Addendum I

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

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

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

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

The following example illustrates the changes :-

September 2002

*NEIC **01** 18:45:41.7±1.7,21°.70S×179°.55W,h600^{km},mb4.6/6,*
Error ellipse: s-maj=75.5km s-min=25.7km az=151.0
*IDC **01** 18:45:46.3±2.6,21°.76S×179°.70W,h627^{km}±37^{km},mb3.5/4,*
mb1 3.7/4,mb1mx3.2/14,Error ellipse: s-maj=83.2km
s-min=20.6km az=159.0
ISC 01 18:45:43.1±2.7**,22°.3S**±0°.2×**179°.6W**±0°.3**,h613**^{km}±42^{km},
n22,σ1**s**.**15**/21**,mb4.4**/9**,1C,South of Fiji Islands**

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

Epicentral Estimates

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

Observational Data

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

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

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

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

Addendum II

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

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

Addendum III

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

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

*UPA **01** 00:02:37.9±0.9, 5°.10N×82°.80W, h43^{km}±125^{km}, MW4.7*
*UCR **01** 00:02:38.4±1.4, 5°.33N×82°.77W, h10^{km}, MW4.0*
ISC 01 00:02:38.0±1.8**, 5°.32N**±0°.09×**82°.76W**±0°.10**, h10**^{km}**, n42, σ1^{s}.28**/49**, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CACAO	El Cacao, Vera	2.76	43	eP	Pn	00 03 20.3	-2.0
GMAL	Guarumal, Vera	2.86	32	eP	Pn	00 03 23.1	-0.7
PIRO	Carate, Puerto	3.12	349	eP	Pn	00 03 26.9	-0.5
PIRO				eS	Sn	00 04 03.3	-1.3
PIRO	Carate, Puerto	3.12	349	eP	Pn	00 03 26.8	-0.5
PIRO				eS	Sn	00 04 06.0	+1.3
BCO2	Palmira	3.39	4	eP	Pn	00 03 30.8	-0.4
BCO2				eS	Sn	00 04 11.7	+0.2
RIOS	Rincon, Osa	3.44	347	eP	Pn	00 03 31.3	-0.5
RIOS				eS	Sn	00 04 12.6	0.0
BRU2	Volcan	3.45	1	eP	Pn	00 03 31.9	-0.2
BRU2				eS	Sn	00 04 12.8	-0.3
BRU2	Volcan	3.45	1	eP	Pn	00 03 31.9	-0.2
AZU	Azuero	3.48	45	eP	Pn	00 03 31.4	-0.9
AZU				eS	Sn	00 04 11.6	-2.1
AZU	Azuero	3.48	45	eP	Pn	00 03 31.6	-0.7
DRK0	Durika	3.95	353	eP	Pn	00 03 38.9	0.0
DRK0	Durika	3.95	353	eP	Pn	00 03 39.3	+0.4
PEZE	Perez Zeledon,	4.14	347	eP	Pn	00 03 42.2	+0.8
CDM	Cerro de Muert	4.32	347	eP	Pn	00 03 45.0	+0.7
RIMA	Rio Macho	4.55	346	eP	Pn	00 03 48.2	+1.0
LCR2	La Lucha 2	4.56	344	eP	Pn	00 03 48.0	+0.6
JACO	JACO, Garabito	4.71	337	eP	Pn	00 03 49.2	+0.1
BCIP	Isla Barro Col	4.80	37	eP	Pn	00 03 50.4	0.0
BCIP				eS	Sn	00 04 44.0	-2.1
BCIP	Isla Barro Col	4.80	37	eP	Pn	00 03 51.1	+0.7
HDC	Heredia	4.84	344	eP	Pn	00 03 50.2	-0.9
LAFE	Finca La Fe, P	4.94	335	eP	Pn	00 03 52.7	+0.3
PTAC	Punta Ardita,	5.25	69	eP	Pn	00 03 56.8	+0.2
JTS	Las Juntas de	5.40	336	eP	Pn	00 03 59.5	+0.8
PLVR	Palo Verde	5.62	333	eP	Pn	00 04 01.4	-0.5
PLMC	San Jos del P	6.46	93	eP	Pn	00 04 13.1	-0.3
YOTC	Yotoco, Valle	6.53	101	eP	Pn	00 04 14.0	-0.3
OTAV	Otavalo	6.63	139	eP	Pn	00 04 15.9	-0.2
DBBC	Dabeiba	6.73	75	eP	Pn	00 04 19.5	+2.5
GCUF	Volcan Galeras	6.76	127	eP	Pn	00 04 18.2	+0.3
MARP	Paez Belalcaza	7.22	110	eP	Pn	00 04 25.3	+1.4
GUY2C	Guyana, Caldas	7.36	90	eP	Pn	00 04 28.3	+2.2
ANIL	Santa Ana	7.38	96	eP	Pn	00 04 27.4	+1.3
RREF	El Recreo	7.39	93	eP	Pn	00 04 28.2	+1.5
TOLC	Tolima	7.45	95	eP	Pn	00 04 27.9	+0.8
UREC	San Jos de Ur	7.58	71	eP	Pn	00 04 30.7	+2.0
ORTC	Ortega, Tolima	7.62	100	eP	Pn	00 04 31.1	+1.9
BETC	Betania	7.76	109	eP	Pn	00 04 33.3	+2.2
MOTC	Monteria, Cord	7.83	64	eP	Pn	00 04 34.8	+2.6
NORC	Norcasia	7.86	88	eP	Pn	00 04 34.9	+2.4
ZARC	Zaragoza, Cauc	8.14	74	eP	Pn	00 04 38.5	+2.1
CHIC	Chingaza	9.02	94	eP	Pn	00 04 49.0	+0.2
SMLC	San Martn de	9.29	68	eP	Pn	00 04 54.2	+2.1

IDC 01 00:43:13.5±3.6**, 4°.31S×135°.79E, h0**^{km}**, mb3.0**/1**, mb1 3.4**/3**, mb1mx3.1**/33**, mbtmp3.1**/3**, ML3.1**/2**, Error ellipse: s-maj=152.1km s-min=33.6km az=80.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	15.60	185	Pn	Pn	00 46 52.9	-2.1
	0.1nm,0.3s,baz=4.4,slow=13,SNR=2.0						
WRA				Sn	Sn	00 49 39.6	-9.1
	0.1nm,0.3s,baz=2.4,slow=23,SNR=4.8						
ASAR	Alice Springs	19.33	185	P	Pn	00 47 41.4	-0.2
	0.2nm,0.3s,baz=6.6,slow=11,SNR=17						
MKAR	Makanchi Array	69.31	324	P	P	00 54 22.8	0.0
	0.1nm,0.6s,baz=121,slow=7.1,SNR=1.4						

*UCR **01** 00:48:19.9±1.1, 13°.03N×89°.71W, h29^{km}±4^{km}, ML3.6, mb3.6(NEIC)*
*SNET **01** 00:48:20.0±1.0, 13°.03N×89°.70W, h29^{km}±4^{km}, ML3.6*
*NEIC **01** 00:48:20.7±0.5, 12°.97N±0°.09×89°.6W±0°.2, h32^{km}±26^{km}, Error ellipse: s-maj=26.4km s-min=6.4km az=64.0*
*GCG **01** 00:48:20.5±0.5, 12°.98N×90°.14W, h4^{km}±16^{km}, MD3.9*
ISC 01 00:48:19.1±1.8**, 12°.95N**±0°.07×**89°.70W**±0°.05**, h25**^{km}±13^{km}**, n52, σ0^{s}.64**/73**, 2D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LALI	Alcalda de L	0.64	34	eP	Pb	00 48 31.9	0.0
LALI				eS	Sb	00 48 40.4	0.0
LALI	Alcalda de L	0.64	34	eP	Pb	00 48 31.9	0.0
LALI				eS	Sb	00 48 40.4	0.0
JAYA	Jayaque - finc	0.74	19	eP	Pb	00 48 33.4	-0.1
JAYA				IAML		00 48 46.8	
	comp=Z,3µm,0.2s						
JAYA	Jayaque - finc	0.74	19	eP	Pb	00 48 33.4	-0.1
JAYA				IAML		00 48 46.8	
	comp=Z,3µm,0.2s						
SNET	Serv Nac Est T	0.86	32	eP	Pb	00 48 35.4	0.0
SNET				eS	Sn	00 48 47.1	-0.4
SNET				IAML		00 48 53.8	
	comp=Z,2µm,0.2s						
SNET	Serv Nac Est T	0.86	32	eP	Pb	00 48 35.4	0.0
SNET				eS	Sn	00 48 47.1	-0.4
SNET				IAML		00 48 53.8	
	comp=Z,2µm,0.2s						
SNET	Serv Nac Est T	0.86	32		Pb	00 48 34.6	-0.9
SNET				Sn	Sn	00 48 47.3	-0.1
CEVE	Cerro Verde	0.87	5	eP	Pb	00 48 35.4	-0.4
CEVE				eS	Sn	00 48 47.4	-0.7
CEVE				IAML		00 48 50.4	
	comp=Z,5µm,0.3s						
CEVE	Cerro Verde	0.87	5	eP	Pb	00 48 35.4	-0.4
CEVE				eS	Sn	00 48 47.4	-0.7
CEVE				IAML		00 48 50.4	
	comp=Z,5µm,0.3s						
BOQS	Boqueron	0.88	27	eP	Pb	00 48 35.8	0.0
BOQS				eS	Sn	00 48 48.0	-0.1
BOQS	Boqueron	0.88	27	eP	Pb	00 48 35.8	0.0
BOQS				eS	Sn	00 48 48.0	-0.1
SBLS	San Blas	0.88	5	eP	Pb	00 48 35.5	-0.5
SBLS	San Blas	0.88	5	eP	Pb	00 48 35.5	-0.5
CEDA	San Andres	0.89	19	eP	Pn	00 48 35.4	-0.8
CEDA				eS	Sb	00 48 47.0	-0.6
CEDA				IAML		00 48 60.0	
	comp=Z,1µm,0.5s						
CEDA	San Andres	0.89	19	eP	Pn	00 48 35.4	-0.8
CEDA				eS	Sb	00 48 47.0	-0.6
CEDA				IAML		00 48 60.0	
	comp=Z,1µm,0.5s						
OPAM	Oficina de Pla	0.90	33	eP	Pn	00 48 35.9	-0.3
OPAM				eS	Sn	00 48 47.8	-0.6
OPAM				IAML		00 48 53.5	
	comp=Z,2µm,0.4s						
OPAM	Oficina de Pla	0.90	33	eP	Pn	00 48 35.9	-0.3
OPAM				eS	Sn	00 48 47.8	-0.6
OPAM				IAML		00 48 53.5	
	comp=Z,2µm,0.4s						
LFRS	El Faro	0.91	43	eP	Pn	00 48 35.9	-0.5
LFRS	El Faro	0.91	43	eP	Pn	00 48 35.9	-0.5
SNJE	San Jose	0.91	5	eP	Pn	00 48 36.1	-0.5
SNJE	San Jose	0.91	5	eP	Pn	00 48 36.1	-0.5
RTR	El Retiro	0.94	3	eP	Pn	00 48 36.4	-0.5
RTR	El Retiro	0.94	3	eP	Pn	00 48 36.4	-0.5
LFU	La Fuente	0.97	36	eP	Pn	00 48 37.2	-0.1
LFU				eS	Sn	00 48 50.1	-0.1
LFU	La Fuente	0.97	36	eP	Pn	00 48 37.2	-0.1
LFU				eS	Sn	00 48 50.1	-0.1
LBRS	Las Brisas	1.00	39	eP	Pn	00 48 37.7	0.0
LBRS				eS	Sb	00 48 51.4	+0.6
LBRS	Las Brisas	1.00	39	eP	Pn	00 48 37.7	0.0
LBRS				eS	Sb	00 48 51.4	+0.6
COEG	Centro de Oper	1.03	50	eP	Pn	00 48 37.6	-0.5
COEG				IAML		00 49 04.7	
	comp=Z,945nm,0.4s						
COEG	Centro de Oper	1.03	50	eP	Pn	00 48 37.6	-0.5
COEG				IAML		00 49 04.7	
	comp=Z,945nm,0.4s						
TACO	Tacachico	1.06	18	eP	Pn	00 48 38.2	-0.3
TACO	Tacachico	1.06	18	eP	Pn	00 48 38.2	-0.3
PQSS	Presa 15 de Se	1.29	59	eP	Pn	00 48 41.6	0.0
PACA	Pacayal	1.43	69	eP	Pn	00 48 43.9	+0.3
PACA	Pacayal	1.43	69	eP	Pn	00 48 43.9	+0.3
MTO3	Montecristo	1.47	13⇓	eP	Pn	00 48 44.9	+0.6
MTO3	Montecristo	1.47	13⇓	eP	Pn	00 48 44.9	+0.6
MTO3	Montecristo	1.47	13	Pn	Pn	00 48 44.9	+0.6
MTO3				Sn	Sb	00 49 03.9	-0.5
ESQI	Esquipulas	1.63	12	Pn	Pn	00 48 47.1	+0.7
PCG	Pacaya	1.68	328	eP	Pn	00 48 47.9	+0.7
FAGO	Alcalda de S	1.71	64	eP	Pn	00 48 48.1	+0.8
FAGO	Alcalda de S	1.71	64	eP	Pn	00 48 48.1	+0.8
NBG	Las Nubes	1.74	339	eP	Pb	00 48 49.9	-0.7
NBG				eS	Sb	00 49 13.5	+1.3
LCND	La Caada	1.79	78	eP	Pn	00 48 48.1	-0.4
LCND	La Caada	1.79	78	eP	Pn	00 48 48.1	-0.4
CNCH	Conchagua	1.84	80	eP	Pn	00 48 49.3	0.0
CNCH	Conchagua	1.84	80	eP	Pn	00 48 49.3	0.0
FUG	Fuego 3	1.86	323	eP	Pn	00 48 50.0	+0.5
FUG				eS	Sb	00 49 14.0	-1.4
MRL	Marmol	2.12	0	eP	Pb	00 48 57.7	+0.7
MRL				eS	Sb	00 49 26.2	+3.3
CRIN	San Cristobal	2.59	95	Pn	Pn	00 48 59.8	+0.3
TGUH	Tegucigalpa,Un	2.60	65	Pn	Pn	00 48 60.0	+0.3
JTS	Las Juntas de	5.35	119	Pn	Pn	00 49 37.2	-0.2
TEIG	Tepich	7.36	10	Pn	Pn	00 50 05.4	+0.4

*IDC **01** 00:56:05.6±4.8, 4°.45S×144°.22E, h115^{km}±40^{km}, mb3.6/6, mb1 3.9/8, mb1mx3.6/29, mbtmp4.1/8, MS3.4/1, Ms1 3.4/1, ms1mx2.4/36, Error ellipse: s-maj=49.4km s-min=18.7km az=93.0*
*NEIC **01** 00:56:07±1.2, 4°.5S±0°.1×144°.1E±0°.2, h125^{km}±5^{km}, mb4.1/12, Error ellipse: s-maj=24.4km s-min=13.6km az=57.0*
ISC 01 00:56:05.5±0.9**, 4°.42S**±0°.10×**144°.2E**±0°.1**, h110**^{km}**, n24, σ0^{s}.85**/23**, mb3.9**/9**, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	Jayapura	3.97	298	P	Pn	00 57 05.3	+0.9
	2.2nm,0.3s,baz=156,slow=12,SNR=13						
JAY				S	Sn	00 58 00.6	+10
	1.3nm,0.3s,baz=236,slow=20,SNR=1.9						
COEN	Coen	9.54	186	Pn	Pn	00 58 21.4	+1.5
MTN	Manton Dam	15.39	236		Pn	00 59 36.9	+0.2
MTN				IAmb	IAmb	00 59 52.9	
	comp=Z,15nm,1.0s						
WB0	Warramunga Arr	18.01	211		P	01 00 06.4	-1.4
WB0				IAmb	IAmb	01 00 10.6	
	comp=Z,7.7nm,0.9s						
WR0	Warramunga Arr	18.09	211	P	P	01 00 07.9	-0.9
WR0				IAmb	IAmb	01 00 12.1	
	comp=Z,6.6nm,0.5s						
WRA	Warramunga Arr	18.18	211	P	P	01 00 09.2	-0.5
	comp=Z,1.4nm,0.3s,baz=29,slow=11,SNR=47						
WRA	Warramunga Arr	18.18	211	P	P	01 00 09.2	-0.5
AS31	Alice Springs	21.56	206	P	P	01 00 45.7	-0.6
AS31				IAmb	IAmb	01 00 49.0	
	comp=Z,2.7nm,0.5s						
ASAR	Alice Springs	21.57	206	P	P	01 00 45.5	-0.8
	comp=Z,3.8nm,0.4s,baz=30,slow=9.7,SNR=50						
ASAR	Alice Springs	21.57	206	P	P	01 00 45.3	-1.0
EIDS	Eidsvold	21.86	163	P	P	01 00 50.5	+1.2
FITZ	Fitzroy Crossi	22.68	232	P	P	01 00 57.5	-0.5
	comp=Z,7.8nm,0.5s,baz=43,slow=8.1,SNR=28						
FITZ	Fitzroy Crossi	22.68	232	P	P	01 00 57.3	-0.6
FITZ				IAmb	IAmb	01 00 59.4	
	comp=Z,8.5nm,0.7s						
STKA	Stephens Creek	27.43	185	P	P	01 01 41.0	0.0
	comp=Z,1.6nm,0.6s,baz=4.4,slow=13,SNR=4.1						
STKA	Stephens Creek	27.43	185	P	P	01 01 40.2	-0.7
PSA00	Pilbara Seismi	29.14	232	P	P	01 01 55.7	-0.6
BBOO	Buckleboo	29.26	194	P	P	01 01 56.7	-0.5
URZ	Urewera	45.08	143	LR	LR	01 23 52.2	
	comp=Z,45nm,18.4s,baz=210,slow=37						
MKAR	Makanchi Array	74.51	321	P	P	01 07 32.6	+0.4
	comp=Z,0.3nm,0.7s,baz=103,slow=7.4,SNR=4.1						
ZALV	Zalesovo Beam	76.20	328	P	P	01 07 41.3	-0.3
	comp=Z,0.5nm,0.6s,baz=142,slow=5.6,SNR=3.9						
ILAR	Eielson Array	85.14	24	P	P	01 08 28.5	-0.5
	comp=Z,0.7nm,0.7s,baz=262,slow=4.8,SNR=8.1						
ILAR	Eielson Array	85.14	24	P	P	01 08 28.4	-0.7
QSPA	South Pole Qui	85.54	180	P	P	01 08 30.1	-1.1
QSPA				IAmb	IAmb	01 08 44.8	
	comp=Z,2.1nm,1.1s						
BARN	Barnard Glacie	86.23	28	P	P	01 08 35.6	+0.9
BARN				IAmb	IAmb	01 08 36.9	
	comp=Z,2.7nm,0.7s						

IDC 01 01:05:35.2±2.8**, 2°.42N×126°.77E, h0**^{km}**, mb3.2**/3**, mb1 3.4**/3**, mb1mx3.2**/35**, mbtmp3.2**/3**, Error ellipse: s-maj=270.7km s-min=26.9km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	23.44	162	P	P	01 10 46.0	-0.3
	0.7nm,0.7s,baz=341,slow=11,SNR=7.2						
ASAR	Alice Springs	26.85	165	P	P	01 11 18.0	+0.3
	0.1nm,0.3s,baz=342,slow=12,SNR=1.5						
MKAR	Makanchi Array	58.65	326	P	P	01 15 34.3	-0.1
	0.2nm,0.5s,baz=125,slow=7.2,SNR=5.3						

*MDD **01** 01:28:43.1±1.0, 35°.75N×0°.22E, h8^{km}±22^{km}, mb4.0/18, Error ellipse: s-maj=20.3km s-min=6.0km az=155.0, PRXIMO*
*CRAAG **01** 01:28:43.5, 35°.63N×0°.36E, Ml3.2*
ISC 01 01:28:41.4±1.2**, 35°.66N**±0°.06×**0°.36E**±0°.04**, h32**^{km}±9^{km}**, n42, σ2^{s}.00**/63**, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OJBR	Djebel Berber	0.08	191	P	Pb	01 28 47.0	0.0
OJBR	Djebel Berber	0.08	191	P	Pb	01 28 47.0	0.0
ODJA	Bouhanifia	0.54	232	P	Pn	01 28 54.0	+1.1
ODJA	Bouhanifia	0.54	232	P	Pn	01 28 54.0	+1.1
EANR	'Ain N'Sour	0.66	64	P	Pn	01 28 56.8	+2.1
EANR	'Ain N'Sour	0.66	64	P	Pn	01 28 56.8	+2.1
USTO	Oran	0.75	276	P	Pb	01 28 58.0	+2.0
USTO	Oran	0.75	276	P	Pb	01 28 58.0	+2.0
ECHF	Ech Chlef	0.93	58	P	Pn	01 28 57.2	-1.1
ECHA	Ech Chlef	0.95	59	P	Pn	01 28 57.2	-1.3
EBNR	Beni Rached	1.13	56	P	Pb	01 29 02.9	+0.4
CART	Cartagena	2.21	331	P	Pn	01 29 15.4	-0.4
CART				S	Sn	01 29 38.1	-4.0
CART	Cartagena	2.21	331	eP	Pn	01 29 15.4	-0.4
CART				eS	Sn	01 29 38.1	-4.0
CART				eCod		01 30 51.7	
ENIJ	Nijar	2.45	303	P	Pn	01 29 18.8	-0.4
	9.5nm,0.2s,SNR=7.9						
ENIJ				S	Sn	01 29 45.0	-3.1
	34nm,0.3s,SNR=7.9						
EMUR	La Murta	2.53	330	P	Pn	01 29 20.2	0.0
	1.9nm,0.2s,SNR=18						
EMUR				S	Sn	01 29 46.6	-3.3
	11nm,0.3s,SNR=4.7						
EBER	Berja	2.90	296	P	Pn	01 29 25.5	-0.1
	16nm,0.2s,SNR=43						
EBER				S	Sn	01 29 56.6	-2.9
	23nm,0.4s,SNR=7.9						
EBEN2	Beniarda presa	3.04	352	S	Sn	01 30 00.1	-2.5
	SNR=7.9						
GORA	Gorafe	3.29	304	P	Pn	01 29 33.7	+3.0
	14nm,0.2s,SNR=7.9						
GORA				S	Sn	01 30 11.9	+3.1
	SNR=7.9						
ETOB	Tobarra	3.34	333	P	Pn	01 29 33.1	+1.5
	8.1nm,0.2s,SNR=31						
ETOB				S	Sn	01 30 09.7	-0.5
	0.2nm,0.2s,SNR=7.9						
SESP	Santiago Espad	3.38	317	P	Pn	01 29 34.0	+1.8
	25nm,0.2s,SNR=7.9						
SESP				S	Sn	01 30 11.1	-0.1
	44nm,0.3s,SNR=7.9						
EQUE	Quentar	3.43	298	P	Pn	01 29 33.8	+1.1
	11nm,0.4s,SNR=34						
EQUE				S	Sn	01 30 12.3	-0.1
	1.8nm,0.2s,SNR=7.9						
ELGU	Los Guajares,	3.44	292	P	Pn	01 29 32.5	-0.4
	5.5nm,0.2s,SNR=7.9						
ELGU				S	Sn	01 30 10.4	-2.2
	10nm,0.2s,SNR=7.9						
EQES	Quesada	3.49	309	P	Pn	01 29 35.8	+2.3
	8.4nm,0.1s,SNR=44						
EQES				S	Sn	01 30 14.5	+0.7
	2.5nm,0.3s,SNR=7.9						
EMAL	Malaga-Limoner	4.03	287	P	Pn	01 29 42.0	+1.1
EMAL				S	Sn	01 30 23.6	-3.3
EMAL	Malaga-Limoner	4.03	287	eP	Pn	01 29 42.0	+1.1
EMAL				eS	Sn	01 30 23.6	-3.3
ECHE	Chera	4.06	345	P	Pn	01 29 42.3	+1.0
	1.5nm,0.2s,SNR=7.9						
ECHE				S	Sn	01 30 26.2	-1.6
	10.0nm,0.4s,SNR=7.9						
EADA	Adamuz	4.68	304	P	Pn	01 29 50.8	+1.0
	1.1nm,0.2s,SNR=7.9						
EADA				S	Sn	01 30 40.7	-2.4
	2.0nm,0.3s,SNR=7.9						
EMOS	Mosqueruela	4.74	352	P	Pn	01 29 53.1	+2.3
	1.8nm,0.2s,SNR=6.0						
EMOS				S	Sn	01 30 43.7	-1.0
	5.9nm,0.3s,SNR=7.9						
EJIF	Jimena Fronter	4.79	281	P	Pb	01 29 58.3	-6.3
	6µm,0.4s,SNR=7.9						
EJIF				S	Sn	01 30 44.1	-1.6
	5µm,0.4s,SNR=7.9						
ECAB	El Cabril	5.22	299	P	Pn	01 29 57.5	+0.2
	1.5nm,0.3s,SNR=8.2						
ECAB				S	Sn	01 30 52.6	-3.8
	1.2nm,0.3s,SNR=7.9						
ESDC	Sonseca Array	5.27	321	P	Pn	01 30 00.0	+2.0
	0.7nm,0.2s,baz=140,slow=13,SNR=8.7						
ESDC				S	Sn	01 30 55.1	-2.6
	0.5nm,0.2s,baz=137,slow=23,SNR=7.9						
ERTA	Horta de San J	5.28	360	P	Pn	01 30 01.0	+2.8
	2.0nm,0.2s,SNR=7.9						
ERTA				S	Sn	01 30 56.9	-1.1
	3.9nm,0.5s,SNR=7.9						
PAB	San Pablo	5.38	317	P	Pn	01 30 00.8	+1.2
	2.0nm,0.3s,SNR=7.9						
PAB				S	Sn	01 30 57.5	-3.1
	1.0nm,0.2s,SNR=7.9						
UCM	Universidad Co	5.44	330	P	Pn	01 30 03.1	+2.8
UCM				S	Sn	01 31 00.1	-1.7
UCM	Universidad Co	5.44	330	eP	Pn	01 30 03.1	+2.8
UCM				eS	Sn	01 31 00.1	-1.7
ETOR	Torete	5.49	340	P	Pn	01 30 03.0	+2.0
	0.3nm,0.2s,SNR=7.9						
ETOR				S	Sn	01 31 01.4	-1.6
	3.4nm,0.3s,SNR=7.9						
EPOB	Poblet	5.71	5	P	Pn	01 30 06.2	+2.2
	1.7nm,0.3s,SNR=7.9						
EPOB				S	Sn	01 31 05.7	-2.8
	2.6nm,0.3s,SNR=7.9						
EMIN	Mina Concepcio	6.03	292	P	Pn	01 30 08.0	-0.4
	0.4nm,0.2s,SNR=7.9						
CFON	Fontmartina	6.30	14	P	Pn	01 30 14.3	+2.2
	1.1nm,0.2s,SNR=7.9						
EPLA	Plasencia	6.73	313	P	Pn	01 30 19.6	+1.6
	0.6nm,0.3s,SNR=7.9						
EPLA				S	Sn	01 31 31.6	-1.9
	1.0nm,0.5s,SNR=7.9						
CSOR	Sort	6.73	5	P	Pn	01 30 20.7	+2.7
	0.5nm,0.2s,SNR=7.9						
CSOR				S	Sn	01 31 33.7	+0.1
	1.9nm,0.4s,SNR=7.9						
CLLI	Llivia	6.92	10	S	Sn	01 31 36.9	-1.5
	0.7nm,0.5s,SNR=7.9						

MAN 01 01:43:37.4, 17°.27N×120°.01E, h19^{km}**, mb4.4, ML3.3, MS3.1, 1C, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOLP	Bolinao	0.89	186	eP	Pb	01 43 54.0	-0.3
BOLP				eS	Sg	01 44 06.8	+0.2
APYP	Conner	1.32	63	eP	Pn	01 43 59.5	-1.2
APYP				eS	Sn	01 44 14.7	-3.0
CAUP	Cauayan	1.77	100	eP	Pn	01 44 06.8	-0.1
CAUP				eS	Sb	01 44 30.1	-0.8
BALP	Baler	2.14	135	eP	Pn	01 44 13.6	+1.5
BALP				eS	Sn	01 44 35.7	-2.5
SGCP	Mt. Cagua	2.17	63	eP	Pn	01 44 13.3	+0.8
LQP	Lukban	3.47	155⇑	eP	Pn	01 44 32.2	+1.6

*KRSZO **01** 02:43:00.4±0.9, 44°.28N×15°.73E, h12^{km}, ML2.9/11, Error ellipse: s-maj=4.9km s-min=2.8km az=59.0*
*PRU **01** 02:43:01.5±0.0, 44°.38N×15°.62E, h0^{km}*
*VIE **01** 02:43:04.9±1.1, 44°.50N×16°.18E, h25^{km}, mb2.1/3, ml2.3/8, Error ellipse: s-maj=8.3km s-min=7.3km az=50.0 112 km NNW of Split*
ISC 01 02:43:00.1±0.9**, 44°.32N**±0°.02×**15°.91E**±0°.03**, h13**^{km}±7^{km}**, n61, σ1^{s}.97**/97**, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UDBI	Udbina	0.23	334	i Pg	Pb	02 43 06.2	-0.1
UDBI				Sg	Sb	02 43 10.3	-0.1
UDBI	Udbina	0.23	334	Pg	Pb	02 43 06.2	-0.1
UDBI				Lg	Lg	02 43 10.3	
MORI	Morici	0.47	198	i Pg	Pg	02 43 08.6	-0.8
MORI				Sg	Sg	02 43 15.4	-0.2
KIJV	Kijevo	0.47	131	ePg	Pn	02 43 11.2	-1.4
KIJV				Sg	Sb	02 43 20.3	+3.1
KIJV	Kijevo	0.47	131	Pg	Pn	02 43 11.2	-1.4
KIJV				Lg	Lg	02 43 20.3	
ZIRJ	Zirje	0.69	196	i Pg	Pg	02 43 12.3	-1.1
ZIRJ				Sg	Sg	02 43 22.2	-0.2
ZIRJ	Zirje	0.69	196	Pg	Pg	02 43 12.3	-1.1
ZIRJ				Lg	Lg	02 43 22.2	
DUGI	Dugi Otok	0.69	242	i Pg	Pg	02 43 10.8	-2.7
DUGI				Sg	Sg	02 43 19.6	-3.0
NVLJ	Novalja	0.78	289	i Pg	Pg	02 43 12.6	-2.6
NVLJ				Sg	Sg	02 43 22.6	-2.8
NVLJ	Novalja	0.78	289	Pg	Pg	02 43 12.6	-2.6
NVLJ				Lg	Lg	02 43 22.6	
BLY	Banja Luka	1.01	64	Pg	Pn	02 43 22.8	+2.8
	comp=Z,0.2nm,SNR=2.9						
BLY				Sn	Sn	02 43 38.3	+4.3
HVAR	Hvar	1.20	161	ePg	Pn	02 43 23.2	+0.6
HVAR				Sg	Sn	02 43 40.4	+1.6
HVAR	Hvar	1.20	161	Pn	Pn	02 43 23.2	+0.6
HVAR				Sn	Sn	02 43 40.4	+1.6
RICI	Ricice	1.21	132	ePn	Pn	02 43 24.4	+1.7
RICI				Sn	Sn	02 43 44.4	+5.4
RICI	Ricice	1.21	132	Pn	Pn	02 43 24.4	+1.7
RICI				Lg	Lg	02 43 44.4	
MAKA	Makarska	1.31	142	ePn	Pn	02 43 25.2	+1.2
MAKA				Sn	Sn	02 43 45.4	+4.1
MAKA	Makarska	1.31	142	Pn	Pn	02 43 25.2	+1.2
MAKA				Lg	Lg	02 43 45.4	
GBRS	Gornja Briga	1.44	328	i Pn	Pg	02 43 27.2	-0.6
GBRS				IAML		02 43 48.4	
	comp=Z,15nm,0.1s						
GBRS	Gornja Briga	1.44	328	Pn	Pg	02 43 27.2	-0.6
GBRS				x	x	02 43 48.4	
	comp=Z,15nm,0.1s						
ZAG	Zagreb	1.51	2	ePn	Pg	02 43 29.1	0.0
PTJ	Puntijarka	1.59	2	i Pn	Pg	02 43 29.6	-1.0
PTJ	Puntijarka	1.59	2	Pn	Pg	02 43 29.6	-1.0
VISS	Visnje	1.67	333	i Pn	Pb	02 43 30.5	-0.1
VISS				eSn	Sb	02 43 52.3	+0.7
VISS				IAML		02 43 55.3	
	comp=Z,16nm,0.1s						
VISS	Visnje	1.67	333	Pn	Pb	02 43 30.5	-0.1
VISS				Sn	Sb	02 43 52.3	+0.7
VISS				x	x	02 43 55.3	
	comp=Z,16nm,0.1s						
GOLS	Golise	1.71	353	i Pn	Pg	02 43 31.8	-1.0
GOLS	Golise	1.71	353	Pn	Pg	02 43 31.8	-1.0
KALN	Kalnik	1.86	12	i Pn	Pb	02 43 33.3	-0.6
KALN	Kalnik	1.86	12	Pn	Pb	02 43 33.3	-0.6
PDKS	Podkum	1.86	340	i Pn	Pb	02 43 33.3	-0.6
PDKS				i Sn	Sn	02 43 56.9	+1.8
PDKS	Podkum	1.86	340	Pn	Pb	02 43 33.3	-0.6
PDKS				Sn	Sn	02 43 56.9	+1.8
STON	Ston	1.94	137	ePn	Pb	02 43 34.3	-1.0
STON				Sn	Sg	02 44 00.3	-2.3
STON	Ston	1.94	137	Pn	Pb	02 43 34.3	-1.0
STON				Sn	Sg	02 44 00.3	-2.3
TRI	Trieste	2.06	313	Pn	Pn	02 43 35.7	+1.4
	comp=Z,0.2nm,SNR=2.9						
TRI				Sn	Sn	02 44 00.9	+1.0
DBRK	Dubrovnik	2.32	135	ePn	Pb	02 43 41.1	-0.6
DBRK				Sn	Sg	02 44 11.6	-2.9
DBRK	Dubrovnik	2.32	135	Pn	Pb	02 43 41.1	-0.6
DBRK				Sn	Sg	02 44 11.6	-2.9

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OBKA  Obir              2.39 337 ePn     Pn      02 43 40.5 +1.4
            comp=Z,1.5nm,0.2s,SNR=5.9
OBKA                              Sn     Sn      02 44 11.2 +3.0
            comp=Z,7.5nm,0.4s
OBKA  Obir              2.39 337  Pn     Pn      02 43 40.5 +1.4
            comp=Z,1.5nm,0.2s,SNR=5.9
OBKA                              Pg     Pb      02 43 41.2 -1.8
            comp=Z,0.1nm,SNR=2.2
OBKA                              Lg     Lg      02 44 10.8
OBKA                              Sn     Sn      02 44 11.2 +3.0
            comp=Z,7.5nm,0.4s
SOKA  Soboth            2.44 346 ePn     Pn      02 43 41.1 +1.4
            comp=Z,1.8nm,0.3s,SNR=6.1
SOKA                              Sn     Sn      02 44 10.3 +0.9
            comp=Z,2.0nm,0.3s
SOKA  Soboth            2.44 346  Pn     Pn      02 43 41.1 +1.4
            comp=Z,1.8nm,0.3s,SNR=6.1
SOKA                              Sn     Sn      02 44 10.3 +0.9
            comp=Z,2.0nm,0.3s
MORH  Mrgy, Hungar      2.71  45  Pn     Pg      02 43 49.4 -2.6
MYKA  Terra Mystica     2.81 326  Pn     Pb      02 43 47.8 -2.3
            comp=Z,1.6nm,0.4s
MYKA                             eSn     Sn      02 44 21.7 +3.2
            comp=Z,1.4nm,0.3s
MYKA  Terra Mystica     2.81 326  Pn     Pb      02 43 47.8 -2.3
            comp=Z,1.6nm,0.4s
MYKA                              Sn     Sn      02 44 21.7 +3.2
            comp=Z,1.4nm,0.3s
DIVS  Divibare          2.95  93  Pn     Pb      02 43 51.4 -1.0
            comp=Z,0.1nm,SNR=1.4
ARSA  Arzberg           2.95 355 ePn     Pn      02 43 48.3 +1.7
            comp=Z,0.7nm,0.2s,SNR=5.3
ARSA  Arzberg           2.95 355  Pg     Pn      02 43 48.3 +1.7
            comp=Z,0.7nm,0.2s,SNR=5.3
ARSA                              Pn     Pb      02 43 48.4 -4.0
            comp=Z,0.1nm,SNR=1.3
MPLH  Magyarpolny       3.08  21  Pn     Pb      02 43 50.9 -3.6
            comp=Z,0.1nm,SNR=2.1
SOP   Sopron            3.40   7  Pn     Pn      02 43 54.4 +1.6
            comp=Z,0.1nm,SNR=1.2
ABTA  Abfaltersbach     3.41 317 ePn     Pn      02 43 56.5 +3.6
            comp=Z,0.1nm,0.2s
ABTA  Abfaltersbach     3.41 317  Pn     Pn      02 43 56.5 +3.6
            comp=Z,0.1nm,0.2s
CONA  Conrad Observa    3.61 360 i Pn    Pn      02 43 57.9 +2.1
            comp=Z,0.9nm,0.1s,SNR=6.4
CONA                             eSn     Sn      02 44 38.5 +0.2
            comp=Z,0.7nm,0.2s
CONA  Conrad Observa    3.61 360  Pn     Pn      02 43 57.9 +2.1
            comp=Z,0.9nm,0.1s,SNR=6.4
CONA                              Sn     Sn      02 44 38.5 +0.2
            comp=Z,0.7nm,0.2s
MOA   Molln             3.71 343 i Pn    Pn      02 43 59.4 +2.3
            comp=Z,2.4nm,0.2s,SNR=14
MOA                              eSn     Sn      02 44 41.7 +0.9
            comp=Z,8.0nm,0.5s
MOA   Molln             3.71 343  Pn     Pn      02 43 59.4 +2.3
            comp=Z,2.4nm,0.2s,SNR=14
MOA                               Sn     Sn      02 44 41.7 +0.9
            comp=Z,8.0nm,0.5s
WATA  Walderalm         4.28 316 ePn     Pn      02 44 07.2 +2.2
            comp=Z,0.5nm,0.2s
WATA  Walderalm         4.28 316  Pn     Pn      02 44 07.2 +2.2
            comp=Z,0.5nm,0.2s
CKRC  Cesky Krumlov     4.64 347 ePN     Pn      02 44 11.2 +1.4
CKRC                             eSN     Sn      02 45 02.6 -0.9
CKRC  Cesky Krumlov     4.64 347  Pn     Pn      02 44 11.2 +1.4
CKRC                              Sn     Sn      02 45 02.6 -0.9
KHC   Kasperske Hory    5.08 342 ePN     Pn      02 44 16.8 +1.0
KHC                              eSN     Sn      02 45 13.1 -1.2
KHC   Kasperske Hory    5.08 342  Pn     Pn      02 44 16.8 +1.0
KHC                               Sn     Sn      02 45 13.1 -1.2
KRLC  Kraliky           5.79   6 eSN     Sn      02 45 32.5 +0.5
KRLC  Kraliky           5.79   6  Sn     Sn      02 45 32.5 +0.5
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*VAO **01** 02:48:10.3±0.5, 18.°81S×69.°06W, h10km, mb5.0*
*NEIC **01** 02:48:18.9±1.7, 18.°88S±0.°06×69.°14W±0.°08, h107km±5km, Error ellipse: s-maj=10.4km s-min=8.5km az=81.0*
*GUC **01** 02:48:20.2±0.6, 18.°89S×69.°31W, h112km±4km, ML4.8*
*IDC **01** 02:48:20.1±0.5, 18.°89S×69.°06W, h114km±4km, mb4.4/11, mb1 4.5/14, mb1mx4.4/25, mbtmp4.8/14, MS3.2/3, Ms1 3.2/3, ms1mx2.9/24, Error ellipse: s-maj=12.9km s-min=9.3km az=84.0*
ISC 01 02:48:18.8±0.4**, 18.°86S**±0.°04×**69.°17W**±0.°05**, h108**km±4km**, n200, σ1s37**/201**, mb4.5**/36**, 3C-4D, Northern Chile**

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Code  Station Name       Δ°  AZ°   Phase ID          Time      Res
                                  Op     ISC       h  m  s    ISC
MNMC  Minye Minye       0.48 236⇑iP      Pn      02 48 36.2 +0.5
MNMC                             i S     Sn      02 48 48.9 +0.6
MNMC                              IAML           02 48 49.7
            comp=N,76µm,0.4s
MNMC  Minye Minye       0.48 236         Pn      02 48 36.2 +0.5
PSGC  Pisagua           1.16 231⇑iP      Pn      02 48 41.2 -0.4
PSGC                             i S     Sn      02 48 57.6 -1.3
PSGC                              IAML           02 49 02.0
            comp=N,19µm,0.5s
PSGCX Pisagua           1.16 231  Pn     Pn      02 48 41.2 -0.5
AP01  Chacalluta        1.21 294⇑iP      Pn      02 48 42.0 -0.1
AP01                             i S     Sn      02 48 59.2 -0.6
AP01                              IAML           02 49 00.7
            comp=E,32µm,0.3s
AP01  Chacalluta        1.21 294         Pn      02 48 42.1 -0.1
PB08  IPOC Station P    1.27 179⇓iP      Pn      02 48 44.7 +1.4
PB08                             i S     Sn      02 49 03.6 +1.9
PB08  IPOC Station P    1.27 179         Pn      02 48 44.4 +1.1
HMBC  Humberstone       1.56 205⇓iP      Pn      02 48 46.2 -0.2
HMBC                             i S     Sn      02 49 06.6 -0.7
TA02  Huaiquique        1.67 213 eP      Pn      02 48 47.1 -0.5
TA02                             i S     Sn      02 49 07.8 -1.6
TA01  Diego Aracena     1.94 209 eP      Pn      02 48 49.9 -1.1
TA01                             i S     Sn      02 49 13.3 -2.2
TA01  Diego Aracena     1.94 209  Pn     Pn      02 48 50.1 -0.9
PB01  IPOC Station P    2.19 188⇓iP      Pn      02 48 54.5 +0.2
PB01                             i S     Sn      02 49 21.2 -0.2
PB01                              IAML           02 49 24.1
            comp=E,4µm,0.2s
PB01  IPOC Station P    2.19 188         Pn      02 48 54.5 +0.2
PB09  IPOC Station P    2.92 181 eP      Pn      02 49 04.5 +0.6
PB09                              IAML           02 50 07.0
            comp=E,1µm,0.4s
PB09  IPOC Station P    2.92 181         Pn      02 49 04.5 +0.6
PB07  IPOC Station P    2.93 193⇓iP      Pn      02 49 03.3 -0.7
PB07                              IAML           02 49 49.4
            comp=E,3µm,0.5s
PB07  IPOC Station P    2.93 193         Pn      02 49 04.5 +0.5
PB04  IPOC Station P    3.58 195 eP      Pn      02 49 11.2 -1.4
PB04                              IAML           02 50 18.4
            comp=E,2µm,0.7s
PB04  IPOC Station P    3.58 195         Pn      02 49 11.2 -1.4
LVC   Limon Verde       3.74 176  P      Pn      02 49 16.0 +1.0
            comp=E,34nm,0.3s,baz=350,slow=11,SNR=248
LVC                               S      Sn      02 49 59.5 +1.2
            comp=E,87nm,0.3s,baz=305,slow=21,SNR=11
LVC   Limon Verde       3.74 176  Pn     Pn      02 49 15.7 +0.8
PB06  IPOC Station P    3.84 186         Pn      02 49 16.0 -0.2
PB15  IPOC Station P    4.33 184         Pn      02 49 22.6 -0.2
PB10  IPOC Station P    4.81 195  Pn     Pn      02 49 27.2 -1.8
PB14  IPOC Station P    5.85 191  Pn     Pn      02 49 40.8 -2.7
GO02  Mina Guanaco      6.28 183  Pn     Pn      02 49 47.8 -1.5
AC01  Pan de Azucar     7.37 190  Pn     Pn      02 50 00.4 -3.4
AC02  Maricunga         7.94 180         Pn      02 50 10.2 -1.8
SIV   San Ignacio       8.24  71  P      Pn      02 50 16.0 +0.3
            comp=E,26nm,0.3s,baz=260,slow=14,SNR=625
SIV                               S      Sn      02 51 46.9 -0.3
            baz=192,slow=18,SNR=11
GO03  Copiap            8.75 186         Pn      02 50 18.7 -3.8
AC05  El Transito       9.98 186         Pn      02 50 35.0 -4.3
NNA   Nana             10.07 312  P      Pn      02 50 38.3 -2.1
            comp=E,6.9nm,0.3s,baz=139,slow=9.7,SNR=11
NNA                               S      Sn      02 52 21.2  -10
            comp=E,3.8nm,0.3s,baz=218,slow=17,SNR=1.5
NNA                               LR     LR      02 54 57.0
            comp=E,85nm,18.1s,baz=152,slow=39
NNA   Nana             10.07 312         Pn      02 50 38.6 -1.8
LCO   Las Campanas     10.20 188  Pn     Pn      02 50 37.5 -4.9
CO01  Juntas del Tor   11.10 184         Pn      02 50 50.7 -3.9
GO04  Tololo Observa   11.36 187  Pn     Pn      02 50 53.4 -4.6
SAML  Samuel           11.44  31         Pn      02 50 56.9 -2.0
CZSB  Cruzeiro do Su   11.59 342 eP      Pn      02 50 57.1 -3.8
CO03  El Pedregal      12.01 186         Pn      02 51 06.8 +0.3
CO02  Combarbal        12.40 187         Pn      02 51 11.3 -0.4
ZON   Zonda            12.64 178         Pn      02 51 14.4 -0.4
CPUP  Villa Florida    13.22 126  P      Pn      02 51 21.8 -0.5
            comp=E,0.7nm,0.3s,baz=309,slow=13,SNR=35
CPUP  Villa Florida    13.22 126  Pn     Pn      02 51 21.1 -1.2
PP1B  Ponte de Pedra   13.64  87 eP      Pn      02 51 23.4 -4.5
ROC1  El Roble         14.15 186         Pn      02 51 34.0 -0.7
PEL   Peldehue         14.29 185  Pn     Pn      02 51 35.5 -0.7
MT02  Curacav          14.45 187  Pn     Pn      02 51 37.3 -0.9
MT05  Renca            14.54 185         Pn      02 51 38.9 -0.5
ATAH  Atahualpa        14.71 321  LR     LR      02 57 39.6
            comp=E,83nm,20.5s,baz=142,slow=38
TRCB  Terra Rica       15.95 107 eP      Pn      02 51 54.4 -2.8
PTGB  Pitanga          16.92 113 eP      Pn      02 52 08.8 -0.4
H03N1 Juan Fernandez   16.93 209  T      T       03 09 18.6
            baz=34,SNR=32
H03N2 Juan Fernandez   16.94 209  T      T       03 09 22.8
            baz=34,SNR=53
H03N3 Juan Fernandez   16.95 209  T      T       03 09 19.4
            baz=34,SNR=103
VA04  Juan Fernndez    17.07 208         Pn      02 52 10.3 -0.5
VA04                              IAmb   IAmb    02 52 13.6
            comp=Z,63nm,0.8s
MACA  Manacapuru-AM    17.68  29 eP      P       02 52 17.3 -0.4
BI02  San Fabin de     17.83 186         P       02 52 19.4 +0.1
BI02                              IAmb   IAmb    02 52 23.4
            comp=Z,67nm,1.1s
NPGB  Novo Progresso   17.85  51 eP      P       02 52 19.3 -0.3
BI03  Tigo             18.23 190  P      P       02 52 23.8 +0.1
BI03                              IAmb   IAmb    02 52 28.0
            comp=Z,49nm,1.1s
CPSB  Cacapava Do Su   18.32 132 eP      P       02 52 24.9 +0.1
SNDB  Serra Nova Dou   18.54  71 eP      P       02 52 26.5 -0.6
FRTB  Fartura          18.83 107 eP      P       02 52 30.7 +0.4
PLTB  Pedras Altas     19.03 135 eP      P       02 52 33.0 +0.6
ITTB  Itaituba         19.49  44 eP      P       02 52 37.1 -0.4
BB19B Bebedouro        19.53 100 eP      P       02 52 38.0  0.0
CNLB  Canela           19.67 125 eP      P       02 52 39.7 +0.2
IPMB  Ipameri, GO      19.91  91 eP      P       02 52 41.9 -0.2
LC01  Cunco            20.10 186  P      P       02 52 43.0 -1.0
LC01                              IAmb   IAmb    02 52 48.3
            comp=Z,52nm,1.0s
PTGA  Pitinga          20.15  28  P      P       02 52 43.8 -0.9
            comp=Z,5.0nm,0.3s,baz=214,slow=16,SNR=16
PTGA  Pitinga          20.15  28  P      P       02 52 43.1 -1.6
PTGA  Pitinga          20.15  28 eP      P       02 52 43.5 -1.2
PTGA  Pitinga          20.15  28 eP      P       02 52 43.3 -1.4
BDFB  Brasilia         20.46  84  P      P       02 52 48.0 -0.1
            comp=Z,38nm,0.5s,baz=258,slow=9.1,SNR=57
BDFB  Brasilia         20.46  84  P      P       02 52 48.0 -0.1
SPB   Sao Paulo        20.80 107  P      P       02 52 50.3 -1.3
SPB                               IAmb   IAmb    02 52 51.6
            comp=Z,43nm,1.1s
SPB   Sao Paulo        20.80 107 eP      P       02 52 50.6 -1.0
OTAV  Otavalo          21.05 333  P      P       02 52 55.9 +1.1
OTAV  Otavalo          21.05 333 eP      P       02 52 58.7 +3.8
PET01 Itanhaem-SP      21.06 109 eP      P       02 52 54.8 +0.4
VAO   Valinhos         21.14 105 eP      P       02 52 53.9 -1.5
PEXB  Peixe            21.19  75 eP      P       02 52 55.9 -0.1
GCUF  Volcan Galeras   21.52 337 eP      P       02 53 02.4 +2.6
GARC  Garzon, Huila    21.82 343 eP      P       02 53 00.7 -2.1
PLCA  Paso Flores      21.83 183  P      P       02 53 02.9 +0.3
            comp=Z,51nm,1.0s,baz=0.4,slow=12,SNR=49
PLCA  Paso Flores      21.83 183  P      P       02 53 02.3 -0.3
PLCA                              IAmb   IAmb    02 53 06.0
            comp=Z,81nm,1.1s
PLCA  Paso Flores      21.83 183 eP      P       02 53 03.4 +0.9
MALB  Monte Alegre     22.34  43 eP      P       02 53 06.2 -1.8
PARB  Paraibuna        22.41 106 eP      P       02 53 07.0 -1.7
PRPB  Parauapebas      22.68  59 eP      P       02 53 10.1 -1.4
BSCB  Bom Sucesso      23.03  99 eP      P       02 53 14.3 -0.7
SMTB  Santa Maria do   23.16  68 eP      P       02 53 16.0 -0.2
ORTC  Ortega, Tolima   23.40 345 eP      P       02 53 15.9 -2.5
CHIC  Chingaza         23.77 349 eP      P       02 53 21.2 -0.9
YOTC  Yotoco, Valle    23.77 342 eP      P       02 53 24.0 +2.2
MAN01 Angra dos Reis   23.88 104 eP      P       02 53 23.5 +0.9
JANB  Januaria         24.07  85 eP      P       02 53 23.3 -1.2
TOLC  Tolima           24.07 345 eP      P       02 53 23.9 -0.8
DIAM  Diamantina, MG   24.17  93 eP      P       02 53 24.9 -0.5
SDBA  SAO DESIDERIO    24.22  78 eP      P       02 53 25.2 -0.6
RREF  El Recreo        24.38 345 eP      P       02 53 30.3 +2.4
PLMC  San Jos del P    24.63 343 eP      P       02 53 28.9 -0.6
GUY2C Guyana, Caldas   24.70 345 eP      P       02 53 30.4 -0.2
SPBC  San Pablo de B   24.83 348 eP      P       02 53 29.6 -1.8
RUSC  La Rusia         24.90 351 eP      P       02 53 32.1 -0.3
MCPB  Macapa, AP       24.90  44 eP      P       02 53 31.1 -0.9
NORC  Norcasia         24.91 346 eP      P       02 53 30.5 -1.5
TAMC  Tame, Arauca     25.27 354 eP      P       02 53 34.7 -0.6
DUB01 Friburgo-RJ      25.30 102 eP      P       02 53 36.1 +0.6
CBOC  Ciudad Bolivar   25.48 344 eP      P       02 53 36.4 -0.9
BARC  Barichara        25.60 351 eP      P       02 53 37.3 -1.1
HELC  Santa Helena     25.67 345 eP      P       02 53 37.6 -1.6
PTBC  PUERTO BERRIO,   25.77 348 eP      P       02 53 37.2 -2.5
CAM01 Campos-RJ        25.95 101 eP      P       02 53 42.0 +0.6
PAMC  Pamplona, Colo   26.27 352 eP      P       02 53 43.9 -0.9
SJMB  Sao Joao De Ma   26.49  94 eP      P       02 53 46.2 -0.1
ZARC  Zaragoza, Cauc   26.78 347 eP      P       02 53 46.6 -2.3
BSFB  Barra de Sao F   26.80  95 eP      P       02 53 49.0 -0.1
ALF01 Guarapari-ES     26.82  99 eP      P       02 53 49.8 +0.6
RIB01 Linhares ES      27.19  96 eP      P       02 53 52.3 -0.2
NAN01 Guarapari, ES    27.58  93 eP      P       02 53 55.7 -0.3
SDV   Santo Domingo    27.61 357  P      P       02 53 57.6 +1.1
            comp=Z,3.3nm,0.4s,baz=161,slow=9.2,SNR=7.5
SMLC  San Martn de     27.91 350 eP      P       02 53 55.7 -3.2
MOTC  Monteria, Cord   28.20 346 eP      P       02 54 00.3 -1.2
GDU01 Guandu, BA       28.84  84 eP      P       02 54 06.8 -0.5
NBPS  Pedro II - PI    30.65  65 eP      P       02 54 23.3 -0.1
NBMO  Morrinhos-CE     32.41  65 eP      P       02 54 38.7  0.0
NBLI  Livramento-PB    33.33  74 eP      P       02 54 47.6 +0.8
RCBR  Riachuelo        34.90  73  P      P       02 55 01.5 +1.1
            comp=Z,21nm,0.7s,baz=0.0,slow=0.0,SNR=12
RCBR                              LR     LR      03 10 18.5
            comp=Z,44nm,18.6s,baz=38,slow=38
NBPV  Pedro Velho      35.22  74 eP      P       02 55 04.5 +1.4
PETF  Flores           40.97 329  P      P       02 55 51.9 +0.7
PETF                              IAmb   IAmb    02 56 15.8
            comp=Z,24nm,1.3s
CMIG  Matias Romero    43.77 323  pP     pP      02 56 41.4 +1.2
            comp=Z,1.6nm,0.6s,baz=124,slow=9.3,SNR=2.4
352A  Blakely          52.29 343  P      P       02 57 19.7 +0.4
ZAIG  Zacatecas        52.69 320  P      P       02 57 24.0 +1.2
ZAIG                              IAmb   IAmb    02 57 25.6
            comp=Z,3.3nm,0.9s
152A  Waverly Hall     53.35 344  IAmb   IAmb    02 57 28.4
            comp=Z,9.2nm,0.9s
435B  Jarrell          56.41 331  P      P       02 57 49.0 -0.3
435B                              IAmb   IAmb    02 58 18.2
            comp=Z,4.6nm,0.8s
WVT   Waverly          57.47 342  P      P       02 57 56.6  0.0
WVT                               IAmb   IAmb    02 57 57.3
            comp=Z,10nm,0.9s
HPIG                   57.67 321  P      P       02 57 57.9 -0.5
HPIG                              IAmb   IAmb    02 58 06.3
            comp=Z,4.9nm,0.6s
TXAR  Lajitas Array    58.34 324  P      P       02 58 04.1 +1.1
            comp=Z,0.6nm,0.9s,baz=124,slow=7.7,SNR=4.1
TXAR                              pP     pP      02 58 31.1 +0.5
            comp=Z,0.4nm,0.6s,baz=170,slow=9.8,SNR=3.1
R50A  Paris            58.59 346  P      P       02 58 04.2 -0.1
R50A                              IAmb   IAmb    02 58 05.8
            comp=Z,7.6nm,1.1s
FVM   French Village   59.97 341  IAmb   IAmb    02 58 15.3
            comp=Z,11nm,0.9s
ACSO  Alum Creek Sta   60.18 348  P      P       02 58 15.8 +0.5
MNTX  Cornudas Mount   61.10 325  P      P       02 58 22.0 +0.2
MSTX  Muleshoe         61.52 328  IAmb   IAmb    02 58 54.5
            comp=Z,10nm,1.2s
VNA3  Neumayer Olymp   62.64 162  P      P       02 58 32.9 +1.3
VNA1  Neumayer--Stat   62.84 161  P      P       02 58 32.6 -0.2
319A  Douglas          63.06 322  P      P       02 58 35.5 +0.5
319A                              IAmb   IAmb    02 58 37.4
            comp=Z,4.7nm,0.9s
VNA2  Neumayer--Watz   63.21 161  P      P       02 58 36.6 +1.3
            baz=290,slow=8.0
SNAA  Sanae            64.84 161  P      P       02 58 46.7 +0.7
GLMI  Grayling         64.92 348  P      P       02 58 47.4 +0.7
214A  Organ Pipe Nat   65.59 320  P      P       02 58 52.6 +1.2
214A                              IAmb   IAmb    02 58 54.8
            comp=Z,5.7nm,1.1s
X18A  Snowflake        65.75 324  P      P       02 58 52.6  0.0
SDCO  Great Sand Dun   65.86 329  P      P       02 58 54.4 +1.1
SDCO                              IAmb   IAmb    02 59 23.5
            comp=Z,3.9nm,0.9s
X16A  Lo Mia Camp, P   66.51 323  P      P       02 58 57.8 +0.4
WUAZ  Wupatki          67.27 324  P      P       02 59 02.7 +0.5
WUAZ                              IAmb   IAmb    02 59 06.1
            comp=Z,6.7nm,1.4s
PV01  Paradox Valley   67.70 327  P      P       02 59 05.9 +1.0
LIC   Lamto            67.92  75 eP      P       02 59 05.4 -1.1
            comp=Z,30nm,0.8s
TIC   Toumodi          68.09  74 eP      P       02 59 06.5 -1.1
KIC   Kosan Boka       68.23  75 eP      P       02 59 07.3 -1.2
            comp=Z,73nm,0.9s
DBIC  Dimbokro         68.25  75  P      P       02 59 08.1 -0.4
            comp=Z,25nm,0.7s,baz=226,slow=7.7,SNR=30
DBIC  Dimbokro         68.25  75  P      P       02 59 08.2 -0.3
U15A  North Rim        68.44 324  IAmb   IAmb    02 59 13.9
            comp=Z,5.1nm,1.2s
KNB   Kanab            69.16 324  P      P       02 59 15.7 +1.8
SRU   San Rafael Swe   69.44 327  P      P       02 59 16.7 +1.1
PDAR  Pinedale Array   71.71 330  P      P       02 59 31.4 +1.9
            comp=Z,0.3nm,0.6s,baz=115,slow=7.0,SNR=4.2
PDAR                              pP     pP      02 59 58.6 +0.6
            comp=Z,0.5nm,0.6s,baz=116,slow=6.1,SNR=3.7
KOWA  Kowa             72.22  67  P      P       02 59 32.0 -0.7
KOWA                              IAmb   IAmb    02 59 33.3
            comp=Z,9.7nm,0.6s
ULM   Lac du Bonnet    72.74 342  P      P       02 59 36.2 +1.2
            comp=Z,1.6nm,0.4s,baz=157,slow=4.3,SNR=7.6
ULM                               pP     pP      03 00 04.0 +0.3
            comp=Z,2.7nm,0.4s,baz=142,slow=6.6,SNR=4.1
ULM   Lac du Bonnet    72.74 342  IAmb   IAmb    02 59 44.5
            comp=Z,2.1nm,0.7s
NVAR  Mina Array Bea   73.28 322  P      P       02 59 40.3 +1.5
            comp=Z,0.3nm,0.6s,baz=144,slow=6.7,SNR=2.7
NVAR                              pP     pP      03 00 08.7 +1.4
            comp=Z,0.9nm,0.8s,baz=153,slow=6.5,SNR=6.1
YNE   Yellowstone No   73.63 331  P      P       02 59 41.5 +0.7
YHH   Holmes Hill      73.86 330  P      P       02 59 43.6 +1.4
GCMT  Greycliff        74.08 332  P      P       02 59 44.9 +1.7
PAHR  Pah Rah Range    74.75 322  IAmb   IAmb    03 00 18.5
            comp=Z,4.8nm,0.8s
ORV   Oroville         75.90 321  IAmb   IAmb    03 00 24.8
            comp=Z,5.1nm,1.0s
TOA0  Torodi Ar. Sit   76.72  71  P      P       02 59 58.0 -0.8
TOA0                              IAmb   IAmb    03 00 01.2
            comp=Z,10nm,0.9s
TORD  Torodi Ar. Bea   76.72  71  P      P       02 59 57.9 -0.9
            comp=Z,5.9nm,0.5s,baz=255,slow=5.0,SNR=18
TORD                              pP     pP      03 00 28.5 +0.9
            comp=Z,1.7nm,0.5s,baz=250,slow=5.0,SNR=1.9
TORD  Torodi Ar. Bea   76.72  71  P      P       02 59 58.0 -0.9
TSUM  Tsumeb           81.04 107  P      P       03 00 22.6  0.0
TSUM                              IAmb   IAmb    03 00 23.7
            comp=Z,6.0nm,0.8s
TAM   Tamanrasset      83.86  64  P      P       03 00 37.5 +0.3
ESDC  Sonseca Array    84.14  45  P      P       03 00 38.7 +0.6
            comp=Z,4.4nm,0.9s,baz=250,slow=4.8,SNR=12
ESDC  Sonseca Array    84.14  45  P      P       03 00 38.4 +0.4
BOSA  Boshof           84.91 118  P      P       03 00 42.5 +0.1
            comp=Z,2.4nm,0.5s,baz=256,slow=5.2,SNR=8.9
MAW   Mawson           86.92 163  P      P       03 00 51.7 +0.4
MAW                               IAmb   IAmb    03 00 53.4
            comp=Z,3.9nm,1.1s
YKA   Yellowknife Ar   88.63 341  P      P       03 00 60.0 +0.6
            comp=Z,3.9nm,0.9s,baz=132,slow=5.4,SNR=31
YKA                               pP     pP      03 01 29.6 +0.7
            comp=Z,3.6nm,0.5s,baz=128,slow=5.5,SNR=16
SUMG  Summit           93.50   9  P      P       03 01 22.7 +0.4
SUMG                              IAmb   IAmb    03 01 44.1
            comp=Z,3.8nm,1.1s
TULEG Thule            95.19   0  P      P       03 01 30.6 +1.2
H11S2 WAKE ISLAND Hy  127.26 279  T      T       05 26 41.5
            baz=100,slow=75,SNR=63
H11S1 WAKE ISLAND Hy  127.27 279  T      T       05 26 41.9
            baz=100,slow=75,SNR=67
H11N3 WAKE ISLAND Hy  127.27 281  T      T       05 26 43.1
            baz=100,slow=74,SNR=10
H11S3 WAKE ISLAND Hy  127.28 279  T      T       05 26 42.8
            baz=100,slow=75,SNR=78
H11N2 WAKE ISLAND Hy  127.28 281  T      T       05 26 43.8
            baz=100,slow=74,SNR=14
H11N1 WAKE ISLAND Hy  127.29 281  T      T       05 26 27.5
            baz=100,slow=74,SNR=13
ASAR  Alice Springs   132.11 209  PKP    PKPdf   03 07 20.7  0.0
            comp=Z,0.3nm,0.6s,baz=140,slow=2.5,SNR=2.7
ASAR                              pPKP   pPKPdf  03 07 51.5 -0.1
            comp=Z,0.7nm,0.6s,baz=144,slow=2.0,SNR=4.2
ASAR                              SKPbc  SKPbc   03 10 36.3 -1.2
            comp=Z,0.6nm,0.8s,baz=142,slow=3.7,SNR=4.6
WRA   Warramunga Arr  135.07 212  PKP    PKPdf   03 07 26.4  0.0
            comp=Z,0.9nm,0.8s,baz=148,slow=1.8,SNR=7.3
WRA                               pPKP   pPKPdf  03 07 57.2  0.0
            comp=Z,0.9nm,0.6s,baz=152,slow=1.7,SNR=4.1
WRA                               SKPbc  SKPbc   03 10 46.0 -1.3
            comp=Z,1.0nm,1.1s,baz=149,slow=2.8,SNR=4.8
ZALV  Zalesovo Beam   139.66  24  PKhKP  PKPpre  03 07 28.7
            comp=Z,2.0nm,0.7s,baz=288,slow=4.5,SNR=4.0
ZALV                              PKP    PKPdf   03 07 34.2 +0.5
            comp=Z,1.9nm,0.5s,baz=230,slow=1.1,SNR=8.1
ZALV                              pPKP   pPKPdf  03 08 05.0 +0.4
            comp=Z,2.3nm,0.9s,baz=291,slow=2.5,SNR=3.5
NIL   Nilore          143.44  59  PKPdf  PKPdf   03 07 41.3 +0.2
MKAR  Makanchi Array  143.62  34  PKhKP  PKPbc   03 07 38.2 -0.6
            comp=Z,0.8nm,0.6s,baz=300,slow=2.2,SNR=9.7
MKAR  Makanchi Array  143.62  34  PKPdf  PKPbc   03 07 38.5 -0.3
SONM  Songino Array   150.87   6  PKPbc  PKPbc   03 07 59.2 +0.2
            comp=Z,7.1nm,0.8s,baz=327,slow=1.4,SNR=21
SONM                              pPKPbc pPKPbc  03 08 31.1 +1.3
            comp=Z,2.3nm,0.5s,baz=185,slow=1.0,SNR=4.6
LZH   Lanzhou         161.77  18 ePKP    PKPdf   03 08 07.5 -0.3
LZH                               pPKP   pPKPdf  03 08 35.6 -3.2
LZH                               sPKP           03 08 47.8
LZH                               PKP    PKPab   03 08 57.9 +4.4
```

NNC 01 03:14:14.8±6.0**, 36.°60N×69.°99E, h55**km±162km**, mb3.7, mpv3.4, 3C-7D, Error ellipse: s-maj=49.7km s-min=39.1km az=143.0, Hindu Kush region**

```
Code  Station Name       Δ°  AZ°   Phase ID          Time      Res
                                  Op     ISC       h  m  s    ISC
KK31  Karatay Array     6.51   3 ⇑P      Pn      03 15 49.7 +1.8
            1.9nm,0.4s,baz=186,slow=13,SNR=48
KK31                             ⇓S      Sn      03 17 02.0 +1.3
            2.8nm,0.6s,baz=186,slow=22,SNR=7.5
AAK   Ala-Archa         6.96  29 ⇑P      Pn      03 15 53.6 -0.6
            1.3nm,0.5s
AAK                              ⇓S      Sn      03 17 09.8 -2.2
            3.3nm,0.6s
TKM2  Tokmak 2          7.64  33 ⇓P      Pn      03 16 01.9 -1.8
            2.2nm,1.1s
TKM2                             ⇓S      Sn      03 17 33.3 +4.3
            1.3nm,0.6s
AB31  Akbulak array    14.62 333 ⇑P      Pn      03 17 38.3  0.0
            0.9nm,0.3s,baz=147,slow=14,SNR=52
AB31                             ⇓S      Sn      03 20 17.4 -1.4
            1.2nm,0.9s
AKTO  Aktyubinsk       16.30 332 ⇓P      P       03 18 01.5 -0.5
            2.7nm,0.9s
AKTO                             ⇓S      Sn      03 20 58.3 -1.4
            1.3nm,0.9s
```

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*ATH **01** 03:43:01.5, 36.°40N×22.°76E, h58km±3km, ML3.6/11, Error ellipse: s-maj=3.2km s-min=1.3km az=70.0*
*THE **01** 03:43:03.9, 36.°39N×22.°76E, h49km±2km, ML3.6/8, Error ellipse: s-maj=2.0km s-min=0.8km az=156.0*
*BEO **01** 03:43:04.4±0.9, 36.°71N×22.°08E, h0km, ML3.8/7*
*HLW **01** 03:43:05.2, 35.°95N×23.°42E, h9km±21km, Md3.9*
ISC 01 03:43:00.4±1.0**, 36.°36N**±0.°05×**22.°67E**±0.°04**, h74**km±8km**, n81, σ2s08**/92**, Southern Greece**

```
Code  Station Name       Δ°  AZ°   Phase ID          Time      Res
                                  Op     ISC       h  m  s    ISC
KTHR  Kythira           0.29 111  P      Pn      03 43 11.8 -0.2
KTHR                              S      Sn      03 43 18.4 -2.1
            9µm,0.5s
KTHA  Kythira Island    0.33 109  P      Pn      03 43 12.3 +0.1
KTHA                              S      Sn      03 43 18.6 -2.4
KTHA                              AML    AML     03 43 20.8
            comp=N,12918µm,0.3s
KTHA                              AML    AML     03 43 21.9
            comp=E,23699µm,0.3s
KTHA  Kythira Island    0.33 109  P      Pn      03 43 12.3 +0.1
KTHA                              S      Sn      03 43 19.1 -1.9
            comp=E,9µm,0.3s
VLI   Veliai            0.41  31  P      Pn      03 43 13.0 +0.2
VLI                               S      Sn      03 43 20.4 -1.6
VLI                               AML    AML     03 43 25.9
            comp=N,8419µm,0.6s
```

VLI				AML	AML	03 43 26.0	
	comp=E,18604µm,0.5s						
VLI	**Veliai**	**0.41**	**31**	P	**Pn**	**03 43 13.0**	**+0.2**
VLI				S	**Sn**	**03 43 20.9**	**-1.1**
MNVA	**Monemvasia**	**0.44**	**42**	P	**Pn**	**03 43 13.2**	**+0.2**
MNVA				AML	AML	03 43 21.9	
	comp=N,16385µm,0.3s						
MNVA				AML	AML	03 43 21.9	
	comp=E,13983µm,0.5s						
ANKY	**Antikythira Is**	**0.71**	**134**	P	**Pn**	**03 43 17.4**	**+1.7**
ANKY				S	**Sn**	**03 43 28.0**	**+1.0**
ANKY				AML	AML	03 43 30.5	
	comp=N,13374µm,0.4s						
ANKY				AML	AML	03 43 31.9	
	comp=E,18633µm,0.6s						
ANKY	**Antikythira Is**	**0.71**	**134**	P	**Pn**	**03 43 17.6**	**+1.9**
ANKY				S	**Sn**	**03 43 28.0**	**+1.0**
	comp=E,7µm,0.3s						
PYL	**PYLOS**	**0.92**	**306**	P	**Pn**	**03 43 19.9**	**+1.8**
PYL				S	**Sn**	**03 43 33.8**	**+2.6**
PYL				AML	AML	03 43 35.3	
	comp=E,4410µm,0.5s						
PYL				AML	AML	03 43 46.0	
	comp=N,3398µm,0.9s						
PYL	**PYLOS**	**0.92**	**306**	P	**Pn**	**03 43 19.9**	**+1.8**
PYL				S	**Sn**	**03 43 33.9**	**+2.6**
ITM	**Ithomi**	**1.01**	**324**	P	**Pn**	**03 43 21.7**	**+2.5**
ITM				S	**Sn**	**03 43 35.8**	**+2.5**
ITM				AML	AML	03 43 39.4	
	comp=N,4986µm,0.3s						
ITM				AML	AML	03 43 40.2	
	comp=E,5252µm,0.3s						
ITM	**Ithomi**	**1.01**	**324**	P	**Pn**	**03 43 21.7**	**+2.5**
ITM				S	**Sn**	**03 43 35.8**	**+2.5**
	comp=E,3µm,0.3s						
VLX	**Vlachokerasia**	**1.03**	**347**	P	**Pn**	**03 43 21.8**	**+2.3**
VLX				AML	AML	03 43 43.0	
	comp=E,5468µm,0.6s						
VLX				AML	AML	03 43 48.7	
	comp=N,2839µm,0.8s						
VLX	**Vlachokerasia**	**1.03**	**347**	P	**Pn**	**03 43 22.4**	**+2.8**
KRND	**KRANIDI**	**1.09**	**21**	P	**Pn**	**03 43 22.0**	**+1.8**
KRND				S	**Sn**	**03 43 35.7**	**+0.8**
KRND				AML	AML	03 43 38.1	
	comp=E,8434µm,0.4s						
KRND				AML	AML	03 43 38.2	
	comp=N,6561µm,0.4s						
KRND	**KRANIDI**	**1.09**	**21**	P	**Pn**	**03 43 22.0**	**+1.8**
KRND				S	**Sn**	**03 43 36.7**	**+1.8**
	comp=N,4µm,0.5s						
YDRA	**Hydra**	**1.17**	**33**	P	**Pn**	**03 43 22.9**	**+1.7**
EPID	**Epidavros**	**1.30**	**16**	P	**Pn**	**03 43 25.8**	**+2.9**
EPID				S	**Sn**	**03 43 41.8**	**+2.0**
IMMV	**Iera Moni Meta**	**1.39**	**130**	P	**Pn**	**03 43 26.5**	**+2.4**
IMMV				AML	AML	03 43 50.8	
	comp=E,3103µm,0.6s						
IMMV				AML	AML	03 43 53.4	
	comp=N,3412µm,0.4s						
IMMV	**Iera Moni Meta**	**1.39**	**130**	P	**Pn**	**03 43 26.5**	**+2.4**
AMT	**Artemida-Makis**	**1.40**	**327**	P	**Pn**	**03 43 27.8**	**+3.6**
MHLO	**Agia Marina, M**	**1.43**	**76**	P	**Pn**	**03 43 25.9**	**+1.4**
MHLO				AML	AML	03 43 46.9	
	comp=N,6472µm,0.4s						
MHLO				AML	AML	03 43 47.1	
	comp=E,5049µm,0.4s						
MHLO	**Agia Marina, M**	**1.43**	**76**	P	**Pn**	**03 43 25.8**	**+1.2**
VAM	**Vamos**	**1.57**	**127**	P	**Pn**	**03 43 28.7**	**+2.3**
VAM				S	**Sn**	**03 43 49.9**	**+4.0**
VAM				AML	AML	03 43 56.4	
	comp=N,2960µm,0.3s						
VAM				AML	AML	03 43 57.6	
	comp=E,3126µm,0.5s						
VAM	**Vamos**	**1.57**	**127**	P	**Pn**	**03 43 28.5**	**+2.2**
LOUT	**Loutraki**	**1.64**	**8**	P	**Pn**	**03 43 30.0**	**+2.7**
LTK	**Loutraki**	**1.67**	**8**	P	**Pn**	**03 43 29.9**	**+2.1**
KLV	**Kalavryta, Ach**	**1.73**	**346**	P	**Pn**	**03 43 32.7**	**+4.2**
ATH	**Athens Observa**	**1.81**	**27**	P	**Pn**	**03 43 31.6**	**+2.1**
ATH				S	**Sn**	**03 43 53.3**	**+1.6**
	comp=E,912nm,0.4s						
ATHU	**Athens Univers**	**1.83**	**29**	P	**Pn**	**03 43 31.4**	**+1.6**
ATHU				S	**Sn**	**03 43 53.7**	**+1.5**
	comp=E,262nm,0.4s						
PTL	**Penteli**	**1.93**	**29**	P	**Pn**	**03 43 33.2**	**+2.0**
DION	**Dionisos Attik**	**1.98**	**30**	P	**Pn**	**03 43 33.6**	**+1.7**
DION				S	**Sn**	**03 43 56.8**	**+0.8**
KALE	**Kalithea**	**2.07**	**348**	P	**Pn**	**03 43 36.4**	**+3.3**
IDI	**Anoyia**	**2.10**	**120**	P	**Pn**	**03 43 34.2**	**+0.7**
EREA	**Eretria**	**2.28**	**26**	P	**Pn**	**03 43 37.9**	**+1.9**
EREA				S	**Sn**	**03 44 04.9**	**+1.7**
	comp=E,580nm,0.3s						
PDO	**Prodromos**	**2.52**	**332**	P	**Pn**	**03 43 43.6**	**+4.4**
AGG	**Agios Georgios**	**2.67**	**354**	P	**Pn**	**03 43 43.6**	**+2.5**
NYDR	**Nydri-Lefkada**	**2.82**	**327**	P	**Pn**	**03 43 46.4**	**+3.2**
IGT	**Igoumenitsa**	**3.66**	**330**	*e*Pn	**Pn**	**03 43 56.4**	**+1.8**
IGT				*e*Sn	**Sn**	**03 44 33.9**	**-2.7**
FNA	**Florina**	**4.53**	**347**	*e*Pn	**Pn**	**03 44 08.0**	**+1.5**
FNA				*e*Sn	**Sn**	**03 44 56.1**	**-1.7**
SRS	**Serrai**	**4.80**	**8**	*e*Pn	**Pn**	**03 44 14.1**	**+4.0**
SLUM	**Salum**	**5.30**	**156**	P	**Pn**	**03 44 18.4**	**+1.5**
	baz=160						
SLUM				S	Sn	03 45 04.2	-13
	baz=160						
SKO	**Skopje**	**5.68**	**351**	*e*Sn	**Sn**	**03 45 24.1**	**-1.9**
PDG	**Podgorica**	**6.61**	**337**	*e*Pn	**Pn**	**03 44 35.5**	**+0.7**
HCY	**Herceg Novi**	**6.88**	**333**	*e*Pn	**Pn**	**03 44 38.3**	**-0.2**
ZAPS	**Zavoj**	**6.90**	**360**	*e*Pn	**Pn**	**03 44 42.6**	**+3.8**
TREB	**Trebinje**	**7.17**	**334**	*e*Pn	**Pn**	**03 44 41.6**	**-0.9**
DBRK	**Dubrovnik**	**7.20**	**332**	*e*Pn	Pn	03 44 41.0	-1.9
DBRK				Sn	Sn	03 45 52.1	-11
IVAS	**Ivanjica**	**7.46**	**346**	*e*Pn	**Pn**	**03 44 46.4**	**-0.1**
IVAS				*e*Sn	**Sn**	**03 46 05.1**	**-4.4**
SWA2		**7.48**	**161**	P	**Pn**	**03 44 47.0**	**+0.3**
	baz=165						
SWA2				S	Sn	03 46 00.8	-9.3
	baz=165						
STON	**Ston**	**7.54**	**331**	*e*Pn	Pn	03 44 45.9	-1.6
STON				Sn	Sn	03 46 01.4	-10
STON	**Ston**	**7.54**	**331**	*e*Pn	Pn	03 44 45.6	-2.0
GRUS	**Gruza**	**7.66**	**349**	*e*Pn	**Pn**	**03 44 50.1**	**+0.9**
GRUS				*e*Sn	**Sn**	**03 46 11.5**	**-2.9**
RUDO	**Rudo**	**7.67**	**342**	*e*Pn	**Pn**	**03 44 49.1**	**-0.3**
BBLS	**Lazići**	**7.90**	**343**	*e*Pn	**Pn**	**03 44 52.6**	**+0.1**
BBLS				*e*Sn	Sn	03 46 14.3	-6.0
BBLS	**Lazići**	**7.90**	**343**	*e*Pn	**Pn**	**03 44 52.0**	**-0.5**
DIVS	**Divibare**	**7.99**	**346**	*e*Pn	**Pn**	**03 44 53.6**	**-0.2**
DIVS				*e*Sn	Sn	03 46 17.1	-5.5
DIVS	**Divibare**	**7.99**	**346**	*e*Pn	**Pn**	**03 44 52.9**	**-0.9**
TRUS	**Trudelj**	**8.04**	**348**	*e*Sn	**Sn**	**03 46 18.7**	**-4.9**
MAKA	**Makarska**	**8.17**	**330**	*i* Pn	Pn	03 44 55.1	-1.0
MAKA				Sn	Sn	03 46 18.2	-8.5
HAPS	**Han Pijesak,BI**	**8.22**	**341**	*e*Pn	Pn	03 44 55.4	-1.5
RICI	**Ricice**	**8.29**	**331**	*e*Pn	Pn	03 44 56.9	-0.9
RICI				Sn	Sn	03 46 21.6	-8.2
HVAR	**Hvar**	**8.32**	**327**	*e*Pn	**Pn**	**03 44 57.5**	**-0.7**
HVAR				Sn	Sn	03 46 21.5	-8.9
KIJV	**Kijevo**	**9.01**	**330**	*i* Pn	**Pn**	**03 45 07.5**	**-0.1**
KIJV				Sn	Sn	03 46 38.6	-8.8
FRGS	**Fruska Gora**	**9.05**	**347**	*e*Pn	Pn	03 45 05.6	-2.5
ZIRJ	**Zirje**	**9.06**	**326**	*e*Pn	Pn	03 45 06.6	-1.6
ZIRJ				Sn	Sn	03 46 38.7	-10
MGRS	**Mrkonjic Grad**	**9.10**	**334**	*e*Pn	**Pn**	**03 45 08.2**	**-0.7**
MORI	**Morici**	**9.19**	**327**	*e*Pn	Pn	03 45 08.8	-1.3
BLY	**Banja Luka**	**9.36**	**335**	*e*Pn	**Pn**	**03 45 12.2**	**-0.1**
HNAT	**Natroun**	**9.46**	**133**	P	**Pn**	**03 45 14.9**	**+1.0**
	baz=134						
DUGI	**Dugi Otok**	**9.59**	**325**	*e*Pn	**Pn**	**03 45 15.0**	**-0.5**
UDBI	**Udbina**	**9.70**	**329**	*i* Pn	**Pn**	**03 45 17.5**	**+0.4**
GLL	**Jalalah**	**10.16**	**129**	P	**Pn**	**03 45 22.4**	**-1.1**
	baz=130						
MORH	**Mrgy, Hungar**	**10.29**	**344**	*e*Pn	Pn	03 45 23.1	-2.0
HFRF	**Wahat Farafira**	**10.36**	**151**	P	**Pn**	**03 45 25.3**	**-0.9**
	baz=153						
NBNS	**Bani Suef**	**10.61**	**134**	P	**Pn**	**03 45 28.8**	**-0.7**
	baz=135						
CRES	**Cresnjev**	**10.90**	**332**	*e*Pn	Pn	03 45 32.3	-1.1
CEY	**Cerknica**	**11.24**	**329**	*e*Pn	Pn	03 45 34.9	-3.1
SOKA	**Soboth**	**11.78**	**333**	*e*Pn	**Pn**	**03 45 44.7**	**-0.7**
	comp=E,0.3nm,0.2s						
OBKA	**Obir**	**11.82**	**332**	*e*Pn	**Pn**	**03 45 46.3**	**+0.3**
	comp=E,0.4nm,0.2s						
MOA	**Molln**	**13.05**	**334**	*e*Pn	**Pn**	**03 46 03.4**	**+0.8**
	comp=E,0.8nm,0.4s						

SNET ***01*** *04:28:05.7±0.9, 14°.51N×89°.20W, h2^{km}±4^{km}, ML3.4*
INET ***01*** *04:28:06.4, 14°.53N×89°.23W, h1^{km}, MW3.9*
GCG ***01*** *04:28:07.9±0.8, 15°.40N×89°.54W, h77^{km}, MD3.6*
ISC 01 04:28:04.8±1.9**, 14°.55N**±0°.05×**89°.11W**±0°.09**, h12**^{km}±10^{km}**,**
n17, σ**0**^{s}**86**/24**, 2C, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESQI	**Esquipulas**	**0.23**	**272**	⇑*i*P	**Pg**	**04 28 09.9**	**+0.3**
ESQI				*e*S	**Sg**	**04 28 12.1**	**-0.9**
MTO3	**Montecristo**	**0.29**	**238**	*e*P	**Pg**	**04 28 10.9**	**+0.1**
MTO3				*e*S	**Sg**	**04 28 15.0**	**+0.2**
TACO	**Tacachico**	**0.62**	**202**	⇑*e*P	**Pb**	**04 28 17.5**	**-0.2**
TACO				*e*S	**Sb**	**04 28 26.7**	**+0.2**
MRL	**Marmol**	**0.77**	**313**	*e*P	**Pn**	**04 28 20.6**	**-1.1**
MRL				*e*S	**Sb**	**04 28 31.2**	**+0.5**
CEDA	**San Andres**	**0.79**	**201**	*e*P	**Pn**	**04 28 20.8**	**-1.1**
CEDA				*e*S	**Sb**	**04 28 31.8**	**+0.4**
CEDA				IAML		04 28 41.5	
	comp=Z,2µm,0.4s						
BOQS	**Boqueron**	**0.83**	**192**	*e*P	**Pn**	**04 28 21.7**	**-0.8**
RTR	**El Retiro**	**0.83**	**219**	*e*P	**Pn**	**04 28 21.4**	**-1.2**
SNJE	**San Jose**	**0.83**	**215**	*e*P	**Pb**	**04 28 21.2**	**-0.1**
SBLS	**San Blas**	**0.87**	**215**	*e*P	**Pb**	**04 28 21.5**	**-0.5**
CEVE	**Cerro Verde**	**0.88**	**215**	*e*P	**Pn**	**04 28 22.1**	**-1.1**
CEVE				*e*S	**Sb**	**04 28 34.7**	**+0.8**
CEVE				IAML		04 28 39.5	
	comp=Z,2µm,0.3s						
LFRS	**El Faro**	**0.92**	**177**	*e*P	**Pn**	**04 28 23.1**	**-0.7**
JAYA	**Jayaque - finc**	**0.95**	**200**	*e*P	**Pn**	**04 28 23.4**	**-0.8**
COEG	**Centro de Oper**	**0.95**	**167**	*e*P	**Pn**	**04 28 23.7**	**-0.4**
COEG				IAML		04 28 43.0	
	comp=Z,1µm,0.4s						
PQSS	**Presa 15 de Se**	**1.06**	**150**	*e*P	**Pn**	**04 28 25.7**	**+0.1**
PQSS				IAML		04 28 44.6	
	comp=Z,827nm,0.1s						
NBG	**Las Nubes**	**1.20**	**272**	*e*P	**Pg**	**04 28 28.8**	**+0.8**
NBG				*e*S	**Sg**	**04 28 45.6**	**+2.0**
PCG	**Pacaya**	**1.46**	**264**	*e*P	**Pg**	**04 28 33.8**	**+0.9**
FUG	**Fuego 3**	**1.68**	**267**	*e*P	**Pg**	**04 28 37.2**	**+0.1**

IDC ***01*** *04:30:35.7±2.5, 14°.23S×167°.25E, h177^{km}±23^{km}, mb3.7/11, mb1 3.9/12, mb1mx3.7/35, mbtmp4.2/12, Error ellipse: s-maj=27.8km s-min=16.9km az=138.0*
NEIC ***01*** *04:30:36.6±1.0, 14°.3S±0°.1×167°.3E±0°.2, h191^{km}±7^{km}, mb4.3/16, Error ellipse: s-maj=24.8km s-min=15.0km az=108.0*
ISC 01 04:30:37.4±0.6**, 14°.36S**±0°.08×**167°.3E**±0°.1**, h200**^{km}**, n40,**
σ**0**^{s}**86**/42**, mb4.0**/16**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**1.09**	**187**		**Pn**	**04 31 06.3**	**-1.5**
DZM	**Mont Dzumac**	**7.71**	**186**	P	**Pn**	**04 32 28.7**	**+1.6**
	2.4nm,0.3s,baz=29,slow=6.3,SNR=11						
DZM				S	**Sn**	**04 33 54.3**	**-0.1**
	0.3nm,0.3s,baz=48,slow=17,SNR=3.2						
EIDS	**Eidsvold**	**18.79**	**232**	P	**P**	**04 34 41.3**	**-0.6**
EIDS				IAmb	IAmb	04 34 48.5	
	comp=Z,20nm,1.5s						
CTAO	**Charters Tower**	**20.92**	**251**	P	**P**	**04 35 04.7**	**-0.1**
CTAO				IAmb	IAmb	04 35 07.1	
	comp=Z,5.6nm,0.9s						
ARMA	**Armidale**	**21.55**	**220**	P	**P**	**04 35 12.4**	**+1.0**
ARMA				IAmb	IAmb	04 35 34.6	
	comp=Z,17nm,1.4s						
COEN	**Coen**	**23.43**	**268**	P	**P**	**04 35 28.5**	**-0.4**
COEN				IAmb	IAmb	04 35 31.1	
	comp=Z,7.0nm,0.8s						
BKZ	**Black Stump Fm**	**25.99**	**164**	P	**P**	**04 35 50.7**	**-1.1**
STKA	**Stephens Creek**	**29.28**	**229**	P	**P**	**04 36 22.4**	**+1.2**
	comp=Z,6.0nm,0.4s,baz=55,slow=9.3,SNR=36						
STKA				PcP	**PcP**	**04 39 22.6**	**-0.2**
	comp=Z,1.4nm,0.5s,baz=333,slow=4.5,SNR=1.8						
STKA	**Stephens Creek**	**29.28**	**229**	P	**P**	**04 36 22.5**	**+1.3**
STKA				IAmb	IAmb	04 36 23.1	
	comp=Z,1.8nm,0.4s						
TOO	**Toolangi**	**30.19**	**216**	P	**P**	**04 36 29.5**	**+0.4**
WB0	**Warramunga Arr**	**31.92**	**256**	P	**P**	**04 36 43.9**	**-0.6**
WB0				IAmb	IAmb	04 36 44.1	
	comp=Z,3.6nm,0.6s						
WB2	**Warramunga Arr**	**31.97**	**255**	P	**P**	**04 36 43.8**	**-1.2**
WB2				IAmb	IAmb	04 37 00.6	
	comp=Z,8.8nm,1.4s						
WRA	**Warramunga Arr**	**31.98**	**255**	P	**P**	**04 36 44.1**	**-1.0**
	comp=Z,1.8nm,0.6s,baz=86,slow=9.3,SNR=20						
WRA				PcP	**PcP**	**04 39 30.6**	**+0.3**
	comp=Z,0.5nm,0.8s,baz=74,slow=3.5,SNR=2.2						
WRA	**Warramunga Arr**	**31.98**	**255**	IAmb	IAmb	04 36 50.0	
	comp=Z,0.1nm,0.9s						
AS31	**Alice Springs**	**32.87**	**249**	P	**P**	**04 36 52.2**	**-0.6**
ASAR	**Alice Springs**	**32.87**	**249**	P	**P**	**04 36 52.0**	**-0.7**
	comp=Z,2.4nm,0.5s,baz=75,slow=9.6,SNR=56						
ASAR				PcP	**PcP**	**04 39 32.6**	**-0.1**
	comp=Z,0.3nm,0.5s,baz=101,slow=3.9,SNR=2.7						
BBOO	**Buckleboo**	**33.86**	**232**	P	**P**	**04 37 01.2**	**+0.1**
FITZ	**Fitzroy Crossi**	**40.15**	**259**	P	**P**	**04 37 54.9**	**+0.6**
	comp=Z,3.1nm,0.8s,baz=79,slow=7.7,SNR=5.6						
FITZ	**Fitzroy Crossi**	**40.15**	**259**	IAmb	IAmb	04 37 55.7	
	comp=Z,4.7nm,0.9s						
NWAO	**Narrogin (SRO)**	**49.00**	**239**	P	**P**	**04 39 03.8**	**-0.3**
	comp=Z,8.1nm,0.9s,baz=34,slow=7.3,SNR=1.6						
NWAO	**Narrogin (SRO)**	**49.00**	**239**	IAmb	IAmb	04 39 14.4	
	comp=Z,26nm,1.4s						
PETK	**Petropavlovsk-**	**67.70**	**354**	P	**P**	**04 41 12.9**	**-0.1**
	comp=Z,2.4nm,0.8s,baz=152,slow=6.5,SNR=2.4						
SONM	**Songino Array**	**82.24**	**324**	P	**P**	**04 42 38.1**	**+1.6**
	comp=Z,0.3nm,0.4s,baz=138,slow=5.8,SNR=2.3						
IL31		**86.16**	**18**	P	**P**	**04 42 55.0**	**-0.6**
IL31				IAmb	IAmb	04 43 10.8	
	comp=Z,5.9nm,1.4s						
ILAR	**Eielson Array**	**86.16**	**18**	P	**P**	**04 42 55.0**	**-0.7**
	comp=Z,0.7nm,0.7s,baz=242,slow=4.9,SNR=10						
NVAR	**Mina Array Bea**	**86.98**	**49**	P	**P**	**04 43 01.4**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=232,slow=5.6,SNR=2.9						
SNAA	**Sanae**	**93.92**	**183**	P	**P**	**04 43 30.9**	**-1.1**
VNA3	**Neumayer Olymp**	**94.58**	**181**	P	**P**	**04 43 34.1**	**-0.9**
VNA2	**Neumayer--Watz**	**94.85**	**182**	P	**P**	**04 43 35.7**	**-0.5**
	baz=191,slow=4.7						
MK31	**Makanchi Array**	**96.99**	**316**	P	**P**	**04 43 46.3**	**0.0**
MKAR	**Makanchi Array**	**96.99**	**316**	P	**P**	**04 43 47.3**	**+1.0**
	comp=Z,0.3nm,0.6s,baz=90,slow=5.9,SNR=3.9						
ZALV	**Zalesovo Beam**	**97.14**	**324**	P	**P**	**04 43 45.0**	**-1.8**
YKA	**Yellowknife Ar**	**97.19**	**27**	P	**P**	**04 43 47.0**	**+0.2**
	comp=Z,0.2nm,0.7s,baz=254,slow=3.7,SNR=3.7						
ARCES	**ARCESS Array B**	**119.92**	**345**	PKP	**PKPdf**	**04 49 03.4**	**-0.1**
	comp=Z,1.8nm,0.3s,baz=68,slow=2.3,SNR=44						
FINES	**FINESS Array B**	**125.41**	**338**	PKP	**PKPdf**	**04 49 14.4**	**+0.3**
	comp=Z,0.7nm,0.3s,baz=48,slow=2.1,SNR=10						
NOA	**NORSAR Array B**	**130.29**	**345**	PKP	**PKiKP**	**04 49 24.7**	**+0.3**
	comp=Z,0.5nm,0.8s,baz=35,slow=2.2,SNR=1.6						
AKASG	**Malin Array Be**	**130.47**	**326**	SKPbc	**SKPab**	**04 52 30.4**	**+1.4**
	comp=Z,0.9nm,0.6s,baz=47,slow=4.1,SNR=6.3						
GERES	**GERESS Array B**	**139.35**	**333**	PKP	**PKPdf**	**04 49 41.0**	**0.0**
	comp=Z,0.3nm,0.5s,baz=75,slow=1.1,SNR=4.3						
GERES				SKPbc	**SKiKP**	**04 53 00.2**	**-0.2**
	comp=Z,0.4nm,0.7s,baz=5.4,slow=4.1,SNR=3.2						
KEST	**Kesra**	**150.97**	**321**	PKPbc	**PKiKP**	**04 50 08.3**	**+0.8**
	comp=Z,7.3nm,0.9s,baz=109,slow=3.9,SNR=5.6						
TORD	**Torodi Ar. Bea**	**166.00**	**267**	PKP	**PKPdf**	**04 50 19.7**	**+0.3**
	comp=Z,0.4nm,0.7s,baz=132,slow=2.1,SNR=1.5						

BJI ***01*** *04:36:32.3±0.0, 5°.70S×151°.69E, h54^{km}, mB5.1/31, mb4.7/43, Ms4.8/27, Ms7 4.6/27*
IDC ***01*** *04:36:33.5±0.5, 5°.50S×151°.66E, h34^{km}±3^{km}, mb4.5/22, mb1 4.6/22, mb1mx4.5/30, mbtmp4.7/22, MS4.3/19, Ms1 4.3/19, ms1mx4.3/19, Error ellipse: s-maj=15.2km s-min=11.4km az=83.0*
NEIC ***01*** *04:36:36.2±1.3, 5°.45S±0°.07×151°.59E±0°.08, h58^{km}±3^{km}, mb5.0/90, Error ellipse: s-maj=13.2km s-min=8.9km az=124.0*
GCMT ***01*** *04:36:36.2±0.2, 5°.50S±0°.02×151°.62E±0°.02, h48^{km}±1^{km}, MW5.0/102, Moment Tensor Solution. s66,c87; s102,c131; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$3.39±.17; M$_{\theta\theta}$-3.67±.13; M$_{\phi\phi}$0.28±.13; M$_{r\theta}$-1.85±.09; M$_{\theta\phi}$-2.17±.13; M$_{\phi r}$-1.07±.09; Best double couple: M$_0$4.54700×10^{16} NP1:φ$_s$72.00000°, δ31.00000°, λ99.00000°. NP2:φ$_s$242.00000°, δ59.00000°, λ85.00000°. Principal axes: T 3.9370, Plg75.0000°, Azm137.0000°; N 1.2230, Plg4.0000°, Azm245.0000°; P -5.1580, Plg14.0000°, Azm336.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
DJA ***01*** *04:36:36.6±0.3, 5°S±3°×15°2E±°, h59^{km}±4^{km}, M5.1/29, mb5.0/29, mB5.4/9, MLv5.5/3, Mw(mB)4.8/9, MwMwp4.6/1, Mwp5.0/1*
ISC 01 04:36:34.4±0.5**, 5°.42S**±0°.05×**151°.64E**±0°.05**, h41**^{km}±3^{km}**,**
h41^{km}**:pP-P, n240,** σ**1**^{s}**32**/209**, mb5.0**/69**, MS4.5**/26**, 9C-4D,**
New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.33**	**23**	Pn	**Pn**	**04 36 58.5**	**+1.9**
RABL	**Rabaul**	**1.33**	**23**	P	**Pn**	**04 36 59.5**	**+2.9**
MANU	**Manus Island**	**5.43**	**308**		Pn	04 37 58.1	+5.2
PMG	**Port Moresby**	**5.95**	**228**	Pn	**Pn**	**04 38 02.1**	**+2.0**
	22nm,0.3s,baz=28,slow=9.8,SNR=43						
PMG				Sn	**Sn**	**04 39 10.0**	**+3.0**
	34nm,0.3s,baz=291,slow=21,SNR=9.2						
PMG	**Port Moresby**	**5.95**	**228**	P	**Pn**	**04 38 02.6**	**+2.5**
HNR	**Honiara**	**9.15**	**116**	LR	LR	04 42 07.0	
	comp=Z,1µm,21.1s,baz=270,slow=37						
JAY	**Jayapura**	**11.28**	**284**	LR	LR	04 43 07.0	
	comp=Z,2µm,19.6s,baz=88,slow=35						
GENI	**Genyem**	**11.78**	**283**	P	**Pn**	**04 39 24.4**	**+4.3**
	4µm169nm,1.5s						
COEN	**Coen**	**11.89**	**224**	Pn	**Pn**	**04 39 22.0**	**+0.4**
SMPI	**Sarmi**	**13.34**	**284**	P	**Pn**	**04 39 44.4**	**+3.0**
	1µm52nm,1.6s						
CTAO	**Charters Tower**	**15.49**	**199**	P	**P**	**04 40 14.9**	**+0.9**
SANVU	**Saraoutou**	**18.25**	**124**	P	**Pn**	**04 40 46.4**	**+1.7**
SANVU				IAmb	IAmb	04 40 48.2	
	comp=Z,97nm,0.9s						
SANVU	**Saraoutou**	**18.25**	**124**	P	**Pn**	**04 40 47.0**	**+2.3**
FAKI	**Fak Fak**	**19.50**	**277**	P	**P**	**04 40 58.1**	**-0.2**
EIDS	**Eidsvold**	**19.84**	**181**	P	**P**	**04 41 02.2**	**+0.2**
SIJI	**Sorong**	**20.83**	**282**	P	**P**	**04 41 13.6**	**+0.7**
	comp=Z,23nm,0.9s,baz=70,slow=9.5,SNR=9.6						
SIJI				LR	LR	04 50 44.7	
	comp=Z,431nm,20.1s,baz=96,slow=41						
SWI	**Sorong**	**20.84**	**282**	P	Pn	04 41 14.9	-0.7
	comp=Z,1µmcomp=Z,138nm,1.2s						
MTN	**Manton Dam**	**21.54**	**249**	P	**P**	**04 41 21.1**	**+0.7**
MTN				IAmb	IAmb	04 41 31.6	
	comp=Z,66nm,1.1s						
DZM	**Mont Dzumac**	**21.89**	**141**	P	**P**	**04 41 23.5**	**-0.7**
	comp=Z,11nm,0.7s,baz=325,slow=16,SNR=6.6						
DZM				LR	LR	04 48 48.2	
	comp=Z,3µm,21.6s,baz=282,slow=34						
DZM	**Mont Dzumac**	**21.89**	**141**	IAmb	IAmb	04 41 37.4	
	comp=Z,65nm,1.2s						
WB0	**Warramunga Arr**	**22.02**	**228**	P	**P**	**04 41 25.1**	**-0.4**
WR0	**Warramunga Arr**	**22.03**	**227**	P	**P**	**04 41 25.3**	**-0.4**
WRAB	**Tennant Creek**	**22.16**	**228**	P	**P**	**04 41 27.1**	**+0.1**
WB2	**Warramunga Arr**	**22.16**	**228**	P	**P**	**04 41 26.7**	**-0.4**
WRA	**Warramunga Arr**	**22.17**	**228**	P	**P**	**04 41 27.0**	**-0.2**
	comp=Z,37nm,0.4s,baz=52,slow=10.0,SNR=133						
WRA				PcP	**PcP**	**04 45 22.8**	**-0.4**
	comp=Z,1.6nm,1.0s,baz=48,slow=2.2,SNR=1.9						
WRA				ScP	**ScP**	**04 48 57.8**	**+0.2**
	comp=Z,1.0nm,0.6s,baz=47,slow=2.8,SNR=10						
WRA	**Warramunga Arr**	**22.17**	**228**	IAmb	IAmb	04 41 30.0	
	comp=Z,3.7nm,0.9s						
TARA	**Tarawa**	**22.30**	**73**	P	**P**	**04 41 29.9**	**+1.3**
ANA2	**Anatahan**	**22.40**	**345**	P	**P**	**04 41 29.5**	**-0.1**
ARMA	**Armidale**	**24.87**	**180**	P	**P**	**04 41 53.3**	**-0.1**
AS31	**Alice Springs**	**24.92**	**222**	P	**P**	**04 41 54.0**	**+0.1**
AS31				IAmb	IAmb	04 41 56.3	
	comp=Z,45nm,1.0s						
ASAR	**Alice Springs**	**24.92**	**222**	P	**P**	**04 41 54.0**	**+0.1**
	comp=Z,83nm,0.8s,baz=55,slow=8.7,SNR=201						
ASAR				PcP	**PcP**	**04 45 29.7**	**+0.7**
	comp=Z,1.1nm,0.7s,baz=34,slow=3.6,SNR=2.0						
ASAR				ScP	**ScP**	**04 49 05.7**	**+0.8**
	comp=Z,1.3nm,0.9s,baz=40,slow=3.3,SNR=5.3						
ASAR				LR	LR	04 51 36.6	
	comp=Z,477nm,21.4s,baz=58,slow=36						
ASAR	**Alice Springs**	**24.92**	**222**	P	**P**	**04 41 53.3**	**-0.6**
SOEI	**Soe**	**27.46**	**259**	P	**P**	**04 42 16.5**	**-0.6**
SOEI				IAmb	IAmb	04 42 39.5	
	comp=Z,41nm,0.9s						
SOEI	**Soe**	**27.46**	**259**	P	**P**	**04 42 17.9**	**+0.8**
	comp=Z,48nm,1.2s						
STKA	**Stephens Creek**	**27.95**	**198**	P	**P**	**04 42 19.6**	**-1.6**
	comp=Z,11nm,0.9s,baz=25,slow=12,SNR=9.1						
STKA				LR	LR	04 53 56.4	
	comp=Z,739nm,19.2s,baz=22,slow=37						
STKA	**Stephens Creek**	**27.95**	**198**	P	**P**	**04 42 20.7**	**-0.4**
BATI	**Baumata**	**28.11**	**259**	P	**P**	**04 42 21.8**	**-1.0**
	comp=Z,53nm,0.7s,baz=32,slow=2.5,SNR=5.5						
BATI	**Baumata**	**28.11**	**259**	P	**P**	**04 42 24.7**	**+1.9**
	comp=Z,38nm,0.9s						
FITZ	**Fitzroy Crossi**	**28.35**	**241**	P	**P**	**04 42 24.3**	**-0.5**
	comp=Z,26nm,0.5s,baz=49,slow=8.0,SNR=95						
FITZ	**Fitzroy Crossi**	**28.35**	**241**	P	**P**	**04 42 24.3**	**-0.5**
FITZ				IAmb	IAmb	04 42 40.4	
	comp=Z,37nm,0.7s						
MSVF	**Nonsavu**	**28.57**	**118**	P	**P**	**04 42 28.6**	**+1.7**
MSVF				IAmb	IAmb	04 42 30.4	
	comp=Z,40nm,1.1s						
LUWI	**Luwuk**	**29.14**	**278**	P	**P**	**04 42 29.7**	**-2.2**
MMRI	**Maumere**	**29.35**	**262**	P	**P**	**04 42 32.8**	**-1.0**
MMRI				IAmb	IAmb	04 42 52.9	
	comp=Z,53nm,1.0s						
BBOO	**Buckleboo**	**30.88**	**206**	P	**P**	**04 42 46.1**	**-1.0**
FORT	**Forrest**	**33.58**	**218**	P	**P**	**04 43 09.9**	**-0.9**
PSA00	**Pilbara Seismi**	**34.72**	**239**	P	**P**	**04 43 20.8**	**0.0**
RAO	**Raoul Island**	**37.28**	**133**	LR	LR	04 56 51.5	
	comp=Z,811nm,18.2s,baz=322,slow=33						
JAGI	**Jajag, Banyuwa**	**37.32**	**263**	P	**P**	**04 43 41.8**	**-1.4**
	comp=Z,23nm,1.0s						
JOW	**Kunigami**	**39.24**	**326**	LR	LR	04 56 53.1	
	comp=Z,733nm,22.0s,baz=124,slow=31						
URZ	**Urewera**	**40.05**	**148**	P	**P**	**04 44 05.1**	**-0.6**
	comp=Z,10nm,0.8s,baz=333,slow=4.9,SNR=5.0						
URZ				LR	LR	04 58 55.0	
	comp=Z,844nm,19.5s,baz=31,slow=34						
URZ	**Urewera**	**40.05**	**148**	IAmb	IAmb	04 44 08.3	
	comp=Z,32nm,1.4s						
TUWZ	**Tuamarina**	**41.02**	**154**	P	**P**	**04 44 13.8**	**+0.1**
MORW	**Morawa**	**41.06**	**231**	P	**P**	**04 44 13.8**	**-0.5**
MORW				IAmb	IAmb	04 44 26.0	
	comp=Z,32nm,1.2s						
RPZ	**Rata Peaks**	**41.80**	**159**	P	**P**	**04 44 17.3**	**-2.7**
	comp=Z,14nm,0.9s,baz=280,slow=6.1,SNR=4.0						
RPZ				LR	LR	04 59 19.8	
	comp=Z,1µm,21.3s,baz=314,slow=33						
JMN	**Monobe**	**42.41**	**338**	P	**P**	**04 44 26.1**	**+0.9**
MJAR	**Matsushiro Arr**	**43.60**	**344**	P	**P**	**04 44 34.4**	**-0.4**
	comp=Z,2.8nm,0.8s,baz=174,slow=8.9,SNR=6.7						
MAT	**Matsushiro**	**43.60**	**344**	P	**P**	**04 44 31.6**	**-3.1**
MAT				*e*S	**S**	**04 50 55.8**	**-5.6**
MDSI	**Maura Dua**	**47.28**	**269**	P	P	04 45 23.2	+19
QIZ	**Qiongzhong**	**47.80**	**302**	P	**P**	**04 45 07.2**	**-1.0**
QIZ				S	**S**	**04 52 01.3**	**-1.1**
QIZ				LR	LR		
	comp=Z,480nm,25.5s						
QIZ				LR	LR		
	comp=Z,530nm,27.0s						
QIZ				LR	LR		
	comp=Z,630nm,29.9s						
KSRS	**Korea Array**	**48.04**	**335**	P	**P**	**04 45 10.7**	**+0.9**
	comp=Z,2.5nm,0.9s,baz=159,slow=9.4,SNR=9.3						
KSRS				pP	**pP**	**04 45 21.2**	**-0.5**
	comp=Z,5.5nm,1.0s,baz=150,slow=8.3,SNR=7.8						
KSAR	**Wonju Array Be**	**48.05**	**334**	P	**P**	**04 45 10.4**	**+0.6**
NJ2	**Nanjing**	**48.61**	**322**	*e*P	**P**	**04 45 15.0**	**+0.8**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
INCN	**Inchon**	**48.63**	**333**	P	**P**	**04 45 14.8**	**+0.5**
USRK	**Ussuriysk Ar.**	**52.47**	**342**	P	**P**	**04 45 44.4**	**+1.2**
	comp=Z,1.0nm,0.5s,baz=150,slow=6.0,SNR=2.4						
USRK	**Ussuriysk Ar.**	**52.47**	**342**	P	**P**	**04 45 44.2**	**+1.0**
ENH	**Enshi**	**53.74**	**314**	P	**P**	**04 45 54.1**	**+1.2**
GSI	**Gunungsitoli**	**54.41**	**275**	P	**P**	**04 45 56.4**	**-1.6**
GSI				IAmb	IAmb	04 45 58.5	
	comp=Z,17nm,1.0s						
BJI	**Beijing**	**55.78**	**327**	P	**P**	**04 46 06.1**	**-1.2**
BJI				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BJI				LR	LR		
	comp=Z,220nm,21.2s						
BJI				LR	LR		
	comp=Z,440nm,35.0s						

XAN	Xi'an	56.28	317	P	P	04 46 11.2	0.0
XAN				pP	pP	04 46 22.1	-1.3
XAN				pmax	pmax		
	comp=Z,9.0nm,1.4s						
XAN				pmax	pmax		
	comp=Z,240nm,4.9s						
XAN				LR	LR		
	comp=Z,280nm,21.5s						
XAN				LR	LR		
	comp=Z,290nm,19.3s						
XAN				LR	LR		
	comp=Z,530nm,21.3s						
KMI	Kunming	56.38	305	⇑P	P	04 46 12.2	-0.1
KMI				pP	pP	04 46 24.9	+0.5
KMI				sP	sP	04 46 33.4	+4.1
KMI				S	S	04 54 03.5	+3.0
KMI				SS	SS	04 57 50.9	+2.7
KMI				pmax	pmax		
	comp=Z,10.0nm,1.3s						
KMI				pmax	pmax		
	comp=Z,150nm,4.0s						
KMI				LR	LR		
	comp=Z,190nm,21.2s						
KMI				LR	LR		
	comp=Z,230nm,21.8s						
KMI				LR	LR		
	comp=Z,420nm,37.1s						
CM31	Chiang Mai Arr	57.10	296	P	P	04 46 17.4	+0.2
CMAR	Chiang Mai Arr	57.10	296	P	P	04 46 18.0	+0.8
	comp=Z,2.3nm,0.5s,baz=113,slow=5.5,SNR=17						
CMAR				pP	pP	04 46 28.9	-0.6
	comp=Z,4.6nm,0.9s,baz=116,slow=5.1,SNR=3.5						
CMAR				LR	LR	05 10 46.8	
	comp=Z,126nm,19.6s,baz=160,slow=36						
CHTO	Chiang Mai	57.22	296	P	P	04 46 17.4	-0.6
CD2	Chengdu	58.27	311	*e*P	P	04 46 25.5	+0.2
CD2				S	S	04 54 25.0	+0.2
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				LR	LR		
	comp=Z,460nm,15.2s						
CD2				LR	LR		
	comp=Z,550nm,14.7s						
PETK	Petropavlovsk-	58.53	4	P	P	04 46 27.9	+1.3
	comp=Z,2.1nm,0.6s,baz=165,slow=4.8,SNR=8.3						
PPT	Papeete	58.64	107	LR	LR	05 06 47.6	
	comp=Z,93nm,21.9s,baz=264,slow=31						
HHC	Hu-ho-hao-te	58.88	325	*e*P	P	04 46 31.7	+2.3
HHC				S	S	04 54 32.6	0.0
HHC				pmax	pmax		
	comp=Z,13nm,1.1s						
HHC				pmax	pmax		
	comp=Z,150nm,5.8s						
HHC				LR	LR		
	comp=Z,250nm,18.0s						
HHC				LR	LR		
	comp=Z,340nm,18.0s						
HHC				LR	LR		
	comp=Z,480nm,18.2s						
LZH	Lanzhou	60.88	317	*e*P	P	04 46 44.0	+0.7
LZH				pP	pP	04 46 55.3	-0.3
LZH				sP	sP	04 47 06.0	+5.5
LZH				PP	PP	04 49 01.6	+3.8
LZH				pmax	pmax		
	comp=Z,26nm,1.3s						
LZH				pmax	pmax		
	comp=Z,120nm,5.4s						
LZH				LR	LR		
	comp=Z,250nm,16.0s						
LZH				LR	LR		
	comp=Z,370nm,15.7s						
LZH				LR	LR		
	comp=Z,380nm,17.8s						
GTA	Gaotai	65.33	318	*e*P	P	04 47 13.7	+0.9
GTA				pP	pP	04 47 24.4	-0.8
GTA				sP	sP	04 47 28.6	-1.5
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,77nm,6.5s						
GTA				LR	LR		
	comp=Z,110nm,18.2s						
GTA				LR	LR		
	comp=Z,240nm,17.8s						
GTA				LR	LR		
	comp=Z,240nm,17.8s						
SHL	Shillong	65.63	301	P	P	04 47 14.6	-0.4
ULN	Ulaanbaatar	65.92	329	P	P	04 47 16.7	+0.3
ULN				IAmb	IAmb	04 47 29.1	
	comp=Z,23nm,1.1s						
SONM	Songino Array	66.24	328	P	P	04 47 19.2	+0.8
	comp=Z,2.1nm,0.6s,baz=139,slow=5.9,SNR=16						
SONM				pP	pP	04 47 29.4	-1.5
	comp=Z,15nm,1.0s,baz=136,slow=5.6,SNR=24						
SONM	Songino Array	66.24	328	P	P	04 47 18.6	+0.2
CASY	Casey	67.09	197	P	P	04 47 22.4	-0.9
CASY				IAmb	IAmb	04 47 24.4	
	comp=Z,16nm,1.1s						
TLY	Talaya	70.04	331	P	P	04 47 42.3	+0.2
VNDA	Vanda	72.26	178	P	P	04 47 55.4	+0.4
	comp=Z,9.8nm,1.0s,baz=337,slow=7.7,SNR=10						
VNDA				LR	LR	05 17 44.6	
	comp=Z,138nm,19.4s,baz=360,slow=34						
BILL	Bilibino	74.02	6	P	P	04 48 06.1	+0.7
WMQ	Urumqi	75.42	318	*e*P	P	04 48 14.3	+0.1
WMQ				PcP	pP	04 48 25.3	-1.6
WMQ				pmax	pmax		
	comp=Z,11nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,110nm,5.1s						
WMQ				LR	LR		
	comp=Z,650nm,28.9s						
WMQ				LR	LR		
	comp=Z,1μm,29.2s						
WMQ				LR	LR		
	comp=Z,550nm,29.1s						
WMQ	Urumqi	75.42	318	P	P	04 48 14.0	-0.2
WMQ				IAmb	IAmb	04 48 26.4	
	comp=Z,22nm,1.1s						
TIXI	Tiksi	78.36	353	P	P	04 48 29.7	-0.4
ZSN	Zaisan	78.61	320	*e*P	P	04 48 30.6	-1.4
	baz=320						
MKAR	Makanchi Array	80.03	319	P	P	04 48 39.6	-0.2
	comp=Z,4.0nm,1.0s,baz=100,slow=6.7,SNR=19						
MKAR				pP	pP	04 48 50.5	-2.0
	comp=Z,6.8nm,1.0s,baz=99,slow=7.5,SNR=16						
MKAR				LR	LR	05 24 04.6	
	comp=Z,160nm,20.4s,baz=92,slow=36						
MKAR	Makanchi Array	80.03	319	P	P	04 48 39.0	-0.8
RC01	Rabbit Creek A	80.22	25	P	P	04 48 41.9	+1.4
	baz=240						
MAKZ	Makanchi	80.24	319	P	P	04 48 40.8	-0.2
SHLS	Shalkode	80.85	315	*e*P	P	04 48 41.6	-2.8
	comp=Z,2.9nm,1.0s,baz=315						
ZAA0	Zalesovo Array	81.03	327	P	P	04 48 43.8	-1.1
ZALV	Zalesovo Beam	81.03	327	P	P	04 48 43.7	-1.2
	comp=Z,2.2nm,0.5s,baz=114,slow=6.6,SNR=17						
ZALV				pP	pP	04 48 54.7	-3.0
	comp=Z,8.4nm,0.8s,baz=104,slow=6.3,SNR=13						
KPKS	Kokpek	81.48	315	*e*P	P	04 48 46.5	-1.3
	comp=Z,2.1nm,0.9s,baz=315						
SATY	Saty	81.57	315	*e*P	P	04 48 47.4	-0.8
	baz=315						
MLY	Manley	81.88	21	P	P	04 48 51.3	+2.1
	baz=238						
MCK	McKinley	81.88	23	P	P	04 48 50.9	+1.6
	baz=240						
TDK	Taldyqorghan	82.09	317	*e*P	P	04 48 49.6	-1.2
	comp=Z,11nm,1.2s,baz=317						
NEA2	Nenana	82.26	22	P	P	04 48 52.2	+1.0
	baz=240						
I23K	Minto, Yukon-K	82.44	21	P	P	04 48 54.1	+2.0
	baz=239						
SEM	Semipalatinsk	82.46	322	*e*P	P	04 48 50.9	-2.0
	comp=Z,3.6nm,1.1s,baz=322						
MDOK	Medeo	82.55	315	*e*P	P	04 48 53.3	-0.2
	baz=315						
WRH	Wood River Hil	82.57	22	P	P	04 48 53.6	+0.8
AAA	Alma-Ata	82.66	315	*e*P	P	04 48 53.9	0.0
	baz=315						
CCB	Clear Creek Bu	82.76	22	P	P	04 48 54.8	+1.0
CHKK	Chushkaly	82.77	315	*e*P	P	04 48 53.3	-1.1
	baz=315						
TCOL	CIGO, UAF Yank	82.85	22	P	P	04 48 54.8	+0.6
	baz=241						
HDA	Harding Lake	82.97	23	P	P	04 48 55.5	+0.5
	baz=242						
ILAR	Eielson Array	83.17	22	P	P	04 48 55.2	-0.7
	comp=Z,2.0nm,0.6s,baz=251,slow=4.7,SNR=29						
ILAR				LR	LR	05 24 39.3	
	comp=Z,178nm,18.5s,baz=255,slow=35						
ILAR	Eielson Array	83.17	22	P	P	04 48 56.3	+0.4
COLD	Coldfoot	83.22	19	P	P	04 48 57.5	+1.3
	baz=238						
KUU	Kurty	83.23	315	*e*P	P	04 48 55.4	-1.4
	comp=Z,22nm,1.3s,baz=315						
NIL	Nilore	83.37	305	P	P	04 48 57.2	-0.5
KURK	Kurchatov	83.55	322	P	P	04 48 57.5	-0.6
SCRK	Sand Creek	83.93	24	P	P	04 49 01.9	+1.9
	baz=244						
AAK	Ala-Archa	84.25	314	P	P	04 49 02.0	-0.2
AAK				IAmb	IAmb	04 49 14.2	
	comp=Z,13nm,1.0s						
SGDS	Sogindy	84.34	315	*e*P	P	04 49 01.3	-1.2
	baz=314						
BCAR	Beaver Creek A	84.45	25	P	P	04 49 03.8	+1.2
MAW	Mawson	84.56	203	LR	LR	05 23 24.9	
	comp=Z,320nm,21.9s,baz=61,slow=33						
BTLS	Baital	85.10	316	*e*P	P	04 49 04.9	-1.2
	comp=Z,6.5nm,1.1s,baz=316						
HYT	Haines Junctio	85.52	28	P	P	04 49 08.3	+0.2
HYT				IAmb	IAmb	04 49 23.9	
	comp=Z,13nm,1.1s						
NRIK	Noril'sk	86.18	341	P	P	04 49 12.5	+1.5
	comp=Z,2.1nm,0.3s,baz=113,slow=6.2,SNR=4.0						
NRIK	Noril'sk	86.18	341	P	P	04 49 11.5	+0.5
NRIK				IAmb	IAmb	04 49 22.9	
	comp=Z,12nm,1.1s						
DZA	Taraz	86.59	313	*e*P	P	04 49 13.4	-0.2
	comp=Z,13nm,1.1s,baz=314						
KKAR	Karatay Array	87.22	314	P	P	04 49 16.3	-0.4
IUG	Iuzhnay	87.40	313	*e*P	P	04 49 16.2	-1.6
	comp=Z,3.7nm,1.2s,baz=313						
EPYK	Eagle Plains	87.68	23	P	P	04 49 20.0	+1.6
	baz=251						
DLBC	Dease Lake	88.51	31	P	P	04 49 23.7	+1.2
BRVK	Borovoye	89.11	323	P	P	04 49 24.6	-0.9
K02D	Willamette Mer	89.75	47	P	P	04 49 29.5	+0.7
	baz=262						
O02D	Mt. Diablo Mer	90.08	50	P	P	04 49 30.4	0.0
	baz=263						
I03D	Drain, OR	90.10	46	P	P	04 49 31.1	+0.9
	baz=263						
M02C	Callahan	90.18	49	P	P	04 49 31.6	+0.8
	baz=263						
N02D	Trinity Center	90.24	49	P	P	04 49 31.2	+0.1
	baz=263						
HUMO	Hull Mountain	90.25	47	P	P	04 49 32.1	+1.0
HUMO				IAmb	IAmb	04 49 46.1	
	comp=Z,11nm,0.9s						
WDC	Whiskeytown Da	90.32	49	IAmb	IAmb	04 49 33.6	
	comp=Z,12nm,1.5s						
YBH	Yreka Blue Hor	90.33	48	P	P	04 49 32.8	+1.2
YBH				IAmb	IAmb	04 49 46.6	
	comp=Z,7.9nm,1.0s						
H04D	Lebanon	90.64	46	P	P	04 49 33.2	+0.4
	baz=263						
L04D	Klamath Falls	90.69	48	P	P	04 49 33.4	+0.1
	baz=263						
D03D	Eldon	90.77	42	P	P	04 49 34.2	+0.9
	baz=263						
I04A	Tendick Farm,	90.79	46	P	P	04 49 33.6	0.0
	baz=263						
O03E	Paynes Creek	90.84	50	P	P	04 49 34.4	+0.5
	baz=264						
D04E	Lakebay	90.94	43	P	P	04 49 35.3	+1.2
	baz=263						
J04D	Umpqua Nationa	90.94	47	P	P	04 49 35.0	+0.5
	baz=264						
M04C	Macdoel	90.98	48	P	P	04 49 35.2	+0.6
	baz=264						
ORV	Oroville	91.00	51	IAmb	IAmb	04 49 36.3	
	comp=Z,7.2nm,1.3s						
K04D	Chiloquin, OR	91.14	47	P	P	04 49 35.5	+0.2
	baz=264						
J05D	Fort Rock, OR	91.58	47	P	P	04 49 37.7	+0.3
	baz=264						
I05D	Terrebonne, OR	91.62	46	P	P	04 49 37.4	0.0
	baz=264						
CMB	Columbia Colle	91.71	52	IAmb	IAmb	04 49 52.9	
	comp=Z,8.3nm,1.3s						
G05D	Wamic, OR	91.73	45	P	P	04 49 38.3	+0.5
	baz=264						
BEKR	Beckworth	91.90	50	IAmb	IAmb	04 49 51.5	
	comp=Z,12nm,1.5s						
VCNR	Virginia City	92.40	51	IAmb	IAmb	04 49 54.2	
	comp=Z,8.5nm,1.3s						
PNTR	Pine Nut	92.42	51	P	P	04 49 42.4	+0.9
PNTR				IAmb	IAmb	04 49 56.0	
	comp=Z,7.6nm,0.9s						
PAHR	Pah Rah Range	92.64	51	IAmb	IAmb	04 49 44.1	
	comp=Z,9.8nm,1.3s						
SYO	Syowa Base	92.70	200	⇑*e*P	P	04 49 41.2	-0.6
MDPB	Devils Postpil	92.70	53	IAmb	IAmb	04 49 57.8	
	comp=Z,5.7nm,1.0s						
RYN	Ryan	93.22	52	IAmb	IAmb	04 50 03.3	
	comp=Z,6.3nm,1.0s						
EDW2	Edwards Air Fo	93.36	55	P	P	04 49 46.6	+0.8
	baz=266						
NVAR	Mina Array Bea	93.38	52	P	P	04 49 46.9	+1.0
	comp=Z,3.3nm,0.9s,baz=255,slow=6.5,SNR=24						
NVAR				pP	pP	04 49 58.0	-0.7
	comp=Z,5.6nm,0.9s,baz=253,slow=5.7,SNR=12						
NVAR				LR	LR	05 27 31.1	
	comp=Z,140nm,18.9s,baz=262,slow=33						
NVAR	Mina Array Bea	93.38	52	P	P	04 49 46.3	+0.4
G08A	Pilot Rock	93.39	45	IAmb	IAmb	04 50 02.2	
	comp=Z,8.4nm,1.2s						
CWC	Cottonwood Cre	93.41	54	P	P	04 49 46.3	+0.3
	baz=266						
WVOR	Wild Horse Val	93.41	48	IAmb	IAmb	04 50 02.1	
	comp=Z,10.0nm,1.2s						
NV11	Mina Array Sit	93.49	52	IAmb	IAmb	04 50 01.3	
	comp=Z,7.1nm,1.0s						
BFSC	Mount Baldy Ra	93.59	56	P	P	04 49 47.0	+0.1
	baz=266						
LRMC	Laurel Mtn Rad	93.66	55	P	P	04 49 47.3	+0.2
	baz=266						
MPMC	Manual Prospec	93.86	54	P	P	04 49 48.2	+0.1
	baz=266						
GRAC	Grapevine Rang	94.02	53	P	P	04 49 49.5	+0.9
	baz=266						
TKX	Tecate	94.36	58	P	P	04 49 50.6	+0.3
BMO	Blue Mountains	94.53	46	IAmb	IAmb	04 50 05.0	
	comp=Z,6.0nm,1.1s						
PFO	Pinyon Flats O	94.55	57	P	P	04 49 51.8	+0.5
	baz=266						
PFO	Pinyon Flats O	94.55	57	P	P	04 49 53.3	+2.0
PFO				IAmb	IAmb	04 50 06.7	
	comp=Z,8.9nm,1.1s						
TPFO	Pinon Flats	94.55	57	P	P	04 49 52.1	+0.8
	baz=266						
F10A	Beach Ranch, E	94.64	44	IAmb	IAmb	04 50 06.9	
	comp=Z,7.7nm,1.1s						
SHOC	Shoshone, Teco	94.83	55	P	P	04 49 52.8	+0.4
	baz=267						
ABKAR	Akbulak array	95.18	319	P	P	04 49 52.4	-1.2
GMRC	Granite Mounta	95.27	56	P	P	04 49 54.8	+0.2
	baz=267						
SHPR	Sheep Range	95.76	54	IAmb	IAmb	04 50 14.3	
	comp=Z,9.5nm,1.3s						
PRN	Pahroc Range	95.89	53	IAmb	IAmb	04 50 12.7	
	comp=Z,7.3nm,1.1s						
GEYT	Alibeck	96.07	307	LR	LR	05 34 21.8	
	comp=Z,75nm,21.2s,baz=245,slow=36						
ARU	Arti	96.19	326	P	P	04 49 58.0	-0.1
YKA	Yellowknife Ar	96.51	28	P	P	04 49 59.3	-0.1
	comp=Z,0.4nm,0.7s,baz=272,slow=4.2,SNR=8.8						
YKA				LR	LR	05 27 59.5	
	comp=Z,151nm,21.8s,baz=0.0,slow=32						
KNB	Kanab	97.65	53	P	Pdif	04 50 06.6	+1.2
PDAR	Pinedale Array	100.12	48	P	Pdif	04 50 15.4	-0.9
	comp=Z,0.4nm,0.6s,baz=222,slow=3.6,SNR=5.6						
PDAR	Pinedale Array	100.12	48	Pdif	Pdif	04 50 16.1	-0.2
FINES	FINESS Array B	111.13	335	PKiKP	PKiKP	04 55 03.4	+0.1
	comp=Z,4.6nm,1.1s,baz=110,slow=3.3,SNR=1.5						
AKASG	Malin Array Be	114.32	324	PKP	PKPdf	04 55 08.6	-1.1
	comp=Z,0.3nm,0.4s,baz=111,slow=1.7,SNR=4.2						
BURAR	Bucovina Array	117.97	322	⇑P	pPKPdf	04 55 28.9	-1.3
MLR	Muntele Rosu	118.38	320	⇓P	PKiKP	04 55 22.6	+4.6
DOPR	Dopca	118.55	320	⇑P	pPKPdf	04 55 28.1	-3.2
VOIR		118.98	320	⇑P	pPKPdf	04 55 29.9	-2.3
KOLS	Kolonicke sedl	119.14	324	*e*PKP	pPKPdf	04 55 30.1	-2.2
ARR	Arges	119.27	320	⇓P	pPKPdf	04 55 31.4	-1.3
PLCA	Paso Flores	119.97	144	PKP	PKPdf	04 55 20.7	-0.4
	comp=Z,0.6nm,0.5s,baz=220,slow=2.0,SNR=6.6						
BZS	Buzias	121.08	321	⇓P	pPKPdf	04 55 33.9	-2.2
VTS	Vitosha	121.32	317	⇑P	pPKPdf	04 55 32.1	-4.7
MORC	Moravsky Berou	121.37	327	⇑P	pPKPdf	04 55 34.2	-2.4
MORC	Moravsky Berou	121.37	327	*e*PKIKP	pPKPdf	04 55 34.3	-2.4
KRLC	Kraliky	121.62	328	*e*pPKP	pPKPdf	04 55 33.7	-3.4
KRLC				*e*x	x	04 55 43.5	
JAVC	Velka Javorina	121.80	326	*e*PKIKP	pPKPdf	04 55 35.9	-1.6
VRAC	Vranov	122.15	327	⇑P	pPKPdf	04 55 35.7	-2.4
VRAC	Vranov	122.15	327	*e*PKIKP	pPKPdf	04 55 35.2	-2.9
KRUC	Moravsky	122.39	327	*e*PKIKP	pPKPdf	04 55 36.0	-2.5
FRGS	Fruska Gora	122.42	321	⇓P	pPKPdf	04 55 36.6	-2.2
MORH	Mrgy, Hungar	122.61	323	⇑P	pPKPdf	04 55 36.4	-2.6
BRG	Berggiesshubel	122.62	330	*e*P	pPKPdf	04 55 36.7	-2.3
BRG				Amp		04 55 38.9	
	comp=Z,11nm,1.6s						
CLL	Collm	122.83	330	*e*PKPdf	PKPdf	04 55 25.0	-1.1
CONA	Conrad Observa	123.32	326	*e*P	pPKPdf	04 55 37.4	-3.1
	comp=Z,13nm,1.8s						
U56A	King	123.37	50	PKPdf	PKPdf	04 55 27.0	-0.6
CKRC	Cesky Krumlov	123.66	327	*e*PKPDF	PKPdf	04 55 27.3	-0.5
CKRC				*e*x	x	04 55 38.1	
KHC	Kasperske Hory	123.86	328	*e*PKPDF	PKPdf	04 55 28.0	-0.2
KHC				*e*x	x	04 55 38.5	
GEC2	GERESS Array S	123.97	328	PKPdf	PKPdf	04 55 27.9	-0.6
GEC2B	GERESS ARRAY S	123.97	328	PKPdf	PKPdf	04 55 27.9	-0.6
GERES	GERESS Array B	123.97	328	PKP	PKPdf	04 55 27.8	-0.7
	comp=Z,1.3nm,0.8s,baz=60,slow=1.3,SNR=8.8						
GERES				pPKP	pPKPdf	04 55 39.0	-2.7
	comp=Z,2.8nm,0.7s,baz=85,slow=1.7,SNR=13						
GERES	GERESS Array B	123.97	328	PKPdf	PKPdf	04 55 27.3	-1.2
SOKA	Soboth	124.48	325	*e*P	pPKPdf	04 55 40.1	-2.7
	comp=Z,15nm,1.6s						
ABTA	Abfaltersbach	125.86	326	*e*P	pPKPdf	04 55 42.4	-3.0
	comp=Z,10nm,1.5s						
WATA	Walderalm	126.02	327	*e*P	pPKPdf	04 55 43.3	-2.5
	comp=Z,15nm,1.5s						
MOTA	Moosalm	126.26	328	*e*P	pPKPdf	04 55 43.3	-2.9
	comp=Z,12nm,1.3s						
SQTA	Sankt Quirin	126.28	327	*e*P	pPKPdf	04 55 44.0	-2.3
	comp=Z,8.3nm,0.9s						
FETA	Feichten	126.67	327	*e*P	pPKPdf	04 55 43.1	-3.9
	comp=Z,13nm,1.3s						
DAVA	Damuels	126.95	328	*e*P	pPKPdf	04 55 44.9	-2.6
	comp=Z,10nm,0.9s						
GO02	Mina Guanaco	129.71	129	PKPdf	PKPdf	04 55 40.8	+0.4
CPUP	Villa Florida	137.75	140	PKP	PKPdf	04 55 54.3	-0.8
	comp=Z,2.4nm,0.9s,baz=291,slow=5.5,SNR=4.8						
TAM	Tamanrasset	143.02	301	PKPdf	PKPdf	04 56 04.4	-0.5
FDF	Fort de France	146.46	72	PKPbc	PKPdf	04 56 11.5	+0.6
TOSP	Speyside	147.66	77	PKPbc	PKPbc	04 56 16.1	+0.4
PTGA	Pitinga	147.85	100	PKPbc	PKPbc	04 56 16.3	0.0
TOA0	Torodi Ar. Sit	149.39	287	PKPbc	PKPbc	04 56 19.6	-0.5
TOA0				PKPab	pPKPdf	04 56 30.6	+1.7
TORD	Torodi Ar. Bea	149.39	287	PKPbc	PKPbc	04 56 19.3	-0.8
	comp=Z,4.9nm,0.6s,baz=65,slow=2.3,SNR=28						
TORD				pPKPbc	pPKPdf	04 56 30.2	+1.3
	comp=Z,20nm,0.7s,baz=66,slow=2.6,SNR=22						
TORD	Torodi Ar. Bea	149.39	287	PKPbc	PKPbc	04 56 18.7	-1.4
BDFB	Brasilia	151.42	137	PKPbc	PKPbc	04 56 24.8	-0.2
	comp=Z,3.6nm,0.4s,baz=134,slow=2.6,SNR=15						
BDFB	Brasilia	151.42	137		PKPbc	04 56 24.6	-0.5
BDFB					PKPab	04 56 33.0	-0.3
DBIC	Dimbokro	156.59	274	PKPbc	PKPbc	04 56 37.1	
	comp=Z,4.2nm,0.8s,baz=52,slow=4.6,SNR=4.0						

IDC ***01*** *04:46:48.0±3.7, 5°.21S×151°.58E, h35km±28km, mb4.0/11, mb1 4.2/12, mb1mx3.9/38, mbtmp4.2/12, ML2.0/1, MS3.2/1, Ms1 3.2/1, ms1mx2.8/31, Error ellipse: s-maj=22.4km s-min=20.0km az=92.0*

NEIC ***01*** *04:46:50.9±0.8, 5°.29S±0°.06×151°.6E±0°.1, h56km±5km, mb4.3/10, Error ellipse: s-maj=16.2km s-min=8.1km az=99.0*

ISC 01 04:46:50.4±0.6, 5°.27S±0°.09×151°.5E±0°.1, h57km, n29, σ1s.40/34, mb4.1/14, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	1.26	32		Pn	04 47 13.1	+1.2
PMG	Port Moresby	5.95	226	Pn	Pn	04 48 16.6	+0.6
	2.4nm,0.3s,baz=31,slow=11,SNR=5.4						
PMG				Sn	Sn	04 49 19.5	-3.3
	1.1nm,0.3s,baz=33,slow=18,SNR=1.8						
PMG				LR	LR	04 50 34.9	
	comp=Z,195nm,19.0s,baz=58,slow=38						
PMG	Port Moresby	5.95	226		Pn	04 48 18.7	+2.7
WB0	Warramunga Arr	22.02	228	P	P	04 51 41.6	+1.4
WB0				IAmb	IAmb	04 51 43.5	
	comp=Z,16nm,0.8s						
WR0	Warramunga Arr	22.03	227	P	P	04 51 41.2	+0.8
DZM	Mont Dzumac	22.09	141	P	P	04 51 40.8	-0.3
	comp=Z,5.8nm,0.7s,baz=306,slow=18,SNR=1.5						
WRAB	Tennant Creek	22.16	227	P	P	04 51 42.2	+0.5
WB2	Warramunga Arr	22.16	227	P	P	04 51 42.8	+1.0
WRA	Warramunga Arr	22.17	227	P	P	04 51 41.8	-0.1
	comp=Z,18nm,0.7s,baz=52,slow=9.8,SNR=54						
WRA				PcP	PcP	04 55 37.2	0.0
	comp=Z,0.5nm,0.9s,baz=38,slow=2.6,SNR=2.0						
WRA				ScP	ScP	04 59 12.4	+2.4
	comp=Z,0.4nm,0.7s,baz=53,slow=2.8,SNR=4.6						
WRA	Warramunga Arr	22.17	227	P	P	04 51 43.5	+1.6
AS31	Alice Springs	24.94	221	P	P	04 52 09.5	+1.0
AS31				IAmb	IAmb	04 52 11.7	
	comp=Z,5.2nm,0.8s						
ASAR	Alice Springs	24.94	221	P	P	04 52 09.0	+0.4
	comp=Z,18nm,0.7s,baz=55,slow=9.1,SNR=81						
ARMA	Armidale	25.02	180	P	P	04 52 09.9	+0.7
STKA	Stephens Creek	28.05	198	P	P	04 52 37.1	+0.7
	comp=Z,0.7nm,0.3s,baz=20,slow=14,SNR=3.1						
FITZ	Fitzroy Crossi	28.30	241	P	P	04 52 39.4	+0.5
	comp=Z,4.7nm,0.6s,baz=53,slow=7.5,SNR=12						
FITZ	Fitzroy Crossi	28.30	241	P	P	04 52 39.7	+0.8
FITZ				IAmb	IAmb	04 52 44.3	
	comp=Z,7.6nm,0.9s						
URZ	Urewera	40.25	148	P	P	04 54 20.5	-1.3
	comp=Z,4.2nm,0.7s,baz=141,slow=21,SNR=2.0						
CMAR	Chiang Mai Arr	56.91	296	P	P	04 56 30.5	+0.4
	comp=Z,0.5nm,0.3s,baz=117,slow=5.2,SNR=2.1						
SONM	Songino Array	66.04	329	P	P	04 57 33.2	+1.9
	comp=Z,0.5nm,0.8s,baz=138,slow=4.5,SNR=3.6						
SONM				pP	pP	04 57 44.1	-3.0
	comp=Z,0.5nm,0.6s,baz=123,slow=5.5,SNR=3.2						
SONM	Songino Array	66.04	329	P	P	04 57 32.5	+1.1
MKAR	Makanchi Array	79.83	319	P	P	04 58 52.0	-0.9
	comp=Z,0.3nm,0.8s,baz=97,slow=5.7,SNR=2.1						
ZALV	Zalesovo Beam	80.83	327	P	P	04 58 56.3	-1.7
	comp=Z,0.4nm,0.4s,baz=124,slow=7.9,SNR=2.2						
ILAR	Eielson Array	83.08	22	P	P	04 59 08.2	-1.4
	comp=Z,0.5nm,0.7s,baz=258,slow=5.7,SNR=3.5						
NVAR	Mina Array Bea	93.39	52	P	P	05 00 00.9	+0.9
	comp=Z,0.5nm,0.7s,baz=243,slow=6.9,SNR=5.0						
GERES	GERESS Array B	123.77	328	PKP	PKiKP	05 05 42.9	+0.5
	comp=Z,0.3nm,0.6s,baz=75,slow=1.5,SNR=2.2						
TOA0	Torodi Ar. Sit	149.21	287	PKPbc	PKPbc	05 06 33.3	-0.4
TORD	Torodi Ar. Bea	149.21	287	PKPbc	PKPbc	05 06 34.0	+0.3
	comp=Z,1.7nm,0.6s,baz=73,slow=3.0,SNR=6.9						
TORD				pPKPbc	pPKPdf	05 06 45.4	-1.3
	comp=Z,3.0nm,0.7s,baz=73,slow=3.0,SNR=9.6						
TORD	Torodi Ar. Bea	149.21	287		PKPbc	05 06 34.4	+0.7
BDFB	Brasilia	151.62	137	PKPbc	PKiKP	05 06 40.0	0.0
	comp=Z,1.3nm,0.4s,baz=185,slow=5.5,SNR=4.6						

SNET 01 04:57:05.1±1.6, 14°.46N×89°.15W, h6km±999km, ML1.6, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ESQI	Esquipulas	0.21	298	*e*P	Pg	04 57 10.4	+1.1
ESQI				*e*S	Sg	04 57 13.4	+1.3
MTO3	Montecristo	0.21	253	*e*P	Pg	04 57 10.9	+1.6
MTO3				*e*S	Sg	04 57 14.9	+2.7
LLGN	La Laguna	0.36	146	*e*P	Pb	04 57 14.0	0.0
LLGN				*e*S	Sg	04 57 18.1	+1.2

SNET 01 04:57:10.6±1.3, 14°.50N×89°.23W, h8km±26km, ML2.2, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ESQI	Esquipulas	0.13	298	*e*P	Pg	04 57 14.0	+0.5

ESQI				eS	Sg	04 57 16.6	+1.2
MTO3	Montecristo	0.17	232	eP	Pg	04 57 15.8	+1.6
MTO3				eS	Sg	04 57 18.5	+2.0
MTO3				IAML		04 57 19.2	
	comp=Z,481nm,0.2s						
TACO	Tacachico	0.54	193	eP	Pb	04 57 22.0	-0.4
PQSS	Presa 15 de Se	1.08	143	eP	Pg	04 57 30.8	-0.7
PQSS				eS	Sg	04 57 44.8	-0.8
PQSS				IAML		04 57 48.0	
	comp=Z,68nm,0.1s						

ARE ***01*** *05:12:16±1.2, 14°.4S±0°.1×76°.8W±0°.2, h14^{km}±8^{km}, Error ellipse: s-maj=32.0km s-min=10.9km az=66.0*

NEIC 01 05:12:17.9±1.6**, 14°.4S**±0°.1×**76°.94W**±0°.10**, h10**^{km}±2^{km}**, ML4.4**(ARE)**, Error ellipse: s-maj=23.6km s-min=4.9km az=222.0, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	Nana	2.39	2	Pn	Pn	05 12 56.3	-0.8
PSGCX	Pisagua	8.33	129	Pn	Pn	05 14 18.2	-0.7
MNMC	Minye Minye	8.47	125	Pn	Pn	05 14 20.4	-0.6
TA01	Diego Aracena	8.91	135	Pn	Pn	05 14 26.7	0.0
PB08	IPOC Station P	9.38	129	Pn	Pn	05 14 33.6	0.0
PB01	IPOC Station P	9.71	134	Pn	Pn	05 14 38.6	+0.8
PB07	IPOC Station P	9.91	138	Pn	Pn	05 14 40.9	+0.3
PB04	IPOC Station P	10.20	142	Pn	Pn	05 14 44.6	+0.1
PB09	IPOC Station P	10.39	136	Pn	Pn	05 14 47.9	+0.8
LVC	Limon Verde	11.17	138	Pn	Pn	05 14 58.6	+0.5
GO02	Mina Guanaco	12.76	148	Pn	Pn	05 15 19.0	-0.7
SAML	Samuel	14.51	70	Pn	Pn	05 15 43.2	-0.3

IDC 01 05:53:14.4±3.7**, 7°.23S**×**124°.44E, h555**^{km}±56^{km}**, mb2.5**/1**, mb1 2.9**/5**, mb1mx2.6**/32**, mbtmp3.7**/5**, Error ellipse: s-maj=193.8km s-min=21.4km az=55.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	3.06	194	P	P	05 54 31.4	+1.2
	26nm,0.3s,baz=101,slow=19,SNR=24						
BATI				S	S	05 55 31.3	-0.7
	6.4nm,0.3s,baz=90,slow=16,SNR=2.5						
KAPI	Kappang	5.15	295	P	P	05 54 47.3	+1.5
	1.5nm,0.3s,baz=117,slow=16,SNR=4.6						
WRA	Warramunga Arr	15.88	144	P	P	05 56 31.9	-0.8
	0.5nm,0.3s,baz=324,slow=11,SNR=35						
ASAR	Alice Springs	18.70	152	P	P	05 56 59.0	+0.4
	0.3nm,0.3s,baz=330,slow=9.1,SNR=15						
MKAR	Makanchi Array	65.50	330	P	P	06 03 02.6	-0.7
	0.3nm,0.6s,baz=148,slow=7.0,SNR=3.9						

INET ***01*** *05:53:46.3, 13°.22N×92°.09W, h26^{km}, MW4.3*

IDC ***01*** *05:53:47.3±0.6, 13°.28N×91°.82W, h32^{km}±3^{km}, mb4.3/21, mb1 4.5/22, mb1mx4.4/32, mbtmp4.5/22, ML4.4/1, MS3.6/20, Ms1 3.6/20, ms1mx3.5/30, Error ellipse: s-maj=23.3km s-min=11.3km az=54.0*

GCMT ***01*** *05:53:47.1±0.4, 13°.35N±0°.02×92°.27W±0°.03, h12^{km}, MW4.8/70, Moment Tensor Solution. s19,c20; s70,c98; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.70±.07; $M_{\theta\theta}$1.26±.06; $M_{\phi\phi}$0.43±.07; $M_{r\theta}$0.42±.23; $M_{\theta\phi}$-1.00±.05; $M_{\phi r}$-0.37±.27; Best double couple: $M_0$1.89700×10^{16} NP1:ϕ_s121.00000°, δ37.00000°, λ-94.00000°. NP2: ϕ_s306.00000°, δ54.00000°, λ-87.00000°. Principal axes: T 2.0090, Plg8.0000°, Azm34.0000°; N -0.2250, Plg3.0000°, Azm124.0000°; P -1.7860, Plg81.0000°, Azm231.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***01*** *05:53:47.1±1.9, 13°.30N±0°.07×91°.95W±0°.07, h35^{km}±1^{km}, mb4.9/370 Error ellipse: s-maj=14.2km s-min=9.8km az=220.0*

UCR ***01*** *05:53:50.3±1.5, 13°.61N×91°.76W, h32^{km}±175^{km}, ML4.1, mb4.9(NEIC)*

SNET ***01*** *05:53:51.1±1.5, 13°.65N×91°.60W, h13^{km}±662^{km}, ML4.2*

GCG ***01*** *05:53:55.4±0.3, 13°.68N×91°.47W, h13^{km}±132^{km}, MD4.4*

ISC 01 05:53:47.5±0.5**, 13°.42N**±0°.04×**91°.95W**±0°.04**, h33**^{km}±2^{km}**, h33**^{km}**:pP-P, n720,** σ1^{s}.**33**/652**, mb4.9**/179**, MS3.7**/19**, 9C, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTAL	Retalhuleu	1.12	13⇑	eP	Pb	05 54 08.0	-0.4
RTAL				IAML		05 54 08.7	
	comp=Z,3μm,0.7s						
RTAL				eS	Sn	05 54 18.3	-2.9
RTAL	Retalhuleu	1.12	13		Pn	05 54 07.9	+0.9
RTAL				Sn	Sn	05 54 19.1	-2.1
FUG	Fuego 3	1.48	46	eP	Pn	05 54 13.6	+1.6
PCG	Pacaya	1.62	53	eP	Pn	05 54 15.8	+1.8
NBG	Las Nubes	1.94	53	eP	Pb	05 54 21.2	-1.2
RTR	El Retiro	2.29	78	eP	Pn	05 54 23.6	+0.5
RTR	El Retiro	2.29	78	eP	Pn	05 54 23.6	+0.5
CEVE	Cerro Verde	2.30	80	eP	Pn	05 54 23.7	+0.4
CEVE				IAML		05 54 26.1	
	comp=Z,4μm,0.3s						
CEVE	Cerro Verde	2.30	80	eP	Pn	05 54 23.7	+0.4
CEVE				IAML		05 54 26.1	
	comp=Z,4μm,0.3s						
SBLS	San Blas	2.30	79	eP	Pn	05 54 23.6	+0.3
SBLS	San Blas	2.30	79	eP	Pn	05 54 23.6	+0.3
SNJE	San Jose	2.32	79	eP	Pn	05 54 23.9	+0.3
SNJE	San Jose	2.32	79	eP	Pn	05 54 23.9	+0.3
JAYA	Jayaque - finc	2.44	84⇑	eP	Pn	05 54 25.3	+0.1
JAYA				IAML		05 55 02.3	
	comp=Z,1μm,0.2s						
JAYA	Jayaque - finc	2.44	84⇑	eP	Pn	05 54 25.3	+0.1
JAYA				IAML		05 55 02.3	
	comp=Z,1μm,0.2s						
CEDA	San Andres	2.51	81	eP	Pn	05 54 27.0	+0.9
CEDA				IAML		05 55 06.8	
	comp=Z,2μm,0.5s						
CEDA	San Andres	2.51	81	eP	Pn	05 54 27.0	+0.9
CEDA				IAML		05 55 06.8	
	comp=Z,2μm,0.5s						
TACO	Tacachico	2.58	78⇑	eP	Pn	05 54 27.9	+0.9
TACO				eS	Sn	05 54 55.4	-1.9
TACO	Tacachico	2.58	78⇑	eP	Pn	05 54 27.9	+0.9
TACO				eS	Sn	05 54 55.4	-1.9
BOQS	Boqueron	2.62	83	eP	Pn	05 54 28.0	+0.4
BOQS				eS	Sn	05 54 57.4	-1.0
BOQS	Boqueron	2.62	83	eP	Pn	05 54 28.0	+0.4
BOQS				eS	Sn	05 54 57.4	-1.0
SNET	Serv Nac Est T	2.66	84	eP	Pn	05 54 28.3	+0.2
SNET				IAML		05 54 30.3	
	comp=Z,2μm,0.4s						
SNET	Serv Nac Est T	2.66	84	eP	Pn	05 54 28.3	+0.2
SNET				IAML		05 54 30.3	
	comp=Z,2μm,0.4s						
SNET	Serv Nac Est T	2.66	84	Pn	Pn	05 54 28.5	+0.4
OPAM	Oficina de Pla	2.69	84	eP	Pn	05 54 29.5	+0.9
OPAM	Oficina de Pla	2.69	84	eP	Pn	05 54 29.5	+0.9
MTO3	Montecristo	2.69	69⇑	eP	Pn	05 54 30.0	+1.2
MTO3				IAML		05 55 08.5	
	comp=Z,888nm,0.5s						
MTO3	Montecristo	2.69	69⇑	eP	Pn	05 54 30.0	+1.2
MTO3				IAML		05 55 08.5	
	comp=Z,888nm,0.5s						
MTO3	Montecristo	2.69	69		Pn	05 54 29.9	+1.1
MRL	Marmol	2.75	53	eP	Pn	05 54 32.4	+3.0
MRL				eS	Sn	05 55 00.1	-1.6
ESQI	Esquipulas	2.77	66		Pn	05 54 31.2	+1.5
LFRS	El Faro	2.82	86	eP	Pn	05 54 31.2	+0.8
LFRS	El Faro	2.82	86	eP	Pn	05 54 31.2	+0.8
CCIG	Comitan	2.85	356		Pn	05 54 33.8	+3.0
PQSS	Presa 15 de Se	3.30	86	eP	Pn	05 54 37.4	+0.5
PQSS				eS	Sn	05 55 14.7	-0.4
LCND	La Caada	3.95	91⇑	eP	Pn	05 54 46.3	+0.5
LCND				IAML		05 54 47.6	
	comp=Z,860nm,0.3s						
LCND	La Caada	3.95	91⇑	eP	Pn	05 54 46.3	+0.5
LCND				IAML		05 54 47.6	
	comp=Z,860nm,0.3s						
PETF	Flores	4.01	30		Pn	05 54 49.1	+2.4
TGUH	Tegucigalpa,Un	4.59	82	Pn	Pn	05 54 55.0	+0.3
TGUH	Tegucigalpa,Un	4.59	82	eP	Pn	05 54 55.5	+0.8
CMIG	Matias Romero	4.62	323	Pn	Pn	05 54 53.6	-1.4
	comp=Z,8.6nm,0.3s,baz=155,slow=14,SNR=84						
CMIG				Sn	Sn	05 55 46.0	-1.5
	comp=Z,22nm,0.3s,baz=110,slow=10,SNR=4.3						
CMIG				LR	LR	05 56 40.0	
	comp=Z,498nm,18.4s,baz=141,slow=36						
CRIN	San Cristobal	4.83	98		Pn	05 54 59.0	+1.0
ACON	Acoyapa	6.77	102		Pn	05 55 24.2	-0.3
PLVR	Palo Verde	7.14	115	eP	Pn	05 55 31.0	+1.1
JTS	Las Juntas de	7.52	114	eP	Pn	05 55 37.7	+2.7
JTS	Las Juntas de	7.52	114	Pn	Pn	05 55 37.1	+2.2
JTS	Las Juntas de	7.52	114	eP	Pn	05 55 36.9	+2.0
ESPN	Las Esperanzas	7.56	98		Pn	05 55 36.5	+1.0
TLIG	Tlapa	7.59	304	Pn	Pn	05 55 36.7	+0.7
TEIG	Tepich	7.62	27	Pn	Pn	05 55 38.4	+2.1
TEIG	Tepich	7.62	27	eP	Pn	05 55 37.9	+1.6
LAFE	Finca La Fe, P	7.78	117	eP	Pn	05 55 39.6	+1.2
JACO	JACO, Garabito	8.06	117	eP	Pn	05 55 44.7	+2.4
RIMA	Rio Macho	8.72	114	eP	Pn	05 55 55.2	+3.7
CDM	Cerro de Muert	8.90	115	eP	Pn	05 55 57.1	+2.9
DRK0	Durika	9.48	115	eP	Pn	05 56 05.7	+3.7
PIRO	Carate, Puerto	9.82	120	eP	Pn	05 56 10.1	+3.6
MOIG	Morelia	10.82	306	Pn	Pn	05 56 23.1	+2.7
ZAIG	Zacatecas	13.71	314		Pn	05 57 02.5	+2.6
MTDJ	Mount Denham	14.67	69		P	05 57 19.8	+1.1
833A	Chaparral WMA,	16.37	336	P	Pn	05 57 35.4	+0.6
	baz=154						
MOTC	Monteria, Cord	16.63	104	eP	P	05 57 41.4	+1.0
HKT	Hockley	16.84	348		Pn	05 57 41.1	+0.4
UREC	San Jos de Ur	17.09	108	eP	P	05 57 46.3	+0.8
060A	Indiantown	17.35	37	P	Pn	05 57 45.8	-1.3
CBOC	Ciudad Bolivar	17.41	114	eP	P	05 57 51.4	+2.3
PLMC	San Jos del P	17.62	117	eP	P	05 57 53.2	+1.7
HELC	Santa Helena	17.70	112	eP	P	05 57 53.3	+0.7
ZARC	Zaragoza, Cauc	17.81	108	eP	P	05 57 55.5	+2.0
342A	Flagon Creek P	17.87	359		P	05 57 55.6	+1.6
344A	Westbrook Farm	17.98	3	P	P	05 57 57.5	+2.4
346A	Big Creek Wild	18.02	7	P	P	05 57 55.9	+0.2
YOTC	Yotoco, Valle	18.04	120	eP	P	05 57 57.3	+1.2
435B	Jarrell	18.04	344	P	P	05 57 58.2	+2.3
	baz=162						
435B	Jarrell	18.04	344	P	P	05 57 58.0	+2.1
656A	Willston	18.11	27		P	05 57 59.0	+2.4
656A				IAmb	IAmb	05 58 12.3	
	comp=Z,53nm,0.8s						
SMLC	San Martn de	18.13	103	eP	P	05 57 57.1	+0.1
BRAL	Brewton	18.23	14	P	Pn	05 58 00.1	+2.2
BRAL				IAmb	IAmb	05 58 02.9	
	comp=Z,137nm,1.5s						
GUY2C	Guyana, Caldas	18.27	115	eP	Pn	05 58 01.5	+2.4
NATX	Nacogdoches	18.42	353	P	Pn	05 58 01.6	+1.3
	baz=172						
NATX	Nacogdoches	18.42	353	P	Pn	05 58 01.3	+1.0
RREF	El Recreo	18.44	116	eP	Pn	05 58 05.5	+4.2
JCT	Junction City	18.46	338	P	Pn	05 58 03.9	+3.1
	baz=155,SNR=5.6						
JCT	Junction City	18.46	338	P	Pn	05 58 01.8	+1.0
NORC	Norcasia	18.56	113	eP	Pn	05 58 04.2	+2.1
ANIL	Santa Ana	18.59	117	eP	Pn	05 58 06.3	+3.5
HPIG		18.59	318	P	Pn	05 58 02.8	+0.2
TOLC	Tolima	18.61	117	eP	Pn	05 58 06.1	+3.0
OTAV	Otavalo	18.72	133	P	P	05 58 03.9	-0.1
OTAV	Otavalo	18.72	133	eP	Pn	05 58 04.9	+0.4
OTAV	Otavalo	18.72	133	eP	Pn	05 58 05.5	+1.0
VBMS	Vicksburg	18.75	4	P	Pn	05 58 05.2	+0.9
	baz=184						
VBMS	Vicksburg	18.75	4	P	Pn	05 58 04.7	+0.4
VBMS				IAmb	IAmb	05 58 09.0	
	comp=Z,41nm,0.7s						
CRJC	Cerrejon, Guaj	18.79	95	eP	Pn	05 58 05.2	+0.2
237A	Washetta, Mont	18.83	350	P	Pn	05 58 05.8	+0.5
GCUF	Volcan Galeras	18.87	129	eP	Pn	05 58 08.5	+2.2
PCON	Cinco Dias	18.93	124	eP	Pn	05 58 09.2	+2.1
H06E1	SOCORRO T-PHAS	18.99	289	T	T	06 17 35.6	
MARP	Paez Belalcaza	18.99	122	eP	Pn	05 58 09.5	+1.9
BRRC	Barranca, Sant	19.00	107	eP	Pn	05 58 08.5	+1.0
OCAC	Ocana	19.00	104	eP	Pn	05 58 07.9	+0.3
ORTC	Ortega, Tolima	19.01	118	eP	Pn	05 58 09.8	+2.2
352A	Blakely	19.10	19	P	Pn	05 58 09.1	+0.6
352A				IAmb	IAmb	05 58 11.7	
	comp=Z,42nm,0.8s						
250A	Grady	19.19	15	P	Pn	05 58 09.7	+0.1
143A	Socs Landing,	19.20	1	P	Pn	05 58 09.3	-0.4
143A				IAmb	IAmb	05 58 21.6	
	comp=Z,42nm,0.6s						
TXAR	Lajitas Array	19.20	327	P	Pn	05 58 10.8	+0.9
	comp=Z,0.3nm,0.3s,baz=157,slow=12,SNR=62						
TXAR				PcP	PcP	06 02 31.2	-0.4
	comp=Z,0.0nm,0.3s,baz=122,slow=4.8,SNR=3.4						
TXAR				LR	LR	06 06 48.8	
	comp=Z,108nm,18.9s,baz=0.0,slow=40						
TXAR	Lajitas Array	19.20	327	P	Pn	05 58 10.3	+0.4
TX31	Lajitas Ar. Si	19.20	327	P	Pn	05 58 10.3	+0.4
TX31				IAmb	IAmb	05 58 31.6	
	comp=Z,78nm,1.4s						
TX32	Lajitas Array	19.20	327	P	Pn	05 58 10.3	+0.4
SPBC	San Pablo de B	19.24	112	eP	Pn	05 58 12.0	+1.6
146A	Union	19.31	7	P	P	05 58 10.5	+0.7
146A				IAmb	IAmb	05 58 22.6	
	comp=Z,44nm,0.8s						
ROSC	El Rosal	19.37	114	P	Pn	05 58 14.8	+2.5
	comp=Z,0.9nm,0.3s,baz=78,slow=12,SNR=9.4						
ROSC	El Rosal	19.37	114		P	05 58 09.5	-1.5
BARC	Barichara	19.68	108	eP	Pn	05 58 17.2	+1.3
GARC	Garzon, Huila	19.74	123	eP	Pn	05 58 17.6	+1.0
Z41A	Richland Creek	19.76	358	P	Pn	05 58 16.0	-0.4
	baz=178,SNR=8.7						
SLBS	Sierra La Lagu	19.86	304	P	Pn	05 58 16.9	-0.8
Z38A	Mt. Pleasant	19.94	353	P	P	05 58 17.6	+1.0
CHIC	Chingaza	19.99	114	eP	Pn	05 58 21.6	+2.0
RUSC	La Rusia	20.04	110	eP	Pn	05 58 21.4	+1.1
LRAL	Lakeview Retre	20.04	12	P	Pn	05 58 19.2	-0.5
	baz=194,SNR=7.2						
LRAL	Lakeview Retre	20.04	12	P	P	05 58 18.8	+1.1
WLAR	White Oak Lake	20.20	357	P	P	05 58 20.4	+0.9
WLAR				IAmb	IAmb	05 58 32.4	
	comp=Z,40nm,0.8s						
LPIG	La Paz	20.35	304	P	Pn	05 58 23.3	-0.1
	comp=Z,17nm,0.3s,baz=104,slow=4.1,SNR=2.9						
LPIG				LR	LR	06 06 41.7	
	comp=Z,104nm,18.6s,baz=114,slow=38						
255A	Hazlehurst	20.36	24	IAmb	IAmb	05 58 40.1	
	comp=Z,40nm,0.9s						
ABTX	Abilene, Hawle	20.37	341	P	Pn	05 58 23.1	-0.5
	baz=158,SNR=21						
ABTX	Abilene, Hawle	20.37	341	P	Pn	05 58 22.6	-1.0
ABTX				IAmb	IAmb	05 58 41.4	
	comp=Z,38nm,0.9s						
Z35A	Perchaven, San	20.40	347	IAmb	IAmb	05 58 34.3	
	comp=Z,44nm,0.8s						
CCAR	Cane Creek	20.40	0	P	P	05 58 22.4	+0.8
CCAR				IAmb	IAmb	05 58 35.1	
	comp=Z,42nm,0.7s						
Z51A	Franklin	20.74	16	IAmb	IAmb	05 58 30.4	
	comp=Z,30nm,0.8s						
Y49A	Blount Mountai	20.96	13	IAmb	IAmb	05 58 40.7	
	comp=Z,33nm,0.8s						
X40A	Basin Creek Fa	20.99	358	P	P	05 58 28.8	+0.8
	baz=178,SNR=5.2						
TAMC	Tame, Arauca	21.02	107	eP	P	05 58 30.5	+1.9
X43A	Marvell	21.02	2	P	P	05 58 29.7	+1.3
	baz=183						
MIAR	Mount Ida	21.08	356	P	P	05 58 29.2	+0.2
	baz=176						
MIAR	Mount Ida	21.08	356	P	P	05 58 29.6	+0.5
OXF	Oxford	21.12	6	P	P	05 58 29.7	+0.2
	baz=187,SNR=11						
OXF	Oxford	21.12	6	P	P	05 58 29.3	-0.1
MACC	Macarena, Meta	21.12	121	eP	P	05 58 32.5	+2.8
SC01	Santiago de lo	21.20	71	P	P	05 58 31.2	+0.7
SC01				IAmb	IAmb	05 58 36.6	
	comp=Z,71nm,0.9s						
GOGA	Godfrey	21.35	20	P	P	05 58 32.8	+0.9
	baz=203,SNR=23						
GOGA	Godfrey	21.35	20	P	P	05 58 32.1	+0.2
GOGA				IAmb	IAmb	05 58 33.6	
	comp=Z,43nm,0.8s						
SDV	Santo Domingo	21.39	100	P	P	05 58 32.5	-0.3
	comp=Z,23nm,0.5s,baz=282,slow=4.5,SNR=36						
SDV	Santo Domingo	21.39	100	P	P	05 58 32.4	-0.3
SDV				IAmb	IAmb	05 58 37.0	
	comp=Z,69nm,1.2s						
SDV	Santo Domingo	21.39	100	eP	P	05 58 32.7	0.0
X48A	Hartselle	21.40	11	P	P	05 58 32.2	-0.3
X48A				IAmb	IAmb	05 58 34.1	
	comp=Z,22nm,0.7s						
PTLC	Puerto Leguiza	21.50	126	eP	P	05 58 46.3	+13
PTGC	Puerto Gaitan,	21.60	113	eP	P	05 58 37.2	+2.4
W41B	Gary Mavity, V	21.66	359	P	P	05 58 35.4	+0.2
	baz=179,SNR=5.9						
CLNB	Carlsbad	21.70	332	P	P	05 58 37.1	+1.2
W39A	Magazine	21.74	356	P	P	05 58 36.7	+0.6
	baz=175,SNR=6.6						
X34A	Smith Ranch, M	21.75	347	P	P	05 58 37.3	+1.1
X34A				IAmb	IAmb	05 58 48.8	
	comp=Z,19nm,0.6s						
PLAL	Pickwick Lake	21.75	9	IAmb	IAmb	05 58 48.6	
	comp=Z,26nm,0.8s						
W45A	Hickory Valley	21.78	6	IAmb	IAmb	05 58 49.2	
	comp=Z,60nm,0.8s						
FPAL	Fort Paine	21.80	14	IAmb	IAmb	05 58 49.8	
	comp=Z,38nm,0.8s						
GUVC	San Jose del G	21.95	118	eP	P	05 58 43.6	+5.0
MNTX	Cornudas Mount	21.98	328	P	P	05 58 39.8	+1.1
	baz=143,SNR=24						
MNTX	Cornudas Mount	21.98	328	P	P	05 58 39.9	+1.2
Z56A	Williston	22.04	24	P	P	05 58 40.1	+0.9
Z56A				IAmb	IAmb	05 58 43.6	
	comp=Z,51nm,0.8s						
HBAR	Harrisburg	22.07	3	P	P	05 58 40.3	+0.7
WMOK	Wichita Mounta	22.10	345	P	P	05 58 40.5	+0.4
	baz=162,SNR=14						
WMOK	Wichita Mounta	22.10	345	P	P	05 58 40.3	+0.3
LPAR	Lepanto	22.13	4	P	P	05 58 40.2	-0.1
CSU	Charleston Sou	22.29	27	P	P	05 58 42.8	+0.8
FNO	Franklin	22.29	348	P	P	05 58 42.0	0.0
NHSC	New Hope	22.34	27	P	P	05 58 44.2	+1.6
	baz=211,SNR=5.6						
NHSC	New Hope	22.34	27	P	P	05 58 44.1	+1.5
SWET	Sewanee	22.37	13	IAmb	IAmb	05 58 44.4	
	comp=Z,30nm,0.6s						
OKCFA	Oklahoma City	22.45	348	P	P	05 58 43.6	-0.1
OKCFA				IAmb	IAmb	05 59 01.7	
	comp=Z,32nm,0.8s						
W50A	Signal Mountai	22.50	14	P	P	05 58 44.0	-0.3
GNAR	Gosnell	22.51	4	P	P	05 58 44.6	+0.2
HALT	Halls	22.51	6	P	P	05 58 44.3	0.0
LCAR	Lake Charles	22.56	2	IAmb	IAmb	05 58 46.7	
	comp=Z,38nm,0.6s						
TUL1	Leonard	22.66	352	P	P	05 58 45.5	-0.4
	baz=170						
PEBM	Pemiscott Bayo	22.67	4	P	P	05 58 45.6	-0.5
LNXT	Lenox	22.69	5	P	P	05 58 46.0	-0.2
MSTX	Muleshoe	22.70	336	P	P	05 58 46.8	+0.3
	baz=152						
MSTX	Muleshoe	22.70	336	P	P	05 58 47.2	+0.7
MSTX				IAmb	IAmb	05 58 59.5	
	comp=Z,23nm,0.7s						
V48A	Smith Brothers	22.70	11	IAmb	IAmb	05 58 58.1	
	comp=Z,22nm,0.7s						
W52A	Murphy	22.76	17	IAmb	IAmb	05 58 49.2	
	comp=Z,33nm,0.6s						
U40A	Yellville	22.85	358	P	P	05 58 47.8	-0.2
	baz=178,SNR=11						
Z59A	Georgetown, SC	22.86	28	P	P	05 58 49.2	+1.1
	baz=213						
WVT	Waverly	22.91	9	P	P	05 58 47.8	-0.8
	baz=190						
WVT	Waverly	22.91	9	P	P	05 58 47.8	-0.8
WVT				IAmb	IAmb	05 58 49.5	
	comp=Z,34nm,0.6s						
PENMO	Penman	23.02	5	P	P	05 58 49.4	-0.3
AMTX	Amarillo	23.11	339	P	P	05 58 51.2	+0.5
	baz=155						
AMTX	Amarillo	23.11	339	IAmb	IAmb	05 59 09.6	
	comp=Z,36nm,0.8s						
CLTN	Cedars of Leba	23.13	12	P	P	05 58 50.5	-0.3
CLTN				IAmb	IAmb	05 59 01.4	
	comp=Z,80nm,1.2s						
HICK	Hickman	23.15	6	P	P	05 58 50.5	-0.5
PARMO	Parma	23.23	4	P	P	05 58 51.4	-0.3
PBMO	Poplar Bluff	23.30	3	IAmb	IAmb	05 58 53.5	
	comp=Z,43nm,0.7s						
HENM	Henderson Moun	23.30	5	P	P	05 58 51.9	-0.6
V51A	Loudon	23.31	16	P	P	05 58 52.4	-0.2
V51A				IAmb	IAmb	05 59 03.7	
	comp=Z,54nm,1.3s						
TKL	Tuckaleechee C	23.33	17	P	P	05 58 53.0	+0.2
	comp=Z,45nm,0.8s,baz=183,slow=10,SNR=68						
TKL				LR	LR	06 08 52.2	
	comp=Z,200nm,21.8s,baz=213,slow=39						
TKL	Tuckaleechee C	23.33	17	P	P	05 58 53.6	+0.7
SRIG	Santa Rosalia	23.46	309	P	P	05 58 54.6	+0.4
HSIG		23.49	314	P	P	05 58 55.8	+1.3
T42A	Van Buren	23.52	2	P	P	05 58 54.6	0.0
T42A				IAmb	IAmb	05 59 05.1	
	comp=Z,50nm,1.2s						
X57A	Johnson Farm,	23.54	25	P	P	05 58 55.2	+0.3
	baz=210						
BIRD	Birdtown, Kers	23.55	24	IAmb	IAmb	05 58 57.5	
	comp=Z,29nm,1.0s						
V52A	Sevierville	23.56	17	IAmb	IAmb	05 59 06.1	
	comp=Z,57nm,1.0s						
V53A	Saluda	23.63	19	IAmb	IAmb	05 59 15.6	
	comp=Z,50nm,1.1s						
MGMO	Mountain Grove	23.63	359	IAmb	IAmb	05 59 07.3	
	comp=Z,58nm,1.1s						
U49A	Red Boiling Sp	23.65	12	IAmb	IAmb	05 59 07.8	
	comp=Z,46nm,1.1s						
KMSC	Kings Mountain	23.66	22	P	P	05 58 56.4	+0.4
	baz=206,SNR=15						
KMSC	Kings Mountain	23.66	22	P	P	05 58 55.9	0.0
KMSC				IAmb	IAmb	05 58 57.4	
	comp=Z,49nm,0.9s						
121A	Cookes Peak, D	23.91	325	P	P	05 59 01.4	+2.8
	baz=139,SNR=9.2						
121A	Cookes Peak, D	23.91	325	P	P	05 58 59.7	+1.1
121A				IAmb	IAmb	05 59 17.3	
	comp=Z,42nm,1.2s						
W56A	Indian Trail	23.93	23	P	P	05 58 58.5	-0.1
	baz=208,SNR=9.9						
319A	Douglas	23.94	321	P	P	05 59 00.9	+2.1
319A				IAmb	IAmb	05 59 02.4	
	comp=Z,35nm,0.9s						
KAN14	Manchester OK	24.05	348	P	P	05 58 59.8	+0.1
S39A	Bolivar	24.20	357	P	P	05 59 00.5	-0.5
TZTN	Tazewell	24.23	17	P	P	05 59 01.6	+0.3
	baz=200,SNR=8.6						
TZTN	Tazewell	24.23	17	IAmb	IAmb	05 59 13.0	
	comp=Z,39nm,0.8s						
X59A	McDuffie Farm,	24.28	28	P	P	05 59 01.5	-0.3
	baz=213						
V55A	Taylorsville	24.33	22	P	P	05 59 02.8	+0.5
V55A				IAmb	IAmb	05 59 03.5	
	comp=Z,33nm,0.7s						
T50A	Nancy	24.34	14	P	P	05 59 02.3	-0.1
T50A				IAmb	IAmb	05 59 03.3	
	comp=Z,30nm,0.7s						
W58A	Raeford	24.38	26	P	P	05 59 02.8	+0.1
	baz=211,SNR=9.5						
ATAH	Atahualpa	24.46	146	P	P	05 59 03.4	-0.7
	comp=Z,15nm,1.0s,baz=343,slow=5.8,SNR=9.8						
FVM	French Village	24.50	3	P	P	05 59 03.0	-0.8
FVM				IAmb	IAmb	05 59 04.2	
	comp=Z,14nm,0.6s						
CCM	Cathedral Cave	24.54	1	P	P	05 59 03.6	-0.5
	baz=182						
CCM	Cathedral Cave	24.54	1	P	P	05 59 03.8	-0.4
V56A	Mocksville	24.56	23	P	P	05 59 04.7	+0.3
	baz=208,SNR=10						
BNM	Barren Site	24.56	330	P	P	05 59 07.1	+2.4
X60A	Albert Glenn T	24.57	29	P	P	05 59 04.2	-0.2
	baz=214,SNR=16						
U54A	Nelsons Funny	24.73	20	P	P	05 59 06.4	+0.4
	baz=204,SNR=18						
U54A	Nelsons Funny	24.73	20	P	P	05 59 05.9	-0.1
R40A	Maddies Statio	24.77	359	IAmb	IAmb	05 59 08.3	
	comp=Z,25nm,0.8s						
W59A	Clinton	24.85	27	P	P	05 59 07.2	+0.2
	baz=213						
V57A	Coltrane Farms	24.91	24	P	P	05 59 07.9	+0.4
	baz=209,SNR=14						
U56A	King	25.08	22	P	P	05 59 09.7	+0.6
	baz=207,SNR=13						
W60A	Pink Hill	25.09	28	P	P	05 59 09.0	-0.1
	baz=214,SNR=13						
V58A	Windy Hill, Pi	25.09	25	P	P	05 59 09.3	+0.1
	baz=210,SNR=15						
ANMO	Albuquerque	25.12	331	P	P	05 59 12.1	+2.4
	comp=Z,6.7nm,0.9s,baz=147,slow=12,SNR=22						
ANMO				LR	LR	06 10 36.1	
	comp=Z,80nm,18.4s,baz=158,slow=40						

ANMO	Albuquerque	25.12	331	P	P	05 59 11.8	+2.1
	baz=145						
ANMO	Albuquerque	25.12	331	P	P	05 59 11.4	+1.7
CNNC	Cliffs of the	25.16	28	P	P	05 59 09.8	0.0
	baz=214,SNR=20						
WCI	Wyandotte Cave	25.21	10	P	P	05 59 10.0	-0.1
	baz=193						
WCI	Wyandotte Cave	25.21	10	P	P	05 59 10.1	-0.1
S51A	Beattyville	25.24	16	IAmb	IAmb	05 59 30.1	
	comp=Z,25nm,1.0s						
SJG	San Juan	25.25	76	LR	LR	06 10 24.7	
	comp=Z,153nm,18.5s,baz=282,slow=40						
V59A	Middlesex	25.44	27	P	P	05 59 11.9	-0.4
	baz=212,SNR=7.9						
R49A	Shelbyville	25.49	12	IAmb	IAmb	05 59 24.0	
	comp=Z,22nm,0.6s						
TUC	Tucson	25.51	321	P	P	05 59 15.1	+2.0
	baz=133						
TUC	Tucson	25.51	321	P	P	05 59 14.5	+1.4
W61A	Ground Anchor	25.53	29	P	P	05 59 13.5	+0.5
	baz=216						
U57A	Blanch	25.55	24	P	P	05 59 13.8	+0.5
	baz=209,SNR=16						
R32A	Long Quarter,	25.61	348	P	P	05 59 14.8	+0.9
R32A				IAmb	IAmb	05 59 26.6	
	comp=Z,24nm,1.0s						
R50A	Paris	25.67	14	IAmb	IAmb	05 59 16.3	
	comp=Z,26nm,0.7s						
T56A	Rocky Mt	25.81	22	P	P	05 59 15.3	-0.4
	baz=207						
BLA	Blacksburg	25.83	21	P	P	05 59 16.0	+0.1
	baz=206,SNR=5.1						
BLA	Blacksburg	25.83	21	IAmb	IAmb	05 59 28.4	
	comp=Z,31nm,0.9s						
U58A	Oxford	25.84	25	P	P	05 59 16.0	0.0
	baz=211						
V60A	Jim Taylor Roa	25.88	28	P	P	05 59 16.5	+0.2
	baz=214,SNR=5.8						
V60A	Jim Taylor Roa	25.88	28	P	P	05 59 15.6	-0.7
KSU1	Kansas State U	25.91	352	P	P	05 59 17.0	+0.5
	baz=170						
KSU1	Kansas State U	25.91	352	IAmb	IAmb	05 59 28.6	
	comp=Z,16nm,0.8s						
P40A	Paris	26.00	360	P	P	05 59 17.2	-0.2
P40A				IAmb	IAmb	05 59 19.1	
	comp=Z,23nm,0.6s						
S54A	Dingess, Beckl	26.06	19	P	P	05 59 17.9	-0.1
	baz=204,SNR=8.4						
S54A	Dingess, Beckl	26.06	19	P	P	05 59 17.6	-0.4
S54A				IAmb	IAmb	05 59 28.9	
	comp=Z,28nm,0.7s						
T57A	Hurt	26.08	24	P	P	05 59 18.6	+0.5
	baz=209,SNR=5.7						
T57A	Hurt	26.08	24	P	P	05 59 18.4	+0.3
T57A				IAmb	IAmb	05 59 19.2	
	comp=Z,22nm,0.9s						
BLO	Bloomington	26.09	10	IAmb	IAmb	05 59 19.7	
	comp=Z,21nm,0.7s						
T25A	Trinidad	26.11	337	P	P	05 59 21.9	+3.2
	baz=152,SNR=12						
U59A	Littleton	26.13	27	P	P	05 59 18.5	-0.1
	baz=213						
U59A	Littleton	26.13	27	IAmb	IAmb	05 59 19.1	
	comp=Z,13nm,0.6s						
P43A	Skaggs, Pawnee	26.20	4	IAmb	IAmb	05 59 21.6	
	comp=Z,23nm,0.7s						
T58A	Grand View Acr	26.32	25	P	P	05 59 20.5	+0.2
	baz=210						
R53A	Hurricane	26.35	18	P	P	05 59 20.1	-0.4
R53A				IAmb	IAmb	05 59 31.1	
	comp=Z,28nm,1.0s						
P46A	Rosedale	26.43	8	P	P	05 59 21.0	-0.2
U60A	Pendleton	26.51	27	P	P	05 59 22.2	+0.2
	baz=214,SNR=9.8						
R54A	Victor	26.51	20	P	P	05 59 22.0	0.0
	baz=204						
S56A	Natural Bridge	26.56	22	P	P	05 59 22.7	+0.2
	baz=208						
P48A	Milroy	26.57	11	P	P	05 59 21.0	-1.4
P48A				IAmb	IAmb	05 59 24.7	
	comp=Z,56nm,1.4s						
214A	Organ Pipe Nat	26.57	317	P	P	05 59 24.4	+1.8
	baz=130,SNR=8.1						
214A	Organ Pipe Nat	26.57	317	P	P	05 59 23.2	+0.6
X18A	Snowflake	26.60	325	P	P	05 59 24.5	+1.5
Q51A	Peebles	26.61	15	IAmb	IAmb	05 59 34.4	
	comp=Z,38nm,0.8s						
T59A	Double "B" Far	26.75	26	P	P	05 59 24.4	+0.2
	baz=212,SNR=11						
T59A	Double "B" Far	26.75	26	IAmb	IAmb	05 59 25.5	
	comp=Z,38nm,0.8s						
P49A	Miami Univ. Ec	26.78	12	P	P	05 59 23.3	-1.1
	baz=196						
P49A	Miami Univ. Ec	26.78	12	IAmb	IAmb	05 59 37.7	
	comp=Z,25nm,1.4s						
O44A	Mansfield	26.80	6	IAmb	IAmb	05 59 35.4	
	comp=Z,26nm,0.8s						
Q52A	Bidwell	26.84	17	IAmb	IAmb	05 59 35.0	
	comp=Z,34nm,1.0s						
S57A	Dark Hollow, R	26.86	23	P	P	05 59 25.3	+0.1
	baz=209						
S57A	Dark Hollow, R	26.86	23	P	P	05 59 26.3	+1.1
R55A	Marlinton	26.90	21	P	P	05 59 25.6	0.0
	baz=206,SNR=6.3						
Q53A	Leroy	26.96	18	P	P	05 59 26.4	+0.3
	baz=203						
SDCO	Great Sand Dun	27.07	336	P	P	05 59 30.3	+2.9
	baz=150,SNR=13						
SDCO	Great Sand Dun	27.07	336	P	P	05 59 28.4	+1.1
S58A	Poland Farm, P	27.09	25	P	P	05 59 27.2	0.0
	baz=211						
S58A	Poland Farm, P	27.09	25	IAmb	IAmb	05 59 38.4	
	comp=Z,20nm,0.8s						
P51A	Williamsport	27.12	15	P	P	05 59 26.8	-0.6
P51A				IAmb	IAmb	05 59 38.2	
	comp=Z,17nm,0.7s						
HDIL	Hopedale	27.13	4	P	P	05 59 27.4	-0.1
	baz=186,SNR=9.4						
HDIL	Hopedale	27.13	4	P	P	05 59 27.2	-0.3
HDIL				IAmb	IAmb	05 59 38.5	
	comp=Z,33nm,0.8s						
KSCO	Kaye Shedlock’	27.18	342	P	P	05 59 30.6	+2.4
	baz=157						
SFIN	Lafayette	27.19	8	P	P	05 59 27.6	-0.4
	baz=190,SNR=10						
SFIN	Lafayette	27.19	8	IAmb	IAmb	05 59 28.6	
	comp=Z,30nm,0.7s						
N41A	Harden Midland	27.20	2	IAmb	IAmb	05 59 37.9	
	comp=Z,32nm,1.4s						
T60A	Surry	27.25	27	P	P	05 59 28.9	+0.3
	baz=214						
R56A	Bull Pasture M	27.26	22	P	P	05 59 29.2	+0.4
	baz=207						
N38A	Joes South For	27.29	358	P	P	05 59 29.1	+0.2
N38A				IAmb	IAmb	05 59 32.8	
	comp=Z,15nm,0.6s						
Q54A	Coxs Mills	27.29	19	P	P	05 59 29.1	+0.1
Q54A				IAmb	IAmb	05 59 39.2	
	comp=Z,31nm,0.8s						
X16A	Lo Mia Camp, P	27.36	323	P	P	05 59 32.5	+2.6
R58B	Mineral	27.46	25	P	P	05 59 30.7	+0.2
	baz=211						
R58B	Mineral	27.46	25	IAmb	IAmb	05 59 41.8	
	comp=Z,18nm,0.9s						
O49A	Covington	27.49	13	IAmb	IAmb	05 59 32.0	
	comp=Z,21nm,1.1s						
R57A	Stanardsville	27.50	23	P	P	05 59 31.0	+0.2
	baz=209						
P52A	Corning	27.51	17	P	P	05 59 30.5	-0.4
	baz=201						
S59A	Mechanicsville	27.53	26	P	P	05 59 31.8	+0.6
	baz=212						
P53A	Whipple	27.58	18	IAmb	IAmb	05 59 42.4	
	comp=Z,60nm,1.4s						
S22A	4UR Ranch, Cre	27.61	334	P	P	05 59 34.7	+2.4
	baz=148,SNR=11						
R58A	Rapidan	27.70	24	P	P	05 59 33.0	+0.4
	baz=210						
S60A	Water View	27.76	27	P	P	05 59 33.2	0.0
	baz=213						
ACSO	Alum Creek Sta	27.84	15	P	P	05 59 33.7	-0.3
	baz=199						
CBN	Corbin Frederi	27.88	25	P	P	05 59 35.2	+1.0
	baz=211						
CBN	Corbin Frederi	27.88	25	P	P	05 59 34.0	-0.2
N47A	Urbana	27.90	10	P	P	05 59 32.5	-1.9
N47A				IAmb	IAmb	05 59 34.8	
	comp=Z,26nm,0.9s						
Q56A	Snyder Ridge,	27.90	22	P	P	05 59 35.1	+0.5
	baz=207,SNR=5.8						
Q56A	Snyder Ridge,	27.90	22	IAmb	IAmb	05 59 46.2	
	comp=Z,18nm,0.7s						
MVCO	Mesa Verde	27.92	331	P	P	05 59 37.8	+2.8
	baz=144,SNR=7.0						
MVCO	Mesa Verde	27.92	331	P	P	05 59 33.7	-1.3
MVCO				IAmb	IAmb	05 59 38.4	
	comp=Z,14nm,0.8s						
R59A	King George, V	27.98	25	P	P	05 59 36.1	+1.0
	baz=212						
O52A	Adamsville	28.04	17	IAmb	IAmb	05 59 45.5	
	comp=Z,21nm,0.8s						
Q57A	Strasburg	28.18	23	P	P	05 59 37.0	0.0
	baz=209						
MCWV	Mont Chateau	28.23	20	P	P	05 59 37.7	+0.3
	baz=205						
R60A	Leonardtown, M	28.26	26	P	P	05 59 38.5	+0.9
	baz=213						
O53A	New Philadelph	28.34	17	P	P	05 59 38.6	+0.2
	baz=202						
O53A	New Philadelph	28.34	17	IAmb	IAmb	05 59 48.8	
	comp=Z,47nm,1.2s						
Q58A	Fox Den Farm,	28.38	24	P	P	05 59 39.0	+0.2
	baz=210						
CZSB	Cruzeiro do Su	28.41	137	*e*P	P	05 59 40.8	+1.6
P56A	Dayton Farm, R	28.44	22	P	P	05 59 39.8	+0.5
	baz=208						
HQIL	Hanson Quary C	28.50	6	P	P	05 59 39.7	0.0
O54A	Avella	28.53	19	IAmb	IAmb	05 59 50.7	
	comp=Z,18nm,0.9s						
L40A	Anamosa	28.54	1	IAmb	IAmb	05 59 51.7	
	comp=Z,20nm,0.9s						
L42A	Oliver, Polo	28.55	4	IAmb	IAmb	05 59 51.1	
	comp=Z,42nm,1.3s						
GLA	Glamis	28.58	317	P	P	05 59 41.7	+1.0
	baz=128						
PV01	Paradox Valley	28.70	332	IAmb	IAmb	05 59 55.3	
	comp=Z,19nm,1.1s						
P57A	Homestead Farm	28.72	23	P	P	05 59 42.5	+0.7
	baz=209,SNR=6.5						
P57A	Homestead Farm	28.72	23	P	P	05 59 41.0	-0.8
Q59A	Harwood	28.73	25	P	P	05 59 42.4	+0.6
	baz=212						
PV15	Paradox Valley	28.83	332	P	P	05 59 43.5	+0.4
PV15				IAmb	IAmb	05 59 47.6	
	comp=Z,17nm,1.0s						
PV13	Radium Mtn., P	28.84	332	P	P	05 59 43.3	+0.2
PV13				IAmb	IAmb	05 59 46.7	
	comp=Z,19nm,0.9s						
PV02	Paradox Valley	28.84	332	P	P	05 59 42.6	-0.5
PV02				IAmb	IAmb	05 59 56.4	
	comp=Z,21nm,1.1s						
L44A	Lake County Fo	28.86	6	P	P	05 59 43.5	+0.6
	baz=188						
L44A	Lake County Fo	28.86	6	P	P	05 59 42.8	-0.2
L44A				IAmb	IAmb	05 59 54.0	
	comp=Z,37nm,0.8s						
ISCO	Idaho Springs	28.90	338	P	P	05 59 45.9	+2.2
	baz=152						
ISCO	Idaho Springs	28.90	338	P	P	05 59 43.0	-0.8
PV05	Paradox Valley	28.90	331	P	P	05 59 43.3	-0.4
PDMCI	Parker Dam,Lak	28.93	320	P	P	05 59 45.7	+2.0
	baz=131,SNR=8.9						
M50A	Fremont	28.94	14	IAmb	IAmb	05 59 55.6	
	comp=Z,13nm,0.7s						
PV18	Skein Mesa, Pa	28.95	332	P	P	05 59 42.4	-1.7
PV18				IAmb	IAmb	05 59 47.5	
	comp=Z,21nm,1.1s						
PV12	Saucer Basin,	28.96	332	IAmb	IAmb	05 59 48.0	
	comp=Z,32nm,0.8s						
N53A	Lisbon	28.96	18	IAmb	IAmb	05 59 54.7	
	comp=Z,29nm,1.1s						
PV07	Paradox Valley	28.99	332	IAmb	IAmb	05 59 48.2	
	comp=Z,22nm,0.9s						
PV17	East Wray Mesa	29.00	332	IAmb	IAmb	05 59 48.0	
	comp=Z,19nm,0.9s						
M51A	Elyria	29.08	15	P	P	05 59 44.6	-0.3
	baz=200						
PV10	Paradox Valley	29.12	332	IAmb	IAmb	05 59 54.9	
	comp=Z,14nm,0.9s						
PV22	Blue Mesa, Par	29.13	332	IAmb	IAmb	05 59 49.2	
	comp=Z,15nm,0.8s						
SWSC	Sam W. Stewart	29.17	316	P	P	05 59 47.2	+1.4
	baz=126						
IKP	In-Ko-Pah, Jac	29.21	315	P	P	05 59 48.1	+1.8
	baz=126						
O56A	Blue Knob Stat	29.21	21	P	P	05 59 45.8	-0.4
	baz=207						
O56A	Blue Knob Stat	29.21	21	IAmb	IAmb	05 59 56.8	
	comp=Z,41nm,1.1s						
W13A	Hualapai Mount	29.29	321	P	P	05 59 50.0	+2.8
NNA	Nana	29.36	149	LR	LR	06 09 44.3	
	comp=Z,57nm,21.9s,baz=314,slow=33						
N54A	Moraine State	29.36	19	P	P	05 59 47.2	-0.2
	baz=204						
N54A	Moraine State	29.36	19	IAmb	IAmb	05 59 57.8	
	comp=Z,39nm,1.1s						
BC3	Big Chuckawall	29.36	317	P	P	05 59 49.7	+2.0
	baz=128,SNR=11						
JFWS	Jewell Farm	29.42	3	IAmb	IAmb	06 00 00.3	
	comp=Z,14nm,0.8s						
P59A	Jarrettsville	29.45	25	P	P	05 59 48.7	+0.4
	baz=212						
IRM	Iron Mountain	29.47	318	P	P	05 59 50.5	+1.9
	baz=129,SNR=6.5						
M52A	Chesterland	29.50	16	P	P	05 59 48.3	-0.4
M52A				IAmb	IAmb	05 59 59.1	
	comp=Z,26nm,1.1s						
O57A	Amberson	29.50	23	P	P	05 59 48.7	0.0
	baz=209						
MONP2	Monument Peak	29.57	315	P	P	05 59 51.6	+2.0
	baz=126						
M53A	WI Miller and	29.59	17	P	P	05 59 48.8	-0.7
	baz=203						
SSPA	Standing Stone	29.78	22	P	P	05 59 50.7	-0.4
SSPA				IAmb	IAmb	05 59 51.9	
	comp=Z,22nm,0.8s						
MVL	Millersville	29.82	25	P	P	05 59 51.1	-0.4
MVL				IAmb	IAmb	05 59 54.2	
	comp=Z,40nm,1.3s						
N56A	West Decatur	29.88	21	P	P	05 59 52.1	0.0
	baz=207						
P60A	Greenville	29.95	26	P	P	05 59 52.5	-0.1
	baz=213						
M54A	Oil Creek Stat	29.96	19	P	P	05 59 52.4	-0.3
	baz=204						
TPFO	Pinon Flats	30.00	316	P	P	05 59 55.2	+1.8
	baz=126						
KNB	Kanab	30.00	325	P	P	05 59 54.0	+0.6
N57A	Milroy	30.01	22	P	P	05 59 53.1	0.0
	baz=209						
PFO	Pinyon Flats O	30.01	316	P	P	05 59 55.5	+2.0
	baz=126						
PFO	Pinyon Flats O	30.01	316	P	P	05 59 53.4	-0.1
109C	Camp Elliot, M	30.04	314	P	P	05 59 52.8	-0.7
109C				IAmb	IAmb	05 59 56.4	
	comp=Z,18nm,1.3s						
O59A	Robesonia	30.15	24	P	P	05 59 54.6	+0.1
	baz=212						
L53A	Girard	30.19	17	P	P	05 59 54.6	-0.2
	baz=203						
GMRC	Granite Mounta	30.20	319	P	P	05 59 57.3	+2.2
	baz=129,SNR=5.5						
M55A	Ridgway	30.21	20	P	P	05 59 54.5	-0.6
M55A				IAmb	IAmb	05 59 58.8	
	comp=Z,13nm,0.8s						
O20A	White River Ci	30.22	335	P	P	05 59 57.9	+2.7
	baz=147						
O20A	White River Ci	30.22	335	IAmb	IAmb	06 00 00.9	
	comp=Z,18nm,1.4s						
LCMT	Little Creek M	30.24	325	P	P	05 59 58.3	+2.9
N58A	Sunbury	30.39	23	P	P	05 59 58.0	+1.5
	baz=210						
SRU	San Rafael Swe	30.40	331	P	P	05 59 59.5	+2.7
MTPU	Mount Pierson	30.41	327	P	P	05 59 59.4	+2.2
ERPA	Erie	30.42	18	P	P	05 59 56.3	-0.5
	baz=203						
M56A	Emporium	30.42	21	P	P	05 59 58.3	+1.4
	baz=207						
M56A	Emporium	30.42	21	P	P	05 59 56.6	-0.3
M56A				IAmb	IAmb	05 59 58.9	
	comp=Z,24nm,0.9s						
ECSD	EROS Data Cent	30.47	353	P	P	05 59 59.6	+2.3
	baz=171						
I42A	Draeger Farm,	30.47	4	P	P	05 59 56.8	-0.4
I42A				IAmb	IAmb	05 59 58.1	
	comp=Z,14nm,0.8s						
O60A	Telford	30.48	25	P	P	05 59 57.7	+0.5
	baz=213						
MURC	Murrieta	30.50	315	P	P	05 59 59.6	+2.0
	baz=125						
SZCU	Shurtz Canyon	30.57	326	P	P	05 59 58.1	-0.3
M57A	Sunshine Farm,	30.67	22	P	P	05 59 59.0	0.0
	baz=209						
M57A	Sunshine Farm,	30.67	22	P	P	05 59 58.6	-0.4
MSU	Marysvale	30.76	328	P	P	05 59 59.7	-0.4
MVU	Marysvale	30.77	328	P	P	06 00 00.2	0.0
P17A	Butcher Ranch,	30.79	331	P	P	06 00 01.1	+0.8
N59A	State Game Lan	30.83	24	P	P	06 00 00.5	+0.1
	baz=212						
TMUT	Trail Mountain	30.88	330	P	P	06 00 02.5	+1.3
M58A	Price’s Panora	30.95	23	P	P	06 00 01.4	-0.1
	baz=210						
SHPR	Sheep Range	31.00	322	P	P	06 00 04.8	+2.6
N60A	Cedar Hill Far	31.06	25	P	P	06 00 02.7	+0.3
	baz=213						
WVNY	West Valley, N	31.11	19	IAmb	IAmb	06 00 13.2	
	comp=Z,17nm,0.7s						
L56A	Greenwood	31.22	21	P	P	06 00 03.3	-0.6
	baz=208						
N61A	South Mountain	31.31	26	P	P	06 00 04.5	-0.1
	baz=214						
L57A	Andrews Acres	31.35	22	P	P	06 00 04.8	-0.2
	baz=209						
M59A	Waymart	31.49	24	P	P	06 00 05.8	-0.5
	baz=212						
MPU	Maple Canyon	31.64	330	P	P	06 00 09.8	+2.0
M60A	Port Jervis	31.64	25	P	P	06 00 07.0	-0.6
	baz=213						
PAL	Palisades	31.68	27	P	P	06 00 07.6	-0.3
	baz=215						
PAL	Palisades	31.68	27	P	P	06 00 07.9	0.0
PAL				IAmb	IAmb	06 00 19.2	
	comp=Z,22nm,0.8s						
I51A	Listowel	31.70	15	P	P	06 00 07.1	-0.9
	baz=200						
SPMN	Marine on St.	31.70	359	P	P	06 00 08.0	-0.1
	baz=178						
SPMN	Marine on St.	31.70	359	IAmb	IAmb	06 00 18.7	
	comp=Z,9.0nm,0.6s						
K22A	Casper	31.73	339	P	P	06 00 10.0	+1.4
	baz=152						
K22A	Casper	31.73	339	P	P	06 00 08.4	-0.2
K22A				IAmb	IAmb	06 00 20.7	
	comp=Z,14nm,1.2s						
L58A	Harry Jones Me	31.76	23	P	P	06 00 08.5	-0.1
	baz=211						
K56A	Middlesex	31.80	21	P	P	06 00 08.7	-0.2
	baz=208						
BINY	Binghamton	31.84	23	P	P	06 00 09.2	-0.1
	baz=210						
LRMC	Laurel Mtn Rad	31.93	318	P	P	06 00 12.5	+2.1
	baz=127						
TPNV	Topopah Spring	31.95	321	P	P	06 00 13.5	+2.9
	baz=131						
TPNV	Topopah Spring	31.95	321	P	P	06 00 13.5	+2.9
M61A	Granite Spring	31.99	26	P	P	06 00 10.6	-0.1
	baz=215						
FURC	Furnace Creek,	32.02	320	P	P	06 00 13.5	+2.6
	baz=130						
WSPT	Westport, CT	32.07	27	P	P	06 00 11.2	-0.1
K57A	Scipio Center	32.11	22	P	P	06 00 11.0	-0.7
	baz=209						
MPMC	Manual Prospec	32.16	319	P	P	06 00 14.6	+2.2
	baz=128,SNR=12						
L59A	Walton	32.20	24	P	P	06 00 12.5	0.0
	baz=212						
CTU	Camp Tracy	32.23	331	P	P	06 00 12.2	-0.7
L60A	Shokan	32.36	25	P	P	06 00 14.0	+0.1
	baz=214						
TCUT	Toone Canyon	32.40	332	P	P	06 00 15.2	+0.6
K58A	Earlville	32.45	23	P	P	06 00 14.5	-0.2
	baz=210,SNR=7.1						
J56A	Wolcott	32.47	21	P	P	06 00 14.2	-0.6
	baz=208						
ISA	Isabella, Lake	32.56	317	P	P	06 00 18.5	+2.7
	baz=126						
ISA	Isabella, Lake	32.56	317	P	P	06 00 18.3	+2.5
COWI	Conover	32.66	4	P	P	06 00 15.9	-0.6
COWI				IAmb	IAmb	06 00 17.1	
	comp=Z,17nm,1.1s						
CWC	Cottonwood Cre	32.77	319	P	P	06 00 19.6	+1.8
	baz=128						
M63A	Gales Ferry	32.84	28	P	P	06 00 18.1	0.0
	baz=218						
J57A	Williamstown	32.89	22	P	P	06 00 17.5	-1.0
	baz=209						
BW06	Boulder Array	32.96	336	P	P	06 00 21.2	+1.8
	baz=147,SNR=6.3						
BW06	Boulder Array	32.96	336	P	P	06 00 22.1	+2.6
PD31	Pinedale Array	32.96	336	P	P	06 00 21.3	+1.9
PDAR	Pinedale Array	32.96	336	P	P	06 00 21.2	+1.8
	comp=Z,4.3nm,0.9s,baz=138,slow=8.9,SNR=23						
PDAR				pP	sP	06 00 30.6	-0.6
	comp=Z,2.0nm,0.8s,baz=142,slow=9.9,SNR=6.4						
PDAR				PcP	PcP	06 03 03.1	0.0
	comp=Z,0.9nm,0.9s,baz=101,slow=7.7,SNR=4.3						
PKM	Mcpherson Peak	33.02	315	P	P	06 00 21.1	+1.2
	baz=124						
BGU	Big Grassy Mou	33.02	330	P	P	06 00 22.7	+2.9
SPUT	South Promonto	33.04	331	P	P	06 00 23.2	+3.2
L62A	Suffield	33.06	27	P	P	06 00 19.9	0.0
	baz=216						
L62A	Suffield	33.06	27	P	P	06 00 20.0	0.0
VES	Vestal, Richgr	33.06	317	P	P	06 00 22.6	+2.5
	baz=126,SNR=9.0						
E38A	The Farm, Brul	33.08	0	P	P	06 00 19.6	-0.5
E38A				IAmb	IAmb	06 00 47.1	
	comp=Z,20nm,1.1s						
H53A	Bobcaygeon	33.08	18	P	P	06 00 19.4	-0.7
	baz=204						
SADO	Sadowa	33.10	17	P	P	06 00 19.7	-0.6
SADO				IAmb	IAmb	06 00 20.1	
	comp=Z,15nm,0.9s						
J58A	Remsen	33.10	23	P	P	06 00 20.0	-0.4
	baz=211						
TPH	Tonopah	33.27	322	P	P	06 00 24.7	+2.5
DELO	Deloro Mine	33.32	19	IAmb	IAmb	06 00 23.1	
	comp=Z,14nm,0.7s						
K61A	Williamstown	33.32	25	P	P	06 00 22.6	+0.4
	baz=214						
J59A	Piesco	33.49	23	P	P	06 00 23.2	-0.5
	baz=212						
J59A	Piesco	33.49	23	IAmb	IAmb	06 00 34.2	
	comp=Z,22nm,0.9s						
I58A	Old Forge	33.50	23	P	P	06 00 23.5	-0.4
	baz=211,SNR=7.5						
HVU	Hansel Valley	33.56	331	P	P	06 00 25.1	+0.6
AHID	Auburn Hatcher	33.60	334	P	P	06 00 26.7	+1.8
AHID				IAmb	IAmb	06 00 38.7	
	comp=Z,35nm,1.4s						
J60A	Lant Hill Farm	33.73	25	P	P	06 00 25.9	+0.1
	baz=214						
K62A	Royalston	33.76	27	P	P	06 00 26.2	+0.1
L64A	Middleborough	33.81	29	P	P	06 00 26.9	+0.3
	baz=219						
HRV	Adam Dziewonsk	33.93	27	P	P	06 00 27.3	-0.3
	baz=217						
HRV	Adam Dziewonsk	33.93	27	P	P	06 00 27.2	-0.3
PLVO	Plevna	33.96	19	P	P	06 00 27.3	-0.5
PLVO				IAmb	IAmb	06 00 28.8	
	comp=Z,23nm,1.4s						
G54A	Lake Saint Pet	33.97	18	P	P	06 00 27.6	-0.4
	baz=205						
H57A	Richville	34.02	21	P	P	06 00 28.0	-0.3
	baz=210						
NV11	Mina Array Sit	34.06	322	IAmb	IAmb	06 00 32.8	
	comp=Z,18nm,0.9s						
OMMB	Old Mammoth Mi	34.07	320	P	P	06 00 31.9	+2.6
K63A	Dunstable	34.09	27	P	P	06 00 28.7	-0.2
	baz=217						
K63A	Dunstable	34.09	27	P	P	06 00 28.9	0.0
LOHW	Long Hollow	34.09	336	IAmb	IAmb	06 00 42.4	
	comp=Z,35nm,1.4s						
MDPB	Devils Postpil	34.13	320	IAmb	IAmb	06 00 33.1	
	comp=Z,10.0nm,0.9s						
NVAR	Mina Array Bea	34.15	322	P	P	06 00 32.5	+2.7
	comp=Z,12nm,0.8s,baz=139,slow=8.5,SNR=93						
NVAR				pP	pwP	06 00 41.7	-0.7
	comp=Z,6.3nm,0.7s,baz=125,slow=7.3,SNR=9.7						
NVAR				PcP	PcP	06 03 07.5	+0.9
	comp=Z,3.0nm,0.7s,baz=138,slow=4.1,SNR=11						

NVAR				pPcP		06 03 16.6	
	comp=Z,2.6nm,0.7s,baz=136,slow=3.9,SNR=7.0						
NVAR				LR	LR	06 16 58.5	
	comp=Z,128nm,20.4s,baz=185,slow=41						
NVAR	Mina Array Bea	34.15	322	P	P	06 00 31.8	+1.9
LHV	Little Huntoon	34.16	321	IAmb	IAmb	06 00 33.7	
	comp=Z,11nm,0.8s						
I60A	Shoreham	34.28	24	P	P	06 00 30.5	-0.1
	baz=213						
RYN	Ryan	34.41	322	P	P	06 00 31.1	-0.9
EYMN	Ely	34.42	1	P	P	06 00 30.8	-1.0
EYMN				IAmb	IAmb	06 00 46.3	
	comp=Z,25nm,1.4s						
H58A	Gabriels	34.42	23	P	P	06 00 31.0	-0.8
	baz=212						
ETMB	Extrema	34.44	131	*e*P	P	06 00 31.8	-0.5
LONY	Lake Ozonia	34.45	22	P	P	06 00 31.4	-0.6
	baz=211						
IMW	Indian Meadow	34.46	335	IAmb	IAmb	06 00 37.3	
	comp=Z,6.8nm,0.7s						
ALGO	Algonquin Park	34.49	17	P	P	06 00 31.6	-0.8
	baz=204						
PTGA	Pitinga	34.68	111	IAmb	IAmb	06 00 39.4	
	comp=Z,22nm,1.0s						
PTGA	Pitinga	34.68	111	*e*P	P	06 00 36.7	+2.2
G57A	Newington	34.72	21	P	P	06 00 33.8	-0.6
	baz=210						
H17A	Grant Village	34.73	336	P	P	06 00 37.5	+2.7
	baz=147						
H17A	Grant Village	34.73	336	IAmb	IAmb	06 00 55.6	
	comp=Z,23nm,1.5s						
H59A	Cadyville	34.80	23	P	P	06 00 34.2	-0.9
	baz=212						
LKWY	Lake	34.80	337	IAmb	IAmb	06 01 02.6	
	comp=Z,17nm,1.5s						
RLMT	Red Lodge	34.86	338	P	P	06 00 37.4	+1.5
	baz=150						
WAKR	Walker	34.89	321	P	P	06 00 39.2	+3.0
WAKR				IAmb	IAmb	06 00 40.0	
	comp=Z,15nm,1.4s						
VT1	Waterbury	34.90	24	P	P	06 00 35.5	-0.5
FRNY	Flat Rock	35.00	23	P	P	06 00 36.4	-0.4
YNE	Yellowstone No	35.03	337	P	P	06 00 39.7	+2.3
G58A	Ormstown	35.09	22	P	P	06 00 36.8	-0.8
	baz=211						
H60A	Morristown	35.12	24	P	P	06 00 37.3	-0.5
	baz=214						
I62A	Tamworth	35.12	26	P	P	06 00 37.9	+0.1
	baz=216						
I62A	Tamworth	35.12	26	P	P	06 00 38.0	+0.1
MACA	Manacapuru-AM	35.13	116	*e*P	P	06 00 40.5	+2.2
YHH	Holmes Hill	35.17	336	P	P	06 00 41.4	+2.8
CMB	Columbia Colle	35.20	319	P	P	06 00 39.3	+0.6
LAO	LASA Array	35.27	343	P	P	06 00 39.3	+0.1
LAO				IAmb	IAmb	06 00 41.9	
	comp=Z,14nm,1.4s						
YHB	Horse Butte	35.27	336	P	P	06 00 40.0	+0.5
PNTR	Pine Nut	35.35	321	P	P	06 00 43.1	+3.0
PNTR				IAmb	IAmb	06 00 43.8	
	comp=Z,12nm,0.9s						
YHL	Hebgen Lake	35.35	336	P	P	06 00 42.4	+2.2
G59A	Clarenceville	35.36	23	P	P	06 00 39.6	-0.3
	baz=213						
QLMT	Earthquake Lak	35.43	336	P	P	06 00 43.4	+2.6
F57A	Harrington	35.43	21	P	P	06 00 39.9	-0.6
	baz=210						
VCNR	Virginia City	35.51	322	P	P	06 00 41.2	-0.4
E55A	Montcerf-Lytto	35.54	19	P	P	06 00 40.7	-0.7
	baz=207						
GCMT	Greycliff	35.58	339	P	P	06 00 42.6	+0.6
I63A	Otisfield	35.59	27	P	P	06 00 41.8	0.0
	baz=217						
I63A	Otisfield	35.59	27	P	P	06 00 41.9	0.0
PAHR	Pah Rah Range	35.61	322	P	P	06 00 45.1	+2.7
HLID	Hailey	35.70	332	P	P	06 00 45.5	+2.4
	baz=141,SNR=7.8						
HLID	Hailey	35.70	332	P	P	06 00 43.3	+0.2
G60A	Masonville	35.71	24	P	P	06 00 42.6	-0.3
	baz=214						
H62A	Milan	35.76	26	P	P	06 00 43.2	-0.2
BCYI	Bear Canyon	35.83	333	P	P	06 00 47.3	+3.0
TRQ	Mont Tremblant	35.84	21	P	P	06 00 44.0	0.0
MOQ	Mont Orford	35.92	24	P	P	06 00 44.4	-0.3
E56A	St. Veronique	35.96	20	P	P	06 00 44.3	-0.7
	baz=209						
AFDM	Forest Hills D	36.11	320	P	P	06 00 46.7	+0.2
E57A	Chemin Saint G	36.14	21	P	P	06 00 46.4	-0.3
	baz=210						
BOZ	Bozeman (W)	36.15	336	P	P	06 00 49.3	+2.5
	baz=146						
F59A	Saint Guilaume	36.16	23	P	P	06 00 46.6	-0.2
	baz=213						
SAML	Samuel	36.19	126	P	P	06 00 46.1	-1.3
SAML				IAmb	IAmb	06 00 48.3	
	comp=Z,10nm,1.0s						
D55A	Sainte-Anne-du	36.23	19	P	P	06 00 46.9	-0.4
	baz=208,SNR=9.5						
BEKR	Beckworth	36.30	322	IAmb	IAmb	06 00 51.6	
	comp=Z,12nm,1.0s						
H63A	New Sharon	36.31	27	P	P	06 00 48.1	+0.1
	baz=218						
DLMT	Dillon	36.34	335	IAmb	IAmb	06 01 02.2	
	comp=Z,31nm,1.4s						
WVL	Waterville	36.40	27	P	P	06 00 48.9	+0.1
E58A	La Victoria	36.42	22	P	P	06 00 48.6	-0.4
	baz=212						
D56A	ZEC Mazanza, M	36.49	20	P	P	06 00 48.7	-0.8
	baz=209						
G62A	West of Eustis	36.54	26	P	P	06 00 49.7	-0.4
	baz=216						
G62A	West of Eustis	36.54	26	P	P	06 00 49.7	-0.4
F60A	Warwick	36.58	24	P	P	06 00 49.7	-0.6
	baz=214,SNR=5.7						
H64A	Troy	36.66	28	P	P	06 00 50.8	-0.2
	baz=219						
ORV	Oroville	36.80	320	P	P	06 00 54.8	+2.4
G63A	Kingsbury	36.85	27	P	P	06 00 52.2	-0.5
	baz=218						
ULM	Lac du Bonnet	36.86	356	P	P	06 00 52.4	-0.3
	comp=Z,2.0nm,0.6s,baz=183,slow=14,SNR=5.0						
ULM				PcP	PcP	06 03 14.3	+0.3
	comp=Z,5.4nm,1.0s,baz=218,slow=3.1,SNR=4.0						
ULM				pPcP		06 03 23.6	
	comp=Z,4.6nm,0.9s,baz=136,slow=0.9,SNR=4.5						
ULM				LR	LR	06 19 11.5	
	comp=Z,78nm,18.5s,baz=168,slow=41						
ULM	Lac du Bonnet	36.86	356	P	P	06 00 52.6	-0.1
WVOR	Wild Horse Val	36.99	326	P	P	06 00 54.7	+0.6
E60A	Ste Agathe de	37.11	24	P	P	06 00 54.2	-0.6
	baz=214						
D58A	Chemin du LacG	37.18	22	P	P	06 00 54.8	-0.6
	baz=212,SNR=6.1						
O03E	Paynes Creek	37.43	321	P	P	06 00 59.2	+1.4
	baz=127,SNR=7.2						
LATQ	La Tuque	37.46	22	P	P	06 00 57.6	-0.2
	baz=212						
LATQ	La Tuque	37.46	22	IAmb	IAmb	06 01 08.1	
	comp=Z,29nm,1.4s						
F63A	Nahmakanta, Br	37.54	27	P	P	06 00 57.9	-0.6
	baz=218						
EGMT	Eagleton	37.54	340	P	P	06 01 00.5	+1.9
	baz=151,SNR=7.7						
EGMT	Eagleton	37.54	340	P	P	06 00 58.8	+0.2
MOD	Modoc Plateau	37.56	324	P	P	06 00 58.8	-0.1
LSQQ	Lebel-sur-Quev	37.62	16	P	P	06 00 58.1	-1.0
	baz=204						
D60A	Saint Jean D’O	37.76	24	P	P	06 00 60.0	-0.4
	baz=215,SNR=5.6						
G65A	Princeton	37.84	28	P	P	06 01 00.4	-0.6
	baz=221						
O02D	Mt. Diablo Mer	37.97	320	P	P	06 01 03.0	+0.7
	baz=126						
BMO	Blue Mountains	38.04	330	P	P	06 01 03.0	+0.2
MSO	Missoula	38.08	335	P	P	06 01 04.9	+1.8
	baz=144,SNR=8.7						
MSO	Missoula	38.08	335	P	P	06 01 02.8	-0.3
MSO				IAmb	IAmb	06 01 08.0	
	comp=Z,20nm,1.3s						
MATQ	Matagami	38.09	15	P	P	06 01 02.4	-0.7
	baz=203,SNR=6.9						
D61A	St Aubert, Com	38.29	24	P	P	06 01 04.6	-0.2
	baz=216,SNR=6.0						
M04C	Macdoel	38.37	323	P	P	06 01 07.5	+1.8
	baz=129						
N02D	Trinity Center	38.39	321	P	P	06 01 05.6	-0.3
	baz=127						
E63A	Oxbow	38.40	26	P	P	06 01 05.2	-0.5
	baz=219						
I07A	Izee	38.59	328	P	P	06 01 07.8	+0.2
E64A	Bridgewater	38.65	27	P	P	06 01 07.1	-0.7
	baz=219						
M02C	Callahan	38.73	322	P	P	06 01 08.4	-0.3
	baz=127						
F10A	Beach Ranch, E	38.84	332	P	P	06 01 09.5	-0.1
F10A				IAmb	IAmb	06 01 13.3	
	comp=Z,15nm,0.8s						
YBH	Yreka Blue Hor	38.85	322	P	P	06 01 09.6	-0.1
L04D	Klamath Falls	38.91	323	P	P	06 01 11.7	+1.4
	baz=129,SNR=5.4						
JTMT	Jette	38.95	336	P	P	06 01 09.8	-0.8
KHMM	Horse Mountain	38.96	321	P	P	06 01 11.9	+1.2
KHMM				IAmb	IAmb	06 01 13.6	
	comp=Z,25nm,0.9s						
J05D	Fort Rock, OR	38.98	325	P	P	06 01 13.0	+2.1
	baz=131						
D63A	Stockholm	39.01	26	P	P	06 01 10.5	-0.4
	baz=219						
JCC	Jacoby Creek,	39.11	320	P	P	06 01 11.5	-0.3
MNMC	Minye Minye	39.13	145	P	P	06 01 11.2	-1.3
MNMC				IAmb	IAmb	06 01 13.6	
	comp=Z,15nm,1.0s						
J04D	Umpqua Nationa	39.44	325	P	P	06 01 17.1	+2.3
	baz=130,SNR=5.1						
I05D	Terrebonne, OR	39.73	327	P	P	06 01 19.5	+2.4
	baz=132						
I04A	Tendick Farm,	39.96	325	P	P	06 01 20.2	+1.2
	baz=130,SNR=7.0						
KBO	Bosley Butte	40.04	322	IAmb	IAmb	06 01 22.8	
	comp=Z,36nm,1.0s						
ITTB	Itaituba	40.06	114	*e*P	P	06 01 22.2	+2.2
G05D	Wamic, OR	40.33	328	P	P	06 01 24.8	+2.9
	baz=133						
MALB	Monte Alegre	40.34	109	*e*P	P	06 01 25.4	+3.1
H04A	Detroit Lake	40.42	326	P	P	06 01 22.8	+0.1
H04A				IAmb	IAmb	06 01 25.0	
	comp=Z,21nm,0.9s						
D08A	Wollman Farm,	40.42	331	P	P	06 01 23.2	+0.5
I03D	Drain, OR	40.43	324	P	P	06 01 24.7	+2.0
	baz=129						
J01E	Myrtle Point	40.43	323	P	P	06 01 24.7	+1.9
	baz=128,SNR=7.1						
E07A	Sunnyside	40.51	330	P	P	06 01 23.0	-0.3
H04D	Lebanon	40.61	326	P	P	06 01 25.2	+1.0
	baz=130,SNR=5.3						
C09A	Chrisman Ranch	40.68	333	P	P	06 01 24.9	+0.1
C09A				IAmb	IAmb	06 01 38.8	
	comp=Z,28nm,1.5s						
F05D	White Salmon	40.84	328	P	P	06 01 28.7	+2.6
	baz=133						
VILB	Vilhena	40.95	128	*e*P	P	06 01 27.9	+0.5
I02D	Swisshome	40.97	325	P	P	06 01 29.4	+2.3
	baz=128						
G03D	McMinnville, O	41.34	326	P	P	06 01 32.2	+2.0
	baz=130						
B08A	Colville Reser	41.57	332	P	P	06 01 32.3	+0.2
MCPB	Macapa, AP	41.83	106	*e*P	P	06 01 37.2	+2.5
D05A	Enumclaw	41.99	329	P	P	06 01 36.3	+0.8
D05A				IAmb	IAmb	06 01 49.4	
	comp=Z,20nm,1.1s						
E03A	Lebam	42.37	328	P	P	06 01 38.2	-0.3
E03A				IAmb	IAmb	06 01 54.1	
	comp=Z,33nm,1.0s						
D03D	Eldon	42.78	329	P	P	06 01 43.1	+1.2
	baz=132						
B05A	Bryant	42.79	330	P	P	06 01 42.8	+0.8
	baz=134						
NLWA	Neilton Lookou	43.08	328	P	P	06 01 43.6	-0.8
NLWA				IAmb	IAmb	06 01 47.5	
	comp=Z,18nm,1.1s						
PGC	Sidney	43.71	330	P	P	06 01 48.7	-0.7
PGC				IAmb	IAmb	06 02 04.3	
	comp=Z,18nm,0.9s						
FCC	Fort Churchill	45.28	358	P	P	06 02 01.1	-0.7
FCC				IAmb	IAmb	06 02 12.9	
	comp=Z,12nm,1.0s						
AC02	Maricunga	45.75	151	P	P	06 02 04.1	-2.4
AC02				IAmb	IAmb	06 02 07.5	
	comp=Z,12nm,1.1s						
TMAB	Tom-Au,PA,Br	46.24	107	*e*P	P	06 02 12.0	+2.0
LCO	Las Campanas	46.92	154	P	P	06 02 13.5	-1.8
LCO				IAmb	IAmb	06 02 24.8	
	comp=Z,20nm,1.3s						
SNDB	Serra Nova Dou	47.56	120	*e*P	P	06 02 19.6	-0.7
CO03	El Pedregal	48.52	155	P	P	06 02 26.4	-1.2
CO03				IAmb	IAmb	06 02 29.7	
	comp=Z,11nm,0.9s						
AQDB	Aquidauana	49.04	133	*e*P	P	06 02 30.2	-1.4
ARAG	Araguaiana, MT	49.13	125	*e*P	P	06 02 32.6	+0.2
ZON	Zonda	49.98	154	P	P	06 02 36.8	-1.8
ZON				IAmb	IAmb	06 02 48.6	
	comp=Z,12nm,1.3s						
ROSB	Rosrio	50.14	105	*e*P	P	06 02 41.8	+1.6
PEXB	Peixe	50.17	118	*e*P	P	06 02 41.0	+0.6
YKA	Yellowknife Ar	51.59	347	P	P	06 02 51.5	+1.2
	comp=Z,6.6nm,0.8s,baz=144,slow=7.8,SNR=77						
YKA				pP	pP	06 03 00.6	+1.1
	comp=Z,5.4nm,0.7s,baz=147,slow=7.8,SNR=14						
YKA				PcP	PcP	06 04 04.7	+0.8
	comp=Z,1.4nm,0.8s,baz=143,slow=4.0,SNR=5.9						
YKA				LR	LR	06 27 32.5	
	comp=Z,81nm,20.6s,baz=0.0,slow=39						
CPUP	Villa Florida	51.91	140	P	P	06 02 51.4	-1.9
	comp=Z,1.8nm,0.9s,baz=301,slow=8.7,SNR=3.9						
CPUP				PcP	PcP	06 04 04.5	-1.2
	comp=Z,1.6nm,0.8s,baz=270,slow=5.9,SNR=3.2						
CPUP	Villa Florida	51.91	140	*e*P	P	06 02 51.5	-1.7
BDFB	Brasilia	52.17	122	P	P	06 02 54.6	-0.9
	comp=Z,6.1nm,0.9s,baz=304,slow=7.9,SNR=7.8						
BDFB	Brasilia	52.17	122	P	P	06 02 54.9	-0.6
BDFB				IAmb	IAmb	06 02 57.3	
	comp=Z,11nm,1.1s						
SDBA	SAO DESIDERIO	53.24	117	*e*P	P	06 03 04.0	+0.7
JANB	Januaria	54.98	119	*e*P	P	06 03 15.8	-0.2
LC01	Cunco	55.33	161	P	P	06 03 16.7	-1.4
LC01				IAmb	IAmb	06 03 26.8	
	comp=Z,13nm,1.1s						
DIAM	Diamantina, MG	57.09	122	*e*P	P	06 03 31.1	-0.2
PLCA	Paso Flores	57.42	161	P	P	06 03 31.4	-1.7
	comp=Z,4.9nm,1.1s,baz=316,slow=9.3,SNR=4.2						
PLCA				LR	LR	06 21 41.8	
	comp=Z,90nm,21.2s,baz=9.0,slow=29						
PLCA	Paso Flores	57.42	161	P	P	06 03 30.3	-2.7
PLCA				IAmb	IAmb	06 03 32.8	
	comp=Z,19nm,1.4s						
PLCA	Paso Flores	57.42	161	*e*P	P	06 03 32.3	-0.7
GDU01	Guandu, BA	58.47	115	*e*P	P	06 03 41.1	+0.3
BSFB	Barra de Sao F	59.69	121	*e*P	P	06 03 49.0	-0.2
RIB01	Linhares ES	60.30	122	*e*P	P	06 03 52.7	-0.7
BCAR	Beaver Creek A	60.58	336	P	P	06 03 56.1	+1.5
GLB	Gilahina Butte	60.59	334	IAmb	IAmb	06 03 57.6	
	comp=Z,8.8nm,0.9s						
N25K	Chitina, Valde	61.00	334	P	P	06 03 59.3	+1.7
	baz=118						
N25K	Chitina, Valde	61.00	334	IAmb	IAmb	06 04 02.2	
	comp=Z,8.1nm,0.7s						
INK	Inuvik	61.00	344	IAmb	IAmb	06 04 16.7	
	comp=Z,13nm,0.9s						
EGAK	Eagle	61.26	338	IAmb	IAmb	06 04 10.3	
	comp=Z,6.6nm,1.0s						
KLU	Klutina	61.51	334	IAmb	IAmb	06 04 05.3	
	comp=Z,14nm,0.9s						
SCRK	Sand Creek	61.90	337	P	P	06 04 05.2	+1.5
	baz=120						
PAX	Paxson	62.00	335	IAmb	IAmb	06 04 06.3	
	comp=Z,7.5nm,0.9s						
RC01	Rabbit Creek A	63.02	333	P	P	06 04 12.1	+1.0
	baz=113						
PRP	Porcupine Dome	63.23	338	P	P	06 04 12.6	+0.1
PRP				IAmb	IAmb	06 04 26.5	
	comp=Z,11nm,1.2s						
HDA	Harding Lake	63.24	337	P	P	06 04 13.1	+0.6
	baz=117						
HDA	Harding Lake	63.24	337	P	P	06 04 12.8	+0.3
HDA				IAmb	IAmb	06 04 25.9	
	comp=Z,22nm,1.4s						
IL18	Eielson Array	63.34	337	P	P	06 04 13.6	+0.5
IL31		63.38	337	P	P	06 04 13.7	+0.4
ILAR	Eielson Array	63.38	337	P	P	06 04 14.2	+0.7
	comp=Z,7.8nm,1.0s,baz=138,slow=4.5,SNR=56						
ILAR				pP	pP	06 04 24.2	+1.4
	comp=Z,10nm,1.1s,baz=153,slow=3.7,SNR=7.6						
ILAR				LR	LR	06 36 35.4	
	comp=Z,50nm,20.7s,baz=80,slow=40						
ILAR	Eielson Array	63.38	337	P	P	06 04 13.8	+0.4
RND	Reindeer	63.57	335	P	P	06 04 16.0	+1.3
SUA	Susitna One	63.61	333	P	P	06 04 16.4	+1.3
SUA				IAmb	IAmb	06 04 28.1	
	comp=Z,10nm,0.8s						
CCB	Clear Creek Bu	63.68	337	P	P	06 04 15.8	+0.4
WRH	Wood River Hil	63.72	336	IAmb	IAmb	06 04 17.8	
	comp=Z,14nm,1.3s						
MCK	McKinley	63.74	335	P	P	06 04 16.9	+1.1
	baz=115						
POKR	Poker Plat Res	63.75	337	P	P	06 04 16.9	+1.1
	baz=117						
POKR	Poker Plat Res	63.75	337	P	P	06 04 16.5	+0.7
POKR				IAmb	IAmb	06 04 30.6	
	comp=Z,15nm,1.3s						
CUT	Chulitna	63.76	334	P	P	06 04 17.2	+1.3
	baz=113						
BMAR	Burnt Mountain	63.85	340	P	P	06 04 16.2	-0.3
MDM	Murphy Dome	63.98	337	P	P	06 04 17.8	+0.4
BWN	Browne	64.13	336	P	P	06 04 18.9	+0.5
NEA2	Nenana	64.15	336	P	P	06 04 19.8	+1.3
	baz=115						
TRF	Thorofare Moun	64.18	335	P	P	06 04 19.7	+0.9
TRF				IAmb	IAmb	06 04 20.7	
	comp=Z,14nm,0.8s						
KTH	Kantishna Hill	64.48	335	P	P	06 04 20.7	0.0
KTH				IAmb	IAmb	06 04 22.2	
	comp=Z,10.0nm,0.9s						
I23K	Minto, Yukon-K	64.50	337	P	P	06 04 22.1	+1.5
	baz=115,SNR=12						
I23K	Minto, Yukon-K	64.50	337	P	P	06 04 21.7	+1.0
ICESG	Greenland Ices	64.60	18	*i* P	pP	06 04 30.1	-1.2
PPT	Papeete	64.67	243	LR	LR	06 24 53.0	
	comp=Z,62nm,21.4s,baz=114,slow=29						
BPAW	Bear Paw Mtn.	64.72	335	IAmb	IAmb	06 04 23.7	
	comp=Z,9.3nm,0.9s						
MLY	Manley	64.98	336	P	P	06 04 24.7	+0.8
	baz=113,SNR=21						
COLD	Coldfoot	65.68	339	P	P	06 04 30.5	+2.1
	baz=115,SNR=5.3						
COLD	Coldfoot	65.68	339	IAmb	IAmb	06 04 42.7	
	comp=Z,13nm,1.1s						
TTA	Tatalina	66.43	333	IAmb	IAmb	06 04 47.3	
	comp=Z,11nm,1.1s						
SUMG	Summit	66.78	15	*i* P	pP	06 04 44.0	-1.1
	comp=Z,27nm,1.1s						
SUMG	Summit	66.78	15	*i* P	pP	06 04 44.0	-1.1
SUMG				IAmb	IAmb	06 04 46.2	
	comp=Z,27nm,1.1s						
DAG	Danmarks Havn	73.21	13	*i* P	P	06 05 14.0	-0.7
DAG	Danmarks Havn	73.21	13	*i* P	P	06 05 14.1	-0.7
ESDC	Sonseca Array	80.03	52	P	P	06 05 53.4	-0.7
	comp=Z,1.0nm,0.6s,baz=291,slow=5.0,SNR=9.5						
ESDC				LR	LR	06 37 03.9	
	comp=Z,38nm,20.1s,baz=255,slow=32						
ESDC	Sonseca Array	80.03	52	P	P	06 05 53.2	-0.9
BILL	Bilibino	82.01	338	P	P	06 06 03.5	-0.4
NB2	NORSAR Subarra	84.63	28	P	P	06 06 19.9	+2.3
	comp=Z,1.9nm,0.7s,baz=289,slow=4.8						
NOA	NORSAR Array B	84.63	28	P	P	06 06 17.6	0.0
	comp=Z,3.2nm,0.8s,baz=290,slow=4.8,SNR=9.5						
NOA				LR	LR	06 42 37.8	
	comp=Z,37nm,20.5s,baz=280,slow=35						
KOWA	Kowa	84.76	76	P	P	06 06 19.0	-0.1
TIC	Toumodi	85.51	84	*e*P	P	06 06 21.8	-1.1
LIC	Lamto	85.60	85	*e*P	P	06 06 21.5	-1.8
	comp=Z,47nm,1.4s						
DBIC	Dimbokro	85.66	84	P	P	06 06 23.0	-0.6
	comp=Z,3.1nm,0.7s,baz=278,slow=5.5,SNR=4.5						
DBIC				LR	LR	06 45 37.2	
	comp=Z,24nm,18.2s,baz=268,slow=36						
KIC	Kosan Boka	85.84	84	*e*P	P	06 06 24.9	+0.3
	comp=Z,53nm,1.4s						
ARCES	ARCESS Array B	86.67	18	P	P	06 06 28.1	+0.5
	comp=Z,3.3nm,0.9s,baz=356,slow=6.3,SNR=4.7						
ARCES				LR	LR	06 46 33.4	
	comp=Z,59nm,18.5s,baz=250,slow=36						
CLL	Collm	88.74	37	*e*P	P	06 06 38.0	+0.2
CLL				LmV		06 39 00.0	
	comp=Z,100nm,21.1s						
GERES	GERESS Array B	90.01	40	P	P	06 06 44.9	+0.9
	comp=Z,1.5nm,0.9s,baz=336,slow=2.9,SNR=6.7						
TORD	Torodi Ar. Bea	90.47	76	P	P	06 06 46.2	-0.4
	comp=Z,0.5nm,0.5s,baz=284,slow=4.9,SNR=2.7						
TORD				LR	LR	06 46 14.6	
	comp=Z,10nm,18.2s,baz=245,slow=35						
TIXI	Tiksi	90.83	348	P	P	06 06 46.5	-0.6
TIXI				IAmb	IAmb	06 06 58.6	
	comp=Z,5.8nm,0.8s						
FINES	FINESS Array B	91.00	25	P	P	06 06 48.2	+0.1
	comp=Z,3.2nm,1.0s,baz=270,slow=4.2,SNR=1.9						
FINES				LR	LR	06 48 43.4	
	comp=Z,39nm,18.2s,baz=294,slow=36						
KEST	Kesra	91.20	53	P	P	06 06 50.1	+0.3
	comp=Z,8.1nm,0.9s,baz=287,slow=11,SNR=3.0						
MNK	Minsk	95.45	31	*i* P	P	06 07 05.6	-3.2
	comp=E,2.0nm,1.0s						
MNK				*i* P	P	06 07 05.6	-3.2
	comp=N,6.0nm,0.7s						
MNK				*i* P	P	06 07 05.6	-3.2
	comp=Z,7.0nm,1.0s						
MNK				*i* PP	PP	06 10 55.1	-4.0
MNK				*i* PPP	PPP	06 12 58.5	
MNK				*i* S	SKSac	06 17 38.6	-3.8
MNK				*i* SS	SS	06 24 48.2	-1.8
MNK				*i* SSS	SSS	06 28 41.8	
MNK				*i* LR	LR	06 46 24.3	
MNK				*i* LRM	MLR	06 50 55.8	
	comp=E,40nm,33.9s						
MNK				*i* LRM	MLR	06 50 55.8	
	comp=N,147nm,27.1s						
MNK				*i* LRM	MLR	06 50 55.8	
	comp=Z,72nm,17.6s						
NRIK	Noril'sk	97.45	0	LR	LR	06 55 31.8	
	comp=Z,112nm,18.9s,baz=358,slow=38						
SONM	Songino Array	116.86	346	PKP	PKiKP	06 12 29.5	+0.5
	comp=Z,0.5nm,0.8s,baz=149,slow=0.9,SNR=3.7						
MKAR	Makanchi Array	119.84	5	PKP	PKPdf	06 12 34.1	-0.6
	comp=Z,0.6nm,0.7s,baz=355,slow=2.1,SNR=7.0						
MKAR				pPKP	pPKPdf	06 12 43.9	-0.5
	comp=Z,0.7nm,0.7s,baz=20,slow=1.8,SNR=5.6						
BOSA	Boshof	120.07	115	PKP	PKPdf	06 12 35.3	-0.4
	comp=Z,2.9nm,1.0s,baz=299,slow=3.7,SNR=5.1						
BOSA	Boshof	120.07	115	PKPdf	PKPdf	06 12 35.4	-0.2
KSH	Kashi	126.14	12	PKP	PKiKP	06 12 50.7	+3.2
GTA	Gaotai	126.31	349	*e*PKP	PKiKP	06 12 48.0	+0.1
GTA				sPKP		06 13 02.3	
STKA	Stephens Creek	127.81	240	PKP	PKPdf	06 12 49.0	-1.3
	comp=Z,4.8nm,0.9s,baz=354,slow=19,SNR=6.0						
LZH	Lanzhou	128.54	344	*e*PKP	PKPdf	06 12 52.0	+0.2
LZH				pPKP	pPKPdf	06 13 03.1	+1.5
LZH				sPKP		06 13 07.8	
CD2	Chengdu	133.41	341	PKP	PKPdf	06 13 00.0	-1.0
WRA	Warramunga Arr	135.30	255	PKP	PKPdf	06 13 03.9	-0.8
	comp=Z,1.8nm,0.7s,baz=78,slow=1.5,SNR=14						
ASAR	Alice Springs	135.52	250	PKP	PKPdf	06 13 02.6	-2.4
	comp=Z,1.7nm,0.8s,baz=100,slow=1.9,SNR=16						
ASAR				pPKP	pPKPdf	06 13 14.1	-0.5
	comp=Z,1.3nm,0.8s,baz=96,slow=2.6,SNR=5.7						
CMAR	Chiang Mai Arr	146.55	341	PKPbc	PKPbc	06 13 26.1	-0.3
	comp=Z,10nm,0.8s,baz=340,slow=3.3,SNR=48						
CMAR				pPKPbc	pPKPbc	06 13 37.0	+0.9
	comp=Z,10nm,0.7s,baz=337,slow=3.4,SNR=7.7						
HYB	Hyderabad	147.95	17	*i* PKP	PKPbc	06 13 30.0	-0.4
HYB				*e*pPKP	pPKPbc	06 13 39.5	-0.6

DJA 01 05:54:17.9±0.8, 0°S±5°×12°3E±°, h145km±7km, M2.8/5, MLv2.8/5, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GTOI	Gorontalo	0.79	18	P	Pn	05 54 41.9	+1.4
GTOI				S	Sn	05 55 00.7	+2.9
LUWI	Luwuk	0.92	179	P	Pn	05 54 42.1	+0.6
LUWI				S	Sn	05 54 59.8	+0.3
MRSI	Marisa	1.01	306	P	Pn	05 54 42.7	+0.4
MRSI				S	Sn	05 55 01.1	+0.2
APSI	Ampana	1.36	235	P	Pn	05 54 46.4	+0.8

IDC 01 06:28:28.8±2.6, 7.°01S×127.°66E, h0km, mb3.4/1, mb1 3.9/3, mb1mx3.6/21, mbtmp3.7/3, ML3.8/2, Error ellipse: s-maj=298.1km s-min=32.7km az=65.0, Banda

Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	14.40	154	Pn	Pn	06 31 54.5	+0.5
	0.3nm,0.3s,baz=331,slow=12,SNR=13						
WRA				Sn	Sn	06 34 21.1	-13
	0.8nm,0.3s,baz=318,slow=26,SNR=12						
ASAR	Alice Springs	17.61	161	P	Pn	06 32 35.5	-0.3
	0.6nm,0.3s,baz=343,slow=12,SNR=31						
ASAR				S	Sn	06 35 39.9	-13
	0.2nm,0.3s,baz=318,slow=22,SNR=6.8						
MKAR	Makanchi Array	66.98	328	P	P	06 39 23.5	0.0
	0.2nm,0.4s,baz=134,slow=7.7,SNR=1.8						

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*MEX **01** 06:29:48.2±0.7, 14°.34N×92°.20W, h66^{km}±26^{km}, MD3.9*
*GCG **01** 06:29:49.1±0.9, 13°.98N×92°.00W, h3^{km}±15^{km}, MD3.7*
ISC 01 06:29:47.3±2.4, **14°.2N**±0°.2×**92°.42W**±0°.10, **h35**^{km}, **n8**,
σ**1^s.51**/13, **Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		0.71	12	eP	Pn	06 29 59.8	-1.1
FUG	Fuego 3	1.55	81	eP	Pn	06 30 11.7	-0.9
FUG				eS	Sn	06 30 29.9	-1.7
PCIG		1.68	333	eP	Pn	06 30 14.1	0.0
PCIG				eS	Sn	06 30 33.4	-1.1
PCG	Pacaya	1.77	84	eP	Pn	06 30 16.3	+0.6
PCG				eS	Sn	06 30 36.9	-0.2
IXG	Ixpaco	1.92	91	eP	Pn	06 30 17.2	-0.5
IXG				eS	Sn	06 30 39.0	-1.7
NBG	Las Nubes	2.04	79	eP	Pn	06 30 22.3	+2.8
NBG				eS	Sn	06 30 45.0	+1.1
CCIG	Comitan	2.08	7	eP	Pn	06 30 21.8	+1.9
CMIG	Matias Romero	3.72	321	eP	Pn	06 30 43.3	+0.9

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*OSPL **01** 06:37:16.4±2.7, 18°.17N×68°.27W, h194^{km}±23^{km}, ML3.1*
*RSPR **01** 06:37:17.0, 18°.33N×68°.20W, h174^{km}±1^{km}, MD3.6/16*
*NEIC **01** 06:37:17.0±0.8, 18°.3N±0°.2×68°.26W±0°.07, h167^{km}±11^{km},*
Error ellipse: s-maj=25.2km s-min=9.8km az=186.0
ISC 01 06:37:16.4±1.8, **18°.4N**±0°.1×**68°.26W**±0°.04, **h173**^{km}±13^{km},
n60, σ**0^s.81**/73, **14C-2D**, **Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MPR	Mayaguez	1.07	98	Pn	Pn	06 37 44.0	+0.1
MPR	Mayaguez	1.07	98	iP	Pn	06 37 44.3	+0.4
MPR				eS	Sn	06 38 06.6	+1.4
MPR				IAML		06 38 10.6	
	comp=Z,45nm,1.6s						
AGPR	Aguadilla, PR	1.10	84	⇑eP	Pn	06 37 44.8	+0.7
AGPR	Aguadilla, PR	1.10	84	eS	Sn	06 38 05.9	+0.4
AGPR	Aguadilla, PR	1.10	84		Pn	06 37 44.7	+0.6
AGPR				IAML		06 38 10.2	
	comp=N,262nm,0.4s						
AGPR				IAML		06 38 11.9	
	comp=E,224nm,0.3s						
AGPR	Aguadilla, PR	1.10	84	iP	Pn	06 37 44.7	+0.6
AGPR				eS	Sn	06 38 06.6	+1.1
AGPR				IAML		06 38 11.8	
	comp=Z,126nm,0.2s						
LSP	Las Mesas	1.13	99	⇑eP	Pn	06 37 44.3	-0.1
LSP	Las Mesas	1.13	99	eS	Sn	06 38 06.4	+0.3
LSP	Las Mesas	1.13	99		Pn	06 37 44.3	-0.1
LSP					Sn	06 38 06.4	+0.3
DR12	Loma Pena Alta	1.15	292		Pn	06 37 44.3	-0.3
CRPR	Cabo Rojo, PR	1.15	107	⇑eP	Pn	06 37 44.2	-0.4
CRPR	Cabo Rojo, PR	1.15	107	eS	Sn	06 38 06.1	-0.2
CRPR	Cabo Rojo, PR	1.15	107	Pn	Pn	06 37 44.2	-0.4
MLPR	Magueyes Islan	1.22	108		Pn	06 37 43.7	-1.4
GBPR	Guanica, Bosqu	1.37	106	⇓iP	Pn	06 37 46.7	+0.2
GBPR	Guanica, Bosqu	1.37	106	eS	Sn	06 38 09.6	-0.1
GBPR	Guanica, Bosqu	1.37	106		Pn	06 37 46.7	+0.2
GBPR					Sn	06 38 09.6	-0.1
AOPR	Arecibo Observ	1.43	90	⇑eP	Pn	06 37 47.4	+0.2
AOPR	Arecibo Observ	1.43	90	eS	Sn	06 38 11.3	+0.4
AOPR	Arecibo Observ	1.43	90		Pn	06 37 47.0	-0.2
AOPR					Sn	06 38 10.6	-0.3
SDD	Santo Domingo	1.57	274	eP	Pn	06 37 47.7	-0.7
SDD				eS	Sn	06 38 11.8	-1.4
OBIP	Obispado Ponce	1.60	101	⇑eP	Pn	06 37 48.8	0.0
OBIP	Obispado Ponce	1.60	101	eS	Sn	06 38 14.3	+0.5
OBIP	Obispado Ponce	1.60	101		Pn	06 37 48.8	0.0
OBIP					Sn	06 38 13.4	-0.3
OBIP				IAML		06 38 16.7	
	comp=N,119nm,0.5s						
OBIP				IAML		06 38 17.1	
	comp=E,112nm,0.7s						
CELP	Cerrillos	1.62	100	⇑eP	Pn	06 37 49.3	+0.3
CELP	Cerrillos	1.62	100	eS	Sn	06 38 14.1	-0.1
CELP	Cerrillos	1.62	100		Pn	06 37 49.3	+0.3
CELP					Sn	06 38 14.1	-0.1
EMPR	Esperanza - Ma	1.65	86	⇑eP	Pn	06 37 49.8	+0.6
EMPR	Esperanza - Ma	1.65	86	eS	Sn	06 38 14.5	0.0
EMPR	Esperanza - Ma	1.65	86	Pn	Pn	06 37 49.2	0.0
EMPR				IAML		06 38 11.0	
	comp=N,218nm,2.5s						
EMPR				IAML		06 38 26.4	
	comp=E,199nm,1.0s						
ICMP	Isla Caja de M	1.71	106	⇑eP	Pn	06 37 49.8	-0.1
ICMP	Isla Caja de M	1.71	106		Pn	06 37 49.8	-0.1
ICMP				IAML		06 38 18.0	
	comp=E,97nm,0.4s						
ICMP				IAML		06 38 18.1	
	comp=N,115nm,0.5s						
BANI	BANI	1.99	271	Pn	Pn	06 37 52.6	-0.3
BANI	BANI	1.99	271	iP	Pn	06 37 52.7	-0.3
BANI				eS	Sn	06 38 19.7	-1.6
SJG	San Juan	2.02	97	Pn	Pn	06 37 53.2	0.0
SJG					Sn	06 38 21.0	-0.7
SJG				IAML		06 38 27.0	
	comp=N,126nm,0.3s						
SJG				IAML		06 38 27.5	
	comp=N,114nm,0.4s						
GCPR	Guaynabo City	2.07	91	⇑eP	Pn	06 37 53.4	-0.3
GCPR	Guaynabo City	2.07	91	eS	Sn	06 38 22.3	-0.3
GCPR	Guaynabo City	2.07	91		Pn	06 37 53.2	-0.5
GCPR					Sn	06 38 21.2	-1.4
GCPR				IAML		06 38 24.5	
	comp=E,91nm,0.4s						
IGPR	InterUniversit	2.08	100	⇓iP	Pn	06 37 54.2	+0.3
IGPR	InterUniversit	2.08	100	eS	Sn	06 38 23.0	0.0
PDPR	Patillas Dam,	2.15	99	Pn	Pn	06 37 55.0	+0.3
PDPR				IAML		06 38 27.3	
	comp=E,111nm,0.6s						
CBYP	Canovanas	2.29	92	⇑eP	Pn	06 37 56.7	+0.5
CBYP	Canovanas	2.29	92	eS	Sn	06 38 27.0	-0.1
CBYP	Canovanas	2.29	92		Pn	06 37 56.7	+0.5
HUMP	Col San Antoni	2.30	95	⇑eP	Pn	06 37 57.1	+0.8
HUMP	Col San Antoni	2.30	95	eS	Sn	06 38 26.7	-0.6
HUMP	Col San Antoni	2.30	95		Pn	06 37 56.5	+0.2
SC01	Santiago de lo	2.57	295		Pn	06 38 00.4	+0.9
SC01				IAML		06 38 41.9	
	comp=E,118nm,0.8s						
SC01	Santiago de lo	2.57	295	iP	Pn	06 38 00.2	+0.7
SC01				eS	Sn	06 38 33.6	+0.7
SC01				IAML		06 38 38.0	
	comp=Z,69nm,1.1s						
MTP	Monte Pirata	2.59	95	⇑eP	Pn	06 38 00.2	+0.5
MTP	Monte Pirata	2.59	95		Pn	06 38 00.5	+0.8
MTP				IAML		06 38 36.3	
	comp=E,93nm,0.5s						
CUPR	Culebra, Puert	2.83	91	⇑eP	Pn	06 38 02.8	+0.2
CUPR	Culebra, Puert	2.83	91	eS	Sn	06 38 37.4	-1.1
CUPR	Culebra, Puert	2.83	91		Pn	06 38 02.7	+0.1
SDDR	Presa de Saban	2.94	283	⇑eP	Pn	06 38 04.8	+0.8
SDDR	Presa de Saban	2.94	283	eS	Sn	06 38 43.8	+2.8
SDDR	Presa de Saban	2.94	283		Pn	06 38 05.3	+1.4
SDDR				IAML		06 38 48.0	
	comp=E,65nm,0.8s						
SDDR				IAML		06 38 48.1	
	comp=E,46nm,0.7s						
SDDR	Presa de Saban	2.94	283	iP	Pn	06 38 05.3	+1.4
SDDR				eS	Sn	06 38 40.6	-0.4
SDDR				IAML		06 38 49.2	
	comp=Z,31nm,0.4s						
TBVI	Tortola	3.46	88	eS	Sn	06 38 51.6	-0.9
GRTK	Grand Turk	4.14	320	eS	Sn	06 39 05.0	-3.1
GRTK				IAML		06 39 09.7	
	comp=Z,18nm,0.3s						

IDC 01 06:42:27.0±4.8, **20°.09S**×**169°.01E**, **h0**^{km}, **mb3.5**/2,
mb1 3.6/3, **mb1mx3.4**/34, **mbtmp3.3**/3, **ML2.4**/1, **MS2.9**/2,
Ms1 2.9/2, **ms1mx2.6**/24, **Error ellipse: s-maj=142.9km**
s-min=38.1km az=132.0, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	3.10	230	Pn	Pn	06 43 16.1	-1.2
	0.5nm,0.3s,baz=185,slow=17,SNR=1.3						
DZM				Sn	Sn	06 43 57.6	+2.4
	2.1nm,0.3s,baz=124,slow=15,SNR=2.2						
DZM				LR	LR	06 43 59.1	
	comp=Z,81nm,18.5s,baz=182,slow=30						
WRA	Warramunga Arr	32.54	264	P	P	06 49 00.1	0.0
	0.3nm,0.5s,baz=93,slow=8.2,SNR=2.4						
ASAR	Alice Springs	32.72	257	P	P	06 49 01.6	0.0
	1.1nm,0.8s,baz=86,slow=8.2,SNR=2.8						
KLR	Kul'dur	76.55	336	LR	LR	07 23 22.4	
	comp=Z,17nm,21.6s,baz=18,slow=32						
GERES	GERESS Array B	145.13	331	PKPbc	PKPbc	07 02 05.5	-0.6
	0.3nm,0.6s,baz=46,slow=2.8,SNR=2.1						

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*UPA **01** 06:46:31.7±0.9, 7°.61N×82°.91W, h24^{km}±11^{km}, MW4.4*
*UCR **01** 06:46:31.6±1.7, 7°.67N×82°.96W, h7^{km}±10^{km}, MW4.1*
ISC 01 06:46:29.6±1.8, **7°.65N**±0°.07×**82°.84W**±0°.05, **h7**^{km}±12^{km},
n44, σ**1^s.29**/57, **South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CCOL	Caracol de Cor	0.76	350	eP	Pb	06 46 46.0	+0.7
CCOL				eS	Sn	06 46 57.5	-1.1
PEDE3	Pedregal, Chir	0.84	30	eP	Pn	06 46 49.2	+1.3
PEDE3				eS	Sg	06 46 55.8	-1.0
PIRO	Carate, Puerto	0.89	327	eP	Pg	06 46 47.2	+0.3
PIRO				eS	Sb	06 46 59.8	+0.2
PIRO	Carate, Puerto	0.89	327	eP	Pg	06 46 47.0	+0.1
BCO2	Palmira	1.10	16	eP	Pb	06 46 51.3	+0.1
BCO2				eS	Sb	06 47 06.2	+0.2
BRU2	Volcan	1.15	8	eP	Pb	06 46 52.0	+0.1
BRU2				eS	Sb	06 47 04.6	-2.5
BRU2	Volcan	1.15	8	eP	Pb	06 46 51.8	-0.1
BRU2				eS	Sb	06 47 07.0	-0.1
EDSV	San Vito	1.17	354	eP	Pb	06 46 52.2	0.0
RIOS	Rincon, Osa	1.24	328	eP	Pn	06 46 51.9	-1.5
RIOS				eS	Sn	06 47 09.5	-0.9
POTG	Potrero Grande	1.42	349	eP	Pn	06 46 56.2	+0.2
POTG				eS	Sb	06 47 14.8	-0.1
EDPN	Palmar Norte	1.44	335	eP	Pn	06 46 55.7	-0.4
EDBA	Buenos Aires	1.56	344	eP	Pb	06 46 58.4	-0.5
GMAL	Guarumal, Vera	1.60	86	eP	Pn	06 46 58.9	+0.4
GMAL				eS	Sn	06 47 19.2	-0.2
DRK0	Durika	1.65	346	eP	Pn	06 46 59.4	+0.1
DRK0				eS	Sb	06 47 21.7	+0.1
DRK0	Durika	1.65	346	eP	Pn	06 46 57.8	-1.5
EDLM	Las Mercedes	1.78	336	eP	Pn	06 47 01.1	+0.1
CNI2	El Empalme, Bo	1.80	12	eP	Pn	06 47 01.5	+0.4
CNI2				eS	Sb	06 47 25.8	+0.1
MARI3	Mariato, Verag	1.84	90	eP	Pn	06 47 02.5	+0.8
EDDO	Dominical	1.89	328	eP	Pn	06 47 02.2	-0.1
PEZE	Perez Zeledon,	1.91	334	eP	Pn	06 47 03.3	+0.5
CACAO	El Cacao, Vera	1.99	99	eP	Pn	06 47 04.0	+0.2
CACAO				eS	Sn	06 47 26.5	-2.4
CDM	Cerro de Muert	2.10	334	eP	Pn	06 47 05.8	+0.1
RIMA	Rio Macho	2.33	334	eP	Pn	06 47 09.9	+1.3
LCR2	La Lucha 2	2.37	331	eP	Pn	06 47 09.5	+0.3
AZU	Azuero	2.55	87	eP	Pn	06 47 12.5	+1.0
AZU				eS	Sn	06 47 42.7	-0.2
AZU	Azuero	2.55	87	eP	Pn	06 47 13.1	+1.6
PNME	Penonome	2.63	71	eP	Pn	06 47 14.3	+1.8
HDC	Heredia	2.65	332	eP	Pn	06 47 14.1	+1.0
HDC				eS	Sn	06 47 45.8	+0.2
HDC	Heredia	2.65	332	eP	Pn	06 47 13.9	+0.9
JACO	JACO, Garabito	2.69	318	eP	Pn	06 47 12.6	-0.8
LAFE	Finca La Fe, P	2.96	317	eP	Pn	06 47 16.8	-0.4
BCIP	Isla Barro Col	3.33	63	eP	Pn	06 47 23.8	+1.5
BCIP	Isla Barro Col	3.33	63	eP	Pb	06 47 27.1	-2.1
JTS	Las Juntas de	3.35	322	eP	Pn	06 47 22.4	-0.1
PLVR	Palo Verde	3.65	317	eP	Pn	06 47 26.6	-0.2
PTAC	Punta Ardita,	5.02	95	eP	Pn	06 47 41.5	-4.0
SOLC	Bahia Solano	5.58	104	eP	Pn	06 47 53.2	+0.1
CBOC	Ciudad Bolivar	7.01	104	eP	Pn	06 48 13.6	+0.6
HELC	Santa Helena	7.41	101	eP	Pn	06 48 20.9	+2.3
YOTC	Yotoco, Valle	7.42	119	eP	Pn	06 48 20.3	+1.7
GUY2C	Guyana, Caldas	7.81	108	eP	Pn	06 48 26.9	+2.6
RREF	El Recreo	7.94	110	eP	Pn	06 48 29.3	+3.2
TOLC	Tolima	8.08	112	eP	Pn	06 48 30.8	+3.0
ORTC	Ortega, Tolima	8.42	116	eP	Pn	06 48 35.9	+3.5

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*IDC **01** 06:48:18.7±2.3, 56°.22N×169°.36W, h0^{km}, mb3.5/5,*
mb1 3.8/7, mb1mx3.4/65, mbtmp3.5/7, ML3.1/2, MS3.6/1,
Ms1 3.6/1, ms1mx2.5/38, Error ellipse: s-maj=42.1km
s-min=33.1km az=24.0
*AEIC **01** 06:48:21±5.4, 56°.52N±0°.06×169°.3W±0°.1, h20^{km}±2^{km},*
Error ellipse: s-maj=12.6km s-min=8.3km az=231.0
*NEIC **01** 06:48:22.6±0.7, 56°.67N±0°.06×168°.95W±0°.08, h10^{km}±1^{km},*
mb3.5/1, ML3.5(AEIC), Error ellipse: s-maj=11.5km
s-min=6.3km az=204.0
ISC 01 06:48:22.8±0.8, **56°.65N**±0°.09×**168°.94W**±0°.07, **h10**^{km}, **n32**,
σ**0^s.87**/32, **mb3.3**/4, **Pribilof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPIA	Saint Paul Isl	0.89	307		Pg	06 48 39.6	-0.3
AKGG	Akutan Green G	2.97	144		Pn	06 49 10.6	+0.7
MSW	Makushin Switc	3.00	155		Pn	06 49 10.3	-0.1
AKRB	Akutan Reef Bi	3.01	146		Pn	06 49 10.6	+0.2
MNAT	Makushin Natee	3.06	154		Pn	06 49 11.3	+0.2
MGOD	Makushin Gods	3.09	157		Pn	06 49 11.5	-0.1
AKUT	Akutan	3.10	143	Pn	Pn	06 49 11.5	-0.1
UNV	Unalaska Valle	3.13	153		Pn	06 49 12.0	-0.1
OKFG	Magazine Ridge	3.30	169		Pn	06 49 14.2	-0.1
FALS	False Pass	3.60	118		Pn	06 49 18.5	0.0
NIKH	Nikolski High	3.68	179	Pn	Pn	06 49 19.6	-0.1
ATKA	Atka Island	5.41	217		Pn	06 49 44.0	+0.6
CHGN	Chignik	5.84	89	Pn	Pn	06 49 49.0	-0.3
ADK	Adak	6.58	227	Pn	Pn	06 49 59.7	+0.2
ANM	Nome	8.13	11	Pn	Pn	06 50 21.2	+0.5
OHAK	Old Harbor	8.58	80	Pn	Pn	06 50 24.7	-2.1
AMKA	Amchitka	8.70	238	Pn	Pn	06 50 28.7	+0.2
KDAK	Kodiak Island	8.95	76	Pn	Pn	06 50 33.5	+1.7
	0.6nm,0.3s,baz=297,slow=11,SNR=1.5						
TTA	Tatalina	9.05	41	Pn	Pn	06 50 33.1	-0.2
BRLK	Bradley Lake	10.02	64	Pn	Pn	06 50 47.1	+0.5
PPLA	Purkeypile	10.49	46	Pn	Pn	06 50 52.7	-0.4
PMR	Palmer	11.29	56	Pn	Pn	06 51 04.3	+0.3
IMAR	Indian Mountai	11.83	32	Pn	Pn	06 51 10.6	-0.7
I23K	Minto, Yukon-K	12.72	40	Pn	Pn	06 51 22.5	-0.9
ILAR	Eielson Array	13.45	44	Pn	Pn	06 51 36.2	+2.8
	0.0nm,0.3s,baz=245,slow=11,SNR=1.3						
BMAR	Burnt Mountain	15.58	36		Pn	06 52 01.3	-0.9
INK	Inuvik	19.74	40	P	Pn	06 52 53.6	-0.1
	1.7nm,0.6s,baz=249,slow=11,SNR=5.9						
INK	Inuvik	19.74	40	P	P	06 52 52.8	+0.6
INK				IAmb	IAmb	06 52 54.5	
	comp=Z,2.4nm,0.8s						
YKA	Yellowknife Ar	27.40	55	P	P	06 54 09.1	+1.1
	comp=Z,0.3nm,0.7s,baz=281,slow=7.5,SNR=5.2						
NVAR	Mina Array Bea	37.71	97	P	P	06 55 37.8	-0.6
	comp=Z,0.2nm,0.5s,baz=293,slow=7.8,SNR=2.8						
TXAR	Lajitas Array	52.55	93	P	P	06 57 36.0	-0.3
	comp=Z,0.4nm,0.9s,baz=317,slow=5.3,SNR=5.1						
TXAR				LR	LR	07 17 38.6	
	comp=Z,49nm,18.4s,baz=0.0,slow=33						
AKASG	Malin Array Be	71.97	348	P	P	06 59 45.4	-0.5
	comp=Z,0.4nm,0.4s,baz=14,slow=6.1,SNR=5.4						

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*IDC **01** 07:01:48.6±0.8, 3°.84S×101°.67E, h0^{km}, mb4.3/18,*
mb1 4.4/18, mb1mx4.1/47, mbtmp4.3/18, MS3.3/4,
Ms1 3.3/4, ms1mx2.8/38, Error ellipse: s-maj=33.1km
s-min=14.3km az=54.0
*NEIC **01** 07:01:55.8±1.3, 3°.80S±0°.05×101°.78E±0°.05, h57^{km}±7^{km},*
mb4.5/23, Error ellipse: s-maj=8.5km s-min=4.4km
az=136.0
*DJA **01** 07:01:57.5±0.6, 4°S±4°×10°2E±°, h31^{km}±6^{km}, M4.3/12,*
MLv4.3/12
ISC 01 07:01:56.7±0.6, **3°.79S**±0°.08×**101°.85E**±0°.08, **h58**^{km}, **n98**,
σ**1^s.18**/92, **mb4.5**/35, **9C-2D**, **Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSI	Kapahiang	0.76	79	P	Pn	07 02 11.5	-0.1
KSI				S	Sn	07 02 22.6	+0.1
MNAI	Manna	1.24	117	Pn	Pn	07 02 18.6	+0.7
MNAI				Sn	Sn	07 02 33.5	-0.2
MNAI	Manna	1.24	117	P	Pn	07 02 18.4	+0.5
MNAI				S	Sn	07 02 33.4	-0.2
LHSI	Lahat	1.67	91	P	Pn	07 02 25.3	+1.6
KRJI	Kerinci	1.73	347	P	Pn	07 02 26.0	+1.4
MDSI	Maura Dua	2.42	107	P	Pn	07 02 35.7	+1.8
LWLI	Liwa	2.52	119	P	Pn	07 02 37.9	+2.6
SDSI	Sungai Dareh	2.87	352	P	Pn	07 02 41.6	+1.6
PMBI	Palembang	3.04	74	Pn	Pn	07 02 41.9	-0.5
KASI	Kota Agung	3.15	123	P	Pn	07 02 45.2	+1.3
PDSI	Padang	3.18	334	P	Pn	07 02 44.7	+0.4
BKNI	Bangkinang	4.17	349		Pn	07 02 57.1	-0.7
BKNI	Bangkinang	4.17	349	P	Pn	07 02 59.2	+1.4
GSI	Gunungsitoli	6.62	320	Pn	Pn	07 03 31.3	-0.2
PSI	Prapat	7.17	336	LR	LR	07 06 40.8	
	comp=Z,146nm,19.6s,baz=266,slow=42						
JAGI	Jajag, Banyuwa	13.08	111	Pn	Pn	07 04 59.8	-0.1
KAPI	Kappang	17.89	95	LR	LR	07 13 26.7	
	comp=Z,66nm,18.3s,baz=302,slow=39						
TOLI2	Tolitoli	19.54	76	P	P	07 06 18.7	-1.0
CMAR	Chiang Mai Arr	22.29	353	P	P	07 06 49.2	-0.1
	1.3nm,0.5s,baz=188,slow=8.0,SNR=6.2						
CMAR				LR	LR	07 15 40.8	
	comp=Z,32nm,18.2s,baz=340,slow=37						
KMI	Kunming	28.76	2	⇑P	P	07 07 50.4	+1.2
KMI				pmax	pmax		
	comp=Z,13nm,0.5s						
H08S2	Diego Garcia H	29.45	261	T	T	07 38 03.8	
	baz=84,slow=76,SNR=6.3						
H08S3	Diego Garcia H	29.46	261	T	T	07 38 00.1	
	baz=84,slow=76,SNR=20						
H08S1	Diego Carcia H	29.47	261	T	T	07 37 49.0	
	baz=84,slow=76,SNR=4.0						
H01W3	Cape Leeuwin H	32.97	161	T	T	07 43 00.5	
	baz=337,slow=76,SNR=5.3						
H01W2	Cape Leeuwin H	32.98	161	T	T	07 43 05.1	
	baz=337,slow=76,SNR=4.5						
H01W1	Cape Leeuwin H	32.99	161	T	T	07 43 17.8	
	baz=337,slow=76,SNR=6.1						
LSA	Lhasa	34.84	344	P	P	07 08 39.9	-3.0
LSA				IAmb	IAmb	07 08 50.7	
	comp=Z,3.1nm,0.5s						
WB0	Warramunga Arr	35.48	119	P	P	07 08 46.7	-1.4
WB0				IAmb	IAmb	07 08 51.4	
	comp=Z,8.5nm,1.3s						
WRA	Warramunga Arr	35.50	120	P	P	07 08 48.4	+0.1
	comp=Z,0.7nm,0.4s,baz=302,slow=9.0,SNR=18						
WRA				PcP	PcP	07 11 16.5	-0.2
	comp=Z,0.3nm,0.7s,baz=306,slow=2.2,SNR=2.2						
WRA	Warramunga Arr	35.50	120	P	P	07 08 47.7	-0.5
WB2	Warramunga Arr	35.52	120	P	P	07 08 47.2	-1.1
WB2				IAmb	IAmb	07 09 14.6	
	comp=Z,9.2nm,1.4s						
WC3	Warramunga Arr	35.54	120	P	P	07 08 47.7	-0.8
WC3				IAmb	IAmb	07 09 11.9	
	comp=Z,9.1nm,1.3s						
WR0	Warramunga Arr	35.69	119	P	P	07 08 49.1	-0.7
WR0				IAmb	IAmb	07 09 13.6	
	comp=Z,11nm,1.4s						
ASAR	Alice Springs	36.71	126	P	P	07 08 58.8	+0.2
	comp=Z,0.7nm,0.4s,baz=297,slow=8.1,SNR=22						
ASAR				PcP	PcP	07 11 20.7	+0.4
	comp=Z,0.3nm,0.7s,baz=306,slow=2.7,SNR=2.7						
ASAR	Alice Springs	36.71	126	P	P	07 08 57.7	-0.9
AS31	Alice Springs	36.72	126	P	P	07 08 58.6	+0.1
NJ2	Nanjing	39.14	23	eP	P	07 09 20.2	+1.4
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
LZH	Lanzhou	39.72	3	eP	P	07 09 25.5	+1.8
LZH				pP	sP	07 09 42.1	-3.2
LZH				sP	pP	07 09 49.3	+11
LZH				pmax	pmax		
	comp=Z,18nm,1.3s						
LZH				pmax	pmax		
	comp=Z,62nm,5.2s						
HHC	Hu-ho-hao-te	45.31	10	eP	P	07 10 10.7	+1.7
HHC				pmax	pmax		
	comp=Z,7.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,91nm,5.8s						
JNU	Nakatsue	45.86	35	LR	LR	07 29 50.8	
	comp=Z,113nm,19.1s,baz=256,slow=37						
STKA	Stephens Creek	46.59	132	P	P	07 10 19.9	+0.7
	comp=Z,5.1nm,0.8s,baz=318,slow=9.0,SNR=7.7						
STKA	Stephens Creek	46.59	132	P	P	07 10 18.6	-0.5
KSRS	Korea Array	47.66	28	P	P	07 10 27.1	-0.3
	comp=Z,1.1nm,0.8s,baz=213,slow=8.0,SNR=4.6						
WMQ	Urumqi	49.08	346	eP	P	07 10 38.9	+0.7
WMQ				sP	sP	07 11 08.6	+8.5
WMQ				pmax	pmax		
	comp=Z,21nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,140nm,5.1s						
KSH	Kashi	49.24	334	P	P	07 10 38.5	-1.1
KSH				pmax	pmax		
	comp=Z,3.0nm,0.8s						
SHLS	Shalkode	50.92	339	eP	P	07 10 51.2	-1.1
	baz=339						
SATY	Saty	51.22	338	eP	P	07 10 54.5	0.0
	baz=338						
KPKS	Kokpek	51.47	339	eP	P	07 10 55.8	-0.6
	baz=338						
SONM	Songino Array	51.56	4	P	P	07 10 57.8	+0.8
	comp=Z,4.3nm,0.7s,baz=183,slow=9.4,SNR=31						
SONM	Songino Array	51.56	4	P	P	07 10 57.6	+0.6
ULN	Ulaanbaatar	51.64	4	P	P	07 10 56.8	-0.8
ULN				IAmb	IAmb	07 10 58.7	
	comp=Z,3.1nm,0.9s						
MDOK	Medeo	51.83	337	eP	P	07 10 58.9	-0.2
	baz=337						
AAA	Alma-Ata	51.92	337	eP	P	07 11 00.3	+0.6
	baz=337						
KUU	Kurty	52.72	337	eP	P	07 11 04.7	-0.9
	comp=Z,2.3nm,0.7s,baz=337						
ZSN	Zaisan	53.17	346	eP	P	07 11 08.8	0.0
	comp=Z,3.2nm,0.8s,baz=346						
MK31	Makanchi Array	53.25	343	P	P	07 11 08.7	-0.8
MK31				IAmb	IAmb	07 11 09.8	
	comp=Z,3.1nm,0.6s						
MKAR	Makanchi Array	53.25	343	P	P	07 11 09.3	-0.1
	comp=Z,3.9nm,0.5s,baz=151,slow=8.4,SNR=29						
MKAR	Makanchi Array	53.25	343	P	P	07 11 08.9	-0.6
MAKZ	Makanchi	53.36	343	P	P	07 11 09.0	-1.2
KKAR	Karatay Array	54.59	332	P	P	07 11 18.1	-1.1
USA0B	Ussuriysk Arra	54.90	26	P	P	07 11 21.4	0.0
USRK	Ussuriysk Ar.	54.90	26	P	P	07 11 21.4	0.0
	comp=Z,5.2nm,0.5s,baz=208,slow=4.7,SNR=15						
TLY	Talaya	55.28	1	P	P	07 11 24.7	+0.6
	comp=Z,0.9nm,0.4s,baz=146,slow=3.6,SNR=3.8						
TLY	Talaya	55.28	1	IAmb	IAmb	07 11 25.5	
	comp=Z,2.6nm,0.8s						
SEM	Semipalatinsk	57.10	344	eP	P	07 11 36.0	-1.4
	baz=344						
KURK	Kurchatov	57.84	343	P	P	07 11 41.2	-1.1
ZAA0	Zalesovo Array	59.27	348	P	P	07 11 51.1	-1.0
ZALV	Zalesovo Beam	59.27	348	P	P	07 11 51.5	-0.7
	comp=Z,8.2nm,0.5s,baz=171,slow=5.6,SNR=44						
BVAR	Borovoye Array	62.50	339	P	P	07 12 12.5	-1.6
	comp=Z,0.7nm,0.3s,baz=137,slow=10,SNR=8.2						
BRVK	Borovoye	62.56	339	P	P	07 12 13.3	-1.1
ABKAR	Akbulak array	64.09	331	P	P	07 12 24.1	-0.6
ABKAR	Akbulak array	64.09	331	P	P	07 12 23.8	-0.9
ABKAR				IAmb	IAmb	07 12 24.8	
	comp=Z,3.3nm,0.7s						
AB04	Akbulak array	64.09	331	P	P	07 12 24.4	-0.3
KBZ	Khabaz	70.86	319	P	P	07 13 07.9	+0.4
	comp=Z,3.0nm,0.8s,baz=113,slow=9.5,SNR=4.5						
PETK	Petropavlovsk-	73.42	31	P	P	07 13 22.1	-0.6
NRIK	Noril'sk	73.64	355	P	P	07 13 22.6	-0.9
	comp=Z,1.9nm,0.4s,baz=175,slow=7.0,SNR=3.8						
NRIK	Noril'sk	73.64	355	IAmb	IAmb	07 13 23.4	
	comp=Z,5.3nm,1.2s						
BRTR	Keskin Array B	75.89	312	P	P	07 13 37.0	-0.5
	comp=Z,1.6nm,0.5s,baz=131,slow=7.1,SNR=4.7						
KLMR	Klimovskoe	80.24	334	eP	P	07 13 52.4	-8.4
KLMR				AMP		07 13 57.8	
	comp=Z,25nm,1.5s						
SHAB	Shabla	80.55	315	⇑P	P	07 14 17.8	+15
EFOR	EFORIE	80.67	316	⇑P	P	07 14 18.4	+15

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AKASG Malin Array Be     82.02 322  P       P        07 14 09.2 -1.4
            comp=Z,0.5nm,0.4s,baz=94,slow=4.2,SNR=4.5
AKASG Malin Array Be     82.02 322  P       P        07 14 09.4 -1.1
VRI   Vrincioaia         82.41 317 ⇑P       P        07 14 14.0 +1.2
PLOR  Plostina           82.46 317 ⇑P       P        07 14 08.9 -4.1
DOPR  Dopca              83.35 317 ⇑P       P        07 14 20.1 +2.5
VOIR                     83.47 316 ⇑P       P        07 14 19.6 +1.3
BURAR Bucovina Array     83.82 319 ⇓P       P        07 14 21.7 +1.6
MNK   Minsk              83.83 326 i P      P        07 14 19.6 -0.2
            comp=E,3.0nm,0.7s
MNK                                i P      P        07 14 19.6 -0.2
            comp=N,11nm,0.8s
MNK                                i P      P        07 14 19.6 -0.2
            comp=Z,15nm,0.7s
MNK                                i PP     PP       07 17 34.0 +0.2
MNK                                i PPP    PPP      07 19 26.3
MNK                                i S      S        07 24 37.8 -0.8
MNK                                i SS     SS       07 30 11.7 +4.5
MNK                                i SSS    SSS      07 33 41.7
MNK                                i LQ     LQ       07 48 47.1
MNK                                i LR     LR       07 51 23.4
MNK                                i LRM    MLR      07 53 10.5
MNK                                i LRM    MLR      07 53 29.2
            comp=N,198nm,20.2s
MNK                                i LRM    MLR      07 53 29.2
            comp=Z,122nm,24.6s
VTS   Vitosha            84.20 313 ⇑P       P        07 14 22.4 +0.2
DRGR                     85.33 317 ⇑P       P        07 14 19.2 -8.5
KOLS  Kolonicke sedl     86.00 319 eP       P        07 14 32.2 +1.3
FINES FINESS Array B     86.55 332  P       P        07 14 33.1 -0.1
            comp=Z,9.9nm,1.1s,baz=117,slow=6.6,SNR=8.0
PSZ   Piszkesteto        87.40 318 ⇓P       P        07 14 25.4  -12
ARCES ARCESS Array B     88.78 340  P       P        07 14 43.9 +0.1
            comp=Z,5.6nm,1.1s,baz=99,slow=5.6,SNR=5.6
GERES GERESS Array B     91.60 319  P       P        07 14 58.1 +0.5
            comp=Z,0.2nm,0.5s,baz=48,slow=1.5,SNR=2.4
BDFB  Brasilia          144.47 236  PKP     PKPdf    07 21 27.4 -0.3
            comp=Z,1.1nm,0.4s,baz=111,slow=4.2,SNR=5.2
TXAR  Lajitas Array     144.92  41  PKPbc   PKPdf    07 21 27.9 -0.3
            comp=Z,2.2nm,0.6s,baz=273,slow=0.8,SNR=43
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*NNC **01** 07:05:48.1±0.6, 50°.04N×78°.86E, h0^{km}, mb3.0, mpv2.7, Error ellipse: s-maj=15.7km s-min=2.9km az=68.0, Suspected Mining explosion.*

*IDC **01** 07:05:49.2±0.8, 50°.05N×78°.78E, h0^{km}, mb1 2.8/3, mb1mx2.7/39, mbtmp2.8/3, ML2.5/3, Error ellipse: s-maj=11.2km s-min=6.1km az=57.0*

ISC 01 07:05:44.4±1.0**, 50°.15N**±0°.06×**79°.44E**±0°.07**, h0^{km}, n9, σ1^{s}.56**/13**, 5C-4D, Eastern Kazakhstan**

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Code  Station Name        Δ°   AZ°   Phase ID          Time     Res
                                    Op      ISC      h  m  s    ISC
KURBB Kurchatov Arra      0.75 309  Pg      Pg       07 06 00.0 +1.2
            2.3nm,0.3s,baz=167,slow=18,SNR=70
KURBB                               Lg      Lg       07 06 08.9
            2.8nm,0.3s,baz=162,slow=34,SNR=11
KURBB Kurchatov Arra      0.75 309 ⇑P       Pb       07 06 00.1 -0.2
            17nm,0.4s
KURBB                              ⇓S       Sg       07 06 08.8 +0.4
            98nm,0.6s
KURK  Kurchatov           0.77 317 ⇑P       Pb       07 06 01.5 +0.8
            6.5nm,0.4s
KURK                               ⇓S       Sb       07 06 11.2 -0.5
            25nm,0.8s
MAKZ  Makanchi            3.75 152 ⇓Pg      Pg       07 06 57.7 +1.6
            1.3nm,0.5s
MAKZ                               ⇑Lg      Lg       07 07 46.9
            2.7nm,0.5s
MK31  Makanchi Array      3.86 149 ⇑Pn      Pb       07 06 52.2 -1.1
            0.2nm,0.3s,baz=327,slow=11,SNR=22
MK31                               ⇓Pg      Pg       07 07 00.2 +2.0
            0.9nm,0.4s,baz=326,slow=12,SNR=8.3
MK31                               ⇑Lg      Lg       07 07 53.5
            2.9nm,0.5s,baz=324,slow=26,SNR=10
MKAR  Makanchi Array      3.86 149  Pn      Pb       07 06 52.5 -0.7
            0.3nm,0.3s,baz=330,slow=11,SNR=21
MKAR                                Pg      Pg       07 06 58.9 +0.7
            0.5nm,0.3s,baz=327,slow=16,SNR=16
MKAR                                Lg      Lg       07 07 53.9
            1.3nm,0.3s,baz=320,slow=24,SNR=4.6
I46RU ZALESOVO INFRA      5.05  39 i                 07 37 10.0
            baz=227,slow=340,SNR=4.6
ZALV  Zalesovo Beam       5.05  39  Pn      Pb       07 07 12.9 -0.5
            0.8nm,0.3s,baz=232,slow=14,SNR=11
ZALV                                Lg      Lg       07 08 44.5
            0.3nm,0.3s,baz=227,slow=26,SNR=3.6
BVAR  Borovoye Array      6.33 300  Pn      Pn       07 07 19.4 +0.5
            0.1nm,0.3s,baz=120,slow=13,SNR=2.3
BVAR                                Sn      Sn       07 08 28.3 -3.6
            0.7nm,0.3s,baz=103,slow=25,SNR=13
BVAR                                Lg      Lg       07 08 58.9
            0.3nm,0.3s,baz=98,slow=32,SNR=3.0
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*KRSC **01** 07:18:46.2±1.6, 48°.93N×156°.56E, h32^{km}±23^{km}, ML3.9*

*IDC **01** 07:18:49.9±1.8, 49°.27N×159°.01E, h0^{km}, mb3.4/1, mb1 3.7/3, mb1mx3.3/42, mbtmp3.3/3, ML2.6/2, MS3.5/1, Ms1 3.5/1, ms1mx2.3/39, Error ellipse: s-maj=51.4km s-min=34.7km az=139.0*

ISC 01 07:18:49.3±3.9**, 49°.2N**±0°.2×**155°.9E**±0°.2**, h10^{km}, n18, σ1^{s}.10**/21**, Kuril Islands**

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Code  Station Name        Δ°   AZ°   Phase ID          Time     Res
                                    Op      ISC      h  m  s    ISC
SKR   Severo-Kuril's      1.52   4 eP       Pn       07 19 15.6 -0.9
SKR                                 S       Sn       07 19 36.8 +0.5
PAU   Pauzhetka           2.37  13  S       Sn       07 19 58.4 +1.2
KDTR  Khodutka, Kamc      2.97  27  P       Pn       07 19 35.8 -0.7
KDTR                                S       Sn       07 20 12.5 +0.3
MTVR  Mutnovka            3.61  22 eP       Pn       07 19 45.8 +0.4
MTVR                               eS       Sn       07 20 29.6 +1.5
GRL   Gorelyy             3.65  21 eP       Pn       07 19 46.6 +0.7
GRL                                eS       Sn       07 20 31.2 +2.2
RUS   Russkaya            3.65  26 eS       Sn       07 20 28.8 -0.1
PETK  Petropavlovsk-      4.09  15  Pn      Pn       07 19 51.5 -0.4
            0.5nm,0.3s,baz=179,slow=11,SNR=7.9
PETK                                Sn      Sb       07 20 49.2 -1.8
            0.1nm,0.3s,baz=75,slow=30,SNR=1.2
UGLR  Uglovaya            4.43  23 eP       Pn       07 19 57.6 +0.9
KOK   Koryaka             4.46  21 eP       Pn       07 19 58.7 +1.6
SMAR  Somma               4.47  23 eP       Pn       07 19 57.9 +0.5
KRER  Koryakskii          4.50  22 eP       Pn       07 19 59.2 +1.5
SDLR  Sedlovina           4.51  23 eP       Pn       07 19 57.4 -0.3
KRX   Arik                4.53  21 eP       Pn       07 19 58.4 +0.4
SPN   Mys Shipunski       4.70  32  P       Pn       07 20 00.0 -0.2
SPN                                 S       Sn       07 20 54.9 +0.2
MKZ   Mys Kozlova         6.47  31 eP       Pn       07 20 23.6 -1.0
MJAR  Matsushiro Arr     18.06 232  P       P        07 23 21.4  +21
            0.1nm,0.3s,baz=37,slow=12,SNR=6.1
SIJI  Sorong             54.20 211  LR      LR       07 50 48.0
            comp=Z,38nm,18.8s,baz=148,slow=35
TXAR  Lajitas Array      74.67  63  P       P        07 30 20.5 -8.6
            0.2nm,0.6s,baz=300,slow=5.0,SNR=6.1
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*IDC **01** 07:22:54.4±3.5, 20°.50N×144°.91E, h154^{km}±32^{km}, mb3.6/15, mb1 3.7/18, mb1mx3.6/44, mbtmp4.1/18, Error ellipse: s-maj=21.8km s-min=12.1km az=91.0*

*NEIC **01** 07:22:55.5±1.4, 20°.5N±0°.1×144°.8E±0°.2, h159^{km}±8^{km}, mb4.3/38, Error ellipse: s-maj=23.8km s-min=16.6km az=105.0*

ISC 01 07:22:54.6±0.6**, 20°.61N**±0°.07×**144°.8E**±0°.1**, h150^{km}, n65, σ1^{s}.33**/65**, mb4.1**/28**, Mariana Islands**

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Code  Station Name        Δ°   AZ°   Phase ID          Time     Res
                                    Op      ISC      h  m  s    ISC
JCJ   Chichijima          6.89 340  P       Pn       07 24 33.7 +0.5
            15nm,0.3s,baz=287,slow=20,SNR=1.9
JCJ                                 S       Sn       07 25 43.2 -7.2
            4.5nm,0.3s,baz=321,slow=24,SNR=1.7
INU   Inuyama            16.20 337          P        07 26 36.0 +1.9
INU                                 IAmb    IAmb     07 26 39.8
            comp=Z,19nm,1.2s
JMN   Monobe             16.27 326          Pn       07 26 35.1 +0.4
JMN                                 IAmb    IAmb     07 26 38.7
            comp=Z,33nm,1.2s
JGF   Kuroka             16.31 338          Pn       07 26 35.5 +0.5
JGF                                 IAmb    IAmb     07 26 36.1
            comp=Z,22nm,1.2s
JOW   Kunigami           16.35 295  P       P        07 26 36.0 +0.2
            comp=Z,1.6nm,0.3s,baz=156,slow=15,SNR=2.2
JWT   Wachi              16.80 332  P       Pn       07 26 41.7 +0.7
MJAR  Matsushiro Arr     16.89 341  P       P        07 26 42.3 +0.7
            comp=Z,0.1nm,0.3s,baz=170,slow=11,SNR=6.6
MJAR  Matsushiro Arr     16.89 341  P       Pn       07 26 43.1 +1.0
MAJO  Matsushiro         16.89 341  P       Pn       07 26 43.0 +0.9
MAJO                                IAmb    IAmb     07 26 45.6
            comp=Z,22nm,1.3s
JMM   Marumori           17.54 349  P       Pn       07 26 51.4 +1.5
JHS   Saijyo             17.65 327  P       Pn       07 26 52.5 +1.2
JHS                                 IAmb    IAmb     07 26 54.8
            comp=Z,23nm,1.1s
KSRS  Korea Array        22.29 322  P       P        07 27 41.2 +1.5
            comp=Z,2.2nm,0.8s,baz=145,slow=8.8,SNR=10
FAKI  Fak Fak            26.43 209  P       P        07 28 20.1 +2.4
KLR   Kul'dur            30.40 343  P       P        07 28 53.7 +1.2
            comp=Z,1.1nm,0.3s,baz=158,slow=12,SNR=4.6
TOLI2 Tolitoli           30.44 233  P       P        07 28 53.9 +0.6
MTN   Manton Dam         35.86 203  P       P        07 29 38.9 -1.3
SONM  Songino Array      41.14 320  P       P        07 30 24.8 +0.7
            comp=Z,0.6nm,0.4s,baz=124,slow=7.4,SNR=6.7
SONM  Songino Array      41.14 320  P       P        07 30 25.5 +1.4
WB0   Warramunga Arr     41.41 195  P       P        07 30 26.1 -0.3
WR0   Warramunga Arr     41.56 195  P       P        07 30 27.1 -0.5
WR0                                 IAmb    IAmb     07 30 46.9
            comp=Z,8.7nm,1.4s
WRAB  Tennant Creek      41.58 195  P       P        07 30 27.9 +0.1
WB2   Warramunga Arr     41.59 195  P       P        07 30 27.3 -0.6
WRA   Warramunga Arr     41.59 195  P       P        07 30 27.0 -0.8
            comp=Z,1.0nm,0.4s,baz=17,slow=8.8,SNR=19
WRA   Warramunga Arr     41.59 195  P       P        07 30 27.3 -0.6
FITZ  Fitzroy Crossi     42.82 207  P       P        07 30 36.8 -1.1
FITZ                                IAmb    IAmb     07 30 38.2
            comp=Z,7.1nm,0.8s
ASAR  Alice Springs      45.28 194  P       P        07 30 56.2 -1.2
            comp=Z,0.6nm,0.5s,baz=17,slow=8.1,SNR=15
ASAR  Alice Springs      45.28 194  P       P        07 30 56.5 -0.9
PSA00 Pilbara Seismi     48.51 212  P       P        07 31 21.9 -0.6
PSA00                               IAmb    IAmb     07 31 22.3
            comp=Z,12nm,1.2s
STKA  Stephens Creek     52.28 183  P       P        07 31 47.8 -2.8
            comp=Z,1.0nm,0.5s,baz=27,slow=6.8,SNR=1.6
ZAA0  Zalesovo Array     56.00 322  P       P        07 32 17.4  0.0
ZAA0                                IAmb    IAmb     07 32 18.7
            comp=Z,3.4nm,1.2s
ZALV  Zalesovo Beam      56.00 322  P       P        07 32 17.3 -0.1
            comp=Z,1.2nm,0.5s,baz=96,slow=6.9,SNR=5.5
ZALV  Zalesovo Beam      56.00 322  P       P        07 32 17.1 -0.2
MK31  Makanchi Array     56.55 313  P       P        07 32 21.7 +0.3
MKAR  Makanchi Array     56.55 313  P       P        07 32 22.3 +0.9
            comp=Z,1.2nm,0.5s,baz=90,slow=9.0,SNR=19
MKAR  Makanchi Array     56.55 313  P       P        07 32 21.7 +0.3
MAKZ  Makanchi           56.76 313  P       P        07 32 23.4 +0.4
MAKZ                                IAmb    IAmb     07 32 24.6
            comp=Z,2.4nm,0.7s
KURK  Kurchatov          59.30 317  P       P        07 32 40.9 +0.4
KURK                                IAmb    IAmb     07 32 42.6
            comp=Z,8.4nm,1.5s
NRIK  Noril'sk           59.53 340  P       P        07 32 41.8  0.0
            comp=Z,1.4nm,0.6s,baz=135,slow=7.1,SNR=3.8
NRIK  Noril'sk           59.53 340  P       P        07 32 42.1 +0.4
SKT   Skwentna           59.68  29  P       P        07 32 43.2 +0.3
SKT                                 IAmb    IAmb     07 32 50.0
            comp=Z,14nm,1.5s
KTH   Kantishna Hill     60.33  28  P       P        07 32 48.2 +0.8
KTH                                 IAmb    IAmb     07 33 14.4
            comp=Z,4.8nm,1.3s
HDA   Harding Lake       62.22  27  P       P        07 32 59.8 -0.2
HDA                                 IAmb    IAmb     07 33 08.5
            comp=Z,4.8nm,1.4s
ILAR  Eielson Array      62.31  27  P       P        07 32 59.8 -0.8
            comp=Z,0.7nm,0.9s,baz=243,slow=4.4,SNR=5.9
RIDG  Independent Ri     63.02  28  P       P        07 33 05.7 +0.3
RIDG                                IAmb    IAmb     07 33 33.3
            comp=Z,8.0nm,1.3s
BALM  Baldy              63.88  31  P       P        07 33 11.7 +0.5
BALM                                IAmb    IAmb     07 33 26.4
            comp=Z,10nm,1.4s
BCAR  Beaver Creek A     64.31  29  P       P        07 33 14.4 +0.5
KK31  Karatay Array      64.92 309  P       P        07 33 19.3 +1.2
KK31                                IAmb    IAmb     07 33 19.9
            comp=Z,3.7nm,0.9s
KKAR  Karatay Array      64.92 309  P       P        07 33 19.3 +1.2
KKAR  Karatay Array      64.92 309  P       P        07 33 19.3 +1.2
KKAR                                IAmb    IAmb     07 33 19.9
            comp=Z,3.7nm,0.9s
KK01  Karatay Array      64.92 309  P       P        07 33 19.1 +1.0
KBL   Kabul              67.19 300  P       P        07 33 34.0 +0.9
INK   Inuvik             67.95  23  P       P        07 33 36.4 -0.4
            comp=Z,1.1nm,0.8s,baz=267,slow=5.3,SNR=3.2
INK   Inuvik             67.95  23  P       P        07 33 36.6 -0.2
INK                                 IAmb    IAmb     07 33 37.4
            comp=Z,6.5nm,1.4s
ABKAR Akbulak array      71.38 316  P       P        07 33 58.4 +0.1
YKA   Yellowknife Ar     76.70  28  P       P        07 34 28.9  0.0
            comp=Z,1.5nm,0.6s,baz=295,slow=4.7,SNR=35
K05A  Summer Lake        79.34  48  P       P        07 34 45.3 +1.2
BEKR  Beckworth          80.63  51  P       P        07 34 51.6 +0.5
CMB   Columbia Colle     81.21  53  P       P        07 34 54.7 +0.7
NVAR  Mina Array Bea     82.62  52  P       P        07 35 02.1 +0.5
            comp=Z,1.9nm,0.6s,baz=273,slow=6.3,SNR=17
NVAR  Mina Array Bea     82.62  52  P       P        07 35 02.5 +0.8
FIA1  FINESS Array S     84.81 335  P       P        07 35 10.9 -1.0
FINES FINESS Array B     84.81 335  P       P        07 35 10.9 -1.0
            comp=Z,1.6nm,0.3s,baz=66,slow=5.1,SNR=26
PDAR  Pinedale Array     87.08  45  P       P        07 35 22.2 -1.6
            comp=Z,0.2nm,0.5s,baz=246,slow=2.9,SNR=3.7
TORD  Torodi Ar. Bea    130.60 310  PKP     PKPdf    07 41 46.7 -1.8
            comp=Z,0.7nm,0.6s,baz=29,slow=2.0,SNR=3.2
PLCA  Paso Flores       143.90 132  PKP     PKPab    07 42 08.6 -1.4
            comp=Z,1.1nm,0.8s,baz=304,slow=3.6,SNR=1.4
```

IDC 01 07:27:15.8±1.7**, 3°.32S**×**128°.16E, h0^{km}, mb3.4**/2**, mb1 3.7**/4**, mb1mx3.5**/32**, mbtmp3.5**/4**, ML3.5**/2**, MS2.8**/1**, Ms1 2.8**/1**, ms1mx2.3**/17**, Error ellipse: s-maj=38.7km s-min=26.7km az=94.0, Seram**

```
Code  Station Name        Δ°   AZ°   Phase ID          Time     Res
                                    Op      ISC      h  m  s    ISC
SIJI  Sorong              3.94  52  Pn      Pn       07 28 18.0 +0.3
            15nm,0.3s,baz=236,slow=15,SNR=16
SIJI                                Sn      Sn       07 29 05.6 +0.9
            7.1nm,0.3s,baz=119,slow=18,SNR=9.3
WRA   Warramunga Arr     17.59 160  P       Pn       07 31 22.1 -0.5
            0.1nm,0.3s,baz=343,slow=12,SNR=1.8
WRA                                 LR      LR       07 39 03.8
            comp=Z,27nm,18.3s,baz=335,slow=40
ASAR  Alice Springs      20.98 165  P       P        07 32 01.1 +0.2
            1.3nm,0.5s,baz=348,slow=11,SNR=17
MKAR  Makanchi Array     64.16 327  P       P        07 37 52.2 -0.1
            0.2nm,0.5s,baz=111,slow=7.9,SNR=2.6
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*DDA **01** 07:30:23.9, 39°.05N×26°.46E, h7^{km}±3^{km}, ML2.2*

*ISK **01** 07:30:23.9, 39°.04N×26°.45E, h10^{km}, ML2.6/5*

*ATH **01** 07:30:24.8, 39°.04N×26°.36E, h24^{km}±4^{km}, ML2.4/1, Error ellipse: s-maj=10.2km s-min=1.4km az=70.0*

*THE **01** 07:30:25.4, 39°.02N×26°.34E, h14^{km}±3^{km}, ML2.3/1, Error ellipse: s-maj=7.9km s-min=1.2km az=69.0*

ISC 01 07:30:24.5±0.9**, 39°.04N**±0°.02×**26°.47E**±0°.03**, h16^{km}**±7^{km}**, n26, σ0^{s}.72**/42**, Turkey**

```
Code  Station Name        Δ°   AZ°   Phase ID          Time     Res
                                    Op      ISC      h  m  s    ISC
PRK   Paraskevi           0.26 323  P       Pg       07 30 30.4 +0.2
PRK                                 S       Sg       07 30 34.5 +0.5
PRK                                 AML     AML      07 30 34.8
            comp=E,2587μm,0.3s
PRK                                 AML     AML      07 30 34.9
            comp=N,2105μm,0.3s
PRK   Paraskevi           0.26 323  P       Pg       07 30 30.4 +0.2
PRK                                 S       Sg       07 30 34.5 +0.5
            comp=N,1μm,0.3s
AYVA  Ayvalik             0.32  33 i P      Pg       07 30 30.6 -0.7
AYVA                                IAML             07 30 35.0
            comp=E,220nm,0.8s
AYVA                               i S      Sg       07 30 35.4 -0.4
DKL   Dikili              0.34  85  PG      Pg       07 30 31.5 -0.1
DKL                                 SG      Sg       07 30 36.9 +0.4
ZEDA  zmir-Bergama        0.48  99 i P      Pg       07 30 33.9 -0.3
ZEDA                               i S      Sg       07 30 40.2 -0.4
ZEDA                                IAML             07 30 41.0
            comp=E,118nm,0.4s
KOCA  Canakkale, Ayv      0.53 331 i P      Pg       07 30 34.2 -0.8
KOCA                               i S      Sg       07 30 41.3 -0.8
KOCA                                IAML             07 30 42.0
            comp=E,169nm,0.8s
KOCA                                IAML             07 30 45.0
            comp=N,140nm,1.3s
BUHA  Balikesir, Bur      0.66  46 i P      Pb       07 30 38.2 +0.5
BUHA                               i S      Sg       07 30 45.7 -0.6
BUHA                                IAML             07 30 50.0
            comp=E,76nm,0.7s
URLA  Izmir               0.69 172  PG      Pg       07 30 37.7 -0.3
URLA                                SG      Sb       07 30 47.7 +0.3
URLA  Izmir               0.69 172 i P      Pg       07 30 36.1 -1.9
URLA                               i S      Sg       07 30 46.1 -1.0
BAYC  CANAKKALE_Bayr      0.70   5 i P      Pg       07 30 37.6 -0.7
BAYC                               i S      Sg       07 30 47.2 -0.4
BAYC                                IAML             07 30 50.0
            comp=E,136nm,0.6s
BAYC                                IAML             07 30 50.0
            comp=N,279nm,0.4s
EZN   Ezine               0.79 352  P       Pg       07 30 39.8 -0.2
EZN   Ezine               0.79 352  PG      Pg       07 30 39.8 -0.2
EZN                                 SG      Sb       07 30 51.3 +0.9
ZEYE  Izmir, Urla-Ze      0.80 178 i P      Pg       07 30 40.1  0.0
ZEYE                               i S      Sg       07 30 50.9 +0.2
ZEYE                                IAML             07 30 54.0
            comp=E,128nm,0.6s
ZEYE                                IAML             07 30 54.0
            comp=N,94nm,0.3s
STEP  BALIKESIR_Sava      1.03  71 i P      Pb       07 30 43.9  0.0
STEP                                IAML             07 31 01.0
            comp=N,51nm,0.6s
STEP                                IAML             07 31 02.0
            comp=E,73nm,0.3s
AKHS  Akhisar             1.06  98 i P      Pb       07 30 44.4 -0.2
AKHS                               i S      Sb       07 30 59.2 +1.0
BALY  Balya               1.13  52 i P      Pb       07 30 44.7 -1.1
BALY                               i S      Sb       07 30 59.5 -0.9
BALY                                IAML             07 31 02.0
            comp=N,52nm,0.8s
BALY                                IAML             07 31 04.0
            comp=E,76nm,0.5s
GADA  Gvkgeada            1.23 339  P       Pn       07 30 46.8 -0.3
GADA  Gvkgeada            1.23 339  PN      Pn       07 30 47.3 +0.2
BALB  Balikesir           1.25  61  PN      Pn       07 30 47.5 +0.2
LIA   Limnos Island       1.31 311  P       Pn       07 30 47.2 -1.0
LIA   Limnos Island       1.31 311  P       Pn       07 30 47.2 -1.0
SMG   Samos               1.36 168  P       Pb       07 30 49.9 +0.2
SMG                                 S       Sn       07 31 07.0 +0.4
SMG   Samos               1.36 168  P       Pb       07 30 49.9 +0.2
SMG                                 S       Sn       07 31 07.0 +0.4
AYDB  Zeytinkoy-Aydi      1.56 134  PN      Pn       07 30 52.5 +0.7
ALN   Alexandroupoli      1.88 350  P       Pn       07 30 57.4 +1.4
ALN   Alexandroupoli      1.88 350  P       Pn       07 30 57.4 +1.4
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*DJA **01** 07:40:24.0±1.2, 8°S±5°×11°8E±°, h21^{km}±14^{km}, M3.9/11, MLv3.9/11*

*IDC **01** 07:40:26.9±2.0, 7°.92S×118°.37E, h0^{km}, mb3.2/2, mb1 3.5/5, mb1mx3.3/32, mbtmp3.3/5, ML3.2/3, Error ellipse: s-maj=49.1km s-min=22.9km az=73.0*

ISC 01 07:40:25.2±1.1**, 8°.01S**±0°.05×**117°.73E**±0°.05**, h35^{km}, n14, σ1^{s}.73**/17**, Sumbawa region**

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Code  Station Name        Δ°   AZ°   Phase ID          Time     Res
                                    Op      ISC      h  m  s    ISC
PLAI  Plampang            0.81 177  P       Pn       07 40 39.9 -0.3
PLAI                                S       Sn       07 40 51.5 +0.5
TWSI  Taliwang, Sumb      1.11 229  P       Pn       07 40 43.9 -0.4
TWSI                                S       Sn       07 40 58.3 -0.1
SRBI  Singaraja           2.50 268  P       Pn       07 41 03.1 -0.3
BSSI  Bau Bau, Buton      3.31  56  P       Pn       07 41 14.5 -0.1
ABJI  Asem Bagus          3.47 273  P       Pn       07 41 17.4 +0.6
JAGI  Jajag, Banyuwa      3.57 262  P       Pn       07 41 17.8 -0.4
KAPI  Kappang             3.59  34  Pn      Pn       07 41 18.2 -0.3
            7.0nm,0.3s,baz=198,slow=4.4,SNR=9.7
KAPI                                Sn      Sn       07 41 58.5 -1.2
            12nm,0.3s,baz=188,slow=22,SNR=9.0
KMMI  Kalianget           3.86 284  P       Pn       07 41 22.2 +0.1
EDFI  Ende, Flores        3.98 101  P       Pn       07 41 24.9 +1.0
MMRI  Maumere             4.50  98  P       Pn       07 41 31.4 +0.4
FITZ  Fitzroy Crossi     12.64 143  Pn      Pn       07 43 24.5 +1.9
            0.1nm,0.3s,baz=351,slow=13,SNR=1.3
FITZ                                Sn      Sn       07 45 36.9 -5.3
            0.1nm,0.3s,baz=216,slow=5.5,SNR=2.9
WRA   Warramunga Arr     19.98 128  P       Pn       07 44 56.2 -0.6
            0.1nm,0.3s,baz=304,slow=12,SNR=2.1
ASAR  Alice Springs      21.97 137  P       P        07 45 18.7 +2.5
            0.3nm,0.5s,baz=309,slow=8.9,SNR=11
MKAR  Makanchi Array     63.02 333  P       P        07 50 57.1 +8.3
            0.3nm,0.7s,baz=129,slow=8.0,SNR=2.7
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*IGQ **01** 08:06:20±0.2, 0°N±1°×7°7W±°, h4^{km}*

*RSNC **01** 08:06:21.3±0.4, 0°.10N×77°.51W, h68^{km}±7^{km}, ML3.7, Mw3.8*

ISC 01 08:06:19.5±1.1**, 0°.10N**±0°.02×**77°.55W**±0°.02**, h10^{km}**±9^{km}**, n87, σ1^{s}.48**/105**, 2D, Colombia-Ecuador border region**

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Code  Station Name        Δ°   AZ°   Phase ID          Time     Res
                                    Op      ISC      h  m  s    ISC
LAV4  Lava4-Reventad      0.21 202  P       Pg       08 06 25.0 +1.0
CAYA  Cayambe             0.44 266  P       Pn       08 06 31.0 -1.4
CAYA                                S       Sb       08 06 37.0 +0.5
ANGU  Angureal            0.46 263  P       Pb       08 06 31.0 +0.9
YAHU  Yahuarcocha         0.58 297  P       Pn       08 06 33.0 -1.2
YAHU                                S       Sn       08 06 42.0 -2.1
AIB1  Ecuador-Imbabu      0.62 293  P       Pn       08 06 34.0 -0.7
AIB1                                S       Sn       08 06 45.0 +0.1
TULM  Tulcn-Chalpat       0.65 339  P       Pb       08 06 33.0 -0.3
TULM                                S       Sn       08 06 44.0 -1.9
IMBA  Imbabura, San       0.67 285  P       Pn       08 06 35.0 -0.5
IMBA                                S       Sn       08 06 46.0 -0.2
ATUL  Tulcn               0.69 346  P       Pb       08 06 34.0 +0.2
ATUL                                S       Sb       08 06 44.0 +0.5
APS4  Papallacta          0.73 230  P       Pg       08 06 34.0 +0.4
APS4                                S       Sb       08 06 45.0 +0.4
ACOT  Cotacachi (Cas      0.75 285  P       Pn       08 06 36.0 -0.4
URCU  Urcuqui             0.78 295  P       Pn       08 06 37.0  0.0
CHL2  Volc¡n Chiles       0.79 332  P       Pn       08 06 36.0 -1.1
CHL1  Volc¡n Chiles       0.79 330  P       Pb       08 06 36.0 +0.3
ANTI  Antisana            0.82 228  P       Pb       08 06 36.0 -0.2
COTA  Cotacachi           0.82 286  P       Pn       08 06 38.0 +0.4
CUSW  Cuicocha Oeste      0.82 283  P       Pn       08 06 38.0 +0.5
ECEN  Cerro Negro         0.83 330  P       Pn       08 06 37.0 -0.8
CUIC  Cuicocha-Domo       0.83 284  P       Pn       08 06 38.0 +0.3
ANTS  Antisana-Sarah      0.86 226  P       Pb       08 06 37.0 +0.1
CUSE  Cuicocha Este       0.87 283  P       Pn       08 06 38.0 -0.2
CMBC  Cumbal              0.88 342 eP       Pn       08 06 38.3  0.0
CMBC                               eS       Sn       08 06 51.7 +0.3
CMBC                               i                 08 06 52.7
            comp=Z,2μm,0.3s
OTAV  Otavalo             0.91 279⇓eP       Pn       08 06 39.0 +0.3
OTAV                               eS       Sn       08 06 53.0 +0.8
OTAV  Otavalo             0.91 279  P       Pn       08 06 39.0 +0.3
ANTM  Antisana-La Mi      0.92 227  P       Pb       08 06 38.0 +0.1
ANTG  Antisana-Guama      0.92 229  P       Pb       08 06 38.0  0.0
PULU  Pululahua           0.95 265  P       Pn       08 06 40.0 +0.7
EPNL  EPN Laboratori      0.99 252  P       Pn       08 06 41.0 +1.2
YANA  Yana                1.04 258  P       Pn       08 06 41.0 +0.4
GGP   Refugio Guagua      1.08 255  P       Pn       08 06 42.0 +0.8
GGPC  Guagua Pichinc      1.08 255  P       Pn       08 06 42.0 +0.8
PINO  Pino                1.09 256  P       Pn       08 06 42.0 +0.7
TERV  Terraza Guagua      1.09 255  P       Pn       08 06 42.0 +0.7
PITA  Cotopaxi Volc       1.10 233  P       Pn       08 06 42.0 +0.6
CPAS1 Pasto               1.10  12 eP       Pb       08 06 40.7 -0.2
CPAS1 Pasto               1.10  12 eS       Sg       08 06 55.8 +0.6
GGPT  Toaza - Volcan      1.12 253  P       Pg       08 06 42.0 +1.0
ARDO  Archidona, Ten      1.12 193  P       Pb       08 06 40.0 -1.0
VC1   Cotopaxi 1          1.13 229  P       Pg       08 06 42.0 +0.8
GCUF  Volcan Galeras      1.14  11⇓eP       Pb       08 06 41.3 -0.3
GCUF                               eS       Sn       08 06 57.3 -0.5
GCUF                               i                 08 06 59.2
            comp=Z,2μm,0.2s
TAMB  Tambo               1.14 226  P       Pg       08 06 42.0 +0.6
CCUFI Cufio, Nario        1.14  10 eP       Pb       08 06 41.3 -0.2
CCUFI                              eS       Sn       08 06 57.1 -0.8
BTAM  Cotopaxi Volca      1.14 228  P       Pg       08 06 43.0 +1.4
CPAS2 Pasto               1.15  15 eP       Pb       08 06 41.2 -0.5
CPAS2 Pasto               1.15  15 eS       Sg       08 06 56.9 +0.2
BREF  Cotopaxi Volca      1.17 229  P       Pg       08 06 44.0 +1.9
BNAS  Cotopaxi Volca      1.21 230  P       Pg       08 06 44.0 +1.3
BMOR  Cotopaxi Volca      1.23 228  P       Pg       08 06 44.0 +0.8
PAC1  Pacto, Paraso       1.25 278  P       Pg       08 06 44.0 +0.5
PIS1  Pisayambo           1.42 216  P       Pb       08 06 46.0 -0.4
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ILLI  Illinizas Sur       1.43 235   P     Pg     08 06 48.0 +1.0
APUY  Puyo                1.61 196   P     Pb     08 06 49.0 -0.5
PUYO  Puyo, Santa Ro      1.65 197   P     Pn     08 06 49.0 +0.3
BV15  Puerto Quito-O      1.67 272   P     Pg     08 06 52.0 +0.4
SAGO  Sagoatoa            1.67 222   P     Pn     08 06 49.0 -0.3
BRUN  Tungurahua Vol      1.74 210   P     Pb     08 06 51.0 -0.8
RUN5  Runtun              1.74 210   P     Pb     08 06 51.0 -0.8
BULB  Ulba Tungurahu      1.75 209   P     Pb     08 06 51.0 -1.0
POND  Pondoa              1.76 211   P     Pn     08 06 51.0 +0.6
JUI6  Juive               1.77 211   P     Pn     08 06 51.0 +0.5
RETU  Refugio             1.78 210   P     Pb     08 06 52.0 -0.6
BBIL  Ulba Tungurahu      1.80 211   P     Pb     08 06 52.0 -0.8
ARRY  Arrayan             1.83 209   P     Pn     08 06 52.0 +0.6
BMAS  Trigal station      1.84 210   P     Pb     08 06 53.0 -0.6
CHSH  Refugio Sur-Vo      2.06 220   P     Pb     08 06 58.0 +0.6
TUMC  Tumaco              2.08 326  eP     Pn     08 06 53.1 -1.3
SOTA  Rioblanco           2.23  25  eP     Pb     08 06 58.9 -1.3
SOTA                                eS     Sb     08 07 29.1 +1.0
FLFR  Flavio Alfaro       2.33 259   P     Pb     08 07 01.0 -0.7
PCON  Cinco Dias          2.50  28  eP     Pb     08 07 04.4 -0.4
PCON                                eS     Sb     08 07 36.5 +0.8
PCON                                i             08 07 40.4
      comp=Z,252nm,0.4s
PTLC  Puerto Leguiza      2.76  89  eP     Pn     08 07 02.2 -1.6
PTLC                                eS     Sn     08 07 34.1 -3.1
CAB1  Cabo Pasado-Ma      2.92 260   P     Pb     08 07 12.0 +0.3
CABP  Cabo Pasado         2.92 260   P     Pb     08 07 11.0 -0.7
GARC  Garzon, Huila       2.92  45  eP     Pn     08 07 05.2 -1.1
GARC                                eS     Sn     08 07 41.3 -0.3
COHC  Cochancay           3.07 214   P     Pb     08 07 14.0 -0.2
MILO  Milagro-Astudi      3.10 220   P     Pb     08 07 15.0 +0.2
MARP  Paez Belalcaza      3.16  30  eP     Pn     08 07 10.9 +1.4
MARP                                eS     Sb     08 07 56.4 +1.8
BETC  Betania             3.32  39  eP     Pb     08 07 20.8 +2.3
BETC                                eS     Sg     08 08 05.0 -1.2
PPLP  Puerto Lpez         3.61 243   P     Pb     08 07 20.0 -3.6
YOTC  Yotoco, Valle       4.04  17  eP     Pn     08 07 24.6 +3.0
YOTC                                eS     Sb     08 08 21.0 +1.1
MACC  Macarena, Meta      4.22  61  eP     Pn     08 07 22.6 -1.5
MACC                                eS     Sb     08 08 26.9 +1.8
MACC                                i             08 08 38.5
      comp=Z,246nm,0.5s
ORTC  Ortega, Tolima      4.43  31  eP     Pn     08 07 27.8 +0.9
ORTC                                eS     Sg     08 08 36.7 -5.1
ORTC                                i             08 08 43.3
      comp=Z,59nm,0.5s
PLMC  San Jos del P       4.94  15  eP     Pn     08 07 35.6 +1.7
TOLC  Tolima              4.98  27  eP     Pn     08 07 39.8 +5.1
TOLC                                eS     Sg     08 08 54.3 -5.3
TOLC                                i             08 09 09.1
      comp=Z,19nm,0.4s
RREF  El Recreo           5.25  25  eP     Pn     08 07 44.5 +5.8
GUVC  San Jose del G      5.49  64  eP     Pn     08 07 40.4 -1.0
GUVC                                eS     Sb     08 09 08.6 +7.1
GUY2C Guyana, Caldas      5.54  23  eP     Pn     08 07 45.4 +2.9
CBOC  Ciudad Bolivar      5.93  15  eP     Pn     08 07 52.1 +4.5
PTGC  Puerto Gaitan,      6.77  53  eS     Sb     08 09 47.6 +9.2
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*IDC **01** 08:06:45.7±0.7, 43°.96N×88°.16E, h0^{km}, mb3.9/15, mb1 4.0/21, mb1mx3.8/70, mbtmp3.9/21, ML3.6/6, MS2.7/3, Ms1 2.7/3, ms1mx2.4/43, Error ellipse: s-maj=18.2km s-min=10.6km az=40.0*

*NNC **01** 08:06:46.8±4.0, 43°.90N×88°.13E, h12^{km}±24^{km}, mb4.2, mpv4.3, Error ellipse: s-maj=25.6km s-min=19.8km az=117.0*

*NEIC **01** 08:06:48.5±0.8, 43°.93N±0°.09×88°.04E±0°.07, h17^{km}±3^{km}, mb4.1/9, Error ellipse: s-maj=13.1km s-min=6.5km az=167.0*

ISC 01 08:06:46.9±0.6**, 43°.98N**±0°.06×**88°.15E**±0°.05**, h10^{km}, n59,** σ**1^{s}.10**/69**, mb3.8**/16**, 17C-10D, Northern Xinjiang**

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Code  Station Name         Δ°   AZ°    Phase ID         Time      Res
                                      Op     ISC      h  m  s    ISC
WMQ   Urumqi              0.36 245   Pg     Pg     08 06 53.5 -0.7
WMQ                                  Sg     Sg     08 06 58.6 -0.4
WMQ                                  smax   smax
      comp=N,18µm,0.7s
WMQ                                  smax   smax
      comp=E,20µm,0.5s
WMQ   Urumqi              0.36 245          Pg     08 06 53.3 -0.8
WMQ                                  Sg     Sg     08 06 58.5 -0.4
MK31  Makanchi Array      5.00 306  ⇑Pn     Pn     08 08 03.7 +1.7
      comp=E,8.4nm,0.3s,baz=123,slow=13,SNR=948
MK31                                ⇑Sn     Sn     08 09 01.5 +1.7
      comp=E,11nm,0.3s,baz=118,slow=25,SNR=4.2
MK31                                ⇑Lg     Lg     08 09 25.8
      comp=E,33nm,0.5s,baz=134,slow=27
MK31  Makanchi Array      5.00 306          Pn     08 08 04.1 +2.1
MKAR  Makanchi Array      5.00 306   Pn     Pn     08 08 03.8 +1.8
      comp=E,15nm,0.3s,baz=125,slow=13,SNR=794
MKAR                                 Sn     Sn     08 09 02.5 +2.7
      comp=E,9.1nm,0.3s,baz=120,slow=25,SNR=6.1
MKAR                                 Lg     Lg     08 09 23.5
      comp=E,10nm,0.3s,baz=116,slow=27,SNR=4.8
MKAR  Makanchi Array      5.00 306   Pn     Pn     08 08 03.2 +1.3
MAKZ  Makanchi            5.19 305  ⇓Pn     Pn     08 08 06.1 +1.5
      comp=E,32nm,0.3s
MAKZ                                ⇑Sn     Sn     08 09 06.4 +2.0
      comp=E,23nm,0.5s
MAKZ                                ⇓Lg     Lg     08 09 31.1
      comp=E,45nm,0.8s
MAKZ  Makanchi            5.19 305   Pn     Pn     08 08 06.4 +1.8
PDGK  Podgornoye          6.32 267  ⇑Pn     Pn     08 08 20.7 +0.5
      comp=E,14nm,0.5s
PDGK                                ⇓Sn     Sn     08 09 32.8 +0.3
      comp=E,16nm,0.5s
PDGK                                ⇑Lg     Lg     08 10 05.5
      comp=E,27nm,0.7s
MDOK  Medeo               8.10 268  ⇑Pn     Pn     08 08 45.2 +0.4
      comp=E,6.6nm,0.6s
MDOK                                 Lg     Lg     08 11 04.5
      comp=E,19nm,0.8s
TKM2  Tokmak 2            9.19 268  ⇓Pn     Pn     08 08 59.6 -0.2
      comp=E,2.6nm,0.7s
TKM2                                ⇑Sn     Sn     08 10 45.9 +2.5
      comp=E,4.8nm,0.6s
TKM2                                ⇑Lg     Lg     08 11 35.8
      comp=E,7.2nm,0.7s
KURBB Kurchatov Arra      9.32 319   Pn     Pn     08 09 01.0 -0.2
      comp=E,1.0nm,0.3s,baz=133,slow=12,SNR=53
KURBB                                Sn     Sn     08 10 44.0 -1.9
      comp=E,0.2nm,0.3s,baz=114,slow=19,SNR=4.3
KURBB                                Lg     Lg     08 11 49.0
      comp=E,0.2nm,0.3s,baz=110,slow=33,SNR=1.9
KURBB Kurchatov Arra      9.32 319  ⇓Pn     Pn     08 09 01.0 -0.2
      comp=E,2.1nm,0.3s
KURBB                               ⇓Sn     Sn     08 10 47.1 +1.1
      comp=E,20nm,0.7s
KURBB                               ⇓Lg     Lg     08 11 44.2
      comp=E,45nm,0.6s
KURK  Kurchatov           9.34 320  ⇑Pn     Pn     08 09 00.8 -0.7
      comp=E,3.0nm,0.3s
KURK                                ⇓Sn     Sn     08 10 47.6 +1.2
      comp=E,13nm,0.8s
KURK                                ⇓Lg     Lg     08 11 43.0
      comp=E,34nm,1.0s
KURK  Kurchatov           9.34 320   Pn     Pn     08 09 00.9 -0.5
GTA   Gaotai              9.84 114  ⇑P      Pn     08 09 10.4 +1.8
GTA                                  pP            08 09 13.5
GTA                                  sP            08 09 16.4
GTA                                  pmax   pmax
      comp=Z,4.0nm,0.9s
GTA                                  smax   smax
      comp=N,27nm,0.9s
GTA                                  smax   smax
      comp=E,24nm,1.0s
AAK   Ala-Archa          10.04 267   Pn     Pn     08 09 11.3 -0.1
      comp=E,0.2nm,0.3s,baz=147,slow=5.0,SNR=2.4
AAK                                  Lg     Lg     08 12 05.3
      comp=E,0.2nm,0.3s,baz=286,slow=18,SNR=1.9
AAK                                  LR     LR     08 13 30.3
      comp=E,36nm,19.6s,baz=84,slow=40
AAK   Ala-Archa          10.04 267          Pn     08 09 11.4  0.0
ZAA0  Zalesovo Array     10.21 349  ⇑Pn     Pn     08 09 12.5 -1.0
      comp=E,0.3nm,0.6s
ZAA0                                ⇑Sn     Sn     08 11 05.0 -3.0
      comp=E,0.8nm,0.4s
ZAA0                                ⇑Lg     Lg     08 12 17.8
      comp=E,5.4nm,1.1s
ZAA0  Zalesovo Array     10.21 349          Pn     08 09 13.3 -0.2
ZALV  Zalesovo Beam      10.21 349   Pn     Pn     08 09 13.3 -0.2
      comp=E,0.8nm,0.3s,baz=168,slow=14,SNR=12
ZALV                                 Sn     Sn     08 11 06.2 -1.8
      comp=E,0.9nm,0.3s,baz=165,slow=24,SNR=5.0
ZALV                                 Lg     Lg     08 12 08.8
      comp=E,0.2nm,0.3s,baz=171,slow=30,SNR=1.7
ZALV                                 LR     LR     08 13 50.1
      comp=E,28nm,22.0s,baz=78,slow=42
KK31  Karatay Array      12.83 272  ⇑P      Pn     08 09 49.7 +0.4
      comp=E,1.1nm,0.6s,baz=197,slow=7.0,SNR=24
KK31  Karatay Array      12.83 272   Pn     Pn     08 09 49.0 -0.3
KKAR  Karatay Array      12.83 272          Pn     08 09 49.3 -0.1
KKAR  Karatay Array      12.83 272   Pn     Pn     08 09 48.9 -0.5
TLY   Talaya             12.94  48   Lg     Lg     08 13 29.1
      comp=E,0.0nm,0.3s,baz=187,slow=19,SNR=3.7
SONM  Songino Array      13.28  67   Pn     Pn     08 09 54.1 -1.4
      comp=E,0.1nm,0.3s,baz=256,slow=11,SNR=1.3
SONM                                 Lg     Lg     08 13 45.2
      comp=E,0.5nm,0.3s,baz=252,slow=27,SNR=5.0
BVAR  Borovoye Array     14.81 314   Pn     Pn     08 10 15.2 -1.2
      comp=E,1.2nm,0.3s,baz=99,slow=15,SNR=18
BRVK  Borovoye           14.89 314  ⇓P      Pn     08 10 15.7 -1.6
      comp=E,12nm,0.9s
BRVK  Borovoye           14.89 314   Pn     Pn     08 10 17.1 -0.2
NIL   Nilore             15.51 233   Pn     Pn     08 10 24.1 -1.6
NIL                                  IAmb   IAmb   08 10 31.4
      comp=Z,9.2nm,0.5s
SHL   Shillong           18.62 169   P      P      08 11 04.3 -0.4
SHL                                  IAmb   IAmb   08 11 10.7
      comp=Z,6.9nm,0.6s
AB31  Akbulak array      20.02 295  ⇑P      P      08 11 19.2 -0.4
      comp=Z,1.5nm,0.5s,baz=94,slow=11,SNR=32
ABKAR Akbulak array      20.02 295   P      P      08 11 19.5 -0.2
ABKAR Akbulak array      20.02 295   P      P      08 11 19.8 +0.1
AKTO  Aktyubinsk         21.37 298   P      P      08 11 34.2  0.0
      comp=Z,2.9nm,0.7s,baz=100,slow=4.3,SNR=11
AKTO  Aktyubinsk         21.37 298  ⇑P      P      08 11 32.9 -1.4
      comp=Z,3.5nm,0.8s
ARU   Arti               22.46 314   P      P      08 11 46.7 +0.7
      comp=Z,1.9nm,0.5s,baz=117,slow=8.2,SNR=6.2
ARU                                  LR     LR     08 19 59.9
      comp=Z,25nm,18.1s,baz=78,slow=35
ARU   Arti               22.46 314   P      P      08 11 46.0  0.0
GEYT  Alibeck            23.39 265   P      P      08 11 56.1 +0.3
      comp=Z,2.4nm,0.7s,baz=54,slow=7.5,SNR=4.6
GEYT  Alibeck            23.39 265   P      P      08 11 55.6 -0.2
NRIK  Noril'sk           25.43 360   P      P      08 12 15.4 +1.0
      comp=Z,2.9nm,0.3s,baz=162,slow=9.2,SNR=6.7
NRIK  Noril'sk           25.43 360   P      P      08 12 15.2 +0.8
NRIK                                 IAmb   IAmb   08 12 16.4
      comp=Z,3.3nm,0.5s
CMAR  Chiang Mai Arr     27.02 157   P      P      08 12 28.7 -0.4
      comp=Z,0.7nm,0.3s,baz=346,slow=9.3,SNR=2.2
AKASG Malin Array Be     39.56 301   P      P      08 14 18.0 +0.1
      comp=Z,0.7nm,0.5s,baz=69,slow=9.3,SNR=4.5
AKASG Malin Array Be     39.56 301   IAmb   IAmb   08 14 19.5
      comp=Z,0.5nm,0.6s
AKBB  Malin Array Si     39.56 301   P      P      08 14 18.1 +0.2
AKBB                                 IAmb   IAmb   08 14 27.5
      comp=Z,3.4nm,1.0s
FINES FINESS Array B     39.71 318   P      P      08 14 19.6 +0.6
      comp=Z,0.7nm,0.4s,baz=94,slow=9.0,SNR=6.0
FINES FINESS Array B     39.71 318   P      P      08 14 19.4 +0.4
ARCES ARCESS Array B     40.14 331   P      P      08 14 23.3 +0.7
      comp=Z,4.6nm,0.9s,baz=94,slow=9.1,SNR=2.0
HFS   Hagfors            45.90 318   P      P      08 15 09.4 +0.1
      comp=Z,1.9nm,0.8s,baz=83,slow=12,SNR=1.6
NB2   NORSAR Subarra     46.85 319   P      P      08 15 17.0 +0.3
      comp=Z,0.8nm,0.7s,baz=72,slow=7.9
NOA   NORSAR Array B     46.85 319   P      P      08 15 17.0 +0.3
      comp=Z,0.4nm,0.7s,baz=158,slow=6.0,SNR=4.3
ILAR  Eielson Array      63.39  23   P      P      08 17 16.4 +0.4
      comp=Z,0.2nm,0.6s,baz=329,slow=5.1,SNR=4.6
YKA   Yellowknife Ar     72.32  11   P      P      08 18 12.8 +0.6
      comp=Z,0.2nm,0.6s,baz=343,slow=5.4,SNR=3.3
WRA   Warramunga Arr     76.38 136   P      P      08 18 36.9 +0.5
      comp=Z,2.0nm,0.8s,baz=336,slow=5.5,SNR=15
TORD  Torodi Ar. Bea     78.47 277   P      P      08 18 47.9 -0.4
      comp=Z,0.7nm,0.7s,baz=46,slow=6.2,SNR=1.8
ASAR  Alice Springs      79.30 138   P      P      08 18 53.4 +0.7
      comp=Z,1.1nm,0.5s,baz=331,slow=5.6,SNR=17
CPUP  Villa Florida     147.04 291   PKPbc  PKPbc  08 26 29.6 -0.3
      comp=Z,2.5nm,0.8s,baz=27,slow=3.8,SNR=9.8
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*REY **01** 08:18:53.0, 64°.66N×17°.51W, h7^{km}*

*IDC **01** 08:18:53.6±0.8, 64°.63N×17°.68W, h0^{km}, mb3.7/9, mb1 4.0/11, mb1mx3.7/51, mbtmp3.7/11, ML3.2/2, MS3.2/5, Ms1 3.2/5, ms1mx2.8/38, Error ellipse: s-maj=23.9km s-min=11.1km az=14.0*

*NEIC **01** 08:18:55.4±1.2, 64°.52N±0°.07×17°.9W±0°.1, h8^{km}±5^{km}, mb4.4/15, Error ellipse: s-maj=10.9km s-min=7.7km az=140.0*

ISC 01 08:18:54.5±0.4**, 64°.67N**±0°.02×**17°.52W**±0°.02**, h10^{km}, n97,** σ**2^{s}.23**/107**, mb4.1**/15**, MS3.3**/3**, Iceland**

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Code  Station Name         Δ°   AZ°    Phase ID         Time      Res
                                      Op     ISC      h  m  s    ISC
IDYN  Dyngjuhals          0.14  29   P      Pg     08 18 56.3 -1.4
      baz=25
IDYN                                 S      Sg     08 18 59.4 -0.6
      baz=25
IDJK  Dyngjujokull        0.21 144   P      Pg     08 18 57.2 -1.6
      baz=142
IURH  Urdarhals           0.22  47   P      Pg     08 18 57.6 -1.5
      baz=44
IHAM  Hamarinn            0.23 214   P      Pg     08 18 57.5 -1.8
      baz=217
IGRF  Grimsfjall          0.29 157   P      Pg     08 18 58.5 -1.9
      baz=157
IGRF                                 S      Sg     08 19 01.8 -2.4
      baz=157
IHUS  Husbondi            0.38 189   P      Pg     08 19 00.2 -1.8
      baz=190
ISKR  Skrokkalda          0.39 254   P      Pg     08 19 00.5 -1.6
      baz=256
IVOT  Vottur              0.43 160   P      Pg     08 19 00.9 -1.9
      baz=160
THOR  Thorvaldshraun      0.45  54   P      Pg     08 19 01.4 -1.8
      baz=52
THOR                                 S      Sb     08 19 08.5 -2.7
      baz=52
IJOK  Jokulheimar         0.47 221   P      Pg     08 19 01.0 -2.7
      baz=222
IJOK                                 S      Sg     08 19 06.5 -3.3
      baz=222
IKRE  Kreppuhraun         0.50  76   P      Pg     08 19 02.0 -2.2
      baz=75
IKRE                                 S      Sb     08 19 10.0 -2.8
      baz=75
IASK  Askja               0.53  44   P      Pg     08 19 02.9 -2.0
      baz=43
IMKO  Mokollar            0.59  58   P      Pg     08 19 03.9 -2.1
      baz=57
IMKO                                 S      Sb     08 19 13.1 -2.3
      baz=57
IIEY  Innrieyrar          0.64 205   P      Pg     08 19 04.5 -2.3
      baz=206
ISVA  Svartarkot          0.68   9   P      Pg     08 19 05.4 -2.2
      baz=9.0
ISVA                                 S      Sb     08 19 15.2 -2.6
      baz=9.0
IKSK  Karasker            0.69 138   P      Pg     08 19 04.8 -2.9
      baz=138
IKAL  Kalfafell           0.73 186   P      Pg     08 19 06.0 -2.6
      baz=186
IVSH  V-Sauoahnukur       0.78  79   P      Pg     08 19 06.7 -2.9
      baz=78
IVSH                                 S      Sg     08 19 17.9 -1.8
      baz=78
IFAG  Fagurholsmyri       0.88 154   P      Pg     08 19 08.6 -2.9
      baz=154
IHVE  Hveravellir         0.90 284   P      Pg     08 19 08.8 -2.9
      baz=284
IHVE                                 S      Sg     08 19 21.4 -2.1
      baz=284
IADA  Aoalbol             0.90  66   P      Pg     08 19 08.8 -3.0
      baz=66
IADA                                 S      Sg     08 19 21.6 -2.0
      baz=66
IMEL  Melhnausar          0.97  22   P      Pg     08 19 10.2 -3.0
      baz=21
ISNB  Snabyli             1.06 208   P      Pg     08 19 11.7 -3.1
      baz=208
IKVO  Krokottuvotn        1.08  14   P      Pg     08 19 12.1 -3.2
      baz=14
IGRS  Grimsstaoir         1.14  31   P      Pb     08 19 13.0 -3.2
      baz=30
IGRS                                 S      Sg     08 19 29.1 -2.0
      baz=30
IFED  Fedgar              1.15 236   P      Pb     08 19 13.3 -3.0
      baz=237
IRJU  Rjupnafell          1.17 206   P      Pb     08 19 13.8 -3.0
      baz=206
ISKI  Skildingahlsh       1.22  10   P      Pn     08 19 14.5 -3.1
      baz=9.3
ISKI                                 S      Sb     08 19 31.3 -2.1
      baz=9.3
IGYG  Gygjarholskot       1.23 253   P      Pn     08 19 14.5 -3.2
      baz=253
IGHA  Grjothals           1.23  17   P      Pn     08 19 14.4 -3.4
      baz=16
IGRA  Granastaoir         1.25 359   P      Pn     08 19 14.7 -3.3
      baz=359
IGRA                                 S      Sb     08 19 32.2 -2.1
      baz=359
IHAU  Haukadalur          1.28 238   P      Pn     08 19 15.9 -2.4
      baz=238
IHVO  Lagu-Hvolar         1.29 207   P      Pn     08 19 15.7 -2.8
      baz=208
IDIM  Dimmadalss          1.32  11   P      Pn     08 19 15.8 -3.1
      baz=10
IHLA  Hella               1.33 345   P      Pn     08 19 16.2 -2.8
      baz=344
IHLA                                 S      Sb     08 19 34.2 -2.3
      baz=344
IALF  Alftagrof           1.39 212   P      Pn     08 19 17.3 -2.6
      baz=213
IHED  Heoinshofoi         1.42   3   P      Pn     08 19 17.4 -2.8
      baz=3.3
IHED                                 S      Sn     08 19 36.8 -2.2
      baz=3.3
IESK  Eystri-Skogar       1.43 217   P      Pn     08 19 18.1 -2.4
      baz=218
ISAU  Saurbar             1.43 243   P      Pn     08 19 17.6 -2.9
      baz=243
IMID  Miomork             1.45 227   P      Pn     08 19 18.8 -1.9
      baz=227
IMID                                 S      Sg     08 19 38.7 -2.4
      baz=227
IBRE  Brettingsstaoi      1.47 354   P      Pn     08 19 18.3 -2.6
      baz=354
IBRE                                 S      Sg     08 19 39.2 -2.4
      baz=354
IGIL  Gilhagi             1.50  19   P      Pn     08 19 18.9 -2.5
      baz=18
ISIG  Siglufjorour        1.58 339   P      Pn     08 19 20.0 -2.5
      baz=339
IASM  Asmuli              1.59 240   P      Pn     08 19 20.5 -2.2
      baz=240
BORG  Borgarnes           1.64 274   Pg     Pn     08 19 20.7 -2.5
      66nm,0.3s,baz=95,slow=8.7,SNR=120
BORG                                 Lg     Lg     08 19 43.5
      50nm,0.3s,baz=249,slow=22,SNR=12
IKRO  Krokur              1.67 251   P      Pn     08 19 21.7 -2.0
      baz=252
ISOL  Solvholt            1.67 245   P      Pn     08 19 22.1 -1.6
      baz=246
ILEI  Leirhofn            1.80  13   P      Pn     08 19 23.4 -2.0
      baz=13
IBJA  Bjarnastaoir        1.80 248   P      Pn     08 19 24.1 -1.4
      baz=248
IHRN  Hraun               1.81 324   P      Pn     08 19 23.7 -1.9
      baz=324
ISAN  Sandskeio           1.87 253   P      Pn     08 19 25.1 -1.3
      baz=253
IGRI  Grimsey             1.89 354   P      Pn     08 19 24.6 -2.2
      baz=354
IKAS  Kald??rsel          1.99 253   P      Pn     08 19 27.1 -1.1
      baz=253
IVOS  Vogsosar            2.00 248   P      Pn     08 19 26.9 -1.3
      baz=248
SCO   Scoresbysund        6.08 346  e       Pn     08 20 20.4 -3.8
      baz=162,slow=8.6
SCO                                 i P     Pn     08 20 24.0 -0.2
SCO                                 i S     Sn     08 21 37.9 +4.2
SCO                                  IAML          08 21 52.2
      comp=Z,1.1nm,0.4s
EKA   Eskdalemuir Ar     11.77 136   Pn     Pn     08 21 42.4 +0.2
      baz=321,slow=13,SNR=7.4
DAG   Danmarks Havn      12.17 359  i P     Pn     08 21 52.1 +4.6
DAG   Danmarks Havn      12.17 359  eP      Pn     08 21 52.1 +4.6
NOA   NORSAR Array B     13.54  92   Pn     Pn     08 22 06.0 -0.4
      comp=Z,0.0nm,0.3s,baz=296,slow=14,SNR=1.3
NOA                                  LR     LR     08 27 17.0
      comp=Z,40nm,18.1s,baz=280,slow=37
SFJD  Kangerlussuaq      13.66 295   LR     LR     08 27 05.2
      comp=Z,205nm,18.4s,baz=102,slow=36
TULEG Thule              19.84 327   P      Pn     08 23 26.9 +0.4
CLL   Collm              20.71 116   P      Pn     08 23 37.5 +0.5
ECH   Echery             21.16 129   P      P      08 23 40.4 +0.9
ECH                                  IAmb   IAmb   08 24 03.7
      comp=Z,23nm,1.4s
BRG   Berggiesshubel     21.42 115  eP      P      08 23 46.0 +3.7
BRG                                  Amp           08 23 50.2
      comp=Z,16nm,1.6s
KHC   Kasperske Hory     22.68 118  eP      P      08 23 56.4 +0.6
DPC   Dobruska-Polom     22.77 113  eP      P      08 23 58.8 +2.1
GERES GERESS Array B     22.97 119   P      P      08 23 59.5 +0.6
      comp=Z,0.8nm,0.8s,baz=289,slow=8.3,SNR=5.2
GERES                                LR     LR     08 33 17.5
      comp=Z,48nm,20.9s,baz=323,slow=38
GERES GERESS Array B     22.97 119   P      P      08 24 01.2 +2.4
CKRC  Cesky Krumlov      23.22 118  eP      P      08 24 03.4 +2.1
ESDC  Sonseca Array      26.26 156   P      P      08 24 30.7 +1.0
      comp=Z,0.9nm,0.8s,baz=348,slow=10.0,SNR=2.7
YKA   Yellowknife Ar     39.20 313   P      P      08 26 22.9 +0.8
      comp=Z,1.4nm,1.1s,baz=44,slow=8.7,SNR=9.1
A21K  Barrow             41.42 341   P      P      08 26 42.4 +2.0
A21K                                 IAmb   IAmb   08 26 44.3
      comp=Z,21nm,1.5s
ABKAR Akbulak array      42.00  73   P      P      08 26 47.5 +2.2
TIXI  Tiksi              42.03  15   P      P      08 26 48.1 +2.7
H43A  Windswept, Lux     42.75 277   P      P      08 26 52.1 +0.6
L44A  Lake County Fo     44.67 275   P      P      08 27 07.5 +0.6
ILAR  Eielson Array      45.68 332   P      P      08 27 14.9 +0.2
      comp=Z,2.6nm,1.1s,baz=20,slow=7.1,SNR=11
ILAR                                 PcP    PcP    08 28 53.4 +0.9
      comp=Z,1.1nm,1.1s,baz=358,slow=4.1,SNR=4.7
ILAR  Eielson Array      45.68 332   P      P      08 27 17.0 +2.3
IMAR  Indian Mountai     45.85 337   P      P      08 27 18.2 +2.1
BCAR  Beaver Creek A     46.10 329   P      P      08 27 20.0 +1.9
ZALV  Zalesovo Beam      47.64  51   P      P      08 27 31.6 +1.4
      comp=Z,0.6nm,0.6s,baz=328,slow=5.3,SNR=4.0
ZALV  Zalesovo Beam      47.64  51   P      P      08 27 33.1 +2.9
KKAR  Karatay Array      51.28  70   P      P      08 28 00.1 +1.9
YNE   Yellowstone No     51.46 295   P      P      08 28 00.3 +0.5
H17A  Grant Village      52.20 295   P      P      08 28 06.8 +1.5
H17A                                 IAmb   IAmb   08 28 11.4
      comp=Z,4.1nm,1.1s
MKAR  Makanchi Array     52.73  58   P      P      08 28 09.6 +0.6
      comp=Z,1.1nm,1.1s,baz=324,slow=7.5,SNR=5.0
TORD  Torodi Ar. Bea     53.15 156   P      P      08 28 12.7 +0.4
      comp=Z,1.1nm,0.8s,baz=341,slow=7.6,SNR=3.2
BW06  Boulder Array      53.17 293   P      P      08 28 12.9 +0.5
BW06                                 IAmb   IAmb   08 28 15.5
      comp=Z,4.0nm,1.2s
PD31  Pinedale Array     53.17 293   P      P      08 28 13.1 +0.7
PD31                                 IAmb   IAmb   08 28 15.4
      comp=Z,3.7nm,1.2s
PDAR  Pinedale Array     53.17 293   P      P      08 28 13.2 +0.7
      comp=Z,2.0nm,1.1s,baz=48,slow=6.1,SNR=8.8
AAK   Ala-Archa          53.27  67   P      P      08 28 15.9 +2.8
AAK                                  IAmb   IAmb   08 28 18.4
      comp=Z,3.9nm,1.1s
PV23  Carpenter Ridg     56.61 290   P      P      08 28 37.9 +0.4
PV23                                 IAmb   IAmb   08 28 40.3
      comp=Z,14nm,1.3s
YBH   Yreka Blue Hor     59.05 303   LR     LR     08 54 03.5
      comp=Z,37nm,20.7s,baz=50,slow=36
NIL   Nilore             60.46  73   P      P      08 29 06.7 +2.7
TXAR  Lajitas Array      62.27 280   P      P      08 29 17.6 +1.2
      comp=Z,0.7nm,1.0s,baz=24,slow=5.3,SNR=4.2
KSRS  Korea Array        74.65  28   LR     LR     09 04 51.6
      comp=Z,15nm,18.4s,baz=155,slow=37
CMAR  Chiang Mai Arr     84.14  59   P      P      08 31 27.2 +1.6
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*IDC **01** 08:22:09.3±1.8, 16°.60S×177°.37E, h0^{km}, mb3.9/8, mb1 4.3/8, mb1mx4.0/28, mbtmp3.9/8, MS3.3/6, Ms1 3.3/6, ms1mx3.0/23, Error ellipse: s-maj=95.1km s-min=23.6km az=155.0*

ISC 01 08:22:13.1±1.7**, 16°.6S**±0°.6×**177°.4E**±0°.3**, h24^{km}, n13,**

σ0^{s}.72/8,**mb3.8**/8,**MS3.3**/3,**Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	10.83	77	LR	LR	08 28 03.9	
	comp=Z,237nm,20.5s,baz=254,slow=33						
DZM	Mont Dzumac	11.64	241	LR	LR	08 28 56.7	
	comp=Z,128nm,18.9s,baz=32,slow=35						
HNR	Honiara	18.40	291	LR	LR	08 31 48.5	
	comp=Z,125nm,22.0s,baz=116,slow=32						
STKA	Stephens Creek	35.78	238	LR	LR	08 43 00.8	
	comp=Z,43nm,18.6s,baz=26,slow=35						
WRA	Warramunga Arr	40.90	259	P	P	08 29 52.9	-0.9
	1.0nm,0.8s,baz=91,slow=9.0,SNR=4.4						
WRA				LR	LR	08 46 17.9	
	comp=Z,37nm,18.4s,baz=235,slow=35						
ASAR	Alice Springs	41.27	253	P	P	08 29 57.0	+0.1
	1.7nm,0.9s,baz=80,slow=8.5,SNR=11						
RPN	Rapa Nui	68.02	113	LR	LR	08 55 19.7	
	comp=Z,26nm,20.7s,baz=242,slow=29						
NVAR	Mina Array Bea	81.37	46	P	P	08 34 28.7	+0.5
	0.4nm,0.7s,baz=233,slow=5.5,SNR=5.6						
CMAR	Chiang Mai Arr	84.65	291	P	P	08 34 46.4	+1.0
	0.5nm,0.4s,baz=131,slow=4.2,SNR=4.5						
ILAR	Eielson Array	85.61	15	P	P	08 34 48.7	-0.4
	0.7nm,1.0s,baz=226,slow=6.5,SNR=4.2						
TXAR	Lajitas Array	88.77	59	P	P	08 35 05.5	+0.1
	0.5nm,0.9s,baz=235,slow=4.4,SNR=4.2						
PDAR	Pinedale Array	89.25	45	P	P	08 35 07.0	-0.6
	0.2nm,0.7s,baz=214,slow=4.4,SNR=4.2						
SONM	Songino Array	89.97	320	P	P	08 35 10.5	-0.1
	0.3nm,0.4s,baz=116,slow=3.4,SNR=4.1						

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*DDA **01** 09:18:43.7,38°.74N×26°.85E,h7^{km}±4^{km},ML2.0*
*ISK **01** 09:18:43.2,38°.71N×26°.89E,h4^{km},ML2.5/6*
ISC 01 09:18:43.9±0.9,**38°.74N**±0°.03×**26°.87E**±0°.04,**h10**^{km}±8^{km},
n14,σ0^{s}.42/22,**Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FOCM	Foa	0.11	257	PG	Pg	09 18 46.6	0.0
FOCM				SG	Sg	09 18 48.7	+0.2
ZEDA	zmir-Bergama	0.28	35	*i* P	Pg	09 18 49.5	-0.1
ZEDA				*i* S	Sg	09 18 53.3	0.0
ZEDA				IAML		09 18 55.0	
	comp=E,124nm,0.7s						
ZEDA				IAML		09 18 56.0	
	comp=N,143nm,0.3s						
DKL	Dikili	0.33	5	PG	Pg	09 18 50.7	+0.2
URLA	Izmir	0.43	210	PG	Pg	09 18 52.4	0.0
URLA				SG	Sg	09 18 58.6	+0.5
URLA	Izmir	0.43	210	*i* P	Pg	09 18 51.7	-0.7
URLA				*i* S	Sg	09 18 57.8	-0.3
ZEYE	Izmir, Urla-Ze	0.57	210	*i* P	Pg	09 18 54.8	-0.2
ZEYE				*i* S	Sb	09 19 03.8	-0.4
ZEYE				IAML		09 19 09.0	
	comp=E,117nm,0.4s						
ZEYE				IAML		09 19 09.0	
	comp=N,145nm,0.2s						
AYVA	Ayvalik	0.59	346	*i* P	Pb	09 18 55.8	-0.5
AYVA				*i* S	Sg	09 19 01.9	-1.1
AYVA				IAML		09 19 06.0	
	comp=N,84nm,0.3s						
DGB	zmir	0.69	179	*i* P	Pb	09 18 58.1	+0.2
DGB				IAML		09 19 09.0	
	comp=E,84nm,0.7s						
DGB				IAML		09 19 11.0	
	comp=N,193nm,0.2s						
AKHS	Akhisar	0.75	79	*i* P	Pn	09 19 00.6	0.0
SIGR	SIGRI	0.92	301	PG	Pb	09 19 01.9	0.0
KOCA	Canakkale, Ayv	0.95	324	*i* P	Pg	09 19 02.3	+0.1
KOCA				*i* S	Sg	09 19 14.7	+0.1
KOCA				IAML		09 19 16.0	
	comp=N,67nm,0.5s						
AYDB	Zeytinkoy-Aydi	1.13	134	PN	Pb	09 19 05.4	-0.1
AYDB				SN	Sb	09 19 20.4	+0.1
EZN	Ezine	1.17	339	PN	Pn	09 19 06.8	+0.6
BALB	Balikesir	1.20	41	PN	Pn	09 19 07.2	+0.5

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*NEIC **01** 09:42:52.1±1.5,5°.5S±0°.1×151°.9E±0°.1,h75^{km}±22^{km},*
mb4.4/10,Error ellipse: s-maj=22.5km s-min=9.3km
az=129.0
*IDC **01** 09:42:55.2±5.0,5°.45S×151°.50E,h80^{km}±41^{km},mb3.9/10,*
mb1 4.1/11,mb1mx3.8/42,mbtmp4.2/11,ML2.1/1,MS3.2/3,
Ms1 3.2/3,ms1mx2.7/34,Error ellipse: s-maj=37.0km
s-min=23.2km az=105.0
ISC 01 09:42:50.7±0.7,**5°.55S**±0°.08×**151°.9E**±0°.1,**h45**^{km},**n30,**
σ1^{s}.26/30,**mb4.4**/14,**New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	1.37	11	Pn	Pn	09 43 15.1	+1.7
MANU	Manus Island	5.71	307	Pn	Pn	09 44 15.6	+2.5
PMG	Port Moresby	6.07	231	P	Pn	09 44 19.5	+1.6
	3.0nm,0.3s,baz=38,slow=14,SNR=7.4						
PMG				S	Sn	09 45 25.8	-0.5
	10.0nm,0.3s,baz=261,slow=5.5,SNR=7.5						
PMG	Port Moresby	6.07	231	Pn	Pn	09 44 19.8	+1.8
HNR	Honiara	8.85	116	LR	LR	09 48 55.1	
	comp=Z,76nm,20.1s,baz=275,slow=39						
EIDS	Eidsvold	19.73	182	P	Pn	09 47 19.6	+1.2
DZM	Mont Dzumac	21.62	141	LR	LR	09 54 52.3	
	comp=Z,120nm,19.7s,baz=252,slow=33						
MTN	Manton Dam	21.74	249	P	P	09 47 37.6	-0.8
MTN				IAmb	IAmb	09 47 47.8	
	comp=Z,11nm,0.9s						
TARA	Tarawa	22.08	73	P	P	09 47 41.2	-0.9
WB0	Warramunga Arr	22.14	229	P	P	09 47 41.8	-1.0
WB0				IAmb	IAmb	09 47 44.6	
	comp=Z,12nm,0.8s						
WR0	Warramunga Arr	22.15	228		P	09 47 42.4	-0.5
WR0				IAmb	IAmb	09 47 44.7	
	comp=Z,15nm,0.9s						
WRAB	Tennant Creek	22.27	228	P	P	09 47 43.1	-1.1
WRAB				IAmb	IAmb	09 47 45.8	
	comp=Z,17nm,0.7s						
WB2	Warramunga Arr	22.28	228	P	P	09 47 43.0	-1.2
WRA	Warramunga Arr	22.29	228	P	P	09 47 42.9	-1.5
	comp=Z,13nm,0.6s,baz=52,slow=9.9,SNR=106						
WRA				PcP	PcP	09 51 38.9	-0.3
	comp=Z,0.6nm,0.8s,baz=40,slow=1.8,SNR=2.6						
WRA	Warramunga Arr	22.29	228	P	P	09 47 43.9	-0.5
AS31	Alice Springs	25.00	222	P	P	09 48 10.9	+0.4
ASAR	Alice Springs	25.00	222	P	P	09 48 10.6	0.0
	comp=Z,12nm,0.7s,baz=56,slow=8.8,SNR=111						
ASAR	Alice Springs	25.00	222	P	P	09 48 10.5	-0.1
STKA	Stephens Creek	27.92	199	P	P	09 48 37.5	+0.8
	comp=Z,1.7nm,0.8s,baz=21,slow=14,SNR=2.2						
STKA				LR	LR	10 00 08.4	
	comp=Z,60nm,18.4s,baz=18,slow=37						
FITZ	Fitzroy Crossi	28.52	242	P	P	09 48 40.5	-1.8
	comp=Z,6.7nm,0.6s,baz=45,slow=8.7,SNR=15						
FITZ	Fitzroy Crossi	28.52	242	P	P	09 48 40.4	-1.8
FITZ				IAmb	IAmb	09 48 45.5	
	comp=Z,10nm,1.0s						
SONM	Songino Array	66.49	328	P	P	09 53 35.2	-0.6
	comp=Z,0.4nm,0.4s,baz=148,slow=5.0,SNR=5.0						
MKAR	Makanchi Array	80.31	319	P	P	09 54 56.2	-0.9
	comp=Z,0.2nm,0.6s,baz=100,slow=8.9,SNR=4.5						
ZALV	Zalesovo Beam	81.28	327	P	P	09 55 00.5	-1.6
	comp=Z,0.8nm,0.5s,baz=109,slow=6.2,SNR=2.6						
ILAR	Eielson Array	83.18	22	P	P	09 55 11.6	-0.2
	comp=Z,0.4nm,0.7s,baz=255,slow=5.6,SNR=3.1						
NRIK	Noril'sk	86.38	341	P	P	09 55 26.9	-0.9
	comp=Z,1.8nm,0.5s,baz=233,slow=8.7,SNR=6.7						
NVAR	Mina Array Bea	93.24	52	P	P	09 56 03.4	+2.3
	comp=Z,0.9nm,0.7s,baz=269,slow=5.4,SNR=8.8						
GERES	GERESS Array B	124.22	328	PKP	PKPdf	10 01 44.3	-0.4
	comp=Z,0.4nm,0.5s,baz=72,slow=3.2,SNR=2.5						
TORD	Torodi Ar. Bea	149.68	287	PKPbc	PKPbc	10 02 35.6	-1.0
	comp=Z,1.4nm,0.6s,baz=94,slow=2.9,SNR=4.4						
BDFB	Brasilia	151.15	137	PKPbc	PKiKP	10 02 41.0	+0.3
	comp=Z,1.8nm,0.6s,baz=171,slow=5.7,SNR=3.1						

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*IDC **01** 09:44:05.4±0.5,27°.45N×140°.23E,h487^{km}±7^{km},mb3.0/11,*
mb1 3.1/15,mb1mx2.9/50,mbtmp3.8/15,Error ellipse:
s-maj=19.2km s-min=9.7km az=81.0
*JMA **01** 09:44:06.9±0.1,27°.74N×140°.84E,h503^{km},M3.7*
ISC 01 09:44:06.1±0.6,**27°.53N**±0°.07×**140°.3E**±0°.1,**h500**^{km},**n26,**
σ1^{s}.48/33,**mb3.5**/12,**Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	Chichi jima	1.70	104	P	P	09 45 09.9	+0.1
CBIJ				S	S	09 45 59.3	-2.2
JCJ	Chichijima	1.70	104	P	P	09 45 10.0	+0.2
	45nm,0.3s,baz=277,slow=22,SNR=7.2						
JCJ				S	S	09 45 59.2	-2.3
	97nm,0.3s,baz=30,slow=23,SNR=12						
JHH2	Haha-jima-NKT2	1.86	118	S	S	09 46 02.6	-0.3
BSO1	Boso 1	7.12	4	P	P	09 45 54.0	+1.2
BSO1				*e*S	S	09 47 20.4	0.0
BSO3	Boso 3	7.25	1	*e*S	S	09 47 21.6	-1.7
JIE	Ise	7.52	336	P	P	09 46 00.0	+2.6
JHU	Hanno	8.35	354	*e*S	S	09 47 40.8	-3.6
JAG	Ashikaga	8.90	355	P	P	09 46 12.0	+0.3
JAG				*e*S	S	09 47 51.6	-3.4
JHO	Hitachi	9.06	1	P	P	09 46 14.3	+0.9
JHO				*e*S	S	09 47 54.8	-3.2
MJAR	Matsushiro Arr	9.17	349	P	P	09 46 14.8	+0.3
	0.1nm,0.3s,baz=172,slow=9.6,SNR=2.3						
JNU	Nakatsue	9.89	307	P	P	09 46 22.9	+0.6
	0.3nm,0.3s,baz=188,slow=2.7,SNR=4.3						
KSRS	Korea Array	14.40	317	P	P	09 47 09.4	-0.4
	0.2nm,0.3s,baz=134,slow=12,SNR=4.1						
USRK	Ussuriysk Ar.	17.94	340	P	P	09 47 46.2	+0.5
	baz=169,slow=4.5,SNR=4.7						
KLR	Kul'dur	22.66	345	P	P	09 48 29.2	+0.7
	0.4nm,0.3s,baz=299,slow=6.6,SNR=2.6						
SONM	Songino Array	33.27	317	P	P	09 50 01.2	-0.2
	0.3nm,0.5s,baz=123,slow=7.7,SNR=2.9						
SEY	Seymchan	36.28	9	P	P	09 50 27.4	+1.2
	1.0nm,0.5s,baz=168,slow=7.7,SNR=5.8						
FITZ	Fitzroy Crossi	47.54	199	P	P	09 51 55.7	0.0
	2.5nm,0.7s,baz=28,slow=8.8,SNR=3.5						
WRA	Warramunga Arr	47.55	188	P	P	09 51 55.3	-0.5
	3.2nm,0.3s,baz=7.0,slow=8.6,SNR=40						
ZALV	Zalesovo Beam	48.09	319	P	P	09 51 58.8	-0.6
	0.7nm,0.3s,baz=111,slow=7.0,SNR=4.7						
MKAR	Makanchi Array	48.94	309	P	P	09 52 05.9	0.0
	0.3nm,0.3s,baz=86,slow=10,SNR=16						
MKAR				PcP	PcP	09 53 20.7	-0.2
	0.2nm,0.8s,baz=98,slow=6.0,SNR=1.9						
MKAR				ScP	ScP	09 56 27.4	-0.5
	0.2nm,0.4s,baz=75,slow=4.1,SNR=3.2						
ASAR	Alice Springs	51.27	188	P	P	09 52 22.8	-0.5
	2.0nm,0.3s,baz=359,slow=4.9,SNR=55						
ILAR	Eielson Array	58.12	29	P	P	09 53 12.1	+1.2
	0.2nm,0.4s,baz=252,slow=5.6,SNR=4.9						
STKA	Stephens Creek	59.09	179	P	P	09 53 17.7	-0.1
	2.6nm,0.8s,baz=347,slow=6.7,SNR=5.5						
YKA	Yellowknife Ar	72.54	28	P	P	09 54 42.9	+1.4
	0.4nm,0.6s,baz=298,slow=5.2,SNR=8.6						
FINES	FINESS Array B	76.83	333	P	P	09 55 05.7	+0.1
	0.8nm,0.3s,baz=74,slow=4.8,SNR=14						
PLCA	Paso Flores	151.40	125	PKPbc	PKiKP	10 03 03.9	+0.5
	0.6nm,0.6s,baz=270,slow=2.0,SNR=3.2						

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*IDC **01** 10:20:40.1±1.9,39°.00N×143°.77E,h0^{km},mb3.7/6,*
mb1 3.7/9,mb1mx3.5/61,mbtmp3.7/9,ML2.5/3,Error
ellipse: s-maj=49.9km s-min=22.1km az=74.0
*NIED **01** 10:20:44.6,38°.99N×143°.19E,h10^{km},MW3.4,Moment*
Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm;
M_{rr}0.69; $M_{\theta\theta}$0.45; $M_{\phi\phi}$-1.14; $M_{r\theta}$-0.81; $M_{\theta\phi}$-0.26; $M_{\phi r}$0.85;
Fault plane solution: $M_0$1.55000×10^{14} NP1:
ϕ_s333.00000°,δ74.00000°,λ57.00000°. NP2:
ϕ_s221.00000°,δ36.00000°,λ153.00000°.
*JMA **01** 10:20:44.6±0.1,38°.99N×143°.19E,h10^{km}±2^{km},M3.6*
ISC 01 10:20:42.3±2.3,**39°.09N**±0°.05×**143°.35E**±0°.08,**h4**^{km}±13^{km},
n30,σ1^{s}.32/31,**mb3.5**/6,**Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MIYJ	Miyakonagasawa	1.28	293	P	Pn	10 21 06.9	-0.1
MIYJ				*e*S	Sb	10 21 23.1	-0.8
OFUJ	Ofunato	1.31	270	P	Pn	10 21 06.6	-0.7
JTH	Tanohata	1.43	307	P	Pg	10 21 10.0	+0.3
JTH				*e*S	Sn	10 21 28.6	+0.3
JKMT	Kesennumamotoy	1.49	260	P	Pn	10 21 09.2	-0.6
JOM	Ohasama	1.64	284	P	Pn	10 21 12.5	+0.5
JOM				*e*S	Sn	10 21 32.8	-0.7
JMK	Ichinoseki	1.66	266	P	Pn	10 21 12.2	0.0
JMK				*e*S	Sn	10 21 32.4	-1.6
JIO	Ouri	1.69	249	P	Pn	10 21 12.0	-0.5
JANG	Nango	1.91	313	P	Pb	10 21 17.7	0.0
JANG				*e*S	Sn	10 21 41.4	+1.2
JRG	Rokugo	2.13	279	P	Pn	10 21 19.7	+1.0
JOU	Okura	2.22	252	P	Pn	10 21 21.0	+1.1
JYK	Kaneyama	2.33	267	P	Pn	10 21 23.0	+1.5
JMM	Marumori	2.35	240	P	Pn	10 21 21.3	-0.3
JTM	Tenmabayashi	2.44	315	P	Pb	10 21 25.6	-1.2
JTM				*e*S	Sb	10 21 55.9	-1.3
JFK	Kawauchi	2.60	229	P	Pn	10 21 24.2	-0.9
MAT	Matsushiro	4.80	240	P	Pn	10 21 57.6	+2.2
MJAR	Matsushiro Arr	4.80	240	Pn	Pn	10 21 57.3	+2.0
	0.3nm,0.3s,baz=51,slow=10,SNR=23						
MJAR				Sn	Sn	10 22 55.0	+3.6
	baz=69,slow=21,SNR=1.5						
ASAJ	Asahikawa	5.06	354	Pn	Pn	10 22 00.4	+1.5
	0.4nm,0.3s,baz=196,slow=19,SNR=6.0						
ASAJ				Sn	Sn	10 22 57.1	-0.6
	0.3nm,0.3s,baz=246,slow=29,SNR=1.7						
USRK	Ussuriysk Ar.	9.92	305	Pn	Pn	10 23 10.1	+4.5
	baz=106,slow=14,SNR=2.6						
SONM	Songino Array	27.99	300	P	P	10 26 35.2	+1.0
	0.5nm,0.6s,baz=83,slow=8.4,SNR=3.9						
H11N2	WAKE ISLAND Hy	28.02	127	T	T	10 55 43.7	
	baz=319,slow=74,SNR=43						
H11N1	WAKE ISLAND Hy	28.03	127	T	T	10 55 49.5	
	baz=319,slow=74,SNR=30						
H11N3	WAKE ISLAND Hy	28.04	127	T	T	10 55 44.2	
	baz=319,slow=74,SNR=37						
H11S1	WAKE ISLAND Hy	28.82	129	T	T	10 56 51.0	
	baz=321						
H11S3	WAKE ISLAND Hy	28.82	129	T	T	10 56 48.4	
	baz=321						
H11S2	WAKE ISLAND Hy	28.84	129	T	T	10 56 49.0	
	baz=321						
ZALV	Zalesovo Beam	41.70	311	P	P	10 28 33.0	+1.0
	0.4nm,0.5s,baz=85,slow=6.5,SNR=2.1						
MKAR	Makanchi Array	44.35	301	P	P	10 28 53.8	+0.2
	0.6nm,0.8s,baz=88,slow=11,SNR=4.7						
WRA	Warramunga Arr	59.32	190	P	P	10 30 43.8	-1.6
	0.3nm,0.6s,baz=7.6,slow=7.2,SNR=4.6						
ASAR	Alice Springs	63.05	190	P	P	10 31 08.9	-1.7
	0.2nm,0.7s,baz=13,slow=12,SNR=1.7						
BELG	Belogornoye	63.34	317	P	P	10 31 12.1	-0.2
	3.8nm,0.6s,baz=35,slow=6.7,SNR=2.1						

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IDC 01 10:23:27.3±4.4,**6°.95S**×**149°.62E**,**h0**^{km},**mb2.7**/1,
mb1 3.3/2,**mb1mx3.1**/44,**mbtmp3.0**/2,**ML3.2**/1,**Error**
ellipse: s-maj=163.6km s-min=54.8km az=117.0,New
Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	19.66	227	P	P	10 27 58.1	+0.1
	0.1nm,0.3s,baz=54,slow=11,SNR=5.7						
ASAR	Alice Springs	22.45	221	P	P	10 28 28.3	+0.1
	0.2nm,0.7s,baz=44,slow=11,SNR=1.8						
TORD	Torodi Ar. Bea	147.84	284	PKPbc	PKPbc	10 43 14.6	-0.9
	0.2nm,0.5s,baz=66,slow=1.7,SNR=1.6						

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*NEIC **01** 10:27:41.6±1.0,28°.52S±0°.05×71°.48W±0°.09,h35^{km}±74^{km},*
Error ellipse: s-maj=11.6km s-min=7.3km az=105.0
*GUC **01** 10:27:41.7±0.7,28°.55S×71°.20W,h45^{km}±3^{km},ML3.9*
*IDC **01** 10:27:42.5±1.0,28°.63S×71°.03W,h40^{km}±6^{km},mb3.4/5,*
mb1 3.6/6,mb1mx3.5/33,mbtmp3.6/6,ML3.0/1,Error
ellipse: s-maj=38.1km s-min=32.2km az=28.0
ISC 01 10:27:41.7±0.9,**28°.50S**±0°.04×**71°.45W**±0°.07,**h33**^{km}±2^{km},
n48,σ1^{s}.06/58,**mb3.4**/5,**5C-1D,Near coast of central**
Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AC04	Llanos de Chal	0.45	48	⇑*i*P	Pn	10 27 51.8	0.0
AC04				*e*S	Sn	10 27 58.7	+0.1
AC04				IAML		10 27 59.2	
	comp=E,27μm,0.1s						
AC04	Llanos de Chal	0.45	48		Pn	10 27 51.9	+0.1
LCO	Las Campanas	0.83	128	Pn	Pn	10 27 56.1	-1.1
AC05	El Transito	1.08	108	⇓*i*P	Pn	10 27 59.6	-1.1
AC05				*i* S	Sn	10 28 12.2	-2.4
AC05	El Transito	1.08	108		Pn	10 27 59.7	-1.1
GO03	Copiap	1.41	50	⇑*i*P	Pn	10 28 05.2	+0.1
GO03				*e*S	Sn	10 28 22.4	0.0
GO03				IAML		10 28 24.3	
	comp=N,3μm,0.3s						
GO03	Copiap	1.41	50		Pn	10 28 05.3	+0.3
GO04	Tololo Observa	1.76	161	⇑*i*P	Pn	10 28 09.9	-0.2
GO04				*e*S	Sn	10 28 33.1	+1.7
GO04	Tololo Observa	1.76	161		Pn	10 28 10.1	0.0
CO01	Juntas del Tor	1.89	141	*e*P	Pn	10 28 12.2	+0.4
CO01				*i* S	Sn	10 28 35.0	+0.3
CO01	Juntas del Tor	1.89	141		Pn	10 28 12.5	+0.7
CO03	El Pedregal	2.42	164	*e*P	Pn	10 28 19.1	0.0
CO03				*i* S	Sn	10 28 46.9	-0.6
CO03				IAML		10 28 53.8	
	comp=E,788nm,0.2s						
CO03	El Pedregal	2.42	164		Pn	10 28 19.3	+0.2
AC01	Pan de Azucar	2.46	18	*e*P	Pn	10 28 19.3	-0.3
AC01				IAML		10 29 03.0	
	comp=E,495nm,0.2s						
AC01	Pan de Azucar	2.46	18		Pn	10 28 19.4	-0.1
AC02	Maricunga	2.65	52	*e*P	Pn	10 28 23.5	+1.1
AC02				*i* S	Sn	10 28 55.3	+1.7
AC02				IAML		10 29 02.2	
	comp=N,787nm,0.3s						
AC02	Maricunga	2.65	52		Pn	10 28 24.0	+1.5
CO02	Combarbal	2.72	172	⇑*i*P	Pn	10 28 22.8	-0.3
CO02	Combarbal	2.72	172		Pn	10 28 22.9	-0.3
GO02	Mina Guanaco	3.72	27	⇑*e*P	Pn	10 28 37.2	+0.1
GO02				*i* S	Sb	10 29 31.1	-0.5
GO02	Mina Guanaco	3.72	27		Pn	10 28 37.2	+0.1
ZON	Zonda	3.87	142		Pn	10 28 41.2	+2.3
PB14	IPOC Station P	3.97	14		Pn	10 28 39.7	-0.9
VA03	San Esteban	4.32	170		Pn	10 28 45.3	+0.2
ROC1	El Roble	4.47	175		Pn	10 28 47.8	+0.4
PEL	Peldehue	4.67	172		Pn	10 28 50.2	+0.2
MT02	Curacav	4.75	177		Pn	10 28 50.5	-0.4
MT05	Renca	4.91	173		Pn	10 28 52.7	-0.5
PB15	IPOC Station P	5.56	19	Pn	Pn	10 29 03.3	+0.9
PB06	IPOC Station P	6.02	17	Pn	Pn	10 29 08.6	0.0
BO02	Sierra Bellavi	6.30	175	Pn	Pn	10 29 11.5	-0.8
LVC	Limon Verde	6.30	22	P	Pn	10 29 11.6	-1.0
	comp=N,0.4nm,0.3s,baz=193,slow=12,SNR=8.4						
LVC				S	Sn	10 30 21.6	-2.0
	comp=N,2.5nm,0.3s,baz=122,slow=15,SNR=1.8						
LVC	Limon Verde	6.30	22	Pn	Pn	10 29 12.6	0.0
PB09	IPOC Station P	6.97	17	Pn	Pn	10 29 21.4	-0.3
H03N1	Juan Fernandez	8.08	231	T	T	10 37 57.2	
	baz=57,slow=71,SNR=1097						
H03N2	Juan Fernandez	8.09	231	T	T	10 38 12.6	
	baz=57,slow=71,SNR=624						
H03N3	Juan Fernandez	8.09	231	T	T	10 38 09.1	
	baz=57,slow=71,SNR=766						
BI02	San Fabin de	8.14	179	Pn	Pn	10 29 37.1	-0.5
VA04	Juan Fernndez	8.14	229	Pn	Pn	10 29 35.8	-1.7
TXAR	Lajitas Array	65.24	329	P	P	10 38 21.7	+1.6
	comp=N,0.1nm,0.4s,baz=155,slow=8.2,SNR=4.4						
KOWA	Kowa	77.93	66	P	P	10 39 34.8	-2.0
	comp=N,1.3nm,0.4s,baz=238,slow=9.9,SNR=4.1						
KOWA				pP	pP	10 39 47.6	+0.6
	comp=N,1.0nm,0.4s,baz=196,slow=4.9,SNR=1.5						
PDAR	Pinedale Array	79.12	332	P	P	10 39 44.2	+1.3
	comp=N,0.2nm,0.5s,baz=134,slow=6.4,SNR=2.5						
NVAR	Mina Array Bea	79.70	324	P	P	10 39 48.8	+2.6
	comp=N,0.1nm,0.4s,baz=147,slow=5.3,SNR=2.0						
TORD	Torodi Ar. Bea	81.88	70	P	P	10 39 56.9	-1.3
	comp=N,0.8nm,0.6s,baz=256,slow=5.8,SNR=5.0						
TORD				pP	pP	10 40 08.6	+0.2
	comp=N,0.8nm,0.6s,baz=257,slow=4.6,SNR=3.4						
ASAR	Alice Springs	122.67	208	PKP	PKPdf	10 46 33.3	-1.3
	comp=N,0.1nm,0.4s,baz=128,slow=1.6,SNR=1.2						
WRA	Warramunga Arr	125.77	210	PKP	PKPdf	10 46 39.9	-0.7
	comp=N,0.3nm,0.5s,baz=151,slow=1.6,SNR=6.1						
ZALV	Zalesovo Beam	149.22	28	PKPbc	PKPbc	10 47 26.2	-0.1
	comp=N,2.7nm,0.5s,baz=308,slow=3.3,SNR=13						
ZALV				pPKPbc	pPKPbc	10 47 38.0	+1.3
	comp=N,1.4nm,0.5s,baz=312,slow=3.9,SNR=4.6						
MKAR	Makanchi Array	152.53	41	PKPbc	PKPbc	10 47 33.7	-0.7
	comp=N,0.5nm,0.3s,baz=325,slow=1.2,SNR=11						
MKAR				pPKPbc	sPKPbc	10 47 47.0	-1.7
	comp=N,0.6nm,0.6s,baz=313,slow=2.8,SNR=5.1						

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*IDC **01** 10:30:39.8±0.8,73°.22N×6°.61E,h0^{km},mb3.5/10,*
mb1 3.8/13,mb1mx3.5/71,mbtmp3.6/13,ML2.6/2,MS2.9/3,
Ms1 2.9/3,ms1mx2.4/49,Error ellipse: s-maj=25.5km
s-min=14.0km az=49.0
ISC 01 10:30:40.5±0.7,**73°.3N**±0°.1×**6°.4E**±0°.1,**h10**^{km},**n18,**
σ1^{s}.79/16,**mb3.5**/10,**Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARCES	ARCESS Array B	7.15	112	Pn	Pn	10 32 23.2	-1.7
	baz=324,slow=12,SNR=18						
ARCES				Sn	Sn	10 33 37.4	-8.7
	baz=310,slow=20,SNR=1.6						
DAG	Danmarks Havn	7.32	310	*i* P	Pn	10 32 24.0	-3.2
DAG				*i* S	Sn	10 33 39.1	-11
DAG	Danmarks Havn	7.32	310	*e*P	Pn	10 32 24.0	-3.2
DAG				*i* S	Sn	10 33 39.1	-11
DAG				IAML		10 33 44.8	
	comp=Z,1.3nm,0.4s						
NOA	NORSAR Array B	12.42	169	LR	LR	10 38 12.5	
	comp=Z,28nm,18.0s,baz=290,slow=37						
HFS	Hagfors	13.49	164	Pn	Pn	10 33 51.2	-0.4
	baz=14,slow=7.7,SNR=1.8						
FINES	FINESS Array B	13.97	138	Pn	Pn	10 33 56.1	-2.0
	comp=Z,0.1nm,0.3s,baz=332,slow=11,SNR=3.7						
SFJD	Kangerlussuaq	19.59	281	LR	LR	10 41 44.5	
	comp=Z,74nm,18.6s,baz=150,slow=34						
VRAC	Vranov	24.47	164	P	P	10 36 00.1	+0.9
	comp=Z,2.1nm,0.7s,baz=353,slow=7.4,SNR=4.0						
VRAC				LR	LR	10 46 32.9	
	comp=Z,18nm,19.2s,baz=8.0,slow=39						
AKASG	Malin Array Be	24.71	144	P	P	10 36 00.8	-0.6
	comp=Z,0.9nm,0.6s,baz=346,slow=9.6,SNR=4.1						
GERES	GERESS Array B	24.73	168	P	P	10 36 02.1	+0.4
	comp=Z,0.9nm,0.9s,baz=346,slow=6.4,SNR=4.3						
AKTO	Aktyubinsk	31.70	107	P	P	10 37 04.0	+0.2
	comp=Z,0.6nm,0.5s,baz=343,slow=14,SNR=2.1						
YKA	Yellowknife Ar	38.88	321	P	P	10 38 05.2	-0.1
	comp=Z,1.1nm,1.1s,baz=24,slow=9.0,SNR=8.3						
ILAR	Eielson Array	41.07	343	P	P	10 38 24.4	+0.9
	comp=Z,0.6nm,1.0s,baz=355,slow=6.6,SNR=5.1						
GEYT	Alibeck	43.31	115	P	P	10 38 42.9	+0.8
	comp=Z,0.9nm,0.4s,baz=317,slow=9.8,SNR=2.3						
SONM	Songino Array	47.68	64	P	P	10 39 18.2	+1.5
	comp=Z,0.4nm,1.0s,baz=352,slow=3.2,SNR=1.5						
TORD	Torodi Ar. Bea	60.16	185	P	P	10 40 48.7	+0.6
	comp=Z,1.0nm,0.9s,baz=349,slow=6.1,SNR=2.5						
TXAR	Lajitas Array	67.67	298	P	P	10 41 40.2	+2.7
	comp=Z,0.2nm,0.8s,baz=64,slow=4.1,SNR=2.2						
ASAR	Alice Springs	122.94	60	PKP	PKiKP	10 49 37.5	+1.0
	comp=Z,0.3nm,0.7s,baz=7.1,slow=1.9,SNR=2.0						

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*JMA **01** 10:32:40.1±0.1,39°.12N×142°.95E,h20^{km}±2^{km},M3.6*
*NIED **01** 10:32:40.1,39°.12N×142°.95E,h20^{km},MW3.7,Moment*
Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm;
M_{rr}1.30; $M_{\theta\theta}$0.60; $M_{\phi\phi}$-1.90; $M_{r\theta}$2.54; $M_{\theta\phi}$-0.39; $M_{\phi r}$2.55;
Fault plane solution: $M_0$3.99000×10^{14} NP1:ϕ_s41.00000°,
δ80.00000°,λ108.00000°. NP2:ϕ_s159.00000°,δ20.00000°,
λ29.00000°.
*IDC **01** 10:32:42.1±1.4,39°.49N×142°.48E,h0^{km},mb3.6/6,*
mb1 3.6/8,mb1mx3.3/59,mbtmp3.6/8,ML3.0/2,MS2.8/2,
Ms1 2.8/2,ms1mx2.4/52 Error ellipse: s-maj=35.7km
s-min=20.6km az=98.0
ISC 01 10:32:41.4±2.2,**39°.22N**±0°.05×**142°.79E**±0°.09,**h8**^{km}±12^{km},
n27,σ1^{s}.43/27,**mb3.6**/6,**Near east coast of eastern**
Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MIYJ	Miyakonagasawa	0.84	296	P	Pg	10 32 58.1	+0.7
OFUJ	Ofunato	0.89	261	P	Pg	10 32 58.5	+0.1
OFUJ				*e*S	Sg	10 33 10.7	+0.8
JTH	Tanohata	1.02	315	P	Pg	10 33 01.5	+0.6
JKMT	Kesennumamotoy	1.10	249	P	Pb	10 33 01.5	-1.2
JOM	Ohasama	1.19	283	P	Pn	10 33 03.7	-0.7
JMK	Ichinoseki	1.25	258	P	Pn	10 33 04.2	-1.0
JMK				*e*S	Sb	10 33 21.4	-0.1

JIO	Ouri	1.36	236	P	Pn	10 33 04.8	-1.9
JIO				*e*S	Sb	10 33 21.8	-2.8
JANG	Nango	1.52	320	P	Pn	10 33 08.4	-0.4
JANG				*e*S	Sn	10 33 29.3	+0.5
JRG	Rokugo	1.69	277	P	Pn	10 33 11.9	+0.8
JOU	Okura	1.87	244	P	Pn	10 33 13.3	-0.4
JOU				*e*S	Sn	10 33 37.5	0.0
JYK	Kaneyama	1.92	262	P	Pn	10 33 14.7	+0.4
JAH	Hinai	1.93	301	P	Pn	10 33 15.2	+0.8
JMM	Marumori	2.07	230	P	Pn	10 33 15.2	-1.2
MJAR	Matsushiro Arr	4.50	235	Pn	Pn	10 33 51.1	+1.2
	0.4nm,0.3s,baz=36,slow=13,SNR=45						
MJAR				Sn	Sn	10 34 45.9	+3.4
	baz=60,slow=21,SNR=1.2						
MAT	Matsushiro	4.50	235	P	Pn	10 33 51.2	+1.3
ASAJ	Asahikawa	4.90	358	Pn	Pn	10 33 54.9	-0.4
	0.7nm,0.3s,baz=189,slow=16,SNR=5.7						
KSRS	Korea Array	11.81	266	LR	LR	10 39 28.9	
	comp=Z,31nm,20.6s,baz=66,slow=35						
KLR	Kul'dur	12.75	325	LR	LR	10 40 36.2	
	comp=Z,54nm,18.7s,baz=142,slow=38						
SEY	Seymchan	24.44	11	P	P	10 37 59.9	-0.5
	0.7nm,0.5s,baz=215,slow=11,SNR=5.4						
SONM	Songino Array	27.55	300	P	P	10 38 28.0	-0.7
	0.4nm,0.6s,baz=81,slow=9.1,SNR=1.7						
H11N2	WAKE ISLAND Hy	28.44	126	T	T	11 09 08.4	
	baz=316,slow=74						
H11N1	WAKE ISLAND Hy	28.45	126	T	T	11 09 09.6	
	baz=316,slow=74						
H11N3	WAKE ISLAND Hy	28.46	126	T	T	11 09 16.6	
	baz=316						
ZALV	Zalesovo Beam	41.29	311	P	P	10 40 25.6	-1.3
	0.6nm,0.5s,baz=84,slow=7.5,SNR=3.1						
MKAR	Makanchi Array	43.92	300	P	P	10 40 47.0	-1.5
	0.9nm,0.9s,baz=81,slow=9.7,SNR=6.7						
WRA	Warramunga Arr	59.38	189	P	P	10 42 47.1	+2.9
	0.3nm,0.5s,baz=8.5,slow=7.0,SNR=2.0						
ASAR	Alice Springs	63.10	189	P	P	10 43 13.6	+4.2
	0.3nm,0.8s,baz=7.8,slow=7.5,SNR=2.5						

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*DDA **01** 10:46:31.0, 40°.68N×27°.48E, h14^{km}±1^{km}, MW3.5*
*ISK **01** 10:46:31.7, 40°.70N×27°.51E, h6^{km}, ML3.5/34*
*ATH **01** 10:46:32.8, 40°.64N×27°.31E, h10^{km}±31^{km}, ML3.2/4, Error ellipse: s-maj=31.6km s-min=4.6km az=0.0*
*THE **01** 10:46:34.0, 40°.69N×27°.51E, h25^{km}±4^{km}, ML3.2/7, Error ellipse: s-maj=4.4km s-min=1.0km az=136.0*
ISC 01 10:46:32.0±0.8, **40°.70N**±0°.02×**27°.49E**±0°.02, **h12**^{km}±5^{km}, **n98**, σ**0^{s}.87**/126, **12C-3D**, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MRMT	Marmara Adasi	0.12	138	PG	Pg	10 46 34.9	-0.3
MRMT				SG	Sg	10 46 36.9	-0.6
GZKV	Gazikoy-Tekird	0.13	294	PG	Pg	10 46 35.1	-0.1
GZKV				SG	Sg	10 46 37.9	+0.4
SART	Tekirdag	0.23	268	*i*P	Pg	10 46 35.8	-1.1
RKY	Sarkoy-Tekirda	0.23	268	PG	Pg	10 46 37.3	+0.3
RKY				SG	Sg	10 46 41.2	+0.9
TKR	Tekirdag	0.30	7	PG	Pg	10 46 38.1	0.0
TKR				SG	Sg	10 46 43.2	+1.1
KRBG	Karabiga-Canak	0.33	205	PG	Pg	10 46 38.9	+0.2
KNL	Balıkesir	0.43	176	*i*P	Pg	10 46 39.1	-1.3
EDC	Edincik	0.45	140	PG	Pg	10 46 40.8	-0.1
EDC				SG	Sg	10 46 47.2	+0.3
KESN	Edirne-Kesan	0.62	282	*i*P	Pg	10 46 43.8	-0.5
KESN				*i*S	Sg	10 46 51.8	-0.7
ERIK	Erikli-Kesan	0.74	268	PG	Pg	10 46 46.7	+0.4
SLVT	Silivri	0.77	46	PG	Pg	10 46 46.6	-0.2
UKOP	Uzunkopru-Edir	0.78	304	PG	Pg	10 46 47.3	+0.2
KCTX	Karacabey (Bur	0.79	123	PG	Pg	10 46 46.8	-0.5
GELI	Tayfur-Gelibol	0.83	249	PG	Pg	10 46 47.9	-0.1
ELBA	Catalca	0.85	58	*i*P	Pg	10 46 47.4	-1.0
ELBA				*i*S	Sg	10 46 58.5	-0.9
VIZE	Kirklareli, Vi	0.92	17	*i*P	Pb	10 46 49.6	-0.3
VIZE				*i*S	Sg	10 47 01.3	-0.5
CTKS	Kestanelik-??a	0.94	55	PG	Pb	10 46 49.6	-0.7
BALY	Balya	0.96	174	*i*P	Pb	10 46 49.1	-1.5
BALY				*i*S	Sb	10 47 02.3	-1.0
AVCI	Avcilar-stanb	0.98	72	PG	Pb	10 46 50.7	-0.3
AVCI				SG	Sg	10 47 04.7	+0.9
CTYL	Yalikoy Yolu	0.99	38	PG	Pb	10 46 50.3	-0.8
CAVK	Edirne/Enez-Ca	1.00	270	*i*P	Pb	10 46 50.7	-0.6
CAVK				*i*S	Sb	10 47 03.7	-0.7
ENEZ	Enez	1.01	273	P	Pb	10 46 51.5	0.0
ENEZ				S	Sb	10 47 05.3	+0.5
	2µm,0.3s						
ENEZ	Enez	1.01	273	PG	Pb	10 46 51.8	+0.3
ARMT	Armutlu	1.05	97	PG	Pb	10 46 52.3	+0.1
BGKT	Bogazkoy	1.09	63	PG	Pb	10 46 52.6	-0.2
BALB	Balikesir	1.10	164	PN	Pb	10 46 52.8	-0.1
ALN	Alexandroupoli	1.11	281	P	Pb	10 46 52.2	-1.0
ALN				AML	AML	10 47 09.8	
	comp=N,2010µm,0.6s						
ALN				AML	AML	10 47 09.8	
	comp=E,3080µm,0.4s						
ALN	Alexandroupoli	1.11	281	P	Pb	10 46 52.8	-0.4
ALN				S	Sb	10 47 07.8	+0.2
	comp=E,1µm,0.5s						
ALN	Alexandroupoli	1.11	281	PN	Pb	10 46 53.3	+0.1
MDNY	Mudanya-Bursa	1.11	107	PN	Pb	10 46 53.2	0.0
KIRK	Kırklareli	1.12	345	*i*P	Pb	10 46 52.5	-0.9
KIRK				*i*S	Sb	10 47 07.2	-0.8
ARMN	Kirklareli, Me	1.17	358	*i*P	Pn	10 46 53.7	-0.5
ARMN				*i*S	Sb	10 47 08.9	-0.4
BAYC	CANAKKALE_Bayr	1.19	217	*i*P	Pn	10 46 54.1	-0.5
BAYC				*i*S	Sb	10 47 09.8	-0.2
BUHA	Balikesir, Bur	1.23	195	*i*P	Pn	10 46 54.7	-0.4
BUHA				*i*S	Sb	10 47 11.5	+0.3
EZN	Ezine	1.24	226	P	Pn	10 46 54.8	-0.4
EZN				S	Sb	10 47 11.1	-0.3
	comp=E,625nm,0.2s						
EZN	Ezine	1.24	226	PN	Pn	10 46 54.4	-0.8
ISK	Istanbul-Kandi	1.25	72	P	Pn	10 46 54.2	-1.1
ISK				S	Sb	10 47 10.7	-0.9
	comp=E,588nm,0.4s						
ISK	Istanbul-Kandi	1.25	72	PN	Pn	10 46 54.1	-1.2
KAVV	Kandilli-Istan	1.25	72	PN	Pn	10 46 54.8	-0.5
ORLT	Orhaneli	1.26	121	PN	Pn	10 46 55.9	+0.4
EDRB	Edirne	1.28	334	P	Pn	10 46 55.9	+0.2
EDRB				S	Sb	10 47 12.8	+0.3
	comp=E,2µm,0.4s						
EDRB	Edirne	1.28	334	PN	Pn	10 46 56.4	+0.7
TRML	Termal-Yalova	1.29	93	PN	Pb	10 46 56.4	+0.2
KLYT	Kilyos	1.30	64	PN	Pn	10 46 56.5	+0.5
GADA	Gvkgeada	1.31	248	P	Pn	10 46 56.2	0.0
GADA				S	Sb	10 47 13.8	+0.4
	comp=E,545nm,0.5s						
GEMT	Gemlik	1.32	101	PN	Pb	10 46 57.1	+0.3
STEP	BALIKESIR_Sava	1.33	172	*i*P	Pn	10 46 56.9	+0.4
STEP				*i*S	Sn	10 47 14.9	+0.8
DURS	Dursunbey	1.33	145	*i*P	Pn	10 46 56.6	+0.1
DURS				*i*S	Sb	10 47 14.2	+0.2
CFTB	Yalova	1.38	91	PN	Pn	10 46 57.7	+0.6
BOZC	Bozcaada	1.39	233	PN	Pn	10 46 58.2	+1.0
BOZC	Bozcaada	1.39	233	*i*P	Pn	10 46 57.3	+0.1
BOZC				*i*S	Sn	10 47 14.8	-0.7
DST	Dursunbey	1.39	141	PN	Pn	10 46 57.9	+0.5
YLV	Yalova	1.44	95	PN	Pn	10 46 58.7	+0.7
SMTH	Samothraki Isl	1.51	262	P	Pn	10 46 58.0	-0.8
SMTH				AML	AML	10 47 21.8	
	comp=N,1530µm,0.4s						
SMTH				AML	AML	10 47 22.7	
	comp=E,801µm,0.1s						
SMTH	Samothraki Isl	1.51	262	P	Pn	10 46 58.2	-0.7
AYVA	Ayvalik	1.51	204	*i*P	Pn	10 46 60.0	+1.0
AYVA				*i*S	Sb	10 47 19.6	+0.4
RDO	Rodhopi	1.54	288	P	Pn	10 46 59.2	-0.2
RDO				AML	AML	10 47 22.5	
	comp=N,1566µm,0.2s						
RDO				AML	AML	10 47 23.0	
	comp=E,1489µm,0.2s						
RDO	Rodhopi	1.54	288	P	Pn	10 46 59.5	+0.2
RDO				S	Sn	10 47 18.7	-0.6
	comp=E,770nm,0.2s						
RDO	Rodhopi	1.54	288	PN	Pn	10 47 00.3	+1.0
KOCA	Canakkale, Ayv	1.58	221	*i*P	Pn	10 46 59.8	-0.1
KOCA				*i*S	Sn	10 47 19.3	-0.9
HRT	Hereke	1.66	85	PN	Pn	10 47 01.9	+0.8
DKL	Dikili	1.68	196	PN	Pn	10 47 02.3	+1.0
SILT	Sile	1.70	74	PN	Pn	10 47 02.2	+0.7
PRK	Paraskevi	1.72	213	P	Pn	10 47 01.9	+0.1
PRK				AML	AML	10 47 28.7	
	comp=N,2176µm,0.6s						
PRK				AML	AML	10 47 30.7	
	comp=E,2076µm,0.4s						
PRK	Paraskevi	1.72	213	P	Pn	10 47 02.7	+0.9
ADVT	Abdulvahap	1.74	98	PN	Pn	10 47 02.8	+0.8
ZEDA	zmir-Bergama	1.75	190	*i*P	Pn	10 47 02.5	+0.2
ZEDA				*i*S	Sn	10 47 25.1	+0.6
AKHS	Akhisar	1.83	172	*i*P	Pn	10 47 04.2	+0.9
CAVI	Cavuskoy	1.86	105	PN	Pn	10 47 04.7	+0.9
DEMI	Demirci	1.90	150	*i*P	Pn	10 47 04.6	+0.2
LIA	Limnos Island	1.93	246	P	Pn	10 47 04.6	-0.1
SIGR	SIGRI	1.94	221	P	Pn	10 47 05.5	+0.7
SIGR	SIGRI	1.94	221	PN	Pn	10 47 06.3	+1.5
TVSB	Tavsanli	1.96	129	PN	Pn	10 47 06.1	+0.9
AUBOZ	BOZOYUK	2.10	111	PN	Pn	10 47 08.1	+1.0
KAVA	Kavala	2.27	279	P	Pn	10 47 09.5	+0.1
GULT	Gulveren	2.32	96	PN	Pn	10 47 11.2	+1.0
URLA	Izmir	2.43	197	PN	Pn	10 47 13.0	+1.4
SRCK	Saricakaya, Es	2.49	104	PN	Pn	10 47 13.6	+1.3
PLD	Plovdiv	2.52	305	PN	Pn	10 47 14.1	+1.3
AYDB	Zeytinkoy-Aydi	2.76	173	PN	Pn	10 47 18.0	+1.7
RAZG	Razgrad	2.96	346	⇑P	Pn	10 47 19.3	+0.4
VTS	Vitosha	3.72	302	⇑P	Pn	10 47 30.6	+1.2
VAY	Valandovo	3.77	281	*i*Pn	Pn	10 47 33.4	+3.4
STIP	Stip	4.12	286	*i*Pn	Pn	10 47 33.0	-1.8
CFR	Carcaliu	4.51	6	⇑P	Pn	10 47 40.5	+0.4
MLR	Muntele Rosu	4.92	347	⇓P	Pn	10 47 48.2	+2.2
VOIR		5.06	340	⇑P	Pn	10 47 48.6	+0.8
ARR	Arges	5.12	337	⇓P	Pn	10 47 49.8	+1.3
PLOR	Plostina	5.19	354	⇑P	Pn	10 47 51.5	+2.0
VRI	Vrincioaia	5.20	354	⇑P	Pn	10 47 51.2	+1.6
DOPR	Dopca	5.49	345	⇑P	Pn	10 47 55.2	+1.6
HERR	Herculane	5.60	320	⇑P	Pn	10 47 54.6	-0.5
GZR	Gura Zlata	5.83	325	⇓P	Pn	10 47 59.2	+1.0
MDVR	Moldovita	5.89	316	⇑P	Pn	10 47 59.1	0.0
BIZ	Bicaz	6.32	351	⇑P	Pn	10 48 06.3	+1.3
BZS	Buzias	6.53	321	⇑P	Pn	10 48 07.7	-0.1
BURAR	Bucovina Array	7.11	347	⇑P	Pn	10 48 17.8	+1.9

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*IDC **01** 10:50:21.0±1.5, 35°.83N×22°.73E, h0^{km}, mb3.6/6, mb1 3.7/7, mb1mx3.4/56, mbtmp3.6/7, ML3.8/1, MS2.9/1, Ms1 2.9/1, ms1mx2.3/46, Error ellipse: s-maj=36.6km s-min=23.7km az=148.0*
*ATH **01** 10:50:23.3, 35°.95N×22°.58E, h8^{km}±4^{km}, ML3.0/8, Error ellipse: s-maj=5.2km s-min=0.9km az=55.0*
*THE **01** 10:50:23.7, 36°.00N×22°.60E, h0^{km}±3^{km}, ML2.9/5, Error ellipse: s-maj=4.1km s-min=1.0km az=210.0*
ISC 01 10:50:23.2±1.4, **35°.93N**±0°.04×**22°.67E**±0°.04, **h16**^{km}±10^{km}, **n44**, σ**0^{s}.67**/52, **mb3.6**/6, **Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTHR	Kythira	0.42	39	P	Pg	10 50 31.8	0.0
KTHR				S	Sb	10 50 37.8	-0.8
	3µm,0.4s						
KTHA	Kythira Island	0.45	44	P	Pb	10 50 32.7	-0.2
KTHA				S	Sb	10 50 39.8	+0.4
KTHA				AML	AML	10 50 41.6	
	comp=N,2479µm,0.5s						
KTHA				AML	AML	10 50 43.0	
	comp=E,5944µm,0.6s						
KTHA	Kythira Island	0.45	44	P	Pb	10 50 32.5	-0.4
KTHA				S	Sb	10 50 39.8	+0.4
	comp=E,2µm,0.5s						
ANKY	Antikythira Is	0.51	97	P	Pb	10 50 34.4	+0.4
ANKY				S	Sn	10 50 42.8	-1.7
ANKY				AML	AML	10 50 45.1	
	comp=E,2109µm,0.7s						
ANKY				AML	AML	10 50 51.8	
	comp=N,2116µm,0.5s						
ANKY	Antikythira Is	0.51	97	P	Pb	10 50 34.3	+0.4
ANKY				S	Sn	10 50 43.4	-1.0
	comp=N,990nm,0.6s						
VLI	Veliai	0.81	15	P	Pb	10 50 38.7	-0.3
VLI				AML	AML	10 50 59.9	
	comp=N,1220µm,0.6s						
VLI				AML	AML	10 51 07.9	
	comp=E,1763µm,1.0s						
VLI	Veliai	0.81	15	P	Pb	10 50 38.7	-0.3
IMMV	Iera Moni Meta	1.16	114	P	Pg	10 50 45.9	+0.2
IMMV				AML	AML	10 51 10.2	
	comp=N,2400µm,0.4s						
IMMV				AML	AML	10 51 17.8	
	comp=E,1242µm,0.6s						
IMMV	Iera Moni Meta	1.16	114	P	Pg	10 50 45.9	+0.2
PYL	PYLOS	1.22	322	P	Pn	10 50 44.5	-1.2
PYL				S	Sb	10 51 00.7	-0.7
PYL				AML	AML	10 51 07.6	
	comp=E,1789µm,0.7s						
PYL				AML	AML	10 51 09.0	
	comp=N,1014µm,0.4s						
PYL	PYLOS	1.22	322	P	Pn	10 50 44.0	-1.7
PYL				S	Sn	10 51 02.0	+0.1
	comp=N,702nm,0.5s						
VAM	Vamos	1.35	112	P	Pg	10 50 49.4	+0.2
VAM				AML	AML	10 51 21.5	
	comp=N,2105µm,0.9s						
VAM				AML	AML	10 51 21.5	
	comp=E,2088µm,0.8s						
VAM	Vamos	1.35	112	P	Pg	10 50 49.9	+0.7
ITM	Ithomi	1.38	334	P	Pn	10 50 48.0	0.0
ITM				S	Sn	10 51 05.5	-0.5
ITM				AML	AML	10 51 12.7	
	comp=E,1214µm,0.3s						
ITM				AML	AML	10 51 13.8	
	comp=N,719µm,0.3s						
ITM	Ithomi	1.38	334	P	Pn	10 50 47.8	-0.1
ITM				S	Sb	10 51 06.5	+0.3
	comp=N,600nm,0.6s						
VLX	Vlachokerasia	1.45	351	P	Pb	10 50 49.7	-0.4
VLX	Vlachokerasia	1.45	351	P	Pg	10 50 51.7	+0.5
KRND	KRANIDI	1.50	15	P	Pb	10 50 50.5	-0.1
KRND	KRANIDI	1.50	15	P	Pb	10 50 51.0	+0.3
MHLO	Agia Marina, M	1.59	61	P	Pb	10 50 52.3	+0.1
MHLO	Agia Marina, M	1.59	61	P	Pb	10 50 52.3	+0.1
GVD	Gavdhos	1.59	133	P	Pg	10 50 53.7	-0.1
GVD	Gavdhos	1.59	133	P	Pg	10 50 53.9	+0.1
AMT	Artemida-Makis	1.77	334	P	Pb	10 50 54.9	-0.5
AMT				AML	AML	10 51 27.5	
	comp=N,2830µm,0.5s						
AMT				AML	AML	10 51 35.8	
	comp=E,1732µm,0.9s						
AMT	Artemida-Makis	1.77	334	P	Pb	10 50 54.9	-0.5
IDI	Anoyia	1.92	109	P	Pg	10 50 59.0	-1.0
IDI	Anoyia	1.92	109	P	Pg	10 50 59.6	-0.5
LTK	Loutraki	2.10	6	P	Pb	10 51 01.0	0.0
LTK	Loutraki	2.10	6	P	Pb	10 51 01.0	0.0
THAL	Thalero	2.10	360	P	Pb	10 51 01.0	0.0
KLV	Kalavryta, Ach	2.15	349	P	Pb	10 51 01.3	-0.5
KLV	Kalavryta, Ach	2.15	349	P	Pb	10 51 02.3	+0.5
DRO	Drossia	2.16	339	P	Pb	10 51 01.3	-0.7
DRO	Drossia	2.16	339	P	Pb	10 51 02.8	+0.8
LAKA	Lakka	2.37	347	P	Pb	10 51 05.1	-0.5
LAKA	Lakka	2.37	347	P	Pb	10 51 05.5	-0.1
GERES	GERESS Array B	14.49	336	LR	LR	11 00 52.9	
	comp=E,53nm,20.3s,baz=152,slow=43						
AKASG	Malin Array Be	15.50	16	Pn	Pn	10 54 00.6	-0.5
	comp=E,0.4nm,0.3s,baz=206,slow=12,SNR=2.3						
ESDC	Sonseca Array	21.35	288	P	P	10 55 10.2	+0.4
	comp=E,1.0nm,0.9s,baz=81,slow=10,SNR=2.1						
FINES	FINESS Array B	25.62	4	P	P	10 55 53.9	+2.2
	comp=E,2.3nm,0.9s,baz=167,slow=13,SNR=1.7						
EKA	Eskdalemuir Ar	26.25	326	P	P	10 55 57.9	+0.5
	comp=E,3.7nm,0.8s,baz=120,slow=12,SNR=3.0						
TORD	Torodi Ar. Bea	29.52	225	P	P	10 56 27.1	+0.1
	comp=E,0.6nm,1.0s,baz=27,slow=9.7,SNR=2.0						
KURBB	Kurchatov Arra	42.22	52	P	P	10 58 16.1	+0.7
	comp=E,0.7nm,0.7s,baz=280,slow=8.6,SNR=4.7						
MKAR	Makanchi Array	45.05	57	P	P	10 58 37.7	-0.5
	comp=E,0.4nm,0.5s,baz=265,slow=7.6,SNR=6.6						

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*NEIC **01** 10:56:52.7±0.4, 73°.4N±0°.1×6°.6E±0°.2, h10^{km}±1^{km}, mb4.0/11, Error ellipse: s-maj=19.7km s-min=11.6km az=10.0*
*NAO **01** 10:56:52.4±1.6, 73°.32N×6°.27E, ML3.6*
*IDC **01** 10:56:55.0±0.7, 73°.19N×6°.73E, h0^{km}, mb3.5/14, mb1 3.8/18, mb1mx3.5/59, mbtmp3.6/18, ML3.0/4, MS3.2/15, Ms1 3.2/15, ms1mx3.0/45, Error ellipse: s-maj=20.0km s-min=12.6km az=49.0*
*BER **01** 10:56:55.7±2.5, 73°.36N×6°.42E, h10^{km}, ML2.3, ML3.6(NAO), Confirmed Earthquake*
ISC 01 10:56:54.1±0.5, **73°.24N**±0°.05×**6°.63E**±0°.05, **h10**^{km}, **n99**, σ**2^{s}.89**/111, **mb3.7**/19, **MS3.1**/8, **Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BJO1	Bjornoya	3.67	64	*e*P	Pn	10 57 50.1	-0.8
BJO1				*e*S	Sn	10 58 28.8	-5.4
BJO1				IAML		10 58 39.4	
	comp=Z,24nm,1.1s						
HSPB	Hornsund (broa	4.42	27	Pn	Pn	10 58 00.5	-0.6
HSPB	Hornsund (broa	4.42	27	*e*P	Pn	10 58 00.5	-0.6
HSPB				*e*S	Sn	10 58 47.6	-4.8
JMIC	Jan Mayen	5.18	251	LR	LR	10 59 50.6	
	comp=Z,159nm,20.1s,baz=275,slow=34						
BRBA	Barentsburg A	5.20	18	Pn	Pn	10 58 10.9	-0.8
BRBA	Barentsburg A	5.20	18	*e*P	Pn	10 58 11.2	-0.5
TRO	Tromso	5.34	127	Pn	Pn	10 58 15.0	+1.3
TRO				Sn	Sn	10 59 09.9	-5.1
TRO	Tromso	5.34	127	*e*P	Pn	10 58 14.8	+1.1
TRO				IAML		10 59 14.9	
	comp=Z,7.9nm,0.3s						
N2VI	Vinje	5.53	150	*e*P	Pn	10 58 17.9	+1.5
N2VI				*e*S	Sn	10 59 14.2	-5.7
LOF	Lofoten	5.62	153	Pn	Pn	10 58 18.7	+1.2
LOF				Sn	Sn	10 59 15.5	-6.5
LOF	Lofoten	5.62	153	*e*P	Pn	10 58 18.7	+1.2
LOF				IAML		10 59 19.4	
	comp=Z,7.6nm,0.7s						
JETT	Jettan, Norway	5.75	123	Pn	Pn	10 58 21.9	+2.5
HOPEN	Hopen	5.80	47	Pn	Pn	10 58 19.8	-0.3
HOPEN	Hopen	5.80	47	*e*P	Pn	10 58 19.4	-0.6
HOPEN				*e*S	Sn	10 59 20.7	-5.8
KBS	Kingsbay	5.86	10	Pn	Pn	10 58 20.3	-0.5
KBS	Kingsbay	5.86	10	Pn	Pn	10 58 20.3	-0.5
HAMF	Hammerfest	5.90	108	*e*P	Pn	10 58 20.0	-1.4
HAMF				*e*S	Sn	10 59 22.4	-6.4
STEI	Steigen	6.05	148	*e*P	Pn	10 58 25.5	+2.0
STEI				IAML		10 59 42.8	
	comp=Z,5.1nm,0.7s						
N2IH	Innhavet	6.13	145	*e*P	Pn	10 58 25.3	+0.7
N2IH				*e*S	Sn	10 59 29.8	-4.7
KIF	Kilpisjarvi	6.25	126	Pn	Pn	10 58 27.4	+1.2
KIF				Sn	Sn	10 59 32.7	-4.8
KIF	Kilpisjarvi	6.25	126	Pn	Pn	10 58 27.4	+1.2
KIF				Sn	Sn	10 59 32.7	-4.8
FAUS	Fauske	6.56	149	*e*P	Pn	10 58 31.1	+0.6
FAUS				*e*S	Sn	10 59 38.3	-7.0
FAUS				IAML		10 59 40.0	
	comp=Z,3.9nm,0.6s						
NBB05	Inndyr	6.72	154	*e*P	Pn	10 58 33.6	+1.0
KTK1	Kautokeino	6.84	120	*e*P	Pn	10 58 36.7	+2.4
KTK1				*e*S	Sn	10 59 48.2	-3.8
KTK1				IAML		11 00 04.5	
	comp=Z,2.5nm,0.6s						
ARA0	ARCESS Array S	7.07	112	Pn	Pn	10 58 38.0	+0.6
	baz=325,slow=12						
ARA0				Sn	Sn	10 59 50.8	-7.0
	baz=305,slow=22						
ARA0	ARCESS Array S	7.07	112	Pn	Pn	10 58 38.0	+0.6
	baz=325,slow=12						
ARA0				Sn	Sn	10 59 50.8	-7.0
	baz=305,slow=22						
ARA0				IAML		11 00 12.0	
	comp=Z,2.7nm,0.8s						
ARCES	ARCESS Array B	7.07	112	Pn	Pn	10 58 37.9	+0.5
	baz=326,slow=11,SNR=28						
ARCES				Sn	Sn	10 59 50.4	-7.3
	baz=313,slow=23,SNR=2.3						
ARCES				LR	LR	11 01 01.0	
	comp=Z,112nm,21.6s,baz=290,slow=35						
ARCES	ARCESS Array B	7.07	112		Pn	10 58 37.5	+0.1
KONS	Konsvik	7.13	159	*e*P	Pn	10 58 39.8	+1.6
KONS				IAML		10 59 57.3	
	comp=Z,5.2nm,0.3s						
KEV	Kevo	7.34	108	Pn	Pn	10 58 40.9	-0.2
DAG	Danmarks Havn	7.40	310	*e*	Pn	10 58 37.5	-4.4
	baz=109,slow=18						
DAG				*i*P	Pn	10 58 38.6	-3.3
DAG				*i*S	Sn	10 59 52.6	-13
DAG				IAML		10 59 58.1	
	comp=Z,6.9nm,0.3s						
DBG	Daneborg	7.56	291	Pn	Pn	10 58 40.6	-3.4
DBG	Daneborg	7.56	291	*e*P	Pn	10 58 40.7	-3.4
DBG				*e*S	Sn	10 59 58.3	-11
DBG	Daneborg	7.56	291	*i*P	Pn	10 58 40.7	-3.4
DBG				*i*S	Sn	10 59 58.3	-11
MOR8	Moi Rana	7.59	155	*e*P	Pn	10 58 45.4	+0.7
NSS	Namsos	8.96	165	*e*P	Pn	10 59 05.6	+2.3
NSS				IAML		11 00 49.6	
	comp=Z,2.9nm,0.4s						
SCO	Scoresbysund	9.27	267	*i*P	Pn	10 59 06.9	-0.6
SCO				*e*S	Sn	11 00 46.2	-5.4
SCO	Scoresbysund	9.27	267	Pn	Pn	10 59 06.2	-1.3
SCO	Scoresbysund	9.27	267	*i*P	Pn	10 59 07.0	-0.6
SCO				*e*S	Sn	11 00 46.2	-5.4
SCO	Scoresbysund	9.27	267	*i*P	Pn	10 59 07.0	-0.6
SCO				*e*S	Sn	11 00 46.2	-5.4
NOD	Norderasen	10.28	159	*e*P	Pn	10 59 23.8	+2.3
APA0	Apatity Array	10.40	110	Pn	Pn	10 59 23.0	-0.1
	baz=329,slow=14						
APA0	Apatity Array	10.40	110	Pn	Pn	10 59 23.0	-0.1
	baz=329,slow=14						
LVZ	Lovozero	10.66	106	Pn	Pn	10 59 26.5	-0.2
AKN	Aaknes	11.11	179	Pn	Pn	10 59 34.5	+1.7
AKN	Aaknes	11.11	179	Pn	Pn	10 59 34.5	+1.7
NC204	NORSAR Array S	12.12	170	Pn	Pn	10 59 47.8	+1.2
NC303	NORSAR Array S	12.20	169	Pn	Pn	10 59 49.6	+1.9
NC405	NORSAR Array S	12.33	168	Pn	Pn	10 59 50.5	+1.1
NB201	NORSAR Array S	12.37	169	Pn	Pn	10 59 50.7	+0.6
NB2	NORSAR Subarra	12.38	170	Pn	Pn	10 59 52.9	+2.8
	baz=355,slow=16						
NB2	NORSAR Subarra	12.38	170	Pn	Pn	10 59 52.9	+2.8
	baz=355,slow=16						
NOA	NORSAR Array B	12.38	170	Pn	Pn	10 59 51.6	+1.4
	comp=Z,0.0nm,0.3s,baz=355,slow=12,SNR=5.8						
NOA				LR	LR	11 04 19.9	
	comp=Z,82nm,19.3s,baz=0.0,slow=36						
NRA0	NORESS Array S	12.70	169	Pn	Pn	10 59 57.3	+2.8
	baz=358,slow=16						
NRA0	NORESS Array S	12.70	169	Pn	Pn	10 59 57.3	+2.8
	baz=358,slow=16						
BORG	Borgarnes	12.99	243	LR	LR	11 03 47.0	
	comp=Z,56nm,19.1s,baz=17,slow=32						
HFS	Hagfors	13.44	165	Pn	Pn	11 00 05.5	+1.0
	comp=Z,0.2nm,0.3s,baz=7.5,slow=12,SNR=7.0						
HFS				LR	LR	11 04 53.6	
	comp=Z,137nm,20.3s,baz=347,slow=36						
HFS	Hagfors	13.44	165	Pn	Pn	11 00 05.5	+1.0
	baz=352,slow=12						
HFS	Hagfors	13.44	165	Pn	Pn	11 00 05.5	+1.0
	baz=352,slow=12						
FIA1	FINESS Array S	13.90	138	Pn	Pn	11 00 11.7	+0.9
FIA0	FINESS Array S	13.90	138	Pn	Pn	11 00 11.5	+0.7
	baz=344,slow=12						
FIA0	FINESS Array S	13.90	138	Pn	Pn	11 00 11.5	+0.7
	baz=344,slow=12						
FINES	FINESS Array B	13.90	138	Pn	Pn	11 00 10.7	-0.1
	comp=Z,0.3nm,0.3s,baz=331,slow=16,SNR=16						
FINES				LR	LR	11 05 02.3	
	comp=Z,121nm,20.3s,baz=352,slow=35						
FINES	FINESS Array B	13.90	138		Pn	11 00 12.0	+1.2
SFJD	Kangerlussuaq	19.67	281	LR	LR	11 08 14.1	
	comp=Z,57nm,19.0s,baz=92,slow=34						
EUNU	Eureka	20.00	329	P	P	11 01 22.9	-3.4
EUNU				IAmb	IAmb	11 01 30.2	
	comp=Z,17nm,1.2s						
CLL	Collm	22.18	169	P	P	11 01 50.8	+0.8
CLL				IAmb	IAmb	11 02 01.3	
	comp=Z,12nm,1.4s						
MORC	Moravsky Berou	24.03	162	P	P	11 02 09.2	+0.3
VRAC	Vranov	24.41	164	P	P	11 02 15.5	+3.1
	comp=Z,2.6nm,0.9s,baz=6.1,slow=11,SNR=4.2						
VRAC				LR	LR	11 11 34.0	
	comp=Z,55nm,18.9s,baz=2.0,slow=36						
AKASG	Malin Array Be	24.64	144	P	P	11 02 15.8	+1.4
	comp=Z,1.4nm,0.5s,baz=346,slow=9.8,SNR=5.5						
AKASG				LR	LR	11 11 49.0	
	comp=Z,93nm,19.9s,baz=20,slow=36						
AKASG	Malin Array Be	24.64	144	P	P	11 02 14.4	0.0
GERES	GERESS Array B	24.68	169	P	P	11 02 18.6	+3.8
	comp=Z,1.1nm,0.9s,baz=10,slow=8.3,SNR=4.7						

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GERES                            LR      LR      11 11 25.2
           comp=Z,51nm,18.2s,baz=325,slow=35
GERES  GERESS Array B  24.68 169 P       P       11 02 15.2 +0.3
PSZ    Piszkesteto     26.09 159 P       P       11 02 27.4 -0.2
PSZ                              IAmb    IAmb    11 02 28.9
           comp=Z,4.5nm,0.9s
ARU    Arti            26.48 101 LR      LR      11 13 53.3
           comp=Z,28nm,18.2s,baz=232,slow=38
BURAR  Bucovina Array  27.03 152 P       P       11 02 36.3 +0.2
MLR    Muntele Rosu    29.21 152 LR      LR      11 15 00.1
           comp=Z,93nm,20.3s,baz=5.5,slow=37
AKTO   Aktyubinsk      31.62 108 P       P       11 03 19.1 +2.4
           comp=Z,0.9nm,0.8s,baz=348,slow=9.3,SNR=2.2
ABKAR  Akbulak array   33.22 106 P       P       11 03 29.8 -0.9
KBZ    Khabaz          34.03 130 LR      LR      11 17 46.3
           comp=Z,45nm,21.0s,baz=18,slow=37
BRTR   Keskin Array B  36.05 143 LR      LR      11 20 00.4
           comp=Z,18nm,20.8s,baz=326,slow=38
ZALV   Zalesovo Beam   36.20  78 P       P       11 03 59.2 +2.9
           comp=Z,0.4nm,0.4s,baz=321,slow=11,SNR=2.3
KURK   Kurchatov       37.27  87 P       P       11 04 04.2 -1.4
KURBB  Kurchatov Arra  37.33  87 P       P       11 04 08.3 +2.3
           comp=Z,0.6nm,0.8s,baz=334,slow=6.5,SNR=4.4
YKA    Yellowknife Ar  38.95 321 P       P       11 04 20.9 +1.4
           comp=Z,0.2nm,0.7s,baz=22,slow=8.4,SNR=5.3
ILAR   Eielson Array   41.12 343 P       P       11 04 39.9 +2.3
           comp=Z,0.6nm,0.9s,baz=18,slow=5.7,SNR=5.5
ILAR   Eielson Array   41.12 343 P       P       11 04 34.3 -3.3
KK31   Karatay Array   41.83 100 P       P       11 04 42.6 -1.0
KK31                             IAmb    IAmb    11 04 47.6
           comp=Z,2.4nm,1.1s
KKAR   Karatay Array   41.83 100 P       P       11 04 42.9 -0.8
KKAR   Karatay Array   41.83 100 P       P       11 04 42.4 -1.2
KKAR                             IAmb    IAmb    11 04 47.6
           comp=Z,2.4nm,1.1s
MK31   Makanchi Array  41.87  86 P       P       11 04 42.4 -1.5
MK31                             IAmb    IAmb    11 05 58.1
           comp=Z,5.1nm,1.9s
MKAR   Makanchi Array  41.87  86 P       P       11 04 46.7 +2.8
           comp=Z,0.6nm,1.0s,baz=332,slow=4.9,SNR=3.5
GEYT   Alibeck         43.23 115 P       P       11 04 57.1 +2.0
           comp=Z,1.7nm,0.8s,baz=330,slow=13,SNR=2.8
GEYT                             LR      LR      11 24 13.6
           comp=Z,53nm,20.5s,baz=10.0,slow=38
SONM   Songino Array   47.62  64 P       P       11 05 32.6 +2.7
           comp=Z,0.4nm,0.9s,baz=325,slow=9.2,SNR=2.4
TORD   Torodi Ar. Bea  60.14 186 P       P       11 07 03.5 +2.0
           comp=Z,0.6nm,0.5s,baz=356,slow=6.3,SNR=3.4
TORD   Torodi Ar. Bea  60.14 186 P       P       11 07 01.5  0.0
TORD                             IAmb    IAmb    11 07 10.5
           comp=Z,1.3nm,0.8s
NVAR   Mina Array Bea  62.49 313 P       P       11 07 22.1 +4.5
           comp=Z,0.5nm,0.9s,baz=29,slow=5.5,SNR=3.6
TXAR   Lajitas Array   67.76 298 P       P       11 07 54.6 +2.9
           comp=Z,0.1nm,0.6s,baz=20,slow=4.0,SNR=1.6
ASAR   Alice Springs  122.89  60 PKP     PKiKP   11 15 50.1 +0.1
           comp=Z,0.3nm,0.7s,baz=350,slow=2.6,SNR=4.4
```

IDC 01 10:57:32.5±10.0**, 4°.13S×104°.88E, h61**^{km}±65^{km}**, mb3.4**/3**, mb1 3.6**/4**, mb1mx3.0**/59**, mbtmp3.7**/4**, ML3.6**/1**, Error ellipse: s-maj=193.1km s-min=67.6km az=46.0, Southern Sumatera**

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Code   Station Name      Δ°   AZ°   Phase ID          Time      Res
                                 Op      ISC      h  m  s     ISC
LEM    Lembang          3.82 135 P       Pn      10 58 29.1 +0.1
           4.9nm,0.3s,baz=270,slow=20,SNR=2.3
LEM                              S       Sn      10 59 13.4 +0.7
           4.6nm,0.3s,baz=294,slow=20,SNR=1.4
WRA    Warramunga Arr  32.72 121 P       P       11 03 58.5 -1.2
           0.3nm,0.6s,baz=292,slow=10.0,SNR=1.9
ASAR   Alice Springs   34.08 127 P       P       11 04 10.7 -0.7
           0.5nm,0.6s,baz=296,slow=7.6,SNR=12
STKA   Stephens Creek  44.12 133 P       P       11 05 36.5 +1.4
           1.0nm,0.5s,baz=306,slow=6.0,SNR=4.7
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*AEIC **01** 11:20:23±2.1, 56°.54N±0°.03×169°.19W±0°.08, h14^{km}±3^{km}, Error ellipse: s-maj=7.4km s-min=3.7km az=59.0*

*IDC **01** 11:20:24.1±0.5, 56°.67N×169°.04W, h0^{km}, mb4.8/27, mb1 5.0/30, mb1mx4.9/35, mbtmp4.8/30, ML4.2/3, MS4.3/32, Ms1 4.4/32, ms1mx4.2/51, Error ellipse: s-maj=16.5km s-min=9.4km az=2.0*

*NEIC **01** 11:20:25.4, 56°.66N×169°.16W, h5^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-4.30; $M_{\theta\theta}$3.24; $M_{\phi\phi}$1.06; $M_{r\theta}$3.06; $M_{\theta\phi}$-0.51; $M_{\phi r}$-2.31; Fault plane solution: $M_0$5.48000×10^{16} NP1:ϕ_s298.83000°, δ67.64000°, λ-81.35000°. NP2:ϕ_s97.04000°, δ23.89000°, λ-110.08000°. Principal axes: T 4.7911, Plg22.0000°, Azm22.0000°; N 1.1771, Plg8.0000°, Azm116.0000°; P -5.9682, Plg66.0000°, Azm224.0000°;*

*MOS **01** 11:20:25.0±0.9, 56°.67N×169°.09W, h18^{km}, mb5.4/144, MS4.4/9 Error ellipse: s-maj=6.5km s-min=4.7km az=92.4*

*NEIC **01** 11:20:25.6±1.7, 56°.64N±0°.05×169°.08W±0°.08, h10^{km}±1^{km}, mb5.2/387, Mwb5.1/20, ML4.9(AEIC), Error ellipse: s-maj=9.0km s-min=5.7km az=215.0*

*GCMT **01** 11:20:27.6±0.2, 56°.83N±0°.01×169°.09W±0°.02, h12^{km}, MW5.1/142, Moment Tensor Solution. s75,c105; s142,c226; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-6.26±.10; $M_{\theta\theta}$6.23±.10; $M_{\phi\phi}$0.03±.09; $M_{r\theta}$0.94±.30; $M_{\theta\phi}$-1.51±.09; $M_{\phi r}$-0.09±.32; Best double couple: $M_0$6.48800×10^{16} NP1:ϕ_s104.00000°, δ41.00000°, λ-88.00000°. NP2:ϕ_s282.00000°, δ49.00000°, λ-92.00000°. Principal axes: T 6.6460, Plg4.0000°, Azm13.0000°; N -0.3110, Plg1.0000°, Azm283.0000°; P -6.3300, Plg86.0000°, Azm178.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BJI **01** 11:20:27.4±0.0, 56°.84N×169°.81W, h16^{km}, mB5.4/45, mb5.1/64, Ms5.1/50, Ms7 4.7/49*

*BGR **01** 11:20:30.4±0.0, 56°.84N×169°.89W, h33^{km}, mb5.4, Ms4.2*

ISC 01 11:20:25.9±0.6**, 56°.65N**±0°.04×**169°.08W**±0°.03**, h10**^{km}±3^{km}**, n1269, σ1^{s}10**/1303**, mb5.3**/359**, MS4.5**/53**, 42C-22D, Fault plane solution: NP1:**ϕ_s264.19437°**,** δ37.57856°**,** λ-87.76162°. **NP2:**ϕ_s81.37083°**,** δ52.45507°**,** λ-91.72150°. **Principal axes:** T Plg7.4404°**,** Azm172.5984°**;** N Plg1.3649°**,** Azm82.4201°**;** P Plg82.4340°**,** Azm342.0866°**;**
Pribilof Islands

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Code   Station Name      Δ°   AZ°   Phase ID          Time      Res
                                 Op      ISC      h  m  s     ISC
SPIA   Saint Paul Isl   0.83 310         Pg      11 20 40.3 -1.6
SPIA   Saint Paul Isl   0.83 310         Sg      11 20 52.7  0.0
AKGG   Akutan Green G   3.02 143         Pn      11 21 12.6 -1.1
AKGG                                     Sn      11 21 49.2 -0.7
MSW    Makushin Switc   3.04 153         Pn      11 21 12.6 -1.4
AKRB   Akutan Reef Bi   3.06 145         Pn      11 21 13.5 -0.7
AKRB                                     Sn      11 21 51.5 +0.8
AKLV   Akutan Long Va   3.07 143         Pn      11 21 14.0 -0.3
MNAT   Makushin Natee   3.10 153         Pn      11 21 14.4 -0.3
MAPS   Pakushin South   3.10 156         Pn      11 21 14.3 -0.4
AKBBA  Akutan Broad B   3.13 144         Pn      11 21 14.3 -0.8
MGOD   Makushin Gods    3.13 155         Pn      11 21 13.7 -1.5
AKUT   Akutan           3.15 142 Pn      Pn      11 21 14.7 -0.7
AKSA   Akutan Strait    3.17 141         Pn      11 21 15.5 -0.2
UNV    Unalaska Valle   3.18 151 Pn      Pn      11 21 16.3 +0.6
UNV    Unalaska Valle   3.18 151         Sn      11 21 53.8 +0.2
WEBT   Westdahl Beart   3.21 128         Pn      11 21 15.3 -0.9
WESP   Westdahl Peak    3.29 129         Pn      11 21 16.7 -0.7
OKFG   Magazine Ridge   3.32 168         Pn      11 21 16.0 -1.7
OKFG                                     Sn      11 21 55.8 -1.4
OKSO   Okmok South      3.34 170         Pn      11 21 17.0 -1.1
SSLS   Shishaldin Sou   3.47 122         Pn      11 21 19.8 -0.1
FALS   False Pass       3.67 117         Pn      11 21 23.3 +0.8
NIKH   Nikolski High    3.69 178         Pn      11 21 24.6 +1.8
DT1    Dutton Round H   4.13 109         Pn      11 21 28.0 -0.9
SDPT   Sand Point       5.00 102 Pn      Pn      11 21 43.0 +2.1
KOFP   Korovin Flat P   5.27 216         Pn      11 21 44.3 -0.3
ATKA   Atka Island      5.37 216 Pn      Pn      11 21 46.2 +0.4
ATKA   Atka Island      5.37 216         Sn      11 22 48.4 +0.8
CHGN   Chignik          5.92  89         Pn      11 21 53.2 -0.3
ADK    Adak             6.53 226 P       Pn      11 22 00.4 -1.4
ADK    Adak             6.53 226 Pn      Pn      11 22 00.4 -1.4
GAMB   Gambell          7.26 351         Pn      11 22 11.1 -0.8
ANM    Nome             8.14  11 P       Pn      11 22 27.4 +3.5
ANM    Nome             8.14  11         Pn      11 22 27.4 +3.5
SII    Sitkinak Islan   8.22  84 Pn      Pn      11 22 29.9 +4.8
AMKA   Amchitka         8.64 237 Pn      Pn      11 22 31.8 +1.1
OHAK   Old Harbor       8.66  80 Pn      Pn      11 22 32.4 +1.5
AUCH   Augustine Cone   8.73  65         Pn      11 22 33.3 +1.2
KDAK   Kodiak Island    9.02  76 Pn      Pn      11 22 37.5 +1.5
           1.9nm,0.3s,baz=296,slow=6.4,SNR=25
KDAK                             Sn      Sn      11 24 17.4  0.0
           5.1nm,0.3s,baz=198,slow=23,SNR=5.7
KDAK   Kodiak Island    9.02  76 i P     Pn      11 22 35.1 -0.9
KDAK   Kodiak Island    9.02  76 Pn      Pn      11 22 37.7 +1.7
IVE    Iliamna Volcan   9.09  62         Pn      11 22 36.8 -0.2
TTA    Tatalina         9.10  41 P       Pn      11 22 40.2 +3.1
TTA    Tatalina         9.10  41 Pn      Pn      11 22 40.2 +3.1
NCT    North Crescent   9.29  58         Pn      11 22 39.6 -0.1
RED    Redoubt Volcan   9.32  59         Pn      11 22 40.3 +0.1
RSO    Redoubt South    9.34  59         Pn      11 22 44.0 +3.5
DFR    Drift River      9.41  58         Pn      11 22 42.0 +0.6
CNPM   China Poot       9.87  66 Pn      Pn      11 22 49.7 +2.0
SPCG   Spurr Capps Gl   9.95  55         Pn      11 22 49.7 +0.9
BRLK   Bradley Lake    10.09  64 Pn      Pn      11 22 53.2 +2.6
STLK   Strandline Lak  10.10  54         Pn      11 22 51.8 +1.0
BRSE   Bradley Lake S  10.16  65         Pn      11 22 52.7 +1.2
SKT    Skwentna        10.42  52         Pn      11 22 57.7 +2.6
PPLA   Purkeypile      10.54  47         Pn      11 22 59.4 +2.4
SUA    Susitna One     10.58  55         Pn      11 23 01.4 +4.0
SEW    Seward          10.86  63 Pn      Pn      11 23 03.6 +2.6
RC01   Rabbit Creek A  10.94  58 P       Pn      11 23 05.3 +3.1
           baz=254,SNR=11
CUT    Chulitna        11.13  51 P       Pn      11 23 08.8 +4.0
           baz=247,SNR=9.4
PMR    Palmer          11.36  56 P       Pn      11 23 09.8 +1.9
PMR    Palmer          11.36  56         Pn      11 23 09.8 +1.9
KTH    Kantishna Hill  11.37  45         Pn      11 23 09.8 +1.8
GHO    Glory Hole Cre  11.51  55         Pn      11 23 11.6 +1.6
TRF    Thorofare Moun  11.57  46         Pn      11 23 13.8 +2.9
BPAW   Bear Paw Mtn.   11.62  43         Pn      11 23 12.2 +0.7
KNK    Knik Glacier    11.62  57         Pn      11 23 12.8 +1.2
SML    Sawmill         11.79  55 P       Pn      11 23 14.3 +0.5
SML    Sawmill         11.79  55         Pn      11 23 14.3 +0.5
RDOG   Red Dog Mine    11.79  11         Pn      11 23 15.4 +1.6
IMAR   Indian Mountai  11.87  32         Pn      11 23 14.4 -0.5
RND    Reindeer        12.13  48 P       Pn      11 23 21.2 +2.7
RND    Reindeer        12.13  48 Pn      Pn      11 23 21.2 +2.7
MLY    Manley          12.22  39 P       Pn      11 23 19.3 -0.5
           baz=235,SNR=24
BWN    Browne          12.23  44         Pn      11 23 23.5 +3.6
MCK    McKinley        12.23  46 P       Pn      11 23 21.5 +1.6
           baz=244,SNR=62
SCM    Sheep Creek Mo  12.25  56 P       Pn      11 23 20.6 +0.4
SCM    Sheep Creek Mo  12.25  56         Pn      11 23 20.6 +0.4
HIN    Hinchinbrook I  12.36  63         Pn      11 23 24.4 +2.7
FID    Port Fidalgo    12.42  61         Pn      11 23 24.6 +2.2
NEA2   Nenana          12.59  43 P       Pn      11 23 26.0 +1.3
           baz=240,SNR=13
DHY    Denali Highway  12.62  50         Pn      11 23 29.6 +4.4
EYAK   Cordova Ski Ar  12.75  63 Pn      Pn      11 23 29.7 +2.8
I23K   Minto, Yukon-K  12.77  40 P       Pn      11 23 28.8 +1.6
           baz=237
I23K   Minto, Yukon-K  12.77  40         Pn      11 23 30.1 +3.0
KLU    Klutina         12.82  58         Pn      11 23 28.2 +0.2
M24K   Tolsona, Glenn  12.85  55 P       Pn      11 23 30.3 +1.9
           baz=255,SNR=13
M24K   Tolsona, Glenn  12.85  55         Pn      11 23 30.2 +1.9
WRH    Wood River Hil  12.90  44         Pn      11 23 30.0 +1.1
MDM    Murphy Dome     13.08  42         Pn      11 23 32.3 +0.8
CCB    Clear Creek Bu  13.09  44         Pn      11 23 33.1 +1.6
TCOL   CIGO, UAF Yank  13.18  43 P       Pn      11 23 35.7 +3.0
           baz=241,SNR=27
TCOL   CIGO, UAF Yank  13.18  43         Pn      11 23 36.0 +3.3
COLA   College         13.18  43 P       Pn      11 23 36.2 +3.4
COLA   College         13.18  43         Pn      11 23 36.2 +3.4
RAGM   Ragged Mountai  13.26  63         Pn      11 23 36.2 +2.3
HDA    Harding Lake    13.32  45 P       Pn      11 23 35.1 +0.5
           baz=245
HDA    Harding Lake    13.32  45         Pn      11 23 36.0 +1.3
PAX    Paxson          13.40  52 P       Pn      11 23 37.0 +1.1
PAX    Paxson          13.40  52         Pn      11 23 37.0 +1.1
POKR   Poker Plat Res  13.46  42 P       Pn      11 23 37.6 +1.0
           baz=241,SNR=28
POKR   Poker Plat Res  13.46  42         Pn      11 23 38.2 +1.7
HMT    Hamilton        13.46  64         Pn      11 23 38.6 +2.0
N25K   Chitina, Valde  13.47  58 P       Pn      11 23 37.2 +0.4
           baz=259,SNR=13
N25K   Chitina, Valde  13.47  58         Pn      11 23 37.0 +0.2
IL31                   13.50  44         Pn      11 23 37.8 +0.7
ILAR   Eielson Array   13.50  44 Pn      Pn      11 23 36.9 -0.3
           0.1nm,0.3s,baz=239,slow=12,SNR=53
ILAR   Eielson Array   13.50  44 P       Pn      11 23 36.7 -0.4
ILAR   Eielson Array   13.50  44         Pn      11 23 36.7 -0.4
COLD   Coldfoot        13.76  32 P       Pn      11 23 42.0 +1.4
           baz=229,SNR=21
COLD   Coldfoot        13.76  32 Pn      Pn      11 23 42.7 +2.1
GLB    Gilahina Butte  13.81  59         Pn      11 23 41.7 +0.3
RIDG   Independent Ri  13.91  49         Pn      11 23 43.2 +0.3
VRDI   Verde Repeater  13.95  60         Pn      11 23 42.9 -0.6
CRQM   Cirque          14.05  62         Pn      11 23 46.2 +1.4
MENT   Mentasta        14.16  53         Pn      11 23 47.1 +0.9
MCARA  McCarthy VSAT   14.18  60         Pn      11 23 47.1 +0.7
TGL    Tana Glacier    14.20  62 Pn      Pn      11 23 46.9 +0.1
DOT    Dot Lake        14.22  50 Pn      Pn      11 23 47.4 +0.5
PRP    Porcupine Dome  14.35  42 Pn      Pn      11 23 48.9  0.0
SCRK   Sand Creek      14.35  49 P       Pn      11 23 49.4 +0.5
           baz=251,SNR=26
ISLE   Juniper Island  14.43  63         Pn      11 23 50.0  0.0
BALM   Baldy           14.46  61         Pn      11 23 49.6 -0.9
MESA   MESA            14.60  65         Pn      11 23 53.0 +0.7
YAH    Yahtse          14.71  64         Pn      11 23 53.5 -0.4
BARN   Barnard Glacie  14.79  61         Pn      11 23 55.0 -0.1
CTGM   Chitina Glacie  14.95  62         Pn      11 23 56.7 -0.3
FYU    Fort Yukon      14.96  39         Pn      11 23 58.5 +1.5
TABL   Table Mountain  15.01  64         Pn      11 23 57.4 -0.6
TABL                             IAmb    IAmb    11 24 23.4
           comp=Z,116nm,1.0s
BCAR   Beaver Creek A  15.05  54         Pn      11 23 57.6 -0.7
PCA    Pinnacle        15.44  65         Pn      11 24 04.5 +1.0
PCA                              IAmb    IAmb    11 24 11.3
           comp=Z,143nm,1.0s
A21K   Barrow          15.65  15 P       Pn      11 24 06.2 +0.2
           baz=206,SNR=26
A21K   Barrow          15.65  15         Pn      11 24 06.0  0.0
BCPM   Bancas Point    15.76  66 P       P       11 24 11.1 -0.4
EGAK   Eagle           15.77  48 Pn      Pn      11 24 07.9 +0.2
EGAK                             IAmb    IAmb    11 24 16.6
           comp=Z,106nm,0.9s
BILL   Bilibino        16.00 325⇑eP      Pn      11 24 10.9 +0.2
BILL                             pmax    pmax
           comp=Z,110nm,1.5s
BILL                             MLR     MLR
           comp=Z,2μm,15.0s
BILL   Bilibino        16.00 325 P       Pn      11 24 12.0 +1.4
DAWY   Dawson          16.32  51         Pn      11 24 15.7 +0.9
DAWY                             IAmb    IAmb    11 24 24.9
           comp=Z,370nm,1.2s
HYT    Haines Junctio  16.81  63 P       Pn      11 24 22.0 +0.9
HYT                              IAmb    IAmb    11 24 29.9
           comp=Z,375nm,1.4s
SKAG   Skagway         17.96  67 P       P       11 24 38.2 +2.3
EPYK   Eagle Plains    18.02  44 P       Pn      11 24 35.8 -0.2
           baz=253
EPYK   Eagle Plains    18.02  44 P       P       11 24 37.1 +0.7
WHY    Whitehorse      18.10  63 P       Pn      11 24 37.2  0.0
WHY                              IAmb    IAmb    11 24 44.4
           comp=Z,222nm,1.1s
BESE   Bessie Mountai  18.32  70         P       11 24 42.0 +2.2
SIT    Sitka           18.36  75 P       P       11 24 41.1 +0.9
SIT                              pmax    pmax
           comp=Z,374nm,1.5s
SIT    Sitka           18.36  75         P       11 24 41.1 +0.9
SIT                              IAmb    IAmb    11 24 49.6
           comp=Z,374nm,1.5s
JIS    Juneau Island   18.61  70 P       Pn      11 24 43.6 +0.3
PET    Petropavlovsk   18.83 273 eP      Pn      11 24 46.1 +0.1
PET                              eS      Sn      11 28 11.5 -4.9
PET                              pmax    pmax
           comp=Z,2μm,12.6s
PET                              pmax    pmax
           comp=Z,139nm,1.8s
PET                              pmax    pmax
           comp=Z,1μm,13.2s
PET                              MLR     MLR
           comp=Z,500nm,17.0s
PET    Petropavlovsk   18.83 273 P       Pn      11 24 46.3 +0.3
PEA0B  Petropavlovsk-  19.32 273ceP      Pn      11 24 52.8 +0.9
PEA0B  Petropavlovsk-  19.32 273         Pn      11 24 52.5 +0.6
PEA0B                            IAmb    IAmb    11 24 54.2
           comp=Z,127nm,1.1s
PETK   Petropavlovsk-  19.32 273 P       Pn      11 24 52.4 +0.4
           comp=Z,1.6nm,0.3s,baz=85,slow=10,SNR=44
PETK                             LR      LR      11 32 43.2
           comp=Z,286nm,18.5s,baz=82,slow=38
PETK   Petropavlovsk-  19.32 273 P       Pn      11 24 51.6 -0.4
PETK   Petropavlovsk-  19.32 273 P       Pn      11 24 51.6 -0.4
INK    Inuvik          19.79  40 P       P       11 24 55.6 -0.2
           comp=Z,1.0nm,0.3s,baz=238,slow=9.1,SNR=70
INK                              LR      LR      11 33 17.9
           comp=Z,2μm,19.0s,baz=246,slow=39
INK    Inuvik          19.79  40 P       P       11 24 56.0 +0.2
INK                              pmax    pmax
           comp=Z,138nm,1.0s
INK    Inuvik          19.79  40 P       P       11 24 56.0 +0.2
INK                              IAmb    IAmb    11 25 01.8
           comp=Z,138nm,1.0s
CRAG   Craig           19.97  78 P       Pn      11 24 59.6  0.0
CRAG                             IAmb    IAmb    11 25 10.7
           comp=Z,262nm,1.3s
WRAK   Wrangell Islan  20.11  75 P       Pn      11 25 01.6 +0.4
SEY    Seymchan        20.13 304 P       P       11 24 59.9 +0.4
           comp=Z,50nm,1.1s,baz=75,slow=10,SNR=104
SEY    Seymchan        20.13 304⇑iP      P       11 24 58.8 -0.7
DLBC   Dease Lake      20.84  69 P       P       11 25 08.1 +0.7
           comp=Z,28nm,1.0s,baz=280,slow=12,SNR=28
DLBC                             LR      LR      11 33 10.7
           comp=Z,850nm,20.5s,baz=282,slow=37
DLBC   Dease Lake      20.84  69 P       P       11 25 07.7 +0.3
MA2    Magadan         21.18 295 P       P       11 25 11.0  0.0
           comp=Z,65nm,1.1s,baz=85,slow=9.5,SNR=18
MA2    Magadan         21.18 295ceP      P       11 25 11.9 +0.9
MA2                              pmax    pmax
           comp=Z,151nm,1.7s
MA2    Magadan         21.18 295 P       P       11 25 11.3 +0.3
MA2                              IAmb    IAmb    11 25 17.6
           comp=Z,174nm,1.4s
C36M   Paulatuk        23.37  39 P       P       11 25 33.7 -0.4
           baz=260,SNR=35
C36M   Paulatuk        23.37  39 P       P       11 25 33.4 -0.7
C36M                             IAmb    IAmb    11 25 39.3
           comp=Z,189nm,1.5s
YKA    Yellowknife Ar  27.46  55 P       P       11 26 11.7 +0.2
           comp=Z,26nm,1.0s,baz=279,slow=8.5,SNR=71
YKA                              PcP     PcP     11 29 29.4 -0.1
           comp=Z,6.3nm,1.0s,baz=300,slow=1.8,SNR=4.5
YKA                              LR      LR      11 37 57.9
           comp=Z,2μm,18.1s,baz=0.0,slow=38
YKA    Yellowknife Ar  27.46  55 i P     P       11 26 12.1 +0.6
YKA                              pmax    pmax
           comp=Z,81nm,1.3s
A04D   Lummi Island    28.72  86 P       P       11 26 23.7 +0.9
           baz=304
D03D   Eldon           29.18  88 P       P       11 26 28.8 +1.8
           baz=306,SNR=9.3
B05A   Bryant          29.31  86 P       P       11 26 29.1 +1.0
           baz=304,SNR=15
E03A   Lebam           29.50  90 P       P       11 26 31.6 +1.7
E03A                             IAmb    IAmb    11 26 33.0
           comp=Z,56nm,1.1s
D04E   Lakebay         29.56  89 P       P       11 26 32.6 +2.2
           baz=306
D05A   Enumclaw        29.99  88 P       P       11 26 36.1 +1.9
D05A                             IAmb    IAmb    11 26 36.9
           comp=Z,38nm,1.1s
E04D   Cinebar         30.05  90 P       P       11 26 36.7 +2.0
           baz=307,SNR=15
LON    Longmire        30.35  89 P       P       11 26 38.1 +0.7
LON                              pmax    pmax
           comp=Z,14nm,1.1s
LON    Longmire        30.35  89 P       P       11 26 38.1 +0.7
G03D   McMinnville, O  30.48  92 P       P       11 26 39.9 +1.4
           baz=309
YAK    Yakutsk         30.63 306 eP      P       11 26 39.0 -0.7
YAK                              e               11 27 46.9
YAK                              e               11 29 36.6
YAK                              eS      S       11 31 37.3 -4.1
YAK                              eSS     ScP     11 33 19.7  0.0
YAK                              e               11 37 09.5
YAK                              pmax    pmax
           comp=Z,70nm,1.2s
YAK                              pmax    pmax
           comp=N,11nm,1.1s
YAK                              pmax    pmax
           comp=E,49nm,1.3s
YAK                              pmax    pmax
           comp=Z,74nm,1.8s
YAK                              pmax    pmax
           comp=N,27nm,1.7s
YAK                              pmax    pmax
           comp=E,68nm,1.9s
YAK                              smax    smax
           comp=N,26nm,2.0s
YAK                              smax    smax
           comp=E,37nm,2.4s
LTY    Liberty         30.68  87 P       P       11 26 40.8 +0.5
B08A   Colville Reser  30.78  84 P       P       11 26 41.2  0.0
COR    Corvallis       30.86  93 P       P       11 26 44.5 +2.7
F05D   White Salmon    31.06  90 P       P       11 26 44.5 +0.8
           baz=308
H04D   Lebanon         31.21  93 P       P       11 26 46.8 +1.8
           baz=310,SNR=9.6
I03D   Drain, OR       31.40  95 P       P       11 26 48.1 +1.4
           baz=311
H04A   Detroit Lake    31.41  92 P       P       11 26 47.3 +0.5
H04A                             IAmb    IAmb    11 26 49.1
           comp=Z,42nm,1.1s
J01E   Myrtle Point    31.43  96 P       P       11 26 49.1 +2.2
           baz=311
G05D   Wamic, OR       31.54  91 P       P       11 26 49.2 +1.3
           baz=309,SNR=6.3
E07A   Sunnyside       31.54  87 P       P       11 26 48.9 +1.0
E07A                             IAmb    IAmb    11 26 54.0
           comp=Z,39nm,1.3s
C09A   Chrisman Ranch  31.68  84 P       P       11 26 49.1  0.0
C09A                             IAmb    IAmb    11 26 55.6
           comp=Z,32nm,1.5s
D08A   Wollman Farm,   31.76  86 P       P       11 26 49.6 -0.2
D08A                             IAmb    IAmb    11 26 51.4
           comp=Z,32nm,1.3s
HAWA   Hanford         31.82  87 P       P       11 26 50.6 +0.3
HAWA                             IAmb    IAmb    11 26 52.2
           comp=Z,36nm,1.1s
I04A   Tendick Farm,   31.86  94 P       P       11 26 52.0 +1.3
           baz=310,SNR=15
K02D   Willamette Mer  31.89  96 P       P       11 26 52.1 +1.0
           baz=312
NEW    Newport         32.04  83 P       P       11 26 52.8 +0.5
           baz=305,SNR=15
NEW    Newport         32.04  83 P       P       11 26 52.6 +0.3
NEW                              pmax    pmax
           comp=Z,15nm,1.1s
NEW    Newport         32.04  83 P       P       11 26 52.6 +0.3
I05D   Terrebonne, OR  32.10  92 P       P       11 26 54.3 +1.4
           baz=310,SNR=7.2
L02E   Cave Junction   32.28  97 P       P       11 26 56.0 +1.5
           baz=313
HUMO   Hull Mountain   32.34  96 P       P       11 26 56.0 +1.0
J04D   Umpqua Nationa  32.38  94 P       P       11 26 57.4 +1.8
           baz=311,SNR=8.7
RES    Resolute Bay    32.47  28 P       P       11 26 54.9 -0.9
           comp=Z,5.1nm,1.1s,baz=248,slow=12,SNR=8.2
RES                              PcP     PcP     11 29 42.6 +0.4
           comp=Z,2.8nm,0.8s,baz=252,slow=3.2,SNR=1.7
RES    Resolute Bay    32.47  28 P       P       11 26 55.5 -0.2
RES                              pmax    pmax
           comp=Z,25nm,1.5s
RES    Resolute Bay    32.47  28 P       P       11 26 55.5 -0.2
E09A   Wood Farm, Sta  32.51  86 P       P       11 26 56.6 +0.2
E09A                             IAmb    IAmb    11 26 57.9
           comp=Z,32nm,1.1s
JKA    Kamikawa-asahi  32.56 268 P       P       11 26 58.1 +1.2
JKA                              IAmb    IAmb    11 27 01.2
           comp=Z,80nm,1.4s
ASAJ   Asahikawa       32.56 268 P       P       11 26 58.1 +1.3
ASAJ                             pmax    pmax
           comp=Z,80nm,1.4s
PINE   Pine Mountain   32.67  92 P       P       11 26 59.5 +1.4
PINE                             IAmb    IAmb    11 27 00.7
           comp=Z,36nm,1.1s
G08A   Pilot Rock      32.81  89 P       P       11 26 59.1 -0.1
J05D   Fort Rock, OR   32.84  93 P       P       11 27 01.1 +1.6
           baz=311,SNR=32
L04D   Klamath Falls   32.96  96 P       P       11 27 02.0 +1.5
           baz=312,SNR=9.2
YBH    Yreka Blue Hor  33.06  97 P       P       11 27 02.8 +1.4
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YBH				pmax	pmax		
	comp=Z,47nm,1.5s						
YBH	**Yreka Blue Hor**	33.06	97	P	P	11 27 02.8	+1.4
YBH				IAmb	IAmb	11 27 08.7	
	comp=Z,47nm,1.5s						
M02C	**Callahan**	33.22	97	P	P	11 27 04.9	+2.2
	baz=313,SNR=9.9						
I07A	**Izee**	33.28	91	P	P	11 27 04.3	+1.0
I07A				IAmb	IAmb	11 27 05.3	
	comp=Z,27nm,1.2s						
WALA	**Waterton Lakes**	33.34	79	P	P	11 27 03.7	-0.1
F10A	**Beach Ranch, E**	33.34	86	P	P	11 27 03.5	-0.3
F10A				IAmb	IAmb	11 27 05.2	
	comp=Z,24nm,1.1s						
K05A	**Summer Lake**	33.40	94	P	P	11 27 05.9	+1.5
K05A				IAmb	IAmb	11 27 07.3	
	comp=Z,42nm,1.0s						
M04C	**Macdoel**	33.51	96	P	P	11 27 06.9	+1.6
	baz=313,SNR=25						
N02D	**Trinity Center**	33.59	98	P	P	11 27 07.9	+2.0
	baz=314,SNR=12						
JTMT	**Jette**	33.90	81	P	P	11 27 08.4	-0.3
WDC	**Whiskeytown Da**	33.95	98	P	P	11 27 09.7	+0.7
WDC				pmax	pmax		
	comp=Z,19nm,1.2s						
WDC	**Whiskeytown Da**	33.95	98	P	P	11 27 09.7	+0.7
BMO	**Blue Mountains**	34.00	88	P	P	11 27 09.2	-0.3
BMO				pmax	pmax		
	comp=Z,23nm,1.5s						
BMO	**Blue Mountains**	34.00	88	P	P	11 27 09.2	-0.3
O02D	**Mt. Diablo Mer**	34.09	99	P	P	11 27 12.4	+2.1
	baz=315,SNR=8.5						
MOD	**Modoc Plateau**	34.27	94	P	P	11 27 12.8	+0.9
MOD				IAmb	IAmb	11 27 14.4	
	comp=Z,32nm,1.1s						
O03E	**Paynes Creek**	34.55	98	P	P	11 27 15.2	+0.9
	baz=314,SNR=27						
MSO	**Missoula**	34.63	82	P	P	11 27 14.8	-0.1
	baz=307,SNR=6.3						
MSO	**Missoula**	34.63	82	P	P	11 27 13.9	-1.1
WVOR	**Wild Horse Val**	34.83	92	P	P	11 27 17.2	+0.4
WVOR				pmax	pmax		
	comp=Z,33nm,1.1s						
WVOR	**Wild Horse Val**	34.83	92	P	P	11 27 17.1	+0.4
WVOR				IAmb	IAmb	11 27 18.9	
	comp=Z,33nm,1.1s						
GDXM	**Geysers**	35.06	101	P	P	11 27 19.1	+0.4
ORV	**Oroville**	35.24	98	P	P	11 27 19.9	-0.2
ORV				pmax	pmax		
	comp=Z,19nm,1.1s						
ORV	**Oroville**	35.24	98	P	P	11 27 19.9	-0.2
ZEA	**Zeya**	35.30	293	*e*P	P	11 27 20.2	-0.3
ZEA				pmax	pmax		
	comp=E,10.0nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,20nm,1.8s						
ZEA				MLR	MLR		
	comp=E,400nm,12.0s						
ZEA				MLR	MLR		
	comp=Z,400nm,14.0s						
KLR	**Kul'dur**	35.40	284	*ce*P	P	11 27 19.7	-1.8
KLR				pmax	pmax		
	comp=Z,18nm,1.7s						
BEKR	**Beckworth**	35.64	97	P	P	11 27 24.4	+0.5
MFID	**Camas Ranch**	35.74	89	P	P	11 27 24.8	+0.2
HRY	**Holter Researc**	35.86	81	P	P	11 27 25.4	-0.1
KIP	**Kipapa**	36.12	162	*ce*P	P	11 27 29.4	+1.6
KIP				pmax	pmax		
	comp=Z,35nm,1.0s						
EGMT	**Eagleton**	36.19	78	P	P	11 27 27.5	-0.8
	baz=306						
EGMT	**Eagleton**	36.19	78	P	P	11 27 27.6	-0.8
DLMT	**Dillon**	36.27	83	P	P	11 27 29.0	-0.2
PAHR	**Pah Rah Range**	36.29	96	P	P	11 27 30.1	+0.8
PAHR				IAmb	IAmb	11 27 31.3	
	comp=Z,38nm,1.0s						
HLID	**Hailey**	36.42	87	P	P	11 27 30.8	+0.3
	baz=311,SNR=16						
HLID	**Hailey**	36.42	87	P	P	11 27 30.5	0.0
VCNR	**Virginia City**	36.43	97	P	P	11 27 31.1	+0.5
VCNR				IAmb	IAmb	11 27 33.0	
	comp=Z,41nm,1.0s						
MCMT	**McKenzie Canyo**	36.47	84	P	P	11 27 31.4	+0.4
BCYI	**Bear Canyon**	36.49	85	P	P	11 27 31.4	+0.3
FFC	**Flin Flon**	36.51	64	P	P	11 27 30.3	-0.6
FFC				pmax	pmax		
	comp=Z,38nm,1.5s						
FFC	**Flin Flon**	36.51	64	P	P	11 27 30.3	-0.6
FFC				IAmb	IAmb	11 27 35.5	
	comp=Z,38nm,1.4s						
PNTR	**Pine Nut**	36.60	97	P	P	11 27 32.7	+0.6
PNTR				IAmb	IAmb	11 27 34.5	
	comp=Z,64nm,1.0s						
BOZ	**Bozeman (W)**	36.65	82	P	P	11 27 32.2	-0.2
	baz=309,SNR=17						
BOZ	**Bozeman (W)**	36.65	82	P	P	11 27 31.8	-0.6
BOZ				pmax	pmax		
	comp=Z,22nm,1.4s						
BOZ	**Bozeman (W)**	36.65	82	P	P	11 27 31.8	-0.6
CMB	**Columbia Colle**	36.93	99	P	P	11 27 34.4	-0.3
CMB				pmax	pmax		
	comp=Z,20nm,1.1s						
CMB	**Columbia Colle**	36.93	99	P	P	11 27 34.4	-0.3
WAKR	**Walker**	37.11	98	P	P	11 27 37.8	+1.4
WAKR				IAmb	IAmb	11 27 38.9	
	comp=Z,30nm,1.0s						
QLMT	**Earthquake Lak**	37.25	83	P	P	11 27 37.1	-0.5
YHL	**Hebgen Lake**	37.37	83	P	P	11 27 38.3	-0.3
YHB	**Horse Butte**	37.43	83	P	P	11 27 38.8	-0.3
RYN	**Ryan**	37.52	97	P	P	11 27 40.3	+0.4
YHH	**Holmes Hill**	37.59	83	P	P	11 27 40.2	-0.3
GCMT	**Greycliff**	37.60	81	P	P	11 27 40.3	-0.2
YMR	**Madison River**	37.61	83	P	P	11 27 40.1	-0.5
YNR	**Norris Junctio**	37.73	83	P	P	11 27 42.5	+0.8
NVAR	**Mina Array Bea**	37.78	97	P	P	11 27 42.4	+0.2
	comp=Z,10nm,0.8s,baz=299,slow=8.2,SNR=67						
NVAR				PcP	PcP	11 29 59.4	+0.7
	comp=Z,8.5nm,0.9s,baz=292,slow=3.3,SNR=7.8						
NVAR				LR	LR	11 41 34.8	
	comp=Z,537nm,18.2s,baz=324,slow=34						
NVAR	**Mina Array Bea**	37.78	97	P	P	11 27 41.6	-0.6
LHV	**Little Huntoon**	37.80	97	P	P	11 27 42.9	+0.9
LHV				IAmb	IAmb	11 27 44.5	
	comp=Z,30nm,1.1s						
ELK	**Elko**	37.85	91	P	P	11 27 43.1	+0.3
ELK				pmax	pmax		
	comp=Z,30nm,1.2s						
ELK	**Elko**	37.85	91	P	P	11 27 43.0	+0.3
NV11	**Mina Array Sit**	37.87	97	P	P	11 27 43.6	+0.9
YNE	**Yellowstone No**	37.91	82	P	P	11 27 42.8	-0.4
MDPB	**Devils Postpil**	37.93	98	P	P	11 27 44.6	+1.1
YPP	**Pitchstone Pla**	37.95	84	P	P	11 27 44.5	+0.9
LKWY	**Lake**	37.98	83	P	P	11 27 44.7	+0.9
LKWY				pmax	pmax		
	comp=Z,19nm,1.3s						
LKWY	**Lake**	37.98	83	P	P	11 27 44.7	+0.9
H17A	**Grant Village**	37.99	83	P	P	11 27 45.3	+1.3
	baz=310,SNR=7.5						
H17A	**Grant Village**	37.99	83	P	P	11 27 44.6	+0.7
YMP	**Mirror Lake Pl**	38.00	82	P	P	11 27 44.0	-0.1
TULEG	**Thule**	38.06	22	P	P	11 27 43.9	+0.1
MLAC	**Mammoth, Mammo**	38.07	98	P	P	11 27 46.4	+1.8
	baz=317,SNR=9.6						
IMW	**Indian Meadow**	38.12	84	P	P	11 27 45.1	+0.1
FCC	**Fort Churchill**	38.19	55	P	P	11 27 44.9	-0.1
FCC				pmax	pmax		
	comp=Z,66nm,1.2s						
FCC	**Fort Churchill**	38.19	55	P	P	11 27 44.9	-0.1
FCC				IAmb	IAmb	11 27 51.0	
	comp=Z,66nm,1.2s						
RLMT	**Red Lodge**	38.25	81	P	P	11 27 46.2	+0.2
	baz=310,SNR=7.4						
RLMT	**Red Lodge**	38.25	81	P	P	11 27 46.3	+0.3
MOOW	**Moose Ponds**	38.32	84	P	P	11 27 47.1	+0.4
USRK	**Ussuriysk Ar.**	38.35	277	PcP	PcP	11 30 00.5	+0.4
	comp=Z,5.2nm,1.0s,baz=73,slow=5.5,SNR=5.1						
USRK				LR	LR	11 43 57.7	
	comp=Z,263nm,19.4s,baz=47,slow=37						
LOHW	**Long Hollow**	38.49	84	P	P	11 27 47.8	-0.2
SNOW	**Snow King Moun**	38.50	84	P	P	11 27 48.3	+0.1
HVU	**Hansel Valley**	38.51	88	P	P	11 27 48.4	+0.3
HVU				pmax	pmax		
	comp=Z,28nm,1.0s						
HVU	**Hansel Valley**	38.51	88	P	P	11 27 48.4	+0.3
REDW	**Red Top Meadow**	38.52	85	P	P	11 27 48.7	+0.4
TPH	**Tonopah**	38.63	96	P	P	11 27 49.6	+0.3
TPH				pmax	pmax		
	comp=Z,151nm,1.0s						
TPH	**Tonopah**	38.63	96	P	P	11 27 49.6	+0.3
PAGB	**Antelope Grade**	38.70	102	P	P	11 27 50.7	+1.1
PAGB				IAmb	IAmb	11 27 52.1	
	comp=Z,40nm,1.2s						
VOG	**Valley Oaks Go**	38.73	100	P	P	11 27 50.8	+1.0
	baz=318						
AHID	**Auburn Hatcher**	38.77	86	P	P	11 27 49.9	-0.5
LAO	**LASA Array**	38.91	77	P	P	11 27 51.4	+0.1
	baz=309						
LAO	**LASA Array**	38.91	77	P	P	11 27 51.4	+0.1
BGU	**Big Grassy Mou**	38.95	89	P	P	11 27 51.9	0.0
SPUT	**South Promonto**	39.01	88	P	P	11 27 52.6	+0.2
SMMC	**Simmler**	39.14	102	P	P	11 27 54.9	+1.5
	baz=319,SNR=6.1						
VES	**Vestal, Richgr**	39.24	100	P	P	11 27 54.9	+0.8
	baz=318,SNR=12						
R11A	**Troy Canyon, C**	39.34	94	P	P	11 27 55.5	+0.3
	baz=316						
R11A	**Troy Canyon, C**	39.34	94	P	P	11 27 55.0	-0.1
CWC	**Cottonwood Cre**	39.35	99	P	P	11 27 56.0	+0.7
	baz=318						
MDJ	**Mudanjiang**	39.40	279	P	P	11 27 53.8	-1.5
MDJ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,320nm,3.9s						
BOD	**Bodaibo**	39.54	305	*e*P	P	11 27 55.7	-0.7
BOD				pmax	pmax		
	comp=Z,32nm,1.7s						
PKM	**Mcpherson Peak**	39.56	102	P	P	11 27 58.7	+1.6
	baz=319,SNR=5.5						
DUG	**Dugway, Tooele**	39.57	90	P	P	11 27 57.0	-0.1
	baz=314,SNR=19						
DUG	**Dugway, Tooele**	39.57	90	P	P	11 27 56.8	-0.2
DUG				pmax	pmax		
	comp=Z,33nm,1.4s						
DUG	**Dugway, Tooele**	39.57	90	P	P	11 27 56.8	-0.2
BW06	**Boulder Array**	39.62	84	P	P	11 27 57.3	-0.2
	baz=312,SNR=5.1						
BW06	**Boulder Array**	39.62	84	P	P	11 27 57.0	-0.6
PD31	**Pinedale Array**	39.62	84	P	P	11 27 57.2	-0.3
PDAR	**Pinedale Array**	39.62	84	P	P	11 27 55.6	-1.9
	comp=Z,2.9nm,1.0s,baz=308,slow=5.5,SNR=15						
PDAR				LR	LR	11 45 25.6	
	comp=Z,208nm,19.2s,baz=328,slow=38						
PDAR	**Pinedale Array**	39.62	84	P	P	11 27 57.3	-0.2
ISA	**Isabella, Lake**	39.71	100	P	P	11 27 58.1	0.0
	baz=318,SNR=7.6						
ISA	**Isabella, Lake**	39.71	100	P	P	11 27 57.4	-0.8
ISA				pmax	pmax		
	comp=Z,25nm,1.5s						
ISA	**Isabella, Lake**	39.71	100	P	P	11 27 57.4	-0.8
TCUT	**Toone Canyon**	39.71	88	P	P	11 27 58.2	-0.2
CTU	**Camp Tracy**	39.81	89	P	P	11 27 58.5	-0.6
ARVC	**Arvin**	39.91	101	P	P	11 27 60.0	+0.2
	baz=319						
SBC	**Santa Barbara**	39.95	102	P	P	11 28 01.7	+1.6
	baz=319						
MPMC	**Manual Prospec**	39.95	99	P	P	11 28 01.1	+0.7
	baz=318,SNR=19						
TPNV	**Topopah Spring**	39.98	97	P	P	11 28 01.1	+0.6
	baz=317,SNR=29						
TPNV	**Topopah Spring**	39.98	97	P	P	11 28 00.6	+0.1
TPNV				pmax	pmax		
	comp=Z,47nm,1.1s						
TPNV	**Topopah Spring**	39.98	97	P	P	11 28 00.6	+0.1
TPNV				IAmb	IAmb	11 28 02.4	
	comp=Z,47nm,1.1s						
FURC	**Furnace Creek,**	39.99	98	P	P	11 28 01.7	+1.3
	baz=317,SNR=25						
JLU	**Jordanelle**	40.04	88	P	P	11 28 01.2	+0.1
NLU	**North Lily Min**	40.14	90	P	P	11 28 01.3	-0.6
PSUT	**Pine Spring**	40.16	93	P	P	11 28 02.4	+0.3
MAJO	**Matsushiro**	40.21	263	*i* P	P	11 28 02.8	+0.6
MAJO	**Matsushiro**	40.21	263	P	P	11 28 02.0	-0.2
MAJO				IAmb	IAmb	11 28 04.6	
	comp=Z,70nm,1.4s						
MAT	**Matsushiro**	40.21	263	P	P	11 28 01.6	-0.6
MAT				*e*S	S	11 34 08.2	-0.7
MJAR	**Matsushiro Arr**	40.21	263	P	P	11 28 02.2	0.0
	comp=Z,21nm,1.3s,baz=24,slow=6.9,SNR=11						
MJAR				PcP	PcP	11 30 06.2	+0.1
	comp=Z,4.5nm,1.0s,baz=10,slow=2.1,SNR=5.2						
MJAR				LR	LR	11 42 36.2	
	comp=Z,162nm,21.8s,baz=90,slow=33						
MJAR	**Matsushiro Arr**	40.21	263	P	P	11 28 02.3	0.0
MJAR				pmax	pmax		
	comp=Z,27nm,1.5s						
MJAR	**Matsushiro Arr**	40.21	263	P	P	11 28 02.3	0.0
LRMC	**Laurel Mtn Rad**	40.28	99	P	P	11 28 03.4	+0.5
	baz=318,SNR=15						
PRN	**Pahroc Range**	40.31	95	P	P	11 28 03.6	+0.5
PRN				IAmb	IAmb	11 28 05.6	
	comp=Z,70nm,1.2s						
MPU	**Maple Canyon**	40.35	89	P	P	11 28 03.5	-0.1
EDW2	**Edwards Air Fo**	40.55	100	P	P	11 28 05.6	+0.5
	baz=319,SNR=6.3						
SHOC	**Shoshone, Teco**	40.73	98	P	P	11 28 07.6	+1.0
	baz=318,SNR=9.6						
DECC	**Green Verdugo**	40.84	101	P	P	11 28 08.8	+1.3
	baz=319						
GSC	**Goldstone, Bar**	40.89	99	P	P	11 28 08.5	+0.6
	baz=318,SNR=28						
GSC	**Goldstone, Bar**	40.89	99	P	P	11 28 08.2	+0.3
GSC				pmax	pmax		
	comp=Z,46nm,1.2s						
GSC	**Goldstone, Bar**	40.89	99	P	P	11 28 08.2	+0.3
GSC				IAmb	IAmb	11 28 09.8	
	comp=Z,46nm,1.2s						
SHPR	**Sheep Range**	40.90	96	P	P	11 28 08.5	+0.4
MWC	**Mount Wilson**	41.01	101	P	P	11 28 09.5	+0.4
MWC				pmax	pmax		
	comp=Z,49nm,1.3s						
MWC	**Mount Wilson**	41.01	101	P	P	11 28 09.5	+0.4
MWC				IAmb	IAmb	11 28 11.7	
	comp=Z,49nm,1.3s						
TMUT	**Trail Mountain**	41.08	90	P	P	11 28 09.6	-0.2
MVU	**Marysvale**	41.09	91	P	P	11 28 09.9	+0.1
MSU	**Marysvale**	41.10	91	P	P	11 28 10.0	+0.2
MSU	**Marysvale**	41.10	91	P	P	11 28 10.0	+0.2
CCUT	**Cedar City**	41.13	93	P	P	11 28 10.2	+0.1
BFSC	**Mount Baldy Ra**	41.22	101	P	P	11 28 11.5	+0.8
	baz=319,SNR=8.4						
P17A	**Butcher Ranch,**	41.22	89	P	P	11 28 10.6	-0.1
SZCU	**Shurtz Canyon**	41.25	93	P	P	11 28 11.0	-0.1
K22A	**Casper**	41.36	82	P	P	11 28 11.4	-0.5
	baz=312						
K22A	**Casper**	41.36	82	P	P	11 28 10.9	-1.0
MTPU	**Mount Pierson**	41.43	92	P	P	11 28 13.0	+0.3
HEC	**Hector,Ludlow**	41.49	99	P	P	11 28 13.7	+0.8
	baz=318,SNR=23						
LCMT	**Little Creek M**	41.59	94	P	P	11 28 14.2	+0.5
SRU	**San Rafael Swe**	41.59	89	P	P	11 28 13.5	-0.3
SRU				pmax	pmax		
	comp=Z,80nm,1.2s						
SRU	**San Rafael Swe**	41.59	89	P	P	11 28 13.5	-0.3
BBRC	**Big Bear Solar**	41.60	100	P	P	11 28 15.1	+1.1
	baz=319						
RWWY	**Rawlins**	41.63	84	P	P	11 28 11.7	-2.5
SCI2	**San Clemente I**	41.69	103	P	P	11 28 15.4	+1.0
	baz=320						
HIA	**Hailar**	41.70	291	P	P	11 28 13.9	-0.5
HIA				pmax	pmax		
	comp=Z,11nm,0.9s						
HIA	**Hailar**	41.70	291	P	P	11 28 13.9	-0.5
MDND	**Maddock**	41.70	71	P	P	11 28 16.5	+2.1
RSSD	**Black Hills**	41.74	79	P	P	11 28 14.2	-0.8
	baz=311						
RSSD	**Black Hills**	41.74	79	P	P	11 28 13.6	-1.4
RSSD				pmax	pmax		
	comp=Z,9.0nm,1.0s						
RSSD	**Black Hills**	41.74	79	P	P	11 28 13.6	-1.4
PKCU	**Pink Cliffs**	41.79	93	P	P	11 28 16.3	+0.7
KNB	**Kanab**	41.82	93	P	P	11 28 15.8	+0.1
KNB				pmax	pmax		
	comp=Z,55nm,1.4s						
KNB	**Kanab**	41.82	93	P	P	11 28 15.8	+0.1
GMRC	**Granite Mounta**	41.90	98	P	P	11 28 16.8	+0.5
	baz=318,SNR=33						
MURC	**Murrieta**	41.95	101	P	P	11 28 17.2	+0.5
	baz=320						
ULM	**Lac du Bonnet**	42.13	66	P	P	11 28 17.0	-0.9
	comp=Z,21nm,1.2s,baz=298,slow=7.2,SNR=11						
ULM				PcP	PcP	11 30 11.0	-1.1
	comp=Z,6.9nm,1.0s,baz=295,slow=1.8,SNR=3.3						
ULM				LR	LR	11 47 06.0	
	comp=Z,1µm,18.8s,baz=314,slow=38						
ULM	**Lac du Bonnet**	42.13	66	⇓*i*P	P	11 28 16.6	-1.2
ULM	**Lac du Bonnet**	42.13	66	P	P	11 28 17.2	-0.7
O20A	**White River Ci**	42.13	86	P	P	11 28 18.0	-0.3
	baz=314,SNR=13						
O20A	**White River Ci**	42.13	86	P	P	11 28 17.7	-0.6
CN2	**Changchun**	42.18	281	*e*P	P	11 28 12.8	-5.5
BELC	**Belle Mtn. Jos**	42.30	99	P	P	11 28 20.1	+0.5
	baz=319						
PFO	**Pinyon Flats O**	42.34	100	P	P	11 28 20.3	+0.3
	baz=319,SNR=16						
PFO	**Pinyon Flats O**	42.34	100	⇓*i*P	P	11 28 18.9	-1.0
PFO				pmax	pmax		
	comp=Z,47nm,1.3s						
PFO	**Pinyon Flats O**	42.34	100	P	P	11 28 20.1	+0.2
NEE2	**Needles Airpor**	42.48	97	P	P	11 28 21.6	+0.7
	baz=318,SNR=6.5						
U15A	**North Rim**	42.54	94	P	P	11 28 22.0	+0.3
U15A				IAmb	IAmb	11 28 23.4	
	comp=Z,41nm,1.1s						
109C	**Camp Elliot, M**	42.54	101	P	P	11 28 22.2	+0.8
	baz=320,SNR=9.8						
109C	**Camp Elliot, M**	42.54	101	P	P	11 28 21.8	+0.4
109C				IAmb	IAmb	11 28 24.0	
	comp=Z,43nm,1.1s						
W13A	**Hualapai Mount**	42.64	96	P	P	11 28 22.5	+0.1
IRM	**Iron Mountain**	42.65	98	P	P	11 28 22.9	+0.6
	baz=319,SNR=55						
NRIK	**Noril'sk**	42.77	329	P	P	11 28 22.6	-0.2
	comp=Z,14nm,1.1s,baz=67,slow=6.3,SNR=22						
NRIK				LR	LR	11 48 58.2	
	comp=Z,538nm,19.1s,baz=55,slow=40						
NRIK	**Noril'sk**	42.77	329	*ce*P	P	11 28 22.7	-0.2
NRIK				pmax	pmax		
	comp=Z,44nm,1.4s						
NRIK	**Noril'sk**	42.77	329	P	P	11 28 22.6	-0.2
NRIK				IAmb	IAmb	11 28 24.2	
	comp=Z,45nm,1.3s						
BC3	**Big Chuckawall**	42.86	99	P	P	11 28 24.2	+0.1
	baz=319,SNR=9.8						
TJX	**Tijuana**	42.86	102	P	P	11 28 25.7	+1.7
N23A	**Red Feather La**	42.87	84	P	P	11 28 23.8	-0.6
	baz=314						
MONP2	**Monument Peak**	42.91	101	P	P	11 28 25.1	+0.5
	baz=320,SNR=12						
PV10	**Paradox Valley**	42.93	89	P	P	11 28 24.9	+0.1
PV10				IAmb	IAmb	11 28 26.0	
	comp=Z,42nm,1.2s						
BAR	**Barrett**	42.94	101	P	P	11 28 24.8	+0.2
PV14	**Lion Creek, Pa**	42.94	89	P	P	11 28 23.9	-0.9
PV22	**Blue Mesa, Par**	42.96	88	P	P	11 28 24.7	-0.2
UPNV	**Upernavik**	42.97	24	*e*P	P	11 28 24.4	0.0
UPNV				IAmb	IAmb	11 28 25.5	
	comp=Z,32nm,1.0s						
PV20	**West Nyswonger**	42.99	89	P	P	11 28 24.9	-0.3
TKX	**Tecate**	43.05	101	P	P	11 28 25.9	+0.3
PDMCI	**Parker Dam,Lak**	43.09	97	P	P	11 28 26.1	+0.3
	baz=319,SNR=14						
SWSC	**Sam W. Stewart**	43.21	100	P	P	11 28 27.3	+0.6
	baz=320,SNR=9.6						
CBX	**Cerro Bola**	43.22	102	P	P	11 28 28.3	+1.3
IKP	**In-Ko-Pah, Jac**	43.26	101	P	P	11 28 27.8	+0.4
	baz=320,SNR=11						
SMCO	**Snowmass**	43.50	86	P	P	11 28 31.1	+1.5
GLA	**Glamis**	43.66	99	P	P	11 28 30.9	+0.4
	baz=320,SNR=11						
GLA	**Glamis**	43.66	99	P	P	11 28 30.9	+0.4
GLA				pmax	pmax		
	comp=Z,41nm,1.1s						
GLA	**Glamis**	43.66	99	P	P	11 28 30.9	+0.4
GLA				IAmb	IAmb	11 28 32.0	
	comp=Z,41nm,1.1s						
WUAZ	**Wupatki**	43.71	94	P	P	11 28 31.4	+0.4
	baz=318,SNR=11						
WUAZ	**Wupatki**	43.71	94	P	P	11 28 31.1	+0.1
WUAZ				IAmb	IAmb	11 28 32.6	
	comp=Z,34nm,1.2s						
ISCO	**Idaho Springs**	43.81	85	P	P	11 28 34.6	+2.6
ISCO				pmax	pmax		
	comp=Z,8.0nm,2.0s						
ESJX	**Sierra Juarez**	43.84	101	P	P	11 28 32.4	+0.2
MVCO	**Mesa Verde**	44.06	90	P	P	11 28 33.8	-0.2
	baz=316						
MVCO	**Mesa Verde**	44.06	90	P	P	11 28 34.0	+0.1
B35A	**Bob, Littlefor**	44.41	67	P	P	11 28 36.1	-0.2
B35A				IAmb	IAmb	11 28 37.0	
	comp=Z,37nm,1.2s						
X16A	**Lo Mia Camp, P**	44.48	95	P	P	11 28 37.3	0.0
X16A				IAmb	IAmb	11 28 39.3	
	comp=Z,33nm,1.1s						
S22A	**4UR Ranch, Cre**	44.60	88	P	P	11 28 38.6	+0.3
	baz=316,SNR=8.5						
SPX	**San Pedro Mart**	44.85	102	P	P	11 28 40.5	+0.1
SPX				IAmb	IAmb	11 28 42.2	
	comp=Z,24nm,1.0s						
W18A	**Petrified Fore**	44.91	93	P	P	11 28 41.0	+0.4
	baz=318,SNR=12						
W18A	**Petrified Fore**	44.91	93	P	P	11 28 40.6	0.0
W18A				IAmb	IAmb	11 28 42.0	
	comp=Z,25nm,1.1s						
KS19	**Wonju Array Si**	45.22	273	P	P	11 28 43.6	+0.8
KS19				IAmb	IAmb	11 28 45.2	
	comp=Z,52nm,1.4s						
KSRS	**Korea Array**	45.22	273	P	P	11 28 43.5	+0.7
	comp=Z,27nm,1.3s,baz=48,slow=7.0,SNR=26						
KSRS				LR	LR	11 48 31.1	
	comp=Z,138nm,18.6s,baz=68,slow=37						
X18A	**Snowflake**	45.22	93	P	P	11 28 43.6	+0.4
KSAR	**Wonju Array Be**	45.25	273	P	P	11 28 43.7	+0.6
KSAR	**Wonju Array Be**	45.25	273	P	P	11 28 43.7	+0.6
SDCO	**Great Sand Dun**	45.33	87	P	P	11 28 44.0	-0.1
	baz=316,SNR=9.8						
SDCO	**Great Sand Dun**	45.33	87	P	P	11 28 43.4	-0.8
FRB	**Frobisher Bay**	45.43	38	P	P	11 28 43.6	-0.6
FRB				pmax	pmax		
	comp=Z,22nm,1.3s						
DAG	**Danmarks Havn**	45.52	9	*i* P	P	11 28 44.0	-0.8
	comp=Z,22nm,1.2s						
DAG	**Danmarks Havn**	45.52	9	*i* P	P	11 28 44.0	-0.8
DAG	**Danmarks Havn**	45.52	9	*i* P	P	11 28 44.0	-0.8
DAG				IAmb	IAmb	11 28 45.2	
	comp=Z,22nm,1.2s						
PIX	**Pinacate**	45.54	99	P	P	11 28 44.7	-0.7
PIX				IAmb	IAmb	11 28 45.9	
	comp=Z,23nm,1.2s						
214A	**Organ Pipe Nat**	45.59	98	P	P	11 28 46.3	+0.4
	baz=320,SNR=31						
214A	**Organ Pipe Nat**	45.59	98	P	P	11 28 46.3	+0.4
214A				IAmb	IAmb	11 28 47.4	
	comp=Z,39nm,1.0s						
EYMN	**Ely**	45.82	66	P	P	11 28 47.2	-0.3
	baz=311,SNR=6.9						
EYMN	**Ely**	45.82	66	P	P	11 28 47.0	-0.4
KSCO	**Kaye Shedlock'**	46.01	83	P	P	11 28 49.6	+0.3
	baz=315						
F36A	**Milaca**	46.16	70	P	P	11 28 49.4	-0.8
F36A				IAmb	IAmb	11 28 55.7	
	comp=Z,36nm,1.4s						
TJN	**Taejon**	46.31	272	*ce*P	P	11 28 53.1	+1.7
T25A	**Trinidad**	46.37	86	P	P	11 28 52.2	0.0
	baz=316,SNR=13						
TUC	**Tucson**	46.43	96	P	P	11 28 53.1	+0.6
	baz=320						
TUC	**Tucson**	46.43	96	P	P	11 28 52.9	+0.3
TUC				pmax	pmax		
	comp=Z,40nm,1.3s						
TUC	**Tucson**	46.43	96	P	P	11 28 52.9	+0.3
TUC				IAmb	IAmb	11 28 54.3	
	comp=Z,40nm,1.3s						
SUMG	**Summit**	46.64	18	*i* P	P	11 28 54.2	+0.1
	comp=Z,179nm,1.2s						
SUMG	**Summit**	46.64	18	P	P	11 28 54.2	+0.1
SUMG				pmax	pmax		
	comp=Z,57nm,1.1s						
SUMG	**Summit**	46.64	18	P	P	11 28 54.2	+0.1
SUMG	**Summit**	46.64	18	*i* P	P	11 28 54.3	+0.1
SUMG				IAmb	IAmb	11 28 55.7	
	comp=Z,179nm,1.2s						
E38A	**The Farm, Brul**	46.68	68	P	P	11 28 54.0	-0.3
JNU	**Nakatsue**	46.78	266	LR	LR	11 48 40.0	
	comp=Z,175nm,18.6s,baz=68,slow=36						

ANMO	Albuquerque	46.84	90	P	P	11 28 55.5	-0.4
	baz=318						
ANMO	Albuquerque	46.84	90	ceP	P	11 28 56.0	+0.1
ANMO				pmax	pmax		
	comp=Z,20nm,1.7s						
ANMO	Albuquerque	46.84	90	P	P	11 28 55.1	-0.8
SPMN	Marine on St.	46.97	70	P	P	11 28 56.7	+0.2
	baz=313						
SPMN	Marine on St.	46.97	70	P	P	11 28 56.7	+0.2
SPMN				IAmb	IAmb	11 29 02.2	
	comp=Z,51nm,1.4s						
LENM	Lemitar	47.14	91	P	P	11 28 59.0	+0.8
Y22D	IRIS PASSCAL I	47.23	91	P	P	11 28 59.9	+0.9
	baz=318						
Y22D	IRIS PASSCAL I	47.23	91	P	P	11 28 59.4	+0.5
BNM	Barren Site	47.34	91	P	P	11 29 00.7	+0.8
IRK	Irkutsk	47.37	303	eP	P	11 28 57.8	-1.8
IRK				pmax	pmax		
	comp=Z,62nm,3.1s						
DL2	Dalian	47.64	279	P	P	11 29 05.9	+4.1
DL2				eS	S	11 36 02.3	+5.2
DL2				pmax	pmax		
	comp=Z,24nm,0.8s						
DL2				LR	LR		
	comp=N,670nm,14.8s						
DL2				LR	LR		
	comp=E,340nm,16.4s						
DL2				LR	LR		
	comp=Z,400nm,15.9s						
DBG	Daneborg	47.66	11	i P	P	11 29 01.0	-0.5
DBG				IAmb	IAmb	11 29 01.4	
	comp=Z,66nm,0.9s						
121A	Cookes Peak, D	47.91	93	P	P	11 29 04.8	+0.5
	baz=319,SNR=15						
121A	Cookes Peak, D	47.91	93	P	P	11 29 04.5	+0.3
121A				IAmb	IAmb	11 29 05.8	
	comp=Z,27nm,1.1s						
319A	Douglas	47.97	96	P	P	11 29 04.5	-0.2
319A				IAmb	IAmb	11 29 11.2	
	comp=Z,51nm,1.5s						
TLY	Talaya	48.03	303	eP	P	11 29 04.9	+0.1
TLY				e		11 31 02.6	
TLY				eS	S	11 36 12.1	+10
TLY				pmax	pmax		
	comp=Z,89nm,1.4s						
TLY				MLR	MLR		
	comp=Z,2µm,14.0s						
TLY	Talaya	48.03	303	P	P	11 29 04.8	+0.1
TLY				IAmb	IAmb	11 29 06.7	
	comp=Z,42nm,1.3s						
COWI	Conover	48.25	67	P	P	11 29 06.0	-0.5
COWI				IAmb	IAmb	11 29 07.1	
	comp=Z,32nm,1.1s						
G40A	Rib Lake	48.28	68	P	P	11 29 05.4	-1.3
G40A				IAmb	IAmb	11 29 07.9	
	comp=Z,40nm,1.1s						
SFJD	Kangerlussuaq	48.46	27	i P	P	11 29 06.8	-1.0
SFJD	Kangerlussuaq	48.46	27	P	P	11 29 07.9	+0.1
SFJD				pmax	pmax		
	comp=Z,22nm,1.1s						
SFJD	Kangerlussuaq	48.46	27	P	P	11 29 07.9	+0.1
SFJD				IAmb	IAmb	11 29 09.0	
	comp=Z,22nm,1.1s						
SFJD	Kangerlussuaq	48.46	27	i P	P	11 29 06.8	-1.0
N35A	Tabor	48.49	76	P	P	11 29 07.7	-0.7
N35A				IAmb	IAmb	11 29 08.6	
	comp=Z,21nm,0.9s						
HSIG		48.87	99	P	P	11 29 11.2	-0.3
F42A	Maple Grove Fa	48.99	66	P	P	11 29 12.4	+0.2
ULN	Ulaanbaatar	49.00	297	⇓iP	P	11 29 12.1	-0.3
ULN				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ULN	Ulaanbaatar	49.00	297	P	P	11 29 12.0	-0.4
ULN				IAmb	IAmb	11 29 14.0	
	comp=Z,32nm,1.2s						
I40A	Norwalk	49.02	70	P	P	11 29 12.1	-0.3
I40A				IAmb	IAmb	11 29 13.5	
	comp=Z,74nm,1.5s						
ZAK	Zakamensk	49.08	302	eP	P	11 29 11.3	-1.7
ZAK				e		11 30 36.7	
ZAK				pmax	pmax		
	comp=Z,11nm,1.5s						
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.4s						
E43A	Lone Tree Farm	49.14	65	P	P	11 29 12.8	-0.5
E43A				IAmb	IAmb	11 29 14.2	
	comp=Z,43nm,1.0s						
MOY	Mondy	49.26	305	eP	P	11 29 14.6	+0.3
MOY				pmax	pmax		
	comp=Z,62nm,1.9s						
ICESG	Greenland Ices	49.30	21	i P	P	11 29 14.5	-0.1
ICESG				IAmb	IAmb	11 29 15.4	
	comp=Z,42nm,1.0s						
SONM	Songino Array	49.34	298	P	P	11 29 15.1	+0.1
	comp=Z,13nm,1.1s,baz=49,slow=7.9,SNR=48						
SONM				PcP	PcP	11 30 36.9	-0.5
	comp=Z,7.9nm,1.1s,baz=90,slow=2.9,SNR=6.2						
SONM				LR	LR	11 51 16.6	
	comp=Z,498nm,19.0s,baz=42,slow=38						
SONM	Songino Array	49.34	298	P	P	11 29 15.5	+0.5
SONM				pmax	pmax		
	comp=Z,27nm,1.4s						
SONM	Songino Array	49.34	298	P	P	11 29 15.5	+0.5
AMTX	Amarillo	49.52	86	P	P	11 29 15.2	-1.3
	baz=318						
AMTX	Amarillo	49.52	86	P	P	11 29 15.2	-1.3
AMTX				IAmb	IAmb	11 29 20.9	
	comp=Z,34nm,1.5s						
MSTX	Muleshoe	49.60	88	P	P	11 29 16.5	-0.6
	baz=318,SNR=7.0						
MSTX	Muleshoe	49.60	88	P	P	11 29 16.1	-1.1
BJT	Baijiatuau	49.80	284	P	P	11 29 18.9	+0.5
BJT				pmax	pmax		
	comp=Z,34nm,1.4s						
BJT	Baijiatuau	49.80	284	P	P	11 29 18.9	+0.5
BJT				IAmb	IAmb	11 29 20.4	
	comp=Z,34nm,1.4s						
MNTX	Cornudas Mount	49.87	92	P	P	11 29 19.3	+0.2
	baz=320,SNR=39						
MNTX	Cornudas Mount	49.87	92	P	P	11 29 18.9	-0.2
MNTX				IAmb	IAmb	11 29 20.4	
	comp=Z,33nm,1.1s						
JFWS	Jewell Farm	49.90	70	P	P	11 29 18.3	-0.8
	baz=315						
NUUK	Nuuk	50.33	30	i P	P	11 29 21.1	-1.0
NUUK				IAmb	IAmb	11 29 23.4	
	comp=Z,27nm,1.1s						
E46A	Sault Ste Mari	50.49	63	P	P	11 29 23.5	0.0
E46A				IAmb	IAmb	11 29 29.4	
	comp=Z,67nm,1.2s						
P38A	Dawn	50.51	76	P	P	11 29 22.3	-1.4
G45A	Suttons Bay	50.75	65	P	P	11 29 25.8	+0.3
SCO	Scoresbysund	51.01	14	i P	P	11 29 26.6	-0.5
	comp=Z,35nm,1.2s						
SCO	Scoresbysund	51.01	14	P	P	11 29 27.3	+0.2
SCO				pmax	pmax		
	comp=Z,35nm,1.2s						
SCO	Scoresbysund	51.01	14	P	P	11 29 27.3	+0.2
SCO				IAmb	IAmb	11 29 32.3	
	comp=Z,35nm,1.2s						
SCO	Scoresbysund	51.01	14	i P	P	11 29 26.6	-0.5
SCO				IAmb	IAmb	11 29 32.1	
	comp=Z,35nm,1.2s						
WMOK	Wichita Mounta	51.23	84	P	P	11 29 28.4	-1.0
	baz=318,SNR=5.7						
WMOK	Wichita Mounta	51.23	84	P	P	11 29 28.2	-1.1
WMOK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
WMOK	Wichita Mounta	51.23	84	P	P	11 29 28.2	-1.1
MATQ	Matagami	51.28	56	P	P	11 29 28.8	-0.7
	baz=315,SNR=9.0						
P40A	Paris	51.37	75	P	P	11 29 28.6	-1.7
GLMI	Grayling	51.42	65	P	P	11 29 29.9	-0.7
	baz=315						
GLMI	Grayling	51.42	65	P	P	11 29 30.2	-0.4
HHC	Hu-ho-hao-te	51.64	288	⇑iP	P	11 29 33.8	+1.3
HHC				pP	sP	11 29 38.3	+1.3
HHC				S	S	11 36 52.8	-0.6
HHC				pmax	pmax		
	comp=Z,25nm,1.1s						
HHC				pmax	pmax		
	comp=Z,360nm,5.6s						
HHC				LR	LR		
	comp=Z,670nm,14.9s						
HHC				LR	LR		
	comp=Z,480nm,13.1s						
HHC				LR	LR		
	comp=Z,900nm,15.7s						
TUL1	Leonard	52.00	81	P	P	11 29 33.4	-1.6
	baz=318						
TUL1	Leonard	52.00	81	P	P	11 29 33.9	-1.1
S39A	Bolivar	52.02	77	P	P	11 29 32.8	-2.4
TIA	Tai'an	52.05	280	P	P	11 29 28.0	-7.4
TIA				S	S	11 37 10.0	+11
TIA				pmax	pmax		
	comp=Z,5.0nm,0.5s						
TIA				pmax	pmax		
	comp=Z,130nm,3.7s						
TIA				LR	LR		
	comp=N,370nm,14.5s						
TIA				LR	LR		
	comp=E,270nm,15.9s						
TIA				LR	LR		
	comp=Z,360nm,15.1s						
LSQQ	Lebel-sur-Quev	52.08	56	P	P	11 29 34.4	-1.1
	baz=316						
HDIL	Hopedale	52.08	72	P	P	11 29 35.1	-0.4
	baz=317						
HDIL	Hopedale	52.08	72	P	P	11 29 34.6	-1.0
HDIL				IAmb	IAmb	11 29 36.1	
	comp=Z,70nm,1.2s						
R40A	Maddies Statio	52.15	76	P	P	11 29 34.0	-2.2
ABTX	Abilene, Hawle	52.34	86	P	P	11 29 36.8	-0.8
	baz=319,SNR=8.0						
ABTX	Abilene, Hawle	52.34	86	P	P	11 29 36.6	-1.0
ABTX				IAmb	IAmb	11 29 38.5	
	comp=Z,50nm,1.5s						
U38A	Gravette	52.37	79	P	P	11 29 35.6	-2.2
J47A	Sunmer	52.45	67	P	P	11 29 37.6	-0.7
J47A				IAmb	IAmb	11 29 39.1	
	comp=Z,32nm,0.9s						
VLDQ	Val d'Or	52.54	58	P	P	11 29 36.7	-2.1
VLDQ				IAmb	IAmb	11 29 37.8	
	comp=Z,39nm,1.1s						
P43A	Skaggs, Pawnee	52.63	73	P	P	11 29 38.7	-0.9
P43A				IAmb	IAmb	11 29 43.5	
	comp=Z,35nm,1.2s						
BTO	Baotou	52.63	289	eP	P	11 29 40.0	+0.2
TX31	Lajitas Ar. Si	52.63	92	P	P	11 29 39.5	-0.4
TX32	Lajitas Array	52.63	92	P	P	11 29 39.2	-0.7
TX32				IAmb	IAmb	11 29 40.8	
	comp=Z,30nm,1.1s						
TXAR	Lajitas Array	52.63	92	P	P	11 29 39.4	-0.5
	comp=Z,15nm,0.9s,baz=300,slow=5.8,SNR=111						
TXAR				PcP	PcP	11 30 49.5	-0.4
	comp=Z,9.5nm,1.1s,baz=305,slow=3.2,SNR=3.9						
TXAR				LR	LR	11 51 20.7	
	comp=Z,324nm,18.6s,baz=0.0,slow=35						
TXAR	Lajitas Array	52.63	92	P	P	11 29 39.7	-0.2
TXAR	Lajitas Array	52.63	92	P	P	11 29 39.7	-0.2
ANGG	Ammassalik, Gr	52.65	23	P	P	11 29 38.8	-0.6
ANGG				IAmb	IAmb	11 29 39.5	
	comp=Z,48nm,1.0s						
ANGG	Ammassalik, Gr	52.65	23	i P	P	11 29 39.0	-0.4
ANGG				IAmb	IAmb	11 29 39.3	
	comp=Z,50nm,1.0s						
U40A	Yellville	53.26	78	P	P	11 29 41.9	-2.5
	baz=318						
SFIN	Lafayette	53.36	71	P	P	11 29 44.5	-0.5
	baz=317,SNR=13						
SFIN	Lafayette	53.36	71	P	P	11 29 44.1	-0.9
SFIN				IAmb	IAmb	11 29 45.3	
	comp=Z,52nm,1.1s						
FVM	French Village	53.36	75	P	P	11 29 43.6	-1.5
FVM				pmax	pmax		
	comp=Z,28nm,1.5s						
FVM	French Village	53.36	75	P	P	11 29 43.6	-1.5
FVM				IAmb	IAmb	11 29 47.8	
	comp=Z,28nm,1.5s						
HPIG		53.40	96	P	P	11 29 45.6	-0.1
HPIG				IAmb	IAmb	11 29 51.4	
	comp=Z,35nm,1.5s						
Q44A	Meyer Farm, Va	53.43	73	P	P	11 29 45.4	-0.2
Q44A				IAmb	IAmb	11 29 49.2	
	comp=Z,22nm,1.1s						
L48A	N Adams	53.59	67	P	P	11 29 46.1	-0.6
L48A				IAmb	IAmb	11 29 47.1	
	comp=Z,34nm,1.0s						
W39A	Magazine	53.62	80	P	P	11 29 45.5	-1.5
	baz=318						
SLBS	Sierra La Lagu	53.65	102	P	P	11 29 47.9	+0.5
SLBS				IAmb	IAmb	11 29 48.9	
	comp=Z,29nm,1.1s						
SSE	Sheshan	53.66	273	P	P	11 29 47.1	-0.2
ARCES	ARCESS Array B	53.67	354	P	P	11 29 45.9	-1.0
	comp=Z,6.2nm,0.9s,baz=20,slow=2.9,SNR=5.0						
ARCES				LR	LR	11 52 21.0	
	comp=Z,288nm,21.9s,baz=5.0,slow=36						
N47A	Urbana	53.72	69	P	P	11 29 46.6	-1.0
AAM	Ann Arbor	53.72	67	P	P	11 29 47.0	-0.7
AAM				pmax	pmax		
	comp=Z,34nm,1.1s						
AAM	Ann Arbor	53.72	67	P	P	11 29 47.0	-0.7
AAM				IAmb	IAmb	11 29 48.4	
	comp=Z,34nm,1.1s						
ALGO	Algonquin Park	53.82	60	P	P	11 29 47.3	-1.0
	baz=317						
P46A	Rosedale	53.86	71	P	P	11 29 47.7	-1.0
JCT	Junction City	53.88	88	P	P	11 29 48.2	-0.9
	baz=320,SNR=15						
JCT	Junction City	53.88	88	P	P	11 29 48.0	-1.1
JCT				pmax	pmax		
	comp=Z,36nm,1.2s						
JCT	Junction City	53.88	88	P	P	11 29 48.0	-1.1
JCT				IAmb	IAmb	11 29 49.1	
	comp=Z,36nm,1.2s						
K50A	Casco	53.90	65	P	P	11 29 48.7	-0.2
I51A	Listowel	53.94	64	P	P	11 29 50.2	+0.9
	baz=317						
FCAR	Ozark Folk Cen	54.00	78	P	P	11 29 48.3	-1.5
OLIL	Olney	54.04	73	P	P	11 29 48.8	-1.2
OLIL				IAmb	IAmb	11 29 50.5	
	comp=Z,23nm,1.0s						
SADO	Sadowa	54.16	61	LR	LR	11 54 28.1	
	comp=Z,664nm,19.4s,baz=338,slow=38						
S44A	Carbondale	54.20	74	P	P	11 29 49.9	-1.3
SIUC	Southern Illin	54.20	74	P	P	11 29 49.7	-1.5
SIUC				IAmb	IAmb	11 29 55.7	
	comp=Z,40nm,1.4s						
G54A	Lake Saint Pet	54.21	60	P	P	11 29 50.3	-0.9
	baz=317						
MIAR	Mount Ida	54.22	80	P	P	11 29 50.2	-1.2
	baz=319						
NJ2	Nanjing	54.22	275	eP	P	11 29 49.9	-1.5
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
PBMO	Poplar Bluff	54.25	76	P	P	11 29 49.9	-1.7
PBMO				IAmb	IAmb	11 29 53.8	
	comp=Z,25nm,1.2s						
D55A	Sainte-Anne-du	54.25	57	P	P	11 29 50.7	-0.8
	baz=317,SNR=13						
E55A	Montcerf-Lytto	54.40	58	P	P	11 29 51.7	-0.8
	baz=317						
ZAA0	Zalesovo Array	54.42	316	P	P	11 29 52.4	-0.1
ZALV	Zalesovo Beam	54.42	316	P	P	11 29 52.0	-0.6
	comp=Z,1.8nm,0.9s,baz=57,slow=5.5,SNR=9.4						
ZALV				PcP	PcP	11 30 56.0	-0.1
	comp=Z,5.5nm,1.0s,baz=62,slow=3.4,SNR=6.9						
ZALV				LR	LR	11 54 30.0	
	comp=Z,426nm,18.1s,baz=32,slow=38						
ZALV	Zalesovo Beam	54.42	316	i P	P	11 29 52.5	-0.1
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ZALV	Zalesovo Beam	54.42	316	P	P	11 29 51.9	-0.6
N49A	Columbus Grove	54.47	68	P	P	11 29 52.2	-0.9
BLO	Bloomington	54.55	71	P	P	11 29 52.3	-1.4
BLO				pmax	pmax		
	comp=Z,26nm,1.0s						
BLO	Bloomington	54.55	71	P	P	11 29 52.3	-1.4
BLO				IAmb	IAmb	11 29 53.7	
	comp=Z,26nm,1.0s						
D56A	ZEC Mazanza, M	54.56	57	P	P	11 29 52.9	-0.9
	baz=318						
H53A	Bobcaygeon	54.57	61	P	P	11 29 53.8	0.0
	baz=317						
M50A	Fremont	54.69	67	P	P	11 29 53.5	-1.2
M50A				IAmb	IAmb	11 29 55.4	
	comp=Z,19nm,0.8s						
E56A	St. Veronique	54.81	57	P	P	11 29 54.6	-0.9
	baz=318						
P48A	Milroy	54.90	70	P	P	11 29 54.5	-1.8
O49A	Covington	54.93	69	P	P	11 29 55.3	-1.2
O49A				IAmb	IAmb	11 29 56.9	
	comp=Z,35nm,1.3s						
M51A	Elyria	55.18	66	P	P	11 29 57.7	-0.6
	baz=318,SNR=5.6						
LATQ	La Tuque	55.22	55	P	P	11 29 57.9	-0.6
	baz=318						
LATQ	La Tuque	55.22	55	P	P	11 29 57.4	-1.0
TRQ	Mont Tremblant	55.27	57	P	P	11 29 57.8	-1.2
E57A	Chemin Saint G	55.32	57	P	P	11 29 58.3	-1.0
	baz=318,SNR=8.7						
WCI	Wyandotte Cave	55.37	72	P	P	11 29 58.8	-0.9
	baz=318						
WCI	Wyandotte Cave	55.37	72	P	P	11 29 58.5	-1.2
WCI				pmax	pmax		
	comp=Z,18nm,1.1s						
WCI	Wyandotte Cave	55.37	72	P	P	11 29 58.5	-1.2
WCI				IAmb	IAmb	11 29 60.0	
	comp=Z,18nm,1.1s						
D58A	Chemin du LacG	55.39	56	P	P	11 29 58.8	-0.9
	baz=318,SNR=5.5						
N51A	Ashland	55.39	67	P	P	11 29 58.5	-1.4
M52A	Chesterland	55.44	66	P	P	11 29 59.5	-0.6
M52A				IAmb	IAmb	11 30 00.8	
	comp=Z,38nm,1.0s						
ACSO	Alum Creek Sta	55.59	68	P	P	11 30 00.5	-0.7
	baz=318,SNR=7.5						
ACSO	Alum Creek Sta	55.59	68	P	P	11 30 00.2	-1.1
ACSO				IAmb	IAmb	11 30 01.4	
	comp=Z,39nm,1.1s						
L53A	Girard	55.69	65	P	P	11 30 02.1	+0.2
	baz=318,SNR=8.1						
ERPA	Erie	55.70	64	P	P	11 30 02.3	+0.2
	baz=318,SNR=12						
ERPA	Erie	55.70	64	P	P	11 30 02.0	0.0
E58A	La Victoria	55.75	56	P	P	11 30 01.2	-1.0
	baz=318						
833A	Chaparral WMA,	55.77	90	P	P	11 30 02.6	0.0
	baz=321						
M53A	WI Miller and	55.86	65	P	P	11 30 03.2	0.0
	baz=318,SNR=13						
M53A	WI Miller and	55.86	65	P	P	11 30 02.8	-0.4
T47A	Sharon Grove	55.87	73	P	P	11 30 01.3	-2.0
T47A				IAmb	IAmb	11 30 03.3	
	comp=Z,25nm,1.2s						
G57A	Newington	55.90	59	P	P	11 30 02.3	-1.0
	baz=318						
R49A	Shelbyville	55.91	71	P	P	11 30 02.5	-1.0
R49A				IAmb	IAmb	11 30 03.5	
	comp=Z,25nm,1.2s						
ALLY	Alegheny Colle	55.97	65	P	P	11 30 03.2	-0.7
P51A	Williamsport	56.11	68	P	P	11 30 03.8	-1.2
P51A				IAmb	IAmb	11 30 04.2	
	comp=Z,16nm,1.0s						
WVT	Waverly	56.12	75	P	P	11 30 04.7	-0.4
	baz=319						
WVT	Waverly	56.12	75	P	P	11 30 04.6	-0.5
WVT				pmax	pmax		
	comp=Z,15nm,1.2s						
WVT	Waverly	56.12	75	P	P	11 30 04.6	-0.5
WVNY	West Valley, N	56.17	63	P	P	11 30 04.8	-0.7
H57A	Richville	56.19	59	P	P	11 30 04.3	-1.2
	baz=318						
N53A	Lisbon	56.25	66	P	P	11 30 04.8	-1.1
N53A				IAmb	IAmb	11 30 06.4	
	comp=Z,54nm,1.1s						
O52A	Adamsville	56.26	67	P	P	11 30 05.3	-0.8
G58A	Ormstown	56.30	58	P	P	11 30 04.9	-1.3
	baz=319						
Q51A	Peebles	56.30	69	P	P	11 30 05.4	-1.0
M54A	Oil Creek Stat	56.31	64	P	P	11 30 06.2	-0.3
	baz=318,SNR=9.0						
M54A	Oil Creek Stat	56.31	64	P	P	11 30 05.9	-0.5
R50A	Paris	56.35	70	P	P	11 30 05.7	-1.0
F59A	Saint Guilaume	56.37	57	P	P	11 30 06.2	-0.4
	baz=319						
D60A	Saint Jean D'O	56.41	55	P	P	11 30 06.5	-0.5
	baz=319,SNR=5.5						
I57A	Carthage	56.45	60	P	P	11 30 07.0	-0.4
	baz=319						
LONY	Lake Ozonia	56.45	59	P	P	11 30 05.5	-1.9
	baz=319						
P52A	Corning	56.47	68	P	P	11 30 06.5	-1.0
	baz=319,SNR=7.1						
P52A	Corning	56.47	68	P	P	11 30 06.2	-1.4
HKT	Hockley	56.48	85	P	P	11 30 11.2	+3.6
HKT				pmax	pmax		
	comp=Z,19nm,1.5s						
HKT	Hockley	56.48	85	P	P	11 30 11.2	+3.6
O53A	New Philadelph	56.48	67	P	P	11 30 06.7	-0.9
	baz=319						
O53A	New Philadelph	56.48	67	P	P	11 30 06.2	-1.4
O53A				IAmb	IAmb	11 30 07.8	
	comp=Z,32nm,1.1s						
OXF	Oxford	56.50	77	P	P	11 30 07.0	-0.8
	baz=319						
OXF	Oxford	56.50	77	P	P	11 30 07.0	-0.8
OXF				pmax	pmax		
	comp=Z,55nm,1.4s						
OXF	Oxford	56.50	77	P	P	11 30 07.0	-0.8
OXF				IAmb	IAmb	11 30 13.3	
	comp=Z,55nm,1.4s						
D61A	St Aubert, Com	56.52	54	P	P	11 30 07.2	-0.7
	baz=319,SNR=11						
N54A	Moraine State	56.56	65	P	P	11 30 07.8	-0.4
	baz=319,SNR=7.0						
N54A	Moraine State	56.56	65	P	P	11 30 07.5	-0.7
N54A				IAmb	IAmb	11 30 08.9	
	comp=Z,42nm,1.1s						
K56A	Middlesex	56.58	62	P	P	11 30 08.6	+0.2
	baz=319,SNR=5.6						
E60A	Ste Agathe de	56.59	55	P	P	11 30 07.8	-0.5
	baz=319						
DGZ	Jazzator, Alta	56.61	311	d iP	P	11 30 09.2	+0.6
DGZ				pmax	pmax		
	comp=Z,39nm,1.2s						
F60A	Warwick	56.66	56	P	P	11 30 08.2	-0.6
	baz=319						
G59A	Clarenceville	56.76	57	P	P	11 30 08.5	-1.0
	baz=319,SNR=5.9						
M55A	Ridgway	56.79	64	P	P	11 30 09.8	0.0
H58A	Gabriels	56.80	59	P	P	11 30 08.6	-1.2
	baz=319						
H59A	Cadyville	56.85	58	P	P	11 30 09.3	-1.0
	baz=319						
PLAL	Pickwick Lake	56.86	76	P	P	11 30 09.8	-0.6
L56A	Greenwood	56.88	63	P	P	11 30 10.4	-0.1
	baz=319,SNR=6.9						
L56A	Greenwood	56.88	63	P	P	11 30 10.6	0.0
Q52A	Bidwell	56.91	68	P	P	11 30 09.3	-1.4
Q52A				IAmb	IAmb	11 30 10.5	
	comp=Z,34nm,1.1s						
U49A	Red Boiling Sp	56.92	73	P	P	11 30 09.9	-0.9
K57A	Scipio Center	56.95	61	P	P	11 30 10.5	-0.4
	baz=319						
CLTN	Cedars of Leba	56.95	73	P	P	11 30 10.1	-0.9
CLTN				IAmb	IAmb	11 30 11.9	
	comp=Z,36nm,1.0s						
O54A	Avella	56.95	66	P	P	11 30 09.9	-1.1
P53A	Whipple	56.96	67	P	P	11 30 10.1	-0.9
P53A				IAmb	IAmb	11 30 11.3	
	comp=Z,41nm,1.1s						
E61A	Lac Etchemin	56.97	55	P	P	11 30 10.5	-0.6
	baz=319						
MOQ	Mont Orford	57.02	57	P	P	11 30 10.5	-1.0
T50A	Nancy	57.03	72	P	P	11 30 10.8	-0.8
T50A				IAmb	IAmb	11 30 11.9	
	comp=Z,27nm,1.2s						
J58A	Remsen	57.07	60	P	P	11 30 11.3	-0.5
	baz=319						
J58A	Remsen	57.07	60	P	P	11 30 11.1	-0.7
M56A	Emporium	57.07	64	P	P	11 30 11.9	+0.1
	baz=319,SNR=6.7						
M56A	Emporium	57.07	64	P	P	11 30 11.6	-0.2
G60A	Masonville	57.14	57	P	P	11 30 11.3	-0.9
	baz=319						
S51A	Beattyville	57.22	70	P	P	11 30 11.5	-1.4
S51A				IAmb	IAmb	11 30 13.0	
	comp=Z,25nm,1.0s						
L57A	Andrews Acres	57.34	62	P	P	11 30 12.4	-1.3
	baz=319						
J59A	Piesco	57.36	60	P	P	11 30 12.3	-1.5
	baz=319						
Q53A	Leroy	57.37	68	P	P	11 30 13.0	-0.9
	baz=319,SNR=8.1						
G61A	St-Isidore-de-	57.37	56	P	P	11 30 13.1	-0.8

	baz=320						
I59A	**Olmsteadville**	**57.41**	**59**	P	**P**	**11 30 13.3**	**-0.9**
	baz=319						
N56A	**West Decatur**	**57.44**	**64**	P	**P**	**11 30 14.3**	**-0.2**
	baz=319,SNR=12						
R53A	**Hurricane**	**57.54**	**69**	P	**P**	**11 30 14.6**	**-0.6**
D63A	**Stockholm**	**57.57**	**53**	P	**P**	**11 30 14.9**	**-0.3**
	baz=320						
BINY	**Binghamton**	**57.60**	**61**	P	**P**	**11 30 15.7**	**+0.1**
	baz=319,SNR=5.7						
MCWV	**Mont Chateau**	**57.62**	**66**	P	**P**	**11 30 15.3**	**-0.4**
	baz=319,SNR=8.3						
MCWV	**Mont Chateau**	**57.62**	**66**	P	**P**	**11 30 14.5**	**-1.2**
MCWV				IAmb	IAmb	11 30 16.3	
	comp=Z,24nm,0.9s						
Q54A	**Coxs Mills**	**57.62**	**67**	P	**P**	**11 30 14.8**	**-0.9**
Q54A				IAmb	IAmb	11 30 16.1	
	comp=Z,37nm,1.0s						
M57A	**Sunshine Farm,**	**57.70**	**63**	P	**P**	**11 30 16.3**	**+0.1**
	baz=319						
M57A	**Sunshine Farm,**	**57.70**	**63**	P	**P**	**11 30 15.9**	**-0.3**
M57A				IAmb	IAmb	11 30 22.2	
	comp=Z,58nm,1.2s						
TMCR	**Tamitsa**	**57.73**	**346**	*e*P	**P**	**11 30 13.9**	**-2.1**
TMCR				pmax	pmax		
	comp=Z,29nm,1.1s						
L58A	**Harry Jones Me**	**57.79**	**62**	P	**P**	**11 30 17.0**	**+0.1**
	baz=319,SNR=6.0						
O56A	**Blue Knob Stat**	**57.80**	**65**	P	**P**	**11 30 16.8**	**-0.2**
	baz=319,SNR=7.1						
O56A	**Blue Knob Stat**	**57.80**	**65**	P	**P**	**11 30 16.2**	**-0.7**
O56A				IAmb	IAmb	11 30 17.5	
	comp=Z,52nm,1.1s						
X48A	**Hartselle**	**57.81**	**75**	P	**P**	**11 30 16.2**	**-0.9**
SWET	**Sewanee**	**57.82**	**74**	P	**P**	**11 30 16.3**	**-1.0**
SWET				IAmb	IAmb	11 30 16.7	
	comp=Z,26nm,1.3s						
WHN	**Wuhan**	**57.84**	**278**	⇑P	**P**	**11 30 18.2**	**+0.8**
SSPA	**Standing Stone**	**57.85**	**64**	P	**P**	**11 30 17.2**	**-0.2**
	baz=319						
SSPA	**Standing Stone**	**57.85**	**64**	P	**P**	**11 30 16.7**	**-0.7**
SSPA				IAmb	IAmb	11 30 18.3	
	comp=Z,56nm,1.1s						
G62A	**West of Eustis**	**57.88**	**56**	P	**P**	**11 30 17.1**	**-0.3**
	baz=320						
G62A	**West of Eustis**	**57.88**	**56**	P	**P**	**11 30 17.1**	**-0.3**
G62A				IAmb	IAmb	11 30 18.5	
	comp=Z,52nm,1.1s						
E63A	**Oxbow**	**57.91**	**53**	P	**P**	**11 30 16.7**	**-0.8**
	baz=320						
E63A	**Oxbow**	**57.91**	**53**	P	**P**	**11 30 16.5**	**-1.1**
E63A				IAmb	IAmb	11 30 18.1	
	comp=Z,38nm,0.9s						
N57A	**Milroy**	**57.93**	**64**	P	**P**	**11 30 18.0**	**+0.1**
	baz=319,SNR=5.9						
M58A	**Price's Panora**	**58.00**	**62**	P	**P**	**11 30 17.8**	**-0.6**
	baz=320						
J60A	**Lant Hill Farm**	**58.04**	**59**	P	**P**	**11 30 18.3**	**-0.3**
	baz=320						
L59A	**Walton**	**58.07**	**61**	P	**P**	**11 30 18.1**	**-0.7**
	baz=320						
L59A	**Walton**	**58.07**	**61**	P	**P**	**11 30 18.2**	**-0.7**
TZTN	**Tazewell**	**58.07**	**71**	P	**P**	**11 30 18.5**	**-0.4**
	baz=320,SNR=5.9						
TZTN	**Tazewell**	**58.07**	**71**	P	**P**	**11 30 18.2**	**-0.7**
TZTN				IAmb	IAmb	11 30 24.4	
	comp=Z,39nm,1.2s						
H62A	**Milan**	**58.09**	**57**	P	**P**	**11 30 18.6**	**-0.3**
	baz=320						
XAN	**Xi'an**	**58.11**	**284**	P	**P**	**11 30 19.3**	**0.0**
XAN				pP	sP	11 30 29.6	+5.8
XAN				pmax	pmax		
	comp=Z,26nm,1.3s						
XAN				pmax	pmax		
	comp=Z,320nm,3.5s						
XAN				LR	LR		
	comp=Z,400nm,23.6s						
XAN				LR	LR		
	comp=Z,270nm,25.0s						
XAN				LR	LR		
	comp=Z,420nm,14.7s						
R54A	**Victor**	**58.15**	**68**	P	**P**	**11 30 19.0**	**-0.5**
	baz=320,SNR=16						
F63A	**Nahmakanta, Br**	**58.15**	**54**	P	**P**	**11 30 18.9**	**-0.4**
	baz=320						
W50A	**Signal Mountai**	**58.16**	**73**	P	**P**	**11 30 18.9**	**-0.8**
W50A				IAmb	IAmb	11 30 20.2	
	comp=Z,33nm,1.4s						
E64A	**Bridgewater**	**58.17**	**53**	P	**P**	**11 30 18.3**	**-1.2**
	baz=320						
Z47A	**Carrollton**	**58.22**	**77**	P	**P**	**11 30 19.5**	**-0.4**
Z47A				IAmb	IAmb	11 30 21.2	
	comp=Z,17nm,1.0s						
P56A	**Dayton Farm, R**	**58.24**	**65**	P	**P**	**11 30 19.1**	**-0.9**
	baz=320,SNR=14						
S54A	**Dingess, Beckl**	**58.28**	**69**	P	**P**	**11 30 19.8**	**-0.6**
	baz=320,SNR=9.0						
S54A	**Dingess, Beckl**	**58.28**	**69**	P	**P**	**11 30 19.4**	**-1.0**
S54A				IAmb	IAmb	11 30 20.8	
	comp=Z,44nm,0.9s						
N58A	**Sunbury**	**58.28**	**63**	P	**P**	**11 30 20.2**	**-0.1**
	baz=320,SNR=6.2						
N58A	**Sunbury**	**58.28**	**63**	P	**P**	**11 30 19.2**	**-1.1**
N58A				IAmb	IAmb	11 30 21.3	
	comp=Z,43nm,1.1s						
O57A	**Amberson**	**58.30**	**64**	P	**P**	**11 30 20.6**	**+0.1**
	baz=320,SNR=8.6						
F64A	**Sherman**	**58.37**	**54**	P	**P**	**11 30 20.4**	**-0.4**
	baz=320,SNR=5.4						
F64A	**Sherman**	**58.37**	**54**	P	**P**	**11 30 20.2**	**-0.6**
G63A	**Kingsbury**	**58.37**	**55**	P	**P**	**11 30 20.7**	**-0.2**
	baz=320						
M59A	**Waymart**	**58.37**	**62**	P	**P**	**11 30 20.7**	**-0.3**
	baz=320						
ZAIG	**Zacatecas**	**58.40**	**96**	P	**P**	**11 30 21.1**	**-0.7**
ZAIG				IAmb	IAmb	11 30 23.1	
	comp=Z,24nm,1.3s						
Q56A	**Snyder Ridge,**	**58.41**	**66**	P	**P**	**11 30 20.9**	**-0.4**
	baz=320,SNR=5.2						
Q56A	**Snyder Ridge,**	**58.41**	**66**	P	**P**	**11 30 20.6**	**-0.7**
Q56A				IAmb	IAmb	11 30 24.5	
	comp=Z,29nm,1.1s						
R55A	**Marlinton**	**58.52**	**67**	P	**P**	**11 30 21.9**	**-0.2**
	baz=320						
R55A	**Marlinton**	**58.52**	**67**	P	**P**	**11 30 21.3**	**-0.8**
R55A				IAmb	IAmb	11 30 27.7	
	comp=Z,44nm,1.2s						
V52A	**Sevierville**	**58.58**	**72**	P	**P**	**11 30 21.5**	**-1.0**
V52A				IAmb	IAmb	11 30 26.8	
	comp=Z,39nm,1.4s						
TKL	**Tuckaleechee C**	**58.63**	**72**	P	**P**	**11 30 21.8**	**-1.0**
TKL				pmax	pmax		
	comp=Z,39nm,1.5s						
TKL	**Tuckaleechee C**	**58.63**	**72**	P	**P**	**11 30 21.8**	**-1.0**
TKL				IAmb	IAmb	11 30 27.6	
	comp=Z,39nm,1.4s						
P57A	**Homestead Farm**	**58.67**	**65**	P	**P**	**11 30 22.7**	**-0.3**
	baz=320						
P57A	**Homestead Farm**	**58.67**	**65**	P	**P**	**11 30 22.4**	**-0.7**
N59A	**State Game Lan**	**58.69**	**62**	P	**P**	**11 30 22.8**	**-0.4**
	baz=320						
N59A	**State Game Lan**	**58.69**	**62**	P	**P**	**11 30 22.5**	**-0.7**
N59A				IAmb	IAmb	11 30 24.2	
	comp=Z,31nm,1.0s						
O58A	**Lewisberry**	**58.72**	**64**	P	**P**	**11 30 23.3**	**-0.1**
	baz=320,SNR=7.4						
GTA	**Gaotai**	**58.74**	**295**	⇓P	**P**	**11 30 23.6**	**-0.1**
GTA				pP	sP	11 30 28.0	-0.3
GTA				sP	pP	11 30 30.7	+3.7
GTA				S	**S**	**11 38 29.4**	**+0.9**
GTA				sS	sS	11 38 36.4	+2.5
GTA				pmax	pmax		
	comp=Z,35nm,1.3s						
GTA				pmax	pmax		
	comp=Z,220nm,6.5s						
GTA				LR	LR		
	comp=Z,400nm,19.3s						
GTA				LR	LR		
	comp=Z,560nm,18.5s						
GTA				LR	LR		
	comp=Z,430nm,16.7s						
PAGS	**Pennsylvania G**	**58.74**	**63**	P	**P**	**11 30 22.9**	**-0.6**
I63A	**Otisfield**	**58.75**	**57**	P	**P**	**11 30 23.9**	**+0.3**
	baz=320						
L61A	**Hillsdale 1, H**	**58.78**	**60**	P	**P**	**11 30 22.4**	**-1.4**
	baz=320						
R56A	**Bull Pasture M**	**58.79**	**67**	P	**P**	**11 30 23.7**	**-0.3**
	baz=320						
Q57A	**Strasburg**	**58.81**	**66**	P	**P**	**11 30 23.7**	**-0.3**
	baz=320,SNR=6.2						
M60A	**Port Jervis**	**58.93**	**61**	P	**P**	**11 30 24.5**	**-0.3**
	baz=320,SNR=7.1						
SEM	**Semipalatinsk**	**58.94**	**316**	*e*P	**P**	**11 30 23.6**	**-1.5**
	comp=Z,7.6nm,1.5s,baz=316						
SEM	**Semipalatinsk**	**58.94**	**316**	*e*P	**P**	**11 30 23.5**	**-1.5**
SEM				pmax	pmax		
	comp=Z,8.0nm,1.5s						
O59A	**Robesonia**	**58.94**	**63**	P	**P**	**11 30 25.0**	**+0.1**
	baz=320,SNR=9.7						
W52A	**Murphy**	**58.98**	**72**	P	**P**	**11 30 24.3**	**-1.0**
W52A				IAmb	IAmb	11 30 25.9	
	comp=Z,30nm,1.2s						
U54A	**Nelsons Funny**	**58.99**	**70**	P	**P**	**11 30 25.3**	**-0.1**
	baz=320,SNR=11						
U54A	**Nelsons Funny**	**58.99**	**70**	P	**P**	**11 30 24.8**	**-0.6**
N60A	**Cedar Hill Far**	**59.05**	**62**	P	**P**	**11 30 25.7**	**+0.1**
	baz=320,SNR=5.5						
V53A	**Saluda**	**59.12**	**71**	P	**P**	**11 30 25.8**	**-0.5**
V53A				IAmb	IAmb	11 30 26.8	
	comp=Z,33nm,1.2s						
LUPA	**Lehigh Univers**	**59.12**	**62**	P	**P**	**11 30 25.5**	**-0.7**
ODNJ	**Ogdensburg**	**59.12**	**61**	P	**P**	**11 30 26.1**	**-0.1**
ODNJ				IAmb	IAmb	11 30 26.6	
	comp=Z,40nm,1.1s						
BLA	**Blacksburg**	**59.18**	**68**	P	**P**	**11 30 26.5**	**-0.2**
	baz=320,SNR=11						
BLA	**Blacksburg**	**59.18**	**68**	P	**P**	**11 30 25.9**	**-0.8**
BLA				pmax	pmax		
	comp=Z,60nm,1.1s						
BLA	**Blacksburg**	**59.18**	**68**	P	**P**	**11 30 25.9**	**-0.8**
LZH	**Lanzhou**	**59.22**	**290**	⇓P	**P**	**11 30 27.5**	**+0.4**
LZH				pP	pP	11 30 30.7	+0.2
LZH				sS	sS	11 38 38.8	-1.5
LZH				pmax	pmax		
	comp=Z,54nm,1.3s						
LZH				pmax	pmax		
	comp=Z,230nm,5.2s						
LZH				LR	LR		
	comp=Z,810nm,15.2s						
LZH				LR	LR		
	comp=Z,860nm,15.2s						
LZH				LR	LR		
	comp=Z,610nm,16.8s						
Q58A	**Fox Den Farm,**	**59.25**	**65**	P	**P**	**11 30 26.8**	**-0.3**
	baz=320,SNR=16						
S56A	**Natural Bridge**	**59.26**	**67**	P	**P**	**11 30 27.2**	**0.0**
	baz=320,SNR=16						
SDMD	**Soldier's Deli**	**59.31**	**64**	P	**P**	**11 30 27.1**	**-0.4**
SDMD				IAmb	IAmb	11 30 32.1	
	comp=Z,34nm,1.3s						
KURK	**Kurchatov**	**59.32**	**317**	P	**P**	**11 30 27.4**	**0.0**
KURK				pmax	pmax		
	comp=Z,49nm,1.3s						
KURK	**Kurchatov**	**59.32**	**317**	P	**P**	**11 30 27.4**	**0.0**
KURK				IAmb	IAmb	11 30 29.0	
	comp=Z,49nm,1.3s						
R57A	**Stanardsville**	**59.32**	**66**	P	**P**	**11 30 26.7**	**-0.9**
	baz=320						
O60A	**Telford**	**59.32**	**63**	P	**P**	**11 30 27.2**	**-0.3**
	baz=320						
P59A	**Jarrettsville**	**59.36**	**64**	P	**P**	**11 30 27.6**	**-0.2**
	baz=320,SNR=6.3						
ZSN	**Zaisan**	**59.43**	**311**	*e*P	**P**	**11 30 28.3**	**+0.1**
	comp=Z,16nm,1.1s,baz=311						
ZSN	**Zaisan**	**59.43**	**311**	*e*P	**P**	**11 30 28.3**	**+0.1**
ZSN				pmax	pmax		
	comp=Z,16nm,1.1s						
S57A	**Dark Hollow, R**	**59.51**	**67**	P	**P**	**11 30 28.8**	**-0.1**
	baz=320,SNR=7.5						
S57A	**Dark Hollow, R**	**59.51**	**67**	P	**P**	**11 30 28.1**	**-0.8**
WUPA	**West Chester U**	**59.52**	**63**	P	**P**	**11 30 29.0**	**+0.1**
WUPA				IAmb	IAmb	11 30 34.8	
	comp=Z,31nm,1.4s						
T56A	**Rocky Mt**	**59.52**	**68**	P	**P**	**11 30 28.8**	**-0.2**
	baz=320,SNR=7.6						
PAL	**Palisades**	**59.52**	**61**	P	**P**	**11 30 28.6**	**-0.3**
	baz=320						
N61A	**South Mountain**	**59.53**	**61**	P	**P**	**11 30 29.0**	**+0.1**
	baz=320						
R58A	**Rapidan**	**59.58**	**66**	P	**P**	**11 30 28.6**	**-0.7**
	baz=320,SNR=5.8						
P60A	**Greenville**	**59.60**	**63**	P	**P**	**11 30 29.9**	**+0.5**
	baz=320						
P60A	**Greenville**	**59.60**	**63**	P	**P**	**11 30 29.1**	**-0.3**
P60A				IAmb	IAmb	11 30 34.4	
	comp=Z,41nm,1.3s						
PSUB	**Penn St. - Bra**	**59.60**	**63**	P	**P**	**11 30 27.8**	**-1.6**
V55A	**Taylorsville**	**59.81**	**70**	P	**P**	**11 30 30.3**	**-0.7**
Q59A	**Harwood**	**59.82**	**64**	P	**P**	**11 30 31.0**	**+0.1**
	baz=320						
Y52A	**Lilburn**	**59.85**	**73**	P	**P**	**11 30 30.3**	**-1.0**
Y52A				IAmb	IAmb	11 30 36.1	
	comp=Z,23nm,1.2s						
U56A	**King**	**59.86**	**69**	P	**P**	**11 30 31.2**	**-0.2**
	baz=320,SNR=14						
U56A	**King**	**59.86**	**69**	P	**P**	**11 30 30.4**	**-1.0**
R58B	**Mineral**	**59.90**	**66**	P	**P**	**11 30 31.0**	**-0.5**
	baz=320,SNR=5.6						
R58B	**Mineral**	**59.90**	**66**	P	**P**	**11 30 31.4**	**-0.2**
R58B				IAmb	IAmb	11 30 33.4	
	comp=Z,44nm,1.4s						
O61A	**Allentown**	**59.91**	**62**	P	**P**	**11 30 31.8**	**+0.2**
	baz=321						
T57A	**Hurt**	**59.94**	**68**	P	**P**	**11 30 31.0**	**-0.9**
	baz=320,SNR=10						
T57A	**Hurt**	**59.94**	**68**	P	**P**	**11 30 31.3**	**-0.6**
T57A				IAmb	IAmb	11 30 32.3	
	comp=Z,38nm,1.0s						
CBN	**Corbin Frederi**	**59.97**	**65**	P	**P**	**11 30 32.2**	**+0.2**
	baz=320						
CBN	**Corbin Frederi**	**59.97**	**65**	P	**P**	**11 30 32.3**	**+0.3**
SVE	**Sverdlovsk**	**60.00**	**331**	*ce*P	**P**	**11 30 32.5**	**+0.6**
SVE				pmax	pmax		
	comp=Z,61nm,1.4s						
SVE				MLR	MLR		
	comp=Z,440nm,21.0s						
S58A	**Poland Farm, P**	**60.08**	**66**	P	**P**	**11 30 31.8**	**-1.0**
	baz=320						
S58A	**Poland Farm, P**	**60.08**	**66**	P	**P**	**11 30 31.9**	**-1.0**
S58A				IAmb	IAmb	11 30 33.5	
	comp=Z,17nm,1.0s						
R59A	**King George, V**	**60.10**	**65**	P	**P**	**11 30 33.5**	**+0.6**
	baz=321						
250A	**Grady**	**60.13**	**76**	P	**P**	**11 30 33.6**	**+0.4**
250A				IAmb	IAmb	11 30 37.7	
	comp=Z,47nm,1.4s						
DRLN	**Deer Lake**	**60.22**	**45**	P	**P**	**11 30 33.0**	**-0.6**
V56A	**Mocksville**	**60.22**	**69**	P	**P**	**11 30 33.6**	**-0.2**
	baz=321,SNR=21						
KMSC	**Kings Mountain**	**60.30**	**71**	P	**P**	**11 30 33.9**	**-0.5**
	baz=321,SNR=16						
KMSC	**Kings Mountain**	**60.30**	**71**	P	**P**	**11 30 33.6**	**-0.7**
R60A	**Leonardtown, M**	**60.32**	**65**	P	**P**	**11 30 35.0**	**+0.6**
	baz=321						
U57A	**Blanch**	**60.34**	**68**	P	**P**	**11 30 34.3**	**-0.3**
	baz=321,SNR=22						
BRVK	**Borovoye**	**60.34**	**323**	*i* P	**P**	**11 30 34.6**	**+0.2**
BRVK				pmax	pmax		
	comp=Z,48nm,1.2s						
BRVK	**Borovoye**	**60.34**	**323**	P	**P**	**11 30 34.5**	**+0.1**
S59A	**Mechanicsville**	**60.35**	**66**	P	**P**	**11 30 34.1**	**-0.5**
	baz=321						
T58A	**Grand View Acr**	**60.35**	**67**	P	**P**	**11 30 34.1**	**-0.5**
	baz=321,SNR=8.8						
GOGA	**Godfrey**	**60.51**	**73**	P	**P**	**11 30 34.6**	**-1.2**
	baz=321						
V57A	**Coltrane Farms**	**60.53**	**69**	P	**P**	**11 30 35.3**	**-0.6**
	baz=321,SNR=7.7						
KLMR	**Klimovskoe**	**60.69**	**344**	*e*P	**P**	**11 30 34.3**	**-2.3**
KLMR				pmax	pmax		
	comp=Z,58nm,1.5s						
KLMR	**Klimovskoe**	**60.69**	**344**	*e*P	**P**	**11 30 34.4**	**-2.2**
KLMR				AMP		11 30 37.9	
	comp=Z,58nm,1.5s						
W56A	**Indian Trail**	**60.69**	**70**	P	**P**	**11 30 36.3**	**-0.7**
	baz=321,SNR=7.3						
ENH	**Enshi**	**60.70**	**281**	P	**P**	**11 30 37.0**	**-0.3**
ENH				IAmb	IAmb	11 30 39.4	
	comp=Z,35nm,1.2s						
S60A	**Water View**	**60.71**	**65**	P	**P**	**11 30 37.6**	**+0.5**
	baz=321						
U58A	**Oxford**	**60.77**	**68**	P	**P**	**11 30 37.1**	**-0.4**
	baz=321						
T59A	**Double "B" Far**	**60.83**	**66**	P	**P**	**11 30 37.5**	**-0.4**
	baz=321,SNR=6.3						
T59A	**Double "B" Far**	**60.83**	**66**	P	**P**	**11 30 37.8**	**-0.1**
ARU	**Arti**	**60.89**	**332**	*d i*P	**P**	**11 30 37.8**	**-0.3**
ARU						11 31 19.5	
ARU						11 32 47.8	
ARU				S	**S**	**11 38 58.2**	**+2.8**
ARU				SS	**SS**	**11 42 53.3**	**-0.2**
ARU				pmax	pmax		
	comp=Z,48nm,1.2s						
ARU				MLR	MLR		
	comp=Z,317nm,19.0s						
ARU	**Arti**	**60.89**	**332**	P	**P**	**11 30 36.9**	**-1.2**
V58A	**Windy Hill, Pi**	**60.94**	**68**	P	**P**	**11 30 38.5**	**-0.3**
	baz=321,SNR=22						
V58A	**Windy Hill, Pi**	**60.94**	**68**	P	**P**	**11 30 38.2**	**-0.5**
JSC	**Jenkinsville**	**61.00**	**71**	P	**P**	**11 30 38.4**	**-0.7**
JSC				pmax	pmax		
	comp=Z,41nm,1.5s						
JSC	**Jenkinsville**	**61.00**	**71**	P	**P**	**11 30 38.4**	**-0.7**
JSC				IAmb	IAmb	11 30 43.5	
	comp=Z,41nm,1.5s						
MK31	**Makanchi Array**	**61.02**	**312**	*ce*P	**P**	**11 30 38.8**	**-0.3**
MK31	**Makanchi Array**	**61.02**	**312**	P	**P**	**11 30 38.0**	**-1.1**
MKAR	**Makanchi Array**	**61.02**	**312**	P	**P**	**11 30 38.6**	**-0.5**
	comp=Z,8.9nm,1.1s,baz=48,slow=5.4,SNR=35						
MKAR				LR	LR	11 58 45.2	
	comp=Z,242nm,18.6s,baz=22,slow=38						
MKAR	**Makanchi Array**	**61.02**	**312**	*i* P	**P**	**11 30 38.5**	**-0.6**
MKAR				pmax	pmax		
	comp=Z,9.0nm,1.1s						
MKAR	**Makanchi Array**	**61.02**	**312**	P	**P**	**11 30 38.0**	**-1.1**
WMQ	**Urumqi**	**61.07**	**306**	*e*P	**P**	**11 30 40.9**	**+1.3**
WMQ				pP	sP	11 30 43.4	-0.8
WMQ				sP	pP	11 30 51.4	+8.5
WMQ				S	**S**	**11 39 02.6**	**+4.4**
WMQ				pmax	pmax		
	comp=Z,36nm,1.7s						
WMQ				pmax	pmax		
	comp=Z,370nm,3.8s						
WMQ				LR	LR		
	comp=Z,550nm,15.3s						
WMQ				LR	LR		
	comp=Z,240nm,8.1s						
WMQ				LR	LR		
	comp=Z,110nm,23.3s						
WMQ	**Urumqi**	**61.07**	**306**	P	**P**	**11 30 40.0**	**+0.4**
WMQ				pmax	pmax		
	comp=Z,83nm,1.5s						
WMQ	**Urumqi**	**61.07**	**306**	P	**P**	**11 30 40.0**	**+0.4**
KIRV	**Kirov**	**61.07**	**338**	⇑*i*P	**P**	**11 30 39.2**	**0.0**
BIRD	**Birdtown, Kers**	**61.13**	**70**	P	**P**	**11 30 38.8**	**-1.2**
BIRD				IAmb	IAmb	11 30 40.9	
	comp=Z,36nm,1.0s						
MAKZ	**Makanchi**	**61.14**	**312**	P	**P**	**11 30 39.3**	**-0.7**
MAKZ				pmax	pmax		
	comp=Z,12nm,1.2s						
MAKZ	**Makanchi**	**61.14**	**312**	P	**P**	**11 30 39.2**	**-0.7**
U59A	**Littleton**	**61.19**	**67**	P	**P**	**11 30 39.7**	**-0.7**
	baz=321						
U59A	**Littleton**	**61.19**	**67**	P	**P**	**11 30 39.6**	**-0.7**
U59A				IAmb	IAmb	11 30 41.3	
	comp=Z,41nm,1.4s						
V59A	**Middlesex**	**61.41**	**68**	P	**P**	**11 30 41.5**	**-0.4**
	baz=321,SNR=12						
U60A	**Pendleton**	**61.41**	**67**	P	**P**	**11 30 41.7**	**-0.2**
	baz=321						
X57A	**Johnson Farm,**	**61.47**	**70**	P	**P**	**11 30 41.9**	**-0.4**
	baz=321						
W58A	**Raeford**	**61.48**	**69**	P	**P**	**11 30 41.9**	**-0.5**
	baz=321,SNR=20						
FINES	**FINESS Array B**	**61.64**	**352**	P	**P**	**11 30 42.4**	**-0.6**
	comp=Z,20nm,1.1s,baz=28,slow=8.6,SNR=15						
FINES				LR	LR	12 00 19.4	
	comp=Z,223nm,18.3s,baz=15,slow=39						
FINES	**FINESS Array B**	**61.64**	**352**	*i* P	**P**	**11 30 42.9**	**-0.2**
FINES				pmax	pmax		
	comp=Z,20nm,1.0s						
W59A	**Clinton**	**61.77**	**68**	P	**P**	**11 30 44.0**	**-0.3**
	baz=321						
V60A	**Jim Taylor Roa**	**61.91**	**67**	P	**P**	**11 30 44.5**	**-0.7**
	baz=321						
V60A	**Jim Taylor Roa**	**61.91**	**67**	P	**P**	**11 30 44.3**	**-1.0**
CNNC	**Cliffs of the**	**62.00**	**68**	P	**P**	**11 30 45.8**	**0.0**
	baz=321						
CNNC	**Cliffs of the**	**62.00**	**68**	P	**P**	**11 30 45.3**	**-0.6**
BRZS	**Berezniki**	**62.10**	**320**	*e*P	**P**	**11 30 45.8**	**-0.6**
	comp=Z,9.6nm,1.3s,baz=320						
BRZS	**Berezniki**	**62.10**	**320**	*e*P	**P**	**11 30 45.8**	**-0.6**
BRZS				pmax	pmax		
	comp=Z,10.0nm,1.3s						
X59A	**McDuffie Farm,**	**62.15**	**69**	P	**P**	**11 30 46.4**	**-0.5**
	baz=322						
W60A	**Pink Hill**	**62.24**	**68**	P	**P**	**11 30 47.4**	**0.0**
	baz=322						
V61A	**Roper**	**62.24**	**67**	P	**P**	**11 30 47.6**	**+0.1**
	baz=322						
NC303	**NORSAR Array S**	**62.46**	**360**	P	**P**	**11 30 49.2**	**+0.6**
X60A	**Albert Glenn T**	**62.47**	**68**	P	**P**	**11 30 48.7**	**-0.3**
	baz=322,SNR=6.0						
NHSC	**New Hope**	**62.48**	**71**	P	**P**	**11 30 49.0**	**-0.1**
	baz=322,SNR=11						
NHSC	**New Hope**	**62.48**	**71**	P	**P**	**11 30 48.5**	**-0.6**
W61A	**Ground Anchor**	**62.51**	**67**	P	**P**	**11 30 49.9**	**+0.6**
	baz=322						
NC405	**NORSAR Array S**	**62.57**	**360**	P	**P**	**11 30 49.5**	**+0.2**
NB2	**NORSAR Subarra**	**62.65**	**360**	P	**P**	**11 30 49.7**	**-0.2**
	comp=Z,94nm,2.0s,baz=359,slow=6.9						
NB2	**NORSAR Subarra**	**62.65**	**360**	P	**P**	**11 30 49.7**	**-0.2**
	baz=359,slow=6.9						
NOA	**NORSAR Array B**	**62.65**	**360**	P	**P**	**11 30 49.5**	**-0.3**
	comp=Z,11nm,1.1s,baz=359,slow=6.9,SNR=9.3						
NOA				LR	LR	11 59 09.7	
	comp=Z,211nm,18.4s,baz=355,slow=37						
Z59A	**Georgetown, SC**	**62.84**	**70**	P	**P**	**11 30 51.6**	**+0.1**
	baz=322,SNR=5.8						
CD2	**Chengdu**	**63.28**	**286**	P	**P**	**11 30 55.3**	**+0.8**
CD2				S	**S**	**11 39 26.6**	**+0.3**
CD2				pmax	pmax		
	comp=Z,60nm,1.0s						
CD2				LR	LR		
	comp=Z,350nm,10.8s						
CD2				LR	LR		
	comp=Z,360nm,10.6s						
KONO	**Kongsberg**	**64.04**	**1**	*ce*P	**P**	**11 30 59.3**	**+0.3**
KONO				pmax	pmax		
	comp=Z,50nm,1.7s						
KONO	**Kongsberg**	**64.04**	**1**	P	**P**	**11 30 59.4**	**+0.4**
TDK	**Taldyqorghan**	**64.06**	**313**	*e*P	**P**	**11 30 59.3**	**-0.1**
	comp=Z,33nm,1.4s,baz=313						
TDK				LR	LR	12 00 04.5	
	comp=Z,308nm,14.6s,baz=313						
TDK	**Taldyqorghan**	**64.06**	**313**	*e*P	**P**	**11 30 59.3**	**-0.1**
TDK				pmax	pmax		
	comp=Z,33nm,1.4s						
TDK				MLR	MLR		
	comp=Z,308nm,15.0s						
VSU	**Vasula**	**64.54**	**351**	P	**P**	**11 31 03.4**	**+1.1**
TLIG	**Tlapa**	**64.80**	**96**	P	**P**	**11 31 04.1**	**-0.6**
TLIG				IAmb	IAmb	11 31 05.7	
	comp=Z,36nm,1.2s						
SHLS	**Shalkode**	**65.14**	**311**	*e*P	**P**	**11 31 06.0**	**-0.8**
	comp=Z,42nm,1.3s,baz=311						
SHLS				*e*S	**S**	**11 39 48.4**	**-0.9**
	baz=311						
SHLS	**Shalkode**	**65.14**	**311**	*e*P	**P**	**11 31 05.9**	**-0.8**
SHLS				*e*S	**S**	**11 39 48.3**	**-0.9**
SHLS				pmax	pmax		
	comp=Z,43nm,1.3s						
KPKS	**Kokpek**	**65.21**	**312**	*e*P	**P**	**11 31 06.8**	**-0.3**
	comp=Z,18nm,1.2s,baz=312						
KPKS	**Kokpek**	**65.21**	**312**	*e*P	**P**	**11 31 06.8**	**-0.3**
KPKS				pmax	pmax		
	comp=Z,18nm,1.2s						
GYA	**Guiyang**	**65.23**	**281**	⇑P	**P**	**11 31 08.7**	**+1.2**
GYA				pP	sP	11 31 11.9	-0.2
GYA				pmax	pmax		
	comp=Z,47nm,1.0s						
GYA				pmax	pmax		
	comp=Z,430nm,3.6s						
GYA				LR	LR		
	comp=Z,390nm,18.0s						
GYA				LR	LR		
	comp=Z,450nm,14.6s						
GYA				LR	LR		

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      comp=Z,320nm,16.8s
CHKK  Chushkaly       65.58 313 eP     P      11 31 08.4 -1.0
      baz=314
CHKK  Chushkaly       65.58 313 eP     P      11 31 08.4 -1.0
SATY  Saty            65.66 312 eP     P      11 31 10.1  0.0
      comp=Z,9.0nm,1.3s,baz=312
SATY  Saty            65.66 312 eP     P      11 31 10.0  0.0
SATY                             pmax  pmax
      comp=Z,9.0nm,1.3s
BTLS  Baital          65.74 316 eP     P      11 31 10.1 -0.3
      comp=Z,12nm,1.4s,baz=316
BTLS  Baital          65.74 316 eP     P      11 31 10.0 -0.3
BTLS                             pmax  pmax
      comp=Z,12nm,1.4s
KUU   Kurty           65.80 314 eP     P      11 31 09.7 -1.2
      comp=Z,14nm,1.3s,baz=314
KUU   Kurty           65.80 314 eP     P      11 31 09.6 -1.2
KUU                              pmax  pmax
      comp=Z,14nm,1.3s
MOS   Moscow          65.89 344 eP     P      11 31 09.7 -1.4
MOS                              pmax  pmax
      comp=Z,39nm,0.8s
MDOK  Medeo           66.13 313 eP     P      11 31 12.8 -0.4
      baz=313
MDOK                             LR    LR     12 00 30.3
      comp=Z,232nm,14.0s,baz=313
MDOK  Medeo           66.13 313 eP     P      11 31 12.7 -0.4
MDOK                             MLR   MLR
      comp=Z,232nm,14.0s
AAA   Alma-Ata        66.14 313 eP     P      11 31 13.4 +0.2
      comp=Z,32nm,1.4s,baz=313
AAA                              LR    LR     12 00 37.7
      comp=Z,180nm,14.8s,baz=313
AAA   Alma-Ata        66.14 313 eP     P      11 31 13.3 +0.2
AAA                              pmax  pmax
      comp=Z,32nm,1.4s
AAA                              MLR   MLR
      comp=Z,181nm,15.0s
TNSS  Tian-Shan       66.27 313 eP     P      11 31 14.1 -0.3
      baz=313
TNSS  Tian-Shan       66.27 313 eP     P      11 31 14.0 -0.3
MTBS  Maitube         66.41 313 eP     P      11 31 15.0 +0.2
      baz=314
MTBS  Maitube         66.41 313 eP     P      11 31 14.9 +0.2
OBN   Obninsk         66.65 344⇑eP     P      11 31 14.2 -1.8
OBN                             e             11 31 43.6
OBN                             e             11 33 41.2
OBN                              pmax  pmax
      comp=Z,28nm,1.2s
OBN                              MLR   MLR
      comp=Z,382nm,18.0s
SGDS  Sogindy         66.85 315 eP     P      11 31 17.9 +0.2
      comp=Z,8.2nm,1.2s,baz=315
SGDS                            eS     S      11 40 11.2 +1.3
      baz=315
SGDS  Sogindy         66.85 315 eP     P      11 31 17.8 +0.2
SGDS                            eS     S      11 40 11.2 +1.3
SGDS                             pmax  pmax
      comp=Z,8.0nm,1.2s
AB31  Akbulak array   66.89 327 i P    P      11 31 17.9 +0.2
AB31                             pmax  pmax
      comp=Z,43nm,1.2s
ABKAR Akbulak array   66.89 327  P     P      11 31 17.6 -0.1
ABKAR Akbulak array   66.89 327  P     P      11 31 17.7 +0.1
ABKAR                            IAmb  IAmb   11 31 19.2
      comp=Z,45nm,1.1s
TKM2  Tokmak 2        66.91 314  P     P      11 31 18.9 +0.7
      SNR=21
USP   Ospenovka       67.06 315  P     P      11 31 19.8 +0.9
      SNR=25
CHMS  Chumysh         67.18 314  P     P      11 31 20.7 +1.0
      SNR=23
BELG  Belogornoye     67.21 337⇑iP     P      11 31 18.6 -1.0
BELG                             pmax  pmax
      comp=Z,8.0nm,0.9s
ULHL  Ulahol          67.22 313  P     P      11 31 20.8 +0.7
      SNR=17
KBK   Karagaybulak    67.39 314  P     P      11 31 22.2 +1.0
      SNR=15
ISAL  Salakas         67.45 351 eP     P      11 31 21.3 +0.2
AAK   Ala-Archa       67.59 314  P     P      11 31 23.3 +0.9
      SNR=18
AAK   Ala-Archa       67.59 314 i P    P      11 31 22.8 +0.4
AAK                              pmax  pmax
      comp=Z,119nm,1.2s
AAK   Ala-Archa       67.59 314  P     P      11 31 22.5 +0.1
IDID  Didziasalis     67.65 350 eP     P      11 31 22.5 +0.2
EKS2  Erkin-Say       67.85 315  P     P      11 31 25.1 +1.1
      SNR=26
UCH   Uchtor          67.93 314  P     P      11 31 26.3 +1.4
      SNR=12
NACGM Naroch          68.05 350 i P    P      11 31 24.7 -0.2
NACGM                           i P    P      11 31 24.7 -0.2
NACGM                           i P    P      11 31 24.7 -0.2
NACGM                           i PcP  PcP    11 31 59.5 +8.5
NACGM                           i PP   PP     11 34 01.2 +6.9
NACGM                           i PPP  PPP    11 35 46.8
NACGM                           i S    S      11 40 37.1  +13
NACGM                           i PS          11 42 10.2
NACGM                           i SS   SS     11 45 09.4  +25
NACGM                           i SSS  SSS    11 48 37.6
NACGM                           i LQ   LQ     11 58 06.1
NACGM                           i LR   LR     12 02 19.4
AML   Almayashu       68.33 315  P     P      11 31 28.6 +1.2
      SNR=26
MNK   Minsk           68.34 349 eP     P      11 31 25.0 -1.7
MNK                              pmax  pmax
      comp=Z,150nm,1.0s
MNK   Minsk           68.34 349 i P    P      11 31 23.5 -3.2
      comp=E,4.0nm,0.9s
MNK                             i P    P      11 31 23.5 -3.2
      comp=N,10.0nm,0.8s
MNK                             i P    P      11 31 23.5 -3.2
      comp=Z,14nm,0.6s
MNK                             i PcP  PcP    11 31 49.0 -3.2
MNK                             i PP   PP     11 33 53.9 -2.9
MNK                             i PPP  PPP    11 35 32.2
MNK                             i S    S      11 40 23.7 -3.6
MNK                             i ScS  SKiKP  11 41 13.7 -6.6
MNK                             i SS   SS     11 44 48.8 -0.5
MNK                             i SSS  SSS    11 48 04.6
MNK                             i LR   LR     12 01 57.5
MNK                             i LRM  MLR    12 03 51.9
      comp=N,243nm,18.1s
MNK                             i LRM  MLR    12 04 17.7
      comp=E,51nm,19.0s
MNK                             i LRM  MLR    12 04 34.9
      comp=Z,200nm,19.0s
KMI   Kunming         68.41 283 ⇓P     P      11 31 28.2 +0.4
KMI                              S     S      11 40 31.3 +1.9
KMI                              sS    sS     11 40 38.3 +3.3
KMI                              pmax  pmax
      comp=Z,30nm,1.4s
KMI                              pmax  pmax
      comp=Z,250nm,3.9s
KMI                              LR    LR
      comp=Z,230nm,13.5s
KMI                              LR    LR
      comp=Z,310nm,16.5s
KMI                              LR    LR
      comp=Z,300nm,20.7s
KMI   Kunming         68.41 283  P     P      11 31 28.3 +0.4
KMI                              pmax  pmax
      comp=Z,62nm,1.3s
KMI   Kunming         68.41 283  P     P      11 31 28.3 +0.4
DZA   Taraz           68.60 317 eP     P      11 31 28.3 -0.3
      comp=Z,11nm,1.0s,baz=317
DZA   Taraz           68.60 317 eP     P      11 31 28.3 -0.3
DZA                              pmax  pmax
      comp=Z,11nm,1.0s
LPSR  Galich'ya Gora  68.70 342 eP     P      11 31 27.9 -1.1
LPSR                             pmax  pmax
      comp=Z,40nm,1.1s
KK31  Karatay Array   68.72 317  P     P      11 31 29.6 +0.2
KK31                             pmax  pmax
      comp=Z,51nm,1.2s
KK31  Karatay Array   68.72 317  P     P      11 31 29.6 +0.2
KKAR  Karatay Array   68.72 317  P     P      11 31 29.2 -0.1
KKAR  Karatay Array   68.72 317  P     P      11 31 29.2 -0.1
KKAR  Karatay Array   68.72 317  P     P      11 31 28.9 -0.5
KKAR                             IAmb  IAmb   11 31 30.9
      comp=Z,51nm,1.2s
SUW   Suwalki         69.24 352 eP     P      11 31 32.2 -0.1
SUW   Suwalki         69.24 352 eP     P      11 31 32.0 -0.3
SUW   Suwalki         69.24 352  P     P      11 31 31.5 -0.8
SUW                              pmax  pmax
      comp=Z,106nm,1.0s
SUW   Suwalki         69.24 352  P     P      11 31 31.5 -0.8
KSH   Kashi           69.63 312  P     P      11 31 39.0 +3.9
KSH                              S     S      11 40 46.1 +2.8
KSH                              pmax  pmax
      comp=Z,49nm,1.3s
KSH                              LR    LR
      comp=Z,830nm,19.3s
KSH                              LR    LR
      comp=Z,2µm,20.0s
KSH                              LR    LR
      comp=Z,850nm,28.9s
IUG   Iuzhnay         69.73 317 eP     P      11 31 36.0 +0.2
      comp=Z,25nm,1.2s,baz=317
IUG   Iuzhnay         69.73 317 eP     P      11 31 35.9 +0.2
IUG                              pmax  pmax
      comp=Z,25nm,1.2s
BSEG  Bad Segeberg    69.77   0 eP     P      11 31 35.9 +0.4
      comp=Z,55nm,1.2s,baz=0.8,slow=5.9
VSR   Storozhevoye    69.99 342 eP     P      11 31 35.7 -1.3
VSR                              pmax  pmax
      comp=Z,40nm,1.1s
VORD  Divnogorie      70.21 341 eP     P      11 31 37.2 -1.1
VORD                             pmax  pmax
      comp=Z,30nm,1.0s
AFI   Afiamalu        70.33 183  LR    LR     11 54 31.5
      comp=Z,196nm,21.0s,baz=37,slow=29
LSA   Lhasa           70.77 295  P     P      11 31 44.2 +1.5
LSA                              pmax  pmax
      comp=Z,260nm,1.3s
LSA   Lhasa           70.77 295  P     P      11 31 44.1 +1.4
LSA                              pmax  pmax
      comp=Z,110nm,1.3s
LSA   Lhasa           70.77 295  P     P      11 31 44.1 +1.4
SLVN  Son La          70.83 280  P     P      11 31 43.5 +0.9
RUE   Ruedersdorf     71.21 358 eP     P      11 31 44.5 +0.2
      comp=Z,54nm,1.2s,baz=0.8,slow=5.9
IBBN  Ibbenburen      71.37   2 eP     P      11 31 45.7 +0.4
      comp=Z,95nm,1.5s,baz=0.8,slow=5.9
FLTG  Flechtingen     71.38 360 eP     P      11 31 45.5 +0.1
      comp=Z,33nm,1.3s,baz=0.8,slow=5.9
BEL   Belsk           71.57 354 eP     P      11 31 47.1 +0.5
CLZ   Clausthal       71.87   0 eP     P      11 31 49.0 +0.6
      comp=Z,65nm,1.2s,baz=0.8,slow=5.9
AKASG Malin Array Be  71.94 348  P     P      11 31 47.9 -0.9
      comp=Z,27nm,1.0s,baz=15,slow=6.1,SNR=58
AKASG                            LR    LR     12 07 33.1
      comp=Z,227nm,18.6s,baz=0.0,slow=39
AKASG Malin Array Be  71.94 348  P     P      11 31 47.3 -1.5
AKASG                            pmax  pmax
      comp=Z,15nm,1.4s
AKASG Malin Array Be  71.94 348  P     P      11 31 47.3 -1.5
AKBB  Malin Array Si  71.94 348ceP     P      11 31 46.9 -2.0
AKBB  Malin Array Si  71.94 348  P     P      11 31 48.4 -0.5
AKBB                             IAmb  IAmb   11 31 49.1
      comp=Z,46nm,1.1s
GTTG  Gottingen       72.16   1 eP     P      11 31 50.9 +0.8
      comp=Z,56nm,1.2s,baz=0.8,slow=5.9
BUG   Bochum--Univer  72.23   2 eP     P      11 31 50.9 +0.4
      comp=Z,48nm,1.5s,baz=0.8,slow=5.9
CLL   Collm           72.39 359⇓iP     P      11 31 51.1 -0.4
      comp=Z,27nm,1.2s
CLL                             i pP   pP     11 31 54.7 -0.2
CLL                             ePP    PP     11 34 32.0 +0.4
CLL                             eS     S      11 41 15.0 +0.3
CLL                             eSS    SS     11 45 54.0 +2.5
CLL                             eSSS   SSS    11 49 12.0
CLL                             e             11 49 57.0
CLL                              Lm    MLR    12 05 00.0
      comp=N,200nm,20.0s
CLL                              Lm    MLR    12 05 00.0
      comp=E,200nm,18.6s
CLL                              Lm    MLR    12 05 00.0
      comp=Z,200nm,20.4s
CLL   Collm           72.39 359⇓iP     P      11 31 51.1 -0.4
CLL                             i             11 31 54.7
CLL                             eS     S      11 41 15.0 +0.3
CLL                              pmax  pmax
      comp=Z,27nm,1.2s
CLL   Collm           72.39 359  P     P      11 31 51.3 -0.2
CLL                              IAmb  IAmb   11 31 52.6
      comp=Z,28nm,1.2s
CLL   Collm           72.39 359 eP     P      11 31 51.2 -0.3
      comp=Z,27nm,1.2s,baz=0.8,slow=5.9
KASTN Kahler Asten    72.49   2 eP     P      11 31 51.8 -0.4
      comp=Z,35nm,1.3s,baz=0.8,slow=5.9
NEUB  Neuenburg       72.50 359 eP     P      11 31 52.4 +0.2
      comp=Z,49nm,1.2s,baz=0.8,slow=5.9
FBE   Freiberg        72.77 358 eP     P      11 31 53.9  0.0
      comp=Z,85nm,1.7s,baz=0.8,slow=5.9
KSP   Ksiaz           72.78 356 eP     P      11 31 53.9  0.0
KSP   Ksiaz           72.78 356  P     P      11 31 54.4 +0.5
BRG   Berggiesshubel  72.81 358  P     P      11 31 54.5 +0.5
BRG   Berggiesshubel  72.81 358 i P    P      11 31 53.9 -0.1
BRG                              Amp          11 31 56.1
      comp=Z,42nm,1.5s
BRG   Berggiesshubel  72.81 358 eP     P      11 31 54.0  0.0
      comp=Z,42nm,1.5s,baz=0.8,slow=5.9
UBBA  Unterbreizbach  72.89   1 eP     P      11 31 55.1 +0.7
      comp=Z,90nm,2.0s,baz=0.8,slow=5.9
MEM   Membach         73.03   3 dP     P      11 31 55.1 -0.2
MEM                             dsP    sP     11 31 59.6 -0.3
BSTI  Sart Tilman     73.04   4 dsP    sP     11 31 59.1 -0.9
CHVC  Chvalec         73.04 357 eP     P      11 31 55.1 -0.4
BTNL  Ternell         73.05   3 dP     P      11 31 56.0 +0.4
BTNL                            dsP    sP     11 32 00.4 +0.3
OSTC  Ostas           73.07 356 eP     P      11 31 55.8 +0.2
MOX   Moxa            73.07 360 eP     P      11 31 55.7 +0.1
      comp=Z,39nm,1.2s,baz=0.8,slow=5.9
MOX                             eL     L      12 00 59.6
      comp=Z,127nm,21.1s
UPC   Upice           73.12 357 eP     P      11 31 56.2 +0.3
UPC   Upice           73.12 357 eP     P      11 31 56.2 +0.3
PVCC  Panska Ves      73.14 358 eP     P      11 31 56.4 +0.4
PVCC  Panska Ves      73.14 358 eP     P      11 31 56.4 +0.4
PLN   Plauen          73.22 359 eP     P      11 31 55.7 -0.8
      comp=Z,50nm,1.9s,baz=0.8,slow=5.9
OJC   Ojcow           73.24 354 eP     P      11 31 57.3 +0.7
OJC   Ojcow           73.24 354  P     P      11 31 56.2 -0.4
OJC                              pmax  pmax
      comp=Z,35nm,1.2s
OJC   Ojcow           73.24 354  P     P      11 31 56.1 -0.4
OJC                              IAmb  IAmb   11 31 58.1
      comp=Z,35nm,1.2s
WERD  Werda           73.26 359 eP     P      11 31 56.3 -0.4
      comp=Z,29nm,1.5s,baz=0.8,slow=5.9
DPC   Dobruska-Polom  73.27 356 eP     P      11 31 56.9 +0.1
DPC   Dobruska-Polom  73.27 356 eP     P      11 31 56.9 +0.1
BMRD  Maredsous       73.29   4 dP     P      11 31 56.5 -0.4
TANN  Tannenbergstha  73.29 359 eP     P      11 31 57.2 +0.2
      comp=Z,33nm,1.4s,baz=0.8,slow=5.9
LVV   L'vov           73.34 351 eP     P      11 31 57.4 +0.2
WERN  Wernitzgruen    73.42 359 eP     P      11 31 58.1 +0.4
      comp=Z,39nm,1.4s,baz=0.8,slow=5.9
TNS   Taunus Mts      73.47   2 eP     P      11 31 58.1 +0.1
      comp=Z,26nm,1.1s,baz=0.8,slow=5.9
NKC   Novy Kostel     73.47 359 eP     P      11 31 57.7 -0.3
NKC   Novy Kostel     73.47 359 eP     P      11 31 57.7 -0.3
GIVF  Givet           73.49   4 eP     P      11 31 57.7 -0.4
GIVF                             pmax  pmax
      comp=Z,78nm,1.7s
KRLC  Kraliky         73.53 356 eP     P      11 31 58.5 +0.1
KRLC  Kraliky         73.53 356 eP     P      11 31 58.5 +0.1
PRU   Pruhonice       73.68 358 eP     P      11 31 59.4 +0.2
PRU   Pruhonice       73.68 358 eP     P      11 31 59.4 +0.2
MANZ  Manzenberg      73.72 359 eP     P      11 31 59.7 +0.2
      comp=Z,23nm,1.3s,baz=0.8,slow=5.9
SHL   Shillong        73.77 292  P     P      11 31 59.5 -0.9
SHL                              pmax  pmax
      comp=Z,39nm,1.3s
SHL   Shillong        73.77 292  P     P      11 31 59.5 -0.9
SHL                              IAmb  IAmb   11 32 00.9
      comp=Z,39nm,1.3s
MORC  Moravsky Berou  73.80 356 ⇑P     P      11 32 00.5 +0.6
MORC  Moravsky Berou  73.80 356 eP     P      11 32 00.4 +0.5
MORC  Moravsky Berou  73.80 356  P     P      11 31 59.7 -0.3
MORC                             pmax  pmax
      comp=Z,28nm,1.3s
MORC  Moravsky Berou  73.80 356  P     P      11 31 59.7 -0.3
MORC                             IAmb  IAmb   11 32 01.5
      comp=Z,28nm,1.3s
ROTZ  Rotzenmuhle     73.94 359 eP     P      11 32 01.1 +0.3
      comp=Z,30nm,1.5s,baz=0.8,slow=5.9
WLF   Walferdange     73.98   3  P     P      11 32 02.9 +2.0
WLF   Walferdange     73.98   3 eP     P      11 32 01.2 +0.3
      comp=Z,48nm,1.2s,baz=0.8,slow=5.9
PBCC  Pribram         74.00 358 eP     P      11 32 01.0 -0.1
NIE   Niedzica        74.01 354 eP     P      11 32 02.4 +1.2
GRA1  Grafenberg Arr  74.02 360  P     P      11 32 01.8 +0.5
GRF   Grafenberg Arr  74.02 360  P     P      11 32 01.8 +0.5
GRF                              pmax  pmax
      comp=Z,94nm,1.5s
GRF   Grafenberg Arr  74.02 360 eP     P      11 32 01.8 +0.5
      comp=Z,155nm,1.8s,baz=0.8,slow=5.9
GRF                             eL     L      12 01 16.3
      comp=Z,138nm,18.8s
GRFO  Grafenberg      74.02 360  P     P      11 32 02.5 +1.3
GRFO  Grafenberg      74.02 360  P     P      11 32 02.5 +1.3
GRFO                             IAmb  IAmb   11 32 06.9
      comp=Z,24nm,1.5s
VRAC  Vranov          74.30 356 ⇑P     P      11 32 03.7 +0.8
VRAC  Vranov          74.30 356 eP     P      11 32 03.3 +0.4
VRAC  Vranov          74.30 356  P     P      11 32 03.6 +0.8
LANS  Liptovska Anna  74.33 354 eP     P      11 32 04.5 +1.5
LANS                             pmax  pmax
      comp=Z,24nm,1.2s
LANS  Liptovska Anna  74.33 354 eP     P      11 32 04.5 +1.5
KOLS  Kolonicke sedl  74.36 352 eP     P      11 32 03.8 +0.6
KOLS                             pmax  pmax
      comp=Z,23nm,1.1s
KOLS  Kolonicke sedl  74.36 352 eP     P      11 32 03.8 +0.6
TAPN  Taplejung       74.41 296 eP     P      11 32 04.6 +0.4
      comp=Z,200nm,1.4s
CRVS  Cervenica-Dubn  74.45 353 eP     P      11 32 04.6 +0.9
CRVS                             pmax  pmax
      comp=Z,90nm,1.7s
CRVS  Cervenica-Dubn  74.45 353 eP     P      11 32 04.6 +0.9
FLN   La Foliniere    74.53   8 eP     P      11 32 03.4 -0.7
FLN                              pmax  pmax
      comp=Z,93nm,1.6s
SWI   Sorong          74.55 244  P     P      11 32 05.4 +0.7
      comp=Z,1µmcomp=Z,91nm,1.4s
KRUC  Moravsky        74.56 356 eP     P      11 32 04.4 +0.1
WET   Wettzell        74.56 359 eP     P      11 32 04.7 +0.3
      comp=Z,49nm,1.6s,baz=0.8,slow=5.9
KHC   Kasperske Hory  74.56 358ceP     P      11 32 04.1 -0.3
KHC                              pmax  pmax
      comp=Z,28nm,1.0s
KHC   Kasperske Hory  74.56 358 eP     P      11 32 05.0 +0.6
KHC   Kasperske Hory  74.56 358  P     P      11 32 04.6 +0.2
KHC                              IAmb  IAmb   11 32 07.0
      comp=Z,51nm,1.4s
SORM  Soroca          74.57 348 ⇑P     P      11 32 03.6 -0.8
SORM  Soroca          74.57 348  P     P      11 32 03.6 -0.8
UZH   Uzhgorod        74.66 352⇑iP     P      11 32 04.6 -0.3
UZH                             e             11 32 12.7
UZH                             e             11 32 17.2
JAVC  Velka Javorina  74.71 355 eP     P      11 32 06.7 +1.4
LDF   La Druitiere    74.72   8 eP     P      11 32 04.4 -0.9
LDF                              pmax  pmax
      comp=Z,22nm,1.0s
GEC2  GERESS Array S  74.84 358  P     P      11 32 05.5 -0.6
GEC2                             IAmb  IAmb   11 32 07.6
      comp=Z,22nm,1.2s
GEC2  GERESS Array S  74.84 358 eP     P      11 32 06.2 +0.1
      comp=Z,24nm,1.2s,baz=0.8,slow=5.9
GERES GERESS Array B  74.84 358  P     P      11 32 06.0 -0.2
      comp=Z,6.8nm,1.0s,baz=9.5,slow=4.1,SNR=30
GERES                            LR    LR     12 06 30.2
      comp=Z,115nm,18.3s,baz=18,slow=37
GERES GERESS Array B  74.84 358  P     P      11 32 05.6 -0.6
GERES GERESS Array B  74.84 358  P     P      11 32 05.6 -0.6
GUN   Gumba           74.85 298 eP     P      11 32 07.3 +0.5
      comp=Z,287nm,1.5s
CKRC  Cesky Krumlov   74.86 358 eP     P      11 32 06.3 +0.2
UBPT  Khong Chiam     74.89 275  P     P      11 32 07.4 +0.7
KECS  Kecovo          74.93 353 eP     P      11 32 07.5 +1.0
KECS                             pmax  pmax
      comp=Z,15nm,1.1s
KECS  Kecovo          74.93 353 eP     P      11 32 07.5 +1.0
STU   Stuttgart       74.93   1  P     P      11 32 07.6 +1.1
SMOL  Smolenice       75.06 356 eP     P      11 32 08.5 +1.2
SMOL                             pmax  pmax
      comp=Z,17nm,1.2s
SMOL  Smolenice       75.06 356 eP     P      11 32 08.5 +1.2
GOF   Gofitskoye      75.13 337⇑iP     P      11 32 08.5 +0.8
GOF                              pmax  pmax
      comp=Z,128nm,1.0s
MODS  Modra-Piesok    75.21 356 eP     P      11 32 08.3 +0.2
MODS                             pmax  pmax
      comp=Z,51nm,1.3s
MODS  Modra-Piesok    75.21 356 eP     P      11 32 08.3 +0.2
PKI   Pulchoki        75.36 298 eP     P      11 32 09.7  0.0
      comp=Z,246nm,1.5s
PKIN  Phulchoki       75.36 298 eP     P      11 32 09.8 +0.1
      comp=Z,280nm,1.5s
BFO   Black Forest    75.36   2 i P    P      11 32 05.8 -3.2
BFO   Black Forest    75.36   2  P     P      11 32 09.2 +0.1
BFO   Black Forest    75.36   2 eP     P      11 32 09.3 +0.3
      comp=Z,28nm,1.4s,baz=0.8,slow=5.9
GKN   Gorkha          75.38 299 eP     P      11 32 09.8 +0.2
      comp=Z,366nm,1.6s
BUR08 Bucovina Ar. S  75.39 350  P     P      11 32 09.3  0.0
BUR08                            IAmb  IAmb   11 32 10.5
      comp=Z,19nm,1.1s
ZST   Bratislava      75.39 356 eP     P      11 32 10.0 +0.8
ZST                              pmax  pmax
      comp=Z,176nm,1.7s
ZST   Bratislava      75.39 356 eP     P      11 32 10.0 +0.8
BURAR Bucovina Array  75.42 350 ⇑P     P      11 32 09.5 +0.1
BURAR Bucovina Array  75.42 350  P     P      11 32 09.5 +0.1
BURAR Bucovina Array  75.42 350  P     P      11 32 08.8 -0.7
DMN   Daman           75.48 298 eP     P      11 32 10.6 +0.3
      comp=Z,197nm,1.4s
DANN  Dangsing        75.51 300 eP     P      11 32 11.0 +0.5
      comp=Z,209nm,1.1s
PSZ   Piszkesteto     75.53 354 ⇓P     P      11 32 11.0 +0.9
PSZ   Piszkesteto     75.53 354  P     P      11 32 10.2 +0.1
PSZ                              pmax  pmax
      comp=Z,51nm,1.3s
PSZ   Piszkesteto     75.53 354  P     P      11 32 10.2 +0.1
PSZ                              IAmb  IAmb   11 32 12.3
      comp=Z,51nm,1.3s
FUR   Furstenfeldbru  75.55 360 eP     P      11 32 10.7 +0.6
      comp=Z,68nm,1.5s,baz=0.8,slow=5.9
CHTO  Chiang Mai      75.57 282  P     P      11 32 10.1 -0.5
CHTO                             pmax  pmax
      comp=Z,37nm,1.5s
CHTO  Chiang Mai      75.57 282  P     P      11 32 10.1 -0.5
CHTO                             IAmb  IAmb   11 32 16.3
      comp=Z,37nm,1.4s
HAU   Haudompre       75.64   3 eP     P      11 32 10.3 -0.3
HAU                              pmax  pmax
      comp=Z,25nm,1.1s
CONA  Conrad Observa  75.71 357 eP     P      11 32 11.4 +0.3
      comp=Z,22nm,1.1s,SNR=11
MILM  Milestii Mici   75.72 347 ⇑P     P      11 32 10.5 -0.5
SRO   Srobarova       75.72 355 eP     P      11 32 12.0 +1.0
SRO                              pmax  pmax
      comp=Z,28nm,1.3s
SRO   Srobarova       75.72 355 eP     P      11 32 12.0 +1.0
PPT   Papeete         75.73 161  LR    LR     11 56 22.4
      comp=Z,292nm,21.6s,baz=349,slow=28
NIL   Nilore          75.77 310  P     P      11 32 12.4 +0.8
NIL                              pmax  pmax
      comp=Z,82nm,1.2s
NIL   Nilore          75.77 310  P     P      11 32 12.4 +0.8
SRO2  Moca            75.77 355 eP     P      11 32 11.6 +0.3
SRO2                             pmax  pmax
      comp=Z,22nm,1.1s
SRO2  Moca            75.77 355 eP     P      11 32 11.6 +0.3
MOA   Molln           75.83 358 eP     P      11 32 11.7  0.0
      comp=Z,16nm,1.3s
FAKI  Fak Fak         75.84 242  P     P      11 32 12.5 +0.4
FAKI  Fak Fak         75.84 242  P     P      11 32 13.0 +0.9
      comp=Z,49nm,1.7s
HINF  Hinteralfeld    75.84   3 eP     P      11 32 11.3 -0.5
HINF                             pmax  pmax
      comp=Z,28nm,1.3s
CM31  Chiang Mai Arr  75.86 282  P     P      11 32 12.4 +0.2
CM31                             IAmb  IAmb   11 32 14.3
      comp=Z,53nm,1.4s
CMAR  Chiang Mai Arr  75.86 282  P     P      11 32 12.9 +0.7
      comp=Z,19nm,1.1s,baz=18,slow=5.6,SNR=54
CMAR                             LR    LR     12 09 07.3
      comp=Z,122nm,18.0s,baz=120,slow=38
CMAR  Chiang Mai Arr  75.86 282 i P    P      11 32 13.0 +0.7
CMAR                             pmax  pmax
      comp=Z,19nm,1.1s
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CMAR	**Chiang Mai Arr**	**75.86**	**282**	P	**P**	**11 32 12.1**	**-0.2**
SOP	**Sopron**	**75.93**	**356**	P	**P**	**11 32 14.1**	**+1.9**
SOP				pmax	pmax		
	comp=Z,21nm,1.3s						
RJOB	**Jochberg**	**75.97**	**359**	*e*P	**P**	**11 32 12.6**	**+0.1**
	comp=Z,109nm,1.7s,baz=0.8,slow=5.9						
BIZ	**Bicaz**	**76.00**	**349**	⇑P	**P**	**11 32 13.2**	**+0.5**
ARCR	**ARCALIA**	**76.02**	**351**	⇑P	**P**	**11 32 13.4**	**+0.6**
UBR	**Ueberruh**	**76.03**	**1**	*e*P	**P**	**11 32 12.7**	**-0.2**
	comp=Z,52nm,1.3s,baz=0.8,slow=5.9						
KOLN	**Koldanda**	**76.07**	**299**	*e*P	**P**	**11 32 13.9**	**+0.2**
	comp=Z,228nm,1.5s						
RETA	**Reutte**	**76.23**	**0**	*e*P	**P**	**11 32 14.2**	**+0.1**
	comp=Z,16nm,1.1s						
KIV	**Kislovodsk**	**76.26**	**337**	⇑P	**P**	**11 32 14.0**	**-0.3**
KIV	**Kislovodsk**	**76.26**	**337**	*e*P	**P**	**11 32 14.0**	**-0.3**
KIV				pmax	pmax		
	comp=Z,81nm,1.1s						
KIV				MLR	MLR		
	comp=Z,599nm,18.0s						
KIV	**Kislovodsk**	**76.26**	**337**	P	**P**	**11 32 14.7**	**+0.3**
KIV				IAmb	IAmb	11 32 16.2	
	comp=Z,24nm,1.0s						
GROC	**Groznyy**	**76.27**	**335**	*e*P	**P**	**11 32 14.6**	**+0.3**
GROC				*e*		11 32 26.5	
GROC				pmax	pmax		
	comp=Z,56nm,1.4s						
LOR	**Lormes**	**76.28**	**5**	*e*P	**P**	**11 32 13.8**	**-0.5**
LOR				pmax	pmax		
	comp=Z,55nm,1.3s						
MOTA	**Moosalm**	**76.37**	**360**	*e*P	**P**	**11 32 14.8**	**-0.2**
	comp=Z,33nm,1.2s,SNR=8.6						
WATA	**Walderalm**	**76.38**	**360**	*e*P	**P**	**11 32 15.2**	**+0.2**
	comp=Z,41nm,1.4s,SNR=7.6						
DAVA	**Damuels**	**76.43**	**1**	*i* P	**P**	**11 32 13.0**	**-2.3**
	comp=Z,11nm,1.1s						
KBZ	**Khabaz**	**76.43**	**337**	P	**P**	**11 32 15.7**	**+0.6**
	comp=Z,15nm,1.0s,baz=293,slow=3.6,SNR=12						
KBZ				LR	LR	12 10 13.9	
	comp=Z,283nm,19.7s,baz=9.5,slow=39						
KBZ	**Khabaz**	**76.43**	**337**	*ce*P	**P**	**11 32 16.0**	**+0.9**
KBZ				pmax	pmax		
	comp=Z,27nm,1.1s						
WTTA	**Wattenberg**	**76.45**	**359**	*e*P	**P**	**11 32 15.4**	**0.0**
	comp=Z,21nm,1.1s						
DRGR		**76.45**	**352**	⇓P	**P**	**11 32 15.5**	**+0.1**
DRGR		**76.45**	**352**	P	**P**	**11 32 15.6**	**+0.3**
DRGR				pmax	pmax		
	comp=Z,7.0nm,1.4s						
CJR	**Cluj-Napoca**	**76.46**	**351**	⇓P	**P**	**11 32 16.5**	**+1.1**
SQTA	**Sankt Quirin**	**76.50**	**360**	*e*P	**P**	**11 32 15.7**	**+0.1**
	comp=Z,51nm,1.4s,SNR=11						
NCK	**Nalchik**	**76.50**	**336**	*i* P	**P**	**11 32 15.8**	**+0.2**
NCK				pmax	pmax		
	comp=Z,46nm,1.2s						
KBA	**Koelnbreinsper**	**76.62**	**358**	*e*P	**P**	**11 32 16.8**	**+0.4**
	comp=Z,48nm,1.2s,SNR=14						
KBA	**Koelnbreinsper**	**76.62**	**358**	P	**P**	**11 32 17.2**	**+0.8**
FETA	**Feichten**	**76.70**	**0**	*e*P	**P**	**11 32 17.2**	**+0.3**
	comp=Z,33nm,1.1s,SNR=7.8						
MFF	**Saint Martin d**	**76.70**	**8**	*e*P	**P**	**11 32 16.4**	**-0.2**
MFF				pmax	pmax		
	comp=Z,123nm,1.6s						
KBL	**Kabul**	**76.72**	**314**	P	**P**	**11 32 16.0**	**-1.2**
KBL				pmax	pmax		
	comp=Z,63nm,1.3s						
KBL	**Kabul**	**76.72**	**314**	P	**P**	**11 32 15.9**	**-1.2**
AVF	**Avril sur Loir**	**76.73**	**5**	*e*P	**P**	**11 32 16.3**	**-0.5**
AVF				pmax	pmax		
	comp=Z,24nm,1.0s						
SMF	**Signal de Mont**	**76.90**	**5**	*e*P	**P**	**11 32 17.3**	**-0.5**
SMF				pmax	pmax		
	comp=Z,73nm,1.5s						
ABTA	**Abfaltersbach**	**76.96**	**359**	*e*P	**P**	**11 32 17.8**	**-0.4**
	comp=Z,26nm,1.2s,SNR=6.8						
SOKA	**Soboth**	**76.98**	**357**	*e*P	**P**	**11 32 18.8**	**+0.4**
	comp=Z,31nm,1.2s,SNR=11						
PLOR	**Plostina**	**77.02**	**349**	⇑P	**P**	**11 32 18.8**	**+0.3**
PLOR	**Plostina**	**77.02**	**349**	P	**P**	**11 32 18.8**	**+0.3**
DOPR	**Dopca**	**77.03**	**350**	⇑P	**P**	**11 32 19.5**	**+0.9**
SIRR	**Siria**	**77.06**	**352**	⇑P	**P**	**11 32 19.4**	**+0.7**
MYKA	**Terra Mystica**	**77.06**	**358**	*e*P	**P**	**11 32 19.3**	**+0.5**
	comp=Z,31nm,1.7s						
ZEI	**Tsey**	**77.10**	**336**	*e*P	**P**	**11 32 17.7**	**-1.6**
ZEI				pmax	pmax		
	comp=Z,40nm,1.4s						
ZOU	**Zoufplan**	**77.15**	**359**	P	**P**	**11 32 18.9**	**-0.6**
ZOU				IAmb	IAmb	11 32 21.3	
	comp=Z,22nm,1.2s						
OBKA	**Obir**	**77.16**	**357**	*e*P	**P**	**11 32 19.7**	**+0.3**
	comp=Z,48nm,1.1s,SNR=6.6						
TCF	**Toulx Ste Croi**	**77.17**	**6**	*e*P	**P**	**11 32 18.7**	**-0.6**
TCF				pmax	pmax		
	comp=Z,22nm,1.1s						
SOC	**Sochi**	**77.23**	**339**	*e*P	**P**	**11 32 17.9**	**-1.8**
SOC				*e*		11 35 15.5	
SOC				*e*S	**S**	**11 42 08.1**	**-0.8**
SOC				*e*SSS	SSS	11 50 19.7	
SOC				pmax	pmax		
	comp=Z,31nm,0.9s						
SOC				MLR	MLR		
	comp=Z,706nm,21.0s						
MORH	**Mrgy, Hungar**	**77.30**	**355**	⇑P	**P**	**11 32 20.4**	**+0.4**
ONI	**Oni**	**77.39**	**336**	P	**P**	**11 32 23.0**	**+2.3**
LGD	**Lagodekhi**	**77.45**	**334**	P	**P**	**11 32 21.9**	**+0.9**
ZKTA	**Zakatala**	**77.55**	**333**	P	**P**	**11 32 22.1**	**+0.6**
VOIR		**77.59**	**350**	⇑P	**P**	**11 32 22.6**	**+0.8**
VOIR		**77.59**	**350**	P	**P**	**11 32 22.5**	**+0.8**
CTI	**Castel Tesino**	**77.67**	**359**	P	**P**	**11 32 22.1**	**-0.1**
CTI				pmax	pmax		
	comp=Z,22nm,1.4s						
CTI	**Castel Tesino**	**77.67**	**359**	P	**P**	**11 32 22.1**	**-0.1**
CTI				IAmb	IAmb	11 32 27.9	
	comp=Z,22nm,1.4s						
GEYT	**Alibeck**	**77.67**	**324**	P	**P**	**11 32 23.0**	**+0.7**
	comp=Z,23nm,1.1s,baz=310,slow=3.7,SNR=38						
GEYT				LR	LR	12 09 09.9	
	comp=Z,363nm,20.4s,baz=25,slow=38						
GEYT	**Alibeck**	**77.67**	**324**	P	**P**	**11 32 22.7**	**+0.4**
GYA0B	**ALIBECK ARRAY**	**77.67**	**324**	P	**P**	**11 32 23.3**	**+1.0**
ARR	**Arges**	**77.70**	**350**	⇓P	**P**	**11 32 22.9**	**+0.5**
BZS	**Buzias**	**77.71**	**352**	⇑P	**P**	**11 32 22.5**	**+0.2**
BZS	**Buzias**	**77.71**	**352**	P	**P**	**11 32 22.3**	**0.0**
BZS				pmax	pmax		
	comp=Z,35nm,1.5s						
TPGR	**Topolog**	**77.80**	**347**	⇑P	**P**	**11 32 23.3**	**+0.4**
SEKA	**Sheki**	**77.81**	**333**	P	**P**	**11 32 23.3**	**+0.3**
GZR	**Gura Zlata**	**77.84**	**351**	⇑P	**P**	**11 32 23.5**	**+0.4**
MRSI	**Marisa**	**78.17**	**252**	P	**P**	**11 32 26.0**	**+0.8**
	comp=Z,1µmcomp=Z,62nm,2.0s						
SANI	**Sanana**	**78.22**	**248**	P	**P**	**11 32 26.4**	**+0.9**
	comp=Z,53nm,1.4s						
MNGR	**Mingechevir, A**	**78.25**	**333**	P	**P**	**11 32 25.9**	**+0.5**
TOLI2	**Tolitoli**	**78.25**	**254**	P	**P**	**11 32 25.5**	**-0.2**
FRGS	**Fruska Gora**	**78.28**	**354**	⇑P	**P**	**11 32 26.1**	**+0.5**
KZRT	**Kazreti**	**78.32**	**335**	P	**P**	**11 32 27.8**	**+1.9**
HERR	**Herculane**	**78.38**	**352**	⇑P	**P**	**11 32 25.1**	**-0.9**
SC01	**Santiago de lo**	**78.47**	**72**	P	**P**	**11 32 26.8**	**-0.1**
AKH	**Akhalkalaki**	**78.51**	**336**	P	**P**	**11 32 26.2**	**-0.9**
AKH				pmax	pmax		
	comp=Z,86nm,1.4s						
AKH	**Akhalkalaki**	**78.51**	**336**	P	**P**	**11 32 26.2**	**-0.9**
CAF	**Calviac**	**78.52**	**6**	*e*P	**P**	**11 32 26.6**	**-0.3**
CAF				pmax	pmax		
	comp=Z,48nm,1.4s						
MDVR	**Moldovita**	**78.53**	**352**	⇑P	**P**	**11 32 26.8**	**-0.2**
SDDR	**Presa de Saban**	**78.54**	**73**	P	**P**	**11 32 27.0**	**-0.4**
SDDR				IAmb	IAmb	11 32 29.0	
	comp=Z,42nm,0.9s						
GANJ	**Ganja**	**78.56**	**333**	P	**P**	**11 32 27.6**	**+0.4**
BNI	**Bardonecchia**	**78.60**	**3**	P	**P**	**11 32 30.4**	**+2.9**
ORIF	**Oris-en-Rattie**	**78.71**	**4**	*e*P	**P**	**11 32 31.6**	**+3.6**
ORIF				pmax	pmax		
	comp=Z,69nm,1.6s						
DIVS	**Divibare**	**79.33**	**353**	P	**P**	**11 32 30.8**	**-0.6**
DIVS				IAmb	IAmb	11 32 32.6	
	comp=Z,34nm,1.2s						
KARS	**Kars**	**79.35**	**336**	P	**P**	**11 32 34.6**	**+3.0**
MPSI	**Mapaga**	**79.37**	**254**	P	**P**	**11 32 32.7**	**+0.9**
	comp=Z,43nm,1.4s						
HRA	**Herat**	**79.44**	**319**	P	**P**	**11 32 32.5**	**+0.2**
HRA				IAmb	IAmb	11 32 38.1	
	comp=Z,56nm,1.4s						
BANI	**BANI**	**79.52**	**73**	P	**P**	**11 32 31.4**	**-1.4**
DR12	**Loma Pena Alta**	**79.70**	**72**	P	**P**	**11 32 33.8**	**+0.1**
LKRN	**Lenkeran, Azer**	**79.74**	**331**	P	**P**	**11 32 33.9**	**+0.3**
PLE	**Pljevlja**	**80.13**	**354**	P	**P**	**11 32 37.7**	**+1.9**
NAX	**Nakhchivan**	**80.16**	**333**	P	**P**	**11 32 37.2**	**+1.2**
KVT	**Kavak**	**80.35**	**341**	P	**P**	**11 32 39.2**	**+2.3**
COEN	**Coen**	**80.75**	**227**	P	**P**	**11 32 38.7**	**-0.4**
COEN				IAmb	IAmb	11 32 40.5	
	comp=Z,28nm,1.4s						
PLD	**Plovdiv**	**80.92**	**350**	P	**P**	**11 32 41.3**	**+1.4**
PLD				pmax	pmax		
	comp=Z,106nm,1.4s						
DZM	**Mont Dzumac**	**81.09**	**203**	LR	LR	12 02 13.2	
	comp=Z,269nm,21.0s,baz=175,slow=31						
SKO	**Skopje**	**81.34**	**352**	*i* P	**P**	**11 32 43.4**	**+1.2**
GEVA	**Gevas**	**81.56**	**335**	P	**P**	**11 32 45.2**	**+1.6**
INTR	**Introdacqua**	**81.67**	**358**	P	**P**	**11 32 43.9**	**-0.2**
INTR				IAmb	IAmb	11 32 46.4	
	comp=Z,37nm,1.0s						
VAY	**Valandovo**	**81.90**	**351**	*i* P	**P**	**11 32 45.3**	**+0.2**
SJG	**San Juan**	**81.95**	**69**	LR	LR	12 11 45.0	
	comp=Z,309nm,19.1s,baz=333,slow=38						
BR131	**Keskin Array S**	**82.08**	**342**	P	**P**	**11 32 45.5**	**-0.8**
BR131				pmax	pmax		
	comp=Z,31nm,1.1s						
BR131	**Keskin Array S**	**82.08**	**342**	P	**P**	**11 32 45.5**	**-0.8**
BR131				IAmb	IAmb	11 32 48.2	
	comp=Z,31nm,1.1s						
BRTR	**Keskin Array B**	**82.08**	**342**	P	**P**	**11 32 46.6**	**+0.4**
	comp=Z,11nm,1.0s,baz=29,slow=2.8,SNR=19						
BRTR				LR	LR	12 12 57.1	
	comp=Z,141nm,21.3s,baz=14,slow=38						
BRTR	**Keskin Array B**	**82.08**	**342**	*i* P	**P**	**11 32 47.0**	**+0.7**
BRTR				pmax	pmax		
	comp=Z,11nm,1.0s						
BRTR	**Keskin Array B**	**82.08**	**342**	P	**P**	**11 32 45.9**	**-0.4**
OHR	**Ohrid**	**82.25**	**352**	*i* P	**P**	**11 32 47.7**	**+0.7**
TTSI	**Tana Toraja**	**82.26**	**252**	P	**P**	**11 32 47.7**	**+0.4**
	comp=Z,2µmcomp=Z,48nm,1.4s						
MTP	**Monte Pirata**	**82.27**	**69**	P	**P**	**11 32 47.2**	**-0.2**
MALT	**Malatya**	**82.57**	**339**	P	**P**	**11 32 50.8**	**+2.0**
MARD	**Mardin**	**83.03**	**336**	P	**P**	**11 32 52.6**	**+1.3**
ESDC	**Sonseca Array**	**83.22**	**12**	P	**P**	**11 32 51.5**	**-0.6**
	comp=Z,10nm,1.1s,baz=357,slow=5.6,SNR=18						
ESDC				LR	LR	12 08 26.6	
	comp=Z,147nm,21.8s,baz=325,slow=35						
ESDC	**Sonseca Array**	**83.22**	**12**	P	**P**	**11 32 51.4**	**-0.7**
BNSI	**Bone**	**83.25**	**251**	P	**P**	**11 32 53.4**	**+1.0**
	comp=Z,27nm,1.6s						
PMTG	**Montargil**	**83.27**	**15**	*e*P	**P**	**11 32 52.8**	**+0.5**
PESTR	**Estremoz**	**83.56**	**14**	*e*P	**P**	**11 32 54.0**	**+0.2**
	comp=Z,42nm,1.6s						
GAZ	**Gaziantep**	**83.91**	**339**	P	**P**	**11 32 56.9**	**+1.1**
KAPI	**Kappang**	**83.96**	**251**	P	**P**	**11 32 56.7**	**+0.6**
KAPI				pmax	pmax		
	comp=Z,55nm,1.5s						
KAPI	**Kappang**	**83.96**	**251**	P	**P**	**11 32 56.7**	**+0.6**
BKSI	**Bulukumba**	**84.03**	**251**	P	**P**	**11 32 57.1**	**+0.7**
	comp=Z,40nm,1.4s						
PNCL	**Nicolau / Gran**	**84.17**	**15**	*e*P	**P**	**11 32 57.7**	**+0.8**
PBAR	**Barrancos**	**84.32**	**14**	*e*P	**P**	**11 32 58.3**	**+0.6**
	comp=Z,50nm,1.3s						
ISP	**Isparta**	**84.43**	**345**	P	**P**	**11 32 58.1**	**-0.3**
ISP				pmax	pmax		
	comp=Z,60nm,1.2s						
ISP	**Isparta**	**84.43**	**345**	P	**P**	**11 32 58.1**	**-0.3**
MOTC	**Monteria, Cord**	**84.61**	**82**	*e*P	**P**	**11 32 57.3**	**-2.2**
CTAO	**Charters Tower**	**85.15**	**222**	P	**P**	**11 33 01.7**	**-0.2**
CTAO				pmax	pmax		
	comp=Z,36nm,1.2s						
CTAO	**Charters Tower**	**85.15**	**222**	P	**P**	**11 33 01.7**	**-0.2**
CTAO				IAmb	IAmb	11 33 03.4	
	comp=Z,36nm,1.2s						
SMLC	**San Martn de**	**85.47**	**81**	*e*P	**P**	**11 33 03.3**	**-0.5**
KULM	**Kulim**	**85.77**	**273**	P	**P**	**11 33 04.6**	**-0.6**
CORL	**Corleone**	**85.80**	**358**	P	**P**	**11 33 05.2**	**+0.1**
ZARC	**Zaragoza, Cauc**	**86.12**	**82**	*e*P	**P**	**11 33 03.7**	**-3.3**
EDFI	**Ende, Flores**	**86.12**	**248**	P	**P**	**11 33 06.1**	**-0.9**
IPM	**Ipoh**	**86.23**	**272**	P	**P**	**11 33 07.4**	**-0.2**
OCAC	**Ocana**	**86.34**	**81**	*e*P	**P**	**11 33 08.2**	**-0.1**
CSS	**Mathiatis**	**86.78**	**342**	P	**P**	**11 33 10.5**	**+0.5**
SDV	**Santo Domingo**	**87.26**	**78**	P	**P**	**11 33 12.3**	**-0.5**
SDV				IAmb	IAmb	11 33 13.8	
	comp=Z,23nm,1.1s						
SDV	**Santo Domingo**	**87.26**	**78**	*e*P	**P**	**11 33 08.8**	**-4.0**
SDV	**Santo Domingo**	**87.26**	**78**	*e*P	**P**	**11 33 12.7**	**-0.1**
HYB	**Hyderabad**	**87.29**	**298**	*i* P	**P**	**11 33 11.0**	**-1.7**
PAMC	**Pamplona, Colo**	**87.43**	**81**	*e*P	**P**	**11 33 12.4**	**-1.5**
NORC	**Norcasia**	**87.71**	**83**	*e*P	**P**	**11 33 14.6**	**-0.2**
GUY2C	**Guyana, Caldas**	**87.72**	**84**	*e*P	**P**	**11 33 15.1**	**-0.3**
BARC	**Barichara**	**87.78**	**81**	*e*P	**P**	**11 33 15.2**	**-0.2**
SPBC	**San Pablo de B**	**88.08**	**83**	*e*P	**P**	**11 33 16.1**	**-0.5**
YOTC	**Yotoco, Valle**	**88.21**	**86**	*e*P	**P**	**11 33 16.7**	**-0.6**
TOLC	**Tolima**	**88.28**	**84**	*e*P	**P**	**11 33 18.1**	**+0.3**
ANIL	**Santa Ana**	**88.31**	**84**	*e*P	**P**	**11 33 16.2**	**-1.8**
RUSC	**La Rusia**	**88.42**	**82**	*e*P	**P**	**11 33 18.2**	**-0.5**
POO	**Poona**	**88.58**	**302**	*e*P	**P**	**11 33 18.0**	**-0.9**
ROSC	**El Rosal**	**88.61**	**83**	P	**P**	**11 33 19.5**	**0.0**
	comp=Z,4.3nm,0.3s,baz=333,slow=13,SNR=4.4						
TAMC	**Tame, Arauca**	**88.67**	**80**	*e*P	**P**	**11 33 17.5**	**-1.9**
ORTC	**Ortega, Tolima**	**88.88**	**85**	*e*P	**P**	**11 33 20.0**	**-0.3**
MARP	**Paez Belalcaza**	**89.37**	**86**	*e*P	P	11 33 15.1	-7.8
PCON	**Cinco Dias**	**89.55**	**86**	*e*P	**P**	**11 33 25.5**	**+1.3**
WB0	**Warramunga Arr**	**89.62**	**232**	P	**P**	**11 33 23.1**	**-0.4**
WB0				IAmb	IAmb	11 33 28.5	
	comp=Z,23nm,1.4s						
WRAB	**Tennant Creek**	**89.79**	**232**	P	**P**	**11 33 24.1**	**-0.2**
WRAB				pmax	pmax		
	comp=Z,28nm,1.5s						
WRAB	**Tennant Creek**	**89.79**	**232**	P	**P**	**11 33 24.1**	**-0.2**
WRAB				IAmb	IAmb	11 33 25.1	
	comp=Z,28nm,1.4s						
BETC	**Betania**	**89.79**	**85**	*e*P	**P**	**11 33 24.8**	**+0.2**
WB2	**Warramunga Arr**	**89.79**	**232**	P	**P**	**11 33 23.7**	**-0.6**
WB2				IAmb	IAmb	11 33 25.2	
	comp=Z,25nm,1.4s						
WRA	**Warramunga Arr**	**89.80**	**232**	P	**P**	**11 33 23.7**	**-0.6**
	comp=Z,4.7nm,1.1s,baz=41,slow=5.5,SNR=13						
WRA	**Warramunga Arr**	**89.80**	**232**	P	**P**	**11 33 23.3**	**-1.0**
WRA	**Warramunga Arr**	**89.80**	**232**	P	**P**	**11 33 23.3**	**-1.0**
MDT	**Midelt**	**89.91**	**13**	LR	LR	12 09 48.1	
	comp=Z,180nm,21.7s,baz=352,slow=33						
OTAV	**Otavalo**	**90.15**	**89**	P	**P**	**11 33 27.0**	**+0.2**
OTAV				pmax	pmax		
	comp=Z,16nm,1.4s						
OTAV	**Otavalo**	**90.15**	**89**	P	**P**	**11 33 27.0**	**+0.2**
OTAV				IAmb	IAmb	11 33 46.7	
	comp=Z,16nm,1.4s						
OTAV	**Otavalo**	**90.15**	**89**	*e*P	**P**	**11 33 26.5**	**-0.3**
OTAV	**Otavalo**	**90.15**	**89**	*e*P	**P**	**11 33 27.1**	**+0.2**
GARC	**Garzon, Huila**	**90.17**	**86**	*e*P	**P**	**11 33 25.7**	**-0.9**
PTGC	**Puerto Gaitan,**	**90.34**	**82**	*e*P	**P**	**11 33 26.2**	**-0.9**
MACC	**Macarena, Meta**	**91.11**	**84**	*e*P	**P**	**11 33 26.9**	**-3.8**
GUVC	**San Jose del G**	**91.45**	**83**	*e*P	**P**	**11 33 29.7**	**-2.6**
FITZ	**Fitzroy Crossi**	**92.16**	**240**	P	**P**	**11 33 35.2**	**-0.1**
FITZ				IAmb	IAmb	11 33 36.5	
	comp=Z,26nm,1.2s						
ASAR	**Alice Springs**	**93.27**	**230**	P	**P**	**11 33 40.0**	**-0.4**
	comp=Z,1.5nm,0.9s,baz=23,slow=4.7,SNR=11						
ASAR	**Alice Springs**	**93.27**	**230**	P	**P**	**11 33 39.7**	**-0.7**
ASAR	**Alice Springs**	**93.27**	**230**	P	**P**	**11 33 39.6**	**-0.7**
RAYN	**Ar Rayn**	**94.96**	**328**	P	**P**	**11 33 47.2**	**-1.3**
RAYN				pmax	pmax		
	comp=Z,16nm,1.3s						
RAYN	**Ar Rayn**	**94.96**	**328**	P	**P**	**11 33 47.2**	**-1.3**
RAYN				IAmb	IAmb	11 33 53.6	
	comp=Z,16nm,1.3s						
TORD	**Torodi Ar. Bea**	**110.04**	**10**	PP	**PP**	**11 39 35.3**	**+5.6**
	comp=Z,1.6nm,1.2s,baz=348,slow=6.2,SNR=4.4						
KMBO	**Kilima Mbogo**	**120.74**	**329**	PKP	**PKiKP**	**11 39 18.9**	**+0.4**
	comp=Z,1.8nm,0.9s,baz=21,slow=8.0,SNR=3.6						
CPUP	**Villa Florida**	**123.47**	**88**	PKP	**PKPdf**	**11 39 22.3**	**-0.5**
	comp=Z,0.9nm,0.5s,baz=340,slow=2.7,SNR=4.2						
LC01	**Cunco**	**125.13**	**109**		**PKPdf**	**11 39 25.4**	**-0.2**
PLCA	**Paso Flores**	**127.17**	**109**	PKP	**PKPdf**	**11 39 29.1**	**-0.5**
	comp=Z,9.2nm,1.1s,baz=328,slow=3.8,SNR=10.0						
PLCA	**Paso Flores**	**127.17**	**109**	PKIKP	**PKiKP**	**11 39 30.0**	**-0.1**
PLCA	**Paso Flores**	**127.17**	**109**	PKPdf	**PKiKP**	**11 39 30.0**	**-0.1**
CNLB	**Canela**	**129.36**	**84**	*e*P	**PKPdf**	**11 39 33.6**	**-0.5**
QSPA	**South Pole Qui**	**146.43**	**180**	PKPdf	**PKPbc**	**11 40 05.3**	**-0.2**
LBTB	**Lobatse**	**146.65**	**335**	PKP2	**PKPbc**	**11 40 07.8**	**+0.3**
LBTB	**Lobatse**	**146.65**	**335**		**PKPbc**	**11 40 07.8**	**+0.3**
BOSA	**Boshof**	**150.19**	**334**	PKPbc	**PKPbc**	**11 40 15.8**	**-0.8**
	comp=Z,20nm,1.2s,baz=28,slow=2.9,SNR=7.7						
BOSA	**Boshof**	**150.19**	**334**	PKIKP	**PKPbc**	**11 40 16.5**	**-0.2**
BOSA	**Boshof**	**150.19**	**334**		**PKPbc**	**11 40 16.4**	**-0.2**
BELA	**Belgrano 2**	**153.71**	**160**		**PKPbc**	**11 40 21.8**	**-1.2**
SYO	**Syowa Base**	**162.22**	**214**	⇓*e*PKPdf	**PKPdf**	**11 40 27.6**	**+1.9**
SYO	**Syowa Base**	**162.22**	**214**	⇓*e*PKPab	**PKPab**	**11 41 16.4**	**+3.4**
SNAA	**Sanae**	**163.85**	**164**	PKPab	**PKPab**	**11 41 18.8**	**-1.4**
	comp=Z,2.7nm,1.1s,baz=240,slow=1.3,SNR=3.5						

WEL 01 11:30:39.9, 43°S±1°×17°1E±°, h5^{km}±2^{km}, M2.6/11, mB5.2/2, ML2.6/10, MLv2.6/11, Mw(mB)4.6/2 Error ellipse: s-maj=0.0km s-min=0.0km az=94.8, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
INZ	**Inchbonnie**	**0.35**	**20**	P	Pb	11 30 48.0	-0.5
WVZ	**Waitaha Valley**	**0.40**	**267**	P	Pb	11 30 49.3	-0.1
OXZ	**Oxford**	**0.61**	**116**	P	Pb	11 30 53.6	+0.5
RPZ	**Rata Peaks**	**0.68**	**194**	P	Pb	11 30 54.7	+0.5
GCSZ	**Gaunt Creek Bo**	**0.75**	**249**	P	Pn	11 31 04.6	+7.6
LTZ	**Lake Taylor**	**0.78**	**70**	P	Pb	11 30 56.5	+0.7
ARCZ	**Arundel**	**0.90**	**185**	P	Pn	11 30 58.7	-0.4
RACZ	**Rakaia**	**0.92**	**137**	P	Pn	11 30 59.6	+0.2
WACZ	**Wakanui South**	**0.98**	**156**	P	Pn	11 31 00.5	+0.3
FOZ	**Fox Glacier**	**1.17**	**245**	P	Pn	11 31 04.6	+1.7
MQZ	**McQueen's Vall**	**1.19**	**124**	P	Pn	11 31 03.9	+0.8
TMZ	**Timaru**	**1.34**	**189**	P	Pg	11 31 06.2	+0.6
DSZ	**Denniston Nort**	**1.36**	**17**	P	Pg	11 31 06.8	+0.8
AKCZ	**Akaroa Harbour**	**1.44**	**125**	P	Pg	11 31 09.5	+2.1
LBZ	**Lake Benmore**	**1.55**	**211**	P	Pg	11 31 09.8	+0.3
THZ	**Tophouse**	**1.76**	**43**	P	Pg	11 31 13.7	+0.1
ODZ	**Otahua Downs**	**2.04**	**193**	P	Pn	11 31 15.5	+0.6
WHTZ	**Whakaora**	**5.64**	**41**	P	Pn	11 32 05.8	+1.4
MARZ	**Manawahe**	**6.52**	**41**	P	Pn	11 32 19.2	+2.8

IDC ***01*** *11:31:58.1±8.3, 30°.89S×179°.43W, h0^{km}, mb3.7/2, mb1 4.0/2, mb1mx3.7/33, mbtmp3.7/2, Error ellipse: s-maj=357.3km s-min=54.5km az=157.0*

WEL ***01*** *11:32:00.3±0.9, 32°S±21°×18°0W±5°5, h122^{km}±57^{km}, M4.4/2, MLv4.4/2, Error ellipse: s-maj=0.1km s-min=0.0km az=110.1*

ISC 01 11:32:02.5±1.1, 32°.42S±0°.10×179°.6W±0°.2, h35^{km}, n23, σ2^{s}88/34, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.46**	**25**	P	**Pn**	**11 32 53.4**	**-0.5**
GLKZ				S	**Sn**	**11 33 31.3**	**-2.4**
MXZ	**Matakaoa Point**	**5.41**	**198**	P	**Pn**	**11 33 25.3**	**+4.6**
MXZ				S	**Sn**	**11 34 25.4**	**+3.6**
WMGZ	**Waiomatatini S**	**5.63**	**196**	P	**Pn**	**11 33 26.1**	**+2.3**
WMGZ				S	**Sn**	**11 34 28.9**	**+1.8**
HAZ	**Te Kaha**	**5.74**	**201**	P	**Pn**	**11 33 27.9**	**+2.7**
HAZ				S	**Sn**	**11 34 35.4**	**+5.5**
PKGZ	**Pakihiroa**	**5.78**	**199**	P	**Pn**	**11 33 27.8**	**+1.9**
PKGZ				S	**Sn**	**11 34 31.2**	**+0.2**
PUZ	**Puketiti**	**5.91**	**197**	P	**Pn**	**11 33 28.6**	**+1.0**
PUZ				S	**Sn**	**11 34 31.5**	**-2.5**
KWHZ	**Kaweka Forest**	**7.70**	**204**	P	**Pn**	**11 33 54.5**	**+2.3**
KWHZ				P	**Sn**	**11 35 19.9**	**+1.7**
KRHZ	**Kereru**	**7.91**	**203**	P	**Pn**	**11 33 57.0**	**+1.8**
KRHZ				P	**Sn**	**11 35 23.1**	**-0.3**
PXZ	**Pawanui**	**8.12**	**200**	S	**Sn**	**11 35 26.5**	**-1.8**
PNHZ	**Pukenui**	**8.21**	**203**	S	**Sn**	**11 35 27.6**	**-3.2**
WPHZ	**Waipukurau**	**8.27**	**202**	P	**Sn**	**11 35 31.8**	**-0.4**
TSZ	**Takapari Road**	**8.43**	**204**	S	**Sn**	**11 35 34.8**	**-1.2**
DVHZ	**Dannevirke**	**8.57**	**202**	P	**Sn**	**11 35 37.5**	**-2.1**
ANWZ	**Angora Road**	**8.63**	**200**	P	**Sn**	**11 35 40.1**	**-0.8**
PRWZ	**Pori Road**	**8.87**	**202**	P	**Sn**	**11 35 44.4**	**-2.4**
BFZ	**Birch Farm**	**8.90**	**201**	P	**Pn**	**11 34 07.2**	**-1.4**
BFZ				P	**Sn**	**11 35 44.5**	**-3.0**
MRZ	**Mangatainoka R**	**9.09**	**204**	P	**Pn**	**11 34 08.4**	**-2.8**
MRZ				S	**Sn**	**11 35 49.4**	**-2.9**
HOWZ	**Holdsworth Sta**	**9.33**	**203**	P	**Sn**	**11 35 53.8**	**-4.3**
TMWZ	**Te Maipa**	**9.39**	**201**	S	**Sn**	**11 35 56.2**	**-3.6**
MTW	**Mount Morrison**	**9.56**	**203**	P	**Pn**	**11 34 16.7**	**-1.0**
MTW				P	**Sn**	**11 35 56.7**	**-7.3**
ASAR	**Alice Springs**	**41.68**	**270**	P	**P**	**11 39 49.6**	**+1.6**
	0.6nm,0.6s,baz=103,slow=7.5,SNR=8.0						
WRA	**Warramunga Arr**	**42.86**	**275**	P	**P**	**11 39 59.0**	**+1.4**
	0.4nm,0.4s,baz=114,slow=8.0,SNR=8.8						
FINES	**FINESS Array B**	**146.53**	**338**	PKPbc	**PKPdf**	**11 51 35.6**	**-2.2**
	1.2nm,0.5s,baz=40,slow=4.5,SNR=14						

IDC 01 11:33:24.4±31.0, 23°.27S×68°.36E, h0^{km}, mb3.7/3, mb1 3.8/3, mb1mx3.5/45, mbtmp3.7/3, Error ellipse: s-maj=805.6km s-min=118.8km az=178.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**16.04**	**15**	T	T	11 51 41.0	
	baz=195,slow=76,SNR=7.2						
H08S2	**Diego Garcia H**	**16.04**	**15**	T	T	11 51 39.1	
	baz=195,slow=76,SNR=16						
H08S3	**Diego Garcia H**	**16.05**	**15**	T	T	11 51 40.7	
	baz=195,slow=76,SNR=17						
CMAR	**Chiang Mai Arr**	**51.11**	**38**	P	P	11 42 29.0	-0.2
	0.4nm,0.5s,baz=235,slow=7.6,SNR=4.5						
MKAR	**Makanchi Array**	**70.87**	**10**	P	P	11 44 43.2	+0.2
	0.5nm,0.7s,baz=200,slow=6.0,SNR=5.9						
ZALV	**Zalesovo Beam**	**78.21**	**10**	P	P	11 45 25.2	-0.2
	0.5nm,0.6s,baz=202,slow=6.4,SNR=2.2						

IDC ***01*** *11:36:16.2±1.8, 6°.23S×129°.82E, h0^{km}, mb3.8/3, mb1 3.9/6, mb1mx3.6/41, mbtmp3.7/6, ML3.5/3, Error ellipse: s-maj=96.1km s-min=24.8km az=78.0*

ISC 01 11:36:31.0±1.3, 7°.03S±0°.09×129°.9E±0°.1, h150^{km}, n7, σ2^{s}76/10, mb3.5/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	**Baumata**	**6.93**	**242**	Sn	**Sn**	**11 39 27.5**	**-0.4**
	5.3nm,0.3s,baz=110,slow=22,SNR=2.3						
FITZ	**Fitzroy Crossi**	**11.76**	**200**	Pn	**Pn**	**11 39 16.2**	**+2.0**
	0.4nm,0.3s,baz=21,slow=12,SNR=12						
FITZ				Sn	**Sn**	**11 41 21.0**	**-3.3**
	0.4nm,0.3s,baz=173,slow=9.4,SNR=1.7						
WRA	**Warramunga Arr**	**13.54**	**162**	Pn	**P**	**11 39 40.0**	**-1.1**
	0.1nm,0.3s,baz=342,slow=13,SNR=2.5						
WRA				Sn	**Sn**	**11 42 04.2**	**-3.1**
	0.8nm,0.3s,baz=334,slow=22,SNR=10						
ASAR	**Alice Springs**	**16.99**	**167**	P	**Pn**	**11 40 24.6**	**+4.8**
	0.2nm,0.3s,baz=345,slow=10,SNR=27						
ASAR				S	**S**	**11 43 28.8**	**+0.1**
	0.1nm,0.3s,baz=346,slow=27,SNR=2.1						
MKAR	**Makanchi Array**	**68.19**	**327**	P	**P**	**11 47 14.8**	**-0.3**
	0.5nm,0.4s,baz=125,slow=7.8,SNR=8.9						
ZALV	**Zalesovo Beam**	**71.56**	**334**	P	**P**	**11 47 33.8**	**-1.8**
	0.4nm,0.4s,baz=121,slow=6.6,SNR=2.8						
KURBB	**Kurchatov Arra**	**72.48**	**329**	P	**P**	**11 47 40.0**	**-1.1**
	0.5nm,0.6s,baz=126,slow=4.9,SNR=7.9						

IDC ***01*** *11:41:45.3±0.7, 12°.41S×166°.83E, h166^{km}±5^{km}, mb4.9/41, mb1 5.0/44, mb1mx4.9/51, mbtmp5.3/44, MS4.1/12, Ms1 4.1/12, ms1mx3.8/34, Error ellipse: s-maj=8.2km s-min=7.9km az=143.0*

NEIC ***01*** *11:41:46.4, 12°.37S×166°.76E, h158^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$1.50; M$_{\theta\theta}$0.33; M$_{\phi\phi}$-1.83; M$_{r\theta}$0.16; M$_{\theta\phi}$-0.28; M$_{\phi r}$-0.78; Fault plane solution: M$_{0}$1.89000×10^{17} NP1:ϕ_s177.22000°, δ57.97000°, λ77.93000°. NP2:ϕ_s19.17000°, δ34.00000°, λ108.48000°. Principal axes: T 1.7141, Plg74.0000°, Azm55.0000°; N 0.3146, Plg10.0000°, Azm184.0000°; P -2.0287, Plg12.0000°, Azm276.0000°;*

NEIC ***01*** *11:41:46.5±1.1, 12°.38S±0°.08×166°.75E±0°.09, h177^{km}±4^{km}, mb5.4/302, Mwb5.5/12 Error ellipse: s-maj=13.1km s-min=10.9km az=68.0*

BJI ***01*** *11:41:47.6±0.0, 11°.85S×166°.60E, h175^{km}, mB5.3/45, mb5.3/72*

GCMT ***01*** *11:41:47.5±0.1, 12°.39S±0°.01×166°.59E±0°.01, h167^{km}, MW5.4/145, Moment Tensor Solution. s120,c190; s145,c256; Duration: 1^{s}2 Moment tensor: Scale 10^{17} Nm; M$_{rr}$1.17±.02; M$_{\theta\theta}$-0.02±.02; M$_{\phi\phi}$-1.15±.02; M$_{r\theta}$0.18±.02; M$_{\theta\phi}$0.09±.02; M$_{\phi r}$-1.04±.02; Best double couple: M$_{0}$1.57100×10^{17} NP1:ϕ_s359.00000°, δ24.00000°,* *λ96.00000°. NP2:ϕ_s172.00000°,δ66.00000°,λ87.00000°. Principal axes: T 1.5790, Plg69.0000°, Azm76.0000°; N -0.0190, Plg3.0000°, Azm173.0000°; P -1.5630, Plg21.0000°, Azm264.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*MOS **01** 11:41:47.4±0.8, 12°.37S×166°.68E, h197^{km}, mb5.5/65*
Error ellipse: s-maj=7.0km s-min=6.0km az=124.3

*NOU **01** 11:41:48.0, 12°.36S×166°.70E, h181^{km}, mb5.2, Santa Cruz Islands*

ISC 01 11:41:46.5±0.4, **12°.43S**±0°.04×**166°.80E**±0°.04, **h179**^{km}±2^{km}, **h179**^{km}**:pP-P, n1341,** σ1^{s}**.03**/1456, **mb5.3**/251, **178C-80D, Fault plane solution: NP1:**ϕ_s145.29369°, δ63.56972°, λ44.92351°. **NP2:**ϕ_s31.35622°, δ50.77616°, λ144.93050°. **Principal axes:** T Plg49.6302°, Azm4.6724°; N Plg39.3490°, Azm169.3448°; P Plg7.6084°, Azm265.6326°; **Fault plane solution: NP1:** ϕ_s155.84630°, δ62.01132°, λ108.14279°. **NP2:** ϕ_s300.92239°, δ32.95073°, λ59.63347°. **Principal axes:** T Plg67.6991°, Azm101.3136°; N Plg15.9600°, Azm327.1039°; P Plg15.1601°, Azm232.6597°; **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	3.02	173	Pn	Pn	11 42 35.1	-0.3
SANVU	Saraoutou	3.02	173	P	Pn	11 42 36.9	+1.5
DVP	Devils Point	5.43	166	P	Pn	11 43 10.2	+4.2
HNR	Honiara	7.36	293	P	Pn	11 43 30.9	-0.5
	33nm,0.3s,baz=105,slow=20,SNR=12						
HNR				S	Sn	11 44 55.4	+1.1
	baz=66,slow=20,SNR=1.6						
HNR	Honiara	7.36	293		Pn	11 43 30.5	-0.9
HNR	Honiara	7.36	293	P	Pn	11 43 31.4	0.0
MARNC	Mare, Loyalty	9.08	173	P	Pn	11 43 54.2	+0.3
YATNC	Mamie plateau,	9.58	180	P	Pn	11 44 01.6	+1.1
DZM	Mont Dzumac	9.60	182	P	Pn	11 44 01.9	+1.1
	28nm,0.3s,baz=357,slow=10.0,SNR=131						
DZM				S	Sn	11 45 44.5	-3.3
	5.4nm,0.3s,baz=315,slow=20,SNR=1.6						
DZM				LR	LR	11 47 13.7	
	comp=Z,1µm,18.2s,baz=38,slow=34						
DZM	Mont Dzumac	9.60	182	Pn	Pn	11 44 03.4	+2.6
DZM	Mont Dzumac	9.60	182	P	Pn	11 44 03.4	+2.6
NOUC	Port Laguerre	9.63	183	P	Pn	11 44 04.2	+3.0
ONTNC	Ouen Toro	9.83	182	P	Pn	11 44 06.9	+3.1
OUENC	Ouen Island, N	9.94	180	P	Pn	11 44 08.0	+2.8
PINNC	Pines Island,	10.15	177	P	Pn	11 44 11.3	+3.4
MSVF	Nonsavu	12.07	117	P	P	11 44 37.6	-0.7
MSVF	Nonsavu	12.07	117	P	P	11 44 37.6	-0.7
MSVF	Nonsavu	12.07	117	P	P	11 44 37.4	-0.9
FUNA	Funafuti	12.79	74		P	11 44 47.6	+1.3
TARA	Tarawa	14.98	24	P	P	11 45 10.4	-0.2
TARA	Tarawa	14.98	24	P	P	11 45 10.8	+0.2
NFK	Norfolk Island	16.57	177	P	P	11 45 27.7	-0.3
	baz=17,SNR=3.9						
PMG	Port Moresby	19.52	277	P	P	11 46 00.1	-0.2
	3.3nm,0.3s,baz=89,slow=6.5,SNR=17						
PMG	Port Moresby	19.52	277	*i* P	P	11 46 00.5	+0.2
PMG	Port Moresby	19.52	277	P	P	11 46 00.7	+0.4
PMG				IAmb	IAmb	11 46 03.8	
	comp=Z,139nm,1.1s						
PMG	Port Moresby	19.52	277	P	P	11 46 00.7	+0.4
EIDS	Eidsvold	19.64	227	P	P	11 46 03.2	+1.6
	baz=20,SNR=68						
EIDS	Eidsvold	19.64	227	P	P	11 46 02.9	+1.4
LHI	Lord Howe Isla	20.30	199	P	Pn	11 46 11.5	-1.3
	baz=20,SNR=14						
LHI	Lord Howe Isla	20.30	199	P	P	11 46 10.3	+1.9
LHI	Lord Howe Isla	20.30	199	P	Pn	11 46 11.0	-1.9
AFI	Afiamalu	20.91	96	P	P	11 46 16.1	+0.9
	comp=Z,53nm,0.8s,baz=272,slow=17,SNR=5.7						
AFI	Afiamalu	20.91	96	P	P	11 46 16.6	+1.4
AFI				IAmb	IAmb	11 46 19.0	
	comp=Z,165nm,1.1s						
AFI	Afiamalu	20.91	96	P	Pn	11 46 18.7	-2.1
PATS	Pohnpei	20.92	336	P	P	11 46 15.2	-0.1
	baz=21,SNR=20						
PATS	Pohnpei	20.92	336	P	P	11 46 14.8	-0.5
CTAO	Charters Tower	21.13	246	P	P	11 46 17.6	+0.1
CTAO				pmax	pmax		
	comp=Z,206nm,1.1s						
CTAO	Charters Tower	21.13	246	P	P	11 46 17.6	+0.1
MANU	Manus Island	21.85	297	P	P	11 46 25.3	+0.2
RMQ	Roma	21.98	228	P	P	11 46 27.6	+1.3
	baz=22,SNR=100						
MTSU	Mount Surprise	22.41	253	P	P	11 46 31.3	+0.8
	baz=23,SNR=49						
ARMA	Armidale	22.75	216	P	P	11 46 35.4	+1.8
	baz=23,SNR=48						
ARMA	Armidale	22.75	216	P	P	11 46 35.2	+1.6
COEN	Coen	23.05	264	P	P	11 46 37.5	+1.2
KNTN	Kanton	23.33	67	P	P	11 46 39.8	+1.1
KNTN				IAmb	IAmb	11 46 40.1	
	comp=Z,115nm,0.8s						
KNTN	Kanton	23.33	67	P	P	11 46 39.9	+1.1
NIUE	Niue	23.34	109	P	P	11 46 38.8	-0.1
	baz=23,SNR=9.0						
NIUE	Niue	23.34	109	P	P	11 46 39.0	+0.2
NIUE	Niue	23.34	109	P	P	11 46 41.8	+3.0
OUZ	Omahuta	23.51	166	P	P	11 46 42.8	+2.6
OUZ				IAmb	IAmb	11 46 43.7	
	comp=Z,87nm,0.7s						
QLP	Quilpie	25.45	233	P	P	11 46 58.6	+0.7
	baz=26,SNR=10						
HIZ	Hauiti	26.95	166	P	P	11 47 13.3	+2.1
HIZ				IAmb	IAmb	11 47 15.2	
	comp=Z,94nm,0.9s						
CMSA	Cobar Meteorol	27.20	222	P	P	11 47 14.7	+1.1
	baz=27,SNR=48						
QIS	Mount Isa	27.27	249	P	P	11 47 14.5	+0.1
	baz=27,SNR=11						
URZ	Urewera	27.32	162	P	P	11 47 14.9	+0.4
	comp=Z,28nm,0.5s,baz=262,slow=2.4,SNR=21						
URZ				PcP	PcP	11 50 28.7	-0.6
	comp=Z,17nm,0.8s,baz=266,slow=4.6,SNR=4.1						
URZ	Urewera	27.32	162	P	P	11 47 15.6	+1.1
URZ				IAmb	IAmb	11 47 17.6	
	comp=Z,72nm,1.0s						
YNG	Young	27.46	215	P	P	11 47 18.0	+2.0
	baz=28,SNR=5.1						
JAY	Jayapura	27.66	289	P	P	11 47 17.4	-0.5
	comp=Z,34nm,0.9s,baz=107,slow=4.1,SNR=10						
JAY	Jayapura	27.66	289	P	P	11 47 20.1	+2.2
	comp=Z,25nm,1.0s						
CNB	Canberra Magne	27.72	212	P	P	11 47 19.6	+1.4
	baz=28,SNR=10						
BKZ	Black Stump Fm	27.98	164	P	P	11 47 21.8	+1.3
QRZ	Quartz Range	28.73	171	P	P	11 47 29.2	+2.2
NNZ	Nelson	29.25	170	P	P	11 47 34.0	+2.4
NNZ				IAmb	IAmb	11 47 35.7	
	comp=Z,71nm,0.8s						
BFZ	Birch Farm	29.34	165	P	P	11 47 32.9	+0.4
TUWZ	Tuamarina	29.56	169	P	P	11 47 35.3	+1.0
SNZO	South Karori	29.59	168	P	P	11 47 35.3	+0.7
SNZO				IAmb	IAmb	11 47 37.5	
	comp=Z,88nm,0.9s						
SMPI	Sarmi	29.70	288	P	P	11 47 36.1	+0.2
	comp=Z,1µmcomp=Z,86nm,1.4s						
THZ	Tophouse	29.70	171	P	P	11 47 37.3	+1.6
BHW	Baring Head	29.72	168	P	P	11 47 36.2	+0.5
MSWZ	Moikau Station	29.81	167	P	P	11 47 36.8	+0.2
BSWZ	Blackbirch Sta	29.82	169	P	P	11 47 39.1	+2.4
PLWZ	Palliser	29.96	167	P	P	11 47 37.6	-0.3
STKA	Stephens Creek	30.19	226	P	P	11 47 41.4	+1.3
	baz=30,SNR=9.6						
STKA	Stephens Creek	30.19	226	P	P	11 47 40.5	+0.4
	comp=Z,18nm,0.8s,baz=69,slow=10,SNR=22						
STKA				pP	pP	11 48 14.9	-1.5
	comp=Z,11nm,0.7s,baz=52,slow=9.7,SNR=3.4						
STKA				PcP	PcP	11 50 36.5	-0.2
	comp=Z,15nm,0.7s,baz=39,slow=4.1,SNR=6.7						
STKA				ScP	ScP	11 54 04.0	+1.7
	comp=Z,9.3nm,1.0s,baz=81,slow=3.6,SNR=5.6						
STKA				LR	LR	11 59 36.4	
	comp=Z,915nm,18.3s,baz=59,slow=35						
STKA	Stephens Creek	30.19	226	*i* P	P	11 47 41.1	+1.0
STKA	Stephens Creek	30.19	226	P	P	11 47 40.8	+0.6
KHZ	Kahutara	30.45	170	P	P	11 47 42.9	+0.7
LTZ	Lake Taylor	30.61	172	P	P	11 47 44.1	+0.4
FOZ	Fox Glacier	31.10	176	P	P	11 47 49.1	+1.2
OXZ	Oxford	31.12	173	P	P	11 47 49.0	+0.9
RPZ	Rata Peaks	31.39	174	P	P	11 47 50.7	+0.3
	comp=Z,184nm,0.6s,baz=309,slow=2.6,SNR=101						
RPZ				PcP	PcP	11 50 39.9	+0.2
	comp=Z,18nm,0.6s,baz=255,slow=1.4,SNR=3.2						
RPZ	Rata Peaks	31.39	174	P	P	11 47 51.1	+0.7
TOO	Toolangi	31.46	214	P	P	11 47 52.6	+1.3
	baz=32,SNR=9.8						
TOO	Toolangi	31.46	214	P	P	11 47 53.1	+1.8
TOO				pmax	pmax		
	comp=Z,23nm,1.1s						
TOO	Toolangi	31.46	214	P	P	11 47 53.1	+1.8
MQZ	McQueen's Vall	31.57	172	P	P	11 47 52.7	+0.7
WR0	Warramunga Arr	31.83	252	P	P	11 47 53.2	-1.4
WB0	Warramunga Arr	31.94	253	P	P	11 47 54.2	-1.4
WB0				IAmb	IAmb	11 47 56.0	
	comp=Z,65nm,1.1s						
LBZ	Lake Benmore	31.98	175	P	P	11 47 55.8	+0.2
LBZ				IAmb	IAmb	11 47 57.9	
	comp=Z,96nm,0.9s						
WB2	Warramunga Arr	32.01	252	P	P	11 47 54.8	-1.4
WRAB	Tennant Creek	32.01	252	*j* *i*P	P	11 47 55.2	-1.0
WRAB				pmax	pmax		
	comp=Z,56nm,1.2s						
WRAB	Tennant Creek	32.01	252	P	P	11 47 55.4	-0.8
WRA	Warramunga Arr	32.02	252	P	P	11 47 55.3	-1.0
	comp=Z,29nm,1.0s,baz=84,slow=8.9,SNR=78						
WRA				pP	pP	11 48 31.1	-1.2
	comp=Z,8.0nm,0.7s,baz=85,slow=8.7,SNR=3.3						
WRA				PcP	PcP	11 50 41.0	-0.8
	comp=Z,4.9nm,0.7s,baz=78,slow=3.5,SNR=4.9						
WRA				ScP	ScP	11 54 10.3	+1.7
	comp=Z,9.1nm,1.0s,baz=84,slow=3.4,SNR=14						
WRA				PKiKP	PKiKP	11 58 08.4	-1.5
	comp=Z,0.5nm,0.9s,baz=22,slow=0.7,SNR=4.6						
WRA				LR	LR	12 00 41.2	
	comp=Z,615nm,18.2s,baz=80,slow=35						
WRA				P3KPbc		12 19 23.2	
	comp=Z,0.9nm,0.7s,baz=264,slow=2.5,SNR=5.5						
WRA	Warramunga Arr	32.02	252	P	P	11 47 54.9	-1.4
SRPI	Serui, Papua	32.04	287	P	P	11 47 56.8	+0.3
WKZ	Wanaka	32.34	177	P	P	11 48 00.1	+1.4
BAKI	Biak	32.41	288	P	P	11 47 59.5	-0.2
	comp=Z,82nm,1.3s						
ODZ	Otahua Downs	32.67	175	P	P	11 48 01.3	-0.3
MLZ	Mavora Lakes	32.84	178	P	P	11 48 03.8	+0.6
MLZ				IAmb	IAmb	11 48 05.2	
	comp=Z,92nm,1.0s						
DCZ	Deep Cove	32.92	180	P	P	11 48 04.4	+0.6
HTT	Hallett	32.93	226	P	P	11 48 05.1	+1.0
	baz=33,SNR=15						
ARPS	Mount Arapiles	33.01	218	P	P	11 48 05.7	+1.0
	baz=33,SNR=6.6						
AS31	Alice Springs	33.13	246	P	P	11 48 04.7	-1.3
ASAR	Alice Springs	33.13	246	P	P	11 48 04.8	-1.1
	comp=Z,30nm,0.8s,baz=76,slow=9.6,SNR=172						
ASAR				PcP	PcP	11 50 44.4	-0.6
	comp=Z,8.8nm,0.7s,baz=80,slow=3.7,SNR=9.7						
ASAR				S	S	11 53 09.4	-2.8
	comp=Z,2.0nm,1.0s,baz=77,slow=16,SNR=4.5						
ASAR				ScP	ScP	11 54 13.4	+1.0
	comp=Z,10nm,0.9s,baz=84,slow=3.6,SNR=19						
ASAR				PKiKP	PKiKP	11 58 09.1	-1.6
	comp=Z,0.6nm,1.0s,baz=121,slow=1.7,SNR=2.2						
ASAR				LR	LR	12 02 02.9	
	comp=Z,296nm,18.2s,baz=74,slow=37						
ASAR				P3KPbc		12 19 16.4	
	comp=Z,1.0nm,0.8s,baz=274,slow=4.1,SNR=10						
ASAR				P3KP		12 20 36.3	
	comp=Z,0.3nm,0.7s,baz=204,slow=1.8,SNR=1.5						
ASAR	Alice Springs	33.13	246	P	P	11 48 03.9	-2.1
WHZ	Wether Hill Ro	33.37	179	P	P	11 48 07.1	-0.5
WHZ				IAmb	IAmb	11 48 08.7	
	comp=Z,47nm,0.7s						
KDU	Kakadu	33.50	266	P	P	11 48 09.0	-0.1
	baz=34,SNR=19						
PYZ	Puysegur Point	33.63	180	P	P	11 48 10.0	+0.2
PYZ				IAmb	IAmb	11 48 28.7	
	comp=Z,60nm,1.0s						
BBOO	Buckleboo	34.68	229	P	P	11 48 19.6	+0.4
	baz=35,SNR=28						
BBOO	Buckleboo	34.68	229	P	P	11 48 19.6	+0.4
MTN	Manton Dam	34.79	265	P	P	11 48 20.6	+0.3
	baz=35,SNR=14						
MTN	Manton Dam	34.79	265	P	P	11 48 20.4	+0.1
MTN				IAmb	IAmb	11 48 21.5	
	comp=Z,98nm,1.1s						
SIJI	Sorong	37.06	285	P	P	11 48 39.8	+0.2
	comp=Z,100nm,1.0s,baz=77,slow=6.7,SNR=18						
SIJI				LR	LR	12 04 09.9	
	comp=Z,343nm,20.3s,baz=358,slow=36						
SWI	Sorong	37.06	285	P	P	11 48 39.8	+0.2
SWI				pmax	pmax		
	comp=Z,152nm,1.1s						
SWI	Sorong	37.06	285	P	P	11 48 39.3	-0.3
	comp=Z,153nm,1.1s						
FITZ	Fitzroy Crossi	40.05	257	P	P	11 49 04.3	-0.1
	baz=40,SNR=42						
FITZ	Fitzroy Crossi	40.05	257	P	P	11 49 04.2	-0.3
	comp=Z,49nm,0.9s,baz=72,slow=7.5,SNR=45						
FITZ				LR	LR	12 06 25.2	
	comp=Z,230nm,18.3s,baz=82,slow=37						
FITZ	Fitzroy Crossi	40.05	257	P	P	11 49 04.8	+0.4
FITZ				IAmb	IAmb	11 49 06.4	
	comp=Z,74nm,1.1s						
FORT	Forrest	40.13	237	P	P	11 49 05.7	+0.8
	baz=40,SNR=28						
FORT	Forrest	40.13	237	P	P	11 49 05.6	+0.6
NLAI	Namlea	40.33	280	P	P	11 49 07.1	+0.3
	comp=Z,59nm,0.9s						
SANI	Sanana	41.72	281	P	P	11 49 18.3	+0.1
	comp=Z,51nm,1.1s						
SOEI	Soe	41.80	269	P	P	11 49 19.9	+1.0
	comp=Z,36nm,1.1s						
BATI	Baumata	42.33	268	P	P	11 49 24.9	+1.8
	comp=Z,58nm,0.6s,baz=145,slow=4.6,SNR=8.8						
BATI	Baumata	42.33	268	P	P	11 49 25.1	+2.0
	comp=Z,62nm,1.0s						
EDFI	Ende, Flores	44.46	270	P	P	11 49 39.9	-0.4
	comp=Z,14nm,1.1s						
DAV	Davao City (W)	45.33	293	LR	LR	12 10 14.8	
	comp=Z,93nm,18.3s,baz=118,slow=38						
KMBL	Kambalda	45.38	238	P	P	11 49 47.7	+0.5
	baz=46,SNR=16						
PSA00	Pilbara Seismi	45.67	252	P	P	11 49 50.3	+0.7
KCP	Kidapawan	45.74	293	⇑*i*P	P	11 49 50.6	+0.3
SKMP	Bagumbayan, Su	46.03	292	*e*P	P	11 49 51.9	-0.7
BNSI	Bone	46.82	276	P	P	11 49 59.3	+0.6
	comp=Z,60nm,1.1s						
KAPI	Kappang	47.03	275	P	P	11 50 00.9	+0.6
	comp=Z,25nm,0.9s,baz=121,slow=4.2,SNR=13						
KAPI				PcP	PcP	11 51 30.5	+0.9
	comp=Z,27nm,0.7s,baz=72,slow=3.2,SNR=8.2						
KAPI	Kappang	47.03	275	*ce*P	P	11 50 01.5	+1.2
KAPI	Kappang	47.03	275	P	P	11 49 59.8	-0.5
MEEK	Meekatharra	47.29	245	P	P	11 50 02.3	+0.1
	baz=47,SNR=32						
MSLP	Maasin	47.31	296	*e*P	P	11 50 03.2	+0.7
TTSI	Tana Toraja	47.41	277	P	P	11 50 13.7	+10
PAGZ	Pagadian	47.63	293	*e*P	P	11 50 05.1	+0.2
MPSI	Mapaga	48.23	282	P	P	11 50 09.4	-0.2
	comp=Z,45nm,1.1s						
PLAI	Plampang	48.27	269	P	P	11 50 09.8	-0.1
	comp=Z,49nm,0.6s						
KLBR	Kellerberrin	48.86	239	P	P	11 50 14.3	+0.1
	baz=49,SNR=7.2						
TWSI	Taliwang, Sumb	49.16	269	P	P	11 50 16.6	0.0
	comp=Z,759nmcomp=Z,36nm,0.8s						
BLDU	Ballidu	49.56	240	P	P	11 50 19.7	+0.2
	baz=50,SNR=5.5						
NWAO	Narrogin (SRO)	49.57	237	P	P	11 50 20.0	+0.5
	baz=50,SNR=4.4						
MORW	Morawa	49.89	242	P	P	11 50 22.4	+0.4
	baz=50,SNR=5.6						
MORW	Morawa	49.89	242	P	P	11 50 22.1	+0.2
MUN	Mundaring	50.23	239	P	P	11 50 24.8	+0.3
	baz=50,SNR=4.9						
SRBI	Singaraja	50.89	270	P	P	11 50 29.8	+0.1
	comp=Z,42nm,0.8s						
KBKI	Kotabaru	50.89	276	P	P	11 50 30.8	+1.1
	comp=Z,850nmcomp=Z,25nm,0.9s						
JAGI	Jajag, Banyuwa	51.86	269	P	P	11 50 35.6	-1.4
JAGI				IAmb	IAmb	11 52 34.5	
	comp=Z,67nm,0.9s						
JAGI	Jajag, Banyuwa	51.86	269	P	P	11 50 36.1	-0.8
	comp=Z,67nm,0.9s						
ABJI	Asem Bagus	51.89	270	P	P	11 50 38.2	+1.1
	comp=Z,39nm,1.1s						
BBKI	Banjar Baru	52.14	275	P	P	11 50 40.1	+1.1
	comp=Z,25nm,0.8s						
SPMM	Sapulut	52.84	286	P	P	11 50 45.0	+0.8
JYT	Yasato	54.52	334	P	P	11 50 55.7	-0.2
INU	Inuyama	55.26	330	P	P	11 51 00.9	-0.3
INU				IAmb	IAmb	11 51 03.3	
	comp=Z,95nm,1.3s						
JGF	Kuroka	55.30	331	P	P	11 51 01.2	-0.3
JGF				IAmb	IAmb	11 51 02.9	
	comp=Z,192nm,2.0s						
JMN	Monobe	55.59	327	P	P	11 51 03.5	-0.1
JMM	Marumori	55.66	335	P	P	11 51 04.2	+0.2
JMM				IAmb	IAmb	11 51 05.5	
	comp=Z,69nm,1.0s						
MJAR	Matsushiro Arr	55.67	332	P	P	11 51 03.5	-0.6
	comp=Z,44nm,1.0s,baz=164,slow=7.7,SNR=62						
MJAR	Matsushiro Arr	55.67	332	P	P	11 51 02.6	-1.5
MAJO	Matsushiro	55.67	332	⇑*i*P	P	11 51 03.7	-0.4
MAJO				pmax	pmax		
	comp=Z,92nm,1.2s						
MAJO	Matsushiro	55.67	332	P	P	11 51 03.4	-0.7
MAJO				IAmb	IAmb	11 51 04.8	
	comp=Z,89nm,1.1s						
MAT	Matsushiro	55.67	332	P	P	11 51 03.5	-0.6
MAT				*e*S	S	11 58 35.2	-1.2
JSU	Suzuyama	55.89	322	P	P	11 51 05.7	-0.1
JSU				IAmb	IAmb	11 51 06.8	
	comp=Z,46nm,0.8s						
JNU	Nakatsue	56.80	324	P	P	11 51 12.1	-0.1
	comp=Z,35nm,0.6s,baz=116,slow=0.8,SNR=21						
JNU	Nakatsue	56.80	324	P	P	11 51 11.7	-0.6
JNU				IAmb	IAmb	11 51 13.5	
	comp=Z,45nm,0.8s						
JHS	Saijyo	56.96	327	P	P	11 51 13.1	-0.2
JHS				IAmb	IAmb	11 51 22.5	
	comp=Z,94nm,1.4s						
CISI	Cisompet, Garu	58.20	269	P	P	11 51 22.6	+0.2
CISI				IAmb	IAmb	11 51 28.7	
	comp=Z,47nm,0.6s						
ERM	Erimo	58.38	339	*i* P	P	11 51 23.5	+0.5
ERM				pmax	pmax		
	comp=Z,36nm,0.7s						
LEM	Lembang	58.52	270	P	P	11 51 25.7	+0.9
	comp=Z,76nm,0.6s,baz=35,slow=4.3,SNR=20						
LEM	Lembang	58.52	270	P	P	11 51 25.9	+1.1
	comp=Z,55nm,0.7s						
TNG	Tangerang	59.59	270	P	P	11 51 31.4	-0.5
	comp=Z,51µmcomp=Z,714nm,0.5s						
JKA	Kamikawa-asahi	60.44	340	P	P	11 51 37.3	+0.2
ASAJ	Asahikawa	60.44	340	P	P	11 51 37.3	+0.2
ASAJ				pmax	pmax		
	comp=Z,76nm,0.8s						
TJN	Taejon	61.15	324	*d i*P	P	11 51 41.9	-0.1
SSE	Sheshan	61.56	316	P	P	11 51 45.1	+0.2
SSE				IAmb	IAmb	11 51 45.9	
	comp=Z,58nm,0.8s						
KSRS	Korea Array	61.60	325	P	P	11 51 45.5	+0.5
	comp=Z,14nm,0.8s,baz=137,slow=7.2,SNR=54						
KSRS				PcP	pP	11 52 25.8	-0.3
	comp=Z,8.3nm,1.0s,baz=138,slow=4.9,SNR=6.7						
KSRS				LR	LR	12 16 59.2	
	comp=Z,67nm,19.6s,baz=145,slow=34						
KSRS				PKP2bc		12 21 01.9	
	comp=Z,2.0nm,1.0s,baz=328,slow=2.0,SNR=7.2						
KSAR	Wonju Array Be	61.61	325	P	P	11 51 45.2	+0.1
KSAR	Wonju Array Be	61.61	325	P	P	11 51 45.2	+0.1
KS19	Wonju Array Si	61.66	325	P	P	11 51 44.3	-1.1
KS19				IAmb	IAmb	11 51 46.8	
	comp=Z,157nm,2.0s						
KASI	Kota Agung	61.81	270	P	P	11 51 47.3	+0.4
	comp=Z,43nm,0.8s						
MDSI	Maura Dua	62.33	271	P	P	11 51 49.3	-1.1
	comp=Z,11nm,0.7s						
YSS	Yuzh-Sakhalins	62.91	342	⇓*i*P	P	11 51 55.1	+1.6
YSS				pmax	pmax		
	comp=Z,110nm,0.9s						
YSS	Yuzh-Sakhalins	62.91	342	P	P	11 51 54.1	+0.6
TEY	Ternei	63.40	336	⇑*i*P	P	11 51 57.1	+0.4
TEY				pmax	pmax		
	comp=E,20nm,1.5s						
TEY				pmax	pmax		
	comp=N,30nm,1.2s						
TEY				pmax	pmax		
	comp=Z,90nm,1.2s						
NJ2	Nanjing	63.73	315	*e*P	P	11 52 00.0	+0.8
NJ2				pmax	pmax		
	comp=Z,59nm,0.8s						
MSHR	Mys Shultsa	63.76	331	*i* P	P	11 51 59.4	+0.2
MSHR				pmax	pmax		
	comp=Z,18nm,0.9s						
QIZ	Qiongzhong	64.24	298	P	P	11 52 02.5	-0.3
QIZ				S	S	12 00 28.7	+2.3
QIZ				sS	SKSac	12 01 39.4	-0.5
QIZ				SS	SS	12 04 36.3	-3.4
QIZ				LR	LR		
	comp=Z,530nm,14.7s						
QIZ				LR	LR		
	comp=Z,390nm,20.1s						
QIZ				LR	LR		
	comp=Z,270nm,18.6s						
USA0B	Ussuriysk Arra	64.64	333	P	P	11 52 05.4	+0.5
USA0B				pmax	pmax		
	comp=Z,209nm,1.3s						
USA0B	Ussuriysk Arra	64.64	333	P	P	11 52 05.4	+0.5
USRK	Ussuriysk Ar.	64.64	333	P	P	11 52 06.1	+1.2
	comp=Z,73nm,1.0s,baz=137,slow=5.7,SNR=59						
USRK				PKP2bc		12 20 57.0	
	comp=Z,3.4nm,0.9s,baz=276,slow=5.2,SNR=4.1						
USRK	Ussuriysk Ar.	64.64	333	P	P	11 52 05.0	+0.1
USRK	Ussuriysk Ar.	64.64	333	P	P	11 52 05.0	+0.1
VNDA	Vanda	65.14	181	P	P	11 52 09.0	+1.4
	comp=Z,20nm,0.7s,baz=356,slow=6.3,SNR=24						
VNDA	Vanda	65.14	181	P	P	11 52 08.6	+0.9
VNDA				pmax	pmax		
	comp=Z,117nm,1.3s						
VNDA	Vanda	65.14	181	P	P	11 52 08.6	+0.9
SBA	Scott Base	65.42	180	P	P	11 52 11.1	+1.6
SBA				pmax	pmax		
	comp=Z,164nm,1.2s						
SBA	Scott Base	65.42	180	P	P	11 52 11.1	+1.6
CASY	Casey	65.48	202	P	P	11 52 09.9	-0.1
PET	Petropavlovsk	65.56	355	*e*P	P	11 52 10.8	+0.2
PET				pmax	pmax		
	comp=Z,94nm,1.2s						
PET	Petropavlovsk	65.56	355	P	P	11 52 10.6	0.0
PET				IAmb	IAmb	11 52 12.1	
	comp=Z,96nm,1.2s						
PEA0B	Petropavlovsk-	65.74	354	⇑*i*P	P	11 52 11.5	-0.3
PEA0B	Petropavlovsk-	65.74	354	P	P	11 52 11.5	-0.3
PETK	Petropavlovsk-	65.74	354	P	P	11 52 12.6	+0.8
	comp=Z,27nm,1.0s,baz=132,slow=6.4,SNR=52						
PETK				LR	LR	12 15 24.2	
	comp=Z,85nm,20.8s,baz=143,slow=31						
PETK	Petropavlovsk-	65.74	354	P	P	11 52 11.5	-0.3
PETK	Petropavlovsk-	65.74	354	P	P	11 52 11.5	-0.3
SDSI	Sungai Dareh	65.77	275	P	P	11 52 20.1	+7.3
MDJ	Mudanjiang	66.05	332	P	P	11 52 15.1	+1.1
MDJ				pP	pP	11 52 56.6	+0.8
MDJ				sP	sP	11 53 15.7	+0.7
MDJ				PP	PP	11 54 44.0	+2.1
MDJ				S	S	12 00 51.0	+3.5
MDJ				sS	SKiKP	12 02 00.8	0.0
MDJ				SS	SS	12 05 06.6	-0.3
MDJ				pmax	pmax		
	comp=Z,96nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,410nm,3.7s						
MDJ	Mudanjiang	66.05	332	P	P	11 52 14.3	+0.3
WHN	Wuhan	66.08	312	⇑P	P	11 52 14.7	+0.3
DL2	Dalian	66.20	323	⇑*i*P	P	11 52 15.7	+0.7
DL2				pmax	pmax		
	comp=Z,85nm,0.7s						
TYV	Tymovskoe	66.45	344	*e*P	P	11 52 17.4	+1.0
TYV				*e*S	S	12 00 52.2	+0.1
TYV				pmax	pmax		
	comp=Z,60nm,0.8s						
TYV				pmax	pmax		
	comp=Z,400nm,2.8s						
TYV				smax	smax		
	comp=N,700nm,9.3s						
SNY	Shenyang	67.05	326	⇑P	P	11 52 20.6	+0.3
SNY				pP	pP	11 52 59.7	-2.4
SNY				S	S	12 01 02.0	+2.4
SNY				pmax	pmax		

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       comp=N,31nm,1.6s
SNY                                pmax    pmax
       comp=N,330nm,5.0s
SNY                                LR      LR
       comp=N,180nm,4.4s
SNY                                LR      LR
       comp=N,210nm,5.0s
SNY                                LR      LR
       comp=N,230nm,6.3s
TIA    Tai'an            67.33 318  P      P        11 52 22.2 -0.1
TIA                                pmax    pmax
       comp=N,29nm,1.1s
CN2    Changchun         67.45 329 eP      P        11 52 23.5 +0.6
CN2                                pmax    pmax
       comp=N,110nm,0.9s
CN2                                pmax    pmax
       comp=N,510nm,6.0s
IPM    Ipoh              67.48 280  P      P        11 52 24.1 +0.3
IPM                                IAmb    IAmb     11 53 08.9
       comp=Z,73nm,1.3s
IPM    Ipoh              67.48 280  P      P        11 52 24.0 +0.3
MNSI   Mandailing Nat    67.96 276  P      P        11 52 25.9 -0.8
GRNR   Gornyy            68.29 340⇑iP      P        11 52 29.7 +1.8
GRNR                               pmax    pmax
       comp=Z,130nm,1.2s
KLR    Kul'dur           68.73 336⇑iP      P        11 52 32.0 +1.3
KLR                                pmax    pmax
       comp=Z,118nm,0.9s
ENH    Enshi             69.57 309  P      P        11 52 35.5 -0.8
ENH                                IAmb    IAmb     11 52 37.4
       comp=Z,86nm,1.1s
GSI    Gunungsitoli      70.03 276  P      P        11 52 39.4 -0.1
GSI    Gunungsitoli      70.03 276  P      P        11 52 40.5 +1.0
GYA    Guiyang           70.05 304 ⇑P      P        11 52 40.0 +0.6
GYA                                pP      pP       11 53 20.6 -0.1
GYA                                PP      PP       11 55 16.4 -0.7
GYA                                S       S        12 01 37.7 +1.8
GYA                                SS      SS       12 06 09.2 -0.3
GYA                                pmax    pmax
       comp=Z,23nm,0.8s
BJT    Baijiatuau        70.19 321  P      P        11 52 40.1 +0.2
BJT                                pmax    pmax
       comp=Z,108nm,1.6s
BJT    Baijiatuau        70.19 321  P      P        11 52 40.1 +0.2
BJT                                IAmb    IAmb     11 52 41.8
       comp=Z,108nm,1.6s
BJI    Beijing           70.20 321  P      P        11 52 40.5 +0.6
BJI                                PcP     PcP      11 53 00.8 +0.2
BJI                                S       S        12 01 40.6 +3.7
BJI                                pmax    pmax
       comp=Z,40nm,1.2s
BJI                                pmax    pmax
       comp=Z,220nm,3.5s
SLVN   Son La            70.27 298  P      P        11 52 40.4 -0.4
MLSI   Meulaboh, Aceh    71.88 279  P      P        11 52 56.3 +5.7
KMI    Kunming           72.72 301 ⇑P      P        11 52 57.2 +1.6
KMI                                pP      pP       11 53 37.3 +0.2
KMI                                sP      sP       11 53 55.4 -0.3
KMI                                PP      PP       11 55 42.9 +2.8
KMI                                S       S        12 02 06.4 -0.5
KMI                                sS      sS       12 03 21.0 +1.7
KMI                                pmax    pmax
       comp=Z,72nm,1.2s
KMI                                pmax    pmax
       comp=Z,190nm,3.5s
KMI                                LR      LR
       comp=Z,230nm,13.5s
KMI                                LR      LR
       comp=Z,310nm,16.5s
KMI                                LR      LR
       comp=Z,300nm,20.7s
KMI    Kunming           72.72 301  P      P        11 52 56.8 +1.2
KMI                                pmax    pmax
       comp=Z,120nm,1.3s
KMI    Kunming           72.72 301  P      P        11 52 56.8 +1.2
KMI                                IAmb    IAmb     11 52 58.3
       comp=Z,120nm,1.3s
MA2    Magadan           72.92 352  P      P        11 52 55.2 -0.5
       comp=Z,21nm,0.9s,baz=140,slow=11,SNR=15
MA2    Magadan           72.92 352⇑iP      P        11 52 55.6 -0.1
MA2                                pmax    pmax
       comp=Z,29nm,1.0s
MA2    Magadan           72.92 352  P      P        11 52 54.4 -1.3
MA2                                IAmb    IAmb     11 52 56.7
       comp=Z,173nm,1.8s
HHC    Hu-ho-hao-te      73.55 319⇑iP      P        11 53 01.4 +1.4
HHC                                pmax    pmax
       comp=Z,54nm,1.1s
HHC                                pmax    pmax
       comp=Z,260nm,5.5s
CM31   Chiang Mai Arr    73.61 294  P      P        11 53 01.2 +0.5
CMAR   Chiang Mai Arr    73.61 294  P      P        11 53 01.9 +1.3
       comp=Z,15nm,0.8s,baz=125,slow=4.7,SNR=78
CMAR                               pP      pP       11 53 41.9 -0.5
       comp=Z,11nm,1.0s,baz=122,slow=4.4,SNR=2.8
CMAR                               PKPPKP           12 20 35.6
       comp=Z,0.4nm,0.4s,baz=307,slow=3.2,SNR=4.4
CMAR   Chiang Mai Arr    73.61 294 i P     P        11 53 02.0 +1.3
CMAR                               pmax    pmax
       comp=Z,15nm,0.8s
CMAR   Chiang Mai Arr    73.61 294  P      P        11 53 01.4 +0.7
CHTO   Chiang Mai        73.73 294  P      P        11 53 01.4  0.0
CHTO                               pmax    pmax
       comp=Z,76nm,1.6s
CHTO   Chiang Mai        73.73 294  P      P        11 53 01.4  0.0
ZEA    Zeya              74.01 337 eP      P        11 53 03.7 +1.5
ZEA                                pmax    pmax
       comp=E,10.0nm,0.8s
ZEA                                pmax    pmax
       comp=N,30nm,1.0s
ZEA                                pmax    pmax
       comp=Z,50nm,1.2s
HIA    Hailar            74.08 330  P      P        11 53 03.7 +0.9
HIA                                pmax    pmax
       comp=Z,57nm,0.9s
HIA    Hailar            74.08 330  P      P        11 53 03.7 +0.9
HIA                                IAmb    IAmb     11 53 04.6
       comp=Z,57nm,0.9s
CD2    Chengdu           74.26 307  P      P        11 53 05.2 +0.9
CD2                                pmax    pmax
       comp=Z,60nm,0.7s
CD2                                pmax    pmax
       comp=Z,120nm,5.0s
BTO    Baotou            74.41 319 eP      P        11 53 06.8 +1.8
SEY    Seymchan          75.96 353  P      P        11 53 13.8 +0.6
       comp=Z,164nm,0.9s,baz=165,slow=5.0,SNR=514
SEY    Seymchan          75.96 353⇑iP      P        11 53 13.9 +0.7
LZH    Lanzhou           76.45 312 ⇑P      P        11 53 18.5 +1.7
LZH                                pP      pwP      11 54 02.1 -0.1
LZH                                sP      sP       11 54 20.8 +2.5
LZH                                pmax    pmax
       comp=Z,120nm,1.1s
LZH                                pmax    pmax
       comp=Z,340nm,7.1s
KDAK   Kodiak Island     77.49  21  P      P        11 53 21.7 -0.1
       comp=Z,13nm,0.7s,baz=264,slow=0.9,SNR=4.7
KDAK   Kodiak Island     77.49  21  P      P        11 53 22.9 +1.1
KDAK                               IAmb    IAmb     11 54 07.5
       comp=Z,124nm,1.5s
QSPA   South Pole Qui    77.58 180  P      P        11 53 23.0 +0.4
QSPA                               IAmb    IAmb     11 53 24.1
       comp=Z,68nm,0.9s
GAMB   Gambell           77.75  10  P      P        11 53 23.5 +0.4
GAMB                               IAmb    IAmb     11 53 25.0
       comp=Z,94nm,1.0s
CNPM   China Poot        79.27  20  P      P        11 53 32.1 +0.5
CNPM                               IAmb    IAmb     11 53 35.4
       comp=Z,46nm,0.9s
RSO    Redoubt South     79.48  19  P      P        11 53 32.9 -0.1
BRLK   Bradley Lake      79.56  20  P      P        11 53 33.2  0.0
BRLK                               IAmb    IAmb     11 53 34.5
       comp=Z,52nm,1.0s
ANM    Nome              79.62  12  P      P        11 53 33.6 +0.2
ANM                                pmax    pmax
       comp=Z,73nm,1.2s
ANM    Nome              79.62  12  P      P        11 53 33.6 +0.2
ANM                                IAmb    IAmb     11 53 35.8
       comp=Z,73nm,1.2s
YAK    Yakutsk           79.71 343c iP     P        11 53 34.2 +0.3
YAK                                e                11 53 40.2
YAK                                e                11 56 35.5
YAK                                ePPP    PPP      11 58 28.9
YAK                                eS      S        12 03 21.0 -0.1
YAK                                e                12 03 43.7
YAK                                e*SS    sS       12 04 33.9 -1.9
YAK                                pmax    pmax
       comp=Z,167nm,0.8s
YAK                                pmax    pmax
       comp=N,29nm,1.0s
YAK                                pmax    pmax
       comp=E,11nm,0.9s
YAK                                pmax    pmax
       comp=Z,87nm,3.4s
YAK                                pmax    pmax
       comp=N,62nm,3.2s
YAK                                pmax    pmax
       comp=E,129nm,3.6s
YAK                                smax    smax
       comp=N,43nm,2.3s
YAK                                smax    smax
       comp=E,44nm,2.5s
YAK    Yakutsk           79.71 343  P      P        11 53 34.0 +0.1
ULN    Ulaanbaatar       80.02 324⇑iP      P        11 53 37.0 +0.9
ULN                                pmax    pmax
       comp=Z,122nm,1.4s
ULN    Ulaanbaatar       80.02 324  P      P        11 53 36.5 +0.4
ULN                                IAmb    IAmb     11 53 38.2
       comp=Z,88nm,1.1s
MOKO   MOKOCHONG         80.07 300 eP      P        11 53 36.6 -0.3
IMP    Imphal            80.08 298 eP      P        11 53 36.6 -0.2
SAIH   SAIHA             80.18 296 eP      P        11 53 38.1 +0.6
SAIH                               IAmb    IAmb     11 53 46.3
       comp=Z,19nm,0.3s
KOHI   KOHIMA            80.22 299 eP      P        11 53 37.3 -0.4
BILL   Bilibino          80.25 360⇓iP      P        11 53 37.1 +0.4
BILL                               e                11 56 40.5
BILL                               eS      SPn      12 04 14.8 +2.9
BILL                               pmax    pmax
       comp=Z,248nm,1.0s
BILL   Bilibino          80.25 360  P      P        11 53 37.0 +0.3
SONM   Songino Array     80.39 324  P      P        11 53 38.3 +0.3
       comp=Z,22nm,0.9s,baz=139,slow=5.6,SNR=87
SONM                               PKiKP   PKiKP    11 59 05.4  0.0
       comp=Z,0.5nm,0.7s,baz=111,slow=3.2,SNR=3.1
SONM                               PKKPbc  PKKPbc   12 12 19.1 -2.1
       comp=Z,2.7nm,0.8s,baz=260,slow=3.0,SNR=16
SONM                               PKPPKP  P'P'df   12 20 22.4 +0.1
       comp=Z,1.0nm,0.9s,baz=296,slow=3.7,SNR=5.3
SONM   Songino Array     80.39 324  P      P        11 53 37.9 -0.2
SONM   Songino Array     80.39 324  P      P        11 53 37.9 -0.2
TTA    Tatalina          80.45  16  P      P        11 53 38.4 +0.4
TTA                                pmax    pmax
       comp=Z,22nm,1.0s
TTA    Tatalina          80.45  16  P      P        11 53 38.4 +0.4
O22K   Cooper Landing    80.49  20  P      P        11 53 38.3 +0.2
       baz=223
O22K   Cooper Landing    80.49  20  P      P        11 53 38.2 +0.2
GTA    Gaotai            80.76 314 ⇑P      P        11 53 41.4 +1.2
GTA                                pP      pP       11 54 20.8 -2.5
GTA                                sP      sP       11 54 40.8 -1.1
GTA                                S       S        12 03 35.7 +2.4
GTA                                pmax    pmax
       comp=Z,45nm,1.2s
GTA                                pmax    pmax
       comp=Z,230nm,6.9s
SUA    Susitna One       80.88  19  P      P        11 53 40.1 -0.2
RC01   Rabbit Creek A    80.93  20  P      P        11 53 40.6 +0.1
       baz=223
PMR    Palmer            81.50  20  P      P        11 53 42.8 -0.6
PMR                                pmax    pmax
       comp=Z,43nm,1.0s
PMR    Palmer            81.50  20  P      P        11 53 42.8 -0.6
PPLA   Purkeypile        81.52  18  P      P        11 53 43.8 +0.1
HIN    Hinchinbrook I    81.55  21  P      P        11 53 44.0 +0.2
HIN                                IAmb    IAmb     11 53 45.6
       comp=Z,58nm,0.9s
KNK    Knik Glacier      81.59  20  P      P        11 53 43.9  0.0
KNK                                IAmb    IAmb     11 53 45.6
       comp=Z,73nm,1.2s
TEZP   TEZPUR            81.62 300 eP      P        11 53 45.0 +0.1
TEZP                               IAmb    IAmb     11 53 47.7
       comp=Z,30nm,0.8s
TEZP                              i pP     pP       11 54 27.2 -0.3
GLI    Glacier Island    81.67  21  P      P        11 53 44.6 +0.2
GLI                                IAmb    IAmb     11 53 45.6
       comp=Z,65nm,1.0s
GHO    Glory Hole Cre    81.70  20  P      P        11 53 44.3 -0.3
CUT    Chulitna          81.73  19  P      P        11 53 44.4 -0.2
       baz=222,SNR=7.1
FID    Port Fidalgo      81.80  21  P      P        11 53 44.3 -0.8
FID                                IAmb    IAmb     11 53 46.2
       comp=Z,77nm,1.1s
SML    Sawmill           81.92  20  P      P        11 53 45.4 -0.3
SML                                IAmb    IAmb     11 53 47.3
       comp=Z,63nm,1.1s
SHL    Shillong          82.08 298  P      P        11 53 47.3 -0.2
SHL                                pmax    pmax
       comp=Z,84nm,1.1s
SHL    Shillong          82.08 298 eP      P        11 53 48.3 +0.8
SHL    Shillong          82.08 298  P      P        11 53 47.3 -0.2
SHL                                IAmb    IAmb     11 53 49.1
       comp=Z,84nm,1.1s
BOD    Bodaibo           82.22 335 eP      P        11 53 46.9 -0.4
BOD                                pmax    pmax
       comp=Z,50nm,1.7s
SCM    Sheep Creek Mo    82.27  20  P      P        11 53 47.7 +0.1
SCM                                pmax    pmax
       comp=Z,56nm,0.8s
SCM    Sheep Creek Mo    82.27  20  P      P        11 53 47.7 +0.1
SCM                                IAmb    IAmb     11 53 48.7
       comp=Z,56nm,0.8s
HMT    Hamilton          82.32  22  P      P        11 53 48.4 +0.6
HMT                                IAmb    IAmb     11 53 49.0
       comp=Z,66nm,1.0s
KTH    Kantishna Hill    82.39  18  P      P        11 53 48.2 +0.1
GUWA   GUWAHATI          82.44 299 eP      P        11 53 49.3 +0.2
TRF    Thorofare Moun    82.50  18  P      P        11 53 48.7 -0.2
KLU    Klutina           82.51  21  P      P        11 53 49.0 +0.2
KLU                                IAmb    IAmb     11 53 50.6
       comp=Z,110nm,1.5s
KCPM   Cahto Peak        82.73  47  P      P        11 53 51.4 +0.8
KCPM                               IAmb    IAmb     11 53 52.9
       comp=Z,118nm,1.2s
BPAW   Bear Paw Mtn.     82.78  17  P      P        11 53 49.2 -0.9
HOPS   Hopland Field     82.83  48  P      P        11 53 51.1 +0.2
HOPS                               IAmb    IAmb     11 54 38.3
       comp=Z,131nm,1.4s
M24K   Tolsona, Glenn    82.85  20  P      P        11 53 51.6 +1.1
       baz=226
M24K   Tolsona, Glenn    82.85  20  P      P        11 53 51.0 +0.4
JCC    Jacoby Creek,     82.85  46  P      P        11 53 51.4 +0.5
JCC                                IAmb    IAmb     11 53 53.6
       comp=Z,102nm,1.4s
RND    Reindeer          82.91  18  P      P        11 53 50.6 -0.2
RND                                pmax    pmax
       comp=Z,45nm,0.9s
RND    Reindeer          82.91  18  P      P        11 53 50.6 -0.2
RND                                IAmb    IAmb     11 53 51.4
       comp=Z,45nm,0.9s
GDXM   Geysers           82.96  48  P      P        11 53 52.0 +0.3
CRQM   Cirque            83.01  22  P      P        11 53 51.2 -0.4
N25K   Chitina, Valde    83.05  21  P      P        11 53 52.2 +0.6
       baz=228
N25K   Chitina, Valde    83.05  21  P      P        11 53 51.3 -0.3
KHMM   Horse Mountain    83.08  46  P      P        11 53 53.0 +0.6
KHMM                               IAmb    IAmb     11 53 55.0
       comp=Z,86nm,1.2s
MESA   MESA              83.08  23  P      P        11 53 52.5 +0.5
MCK    McKinley          83.12  18  P      P        11 53 51.6 -0.2
       baz=223,SNR=22
TGL    Tana Glacier      83.13  22  P      P        11 53 51.5 -0.6
DHY    Denali Highway    83.14  19  P      P        11 53 51.5 -0.6
DHY                                IAmb    IAmb     11 53 53.8
       comp=Z,68nm,1.3s
RDOG   Red Dog Mine      83.17  11  P      P        11 53 52.6 +0.6
RDOG                               IAmb    IAmb     11 53 54.3
       comp=Z,84nm,1.0s
VRDI   Verde Repeater    83.21  22  P      P        11 53 52.6  0.0
VRDI                               IAmb    IAmb     11 53 54.0
       comp=Z,133nm,1.5s
ISLE   Juniper Island    83.21  23  P      P        11 53 52.6 +0.1
ISLE                               IAmb    IAmb     11 53 54.0
       comp=Z,110nm,1.1s
SAO    San Andreas Ge    83.21  50  P      P        11 53 53.3 +0.4
SAO                                pmax    pmax
       comp=Z,35nm,1.2s
SAO    San Andreas Ge    83.21  50  P      P        11 53 53.3 +0.4
KRMB   Red Mountain      83.21  45  P      P        11 53 54.5 +1.5
KRMB                               IAmb    IAmb     11 53 55.7
       comp=Z,75nm,1.3s
GLB    Gilahina Butte    83.22  22  P      P        11 53 52.7 +0.2
GLB                                IAmb    IAmb     11 53 54.0
       comp=Z,119nm,1.2s
KBO    Bosley Butte      83.27  44  P      P        11 53 54.0 +0.8
KBO                                IAmb    IAmb     11 53 55.8
       comp=Z,68nm,1.1s
YAH    Yahtse            83.28  23  P      P        11 53 53.2 +0.2
YAH                                IAmb    IAmb     11 53 54.9
       comp=Z,82nm,1.2s
BWN    Browne            83.28  18  P      P        11 53 52.5 -0.2
ZAK    Zakamensk         83.42 325 eP      P        11 53 53.5 -0.3
ZAK                                pmax    pmax
       comp=Z,67nm,1.2s
MCARA  McCarthy VSAT     83.47  22  P      P        11 53 53.9 +0.3
MCARA                              IAmb    IAmb     11 53 55.3
       comp=Z,83nm,1.2s
IMAR   Indian Mountai    83.48  15  P      P        11 53 53.4 -0.2
O02D   Mt. Diablo Mer    83.48  47  P      P        11 53 55.8 +1.5
       baz=248,SNR=27
BALM   Baldy             83.49  22  P      P        11 53 53.5 -0.4
BALM                               IAmb    IAmb     11 53 55.4
       comp=Z,68nm,1.2s
PMPB   Monarch Peak      83.50  51  P      P        11 53 55.3 +0.8
PMPB                               IAmb    IAmb     11 54 41.5
       comp=Z,138nm,1.7s
MLY    Manley            83.55  17  P      P        11 53 54.4 +0.4
       baz=222,SNR=15
TABL   Table Mountain    83.56  23  P      P        11 53 54.9 +0.5
TABL                               IAmb    IAmb     11 53 56.0
       comp=Z,99nm,1.0s
L02E   Cave Junction     83.67  45  P      P        11 53 56.3 +1.2
       baz=247,SNR=7.6
PAX    Paxson            83.69  20  P      P        11 53 54.6 -0.2
PAX                                pmax    pmax
       comp=Z,129nm,1.7s
PAX    Paxson            83.69  20  P      P        11 53 54.6 -0.2
PAX                                IAmb    IAmb     11 53 56.2
       comp=Z,129nm,1.7s
PCA    Pinnacle          83.69  24  P      P        11 53 55.1 +0.2
PCA                                IAmb    IAmb     11 53 56.2
       comp=Z,64nm,1.0s
NEA2   Nenana            83.71  18  P      P        11 53 54.3 -0.5
       baz=223,SNR=18
PAGB   Antelope Grade    83.76  51  P      P        11 53 56.1 +0.4
BARN   Barnard Glacie    83.76  23  P      P        11 53 55.7 +0.3
BARN                               IAmb    IAmb     11 53 57.1
       comp=Z,85nm,1.1s
IRK    Irkutsk           83.78 327 eP      P        11 53 54.5 -0.9
IRK                                pmax    pmax
       comp=Z,105nm,2.3s
PKM    Mcpherson Peak    83.81  52  P      P        11 53 56.2 -0.1
       baz=250
WDC    Whiskeytown Da    83.81  46  P      P        11 53 56.3 +0.5
WDC                                pmax    pmax
       comp=Z,75nm,1.4s
WDC    Whiskeytown Da    83.81  46  P      P        11 53 56.3 +0.5
WDC                                IAmb    IAmb     11 53 58.2
       comp=Z,75nm,1.4s
SMMC   Simmler           83.81  52  P      P        11 53 57.1 +1.0
       baz=250
CTGM   Chitina Glacie    83.82  23  P      P        11 53 55.7 +0.1
CTGM                               IAmb    IAmb     11 53 57.3
       comp=Z,85nm,1.1s
MAW    Mawson            83.83 202  P      P        11 53 56.0 +0.5
       comp=Z,41nm,1.0s,baz=103,slow=5.7,SNR=8.7
MAW    Mawson            83.83 202  P      P        11 53 55.8 +0.3
MAW                                pmax    pmax
       comp=Z,8.0nm,0.9s
MAW    Mawson            83.83 202  P      P        11 53 55.8 +0.3
K02D   Willamette Mer    83.84  44  P      P        11 53 57.1 +1.1
       baz=247,SNR=15
N02D   Trinity Center    83.84  46  P      P        11 53 57.5 +1.3
       baz=248,SNR=22
J01E   Myrtle Point      83.84  43  P      P        11 53 57.0 +1.0
       baz=247,SNR=9.9
TLY    Talaya            83.84 326  P      P        11 53 56.2 +0.4
       comp=Z,31nm,0.7s,baz=159,slow=3.7,SNR=79
TLY    Talaya            83.84 326 eP      P        11 53 56.1 +0.3
TLY                               e                 12 04 52.3
TLY                                pmax    pmax
       comp=Z,314nm,1.8s
TLY    Talaya            83.84 326  P      P        11 53 56.1 +0.3
TLY                                IAmb    IAmb     11 53 57.4
       comp=Z,62nm,0.9s
M02C   Callahan          83.89  45  P      P        11 53 57.9 +1.5
       baz=248,SNR=24
WRH    Wood River Hil    83.91  18  P      P        11 53 55.6 -0.2
WRH                                IAmb    IAmb     11 53 56.8
       comp=Z,79nm,1.0s
LSA    Lhasa             83.96 302  P      P        11 53 58.0 +0.5
LSA                                pmax    pmax
       comp=Z,120nm,0.9s
LSA    Lhasa             83.96 302  P      P        11 53 58.4 +0.9
LSA                                pmax    pmax
       comp=Z,28nm,0.8s
LSA    Lhasa             83.96 302  P      P        11 53 58.4 +0.9
I23K   Minto, Yukon-K    84.03  17  P      P        11 53 56.1 -0.3
       baz=223,SNR=7.4
I23K   Minto, Yukon-K    84.03  17  P      P        11 53 55.3 -1.1
YBH    Yreka Blue Hor    84.12  45  P      P        11 53 57.9 +0.4
       comp=Z,43nm,0.9s,baz=190,slow=1.8,SNR=74
YBH    Yreka Blue Hor    84.12  45  P      P        11 53 58.4 +0.8
YBH                                IAmb    IAmb     11 53 59.9
       comp=Z,76nm,1.1s
CCB    Clear Creek Bu    84.13  18  P      P        11 53 55.8 -1.1
CCB                                IAmb    IAmb     11 53 57.1
       comp=Z,44nm,0.9s
ORV    Oroville          84.17  48  P      P        11 53 57.5 -0.2
ORV                                pmax    pmax
       comp=Z,39nm,1.0s
ORV    Oroville          84.17  48  P      P        11 53 57.5 -0.2
HDA    Harding Lake      84.22  18  P      P        11 53 57.6 +0.2
       baz=225
HDA    Harding Lake      84.22  18  P      P        11 53 57.5 +0.1
MDM    Murphy Dome       84.22  18  P      P        11 53 56.7 -0.7
O03E   Paynes Creek      84.22  47  P      P        11 53 58.8 +0.7
       baz=248,SNR=41
MENT   Mentasta          84.25  20  P      P        11 53 58.0 +0.3
MENT                               IAmb    IAmb     11 53 59.5
       comp=Z,73nm,1.3s
I02D   Swisshome         84.27  43  P      P        11 53 59.2 +1.2
       baz=247,SNR=5.4
TCOL   CIGO, UAF Yank    84.27  18  P      P        11 53 57.5 -0.1
       baz=224,SNR=42
TCOL   CIGO, UAF Yank    84.27  18  P      P        11 53 56.8 -0.8
COLA   College           84.28  18⇑iP      P        11 53 57.3 -0.3
COLA                               pmax    pmax
       comp=Z,141nm,1.0s
COLA   College           84.28  18  P      P        11 53 57.2 -0.3
HUMO   Hull Mountain     84.28  44  P      P        11 53 59.2 +1.0
HUMO                               IAmb    IAmb     11 54 00.7
       comp=Z,63nm,1.0s
AFDM   Forest Hills D    84.34  48  P      P        11 53 58.8 +0.2
AFDM                               IAmb    IAmb     11 54 45.7
       comp=Z,83nm,1.3s
RIDG   Independent Ri    84.42  20  P      P        11 53 58.6 +0.1
I03D   Drain, OR         84.44  43  P      P        11 53 59.8 +0.9
       baz=247,SNR=16
CMB    Columbia Colle    84.45  49  P      P        11 53 58.9 -0.3
CMB                                pmax    pmax
       comp=Z,32nm,1.1s
CMB    Columbia Colle    84.45  49  P      P        11 53 58.9 -0.3
IL31                     84.49  18  P      P        11 53 58.1 -0.6
IL31                               IAmb    IAmb     11 53 59.6
       comp=Z,89nm,0.9s
ILAR   Eielson Array     84.49  18  P      P        11 53 58.4 -0.4
       comp=Z,60nm,0.8s,baz=235,slow=5.8,SNR=476
ILAR                               PKiKP   PKiKP    11 59 10.6 -0.7
       comp=Z,0.5nm,0.6s,baz=267,slow=3.3,SNR=7.3
ILAR                               PKKP    PKKPdf   12 12 03.6 -0.4
       comp=Z,0.7nm,0.7s,baz=340,slow=1.1,SNR=5.2
ILAR   Eielson Array     84.49  18  P      P        11 53 58.2 -0.6
ILAR   Eielson Array     84.49  18  P      P        11 53 58.2 -0.6
OSI    Osito Audit: C    84.56  53  P      P        11 54 00.9 +1.0
       baz=251
OSI    Osito Audit: C    84.56  53  P      P        11 54 00.2 +0.3
OSI                                IAmb    IAmb     11 54 47.6
       comp=Z,73nm,1.6s
POKR   Poker Plat Res    84.57  18  P      P        11 53 58.8 -0.4
       baz=225,SNR=26
POKR   Poker Plat Res    84.57  18  P      P        11 53 58.8 -0.4
POKR                               IAmb    IAmb     11 53 59.9
       comp=Z,94nm,1.0s
L04D   Klamath Falls     84.58  45  P      P        11 54 00.8 +0.8
       baz=248,SNR=23
DOT    Dot Lake          84.61  20  P      P        11 53 59.7 +0.2
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DOT				IAmb	IAmb	11 54 01.0	
	comp=Z,83nm,1.0s						
VOG	Valley Oaks Go	84.62	51	P	P	11 54 00.2	+0.2
	baz=250						
ARVC	Arvin	84.65	52	P	P	11 54 00.6	+0.4
	baz=251,SNR=5.4						
VES	Vestal, Richgr	84.69	52	P	P	11 54 00.5	+0.1
	baz=251,SNR=7.9						
M04C	Macdoel	84.75	45	P	P	11 54 01.5	+0.8
	baz=248,SNR=28						
DECC	Green Verdugo	84.75	53	P	P	11 54 01.4	+0.6
	baz=251						
COR	Corvallis	84.82	42	P	P	11 54 02.7	+1.9
PASC	Pasadena Art C	84.84	54	P	P	11 54 01.3	+0.1
SCRK	Sand Creek	84.86	20	P	P	11 54 01.6	+0.9
	baz=228,SNR=37						
MWC	Mount Wilson	84.96	54	P	P	11 54 02.2	+0.1
MWC				pmax	pmax		
	comp=Z,113nm,1.7s						
MWC	Mount Wilson	84.96	54	P	P	11 54 02.2	+0.1
MWC				IAmb	IAmb	11 54 49.3	
	comp=Z,113nm,1.7s						
RUBR	Rubicon Trail	84.97	48	P	P	11 54 02.7	+0.7
RUBR				IAmb	IAmb	11 54 06.9	
	comp=Z,56nm,1.0s						
BCAR	Beaver Creek A	85.00	21	P	P	11 54 01.7	+0.3
G03D	McMinnville, O	85.09	42	P	P	11 54 03.2	+1.1
	baz=247,SNR=9.8						
ISA	Isabella, Lake	85.10	52	P	P	11 54 03.3	+0.7
	baz=251,SNR=18						
ISA	Isabella, Lake	85.10	52	P	P	11 54 02.9	+0.3
ISA				pmax	pmax		
	comp=Z,47nm,1.4s						
ISA	Isabella, Lake	85.10	52	P	P	11 54 02.9	+0.3
J04D	Umpqua Nationa	85.10	44	P	P	11 54 03.5	+0.9
	baz=248,SNR=18						
BEKR	Beckworth	85.11	48	P	P	11 54 02.6	-0.1
BEKR				IAmb	IAmb	11 54 04.6	
	comp=Z,66nm,1.2s						
I04A	Tendick Farm,	85.11	43	P	P	11 54 02.8	+0.4
	baz=248,SNR=19						
K04D	Chiloquin, OR	85.11	45	P	P	11 54 03.5	+1.0
	baz=248,SNR=9.6						
H04D	Lebanon	85.17	43	P	P	11 54 03.7	+1.2
	baz=248,SNR=13						
EDW2	Edwards Air Fo	85.22	53	P	P	11 54 03.9	+0.8
	baz=251,SNR=21						
HYT	Haines Junctio	85.22	24	P	P	11 54 02.2	-0.4
BFSC	Mount Baldy Ra	85.28	54	P	P	11 54 03.9	+0.3
	baz=252,SNR=10						
MDPB	Devils Postpil	85.28	50	P	P	11 54 04.2	+0.5
MDPB				IAmb	IAmb	11 54 05.6	
	comp=Z,59nm,1.2s						
109C	Camp Elliot, M	85.30	55	P	P	11 54 04.1	+0.6
	baz=252						
109C	Camp Elliot, M	85.30	55	P	P	11 54 03.8	+0.3
109C				IAmb	IAmb	11 55 50.7	
	comp=Z,48nm,0.7s						
MOY	Mondy	85.30	325	*e*P	P	11 54 05.1	+1.9
MOY				pmax	pmax		
	comp=Z,89nm,2.8s						
WAKR	Walker	85.31	49	P	P	11 54 04.3	+0.6
WAKR				IAmb	IAmb	11 54 06.1	
	comp=Z,66nm,1.2s						
OMMB	Old Mammoth Mi	85.34	50	P	P	11 54 04.9	+0.9
COLD	Coldfoot	85.34	15	P	P	11 54 04.4	+1.4
	baz=222						
COLD	Coldfoot	85.34	15	P	P	11 54 04.0	+1.1
COLD				IAmb	IAmb	11 54 05.6	
	comp=Z,63nm,1.0s						
PNTR	Pine Nut	85.39	49	P	P	11 54 04.5	+0.3
PNTR				IAmb	IAmb	11 54 51.6	
	comp=Z,67nm,1.2s						
GTK	Tadong	85.41	299	*e*P	P	11 54 05.0	+0.7
E03A	Lebam	85.42	40	P	P	11 54 04.5	+0.8
VCNR	Virginia City	85.42	48	P	P	11 54 04.6	+0.4
PRP	Porcupine Dome	85.43	18	P	P	11 54 02.5	-1.1
MURC	Murrieta	85.44	54	P	P	11 54 04.8	+0.5
	baz=252,SNR=6.0						
MLAC	Mammoth, Mammo	85.47	50	P	P	11 54 06.0	+1.4
	baz=251,SNR=12						
NLWA	Neilton Lookou	85.56	40	P	P	11 54 04.6	+0.1
NLWA				IAmb	IAmb	11 54 06.9	
	comp=Z,57nm,1.4s						
BAR	Barrett	85.58	55	P	P	11 54 05.2	+0.2
H04A	Detroit Lake	85.59	43	P	P	11 54 04.7	0.0
H04A				IAmb	IAmb	11 54 06.3	
	comp=Z,80nm,1.3s						
TKX	Tecate	85.60	55	P	P	11 54 05.5	+0.5
CWC	Cottonwood Cre	85.65	51	P	P	11 54 06.0	+0.6
	baz=251						
LRMC	Laurel Mtn Rad	85.65	52	P	P	11 54 06.2	+0.8
	baz=252,SNR=17						
J05D	Fort Rock, OR	85.71	44	P	P	11 54 06.7	+1.2
	baz=249,SNR=43						
TIN	Tinemaha, Big	85.73	51	P	P	11 54 06.7	+1.0
	baz=251						
K05A	Summer Lake	85.74	45	P	P	11 54 06.2	+0.4
PAHR	Pah Rah Range	85.76	48	P	P	11 54 06.3	+0.5
PAHR				IAmb	IAmb	11 54 07.9	
	comp=Z,50nm,1.0s						
MONP2	Monument Peak	85.85	55	P	P	11 54 07.4	+0.9
	baz=252,SNR=14						
MOD	Modoc Plateau	85.86	46	P	P	11 54 06.5	+0.2
MOD				IAmb	IAmb	11 54 08.2	
	comp=Z,62nm,1.2s						
BBRC	Big Bear Solar	85.87	54	P	P	11 54 07.4	+0.8
	baz=252						
LHV	Little Huntoon	85.92	50	P	P	11 54 07.1	+0.7
ESJX	Sierra Juarez	85.96	56	P	P	11 54 07.8	+0.8
MPMC	Manual Prospec	85.98	52	P	P	11 54 07.7	+0.6
	baz=252,SNR=16						
I05D	Terrebonne, OR	86.03	43	P	P	11 54 07.6	+0.7
	baz=248,SNR=20						
IKP	In-Ko-Pah, Jac	86.03	56	P	P	11 54 08.0	+0.8
	baz=253,SNR=8.2						
RYN	Ryan	86.03	49	P	P	11 54 07.2	0.0
PFO	Pinyon Flats O	86.03	55	P	P	11 54 07.4	+0.1
	comp=Z,7.5nm,1.0s,baz=220,slow=2.4,SNR=11						
PFO	Pinyon Flats O	86.03	55	P	P	11 54 07.8	+0.4
	baz=252,SNR=7.9						
PFO	Pinyon Flats O	86.03	55	⇑*i*P	P	11 54 07.7	+0.4
PFO				pmax	pmax		
	comp=Z,37nm,1.4s						
PFO	Pinyon Flats O	86.03	55	P	P	11 54 07.5	+0.1
TPFO	Pinon Flats	86.03	55	P	P	11 54 07.8	+0.5
	baz=252,SNR=7.0						
E04D	Cinebar	86.06	41	P	P	11 54 08.0	+1.1
	baz=248,SNR=20						
PINE	Pine Mountain	86.09	44	P	P	11 54 07.9	+0.5
PINE				IAmb	IAmb	11 54 09.7	
	comp=Z,89nm,1.2s						
D03D	Eldon	86.10	40	P	P	11 54 08.2	+1.1
	baz=247,SNR=12						
NVAR	Mina Array Bea	86.12	49	P	P	11 54 08.3	+0.6
	comp=Z,20nm,1.0s,baz=231,slow=7.8,SNR=85						
NVAR				pP	pP	11 54 49.2	-2.4
	comp=Z,16nm,1.2s,baz=249,slow=7.5,SNR=2.7						
NVAR				PKiKP	PKiKP	11 59 16.6	+1.7
	comp=Z,0.4nm,0.8s,baz=318,slow=2.4,SNR=2.6						
NVAR				PKKPbc	PKKPbc	12 12 06.9	-0.5
	comp=Z,0.5nm,0.6s,baz=103,slow=4.0,SNR=7.0						
NVAR				LR	LR	12 25 43.6	
	comp=Z,144nm,20.5s,baz=250,slow=31						
NVAR	Mina Array Bea	86.12	49	P	P	11 54 07.8	0.0
D04E	Lakebay	86.17	40	P	P	11 54 09.0	+1.6
	baz=247						
TAPN	Taplejung	86.18	299	*e*P	P	11 54 08.6	+0.2
	comp=Z,174nm,1.3s						
NV11	Mina Array Sit	86.24	50	P	P	11 54 08.2	0.0
NV11				IAmb	IAmb	11 54 55.6	
	comp=Z,66nm,1.4s						
FYU	Fort Yukon	86.24	17	P	P	11 54 07.3	0.0
GSC	Goldstone, Bar	86.28	53	P	P	11 54 09.1	+0.7
	baz=252,SNR=11						
GSC	Goldstone, Bar	86.28	53	P	P	11 54 08.1	-0.3
GSC				pmax	pmax		
	comp=Z,56nm,1.7s						
GSC	Goldstone, Bar	86.28	53	P	P	11 54 08.1	-0.3
EGAK	Eagle	86.32	20	P	P	11 54 07.1	-0.6
EGAK				IAmb	IAmb	11 54 09.7	
	comp=Z,53nm,0.9s						
PGC	Sidney	86.32	39	P	P	11 54 08.7	+0.6
PGC				IAmb	IAmb	11 54 10.2	
	comp=Z,69nm,1.3s						
SWSC	Sam W. Stewart	86.36	55	P	P	11 54 09.7	+1.0
	baz=253,SNR=11						
GRAC	Grapevine Rang	86.37	51	P	P	11 54 09.6	+0.8
	baz=252						
G05D	Wamic, OR	86.37	42	P	P	11 54 09.3	+0.8
	baz=248,SNR=13						
DAWY	Dawson	86.47	21	P	P	11 54 08.5	-0.1
HEC	Hector,Ludlow	86.50	53	P	P	11 54 10.4	+0.9
	baz=252						
F05D	White Salmon	86.52	42	P	P	11 54 10.3	+1.1
	baz=248,SNR=12						
BELC	Belle Mtn. Jos	86.52	54	P	P	11 54 10.6	+0.9
	baz=253						
SFX	San Felipe	86.58	57	P	P	11 54 10.4	+0.5
FURC	Furnace Creek,	86.59	52	P	P	11 54 10.9	+1.1
	baz=252,SNR=22						
LON	Longmire	86.61	41	P	P	11 54 09.7	0.0
LON				pmax	pmax		
	comp=Z,22nm,1.1s						
LON	Longmire	86.61	41	P	P	11 54 09.7	0.0
D05A	Enumclaw	86.66	40	P	P	11 54 10.9	+1.0
A04D	Lummi Island	86.80	39	P	P	11 54 12.0	+1.5
	baz=247,SNR=12						
TPH	Tonopah	86.82	50	P	P	11 54 11.2	+0.1
TPH				pmax	pmax		
	comp=Z,246nm,1.6s						
TPH	Tonopah	86.82	50	P	P	11 54 11.2	+0.1
BC3	Big Chuckawall	86.85	55	P	P	11 54 12.4	+1.2
	baz=253,SNR=9.8						
SHOC	Shoshone, Teco	86.87	52	P	P	11 54 12.0	+0.8
	baz=252						
B05A	Bryant	87.00	39	P	P	11 54 12.3	+0.9
	baz=248,SNR=24						
GMRC	Granite Mounta	87.02	54	P	P	11 54 12.8	+0.7
	baz=253,SNR=14						
BMAR	Burnt Mountain	87.02	17	P	P	11 54 09.6	-1.6
A21K	Barrow	87.12	11	P	P	11 54 12.7	+1.2
	baz=216,SNR=15						
A21K	Barrow	87.12	11	P	P	11 54 11.8	+0.3
DLBC	Dease Lake	87.13	28	P	P	11 54 11.3	-0.6
	comp=Z,18nm,1.2s,baz=234,slow=6.3,SNR=7.9						
DLBC	Dease Lake	87.13	28	P	P	11 54 12.1	+0.2
I07A	Izee	87.17	44	P	P	11 54 13.1	+0.6
I07A				IAmb	IAmb	11 54 14.7	
	comp=Z,50nm,1.0s						
GLA	Glamis	87.17	55	P	P	11 54 14.2	+1.4
	baz=253,SNR=7.2						
GLA	Glamis	87.17	55	P	P	11 54 13.7	+1.0
GLA				pmax	pmax		
	comp=Z,33nm,1.0s						
GLA	Glamis	87.17	55	P	P	11 54 13.7	+1.0
GLA				IAmb	IAmb	11 54 14.8	
	comp=Z,33nm,0.9s						
WVOR	Wild Horse Val	87.20	46	P	P	11 54 12.8	0.0
WVOR				pmax	pmax		
	comp=Z,57nm,1.2s						
WVOR	Wild Horse Val	87.20	46	P	P	11 54 12.8	0.0
WVOR				IAmb	IAmb	11 54 15.0	
	comp=Z,57nm,1.2s						
TPNV	Topopah Spring	87.21	51	P	P	11 54 13.6	+0.7
	baz=252,SNR=15						
TPNV	Topopah Spring	87.21	51	P	P	11 54 13.4	+0.4
TPNV				pmax	pmax		
	comp=Z,144nm,2.0s						
TPNV	Topopah Spring	87.21	51	P	P	11 54 13.4	+0.4
TPNV				IAmb	IAmb	11 54 16.4	
	comp=Z,144nm,2.0s						
IRM	Iron Mountain	87.24	54	P	P	11 54 14.1	+1.1
	baz=253,SNR=24						
B06A	Marblemount	87.47	39	P	P	11 54 13.8	+0.1
LTY	Liberty	87.52	41	P	P	11 54 14.1	0.0
LTY				IAmb	IAmb	11 54 15.8	
	comp=Z,50nm,1.2s						
TIXI	Tiksi	87.64	349	P	P	11 54 13.7	-0.3
TIXI				pmax	pmax		
	comp=Z,85nm,1.4s						
TIXI	Tiksi	87.64	349	P	P	11 54 13.7	-0.3
TIXI				IAmb	IAmb	11 54 15.3	
	comp=Z,85nm,1.4s						
E07A	Sunnyside	87.80	41	P	P	11 54 15.8	+0.5
E07A				IAmb	IAmb	11 54 17.4	
	comp=Z,44nm,0.9s						
PIX	Pinacate	87.87	57	P	P	11 54 15.9	0.0
GUN	Gumba	87.89	299	*e*P	P	11 54 16.7	+0.1
	comp=Z,98nm,0.8s						
SHPR	Sheep Range	87.91	52	P	P	11 54 17.0	+0.7
G08A	Pilot Rock	87.95	43	P	P	11 54 16.6	+0.4
G08A				IAmb	IAmb	11 54 18.2	
	comp=Z,57nm,1.1s						
HAWA	Hanford	87.95	42	P	P	11 54 16.3	+0.3
HAWA				IAmb	IAmb	11 54 18.2	
	comp=Z,46nm,1.1s						
PDMCI	Parker Dam,Lak	88.08	54	P	P	11 54 18.1	+1.2
	baz=254,SNR=19						
R11A	Troy Canyon, C	88.13	50	P	P	11 54 17.8	+0.5
	baz=253,SNR=31						
R11A	Troy Canyon, C	88.13	50	P	P	11 54 17.7	+0.3
R11A				IAmb	IAmb	11 55 04.8	
	comp=Z,47nm,1.4s						
PKI	Pulchoki	88.21	299	*e*P	P	11 54 17.7	-0.4
	comp=Z,170nm,1.0s						
PKIN	Phulchoki	88.22	299	*e*P	P	11 54 17.9	-0.2
	comp=Z,174nm,1.0s						
PRN	Pahroc Range	88.26	51	P	P	11 54 18.6	+0.7
DMN	Daman	88.48	299	*e*P	P	11 54 19.6	+0.3
	comp=Z,252nm,0.7s						
W13A	Hualapai Mount	88.50	54	P	P	11 54 19.5	+0.3
214A	Organ Pipe Nat	88.51	57	P	P	11 54 20.5	+1.4
	baz=254						
214A	Organ Pipe Nat	88.51	57	P	P	11 54 20.0	+1.0
D08A	Wollman Farm,	88.57	41	P	P	11 54 19.1	+0.2
D08A				IAmb	IAmb	11 54 21.2	
	comp=Z,82nm,1.5s						
EPYK	Eagle Plains	88.75	20	P	P	11 54 19.0	-0.4
	baz=235						
EPYK	Eagle Plains	88.75	20	P	P	11 54 19.0	-0.4
B08A	Colville Reser	88.75	40	P	P	11 54 19.4	-0.4
B08A				IAmb	IAmb	11 54 21.5	
	comp=Z,54nm,1.3s						
SLBS	Sierra La Lagu	88.87	66	P	P	11 54 21.5	+0.6
SLBS				IAmb	IAmb	11 54 23.6	
	comp=Z,51nm,1.4s						
E09A	Wood Farm, Sta	88.89	42	P	P	11 54 20.8	+0.3
E09A				IAmb	IAmb	11 54 22.5	
	comp=Z,62nm,1.3s						
BMO	Blue Mountains	88.91	44	P	P	11 54 21.1	+0.4
BMO				pmax	pmax		
	comp=Z,81nm,1.6s						
BMO	Blue Mountains	88.91	44	P	P	11 54 21.1	+0.4
BMO				IAmb	IAmb	11 54 22.7	
	comp=Z,81nm,1.6s						
GKN	Gorkha	88.98	299	*e*P	P	11 54 21.2	-0.3
	comp=Z,150nm,0.8s						
BELA	Belgrano 2	89.04	176	P	P	11 54 20.9	+0.2
ELK	Elko	89.09	48	P	P	11 54 22.5	+0.6
	comp=Z,21nm,1.0s,baz=253,slow=5.0,SNR=68						
ELK	Elko	89.09	48	P	P	11 54 22.0	+0.1
ELK				pmax	pmax		
	comp=Z,49nm,1.2s						
ELK	Elko	89.09	48	P	P	11 54 22.0	+0.1
ELK				IAmb	IAmb	11 54 24.0	
	comp=Z,49nm,1.2s						
C09A	Chrisman Ranch	89.23	41	P	P	11 54 21.6	-0.4
HSIG		89.30	60	P	P	11 54 22.8	0.0
F10A	Beach Ranch, E	89.32	43	P	P	11 54 22.3	-0.3
F10A				IAmb	IAmb	11 54 23.7	
	comp=Z,45nm,0.9s						
MFID	Camas Ranch	89.47	45	P	P	11 54 23.8	+0.3
MFID				IAmb	IAmb	11 54 25.5	
	comp=Z,33nm,0.9s						
PSUT	Pine Spring	89.48	50	P	P	11 54 23.8	+0.1
LCMT	Little Creek M	89.53	52	P	P	11 54 24.3	+0.4
CCUT	Cedar City	89.58	51	P	P	11 54 24.8	+0.6
SZCU	Shurtz Canyon	89.81	51	P	P	11 54 25.8	+0.6
KOLN	Koldanda	89.81	298	*e*P	P	11 54 24.8	-0.7
	comp=Z,113nm,1.1s						
DANN	Dangsing	89.81	299	*e*P	P	11 54 25.0	-0.6
	comp=Z,105nm,0.7s						
KNB	Kanab	89.86	52	P	P	11 54 26.1	+0.6
KNB				pmax	pmax		
	comp=Z,219nm,1.9s						
KNB	Kanab	89.86	52	P	P	11 54 26.1	+0.6
U15A	North Rim	90.11	53	P	P	11 54 27.8	+1.0
NEW	Newport	90.12	40	P	P	11 54 26.3	+0.1
	comp=Z,28nm,0.9s,baz=238,slow=4.1,SNR=52						
NEW	Newport	90.12	40	P	P	11 54 26.6	+0.4
	baz=252						
NEW	Newport	90.12	40	P	P	11 54 26.2	0.0
NEW				pmax	pmax		
	comp=Z,44nm,1.1s						
NEW	Newport	90.12	40	P	P	11 54 26.2	0.0
NEW				IAmb	IAmb	11 54 27.8	
	comp=Z,44nm,1.1s						
X16A	Lo Mia Camp, P	90.26	55	P	P	11 54 28.0	+0.6
X16A				IAmb	IAmb	11 54 30.2	
	comp=Z,103nm,1.9s						
TUC	Tucson	90.26	57	P	P	11 54 28.9	+1.6
	baz=256						
TUC	Tucson	90.26	57	P	P	11 54 28.1	+0.8
TUC				pmax	pmax		
	comp=Z,57nm,1.3s						
TUC	Tucson	90.26	57	P	P	11 54 28.1	+0.8
TUC				IAmb	IAmb	11 54 30.3	
	comp=Z,57nm,1.3s						
PKCU	Pink Cliffs	90.36	52	P	P	11 54 29.2	+1.2
HLID	Hailey	90.50	45	P	P	11 54 29.4	+1.1
	baz=253						
HLID	Hailey	90.50	45	P	P	11 54 28.6	+0.3
HLID				IAmb	IAmb	11 54 30.6	
	comp=Z,46nm,1.2s						
WUAZ	Wupatki	90.59	54	P	P	11 54 30.1	+1.2
	baz=255,SNR=15						
WUAZ	Wupatki	90.59	54	P	P	11 54 29.5	+0.6
MTPU	Mount Pierson	90.62	51	P	P	11 54 30.6	+1.4
DUG	Dugway, Tooele	90.72	49	P	P	11 54 29.9	+0.6
	baz=254,SNR=18						
DUG	Dugway, Tooele	90.72	49	P	P	11 54 29.8	+0.5
DUG				pmax	pmax		
	comp=Z,70nm,1.7s						
DUG	Dugway, Tooele	90.72	49	P	P	11 54 29.8	+0.5
DUG				IAmb	IAmb	11 54 31.6	
	comp=Z,70nm,1.6s						
MVU	Marysvale	90.72	51	P	P	11 54 30.3	+0.8
MSU	Marysvale	90.75	51	P	P	11 54 30.7	+1.1
MSU	Marysvale	90.75	51	P	P	11 54 30.6	+1.1
BGU	Big Grassy Mou	90.75	48	P	P	11 54 29.4	-0.1
SYO	Syowa Base	90.77	197	⇑*i*P	P	11 54 28.8	0.0
SYO	Syowa Base	90.77	197	⇓*e*PcP	PcP	11 54 30.6	+0.8
SYO	Syowa Base	90.77	197	⇑*e*pP	pP	11 55 12.8	-0.4
WMQ	Urumqi	90.80	315	*e*P	P	11 54 30.0	+0.5
WMQ				pmax	pmax		
	comp=Z,53nm,1.7s						
WMQ				pmax	pmax		
	comp=Z,330nm,3.6s						
WMQ				LR	LR		
	comp=Z,190nm,28.9s						
WMQ				LR	LR		
	comp=Z,2µm,28.9s						
WMQ				LR	LR		
	comp=Z,120nm,26.5s						
WMQ	Urumqi	90.80	315	P	P	11 54 29.3	-0.2
WMQ				pmax	pmax		
	comp=Z,131nm,1.6s						
WMQ	Urumqi	90.80	315	P	P	11 54 29.3	-0.2
INK	Inuvik	90.87	19	P	P	11 54 28.0	-1.1
	comp=Z,3.6nm,1.0s,baz=217,slow=5.5,SNR=5.9						
INK				PKiKP	PKiKP	11 59 21.8	+0.2
	comp=Z,1.8nm,0.6s,baz=149,slow=0.3,SNR=5.6						
INK				PKKPbc	PKKPdf	12 11 52.8	-0.1
	comp=Z,2.8nm,0.9s,baz=17,slow=5.8,SNR=6.9						
INK	Inuvik	90.87	19	P	P	11 54 28.4	-0.7
HVU	Hansel Valley	91.17	48	P	P	11 54 31.9	+0.5
HVU				pmax	pmax		
	comp=Z,88nm,1.3s						
HVU	Hansel Valley	91.17	48	P	P	11 54 31.9	+0.5
NLU	North Lily Min	91.20	49	P	P	11 54 31.8	+0.1
319A	Douglas	91.28	58	P	P	11 54 32.7	+0.6
SPUT	South Promonto	91.28	48	P	P	11 54 32.6	+0.7
BCYI	Bear Canyon	91.41	45	P	P	11 54 33.2	+0.6
X18A	Snowflake	91.48	55	P	P	11 54 33.8	+0.8
X18A				IAmb	IAmb	11 54 35.6	
	comp=Z,66nm,1.6s						
MPU	Maple Canyon	91.54	49	P	P	11 54 33.8	+0.6
CTU	Camp Tracy	91.63	49	P	P	11 54 34.0	+0.4
TMUT	Trail Mountain	91.68	50	P	P	11 54 34.7	+0.7
MSO	Missoula	91.75	42	P	P	11 54 33.9	0.0
	baz=254						
MSO	Missoula	91.75	42	P	P	11 54 33.5	-0.4
MSO				IAmb	IAmb	11 54 35.0	
	comp=Z,41nm,1.8s						
JTMT	Jette	91.78	41	P	P	11 54 33.9	-0.1
JTMT				IAmb	IAmb	11 54 35.2	
	comp=Z,31nm,1.2s						
W18A	Petrified Fore	91.79	55	P	P	11 54 36.0	+1.5
	baz=256						
W18A	Petrified Fore	91.79	55	P	P	11 54 35.3	+0.8
W18A				IAmb	IAmb	11 54 37.0	
	comp=Z,61nm,1.4s						
JLU	Jordanelle	91.83	49	P	P	11 54 35.3	+0.7
MCMT	McKenzie Canyo	91.93	45	P	P	11 54 35.4	+0.4
TCUT	Toone Canyon	91.99	48	P	P	11 54 35.9	+0.6
HYB	Hyderabad	92.01	287	*e*P	P	11 54 34.7	-1.0
P17A	Butcher Ranch,	92.07	50	P	P	11 54 36.1	+0.4
SRU	San Rafael Swe	92.15	51	P	P	11 54 36.2	+0.1
SRU				pmax	pmax		
	comp=Z,15nm,1.3s						
SRU	San Rafael Swe	92.15	51	P	P	11 54 36.1	+0.1
DLMT	Dillon	92.25	44	P	P	11 54 36.8	+0.5
DLMT				IAmb	IAmb	11 54 38.4	
	comp=Z,49nm,1.2s						
WALA	Waterton Lakes	92.39	40	P	P	11 54 37.0	+0.2
WALA				IAmb	IAmb	11 54 38.9	
	comp=Z,39nm,1.2s						
ECR	Eagle Creek	92.50	47	P	P	11 54 38.5	+0.9
DGZ	Jazzator, Alta	92.62	320	⇑*i*P	P	11 54 38.0	+0.1
DGZ				pmax	pmax		
	comp=Z,38nm,0.8s						
AHID	Auburn Hatcher	92.62	47	P	P	11 54 38.9	+0.7
121A	Cookes Peak, D	92.78	57	P	P	11 54 40.2	+1.2
	baz=257,SNR=11						
121A	Cookes Peak, D	92.78	57	P	P	11 54 39.6	+0.5
QLMT	Earthquake Lak	92.91	45	P	P	11 54 40.1	+0.7
REDW	Red Top Meadow	92.95	46	P	P	11 54 40.5	+0.8
REDW				IAmb	IAmb	11 54 41.9	
	comp=Z,53nm,1.6s						
BOZ	Bozeman (W)	92.96	44	P	P	11 54 40.7	+1.1
	baz=255,SNR=29						
BOZ	Bozeman (W)	92.96	44	P	P	11 54 39.9	+0.3
BOZ				pmax	pmax		
	comp=Z,28nm,1.2s						
BOZ	Bozeman (W)	92.96	44	P	P	11 54 39.9	+0.3
BOZ				IAmb	IAmb	11 54 41.8	
	comp=Z,28nm,1.2s						
IMW	Indian Meadow	93.02	46	P	P	11 54 40.1	+0.1
SNOW	Snow King Moun	93.04	46	P	P	11 54 40.5	+0.4
SNOW				IAmb	IAmb	11 55 27.0	
	comp=Z,30nm,1.5s						
YHB	Horse Butte	93.05	45	P	P	11 54 41.5	+1.4
YHL	Hebgen Lake	93.08	45	P	P	11 54 41.7	+1.4
HRY	Holter Researc	93.11	43	P	P	11 54 41.0	+0.8
PV14	Lion Creek, Pa	93.11	52	P	P	11 54 41.3	+0.7
MOOW	Moose Ponds	93.12	46	P	P	11 54 41.1	+0.6
PV19	Morning Glory	93.13	52	P	P	11 54 40.9	+0.3
PV17	East Wray Mesa	93.14	52	P	P	11 54 40.7	+0.1
PV20	West Nyswonger	93.15	52	P	P	11 54 41.0	+0.3
LOHW	Long Hollow	93.18	46	P	P	11 54 41.1	+0.3
YMR	Madison River	93.19	45	P	P	11 54 42.2	+1.4
YHH	Holmes Hill	93.30	45	P	P	11 54 41.9	+0.6
H17A	Grant Village	93.39	45	P	P	11 54 43.9	+2.2
	baz=256						
H17A	Grant Village	93.39	45	P	P	11 54 43.3	+1.6
LKWY	Lake	93.56	45	P	P	11 54 44.6	+2.1
LKWY				pmax	pmax		
	comp=Z,8.0nm,1.1s						
LKWY	Lake	93.56	45	P	P	11 54 44.6	+2.1
ZSN	Zaisan	93.67	318	*e*P	P	11 54 42.4	-0.2
	comp=Z,26nm,1.3s,baz=318						
ZSN	Zaisan	93.67	318	*e*P	P	11 54 42.4	-0.2
ZSN				pmax	pmax		
	comp=Z,26nm,1.3s						
BW06	Boulder Array	93.73	47	P	P	11 54 43.5	+0.2
	baz=257						
BW06	Boulder Array	93.73	47	P	P	11 54 43.0	-0.3
PD31	Pinedale Array	93.73	47	P	P	11 54 43.0	-0.3
PDAR	Pinedale Array	93.73	47	P	P	11 54 43.0	-0.3
	comp=Z,4.3nm,1.0s,baz=207,slow=1.7,SNR=19						
PDAR				PKiKP	PKiKP	11 59 28.2	+0.6
	comp=Z,0.6nm,0.7s,baz=182,slow=0.9,SNR=5.6						
PDAR				PKKP	PKKPdf	12 11 46.1	-1.2
	comp=Z,0.8nm,0.7s,baz=102,slow=5.0,SNR=9.2						
PDAR				LR	LR	12 31 33.4	

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      comp=Z,75nm,18.4s,baz=292,slow=32
PDAR  Pinedale Array    93.73  47  P        P         11 54 42.1 -1.2
LENM  Lemitar           93.80  56  P        P         11 54 43.8 +0.1
YNE   Yellowstone No    93.93  45  P        P         11 54 44.3 +0.1
BNM   Barren Site       94.07  56  P        P         11 54 45.3 +0.2
PMSA  Palmer Station    94.08 161  P        P         11 54 45.5 +1.3
PMSA  Palmer Station    94.08 161 eP        P         11 54 45.1 +1.0
O20A  White River Ci    94.10  50  P        P         11 54 45.4 +0.3
      baz=257
O20A  White River Ci    94.10  50  P        P         11 54 45.6 +0.6
O20A                               IAmb     IAmb      11 55 30.9
      comp=Z,50nm,2.0s
GCMT  Greycliff         94.35  44  P        P         11 54 47.0 +1.1
ANMO  Albuquerque       94.38  55  P        P         11 54 46.6 +0.2
      comp=Z,5.1nm,1.0s,baz=259,slow=4.0,SNR=11
ANMO  Albuquerque       94.38  55  P        P         11 54 46.8 +0.4
      baz=258
ANMO  Albuquerque       94.38  55ceP        P         11 54 47.1 +0.7
ANMO                               pmax     pmax
      comp=Z,17nm,1.7s
ANMO  Albuquerque       94.38  55  P        P         11 54 46.0 -0.4
C36M  Paulatuk          94.39  19  P        P         11 54 44.6 -0.7
      baz=246,SNR=12
C36M  Paulatuk          94.39  19  P        P         11 54 43.6 -1.7
C36M                               IAmb     IAmb      11 54 45.4
      comp=Z,15nm,0.8s
RLMT  Red Lodge         94.47  45  P        P         11 54 47.6 +0.9
      baz=257
RLMT  Red Lodge         94.47  45  P        P         11 54 46.8 +0.2
MNTX  Cornudas Mount    94.59  59  P        P         11 54 47.7 +0.4
      baz=258,SNR=8.4
MNTX  Cornudas Mount    94.59  59  P        P         11 54 47.6 +0.4
S22A  4UR Ranch, Cre    94.66  53  P        P         11 54 48.8 +1.0
      baz=258
EGMT  Eagleton          94.80  42  P        P         11 54 48.6 +0.7
      baz=257,SNR=7.9
EGMT  Eagleton          94.80  42  P        P         11 54 48.1 +0.2
EGMT                               IAmb     IAmb      11 54 49.8
      comp=Z,48nm,1.6s
SMCO  Snowmass          94.85  51  P        P         11 54 49.2 +0.5
MK31  Makanchi Array    95.23 317⇑iP        P         11 54 50.1 +0.3
MK31  Makanchi Array    95.23 317  P        P         11 54 49.9 +0.1
MKAR  Makanchi Array    95.23 317  P        P         11 54 50.1 +0.3
      comp=Z,35nm,0.6s,baz=92,slow=6.6,SNR=314
MKAR                               PKiKP    PKiKP     11 59 29.6 -0.3
      comp=Z,2.4nm,0.8s,baz=83,slow=3.3,SNR=9.8
MKAR                               PKKPbc   PKKPbc    12 11 41.7 -2.8
      comp=Z,14nm,0.6s,baz=276,slow=3.3,SNR=115
MKAR                               PKPPKP   P'P'df    12 19 54.7 -0.4
      comp=Z,0.9nm,1.0s,baz=262,slow=2.5,SNR=4.6
MKAR  Makanchi Array    95.23 317 i P       P         11 54 50.0 +0.2
MKAR                               pmax     pmax
      comp=Z,35nm,0.6s
MKAR  Makanchi Array    95.23 317  P        P         11 54 49.9 +0.1
NVL   N'lazarevskaya    95.25 188⇓iP        P         11 54 48.7 -0.7
NVL                                pmax     pmax
      comp=Z,35nm,0.8s
ZAA0  Zalesovo Array    95.28 324  P        P         11 54 48.6 -1.1
ZAA0                               IAmb     IAmb      11 54 50.1
      comp=Z,27nm,0.9s
ZALV  Zalesovo Beam     95.28 324  P        P         11 54 48.7 -1.1
      comp=Z,16nm,0.7s,baz=114,slow=4.4,SNR=57
ZALV                               PKiKP    PKiKP     11 59 29.5 -0.1
      comp=Z,1.4nm,0.7s,baz=45,slow=2.6,SNR=5.1
ZALV                               PKKP     PKKPdf    12 11 42.1 -2.5
      comp=Z,4.9nm,0.5s,baz=298,slow=2.9,SNR=20
ZALV  Zalesovo Beam     95.28 324 i P       P         11 54 49.2 -0.6
ZALV                               pmax     pmax
      comp=Z,16nm,0.7s
ZALV  Zalesovo Beam     95.28 324  P        P         11 54 48.9 -0.9
MAKZ  Makanchi          95.45 317  P        P         11 54 50.2 -0.6
MAKZ                               pmax     pmax
      comp=Z,58nm,1.1s
MAKZ  Makanchi          95.45 317  P        P         11 54 50.2 -0.6
TX31  Lajitas Ar. Si    95.58  61  P        P         11 54 52.0 +0.1
TX31                               IAmb     IAmb      11 54 53.6
      comp=Z,22nm,1.1s
TX32  Lajitas Array     95.58  61  P        P         11 54 51.8 -0.1
TXAR  Lajitas Array     95.58  61  P        P         11 54 52.2 +0.4
      comp=Z,3.3nm,0.8s,baz=230,slow=5.1,SNR=24
TXAR                               PKiKP    PKiKP     11 59 32.9 +1.8
      comp=Z,0.6nm,1.1s,baz=242,slow=1.9,SNR=2.5
TXAR                               PKKP     PKKPbc    12 11 43.1 +0.3
      comp=Z,0.7nm,0.8s,baz=95,slow=3.7,SNR=5.5
TXAR                               LR       LR        12 34 21.5
      comp=Z,96nm,18.5s,baz=0.0,slow=33
TXAR  Lajitas Array     95.58  61  P        P         11 54 51.5 -0.4
TXAR  Lajitas Array     95.58  61  P        P         11 54 51.5 -0.4
SDCO  Great Sand Dun    95.69  53  P        P         11 54 52.7 +0.2
      baz=259
SDCO  Great Sand Dun    95.69  53  P        P         11 54 52.7 +0.2
YKA   Yellowknife Ar    95.72  27  P        P         11 54 50.5 -1.1
      comp=Z,5.6nm,0.6s,baz=255,slow=3.9,SNR=91
YKA                                PKiKP    PKiKP     11 59 29.8 -0.3
      comp=Z,0.8nm,0.6s,baz=215,slow=0.8,SNR=14
YKA                                PKKPbc   PKKPbc    12 11 40.4 -3.3
      comp=Z,0.8nm,0.6s,baz=85,slow=3.3,SNR=12
SNAA  Sanae             95.81 183  P        P         11 54 51.6 -0.5
SNAA  Sanae             95.81 183  PKKPbc   PKKPbc    12 11 39.3 -4.1
      comp=Z,1.9nm,0.8s,baz=11,slow=4.1,SNR=3.8
SNAA  Sanae             95.81 183  P        P         11 54 51.5 -0.5
SNAA                               pmax     pmax
      comp=Z,133nm,1.7s
SNAA  Sanae             95.81 183  P        P         11 54 51.5 -0.5
K22A  Casper            95.89  48  P        P         11 54 54.5 +1.4
      baz=259
N23A  Red Feather La    95.97  50  P        P         11 54 53.9 +0.3
      baz=259
ISCO  Idaho Springs     96.00  51  P        P         11 54 54.7 +0.9
      baz=259
SMLA  Simla             96.01 300 eP        P         11 54 52.6 -1.0
SMLA                               IAmb     IAmb      11 54 54.7
      comp=Z,11nm,0.7s
Q24A  Divide            96.20  52  P        P         11 54 55.6 +0.9
      baz=259
SHLS  Shalkode          96.47 313 eP        P         11 54 53.8 -1.9
      comp=Z,37nm,1.9s,baz=313
SHLS  Shalkode          96.47 313 eP        P         11 54 53.7 -1.9
SHLS                               pmax     pmax
      comp=Z,37nm,1.9s
VNA3  Neumayer Olymp    96.49 181  P        P         11 54 54.7 -0.4
VNA3  Neumayer Olymp    96.49 181  PKiKP    PKiKP     11 59 34.1 +2.6
VNA2  Neumayer--Watz    96.75 182  P        P         11 54 56.0 -0.2
      baz=187,slow=4.6
VNA2  Neumayer--Watz    96.75 182  PKiKP    PKiKP     11 59 31.4 -0.4
LAO   LASA Array        96.87  44  P        P         11 54 58.2 +0.9
      baz=259
LAO   LASA Array        96.87  44  P        P         11 54 57.7 +0.4
LAO                                IAmb     IAmb      11 55 00.0
      comp=Z,40nm,1.8s
VNA1  Neumayer--Stat    97.05 182  P        P         11 54 57.4 -0.2
KPKS  Kokpek            97.08 313 eP        P         11 54 57.9 -0.5
      comp=Z,26nm,2.0s,baz=313
KPKS                              eS        SKSac     12 05 17.0 -1.6
      baz=313
KPKS  Kokpek            97.08 313 eP        P         11 54 57.9 -0.5
KPKS                              eS        SKSac     12 05 16.9 -1.6
KPKS                               pmax     pmax
      comp=Z,26nm,2.0s
MSTX  Muleshoe          97.18  57  P        P         11 54 59.0  0.0
      baz=260
SATY  Saty              97.21 312 eP        P         11 54 58.6 -0.5
      baz=312
SATY                              eS        SKSac     12 05 18.0 -1.3
      baz=312
SATY  Saty              97.21 312 eP        P         11 54 58.5 -0.5
SATY                              eS        SKSac     12 05 18.0 -1.3
SEM   Semipalatinsk     97.28 320 eP        P         11 54 57.3 -2.0
      baz=320
SEM   Semipalatinsk     97.28 320 eP        P         11 54 57.2 -2.0
TDK   Taldyqorghan      97.55 314 eP        P         11 54 59.8 -0.6
      baz=314
TDK   Taldyqorghan      97.55 314 eP        P         11 54 59.7 -0.6
NRIK  Noril'sk          97.77 339  P        P         11 55 00.2 -0.5
      comp=Z,9.4nm,0.7s,baz=118,slow=5.0,SNR=17
NRIK                               PP       PP        11 58 57.6 -3.7
      comp=Z,1.7nm,0.5s,baz=131,slow=7.0,SNR=6.6
NRIK                               PKiKP    PKiKP     11 59 34.3 +0.7
      comp=Z,2.6nm,0.6s,baz=151,slow=2.9,SNR=2.2
NRIK  Noril'sk          97.77 339 i P       P         11 55 00.4 -0.3
NRIK                               pmax     pmax
      comp=Z,37nm,1.5s
NRIK  Noril'sk          97.77 339  P        P         11 54 59.9 -0.8
RSSD  Black Hills       97.94  47  Pdiff    Pdif      11 55 03.6 +1.2
      baz=260
RSSD  Black Hills       97.94  47  P        Pdif      11 55 06.2 +3.8
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MDOK  Medeo             98.20 312 eP        P         11 55 02.9 -0.6
      baz=312
MDOK                              eS        SKSac     12 05 22.8 -1.6
      baz=312
MDOK  Medeo             98.20 312 eP        P         11 55 02.9 -0.6
MDOK                              eS        SKSac     12 05 22.8 -1.6
AMTX  Amarillo          98.22  56  Pdiff    Pdif      11 55 04.2 +0.5
      baz=261
TNSS  Tian-Shan         98.26 312 eP        Pdif      11 55 04.3 +0.3
      baz=312
TNSS  Tian-Shan         98.26 312 eP        Pdif      11 55 04.3 +0.2
AAA   Alma-Ata          98.31 312 eP        Pdif      11 55 04.8 +0.9
      baz=312
AAA   Alma-Ata          98.31 312 eP        Pdif      11 55 04.7 +0.8
CHKK  Chushkaly         98.36 313 eP        P         11 55 03.7 -0.3
      baz=313
CHKK  Chushkaly         98.36 313 eP        P         11 55 03.7 -0.3
KURK  Kurchatov         98.36 320ceP        P         11 55 03.4 -0.4
KURK                               pmax     pmax
      comp=Z,14nm,1.7s
KURK  Kurchatov         98.36 320  P        P         11 55 02.8 -1.0
KURBB Kurchatov Arra    98.40 320  P        P         11 55 02.9 -1.0
      comp=Z,3.2nm,0.6s,baz=97,slow=4.3,SNR=33
ULHL  Ulahol            98.65 311  P        PKKPbc    12 11 33.5 -1.7
      SNR=20
KUU   Kurty             98.83 313 eP        P         11 55 05.0 -1.2
      comp=Z,27nm,1.4s,baz=313
KUU                               eS        SKSac     12 05 25.2 -2.0
      baz=313
KUU   Kurty             98.83 313 eP        P         11 55 04.9 -1.2
KUU                               eS        SKSac     12 05 25.2 -2.0
KUU                                pmax     pmax
      comp=Z,27nm,1.4s
JCT   Junction City     99.08  61  Pdiff    Pdif      11 55 07.3 -0.2
      baz=261,SNR=6.5
JCT   Junction City     99.08  61  P        Pdif      11 55 07.1 -0.5
JCT                                pmax     pmax
      comp=Z,8.0nm,0.9s
JCT   Junction City     99.08  61           Pdif      11 55 07.1 -0.5
JCT                                IAmb     IAmb      11 55 08.7
      comp=Z,8.3nm,0.9s
TKM2  Tokmak 2          99.22 312  P        PKKPbc    12 11 32.0 -1.6
      SNR=15
KBK   Karagaybulak      99.66 312  P        PKKPbc    12 11 31.4 -0.9
      SNR=7.3
CHMS  Chumysh           99.84 312  P        PKKPbc    12 11 30.3 -1.3
      SNR=6.2
UCH   Uchtor            99.92 311  P        PKKPbc    12 11 31.5 -0.4
      SNR=14
AAK   Ala-Archa         99.98 312  P        PKKPbc    12 11 30.5 -0.9
      SNR=8.8
SGDS  Sogindy           99.99 312 eS        SKSac     12 05 31.1 -2.0
      baz=312
USP   Ospenovka        100.06 312  P        PKKPbc    12 11 29.2 -1.8
      SNR=6.8
AML   Almayashu        100.51 311  P        PKKPbc    12 11 29.3 -0.8
      SNR=7.4
EKS2  Erkin-Say        100.51 311  P        PKKPbc    12 11 28.8 -1.0
      SNR=12
WMOK  Wichita Mounta   100.56  57  Pdiff    Pdif      11 55 14.5 +0.5
      baz=262
BTLS  Baital           100.61 314 eP        Pdif      11 55 13.1 -0.9
      baz=314
BTLS  Baital           100.61 314 eP        Pdif      11 55 13.0 -0.9
BRZS  Berezniki        102.05 319 eP        Pdif      11 55 18.8 -1.4
      baz=319
BRZS                              eS        SKSac     12 05 40.7 -1.8
      baz=319
DZA   Taraz            102.33 312 eS        SKSac     12 05 42.5 -1.7
      baz=312
RES   Resolute Bay     104.10  16  PKiKP    PKiKP     11 59 44.4 -0.5
      comp=Z,4.2nm,0.7s,baz=212,slow=1.7,SNR=19
RES                                PKKPbc   PKKPbc    12 11 18.0 -2.1
      comp=Z,3.1nm,1.0s,baz=105,slow=3.6,SNR=10
ULM   Lac du Bonnet    104.12  41  Pdiff    Pdif      11 55 31.0 +1.6
      comp=Z,2.4nm,0.8s,baz=207,slow=2.3,SNR=4.6
ULM                                PKiKP    PKiKP     11 59 44.9 -0.7
      comp=Z,5.7nm,0.7s,baz=309,slow=2.8,SNR=11
PLCA  Paso Flores      105.16 138  PKiKP    PKiKP     11 59 48.2 +0.2
      comp=Z,1.0nm,0.7s,baz=274,slow=3.7,SNR=3.3
ARU   Arti             110.35 326 i PKIKP   PKiKP     11 59 57.0  0.0
ARU                                                   12 00 34.5
ARU                                                   12 06 51.8
ARU                                SP       SP        12 09 36.8 -8.5
ARU                                SS       SS        12 15 39.4 -8.6
P49A  Miami Univ. Ec   112.03  52  PKiKP    PKiKP     12 00 00.8 +0.1
      baz=272
GEYT  Alibeck          112.23 306  PKiKP    PKiKP     12 00 01.6 +0.3
      comp=Z,6.1nm,0.8s,baz=145,slow=3.2,SNR=13
GEYT                               PKKPbc   PKKPbc    12 10 52.9 -0.4
      comp=Z,2.2nm,0.8s,baz=278,slow=4.3,SNR=3.9
ACSO  Alum Creek Sta   113.33  51  PKiKP    PKiKP     12 00 02.8 -0.4
      baz=273
HSPB  Hornsund (broa   113.72 353 ePKPdf    PKiKP     12 00 03.3 +0.5
M51A  Elyria           113.86  50  P        PKiKP     12 00 04.1 -0.1
      baz=274
P52A  Corning          114.02  52  P        PKPdf     12 00 04.1 -0.5
      baz=274
Q53A  Leroy            114.54  53  P        PKPdf     12 00 05.4 -0.1
      baz=274
UPNV  Upernavik        114.65  13⇑iP        PKiKP     12 00 04.8 +0.1
UPNV                               IAmb     IAmb      12 00 05.5
      comp=Z,32nm,0.7s
O53A  New Philadelph   114.68  51  P        PKPdf     12 00 05.5 -0.2
      baz=275
M53A  WI Miller and    114.98  50  P        PKiKP     12 00 05.9 -0.4
      baz=276
LVC   Limon Verde      115.26 122c iPKIKP   PKPdf     12 00 09.3 +1.4
LVC                                pmax     pmax
      comp=Z,3.0nm,0.6s
O54A  Avella           115.32  51           PKiKP     12 00 07.0  0.0
PB01  IPOC Station P   115.47 121           PKPdf     12 00 07.3 -0.7
BLA   Blacksburg       115.51  55  P        PKPdf     12 00 06.8 -0.7
      baz=274
V56A  Mocksville       115.53  56  P        PKPdf     12 00 07.0 -0.5
      baz=273
N54A  Moraine State    115.54  50  P        PKPdf     12 00 06.8 -0.6
      baz=276
DAG   Danmarks Havn    115.60   1⇑iP        PKiKP     12 00 05.7 -0.8
      comp=Z,11nm,0.7s
DAG   Danmarks Havn    115.60   1 i P       PKKPbc    12 10 45.6 +2.7
DAG   Danmarks Havn    115.60   1⇑iPKIKP    PKiKP     12 00 05.7 -0.8
DAG   Danmarks Havn    115.60   1⇑iP        PKiKP     12 00 05.8 -0.8
DAG                                IAmb     IAmb      12 00 06.6
      comp=Z,11nm,0.7s
DAG   Danmarks Havn    115.60   1 i P       PKKPbc    12 10 45.7 +2.7
R55A  Marlinton        115.68  53  P        PKPdf     12 00 07.4 -0.5
      baz=274
R55A  Marlinton        115.68  53           PKPdf     12 00 07.1 -0.8
SADO  Sadowa           115.70  46  PKP      PKPdf     12 00 06.6 -1.0
      comp=Z,8.7nm,0.8s,baz=13,slow=6.6,SNR=6.4
SADO  Sadowa           115.70  46           PKPdf     12 00 06.8 -0.8
M54A  Oil Creek Stat   115.73  50  P        PKPdf     12 00 07.5 -0.3
      baz=276
M54A  Oil Creek Stat   115.73  50           PKPdf     12 00 07.7 -0.1
MATQ  Matagami         115.86  41  P        PKPdf     12 00 06.4 -1.3
      baz=282
FRB   Frobisher Bay    116.01  24  PKP      PKPdf     12 00 07.0 -0.5
      comp=Z,10nm,0.6s,baz=326,slow=1.9,SNR=68
V57A  Coltrane Farms   116.11  56  P        PKPdf     12 00 08.3 -0.3
      baz=274
H53A  Bobcaygeon       116.13  46  P        PKPdf     12 00 08.2 -0.3
      baz=278
PB08  IPOC Station P   116.14 120           PKPdf     12 00 08.6 -1.1
NUUG  Nuugaatsiaq      116.17  13 i P       PKiKP     12 00 07.9 +0.2
NUUG                               IAmb     IAmb      12 00 08.3
      comp=Z,28nm,0.8s
MNMC  Minye Minye      116.20 119           PKPdf     12 00 09.0 -0.7
R56A  Bull Pasture M   116.23  53  P        PKPdf     12 00 08.9  0.0
      baz=275
ALGO  Algonquin Park   116.28  45  P        PKPdf     12 00 08.1 -0.6
      baz=280,SNR=5.8
G54A  Lake Saint Pet   116.35  45  P        PKPdf     12 00 08.4 -0.5
      baz=279
LSQQ  Lebel-sur-Quev   116.42  41  P        PKPdf     12 00 08.1 -0.7
      baz=282
U57A  Blanch           116.43  55  P        PKiKP     12 00 09.4 +0.2
      baz=274
T57A  Hurt             116.46  55  P        PKPdf     12 00 09.1 -0.2
      baz=274
O56A  Blue Knob Stat   116.69  51  P        PKiKP     12 00 09.9 +0.2
      baz=276
N56A  West Decatur     116.82  50  P        PKPdf     12 00 09.6 -0.4
      baz=277
M56A  Emporium         116.84  50  P        PKPdf     12 00 09.8 -0.1
      baz=277
R57A  Stanardsville    116.93  53  P        PKPdf     12 00 09.8 -0.3
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      baz=276
T58A  Grand View Acr   117.04  55  P        PKPdf     12 00 10.3 -0.1
      baz=275
YOTC  Yotoco, Valle    117.06  92 eP        PKPdf     12 00 10.3 -1.0
U58A  Oxford           117.07  55  P        PKPdf     12 00 10.2 -0.3
      baz=274
SSPA  Standing Stone   117.17  51  P        PKPdf     12 00 10.4 -0.1
      baz=277
L56A  Greenwood        117.22  49  P        PKPdf     12 00 10.4 -0.3
      baz=278
L56A  Greenwood        117.22  49           PKPdf     12 00 10.5 -0.2
S58A  Poland Farm, P   117.36  54  P        PKPdf     12 00 10.6 -0.4
      baz=275
V59A  Middlesex        117.36  56  P        PKPdf     12 00 10.7 -0.3
      baz=274
TMCR  Tamitsa          117.40 337 ePKIKP    PKPdf     12 00 09.4 -0.8
TMCR                               pmax     pmax
      comp=Z,18nm,0.9s
N57A  Milroy           117.40  50  P        PKPdf     12 00 11.0 -0.1
      baz=277
BELG  Belogornoye      117.44 323 i PKIKP   PKiKP     12 00 11.3 +0.6
R58B  Mineral          117.46  54  P        PKPdf     12 00 10.5 -0.7
      baz=276
Q58A  Fox Den Farm,    117.52  53  P        PKPdf     12 00 10.9 -0.4
      baz=276
HAMF  Hammerfest       117.53 347 e         PKPdf     12 00 08.6 -1.8
E55A  Montcerf-Lytto   117.56  44  P        PKPdf     12 00 10.6 -0.5
      baz=281
M57A  Sunshine Farm,   117.64  50  P        PKPdf     12 00 11.4  0.0
      baz=278
PTLC  Puerto Leguiza   117.73  96 eP        PKPdf     12 00 11.8 -0.7
L57A  Andrews Acres    117.76  49  P        PKPdf     12 00 11.1 -0.6
      baz=278
T59A  Double "B" Far   117.82  55  P        PKPdf     12 00 11.5 -0.4
      baz=275
D55A  Sainte-Anne-du   117.83  43  P        PKPdf     12 00 11.2 -0.4
      baz=282,SNR=6.1
K57A  Scipio Center    117.89  48  P        PKPdf     12 00 11.0 -0.9
      baz=279
ARCES ARCESS Array B   117.92 346  PKP      PKPdf     12 00 11.1 -0.1
      comp=Z,43nm,0.6s,baz=70,slow=1.9,SNR=192
ARCES                              PKKPbc   PKKPbc    12 10 31.4 -3.2
      comp=Z,6.4nm,0.8s,baz=222,slow=1.6,SNR=9.8
ARCES ARCESS Array B   117.92 346  PKPdf    PKiKP     12 00 11.3 +0.1
O58A  Lewisberry       117.96  51  P        PKPdf     12 00 11.8 -0.3
      baz=278
DBG   Daneborg         118.01   2 i P       PKPdf     12 00 11.1 -0.1
DBG                                IAmb     IAmb      12 00 12.4
      comp=Z,21nm,1.0s
DBG   Daneborg         118.01   2 i P       PKKPbc    12 10 36.5 +2.0
N58A  Sunbury          118.02  50  P        PKPdf     12 00 11.4 -0.8
      baz=278
N58A  Sunbury          118.02  50           PKPdf     12 00 12.1 -0.1
R59A  King George, V   118.04  53  P        PKiKP     12 00 12.5 +0.2
      baz=276
SUMG  Summit           118.04   8 i P       PKiKP     12 00 12.2 +0.4
      comp=Z,82nm,1.1s
SUMG  Summit           118.04   8 i P       PKKPbc    12 10 34.5 -0.3
SUMG  Summit           118.04   8  PKIKP    PKiKP     12 00 12.2 +0.4
SUMG  Summit           118.04   8  PKPdf    PKiKP     12 00 12.2 +0.4
SUMG  Summit           118.04   8 i P       PKiKP     12 00 12.2 +0.4
SUMG                               IAmb     IAmb      12 00 13.8
      comp=Z,82nm,1.1s
SUMG  Summit           118.04   8 i P       PKKPbc    12 10 34.5 -0.3
M58A  Price's Panora   118.14  50  P        PKPdf     12 00 12.1 -0.3
      baz=278
U60A  Pendleton        118.18  55  P        PKPdf     12 00 12.5 -0.1
      baz=275
TOLC  Tolima           118.18  91 eP        PKPdf     12 00 13.4 -0.3
RREF  El Recreo        118.22  91 eP        PKPdf     12 00 14.1 -0.1
E56A  St. Veronique    118.23  44  P        PKPdf     12 00 11.6 -0.8
      baz=282
GUY2C Guyana, Caldas   118.27  91 eP        PKPdf     12 00 13.4 -0.6
HELC  Santa Helena     118.29  90 eP        PKPdf     12 00 13.2 -0.7
I57A  Carthage         118.30  47  P        PKPdf     12 00 12.3 -0.4
      baz=280
D56A  ZEC Mazanza, M   118.31  43  P        PKPdf     12 00 12.0 -0.6
      baz=283
ILULI Ilulissat        118.35  14 i P       PKPdf     12 00 11.9 -0.1
      comp=Z,35nm,0.7s
ILULI Ilulissat        118.35  14  PKIKP    PKPdf     12 00 11.9 -0.1
ILULI Ilulissat        118.35  14  PKPdf    PKPdf     12 00 11.9 -0.1
ILULI Ilulissat        118.35  14 i P       PKPdf     12 00 11.9 -0.1
ILULI                              IAmb     IAmb      12 00 12.6
      comp=Z,35nm,0.7s
BINY  Binghamton       118.36  49  P        PKPdf     12 00 12.0 -0.8
      baz=279
H57A  Richville        118.40  46  P        PKPdf     12 00 12.3 -0.5
      baz=281
KLMR  Klimovskoe       118.44 334 ePKIKP    PKPdf     12 00 11.3 -1.0
KLMR                              e                   12 01 29.4
KLMR                               pmax     pmax
      comp=Z,41nm,1.1s
KLMR  Klimovskoe       118.44 334 ePKPdf    PKPdf     12 00 11.4 -0.9
KLMR                               AMP                12 00 14.0
      comp=Z,41nm,1.1s
KLMR                              ePP       PP        12 01 29.4 -2.0
KLMR                              ePKKPbc   PKKPbc    12 10 29.3 -3.3
KLMR                              eSKKP               12 14 21.4
T60A  Surry            118.45  54  P        PKPdf     12 00 12.6 -0.5
      baz=276
S60A  Water View       118.46  54  P        PKiKP     12 00 13.9 +0.7
      baz=276
L58A  Harry Jones Me   118.49  49  P        PKPdf     12 00 12.9 -0.1
      baz=279
O59A  Robesonia        118.49  51  P        PKPdf     12 00 12.7 -0.5
      baz=278
K58A  Earlville        118.52  48  P        PKPdf     12 00 12.9 -0.3
      baz=280
J58A  Remsen           118.67  47  P        PKPdf     12 00 13.2 -0.2
      baz=280
J58A  Remsen           118.67  47           PKPdf     12 00 13.1 -0.3
N59A  State Game Lan   118.72  50  P        PKiKP     12 00 13.7 +0.1
      baz=279
I58A  Old Forge        118.84  47  P        PKPdf     12 00 13.5 -0.2
      baz=281
E57A  Chemin Saint G   118.86  44  P        PKPdf     12 00 13.2 -0.5
      baz=283,SNR=7.6
KTK1  Kautokeino       118.86 346 ePKPdf    PKiKP     12 00 13.1  0.0
M59A  Waymart          118.88  49  P        PKiKP     12 00 13.9  0.0
      baz=279
LONY  Lake Ozonia      118.93  46  P        PKPdf     12 00 13.3 -0.6
      baz=282
P60A  Greenville       118.98  51  P        PKPdf     12 00 13.7 -0.4
      baz=278
O60A  Telford          119.08  51  P        PKiKP     12 00 14.5 +0.2
      baz=279
K59A  Cooperstown      119.09  48  P        PKPdf     12 00 14.0 -0.2
      baz=280
PSUB  Penn St. - Bra   119.11  51           PKPdf     12 00 14.2 -0.1
ZARC  Zaragoza, Cauc   119.18  88 eP        PKPdf     12 00 14.1 -1.1
G58A  Ormstown         119.19  45  P        PKPdf     12 00 13.5 -0.7
      baz=282
J59A  Piesco           119.21  47  P        PKPdf     12 00 14.2 -0.3
      baz=281
J59A  Piesco           119.21  47           PKPdf     12 00 13.6 -0.8
N60A  Cedar Hill Far   119.23  50  P        PKPdf     12 00 14.3 -0.2
      baz=279
H58A  Gabriels         119.26  46  P        PKPdf     12 00 14.1 -0.4
      baz=282
TRO   Tromso           119.34 348 ePKPdf    PKPdf     12 00 13.9 +0.1
PTBC  PUERTO BERRIO,119.40  89 eP           PKPdf     12 00 13.4 -2.2
E58A  La Victoria      119.45  44  P        PKPdf     12 00 14.6 -0.2
      baz=284,SNR=6.5
LATQ  La Tuque         119.53  42  P        PKPdf     12 00 14.3 -0.6
      baz=285
D58A  Chemin du LacG   119.54  43  P        PKPdf     12 00 13.9 -1.0
      baz=284,SNR=6.7
I59A  Olmsteadville    119.60  47  P        PKPdf     12 00 15.0 -0.2
      baz=282
G59A  Clarenceville    119.81  45  P        PKPdf     12 00 15.1 -0.3
      baz=283
F59A  Saint Guilaume   119.91  44  P        PKPdf     12 00 15.5 -0.1
      baz=284
I60A  Shoreham         120.00  46  P        PKiKP     12 00 16.1 +0.1
      baz=282
PAL   Palisades        120.10  50  P        PKPdf     12 00 16.1  0.0
      baz=280
PAL   Palisades        120.10  50  PKIKP    PKPdf     12 00 15.6 -0.6
PAL   Palisades        120.10  50           PKPdf     12 00 15.6 -0.6
SFJD  Kangerlussuaq    120.10  16  PKP      PKPdf     12 00 15.0 -0.4
      comp=Z,25nm,0.9s,baz=303,slow=1.9,SNR=12
SFJD  Kangerlussuaq    120.10  16 i P       PKPdf     12 00 14.9 -0.4
SFJD  Kangerlussuaq    120.10  16  PKIKP    PKPdf     12 00 14.3 -1.1
SFJD  Kangerlussuaq    120.10  16  PKPdf    PKPdf     12 00 14.3 -1.1
SFJD  Kangerlussuaq    120.10  16 i P       PKPdf     12 00 14.9 -0.4
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M61A	Granite Spring	120.15	49	P	PKPdf	12 00 16.3	0.0
	baz=280						
K61A	Williamstown	120.26	48	P	PKiKP	12 00 16.7	+0.1
	baz=282						
F60A	Warwick	120.44	44	P	PKPdf	12 00 16.4	-0.2
	baz=284,SNR=10.0						
J61A	Chester	120.63	47	P	PKiKP	12 00 17.4	+0.1
	baz=282						
E60A	Ste Agathe de	120.68	43	P	PKPdf	12 00 16.8	-0.3
	baz=285						
L61B	Northampton	120.73	48	P	PKiKP	12 00 17.5	0.0
	baz=282						
I61A	Oroboro, Fairl	120.75	46	P	PKiKP	12 00 17.9	+0.4
	baz=283						
M62A	Hamden	120.77	49	P	PKPdf	12 00 16.7	-0.7
	baz=281						
H61A	Lyndonville	120.81	45	P	PKPdf	12 00 17.4	-0.1
	baz=284						
LBNH	Lisbon	120.87	46	P	PKPdf	12 00 17.0	-0.6
	baz=284						
D60A	Saint Jean D’O	120.88	42	P	PKPdf	12 00 16.3	-1.1
	baz=286,SNR=7.1						
G61A	St-Isidore-de-	120.90	44	P	PKPdf	12 00 16.9	-0.7
	baz=284						
ICESG	Greenland Ices	120.90	11	i P	PKPdf	12 00 17.2	-0.1
ICESG				IAmb	IAmb	12 00 17.8	
	comp=Z,38nm,0.9s						
ICESG	Greenland Ices	120.90	11	i P	PKKPbc	12 10 21.7	-2.5
F61A	St Evariste	121.09	44	P	PKPdf	12 00 17.8	-0.1
	baz=285						
J62A	Henniker	121.19	47	P	PKiKP	12 00 18.6	+0.3
	baz=283						
UMR	Umm Al-Rimmam	121.25	297	eP		12 00 19.0	
D61A	St Aubert, Com	121.29	42	P	PKPdf	12 00 17.6	-0.6
	baz=287,SNR=5.9						
KBD	Kabd	121.29	297	eP		12 00 19.4	
VRH	Novokhopyorsk	121.30	323	ePKIKP	PKPdf	12 00 18.2	+0.1
VRH				pmax	pmax		
	comp=Z,70nm,0.6s						
E61A	Lac Etchemin	121.30	43	P	PKiKP	12 00 18.8	+0.3
	baz=286,SNR=12						
H62A	Milan	121.33	45	P	PKiKP	12 00 19.0	+0.4
	baz=284						
N2IH	Innhavet	121.33	348	ePKPdf	PKiKP	12 00 18.0	+0.1
RDF	Al-Radifah	121.42	296	eP		12 00 19.6	
STEI	Steigen	121.51	348	ePKPdf	PKPdf	12 00 18.1	+0.1
MIB	Mutribah	121.56	297	eP		12 00 19.4	
G62A	West of Eustis	121.60	44	P	PKPdf	12 00 18.5	-0.5
	baz=285						
G62A	West of Eustis	121.60	44		PKPdf	12 00 18.4	-0.5
MOS	Moscow	121.69	329	ePKIKP	PKPdf	12 00 18.2	-0.5
MOS				pmax	pmax		
	comp=Z,49nm,0.7s						
SCO	Scoresbysund	121.73	3	i P	PKiKP	12 00 19.1	+0.5
	comp=Z,39nm,1.0s						
SCO	Scoresbysund	121.73	3	PKIKP	PKiKP	12 00 19.3	+0.7
SCO	Scoresbysund	121.73	3	PKPdf	PKiKP	12 00 19.3	+0.7
SCO	Scoresbysund	121.73	3	i P	PKiKP	12 00 19.1	+0.5
SCO				IAmb	IAmb	12 00 20.0	
	comp=Z,39nm,1.0s						
NUUK	Nuuk	121.80	19	i P	PKiKP	12 00 19.4	+0.5
NUUK				IAmb	IAmb	12 00 20.0	
	comp=Z,56nm,0.9s						
N2TV	T¥rnvik	121.84	348	ePKPdf	PKPdf	12 00 18.1	-0.6
RST	Umm Al-Ruwaisa	121.88	297	eP		12 00 20.1	
N2ST	Straumen	121.92	347	ePKPdf	PKPdf	12 00 18.9	0.0
FAUS	Fauske	121.96	347	ePKPdf	PKiKP	12 00 19.9	+0.8
G63A	Kingsbury	122.25	44	P	PKPdf	12 00 20.0	-0.2
	baz=286						
NBB28	Valnes	122.29	348	ePKPdf	PKPdf	12 00 19.6	0.0
GNI	Garni	122.33	310c	i PKIKP	PKiKP	12 00 22.6	+1.7
GNI				pmax	pmax		
	comp=Z,58nm,1.3s						
GNI	Garni	122.33	310	PKPdf	PKiKP	12 00 21.4	+0.5
CPUP	Villa Florida	122.33	132	PKP	PKPdf	12 00 20.4	-0.5
	comp=Z,20nm,0.8s,baz=275,slow=1.3,SNR=45						
CPUP				PKKPab	PKKPab	12 10 18.2	-0.4
	comp=Z,3.1nm,1.1s,baz=65,slow=6.7,SNR=4.2						
CPUP				PKKP	PKKPdf	12 10 53.2	+0.5
	comp=Z,1.3nm,0.5s,baz=129,slow=3.8,SNR=4.2						
CPUP	Villa Florida	122.33	132	eP	PKPdf	12 00 20.7	-0.3
LPSR	Galich'ya Gora	122.36	325	ePKIKP	PKiKP	12 00 20.5	+0.2
LPSR				pmax	pmax		
	comp=Z,60nm,1.1s						
ZEI	Tsey	122.37	313	i PKIKP	PKPdf	12 00 20.8	0.0
ZEI				pmax	pmax		
	comp=Z,18nm,0.9s						
GOF	Gofitskoye	122.39	316	⇑ePKIKP	PKiKP	12 00 20.9	+0.3
PKME	Peaks-Kenny Pk	122.43	44	P	PKiKP	12 00 20.8	+0.1
	baz=286						
PKME	Peaks-Kenny Pk	122.43	44		PKiKP	12 00 20.8	+0.1
F63A	Nahmakanta, Br	122.43	43	P	PKPdf	12 00 20.5	-0.1
	baz=287						
F63A	Nahmakanta, Br	122.43	43		PKiKP	12 00 21.0	+0.3
CPSB	Cacapava Do Su	122.45	139	eP	PKPdf	12 00 21.1	0.0
OBN	Obninsk	122.52	329d	i PKIKP	PKiKP	12 00 20.7	+0.2
OBN				e		12 02 02.8	
OBN				eSS	SS	12 18 23.5	-2.4
OBN				pmax	pmax		
	comp=Z,67nm,1.5s						
VORR	Voronezh	122.58	324	ePKIKP	PKPdf	12 00 19.0	-1.6
VORR				pmax	pmax		
	comp=Z,250nm,1.2s						
H64A	Troy	122.65	45	P	PKPdf	12 00 20.8	-0.1
	baz=286						
E63A	Oxbow	122.67	42	P	PKPdf	12 00 20.4	-0.5
	baz=288						
D63A	Stockholm	122.69	42	P	PKPdf	12 00 20.5	-0.4
	baz=288,SNR=5.3						
VSR	Storozhevoye	122.78	324	ePKIKP	PKPdf	12 00 20.9	-0.1
VSR				pmax	pmax		
	comp=Z,50nm,0.7s						
G64A	Maxfield	122.79	44	P	PKiKP	12 00 21.6	+0.1
	baz=287						
VORD	Divnogorie	122.81	323	ePKIKP	PKPdf	12 00 20.8	-0.2
VORD				pmax	pmax		
	comp=Z,20nm,0.8s						
KBZ	Khabaz	122.84	314	PKP	PKiKP	12 00 21.5	-0.1
	comp=Z,13nm,0.8s,baz=104,slow=3.8,SNR=18						
PQI	Presque Isle	122.86	42	PKPdf	PKPdf	12 00 20.4	-0.9
ETMB	Extrema	122.88	110	eP	PKPdf	12 00 20.8	-1.5
F64A	Sherman	122.89	43	P	PKPdf	12 00 21.0	-0.4
	baz=287						
F64A	Sherman	122.89	43		PKiKP	12 00 21.9	+0.3
KIV	Kislovodsk	122.93	315	ePKIKP	PKiKP	12 00 22.1	+0.2
KIV				pmax	pmax		
	comp=Z,56nm,1.0s						
KIV	Kislovodsk	122.93	315	PKPdf	PKiKP	12 00 22.1	+0.2
E64A	Bridgewater	123.07	42	P	PKPdf	12 00 21.5	-0.2
	baz=288						
MOR8	Moi Rana	123.16	347	ePKPdf	PKPdf	12 00 20.3	-1.1
KONS	Konsvik	123.17	348	ePKPdf	PKPdf	12 00 21.2	-0.1
H65A	Eastbrook	123.30	44	P	PKPdf	12 00 22.1	-0.1
	baz=287						
RAYN	Ar Rayn	123.42	290	PKIKP	PKiKP	12 00 23.5	+0.1
RAYN	Ar Rayn	123.42	290	PKPdf	PKiKP	12 00 23.5	+0.1
FIA1	FINESS Array S	123.43	339	PKPdf	PKPdf	12 00 21.6	-0.3
FINES	FINESS Array B	123.43	339	PKP	PKPdf	12 00 21.9	0.0
	comp=Z,26nm,0.8s,baz=18,slow=3.6,SNR=54						
FINES				PKKPbc	PKKPab	12 10 12.6	+1.4
	comp=Z,6.5nm,0.6s,baz=183,slow=3.1,SNR=27						
FINES	FINESS Array B	123.43	339	PKIKP	PKPdf	12 00 21.4	-0.5
FINES	FINESS Array B	123.43	339	PKPdf	PKPdf	12 00 21.4	-0.5
SDV	Santo Domingo	123.53	88	PKPdf	PKPdf	12 00 23.2	-0.5
SDV	Santo Domingo	123.53	88	eP	PKPdf	12 00 23.3	-0.5
SDV	Santo Domingo	123.53	88	eP	PKPdf	12 00 23.3	-0.5
G65A	Princeton	123.62	44	P	PKPdf	12 00 22.9	+0.1
	baz=288						
CHVG	Ch'k'valeri	123.68	313	⇓P	PKiKP	12 00 24.3	+1.0
CHVG	Ch'k'valeri	123.68	313	⇓PKIKP	PKiKP	12 00 24.3	+1.0
H66A	Whiting	123.91	44	P	PKPdf	12 00 23.4	+0.1
	baz=288						
BATG	Bathurst New B	123.93	41	PKPdf	PKPdf	12 00 22.7	-0.7
GEVA	Gevas	123.98	308	PKPdf	PKiKP	12 00 24.6	+0.3
ISOG	Isortoq, Green	124.10	13	i P	PKPdf	12 00 22.9	-0.2
ISOG				IAmb	IAmb	12 00 23.5	
	comp=Z,44nm,0.7s						
ANGG	Ammassalik, Gr	124.32	12		PKPdf	12 00 22.6	-0.9
ANGG	Ammassalik, Gr	124.32	12	i P	PKPdf	12 00 23.3	-0.2
ANGG				IAmb	IAmb	12 00 23.6	
	comp=Z,42nm,0.7s						
BOSA	Boshof	124.80	222	PKP	PKPdf	12 00 25.8	0.0
	comp=Z,15nm,0.8s,baz=150,slow=1.6,SNR=26						
BOSA	Boshof	124.80	222	PKIKP	PKPdf	12 00 25.4	-0.4
BOSA	Boshof	124.80	222	PKPdf	PKPdf	12 00 25.4	-0.4
CNLB	Canela	124.84	139	eP	PKPdf	12 00 25.5	-0.3
SIV	San Ignacio	124.86	120	PKP	PKPdf	12 00 25.6	-0.5
	comp=Z,21nm,0.9s,baz=256,slow=2.2,SNR=51						
NSS	Namsos	125.11	347	ePKPdf	PKPdf	12 00 24.7	-0.3
LMN	Caledonia Moun	125.24	42		PKPdf	12 00 25.9	0.0
ITAB	Concordia	125.40	137	eP	PKPdf	12 00 26.9	0.0
KOPT	Kop Dagi	125.53	310	PKPdf	PKiKP	12 00 28.1	+0.6
MARD	Mardin	125.95	307	PKPdf	PKPdf	12 00 27.9	+0.2
SAML	Samuel	125.98	111	PKIKP	PKPdf	12 00 27.4	-0.9
SAML	Samuel	125.98	111		PKPdf	12 00 27.4	-0.9
SAML	Samuel	125.98	111	eP	PKPdf	12 00 27.6	-0.7
NRS	Narsarsuaq	126.00	19	i P	PKPdf	12 00 26.7	-0.1
	comp=Z,100nm,0.8s						
NRS	Narsarsuaq	126.00	19	PKIKP	PKPdf	12 00 26.2	-0.6
NRS	Narsarsuaq	126.00	19		PKPdf	12 00 26.2	-0.6
NRS	Narsarsuaq	126.00	19	i P	PKPdf	12 00 26.8	-0.1
NRS				IAmb	IAmb	12 00 27.4	
	comp=Z,100nm,0.8s						
AAL	Aland	126.43	340	eP	PKPdf	12 00 27.7	0.0
HAL	Halifax	126.47	43	PKIKP	PKPdf	12 00 28.4	+0.1
HAL	Halifax	126.47	43		PKPdf	12 00 28.4	+0.1
LBTB	Lobatse	126.93	225	PKIKP	PKPdf	12 00 29.8	-0.1
LBTB	Lobatse	126.93	225	PKPdf	PKPdf	12 00 29.8	-0.1
AQDB	Aquidauana	126.93	128	eP	PKPdf	12 00 29.9	0.0
VILB	Vilhena	127.00	117	eP	PKiKP	12 00 30.5	-0.2
PTGB	Pitanga	127.07	134	eP	PKiKP	12 00 30.5	-0.2
MNK	Minsk	127.10	331	ePKIKP	PKPdf	12 00 29.0	-0.2
MNK	Minsk	127.10	331	i PKP	PKPdf	12 00 27.9	-1.2
	comp=E,4.0nm,0.8s						
MNK				i PKP	PKPdf	12 00 27.9	-1.2
	comp=N,41nm,0.8s						
MNK				i PKP	PKPdf	12 00 27.9	-1.2
	comp=Z,41nm,0.8s						
MNK				i pPKP	pPKPdf	12 01 14.9	-0.4
MNK				i PP	PP	12 02 26.9	-2.9
MNK				i SKS	SKSdf	12 07 22.3	-1.6
MNK				i SP	SP	12 12 12.8	-2.5
MNK				i PS	PS	12 12 40.9	+3.8
MNK				i SS	SS	12 19 20.9	-2.3
MNK				i SSS	SSS	12 24 19.6	
MNK				i LRM	MLR	12 55 59.3	
	comp=E,6.0nm,14.5s						
MNK				i LRM	MLR	12 56 03.2	
	comp=N,129nm,16.6s						
MNK				i LRM	MLR	12 56 03.2	
	comp=Z,65nm,14.5s						
IDID	Didziasalis	127.13	333	eP	PKiKP	12 00 30.4	+0.7
ISAL	Salakas	127.25	333	eP	PKiKP	12 00 30.0	+0.1
NACGM	Naroch	127.36	332	i PKP	PKiKP	12 00 30.5	+0.3
NACGM				i PKP	PKiKP	12 00 30.5	+0.3
NACGM				i PKP	PKiKP	12 00 30.5	+0.3
NACGM				i PPP	PPP	12 03 28.0	
NACGM				i SKS	SKSdf	12 07 18.3	-6.1
NACGM				i SKKS	pSKSdf	12 08 31.2	+2.6
NACGM				i PS	sSdif	12 11 33.7	-2.3
NACGM				i SS	SKKSdf	12 17 32.5	-7.9
NACGM				i SSS	SSS	12 22 59.8	
UPP	Uppsala	127.44	341	eP	PKPdf	12 00 29.5	-0.1
GBN	Guysborough	127.55	42		PKiKP	12 00 31.0	+0.2
MOL	Molde	127.78	348	ePKPdf	PKPdf	12 00 30.0	-0.2
TRCB	Terra Rica	127.87	132	eP	PKiKP	12 00 32.1	-0.2
DOMB	Dombas	127.93	347	ePKPdf	PKPdf	12 00 30.8	+0.2
NC303	NORSAR Array S	128.10	345		PKiKP	12 00 31.6	+0.1
KMBO	Kilima Mbogo	128.15	259	PKP	PKiKP	12 00 33.3	-0.1
	comp=Z,1.3nm,0.6s,baz=50,slow=8.8,SNR=4.7						
AKN	Aaknes	128.24	348	ePKPdf	PKiKP	12 00 32.8	+0.9
NB201	NORSAR Array S	128.27	345		PKiKP	12 00 32.2	+0.3
NB2	NORSAR Subarra	128.30	345	PKPdf	PKPdf	12 00 31.4	+0.1
	comp=Z,43nm,1.4s,baz=31,slow=1.9						
NB2	NORSAR Subarra	128.30	345	PKPdf	PKPdf	12 00 31.4	+0.1
	baz=31,slow=1.9						
NOA	NORSAR Array B	128.30	345	PKP	PKPdf	12 00 31.6	+0.3
	comp=Z,15nm,0.7s,baz=31,slow=2.0,SNR=49						
OBIP	Obispado Ponce	128.31	77	PKPdf	PKPdf	12 00 32.2	-0.3
NBO00	NORSAR Array S	128.41	345	PKPdf	PKiKP	12 00 32.5	+0.3
NC602	NORSAR Array S	128.48	345		PKiKP	12 00 32.4	+0.1
NC602	NORSAR Array S	128.48	345	ePKPdf	PKiKP	12 00 32.3	+0.1
NORES	NORESS Array B	128.48	345	PKIKP	PKiKP	12 00 32.2	-0.1
NORES				pmax	pmax		
	comp=Z,20nm,0.6s						
NAO01	NORSAR Array S	128.55	345		PKiKP	12 00 32.7	+0.3
AKASG	Malin Array Be	128.58	327	PKP	PKPdf	12 00 30.9	-1.1
	comp=Z,7.4nm,0.6s,baz=55,slow=2.1,SNR=42						
AKASG				PP	PP	12 02 39.7	+0.1
	comp=Z,0.3nm,0.4s,baz=52,slow=6.6,SNR=4.9						
AKASG				PKKPbc	PKKPbc	12 09 51.9	
	comp=Z,1.3nm,0.7s,baz=252,slow=3.8,SNR=5.0						
AKASG	Malin Array Be	128.58	327	PKIKP	PKPdf	12 00 31.0	-1.1
AKASG	Malin Array Be	128.58	327		PKPdf	12 00 32.0	-0.1
AKBB	Malin Array Si	128.58	327	PKIKP	PKPdf	12 00 32.3	+0.2
AKBB	Malin Array Si	128.58	327	PKPdf	PKPdf	12 00 32.3	+0.2
KIEV	Kiev	128.59	327	PKIKP	PKPdf	12 00 32.0	-0.1
SJG	San Juan	128.74	77	PKIKP	PKPdf	12 00 32.5	-0.8
SJG	San Juan	128.74	77		PKPdf	12 00 32.5	-0.8
GAZ	Gaziantep	128.75	308	PKPdf	PKiKP	12 00 33.6	-0.1
GCPR	Guaynabo City	128.81	76		PKPdf	12 00 32.9	-0.6
PDPR	Patillas Dam,	128.86	77		PKPdf	12 00 32.5	-1.0
HUMP	Col San Antoni	129.03	77		PKPdf	12 00 33.3	-0.5
FOO	Floro	129.16	349	ePKPdf	PKiKP	12 00 33.7	+0.1
PP1B	Ponte de Pedra	129.17	125	eP	PKiKP	12 00 34.8	-0.2
SKAR	Skarslia	129.31	347	ePKPdf	PKiKP	12 00 34.9	+0.9
HYA	Hoyanger	129.33	348	ePKPdf	PKiKP	12 00 34.6	+0.7
OSL	Oslo	129.37	345	ePKPdf	PKiKP	12 00 34.8	+0.7
SUW	Suwalki	129.56	333	ePKP	PKiKP	12 00 34.8	+0.2
SUW	Suwalki	129.56	333	eP	PKPdf	12 00 34.2	+0.4
SUW	Suwalki	129.56	333	PKIKP	PKiKP	12 00 34.4	-0.2
SUW	Suwalki	129.56	333	PKPdf	PKiKP	12 00 34.4	-0.2
PCMB	Pacaembu	129.60	132	eP	PKiKP	12 00 35.5	-0.2
FRTB	Fartura	129.70	135	eP	PKiKP	12 00 35.7	-0.3
KONO	Kongsberg	129.91	345c	i PKIKP	PKiKP	12 00 36.8	+1.6
KONO				pmax	pmax		
	comp=Z,55nm,2.5s						
KONO	Kongsberg	129.91	345	ePKPdf	PKiKP	12 00 35.7	+0.6
ASK	Askoy	130.15	348	ePKPdf	PKiKP	12 00 36.2	+0.6
BER	Bergen	130.22	348	ePKPdf	PKiKP	12 00 35.7	0.0
ODD1	Odda	130.37	347	ePKPdf	PKiKP	12 00 36.1	-0.1
SORM	Soroca	130.43	324	⇑P	PKPdf	12 00 35.6	-0.1
SORM	Soroca	130.43	324	⇑PKIKP	PKPdf	12 00 35.6	-0.1
PET01	Itanhaem-SP	130.60	138	eP	PKPdf	12 00 37.1	+0.3
LSZ	Lusaka	130.64	237	PKIKP	PKPdf	12 00 37.1	-0.1
LSZ	Lusaka	130.64	237		PKPdf	12 00 37.1	-0.1
BR131	Keskin Array S	130.66	312	PKIKP	PKPdf	12 00 36.7	+0.1
BR131	Keskin Array S	130.66	312	PKPdf	PKPdf	12 00 36.7	+0.1
BRTR	Keskin Array B	130.66	312	PKP	PKPdf	12 00 36.9	+0.3
	comp=Z,5.2nm,0.6s,baz=143,slow=5.0,SNR=16						
BRTR				SKPbc	SKPab	12 03 46.0	+1.9
	comp=Z,17nm,1.1s,baz=48,slow=1.8,SNR=21						
BRTR	Keskin Array B	130.66	312	PKIKP	PKPdf	12 00 36.2	-0.4
BRTR	Keskin Array B	130.66	312	PKPdf	PKPdf	12 00 36.2	-0.4
MILM	Milestii Mici	130.79	323	⇑P	PKiKP	12 00 37.1	-0.3
BLS5	Blasjo	130.85	347	ePKPdf	PKiKP	12 00 38.3	+1.2
HORU	Horodok	130.91	326	PKIKP	PKPdf	12 00 36.3	-0.3
SPB	Sao Paulo	130.98	137	eP	PKiKP	12 00 38.3	-0.2
BR231	Keskin MP Arra	131.24	313		PKiKP	12 00 38.5	-0.1
KMPD	K-Podol'skiy	131.26	326	PKIKP	PKiKP	12 00 38.0	-0.2
HOMB	Homborsund	131.39	345	ePKPdf	PKiKP	12 00 38.7	+0.5
HOMB	Homborsund	131.39	345	eP	PKiKP	12 00 38.9	+0.7
ITRB	Iturama	131.44	131	eP	PKPdf	12 00 38.7	+0.1
TLCR		131.64	321	⇑P	PKiKP	12 00 39.2	+0.1
TLCR		131.64	321	⇑PKIKP	PKiKP	12 00 39.2	+0.1
SNART	Snartemo	131.65	346	ePKPdf	PKiKP	12 00 39.9	+1.2
SNART	Snartemo	131.65	346	i P	PKiKP	12 00 39.0	+0.3
SNART				i P	PKPdf	12 00 39.2	+1.5
VAO	Valinhos	131.69	137	eP	PKPdf	12 00 39.5	+0.5
RCLB	Rio Claro- Sao	131.71	136	eP	PKPdf	12 00 39.1	+0.1
PTGA	Pitinga	131.78	102	PKP	PKPdf	12 00 38.9	-0.4
	comp=Z,20nm,0.9s,baz=227,slow=4.9,SNR=11						
PTGA	Pitinga	131.78	102	PKPdf	PKPdf	12 00 38.6	-0.8
PTGA	Pitinga	131.78	102	eP	PKPdf	12 00 39.3	0.0
BB19B	Bebedouro	131.91	133	eP	PKiKP	12 00 40.1	-0.3
CFR	Carcaliu	132.07	321	⇓P	PKiKP	12 00 39.7	-0.2
CFR	Carcaliu	132.07	321	⇓PKIKP	PKiKP	12 00 39.7	-0.2
BEL	Belsk	132.09	332	ePKP	PKiKP	12 00 40.2	+0.4
MDUB	Mudurnu	132.13	314	PKPdf	PKPdf	12 00 39.0	-0.3
KSV	Kosov	132.16	326	PKIKP	PKPdf	12 00 38.0	-1.0
MORS	Morshin	132.30	328	PKIKP	PKPdf	12 00 39.8	+0.6
PARB	Paraibuna	132.35	138	eP	PKPdf	12 00 40.3	+0.1
BIZ	Bicaz	132.36	324	⇓P	PKiKP	12 00 40.7	+0.1
MFTR	Murfatlar	132.37	320	⇑P	PKiKP	12 00 40.9	+0.3
CSS	Mathiatis	132.38	306	PKPdf	PKiKP	12 00 40.5	-0.5
HARR	Harsova	132.43	321	⇑P	PKiKP	12 00 40.8	+0.1
HARR	Harsova	132.43	321	⇑PKIKP	PKiKP	12 00 40.8	+0.1
TLBR	Topalu	132.43	320	⇑P	PKiKP	12 00 41.0	+0.3
BUR08	Bucovina Ar. S	132.47	325	PKPdf	PKiKP	12 00 41.6	+0.7
BURAR	Bucovina Array	132.48	325	⇑P	PKiKP	12 00 41.4	+0.5
BURAR	Bucovina Array	132.48	325	⇑PKIKP	PKiKP	12 00 41.4	+0.5
BURAR	Bucovina Array	132.48	325	PKPdf	PKiKP	12 00 41.1	+0.2
VRI	Vrincioaia	132.57	322	⇑P	PKPdf	12 00 40.2	+0.3
VRI	Vrincioaia	132.57	322	⇑PKIKP	PKPdf	12 00 40.2	+0.3
ARAG	Araguaiana, MT	132.66	125	eP	PKPdf	12 00 40.8	-0.1
MUD	Monsted U'grnd	132.80	343	i P	PKiKP	12 00 40.7	-0.3
	comp=Z,18nm,0.8s						
MUD	Monsted U'grnd	132.80	343	i PKIKP	PKiKP	12 00 41.1	+0.1
MUD	Monsted U'grnd	132.80	343	eP	PKiKP	12 00 40.7	-0.3
MUD				i P	PKiKP	12 00 41.2	+0.1
MUD				IAmb	IAmb	12 00 42.4	
	comp=Z,18nm,0.8s						
MLR	Muntele Rosu	133.23	322	⇓P	PKPdf	12 00 41.7	+0.4
MLR	Muntele Rosu	133.23	322	PKIKP	PKPdf	12 00 41.6	+0.3
MLR	Muntele Rosu	133.23	322	PKPdf	PKPdf	12 00 41.6	+0.3
KOLS	Kolonicke sedl	133.27	328	ePKIKP	PKiKP	12 00 41.8	-0.5
KOLS	Kolonicke sedl	133.27	328	ePKP	PKiKP	12 00 41.8	-0.5
KOLS				e		12 03 57.7	
DOPR	Dopca	133.30	323	⇓P	PKiKP	12 00 42.0	-0.5
BMR	Baia Mare	133.39	326	⇑P	PKiKP	12 00 42.0	-0.6
BMR	Baia Mare	133.39	326	⇑PKIKP	PKiKP	12 00 42.0	-0.6
UZH	Uzhgorod	133.45	328	ePKIKP	PKPdf	12 00 38.7	-2.7
OJC	Ojcow	133.65	331	ePKP	PKiKP	12 00 42.5	-0.5
OJC	Ojcow	133.65	331	PKIKP	PKPdf	12 00 42.1	+0.4
OJC	Ojcow	133.65	331	PKPdf	PKPdf	12 00 42.1	+0.4
CRVS	Cervenica-Dubn	133.70	329	ePKIKP	PKiKP	12 00 43.3	+0.1
CRVS	Cervenica-Dubn	133.70	329	ePKP	PKiKP	12 00 43.3	+0.1
CRVS				e		12 03 59.5	
VOIR		133.79	323	⇑P	PKiKP	12 00 43.0	-0.6
VOIR		133.79	323	⇑PKIKP	PKiKP	12 00 43.0	-0.6
NPGB	Novo Progresso	133.84	113	eP	PKPdf	12 00 43.0	-0.2
NIE	Niedzica	133.94	330	ePKP	PKiKP	12 00 43.5	-0.2
NIE	Niedzica	133.94	330	PKIKP	PKiKP	12 00 44.0	+0.3
ARR	Arges	134.07	323	⇓P	PKiKP	12 00 44.5	+0.4
IPMB	Ipameri, GO	134.09	131	eP	PKPdf	12 00 43.2	-0.5
HUMR	Humele	134.32	322	⇓P	PKiKP	12 00 47.6	+3.0
COPA	Copaceanca	134.39	321	⇑P	PKiKP	12 00 44.2	-0.5
VAS01	Vassouras-RJ	134.51	139	eP	PKPdf	12 00 45.0	+0.7
MBAR	Mbarara	134.52	257	SKPbc	SKPab	12 04 00.0	-1.5
	comp=Z,1.6nm,0.3s,baz=100,slow=3.5,SNR=7.5						
LANS	Liptovska Anna	134.53	330	ePKIKP	PKiKP	12 00 45.3	+0.4
LANS	Liptovska Anna	134.53	330	ePKP	PKiKP	12 00 45.3	+0.4
LANS				e		12 04 02.8	
BSCB	Bom Sucesso	134.54	137	eP	PKPdf	12 00 44.4	0.0
ITTB	Itaituba	134.55	109	eP	PKPdf	12 00 44.6	0.0
OKC	Ostrava-Krasne	134.68	332	ePKIKP	PKPdf	12 00 44.2	+0.5
OKC	Ostrava-Krasne	134.68	332	ePKPDF	PKPdf	12 00 44.2	+0.5
DEV	Deva	134.78	325	⇓P	PKiKP	12 00 44.9	-0.6
DEV	Deva	134.78	325	⇓PKIKP	PKiKP	12 00 44.9	-0.6
KSP	Ksiaz	134.79	334	ePKP	PKiKP	12 00 45.1	-0.2
KSP	Ksiaz	134.79	334	PKIKP	PKiKP	12 00 45.1	-0.2
MORC	Moravsky Berou	135.00	332	⇓P	PKiKP	12 00 45.6	-0.3
MORC	Moravsky Berou	135.00	332	ePKP	PKPdf	12 00 44.9	+0.5
MORC				ePP	PP	12 03 21.3	+0.6
MORC				e		12 04 03.0	
MORC	Moravsky Berou	135.00	332	PKIKP	PKPdf	12 00 44.9	+0.5
MORC	Moravsky Berou	135.00	332	PKPdf	PKPdf	12 00 44.9	+0.5
OSTC	Ostas	135.03	334	ePKPDF	PKiKP	12 00 45.4	-0.5
OSTC				eSKP		12 04 03.2	
CHVC	Chvalec	135.08	334	ePKPDF	PKiKP	12 00 45.8	-0.2
CHVC				eSKP		12 04 03.5	
KRLC	Kraliky	135.13	333	ePKIKP	PKPdf	12 00 44.5	-0.1
KRLC	Kraliky	135.13	333	ePKPDF	PKPdf	12 00 44.5	-0.1
KRLC				eSKP		12 04 03.0	
PSZ	Piszkesteto	135.13	329	PKIKP	PKPdf	12 00 45.3	+0.6
PSZ	Piszkesteto	135.13	329	PKPdf	PKPdf	12 00 45.3	+0.6
DPC	Dobruska-Polom	135.14	333	ePKIKP	PKPdf	12 00 45.0	+0.4
DPC	Dobruska-Polom	135.14	333	ePKPDF	PKPdf	12 00 45.0	+0.4
DPC				eSKP		12 04 03.5	
GZR	Gura Zlata	135.14	324	⇓P	PKPdf	12 00 45.2	+0.4
GZR	Gura Zlata	135.14	324	⇓PKIKP	PKPdf	12 00 45.2	+0.4
PLVB	Pleven	135.15	321	⇓P	PKiKP	12 00 45.8	-0.5
UPC	Upice	135.16	334	ePKIKP	PKiKP	12 00 45.7	-0.4
UPC	Upice	135.16	334	ePKPDF	PKiKP	12 00 45.7	-0.4
UPC				eSKP		12 04 03.6	
SIRR	Siria	135.24	326	⇑P	PKiKP	12 00 46.3	-0.1
DUB01	Friburgo-RJ	135.33	140	eP	PKPdf	12 00 46.5	+0.7
JAVC	Velka Javorina	135.59	331	ePKP	PKiKP	12 00 46.9	-0.2
JAVC				ePP	PP	12 03 26.6	+2.2
JAVC				e		12 04 06.0	
HERR	Herculane	135.64	324	⇓P	PKPdf	12 00 46.3	+0.6
BZS	Buzias	135.66	325	⇓P	PKPdf	12 00 46.2	+0.6
BZS	Buzias	135.66	325	⇓PKIKP	PKPdf	12 00 46.2	+0.6
BDFB	Brasilia	135.67	128	PKhKP	PKPpre	12 00 36.6	
	comp=Z,3.1nm,0.5s,baz=221,slow=4.3,SNR=3.2						
BDFB				PKP	PKPdf	12 00 46.7	+0.1
	comp=Z,29nm,0.7s,baz=192,slow=1.7,SNR=31						
BDFB	Brasilia	135.67	128	PKIKP	PKPdf	12 00 46.6	-0.1
BDFB	Brasilia	135.67	128	PKPdf	PKPdf	12 00 46.6	-0.1
BRG	Berggiesshubel	135.75	336	ePKP	PKPpre	12 00 37.1	
BRG				Amp		12 00 37.8	
	comp=Z,2.9nm,0.8s						
BRG				i x	x	12 00 47.0	
BRG				Amp		12 00 49.6	
	comp=Z,28nm,1.1s						
BRG				pPKP	pPKPdf	12 01 31.1	-0.8
BRG				Amp		12 01 32.9	
	comp=Z,7.7nm,1.2s						
BRG				SKP		12 04 05.4	
BRG				Amp		12 04 07.0	
	comp=Z,25nm,1.3s						
PVCC	Panska Ves	135.75	335	ePKIKP	PKPdf	12 00 45.9	+0.2
PVCC	Panska Ves	135.75	335	ePKPDF	PKPdf	12 00 45.9	+0.2
VRAC	Vranov	135.77	332	⇑P	PKiKP	12 00 46.6	-0.8
VRAC	Vranov	135.77	332	ePKP	PKPdf	12 00 46.3	+0.5
VRAC				ePP	PP	12 03 26.1	+0.6
VRAC				e		12 04 05.1	
VRAC	Vranov	135.77	332	⇑PKIKP	PKiKP	12 00 46.6	-0.8
CLL	Collm	135.78	337	i PKPdf	PKPdf	12 00 46.2	+0.5
	comp=Z,13nm,0.9s						
CLL				i PKiKP	PKiKP	12 00 47.6	+0.3
	comp=Z,24nm,0.7s						
CLL				epPKPdf	pPKPdf	12 01 34.0	+2.1
CLL				ePP	PP	12 03 21.0	-4.3
CLL				i SKPdf	SKPdf	12 04 04.5	+0.6
	comp=Z,34nm,1.5s						
CLL				i PKSdf	PKSdf	12 04 19.0	-2.7
CLL	Collm	135.78	337	i PKIKP	PKPdf	12 00 46.2	+0.5
CLL				e		12 01 34.0	
CLL				pmax	pmax		
	comp=Z,13nm,0.9s						
SMOL	Smolenice	135.94	331	ePKIKP	PKiKP	12 00 47.3	-0.5
SMOL	Smolenice	135.94	331	ePKP	PKiKP	12 00 47.3	-0.5
SMOL				e		12 04 06.9	
CAM01	Campos-RJ	135.97	140	eP	PKPdf	12 00 47.5	+0.6
KRUC	Moravsky	136.04	332	ePKP	PKPdf	12 00 46.7	+0.5
KRUC				ePP	PP	12 03 27.5	+0.4
KRUC				e		12 04 06.2	
MDVR	Moldovita	136.11	324	⇑P	PKPdf	12 00 46.9	+0.3
MODS	Modra-Piesok	136.12	331	ePKIKP	PKPdf	12 00 46.5	+0.1
MODS	Modra-Piesok	136.12	331	ePKP	PKPdf	12 00 46.5	+0.1
MODS				e		12 04 06.5	
PRU	Pruhonice	136.17	334	ePKIKP	PKPdf	12 00 43.5	-3.0
PRU	Pruhonice	136.17	334	ePKPpre	PKPdf	12 00 43.5	-3.0
PRU				ePKPDF	PKiKP	12 00 48.3	+0.1
PRU				eSKP		12 04 06.3	
ZST	Bratislava	136.32	331	ePKIKP	PKPdf	12 00 47.4	+0.6
ZST	Bratislava	136.32	331	ePKP	PKPdf	12 00 47.4	+0.6
VTS	Vitosha	136.42	321	⇓P	PKPdf	12 00 48.0	+0.6
VTS	Vitosha	136.42	321	⇓PKIKP	PKPdf	12 00 48.0	+0.6
EKA	Eskdalemuir Ar	136.48	352	PKIKP	PKiKP	12 00 48.4	-0.2
EKA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
PBCC	Pribram	136.63	334	ePKPDF	PKPdf	12 00 47.9	+0.6
BOVS	Bovan	136.78	323	⇓P	PKPdf	12 00 48.1	+0.3
MALB	Monte Alegre	136.82	106	eP	PKPdf	12 00 49.2	+0.4
MOX	Moxa	136.84	337	PKIKP	PKPdf	12 00 48.6	+0.9
NKC	Novy Kostel	136.84	336	ePKIKP	PKPpre	12 00 41.8	
NKC	Novy Kostel	136.84	336	ePKPpre	PKPpre	12 00 41.8	
NKC				ePKPDF	PKiKP	12 00 50.2	+0.6
NKC				eSKP		12 04 09.1	
MORH	Mrgy, Hungar	136.90	328	⇑P	PKPdf	12 00 48.4	+0.5
MORH	Mrgy, Hungar	136.90	328	⇑i P	PKPdf	12 00 47.9	0.0
FRGS	Fruska Gora	136.95	326	⇑P	PKPdf	12 00 48.5	+0.4
FRGS	Fruska Gora	136.95	326	⇑i P	PKPdf	12 00 48.3	+0.2
CONA	Conrad Observa	137.10	331	i P	PKPdf	12 00 48.8	+0.5
	SNR=10.0						

CONA				*e*P	PP	12 03 35.2	+1.3
	comp=Z,9.8nm,1.5s						
CONA				*e*S	SKiKP	12 04 09.4	-0.1
	comp=Z,19nm,1.3s						
CKRC	Cesky Krumlov	137.15	333	*e*PKPDF	PKPpre	12 00 38.6	
CKRC				*e*x	x	12 00 47.2	
CKRC				*e*SKP		12 04 09.7	
KHC	Kasperske Hory	137.23	334	*e*PKHKP	PKPpre	12 00 40.0	
KHC				*e*		12 00 48.0	
KHC	Kasperske Hory	137.23	334	*e*PKPpre	PKPpre	12 00 40.0	
KHC				*e*PKPDF	PKPdf	12 00 48.0	-0.5
KHC				*e*pPKP	pPKPdf	12 01 31.0	-3.8
KHC				*e*SKP		12 04 09.2	
GEC2	GERESS Array S	137.40	334	PKPdf	PKPdf	12 00 49.2	+0.3
GERES	GERESS Array B	137.40	334	PKhKP	PKPpre	12 00 38.2	
	comp=Z,2.4nm,0.9s,baz=29,slow=3.0,SNR=14						
GERES				PKP	PKPdf	12 00 49.2	+0.3
	comp=Z,7.2nm,0.6s,baz=40,slow=2.3,SNR=15						
GERES				SKPbc	SKPbc	12 04 07.0	+1.4
	comp=Z,2.5nm,0.8s,baz=31,slow=3.1,SNR=7.7						
GERES				SKKPbc	SKKPbc	12 12 54.3	-3.2
	comp=Z,0.8nm,0.8s,baz=193,slow=3.8,SNR=2.9						
ALF01	Guarapari-ES	137.44	140	*e*P	PKPdf	12 00 50.7	+1.0
TEKS	Tekeris	137.49	325	*e*P	PKPdf	12 00 49.7	+0.6
DIVS	Divibare	137.50	324⇑	*i*P	PKPdf	12 00 49.6	+0.4
DIVS	Divibare	137.50	324		PKPdf	12 00 49.7	+0.5
WET	Wettzell	137.52	335	PKIKP	PKPdf	12 00 50.0	+1.0
MOA	Molln	137.89	332	*i* P	PKPdf	12 00 50.0	+0.2
	comp=Z,3.6nm,0.5s						
MOA				*e*S	SKiKP	12 04 12.1	+1.1
	comp=Z,7.8nm,1.0s						
BBLS	Lazići	137.98	324⇑	*i*P	PKPdf	12 00 50.5	+0.4
HAPS	Han Pijesak,BI	138.10	325	*e*P	PKPdf	12 00 47.1	-3.3
SOKA	Soboth	138.39	331	*e*P	PKPdf	12 00 51.7	+0.9
	comp=Z,5.3nm,0.7s						
SOKA				*e*S	SKiKP	12 04 13.9	+1.7
	comp=Z,5.2nm,1.1s						
FNA	Florina	138.59	319	PKIKP	PKPdf	12 00 51.0	-0.3
FNA	Florina	138.59	319	PKPdf	PKPdf	12 00 51.0	-0.3
BLY	Banja Luka	138.64	327	*e*P	PKPpre	12 00 42.3	
BSFB	Barra de Sao F	138.67	138	*e*P	PKPdf	12 00 52.9	+0.9
PRIJ	Prijedor	138.73	328	*e*P	PKPdf	12 00 47.9	-3.4
CRES	Cresnjev	138.79	329	*e*P	PKPpre	12 00 42.4	
BTNL	Ternell	138.80	341	*d*PKPdf	PKPdf	12 00 52.1	+0.8
BTNL				*d*PKiKP	PKiKP	12 00 54.2	+0.7
MEM	Membach	138.82	341	*d*PKPdf	PKPdf	12 00 52.3	+1.0
MEM				*d*PKiKP	PKiKP	12 00 54.4	+0.8
KBA	Koelnbreinsper	138.88	332	*e*P	PKPdf	12 00 51.2	-0.6
	comp=Z,4.9nm,0.6s						
PDG	Podgorica	138.94	323	*e*P	PKPpre	12 00 43.6	
MYKA	Terra Mystica	139.08	332	*i* P	PKPdf	12 00 51.9	-0.2
	comp=Z,9.2nm,0.6s						
LJU	Ljubljana	139.09	330	*e*P	PKPdf	12 00 44.8	-7.2
PRPB	Parauapebas	139.18	115	*e*P	PKPdf	12 00 52.9	-0.2
BCLA	Clavier	139.20	342	*d*PKPdf	PKPdf	12 00 50.9	-1.1
BCLA				*d*PKiKP	PKiKP	12 00 52.2	-2.1
BGES	Gesves	139.29	342	*d*PKiKP	PKiKP	12 00 54.9	+0.4
CEY	Cerknica	139.36	330⇑	*i*P	PKPdf	12 00 51.0	-1.5
MCPB	Macapa, AP	139.40	105	*e*P	PKPdf	12 00 53.5	-0.1
SNF	Seneffe	139.42	343	*d*PKPdf	PKPdf	12 00 53.0	+0.6
SNF				*d*PKiKP	PKiKP	12 00 55.3	+0.5
BMRD	Maredsous	139.46	342	*d*PKPdf	PKPdf	12 00 53.2	+0.8
WATA	Walderalm	139.47	334	*e*P	PKPdf	12 00 51.6	-1.2
	comp=Z,7.3nm,0.7s						
WATA				*e*P	PP	12 03 51.8	+3.3
	comp=Z,19nm,1.6s						
WATA				*e*S	SKiKP	12 04 16.8	+2.3
	comp=Z,5.9nm,1.0s						
WTTA	Wattenberg	139.50	334	*e*P	PKPdf	12 00 50.4	-2.5
	comp=Z,17nm,0.9s						
WTTA				*e*S	SKiKP	12 04 17.0	+2.4
	comp=Z,14nm,1.2s						
ABTA	Abfaltersbach	139.51	333	*e*P	PKPdf	12 00 53.3	+0.5
	comp=Z,14nm,0.8s						
STON	Ston	139.57	324	*e*P	PKPdf	12 00 49.9	-3.0
WLF	Walferdange	139.59	341	*d*PKPdf	PKPdf	12 00 52.7	-0.1
WLF	Walferdange	139.59	341	PKIKP	PKPdf	12 00 53.7	+0.9
WLF	Walferdange	139.59	341	PKPdf	PKPdf	12 00 53.7	+0.9
MOTA	Moosalm	139.66	334	*e*P	PKPdf	12 00 54.0	+0.9
	comp=Z,25nm,1.0s						
RETA	Reutte	139.69	335	*e*P	PKPdf	12 00 53.2	+0.1
	comp=Z,14nm,1.3s						
RETA				*e*S	SKPab	12 04 25.4	+2.3
	comp=Z,14nm,1.9s						
DOU	Dourbes	139.70	342	*d*PKPdf	PKPdf	12 00 52.9	0.0
DOU				*d*PKiKP	PKiKP	12 00 55.9	+0.6
DOU				*d*pPKiKP	pPKiKP	12 01 43.5	+2.0
SQTA	Sankt Quirin	139.72	334	*e*P	PKPdf	12 00 54.3	+1.1
	comp=Z,12nm,0.6s						
SQTA				*e*P	PP	12 03 49.5	-0.5
	comp=Z,15nm,1.7s						
FETA	Feichten	140.07	334	*e*P	PKPdf	12 00 54.5	+0.5
	comp=Z,26nm,1.1s,SNR=7.5						
DAVA	Damuels	140.22	335	*e*P	PKPdf	12 00 54.4	+0.2
	comp=Z,16nm,0.9s						
MDP	Montagnes des	140.38	97	PKP	PKPdf	12 00 55.0	-0.2
	comp=Z,21nm,0.7s,baz=200,slow=4.4,SNR=5.6						
DAVOX	Davos/Dischmat	140.62	335	PP	PP	12 03 56.8	+1.2
	comp=Z,2.7nm,0.8s,baz=48,slow=6.1,SNR=3.6						
ZCCA	Zocca	142.03	331	PKPdf	PKPdf	12 00 56.5	-0.9
CLF	Chambon-Foret	142.24	343	PKPdf	PKPdf	12 00 57.6	+0.1
INTR	Introdacqua	142.25	326	PKPdf	PKPdf	12 00 58.6	+0.7
LATE	Laterza	142.92	329		PKPdf	12 00 57.2	-1.8
BNI	Bardonecchia	143.32	336	PKIKP	PKPbc	12 00 58.3	+0.9
BNI	Bardonecchia	143.32	336	PKPdf	PKPbc	12 00 58.3	+0.9
SSB	Saint Sauveur	143.94	339	PKIKP	PKPbc	12 00 59.9	+0.9
SSB	Saint Sauveur	143.94	339		PKPbc	12 00 59.9	+0.9
ROSB	Rosrio	145.71	114	*e*P	PKPdf	12 01 04.6	0.0
VSL	Villasalto	146.45	327		PKPab	12 01 07.6	-0.5
H07N1	FLORES T-PHASE	148.56	27	*e*PKP	PKiKP	12 01 13.3	-0.6
H07S1	FLORES T-PHASE	148.78	28	*e*PKP	PKPbc	12 01 12.6	-0.5
NBMO	Morrinhos-CE	149.08	119	*e*P	PKPdf	12 01 10.5	+0.3
KEST	Kesra	149.14	323	PKPbc	PKiKP	12 01 15.3	0.0
	comp=Z,128nm,0.7s,baz=74,slow=0.2,SNR=67						
KEST	Kesra	149.14	323		PKiKP	12 01 14.9	-0.4
NBLI	Livramento-PB	149.27	129	*e*P	PKPdf	12 01 10.7	0.0
NBRF	Rio Formoso -	149.75	133	*e*P	PKPdf	12 01 13.7	+2.4
NBPA	Parau_RN	150.14	126	*e*P	PKPdf	12 01 12.4	+0.5
PBRG	Braganca	150.20	350	*e*PKiKP	PKiKP	12 01 17.3	0.0
PBRG	Braganca	150.20	350	*e*PKPab	PKPab	12 01 24.1	+1.0
PGRA	Graciosa	150.44	24	*e*PKP	PKPbc	12 01 17.3	+0.2
PCAB	Cabril	150.48	352	*e*PKiKP	PKiKP	12 01 18.2	+0.3
CALA	Caldeira	150.53	25	*e*PKP	PKiKP	12 01 18.9	+0.8
ROSA	Rosais	150.60	24	*e*PKP	PKiKP	12 01 18.5	+0.3
ROSA	Rosais	150.60	24		PKiKP	12 01 18.5	+0.3
PICO	Pico	150.71	25	*e*PKP	PKPbc	12 01 17.7	-0.2
PCAN	Candelaria	150.72	25	*e*PKP	PKiKP	12 01 18.5	+0.1
PMAN	Manadas	150.73	24	*e*PKP	PKiKP	12 01 18.9	+0.5
POLO	Lamas de Olo	150.78	352	*e*PKiKP	PKiKP	12 01 19.2	+0.6
PPNO	Prainha do Nor	150.80	25	*e*PKP	PKPbc	12 01 17.8	-0.3
SHEL	Horse Pasture	150.85	195	PKIKP	PKiKP	12 01 19.5	+0.2
SHEL	Horse Pasture	150.85	195		PKiKP	12 01 19.5	+0.2
PVRL	Vila Real	150.87	351	*e*PKiKP	PKiKP	12 01 19.3	+0.6
PVRL	Vila Real	150.87	351	*e*PKPab	PKPab	12 01 27.9	+2.0
MVO	Moncorvo	150.87	350	*e*PKiKP	PKiKP	12 01 19.3	+0.6
PID	Ribeirinha	150.88	25	*e*PKP	PKiKP	12 01 18.8	0.0
PAGU	Agualva, Azore	150.97	23	*e*PKP	PKiKP	12 01 19.2	+0.3
RCBR	Riachuelo	151.04	128	PKP	PKPdf	12 01 14.0	+0.6
	comp=Z,76nm,1.2s,baz=179,slow=5.8,SNR=5.2						
RCBR				PKPbc	PKPbc	12 01 19.0	-0.4
	comp=Z,120nm,0.8s,baz=214,slow=3.1,SNR=51						
RCBR	Riachuelo	151.04	128	PKPdf	PKPdf	12 01 14.2	+0.9
RCBR				PKPbc	PKPbc	12 01 18.8	-0.5
RCBR	Riachuelo	151.04	128	*e*P	PKPdf	12 01 14.6	+1.2
ADH	Angra Heroismo	151.05	23	*e*PKP	PKiKP	12 01 19.9	+0.9
PSCM	Serra do Cume	151.06	23	*e*PKP	PKiKP	12 01 19.8	+0.7
PTO	Porto	151.12	353	*e*PKiKP	PKiKP	12 01 19.4	+0.3
PVIS	Viseu	151.44	352	*e*PKiKP	PKiKP	12 01 20.4	+0.5
ESBB	Sonseca Array	151.66	345		PKiKP	12 01 20.3	-0.1
ESDC	Sonseca Array	151.66	345	PKP	PKPdf	12 01 14.7	+1.1
	comp=Z,5.4nm,1.1s,baz=18,slow=1.6,SNR=10						
ESDC				PKPbc	PKiKP	12 01 20.8	+0.4
	comp=Z,52nm,0.8s,baz=12,slow=2.5,SNR=114						
ESDC				PKPab	PKPab	12 01 30.4	+1.1
	comp=Z,4.8nm,0.7s,baz=17,slow=3.5,SNR=5.1						
ESDC				PP	PP	12 05 02.2	+2.0
	comp=Z,1.5nm,1.1s,baz=347,slow=5.2,SNR=4.2						
ESDC	Sonseca Array	151.66	345		PKPdf	12 01 14.0	+0.4
ESDC				PKPbc	PKiKP	12 01 20.6	+0.2
ESDC				PKPab	PKPab	12 01 30.2	+1.0
MTE	Manteigas	151.70	351	PKPdf	PKPdf	12 01 14.8	+1.2
MTE				PKPbc	PKiKP	12 01 21.8	+1.4
MTE	Manteigas	151.70	351	*e*PKiKP	PKiKP	12 01 20.9	+0.5
MTE				*i* P	PKPab	12 01 26.3	-3.1
PAB	San Pablo	151.88	345	PKIKP	PKPdf	12 01 15.3	+1.4
PAB						12 01 31.3	
PAB	San Pablo	151.88	345	PKPdf	PKPdf	12 01 15.3	+1.4
PAB				PKPbc	PKiKP	12 01 22.3	+1.5
PAB				PKPab	PKPab	12 01 31.3	+1.1
COI	Coimbra	152.01	352		PKiKP	12 01 21.3	+0.3
COI	Coimbra	152.01	352	*e*PKiKP	PKiKP	12 01 21.6	+0.6
PCAS	Casmilo, Conde	152.17	352	*e*PKiKP	PKiKP	12 01 22.0	+0.6
PCAS	Casmilo, Conde	152.17	352	*e*PKPab	PKPab	12 01 32.8	+1.5
PCBR	Castelo Branco	152.23	351	*e*PKiKP	PKiKP	12 01 22.1	+0.6
PCBR	Castelo Branco	152.23	351	*e*PKPab	PKPab	12 01 33.2	+1.7
PMRV	Marv??o	152.62	350	*e*PKiKP	PKiKP	12 01 23.2	+0.9
PSBE	So Bento	152.74	353	*e*PKiKP	PKiKP	12 01 23.5	+0.9
PMTG	Montargil	153.10	351	*e*PKiKP	PKiKP	12 01 23.8	+0.5
PMTG	Montargil	153.10	351	*e*PKPab	PKPab	12 01 37.1	+1.9
PESTR	Estremoz	153.20	350		PKiKP	12 01 23.6	0.0
PESTR				PKPab	PKPab	12 01 36.9	+1.2
PESTR	Estremoz	153.20	350	*e*PKiKP	PKiKP	12 01 24.1	+0.6
PESTR	Estremoz	153.20	350	*e*PKPab	PKPab	12 01 37.3	+1.6
PMAFR	Mafra	153.35	353	*e*PKiKP	PKiKP	12 01 25.1	+1.3
PMAFR	Mafra	153.35	353	*e*PKPab	PKPab	12 01 37.8	+1.5
LIS	Lisbon	153.57	353	*e*PKiKP	PKiKP	12 01 25.7	+1.5
EVO	Evora	153.60	351	*e*PKiKP	PKiKP	12 01 25.3	+1.0
EVO	Evora	153.60	351	*e*PKPab	PKPab	12 01 38.7	+1.4
PBAR	Barrancos	153.78	349	*e*PKiKP	PKPbc	12 01 24.6	0.0
PBAR	Barrancos	153.78	349	*e*PKPab	PKPab	12 01 39.3	+1.2
PBEJ	Beja	154.07	350	*e*PKiKP	PKiKP	12 01 26.6	+1.3
PBEJ	Beja	154.07	350	*e*PKPab	PKPab	12 01 41.2	+1.8
PNCL	Nicolau / Gran	154.09	352	*e*PKiKP	PKiKP	12 01 26.4	+1.1
PNCL	Nicolau / Gran	154.09	352	*e*PKPab	PKPab	12 01 40.8	+1.4
MESJ	Messejana	154.31	351	*e*PKiKP	PKiKP	12 01 27.1	+1.3
MESJ	Messejana	154.31	351	*e*PKPab	PKPab	12 01 42.2	+1.8
PCVE	Castro Verde	154.48	350	*e*PKiKP	PKiKP	12 01 27.5	+1.3
PCVE	Castro Verde	154.48	350	*e*PKPab	PKPab	12 01 43.2	+2.1
PVAQ	Vaqueiros	154.65	350		PKPab	12 01 42.6	+0.7
PVAQ	Vaqueiros	154.65	350	*e*PKiKP	PKiKP	12 01 28.1	+1.6
PVAQ	Vaqueiros	154.65	350	*e*PKPab	PKPab	12 01 43.6	+1.8
PTEO	Sao Teotonio	154.67	352	*e*PKiKP	PKiKP	12 01 27.9	+1.3
PTEO	Sao Teotonio	154.67	352	*e*PKPab	PKPab	12 01 43.9	+2.0
PBDV	Barranco-do-Ve	154.84	350	*e*PKiKP	PKiKP	12 01 28.6	+1.6
PBDV	Barranco-do-Ve	154.84	350	*e*PKPab	PKPab	12 01 45.1	+2.4
MORF	Marmelete	154.90	351	*e*PKiKP	PKiKP	12 01 28.8	+1.7
MORF	Marmelete	154.90	351	*e*PKPab	PKPab	12 01 44.8	+1.8
PFVI	Vila Bisbo	155.09	352	*e*PKPab	PKPab	12 01 45.3	+1.6
MDT	Midelt	158.24	340	PKPab	PKPab	12 01 58.6	+1.1
	comp=Z,7.6nm,0.7s,baz=62,slow=4.6,SNR=6.0						
TOA0	Torodi Ar. Sit	165.46	274		PKPdf	12 01 29.7	-0.8
TOA0				PKPab	PKPab	12 02 29.7	-0.1
TORD	Torodi Ar. Bea	165.46	274	PKP	PKPdf	12 01 30.4	-0.2
	comp=Z,5.3nm,1.0s,baz=2.9,slow=2.0,SNR=18						
TORD				PKPab	PKPab	12 02 29.4	-0.3
	comp=Z,24nm,1.0s,baz=74,slow=4.1,SNR=32						
TORD				PP	PP	12 06 20.3	+2.8
	comp=Z,1.7nm,1.0s,baz=69,slow=4.6,SNR=3.9						
TORD	Torodi Ar. Bea	165.46	274		PKPdf	12 01 29.7	-0.8
TORD					PKPab	12 02 29.5	-0.3
KIC	Kosan Boka	169.71	235	*e*PKP2	PKPab	12 02 48.1	-0.4
	comp=Z,31nm,1.1s						
LIC	Lamto	169.85	233	*e*PKP2	PKPab	12 02 48.7	-0.4
	comp=Z,30nm,1.5s						
DBIC	Dimbokro	169.98	236	PKP	PKPdf	12 01 33.4	-0.3
	comp=Z,2.4nm,0.7s,baz=202,slow=3.8,SNR=3.2						
DBIC				PKPab	PKPab	12 02 49.8	+0.1
	comp=Z,3.3nm,0.7s,baz=73,slow=1.2,SNR=6.0						
TIC	Toumodi	170.10	235	*e*PKP2	PKPab	12 02 49.6	-0.6
KOWA	Kowa	170.84	284	PKP	PKPdf	12 01 33.5	-0.7
	comp=Z,2.9nm,0.8s,baz=352,slow=4.1,SNR=5.4						
KOWA				PKPab	PKPab	12 02 53.5	-0.1
	comp=Z,8.5nm,0.8s,baz=63,slow=3.4,SNR=12						
KOWA	Kowa	170.84	284		PKPdf	12 01 34.5	+0.4
KOWA				PKPab	PKPab	12 02 53.5	-0.1

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*NEIC **01** 11:42:40.3±3.2, 56°.82N±0°.07×168°.8W±0°.1, h22^{km}±8^{km}, mb3.7/2, ML3.9(AEIC) Error ellipse: s-maj=10.4km s-min=7.2km az=212.0*

*IDC **01** 11:42:41.0±3.6, 56°.42N×169°.40W, h0^{km}, mb3.5/5, mb1 3.6/7, mb1mx3.4/57, mbtmp3.6/7, ML3.0/2, Error ellipse: s-maj=84.3km s-min=21.3km az=172.0*

*AEIC **01** 11:42:40±2.4, 56°.76N±0°.06×168°.9W±0°.1, h26^{km}±4^{km}, Error ellipse: s-maj=9.5km s-min=7.5km az=222.0*

ISC 01 11:42:40.6±0.8**, 56°.70N**±0°.09×**168°.77W**±0°.07**, h10**^{km}**, n25,** σ**2^{s}17**/22**, mb3.6**/3**, Pribilof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPIA	Saint Paul Isl	0.94	301		Pg	11 42 57.3	-1.3
AKUT	Akutan	3.09	145	Pn	Pn	11 43 29.6	+0.2
UNV	Unalaska Valle	3.14	155	Pn	Pn	11 43 30.3	+0.2
FALS	False Pass	3.54	119	Pn	Pn	11 43 33.7	-1.9
NIKH	Nikolski High	3.74	181	Pn	Pn	11 43 37.5	-0.7
ATKA	Atka Island	5.50	217	Pn	Pn	11 44 00.7	-1.8
ADK	Adak	6.69	227	Pn	Pn	11 44 17.0	-1.7
GAMB	Gambell	7.25	350	Pn	Pn	11 44 25.0	-1.4
ANM	Nome	8.06	11	Pn	Pn	11 44 33.2	-4.4
OHAK	Old Harbor	8.48	80	Pn	Pn	11 44 40.1	-3.2
AMKA	Amchitka	8.81	238		Pn	11 44 47.4	-0.4
KDAK	Kodiak Island	8.85	76	Pn	Pn	11 44 57.7	+9.3
	0.4nm,0.3s,baz=296,slow=12,SNR=1.8						
TTA	Tatalina	8.95	41	Pn	Pn	11 44 46.9	-3.0
IMAR	Indian Mountai	11.74	31	Pn	Pn	11 45 26.2	-1.6
I23K	Minto, Yukon-K	12.62	40	Pn	Pn	11 45 37.8	-2.2
ILAR	Eielson Array	13.35	44	Pn	Pn	11 45 55.0	+5.1
	0.0nm,0.3s,baz=237,slow=15,SNR=2.8						
BCAR	Beaver Creek A	14.88	54		Pn	11 46 09.9	-1.0
BMAR	Burnt Mountain	15.49	36		Pn	11 46 18.2	-0.6
DAWY	Dawson	16.16	51	P	Pn	11 46 26.8	-0.8
DAWY				IAmb	IAmb	11 46 41.9	
	comp=Z,8.9nm,1.3s						
WHY	Whitehorse	17.93	63		Pn	11 46 48.0	-1.8
WHY				IAmb	IAmb	11 47 10.6	
	comp=Z,9.2nm,1.4s						
INK	Inuvik	19.64	40	P	Pn	11 47 16.1	+5.8
	comp=Z,2.2nm,0.9s,baz=244,slow=11,SNR=6.3						
SEY	Seymchan	20.24	304	P	P	11 47 17.4	+1.8
	comp=Z,0.7nm,0.7s,baz=101,slow=9.5,SNR=4.6						
SONM	Songino Array	49.47	298	P	P	11 51 32.8	+2.0
	comp=Z,0.4nm,0.6s,baz=48,slow=6.4,SNR=2.3						
KURBB	Kurchatov Arra	59.51	317	P	P	11 52 44.2	+0.8
	comp=Z,0.3nm,0.7s,baz=37,slow=6.2,SNR=1.8						
AKASG	Malin Array Be	71.93	348	P	P	11 54 04.9	+1.4
	comp=Z,0.5nm,0.5s,baz=9.5,slow=5.8,SNR=2.6						

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*IDC **01** 11:43:37.2±1.0, 56°.66N×169°.15W, h0^{km}, mb4.0/14, mb1 4.1/17, mb1mx3.9/58, mbtmp4.0/17, ML3.4/3, MS3.6/2, Ms1 3.6/2, ms1mx2.9/58, Error ellipse: s-maj=33.9km s-min=12.0km az=6.0*

*NEIC **01** 11:43:40.9±1.8, 56°.72N±0°.08×169°.4W±0°.1, h15^{km}±5^{km}, mb4.2/8, Error ellipse: s-maj=12.7km s-min=6.0km az=208.0*

ISC 01 11:43:38.6±0.5**, 56°.54N**±0°.08×**169°.13W**±0°.05**, h10**^{km}**, n42,** σ**1^{s}45**/44**, mb4.1**/14**, Pribilof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPIA	Saint Paul Isl	0.89	317		Pg	11 43 53.5	-2.2
AKUT	Akutan	3.08	140	Pn	Pb	11 44 31.9	-1.4
UNV	Unalaska Valle	3.09	150		Pb	11 44 32.3	-1.2
FALS	False Pass	3.64	115	Pn	Pb	11 44 40.7	-2.2
AMKA	Amchitka	8.55	238	Pn	Pn	11 45 44.0	+1.7
KDAK	Kodiak Island	9.08	75	Pn	Pn	11 45 50.7	+1.3
	0.5nm,0.3s,baz=262,slow=7.1,SNR=2.2						
KDAK				Sn	Sn	11 47 30.6	-1.0
	baz=307,slow=20,SNR=1.4						
KDAK				LR	LR	11 49 31.4	
	comp=Z,210nm,21.8s,baz=254,slow=39						
IMAR	Indian Mountai	11.98	32		Pn	11 46 30.4	+1.2
KLU	Klutina	12.91	58		Pn	11 46 44.2	+2.3
MDM	Murphy Dome	13.19	42		Pn	11 46 48.9	+3.3
IL31		13.60	44		Pn	11 46 53.5	+2.3
ILAR	Eielson Array	13.60	44	Pn	Pn	11 46 53.3	+2.0
	0.0nm,0.3s,baz=235,slow=12,SNR=9.3						
PRP	Porcupine Dome	14.46	42	Pn	Pn	11 47 03.8	+0.7
YAH	Yahtse	14.78	64		Pn	11 47 09.1	+1.5
CTGM	Chitina Glacie	15.02	61		Pn	11 47 12.5	+1.7
CTGM				IAmb	IAmb	11 47 30.6	
	comp=Z,20nm,1.0s						
BCAR	Beaver Creek A	15.14	53		Pn	11 47 13.1	+0.8
BMAR	Burnt Mountain	15.73	36		Pn	11 47 22.8	+2.8
EGAK	Eagle	15.87	47		Pn	11 47 22.9	+1.2
EGAK				IAmb	IAmb	11 47 30.5	
	comp=Z,13nm,0.8s						
DAWY	Dawson	16.41	51	Pn	P	11 47 31.2	-0.4
DAWY				IAmb	IAmb	11 47 37.2	
	comp=Z,24nm,1.1s						
HYT	Haines Junctio	16.89	62		P	11 47 37.6	+0.7
HYT				IAmb	IAmb	11 47 42.2	
	comp=Z,19nm,1.1s						
PETK	Petropavlovsk-	19.30	274	P	Pn	11 48 04.8	+0.3
	comp=Z,0.3nm,0.3s,baz=74,slow=11,SNR=8.4						
PETK	Petropavlovsk-	19.30	274	P	Pn	11 48 04.5	0.0
INK	Inuvik	19.89	39	P	P	11 48 10.0	+0.3
	comp=Z,0.2nm,0.3s,baz=230,slow=9.7,SNR=15						
INK	Inuvik	19.89	39	P	P	11 48 11.0	+1.3
SEY	Seymchan	20.17	304	P	P	11 48 12.3	-0.4
	comp=Z,7.7nm,0.9s,baz=98,slow=9.1,SNR=23						
MA2	Magadan	21.20	295	P	P	11 48 23.9	0.0
	comp=Z,4.9nm,0.7s,baz=90,slow=14						
MA2	Magadan	21.20	295	P	P	11 48 23.7	-0.3
MA2				IAmb	IAmb	11 48 29.7	
	comp=Z,14nm,1.1s						
YKA	Yellowknife Ar	27.55	55	P	P	11 49 24.6	-0.5
	comp=Z,3.6nm,0.9s,baz=280,slow=8.5,SNR=12						
YKA				PcP	PcP	11 52 42.0	-0.4
	comp=Z,0.3nm,0.6s,baz=283,slow=1.7,SNR=5.2						
NVAR	Mina Array Bea	37.80	97	P	P	11 50 55.5	+0.5
	comp=Z,0.6nm,0.8s,baz=285,slow=8.1,SNR=4.8						
NVAR				PcP	PcP	11 53 12.3	+0.8
	comp=Z,0.9nm,0.8s,baz=316,slow=2.5,SNR=6.1						
ELK	Elko	37.88	91	P	P	11 50 56.0	+0.3
	comp=Z,0.5nm,0.4s,baz=305,slow=5.5,SNR=3.8						
FRB	Frobisher Bay	45.54	38	P	P	11 51 58.8	+1.0
	comp=Z,2.0nm,0.9s,baz=327,slow=5.4,SNR=4.0						
TLY	Talaya	48.07	303	P	P	11 52 17.7	-0.2
	comp=Z,0.8nm,0.4s,baz=4.4,slow=6.3,SNR=4.3						
SONM	Songino Array	49.37	298	P	P	11 52 28.4	+0.4
	comp=Z,1.6nm,0.8s,baz=40,slow=7.9,SNR=10						
TXAR	Lajitas Array	52.65	92	P	P	11 52 52.3	-0.6
	comp=Z,0.8nm,0.8s,baz=305,slow=4.0,SNR=8.5						
KURK	Kurchatov	59.38	317	P	P	11 53 39.9	-0.7
KURBB	Kurchatov Arra	59.49	317	P	P	11 53 40.1	-1.2
	comp=Z,2.0nm,0.9s,baz=34,slow=7.1,SNR=9.6						
MKAR	Makanchi Array	61.08	312	P	P	11 53 51.1	-1.2
	comp=Z,0.8nm,0.9s,baz=45,slow=4.3,SNR=5.0						
KSH	Kashi	69.68	312	P	P	11 54 51.8	+3.5
KSH				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KSH				pmax	pmax		
	comp=Z,140nm,5.4s						
AKASG	Malin Array Be	72.05	348	P	P	11 55 00.5	-1.7
	comp=Z,3.2nm,0.7s,baz=17,slow=6.2,SNR=7.8						
CMAR	Chiang Mai Arr	75.86	282	P	P	11 55 25.0	0.0
	comp=Z,2.4nm,0.9s,baz=19,slow=6.2,SNR=5.0						
GEYT	Alibeck	77.75	324	P	P	11 55 35.5	+0.1
	comp=Z,1.6nm,0.7s,baz=300,slow=3.3,SNR=5.4						
GEYT	Alibeck	77.75	324	P	P	11 55 35.3	-0.2
RAR	Rarotonga	77.85	171	LR	LR	12 29 15.2	
	comp=Z,70nm,18.2s,baz=175,slow=35						

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*IDC **01** 11:58:37.2±5.3, 5°.67S×151°.07E, h48^{km}±48^{km}, mb3.4/6, mb1 3.6/7, mb1mx3.4/42, mbtmp3.6/7, ML1.5/1, Error ellipse: s-maj=64.1km s-min=30.7km az=124.0*

ISC 01 11:58:39.1±1.2**, 5°.7S**±0°.3×**151°.0E**±0°.3**, h65**^{km}**, n8,** σ**1^{s}23**/10**, mb3.4**/6**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	5.25	226	P	Pn	11 59 55.6	+0.5
	1.0nm,0.3s,baz=66,slow=10.0,SNR=2.4						
PMG				S	Sn	12 00 53.0	-1.3
	3.6nm,0.3s,baz=335,slow=18,SNR=6.9						
WRA	Warramunga Arr	21.47	227	P	P	12 03 21.6	-0.8
	0.6nm,0.4s,baz=53,slow=11,SNR=8.4						
WRA				PcP	PcP	12 07 23.7	+0.2
	0.2nm,0.5s,baz=41,slow=1.9,SNR=1.5						
ASAR	Alice Springs	24.25	221	P	P	12 03 50.5	+0.3
	0.9nm,0.7s,baz=52,slow=9.5,SNR=14						
FITZ	Fitzroy Crossi	27.61	241	P	P	12 04 23.0	+2.3
	2.1nm,1.0s,baz=66,slow=12,SNR=1.8						
SONM	Songino Array	66.16	329	P	P	12 09 19.7	-0.2
	0.2nm,0.4s,baz=116,slow=6.6,SNR=1.6						
ILAR	Eielson Array	83.71	22	P	P	12 10 59.2	-1.4
	0.2nm,0.6s,baz=248,slow=5.3,SNR=1.7						
NVAR	Mina Array Bea	94.09	52	P	P	12 11 51.7	+0.6
	0.3nm,0.8s,baz=255,slow=5.4,SNR=3.3						
TORD	Torodi Ar. Bea	148.84	286	PKPbc	PKPbc	12 18 20.6	+0.1
	0.5nm,0.4s,baz=62,slow=3.0,SNR=6.3						

IDC 01 12:04:14.8±2.3**, 14°.70S**×**178°.18W, h0**^{km}**, mb3.8**/7**, mb1 4.0**/7**, mb1mx3.8**/37**, mbtmp3.8**/7**, Error ellipse: s-maj=138.0km s-min=22.8km az=145.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	40.44	238	P	P	12 11 55.7	+0.4
	1.6nm,0.6s,baz=100,slow=12,SNR=4.1						
WRA	Warramunga Arr	45.52	256	P	P	12 12 36.8	+0.2
	0.6nm,0.2s,baz=83,slow=7.8,SNR=38						
ASAR	Alice Springs	45.95	251	P	P	12 12 39.4	-0.6
	2.8nm,0.4s,baz=84,slow=8.5,SNR=104						
FITZ	Fitzroy Crossi	53.84	258	P	P	12 13 39.4	-0.6
	2.0nm,0.8s,baz=79,slow=5.2,SNR=2.2						
NVAR	Mina Array Bea	76.97	44	P	P	12 16 09.8	0.0
	0.4nm,0.7s,baz=226,slow=7.4,SNR=3.8						
ILAR	Eielson Array	82.72	13	P	P	12 16 40.9	+0.8
	0.2nm,0.7s,baz=212,slow=9.6,SNR=1.4						
YKA	Yellowknife Ar	91.33	25	P	P	12 17 21.3	-0.8
	0.1nm,0.5s,baz=238,slow=4.2,SNR=2.0						

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*AEIC **01** 12:20:12±2.1, 56°.66N±0°.06×168°.89W±0°.10, h23^{km}±8^{km}, Error ellipse: s-maj=9.9km s-min=7.3km az=207.0*

*NEIC **01** 12:20:12.0±1.9, 56°.67N±0°.06×168°.9W±0°.1, h10^{km}±2^{km}, ML3.3(AEIC), Error ellipse: s-maj=12.5km s-min=7.9km az=41.0*

*IDC **01** 12:20:12.6±1.6, 56°.46N×168°.82W, h0^{km}, mb3.3/5, mb1 3.8/7, mb1mx3.4/50, mbtmp3.5/7, ML3.3/2, Error ellipse: s-maj=51.3km s-min=21.8km az=3.0*

ISC 01 12:20:13.2±0.7**, 56°.65N**±0°.09×**168°.79W**±0°.07**, h10**^{km}**, n26,** σ**1^{s}58**/26**, mb3.1**/4**, Pribilof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPIA	Saint Paul Isl	0.96	304	Pn	Pg	12 20 30.6	-1.1
AKUT	Akutan	3.05	144	Pn	Pn	12 21 01.8	+0.4
UNV	Unalaska Valle	3.10	154	Pn	Pn	12 21 01.5	-0.6
FALS	False Pass	3.53	118	Pn	Pn	12 21 07.6	-0.3
NIKH	Nikolski High	3.68	181	Pn	Pn	12 21 08.2	-1.9
SDPT	Sand Point	4.84	102	Pn	Pn	12 21 26.4	+0.3
ATKA	Atka Island	5.46	218	Pn	Pn	12 21 35.3	+0.8
ADK	Adak	6.64	227	Pn	Pn	12 21 50.0	-0.7
GAMB	Gambell	7.30	350	Pn	Pn	12 21 59.7	+0.1
ANM	Nome	8.12	10	Pn	Pn	12 22 11.4	+0.4
AMKA	Amchitka	8.77	238	Pn	Pn	12 22 18.6	-1.3
KDAK	Kodiak Island	8.87	76	Pn	Pn	12 22 23.2	+2.0
	0.3nm,0.3s,baz=11,slow=10,SNR=1.4						
KDAK	Kodiak Island	8.87	76	Pn	Pn	12 22 20.6	-0.5
TTA	Tatalina	9.00	40	Pn	Pn	12 22 22.2	-0.8
ILAR	Eielson Array	13.39	44	Pn	P	12 23 29.0	-3.6
	0.0nm,0.3s,baz=250,slow=10,SNR=2.2						
MESA	MESA	14.45	65	Pn	Pn	12 23 34.8	-3.0
BARN	Barnard Glacie	14.66	61	Pn	Pn	12 23 38.9	-1.6
CTGM	Chitina Glacie	14.81	62	Pn	Pn	12 23 40.6	-1.9
PCA	Pinnacle	15.30	65	Pn	Pn	12 23 48.6	-0.3
BMAR	Burnt Mountain	15.54	36	Pn	Pn	12 23 50.7	-1.3
INK	Inuvik	19.69	40	P	Pn	12 24 45.3	+1.8
	0.1nm,0.3s,baz=243,slow=4.6,SNR=4.3						
SEY	Seymchan	20.26	304	P	P	12 24 49.5	+1.1
	0.7nm,0.7s,baz=82,slow=23,SNR=4.1						
YKA	Yellowknife Ar	27.33	55	P	P	12 25 59.9	+2.2
	0.3nm,0.8s,baz=281,slow=7.8,SNR=4.2						
NVAR	Mina Array Bea	37.62	97	P	P	12 27 28.7	+0.5
	0.1nm,0.5s,baz=287,slow=12,SNR=2.4						
TXAR	Lajitas Array	52.47	93	P	P	12 29 27.7	+1.6
	0.1nm,0.4s,baz=294,slow=4.5,SNR=3.8						
CMAR	Chiang Mai Arr	76.02	282	P	P	12 32 02.0	+1.4
	0.4nm,0.3s,baz=26,slow=8.3,SNR=4.2						

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*IDC **01** 12:27:11.3±0.9, 3°.11S×148°.39E, h0^{km}, mb4.3/14,* *mb1 4.5/15, mb1mx4.4/34, mbtmp4.3/15, ML3.4/1, MS4.3/27, Ms1 4.3/27, ms1mx4.2/38, Error ellipse: s-maj=28.5km s-min=16.0km az=112.0*

*DJA **01** 12:27:13.2±0.3, 3°S±4°×14°8E±°, h10^{km}, M4.7/16, mb4.6/16, mB5.2/6, MLv4.7/3, Mw(mB)4.6/6, MwMwp5.3/2, Mwp5.5/2*

*NEIC **01** 12:27:13.4±2.2, 2°.91S±0°.08×148°.19E±0°.07, h14^{km}±4^{km}, mb4.8/23, Error ellipse: s-maj=13.5km s-min=7.5km az=221.0*

*GCMT **01** 12:27:17.4±0.1, 3°.03S±0°.01×148°.25E±0°.01, h13^{km}±1^{km}, MW5.1/119, Moment Tensor Solution. s60,c82; s119,c193; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.59±.11; M$_{\theta\theta}$3.32±.11; M$_{\phi\phi}$-2.74±.11; M$_{r\theta}$0.49±.23; M$_{\theta\phi}$4.51±.10; M$_{\phi r}$-0.12±.23; Best double couple: M$_0$5.45700×10^{16} NP1:ϕ_s17.00000°, δ85.00000°, λ-179.00000°. NP2:ϕ_s287.00000°, δ89.00000°, λ-5.00000°. Principal axes: T 5.7460, Plg3.0000°, Azm332.0000°; N -0.5860, Plg85.0000°, Azm101.0000°; P -5.1670, Plg4.0000°, Azm242.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 01 12:27:14.1±0.4**, 2°.95S**±0°.06×**148°.29E**±0°.07**, h18**^{km}**, n98, σ2^{s}.36**/84**, mb4.5**/30**, MS4.3**/24**, 1D, Admiralty Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MANU	Manus Island	1.29	314	Pn	Pn	12 27 34.5	-2.7
RABL	Rabaul	4.06	108	Pn	Pn	12 28 14.7	-0.7
RABL	Rabaul	4.06	108	P	Pn	12 28 15.0	-0.4
PMG	Port Moresby	6.51	190	Pn	Pn	12 28 51.9	+2.8
	1.8nm,0.3s,baz=359,slow=7.2,SNR=8.3						
PMG				Sn	Sn	12 30 05.0	+2.0
	2.4nm,0.3s,baz=165,slow=20,SNR=1.8						
PMG				LR	LR	12 31 22.9	
	comp=Z,3µm,18.7s,baz=24,slow=39						
PMG	Port Moresby	6.51	190	Pn	Pn	12 28 49.7	+0.6
PMG	Port Moresby	6.51	190	P	Pn	12 28 52.5	+3.4
JAY	Jayapura	7.58	273	Pn	Pn	12 29 04.7	+0.8
	0.5nm,0.3s,baz=142,slow=5.9,SNR=4.1						
JAY				LR	LR	12 31 21.0	
	comp=Z,2µm,21.9s,baz=79,slow=32						
GENI	Genyem	8.12	272	P	Pn	12 29 12.5	+1.3
COEN	Coen	12.05	204	Pn	Pn	12 30 04.8	-0.3
HNR	Honiara	13.26	120	LR	LR	12 35 23.5	
	comp=Z,2µm,18.1s,baz=290,slow=38						
GUMO	Guam	16.78	348	LR	LR	12 36 42.6	
	comp=Z,477nm,18.6s,baz=138,slow=34						
CTAO	Charters Tower	17.15	186		Pn	12 31 12.3	-0.7
WB0	Warramunga Arr	21.53	218	P	P	12 32 01.3	-1.2
WB0				IAmb	IAmb	12 32 25.2	
	comp=Z,42nm,1.1s						
WR0	Warramunga Arr	21.58	217	P	P	12 32 02.2	-0.9
WR0				IAmb	IAmb	12 32 14.8	
	comp=Z,62nm,1.4s						
WRAB	Tennant Creek	21.68	218	P	P	12 32 03.1	-1.0
WB2	Warramunga Arr	21.69	218	P	P	12 32 02.8	-1.4
WRA	Warramunga Arr	21.69	218	P	P	12 32 03.1	-1.2
	comp=Z,14nm,1.0s,baz=43,slow=10,SNR=52						
WRA				LR	LR	12 41 33.0	
	comp=Z,739nm,18.5s,baz=45,slow=40						
WRA	Warramunga Arr	21.69	218	P	P	12 32 02.6	-1.7
SANVU	Saraoutou	22.39	125	P	P	12 32 10.7	-1.1
SANVU	Saraoutou	22.39	125	P	P	12 32 11.3	-0.5
EIDS	Eidsvold	22.45	173	P	P	12 32 12.0	-0.4
EIDS				IAmb	IAmb	12 32 20.5	
	comp=Z,33nm,1.1s						
AS31	Alice Springs	24.85	213	P	P	12 32 34.9	-0.9
ASAR	Alice Springs	24.85	213	P	P	12 32 34.9	-1.0
	comp=Z,9.3nm,0.8s,baz=44,slow=7.9,SNR=70						
ASAR				LR	LR	12 42 48.8	
	comp=Z,909nm,18.2s,baz=38,slow=38						
ASAR	Alice Springs	24.85	213	P	P	12 32 34.7	-1.1
GTOI	Gorontalo	25.52	278	P	P	12 32 43.1	+1.2
	comp=Z,26nm,1.5s						
FITZ	Fitzroy Crossi	26.82	234	P	P	12 32 54.4	+0.8
	comp=Z,14nm,0.9s,baz=61,slow=11,SNR=17						
FITZ	Fitzroy Crossi	26.82	234	P	P	12 32 52.4	-1.2
FITZ				IAmb	IAmb	12 32 55.7	
	comp=Z,21nm,0.9s						
ARMA	Armidale	27.50	174	P	P	12 32 59.0	-0.8
H11S3	WAKE ISLAND Hy	27.97	40	T	T	13 02 26.7	
	baz=222,slow=76,SNR=1560						
H11S2	WAKE ISLAND Hy	27.98	40	T	T	13 02 27.1	
	baz=222,slow=76,SNR=780						
H11S1	WAKE ISLAND Hy	27.99	40	T	T	13 02 27.9	
	baz=222,slow=76,SNR=1172						
H11N1	WAKE ISLAND Hy	29.01	38	T	T	13 03 42.5	
	baz=220,slow=76,SNR=238						
H11N3	WAKE ISLAND Hy	29.02	38	T	T	13 03 44.2	
	baz=220,slow=76,SNR=317						
H11N2	WAKE ISLAND Hy	29.02	38	T	T	13 03 44.4	
	baz=220,slow=76,SNR=457						
STKA	Stephens Creek	29.46	192	P	P	12 33 15.0	-2.1
	comp=Z,2.0nm,0.3s,baz=10,slow=11,SNR=2.9						
STKA				LR	LR	12 46 02.3	
	comp=Z,1µm,18.8s,baz=8.2,slow=39						
JCJ	Chichijima	30.45	349	LR	LR	12 43 56.3	
	comp=Z,659nm,21.7s,baz=272,slow=33						
JOW	Kunigami	35.36	328	LR	LR	12 45 17.4	
	comp=Z,686nm,21.8s,baz=144,slow=31						
JHJ	Hachijo jima 2	36.76	348	LR	LR	12 48 15.6	
	comp=Z,400nm,18.3s,baz=184,slow=34						
MJAR	Matsushiro Arr	40.40	347	LR	LR	12 51 13.4	
	comp=Z,372nm,18.3s,baz=165,slow=36						
AFI	Afiamalu	40.91	108	LR	LR	12 50 12.0	
	comp=Z,315nm,19.6s,baz=224,slow=34						
URZ	Urewera	43.92	147	P	P	12 35 21.3	+1.3
MDSI	Maura Dua	44.04	267	P	P	12 35 21.7	+0.4
	comp=Z,12nm,1.2s						
KSRS	Korea Array	44.43	337	P	P	12 35 25.6	+1.7
	comp=Z,2.0nm,0.9s,baz=149,slow=9.1,SNR=8.8						
ASAJ	Asahikawa	47.13	354	LR	LR	12 54 15.8	
	comp=Z,301nm,21.2s,baz=176,slow=34						
USRK	Ussuriysk Ar.	49.16	345	LR	LR	12 54 40.6	
	comp=Z,250nm,21.4s,baz=142,slow=33						
CMAR	Chiang Mai Arr	53.02	296	P	P	12 36 32.4	+1.9
	comp=Z,1.9nm,0.9s,baz=112,slow=5.7,SNR=16						
CMAR				LR	LR	12 59 27.8	
	comp=Z,85nm,19.0s,baz=149,slow=36						
CMAR	Chiang Mai Arr	53.02	296	P	P	12 36 30.1	-0.4
KLR	Kul'dur	53.91	347	LR	LR	12 58 05.6	
	comp=Z,268nm,19.8s,baz=152,slow=34						
PETK	Petropavlovsk-	56.41	7	P	P	12 36 56.1	+1.7
	comp=Z,2.9nm,0.7s,baz=186,slow=4.1,SNR=2.6						
PETK				LR	LR	12 58 04.4	
	comp=Z,175nm,21.6s,baz=188,slow=33						
ULN	Ulaanbaatar	62.10	330	P	P	12 37 33.4	-0.7
ULN				IAmb	IAmb	12 37 38.0	
	comp=Z,7.9nm,1.1s						
SONM	Songino Array	62.41	329	P	P	12 37 37.4	+1.2
	comp=Z,3.4nm,0.9s,baz=150,slow=5.2,SNR=16						
SONM				LR	LR	13 04 58.1	
	comp=Z,335nm,19.7s,baz=124,slow=36						
SONM	Songino Array	62.41	329	P	P	12 37 36.1	-0.1
PPT	Papeete	62.58	108	LR	LR	13 00 27.9	
	comp=Z,64nm,19.4s,baz=268,slow=32						
ZSN	Zaisan	74.59	321	*e*P	P	12 38 54.8	+2.6
	baz=321						
VNDA	Vanda	74.87	177	LR	LR	13 10 13.6	
	comp=Z,148nm,18.0s,baz=330,slow=35						
MK31	Makanchi Array	76.00	320	P	P	12 39 00.7	+0.4
MKAR	Makanchi Array	76.00	320	P	P	12 39 01.0	+0.7
	comp=Z,2.0nm,0.8s,baz=105,slow=6.6,SNR=18						
MKAR				LR	LR	13 13 10.4	
	comp=Z,240nm,18.7s,baz=100,slow=36						
MKAR	Makanchi Array	76.00	320	P	P	12 39 00.5	+0.2
MAKZ	Makanchi	76.20	320	P	P	12 39 01.7	+0.3
SHLS	Shalkode	76.75	315	*e*P	P	12 39 04.7	-0.1
	comp=Z,4.4nm,1.5s,baz=316						
ZAA0	Zalesovo Array	77.14	327	P	P	12 39 06.2	-0.4
ZALV	Zalesovo Beam	77.14	327	P	P	12 39 06.8	+0.2
	comp=Z,3.0nm,0.9s,baz=72,slow=4.7,SNR=9.1						
ZALV	Zalesovo Beam	77.14	327	P	P	12 39 06.1	-0.5
KPKS	Kokpek	77.39	316	*e*P	P	12 39 09.7	+1.4
	comp=Z,4.6nm,1.4s,baz=316						
SATY	Saty	77.47	315	*e*P	P	12 39 09.7	+0.9
	baz=315						
TDK	Taldyqorghan	78.01	317	*e*P	P	12 39 13.6	+1.9
	baz=317						
TDK				*e*S	S	12 49 03.6	-1.2
	baz=317						
MDOK	Medeo	78.45	315	*e*P	P	12 39 16.1	+1.8
	baz=315						
TNSS	Tian-Shan	78.49	315	*e*P	P	12 39 15.9	+1.0
	baz=315						
AAA	Alma-Ata	78.56	315	*e*P	P	12 39 17.0	+2.2
	baz=315						
KUU	Kurty	79.14	316	*e*P	P	12 39 18.4	+0.5
	comp=Z,9.8nm,1.1s,baz=316						
NIL	Nilore	79.22	305	P	P	12 39 19.0	+0.3
NIL				IAmb	IAmb	12 39 21.5	
	comp=Z,7.8nm,0.8s						
KURK	Kurchatov	79.56	323	P	P	12 39 20.4	+0.4
KURK				IAmb	IAmb	12 39 23.4	
	comp=Z,15nm,1.3s						
IMAR	Indian Mountai	80.20	21	P	P	12 39 23.9	+0.7
RND	Reindeer	80.83	24	P	P	12 39 27.8	+1.1
RND				IAmb	IAmb	12 39 50.5	
	comp=Z,15nm,1.3s						
BTLS	Baital	81.01	316	*e*P	P	12 39 28.3	+0.3
	comp=Z,4.7nm,1.4s,baz=316						
ILAR	Eielson Array	82.19	23	P	P	12 39 33.1	-0.7
	comp=Z,1.4nm,0.9s,baz=257,slow=5.1,SNR=12						
ILAR	Eielson Array	82.19	23	P	P	12 39 33.5	-0.3
DZA	Taraz	82.47	314	*e*P	P	12 39 37.7	+1.9
	baz=314						
NRIK	Noril'sk	82.79	342	P	P	12 39 38.4	+1.6
	comp=Z,2.3nm,0.6s,baz=135,slow=7.5,SNR=9.5						
NRIK	Noril'sk	82.79	342	P	P	12 39 36.5	-0.3
NRIK				IAmb	IAmb	12 39 40.0	
	comp=Z,4.4nm,0.8s						
BRZS	Berezniki	83.04	321	*e*P	P	12 39 39.9	+1.4
	comp=Z,7.2nm,1.4s,baz=321						
KK31	Karatay Array	83.10	314	P	P	12 39 39.0	0.0
KK31				IAmb	IAmb	12 39 43.0	
	comp=Z,11nm,1.5s						
KKAR	Karatay Array	83.10	314	P	P	12 39 39.7	+0.7
KKAR				IAmb	IAmb	12 39 42.9	
	comp=Z,11nm,1.5s						
IUG	Iuzhnay	83.28	313	*e*P	P	12 39 42.0	+1.9
	baz=313						
BCAR	Beaver Creek A	83.65	25	P	P	12 39 42.6	+1.1
H02S1	DAWSON INLET T	85.91	36	T	T	14 15 03.9	
	SNR=26						
DLBC	Dease Lake	88.14	31	LR	LR	13 13 20.1	
	comp=Z,154nm,18.9s,baz=255,slow=31						
YBH	Yreka Blue Hor	91.20	48	LR	LR	13 12 51.9	
	comp=Z,259nm,21.7s,baz=268,slow=30						
GEYT	Alibeck	91.93	308	LR	LR	13 22 27.9	
	comp=Z,109nm,21.8s,baz=180,slow=36						
SYO	Syowa Base	93.88	200⇓	*e*X	P	12 40 26.6	-3.6
NVAR	Mina Array Bea	94.49	52	P	P	12 40 36.0	+2.0
	comp=Z,0.4nm,0.8s,baz=256,slow=6.0,SNR=3.6						
NVAR				LR	LR	13 15 56.8	
	comp=Z,144nm,20.6s,baz=266,slow=31						
YKA	Yellowknife Ar	95.89	28	P	P	12 40 40.6	+1.0
	comp=Z,1.5nm,0.8s,baz=272,slow=3.9,SNR=30						
YKA				LR	LR	13 20 34.9	
	comp=Z,62nm,20.5s,baz=0.0,slow=33						
ELK	Elko	96.82	49	LR	LR	13 17 38.1	
	comp=Z,138nm,21.0s,baz=270,slow=31						
MNK	Minsk	109.65	328	*i* P	Pdif	12 41 34.6	-6.5
	comp=E,2.0nm,0.8s						
MNK				*i* P	Pdif	12 41 34.6	-6.5
	comp=N,11nm,0.7s						
MNK				*i* P	Pdif	12 41 34.6	-6.5
	comp=Z,8.0nm,1.0s						
MNK				*i* PP	PP	12 46 14.7	-0.1
MNK				*i* PPP	PPP	12 48 40.9	
MNK				*i* SKS	SKSdf	12 52 47.4	-7.6
MNK				*i* SP	SP	12 55 31.0	-9.1
MNK				*i* PS	PS	12 55 50.2	+7.0
MNK				*i* SS	SS	13 01 35.0	-1.8
MNK				*i* SSS	SSS	13 05 41.9	
MNK				*i* LR	LR	13 26 58.2	
MNK				*i* LRM	MLR	13 33 02.4	
	comp=E,51nm,21.7s						
MNK				*i* LRM	MLR	13 33 12.6	
	comp=N,416nm,23.0s						
MNK				*i* LRM	MLR	13 33 31.8	
	comp=Z,208nm,23.0s						
CPUP	Villa Florida	141.78	141	PKP	PKPdf	12 46 46.0	+0.5
	comp=Z,1.3nm,0.8s,baz=231,slow=6.5,SNR=2.4						
TORD	Torodi Ar. Bea	145.45	289	PKPbc	PKPdf	12 46 52.0	-0.3
	comp=Z,3.7nm,1.0s,baz=59,slow=4.0,SNR=11						
TORD	Torodi Ar. Bea	145.45	289		PKPbc	12 46 52.2	0.0
DBIC	Dimbokro	152.99	279	PKPbc	PKiKP	12 47 12.2	+0.4
	comp=Z,2.7nm,0.7s,baz=194,slow=3.6,SNR=2.9						

*IDC **01** 12:31:29.1±1.0, 30°.39S×177°.70W, h0^{km}, mb4.5/6, mb1 4.6/9, mb1mx4.3/33, mbtmp4.4/9, ML3.8/3, MS4.1/2, Ms1 4.1/2, ms1mx3.2/27, Error ellipse: s-maj=29.7km s-min=19.6km az=118.0*

*NEIC **01** 12:31:31.4±2.0, 30°.32S±0°.06×177°.6W±0°.2, h24^{km}±1^{km}, mb4.4/22, Error ellipse: s-maj=22.7km s-min=8.2km az=87.0*

ISC 01 12:31:30.3±0.7**, 30°.40S**±0°.04×**177°.8W**±0°.1**, h10**^{km}**, n87, σ1^{s}.97**/91**, mb4.4**/10**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	1.14	354	P	Pb	12 31 51.9	-0.2
GLKZ				S	Sb	12 32 04.1	-2.8
RAO	Raoul Island	1.15	354	Pn	Pn	12 31 52.3	-0.1
	307nm,0.3s,baz=37,slow=19,SNR=22						
RAO				Sn	Sb	12 32 04.1	-3.1
	4µm,0.3s,baz=84,slow=21,SNR=28						
RAO	Raoul Island	1.15	354		Pn	12 31 52.5	0.0
RAO				Sn	Sb	12 32 05.4	-1.8
RIZ	Raoul Island	1.16	354	P	Pb	12 31 52.4	0.0
RIZ				S	Sb	12 32 05.1	-2.4
MXZ	Matakaoa Point	7.85	203	P	Pn	12 33 26.1	+1.6
MXZ				S	Sn	12 34 53.0	-0.4
WMGZ	Waiomatatini S	8.04	202	P	Pn	12 33 28.0	+0.8
WMGZ				S	Sn	12 34 58.9	+0.6
HAZ	Te Kaha	8.21	205	P	Pn	12 33 29.7	+0.3
HAZ				S	Sn	12 35 01.6	-0.7
PKGZ	Pakihiroa	8.22	204	P	Pn	12 33 29.7	0.0
PKGZ				S	Sn	12 35 00.9	-1.8
PUZ	Puketiti	8.33	202	P	Pn	12 33 31.1	0.0
PUZ				S	Sn	12 35 03.0	-2.3
RUGZ	Raukumara Rang	8.43	205	P	Pn	12 33 33.2	+0.5
TWGZ	Tauwhareparae	8.51	203	P	Pn	12 33 34.3	+0.6
TWGZ				S	Sn	12 35 08.4	-1.5
WCZ	Waipu Caves	8.61	228	P	Pn	12 33 45.1	+10
OUZ	Omahuta	8.70	234	P	Pn	12 33 45.4	+9.2
CNGZ	Carnagh Statio	8.72	201	P	Pn	12 33 36.5	0.0
TKGZ	Te Karaka	8.79	203	P	Pn	12 33 37.2	-0.3
TKGZ				S	Sn	12 35 15.8	-0.9
MWZ	Matawai	8.81	205	P	Pn	12 33 36.2	-1.6
MWZ				S	Sn	12 35 15.6	-1.6
URZ	Urewera	8.90	207	Pn	Pn	12 33 38.4	-0.6
	0.5nm,0.3s,baz=253,slow=3.6,SNR=15						
URZ				Sn	Sn	12 35 16.6	-2.8
	3.8nm,0.3s,baz=234,slow=22,SNR=14						
URZ	Urewera	8.90	207	Pn	Pn	12 33 39.4	+0.4
URZ	Urewera	8.90	207	P	Pn	12 33 38.5	-0.5
URZ				S	Sn	12 35 17.8	-1.6
RIGZ	Rimuhau	9.06	203	P	Pn	12 33 40.8	-0.5
RIGZ				S	Sn	12 35 21.3	-2.1
TARZ	Mount Tarawera	9.13	210	P	Pn	12 33 36.1	-6.1
RTZ	Ruatahuna	9.27	206	P	Pn	12 33 43.9	-0.2
SNGZ	Shannon Statio	9.28	204	P	Pn	12 33 44.1	-0.1
SNGZ				S	Sn	12 35 27.5	-1.1
MTHZ	Maungataniwha	9.52	206	P	Pn	12 33 44.6	-2.9
BKZ	Black Stump Fm	9.93	207	Pn	Pn	12 33 54.3	+1.2
BKZ	Black Stump Fm	9.93	207	P	Pn	12 33 51.7	-1.4
BKZ				S	Sn	12 35 42.4	-2.3
HIZ	Hauiti	10.12	215	P	Pn	12 34 04.5	+8.9
OTVZ	Oturere	10.27	210	P	Pn	12 33 59.3	+1.4
OTVZ				S	Sn	12 35 52.3	-0.8
PXZ	Pawanui	10.56	203	S	Sn	12 35 55.6	-4.4
BFZ	Birch Farm	11.35	204	Pn	Pn	12 34 14.2	+1.6
BFZ	Birch Farm	11.35	204	P	Pn	12 34 08.8	-3.7
BFZ				S	Sn	12 36 11.0	-8.4
MRZ	Mangatainoka R	11.57	206	P	Pn	12 34 12.1	-3.5
MRZ				S	Sn	12 36 16.6	-8.3
THZ	Tophouse	13.60	211	Pn	Pn	12 34 46.0	+2.7
RPZ	Rata Peaks	15.98	211	Pn	Pn	12 35 16.3	+1.1
	0.7nm,0.3s,baz=35,slow=13,SNR=1.6						
RPZ				Sn	Sn	12 37 57.1	-15
	0.4nm,0.3s,baz=5.9,slow=20,SNR=1.3						
DZM	Mont Dzumac	16.39	297	Pn	P	12 35 22.9	-0.6
	0.4nm,0.3s,baz=119,slow=19,SNR=2.0						
ARMA	Armidale	26.35	262	P	P	12 37 08.7	+2.0
EIDS	Eidsvold	27.93	273	P	P	12 37 22.2	+1.4
EIDS				IAmb	IAmb	12 37 26.4	
	comp=Z,10nm,1.3s						
CAN	Canberra	28.25	251	P	P	12 37 25.8	+2.1
TOO	Toolangi	31.14	247	P	P	12 37 51.4	+2.1
TARA	Tarawa	32.80	343	P	P	12 38 02.4	-1.5
CTAO	Charters Tower	33.98	279	P	P	12 38 15.7	+1.3
STKA	Stephens Creek	34.66	257	P	P	12 38 22.6	+2.4
	comp=Z,15nm,0.8s,baz=99,slow=11,SNR=18						
STKA	Stephens Creek	34.66	257	P	P	12 38 21.6	+1.5
PMG	Port Moresby	38.78	295	P	P	12 38 54.6	-0.7
BBOO	Buckleboo	39.15	254	P	P	12 38 59.8	+1.5
COEN	Coen	39.45	286	P	P	12 39 02.7	+1.8
COEN				IAmb	IAmb	12 39 22.2	
	comp=Z,12nm,1.4s						
AS31	Alice Springs	43.30	267	P	P	12 39 32.8	+0.3
AS31				IAmb	IAmb	12 39 33.6	
	comp=Z,2.5nm,0.4s						
ASAR	Alice Springs	43.30	267	P	P	12 39 32.7	+0.1
	comp=Z,3.9nm,0.3s,baz=104,slow=7.4,SNR=157						
MANU	Manus Island	43.41	304	P	P	12 39 34.2	+0.7
WR0	Warramunga Arr	44.11	272	P	P	12 39 39.4	+0.4
WB2	Warramunga Arr	44.28	272		P	12 39 40.5	+0.1
WRA	Warramunga Arr	44.29	272	P	P	12 39 40.6	0.0
	comp=Z,11nm,0.3s,baz=110,slow=8.1,SNR=224						
WRA	Warramunga Arr	44.29	272	P	P	12 39 40.5	0.0
WB0	Warramunga Arr	44.31	272		P	12 39 40.7	0.0
FORT	Forrest	46.23	255	P	P	12 39 56.6	+0.8
MTN	Manton Dam	50.17	279	P	P	12 40 25.4	-1.0
FITZ	Fitzroy Crossi	52.55	270	P	P	12 40 43.8	-0.4
CASY	Casey	55.23	208	P	P	12 41 03.9	+0.7
BATI	Baumata	57.84	277	LR	LR	13 04 33.5	
	comp=Z,141nm,18.4s,baz=206,slow=34						
QSPA	South Pole Qui	59.71	180	P	P	12 41 33.9	-1.0
SNAA	Sanae	78.15	178	P	P	12 43 30.6	+1.2
SNAA	Sanae	78.15	178	P	P	12 43 29.5	+0.1
SNAA				IAmb	IAmb	12 43 37.8	
	comp=Z,2.7nm,0.8s						
VNA3	Neumayer Olymp	78.29	176	P	P	12 43 31.1	+1.0
VNA2	Neumayer--Watz	78.73	177	P	P	12 43 33.9	+1.4
	baz=176,slow=5.1						
H03S2	Juan Fernandez	80.31	123	T	T	14 12 56.0	
	baz=238,slow=74,SNR=41						
H03S1	Juan Fernandez	80.32	123	T	T	14 12 57.2	
	baz=238,slow=74,SNR=52						
H03S3	Juan Fernandez	80.33	123	T	T	14 12 56.2	
	baz=238,slow=74,SNR=46						
H03N3	Juan Fernandez	80.50	123	T	T	14 13 11.9	
	baz=242,slow=72,SNR=17						
H03N2	Juan Fernandez	80.50	123	T	T	14 13 10.4	
	baz=242,slow=72,SNR=24						
H03N1	Juan Fernandez	80.52	123	T	T	14 13 03.4	
	baz=242,slow=72,SNR=28						
KSRS	Korea Array	84.47	320	P	P	12 44 04.8	+1.7
	comp=Z,0.7nm,0.8s,baz=151,slow=5.8,SNR=3.4						
PETK	Petropavlovsk-	85.86	345	P	P	12 44 10.9	+1.1
	comp=Z,3.5nm,1.0s,baz=147,slow=9.1,SNR=5.0						
NVAR	Mina Array Bea	88.11	43	P	P	12 44 22.9	+1.5
	comp=Z,0.4nm,0.7s,baz=229,slow=9.1,SNR=5.3						
PDAR	Pinedale Array	96.00	43	LR	LR	13 19 18.3	
	comp=Z,99nm,21.4s,baz=272,slow=30						
MKAR	Makanchi Array	117.92	310	PKP	PKPdf	12 50 15.6	-1.4
	comp=Z,0.3nm,0.6s,baz=214,slow=1.9,SNR=5.4						
MKAR	Makanchi Array	117.92	310		PKPdf	12 50 15.8	-1.1
KKAR	Karatay Array	125.23	304		PKPdf	12 50 30.6	-0.5
ARCES	ARCESS Array B	138.63	348	PKhKP	PKPpre	12 50 49.8	
	comp=Z,9.1nm,1.1s,baz=19,slow=7.7,SNR=1.5						
ARCES				PKP	sPKPdf	12 50 58.9	+0.3
	comp=Z,4.4nm,1.0s,baz=52,slow=1.5,SNR=1.2						
H10N3	ASCENSION HYDR	138.73	154	T	T	15 26 45.7	
	baz=203,slow=75,SNR=35						
H10N1	ASCENSION HYDR	138.73	154	T	T	15 26 45.1	
	baz=203,slow=75,SNR=49						
H10N2	ASCENSION HYDR	138.75	154	T	T	15 26 46.1	
	baz=203,slow=75,SNR=42						
FINES	FINESS Array B	145.21	340	PKPbc	PKPbc	12 51 05.9	-1.2
	comp=Z,5.4nm,0.5s,baz=52,slow=4.0,SNR=58						
NB2	NORSAR Subarra	148.78	352	PKP	PKPbc	12 51 15.9	-1.5
	comp=Z,0.6nm,0.5s,baz=20,slow=2.8						
NOA	NORSAR Array B	148.78	352	PKPbc	PKPbc	12 51 16.7	-0.7
	comp=Z,0.8nm,0.6s,baz=14,slow=4.2,SNR=2.4						
AKASG	Malin Array Be	151.41	323	PKPbc	PKPbc	12 51 23.1	-0.9
	comp=Z,3.8nm,0.7s,baz=46,slow=3.1,SNR=8.3						
AKASG	Malin Array Be	151.41	323		PKPbc	12 51 22.9	-1.1
TORD	Torodi Ar. Bea	162.82	178	PKPab	PKPab	12 52 23.2	+1.1
	comp=Z,1.1nm,0.6s,baz=232,slow=1.7,SNR=3.6						

IDC 01 12:32:59.1±705.0**, 46°.39N**×**64°.24E, h0**^{km}**, Error ellipse: s-maj=250.6km s-min=121.5km az=142.0, Western Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I31KZ	AKTYUBINSK INF	5.77	316	*i*		13 09 00.0	
	baz=132,slow=333,SNR=0.9						
I46RU	ZALESOVO INFRA	15.16	53	*i*		14 08 50.0	
	baz=249,slow=342,SNR=1.5						
I18DK	QAANAAQ INFRAS	53.11	349	*i*		18 37 30.0	
	baz=24,slow=345,SNR=1.6						
I53US	FAIRBANKS INFR	66.28	14	*i*		19 43 40.0	
	baz=333,slow=330,SNR=1.7						

IDC 01 12:43:03.3±4.6**, 30°.33N**×**141°.68E, h0**^{km}**, mb3.3**/4**, mb1 3.5**/5**, mb1mx3.3**/44**, mbtmp3.3**/5**, ML2.3**/1**, Error ellipse: s-maj=178.7km s-min=24.7km az=71.0, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MJAR	Matsushiro Arr	6.84	336	Pn	Pn	12 44 43.3	-1.7
	0.1nm,0.3s,baz=156,slow=11,SNR=5.0						
SONM	Songino Array	32.13	313	P	P	12 49 34.3	+1.7
	0.3nm,0.8s,baz=101,slow=7.5,SNR=1.9						
MKAR	Makanchi Array	48.12	307	P	P	12 51 43.9	-1.1
	0.1nm,0.4s,baz=87,slow=9.1,SNR=2.1						
WRA	Warramunga Arr	50.48	189	P	P	12 52 02.8	-0.3
	0.2nm,0.2s,baz=6.0,slow=7.6,SNR=5.5						
ASAR	Alice Springs	54.20	189	P	P	12 52 30.8	0.0
	0.4nm,0.9s,baz=13,slow=8.7,SNR=2.3						

IDC 01 12:51:36.6±2.9**, 18°.48S**×**177°.75W, h0**^{km}**, mb3.5**/4**, mb1 3.9**/4**, mb1mx3.6**/48**, mbtmp3.5**/4**, Error ellipse: s-maj=240.1km s-min=26.7km az=156.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	45.15	260	P	P	12 59 56.0	+0.6
	0.3nm,0.3s,baz=95,slow=8.4,SNR=10						
ASAR	Alice Springs	45.25	255	P	P	12 59 55.1	-1.1
	0.5nm,0.8s,baz=86,slow=6.9,SNR=5.3						
NVAR	Mina Array Bea	79.40	43	P	P	13 03 44.9	-0.1
	0.5nm,0.7s,baz=225,slow=8.1,SNR=6.7						
TXAR	Lajitas Array	85.77	57	P	P	13 04 18.5	+0.2
	0.3nm,0.9s,baz=234,slow=5.5,SNR=2.0						

*ATH **01** 12:53:13.0, 38°.31N×20°.44E, h12^{km}±1^{km}, ML2.8/4, Error ellipse: s-maj=1.9km s-min=0.6km az=267.0*

*THE **01** 12:53:13.1, 38°.30N×20°.44E, h10^{km}, ML2.6/7, Error ellipse: s-maj=0.8km s-min=0.3km az=268.0*

ISC 01 12:53:12.1±0.8**, 38°.30N**±0°.02×**20°.41E**±0°.03**, h17**^{km}±4^{km}**, n50, σ0^{s}.85**/81**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEF4	Livadi, Kephal	0.04	163	P	Pg	12 53 15.2	+0.1
KEF4				S	Sg	12 53 17.0	-0.2
KEF4	Livadi, Kephal	0.04	163	P	Pg	12 53 15.2	+0.1
KEF4				S	Sg	12 53 16.9	-0.2
KEF5	Kardakata, Kep	0.05	116	P	Pg	12 53 15.0	-0.3
KEF5				S	Sg	12 53 16.2	-1.1
KEF5	Kardakata, Kep	0.05	116	P	Pg	12 53 14.9	-0.3
KEF5				S	Sg	12 53 15.9	-1.4
DMLN	Damoulianata-K	0.07	204	P	Pg	12 53 15.7	+0.4
DMLN				S	Sg	12 53 17.8	+0.3
DMLN	Damoulianata-K	0.07	204	P	Pg	12 53 15.7	+0.4
DMLN				S	Sg	12 53 17.8	+0.3
	12µm,0.3s						
LXRA	Lixouri, Kepha	0.10	167	P	Pg	12 53 16.0	+0.4
LXRA				S	Sg	12 53 18.5	+0.6

KEF3	**Kipouria, Keph**	0.11	206	P	**Pg**	**12 53 15.9**	**+0.2**
KEF3				S	**Sg**	**12 53 18.0**	**0.0**
KEF3	**Kipouria, Keph**	0.11	206	P	**Pg**	**12 53 15.8**	**+0.2**
KEF3				S	**Sg**	**12 53 18.0**	**0.0**
ARGA	**Argostoli. Kep**	0.14	156	P	**Pg**	**12 53 16.1**	**+0.2**
ARGA				S	**Sg**	**12 53 18.5**	**0.0**
VLS	**Valsamata**	0.19	131	P	**Pg**	**12 53 16.7**	**0.0**
VLS				S	**Sg**	**12 53 19.6**	**-0.3**
VLS				AML	AML	12 53 19.9	
	comp=N,13760µm,0.1s						
VLS				AML	AML	12 53 19.9	
	comp=E,11220µm,0.1s						
VLS	**Valsamata**	0.19	131	P	**Pg**	**12 53 16.7**	**0.0**
VLS				S	**Sg**	**12 53 19.6**	**-0.3**
FSK	**Fiskardo**	0.20	37	P	**Pg**	**12 53 17.1**	**+0.1**
FSK				S	**Sg**	**12 53 19.9**	**-0.3**
FSK				AML	AML	12 53 20.6	
	comp=E,13158µm,0.2s						
FSK				AML	AML	12 53 21.0	
	comp=N,7140µm,0.2s						
FSK	**Fiskardo**	0.20	37	P	**Pg**	**12 53 17.0**	**+0.1**
FSK				S	**Sg**	**12 53 19.9**	**-0.3**
	comp=N,5µm,0.2s						
PSDA	**Pessada-Kefalo**	0.23	143	P	**Pg**	**12 53 17.5**	**+0.2**
PSDA	**Pessada-Kefalo**	0.23	143	P	**Pg**	**12 53 17.6**	**+0.2**
PSDA				S	**Sg**	**12 53 20.9**	**-0.1**
	comp=N,282nm,0.3s						
EVGI	**Lefkada island**	0.37	31	P	**Pg**	**12 53 20.2**	**+0.4**
EVGI				S	**Sg**	**12 53 26.0**	**+0.9**
EVGI	**Lefkada island**	0.37	31	P	**Pg**	**12 53 20.2**	**+0.4**
EVGI				S	**Sg**	**12 53 26.0**	**+0.9**
DRAG	**Dragano-Lefkad**	0.40	19	P	**Pg**	**12 53 20.7**	**+0.3**
DRAG				S	**Sg**	**12 53 26.5**	**+0.5**
DRAG	**Dragano-Lefkad**	0.40	19	P	**Pg**	**12 53 20.7**	**+0.3**
DRAG				S	**Sg**	**12 53 26.5**	**+0.5**
VLMS	**Volimes, Zakyn**	0.47	155	P	**Pg**	**12 53 21.6**	**+0.1**
VLMS				S	**Sb**	**12 53 29.2**	**+0.7**
VLMS				AML	AML	12 53 33.4	
	comp=E,2467µm,0.2s						
VLMS				AML	AML	12 53 35.6	
	comp=N,3065µm,0.3s						
VLMS	**Volimes, Zakyn**	0.47	155	P	**Pg**	**12 53 21.8**	**+0.3**
VLMS				S	**Sb**	**12 53 29.5**	**+0.9**
	comp=N,1µm,0.1s						
NYDR	**Nydri-Lefkada**	0.47	29	P	**Pg**	**12 53 21.6**	**0.0**
NYDR				S	**Sg**	**12 53 28.2**	**+0.2**
NYDR	**Nydri-Lefkada**	0.47	29	P	**Pg**	**12 53 21.7**	**+0.1**
NYDR				S	**Sg**	**12 53 28.2**	**+0.2**
	comp=N,532nm,0.3s						
LKD2	**Lefkada island**	0.53	22	P	**Pg**	**12 53 22.5**	**-0.1**
LKD2	**Lefkada island**	0.53	22	P	**Pg**	**12 53 22.8**	**+0.2**
LKD2				S	**Sb**	**12 53 30.9**	**+0.6**
	comp=N,385nm,0.2s						
TSLK	**Tsoukalades, L**	0.56	20	P	**Pg**	**12 53 23.5**	**+0.3**
TSLK	**Tsoukalades, L**	0.56	20	P	**Pg**	**12 53 23.5**	**+0.3**
AST1	**Astakos**	0.59	66	P	**Pg**	**12 53 23.5**	**-0.2**
AST1				S	**Sb**	**12 53 32.6**	**+0.7**
PDO	**Prodromos**	0.68	64	P	**Pg**	**12 53 25.4**	**0.0**
PDO				AML	AML	12 53 39.0	
	comp=E,1081µm,0.4s						
PDO				AML	AML	12 53 39.8	
	comp=N,1013µm,0.5s						
PDO	**Prodromos**	0.68	64	P	**Pg**	**12 53 25.4**	**0.0**
LTHK	**Lithakia**	0.68	150	P	**Pg**	**12 53 25.3**	**-0.1**
LTHK				S	**Sb**	**12 53 35.8**	**+1.2**
LTHK	**Lithakia**	0.68	150	P	**Pg**	**12 53 25.3**	**-0.1**
LTHK				S	**Sb**	**12 53 35.8**	**+1.2**
	comp=N,1µm,0.2s						
RLS	**Riolos of Patr**	0.87	106	P	**Pg**	**12 53 28.5**	**-0.5**
EFP	**Efpalio**	1.18	83	P	**Pb**	**12 53 33.9**	**-0.2**
EFP	**Efpalio**	1.18	83	P	**Pb**	**12 53 33.9**	**-0.2**
ANX	**Ano Chora**	1.22	76	P	**Pb**	**12 53 35.2**	**+0.3**
ANX	**Ano Chora**	1.22	76	P	**Pb**	**12 53 35.1**	**+0.3**
IGT	**Igoumenitsa**	1.23	357	P	**Pn**	**12 53 35.5**	**+0.9**
IGT	**Igoumenitsa**	1.23	357	P	**Pn**	**12 53 35.5**	**+0.9**
KLV	**Kalavryta, Ach**	1.40	100	P	**Pn**	**12 53 37.7**	**+0.8**
KLV	**Kalavryta, Ach**	1.40	100	P	**Pn**	**12 53 37.7**	**+0.8**
STON	**Ston**	5.01	337	*e*Pn	**Pn**	**12 54 26.7**	**+0.2**
STON				Sn	**Sn**	**12 55 21.4**	**-2.5**
MAKA	**Makarska**	5.61	334	*e*Pn	**Pn**	**12 54 35.0**	**+0.3**
MAKA				Sn	**Sn**	**12 55 36.5**	**-2.2**
HVAR	**Hvar**	5.72	330	*e*Pn	**Pn**	**12 54 37.1**	**+0.8**
HVAR				Sn	**Sn**	**12 55 38.0**	**-3.5**
RICI	**Ricice**	5.75	335	*e*Pn	**Pn**	**12 54 37.5**	**+0.8**
RICI				Sn	**Sn**	**12 55 39.8**	**-2.5**
KIJV	**Kijevo**	6.45	333	*e*Pn	**Pn**	**12 54 47.1**	**+0.9**
ZIRJ	**Zirje**	6.45	328	*e*Pn	**Pn**	**12 54 47.1**	**+0.9**
MORI	**Morici**	6.60	329	*i* Pn	**Pn**	**12 54 49.5**	**+1.3**
UDBI	**Udbina**	7.13	332	*e*Pn	**Pn**	**12 54 57.9**	**+2.2**

*NEIC **01** 13:19:22.1±0.7, 14°.71S±0°.08×167°.3E±0°.1, h134^{km}±5^{km}, mb4.6/28, Error ellipse: s-maj=19.9km s-min=11.1km az=102.0*

*IDC **01** 13:19:24.3±2.7, 14°.81S×167°.28E, h148^{km}±23^{km}, mb3.7/9, mb1 3.9/11, mb1mx3.6/33, mbtmp4.2/11, Error ellipse: s-maj=23.6km s-min=14.7km az=72.0*

ISC 01 13:19:21.8±0.6, **14°.76S**±0°.07×**167°.44E**±0°.09, **h129**^{km}, **n50**, σ**1^{s}18**/50, **mb4.4**/22, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	0.72	198	Pn	**Pn**	**13 19 43.8**	**+1.6**
SANVU				Sn	**Sn**	**13 19 59.2**	**+1.5**
DZM	**Mont Dzumac**	7.33	187	P	**Pn**	**13 21 07.7**	**+1.4**
	3.3nm,0.3s,baz=95,slow=12,SNR=15						
DZM				S	**Sn**	**13 22 28.4**	**+0.2**
	2.4nm,0.3s,baz=160,slow=22,SNR=3.8						
DZM	**Mont Dzumac**	7.33	187		**Pn**	**13 21 08.4**	**+2.1**
HNR	**Honiara**	9.04	305	P	**Pn**	**13 21 32.2**	**+3.0**
	15nm,0.3s,baz=59,slow=12,SNR=1.2						
HNR				S	**Sn**	**13 23 10.5**	**+1.1**
	7.4nm,0.3s,baz=166,slow=10,SNR=1.4						
EIDS	**Eidsvold**	18.62	233	P	**P**	**13 23 28.8**	**-0.6**
CTAO	**Charters Tower**	20.89	252	P	**P**	**13 23 52.5**	**-1.4**
OUZ	**Omahuta**	21.11	166	P	**P**	**13 23 55.4**	**-0.8**
URZ	**Urewera**	24.92	162	P	**P**	**13 24 33.6**	**+0.7**
URZ				IAmb	IAmb	13 24 40.1	
	comp=Z,8.6nm,1.0s						
BKZ	**Black Stump Fm**	25.59	164	P	**P**	**13 24 39.4**	**+0.5**
BKZ				IAmb	IAmb	13 24 53.2	
	comp=Z,17nm,1.3s						
TUWZ	**Tuamarina**	27.17	169	P	**P**	**13 24 54.6**	**+1.6**
THZ	**Tophouse**	27.32	171	P	**P**	**13 24 54.9**	**+0.4**
MSWZ	**Moikau Station**	27.41	167	P	**P**	**13 24 54.5**	**-0.7**
PLWZ	**Palliser**	27.56	167	P	**P**	**13 24 57.2**	**+0.6**
LTZ	**Lake Taylor**	28.23	172	P	**P**	**13 25 03.2**	**+0.6**
LTZ				IAmb	IAmb	13 25 20.9	
	comp=Z,26nm,1.3s						
OXZ	**Oxford**	28.74	173	P	**P**	**13 25 07.3**	**+0.3**
RPZ	**Rata Peaks**	29.02	175	P	**P**	**13 25 11.0**	**+1.5**
	comp=Z,4.6nm,0.6s,baz=296,slow=4.1,SNR=6.5						
RPZ	**Rata Peaks**	29.02	175	IAmb	IAmb	13 25 29.1	
	comp=Z,26nm,1.2s						
STKA	**Stephens Creek**	29.10	230	P	**P**	**13 25 10.0**	**-0.4**
	comp=Z,3.2nm,0.4s,baz=54,slow=9.5,SNR=20						
STKA	**Stephens Creek**	29.10	230	IAmb	IAmb	13 25 16.3	
	comp=Z,0.7nm,0.7s						
LBZ	**Lake Benmore**	29.62	176	P	**P**	**13 25 15.4**	**+0.6**
LBZ				IAmb	IAmb	13 25 27.6	
	comp=Z,18nm,1.3s						
ODZ	**Otahua Downs**	30.31	175	P	**P**	**13 25 20.8**	**-0.1**
ODZ				IAmb	IAmb	13 25 37.8	
	comp=Z,16nm,1.2s						
WR0	**Warramunga Arr**	31.79	256	P	**P**	**13 25 32.9**	**-1.3**
WR0				IAmb	IAmb	13 25 40.3	
	comp=Z,5.8nm,1.2s						
RAR	**Rarotonga**	31.80	106	P	**P**	**13 25 35.5**	**+1.2**
WB0	**Warramunga Arr**	31.91	256	P	**P**	**13 25 34.0**	**-1.3**
WB0				IAmb	IAmb	13 25 51.9	
	comp=Z,8.9nm,1.3s						
WB2	**Warramunga Arr**	31.96	256	P	**P**	**13 25 34.9**	**-0.9**
WB2				IAmb	IAmb	13 26 02.6	
	comp=Z,8.2nm,1.4s						
WRAB	**Tennant Creek**	31.96	256	P	**P**	**13 25 34.7**	**-1.1**
WRAB				IAmb	IAmb	13 25 35.9	
	comp=Z,6.4nm,0.8s						
WRA	**Warramunga Arr**	31.98	256	P	**P**	**13 25 34.5**	**-1.4**
	comp=Z,0.3nm,0.3s,baz=82,slow=7.7,SNR=14						
WRA				PcP	**PcP**	**13 28 23.1**	**0.0**
	comp=Z,0.2nm,0.6s,baz=88,slow=3.5,SNR=1.3						
WRA	**Warramunga Arr**	31.98	256	P	**P**	**13 25 35.0**	**-0.8**
AS31	**Alice Springs**	32.81	249	P	**P**	**13 25 41.6**	**-1.6**
ASAR	**Alice Springs**	32.81	249	P	**P**	**13 25 42.0**	**-1.1**
	comp=Z,1.0nm,0.4s,baz=75,slow=9.5,SNR=34						
ASAR				PcP	**PcP**	**13 28 24.9**	**-0.4**
	comp=Z,0.3nm,0.6s,baz=75,slow=2.6,SNR=5.5						
ASAR	**Alice Springs**	32.81	249	P	**P**	**13 25 41.8**	**-1.4**
BBOO	**Buckleboo**	33.69	232	P	**P**	**13 25 49.6**	**-1.1**
BBOO				IAmb	IAmb	13 26 08.4	
	comp=Z,25nm,1.3s						
FITZ	**Fitzroy Crossi**	40.17	259	P	**P**	**13 26 45.5**	**-0.1**
NWAO	**Narrogin (SRO)**	48.87	239	P	**P**	**13 27 53.7**	**-0.9**
MORW	**Morawa**	49.40	244	P	**P**	**13 27 57.5**	**-1.1**
MORW				IAmb	IAmb	13 28 14.7	
	comp=Z,19nm,1.4s						
VNDA	**Vanda**	62.84	181	P	**P**	**13 29 33.8**	**+0.4**
	comp=Z,7.4nm,1.1s,baz=360,slow=8.9,SNR=6.6						
VNDA	**Vanda**	62.84	181	IAmb	IAmb	13 29 35.5	
	comp=Z,39nm,1.4s						
SBA	**Scott Base**	63.11	180	P	**P**	**13 29 36.4**	**+1.3**
CASY	**Casey**	63.56	202	P	**P**	**13 29 37.5**	**-0.7**
CASY				IAmb	IAmb	13 29 59.1	
	comp=Z,16nm,1.1s						
QSPA	**South Pole Qui**	75.27	180	P	**P**	**13 30 50.4**	**0.0**
QSPA				IAmb	IAmb	13 30 51.3	
	comp=Z,4.3nm,0.9s						
SONM	**Songino Array**	82.62	324	P	**P**	**13 31 31.3**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=120,slow=3.8,SNR=2.5						
SKT	**Skwentna**	83.02	18	P	**P**	**13 31 29.3**	**-3.0**
SKT				IAmb	IAmb	13 31 30.9	
	comp=Z,11nm,0.8s						
ILAR	**Eielson Array**	86.50	18	P	**P**	**13 31 49.3**	**-0.4**
	comp=Z,0.7nm,0.8s,baz=231,slow=4.2,SNR=8.9						
VNA3	**Neumayer Olymp**	94.19	181	P	**P**	**13 32 24.0**	**-1.7**
VNA2	**Neumayer--Watz**	94.45	182	P	P	13 32 21.6	-5.3
MKAR	**Makanchi Array**	97.34	316	P	Pdif	13 32 40.4	-0.1
	comp=Z,0.2nm,0.5s,baz=84,slow=7.3,SNR=5.3						
MKAR	**Makanchi Array**	97.34	316	P	**P**	**13 32 39.8**	**-0.6**
YKA	**Yellowknife Ar**	97.50	27	P	**P**	**13 32 41.0**	**+0.3**
	comp=Z,0.2nm,0.7s,baz=252,slow=3.6,SNR=3.1						
ARCES	**ARCESS Array B**	120.32	345	PKP	**PKPdf**	**13 37 57.1**	**0.0**
	comp=Z,3.1nm,0.9s,baz=64,slow=1.9,SNR=23						
FINES	**FINESS Array B**	125.81	338	PKP	**PKiKP**	**13 38 08.7**	**+0.5**
	comp=Z,4.7nm,1.1s,baz=139,slow=4.1,SNR=3.9						

IDC 01 13:30:33.1±2.6, **2°.57N**×**128°.89E**, **h0**^{km}, **mb3.2**/3, **mb1 3.4**/3, **mb1mx3.1**/54, **mbtmp3.2**/3, **Error ellipse: s-maj=170.8km s-min=28.8km az=68.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	23.00	167	P	P	13 35 40.6	+0.9
	0.1nm,0.3s,baz=347,slow=11,SNR=5.8						
ASAR	**Alice Springs**	26.53	170	P	P	13 36 11.8	-0.9
	0.2nm,0.7s,baz=346,slow=7.5,SNR=4.7						
MKAR	**Makanchi Array**	59.74	325	P	P	13 40 39.9	+0.1
	0.3nm,0.5s,baz=116,slow=9.8,SNR=1.8						

*IDC **01** 13:31:49.8±2.1, 22°.70N×12°.34W, h0^{km}, mb3.6/5, mb1 3.8/8, mb1mx3.5/55, mbtmp3.7/8, ML3.7/3, Error ellipse: s-maj=58.0km s-min=27.0km az=66.0*

ISC 01 13:31:52.4±1.5, **22°.7N**±0°.1×**11°.9W**±0°.2, **h10**^{km}, **n10**, σ**2^{s}10**/10, **mb3.6**/5, **Mauritania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOWA	**Kowa**	11.10	136	Pn	**Pn**	**13 34 33.4**	**+2.1**
	0.8nm,0.3s,baz=321,slow=10,SNR=11						
KOWA				Sn	**Sn**	**13 36 35.4**	**-0.2**
	0.5nm,0.3s,baz=61,slow=21,SNR=5.9						
KOWA				Lg	Lg	13 37 40.7	
	baz=54,slow=19,SNR=1.2						
MDT	**Midelt**	11.97	31	Lg	Lg	13 38 05.1	
	0.1nm,0.3s,baz=284,slow=12,SNR=1.7						
TORD	**Torodi Ar. Bea**	16.08	124	Pn	**Pn**	**13 35 39.3**	**+0.6**
	0.1nm,0.3s,baz=316,slow=11,SNR=4.5						
TORD				Sn	**Sn**	**13 38 33.0**	**-4.2**
	0.1nm,0.3s,baz=318,slow=23,SNR=1.8						
I17CI	**DIMBOKRO INFRA**	17.36	156	*i*		15 23 50.0	
	baz=339,slow=313,SNR=1.5						
DBIC	**Dimbokro**	17.36	156	P	**P**	**13 35 55.8**	**-0.4**
	0.3nm,0.3s,baz=327,slow=9.0,SNR=5.1						
GERES	**GERESS Array B**	33.06	32	P	**P**	**13 38 28.4**	**+0.3**
	0.5nm,0.7s,baz=217,slow=9.7,SNR=2.6						
FINES	**FINESS Array B**	46.66	24	P	**P**	**13 40 20.9**	**0.0**
	4.1nm,1.1s,baz=232,slow=6.8,SNR=1.4						
KURBB	**Kurchatov Arra**	73.08	42	P	**P**	**13 43 24.1**	**+1.3**
	0.3nm,0.5s,baz=280,slow=5.6,SNR=2.3						
YKA	**Yellowknife Ar**	75.75	332	P	**P**	**13 43 35.9**	**-2.2**
	0.3nm,1.0s,baz=72,slow=7.9,SNR=2.3						
MKAR	**Makanchi Array**	76.58	45	P	**P**	**13 43 44.3**	**+1.2**
	0.3nm,0.5s,baz=288,slow=5.7,SNR=7.2						

*NDI **01** 13:33:01.0±4.9, 24°.99N×96°.94E, h21^{km}±17^{km}, mb4.2, ML3.5, mb4.1(NEIC)*

*IDC **01** 13:33:01.2±1.1, 25°.08N×96°.34E, h0^{km}, mb3.9/8, mb1 4.0/9, mb1mx3.7/64, mbtmp3.9/9, ML4.0/1, MS3.3/4, Ms1 3.3/4, ms1mx3.0/58, Error ellipse: s-maj=54.5km s-min=18.1km az=69.0*

*NEIC **01** 13:33:06.6±1.7, 24°.9N±0°.1×96°.5E±0°.1, h62^{km}±11^{km}, mb4.1/10, Error ellipse: s-maj=24.0km s-min=4.6km az=52.0*

ISC 01 13:33:02.9±0.7, **25°.14N**±0°.07×**96°.64E**±0°.06, **h10**^{km}, **n55**, σ**1^{s}81**/55, **mb4.0**/12, **Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOKO	**MOKOCHONG**	2.25	302	*e*P	**Pb**	**13 33 42.3**	**-1.4**
MOKO				*e*P	**Pn**	**13 33 42.5**	**+2.2**
MOKO				*e*S	**Sb**	**13 34 12.9**	**+1.3**
MOKO				*e*S	**Sg**	**13 34 15.3**	**+0.1**
LKP	**Lekhapani**	2.30	342	*e*P	**Pb**	**13 33 43.0**	**-1.5**
LKP				IAML		13 34 26.7	
	comp=E,648nm,0.8s						
LKP				IAML		13 34 27.0	
	comp=N,389nm,0.6s						
KOHI	**KOHIMA**	2.36	285	*e*P	**Pb**	**13 33 43.9**	**-1.7**
KOHI				*e*S	**Sb**	**13 34 14.7**	**-0.1**
KOHI				IAML		13 34 27.8	
	comp=E,747nm,0.7s						
KOHI				IAML		13 34 29.6	
	comp=Z,275nm,0.6s						
KOHI				IAML		13 34 31.0	
	comp=N,663nm,1.3s						
JORH	**JORHAT**	2.68	307	*e*P	**Pn**	**13 33 46.7**	**+0.6**
JORH				*e*P	**Pb**	**13 33 51.0**	**+0.1**
JORH				IAML		13 34 31.2	
	comp=E,596nm,0.8s						
JORH				IAML		13 35 17.3	
	comp=Z,236nm,1.3s						
ZIRO	**ZIRO**	3.45	314	*e*PN	**Pn**	**13 33 57.2**	**+0.3**
ZIRO				*i* PG	**Pb**	**13 34 02.8**	**-1.5**
TEZP	**TEZPUR**	3.76	294	*e*P	**Pn**	**13 34 01.2**	**+0.3**
TEZP				IAML		13 34 46.4	
	comp=E,109nm,0.6s						
SAIH	**SAIHA**	4.25	233	*e*P	**Pn**	**13 34 08.2**	**+0.4**
SAIH				*e*P	**Pn**	**13 34 09.4**	**+1.5**
SAIH				*e*x	x	13 35 04.7	
SAIH				*e*x	x	13 35 05.3	
SAIH				IAML		13 35 18.0	
	comp=E,153nm,0.9s						
SAIH				IAML		13 35 22.5	
	comp=N,108nm,1.2s						
SHL	**Shillong**	4.32	277	*e*P	**Pn**	**13 34 08.3**	**-0.5**
SHL				*e*P	**Pn**	**13 34 08.4**	**-0.5**
SHL				*e*S	**Sn**	**13 34 58.3**	**-1.1**
SHL				*e*x	x	13 35 10.3	
SHL				IAML		13 35 20.1	
	comp=N,254nm,0.3s						
SHL				IAML		13 35 21.1	
	comp=E,79nm,0.0s						
SHL	**Shillong**	4.32	277	Pn	**Pn**	**13 34 08.0**	**-0.9**
GUWA	**GUWAHATI**	4.58	284	*e*P	**Pn**	**13 34 11.7**	**-0.5**
GUWA				*e*x	x	13 34 11.7	
GUWA				*e*x	x	13 35 02.3	
GUWA				*e*S	**Sn**	**13 35 02.9**	**-2.8**
GUWA				IAML		13 35 12.4	
	comp=N,62nm,0.6s						
GUWA				IAML		13 35 16.7	
	comp=E,51nm,0.8s						
CM33	**Chiang Mai Arr**	6.64	161	P	Pb	13 34 50.0	-8.5
CHTO	**Chiang Mai**	6.64	161	Pn	**Pn**	**13 34 40.1**	**-0.5**
CMMT	**Chiang Mai**	6.65	161	P	Pb	13 34 49.3	-9.3
LSA	**Lhasa**	6.67	314	Pn	**Pn**	**13 34 43.9**	**+2.6**
CM32	**Chiang Mai Arr**	6.77	162	P	Pb	13 34 52.0	-8.7
CM36	**Chiang Mai Arr**	6.97	160	P	Pn	13 34 52.0	+6.9
CM15	**Chiang Mai Arr**	6.98	162	P	Pn	13 34 53.0	+7.7
CM31	**Chiang Mai Arr**	6.98	162	P	Pb	13 34 56.0	-8.3
CM31	**Chiang Mai Arr**	6.98	162	Pn	**Pn**	**13 34 43.2**	**-2.0**
CMAR	**Chiang Mai Arr**	6.98	162	Pn	**Pn**	**13 34 44.9**	**-0.3**
	comp=E,0.7nm,0.3s,baz=335,slow=13,SNR=14						
CMAR				Pg	Pg	13 35 10.8	-5.8
	comp=E,0.9nm,0.3s,baz=342,slow=18,SNR=26						
CMAR				Lg	Lg	13 36 44.3	
	comp=E,0.4nm,0.3s,baz=331,slow=31,SNR=5.2						
CMAR				LR	LR	13 37 39.8	
	comp=E,177nm,19.1s,baz=353,slow=40						
CMAR	**Chiang Mai Arr**	6.98	162	Pn	**Pn**	**13 34 43.2**	**-2.1**
CM02	**Chiang Mai Arr**	7.00	162	P	**Pn**	**13 34 48.6**	**+3.1**
CM13	**Chiang Mai Arr**	7.01	162	P	**Pn**	**13 34 48.0**	**+2.4**
CM09	**Chiang Mai Arr**	7.01	161	P	Pn	13 34 53.4	+7.8
CM01	**Chiang Mai Arr**	7.02	162	P	Pb	13 34 57.1	-7.8
CM05	**Chiang Mai Arr**	7.04	162	P	**Pn**	**13 34 49.0**	**+3.0**
CM04	**Chiang Mai Arr**	7.05	162	P	**Pn**	**13 34 49.4**	**+3.2**
GTK	**Tadong**	7.54	289	*e*P	**Pn**	**13 34 55.1**	**+2.1**
GTK				*e*S	**Sn**	**13 36 18.0**	**-0.6**
SUKH	**Sukhothai**	8.11	159	P	**Pn**	**13 35 01.0**	**+0.3**
BHPL	**Bhopal**	17.63	268	*e*x	x	13 37 07.9	
BHPL				*e*P	**Pn**	**13 37 08.2**	**-0.5**
BHPL				*i* pP	**P**	**13 37 14.3**	**+4.5**
BHPL				IAmb	IAmb	13 37 14.6	
	comp=Z,16nm,1.1s						
DHRM	**DHARAMSHALA**	19.18	296	*e*x	**P**	**13 37 31.1**	**+4.2**
DHRM				IAmb	IAmb	13 37 32.0	
	comp=Z,12nm,0.5s						
NIL	**Nilore**	22.04	298	P	**P**	**13 37 56.6**	**-1.1**
PALK	**Pallekele**	23.40	223	LR	LR	13 49 32.9	
	comp=Z,51nm,19.0s,baz=205,slow=43						
SONM	**Songino Array**	23.94	16	P	**P**	**13 38 17.3**	**+0.1**
	comp=Z,0.7nm,0.7s,baz=208,slow=8.2,SNR=4.1						
MK31	**Makanchi Array**	24.46	336	P	**P**	**13 38 20.8**	**-1.1**
MKAR	**Makanchi Array**	24.46	336	P	**P**	**13 38 21.7**	**-0.2**
	comp=Z,2.2nm,0.6s,baz=143,slow=10,SNR=25						
MKAR				LR	LR	13 50 13.6	
	comp=Z,16nm,20.7s,baz=100,slow=42						
MKAR	**Makanchi Array**	24.46	336	P	**P**	**13 38 20.5**	**-1.5**
MAKZ	**Makanchi**	24.59	335	P	**P**	**13 38 21.2**	**-1.9**
AAK	**Ala-Archa**	25.23	319	P	**P**	**13 38 27.8**	**-1.3**
	comp=Z,1.5nm,0.7s,baz=134,slow=5.1,SNR=6.7						
AAK	**Ala-Archa**	25.23	319	P	**P**	**13 38 29.1**	**0.0**
AAK				IAmb	IAmb	13 38 39.5	
	comp=Z,2.8nm,0.7s						
KBL	**Kabul**	25.64	298	P	**P**	**13 38 30.5**	**-2.4**
KBL				IAmb	IAmb	13 38 50.5	
	comp=Z,6.8nm,0.9s						
TLY	**Talaya**	27.04	10	Lg	Lg	13 47 18.4	
	comp=Z,3.5nm,0.7s,baz=82,slow=10,SNR=4.5						
KURBB	**Kurchatov Arra**	29.03	336	P	**P**	**13 39 02.3**	**-0.6**
	comp=Z,0.8nm,0.6s,baz=148,slow=9.3,SNR=8.4						
KURK	**Kurchatov**	29.07	336	P	**P**	**13 39 02.3**	**-0.9**
KURK	**Kurchatov**	29.07	336	IAmb	IAmb	13 39 14.1	
	comp=Z,3.6nm,1.1s						
ZALV	**Zalesovo Beam**	30.10	346	P	**P**	**13 39 11.8**	**-0.6**
	comp=Z,1.2nm,0.5s,baz=160,slow=7.8,SNR=9.5						
BRVK	**Borovoye**	34.21	332	P	**P**	**13 39 46.7**	**-1.7**
GEYT	**Alibeck**	34.98	301	P	**P**	**13 39 59.1**	**+3.7**
	comp=Z,0.6nm,0.5s,baz=96,slow=10,SNR=2.6						
ABKAR	**Akbulak array**	37.31	320	P	**P**	**13 40 13.9**	**-1.3**
ABKAR				IAmb	IAmb	13 40 16.4	
	comp=Z,3.2nm,0.8s						
JHJ	**Hachijo jima 2**	38.31	68	LR	LR	13 57 57.8	
	comp=Z,312nm,19.9s,baz=247,slow=39						
ARCES	**ARCESS Array B**	60.10	337	P	**P**	**13 43 11.2**	**+1.3**
	comp=Z,5.1nm,1.0s,baz=102,slow=8.4,SNR=3.6						
NOA	**NORSAR Array B**	66.16	328	P	**P**	**13 43 50.3**	**0.0**
	comp=Z,0.6nm,0.7s,baz=80,slow=6.3,SNR=2.7						
GERES	**GERESS Array B**	67.00	315	P	**P**	**13 43 53.1**	**-2.9**
	comp=Z,0.7nm,0.8s,baz=62,slow=6.6,SNR=4.7						
IMAR	**Indian Mountai**	74.88	24	P	**P**	**13 44 42.0**	**-1.5**
BMAR	**Burnt Mountain**	77.22	20	P	**P**	**13 44 56.3**	**-0.6**

*NEIC **01** 13:34:02.5, 21°.29S×170°.28E, h10^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.56; M$_{\theta\theta}$-3.01; M$_{\phi\phi}$2.45; M$_{r\theta}$-0.10; M$_{\theta\phi}$-1.44; M$_{\phi r}$0.38; Fault plane solution: M$_0$3.15000×10^{17} NP1:φ$_s$300.68000°, δ83.31000°, λ173.23000°. NP2:φ$_s$31.47000°, δ83.27000°, λ6.73000°. Principal axes: T 2.8763, Plg10.0000°, Azm256.0000°; N 0.4917, Plg80.0000°, Azm76.0000°; P -3.3681, Plg0.0000°, Azm346.0000°;*

*IDC **01** 13:34:02.3±0.5, 21°.24S×170°.35E, h0^{km}, mb4.9/29, mb1 5.1/32, mb1mx4.9/45, mbtmp5.0/32, ML4.9/3, MS5.1/19, Ms1 5.1/19, ms1mx4.9/28 Error ellipse: s-maj=14.2km s-min=11.9km az=157.0*

*NEIC **01** 13:34:03.0±1.7, 21°.27S±0°.07×170°.27E±0°.07, h8^{km}±3^{km}, mb5.5/208, Ms_20 5.4/478, Mwb5.6/37, Mww5.7, Mwc5.7(GCMT), Error ellipse: s-maj=11.0km s-min=8.7km az=150.0*

*NOU **01** 13:34:04.8, 21°.27S×170°.29E, h7^{km}, mb5.5, Southeast of Loyalty Islands*

*MOS **01** 13:34:04.2±1.2, 21°.32S×170°.30E, h24^{km}, mb5.6/49, MS5.3/16, Error ellipse: s-maj=8.5km s-min=7.5km az=49.1*

*GCMT **01** 13:34:08.0±0.1, 21°.26S±0°.01×170°.29E, h16^{km}, MW5.7/156, Moment Tensor Solution. s134, c255; s156, c317; Duration: 1^{s}7 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-1.14±.04; M$_{\theta\theta}$-2.61±.03; M$_{\phi\phi}$3.76±.04; M$_{r\theta}$1.37±.10; M$_{\theta\phi}$-2.10±.03; M$_{\phi r}$1.15±.10; Best double couple: M$_0$4.31900×10^{17} NP1:φ$_s$302.00000°, δ64.00000°, λ-164.00000°. NP2:φ$_s$204.00000°, δ76.00000°, λ-27.00000°. Principal axes: T 4.4850, Plg8.0000°, Azm255.0000°; N -0.3220, Plg60.0000°, Azm358.0000°; P -4.1530, Plg29.0000°, Azm161.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **01** 13:34:08, 21°.27S×170°.30E, h18^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$-1.22; M$_{\theta\theta}$-2.84; M$_{\phi\phi}$4.06; M$_{r\theta}$1.37; M$_{\theta\phi}$-2.30; M$_{\phi r}$0.65; Fault plane solution: M$_0$4.54000×10^{17} NP1:φ$_s$301.00000°, δ70.00000°, λ-162.00000°. NP2:φ$_s$205.00000°, δ73.00000°, λ-21.00000°. Principal axes: T 4.7650, Plg2.0000°, Azm254.0000°; N -0.4919, Plg64.0000°, Azm348.0000°; P -4.2731, Plg26.0000°, Azm162.0000°;*

*BGR **01** 13:34:10.8±0.0, 20°.89S×171°.32E, h33^{km}*

*NEIC **01** 13:34:12, 21°.17S×170°.38E, h14^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.54; M$_{\theta\theta}$-2.52; M$_{\phi\phi}$3.06; M$_{r\theta}$1.06; M$_{\theta\phi}$-2.12; M$_{\phi r}$0.79; Fault plane solution: M$_0$3.77000×10^{17} NP1:φ$_s$298.00000°, δ71.00000°, λ-168.00000°. NP2:φ$_s$204.00000°, δ79.00000°, λ-19.00000°. Principal axes: T 3.8115, Plg6.0000°, Azm252.0000°; N -0.0792, Plg68.0000°, Azm356.0000°; P -3.7323, Plg22.0000°, Azm160.0000°;*

ISC 01 13:34:03.6±0.2, **21°.35S**±0°.04×**170°.38E**±0°.04, **h10**^{km}, **n919**, σ**1^{s}55**/763, **mb5.5**/193, **MS5.3**/290, **33C-28D**, **Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PINNC	**Pines Island,**	3.00	245	P	**Pn**	**13 34 50.9**	**-0.3**
YATNC	**Mamie plateau,**	3.32	257	P	**Pn**	**13 34 54.7**	**-0.9**
OUENC	**Ouen Island, N**	3.45	251	P	**Pn**	**13 34 57.1**	**-0.3**
DZM	**Mont Dzumac**	3.73	258	Pn	**Pn**	**13 35 01.5**	**+0.2**
	70nm,0.3s,baz=113,slow=9.0,SNR=359						
DZM				Sn	**Sn**	**13 35 44.1**	**-1.2**
	158nm,0.3s,baz=232,slow=14,SNR=9.8						
DZM	**Mont Dzumac**	3.73	258	Pn	**Pn**	**13 34 59.5**	**-1.8**
DZM	**Mont Dzumac**	3.73	258	P	**Pn**	**13 35 01.6**	**+0.2**
ONTNC	**Ouen Toro**	3.77	255	P	**Pn**	**13 35 01.6**	**-0.2**
NOUC	**Port Laguerre**	3.86	258	P	**Pn**	**13 35 02.7**	**-0.4**
DVP	**Devils Point**	4.15	330	P	**Pn**	**13 35 07.5**	**+0.4**
SANVU	**Saraoutou**	6.59	332	Pn	**Pn**	**13 35 38.8**	**-1.8**
SANVU	**Saraoutou**	6.59	332	P	**Pn**	**13 35 41.1**	**+0.4**
NFK	**Norfolk Island**	7.98	196	P	**Pn**	**13 36 00.3**	**+0.6**
	baz=8.1,SNR=11						
NFK	**Norfolk Island**	7.98	196	P	**Pn**	**13 36 00.2**	**+0.6**
MSVF	**Nonsavu**	8.08	65	P	**Pn**	**13 36 03.4**	**+2.3**
MSVF	**Nonsavu**	8.08	65		**Pn**	**13 36 03.4**	**+2.3**
OUZ	**Omahuta**	14.11	169	Pn	**Pn**	**13 37 26.2**	**+2.7**
LHI	**Lord Howe Isla**	14.32	223		**Pn**	**13 37 25.0**	**-1.5**
LHI	**Lord Howe Isla**	14.32	223	P	**Pn**	**13 37 29.1**	**+2.7**

FUNA	Funafuti	15.32	35		Pn	13 37 38.0	-2.0
HNR	Honiara	15.53	318	Pn	Pn	13 37 38.7	-4.0
	3.9nm,0.3s,baz=108,slow=19,SNR=1.5						
HNR	Honiara	15.53	318	P	P	13 37 44.5	-2.6
HNR				pmax	pmax		
	comp=Z,663nm,1.1s						
HNR	Honiara	15.53	318		P	13 37 44.5	-2.6
HIZ	Hauiti	17.54	168	P	P	13 38 09.6	+0.3
HIZ				IAmb	IAmb	13 38 12.8	
	comp=Z,776nm,1.4s						
MXZ	Matakaoa Point	17.56	159	P	Pn	13 38 09.5	+1.0
URZ	Urewera	17.83	162	P	P	13 38 14.8	+2.3
	comp=Z,8.1nm,0.3s,baz=354,slow=7.2,SNR=73						
URZ	Urewera	17.83	162		P	13 38 14.0	+1.5
EIDS	Eidsvold	18.16	254	P	P	13 38 19.2	+2.9
	baz=18,SNR=31						
EIDS	Eidsvold	18.16	254	P	P	13 38 18.0	+1.7
EIDS				IAmb	IAmb	13 38 29.1	
	comp=Z,514nm,1.4s						
BKZ	Black Stump Fm	18.52	165	P	Pn	13 38 21.4	+1.0
BKZ				IAmb	IAmb	13 38 24.5	
	comp=Z,298nm,1.1s						
AFI	Afiamalu	18.54	69	P	P	13 38 19.3	-1.2
	comp=Z,2.7nm,0.3s,baz=329,slow=16,SNR=10						
AFI	Afiamalu	18.54	69	P	P	13 38 19.2	-1.3
AFI	Afiamalu	18.54	69	P	Pn	13 38 21.7	+1.0
NIUE	Niue	18.62	87	P	P	13 38 22.3	+0.9
	baz=19,SNR=5.0						
NIUE	Niue	18.62	87	P	P	13 38 20.9	-0.6
NIUE	Niue	18.62	87	P	Pn	13 38 22.9	+1.2
ARMA	Armidale	19.11	238	P	Pn	13 38 30.5	+2.9
	baz=19,SNR=33						
ARMA	Armidale	19.11	238	Pn	Pn	13 38 30.3	+2.6
QRZ	Quartz Range	19.50	175	P	P	13 38 31.3	+0.4
QRZ				IAmb	IAmb	13 38 36.7	
	comp=Z,437nm,1.4s						
BFZ	Birch Farm	19.91	167	P	P	13 38 35.7	+0.3
BFZ				IAmb	IAmb	13 38 38.1	
	comp=Z,192nm,0.7s						
NNZ	Nelson	19.97	173	P	Pn	13 38 38.1	+0.3
NNZ				IAmb	IAmb	13 38 42.3	
	comp=Z,413nm,1.2s						
SNZO	South Karori	20.24	171	P	P	13 38 39.8	+0.9
SNZO				IAmb	IAmb	13 38 45.2	
	comp=Z,459nm,1.4s						
SNZO	South Karori	20.24	171	IAMs_20	IAMs_20	13 45 58.9	
	comp=Z,13µm,18.0s						
TUWZ	Tuamarina	20.25	172	P	Pn	13 38 41.3	+0.3
BHW	Baring Head	20.36	170	P	P	13 38 41.2	+1.0
RMQ	Roma	20.41	251	P	Pn	13 38 44.0	+1.0
	baz=20,SNR=295						
MSWZ	Moikau Station	20.43	169	P	P	13 38 41.5	+0.4
THZ	Tophouse	20.47	175	P	P	13 38 42.6	+1.1
THZ				IAmb	IAmb	13 38 45.8	
	comp=Z,136nm,0.8s						
BSWZ	Blackbirch Sta	20.52	173	P	P	13 38 42.1	+0.1
PLWZ	Palliser	20.58	170	P	P	13 38 43.2	+0.5
CMWZ	Cape Campbell	20.60	172	P	P	13 38 43.7	+0.8
MGCD	Mangrove Creek	20.77	231	P	Pn	13 38 47.9	+0.8
	baz=21,SNR=8.7						
RIV	Riverview	21.05	230	P	P	13 38 50.3	+2.6
	baz=21,SNR=5.8						
KHZ	Kahutara	21.18	174	P	P	13 38 50.0	+1.0
KHZ				IAmb	IAmb	13 38 52.5	
	comp=Z,161nm,0.8s						
LTZ	Lake Taylor	21.43	176	P	P	13 38 53.1	+1.3
LTZ				IAmb	IAmb	13 38 55.5	
	comp=Z,362nm,1.4s						
OXZ	Oxford	21.96	177	P	P	13 38 58.4	+0.9
OXZ				IAmb	IAmb	13 39 01.1	
	comp=Z,127nm,0.7s						
FOZ	Fox Glacier	22.13	181	P	P	13 39 00.9	+1.6
FOZ				IAmb	IAmb	13 39 02.7	
	comp=Z,166nm,1.0s						
RPZ	Rata Peaks	22.31	179	P	P	13 39 02.7	+1.4
	comp=Z,95nm,1.0s,baz=337,slow=3.2,SNR=32						
RPZ	Rata Peaks	22.31	179	P	P	13 39 02.9	+1.6
RPZ				IAmb	IAmb	13 39 13.6	
	comp=Z,259nm,1.2s						
CTAO	Charters Tower	22.59	269	IAMs_20	IAMs_20	13 47 43.8	
	comp=Z,12µm,18.0s						
TARA	Tarawa	22.70	7	P	P	13 39 06.0	+0.4
TARA	Tarawa	22.70	7	P	P	13 39 06.7	+1.1
LBZ	Lake Benmore	22.98	180	P	P	13 39 09.0	+0.7
CNB	Canberra Magne	23.08	228	P	P	13 39 12.0	+2.4
	baz=23,SNR=24						
YNG	Young	23.27	232	P	P	13 39 13.8	+2.4
	baz=23,SNR=8.1						
CAN	Canberra	23.34	229	P	P	13 39 12.8	+0.6
CAN				pmax	pmax		
	comp=Z,244nm,1.3s						
CAN				MLR	MLR		
	comp=Z,12µm,18.0s						
CAN	Canberra	23.34	229	P	P	13 39 12.8	+0.6
CAN				IAmb	IAmb	13 39 24.9	
	comp=Z,244nm,1.3s						
CAN				IAMs_20	IAMs_20	13 46 41.7	
	comp=Z,12µm,18.0s						
WKZ	Wanaka	23.45	182	P	P	13 39 15.8	+2.7
WKZ				IAmb	IAmb	13 39 43.4	
	comp=Z,125nm,1.1s						
ODZ	Otahua Downs	23.64	180	P	P	13 39 15.9	+1.0
MLZ	Mavora Lakes	24.03	184	P	P	13 39 17.8	-0.9
DCZ	Deep Cove	24.20	186	P	P	13 39 20.8	+0.6
DCZ				IAmb	IAmb	13 39 23.7	
	comp=Z,116nm,0.8s						
CMSA	Cobar Meteorol	24.27	240	P	P	13 39 22.2	+1.1
	baz=24,SNR=77						
QLP	Quilpie	24.43	253	P	P	13 39 23.6	+1.0
	baz=24,SNR=92						
WHZ	Wether Hill Ro	24.57	184	P	P	13 39 24.3	+0.7
WHZ				IAmb	IAmb	13 39 25.7	
	comp=Z,134nm,1.3s						
RABL	Rabaul	24.57	311	P	P	13 39 24.4	+0.5
MTSU	Mount Surprise	24.73	273	P	P	13 39 26.1	+0.7
	baz=25,SNR=73						
PYZ	Puysegur Point	24.94	186	P	P	13 39 27.1	+0.1
PYZ				IAmb	IAmb	13 39 45.6	
	comp=Z,84nm,1.0s						
PMG	Port Moresby	25.30	294	P	P	13 39 29.9	-0.5
	comp=Z,75nm,0.8s,baz=105,slow=6.3,SNR=28						
PMG	Port Moresby	25.30	294	*i* P	P	13 39 30.0	-0.5
PMG				pmax	pmax		
	comp=Z,201nm,1.0s						
PMG	Port Moresby	25.30	294	P	P	13 39 30.2	-0.3
PMG	Port Moresby	25.30	294	P	P	13 39 30.9	+0.4
KNTN	Kanton	25.39	46	P	P	13 39 30.7	-0.6
KNTN				IAmb	IAmb	13 39 31.3	
	comp=Z,174nm,1.0s						
COEN	Coen	26.91	281	P	P	13 39 45.5	+0.3
COEN				IAmb	IAmb	13 39 53.7	
	comp=Z,88nm,1.1s						
TOO	Toolangi	26.92	228	P	P	13 39 47.0	+2.0
	baz=27,SNR=6.0						
TOO	Toolangi	26.92	228	P	P	13 39 45.0	0.0
TOO				pmax	pmax		
	comp=Z,77nm,1.4s						
TOO	Toolangi	26.92	228	P	P	13 39 45.0	0.0
TOO				IAMs_20	IAMs_20	13 48 18.4	
	comp=Z,8µm,21.0s						
STKA	Stephens Creek	27.71	242	P	P	13 39 53.4	+1.2
	baz=28,SNR=23						
STKA	Stephens Creek	27.71	242	P	P	13 39 53.2	+1.0
	comp=Z,31nm,0.8s,baz=77,slow=9.4,SNR=42						
STKA	Stephens Creek	27.71	242	P	P	13 39 53.0	+0.8
QIS	Mount Isa	28.73	266	P	P	13 40 01.8	+0.4
	baz=29,SNR=20						
ARPS	Mount Arapiles	29.16	232	P	P	13 40 06.8	+1.8
	baz=29,SNR=5.0						
HTT	Hallett	30.29	240	P	P	13 40 16.1	+0.9
	baz=30,SNR=13						
PATS	Pohnpei	30.41	336	IAMs_20	IAMs_20	13 49 49.1	
	comp=Z,11µm,22.0s						
BBOO	Buckleboo	32.48	242	P	P	13 40 35.3	+0.8
	baz=32,SNR=6.5						
BBOO	Buckleboo	32.48	242	P	P	13 40 34.4	0.0
BBOO				IAmb	IAmb	13 40 36.3	
	comp=Z,101nm,1.3s						
WR0	Warramunga Arr	33.52	266	P	P	13 40 42.0	-1.6
WC3	Warramunga Arr	33.67	266	P	P	13 40 44.1	-1.0
	baz=34						
WC3	Warramunga Arr	33.67	266	P	P	13 40 43.7	-1.4
WB0	Warramunga Arr	33.69	266	P	P	13 40 43.7	-1.4
WB7	Warramunga Arr	33.69	266	IAMs_20	IAMs_20	13 54 06.7	
	comp=Z,9µm,20.0s						
WB2	Warramunga Arr	33.70	266	P	P	13 40 44.8	-0.4
	baz=34						
WB2	Warramunga Arr	33.70	266	P	P	13 40 43.3	-1.9
WRAB	Tennant Creek	33.70	266	*ce*P	P	13 40 43.7	-1.5
WRAB				pmax	pmax		
	comp=Z,155nm,1.0s						
WRAB	Tennant Creek	33.70	266	P	P	13 40 43.6	-1.5
WRA	Warramunga Arr	33.71	266	P	P	13 40 44.6	-0.7
	comp=Z,41nm,0.7s,baz=95,slow=8.0,SNR=160						
WRA				S	S	13 46 11.0	+2.2
	comp=Z,8.4nm,1.3s,baz=113,slow=16,SNR=7.6						
WRA				LR	LR	13 54 28.2	
	comp=Z,11µm,19.7s,baz=95,slow=36						
WRA	Warramunga Arr	33.71	266	P	P	13 40 43.0	-2.3
WRA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
WRA	Warramunga Arr	33.71	266	P	P	13 40 43.0	-2.3
AS31	Alice Springs	33.72	259	P	P	13 40 44.4	-1.0
ASAR	Alice Springs	33.72	259	P	P	13 40 45.3	-0.1
	comp=Z,91nm,0.9s,baz=84,slow=8.8,SNR=376						
ASAR				PcP	PcP	13 43 24.2	-0.9
	comp=Z,2.3nm,0.8s,baz=59,slow=4.7,SNR=2.6						
ASAR				LR	LR	13 54 03.1	
	comp=Z,6µm,20.6s,baz=88,slow=36						
ASAR	Alice Springs	33.72	259	P	P	13 40 43.8	-1.6
ASAR						13 43 24.2	
ASAR	Alice Springs	33.72	259	P	P	13 40 43.8	-1.6
JAY	Jayapura	34.41	299	P	P	13 40 50.9	-0.5
	comp=Z,29nm,0.6s,baz=136,slow=3.8,SNR=17						
JAY				LR	LR	13 52 38.1	
	comp=Z,3µm,22.0s,baz=96,slow=32						
JAY	Jayapura	34.41	299	P	P	13 40 50.6	-0.9
	comp=Z,605nmcomp=Z,38nm,1.1s						
GENI	Genyem	34.81	298	P	P	13 40 54.8	0.0
	comp=Z,5µmcomp=Z,326nm,1.6s						
SMPI	Sarmi	36.35	298	P	P	13 41 08.1	0.0
	comp=Z,43nm,1.4s						
KDU	Kakadu	37.17	277	P	P	13 41 14.8	-0.3
	baz=37,SNR=5.7						
MTN	Manton Dam	38.37	276	P	P	13 41 24.6	-0.6
	baz=38,SNR=16						
MTN	Manton Dam	38.37	276	P	P	13 41 23.8	-1.4
MTN				IAmb	IAmb	13 41 32.5	
	comp=Z,92nm,0.8s						
MTN				IAMs_20	IAMs_20	13 55 55.3	
	comp=Z,7µm,20.0s						
BAKI	Biak	38.95	296	P	P	13 41 30.4	+0.3
	comp=Z,2µmcomp=Z,163nm,1.0s						
FORT	Forrest	38.97	247	P	P	13 41 30.9	+0.8
	baz=39,SNR=7.2						
FORT	Forrest	38.97	247	P	P	13 41 29.5	-0.6
FORT				IAmb	IAmb	13 41 31.3	
	comp=Z,208nm,1.4s						
FORT				IAMs_20	IAMs_20	13 56 53.8	
	comp=Z,6µm,22.0s						
FAKI	Fak Fak	41.35	291	P	P	13 41 48.5	-1.6
FAKI				IAmb	IAmb	13 41 56.8	
	comp=Z,119nm,1.2s						
FAKI	Fak Fak	41.35	291	P	P	13 41 48.6	-1.5
	comp=Z,2µmcomp=Z,97nm,0.8s						
FITZ	Fitzroy Crossi	42.13	266	P	P	13 41 56.4	0.0
	baz=42,SNR=85						
FITZ	Fitzroy Crossi	42.13	266	P	P	13 41 56.9	+0.4
	comp=Z,65nm,0.7s,baz=100,slow=11						
FITZ				LR	LR	13 59 39.2	
	comp=Z,11µm,19.2s,baz=104,slow=36						
FITZ	Fitzroy Crossi	42.13	266	P	P	13 41 56.1	-0.4
SIJI	Sorong	43.22	293	P	P	13 42 04.8	-0.6
	comp=Z,24nm,0.7s,baz=110,slow=9.6,SNR=13						
SWI	Sorong	43.23	293	P	P	13 42 04.3	-1.1
	comp=Z,1µmcomp=Z,61nm,0.8s						
KMBL	Kambalda	44.28	247	P	P	13 42 13.4	-0.3
	baz=44,SNR=13						
SOEI	Soe	45.73	277	P	P	13 42 24.1	-1.4
SOEI				IAMs_20	IAMs_20	14 04 52.6	
	comp=Z,4µm,19.0s						
SOEI	Soe	45.73	277	P	P	13 42 26.6	+1.0
	comp=Z,2µmcomp=Z,121nm,1.0s						
NLAI	Namlea	45.74	287	P	P	13 42 25.7	+0.3
	comp=Z,106nm,1.2s						
BATI	Baumata	46.14	276	P	P	13 42 29.1	+0.5
	comp=Z,30nm,0.8s,baz=135,slow=8.6,SNR=2.3						
BATI	Baumata	46.14	276	P	P	13 42 29.8	+1.1
	comp=Z,98nm,1.0s						
PSAD2	Pilbara Seismi	46.74	260	P	P	13 42 31.6	-1.7
PSAD2				IAmb	IAmb	13 42 44.7	
	comp=Z,76nm,1.1s						
PSA00	Pilbara Seismi	46.85	260	P	P	13 42 33.3	-0.9
PSA00	Pilbara Seismi	46.85	260	P	P	13 42 32.4	-1.8
PSA00				IAmb	IAmb	13 42 41.3	
	comp=Z,46nm,1.0s						
SANI	Sanana	47.26	288	P	P	13 42 37.3	-0.1
	comp=Z,3µmcomp=Z,241nm,1.0s						
MEEK	Meekatharra	47.33	253	P	P	13 42 37.4	-0.5
	baz=47,SNR=27						
KLBR	Kellerberrin	47.81	246	P	P	13 42 41.3	-0.2
	baz=48,SNR=12						
MMRI	Maumere	48.00	278	P	P	13 42 42.0	-1.2
NWAO	Narrogin (SRO)	48.24	244	P	P	13 42 44.9	+0.1
	baz=48,SNR=6.0						
NWAO	Narrogin (SRO)	48.24	244	P	P	13 42 44.1	-0.7
NWAO				pmax	pmax		
	comp=Z,62nm,1.0s						
NWAO	Narrogin (SRO)	48.24	244	P	P	13 42 44.1	-0.7
NWAO				IAmb	IAmb	13 42 55.4	
	comp=Z,62nm,1.0s						
NWAO	Narrogin (SRO)	48.24	244	P	P	13 42 44.1	-0.7
NWAO				IAmb	IAmb	13 42 55.4	
	comp=Z,50nm,1.0s						
EDFI	Ende, Flores	48.47	277	P	P	13 42 46.0	-0.9
	comp=Z,35nm,1.2s						
BLDU	Ballidu	48.74	248	P	P	13 42 48.4	-0.3
	baz=49,SNR=9.1						
MORW	Morawa	49.40	250	P	P	13 42 53.8	0.0
	baz=49,SNR=8.9						
MORW	Morawa	49.40	250	P	P	13 42 53.2	-0.7
WSI	Waingapu	49.44	276	P	P	13 42 54.7	+0.5
	comp=Z,356nm,1.1s						
LUWI	Luwuk	50.58	287	P	P	13 43 02.3	-0.6
LUWI	Luwuk	50.58	287	P	P	13 43 04.0	+1.1
	comp=Z,3µmcomp=Z,240nm,1.1s						
BKSI	Bulukumba	51.18	281	P	P	13 43 06.9	-0.5
	comp=Z,87nm,1.0s						
BNSI	Bone	51.56	282	P	P	13 43 10.6	+0.3
	comp=Z,1µmcomp=Z,104nm,1.2s						
KAPI	Kappang	51.64	281	P	P	13 43 11.2	+0.3
	comp=Z,25nm,0.9s,baz=137,slow=7.5,SNR=3.8						
KAPI	Kappang	51.64	281	P	P	13 43 10.6	-0.3
KAPI				pmax	pmax		
	comp=Z,142nm,1.1s						
KAPI				MLR	MLR		
	comp=Z,2µm,20.0s						
KAPI	Kappang	51.64	281	P	P	13 43 10.6	-0.3
APSI	Ampana	51.64	287	P	P	13 43 11.4	+0.5
	comp=Z,1µmcomp=Z,111nm,1.1s						
GIRL	Giralia	51.80	257	P	P	13 43 13.1	+1.1
	baz=52,SNR=3.1						
MRSI	Marisa	52.01	288	P	P	13 43 13.4	-0.3
	comp=Z,648nmcomp=Z,36nm,1.2s						
SPSI	Sidrap Palu	52.04	282	P	P	13 43 12.6	-1.3
	comp=Z,783nmcomp=Z,40nm,1.7s						
PLAI	Plampang	52.06	275	P	P	13 43 14.2	+0.1
	comp=Z,101nm,1.2s						
KIP	Kipapa	52.53	38	*i* P	P	13 43 16.7	-0.6
KIP				pmax	pmax		
	comp=Z,121nm,1.2s						
KKO	Keanakako`i	52.63	42	P	P	13 43 16.4	-1.8
HMH	Humu‘ula Sheep	52.65	42	P	P	13 43 18.5	-0.1
TWSI	Taliwang, Sumb	52.93	275	P	P	13 43 20.3	-0.2
	comp=Z,43nm,1.0s						
TOLI2	Tolitoli	53.33	288	P	P	13 43 22.6	-0.9
MPSI	Mapaga	53.76	287	P	P	13 43 26.4	-0.2
	comp=Z,978nmcomp=Z,111nm,1.0s						
SRBI	Singaraja	54.70	275	P	P	13 43 34.8	+1.4
	comp=Z,107nm,1.1s						
JCJ	Chichijima	55.35	329	LR	LR	14 04 57.5	
	comp=Z,779nm,21.8s,baz=142,slow=34						
KBKI	Kotabaru	55.60	281	P	P	13 43 39.7	-0.2
	comp=Z,33nm,1.1s						
VNDA	Vanda	56.37	182	P	P	13 43 45.0	+0.5
	comp=Z,4.5nm,0.9s,baz=6.0,slow=6.0,SNR=3.9						
VNDA				LR	LR	14 04 59.3	
	comp=Z,2µm,19.8s,baz=24,slow=33						
BBKI	Banjar Baru	56.75	280	P	P	13 43 48.4	+0.2
	comp=Z,73nm,1.1s						
MTKI	Muara Teweh, K	57.72	283	P	P	13 43 54.7	-0.3
	comp=Z,32nm,1.0s						
CASY	Casey	58.64	204	P	P	13 43 59.7	-0.9
CASY				IAmb	IAmb	13 44 01.7	
	comp=Z,59nm,0.9s						
KKM	Kota Kinabalu	59.67	291	P	P	13 44 08.4	-0.3
SBUM	Sibu	61.57	285	P	P	13 44 20.8	-0.8
SBUM				IAmb	IAmb	13 44 37.3	
	comp=Z,59nm,1.4s						
SBUM	Sibu	61.57	285	P	P	13 44 23.0	+1.4
CISI	Cisompet, Garu	61.76	273	IAMs_20	IAMs_20	14 13 11.4	
	comp=Z,2µm,21.0s						
XMIS	Christmas Isla	62.81	269	P	P	13 44 27.1	-2.9
KSM	Kuching	62.89	283	P	P	13 44 31.0	+0.6
JOW	Kunigami	62.90	318	P	P	13 44 29.1	-1.1
	comp=Z,11nm,0.8s,baz=124,slow=18,SNR=1.5						
DBJI	Dramaga	63.10	273	P	P	13 44 32.0	+0.1
	comp=Z,185nm,1.1s						
INU	Inuyama	64.65	330	IAMs_20	IAMs_20	14 07 33.2	
	comp=Z,2µm,21.0s						
JMN	Monobe	64.88	327	IAMs_20	IAMs_20	14 08 18.4	
	comp=Z,2µm,20.0s						
MJAR	Matsushiro Arr	65.10	332	P	P	13 44 43.3	-1.2
	comp=Z,16nm,1.1s,baz=171,slow=7.1,SNR=5.1						
MJAR				LR	LR	14 08 50.7	
	comp=Z,727nm,21.7s,baz=150,slow=32						
MJAR	Matsushiro Arr	65.10	332	IAmb	IAmb	13 44 50.8	
	comp=Z,11nm,1.1s						
MAJO	Matsushiro	65.11	332	*i* P	P	13 44 44.5	0.0
MAJO				pmax	pmax		
	comp=Z,42nm,1.3s						
MAT	Matsushiro	65.11	332	P	P	13 44 43.4	-1.1
MAT				*e*S	S	13 53 24.0	-3.2
JMM	Marumori	65.14	334	IAMs_20	IAMs_20	14 07 33.3	
	comp=Z,3µm,21.0s						
KASI	Kota Agung	65.56	274	P	P	13 44 46.8	-1.2
	comp=Z,1µmcomp=Z,113nm,1.0s						
YHNB	Yeheng	66.03	311	P	P	13 44 49.0	-1.9
MDSI	Maura Dua	66.22	275	P	P	13 44 50.5	-1.8
	comp=Z,591nmcomp=Z,44nm,1.2s						
PMBI	Palembang	66.24	276	IAMs_20	IAMs_20	14 16 03.1	
	comp=Z,2µm,22.0s						
JTM	Tenmabayashi	67.56	336	IAMs_20	IAMs_20	14 09 00.1	
	comp=Z,1µm,18.0s						
QSPA	South Pole Qui	68.72	180	P	P	13 45 06.8	-0.6
MYKOM	Kota Tinggi	68.91	281	IAMs_20	IAMs_20	14 16 47.8	
	comp=Z,2µm,19.0s						
MYKOM	Kota Tinggi	68.91	281	P	P	13 45 10.0	+0.8
JKA	Kamikawa-asahi	69.94	339	IAMs_20	IAMs_20	14 09 25.3	
	comp=Z,3µm,21.0s						
SDSI	Sungai Dareh	70.08	277	P	P	13 45 15.4	-1.1
	comp=Z,17nm,1.2s						
SSE	Sheshan	70.33	316	P	P	13 45 23.6	+6.0
SSE				S	S	13 54 33.6	+3.6
SSE				pmax	pmax		
	comp=Z,13nm,1.3s						
SSE				pmax	pmax		
	comp=Z,63nm,3.5s						
SSE				LR	LR		
	comp=Z,290nm,18.0s						
SSE				LR	LR		
	comp=Z,430nm,17.7s						
TJN	Taejon	70.34	324	*ce*P	P	13 45 18.3	+0.8
KSRS	Korea Array	70.84	325	P	P	13 45 20.0	-0.6
	comp=Z,1.9nm,0.9s,baz=146,slow=6.0,SNR=6.7						
KSRS				LR	LR	14 14 53.6	
	comp=Z,586nm,19.5s,baz=136,slow=35						
KSRS	Korea Array	70.84	325	P	P	13 45 20.0	-0.6
KSAR	Wonju Array Be	70.85	325	P	P	13 45 18.4	-2.2
KSAR	Wonju Array Be	70.85	325	P	P	13 45 18.4	-2.2
BKNI	Bangkinang	70.92	278	IAMs_20	IAMs_20	14 18 40.1	
	comp=Z,2µm,21.0s						
QIZ	Qiongzhong	71.55	300	P	P	13 45 27.7	+2.4
QIZ				S	S	13 54 44.3	-0.4
QIZ				pmax	pmax		
	comp=Z,35nm,1.7s						
QIZ				LR	LR		
	comp=Z,830nm,21.2s						
QIZ				LR	LR		
	comp=Z,660nm,25.5s						
QIZ				LR	LR		
	comp=Z,810nm,28.9s						
INCN	Inchon	71.55	325	P	P	13 45 24.0	-0.9
INCN				pmax	pmax		
	comp=Z,110nm,1.3s						
INCN	Inchon	71.55	325	P	P	13 45 24.0	-0.9
RPN	Rapa Nui	72.29	113	*i* P	P	13 45 32.2	+2.5
YSS	Yuzh-Sakhalins	72.41	341	IAMs_20	IAMs_20	14 14 32.7	
	comp=Z,2µm,20.0s						
MNSI	Mandailing Nat	72.45	278	P	P	13 45 29.1	-1.7
	comp=Z,49nm,0.9s						
NJ2	Nanjing	72.46	316	*e*P	P	13 45 37.4	+7.0
NJ2				S	SKiKP	13 55 00.8	-5.3
NJ2				SS	SS	13 59 33.1	-0.7
NJ2				pmax	pmax		
	comp=Z,23nm,0.9s						
NJ2				LR	LR		
	comp=Z,1µm,19.4s						
NJ2				LR	LR		
	comp=Z,750nm,18.8s						
NJ2				LR	LR		
	comp=Z,890nm,19.0s						
IPM	Ipoh	72.56	282	P	P	13 45 30.6	-1.0
IPM				IAmb	IAmb	13 45 38.8	
	comp=Z,32nm,0.9s						
IPM				IAMs_20	IAMs_20	14 19 00.6	
	comp=Z,2µm,19.0s						
IPM	Ipoh	72.56	282	P	P	13 45 31.0	-0.5
KULM	Kulim	73.23	283	IAMs_20	IAMs_20	14 19 34.3	
	comp=Z,2µm,21.0s						
KULM	Kulim	73.23	283	P	P	13 45 36.0	+0.5
RPSI	Rantau Prapat	73.78	280	P	P	13 45 36.8	-2.0
ADK	Adak	73.79	8	P	P	13 45 37.6	-0.2
ADK				pmax	pmax		
	comp=Z,140nm,1.3s						
ADK	Adak	73.79	8	P	P	13 45 37.6	-0.2
PSI	Prapat	73.82	280	P	P	13 45 36.8	-2.4
	comp=Z,3.7nm,0.5s,baz=180,slow=4.6,SNR=5.2						
USA0B	Ussuriysk Arra	74.09	332	*i* P	P	13 45 40.7	+0.9
USRK	Ussuriysk Ar.	74.09	332	P	P	13 45 40.8	+1.0
	comp=Z,13nm,1.2s,baz=177,slow=5.8,SNR=12						
USRK				LR	LR	14 14 20.8	
	comp=Z,633nm,21.4s,baz=134,slow=33						
USRK	Ussuriysk Ar.	74.09	332	P	P	13 45 38.8	-1.0
USRK	Ussuriysk Ar.	74.09	332	P	P	13 45 38.8	-1.0
GSI	Gunungsitoli	74.49	278	P	P	13 45 41.6	-1.2
GSI				IAmb	IAmb	13 45 50.8	
	comp=Z,66nm,0.9s						
GSI	Gunungsitoli	74.49	278	P	P	13 45 42.8	-0.1
	comp=Z,90nm,1.0s						
WHN	Wuhan	74.55	312	P	P	13 45 49.0	+6.2
WHN				S	S	13 55 21.5	+3.1
WHN				pmax	pmax		
	comp=Z,66nm,1.2s						
WHN				LR	LR		
	comp=Z,2µm,27.1s						
PET	Petropavlovsk	74.75	353	*e*P	P	13 45 50.2	+6.8
PET				*e*S	S	13 55 23.9	+4.2
PET	Petropavlovsk	74.75	353	IAMs_20	IAMs_20	14 18 11.6	
	comp=Z,2µm,19.0s						
PEA0B	Petropavlovsk-	74.95	352	IAMs_20	IAMs_20	14 15 14.9	
	comp=Z,2µm,20.0s						
PETK	Petropavlovsk-	74.95	352	P	P	13 45 46.0	+1.4
	comp=Z,9.6nm,0.9s,baz=182,slow=7.0,SNR=5.0						
PETK				LR	LR	14 13 38.5	
	comp=Z,1µm,20.6s,baz=161,slow=32						
PETK	Petropavlovsk-	74.95	352	P	P	13 45 44.9	+0.3
PETK	Petropavlovsk-	74.95	352	P	P	13 45 44.9	+0.3
DL2	Dalian	75.33	323	P	P	13 45 53.9	+6.8
DL2				S	S	13 55 34.2	+7.5
DL2				pmax	pmax		
	comp=Z,78nm,1.1s						
DL2				pmax	pmax		
	comp=Z,360nm,6.6s						
DL2				LR	LR		
	comp=Z,440nm,16.6s						
DL2				LR	LR		
	comp=Z,620nm,18.4s						
DL2				LR	LR		
	comp=Z,990nm,18.8s						
MDJ	Mudanjiang	75.47	331	P	P	13 45 50.8	+3.0
MDJ				pP	PcP	13 46 01.1	+0.2
MDJ				sP	pwP	13 46 05.4	+12
MDJ				S	S	13 55 29.9	+1.8
MDJ				pmax	pmax		
	comp=Z,9.0nm,1.4s						
MDJ				pmax	pmax		
	comp=Z,410nm,3.8s						

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MDJ                                LR        LR
       comp=Z,780nm,18.2s
MDJ                                LR        LR
       comp=Z,970nm,18.8s
MDJ                                LR        LR
       comp=Z,2µm,24.0s
TIA    Tai'an             76.22 318  P       P         13 45 51.6  -0.7
TIA                                pmax      pmax
       comp=Z,8.0nm,1.1s
TIA                                LR        LR
       comp=Z,550nm,16.1s
TIA                                LR        LR
       comp=Z,540nm,15.0s
TIA                                LR        LR
       comp=Z,480nm,19.4s
SNY    Shenyang           76.32 326 ⇓P       P         13 45 58.6  +5.9
SNY                                S         S         13 55 38.3  +0.8
SNY                                pmax      pmax
       comp=Z,16nm,1.3s
SNY                                pmax      pmax
       comp=Z,360nm,5.2s
SNY                                LR        LR
       comp=Z,720nm,20.7s
SNY                                LR        LR
       comp=Z,600nm,19.9s
SNY                                LR        LR
       comp=Z,990nm,18.9s
LHMI   Lhok Sumawe        76.58 281  IAMs_20 IAMs_20   14 24 42.2
       comp=Z,2µm,19.0s
CN2    Changchun          76.80 328 eP       P         13 45 55.5  +0.1
CN2                                eS        S         13 55 47.3  +4.5
CN2                                pmax      pmax
       comp=Z,10.0nm,0.6s
CN2                                pmax      pmax
       comp=Z,290nm,5.0s
CN2                                LR        LR
       comp=Z,700nm,20.0s
CN2                                LR        LR
       comp=Z,880nm,20.0s
CN2                                LR        LR
       comp=Z,1µm,21.0s
MAW    Mawson             76.89 202  P       P         13 45 56.4  +0.7
       comp=Z,8.6nm,0.6s,baz=137,slow=8.6,SNR=7.0
MAW                                LR        LR        14 15 23.9
       comp=Z,879nm,20.1s,baz=102,slow=32
GRNR   Gornyy             77.79 339⇓iP       P         13 46 01.5  +0.7
GRNR                               pmax      pmax
       comp=Z,3.0nm,1.1s
GRNR                               MLR       MLR
       comp=N,310nm,15.0s
GRNR                               MLR       MLR
       comp=E,230nm,15.0s
ENH    Enshi              77.83 309  P       P         13 46 00.4  -1.1
GYA    Guiyang            77.89 305 ⇑P       P         13 46 05.8  +3.7
GYA                                PcP       pwP       13 46 09.2  +1.5
GYA                                sP        PcP       13 46 17.6  +5.7
GYA                                S         S         13 56 00.3  +4.7
GYA                                SS        SS        14 01 01.3  +4.4
GYA                                pmax      pmax
       comp=E,7.0nm,1.3s
GYA                                pmax      pmax
       comp=E,170nm,4.8s
GYA                                LR        LR
       comp=E,340nm,18.6s
GYA                                LR        LR
       comp=E,450nm,16.9s
GYA                                LR        LR
       comp=E,480nm,21.4s
KLR    Kul'dur            78.22 335  P       P         13 46 02.9  -0.4
       comp=E,3.9nm,1.0s,baz=161,slow=8.7,SNR=5.6
KLR    Kul'dur            78.22 335ceP       P         13 46 03.5  +0.3
KLR                                pmax      pmax
       comp=Z,57nm,1.4s
PHIT   Phitsanulok        78.52 294  P       P         13 46 13.0  +7.4
BJI    Beijing            79.24 321  P       P         13 46 15.6  +6.6
BJI                                S         S         13 56 10.1  +0.9
BJI                                SS        SS        14 01 16.8  +0.5
BJI                                pmax      pmax
       comp=Z,21nm,1.0s
BJI                                pmax      pmax
       comp=Z,230nm,3.5s
BJI                                LR        LR
       comp=Z,830nm,21.0s
BJI                                LR        LR
       comp=Z,550nm,27.7s
BJI                                LR        LR
       comp=Z,1µm,26.5s
LAMP   Lampang            79.78 294  P       P         13 46 14.0  +1.6
BELA   Belgrano 2         79.92 175  P       P         13 46 10.8  -1.5
PAYA   Payao              79.95 295  P       P         13 46 15.4  +2.0
CM35   Chiang Mai Arr     80.25 294  P       P         13 46 15.0  -0.1
CM04   Chiang Mai Arr     80.28 294  P       P         13 46 16.4  +1.2
KMI    Kunming            80.29 302 ⇓P       P         13 46 16.7  +1.3
KMI                                pP        PcP       13 46 23.7  +1.2
KMI                                sP        pwP       13 46 26.1  +5.1
KMI                                S         S         13 56 17.7  -3.7
KMI                                SS        SS        14 01 35.6  +2.5
KMI                                pmax      pmax
       comp=Z,17nm,1.1s
KMI                                pmax      pmax
       comp=Z,240nm,3.9s
KMI                                LR        LR
       comp=Z,290nm,17.7s
KMI                                LR        LR
       comp=Z,580nm,17.7s
KMI                                LR        LR
       comp=Z,640nm,24.0s
CM09   Chiang Mai Arr     80.29 294  P       P         13 46 16.9  +1.6
CM01   Chiang Mai Arr     80.31 294  P       P         13 46 16.9  +1.6
CM05   Chiang Mai Arr     80.31 294  P       P         13 46 16.8  +1.4
XAN    Xi'an              80.31 312  P       P         13 46 15.2  +0.1
XAN                                pP        PcP       13 46 21.8  -0.4
XAN                                S         S         13 56 21.9  +0.9
XAN                                SS        SS        14 01 35.2  +2.4
XAN                                pmax      pmax
       comp=Z,11nm,1.4s
XAN                                pmax      pmax
       comp=Z,220nm,5.2s
XAN                                LR        LR
       comp=Z,310nm,15.0s
XAN                                LR        LR
       comp=Z,740nm,20.5s
XAN                                LR        LR
       comp=Z,990nm,23.0s
CM02   Chiang Mai Arr     80.32 294  P       P         13 46 16.0  +0.6
CM31   Chiang Mai Arr     80.34 294  P       P         13 46 17.1  +1.6
CM31   Chiang Mai Arr     80.34 294  P       P         13 46 15.2  -0.3
CM31                               IAmb      IAmb      13 46 24.9
       comp=Z,60nm,1.1s
CMAR   Chiang Mai Arr     80.34 294  P       P         13 46 16.4  +0.8
       comp=Z,4.1nm,0.8s,baz=133,slow=4.1,SNR=27
CMAR   Chiang Mai Arr     80.34 294  P       P         13 46 15.4  -0.1
CMAR   Chiang Mai Arr     80.34 294  P       P         13 46 15.4  -0.1
CM15   Chiang Mai Arr     80.35 294  P       P         13 46 16.0  +0.4
CM13   Chiang Mai Arr     80.35 294  P       P         13 46 17.0  +1.4
CMMT   Chiang Mai         80.49 294  P       P         13 46 16.0  -0.3
CHTO   Chiang Mai         80.49 294  P       P         13 46 16.6  +0.3
CHTO                               pmax      pmax
       comp=Z,47nm,1.0s
CHTO   Chiang Mai         80.49 294  P       P         13 46 16.6  +0.3
CHTO                               IAmb      IAmb      13 46 25.4
       comp=Z,47nm,1.0s
CM32   Chiang Mai Arr     80.50 294  P       P         13 46 19.0  +2.6
MHMT   Maesarieng         81.08 293  P       P         13 46 26.0  +6.5
MA2    Magadan            82.22 350  P       P         13 46 25.3  +0.8
       comp=Z,3.0nm,0.6s,baz=168,slow=5.9,SNR=6.1
MA2    Magadan            82.22 350ceP       P         13 46 26.6  +2.1
MA2                                pmax      pmax
       comp=Z,11nm,1.6s
MA2    Magadan            82.22 350  IAMs_20 IAMs_20   14 19 03.0
       comp=Z,2µm,21.0s
CD2    Chengdu            82.36 307  P       P         13 46 25.6  -0.4
CD2                                S         S         13 56 40.5  -1.8
CD2                                SS        SS        14 02 06.2  +2.7
CD2                                pmax      pmax
       comp=Z,10.0nm,0.5s
CD2                                LR        LR
       comp=Z,1µm,20.1s
CD2                                LR        LR
       comp=Z,1µm,20.6s
CD2                                LR        LR
       comp=Z,920nm,19.1s
HHC    Hu-ho-hao-te       82.51 319 eP       P         13 46 27.3  +0.6
HHC                                sP        pwP       13 46 41.6  +9.3
HHC                                S         S         13 56 39.7  -3.9
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HHC                                sS        ScS       13 56 56.5  -2.4
HHC                                SS        SS        14 02 04.2  -1.2
HHC                                pmax      pmax
       comp=Z,9.0nm,1.1s
HHC                                pmax      pmax
       comp=Z,280nm,5.1s
HHC                                LR        LR
       comp=Z,550nm,18.6s
HHC                                LR        LR
       comp=Z,690nm,20.2s
HHC                                LR        LR
       comp=Z,1µm,22.6s
PBA    Port Blair         82.94 285  IAMs_20 IAMs_20   14 24 55.5
       comp=Z,2µm,22.0s
SYO    Syowa Base         83.21 196⇑eP       P         13 46 27.2  -2.6
SYO    Syowa Base         83.21 196⇑ipP      P         13 46 29.7  -0.1
BTO    Baotou             83.31 318 eP       P         13 46 36.9  +6.1
BTO                                S         S         13 56 57.3  +5.5
ZEA    Zeya               83.51 336 eP       P         13 46 31.4   0.0
ZEA                                eS        S         13 56 56.4  +3.5
ZEA                                pmax      pmax
       comp=N,10.0nm,1.0s
ZEA                                pmax      pmax
       comp=Z,20nm,1.0s
ZEA                                smax      smax
       comp=E,100nm,8.2s
OHAK   Old Harbor         83.98  19  P       P         13 46 33.2  -0.5
KDAK   Kodiak Island      84.66  19  P       P         13 46 37.3  +0.2
       comp=E,22nm,1.0s,baz=229,slow=5.5,SNR=5.7
LZH    Lanzhou            84.92 312 ⇑P       P         13 46 39.6  +0.4
LZH                                pP        pwP       13 46 51.1  +6.2
LZH                                sP        sP        13 46 55.1   +12
LZH                                SKS       SKSac     13 56 58.6  -5.5
LZH                                S         S         13 57 05.0  -3.3
LZH                                sS        ScS       13 57 25.1  +6.0
LZH                                SS        SS        14 02 43.2  +1.7
LZH                                pmax      pmax
       comp=E,61nm,1.4s
LZH                                pmax      pmax
       comp=E,440nm,6.2s
LZH                                LR        LR
       comp=E,680nm,17.0s
LZH                                LR        LR
       comp=E,670nm,17.4s
LZH                                LR        LR
       comp=E,690nm,19.0s
SEY    Seymchan           85.19 352  P       P         13 46 38.6  -1.1
       comp=E,5.4nm,0.8s,baz=165,slow=5.7,SNR=14
SEY    Seymchan           85.19 352 i P      P         13 46 38.4  -1.3
GAMB   Gambell            85.99   8  P       P         13 46 43.7  +0.1
GAMB                               IAmb      IAmb      13 46 55.3
       comp=Z,37nm,1.0s
GAMB                               IAMs_20   IAMs_20   14 18 05.7
       comp=Z,2µm,22.0s
SAO    San Andreas Ge     86.41  48  IAMs_20 IAMs_20   14 17 37.3
       comp=Z,1µm,20.0s
HOPS   Hopland Field      86.43  46  IAMs_20 IAMs_20   14 22 07.1
       comp=Z,2µm,19.0s
KCPM   Cahto Peak         86.45  45  P       P         13 46 47.5  +0.9
KCPM                               IAmb      IAmb      13 46 58.4
       comp=Z,42nm,1.0s
GDXM   Geysers            86.52  46  IAMs_20 IAMs_20   14 22 12.5
       comp=Z,2µm,19.0s
PMPB   Monarch Peak       86.59  49  P       P         13 46 46.3  -1.1
PMPB                               IAmb      IAmb      13 47 12.9
       comp=Z,39nm,1.2s
KMRM   Mail Ridge         86.64  44  P       P         13 46 46.9  -0.6
PKM    Mcpherson Peak     86.65  51  P       P         13 46 49.3  +1.5
       baz=241
PAGB   Antelope Grade     86.74  50  P       P         13 46 48.6  +0.5
PAGB                               IAmb      IAmb      13 47 07.7
       comp=Z,52nm,1.5s
PAGB                               IAMs_20   IAMs_20   14 20 16.3
       comp=Z,1µm,18.0s
NVL    N'lazarevskaya     86.91 187 eP       P         13 46 46.9  -1.4
NVL                                eS        SKSac     13 57 12.6  -2.6
NVL                                pmax      pmax
       comp=Z,35nm,0.9s
SNAA   Sanae              87.11 182  P       P         13 46 48.1  -1.2
SNAA   Sanae              87.11 182  pP      pP        13 46 57.5  +5.6
SNAA   Sanae              87.11 182ceP       P         13 46 48.2  -1.2
SNAA                               pmax      pmax
       comp=Z,43nm,1.2s
SNAA   Sanae              87.11 182  P       P         13 46 47.7  -1.7
SNAA                               IAmb      IAmb      13 46 49.5
       comp=Z,28nm,0.9s
SNAA                               IAMs_20   IAMs_20   14 24 29.5
       comp=Z,1µm,19.0s
KRMB   Red Mountain       87.20  43  P       P         13 46 51.3  +1.0
KRMB                               IAmb      IAmb      13 46 59.8
       comp=Z,44nm,1.3s
O02D   Mt. Diablo Mer     87.22  45  P       P         13 46 51.9  +1.5
       baz=239,SNR=13
OSI    Osito Audit: C     87.31  51  P       P         13 46 50.4  -0.5
OSI                                IAmb      IAmb      13 47 10.3
       comp=Z,37nm,1.4s
OSI                                IAMs_20   IAMs_20   14 16 43.4
       comp=Z,1µm,19.0s
DECC   Green Verdugo      87.42  52  P       P         13 46 52.2  +0.7
       baz=242
ARVC   Arvin              87.47  51  P       P         13 46 52.3  +0.7
       baz=242
WDC    Whiskeytown Da     87.59  45  P       P         13 46 52.7  +0.6
WDC                                pmax      pmax
       comp=Z,39nm,1.4s
WDC    Whiskeytown Da     87.59  45  P       P         13 46 52.7  +0.6
WDC                                IAmb      IAmb      13 47 03.8
       comp=Z,39nm,1.4s
MWC    Mount Wilson       87.61  52  P       P         13 46 53.0  +0.4
MWC                                pmax      pmax
       comp=Z,16nm,1.0s
MWC    Mount Wilson       87.61  52  P       P         13 46 53.0  +0.4
VES    Vestal, Richgr     87.63  50  P       P         13 46 52.9  +0.6
       baz=242
VNA3   Neumayer Olymp     87.66 180  P       P         13 46 50.7  -1.3
ANM    Nome               87.67  10  P       P         13 46 52.9  +1.0
ANM                                pmax      pmax
       comp=Z,7.0nm,1.0s
ANM    Nome               87.67  10  P       P         13 46 52.9  +1.0
ANM                                IAMs_20   IAMs_20   14 19 21.2
       comp=Z,2µm,21.0s
N02D   Trinity Center     87.69  44  P       P         13 46 54.5  +1.9
       baz=239,SNR=8.5
109C   Camp Elliot, M     87.70  53  P       P         13 46 53.8  +1.0
       baz=243
109C   Camp Elliot, M     87.70  53  P       P         13 46 53.1  +0.4
109C                               IAmb      IAmb      13 47 03.9
       comp=Z,31nm,1.2s
109C                               IAMs_20   IAMs_20   14 25 45.0
       comp=Z,1µm,20.0s
ORV    Oroville           87.76  46  P       P         13 46 53.4  +0.5
ORV                                pmax      pmax
       comp=Z,31nm,1.3s
ORV    Oroville           87.76  46  P       P         13 46 53.4  +0.5
ORV                                IAmb      IAmb      13 47 02.3
       comp=Z,31nm,1.2s
ORV                                IAMs_20   IAMs_20   14 22 51.5
       comp=Z,981nm,18.0s
CMB    Columbia Colle     87.77  48  P       P         13 46 53.3  +0.2
CMB                                pmax      pmax
       comp=Z,21nm,1.1s
CMB                                MLR       MLR
       comp=Z,1µm,18.0s
CMB    Columbia Colle     87.77  48  P       P         13 46 53.3  +0.2
CMB                                IAmb      IAmb      13 47 04.2
       comp=Z,21nm,1.1s
CMB                                IAMs_20   IAMs_20   14 25 34.3
       comp=Z,1µm,18.0s
M02C   Callahan           87.81  44  P       P         13 46 55.3  +2.1
       baz=239,SNR=8.1
BFSC   Mount Baldy Ra     87.91  52  P       P         13 46 54.1  +0.2
       baz=242
O03E   Paynes Creek       87.93  45  P       P         13 46 54.7  +0.9
       baz=240,SNR=9.1
MURC   Murrieta           87.96  53  P       P         13 46 55.0  +0.9
       baz=243
EDW2   Edwards Air Fo     87.96  51  P       P         13 46 55.1  +1.0
       baz=242,SNR=8.8
VNA2   Neumayer--Watz     87.97 181  P       P         13 46 52.6  -0.8
       baz=172,slow=4.3
VNA2   Neumayer--Watz     87.97 181  pP      pP        13 47 01.8  +5.9
K02D   Willamette Mer     87.97  42  P       P         13 46 55.5  +1.6
       baz=238
ISA    Isabella, Lake     87.98  50  P       P         13 46 55.5  +1.3
       baz=242,SNR=13
ISA    Isabella, Lake     87.98  50  P       P         13 46 54.6  +0.4
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ISA                                pmax      pmax
       comp=Z,55nm,1.5s
ISA    Isabella, Lake     87.98  50  P       P         13 46 54.6  +0.4
ISA                                IAmb      IAmb      13 47 13.4
       comp=Z,55nm,1.5s
ISA                                IAMs_20   IAMs_20   14 17 02.1
       comp=Z,1µm,20.0s
YBH    Yreka Blue Hor     88.07  44  P       P         13 46 55.5  +1.0
YBH                                pmax      pmax
       comp=Z,17nm,1.0s
YBH    Yreka Blue Hor     88.07  44  P       P         13 46 55.5  +1.0
TTA    Tatalina           88.09  15  P       P         13 46 54.3  +0.3
TTA                                pmax      pmax
       comp=Z,16nm,1.1s
TTA    Tatalina           88.09  15  P       P         13 46 54.3  +0.3
SPX    San Pedro Mart     88.12  56  IAMs_20 IAMs_20   14 24 05.3
       comp=Z,1µm,18.0s
ESJX   Sierra Juarez      88.18  55  P       P         13 46 52.8  -2.5
MONP2  Monument Peak      88.22  54  P       P         13 46 57.3  +1.8
       baz=243,SNR=5.6
SUA    Susitna One        88.22  18  P       P         13 46 56.1  +1.4
SUA                                IAmb      IAmb      13 47 06.5
       comp=Z,26nm,1.2s
VNA1   Neumayer--Stat     88.25 180  P       P         13 46 53.7  -1.1
IKP    In-Ko-Pah, Jac     88.35  54  P       P         13 46 57.1  +1.1
       baz=243
RMX    La Rumorosa        88.35  54  IAMs_20 IAMs_20   14 17 44.5
       comp=Z,1µm,20.0s
HUMO   Hull Mountain      88.37  43  P       P         13 46 56.8  +1.0
HUMO                               IAmb      IAmb      13 47 08.7
       comp=Z,52nm,1.4s
RUBR   Rubicon Trail      88.42  47  P       P         13 46 56.0  -0.4
RUBR                               IAMs_20   IAMs_20   14 17 04.0
       comp=Z,1µm,22.0s
LRMC   Laurel Mtn Rad     88.47  51  P       P         13 46 57.9  +1.3
       baz=242,SNR=8.2
MDPB   Devils Postpil     88.48  48  P       P         13 46 54.5  -2.3
MDPB                               IAmb      IAmb      13 47 08.2
       comp=Z,47nm,1.5s
MDPB                               IAMs_20   IAMs_20   14 18 31.2
       comp=Z,1µm,20.0s
PFO    Pinyon Flats O     88.51  53  P       P         13 46 57.5  +0.7
       baz=243
PFO    Pinyon Flats O     88.51  53  P       P         13 46 55.1  -1.7
PFO                                pmax      pmax
       comp=Z,17nm,1.3s
PFO                                MLR       MLR
       comp=Z,1µm,18.0s
PFO    Pinyon Flats O     88.51  53  P       P         13 46 55.1  -1.7
PFO    Pinyon Flats O     88.51  53  IAMs_20 IAMs_20   14 29 12.0
       comp=Z,1µm,18.0s
XPFO   Pion Flat          88.52  53  IAMs_20 IAMs_20   14 29 12.0
       comp=Z,1µm,18.0s
OMMB   Old Mammoth Mi     88.53  49  P       P         13 46 57.3  +0.3
OMMB                               IAmb      IAmb      13 47 08.5
       comp=Z,33nm,1.4s
OMMB                               IAMs_20   IAMs_20   14 18 31.4
       comp=Z,1µm,19.0s
L04D   Klamath Falls      88.58  43  P       P         13 46 58.2  +1.3
       baz=239
SFX    San Felipe         88.60  56  IAMs_20 IAMs_20   14 25 35.8
       comp=Z,989nm,19.0s
CWC    Cottonwood Cre     88.63  50  P       P         13 46 58.5  +1.2
       baz=242
WAKR   Walker             88.65  48  P       P         13 46 58.1  +0.7
WAKR                               IAmb      IAmb      13 47 09.2
       comp=Z,54nm,1.4s
WAKR                               IAMs_20   IAMs_20   14 17 35.1
       comp=Z,2µm,21.0s
MLAC   Mammoth, Mammo88.65  49  P       P         13 46 59.2  +1.7
       baz=242
M04C   Macdoel            88.66  44  P       P         13 46 58.6  +1.4
       baz=240
BEKR   Beckworth          88.68  46  P       P         13 46 57.7  +0.2
I03D   Drain, OR          88.69  42  P       P         13 46 58.7  +1.5
       baz=239
SWSC   Sam W. Stewart     88.71  54  P       P         13 46 58.3  +0.7
       baz=244
PMR    Palmer             88.78  18  P       P         13 46 55.0  -2.1
PMR                                pmax      pmax
       comp=Z,39nm,0.4s
PMR    Palmer             88.78  18  P       P         13 46 55.0  -2.1
PNTR   Pine Nut           88.82  47  P       P         13 46 58.6  +0.4
PNTR                               IAmb      IAmb      13 47 09.8
       comp=Z,31nm,1.1s
PNTR                               IAMs_20   IAMs_20   14 27 08.5
       comp=Z,1µm,18.0s
MPMC   Manual Prospec     88.87  50  P       P         13 46 59.5  +1.0
       baz=243
VCNR   Virginia City      88.89  47  P       P         13 46 59.0  +0.5
GHO    Glory Hole Cre     88.99  18  IAMs_20 IAMs_20   14 20 53.6
       comp=Z,1µm,20.0s
GSC    Goldstone, Bar     89.02  51  P       P         13 47 00.1  +1.0
       baz=243
GSC    Goldstone, Bar     89.02  51  P       P         13 46 59.1   0.0
GSC                                pmax      pmax
       comp=Z,27nm,1.4s
GSC    Goldstone, Bar     89.02  51  P       P         13 46 59.1   0.0
BELC   Belle Mtn. Jos     89.03  53  P       P         13 47 01.1  +1.8
       baz=244
SRIG   Santa Rosalia      89.08  60  IAMs_20 IAMs_20   14 18 20.1
       comp=Z,2µm,20.0s
K04D   Chiloquin, OR      89.14  43  P       P         13 47 01.0  +1.5
       baz=240
HEC    Hector,Ludlow      89.15  52  P       P         13 47 00.8  +1.1
       baz=243,SNR=6.4
BILL   Bilibino           89.17 358⇑eP       P         13 46 58.0  -0.9
BILL                               e                   13 50 32.2
BILL                               ePPP      PPP       13 52 30.9
BILL                               i SS      SS        14 03 41.6  -0.5
BILL                               pmax      pmax
       comp=Z,34nm,1.3s
BILL   Bilibino           89.17 358  P       P         13 46 58.2  -0.7
LHV    Little Huntoon     89.17  48  P       P         13 46 59.2  -0.3
LHV                                IAmb      IAmb      13 47 11.4
       comp=Z,44nm,1.3s
ULN    Ulaanbaatar        89.18 323ceP       P         13 46 59.3  -0.3
ULN                                pmax      pmax
       comp=Z,44nm,1.4s
ULN    Ulaanbaatar        89.18 323  P       P         13 46 59.1  -0.5
ULN                                IAmb      IAmb      13 47 07.6
       comp=Z,51nm,1.4s
YAK    Yakutsk            89.19 342  P       P         13 46 56.2  -2.9
       comp=Z,1.6nm,0.3s,baz=141,slow=0.8,SNR=1.8
YAK    Yakutsk            89.19 342ceP       P         13 46 58.0  -1.1
YAK                                pmax      pmax
       comp=Z,23nm,0.9s
J04D   Umpqua Nationa     89.22  42  P       P         13 47 01.7  +1.7
       baz=240
GO09   Cerro Castillo     89.25 146  P       P         13 47 00.2  +0.3
PAHR   Pah Rah Range      89.26  47  P       P         13 47 00.3  +0.1
PAHR                               IAmb      IAmb      13 47 15.3
       comp=Z,50nm,1.4s
BC3    Big Chuckawall     89.28  53  P       P         13 47 02.1  +1.7
       baz=244
I04A   Tendick Farm,      89.32  42  P       P         13 47 00.9  +0.7
       baz=239
RYN    Ryan               89.34  48  P       P         13 47 00.1  -0.5
RYN                                IAmb      IAmb      13 47 14.0
       comp=Z,39nm,1.5s
GTA    Gaotai             89.34 313 eP       P         13 46 59.9  -0.6
GTA                                PP        PP        13 50 35.1  +3.4
GTA                                SKS       SKSac     13 57 30.4  -0.5
GTA                                S         S         13 57 46.6  -4.1
GTA                                sS        ScS       13 58 06.8   +11
GTA                                SS        SS        14 03 47.5  +1.5
GTA                                pmax      pmax
       comp=Z,3.0nm,1.2s
GTA                                pmax      pmax
       comp=Z,57nm,6.4s
GTA                                LR        LR
       comp=Z,450nm,19.3s
GTA                                LR        LR
       comp=Z,670nm,18.2s
GTA                                LR        LR
       comp=Z,890nm,20.0s
LPIG   La Paz             89.37  64  LR      LR        14 18 01.3
       comp=Z,2µm,21.0s,baz=298,slow=30
NVAR   Mina Array Bea     89.40  48  P       P         13 47 01.6  +0.7
       comp=Z,6.8nm,0.8s,baz=226,slow=8.1,SNR=40
NVAR                               PP        PP        13 50 33.4  +1.1
       comp=Z,0.5nm,0.8s,baz=234,slow=8.7,SNR=3.8
NVAR                               LR        LR        14 18 25.9
       comp=Z,959nm,21.8s,baz=246,slow=30
NVAR   Mina Array Bea     89.40  48  P       P         13 47 00.1  -0.8
H04D   Lebanon            89.49  41  P       P         13 47 02.3  +1.4
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      baz=239
GLA   Glamis              89.49  54  P         P         13 47 02.2 +1.0
      baz=244
GLA   Glamis              89.49  54  P         P         13 47 00.9 -0.4
GLA                                  pmax      pmax
      comp=Z,49nm,1.4s
GLA   Glamis              89.49  54  P         P         13 47 00.9 -0.4
GLA                                  IAmb      IAmb      13 47 13.2
      comp=Z,49nm,1.4s
NV11  Mina Array Sit      89.50  48  P         P         13 47 01.3  0.0
NV11                                 IAmb      IAmb      13 47 12.7
      comp=Z,35nm,1.2s
FURC  Furnace Creek,      89.51  50  P         P         13 47 02.8 +1.6
      baz=243
SLBS  Sierra La Lagu      89.51  64  P         P         13 47 02.3 +0.7
SLBS                                 IAmb      IAmb      13 47 22.0
      comp=Z,46nm,1.4s
SLBS  Sierra La Lagu      89.51  64  IAMs_20   IAMs_20   14 18 05.1
      comp=Z,2µm,21.0s
G03D  McMinnville, O      89.53  40  P         P         13 47 01.9 +0.8
      baz=239
SONM  Songino Array       89.54 323  P         P         13 47 00.5 -0.7
      comp=Z,2.3nm,0.9s,baz=70,slow=0.5,SNR=9.1
SONM                                 LR        LR        14 24 58.6
      comp=Z,432nm,20.1s,baz=124,slow=34
SONM  Songino Array       89.54 323  P         P         13 47 00.2 -1.0
GMRC  Granite Mounta      89.63  52  P         P         13 47 03.0 +1.0
      baz=244
MOD   Modoc Plateau       89.72  44  P         P         13 47 02.5 +0.3
MOD                                  IAmb      IAmb      13 47 13.5
      comp=Z,50nm,1.3s
IRM   Iron Mountain       89.73  53  P         P         13 47 03.8 +1.4
      baz=244,SNR=6.3
K05A  Summer Lake         89.74  43  P         P         13 47 02.1 -0.3
K05A                                 IAmb      IAmb      13 47 13.5
      comp=Z,26nm,1.0s
J05D  Fort Rock, OR       89.80  43  P         P         13 47 03.7 +1.1
      baz=240
PIX   Pinacate            89.89  56  P         P         13 47 02.7 -0.5
H04A  Detroit Lake        89.91  41  P         P         13 47 02.8 -0.2
H04A                                 IAmb      IAmb      13 47 13.8
      comp=Z,34nm,1.1s
H04A                                 IAMs_20   IAMs_20   14 22 49.8
      comp=Z,1µm,20.0s
TRF   Thorofare Moun      89.96  17  P         P         13 47 01.8 -1.1
TPH   Tonopah             89.99  49  P         P         13 47 04.3 +0.6
TPH                                  pmax      pmax
      comp=Z,195nm,1.2s
TPH   Tonopah             89.99  49  P         P         13 47 04.3 +0.6
CRQM  Cirque              90.00  21  P         P         13 47 02.4 -0.8
CRQM                                 IAmb      IAmb      13 47 13.7
      comp=Z,54nm,1.1s
CRQM                                 IAMs_20   IAMs_20   14 22 49.4
      comp=Z,999nm,19.0s
E03A  Lebam               90.04  39  P         P         13 47 04.5 +1.0
E03A                                 IAmb      IAmb      13 47 15.4
      comp=Z,53nm,1.0s
E03A                                 IAMs_20   IAMs_20   14 24 18.2
      comp=Z,970nm,19.0s
M24K  Tolsona, Glenn      90.06  19  P         P         13 47 06.7 +3.4
      baz=220
TGL   Tana Glacier        90.11  21  P         P         13 47 03.5 -0.1
TGL                                  IAmb      IAmb      13 47 13.6
      comp=Z,36nm,1.0s
ISLE  Juniper Island      90.16  21  P         P         13 47 03.7 -0.1
ISLE                                 IAMs_20   IAMs_20   14 19 39.6
      comp=Z,953nm,19.0s
N25K  Chitina, Valde      90.17  20  P         P         13 47 06.1 +2.3
      baz=221
N25K  Chitina, Valde      90.17  20  P         P         13 47 05.0 +1.2
N25K                                 IAmb      IAmb      13 47 30.6
      comp=Z,21nm,0.6s
TPNV  Topopah Spring      90.17  50  P         P         13 47 05.5 +1.0
      baz=243,SNR=26
TPNV  Topopah Spring      90.17  50  P         P         13 47 04.2 -0.3
TPNV                                 pmax      pmax
      comp=Z,33nm,1.2s
TPNV  Topopah Spring      90.17  50  P         P         13 47 04.2 -0.3
TPNV                                 IAmb      IAmb      13 47 23.8
      comp=Z,32nm,1.2s
TPNV                                 IAMs_20   IAMs_20   14 18 03.4
      comp=Z,1µm,22.0s
YAH   Yahtse              90.19  22  P         P         13 47 04.1  0.0
PINE  Pine Mountain       90.24  42  P         P         13 47 05.0 +0.3
PINE                                 IAmb      IAmb      13 47 16.3
      comp=Z,45nm,1.1s
I05D  Terrebonne, OR      90.26  42  P         P         13 47 05.3 +0.7
      baz=240
GLB   Gilahina Butte      90.29  20  P         P         13 47 04.2 -0.1
GLB                                  IAmb      IAmb      13 47 14.7
      comp=Z,29nm,1.0s
BPAW  Bear Paw Mtn.       90.30  16  IAMs_20   IAMs_20   14 29 12.1
      comp=Z,1µm,19.0s
RND   Reindeer            90.31  17  P         P         13 47 02.5 -1.9
RND                                  pmax      pmax
      comp=Z,23nm,1.0s
RND                                  MLR       MLR
      comp=Z,1µm,19.0s
RND   Reindeer            90.31  17  P         P         13 47 02.5 -1.9
RND                                  IAmb      IAmb      13 47 16.3
      comp=Z,23nm,1.0s
RND                                  IAMs_20   IAMs_20   14 29 09.4
      comp=Z,1µm,19.0s
NLWA  Neilton Lookou      90.31  38  IAMs_20   IAMs_20   14 23 46.1
      comp=Z,1µm,19.0s
NEE2  Needles Airpor      90.39  53  P         P         13 47 06.9 +1.5
      baz=244
TABL  Table Mountain      90.45  22  P         P         13 47 04.0 -1.3
TABL                                 IAMs_20   IAMs_20   14 20 29.9
      comp=Z,1µm,21.0s
DHY   Denali Highway      90.46  18  P         P         13 47 04.8 -0.4
DHY                                  IAMs_20   IAMs_20   14 21 37.6
      comp=Z,1µm,21.0s
BALM  Baldy               90.47  21  P         P         13 47 04.9 -0.4
BALM                                 IAmb      IAmb      13 47 15.3
      comp=Z,42nm,1.0s
MCARA McCarthy VSAT       90.50  20  P         P         13 47 04.8 -0.5
PCA   Pinnacle            90.52  22  P         P         13 47 03.6 -1.8
PDMCI Parker Dam,Lak      90.55  53  P         P         13 47 07.5 +1.4
      baz=244,SNR=7.9
214A  Organ Pipe Nat      90.56  56  P         P         13 47 08.0 +1.7
      baz=245,SNR=7.2
214A  Organ Pipe Nat      90.56  56  P         P         13 47 05.9 -0.4
214A                                 IAMs_20   IAMs_20   14 25 27.9
      comp=Z,1µm,18.0s
E04D  Cinebar             90.64  39  P         P         13 47 07.7 +1.5
      baz=239
BARN  Barnard Glacie      90.72  21  P         P         13 47 06.1 -0.5
G05D  Wamic, OR           90.73  41  P         P         13 47 06.8  0.0
      baz=240
SHPR  Sheep Range         90.75  51  P         P         13 47 06.6 -0.6
BWN   Browne              90.76  16  IAMs_20   IAMs_20   14 25 01.5
      comp=Z,1µm,20.0s
CTGM  Chitina Glacie      90.76  21  P         P         13 47 06.0 -0.7
HSIG                      90.82  59  P         P         13 47 07.3 -0.3
HSIG                                 IAmb      IAmb      13 47 18.9
      comp=Z,22nm,1.0s
HSIG                                 IAMs_20   IAMs_20   14 24 42.9
      comp=Z,1µm,19.0s
D03D  Eldon               90.84  38  P         P         13 47 08.5 +1.4
      baz=239
F05D  White Salmon        90.96  40  P         P         13 47 08.7 +0.9
      baz=240
WVOR  Wild Horse Val      91.06  44  P         P         13 47 09.2 +0.7
WVOR                                 pmax      pmax
      comp=Z,28nm,1.2s
WVOR  Wild Horse Val      91.06  44  P         P         13 47 09.2 +0.7
WVOR                                 IAmb      IAmb      13 47 19.9
      comp=Z,28nm,1.2s
W13A  Hualapai Mount      91.08  53  P         P         13 47 08.8  0.0
W13A                                 IAmb      IAmb      13 47 20.5
      comp=Z,28nm,1.2s
MLY   Manley              91.13  15  P         P         13 47 09.5 +1.3
      baz=216
LON   Longmire            91.19  40  P         P         13 47 08.8 -0.1
LON                                  pmax      pmax
      comp=Z,18nm,1.3s
LON   Longmire            91.19  40  P         P         13 47 08.8 -0.1
IMAR  Indian Mountai      91.20  14  P         P         13 47 08.5 +0.1
PGC   Sidney              91.21  37  P         P         13 47 09.2 +0.4
PGC                                  IAmb      IAmb      13 47 20.0
      comp=Z,44nm,1.1s
PRN   Pahroc Range        91.23  50  P         P         13 47 10.2 +0.8
PRN                                  IAMs_20   IAMs_20   14 25 06.0
      comp=Z,1µm,20.0s
R11A  Troy Canyon, C      91.26  49  P         P         13 47 10.7 +1.1
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      baz=244,SNR=14
R11A  Troy Canyon, C      91.26  49  P         P         13 47 09.8 +0.2
RDOG  Red Dog Mine        91.28  10  IAMs_20   IAMs_20   14 21 10.6
      comp=Z,1µm,22.0s
I07A  Izee                91.28  43  P         P         13 47 10.2 +0.8
I07A                                 IAmb      IAmb      13 47 20.8
      comp=Z,24nm,1.1s
I07A                                 IAMs_20   IAMs_20   14 22 28.3
      comp=Z,952nm,20.0s
D05A  Enumclaw            91.30  39  P         P         13 47 10.2 +0.9
WRH   Wood River Hil      91.36  17  P         P         13 47 07.4 -1.8
WRH                                  IAmb      IAmb      13 47 19.8
      comp=Z,30nm,1.4s
WRH                                  IAMs_20   IAMs_20   14 23 34.2
      comp=Z,1µm,19.0s
MENT  Mentasta            91.44  19  P         P         13 47 10.5 +0.9
MENT                                 IAmb      IAmb      13 47 19.8
      comp=Z,28nm,1.2s
I23K  Minto, Yukon-K      91.57  16  P         P         13 47 13.2 +3.1
      baz=217
I23K  Minto, Yukon-K      91.57  16  IAMs_20   IAMs_20   14 25 03.6
      comp=Z,1µm,20.0s
CCB   Clear Creek Bu      91.58  17  P         P         13 47 09.6 -0.6
CCB                                  IAMs_20   IAMs_20   14 24 45.9
      comp=Z,1µm,20.0s
HDA   Harding Lake        91.62  17  P         P         13 47 12.5 +2.1
      baz=219
HDA   Harding Lake        91.62  17  P         P         13 47 08.8 -1.6
HDA                                  IAmb      IAmb      13 47 18.6
      comp=Z,38nm,1.1s
HDA                                  IAMs_20   IAMs_20   14 25 53.2
      comp=Z,1µm,21.0s
BOD   Bodaibo             91.69 334  eP        P         13 47 13.2 +2.4
BOD                                  pmax      pmax
      comp=Z,22nm,2.1s
RIDG  Independent Ri      91.70  18  P         P         13 47 10.1 -0.8
MDM   Murphy Dome         91.71  16  P         P         13 47 10.8 -0.1
MDM                                  IAmb      IAmb      13 47 19.2
      comp=Z,17nm,1.0s
TCOL  CIGO, UAF Yank      91.74  17  P         P         13 47 12.6 +1.7
      baz=218
TCOL  CIGO, UAF Yank      91.74  17  P         P         13 47 09.5 -1.4
TCOL                                 IAmb      IAmb      13 47 18.8
      comp=Z,29nm,1.1s
TCOL                                 IAMs_20   IAMs_20   14 24 52.2
      comp=Z,1µm,20.0s
COLA  College             91.74  17 i P        P         13 47 12.7 +1.8
COLA                                 pmax      pmax
      comp=Z,47nm,1.8s
COLA  College             91.74  17  P         P         13 47 09.9 -1.0
COLA                                 IAmb      IAmb      13 47 18.8
      comp=Z,26nm,1.1s
COLA  College             91.74  17  IAMs_20   IAMs_20   14 24 52.2
      comp=Z,1µm,20.0s
IL31                      91.92  17  P         P         13 47 09.8 -1.9
ILAR  Eielson Array       91.92  17  P         P         13 47 10.4 -1.4
      comp=Z,2.7nm,0.7s,baz=235,slow=4.6,SNR=24
ILAR                                 PP        PP        13 50 51.5 +0.1
      comp=Z,0.6nm,1.0s,baz=215,slow=7.7,SNR=1.2
ILAR                                 LR        LR        14 24 30.6
      comp=Z,748nm,19.5s,baz=228,slow=33
HYT   Haines Junctio      92.01  23  P         P         13 47 12.1 -0.4
HYT                                  IAmb      IAmb      13 47 20.6
      comp=Z,35nm,1.0s
HYT                                  IAMs_20   IAMs_20   14 20 23.8
      comp=Z,1µm,21.0s
POKR  Poker Plat Res      92.04  17  P         P         13 47 14.0 +1.7
      baz=219
LTY   Liberty             92.11  40  P         P         13 47 14.2 +1.0
BCAR  Beaver Creek A      92.13  20  P         P         13 47 11.7 -1.2
SCRK  Sand Creek          92.14  18  P         P         13 47 14.8 +1.8
      baz=222
G08A  Pilot Rock          92.20  42  P         P         13 47 13.9 +0.2
G08A                                 IAMs_20   IAMs_20   14 24 14.5
      comp=Z,1µm,19.0s
E07A  Sunnyside           92.26  40  P         P         13 47 14.3 +0.5
E07A                                 IAmb      IAmb      13 47 25.0
      comp=Z,17nm,1.0s
E07A                                 IAMs_20   IAMs_20   14 22 50.0
      comp=Z,930nm,19.0s
TUC   Tucson              92.28  56  P         P         13 47 15.4 +1.1
      baz=246
TUC   Tucson              92.28  56  P         P         13 47 14.7 +0.4
TUC                                  pmax      pmax
      comp=Z,31nm,1.5s
TUC   Tucson              92.28  56  P         P         13 47 14.7 +0.4
TUC                                  IAmb      IAmb      13 47 34.8
      comp=Z,31nm,1.5s
TUC   Tucson              92.28  56  IAMs_20   IAMs_20   14 25 38.2
      comp=Z,1µm,18.0s
PALK  Pallekele           92.31 277  IAMs_20   IAMs_20   14 27 30.0
      comp=Z,1µm,21.0s
LCMT  Little Creek M      92.36  51  P         P         13 47 15.0 +0.4
HAWA  Hanford             92.38  41  P         P         13 47 13.9 -0.4
HAWA                                 IAmb      IAmb      13 47 25.6
      comp=Z,32nm,1.1s
HAWA                                 IAMs_20   IAMs_20   14 27 29.0
      comp=Z,1µm,18.0s
CCUT  Cedar City          92.50  51  P         P         13 47 15.7 +0.3
ELK   Elko                92.56  47  P         P         13 47 15.6  0.0
ELK                                  pmax      pmax
      comp=Z,15nm,1.3s
ELK                                  MLR       MLR
      comp=Z,900nm,18.0s
ELK   Elko                92.56  47  P         P         13 47 15.6  0.0
ELK                                  IAMs_20   IAMs_20   14 29 38.5
      comp=Z,884nm,18.0s
PSUT  Pine Spring         92.57  50  P         P         13 47 16.1 +0.4
ZAK   Zakamensk           92.62 324  eP        P         13 47 14.8 -0.7
ZAK                                  pmax      pmax
      comp=Z,17nm,1.5s
X16A  Lo Mia Camp, P      92.62  54  P         P         13 47 16.5 +0.5
X16A                                 IAmb      IAmb      13 47 27.8
      comp=Z,25nm,1.1s
KNB   Kanab               92.67  51  P         P         13 47 17.7 +1.5
KNB                                  pmax      pmax
      comp=Z,37nm,1.4s
KNB   Kanab               92.67  51  P         P         13 47 17.7 +1.5
SZCU  Shurtz Canyon       92.72  51  P         P         13 47 16.9 +0.5
U15A  North Rim           92.81  52  P         P         13 47 17.7 +0.7
WHY   Whitehorse          92.86  24  P         P         13 47 14.6 -1.7
WHY                                  IAmb      IAmb      13 47 24.6
      comp=Z,26nm,1.1s
WHY                                  IAMs_20   IAMs_20   14 22 57.5
      comp=Z,2µm,20.0s
PRP   Porcupine Dome      92.86  17  IAMs_20   IAMs_20   14 25 27.0
      comp=Z,1µm,20.0s
BMO   Blue Mountains      93.04  43  P         P         13 47 16.3 -1.2
BMO                                  pmax      pmax
      comp=Z,12nm,1.4s
BMO   Blue Mountains      93.04  43  P         P         13 47 16.3 -1.2
BMO                                  IAMs_20   IAMs_20   14 24 46.7
      comp=Z,1µm,20.0s
COLD  Coldfoot            93.04  14  P         P         13 47 17.5 +0.6
      baz=216
COLD  Coldfoot            93.04  14  P         P         13 47 16.6 -0.3
COLD                                 IAmb      IAmb      13 47 25.5
      comp=Z,20nm,1.1s
COLD                                 IAMs_20   IAMs_20   14 26 22.3
      comp=Z,945nm,19.0s
319A  Douglas             93.08  58  P         P         13 47 17.7 -0.4
319A                                 IAmb      IAmb      13 47 29.8
      comp=Z,17nm,1.0s
TLY   Talaya              93.09 325  eP        P         13 47 11.7 -5.8
TLY                                  pmax      pmax
      comp=Z,6.0nm,0.6s
TLY                                  MLR       MLR
      comp=Z,820nm,14.0s
WUAZ  Wupatki             93.12  53  P         P         13 47 20.1 +1.8
      baz=246
WUAZ  Wupatki             93.12  53  P         P         13 47 18.4 +0.2
WUAZ                                 IAmb      IAmb      13 47 29.8
      comp=Z,24nm,1.1s
PKCU  Pink Cliffs         93.22  51  P         P         13 47 17.3 -1.5
E09A  Wood Farm, Sta      93.28  41  IAMs_20   IAMs_20   14 23 50.9
      comp=Z,1µm,19.0s
MFID  Camas Ranch         93.34  45  P         P         13 47 15.4 -3.6
TAPN  Taplejung           93.41 298  eP        P         13 47 25.1 +5.1
      comp=Z,109nm,1.4s
DLBC  Dease Lake          93.42  27  IAMs_20   IAMs_20   14 23 51.7
      comp=Z,1µm,19.0s
MTPU  Mount Pierson       93.56  51  P         P         13 47 19.7 -0.7
EGAK  Eagle               93.56  19  P         P         13 47 18.4 -1.0
F10A  Beach Ranch, E      93.60  42  P         P         13 47 19.8 -0.3
F10A                                 IAMs_20   IAMs_20   14 24 22.4
      comp=Z,954nm,20.0s
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DAWY  Dawson              93.60  20  P         P         13 47 19.0 -0.6
DAWY                                 IAmb      IAmb      13 47 30.3
      comp=Z,43nm,1.2s
MVU   Marysvale           93.72  50  P         P         13 47 20.2 -0.9
FYU   Fort Yukon          93.74  16  IAMs_20   IAMs_20   14 31 01.1
      comp=Z,1µm,19.0s
MSU   Marysvale           93.75  50  P         P         13 47 21.6 +0.4
MSU   Marysvale           93.75  50  P         P         13 47 21.6 +0.4
X18A  Snowflake           93.80  54  P         P         13 47 20.2 -1.3
X18A                                 IAmb      IAmb      13 47 32.9
      comp=Z,21nm,1.2s
C09A  Chrisman Ranch      93.80  40  IAMs_20   IAMs_20   14 26 26.6
      comp=Z,926nm,19.0s
DUG   Dugway, Tooele      94.00  48  IAMs_20   IAMs_20   14 29 54.2
      comp=Z,1µm,19.0s
HLID  Hailey              94.33  45  P         P         13 47 24.7 +1.1
      baz=245
HLID  Hailey              94.33  45  P         P         13 47 24.2 +0.5
MOY   Mondy               94.51 324  eP        P         13 47 29.5 +5.3
MOY                                  pmax      pmax
      comp=Z,46nm,2.5s
BMAR  Burnt Mountain      94.56  16  P         P         13 47 23.1 -0.9
HVU   Hansel Valley       94.68  47  P         P         13 47 25.0 -0.3
HVU                                  pmax      pmax
      comp=Z,10.0nm,1.1s
HVU   Hansel Valley       94.68  47  P         P         13 47 25.0 -0.3
121A  Cookes Peak, D      94.70  57  P         P         13 47 26.9 +1.3
      baz=248
121A  Cookes Peak, D      94.70  57  P         P         13 47 25.1 -0.4
NEW   Newport             94.70  40  LR        LR        14 26 46.9
      comp=Z,654nm,18.0s,baz=244,slow=33
NEW   Newport             94.70  40  IAMs_20   IAMs_20   14 28 30.4
      comp=Z,1µm,18.0s
SPUT  South Promonto      94.71  47  P         P         13 47 25.1 -0.3
TMUT  Trail Mountain      94.76  50  P         P         13 47 25.8 -0.1
CTU   Camp Tracy          94.94  48  P         P         13 47 26.2 -0.3
JLU   Jordanelle          95.11  48  P         P         13 47 26.8 -0.6
GUN   Gumba               95.13 298  eP        P         13 47 33.1 +5.2
      comp=Z,21nm,1.0s
SRU   San Rafael Swe      95.18  50  P         P         13 47 25.7 -1.9
SRU                                  pmax      pmax
      comp=Z,9.0nm,1.3s
SRU   San Rafael Swe      95.18  50  P         P         13 47 25.7 -1.9
A21K  Barrow              95.20  10  IAMs_20   IAMs_20   14 23 28.3
      comp=Z,1µm,21.0s
TCUT  Toone Canyon        95.35  48  P         P         13 47 28.2 -0.3
PKI   Pulchoki            95.39 297  eP        P         13 47 34.3 +5.2
      comp=Z,39nm,1.1s
PKIN  Phulchoki           95.41 297  eP        P         13 47 34.3 +5.2
      comp=Z,38nm,1.0s
EPT   El Paso             95.42  58  IAMs_20   IAMs_20   14 27 39.7
      comp=Z,1µm,18.0s
KKN   Kakani              95.58 298  eP        P         13 47 35.2 +5.4
      comp=Z,15nm,0.7s
DMN   Daman               95.66 297  eP        P         13 47 35.8 +5.6
      comp=Z,40nm,0.9s
MCMT  McKenzie Canyo      95.88  44  P         P         13 47 29.6 -1.2
Y22D  IRIS PASSCAL I      95.94  56  IAMs_20   IAMs_20   14 28 33.3
      comp=Z,942nm,18.0s
PV14  Lion Creek, Pa      95.97  51  IAMs_20   IAMs_20   14 31 54.3
      comp=Z,1µm,18.0s
PV19  Morning Glory       95.98  51  IAMs_20   IAMs_20   14 31 22.8
      comp=Z,980nm,21.0s
EPYK  Eagle Plains        96.00  19  P         P         13 47 30.1 -0.4
      baz=228
EPYK  Eagle Plains        96.00  19  P         P         13 47 29.5 -1.0
PV18  Skein Mesa, Pa      96.01  51  IAMs_20   IAMs_20   14 31 56.7
      comp=Z,1µm,19.0s
MSO   Missoula            96.02  42  IAMs_20   IAMs_20   14 27 21.5
      comp=Z,1µm,19.0s
PV16  Nyswonger Mesa      96.03  51  IAMs_20   IAMs_20   14 31 58.2
      comp=Z,1µm,18.0s
PV11  David Mesa, Pa      96.05  51  IAMs_20   IAMs_20   14 34 39.9
      comp=Z,1µm,18.0s
PV03  Paradox Valley      96.06  51  IAMs_20   IAMs_20   14 32 05.9
      comp=Z,953nm,18.0s
PV04  Paradox Valley      96.07  51  IAMs_20   IAMs_20   14 32 01.2
      comp=Z,1µm,19.0s
GKN   Gorkha              96.19 298  eP        P         13 47 37.3 +4.8
      comp=Z,24nm,0.8s
JTMT  Jette               96.19  41  IAMs_20   IAMs_20   14 28 04.0
      comp=Z,873nm,20.0s
PLCA  Paso Flores         96.26 138  P         P         13 47 32.4 -0.2
      comp=Z,3.2nm,0.9s,baz=199,slow=8.2,SNR=5.3
PLCA                                 LR        LR        14 20 56.6
      comp=Z,266nm,22.0s,baz=236,slow=29
PLCA  Paso Flores         96.26 138  P         P         13 47 31.5 -1.1
PLCA                                 pmax      pmax
      comp=Z,14nm,1.5s
PLCA  Paso Flores         96.26 138  P         P         13 47 31.4 -1.1
MNTX  Cornudas Mount      96.29  59  P         P         13 47 33.6 +1.0
      baz=249
MNTX  Cornudas Mount      96.29  59  P         P         13 47 31.9 -0.8
MNTX                                 IAMs_20   IAMs_20   14 27 25.6
      comp=Z,999nm,18.0s
LC01  Cunco               96.45 136  P         P         13 47 32.5 -0.9
LC01                                 IAMs_20   IAMs_20   14 19 59.4
      comp=Z,1µm,20.0s
ANMO  Albuquerque         96.62  55  P         P         13 47 34.8 +0.5
      baz=249
ANMO  Albuquerque         96.62  55  P         P         13 47 32.8 -1.5
ANMO                                 pmax      pmax
      comp=Z,7.0nm,1.2s
ANMO                                 MLR       MLR
      comp=Z,700nm,20.0s
ANMO  Albuquerque         96.62  55  P         P         13 47 32.8 -1.5
IMW   Indian Meadow       96.77  46  P         P         13 47 35.4 +0.5
TX31  Lajitas Ar. Si      96.83  61  P         P         13 47 35.2 -0.1
TX31                                 IAmb      IAmb      13 47 46.7
      comp=Z,24nm,1.1s
TX32  Lajitas Array       96.83  61  P         P         13 47 34.9 -0.4
TXAR  Lajitas Array       96.83  61  P         P         13 47 36.8 +1.5
      comp=Z,1.4nm,0.8s,baz=219,slow=5.8,SNR=15
TXAR                                 LR        LR        14 22 56.9
      comp=Z,2µm,20.6s,baz=0.0,slow=30
TXAR  Lajitas Array       96.83  61  P         P         13 47 33.8 -1.5
TXAR  Lajitas Array       96.83  61  P         P         13 47 33.8 -1.5
BOZ   Bozeman (W)         96.98  44  IAMs_20   IAMs_20   14 27 07.2
      comp=Z,1µm,20.0s
DANN  Dangsing            97.03 298  eP        P         13 47 41.0 +4.5
      comp=Z,15nm,0.9s
O20A  White River Ci      97.19  50  IAMs_20   IAMs_20   14 22 10.0
      comp=Z,1µm,21.0s
UNM   Universidad Na      97.23  72  IAMs_20   IAMs_20   14 21 45.6
      comp=Z,1µm,20.0s
PDAR  Pinedale Array      97.26  47  P         P         13 47 37.2 +0.1
      comp=Z,0.4nm,0.7s,baz=163,slow=1.5,SNR=5.4
PDAR                                 LR        LR        14 24 50.7
      comp=Z,472nm,20.9s,baz=250,slow=31
SMCO  Snowmass            97.76  51  IAMs_20   IAMs_20   14 35 04.5
      comp=Z,807nm,18.0s
INK   Inuvik              98.20  18  P         P         13 47 39.2 -1.1
      comp=Z,6.3nm,1.1s,baz=189,slow=3.7,SNR=8.6
INK   Inuvik              98.20  18  P         P         13 47 40.2 -0.2
SDCO  Great Sand Dun      98.33  53  IAMs_20   IAMs_20   14 23 32.3
      comp=Z,964nm,21.0s
MSTX  Muleshoe            99.13  57  IAMs_20   IAMs_20   14 30 41.9
      comp=Z,950nm,20.0s
WMQ   Urumqi              99.42 313  eP        Pdif      13 47 48.6 +2.0
WMQ                                  sP        pwP       13 47 59.8 +7.6
WMQ                                  S         SKKSac    13 59 04.7 +7.6
WMQ                                  pmax      pmax
      comp=Z,13nm,2.3s
WMQ                                  pmax      pmax
      comp=Z,60nm,3.7s
WMQ                                  LR        LR
      comp=Z,780nm,18.7s
WMQ                                  LR        LR
      comp=Z,370nm,23.9s
WMQ                                  LR        LR
      comp=Z,470nm,26.5s
PHWY  Pilot Hill          99.59  49  IAMs_20   IAMs_20   14 25 07.2
      comp=Z,1µm,21.0s
AMTX  Amarillo           100.28  57  IAMs_20   IAMs_20   14 33 03.3
      comp=Z,923nm,19.0s
LAO   LASA Array         100.88  44  IAMs_20   IAMs_20   14 31 19.3
      comp=Z,1µm,20.0s
C36M  Paulatuk           101.62  19  Pdiff     Pdif      13 47 55.4 -0.1
      baz=240
YKA   Yellowknife Ar     102.04  27  P         Pdif      13 47 59.1 +1.5
      comp=Z,1.9nm,0.8s,baz=251,slow=4.2,SNR=26
YKA                                  PP        PP        13 52 09.3 -0.1
      comp=Z,0.8nm,0.9s,baz=243,slow=6.8,SNR=4.0
YKA                                  PKKPbc    PKKPbc    14 04 01.9 -2.0
      comp=Z,0.1nm,0.5s,baz=54,slow=3.6,SNR=3.9
ZSN   Zaisan             102.49 316  ePKiKP    PKiKP     13 52 20.0 -1.4
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	baz=316						
WMOK	**Wichita Mounta**	**102.51**	**58**	IAMs_20	IAMs_20	14 31 57.3	
	comp=Z,961nm,19.0s						
CCIG	**Comitan**	**102.56**	**77**	IAMs_20	IAMs_20	14 24 24.0	
	comp=Z,831nm,20.0s						
U32A	**Winter Ranch,**	**102.82**	**56**	IAMs_20	IAMs_20	14 36 36.4	
	comp=Z,893nm,18.0s						
CBKS	**Cedar Bluff**	**102.97**	**53**	IAMs_20	IAMs_20	14 35 19.2	
	comp=Z,989nm,20.0s						
AC05	**El Transito**	**103.14**	**128**	IAMs_20	IAMs_20	14 28 05.1	
	comp=Z,786nm,18.0s						
R32A	**Long Quarter,**	**103.63**	**54**	IAMs_20	IAMs_20	14 33 56.6	
	comp=Z,893nm,18.0s						
OKCFA	**Oklahoma City**	**103.75**	**57**	IAMs_20	IAMs_20	14 32 57.1	
	comp=Z,834nm,19.0s						
OK025	**Westminster Rd**	**103.88**	**57**	IAMs_20	IAMs_20	14 35 08.2	
	comp=Z,881nm,18.0s						
MKAR	**Makanchi Array**	**103.98**	**315**	Pdiff	**Pdif**	**13 48 07.4**	**+0.8**
	comp=Z,0.4nm,0.7s,baz=96,slow=6.4,SNR=2.8						
MKAR				PP	**PKiKP**	**13 52 24.3**	**+0.2**
	comp=Z,0.6nm,0.7s,baz=110,slow=5.4,SNR=7.4						
SNET	**Serv Nac Est T**	**104.39**	**81**	IAMs_20	IAMs_20	14 23 48.5	
	comp=Z,1µm,22.0s						
OK030	**Cody Creek RV**	**104.41**	**57**	IAMs_20	IAMs_20	14 33 16.6	
	comp=Z,950nm,19.0s						
ZALV	**Zalesovo Beam**	**104.43**	**323**	Pdiff	**Pdif**	**13 48 15.1**	**+6.6**
	comp=Z,0.4nm,0.3s,baz=99,slow=9.5,SNR=2.5						
K31A	**O'Neill**	**104.75**	**50**	IAMs_20	IAMs_20	14 36 16.9	
	comp=Z,1µm,19.0s						
T35A	**Sooner Cattle**	**104.89**	**56**	IAMs_20	IAMs_20	14 37 53.2	
	comp=Z,870nm,18.0s						
SHLS	**Shalkode**	**104.92**	**311**	*e*PKiKP	**PKiKP**	**13 52 24.1**	**-2.1**
	baz=311						
X37A	**Clayton**	**105.16**	**58**	IAMs_20	IAMs_20	14 33 43.6	
	comp=Z,1µm,18.0s						
TUL1	**Leonard**	**105.18**	**57**	IAMs_20	IAMs_20	14 33 08.1	
	comp=Z,1µm,18.0s						
KSU1	**Kansas State U**	**105.39**	**54**	IAMs_20	IAMs_20	14 34 55.3	
	comp=Z,790nm,18.0s						
SATY	**Saty**	**105.64**	**310**	*e*PKiKP	**PKiKP**	**13 52 26.4**	**-1.0**
	baz=310						
TDK	**Taldyqorghan**	**106.13**	**312**	*e*PKiKP	**PKiKP**	**13 52 26.2**	**-1.9**
	baz=312						
TDK				*e*PP	**PP**	**13 52 38.5**	**-2.0**
	baz=312						
L34A	**Svendsen Farm,**	**106.29**	**51**	IAMs_20	IAMs_20	14 40 02.7	
	comp=Z,1µm,18.0s						
U38A	**Gravette**	**106.42**	**57**	IAMs_20	IAMs_20	14 34 12.7	
	comp=Z,932nm,18.0s						
MIAR	**Mount Ida**	**106.58**	**59**	IAMs_20	IAMs_20	14 35 25.2	
	comp=Z,1µm,18.0s						
MDOK	**Medeo**	**106.64**	**310**	*e*PP	**PP**	**13 52 42.8**	**-1.6**
	baz=310						
342A	**Flagon Creek P**	**106.78**	**62**	IAMs_20	IAMs_20	14 28 18.0	
	comp=Z,1µm,22.0s						
X40A	**Basin Creek Fa**	**107.16**	**59**	IAMs_20	IAMs_20	14 29 13.6	
	comp=Z,923nm,21.0s						
JTS	**Las Juntas de**	**107.25**	**85**	IAMs_20	IAMs_20	14 26 10.4	
	comp=Z,786nm,20.0s						
F33A	**5 Mile Ranch,**	**107.25**	**47**	IAMs_20	IAMs_20	14 30 19.4	
	comp=Z,992nm,22.0s						
TEIG	**Tepich**	**107.25**	**75**	IAMs_20	IAMs_20	14 27 32.2	
	comp=Z,1µm,22.0s						
NRIK	**Noril'sk**	**107.28**	**338**	IAMs_20	IAMs_20	14 33 15.4	
	comp=Z,1µm,22.0s						
KURK	**Kurchatov**	**107.31**	**318**		**PKiKP**	**13 52 27.6**	**-2.5**
KURK					SKKSac	13 59 56.4	+3.7
KURBB	**Kurchatov Arra**	**107.34**	**318**	PKiKP	**PKiKP**	**13 52 27.6**	**-2.6**
	comp=Z,0.5nm,0.7s,baz=109,slow=3.4,SNR=4.5						
KURBB				PP	**PP**	**13 52 46.4**	**-2.7**
	comp=Z,0.6nm,0.4s,baz=104,slow=6.7,SNR=6.8						
KURBB				PKKPbc	**PKKPbc**	**14 03 45.5**	**-1.8**
	comp=Z,0.7nm,0.7s,baz=282,slow=3.9,SNR=6.6						
S39A	**Bolivar**	**107.55**	**56**	IAMs_20	IAMs_20	14 37 32.5	
	comp=Z,820nm,18.0s						
U40A	**Yellville**	**107.60**	**57**	IAMs_20	IAMs_20	14 34 13.0	
	comp=Z,815nm,19.0s						
WHAR	**Wooly Hollow**	**107.79**	**58**	IAMs_20	IAMs_20	14 35 25.2	
	comp=Z,1µm,18.0s						
P38A	**Dawn**	**107.83**	**54**	IAMs_20	IAMs_20	14 36 01.0	
	comp=Z,1µm,19.0s						
HDC	**Heredia**	**107.94**	**86**	IAMs_20	IAMs_20	14 25 26.7	
	comp=Z,947nm,22.0s						
FCAR	**Ozark Folk Cen**	**108.06**	**58**	IAMs_20	IAMs_20	14 36 02.3	
	comp=Z,918nm,18.0s						
AGMN	**Agassiz Nation**	**108.07**	**44**	IAMs_20	IAMs_20	14 34 46.7	
	comp=Z,1µm,19.0s						
N38A	**Joes South For**	**108.32**	**53**	IAMs_20	IAMs_20	14 42 40.6	
	comp=Z,873nm,18.0s						
ESPN	**Las Esperanzas**	**108.47**	**84**	IAMs_20	IAMs_20	14 26 23.7	
	comp=Z,1µm,21.0s						
R40A	**Maddies Statio**	**108.50**	**55**	IAMs_20	IAMs_20	14 38 36.6	
	comp=Z,1µm,19.0s						
LCAR	**Lake Charles**	**108.87**	**58**	IAMs_20	IAMs_20	14 37 00.7	
	comp=Z,913nm,18.0s						
P40A	**Paris**	**108.93**	**54**	IAMs_20	IAMs_20	14 33 30.0	
	comp=Z,886nm,20.0s						
T42A	**Van Buren**	**109.13**	**57**	IAMs_20	IAMs_20	14 36 55.5	
	comp=Z,1µm,19.0s						
SPMN	**Marine on St.**	**109.53**	**48**	IAMs_20	IAMs_20	14 32 46.2	
	comp=Z,853nm,21.0s						
PBMO	**Poplar Bluff**	**109.59**	**57**	IAMs_20	IAMs_20	14 33 22.8	
	comp=Z,980nm,21.0s						
MET	**Memphis--Engin**	**109.63**	**59**	IAMs_20	IAMs_20	14 29 24.9	
	comp=Z,979nm,21.0s						
OXF	**Oxford**	**109.91**	**60**	IAMs_20	IAMs_20	14 31 46.6	
	comp=Z,1µm,20.0s						
L40A	**Anamosa**	**110.06**	**52**	IAMs_20	IAMs_20	14 33 03.6	
	comp=Z,973nm,19.0s						
PARMO	**Parma**	**110.10**	**58**	IAMs_20	IAMs_20	14 35 29.3	
	comp=Z,985nm,21.0s						
PENMO	**Penman**	**110.15**	**58**	IAMs_20	IAMs_20	14 39 01.7	
	comp=Z,817nm,19.0s						
W45A	**Hickory Valley**	**110.23**	**59**	IAMs_20	IAMs_20	14 37 08.2	
	comp=Z,1µm,19.0s						
HENM	**Henderson Moun**	**110.33**	**58**	IAMs_20	IAMs_20	14 35 44.4	
	comp=Z,832nm,20.0s						
DZA	**Taraz**	**110.68**	**309**	*e*PP	**PP**	**13 53 11.5**	**-2.2**
	baz=309						
FCC	**Fort Churchill**	**110.84**	**34**	IAMs_20	IAMs_20	14 44 08.7	
	comp=Z,1µm,19.0s						
EYMN	**Ely**	**110.89**	**45**	IAMs_20	IAMs_20	14 30 44.3	
	comp=Z,1µm,22.0s						
BRZS	**Berezniki**	**110.92**	**317**	*e*PP	**PP**	**13 53 13.1**	**-2.0**
	baz=317						
JFWS	**Jewell Farm**	**110.92**	**51**	IAMs_20	IAMs_20	14 36 39.3	
	comp=Z,865nm,19.0s						
L42A	**Oliver, Polo**	**111.19**	**52**	IAMs_20	IAMs_20	14 31 15.5	
	comp=Z,840nm,20.0s						
HDIL	**Hopedale**	**111.21**	**54**	IAMs_20	IAMs_20	14 34 13.2	
	comp=Z,746nm,20.0s						
G40A	**Rib Lake**	**111.35**	**48**	IAMs_20	IAMs_20	14 35 53.3	
	comp=Z,928nm,19.0s						
WVT	**Waverly**	**111.51**	**58**	IAMs_20	IAMs_20	14 36 48.7	
	comp=Z,800nm,18.0s						
LRAL	**Lakeview Retre**	**111.56**	**62**	IAMs_20	IAMs_20	14 38 28.4	
	comp=Z,1µm,19.0s						
BRLS	**Borolday**	**111.78**	**309**	*e*PKiKP	**PKiKP**	**13 52 37.7**	**-1.1**
	baz=309						
BRLS	**Borolday**	**111.78**	**309**	*i* PKIKP	**PKiKP**	**13 52 37.7**	**-1.1**
OLIL	**Olney**	**111.79**	**56**	IAMs_20	IAMs_20	14 41 31.8	
	comp=Z,899nm,19.0s						
X48A	**Hartselle**	**111.81**	**60**	IAMs_20	IAMs_20	14 32 16.9	
	comp=Z,1µm,20.0s						
250A	**Grady**	**111.95**	**63**	IAMs_20	IAMs_20	14 31 31.7	
	comp=Z,925nm,22.0s						
USIN	**University of**	**111.98**	**56**	IAMs_20	IAMs_20	14 38 00.1	
	comp=Z,1µm,18.0s						
T47A	**Sharon Grove**	**112.25**	**58**	IAMs_20	IAMs_20	14 33 01.1	
	comp=Z,713nm,21.0s						
K43A	**Burlington**	**112.28**	**51**	IAMs_20	IAMs_20	14 41 04.8	
	comp=Z,1µm,19.0s						
HQIL	**Hanson Quary C**	**112.49**	**52**	IAMs_20	IAMs_20	14 41 03.0	
	comp=Z,900nm,18.0s						
L44A	**Lake County Fo**	**112.50**	**52**	IAMs_20	IAMs_20	14 38 13.3	
	comp=Z,1µm,19.0s						
P46A	**Rosedale**	**112.62**	**55**	IAMs_20	IAMs_20	14 34 08.8	
	comp=Z,819nm,21.0s						
CLTN	**Cedars of Leba**	**112.70**	**59**	IAMs_20	IAMs_20	14 33 44.1	
	comp=Z,911nm,20.0s						
BRVK	**Borovoye**	**112.78**	**320**	*c i*PKIKP	**PKiKP**	**13 52 40.2**	**-0.1**
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.7s						
BRVK	**Borovoye**	**112.78**	**320**	IAMs_20	IAMs_20	14 37 11.9	
	comp=Z,989nm,22.0s						
352A	**Blakely**	**112.96**	**64**	IAMs_20	IAMs_20	14 33 23.6	
	comp=Z,970nm,22.0s						
BLO	**Bloomington**	**113.07**	**55**	IAMs_20	IAMs_20	14 38 48.9	
	comp=Z,1µm,19.0s						
WCI	**Wyandotte Cave**	**113.10**	**56**	IAMs_20	IAMs_20	14 37 34.5	
	comp=Z,1µm,18.0s						
U49A	**Red Boiling Sp**	**113.21**	**58**	IAMs_20	IAMs_20	14 33 50.7	
	comp=Z,723nm,21.0s						
W50A	**Signal Mountai**	**113.35**	**60**	IAMs_20	IAMs_20	14 37 37.6	
	comp=Z,1µm,20.0s						
152A	**Waverly Hall**	**113.37**	**63**	IAMs_20	IAMs_20	14 39 38.9	
	comp=Z,1µm,18.0s						
X51A	**Calhoun**	**113.61**	**61**	IAMs_20	IAMs_20	14 33 03.4	
	comp=Z,1µm,20.0s						
L46A	**Eue Claire**	**113.67**	**52**	IAMs_20	IAMs_20	14 33 03.2	
	comp=Z,941nm,22.0s						
W52A	**Murphy**	**114.45**	**60**	IAMs_20	IAMs_20	14 33 08.8	
	comp=Z,1µm,22.0s						
GOGA	**Godfrey**	**114.54**	**62**	IAMs_20	IAMs_20	14 34 15.3	
	comp=Z,1µm,20.0s						
656A	**Willston**	**114.56**	**67**	IAMs_20	IAMs_20	14 34 18.3	
	comp=Z,872nm,21.0s						
R50A	**Paris**	**114.63**	**57**	IAMs_20	IAMs_20	14 38 12.2	
	comp=Z,755nm,19.0s						
154A	**Montrose**	**114.69**	**63**	IAMs_20	IAMs_20	14 40 39.5	
	comp=Z,928nm,18.0s						
O49A	**Covington**	**114.89**	**55**	IAMs_20	IAMs_20	14 37 48.8	
	comp=Z,1µm,21.0s						
TZTN	**Tazewell**	**114.99**	**59**	IAMs_20	IAMs_20	14 35 13.8	
	comp=Z,1µm,21.0s						
L48A	**N Adams**	**115.04**	**53**	IAMs_20	IAMs_20	14 33 09.4	
	comp=Z,993nm,20.0s						
255A	**Hazlehurst**	**115.10**	**64**	IAMs_20	IAMs_20	14 40 42.2	
	comp=Z,888nm,20.0s						
S51A	**Beattyville**	**115.11**	**57**	IAMs_20	IAMs_20	14 39 51.0	
	comp=Z,859nm,19.0s						
BG3	**Lake Jocassee**	**115.24**	**60**	IAMs_20	IAMs_20	14 35 13.7	
	comp=Z,1µm,21.0s						
DWPF	**Disney Wildern**	**115.26**	**68**	IAMs_20	IAMs_20	14 29 54.8	
	comp=Z,812nm,18.0s						
456A	**Hilliard**	**115.26**	**65**	IAMs_20	IAMs_20	14 35 49.6	
	comp=Z,861nm,20.0s						
Q51A	**Peebles**	**115.50**	**56**	IAMs_20	IAMs_20	14 44 13.0	
	comp=Z,1µm,18.0s						
AAM	**Ann Arbor**	**115.65**	**52**	IAMs_20	IAMs_20	14 39 58.7	
	comp=Z,756nm,18.0s						
Z56A	**Williston**	**116.25**	**62**	IAMs_20	IAMs_20	14 35 57.7	
	comp=Z,1µm,20.0s						
Q52A	**Bidwell**	**116.32**	**56**	IAMs_20	IAMs_20	14 39 08.0	
	comp=Z,943nm,21.0s						
K50A	**Casco**	**116.46**	**52**	IAMs_20	IAMs_20	14 47 08.9	
	comp=Z,983nm,18.0s						
JSC	**Jenkinsville**	**116.49**	**61**	IAMs_20	IAMs_20	14 35 12.9	
	comp=Z,762nm,21.0s						
S54A	**Dingess, Beckl**	**116.93**	**58**	IAMs_20	IAMs_20	14 41 51.1	
	comp=Z,840nm,19.0s						
P53A	**Whipple**	**117.06**	**56**	IAMs_20	IAMs_20	14 40 39.3	
	comp=Z,968nm,19.0s						
NHSC	**New Hope**	**117.21**	**63**	IAMs_20	IAMs_20	14 35 07.0	
	comp=Z,1µm,22.0s						
Q54A	**Coxs Mills**	**117.44**	**56**	IAMs_20	IAMs_20	14 45 21.4	
	comp=Z,1µm,19.0s						
U56A	**King**	**117.49**	**59**	IAMs_20	IAMs_20	14 36 26.0	
	comp=Z,1µm,21.0s						
N53A	**Lisbon**	**117.61**	**54**	IAMs_20	IAMs_20	14 35 45.8	
	comp=Z,1µm,18.0s						
SOCY	**Socotra**	**118.75**	**273**	IAMs_20	IAMs_20	14 42 02.6	
	comp=Z,951nm,20.0s						
S57A	**Dark Hollow, R**	**118.78**	**58**	IAMs_20	IAMs_20	14 42 14.1	
	comp=Z,974nm,19.0s						
SAML	**Samuel**	**119.42**	**114**	IAMs_20	IAMs_20	14 34 03.5	
	comp=Z,739nm,21.0s						
ARU	**Arti**	**119.56**	**324**	*i* PKIKP	**PKiKP**	**13 52 56.3**	**+3.0**
ARU						13 54 24.0	
ARU						14 00 05.4	
ARU				SP	SP	14 04 02.4	-0.1
ARU				SS	SS	14 10 34.2	-5.0
ARU	**Arti**	**119.56**	**324**	PKPdf	**PKPdf**	**13 52 50.8**	**-2.5**
ARU				IAMs_20	IAMs_20	14 39 47.0	
	comp=Z,774nm,21.0s						
R58B	**Mineral**	**119.65**	**58**	IAMs_20	IAMs_20	14 42 59.2	
	comp=Z,811nm,18.0s						
T59A	**Double "B" Far**	**119.82**	**59**	IAMs_20	IAMs_20	14 41 38.7	
	comp=Z,1µm,19.0s						
GEYT	**Alibeck**	**120.05**	**302**	PKP	**PKiKP**	**13 52 54.9**	**0.0**
	comp=Z,1.4nm,0.7s,baz=261,slow=5.5,SNR=2.8						
GEYT	**Alibeck**	**120.05**	**302**		**PKPdf**	**13 52 53.7**	**-1.2**
CBN	**Corbin Frederi**	**120.06**	**57**	IAMs_20	IAMs_20	14 43 30.1	
	comp=Z,888nm,18.0s						
T60A	**Surry**	**120.48**	**59**	IAMs_20	IAMs_20	14 44 04.3	
	comp=Z,890nm,18.0s						
P60A	**Greenville**	**121.51**	**56**	IAMs_20	IAMs_20	14 39 11.2	
	comp=Z,984nm,19.0s						
WUPA	**West Chester U**	**121.54**	**55**	IAMs_20	IAMs_20	14 39 13.9	
	comp=Z,657nm,20.0s						
P61A	**Hammonton**	**122.16**	**56**	IAMs_20	IAMs_20	14 38 41.3	
	comp=Z,893nm,18.0s						
SDDR	**Presa de Saban**	**122.39**	**81**	IAMs_20	IAMs_20	14 34 20.5	
	comp=Z,1µm,22.0s						
GRTK	**Grand Turk**	**123.09**	**78**	IAMs_20	IAMs_20	14 37 47.0	
	comp=Z,815nm,20.0s						
KIRV	**Kirov**	**124.02**	**327**	*c i*PKIKP	**PKPdf**	**13 53 01.5**	**-0.2**
TMCR	**Tamitsa**	**126.90**	**336**	*e*PKIKP	**PKPdf**	**13 53 05.9**	**-1.2**
TMCR				pmax	pmax		
	comp=Z,14nm,1.3s						
SNDB	**Serra Nova Dou**	**127.36**	**125**	*e*P	**PKiKP**	**13 53 11.7**	**+1.6**
ARCES	**ARCESS Array B**	**127.37**	**345**	PKP	**PKPdf**	**13 53 08.0**	**+0.1**
	comp=Z,7.6nm,1.1s,baz=70,slow=4.0,SNR=2.0						
KLMR	**Klimovskoe**	**127.89**	**332**	*e*PKIKP	**PKPdf**	**13 53 06.7**	**-2.3**
KLMR				pmax	pmax		
	comp=Z,32nm,1.4s						
KLMR	**Klimovskoe**	**127.89**	**332**	*e*PKPdf	**PKPdf**	**13 53 06.8**	**-2.3**
KLMR				AMP		13 53 19.3	
	comp=Z,32nm,1.4s						
BATG	**Bathurst New B**	**128.02**	**46**	PKPdf	**PKPdf**	**13 53 08.0**	**-1.8**
SABA	**Saba**	**129.51**	**84**	IAMs_20	IAMs_20	15 02 18.2	
	comp=Z,570nm,20.0s						
SKI	**Saint Kitts**	**129.91**	**85**	IAMs_20	IAMs_20	14 44 18.2	
	comp=Z,626nm,22.0s						
VRH	**Novokhopyorsk**	**130.36**	**320**	*e*PKIKP	**PKPdf**	**13 53 12.5**	**-1.6**
VRH				pmax	pmax		
	comp=Z,20nm,1.6s						
GNI	**Garni**	**130.45**	**305**	*c i*PKIKP	**PKiKP**	**13 53 18.0**	**+2.3**
GNI				pmax	pmax		
	comp=Z,51nm,1.7s						
MOS	**Moscow**	**131.02**	**327**	*i* PKIKP	**PKiKP**	**13 53 17.7**	**+1.6**
MOS				*e*		13 55 37.1	
KIV	**Kislovodsk**	**131.45**	**310**	*i* PKIKP	**PKPdf**	**13 53 16.7**	**+0.1**
KIV				*e*		13 55 34.2	
KIV				*e*PS	**PS**	**14 05 47.7**	**-2.3**
KIV				*e*SS	SS	14 13 05.2	-4.1
KIV				pmax	pmax		
	comp=Z,20nm,1.0s						
KIV				MLR	MLR		
	comp=Z,932nm,23.0s						
LPSR	**Galich'ya Gora**	**131.54**	**322**	*e*PKIKP	**PKiKP**	**13 53 19.6**	**+2.3**
LPSR				pmax	pmax		
	comp=Z,20nm,1.3s						
VSR	**Storozhevoye**	**131.88**	**321**	*e*PKIKP	**PKiKP**	**13 53 20.4**	**+2.4**
VSR				pmax	pmax		
	comp=Z,10.0nm,1.2s						
GEVA	**Gevas**	**131.91**	**303**	IAMs_20	IAMs_20	14 59 04.7	
	comp=Z,706nm,20.0s						
FINES	**FINESS Array B**	**132.93**	**337**	PKP	**PKPdf**	**13 53 17.6**	**-1.0**
	comp=Z,3.9nm,0.9s,baz=51,slow=4.4,SNR=2.9						
KOPT	**Kop Dagi**	**133.69**	**305**	IAMs_20	IAMs_20	14 57 55.6	
	comp=Z,670nm,19.0s						
MNK	**Minsk**	**136.49**	**329**	*i* PKP	**PKPdf**	**13 53 24.5**	**-1.0**
	comp=E,0.0nm,0.5s						
MNK				*i* PKP	**PKPdf**	**13 53 24.5**	**-1.0**
	comp=N,9.0nm,0.9s						
MNK				*i* PKP	**PKPdf**	**13 53 24.5**	**-1.0**
	comp=Z,5.0nm,0.8s						
MNK				*i* PP	**PP**	**13 56 06.0**	**-0.8**
MNK				*i* PKS	**PKSdf**	**13 57 00.7**	**-0.8**
MNK				*i* PPP	PPP	13 58 59.6	
MNK				*i* SKS	**SKSdf**	**14 00 32.6**	**-3.8**
MNK				*i* PS	**PS**	**14 06 30.9**	**-1.3**
MNK				*i* SS	**SS**	**14 14 07.5**	**-1.3**
MNK				*i* SSS	SSS	14 19 11.9	
MNK				*i* LQ	LQ	14 46 46.1	
MNK				*i* LR	LR	14 51 13.8	
MNK				*i* LRM	MLR	14 53 08.2	
	comp=N,542nm,23.1s						
MNK				*i* LRM	MLR	14 53 19.8	
	comp=E,59nm,23.1s						
MNK				*i* LRM	MLR	14 53 24.1	
	comp=Z,524nm,21.7s						
GAZ	**Gaziantep**	**136.65**	**302**	IAMs_20	IAMs_20	14 56 53.6	
	comp=Z,696nm,21.0s						
NACGM	**Naroch**	**136.78**	**330**	*i* PKP	**PKPdf**	**13 53 25.9**	**-0.2**
NACGM				*i* PKP	**PKPdf**	**13 53 25.9**	**-0.2**
NACGM				*i* PKP	**PKPdf**	**13 53 25.9**	**-0.2**
NACGM				*i* SSS	SSS	14 16 29.7	
NACGM				*i* LR	LR	14 46 07.7	
NOA	**NORSAR Array B**	**137.75**	**345**	PKP	**PKiKP**	**13 53 32.0**	**+2.3**
	comp=Z,1.7nm,0.9s,baz=32,slow=2.0,SNR=4.2						
AKASG	**Malin Array Be**	**137.81**	**324**	PKP	**PKPdf**	**13 53 27.3**	**-0.8**
	comp=Z,0.9nm,0.6s,baz=46,slow=3.3,SNR=4.5						
AKASG				SKPbc	**SKPbc**	**13 57 00.9**	**-1.2**
	comp=Z,1.2nm,0.8s,baz=46,slow=3.4,SNR=5.7						
AKASG	**Malin Array Be**	**137.81**	**324**	PKIKP	**PKPdf**	**13 53 26.2**	**-1.9**
AKASG	**Malin Array Be**	**137.81**	**324**		**PKPdf**	**13 53 26.2**	**-1.9**
KIS	**Kishinev**	**139.78**	**319**	⇑*i*PKP	**PKiKP**	**13 53 42.0**	**+7.8**
	comp=Z,280nm,13.0s						
KIS				*e*LR	LR	14 53 40.0	
	comp=Z,200nm,23.0s						
KIS	**Kishinev**	**139.78**	**319**	*c i*PKIKP	**PKiKP**	**13 53 42.0**	**+7.8**
KIS				pmax	pmax		
	comp=Z,300nm,13.0s						
CSS	**Mathiatis**	**140.07**	**299**	IAMs_20	IAMs_20	15 03 55.0	
	comp=Z,741nm,19.0s						
BIZ	**Bicaz**	**141.46**	**320**	⇑P	**PKiKP**	**13 53 39.7**	**+2.0**
BURAR	**Bucovina Array**	**141.64**	**321**	⇑P	**PKiKP**	**13 53 39.6**	**+1.4**
BURAR	**Bucovina Array**	**141.64**	**321**	⇑PKIKP	**PKiKP**	**13 53 39.6**	**+1.4**
ISP	**Isparta**	**141.75**	**304**	IAMs_20	IAMs_20	15 07 46.0	
	comp=Z,715nm,20.0s						
MLR	**Muntele Rosu**	**142.24**	**318**	IAMs_20	IAMs_20	15 03 10.5	
	comp=Z,790nm,20.0s						
KOLS	**Kolonicke sedl**	**142.56**	**325**	*e*PKIKP	**PKiKP**	**13 53 40.0**	**+0.1**
KOLS	**Kolonicke sedl**	**142.56**	**325**	*e*PKP	**PKiKP**	**13 53 40.0**	**+0.1**
RCBR	**Riachuelo**	**142.67**	**133**	IAMs_20	IAMs_20	14 50 15.9	
	comp=Z,608nm,20.0s						
UZH	**Uzhgorod**	**142.72**	**325**	⇑*i*PKIKP	**PKiKP**	**13 53 39.3**	**-0.9**
UZH				*e*		13 53 47.4	
OJC	**Ojcow**	**143.03**	**328**	*e*PKP	**PKiKP**	**13 53 42.4**	**+1.6**
ARR	**Arges**	**143.11**	**319**	⇓P	**PKiKP**	**13 53 42.1**	**+0.9**
NIE	**Niedzica**	**143.29**	**327**	*e*PKP	**PKiKP**	**13 53 48.2**	**+6.8**
LANS	**Liptovska Anna**	**143.88**	**327**	*e*PKIKP	**PKiKP**	**13 53 42.6**	**0.0**
LANS	**Liptovska Anna**	**143.88**	**327**	*e*PKP	**PKiKP**	**13 53 42.6**	**0.0**
RUE	**Ruedersdorf**	**144.05**	**336**	*e*PKPbc	**PKPdf**	**13 53 39.7**	**+0.4**
	baz=36,slow=2.9						
OKC	**Ostrava-Krasne**	**144.08**	**329**	AMS	AMS	14 54 30.0	
	comp=Z,900nm,19.5s						
GZR	**Gura Zlata**	**144.23**	**320**	⇑P	**PKiKP**	**13 53 44.7**	**+1.2**
GZR	**Gura Zlata**	**144.23**	**320**	⇑PKIKP	**PKiKP**	**13 53 44.7**	**+1.2**
KSP	**Ksiaz**	**144.24**	**332**	*e*PKP	**PKiKP**	**13 53 43.3**	**0.0**
MORC	**Moravsky Berou**	**144.41**	**329**	*e*PKP	**PKPab**	**13 53 37.0**	**-1.2**
SIRR	**Siria**	**144.42**	**322**	⇓P	**PKPdf**	**13 53 39.5**	**-0.7**
PSZ	**Piszkesteto**	**144.44**	**325**	⇑P	**PKiKP**	**13 53 42.9**	**-1.0**
PSZ	**Piszkesteto**	**144.44**	**325**	⇑PKIKP	**PKiKP**	**13 53 42.9**	**-1.0**
OSTC	**Ostas**	**144.48**	**331**	*e*PKP	**PKiKP**	**13 53 46.3**	**+2.5**
OSTC				AMS	AMS	14 53 30.0	
	comp=Z,1µm,20.1s						
CHVC	**Chvalec**	**144.53**	**332**	*e*PKP	**PKiKP**	**13 53 45.0**	**+1.1**
CHVC				AMS	AMS	14 53 00.0	
	comp=Z,1µm,25.1s						
KRLC	**Kraliky**	**144.56**	**330**	*e*PKIKP	**PKiKP**	**13 53 43.5**	**-0.5**
KRLC				MLR	MLR		
	comp=Z,700nm,20.9s						
KRLC	**Kraliky**	**144.56**	**330**	*e*PKP	**PKiKP**	**13 53 43.5**	**-0.5**
KRLC				AMS	AMS	14 53 40.0	
	comp=Z,700nm,20.9s						
DPC	**Dobruska-Polom**	**144.58**	**331**	*e*PKIKP	**PKiKP**	**13 53 42.5**	**-1.5**
DPC	**Dobruska-Polom**	**144.58**	**331**	*e*PKP	**PKiKP**	**13 53 42.5**	**-1.5**
DPC				AMS	AMS	14 53 40.0	
	comp=Z,1µm,28.8s						
UPC	**Upice**	**144.60**	**332**	*e*PKIKP	**PKiKP**	**13 53 45.0**	**+1.0**
UPC				MLR	MLR		
	comp=Z,1µm,27.0s						
UPC	**Upice**	**144.60**	**332**	*e*PKP	**PKiKP**	**13 53 45.0**	**+1.0**
UPC				AMS	AMS	14 53 00.0	
	comp=Z,1µm,27.0s						
HERR	**Herculane**	**144.72**	**319**	⇑P	**PKiKP**	**13 53 45.2**	**+0.8**
BZS	**Buzias**	**144.80**	**321**	⇓P	**PKiKP**	**13 53 43.0**	**-1.6**
BZS	**Buzias**	**144.80**	**321**	⇓PKIKP	**PKiKP**	**13 53 43.0**	**-1.6**
JAVC	**Velka Javorina**	**144.97**	**328**	*e*PKP	**PKPdf**	**13 53 42.1**	**+1.0**
FLTG	**Flechtingen**	**145.12**	**338**	*e*PKPbc	**PKPdf**	**13 53 43.1**	**+2.0**
	baz=36,slow=2.9						
VRAC	**Vranov**	**145.18**	**330**	⇑P	**PKiKP**	**13 53 44.6**	**-0.6**
VRAC	**Vranov**	**145.18**	**330**	*e*PKP	**PKPab**	**13 53 41.0**	**0.0**
VRAC				*e*		13 53 46.9	
VRAC	**Vranov**	**145.18**	**330**	⇑PKIKP	**PKiKP**	**13 53 44.6**	**-0.6**
MDVR	**Moldovita**	**145.19**	**320**	⇑P	**PKPbc**	**13 53 40.4**	**-0.8**
PVCC	**Panska Ves**	**145.22**	**333**	AMS	AMS	14 56 40.0	
	comp=Z,800nm,15.5s						
BRG	**Berggiesshubel**	**145.22**	**334**	*e*PKPbc	**PKiKP**	**13 53 43.7**	**-1.6**
	baz=36,slow=2.9						
CLL	**Collm**	**145.27**	**335**	*e*PKPbc	**PKPdf**	**13 53 42.0**	**+0.6**
CLL				*e*PKiKP	**pPKPdf**	**13 53 44.0**	**0.0**
CLL				*i*		13 53 47.2	
	comp=Z,157nm,1.8s						
CLL				*i*		13 53 50.9	
CLL				*i*		13 54 10.2	
CLL				*e*PP	**PP**	**13 57 00.0**	**-0.2**
CLL				*e*PKSdf	**PKSdf**	**13 57 16.0**	**-0.7**
CLL				*e*SKKSac	SKKSac	14 03 48.0	-5.0
CLL				*e*PSKS		14 07 12.0	
CLL				*e*		14 11 24.0	
CLL				*e*SS	SS	14 16 06.0	+15
CLL				*e*SSS	SSS	14 21 06.0	
CLL				*e*SSSS		14 25 00.0	
CLL				LmH		15 04 00.0	
	comp=N,400nm,20.9s						
CLL				LmH		15 04 00.0	
	comp=E,400nm,21.5s						
CLL				LmV		15 04 00.0	
	comp=Z,600nm,20.8s						
CLL	**Collm**	**145.27**	**335**	PKP2	**PKPbc**	**13 53 37.9**	**-3.2**
CLL				MLR	MLR		
	comp=Z,800nm,20.0s						
CLL	**Collm**	**145.27**	**335**		**PKPbc**	**13 53 37.9**	**-3.2**
CLL				IAMs_20	IAMs_20	14 57 49.9	
	comp=Z,803nm,20.0s						
CLL	**Collm**	**145.27**	**335**	*e*PKPbc	**PKiKP**	**13 53 43.6**	**-1.8**
	baz=36,slow=2.9						
VTS	**Vitosha**	**145.30**	**315**	⇓P	**PKPbc**	**13 53 41.2**	**-0.6**
VTS	**Vitosha**	**145.30**	**315**	⇓PKIKP	**PKPbc**	**13 53 41.2**	**-0.6**
SMOL	**Smolenice**	**145.32**	**328**	*e*PKIKP	**PKiKP**	**13 53 45.6**	**0.0**
SMOL	**Smolenice**	**145.32**	**328**	*e*PKP	**PKiKP**	**13 53 45.6**	**0.0**
FBE	**Freiberg**	**145.43**	**334**	*e*PKPbc	**PKiKP**	**13 53 44.6**	**-1.1**
	baz=36,slow=2.9						
KRUC	**Moravsky**	**145.45**	**329**	*e*PKP	**PKPbc**	**13 53 40.3**	**-1.5**
ASSE	**Asse, Remlinge**	**145.48**	**338**	*e*PKPbc	**PKiKP**	**13 53 44.6**	**-1.0**
	baz=36,slow=2.9						
MODS	**Modra-Piesok**	**145.49**	**328**	*e*PKIKP	**PKiKP**	**13 53 45.1**	**-0.8**
MODS	**Modra-Piesok**	**145.49**	**328**	*e*PKP	**PKiKP**	**13 53 45.1**	**-0.8**
PRA	**Prague**	**145.62**	**332**	AMS	AMS	14 54 00.0	
	comp=Z,500nm,29.5s						
PRU	**Pruhonice**	**145.63**	**332**	*e*PKIKP	**PKiKP**	**13 53 45.6**	**-0.5**
PRU	**Pruhonice**	**145.63**	**332**	*e*PKP	**PKiKP**	**13 53 45.6**	**-0.5**
PRU				AMS	AMS	14 57 00.0	
	comp=Z,1µm,32.1s						
TREC	**Trest**	**145.71**	**330**	AMS	AMS	14 52 50.0	
	comp=Z,2µm,30.3s						
CLZ	**Clausthal**	**145.82**	**338**	*e*PKPbc	**PKiKP**	**13 53 46.0**	**-0.6**
	baz=36,slow=2.9						
NEUB	**Neuenburg**	**145.82**	**336**	*e*PKPbc	**PKiKP**	**13 53 45.8**	**-0.7**
	baz=36,slow=2.9						
PBCC	**Pribram**	**146.09**	**332**	*e*PKP	**PKiKP**	**13 53 46.6**	**-0.5**
FRGS	**Fruska Gora**	**146.12**	**321**	⇑P	**PKiKP**	**13 53 46.9**	**-0.5**
FRGS	**Fruska Gora**	**146.12**	**321**	*e*P	**PKiKP**	**13 53 46.5**	**-0.8**
MORH	**Mrgy, Hungar**	**146.15**	**324**	⇑P	**PKiKP**	**13 53 46.9**	**-0.5**
MORH	**Mrgy, Hungar**	**146.15**	**324**	*e*P	**PKPab**	**13 53 44.4**	**-0.3**
TANN	**Tannenbergstha**	**146.18**	**334**	*e*PKPbc	**PKiKP**	**13 53 47.2**	**-0.1**
	baz=36,slow=2.9						
GTTG	**Gottingen**	**146.21**	**338**	*e*PKPbc	**PKiKP**	**13 53 47.1**	**-0.2**
	baz=36,slow=2.9						
WERD	**Werda**	**146.22**	**335**	*e*PKPbc	**PKiKP**	**13 53 47.2**	**-0.1**
	baz=36,slow=2.9						
PLN	**Plauen**	**146.25**	**335**	*e*PKPbc	**PKiKP**	**13 53 47.2**	**-0.2**
	baz=36,slow=2.9						
IBBN	**Ibbenburen**	**146.29**	**341**	*e*PKPbc	**PKiKP**	**13 53 47.0**	**-0.4**
	baz=36,slow=2.9						
WERN	**Wernitzgruen**	**146.31**	**334**	*e*PKPbc	**PKiKP**	**13 53 47.8**	**+0.2**
	baz=36,slow=2.9						
NKC	**Novy Kostel**	**146.32**	**334**	*e*PKP2	**PKiKP**	**13 53 47.4**	**-0.2**
NKC	**Novy Kostel**	**146.32**	**334**	*e*PKP	**PKiKP**	**13 53 47.4**	**-0.2**
MOX	**Moxa**	**146.33**	**335**	*e*PKPbc	**PKiKP**	**13 53 47.4**	**-0.2**
	baz=36,slow=2.9						
CONA	**Conrad Observa**	**146.49**	**328**	*e*P	**PKiKP**	**13 53 48.3**	**+0.2**
	comp=Z,52nm,1.6s						
CONA				*e*S	**SKSdf**	**14 00 51.3**	**-1.5**
	comp=Z,2.1nm,0.7s						

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CKRC  Cesky Krumlov      146.59 331  ePKP      PKPdf    13 53 43.8  0.0
DIVS  Divibare           146.60 320  eP        PKPdf    13 53 42.7 -1.4
TEKS  Tekeris            146.63 321  eP        PKPdf    13 53 43.7 -0.3
MANZ  Manzenberg         146.66 334  ePKPbc    PKiKP    13 53 48.6 +0.3
      baz=36,slow=2.9
KHC   Kasperske Hory     146.69 332c iPKP2     PKPab    13 53 47.1 +0.4
KHC                                   pmax     pmax
      comp=Z,46nm,1.0s
KHC   Kasperske Hory     146.69 332  ePKP      PKPdf    13 53 44.7 +0.7
KHC                                  epPKP     sPKPab   13 53 55.5 +5.3
KHC                                   AMS      AMS      14 57 20.0
      comp=Z,900nm,22.9s
KHC   Kasperske Hory     146.69 332            PKPdf    13 53 39.8 -4.2
SKO   Skopje             146.78 315  i P       PKiKP    13 53 48.7  0.0
ROTZ  Rotzenmuhle        146.78 334  ePKPbc    PKiKP    13 53 49.0 +0.4
      baz=36,slow=2.9
UBBA  Unterbreizbach     146.80 337  ePKPbc    PKiKP    13 53 48.8 +0.4
      baz=36,slow=2.9
GEC2  GERESS Array S     146.84 331   PKPdf    PKPdf    13 53 42.8 -1.5
GEC2  GERESS Array S     146.84 331  ePKPbc    PKiKP    13 53 49.0 +0.2
      baz=36,slow=2.9
GERES GERESS Array B     146.84 331   PKPbc    PKPbc    13 53 45.3 -0.9
      comp=Z,16nm,1.1s,baz=32,slow=3.1,SNR=17
WET   Wettzell           146.98 333  ePKPbc    PKiKP    13 53 49.4 +0.4
      baz=36,slow=2.9
BBLS  Lazi&#263;i        147.08 320  eP        PKPbc    13 53 46.9 -0.1
ARSA  Arzberg            147.12 328  eP        PKiKP    13 53 50.6 +1.2
      comp=Z,25nm,1.5s
HAPS  Han Pijesak,Bl     147.23 320  eP        PKiKP    13 53 51.9 +2.1
GRF   Grafenberg Arr     147.24 335  ePKPbc    PKiKP    13 53 50.1 +0.6
      baz=36,slow=2.9
MOA   Molln              147.31 330  eP        PKPab    13 53 49.1 -0.1
      comp=Z,19nm,1.4s
FNA   Florina            147.38 313   PKIKP    PKPdf    13 53 43.9 -1.5
FNA   Florina            147.38 313   PKPdf    PKPdf    13 53 43.9 -1.5
OHR   Ohrid              147.61 314  i P       PKiKP    13 53 51.8 +1.2
SOKA  Soboth             147.76 327  eP        PKPab    13 53 52.0 +0.9
      comp=Z,12nm,1.0s
SOKA                                 eS        SKSdf    14 00 58.4 +3.7
      comp=Z,0.6nm,0.4s
TNS   Taunus Mts         147.85 338  ePKPbc    PKPab    13 53 51.7 +0.4
      baz=36,slow=2.9
BLY   Banja Luka         147.86 323  eP        PKiKP    13 53 50.2 -0.7
PDG   Podgorica          147.95 318  ⇓P        PKPab    13 53 51.8 -0.1
PDG   Podgorica          147.95 318  eP        PKPab    13 53 52.9 +1.0
PDG   Podgorica          147.95 318   PKPab    PKPab    13 53 52.8 +1.0
AHRW  Bad Neuenahr-A     148.04 340  ePKPbc    PKPab    13 53 52.2 +0.3
      baz=36,slow=2.9
CRES  Cresnjev           148.11 326  eP        PKPbc    13 53 49.5 -0.1
MGRS  Mrkonjic Grad      148.12 322  eP        PKPab    13 53 56.2 +3.6
BEBN  Eben Emael         148.25 341  dx        PKPab    13 53 55.7 +3.0
BEBN                                 dx        x        13 53 59.3
BTNL  Ternell            148.29 341  dx        PKPab    13 53 53.7 +0.7
KBA   Koelnbreinsper     148.30 330  eP        PKPab    13 53 53.7 +0.3
      comp=Z,30nm,1.4s
KBA                                  eS        SKSdf    14 00 55.8 +0.3
      comp=Z,0.9nm,0.5s
MEM   Membach            148.31 341  dx        x        13 53 55.6
FUR   Furstenfeldbru     148.41 333  ePKPbc    PKPab    13 53 53.3 -0.3
      baz=36,slow=2.9
HCY   Herceg Novi        148.42 318  eP        PKPab    13 53 56.1 +2.3
LJU   Ljubljana          148.45 327  eP        PKPbc    13 53 49.8 -0.7
BSTI  Sart Tilman        148.47 341  dx        PKPab    13 53 54.4 +0.8
BSTI                                 dx        x        13 53 56.6
MYKA  Terra Mystica      148.48 329  eP        PKiKP    13 53 52.5 +0.3
      comp=Z,16nm,0.9s
BHOU  Houvegnez          148.54 341  dx        PKPab    13 53 57.1 +3.1
BHOU                                 dx        x        13 53 60.0
STON  Ston               148.67 320  eP        PKPdf    13 53 43.5 -3.9
BCLA  Clavier            148.69 342  dx        PKPab    13 53 56.8 +2.3
BCLA                                 dx        x        13 53 59.3
CEY   Cerknica           148.71 327  eP        PKiKP    13 53 52.1 -0.6
STU   Stuttgart          148.77 336   PKIKP    PKPdf    13 53 48.0 +0.6
STU   Stuttgart          148.77 336            PKPdf    13 53 48.0 +0.6
STU   Stuttgart          148.77 336  ePKPbc    PKPab    13 53 54.2 -0.8
      baz=36,slow=2.9
BGES  Gesves             148.78 342  dx        PKPab    13 53 56.9 +1.9
BGES                                 dx        x        13 54 00.7
ZOU   Zoufplan           148.85 329            PKPdf    13 53 47.3 -0.6
SNF   Seneffe            148.90 343  dx        PKPab    13 53 56.8 +1.4
WATA  Walderalm          148.92 332  eP        PKPab    13 53 55.2 -0.6
      comp=Z,53nm,1.4s,SNR=5.5
ABTA  Abfaltersbach      148.93 330  eP        PKiKP    13 53 52.8 -0.4
      comp=Z,42nm,1.3s
WTTA  Wattenberg         148.95 331  eP        PKPbc    13 53 52.7 +0.7
      comp=Z,66nm,1.3s
BMRD  Maredsous          148.95 342  dx        PKPab    13 53 56.7 +1.1
TRI   Trieste            149.06 327   IAMs_20  IAMs_20  15 05 25.6
      comp=Z,773nm,22.0s
WLF   Walferdange        149.09 340  dx        PKPab    13 53 55.7 -0.6
WLF                                  dx        x        13 53 58.9
WLF   Walferdange        149.09 340   PKHKP    PKPpre   13 53 45.4
WLF   Walferdange        149.09 340            PKPdf    13 53 45.4 -2.5
WLF   Walferdange        149.09 340  ePKPbc    PKPab    13 53 55.4 -0.8
      baz=36,slow=2.9
MOTA  Moosalm            149.12 332  eP        PKPbc    13 53 52.5 +0.1
      comp=Z,50nm,1.2s
MOTA                                 eS        SKSdf    14 00 58.1 +1.5
      comp=Z,4.0nm,0.8s
RETA  Reutte             149.16 333  eP        PKiKP    13 53 54.1 +0.5
      comp=Z,29nm,1.4s
SQTA  Sankt Quirin       149.17 332  eP        PKPbc    13 53 52.9 +0.4
      comp=Z,34nm,0.9s,SNR=14
SQTA                                 eS        SKSdf    14 00 58.8 +2.2
      comp=Z,0.7nm,0.3s
DOU   Dourbes            149.19 342  dx        PKPab    13 53 57.5 +0.9
UBR   Ueberruh           149.28 333  ePKPbc    PKiKP    13 53 55.0 +1.1
      baz=36,slow=2.9
BFO   Black Forest       149.47 336   PKPdf    PKPdf    13 53 48.2 -0.4
BFO   Black Forest       149.47 336  ePKPbc    PKiKP    13 53 55.5 +1.4
      baz=36,slow=2.9
FETA  Feichten           149.53 332  eP        PKiKP    13 53 54.1 -0.4
      comp=Z,61nm,1.1s
FETA                                 eS        SKSdf    14 00 59.1 +1.9
      comp=Z,1.7nm,0.7s
DAVA  Damuels            149.69 333  eP        PKiKP    13 53 56.2 +1.4
      comp=Z,78nm,1.9s
CTI   Castel Tesino      149.85 330   PKIKP    PKPdf    13 53 46.2 -3.2
CTI                                   MLR      MLR
      comp=Z,800nm,22.0s
CTI   Castel Tesino      149.85 330   PKPdf    PKPdf    13 53 46.2 -3.2
CTI                                   IAMs_20  IAMs_20  15 03 46.2
      comp=Z,829nm,22.0s
MATE  Matera             150.52 317  ⇑P        PKPbc    13 53 55.8 +0.1
TIP   Timpagrande        151.26 314  ⇓P        PKPbc    13 53 57.7  0.0
TIP   Timpagrande        151.26 314            PKPbc    13 53 56.8 -0.9
ZCCA  Zocca              151.42 328            PKPbc    13 53 57.3 -0.6
SENIN Lac Senin/Sane     151.48 335   PKPdf    PKPdf    13 53 51.7 -0.3
AQU   L'Aquila           151.50 323   PKIKP    PKPdf    13 53 50.8 -1.2
AQU   L'Aquila           151.50 323  eP        PKiKP    13 54 01.3 +2.7
AQU   L'Aquila           151.50 323            PKPdf    13 53 50.8 -1.2
CASP  Castiglione de     152.59 326   IAMs_20  IAMs_20  15 17 59.1
      comp=Z,638nm,21.0s
BNI   Bardonecchia       152.81 334   PKIKP    PKPdf    13 53 55.5 +1.6
BNI   Bardonecchia       152.81 334   PKPdf    PKPdf    13 53 55.5 +1.6
ESDC  Sonseca Array      161.10 346   PKPab    PKPab    13 54 46.1 -1.5
      comp=Z,2.5nm,1.3s,baz=13,slow=40,SNR=2.6
LIC   Lamto              164.32 197  ePKP2     PKPab    13 55 00.5 -1.7
      comp=Z,76nm,1.5s
KIC   Kosan Boka         164.37 198  ePKP2     PKPab    13 55 01.1 -1.3
      comp=Z,52nm,1.1s
DBIC  Dimbokro           164.70 198   PKPab    PKPab    13 55 03.9  0.0
      comp=Z,19nm,0.9s,baz=149,slow=4.8,SNR=18
DBIC  Dimbokro           164.70 198   PKP2     PKPab    13 55 03.2 -0.6
DBIC  Dimbokro           164.70 198   PKPab    PKPab    13 55 03.2 -0.6
TIC   Toumodi            164.72 198  ePKP2     PKPab    13 55 02.2 -1.8
TORD  Torodi Ar. Bea     166.47 235   PKP      PKPdf    13 54 11.6 +1.5
      comp=Z,0.8nm,1.0s,baz=159,slow=4.3,SNR=2.0
TORD                                  PKPab    PKPab    13 55 11.7 -0.1
      comp=Z,2.1nm,0.8s,baz=90,slow=3.2,SNR=4.9
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IDC ***01*** *13:41:09.8±0.8, 21.°28S×170.°26E, h0^{km}, mb4.5/15, mb1 4.7/17, mb1mx4.5/42, mbtmp4.5/17, ML3.9/2, MS4.3/1, Ms1 4.3/1, ms1mx3.8/31, Error ellipse: s-maj=21.6km s-min=17.3km az=156.0*

NEIC ***01*** *13:41:10.4±1.3, 21.°38S±0.°08×170.°23E±0.°08, h10^{km}±1^{km}, mb5.0/45, Error ellipse: s-maj=13.2km s-min=12.3km az=162.0*

GCMT ***01*** *13:41:14.4±0.2, 21.°20S±0.°01×170.°25E±0.°01, h12^{km}, MW5.2/127, Moment Tensor Solution. s31,c39; s127,c220; Duration: 1^{s}0 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.26±.02; $M_{\theta\theta}$-0.63±.02; $M_{\phi\phi}$0.88±.02; $M_{r\theta}$-0.03±.06; $M_{\theta\phi}$-0.56±.02; $M_{\phi r}$0.16±.06; Best double couple: $M_0$0.95100×10^{17} NP1:ϕ_s296.00000°, δ84.00000°, λ177.00000°. NP2:ϕ_s27.00000°, δ87.00000°, λ6.00000°. Principal axes: T 1.0880, Plg7.0000°, Azm252.0000°; N -0.2740, Plg83.0000°, Azm51.0000°; P -0.8140, Plg2.0000°, Azm161.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NOU ***01*** *13:41:14.6, 21.°24S×169.°97E, h0^{km}, mb4.8, Southeast of Loyalty Islands*

ISC 01 13:41:10.9±0.4**, 21.°45S**±0.°06×**170.°25E**±0.°06**, h10^{km}, n127, σ1^{s}18**/127**, mb4.9**/37**, MS5.0**/3**, 2C, Southeast of Loyalty Islands**

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Code  Station Name         Δ°   AZ°    Phase ID              Time     Res
                                     Op        ISC        h  m  s    ISC
MARNC Mare, Loyalty        2.07 269  P         Pn       13 41 44.9 -0.8
PINNC Pines Island,        2.85 246  P         Pn       13 41 57.7 +1.3
YATNC Mamie plateau,       3.18 258  P         Pn       13 42 01.3 +0.2
OUENC Ouen Island, N       3.31 253  P         Pn       13 42 03.9 +1.1
DZM   Mont Dzumac          3.59 259  Pn        Pn       13 42 07.4 +0.6
      12nm,0.3s,baz=118,slow=14,SNR=39
DZM                                  LR        LR       13 42 37.6
      comp=Z,4µm,19.4s,baz=90,slow=24
DZM                                  Sn        Sn       13 42 50.5 +1.1
      33nm,0.3s,baz=106,slow=24,SNR=11
DZM   Mont Dzumac          3.59 259  P         Pn       13 42 08.4 +1.6
ONTNC Ouen Toro            3.63 256  P         Pn       13 42 07.8 +0.6
NOUC  Port Laguerre        3.73 259  P         Pn       13 42 09.3 +0.7
SANVU Saraoutou            6.64 334  Pn        Pn       13 42 49.2 +0.6
SANVU Saraoutou            6.64 334  P         Pn       13 42 49.4 +0.8
MSVF  Nonsavu              8.23  65            Pn       13 43 11.5 +1.0
HIZ   Hauiti              17.46 168  P         P        13 45 15.6 -0.2
HIZ                                  IAmb      IAmb     13 45 24.9
      comp=Z,188nm,1.3s
URZ   Urewera             17.76 162  P         P        13 45 21.6 +2.5
      comp=Z,0.4nm,0.3s,baz=7.7,slow=5.8,SNR=19
URZ   Urewera             17.76 162  P         P        13 45 20.7 +1.5
URZ                                  IAmb      IAmb     13 45 24.1
      comp=Z,124nm,1.4s
EIDS  Eidsvold            18.02 254  P         P        13 45 22.1  0.0
BKZ   Black Stump Fm      18.45 165  P         Pn       13 45 28.0 +1.1
BFZ   Birch Farm          19.83 166  P         P        13 45 41.6 -0.3
BFZ                                  IAmb      IAmb     13 46 05.0
      comp=Z,82nm,1.2s
NNZ   Nelson              19.88 173  P         P        13 45 42.5 +0.1
NNZ                                  IAmb      IAmb     13 45 48.9
      comp=Z,124nm,1.3s
TUWZ  Tuamarina           20.16 172  P         P        13 45 46.1 +0.7
MSWZ  Moikau Station      20.35 169  P         P        13 45 47.6 +0.1
THZ   Tophouse            20.37 174  P         P        13 45 48.9 +1.1
PLWZ  Palliser            20.50 169  Pn        Pn       13 45 52.1 +0.9
KHZ   Kahutara            21.08 173  P         P        13 45 55.3 -0.1
LTZ   Lake Taylor         21.33 176  P         P        13 45 58.6 +0.4
OXZ   Oxford              21.86 176  P         P        13 46 04.7 +0.9
OXZ                                  IAmb      IAmb     13 46 09.2
      comp=Z,54nm,1.1s
RPZ   Rata Peaks          22.21 178  P         P        13 46 09.4 +1.9
      comp=Z,37nm,1.1s,baz=332,slow=20,SNR=7.3
RPZ   Rata Peaks          22.21 178  P         P        13 46 08.3 +0.8
RPZ                                  IAmb      IAmb     13 46 18.7
      comp=Z,84nm,1.2s
CTAO  Charters Tower      22.48 269  P         P        13 46 08.1 -2.5
ODZ   Otahua Downs        23.53 179  P         P        13 46 20.3 -0.9
MLZ   Mavora Lakes        23.92 184  P         P        13 46 26.2 +1.2
DCZ   Deep Cove           24.09 185  P         P        13 46 26.9 +0.4
DCZ                                  IAmb      IAmb     13 46 29.8
      comp=Z,42nm,1.1s
WHZ   Wether Hill Ro      24.45 184  P         P        13 46 30.3 +0.4
WHZ                                  IAmb      IAmb     13 46 39.2
      comp=Z,44nm,1.4s
PMG   Port Moresby        25.23 295  P         P        13 46 38.3 +1.0
      comp=Z,18nm,0.9s,baz=161,slow=11,SNR=4.4
TOO   Toolangi            26.76 228  P         P        13 46 51.0  0.0
TOO                                  IAmb      IAmb     13 47 18.9
      comp=Z,38nm,1.5s
STKA  Stephens Creek      27.56 242  P         P        13 47 00.3 +2.1
      comp=Z,7.4nm,0.8s,baz=82,slow=14,SNR=9.4
STKA  Stephens Creek      27.56 242  P         P        13 46 58.8 +0.6
BBOO  Buckleboo           32.33 242  P         P        13 47 40.7 +0.2
BBOO                                 IAmb      IAmb     13 48 00.6
      comp=Z,36nm,1.4s
WR0   Warramunga Arr      33.40 266  P         P        13 47 49.1 -0.8
WR0                                  IAmb      IAmb     13 47 50.1
      comp=Z,19nm,0.9s
WB0   Warramunga Arr      33.56 266  P         P        13 47 50.5 -0.9
WB2   Warramunga Arr      33.57 266  P         P        13 47 50.9 -0.6
WB2                                  IAmb      IAmb     13 47 51.7
      comp=Z,22nm,0.9s
WRAB  Tennant Creek       33.58 266  P         P        13 47 50.8 -0.7
WRAB                                 IAmb      IAmb     13 47 51.6
      comp=Z,20nm,0.9s
AS31  Alice Springs       33.58 259  P         P        13 47 51.0 -0.6
ASAR  Alice Springs       33.58 259  P         P        13 47 51.7 +0.1
      comp=Z,23nm,0.9s,baz=83,slow=8.9,SNR=48
ASAR  Alice Springs       33.58 259  P         P        13 47 50.8 -0.8
WRA   Warramunga Arr      33.59 266  P         P        13 47 50.9 -0.7
      comp=Z,12nm,0.8s,baz=97,slow=8.0,SNR=24
WRA   Warramunga Arr      33.59 266  P         P        13 47 50.6 -1.0
MTN   Manton Dam          38.26 276  P         P        13 48 30.3 -1.4
MTN                                  IAmb      IAmb     13 48 37.5
      comp=Z,29nm,1.2s
FITZ  Fitzroy Crossi      42.01 266  P         P        13 49 03.5 +0.7
      comp=Z,21nm,0.9s,baz=120,slow=10.0,SNR=16
FITZ  Fitzroy Crossi      42.01 266  P         P        13 49 03.1 +0.3
FITZ                                 IAmb      IAmb     13 49 04.2
      comp=Z,23nm,0.8s
SIJI  Sorong              43.16 293  P         P        13 49 13.3 +1.2
      comp=Z,10.0nm,0.8s,baz=134,slow=18,SNR=2.6
PSA00 Pilbara Seismi      46.72 260  P         P        13 49 39.9 -0.6
NWAO  Narrogin (SRO)      48.09 245  P         P        13 49 50.7 -0.3
MORW  Morawa              49.26 250  P         P        13 49 59.6 -0.5
KAPI  Kappang             51.55 281  P         P        13 50 16.2 -1.3
      comp=Z,8.8nm,1.0s,baz=100,slow=17,SNR=2.7
KAPI  Kappang             51.55 281  P         P        13 50 15.3 -2.3
KAPI                                 IAmb      IAmb     13 50 25.7
      comp=Z,25nm,1.1s
TOLI2 Tolitoli            53.26 288  P         P        13 50 29.8 -0.4
MJAR  Matsushiro Arr      65.14 332  P         P        13 51 50.2 -1.9
      comp=Z,1.5nm,0.7s,baz=166,slow=9.3,SNR=2.7
QSPA  South Pole Qui      68.61 180  P         P        13 52 13.4 -0.6
NJ2   Nanjing             72.45 316  eP        P        13 52 39.3 +1.5
NJ2                                  pmax      pmax
      comp=Z,10.0nm,0.5s
BELA  Belgrano 2          79.82 175  P         P        13 53 18.3 -0.8
KMI   Kunming             80.24 302 ⇑P         P        13 53 26.5 +4.0
KMI                                  pP        PcP      13 53 36.6 +6.9
KMI                                  sP        pwP      13 53 40.5  +13
KMI   Kunming             80.24 302  S         S        14 03 28.6 +0.3
KMI   Kunming             80.24 302  sS        sS       14 03 47.3  +15
CMAR  Chiang Mai Arr      80.27 294  P         P        13 53 24.3 +1.8
      comp=Z,2.4nm,0.8s,baz=135,slow=4.2,SNR=11
CMAR  Chiang Mai Arr      80.27 294  P         P        13 53 21.5 -1.0
CHTO  Chiang Mai          80.43 295  P         P        13 53 21.8 -1.6
CD2   Chengdu             82.33 307  eP        P        13 53 34.6 +1.4
CD2                                  pmax      pmax
      comp=Z,10.0nm,0.5s
HHC   Hu-ho-hao-te        82.51 319  eP        P        13 53 36.1 +2.1
HHC                                  pmax      pmax
      comp=Z,8.0nm,1.1s
HHC                                  pmax      pmax
      comp=Z,120nm,5.6s
SYO   Syowa Base          83.08 196⇑eP         P        13 53 36.0 -0.4
OHAK  Old Harbor          84.12  19  P         P        13 53 40.5 -1.2
LZH   Lanzhou             84.91 312  eP        P        13 53 49.2 +2.7
LZH                                  pP        pwP      13 54 01.7  +10
LZH                                  sP        sP       13 54 05.3  +15
LZH                                  PP        PP       13 57 03.3 -0.1
LZH                                  pmax      pmax
      comp=Z,21nm,1.4s
LZH                                  pmax      pmax
      comp=Z,120nm,6.0s
LZH                                  LR        LR
      comp=N,400nm,17.1s
LZH                                  LR        LR
      comp=E,420nm,17.2s
LZH                                  LR        LR
      comp=Z,360nm,19.3s
SEY   Seymchan            85.28 352  P         P        13 53 48.0 +0.5
      comp=Z,1.7nm,0.9s,baz=60,slow=8.1,SNR=3.3
SNAA  Sanae               87.00 182  P         P        13 53 55.0 -1.2
SNAA  Sanae               87.00 182  P         P        13 53 55.1 -1.1
VNA3  Neumayer Olymp      87.55 180  P         P        13 53 57.4 -1.5
N02D  Trinity Center      87.84  44  P         P        13 54 01.9 +1.2
      baz=239
VNA2  Neumayer--Watz      87.86 181  P         P        13 53 59.3 -1.0
      baz=173,slow=4.2
L02E  Cave Junction       87.88  43  P         P        13 54 02.3 +1.6
      baz=238
CMB   Columbia Colle      87.93  48  P         P        13 54 00.0 -1.1
CMB                                  IAmb      IAmb     13 54 17.0
      comp=Z,7.9nm,1.4s
M02C  Callahan            87.96  44  P         P        13 54 02.1 +0.8
      baz=239
BFSC  Mount Baldy Ra      88.07  52  P         P        13 54 03.3 +1.3
      baz=242
O03E  Paynes Creek        88.09  45  P         P        13 54 01.2 -0.8
      baz=240
ISA   Isabella, Lake      88.14  50  P         P        13 54 01.8 -0.4
      baz=242
ISA   Isabella, Lake      88.14  50  P         P        13 54 01.2 -1.1
ISA                                  IAmb      IAmb     13 54 22.2
      comp=Z,10nm,1.3s
VNA1  Neumayer--Stat      88.14 180  P         P        13 54 00.7 -0.9
RC01  Rabbit Creek A      88.34  18  P         P        13 54 02.3 -0.2
      baz=217
LRMC  Laurel Mtn Rad      88.62  51  P         P        13 54 04.9 +0.2
      baz=242
CWC   Cottonwood Cre      88.78  50  P         P        13 54 05.6 +0.2
      baz=242
WAKR  Walker              88.81  48  P         P        13 54 04.8 -0.7
WAKR                                 IAmb      IAmb     13 54 26.5
      comp=Z,9.4nm,1.3s
MPMC  Manual Prospec      89.03  51  P         P        13 54 06.0 -0.6
      baz=242
GTA   Gaotai              89.33 313  eP        P        13 54 10.0 +2.2
GTA                                  pP        pwP      13 54 20.3 +7.0
GTA                                  sP        sP       13 54 24.7  +13
GTA                                  pmax      pmax
      comp=Z,2.0nm,1.3s
GTA                                  pmax      pmax
      comp=Z,120nm,7.6s
GTA                                  LR        LR
      comp=N,370nm,18.2s
GTA                                  LR        LR
      comp=E,340nm,16.7s
GTA                                  LR        LR
      comp=Z,440nm,17.1s
PAHR  Pah Rah Range       89.42  47  P         P        13 54 07.1 -1.2
PAHR                                 IAmb      IAmb     13 54 28.3
      comp=Z,10.0nm,1.5s
SONM  Songino Array       89.55 323  P         P        13 54 07.7 -1.0
      comp=Z,0.9nm,0.9s,baz=140,slow=4.7,SNR=3.0
NVAR  Mina Array Bea      89.56  48  P         P        13 54 08.7 -0.4
      comp=Z,0.9nm,0.8s,baz=227,slow=6.6,SNR=6.7
NVAR  Mina Array Bea      89.56  48  P         P        13 54 07.5 -1.5
NV11  Mina Array Sit      89.66  48  P         P        13 54 08.3 -1.1
NV11                                 IAmb      IAmb     13 54 33.4
      comp=Z,10nm,1.4s
FURC  Furnace Creek,      89.67  50  P         P        13 54 09.2  0.0
      baz=243
MOD   Modoc Plateau       89.87  44  P         P        13 54 09.6 -0.7
MOD                                  IAmb      IAmb     13 54 27.1
      comp=Z,9.4nm,1.3s
IRM   Iron Mountain       89.89  53  P         P        13 54 10.3 -0.2
      baz=244
J05D  Fort Rock, OR       89.96  43  P         P        13 54 10.2 -0.5
      baz=240
N25K  Chitina, Valde      90.31  20  P         P        13 54 11.9 +0.1
      baz=221
PRN   Pahroc Range        91.39  50  P         P        13 54 16.9 -0.6
PRN                                  IAmb      IAmb     13 54 31.8
      comp=Z,12nm,1.2s
R11A  Troy Canyon, C      91.42  49  P         P        13 54 17.4 -0.3
      baz=244
ILAR  Eielson Array       92.06  17  P         P        13 54 18.0 -1.7
      comp=Z,1.1nm,1.0s,baz=240,slow=5.0,SNR=8.2
ILAR  Eielson Array       92.06  17  P         P        13 54 18.5 -1.3
SCRK  Sand Creek          92.27  18  P         P        13 54 19.0 -1.9
      baz=222
COLD  Coldfoot            93.17  14  P         P        13 54 24.1 -0.7
      baz=216
EGAK  Eagle               93.70  19  P         P        13 54 25.3 -2.0
EPYK  Eagle Plains        96.14  19  P         P        13 54 37.3 -1.2
      baz=228
TXAR  Lajitas Array       96.99  61  P         P        13 54 44.4 +1.0
      comp=Z,0.1nm,0.3s,baz=252,slow=5.4,SNR=1.7
WMQ   Urumqi              99.41 313  eP        Pdif     13 54 55.1 +1.3
WMQ                                  pmax      pmax
      comp=Z,5.0nm,1.1s
WMQ                                  pmax      pmax
      comp=Z,160nm,5.7s
WMQ                                  LR        LR
      comp=N,780nm,15.1s
WMQ                                  LR        LR
      comp=E,420nm,20.7s
WMQ                                  LR        LR
      comp=Z,640nm,24.5s
YKA   Yellowknife Ar     102.19  27  P         Pdif     13 55 05.8 +0.2
      comp=Z,0.6nm,1.0s,baz=252,slow=5.2,SNR=3.8
KURBB Kurchatov Arra     107.35 318  PP        PP       13 59 56.4 -0.1
      comp=Z,0.5nm,0.9s,baz=98,slow=7.4,SNR=4.1
AKASG Malin Array Be     137.83 323  PKP       PKiKP    14 00 36.5 -0.9
      comp=Z,0.1nm,0.2s,baz=32,slow=3.1,SNR=1.8
KOLS  Kolonicke sedl     142.58 325  ePKP      PKiKP    14 00 46.5 -0.8
LANS  Liptovska Anna     143.91 327  ePKP      PKiKP    14 00 52.2 +2.2
KRLC  Kraliky            144.60 330  ePKP      PKiKP    14 00 51.9 +0.5
DPC   Dobruska-Polom     144.61 331  ePKP      PKiKP    14 00 53.1 +1.6
BRG   Berggiesshubel     145.26 333  ePKP      PKiKP    14 00 53.6 +0.9
BRG                                   Amp               14 00 56.4
      comp=Z,37nm,1.9s
BRG                                  ex        x        14 01 44.6
BRG                                   Amp               14 01 45.5
      comp=Z,9.9nm,1.0s
CLL   Collm              145.31 335  e(PKPbc)  PKPbc    14 00 47.0 -1.6
CLL                                  e                  14 00 52.0
CLL                                  eSSS      SSS      14 28 30.0
CLL                                  eSSSS              14 32 36.0
MODS  Modra-Piesok       145.52 328  ePKP      PKiKP    14 00 54.0 +0.7
CKRC  Cesky Krumlov      146.62 331  ePKP      PKPdf    14 00 51.3 +0.1
KHC   Kasperske Hory     146.72 332  ePKP      PKPdf    14 00 51.7 +0.3
GEC2  GERESS Array S     146.88 331            PKPdf    14 00 51.0 -0.8
GERES GERESS Array B     146.88 331   PKPbc    PKPbc    14 00 52.6 -1.0
      comp=Z,1.4nm,0.8s,baz=49,slow=4.4,SNR=7.4
GERES GERESS Array B     146.88 331            PKPdf    14 00 49.2 -2.5
DBIC  Dimbokro           164.56 199   PKPab    PKPab    14 02 10.5 -0.1
      comp=Z,4.2nm,0.9s,baz=238,slow=5.5,SNR=3.7
```

IDC ***01*** *13:42:09.2±1.0, 21.°12S×169.°93E, h0^{km}, mb4.7/15, mb1 4.9/16, mb1mx4.6/39, mbtmp4.7/16, ML4.1/1, Error ellipse: s-maj=27.9km s-min=20.5km az=160.0*

NEIC ***01*** *13:42:12.0±1.7, 20.°8S±0.°1×169.°72E±0.°06, h10^{km}±1^{km}, mb5.1/34, Error ellipse: s-maj=21.2km s-min=9.7km az=172.0*

ISC 01 13:42:11.0±0.6**, 20.°86S**±0.°10×**169.°93E**±0.°09**, h10^{km}, n59, σ1^{s}31**/58**, mb5.0**/30**, 1D, Vanuatu Islands**

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Code  Station Name         Δ°   AZ°    Phase ID              Time     Res
                                     Op        ISC        h  m  s    ISC
DZM   Mont Dzumac          3.46 249  Pn        Pn       13 43 06.4 +1.3
      14nm,0.3s,baz=246,slow=20,SNR=2.2
DZM                                  Sn        Sn       13 43 46.9 +0.6
      17nm,0.3s,baz=99,slow=22,SNR=1.4
EIDS  Eidsvold            17.91 252  P         P        13 46 21.1 +0.2
URZ   Urewera             18.42 162  P         P        13 46 22.4 -3.9
      0.6nm,0.3s,baz=31,slow=6.3,SNR=3.8
ARMA  Armidale            19.03 236  P         Pn       13 46 34.1  0.0
CTAO  Charters Tower      22.19 268  P         P        13 47 08.6 +1.0
OXZ   Oxford              22.47 176  P         P        13 47 12.5 +2.2
CAN   Canberra            23.35 227  P         P        13 47 20.9 +1.2
CAN                                  IAmb      IAmb     13 47 26.6
      comp=Z,96nm,1.5s
LBZ   Lake Benmore        23.46 180  P         P        13 47 22.1 +1.5
PMG   Port Moresby        24.72 294  P         P        13 47 34.4 +1.7
      comp=Z,49nm,0.8s,baz=123,slow=6.5,SNR=7.8
PMG   Port Moresby        24.72 294  P         P        13 47 33.9 +1.2
PMG                                  IAmb      IAmb     13 47 35.4
      comp=Z,49nm,0.8s
COEN  Coen                26.41 281  P         P        13 47 49.8 +1.7
COEN                                 IAmb      IAmb     13 47 51.4
      comp=Z,37nm,1.4s
TOO   Toolangi            26.94 227  P         P        13 47 54.0 +1.3
TOO                                  IAmb      IAmb     13 48 10.1
      comp=Z,32nm,1.4s
STKA  Stephens Creek      27.58 241  P         P        13 47 56.2 -2.2
      comp=Z,13nm,1.0s,baz=86,slow=11,SNR=3.2
STKA  Stephens Creek      27.58 241  P         P        13 47 58.1 -0.3
```

WR0	Warramunga Arr	33.14	265	P	P	13 48 47.2	-0.5
WR0				IAmb	IAmb	13 48 47.9	
	comp=Z,34nm,0.8s						
WB0	Warramunga Arr	33.31	265	P	P	13 48 48.3	-0.8
WB2	Warramunga Arr	33.32	265	P	P	13 48 48.6	-0.8
WB2				IAmb	IAmb	13 48 49.5	
	comp=Z,25nm,0.8s						
WRAB	Tennant Creek	33.32	265	P	P	13 48 48.1	-1.3
WRAB				IAmb	IAmb	13 48 49.4	
	comp=Z,21nm,0.8s						
WRA	Warramunga Arr	33.33	265	P	P	13 48 48.4	-1.0
	comp=Z,21nm,0.8s,baz=103,slow=8.0,SNR=7.3						
WRA	Warramunga Arr	33.33	265	P	P	13 48 48.0	-1.4
AS31	Alice Springs	33.40	258	P	P	13 48 48.8	-1.2
ASAR	Alice Springs	33.41	258	P	P	13 48 49.6	-0.4
	comp=Z,32nm,0.8s,baz=83,slow=9.0,SNR=17						
ASAR	Alice Springs	33.41	258	P	P	13 48 49.1	-1.0
JAY	Jayapura	33.82	299	P	P	13 48 54.5	+0.8
	comp=Z,24nm,0.8s,baz=149,slow=3.2,SNR=5.3						
MTN	Manton Dam	37.90	276	P	P	13 49 28.6	-0.1
MTN				IAmb	IAmb	13 49 29.6	
	comp=Z,32nm,0.8s						
FAKI	Fak Fak	40.79	291	P	P	13 49 52.4	-0.5
FAKI				IAmb	IAmb	13 49 54.1	
	comp=Z,26nm,0.8s						
FITZ	Fitzroy Crossi	41.75	266	P	P	13 50 01.0	+0.3
	comp=Z,48nm,0.9s,baz=129,slow=7.0,SNR=12						
FITZ	Fitzroy Crossi	41.75	266	P	P	13 50 00.1	-0.6
FITZ				IAmb	IAmb	13 50 02.0	
	comp=Z,52nm,0.9s						
SIJI	Sorong	42.65	293	P	P	13 50 08.9	+0.8
	comp=Z,14nm,0.7s,baz=105,slow=7.3,SNR=7.1						
PSA00	Pilbara Seismi	46.53	260	P	P	13 50 37.7	-1.4
PSA00				IAmb	IAmb	13 50 39.4	
	comp=Z,24nm,0.9s						
PSA00	Pilbara Seismi	46.53	260	P	P	13 50 37.6	-1.4
PSA00				IAmb	IAmb	13 50 54.6	
	comp=Z,9.0nm,0.8s						
MMRI	Maumere	47.53	277	P	P	13 50 46.3	-0.6
NWAO	Narrogin (SRO)	48.07	244	P	P	13 50 48.7	-2.2
MORW	Morawa	49.19	249	P	P	13 50 58.2	-1.3
MORW				IAmb	IAmb	13 51 09.4	
	comp=Z,28nm,0.9s						
KAPI	Kappang	51.14	281	P	P	13 51 15.5	+0.9
	comp=Z,19nm,0.9s,baz=121,slow=7.1,SNR=8.3						
KAPI	Kappang	51.14	281	P	P	13 51 13.4	-1.1
KAPI				IAmb	IAmb	13 51 16.4	
	comp=Z,26nm,0.9s						
TOLI2	Tolitoli	52.79	288	P	P	13 51 25.9	-0.9
SBA	Scott Base	57.06	181	P	P	13 51 58.0	+1.2
KSM	Kuching	62.37	283	P	P	13 52 34.1	-0.3
MJAR	Matsushiro Arr	64.48	332	P	P	13 52 47.3	-0.6
	comp=Z,3.8nm,1.0s,baz=166,slow=7.1,SNR=4.4						
MJAR	Matsushiro Arr	64.48	332	IAmb	IAmb	13 52 51.7	
	comp=Z,3.0nm,1.1s						
YHNB	Yeheng	65.40	311	P	P	13 52 54.4	+0.2
QSPA	South Pole Qui	69.20	180	P	P	13 53 18.6	+0.8
QSPA				IAmb	IAmb	13 53 32.9	
	comp=Z,14nm,1.1s						
KSRS	Korea Array	70.21	326	P	P	13 53 24.1	0.0
	comp=Z,1.4nm,1.0s,baz=141,slow=6.4,SNR=4.0						
IPM	Ipoh	72.06	282	P	P	13 53 34.9	-1.0
IPM				IAmb	IAmb	13 53 36.2	
	comp=Z,12nm,0.8s						
GSI	Gunungsitoli	74.02	278	P	P	13 53 47.4	-0.1
GSI				IAmb	IAmb	13 53 48.1	
	comp=Z,21nm,0.9s						
KMI	Kunming	79.68	302	⇓P	P	13 54 20.1	+0.6
KMI				pP	PcP	13 54 27.0	-0.3
KMI				pmax	pmax		
	comp=Z,17nm,1.0s						
CMAR	Chiang Mai Arr	79.76	294	P	P	13 54 20.9	+1.1
	comp=Z,5.8nm,0.8s,baz=134,slow=4.3,SNR=12						
CMAR	Chiang Mai Arr	79.76	294	P	P	13 54 19.7	-0.1
CHTO	Chiang Mai	79.92	295	P	P	13 54 19.6	-1.0
CHTO				IAmb	IAmb	13 54 22.1	
	comp=Z,11nm,0.9s						
SONM	Songino Array	88.90	323	P	P	13 55 05.3	-0.3
	comp=Z,2.9nm,1.2s,baz=141,slow=5.5,SNR=2.2						
NVAR	Mina Array Bea	89.39	48	P	P	13 55 09.1	+0.8
	comp=Z,0.9nm,0.9s,baz=225,slow=8.9,SNR=1.6						
ILAR	Eielson Array	91.58	17	P	P	13 55 20.0	+2.4
	comp=Z,1.4nm,0.9s,baz=231,slow=4.9,SNR=4.3						
TXAR	Lajitas Array	96.97	61	P	P	13 55 49.3	+6.0
	comp=Z,0.8nm,1.0s,baz=219,slow=6.9,SNR=1.7						
PDAR	Pinedale Array	97.24	47	P	Pdif	13 55 46.8	+2.3
	comp=Z,0.4nm,0.9s,baz=285,slow=4.6,SNR=1.5						
YKA	Yellowknife Ar	101.80	27	P	Pdif	13 56 05.2	+1.3
	comp=Z,0.5nm,0.8s,baz=250,slow=4.0,SNR=3.9						
CLL	Collm	144.66	335	*i* (PKPdf)	PKPab	14 01 44.2	-2.2
	comp=Z,8.0nm,0.9s						
GERES	GERESS Array B	146.22	331	PKPbc	PKPdf	14 01 49.6	-1.1
	comp=Z,4.1nm,0.9s,baz=38,slow=2.4,SNR=5.3						
TORD	Torodi Ar. Bea	166.39	238	PKP	PKPdf	14 02 17.9	+0.5
	comp=Z,0.5nm,0.7s,baz=117,slow=4.9,SNR=2.0						
TORD				PKPab	PKPab	14 03 16.0	-3.0
	comp=Z,0.5nm,0.8s,baz=83,slow=4.6,SNR=1.2						

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*NEIC **01** 13:43:58.1±0.6, 21°.7S±0°.2×168°.8E±0°.2, h10^{km}±2^{km}, mb4.7/8, Error ellipse: s-maj=33.3km s-min=25.4km az=131.0*

*IDC **01** 13:44:02.3±2.2, 20°.14S×169°.00E, h0^{km}, mb4.1/5, mb1 4.3/6, mb1mx3.9/37, mbtmp4.0/6, Error ellipse: s-maj=102.3km s-min=26.7km az=149.0*

ISC 01 13:44:00.2±0.8, **21°.7S**±0°.2×**169°.54E**±0°.08, **h10**^{km}, **n16, σ2ˢ.12**/14, **mb4.1**/6, **Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	2.91	262	Pn	Pb	13 44 52.6	+0.5
	baz=293,slow=22,SNR=1.0						
DZM				Sn	Sg	13 45 35.0	+1.4
	5.6nm,0.3s,baz=342,slow=22,SNR=1.8						
AFI	Afiamalu	19.38	70	P	Pn	13 48 31.7	+4.2
BFZ	Birch Farm	19.79	165	P	P	13 48 30.1	-0.5
KHZ	Kahutara	20.95	172	P	P	13 48 44.1	+0.9
KHZ				IAmb	IAmb	13 48 47.1	
	comp=Z,45nm,1.3s						
MLZ	Mavora Lakes	23.66	183	P	P	13 49 08.7	-3.1
MLZ				IAmb	IAmb	13 49 14.9	
	comp=Z,29nm,1.4s						
ASAR	Alice Springs	32.90	260	P	P	13 50 36.0	+1.2
	comp=Z,2.2nm,0.8s,baz=80,slow=10,SNR=2.0						
WRA	Warramunga Arr	32.91	267	P	P	13 50 33.4	-1.6
	comp=Z,1.3nm,0.8s,baz=97,slow=7.7,SNR=2.1						
FITZ	Fitzroy Crossi	41.34	267	P	P	13 51 48.3	+1.8
	comp=Z,4.2nm,0.8s,baz=113,slow=7.7,SNR=1.9						
FITZ	Fitzroy Crossi	41.34	267	IAmb	IAmb	13 51 58.9	
	comp=Z,16nm,0.9s						
NWAO	Narrogin (SRO)	47.40	245	P	P	13 52 27.3	-7.6
MORW	Morawa	48.56	250	P	P	13 52 36.8	-7.1
PEA0B	Petropavlovsk-	75.17	353	P	P	13 55 41.2	-1.3
NVAR	Mina Array Bea	90.19	48	P	P	13 57 01.6	+0.4
	comp=Z,1.1nm,1.0s,baz=225,slow=7.5,SNR=3.5						
ILAR	Eielson Array	92.46	17	P	P	13 57 07.8	-3.1
	comp=Z,0.7nm,0.9s,baz=238,slow=6.2,SNR=2.9						
BCAR	Beaver Creek A	92.70	20	P	P	13 57 11.3	-0.7
GERES	GERESS Array B	146.75	330	PKPbc	PKPbc	14 03 42.6	+0.1
	comp=Z,1.1nm,0.7s,baz=18,slow=7.4,SNR=2.0						

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*NEIC **01** 13:51:40±1.5, 21°.7S±0°.3×170°.14E±0°.07, h10^{km}±2^{km}, mb4.3/8, Error ellipse: s-maj=42.8km s-min=9.9km az=175.0*

*IDC **01** 13:51:41.1±4.3, 20°.47S×169°.84E, h0^{km}, mb4.0/5, mb1 4.2/5, mb1mx3.8/36, mbtmp4.0/5, Error ellipse: s-maj=175.3km s-min=32.9km az=150.0*

ISC 01 13:51:38.9±2.6, **21°.8S**±0°.5×**170°.2E**±0°.2, **h10**^{km}, **n19, σ1ˢ.62**/18, **mb4.2**/9, **Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	3.45	264	Sn	Sn	13 53 12.8	-1.1
	0.8nm,0.3s,baz=116,slow=23,SNR=1.7						
DZM	Mont Dzumac	3.45	264	Pn	Pn	13 52 31.5	-1.4
WR0	Warramunga Arr	33.28	267	P	P	13 58 17.5	+0.7
WR0				IAmb	IAmb	13 58 19.2	
	comp=Z,3.5nm,0.9s						
ASAR	Alice Springs	33.43	260	P	P	13 58 20.6	+2.4
	comp=Z,1.8nm,0.6s,baz=83,slow=8.9,SNR=14						
ASAR	Alice Springs	33.43	260	P	P	13 58 18.5	+0.3
WB0	Warramunga Arr	33.45	267	P	P	13 58 19.4	+1.0
WB0				IAmb	IAmb	13 58 20.1	
	comp=Z,4.0nm,0.9s						
WB2	Warramunga Arr	33.46	266	P	P	13 58 19.9	+1.5
WB2				IAmb	IAmb	13 58 25.4	
	comp=Z,5.3nm,1.1s						
WRAB	Tennant Creek	33.46	267	P	P	13 58 19.7	+1.2
WRAB				IAmb	IAmb	13 58 21.6	
	comp=Z,3.4nm,0.8s						
WRA	Warramunga Arr	33.47	266	P	P	13 58 20.2	+1.7
	comp=Z,1.3nm,0.6s,baz=93,slow=8.0,SNR=14						
WRA	Warramunga Arr	33.47	266	P	P	13 58 19.7	+1.2
FITZ	Fitzroy Crossi	41.90	267	P	P	13 59 32.1	+2.3
	comp=Z,3.6nm,0.7s,baz=121,slow=5.9,SNR=7.8						
FITZ	Fitzroy Crossi	41.90	267	IAmb	IAmb	13 59 34.6	
	comp=Z,5.6nm,1.1s						
USA0B	Ussuriysk Arra	74.37	333	P	P	14 03 18.1	+1.3
USRK	Ussuriysk Ar.	74.37	333	P	P	14 03 18.4	+1.6
PEA0B	Petropavlovsk-	75.35	352	P	P	14 03 22.1	-0.1
PETK	Petropavlovsk-	75.35	352	P	P	14 03 22.2	0.0
CMAR	Chiang Mai Arr	80.32	294	P	P	14 03 51.6	+0.9
	comp=Z,0.6nm,0.7s,baz=136,slow=3.8,SNR=4.8						
ILAR	Eielson Array	92.39	17	P	P	14 04 46.1	-3.1
	comp=Z,0.2nm,0.7s,baz=232,slow=4.4,SNR=1.6						
YKA	Yellowknife Ar	102.52	27	P	Pdif	14 05 35.7	+0.7
	comp=Z,0.3nm,0.9s,baz=248,slow=5.0,SNR=2.8						

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*NEIC **01** 13:52:13.8±2.6, 17°.8N±0°.2×68°.99W±0°.06, h83^{km}±30^{km}, ML2.9/32, Md3.4/17(RSPR), Error ellipse: s-maj=29.6km s-min=7.0km az=187.0*

*OSPL **01** 13:52:14.7±2.2, 17°.95N×69°.03W, h137^{km}±22^{km}, ML2.7*

*RSPR **01** 13:52:14.6, 17°.63N×68°.75W, h134^{km}±5^{km}, MD3.4/4*

ISC 01 13:52:13.2±1.8, **18°.1N**±0°.1×**68°.96W**±0°.04, **h121**^{km}±14^{km}, **n47, σ0ˢ.94**/54, **6C-4D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DR12	Loma Pena Alta	0.83	331		Pn	13 52 32.9	-1.0
DR12				Sn	Sn	13 52 48.2	-1.3
SDD	Santo Domingo	0.99	294	Pn	Pn	13 52 33.7	-1.5
SDD				Sn	Sn	13 52 51.9	0.0
SDD				IAML		13 52 52.5	
	comp=N,133nm,0.2s						
SDD	Santo Domingo	0.99	294	*i* P	Pn	13 52 36.2	+1.0
SDD				*e*S	Sn	13 52 52.0	0.0
SDD				IAML		13 52 53.9	
	comp=Z,19nm,0.3s						
BANI	BANI	1.37	284	Pn	Pn	13 52 40.0	+0.6
BANI	BANI	1.37	284	*e*S	Sn	13 53 01.1	+1.9
MPR	Mayaguez	1.74	85	Pn	Pn	13 52 42.6	-0.9
MPR				IAML		13 53 21.4	
	comp=N,140nm,0.1s						
CRPR	Cabo Rojo, PR	1.76	91	⇑*e*P	Pn	13 52 44.1	+0.3
CRPR	Cabo Rojo, PR	1.76	91	*e*S	Sn	13 53 06.3	-0.7
CRPR	Cabo Rojo, PR	1.76	91		Pn	13 52 44.1	+0.3
CRPR					Sn	13 53 06.3	-0.7
LSP	Las Mesas	1.79	86	⇑*e*P	Pn	13 52 44.1	0.0
LSP	Las Mesas	1.79	86	*e*S	Sn	13 53 07.8	+0.1
LSP	Las Mesas	1.79	86		Pn	13 52 44.1	0.0
LSP					Sn	13 53 07.8	+0.1
AGPR	Aguadilla, PR	1.80	77	⇓*e*P	Pn	13 52 45.8	+1.6
AGPR	Aguadilla, PR	1.80	77		Pn	13 52 45.2	+0.9
AGPR	Aguadilla, PR	1.80	77	IAML		13 53 37.7	
	comp=N,151nm,2.0s						
AGPR				IAML		13 54 06.7	
	comp=E,119nm,2.9s						
AGPR	Aguadilla, PR	1.80	77	*i* P	Pn	13 52 45.6	+1.4
AGPR				*e*S	Sn	13 53 10.7	+2.7
AGPR				IAML		13 53 16.1	
	comp=Z,113nm,1.8s						
MLPR	Magueyes Islan	1.82	92	Pn	Pn	13 52 43.6	-0.9
AOPR	Arecibo Observ	2.12	82	⇑*e*P	Pn	13 52 48.8	+0.6
AOPR	Arecibo Observ	2.12	82	*e*S	Sn	13 53 16.2	+1.3
AOPR	Arecibo Observ	2.12	82		Pn	13 52 48.8	+0.6
AOPR					Sn	13 53 16.2	+1.3
SC01	Santiago de lo	2.16	309	Pn	Pn	13 52 48.2	-0.6
SC01				IAML		13 53 22.8	
	comp=E,118nm,0.6s						
SC01	Santiago de lo	2.16	309	*i* P	Pn	13 52 49.5	+0.7
SC01				*e*S	Sn	13 53 15.8	-0.2
SC01				IAML		13 53 17.0	
	comp=Z,43nm,0.8s						
OBIP	Obispado Ponce	2.24	90	⇑*e*P	Pn	13 52 50.2	+0.5
OBIP	Obispado Ponce	2.24	90		Pn	13 52 50.2	+0.5
CELP	Cerrillos	2.26	89	⇓*e*P	Pn	13 52 50.9	+0.9
CELP	Cerrillos	2.26	89	*e*S	Sn	13 53 17.8	-0.5
CELP	Cerrillos	2.26	89		Pn	13 52 50.9	+0.9
CELP					Sn	13 53 17.8	-0.5
ICMP	Isla Caja de M	2.32	94	Pn	Pn	13 52 50.8	0.0
ICMP				IAML		13 53 22.7	
	comp=E,58nm,2.1s						
ICMP				IAML		13 53 32.9	
	comp=N,49nm,2.6s						
EMPR	Esperanza - Ma	2.35	79	⇓*e*P	Pn	13 52 51.6	+0.6
EMPR	Esperanza - Ma	2.35	79		Pn	13 52 51.6	+0.6
SDDR	Presa de Saban	2.40	293		Pn	13 52 52.2	+0.4
SDDR				IAML		13 53 25.8	
	comp=N,47nm,0.6s						
SDDR				IAML		13 53 27.3	
	comp=N,40nm,0.6s						
SDDR	Presa de Saban	2.40	293	*i* P	Pn	13 52 52.6	+0.8
SDDR				*e*S	Sn	13 53 20.0	-1.3
SDDR				IAML		13 53 26.4	
	comp=Z,31nm,1.0s						
GCPR	Guaynabo City	2.75	84	⇑*e*P	Pn	13 52 56.5	+0.3
GCPR	Guaynabo City	2.75	84		Pn	13 52 55.8	-0.4
GCPR				IAML		13 53 24.1	
	comp=N,26nm,4.0s						
PDPR	Patillas Dam,	2.79	90	Pn	Pn	13 52 55.8	-1.0
PDPR				IAML		13 54 25.9	
	comp=E,38nm,2.8s						
CBYP	Canovanas	2.96	85	⇑*e*P	Pn	13 52 58.6	-0.4
CBYP	Canovanas	2.96	85	*e*S	Sn	13 53 33.5	-0.9
CBYP	Canovanas	2.96	85		Sn	13 53 33.5	-0.9
CBYP	Canovanas	2.96	85		Pn	13 52 58.0	-1.0
CBYP	Canovanas	2.96	85	IAML		13 53 40.4	
	comp=E,91nm,0.2s						
CBYP				IAML		13 53 41.4	
	comp=N,103nm,0.2s						
HUMP	Col San Antoni	2.96	88	Pn	Pn	13 52 58.4	-0.6
HUMP				IAML		13 53 39.7	
	comp=E,44nm,0.2s						
HUMP				IAML		13 53 41.1	
	comp=N,35nm,0.2s						
MTP	Monte Pirata	3.24	89	⇓*e*P	Pn	13 53 02.7	+0.1
MTP	Monte Pirata	3.24	89	*e*S	Sn	13 53 40.3	-0.6
MTP	Monte Pirata	3.24	89		Sn	13 53 40.3	-0.6
MTP	Monte Pirata	3.24	89		Pn	13 53 03.9	+1.2
MTP	Monte Pirata	3.24	89	IAML		13 53 53.0	
	comp=E,24nm,2.1s						
CUPR	Culebra, Puert	3.50	85	Pn	Pn	13 53 04.7	-1.4
CUPR				IAML		13 54 44.7	
	comp=E,22nm,2.9s						
CUPR				IAML		13 55 12.9	
	comp=N,31nm,4.6s						

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*NNC **01** 13:58:28.7±4.0, 39°.49N×73°.35E, h0^{km}, mb3.6, mpv3.2, Error ellipse: s-maj=30.3km s-min=26.2km az=124.0*

*SOME **01** 13:58:29.2, 39°.55N×73°.33E, h5^{km}*

*KRNET **01** 13:58:30.3±0.1, 39°.43N×74°.21E, mb3.0*

ISC 01 13:58:37.8±2.3, **39°.60N**±0°.08×**74°.00E**±0°.05, **h9**^{km}±15^{km}, **n36, σ1ˢ.60**/59, **23C-9D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHH	Osh	1.31	315	⇑*i*P	Pn	13 58 59.7	-2.8
	baz=15						
OHH				⇑*i*S	Sn	13 59 20.8	+0.5
	baz=15						
DRK	Karamyk	1.71	267	⇑*i*P	Pn	13 59 05.1	-3.0
	baz=72						
DRK				⇑*i*S	Sn	13 59 30.8	+0.5
	baz=72						
ARSB	Arslanbob	1.89	336	⇑*i*P	Pn	13 59 08.9	-1.6
	baz=34						
ARSB				⇑*i*S	Sb	13 59 37.5	+1.0
	baz=34						
ARLS	Aral	2.27	6	⇓*i*P	Pn	13 59 13.4	-2.4
	baz=2.0						
ARLS				⇓*i*S	Sn	13 59 45.6	+1.5
	baz=2.0						
BTK	Batken	2.50	282	⇓*i*P	Pn	13 59 17.5	-1.3
	baz=85						
BTK				⇓*i*S	Sn	13 59 51.2	+1.8
	baz=85						
AML	Almayashu	2.54	355	⇑*i*P	Pn	13 59 17.7	-2.0
	baz=52						
AML				⇑*i*S	Sn	13 59 52.4	+1.4
	baz=52						
UCH	Uchtor	2.66	8	⇑*i*P	Pn	13 59 18.8	-2.5
	baz=5.0						
UCH				⇑*i*S	Sn	13 59 54.0	+0.1
	baz=5.0						
AAK	Ala-Archa	3.06	7	⇑*i*P	Pn	13 59 24.4	-2.2
	baz=4.0						
AAK				⇑*i*S	Sn	14 00 03.8	+0.3
	baz=4.0						
AAK	Ala-Archa	3.06	7	⇑Pg	Pn	13 59 26.6	0.0
	2.1nm,0.5s						
AAK				⇑Lg	Lg	14 00 15.8	
	12nm,0.7s						
EKS2	Erkin-Say	3.07	357	⇑*i*P	Pn	13 59 24.8	-1.9
	baz=54						
EKS2				⇑*i*S	Sn	14 00 04.9	+1.3
	baz=54						
MNAS	Manas	3.10	339	⇓*i*P	Pn	13 59 26.0	-1.2
	baz=38						
MNAS				⇓*i*S	Sn	14 00 06.4	+2.0
	baz=38						
KBK	Karagaybulak	3.14	13	⇑*i*P	Pn	13 59 25.2	-2.5
	baz=10.0						
KBK				⇑*i*S	Sn	14 00 05.7	+0.3
	baz=10.0						
ULHL	Ulahol	3.14	32	⇑*i*P	Pn	13 59 24.7	-3.1
	baz=28						
ULHL				⇑*i*S	Sn	14 00 03.8	-1.8
	baz=28						
MRKS	Merke	3.20	350	*e*P	Pn	13 59 28.4	0.0
	7.6nm,0.3s						
MRKS				*e*S	Sn	14 00 10.7	+3.9
	4.2nm,0.4s						
MRKS	Merke	3.20	350	Pg	Pn	13 59 28.4	0.0
	7.6nm,0.3s						
MRKS				Lg	Lg	14 00 10.7	
	4.2nm,0.4s						
TKM2	Tokmak 2	3.53	19	⇓*i*P	Pn	13 59 30.4	-2.7
	baz=16						
TKM2				⇓*i*S	Sn	14 00 14.3	-0.8
	baz=16						
TKM2	Tokmak 2	3.53	19	⇓Pg	Pn	13 59 32.6	-0.6
	2.1nm,0.8s						
TKM2				⇑Lg	Lg	14 00 30.4	
	7.9nm,0.6s						
USP	Ospenovka	3.69	6	⇑*i*P	Pn	13 59 33.1	-2.0
	baz=3.0						
USP				⇑*i*S	Sn	14 00 19.4	+0.7
	baz=3.0						
KST	Kastek	3.75	23	*e*P	Pb	13 59 44.3	0.0
	3.6nm,0.4s						
KST				*e*S	Sg	14 00 38.1	0.0
	6.1nm,0.5s						
KST	Kastek	3.75	23	Pg	Pb	13 59 44.3	0.0
	3.6nm,0.4s						
KST				Lg	Lg	14 00 38.1	
	6.1nm,0.5s						
DGS	Degeres	3.88	20	*e*P	Pb	13 59 46.8	+0.3
	1.8nm,0.4s						
DGS				*e*S	Sg	14 00 42.0	-0.3
	5.1nm,0.8s						
DGS	Degeres	3.88	20	Pg	Pb	13 59 46.8	+0.3
	1.8nm,0.4s						
DGS				Lg	Lg	14 00 42.0	
	5.1nm,0.8s						
SGDS	Sogindy	3.88	7	Pg	Pb	13 59 45.8	-0.7
	4.2nm,1.0s						
SGDS				Lg	Lg	14 00 40.0	
	5.6nm,0.7s						
IUG	Iuzhnay	3.94	312	*e*P	Pn	13 59 36.6	-2.1
	1.7nm,0.3s						
IUG				*e*S	Sn	14 00 24.2	-0.9
	17nm,0.9s						
IZV	Izvestkoviy	3.96	29	*e*P	Pb	13 59 48.6	+0.6
	1.7nm,0.5s						
IZV				*e*S	Sg	14 00 45.2	+0.3
	5.2nm,0.3s						
IZV	Izvestkoviy	3.96	29	Pg	Pb	13 59 48.6	+0.6
	1.7nm,0.5s						
IZV				Lg	Lg	14 00 45.2	
	5.2nm,0.3s						
TNSS	Tian-Shan	4.09	32	*e*P	Pb	13 59 50.6	+0.3
	1.7nm,0.3s						
TNSS				*e*S	Sg	14 00 49.3	+0.1
	2.9nm,1.2s						
TNSS	Tian-Shan	4.09	32	Pg	Pb	13 59 50.6	+0.3
	1.7nm,0.3s						
TNSS				Lg	Lg	14 00 49.3	
	2.9nm,1.2s						
MDOK	Medeo	4.24	32	*e*P	Pb	13 59 53.9	+1.3
	2.3nm,0.8s						
MDOK				*e*S	Sg	14 00 54.1	+0.2
	4.9nm,1.1s						
MDOK	Medeo	4.24	32	Pg	Pb	13 59 53.9	+1.3
	2.3nm,0.8s						
MDOK				Lg	Lg	14 00 54.1	
	4.9nm,1.1s						
KOTS	Kotyrbulak	4.32	32	*e*P	Pb	13 59 55.4	+1.3
	1.8nm,0.3s						
KOTS				*e*S	Sg	14 00 57.0	+0.5
	18nm,0.8s						
KOTS	Kotyrbulak	4.32	32	Pg	Pb	13 59 55.4	+1.3
	1.8nm,0.3s						
KOTS				Lg	Lg	14 00 57.0	
	18nm,0.8s						
SATY	Saty	4.79	42	*e*P	Pb	14 00 05.2	+3.1
	2.8nm,0.8s						
SATY				*e*S	Sg	14 01 13.3	+1.6
	6.5nm,1.3s						
SATY	Saty	4.79	42	Pg	Pb	14 00 05.1	+3.1
	2.8nm,0.8s						
SATY				Lg	Lg	14 01 13.3	
	6.5nm,1.3s						
CHKK	Chushkaly	4.80	27	*e*P	Pb	14 00 03.2	+1.0
	0.5nm,0.1s						
CHKK				*e*S	Sg	14 01 10.1	-1.9
	3.3nm,0.2s						
CHKK	Chushkaly	4.80	27	Pg	Pb	14 00 03.2	+1.0
	0.5nm,0.1s						
CHKK				Lg	Lg	14 01 10.1	
	3.3nm,0.2s						

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*ISU **01** 14:01:28, 41°.25N×72°.12E, h5^{km}, Hypocentre not reviewed by the ISC*

*KRNET **01** 14:01:28.8±0.1, 41°.23N×72°.09E, h14^{km}, mb3.4*

*SOME **01** 14:01:29.3, 41°.32N×72°.13E, h5^{km}*

*NNC **01** 14:01:32.5±1.5, 41°.39N×72°.23E, h0^{km}, mb3.8, mpv3.5, Error ellipse: s-maj=13.4km s-min=4.9km az=4.0*

ISC 01 14:01:27.4±1.2, **41°.23N**±0°.02×**72°.15E**±0°.02, **h4**^{km}±12^{km}, **n62, σ1ˢ.40**/98, **26C-12D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NAM	Namangan	0.44	237	*e*P		14 01 38.0	
NAM				*e*S		14 01 45.0	
ANR	Andizhan	0.50	161	*e*P		14 01 40.0	
ANR				*e*S		14 01 49.0	
FRG	Fergana	0.56	209	*e*P		14 01 47.0	
FRG				*e*S		14 02 00.0	
ARSB	Arslanbob	0.64	81	⇑*i*P	Pn	14 01 41.9	-1.5
	baz=82						
ARSB				⇑*i*S	Sb	14 01 51.2	+0.6
	baz=82						
ARSB	Arslanbob	0.64	81	*e*P		14 01 42.0	
ARSB				*e*S		14 01 51.0	
OHH	Osh	0.85	145	⇓*i*P	Pn	14 01 45.6	-0.7
	baz=43						
OHH				⇓*i*S	Sb	14 01 57.5	+0.8
	baz=43						
OHH	Osh	0.85	145	*e*P		14 01 45.0	
OHH				*e*S		14 01 58.0	
MNAS	Manas	1.29	12	⇑*i*P	Pg	14 01 53.2	+1.1
	baz=14						
MNAS				⇑*i*S	Sn	14 02 10.9	+0.8
	baz=14						
SHAK	Shakhimardan	1.31	194	*e*P		14 01 54.0	
SHAK				*e*S		14 02 12.0	
SHAK				*e*S		14 02 15.0	
AML	Almayashu	1.47	52	⇓*i*P	Pg	14 01 57.0	+1.4
	baz=53						
AML				⇓*i*S	Sg	14 02 17.3	+2.6
	baz=53						

AML	Almayashu	1.47	52	P	Pg	14 01 57.4	+1.8
	SNR=165						
BTK	Batken	1.55	221	⇑iP	Pg	14 01 57.2	+0.1
	baz=20						
BTK				⇑iS	Sg	14 02 17.6	+0.5
	baz=20						
BTK	Batken	1.55	221	eP		14 01 57.0	
BTK				i S		14 02 18.0	
CHMG	Chimgan	1.64	282	eP		14 01 59.0	
CHMG				eS		14 02 20.0	
CHRV	Charvak	1.70	285	eP		14 02 01.0	
CHRV				eS		14 01 23.0	
MRKS	Merke	1.72	28	eP	Pg	14 02 02.2	+1.8
	136nm,0.2s						
MRKS				eS	Sg	14 02 24.6	+2.1
	101nm,0.2s						
MRKS	Merke	1.72	28	P	Pg	14 02 01.5	+1.2
	136nm,0.2s						
MRKS				S	Sg	14 02 24.6	+2.1
	101nm,0.2s						
ARLS	Aral	1.75	68	⇑iP	Pg	14 02 02.0	+1.0
	baz=69						
ARLS				⇑iS	Sg	14 02 26.3	+2.6
	baz=69						
DRK	Karamyk	1.77	189	⇑iP	Pb	14 02 01.2	+0.6
	baz=87						
DRK				⇑iS	Sg	14 02 24.8	+0.6
	baz=87						
DZA	Taraz	1.77	340	eP	Pg	14 02 02.7	+1.4
	104nm,0.2s						
DZA				eS	Sg	14 02 26.0	+1.7
	751nm,0.2s						
DZA	Taraz	1.77	340	P	Pg	14 02 02.4	+1.0
	104nm,0.2s						
DZA				S	Sg	14 02 26.2	+1.9
	751nm,0.2s						
IUG	Iuzhnay	1.83	301	eP	Pg	14 02 03.0	+0.5
	74nm,0.2s						
IUG				eS	Sg	14 02 26.6	+0.3
	518nm,0.3s						
EKS2	Erkin-Say	1.88	40	⇑iP	Pg	14 02 04.0	+0.5
	baz=41						
EKS2				⇑iS	Sg	14 02 29.6	+1.8
	baz=41						
EKS2	Erkin-Say	1.88	40	P	Pg	14 02 04.4	+1.0
	SNR=62						
UCH	Uchtor	2.03	60	⇓iP	Pg	14 02 06.3	-0.1
	baz=60						
UCH				⇓iS	Sg	14 02 34.2	+1.4
	baz=60						
UCH	Uchtor	2.03	60	P	Pg	14 02 06.4	0.0
	SNR=83						
TAS	Tashkent	2.15	274	⇓iP	Pb	14 02 06.6	-0.4
	baz=74						
TAS				⇓iS	Sb	14 02 34.4	+0.4
	baz=74						
TAS	Tashkent	2.15	274	eS		14 01 37.0	
KK31	Karatay Array	2.23	328	⇑Pn	Pb	14 02 07.8	-0.6
	6.8nm,0.2s,baz=134,slow=13,SNR=351						
KK31				⇑Sn	Sg	14 02 37.0	-2.2
	106nm,0.5s,baz=131,slow=25,SNR=29						
AAK	Ala-Archa	2.25	50	⇑iP	Pb	14 02 09.2	+0.5
	baz=51						
AAK				⇑iS	Sg	14 02 38.8	-0.8
	baz=51						
AAK	Ala-Archa	2.25	50	P	Pg	14 02 09.4	-1.1
	SNR=10						
AAK	Ala-Archa	2.25	50	⇑Pg	Pb	14 02 09.2	+0.5
	8.9nm,0.6s						
AAK				⇓Lg	Lg	14 02 39.7	
	22nm,0.6s						
FRU1	Bishkek	2.43	49	⇑iP	Pb	14 02 11.7	-0.1
	baz=49						
FRU1				⇑iS	Sb	14 02 43.0	+0.8
	baz=49						
BRLS	Borolday	2.49	317	eP	Pg	14 02 13.6	-1.5
	66nm,0.2s						
BRLS				eS	Sg	14 02 45.0	-2.3
	103nm,0.2s						
BRLS	Borolday	2.49	317	Pg	Pg	14 02 13.6	-1.5
	66nm,0.2s						
BRLS				Lg	Lg	14 02 45.0	
	103nm,0.2s						
KBK	Karagaybulak	2.53	55	⇑iP	Pb	14 02 13.3	-0.2
	baz=55						
KBK				⇑iS	Sb	14 02 45.7	+0.6
	baz=55						
KBK	Karagaybulak	2.53	55	P	Pb	14 02 14.1	+0.5
	SNR=58						
CHMS	Chumysh	2.62	47	⇑iP	Pb	14 02 14.3	-0.8
	baz=47						
CHMS				⇑iS	Sb	14 02 47.6	-0.1
	baz=47						
CHMS	Chumysh	2.62	47	P	Pb	14 02 14.6	-0.5
	SNR=8.2						
USP	Ospenovka	2.68	40	⇑iP	Pb	14 02 14.9	-1.2
	baz=41						
USP				⇑iS	Sb	14 02 49.0	-0.4
	baz=41						
USP	Ospenovka	2.68	40	P	Pb	14 02 15.1	-1.0
	SNR=36						
SGDS	Sogindy	2.89	39	Pg	Pg	14 02 21.9	-0.8
	5.4nm,0.3s						
SGDS				Lg	Lg	14 02 59.4	
	32nm,0.3s						
TKM2	Tokmak 2	3.08	55	P	Pb	14 02 21.0	-1.8
	SNR=13						
TKM2	Tokmak 2	3.08	55	⇑Pn	Pb	14 02 20.3	-2.6
	1.0nm,0.3s						
TKM2				⇓Lg	Lg	14 03 05.9	
	8.2nm,0.5s						
DGS	Degeres	3.36	52	eP	Pg	14 02 30.8	-1.0
	8.1nm,0.5s						
DGS				eS	Sg	14 03 14.6	-0.8
	21nm,0.7s						
DGS	Degeres	3.36	52	Pg	Pg	14 02 30.8	-1.0
	8.1nm,0.5s						
DGS				Lg	Lg	14 03 14.6	
	21nm,0.7s						
KST	Kastek	3.37	56	eP	Pg	14 02 31.1	-0.8
	5.6nm,0.2s						
KST				eS	Sg	14 03 15.0	-0.6
	23nm,0.5s						
KST	Kastek	3.37	56	Pg	Pg	14 02 31.2	-0.8
	5.6nm,0.2s						
KST				Lg	Lg	14 03 15.0	
	23nm,0.5s						
IZV	Izvestkoviy	3.78	60	eP	Pg	14 02 39.4	-0.5
	3.9nm,0.6s						
IZV				eS	Sg	14 03 29.2	+0.4
	17nm,0.5s						
IZV	Izvestkoviy	3.78	60	Pg	Pg	14 02 39.4	-0.5
	3.9nm,0.6s						
IZV				Lg	Lg	14 03 29.2	
	17nm,0.5s						
TNSS	Tian-Shan	4.00	62	eP	Pg	14 02 42.1	-2.0
	5.8nm,0.5s						
TNSS				eS	Sg	14 03 34.4	-1.6
	4.8nm,0.4s						
TNSS	Tian-Shan	4.00	62	Pg	Pg	14 02 42.1	-2.0
	5.8nm,0.5s						
TNSS				Lg	Lg	14 03 34.4	
	4.8nm,0.4s						
BTLS	Baital	4.06	19	eP	Pg	14 02 44.1	-1.0
	5.3nm,0.3s						
BTLS				eS	Sg	14 03 37.8	+0.1
	18nm,0.5s						
BTLS	Baital	4.06	19	Pg	Pg	14 02 44.1	-1.0
	5.3nm,0.3s						
BTLS				Lg	Lg	14 03 37.8	
	18nm,0.5s						
KUU	Kurty	4.08	48	eP	Pg	14 02 43.0	-2.7
	3.2nm,0.4s						
KUU				eS	Sg	14 03 35.2	-3.4
	8.6nm,0.4s						
KUU	Kurty	4.08	48	Pg	Pg	14 02 43.0	-2.7
	3.2nm,0.4s						
KUU				Lg	Lg	14 03 35.2	
	8.6nm,0.4s						
MDOK	Medeo	4.12	60	eP	Pg	14 02 45.4	-1.0
	7.3nm,0.5s						
MDOK				eS	Sg	14 03 39.3	-0.5
	7.7nm,0.5s						
MDOK	Medeo	4.12	60	Pn	Pn	14 02 34.8	+3.5
	1.9nm,0.5s						
MDOK				Pg	Pg	14 02 46.9	+0.4
	7.1nm,0.6s						
MDOK				Lg	Lg	14 03 40.1	
	13nm,0.7s						
MDOK	Medeo	4.12	60	Pg	Pg	14 02 45.4	-1.0
	7.3nm,0.5s						
MDOK				Lg	Lg	14 03 39.3	
	7.7nm,0.5s						
KTBS	Karatobe	4.17	52	eP	Pg	14 02 45.9	-1.5
	3.2nm,0.5s						
KTBS				eS	Sg	14 03 40.2	-1.2
	21nm,0.6s						
KTBS	Karatobe	4.17	52	Pg	Pg	14 02 45.9	-1.5
	3.2nm,0.5s						
KTBS				Lg	Lg	14 03 40.2	
	21nm,0.6s						
KOTS	Kotyrbulak	4.20	60	eP	Pg	14 02 47.4	-0.4
	14nm,0.4s						
KOTS				eS	Sg	14 03 43.0	+0.8
	25nm,0.5s						
KOTS	Kotyrbulak	4.20	60	Pg	Pg	14 02 47.4	-0.4
	14nm,0.4s						
KOTS				Lg	Lg	14 03 43.0	
	25nm,0.5s						
CHKK	Chushkaly	4.44	52	eP	Pg	14 02 51.1	-1.3
	1.6nm,0.2s						
CHKK				eS	Sg	14 03 49.4	-0.5
	8.5nm,0.4s						
CHKK	Chushkaly	4.44	52	Pg	Pg	14 02 51.1	-1.3
	1.6nm,0.2s						
CHKK				Lg	Lg	14 03 49.4	
	8.5nm,0.4s						
SATY	Saty	5.00	66	eP	Pg	14 03 01.6	-1.6
	1.8nm,0.4s						
SATY				eS	Sg	14 04 07.0	-1.0
	4.8nm,0.4s						
SATY	Saty	5.00	66	Pg	Pg	14 03 01.6	-1.6
	1.8nm,0.4s						
SATY				Lg	Lg	14 04 07.0	
	4.8nm,0.4s						
ARXS	Arharly	5.14	53	eP	Pg	14 03 03.2	-2.7
	5.4nm,0.4s						
ARXS				eS	Sg	14 04 11.4	-1.0
	8.4nm,0.5s						
ARXS	Arharly	5.14	53	Pg	Pg	14 03 03.2	-2.7
	5.4nm,0.4s						
ARXS				Lg	Lg	14 04 11.4	
	8.4nm,0.5s						
KPKS	Kokpek	5.33	63	eP	Pg	14 03 08.4	-1.2
	3.0nm,0.4s						
KPKS				eS	Sg	14 04 18.8	0.0
	14nm,0.4s						
MNBS	Baschi	5.42	56	Pg	Pg	14 03 11.7	+0.4
	2.5nm,0.6s						
MNBS				Lg	Lg	14 04 20.8	
	7.3nm,0.5s						
PDGK	Podgornoye	5.84	66	⇓Pg	Pg	14 03 18.1	-1.2
	1.7nm,0.7s						
PDGK				⇓Lg	Lg	14 04 30.6	
	3.8nm,0.6s						

IDC ***01*** *14:02:30.1±1.0, 21°.47S×170°.10E, h0^{km}, mb4.4/9, mb1 4.5/11, mb1mx4.2/29, mbtmp4.3/11, ML3.8/2, MS4.2/14, Ms1 4.2/14, ms1mx4.0/31, Error ellipse: s-maj=35.6km s-min=19.8km az=161.0*

NEIC ***01*** *14:02:31±0.9, 21°.45S±0°.09×170°.15E±0°.08, h10^{km}±5^{km}, mb4.7/26, Error ellipse: s-maj=12.6km s-min=10.4km az=157.0*

GCMT ***01*** *14:02:34.0±0.4, 21°.33S±0°.02×170°.27E±0°.02, h21^{km}±1^{km}, MW4.9/81, Moment Tensor Solution. s12,c14; s81,c107; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.58±.21; $M_{\theta\theta}$-2.28±.15; $M_{\phi\phi}$2.87±.17; $M_{r\theta}$0.33±.27; $M_{\theta\phi}$-1.52±.15; $M_{\phi r}$1.10±.28; Best double couple: $M_0$3.19400×10^{16} NP1:ϕ_s299.00000°, δ69.00000°, λ-178.00000°. NP2: ϕ_s209.00000°, δ88.00000°, λ-21.00000°. Principal axes: T 3.5200, Plg14.0000°, Azm256.0000°; N -0.6480, Plg69.0000°, Azm25.0000°; P -2.8670, Plg16.0000°, Azm162.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NOU ***01*** *14:02:38.5, 21°.23S×169°.52E, h4^{km}, MLv4.3, Southeast of Loyalty Islands*

ISC 01 14:02:31.0±0.5**, 21°.51S**±0°.06×**170°.18E**±0°.06**, h10^{km}, n73, σ1^{s}.03**/63**, mb4.7**/16**, MS4.2**/10**, 1C, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	2.00	270	P	Pn	14 03 04.3	-0.6
PINNC	Pines Island,	2.77	246	P	Pn	14 03 16.6	+1.2
YATNC	Mamie plateau,	3.11	259	P	Pn	14 03 20.8	+0.7
OUENC	Ouen Island, N	3.23	253	P	Pn	14 03 22.7	+0.9
DZM	Mont Dzumac	3.52	260	Pn	Pn	14 03 26.9	+1.1
	10nm,0.3s,baz=140,slow=23,SNR=32						
DZM				Sn	Sn	14 04 09.2	+1.5
	15nm,0.3s,baz=125,slow=22,SNR=8.0						
DZM	Mont Dzumac	3.52	260		Pn	14 03 26.7	+0.9
DZM	Mont Dzumac	3.52	260	P	Pn	14 03 27.2	+1.4
ONTNC	Ouen Toro	3.55	256	P	Pn	14 03 27.3	+1.1
NOUC	Port Laguerre	3.65	260	P	Pn	14 03 28.8	+1.2
DVP	Devils Point	4.21	333	P	Pn	14 03 38.1	+2.9
SANVU	Saraoutou	6.66	334	Pn	Pn	14 04 08.0	-0.9
SANVU	Saraoutou	6.66	334	P	Pn	14 04 11.6	+2.7
MSVF	Nonsavu	8.31	64	Pn	Pn	14 04 32.0	+0.4
RAO	Raoul Island	13.23	128	LR	LR	14 09 09.3	
	comp=Z,528nm,19.7s,baz=348,slow=30						
HNR	Honiara	15.53	319	LR	LR	14 11 18.1	
	comp=Z,583nm,18.7s,baz=239,slow=34						
URZ	Urewera	17.73	162	P	Pn	14 06 38.6	+0.6
	0.3nm,0.3s,baz=1.0,slow=5.3,SNR=6.7						
URZ				LR	LR	14 12 17.6	
	comp=Z,1µm,18.1s,baz=31,slow=33						
URZ	Urewera	17.73	162	Pn	Pn	14 06 38.0	0.0
URZ				IAmb	IAmb	14 06 41.8	
	comp=Z,58nm,1.5s						
EIDS	Eidsvold	17.94	254	P	Pn	14 06 41.1	+0.4
BKZ	Black Stump Fm	18.41	164	P	Pn	14 06 47.1	+0.7
AFI	Afiamalu	18.76	69	LR	LR	14 12 05.6	
	comp=Z,632nm,21.4s,baz=239,slow=31						
ARMA	Armidale	18.88	238		P	14 06 51.6	0.0
QRZ	Quartz Range	19.36	175	P	P	14 06 57.4	+0.7
QRZ				IAmb	IAmb	14 07 07.6	
	comp=Z,72nm,1.4s						
BFZ	Birch Farm	19.80	166	P	P	14 07 02.6	+1.1
BFZ				IAmb	IAmb	14 07 31.1	
	comp=Z,49nm,1.4s						
TUWZ	Tuamarina	20.11	172	P	P	14 07 06.1	+1.1
MSWZ	Moikau Station	20.30	169	P	P	14 07 08.0	+0.9
CTAO	Charters Tower	22.41	269	P	P	14 07 29.3	-0.6
CTAO				IAmb	IAmb	14 07 46.3	
	comp=Z,24nm,1.2s						
WKZ	Wanaka	23.28	182	P	P	14 07 39.5	+0.7
WKZ				IAmb	IAmb	14 08 07.2	
	comp=Z,35nm,1.3s						
PMG	Port Moresby	25.20	295	P	P	14 07 56.3	-0.6
	comp=Z,13nm,0.9s,baz=143,slow=5.6,SNR=3.0						
PMG				LR	LR	14 15 48.0	
	comp=Z,768nm,19.1s,baz=106,slow=32						
PMG	Port Moresby	25.20	295	P	P	14 07 56.1	-0.9
PMG	Port Moresby	25.20	295	P	P	14 07 58.8	+1.8
STKA	Stephens Creek	27.47	242	P	P	14 08 18.1	+0.6
	comp=Z,5.4nm,0.8s,baz=73,slow=10,SNR=7.8						
STKA				LR	LR	14 19 27.0	
	comp=Z,450nm,18.4s,baz=55,slow=37						
STKA	Stephens Creek	27.47	242	P	P	14 08 16.8	-0.6
RAR	Rarotonga	27.96	95	LR	LR	14 17 27.6	
	comp=Z,113nm,21.0s,baz=264,slow=32						
WR0	Warramunga Arr	33.33	266	P	P	14 09 08.3	-1.1
WR0				IAmb	IAmb	14 09 12.0	
	comp=Z,13nm,0.8s						
WB0	Warramunga Arr	33.49	266	P	P	14 09 10.0	-0.8
WB2	Warramunga Arr	33.51	266	P	P	14 09 09.9	-1.0
WRAB	Tennant Creek	33.51	266	P	P	14 09 09.9	-1.0
WRAB				IAmb	IAmb	14 09 16.7	
	comp=Z,12nm,0.8s						
AS31	Alice Springs	33.51	259	P	P	14 09 10.8	-0.2
ASAR	Alice Springs	33.51	259	P	P	14 09 10.9	0.0
	comp=Z,15nm,0.9s,baz=84,slow=8.9,SNR=50						
ASAR				LR	LR	14 22 41.9	
	comp=Z,394nm,19.4s,baz=94,slow=36						
ASAR	Alice Springs	33.51	259	P	P	14 09 10.6	-0.4
WRA	Warramunga Arr	33.52	266	P	P	14 09 10.3	-0.7
	comp=Z,12nm,0.9s,baz=101,slow=8.0,SNR=39						
WRA				LR	LR	14 22 44.6	
	comp=Z,1µm,18.9s,baz=95,slow=36						
WRA	Warramunga Arr	33.52	266	P	P	14 09 10.3	-0.7
PPT	Papeete	38.05	91	LR	LR	14 20 56.9	
	comp=Z,304nm,20.5s,baz=303,slow=29						
FAKI	Fak Fak	41.24	291	P	P	14 10 16.0	-0.6
FAKI				IAmb	IAmb	14 10 26.8	
	comp=Z,28nm,1.4s						
FITZ	Fitzroy Crossi	41.94	267	P	P	14 10 22.4	+0.1
FITZ				IAmb	IAmb	14 10 26.2	
	comp=Z,23nm,0.9s						
NWAO	Narrogin (SRO)	48.00	245	P	P	14 11 10.4	0.0
MORW	Morawa	49.18	250	P	P	14 11 19.4	-0.1
KHLU	Kahalu`u	52.63	41	P	P	14 11 44.5	-1.0
TOLI2	Tolitoli	53.21	289	P	P	14 11 49.8	-0.1
VNDA	Vanda	56.21	182	LR	LR	14 33 23.7	
	comp=Z,264nm,19.1s,baz=346,slow=33						
ERM	Erimo	67.97	339	P	P	14 13 29.9	-0.1
QSPA	South Pole Qui	68.56	180	P	P	14 13 34.5	+0.7
QSPA				IAmb	IAmb	14 13 53.7	
	comp=Z,10nm,1.2s						
RPN	Rapa Nui	72.39	113	LR	LR	14 37 46.4	
	comp=Z,140nm,21.7s,baz=253,slow=29						
PETK	Petropavlovsk-	75.09	352	LR	LR	14 41 57.0	
	comp=Z,155nm,19.8s,baz=213,slow=32						
CMAR	Chiang Mai Arr	80.24	294	P	P	14 14 42.8	+0.4
	comp=Z,1.2nm,0.7s,baz=136,slow=4.0,SNR=11						
CMAR	Chiang Mai Arr	80.24	294	P	P	14 14 42.0	-0.4
CHTO	Chiang Mai	80.40	295	P	P	14 14 43.1	-0.1
CHTO				IAmb	IAmb	14 14 49.9	
	comp=Z,9.0nm,1.2s						
SYO	Syowa Base	83.01	196	⇑eP	P	14 14 56.6	+0.5
SNAA	Sanae	86.94	182	P	P	14 15 14.8	-1.2
VNA3	Neumayer Olymp	87.50	180	P	P	14 15 17.1	-1.5
VNA2	Neumayer--Watz	87.80	181	P	P	14 15 19.0	-1.1
	baz=191,slow=3.3						
SONM	Songino Array	89.56	323	P	P	14 15 28.6	-0.1
	comp=Z,0.4nm,0.8s,baz=116,slow=3.4,SNR=2.7						
SONM				LR	LR	14 53 37.5	
	comp=Z,141nm,19.7s,baz=169,slow=34						
SONM	Songino Array	89.56	323	IAmb	IAmb	14 15 36.8	
	comp=Z,2.0nm,1.1s						
NVAR	Mina Array Bea	89.64	48	P	P	14 15 30.6	+1.1
	comp=Z,0.4nm,0.7s,baz=248,slow=7.8,SNR=3.9						
NVAR	Mina Array Bea	89.64	48	P	P	14 15 29.9	+0.5
ILAR	Eielson Array	92.13	17	P	P	14 15 37.9	-2.3
	comp=Z,0.4nm,1.0s,baz=230,slow=4.8,SNR=2.2						
TXAR	Lajitas Array	97.07	61	P	Pdif	14 16 04.8	+0.9
	comp=Z,0.1nm,0.6s,baz=268,slow=5.4,SNR=3.3						
INK	Inuvik	98.41	18	P	Pdif	14 16 10.4	+1.7
	comp=Z,2.7nm,1.2s,baz=264,slow=8.0,SNR=3.3						
YKA	Yellowknife Ar	102.27	27	P	Pdif	14 16 28.0	+2.0
	comp=Z,0.3nm,0.8s,baz=253,slow=4.7,SNR=4.0						
CLL	Collm	145.34	335	ePKPbc	PKiKP	14 22 12.0	-0.9
CKRC	Cesky Krumlov	146.64	331	ePKP	PKPbc	14 22 12.9	0.0
KHC	Kasperske Hory	146.74	332	ePKP	PKPbc	14 22 13.3	+0.1
GERES	GERESS Array B	146.90	331	PKPbc	PKPdf	14 22 12.3	+0.5
	comp=Z,1.0nm,0.8s,baz=46,slow=3.4,SNR=4.8						

IDC 01 14:08:26.5±2.7**, 9°.87S**×**156°.21E, h0^{km}, mb3.5**/5**, mb1 3.7**/5**, mb1mx3.6**/33**, mbtmp3.5**/5**, Error ellipse: s-maj=92.8km s-min=29.8km az=129.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.36	242	P	P	14 13 35.8	-1.1
	0.9nm,1.0s,baz=69,slow=9.4,SNR=3.6						
ASAR	Alice Springs	25.33	234	P	P	14 13 55.7	+0.3
	1.0nm,1.0s,baz=61,slow=9.6,SNR=3.5						
SONM	Songino Array	72.38	327	P	P	14 19 54.6	0.0
	0.5nm,0.6s,baz=132,slow=6.5,SNR=4.5						
ILAR	Eielson Array	85.59	21	P	P	14 21 07.6	+1.1
	0.7nm,1.0s,baz=234,slow=4.2,SNR=4.7						
MKAR	Makanchi Array	86.34	319	P	P	14 21 10.0	-0.6
	0.2nm,0.6s,baz=116,slow=3.4,SNR=1.8						

IDC ***01*** *14:10:52.9±1.3, 21°.09S×170°.08E, h0^{km}, mb4.0/6, mb1 4.2/8, mb1mx3.9/32, mbtmp4.0/8, ML3.4/2, MS3.4/1, Ms1 3.4/1, ms1mx3.0/34, Error ellipse: s-maj=40.0km s-min=24.8km az=157.0*

NEIC ***01*** *14:10:54.8±2.5, 21°.4S±0°.1×170°.02E±0°.08, h10^{km}±1^{km}, mb4.6/18, Error ellipse: s-maj=18.6km s-min=11.4km az=160.0*

ISC 01 14:10:54.8±0.6**, 21°.34S**±0°.09×**170°.09E**±0°.08**, h10^{km}, n31, σ1^{s}.21**/32**, mb4.2**/11**, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	3.46	257	Pn	Pn	14 11 50.2	+1.3
	1.3nm,0.3s,baz=116,slow=20,SNR=9.4						
DZM				Sn	Sn	14 12 32.0	+2.0
	7.2nm,0.3s,baz=196,slow=21,SNR=7.9						
DZM				LR	LR	14 12 33.4	
	comp=Z,520nm,20.3s,baz=166,slow=28						
DZM	Mont Dzumac	3.46	257		Pn	14 11 50.0	+1.1
SANVU	Saraoutou	6.46	334	Pn	Pn	14 12 32.4	+2.3
URZ	Urewera	17.92	162	P	P	14 15 07.1	+2.3
	0.3nm,0.3s,baz=187,slow=22,SNR=3.8						
BKZ	Black Stump Fm	18.60	164	P	Pn	14 15 13.3	+0.7
BKZ				IAmb	IAmb	14 15 16.5	
	comp=Z,38nm,1.4s						
AFI	Afiamalu	18.79	70	P	Pn	14 15 16.6	+1.6
AFI				IAmb	IAmb	14 15 30.9	
	comp=Z,63nm,1.1s						
SNZO	South Karori	20.29	170	P	P	14 15 31.8	+1.1
THZ	Tophouse	20.50	174	P	P	14 15 34.4	+1.3
THZ				IAmb	IAmb	14 15 38.5	
	comp=Z,19nm,1.1s						
KHZ	Kahutara	21.22	173	P	P	14 15 41.4	+0.7
STKA	Stephens Creek	27.48	242	P	P	14 16 41.2	-0.1
	comp=Z,2.2nm,0.8s,baz=90,slow=7.1,SNR=1.7						
STKA	Stephens Creek	27.48	242	P	P	14 16 40.8	-0.5
WR0	Warramunga Arr	33.25	266	P	P	14 17 31.5	-1.0
WR0				IAmb	IAmb	14 17 56.5	
	comp=Z,8.3nm,1.3s						
WB0	Warramunga Arr	33.41	266	P	P	14 17 33.4	-0.6
WB0				IAmb	IAmb	14 17 39.9	
	comp=Z,13nm,1.4s						
WB2	Warramunga Arr	33.43	266	P	P	14 17 33.0	-1.1
WB2				IAmb	IAmb	14 17 51.3	
	comp=Z,4.7nm,0.9s						
WRA	Warramunga Arr	33.44	266	P	P	14 17 33.5	-0.6
	comp=Z,1.7nm,0.6s,baz=92,slow=5.9,SNR=22						
WRA	Warramunga Arr	33.44	266	P	P	14 17 32.7	-1.5
AS31	Alice Springs	33.45	259	P	P	14 17 33.9	-0.4
ASAR	Alice Springs	33.45	259	P	P	14 17 34.6	+0.3
	comp=Z,2.6nm,0.8s,baz=91,slow=8.7,SNR=33						
ASAR				PcP	PcP	14 20 14.1	-1.5
	comp=Z,0.3nm,0.7s,baz=112,slow=4.1,SNR=2.1						
ASAR	Alice Springs	33.45	259	P	P	14 17 33.0	-1.3
MTN	Manton Dam	38.09	276	P	P	14 18 13.0	-1.2
MTN				IAmb	IAmb	14 18 19.1	
	comp=Z,19nm,1.2s						
PPTF	Pamatai, Papee	38.16	92	P	P	14 18 14.9	+0.2
FITZ	Fitzroy Crossi	41.86	266	P	P	14 18 45.5	0.0
QSPA	South Pole Qui	68.73	180	P	P	14 21 58.9	+0.3
QSPA				IAmb	IAmb	14 22 03.9	
	comp=Z,5.9nm,1.2s						
BELA	Belgrano 2	79.95	175	P	P	14 23 01.8	-1.9
CMAR	Chiang Mai Arr	80.08	294	P	P	14 23 05.5	+0.2
	comp=Z,0.7nm,0.6s,baz=135,slow=4.2,SNR=3.8						
CMAR	Chiang Mai Arr	80.08	294	P	P	14 23 05.2	-0.2
SONM	Songino Array	89.36	323	P	P	14 23 49.9	-1.8
	comp=Z,0.2nm,0.4s,baz=108,slow=4.7,SNR=3.8						
SONM	Songino Array	89.36	323	IAmb	IAmb	14 23 51.3	
	comp=Z,1.6nm,1.3s						
NVAR	Mina Array Bea	89.59	48	P	P	14 23 52.4	-0.7
	comp=Z,0.5nm,1.0s,baz=232,slow=4.4,SNR=2.3						
INK	Inuvik	98.28	18	P	P	14 24 31.5	-0.4
GERES	GERESS Array B	146.70	331	PKPbc	PKPdf	14 30 35.4	0.0
	comp=Z,0.7nm,0.9s,baz=35,slow=2.4,SNR=2.3						

WEL 01 14:14:58.2, 38°.3S±0°.4×**176°.3E**±0°.4**, h5^{km}, M1.6**/7**, ML1.8**/7**, MLv1.6**/7**, Error ellipse: s-maj=0.0km s-min=0.0km az=102.2, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HSRZ	Hossack Road	0.07	280	P	Pg	14 15 00.3	+0.5
HSRZ				S	Sg	14 15 02.0	+1.1
HLRZ	Highlands Stat	0.07	13	P	Pg	14 15 00.4	+0.5
HLRZ				S	Sg	14 15 01.6	+0.5
HRRZ	Handcock Road	0.08	209	P	Pg	14 15 00.7	+0.8

RRRZ	Republican Roa	0.14	96	P	Pg	14 15 01.8	+0.7
TARZ	Mount Tarawera	0.16	58	P	Pg	14 15 02.4	+1.0
TARZ				S	Sg	14 15 06.1	+2.5
PRRZ	Plateau Road	0.18	164	P	Pg	14 15 02.7	+1.0
PRRZ				S	Sg	14 15 05.8	+1.6
UTU	Utuhina	0.18	324	P	Pg	14 15 02.7	+0.9
MKRZ	Makatiti	0.21	30	P	Pg	14 15 05.2	+2.9
OMRZ	Omania	0.22	8	P	Pg	14 15 02.8	+0.3
OMRZ				S	Sg	14 15 06.0	+0.6
WPRZ	Whakapapatarin	0.24	214	P	Pg	14 15 03.8	+1.0
WPRZ				S	Sg	14 15 08.0	+2.1
ALRZ	Allen Road	0.24	178	P	Pg	14 15 03.8	+1.0
ALRZ				S	Sg	14 15 08.2	+2.2
NGRZ	Ngongotaha	0.25	333	P	Pg	14 15 04.7	+1.7

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*IDC **01** 14:26:14.2±0.9, 33°.22S×178°.54W, h0^{km}, mb4.3/5, mb1 4.4/7, mb1mx4.2/25, mbtmp4.3/7, ML3.9/2, MS3.8/2, Ms1 3.8/2, ms1mx3.2/30, Error ellipse: s-maj=31.6km s-min=24.5km az=86.0*

*NEIC **01** 14:26:16.2±1.2, 33°.2S±0°.1×178°.5W±0°.2, h16^{km}±2^{km}, mb4.6/14, Error ellipse: s-maj=25.7km s-min=14.1km az=110.0*

ISC 01 14:26:15.2±0.6**, 33°.23S**±0°.07×**178°.6W**±0°.1**, h10^{km}, n63, σ1ˢ.50**/64**, mb4.5**/11**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	4.01	8	Sn	Sn	14 27 59.7	-4.0
	128nm,0.3s,baz=98,slow=23,SNR=4.6						
RAO	Raoul Island	4.01	8	Pn	Pn	14 27 16.8	+0.1
MXZ	Matakaoa Point	5.03	210	Pn	Pn	14 27 32.2	+1.5
URZ	Urewera	6.13	214	Pn	Pn	14 27 44.7	-1.1
	2.9nm,0.3s,baz=240,slow=2.9,SNR=50						
URZ				Sn	Sn	14 28 54.7	-1.3
	6.6nm,0.3s,baz=287,slow=21,SNR=8.0						
URZ	Urewera	6.13	214		Pn	14 27 45.8	0.0
TARZ	Mount Tarawera	6.41	217	P	Sb	14 29 20.8	-2.9
MTHZ	Maungataniwha	6.74	212	P	Sn	14 29 12.5	+1.5
WHHZ	Waihua	6.75	209	P	Sn	14 29 12.0	+0.6
NMHZ	Naumai	6.95	211	P	Sn	14 29 17.2	+0.8
ARHZ	Aropaoanui	7.01	210	P	Sn	14 29 17.7	0.0
BKZ	Black Stump Fm	7.15	213		Pn	14 27 59.2	-0.7
MCHZ	McNeill Hill	7.29	210	P	Sn	14 29 24.3	-0.3
CKHZ	Cape Kidnapper	7.32	208	P	Sn	14 29 25.2	0.0
KWHZ	Kaweka Forest	7.39	212	P	Sn	14 29 27.8	+0.6
KRHZ	Kereru	7.59	211	P	Sn	14 29 30.4	-1.7
PXZ	Pawanui	7.72	207	P	Sn	14 29 30.7	-4.4
PNHZ	Pukenui	7.89	211	P	Sn	14 29 37.2	-2.2
BFZ	Birch Farm	8.52	208	Pn	Pn	14 28 17.7	-0.9
TUWZ	Tuamarina	10.13	214		Sn	14 30 29.3	-5.0
THZ	Tophouse	10.88	216	Pn	Pn	14 28 52.4	+1.3
KHZ	Kahutara	11.09	212	Pn	Pn	14 28 54.8	+0.9
RPZ	Rata Peaks	13.25	215	Pn	Pn	14 29 21.8	-1.6
	0.6nm,0.3s,baz=54,slow=19,SNR=1.8						
MLZ	Mavora Lakes	15.89	216	P	P	14 30 03.6	+1.0
DZM	Mont Dzumac	17.31	306	LR	LR	14 36 07.1	
	comp=Z,528nm,18.1s,baz=279,slow=34						
AFI	Afiamalu	20.20	19	P	P	14 30 49.9	-0.4
RAR	Rarotonga	20.51	59	LR	LR	14 37 53.8	
	comp=Z,180nm,20.3s,baz=254,slow=34						
FUNA	Funafuti	24.68	355	P	P	14 31 35.0	-1.4
EIDS	Eidsvold	27.55	279	P	P	14 32 04.7	+2.4
CTAO	Charters Tower	33.91	284	P	P	14 33 00.9	+2.4
CTAO				IAmb	IAmb	14 33 02.7	
	comp=Z,6.8nm,0.7s						
COEN	Coen	39.69	290	P	P	14 33 49.3	+1.5
COEN				IAmb	IAmb	14 34 06.9	
	comp=Z,16nm,1.4s						
AS31	Alice Springs	42.57	270	P	P	14 34 12.1	+0.5
ASAR	Alice Springs	42.57	270	P	P	14 34 12.8	+1.2
	comp=Z,9.7nm,0.7s,baz=110,slow=7.3,SNR=129						
ASAR				PcP	PcP	14 36 03.9	0.0
	comp=Z,1.7nm,0.8s,baz=130,slow=4.2,SNR=6.2						
ASAR	Alice Springs	42.57	270	P	P	14 34 11.5	0.0
WR0	Warramunga Arr	43.64	275	P	P	14 34 19.6	-0.5
WR0				IAmb	IAmb	14 34 21.9	
	comp=Z,7.1nm,0.9s						
WB2	Warramunga Arr	43.81	275	P	P	14 34 21.7	+0.1
WB2				IAmb	IAmb	14 34 23.2	
	comp=Z,9.0nm,0.9s						
WRAB	Tennant Creek	43.81	275	P	P	14 34 21.3	-0.3
WRAB				IAmb	IAmb	14 34 23.2	
	comp=Z,7.8nm,0.8s						
WRA	Warramunga Arr	43.82	275	P	P	14 34 22.3	+0.7
	comp=Z,5.5nm,0.8s,baz=116,slow=7.5,SNR=29						
WRA				PcP	PcP	14 36 08.1	-0.1
	comp=Z,0.8nm,0.8s,baz=116,slow=3.8,SNR=2.3						
WRA	Warramunga Arr	43.82	275	P	P	14 34 21.8	+0.2
WB0	Warramunga Arr	43.85	276	P	P	14 34 22.0	0.0
WB0				IAmb	IAmb	14 34 23.5	
	comp=Z,8.1nm,0.8s						
FORT	Forrest	44.94	258	P	P	14 34 29.9	-0.5
FITZ	Fitzroy Crossi	51.95	272	P	P	14 35 25.4	+0.7
CASY	Casey	52.43	209	P	P	14 35 29.2	+1.7
QSPA	South Pole Qui	56.88	180	P	P	14 36 01.5	+1.5
	comp=Z,4.0nm,0.9s,baz=353,slow=5.3,SNR=6.9						
QSPA	South Pole Qui	56.88	180	P	P	14 36 01.2	+1.2
QSPA				IAmb	IAmb	14 36 14.8	
	comp=Z,4.7nm,0.8s						
SNAA	Sanae	75.34	179	P	PcP	14 38 09.3	-2.4
SNAA	Sanae	75.34	179	P	P	14 37 58.7	+0.3
	comp=Z,2.1nm,1.1s,baz=231,slow=6.5,SNR=2.8						
VNA3	Neumayer Olymp	75.52	176	P	PcP	14 38 10.5	-1.8
VNA2	Neumayer--Watz	75.94	177	P	PcP	14 38 13.4	-0.7
	baz=173,slow=4.5						
VNA1	Neumayer--Stat	76.18	177	P	PcP	14 38 14.9	-0.2
KSRS	Korea Array	86.21	320	P	P	14 38 57.0	+0.3
	comp=Z,0.6nm,0.7s,baz=147,slow=7.1,SNR=4.1						
MKAR	Makanchi Array	119.21	309	PKP	PKPdf	14 45 04.3	0.0
	comp=Z,0.3nm,0.6s,baz=128,slow=1.0,SNR=4.7						
ZALV	Zalesovo Beam	119.82	317	PKP	PKPdf	14 45 04.5	-0.6
	comp=Z,0.2nm,0.3s,baz=128,slow=3.1,SNR=2.3						
FINES	FINESS Array B	147.62	338	PKPbc	PKPbc	14 45 59.0	-0.1
	comp=Z,4.4nm,0.7s,baz=35,slow=4.8,SNR=14						
FINES	FINESS Array B	147.62	338		PKPbc	14 45 58.7	-0.4
NB2	NORSAR Subarra	151.47	350	PKP	PKPab	14 46 14.7	-2.4
	comp=Z,6.6nm,1.1s,baz=23,slow=2.9						
NOA	NORSAR Array B	151.47	350	PKPbc	PKiKP	14 46 10.2	+1.0
	comp=Z,0.8nm,0.7s,baz=13,slow=4.1,SNR=2.8						
HFS	Hagfors	151.91	347	PKPbc	PKPbc	14 46 09.5	-0.2
	comp=Z,2.8nm,0.8s,baz=57,slow=5.3,SNR=2.3						
AKASG	Malin Array Be	153.20	319	PKPbc	PKiKP	14 46 13.3	+0.3
	comp=Z,0.4nm,0.3s,baz=58,slow=2.6,SNR=7.0						
AKASG	Malin Array Be	153.20	319		PKPbc	14 46 12.8	-0.1
BRTR	Keskin Array B	153.42	293	PKPbc	PKiKP	14 46 14.8	+0.7
	comp=Z,2.3nm,0.8s,baz=73,slow=4.3,SNR=6.8						
TORD	Torodi Ar. Bea	160.00	181	PKPab	PKPab	14 46 55.7	+1.1
	comp=Z,0.8nm,0.8s,baz=177,slow=3.0,SNR=3.7						
TORD	Torodi Ar. Bea	160.00	181		PKPab	14 46 54.1	-0.5
CLL	Collm	160.06	338	*e*PKPab	PKPab	14 46 54.0	0.0

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*IDC **01** 14:38:06.4±1.3, 10°.68S×161°.39E, h0^{km}, mb3.8/8, mb1 3.9/8, mb1mx3.8/41, mbtmp3.8/8, MS3.9/1, Ms1 3.9/1, ms1mx3.0/28, Error ellipse: s-maj=30.6km s-min=24.4km az=85.0*

*NEIC **01** 14:38:08.0±2.1, 10°.8S±0°.1×161°.24E±0°.10, h10^{km}±1^{km}, mb4.3/10, Error ellipse: s-maj=21.4km s-min=11.2km az=42.0*

ISC 01 14:38:07.8±0.7**, 10°.74S**±0°.09×**161°.28E**±0°.10**, h10^{km}, n22, σ1ˢ.28**/22**, mb3.7**/11**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	1.85	315	Pn	Pb	14 38 40.8	-0.8
	82nm,0.3s,baz=186,slow=6.2,SNR=19						
HNR				Sn	Sb	14 39 04.6	-0.3
	105nm,0.3s,baz=144,slow=14,SNR=6.3						
HNR				LR	LR	14 39 14.8	
	comp=Z,142nm,20.3s,baz=164,slow=36						
HNR	Honiara	1.85	315	Pn	Pn	14 38 40.4	+0.9
SANVU	Saraoutou	7.43	130	Pn	Pn	14 39 57.6	+1.3
RABL	Rabaul	11.13	305	Pn	Pn	14 40 47.1	0.0
CTAO	Charters Tower	17.20	236	Pn	Pn	14 42 07.4	-0.9
CTAO				IAmb	IAmb	14 42 32.1	
	comp=Z,24nm,1.4s						
EIDS	Eidsvold	17.47	212	Pn	Pn	14 42 09.9	-1.8
MSVF	Nonsavu	17.67	115	Pn	Pn	14 42 11.9	-2.4
WR0	Warramunga Arr	27.33	247	P	P	14 43 51.4	-1.7
WR0				IAmb	IAmb	14 43 57.5	
	comp=Z,6.0nm,1.2s						
WB0	Warramunga Arr	27.41	248	P	P	14 43 55.5	+1.6
WB0				IAmb	IAmb	14 44 03.4	
	comp=Z,9.2nm,1.2s						
WB2	Warramunga Arr	27.50	247	P	P	14 43 55.8	+1.1
WB2				IAmb	IAmb	14 44 10.1	
	comp=Z,9.3nm,1.2s						
WRA	Warramunga Arr	27.51	247	P	P	14 43 56.4	+1.6
	comp=Z,1.6nm,1.1s,baz=76,slow=10,SNR=5.7						
WRA				LR	LR	14 54 14.1	
	comp=Z,220nm,18.7s,baz=245,slow=35						
ASAR	Alice Springs	29.07	240	P	P	14 44 09.5	+0.9
	comp=Z,0.4nm,0.7s,baz=70,slow=9.0,SNR=2.5						
BBOO	Buckleboo	31.95	223	P	P	14 44 33.5	-0.4
FITZ	Fitzroy Crossi	35.23	254	P	P	14 45 03.5	+0.7
	comp=Z,3.3nm,0.7s,baz=97,slow=8.2,SNR=7.9						
FITZ	Fitzroy Crossi	35.23	254	P	P	14 45 02.3	-0.4
KSM	Kuching	52.13	280	P	P	14 47 18.7	-0.1
KSRS	Korea Array	57.24	329	P	P	14 47 56.9	+1.5
	comp=Z,0.4nm,0.5s,baz=139,slow=7.8,SNR=2.0						
SONM	Songino Array	75.88	325	P	P	14 49 55.1	+0.4
	comp=Z,0.9nm,0.6s,baz=126,slow=4.5,SNR=8.5						
SONM	Songino Array	75.88	325	IAmb	IAmb	14 49 57.6	
	comp=Z,0.9nm,0.6s						
QSPA	South Pole Qui	79.26	180	P	P	14 50 14.8	+1.5
	comp=Z,0.8nm,1.0s,baz=346,slow=4.2,SNR=1.7						
ILAR	Eielson Array	84.67	20	P	P	14 50 40.7	-0.7
	comp=Z,0.2nm,0.5s,baz=246,slow=5.1,SNR=1.6						
MKAR	Makanchi Array	90.32	318	P	P	14 51 07.9	-1.3
	comp=Z,0.2nm,0.6s,baz=96,slow=5.8,SNR=2.8						

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*NAO **01** 14:40:22.4±1.8, 73°.25N×6°.09E, ML3.2*

*BER **01** 14:40:24.9±3.2, 73°.32N×6°.13E, h6^{km}±32^{km}, ML2.1, ML3.2(NAO), Confirmed Earthquake*

*IDC **01** 14:40:31.0±6.2, 72°.66N×7°.55E, h0^{km}, mb1 3.6/4, mb1mx3.1/51, mbtmp3.5/4, ML2.6/4, Error ellipse: s-maj=70.1km s-min=27.1km az=153.0*

ISC 01 14:40:21.8±0.9**, 73°.31N**±0°.09×**6°.05E**±0°.06**, h10^{km}, n35, σ2ˢ.19**/41**, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HSPB	Hornsund (broa	4.43	29	*e*P	Pn	14 41 30.1	+1.1
BRBA	Barentsburg A	5.18	19	Pn	Pn	14 41 41.5	+2.4
BRBA	Barentsburg A	5.18	19	*e*P	Pn	14 41 41.5	+2.4
TRO	Tromso	5.52	126	*e*P	Pn	14 41 43.6	-0.2
TRO				IAML		14 42 44.9	
	comp=Z,3.4nm,0.7s						
N2VI	Vinje	5.68	148	*e*P	Pn	14 41 46.5	+0.4
LOF	Lofoten	5.76	151	*e*P	Pn	14 41 48.6	+1.5
LOF				IAML		14 42 47.1	
	comp=Z,6.3nm,0.7s						
KBS	Kingsbay	5.82	11	Pn	Pn	14 41 51.8	+3.9
KBS	Kingsbay	5.82	11	*e*P	Pn	14 41 50.5	+2.6
HOPEN	Hopen	5.88	48	*e*P	Pn	14 41 49.1	+0.3
JETT	Jettan, Norway	5.93	122	Pn	Pn	14 41 51.0	+1.5
HAMF	Hammerfest	6.08	107	Pn	Pn	14 41 51.6	+0.1
HAMF	Hammerfest	6.08	107	*e*P	Pn	14 41 51.4	-0.1
HAMF				*e*S	Sn	14 42 51.4	-10
HAMF				IAML		14 43 09.5	
	comp=Z,4.3nm,0.8s						
STEI	Steigen	6.21	146	*e*P	Pn	14 41 54.0	+0.7
STEI				IAML		14 42 56.5	
	comp=Z,3.3nm,0.5s						
KIF	Kilpisjarvi	6.43	125	Pn	Pn	14 41 57.9	+1.6
KIF	Kilpisjarvi	6.43	125	*e*P	Pn	14 41 57.1	+0.8
FAUS	Fauske	6.71	148	*e*P	Pn	14 42 01.1	+0.9
FAUS				IAML		14 43 15.8	
	comp=Z,1.8nm,0.7s						
NBB30	Finnes	6.88	154	*e*P	Pn	14 42 03.7	+1.3
DAG	Danmarks Havn	7.22	310	*e*P	Pn	14 42 10.2	+3.1
DAG				*e*S	Sn	14 43 24.1	-5.0
ARA0	ARCESS Array S	7.25	112	Pn	Pn	14 42 08.6	+0.9
	baz=322,slow=12						
ARA0				Sn	Sn	14 43 28.7	-1.2
	baz=306,slow=22						
ARA0	ARCESS Array S	7.25	112	Pn	Pn	14 42 08.6	+0.9
	baz=322,slow=12						
ARA0				Sn	Sn	14 43 28.7	-1.2
	baz=306,slow=22						
ARCES	ARCESS Array B	7.25	112	Pn	Pn	14 42 08.8	+1.2
	baz=320,slow=11,SNR=24						
ARCES				Sn	Sn	14 43 22.9	-7.0
	baz=309,slow=20,SNR=7.0						
KONS	Konsvik	7.26	157	*e*P	Pn	14 42 09.8	+2.1
KONS				IAML		14 43 25.6	
	comp=Z,3.5nm,0.9s						
SALU	Saltoluokta	7.27	139	*e*P	Pn	14 42 08.9	+1.0
DBG	Daneborg	7.37	290	Pn	Pn	14 42 11.2	+2.0
DBG				Sn	Sn	14 43 29.8	-3.0
DBG	Daneborg	7.37	290	Pn	Pn	14 42 11.2	+2.0
DBG				Sn	Sn	14 43 29.8	-3.0
MOR8	Moi Rana	7.73	154	*e*P	Pn	14 42 16.0	+1.8
APA0	Apatity Array	10.59	109	Pn	Pn	14 42 53.5	+0.2
	baz=323,slow=14						
APA0	Apatity Array	10.59	109	Pn	Pn	14 42 53.5	+0.2
	baz=323,slow=14						
NOA	NORSAR Array B	12.48	168	Pn	Pn	14 43 20.5	+1.3
	comp=Z,0.0nm,0.3s,baz=336,slow=4.3,SNR=2.2						
HFS	Hagfors	13.56	163	Pn	Pn	14 43 35.1	+1.3
	comp=Z,0.2nm,0.3s,baz=357,slow=10,SNR=9.1						
HFS	Hagfors	13.56	163	Pn	Pn	14 43 35.2	+1.4
	baz=350,slow=12						
HFS	Hagfors	13.56	163	Pn	Pn	14 43 35.2	+1.4
	baz=350,slow=12						
FIA0	FINESS Array S	14.06	137	Pn	Pn	14 43 42.0	+1.3
FIA0	FINESS Array S	14.06	137	Pn	Pn	14 43 42.0	+1.3
FINES	FINESS Array B	14.06	137	Pn	Pn	14 43 41.9	+1.1
	comp=Z,0.1nm,0.3s,baz=342,slow=12,SNR=5.3						

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*IDC **01** 14:49:52.1±2.3, 55°.96N×169°.11W, h0^{km}, mb3.7/5, mb1 3.9/8, mb1mx3.6/45, mbtmp3.8/8, ML2.9/3, MS3.9/2, Ms1 3.9/2, ms1mx3.0/56, Error ellipse: s-maj=59.1km s-min=18.9km az=170.0*

*AEIC **01** 14:49:53±1.7, 56°.70N±0°.06×169°.0W±0°.1, h26^{km}±6^{km}, Error ellipse: s-maj=9.0km s-min=7.5km az=50.0*

*NEIC **01** 14:49:54.4±1.7, 56°.68N±0°.04×169°.1W±0°.1, h12^{km}±6^{km}, mb3.8/2, ML3.7(AEIC), Error ellipse: s-maj=8.7km s-min=4.4km az=64.0*

ISC 01 14:49:55.2±0.7**, 56°.66N**±0°.09×**169°.03W**±0°.06**, h10^{km}, n35, σ1ˢ.53**/35**, mb3.6**/3**, Pribilof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPIA	Saint Paul Isl	0.85	309		Pg	14 50 10.2	-1.3
AKGG	Akutan Green G	3.01	144		Pn	14 50 41.1	-1.7
MSW	Makushin Switc	3.03	154		Pn	14 50 42.4	-0.8
MNAT	Makushin Natee	3.09	153		Pn	14 50 42.9	-1.0
MAPS	Pakushin South	3.10	156		Pn	14 50 43.5	-0.6
AKBBA	Akutan Broad B	3.12	144		Pn	14 50 43.6	-0.6
MGOD	Makushin Gods	3.12	156		Pn	14 50 43.6	-0.9
AKUT	Akutan	3.14	142	Pn	Pn	14 50 43.4	-1.2
UNV	Unalaska Valle	3.17	152		Pn	14 50 44.2	-0.8
FALS	False Pass	3.65	117		Pn	14 50 50.3	-1.4
NIKH	Nikolski High	3.69	178		Pn	14 50 52.1	-0.1
SDPT	Sand Point	4.98	102	Pn	Pn	14 51 08.3	-1.5
ATKA	Atka Island	5.38	216		Pn	14 51 16.4	+1.0
CHGN	Chignik	5.90	89	Pn	Pn	14 51 23.1	+0.7
ADK	Adak	6.55	226		Pn	14 51 29.0	-2.4
GAMB	Gambell	7.27	351	Pn	Pn	14 51 40.0	-1.2
ANM	Nome	8.14	11		Pn	14 51 50.6	-2.5
AMKA	Amchitka	8.66	237		Pn	14 52 00.7	+0.3
KDAK	Kodiak Island	9.00	76	Pn	Pn	14 52 06.6	+1.6
	0.2nm,0.3s,baz=123,slow=21,SNR=1.8						
KDAK				Sn	Sn	14 53 45.6	-0.6
	0.1nm,0.3s,baz=134,slow=12,SNR=1.3						
TTA	Tatalina	9.08	41	Pn	Pn	14 52 03.3	-2.8
SUA	Susitna One	10.56	55	Pn	Pn	14 52 25.8	-0.7
BPAW	Bear Paw Mtn.	11.60	43	Pn	Pn	14 52 40.5	-0.1
I23K	Minto, Yukon-K	12.75	40	Pn	Pn	14 52 54.2	-2.1
ILAR	Eielson Array	13.48	44	Pn	P	14 53 10.3	-5.3
	0.0nm,0.3s,baz=235,slow=13,SNR=2.6						
ILAR				LR	LR	14 58 27.9	
	comp=Z,161nm,19.8s,baz=226,slow=37						
BCAR	Beaver Creek A	15.03	54	P	P	14 53 31.4	-1.4
DAWY	Dawson	16.30	51	P	P	14 53 47.4	+0.5
DAWY				IAmb	IAmb	14 54 03.6	
	comp=Z,9.8nm,1.4s						
PETK	Petropavlovsk-	19.35	274	P	P	14 54 20.6	+0.1
	comp=Z,0.3nm,0.3s,baz=84,slow=12,SNR=6.7						
INK	Inuvik	19.77	40	P	Pn	14 54 30.1	+3.6
	comp=Z,2.5nm,0.5s,baz=240,slow=8.3,SNR=18						
INK	Inuvik	19.77	40	P	P	14 54 24.3	-0.7
INK				IAmb	IAmb	14 54 47.9	
	comp=Z,6.5nm,1.2s						
SEY	Seymchan	20.15	304	P	P	14 54 29.6	+0.5
	comp=Z,1.3nm,0.7s,baz=109,slow=11,SNR=7.8						
YKA	Yellowknife Ar	27.44	55	P	P	14 55 43.3	+2.6
	comp=Z,1.0nm,0.8s,baz=286,slow=8.3,SNR=3.6						
YKA				PcP	PcP	14 58 58.8	0.0
	comp=Z,0.2nm,0.6s,baz=293,slow=2.5,SNR=2.9						
SONM	Songino Array	49.36	298	P	P	14 58 45.0	+0.5
	comp=Z,0.6nm,0.9s,baz=65,slow=6.8,SNR=2.0						
ABKAR	Akbulak array	66.90	327	P	P	15 00 46.7	-0.4
AKASG	Malin Array Be	71.95	348	P	P	15 01 20.8	+2.5
	comp=Z,0.7nm,0.6s,baz=11,slow=5.5,SNR=2.8						
ROSC	El Rosal	88.59	83	LR	LR	15 44 28.3	
	comp=Z,174nm,21.9s,baz=66,slow=37						

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*WEL **01** 15:03:53.0±1.0, 35°S±9°×18°0W±1°2, h167^{km}±16^{km}, M3.8/43, mB4.3/8, MLv4.2/43, Mw(mB)3.4/8, Error ellipse: s-maj=0.0km s-min=0.0km az=93.2*

*IDC **01** 15:04:00.2±3.0, 35°.19S×177°.93E, h0^{km}, mb3.8/2, mb1 4.1/3, mb1mx3.8/21, mbtmp3.8/3, ML3.8/1, Error ellipse: s-maj=62.6km s-min=30.8km az=82.0*

ISC 01 15:03:48.8±2.5**, 35°.1S**±0°.1×**179°.6W**±0°.2**, h35^{km}, n64, σ1ˢ.34**/71**, East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	3.03	214	P	Pn	15 04 36.4	+2.2
MXZ				S	Sn	15 05 11.2	+1.9
WMGZ	Waiomatatini S	3.20	210	P	Pn	15 04 39.4	+2.9
PKGZ	Pakihiroa	3.40	213	P	Pn	15 04 41.6	+2.2
PKGZ				S	Sn	15 05 19.1	+0.5
HAZ	Te Kaha	3.44	217	P	Pn	15 04 40.3	+0.5
PUZ	Puketiti	3.48	209	P	Pn	15 04 42.6	+2.1
PUZ				S	Sn	15 05 20.3	-0.2
RUGZ	Raukumara Rang	3.65	216	P	Pn	15 04 44.6	+1.7
TWGZ	Tauwhareparae	3.69	211	P	Pn	15 04 45.2	+1.9
TWGZ				S	Sn	15 05 27.3	+1.7
CNGZ	Carnagh Statio	3.86	207	P	Pn	15 04 47.8	+2.2
TKGZ	Te Karaka	3.96	211	P	Pn	15 04 48.2	+1.1
TKGZ				S	Sn	15 05 32.1	-0.1
MWZ	Matawai	4.02	214	P	Pn	15 04 49.0	+1.2
MWZ				S	Sn	15 05 33.6	0.0
MYRZ	Mayor Island	4.05	235	P	Pn	15 04 52.4	+4.2
URZ	Urewera	4.16	219	Pn	Pn	15 04 50.8	+1.0
	10nm,0.3s,baz=250,slow=2.2,SNR=76						
URZ				Sn	Sn	15 05 28.5	-8.6
	4.8nm,0.3s,baz=212,slow=19,SNR=4.1						
URZ	Urewera	4.16	219	P	Pn	15 04 50.7	+1.0
KUZ	Kuaotunu	4.17	245	P	Pn	15 04 49.7	-0.2
OPRZ	Ohinepanea	4.18	227	P	Pn	15 04 50.5	+0.5
RAGZ	Rawiri	4.20	214	P	Pn	15 04 52.1	+1.7
GRZ	Great Barrier	4.21	252	P	Pn	15 04 50.0	-0.5
RIGZ	Rimuhau	4.22	209	P	Pn	15 04 52.0	+1.3
EDRZ	Edgecumbe	4.25	223	P	Pn	15 04 53.7	+2.7
TGRZ	Tauranga	4.29	230	P	Pn	15 04 52.3	+0.8
PRGZ	Paritu Road	4.37	207	P	Pn	15 04 53.6	+1.0
PRGZ				S	Sn	15 05 40.4	-1.9
SNGZ	Shannon Statio	4.47	213	P	Pn	15 04 55.5	+1.5
SNGZ				S	Sn	15 05 44.1	-0.7
KARZ	Kaharoa	4.48	227	P	Pn	15 04 54.9	+0.7
RTZ	Ruatahuna	4.50	217	P	Pn	15 04 55.4	+0.9
KMRZ	Kaimai	4.56	231	P	Pn	15 04 56.0	+0.7
PRRZ	Plateau Road	4.72	222	P	Pn	15 04 58.7	+1.2
MKAZ	Moumakai	4.72	243	P	Pn	15 04 58.2	+0.7
WHHZ	Waihua	4.76	211	P	Pn	15 04 59.1	+1.2
WHHZ				S	Sn	15 05 51.2	-0.7
TOZ	Tahuroa Road	4.78	235	P	Pn	15 04 59.3	+1.0
NMHZ	Naumai	4.96	214	P	Pn	15 05 01.9	+1.0
ARHZ	Aropaoanui	5.02	212	P	Pn	15 05 03.1	+1.6
AWAZ	Awhitu Peninsu	5.09	245	P	Pn	15 05 03.8	+1.3
WTAZ	Waiatarua	5.10	247	P	Pn	15 05 04.0	+1.3
TLZ	Tolley Road	5.11	229	P	Pn	15 05 03.4	+0.6
BKZ	Black Stump Fm	5.17	216	P	Pn	15 05 03.7	+0.1
MCHZ	McNeill Hill	5.30	213	P	Pn	15 05 06.2	+0.9
CKHZ	Cape Kidnapper	5.31	209	P	Pn	15 05 04.8	-0.8
RATZ	Rangitukua	5.32	223	P	Pn	15 05 06.8	+1.0
RITZ	Rihia Road	5.35	222	P	Pn	15 05 07.2	+1.0
KATZ	Kakaramea	5.44	223	P	Pn	15 05 09.1	+1.6
KAHZ	Kahuranaki	5.51	210	P	Pn	15 05 07.6	-0.7
TMVZ	Te Maari	5.54	221	P	Pn	15 05 09.2	+0.4
ETVZ	East Tongariro	5.55	221	P	Pn	15 05 09.5	+0.6
KRVZ	Karewarewa	5.56	222	P	Pn	15 05 09.9	+0.8
OTVZ	Oturere	5.59	221	P	Pn	15 05 11.3	+1.7
KRHZ	Kereru	5.61	214	P	Pn	15 05 09.3	-0.3
KRHZ				S	Sn	15 06 09.7	-3.1
BHHZ	Black Hill Sta	5.63	217	P	Pn	15 05 10.1	+0.1
NGZ	Ngauruhoe	5.64	222	P	Pn	15 05 11.3	+1.1
HIZ	Hauiti	5.64	231	P	Pn	15 05 11.5	+1.4
TWVZ	Taurewa	5.65	223	P	Pn	15 05 11.2	+0.9
MOVZ	Moawhango	5.72	219	P	Pn	15 05 11.3	0.0
WNVZ	Wahianoa	5.75	221	P	Pn	15 05 12.1	+0.4
PRHZ	Porangahau	6.01	209	P	Pn	15 05 14.0	-1.2
TSZ	Takapari Road	6.13	214	P	Pn	15 05 15.5	-1.3
ANWZ	Angora Road	6.24	209	P	Pn	15 05 18.1	-0.2
WAZ	Wanganui	6.38	221	P	Pn	15 05 19.9	-0.4
PRWZ	Pori Road	6.53	211	P	Pn	15 05 20.6	-1.6
MRZ	Mangatainoka R	6.78	213	P	Pn	15 05 24.2	-1.6
OGWZ	Otaki Gorge	7.09	214	P	Pn	15 05 29.2	-0.8
KHZ	Kahutara	9.11	214	P	Pn	15 05 55.0	-2.6
RPZ	Rata Peaks	11.28	217	Sn	Sn	15 08 15.7	-16
	0.3nm,0.3s,baz=45,slow=18,SNR=1.8						
ASAR	Alice Springs	41.76	273	P	P	15 11 34.5	-0.4
	1.1nm,0.7s,baz=117,slow=7.6,SNR=14						
WRA	Warramunga Arr	43.17	278	P	P	15 11 46.5	+0.2
	1.1nm,0.6s,baz=118,slow=7.8,SNR=15						
FINES	FINESS Array B	148.95	336	PKPbc	PKPab	15 23 46.9	+11
	3.1nm,1.0s,baz=50,slow=2.2,SNR=1.8						

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*NEIC **01** 15:28:05.4±0.8, 1°.8N±0°.1×125°.06E±0°.09, h196^{km}±7^{km}, mb4.2/19, Error ellipse: s-maj=16.1km s-min=11.6km az=214.0*

*DJA **01** 15:28:07.5±0.3, 2°N±2°×12°5E±°, h184^{km}±3^{km}, M3.9/14, mb4.0/5, mB4.8/1, MLv3.8/14, Mw(mB)4.1/1*

*IDC **01** 15:28:10.9±9.3, 1°.65N×124°.98E, h251^{km}±97^{km}, mb3.4/6, mb1 3.5/8, mb1mx3.2/43, mbtmp4.1/8, MS3.2/1, Ms1 3.2/1, ms1mx2.4/25, Error ellipse: s-maj=103.5km s-min=16.1km az=62.0*

ISC 01 15:28:06.0±0.6**, 1°.66N**±0°.05×**125°.05E**±0°.05**, h200^{km}, n47, σ1ˢ.40**/53**, mb4.0**/12**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMSI	Cibinong	1.52	225	P	Pn	15 28 40.7	+0.8
KMSI				S	Sn	15 29 05.2	-1.0
SGSI	Sangihe	2.07	13	P	Pn	15 28 46.2	+0.9
SGSI				S	Sn	15 29 16.2	+0.2
GTOI	Gorontalo	2.28	244	P	Pn	15 28 48.7	+1.2
GTOI				S	Sn	15 29 20.3	+0.6
TNTI	Ternate	2.48	111		Pn	15 28 51.1	+1.4
TNTI	Ternate	2.48	111	P	Pn	15 28 51.5	+1.8
TNTI				S	Sn	15 29 24.5	+0.8
MRSI	Marisa	3.32	249	P	Pn	15 29 00.1	+0.6
MRSI				S	Sn	15 29 41.1	-0.2
LUWI	Luwuk	3.52	220	Pn	Pn	15 29 02.4	+0.5
LUWI	Luwuk	3.52	220	P	Pn	15 29 02.4	+0.5
LUWI				S	Sn	15 29 44.9	-0.8
SANI	Sanana	3.80	166	P	Pn	15 29 04.5	-0.9
SANI				S	Sn	15 29 45.6	-6.4
APSI	Ampana	4.25	233	P	Pn	15 29 11.4	+0.4
TOLI2	Tolitoli	4.30	263	Pn	Pn	15 29 11.4	-0.2
NLAI	Namlea	5.28	157	P	Pn	15 29 24.7	+0.7
	0.3nm2µm19nm,0.8s						
MPSI	Mapaga	5.31	256	P	Pn	15 29 26.0	+1.5
	0.1nm9.9nm,0.8s						
MSAI	Masohi	6.30	142	P	Pn	15 29 39.5	+2.2
	0.2nm21nm,0.7s						
KAPI	Kappang	8.48	219	Pn	Pn	15 30 08.0	+2.4
BATI	Baumata	11.87	187	P	P	15 30 53.4	-0.8
	1.3nm,0.3s,baz=211,slow=22,SNR=2.1						
BATI	Baumata	11.87	187	P	Pn	15 30 50.7	+1.4
MTN	Manton Dam	15.62	157	P	P	15 31 36.3	+0.4
MTN				IAmb	IAmb	15 31 53.8	
	comp=Z,20nm,1.2s						
FITZ	Fitzroy Crossi	19.64	178	P	P	15 32 20.3	+0.7
	comp=Z,0.7nm,0.3s,baz=352,slow=7.2,SNR=13						
FITZ	Fitzroy Crossi	19.64	178	P	P	15 32 20.0	+0.4

FITZ				IAmb	IAmb	15 32 42.5	
	comp=Z,7.5nm,1.3s						
WB0	**Warramunga Arr**	**23.18**	**157**	P	**P**	**15 32 55.7**	**+0.6**
WB0				IAmb	IAmb	15 32 58.4	
	comp=Z,8.7nm,0.8s						
WRAB	**Tennant Creek**	**23.32**	**157**	P	**P**	**15 32 56.3**	**0.0**
WRAB				IAmb	IAmb	15 32 59.3	
	comp=Z,7.0nm,0.8s						
WRA	**Warramunga Arr**	**23.32**	**157**	P	**P**	**15 32 57.8**	**+1.4**
	comp=Z,5.7nm,0.6s,baz=336,slow=10,SNR=41						
WRA	**Warramunga Arr**	**23.32**	**157**	P	**P**	**15 32 56.1**	**-0.3**
WB2	**Warramunga Arr**	**23.33**	**157**	P	**P**	**15 32 57.2**	**+0.8**
WR0	**Warramunga Arr**	**23.41**	**157**	P	**P**	**15 32 57.9**	**+0.6**
WR0				IAmb	IAmb	15 33 00.8	
	comp=Z,4.0nm,0.8s						
PSA00	**Pilbara Seismi**	**23.64**	**192**	P	**P**	**15 33 00.1**	**+0.8**
AS31	**Alice Springs**	**26.61**	**162**	P	**P**	**15 33 27.3**	**+1.2**
ASAR	**Alice Springs**	**26.61**	**162**	P	**P**	**15 33 27.6**	**+1.5**
	comp=Z,1.0nm,0.5s,baz=344,slow=7.9,SNR=41						
ASAR				LR	LR	15 46 06.0	
	comp=Z,50nm,18.1s,baz=158,slow=40						
ASAR	**Alice Springs**	**26.61**	**162**	P	**P**	**15 33 27.2**	**+1.1**
FORT	**Forrest**	**32.38**	**175**	P	**P**	**15 34 18.0**	**+1.1**
NWAO	**Narrogin (SRO)**	**35.18**	**191**	P	**P**	**15 34 42.4**	**+1.4**
BBOO	**Buckleboo**	**35.83**	**164**	P	**P**	**15 34 47.8**	**+1.3**
STKA	**Stephens Creek**	**36.86**	**156**	P	**P**	**15 34 53.8**	**-1.5**
	comp=Z,2.9nm,0.8s,baz=342,slow=6.8,SNR=4.2						
STKA	**Stephens Creek**	**36.86**	**156**	P	**P**	**15 34 56.8**	**+1.5**
ARMA	**Armidale**	**40.73**	**144**	P	**P**	**15 35 26.1**	**-1.5**
ARMA				IAmb	IAmb	15 35 28.7	
	comp=Z,19nm,1.4s						
SONM	**Songino Array**	**48.75**	**343**	P	**P**	**15 36 29.8**	**-0.9**
	comp=Z,0.4nm,0.8s,baz=153,slow=7.2,SNR=4.2						
SONM	**Songino Array**	**48.75**	**343**	IAmb	IAmb	15 36 33.2	
	comp=Z,0.7nm,0.9s						
MK31	**Makanchi Array**	**58.32**	**327**	P	**P**	**15 37 39.5**	**-0.6**
MKAR	**Makanchi Array**	**58.32**	**327**	P	**P**	**15 37 39.7**	**-0.4**
	comp=Z,1.3nm,0.5s,baz=121,slow=7.8,SNR=20						
MKAR	**Makanchi Array**	**58.32**	**327**	P	**P**	**15 37 39.2**	**-0.8**
MAKZ	**Makanchi**	**58.50**	**327**	P	**P**	**15 37 40.6**	**-0.8**
ZALV	**Zalesovo Beam**	**61.69**	**334**	P	**P**	**15 38 02.3**	**-0.4**
	comp=Z,0.6nm,0.5s,baz=116,slow=6.7,SNR=2.6						
KURK	**Kurchatov**	**62.60**	**329**	P	**P**	**15 38 07.9**	**-1.0**
KURK				IAmb	IAmb	15 38 10.9	
	comp=Z,3.5nm,1.0s						
KK31	**Karatay Array**	**63.62**	**318**	P	**P**	**15 38 14.8**	**-1.0**
KK31				IAmb	IAmb	15 38 24.8	
	comp=Z,2.3nm,1.2s						
KKAR	**Karatay Array**	**63.62**	**318**	P	**P**	**15 38 14.5**	**-1.3**
ABKAR	**Akbulak array**	**72.70**	**322**	P	**P**	**15 39 11.2**	**-0.9**

JMA ***01*** *15:29:49.8±0.2, 22°.64N×121°.24E, h0^{km}, M3.2*
TAP ***01*** *15:29:51.2, 22°.75N×120°.89E, h6^{km}, ML3.6, C*
ISC 01 15:29:52.2±0.8**, 22°.74N**±0°.01×**120°.93E**±0°.01**, h10**^{km}±6^{km}**,**
n108, σ1^{s}**08**/213**, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ECL	**Taimali**	**0.14**	**170**	*i* P	**Pg**	**15 29 55.0**	**-0.3**
	baz=158						
ECL				*i* S	**Sg**	**15 29 57.3**	**-0.3**
	baz=158						
TWG	**Pinlang**	**0.16**	**58**	*i* P	**Pg**	**15 29 55.7**	**+0.1**
	baz=69						
TWG				*i* S	**Sg**	**15 29 58.3**	**+0.3**
	baz=69						
TWGBT	**Beinan**	**0.16**	**60**	*i* P	**Pg**	**15 29 55.7**	**0.0**
	baz=69						
TWGBT				*i* S	**Sg**	**15 29 58.3**	**+0.1**
	baz=69						
TTN	**Taitung**	**0.20**	**85**	*i* P	**Pg**	**15 29 57.6**	**+1.2**
	baz=90						
TTN				S	**Sg**	**15 30 01.7**	**+2.5**
	baz=90						
LONT	**Longtian**	**0.25**	**48**	*i* P	**Pg**	**15 29 57.3**	**0.0**
	baz=54						
LONT				*i* S	**Sg**	**15 30 00.9**	**+0.1**
	baz=54						
TSMG	**Majia**	**0.26**	**263**	P	**Pg**	**15 29 56.1**	**-1.5**
	baz=265						
TSMG				*e*S	**Sg**	**15 29 59.1**	**-2.1**
	baz=265						
SSD	**Sandimen**	**0.27**	**272**	P	**Pg**	**15 29 56.1**	**-1.7**
	baz=275						
SSD				S	**Sg**	**15 29 59.4**	**-2.0**
	baz=275						
MASBT	**Mashibuluo**	**0.30**	**246**	*e*P	**Pg**	**15 29 56.8**	**-1.4**
	baz=243						
MASBT				*e*S	**Sg**	**15 30 00.2**	**-2.1**
	baz=243						
EAST	**Anshuo**	**0.36**	**192**	*e*P	**Pg**	**15 29 58.9**	**-0.4**
	baz=186						
EAST				*e*S	**Sg**	**15 30 04.2**	**0.0**
	baz=186						
SLGT	**Liugui**	**0.36**	**315**	*e*P	**Pg**	**15 29 58.1**	**-1.4**
	baz=316						
SLGT				*e*S	**Sg**	**15 30 02.1**	**-2.2**
	baz=316						
TAW	**Tawu**	**0.38**	**185**	*e*P	**Pg**	**15 29 59.4**	**-0.2**
	baz=180						
TAW				S	**Sg**	**15 30 04.6**	**0.0**
	baz=180						
SGLT	**Jiouru**	**0.40**	**268**	*e*P	**Pg**	**15 29 59.7**	**-0.4**
	baz=266						
SGLT				*e*S	**Sg**	**15 30 05.8**	**+0.3**
	baz=266						
TSPT	**Pingtung City**	**0.40**	**262**	*e*P	**Pg**	**15 29 59.9**	**-0.3**
	baz=259						
TSPT				*e*S	**Sg**	**15 30 06.6**	**+1.2**
	baz=259						
EDH	**Donghe**	**0.42**	**56**	*i* P	**Pb**	**15 30 01.2**	**-0.5**
	baz=60						
EDH				*i* S	**Sb**	**15 30 08.5**	**+0.4**
	baz=60						
SSPT	**Xinbi**	**0.42**	**233**	*e*P	**Pg**	**15 29 59.9**	**-0.5**
	baz=223						
SSPT				*e*S	**Sg**	**15 30 06.3**	**+0.3**
	baz=223						
SCST	**Cishan**	**0.43**	**290**	*e*P	**Pg**	**15 30 00.1**	**-0.5**
	baz=290						
SCST				*e*S	**Sg**	**15 30 06.2**	**-0.1**
	baz=290						
STYT	**Tauyuan**	**0.45**	**340**	*e*P	**Pg**	**15 30 00.2**	**-0.9**
	baz=349						
STYT				*e*S	**Sg**	**15 30 05.8**	**-1.3**
	baz=349						
ELDTW	**Lidau**	**0.46**	**10**	P	**Pg**	**15 30 00.4**	**-0.8**
	baz=14						
ELDTW				S	**Sg**	**15 30 06.5**	**-0.7**
	baz=14						
SCZT	**Fangliau**	**0.46**	**218**	*e*P	**Pg**	**15 30 00.2**	**-1.0**
	baz=222						
SCZT				*e*S	**Sg**	**15 30 06.3**	**-1.0**
	baz=222						
SGST	**Jiashian**	**0.47**	**317**	*e*P	**Pg**	**15 29 59.7**	**-1.7**
	baz=326						
SGST				*e*S	**Sg**	**15 30 07.0**	**-0.6**
	baz=326						
TWM1	**Shoushan**	**0.47**	**281**	*e*P	**Pg**	**15 30 01.4**	**0.0**
	baz=286						
TWM1				S	**Sg**	**15 30 08.3**	**+0.6**
	baz=286						
LDUT	**Ludao**	**0.50**	**97**	P	**Pb**	**15 30 03.1**	**0.0**
	baz=87						
LDUT				S	**Sb**	**15 30 11.4**	**+0.8**
	baz=87						
SLIU	**Shizi**	**0.53**	**193**	*e*P	**Pg**	**15 30 02.0**	**-0.5**
	baz=191						
SLIU				*e*S	**Sg**	**15 30 08.8**	**-0.7**
	baz=191						
CHKT	**Chengkung**	**0.54**	**48**	P	**Pb**	**15 30 03.1**	**-0.7**
	baz=69						
CHKT				S	**Sb**	**15 30 11.8**	**+0.2**
	baz=69						
SNJT	**Kaohsiung City**	**0.55**	**272**	*e*P	**Pb**	**15 30 03.6**	**-0.3**
	baz=277						
SNJT				*e*S	**Sb**	**15 30 13.2**	**+1.3**
	baz=277						
FULB	**Fuli**	**0.57**	**36**	P	**Pb**	**15 30 03.7**	**-0.6**
	baz=27						
FULB				S	**Sb**	**15 30 12.0**	**-0.5**
	baz=27						
CHN1	**Nanshi**	**0.58**	**320**	*e*P	**Pb**	**15 30 04.2**	**-0.3**
	baz=326						
CHN1				*e*S	**Sb**	**15 30 13.5**	**+0.7**
	baz=326						
WTP	**Ta-pu**	**0.58**	**330**	*e*P	**Pg**	**15 30 03.3**	**-0.3**
	baz=332						
WTP				*e*S	**Sb**	**15 30 12.2**	**-0.8**
	baz=332						
KAU	**Kaohsiung**	**0.60**	**254**	*e*P	**Pb**	**15 30 05.4**	**+0.7**
	baz=253						
KAU				*e*S	**Sb**	**15 30 15.7**	**+2.4**
	baz=253						
CHN3	**Shinhua**	**0.62**	**303**	*e*P	**Pb**	**15 30 05.5**	**+0.4**
	baz=304						
CHN3				*e*S	**Sb**	**15 30 15.6**	**+1.6**
	baz=304						
SNST	**Tainan City**	**0.62**	**321**	*e*P	**Pb**	**15 30 05.0**	**-0.3**
	baz=324						
SNST				*e*S	**Sb**	**15 30 15.1**	**+1.0**
	baz=324						
TPUB	**Ta-pu**	**0.63**	**334**	*e*P	**Pg**	**15 30 04.2**	**-0.1**
	baz=335						
TPUB				*e*S	**Sg**	**15 30 12.6**	**0.0**
	baz=335						
WLCH	**Liuqiu**	**0.64**	**233**	*e*P	**Pn**	**15 30 07.1**	**-0.1**
	baz=222						
WLCH				*e*S	**Sn**	**15 30 19.0**	**+1.5**
	baz=222						
TWP	**Hsiaoliuchiu**	**0.65**	**234**	*e*P	**Pn**	**15 30 08.4**	**+0.9**
	baz=221						
TWK	**Hsinying**	**0.67**	**323**	*e*P	**Pb**	**15 30 05.7**	**-0.2**
	baz=329						
TWK				*e*S	**Sb**	**15 30 15.9**	**+0.6**
	baz=329						
CHN4	**Tsaushan**	**0.69**	**333**	*e*P	**Pb**	**15 30 05.8**	**-0.4**
	baz=350						
CHN4				*e*S	**Sb**	**15 30 16.4**	**+0.6**
	baz=350						
TWF1	**Yuli**	**0.70**	**29**	*e*P	**Pg**	**15 30 05.0**	**-0.8**
	baz=22						
TWF1				*e*S	**Sg**	**15 30 13.8**	**-1.1**
	baz=22						
EYUL	**Yuli**	**0.71**	**31**	*e*P	**Pg**	**15 30 05.2**	**-0.7**
	baz=23						
EYUL				*e*S	**Sb**	**15 30 15.8**	**-0.6**
	baz=23						
TAI1	**Yung-k'ang**	**0.71**	**295**	*e*P	**Pn**	**15 30 08.4**	**+0.1**
	baz=296						
TAI1				*e*S	**Sn**	**15 30 20.2**	**+0.8**
	baz=296						
YULB	**Yu-li**	**0.74**	**27**	*e*P	**Pg**	**15 30 05.3**	**-1.1**
	baz=28						
YULB				*e*S	**Sg**	**15 30 15.3**	**-0.7**
	baz=28						
HEN	**Hengchun**	**0.75**	**194**	*e*P	**Pb**	**15 30 07.3**	**0.0**
	baz=204						
HEN				*e*S	**Sb**	**15 30 18.4**	**+0.8**
	baz=204						
YUS	**Yu-Shan**	**0.75**	**2**	*e*P	**Pg**	**15 30 06.2**	**-0.6**
	baz=3.0						
YUS				*e*S	**Sg**	**15 30 16.9**	**+0.3**
	baz=3.0						
ALS	**Alishan**	**0.78**	**352**	*e*P	**Pg**	**15 30 07.0**	**-0.3**
	baz=1.0						
ALS				*e*S	**Sb**	**15 30 18.5**	**-0.3**
	baz=1.0						
TWK1	**Hengchun**	**0.80**	**188**	*e*P	**Pb**	**15 30 08.5**	**+0.4**
	baz=187						
TWK1				*e*S	**Sg**	**15 30 17.8**	**-0.2**
	baz=187						
TWKBT	**Hengchun**	**0.80**	**188**	*e*P	**Pn**	**15 30 10.4**	**+0.8**
	baz=187						
TWKBT				*e*S	**Sg**	**15 30 18.4**	**+0.3**
	baz=187						
SCLT	**Jiali**	**0.81**	**303**	*e*P	**Pb**	**15 30 08.9**	**+0.6**
	baz=304						
SCLT				*e*S	**Sn**	**15 30 22.5**	**+0.9**
	baz=304						
TSEB	**Hengchuen, Pin**	**0.83**	**182**	*e*P	**Pg**	**15 30 06.7**	**-1.6**
	baz=184						
TSEB				*e*S	**Sb**	**15 30 21.1**	**+1.1**
	baz=184						
EHY	**Hungye**	**0.85**	**25**	*e*P	**Pg**	**15 30 07.6**	**-0.9**
	baz=26						
EHY				*e*S	**Sg**	**15 30 19.1**	**-0.5**
	baz=26						
ICHU	**Yijhu**	**0.86**	**316**	*e*P	**Pb**	**15 30 10.0**	**+0.8**
	baz=317						
ICHU				*e*S	**Sn**	**15 30 23.5**	**+0.4**
	baz=317						
HGSD	**Ruisui**	**0.88**	**31**	*e*P	**Pb**	**15 30 09.2**	**-0.3**
	baz=23						
HGSD				*e*S	**Sb**	**15 30 21.5**	**+0.1**
	baz=23						
CHN5	**Tsauling**	**0.89**	**345**	*e*P	**Pb**	**15 30 10.1**	**+0.3**
	baz=353						
CHN5				*e*S	**Sb**	**15 30 22.4**	**+0.7**
	baz=353						
CHY	**Chiayi**	**0.89**	**329**	*e*P	**Pb**	**15 30 09.9**	**+0.2**
	baz=330						
CHY				*e*S	**Sn**	**15 30 23.8**	**+0.1**
	baz=330						
CHN2	**Minshiung**	**0.90**	**332**	*e*P	**Pn**	**15 30 10.8**	**0.0**
	baz=347						
CHN2				*e*S	**Sn**	**15 30 24.1**	**+0.2**
	baz=347						
CHN8	**Yiju**	**0.90**	**313**	*e*P	**Pb**	**15 30 09.9**	**+0.1**
	baz=328						
CHN8				*e*S	**Sn**	**15 30 24.0**	**+0.1**
	baz=328						
LAY	**Lan-yu**	**0.90**	**140**	*e*P	**Pb**	**15 30 10.6**	**+0.7**
	baz=139						
LAY				*e*S	**Sg**	**15 30 19.9**	**-1.4**
	baz=139						
WLGB	**Puzi**	**0.94**	**322**	*e*P	**Pb**	**15 30 10.3**	**-0.2**
	baz=323						
WLGB				*e*S	**Sb**	**15 30 24.4**	**+1.3**
	baz=323						
WHYT	**Xinyi Township**	**0.96**	**356**	*e*P	**Pb**	**15 30 11.0**	**+0.1**
	baz=4.0						
WHYT				*e*S	**Sb**	**15 30 24.4**	**+0.7**
	baz=4.0						
WGK	**Gukeng**	**1.00**	**340**	*e*P	**Pb**	**15 30 12.3**	**+0.6**
	baz=341						
WGK				*e*S	**Sn**	**15 30 26.7**	**+0.1**
	baz=341						
WDLH	**Douliu**	**1.01**	**339**	*e*P	**Pb**	**15 30 12.5**	**+0.6**
	baz=353						
WDLH				*e*S	**Sn**	**15 30 29.1**	**+2.3**
	baz=353						
SSLB	**Suanglung**	**1.05**	**1**	*e*P	**Pg**	**15 30 11.8**	**-0.6**
	baz=1.0						
SSLB				*e*S	**Sn**	**15 30 27.8**	**+0.1**
	baz=1.0						
WTK	**Tuku**	**1.07**	**332**	*e*P	**Pb**	**15 30 12.7**	**-0.1**
	baz=333						
WTK				*e*S	**Sn**	**15 30 29.2**	**+1.0**
	baz=333						
WJS	**Zhushan**	**1.10**	**350**	*e*P	**Pn**	**15 30 14.0**	**+0.4**
	baz=3.0						
WJS				*e*S	**Sb**	**15 30 28.8**	**+1.2**
	baz=3.0						
WSF	**Szhu**	**1.11**	**324**	*e*P	**Pg**	**15 30 13.4**	**-0.1**
	baz=325						
WSF				*e*S	**Sb**	**15 30 29.5**	**+1.5**
	baz=325						
SMLT	**Sun Moon Lake**	**1.14**	**359**	*e*P	**Pn**	**15 30 15.1**	**+0.7**
	baz=7.0						
SMLT				*e*S	**Sn**	**15 30 31.4**	**+1.3**
	baz=7.0						
WNT	**Mingjian**	**1.16**	**349**	*e*P	**Pn**	**15 30 14.8**	**+0.4**
	baz=349						
WNT				*e*S	**Sn**	**15 30 31.8**	**+1.4**
	baz=349						
TYC	**Yuchr**	**1.16**	**357**	*e*P	**Pn**	**15 30 15.3**	**+0.7**
	baz=4.0						
TYC				*e*S	**Sn**	**15 30 32.0**	**+1.5**
	baz=4.0						
ESL	**Shilin**	**1.17**	**23**	*e*P	**Pg**	**15 30 14.1**	**-0.6**
	baz=32						
ESL				*e*S	**Sg**	**15 30 28.2**	**-1.6**
	baz=32						
WNT1	**Nantou City**	**1.19**	**349**	*e*P	**Pn**	**15 30 15.6**	**+0.7**
	baz=349						
WNT1				*e*S	**Sn**	**15 30 33.2**	**+2.1**
	baz=349						
WDGT	**Dungji**	**1.28**	**294**	*e*P	**Pg**	**15 30 14.9**	**-1.8**
	baz=295						
WDGT				*e*S	**Sg**	**15 30 32.2**	**-1.2**
	baz=295						
DPDB	**Guoxing**	**1.29**	**360**	*e*P	**Pn**	**15 30 17.2**	**+0.9**
	baz=7.0						
DPDB				*e*S	**Sn**	**15 30 35.7**	**+1.9**
	baz=7.0						
CHGB	**Renai**	**1.34**	**10**	*e*P	**Pg**	**15 30 17.0**	**-0.9**
	baz=17						
CHGB				*e*S	**Sn**	**15 30 35.8**	**+0.7**
	baz=17						
WCHH	**Zhanghua**	**1.38**	**346**	*e*P	**Pn**	**15 30 17.8**	**+0.3**
	baz=346						
WCHH				*e*S	**Sn**	**15 30 39.1**	**+3.2**
	baz=346						
TCU	**Taichung**	**1.42**	**351**	*e*P	**Pb**	**15 30 19.2**	**+0.4**
	baz=334						
TCU				*e*S	**Sn**	**15 30 39.4**	**+2.5**
	baz=334						
WHF	**Hehuan Shan**	**1.44**	**12**	*e*P	**Pb**	**15 30 19.6**	**+0.3**
	baz=18						
WHF				*e*S	**Sn**	**15 30 39.6**	**+1.7**
	baz=18						
PHUB	**P'eng-hu**	**1.47**	**302**	*e*P	**Pn**	**15 30 16.9**	**-1.8**
	baz=303						
PHUB				*e*S	**Sg**	**15 30 36.4**	**-3.1**
	baz=303						
TWD	**Chiawan**	**1.47**	**24**	*e*P	**Pb**	**15 30 19.8**	**+0.1**
	baz=32						
TWD				*e*S	**Sg**	**15 30 38.3**	**-1.2**
	baz=32						
PNG	**Penghu**	**1.51**	**303**	*e*P	**Pn**	**15 30 18.3**	**-1.0**
	baz=305						
PNG				*e*S	**Sb**	**15 30 37.8**	**-1.8**
	baz=305						
TDCB	**Techi**	**1.52**	**8**	*e*P	**Pn**	**15 30 20.5**	**+0.8**
	baz=7.0						
TDCB				*e*S	**Sn**	**15 30 41.8**	**+2.1**
	baz=7.0						
TWT	**Tachien**	**1.53**	**8**	*e*P	**Pg**	**15 30 21.0**	**-0.5**
	baz=18						
TWT				*e*S	**Sn**	**15 30 42.4**	**+2.6**
	baz=18						
FUSS	**Fushou**	**1.53**	**11**	*e*P	**Pn**	**15 30 20.2**	**+0.3**
	baz=21						
FUSS				*e*S	**Sn**	**15 30 41.8**	**+1.8**
	baz=21						
WHP	**Taichung City**	**1.53**	**1**	*e*P	**Pg**	**15 30 21.2**	**-0.5**
	baz=10.0						
WHP				*e*S	**Sg**	**15 30 43.1**	**+1.5**
	baz=10.0						
ETLH	**Xiulin Townshi**	**1.55**	**19**	*e*P	**Pg**	**15 30 21.6**	**-0.4**
	baz=18						
ETLH				*e*S	**Sg**	**15 30 41.6**	**-0.5**
	baz=18						
NACB	**Ninganchiao**	**1.56**	**23**	*e*P	**Pn**	**15 30 20.5**	**+0.6**
	baz=31						
NACB				*e*S	**Sn**	**15 30 40.1**	**-0.2**
	baz=31						
TWQ1	**Liyutan**	**1.61**	**355**	*e*P	**Pg**	**15 30 23.6**	**+0.4**
	baz=355						
TWQ1				*e*S	**Sg**	**15 30 45.9**	**+1.8**
	baz=355						
WDJ	**Dajia District**	**1.63**	**351**	*e*S	**Sg**	**15 30 45.3**	**+0.8**
	baz=351						
NSY	**Sanyi**	**1.68**	**355**	*e*P	**Pg**	**15 30 24.4**	**0.0**
	baz=355						
NSY				*e*S	**Sg**	**15 30 47.5**	**+1.2**
	baz=355						
NNSB	**Datong**	**1.73**	**14**	*e*P	**Pb**	**15 30 24.3**	**0.0**
	baz=24						
NNSB				*e*S	**Sg**	**15 30 48.9**	**+0.9**
	baz=24						
NMLH	**Miaoli**	**1.80**	**356**	*e*P	**Pb**	**15 30 25.1**	**-0.1**
	baz=357						
NMLH				*e*S	**Sg**	**15 30 51.3**	**+1.3**
	baz=357						
ENA	**Nanau**	**1.84**	**24**	*e*P	**Pb**	**15 30 25.4**	**-0.6**
	baz=23						
ENA				*e*S	**Sg**	**15 30 50.4**	**-1.0**
	baz=23						
NSTT	**Nanjuang**	**1.89**	**2**	*e*P	**Pb**	**15 30 26.3**	**-0.5**
	baz=3.0						
NSTT				*e*S	**Sg**	**15 30 51.9**	**-1.0**
	baz=3.0						
NDT	**Datong Townshi**	**1.93**	**16**	*e*P	**Pb**	**15 30 27.7**	**+0.1**
	baz=24						
NDT				*e*S	**Sg**	**15 30 54.2**	**-0.2**
	baz=24						
ENTT	**Nioudou**	**1.98**	**17**	*e*P	**Pb**	**15 30 28.2**	**-0.2**
	baz=28						
ENTT				*e*S	**Sg**	**15 30 54.9**	**-1.1**
	baz=28						
TWC	**Suao**	**2.05**	**24**	*e*P	**Pn**	**15 30 27.9**	**+1.2**
	baz=23						
TWC				*e*S	**Sb**	**15 30 55.0**	**0.0**
	baz=23						
TWE	**Neicheng**	**2.09**	**19**	*e*P	**Pb**	**15 30 29.6**	**-0.6**
	baz=35						
TWE				*e*S	**Sb**	**15 30 56.5**	**+0.3**
	baz=35						
NWLT	**Wulai**	**2.10**	**14**	*e*P	**Pb**	**15 30 31.2**	**+0.8**
	baz=13						
NWLT				*e*S	**Sb**	**15 30 57.3**	**+0.8**
	baz=13						
TWA	**Mucha**	**2.31**	**15**	*e*P	**Pb**	**15 30 34.1**	**0.0**
	baz=22						
TWA				*e*S	**Sb**	**15 31 03.7**	**+1.0**
	baz=22						
TIPB	**Shuangxi**	**2.37**	**20**	*e*P	**Pb**	**15 30 33.6**	**-1.4**
	baz=33						
TIPB				*e*S	**Sn**	**15 31 03.1**	**+2.7**
	baz=33						
JYNG	**Yonagunijimaku**	**2.52**	**47**	P	**Pb**	**15 30 36.9**	**-0.6**
JYNG				S	**Sn**	**15 31 04.6**	**+0.7**
YOJ	**Yonaguni jima**	**2.57**	**48**	*e*P	**Pn**	**15 30 33.9**	**0.0**
	baz=65						
YOJ				*e*S	**Sn**	**15 31 05.0**	**-0.2**
	baz=65						
YOJ	**Yonaguni jima**	**2.57**	**48**	P	**Pn**	**15 30 34.3**	**+0.4**
YOJ				*e*S	**Sn**	**15 31 07.2**	**+2.0**
PTMZ	**Houxiangcun**	**2.83**	**325**	*e*P	**Pn**	**15 30 38.1**	**+0.7**
	baz=326						
PTMZ				*e*S	**Sn**	**15 31 12.4**	**+0.8**
	baz=326						
KNMB	**Chin-men Tao**	**2.90**	**307**	*e*P	**Pn**	**15 30 38.5**	**+0.1**
	baz=308						
KNMB				*e*S	**Sn**	**15 31 13.7**	**+0.5**
	baz=308						
HATJ	**Hateruma jima**	**2.95**	**63**	P	**Pn**	**15 30 38.8**	**-0.3**
HATJ				*e*S	**Sn**	**15 31 12.7**	**-1.9**
IRIF	**Iriomote-Funau**	**3.02**	**58**	P	**Pn**	**15 30 40.0**	**-0.1**
IRIF				*e*S	**Sn**	**15 31 14.1**	**-2.3**
JKRS	**Kuro-shima**	**3.20**	**62**	P	**Pn**	**15 30 42.1**	**-0.4**
JKRS				*e*S	**Sn**	**15 31 17.9**	**-2.8**
JIJ	**Ishigaki jima**	**3.37**	**61**	P	**Pn**	**15 30 44.0**	**-0.8**
JIJ				*e*S	**Sn**	**15 31 22.3**	**-2.6**
JISG	**Ishigakijimahi**	**3.61**	**59**	P	**Pn**	**15 30 47.1**	**-1.1**
JISG				*e*S	**Sn**	**15 31 28.2**	**-2.6**
JTJ	**Tarama**	**3.94**	**61**	*e*S	**Sn**	**15 31 38.3**	**-0.8**

IDC ***01*** *15:32:20.6±1.6, 7°.52S×128°.44E, h145^{km}±20^{km}, mb3.0/1, mb1 3.4/6, mb1mx3.2/40, mbtmp3.8/6, MS2.9/1, Ms1 3.1/1, ms1mx2.6/8, Error ellipse: s-maj=25.0km s-min=14.0km az=121.0*
NEIC ***01*** *15:32:22.0±2.5, 7°.53S±0°.09×128°.44E±0°.08, h167^{km}±9^{km}, mb4.1/8, Error ellipse: s-maj=13.3km s-min=10.8km az=166.0*
DJA ***01*** *15:32:23.2±1.0, 8°S±7°×12°9E±°, h86^{km}±54^{km}, M4.1/6, mb4.1/2, mB4.7/1, MLv4.1/6, Mw(mB)4.0/1*
ISC 01 15:32:19.8±0.7**, 7°.66S**±0°.05×**128°.57E**±0°.06**, h150**^{km}**, n30,**
σ**2^{s}20**/35**, mb3.5**/3**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**2.73**	**97**	Pn	Pn	15 33 09.0	+5.3
SAUI	**Saumlaki**	**2.73**	**97**	P	**Pn**	**15 33 05.0**	**+1.3**
SOEI	**Soe**	**4.73**	**244**		**Pn**	**15 33 32.0**	**+2.2**
SOEI	**Soe**	**4.73**	**244**	P	**Pn**	**15 33 30.0**	**+0.2**
SOEI				S	**Sn**	**15 34 24.1**	**-0.2**
BATI	**Baumata**	**5.47**	**242**	P	**Pn**	**15 33 41.5**	**+2.1**
	24nm,0.3s,baz=80,slow=2.2,SNR=38						
BATI				S	**Sn**	**15 34 40.8**	**-0.9**
	11nm,0.3s,baz=190,slow=23,SNR=7.7						
BATI	**Baumata**	**5.47**	**242**	P	**Pn**	**15 33 41.5**	**+2.1**
	0.2nm879nm54nm,0.5s						
BATI				S	**Sn**	**15 34 40.7**	**-0.9**
	0.2nm879nm54nm,0.5s						
MTN	**Manton Dam**	**5.74**	**154**		**Pn**	**15 33 46.5**	**+3.5**
FAKI	**Fak Fak**	**5.97**	**38**	Pn	**Pn**	**15 33 47.0**	**+0.9**

EDFI	Ende, Flores	6.89	260	P	Pn	15 33 59.2	+0.7
SIJI	Sorong	7.26	22	P	Pn	15 34 04.4	+1.0
	1.2nm,0.3s,baz=210,slow=20,SNR=14						
SIJI				S	Sn	15 35 22.2	-2.5
	0.5nm,0.3s,baz=262,slow=23,SNR=2.2						
FITZ	Fitzroy Crossi	10.76	195	P	Pn	15 34 51.6	+1.7
	0.2nm,0.3s,baz=2.2,slow=9.8,SNR=7.2						
FITZ				S	Sn	15 36 44.7	-4.2
	0.6nm,0.3s,baz=194,slow=21,SNR=2.6						
WB0	Warramunga Arr	13.30	155	Pn	Pn	15 35 24.2	+1.3
WRA	Warramunga Arr	13.43	156	P	Pn	15 35 26.2	+1.6
	0.3nm,0.3s,baz=329,slow=13,SNR=7.1						
WRA				S	Sn	15 37 47.8	-5.6
	1.2nm,0.3s,baz=332,slow=22,SNR=12						
WRA	Warramunga Arr	13.43	156	Pn	Pn	15 35 26.9	+2.4
WB2	Warramunga Arr	13.44	156	Pn	Pn	15 35 26.4	+1.7
WC3	Warramunga Arr	13.46	156	Pn	Pn	15 35 26.6	+1.6
WR0	Warramunga Arr	13.53	155	Pn	Pn	15 35 26.8	+1.0
COEN	Coen	15.65	115		P	15 35 55.3	+2.0
COEN				IAmb	IAmb	15 36 10.7	
	comp=Z,11nm,1.4s						
MBWA	Marble Bar	15.91	212		Pn	15 35 56.1	+0.6
MYLDM	Lahad Datu	16.23	321	Pn	Pn	15 35 56.8	-2.7
MYLDM				IAmb	IAmb	15 36 08.9	
	comp=Z,60nm,1.5s						
AS31	Alice Springs	16.72	163	P	Pn	15 36 08.4	+3.0
ASAR	Alice Springs	16.72	163	P	Pn	15 36 09.4	+4.0
	comp=Z,0.2nm,0.3s,baz=342,slow=11,SNR=18						
ASAR				S	S	15 39 08.2	-3.1
	comp=Z,0.3nm,0.3s,baz=331,slow=23,SNR=6.4						
NWAO	Narrogin (SRO)	27.25	201	P	P	15 37 50.7	+0.7
GSI	Gunungsitoli	32.17	285	P	P	15 38 32.9	-0.7
CMAR	Chiang Mai Arr	39.09	312	LR	LR	15 59 17.0	
	comp=Z,16nm,18.0s,baz=290,slow=42						
MK31	Makanchi Array	68.01	328	P	P	15 43 02.7	-0.1
MK31				IAmb	IAmb	15 43 17.4	
	comp=Z,1.1nm,1.3s						
MKAR	Makanchi Array	68.01	328	P	P	15 43 03.0	+0.2
	comp=Z,0.2nm,0.3s,baz=113,slow=8.1,SNR=8.3						
MAKZ	Makanchi	68.18	327	P	P	15 43 04.0	+0.1
MAKZ				IAmb	IAmb	15 43 22.5	
	comp=Z,4.9nm,1.5s						
RER	Riviere de l'E	71.29	250	P	P	15 43 24.5	+1.0
ZALV	Zalesovo Beam	71.55	334	P	P	15 43 23.6	-0.7

IDC 01 15:34:41.9±7.8**, 7°.16S×126°.79E, h455**^{km}±102^{km}**, mb2.8**/2**, mb1 2.9**/4**, mb1mx2.6**/37**, mbtmp3.8**/4**, Error ellipse: s-maj=167.0km s-min=22.8km az=52.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	4.32	225	P	P	15 36 00.9	+0.7
	6.9nm,0.3s,baz=32,slow=2.6,SNR=4.2						
BATI				S	S	15 37 04.1	+0.1
	4.3nm,0.3s,baz=326,slow=15,SNR=4.3						
ASAR	Alice Springs	17.78	158	P	P	15 38 21.8	-0.5
	0.4nm,0.3s,baz=342,slow=12,SNR=10						
STKA	Stephens Creek	28.20	153	P	P	15 39 56.4	+0.1
	1.9nm,1.0s,baz=322,slow=17,SNR=3.3						
MKAR	Makanchi Array	66.65	328	P	P	15 44 46.2	-0.1
	0.1nm,0.4s,baz=124,slow=7.6,SNR=4.7						

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*IDC **01** 15:36:46.0±3.1, 16°.77S×177°.12W, h0^{km}, mb4.0/5, mb1 4.3/5, mb1mx3.9/35, mbtmp4.0/5, MS3.4/6, Ms1 3.4/6, ms1mx3.2/38, Error ellipse: s-maj=177.0km s-min=25.5km az=148.0*

*NEIC **01** 15:36:50.4±0.6, 17°.2S±0°.1×177°.02W±0°.07, h40^{km}±10^{km}, mb4.7/8, Error ellipse: s-maj=22.0km s-min=5.0km az=204.0*

ISC 01 15:36:49.7±0.8**, 17°.1S**±0°.1×**177°.0W**±0°.1**, h35**^{km}**, n33, σ1^{s}50**/23**, mb4.4**/8**, MS3.5**/7**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.78	262	Pn	Pn	15 37 59.4	+0.1
RAO	Raoul Island	12.10	184	LR	LR	15 43 50.0	
	comp=Z,94nm,18.7s,baz=83,slow=34						
RAO	Raoul Island	12.10	184	Pn	Pn	15 39 39.7	+0.1
DZM	Mont Dzumac	16.37	250	LR	LR	15 45 40.3	
	comp=Z,261nm,20.0s,baz=52,slow=33						
DZM	Mont Dzumac	16.37	250	*e*LR	LR	15 44 09.5	
	comp=Z,429nm,25.6s						
URZ	Urewera	21.68	193	LR	LR	15 48 24.2	
	comp=Z,69nm,19.9s,baz=31,slow=32						
HNR	Honiara	23.70	286	LR	LR	15 49 43.5	
	comp=Z,134nm,18.6s,baz=124,slow=33						
PPT2	Papeete2	26.16	95	*e*LR	LR	15 48 25.0	
	comp=Z,244nm,28.8s						
PPT	Papeete	26.16	95	LR	LR	15 49 40.6	
	comp=Z,90nm,21.6s,baz=171,slow=29						
TBI	Tubuai	26.53	108	*e*LR	LR	15 48 45.0	
	comp=Z,224nm,31.8s						
TAOE	Nuku Hiva Isla	36.77	82	*e*LR	LR	15 53 08.7	
	comp=Z,145nm,30.2s						
STKA	Stephens Creek	40.19	241	LR	LR	15 59 01.8	
	comp=Z,62nm,19.6s,baz=203,slow=33						
WRA	Warramunga Arr	46.11	259	P	P	15 45 12.0	+1.1
	1.0nm,1.0s,baz=94,slow=6.9,SNR=4.2						
WRA	Warramunga Arr	46.11	259	P	P	15 45 10.4	-0.5
AS31	Alice Springs	46.31	253	P	P	15 45 12.5	0.0
ASAR	Alice Springs	46.31	253	P	P	15 45 13.6	+1.1
	4.3nm,0.8s,baz=87,slow=8.2,SNR=36						
ASAR	Alice Springs	46.31	253	P	P	15 45 12.1	-0.3
JAGI	Jajag, Banyuwa	67.42	268	P	P	15 47 42.5	+0.2
NVAR	Mina Array Bea	77.92	43	P	P	15 48 45.5	+1.1
	1.2nm,0.9s,baz=228,slow=8.1,SNR=7.3						
CCB	Clear Creek Bu	84.53	12	P	P	15 49 18.7	+0.1
CCB				IAmb	IAmb	15 49 19.9	
	comp=Z,4.5nm,0.9s						
TCOL	CIGO, UAF Yank	84.72	12	P	P	15 49 20.1	+0.5
TCOL				IAmb	IAmb	15 49 21.1	
	comp=Z,6.2nm,0.8s						
COLA	College	84.72	12	P	P	15 49 19.6	0.0
MDM	Murphy Dome	84.72	12	P	P	15 49 20.0	+0.3
MDM				IAmb	IAmb	15 49 21.2	
	comp=Z,6.5nm,1.1s						
IL31		84.83	12	P	P	15 49 20.5	+0.4
ILAR	Eielson Array	84.83	12	P	P	15 49 20.7	+0.5
	comp=Z,2.9nm,1.0s,baz=221,slow=6.0,SNR=12						
ILAR	Eielson Array	84.83	12	P	P	15 49 20.1	-0.1
YKA	Yellowknife Ar	93.06	24	P	P	15 49 59.1	-0.2
	comp=Z,0.2nm,0.8s,baz=228,slow=3.9,SNR=3.0						
CLL	Collm	144.98	349	*e*(PKPdf)	PKiKP	15 56 25.0	-1.9
DPC	Dobruska-Polom	145.17	345	*e*PKP	PKiKP	15 56 25.2	-2.2
BRTR	Keskin Array B	145.17	317	PKP	PKiKP	15 56 25.2	-2.7
	comp=Z,1.6nm,0.6s,baz=119,slow=1.8,SNR=2.2						
PRU	Pruhonice	145.92	347	*e*PKP	PKiKP	15 56 32.6	+3.7
KHC	Kasperske Hory	146.94	347	*e*PKP	PKiKP	15 56 33.2	+2.1
GERES	GERESS Array B	147.18	347	PKPbc	PKiKP	15 56 29.3	-2.4
	comp=Z,0.4nm,0.7s,baz=12,slow=5.0,SNR=2.5						

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*NEIC **01** 16:00:48.2±1.7, 26°.42N±0°.08×93°.4E±0°.1, h45^{km}±7^{km}, mb4.2/22, Error ellipse: s-maj=14.1km s-min=11.4km az=118.0*

*IDC **01** 16:00:48.7±0.8, 26°.47N×93°.35E, h46^{km}±8^{km}, mb3.6/13, mb1 3.7/13, mb1mx3.5/42, mbtmp3.9/13, MS3.4/1, Ms1 3.4/1, ms1mx2.5/45, Error ellipse: s-maj=34.5km s-min=14.3km az=55.0*

*NDI **01** 16:00:49.3±4.6, 26°.52N×93°.29E, h35^{km}±16^{km}, ML4.2, mb4.2(NEIC)*

ISC 01 16:00:49.2±0.6**, 26°.45N**±0°.04×**93°.24E**±0°.03**, h52**^{km}±5^{km}**, n72, σ1^{s}34**/92**, mb4.1**/19**, 1D, Northeastern India**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TEZP	TEZPUR	0.43	293	⇓*i*P	Pn	16 01 00.9	+1.2
TEZP				*e*S	Sn	16 01 08.7	+1.4
JORH	JORHAT	0.95	72	*i* Pg	Pn	16 01 06.7	+0.3
JORH				*i* Sg	Sn	16 01 19.3	+0.3
KOHI	KOHIMA	1.07	133	*i* x	Pn	16 01 09.0	+0.9
KOHI				*i* x	Sn	16 01 22.9	+0.9
KOHI				IAML		16 01 24.1	
	comp=N,5µm,0.4s						
MOKO	MOKOCHONG	1.15	96	*i* Pg	Pn	16 01 09.8	+0.6
MOKO				*i* Sg	Sn	16 01 23.7	-0.4
MOKO				AMP		16 01 25.7	
	comp=N,229µm,0.3s						
ZIRO	ZIRO	1.20	27	*i* Pg	Pn	16 01 10.7	+0.8
ZIRO				*i* Sg	Sn	16 01 26.0	+0.7
ZIRO				IAML		16 01 26.3	
	comp=E,18µm,0.3s						
ZIRO				IAML		16 01 26.7	
	comp=N,15µm,0.5s						
GUWA	GUWAHATI	1.41	260	*i* Pg	Pn	16 01 13.9	+1.3
GUWA				*e*x	x	16 01 29.0	
GUWA				IAML		16 01 32.7	
	comp=N,1µm,0.1s						
GUWA				IAML		16 01 32.7	
	comp=E,2µm,0.5s						
SHL	Shillong	1.50	234	*i* Pg	Pn	16 01 15.3	+1.3
SHL				*i* x	x	16 01 33.2	
SHL				IAML		16 01 34.2	
	comp=E,2µm,0.1s						
SHL				IAML		16 01 34.7	
	comp=N,3µm,0.3s						
SHL	Shillong	1.50	234		Pn	16 01 15.3	+1.3
LKP	Lekhapani	2.49	69	*e*P	Pn	16 01 27.9	+0.6
LKP				IAML		16 01 57.6	
	comp=N,780nm,0.1s						
AGT	Agartala	3.13	216	*e*S	Sn	16 02 14.3	+2.2
BELO	BELONIA	3.58	207	*e*P	Pn	16 01 43.8	+1.6
BELO				*e*S	Sn	16 02 24.1	+0.9
LSA	Lhasa	3.73	331	P	Pn	16 01 47.6	+2.9
LSA				S	Sn	16 02 24.8	-2.7
LSA				pmax	pmax		
	comp=Z,83nm,0.4s						
LSA				LR	LR		
	comp=N,230nm,5.7s						
LSA				LR	LR		
	comp=E,420nm,8.5s						
LSA				LR	LR		
	comp=Z,550nm,6.4s						
LSA	Lhasa	3.73	331		Pn	16 01 47.6	+2.9
SAIH	SAIHA	3.95	183	*e*P	Pn	16 01 48.4	+0.9
SAIH				*e*S	Sn	16 02 32.2	-0.4
SAIH				IAML		16 02 35.6	
	comp=E,201nm,0.4s						
SAIH				IAML		16 02 36.1	
	comp=N,93nm,0.4s						
GTK	Tadong	4.23	283	*e*x	Sn	16 02 39.1	-0.4
TAPN	Taplejung	5.02	282	*e*Pn	Pn	16 02 03.3	+1.0
TAPN	Taplejung	5.02	282	*e*Pg	Pn	16 02 03.2	+1.0
TAPN				*e*Sg	Sn	16 03 00.3	+1.3
	comp=N,124nm,0.3s						
GUN	Gumba	6.71	284	*e*Pn	Pn	16 02 26.4	+0.9
GUN				*e*Sn	Sn	16 03 40.4	-0.4
GUN	Gumba	6.71	284	*e*Pn	Pn	16 02 26.4	+0.9
GUN				*e*Sg	Sn	16 03 40.3	-0.5
	comp=N,117nm,0.2s						
PKI	Pulchoki	7.07	281	*e*Pn	Pn	16 02 30.8	+0.4
PKI				*e*Sn	Sn	16 03 47.9	-1.7
PKI	Pulchoki	7.07	281	*e*Pn	Pn	16 02 30.9	+0.5
PKI				*e*Sg	Sn	16 03 48.4	-1.2
	comp=N,125nm,0.5s						
PKIN	Phulchoki	7.08	281	*e*Pn	Pn	16 02 30.9	+0.4
PKIN				*e*Sn	Sn	16 03 48.2	-1.6
	comp=N,102nm,0.4s						
PKIN	Phulchoki	7.08	281	*e*Pn	Pn	16 02 30.9	+0.4
PKIN				*e*Sg	Sn	16 03 49.3	-0.5
	comp=N,102nm,0.4s						
BOK	Bokaro	7.17	250	*e*P		16 01 31.5	
BOK				*e*P	Pn	16 02 32.5	+1.0
BOK				*e*S		16 02 40.8	
BOK				*e*S	Sn	16 03 46.8	-4.8
KKN	Kakani	7.21	282	*e*Pn	Pn	16 02 33.3	+1.0
KKN				*e*Sg	Sn	16 03 52.7	-0.3
	comp=N,93nm,0.2s						
DMN	Daman	7.34	281	*e*Pn	Pn	16 02 34.8	+0.7
DMN				*e*Sg	Sn	16 03 56.1	-0.1
	comp=N,103nm,0.4s						
DANN	Dangsing	8.63	285	*e*Pn	Pn	16 02 51.8	0.0
DANN				*e*Sg	Sn	16 04 25.4	-2.5
	comp=N,163nm,0.3s						
BHPL	Bhopal	14.71	261	*e*P	Pn	16 04 11.3	-2.9
BHPL				*e*S	Sn	16 06 42.7	-13
BHPL				IAML		16 06 51.5	
	comp=E,18nm,0.2s						
BHPL				IAML		16 06 51.6	
	comp=N,11nm,0.1s						
ENH	Enshi	14.80	71	Pn	Pn	16 04 12.7	-2.8
SMLA	Simla	14.84	292	*e*P	Pn	16 04 12.8	-3.1
SMLA				*i* x	x	16 04 21.9	
SMLA				*e*S	Sn	16 06 48.4	-11
SMLA				*e*x	x	16 06 48.8	
WMQ	Urumqi	17.91	347	*e*P	P	16 04 56.8	+2.2
WMQ				PP	sP	16 05 14.9	+2.0
WMQ				pmax	pmax		
	comp=Z,8.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,140nm,3.7s						
WMQ				LR	LR		
	comp=N,180nm,29.0s						
WMQ				LR	LR		
	comp=E,780nm,29.1s						
WMQ				LR	LR		
	comp=Z,110nm,25.7s						
NIL	Nilore	18.71	297	P	P	16 05 03.0	-0.5
NIL				IAmb	IAmb	16 05 23.9	
	comp=Z,15nm,0.8s						
MK31	Makanchi Array	22.08	340	P	P	16 05 39.9	+0.1
MK31				IAmb	IAmb	16 05 43.4	
	comp=Z,6.9nm,0.8s						
MKAR	Makanchi Array	22.08	340	P	P	16 05 40.3	+0.5
	comp=Z,6.5nm,0.6s,baz=146,slow=13,SNR=47						
MKAR	Makanchi Array	22.08	340	P	P	16 05 39.2	-0.6
MAKZ	Makanchi	22.19	339	P	P	16 05 41.0	0.0
MAKZ				IAmb	IAmb	16 05 44.4	
	comp=Z,8.3nm,0.7s						
AAK	Ala-Archa	22.26	321	P	P	16 05 44.0	+2.0
	comp=Z,1.3nm,0.5s,baz=139,slow=8.3,SNR=7.0						
AAK	Ala-Archa	22.26	321	P	P	16 05 42.4	+0.4
AAK				IAmb	IAmb	16 05 50.5	
	comp=Z,8.3nm,1.4s						
KBL	Kabul	22.32	297	P	P	16 05 43.4	+0.7
KBL				IAmb	IAmb	16 06 03.3	
	comp=Z,7.1nm,0.7s						
SONM	Songino Array	23.72	22	P	P	16 05 57.7	+1.2
	comp=Z,0.4nm,0.4s,baz=220,slow=8.2,SNR=3.3						
SONM	Songino Array	23.72	22	IAmb	IAmb	16 05 58.4	
	comp=Z,1.6nm,1.5s						
KK31	Karatay Array	24.87	318	P	P	16 06 07.8	+0.9
KKAR	Karatay Array	24.87	318	P	P	16 06 07.5	+0.5
KKAR	Karatay Array	24.87	318	P	P	16 06 07.9	+1.0
KKAR				IAmb	IAmb	16 06 10.0	
	comp=Z,2.1nm,0.8s						
KURBB	Kurchatov Arra	26.64	339	P	P	16 06 23.6	+0.8
	comp=Z,3.3nm,0.6s,baz=158,slow=10.0,SNR=20						
KURK	Kurchatov	26.69	339	P	P	16 06 23.6	+0.3
KURK				IAmb	IAmb	16 06 27.5	
	comp=Z,3.9nm,0.7s						
ZAA0	Zalesovo Array	28.17	349	P	P	16 06 37.2	+0.8
ZALV	Zalesovo Beam	28.17	349	P	P	16 06 35.9	-0.6
	comp=Z,1.6nm,0.4s,baz=172,slow=7.9,SNR=15						
ZALV	Zalesovo Beam	28.17	349	P	P	16 06 37.3	+0.8
ABKAR	Akbulak array	34.34	320	P	P	16 07 31.8	+0.9
ABKAR				IAmb	IAmb	16 07 32.9	
	comp=Z,5.2nm,1.1s						
ABKAR	Akbulak array	34.34	320	P	P	16 07 31.9	+1.0
KLR	Kul'dur	37.40	42	LR	LR	16 26 04.4	
	comp=Z,64nm,20.8s,baz=20,slow=41						
ARU	Arti	38.92	330	P	P	16 08 10.3	+0.5
ARU				IAmb	IAmb	16 08 34.4	
	comp=Z,4.2nm,1.1s						
RAYN	Ar Rayn	43.17	277	P	P	16 08 45.5	+0.3
AKASG	Malin Array Be	53.72	315	P	P	16 10 05.8	-0.1
	comp=Z,0.3nm,0.4s,baz=79,slow=6.7,SNR=2.0						
FIA1	FINESS Array S	56.24	328	P	P	16 10 23.1	-0.7
FINES	FINESS Array B	56.24	328	P	P	16 10 22.9	-1.0
	comp=Z,4.2nm,0.8s,baz=105,slow=11,SNR=4.2						
FINES				pP	pP	16 10 37.0	-1.0
	comp=Z,8.3nm,1.2s,baz=112,slow=11,SNR=1.9						
BURAR	Bucovina Array	56.41	311	P	P	16 10 25.9	+0.4
ARCES	ARCESS Array B	57.71	337	P	P	16 10 34.3	+0.1
WRA	Warramunga Arr	60.97	135	P	P	16 10 57.0	-0.3
	comp=Z,0.5nm,0.9s,baz=325,slow=7.2,SNR=5.4						
WRA				pP	pP	16 11 09.4	-2.4
	comp=Z,1.2nm,0.6s,baz=323,slow=7.4,SNR=7.2						
NOA	NORSAR Array B	63.41	327	P	P	16 11 13.0	-0.3
	comp=Z,0.6nm,0.7s,baz=83,slow=6.5,SNR=2.2						
ASAR	Alice Springs	63.47	138	P	P	16 11 14.4	+0.3
	comp=Z,0.3nm,0.9s,baz=327,slow=6.3,SNR=4.6						
ASAR				pP	pP	16 11 27.4	-1.3
	comp=Z,0.8nm,0.6s,baz=321,slow=6.8,SNR=7.5						
NC204	NORSAR Array S	63.60	328	P	P	16 11 13.8	-0.7
GEC2	GERESS Array S	63.88	314	P	P	16 11 16.6	0.0
GEC2				IAmb	IAmb	16 11 17.5	
	comp=Z,1.9nm,0.8s						
GERES	GERESS Array B	63.88	314	P	P	16 11 17.2	+0.6
	comp=Z,0.8nm,0.5s,baz=69,slow=7.3,SNR=8.6						
EUNU	Eureka	73.71	360	P	P	16 12 17.9	+0.7
UNV	Unalaska Valle	74.80	37	P	P	16 12 22.3	-1.5
ILAR	Eielson Array	77.94	22	P	P	16 12 40.1	-1.3
	comp=Z,0.6nm,1.1s,baz=296,slow=4.2,SNR=5.4						
ILAR	Eielson Array	77.94	22	P	P	16 12 40.9	-0.6
TORD	Torodi Ar. Bea	85.61	282	P	P	16 13 23.6	+0.9
	comp=Z,1.8nm,0.8s,baz=60,slow=4.7,SNR=6.0						
TORD	Torodi Ar. Bea	85.61	282	IAmb	IAmb	16 13 24.3	
	comp=Z,1.8nm,0.8s						
TXAR	Lajitas Array	122.21	17	PKP	PKiKP	16 19 39.1	0.0
	comp=Z,0.1nm,0.5s,baz=11,slow=1.9,SNR=1.8						

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*IDC **01** 16:10:32.4±1.3, 39°.52N×81°.65E, h0^{km}, mb3.4/2, mb1 3.6/4, mb1mx3.2/41, mbtmp3.4/4, ML3.0/3, Error ellipse: s-maj=50.4km s-min=20.0km az=49.0*

*NNC **01** 16:10:36.5±2.1, 37°.00N×70°.91E, h202^{km}±24^{km}, mb2.5, mpv3.3, Error ellipse: s-maj=18.6km s-min=13.9km az=33.0*

ISC 01 16:10:35.8±2.9**, 37°.0N**±0°.2×**70°.9E**±0°.1**, h200**^{km}**, n9, σ0^{s}45**/13**, 5C-5D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	6.15	358	⇑P	Pn	16 12 05.3	+0.3
	1.1nm,0.4s,baz=184,slow=13,SNR=52						
KK31				⇓S	Sn	16 13 15.5	-0.1
	3.6nm,0.3s,baz=181,slow=20,SNR=27						
AAK	Ala-Archa	6.33	25	Pn	Pn	16 12 08.1	+0.7
	0.7nm,0.3s,baz=167,slow=4.8,SNR=13						
AAK				Sn	Sn	16 13 20.1	+0.1
	0.3nm,0.3s,baz=324,slow=22,SNR=15						
AAK	Ala-Archa	6.33	25	⇑P	Pn	16 12 07.4	0.0
	1.0nm,0.5s						
AAK				⇑S	Sn	16 13 20.4	+0.4
	5.7nm,0.8s						
TKM2	Tokmak 2	6.98	30	⇑P	Pn	16 12 15.2	-0.7
	1.8nm,0.7s						
TKM2				⇓S	Sn	16 13 34.9	-0.5
	2.1nm,0.9s						
AB31	Akbulak array	14.64	331	⇓P	P	16 13 54.7	+0.2
	0.7nm,0.5s,baz=142,slow=12,SNR=12						
AB31				⇓S	Sn	16 16 36.7	-0.3
	1.4nm,1.0s						
BVAR	Borovoye Array	16.08	359	Pn	Pn	16 14 11.2	+0.4
	0.1nm,0.3s,baz=108,slow=9.3,SNR=5.4						
AKTO	Aktyubinsk	16.34	330	⇓P	Pn	16 14 13.4	-0.5
	1.7nm,0.5s						
AKTO				⇑S	S	16 17 14.0	0.0
	0.7nm,0.8s						
WRA	Warramunga Arr	82.32	122	P	P	16 22 27.4	-7.9
	0.3nm,0.9s,baz=327,slow=4.8,SNR=5.3						
ASAR	Alice Springs	84.60	125	P	P	16 22 40.8	-6.1
	0.2nm,0.7s,baz=312,slow=4.9,SNR=5.6						

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*NEIC **01** 16:20:36.7±1.0, 14°.34S±0°.09×76°.7W±0°.1, h11^{km}±5^{km}, mb4.6/7, ML4.3(ARE), Error ellipse: s-maj=19.9km s-min=6.2km az=55.0*

*IDC **01** 16:20:36.1±0.9, 14°.23S×76°.55W, h0^{km}, mb3.7/10, mb1 3.9/14, mb1mx3.8/35, mbtmp3.7/14, ML3.4/4, MS3.3/5, Ms1 3.3/5, ms1mx3.0/25, Error ellipse: s-maj=29.5km s-min=13.2km az=73.0*

*ARE **01** 16:20:39±3.4, 14°.24S±0°.08×76°.5W±0°.1, h35^{km}±6^{km}, Error ellipse: s-maj=0.0km s-min=0.0km az=155.0*

ISC 01 16:20:37.0±0.7**, 14°.29S**±0°.07×**76°.6W**±0°.1**, h10**^{km}**, n48, σ1^{s}62**/37**, mb4.0**/12**, MS3.6**/3**, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	Nana	2.30	354	Pn	Pn	16 21 14.6	-0.4
	13nm,0.3s,baz=165,slow=13,SNR=22						
NNA				Lg	Lg	16 21 46.3	
	202nm,0.3s,baz=177,slow=15,SNR=22						
NNA	Nana	2.30	354		Pn	16 21 14.4	-0.7
AP01	Chacalluta	7.25	125	Pn	Pn	16 22 25.3	+2.3
ATAH	Atahualpa	7.33	346	Pn	Pn	16 22 26.0	+1.5
	0.8nm,0.3s,baz=30,slow=6.9,SNR=2.1						
ATAH				Sn	Sn	16 23 43.3	-4.7
	0.9nm,0.3s,baz=228,slow=16,SNR=1.0						
ATAH				Lg	Lg	16 24 10.9	
	2.1nm,0.3s,baz=72,slow=12,SNR=4.2						
PB16	IPOC Station P	7.91	122		Pn	16 22 34.5	+1.9
PSGCX	Pisagua	8.14	131	Pn	Pn	16 22 35.9	+0.5
MNMC	Minye Minye	8.26	127	Pn	Pn	16 22 38.0	+0.8
TA01	Diego Aracena	8.75	136	Pn	Pn	16 22 43.0	-0.6
PB08	IPOC Station P	9.19	130	Pn	Pn	16 22 50.3	+0.2
PB01	IPOC Station P	9.54	136	Pn	Pn	16 22 54.9	+0.3
PB07	IPOC Station P	9.77	140	Pn	Pn	16 22 57.8	-0.1
PB04	IPOC Station P	10.07	144	Pn	Pn	16 23 02.0	0.0
PB09	IPOC Station P	10.23	138	Pn	Pn	16 23 04.3	+0.2
PB10	IPOC Station P	10.81	149	Pn	Pn	16 23 11.2	-0.7
LVC	Limon Verde	11.03	140	Pn	Pn	16 23 14.6	-0.7
	0.3nm,0.3s,baz=271,slow=16,SNR=2.3						
LVC				Sn	Sn	16 25 12.8	-6.1
	0.2nm,0.3s,baz=109,slow=16,SNR=1.5						
LVC				Lg	Lg	16 26 18.0	
	0.2nm,0.3s,baz=87,slow=23,SNR=2.5						
AC01	Pan de Azucar	13.07	155	Pn	Pn	16 23 42.0	-0.8
SAML	Samuel	14.17	69	Pn	Pn	16 23 59.3	+1.3
SIV	San Ignacio	15.09	98	Pn	Pn	16 24 10.5	0.0
	0.1nm,0.3s,baz=256,slow=22,SNR=2.0						
SIV				LR	LR	16 29 19.2	
	comp=Z,39nm,20.9s,baz=244,slow=35						
ROSC	El Rosal	19.14	7	LR	LR	16 33 23.3	
	comp=Z,140nm,21.1s,baz=164,slow=40						
H03N1	Juan Fernandez	19.18	186	T	T	16 44 47.7	
	baz=7.2,slow=74,SNR=246						
H03N2	Juan Fernandez	19.18	186	T	T	16 44 46.9	
	baz=7.2,slow=74,SNR=280						
H03N3	Juan Fernandez	19.20	186	T	T	16 44 45.0	
	baz=7.2,slow=74,SNR=259						
PTGA	Pitinga	21.27	52	P	P	16 25 23.7	0.0
	1.2nm,0.3s,baz=317,slow=22,SNR=1.6						
PTGA				LR	LR	16 34 03.9	
	comp=Z,314nm,18.0s,baz=240,slow=38						
SDV	Santo Domingo	23.77	15	P	P	16 25 50.8	+0.7
	3.1nm,0.4s,baz=307,slow=14,SNR=1.9						
SDV				LR	LR	16 35 06.4	
	comp=Z,21nm,21.9s,baz=237,slow=37						
PLCA	Paso Flores	26.87	170	P	P	16 26 19.1	+1.0
	0.5nm,0.6s,baz=341,slow=12,SNR=1.5						
PLCA	Paso Flores	26.87	170	P	P	16 26 19.3	+1.3
BDFB	Brasilia	27.64	96	LR	LR	16 38 16.2	
	comp=Z,141nm,18.2s,baz=252,slow=38						
EFI	East Falkland	40.16	162	P	P	16 28 14.3	+1.2
EFI				IAmb	IAmb	16 28 24.8	
	comp=Z,62nm,1.4s						
TXAR	Lajitas Array	50.63	329	P	P	16 29 35.9	-0.7
	comp=Z,0.2nm,0.6s,baz=142,slow=9.2,SNR=2.3						
OK025	Westminster Rd	53.35	339	P	P	16 29 55.0	-1.6
PDAR	Pinedale Array	64.34	334	P	P	16 31 14.2	+1.0
	comp=Z,0.1nm,0.4s,baz=119,slow=5.6,SNR=1.6						
NVAR	Mina Array Bea	65.38	325	P	P	16 31 21.6	+1.6
	comp=Z,0.1nm,0.4s,baz=137,slow=7.1,SNR=1.7						
SNAA	Sanae	71.43	161	P	P	16 31 58.1	+0.8
	comp=Z,1.1nm,0.7s,baz=287,slow=22,SNR=6.1						
SNAA	Sanae	71.43	161	IAmb	IAmb	16 32 04.7	
	comp=Z,4.3nm,1.3s						
DBIC	Dimbokro	74.14	79	P	P	16 32 14.6	+0.3
	comp=Z,2.4nm,0.6s,baz=258,slow=7.3,SNR=5.2						
DBIC	Dimbokro	74.14	79	IAmb	IAmb	16 32 35.5	
	comp=Z,8.3nm,1.2s						
YKA	Yellowknife Ar	82.10	343	P	P	16 32 56.8	-0.6
	comp=Z,0.3nm,0.6s,baz=138,slow=5.8,SNR=5.0						
TOA0	Torodi Ar. Sit	82.18	74	P	P	16 32 58.8	-0.1
TOA0				IAmb	IAmb	16 33 02.0	
	comp=Z,3.3nm,0.8s						
TORD	Torodi Ar. Bea	82.18	74	P	P	16 32 59.5	+0.6
	comp=Z,1.9nm,0.7s,baz=261,slow=4.4,SNR=6.2						
TORD	Torodi Ar. Bea	82.18	74	P	P	16 32 59.0	+0.2
H11N3	WAKE ISLAND Hy	119.31	285	T	T	18 49 56.3	
	baz=96,slow=74,SNR=52						
H11N2	WAKE ISLAND Hy	119.33	285	T	T	18 49 56.9	
	baz=96,slow=74,SNR=56						
H11N1	WAKE ISLAND Hy	119.33	285	T	T	18 49 56.5	
	baz=96,slow=74,SNR=18						
H11S2	WAKE ISLAND Hy	119.38	283	T	T	18 49 59.9	
	baz=96,slow=75,SNR=30						
H11S1	WAKE ISLAND Hy	119.39	283	T	T	18 50 01.9	
	baz=96,slow=75,SNR=25						
H11S3	WAKE ISLAND Hy	119.40	283	T	T	18 49 58.6	

	baz=96,slow=75,SNR=24						
MKAR	**Makanchi Array** comp=Z,0.2nm,0.7s,baz=336,slow=3.2,SNR=1.8	**143.09**	**24**	PKP	**PKPdf**	**16 40 11.2**	**-0.2**
SONM	**Songino Array** comp=Z,0.7nm,0.5s,baz=9.6,slow=2.0,SNR=5.5	**146.46**	**356**	PKPbc	**PKPbc**	**16 40 19.4**	**+0.7**

IDC ***01*** *16:21:53.4±1.6, 6°.25S×128°.25E, h320^{km}±21^{km}, mb2.6/1, mb1 3.1/6, mb1mx2.8/41, mbtmp3.8/6, Error ellipse: s-maj=26.8km s-min=17.1km az=106.0*

ISC 01 16:21:52.4±0.9**, 6°.31S**±0°.07×**128°.5E**±0°.1**, h300^{km}, n6, σ2^{s}.16**/11**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong** 0.5nm,0.3s,baz=196,slow=22,SNR=11	**6.07**	**27**	P	**Pn**	**16 23 24.8**	**+2.2**
SIJI	1.1nm,0.3s,baz=229,slow=23,SNR=9.5			S	**S**	**16 24 34.3**	**-1.1**
BATI	**Baumata** 4.0nm,0.3s,baz=120,slow=12,SNR=6.3	**6.15**	**231**	P	**Pn**	**16 23 24.9**	**+1.3**
BATI	6.1nm,0.3s,baz=70,slow=23,SNR=11			S	**S**	**16 24 35.6**	**-1.5**
FITZ	**Fitzroy Crossi** 0.4nm,0.3s,baz=5.4,slow=11,SNR=7.8	**12.04**	**193**	P	**Pn**	**16 24 35.0**	**-0.6**
FITZ	0.1nm,0.3s,baz=278,slow=20,SNR=1.7			S	**S**	**16 26 52.4**	**+2.8**
WRA	**Warramunga Arr** 0.9nm,0.3s,baz=331,slow=12,SNR=38	**14.70**	**158**	P	**Pn**	**16 25 07.5**	**+0.2**
WRA	0.2nm,0.3s,baz=337,slow=16,SNR=3.9			S	**S**	**16 27 44.2**	**-3.0**
ASAR	**Alice Springs** 0.7nm,0.3s,baz=343,slow=11,SNR=114	**18.03**	**164**	P	**P**	**16 25 43.8**	**+1.3**
ASAR	0.1nm,0.3s,baz=344,slow=25,SNR=5.4			S	**S**	**16 28 51.5**	**-2.0**
MKAR	**Makanchi Array** 0.2nm,0.6s,baz=131,slow=7.0,SNR=1.7	**66.83**	**327**	P	**P**	**16 32 10.2**	**-2.2**

IDC ***01*** *16:25:15.6±1.2, 37°.19N×141°.97E, h0^{km}, mb3.4/4, mb1 3.6/8, mb1mx3.4/45, mbtmp3.5/8, ML2.9/4, Error ellipse: s-maj=32.6km s-min=20.2km az=110.0*

JMA ***01*** *16:25:19.1±0.1, 37°.24N×141°.86E, h38^{km}±3^{km}, M3.7*

ISC 01 16:25:17.1±2.0**, 37°.25N**±0°.05×**141°.94E**±0°.06**, h14^{km}**±11^{km}**, n25, σ1^{s}.35**/31**, mb3.5**/4**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**0.85**	**278**	P	**Pg**	**16 25 34.0**	**+0.3**
JFK				S	**Sg**	**16 25 44.1**	**-0.8**
ONAJ	**Iwakimizuishiy**	**0.92**	**261**	P	**Pb**	**16 25 34.9**	**+0.1**
ONAJ				S	**Sb**	**16 25 45.8**	**-1.1**
JMST	**Minamisoumatoc**	**0.96**	**300**	P	**Pb**	**16 25 35.5**	**0.0**
JMST				S	**Sb**	**16 25 46.8**	**-1.2**
JMM	**Marumori**	**1.10**	**305**	P	**Pb**	**16 25 37.6**	**-0.3**
JMM				S	**Sb**	**16 25 50.6**	**-1.4**
JFFD	**Fukushimafurud**	**1.11**	**262**	P	**Pb**	**16 25 37.7**	**-0.3**
JFFD				S	**Sb**	**16 25 50.4**	**-1.9**
JHO	**Hitachi**	**1.27**	**240**	P	**Pn**	**16 25 39.6**	**-0.7**
JHO				S	**Sb**	**16 25 54.8**	**-2.0**
JIO	**Ouri**	**1.29**	**339**	P	**Pn**	**16 25 40.3**	**-0.4**
JFT	**Otama**	**1.30**	**283**	P	**Pn**	**16 25 41.4**	**+0.5**
JFT				S	**Sn**	**16 25 56.8**	**-1.2**
JOU	**Okura**	**1.50**	**318**	P	**Pn**	**16 25 44.0**	**+0.4**
JOU				S	**Sn**	**16 26 02.6**	**-0.5**
JFY	**Yanaizu**	**1.79**	**276**	P	**Pn**	**16 25 48.0**	**+0.5**
JFY				S	**Sn**	**16 26 09.5**	**-0.5**
MJAR	**Matsushiro Arr** 0.3nm,0.3s,baz=77,slow=13,SNR=21	**3.07**	**258**	Pn	**Pn**	**16 26 06.6**	**+1.4**
MJAR	0.7nm,0.3s,baz=81,slow=33,SNR=5.7			Lg	Lg	16 26 44.4	
MAT	**Matsushiro**	**3.07**	**258**	P	**Pn**	**16 26 08.3**	**+3.1**
MAT				S	**Sn**	**16 26 44.2**	**+2.5**
JHJ	**Hachijo jima 2** 10.0nm,0.3s,baz=72,slow=20,SNR=1.2	**4.48**	**204**	Pn	**Pn**	**16 26 25.2**	**+0.6**
JHJ	19nm,0.3s,baz=106,slow=22,SNR=1.3			Sn	**Sn**	**16 27 14.1**	**-2.4**
ASAJ	**Asahikawa** 0.6nm,0.3s,baz=208,slow=12,SNR=7.9	**6.88**	**4**	Pn	**Pn**	**16 26 58.2**	**+0.7**
ASAJ	0.2nm,0.3s,baz=95,slow=9.5,SNR=1.6			Sn	**Sn**	**16 28 13.7**	**-1.9**
USRK	**Ussuriysk Ar.** baz=111,slow=16,SNR=1.7	**10.25**	**316**	Pn	**Pn**	**16 27 44.2**	**+0.5**
SEY	**Seymchan** 0.4nm,0.5s,baz=70,slow=23,SNR=4.8	**26.50**	**11**	P	**P**	**16 30 55.4**	**+1.7**
H11N2	**WAKE ISLAND Hy** baz=315,slow=75,SNR=21	**27.90**	**122**	T	T	17 00 39.0	
H11N1	**WAKE ISLAND Hy** baz=315,slow=75,SNR=20	**27.91**	**122**	T	T	17 00 36.4	
H11N3	**WAKE ISLAND Hy** baz=315,slow=75,SNR=16	**27.92**	**122**	T	T	17 00 38.2	
H11S1	**WAKE ISLAND Hy** baz=316,slow=76,SNR=11	**28.63**	**124**	T	T	17 01 28.7	
H11S3	**WAKE ISLAND Hy** baz=316,slow=76,SNR=10	**28.63**	**124**	T	T	17 01 30.6	
H11S2	**WAKE ISLAND Hy** baz=316,slow=76,SNR=12	**28.64**	**124**	T	T	17 01 33.6	
MKAR	**Makanchi Array** 0.2nm,0.6s,baz=80,slow=8.6,SNR=2.5	**44.36**	**302**	P	**P**	**16 33 27.0**	**+0.1**
ILAR	**Eielson Array** 0.4nm,0.7s,baz=268,slow=6.5,SNR=6.9	**49.09**	**32**	P	**P**	**16 34 04.7**	**+1.1**
WRA	**Warramunga Arr** 0.3nm,0.5s,baz=6.0,slow=7.2,SNR=6.0	**57.33**	**188**	P	**P**	**16 35 04.3**	**-0.3**

JMA 01 16:35:12.2±0.2**, 24°.92N×123°.51E, h25^{km}, M1.4, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	**0.62**	**161**	P	Pb	16 35 24.0	-0.4
IRIF				*e*S	Sb	16 35 32.5	-0.1
YOJ	**Yonaguni jima**	**0.64**	**225**	P	Pb	16 35 24.6	-0.2
YOJ				*e*S	Sb	16 35 32.7	-0.7
JYNG	**Yonagunijimaku**	**0.69**	**228**	P	Pb	16 35 25.3	-0.4
JYNG				*e*S	Sb	16 35 34.1	-0.7
JIJ	**Ishigaki jima**	**0.80**	**134**	P	Pb	16 35 26.8	-0.7
JIJ				S	Sb	16 35 36.8	-1.1
JISG	**Ishigakijimahi**	**0.80**	**114**	P	Pb	16 35 27.2	-0.3
JISG				*e*S	Sb	16 35 37.6	-0.3
JKRS	**Kuro-shima**	**0.82**	**146**	P	Pb	16 35 27.5	-0.3
JKRS				S	Sb	16 35 38.2	-0.2
HATJ	**Hateruma jima**	**0.90**	**163**	P	Pb	16 35 28.9	-0.3
HATJ				*e*S	Sb	16 35 40.5	-0.3

TAP 01 16:35:55.9, 24°.45N×121°.88E, h13^{km}±1^{km}**, ML1.5, 2D, D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENA	**Nanau** baz=260	**0.12**	**262**	⇓*i*P	Pb	16 35 59.9	-0.2
ENA	baz=260			*i* S	Sb	16 36 02.7	-0.2
TWC	**Suao** baz=354	**0.16**	**351**	*i* P	Pb	16 36 00.4	-0.4
TWC	baz=354			*i* S	Sg	16 36 03.1	+0.5
TWE	**Neicheng** baz=327	**0.33**	**325**	*e*P	Pb	16 36 03.6	-0.1
TWE	baz=327			*e*S	Sb	16 36 08.8	-0.1
ENTT	**Nioudou** baz=304	**0.34**	**304**	⇓*i*P	Pb	16 36 04.0	+0.2
ENTT	baz=304			S	Sb	16 36 08.8	-0.4
NDT	**Datong Townshi** baz=295	**0.37**	**295**	P	Pb	16 36 04.6	+0.3
NDT	baz=295			S	Sb	16 36 09.9	+0.1
NACB	**Ninganchiao** baz=223	**0.37**	**224**	P	Pg	16 36 03.1	-0.3
NACB	baz=223			S	Sg	16 36 09.2	+0.7
ETLH	**Xiulin Townshi** baz=236	**0.43**	**237**	*e*P	Pg	16 36 04.6	+0.1
ETLH	baz=236			*e*S	Sb	16 36 11.2	-0.6
NNSB	**Datong** baz=267	**0.45**	**268**	P	Pb	16 36 05.8	+0.1
NNSB	baz=267			*e*S	Sb	16 36 12.4	0.0
NNSH	**Datong** baz=267	**0.45**	**268**	P	Pb	16 36 05.8	0.0
NNSH	baz=267			S	Sb	16 36 12.3	-0.1
NNS	**Nan Shan** baz=268	**0.46**	**269**	*e*P	Pb	16 36 05.8	-0.1
NNS	baz=268			*e*S	Sb	16 36 12.5	-0.1
NWLT	**Wulai** baz=314	**0.47**	**314**	*e*P	Pb	16 36 06.0	-0.1
NWLT	baz=314			*e*S	Sb	16 36 13.5	+0.5
YHNB	**Yeheng** baz=296	**0.51**	**296**	P	Pb	16 36 07.2	+0.5
YHNB	baz=296			*e*S	Sb	16 36 14.6	+0.6
NSK	**Sanguang** baz=296	**0.52**	**296**	*e*P	Pb	16 36 07.6	+0.6
NSK	baz=296			*e*S	Sb	16 36 14.9	+0.4
TIPB	**Shuangxi** baz=355	**0.53**	**355**	*e*P	Pb	16 36 07.4	+0.4
TIPB	baz=355			*e*S	Sb	16 36 14.2	-0.3
FUSS	**Fushou** baz=251	**0.61**	**251**	*e*P	Pb	16 36 08.6	+0.1
FUSS	baz=251			*e*S	Sb	16 36 17.3	+0.1
WHF	**Hehuan Shan** baz=241	**0.63**	**242**	*e*P	Pg	16 36 08.6	+0.2
WHF	baz=241			*e*S	Sb	16 36 18.2	+0.3
CHGB	**Renai** baz=239	**0.75**	**239**	*e*P	Pb	16 36 11.0	+0.1
CHGB	baz=239			*e*S	Sb	16 36 22.1	+1.0

DJA 01 16:49:08.1±0.2**, 0°S**±2°×**12°4E**±°**, h45^{km}**±25^{km}**, M3.8**/12**, mb4.0**/3**, MLv3.7**/12**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**1.06**	**11**	P	Pn	16 49 26.5	0.0
KMSI				S	Sn	16 49 41.0	+0.9
LUWI	**Luwuk**	**1.15**	**240**	P	Pn	16 49 28.1	+0.3
LUWI				S	Sn	16 49 44.2	+1.9
GTOI	**Gorontalo**	**1.33**	**325**	P	Pn	16 49 31.8	+1.5
GTOI				S	Sn	16 49 49.4	+2.5
MRSI	**Marisa**	**2.06**	**297**	P	Pn	16 49 39.0	-1.2
MRSI				S	Sn	16 50 03.7	-1.0
APSI	**Ampana**	**2.17**	**258**	P	Pn	16 49 42.4	+0.7
SANI	**Sanana**	**2.72**	**125**	P	Pn	16 49 48.4	-0.9
SANI				S	Sn	16 50 18.2	-2.7
TNTI	**Ternate**	**3.80**	**71**	P	Pn	16 50 04.1	-0.1
MPSI	**Mapaga**	**3.95**	**282**	P	Pn	16 50 07.7	+1.4
NLAI	**Namlea**	**4.32**	**130**	P	Pn	16 50 11.4	+0.1
TTSI	**Tana Toraja**	**4.71**	**237**	P	Pn	16 50 17.4	+0.8
SPSI	**Sidrap Palu** 0.1nm12nm,0.5s	**5.29**	**229**	P	Pn	16 50 25.6	+0.9
BNSI	**Bone** 0.1nm10nm,1.4s	**5.35**	**223**	P	Pn	16 50 25.3	-0.2

TAP 01 16:50:57.3, 23°.90N×122°.65E, h19^{km}±1^{km}**, ML2.2, D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima** baz=30	**0.65**	**31**	*e*P	Pb	16 51 10.1	+0.1
YOJ	baz=30			*e*S	Sb	16 51 18.4	-0.4
TWD	**Chiawan** baz=265	**0.98**	**281**	*e*P	Pb	16 51 15.4	-0.2
TWD	baz=265			*e*S	Sn	16 51 29.9	+0.5
ENA	**Nanau** baz=303	**0.98**	**303**	*e*P	Pb	16 51 15.2	-0.5
ENA	baz=303			*e*S	Sn	16 51 30.6	+1.0
NACB	**Ninganchiao** baz=271	**1.00**	**286**	*e*P	Pb	16 51 15.8	-0.2
NACB	baz=271			*e*S	Sb	16 51 29.1	+0.3
ETLH	**Xiulin Townshi** baz=272	**1.11**	**286**	P	Pb	16 51 18.1	+0.1
ETLH	baz=272			*e*S	Sb	16 51 31.4	-0.7
ESL	**Shilin** baz=266	**1.11**	**266**	*e*P	Pn	16 51 16.0	-1.9
ESL	baz=266			S	Sb	16 51 30.5	-1.6
HGSD	**Ruisui** baz=250	**1.19**	**250**	*e*P	Pb	16 51 19.5	+0.2
HGSD	baz=250			*e*S	Sb	16 51 31.8	-2.5
TWE	**Neicheng** baz=313	**1.21**	**313**	*e*P	Pn	16 51 19.2	0.0
ENTT	**Nioudou** baz=308	**1.23**	**307**	P	Pn	16 51 19.7	+0.1
ENTT	baz=308			*e*S	Sg	16 51 37.1	-0.1
NDT	**Datong Townshi** baz=305	**1.25**	**304**	P	Pb	16 51 20.3	0.0
NDT	baz=305			*e*S	Sg	16 51 37.3	-0.5
NNSB	**Datong** baz=295	**1.27**	**295**	*e*P	Pn	16 51 20.4	+0.3
NNSB	baz=295			*e*S	Sg	16 51 38.6	+0.1
NNSH	**Datong** baz=281	**1.27**	**295**	P	Pn	16 51 19.9	-0.3
NNSH	baz=281			*e*S	Sg	16 51 38.6	+0.1
EHY	**Hungye** baz=252	**1.27**	**252**	P	Pn	16 51 19.7	-0.5
EHY	baz=252			S	Sb	16 51 35.6	-1.2
NNS	**Nan Shan** baz=295	**1.28**	**295**	*e*P	Pn	16 51 20.4	+0.1
NNS	baz=295			*e*S	Sn	16 51 38.0	+0.8
WHF	**Hehuan Shan** baz=281	**1.29**	**281**	P	Pn	16 51 19.7	-1.0
WHF	baz=281			*e*S	Sn	16 51 38.2	+0.5
TIPB	**Shuangxi** baz=326	**1.31**	**325**	P	Pb	16 51 21.6	+0.3
TIPB	baz=326			S	Sg	16 51 38.8	-0.8
FUSS	**Fushou** baz=286	**1.33**	**286**	*e*P	Pn	16 51 20.8	-0.3
FUSS	baz=286			*e*S	Sb	16 51 38.9	+0.4
EYUL	**Yuli** baz=246	**1.33**	**246**	*e*P	Pn	16 51 21.0	0.0
EYUL	baz=246			*e*S	Sn	16 51 36.7	-1.6
YULB	**Yu-li** baz=248	**1.33**	**248**	P	Pn	16 51 20.1	-0.9
YULB	baz=248			S	Sn	16 51 36.8	-1.5
TWF1	**Yuli** baz=246	**1.35**	**247**	*e*P	Pn	16 51 21.2	0.0
TWF1	baz=246			S	Sn	16 51 38.0	-0.7
CHGB	**Renai** baz=265	**1.36**	**277**	P	Pn	16 51 20.9	-0.5
CHGB	baz=265			*e*S	Sn	16 51 38.5	-0.6
NWLT	**Wulai** baz=311	**1.36**	**310**	*e*P	Pb	16 51 22.0	-0.2
YHNB	**Yeheng** baz=289	**1.39**	**304**	*e*P	Pb	16 51 22.9	+0.1
YHNB	baz=289			*e*S	Sg	16 51 41.8	-0.5
NSK	**Sanguang** baz=289	**1.41**	**304**	P	Pb	16 51 23.2	+0.2
NSK	baz=289			*e*S	Sg	16 51 42.6	-0.3
FULB	**Fuli** baz=227	**1.42**	**241**	*e*S	Sn	16 51 38.5	-1.9
TWA	**Mucha** baz=319	**1.45**	**318**	*e*P	Pb	16 51 24.3	+0.6
TWA	baz=319			*e*S	Sg	16 51 43.3	-0.9

TAP 01 16:51:18.9, 24°.74N×122°.20E, h17^{km}±1^{km}**, ML2.1, D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao** baz=330	**0.33**	**324**	*e*P	Pb	16 51 26.1	-0.2
TWB1	baz=330			*e*S	Sg	16 51 30.9	+0.3
TWC	**Suao** baz=306	**0.34**	**247**	*e*S	Sg	16 51 30.3	-0.7
TWC	**Suao** baz=252	**0.34**	**247**	*e*P	Pg	16 51 25.1	-1.1
TWC	baz=252			*e*S	Sg	16 51 30.4	-0.6
NTC	**Toucheng** baz=290	**0.35**	**289**	*e*P	Pb	16 51 26.9	+0.2
NTC	baz=290			*e*S	Sb	16 51 32.5	+0.5
TIPB	**Shuangxi** baz=299	**0.41**	**304**	*e*S	Sb	16 51 34.7	+1.1
TWE	**Neicheng** baz=269	**0.48**	**268**	P	Pg	16 51 28.4	-0.2
TWE	baz=269			S	Sb	16 51 35.9	+0.2
TWE	**Neicheng** baz=313	**0.48**	**268**	*e*S	Sb	16 51 35.9	+0.2
NWF	**Wu-fen Shan** baz=298	**0.50**	**311**	*e*P	Pb	16 51 29.9	+0.6
WFSB	**Wu-fen Shan** baz=312	**0.50**	**311**	*e*P	Pb	16 51 30.1	+0.8
WFSB	baz=312			*e*S	Sb	16 51 37.1	+0.8
ENA	**Nanau** baz=230	**0.52**	**233**	P	Pg	16 51 29.4	0.0
TNOU	**National Taiwa** baz=327	**0.56**	**317**	*e*S	Sb	16 51 39.2	+1.3
ENTT	**Nioudou** baz=251	**0.58**	**260**	P	Pb	16 51 31.1	+0.4
ENTT	baz=251			*e*S	Sb	16 51 38.5	-0.1
TWA	**Mucha** baz=284	**0.61**	**293**	*e*S	Sn	16 51 42.8	+0.6
NWLT	**Wulai** baz=279	**0.63**	**273**	*e*P	Pg	16 51 31.3	-0.1
NWLT	baz=279			*e*S	Sb	16 51 40.9	+0.8
NWLT	**Wulai** baz=311	**0.63**	**273**	*e*S	Sb	16 51 40.4	+0.3
YM11	**YM11** baz=306	**0.70**	**307**	*e*P	Pg	16 51 33.2	+0.4
YM04	**YM04** baz=305	**0.73**	**304**	*e*S	Sn	16 51 44.3	-0.9
YHNB	**Yeheng** baz=277	**0.75**	**265**	*e*P	Pb	16 51 33.6	0.0
YHNB	baz=277			*e*S	Sb	16 51 43.6	0.0
NSK	**Sanguang** baz=266	**0.77**	**265**	P	Pg	16 51 33.9	0.0
NSK	baz=266			*e*S	Sb	16 51 41.8	-2.2
NNSB	**Datong** baz=247	**0.80**	**247**	*e*P	Pb	16 51 34.4	-0.1
ETLH	**Xiulin Townshi** baz=231	**0.84**	**231**	*e*P	Pb	16 51 34.9	-0.2

MOS ***01*** *16:54:43.8±0.8, 36°.56N×70°.94E, h195^{km}, mb4.6/19, Error ellipse: s-maj=6.4km s-min=3.5km az=80.8*

BJI ***01*** *16:54:44.8±0.0, 36°.78N×70°.99E, h187^{km}, mB4.7/13, mb4.6/26*

IDC ***01*** *16:54:44.3±2.0, 36°.38N×70°.91E, h192^{km}±18^{km}, mb3.9/26, mb1 4.0/32, mb1mx3.8/49, mbtmp4.4/32, Error ellipse: s-maj=11.2km s-min=8.8km az=5.0*

NEIC ***01*** *16:54:45.2±1.8, 36°.55N±0°.06×70°.90E±0°.06, h197^{km}±3^{km}, mb4.5/104, Error ellipse: s-maj=9.7km s-min=6.6km az=207.0*

NNC ***01*** *16:54:46.6±3.0, 36°.79N×70°.90E, h186^{km}±29^{km}, mb3.9, mpv5.0, Error ellipse: s-maj=30.6km s-min=14.9km az=162.0*

ISC 01 16:54:45.1±0.3**, 36°.50N**±0°.03×**70°.94E**±0°.03**, h200^{km}, n351, σ1^{s}.52**/389**, mb4.5**/99**, 24C-18D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.49**	**219**	PN	**Pn**	**16 55 29.7**	**+0.5**
KBL	**Kabul**	**2.49**	**219**	Pn	**Pn**	**16 55 29.7**	**+0.5**
KBL	**Kabul** SNR=536	**2.49**	**219**	P	**Pn**	**16 55 29.8**	**+0.7**
KBL				S	**Sn**	**16 56 02.6**	**-0.9**
CEP	**Cherat**	**2.79**	**163**	⇓P	**Pn**	**16 55 33.7**	**+1.3**
CEP				S	**Sn**	**16 56 09.0**	**-0.3**
NIL	**Nilore**	**3.42**	**146**	PN	**Pn**	**16 55 41.0**	**+1.2**
NIL	**Nilore**	**3.42**	**146**	Pn	**Pn**	**16 55 41.0**	**+1.2**
NIL	**Nilore**	**3.42**	**146**	P	**Pn**	**16 55 41.2**	**+1.4**
THW	**Thamme Wali**	**3.75**	**170**	⇓P	**Pn**	**16 55 45.0**	**+1.1**
KSH	**Kashi**	**4.99**	**51**	P	**Pn**	**16 55 54.7**	**-4.7**
KSH				S	Sn	16 56 44.5	-13
TAS	**Tashkent**	**4.99**	**346**	PN	**Pn**	**16 55 59.1**	**-0.2**
TAS	**Tashkent**	**4.99**	**346**	Pn	**Pn**	**16 55 59.0**	**-0.2**
THN	**Thein Dam**	**5.66**	**134**	*e*P	**Pn**	**16 56 09.0**	**+1.1**
THN				*e*S	**Sn**	**16 57 11.5**	**-1.8**
IUG	**Iuzhnay** baz=353	**5.68**	**353**	*e*P	**Pn**	**16 56 07.2**	**-1.1**
IUG	**Iuzhnay**	**5.68**	**353**	*e*PN	**Pn**	**16 56 07.1**	**-1.1**
AML	**Almayashu** SNR=1253	**6.01**	**20**	P	**Pn**	**16 56 12.1**	**-0.8**
DHRM	**DHARAMSHALA**	**6.13**	**132**	*e*P	**Pn**	**16 56 12.9**	**-1.4**
DHRM				*e*P		16 56 13.3	
DHRM				*e*S	**Sn**	**16 57 20.1**	**-4.7**
DHRM				*e*S		16 57 21.3	
DHRM	comp=E,2μm,0.6s			IAML		16 57 22.7	
UCH	**Uchtor** SNR=167	**6.35**	**25**	P	**Pn**	**16 56 16.7**	**-0.6**
DZA	**Taraz** baz=2.6	**6.39**	**3**	*e*P	**Pn**	**16 56 16.0**	**-1.3**
DZA	**Taraz**	**6.39**	**3**	*e*PN	**Pn**	**16 56 16.0**	**-1.3**
EKS2	**Erkin-Say** SNR=559	**6.53**	**19**	P	**Pn**	**16 56 18.7**	**-0.5**
BRLS	**Borolday** comp=E,59nm,1.0s,baz=351	**6.58**	**353**	*e*P	**Pn**	**16 56 15.1**	**-4.7**
BRLS	**Borolday**	**6.58**	**353**	*e*PN	**Pn**	**16 56 15.0**	**-4.7**
BRLS	comp=Z,59nm,1.0s			pmax	pmax		
KK31	**Karatay Array** comp=Z,40nm,0.4s,baz=185,slow=13,SNR=1934	**6.60**	**357**	⇓P	**Pn**	**16 56 19.2**	**-0.9**
KK31	comp=Z,74nm,0.5s,baz=181,slow=16,SNR=8.6			⇑S	**Sn**	**16 57 28.7**	**-6.7**
KK31	**Karatay Array**	**6.60**	**357**	PN	**Pn**	**16 56 19.1**	**-0.9**
KK31	**Karatay Array**	**6.60**	**357**	Pn	**Pn**	**16 56 19.1**	**-0.9**
KKAR	**Karatay Array**	**6.60**	**357**	PN	**Pn**	**16 56 19.1**	**-1.0**
KKAR	**Karatay Array**	**6.60**	**357**		**Pn**	**16 56 19.1**	**-1.0**
KKAR	**Karatay Array**	**6.60**	**357**	Pn	**Pn**	**16 56 18.7**	**-1.4**
AAK	**Ala-Archa** comp=Z,42nm,0.3s,baz=179,slow=6.3,SNR=531	**6.71**	**23**	P	**Pn**	**16 56 21.4**	**-0.2**
AAK	comp=Z,10nm,0.3s,baz=297,slow=18,SNR=9.6			S	**Sn**	**16 57 33.6**	**-4.7**
AAK	**Ala-Archa** SNR=90	**6.71**	**23**	P	**Pn**	**16 56 21.3**	**-0.3**
AAK	**Ala-Archa** comp=Z,25nm,0.4s	**6.71**	**23**	P	**Pn**	**16 56 24.8**	**+3.2**
AAK	comp=Z,59nm,0.7s			S	**Sn**	**16 57 34.9**	**-3.4**
AAK	**Ala-Archa**	**6.71**	**23**	*i* PN	**Pn**	**16 56 21.1**	**-0.6**
AAK	comp=Z,25nm,0.4s			pmax	pmax		
AAK	**Ala-Archa**	**6.71**	**23**	Pn	**Pn**	**16 56 21.0**	**-0.6**
BHK	**Bhakra**	**6.81**	**137**	*e*P	**Pn**	**16 56 22.0**	**-0.9**
BHK				*e*S	**Sn**	**16 57 38.2**	**-2.3**
KBK	**Karagaybulak** SNR=186	**6.88**	**25**	P	**Pn**	**16 56 23.7**	**-0.1**
ULHL	**Ulahol** SNR=28	**7.05**	**34**	P	**Pn**	**16 56 25.3**	**-0.8**
CHMS	**Chumysh** SNR=139	**7.12**	**23**	P	**Pn**	**16 56 26.0**	**-0.8**
USP	**Ospenovka** SNR=215	**7.29**	**21**	P	**Pn**	**16 56 27.6**	**-1.4**
TKM2	**Tokmak 2** SNR=452	**7.35**	**28**	P	**Pn**	**16 56 29.4**	**-0.6**
TKM2	**Tokmak 2** comp=Z,318nm,0.9s	**7.35**	**28**	⇓P	**Pn**	**16 56 29.3**	**-0.6**
TKM2	comp=Z,38nm,0.8s			⇑S	**Sn**	**16 57 46.5**	**-6.8**
TKM2	**Tokmak 2**	**7.35**	**28**	*i* PN	**Pn**	**16 56 29.3**	**-0.6**

TKM2				pmax	pmax		
	comp=Z,318nm,0.9s						
HRA	Herat	7.41	256		Pn	16 56 29.9	-0.8
SMLA	Simla	7.45	134	eP	Pn	16 56 30.5	-0.7
SMLA				eP		16 56 30.7	
SMLA				eS	Sn	16 57 50.9	-4.6
SMLA				eS		16 57 51.0	
SMLA				IAML		16 57 54.3	
	comp=N,381nm,0.8s						
SMLA				IAML		16 57 55.7	
	comp=E,546nm,0.6s						
SGDS	Sogindy	7.50	21	eP	Pn	16 56 29.4	-2.3
	comp=E,13nm,0.7s,baz=21						
SGDS	Sogindy	7.50	21	ePN	Pn	16 56 29.4	-2.3
SGDS				pmax	pmax		
	comp=Z,13nm,0.7s						
MTBS	Maitube	7.85	31	eP	Pn	16 56 35.0	-1.3
	baz=31						
MTBS				eS	Sn	16 58 03.0	-2.0
	baz=31						
MTBS	Maitube	7.85	31	ePN	Pn	16 56 35.0	-1.3
MTBS				eS	Sn	16 58 03.0	-2.0
TNSS	Tian-Shan	8.00	33	eP	Pn	16 56 36.8	-1.8
	baz=34						
TNSS				eS	Sn	16 58 06.5	-2.4
	baz=34						
TNSS	Tian-Shan	8.00	33	ePN	Pn	16 56 36.8	-1.8
TNSS				eS	Sn	16 58 06.5	-2.4
AAA	Alma-Ata	8.12	33	eP	Pn	16 56 38.5	-1.4
	comp=Z,100nm,1.3s,baz=33						
AAA				eS	Sn	16 58 09.4	-1.9
	baz=33						
AAA	Alma-Ata	8.12	33	ePN	Pn	16 56 38.5	-1.4
AAA				eS	Sn	16 58 09.4	-1.9
AAA				pmax	pmax		
	comp=Z,100nm,1.3s						
MDOK	Medeo	8.14	33	eP	Pn	16 56 39.3	-1.0
	baz=34						
MDOK	Medeo	8.14	33	⇑P	Pn	16 56 39.7	-0.5
	comp=Z,53nm,0.9s						
MDOK				⇓S	Sn	16 58 06.3	-5.7
	comp=Z,20nm,0.7s						
MDOK	Medeo	8.14	33	ePN	Pn	16 56 39.2	-1.0
DDI	Dehra Dun	8.56	134	eP	Pn	16 56 44.9	-0.8
DDI				eP		16 56 45.0	
DDI				eS	Sn	16 58 14.8	-7.1
DDI				eS		16 58 15.0	
DDI				IAML		16 58 21.8	
	comp=N,358nm,0.9s						
CHKK	Chushkaly	8.68	30	eP	Pn	16 56 45.1	-2.0
	baz=31						
CHKK	Chushkaly	8.68	30	ePN	Pn	16 56 45.1	-2.0
SATY	Saty	8.71	39	i P	Pn	16 56 45.7	-2.0
	baz=39						
SATY	Saty	8.71	39	i PN	Pn	16 56 45.6	-2.0
BTLS	Baital	8.85	14	eP	Pn	16 56 47.7	-1.5
	comp=N,5.4nm,0.7s,baz=15						
BTLS	Baital	8.85	14	ePN	Pn	16 56 47.7	-1.5
BTLS				pmax	pmax		
	comp=Z,5.0nm,0.7s						
SHLS	Shalkode	9.33	42	eP	Pn	16 56 57.3	+1.6
	baz=44						
SHLS	Shalkode	9.33	42	eP	Pn	16 56 57.3	+1.6
PDGK	Podgornoye	9.46	41	⇑P	Pn	16 56 56.1	-1.3
	comp=Z,5.9nm,0.8s						
PDGK				⇓S	Sn	16 58 40.2	-3.2
	comp=Z,14nm,0.9s						
PDGK	Podgornoye	9.46	41	i P	Pn	16 56 56.1	-1.3
PDGK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
TDK	Taldyqorghan	10.20	31	eP	Pn	16 57 05.3	-1.5
	comp=Z,12nm,0.9s,baz=32						
TDK	Taldyqorghan	10.20	31	eP	Pn	16 57 05.3	-1.5
TDK				pmax	pmax		
	comp=Z,12nm,0.9s						
GEYT	Alibeck	10.33	282	P	Pn	16 57 07.2	-1.3
	comp=Z,2.7nm,0.3s,baz=116,slow=9.2,SNR=26						
GEYT				S	Sn	16 58 57.2	-6.7
	comp=Z,2.0nm,0.3s,baz=103,slow=12,SNR=3.8						
GEYT	Alibeck	10.33	282		Pn	16 57 06.2	-2.4
GYA0B	ALIBECK ARRAY	10.33	282	⇓P	Pn	16 57 06.9	-1.6
GYA0B				⇓S	Sn	16 59 02.4	-1.4
GYA0B	ALIBECK ARRAY	10.33	282	Pn	Pn	16 57 07.0	-1.5
MAKZ	Makanchi	13.18	35	⇓P	Pn	16 57 42.3	-2.4
	comp=Z,34nm,0.7s						
MAKZ	Makanchi	13.18	35	P	Pn	16 57 43.2	-1.5
MAKZ	Makanchi	13.18	35	Pn	Pn	16 57 43.2	-1.5
BHUJ	Bhuj	13.25	185	eP	Pn	16 57 44.8	-0.9
BHUJ				eP	P	16 57 45.7	-2.9
BHUJ				IAmb	IAmb	16 57 46.9	
	comp=Z,212nm,0.7s						
BHUJ				eS	S	17 00 06.6	-6.9
MK31	Makanchi Array	13.32	36	⇑P	Pn	16 57 45.4	-1.1
	comp=Z,20nm,0.8s,baz=199,slow=11,SNR=140						
MK31	Makanchi Array	13.32	36	i P	Pn	16 57 45.3	-1.1
MK31				pmax	pmax		
	comp=Z,20nm,0.7s						
MK31	Makanchi Array	13.32	36		Pn	16 57 45.0	-1.4
MKAR	Makanchi Array	13.32	36	P	Pn	16 57 46.0	-0.4
	comp=Z,0.7nm,0.3s,baz=215,slow=10,SNR=43						
MKAR	Makanchi Array	13.32	36	Pn	Pn	16 57 45.2	-1.2
DANN	Dangsing	13.53	123	eP	Pn	16 57 48.4	-1.1
BHPL	Bhopal	14.35	155	eP	Pn	16 57 58.4	-1.1
BHPL				eP	P	16 57 58.9	-2.0
BHPL				i x	x	16 58 02.3	
BHPL				eSG	S	17 00 27.4	-12
WMQ	Urumqi	14.74	55	P	Pn	16 58 03.7	-0.3
WMQ	Urumqi	14.74	55	Pn	Pn	16 58 03.7	-0.3
DMN	Daman	14.91	122	eP	Pn	16 58 06.2	-0.3
	comp=Z,59nm,0.6s						
KKN	Kakani	14.92	122	eP	Pn	16 58 06.5	0.0
	comp=Z,46nm,0.5s						
ZSN	Zaisan	15.04	39	eP	Pn	16 58 07.2	-0.5
	baz=39						
ZSN	Zaisan	15.04	39	eP	Pn	16 58 07.1	-0.5
AB07	Akbulak array	15.04	331	Pn	Pn	16 58 06.0	-1.7
AB08	Akbulak array	15.05	331	Pn	Pn	16 58 06.2	-1.6
AB31	Akbulak array	15.06	331	P	Pn	16 58 06.5	-1.3
	comp=Z,16nm,0.6s,baz=143,slow=12,SNR=263						
AB31				⇓S	S	17 00 52.9	-2.0
	comp=Z,11nm,0.6s,baz=131,slow=33,SNR=5.5						
AB31	Akbulak array	15.06	331	⇑eP	Pn	16 58 06.5	-1.3
AB31				pmax	pmax		
	comp=Z,16nm,0.6s						
ABKAR	Akbulak array	15.06	331	Pn	Pn	16 58 05.9	-1.9
AB05	Akbulak array	15.08	331	Pn	Pn	16 58 06.3	-1.7
PKIN	Phulchoki	15.13	122	eP	Pn	16 58 09.3	+0.1
	comp=Z,49nm,0.4s						
KURBB	Kurchatov Arra	15.14	19	P	Pn	16 58 07.0	-1.8
	comp=Z,0.4nm,0.3s,baz=211,slow=10,SNR=19						
KURBB				S	S	17 00 53.5	-3.1
	comp=Z,0.1nm,0.3s,baz=206,slow=17,SNR=4.3						
KURBB	Kurchatov Arra	15.14	19	⇓P	P	16 58 09.6	+0.4
	comp=Z,3.4nm,0.2s						
KURBB	Kurchatov Arra	15.14	19	P	P	16 58 09.6	+0.4
PKI	Pulchoki	15.14	122	eP	Pn	16 58 09.7	+0.3
	comp=Z,70nm,0.6s						
KURK	Kurchatov	15.25	19	⇓P	Pn	16 58 06.7	-3.3
	comp=Z,8.7nm,1.0s						
KURK	Kurchatov	15.25	19	⇓iP	Pn	16 58 07.6	-2.4
KURK				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KURK	Kurchatov	15.25	19	Pn	Pn	16 58 07.2	-2.8
GUN	Gumba	15.26	120	eP	Pn	16 58 10.4	-0.4
	comp=Z,41nm,0.6s						
SEM	Semipalatinsk	15.44	23	eP	Pn	16 58 11.0	-1.6
	baz=23						
SEM	Semipalatinsk	15.44	23	eP	Pn	16 58 11.0	-1.6
SHME	Shamm	16.37	235	P	Pn	16 58 26.7	+2.8
BVAR	Borovoye Array	16.53	359	P	Pn	16 58 25.3	-0.2
	comp=Z,1.9nm,0.3s,baz=164,slow=11,SNR=25						
BRVK	Borovoye	16.56	359	⇑P	Pn	16 58 25.3	-0.6
	comp=Z,18nm,0.9s						
BRVK	Borovoye	16.56	359	ceP	P	16 58 24.9	0.0
BRVK				pmax	pmax		
	comp=Z,20nm,0.9s						
BRVK	Borovoye	16.56	359		P	16 58 24.1	-0.8
BRVK				IAmb	IAmb	16 58 27.2	
	comp=Z,18nm,0.9s						
AKTO	Aktyubinsk	16.76	330	P	Pn	16 58 28.4	+0.1
	comp=Z,3.1nm,0.3s,baz=142,slow=9.5,SNR=54						
AKTO				S	S	17 01 30.9	-0.8
	comp=Z,0.4nm,0.3s,baz=358,slow=13,SNR=3.6						
AKTO	Aktyubinsk	16.76	330	⇓P	Pn	16 58 28.3	+0.1
	comp=Z,43nm,1.0s						

AKTO				⇓S	S	17 01 32.4	+0.7
	comp=Z,11nm,0.6s						
MASF	Masafi	16.83	233	P	Pn	16 58 30.7	+1.4
NGP	Nagpur	16.85	153	eP	P	16 58 28.3	-0.1
NGP				IAmb	IAmb	16 58 33.9	
	comp=Z,11nm,0.6s						
NGP				eS	S	17 01 34.6	+0.5
TAPN	Taplejung	16.89	118	eP	Pn	16 58 31.0	+0.7
	comp=Z,39nm,0.4s						
WSAR	Wadi Sarin	16.97	222	P	P	16 58 29.9	+0.2
	comp=Z,1.2nm,0.3s,baz=69,slow=6.0,SNR=14						
UOSS	Minazif	17.10	232	P	P	16 58 31.4	+0.3
UOSS				IAmb	IAmb	16 58 47.1	
	comp=Z,40nm,1.4s						
UOSS	Minazif	17.10	232	P	Pn	16 58 33.1	+0.5
HATD	Hatta, Dubai	17.23	232	P	Pn	16 58 35.5	+1.4
ASHO	Ashiyiah	17.38	231	P	P	16 58 35.8	+1.6
HOQ	Hoqain	17.44	226	P	P	16 58 36.1	+1.3
DGZ	Jazzator, Alta	17.81	37	c iP	Pn	16 58 39.9	-0.9
DGZ				pmax	pmax		
	comp=Z,23nm,1.2s						
LSA	Lhasa	18.22	106	P	Pn	16 58 46.7	+0.5
LSA				pmax	pmax		
	comp=Z,16nm,0.8s						
LSA	Lhasa	18.22	106		Pn	16 58 46.7	+0.5
LSA				IAmb	IAmb	16 58 48.6	
	comp=Z,16nm,0.8s						
ZAA0	Zalesovo Array	19.93	25	⇑P	P	16 59 00.2	-1.3
	comp=Z,4.3nm,0.7s						
ZAA0	Zalesovo Array	19.93	25	P	P	16 59 00.9	-0.6
ZALV	Zalesovo Beam	19.93	25	P	P	16 59 01.5	+0.1
	comp=Z,21nm,0.6s,baz=220,slow=11,SNR=115						
ZALV	Zalesovo Beam	19.93	25	i P	P	16 59 01.3	-0.2
ZALV				pmax	pmax		
	comp=Z,21nm,0.6s						
ZALV	Zalesovo Beam	19.93	25	P	P	16 59 01.0	-0.5
HYB	Hyderabad	20.17	158	i P	P	16 59 06.0	+1.6
HYB				eS	S	17 02 40.0	+0.3
GNI	Garni	20.85	288	P	P	16 59 11.8	+0.3
	comp=Z,5.5nm,0.9s,baz=75,slow=20,SNR=2.2						
GNI	Garni	20.85	288	i P	P	16 59 11.9	+0.3
GNI				pmax	pmax		
	comp=Z,17nm,1.1s						
GNI	Garni	20.85	288	P	P	16 59 11.3	-0.3
GNI				IAmb	IAmb	16 59 36.5	
	comp=Z,14nm,0.9s						
SHL	Shillong	20.95	115	P	P	16 59 13.0	+0.2
SHL				pmax	pmax		
	comp=Z,26nm,1.0s						
SHL	Shillong	20.95	115	eP	P	16 59 13.1	+0.2
SHL				IAmb	IAmb	16 59 17.3	
	comp=Z,7.0nm,0.6s						
SHL	Shillong	20.95	115	P	P	16 59 13.0	+0.2
SHL				IAmb	IAmb	16 59 16.4	
	comp=Z,26nm,1.0s						
SHL	Shillong	20.95	115	P	P	16 59 15.7	+2.9
	SNR=9.3						
TEZP	TEZPUR	21.03	112	eP	P	16 59 13.5	+0.1
TEZP				IAmb	IAmb	16 59 15.3	
	comp=Z,12nm,0.4s						
SVE	Sverdlovsk	21.48	344	eP	P	16 59 18.9	+1.1
ARU	Arti	21.62	341	P	P	16 59 20.0	+0.8
	comp=Z,1.9nm,0.6s,baz=147,slow=8.1,SNR=9.5						
ARU	Arti	21.62	341	c iP	P	16 59 19.8	+0.6
ARU				*PP	pP	16 59 51.9	-1.8
ARU				S	S	17 03 07.5	+2.7
ARU				pmax	pmax		
	comp=Z,21nm,1.6s						
ARU	Arti	21.62	341	P	P	16 59 18.6	-0.6
ARU				IAmb	IAmb	16 59 41.0	
	comp=Z,9.4nm,0.8s						
KBZ	Khabaz	22.56	297	P	P	16 59 28.4	+0.1
	comp=Z,3.3nm,1.0s,baz=177,slow=17,SNR=3.6						
KIV	Kislovodsk	22.75	298	eP	P	16 59 29.0	-1.1
KIV				pmax	pmax		
	comp=Z,20nm,1.0s						
KIV				MLR	MLR		
	comp=Z,67nm,14.0s						
BELG	Belogornoye	22.86	321	P	P	16 59 31.1	+0.3
	comp=Z,13nm,0.5s,baz=318,slow=2.8,SNR=5.7						
GTA	Gaotai	22.91	74	⇑P	P	16 59 33.7	+2.0
GTA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,97nm,6.4s						
GTA				LR	LR		
	comp=Z,73nm,14.5s						
GTA				LR	LR		
	comp=Z,100nm,14.9s						
GTA				LR	LR		
	comp=Z,70nm,14.5s						
WHFO	Wadi Hawf	23.93	224	P	P	16 59 44.0	+3.0
	SNR=7.9						
ABTO	Aybut	24.64	224	P	P	16 59 51.0	+3.6
	SNR=7.8						
RAYN	Ar Rayn	25.45	247	P	P	16 59 54.7	-0.1
RAYN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
RAYN	Ar Rayn	25.45	247	P	P	16 59 54.7	-0.1
VRH	Novokhopyorsk	25.48	314	eP	P	16 59 54.2	-0.4
VRH				pmax	pmax		
	comp=Z,10.0nm,1.1s						
MOY	Mondy	26.14	45	eP	P	17 00 02.5	+1.8
KIRV	Kirov	26.22	334	P	P	17 00 02.2	+1.0
	comp=Z,6.1nm,0.5s,baz=151,slow=0.7,SNR=4.7						
KIRV	Kirov	26.22	334	ceP	P	17 00 01.7	+0.6
VORD	Divnogorie	26.80	313	eP	P	17 00 06.8	+0.3
VORD				pmax	pmax		
	comp=Z,8.0nm,0.7s						
VSR	Storozhevoye	26.97	313	eP	P	17 00 08.3	+0.4
VSR				pmax	pmax		
	comp=Z,10.0nm,1.2s						
LPSR	Galich'ya Gora	27.62	316	eP	P	17 00 13.3	-0.4
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SONM	Songino Array	28.37	55	P	P	17 00 22.2	+1.5
	comp=Z,4.7nm,0.7s,baz=261,slow=9.3,SNR=42						
SONM	Songino Array	28.37	55	P	P	17 00 21.0	+0.4
ULN	Ulaanbaatar	28.82	55	ceP	P	17 00 25.8	+1.2
ULN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ULN	Ulaanbaatar	28.82	55	P	P	17 00 25.5	+0.9
BRTR	Keskin Array B	29.39	288	P	P	17 00 31.1	+1.4
	comp=Z,1.1nm,0.7s,baz=108,slow=8.6,SNR=1.9						
OBN	Obninsk	29.91	319	⇑eP	P	17 00 36.2	+2.3
OBN				e*PP	pP	17 01 14.6	-0.2
OBN				e		17 01 36.4	
OBN				pmax	pmax		
	comp=Z,9.0nm,0.4s						
CMAR	Chiang Mai Arr	30.50	119	P	P	17 00 39.7	+0.2
	comp=Z,2.5nm,0.9s,baz=298,slow=8.4,SNR=18						
CMAR				PcP	PcP	17 03 33.6	0.0
	comp=Z,1.2nm,1.0s,baz=304,slow=6.0,SNR=4.5						
CMAR	Chiang Mai Arr	30.50	119	ceP	P	17 00 40.9	+1.4
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
CMAR	Chiang Mai Arr	30.50	119	P	P	17 00 40.0	+0.4
XAN	Xi'an	30.98	83	P	P	17 00 45.2	+1.6
XAN				pmax	pmax		
	comp=Z,20nm,0.8s						
KLMR	Klimovskoe	31.46	331	eP	P	17 00 46.8	-0.6
KLMR				e*PP	pP	17 01 29.9	+0.9
KLMR				pmax	pmax		
	comp=Z,16nm,1.2s						
KLMR	Klimovskoe	31.46	331	eP	P	17 00 46.9	-0.5
KLMR				AMP		17 00 48.9	
	comp=Z,16nm,1.2s						
KLMR				epP	pP	17 01 29.9	+0.9
ENH	Enshi	32.62	90	P	P	17 00 58.4	+0.4
ENH				IAmb	IAmb	17 01 01.1	
	comp=Z,18nm,1.1s						
ELL	Elmali	32.75	283	P	P	17 01 00.1	+0.9
ELL				pmax	pmax		
	comp=Z,71nm,0.8s						
ELL	Elmali	32.75	283	P	P	17 01 00.1	+0.9
AKASG	Malin Array Be	32.91	309	P	P	17 01 00.6	+0.4
	comp=Z,6.8nm,0.7s,baz=81,slow=6.8,SNR=17						
AKASG	Malin Array Be	32.91	309	P	P	17 00 59.0	-1.2
AKBB	Malin Array Si	32.91	309	P	P	17 01 00.4	+0.2
AKBB				pmax	pmax		
	comp=Z,5.0nm,0.6s						
AKBB	Malin Array Si	32.91	309	P	P	17 01 00.3	+0.2
TMCR	Tamitsa	34.03	335	eP	P	17 01 11.1	+1.4
TMCR				pmax	pmax		
	comp=Z,13nm,0.9s						

NRIK	Noril'sk	34.13	10	P	P	17 01 12.2	+1.7
	comp=Z,16nm,0.9s,baz=198,slow=6.0,SNR=33						
NRIK	Noril'sk	34.13	10	ceP	P	17 01 11.9	+1.3
NRIK				pmax	pmax		
	comp=Z,19nm,1.0s						
NRIK	Noril'sk	34.13	10	P	P	17 01 11.2	+0.7
NRIK				IAmb	IAmb	17 01 13.1	
	comp=Z,18nm,1.0s						
MLR	Muntele Rosu	34.74	299	P	P	17 01 18.2	+1.9
MLR				pmax	pmax		
	comp=Z,13nm,1.1s						
MLR	Muntele Rosu	34.74	299	P	P	17 01 18.1	+1.9
MLR				IAmb	IAmb	17 01 20.2	
	comp=Z,13nm,1.1s						
BURAR	Bucovina Array	35.24	303	P	P	17 01 21.4	+0.9
BUR08	Bucovina Ar. S	35.26	303	P	P	17 01 21.5	+0.9
WHN	Wuhan	36.44	86	⇓P	P	17 01 32.7	+2.0
WHN				pmax	pmax		
	comp=Z,26nm,0.7s						
LVZ	Lovozero	37.44	338	P	P	17 01 39.3	+0.6
LVZ				pmax	pmax		
	comp=Z,88nm,1.4s						
LVZ	Lovozero	37.44	338	P	P	17 01 39.3	+0.6
FIA1	FINESS Array S	37.46	326	P	P	17 01 39.5	+0.6
FINES	FINESS Array B	37.46	326	P	P	17 01 39.8	+1.0
	comp=Z,5.8nm,0.7s,baz=119,slow=9.3,SNR=24						
FINES	FINESS Array B	37.46	326	P	P	17 01 39.6	+0.7
KEV	Kevo	40.78	338	P	P	17 02 07.2	+0.9
KEV				pmax	pmax		
	comp=Z,43nm,1.3s						
KEV	Kevo	40.78	338	P	P	17 02 07.2	+0.9
ARA0	ARCESS Array S	41.13	338	eP	P	17 02 10.5	+1.4
ARCES	ARCESS Array B	41.13	338	P	P	17 02 10.3	+1.2
	comp=Z,9.7nm,0.6s,baz=116,slow=8.0,SNR=36						
ARCES	ARCESS Array B	41.13	338	P	P	17 02 10.0	+0.9
KTK1	Kautokeino	41.60	336	eP	P	17 02 13.6	+0.7
ZEA	Zeya	42.10	47	eP	P	17 02 19.2	+2.0
ZEA				pmax	pmax		
	comp=E,10.0nm,0.7s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
HAMF	Hammerfest	42.21	339	eP	P	17 02 19.0	+1.2
GERES	GERESS Array B	42.89	305	P	P	17 02 25.1	+1.3
	comp=Z,0.2nm,0.4s,baz=104,slow=8.4,SNR=2.5						
GERES				PcP	PcP	17 04 10.2	-0.5
	comp=Z,0.6nm,0.7s,baz=103,slow=4.7,SNR=4.4						
TRO	Tromso	43.25	336	eP	P	17 02 26.6	+0.5
FAUS	Fauske	43.78	333	eP	P	17 02 31.3	+0.9
MOR8	Moi Rana	43.79	331	eP	P	17 02 30.5	-0.1
YAK	Yakutsk	43.99	35	ceP	P	17 02 31.8	-0.4
YAK				pmax	pmax		
	comp=Z,14nm,0.6s						
YAK	Yakutsk	43.99	35	P	P	17 02 31.9	-0.4
NC405	NORSAR Array S	44.12	323	P	P	17 02 33.9	+0.7
NC602	NORSAR Array S	44.16	323	P	P	17 02 34.0	+0.4
NC602	NORSAR Array S	44.16	323	eP	P	17 02 33.9	+0.3
NORES	NORESS Array B	44.16	323	P	P	17 02 34.2	+0.6
NC303	NORSAR Array S	44.30	323	P	P	17 02 35.3	+0.6
NB201	NORSAR Array S	44.31	323	P	P	17 02 35.1	+0.3
NB2	NORSAR Subarra	44.35	323	P	P	17 02 35.4	+0.2
	comp=Z,9.9nm,0.8s,baz=94,slow=7.9						
NB2	NORSAR Subarra	44.35	323	P	P	17 02 35.4	+0.2
	baz=94,slow=7.9						
NOA	NORSAR Array B	44.35	323	P	P	17 02 35.8	+0.7
	comp=Z,6.6nm,0.7s,baz=96,slow=7.8,SNR=33						
KONS	Konsvik	44.39	331	eP	P	17 02 36.2	+1.0
NSS	Namsos	44.47	328	eP	P	17 02 35.5	-0.5
NBO00	NORSAR Array S	44.56	323	P	P	17 02 37.1	+0.3
NC204	NORSAR Array S	44.59	323	P	P	17 02 37.6	+0.5
NC204				IAmb	IAmb	17 02 50.0	
	comp=Z,17nm,1.1s						
LOF	Lofoten	44.62	333	eP	P	17 02 37.1	0.0
KSAR	Wonju Array Be	44.90	71	P	P	17 02 39.9	+0.2
KSAR	Wonju Array Be	44.90	71	P	P	17 02 39.9	+0.2
KSRS	Korea Array	44.92	71	P	P	17 02 40.7	+0.8
	comp=Z,0.8nm,0.5s,baz=277,slow=6.4,SNR=6.8						
KSRS				PcP	PcP	17 04 17.6	-0.2
	comp=Z,1.4nm,0.7s,baz=290,slow=4.6,SNR=5.6						
KONO	Kongsberg	45.05	321	P	P	17 02 40.9	+0.3
KONO				pmax	pmax		
	comp=Z,37nm,1.5s						
KONO	Kongsberg	45.05	321	P	P	17 02 40.9	+0.3
KONO				IAmb	IAmb	17 02 46.3	
	comp=Z,37nm,1.5s						
KONO	Kongsberg	45.05	321	eP	P	17 02 41.3	+0.7
YULB	Yu-li	45.08	92	P	P	17 02 41.4	+0.1
YULB				IAmb	IAmb	17 02 44.8	
	comp=Z,25nm,1.1s						
KLR	Kul'dur	45.18	54	ceP	P	17 02 42.1	+0.3
KLR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
SKAR	Skarslia	45.75	322	eP	P	17 02 45.3	-0.8
TIXI	Tiksi	45.79	22	P	P	17 02 46.8	+0.6
TIXI				pmax	pmax		
	comp=Z,15nm,0.9s						
TIXI	Tiksi	45.79	22	P	P	17 02 46.8	+0.6
TIXI				IAmb	IAmb	17 02 47.7	
	comp=Z,15nm,0.9s						
USRK	Ussuriysk Ar.	46.21	61	P	P	17 02 50.3	+0.4
	comp=Z,1.4nm,0.7s,baz=243,slow=6.3,SNR=2.9						
SENIN	Lac Senin/Sane	47.55	303	P	P	17 03 01.2	+0.7
KMBO	Kilima Mbogo	48.80	227	P	P	17 03 09.9	-0.6
	comp=Z,2.0nm,0.6s,baz=50,slow=17,SNR=5.3						
MBAR	Mbarara	52.47	234	ceP	P	17 03 39.7	+1.9
MBAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
YSS	Yuzh-Sakhalins	52.86	55	ceP	P	17 03 39.9	-0.2
YSS				pmax	pmax		
	comp=Z,47nm,1.7s						
SEY	Seymchan	54.44	34	⇓iP	P	17 03 51.7	+0.4
DAG	Danmarks Havn	54.72	344	⇑iP	P	17 03 54.0	+1.0
	comp=Z,7.1nm,0.7s						
DAG	Danmarks Havn	54.72	344	⇑iP	P	17 03 54.0	+1.0
DAG	Danmarks Havn	54.72	344	⇑iP	P	17 03 54.1	+1.0
DAG				IAmb	IAmb	17 03 54.8	
	comp=Z,7.1nm,0.7s						
ESDC	Sonseca Array	57.41	298	P	P	17 04 13.1	+0.3
	comp=Z,1.0nm,0.7s,baz=52,slow=7.5,SNR=5.5						
ESDC	Sonseca Array	57.41	298	IAmb	IAmb	17 04 14.3	
	comp=Z,18nm,1.5s						
BILL	Bilibino	58.63	26	⇓iP	P	17 04 21.9	+1.2
BILL				e*PP	PcP	17 05 08.6	+0.1
BILL				e		17 06 29.0	
BILL				eS	S	17 12 34.2	+26
BILL				pmax	pmax		
	comp=Z,8.0nm,1.2s						
BILL	Bilibino	58.63	26	P	P	17 04 21.9	+1.2
SUMG	Summit	61.05	341	i P	P	17 04 38.9	+1.3
	comp=Z,16nm,0.8s						
SUMG	Summit	61.05	341	P	P	17 04 39.1	+1.5
SUMG				pmax	pmax		
	comp=Z,5.0nm,0.9s						
SUMG	Summit	61.05	341	P	P	17 04 39.1	+1.5
SUMG	Summit	61.05	341	i P	P	17 04 38.9	+1.3
SUMG				IAmb	IAmb	17 04 39.9	
	comp=Z,16nm,0.8s						
LSZ	Lusaka	65.42	226	P	P	17 05 07.4	+0.7
LSZ				pmax	pmax		
	comp=Z,3.0nm,0.6s						
LSZ	Lusaka	65.42	226	P	P	17 05 07.4	+0.7
TOA0	Torodi Ar. Sit	65.67	269	P	P	17 05 06.9	-1.4
TORD	Torodi Ar. Bea	65.67	269	P	P	17 05 07.1	-1.2
	comp=Z,2.1nm,0.5s,baz=48,slow=5.6,SNR=15						
TORD	Torodi Ar. Bea	65.67	269	P	P	17 05 07.0	-1.3
MMRI	Maumere	65.80	122	P	P	17 05 08.7	-0.4
A21K	Barrow	67.33	15	P	P	17 05 18.7	+0.9
RES	Resolute Bay	68.70	356	P	P	17 05 27.3	+1.0
RES				pmax	pmax		
	comp=Z,4.0nm,1.3s						
RES	Resolute Bay	68.70	356	P	P	17 05 27.3	+1.0
KOWA	Kowa	69.52	273	P	P	17 05 31.6	-0.8
KOWA				IAmb	IAmb	17 05 33.2	
	comp=Z,5.2nm,0.7s						
ANM	Nome	70.05	22	P	P	17 05 35.9	+1.1
ANM				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ANM	Nome	70.05	22	P	P	17 05 35.9	+1.1
ANM				IAmb	IAmb	17 05 37.2	
	comp=Z,6.2nm,0.8s						
COLD	Coldfoot	71.98	16	P	P	17 05 47.3	+0.9
COLD				IAmb	IAmb	17 05 48.3	
	comp=Z,11nm,1.0s						
IMAR	Indian Mountai	72.19	18	P	P	17 05 47.9	+0.3
AMKA	Amchitka	72.40	39	P	P	17 05 48.6	-0.5

FYU	Fort Yukon	73.58	14	P	P	17 05 57.5	+1.7
FYU				IAmb	IAmb	17 05 58.4	
	comp=Z,15nm,1.2s						
C36M	Paulatuk	73.88	5	P	P	17 05 57.8	+0.4
INK	Inuvik	73.91	9	P	P	17 05 58.5	+0.9
INK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
INK	Inuvik	73.91	9	P	P	17 05 58.5	+0.9
INK				IAmb	IAmb	17 05 59.7	
	comp=Z,8.8nm,0.8s						
I23K	Minto, Yukon-K	73.92	17	P	P	17 05 58.7	+1.0
I23K				IAmb	IAmb	17 05 59.9	
	comp=Z,8.9nm,1.0s						
PSA00	Pilbara Seismi	73.95	133	P	P	17 05 58.5	-0.1
PSA00				IAmb	IAmb	17 06 00.2	
	comp=Z,9.4nm,1.2s						
TTA	Tatalina	74.04	20	P	P	17 05 59.4	+0.8
TTA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
TTA	Tatalina	74.04	20	P	P	17 05 59.4	+0.8
MDM	Murphy Dome	74.33	16	P	P	17 06 00.9	+0.7
MDM				IAmb	IAmb	17 06 02.0	
	comp=Z,8.0nm,0.9s						
POKR	Poker Plat Res	74.37	16	P	P	17 06 01.5	+1.1
PRP	Porcupine Dome	74.44	15	P	P	17 06 02.0	+1.1
TCOL	CIGO, UAF Yank	74.49	16	P	P	17 06 01.6	+0.6
TCOL				IAmb	IAmb	17 06 02.8	
	comp=Z,15nm,0.9s						
COLA	College	74.49	16	P	P	17 06 02.0	+1.0
COLA				pmax	pmax		
	comp=Z,14nm,0.9s						
COLA	College	74.49	16	P	P	17 06 02.0	+1.0
COLA				IAmb	IAmb	17 06 02.8	
	comp=Z,14nm,0.8s						
LBTB	Lobatse	74.65	222	P	P	17 06 03.4	+0.8
LBTB				pmax	pmax		
	comp=Z,3.0nm,0.9s						
LBTB	Lobatse	74.65	222	P	P	17 06 03.4	+0.8
DBIC	Dimbokro	74.65	267	P	P	17 06 01.9	-0.8
	comp=Z,2.4nm,0.8s,baz=90,slow=6.6,SNR=4.0						
DBIC	Dimbokro	74.65	267	P	P	17 06 02.0	-0.8
DBIC				pmax	pmax		
	comp=Z,17nm,1.5s						
DBIC	Dimbokro	74.65	267	P	P	17 06 02.0	-0.8
DBIC				IAmb	IAmb	17 06 16.5	
	comp=Z,17nm,1.5s						
CCB	Clear Creek Bu	74.69	16	P	P	17 06 02.1	-0.1
KIC	Kosan Boka	74.74	267	eP	P	17 06 02.5	-0.8
	comp=Z,4.6nm,0.7s						
WRH	Wood River Hil	74.78	16	P	P	17 06 03.1	+0.4
IL31		74.79	16	P	P	17 06 02.4	-0.3
ILAR	Eielson Array	74.79	16	P	P	17 06 02.8	0.0
	comp=Z,2.3nm,0.8s,baz=320,slow=4.6,SNR=32						
ILAR	Eielson Array	74.79	16	P	P	17 06 02.4	-0.4
TIC	Toumodi	74.80	267	eP	P	17 06 03.4	-0.3
TIC	Toumodi	74.80	267	P	P	17 06 03.4	-0.3
TIC	Toumodi	74.80	267	P	P	17 06 03.4	-0.3
KTH	Kantishna Hill	74.88	18	P	P	17 06 03.7	+0.2
KTH				IAmb	IAmb	17 06 04.8	
	comp=Z,8.2nm,0.9s						
TSUM	Tsumeb	74.88	232	P	P	17 06 04.8	+0.7
FITZ	Fitzroy Crossi	74.93	126	P	P	17 06 04.7	+0.5
MTN	Manton Dam	74.94	119	P	P	17 06 03.9	-0.4
LIC	Lamto	75.05	267	eP	P	17 06 04.0	-1.1
	comp=Z,6.7nm,0.7s						
LIC	Lamto	75.05	267	P	P	17 06 04.0	-1.1
HDA	Harding Lake	75.09	16	P	P	17 06 04.0	-0.5
PPLA	Purkeypile	75.10	19	P	P	17 06 05.1	+0.3
PPLA				IAmb	IAmb	17 06 18.1	
	comp=Z,18nm,1.4s						
TRF	Thorofare Moun	75.12	18	P	P	17 06 05.8	+0.9
TRF				IAmb	IAmb	17 06 24.1	
	comp=Z,17nm,1.5s						
EPYK	Eagle Plains	75.27	11	P	P	17 06 06.0	+0.4
RND	Reindeer	75.51	17	P	P	17 06 06.7	-0.3
RND				pmax	pmax		
	comp=Z,4.0nm,0.6s						
RND	Reindeer	75.51	17	P	P	17 06 06.7	-0.3
RND				IAmb	IAmb	17 06 07.7	
	comp=Z,4.4nm,0.6s						
EGAK	Eagle	75.96	14	P	P	17 06 10.5	+1.1
SKT	Skwentna	76.03	19	P	P	17 06 09.6	-0.4
SKT				IAmb	IAmb	17 06 10.9	
	comp=Z,11nm,1.0s						
RIDG	Independent Ri	76.13	16	P	P	17 06 10.6	0.0
RIDG				IAmb	IAmb	17 06 11.0	
	comp=Z,4.5nm,0.5s						
DHY	Denali Highway	76.14	17	P	P	17 06 10.7	0.0
DHY				IAmb	IAmb	17 06 12.2	
	comp=Z,6.4nm,0.7s						
PAX	Paxson	76.67	16	P	P	17 06 13.9	+0.3
PAX				pmax	pmax		
	comp=Z,7.0nm,0.6s						
PAX	Paxson	76.67	16	P	P	17 06 13.9	+0.3
PAX				IAmb	IAmb	17 06 14.4	
	comp=Z,6.5nm,0.6s						
SUA	Susitna One	76.67	19	P	P	17 06 13.8	+0.1
SUA				IAmb	IAmb	17 06 28.0	
	comp=Z,18nm,1.5s						
DAWY	Dawson	76.93	13	P	P	17 06 15.5	+0.5
PMR	Palmer	76.98	18	P	P	17 06 15.6	+0.4
PMR				pmax	pmax		
	comp=Z,18nm,1.5s						
PMR	Palmer	76.98	18	P	P	17 06 15.6	+0.4
PMR				IAmb	IAmb	17 06 37.5	
	comp=Z,18nm,1.5s						
SML	Sawmill	77.00	18	P	P	17 06 15.1	-0.3
SML				IAmb	IAmb	17 06 16.7	
	comp=Z,15nm,1.0s						
SCM	Sheep Creek Mo	77.22	18	P	P	17 06 16.6	-0.1
SCM				pmax	pmax		
	comp=Z,13nm,1.1s						
SCM	Sheep Creek Mo	77.22	18	P	P	17 06 16.6	-0.1
SCM				IAmb	IAmb	17 06 22.2	
	comp=Z,13nm,1.1s						
M24K	Tolsona, Glenn	77.26	17	P	P	17 06 17.5	+0.6
KNK	Knik Glacier	77.31	18	P	P	17 06 17.7	+0.6
KNK				IAmb	IAmb	17 06 25.4	
	comp=Z,13nm,1.3s						
BCAR	Beaver Creek A	77.38	15	P	P	17 06 18.2	+0.7
BOSA	Boshof	77.72	220	P	P	17 06 20.1	+0.3
	comp=Z,4.5nm,0.8s,baz=45,slow=4.5,SNR=7.5						
BOSA	Boshof	77.72	220	P	P	17 06 20.0	+0.2
BOSA				IAmb	IAmb	17 06 21.2	
	comp=Z,15nm,1.2s						
MORW	Morawa	77.78	141	P	P	17 06 20.3	+0.3
MORW				IAmb	IAmb	17 06 26.9	
	comp=Z,20nm,1.4s						
KLU	Klutina	77.86	17	P	P	17 06 21.1	+0.9
KLU				IAmb	IAmb	17 06 49.4	
	comp=Z,14nm,1.4s						
BRLK	Bradley Lake	78.06	20	P	P	17 06 20.9	-0.3
N25K	Chitina, Valde	78.07	16	P	P	17 06 22.0	+0.6
N25K				IAmb	IAmb	17 06 29.0	
	comp=Z,14nm,1.4s						
SEW	Seward	78.16	19	P	P	17 06 21.9	+0.2
GLB	Gilahina Butte	78.39	16	P	P	17 06 23.7	+0.6
GLB				IAmb	IAmb	17 06 43.3	
	comp=Z,17nm,1.5s						
MCARA	McCarthy VSAT	78.62	16	P	P	17 06 25.4	+1.1
MCARA				IAmb	IAmb	17 06 37.9	
	comp=Z,18nm,1.4s						
VRDI	Verde Repeater	78.66	16	P	P	17 06 25.4	+0.7
VRDI				IAmb	IAmb	17 06 37.2	
	comp=Z,12nm,1.3s						
EYAK	Cordova Ski Ar	78.72	18	P	P	17 06 26.1	+1.3
BALM	Baldy	79.08	16	P	P	17 06 27.8	+0.8
BALM				IAmb	IAmb	17 06 28.7	
	comp=Z,22nm,1.4s						
CRQM	Cirque	79.15	16	P	P	17 06 28.3	+0.9
CRQM				IAmb	IAmb	17 06 38.6	
	comp=Z,16nm,1.3s						
BARN	Barnard Glacie	79.20	15	P	P	17 06 27.9	+0.2
KDAK	Kodiak Island	79.22	22	P	P	17 06 28.0	+0.4
KDAK				pmax	pmax		
	comp=Z,108nm,1.5s						
KDAK	Kodiak Island	79.22	22	P	P	17 06 28.0	+0.4
TGL	Tana Glacier	79.22	16	P	P	17 06 29.0	+1.3
CTGM	Chitina Glacie	79.36	15	P	P	17 06 29.8	+1.3
OHAK	Old Harbor	79.46	23	P	P	17 06 29.6	+0.7
ISLE	Juniper Island	79.47	16	P	P	17 06 29.9	+0.8
ISLE				IAmb	IAmb	17 06 37.7	
	comp=Z,16nm,1.2s						
YKA	Yellowknife Ar	81.25	3	P	P	17 06 39.1	+0.9
	comp=Z,4.6nm,0.5s,baz=359,slow=5.2,SNR=96						
WB0	Warramunga Arr	81.95	122	P	P	17 06 41.9	-0.7
WRA	Warramunga Arr	82.03	122	P	P	17 06 42.5	-0.6
	comp=Z,7.8nm,0.7s,baz=324,slow=5.0,SNR=93						
WRA	Warramunga Arr	82.03	122	P	P	17 06 42.3	-0.7
WRAB	Tennant Creek	82.03	122	i P	P	17 06 42.4	-0.6
WRAB				pmax	pmax		
	comp=Z,17nm,1.4s						
WRAB	Tennant Creek	82.03	122	P	P	17 06 42.6	-0.5
WRAB				IAmb	IAmb	17 06 43.4	
	comp=Z,11nm,0.9s						
WB2	Warramunga Arr	82.04	122	P	P	17 06 42.3	-0.7
WB2				IAmb	IAmb	17 06 43.4	
	comp=Z,14nm,0.9s						
WR0	Warramunga Arr	82.18	122	P	P	17 06 43.1	-0.7
WR0				IAmb	IAmb	17 06 43.9	
	comp=Z,10nm,0.9s						
AS31	Alice Springs	84.29	125	P	P	17 06 53.9	-0.7
ASAR	Alice Springs	84.29	125	P	P	17 06 54.0	-0.6
	comp=Z,7.4nm,0.6s,baz=313,slow=4.8,SNR=182						
ASAR	Alice Springs	84.29	125	P	P	17 06 54.0	-0.6
NEW	Newport	95.30	5	P	P	17 07 47.5	+1.3
	comp=Z,1.3nm,0.7s,baz=52,slow=9.4,SNR=3.7						
PLCA	Paso Flores	149.78	250	PKPbc	PKPbc	17 14 10.8	-0.4
	comp=Z,3.9nm,0.8s,baz=44,slow=5.5,SNR=9.8						
PLCA	Paso Flores	149.78	250		PKPbc	17 14 11.6	+0.4

*AEIC **01** 17:40:29±2.5, 56°.50N±0°.05×169°.16W±0°.04, h6^{km}±3^{km}, Error ellipse: s-maj=7.9km s-min=1.8km az=198.0*

*IDC **01** 17:40:30.6±0.4, 56°.65N×169°.08W, h0^{km}, mb4.9/37, mb1 5.0/41, mb1mx4.9/60, mbtmp4.9/41, ML4.4/3, MS4.5/43, Ms1 4.5/43, ms1mx4.4/67, Error ellipse: s-maj=13.6km s-min=8.4km az=176.0*

*MOS **01** 17:40:31.4±1.0, 56°.68N×169°.06W, h16^{km}, mb5.3/83, MS4.7/17, Error ellipse: s-maj=7.7km s-min=4.0km az=94.9*

*NEIC **01** 17:40:31.7±2.4, 56°.66N±0°.05×169°.14W±0°.09, h10^{km}±1^{km}, mb5.4/118, Mwb5.3/35, ML5.0(AEIC), Mwc5.4(GCMT), Error ellipse: s-maj=9.8km s-min=7.0km az=217.0*

*BJI **01** 17:40:33.9±0.0, 57°.14N×169°.88W, h8^{km}, mB5.2/62, mb5.0/68, Ms5.3/69, Ms7 4.9/67*

*GCMT **01** 17:40:34.7±0.1, 56°.83N±0°.01×169°.14W±0°.02, h12^{km}, MW5.3/160, Moment Tensor Solution. s118,c194; s160,c291; Duration: 1^{s}1 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-1.21±.01; M$_{\theta\theta}$1.31±.01; M$_{\phi\phi}$-0.09±.01; M$_{r\theta}$0.26±.04; M$_{\theta\phi}$-0.18±.01; M$_{\phi r}$-0.02±.04; Best double couple: M$_0$1.29800×10^{17} NP1:ϕ_s98.00000°, δ39.00000°, λ-89.00000°. NP2:ϕ_s277.00000°, δ51.00000°, λ-91.00000°. Principal axes: T 1.3590, Plg6.0000°, Azm7.0000°; N -0.1190, Plg1.0000°, Azm277.0000°; P -1.2370, Plg84.0000°, Azm181.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **01** 17:40:34.3, 56°.68N×169°.14W, h4^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$-1.07; M$_{\theta\theta}$1.02; M$_{\phi\phi}$0.04; M$_{r\theta}$0.34; M$_{\theta\phi}$-0.14; M$_{\phi r}$-0.46; Fault plane solution: M$_0$1.20000×10^{17} NP1:ϕ_s296.22000°, δ58.11000°, λ-70.71000°. NP2:ϕ_s82.69000°, δ36.73000°, λ-117.97000°. Principal axes: T 1.1218, Plg11.0000°, Azm12.0000°; N 0.1445, Plg16.0000°, Azm106.0000°; P -1.2663, Plg70.0000°, Azm250.0000°;*

*NEIC **01** 17:40:35, 56°.81N×169°.10W, h12^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$-1.28; M$_{\theta\theta}$1.37; M$_{\phi\phi}$-0.09; M$_{r\theta}$0.02; M$_{\theta\phi}$-0.23; M$_{\phi r}$-0.07; Fault plane solution: M$_0$1.35000×10^{17} NP1:ϕ_s95.00000°, δ44.00000°, λ-95.00000°. NP2:ϕ_s282.00000°, δ46.00000°, λ-85.00000°. Principal axes: T 1.4043, Plg1.0000°, Azm9.0000°; N -0.1201, Plg3.0000°, Azm99.0000°; P -1.2841, Plg87.0000°, Azm267.0000°;*

*BGR **01** 17:40:38.5±0.0, 57°.60N×171°.29W, h10^{km}, mb5.4*

ISC 01 17:40:31.7±0.5, **56°.62N**±0°.04×**169°.06W**±0°.03, **h7**^{km}±2^{km}, **n979**, σ1^{s}**21**/1036, **mb5.2**/250, **MS4.8**/78, **40C-46D, Pribilof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPIA	Saint Paul Isl	0.86	311	Pg	Pg	17 40 46.5	-1.6
MTBL	Makushin Table	2.98	152		Pn	17 41 18.1	-1.3
AKGG	Akutan Green G	2.99	143		Pn	17 41 18.2	-1.3
MSW	Makushin Switc	3.00	153		Pn	17 41 18.6	-1.1
AKRB	Akutan Reef Bi	3.02	144		Pn	17 41 19.2	-0.7
MNAT	Makushin Natee	3.06	153		Pn	17 41 19.4	-1.0
MAPS	Pakushin South	3.06	156		Pn	17 41 19.4	-1.1
AKMO	Akutan Morgan	3.07	144		Pn	17 41 20.1	-0.4
AKBBA	Akutan Broad B	3.09	143		Pn	17 41 20.2	-0.6
MGOD	Makushin Gods	3.09	155		Pn	17 41 20.0	-0.9
AKUT	Akutan	3.12	142	Pn	Pn	17 41 21.0	-0.1
AKUT	Akutan	3.12	142		Sn	17 41 59.5	+0.9
UNV	Unalaska Valle	3.14	151	Pn	Pn	17 41 21.1	-0.4
UNV	Unalaska Valle	3.14	151		Sn	17 41 58.5	-0.7
AKSA	Akutan Strait	3.14	141		Pn	17 41 21.0	-0.5
OKFG	Magazine Ridge	3.28	168		Pn	17 41 22.0	-1.5
FALS	False Pass	3.65	117		Pn	17 41 29.8	+1.4
NIKH	Nikolski High	3.65	178		Pn	17 41 28.5	0.0
NIKH	Nikolski High	3.65	178		Sn	17 42 11.4	-0.5
SDPT	Sand Point	4.99	101	Pn	Pn	17 41 46.0	-0.9
ATKA	Atka Island	5.34	216	Pn	Pn	17 41 52.1	+0.4
CHGN	Chignik	5.91	89		Pn	17 41 58.8	-0.8
ADK	Adak	6.51	226	P	Pn	17 42 08.7	+0.9
ADK				pmax	pmax		
	comp=Z,303nm,0.8s						
ADK	Adak	6.51	226	Pn	Pn	17 42 06.3	-1.5
GAMB	Gambell	7.30	351		Pn	17 42 17.0	-1.6
KABU	Katmai Buttres	7.62	72		Pn	17 42 23.2	+0.1
ANM	Nome	8.18	11	P	Pn	17 42 30.0	-0.6
ANM	Nome	8.18	11		Pn	17 42 30.0	-0.6
AMKA	Amchitka	8.63	237	Pn	Pn	17 42 38.4	+1.6
OHAK	Old Harbor	8.65	79	Pn	Pn	17 42 38.3	+1.2
AUL	Augustine Lava	8.75	65		Pn	17 42 39.1	+0.7
KDAK	Kodiak Island	9.02	76	Pn	Pn	17 42 43.3	+1.1
	comp=Z,2.5nm,0.3s,baz=289,slow=5.1,SNR=26						
KDAK				Lg	Lg	17 45 21.9	
	comp=Z,3.0nm,0.3s,baz=67,slow=7.8,SNR=1.5						
KDAK				LR	LR	17 45 57.1	
	comp=Z,3μm,21.8s,baz=275,slow=36						
KDAK	Kodiak Island	9.02	76	i P	Pn	17 42 42.6	+0.4
KDAK	Kodiak Island	9.02	76	Pn	Pn	17 42 44.7	+2.6
IVE	Iliamna Volcan	9.10	61		Pn	17 42 43.6	+0.3
RED	Redoubt Volcan	9.33	59		Pn	17 42 48.9	+2.4
RSO	Redoubt South	9.35	59		Pn	17 42 48.6	+1.7
HOM	Homer	9.70	64	P	Pn	17 42 53.7	+2.2
	baz=260						
SPBG	Spurr Blockage	9.79	55		Pn	17 42 56.0	+3.2
SPCR	Spurr Chakacha	9.84	55		Pn	17 42 56.0	+2.5
CNPM	China Poot	9.88	65	Pn	Pn	17 42 55.8	+1.8
SPCG	Spurr Capps Gl	9.96	55		Pn	17 42 57.8	+2.7
BRLK	Bradley Lake	10.09	64	Pn	Pn	17 42 57.0	+0.1
CAPN	Captain Cook N	10.20	59	P	Pn	17 43 03.9	+5.7
	baz=254,SNR=9.7						
SKT	Skwentna	10.43	52		Pn	17 43 01.8	+0.3
PPLA	Purkeypile	10.56	46		Pn	17 43 04.2	+0.8
SUA	Susitna One	10.60	55		Pn	17 43 04.8	+1.0
O22K	Cooper Landing	10.81	61	P	Pn	17 43 09.6	+3.0
	baz=258						
RC01	Rabbit Creek A	10.95	58	P	Pn	17 43 13.4	+4.9
	baz=255,SNR=12						
CUT	Chulitna	11.14	51	P	Pn	17 43 14.3	+3.1
	baz=248,SNR=13						
PMR	Palmer	11.37	56	P	Pn	17 43 16.4	+2.1
PMR	Palmer	11.37	56		Pn	17 43 16.4	+2.1
KTH	Kantishna Hill	11.38	45		Pn	17 43 15.2	+0.6
TRF	Thorofare Moun	11.58	46		Pn	17 43 19.4	+2.0
SML	Sawmill	11.80	55	P	Pn	17 43 21.5	+1.3
SML	Sawmill	11.80	55		Pn	17 43 21.5	+1.3
IMAR	Indian Mountai	11.89	32		Pn	17 43 21.8	+0.3
RND	Reindeer	12.14	48	P	Pn	17 43 24.5	-0.4
RND	Reindeer	12.14	48		Pn	17 43 24.5	-0.4
MLY	Manley	12.24	39	P	Pn	17 43 26.4	+0.1
	baz=235,SNR=11						
BWN	Browne	12.25	44		Pn	17 43 29.6	+3.2
MCK	McKinley	12.25	46	P	Pn	17 43 27.9	+1.6
	baz=244,SNR=78						
SCM	Sheep Creek Mo	12.26	56	P	Pn	17 43 27.8	+1.2
SCM	Sheep Creek Mo	12.26	56		Pn	17 43 27.8	+1.2
FID	Port Fidalgo	12.43	61		Pn	17 43 28.5	-0.3
NEA2	Nenana	12.61	43	P	Pn	17 43 33.9	+2.6
	baz=240,SNR=8.8						
DHY	Denali Highway	12.63	50		Pn	17 43 33.7	+2.0
EYAK	Cordova Ski Ar	12.75	62	Pn	Pn	17 43 35.0	+1.8
I23K	Minto, Yukon-K	12.79	40	P	Pn	17 43 34.3	+0.6
	baz=238,SNR=15						
I23K	Minto, Yukon-K	12.79	40		Pn	17 43 33.7	0.0
KLU	Klutina	12.83	58		Pn	17 43 34.9	+0.6
M24K	Tolsona, Glenn	12.86	55	P	Pn	17 43 36.2	+1.5
	baz=255,SNR=12						
M24K	Tolsona, Glenn	12.86	55		Pn	17 43 37.0	+2.3
WRH	Wood River Hil	12.92	44		Pn	17 43 37.6	+2.2
MDM	Murphy Dome	13.10	42		Pn	17 43 39.8	+1.8
CCB	Clear Creek Bu	13.11	43		Pn	17 43 39.6	+1.6
TCOL	CIGO, UAF Yank	13.20	43	P	Pn	17 43 40.6	+1.4
	baz=241,SNR=14						
COLA	College	13.20	43	⇓eP	Pn	17 43 40.9	+1.6
RAGM	Ragged Mountai	13.26	63		Pn	17 43 41.8	+1.6
HDA	Harding Lake	13.34	45	P	Pn	17 43 42.2	+1.1
	baz=245						
HDA	Harding Lake	13.34	45		Pn	17 43 42.6	+1.4
KAIM	Kayak Island	13.35	65		Pn	17 43 43.4	+2.0
HMT	Hamilton	13.46	64		Pn	17 43 44.3	+1.4
POKR	Poker Plat Res	13.48	42	P	Pn	17 43 44.2	+1.2
	baz=241,SNR=54						
POKR	Poker Plat Res	13.48	42		Pn	17 43 43.5	+0.5
N25K	Chitina, Valde	13.48	58	P	Pn	17 43 43.4	+0.2
	baz=260,SNR=29						
N25K	Chitina, Valde	13.48	58		Pn	17 43 43.9	+0.7
IL31		13.52	44	Pn	Pn	17 43 44.8	+1.2
ILAR	Eielson Array	13.52	44	Pn	Pn	17 43 41.7	-1.9
	comp=Z,0.0nm,0.3s,baz=239,slow=12,SNR=1.7						
ILAR				Lg	Lg	17 47 43.1	
	baz=345,slow=28,SNR=2.5						
COLD	Coldfoot	13.78	32	P	Pn	17 43 47.3	+0.1
	baz=229,SNR=27						
COLD	Coldfoot	13.78	32	Pn	Pn	17 43 49.2	+2.0
GLB	Gilahina Butte	13.82	59		Pn	17 43 47.9	0.0
RIDG	Independent Ri	13.93	49		Pn	17 43 50.6	+1.3
VRDI	Verde Repeater	13.96	60		Pn	17 43 51.9	+2.1
CRQM	Cirque	14.05	62		Pn	17 43 51.0	-0.1
TGL	Tana Glacier	14.21	62		Pn	17 43 54.3	+1.2
SCRK	Sand Creek	14.37	49	P	Pn	17 43 54.7	-0.7
	baz=251,SNR=37						
PRP	Porcupine Dome	14.37	42	Pn	Pn	17 43 54.2	-1.2
ISLE	Juniper Island	14.43	63		Pn	17 43 55.4	-0.9
BALM	Baldy	14.47	61		Pn	17 43 56.3	-0.4
YAH	Yahtse	14.71	64		Pn	17 44 00.7	+0.6
BARN	Barnard Glacie	14.80	61		Pn	17 44 02.4	+1.1
CTGM	Chitina Glacie	14.95	62		Pn	17 44 03.2	-0.1
BCAR	Beaver Creek A	15.06	53		Pn	17 44 03.9	-0.9
PCA	Pinnacle	15.45	65		Pn	17 44 08.2	-1.6
PCA				IAmb	IAmb	17 44 23.4	
	comp=Z,135nm,0.8s						
BMAR	Burnt Mountain	15.65	36		Pn	17 44 11.5	-0.9
A21K	Barrow	15.68	15	P	Pn	17 44 13.3	+0.6
	baz=206						
BILL	Bilibino	16.04	325	deP	P	17 44 20.4	-0.5
BILL				i S	Sn	17 47 20.2	+5.0
BILL				pmax	pmax		
	comp=Z,72nm,1.3s						
BILL				MLR	MLR		
	comp=Z,2μm,15.0s						
DAWY	Dawson	16.34	51		Pn	17 44 21.4	+0.1
DAWY				IAmb	IAmb	17 44 32.1	
	comp=Z,472nm,1.5s						
HYT	Haines Junctio	16.82	62		Pn	17 44 26.6	-0.9
EPYK	Eagle Plains	18.04	44	P	P	17 44 42.7	-0.3
	baz=253						
EPYK	Eagle Plains	18.04	44	P	Pn	17 44 42.3	-0.2
WHY	Whitehorse	18.11	63	P	P	17 44 44.5	+0.6
SIT	Sitka	18.36	74	P	P	17 44 46.8	+0.3
SIT				pmax	pmax		
	comp=Z,408nm,1.1s						
SIT	Sitka	18.36	74		P	17 44 46.8	+0.3
SIT				IAmb	IAmb	17 44 55.7	
	comp=Z,408nm,1.1s						
PET	Petropavlovsk	18.84	273	eP	Pn	17 44 53.5	+1.1
PET				eS	Sn	17 48 20.5	-2.7
PET				pmax	pmax		
	comp=Z,122nm,1.3s						
PET				pmax	pmax		
	comp=Z,2μm,8.4s						
PET				pmax	pmax		
	comp=Z,2μm,12.1s						
PET				MLR	MLR		
	comp=Z,2μm,18.0s						
PEA0B	Petropavlovsk-	19.34	274	ceP	Pn	17 44 58.8	+0.4
PEA0B	Petropavlovsk-	19.34	274		P	17 44 55.7	-1.6
PEA0B				IAmb	IAmb	17 45 01.0	
	comp=Z,377nm,1.6s						
PETK	Petropavlovsk-	19.34	274	P	Pn	17 44 58.0	-0.4
	comp=Z,2.8nm,0.3s,baz=81,slow=9.5,SNR=67						
PETK				LR	LR	17 51 57.9	
	comp=Z,696nm,20.2s,baz=82,slow=36						
PETK	Petropavlovsk-	19.34	274	P	Pn	17 44 58.0	-0.4
INK	Inuvik	19.81	40	P	P	17 45 02.0	-0.3
	comp=Z,2.4nm,0.3s,baz=242,slow=8.7,SNR=94						
INK				PcP	PcP	17 49 19.6	0.0
	comp=Z,0.4nm,0.3s,baz=245,slow=2.8,SNR=2.7						
INK				LR	LR	17 53 34.0	
	comp=Z,3μm,18.3s,baz=244,slow=40						
INK	Inuvik	19.81	40	P	P	17 45 02.1	-0.3
INK				pmax	pmax		
	comp=Z,151nm,0.9s						
INK	Inuvik	19.81	40	P	P	17 45 02.1	-0.3
INK				IAmb	IAmb	17 45 09.8	
	comp=Z,151nm,0.9s						
WRAK	Wrangell Islan	20.11	75	P	P	17 45 05.4	-0.3
WRAK				IAmb	IAmb	17 45 14.8	
	comp=Z,183nm,1.0s						
SEY	Seymchan	20.16	304	P	P	17 45 06.5	+0.3
	comp=Z,62nm,0.9s,baz=95,slow=8.9,SNR=179						
SEY				PcP	PcP	17 49 20.4	+0.1
	comp=Z,4.9nm,0.9s,baz=49,slow=9.3,SNR=3.8						
SEY	Seymchan	20.16	304	⇓iP	P	17 45 06.3	+0.1
DLBC	Dease Lake	20.84	69	P	P	17 45 14.5	+0.8
	comp=Z,85nm,1.1s,baz=278,slow=11,SNR=25						
DLBC				LR	LR	17 53 15.7	
	comp=Z,2μm,20.2s,baz=282,slow=37						
DLBC	Dease Lake	20.84	69	P	P	17 45 12.8	-0.9
DLBC				IAmb	IAmb	17 45 24.2	
	comp=Z,155nm,1.1s						
MA2	Magadan	21.20	295	P	P	17 45 17.7	+0.2
	comp=Z,44nm,1.0s,baz=92,slow=12,SNR=21						
MA2	Magadan	21.20	295	ceP	P	17 45 18.3	+0.8
MA2				pmax	pmax		
	comp=Z,85nm,1.3s						
SKR	Severo-Kuril's	21.31	269	ceP	P	17 45 20.2	+1.5
C36M	Paulatuk	23.39	39	P	P	17 45 40.5	-0.1
	baz=260,SNR=32						
C36M	Paulatuk	23.39	39	P	P	17 45 40.5	-0.1
C36M				IAmb	IAmb	17 45 58.0	
	comp=Z,120nm,1.2s						
BBB	Bella Bella	23.98	83	LR	LR	17 54 15.8	
	comp=Z,1μm,21.0s,baz=306,slow=34						
YKA	Yellowknife Ar	27.47	55	P	P	17 46 17.7	-0.2
	comp=Z,34nm,1.1s,baz=280,slow=8.5,SNR=82						
YKA				PcP	PcP	17 49 36.1	+0.1
	comp=Z,6.8nm,0.7s,baz=303,slow=1.5,SNR=10						
YKA				LR	LR	17 56 50.9	
	comp=Z,3μm,19.5s,baz=0.0,slow=36						
NKL	Nikolayevsk	28.59	285	eP	P	17 46 28.5	+0.5
NKL				pmax	pmax		
	comp=E,82nm,0.9s						
NKL				pmax	pmax		
	comp=N,11nm,0.7s						
NKL				pmax	pmax		
	comp=Z,25nm,2.1s						
NKL				MLR	MLR		
	comp=E,728nm,11.0s						
A04D	Lummi Island	28.71	86	P	P	17 46 30.9	+1.7
	baz=304						
D03D	Eldon	29.17	88	P	P	17 46 34.7	+1.4
	baz=306						
TIXI	Tiksi	29.26	325	P	P	17 46 32.4	-1.4
TIXI				pmax	pmax		
	comp=Z,10.0nm,0.8s						
TIXI	Tiksi	29.26	325	P	P	17 46 32.4	-1.4
B05A	Bryant	29.30	86	P	P	17 46 36.0	+1.6
	baz=305,SNR=15						
D04E	Lakebay	29.55	89	P	P	17 46 39.1	+2.5
	baz=306						
E04D	Cinebar	30.04	90	P	P	17 46 43.1	+2.1
	baz=307,SNR=18						
LON	Longmire	30.34	89	P	P	17 46 43.9	+0.2

LON				pmax	pmax		
	comp=Z,14nm,0.9s						
LON	**Longmire**	30.34	89	P	P	17 46 43.9	+0.2
G03D	**McMinnville, O**	30.47	92	P	P	17 46 41.8	-3.0
	baz=309						
YAK	**Yakutsk**	30.66	306	*e*P	P	17 46 44.8	-1.5
YAK				*e**PP	sP	17 46 49.6	+0.4
YAK				*e*		17 47 41.4	
YAK				*e*PPP	PPP	17 47 55.9	
YAK				*e*		17 49 42.9	
YAK				*e*S	S	17 51 51.1	+2.5
YAK				*e*SS	ScP	17 53 34.0	+7.4
YAK				*e*SSS	SSS	17 53 50.3	
YAK				pmax	pmax		
	comp=Z,63nm,1.0s						
YAK				pmax	pmax		
	comp=N,8.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,30nm,1.1s						
YAK				pmax	pmax		
	comp=N,25nm,1.9s						
YAK				pmax	pmax		
	comp=Z,51nm,1.9s						
YAK				pmax	pmax		
	comp=E,28nm,2.0s						
YAK				smax	smax		
	comp=N,70nm,4.1s						
YAK				smax	smax		
	comp=E,113nm,4.2s						
LTY	**Liberty**	30.67	87	P	P	17 46 46.8	+0.1
LTY				IAmb	IAmb	17 46 53.2	
	comp=Z,75nm,1.7s						
F05D	**White Salmon**	31.05	90	P	P	17 46 51.2	+1.3
	baz=308						
H04D	**Lebanon**	31.20	93	P	P	17 46 53.1	+1.9
	baz=310,SNR=8.3						
I03D	**Drain, OR**	31.39	95	P	P	17 46 54.8	+1.9
	baz=311						
H04A	**Detroit Lake**	31.40	92	P	P	17 46 52.5	-0.6
H04A				IAmb	IAmb	17 47 01.0	
	comp=Z,81nm,1.1s						
J01E	**Myrtle Point**	31.42	96	P	P	17 46 55.3	+2.1
	baz=312						
G05D	**Wamic, OR**	31.53	91	P	P	17 46 56.0	+1.8
	baz=309,SNR=7.9						
E07A	**Sunnyside**	31.53	87	P	P	17 46 54.3	+0.1
E07A				IAmb	IAmb	17 47 01.8	
	comp=Z,29nm,0.8s						
HAWA	**Hanford**	31.81	87	P	P	17 46 57.3	+0.7
HAWA				IAmb	IAmb	17 47 04.2	
	comp=Z,35nm,0.8s						
I04A	**Tendick Farm,**	31.84	94	P	P	17 46 58.4	+1.4
	baz=311,SNR=23						
K02D	**Willamette Mer**	31.88	96	P	P	17 46 58.6	+1.3
	baz=312						
NEW	**Newport**	32.04	83	P	P	17 46 59.0	+0.4
	baz=305,SNR=13						
NEW	**Newport**	32.04	83	P	P	17 46 57.7	-0.9
NEW				pmax	pmax		
	comp=Z,18nm,0.9s						
NEW	**Newport**	32.04	83	P	P	17 46 57.7	-0.9
GRNR	**Gornyy**	32.06	283	⇑*i*P	P	17 46 58.7	0.0
GRNR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GRNR				MLR	MLR		
	comp=N,360nm,16.0s						
GRNR				MLR	MLR		
	comp=Z,570nm,16.0s						
I05D	**Terrebonne, OR**	32.09	92	P	P	17 47 00.7	+1.6
	baz=310,SNR=13						
L02E	**Cave Junction**	32.27	97	P	P	17 47 02.6	+1.9
	baz=313						
J04D	**Umpqua Nationa**	32.37	94	P	P	17 47 03.9	+2.1
	baz=311						
RES	**Resolute Bay**	32.50	28	P	P	17 47 02.2	-0.1
	comp=Z,6.4nm,1.0s,baz=248,slow=16,SNR=12						
RES				PcP	PcP	17 49 48.9	+0.2
	comp=Z,8.1nm,0.7s,baz=234,slow=1.9,SNR=9.2						
RES	**Resolute Bay**	32.50	28	P	P	17 47 01.7	-0.6
RES				pmax	pmax		
	comp=Z,19nm,1.4s						
RES	**Resolute Bay**	32.50	28	P	P	17 47 01.7	-0.6
E09A	**Wood Farm, Sta**	32.50	86	P	P	17 47 02.3	-0.3
E09A				IAmb	IAmb	17 47 09.7	
	comp=Z,31nm,0.9s						
PINE	**Pine Mountain**	32.66	92	P	P	17 47 03.4	-0.9
PINE				IAmb	IAmb	17 47 11.8	
	comp=Z,114nm,1.7s						
G08A	**Pilot Rock**	32.80	88	P	P	17 47 05.2	-0.3
J05D	**Fort Rock, OR**	32.83	93	P	P	17 47 07.5	+1.8
	baz=311,SNR=30						
L04D	**Klamath Falls**	32.94	96	P	P	17 47 08.5	+1.7
	baz=312,SNR=13						
M02C	**Callahan**	33.20	97	P	P	17 47 11.1	+2.2
	baz=314,SNR=13						
I07A	**Izee**	33.27	91	P	P	17 47 09.9	+0.4
I07A				IAmb	IAmb	17 47 16.6	
	comp=Z,107nm,1.7s						
K05A	**Summer Lake**	33.38	94	P	P	17 47 11.3	+0.6
K05A				IAmb	IAmb	17 47 19.2	
	comp=Z,58nm,0.9s						
K05A				PcP	PcP	17 49 53.4	+1.4
M04C	**Macdoel**	33.49	96	P	P	17 47 13.2	+1.7
	baz=313,SNR=14						
N02D	**Trinity Center**	33.57	98	P	P	17 47 13.6	+1.5
	baz=314,SNR=18						
JTMT	**Jette**	33.89	81	P	P	17 47 14.2	-0.7
JTMT				IAmb	IAmb	17 47 21.0	
	comp=Z,120nm,1.9s						
BMO	**Blue Mountains**	33.99	88	P	P	17 47 15.8	0.0
BMO				pmax	pmax		
	comp=Z,84nm,1.8s						
BMO	**Blue Mountains**	33.99	88	P	P	17 47 15.8	0.0
BMO				IAmb	IAmb	17 47 22.6	
	comp=Z,84nm,1.8s						
O02D	**Mt. Diablo Mer**	34.08	99	P	P	17 47 17.7	+1.1
	baz=315						
MOD	**Modoc Plateau**	34.26	94	P	P	17 47 18.2	0.0
MOD				IAmb	IAmb	17 47 25.6	
	comp=Z,113nm,1.7s						
MOD				PcP	PcP	17 49 56.0	+1.6
O03E	**Paynes Creek**	34.54	98	P	P	17 47 21.3	+0.8
	baz=314,SNR=22						
MSO	**Missoula**	34.62	82	P	P	17 47 21.5	+0.2
	baz=307,SNR=7.2						
WVOR	**Wild Horse Val**	34.82	92	P	P	17 47 23.8	+0.8
WVOR				pmax	pmax		
	comp=Z,183nm,1.9s						
WVOR	**Wild Horse Val**	34.82	92	P	P	17 47 23.8	+0.8
ORV	**Oroville**	35.22	98	P	P	17 47 26.1	-0.2
ORV				pmax	pmax		
	comp=Z,83nm,2.0s						
ORV	**Oroville**	35.22	98	P	P	17 47 26.1	-0.2
ORV				IAmb	IAmb	17 47 32.6	
	comp=Z,83nm,1.9s						
ZEA	**Zeya**	35.33	293	*e*P	P	17 47 26.4	-0.7
ZEA				*e*		17 48 50.2	
ZEA				*e*S	S	17 52 54.5	-6.7
ZEA				pmax	pmax		
	comp=Z,100nm,1.4s						
ZEA				pmax	pmax		
	comp=E,100nm,9.1s						
ZEA				pmax	pmax		
	comp=N,200nm,6.0s						
ZEA				pmax	pmax		
	comp=Z,200nm,8.3s						
ZEA				smax	smax		
	comp=N,100nm,10.8s						
ZEA				MLR	MLR		
	comp=E,900nm,16.0s						
ZEA				MLR	MLR		
	comp=Z,800nm,14.0s						
KLR	**Kul'dur**	35.42	284	LR	LR	18 02 04.9	
	comp=Z,354nm,21.2s,baz=41,slow=37						
KLR	**Kul'dur**	35.42	284	*ce*P	P	17 47 26.6	-1.4
KLR				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KIP	**Kipapa**	36.09	162	*ce*P	P	17 47 36.0	+2.1
KIP				pmax	pmax		
	comp=Z,307nm,2.5s						
EGMT	**Eagleton**	36.19	78	P	P	17 47 34.3	-0.4
	baz=307						
PAHR	**Pah Rah Range**	36.27	96	P	P	17 47 35.0	-0.6
PAHR				IAmb	IAmb	17 47 43.2	
	comp=Z,42nm,1.1s						
PAHR				PcP	PcP	17 50 01.7	+1.3
HLID	**Hailey**	36.41	87	P	P	17 47 37.0	+0.2
	baz=311,SNR=23						
HLID	**Hailey**	36.41	87	P	P	17 47 36.8	0.0
HLID				IAmb	IAmb	17 47 43.2	
	comp=Z,73nm,1.8s						
HLID				PcP	PcP	17 50 02.8	+2.0
BCYI	**Bear Canyon**	36.49	85	P	P	17 47 37.2	-0.3
FFC	**Flin Flon**	36.52	64	P	P	17 47 36.9	-0.5
FFC				pmax	pmax		
	comp=Z,35nm,1.2s						
FFC	**Flin Flon**	36.52	64	P	P	17 47 36.9	-0.5
BOZ	**Bozeman (W)**	36.65	82	P	P	17 47 38.9	+0.2
	baz=309,SNR=9.2						
BOZ	**Bozeman (W)**	36.65	82	P	P	17 47 38.7	0.0
BOZ				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BOZ	**Bozeman (W)**	36.65	82	P	P	17 47 38.7	0.0
YHH	**Holmes Hill**	37.59	83	P	P	17 47 46.8	-0.1
NVAR	**Mina Array Bea**	37.77	97	P	P	17 47 48.9	+0.5
	comp=Z,12nm,0.8s,baz=304,slow=8.0,SNR=90						
NVAR				PcP	PcP	17 50 06.0	+0.9
	comp=Z,8.3nm,0.8s,baz=291,slow=2.4,SNR=12						
NVAR				LR	LR	18 01 51.6	
	comp=Z,1µm,18.7s,baz=312,slow=34						
NVAR	**Mina Array Bea**	37.77	97	P	P	17 47 47.5	-0.9
NVAR				PcP	PcP	17 50 07.1	+2.0
LHV	**Little Huntoon**	37.79	97	P	P	17 47 49.2	+1.0
ELK	**Elko**	37.84	91	P	P	17 47 49.1	+0.1
ELK				pmax	pmax		
	comp=Z,28nm,1.0s						
ELK	**Elko**	37.84	91	P	P	17 47 49.1	+0.1
H17A	**Grant Village**	37.99	83	P	P	17 47 52.1	+1.9
	baz=310,SNR=18						
MLAC	**Mammoth, Mammo**	38.05	98	P	P	17 47 53.1	+2.3
	baz=317						
TULEG	**Thule**	38.09	22	P	P	17 47 50.5	+0.1
TULEG	**Thule**	38.09	22	*e*P	P	17 47 50.3	0.0
TULEG				IAmb	IAmb	17 47 52.1	
	comp=Z,8.8nm,0.8s						
FCC	**Fort Churchill**	38.20	54	P	P	17 47 51.1	-0.3
FCC				pmax	pmax		
	comp=Z,77nm,1.3s						
FCC	**Fort Churchill**	38.20	54	P	P	17 47 51.1	-0.3
FCC				IAmb	IAmb	17 47 59.7	
	comp=Z,77nm,1.2s						
RLMT	**Red Lodge**	38.24	81	P	P	17 47 52.8	+0.5
	baz=310,SNR=11						
RLMT	**Red Lodge**	38.24	81	P	P	17 47 52.1	-0.2
USRK	**Ussuriysk Ar.**	38.37	277	P	P	17 47 51.5	-1.6
	comp=Z,3.3nm,1.0s,baz=108,slow=9.3,SNR=2.9						
USRK				PcP	PcP	17 50 06.9	+0.4
	comp=Z,5.4nm,0.8s,baz=72,slow=2.0,SNR=6.4						
USRK				LR	LR	18 03 54.7	
	comp=Z,843nm,19.9s,baz=46,slow=37						
HVU	**Hansel Valley**	38.50	88	P	P	17 47 54.4	0.0
HVU				pmax	pmax		
	comp=Z,30nm,0.8s						
HVU	**Hansel Valley**	38.50	88	P	P	17 47 54.4	0.0
LAO	**LASA Array**	38.91	77	P	P	17 47 58.1	+0.4
	baz=309						
SMMC	**Simmler**	39.13	102	P	P	17 48 01.4	+1.8
	baz=319						
VES	**Vestal, Richgr**	39.23	100	P	P	17 48 01.3	+0.9
	baz=318						
GRAC	**Grapevine Rang**	39.32	97	P	P	17 48 02.8	+1.6
	baz=317						
R11A	**Troy Canyon, C**	39.32	94	P	P	17 48 01.6	+0.1
	baz=316,SNR=50						
R11A	**Troy Canyon, C**	39.32	94	P	P	17 48 01.5	+0.1
CWC	**Cottonwood Cre**	39.33	99	P	P	17 48 02.3	+0.8
	baz=318						
MDJ	**Mudanjiang**	39.41	279	P	P	17 47 58.8	-3.0
MDJ				pP	sP	17 48 08.4	+3.6
MDJ				sP	pP	17 48 13.8	+10
MDJ				S	S	17 54 01.3	-2.2
MDJ				pmax	pmax		
	comp=Z,7.0nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,200nm,7.0s						
MDJ				LR	LR		
	comp=Z,1µm,18.4s						
MDJ				LR	LR		
	comp=Z,1µm,16.5s						
MDJ				LR	LR		
	comp=Z,2µm,15.4s						
PKM	**Mcpherson Peak**	39.54	102	P	P	17 48 03.6	+0.3
	baz=319						
DUG	**Dugway, Tooele**	39.56	90	P	P	17 48 03.9	+0.6
	baz=314,SNR=29						
DUG	**Dugway, Tooele**	39.56	90	P	P	17 48 03.8	+0.5
DUG				pmax	pmax		
	comp=Z,37nm,1.6s						
BOD	**Bodaibo**	39.57	305	*e*P	P	17 48 02.6	-0.4
BOD				pmax	pmax		
	comp=Z,26nm,2.3s						
BW06	**Boulder Array**	39.61	84	P	P	17 48 03.4	-0.4
	baz=312						
PDAR	**Pinedale Array**	39.61	84	P	P	17 48 02.8	-1.0
	comp=Z,2.5nm,0.9s,baz=311,slow=3.8,SNR=15						
PDAR	**Pinedale Array**	39.61	84	P	P	17 48 02.4	-1.5
ISA	**Isabella, Lake**	39.69	100	P	P	17 48 04.7	+0.4
	baz=318,SNR=8.1						
MPMC	**Manual Prospec**	39.94	99	P	P	17 48 07.3	+0.7
	baz=318,SNR=17						
TPNV	**Topopah Spring**	39.97	96	P	P	17 48 07.1	+0.4
	baz=317,SNR=64						
FURC	**Furnace Creek,**	39.98	98	P	P	17 48 07.8	+1.2
	baz=317,SNR=12						
MAJO	**Matsushiro**	40.22	263	⇑*i*P	P	17 48 09.2	+0.6
MAJO				pmax	pmax		
	comp=Z,90nm,2.1s						
MAT	**Matsushiro**	40.22	263	P	P	17 48 08.9	+0.3
MAT				*e*S	S	17 54 16.6	+0.9
MJAR	**Matsushiro Arr**	40.22	263	P	P	17 48 08.7	0.0
	comp=Z,25nm,1.2s,baz=28,slow=7.1,SNR=17						
MJAR				PcP	PcP	17 50 12.4	0.0
	comp=Z,4.8nm,1.0s,baz=57,slow=4.6,SNR=4.8						
LRMC	**Laurel Mtn Rad**	40.26	99	P	P	17 48 09.9	+0.7
	baz=318,SNR=15						
SCZ2	**Santa Cruz Isl**	40.31	103	P	P	17 48 10.7	+1.2
	baz=320						
OSI	**Osito Audit: C**	40.34	101	P	P	17 48 11.2	+1.5
	baz=319						
EDW2	**Edwards Air Fo**	40.54	100	P	P	17 48 11.7	+0.4
	baz=319						
SHOC	**Shoshone, Teco**	40.72	98	P	P	17 48 13.8	+1.0
	baz=318						
GSC	**Goldstone, Bar**	40.87	99	P	P	17 48 14.9	+0.8
	baz=318,SNR=23						
SHPR	**Sheep Range**	40.89	96	P	P	17 48 13.3	-1.1
BFSC	**Mount Baldy Ra**	41.20	101	P	P	17 48 17.5	+0.6
	baz=319						
K22A	**Casper**	41.36	82	P	P	17 48 17.9	-0.3
	baz=312						
HEC	**Hector,Ludlow**	41.48	99	P	P	17 48 19.7	+0.5
	baz=319,SNR=21						
BBRC	**Big Bear Solar**	41.58	100	P	P	17 48 21.3	+1.1
	baz=319						
MDND	**Maddock**	41.71	71	P	P	17 48 20.8	+0.1
	baz=309						
RSSD	**Black Hills**	41.74	79	P	P	17 48 21.0	-0.3
	baz=311						
RSSD	**Black Hills**	41.74	79	P	P	17 48 20.2	-1.1
RSSD				pmax	pmax		
	comp=Z,13nm,0.7s						
RSSD	**Black Hills**	41.74	79	P	P	17 48 20.2	-1.1
GMRC	**Granite Mounta**	41.88	98	P	P	17 48 23.1	+0.6
	baz=319,SNR=27						
MURC	**Murrieta**	41.93	101	P	P	17 48 23.6	+0.8
	baz=320						
O20A	**White River Ci**	42.13	86	P	P	17 48 24.2	-0.3
	baz=314,SNR=11						
ULM	**Lac du Bonnet**	42.13	66	P	P	17 48 24.1	-0.2
	comp=Z,8.1nm,0.8s,baz=308,slow=8.6,SNR=14						
ULM				PcP	PcP	17 50 18.2	-0.3
	comp=Z,6.1nm,0.7s,baz=344,slow=7.5,SNR=3.3						
ULM				LR	LR	18 07 05.2	
	comp=Z,3µm,18.2s,baz=316,slow=38						
ULM	**Lac du Bonnet**	42.13	66	P	P	17 48 22.5	-1.7
ULM				IAmb	IAmb	17 48 30.0	
	comp=Z,75nm,1.4s						
ULM				PcP	PcP	17 50 18.3	-0.2
CN2	**Changchun**	42.20	281	*e*P	P	17 48 23.7	-1.1
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CN2				pmax	pmax		
	comp=Z,310nm,5.0s						
CN2				LR	LR		
	comp=Z,1µm,14.0s						
CN2				LR	LR		
	comp=Z,860nm,14.0s						
CN2				LR	LR		
	comp=Z,850nm,18.0s						
BELC	**Belle Mtn. Jos**	42.28	99	P	P	17 48 25.6	-0.2
	baz=319,SNR=6.8						
PFO	**Pinyon Flats O**	42.33	100	P	P	17 48 26.2	+0.1
	baz=320,SNR=12						
PFO	**Pinyon Flats O**	42.33	100	⇑*i*P	P	17 48 26.5	+0.4
PFO				pmax	pmax		
	comp=Z,52nm,1.3s						
109C	**Camp Elliot, M**	42.52	101	P	P	17 48 28.3	+0.8
	baz=320						
IRM	**Iron Mountain**	42.63	98	P	P	17 48 29.1	+0.6
	baz=319,SNR=61						
NRIK	**Noril'sk**	42.81	329	P	P	17 48 28.8	-0.7
	comp=Z,17nm,0.9s,baz=64,slow=9.3,SNR=26						
NRIK				LR	LR	18 07 03.2	
	comp=Z,1µm,18.6s,baz=56,slow=37						
NRIK	**Noril'sk**	42.81	329	*ce*P	P	17 48 29.6	+0.1
NRIK				pmax	pmax		
	comp=Z,26nm,1.0s						
NRIK	**Noril'sk**	42.81	329	P	P	17 48 27.9	-1.6
BC3	**Big Chuckawall**	42.84	99	P	P	17 48 30.4	+0.2
	baz=319,SNR=10						
N23A	**Red Feather La**	42.87	84	P	P	17 48 30.5	-0.1
	baz=314						
MONP2	**Monument Peak**	42.89	101	P	P	17 48 31.8	+1.0
	baz=320,SNR=11						
UPNV	**Upernavik**	43.00	24	*i* P	P	17 48 31.2	+0.2
UPNV				IAmb	IAmb	17 48 32.8	
	comp=Z,26nm,0.9s						
PDMCI	**Parker Dam,Lak**	43.07	97	P	P	17 48 32.9	+0.8
	baz=319,SNR=12						
SWSC	**Sam W. Stewart**	43.19	100	P	P	17 48 33.6	+0.6
	baz=320,SNR=8.5						
IKP	**In-Ko-Pah, Jac**	43.25	101	P	P	17 48 34.6	+1.1
	baz=320,SNR=6.9						
AGMN	**Agassiz Nation**	43.37	69	P	P	17 48 34.9	+0.6
	baz=310,SNR=14						
GLA	**Glamis**	43.64	99	P	P	17 48 37.9	+1.2
	baz=320,SNR=7.9						
WUAZ	**Wupatki**	43.70	94	P	P	17 48 37.6	+0.4
	baz=318,SNR=14						
ISCO	**Idaho Springs**	43.81	85	P	P	17 48 39.5	+1.2
	baz=315						
ISCO	**Idaho Springs**	43.81	85	P	P	17 48 41.4	+3.1
ISCO				pmax	pmax		
	comp=Z,7.0nm,1.4s						
MVCO	**Mesa Verde**	44.05	90	P	P	17 48 39.6	-0.5
	baz=316,SNR=10						
B35A	**Bob, Littlefor**	44.42	67	P	P	17 48 41.9	-0.8
B35A				IAmb	IAmb	17 48 48.7	
	comp=Z,34nm,0.9s						
SNY	**Shenyang**	44.55	280	⇓P	P	17 48 43.6	-0.2
SNY				pmax	pmax		
	comp=Z,36nm,1.2s						
SNY				pmax	pmax		
	comp=Z,470nm,6.4s						
SNY				LR	LR		
	comp=Z,490nm,16.1s						
SNY				LR	LR		
	comp=Z,1µm,14.9s						
SNY				LR	LR		
	comp=Z,1µm,19.5s						
S22A	**4UR Ranch, Cre**	44.59	88	P	P	17 48 45.0	+0.5
	baz=316						
W18A	**Petrified Fore**	44.89	93	P	P	17 48 47.4	+0.5
	baz=318						
X18A	**Snowflake**	45.21	93	P	P	17 48 48.5	-0.9
X18A				IAmb	IAmb	17 48 57.3	
	comp=Z,54nm,0.8s						
KSRS	**Korea Array**	45.23	273	P	P	17 48 49.3	0.0
	comp=Z,12nm,1.0s,baz=50,slow=6.7,SNR=4.3						
KSRS				PcP	PcP	17 50 29.6	+0.4
	comp=Z,5.7nm,0.9s,baz=46,slow=4.9,SNR=9.0						
KSRS				LR	LR	18 08 38.0	
	comp=Z,273nm,18.7s,baz=54,slow=37						
SDCO	**Great Sand Dun**	45.32	87	P	P	17 48 50.4	0.0
	baz=316,SNR=12						
SDCO	**Great Sand Dun**	45.32	87	P	P	17 48 49.3	-1.1
DAG	**Danmarks Havn**	45.56	9	*i* P	P	17 48 50.8	-0.6
	comp=Z,10nm,0.9s						
DAG	**Danmarks Havn**	45.56	9	*i* P	P	17 48 50.8	-0.6
DAG	**Danmarks Havn**	45.56	9	*i* P	P	17 48 50.9	-0.6
DAG				IAmb	IAmb	17 48 57.2	
	comp=Z,10nm,0.9s						
214A	**Organ Pipe Nat**	45.57	98	P	P	17 48 52.5	+0.4
	baz=320,SNR=44						
EYMN	**Ely**	45.82	66	P	P	17 48 53.5	-0.3
	baz=311,SNR=7.2						
EYMN	**Ely**	45.82	66	P	P	17 48 52.9	-1.0
ECSD	**EROS Data Cent**	45.98	74	P	P	17 48 53.7	-1.5
	baz=313						
TJN	**Taejon**	46.32	272	*ce*P	P	17 48 58.4	+0.5
T25A	**Trinidad**	46.36	86	P	P	17 48 58.4	-0.1
	baz=317,SNR=11						
TUC	**Tucson**	46.42	96	P	P	17 48 59.6	+0.8
	baz=320						
TUC	**Tucson**	46.42	96	P	P	17 48 58.6	-0.2
TUC				pmax	pmax		
	comp=Z,112nm,1.7s						
SUMG	**Summit**	46.67	18	*i* P	P	17 49 01.2	+0.5
	comp=Z,139nm,1.1s						
SUMG	**Summit**	46.67	18	*i* P	P	17 49 01.2	+0.5
SUMG	**Summit**	46.67	18	*i* P	P	17 49 01.2	+0.5
SUMG				IAmb	IAmb	17 49 02.6	
	comp=Z,140nm,1.1s						
ANMO	**Albuquerque**	46.83	90	P	P	17 49 01.8	-0.3
	comp=Z,5.4nm,1.0s,baz=314,slow=10,SNR=10						
ANMO				PcP	PcP	17 50 36.3	+1.2
	comp=Z,16nm,0.9s,baz=246,slow=2.5,SNR=14						
ANMO	**Albuquerque**	46.83	90	P	P	17 49 02.0	-0.2
	baz=318						
ANMO	**Albuquerque**	46.83	90	*ce*P	P	17 49 01.2	-1.0
ANMO				pmax	pmax		
	comp=Z,4.0nm,0.9s						
SPMN	**Marine on St.**	46.97	70	P	P	17 49 03.4	+0.5
	baz=313						
IRK	**Irkutsk**	47.40	303	*e*P	P	17 49 04.7	-1.5
IRK				pmax	pmax		
	comp=Z,52nm,2.3s						
DL2	**Dalian**	47.65	279	P	P	17 49 08.6	+0.3
DL2				PP	PP	17 51 02.6	+3.0
DL2				*e*S	S	17 56 03.4	-0.6
DL2				pmax	pmax		
	comp=Z,21nm,0.9s						
DL2				pmax	pmax		
	comp=Z,320nm,4.6s						
DL2				LR	LR		
	comp=Z,1µm,16.2s						
DL2				LR	LR		
	comp=Z,740nm,15.6s						
DL2				LR	LR		
	comp=Z,880nm,16.0s						
DBG	**Daneborg**	47.70	11	*i* P	P	17 49 07.7	-0.5
DBG				IAmb	IAmb	17 49 08.7	
	comp=Z,31nm,1.1s						
121A	**Cookes Peak, D**	47.90	93	P	P	17 49 11.0	+0.5
	baz=319,SNR=16						
TLY	**Talaya**	48.06	303	*e*P	P	17 49 11.8	+0.5
TLY				*e*S	S	17 56 12.1	+2.4
TLY				pmax	pmax		
	comp=Z,63nm,1.0s						
TLY				MLR	MLR		
	comp=Z,4µm,17.0s						
G40A	**Rib Lake**	48.28	68	P	P	17 49 12.7	-0.4
G40A				IAmb	IAmb	17 49 19.1	
	comp=Z,41nm,0.9s						
SFJD	**Kangerlussuaq**	48.49	27	*i* P	P	17 49 14.2	-0.1
SFJD	**Kangerlussuaq**	48.49	27	*i* P	P	17 49 14.2	-0.1
SFJD	**Kangerlussuaq**	48.49	27	*i* P	P	17 49 14.2	-0.1
ULN	**Ulaanbaatar**	49.03	298	*ce*P	P	17 49 18.8	-0.2
ULN				pmax	pmax		
	comp=Z,30nm,0.9s						
ULN	**Ulaanbaatar**	49.03	298	P	P	17 49 16.6	-2.3
ULN				IAmb	IAmb	17 49 20.6	
	comp=Z,28nm,0.9s						
ZAK	**Zakamensk**	49.11	302	*e*P	P	17 49 19.0	-0.5
ZAK				pmax	pmax		
	comp=Z,11nm,1.5s						
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
E43A	**Lone Tree Farm**	49.15	65	P	P	17 49 18.9	-0.8

E43A				IAmb	IAmb	17 49 26.5	
	comp=Z,40nm,0.8s						
MOY	**Mondy**	**49.29**	**305**	*e*P	**P**	**17 49 20.6**	**-0.3**
MOY				pmax	pmax		
	comp=Z,44nm,2.4s						
ICESG	**Greenland Ices**	**49.33**	**21**	*i* P	**P**	**17 49 20.9**	**-0.3**
ICESG				IAmb	IAmb	17 49 21.8	
	comp=Z,40nm,0.7s						
SONM	**Songino Array**	**49.37**	**298**	P	**P**	**17 49 21.4**	**-0.2**
	comp=Z,14nm,0.8s,baz=50,slow=6.3,SNR=95						
SONM				PcP	**PcP**	**17 50 44.5**	**+0.6**
	comp=Z,6.8nm,0.8s,baz=51,slow=2.0,SNR=7.0						
SONM				LR	LR	18 11 24.0	
	comp=Z,1µm,18.7s,baz=45,slow=38						
SONM	**Songino Array**	**49.37**	**298**	P	**P**	**17 49 21.4**	**-0.2**
SONM						17 50 43.3	
SONM				pmax	pmax		
	comp=Z,14nm,0.9s						
SONM	**Songino Array**	**49.37**	**298**	P	**P**	**17 49 21.4**	**-0.2**
SONM					**PcP**	**17 50 43.3**	**-0.7**
MSTX	**Muleshoe**	**49.59**	**88**	P	**P**	**17 49 23.1**	**-0.3**
	baz=319						
MNTX	**Cornudas Mount**	**49.86**	**92**	P	**P**	**17 49 25.6**	**+0.2**
	baz=320,SNR=30						
JFWS	**Jewell Farm**	**49.90**	**70**	P	**P**	**17 49 25.2**	**-0.3**
	baz=315						
SCO	**Scoresbysund**	**51.04**	**14**	*i* P	**P**	**17 49 34.3**	**+0.6**
	comp=Z,25nm,1.2s						
SCO	**Scoresbysund**	**51.04**	**14**	*i* P	**P**	**17 49 34.3**	**+0.6**
SCO	**Scoresbysund**	**51.04**	**14**	P	**P**	**17 49 33.4**	**-0.3**
SCO	**Scoresbysund**	**51.04**	**14**	*i* P	**P**	**17 49 34.3**	**+0.6**
SCO				IAmb	IAmb	17 49 35.2	
	comp=Z,25nm,1.2s						
MATQ	**Matagami**	**51.29**	**56**	P	**P**	**17 49 35.2**	**-0.7**
	baz=315,SNR=12						
GLMI	**Grayling**	**51.43**	**65**	P	**P**	**17 49 36.9**	**-0.1**
	baz=316						
HHC	**Hu-ho-hao-te**	**51.66**	**288**	*e*P	**P**	**17 49 40.1**	**+1.1**
HHC				pP	sP	17 49 46.2	+4.3
HHC				S	**S**	**17 56 58.6**	**-1.8**
HHC				sS	sS	17 57 08.8	+4.9
HHC				pmax	pmax		
	comp=Z,25nm,1.1s						
HHC				LR	LR		
	comp=Z,1µm,14.1s						
HHC				LR	LR		
	comp=Z,1µm,14.3s						
HHC				LR	LR		
	comp=Z,2µm,16.1s						
TIA	**Tai'an**	**52.07**	**280**	P	**P**	**17 49 42.3**	**+0.4**
TIA				pmax	pmax		
	comp=Z,15nm,1.0s						
TIA				pmax	pmax		
	comp=Z,160nm,6.7s						
TIA				LR	LR		
	comp=Z,760nm,17.3s						
TIA				LR	LR		
	comp=Z,790nm,16.5s						
TIA				LR	LR		
	comp=Z,700nm,19.2s						
HDIL	**Hopedale**	**52.08**	**72**	P	**P**	**17 49 41.5**	**-0.4**
	baz=317						
LSQQ	**Lebel-sur-Quev**	**52.09**	**56**	P	**P**	**17 49 41.1**	**-0.7**
	baz=316						
R40A	**Maddies Statio**	**52.15**	**76**	P	**P**	**17 49 40.9**	**-1.6**
ABTX	**Abilene, Hawle**	**52.33**	**86**	P	**P**	**17 49 42.8**	**-1.1**
	baz=319						
ABTX	**Abilene, Hawle**	**52.33**	**86**	P	**P**	**17 49 42.4**	**-1.5**
ABTX				IAmb	IAmb	17 49 49.6	
	comp=Z,23nm,0.8s						
VLDQ	**Val d'Or**	**52.55**	**58**	P	**P**	**17 49 42.6**	**-2.7**
VLDQ				IAmb	IAmb	17 49 49.6	
	comp=Z,39nm,1.0s						
TX31	**Lajitas Ar. Si**	**52.62**	**92**	P	**P**	**17 49 46.4**	**+0.2**
TX32	**Lajitas Array**	**52.62**	**92**	P	**P**	**17 49 46.0**	**-0.2**
TXAR	**Lajitas Array**	**52.62**	**92**	P	**P**	**17 49 45.8**	**-0.4**
	comp=Z,10nm,0.8s,baz=305,slow=4.7,SNR=103						
TXAR				PcP	**PcP**	**17 50 56.7**	**+0.5**
	comp=Z,2.6nm,0.7s,baz=245,slow=0.9,SNR=3.9						
TXAR				LR	LR	18 11 37.2	
	comp=Z,766nm,18.4s,baz=0.0,slow=36						
TXAR	**Lajitas Array**	**52.62**	**92**	P	**P**	**17 49 46.2**	**0.0**
TXAR	**Lajitas Array**	**52.62**	**92**	P	**P**	**17 49 46.2**	**0.0**
BTO	**Baotou**	**52.65**	**289**	*e*P	**P**	**17 49 45.8**	**-0.5**
ANGG	**Ammassalik, Gr**	**52.68**	**23**	P	**P**	**17 49 44.8**	**-1.2**
ANGG				IAmb	IAmb	17 49 46.5	
	comp=Z,52nm,0.8s						
ANGG	**Ammassalik, Gr**	**52.68**	**23**	*i* P	**P**	**17 49 45.5**	**-0.5**
ANGG				IAmb	IAmb	17 49 46.2	
	comp=Z,50nm,0.8s						
CCM	**Cathedral Cave**	**52.87**	**75**	P	**P**	**17 49 46.7**	**-1.1**
	baz=318						
LPIG	**La Paz**	**53.10**	**102**	P	**P**	**17 49 49.1**	**-0.5**
	comp=Z,29nm,0.5s,baz=236,slow=16,SNR=3.9						
LPIG				LR	LR	18 10 16.1	
	comp=Z,266nm,18.6s,baz=303,slow=34						
SFIN	**Lafayette**	**53.36**	**71**	P	**P**	**17 49 51.3**	**-0.1**
	baz=317						
W39A	**Magazine**	**53.62**	**80**	P	**P**	**17 49 51.9**	**-1.4**
	baz=319						
SSE	**Sheshan**	**53.67**	**273**	P	**P**	**17 49 54.0**	**+0.2**
SSE				pP	**sP**	**17 49 59.0**	**+2.2**
SSE				S	**S**	**17 57 21.2**	**-6.6**
SSE				pmax	pmax		
	comp=Z,15nm,1.1s						
SSE				pmax	pmax		
	comp=Z,99nm,3.5s						
SSE				LR	LR		
	comp=Z,180nm,11.0s						
ARCES	**ARCESS Array B**	**53.71**	**354**	P	**P**	**17 49 53.6**	**0.0**
	comp=Z,9.5nm,0.9s,baz=30,slow=7.6,SNR=4.3						
ARCES				PcP	**PcP**	**17 50 58.8**	**-0.8**
	comp=Z,2.7nm,0.6s,baz=38,slow=4.9,SNR=5.3						
ARCES				LR	LR	18 12 27.7	
	comp=Z,469nm,21.8s,baz=10.0,slow=36						
ALGO	**Algonquin Park**	**53.83**	**60**	P	**P**	**17 49 54.2**	**-0.5**
	baz=317,SNR=8.0						
JCT	**Junction City**	**53.87**	**88**	P	**P**	**17 49 54.6**	**-0.7**
	baz=320,SNR=11						
I51A	**Listowel**	**53.95**	**64**	P	**P**	**17 49 56.6**	**+0.9**
	baz=317						
FCAR	**Ozark Folk Cen**	**54.00**	**78**	P	**P**	**17 49 54.1**	**-2.1**
SADO	**Sadowa**	**54.17**	**61**	LR	LR	18 14 35.9	
	comp=Z,1µm,18.6s,baz=336,slow=38						
SADO	**Sadowa**	**54.17**	**61**	P	**P**	**17 49 57.0**	**-0.3**
SADO				IAmb	IAmb	17 50 03.9	
	comp=Z,19nm,0.8s						
MIAR	**Mount Ida**	**54.22**	**80**	P	**P**	**17 49 56.9**	**-0.8**
	baz=319						
MIAR	**Mount Ida**	**54.22**	**80**	P	**P**	**17 49 56.9**	**-0.8**
MIAR				pmax	pmax		
	comp=Z,19nm,1.2s						
G54A	**Lake Saint Pet**	**54.22**	**60**	P	**P**	**17 49 56.8**	**-0.8**
	baz=317						
NJ2	**Nanjing**	**54.23**	**275**	*e*P	**P**	**17 49 58.0**	**+0.1**
NJ2				pmax	pmax		
	comp=Z,21nm,0.9s						
NJ2				LR	LR		
	comp=Z,710nm,11.3s						
NJ2				LR	LR		
	comp=Z,690nm,13.2s						
NJ2				LR	LR		
	comp=Z,710nm,13.2s						
D55A	**Sainte-Anne-du**	**54.27**	**57**	P	**P**	**17 49 56.8**	**-1.1**
	baz=317,SNR=14						
E55A	**Montcerf-Lytto**	**54.41**	**58**	P	**P**	**17 49 58.6**	**-0.4**
	baz=317						
ZALV	**Zalesovo Beam**	**54.45**	**316**	P	**P**	**17 49 58.8**	**-0.4**
	comp=Z,3.9nm,0.8s,baz=37,slow=7.0,SNR=13						
ZALV				PcP	**PcP**	**17 51 02.5**	**-0.2**
	comp=Z,7.4nm,0.8s,baz=37,slow=4.0,SNR=12						
ZALV				LR	LR	18 14 01.3	
	comp=Z,733nm,19.3s,baz=32,slow=37						
ZALV	**Zalesovo Beam**	**54.45**	**316**	*i* P	**P**	**17 49 59.2**	**0.0**
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ZALV	**Zalesovo Beam**	**54.45**	**316**	P	**P**	**17 49 57.3**	**-1.9**
ZALV				PcP	**PcP**	**17 51 02.3**	**-0.3**
W41B	**Gary Mavity, V**	**54.47**	**79**	P	**P**	**17 49 57.6**	**-1.9**
	baz=319						
D56A	**ZEC Mazanza, M**	**54.58**	**57**	P	**P**	**17 49 59.3**	**-0.9**
	baz=318,SNR=9.0						
H53A	**Bobcaygeon**	**54.58**	**61**	P	**P**	**17 49 59.9**	**-0.4**
	baz=318						
E56A	**St. Veronique**	**54.82**	**57**	P	**P**	**17 50 01.1**	**-0.9**
	baz=318,SNR=9.2						
P48A	**Milroy**	**54.91**	**70**	P	**P**	**17 50 01.1**	**-1.6**
PLVO	**Plevna**	**54.97**	**60**	P	**P**	**17 50 01.9**	**-1.2**
DELO	**Deloro Mine**	**55.09**	**61**	P	**P**	**17 50 02.8**	**-1.2**
DELO				IAmb	IAmb	17 50 07.9	
	comp=Z,35nm,1.2s						
M51A	**Elyria**	**55.19**	**66**	P	**P**	**17 50 03.9**	**-0.7**
	baz=318						
P49A	**Miami Univ. Ec**	**55.22**	**70**	P	**P**	**17 50 03.7**	**-1.2**
	baz=318						
LATQ	**La Tuque**	**55.23**	**55**	P	**P**	**17 50 04.4**	**-0.5**
	baz=318,SNR=7.0						
LATQ	**La Tuque**	**55.23**	**55**	P	**P**	**17 50 03.4**	**-1.6**
TRQ	**Mont Tremblant**	**55.28**	**57**	P	**P**	**17 50 03.9**	**-1.5**
E57A	**Chemin Saint G**	**55.33**	**57**	P	**P**	**17 50 04.6**	**-1.1**
	baz=318,SNR=13						
WCI	**Wyandotte Cave**	**55.37**	**72**	P	**P**	**17 50 05.3**	**-0.7**
	baz=318						
D58A	**Chemin du LacG**	**55.40**	**56**	P	**P**	**17 50 05.3**	**-0.8**
	baz=318,SNR=8.4						
GUMO	**Guam**	**55.42**	**238**	LR	LR	18 11 06.3	
	comp=Z,164nm,21.7s,baz=59,slow=33						
ACSO	**Alum Creek Sta**	**55.59**	**68**	P	**P**	**17 50 07.1**	**-0.6**
	baz=318,SNR=7.2						
L53A	**Girard**	**55.69**	**65**	P	**P**	**17 50 08.6**	**+0.3**
	baz=318,SNR=8.7						
ERPA	**Erie**	**55.71**	**64**	P	**P**	**17 50 08.7**	**+0.3**
	baz=318						
NATX	**Nacogdoches**	**55.73**	**83**	P	**P**	**17 50 08.4**	**-0.3**
	baz=320						
E58A	**La Victoria**	**55.76**	**56**	P	**P**	**17 50 07.7**	**-1.0**
	baz=318						
M53A	**WI Miller and**	**55.87**	**65**	P	**P**	**17 50 09.2**	**-0.4**
	baz=318,SNR=12						
M53A	**WI Miller and**	**55.87**	**65**	P	**P**	**17 50 08.4**	**-1.2**
G57A	**Newington**	**55.91**	**59**	P	**P**	**17 50 08.8**	**-1.0**
	baz=318						
WVT	**Waverly**	**56.12**	**75**	P	**P**	**17 50 10.5**	**-1.0**
	baz=319						
WVT	**Waverly**	**56.12**	**75**	P	**P**	**17 50 10.0**	**-1.5**
WVT				pmax	pmax		
	comp=Z,64nm,1.9s						
WVT	**Waverly**	**56.12**	**75**	P	**P**	**17 50 10.0**	**-1.5**
WVT				IAmb	IAmb	17 50 16.5	
	comp=Z,64nm,1.9s						
WVNY	**West Valley, N**	**56.18**	**63**	P	**P**	**17 50 10.6**	**-1.2**
H57A	**Richville**	**56.20**	**59**	P	**P**	**17 50 11.0**	**-0.8**
	baz=319						
O52A	**Adamsville**	**56.27**	**67**	P	**P**	**17 50 11.4**	**-1.0**
G58A	**Ormstown**	**56.31**	**58**	P	**P**	**17 50 11.8**	**-0.9**
	baz=319						
M54A	**Oil Creek Stat**	**56.32**	**64**	P	**P**	**17 50 12.7**	**-0.2**
	baz=319,SNR=8.4						
F59A	**Saint Guilaume**	**56.38**	**57**	P	**P**	**17 50 12.6**	**-0.6**
	baz=319						
J56A	**Wolcott**	**56.38**	**61**	P	**P**	**17 50 13.1**	**-0.1**
	baz=319						
D60A	**Saint Jean D’O**	**56.43**	**55**	P	**P**	**17 50 12.7**	**-0.7**
	baz=319,SNR=6.4						
I57A	**Carthage**	**56.46**	**60**	P	**P**	**17 50 12.7**	**-1.1**
	baz=319						
LONY	**Lake Ozonia**	**56.46**	**59**	P	**P**	**17 50 12.7**	**-1.1**
	baz=319						
LONY	**Lake Ozonia**	**56.46**	**59**	P	**P**	**17 50 12.1**	**-1.7**
LONY				IAmb	IAmb	17 50 13.8	
	comp=Z,17nm,0.8s						
P52A	**Corning**	**56.48**	**68**	P	**P**	**17 50 12.8**	**-1.1**
	baz=319,SNR=5.9						
O53A	**New Philadelph**	**56.48**	**67**	P	**P**	**17 50 13.3**	**-0.7**
	baz=319						
D61A	**St Aubert, Com**	**56.54**	**54**	P	**P**	**17 50 13.9**	**-0.4**
	baz=319,SNR=9.9						
N54A	**Moraine State**	**56.57**	**65**	P	**P**	**17 50 14.2**	**-0.4**
	baz=319,SNR=11						
K56A	**Middlesex**	**56.59**	**62**	P	**P**	**17 50 15.1**	**+0.4**
	baz=319,SNR=8.6						
E60A	**Ste Agathe de**	**56.60**	**55**	P	**P**	**17 50 13.9**	**-0.8**
	baz=319						
DGZ	**Jazzator, Alta**	**56.64**	**311**	⇓*i*P	**P**	**17 50 15.3**	**+0.1**
DGZ				pmax	pmax		
	comp=Z,25nm,1.1s						
F60A	**Warwick**	**56.67**	**56**	P	**P**	**17 50 14.1**	**-1.2**
	baz=319						
J57A	**Williamstown**	**56.70**	**61**	P	**P**	**17 50 15.0**	**-0.4**
	baz=319						
FRNY	**Flat Rock**	**56.77**	**58**	P	**P**	**17 50 13.0**	**-3.0**
FRNY				IAmb	IAmb	17 50 19.5	
	comp=Z,52nm,1.4s						
G59A	**Clarenceville**	**56.77**	**57**	P	**P**	**17 50 14.8**	**-1.2**
	baz=319,SNR=6.9						
H58A	**Gabriels**	**56.80**	**59**	P	**P**	**17 50 15.3**	**-1.0**
	baz=319						
H59A	**Cadyville**	**56.86**	**58**	P	**P**	**17 50 15.6**	**-1.1**
	baz=319						
L56A	**Greenwood**	**56.89**	**63**	P	**P**	**17 50 16.7**	**-0.3**
	baz=319,SNR=12						
L56A	**Greenwood**	**56.89**	**63**	P	**P**	**17 50 16.3**	**-0.7**
K57A	**Scipio Center**	**56.95**	**61**	P	**P**	**17 50 17.1**	**-0.2**
	baz=319						
P53A	**Whipple**	**56.97**	**67**	P	**P**	**17 50 15.4**	**-2.0**
I58A	**Old Forge**	**56.98**	**60**	P	**P**	**17 50 16.8**	**-0.7**
	baz=319						
E61A	**Lac Etchemin**	**56.99**	**55**	P	**P**	**17 50 16.8**	**-0.8**
	baz=320						
J58A	**Remsen**	**57.08**	**60**	P	**P**	**17 50 17.7**	**-0.4**
	baz=319						
J58A	**Remsen**	**57.08**	**60**	P	**P**	**17 50 17.2**	**-0.9**
J58A				PcP	**PcP**	**17 51 12.1**	**-0.9**
M56A	**Emporium**	**57.08**	**64**	P	**P**	**17 50 17.9**	**-0.4**
	baz=319						
F61A	**St Evariste**	**57.10**	**55**	P	**P**	**17 50 17.4**	**-0.9**
	baz=320						
G60A	**Masonville**	**57.15**	**57**	P	**P**	**17 50 18.3**	**-0.4**
	baz=319						
L57A	**Andrews Acres**	**57.34**	**62**	P	**P**	**17 50 20.3**	**+0.2**
	baz=319,SNR=12						
K58A	**Earlville**	**57.35**	**61**	P	**P**	**17 50 20.0**	**-0.2**
	baz=319						
K58A	**Earlville**	**57.35**	**61**	P	**P**	**17 50 19.0**	**-1.1**
K58A				IAmb	IAmb	17 50 26.7	
	comp=Z,54nm,1.4s						
Q53A	**Leroy**	**57.37**	**68**	P	**P**	**17 50 19.7**	**-0.6**
	baz=319,SNR=10						
J59A	**Piesco**	**57.37**	**60**	P	**P**	**17 50 18.9**	**-1.4**
	baz=319						
G61A	**St-Isidore-de-**	**57.39**	**56**	P	**P**	**17 50 19.9**	**-0.4**
	baz=320						
H60A	**Morristown**	**57.39**	**58**	P	**P**	**17 50 19.6**	**-0.8**
	baz=320						
I59A	**Olmsteadville**	**57.42**	**59**	P	**P**	**17 50 19.8**	**-0.8**
	baz=319						
N56A	**West Decatur**	**57.45**	**64**	P	**P**	**17 50 21.0**	**+0.1**
	baz=319,SNR=18						
D63A	**Stockholm**	**57.59**	**53**	P	**P**	**17 50 21.4**	**-0.3**
	baz=320						
BINY	**Binghamton**	**57.61**	**61**	P	**P**	**17 50 22.1**	**+0.1**
	baz=319,SNR=10						
MCWV	**Mont Chateau**	**57.62**	**66**	P	**P**	**17 50 21.9**	**-0.2**
	baz=319,SNR=12						
M57A	**Sunshine Farm,**	**57.71**	**63**	P	**P**	**17 50 22.6**	**-0.1**
	baz=319						
K59A	**Cooperstown**	**57.73**	**60**	P	**P**	**17 50 22.3**	**-0.5**
	baz=320						
TMCR	**Tamitsa**	**57.77**	**346**	*e*P	**P**	**17 50 22.0**	**-0.7**
TMCR				pmax	pmax		
	comp=Z,16nm,0.9s						
H61A	**Lyndonville**	**57.77**	**57**	P	**P**	**17 50 22.4**	**-0.7**
	baz=320						
L58A	**Harry Jones Me**	**57.80**	**62**	P	**P**	**17 50 23.5**	**+0.2**
	baz=320,SNR=8.0						
O56A	**Blue Knob Stat**	**57.80**	**65**	P	**P**	**17 50 22.6**	**-0.8**
	baz=319,SNR=14						
WHN	**Wuhan**	**57.86**	**278**	⇑P	**P**	**17 50 24.3**	**+0.5**
SSPA	**Standing Stone**	**57.86**	**64**	P	**P**	**17 50 23.7**	**0.0**
	baz=319						
SSPA	**Standing Stone**	**57.86**	**64**	P	**P**	**17 50 23.1**	**-0.6**
G62A	**West of Eustis**	**57.89**	**56**	P	**P**	**17 50 23.6**	**-0.3**
	baz=320						
G62A	**West of Eustis**	**57.89**	**56**	P	**P**	**17 50 22.8**	**-1.1**
G62A				IAmb	IAmb	17 50 29.9	
	comp=Z,50nm,1.0s						
E63A	**Oxbow**	**57.92**	**53**	P	**P**	**17 50 23.2**	**-0.8**
	baz=320,SNR=5.1						
E63A	**Oxbow**	**57.92**	**53**	P	**P**	**17 50 22.7**	**-1.3**
N57A	**Milroy**	**57.94**	**64**	P	**P**	**17 50 24.4**	**+0.1**
	baz=320						
LBNH	**Lisbon**	**57.99**	**57**	P	**P**	**17 50 24.1**	**-0.6**
	baz=320						
M58A	**Price’s Panora**	**58.01**	**62**	P	**P**	**17 50 24.4**	**-0.4**
	baz=320						
J60A	**Lant Hill Farm**	**58.05**	**59**	P	**P**	**17 50 24.6**	**-0.4**
	baz=320,SNR=8.6						
TZTN	**Tazewell**	**58.07**	**71**	P	**P**	**17 50 25.1**	**-0.2**
	baz=320,SNR=8.2						
TZTN	**Tazewell**	**58.07**	**71**	P	**P**	**17 50 24.5**	**-0.8**
TZTN				IAmb	IAmb	17 50 30.4	
	comp=Z,62nm,1.4s						
L59A	**Walton**	**58.08**	**61**	P	**P**	**17 50 25.3**	**0.0**
	baz=320,SNR=8.0						
L59A	**Walton**	**58.08**	**61**	P	**P**	**17 50 24.0**	**-1.3**
L59A				IAmb	IAmb	17 50 33.9	
	comp=Z,46nm,0.8s						
H62A	**Milan**	**58.10**	**56**	P	**P**	**17 50 24.5**	**-0.8**
	baz=320,SNR=5.7						
H62A	**Milan**	**58.10**	**56**	P	**P**	**17 50 24.5**	**-0.8**
H62A				IAmb	IAmb	17 50 26.2	
	comp=Z,36nm,0.8s						
XAN	**Xi'an**	**58.13**	**284**	P	**P**	**17 50 25.9**	**+0.1**
XAN				pP	sP	17 50 33.4	+4.7
XAN				pmax	pmax		
	comp=Z,32nm,1.2s						
XAN				pmax	pmax		
	comp=Z,230nm,4.4s						
XAN				LR	LR		
	comp=Z,820nm,16.6s						
XAN				LR	LR		
	comp=Z,550nm,14.7s						
XAN				LR	LR		
	comp=Z,960nm,14.9s						
R54A	**Victor**	**58.16**	**68**	P	**P**	**17 50 25.6**	**-0.3**
	baz=320,SNR=18						
F63A	**Nahmakanta, Br**	**58.17**	**54**	P	**P**	**17 50 25.1**	**-0.7**
	baz=320						
E64A	**Bridgewater**	**58.18**	**53**	P	**P**	**17 50 24.6**	**-1.3**
	baz=320						
KSPA	**Keystone Colle**	**58.21**	**62**	P	**P**	**17 50 25.9**	**-0.3**
KSPA				IAmb	IAmb	17 50 33.3	
	comp=Z,30nm,0.8s						
P56A	**Dayton Farm, R**	**58.24**	**65**	P	**P**	**17 50 26.3**	**-0.1**
	baz=320,SNR=12						
S54A	**Dingess, Beckl**	**58.28**	**69**	P	**P**	**17 50 26.5**	**-0.3**
	baz=320,SNR=14						
N58A	**Sunbury**	**58.29**	**63**	P	**P**	**17 50 26.8**	**0.0**
	baz=320,SNR=12						
BATG	**Bathurst New B**	**58.29**	**51**	P	**P**	**17 50 25.4**	**-1.3**
O57A	**Amberson**	**58.31**	**64**	P	**P**	**17 50 26.8**	**-0.1**
	baz=320,SNR=8.0						
F64A	**Sherman**	**58.38**	**54**	P	**P**	**17 50 26.4**	**-0.9**
	baz=320,SNR=9.4						
F64A	**Sherman**	**58.38**	**54**	P	**P**	**17 50 26.5**	**-0.8**
M59A	**Waymart**	**58.38**	**62**	P	**P**	**17 50 27.1**	**-0.3**
	baz=320,SNR=7.7						
J61A	**Chester**	**58.38**	**58**	P	**P**	**17 50 27.0**	**-0.3**
	baz=320						
G63A	**Kingsbury**	**58.38**	**55**	P	**P**	**17 50 26.7**	**-0.7**
	baz=320						
Q56A	**Snyder Ridge,**	**58.42**	**66**	P	**P**	**17 50 27.5**	**-0.2**
	baz=320,SNR=6.9						
Q56A	**Snyder Ridge,**	**58.42**	**66**	P	**P**	**17 50 27.3**	**-0.4**
Q56A				IAmb	IAmb	17 50 34.7	
	comp=Z,27nm,0.8s						
FPAL	**Fort Paine**	**58.51**	**74**	P	**P**	**17 50 27.0**	**-1.4**
FPAL				IAmb	IAmb	17 50 33.0	
	comp=Z,53nm,1.5s						
R55A	**Marlinton**	**58.52**	**67**	P	**P**	**17 50 28.5**	**0.0**
	baz=320						
R55A	**Marlinton**	**58.52**	**67**	P	**P**	**17 50 27.6**	**-0.9**
H63A	**New Sharon**	**58.54**	**56**	P	**P**	**17 50 27.4**	**-1.0**
	baz=320						
K61A	**Williamstown**	**58.56**	**59**	P	**P**	**17 50 28.3**	**-0.3**
	baz=320						
TKL	**Tuckaleechee C**	**58.63**	**72**	P	**P**	**17 50 28.4**	**-0.8**
	comp=Z,10nm,0.9s,baz=215,slow=0.2,SNR=13						
TKL				LR	LR	18 17 30.8	
	comp=Z,1µm,18.3s,baz=330,slow=38						
G64A	**Maxfield**	**58.67**	**54**	P	**P**	**17 50 28.5**	**-0.8**
	baz=321						
P57A	**Homestead Farm**	**58.67**	**65**	P	**P**	**17 50 29.2**	**-0.2**
	baz=320						
N59A	**State Game Lan**	**58.69**	**62**	P	**P**	**17 50 29.7**	**+0.2**
	baz=320,SNR=10.0						
N59A	**State Game Lan**	**58.69**	**62**	P	**P**	**17 50 29.8**	**+0.2**
O58A	**Lewisberry**	**58.73**	**64**	P	**P**	**17 50 29.3**	**-0.5**
	baz=320						
I63A	**Otisfield**	**58.76**	**57**	P	**P**	**17 50 29.8**	**-0.2**
	baz=320						
GTA	**Gaotai**	**58.77**	**295**	⇓P	**P**	**17 50 29.6**	**-0.7**
GTA				pP	sP	17 50 35.2	+1.9
GTA				sP	pP	17 50 38.3	+5.9
GTA				PP	**PP**	**17 52 40.8**	**+1.0**
GTA				S	**S**	**17 58 34.8**	**-0.7**
GTA				sS	sS	17 58 46.6	+7.5
GTA				SS	**SS**	**18 02 28.4**	**+0.4**
GTA				pmax	pmax		
	comp=Z,26nm,1.2s						
GTA				pmax	pmax		
	comp=Z,230nm,6.7s						
GTA				LR	LR		
	comp=Z,850nm,17.1s						
GTA				LR	LR		
	comp=Z,1µm,15.3s						
GTA				LR	LR		
	comp=Z,760nm,17.8s						
L61A	**Hillsdale 1, H**	**58.79**	**60**	P	**P**	**17 50 30.2**	**0.0**
	baz=320						
R56A	**Bull Pasture M**	**58.79**	**67**	P	**P**	**17 50 30.1**	**-0.3**
	baz=320						
Q57A	**Strasburg**	**58.82**	**66**	P	**P**	**17 50 30.3**	**-0.1**
	baz=320,SNR=13						
M60A	**Port Jervis**	**58.94**	**61**	P	**P**	**17 50 31.0**	**-0.3**
	baz=320,SNR=8.9						
O59A	**Robesonia**	**58.95**	**63**	P	**P**	**17 50 31.5**	**+0.1**
	baz=320,SNR=13						
SEM	**Semipalatinsk**	**58.98**	**316**	*i* P	**P**	**17 50 30.0**	**-1.7**
	comp=Z,3.7nm,1.1s,baz=316						
SEM				*e*S	**S**	**17 58 37.8**	**-0.4**
	baz=316						
SEM	**Semipalatinsk**	**58.98**	**316**	*i* P	**P**	**17 50 30.0**	**-1.7**
SEM				*e*S	**S**	**17 58 37.7**	**-0.4**
SEM				pmax	pmax		
	comp=Z,4.0nm,1.1s						
U54A	**Nelsons Funny**	**58.99**	**70**	P	**P**	**17 50 31.9**	**+0.1**
	baz=320,SNR=11						
U54A	**Nelsons Funny**	**58.99**	**70**	P	**P**	**17 50 31.5**	**-0.3**
P58A	**Pank, Wackersv**	**59.03**	**64**	P	**P**	**17 50 31.6**	**-0.3**
	baz=320						
K62A	**Royalston**	**59.05**	**59**	P	**P**	**17 50 31.7**	**-0.3**
	baz=320						
N60A	**Cedar Hill Far**	**59.06**	**62**	P	**P**	**17 50 32.1**	**+0.1**
	baz=320,SNR=10						
MVL	**Millersville**	**59.11**	**63**	P	**P**	**17 50 31.0**	**-1.4**
V53A	**Saluda**	**59.12**	**71**	P	**P**	**17 50 31.7**	**-1.0**
BLA	**Blacksburg**	**59.19**	**68**	P	**P**	**17 50 33.0**	**-0.1**
	baz=320,SNR=12						
BLA	**Blacksburg**	**59.19**	**68**	P	**P**	**17 50 32.0**	**-1.1**
BLA				pmax	pmax		
	comp=Z,46nm,0.9s						
BLA	**Blacksburg**	**59.19**	**68**	P	**P**	**17 50 32.0**	**-1.1**
G65A	**Princeton**	**59.24**	**54**	P	**P**	**17 50 32.9**	**-0.4**
	baz=321						
LZH	**Lanzhou**	**59.25**	**290**	⇑P	**P**	**17 50 34.1**	**+0.4**
LZH				pP	sP	17 50 39.7	+3.0
LZH				sP	pP	17 50 43.0	+7.2
LZH				*e*S	**S**	**17 58 43.8**	**+1.9**
LZH				sS	sS	17 58 53.7	+8.2
LZH				pmax	pmax		
	comp=Z,40nm,1.3s						
LZH				pmax	pmax		
	comp=Z,210nm,7.2s						
LZH				LR	LR		
	comp=Z,2µm,14.6s						
LZH				LR	LR		
	comp=Z,2µm,15.3s						
LZH				LR	LR		
	comp=Z,1µm,17.0s						
Q58A	**Fox Den Farm,**	**59.25**	**65**	P	**P**	**17 50 33.3**	**-0.2**
	baz=320,SNR=19						
S56A	**Natural Bridge**	**59.27**	**67**	P	**P**	**17 50 33.6**	**0.0**
	baz=320,SNR=23						
R57A	**Stanardsville**	**59.32**	**66**	P	**P**	**17 50 33.8**	**-0.2**
	baz=320,SNR=9.6						
O60A	**Telford**	**59.33**	**63**	P	**P**	**17 50 33.7**	**-0.3**
	baz=320,SNR=7.2						
KURK	**Kurchatov**	**59.35**	**317**	*ce*P	**P**	**17 50 34.0**	**+0.1**
KURK				pmax	pmax		

	comp=Z,34nm,1.2s						
KURK	Kurchatov	59.35	317	P	P	17 50 33.8	-0.1
KURK				IAmb	IAmb	17 50 39.4	
	comp=Z,30nm,1.1s						
M61A	Granite Spring	59.36	61	P	P	17 50 33.6	-0.6
	baz=320						
P59A	Jarrettsville	59.37	64	P	P	17 50 33.9	-0.3
	baz=320						
ZSN	Zaisan	59.46	311	eP	P	17 50 34.1	-0.7
	comp=Z,13nm,0.9s,baz=311						
ZSN	Zaisan	59.46	311	eP	P	17 50 34.1	-0.7
ZSN				pmax	pmax		
	comp=Z,13nm,0.9s						
S57A	Dark Hollow, R	59.52	67	P	P	17 50 35.3	0.0
	baz=320,SNR=12						
T56A	Rocky Mt	59.52	68	P	P	17 50 34.8	-0.6
	baz=320,SNR=9.0						
PAL	Palisades	59.53	61	P	P	17 50 35.2	-0.2
	baz=320						
N61A	South Mountain	59.54	61	P	P	17 50 35.5	+0.1
	baz=320						
R58A	Rapidan	59.58	66	P	P	17 50 35.2	-0.5
	baz=320						
V55A	Taylorsville	59.82	70	P	P	17 50 37.2	-0.2
U56A	King	59.87	69	P	P	17 50 37.7	-0.1
	baz=320,SNR=9.9						
R58B	Mineral	59.90	66	P	P	17 50 37.8	-0.1
	baz=320,SNR=5.4						
O61A	Allentown	59.92	62	P	P	17 50 37.8	-0.2
	baz=321						
T57A	Hurt	59.95	68	P	P	17 50 38.0	-0.3
	baz=320,SNR=9.9						
SVE	Sverdlovsk	60.03	331	⇓eP	P	17 50 39.0	+0.4
SVE				pmax	pmax		
	comp=Z,42nm,0.9s						
SVE				MLR	MLR		
	comp=Z,692nm,19.0s						
S58A	Poland Farm, P	60.09	66	P	P	17 50 38.9	-0.3
	baz=321						
R59A	King George, V	60.11	65	P	P	17 50 39.2	-0.1
	baz=321						
M63A	Gales Ferry	60.12	59	P	P	17 50 38.8	-0.5
	baz=321						
V56A	Mocksville	60.22	69	P	P	17 50 40.0	-0.1
	baz=321,SNR=22						
DRLN	Deer Lake	60.24	45	P	P	17 50 39.3	-0.8
KMSC	Kings Mountain	60.30	71	P	P	17 50 40.2	-0.6
	baz=321,SNR=15						
KMSC	Kings Mountain	60.30	71	P	P	17 50 39.6	-1.1
U57A	Blanch	60.34	68	P	P	17 50 40.7	-0.2
	baz=321,SNR=43						
S59A	Mechanicsville	60.35	66	P	P	17 50 40.9	-0.1
	baz=321						
T58A	Grand View Acr	60.35	67	P	P	17 50 40.5	-0.6
	baz=321,SNR=14						
BRVK	Borovoye	60.38	323	ceP	P	17 50 40.6	-0.4
BRVK				pmax	pmax		
	comp=Z,32nm,0.9s						
BRVK	Borovoye	60.38	323	P	P	17 50 40.8	-0.2
BRVK				IAmb	IAmb	17 50 42.6	
	comp=Z,31nm,0.9s						
GOGA	Godfrey	60.51	73	P	P	17 50 41.0	-1.1
	baz=321						
HODGE	Hodges	60.52	72	P	P	17 50 41.3	-0.9
HODGE				IAmb	IAmb	17 50 42.7	
	comp=Z,19nm,0.7s						
V57A	Coltrane Farms	60.53	69	P	P	17 50 41.8	-0.5
	baz=321,SNR=10						
W56A	Indian Trail	60.70	70	P	P	17 50 42.9	-0.5
	baz=321,SNR=8.9						
S60A	Water View	60.72	65	P	P	17 50 43.5	0.0
	baz=321						
KLMR	Klimovskoe	60.73	344	eP	P	17 50 41.5	-1.7
KLMR				pmax	pmax		
	comp=Z,43nm,1.3s						
KLMR	Klimovskoe	60.73	344	eP	P	17 50 41.5	-1.7
KLMR				AMP		17 50 44.3	
	comp=Z,43nm,1.3s						
KLMR				LQ	LQ	18 12 31.1	
KLMR				LQ	LQ	18 12 31.1	
KLMR				LR	LR	18 16 50.1	
U58A	Oxford	60.77	68	P	P	17 50 43.4	-0.5
	baz=321						
T59A	Double "B" Far	60.83	66	P	P	17 50 44.2	-0.1
	baz=321						
ARU	Arti	60.93	332	LR	LR	18 20 16.6	
	comp=Z,573nm,18.8s,baz=22,slow=39						
ARU	Arti	60.93	332	c iP	P	17 50 44.2	-0.5
ARU						17 51 27.3	
ARU						17 52 56.2	
ARU				S	S	17 59 04.8	+2.2
ARU				SS	SS	18 02 57.9	-2.9
ARU				pmax	pmax		
	comp=Z,39nm,0.8s						
ARU				MLR	MLR		
	comp=Z,642nm,19.0s						
ARU	Arti	60.93	332	P	P	17 50 43.4	-1.3
ARU				IAmb	IAmb	17 50 46.1	
	comp=Z,40nm,0.9s						
V58A	Windy Hill, Pi	60.95	68	P	P	17 50 44.8	-0.3
	baz=321,SNR=18						
MK31	Makanchi Array	61.05	312	ceP	P	17 50 45.2	-0.5
MKAR	Makanchi Array	61.05	312	P	P	17 50 44.8	-0.9
	comp=Z,9.4nm,0.9s,baz=51,slow=5.3,SNR=51						
MKAR				PP	PP	17 53 00.9	+1.3
	comp=Z,2.3nm,0.8s,baz=41,slow=8.1,SNR=3.6						
MKAR				LR	LR	18 18 52.5	
	comp=Z,642nm,18.6s,baz=24,slow=38						
MKAR	Makanchi Array	61.05	312	i P	P	17 50 45.4	-0.3
MKAR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MKAR	Makanchi Array	61.05	312	P	P	17 50 44.0	-1.7
WMQ	Urumqi	61.10	306	eP	P	17 50 46.9	+0.8
WMQ				pP	sP	17 50 50.0	+0.8
WMQ				sP	pP	17 50 57.9	+10
WMQ				pmax	pmax		
	comp=Z,25nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,150nm,4.1s						
WMQ				LR	LR		
	comp=Z,1µm,18.1s						
WMQ				LR	LR		
	comp=Z,1µm,20.5s						
WMQ				LR	LR		
	comp=Z,370nm,23.1s						
KIRV	Kirov	61.11	338	ceP	P	17 50 44.6	-1.2
T60A	Surry	61.12	66	P	P	17 50 46.1	-0.1
	baz=321						
MAKZ	Makanchi	61.17	312	P	P	17 50 45.5	-1.0
MAKZ				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MAKZ	Makanchi	61.17	312	P	P	17 50 45.5	-1.0
U59A	Littleton	61.19	67	P	P	17 50 46.8	0.0
	baz=321						
V59A	Middlesex	61.42	68	P	P	17 50 48.4	+0.1
	baz=321,SNR=14						
U60A	Pendleton	61.42	67	P	P	17 50 48.2	-0.1
	baz=321						
W58A	Raeford	61.48	69	P	P	17 50 48.8	+0.1
	baz=321,SNR=16						
FIA1	FINESS Array S	61.68	352	P	P	17 50 49.3	-0.4
FIA1				IAmb	IAmb	17 50 50.4	
	comp=Z,30nm,1.1s						
FINES	FINESS Array B	61.68	352	P	P	17 50 49.0	-0.7
	comp=Z,21nm,0.9s,baz=35,slow=7.0,SNR=23						
FINES				LR	LR	18 20 36.0	
	comp=Z,352nm,18.1s,baz=18,slow=39						
FINES	FINESS Array B	61.68	352	i P	P	17 50 49.5	-0.2
FINES				pmax	pmax		
	comp=Z,21nm,0.9s						
FINES	FINESS Array B	61.68	352	P	P	17 50 49.4	-0.2
W59A	Clinton	61.78	68	P	P	17 50 50.8	+0.1
	baz=321						
U61A	Possum Corner	61.89	66	P	P	17 50 51.8	+0.4
	baz=321						
V60A	Jim Taylor Roa	61.92	67	P	P	17 50 51.4	-0.2
	baz=321						
BRZS	Berezniki	62.13	320	eP	P	17 50 52.6	-0.4
	comp=Z,5.4nm,1.0s,baz=320						
BRZS				eS	S	17 59 17.7	-0.4
	baz=320						
BRZS	Berezniki	62.13	320	eP	P	17 50 52.5	-0.4
BRZS				eS	S	17 59 17.7	-0.4
BRZS				pmax	pmax		
	comp=Z,5.0nm,1.0s						
X59A	McDuffie Farm,	62.16	69	P	P	17 50 53.0	-0.3
	baz=322						
W60A	Pink Hill	62.24	68	P	P	17 50 54.2	+0.3
	baz=322,SNR=6.5						
NC204	NORSAR Array S	62.45	0	P	P	17 50 54.5	-0.5
X60A	Albert Glenn T	62.48	68	P	P	17 50 55.4	0.0
	baz=322,SNR=7.7						
NHSC	New Hope	62.48	71	P	P	17 50 55.9	+0.4
	baz=322,SNR=13						
W61A	Ground Anchor	62.51	67	P	P	17 50 56.1	+0.4
	baz=322						
NB2	NORSAR Subarra	62.69	360	P	P	17 50 56.3	-0.2
	comp=Z,3.3nm,0.7s,baz=359,slow=6.5						
NOA	NORSAR Array B	62.69	360	P	P	17 50 55.9	-0.6
	comp=Z,7.6nm,0.8s,baz=359,slow=6.6,SNR=19						
NOA				LR	LR	18 19 08.0	
	comp=Z,288nm,18.4s,baz=355,slow=37						
Z59A	Georgetown, SC	62.85	70	P	P	17 50 58.2	+0.3
	baz=322						
CD2	Chengdu	63.30	286	⇑eP	P	17 51 01.8	+0.7
CD2				S	S	17 59 32.1	-1.2
CD2				pmax	pmax		
	comp=Z,110nm,0.8s						
CD2				LR	LR		
	comp=Z,690nm,13.2s						
CD2				LR	LR		
	comp=Z,660nm,14.7s						
CD2				LR	LR		
	comp=Z,810nm,13.7s						
HFS	Hagfors	63.57	358	LR	LR	18 19 14.0	
	comp=Z,276nm,18.3s,baz=18,slow=37						
UPP	Uppsala	63.75	356	eP	P	17 51 03.7	+0.2
KONO	Kongsberg	64.08	1	ceP	P	17 51 05.2	-0.4
KONO				pmax	pmax		
	comp=Z,34nm,1.3s						
TDK	Taldyqorghan	64.09	313	eP	P	17 51 05.3	-0.8
	comp=Z,18nm,1.1s,baz=313						
TDK				LR	LR	18 20 01.6	
	comp=Z,663nm,13.7s,baz=313						
TDK	Taldyqorghan	64.09	313	eP	P	17 51 05.2	-0.8
TDK				pmax	pmax		
	comp=Z,19nm,1.1s						
TDK				MLR	MLR		
	comp=Z,663nm,14.0s						
VSU	Vasula	64.58	351	P	P	17 51 10.2	+1.3
VSU				pmax	pmax		
	comp=Z,167nm,0.9s						
SHLS	Shalkode	65.18	311	eP	P	17 51 11.5	-1.9
	comp=Z,29nm,1.1s,baz=311						
SHLS	Shalkode	65.18	311	eP	P	17 51 11.4	-1.9
SHLS				pmax	pmax		
	comp=Z,29nm,1.1s						
KPKS	Kokpek	65.24	312	eP	P	17 51 13.1	-0.6
	comp=Z,13nm,0.9s,baz=312						
KPKS	Kokpek	65.24	312	eP	P	17 51 13.0	-0.6
KPKS				pmax	pmax		
	comp=Z,13nm,0.9s						
GYA	Guiyang	65.25	281	⇑P	P	17 51 14.7	+0.8
GYA				pP	sP	17 51 20.0	+3.0
GYA				PP	PP	17 53 41.0	+3.9
GYA				S	S	18 00 02.8	+5.1
GYA				pmax	pmax		
	comp=Z,44nm,1.0s						
GYA				pmax	pmax		
	comp=Z,300nm,3.5s						
GYA				LR	LR		
	comp=Z,460nm,16.8s						
GYA				LR	LR		
	comp=Z,710nm,17.4s						
GYA				LR	LR		
	comp=Z,700nm,16.4s						
SNART	Snartemo	65.36	2	eP	P	17 51 15.0	+1.0
CHKK	Chushkaly	65.61	313	eP	P	17 51 15.6	-0.3
	baz=314						
CHKK	Chushkaly	65.61	313	eP	P	17 51 15.6	-0.3
SATY	Saty	65.69	312	eP	P	17 51 16.3	-0.3
	comp=Z,5.0nm,1.1s,baz=312						
SATY				LR	LR	18 20 58.6	
	comp=Z,203nm,13.2s,baz=312						
SATY	Saty	65.69	312	eP	P	17 51 16.3	-0.3
SATY				pmax	pmax		
	comp=Z,5.0nm,1.1s						
SATY				MLR	MLR		
	comp=Z,203nm,13.0s						
BTLS	Baital	65.77	316	eP	P	17 51 16.2	-0.7
	comp=Z,6.8nm,1.0s,baz=316						
BTLS	Baital	65.77	316	eP	P	17 51 16.2	-0.7
BTLS				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KUU	Kurty	65.84	314	eP	P	17 51 16.0	-1.4
	comp=Z,6.9nm,0.9s,baz=314						
KUU	Kurty	65.84	314	eP	P	17 51 16.0	-1.4
KUU				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MOS	Moscow	65.93	344	eP	P	17 51 16.4	-1.3
MOS				MLR	MLR		
	comp=Z,700nm,23.0s						
MDOK	Medeo	66.16	313	eP	P	17 51 18.9	-0.8
	baz=313						
MDOK				LR	LR	18 21 21.9	
	comp=Z,419nm,14.0s,baz=313						
MDOK	Medeo	66.16	313	eP	P	17 51 18.8	-0.8
MDOK				MLR	MLR		
	comp=Z,419nm,14.0s						
AAA	Alma-Ata	66.18	313	eP	P	17 51 19.1	-0.6
	comp=Z,7.9nm,0.6s,baz=313						
AAA				LR	LR	18 21 31.8	
	comp=Z,310nm,13.3s,baz=313						
AAA	Alma-Ata	66.18	313	eP	P	17 51 19.1	-0.6
AAA				pmax	pmax		
	comp=Z,8.0nm,0.6s						
AAA				MLR	MLR		
	comp=Z,310nm,13.0s						
AKTO	Aktyubinsk	66.43	329	LR	LR	18 23 07.4	
	comp=Z,441nm,19.2s,baz=28,slow=38						
OBN	Obninsk	66.69	344	⇑eP	P	17 51 21.8	-0.8
OBN				e		17 51 50.6	
OBN				e		17 53 50.4	
OBN				eS	S	18 00 21.2	+7.0
OBN				pmax	pmax		
	comp=Z,26nm,0.7s						
OBN				MLR	MLR		
	comp=Z,598nm,19.0s						
SGDS	Sogindy	66.88	315	eP	P	17 51 23.8	-0.4
	comp=Z,3.4nm,0.8s,baz=315						
SGDS	Sogindy	66.88	315	eP	P	17 51 23.8	-0.4
SGDS				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ABKAR	Akbulak array	66.93	327	P	P	17 51 24.0	-0.3
ABKAR	Akbulak array	66.93	327	P	P	17 51 24.0	-0.3
ABKAR				IAmb	IAmb	17 51 26.2	
	comp=Z,35nm,0.8s						
TKM2	Tokmak 2	66.95	314	P	P	17 51 25.0	+0.2
	SNR=13						
USP	Ospenovka	67.09	315	P	P	17 51 25.7	+0.2
	SNR=24						
CMIG	Matias Romero	67.20	93	LR	LR	18 18 37.5	
	comp=Z,194nm,21.0s,baz=302,slow=34						
CHMS	Chumysh	67.22	314	P	P	17 51 26.9	+0.6
	SNR=20						
BELG	Belogornoye	67.24	337	LR	LR	18 23 50.3	
	comp=Z,789nm,19.6s,baz=1.9,slow=39						
BELG	Belogornoye	67.24	337	c iP	P	17 51 26.0	-0.2
BELG				pmax	pmax		
	comp=Z,15nm,0.9s						
MUD	Monsted U'grnd	67.28	1	i P	P	17 51 27.0	+0.7
MUD	Monsted U'grnd	67.28	1	eP	P	17 51 27.0	+0.7
MUD	Monsted U'grnd	67.28	1	eP	P	17 51 27.1	+0.7
KBK	Karagaybulak	67.43	314	P	P	17 51 28.4	+0.6
	SNR=16						
AAK	Ala-Archa	67.62	314	P	P	17 51 29.5	+0.5
	SNR=17						
AAK	Ala-Archa	67.62	314	ceP	P	17 51 29.5	+0.5
AAK				pmax	pmax		
	comp=Z,72nm,1.0s						
AAK	Ala-Archa	67.62	314	P	P	17 51 29.3	+0.3
AAK				IAmb	IAmb	17 51 31.1	
	comp=Z,21nm,0.9s						
IDID	Didziasalis	67.69	350	eP	P	17 51 29.6	+0.6
EKA	Eskdalemuir Ar	67.82	9	LR	LR	18 18 55.8	
	comp=Z,237nm,21.9s,baz=330,slow=34						
EKA	Eskdalemuir Ar	67.82	9	P	P	17 51 28.8	-1.0
EKA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
EKS2	Erkin-Say	67.88	315	P	P	17 51 31.3	+0.7
	SNR=31						
UCH	Uchtor	67.96	314	P	P	17 51 32.6	+1.1
	SNR=8.1						
NACGM	Naroch	68.09	350	i P	P	17 51 31.4	-0.1
NACGM				i P	P	17 51 31.4	-0.1
NACGM				i P	P	17 51 31.4	-0.1
NACGM				i PP	PP	17 54 01.8	+0.8
NACGM				i PPP	PPP	17 55 40.5	
NACGM				i S	S	18 00 29.8	-1.3
NACGM				i ScS	ScS	18 02 19.0	+48
NACGM				i SS	SS	18 05 12.0	+20
NACGM				i SSS	SSS	18 08 06.5	
NACGM				i LQ	LQ	18 14 13.0	
NACGM				i LR	LR	18 18 14.9	
AML	Almayashu	68.37	315	P	P	17 51 34.7	+0.7
	SNR=21						
MNK	Minsk	68.38	349	i P	P	17 51 29.9	-3.4
	comp=E,2.0nm,1.2s						
MNK				i P	P	17 51 29.9	-3.4
	comp=N,26nm,1.0s						
MNK				i P	P	17 51 29.9	-3.4
	comp=Z,39nm,0.8s						
MNK				i PcP	PcP	17 51 55.4	-3.3
MNK				i PP	PP	17 54 00.2	-3.2
MNK				i PPP	PPP	17 55 38.6	
MNK				i S	S	18 00 29.7	-4.8
MNK				i ScS	SKiKP	18 01 29.2	+2.0
MNK				i SS	SS	18 04 59.6	+3.1
MNK				i SSS	SSS	18 08 10.9	
MNK				i LR	LR	18 17 51.4	
MNK				i LRM	MLR	18 23 58.0	
	comp=E,40nm,17.4s						
MNK				i LRM	MLR	18 23 58.0	
	comp=N,294nm,15.2s						
MNK				i LRM	MLR	18 24 45.0	
	comp=Z,343nm,21.0s						
KMI	Kunming	68.43	283	⇓P	P	17 51 34.7	+0.3
KMI				pP	sP	17 51 42.5	+5.1
KMI				sP	pP	17 51 45.6	+9.0
KMI				S	S	18 00 32.7	-3.7
KMI				pmax	pmax		
	comp=Z,24nm,1.0s						
KMI				pmax	pmax		
	comp=Z,240nm,5.3s						
KMI				LR	LR		
	comp=Z,400nm,16.9s						
KMI				LR	LR		
	comp=Z,590nm,17.0s						
KMI				LR	LR		
	comp=Z,380nm,18.7s						
DZA	Taraz	68.63	317	eP	P	17 51 35.1	0.0
	comp=Z,5.5nm,0.6s,baz=317						
DZA	Taraz	68.63	317	eP	P	17 51 35.1	0.0
DZA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
LPSR	Galich'ya Gora	68.74	342	eP	P	17 51 34.6	-1.0
LPSR				pmax	pmax		
	comp=Z,30nm,0.9s						
KK31	Karatay Array	68.76	317	P	P	17 51 36.2	+0.3
KK31				pmax	pmax		
	comp=Z,34nm,1.0s						
KK31	Karatay Array	68.76	317	P	P	17 51 36.2	+0.3
KK31				IAmb	IAmb	17 51 38.0	
	comp=Z,34nm,0.9s						
KKAR	Karatay Array	68.76	317	P	P	17 51 35.6	-0.4
KKAR	Karatay Array	68.76	317	P	P	17 51 35.5	-0.4
SUW	Suwalki	69.28	352	eP	P	17 51 38.6	-0.3
SUW	Suwalki	69.28	352	eP	P	17 51 38.9	0.0
QIZ	Qiongzhong	69.45	273	P	P	17 51 40.1	-0.4
QIZ				S	S	18 00 47.0	-1.1
QIZ				LR	LR		
	comp=Z,430nm,16.7s						
QIZ				LR	LR		
	comp=Z,630nm,16.2s						
QIZ				LR	LR		
	comp=Z,350nm,17.2s						
TAOE	Nuku Hiva Isla	69.46	149	eLR	LR	18 12 32.7	
	comp=Z,1µm,28.7s						
VRH	Novokhopyorsk	69.58	340	eP	P	17 51 39.3	-1.5
VRH				pmax	pmax		
	comp=Z,30nm,0.6s						
KSH	Kashi	69.66	312	P	P	17 51 44.7	+3.0
KSH				pP	sP	17 51 52.5	+7.8
KSH				PcP	PcP	17 52 05.9	+1.3
KSH				S	S	18 00 49.7	-0.7
KSH				pmax	pmax		
	comp=Z,210nm,6.4s						
KSH				LR	LR		
	comp=Z,930nm,14.5s						
KSH				LR	LR		
	comp=Z,5µm,21.5s						
KSH				LR	LR		
	comp=Z,2µm,29.2s						
IUG	Iuzhnay	69.76	317	eP	P	17 51 42.1	-0.2
	comp=Z,16nm,0.9s,baz=317						
IUG	Iuzhnay	69.76	317	eP	P	17 51 42.0	-0.2
IUG				pmax	pmax		
	comp=Z,16nm,0.9s						
BSEG	Bad Segeberg	69.81	0	eP	P	17 51 42.7	+0.5
	comp=Z,42nm,1.1s,baz=2.1,slow=6.1						
VSR	Storozhevoye	70.03	342	eP	P	17 51 42.2	-1.4
VSR				pmax	pmax		
	comp=Z,30nm,0.8s						
LSA	Lhasa	70.79	295	P	P	17 51 49.7	+0.5
RUE	Ruedersdorf	71.24	358	eP	P	17 51 51.0	0.0
	comp=Z,72nm,1.5s,baz=2.1,slow=6.1						
IBBN	Ibbenburen	71.41	2	eP	P	17 51 52.1	+0.1
	comp=Z,88nm,1.7s,baz=2.1,slow=6.1						
FLTG	Flechtingen	71.42	360	eP	P	17 51 51.9	-0.1
	comp=Z,23nm,1.3s,baz=2.1,slow=6.1						
JAY	Jayapura	71.52	234	LR	LR	18 19 36.2	
	comp=Z,113nm,21.4s,baz=27,slow=33						
BEL	Belsk	71.61	354	eP	P	17 51 53.6	+0.4
ASSE	Asse, Remlinge	71.62	0	eP	P	17 51 54.2	+1.0
	comp=Z,31nm,1.3s,baz=2.1,slow=6.1						
CLZ	Clausthal	71.91	0	eP	P	17 51 56.0	+0.9
	comp=Z,36nm,0.9s,baz=2.1,slow=6.1						
AKASG	Malin Array Be	71.98	348	P	P	17 51 54.0	-1.4
	comp=Z,39nm,0.7s,baz=15,slow=6.0,SNR=104						
AKASG				LR	LR	18 27 40.4	
	comp=Z,362nm,18.7s,baz=345,slow=39						
AKASG	Malin Array Be	71.98	348	P	P	17 51 53.9	-1.6
AKASG				pmax	pmax		
	comp=Z,6.0nm,0.7s						
AKASG	Malin Array Be	71.98	348	P	P	17 51 53.9	-1.6
AKBB	Malin Array Si	71.98	348	ceP	P	17 51 53.7	-1.8
AKBB	Malin Array Si	71.98	348	P	P	17 51 54.1	-1.4
AKBB				IAmb	IAmb	17 51 56.0	
	comp=Z,41nm,0.8s						
GTTG	Gottingen	72.20	1	eP	P	17 51 57.1	+0.3
	comp=Z,44nm,1.0s,baz=2.1,slow=6.1						
CLL	Collm	72.43	359	i P	P	17 51 57.9	-0.2
	comp=Z,18nm,0.9s						
CLL				i sP	sP	17 52 01.6	+0.4
	comp=Z,23nm,1.1s						
CLL				eS	S	18 01 23.0	+1.2
CLL				eSS	SS	18 06 05.0	+6.2
CLL				e		18 09 55.0	
CLL				Lm	MLR	18 28 00.0	
	comp=N,200nm,21.2s						
CLL				Lm	MLR	18 28 00.0	
	comp=E,300nm,19.4s						
CLL				Lm	MLR	18 28 00.0	
	comp=Z,400nm,21.0s						
CLL				Lm	MLR	19 48 00.0	
	comp=Z,100nm,18.4s						
CLL	Collm	72.43	359	i P	P	17 51 57.9	-0.2
CLL				i		17 52 01.6	
CLL				eS	S	18 01 23.0	+1.2
CLL				pmax	pmax		
	comp=Z,18nm,0.9s						
CLL				MLR	MLR		
	comp=Z,400nm,21.0s						
CLL	Collm	72.43	359	eP	P	17 51 58.3	+0.2
	comp=Z,23nm,1.1s,baz=2.1,slow=6.1						
NEUB	Neuenburg	72.54	359	eP	P	17 51 59.3	+0.5
	comp=Z,42nm,1.2s,baz=2.1,slow=6.1						
KSP	Ksiaz	72.82	356	eP	P	17 52 00.8	+0.4
KSP	Ksiaz	72.82	356	P	P	17 52 00.9	+0.4
BRG	Berggiesshubel	72.85	358	P	P	17 52 01.0	+0.4
BRG	Berggiesshubel	72.85	358	i P	P	17 52 00.3	-0.3
BRG				Amp		17 52 02.4	
	comp=Z,15nm,1.0s						
BRG	Berggiesshubel	72.85	358	eP	P	17 52 00.3	-0.3
	comp=Z,15nm,1.0s,baz=2.1,slow=6.1						
SRPI	Serui, Papua	73.00	239	P	P	17 52 03.2	+1.2
	comp=Z,2µmcomp=Z,40nm,0.9s						
MEM	Membach	73.06	3	dP	P	17 52 01.5	-0.4

BSTI	Sart Tilman	73.07	4	dP	P	17 52 01.7	-0.2
CHVC	Chvalec	73.08	357	eP	P	17 52 01.7	-0.4
BTNL	Ternell	73.09	3	dP	P	17 52 02.4	+0.3
MOX	Moxa	73.10	360	eP	P	17 52 02.5	+0.4
	comp=Z,57nm,1.6s,baz=2.1,slow=6.1						
OSTC	Ostas	73.11	356	eP	P	17 52 02.0	-0.2
UPC	Upice	73.16	357	eP	P	17 52 02.6	+0.1
UPC	Upice	73.16	357	eP	P	17 52 02.6	+0.1
AHRW	Bad Neuenahr-A	73.16	3	eP	P	17 52 03.1	+0.6
	baz=2.1,slow=6.1						
PVCC	Panska Ves	73.18	358	eP	P	17 52 03.5	+0.9
PVCC	Panska Ves	73.18	358	eP	P	17 52 03.5	+0.9
BGES	Gesves	73.26	4	κP	P	17 52 03.1	+0.1
BGES				dPcP	PcP	17 52 20.0	+0.5
PLN	Plauen	73.26	359	eP	P	17 52 03.5	+0.4
	comp=Z,47nm,1.8s,baz=2.1,slow=6.1						
OJC	Ojcow	73.28	354	eP	P	17 52 03.8	+0.5
DPC	Dobruska-Polom	73.31	356	eP	P	17 52 03.7	+0.3
DPC	Dobruska-Polom	73.31	356	eP	P	17 52 03.7	+0.3
BMRD	Maredsous	73.33	4	κP	P	17 52 03.7	+0.2
BMRD				dPcP	PcP	17 52 19.8	0.0
TANN	Tannenbergstha	73.33	359	eP	P	17 52 03.8	+0.3
	comp=Z,58nm,1.9s,baz=2.1,slow=6.1						
LVV	L'vov	73.38	351	eP	P	17 52 03.6	-0.2
LVV				e		17 52 07.4	
LVV				e		17 54 53.5	
LVV				ePPP	PPP	17 56 28.3	
LVV				eS	S	18 01 31.4	-1.3
LVV				ePS	PnS	18 02 09.4	+6.0
LVV				eSSS	SSS	18 09 33.0	
WERN	Wernitzgruen	73.46	359	eP	P	17 52 04.9	+0.6
	baz=2.1,slow=6.1						
TNS	Taunus Mts	73.51	2	eP	P	17 52 05.2	+0.5
	comp=Z,28nm,1.2s,baz=2.1,slow=6.1						
NKC	Novy Kostel	73.51	359	eP	P	17 52 04.6	0.0
NKC	Novy Kostel	73.51	359	eP	P	17 52 04.6	0.0
DOU	Dourbes	73.53	4	κP	P	17 52 04.9	+0.3
GIVF	Givet	73.53	4	eP	P	17 52 03.9	-0.8
GIVF				pmax	pmax		
	comp=Z,29nm,1.0s						
KRLC	Kraliky	73.56	356	eP	P	17 52 04.7	-0.3
KRLC	Kraliky	73.56	356	eP	P	17 52 04.7	-0.3
KWP	Kalwaria Pacla	73.67	352	eP	P	17 52 05.3	-0.2
KWP	Kalwaria Pacla	73.67	352	P	P	17 52 05.3	-0.2
KWP				pmax	pmax		
	comp=Z,66nm,0.9s						
KWP	Kalwaria Pacla	73.67	352	P	P	17 52 05.3	-0.2
PRU	Pruhonice	73.72	358	eP	P	17 52 05.9	+0.1
PRU	Pruhonice	73.72	358	eP	P	17 52 05.9	+0.1
MORC	Moravsky Berou	73.83	356	⇓P	P	17 52 06.4	-0.1
MORC	Moravsky Berou	73.83	356	eP	P	17 52 06.7	+0.2
MORC	Moravsky Berou	73.83	356	P	P	17 52 07.1	+0.6
MORC				pmax	pmax		
	comp=Z,15nm,1.1s						
ROTZ	Rotzenmuhle	73.98	359	eP	P	17 52 07.5	+0.2
	comp=Z,46nm,1.8s,baz=2.1,slow=6.1						
WLF	Walferdange	74.01	3	κP	P	17 52 07.8	+0.3
PBCC	Pribram	74.03	358	eP	P	17 52 07.5	-0.2
NIE	Niedzica	74.05	354	eP	P	17 52 08.6	+0.8
GRF	Grafenberg Arr	74.06	360	eP	P	17 52 08.6	+0.8
	comp=Z,77nm,1.6s,baz=2.1,slow=6.1						
VRAC	Vranov	74.34	356	⇓P	P	17 52 10.0	+0.5
VRAC	Vranov	74.34	356	eP	P	17 52 09.3	-0.2
VRAC	Vranov	74.34	356	P	P	17 52 09.9	+0.5
LANS	Liptovska Anna	74.36	354	eP	P	17 52 11.0	+1.4
LANS				pmax	pmax		
	comp=Z,16nm,1.0s						
LANS	Liptovska Anna	74.36	354	eP	P	17 52 11.0	+1.4
KOLS	Kolonicke sedl	74.40	352	eP	P	17 52 10.5	+0.7
KOLS				pmax	pmax		
	comp=Z,19nm,0.8s						
KOLS	Kolonicke sedl	74.40	352	eP	P	17 52 10.5	+0.7
TAPN	Taplejung	74.44	296	eP	P	17 52 10.7	0.0
	comp=Z,95nm,1.1s						
CRVS	Cervenica-Dubn	74.49	353	eP	P	17 52 11.3	+1.0
CRVS				pmax	pmax		
	comp=Z,22nm,0.8s						
CRVS	Cervenica-Dubn	74.49	353	eP	P	17 52 11.3	+1.0
SWI	Sorong	74.54	244	P	P	17 52 11.2	+0.2
	comp=Z,864nmcomp=Z,86nm,1.1s						
SIJI	Sorong	74.54	244	P	P	17 52 11.0	0.0
	comp=Z,50nm,0.8s,baz=24,slow=6.9,SNR=28						
SIJI				LR	LR	18 17 36.3	
	comp=Z,84nm,21.3s,baz=66,slow=30						
FLN	La Foliniere	74.56	8	eP	P	17 52 09.6	-1.1
FLN				pmax	pmax		
	comp=Z,67nm,1.4s						
KRUC	Moravsky	74.59	356	eP	P	17 52 11.0	+0.1
KHC	Kasperske Hory	74.60	358	ceP	P	17 52 11.3	+0.3
KHC				pmax	pmax		
	comp=Z,48nm,1.0s						
KHC	Kasperske Hory	74.60	358	eP	P	17 52 11.1	+0.1
SORM	Soroca	74.61	348	⇓P	P	17 52 10.1	-0.9
SORM	Soroca	74.61	348	P	P	17 52 10.1	-0.9
UZH	Uzhgorod	74.70	352	eP	P	17 52 10.4	-1.1
UZH				i		17 52 16.8	
UZH				i		17 52 19.7	
UZH				i		17 52 29.0	
UZH				i		17 55 00.0	
JAVC	Velka Javorina	74.74	355	eP	P	17 52 13.0	+1.1
LDF	La Druitiere	74.75	8	eP	P	17 52 10.5	-1.4
LDF				pmax	pmax		
	comp=Z,11nm,0.7s						
GUN	Gumba	74.88	298	eP	P	17 52 13.4	+0.1
	comp=Z,78nm,0.8s						
GEC2	GERESS Array S	74.88	358	eP	P	17 52 13.0	+0.2
	comp=Z,24nm,1.3s,baz=2.1,slow=6.1						
GERES	GERESS Array B	74.88	358	P	P	17 52 12.4	-0.4
	comp=Z,6.6nm,0.9s,baz=358,slow=4.0,SNR=28						
CKRC	Cesky Krumlov	74.89	358	eP	P	17 52 12.2	-0.5
GRR	Gorron	74.90	8	eP	P	17 52 11.7	-1.0
GRR				pmax	pmax		
	comp=Z,123nm,1.8s						
KECS	Kecovo	74.97	353	eP	P	17 52 14.0	+0.9
KECS				pmax	pmax		
	comp=Z,13nm,1.0s						
KECS	Kecovo	74.97	353	eP	P	17 52 14.0	+0.9
STU	Stuttgart	74.97	1	P	P	17 52 14.4	+1.3
STU				pmax	pmax		
	comp=Z,30nm,0.9s						
PMG	Port Moresby	75.02	225	P	P	17 52 13.9	+0.2
	comp=Z,22nm,0.9s,baz=46,slow=5.8,SNR=4.8						
PMG	Port Moresby	75.02	225	ceP	P	17 52 13.7	0.0
PMG				pmax	pmax		
	comp=Z,42nm,1.3s						
SMOL	Smolenice	75.10	356	eP	P	17 52 15.1	+1.2
SMOL				pmax	pmax		
	comp=Z,11nm,0.9s						
SMOL	Smolenice	75.10	356	eP	P	17 52 15.1	+1.2
GOF	Gofitskoye	75.17	337	⇓iP	P	17 52 15.2	+0.9
GOF				pmax	pmax		
	comp=Z,142nm,0.9s						
MODS	Modra-Piesok	75.25	356	eP	P	17 52 14.9	+0.2
MODS				pmax	pmax		
	comp=Z,28nm,1.2s						
MODS	Modra-Piesok	75.25	356	eP	P	17 52 14.9	+0.2
KKN	Kakani	75.27	298	eP	P	17 52 15.3	-0.1
	comp=Z,109nm,1.3s						
CDF	Champ du Feu	75.30	3	eP	P	17 52 14.3	-0.8
CDF				pmax	pmax		
	comp=Z,18nm,1.2s						
PKI	Pulchoki	75.39	298	eP	P	17 52 16.0	-0.3
	comp=Z,123nm,1.2s						
PKIN	Phulchoki	75.39	298	eP	P	17 52 15.7	-0.5
	comp=Z,61nm,0.9s						
BUR08	Bucovina Ar. S	75.43	350	P	P	17 52 15.3	-0.6
ZST	Bratislava	75.43	356	eP	P	17 52 17.0	+1.2
ZST				pmax	pmax		
	comp=Z,67nm,1.0s						
ZST	Bratislava	75.43	356	eP	P	17 52 17.0	+1.2
BURAR	Bucovina Array	75.46	350	⇓P	P	17 52 15.2	-0.9
BURAR	Bucovina Array	75.46	350	P	P	17 52 15.2	-0.9
BURAR	Bucovina Array	75.46	350	P	P	17 52 15.5	-0.6
DMN	Daman	75.50	298	eP	P	17 52 16.9	+0.1
	comp=Z,76nm,1.0s						
DANN	Dangsing	75.54	300	eP	P	17 52 17.3	+0.2
	comp=Z,268nm,0.8s						
PSZ	Piszkesteto	75.57	354	⇓P	P	17 52 17.7	+1.0
PSZ	Piszkesteto	75.57	354	P	P	17 52 17.9	+1.2
PSZ				pmax	pmax		
	comp=Z,24nm,1.1s						
CHTO	Chiang Mai	75.59	282	P	P	17 52 17.6	+0.5
CHTO				pmax	pmax		
	comp=Z,8.0nm,1.2s						
HAU	Haudompre	75.68	3	eP	P	17 52 16.4	-0.8
HAU				pmax	pmax		
	comp=Z,15nm,0.8s						
KIS	Kishinev	75.68	347	eP	P	17 52 15.0	-2.2
KIS				eS	S	18 01 55.0	-3.5
KIS	Kishinev	75.68	347	eP	P	17 52 15.0	-2.2
KIS				eS	S	18 01 55.0	-3.5
KIS				ePS	PnS	18 02 53.0	+20
PPT	Papeete	75.69	161	LR	LR	18 17 42.3	
	comp=Z,378nm,20.0s,baz=350,slow=30						
PPT2	Papeete2	75.71	161	eS	S	18 02 04.4	+5.0
	comp=Z,252nm,30.5s						
PPT2	Papeete2	75.71	161	eLR	LR	18 15 28.9	
	comp=Z,2µm,28.2s,baz=349						
CONA	Conrad Observa	75.74	357	eP	P	17 52 17.9	+0.2
	comp=Z,16nm,0.8s,SNR=11						
MILM	Milestii Mici	75.76	347	⇓P	P	17 52 17.0	-0.6
SRO	Srobarova	75.76	355	eP	P	17 52 18.9	+1.3
SRO				pmax	pmax		
	comp=Z,15nm,1.0s						
SRO	Srobarova	75.76	355	eP	P	17 52 18.9	+1.3
NIL	Nilore	75.80	310	P	P	17 52 18.3	+0.1
NIL				pmax	pmax		
	comp=Z,45nm,0.9s						
NIL	Nilore	75.80	310	P	P	17 52 18.3	+0.1
NIL				IAmb	IAmb	17 52 20.2	
	comp=Z,45nm,0.9s						
SRO2	Moca	75.80	355	eP	P	17 52 18.2	+0.3
SRO2				pmax	pmax		
	comp=Z,20nm,1.0s						
SRO2	Moca	75.80	355	eP	P	17 52 18.2	+0.3
FAKI	Fak Fak	75.83	242	P	P	17 52 19.3	+0.8
	comp=Z,68nm,1.0s						
MOA	Molln	75.87	358	eP	P	17 52 19.3	+1.0
	comp=Z,12nm,1.1s						
CMAR	Chiang Mai Arr	75.88	282	P	P	17 52 18.9	+0.1
	comp=Z,18nm,0.9s,baz=18,slow=6.1,SNR=96						
CMAR				LR	LR	18 29 14.7	
	comp=Z,398nm,18.1s,baz=67,slow=38						
CMAR	Chiang Mai Arr	75.88	282	P	P	17 52 18.7	-0.1
CMAR	Chiang Mai Arr	75.88	282	P	P	17 52 18.7	-0.1
HINF	Hinteralfeld	75.88	3	eP	P	17 52 17.5	-0.9
SOP	Sopron	75.96	356	P	P	17 52 20.4	+1.6
SOP				pmax	pmax		
	comp=Z,20nm,1.4s						
BIZ	Bicaz	76.04	349	⇓P	P	17 52 18.9	-0.4
BUD	Budapest	76.05	354	P	P	17 52 22.4	+3.1
BUD				pmax	pmax		
	comp=Z,26nm,1.1s						
ARCR	ARCALIA	76.06	351	⇑P	P	17 52 19.9	+0.5
MAK	Makhachkala	76.12	333	eP	P	17 52 17.0	-2.8
MAK				ePPP	PPP	17 57 00.9	
MAK				eS	S	18 02 02.3	-1.2
MAK				MLR	MLR		
	comp=Z,927nm,19.0s						
VASR	Vaslui	76.15	348	⇓P	P	17 52 19.6	-0.3
RETA	Reutte	76.27	0	eP	P	17 52 21.1	+0.5
	comp=Z,11nm,0.9s,SNR=5.5						
KVAR	Kislovodsk Arr	76.30	337	LR	LR	18 28 53.0	
	comp=Z,788nm,20.0s,baz=270,slow=38						
KIV	Kislovodsk	76.30	337	⇑P	P	17 52 21.4	+0.5
KIV	Kislovodsk	76.30	337	eP	P	17 52 20.0	-0.9
KIV				eS	S	18 02 05.3	-0.4
KIV				eSS	SS	18 06 59.2	+1.0
KIV				eSSS	SSS	18 10 22.9	
KIV				pmax	pmax		
	comp=Z,87nm,1.1s						
KIV				pmax	pmax		
	comp=Z,174nm,4.0s						
KIV				MLR	MLR		
	comp=Z,1µm,18.0s						
GROC	Groznyy	76.31	335	eP	P	17 52 21.4	+0.6
GROC				e		17 52 31.1	
GROC				e		17 55 15.0	
GROC				pmax	pmax		
	comp=Z,34nm,1.2s						
LOR	Lormes	76.32	5	eP	P	17 52 20.0	-0.9
LOR				pmax	pmax		
	comp=Z,19nm,0.8s						
TESR	Tescani	76.40	349	⇓P	P	17 52 20.5	-0.8
MOTA	Moosalm	76.41	360	i P	P	17 52 21.2	-0.3
	comp=Z,17nm,0.9s,SNR=7.2						
WATA	Walderalm	76.42	360	eP	P	17 52 21.8	+0.2
	comp=Z,16nm,1.0s,SNR=8.8						
ARSA	Arzberg	76.43	357	eP	P	17 52 22.2	+0.7
	comp=Z,12nm,1.1s						
KBZ	Khabaz	76.47	337	P	P	17 52 22.2	+0.5
	comp=Z,21nm,0.9s,baz=351,slow=3.1,SNR=26						
KBZ				LR	LR	18 29 38.3	
	comp=Z,549nm,19.6s,baz=12,slow=39						
KBZ	Khabaz	76.47	337	ceP	P	17 52 22.3	+0.6
KBZ				pmax	pmax		
	comp=Z,18nm,0.9s						
WTTA	Wattenberg	76.49	360	eP	P	17 52 21.8	-0.3
	comp=Z,14nm,0.7s						
DRGR		76.49	352	⇓P	P	17 52 21.4	-0.5
DRGR		76.49	352	P	P	17 52 21.4	-0.5
CJR	Cluj-Napoca	76.50	351	⇓P	P	17 52 22.6	+0.6
SSF	Saint Saulge	76.50	5	eP	P	17 52 21.2	-0.7
SSF				pmax	pmax		
	comp=Z,21nm,0.8s						
SQTA	Sankt Quirin	76.53	360	eP	P	17 52 22.7	+0.4
	comp=Z,19nm,0.9s,SNR=10						
NCK	Nalchik	76.54	336	i P	P	17 52 23.7	+1.5
NCK				pmax	pmax		
	comp=Z,38nm,0.8s						
KBA	Koelnbreinsper	76.66	358	eP	P	17 52 23.3	+0.3
	comp=Z,18nm,0.9s,SNR=9.3						
KBA	Koelnbreinsper	76.66	358	P	P	17 52 23.9	+0.9
FETA	Feichten	76.73	0	eP	P	17 52 23.3	-0.1
	comp=Z,19nm,0.8s,SNR=9.3						
KBL	Kabul	76.75	314	P	P	17 52 23.1	-0.7
KBL				pmax	pmax		
	comp=Z,36nm,0.9s						
KBL	Kabul	76.75	314	P	P	17 52 23.1	-0.7
KBL				IAmb	IAmb	17 52 24.4	
	comp=Z,36nm,0.9s						
AVF	Avril sur Loir	76.77	5	eP	P	17 52 22.5	-0.9
AVF				pmax	pmax		
	comp=Z,18nm,0.8s						
OZUR		76.90	349	⇓P	P	17 52 24.9	+0.6
NEY	Neytrino	76.97	337	i P	P	17 52 25.5	+0.7
NEY				pmax	pmax		
	comp=Z,1.0nm,0.7s						
DAVOX	Davos/Dischmat	76.97	1	LR	LR	18 25 08.1	
	comp=Z,230nm,22.0s,baz=19,slow=35						
BGF	Bois d'Agland	76.97	6	eP	P	17 52 23.7	-0.9
BGF				pmax	pmax		
	comp=Z,19nm,1.0s						
ABTA	Abfaltersbach	77.00	359	eP	P	17 52 24.6	-0.3
	comp=Z,13nm,1.0s						
KMSI	Cibinong	77.02	251	P	P	17 52 25.9	+0.7
	comp=Z,693nmcomp=Z,72nm,0.9s						
SOKA	Soboth	77.02	357	eP	P	17 52 25.4	+0.4
	comp=Z,16nm,0.9s						
PLOR	Plostina	77.06	349	⇓P	P	17 52 24.5	-0.6
DOPR	Dopca	77.07	350	⇓P	P	17 52 26.1	+0.9
SIRR	Siria	77.09	352	⇓P	P	17 52 26.1	+0.8
ODBI	Odobesti	77.10	348	⇓P	P	17 52 26.6	+1.4
ZEI	Tsey	77.14	336	eP	P	17 52 25.9	+0.1
ZEI				pmax	pmax		
	comp=Z,37nm,1.4s						
ZOU	Zoufplan	77.18	359	P	P	17 52 26.2	+0.2
OBKA	Obir	77.20	357	eP	P	17 52 26.1	+0.1
	comp=Z,37nm,0.8s,SNR=11						
GROS	Grobnik	77.22	357	i P	P	17 52 26.4	+0.3
SOC	Sochi	77.27	339	eP	P	17 52 25.2	-1.1
SOC				e		17 55 21.1	
SOC				ePPP	PPP	17 57 06.5	
SOC				eS	S	18 02 15.7	-0.4
SOC				eSS	SS	18 07 13.7	+1.1
SOC				MLR	MLR		
	comp=Z,785nm,20.0s						
MORH	Mrgy, Hungar	77.34	355	⇑P	P	17 52 26.1	-0.4
ONI	Oni	77.43	336	P	P	17 52 29.9	+2.6
LGD	Lagodekhi	77.49	334	P	P	17 52 28.3	+0.7
CADS	Cadrg	77.50	358	i P	P	17 52 27.2	-0.3
ZKTA	Zakatala	77.58	333	P	P	17 52 28.6	+0.5
VOIR		77.63	350	⇓P	P	17 52 28.8	+0.5
VOIR		77.63	350	P	P	17 52 28.8	+0.5
GEYT	Alibeck	77.71	324	P	P	17 52 29.6	+0.7
	comp=Z,27nm,0.8s,baz=316,slow=4.1,SNR=61						
GEYT				LR	LR	18 29 16.9	
	comp=Z,742nm,20.5s,baz=35,slow=38						
GEYT	Alibeck	77.71	324	P	P	17 52 29.6	+0.7
LOT	Lotru	77.74	351	⇓P	P	17 52 28.8	-0.2
ARR	Arges	77.74	350	⇑P	P	17 52 29.5	+0.5
BZS	Buzias	77.74	352	⇑P	P	17 52 28.7	-0.2
BZS	Buzias	77.74	352	P	P	17 52 28.6	-0.2
BZS				pmax	pmax		
	comp=Z,25nm,1.7s						
SEKA	Sheki	77.84	333	P	P	17 52 29.8	+0.2
GZR	Gura Zlata	77.88	351	⇓P	P	17 52 30.2	+0.5
SEAG	Tbilisi Sea	77.91	335	P	P	17 52 32.2	+2.3
HARR	Harsova	78.06	348	⇑P	P	17 52 30.4	-0.2
HARR	Harsova	78.06	348	P	P	17 52 30.4	-0.2
RJF	Les Rejaudoux	78.14	7	eP	P	17 52 30.0	-1.1
RJF				pmax	pmax		
	comp=Z,25nm,1.3s						
MRSI	Marisa	78.17	253	P	P	17 52 31.5	-0.1
	comp=Z,787nmcomp=Z,62nm,1.2s						
LPL	La Plagne	78.18	3	eP	P	17 52 31.7	+0.1
LPL				pmax	pmax		
	comp=Z,9.0nm,1.0s						
LPG	La Plagne	78.20	3	eP	P	17 52 34.0	+2.2
LPG				pmax	pmax		
	comp=Z,25nm,1.2s						
SANI	Sanana	78.21	248	P	P	17 52 31.1	-0.7
	comp=Z,48nm,1.0s						
MNGR	Mingechevir, A	78.28	333	P	P	17 52 32.3	+0.3
FRGS	Fruska Gora	78.32	354	⇓P	P	17 52 32.5	+0.3
KZRT	Kazreti	78.36	335	P	P	17 52 34.7	+2.2
HERR	Herculane	78.41	352	⇓P	P	17 52 32.5	-0.1
HUMR	Humele	78.54	350	⇓P	P	17 52 32.8	-0.5
SDDR	Presa de Saban	78.54	73	P	P	17 52 33.7	-0.1
AKH	Akhalkalaki	78.55	336	P	P	17 52 35.8	+2.1
CAF	Calviac	78.55	6	eP	P	17 52 32.7	-0.8
CAF				pmax	pmax		
	comp=Z,23nm,0.9s						
MDVR	Moldovita	78.57	352	⇑P	P	17 52 33.5	-0.1
GANJ	Ganja	78.60	333	P	P	17 52 34.0	+0.2
BNI	Bardonecchia	78.64	3	P	P	17 52 36.9	+2.9
BGD	Bogdanovka	78.66	335	P	P	17 52 36.0	+1.7
ORIF	Oris-en-Rattie	78.75	4	eP	P	17 52 34.4	-0.2
ORIF				pmax	pmax		
	comp=Z,12nm,0.8s						
VIVF	Saint-Julien-l	78.76	5	eP	P	17 52 34.1	-0.5
VIVF				pmax	pmax		
	comp=Z,18nm,1.0s						
LUWI	Luwuk	79.02	251	P	P	17 52 35.7	-0.6
	comp=Z,1µmcomp=Z,106nm,1.0s						
MPSI	Mapaga	79.37	254	P	P	17 52 38.4	+0.2
	comp=Z,769nmcomp=Z,54nm,1.6s						
GNI	Garni	79.45	334	diP	P	17 52 40.7	+2.1
GNI				pmax	pmax		
	comp=Z,24nm,1.0s						
APSI	Ampana	79.50	252	P	P	17 52 38.1	-0.8
	comp=Z,31nm,1.3s						
PLVB	Pleven	79.70	350	⇑P	P	17 52 38.3	-1.4
LKRN	Lenkeran, Azer	79.78	331	P	P	17 52 40.4	+0.2
KVT	Kavak	80.38	341	P	P	17 52 45.5	+2.0
VTS	Vitosha	80.59	351	P	P	17 52 45.1	+0.4
VTS				pmax	pmax		
	comp=Z,17nm,1.0s						
PLD	Plovdiv	80.96	350	P	P	17 52 47.3	+0.8
PLD				pmax	pmax		
	comp=Z,132nm,1.1s						
DZM	Mont Dzumac	81.06	203	eS	SKSac	18 03 06.7	+0.4
	comp=Z,289nm,25.4s						
DZM	Mont Dzumac	81.06	203	eLR	LR	18 18 16.5	
	comp=Z,1µm,31.4s						
TBI	Tubuai	81.36	162	eS	SKSac	18 03 06.1	-1.9
	comp=Z,812nm,34.5s						
TBI	Tubuai	81.36	162	eLR	LR	18 18 05.3	
	comp=Z,1µm,31.0s,baz=349						
SKO	Skopje	81.38	352	i P	P	17 52 49.5	+0.8
MVO	Moncorvo	81.41	14	eP	P	17 52 50.5	+1.5
STIP	Stip	81.60	352	i P	P	17 52 49.3	-0.6
GCPR	Guaynabo City	81.82	69	P	P	17 52 51.8	+0.4
VAY	Valandovo	81.94	351	P	P	17 52 55.2	+3.5
VAY				pmax	pmax		
	comp=Z,19nm,2.5s						
VAY	Valandovo	81.94	351	i P	P	17 52 52.3	+0.6
SJG	San Juan	81.95	69	P	P	17 52 52.1	0.0
	comp=Z,14nm,0.7s,baz=67,slow=7.3,SNR=7.0						
SJG	San Juan	81.95	69	P	P	17 52 52.5	+0.5
SJG				pmax	pmax		
	comp=Z,27nm,0.8s						
SJG	San Juan	81.95	69	P	P	17 52 52.5	+0.5
SJG				IAmb	IAmb	17 52 59.8	
	comp=Z,27nm,0.8s						
SRS	Serrai	82.05	350	P	P	17 52 53.0	+0.7
SRS				pmax	pmax		
	comp=Z,28nm,1.5s						
BRTR	Keskin Array B	82.12	343	P	P	17 52 53.2	+0.4
	comp=Z,10nm,0.8s,baz=46,slow=3.0,SNR=30						
BRTR				LR	LR	18 33 04.0	
	comp=Z,204nm,21.3s,baz=18,slow=38						
BRTR	Keskin Array B	82.12	343	P	P	17 52 53.1	+0.2
BRTR	Keskin Array B	82.12	343	P	P	17 52 53.1	+0.2
TTSI	Tana Toraja	82.26	252	P	P	17 52 53.2	-0.5
	comp=Z,2µmcomp=Z,48nm,1.3s						
OHR	Ohrid	82.28	352	i P	P	17 52 49.8	-3.8
FNA	Florina	82.57	352	P	P	17 52 55.1	0.0
FNA				pmax	pmax		
	comp=Z,27nm,2.0s						
MALT	Malatya	82.61	339	P	P	17 52 57.4	+2.0
SPSI	Sidrap Palu	83.06	252	P	P	17 52 57.0	-0.8
	comp=Z,27nm,1.4s						
ESDC	Sonseca Array	83.25	12	P	P	17 52 58.1	-0.5
	comp=Z,6.8nm,0.9s,baz=346,slow=5.0,SNR=21						
ESDC	Sonseca Array	83.25	12	P	P	17 52 57.4	-1.3
PESTR	Estremoz	83.59	14	eP	P	17 53 01.1	+0.7
	comp=Z,39nm,1.3s						
EVO	Evora	83.86	15	eP	P	17 53 01.9	+0.2
BKSI	Bulukumba	84.02	251	P	P	17 53 02.3	-0.5
	comp=Z,37nm,1.1s						
PNCL	Nicolau / Gran	84.20	15	eP	P	17 53 03.9	+0.5
PBAR	Barrancos	84.35	14	eP	P	17 53 04.3	+0.1
ISP	Isparta	84.47	345	P	P	17 53 05.8	+0.8
RKT	Rikitea	84.48	149	eLR	LR	18 19 29.8	
	comp=Z,1µm,29.5s						
MOTC	Monteria, Cord	84.61	82	eP	P	17 53 01.7	-4.2
DBBC	Dabeiba	85.77	84	eP	P	17 53 10.9	-0.8
OCAC	Ocana	86.34	81	eP	P	17 53 12.3	-2.3
BATI	Baumata	86.36	245	P	P	17 53 14.1	-0.4
	comp=Z,24nm,1.1s,baz=100,slow=17,SNR=2.7						
SDV	Santo Domingo	87.26	78	P	P	17 53 18.6	-0.6
	comp=Z,9.6nm,0.7s,baz=338,slow=2.7,SNR=8.9						
SDV	Santo Domingo	87.26	78	eP	P	17 53 19.1	-0.1
HYB	Hyderabad	87.31	298	i P	P	17 53 17.0	-2.2
PAMC	Pamplona, Colo	87.42	81	eP	P	17 53 19.3	-1.1
NORC	Norcasia	87.71	83	eP	P	17 53 22.9	+1.8
GUY2C	Guyana, Caldas	87.72	84	eP	P	17 53 21.7	0.0
BARC	Barichara	87.78	81	eP	P	17 53 21.1	-0.6
SPBC	San Pablo de B	88.07	83	eP	P	17 53 22.6	-0.3
YOTC	Yotoco, Valle	88.20	86	eP	P	17 53 21.4	-2.2
TOLC	Tolima	88.27	84	eP	P	17 53 23.9	-0.3
ANIL	Santa Ana	88.30	84	eP	P	17 53 13.0	-11
RUSC	La Rusia	88.41	82	eP	P	17 53 21.4	-3.7
POO	Poona	88.60	302	eP	P	17 53 24.0	-1.4
ROSC	El Rosal	88.61	83	LR	LR	18 37 53.9	
	comp=Z,124nm,19.0s,baz=70,slow=39						
TAMC	Tame, Arauca	88.67	80	eP	P	17 53 24.1	-1.6
ORTC	Ortega, Tolima	88.87	85	eP	P	17 53 24.0	-2.7
CHIC	Chingaza	89.11	83	eP	P	17 53 28.0	-0.2
MARP	Paez Belalcaza	89.36	86	eP	P	17 53 30.3	+1.1
PCON	Cinco Dias	89.55	87	eP	P	17 53 30.3	-0.2
WRAB	Tennant Creek	89.77	232	ceP	P	17 53 31.4	+0.8
WRAB				pmax	pmax		
	comp=Z,29nm,2.5s						
BETC	Betania	89.78	86	eP	P	17 53 31.2	+0.2
WRA	Warramunga Arr	89.78	232	P	P	17 53 29.9	-0.7
	comp=Z,4.9nm,1.1s,baz=41,slow=5.4,SNR=14						
WRA				LR	LR	18 32 02.9	
	comp=Z,51nm,20.4s,baz=45,slow=34						
GCUF	Volcan Galeras	89.93	88	eP	P	17 53 29.1	-3.1
OTAV	Otavalo	90.14	89	eP	P	17 53 32.6	-0.6
OTAV	Otavalo	90.14	89	eP	P	17 53 34.0	+0.9
GARC	Garzon, Huila	90.16	86	eP	P	17 53 32.5	-0.4
PTGC	Puerto Gaitan,	90.34	82	eP	P	17 53 31.0	-2.5
MACC	Macarena, Meta	91.10	84	eP	P	17 53 35.3	-1.7
GUVC	San Jose del G	91.44	83	eP	P	17 53 38.0	-0.6
FITZ	Fitzroy Crossi	92.15	240	P	P	17 53 41.2	-0.5
	comp=Z,10nm,0.9s,baz=33,slow=5.9,SNR=9.5						
ASAR	Alice Springs	93.26	230	P	P	17 53 46.4	-0.3
	comp=Z,2.4nm,0.9s,baz=26,slow=4.1,SNR=14						
ASAR				LR	LR	18 29 57.9	
	comp=Z,98nm,21.9s,baz=19,slow=32						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
STKA	Stephens Creek	97.56	221	LR	LR	18 33 16.7	
	comp=Z,200nm,21.9s,baz=24,slow=32						
SAML	Samuel	106.15	82	*e*P	Pdif	17 54 45.7	+0.9
KMBO	Kilima Mbogo	120.78	329	PKP	PKPdf	17 59 23.9	-1.0
	comp=Z,2.2nm,0.8s,baz=353,slow=3.8,SNR=3.9						
CPUP	Villa Florida	123.46	88	PKP	PKPdf	17 59 28.9	-0.3
	comp=Z,2.2nm,0.7s,baz=22,slow=8.0,SNR=5.3						
PLCA	Paso Flores	127.14	109	PKP	PKPdf	17 59 36.0	+0.1
	comp=Z,5.7nm,0.8s,baz=331,slow=1.7,SNR=16						
PLCA	Paso Flores	127.14	109	PKIKP	PKiKP	17 59 36.5	+0.1
PLCA	Paso Flores	127.14	109	PKPdf	PKiKP	17 59 36.5	+0.1
PLCA	Paso Flores	127.14	109	*e*P	PKiKP	17 59 36.3	-0.2
QSPA	South Pole Qui	146.39	180		PKPbc	18 00 11.7	0.0
BOSA	Boshof	150.22	334	PKPbc	PKPbc	18 00 22.6	-0.5
	comp=Z,14nm,0.7s,baz=36,slow=2.1,SNR=23						
BOSA	Boshof	150.22	334	PKIKP	PKPbc	18 00 22.9	-0.2
BOSA	Boshof	150.22	334		PKPbc	18 00 22.9	-0.2
BELA	Belgrano 2	153.67	160		PKPbc	18 00 28.4	-0.9
MAW	Mawson	154.20	224	PKPbc	PKiKP	18 00 31.0	+0.3
	comp=Z,27nm,1.1s,baz=293,slow=10,SNR=3.6						
SYO	Syowa Base	162.20	214	⇓*e*PKPdf	PKPdf	18 00 32.0	-0.1
SYO	Syowa Base	162.20	214	⇑*e*PKPab	PKPab	18 01 18.8	-0.5
SYO	Syowa Base	162.20	214	⇑*e*sPKPab	sPKPab	18 01 26.0	+3.7

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*IDC **01** 17:47:07.3±1.3, 13°.43N×89°.17W, h0^{km}, mb3.8/6, mb1 4.2/7, mb1mx3.8/36, mbtmp3.9/7, ML4.3/1, MS3.7/2, Ms1 3.8/2, ms1mx3.2/34, Error ellipse: s-maj=48.8km s-min=29.2km az=47.0*

*GCG **01** 17:47:07.3±0.6, 12°.54N×89°.97W, h32^{km}±249^{km}, MD4.2*

*SNET **01** 17:47:17.1±0.9, 13°.31N×89°.94W, h44^{km}±6^{km}, ML4.6, MW4.6*

*INET **01** 17:47:17.6, 13°.23N×89°.85W, h23^{km}, MW4.1*

*NEIC **01** 17:47:17.7±2.2, 13°.38N±0°.06×89°.9W±0°.1, h68^{km}±10^{km}, Error ellipse: s-maj=16.8km s-min=6.6km az=66.0*

*UCR **01** 17:47:17.6±1.2, 13°.36N×89°.93W, h46^{km}±7^{km}, ML4.4, MW4.6, mb4.4(NEIC)*

ISC 01 17:47:15.8±1.0**, 13°.27N**±0°.07×**89°.95W**±0°.04**, h51**^{km}±7^{km}**, n95, σ1^{s}13**/107**, mb4.0**/5**, 27C-10D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ACAJ	Puerto de Acaj	0.32	21	*e*P	Pn	17 47 25.8	+0.5
ACAJ				*e*S	Sn	17 47 32.1	+0.1
ACAJ				AML	AML	17 47 32.4	
	comp=Z,24µm,0.2s						
ACAJ	Puerto de Acaj	0.32	21	*e*P	Pn	17 47 25.8	+0.5
ACAJ				*e*S	Sn	17 47 32.1	+0.1
ACAJ				AML	AML	17 47 32.4	
	comp=Z,24µm,0.2s						
JUA	Alcaldia, muni	0.60	19	*e*P	Pn	17 47 28.9	+0.4
JUA				*e*S	Sn	17 47 38.8	+1.1
JUA				AML	AML	17 47 43.0	
	comp=Z,83µm,0.4s						
JAYA	Jayaque - finc	0.62	52	⇑*e*P	Pn	17 47 29.1	+0.3
JAYA				*e*S	Sn	17 47 38.3	+0.2
JAYA				IAML		17 47 40.3	
	comp=Z,20µm,0.2s						
JAYA	Jayaque - finc	0.62	52	⇑*e*P	Pn	17 47 29.1	+0.3
JAYA				*e*S	Sn	17 47 38.3	+0.2
JAYA				IAML		17 47 40.3	
	comp=Z,20µm,0.2s						
CEVE	Cerro Verde	0.64	30	⇑*e*P	Pn	17 47 29.6	+0.5
CEVE	Cerro Verde	0.64	30	⇑*e*P	Pn	17 47 29.6	+0.5
SBLS	San Blas	0.65	29	⇑*i*P	Pn	17 47 29.7	+0.5
SBLS	San Blas	0.65	29	⇑*i*P	Pn	17 47 29.7	+0.5
LALI	Alcalda de L	0.65	71	⇓*i*P	Pn	17 47 29.3	+0.3
LALI				*e*S	Sn	17 47 38.7	+0.2
LALI	Alcalda de L	0.65	71	⇓*i*P	Pn	17 47 29.3	+0.3
LALI				*e*S	Sn	17 47 38.7	+0.2
SNJE	San Jose	0.68	30	⇑*i*P	Pn	17 47 30.1	+0.5
SNJE	San Jose	0.68	30	⇑*i*P	Pn	17 47 30.1	+0.5
RTR	El Retiro	0.69	26	⇑*i*P	Pn	17 47 30.4	+0.7
RTR	El Retiro	0.69	26	⇑*i*P	Pn	17 47 30.4	+0.7
CEDA	San Andres	0.76	46	⇑*e*P	Pn	17 47 31.0	+0.6
CEDA				IAML		17 47 47.7	
	comp=Z,21µm,0.5s						
CEDA	San Andres	0.76	46	⇑*e*P	Pn	17 47 31.0	+0.6
CEDA				IAML		17 47 47.7	
	comp=Z,21µm,0.5s						
PMON	Piamonte	0.76	55	*i* P	Pn	17 47 31.1	+0.6
PMON	Piamonte	0.76	55	*i* P	Pn	17 47 31.1	+0.6
MAGS	Ministerio de	0.77	58	*e*P	Pn	17 47 31.8	+1.2
BOQS	Boqueron	0.80	55	⇓*i*P	Pn	17 47 31.9	+0.8
BOQS	Boqueron	0.80	55	⇓*i*P	Pn	17 47 31.9	+0.8
UNIC	Universidad Ca	0.81	29	*e*P	Pn	17 47 31.9	+0.8
UNIC	Universidad Ca	0.81	29	*e*P	Pn	17 47 31.9	+0.8
SNET	Serv Nac Est T	0.81	59	⇑*e*P	Pn	17 47 31.7	+0.6
SNET				*e*S	Sn	17 47 43.4	+1.0
SNET				IAML		17 47 47.8	
	comp=Z,9µm,0.4s						
SNET	Serv Nac Est T	0.81	59	⇑*e*P	Pn	17 47 31.7	+0.6
SNET				*e*S	Sn	17 47 43.4	+1.0
SNET				IAML		17 47 47.8	
	comp=Z,9µm,0.4s						
SNET	Serv Nac Est T	0.81	59	Pn	Pn	17 47 31.2	0.0
OPAM	Oficina de Pla	0.85	59	⇑*e*P	Pn	17 47 32.5	+0.8
OPAM	Oficina de Pla	0.85	59	⇑*e*P	Pn	17 47 32.5	+0.8
UESS	Universidad de	0.86	59	⇑*i*P	Pn	17 47 32.8	+1.0
UESS	Universidad de	0.86	59	⇑*i*P	Pn	17 47 32.8	+1.0
QUEZ	Alcaldia de Qu	0.87	50	*e*P	Pn	17 47 32.8	+0.9
CIGS	Centro de Inve	0.87	61	*e*P	Pn	17 47 32.8	+0.9
CIGS				*e*S	Sn	17 47 44.8	+1.1
CIGS				AML	AML	17 47 47.4	
	comp=Z,15µm,0.3s						
IGN	Direccin Gen	0.88	60	*e*P	Pn	17 47 32.8	+0.7
IGN	Direccin Gen	0.88	60	*e*P	Pn	17 47 32.8	+0.7
UDBS	Universidad Do	0.89	60	⇑*i*P	Pn	17 47 33.0	+0.8
UDBS	Universidad Do	0.89	60	⇑*i*P	Pn	17 47 33.0	+0.8
TACO	Tacachico	0.91	40	⇑*i*P	Pn	17 47 33.1	+0.7
TACO	Tacachico	0.91	40	⇑*i*P	Pn	17 47 33.1	+0.7
AEIL	Aeropuerto Ilo	0.92	62	*e*P	Pn	17 47 33.4	+0.9
AEIL	Aeropuerto Ilo	0.92	62	*e*P	Pn	17 47 33.4	+0.9
LFRS	El Faro	0.93	68	⇓*i*P	Pn	17 47 33.3	+0.5
LFRS	El Faro	0.93	68	⇓*i*P	Pn	17 47 33.3	+0.5
LFU	La Fuente	0.94	60	*e*P	Pn	17 47 33.8	+0.9
LFU	La Fuente	0.94	60	*e*P	Pn	17 47 33.8	+0.9
LBRS	Las Brisas	1.00	62	⇓*i*P	Pn	17 47 34.6	+0.9
LBRS	Las Brisas	1.00	62	⇓*i*P	Pn	17 47 34.6	+0.9
IXG	Ixpaco	1.01	332	*e*P	Pn	17 47 34.7	+0.8
COEG	Centro de Oper	1.10	71	*e*P	Pn	17 47 36.1	+1.1
COEG				IAML		17 47 55.5	
	comp=Z,9µm,0.3s						
COEG	Centro de Oper	1.10	71	*e*P	Pn	17 47 36.1	+1.1
COEG				IAML		17 47 55.5	
	comp=Z,9µm,0.3s						
UESV	Universidad de	1.19	72	⇑*i*P	Pn	17 47 37.4	+1.2
UESV	Universidad de	1.19	72	⇑*i*P	Pn	17 47 37.4	+1.2
MTO3	Montecristo	1.26	27	⇑*i*P	Pn	17 47 38.2	+0.9
MTO3	Montecristo	1.26	27	⇑*i*P	Pn	17 47 38.2	+0.9
MTO3	Montecristo	1.26	27	Pn	Pn	17 47 38.1	+0.8
PCG	Pacaya	1.28	330	*e*P	Pn	17 47 39.2	+1.5
NBG	Las Nubes	1.36	344	*e*P	Pn	17 47 41.0	+2.3
NBG				*e*S	Sn	17 48 07.0	+11
PQSS	Presa 15 de Se	1.40	75	*e*P	Pn	17 47 40.0	+1.1
ESQI	Esquipulas	1.41	25	⇑*i*P	Pn	17 47 40.5	+1.2
ESQI	Esquipulas	1.41	25	Pn	Pn	17 47 40.4	+1.2
FUG	Fuego 3	1.45	324	*e*P	Pn	17 47 40.6	+0.7
PACA	Pacayal	1.60	83	*e*P	Pn	17 47 43.4	+1.6
PACA	Pacayal	1.60	83	*e*P	Pn	17 47 43.4	+1.6
JUCU	Jucuar¡n	1.66	90	*e*P	Pn	17 47 43.2	+0.7
JUCU	Jucuar¡n	1.66	90	*e*P	Pn	17 47 43.2	+0.7
MRL	Marmol	1.82	8	*e*P	Pn	17 47 47.2	+2.3
FAGO	Alcalda de S	1.84	77	*e*P	Pn	17 47 45.7	+0.7
FAGO	Alcalda de S	1.84	77	*e*P	Pn	17 47 45.7	+0.7
LCND	La Caada	2.01	89	⇓*i*P	Pn	17 47 48.5	+1.2
LCND	La Caada	2.01	89	⇓*i*P	Pn	17 47 48.5	+1.2
CNCH	Conchagua	2.06	90	*e*P	Pn	17 47 49.5	+1.4
CNCH	Conchagua	2.06	90	*e*P	Pn	17 47 49.5	+1.4
RTAL	Retalhuleu	2.10	307	Pn	Pn	17 47 50.4	+1.8
TGUH	Tegucigalpa,Un	2.72	73		Pn	17 47 58.0	+0.9
CRIN	San Cristobal	2.88	101	Pn	Pn	17 48 01.5	+2.1
PETF	Flores	3.62	1	Pn	Pn	17 48 11.8	+2.3
JTS	Las Juntas de	5.72	121		Pn	17 48 41.0	+2.7
CMIG	Matias Romero	6.09	309	Pn	Pn	17 48 44.1	+0.7
	comp=Z,6.8nm,0.3s,baz=101,slow=9.3,SNR=52						
CMIG				Sn	Sn	17 49 51.0	-0.8
	baz=115,slow=12,SNR=2.0						
CMIG				LR	LR	17 51 26.4	
	comp=Z,112nm,22.0s,baz=116,slow=39						
TEIG	Tepich	7.10	13		Pn	17 48 59.5	+2.4
HKT	Hockley	17.47	343		Pn	17 51 15.2	-0.6
250A	Grady	18.92	10	P	P	17 51 31.2	-1.3
250A				IAmb	IAmb	17 51 31.6	
	comp=Z,48nm,1.4s						
TXAR	Lajitas Array	20.43	324	P	P	17 51 51.7	+2.6
	comp=Z,1.6nm,0.7s,baz=142,slow=10,SNR=6.7						
TXAR				PcP	PcP	17 56 00.1	+0.2
	comp=Z,0.2nm,0.5s,baz=154,slow=2.3,SNR=4.5						
TXAR	Lajitas Array	20.43	324	P	P	17 51 50.5	+1.4
NVAR	Mina Array Bea	35.49	320	P	P	17 54 10.0	+2.0
	comp=Z,4.1nm,0.7s,baz=134,slow=8.5,SNR=28						
NVAR				PcP	PcP	17 56 37.1	+0.5
	comp=Z,1.4nm,0.7s,baz=134,slow=3.8,SNR=9.2						
LHV	Little Huntoon	35.51	320	P	P	17 54 09.1	+1.3
ULM	Lac du Bonnet	37.19	354	P	P	17 54 19.7	-2.3
	comp=Z,1.9nm,0.4s,baz=170,slow=9.3,SNR=4.9						
ULM	Lac du Bonnet	37.19	354	P	P	17 54 19.9	-2.1
ULM				IAmb	IAmb	17 54 21.2	
	comp=Z,4.3nm,1.1s						
YKA	Yellowknife Ar	52.20	346	P	P	17 56 19.2	-2.1
	comp=Z,0.4nm,0.5s,baz=130,slow=8.2,SNR=9.1						
YKA				PcP	PcP	17 57 32.0	-0.2
	comp=Z,0.3nm,0.6s,baz=121,slow=2.9,SNR=4.4						
ILAR	Eielson Array	64.29	337	P	P	17 57 44.4	-1.3
	comp=Z,0.2nm,0.4s,baz=130,slow=5.3,SNR=4.5						
ESDC	Sonseca Array	78.60	52	LR	LR	18 28 22.7	
	comp=Z,268nm,21.8s,baz=310,slow=32						
TORD	Torodi Ar. Bea	88.61	77	P	P	17 59 59.4	-4.7
	comp=Z,0.9nm,1.0s,baz=327,slow=4.0,SNR=1.7						
WRA	Warramunga Arr	137.14	255	PKP	PKPdf	18 06 34.3	+0.1
	comp=Z,0.9nm,0.9s,baz=94,slow=0.9,SNR=4.8						
ASAR	Alice Springs	137.29	249	PKP	PKPdf	18 06 32.8	-1.7
	comp=Z,0.6nm,1.0s,baz=103,slow=3.9,SNR=4.5						
FITZ	Fitzroy Crossi	145.44	257	PKPbc	PKPdf	18 06 49.6	+0.5
	comp=Z,3.5nm,0.9s,baz=123,slow=3.8,SNR=3.8						
CMAR	Chiang Mai Arr	147.28	344	PKPbc	PKPdf	18 06 52.8	+0.5
	comp=Z,1.6nm,0.6s,baz=346,slow=3.5,SNR=15						

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*NEIC **01** 17:53:19.9±1.6, 21°.53N±0°.09×143°.5E±0°.2, h285^{km}±10^{km}, mb4.1/25, Error ellipse: s-maj=21.3km s-min=12.6km az=91.0*

*IDC **01** 17:53:20.8±1.5, 21°.55N×143°.22E, h289^{km}±14^{km}, mb3.5/22, mb1 3.7/26, mb1mx3.6/53, mbtmp4.2/26, Error ellipse: s-maj=14.9km s-min=8.3km az=89.0*

*JMA **01** 17:53:23.8±0.2, 21°.92N×143°.68E, h335^{km}±1^{km}*

ISC 01 17:53:21.5±0.5**, 21°.57N**±0°.05×**143°.4E**±0°.1**, h300**^{km}**, n73, σ0^{s}89**/77**, mb4.0**/31**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHH2	Haha-jima-NKT2	5.16	348	P	Pn	17 54 42.0	+1.1
JHH2				*e*S	S	17 55 43.4	-1.2
CBIJ	Chichi jima	5.61	349	S	S	17 55 52.2	-2.1
JCJ	Chichijima	5.61	349	P	Pn	17 54 45.4	-0.8
	14nm,0.3s,baz=326,slow=22,SNR=1.6						
JCJ				S	S	17 55 52.8	-1.5
	37nm,0.3s,baz=292,slow=21,SNR=9.2						
JCJ	Chichijima	5.61	349		Pn	17 54 43.3	-2.9
GUMO	Guam	8.06	169	P	Pn	17 55 16.6	+0.6
	8.4nm,0.3s,baz=176,slow=10,SNR=3.9						
BSO3	Boso 3	13.42	350	P	P	17 56 20.9	0.0
JIE	Ise	14.06	337	P	Pn	17 56 28.9	+0.2
JKN2	Miekihoku	14.09	335	P	P	17 56 28.9	+0.4
JOD2	Odawara 2	14.15	346	P	P	17 56 29.6	+0.4
JTO	Tosashimizu	14.64	322	P	Pn	17 56 37.5	+1.8
JHU	Hanno	14.68	347	P	P	17 56 35.1	+0.1
JMN	Monobe	14.73	327		Pn	17 56 38.0	+1.2
INU	Inuyama	14.82	339	P	P	17 56 35.7	-0.8
JYT	Yasato	14.87	350	P	P	17 56 35.7	-1.4
JRY	Ryogami san	14.92	346	P	P	17 56 37.9	+0.2
JGF	Kuroka	14.94	341	P	P	17 56 37.8	-0.1
JGF				IAmb	IAmb	17 56 43.3	
	comp=Z,5.2nm,0.7s						
JAG	Ashikaga	15.19	348	P	P	17 56 40.6	0.0
JSU	Suzuyama	15.20	313	P	P	17 56 40.5	-0.2
JSU				IAmb	IAmb	17 56 46.2	
	comp=Z,14nm,0.8s						
JWT	Wachi	15.35	335		Pn	17 56 43.5	-0.4
MJAR	Matsushiro Arr	15.58	344	P	P	17 56 44.9	-0.1
	comp=Z,0.5nm,0.3s,baz=169,slow=11,SNR=29						
MJAR	Matsushiro Arr	15.58	344	P	P	17 56 43.9	-1.1
MAJO	Matsushiro	15.59	344	P	P	17 56 45.3	+0.4
MAT	Matsushiro	15.59	344	P	P	17 56 44.8	-0.2
JSJ	Shimokoshiki	15.81	312	P	Pn	17 56 50.6	+1.2
JNU	Nakatsue	15.97	319	P	P	17 56 49.5	+0.3
	comp=Z,0.9nm,0.3s,baz=48,slow=14,SNR=3.8						
JHS	Saijyo	16.12	328	P	Pn	17 56 52.3	-0.8
JHS	Saijyo	16.12	328		P	17 56 51.6	+0.7
JMK	Ichinoseki	17.43	354	P	P	17 57 05.3	+0.4
KSRS	Korea Array	20.72	323	P	P	17 57 38.9	-0.7
	comp=Z,2.3nm,0.6s,baz=146,slow=8.6,SNR=20						
ASAJ	Asahikawa	22.50	359	P	P	17 57 55.9	-0.1
	comp=Z,18nm,1.1s,baz=36,slow=33,SNR=2.3						
USRK	Ussuriysk Ar.	24.46	340	P	P	17 58 13.7	0.0
	comp=Z,1.7nm,0.5s,baz=136,slow=7.5,SNR=7.8						
USRK	Ussuriysk Ar.	24.46	340	P	P	17 58 13.2	-0.5
KLR	Kul'dur	29.11	344	P	P	17 58 55.0	0.0
	comp=Z,6.4nm,0.6s,baz=160,slow=7.1,SNR=24						
SBUM	Sibu	35.76	242	P	P	17 59 53.0	+0.1
MTN	Manton Dam	36.24	200	P	P	17 59 56.3	-0.6
MTN				IAmb	IAmb	17 59 57.6	
	comp=Z,7.7nm,0.9s						
BATI	Baumata	37.03	213	P	P	18 00 02.1	-1.4
	comp=Z,10nm,0.5s,baz=93,slow=2.2,SNR=6.0						
SONM	Songino Array	39.54	320	P	P	18 00 23.6	-0.6
	comp=Z,0.7nm,0.5s,baz=138,slow=7.8,SNR=9.4						
SONM	Songino Array	39.54	320	P	P	18 00 23.7	-0.5
CMAR	Chiang Mai Arr	41.75	274	P	P	18 00 42.6	+0.3
	comp=Z,0.3nm,0.5s,baz=87,slow=6.1,SNR=4.2						
WB0	Warramunga Arr	42.00	193	P	P	18 00 44.6	+0.4
WB0				IAmb	IAmb	18 00 45.6	
	comp=Z,3.6nm,0.5s						
WR0	Warramunga Arr	42.16	192	P	P	18 00 45.6	+0.2
WR0				IAmb	IAmb	18 00 46.7	
	comp=Z,4.6nm,1.1s						
WRAB	Tennant Creek	42.17	193	P	P	18 00 46.0	+0.5
WRAB				IAmb	IAmb	18 00 59.6	
	comp=Z,9.9nm,0.9s						
WB2	Warramunga Arr	42.18	193	P	P	18 00 45.9	+0.3
WB2				IAmb	IAmb	18 00 46.8	
	comp=Z,7.3nm,0.7s						
WRA	Warramunga Arr	42.19	193	P	P	18 00 45.0	-0.7
	comp=Z,2.7nm,0.3s,baz=16,slow=9.4,SNR=109						
WRA	Warramunga Arr	42.19	193	P	P	18 00 45.2	-0.5
FITZ	Fitzroy Crossi	43.07	205	P	P	18 00 52.6	-0.1
FITZ				IAmb	IAmb	18 01 10.2	
	comp=Z,5.7nm,1.1s						
KULM	Kulim	44.39	255	P	P	18 01 03.6	+0.3
KULM				IAmb	IAmb	18 01 11.3	
	comp=Z,7.1nm,1.0s						
AS31	Alice Springs	45.89	192	P	P	18 01 14.9	0.0
ASAR	Alice Springs	45.89	192	P	P	18 01 14.1	-0.8
	comp=Z,1.3nm,0.6s,baz=14,slow=7.1,SNR=23						
ASAR	Alice Springs	45.89	192	P	P	18 01 15.1	+0.1
LSA	Lhasa	47.44	291	P	P	18 01 28.4	+1.0
TIXI	Tiksi	50.80	354	P	P	18 01 52.0	+0.6
GIRL	Giralia	52.31	215	P	P	18 02 03.1	-0.1
STKA	Stephens Creek	53.16	182	P	P	18 02 09.0	-0.3
	comp=Z,2.5nm,0.4s,baz=6.3,slow=7.4,SNR=8.7						
STKA	Stephens Creek	53.16	182	P	P	18 02 09.2	-0.1
ZALV	Zalesovo Beam	54.41	322	P	P	18 02 17.9	-0.2
	comp=Z,0.4nm,0.4s,baz=105,slow=7.2,SNR=2.7						
ZALV				PcP	PcP	18 03 16.8	-0.8
	comp=Z,1.1nm,0.4s,baz=127,slow=3.8,SNR=7.1						
MKAR	Makanchi Array	54.91	313	P	P	18 02 22.1	+0.3
	comp=Z,0.2nm,0.3s,baz=92,slow=8.3,SNR=10.0						
MKAR				PcP	PcP	18 03 19.5	-0.2
	comp=Z,0.6nm,0.4s,baz=75,slow=4.4,SNR=9.8						
MKAR	Makanchi Array	54.91	313	P	P	18 02 22.3	+0.5
MAKZ	Makanchi	55.12	313	P	P	18 02 24.1	+0.8
MORW	Morawa	56.81	209	P	P	18 02 33.9	-1.4
MORW				IAmb	IAmb	18 02 40.7	
	comp=Z,11nm,1.1s						
CAN	Canberra	56.83	174	P	P	18 02 32.4	-2.9
CAN				IAmb	IAmb	18 02 49.0	
	comp=Z,12nm,1.1s						
ILAR	Eielson Array	62.08	27	P	P	18 03 10.7	0.0
	comp=Z,0.9nm,0.6s,baz=256,slow=5.5,SNR=14						
ABKAR	Akbulak array	69.76	316	P	P	18 03 59.3	-0.2
ABKAR				IAmb	IAmb	18 03 59.9	
	comp=Z,1.7nm,0.6s						
YKA	Yellowknife Ar	76.50	28	P	P	18 04 39.2	+0.8
	comp=Z,1.2nm,0.4s,baz=294,slow=5.1,SNR=24						
ARCES	ARCESS Array B	79.10	342	P	P	18 04 52.8	+0.1
	comp=Z,6.9nm,1.0s,baz=56,slow=7.4,SNR=7.3						
NEW	Newport	80.27	42	P	P	18 05 00.7	+1.3
	comp=Z,1.2nm,0.5s,baz=329,slow=4.9,SNR=3.1						
KBZ	Khabaz	82.58	314	P	P	18 05 11.7	+0.3
	comp=Z,2.2nm,0.8s,baz=256,slow=20,SNR=4.3						
NVAR	Mina Array Bea	83.10	52	P	P	18 05 15.8	+1.3
	comp=Z,1.3nm,0.6s,baz=272,slow=5.5,SNR=11						
FINES	FINESS Array B	83.37	335	P	P	18 05 14.4	-0.7
	comp=Z,1.3nm,0.5s,baz=71,slow=4.6,SNR=12						
ELK	Elko	84.39	48	P	P	18 05 22.3	+1.3
	comp=Z,0.7nm,0.4s,baz=290,slow=5.7,SNR=4.9						
PFO	Pinyon Flats O	86.33	55	P	P	18 05 31.4	+0.9
	comp=Z,1.8nm,0.7s,baz=252,slow=6.1,SNR=4.3						
PDAR	Pinedale Array	87.37	45	P	P	18 05 36.2	+0.8
	comp=Z,0.1nm,0.3s,baz=204,slow=3.3,SNR=3.9						
PLCA	Paso Flores	145.55	131	PKPbc	PKPab	18 12 26.5	+0.6
	comp=Z,3.8nm,0.6s,baz=257,slow=3.8,SNR=24						

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*NEIC **01** 18:05:07.2±1.2, 5°.42S±0°.09×151°.7E±0°.1, h71^{km}±15^{km}, mb4.3/9, Error ellipse: s-maj=21.3km s-min=12.6km az=104.0*

*IDC **01** 18:05:09.6±5.5, 5°.31S×151°.41E, h77^{km}±45^{km}, mb3.9/6, mb1 4.1/7, mb1mx3.6/46, mbtmp4.2/7, ML2.1/1, Error ellipse: s-maj=51.8km s-min=26.3km az=110.0*

ISC 01 18:05:06.6±0.7**, 5°.37S**±0°.09×**151°.7E**±0°.1**, h57**^{km}**, n22, σ0^{s}90**/23**, mb4.2**/11**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	1.27	22		Pn	18 05 29.3	+1.2
PMG	Port Moresby	6.02	228	P	Pn	18 06 34.6	+1.5
	3.3nm,0.3s,baz=25,slow=10,SNR=9.6						
PMG				S	Sn	18 07 40.8	+0.1
	3.7nm,0.3s,baz=165,slow=18,SNR=2.4						
PMG	Port Moresby	6.02	228		Pn	18 06 33.6	+0.5
HNR	Honiara	9.13	117	Pn	Pn	18 07 15.4	-0.3
EIDS	Eidsvold	19.89	182	P	P	18 09 32.3	-1.1
WB0	Warramunga Arr	22.09	228	P	P	18 09 56.8	-0.4
WB0				IAmb	IAmb	18 09 59.1	
	comp=Z,8.0nm,0.7s						
WR0	Warramunga Arr	22.10	227	P	P	18 09 57.2	-0.1
WR0				IAmb	IAmb	18 09 59.6	
	comp=Z,12nm,0.9s						
WRAB	Tennant Creek	22.23	228	P	P	18 09 59.7	+1.1
WRAB				IAmb	IAmb	18 10 00.7	
	comp=Z,14nm,0.8s						
WB2	Warramunga Arr	22.23	228	P	P	18 09 57.8	-0.9
WRA	Warramunga Arr	22.24	228	P	P	18 09 57.8	-0.9
	comp=Z,11nm,0.6s,baz=52,slow=9.9,SNR=75						
WRA	Warramunga Arr	22.24	228	P	P	18 09 59.2	+0.5
AS31	Alice Springs	24.98	222	P	P	18 10 25.8	+0.6
AS31				IAmb	IAmb	18 10 27.3	
	comp=Z,3.7nm,0.6s						
ASAR	Alice Springs	24.98	222	P	P	18 10 24.9	-0.3
	comp=Z,11nm,0.7s,baz=55,slow=9.0,SNR=120						
ASAR	Alice Springs	24.98	222	P	P	18 10 25.6	+0.4
STKA	Stephens Creek	28.01	199	P	P	18 10 53.7	+1.4
	comp=Z,2.0nm,0.8s,baz=347,slow=13,SNR=3.4						
FITZ	Fitzroy Crossi	28.41	241	P	P	18 10 55.4	-0.6
	comp=Z,4.7nm,0.6s,baz=45,slow=8.1,SNR=16						
FITZ	Fitzroy Crossi	28.41	241	P	P	18 10 54.7	-1.2
FITZ				IAmb	IAmb	18 11 00.4	
	comp=Z,6.0nm,1.0s						
SONM	Songino Array	66.22	328	P	P	18 15 48.7	+0.1
	comp=Z,0.3nm,0.4s,baz=144,slow=5.6,SNR=4.1						
SONM	Songino Array	66.22	328	P	P	18 15 47.6	-1.0
MKAR	Makanchi Array	80.03	319	P	P	18 17 09.2	-0.9
	comp=Z,0.2nm,0.6s,baz=81,slow=8.9,SNR=1.3						
ILAR	Eielson Array	83.11	22	P	P	18 17 26.5	+0.6
	comp=Z,0.3nm,0.7s,baz=244,slow=5.4,SNR=5.8						
TORD	Torodi Ar. Bea	149.42	287	PKPbc	PKiKP	18 24 50.7	-0.8
	comp=Z,0.9nm,0.6s,baz=83,slow=2.5,SNR=5.3						

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*IDC **01** 18:06:03.9±0.8, 37°.02N×97°.73W, h0^{km}, mb3.9/2, mb1 4.2/8, mb1mx3.7/66, mbtmp3.9/8, ML3.5/7, Error ellipse: s-maj=11.8km s-min=10.1km az=139.0*

*TUL **01** 18:06:04±1.3, 36°.95N±0°.02×97°.63W±0°.03, h5^{km}±7^{km}, mb_Lg4.0/153(NEIC), Mwr3.7/19(SLM), Error ellipse: s-maj=3.6km s-min=2.8km az=66.0*

*NEIC **01** 18:06:04.8, 36°.95N×97°.62W, h3^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}0.24; $M_{\theta\theta}$-3.44; $M_{\phi\phi}$3.21; $M_{r\theta}$1.01; $M_{\theta\phi}$1.78; $M_{\phi r}$0.96; Fault plane solution: $M_0$4.00000×10^{14} NP1:ϕ_s328.00000°, δ70.00000°, λ175.00000°. NP2:ϕ_s60.00000°, δ85.00000°, λ20.00000°. Principal axes: T 4.0281, Plg18.0000°, Azm286.0000°; N -0.0025, Plg69.0000°, Azm73.0000°; P -4.0256, Plg10.0000°, Azm192.0000°;*

*NEIC **01** 18:06:04.5±1.0, 36°.93N±0°.02×97°.62W±0°.03, h2^{km}±10^{km} Error ellipse: s-maj=4.2km s-min=1.4km az=219.0*

*ANF **01** 18:06:05.2±0.2, 36°.91N×97°.65W, h5^{km}, ML5.0/16, Error ellipse: s-maj=3.3km s-min=2.3km az=35.0*

ISC 01 18:06:04.7±0.8**, 36°.93N**±0°.02×**97°.59W**±0°.02**, h13**^{km}±5^{km}**, n169, σ1^{s}84**/163**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAN13	South Haven SW	0.12	46		Pg	18 06 07.6	-0.3
KAN13				Sg	Sg	18 06 09.9	-0.5
GC02	Grant County #	0.23	251		Pg	18 06 08.8	-0.8
GC02				Sg	Sg	18 06 11.8	-1.1
KAN01	Argonia South	0.26	329		Pg	18 06 09.4	-0.8
KAN01				Sg	Sg	18 06 13.0	-1.0
KAN14	Manchester OK	0.30	276		Pg	18 06 09.9	-0.9
KAN14				Sg	Sg	18 06 13.9	-1.2
KS21	Milan North St	0.36	351		Pg	18 06 11.5	-0.6
KS21				Sg	Sg	18 06 16.4	-0.5
KAN08	Anthony NE Sta	0.43	315		Pg	18 06 12.5	-0.7
KAN10	Anthony SW Sta	0.45	296	Pg	Pg	18 06 12.9	-0.7
KAN10				Sg	Sg	18 06 17.9	-1.7
KAN12	Harper NE Stat	0.49	319		Pg	18 06 13.7	-0.7
KAN12				Sg	Sg	18 06 20.1	-0.9
CROK	Carrier	0.53	217		Pg	18 06 14.7	-0.3
CROK				Sg	Sg	18 06 22.1	+0.1
T35A	Sooner Cattle	0.86	90	Pg	Pg	18 06 21.4	0.0
T35A				Sg	Sg	18 06 32.9	+0.3
T35B	Sooner Cattle	0.86	90	P		18 06 21.3	
	baz=272,SNR=292						
T35B				S		18 06 33.1	
	baz=272						
QUOK	Quay	1.03	136		Pb	18 06 24.6	+0.1
OK029	Liberty Lake	1.13	174		Pb	18 06 26.1	0.0
OK031	S. Brethren Rd	1.14	148		Pb	18 06 26.6	+0.2
OK030	Cody Creek RV	1.19	147		Pn	18 06 27.3	+0.3
U32A	Winter Ranch,	1.26	245	Pg	Pn	18 06 27.5	-0.5
U32A	Winter Ranch,	1.26	245	P		18 06 27.6	
	baz=62						
U32A				S		18 06 44.4	
	baz=62						
BCOK	Bluff Creek, N	1.27	181		Pn	18 06 28.5	+0.4
OK005	Luther M Schoo	1.31	166	Pn	Pb	18 06 29.6	+0.5
OK009	Oakdale Elemen	1.35	174		Pb	18 06 30.0	+0.2
OK025	Westminster Rd	1.36	171	Pn	Pb	18 06 30.2	+0.3
OKCFA	Oklahoma City	1.51	176		Pb	18 06 32.6	0.0
OKCSW	OKLAHOMA CITY	1.52	175		Pb	18 06 32.8	+0.1
FNO	Franklin	1.67	175		Pb	18 06 35.2	-0.1
R32A	Long Quarter,	1.74	330		Pn	18 06 35.5	+0.8
R32A	Long Quarter,	1.74	330	P		18 06 35.6	
	baz=149,SNR=92						
R32A				S		18 06 58.5	
	baz=149						
TUL1	Leonard	1.77	124	P	Pb	18 06 36.9	-0.1
	baz=306,SNR=300						
TUL1				S	Sg	18 07 01.1	-0.4
	baz=306						
TUL1	Leonard	1.77	124	Pn	Pb	18 06 36.9	-0.1
TUL1	Leonard	1.77	124	P		18 06 36.8	
	baz=306,SNR=419						
TUL1				S		18 07 01.1	
	baz=306						
W35A	Tecumseh	1.86	162		Pn	18 06 37.7	+1.4
KSU1	Kansas State U	2.31	19	P	Pn	18 06 43.6	+1.2
	baz=200						
KSU1				S	Sb	18 07 15.4	+0.9
	baz=200						
KSU1	Kansas State U	2.31	19		Pn	18 06 43.8	+1.5
KSU1				IAmb_Lg		18 07 16.9	
	comp=Z,851nm,1.1s						
KSU1	Kansas State U	2.31	19	P		18 06 43.6	
	baz=200,SNR=90						

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KSU1                          S                 18 07 13.3
      baz=200
WMOK  Wichita Mounta   2.39 204  P         Pn    18 06 44.5 +1.0
      baz=23,SNR=110
WMOK                          S         Sb    18 07 15.9  -1.0
      baz=23
WMOK  Wichita Mounta   2.39 204            Pn    18 06 44.5 +1.0
WMOK                          IAmb_Lg          18 07 22.1
      comp=Z,397nm,0.8s
WMOK  Wichita Mounta   2.39 204  P               18 06 44.6
      baz=23,SNR=151
CBKS  Cedar Bluff      2.54 319  P         Pn    18 06 46.5 +0.9
      baz=138,SNR=32
CBKS                          Sb        Sb    18 07 22.1 +0.9
      baz=138
CBKS  Cedar Bluff      2.54 319  Pn        Pn    18 06 46.3 +0.7
CBKS                          IAmb_Lg          18 07 29.3
      comp=Z,589nm,1.1s
CBKS  Cedar Bluff      2.54 319  P               18 06 46.2
      baz=138,SNR=19
CBKS                          S                 18 07 22.2
      baz=138
U38A  Gravette         2.62 100            Pn    18 06 49.1 +2.4
U38A                          IAmb_Lg          18 07 26.8
      comp=Z,340nm,0.8s
U38A  Gravette         2.62 100  P               18 06 48.7
      baz=282,SNR=117
X37A  Clayton          2.95 142            Pn    18 06 53.2 +2.0
X37A                          IAmb_Lg          18 07 44.5
      comp=Z,718nm,0.7s
X37A  Clayton          2.95 142  P               18 06 52.8
      baz=323
X37A                          S                 18 07 35.9
      baz=323
HHAR  Hobbs            3.01 101            Pn    18 06 54.6 +2.6
HHAR  Hobbs            3.01 101  P               18 06 54.4
      baz=284
S39A  Bolivar          3.49  76            Pn    18 07 00.3 +1.7
S39A                          IAmb_Lg          18 07 58.4
      comp=Z,360nm,0.8s
S39A  Bolivar          3.49  76  P               18 06 60.0
      baz=259,SNR=44
S39A                          S                 18 07 41.8
      baz=259
W39A  Magazine         3.53 118  Pn        Pn    18 07 00.8 +1.6
      baz=301,SNR=21
W39A                          Pb        Pb    18 07 09.4 +2.4
      baz=301
W39A                          Sb        Sb    18 07 53.9 +4.0
      baz=301
W39A  Magazine         3.53 118  Pn        Pn    18 07 01.0 +1.8
W39A                          IAmb_Lg          18 08 03.5
      comp=Z,481nm,0.8s
W39A  Magazine         3.53 118  P               18 07 00.7
      baz=301,SNR=9.7
Z35A  Perchaven, San   3.60 176            Pn    18 07 02.2 +2.1
Z35A                          IAmb_Lg          18 08 01.6
      comp=Z,224nm,0.9s
Z35A  Perchaven, San   3.60 176  P               18 07 02.3
      baz=355
Z35A                          S                 18 07 45.5
      baz=355
N33B  J Bar K, Exete   3.81   2  P               18 07 03.9
      baz=182,SNR=11
N33B                          S                 18 07 49.1
      baz=182
U40A  Yellville        3.85  97  P         Pn    18 07 05.3 +1.6
      baz=280
U40A                          Sn        Sn    18 07 52.4 +3.6
      baz=280
U40A                          Sb        Sg    18 08 05.0  -3.3
      baz=280
U40A  Yellville        3.85  97  Pn        Pn    18 07 05.3 +1.6
U40A                          IAmb_Lg          18 08 15.6
      comp=Z,224nm,0.7s
U40A  Yellville        3.85  97  P               18 07 05.4
      baz=280,SNR=104
U40A                          P                 18 07 05.4
      baz=280,SNR=104
AMTX  Amarillo         3.90 240  IAmb_Lg          18 08 12.2
      comp=Z,612nm,1.1s
MIAR  Mount Ida        4.04 125  Pn        Pn    18 07 08.7 +2.5
      baz=307,SNR=13
MIAR                          Pb        Pb    18 07 18.0 +2.4
      baz=307
MIAR                          Sn        Sn    18 07 56.1 +2.7
      baz=307
MIAR                          Sb        Sg    18 08 10.9  -3.4
      baz=307
MIAR  Mount Ida        4.04 125  Pn        Pn    18 07 08.1 +1.9
MIAR                          IAmb_Lg          18 08 17.2
      comp=Z,422nm,0.9s
MIAR  Mount Ida        4.04 125  P               18 07 08.0
      baz=307
P38A  Dawn             4.18  49            Pn    18 07 08.9 +0.8
P38A  Dawn             4.18  49  P               18 07 09.2
      baz=231,SNR=41
Z38A  Mt. Pleasant     4.24 149  Pn        Pn    18 07 10.1 +1.2
Z38A                          IAmb_Lg          18 08 27.8
      comp=Z,636nm,0.9s
MGMO  Mountain Grove   4.26  85            Pn    18 07 10.9 +1.6
R40A  Maddies Statio   4.44  71  Pn        Pn    18 07 13.1 +1.4
R40A                          IAmb_Lg          18 08 32.4
      comp=Z,448nm,0.9s
R40A  Maddies Statio   4.44  71  P               18 07 12.9
      baz=254,SNR=63
KSCO  Kaye Shedlock'   4.49 299  Pn        Pn    18 07 13.4 +0.8
      baz=116,SNR=7.2
KSCO                          Pb        Pb    18 07 25.2 +1.8
      baz=116
KSCO                          Sb        Sg    18 08 23.2  -5.7
      baz=116
KSCO  Kaye Shedlock'   4.49 299  Pn        Pn    18 07 13.3 +0.8
KSCO                          IAmb_Lg          18 08 26.3
      comp=Z,153nm,0.7s
KSCO  Kaye Shedlock'   4.49 299  P               18 07 13.4
      baz=116
BGNE  Belgrade         4.50 355  P         Pn    18 07 13.8 +1.3
      baz=174
BGNE                          Sb        Sg    18 08 24.0  -5.0
      baz=174
BGNE  Belgrade         4.50 355  Pn        Pn    18 07 12.4  -0.1
BGNE                          IAmb_Lg          18 08 32.7
      comp=Z,613nm,0.8s
BGNE  Belgrade         4.50 355  P               18 07 13.2
      baz=174,SNR=8.5
FCAR  Ozark Folk Cen   4.53 102  Pn        Pn    18 07 14.7 +1.8
FCAR                          IAmb_Lg          18 08 26.3
      comp=Z,425nm,0.8s
X40A  Basin Creek Fa   4.57 121  P         Pn    18 07 15.5 +2.0
      baz=304,SNR=11
X40A                          Sb        Sg    18 08 27.6  -3.8
      baz=304
X40A  Basin Creek Fa   4.57 121            Pn    18 07 15.3 +1.8
X40A                          IAmb_Lg          18 08 35.8
      comp=Z,289nm,0.8s
X40A  Basin Creek Fa   4.57 121  P               18 07 15.3
      baz=304,SNR=47
X40A                          P                 18 07 15.3
      baz=304,SNR=47
WHAR  Wooly Hollow     4.59 109            Pn    18 07 15.8 +2.0
ABTX  Abilene, Hawle   4.61 202  P         Pn    18 07 15.2 +1.1
      baz=20
ABTX                          S         Sn    18 08 08.5 +0.9
      baz=20
ABTX  Abilene, Hawle   4.61 202  Pn        Pn    18 07 15.0 +0.9
ABTX                          IAmb_Lg          18 08 31.2
      comp=Z,144nm,1.1s
ABTX  Abilene, Hawle   4.61 202  P               18 07 15.0
      baz=20,SNR=9.2
W41B  Gary Mavity, V   4.67 110  P         Pn    18 07 16.8 +2.0
      baz=294
W41B                          Sb        Sg    18 08 30.0  -4.6
      baz=294
W41B  Gary Mavity, V   4.67 110  P               18 07 16.3
      baz=294,SNR=30
WLAR  White Oak Lake   4.88 130  IAmb_Lg          18 08 46.7
      comp=Z,257nm,0.7s
WHTX  Lake Whitney,    4.92 179  P         Pn    18 07 19.4 +1.0
      baz=358
WHTX                          Sn        Sn    18 08 15.3 +0.1
      baz=358
WHTX                          Sb        Sb    18 08 36.1 +6.2
      baz=358
WHTX  Lake Whitney,    4.92 179  Pn        Pn    18 07 19.0 +0.6
WHTX  Lake Whitney,    4.92 179  P               18 07 19.2
      baz=358,SNR=18
P40A  Paris            5.08  58  Pn        Pn    18 07 22.1 +1.7
P40A                          IAmb_Lg          18 08 52.2
      comp=Z,486nm,0.8s
L34A  Svendsen Farm,   5.12  10  P               18 07 22.0
      baz=191
237A  Washetta, Mont   5.13 163  Pn        Pn    18 07 22.0 +0.8
237A                          IAmb_Lg          18 08 52.8
      comp=Z,153nm,0.8s
237A  Washetta, Mont   5.13 163  P               18 07 22.4
      baz=344,SNR=15
N38A  Joes South For   5.14  40            Pn    18 07 21.7 +0.3
N38A  Joes South For   5.14  40  P               18 07 21.9
      baz=223,SNR=7.5
MSTX  Muleshoe         5.16 237  P         Pn    18 07 23.1 +1.4
      baz=53
MSTX  Muleshoe         5.16 237  IAmb_Lg          18 09 00.7
      comp=Z,260nm,1.1s
CCM   Cathedral Cave   5.17  75  P         Pn    18 07 23.6 +1.8
      baz=260
CCM   Cathedral Cave   5.17  75  Pn        Pn    18 07 22.8 +1.1
CCM                           IAmb_Lg          18 08 56.7
      comp=Z,428nm,0.7s
CCM   Cathedral Cave   5.17  75  P               18 07 22.8
      baz=260,SNR=6.7
T42A  Van Buren        5.20  87  Pn        Pn    18 07 23.8 +1.6
T42A                          IAmb_Lg          18 08 57.0
      comp=Z,417nm,1.1s
T42A  Van Buren        5.20  87  P               18 07 24.1
      baz=271,SNR=28
LCAR  Lake Charles     5.25  97            Pn    18 07 24.6 +1.7
LCAR                          IAmb_Lg          18 08 49.3
      comp=Z,170nm,0.8s
Z41A  Richland Creek   5.37 132  P         Pn    18 07 27.0 +2.6
      baz=314
Z41A                          S         Sn    18 08 26.4 +0.4
      baz=314
T25A  Trinidad         5.46 274  P         Pn    18 07 26.3 +0.3
      baz=90,SNR=28
T25A                          Sb        Sb    18 08 51.7 +6.2
      baz=90
CCAR  Cane Creek       5.62 121  IAmb_Lg          18 09 11.3
      comp=Z,214nm,0.9s
NATX  Nacogdoches      5.69 154  S         Sn    18 08 36.1 +1.9
      baz=336
NATX  Nacogdoches      5.69 154  IAmb_Lg          18 09 13.2
      comp=Z,162nm,0.8s
K31A  O'Neill          5.76 351  Pn        Pn    18 07 30.8 +0.9
K31A                          IAmb_Lg          18 09 14.4
      comp=Z,420nm,0.8s
HBAR  Harrisburg       5.77 102  IAmb_Lg          18 09 20.0
      comp=Z,436nm,0.9s
FVM   French Village   5.80  77            Pn    18 07 31.4 +1.1
X43A  Marvell          5.96 112  Sb        Sg    18 09 09.4  -6.7
      baz=296
SCIA  State Center     6.02  33  Pb        Pb    18 07 53.4 +4.1
      baz=216
LPAR  Lepanto          6.04 100  IAmb_Lg          18 09 19.4
      comp=Z,387nm,0.8s
SLM   Saint Louis      6.07  71  IAmb_Lg          18 09 29.1
      comp=Z,260nm,0.7s
435B  Jarrell          6.13 180  P         Pn    18 07 35.5 +0.5
      baz=360,SNR=24
435B                          S         Sn    18 08 44.8  -0.1
      baz=360
435B  Jarrell          6.13 180  Pn        Pn    18 07 35.5 +0.5
435B                          IAmb_Lg          18 09 33.4
      comp=Z,269nm,0.8s
435B  Jarrell          6.13 180  P               18 07 35.2
      baz=360,SNR=30
Q24A  Divide           6.31 291  P         Pn    18 07 38.0 +0.3
      baz=106,SNR=7.9
SDCO  Great Sand Dun   6.36 280  P         Pn    18 07 39.3 +0.9
      baz=95,SNR=19
SDCO  Great Sand Dun   6.36 280  Pn        Pn    18 07 39.2 +0.9
SDCO  Great Sand Dun   6.36 280  P               18 07 39.2
      baz=95,SNR=19
N41A  Harden Midland   6.47  52  IAmb_Lg          18 09 29.3
      comp=Z,370nm,0.7s
N41A  Harden Midland   6.47  52  P               18 07 40.9
      baz=237,SNR=9.6
143A  Socs Landing,    6.61 128  IAmb_Lg          18 09 43.9
      comp=Z,179nm,0.8s
S44A  Carbondale       6.69  81            Pn    18 07 43.4 +0.9
S44A  Carbondale       6.69  81  P               18 07 43.5
      baz=266,SNR=8.6
JCT   Junction City    6.69 197  P         Pn    18 07 42.6  -0.1
      baz=15,SNR=8.9
JCT                           S         Sn    18 08 57.3  -1.5
      baz=15
JCT   Junction City    6.69 197  Pn        Pn    18 07 42.3  -0.3
JCT                           IAmb_Lg          18 09 52.5
      comp=Z,208nm,0.9s
JCT   Junction City    6.69 197  P               18 07 42.6
      baz=15,SNR=25
HALT  Halls            6.73  96  IAmb_Lg          18 09 38.4
      comp=Z,221nm,0.8s
K38A  Parkersburg      6.81  32  IAmb_Lg          18 09 49.6
      comp=Z,288nm,0.7s
ECSD  EROS Data Cent   6.84   6  P         Pn    18 07 44.5  -0.2
      baz=187
ECSD                          S         Sn    18 09 00.7  -1.7
      baz=187
ECSD  EROS Data Cent   6.84   6  Pn        Pn    18 07 44.7   0.0
ECSD                          IAmb_Lg          18 09 44.8
      comp=Z,96nm,0.7s
ECSD  EROS Data Cent   6.84   6  P               18 07 44.5
      baz=187
P43A  Skaggs, Pawnee   6.90  64  Pn        Pn    18 07 46.6 +1.1
ISCO  Idaho Springs    6.93 297  P         Pn    18 07 46.7 +0.6
      baz=112,SNR=13
ISCO  Idaho Springs    6.93 297  Pn        Pn    18 07 46.8 +0.6
ISCO  Idaho Springs    6.93 297  P               18 07 46.6
      baz=112,SNR=11
W45A  Hickory Valley   7.03 102  IAmb_Lg          18 09 58.7
      comp=Z,288nm,0.8s
342A  Flagon Creek P   7.05 140  IAmb_Lg          18 09 57.2
      comp=Z,81nm,0.9s
Q44A  Meyer Farm, Va   7.06  71            Pn    18 07 48.1 +0.4
Q44A  Meyer Farm, Va   7.06  71  P               18 07 48.8
      baz=257,SNR=7.9
OXF   Oxford           7.08 107  P         Pn    18 07 49.3 +1.3
      baz=292
OXF   Oxford           7.08 107            Pn    18 07 49.0 +1.1
Y45A  Yeager Farm, C   7.25 113  IAmb_Lg          18 10 12.0
      comp=Z,135nm,0.8s
HDIL  Hopedale         7.43  58  P         Pn    18 07 54.7 +2.0
      baz=244
HDIL                          S         Sn    18 09 15.9  -0.9
      baz=244
HDIL  Hopedale         7.43  58            Pn    18 07 54.4 +1.7
HDIL  Hopedale         7.43  58  P               18 07 53.7
      baz=244,SNR=5.8
ANMO  Albuquerque      7.46 257  Pn        Pn    18 07 55.0 +1.6
      comp=Z,0.1nm,0.3s,baz=128,slow=9.6,SNR=1.3
ANMO                          Pg        Pb    18 08 20.3 +6.2
      comp=Z,1.4nm,0.3s,baz=75,slow=18,SNR=16
ANMO                          Lg        Lg    18 09 53.9
      comp=Z,4.3nm,0.3s,baz=342,slow=16,SNR=16
ANMO  Albuquerque      7.46 257  IAmb_Lg          18 10 04.8
      comp=Z,61nm,0.8s
ANMO                          IAmb_Lg          18 10 04.9
      comp=Z,62nm,0.8s
VBMS  Vicksburg        7.49 127  IAmb_Lg          18 10 16.1
      comp=Z,174nm,1.3s
PHWY  Pilot Hill       7.51 308            Pn    18 07 54.5 +0.3
PHWY                          IAmb_Lg          18 10 11.3
      comp=Z,90nm,0.9s
SUSD  Miller           7.58 353  S         Sn    18 09 18.4  -2.2
      baz=172
SUSD  Miller           7.58 353  IAmb_Lg          18 10 04.1
      comp=Z,189nm,0.8s
N23A  Red Feather La   7.62 304  P         Pn    18 07 57.2 +1.5
      baz=119
I37A  Lemond, Waseca   7.77  23  IAmb_Lg          18 10 25.2
      comp=Z,162nm,1.1s
WVT   Waverly          7.90  93  P         Pn    18 08 00.9 +1.7
      baz=279
WVT                           S         Sn    18 09 26.7  -1.7
      baz=279
WVT   Waverly          7.90  93  IAmb_Lg          18 10 32.6
      comp=Z,90nm,0.8s
735A  Kenedy           8.05 181  IAmb_Lg          18 10 43.0
      comp=Z,108nm,1.0s
JFWS  Jewell Farm      8.22  41  P         Pn    18 08 03.8 +0.2
      baz=226
JFWS                          S         Sn    18 09 34.8  -1.5
      baz=226
JFWS  Jewell Farm      8.22  41            Pn    18 08 03.3  -0.3
JFWS                          IAmb_Lg          18 10 30.0
      comp=Z,196nm,0.7s
146A  Union            8.22 119  IAmb_Lg          18 10 46.3
      comp=Z,108nm,0.9s
MNTX  Cornudas Mount   8.29 233  P         Pn    18 08 05.4 +0.8
      baz=49,SNR=7.1
MNTX  Cornudas Mount   8.29 233  Pn        Pn    18 08 05.5 +0.9
MNTX  Cornudas Mount   8.29 233  P               18 08 05.2
      baz=49,SNR=16
T47A  Sharon Grove     8.39  86  IAmb_Lg          18 10 39.8
      comp=Z,192nm,0.9s
Z47A  Carrollton       8.64 113  IAmb_Lg          18 10 53.2
      comp=Z,74nm,0.8s
M44A  Midewin, Midew   8.65  56  IAmb_Lg          18 10 40.7
      comp=Z,238nm,0.9s
RSSD  Black Hills      8.70 328  P         Pn    18 08 12.7 +2.4
      baz=144
RSSD  Black Hills      8.70 328  IAmb_Lg          18 10 55.0
      comp=Z,122nm,1.1s
833A  Chaparral WMA,   8.71 191  S         Sn    18 09 46.5  -2.0
      baz=9.4
I40A  Norwalk          8.75  35            Pn    18 08 11.1 +0.2
I40A                          IAmb_Lg          18 10 45.2
      comp=Z,132nm,0.8s
V48A  Smith Brothers   8.77  95  IAmb_Lg          18 10 46.6
      comp=Z,131nm,0.9s
RWWY  Rawlins          8.84 305  IAmb_Lg          18 11 02.0
      comp=Z,80nm,1.0s
SFIN  Lafayette        8.90  64  P         Pn    18 08 14.4 +1.4
      baz=251
X48A  Hartselle        8.93 103  IAmb_Lg          18 10 53.6
      comp=Z,81nm,0.7s
K22A  Casper           8.94 312  P         Pn    18 08 14.7 +1.1
      baz=127,SNR=5.1
K22A  Casper           8.94 312  IAmb_Lg          18 10 54.7
      comp=Z,168nm,1.1s
F33A  5 Mile Ranch,    8.96   6  IAmb_Lg          18 10 43.4
      comp=Z,67nm,0.9s
HQIL  Hanson Quary C   8.97  54  IAmb_Lg          18 10 49.2
      comp=Z,226nm,0.8s
BLO   Bloomington      9.01  72  IAmb_Lg          18 11 15.6
      comp=Z,204nm,0.8s
SPMN  Marine on St.    9.04  22  IAmb_Lg          18 11 07.4
      comp=Z,62nm,0.7s
WCI   Wyandotte Cave   9.06  78  P         Pn    18 08 17.1 +1.9
      baz=265
WCI   Wyandotte Cave   9.06  78  Pn        Pn    18 08 17.8 +2.6
WCI                           IAmb_Lg          18 10 58.4
      comp=Z,135nm,0.8s
CLTN  Cedars of Leba   9.10  92  IAmb_Lg          18 10 58.3
      comp=Z,101nm,0.8s
TX31  Lajitas Ar. Si   9.12 216            Pn    18 08 15.8  -0.4
TX32  Lajitas Array    9.12 216            Pn    18 08 15.7  -0.4
TXAR  Lajitas Array    9.12 216  Pn        Pn    18 08 15.4  -0.7
      comp=Z,0.6nm,0.3s,baz=31,slow=10.0,SNR=16
TXAR                          Pg                18 08 46.0
      comp=Z,1.1nm,0.3s,baz=36,slow=12,SNR=6.4
TXAR                          Lg        Lg    18 10 47.2
      comp=Z,2.4nm,0.3s,baz=32,slow=27,SNR=6.0
TXAR  Lajitas Array    9.12 216  Pn        Pn    18 08 15.6  -0.5
121A  Cookes Peak, D   9.46 245  IAmb_Lg          18 11 29.1
      comp=Z,78nm,1.1s
U49A  Red Boiling Sp   9.49  89  IAmb_Lg          18 11 06.4
      comp=Z,180nm,1.2s
SWET  Sewanee          9.59  97  IAmb_Lg          18 11 14.7
      comp=Z,82nm,0.8s
I42A  Draeger Farm,    9.60  41  IAmb_Lg          18 11 12.5
      comp=Z,103nm,0.8s
I42A  Draeger Farm,    9.60  41  P               18 08 23.5
      baz=227,SNR=5.7
Y49A  Blount Mountai   9.62 105  IAmb_Lg          18 11 12.0
      comp=Z,89nm,0.8s
P48A  Milroy           9.90  72  IAmb_Lg          18 11 15.3
      comp=Z,199nm,0.9s
E28A  Huff             9.91 347  IAmb_Lg          18 11 31.2
      comp=Z,180nm,1.0s
R49A  Shelbyville      9.95  78  IAmb_Lg          18 11 22.7
      comp=Z,126nm,0.8s
P49A  Miami Univ. Ec  10.46  72  P         Pn    18 08 34.8 +0.5
      baz=260
V51A  Loudon          10.73  92            Pn    18 08 40.0 +2.0
BW06  Boulder Array   10.89 306  P         Pn    18 08 40.9 +0.5
      baz=118,SNR=6.6
PDAR  Pinedale Array  10.89 306  Pn        Pn    18 08 38.9  -1.6
      comp=Z,0.3nm,0.3s,baz=114,slow=13,SNR=22
PDAR                          Pg                18 09 23.9
      comp=Z,1.0nm,0.3s,baz=112,slow=15,SNR=8.4
PDAR                          Lg        Lg    18 11 43.8
      comp=Z,1.7nm,0.3s,baz=114,slow=33,SNR=10
TKL   Tuckaleechee C  11.22  92  Pn        Pn    18 08 45.5 +0.8
      comp=Z,0.5nm,0.3s,baz=235,slow=9.1,SNR=10
TKL                           Sn        Sn    18 10 48.0  -2.1
      comp=Z,0.9nm,0.3s,baz=267,slow=12,SNR=1.8
TKL                           Lg        Lg    18 11 54.2
      comp=Z,3.9nm,0.3s,baz=181,slow=23,SNR=14
AGMN  Agassiz Nation  11.44   6  P         Pn    18 08 46.4  -1.2
      baz=187
P52A  Corning         12.45  73  P         Pn    18 09 02.1 +0.6
      baz=262
P52A                          S         Sn    18 11 17.1  -2.9
      baz=262
ULM   Lac du Bonnet   13.38   5  Pn        Pn    18 09 10.6  -3.5
      comp=Z,0.5nm,0.3s,baz=184,slow=11,SNR=7.7
ULM                           Sn        Sn    18 11 29.7   -13
      comp=Z,1.0nm,0.3s,baz=82,slow=12,SNR=3.9
ULM                           Lg        Lg    18 12 56.5
      comp=Z,0.5nm,0.3s,baz=282,slow=10,SNR=4.1
SADO  Sadowa          15.98  55  Lg        Lg    18 14 22.6
      comp=Z,1.1nm,0.3s,baz=171,slow=16,SNR=7.6
NVAR  Mina Array Bea  16.47 282  Pn        Pn    18 09 55.3  -0.3
      comp=Z,0.1nm,0.3s,baz=89,slow=12,SNR=6.3
YBH   Yreka Blue Hor  19.99 292  P         P     18 10 36.8  -0.1
      comp=Z,0.1nm,0.3s,baz=106,slow=5.6,SNR=20
YKA   Yellowknife Ar  27.68 343  P         P     18 11 52.1 +0.1
      comp=Z,0.7nm,0.9s,baz=142,slow=9.5,SNR=9.1
ILAR  Eielson Array   40.14 330  P         P     18 13 41.3 +1.4
      comp=Z,2.5nm,0.7s,baz=110,slow=7.1,SNR=30
```

IDC 01 18:19:35.3±2.3**, 12°.58N**×**92°.02E, h0km, mb3.4**/3**, mb1 3.5**/4**, mb1mx3.1**/46**, mbtmp3.3**/4**, ML3.2**/1**, Error ellipse: s-maj=69.8km s-min=29.6km az=68.0, Andaman Islands region**

```
Code  Station Name       Δ°   AZ°    Phase ID         Time       Res
                                   Op       ISC     h  m  s      ISC
CMAR  Chiang Mai Arr    8.87  48   Pn       Pn     18 21 45.3  +0.5
      0.1nm,0.3s,baz=237,slow=16,SNR=2.0
MKAR  Makanchi Array   35.08 348   P        P      18 26 29.9  -0.2
      0.1nm,0.4s,baz=170,slow=9.7,SNR=3.0
WRA   Warramunga Arr   52.72 127   P        P      18 28 51.6  -0.5
      0.4nm,0.5s,baz=308,slow=8.6,SNR=7.5
ASAR  Alice Springs    54.54 131   P        P      18 29 05.9  +0.3
      0.4nm,0.6s,baz=311,slow=7.2,SNR=9.4
```

IDC ***01*** *18:32:18.8±2.0, 2°.12N×127°.42E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.3/42, mbtmp3.5/3, MS3.3/1, Ms1 3.3/1, ms1mx2.5/38, Error ellipse: s-maj=139.2km s-min=25.9km az=67.0*

DJA ***01*** *18:32:32.0±0.7, 2°N±3°×12°7E±°, h111km±8km, M3.6/7, MLv3.6/7*

ISC 01 18:32:32.2±1.3**, 1°.98N**±0°.07×**127°.4E**±0°.1**, h112km, n9,** σ**2ˢ.33**/12**, mb3.6**/3**, Halmahera**

```
Code  Station Name       Δ°   AZ°    Phase ID         Time       Res
                                   Op       ISC     h  m  s      ISC
TNTI  Ternate           1.20 181   P        Pn     18 32 57.4  +1.7
TNTI                               S        Sn     18 33 17.7  +4.2
SGSI  Sangihe           2.51 312   P        Pn     18 33 11.8  -0.1
SGSI                               S        Sn     18 33 41.4  -0.9
KMSI  Cibinong          3.68 248   P        Pn     18 33 28.0  +0.7
KMSI                               S        Sn     18 34 10.6  +0.6
SANI  Sanana            4.24 199   P        Pn     18 33 32.8  -2.0
SANI                               S        Sn     18 34 19.6  -3.8
GTOI  Gorontalo         4.57 253   P        Pn     18 33 41.8  +2.5
WRA   Warramunga Arr   22.83 163   P        P      18 37 25.5  -0.4
      1.7nm,0.5s,baz=343,slow=10,SNR=16
ASAR  Alice Springs    26.27 166   P        P      18 37 56.2  -1.1
      0.3nm,0.5s,baz=344,slow=7.5,SNR=7.0
JCJ   Chichijima       28.72  28   LR       LR     18 50 09.5
      comp=Z,62nm,19.1s,baz=2.5,slow=38
MKAR  Makanchi Array   59.36 326   P        P      18 42 22.6  -0.1
      0.2nm,0.4s,baz=112,slow=7.4,SNR=5.1
```

*NEIC **01** 18:36:09±1.1, 29°.72N±0°.06×141°.2E±0°.2, h42km±5km, mb4.3/11, Error ellipse: s-maj=19.7km s-min=8.6km az=82.0*

*IDC **01** 18:36:11.7±2.2, 29°.62N×141°.29E, h70km±20km, mb3.6/19, mb1 3.8/23, mb1mx3.7/53, mbtmp3.8/23, MS3.3/2, Ms1 3.3/2, ms1mx2.7/46, Error ellipse: s-maj=18.5km s-min=12.4km az=82.0*

ISC 01 18:36:09.6±0.5, **29°.67N**±0°.06×**141°.3E**±0°.1, **h50**km, **n54**, σ**1^{s}23**/46, **mb4.0**/22, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**2.67**	**163**	P	**Pn**	**18 36 52.4**	**+2.2**
	32nm,0.3s,baz=294,slow=23,SNR=5.2						
JCJ				S	**Sn**	**18 37 18.9**	**-2.5**
	135nm,0.3s,baz=297,slow=21,SNR=9.2						
JCJ	**Chichijima**	**2.67**	**163**	Pn	**Pn**	**18 36 49.5**	**-0.8**
JHJ2	**Mitsune**	**3.67**	**340**	Pn	**Pn**	**18 37 02.0**	**-1.7**
MJAR	**Matsushiro Arr**	**7.33**	**340**	P	**Pn**	**18 37 54.9**	**+0.8**
	0.3nm,0.3s,baz=162,slow=12,SNR=20						
MJAR	**Matsushiro Arr**	**7.33**	**340**		**Pn**	**18 37 52.2**	**-1.9**
MAJO	**Matsushiro**	**7.33**	**340**		**Pn**	**18 37 53.1**	**-1.0**
MAT	**Matsushiro**	**7.33**	**340**	P	**Pn**	**18 37 56.6**	**+2.5**
MAT				*e*S	**Sn**	**18 39 16.3**	**+0.3**
MJB9	**Matsu-Tunnel**	**7.34**	**340**	Pn	Pn	18 37 48.8	-5.4
JMM	**Marumori**	**8.19**	**357**	Pn	**Pn**	**18 38 04.5**	**-1.3**
JNU	**Nakatsue**	**9.56**	**294**	LR	LR	18 41 49.4	
	comp=Z,245nm,18.3s,baz=102,slow=35						
JOW	**Kunigami**	**11.84**	**259**	LR	LR	18 42 52.4	
	comp=Z,119nm,21.5s,baz=268,slow=34						
KSRS	**Korea Array**	**13.59**	**308**	P	**Pn**	**18 39 22.4**	**+2.8**
	0.1nm,0.3s,baz=114,slow=12,SNR=2.2						
USRK	**Ussuriysk Ar.**	**16.29**	**335**	P	**P**	**18 39 58.0**	**+0.8**
	baz=163,slow=30,SNR=2.7						
YHNB	**Yeheng**	**18.42**	**259**	P	**P**	**18 40 17.4**	**-3.4**
YHNB				IAmb	IAmb	18 40 29.4	
	comp=Z,24nm,1.0s						
KLR	**Kul'dur**	**20.85**	**342**	P	Pn	18 40 49.5	-0.6
	comp=Z,2.2nm,0.6s,baz=147,slow=8.3,SNR=6.7						
H11N2	**WAKE ISLAND Hy**	**25.21**	**107**	T	T	19 07 29.3	
	baz=298,slow=75,SNR=11						
H11N1	**WAKE ISLAND Hy**	**25.21**	**107**	T	T	19 07 24.7	
	baz=298,slow=75,SNR=13						
H11N3	**WAKE ISLAND Hy**	**25.23**	**107**	T	T	19 07 26.6	
	baz=298,slow=75,SNR=11						
H11S3	**WAKE ISLAND Hy**	**25.64**	**110**	T	T	19 08 01.2	
	baz=142,slow=74,SNR=3.5						
H11S1	**WAKE ISLAND Hy**	**25.64**	**110**	T	T	19 08 06.6	
	baz=304,slow=74,SNR=3.8						
H11S2	**WAKE ISLAND Hy**	**25.66**	**110**	T	T	19 08 01.7	
SONM	**Songino Array**	**32.36**	**314**	P	**P**	**18 42 35.2**	**+0.9**
	comp=Z,0.3nm,0.5s,baz=114,slow=7.7,SNR=3.7						
SONM	**Songino Array**	**32.36**	**314**	P	**P**	**18 42 33.2**	**-1.1**
CMAR	**Chiang Mai Arr**	**40.06**	**264**	P	**P**	**18 43 40.5**	**+0.3**
	comp=Z,0.9nm,0.7s,baz=61,slow=6.0,SNR=8.5						
ZALV	**Zalesovo Beam**	**47.06**	**318**	P	**P**	**18 44 36.1**	**0.0**
	comp=Z,0.4nm,0.5s,baz=23,slow=27,SNR=2.5						
MKAR	**Makanchi Array**	**48.27**	**308**	P	**P**	**18 44 46.3**	**+0.6**
	comp=Z,0.3nm,0.6s,baz=88,slow=8.9,SNR=2.8						
MKAR	**Makanchi Array**	**48.27**	**308**	P	**P**	**18 44 46.1**	**+0.4**
WB0	**Warramunga Arr**	**49.60**	**189**	P	**P**	**18 44 57.3**	**+1.4**
WB0				IAmb	IAmb	18 45 02.7	
	comp=Z,4.3nm,0.9s						
WR0	**Warramunga Arr**	**49.77**	**188**	P	**P**	**18 44 58.5**	**+1.2**
WB2	**Warramunga Arr**	**49.77**	**189**	P	**P**	**18 44 57.6**	**+0.3**
WRA	**Warramunga Arr**	**49.78**	**189**	P	**P**	**18 44 56.3**	**-1.0**
	comp=Z,1.0nm,0.4s,baz=5.5,slow=7.5,SNR=16						
WRA	**Warramunga Arr**	**49.78**	**189**	P	**P**	**18 44 57.9**	**+0.5**
AS31	**Alice Springs**	**53.50**	**188**	P	**P**	**18 45 25.0**	**-0.1**
ASAR	**Alice Springs**	**53.50**	**188**	P	**P**	**18 45 24.0**	**-1.1**
	comp=Z,0.2nm,0.4s,baz=7.7,slow=6.9,SNR=16						
ASAR	**Alice Springs**	**53.50**	**188**	P	**P**	**18 45 26.1**	**+1.0**
ILAR	**Eielson Array**	**55.85**	**29**	P	**P**	**18 45 41.9**	**+0.2**
	comp=Z,1.0nm,0.8s,baz=259,slow=5.9,SNR=7.8						
KK31	**Karatay Array**	**56.98**	**304**	P	**P**	**18 45 49.9**	**-0.2**
KK31				IAmb	IAmb	18 45 52.1	
	comp=Z,2.5nm,1.1s						
KKAR	**Karatay Array**	**56.98**	**304**	P	**P**	**18 45 49.7**	**-0.4**
KKAR	**Karatay Array**	**56.98**	**304**	P	**P**	**18 45 49.9**	**-0.2**
KKAR				IAmb	IAmb	18 45 52.1	
	comp=Z,2.5nm,1.1s						
BCAR	**Beaver Creek A**	**58.11**	**31**	P	**P**	**18 45 57.8**	**+0.1**
INK	**Inuvik**	**61.02**	**25**	P	**P**	**18 46 17.7**	**+0.1**
	comp=Z,0.8nm,0.5s,baz=57,slow=7.7,SNR=4.2						
STKA	**Stephens Creek**	**61.21**	**180**	P	**P**	**18 46 19.4**	**+0.1**
	comp=Z,3.2nm,1.1s,baz=18,slow=7.8,SNR=3.9						
ABKAR	**Akbulak array**	**62.77**	**313**	P	**P**	**18 46 29.4**	**-0.3**
YKA	**Yellowknife Ar**	**70.26**	**29**	P	**P**	**18 47 16.6**	**-0.5**
	comp=Z,0.3nm,0.6s,baz=296,slow=5.8,SNR=5.3						
ARCES	**ARCESS Array B**	**70.87**	**340**	P	**P**	**18 47 19.1**	**-1.7**
	comp=Z,4.0nm,0.9s,baz=40,slow=7.9,SNR=4.4						
FINES	**FINESS Array B**	**75.31**	**333**	P	**P**	**18 47 45.8**	**-1.4**
	comp=Z,1.5nm,0.6s,baz=71,slow=6.5,SNR=6.4						
BEKR	**Beckworth**	**77.44**	**51**	P	**P**	**18 48 00.6**	**+0.6**
BEKR				IAmb	IAmb	18 48 01.8	
	comp=Z,2.2nm,0.8s						
NVAR	**Mina Array Bea**	**79.54**	**52**	P	**P**	**18 48 12.4**	**+0.9**
	comp=Z,1.1nm,0.6s,baz=288,slow=5.8,SNR=13						
AKASG	**Malin Array Be**	**80.10**	**323**	P	**P**	**18 48 14.1**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=46,slow=5.5,SNR=1.6						
NOA	**NORSAR Array B**	**80.95**	**338**	P	**P**	**18 48 18.5**	**0.0**
	comp=Z,0.5nm,0.7s,baz=42,slow=5.3,SNR=3.5						
PDAR	**Pinedale Array**	**82.93**	**45**	P	**P**	**18 48 29.2**	**-0.3**
	comp=Z,0.6nm,0.8s,baz=301,slow=1.2,SNR=5.4						
BRTR	**Keskin Array B**	**83.70**	**312**	P	**P**	**18 48 34.3**	**+0.9**
	comp=Z,2.3nm,0.7s,baz=113,slow=3.9,SNR=5.3						
TXAR	**Lajitas Array**	**94.67**	**53**	P	**P**	**18 49 26.0**	**+0.2**
	comp=Z,0.4nm,0.6s,baz=306,slow=2.1,SNR=5.8						
PLCA	**Paso Flores**	**151.86**	**122**	PKPbc	**PKiKP**	**18 55 59.7**	**+0.4**
	comp=Z,1.3nm,0.7s,baz=251,slow=3.7,SNR=6.7						

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*IDC **01** 18:42:32.9±0.9, 1°.29N×96°.99E, h0km, mb4.3/18, mb1 4.3/20, mb1mx4.1/57, mbtmp4.3/20, ML3.7/2, MS3.5/4, Ms1 3.6/4, ms1mx3.1/47, Error ellipse: s-maj=26.9km s-min=16.1km az=53.0*

*BJI **01** 18:42:33.6±0.0, 0°.91N×97°.15E, h35km, mB5.0/32, mb4.6/46, Ms4.3/15, Ms7 4.1/15*

*DJA **01** 18:42:37.6±1.4, 1°N±6°×9°7E±°, h21km±6km, M4.4/12, mb4.5/2, mB4.8/1, MLv4.4/12, Mw(mB)4.1/1*

*NEIC **01** 18:42:38.4±2.0, 1°.4N±0°.1×97°.16E±0°.08, h35km±10km, mb4.6/23, Error ellipse: s-maj=17.1km s-min=8.8km az=210.0*

ISC 01 18:42:38.2±0.6, **1°.28N**±0°.06×**97°.01E**±0°.07, **h35**km, **n118**, σ**1^{s}74**/115, **mb4.5**/50, **MS4.0**/6, **2C-1D**, **Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSI	**Gunungsitoli**	**0.56**	**87**		**Pn**	**18 42 48.4**	**-1.3**
GSI	**Gunungsitoli**	**0.56**	**87**	P	**Pn**	**18 42 48.8**	**-1.0**
GSI				S	**Sn**	**18 42 57.8**	**-0.1**
TPTI		**1.98**	**5**	P	**Pn**	**18 43 07.4**	**-1.8**
PSI	**Prapat**	**2.44**	**52**	Pn	**Pn**	**18 43 13.8**	**-1.8**
	5.8nm,0.3s,baz=180,slow=3.8,SNR=56						
PSI				LR	LR	18 44 03.6	
	comp=Z,620nm,20.2s,baz=271,slow=38						
MNSI	**Mandailing Nat**	**2.61**	**101**	P	**Pn**	**18 43 18.1**	**+0.2**
TSI	**Tuntungan**	**2.70**	**35**	P	**Pn**	**18 43 18.9**	**-0.2**
LHMI	**Lhok Sumawe**	**3.92**	**359**	Pn	**Pn**	**18 43 35.7**	**-0.3**
LHMI	**Lhok Sumawe**	**3.92**	**359**	P	**Pn**	**18 43 35.5**	**-0.5**
PDSI	**Padang**	**4.08**	**122**	P	**Pn**	**18 43 40.3**	**+2.2**
BKNI	**Bangkinang**	**4.14**	**103**	P	**Pn**	**18 43 39.3**	**+0.4**
SDSI	**Sungai Dareh**	**4.93**	**116**	P	**Pn**	**18 43 50.3**	**+0.5**
IPM	**Ipoh**	**5.12**	**51**		**Pn**	**18 43 52.2**	**-0.2**
KULM	**Kulim**	**5.39**	**42**		**Pn**	**18 43 55.6**	**-0.6**
MYKOM	**Kota Tinggi**	**6.86**	**86**	Pn	**Pn**	**18 44 16.7**	**+0.4**
SRAK	**Srakaew**	**13.60**	**21**	P	**P**	**18 46 00.0**	**+2.9**
	149nm,1.0s						
UTHA	**Uthaitani**	**14.39**	**9**	P	**P**	**18 46 08.7**	**+2.7**
	10.0nm,0.9s						
CHAI	**Chaiyaphum**	**15.34**	**18**	P	**P**	**18 46 18.0**	**+1.5**
	23nm,1.0s						
SUKH	**Sukhothai**	**16.31**	**9**	P	**P**	**18 46 27.9**	**+0.7**
	21nm,0.7s						
UTTA	**Uttaradit**	**16.73**	**12**	P	**P**	**18 46 33.7**	**+1.8**
	11nm,1.0s						
MHMT	**Maesarieng**	**16.82**	**3**	P	**P**	**18 46 34.3**	**+1.4**
	12nm,0.9s						
CM05	**Chiang Mai Arr**	**17.12**	**6**	P	**P**	**18 46 37.0**	**+0.7**
	3.7nm,0.8s						
CM04	**Chiang Mai Arr**	**17.12**	**6**	P	**P**	**18 46 36.8**	**+0.4**
	7.1nm,1.0s						
CM13	**Chiang Mai Arr**	**17.14**	**6**	P	**P**	**18 46 37.0**	**+0.5**
	6.0nm,0.9s						
CM01	**Chiang Mai Arr**	**17.14**	**6**	P	**P**	**18 46 37.0**	**+0.5**
	8.3nm,1.1s						
CM02	**Chiang Mai Arr**	**17.16**	**6**	P	**P**	**18 46 37.0**	**+0.3**
	7.9nm,0.9s						
CMAR	**Chiang Mai Arr**	**17.18**	**6**	P	**Pn**	**18 46 33.9**	**-1.7**
	0.2nm,0.3s,baz=194,slow=12,SNR=22						
CMAR				LR	LR	18 53 42.5	
	comp=Z,170nm,18.3s,baz=295,slow=39						
PALK	**Pallekele**	**17.31**	**291**	Pn	**Pn**	**18 46 36.1**	**-1.3**
CMMT	**Chiang Mai**	**17.53**	**6**	P	**Pn**	**18 46 38.4**	**-1.6**
	315nm3.0nm,0.9s						
CHTO	**Chiang Mai**	**17.53**	**6**		**Pn**	**18 46 35.5**	**-4.5**
KKM	**Kota Kinabalu**	**19.73**	**76**	P	**P**	**18 47 03.1**	**-2.1**
KKM				IAmb	IAmb	18 47 09.0	
	comp=Z,40nm,1.3s						
SLVN	**Son La**	**21.04**	**18**		**P**	**18 47 18.1**	**-1.1**
SLVN				IAmb	IAmb	18 47 20.2	
	comp=Z,30nm,0.8s						
SAIH	**SAIHA**	**21.44**	**350**	*e*P	**P**	**18 47 23.1**	**-0.6**
SAIH				IAmb	IAmb	18 47 24.9	
	comp=Z,11nm,0.6s						
KAPI	**Kappang**	**23.56**	**106**	LR	LR	18 58 11.8	
	comp=Z,151nm,19.0s,baz=292,slow=40						
TOLI2	**Tolitoli**	**23.77**	**90**	P	**P**	**18 47 46.5**	**-1.2**
TOLI2				IAmb	IAmb	18 47 47.6	
	comp=Z,11nm,0.7s						
KMI	**Kunming**	**24.34**	**13**	⇓P	**P**	**18 47 53.2**	**0.0**
KMI				pP	pP	18 48 01.2	-1.9
KMI				sP	sP	18 48 06.2	-1.0
KMI				PP	**PnPn**	**18 48 30.2**	**+5.9**
KMI				S	**S**	**18 52 09.3**	**-1.2**
KMI				SS	**SnSn**	**18 53 06.9**	**+11**
KMI				pmax	pmax		
	comp=Z,22nm,1.2s						
KMI				pmax	pmax		
	comp=Z,110nm,6.4s						
KMI				LR	LR		
	comp=Z,510nm,14.3s						
KMI				LR	LR		
	comp=Z,200nm,15.0s						
KMI				LR	LR		
	comp=Z,490nm,17.5s						
SHL	**Shillong**	**24.65**	**349**	*e*P	**P**	**18 47 55.9**	**0.0**
SHL				IAmb	IAmb	18 47 58.4	
	comp=Z,26nm,0.9s						
SHL	**Shillong**	**24.65**	**349**	P	**P**	**18 47 54.8**	**-1.1**
BOK	**Bokaro**	**24.84**	**335**	*e*P	**P**	**18 47 59.7**	**+2.1**
BOK				IAmb	IAmb	18 48 00.9	
	comp=Z,8.2nm,0.7s						
MOKO	**MOKOCHONG**	**25.01**	**355**	*e*P	**P**	**18 47 58.8**	**-0.4**
MOKO				IAmb	IAmb	18 48 02.7	
	comp=Z,25nm,0.7s						
H08S2	**Diego Garcia H**	**26.01**	**250**	T	T	19 15 05.3	
	baz=71,slow=76,SNR=462						
H08S3	**Diego Garcia H**	**26.02**	**250**	T	T	19 15 13.8	
	baz=71,slow=76,SNR=842						
H08S1	**Diego Carcia H**	**26.03**	**250**	T	T	19 15 14.9	
	baz=71,slow=76,SNR=226						
ZIRO	**ZIRO**	**26.27**	**354**	*e*x	**P**	**18 48 14.9**	**+4.2**
GYA	**Guiyang**	**26.70**	**20**	⇑P	**P**	**18 48 14.7**	**+0.3**
GYA				pP	pP	18 48 20.5	-3.8
GYA				pmax	pmax		
	comp=Z,11nm,0.9s						
GYA				LR	LR		
	comp=Z,480nm,12.6s						
GTK	**Tadong**	**27.12**	**343**	*e*P	**P**	**18 48 19.8**	**+1.6**
GTK				IAmb	IAmb	18 48 22.3	
	comp=Z,9.9nm,0.8s						
TAPN	**Taplejung**	**27.42**	**342**	*e*P	**P**	**18 48 22.9**	**+1.8**
	comp=Z,76nm,1.0s						
PKI	**Pulchoki**	**28.41**	**338**	*e*P	**P**	**18 48 31.1**	**+1.1**
	comp=Z,43nm,1.5s						
PKIN	**Phulchoki**	**28.42**	**338**	*e*P	**P**	**18 48 31.0**	**+1.0**
GUN	**Gumba**	**28.55**	**339**	*e*P	**P**	**18 48 32.7**	**+1.5**
	comp=Z,26nm,0.7s						
DMN	**Daman**	**28.56**	**337**	*e*P	**P**	**18 48 32.6**	**+1.4**
KKN	**Kakani**	**28.66**	**338**	*e*P	**P**	**18 48 33.2**	**+1.2**
DANN	**Dangsing**	**29.75**	**336**	*e*P	**P**	**18 48 43.3**	**+1.5**
	comp=Z,12nm,0.7s						
CD2	**Chengdu**	**30.16**	**12**	*e*P	**P**	**18 48 46.0**	**+0.9**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ENH	**Enshi**	**31.18**	**21**	P	**P**	**18 48 51.4**	**-2.7**
YULB	**Yu-li**	**32.22**	**45**	P	**P**	**18 49 00.2**	**-3.2**
YULB				IAmb	IAmb	18 49 06.2	
	comp=Z,15nm,1.0s						
XAN	**Xi'an**	**34.45**	**18**	P	**P**	**18 49 21.7**	**-1.0**
XAN				pP	pP	18 49 28.2	-4.4
XAN				pmax	pmax		
	comp=Z,18nm,1.1s						
SMLA	**Simla**	**35.13**	**330**	*e*P	**P**	**18 49 29.7**	**+1.1**
SMLA				IAmb	IAmb	18 49 31.3	
	comp=Z,3.3nm,0.8s						
LZH	**Lanzhou**	**35.21**	**10**	*e*P	**P**	**18 49 33.0**	**+3.6**
LZH				pP	sP	18 49 42.5	-1.0
LZH				sP	pP	18 49 47.4	+8.0
LZH				pmax	pmax		
	comp=Z,21nm,1.3s						
LZH				pmax	pmax		
	comp=Z,100nm,5.4s						
DHRM	**DHARAMSHALA**	**36.47**	**330**	*e*P	**P**	**18 49 40.5**	**+0.1**
DHRM				IAmb	IAmb	18 49 45.1	
	comp=Z,9.5nm,0.9s						
MTN	**Manton Dam**	**36.65**	**114**	P	**P**	**18 49 40.4**	**-1.3**
NJ2	**Nanjing**	**36.90**	**32**	*e*P	**P**	**18 49 44.5**	**+0.9**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
GTA	**Gaotai**	**38.04**	**4**	⇑P	**P**	**18 49 53.2**	**-0.2**
GTA				pP	pP	18 50 03.9	+0.4
GTA				sP	sP	18 50 07.9	+0.2
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,21nm,5.6s						
GTA				LR	LR		
	comp=Z,130nm,15.6s						
GTA				LR	LR		
	comp=Z,230nm,16.4s						
GTA				LR	LR		
	comp=Z,100nm,15.3s						
H01W3	**Cape Leeuwin H**	**39.39**	**158**	T	T	19 32 00.5	
	baz=334,slow=76,SNR=20						
H01W2	**Cape Leeuwin H**	**39.40**	**158**	T	T	19 31 58.8	
	baz=334,slow=76,SNR=18						
H01W1	**Cape Leeuwin H**	**39.40**	**158**	T	T	19 31 46.2	
	baz=334,slow=76,SNR=18						
HHC	**Hu-ho-hao-te**	**41.54**	**17**	*e*P	**P**	**18 50 23.3**	**+0.9**
HHC				pmax	pmax		
	comp=Z,9.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,170nm,5.0s						
WB0	**Warramunga Arr**	**42.21**	**122**	P	**P**	**18 50 25.8**	**-2.3**
WB0				IAmb	IAmb	18 50 37.3	
	comp=Z,11nm,1.2s						
WRA	**Warramunga Arr**	**42.24**	**122**	P	**P**	**18 50 28.2**	**-0.2**
	comp=Z,1.7nm,0.7s,baz=300,slow=9.1,SNR=18						
WRA	**Warramunga Arr**	**42.24**	**122**	P	**P**	**18 50 27.6**	**-0.7**
WB2	**Warramunga Arr**	**42.25**	**122**	P	**P**	**18 50 27.7**	**-0.8**
BJI	**Beijing**	**42.34**	**22**	P	**P**	**18 50 28.9**	**+0.1**
BJI				pmax	pmax		
	comp=Z,4.0nm,0.5s						
BJI				pmax	pmax		
	comp=Z,100nm,4.4s						
WR0	**Warramunga Arr**	**42.41**	**122**	P	**P**	**18 50 28.4**	**-1.4**
WMQ	**Urumqi**	**43.16**	**350**	*e*P	**P**	**18 50 37.1**	**+1.5**
WMQ				pP	pP	18 50 47.7	+2.2
WMQ				pmax	pmax		
	comp=Z,13nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,98nm,7.7s						
WMQ				LR	LR		
	comp=Z,380nm,29.0s						
WMQ				LR	LR		
	comp=Z,740nm,29.1s						
WMQ				LR	LR		
	comp=Z,100nm,29.1s						
AS31	**Alice Springs**	**43.59**	**127**	P	**P**	**18 50 38.3**	**-1.1**
ASAR	**Alice Springs**	**43.59**	**127**	P	**P**	**18 50 39.5**	**+0.2**
	comp=Z,1.4nm,0.8s,baz=298,slow=7.9,SNR=14						
ASAR	**Alice Springs**	**43.59**	**127**	P	**P**	**18 50 38.9**	**-0.4**
SHLS	**Shalkode**	**44.55**	**342**	*e*P	**P**	**18 50 46.2**	**-0.6**
	baz=342						
SATY	**Saty**	**44.80**	**341**	*e*P	**P**	**18 50 49.4**	**+0.5**
	baz=341						
JNU	**Nakatsue**	**44.87**	**42**	P	**P**	**18 50 48.2**	**-1.2**
KPKS	**Kokpek**	**45.08**	**341**	*e*P	**P**	**18 50 51.0**	**0.0**
	baz=341						
MDOK	**Medeo**	**45.36**	**339**	*e*P	**P**	**18 50 54.2**	**+1.0**
	baz=339						
KSAR	**Wonju Array Be**	**45.86**	**35**	P	**P**	**18 50 56.4**	**-0.8**
KSRS	**Korea Array**	**45.89**	**35**	P	**P**	**18 50 56.8**	**-0.6**
	comp=Z,6.2nm,0.8s,baz=223,slow=9.0,SNR=28						
KSRS				LR	LR	19 11 02.9	
	comp=Z,54nm,18.7s,baz=296,slow=37						
KS19	**Wonju Array Si**	**45.89**	**35**	P	**P**	**18 50 56.8**	**-0.6**
KUU	**Kurty**	**46.25**	**339**	*e*P	**P**	**18 51 00.1**	**0.0**
	baz=339						
TDK	**Taldyqorghan**	**46.54**	**342**	*e*P	**P**	**18 51 01.9**	**-0.6**
	baz=342						
SONM	**Songino Array**	**47.08**	**9**	P	**P**	**18 51 07.2**	**+0.4**
	comp=Z,5.6nm,0.8s,baz=189,slow=9.2,SNR=47						
SONM				PcP	**PcP**	**18 52 38.5**	**+0.2**
	comp=Z,0.6nm,0.7s,baz=203,slow=1.6,SNR=2.3						
SONM	**Songino Array**	**47.08**	**9**	P	**P**	**18 51 07.1**	**+0.4**
MK31	**Makanchi Array**	**47.12**	**346**	P	**P**	**18 51 07.5**	**+0.6**
MK31				IAmb	IAmb	18 51 08.7	
	comp=Z,4.2nm,1.0s						
MKAR	**Makanchi Array**	**47.12**	**346**	P	**P**	**18 51 07.7**	**+0.7**
	comp=Z,2.5nm,0.5s,baz=160,slow=8.8,SNR=33						
MKAR	**Makanchi Array**	**47.12**	**346**	P	**P**	**18 51 06.7**	**-0.2**
ZSN	**Zaisan**	**47.19**	**349**	*e*P	**P**	**18 51 07.9**	**+0.4**
	comp=Z,4.8nm,0.8s,baz=349						
MAKZ	**Makanchi**	**47.21**	**346**	P	**P**	**18 51 08.2**	**+0.6**
MAKZ				IAmb	IAmb	18 51 11.2	
	comp=Z,2.9nm,0.7s						
IUG	**Iuzhnay**	**47.36**	**333**	*e*P	**P**	**18 51 09.6**	**+0.6**
	baz=333						
DZA	**Taraz**	**47.38**	**334**	*e*P	**P**	**18 51 09.5**	**+0.5**
	baz=334						
KKAR	**Karatay Array**	**47.90**	**334**	P	**P**	**18 51 14.3**	**+1.3**
COEN	**Coen**	**48.17**	**110**	P	**P**	**18 51 15.4**	**-0.1**
COEN				IAmb	IAmb	18 51 18.1	
	comp=Z,5.9nm,1.2s						
SEM	**Semipalatinsk**	**50.98**	**346**	*i* P	**P**	**18 51 36.3**	**-0.4**
	baz=346						
GEYT	**Alibeck**	**51.03**	**320**	P	**P**	**18 51 36.7**	**-0.4**
	comp=Z,0.5nm,0.5s,baz=154,slow=7.2,SNR=1.9						
KURK	**Kurchatov**	**51.67**	**345**	P	**P**	**18 51 41.8**	**+0.3**
KURK				IAmb	IAmb	18 52 00.2	
	comp=Z,8.6nm,1.2s						
BRZS	**Berezniki**	**52.77**	**340**	*e*P	**P**	**18 51 49.2**	**-0.6**
	baz=340						
USRK	**Ussuriysk Ar.**	**52.80**	**31**	P	**P**	**18 51 50.1**	**0.0**
	comp=Z,11nm,0.8s,baz=231,slow=4.7,SNR=16						
ZAA0	**Zalesovo Array**	**53.45**	**351**	P	**P**	**18 51 55.1**	**+0.4**
ZAA0				IAmb	IAmb	18 51 56.1	
	comp=Z,7.9nm,0.8s						
ZALV	**Zalesovo Beam**	**53.45**	**351**	P	**P**	**18 51 55.2**	**+0.5**
	comp=Z,11nm,0.7s,baz=178,slow=6.1,SNR=35						
ZALV	**Zalesovo Beam**	**53.45**	**351**	P	**P**	**18 51 55.1**	**+0.4**
STKA	**Stephens Creek**	**53.55**	**132**	P	**P**	**18 51 56.4**	**+0.6**
	comp=Z,2.1nm,0.8s,baz=341,slow=7.9,SNR=3.0						
KLR	**Kul'dur**	**56.27**	**27**	P	**P**	**18 52 15.1**	**-0.1**
	comp=Z,7.3nm,0.8s,baz=246,slow=6.7,SNR=19						
ABKAR	**Akbulak array**	**57.36**	**332**	P	**P**	**18 52 22.9**	**+0.1**
ABKAR				IAmb	IAmb	18 52 24.1	
	comp=Z,6.6nm,0.8s						
ABKAR	**Akbulak array**	**57.36**	**332**	P	**P**	**18 52 22.2**	**-0.7**
YAK	**Yakutsk**	**65.40**	**16**	P	**P**	**18 53 16.4**	**-0.6**
	comp=Z,14nm,0.9s,baz=35,slow=3.1,SNR=4.4						
NRIK	**Noril'sk**	**68.24**	**356**	P	**P**	**18 53 34.7**	**-0.3**
	comp=Z,2.2nm,0.6s,baz=146,slow=5.0,SNR=4.5						
MA2	**Magadan**	**71.34**	**26**	P	**P**	**18 53 54.0**	**-0.3**
	comp=Z,3.3nm,0.5s,baz=211,slow=4.4,SNR=4.7						
SEY	**Seymchan**	**73.76**	**23**	P	**P**	**18 54 08.2**	**-0.4**
	comp=Z,1.8nm,0.5s,baz=246,slow=10.0,SNR=12						
AKASG	**Malin Array Be**	**75.08**	**322**	P	**P**	**18 54 16.1**	**-0.3**
	comp=Z,0.5nm,0.5s,baz=87,slow=4.8,SNR=2.3						
FINES	**FINESS Array B**	**79.84**	**333**	P	**P**	**18 54 42.7**	**-0.2**
	comp=Z,3.4nm,1.0s,baz=117,slow=7.1,SNR=4.9						
ARCES	**ARCESS Array B**	**82.40**	**340**	P	**P**	**18 54 56.6**	**+0.2**
	comp=Z,2.2nm,0.8s,baz=2.9,slow=2.4,SNR=3.7						
GERES	**GERESS Array B**	**84.63**	**319**	P	**P**	**18 55 08.6**	**+0.2**
	comp=Z,0.5nm,0.8s,baz=78,slow=3.1,SNR=3.7						
TXAR	**Lajitas Array**	**143.70**	**31**	PKP	PKPbc	19 02 08.6	+0.7
	comp=Z,0.3nm,0.8s,baz=20,slow=4.0,SNR=3.9						

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*IDC **01** 18:51:45.2±0.6, 49°.34S×8°.22W, h0km, mb4.4/13, mb1 4.5/13, mb1mx4.4/25, mbtmp4.4/13, MS4.5/16, Ms1 4.5/16, ms1mx4.5/19, Error ellipse: s-maj=21.0km s-min=18.2km az=137.0*

*NEIC **01** 18:51:47.0±2.6, 49°.4S±0°.1×8°.41W±0°.08, h10km±1km, mb4.8/16, Error ellipse: s-maj=24.0km s-min=5.2km az=162.0*

*GCMT **01** 18:51:50.0±0.1, 49°.57S±0°.01×7°.73W±0°.01, h12km, MW5.2/133, Moment Tensor Solution. s82,c113; s133,c213; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-6.89±.11; $M_{\theta\theta}$1.07±.12; $M_{\phi\phi}$5.81±.10; $M_{r\theta}$0.53±.41; $M_{\theta\phi}$-2.12±.09; $M_{\phi r}$-2.17±.32; Best double couple: $M_0$7.11500×10^{16} NP1:ϕ_s157.00000°, δ36.00000°, λ-93.00000°. NP2:ϕ_s341.00000°, δ54.00000°, λ-88.00000°. Principal axes: T 6.9750, Plg9.0000°, Azm69.0000°; N 0.2700, Plg2.0000°, Azm160.0000°; P -7.2550, Plg81.0000°, Azm262.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 01 18:51:46.8±0.4, **49°.32S**±0°.08×**8°.34W**±0°.09, **h10**km, **n66**, σ**1^{s}55**/51, **mb4.6**/20, **MS4.7**/21, **Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**18.04**	**243**		**P**	**18 55 57.7**	**0.0**
VNA1	**Neumayer--Stat**	**21.40**	**180**	P	**P**	**18 56 36.1**	**+1.8**
VNA2	**Neumayer--Watz**	**21.68**	**179**	P	**P**	**18 56 38.0**	**+0.7**
	baz=358,slow=12						
VNA3	**Neumayer Olymp**	**22.01**	**181**	P	**P**	**18 56 43.1**	**+2.3**
SNAA	**Sanae**	**22.57**	**175**	P	**P**	**18 56 47.5**	**+0.6**
SNAA	**Sanae**	**22.57**	**175**	P	**P**	**18 56 46.7**	**-0.2**
	9.4nm,0.9s,baz=341,slow=8.7,SNR=20						
SNAA				LR	LR	19 03 19.5	
	comp=Z,601nm,21.5s,baz=352,slow=31						
SNAA	**Sanae**	**22.57**	**175**	P	**P**	**18 56 46.5**	**-0.4**
SUR	**Sutherland**	**27.55**	**63**	P	**P**	**18 57 33.3**	**-0.6**
	15nm,1.0s,baz=258,slow=4.5,SNR=4.1						
SUR				LR	LR	19 05 34.9	
	comp=Z,2μm,21.9s,baz=236,slow=30						
SUR	**Sutherland**	**27.55**	**63**	P	**P**	**18 57 34.5**	**+0.5**
SUR				IAmb	IAmb	18 57 36.0	
	comp=Z,39nm,1.3s						
BELA	**Belgrano 2**	**30.33**	**191**	P	**P**	**18 57 57.9**	**-0.1**
EFI	**East Falkland**	**31.23**	**246**	P	P	18 57 59.7	-6.4
PMSA	**Palmer Station**	**32.73**	**221**	LR	LR	19 08 48.9	
	comp=Z,1μm,21.7s,baz=106,slow=31						
PMSA	**Palmer Station**	**32.73**	**221**	P	**P**	**18 58 17.8**	**-1.4**
BOSA	**Boshof**	**32.91**	**64**	P	**P**	**18 58 20.2**	**-1.1**
	comp=Z,8.3nm,1.2s,baz=203,slow=12,SNR=4.1						
BOSA				LR	LR	19 09 02.1	
	comp=Z,2μm,19.9s,baz=249,slow=32						
LBTB	**Lobatse**	**35.85**	**60**	P	**P**	**18 58 45.5**	**-1.2**
	comp=Z,6.3nm,1.0s,baz=214,slow=12,SNR=4.2						
TSUM	**Tsumeb**	**36.54**	**44**	P	**P**	**18 58 52.5**	**-0.2**
	comp=Z,5.1nm,0.9s,baz=207,slow=7.0,SNR=4.1						
TSUM	**Tsumeb**	**36.54**	**44**	P	**P**	**18 58 51.8**	**-1.0**
TSUM				IAmb	IAmb	18 59 08.5	
	comp=Z,10nm,1.1s						
MAW	**Mawson**	**38.81**	**145**	LR	LR	19 11 53.8	
	comp=Z,889nm,21.6s,baz=255,slow=31						
QSPA	**South Pole Qui**	**40.94**	**180**	P	**P**	**18 59 29.6**	**+0.5**
QSPA				IAmb	IAmb	18 59 37.5	
	comp=Z,19nm,1.1s						
MATP	**Matopo**	**41.10**	**59**	P	**P**	**18 59 29.6**	**-1.3**
	comp=Z,3.6nm,0.8s,baz=209,slow=7.6,SNR=7.3						
PLCA	**Paso Flores**	**43.67**	**257**	LR	LR	19 17 11.2	
	comp=Z,797nm,18.9s,baz=133,slow=35						
PLCA	**Paso Flores**	**43.67**	**257**	P	**P**	**18 59 50.3**	**-1.3**
CPUP	**Villa Florida**	**44.03**	**283**	P	**P**	**18 59 53.2**	**-1.4**
	comp=Z,2.6nm,0.8s,baz=114,slow=7.9,SNR=4.8						
CPUP				LR	LR	19 15 21.8	
	comp=Z,544nm,21.3s,baz=136,slow=32						
BDFB	**Brasilia**	**46.54**	**302**	P	**P**	**19 00 15.7**	**+0.9**
	comp=Z,3.7nm,1.1s,baz=94,slow=10,SNR=4.8						
BDFB				LR	LR	19 16 45.7	
	comp=Z,711nm,18.2s,baz=129,slow=32						
VNDA	**Vanda**	**53.29**	**177**	P	**P**	**19 01 05.4**	**+0.3**
	comp=Z,8.2nm,1.1s,baz=156,slow=4.0,SNR=3.7						
VNDA				LR	LR	19 22 25.3	
	comp=Z,527nm,19.8s,baz=182,slow=34						

LIC	**Lamto**	55.39	4	*e*P	P	19 01 21.3	+0.2
	comp=Z,1.0nm,0.2s						
KIC	**Kosan Boka**	55.53	4	*e*P	P	19 01 23.5	+1.4
	comp=Z,5.3nm,0.8s						
PB01	**IPOC Station P**	55.61	277	P	P	19 01 22.6	-0.2
PB01				IAmb	IAmb	19 01 26.1	
	comp=Z,18nm,1.2s						
TIC	**Toumodi**	55.80	4	*e*P	P	19 01 21.9	-2.2
DBIC	**Dimbokro**	55.84	4	P	P	19 01 25.4	+1.1
	comp=Z,9.5nm,1.2s,baz=155,slow=8.0,SNR=3.8						
DBIC				LR	LR	19 20 33.0	
	comp=Z,339nm,18.0s,baz=138,slow=31						
PB08	**IPOC Station P**	56.04	278	P	P	19 01 23.8	-2.4
PB08				IAmb	IAmb	19 01 32.0	
	comp=Z,14nm,1.1s						
PB16	**IPOC Station P**	57.58	280	P	P	19 01 38.4	+0.9
PB16				IAmb	IAmb	19 01 40.7	
	comp=Z,14nm,1.1s						
SAML	**Samuel**	60.72	292	P	P	19 01 59.5	+1.0
SAML				IAmb	IAmb	19 02 01.1	
	comp=Z,8.8nm,0.9s						
KMBO	**Kilima Mbogo**	61.80	54	LR	LR	19 27 15.6	
	comp=Z,1µm,19.3s,baz=259,slow=34						
TOA0	**Torodi Ar. Sit**	62.82	11	P	P	19 02 13.4	+0.9
TORD	**Torodi Ar. Bea**	62.82	11	P	P	19 02 13.1	+0.5
	comp=Z,1.8nm,0.6s,baz=198,slow=7.0,SNR=8.4						
TORD				LR	LR	19 23 44.4	
	comp=Z,370nm,21.7s,baz=115,slow=30						
TORD	**Torodi Ar. Bea**	62.82	11	P	P	19 02 13.0	+0.5
TAM	**Tamanrasset**	72.84	13	P	P	19 03 17.6	+1.9
TAM				IAmb	IAmb	19 03 19.6	
	comp=Z,10nm,1.3s						
ROSC	**El Rosal**	78.34	292	LR	LR	19 36 44.5	
	comp=Z,726nm,18.9s,baz=96,slow=34						
H01W2	**Cape Leeuwin H**	81.84	136	T	T	20 35 02.6	
	baz=216,slow=75,SNR=8.3						
H01W1	**Cape Leeuwin H**	81.86	136	T	T	20 35 07.6	
	baz=216,slow=75,SNR=7.3						
H01W3	**Cape Leeuwin H**	81.86	136	T	T	20 35 01.8	
	baz=216,slow=75,SNR=7.3						
ESDC	**Sonseca Array**	88.70	3	P	P	19 04 40.1	+0.2
	comp=Z,1.8nm,1.0s,baz=191,slow=6.0,SNR=6.0						
STKA	**Stephens Creek**	94.84	155	LR	LR	19 39 57.5	
	comp=Z,79nm,21.6s,baz=203,slow=30						
BRTR	**Keskin Array B**	96.09	31	LR	LR	19 46 54.0	
	comp=Z,64nm,21.7s,baz=196,slow=34						
TBI	**Tubuai**	99.80	216	*e*LR	LR	19 37 57.8	
	comp=Z,386nm,26.8s						
ASAR	**Alice Springs**	99.93	145	P	Pdif	19 05 32.5	+0.5
	comp=Z,0.4nm,0.9s,baz=193,slow=3.8,SNR=1.9						
ASAR				LR	LR	19 44 35.8	
	comp=Z,138nm,19.4s,baz=206,slow=32						
PPT2	**Papeete2**	105.05	218	*e*SP	SP	19 19 21.6	-6.3
	comp=Z,119nm,28.5s						
PPT2				*e*SS	SS	19 25 09.8	+1.5
	comp=Z,152nm,27.0s						
PPT2	**Papeete2**	105.05	218	*e*LR	LR	19 40 32.2	
	comp=Z,492nm,25.8s						
TAOE	**Nuku Hiva Isla**	108.39	231	*e*LR	LR	19 42 04.5	
	comp=Z,392nm,23.4s						
DZM	**Mont Dzumac**	108.78	175	*e*SS	SS	19 25 54.9	-3.5
	comp=Z,3µm,31.1s						
DZM	**Mont Dzumac**	108.78	175	*e*LR	LR	19 42 08.0	
	comp=Z,278nm,24.9s						
QIZ	**Qiongzhong**	122.51	99	PKP	PKPdf	19 10 42.6	+0.2
QIZ				PP	PP	19 12 17.4	-1.9
QIZ	**Qiongzhong**	122.51	99	SS	SS	19 29 03.4	+2.9
QIZ				LR	LR		
	comp=N,310nm,23.5s						
QIZ				LR	LR		
	comp=E,430nm,28.9s						
QIZ				LR	LR		
	comp=Z,340nm,23.0s						
MKAR	**Makanchi Array**	123.67	56	PKP	PKPdf	19 10 42.3	-1.6
	comp=Z,0.2nm,0.5s,baz=242,slow=3.1,SNR=2.4						
CD2	**Chengdu**	126.73	84	PKP	PKiKP	19 10 51.0	+0.2
GTA	**Gaotai**	129.50	73	*e*PKP	PKiKP	19 11 03.5	+7.4
NJ2	**Nanjing**	137.33	94	*e*P	PKPdf	19 11 09.8	-0.3
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
HHC	**Hu-ho-hao-te**	137.74	78	*e*P	PKPdf	19 11 08.2	-2.6
SONM	**Songino Array**	138.01	66	PKP	PKPdf	19 11 10.2	-0.9
	comp=Z,0.5nm,0.7s,baz=232,slow=3.1,SNR=5.4						
YKA	**Yellowknife Ar**	139.01	317	PKP	PKPdf	19 11 11.5	-0.7
	comp=Z,1.2nm,1.0s,baz=104,slow=4.3,SNR=4.7						
DLBC	**Dease Lake**	145.48	308	PKPbc	PKPab	19 11 24.9	+0.5
	comp=Z,3.6nm,0.9s,baz=355,slow=9.5,SNR=3.6						
KSRS	**Korea Array**	146.53	94	PKPbc	PKPbc	19 11 27.4	-0.4
	comp=Z,3.0nm,1.0s,baz=253,slow=4.9,SNR=8.3						
INK	**Inuvik**	147.37	326	PKPbc	PKPbc	19 11 29.4	+0.2
	comp=Z,14nm,0.7s,baz=50,slow=2.9,SNR=34						
MJAR	**Matsushiro Arr**	152.62	105	PKPbc	PKPbc	19 11 42.6	-0.5
	comp=Z,1.9nm,0.9s,baz=271,slow=2.5,SNR=3.8						
ILAR	**Eielson Array**	153.31	321	PKP	PKPdf	19 11 35.0	-1.2
	comp=Z,0.7nm,1.1s,baz=247,slow=4.4,SNR=4.2						
ILAR				PKPbc	PKPbc	19 11 43.5	-0.2
	comp=Z,1.2nm,0.8s,baz=352,slow=2.1,SNR=12						

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*TAP **01** 19:10:34.2, 24°.33N×121°.71E, h60^{km}, ML3.1, B*
*JMA **01** 19:10:34.0, 24°.33N×121°.73E, h57^{km}±1^{km}, M2.5*
ISC 01 19:10:35.1±1.2**, 24°.33N**±0°.02×**121°.77E**±0°.02**, h52**^{km}±5^{km}**,**
n106, σ**0^s.97**/208**, 23C-23D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENA	**Nanau**	0.10	343	⇓*i*P	Pn	19 10 43.4	+0.2
	baz=8.0						
ENA				S	Sn	19 10 50.5	+1.5
	baz=8.0						
NACB	**Ninganchiao**	0.23	226	⇑*i*P	Pn	19 10 43.3	-0.6
	baz=217						
NACB				S	Sn	19 10 49.7	-0.5
	baz=217						
TWC	**Suao**	0.28	14	⇓P	Pn	19 10 44.8	+0.4
	baz=21						
TWC				*e*S	Sn	19 10 52.7	+1.8
	baz=21						
ETLH	**Xiulin Townshi**	0.29	245	⇑P	Pn	19 10 44.0	-0.6
	baz=241						
ETLH				*e*S	Sn	19 10 50.9	-0.3
	baz=241						
TWD	**Chiawan**	0.30	213	⇑*i*P	Pn	19 10 43.9	-0.5
	baz=213						
TWD				*e*S	Sn	19 10 50.1	-1.0
	baz=213						
NDT	**Datong Townshi**	0.36	319	⇑P	Pn	19 10 44.9	-0.2
	baz=319						
NDT				*e*S	Sn	19 10 52.2	+0.1
	baz=319						
ENTT	**Nioudou**	0.36	329	⇑P	Pn	19 10 44.9	-0.2
	baz=341						
ENTT				*e*S	Sn	19 10 52.3	+0.2
	baz=341						
NNSB	**Datong**	0.37	285	⇓P	Pn	19 10 44.8	-0.5
	baz=289						
NNSB				*e*S	Sn	19 10 52.3	-0.2
	baz=289						
NNSH	**Datong**	0.37	285	⇓P	Pn	19 10 44.9	-0.4
	baz=288						
NNSH				*e*S	Sn	19 10 52.3	-0.2
	baz=288						
NNS	**Nan Shan**	0.38	287	⇑P	Pn	19 10 44.9	-0.4
	baz=290						
NNS				*e*S	Sn	19 10 52.7	-0.1
	baz=290						
HWA	**Hwalien**	0.39	204	⇓*e*P	Pn	19 10 45.9	+0.6
	baz=205						
HWA				*e*S	Sn	19 10 54.1	+1.5
	baz=205						
TWE	**Neicheng**	0.40	346	⇓*i*P	Pn	19 10 45.7	+0.3
	baz=352						
TWE				*e*S	Sn	19 10 54.4	+1.6
	baz=352						
ILA	**Ilan**	0.43	357	*e*P	Pn	19 10 44.8	-1.0
	baz=1.0						
ILA				*e*S	Sn	19 10 54.7	+1.3
	baz=1.0						
FUSS	**Fushou**	0.49	260	⇓P	Pn	19 10 46.4	-0.3
	baz=256						
FUSS				*e*S	Sn	19 10 54.8	-0.2
	baz=256						
YHNB	**Yeheng**	0.49	313	⇓P	Pn	19 10 45.9	-0.7
	baz=318						
YHNB				*e*S	Sn	19 10 53.9	-0.9
	baz=318						
WHF	**Hehuan Shan**	0.50	248	⇑P	Pn	19 10 46.4	-0.6
	baz=246						
WHF				*e*S	Sn	19 10 55.1	-0.3
	baz=246						
NWLT	**Wulai**	0.51	331	⇓P	Pn	19 10 46.5	-0.2
	baz=337						
NWLT				*e*S	Sn	19 10 55.1	+0.1
	baz=337						
NSK	**Sanguang**	0.51	312	⇓P	Pn	19 10 46.0	-0.8
	baz=317						
NSK				*e*S	Sn	19 10 54.4	-0.7
	baz=317						
TWT	**Tachien**	0.55	262	⇓P	Pn	19 10 47.2	-0.1
	baz=256						
TWT				*e*S	Sn	19 10 55.6	-0.5
	baz=256						
TDCB	**Techi**	0.57	262	⇓*i*P	Pn	19 10 47.0	-0.4
	baz=259						
TDCB				S	Sn	19 10 55.8	-0.6
	baz=259						
ESL	**Shilin**	0.60	211	⇑*i*P	Pn	19 10 46.1	-1.6
	baz=206						
ESL				*e*S	Sn	19 10 55.1	-1.8
	baz=206						
CHGB	**Renai**	0.61	244	⇓*i*P	Pn	19 10 47.5	-0.5
	baz=237						
CHGB				*e*S	Sn	19 10 56.6	-0.8
	baz=237						
TIPB	**Shuangxi**	0.64	4	⇓*i*P	Pn	19 10 48.9	+0.6
	baz=358						
TIPB				*e*S	Sn	19 10 59.5	+1.8
	baz=358						
TATO	**Taipei**	0.69	338	P	Pn	19 10 47.9	-1.0
	baz=342						
TATO				*e*S	Sn	19 10 58.2	-0.6
	baz=342						
TWB1	**Santiao Chiao**	0.70	16	⇓P	Pn	19 10 49.3	+0.3
	baz=20						
TWB1				*e*S	Sn	19 11 00.8	+1.8
	baz=20						
BACT	**New Taipei Cit**	0.73	336	*e*P	Pn	19 10 48.6	-0.7
	baz=349						
BACT				*e*S	Sn	19 11 00.5	+0.8
	baz=349						
EGFH	**Guangfu**	0.73	206	*e*P	Pn	19 10 49.5	+0.2
	baz=206						
EGFH				*e*S	Sn	19 10 58.1	-1.6
	baz=206						
NWF	**Wu-fen Shan**	0.74	1	⇑*e*P	Pn	19 10 49.0	-0.6
	baz=353						
NWF				*e*S	Sn	19 11 01.2	+1.3
	baz=353						
WFSB	**Wu-fen Shan**	0.74	1	*e*P	Pn	19 10 49.1	-0.3
	baz=353						
WFSB				*e*S	Sn	19 11 01.5	+1.7
	baz=353						
TAP	**Taipei**	0.74	341	*e*S	Sn	19 10 59.4	-0.7
	baz=345						
WHP	**Taichung City**	0.76	266	⇑P	Pn	19 10 49.8	0.0
	baz=267						
WHP				*e*S	Sn	19 11 00.7	+0.2
	baz=267						
LIOB	**Emei**	0.76	295	⇑P	Pn	19 10 48.9	-0.8
	baz=297						
LIOB				*e*S	Sn	19 11 00.6	+0.2
	baz=297						
NSTT	**Nanjuang**	0.76	293	*e*P	Pn	19 10 49.2	-0.5
	baz=295						
NSTT				*e*S	Sn	19 11 00.4	-0.1
	baz=295						
NTY	**Taoyuan**	0.79	327	*e*P	Pn	19 10 49.4	-0.7
	baz=331						
NTY				*e*S	Sn	19 11 01.3	+0.1
	baz=331						
WPL	**Puli Township**	0.81	247	*e*P	Pn	19 10 50.9	+0.5
	baz=247						
WPL				*e*S	Sn	19 11 01.7	+0.1
	baz=247						
TNOU	**National Taiwa**	0.81	0	*e*P	Pn	19 10 50.7	+0.3
	baz=351						
TNOU				*e*S	Sn	19 11 02.7	+1.0
	baz=351						
HSN1	**Hsinchu**	0.82	303	*e*P	Pn	19 10 49.7	-0.8
	baz=305						
HSN1				*e*S	Sn	19 11 03.2	+1.5
	baz=305						
DPDB	**Guoxing**	0.83	249	⇑*e*P	Pn	19 10 50.6	-0.1
	baz=248						
DPDB				*e*S	Sn	19 11 02.7	+0.6
	baz=248						
NCUH	**Zhongli**	0.83	320	*e*P	Pn	19 10 52.3	+1.7
	baz=323						
NCUH				*e*S	Sn	19 11 01.8	-0.2
	baz=323						
NCU	**National Centr**	0.83	320	⇓P	Pn	19 10 49.8	-0.9
	baz=323						
NCU				*e*S	Sn	19 11 01.6	-0.4
	baz=323						
TWS1	**Kuangyinshan**	0.83	337	⇑*e*P	Pn	19 10 50.0	-0.7
	baz=340						
TWS1				*e*S	Sn	19 11 01.9	-0.2
	baz=340						
YM01	**YM01**	0.83	347	*e*P	Pn	19 10 49.7	-1.0
	baz=341						
YM01				*e*S	Sn	19 11 01.7	-0.4
	baz=341						
YM10	**YM10**	0.84	347	*e*P	Pn	19 10 50.0	-0.9
	baz=342						
YM10				*e*S	Sn	19 11 01.5	-1.0
	baz=342						
YM04	**YM04**	0.85	345	*e*P	Pn	19 10 50.1	-0.8
	baz=348						
YM04				*e*S	Sn	19 11 01.4	-1.1
	baz=348						
YM05	**YM05**	0.85	347	*e*P	Pn	19 10 50.0	-1.1
	baz=342						
YM05				*e*S	Sn	19 11 01.8	-0.8
	baz=342						
YM11	**YM11**	0.85	348	*e*P	Pn	19 10 50.3	-0.7
	baz=342						
YM11				*e*S	Sn	19 11 01.5	-1.1
	baz=342						
SBCB	**Hsinchu**	0.85	303	*e*S	Sn	19 11 02.3	-0.2
	baz=316						
YM08	**YM08**	0.87	349	*e*P	Pn	19 10 49.9	-1.3
	baz=343						
YM08				*e*S	Sn	19 11 01.5	-1.4
	baz=343						
YM03	**YM03**	0.87	346	*e*P	Pn	19 10 50.2	-1.1
	baz=349						
YM03				*e*S	Sn	19 11 01.8	-1.3
	baz=349						
NTST	**Danshui**	0.88	341	*e*P	Pn	19 10 51.1	-0.2
	baz=343						
NTST				*e*S	Sn	19 11 03.3	+0.1
	baz=343						
ANP	**Anpu**	0.88	345	*e*P	Pn	19 10 50.7	-0.7
	baz=348						
ANP				*e*S	Sn	19 11 01.2	-2.2
	baz=348						
HGSD	**Ruisui**	0.90	201	*e*P	Pn	19 10 51.5	0.0
	baz=208						
HGSD				*e*S	Sn	19 11 05.6	+2.1
	baz=208						
SMLT	**Sun Moon Lake**	0.91	241	⇓*e*P	Pn	19 10 52.1	+0.3
	baz=235						
SMLT				*e*S	Sn	19 11 05.1	+0.9
	baz=235						
NMLH	**Miaoli**	0.92	283	*e*P	Pn	19 10 51.2	-0.6
	baz=284						
NMLH				*e*S	Sn	19 11 05.0	+0.9
	baz=284						
EHY	**Hungye**	0.92	207	*e*P	Pn	19 10 51.0	-0.9
	baz=205						
EHY				*e*S	Sn	19 11 02.3	-1.8
	baz=205						
SSLB	**Suanglung**	0.92	234	*e*P	Pn	19 10 52.1	+0.1
	baz=229						
SSLB				*e*S	Sn	19 11 05.7	+1.4
	baz=229						
NSY	**Sanyi**	0.93	275	*e*P	Pn	19 10 51.4	-0.6
	baz=276						
NSY				*e*S	Sn	19 11 05.1	+0.8
	baz=276						
TYC	**Yuchr**	0.94	243	⇓*e*P	Pn	19 10 52.1	0.0
	baz=242						
TYC				*e*S	Sn	19 11 05.2	+0.6
	baz=242						
TCU	**Taichung**	1.02	260	*e*P	Pn	19 10 52.9	-0.2
	baz=270						
TCU				*e*S	Sn	19 11 07.8	+1.3
	baz=270						
WWF	**Wufeng**	1.02	254	*e*P	Pn	19 10 52.9	-0.3
	baz=265						
WWF				*e*S	Sn	19 11 07.5	+0.9
	baz=265						
YULB	**Yu-li**	1.03	205	*e*P	Pn	19 10 52.5	-0.9
	baz=204						
YULB				*e*S	Sn	19 11 05.9	-0.9
	baz=204						
WDJ	**Dajia District**	1.03	271	⇑*e*P	Pn	19 10 52.8	-0.6
	baz=271						
WDJ				*e*S	Sn	19 11 06.9	+0.1
	baz=271						
WHYT	**Xinyi Township**	1.05	233	⇑*e*P	Pn	19 10 54.2	+0.6
	baz=227						
WHYT				*e*S	Sn	19 11 09.0	+1.7
	baz=227						
EYUL	**Yuli**	1.06	203	*e*P	Pn	19 10 54.2	+0.4
	baz=207						
EYUL				*e*S	Sn	19 11 08.6	+1.0
	baz=207						
TWF1	**Yuli**	1.07	204	*e*P	Pn	19 10 54.2	+0.4
	baz=207						
TWF1				*e*S	Sn	19 11 08.0	+0.3
	baz=207						
JYNG	**Yonagunijimaku**	1.08	83	P	Pn	19 10 53.8	-0.1
JYNG				*e*S	Sn	19 11 07.5	-0.3
WJS	**Zhushan**	1.08	242	*e*P	Pn	19 10 54.1	+0.1
	baz=255						
WJS				*e*S	Sn	19 11 09.6	+1.6
	baz=255						
WNT1	**Nantou City**	1.08	247	⇑*e*P	Pn	19 10 54.2	+0.2
	baz=247						
WNT1				*e*S	Sn	19 11 09.1	+1.0
	baz=247						
WNT	**Mingjian**	1.09	246	⇑*e*P	Pn	19 10 54.5	+0.4
	baz=257						
WNT				*e*S	Sn	19 11 10.0	+1.8
	baz=257						
YOJ	**Yonaguni jima**	1.14	83	*e*P	Pn	19 10 54.6	-0.1
	baz=72						
YOJ				*e*S	Sn	19 11 10.3	+1.0
	baz=72						
WCHH	**Zhanghua**	1.14	257	*e*P	Pn	19 10 54.1	-0.6
	baz=265						
WCHH				*e*S	Sn	19 11 09.5	+0.2
	baz=265						
ALS	**Alishan**	1.21	227	⇑*e*P	Pn	19 10 56.4	+0.4
	baz=219						
ALS				*e*S	Sn	19 11 12.5	+1.1
	baz=219						
FULB	**Fuli**	1.21	201	*e*P	Pn	19 10 56.2	+0.4
	baz=208						
FULB				*e*S	Sn	19 11 12.6	+1.4
	baz=208						
CHN5	**Tsauling**	1.24	234	⇑*e*P	Pn	19 10 56.3	+0.1
	baz=244						
CHN5				*e*S	Sn	19 11 12.9	+0.9
	baz=244						
WGK	**Gukeng**	1.28	240	⇓*e*P	Pn	19 10 56.7	+0.1
	baz=251						
WGK				*e*S	Sn	19 11 14.5	+1.7
	baz=251						
CHKT	**Chengkung**	1.28	197	*e*P	Pn	19 10 56.0	-0.7
	baz=202						
CHKT				*e*S	Sn	19 11 11.7	-1.2
	baz=202						
WDLH	**Douliu**	1.30	241	*e*P	Pn	19 10 57.0	+0.1
	baz=253						
WDLH				*e*S	Sn	19 11 15.1	+1.9
	baz=253						
PCYT	**Pengchaiyu**	1.32	12	*e*S	Sn	19 11 14.7	+1.0
	baz=13						
ELDTW	**Lidau**	1.33	211	⇑*e*P	Pn	19 10 57.1	-0.4
	baz=203						
ELDTW				*e*S	Sn	19 11 13.9	-0.3
	baz=203						
WTK	**Tuku**	1.42	243	⇓*e*P	Pn	19 10 58.3	-0.2
	baz=256						
WTK				*e*S	Sn	19 11 17.0	+0.9
	baz=256						
EDH	**Donghe**	1.42	198	*e*P	Pn	19 10 58.2	-0.4
	baz=197						
EDH				*e*S	Sn	19 11 15.7	-0.5
	baz=197						
TPUB	**Ta-pu**	1.47	226	*e*P	Pn	19 10 59.8	+0.5
	baz=218						
TPUB				*e*S	Sn	19 11 18.5	+1.2
	baz=218						
CHY	**Chiayi**	1.49	236	*e*P	Pn	19 10 59.5	+0.1
	baz=248						
CHY				*e*S	Sn	19 11 19.1	+1.3
	baz=248						
STYT	**Tauyuan**	1.49	219	*e*P	Pn	19 11 00.7	+1.1
	baz=210						
STYT				*e*S	Sn	19 11 19.3	+1.3
	baz=210						
WTP	**Ta-pu**	1.52	225	⇑*e*P	Pn	19 11 00.6	+0.7
	baz=218						
WTP				*e*S	Sn	19 11 20.1	+1.6
	baz=218						
LONT	**Longtian**	1.54	203	*e*P	Pn	19 11 00.7	+0.5
	baz=194						
LONT				*e*S	Sn	19 11 19.4	+0.4
	baz=194						
WSF	**Szhu**	1.58	244	⇑*e*P	Pn	19 10 59.9	-0.8
	baz=254						
WSF				*e*S	Sn	19 11 19.8	-0.2
	baz=254						
TWK	**Hsinying**	1.58	228	⇓*e*P	Pn	19 11 01.4	+0.5
	baz=228						
TWK				*e*S	Sn	19 11 22.1	+1.8
	baz=228						
WLGB	**Puzi**	1.59	238	⇓*e*P	Pn	19 10 59.7	-1.2
	baz=249						
WLGB				*e*S	Sn	19 11 20.1	-0.2
	baz=249						
SNST	**Tainan City**	1.61	227	*e*P	Pn	19 11 02.9	+1.7
	baz=227						
SNST				*e*S	Sn	19 11 21.4	+0.7
	baz=227						
CHN1	**Nanshi**	1.61	225	*e*P	Pn	19 11 01.8	+0.6
	baz=226						
CHN1				*e*S	Sn	19 11 23.2	+2.2
	baz=226						
TWG	**Pinlang**	1.64	203	*e*P	Pn	19 11 01.9	+0.4
	baz=197						
TWG				*e*S	Sn	19 11 18.3	-3.2
	baz=197						
TWGBT	**Beinan**	1.64	203	*e*P	Pn	19 11 02.0	+0.5
	baz=197						
TWGBT				*e*S	Sn	19 11 18.6	-2.9
	baz=197						
SGST	**Jiashian**	1.65	221	*e*P	Pn	19 11 01.2	-0.6
	baz=222						
SGST				*e*S	Sn	19 11 22.3	+0.4
	baz=222						
LDUT	**Ludao**	1.67	190	*e*P	Pn	19 11 00.8	-1.2
	baz=199						
LDUT				*e*S	Sn	19 11 19.5	-2.8
	baz=199						
ICHU	**Yijhu**	1.68	235	⇑*e*P	Pn	19 11 02.0	0.0
	baz=236						
ICHU				*e*S	Sn	19 11 23.4	+1.1
	baz=236						
SLGT	**Liugui**	1.69	218	*e*P	Pn	19 11 03.4	+1.1
	baz=212						
SLGT				*e*S	Sn	19 11 25.6	+2.9
	baz=212						
CHN8	**Yiju**	1.73	236	⇓*e*P	Pn	19 11 02.5	-0.3
	baz=248						
CHN8				*e*S	Sn	19 11 24.1	+0.3
	baz=248						
IRIF	**Iriomote-Funau**	1.79	89	P	Pn	19 11 03.0	-0.5
IRIF				*e*S	Sn	19 11 24.6	-0.5
SCST	**Cishan**	1.86	219	*e*P	Pn	19 11 03.3	-1.2
	baz=220						
SCST				*e*S	Sn	19 11 26.9	0.0
	baz=220						
HATJ	**Hateruma jima**	1.88	98	P	Pn	19 11 05.1	+0.3
ECL	**Taimali**	1.88	204	*e*P	Pn	19 11 05.0	+0.1
	baz=197						
ECL				*e*S	Sn	19 11 27.4	-0.1
	baz=197						
JKRS	**Kuro-shima**	2.04	92	P	Pn	19 11 07.2	+0.1
JKRS				*e*S	Sn	19 11 32.2	+0.8
JIJ	**Ishigaki jima**	2.16	89	P	Pn	19 11 08.4	-0.3

JIJ				eS	Sn	19 11 33.5	-0.8
JISG	Ishigakijimahi	2.33	83	P	Pn	19 11 10.2	-0.7
JISG				eS	Sn	19 11 38.7	+0.3
JTJ	Tarama	2.69	83	P	Pn	19 11 16.0	+0.1
JTJ				eS	Sn	19 11 47.5	+0.3

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*BJI **01** 19:39:09.7±0.0, 31°.70N×110°.95E, h10km, ML3.5/13*
*IDC **01** 19:39:09.3±2.5, 31°.82N×110°.50E, h0km, mb3.7/3, mb1 3.7/6, mb1mx3.4/54, mbtmp3.6/6, ML3.0/3, Error ellipse: s-maj=46.7km s-min=30.5km az=159.0*
ISC 01 19:39:08.5±0.7, **31°.78N**±0°.06×**110°.98E**±0°.05, **h10km, n16, σ1s.53**/21, **mb3.8**/5, **1C, Southeastern China**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
XAN	Xi'an	2.85	323	Pn	Pn	19 39 54.8	+0.7
XAN				Pg	Pg	19 40 03.5	+0.4
XAN				Sn	Sn	19 40 24.5	-3.9
XAN				Sg	Sb	19 40 36.7	+2.3
XAN				smax	smax		
	comp=N,270nm,0.9s						
XAN				smax	smax		
	comp=E,250nm,1.0s						
WHN	Wuhan	3.14	112	⇑Pn	Pn	19 39 58.1	+0.1
WHN				Pg	Pb	19 40 04.4	0.0
WHN				Sn	Sn	19 40 37.0	+1.5
WHN				Sg	Sg	19 40 47.3	-2.0
WHN				smax	smax		
	comp=N,330nm,0.9s						
WHN				smax	smax		
	comp=E,190nm,0.7s						
GYA	Guiyang	6.51	217	Pn	Pn	19 40 44.6	+0.1
GYA				Sn	Sn	19 41 59.5	+0.6
GYA				smax	smax		
	comp=N,19nm,0.9s						
GYA				smax	smax		
	comp=E,13nm,0.8s						
GTA	Gaotai	11.85	313	eP	Pn	19 41 50.1	-7.6
GTA				pmax	pmax		
	comp=Z,1.0nm,1.2s						
GTA				smax	smax		
	comp=N,2.0nm,1.2s						
GTA				smax	smax		
	comp=E,2.0nm,1.2s						
KSRS	Korea Array	15.05	63	Pn	P	19 42 47.1	+0.6
	comp=E,0.1nm,0.3s,baz=239,slow=11,SNR=12						
SONM	Songino Array	16.41	349	Pn	Pn	19 42 59.2	+0.2
	comp=E,0.0nm,0.3s,baz=356,slow=23,SNR=2.3						
CMAR	Chiang Mai Arr	17.15	222	Pn	Pn	19 43 07.4	-1.0
	comp=E,0.0nm,0.3s,baz=31,slow=12,SNR=9.3						
USRK	Ussuriysk Ar.	20.62	47	P	Pn	19 43 53.3	+3.1
	comp=E,4.4nm,0.8s,baz=249,slow=8.5,SNR=7.2						
WMQ	Urumqi	21.90	310	eP	P	19 44 04.7	+2.9
GUN	Gumba	22.10	266	eP	P	19 44 03.6	-0.8
	comp=E,39nm,1.0s						
PKI	Pulchoki	22.59	266	eP	P	19 44 09.6	-0.1
PKIN	Phulchoki	22.60	266	eP	P	19 44 09.5	-0.2
	comp=E,5.5nm,0.8s						
KKN	Kakani	22.64	267	eP	P	19 44 08.9	-1.2
DANN	Dangsing	23.78	269	eP	P	19 44 20.6	-1.2
	comp=E,12nm,0.6s						
MKAR	Makanchi Array	26.61	313	P	P	19 44 46.2	-0.9
	comp=E,0.6nm,0.7s,baz=110,slow=12,SNR=5.3						
ZALV	Zalesovo Beam	29.01	327	P	P	19 45 08.8	+0.5
	comp=E,0.5nm,0.6s,baz=122,slow=7.3,SNR=2.5						

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*NEIC **01** 19:52:15.1±2.2, 49°.9S±0°.1×9°.2W±0°.2, h10km±1km, mb4.6/11, Error ellipse: s-maj=26.1km s-min=17.7km az=157.0*
*IDC **01** 19:52:20.0±1.2, 49°.50S×9°.28W, h0km, mb4.0/4, mb1 4.1/4, mb1mx3.9/30, mbtmp4.0/4, MS4.6/3, Ms1 4.6/3, ms1mx4.0/25, Error ellipse: s-maj=51.0km s-min=28.2km az=93.0*
ISC 01 19:52:16.1±0.6, **49°.9S**±0°.1×**9°.2W**±0°.1, **h10km, n29, σ1s.73**/20, **mb4.3**/9, **MS4.6**/3, **Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	17.25	245	Pn	Pn	19 56 16.0	-0.7
HOPE				IAmb	IAmb	19 56 23.2	
	comp=Z,63nm,1.2s						
VNA1	Neumayer--Stat	20.80	179	P	P	19 56 57.1	0.0
VNA2	Neumayer--Watz	21.09	178	P	P	19 56 58.9	-1.3
	baz=356,slow=12						
VNA3	Neumayer Olymp	21.39	180	P	P	19 57 04.8	+1.3
SNAA	Sanae	22.02	175	P	P	19 57 08.7	-1.6
SNAA	Sanae	22.02	175	P	P	19 57 20.2	+10
	comp=Z,3.6nm,0.7s,baz=356,slow=8.0,SNR=11						
SNAA	Sanae	22.02	175	P	P	19 57 08.8	-1.5
SUR	Sutherland	28.35	63	P	P	19 58 11.2	+0.9
SUR				IAmb	IAmb	19 58 13.4	
	comp=Z,29nm,1.3s						
PMSA	Palmer Station	31.89	222	LR	LR	20 09 24.4	
	comp=Z,997nm,21.6s,baz=96,slow=32						
BOSA	Boshof	33.71	64	P	P	19 59 02.4	+5.0
	comp=Z,4.3nm,1.0s,baz=192,slow=8.0,SNR=4.2						
BOSA	Boshof	33.71	64	P	P	19 58 56.6	-0.8
BOSA				IAmb	IAmb	19 58 58.8	
	comp=Z,6.4nm,1.1s						
LBTB	Lobatse	36.66	60	LR	LR	20 11 50.4	
	comp=Z,963nm,18.5s,baz=227,slow=32						
TSUM	Tsumeb	37.38	45	P	P	19 59 27.2	-1.9
TSUM				IAmb	IAmb	19 59 36.5	
	comp=Z,6.4nm,1.1s						
QSPA	South Pole Qui	40.33	180	P	P	19 59 53.0	-0.4
QSPA				IAmb	IAmb	20 00 07.6	
	comp=Z,9.4nm,1.2s						
MATP	Matopo	41.92	59	LR	LR	20 14 50.7	
	comp=Z,734nm,19.1s,baz=212,slow=32						
MT02	Curacav	47.81	266	P	P	20 00 54.2	+0.6
PB08	IPOC Station P	55.55	280	P	P	20 01 51.0	-1.1
PB08				IAmb	IAmb	20 02 06.5	
	comp=Z,8.0nm,0.9s						
SAML	Samuel	60.41	293	P	P	20 02 25.9	+0.2
SAML				IAmb	IAmb	20 02 43.1	
	comp=Z,4.9nm,0.9s						
TORD	Torodi Ar. Bea	63.53	12	P	P	20 02 48.3	+1.8
	comp=Z,1.1nm,0.8s,baz=6.2,slow=1.9,SNR=6.4						
TORD	Torodi Ar. Bea	63.53	12	P	P	20 02 43.6	-2.9
PTGA	Pitinga	65.24	302	P	P	20 02 56.3	-1.6
H01W2	Cape Leeuwin H	81.82	136	T	T	21 35 38.4	
	baz=216,slow=75,SNR=4.1						
H01W1	Cape Leeuwin H	81.83	136	T	T	21 35 39.6	
	baz=216,slow=75,SNR=3.6						
H01W3	Cape Leeuwin H	81.83	136	T	T	21 35 36.4	
	baz=216,slow=75,SNR=4.8						
ESDC	Sonseca Array	89.34	4	P	P	20 05 16.8	+4.6
	comp=Z,0.7nm,0.7s,baz=203,slow=3.5,SNR=4.2						
SONM	Songino Array	138.79	67	PKP	PKiKP	20 11 46.8	+2.9
	comp=Z,0.1nm,0.3s,baz=178,slow=36,SNR=2.7						
YKA	Yellowknife Ar	139.06	317	PKP	PKiKP	20 11 46.3	+2.5
	comp=Z,0.5nm,0.7s,baz=106,slow=3.0,SNR=5.8						
KSRS	Korea Array	147.06	96	PKPbc	PKiKP	20 12 02.1	+1.1
	comp=Z,1.3nm,0.8s,baz=275,slow=5.0,SNR=4.1						
INK	Inuvik	147.53	325	PKPbc	PKiKP	20 12 03.3	+2.3
	comp=Z,7.3nm,0.8s,baz=40,slow=4.1,SNR=12						

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*IDC **01** 19:52:35.6±1.0, 15°.42N×147°.36E, h0km, mb3.6/8, mb1 3.8/9, mb1mx3.6/50, mbtmp3.6/9, ML3.7/1, Error ellipse: s-maj=34.3km s-min=20.0km az=117.0*
ISC 01 19:52:41.0±1.1, **15°.4N**±0°.2×**147°.2E**±0°.2, **h35km, n12, σ0s.90**/10, **mb3.7**/8, **Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	2.91	233	Pn	Pn	19 53 25.1	+0.4
	9.9nm,0.3s,baz=292,slow=22,SNR=1.6						
GUMO				Sn	Sn	19 53 57.3	-1.2
	13nm,0.3s,baz=34,slow=18,SNR=2.2						
H11S3	WAKE ISLAND Hy	18.86	78	T	T	20 16 26.5	
	baz=263,slow=74,SNR=11						
H11S1	WAKE ISLAND Hy	18.87	78	T	T	20 16 25.2	
	baz=263,slow=74,SNR=6.7						
H11S2	WAKE ISLAND Hy	18.88	78	T	T	20 16 28.3	
	baz=263,slow=74,SNR=5.1						
WRA	Warramunga Arr	37.32	200	P	P	19 59 49.6	-0.6
	0.7nm,0.9s,baz=20,slow=8.9,SNR=4.7						
ASAR	Alice Springs	40.94	199	P	P	20 00 21.4	+1.0
	0.3nm,0.7s,baz=16,slow=11,SNR=2.3						
CMAR	Chiang Mai Arr	46.21	281	P	P	20 01 03.7	+0.8
	0.4nm,0.4s,baz=83,slow=5.9,SNR=1.9						
SONM	Songino Array	46.66	323	P	P	20 01 06.0	-0.2
	0.1nm,0.4s,baz=12,slow=41,SNR=2.5						
MKAR	Makanchi Array	61.83	315	P	P	20 02 56.6	+0.1
	0.3nm,0.4s,baz=90,slow=9.0,SNR=12						
ILAR	Eielson Array	65.98	25	P	P	20 03 22.2	-1.3
	0.6nm,0.7s,baz=255,slow=5.3,SNR=6.3						
INK	Inuvik	71.84	23	P	P	20 04 00.5	+0.7
	1.2nm,0.8s,baz=221,slow=2.7,SNR=4.2						
YKA	Yellowknife Ar	80.22	28	P	P	20 04 47.4	-0.3
	0.5nm,0.7s,baz=290,slow=4.9,SNR=7.9						

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*BJI **01** 19:55:38.0±0.0, 15°.21N×147°.81E, h23km, mB5.0/23, mb4.5/36, Ms4.5/5, Ms7 4.2/5*
*IDC **01** 19:55:40.6±0.8, 15°.53N×147°.26E, h0km, mb4.2/19, mb1 4.3/20, mb1mx4.1/50, mbtmp4.2/20, ML4.1/1, MS3.9/3, Ms1 3.9/3, ms1mx3.0/54, Error ellipse: s-maj=24.8km s-min=14.4km az=109.0*
*NEIC **01** 19:55:43.3±1.9, 15°.44N±0°.08×147°.57E±0°.04, h32km±7km, mb4.6/22, Error ellipse: s-maj=12.8km s-min=4.0km az=197.0*
ISC 01 19:55:44.6±0.5, **15°.37N**±0°.06×**147°.47E**±0°.08, **h35km, n87, σ1s.30**/83, **mb4.6**/53, **MS4.3**/6, **1C, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANA2	Anatahan	1.95	300		Pn	19 56 14.7	-0.7
ANA2	Anatahan	1.95	300	P	Pn	19 56 14.8	-0.5
GUMO	Guam	3.08	235	Pn	Pn	19 56 31.3	+0.4
	24nm,0.3s,baz=140,slow=3.9,SNR=6.8						
GUMO				Sn	Sn	19 57 04.5	-2.0
	64nm,0.3s,baz=141,slow=23,SNR=14						
GUMO				LR	LR	19 57 12.9	
	comp=Z,147nm,21.3s,baz=108,slow=31						
GUMO	Guam	3.08	235	Pn	Pn	19 56 31.9	+1.0
PATS	Pohnpei	13.60	127	Pn	Pn	19 58 53.0	-2.1
H11S3	WAKE ISLAND Hy	18.64	78	T	T	20 19 14.2	
	baz=263,slow=74,SNR=16						
H11S1	WAKE ISLAND Hy	18.66	78	T	T	20 19 18.4	
	baz=263,slow=74,SNR=9.6						
H11S2	WAKE ISLAND Hy	18.66	78	T	T	20 19 11.9	
	baz=263,slow=74,SNR=12						
MJAR	Matsushiro Arr	22.64	340	P	P	20 00 40.8	-2.0
	2.6nm,0.9s,baz=168,slow=8.7,SNR=5.1						
MJAR	Matsushiro Arr	22.64	340	P	P	20 00 40.0	-2.7
MAJO	Matsushiro	22.65	340	P	P	20 00 39.8	-3.0
SIJI	Sorong	22.74	226	P	P	20 00 45.4	+1.4
	39nm,1.0s,baz=49,slow=9.4,SNR=12						
SWI	Sorong	22.74	226	P	P	20 00 45.5	+1.6
	43nm,1.2s						
JMM	Marumori	23.18	346	P	P	20 00 46.7	-1.5
JMM				IAmb	IAmb	20 00 57.3	
	comp=Z,31nm,1.1s						
JNU	Nakatsue	23.21	323	P	P	20 00 47.3	-1.3
JNU				IAmb	IAmb	20 01 05.4	
	comp=Z,42nm,1.3s						
FAKI	Fak Fak	23.61	221	P	P	20 00 54.3	+1.7
	comp=Z,64nm,1.1s						
HNR	Honiara	27.57	153	LR	LR	20 11 14.3	
	comp=Z,94nm,19.5s,baz=58,slow=34						
KSRS	Korea Array	28.00	325	P	P	20 01 29.8	-2.5
	comp=Z,1.1nm,0.7s,baz=148,slow=10.0,SNR=6.9						
ASAJ	Asahikawa	28.95	353	P	P	20 01 41.8	+1.1
	comp=Z,14nm,0.9s,baz=171,slow=6.6,SNR=5.3						
NJ2	Nanjing	30.89	308	eP	P	20 01 57.4	-0.5
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.5s						
PCI	Palu	31.75	242	P	P	20 02 05.8	+0.1
	comp=Z,7μmcomp=Z,533nm,1.0s						
MTN	Manton Dam	32.36	211	P	P	20 02 10.6	-0.4
MTN				IAmb	IAmb	20 02 17.8	
	comp=Z,9.0nm,1.1s						
KAPI	Kappang	34.12	236	P	P	20 02 25.7	-0.8
WB0	Warramunga Arr	37.21	201	P	P	20 02 53.5	+0.7
WR0	Warramunga Arr	37.34	200	P	P	20 02 55.5	+1.5
WB2	Warramunga Arr	37.39	201	P	P	20 02 55.7	+1.3
WB2				IAmb	IAmb	20 02 55.9	
	comp=Z,6.7nm,1.2s						
WRA	Warramunga Arr	37.39	201	P	P	20 02 55.5	+1.0
	comp=Z,1.1nm,0.8s,baz=25,slow=9.4,SNR=5.9						
HHC	Hu-ho-hao-te	40.15	316	eP	P	20 03 18.2	+0.7
HHC				pmax	pmax		
	comp=Z,7.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,65nm,5.4s						
ASAR	Alice Springs	41.00	199	P	P	20 03 25.9	+1.3
	comp=Z,0.5nm,0.6s,baz=22,slow=9.1,SNR=7.9						
CHAI	Chaiyaphum	43.74	277	P	P	20 03 47.1	+0.1
	comp=Z,23nm,0.8s						
SRAK	Srakaew	43.91	274	P	P	20 03 46.2	-2.1
	comp=Z,121nm,1.1s						
LZH	Lanzhou	43.94	306	eP	P	20 03 48.9	+0.3
LZH				pP	pP	20 03 56.7	-0.6
LZH				sP	sP	20 03 59.8	-1.0
LZH				ePP	PP	20 05 32.5	+1.2
LZH				pmax	pmax		
	comp=Z,31nm,1.3s						
LZH				pmax	pmax		
	comp=Z,100nm,4.9s						
LZH				LR	LR		
	comp=Z,250nm,14.6s						
LZH				LR	LR		
	comp=Z,320nm,14.6s						
LZH				LR	LR		
	comp=Z,210nm,16.8s						
MA2	Magadan	44.20	2	P	P	20 03 50.8	+0.7
	comp=Z,2.4nm,0.6s,baz=122,slow=20,SNR=2.3						
UTTA	Uttaradit	44.95	280	P	P	20 03 57.0	+0.3
	comp=Z,14nm,0.8s						
CM09	Chiang Mai Arr	46.38	281	P	P	20 04 09.2	+1.1
	comp=Z,6.7nm,0.9s						
CM04	Chiang Mai Arr	46.40	281	P	P	20 04 08.9	+0.8
	comp=Z,89nmcomp=Z,8.7nm,0.8s						
CMMT	Chiang Mai	46.40	281	P	P	20 04 07.1	-1.0
	comp=Z,4.0nm,0.8s						
CHTO	Chiang Mai	46.40	281	P	P	20 04 07.6	-0.6
CHTO				IAmb	IAmb	20 04 08.7	
	comp=Z,4.8nm,0.8s						
CM01	Chiang Mai Arr	46.42	281	P	P	20 04 09.4	+1.1
	comp=Z,67nmcomp=Z,7.0nm,1.1s						
CM02	Chiang Mai Arr	46.43	281	P	P	20 04 09.0	+0.6
	comp=Z,60nmcomp=Z,6.7nm,1.0s						
CMAR	Chiang Mai Arr	46.43	281	P	P	20 04 08.0	-0.4
	comp=Z,6.6nm,0.9s,baz=79,slow=6.4,SNR=24						
CMAR	Chiang Mai Arr	46.43	281	P	P	20 04 06.7	-1.6
ULN	Ulaanbaatar	46.43	323	P	P	20 04 07.8	-0.3
CM05	Chiang Mai Arr	46.43	281	P	P	20 04 09.0	+0.6
	comp=Z,71nmcomp=Z,6.4nm,0.9s						
CM13	Chiang Mai Arr	46.47	281	P	P	20 04 09.0	+0.3
	comp=Z,84nmcomp=Z,7.9nm,1.0s						
SONM	Songino Array	46.80	323	P	P	20 04 09.9	-1.1
	comp=Z,1.7nm,0.9s,baz=129,slow=7.4,SNR=9.6						
SONM	Songino Array	46.80	323	P	P	20 04 10.3	-0.7
STKA	Stephens Creek	47.31	187	P	P	20 04 10.2	-4.7
MHMT	Maesarieng	47.41	281	P	P	20 04 16.0	0.0
SEY	Seymchan	47.63	3	P	P	20 04 17.6	+0.5
	comp=Z,0.4nm,0.3s,baz=241,slow=20,SNR=5.7						
GTA	Gaotai	47.94	310	⇑P	P	20 04 19.4	-0.6
GTA				pP	pP	20 04 26.5	-2.3
GTA				sP	sP	20 04 29.6	-2.8
GTA				PcP	PcP	20 05 50.2	+2.2
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,38nm,6.0s						
GTA				LR	LR		
	comp=Z,120nm,14.2s						
GTA				LR	LR		
	comp=Z,160nm,13.5s						
GTA				LR	LR		
	comp=Z,190nm,14.5s						
YAK	Yakutsk	48.29	349	P	P	20 04 20.6	-1.6
CAN	Canberra	50.43	178	P	P	20 04 36.2	-2.7
LSA	Lhasa	53.47	296	P	P	20 05 02.2	-0.1
LSA				pmax	pmax		
	comp=Z,32nm,0.6s						
WMQ	Urumqi	57.78	312	eP	P	20 05 33.7	+1.2
GUN	Gumba	58.08	293	eP	P	20 05 34.7	-0.5
	comp=Z,12nm,0.7s						
PKI	Pulchoki	58.50	293	eP	P	20 05 37.3	-0.9
	comp=Z,7.0nm,0.7s						
PKIN	Phulchoki	58.51	293	eP	P	20 05 37.3	-0.9
	comp=Z,8.0nm,0.7s						
KKN	Kakani	58.61	293	eP	P	20 05 38.1	-0.7
	comp=Z,11nm,0.9s						
DMN	Daman	58.77	293	eP	P	20 05 39.5	-0.5
DANN	Dangsing	59.94	294	eP	P	20 05 47.6	-0.5
	comp=Z,17nm,0.7s						
ZALV	Zalesovo Beam	61.68	323	P	P	20 05 58.1	-1.0
	comp=Z,1.6nm,0.4s,baz=104,slow=6.3,SNR=11						
ZALV	Zalesovo Beam	61.68	323	P	P	20 05 56.7	-2.4
MK31	Makanchi Array	61.99	315	P	P	20 06 01.2	-0.2
MK31				IAmb	IAmb	20 06 02.1	
	comp=Z,6.1nm,1.1s						
MKAR	Makanchi Array	61.99	315	P	P	20 06 01.2	-0.2
	comp=Z,4.1nm,0.6s,baz=91,slow=8.0,SNR=53						
MAKZ	Makanchi	62.21	315	P	P	20 06 02.7	-0.2
NRIK	Noril'sk	65.30	340	P	P	20 06 22.4	-0.3
	comp=Z,2.7nm,0.6s,baz=111,slow=9.5,SNR=5.1						
ILAR	Eielson Array	65.89	25	P	P	20 06 27.5	+0.9
	comp=Z,1.0nm,0.9s,baz=256,slow=6.2,SNR=6.3						
KSH	Kashi	66.19	307	P	P	20 06 31.7	+2.5
KSH				S	S	20 15 19.8	+3.9
KSH				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KSH				pmax	pmax		
	comp=Z,100nm,5.0s						
KSH				LR	LR		
	comp=Z,270nm,10.4s						
KSH				LR	LR		
	comp=Z,120nm,8.2s						
KSH				LR	LR		
	comp=Z,760nm,23.3s						
BRVK	Borovoye	70.18	321	P	P	20 06 53.2	-0.5
BRVK				IAmb	IAmb	20 06 54.4	
	comp=Z,5.2nm,0.9s						
KK31	Karatay Array	70.20	311	P	P	20 06 54.2	0.0
KK31				IAmb	IAmb	20 06 54.9	
	comp=Z,6.5nm,0.8s						
KKAR	Karatay Array	70.20	311	P	P	20 06 54.4	+0.3
KKAR				IAmb	IAmb	20 06 54.9	
	comp=Z,6.5nm,0.8s						
KKAR	Karatay Array	70.20	311	P	P	20 06 54.1	-0.1
ARU	Arti	76.75	325	P	P	20 07 32.1	-0.3
ABKAR	Akbulak array	76.93	318	P	P	20 07 33.0	-0.6
ABKAR				IAmb	IAmb	20 07 34.7	
	comp=Z,3.1nm,0.7s						
ABKAR	Akbulak array	76.93	318	P	P	20 07 32.9	-0.6
YKA	Yellowknife Ar	80.12	28	P	P	20 07 52.4	+1.6
	comp=Z,1.1nm,0.7s,baz=285,slow=4.7,SNR=15						
GEYT	Alibeck	80.22	307	P	P	20 07 52.0	0.0
	comp=Z,2.1nm,0.8s,baz=186,slow=3.0,SNR=6.5						
NVAR	Mina Array Bea	83.84	52	P	P	20 08 13.3	+2.0
	comp=Z,0.3nm,0.7s,baz=261,slow=7.4,SNR=4.2						
ELK	Elko	85.51	49	LR	LR	20 41 11.4	
	comp=Z,190nm,21.1s,baz=0.5,slow=32						
ARCES	ARCESS Array B	86.16	343	P	P	20 08 21.8	-0.1
	comp=Z,3.2nm,0.8s,baz=46,slow=6.9,SNR=6.1						
FINES	FINESS Array B	90.60	336	P	P	20 08 41.7	-1.5
	comp=Z,4.3nm,1.0s,baz=20,slow=6.1,SNR=6.6						
ANMO	Albuquerque	93.97	52	LR	LR	20 46 14.8	
	comp=Z,49nm,18.5s,baz=46,slow=32						
DBIC	Dimbokro	144.91	307	PKP	PKPbc	20 15 18.4	+0.1
	comp=Z,6.4nm,0.9s,baz=152,slow=0.5,SNR=4.0						
KIC	Kosan Boka	145.01	306	ePKP1	PKPdf	20 15 19.8	+0.5
	comp=Z,21nm,1.1s						
TIC	Toumodi	145.05	307	ePKP1	PKPdf	20 15 19.9	+0.5
LIC	Lamto	145.32	306	ePKP1	PKPdf	20 15 20.8	+1.0
	comp=Z,11nm,0.4s						

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*NEIC **01** 20:02:20.7±2.3, 49°.32S±0°.10×8°.1W±0°.2, h10km±1km, mb5.3/23, Ms_20 5.4/473, Mwc5.6(GCMT), Error ellipse: s-maj=21.0km s-min=15.2km az=66.0*
*IDC **01** 20:02:20.0±0.5, 49°.33S×7°.98W, h0km, mb4.5/18, mb1 4.5/18, mb1mx4.5/31, mbtmp4.5/18, MS5.2/19, Ms1 5.1/19, ms1mx5.1/21, Error ellipse: s-maj=18.5km s-min=15.5km az=146.0*
*GCMT **01** 20:02:25.7±0.1, 49°.52S±0°.01×7°.77W±0°.01, h12km, MW5.6/157, Moment Tensor Solution. s122,c205; s157,c315; Duration: 1s.6 Moment tensor: Scale 10^{17} Nm; M_{rr}-3.20±.03; $M_{\theta\theta}$0.36±.03; $M_{\phi\phi}$2.84±.03; $M_{r\theta}$0.66±.10; $M_{\theta\phi}$-0.91±.03; $M_{\phi r}$-0.70±.08; Best double couple: $M_0$3.31300×10^{17} NP1:ϕ_s169.00000°, δ38.00000°, λ-79.00000°. NP2:ϕ_s335.00000°, δ53.00000°, λ-98.00000°. Principal axes: T 3.2590, Plg8.0000°, Azm71.0000°; N 0.1080, Plg7.0000°, Azm340.0000°; P -3.3660, Plg80.0000°, Azm210.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **01** 20:02:26, 49°.58S×7°.77W, h12km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-3.46; $M_{\theta\theta}$0.48; $M_{\phi\phi}$2.98; $M_{r\theta}$-0.09; $M_{\theta\phi}$-0.92; $M_{\phi r}$0.25; Fault plane solution: $M_0$3.39000×10^{17} NP1:ϕ_s342.00000°, δ43.00000°, λ-90.00000°. NP2:ϕ_s162.00000°, δ47.00000°, λ-90.00000°. Principal axes: T 3.2915, Plg2.0000°, Azm252.0000°; N 0.1808, Plg0.0000°, Azm162.0000°; P -3.4722, Plg88.0000°, Azm71.0000°;*
ISC 01 20:02:21.2±0.3, **49°.37S**±0°.07×**8°.22W**±0°.06, **h10km, n387, σ2s.05**/149, **mb4.9**/27, **MS5.4**/263, **5C-1D, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	21.35	180	P	P	20 07 11.3	+3.2
VNA2	Neumayer--Watz	21.63	179	P	P	20 07 11.2	+0.1
	baz=357,slow=11						
VNA3	Neumayer Olymp	21.95	181	P	P	20 07 16.6	+2.0
SNAA	Sanae	22.51	176	P	P	20 07 20.4	-0.3
SNAA	Sanae	22.51	176	P	P	20 07 20.7	0.0
	15nm,0.8s,baz=351,slow=8.2,SNR=31						
SNAA				LR	LR	20 14 04.9	
	comp=Z,2μm,19.5s,baz=352,slow=31						
SNAA	Sanae	22.51	176	P	P	20 07 20.3	-0.3
SNAA				IAmb	IAmb	20 07 31.5	
	comp=Z,90nm,1.1s						
SUR	Sutherland	27.51	63	P	P	20 08 05.3	-2.7
	comp=Z,8.9nm,0.8s,baz=188,slow=5.2,SNR=2.8						
SUR				LR	LR	20 16 11.0	
	comp=Z,12μm,21.7s,baz=216,slow=30						
SUR	Sutherland	27.51	63	IAMs_20	IAMs_20	20 15 50.6	
	comp=Z,11μm,21.0s						
SYO	Syowa Base	30.22	148	⇓eP	P	20 08 29.0	-2.4
SYO	Syowa Base	30.22	148	⇑epP	P	20 08 31.6	+0.2
SYO	Syowa Base	30.22	148	⇑esP	sP	20 08 33.6	-1.1
BELA	Belgrano 2	30.29	191	P	P	20 08 32.1	+0.1
BELA				IAmb	IAmb	20 08 43.0	
	comp=Z,27nm,0.8s						
PMSA	Palmer Station	32.74	221	IAMs_20	IAMs_20	20 19 02.6	
	comp=Z,7μm,22.0s						
BOSA	Boshof	32.87	63	P	P	20 08 53.1	-2.2
	comp=Z,8.2nm,0.8s,baz=208,slow=8.6,SNR=12						
BOSA				LR	LR	20 19 38.3	
	comp=Z,13μm,20.2s,baz=234,slow=32						
BOSA	Boshof	32.87	63	P	P	20 08 53.4	-1.9
BOSA				IAmb	IAmb	20 09 02.6	
	comp=Z,48nm,1.2s						
LBTB	Lobatse	35.81	60	P	P	20 09 18.4	-2.4
	comp=Z,3.6nm,0.8s,baz=219,slow=10,SNR=4.6						
LBTB	Lobatse	35.81	60	P	P	20 09 20.0	-0.8
LBTB				IAmb	IAmb	20 09 30.3	
	comp=Z,48nm,1.3s						
TSUM	Tsumeb	36.53	44	P	P	20 09 26.9	-0.2
TSUM	Tsumeb	36.53	44	IAMs_20	IAMs_20	20 20 57.6	
	comp=Z,7μm,20.0s						
CNLB	Canela	37.94	286	eP	P	20 09 41.4	+2.5
PLTB	Pedras Altas	38.05	280	eP	P	20 09 40.8	+1.1
MAW	Mawson	38.72	145	LR	LR	20 22 29.7	
	comp=Z,5μm,21.9s,baz=267,slow=31						
CPSB	Cacapava Do Su	38.84	282	eP	P	20 09 48.8	+2.4
LPA	La Plata	38.88	273	eP	P	20 09 44.2	-2.4
LPA				PP	PP	20 11 07.9	-7.6
LPA				PPP	PPP	20 11 34.3	
LPA				PCP	PcP	20 11 50.2	-7.2
LPA				S	S	20 15 36.6	-7.9
LPA				PS	PcS	20 15 55.2	+8.4
LPA				PPS	PPS	20 17 17.0	
LPA				SS	SnSn	20 18 35.0	+0.8
LPA				SCS	ScS	20 19 53.9	-2.5
PET01	Itanhaem-SP	39.40	295	eP	P	20 09 53.2	+2.2
CRZF	Crozet Islands	39.46	109	IAMs_20	IAMs_20	20 21 04.4	
	comp=Z,7μm,22.0s						
RIB01	Linhares ES	39.53	308	eP	P	20 09 54.3	+2.2
SPB	Sao Paulo	40.02	296	IAMs_20	IAMs_20	20 22 42.0	
	comp=Z,5μm,20.0s						
SPB	Sao Paulo	40.02	296	eP	P	20 09 59.1	+2.9
BSFB	Barra de Sao F	40.16	308	eP	P	20 10 00.5	+3.0

VAO	Valinhos	40.20	297	eP	P	20 10 00.6	+2.7
ITAB	Concordia	40.20	287	eP	P	20 10 00.6	+2.9
SJMB	Sao Joao De Ma	40.44	307	eP	P	20 10 02.2	+2.4
BSCB	Bom Sucesso	40.52	301	eP	P	20 10 03.6	+3.2
H10S2	ASCENSION HYDR	40.64	350	T	T	20 53 42.3	
	baz=173,slow=74,SNR=4.7						
H10S3	ASCENSION HYDR	40.65	350	T	T	20 53 42.3	
	baz=47,slow=74,SNR=7.2						
QSPA	South Pole Qui	40.88	180	P	P	20 10 03.8	+0.7
QSPA				IAmb	IAmb	20 10 08.9	
	comp=Z,59nm,1.3s						
MATP	Matopo	41.06	59	P	P	20 10 02.7	-2.4
	comp=Z,9.5nm,0.6s,baz=212,slow=8.2,SNR=11						
ITQB	Itaqui	41.38	280	eP	P	20 10 09.5	+2.1
PTGB	Pitanga	41.98	290	eP	P	20 10 14.4	+1.9
DIAM	Diamantina, MG	42.09	305	eP	P	20 10 14.1	+0.6
ITZ	Itezhi-Tezhi	43.58	52	eP	P	20 10 24.5	-1.0
ITZ				i		20 10 26.0	
	baz=357,slow=11						
PLCA	Paso Flores	43.73	257	P	P	20 10 27.8	+1.2
	comp=Z,4.1nm,1.1s,baz=265,slow=14,SNR=4.9						
PLCA				LR	LR	20 28 34.0	
	comp=Z,4µm,18.2s,baz=138,slow=36						
PLCA	Paso Flores	43.73	257	P	P	20 10 26.7	+0.1
PLCA	Paso Flores	43.73	257	eP	P	20 10 27.6	+1.1
TRCB	Terra Rica	43.74	291	eP	P	20 10 27.7	+0.9
PCMB	Pacaembu	43.81	293	eP	P	20 10 29.8	+2.5
GDU01	Guandu, BA	43.88	313	eP	P	20 10 28.4	+0.6
CPUP	Villa Florida	44.12	283	P	P	20 10 30.1	+0.4
	comp=Z,3.2nm,0.9s,baz=127,slow=7.3,SNR=6.4						
CPUP				LR	LR	20 25 57.8	
	comp=Z,2µm,21.6s,baz=138,slow=32						
CPUP	Villa Florida	44.12	283	P	P	20 10 28.4	-1.3
CPUP				IAmb	IAmb	20 10 41.6	
	comp=Z,48nm,1.4s						
GO07	Milladeo Hill,	44.41	252	IAMs_20	IAMs_20	20 27 07.7	
	comp=Z,5µm,20.0s						
ITRB	Iturama	44.74	296	eP	P	20 10 37.2	+2.5
IPMB	Ipameri, GO	44.86	300	eP	P	20 10 38.0	+2.3
LSZ	Lusaka	45.10	54	P	P	20 10 34.3	-3.5
JANB	Januaria	45.12	307	eP	P	20 10 38.7	+0.9
BDFB	Brasilia	46.63	302	P	P	20 10 50.4	+0.6
	comp=Z,1.2nm,0.5s,baz=112,slow=10,SNR=4.4						
BDFB				LR	LR	20 27 12.7	
	comp=Z,3µm,18.3s,baz=140,slow=32						
BDFB	Brasilia	46.63	302	IAMs_20	IAMs_20	20 26 53.2	
	comp=Z,4µm,18.0s						
AQDB	Aquidauana	47.36	290	eP	P	20 10 55.8	+0.4
SDBA	SAO DESIDERIO	47.65	308	eP	P	20 10 58.1	+0.4
ZON	Zonda	48.00	268	P	P	20 10 59.1	-1.2
ZON				IAmb	IAmb	20 11 15.6	
	comp=Z,34nm,1.2s						
MT05	Renca	48.17	265	IAMs_20	IAMs_20	20 29 18.2	
	comp=Z,5µm,20.0s						
MT02	Curacav	48.51	265	P	P	20 11 04.4	+0.2
MT02				IAmb	IAmb	20 11 16.1	
	comp=Z,30nm,0.8s						
MT02				IAMs_20	IAMs_20	20 29 19.3	
	comp=Z,4µm,19.0s						
ARAG	Araguaiana, MT	48.73	298	eP	P	20 11 07.8	+1.8
PEXB	Peixe	49.70	304	eP	P	20 11 14.5	+1.1
CO03	El Pedregal	49.77	268	P	P	20 11 12.4	-1.5
CO03				IAMs_20	IAMs_20	20 29 10.5	
	comp=Z,5µm,21.0s						
CO01	Juntas del Tor	49.94	269	P	P	20 11 14.8	-0.7
CO01				IAmb	IAmb	20 11 33.0	
	comp=Z,40nm,1.4s						
CO01				IAMs_20	IAMs_20	20 28 55.1	
	comp=Z,4µm,22.0s						
GO04	Tololo Observa	50.27	268	P	P	20 11 17.0	-1.0
GO04				IAmb	IAmb	20 11 28.9	
	comp=Z,39nm,0.8s						
GO04				IAMs_20	IAMs_20	20 29 02.9	
	comp=Z,4µm,22.0s						
AC05	El Transito	50.81	270	P	P	20 11 21.8	-0.1
AC05				IAMs_20	IAMs_20	20 29 34.2	
	comp=Z,5µm,22.0s						
LCO	Las Campanas	50.97	269	IAMs_20	IAMs_20	20 29 39.5	
	comp=Z,5µm,22.0s						
AC02	Maricunga	51.41	273	IAMs_20	IAMs_20	20 29 53.0	
	comp=Z,4µm,21.0s						
SNDB	Serra Nova Dou	51.45	301	eP	P	20 11 28.0	+1.3
AC04	Llanos de Chal	51.75	270	IAMs_20	IAMs_20	20 30 03.6	
	comp=Z,4µm,22.0s						
SMTB	Santa Maria do	52.03	307	eP	P	20 11 31.8	+0.8
AC01	Pan de Azucar	52.84	272	IAMs_20	IAMs_20	20 30 46.8	
	comp=Z,3µm,21.0s						
GO02	Mina Guanaco	52.85	274	P	P	20 11 37.2	-0.1
GO02				IAmb	IAmb	20 11 54.3	
	comp=Z,64nm,1.4s						
GO02				IAMs_20	IAMs_20	20 31 01.3	
	comp=Z,3µm,20.0s						
NBPS	Pedro II - PI	52.93	317	eP	P	20 11 40.6	+2.9
SBA	Scott Base	53.01	179	IAMs_20	IAMs_20	20 32 16.0	
	comp=Z,3µm,20.0s						
VNDA	Vanda	53.23	177	P	P	20 11 40.6	+1.6
	comp=Z,9.8nm,1.0s,baz=233,slow=5.4,SNR=4.7						
VNDA				LR	LR	20 32 51.0	
	comp=Z,3µm,20.6s,baz=180,slow=34						
ABPO	Ambohimpanom	53.43	76	IAMs_20	IAMs_20	20 33 48.1	
	comp=Z,4µm,18.0s						
LVC	Limon Verde	54.20	277	P	P	20 11 48.3	+1.0
LVC	Limon Verde	54.20	277	IAMs_20	IAMs_20	20 31 52.9	
	comp=Z,3µm,20.0s						
LVC	Limon Verde	54.20	277	eP	P	20 11 48.3	+1.0
PB09	IPOC Station P	54.99	277	IAMs_20	IAMs_20	20 33 50.9	
	comp=Z,4µm,20.0s						
LIC	Lamto	55.44	4	eP	P	20 11 59.7	+3.9
	comp=Z,31nm,0.8s						
PB07	IPOC Station P	55.46	277	P	P	20 11 57.2	+0.9
PB07				IAmb	IAmb	20 12 07.5	
	comp=Z,30nm,0.8s						
PB07				IAMs_20	IAMs_20	20 32 45.3	
	comp=Z,3µm,22.0s						
PRPB	Parauapebas	55.47	307	eP	P	20 11 57.0	+0.8
KIC	Kosan Boka	55.58	4	eP	P	20 11 57.9	+1.0
	comp=Z,12nm,0.7s						
PB01	IPOC Station P	55.69	277	P	P	20 11 58.7	+0.9
PB01				IAMs_20	IAMs_20	20 34 04.4	
	comp=Z,3µm,20.0s						
TIC	Toumodi	55.85	4	eP	P	20 11 59.2	+0.4
VILB	Vilhena	55.87	292	eP	P	20 12 00.3	+1.2
DBIC	Dimbokro	55.88	4	P	P	20 11 59.3	+0.3
	comp=Z,9.1nm,1.1s,baz=138,slow=4.7,SNR=5.0						
DBIC				LR	LR	20 31 18.8	
	comp=Z,2µm,18.6s,baz=146,slow=31						
MNMC	Minye Minye	57.14	279	P	P	20 12 08.3	-0.1
PB16	IPOC Station P	57.66	280	P	P	20 12 13.4	+0.9
PB16				IAmb	IAmb	20 12 23.4	
	comp=Z,26nm,0.8s						
NPGB	Novo Progresso	57.76	301	eP	P	20 12 14.1	+1.6
TMAB	Tom-Au,PA,Br	57.84	311	eP	P	20 12 14.8	+1.9
ITTB	Itaituba	60.17	302	eP	P	20 12 29.6	+0.5
SAML	Samuel	60.81	292	P	P	20 12 33.8	+0.3
SAML	Samuel	60.81	292	eP	P	20 12 33.9	+0.3
MALB	Monte Alegre	61.46	305	eP	P	20 12 38.6	+0.7
MCPB	Macapa, AP	61.56	308	eP	P	20 12 40.4	+1.8
KMBO	Kilima Mbogo	61.77	54	P	P	20 12 40.9	+0.5
	comp=Z,0.5nm,0.3s,baz=158,slow=7.1,SNR=3.5						
TOC5	Torodi Ar. Sit	62.84	11	IAMs_20	IAMs_20	20 33 57.5	
	comp=Z,2µm,22.0s						
TORD	Torodi Ar. Bea	62.86	11	P	P	20 12 47.4	+0.2
	comp=Z,4.1nm,0.9s,baz=235,slow=1.4,SNR=8.9						
TORD				LR	LR	20 34 10.2	
	comp=Z,2µm,21.9s,baz=155,slow=30						
TORD	Torodi Ar. Bea	62.86	11	P	P	20 12 47.0	-0.2
TOC1	Torodi Ar. Sit	62.88	11	IAMs_20	IAMs_20	20 33 58.8	
	comp=Z,2µm,22.0s						
KOWA	Kowa	63.70	5	P	P	20 12 53.5	+0.8
	comp=Z,8.6nm,0.7s,baz=198,slow=3.2,SNR=6.2						
PTGA	Pitinga	65.53	300	eP	P	20 13 05.1	+0.3
NNA	Nana	67.09	278	IAMs_20	IAMs_20	20 40 29.4	
	comp=Z,2µm,21.0s						
ATD	Arta Tunnel	75.39	52	LR	LR	20 46 32.0	
	comp=Z,2µm,19.1s,baz=198,slow=35						
ATD	Arta Tunnel	75.39	52	IAMs_20	IAMs_20	20 44 18.4	
	comp=Z,2µm,21.0s						
OTAV	Otavalo	77.41	285	eP	P	20 14 23.5	+6.3
OTAV	Otavalo	77.41	285	eP	P	20 14 19.2	+2.1
GCUF	Volcan Galeras	77.48	287	eP	P	20 14 21.3	+3.7
CHIC	Chingaza	77.91	292	eP	P	20 14 19.5	-0.3
ORTC	Ortega, Tolima	78.27	290	eP	P	20 14 21.4	0.0
ROSC	El Rosal	78.44	292	LR	LR	20 47 11.0	
	comp=Z,4µm,19.6s,baz=150,slow=34						
RUSC	La Rusia	78.52	293	eP	P	20 14 21.4	-1.9
TOLC	Tolima	78.84	291	eP	P	20 14 25.4	+0.5
YOTC	Yotoco, Valle	79.00	289	eP	P	20 14 21.9	-3.7
RREF	El Recreo	79.11	291	eP	P	20 14 26.8	+0.1
NORC	Norcasia	79.34	292	eP	P	20 14 26.2	-1.1
GUY2C	Guyana, Caldas	79.37	291	eP	P	20 14 24.9	-3.1
PAMC	Pamplona, Colo	79.44	294	eP	P	20 14 30.2	+1.9
SDV	Santo Domingo	79.46	297	eP	P	20 14 29.0	+1.0
PLMC	San Jos del P	79.69	290	eP	P	20 14 30.9	+1.7
PTBC	PUERTO BERRIO,	79.86	293	eP	P	20 14 27.5	-2.6
CBOC	Ciudad Bolivar	80.27	291	eP	P	20 14 29.7	-2.8
ZARC	Zaragoza, Cauc	80.85	293	eP	P	20 14 32.1	-3.3
SMLC	San Martn de	81.42	294	eP	P	20 14 32.5	-5.9
H01W2	Cape Leeuwin H	81.75	135	T	T	21 45 35.9	
	baz=216,slow=75,SNR=24						
H01W1	Cape Leeuwin H	81.76	135	T	T	21 45 36.9	
	baz=216,slow=75,SNR=24						
H01W3	Cape Leeuwin H	81.76	135	T	T	21 45 39.1	
	baz=216,slow=75,SNR=24						
SOCY	Socotra	82.00	61	IAMs_20	IAMs_20	20 45 31.5	
	comp=Z,2µm,21.0s						
MOTC	Monteria, Cord	82.35	293	eP	P	20 14 44.9	+1.6
SABA	Saba	82.55	308	IAMs_20	IAMs_20	20 45 05.9	
	comp=Z,2µm,22.0s						
NWAO	Narrogin (SRO)	84.81	137	LR	LR	20 44 26.6	
	comp=Z,954nm,21.4s,baz=222,slow=30						
NWAO	Narrogin (SRO)	84.81	137	IAMs_20	IAMs_20	20 43 27.4	
	comp=Z,1µm,20.0s						
TAU	Tasmania Unive	85.63	162	IAMs_20	IAMs_20	20 50 01.0	
	comp=Z,2µm,19.0s						
KEST	Kesra	86.16	14	P	P	20 15 01.7	-0.5
	comp=Z,7.2nm,0.9s,baz=104,slow=4.2,SNR=2.8						
KEST				LR	LR	20 50 00.9	
	comp=Z,866nm,19.6s,baz=158,slow=33						
RPZ	Rata Peaks	87.29	179	LR	LR	20 48 01.7	
	comp=Z,203nm,21.4s,baz=185,slow=31						
MQZ	McQueen's Vall	87.30	181	IAMs_20	IAMs_20	20 51 21.6	
	comp=Z,1µm,18.0s						
FOZ	Fox Glacier	87.46	179	IAMs_20	IAMs_20	20 53 51.8	
	comp=Z,1µm,19.0s						
MORW	Morawa	87.50	134	IAMs_20	IAMs_20	20 45 40.8	
	comp=Z,1µm,20.0s						
SDDR	Presa de Saban	87.97	302	IAMs_20	IAMs_20	20 51 23.6	
	comp=Z,1µm,21.0s						
SC01	Santiago de lo	88.02	303	IAMs_20	IAMs_20	20 54 29.9	
	comp=Z,2µm,20.0s						
LTZ	Lake Taylor	88.23	180	IAMs_20	IAMs_20	20 56 10.1	
	comp=Z,1µm,19.0s						
ES04	SONSECA Array	88.73	3	IAMs_20	IAMs_20	20 50 27.5	
	comp=Z,1µm,20.0s						
ES03	SONSECA Array	88.74	3	IAMs_20	IAMs_20	20 50 25.8	
	comp=Z,1µm,20.0s						
ESDC	Sonseca Array	88.75	3	P	P	20 15 15.3	+0.8
	comp=Z,2.5nm,0.8s,baz=191,slow=4.1,SNR=7.9						
ESDC				LR	LR	20 50 46.5	
	comp=Z,844nm,21.7s,baz=155,slow=33						
ES19	SONSECA Array	88.78	3	IAMs_20	IAMs_20	20 50 27.8	
	comp=Z,1µm,21.0s						
THZ	Tophouse	89.24	181	IAMs_20	IAMs_20	20 52 44.0	
	comp=Z,1µm,21.0s						
SNZO	South Karori	89.66	182	IAMs_20	IAMs_20	20 53 34.2	
	comp=Z,1µm,19.0s						
BFZ	Birch Farm	90.24	183	IAMs_20	IAMs_20	20 54 23.6	
	comp=Z,1µm,19.0s						
TOO	Toolangi	90.35	159	IAMs_20	IAMs_20	20 49 37.0	
	comp=Z,2µm,21.0s						
MMAI	Mount Meron Ar	90.74	35	P	P	20 15 25.6	+1.5
	comp=Z,3.3nm,0.8s,baz=234,slow=2.8,SNR=6.2						
MTDJ	Mount Denham	90.91	297	IAMs_20	IAMs_20	20 53 07.6	
	comp=Z,1µm,22.0s						
CSS	Mathiatis	91.72	33	IAMs_20	IAMs_20	20 57 27.1	
	comp=Z,1µm,19.0s						
URZ	Urewera	92.62	184	IAMs_20	IAMs_20	20 59 42.5	
	comp=Z,1µm,18.0s						
RKT	Rikitea	93.70	228	eLR	LR	20 45 51.6	
	comp=Z,1µm,28.0s						
STKA	Stephens Creek	94.76	155	LR	LR	20 53 20.3	
	comp=Z,384nm,21.3s,baz=193,slow=32						
MBWA	Marble Bar	95.95	132	IAMs_20	IAMs_20	20 50 55.7	
	comp=Z,1µm,20.0s						
CTI	Castel Tesino	96.60	14	IAMs_20	IAMs_20	20 55 48.6	
	comp=Z,1µm,20.0s						
DAVOX	Davos/Dischmat	97.05	12	P	Pdif	20 15 54.4	+1.4
	comp=Z,3.3nm,1.0s,baz=186,slow=9.2,SNR=3.2						
XMIS	Christmas Isla	97.09	115	IAMs_20	IAMs_20	20 48 26.4	
	comp=Z,2µm,22.0s						
TIRR	Tirgusor	98.78	26	IAMs_20	IAMs_20	21 04 22.1	
	comp=Z,1µm,20.0s						
TEIG	Tepich	98.86	291	IAMs_20	IAMs_20	20 58 31.6	
	comp=Z,1µm,22.0s						
GERES	GERESS Array B	99.65	14	LR	LR	20 59 10.9	
	comp=Z,555nm,19.7s,baz=200,slow=34						
TBI	Tubuai	99.80	216	eSP	SP	20 29 06.4	-0.1
	comp=Z,418nm,34.5s						
TBI				eSS	SS	20 34 32.5	+2.6
	comp=Z,494nm,28.0s						
TBI	Tubuai	99.80	216	eLR	LR	20 48 38.0	
	comp=Z,1µm,24.0s,baz=153						
ASAR	Alice Springs	99.85	145	P	Pdif	20 16 06.5	+0.5
	comp=Z,0.3nm,0.7s,baz=188,slow=4.9,SNR=5.4						
ASAR				LR	LR	20 55 11.6	
	comp=Z,818nm,20.0s,baz=201,slow=32						
CISI	Cisompet, Garu	100.70	115	IAMs_20	IAMs_20	20 50 37.0	
	comp=Z,1µm,22.0s						
CLL	Collm	101.93	13	ePS	PS	20 29 31.0	+0.6
CLL				ePPS	PPS	20 30 30.0	
CLL				eSS	SS	20 35 00.0	-0.8
CLL				eSSS	SSS	20 38 48.0	
CLL				e		20 39 36.0	
CLL				Lm	MLR	20 59 00.0	
	comp=Z,500nm,20.2s						
PMBI	Palembang	102.51	110	IAMs_20	IAMs_20	20 56 22.5	
	comp=Z,1µm,18.0s						
BKNI	Bangkinang	102.70	105	IAMs_20	IAMs_20	20 51 30.5	
	comp=Z,1µm,21.0s						
KIV	Kislovodsk	103.05	35	IAMs_20	IAMs_20	21 05 11.0	
	comp=Z,949nm,21.0s						
TLIG	Tlapa	103.34	281	IAMs_20	IAMs_20	21 04 28.2	
	comp=Z,875nm,19.0s						
WRA	Warramunga Arr	103.39	144	Pdiff	Pdif	20 16 24.5	+2.7
	comp=Z,0.6nm,0.8s,baz=199,slow=4.1,SNR=2.6						
WR2	Warramunga Arr	103.40	144	IAMs_20	IAMs_20	21 12 46.8	
	comp=Z,1µm,18.0s						
WR0	Warramunga Arr	103.46	144	IAMs_20	IAMs_20	21 00 01.2	
	comp=Z,1µm,22.0s						
WB8	Warramunga Arr	103.53	144	IAMs_20	IAMs_20	21 07 30.1	
	comp=Z,975nm,20.0s						
JAGI	Jajag, Banyuwa	103.62	121	IAMs_20	IAMs_20	20 56 07.3	
	comp=Z,1µm,20.0s						
HRA	Herat	104.16	53	IAMs_20	IAMs_20	21 03 21.6	
	comp=Z,1µm,20.0s						
CNNC	Cliffs of the	104.41	308	IAMs_20	IAMs_20	20 58 28.8	
	comp=Z,940nm,19.0s						
V60A	Jim Taylor Roa	104.49	308	IAMs_20	IAMs_20	20 58 20.0	
	comp=Z,1µm,22.0s						
U61A	Possum Corner	104.51	309	IAMs_20	IAMs_20	20 57 22.6	
	comp=Z,1µm,22.0s						
Z56A	Williston	104.78	304	IAMs_20	IAMs_20	21 05 47.0	
	comp=Z,1µm,19.0s						
UNM	Universidad Na	105.03	282	IAMs_20	IAMs_20	21 05 39.0	
	comp=Z,1µm,18.0s						
PPT2	Papeete2	105.05	218	eSP	SP	20 29 59.0	-3.4
	comp=Z,413nm,26.5s						
PPT2				eSS	SKKPbc	20 35 47.9	+0.8
	comp=Z,650nm,26.2s						
PPT2	Papeete2	105.05	218	eLR	LR	20 51 05.5	
	comp=Z,2µm,25.8s,baz=145						
154A	Montrose	105.19	302	IAMs_20	IAMs_20	21 04 35.9	
	comp=Z,1µm,19.0s						
BIRD	Birdtown, Kers	105.30	306	IAMs_20	IAMs_20	21 03 04.6	
	comp=Z,853nm,19.0s						
HODGE	Hodges	105.95	304	IAMs_20	IAMs_20	21 06 40.9	
	comp=Z,1µm,18.0s						
GOGA	Godfrey	105.99	303	IAMs_20	IAMs_20	21 07 11.1	
	comp=Z,830nm,19.0s						
152A	Waverly Hall	106.13	301	IAMs_20	IAMs_20	21 05 46.7	
	comp=Z,1µm,19.0s						
KMSC	Kings Mountain	106.14	305	IAMs_20	IAMs_20	21 08 06.9	
	comp=Z,903nm,20.0s						
Q60A	Greensboro	106.29	311	IAMs_20	IAMs_20	20 57 01.4	
	comp=Z,1µm,21.0s						
S58A	Poland Farm, P	106.32	309	IAMs_20	IAMs_20	21 00 02.3	
	comp=Z,1µm,22.0s						
T57A	Hurt	106.46	308	IAMs_20	IAMs_20	20 59 41.2	
	comp=Z,1µm,21.0s						
R58B	Mineral	106.50	309	IAMs_20	IAMs_20	21 01 07.1	
	comp=Z,944nm,21.0s						
U56A	King	106.55	307	IAMs_20	IAMs_20	21 03 46.7	
	comp=Z,945nm,20.0s						
V55A	Taylorsville	106.62	306	IAMs_20	IAMs_20	21 00 59.4	
	comp=Z,885nm,21.0s						
Y52A	Lilburn	106.66	303	IAMs_20	IAMs_20	21 05 17.7	
	comp=Z,1µm,20.0s						
YLE	Yale	106.70	315	IAMs_20	IAMs_20	21 05 05.3	
	comp=Z,844nm,20.0s						
P60A	Greenville	106.81	312	IAMs_20	IAMs_20	20 57 03.3	
	comp=Z,999nm,19.0s						
PSUB	Penn St. - Bra	106.81	312	IAMs_20	IAMs_20	20 57 02.3	
	comp=Z,1µm,22.0s						
Z51A	Franklin	106.87	302	IAMs_20	IAMs_20	21 06 19.3	
	comp=Z,1µm,19.0s						
S57A	Dark Hollow, R	106.89	309	IAMs_20	IAMs_20	20 56 35.5	
	comp=Z,880nm,21.0s						
BLA	Blacksburg	107.23	307	IAMs_20	IAMs_20	20 59 13.6	
	comp=Z,837nm,20.0s						
LUPA	Lehigh Univers	107.30	313	IAMs_20	IAMs_20	20 55 44.1	
	comp=Z,1µm,22.0s						
ODNJ	Ogdensburg	107.31	313	IAMs_20	IAMs_20	20 56 48.3	
	comp=Z,1µm,21.0s						
X51A	Calhoun	107.62	303	IAMs_20	IAMs_20	21 01 40.2	
	comp=Z,792nm,19.0s						
P57A	Homestead Farm	107.73	310	IAMs_20	IAMs_20	20 56 16.7	
	comp=Z,828nm,20.0s						
TKL	Tuckaleechee C	107.84	304	IAMs_20	IAMs_20	21 06 10.0	
	comp=Z,944nm,20.0s						
KBL	Kabul	107.95	58	IAMs_20	IAMs_20	21 08 03.9	
	comp=Z,967nm,18.0s						
S54A	Dingess, Beckl	108.14	307	IAMs_20	IAMs_20	21 00 33.6	
	comp=Z,965nm,21.0s						
TZTN	Tazewell	108.38	305	IAMs_20	IAMs_20	21 07 56.2	
	comp=Z,822nm,20.0s						
TAOE	Nuku Hiva Isla	108.42	231	eSP	SP	20 30 37.5	0.0
	comp=Z,268nm,24.5s						
TAOE				eSS	SS	20 36 31.0	+1.9
	comp=Z,564nm,27.9s						
TAOE	Nuku Hiva Isla	108.42	231	eLR	LR	20 52 41.2	
	comp=Z,2µm,24.6s,baz=166						
SWET	Sewanee	108.70	302	IAMs_20	IAMs_20	21 07 07.6	
	comp=Z,1µm,20.0s						
DZM	Mont Dzumac	108.72	175	eLR	LR	20 52 47.6	
	comp=Z,2µm,24.6s						
S51A	Beattyville	109.22	306	IAMs_20	IAMs_20	21 09 06.3	
	comp=Z,1µm,19.0s						
P53A	Whipple	109.44	308	IAMs_20	IAMs_20	21 05 11.1	
	comp=Z,888nm,20.0s						
342A	Flagon Creek P	109.55	295	IAMs_20	IAMs_20	21 02 48.5	
	comp=Z,961nm,22.0s						
CLTN	Cedars of Leba	109.56	303	IAMs_20	IAMs_20	21 07 55.4	
	comp=Z,874nm,20.0s						
U49A	Red Boiling Sp	109.57	303	IAMs_20	IAMs_20	21 09 12.6	
	comp=Z,816nm,18.0s						
V48A	Smith Brothers	109.57	302	IAMs_20	IAMs_20	21 08 00.8	
	comp=Z,847nm,19.0s						
NIL	Nilore	109.67	61	IAMs_20	IAMs_20	21 06 58.7	
	comp=Z,1µm,20.0s						
R50A	Paris	110.08	306	IAMs_20	IAMs_20	21 07 52.2	
	comp=Z,919nm,20.0s						
Q51A	Peebles	110.11	307	IAMs_20	IAMs_20	21 09 09.0	
	comp=Z,818nm,20.0s						
OXF	Oxford	110.13	300	IAMs_20	IAMs_20	21 07 41.7	
	comp=Z,1µm,20.0s						
WVT	Waverly	110.42	302	IAMs_20	IAMs_20	21 08 02.1	
	comp=Z,937nm,18.0s						
ALLY	Alegheny Colle	110.43	311	IAMs_20	IAMs_20	20 56 48.1	
	comp=Z,1µm,20.0s						
W45A	Hickory Valley	110.47	300	IAMs_20	IAMs_20	21 04 37.7	
	comp=Z,1µm,22.0s						
R49A	Shelbyville	110.54	305	IAMs_20	IAMs_20	21 01 49.3	
	comp=Z,1µm,22.0s						
PECO	Prince Edward	110.63	314	IAMs_20	IAMs_20	21 08 14.1	
	comp=Z,992nm,18.0s						
T47A	Sharon Grove	110.64	303	IAMs_20	IAMs_20	21 08 37.0	
	comp=Z,1µm,21.0s						
ERPA	Erie	110.70	311	IAMs_20	IAMs_20	21 00 12.3	
	comp=Z,1µm,18.0s						
MET	Memphis--Engin	110.87	300	IAMs_20	IAMs_20	21 07 01.2	
	comp=Z,983nm,20.0s						
WCI	Wyandotte Cave	111.10	304	IAMs_20	IAMs_20	21 06 28.1	
	comp=Z,889nm,19.0s						
HALT	Halls	111.10	301	IAMs_20	IAMs_20	21 08 30.3	
	comp=Z,1µm,21.0s						
P49A	Miami Univ. Ec	111.21	306	IAMs_20	IAMs_20	21 02 56.9	
	comp=Z,952nm,22.0s						
SBUM	Sibu	111.28	112	IAMs_20	IAMs_20	20 58 13.7	
	comp=Z,858nm,20.0s						
GLAT	Glass	111.33	301	IAMs_20	IAMs_20	21 04 24.4	
	comp=Z,948nm,21.0s						
LPAR	Lepanto	111.42	300	IAMs_20	IAMs_20	21 07 27.8	
	comp=Z,1µm,19.0s						
PLVO	Plevna	111.50	315	IAMs_20	IAMs_20	21 05 05.3	
	comp=Z,886nm,21.0s						
T45A	Paducah	111.51	302	IAMs_20	IAMs_20	21 08 52.1	
	comp=Z,820nm,20.0s						
GNAR	Gosnell	111.52	300	IAMs_20	IAMs_20	21 05 08.5	
	comp=Z,888nm,21.0s						
P48A	Milroy	111.53	306	IAMs_20	IAMs_20	21 08 35.5	
	comp=Z,962nm,21.0s						
HBAR	Harrisburg	111.59	300	IAMs_20	IAMs_20	21 07 43.3	
	comp=Z,1µm,21.0s						
PENMO	Penman	111.65	301	IAMs_20	IAMs_20	21 08 36.9	
	comp=Z,940nm,20.0s						
BLO	Bloomington	111.91	305	IAMs_20	IAMs_20	21 02 42.5	
	comp=Z,940nm,20.0s						
N49A	Columbus Grove	111.94	308	IAMs_20	IAMs_20	20 59 18.3	
	comp=Z,1µm,22.0s						
COEN	Coen	112.07	150	IAMs_20	IAMs_20	21 10 19.4	
	comp=Z,864nm,18.0s						
LCAR	Lake Charles	112.24	300	IAMs_20	IAMs_20	21 08 11.5	
	comp=Z,1µm,19.0s						
SIUC	Southern Illin	112.33	302	IAMs_20	IAMs_20	21 09 19.9	
	comp=Z,811nm,18.0s						
S44A	Carbondale	112.33	302	IAMs_20	IAMs_20	21 09 27.9	
	comp=Z,850nm,18.0s						
PBMO	Poplar Bluff	112.33	301	IAMs_20	IAMs_20	21 09 15.0	
	comp=Z,745nm,19.0s						
Z38A	Mt. Pleasant	112.47	295	IAMs_20	IAMs_20	21 09 31.8	
	comp=Z,828nm,19.0s						
MIAR	Mount Ida	112.55	297	IAMs_20	IAMs_20	21 06 19.9	
	comp=Z,1µm,22.0s						
P46A	Rosedale	112.59	305	IAMs_20	IAMs_20	21 10 19.7	
	comp=Z,839nm,21.0s						
FCAR	Ozark Folk Cen	112.66	299	IAMs_20	IAMs_20	21 06 22.8	
	comp=Z,1µm,21.0s						
N47A	Urbana	112.70	307	IAMs_20	IAMs_20	21 01 56.4	
	comp=Z,1µm,21.0s						
L48A	N Adams	112.81	308	IAMs_20	IAMs_20	21 02 52.3	
	comp=Z,832nm,21.0s						
T42A	Van Buren	112.89	300	IAMs_20	IAMs_20	21 09 39.6	
	comp=Z,836nm,18.0s						
Q44A	Meyer Farm, Va	113.06	303	IAMs_20	IAMs_20	21 03 58.2	
	comp=Z,874nm,22.0s						
SFIN	Lafayette	113.08	305	IAMs_20	IAMs_20	21 07 11.5	
	comp=Z,1µm,22.0s						
FVM	French Village	113.19	302	IAMs_20	IAMs_20	21 10 10.6	
	comp=Z,854nm,18.0s						
U40A	Yellville	113.41	299	IAMs_20	IAMs_20	21 06 24.6	
	comp=Z,1µm,21.0s						
X37A	Clayton	113.63	296	IAMs_20	IAMs_20	21 09 05.5	
	comp=Z,908nm,22.0s						
O44A	Mansfield	113.65	304	IAMs_20	IAMs_20	21 03 46.8	
	comp=Z,1µm,22.0s						
P43A	Skaggs, Pawnee	113.86	303	IAMs_20	IAMs_20	21 04 21.3	
	comp=Z,1µm,22.0s						
HDIL	Hopedale	114.39	304	IAMs_20	IAMs_20	21 11 29.1	
	comp=Z,896nm,20.0s						
HPIG		114.62	283	IAMs_20	IAMs_20	21 07 41.1	
	comp=Z,1µm,19.0s						
CMAR	Chiang Mai Arr	114.91	90	PKP	PKPdf	20 21 01.6	-0.7
	comp=Z,0.9nm,0.4s,baz=240,slow=3.0,SNR=1.6						
P40A	Paris	115.18	302	IAMs_20	IAMs_20	21 08 03.2	
	comp=Z,946nm,20.0s						
TOLI2	Tolitoli	115.21	121	IAMs_20	IAMs_20	21 01 23.4	
	comp=Z,1µm,22.0s						
N41A	Harden Midland	115.34	303	IAMs_20	IAMs_20	21 05 05.4	
	comp=Z,1µm,22.0s						
KSH	Kashi	115.37	58	PKP	PKiKP	20 21 05.7	+3.0
KSH				PP	PP	20 22 08.2	+3.7
KSH				AMB	AMB		
	comp=Z,180nm,7.4s						
KSH				LR	LR		
	comp=Z,560nm,13.7s						
KSH				LR	LR		
	comp=Z,190nm,8.0s						
KSH				LR	LR		
	comp=Z,3µm,20.4s						
OK030	Cody Creek RV	115.39	296	IAMs_20	IAMs_20	21 11 03.1	

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      comp=Z,1µm,20.0s
OK025 Westminster Rd  115.48 295  IAMs_20 IAMs_20  21 07 50.5
      comp=Z,1µm,22.0s
OK029 Liberty Lake    115.70 296  IAMs_20 IAMs_20  21 07 43.2
      comp=Z,1µm,20.0s
WMOK  Wichita Mounta  115.76 294  IAMs_20 IAMs_20  21 10 04.9
      comp=Z,818nm,21.0s
P38A  Dawn            116.07 301  IAMs_20 IAMs_20  21 02 33.9
      comp=Z,720nm,19.0s
KKM   Kota Kinabalu   116.54 114  IAMs_20 IAMs_20  21 02 32.8
      comp=Z,1µm,22.0s
E43A  Lone Tree Farm  117.26 310  IAMs_20 IAMs_20  21 01 34.8
      comp=Z,1µm,22.0s
I40A  Norwalk         117.41 306  IAMs_20 IAMs_20  21 04 42.0
      comp=Z,1µm,22.0s
KSU1  Kansas State U  117.46 299  IAMs_20 IAMs_20  21 11 20.7
      comp=Z,1µm,20.0s
PMG   Port Moresby    117.61 152  IAMs_20 IAMs_20  21 13 58.2
      comp=Z,768nm,18.0s
MNTX  Cornudas Mount  117.72 287  IAMs_20 IAMs_20  21 06 22.1
      comp=Z,781nm,21.0s
G40A  Rib Lake        118.13 308  IAMs_20 IAMs_20  21 08 49.0
      comp=Z,920nm,21.0s
EPT   El Paso         118.47 286  IAMs_20 IAMs_20  21 07 52.1
      comp=Z,826nm,21.0s
ARU   Arti            119.08  36  IAMs_20 IAMs_20  21 19 40.2
      comp=Z,801nm,19.0s
L34A  Svendsen Farm,  119.24 301  IAMs_20 IAMs_20  21 14 48.8
      comp=Z,958nm,19.0s
121A  Cookes Peak, D  119.79 286  IAMs_20 IAMs_20  21 10 46.8
      comp=Z,1µm,22.0s
319A  Douglas         119.96 284  IAMs_20 IAMs_20  21 10 54.4
      comp=Z,719nm,20.0s
Y22D  IRIS PASSCAL I  120.27 288  IAMs_20 IAMs_20  21 15 50.6
      comp=Z,662nm,19.0s
ANMO  Albuquerque     120.56 289  IAMs_20 IAMs_20  21 12 25.3
      comp=Z,888nm,21.0s
EYMN  Ely             120.58 309  IAMs_20 IAMs_20  21 05 28.8
      comp=Z,1µm,22.0s
KSCO  Kaye Shedlock'  120.90 295  IAMs_20 IAMs_20  21 12 49.0
      comp=Z,1µm,20.0s
K31A  O'Neill         121.00 301  IAMs_20 IAMs_20  21 09 16.5
      comp=Z,896nm,20.0s
TUC   Tucson          121.53 284  IAMs_20 IAMs_20  21 11 34.1
      comp=Z,873nm,19.0s
F33A  5 Mile Ranch,   121.72 305  IAMs_20 IAMs_20  21 06 46.2
      comp=Z,968nm,21.0s
SDCO  Great Sand Dun  121.80 292  IAMs_20 IAMs_20  21 13 29.0
      comp=Z,994nm,21.0s
KMI   Kunming         122.11  88 ⇑PKP     PKiKP    20 21 18.3 +1.9
KMI                               LR      LR
      comp=Z,450nm,21.3s
KMI                               LR      LR
      comp=Z,670nm,17.1s
KMI                               LR      LR
      comp=Z,840nm,20.0s
KMI   Kunming         122.11  88  IAMs_20 IAMs_20  21 06 21.0
      comp=Z,859nm,20.0s
SUSD  Miller          122.28 302  IAMs_20 IAMs_20  21 16 34.2
      comp=Z,786nm,18.0s
QIZ   Qiongzhong      122.42  99  PKP     PKPdf    20 21 16.4 -0.3
QIZ                               PP      PP       20 22 52.9 -0.2
QIZ                               SS      SS       20 39 32.9 -1.0
QIZ                               LR      LR
      comp=Z,910nm,19.1s
QIZ                               LR      LR
      comp=Z,680nm,22.6s
QIZ                               LR      LR
      comp=Z,960nm,26.0s
X18A  Snowflake       122.46 287  IAMs_20 IAMs_20  21 13 28.6
      comp=Z,786nm,19.0s
214A  Organ Pipe Nat  122.59 282  IAMs_20 IAMs_20  21 10 21.1
      comp=Z,862nm,21.0s
W18A  Petrified Fore  122.71 287  IAMs_20 IAMs_20  21 14 13.2
      comp=Z,949nm,19.0s
D32A  Dogwood Acres,  122.93 306  IAMs_20 IAMs_20  21 08 48.1
      comp=Z,766nm,20.0s
MVCO  Mesa Verde      123.29 290  IAMs_20 IAMs_20  21 11 34.4
      comp=Z,944nm,22.0s
MKAR  Makanchi Array  123.63  56  PKP     PKPdf    20 21 17.1 -1.1
      comp=Z,0.2nm,0.3s,baz=143,slow=44,SNR=2.4
SPX   San Pedro Mart  123.68 280  IAMs_20 IAMs_20  21 05 46.3
      comp=Z,764nm,20.0s
WUAZ  Wupatki         123.99 287  IAMs_20 IAMs_20  21 14 20.1
      comp=Z,720nm,21.0s
PV03  Paradox Valley  124.16 291  IAMs_20 IAMs_20  21 12 38.5
      comp=Z,915nm,21.0s
ULM   Lac du Bonnet   124.27 309  PKP     PKiKP    20 21 20.9 +1.3
      comp=Z,2.6nm,1.0s,baz=73,slow=4.4,SNR=3.4
PV23  Carpenter Ridg  124.39 291  IAMs_20 IAMs_20  21 14 49.4
      comp=Z,944nm,20.0s
UABX  UABC, Campus M124.71 281    IAMs_20 IAMs_20  21 07 02.4
      comp=Z,846nm,19.0s
MDND  Maddock         124.75 305  IAMs_20 IAMs_20  21 09 20.3
      comp=Z,950nm,20.0s
WMQ   Urumqi          124.82  61 ePKP     PKiKP    20 21 21.2 +0.3
WMQ                               LR      LR
      comp=Z,970nm,23.9s
WMQ                               LR      LR
      comp=Z,950nm,29.1s
WMQ                               LR      LR
      comp=Z,480nm,28.3s
U15A  North Rim       125.14 287  IAMs_20 IAMs_20  21 14 44.6
      comp=Z,731nm,20.0s
W13A  Hualapai Mount  125.30 285  IAMs_20 IAMs_20  21 14 17.9
      comp=Z,744nm,22.0s
K22A  Casper          125.49 296  IAMs_20 IAMs_20  21 14 10.4
      comp=Z,820nm,22.0s
TJX   Tijuana         125.67 280  IAMs_20 IAMs_20  21 06 10.7
      comp=Z,1µm,22.0s
CD2   Chengdu         126.66  84  PKP     PKPdf    20 21 23.5 -1.0
CD2                               PP      PP       20 23 19.7 -2.0
CD2                               AMB     AMB
      comp=Z,290nm,6.7s
CD2                               LR      LR
      comp=Z,1µm,23.0s
CD2                               LR      LR
      comp=Z,890nm,17.6s
CD2                               LR      LR
      comp=Z,1µm,18.1s
GSC   Goldstone, Bar  127.28 283  IAMs_20 IAMs_20  21 08 04.4
      comp=Z,718nm,22.0s
PDAR  Pinedale Array  127.35 295  PKP     PKiKP    20 21 27.4 +1.1
      comp=Z,0.9nm,0.8s,baz=132,slow=3.6,SNR=4.5
BW06  Boulder Array   127.35 295  IAMs_20 IAMs_20  21 18 48.6
      comp=Z,860nm,18.0s
PRN   Pahroc Range    127.48 286  IAMs_20 IAMs_20  21 14 06.5
      comp=Z,913nm,22.0s
DUG   Dugway, Tooele  127.78 290  IAMs_20 IAMs_20  21 17 51.4
      comp=Z,799nm,20.0s
R11A  Troy Canyon, C  128.39 287  IAMs_20 IAMs_20  21 16 52.6
      comp=Z,874nm,22.0s
FCC   Fort Churchill  128.41 318  IAMs_20 IAMs_20  21 06 46.4
      comp=Z,699nm,22.0s
LOHW  Long Hollow     128.46 295  IAMs_20 IAMs_20  21 14 18.1
      comp=Z,760nm,22.0s
SNOW  Snow King Moun  128.46 295  IAMs_20 IAMs_20  21 15 44.2
      comp=Z,740nm,20.0s
RLMT  Red Lodge       128.55 297  IAMs_20 IAMs_20  21 15 56.2
      comp=Z,747nm,18.0s
MOOW  Moose Ponds     128.62 295  IAMs_20 IAMs_20  21 14 11.4
      comp=Z,928nm,22.0s
IMW   Indian Meadow   128.82 295  IAMs_20 IAMs_20  21 14 28.7
      comp=Z,914nm,22.0s
ZALV  Zalesovo Beam   129.12  50  PKP     PKPdf    20 21 26.9 -1.5
      comp=Z,0.5nm,0.5s,baz=225,slow=1.3,SNR=4.6
GTA   Gaotai          129.44  73 ⇑PKP     PKiKP    20 21 34.4 +4.0
GTA                               SKS     SKSdf    20 28 43.4 +2.2
GTA                               AMB     AMB
      comp=Z,200nm,8.0s
GTA                               LR      LR
      comp=Z,610nm,19.6s
GTA                               LR      LR
      comp=Z,490nm,20.0s
GTA                               LR      LR
      comp=Z,770nm,18.9s
ELK   Elko            129.60 289  PKP     PKPdf    20 21 29.9 -0.2
      comp=Z,0.8nm,1.0s,baz=9.1,slow=1.0,SNR=3.7
ELK   Elko            129.60 289  IAMs_20 IAMs_20  21 16 50.5
      comp=Z,891nm,22.0s
ENH   Enshi           129.98  88  IAMs_20 IAMs_20  21 13 11.7
      comp=Z,936nm,20.0s
LZH   Lanzhou         129.99  78 ePKP     PKPdf    20 21 30.6 -0.3
LZH                               sPKP             20 21 35.8
LZH                               SS      SS       20 41 08.7 -0.3
LZH                               LR      LR
      comp=Z,620nm,17.4s
LZH                               LR      LR
      comp=Z,580nm,20.1s
NV11  Mina Array Sit  130.05 285  IAMs_20 IAMs_20  21 17 54.7
      comp=Z,802nm,22.0s
NVAR  Mina Array Bea  130.15 285  PKP     PKPdf    20 21 29.8 -1.4
      comp=Z,0.5nm,0.8s,baz=43,slow=36,SNR=2.7
MDPB  Devils Postpil  130.16 284  IAMs_20 IAMs_20  21 17 24.5
      comp=Z,662nm,21.0s
LHV   Little Huntoon  130.17 285  IAMs_20 IAMs_20  21 17 52.7
      comp=Z,952nm,22.0s
RYN   Ryan            130.40 285  IAMs_20 IAMs_20  21 18 28.9
      comp=Z,747nm,22.0s
EGMT  Eagleton        130.44 300  IAMs_20 IAMs_20  21 18 08.2
      comp=Z,922nm,21.0s
PNTR  Pine Nut        131.35 285  IAMs_20 IAMs_20  21 21 25.1
      comp=Z,747nm,22.0s
MFID  Camas Ranch     131.48 292  IAMs_20 IAMs_20  21 19 13.2
      comp=Z,805nm,21.0s
VCNR  Virginia City   131.50 285  IAMs_20 IAMs_20  21 21 19.1
      comp=Z,777nm,18.0s
PAHR  Pah Rah Range   131.57 286  IAMs_20 IAMs_20  21 20 33.0
      comp=Z,838nm,18.0s
RUBR  Rubicon Trail   131.68 285  IAMs_20 IAMs_20  21 19 10.8
      comp=Z,819nm,22.0s
KNMB  Chin-men Tao    131.83 101  IAMs_20 IAMs_20  21 15 00.3
      comp=Z,878nm,20.0s
AFDM  Forest Hills D  132.14 284  IAMs_20 IAMs_20  21 19 30.8
      comp=Z,737nm,22.0s
BEKR  Beckworth       132.28 286  IAMs_20 IAMs_20  21 19 07.6
      comp=Z,894nm,22.0s
WVOR  Wild Horse Val  132.65 289  IAMs_20 IAMs_20  21 17 44.3
      comp=Z,999nm,22.0s
JTMT  Jette           132.88 298  IAMs_20 IAMs_20  21 20 43.0
      comp=Z,688nm,18.0s
YULB  Yu-li           132.92 105  IAMs_20 IAMs_20  21 16 59.1
      comp=Z,920nm,20.0s
SSLB  Suanglung       132.98 104  IAMs_20 IAMs_20  21 12 39.9
      comp=Z,777nm,20.0s
MOD   Modoc Plateau   133.39 288  IAMs_20 IAMs_20  21 13 53.0
      comp=Z,754nm,20.0s
NACB  Ninganchiao     133.67 104  IAMs_20 IAMs_20  21 13 13.0
      comp=Z,942nm,22.0s
I07A  Izee            134.08 291  IAMs_20 IAMs_20  21 21 22.0
      comp=Z,701nm,21.0s
LTY   Liberty         136.39 294  IAMs_20 IAMs_20  21 20 50.0
      comp=Z,902nm,22.0s
NJ2   Nanjing         137.25  94 ePKP     PKPdf    20 21 40.5 -3.9
HHC   Hu-ho-hao-te    137.68  78 ePKP     PKPdf    20 21 41.4 -3.7
SONM  Songino Array   137.96  66  PKP     PKPdf    20 21 45.7 +0.3
      comp=Z,2.4nm,0.8s,baz=260,slow=2.9,SNR=13
SSE   Sheshan         138.15  97  IAMs_20 IAMs_20  21 14 44.9
      comp=Z,810nm,21.0s
ULN   Ulaanbaatar     138.37  66  IAMs_20 IAMs_20  21 29 14.1
      comp=Z,709nm,19.0s
YKA   Yellowknife Ar  139.10 317  PKhKP   PKPpre   20 21 41.8
      comp=Z,2.0nm,0.9s,baz=107,slow=2.6,SNR=9.3
BJT   Baijiatuau      140.20  82  IAMs_20 IAMs_20  21 19 27.9
      comp=Z,798nm,22.0s
DLBC  Dease Lake      145.57 308  PKPbc   PKPdf    20 21 58.8 +0.2
      comp=Z,4.3nm,0.8s,baz=109,slow=6.3,SNR=5.1
JNU   Nakatsue        145.71 103  PKPbc   PKPdf    20 21 59.2 -0.4
      comp=Z,12nm,0.8s,baz=199,slow=2.0,SNR=5.7
SNY   Shenyang        145.94  84 ⇑PKPbc   PKiKP    20 22 03.2 -0.5
SNY                               AMB     AMB
      comp=Z,210nm,7.1s
SNY                               LR      LR
      comp=Z,330nm,17.1s
SNY                               LR      LR
      comp=Z,370nm,19.2s
SNY                               LR      LR
      comp=Z,790nm,17.2s
KSRS  Korea Array     146.45  94  PKPbc   PKPbc    20 22 01.1 -0.8
      comp=Z,7.0nm,0.8s,baz=249,slow=3.5,SNR=12
INK   Inuvik          147.46 326  PKPbc   PKPbc    20 22 03.2 -0.6
      comp=Z,27nm,0.8s,baz=78,slow=4.5,SNR=29
CN2   Changchun       148.08  82 ePKPbc   PKPbc    20 22 05.4 -1.0
CN2                               AMB     AMB
      comp=Z,250nm,5.0s
CN2                               LR      LR
      comp=Z,420nm,15.0s
CN2                               LR      LR
      comp=Z,370nm,15.0s
CN2                               LR      LR
      comp=Z,460nm,17.0s
FYU   Fort Yukon      152.23 324  IAMs_20 IAMs_20  21 23 18.6
      comp=Z,518nm,20.0s
USA0B Ussuriysk Arra  152.50  86  IAMs_20 IAMs_20  21 33 16.7
      comp=Z,593nm,20.0s
USRK  Ussuriysk Ar.   152.50  86  PKPbc   PKPbc    20 22 15.4 -1.6
      comp=Z,2.0nm,0.8s,baz=126,slow=49,SNR=3.0
MJAR  Matsushiro Arr  152.53 105  PKPbc   PKPbc    20 22 17.2 -0.2
      comp=Z,5.4nm,0.8s,baz=244,slow=2.8,SNR=12
ILAR  Eielson Array   153.40 321  PKP     PKPdf    20 22 12.0 +1.2
      comp=Z,0.8nm,1.0s,baz=355,slow=1.3,SNR=3.6
ILAR                              PKPbc   PKPbc    20 22 17.5 -0.8
      comp=Z,1.9nm,0.7s,baz=18,slow=1.0,SNR=13
YAK   Yakutsk         153.65  45  IAMs_20 IAMs_20  21 30 01.2
      comp=Z,716nm,22.0s
KLR   Kul'dur         154.11  75  PKP     PKPdf    20 22 13.5 +1.3
      comp=Z,0.9nm,0.4s,baz=348,slow=22,SNR=3.1
KLR                               PKPbc   sPKPbc   20 22 22.9 -0.9
      comp=Z,2.6nm,0.8s,baz=327,slow=3.2,SNR=6.6
KLR                               PKPab   pPKPab   20 22 35.9 -0.8
      comp=Z,3.8nm,0.9s,baz=287,slow=5.3,SNR=5.5
SEY   Seymchan        162.75  31  PKPab   PKPab    20 23 10.0 -1.1
      comp=Z,2.1nm,0.8s,baz=262,slow=3.8,SNR=4.3
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*BGR **01** 20:06:33.0±1.0, 36°.15N×2°.18E, h10^{km}, Error ellipse: s-maj=55.6km s-min=24.5km az=106.0*

*IDC **01** 20:06:34.2±0.5, 36°.54N×2°.99E, h0^{km}, mb4.3/29, mb1 4.4/36, mb1mx4.2/67, mbtmp4.3/36, ML3.9/7, MS3.4/9, Ms1 3.4/9, ms1mx3.2/63, Error ellipse: s-maj=13.2km s-min=11.8km az=119.0*

*CRAAG **01** 20:06:34.2, 36°.47N×3°.07E, Ml4.5*

*NEIC **01** 20:06:36.6±2.6, 36°.49N±0°.06×3°.01E±0°.06, h19^{km}±4^{km}, mb4.7/21, Error ellipse: s-maj=8.9km s-min=7.0km az=171.0*

*MDD **01** 20:06:36.3±0.4, 36°.48N×3°.05E, h6^{km}±5^{km}, mb4.7/43, Error ellipse: s-maj=5.2km s-min=3.5km az=125.0, PRXIMO*

MDD EMS: SENTIDO EN ARGELIA.

*MED_RC **01** 20:06:36.0±0.5, 36°.51N×3°.01E, h10^{km}, MW4.4/18, Moment Tensor Solution.Mantle waves: s18,c23; Duration: 1^{s}0 Moment tensor: Scale 10^{15}Nm; M$_{rr}$5.50±.23; M$_{\theta\theta}$-2.70±.21; M$_{\phi\phi}$-2.80±.24; M$_{r\theta}$-2.35±.92; M$_{\theta\phi}$-1.87±.19; M$_{\phi r}$-1.27±.67; Best double couple: M$_0$5.71000×10^{15} NP1:ϕ_s39.00000°, δ32.00000°, λ79.00000°. NP2:ϕ_s231.00000°, δ59.00000°, λ96.00000°. Principal axes: T 6.1900, Plg75.0000°, Azm160.0000°; N -0.9600, Plg6.0000°, Azm48.0000°; P -5.2300, Plg14.0000°, Azm317.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

*LDG **01** 20:06:36.1±0.5, 36°.41N×2°.88E, h10^{km}, Ml4.1/12 Error ellipse: s-maj=12.2km s-min=7.8km az=172.0*

*INMG **01** 20:06:38.3±3.2, 36°.52N×3°.08E, h29^{km}±24^{km}, ML3.4, Error ellipse: s-maj=17.3km s-min=5.7km az=127.0*

*IGIL **01** 20:06:39.1, 36°.62N×2°.93E, h0^{km}*

*CNRM **01** 20:06:50.4, 36°.44N×1°.89E, h115^{km}, ml4.1, Hypocentre not reviewed by the ISC*

ISC 01 20:06:36.7±0.3**, 36°.52N**±0°.03×**3°.04E**±0°.03**, h18**^{km}**, n367,** σ**2^{s}51**/494**, mb4.4**/44**, MS3.6**/7**, 8C-17D, Northern Algeria**

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Code  Station Name     Δ°   AZ°   Phase ID          Time       Res
                                  Op      ISC       h  m  s    ISC
ABA   Alger-Bouzarea   0.28   0   P       Pg       20 06 42.1 -0.9
ABA   Alger-Bouzarea   0.28   0   P       Pg       20 06 42.1 -0.9
EMHD  Djebel Mahouad   0.32 192   P       Pg       20 06 41.4 -2.3
EMHD  Djebel Mahouad   0.32 192   P       Pg       20 06 41.4 -2.3
ABMS  Boumerdes        0.43  57   P       Pg       20 06 44.4 -1.0
ABMS  Boumerdes        0.43  57   P       Pg       20 06 44.4 -1.0
ADJB  Djebel Djouab    0.48 138   P       Pg       20 06 44.5 -2.0
ADJB  Djebel Djouab    0.48 138   P       Pg       20 06 44.5 -2.0
EBNR  Beni Rached      1.23 260   P       Pn       20 06 58.1 -1.0
ECHA  Ech Chlef        1.40 255   P       Pn       20 06 59.2 -2.0
ECHF  Ech Chlef        1.42 256   P       Pn       20 06 59.2 -2.3
EANR  'Ain N'Sour      1.66 251   P       Pn       20 07 04.0 -1.0
EANR  'Ain N'Sour      1.66 251   P       Pn       20 07 04.0 -1.0
ETRT  Tiaret           1.80 232   P       Pn       20 07 07.5 +0.5
ETRT  Tiaret           1.80 232   P       Pn       20 07 07.5 +0.5
SET   Setif            1.94  99   P       Pb       20 07 12.0 +0.5
SET   Setif            1.94  99   P       Pb       20 07 12.0 +0.5
OKGL  Djebel Kef Gue   1.99 257   P       Pg       20 07 15.0 +0.1
OKGL  Djebel Kef Gue   1.99 257   P       Pn       20 07 08.2 -1.2
      170nm,0.3s,SNR=7.9
OKGL                              S       Sb       20 07 35.6 -1.3
      5µm,0.6s,SNR=5.0
OKGL  Djebel Kef Gue   1.99 257           Pn       20 07 08.2 -1.2
OKGL                                      Sn       20 07 35.2 +1.2
OJGS  Djebel Guires    2.11 242   P       Pg       20 07 17.0 -0.2
OJGS  Djebel Guires    2.11 242   P       Pg       20 07 17.0 -0.2
DFRA  Djebel Bou Aff   2.29  88   P       Pn       20 07 13.7  0.0
DFRA  Djebel Bou Aff   2.29  88   P       Pn       20 07 13.7  0.0
CASM  Ain Smara        2.80  94   P       Pn       20 07 19.6 -1.0
CASM  Ain Smara        2.80  94   P       Pn       20 07 19.6 -1.0
EIBI  Ibiza            2.84 332   P       Pn       20 07 21.7 +0.6
      50nm,0.1s,SNR=19
EIBI                              S       Sn       20 07 53.6 -1.3
      309nm,0.5s,SNR=9.8
EIBI  Ibiza            2.84 332           Pn       20 07 21.7 +0.6
EIBI                                      Sn       20 07 53.6 -1.3
ODJA  Bouhanifia       2.84 246   P       Pn       20 07 19.0 -2.2
ODJA  Bouhanifia       2.84 246   P       Pn       20 07 19.0 -2.2
USTO  Oran             3.01 256   P       Pb       20 07 30.0 +0.4
USTO  Oran             3.01 256   P       Pb       20 07 30.0 +0.4
ETOS  Mallorca         3.25 357   P       Pn       20 07 26.8  0.0
      65nm,0.2s,SNR=36
ETOS                              S       Sn       20 08 01.8 -3.2
      87nm,0.4s,SNR=7.9
ETOS  Mallorca         3.25 357           Pn       20 07 27.0 +0.3
ETOS                                      Sn       20 08 01.0 -4.0
OTSS  Djebel Tessala   3.34 249   P       Pn       20 07 23.0 -5.1
OTSS  Djebel Tessala   3.34 249   P       Pn       20 07 23.0 -5.1
EBEN2 Beniarda presa   3.35 311   P       Pn       20 07 29.4 +1.3
      25nm,0.2s,SNR=7.9
EBEN2                             S       Sn       20 08 04.8 -2.7
      92nm,0.2s,SNR=7.9
EBEN2 Beniarda presa   3.35 311           Pn       20 07 29.6 +1.5
EBEN2                                     Sn       20 08 04.8 -2.7
CART  Cartagena        3.40 289   P       Pn       20 07 28.4 -0.4
CART                              S       Sn       20 08 06.4 -2.2
CART  Cartagena        3.40 289  eP       Pn       20 07 28.4 -0.4
CART                             eS       Sn       20 08 06.4 -2.2
CART  Cartagena        3.40 289           Pn       20 07 27.9 -0.8
MAHO  Mahon            3.51  16   P       Pn       20 07 29.9 -0.4
MAHO                              S       Sn       20 08 07.2 -4.2
MAHO  Mahon            3.51  16  eP       Pn       20 07 29.9 -0.4
MAHO                             eS       Sn       20 08 07.2 -4.2
MAHO                             eCod              20 10 27.1
AFON  Font Roja        3.56 308   P       Pn       20 07 32.5 +1.4
      37nm,0.3s,SNR=8.4
AFON                              S       Sn       20 08 10.4 -2.3
      92nm,0.4s,SNR=7.9
AFON  Font Roja        3.56 308           Pn       20 07 32.5 +1.4
AFON                                      Sn       20 08 10.4 -2.3
EMUR  La Murta         3.66 292   P       Pn       20 07 32.7 +0.2
      22nm,0.2s,SNR=66
EMUR                              S       Sn       20 08 13.2 -2.0
      100nm,0.5s,SNR=9.7
EMUR  La Murta         3.66 292           Pn       20 07 32.7 +0.2
EMUR                                      Sn       20 08 13.2 -2.0
ETOB  Tobarra          4.21 302   P       Pn       20 07 40.6 +0.5
      28nm,0.2s,SNR=86
ETOB                              S       Sn       20 08 26.9 -2.0
      268nm,0.5s,SNR=9.2
ETOB  Tobarra          4.21 302           Pn       20 07 40.6 +0.5
ETOB                                      Sn       20 08 26.9 -2.0
ENIJ  Nijar            4.23 278   P       Pn       20 07 39.8 -0.5
      12nm,0.3s,SNR=7.9
ENIJ                              S       Sn       20 08 26.5 -2.8
      176nm,0.4s,SNR=7.9
ENIJ  Nijar            4.23 278           Pn       20 07 39.8 -0.5
ENIJ                                      Sn       20 08 26.8 -2.5
ECHE  Chera            4.40 315   P       Pn       20 07 43.8 +1.1
      21nm,0.2s,SNR=7.9
ECHE                              S       Sn       20 08 30.4 -3.1
      73nm,0.5s,SNR=7.9
EMOS  Mosqueruela      4.72 325   P       Pn       20 07 47.9 +0.7
      58nm,0.3s,SNR=45
EMOS                              S       Sn       20 08 38.5 -3.1
      91nm,0.5s,SNR=7.9
SESP  Santiago Espad   4.73 291   P       Pn       20 07 48.5 +1.3
      39nm,0.2s,SNR=7.9
SESP                              S       Sn       20 08 40.3 -1.3
      271nm,0.8s,SNR=7.9
SESP  Santiago Espad   4.73 291   P                20 07 48.7
TAF   Taforalt         4.75 251   P                20 07 48.0
EBER  Berja            4.78 276   P       Pn       20 07 47.0 -0.9
      14nm,0.3s,SNR=41
EBER                              S       Sn       20 08 42.0 -0.9
      207nm,0.6s,SNR=10
EBER  Berja            4.78 276           Pn       20 07 47.0 -0.9
ERTA  Horta de San J   4.91 335   P       Pn       20 07 49.7 +0.1
      2.8nm,0.1s,SNR=12
ERTA                              S       Sn       20 08 42.9 -3.0
      47nm,0.4s,SNR=7.9
GORA  Gorafe           4.96 283   P       Pn       20 07 52.9 +2.6
      13nm,0.2s,SNR=7.9
GORA                              S       Sn       20 08 45.6 -1.6
      83nm,0.4s,SNR=7.9
EMEL  Melilla          5.01 258   S       Sn       20 08 45.8 -2.6
      86nm,0.2s,SNR=7.9
EQES  Quesada          5.04 287   P       Pn       20 07 53.3 +1.8
      27nm,0.3s,SNR=43
EQES                              S       Sn       20 08 48.3 -1.1
      190nm,0.4s,SNR=10.0
EPOB  Poblet           5.06 343   P       Pn       20 07 51.8  0.0
      5.0nm,0.2s,SNR=12
EPOB                              S       Sn       20 08 46.0 -3.7
      13nm,0.3s,SNR=7.9
KEST  Kesra            5.17  97   Pn      Pn       20 07 54.1 +0.9
      10nm,0.3s,baz=239,slow=2.2,SNR=38
KEST                              Sn      Sn       20 08 51.7 -0.7
      baz=330,slow=14,SNR=1.6
EQUE  Quentar          5.24 279   P       Pn       20 07 55.0 +0.8
      20nm,0.5s,SNR=27
EQUE                              S       Sn       20 08 51.0 -3.1
      89nm,0.4s,SNR=7.9
CFON  Fontmartina      5.26 355   P       Pn       20 07 54.8 +0.4
      13nm,0.1s,SNR=40
CFON                              S       Sn       20 08 50.2 -4.4
      42nm,0.2s,SNR=7.9
ELGU  Los Guajares,    5.37 276   P       Pn       20 07 55.8  0.0
      16nm,0.3s,SNR=7.9
ELGU                              S       Sn       20 08 54.1 -3.1
      163nm,0.4s,SNR=7.9
EMIR  Miracle          5.51 348   P       Pn       20 07 59.6 +1.7
      53nm,0.2s,SNR=27
EMIR                              S       Sn       20 08 58.1 -2.8
      93nm,0.5s,SNR=7.9
VSL   Villasalto       5.82  57           Pn       20 08 01.4 -0.7
ETOR  Torete           5.86 319   P       Pn       20 08 05.4 +2.8
      20nm,0.2s,SNR=23
ETOR                              S       Sn       20 09 11.0 +1.6
      30nm,0.7s,SNR=7.9
EJON  La Jonquera      5.92 359   P       Pn       20 08 04.3 +0.8
      24nm,0.3s,SNR=29
EJON                              S       Sn       20 09 07.9 -3.1
      9.4nm,0.3s,SNR=7.9
SJAF  Saint Jean de    5.96 359   P       Pn       20 08 04.6 +0.6
      12nm,0.2s,SNR=7.9
SJAF                              S       Sn       20 09 08.7 -3.2
      11nm,0.5s,SNR=7.9
EMAL  Malaga-Limoner   6.01 275   P       Pn       20 08 04.6  0.0
EMAL                              S       Sn       20 09 06.8 -6.1
EMAL  Malaga-Limoner   6.01 275  eP       Pn       20 08 04.6  0.0
EMAL                             eS       Sn       20 09 06.8 -6.1
CLLI  Llivia           6.01 352   P       Pn       20 08 06.4 +1.6
      11nm,0.3s,SNR=45
CLLI                              S       Sn       20 09 09.6 -3.7
      24nm,0.6s,SNR=7.9
CLLI  Llivia           6.01 352           Pn       20 08 06.6 +1.8
CSOR  Sort             6.03 346   P       Pn       20 08 06.3 +1.2
      9.8nm,0.2s,SNR=34
CSOR                              S       Sn       20 09 10.6 -3.1
      18nm,0.3s,SNR=7.9
UCM   Universidad Co   6.21 309   P       Pn       20 08 08.3 +0.8
UCM                               S       Sn       20 09 14.9 -3.2
UCM   Universidad Co   6.21 309  eP       Pn       20 08 08.3 +0.8
UCM                              eS       Sn       20 09 14.9 -3.2
EADA  Adamuz           6.28 287   P       Pn       20 08 08.1 -0.3
      1.9nm,0.2s,SNR=14
EADA                              S       Sn       20 09 17.0 -2.9
      8.5nm,0.3s,SNR=7.9
ESBB  Sonseca Array    6.35 302   Pn      Pn       20 08 09.7 +0.2
ESDC  Sonseca Array    6.36 302   Pn      Pn       20 08 09.3 -0.1
      1.6nm,0.3s,baz=116,slow=13,SNR=47
ESDC                              Sn      Sn       20 09 18.9 -2.7
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	2.5nm,0.3s,baz=115,slow=24,SNR=7.6						
ESDC				LR	LR	20 10 33.5	
	comp=Z,802nm,21.7s,baz=120,slow=38						
ESDC	**Sonseca Array**	**6.36**	**302**	P	**Pn**	**20 08 09.4**	**-0.1**
	11nm,0.2s,baz=117,slow=14,SNR=48						
ESDC				S	**Sn**	**20 09 18.9**	**-2.7**
	30nm,0.5s,baz=115,slow=24,SNR=10						
ESDC	**Sonseca Array**	**6.36**	**302**		**Pn**	**20 08 09.5**	**0.0**
ECHI	**Chisagues Biel**	**6.52**	**341**	P	**Pn**	**20 08 12.8**	**+1.1**
	2.1nm,0.2s,SNR=7.9						
ECHI				S	**Sn**	**20 09 22.1**	**-3.6**
	3.1nm,0.2s,SNR=7.9						
PAB	**San Pablo**	**6.56**	**300**	P	**Pn**	**20 08 12.4**	**+0.1**
	22nm,0.4s,SNR=7.9						
PAB				S	**Sn**	**20 09 23.3**	**-3.5**
	6.1nm,0.4s,SNR=7.9						
PAB	**San Pablo**	**6.56**	**300**		**Pn**	**20 08 12.5**	**+0.1**
PAB	**San Pablo**	**6.56**	**300**	P		20 08 14.3	
HORN	**Hornachuelos**	**6.75**	**284**	P		20 08 14.5	
CEU	**Ceuta**	**6.83**	**267**	P	**Pn**	**20 08 20.6**	**+4.7**
CEU	**Ceuta**	**6.83**	**267**	*e*P	**Pn**	**20 08 20.6**	**+4.7**
EPF	**Esparros**	**6.83**	**343**	P	**Pn**	**20 08 17.3**	**+1.4**
EPF				S	**Sn**	**20 09 30.2**	**-3.0**
	6.2nm,0.3s						
EPF	**Esparros**	**6.83**	**343**	*e*Pn	**Pn**	**20 08 17.3**	**+1.4**
EPF				*e*Sn	**Sn**	**20 09 30.2**	**-3.0**
	12nm,0.3s						
ECEU	**Ceuta**	**6.83**	**267**	P	**Pn**	**20 08 16.9**	**+1.0**
	SNR=4.0						
ECEU				S	**Sn**	**20 09 27.5**	**-5.7**
	18nm,0.3s,SNR=7.9						
MTLF	**Montolieu**	**6.84**	**355**	P	**Pn**	**20 08 17.1**	**+1.0**
MTLF				S	**Sn**	**20 09 28.2**	**-5.3**
	24nm,0.8s						
MTLF	**Montolieu**	**6.84**	**355**	*e*Pn	**Pn**	**20 08 17.1**	**+1.0**
MTLF				*e*Sn	**Sn**	**20 09 28.2**	**-5.3**
	49nm,0.8s						
EJIF	**Jimena Fronter**	**6.85**	**272**	P	**Pn**	**20 08 16.2**	**0.0**
	104µm,0.7s,SNR=7.9						
EJIF				S	**Sn**	**20 09 31.5**	**-2.3**
	110µm,0.7s,SNR=7.9						
ECAB	**El Cabril**	**6.92**	**286**	P	**Pn**	**20 08 16.3**	**-0.8**
	2.1nm,0.2s,SNR=26						
ECAB				S	**Sn**	**20 09 32.4**	**-3.0**
	22nm,0.5s,SNR=7.9						
ETSF	**Etsaut**	**6.95**	**338**	P	**Pn**	**20 08 19.1**	**+1.5**
ETSF				S	**Sn**	**20 09 33.7**	**-2.5**
	7.1nm,0.4s						
ETSF	**Etsaut**	**6.95**	**338**	*e*Pn	**Pn**	**20 08 19.1**	**+1.5**
ETSF				*e*Sn	**Sn**	**20 09 33.7**	**-2.5**
	14nm,0.4s						
GUD	**Guadarrama**	**6.98**	**308**	P	**Pn**	**20 08 19.0**	**+0.9**
	5.7nm,0.3s,SNR=12						
GUD				S	**Sn**	**20 09 32.6**	**-4.4**
	9.9nm,0.4s,SNR=7.9						
ESPR	**Espera**	**7.15**	**275**	P	**Pn**	**20 08 23.3**	**+2.9**
	0.4nm,0.1s,SNR=7.9						
ESPR				S	**Sn**	**20 09 40.4**	**-0.7**
	7.7nm,0.4s,SNR=7.9						
ESPR	**Espera**	**7.15**	**275**		**Pn**	**20 08 23.3**	**+2.9**
ATE	**Arette**	**7.16**	**337**	P	**Pn**	**20 08 22.4**	**+1.9**
	5.4nm,0.4s,SNR=7.9						
ATE				S	**Sn**	**20 09 38.7**	**-2.7**
	18nm,0.2s,SNR=7.9						
EORO	**Oroz-Betelu**	**7.19**	**334**	P	**Pn**	**20 08 20.7**	**-0.2**
	4.1nm,0.3s,SNR=10						
EORO				S	**Sn**	**20 09 39.3**	**-2.9**
	16nm,0.4s,SNR=7.9						
MDT	**Midelt**	**7.30**	**242**	Pn	**Pn**	**20 08 22.8**	**+0.3**
	1.4nm,0.3s,baz=96,slow=18,SNR=37						
MDT				Lg	Lg	20 10 28.6	
	3.8nm,0.3s,baz=358,slow=11,SNR=6.0						
MDT				LR	LR	20 11 29.9	
	comp=Z,816nm,18.9s,baz=54,slow=41						
MDT	**Midelt**	**7.30**	**242**	P		20 08 23.2	
LMR	**La Mourre**	**7.31**	**20**	P	**Pn**	**20 08 21.9**	**-0.6**
LMR				S	**Sn**	**20 09 37.3**	**-7.7**
	10nm,0.2s						
LMR	**La Mourre**	**7.31**	**20**	*e*Pn	**Pn**	**20 08 21.9**	**-0.6**
LMR				*e*Sn	**Sn**	**20 09 37.3**	**-7.7**
	21nm,0.2s						
IFR	**Ifrane**	**7.33**	**248**	*e*P	**Pn**	**20 08 23.2**	**+0.2**
FRF	**La Foret Royal**	**7.56**	**20**	P	**Pn**	**20 08 25.4**	**-0.5**
FRF				S	**Sn**	**20 09 46.1**	**-5.0**
	16nm,0.3s						
FRF	**La Foret Royal**	**7.56**	**20**	*e*Pn	**Pn**	**20 08 25.4**	**-0.5**
FRF				*e*Sn	**Sn**	**20 09 46.1**	**-5.0**
	32nm,0.3s						
LASF	**Ste Croix**	**7.58**	**4**	P	**Pn**	**20 08 26.4**	**+0.2**
LASF				S	**Sn**	**20 09 45.8**	**-5.8**
	16nm,0.7s						
LASF	**Ste Croix**	**7.58**	**4**	*e*Pn	**Pn**	**20 08 26.4**	**+0.2**
LASF				*e*Sn	**Sn**	**20 09 45.8**	**-5.8**
	32nm,0.7s						
PGF	**Pioggiola**	**7.58**	**36**	P	**Pn**	**20 08 25.7**	**-0.6**
PGF				S	**Sn**	**20 09 45.6**	**-6.2**
	5.5nm,0.2s						
PGF	**Pioggiola**	**7.58**	**36**	*e*Pn	**Pn**	**20 08 25.7**	**-0.6**
PGF				*e*Sn	**Sn**	**20 09 45.6**	**-6.2**
	11nm,0.2s						
SMRF	**Simiane la Rot**	**7.70**	**14**	P	**Pn**	**20 08 28.8**	**+0.9**
SMRF				S	**Sn**	**20 09 51.5**	**-3.1**
SMRF	**Simiane la Rot**	**7.70**	**14**	*e*Pn	**Pn**	**20 08 28.8**	**+0.9**
SMRF				*e*Sn	**Sn**	**20 09 51.5**	**-3.1**
EMIN	**Mina Concepcio**	**7.85**	**282**	P	**Pn**	**20 08 29.9**	**-0.1**
	4.0nm,0.3s,SNR=17						
EMIN				S	**Sn**	**20 09 53.0**	**-5.4**
	8.2nm,0.4s,SNR=7.9						
EPLA	**Plasencia**	**7.99**	**299**	P	**Pn**	**20 08 32.7**	**+0.8**
	0.6nm,0.2s,SNR=6.3						
EPLA				S	**Sn**	**20 09 57.0**	**-4.9**
	2.1nm,0.3s,SNR=7.9						
SBF	**Sospel**	**8.07**	**23**	P	**Pn**	**20 08 32.1**	**-0.9**
SBF				S	**Sn**	**20 09 57.8**	**-6.0**
	12nm,0.3s						
SBF	**Sospel**	**8.07**	**23**	*e*Pn	**Pn**	**20 08 32.1**	**-0.9**
SBF				*e*Sn	**Sn**	**20 09 57.8**	**-6.0**
	24nm,0.3s						
PBAR	**Barrancos**	**8.19**	**285**	*e*P	**Pn**	**20 08 35.7**	**+1.1**
PBAR				*e*Sn	**Sn**	**20 10 05.0**	**-1.7**
PBAR				A	A	20 10 34.0	
	7.5nm,0.7s						
ELAN	**Lanestosa**	**8.35**	**325**	P	**Pn**	**20 08 38.8**	**+2.1**
	1.8nm,0.2s,SNR=14						
VIVF	**Saint-Julien-l**	**8.42**	**8**	P	**Pn**	**20 08 38.8**	**+1.0**
VIVF				S	**Sn**	**20 10 07.6**	**-4.8**
VIVF	**Saint-Julien-l**	**8.42**	**8**	*e*Pn	**Pn**	**20 08 38.8**	**+1.0**
VIVF				*e*Sn	**Sn**	**20 10 07.6**	**-4.8**
CAF	**Calviac**	**8.43**	**355**	P	**Pn**	**20 08 39.1**	**+1.2**
CAF	**Calviac**	**8.43**	**355**	*e*Pn	**Pn**	**20 08 39.1**	**+1.2**
EGRO	**El Granado**	**8.47**	**280**	P	**Pn**	**20 08 40.8**	**+2.3**
	2.0nm,0.3s,SNR=7.9						
EGRO				S	**Sn**	**20 10 09.0**	**-4.7**
	4.7nm,0.3s,SNR=7.9						
LFF	**La Frestale**	**8.59**	**349**	P	**Pn**	**20 08 41.5**	**+1.4**
LFF				S	**Sn**	**20 10 13.5**	**-3.0**
	15nm,0.7s						
LFF	**La Frestale**	**8.59**	**349**	*e*Pn	**Pn**	**20 08 41.5**	**+1.4**
LFF				*e*Sn	**Sn**	**20 10 13.5**	**-3.0**
	30nm,0.7s						
PVAQ	**Vaqueiros**	**8.65**	**279**	*e*Pn	**Pn**	**20 08 40.8**	**-0.1**
PVAQ				*e*Sn	**Sn**	**20 10 14.8**	**-3.3**
PVAQ				A	A	20 10 27.2	
	7.4nm,0.8s						
PVAQ	**Vaqueiros**	**8.65**	**279**	P		20 08 40.7	
ORIF	**Oris-en-Rattie**	**8.66**	**14**	P	**Pn**	**20 08 43.1**	**+1.9**
ORIF				S	**Sn**	**20 10 15.4**	**-3.0**
ORIF	**Oris-en-Rattie**	**8.66**	**14**	*e*Pn	**Pn**	**20 08 43.1**	**+1.9**
ORIF				*e*Sn	**Sn**	**20 10 15.4**	**-3.0**
MBDF	**Montbardon**	**8.68**	**18**	P	**Pn**	**20 08 42.6**	**+1.2**
MBDF				S	**Sn**	**20 10 14.8**	**-4.0**
	18nm,0.8s						
MBDF	**Montbardon**	**8.68**	**18**	*e*Pn	**Pn**	**20 08 42.6**	**+1.2**
MBDF				*e*Sn	**Sn**	**20 10 14.8**	**-4.0**
	37nm,0.8s						
PMRV	**Marv??o**	**8.73**	**293**	*e*Pn	**Pn**	**20 08 45.1**	**+3.1**
PMRV				*e*Sn	**Sn**	**20 10 19.6**	**-0.4**
PMRV				A	A	20 10 56.1	
	12nm,0.6s						
PESTR	**Estremoz**	**8.74**	**289**	*e*P	**Pn**	**20 08 43.0**	**+0.8**
PESTR				*e*Sn	**Sn**	**20 10 17.6**	**-2.7**
PESTR				A	A	20 10 54.5	
	12nm,0.6s						
PBDV	**Barranco-do-Ve**	**8.82**	**278**	*e*Pn	**Pn**	**20 08 44.8**	**+1.6**
PBDV				*e*Sn	**Sn**	**20 10 17.6**	**-4.6**
SSB	**Saint Sauveur**	**8.83**	**7**		**Pn**	**20 08 44.8**	**+1.5**
RJF	**Les Rejaudoux**	**8.85**	**353**	P	**Pn**	**20 08 44.6**	**+0.9**
RJF				S	**Sn**	**20 10 17.7**	**-5.2**
RJF	**Les Rejaudoux**	**8.85**	**353**	*e*Pn	**Pn**	**20 08 44.6**	**+0.9**
RJF				*e*Sn	**Sn**	**20 10 17.7**	**-5.2**
PCBR	**Castelo Branco**	**8.92**	**295**	*e*Pn	**Pn**	**20 08 46.6**	**+2.0**
PCBR				*e*Sn	**Sn**	**20 10 22.2**	**-2.3**
PCBR				A	A	20 11 09.5	
	9.2nm,0.8s						
PCVE	**Castro Verde**	**8.92**	**280**	*e*Pn	**Pn**	**20 08 45.3**	**+0.7**
PCVE				A	A	20 10 40.4	
	5.7nm,0.7s						
EVO	**Evora**	**9.01**	**286**	P	**Pn**	**20 08 47.2**	**+1.4**
EVO				S	**Sn**	**20 10 21.1**	**-5.6**
EVO	**Evora**	**9.01**	**286**	*e*P	**Pn**	**20 08 47.2**	**+1.4**
EVO				*e*S	**Sn**	**20 10 21.1**	**-5.6**
EVO	**Evora**	**9.01**	**286**	*e*P	**Pn**	**20 08 47.4**	**+1.6**
EVO				*e*Sn	**Sn**	**20 10 24.9**	**-1.8**
EVO				A	A	20 11 11.8	
	5.7nm,0.5s						
MESJ	**Messejana**	**9.08**	**282**	*e*P	**Pn**	**20 08 45.8**	**-1.0**
MESJ	**Messejana**	**9.08**	**282**	P	**Pn**	**20 08 45.8**	**-1.0**
MESJ	**Messejana**	**9.08**	**282**	*e*P	**Pn**	**20 08 46.4**	**-0.4**
MESJ				*e*Sn	**Sn**	**20 10 25.9**	**-2.6**
MESJ				A	A	20 10 26.8	
	5.6nm,0.3s						
MVO	**Moncorvo**	**9.12**	**304**	P	**Pn**	**20 08 47.8**	**+0.4**
	3.6nm,0.2s,SNR=9.6						
MVO				S	**Sn**	**20 10 23.3**	**-6.3**
	14nm,0.4s,SNR=7.9						
MVO	**Moncorvo**	**9.12**	**304**	*e*Pn	**Pn**	**20 08 48.5**	**+1.1**
MVO				*e*Sn	**Sn**	**20 10 27.2**	**-2.4**
MVO				A	A	20 11 13.4	
	12nm,0.5s						
MTE	**Manteigas**	**9.16**	**298**	*e*Pn	**Pn**	**20 08 50.4**	**+2.5**
MTE				*e*Sn	**Sn**	**20 10 28.3**	**-2.2**
MTE				A	A	20 11 01.2	
	11nm,0.5s						
AVE	**Averroes**	**9.16**	**253**	*e*P	**Pn**	**20 08 48.6**	**+0.6**
PBRG	**Braganca**	**9.24**	**308**	*e*Pn	**Pn**	**20 08 50.5**	**+1.4**
PBRG				A	A	20 10 32.6	
	6.7nm,0.5s						
PMTG	**Montargil**	**9.27**	**289**	*e*Sn	**Sn**	**20 10 28.9**	**-4.3**
PMTG				A	A	20 11 11.3	
	12nm,0.5s						
EARI	**Arriondas**	**9.27**	**319**	P	**Pn**	**20 08 51.4**	**+1.9**
	8.2nm,0.2s,SNR=19						
EARI				S	**Sn**	**20 10 27.3**	**-6.0**
	31nm,0.9s,SNR=7.9						
ECAL	**Calabor**	**9.31**	**309**	P	**Pn**	**20 08 50.8**	**+0.7**
	21nm,0.3s,SNR=16						
ECAL				S	**Sn**	**20 10 28.9**	**-5.5**
	6.3nm,0.4s,SNR=7.9						
LPG	**La Plagne**	**9.40**	**16**	P	**Pn**	**20 08 53.7**	**+2.3**
LPG				S	**Sn**	**20 10 30.5**	**-6.3**
LPG	**La Plagne**	**9.40**	**16**	*e*Pn	**Pn**	**20 08 53.7**	**+2.3**
LPG				*e*Sn	**Sn**	**20 10 30.5**	**-6.3**
LPL	**La Plagne**	**9.41**	**16**	P	**Pn**	**20 08 53.8**	**+2.3**
LPL				S	**Sn**	**20 10 32.6**	**-4.4**
LPL	**La Plagne**	**9.41**	**16**	*e*Pn	**Pn**	**20 08 53.8**	**+2.3**
LPL				*e*Sn	**Sn**	**20 10 32.6**	**-4.4**
PVIS	**Viseu**	**9.52**	**299**	*e*Pn	**Pn**	**20 08 53.0**	**+0.1**
PVIS				*e*Sn	**Sn**	**20 10 37.0**	**-2.5**
PVIS				A	A	20 10 42.4	
	7.1nm,0.6s						
PFVI	**Vila Bisbo**	**9.53**	**277**	P	**Pn**	**20 08 56.3**	**+3.3**
	2.3nm,0.2s,SNR=4.0						
PFVI				S	**Sn**	**20 10 33.9**	**-5.7**
	6.7nm,0.3s,SNR=7.9						
ZGR	**Zagora**	**9.65**	**231**	P		20 08 56.0	
PCAS	**Casmilo, Conde**	**9.73**	**295**	*e*Pn	**Pn**	**20 08 56.9**	**+1.2**
PCAS				A	A	20 11 41.5	
	11nm,0.7s						
TCF	**Toulx Ste Croi**	**9.78**	**357**	P	**Pn**	**20 08 57.8**	**+1.4**
TCF	**Toulx Ste Croi**	**9.78**	**357**	*e*Pn	**Pn**	**20 08 57.8**	**+1.4**
BGF	**Bois d'Agland**	**10.03**	**359**	P	**Pn**	**20 09 01.0**	**+1.2**
BGF	**Bois d'Agland**	**10.03**	**359**	*e*Pn	**Pn**	**20 09 01.0**	**+1.2**
ELOB	**Lobios**	**10.13**	**305**	P	**Pn**	**20 09 01.5**	**+0.2**
	2.3nm,0.2s,SNR=7.7						
ELOB				S	**Sn**	**20 10 48.4**	**-6.1**
	10nm,0.6s,SNR=7.9						
ELOB	**Lobios**	**10.13**	**305**		**Pn**	**20 09 01.5**	**+0.2**
SMF	**Signal de Mont**	**10.14**	**3**	P	**Pn**	**20 09 02.4**	**+1.1**
SMF	**Signal de Mont**	**10.14**	**3**	*e*Pn	**Pn**	**20 09 02.4**	**+1.1**
AVF	**Avril sur Loir**	**10.27**	**1**	P	**Pn**	**20 09 04.3**	**+1.3**
AVF	**Avril sur Loir**	**10.27**	**1**	*e*Pn	**Pn**	**20 09 04.3**	**+1.3**
SENIN	**Lac Senin/Sane**	**10.34**	**17**		**Pn**	**20 09 06.7**	**+2.4**
MFF	**Saint Martin d**	**10.35**	**348**	P	**Pn**	**20 09 05.1**	**+0.9**
MFF				S	**Sn**	**20 10 55.5**	**-4.2**
MFF	**Saint Martin d**	**10.35**	**348**	*e*Pn	**Pn**	**20 09 05.1**	**+0.9**
MFF				*e*Sn	**Sn**	**20 10 55.5**	**-4.2**
EPON	**Pontenova**	**10.36**	**314**	P	**Pn**	**20 09 04.7**	**+0.4**
	0.8nm,0.2s,SNR=7.9						
EPON	**Pontenova**	**10.36**	**314**		**Pn**	**20 09 04.7**	**+0.4**
SSF	**Saint Saulge**	**10.54**	**2**	P	**Pn**	**20 09 08.2**	**+1.4**
SSF	**Saint Saulge**	**10.54**	**2**	*e*Pn	**Pn**	**20 09 08.2**	**+1.4**
EAGO	**Agolada(Pontev**	**10.62**	**310**	P	**Pn**	**20 09 08.7**	**+0.7**
	0.4nm,0.1s,SNR=7.9						
EAGO				S	**Sn**	**20 10 59.4**	**-7.0**
	2.5nm,0.4s,SNR=7.9						
EAGO	**Agolada(Pontev**	**10.62**	**310**		**Pn**	**20 09 08.7**	**+0.7**
LOR	**Lormes**	**10.76**	**3**	P	**Pn**	**20 09 10.6**	**+0.8**
LOR	**Lormes**	**10.76**	**3**	*e*Pn	**Pn**	**20 09 10.6**	**+0.8**
EMAZ	**Mazaricos**	**11.25**	**308**	P	**Pn**	**20 09 16.4**	**-0.1**
	0.0nm,0.1s,SNR=7.9						
EMAZ				S	**Sn**	**20 11 15.4**	**-6.5**
	2.1nm,0.4s,SNR=7.9						
BALST	**Balsthal**	**11.35**	**16**	*e*Pn	**Pn**	**20 09 19.1**	**+1.2**
DAVOX	**Davos/Dischmat**	**11.46**	**24**	Pn	**Pn**	**20 09 22.4**	**+2.9**
	0.4nm,0.3s,baz=221,slow=8.3,SNR=10						
DAVOX				LR	LR	20 13 07.1	
	comp=Z,244nm,20.3s,baz=221,slow=34						
PLONS	**Plons/SG**	**11.53**	**22**	*e*Sn	**Sn**	**20 11 29.9**	**+1.1**
SULZ	**Cheisacher**	**11.63**	**17**	*e*Pn	**Pn**	**20 09 22.1**	**+0.4**
HINF	**Hinteralfeld**	**11.64**	**13**	P	**Pn**	**20 09 21.8**	**0.0**
HINF	**Hinteralfeld**	**11.64**	**13**	*e*Pn	**Pn**	**20 09 21.8**	**0.0**
HAU	**Haudompre**	**11.74**	**11**	P	**Pn**	**20 09 23.6**	**+0.4**
HAU				S	**Sn**	**20 11 26.0**	**-7.7**
	0.9nm,0.3s						
HAU	**Haudompre**	**11.74**	**11**	*e*Pn	**Pn**	**20 09 23.6**	**+0.4**
HAU				*e*Sn	**Sn**	**20 11 26.0**	**-7.7**
	1.7nm,0.3s						
SFTF	**Sexfontaines**	**11.77**	**7**	P	**Pn**	**20 09 25.1**	**+1.5**
SFTF				S	**Sn**	**20 11 29.6**	**-4.9**
	2.2nm,0.2s						
SFTF	**Sexfontaines**	**11.77**	**7**	*e*Pn	**Pn**	**20 09 25.1**	**+1.5**
	baz=183						
SFTF				*e*Sn	**Sn**	**20 11 29.6**	**-4.9**
	2.2nm,0.2s						
METMA	**Mettma DE**	**11.83**	**17**	*e*Pn	**Pn**	**20 09 24.1**	**-0.4**
SLE	**Schleitheim**	**11.94**	**18**	*e*Pn	**Pn**	**20 09 26.6**	**+0.6**
SLE				*e*Sn	**Sn**	**20 11 32.6**	**-6.1**
FETA	**Feichten**	**11.96**	**26**	*e*P	Pn	20 09 31.2	+4.9
	6.2nm,1.1s						
BERGE	**Lenzkirch (DE)**	**11.97**	**17**	*e*Pn	**Pn**	**20 09 26.8**	**+0.4**
MEZF	**Maizieres J'vi**	**12.07**	**6**	P	**Pn**	**20 09 30.2**	**+2.5**
MEZF	**Maizieres J'vi**	**12.07**	**6**	*e*Pn	**Pn**	**20 09 30.2**	**+2.5**
ECH	**Echery**	**12.08**	**13**	*e*Pn	**Pn**	**20 09 28.2**	**+0.4**
SAVF	**Savonnieres en**	**12.19**	**7**	*e*Pn	**Pn**	**20 09 30.3**	**+1.0**
	baz=182						
PAGF	**Fort de Pagny**	**12.19**	**8**	*e*Pn	**Pn**	**20 09 30.6**	**+1.2**
GRR	**Gorron**	**12.20**	**348**	P	**Pn**	**20 09 31.4**	**+1.9**
GRR	**Gorron**	**12.20**	**348**	*e*Pn	**Pn**	**20 09 31.4**	**+1.9**
QUIF	**Quistinic**	**12.28**	**340**	P	**Pn**	**20 09 30.9**	**+0.4**
QUIF	**Quistinic**	**12.28**	**340**	*e*Pn	**Pn**	**20 09 30.9**	**+0.4**
CDF	**Champ du Feu**	**12.29**	**13**	P	**Pn**	**20 09 30.5**	**-0.3**
CDF	**Champ du Feu**	**12.29**	**13**	*e*Pn	**Pn**	**20 09 30.5**	**-0.3**
LDF	**La Druitiere**	**12.29**	**350**	*e*Pn	**Pn**	**20 09 31.1**	**+0.4**
SQTA	**Sankt Quirin**	**12.30**	**27**	*e*P	**Pn**	**20 09 34.4**	**+3.5**
	12nm,1.3s						
MOTA	**Moosalm**	**12.37**	**26**	*e*P	**Pn**	**20 09 34.2**	**+2.3**
	8.3nm,0.8s						
ABTA	**Abfaltersbach**	**12.43**	**32**	*e*P	**Pn**	**20 09 35.4**	**+2.7**
	2.6nm,0.8s						
BFO	**Black Forest**	**12.43**	**17**	Pn	**Pn**	**20 09 33.1**	**+0.4**
BFO	**Black Forest**	**12.43**	**17**	*e*Pn	**Pn**	**20 09 34.0**	**+1.3**
BFO				*e*Sn	**Sn**	**20 11 44.1**	**-6.6**
SGMF	**Saint Gilles**	**12.43**	**342**	P	**Pn**	**20 09 32.8**	**+0.2**
SGMF	**Saint Gilles**	**12.43**	**342**	*e*Pn	**Pn**	**20 09 32.8**	**+0.2**
WTTA	**Wattenberg**	**12.49**	**28**	*e*P	**Pn**	**20 09 37.0**	**+3.4**
	7.7nm,1.2s						
WTTA	**Wattenberg**	**12.49**	**28**	*e*Pn	**Pn**	**20 09 36.2**	**+2.5**
FLN	**La Foliniere**	**12.51**	**349**	P	**Pn**	**20 09 33.2**	**-0.4**
FLN	**La Foliniere**	**12.51**	**349**	*e*Pn	**Pn**	**20 09 33.2**	**-0.4**
	baz=169						
ROSF	**Rostrenen**	**12.69**	**341**	P	**Pn**	**20 09 36.3**	**+0.1**
ROSF	**Rostrenen**	**12.69**	**341**	*e*Pn	**Pn**	**20 09 36.3**	**+0.1**
KBA	**Koelnbreinsper**	**13.04**	**33**	*e*Pn	**Pn**	**20 09 43.2**	**+2.0**
RIVT	**Riveris**	**13.46**	**10**	*e*Pn	**Pn**	**20 09 50.4**	**+3.7**
SOKA	**Soboth**	**13.54**	**38**	*e*P	**Pn**	**20 09 51.4**	**+3.6**
	9.8nm,1.3s						
DOU	**Dourbes**	**13.62**	**4**	*d*Pn	**Pn**	**20 09 51.1**	**+2.2**
DOU				*d*PbPb	**PbPb**	**20 10 34.4**	**+0.8**
GIVF	**Givet**	**13.64**	**5**	P	**Pn**	**20 09 50.8**	**+1.7**
GIVF	**Givet**	**13.64**	**5**	*e*Pn	**Pn**	**20 09 50.8**	**+1.7**
ABH	**Alteburg**	**13.75**	**12**	*e*Pn	**Pn**	**20 09 52.2**	**+1.5**
BMRD	**Maredsous**	**13.84**	**5**	*d*Pn	**Pn**	**20 09 54.6**	**+2.9**
BMRD				*d*PnPn	**P**	**20 10 01.5**	**+1.4**
BMRD				*d*PgPg	PbPb	20 11 02.8	+26
BGES	**Gesves**	**13.94**	**5**	*d*Pn	**Pn**	**20 09 56.3**	**+3.1**
BCLA	**Clavier**	**13.99**	**6**	*d*Pn	**P**	**20 09 59.4**	**-2.4**
BCLA				*d*PbPb	**PbPb**	**20 10 45.6**	**+5.7**
SNF	**Seneffe**	**14.02**	**3**	*d*Pn	**Pn**	**20 09 57.9**	**+3.7**
MOA	**Molln**	**14.04**	**33**	*e*Pn	**Pn**	**20 09 56.5**	**+1.9**
ARSA	**Arzberg**	**14.18**	**37**	*e*P	**Pn**	**20 10 00.2**	**+3.7**
	14nm,1.1s						
ARSA	**Arzberg**	**14.18**	**37**	*e*Pn	**Pn**	**20 10 00.0**	**+3.5**
BSTI	**Sart Tilman**	**14.18**	**7**	*d*Pn	**Pn**	**20 09 59.7**	**+3.3**
BTNL	**Ternell**	**14.24**	**8**	*d*Pn	**Pn**	**20 09 59.1**	**+1.8**
MEM	**Membach**	**14.25**	**8**	*d*Pn	**Pn**	**20 10 00.3**	**+2.9**
GRFO	**Grafenberg**	**14.45**	**22**	P	**Pn**	**20 10 02.6**	**+2.4**
GEC2	**GERESS Array S**	**14.59**	**29**	Pn	**Pn**	**20 10 03.9**	**+1.7**
GEC2	**GERESS Array S**	**14.59**	**29**	*e*Pn	**Pn**	**20 10 03.6**	**+1.5**
GERES	**GERESS Array B**	**14.59**	**29**	Pn	**Pn**	**20 10 02.5**	**+0.3**
	0.1nm,0.3s,baz=217,slow=11,SNR=13						
GERES				LR	LR	20 15 42.8	
	comp=Z,132nm,20.1s,baz=238,slow=38						
GERES	**GERESS Array B**	**14.59**	**29**	Pn	**Pn**	**20 10 03.5**	**+1.3**
KHC	**Kasperske Hory**	**14.77**	**28**	*e*P	**Pn**	**20 10 04.6**	**0.0**
KHC				*e*x	x	20 10 11.6	
CKRC	**Cesky Krumlov**	**14.81**	**30**	*e*P	**Pn**	**20 10 06.3**	**+1.2**
CKRC				*e*x	x	20 10 12.3	
CONA	**Conrad Observa**	**14.82**	**36**	P	**Pn**	**20 10 06.6**	**+1.3**
	13nm,1.6s						
MORH	**Mrgy, Hungar**	**15.18**	**46**	⇑P	**Pn**	**20 10 12.5**	**+2.4**
FRGS	**Fruska Gora**	**15.33**	**51**	⇓P	**P**	**20 10 14.8**	**-1.9**
MOX	**Moxa**	**15.41**	**21**	*e*Pn	**Pn**	**20 10 15.2**	**+2.1**
ZST	**Bratislava**	**15.60**	**37**	*e*P	**P**	**20 10 21.3**	**+1.6**
MODS	**Modra-Piesok**	**15.81**	**37**	*e*P	**P**	**20 10 23.4**	**+1.4**
KRUC	**Moravsky**	**15.88**	**34**	*e*PN	**Pn**	**20 10 20.8**	**+1.6**
SRO	**Srobarova**	**15.96**	**40**	*e*P	**P**	**20 10 25.9**	**+2.3**
SRO2	**Moca**	**15.97**	**41**	*e*P	**P**	**20 10 22.1**	**-1.6**
SMOL	**Smolenice**	**15.98**	**37**	*e*P	**P**	**20 10 24.3**	**+0.4**
VRAC	**Vranov**	**16.15**	**33**	Pn	**P**	**20 10 24.4**	**-1.4**
	0.1nm,0.3s,baz=227,slow=14,SNR=2.6						
VRAC				LR	LR	20 16 51.3	
	comp=Z,93nm,19.0s,baz=273,slow=38						
VRAC	**Vranov**	**16.15**	**33**	*e*PN	**P**	**20 10 24.4**	**-1.4**
JAVC	**Velka Javorina**	**16.33**	**36**	*e*PN	**P**	**20 10 28.1**	**+0.3**
BRG	**Berggiesshubel**	**16.35**	**25**	*e*P	**P**	**20 10 27.5**	**-0.5**
BRG				Amp		20 10 33.1	
	comp=Z,4.7nm,1.0s						
CLL	**Collm**	**16.41**	**23**	*i* pP	**P**	**20 10 30.4**	**+1.8**
	comp=Z,39nm,1.7s						
BZS	**Buzias**	**16.67**	**51**	⇑P	**Pn**	**20 10 30.4**	**+1.2**
KRLC	**Kraliky**	**16.81**	**32**	*e*P	**P**	**20 10 33.2**	**+0.1**
KRLC				*e*x	x	20 10 45.1	
DPC	**Dobruska-Polom**	**16.82**	**31**	*e*P	**P**	**20 10 32.5**	**-0.8**
DPC				*e*x	x	20 10 46.6	
PSZ	**Piszkesteto**	**16.86**	**42**	⇑P	**P**	**20 10 34.0**	**+0.3**
CHVC	**Chvalec**	**16.90**	**30**	*e*P	**P**	**20 10 36.4**	**+2.3**
MORC	**Moravsky Berou**	**16.92**	**34**	⇓P	**P**	**20 10 35.8**	**+1.5**
MORC	**Moravsky Berou**	**16.92**	**34**	*e*PN	**Pn**	**20 10 32.0**	**-0.4**
OSTC	**Ostas**	**16.94**	**30**	*e*P	**P**	**20 10 37.6**	**+3.1**
SIRR	**Siria**	**17.00**	**49**	⇓P	**P**	**20 10 37.2**	**+2.0**
KSP	**Ksiaz**	**17.19**	**29**	*e*P	**P**	**20 10 37.7**	**+0.4**
LANS	**Liptovska Anna**	**17.41**	**38**	*e*P	**P**	**20 10 41.7**	**+2.0**
DRGR		**17.89**	**49**	⇑P	**P**	**20 10 47.7**	**+2.6**
NIE	**Niedzica**	**18.00**	**39**	*e*P	**P**	**20 10 49.9**	**+3.7**
OJC	**Ojcow**	**18.27**	**36**	*e*P	**P**	**20 10 51.4**	**+2.1**
CRVS	**Cervenica-Dubn**	**18.29**	**42**	*e*P	**P**	**20 10 52.8**	**+3.4**
KOLS	**Kolonicke sedl**	**18.74**	**43**	*e*P	**Pn**	**20 10 57.3**	**+2.4**
VOIR		**18.81**	**55**	⇑P	**Pn**	**20 10 58.7**	**+2.9**
DOPR	**Dopca**	**19.23**	**54**	⇓P	**Pn**	**20 11 05.0**	**+4.3**
EKA	**Eskdalemuir Ar**	**19.29**	**349**	P	**Pn**	**20 11 01.0**	**-0.4**
	baz=71,slow=19,SNR=4.4						
KWP	**Kalwaria Pacla**	**19.37**	**41**	*e*P	**Pn**	**20 11 03.5**	**+1.0**
MLR	**Muntele Rosu**	**19.42**	**55**	P	**Pn**	**20 11 03.7**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=130,slow=21,SNR=8.1						
MLR				LR	LR	20 18 40.5	
	comp=Z,87nm,18.9s,baz=218,slow=37						
MLR	**Muntele Rosu**	**19.42**	**55**	⇑P	**Pn**	**20 11 04.5**	**+1.2**
MLR	**Muntele Rosu**	**19.42**	**55**	P	**Pn**	**20 11 04.0**	**+0.8**
BURAR	**Bucovina Array**	**19.78**	**49**	⇑P	**Pn**	**20 11 09.5**	**+2.0**
BURAR	**Bucovina Array**	**19.78**	**49**		**Pn**	**20 11 07.4**	**0.0**
BUR08	**Bucovina Ar. S**	**19.78**	**49**		**Pn**	**20 11 08.9**	**+1.4**
BUR08				IAmb	IAmb	20 11 11.5	
	comp=Z,38nm,1.4s						
ICOR	**Ion Corvin**	**20.30**	**60**	⇓P	Pn	20 11 13.0	-0.5
MDUB	**Mudurnu**	**22.35**	**71**	P	**P**	**20 11 33.9**	**+0.2**
SUW	**Suwalki**	**22.38**	**32**	*e*P	**P**	**20 11 35.4**	**+1.6**
SUW	**Suwalki**	**22.38**	**32**	*e*P	**P**	**20 11 34.7**	**+1.0**
KOWA	**Kowa**	**22.82**	**198**	P	**P**	**20 11 38.2**	**-0.4**
	comp=Z,3.3nm,0.7s,baz=19,slow=12,SNR=8.4						
TOA0	**Torodi Ar. Sit**	**23.30**	**183**	P	**P**	**20 11 42.7**	**-1.0**
TOA0				IAmb	IAmb	20 11 44.4	
	comp=Z,28nm,1.4s						
TORD	**Torodi Ar. Bea**	**23.30**	**183**	P	**P**	**20 11 42.5**	**-1.2**
	comp=Z,4.6nm,0.7s,baz=1.1,slow=9.7,SNR=18						
TORD	**Torodi Ar. Bea**	**23.30**	**183**	P	**P**	**20 11 42.4**	**-1.2**
AKASG	**Malin Array Be**	**23.52**	**45**	P	**P**	**20 11 43.9**	**-1.6**
	comp=Z,4.9nm,0.6s,baz=244,slow=9.6,SNR=15						
AKASG	**Malin Array Be**	**23.52**	**45**	P	**P**	**20 11 43.2**	**-2.3**
AKBB	**Malin Array Si**	**23.52**	**45**	P	**P**	**20 11 44.0**	**-1.5**
NACGM	**Naroch**	**24.56**	**34**	*i* P	**P**	**20 11 56.2**	**+1.0**
NACGM				*i* P	**P**	**20 11 56.2**	**+1.0**
NACGM				*i* P	**P**	**20 11 56.2**	**+1.0**
NACGM				*i* PP	**PnPn**	**20 12 30.5**	**+4.0**
NACGM				*i* PPP	PPP	20 12 38.5	
NACGM				*i* S	**S**	**20 16 22.8**	**+7.9**
NACGM				*i* SS	SnSn	20 17 25.9	+26
NACGM				*i* SSS	SSS	20 18 30.4	
NACGM				*i* LQ	LQ	20 19 54.0	
NACGM				*i* LR	LR	20 21 10.2	
HFS	**Hagfors**	**24.61**	**13**	P	**P**	**20 11 54.9**	**-0.7**
	comp=Z,4.9nm,0.8s,baz=180,slow=11,SNR=9.0						
HFS				LR	LR	20 21 35.7	
	comp=Z,174nm,19.3s,baz=192,slow=37						
ISAL	**Salakas**	**24.70**	**32**	*e*P	**P**	**20 11 57.6**	**+1.2**
IDID	**Didziasalis**	**24.80**	**33**	*e*P	**P**	**20 11 58.4**	**+1.1**
MNK	**Minsk**	**24.82**	**36**	*i* P	**P**	**20 11 56.4**	**-1.2**
	comp=E,7.0nm,1.4s						
MNK				*i* P	**P**	**20 11 56.4**	**-1.2**
	comp=N,25nm,1.3s						
MNK				*i* P	**P**	**20 11 56.4**	**-1.2**
	comp=Z,20nm,0.8s						
MNK				*i* PP	**PnPn**	**20 12 29.8**	**-0.2**
MNK				*i* PPP	PPP	20 12 37.9	
MNK				*i* PcP	**PcP**	**20 15 36.5**	**+3.1**
MNK				*i* S	**S**	**20 16 21.4**	**+2.2**
MNK				*i* SS	**SnSn**	**20 17 12.3**	**+5.6**
MNK				*i* SSS	SSS	20 17 26.0	
MNK				*i* ScP	**ScP**	**20 19 09.0**	**-2.4**
MNK				*i* PcS	**PcS**	**20 19 10.9**	**-2.4**
MNK				*i* LQ	LQ	20 19 48.3	
MNK				*i* LR	LR	20 20 13.7	
MNK				*i* LRM	MLR	20 22 34.3	
	comp=E,8.0nm,16.3s						
MNK				*i* LRM	MLR	20 22 34.3	
	comp=N,145nm,18.1s						
MNK				*i* LRM	MLR	20 22 34.3	
	comp=Z,96nm,18.1s						
NB2	**NORSAR Subarra**	**25.09**	**9**	P	**P**	**20 12 01.0**	**+1.0**
	comp=Z,10.0nm,1.1s,baz=196,slow=9.3						
NOA	**NORSAR Array B**	**25.09**	**9**	P	**P**	**20 11 59.8**	**-0.2**
	comp=Z,1.9nm,0.8s,baz=193,slow=10.0,SNR=7.0						
NOA				LR	LR	20 21 50.8	
	comp=Z,39nm,19.1s,baz=120,slow=37						
MMAI	**Mount Meron Ar**	**26.75**	**88**	P	**P**	**20 12 16.7**	**+1.3**
	comp=Z,2.2nm,0.6s,baz=291,slow=7.0,SNR=6.7						
FINES	**FINESS Array B**	**28.86**	**23**	P	**P**	**20 12 32.6**	**-1.2**
	comp=Z,5.0nm,0.8s,baz=213,slow=6.6,SNR=6.1						
OBN	**Obninsk**	**29.45**	**40**	LR	LR	20 25 48.1	
	comp=Z,18nm,18.5s,baz=74,slow=39						
KLMR	**Klimovskoe**	**33.52**	**32**	*e*P	**P**	**20 13 11.8**	**-3.0**
KLMR				AMP		20 13 16.9	

	comp=Z,41nm,1.2s						
ARCES	ARCESS Array B	35.27	13	P	P	20 13 28.7	-1.3
	comp=Z,5.6nm,0.8s,baz=278,slow=0.9,SNR=6.4						
ARCES	ARCESS Array B	35.27	13	IAmb	IAmb	20 13 35.0	
	comp=Z,16nm,1.2s						
SUMG	Summit	41.69	343	iP	P	20 14 25.4	+1.1
	comp=Z,17nm,0.8s						
SUMG	Summit	41.69	343	P	P	20 14 23.1	-1.2
SUMG	Summit	41.69	343	iP	P	20 14 25.5	+1.1
SUMG				IAmb	IAmb	20 14 27.3	
	comp=Z,17nm,0.8s						
ARU	Arti	41.76	43	P	P	20 14 24.0	-0.6
ARU				IAmb	IAmb	20 14 25.5	
	comp=Z,15nm,0.9s						
ABKAR	Akbulak array	42.63	54	P	P	20 14 30.6	-1.2
BRVK	Borovoye	48.67	48	P	P	20 15 19.1	-0.3
BRVK				IAmb	IAmb	20 15 22.4	
	comp=Z,17nm,1.4s						
KMBO	Kilima Mbogo	49.12	132	P	P	20 15 24.7	+1.0
	comp=Z,2.7nm,1.0s,baz=7.0,slow=13,SNR=4.1						
BRZS	Berezniki	50.70	51	eP	P	20 15 34.3	-0.7
	comp=Z,2.5nm,1.0s,baz=51						
IUG	Iuzhnay	50.93	62	eP	P	20 15 34.8	-2.2
	baz=62						
BTLS	Baital	52.87	57	eP	P	20 15 48.6	-2.6
	baz=57						
KURK	Kurchatov	54.21	49	P	P	20 16 00.9	-0.1
KURK				IAmb	IAmb	20 16 02.1	
	comp=Z,7.0nm,0.8s						
NRIK	Noril'sk	54.46	26	P	P	20 16 02.9	+0.3
	comp=Z,2.0nm,0.5s,baz=334,slow=3.8,SNR=4.4						
NRIK	Noril'sk	54.46	26	IAmb	IAmb	20 16 06.4	
	comp=Z,5.5nm,0.9s						
KUU	Kurty	54.78	58	eP	P	20 16 02.7	-2.7
	comp=Z,2.0nm,0.9s,baz=58						
SEM	Semipalatinsk	55.29	49	eP	P	20 16 08.3	-0.8
	baz=49						
TNSS	Tian-Shan	55.49	59	eP	P	20 16 09.4	-1.5
	baz=59						
KSH	Kashi	56.06	63	P	P	20 16 13.1	-1.6
KSH				sP	sP	20 16 23.2	+0.5
KSH				PP	PP	20 18 22.3	+2.8
KSH				S	S	20 23 56.4	-6.2
KSH				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KSH				pmax	pmax		
	comp=Z,130nm,4.9s						
KSH				LR	LR		
	comp=N,270nm,10.4s						
KSH				LR	LR		
	comp=E,120nm,7.0s						
KSH				LR	LR		
	comp=Z,680nm,21.9s						
ZALV	Zalesovo Beam	56.91	44	P	P	20 16 21.0	+0.6
	comp=Z,6.7nm,0.8s,baz=286,slow=7.7,SNR=27						
ZALV	Zalesovo Beam	56.91	44	P	P	20 16 19.9	-0.4
SHLS	Shalkode	57.17	58	eP	P	20 16 24.2	+1.6
	baz=58						
MK31	Makanchi Array	57.74	53	P	P	20 16 26.4	-0.1
MKAR	Makanchi Array	57.74	53	P	P	20 16 26.6	+0.1
	comp=Z,2.4nm,0.8s,baz=282,slow=5.7,SNR=24						
ZSN	Zaisan	59.15	51	eP	P	20 16 34.1	-2.1
	baz=51						
SADO	Sadowa	60.40	306	P	P	20 16 43.5	-1.3
	comp=Z,3.2nm,0.5s,baz=336,slow=3.7,SNR=3.7						
WMQ	Urumqi	62.41	54	eP	P	20 17 01.4	+2.8
LBTB	Lobatse	64.80	157	P	P	20 17 14.3	0.0
ULM	Lac du Bonnet	68.03	317	P	P	20 17 33.8	-1.0
	comp=Z,8.4nm,0.8s,baz=71,slow=5.2,SNR=13						
ULM	Lac du Bonnet	68.03	317	P	P	20 17 33.8	-1.0
BOSA	Boshof	68.08	159	P	P	20 17 36.0	+0.7
	comp=Z,4.5nm,0.8s,baz=353,slow=7.1,SNR=9.1						
BOSA	Boshof	68.08	159	P	P	20 17 34.6	-0.7
BOSA				IAmb	IAmb	20 17 37.1	
	comp=Z,14nm,1.1s						
YKA	Yellowknife Ar	69.44	334	P	P	20 17 43.3	0.0
	comp=Z,2.4nm,0.8s,baz=56,slow=6.5,SNR=22						
SDV	Santo Domingo	71.65	268	P	P	20 17 57.9	0.0
	comp=Z,2.1nm,0.4s,baz=19,slow=7.6,SNR=3.5						
GTA	Gaotai	72.48	54	⇑P	P	20 18 02.8	+0.4
GTA				pP	pP	20 18 07.4	-1.0
GTA				sP	sP	20 18 10.3	-0.2
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s						
E28A	Huff	72.72	315	P	P	20 18 01.9	-1.7
IMAR	Indian Mountai	76.26	350	P	P	20 18 25.8	+2.1
ILAR	Eielson Array	76.32	347	P	P	20 18 25.0	+0.9
	comp=Z,1.5nm,0.8s,baz=7.9,slow=5.5,SNR=12						
ILAR	Eielson Array	76.32	347	P	P	20 18 24.9	+0.8
LZH	Lanzhou	76.99	55	eP	P	20 18 29.6	+1.0
LZH				pP	pP	20 18 34.5	-0.2
LZH				sP	sP	20 18 36.7	-0.1
LZH				ePP	PP	20 21 23.4	+1.9
LZH				pmax	pmax		
	comp=Z,23nm,1.3s						
LZH				pmax	pmax		
	comp=Z,96nm,5.1s						
LZH				LR	LR		
	comp=N,190nm,16.2s						
LZH				LR	LR		
	comp=E,190nm,16.0s						
LZH				LR	LR		
	comp=Z,240nm,18.1s						
DLBC	Dease Lake	77.61	337	P	P	20 18 33.0	+1.5
	comp=Z,2.3nm,0.8s,baz=23,slow=6.9,SNR=3.8						
SEY	Seymchan	77.89	14	P	P	20 18 34.4	+1.5
	comp=Z,1.2nm,0.8s,baz=352,slow=4.2,SNR=4.1						
PDAR	Pinedale Array	80.04	316	P	P	20 18 45.5	+0.1
	comp=Z,3.4nm,1.0s,baz=56,slow=4.9,SNR=12						
NEW	Newport	80.19	324	P	P	20 18 46.8	+0.9
	comp=Z,3.7nm,0.9s,baz=45,slow=4.3,SNR=4.9						
MA2	Magadan	80.60	16	P	P	20 18 48.9	+1.1
	comp=Z,2.3nm,0.7s,baz=15,slow=12,SNR=3.0						
BMO	Blue Mountains	82.70	322	P	P	20 18 58.1	-1.2
BMO				IAmb	IAmb	20 19 03.1	
	comp=Z,7.7nm,1.1s						
KLR	Kul'dur	83.27	31	P	P	20 19 02.2	+0.1
	comp=Z,1.5nm,0.9s,baz=227,slow=3.3,SNR=4.6						
LON	Longmire	83.47	325	P	P	20 19 03.4	+0.1
LON				IAmb	IAmb	20 19 06.2	
	comp=Z,8.7nm,0.9s						
CMAR	Chiang Mai Arr	83.81	72	P	P	20 19 06.4	+1.0
	comp=Z,0.5nm,0.4s,baz=295,slow=6.8,SNR=5.9						
CMAR				LR	LR	20 59 30.1	
	comp=Z,1µm,21.7s,baz=248,slow=38						
CPUP	Villa Florida	84.48	232	P	P	20 19 09.4	+1.0
	comp=Z,3.6nm,0.8s,baz=14,slow=4.6,SNR=8.4						
ELK	Elko	84.53	318	P	P	20 19 10.1	+1.1
	comp=Z,3.7nm,1.0s,baz=34,slow=4.1,SNR=10						
TXAR	Lajitas Array	85.03	303	P	P	20 19 12.4	+0.9
	comp=Z,1.6nm,0.8s,baz=74,slow=4.8,SNR=8.8						
TXAR	Lajitas Array	85.03	303	P	P	20 19 10.7	-0.8
U15A	North Rim	85.85	313	IAmb	IAmb	20 19 18.6	
	comp=Z,4.8nm,0.9s						
NVAR	Mina Array Bea	87.84	318	P	P	20 19 26.9	+1.6
	comp=Z,0.5nm,0.8s,baz=95,slow=3.1,SNR=3.6						
NJ2	Nanjing	89.14	50	eP	P	20 19 31.5	+0.3
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
WRA	Warramunga Arr	134.52	82	PKP	PKPdf	20 25 54.0	-0.2
	comp=Z,0.9nm,1.1s,baz=323,slow=2.0,SNR=2.2						
ASAR	Alice Springs	136.04	87	PKP	PKiKP	20 25 58.1	-0.6
	comp=Z,0.5nm,0.8s,baz=332,slow=1.6,SNR=3.5						
STKA	Stephens Creek	145.60	95	PKPbc	PKPab	20 26 14.7	+0.2
	comp=Z,7.7nm,0.9s,baz=340,slow=4.9,SNR=10						

AEIC ***01*** *20:07:41±3.7, 56°.58N±0°.08×168°.98W±0°.10, h16km±5km, Error ellipse: s-maj=12.7km s-min=4.8km az=148.0*

IDC ***01*** *20:07:45.6±0.7, 56°.71N×168°.93W, h0km, mb4.2/25, mb1 4.4/28, mb1mx4.2/66, mbtmp4.2/28, ML3.3/3, MS3.8/8, Ms1 3.8/8, ms1mx3.3/62, Error ellipse: s-maj=21.2km s-min=10.9km az=2.0*

BJI ***01*** *20:07:45.2±0.0, 56°.94N×169°.39W, h5km, mB5.1/23, mb4.5/39, Ms4.7/7, Ms7 4.4/7*

NEIC ***01*** *20:07:45.6±2.4, 56°.46N±0°.04×168°.8W±0°.1, h10km±1km, mb4.6/7, ML4.3(AEIC), Error ellipse: s-maj=11.3km s-min=7.3km az=87.0*

ISC 01 20:07:46.2±2.3, **56°.54N**±0°.06×**168°.86W**±0°.05, **h10**km±14km, **n143**, σ1^{s}**24**/152, **mb4.6**/48, **MS4.2**/8, **12C-2D, Pribilof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKGG	Akutan Green G	2.86	144		Pn	20 08 28.8	-3.0
AKGG					Sn	20 09 05.9	-0.3
MSW	Makushin Switc	2.88	155		Pn	20 08 30.4	-1.9
AKRB	Akutan Reef Bi	2.89	145		Pn	20 08 30.8	-1.5
AKLV	Akutan Long Va	2.90	144		Pn	20 08 30.8	-1.7
MNAT	Makushin Natee	2.94	154		Pn	20 08 31.3	-1.6
MAPS	Pakushin South	2.95	157		Sn	20 09 10.5	+2.1
MGOD	Makushin Gods	2.97	157		Pn	20 08 31.6	-1.8
AKUT	Akutan	2.98	142		Pn	20 08 31.2	-2.3
MREP	Makushin Rep't	2.99	155		Pn	20 08 32.3	-1.4
AKSA	Akutan Strait	3.01	142		Pn	20 08 31.8	-2.1
UNV	Unalaska Valle	3.02	152		Pn	20 08 35.2	+1.2
UNV	Unalaska Valle	3.02	152		Sn	20 09 10.0	-0.1
WEBT	Westdahl Beart	3.04	128		Pn	20 08 32.4	-2.0
WESP	Westdahl Peak	3.12	129		Pn	20 08 32.2	-3.2
NIKH	Nikolski High	3.57	180		Pn	20 08 41.9	+0.3
SDPT	Sand Point	4.86	101		Pn	20 08 58.8	-0.5
ATKA	Atka Island	5.34	218		Pn	20 09 05.6	-0.3
CHGN	Chignik	5.80	88		Pn	20 09 13.1	+0.8
AMKA	Amchitka	8.68	238	Pn	Pn	20 09 51.1	-0.6
KDAK	Kodiak Island	8.94	75	Pn	Pn	20 09 57.4	+2.2
	1.1nm,0.3s,baz=301,slow=8.7,SNR=11						
KDAK				LR	LR	20 12 30.3	
	comp=Z,112nm,20.2s,baz=247,slow=32						
KDAK	Kodiak Island	8.94	75		Pn	20 09 56.9	+1.7
TTA	Tatalina	9.11	40	Pn	Pn	20 09 57.5	-0.1
PPLA	Purkeypile	10.54	46		Pn	20 10 17.9	+0.6
SUA	Susitna One	10.55	55	Pn	Pn	20 10 19.4	+2.0
RND	Reindeer	12.12	47	Pn	Pn	20 10 38.4	-0.4
KLU	Klutina	12.78	58		Pn	20 10 48.5	+0.6
I23K	Minto, Yukon-K	12.78	40		Pn	20 10 46.8	-0.9
WRH	Wood River Hil	12.90	43	Pn	Pn	20 10 50.6	+1.2
HDA	Harding Lake	13.31	45		Pn	20 10 54.8	-0.3
ILAR	Eielson Array	13.50	43	Pn	Pn	20 10 55.5	-2.1
	0.0nm,0.3s,baz=221,slow=25,SNR=8.9						
ILAR				LR	LR	20 16 30.6	
	comp=Z,537nm,18.1s,baz=242,slow=39						
ILAR	Eielson Array	13.50	43	Pn	Pn	20 10 57.9	+0.4
GLB	Gilahina Butte	13.77	59	Pn	Pn	20 11 01.2	-0.1
COLD	Coldfoot	13.79	31	Pn	Pn	20 11 00.6	-0.9
MCARA	McCarthy VSAT	14.13	59		Pn	20 11 04.7	-1.5
PRP	Porcupine Dome	14.36	42	Pn	Pn	20 11 08.6	-0.8
BALM	Baldy	14.41	61		Pn	20 11 08.4	-1.7
YAH	Yahtse	14.65	64	Pn	Pn	20 11 11.8	-1.7
BARN	Barnard Glacie	14.75	61		Pn	20 11 14.2	-0.6
CTGM	Chitina Glacie	14.90	61		Pn	20 11 16.9	+0.1
HYT	Haines Junctio	16.76	62	P	Pn	20 11 41.3	+0.4
PETK	Petropavlovsk-	19.45	274	P	Pn	20 12 14.2	+0.3
	0.5nm,0.3s,baz=90,slow=10,SNR=7.9						
INK	Inuvik	19.80	39	LR	LR	20 20 07.1	
	comp=Z,252nm,18.6s,baz=259,slow=38						
SEY	Seymchan	20.29	304	P	P	20 12 22.1	+0.4
	15nm,0.9s,baz=101,slow=8.6,SNR=60						
DLBC	Dease Lake	20.77	68	P	P	20 12 28.1	+1.1
	8.8nm,1.1s,baz=270,slow=8.4,SNR=4.5						
DLBC				LR	LR	20 20 41.9	
	comp=Z,188nm,21.5s,baz=210,slow=37						
MA2	Magadan	21.34	295	P	P	20 12 34.2	+1.1
	7.4nm,0.9s,baz=83,slow=9.8,SNR=6.7						
BBB	Bella Bella	23.88	83	LR	LR	20 21 34.0	
	comp=Z,158nm,18.1s,baz=292,slow=35						
YKA	Yellowknife Ar	27.43	55	P	P	20 13 32.1	+0.5
	2.3nm,0.9s,baz=280,slow=8.6,SNR=18						
YKA				PcP	PcP	20 16 50.5	+0.6
	1.3nm,0.9s,baz=302,slow=1.3,SNR=5.8						
YKA				LR	LR	20 24 51.2	
	comp=Z,265nm,20.5s,baz=0.0,slow=38						
RES	Resolute Bay	32.52	28	PcP	PcP	20 17 03.4	+0.5
	1.4nm,0.8s,baz=240,slow=7.8,SNR=4.1						
RES	Resolute Bay	32.52	28	P	P	20 14 17.4	+0.9
RES				IAmb	IAmb	20 14 20.9	
	comp=Z,9.4nm,1.4s						
PNTR	Pine Nut	36.47	97	P	P	20 14 51.1	-0.3
PNTR				IAmb	IAmb	20 15 01.5	
	comp=Z,7.1nm,0.8s						
NVAR	Mina Array Bea	37.65	97	P	P	20 15 03.1	+1.6
	comp=Z,0.6nm,0.6s,baz=297,slow=7.5,SNR=9.1						
NVAR				PcP	PcP	20 17 20.4	+1.6
	comp=Z,1.4nm,0.8s,baz=305,slow=3.0,SNR=6.6						
PDAR	Pinedale Array	39.51	84	P	P	20 15 16.9	-0.1
	comp=Z,0.5nm,0.8s,baz=12,slow=1.1,SNR=4.3						
MJB9	Matsu-Tunnel	40.32	263	P	P	20 15 20.8	-2.8
ULM	Lac du Bonnet	42.07	66	P	P	20 15 38.2	+0.4
	comp=Z,1.8nm,0.7s,baz=323,slow=11,SNR=4.6						
NRIK	Noril'sk	42.94	330	P	P	20 15 44.3	-0.3
	comp=Z,3.1nm,0.8s,baz=70,slow=11,SNR=5.7						
KSRS	Korea Array	45.35	273	P	P	20 16 05.5	+1.2
	comp=Z,2.0nm,1.0s,baz=38,slow=7.5,SNR=5.7						
SUMG	Summit	46.71	18	iP	P	20 16 16.1	+1.0
	comp=Z,36nm,0.9s						
SUMG	Summit	46.71	18	iP	P	20 16 16.2	+1.0
SUMG				IAmb	IAmb	20 16 17.3	
	comp=Z,36nm,0.9s						
SONM	Songino Array	49.51	298	P	P	20 16 37.3	+0.6
	comp=Z,2.5nm,0.9s,baz=44,slow=6.5,SNR=17						
SONM				PcP	PcP	20 17 58.5	0.0
	comp=Z,0.9nm,0.8s,baz=275,slow=1.4,SNR=6.1						
SONM	Songino Array	49.51	298	P	P	20 16 36.2	-0.5
HHC	Hu-ho-hao-te	51.80	288	eP	P	20 16 53.6	-0.4
HHC				pmax	pmax		
	comp=Z,7.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,130nm,5.6s						
TXAR	Lajitas Array	52.50	93	P	P	20 17 00.4	+1.0
	comp=Z,2.5nm,0.9s,baz=299,slow=4.9,SNR=23						
TXAR				PcP	PcP	20 18 11.1	+1.2
	comp=Z,0.4nm,0.6s,baz=307,slow=2.6,SNR=3.6						
TXAR	Lajitas Array	52.50	93	P	P	20 16 56.8	-2.7
NJ2	Nanjing	54.35	275	eP	P	20 17 09.9	-2.9
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.6s						
XAN	Xi'an	58.25	285	P	P	20 17 41.4	+0.7
XAN				pP	sP	20 17 50.6	+5.7
XAN				pmax	pmax		
	comp=Z,8.0nm,1.4s						
XAN				pmax	pmax		
	comp=Z,110nm,5.7s						
XAN				LR	LR		
	comp=Z,320nm,18.8s						
XAN				LR	LR		
	comp=Z,340nm,25.0s						
XAN				LR	LR		
	comp=Z,310nm,25.0s						
GTA	Gaotai	58.90	295	⇑P	P	20 17 46.0	+0.7
GTA				pP	sP	20 17 52.5	+3.0
GTA				sP	pP	20 17 55.7	+7.4
GTA				pmax	pmax		
	comp=Z,8.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,110nm,5.8s						
GTA				LR	LR		
	comp=Z,190nm,20.4s						
GTA				LR	LR		
	comp=Z,230nm,17.4s						
GTA				LR	LR		
	comp=Z,380nm,18.2s						
SEM	Semipalatinsk	59.11	316	eP	P	20 17 45.0	-1.6
	baz=316						
LZH	Lanzhou	59.38	290	eP	P	20 17 48.5	-0.2
LZH				pP	sP	20 17 54.6	+1.7
LZH				sP	pP	20 17 57.4	+5.7
LZH				pmax	pmax		
	comp=Z,20nm,1.3s						
LZH				pmax	pmax		
	comp=Z,69nm,7.6s						
ZSN	Zaisan	59.60	311	eP	P	20 17 49.2	-0.6
	comp=Z,4.5nm,1.1s,baz=311						
KLMR	Klimovskoe	60.84	345	eP	P	20 17 55.9	-2.1
KLMR				AMP		20 18 01.8	
	comp=Z,21nm,1.5s						
MKAR	Makanchi Array	61.19	312	P	P	20 17 59.2	-1.5
	comp=Z,2.4nm,1.0s,baz=52,slow=4.8,SNR=8.5						
WMQ	Urumqi	61.24	307	eP	P	20 18 02.0	+0.8
FINES	FINESS Array B	61.78	352	P	P	20 18 03.6	-0.8
	comp=Z,7.0nm,1.0s,baz=1.3,slow=8.4,SNR=5.2						
BRZS	Berezniki	62.27	320	eP	P	20 18 07.0	-1.0
	comp=Z,2.8nm,1.3s,baz=320						
NB2	NORSAR Subarra	62.77	360	P	P	20 18 10.7	-0.4
	comp=Z,16nm,1.7s,baz=359,slow=6.9						
NOA	NORSAR Array B	62.77	360	P	P	20 18 10.2	-0.9
	comp=Z,3.9nm,1.0s,baz=359,slow=6.5,SNR=4.7						
HFS	Hagfors	63.66	359	P	P	20 18 16.4	-0.6
	comp=Z,3.3nm,0.7s,baz=90,slow=1.5,SNR=6.3						
TDK	Taldyqorghan	64.23	313	eP	P	20 18 20.7	-0.3
	comp=Z,5.2nm,1.1s,baz=313						
SHLS	Shalkode	65.31	312	eP	P	20 18 27.0	-1.2
	comp=Z,7.2nm,1.1s,baz=311						
GYA	Guiyang	65.37	281	⇑P	P	20 18 30.3	+1.5
GYA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KPKS	Kokpek	65.38	312	eP	P	20 18 28.1	-0.6
	comp=Z,4.8nm,1.3s,baz=312						
CHKK	Chushkaly	65.75	314	eP	P	20 18 30.8	-0.2
	baz=314						
SATY	Saty	65.83	312	eP	P	20 18 32.3	+0.7
	baz=312						
BTLS	Baital	65.91	316	eP	P	20 18 31.5	-0.4
	comp=Z,2.4nm,1.1s,baz=316						
MDOK	Medeo	66.30	313	eP	P	20 18 34.0	-0.6
	baz=313						
AAA	Alma-Ata	66.31	313	eP	P	20 18 35.0	+0.4
	baz=313						
TNSS	Tian-Shan	66.44	313	eP	P	20 18 35.1	-0.8
	baz=313						
ABKAR	Akbulak array	67.06	328	P	P	20 18 37.0	-2.2
AAK	Ala-Archa	67.76	315	LR	LR	20 49 11.6	
	comp=Z,185nm,21.5s,baz=298,slow=37						
EKA	Eskdalemuir Ar	67.89	9	P	P	20 18 44.4	+0.1
	comp=Z,7.9nm,0.9s,baz=354,slow=5.0,SNR=11						
MNK	Minsk	68.48	350	iP	P	20 18 46.3	-1.7
	comp=E,2.0nm,1.1s						
MNK				iP	P	20 18 46.3	-1.7
	comp=N,8.0nm,0.9s						
MNK				iP	P	20 18 46.3	-1.7
	comp=Z,12nm,1.1s						
MNK				iPcP	PcP	20 19 11.6	-1.6
MNK				iPP	PP	20 21 16.9	-1.5
MNK				iPPP	PPP	20 22 55.5	
MNK				iS	S	20 27 47.2	-2.3
MNK				iScS	SKSac	20 28 45.8	-0.9
MNK				iSS	SS	20 32 12.4	+0.5
MNK				iSSS	SSS	20 35 28.4	
MNK				iLQ	LQ	20 43 55.8	
MNK				iLR	LR	20 49 16.3	
MNK				iLRM	MLR	20 51 09.9	
	comp=N,83nm,14.5s						
MNK				iLRM	MLR	20 51 17.5	
	comp=Z,72nm,18.1s						
MNK				iLRM	MLR	20 51 22.2	
	comp=E,12nm,18.8s						
KMI	Kunming	68.56	283	⇑P	P	20 18 50.6	+1.3
KMI				pmax	pmax		
	comp=E,6.0nm,1.5s						
DZA	Taraz	68.77	317	eP	P	20 18 50.2	+0.1
	baz=317						
KSH	Kashi	69.80	312	P	P	20 19 00.6	+4.0
KSH				PcP	PcP	20 19 20.7	+1.5
KSH				pmax	pmax		
	comp=E,8.0nm,1.2s						
KSH				pmax	pmax		
	comp=E,91nm,4.3s						
IUG	Iuzhnay	69.90	317	eP	P	20 18 56.9	-0.3
	comp=E,5.5nm,1.2s,baz=317						
AKASG	Malin Array Be	72.08	348	P	P	20 19 09.5	-0.7
	comp=E,8.1nm,0.8s,baz=16,slow=6.1,SNR=20						
AKASG	Malin Array Be	72.08	348	P	P	20 19 09.7	-0.5
AKBB	Malin Array Si	72.08	348	P	P	20 19 08.9	-1.3
AKBB				IAmb	IAmb	20 19 11.0	
	comp=Z,11nm,1.1s						
CLL	Collm	72.51	359	eP	P	20 19 12.0	-0.7
	comp=Z,11nm,1.4s						
BRG	Berggiesshubel	72.93	358	eP	P	20 19 15.8	+0.5
BRG				Amp		20 19 20.5	
	comp=Z,17nm,1.5s						
OSTC	Ostas	73.19	357	eP	P	20 19 16.8	0.0
DPC	Dobruska-Polom	73.39	357	eP	P	20 19 18.4	+0.4
KRLC	Kraliky	73.65	356	eP	P	20 19 19.7	+0.1
PRU	Pruhonice	73.81	358	eP	P	20 19 19.7	-0.7
MORC	Moravsky Berou	73.92	356	⇑P	P	20 19 21.8	+0.7
MORC	Moravsky Berou	73.92	356	eP	P	20 19 21.8	+0.7
VRAC	Vranov	74.43	356	P	P	20 19 24.2	+0.2
	comp=Z,5.3nm,0.9s,baz=359,slow=6.3,SNR=6.7						
VRAC	Vranov	74.43	356	⇑P	P	20 19 25.3	+1.2
VRAC	Vranov	74.43	356	eP	P	20 19 25.0	+0.9
LANS	Liptovska Anna	74.45	354	eP	P	20 19 26.4	+2.1
KOLS	Kolonicke sedl	74.49	352	eP	P	20 19 25.4	+1.0
KRUC	Moravsky	74.68	356	eP	P	20 19 26.2	+0.7
KHC	Kasperske Hory	74.68	358	eP	P	20 19 25.7	+0.1
JAVC	Velka Javorina	74.83	356	eP	P	20 19 28.3	+1.8
GERES	GERESS Array B	74.97	358	P	P	20 19 26.6	-0.7
	comp=Z,1.2nm,0.8s,baz=28,slow=3.2,SNR=8.5						
GERES	GERESS Array B	74.97	358	P	P	20 19 25.7	-1.6
CKRC	Cesky Krumlov	74.98	358	eP	P	20 19 27.5	+0.2
GUN	Gumba	75.01	298	eP	P	20 19 28.8	+0.6
	comp=Z,17nm,0.9s						
SMOL	Smolenice	75.19	356	eP	P	20 19 29.8	+1.3
KKN	Kakani	75.41	298	eP	P	20 19 30.9	+0.6
	comp=Z,15nm,1.0s						
PKI	Pulchoki	75.53	298	eP	P	20 19 31.7	+0.6
PKIN	Phulchoki	75.53	298	eP	P	20 19 31.5	+0.4
	comp=Z,9.6nm,0.8s						
GKN	Gorkha	75.54	299	eP	P	20 19 32.4	+1.4
BURAR	Bucovina Array	75.55	350	⇑P	P	20 19 30.9	+0.2
BURAR	Bucovina Array	75.55	350	P	P	20 19 30.2	-0.5
DMN	Daman	75.64	298	eP	P	20 19 32.8	+1.1
PSZ	Piszkesteto	75.66	354	⇑P	P	20 19 32.5	+1.2
DANN	Dangsing	75.67	300	eP	P	20 19 32.9	+1.0
	comp=Z,45nm,0.8s						
CMAR	Chiang Mai Arr	76.00	282	P	P	20 19 34.6	+1.0
	comp=Z,2.1nm,0.7s,baz=19,slow=6.2,SNR=15						
BIZ	Bicaz	76.14	349	⇑P	P	20 19 34.7	+0.7
DRGR		76.59	352	⇑P	P	20 19 37.1	+0.6
KBZ	Khabaz	76.59	337	P	P	20 19 36.9	+0.4
	comp=Z,5.2nm,1.0s,baz=63,slow=2.9,SNR=4.4						
DOPR	Dopca	77.17	350	⇑P	P	20 19 40.2	+0.4
GEYT	Alibeck	77.84	324	P	P	20 19 44.1	+0.5
	comp=Z,5.2nm,1.0s,baz=302,slow=3.3,SNR=11						
BZS	Buzias	77.84	352	⇓P	P	20 19 43.9	+0.4
TPGR	Topolog	77.94	348	⇑P	P	20 19 44.6	+0.5
FRGS	Fruska Gora	78.42	354	⇓P	P	20 19 47.5	+0.8
GRUS	Gruza	79.62	353	⇑P	P	20 19 54.7	+1.4
BRTR	Keskin Array B	82.23	343	P	P	20 20 07.6	+0.1
	comp=Z,2.1nm,0.7s,baz=132,slow=1.8,SNR=4.1						
ESDC	Sonseca Array	83.31	12	P	P	20 20 12.2	-0.8
	comp=Z,2.5nm,1.0s,baz=327,slow=4.5,SNR=5.8						
WRA	Warramunga Arr	89.82	232	LR	LR	20 58 29.2	
	comp=Z,164nm,21.2s,baz=210,slow=34						
ASAR	Alice Springs	93.29	231	P	P	20 21 01.3	+0.3
	comp=Z,0.4nm,0.7s,baz=24,slow=3.2,SNR=2.1						
BOSA	Boshof	150.34	334	PKPbc	PKPbc	20 27 37.5	+0.1
	comp=Z,2.9nm,0.9s,baz=309,slow=3.6,SNR=4.2						

MAN ***01*** *20:12:27.1, 4°.83N×127°.23E, h9km, mb5.1, ML4.0, MS4.1*

IDC ***01*** *20:12:38.6±9.0, 4°.10N×127°.79E, h193km±50km, mb3.6/4, mb1 3.8/5, mb1mx3.0/44, mbtmp4.1/5, Error ellipse: s-maj=90.4km s-min=67.2km az=17.0*

ISC 01 20:12:25.6±1.1, **4°.6N**±0°.1×**127°.5E**±0°.1, **h100**km, **n12**, σ1^{s}**69**/17, **mb3.7**/4, **1C-1D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	2.32	309	eP	Pn	20 13 01.4	-1.0
DDMP				eS	Sn	20 13 32.3	+1.8
KCP	Kidapawan	3.38	314	⇑eP	Pn	20 13 18.0	+1.4
KCP				iS	Sn	20 13 59.3	+3.4
SKMP	Bagumbayan, Su	3.51	302	eP	Pn	20 13 17.8	-0.5
SKMP				eS	Sn	20 13 59.7	+0.8
BUKP	Musuan	4.05	323	eP	Pn	20 13 25.1	-0.4
BUKP				eS	Sn	20 14 10.7	-1.3
BUTP	Butuan	4.70	336	eP	Pn	20 13 35.9	+1.6
CGP	Cagayan de Oro	4.72	324	⇓eP	Pn	20 13 52.0	+17
CGP				eS	Sn	20 14 24.9	-3.4
PAGZ	Pagadian	5.21	308	eP	Pn	20 13 41.3	0.0
PAGZ				eS	Sn	20 14 39.7	-0.3
SIJI	Sorong	6.62	146	P	Pn	20 14 06.3	+5.8
	4.1nm,0.3s,baz=228,slow=22,SNR=49						
SIJI				S	Sn	20 15 16.1	+1.6
	2.9nm,0.3s,baz=178,slow=22,SNR=18						
FITZ	Fitzroy Crossi	22.66	185	P	P	20 17 19.4	+0.7
	1.5nm,0.5s,baz=21,slow=8.3,SNR=7.2						
WRA	Warramunga Arr	25.32	165	P	P	20 17 42.0	-1.3
	1.8nm,0.5s,baz=345,slow=10,SNR=24						
ASAR	Alice Springs	28.81	168	P	P	20 18 13.9	-0.6
	0.8nm,0.4s,baz=346,slow=6.8,SNR=24						
STKA	Stephens Creek	38.70	161	P	P	20 19 39.2	-0.7
	3.1nm,0.3s,baz=338,slow=8.6,SNR=16						

DJA ***01*** *20:33:01.9±0.6, 9°S±5°×12°4E±°, h92km±8km, M3.3/5,* *mb4.6/2,MLv2.7/5*

*IDC **01** 20:33:04.0±1.2,9°.58S×123°.43E,h130km±9km,mb3.0/1, mb1 3.1/4,mb1mx2.8/47,mbtmp3.4/4,Error ellipse: s-maj=92.1km s-min=21.7km az=67.0*

ISC 01 20:33:01.6±1.2,9°.1S±0°.1×123°.8E±0°.1,h103km±12km,n9, σ1s.16/14,Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	0.80	148	P	Pn	20 33 21.1	+0.7
SOEI				S	Sn	20 33 34.2	-0.3
BATI	Baumata	1.13	189	P	Pn	20 33 24.6	+0.7
	23nm,0.3s,baz=280,slow=1.3,SNR=35						
BATI				S	Sn	20 33 40.7	+0.2
	20nm,0.3s,baz=320,slow=1.8,SNR=6.4						
BATI	Baumata	1.13	189	P	Pn	20 33 24.2	+0.4
BATI				S	Sn	20 33 41.8	+1.3
MMRI	Maumere	1.64	286	P	Pn	20 33 29.9	+0.1
MMRI				S	Sn	20 33 50.0	-1.2
EDFI	Ende, Flores	2.14	279	P	Pn	20 33 36.7	+0.4
EDFI				S	Sn	20 34 01.7	-1.1
FITZ	Fitzroy Crossi	9.13	169	P	Pn	20 35 07.9	-2.7
	0.3nm,0.3s,baz=353,slow=10,SNR=11						
FITZ				S	Sn	20 36 43.0	-8.7
	0.6nm,0.3s,baz=74,slow=23,SNR=11						
WRA	Warramunga Arr	14.82	138	P	Pn	20 36 26.1	+0.1
	0.1nm,0.3s,baz=318,slow=12,SNR=1.3						
WRA				S	Sn	20 38 57.3	-12
	0.2nm,0.3s,baz=305,slow=24,SNR=1.6						
ASAR	Alice Springs	17.41	148	P	P	20 36 57.7	-0.2
	0.1nm,0.3s,baz=322,slow=11,SNR=5.2						
MKAR	Makanchi Array	66.80	330	P	P	20 43 42.8	+0.6
	0.2nm,0.5s,baz=135,slow=7.0,SNR=4.4						

*BJI **01** 20:38:10.0±0.0,56°.60N×169°.10W,h10km,mB4.9/18, mb4.6/31,Ms5.1/7,Ms7 4.9/6*

*AEIC **01** 20:38:11±3.4,56°.66N±0°.07×169°.2W±0°.1,h32km±6km, Error ellipse: s-maj=10.2km s-min=8.9km az=221.0*

*IDC **01** 20:38:11.4±0.6,56°.61N×169°.19W,h0km,mb4.1/25, mb1 4.3/29,mb1mx4.1/53,mbtmp4.1/29,ML3.8/4,MS3.9/3, Ms1 3.9/3,ms1mx3.2/62,Error ellipse: s-maj=21.0km s-min=10.2km az=3.0*

*NEIC **01** 20:38:14.0±2.6,56°.64N±0°.07×169°.2W±0°.1,h20km±5km, mb4.4/17,ML4.2(AEIC),Error ellipse: s-maj=9.8km s-min=9.4km az=213.0*

ISC 01 20:38:13.1±0.4,56°.59N±0°.06×169°.17W±0°.04,h10km, n156,σ1s.78/155,mb4.4/48,MS4.5/3,10C-5D,Pribilof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPIA	Saint Paul Isl	0.84	316		Pg	20 38 28.1	-1.1
AKGG	Akutan Green G	3.00	142		Pn	20 38 59.8	-0.9
AKGG					Sn	20 39 36.0	-0.7
MSW	Makushin Switc	3.01	152		Pn	20 39 00.6	-0.1
AKRB	Akutan Reef Bi	3.03	143		Pn	20 39 00.7	-0.4
AKLV	Akutan Long Va	3.04	142		Pn	20 39 00.8	-0.5
MNAT	Makushin Natee	3.06	151		Pn	20 39 01.1	-0.4
MAPS	Pakushin South	3.06	154		Pn	20 39 01.7	+0.1
MGOD	Makushin Gods	3.09	154		Pn	20 39 01.8	-0.1
AKBBA	Akutan Broad B	3.10	142		Pn	20 39 01.5	-0.6
MREP	Makushin Rep't	3.11	152		Pn	20 39 01.7	-0.5
AKUT	Akutan	3.13	140	Pn	Pn	20 39 03.4	+1.0
AKUT	Akutan	3.13	140		Sn	20 39 40.1	+0.3
UNV	Unalaska Valle	3.14	150	Pn	Pn	20 39 02.2	-0.4
AKSA	Akutan Strait	3.16	140		Sn	20 39 41.4	+0.9
OKFG	Magazine Ridge	3.26	167		Pn	20 39 03.8	-0.5
NIKH	Nikolski High	3.63	177	Pn	Pn	20 39 10.1	+0.8
NIKH	Nikolski High	3.63	177		Sn	20 39 52.1	0.0
FALS	False Pass	3.69	116		Pn	20 39 08.1	-2.0
ATKA	Atka Island	5.28	216		Pn	20 39 33.0	+1.1
ATKA				Sn	Sn	20 40 30.3	-2.5
CHGN	Chignik	5.97	88		Pn	20 39 42.0	+0.6
ADK	Adak	6.45	226		Pn	20 39 47.8	-0.2
GAMB	Gambell	7.32	351	Pn	Pn	20 39 57.7	-2.2
CERAA	Semis' Rag'd T	8.03	239		Pn	20 40 12.0	+2.3
CESW	Semis' Southwe	8.09	239		Pn	20 40 12.4	+1.9
AMKA	Amchitka	8.56	237	Pn	Pn	20 40 19.8	+2.9
OHAK	Old Harbor	8.72	79	Pn	Pn	20 40 19.5	+0.4
KDAK	Kodiak Island	9.09	76	Pn	Pn	20 40 24.3	+0.2
	2.2nm,0.3s,baz=318,slow=2.9,SNR=13						
KDAK				Lg	Lg	20 43 03.2	
	baz=174,slow=18,SNR=7.2						
TTA	Tatalina	9.18	41	Pn	Pn	20 40 23.6	-1.9
BRLK	Bradley Lake	10.16	64	Pn	Pn	20 40 38.2	-0.7
SKT	Skwentna	10.50	52		Pn	20 40 43.0	-0.5
PPLA	Purkeypile	10.63	47		Pn	20 40 45.8	+0.4
SUA	Susitna One	10.66	55		Pn	20 40 46.3	+0.5
PMR	Palmer	11.44	56		Pn	20 40 56.6	+0.4
KTH	Kantishna Hill	11.45	45		Pn	20 40 56.9	+0.4
SML	Sawmill	11.87	55		Pn	20 41 01.5	-0.7
BWN	Browne	12.31	44		Pn	20 41 10.0	+1.7
KLU	Klutina	12.90	58		Pn	20 41 15.8	-0.5
WRH	Wood River Hil	12.98	44	Pn	Pn	20 41 16.6	-0.8
MDM	Murphy Dome	13.17	42		Pn	20 41 20.8	+0.8
CCB	Clear Creek Bu	13.18	43		Pn	20 41 22.8	+2.8
HDA	Harding Lake	13.40	45		Pn	20 41 22.1	-1.0
PAX	Paxson	13.48	52		Pn	20 41 26.1	+1.7
POKR	Poker Plat Res	13.54	42		Pn	20 41 25.2	+0.2
N25K	Chitina, Valde	13.54	58		Pn	20 41 24.0	-1.1
IL31		13.58	44		Pn	20 41 27.2	+1.7
ILAR	Eielson Array	13.58	44	Pn	Pn	20 41 22.9	-2.6
	0.1nm,0.3s,baz=235,slow=12,SNR=4.2						
ILAR				Lg	Lg	20 45 31.6	
	0.1nm,0.3s,baz=266,slow=13,SNR=1.8						
ILAR				LR	LR	20 46 40.9	
	comp=Z,256nm,19.1s,baz=271,slow=38						
ILAR	Eielson Array	13.58	44	Pn	Pn	20 41 24.4	-1.2
GLB	Gilahina Butte	13.89	59	Pn	Pn	20 41 30.2	+0.4
VRDI	Verde Repeater	14.03	60		Pn	20 41 30.5	-1.3
CRQM	Cirque	14.12	62		Pn	20 41 34.5	+1.3
TGL	Tana Glacier	14.28	62		Pn	20 41 35.2	+0.1
PRP	Porcupine Dome	14.44	42	Pn	Pn	20 41 37.9	+0.5
YAH	Yahtse	14.78	64		Pn	20 41 40.4	-1.8
BARN	Barnard Glacie	14.87	61		Pn	20 41 43.2	-0.2
CTGM	Chitina Glacie	15.02	62		Pn	20 41 45.1	-0.2
CTGM				IAmb	IAmb	20 41 55.2	
	comp=Z,24nm,0.9s						
DAWY	Dawson	16.40	51	P	P	20 42 05.2	-0.7
DAWY				IAmb	IAmb	20 42 12.3	
	comp=Z,46nm,1.1s						
HYT	Haines Junctio	16.89	62	P	P	20 42 11.1	-0.3
HYT				IAmb	IAmb	20 42 17.2	
	comp=Z,23nm,0.8s						
EPYK	Eagle Plains	18.10	44	P	Pn	20 42 23.5	-0.8
WHY	Whitehorse	18.18	63	P	P	20 42 25.7	0.0
WHY				IAmb	IAmb	20 42 32.2	
	comp=Z,20nm,1.1s						
BESE	Bessie Mountai	18.39	69		P	20 42 29.1	+1.2
PETK	Petropavlovsk-	19.28	274	P	P	20 42 37.4	-0.3
	comp=Z,0.6nm,0.3s,baz=80,slow=13,SNR=13						
INK	Inuvik	19.87	40	P	P	20 42 42.6	-1.4
	comp=Z,0.8nm,0.3s,baz=249,slow=10,SNR=20						
INK				LR	LR	20 50 11.2	
	comp=Z,150nm,21.3s,baz=238,slow=36						
INK	Inuvik	19.87	40	P	P	20 42 43.1	-0.9
SEY	Seymchan	20.12	304	P	P	20 42 46.5	-0.3
	comp=Z,5.7nm,0.8s,baz=92,slow=9.4,SNR=23						
DLBC	Dease Lake	20.91	69	P	P	20 42 56.0	+0.6
	comp=Z,17nm,0.8s,baz=283,slow=12,SNR=12						
MA2	Magadan	21.16	295	P	P	20 42 59.4	+1.3
	comp=Z,3.4nm,0.9s,baz=78,slow=13,SNR=4.0						
C36M	Paulatuk	23.46	39	P	P	20 43 20.4	-1.8
C36M				IAmb	IAmb	20 43 27.2	
	comp=Z,14nm,0.8s						
YKA	Yellowknife Ar	27.54	55	P	P	20 44 00.7	+1.1
	comp=Z,8.7nm,0.8s,baz=284,slow=8.3,SNR=54						
YKA				PcP	PcP	20 47 16.2	-0.8
	comp=Z,0.7nm,0.7s,baz=300,slow=1.6,SNR=4.7						
NEW	Newport	32.10	83	P	P	20 44 40.4	+0.2
	comp=Z,1.9nm,0.9s,baz=38,slow=8.4,SNR=2.4						
PAHR	Pah Rah Range	36.33	96	P	P	20 45 16.0	-1.0
PAHR				IAmb	IAmb	20 45 22.7	
	comp=Z,6.8nm,1.0s						
NVAR	Mina Array Bea	37.83	97	P	P	20 45 29.2	-0.7
	comp=Z,0.9nm,0.7s,baz=308,slow=7.6,SNR=9.6						
NVAR				PcP	PcP	20 47 46.4	+0.3
	comp=Z,1.1nm,0.7s,baz=270,slow=2.3,SNR=7.2						
NVAR	Mina Array Bea	37.83	97	P	P	20 45 30.2	+0.4
ELK	Elko	37.90	91	P	P	20 45 29.4	-1.0
	comp=Z,1.0nm,0.8s,baz=288,slow=12,SNR=4.1						
TPNV	Topopah Spring	40.02	96	P	P	20 45 47.6	-0.5
TPNV				IAmb	IAmb	20 45 53.8	
	comp=Z,4.5nm,1.0s						
MSU	Marysvale	41.15	91	P	P	20 45 58.0	+0.5
RDMU	Red Mountain	41.16	87	P	P	20 45 59.4	+1.9
Q16A	Castle Valley	41.42	90	P	P	20 46 00.6	+0.9
ULM	Lac du Bonnet	42.20	66	P	P	20 46 06.5	+0.8
	comp=Z,1.8nm,0.5s,baz=298,slow=5.5,SNR=5.7						
ULM	Lac du Bonnet	42.20	66	P	P	20 46 05.0	-0.8
PFO	Pinyon Flats O	42.38	100	P	P	20 46 09.0	+1.5
	comp=Z,2.5nm,1.0s,baz=4.8,slow=2.6,SNR=3.8						
KSRS	Korea Array	45.17	273	P	P	20 46 30.0	+0.2
	comp=Z,3.2nm,1.1s,baz=56,slow=7.8,SNR=6.8						
FRB	Frobisher Bay	45.52	38	P	P	20 46 30.2	-1.9
	comp=Z,2.6nm,0.8s,baz=314,slow=11,SNR=4.9						
DAG	Danmarks Havn	45.60	9	*i* P	P	20 46 35.6	+3.0
DAG	Danmarks Havn	45.60	9	*i* P	P	20 46 35.6	+3.0
SUMG	Summit	46.72	18	*i* P	P	20 46 40.2	-1.8
SUMG	Summit	46.72	18	*i* P	P	20 46 40.2	-1.8
ANMO	Albuquerque	46.89	90	P	P	20 46 44.8	+1.2
	comp=Z,0.4nm,0.5s,baz=323,slow=3.4,SNR=2.4						
ANMO				PcP	PcP	20 48 15.6	-0.6
	comp=Z,1.9nm,0.8s,baz=340,slow=4.5,SNR=5.9						
DBG	Daneborg	47.74	11	*i* P	P	20 46 52.3	+2.9
SONM	Songino Array	49.33	298	P	P	20 47 01.6	-0.6
	comp=Z,1.1nm,0.8s,baz=52,slow=6.8,SNR=12						
SONM				PcP	PcP	20 48 24.3	-0.4
	comp=Z,0.5nm,0.7s,baz=14,slow=1.4,SNR=3.9						
ICESG	Greenland Ices	49.38	21	*i* P	P	20 47 01.5	-1.0
HHC	Hu-ho-hao-te	51.62	288	*e*P	P	20 47 21.1	+1.5
HHC				pmax	pmax		
	comp=Z,9.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,77nm,5.8s						
HHC				LR	LR		
	comp=Z,530nm,17.5s						
HHC				LR	LR		
	comp=Z,870nm,18.4s						
HHC				LR	LR		
	comp=Z,1µm,19.4s						
TX32	Lajitas Array	52.68	92	P	P	20 47 27.1	-0.5
TXAR	Lajitas Array	52.68	92	P	P	20 47 26.2	-1.4
	comp=Z,1.1nm,0.7s,baz=302,slow=5.0,SNR=18						
TXAR	Lajitas Array	52.68	92	P	P	20 47 26.6	-1.0
SSE	Sheshan	53.61	273	P	P	20 47 34.1	-0.2
SSE				S	S	20 55 05.0	-2.6
SSE				pmax	pmax		
	comp=Z,5.0nm,0.6s						
SSE				pmax	pmax		
	comp=Z,37nm,3.9s						
SSE				LR	LR		
	comp=Z,220nm,20.9s						
SSE				LR	LR		
	comp=Z,150nm,19.9s						
ARCES	ARCESS Array B	53.73	354	LR	LR	21 11 48.4	
	comp=Z,410nm,20.1s,baz=230,slow=38						
NJ2	Nanjing	54.17	275	*e*P	P	20 47 36.8	-1.6
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
GTA	Gaotai	58.73	295	P	P	20 48 10.8	-0.1
GTA				pP	sP	20 48 15.9	+0.6
GTA				sP	pP	20 48 18.8	+4.7
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
LZH	Lanzhou	59.20	290	*e*P	P	20 48 14.6	+0.3
LZH				pP	sP	20 48 21.3	+2.6
LZH				sP	pP	20 48 23.7	+6.2
LZH				pmax	pmax		
	comp=Z,19nm,1.3s						
LZH				pmax	pmax		
	comp=Z,65nm,7.5s						
ZSN	Zaisan	59.44	311	*e*P	P	20 48 15.7	+0.1
	comp=Z,1.7nm,0.8s,baz=311						
MKAR	Makanchi Array	61.03	312	P	P	20 48 25.9	-0.6
	comp=Z,1.3nm,0.9s,baz=44,slow=7.2,SNR=4.2						
WMQ	Urumqi	61.07	306	*e*P	P	20 48 29.3	+2.4
FINES	FINESS Array B	61.70	352	P	P	20 48 29.8	-0.9
	comp=Z,3.1nm,0.7s,baz=21,slow=12,SNR=5.2						
BRZS	Berezniki	62.12	320	*e*P	P	20 48 34.4	+0.6
	baz=320						
NB2	NORSAR Subarra	62.72	360	P	P	20 48 37.4	-0.2
	comp=Z,21nm,1.4s,baz=360,slow=6.9						
NOA	NORSAR Array B	62.72	360	P	P	20 48 36.9	-0.8
	comp=Z,0.5nm,0.9s,baz=101,slow=18,SNR=3.6						
SHLS	Shalkode	65.15	311	*e*P	P	20 48 52.8	-1.2
	comp=Z,1.9nm,1.0s,baz=311						
GYA	Guiyang	65.19	281	⇑P	P	20 48 55.3	+0.8
GYA				pmax	pmax		
	comp=Z,11nm,2.0s						
BTLS	Baital	65.75	316	*e*P	P	20 48 58.2	+0.4
	baz=316						
KUU	Kurty	65.81	314	*e*P	P	20 48 58.9	+0.7
	comp=Z,2.2nm,1.2s,baz=314						
MDOK	Medeo	66.14	313	*e*P	P	20 49 01.0	+0.6
	baz=313						
ABKAR	Akbulak array	66.92	327	P	P	20 49 04.3	-0.9
ABKAR	Akbulak array	66.92	327	P	P	20 49 04.9	-0.2
AAK	Ala-Archa	67.60	314	P	P	20 49 10.0	+0.2
	comp=Z,1.1nm,0.6s,baz=163,slow=5.5,SNR=4.7						
KMI	Kunming	68.38	283	⇑P	P	20 49 15.9	+0.9
KMI				pmax	pmax		
	comp=Z,5.0nm,1.6s						
KSH	Kashi	69.63	312	P	P	20 49 26.4	+3.9
KSH				pP	sP	20 49 30.7	+3.8
KSH				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KSH				pmax	pmax		
	comp=Z,55nm,3.9s						
IUG	Iuzhnay	69.74	317	*e*P	P	20 49 23.3	+0.2
	comp=Z,3.1nm,0.9s,baz=317						
AKASG	Malin Array Be	72.00	348	P	P	20 49 35.2	-1.3
	comp=Z,5.3nm,0.7s,baz=15,slow=5.9,SNR=13						
AKASG	Malin Array Be	72.00	348	P	P	20 49 33.9	-2.6
CLL	Collm	72.46	359	*e*(pP)	pP	20 49 43.0	+0.5
	comp=Z,7.0nm,1.2s						
DPC	Dobruska-Polom	73.33	356	*e*P	P	20 49 48.3	+3.8
KRLC	Kraliky	73.59	356	*e*P	P	20 49 49.6	+3.5
LANS	Liptovska Anna	74.39	354	*e*P	P	20 49 55.7	+5.0
KOLS	Kolonicke sedl	74.42	352	*e*P	P	20 49 54.8	+3.9
KHC	Kasperske Hory	74.63	358	*e*P	P	20 49 56.1	+4.0
GERES	GERESS Array B	74.91	358	P	P	20 49 55.6	+1.8
	comp=Z,1.6nm,0.9s,baz=45,slow=2.1,SNR=8.0						
SMOL	Smolenice	75.12	355	*e*P	P	20 50 00.1	+5.2
MODS	Modra-Piesok	75.27	356	*e*P	P	20 50 00.0	+4.2
BURAR	Bucovina Array	75.47	350	⇑P	P	20 49 55.3	-1.8
BURAR	Bucovina Array	75.47	350	P	P	20 49 56.6	-0.5
PSZ	Piszkesteto	75.59	354	⇑P	P	20 50 03.2	+5.4
CONA	Conrad Observa	75.77	357	*e*P	P	20 50 03.3	+4.5
	comp=Z,7.8nm,1.1s						
CMAR	Chiang Mai Arr	75.83	282	P	P	20 49 59.5	0.0
	comp=Z,1.9nm,0.7s,baz=18,slow=5.9,SNR=13						
BIZ	Bicaz	76.06	349	⇑P	P	20 50 01.0	+0.7
TESR	Tescani	76.42	349	⇑P	P	20 50 01.7	-0.7
MOTA	Moosalm	76.44	360	*e*P	P	20 50 07.2	+4.5
	comp=Z,11nm,1.2s						
WATA	Walderalm	76.45	359	*e*P	P	20 50 07.0	+4.3
	comp=Z,8.3nm,1.2s						
KBZ	Khabaz	76.47	337	P	P	20 50 02.3	-0.4
	comp=Z,1.8nm,0.9s,baz=22,slow=13,SNR=1.7						
DRGR		76.51	352	⇓P	P	20 50 01.8	-1.2
WTTA	Wattenberg	76.52	359	*e*P	P	20 50 07.3	+4.1
	comp=Z,8.6nm,1.2s						
SQTA	Sankt Quirin	76.56	360	*e*P	P	20 50 07.8	+4.5
	comp=Z,11nm,1.1s						
KBA	Koelnbreinsper	76.68	358	*e*P	P	20 50 09.2	+5.1
	comp=Z,6.2nm,1.2s						
FETA	Feichten	76.76	0	*e*P	P	20 50 09.0	+4.5
	comp=Z,7.8nm,1.0s						
SOKA	Soboth	77.05	357	*e*P	P	20 50 11.2	+5.2
	comp=Z,7.9nm,1.2s						
DOPR	Dopca	77.09	350	⇓P	P	20 50 05.8	-0.4
OBKA	Obir	77.23	357	*e*P	P	20 50 11.4	+4.3
	comp=Z,14nm,0.9s						
MLR	Muntele Rosu	77.50	349	⇑P	P	20 50 09.0	+0.4
VOIR		77.65	350	⇑P	P	20 50 10.5	+1.0
GEYT	Alibeck	77.69	324	P	P	20 50 09.5	-0.2
	comp=Z,3.9nm,0.9s,baz=241,slow=4.9,SNR=4.5						
ARR	Arges	77.76	350	⇑P	P	20 50 12.7	+2.7
BZS	Buzias	77.77	352	⇓P	P	20 50 14.1	+4.1
GZR	Gura Zlata	77.90	351	⇓P	P	20 50 15.2	+4.5
HERR	Herculane	78.44	352	⇓P	P	20 50 17.7	+4.0
DIKM	Dikmen	79.98	342	⇑P	P	20 50 13.8	-8.4
ESDC	Sonseca Array	83.29	11	P	P	20 50 39.9	+0.1
	comp=Z,2.4nm,1.0s,baz=348,slow=5.9,SNR=7.3						
WRA	Warramunga Arr	89.72	232	P	P	20 51 10.7	-0.6
	comp=Z,0.9nm,0.9s,baz=42,slow=4.8,SNR=4.1						

IDC 01 20:38:29.9±11.0,17°.39S×178°.34W,h571km±144km, mb2.8/6,mb1 3.2/6,mb1mx2.9/38,mbtmp3.7/6,Error ellipse: s-maj=121.5km s-min=36.6km az=161.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	44.79	259	P	P	20 45 53.8	-0.1
	0.3nm,0.5s,baz=96,slow=7.5,SNR=6.5						
ASAR	Alice Springs	45.00	254	P	P	20 45 55.2	-0.2
	0.7nm,0.6s,baz=84,slow=8.2,SNR=8.7						
NVAR	Mina Array Bea	79.00	44	P	P	20 49 36.1	+0.4
	0.4nm,0.5s,baz=226,slow=6.9,SNR=5.9						
ILAR	Eielson Array	85.37	13	P	P	20 50 06.5	-0.4
	0.3nm,0.4s,baz=217,slow=5.0,SNR=8.8						
TXAR	Lajitas Array	85.66	58	P	P	20 50 09.0	-0.3
	0.8nm,0.8s,baz=229,slow=7.0,SNR=5.6						
PDAR	Pinedale Array	86.93	43	P	P	20 50 14.8	-0.3
	0.4nm,0.6s,baz=230,slow=2.5,SNR=4.4						
GERES	GERESS Array B	147.13	345	PKPbc	PKPbc	20 57 09.1	-0.4
	0.7nm,0.6s,baz=5.7,slow=2.7,SNR=5.1						

MEX 01 21:00:04.5±0.3,18°.16N×103°.13W,h10km±3km,MD3.8, Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMIG	Aquila	0.24	302	*i* P	Pg	21 00 09.0	-0.4
MMIG				*i* S	Sg	21 00 12.5	-0.1
MMIG	Aquila	0.24	302	*i* P	Pg	21 00 09.0	-0.4
MMIG				*i* S	Sg	21 00 12.5	-0.1
COIG	Colima	1.14	333	*i* P	Pb	21 00 22.9	-3.6
COIG				*i* S	Sg	21 00 37.2	-4.2
COIG	Colima	1.14	333	*e*P	Pb	21 00 21.3	-5.2
COIG				*i* S	Sg	21 00 35.2	-6.1
R15V		1.29	321	*i* P	Pn	21 00 25.1	-3.6
R15V				*i* S	Sb	21 00 41.0	-4.6
R15V		1.29	321	*e*P	Pn	21 00 24.4	-4.2
R15V				*e*S	Sb	21 00 39.8	-5.7
EZ5V		1.38	341	*i* S	Sb	21 00 43.7	-4.8

IDC 01 21:03:19.2±7.0,4°.42S×143°.78E,h138km±45km,mb3.0/3, mb1 3.1/5,mb1mx3.0/33,mbtmp3.4/5,Error ellipse: s-maj=93.6km s-min=26.5km az=89.0,New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	3.61	302	P	Pn	21 04 14.2	+0.1
	0.3nm,0.3s,baz=143,slow=23,SNR=1.4						
JAY				S	Sn	21 04 51.3	-5.2
	0.4nm,0.3s,baz=155,slow=8.1,SNR=1.3						
WRA	Warramunga Arr	17.96	210	P	P	21 07 17.6	-1.4
	0.1nm,0.3s,baz=30,slow=11,SNR=3.0						
ASAR	Alice Springs	21.37	206	P	P	21 07 55.6	-0.3
	0.2nm,0.3s,baz=37,slow=8.1,SNR=5.7						
FITZ	Fitzroy Crossi	22.35	231	P	P	21 08 06.9	+0.9
	2.6nm,0.8s,baz=59,slow=12,SNR=5.9						
MKAR	Makanchi Array	74.26	321	P	P	21 14 41.2	0.0
	0.1nm,0.5s,baz=104,slow=6.1,SNR=1.9						

*GII **01** 21:09:04.8±0.0,33°.61N×35°.65E,h1km,Mm1.5/2*

*GRAL **01** 21:09:07.5±0.3,33°.58N×35°.57E,h6km±3km,MD2.7*

ISC 01 21:09:06.6±1.0,33°.59N±0°.03×35°.61E±0°.08,h15km±8km, n9,σ0s.85/15,Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QRWL	Qaraoun	0.07	125	*e*P	Pg	21 09 09.6	-0.1
QRWL				*e*S	Sg	21 09 11.2	-0.4
DQRL	Deir Qamar	0.12	344	*e*P	Pb	21 09 09.9	-0.8
RCY	Rachaya	0.21	116	*e*P	Pg	21 09 11.9	+0.5
RCY				*e*S	Sg	21 09 15.2	+0.4
BHL	Bhannes	0.32	7	*e*P	Pg	21 09 13.4	+0.3
BHL				*e*S	Sg	21 09 17.9	+0.2
NATI	Neve Ativ	0.34	162	Pg	Pg	21 09 12.4	-1.2
NATI				Sg	Sb	21 09 19.6	-0.1
GEM	Giv'at Ha'Em	0.38	173	Pg	Pg	21 09 14.1	-0.2
GEM				Sg	Sg	21 09 20.5	+0.9
MMA0B	Mount Meron ar	0.60	197	Pg	Pb	21 09 18.4	-0.5
MMA0B				Sg	Sg	21 09 28.3	+2.0
HWQ	Hawqa	0.74	22	*e*P	Pb	21 09 21.2	-0.1
HMDT	Nahal Hemdat	1.34	183	Pn	Pn	21 09 30.9	+0.2

*NEIC **01** 21:15:28.6±1.0,61°.60N±0°.03×151°.63W±0°.08,h89km±4km, Error ellipse: s-maj=5.9km s-min=4.7km az=116.0*

*AEIC **01** 21:15:29±1.2,61°.62N±0°.03×151°.59W±0°.08,h83km±4km, ML3.1,ML3.4/86(NEIC),Error ellipse: s-maj=5.7km s-min=4.7km az=121.0*

*ANF **01** 21:15:29.5±0.6,61°.67N×151°.45W,h96km±7km,ML3.5/14, ML3.4/13,Error ellipse: s-maj=6.8km s-min=3.5km az=96.0*

ISC 01 21:15:28.4±1.2,61°.63N±0°.03×151°.59W±0°.03,h93km±6km, n145,σ0s.80/152,Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STLK	Strandline Lak	0.18	220		Pn	21 15 41.4	-0.4
SKT	Skwentna	0.35	5		Pn	21 15 42.3	-0.2
SKT					Sn	21 15 52.3	-0.7
SKT	Skwentna	0.35	5	IAML		21 15 52.6	
	comp=N,1µm,0.5s						
SKT				IAML		21 15 52.7	
	comp=E,2µm,0.3s						
SPCG	Spurr Capps Gl	0.40	211		Pn	21 15 42.5	-0.5
SPCG					Sn	21 15 52.6	-1.2
SUA	Susitna One	0.44	112		Pn	21 15 43.6	+0.4
SUA					Sn	21 15 54.2	0.0
SUA	Susitna One	0.44	112	IAML		21 15 54.5	
	comp=N,2µm,0.7s						
SUA				IAML		21 15 56.5	
	comp=E,1µm,0.4s						
CRP	Crater Peak	0.46	216		Pn	21 15 43.1	-0.3
CRP					Sn	21 15 53.5	-0.9
SPCP	Crater Peak Br	0.46	216		Pn	21 15 43.0	-0.4
SPCP					Sn	21 15 53.6	-0.8
SPCN	Chakachatna No	0.50	215		Pn	21 15 43.3	-0.2
SPCN					Sn	21 15 54.5	-0.3
FIS	Fire Island	0.82	126		Pn	21 15 47.7	+1.4
CAPN	Captain Cook N	0.89	166	P	Pn	21 15 48.8	+1.7
	baz=346,SNR=37						
CAPN	Captain Cook N	0.89	166		Pn	21 15 48.9	+1.8
CUT	Chulitna	0.99	38	P	Pn	21 15 49.1	+0.9
	baz=219,SNR=379						
CUT				S	Sn	21 16 04.4	+1.3
	baz=219						
CUT	Chulitna	0.99	38		Pn	21 15 49.1	+0.9
CUT					Sn	21 16 04.5	+1.3
RC01	Rabbit Creek A	1.05	121	P	Pn	21 15 49.1	+0.2
	baz=302,SNR=29						
RC01				S	Sn	21 16 05.0	+0.9
	baz=302						
RC01	Rabbit Creek A	1.05	121		Pn	21 15 49.0	+0.2
RC01					Sn	21 16 05.1	+0.9
DFR	Drift River	1.17	207		Pn	21 15 50.6	+0.2
PMR	Palmer	1.18	91		Pn	21 15 50.2	-0.1
PMR					Sn	21 16 06.5	-0.4
NCT	North Crescent	1.26	212		Pn	21 15 51.8	+0.4
NCT					Sn	21 16 09.0	+0.3
GHO	Glory Hole Cre	1.28	83		Pn	21 15 52.0	+0.4
GHO					Sn	21 16 09.7	+0.5
GHO	Glory Hole Cre	1.28	83	IAML		21 16 12.9	
	comp=E,638nm,0.6s						
GHO				IAML		21 16 13.3	
	comp=N,577nm,0.8s						
PPLA	Purkeypile	1.30	348		Pn	21 15 52.4	+0.5
RSO	Redoubt South	1.30	206		Pn	21 15 51.6	-0.5
RSO				Sn	Sn	21 16 08.4	-1.5
RDSO	Redoubt South	1.31	206		Pn	21 15 52.2	+0.2
SLKM	Skilak Lake	1.31	149		Pn	21 15 51.6	-0.4
RED	Redoubt Volcan	1.35	206		Pn	21 15 52.7	+0.2
KNK	Knik Glacier	1.52	97		Pn	21 15 54.5	0.0
KNK					Sn	21 16 14.3	0.0
KNK	Knik Glacier	1.52	97	IAML		21 16 19.9	
	comp=E,436nm,0.3s						
KNK				IAML		21 16 21.2	
	comp=N,473nm,0.6s						

SML	Sawmill	1.56	82		Pn	21 15 55.0	-0.1
SML	Sawmill	1.56	82	IAML		21 16 21.6	
	comp=N,378nm,0.7s						
SML				IAML		21 16 21.6	
	comp=E,417nm,0.7s						
HUR	Hurricane	1.63	33		Pn	21 15 56.5	+0.6
PWL	Port Wells	1.76	115		Pn	21 15 57.1	-0.4
IVE	Iliamna Volcan	1.77	204		Pn	21 15 57.7	0.0
SEW	Seward	1.86	145		Pn	21 15 59.6	+0.8
WAT1	Susitna Watana	1.86	49		Pn	21 15 59.4	+0.5
BRLK	Bradley Lake	1.91	169		Pn	21 15 59.8	+0.3
BRLK	Bradley Lake	1.91	169	IAML		21 16 28.0	
	comp=E,404nm,0.5s						
TRF	Thorofare Moun	1.92	18		Pn	21 16 00.6	+0.8
TRF	Thorofare Moun	1.92	18	IAML		21 16 25.9	
	comp=E,348nm,0.9s						
TRF				IAML		21 16 26.9	
	comp=N,383nm,0.8s						
WAT2	Susitna Watana	1.94	45		Pn	21 16 00.8	+0.8
BRSE	Bradley Lake S	1.94	167		Pn	21 16 00.9	+0.9
KTH	Kantishna Hill	1.95	9		Pn	21 16 00.9	+0.9
KTH	Kantishna Hill	1.95	9	IAML		21 16 26.7	
	comp=N,294nm,0.9s						
KTH				IAML		21 16 27.2	
	comp=E,308nm,0.9s						
HOM	Homer	1.98	181	P	Pn	21 16 01.7	+1.3
	baz=0.8						
HOM				S	Sn	21 16 26.9	+2.1
	baz=0.8						
HOM	Homer	1.98	181		Pn	21 16 01.3	+0.9
SCM	Sheep Creek Mo	2.04	82		Pn	21 16 01.2	0.0
SCM	Sheep Creek Mo	2.04	82	IAML		21 16 36.4	
	comp=N,234nm,0.7s						
WAT6	Susitna Watana	2.05	61		Pn	21 16 01.8	+0.3
CNPM	China Poot	2.12	175		Pn	21 16 02.2	-0.1
OPT	Oil Point	2.15	203		Pn	21 16 03.6	+1.0
RND	Reindeer	2.19	34		Pn	21 16 03.5	+0.3
CHUM	Lake Minchumin	2.28	352		Pn	21 16 05.0	+0.7
GLI	Glacier Island	2.30	107		Pn	21 16 03.6	-1.1
GLI	Glacier Island	2.30	107	IAML		21 16 42.8	
	comp=E,186nm,0.4s						
TT01	Tatalina	2.43	304		Pn	21 16 06.7	+0.4
MCK	McKinley	2.44	29	P	Pn	21 16 07.4	+1.0
	baz=211,SNR=34						
MCK				S	Sn	21 16 35.5	-0.1
	baz=211						
MCK	McKinley	2.44	29		Pn	21 16 07.5	+1.0
TTA	Tatalina	2.44	304		Pn	21 16 06.8	+0.3
DHY	Denali Highway	2.44	52		Pn	21 16 07.3	+0.7
DHY	Denali Highway	2.44	52	IAML		21 16 38.1	
	comp=N,140nm,0.5s						
DHY				IAML		21 16 42.1	
	comp=E,122nm,0.8s						
AUW	Augustine West	2.45	203		Pn	21 16 07.6	+1.0
JPK	Jack Peak	2.48	101		Pn	21 16 06.4	-0.6
BPAW	Bear Paw Mtn.	2.49	6		Pn	21 16 07.5	+0.4
M24K	Tolsona, Glenn	2.61	77	P	Pn	21 16 09.5	+0.7
	baz=262,SNR=27						
M24K				S	Sn	21 16 41.2	+1.5
	baz=262						
M24K	Tolsona, Glenn	2.61	77		Pn	21 16 09.6	+0.7
M24K	Tolsona, Glenn	2.61	77	IAML		21 16 53.5	
	comp=E,207nm,0.7s						
M24K				IAML		21 16 55.3	
	comp=N,170nm,0.8s						
FID	Port Fidalgo	2.63	107		Pn	21 16 07.6	-1.4
FID	Port Fidalgo	2.63	107	IAML		21 16 42.6	
	comp=N,198nm,0.3s						
KLU	Klutina	2.72	90		Pn	21 16 09.5	-0.7
KLU	Klutina	2.72	90	IAML		21 16 42.3	
	comp=E,176nm,0.6s						
BWN	Browne	2.73	20		Pn	21 16 10.4	+0.1
BWN	Browne	2.73	20	IAML		21 16 53.7	
	comp=N,138nm,1.0s						
BWN				IAML		21 16 58.9	
	comp=E,134nm,0.9s						
HIN	Hinchinbrook I	2.77	114		Pn	21 16 09.7	-1.2
DIV	Divide	2.85	98		Pn	21 16 11.5	-0.4
PS11	TAPS Pump St11	2.94	79		Pn	21 16 13.9	+0.9
PAX	Paxson	3.16	62		Pn	21 16 16.7	+0.6
PAX				Sn	Sn	21 16 52.8	-0.1
NEA2	Nenana	3.19	20	P	Pn	21 16 16.9	+0.5
	baz=202,SNR=9.6						
NEA2				S	Sn	21 16 51.4	-2.0
	baz=202						
NEA2	Nenana	3.19	20		Pn	21 16 16.9	+0.5
WRH	Wood River Hil	3.27	28		Pn	21 16 17.6	+0.2
N25K	Chitina, Valde	3.34	87	P	Pn	21 16 18.5	-0.1
	baz=273						
N25K				S	Sn	21 16 56.0	-1.3
	baz=273						
N25K	Chitina, Valde	3.34	87		Pn	21 16 18.1	-0.5
N25K	Chitina, Valde	3.34	87	IAML		21 17 14.7	
	comp=N,63nm,1.0s						
MLY	Manley	3.43	6	P	Pn	21 16 20.7	+0.9
	baz=187,SNR=8.8						
MLY				S	Sn	21 16 58.0	-1.4
	baz=187						
MLY	Manley	3.43	6		Pn	21 16 20.6	+0.9
CCB	Clear Creek Bu	3.48	28		Pn	21 16 20.5	+0.2
HDA	Harding Lake	3.50	35	P	Pn	21 16 21.1	+0.5
	baz=219						
HDA				S	Sn	21 16 59.3	-1.7
	baz=219						
HDA				S	Sn	21 16 59.3	-1.7
	baz=219						
HDA	Harding Lake	3.50	35		Pn	21 16 21.1	+0.5
HDA	Harding Lake	3.50	35	IAML		21 17 00.5	
	comp=E,46nm,0.6s						
HDA				IAML		21 17 25.9	
	comp=N,62nm,0.7s						
PS08	TAPS Pump Stn8	3.64	35		Pn	21 16 22.9	+0.4
TCOL	CIGO, UAF Yank	3.66	26	P	Pn	21 16 23.4	+0.6
	baz=209,SNR=11						
TCOL	CIGO, UAF Yank	3.66	26		Pn	21 16 23.9	+1.1
COLA	College	3.67	26		Pn	21 16 23.5	+0.7
MDM	Murphy Dome	3.67	23		Pn	21 16 23.5	+0.6
I23K	Minto, Yukon-K	3.67	15	P	Pn	21 16 23.5	+0.6
	baz=197,SNR=19						
I23K	Minto, Yukon-K	3.67	15		Pn	21 16 23.4	+0.5
GLB	Gilahina Butte	3.73	90		Pn	21 16 24.5	+0.7
GLB	Gilahina Butte	3.73	90	IAML		21 17 23.7	
	comp=N,42nm,0.7s						
RIDG	Independent Ri	3.76	53		Pn	21 16 25.6	+1.4
RIDG	Independent Ri	3.76	53	IAML		21 17 22.5	
	comp=N,74nm,1.1s						
RIDG				IAML		21 17 23.8	
	comp=E,66nm,0.8s						
IL31		3.80	32		Pn	21 16 24.8	+0.2
ILAR	Eielson Array	3.80	32	Pn	Pn	21 16 24.8	+0.1
KDAK	Kodiak Island	3.90	188		Sn	21 17 10.2	-0.4
KDAK				IAML		21 17 23.4	
	comp=E,71nm,0.6s						
KDAK				IAML		21 17 26.1	
	comp=E,63nm,1.0s						
KDAK	Kodiak Island	3.90	188	Pn	Pn	21 16 25.9	0.0
MENT	Mentasta	3.90	67		Pn	21 16 26.4	+0.3
MENT				IAML		21 17 35.4	
	comp=E,64nm,0.7s						
MENT				IAML		21 17 36.6	
	comp=N,52nm,0.6s						
POKR	Poker Plat Res	3.97	26	P	Pn	21 16 27.9	+1.0
	baz=210,SNR=5.9						
POKR				S	Sn	21 17 12.7	+0.4
	baz=210						
POKR	Poker Plat Res	3.97	26		Pn	21 16 27.6	+0.7
DOT	Dot Lake	4.02	57		Pn	21 16 28.2	+0.5
MCARA	McCarthy VSAT	4.11	90		Pn	21 16 29.5	+0.6
CRQM	Cirque	4.18	98		Pn	21 16 29.9	-0.2
CRQM	Cirque	4.18	98		Sn	21 17 18.2	+0.3
SCRK	Sand Creek	4.21	53	P	Pn	21 16 30.8	+0.5
	baz=239,SNR=23						
SCRK				S	Sn	21 17 16.2	-2.1
	baz=239						
SCRK	Sand Creek	4.21	53		Pn	21 16 30.7	+0.4
KHIT	Khitrov Hills	4.23	103		Pn	21 16 30.4	-0.1
TGL	Tana Glacier	4.33	98		Pn	21 16 32.1	+0.1
TGL	Tana Glacier	4.33	98		Sn	21 17 21.3	0.0
TGL				IAML		21 17 41.9	
	comp=N,49nm,0.7s						
TGL				IAML		21 17 43.6	
	comp=E,56nm,1.0s						
PTPK	Patty Peak	4.41	92		Pn	21 16 33.9	+0.8
IM03		4.47	349		Pn	21 16 34.3	+0.6
IMAR	Indian Mountai	4.47	349		Pn	21 16 34.5	+0.8
BALM	Baldy	4.50	94		Pn	21 16 34.5	+0.3
BALM	Baldy	4.50	94		Sn	21 17 23.8	-1.5
BALM				IAML		21 17 25.2	
	comp=N,36nm,0.5s						
BALM				IAML		21 17 26.5	
	comp=E,24nm,0.6s						
KIAG	Kiagna River	4.51	95		Pn	21 16 34.6	+0.1
PRP	Porcupine Dome	4.75	32		Pn	21 16 38.7	+1.1
PRP	Porcupine Dome	4.75	32	IAML		21 17 33.7	
	comp=E,22nm,0.7s						
BC03		4.79	68		Pn	21 16 38.6	+0.6
BCAR	Beaver Creek A	4.79	68		Pn	21 16 38.2	+0.1
BARN	Barnard Glacie	4.82	92		Pn	21 16 39.2	+0.6
BARN	Barnard Glacie	4.82	92		Sn	21 17 33.1	-0.1
BARN				IAML		21 17 59.7	
	comp=E,28nm,0.9s						
BARN				IAML		21 18 03.8	
	comp=N,20nm,2.7s						
GRNC	Granite Creek	4.85	96		Pn	21 16 39.0	-0.1
YAH	Yahtse	4.96	101	Pn	Pn	21 16 40.6	0.0
YAH					Sn	21 17 35.5	-1.3
CTGM	Chitina Glacie	4.99	93		Pn	21 16 41.3	+0.4
CTGM	Chitina Glacie	4.99	93	IAML		21 17 58.7	
	comp=E,19nm,3.2s						
CTGM				IAML		21 18 03.2	
	comp=N,26nm,2.5s						
YUK2	White River	5.12	84		Pn	21 16 42.8	+0.2
LOGN	Logan Glacier	5.18	94		Pn	21 16 43.6	+0.1
TABL	Table Mountain	5.22	99		Pn	21 16 43.9	-0.3
YUK3	Moose Creek	5.30	84		Pn	21 16 45.4	+0.2
COLD	Coldfoot	5.65	6	P	Pn	21 16 51.4	+1.7
	baz=187,SNR=11						
COLD	Coldfoot	5.65	6	Pn	Pn	21 16 51.0	+1.3
EGAK	Eagle	5.68	52		Pn	21 16 50.3	+0.3
FYU	Fort Yukon	5.68	27		Pn	21 16 50.9	+0.8
DAWY	Dawson	6.09	61		Pn	21 16 56.3	+0.5
YUK4	Talbot Arm	6.21	87		Pn	21 16 58.2	+0.7
BM03	Burnt Mountain	6.54	24		Pn	21 17 02.3	+0.4
BMAR	Burnt Mountain	6.55	24		Pn	21 17 01.6	-0.5
YUK5	Granite Creek	6.62	88		Pn	21 17 02.9	-0.1
HYT	Haines Junctio	6.85	91	Pn	Pn	21 17 05.8	-0.4
HYT					Sn	21 18 21.9	-0.7

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*IDC **01** 21:15:39.7±0.8, 0°.27N×125°.72E, h0^{km}, mb4.0/9, mb1 4.1/10, mb1mx3.7/50, mbtmp4.0/10, ML3.0/1, Error ellipse: s-maj=45.0km s-min=15.6km az=64.0*

*DJA **01** 21:15:48.1±0.2, 0°N±3°×12°6E±°, h65^{km}±6^{km}, M4.1/14, mb4.4/6, MLv4.0/14*

*NEIC **01** 21:15:48.1±1.1, 0°.44N±0°.10×126°.10E±0°.06, h72^{km}±10^{km}, mb4.2/15, Error ellipse: s-maj=14.3km s-min=8.7km az=165.0*

ISC 01 21:15:46.7±0.6, **0°.39N**±0°.06×**126°.05E**±0°.04, **h50^{km}, n46, σ1^{s}.57**/49, **mb4.1**/15, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.37	74	Pn	Pn	21 16 10.8	+1.4
TNTI				Sn	Sn	21 16 28.6	+2.0
TNTI	Ternate	1.37	74	P	Pn	21 16 10.4	+0.9
TNTI				S	Sn	21 16 30.0	+3.5
KMSI	Cibinong	2.08	275	P	Pn	21 16 20.2	+1.1
KMSI				S	Sn	21 16 45.5	+1.7
SANI	Sanana	2.43	181	P	Pn	21 16 24.6	+0.7
GTOI	Gorontalo	3.05	275	P	Pn	21 16 36.7	+4.3
LUWI	Luwuk	3.57	247	Pn	Pn	21 16 42.7	+3.0
LUWI	Luwuk	3.57	247	P	Pn	21 16 42.4	+2.7
NLAI	Namlea	3.76	164	P	Pn	21 16 44.2	+2.0
MRSI	Marisa	4.11	271	P	Pn	21 16 49.3	+2.3
APSI	Ampana	4.59	254	P	Pn	21 16 52.9	-0.7
TOLI2	Tolitoli	5.32	278	Pn	Pn	21 17 05.3	+1.7
SIJI	Sorong	5.37	104	Pn	Pn	21 17 04.9	+0.6
	0.4nm,0.3s,baz=72,slow=23,SNR=2.9						
MPSI	Mapaga	6.15	270	P	Pn	21 17 17.0	+1.9
	0.1nm11nm,0.7s						
FAKI	Fak Fak	7.02	118	Pn	Pn	21 17 27.5	+0.5
TTSI	Tana Toraja	7.10	241	P	Pn	21 17 29.7	+1.6
	0.1nm19nm,0.6s						
BNSI	Bone	7.61	231	P	Pn	21 17 36.6	+1.5
	0.1nm27nm,0.6s						
SPSI	Sidrap Palu	7.62	235	P	Pn	21 17 37.0	+1.7
	0.1nm35nm,0.5s						
MYLDM	Lahad Datu	8.91	302	Pn	Pn	21 17 53.8	+0.8
STKI	Sintang	14.57	269	P	Pn	21 19 02.7	-7.5
KSM	Kuching	15.78	274		P	21 19 28.5	-0.3
KSM				IAmb	IAmb	21 19 31.0	
	comp=Z,26nm,0.9s						
WB0	Warramunga Arr	21.64	158	P	P	21 20 31.8	-1.2
WB0				IAmb	IAmb	21 20 36.6	
	comp=Z,14nm,0.9s						
WRA	Warramunga Arr	21.78	159	P	P	21 20 33.4	-1.2
	comp=Z,7.0nm,0.8s,baz=337,slow=12,SNR=19						
WRA				PcP	PcP	21 24 33.9	+0.3
	comp=Z,0.7nm,0.9s,baz=332,slow=2.2,SNR=2.8						
WRA	Warramunga Arr	21.78	159	P	P	21 20 34.2	-0.3
WB2	Warramunga Arr	21.79	159	P	P	21 20 33.5	-1.1
WB2				IAmb	IAmb	21 20 38.3	
	comp=Z,9.6nm,0.8s						
WR0	Warramunga Arr	21.87	158	P	P	21 20 34.1	-1.3
PSA00	Pilbara Seismi	22.66	195	P	P	21 20 44.4	+0.5
PSA00				IAmb	IAmb	21 20 50.9	
	comp=Z,5.7nm,0.9s						
TPUB	Ta-pu	23.37	347	P	P	21 20 50.5	-0.6
AS31	Alice Springs	25.10	163	P	P	21 21 07.8	+0.7
ASAR	Alice Springs	25.10	163	P	P	21 21 06.6	-0.4
	comp=Z,2.3nm,0.7s,baz=343,slow=9.3,SNR=19						
GIRL	Giralia	25.62	206	P	P	21 21 12.5	+0.8
STKA	Stephens Creek	35.31	157	P	P	21 22 36.5	-0.7
	comp=Z,2.2nm,0.7s,baz=331,slow=8.9,SNR=3.2						
STKA	Stephens Creek	35.31	157	P	P	21 22 36.8	-0.4
SONM	Songino Array	50.24	343	P	P	21 24 37.3	-0.7
	comp=Z,0.5nm,0.6s,baz=161,slow=8.4,SNR=4.7						
SONM	Songino Array	50.24	343	P	P	21 24 37.4	-0.7
PEA0B	Petropavlovsk-	58.76	22	P	P	21 25 37.7	-1.8
PETK	Petropavlovsk-	58.76	22	P	P	21 25 41.5	+1.9
	comp=Z,3.2nm,0.9s,baz=182,slow=7.2,SNR=1.1						
PETK	Petropavlovsk-	58.76	22	P	P	21 25 37.5	-2.0
MK31	Makanchi Array	59.92	327	P	P	21 25 46.7	-1.0
MK31				IAmb	IAmb	21 25 50.9	
	comp=Z,0.9nm,0.6s						
MKAR	Makanchi Array	59.92	327	P	P	21 25 47.6	-0.1
	comp=Z,1.1nm,0.5s,baz=120,slow=8.5,SNR=19						
MKAR	Makanchi Array	59.92	327	P	P	21 25 46.6	-1.2
MAKZ	Makanchi	60.10	327	P	P	21 25 47.6	-1.4
MAKZ				IAmb	IAmb	21 25 52.1	
	comp=Z,1.5nm,0.7s						
ZALV	Zalesovo Beam	63.26	334	P	P	21 26 09.7	-0.3
	comp=Z,0.5nm,0.4s,baz=174,slow=5.1,SNR=2.7						
ZALV	Zalesovo Beam	63.26	334	P	P	21 26 08.9	-1.1
KURBB	Kurchatov Arra	64.19	329	P	P	21 26 16.1	-0.1
	comp=Z,0.7nm,0.6s,baz=132,slow=6.5,SNR=8.5						
KURK	Kurchatov	64.19	329	P	P	21 26 15.2	-1.1
KURK				IAmb	IAmb	21 26 19.6	
	comp=Z,2.2nm,0.8s						
AKTO	Aktyubinsk	75.85	322	P	P	21 27 26.6	-1.1
	comp=Z,1.6nm,0.7s,baz=108,slow=8.0,SNR=7.4						

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*NEIC **01** 21:35:39.6±1.4, 16°.10N±0°.09×99°.01W±0°.07, h11^{km}±2^{km}, Error ellipse: s-maj=13.9km s-min=9.2km az=202.0*

*MEX **01** 21:35:40.8±1.1, 16°.03N×99°.21W, h13^{km}±20^{km}, MD4.5*

*IDC **01** 21:35:40.7±1.2, 16°.38N×98°.91W, h0^{km}, mb4.0/9, mb1 4.2/11, mb1mx4.0/43, mbtmp4.0/11, ML3.6/2, MS3.8/1, Ms1 3.8/1, ms1mx2.9/30, Error ellipse: s-maj=30.8km s-min=18.6km az=39.0*

ISC 01 21:35:41.1±1.8, **16°.23N**±0°.05×**99°.01W**±0°.04, **h9^{km}**±10^{km}, **n222, σ1^{s}.22**/198, **mb4.5**/69, **Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRIG	Cruz Grande	0.52	347	*e*P	Pg	21 35 51.5	+0.3
CRIG				*i* S	Sb	21 36 00.7	+0.6
PNIG	Pinotepa	0.87	79	*e*P	Pb	21 35 57.9	-0.4
PNIG				*i* S	Sn	21 36 11.8	-0.4
PNIG	Pinotepa	0.87	79		Pb	21 35 57.9	-0.4
PNIG					Sn	21 36 11.4	-0.8
TLIG	Tlapa	1.40	18	*e*P	Pn	21 36 06.1	-0.8
TLIG				*e*S	Sn	21 36 25.2	-0.3
TLIG	Tlapa	1.40	18		Pn	21 36 06.0	-0.8
TLIG				Sn	Sg	21 36 26.3	+0.2
YOIG	Yosondua	1.54	66	*i* P	Pn	21 36 08.5	-0.5
YOIG				*e*S	Sb	21 36 30.3	+0.6
TXIG	Tlaxiaco	1.57	49	*i* P	Pn	21 36 09.0	-0.4
TXIG				*i* S	Sb	21 36 31.3	+0.7
MEIG	Mezcala	1.79	341	*e*P	Pn	21 36 10.6	-1.7
MEIG				*i* S	Sn	21 36 32.8	-2.3
PEIG	Puerto Escondi	1.81	97	*e*P	Pn	21 36 11.4	-1.0
PEIG				*i* S	Sn	21 36 33.3	-2.2
FTIG	Fresnillo de T	1.87	27	*e*P	Pn	21 36 12.9	-0.5
FTIG				*e*S	Sb	21 36 38.7	-0.4
HLIG	Huajuapan de L	1.97	36	*e*P	Pn	21 36 14.5	-0.3
HLIG				*i* S	Sn	21 36 40.3	+0.5
PLIG	Platanillo	2.20	348	*e*P	Pn	21 36 17.2	-0.8
PLIG				*i* S	Sn	21 36 44.0	-1.4
PLIG	Platanillo	2.20	348		Pn	21 36 17.2	-0.8
VHO	Vista Hermosa	2.34	69	*i* P	Pn	21 36 20.2	+0.3
VHO				*i* S	Sn	21 36 50.0	+1.1
YAIG	Yautepec	2.62	359	*i* P	Pn	21 36 22.8	-1.0
YAIG				*i* S	Sn	21 36 55.2	-0.6
TOIG	Toxpalan	2.63	45	*e*P	Pn	21 36 23.7	-0.2
TOIG				*e*S	Sb	21 36 58.4	-2.5
HUIG	Huatulco	2.83	99	*i* P	Pn	21 36 25.5	-1.0
HUIG	Huatulco	2.83	99		Pn	21 36 25.5	-1.0
MOIG	Morelia	4.01	329	Pn	Pn	21 36 44.6	+1.7
CMIG	Matias Romero	4.05	77	Pn	Pn	21 36 42.6	-0.6
	3.6nm,0.3s,baz=258,slow=12,SNR=19						
CMIG				Sn	Sn	21 37 30.3	-0.5
	14nm,0.3s,baz=238,slow=18,SNR=6.3						
CMIG				Lg	Lg	21 37 52.6	
	19nm,0.3s,baz=57,slow=6.1,SNR=4.3						
CCIG	Comitan	6.60	89		Pn	21 37 18.3	-0.3
MTO3	Montecristo	9.49	100		Pn	21 37 56.0	-2.2
H06E1	SOCORRO T-PHAS	11.65	284	T	T	21 50 10.2	
	SNR=7.3						
SLBS	Sierra La Lagu	12.67	308	Pn	Pn	21 38 40.7	-1.0
TX31	Lajitas Ar. Si	13.73	343		Pn	21 38 57.4	+1.3
TX32	Lajitas Array	13.73	343	Pn	Pn	21 38 57.0	+0.9
TXAR	Lajitas Array	13.73	343	Pn	Pn	21 38 54.7	-1.4
JCT	Junction City	14.21	357	Pn	Pn	21 39 02.4	-0.2
ABTX	Abilene, Hawle	16.34	358	P	P	21 39 34.7	+1.0
	baz=178						
ABTX	Abilene, Hawle	16.34	358	P	P	21 39 32.6	-1.1
ABTX				IAmb	IAmb	21 39 41.4	
	comp=Z,31nm,1.1s						
MNTX	Cornudas Mount	16.46	341	P	Pn	21 39 33.3	+1.0
	baz=158						
MNTX	Cornudas Mount	16.46	341	P	Pn	21 39 32.5	+0.2
GDL2	Guadalupe Moun	16.63	344	Pn	Pn	21 39 35.5	+0.9
HSIG		16.82	321	Pn	Pn	21 39 37.2	+0.3
319A	Douglas	17.75	330		Pn	21 39 48.9	+0.2
MSTX	Muleshoe	17.99	350	P	P	21 39 52.6	+0.5
	baz=168,SNR=7.5						
MSTX	Muleshoe	17.99	350	Pn	Pn	21 39 51.6	0.0
MSTX				IAmb	IAmb	21 40 00.1	
	comp=Z,34nm,1.0s						
121A	Cookes Peak, D	18.08	335	P	P	21 39 54.6	+1.5
	baz=152						
121A	Cookes Peak, D	18.08	335		Pn	21 39 52.6	-0.1
AMTX	Amarillo	18.73	353	P	Pn	21 40 01.0	+0.4
	baz=172						
AMTX	Amarillo	18.73	353	P	P	21 39 59.9	-0.4
AMTX				IAmb	IAmb	21 40 08.6	
	comp=Z,25nm,0.9s						
MIAR	Mount Ida	18.88	14	P	P	21 40 02.2	+0.4
BNM	Barren Site	19.12	340	P	P	21 40 04.9	+0.3
LENM	Lemitar	19.25	340	P	P	21 40 05.5	-0.5
TUC	Tucson	19.25	328	P	Pn	21 40 09.3	+2.4
	baz=144						
TUC	Tucson	19.25	328	P	P	21 40 05.8	-0.1
W39A	Magazine	19.46	13	P	Pn	21 40 09.0	-0.3
	baz=195						
W39A	Magazine	19.46	13	P	P	21 40 07.7	-0.4
ANMO	Albuquerque	19.80	342	P	P	21 40 12.9	+0.8
	comp=Z,0.2nm,0.3s,baz=152,slow=12,SNR=9.6						
ANMO				LR	LR	21 48 34.4	
	comp=Z,263nm,20.7s,baz=91,slow=39						
ANMO	Albuquerque	19.80	342	P	Pn	21 40 13.2	-0.4
	baz=159						
ANMO	Albuquerque	19.80	342	P	P	21 40 12.1	0.0
TUL1	Leonard	19.81	8	P	P	21 40 11.5	-0.5
	baz=189						
TUL1	Leonard	19.81	8		P	21 40 11.6	-0.3
TUL1				IAmb	IAmb	21 40 29.9	
	comp=Z,23nm,0.9s						
W41B	Gary Mavity, V	19.82	17	P	Pn	21 40 13.0	-0.5
	baz=199						
352A	Blakely	19.88	38	P	P	21 40 12.2	-0.5
LRAL	Lakeview Retre	19.95	31	P	Pn	21 40 18.6	+3.4
	baz=216						
214A	Organ Pipe Nat	20.06	324	P	P	21 40 14.4	-0.4
OXF	Oxford	20.15	24	P	Pn	21 40 17.3	-0.2
	baz=207						
U38A	Gravette	20.55	11	P	P	21 40 19.5	-0.5
X18A	Snowflake	20.70	334	P	P	21 40 21.5	-0.4
X18A				IAmb	IAmb	21 40 33.7	
	comp=Z,21nm,1.1s						
U40A	Yellville	20.78	14	P	P	21 40 22.2	-0.4
	baz=197						
U40A	Yellville	20.78	14	P	P	21 40 22.1	-0.4
W45A	Hickory Valley	20.80	23	P	P	21 40 22.2	-0.6
LCAR	Lake Charles	20.97	18	P	P	21 40 23.9	-0.5
SPX	San Pedro Mart	21.04	317	P	P	21 40 25.8	+0.1
SPX				IAmb	IAmb	21 40 35.6	
	comp=Z,22nm,1.2s						
PLAL	Pickwick Lake	21.09	26	P	P	21 40 25.7	-0.2
PLAL				IAmb	IAmb	21 40 30.9	
	comp=Z,27nm,0.9s						
X48A	Hartselle	21.09	28		P	21 40 25.0	-0.9
X48A				IAmb	IAmb	21 40 35.1	
	comp=Z,14nm,0.9s						
X16A	Lo Mia Camp, P	21.28	331	P	P	21 40 27.7	-0.4
X16A				IAmb	IAmb	21 40 41.2	
	comp=Z,27nm,0.9s						
T25A	Trinidad	21.37	348	P	P	21 40 31.9	+2.9
	baz=166,SNR=11						
MGMO	Mountain Grove	21.68	15	P	P	21 40 32.0	-0.2
PBMO	Poplar Bluff	21.84	19	P	P	21 40 33.4	-0.5
PBMO				IAmb	IAmb	21 40 37.2	
	comp=Z,20nm,0.9s						
FPAL	Fort Paine	21.85	31	P	P	21 40 33.5	-0.6
FPAL				IAmb	IAmb	21 40 44.5	
	comp=Z,28nm,0.9s						
T42A	Van Buren	21.88	17		P	21 40 33.8	-0.5
S39A	Bolivar	21.96	12	P	P	21 40 32.9	-2.3
GLA	Glamis	22.02	322	P	P	21 40 37.6	+1.7
	baz=136,SNR=5.9						
GOGA	Godfrey	22.13	37	P	P	21 40 37.8	+0.8
	baz=223,SNR=7.4						
GOGA	Godfrey	22.13	37	P	P	21 40 36.2	-0.8
GOGA				IAmb	IAmb	21 40 45.0	
	comp=Z,13nm,0.8s						
WUAZ	Wupatki	22.16	332	P	P	21 40 39.6	+2.1
	baz=147,SNR=6.9						
WUAZ	Wupatki	22.16	332	P	P	21 40 37.8	+0.2
WUAZ				IAmb	IAmb	21 40 46.9	
	comp=Z,23nm,1.0s						
WVT	Waverly	22.18	25	P	P	21 40 39.1	+1.6
	baz=209						
WVT	Waverly	22.18	25	P	P	21 40 37.2	-0.4
WVT				IAmb	IAmb	21 40 40.1	
	comp=Z,25nm,0.9s						
SDCO	Great Sand Dun	22.19	346	P	P	21 40 38.6	+0.7
	baz=163						
SDCO	Great Sand Dun	22.19	346	P	P	21 40 37.9	-0.1
SWET	Sewanee	22.24	29	P	P	21 40 37.3	-1.0
SWET				IAmb	IAmb	21 40 47.5	
	comp=Z,21nm,1.1s						
V48A	Smith Brothers	22.27	27	P	P	21 40 38.1	-0.4
V48A				IAmb	IAmb	21 40 41.6	
	comp=Z,16nm,1.0s						
S22A	4UR Ranch, Cre	22.52	344	P	P	21 40 42.6	+1.1
	baz=160,SNR=9.5						
W50A	Signal Mountai	22.52	30	P	P	21 40 40.4	-0.9
W50A				IAmb	IAmb	21 40 50.2	
	comp=Z,17nm,1.1s						
MVCO	Mesa Verde	22.53	340	P	P	21 40 42.4	+0.9
	baz=156,SNR=7.4						
MVCO	Mesa Verde	22.53	340	P	P	21 40 39.2	-2.3
MVCO				IAmb	IAmb	21 40 51.2	
	comp=Z,31nm,1.1s						
SWSC	Sam W. Stewart	22.53	321	P	P	21 40 42.8	+1.5
	baz=134						
PDMCI	Parker Dam,Lak	22.56	326	P	P	21 40 42.6	+1.0
	baz=140						
R40A	Maddies Statio	22.77	14	P	P	21 40 42.5	-1.3
R40A				IAmb	IAmb	21 40 52.5	

	comp=Z,16nm,0.9s						
CLTN	Cedars of Leba	22.78	27	P	P	21 40 42.6	-1.3
CLTN				IAmb	IAmb	21 40 52.6	
	comp=Z,16nm,1.0s						
CCM	Cathedral Cave	22.80	16	P	P	21 40 44.5	+0.4
	baz=199						
CCM	Cathedral Cave	22.80	16	P	P	21 40 44.2	+0.1
BC3	Big Chuckawall	22.82	323	P	P	21 40 46.4	+1.9
	baz=136						
KSU1	Kansas State U	22.89	5	P	P	21 40 46.3	+1.3
	baz=186						
FVM	French Village	22.96	18	P	P	21 40 44.9	-0.9
FVM				IAmb	IAmb	21 40 53.5	
	comp=Z,18nm,0.8s						
IRM	Iron Mountain	23.01	324	P	P	21 40 47.8	+1.4
	baz=137						
W13A	Hualapai Mount	23.03	327	P	P	21 40 44.8	-2.1
S44A	Carbondale	23.05	20	P	P	21 40 46.1	-0.6
SIUC	Southern Illin	23.09	20	P	P	21 40 46.1	-0.9
CPCT	Cooper Cave	23.11	31	P	P	21 40 46.2	-1.2
W52A	Murphy	23.14	33	P	P	21 40 46.6	-1.1
T47A	Sharon Grove	23.22	25	P	P	21 40 47.0	-1.4
T47A				IAmb	IAmb	21 40 50.0	
	comp=Z,22nm,1.0s						
U15A	North Rim	23.33	332	P	P	21 40 47.8	-2.1
U15A				IAmb	IAmb	21 40 59.8	
	comp=Z,13nm,0.9s						
U49A	Red Boiling Sp	23.38	28	P	P	21 40 47.8	-2.3
U49A				IAmb	IAmb	21 40 58.6	
	comp=Z,17nm,1.1s						
BELC	Belle Mtn. Jos	23.39	322	P	P	21 40 51.6	+1.3
	baz=135						
PFO	Pinyon Flats O	23.39	321	P	P	21 40 50.9	+0.5
	comp=Z,2.0nm,0.8s,baz=134,slow=6.6,SNR=3.0						
PFO	Pinyon Flats O	23.39	321	P	P	21 40 51.7	+1.3
	baz=134						
PV01	Paradox Valley	23.39	341	P	P	21 40 48.7	-1.8
V51A	Loudon	23.48	31	IAmb	IAmb	21 40 59.5	
	comp=Z,25nm,1.1s						
PV15	Paradox Valley	23.55	341	IAmb	IAmb	21 41 00.8	
	comp=Z,22nm,1.2s						
BG3	Lake Jocassee	23.59	35	IAmb	IAmb	21 41 00.6	
	comp=Z,11nm,1.1s						
PV12	Saucer Basin,	23.63	341	IAmb	IAmb	21 41 04.0	
	comp=Z,12nm,1.1s						
TKL	Tuckaleechee C	23.65	32	P	P	21 40 51.9	-0.9
	comp=Z,5.9nm,0.8s,baz=194,slow=12,SNR=6.5						
PV07	Paradox Valley	23.69	341	IAmb	IAmb	21 41 08.8	
	comp=Z,13nm,1.1s						
PV04	Paradox Valley	23.73	340	IAmb	IAmb	21 41 01.5	
	comp=Z,15nm,1.2s						
GMRC	Granite Mounta	23.75	324	P	P	21 40 55.4	+1.5
	baz=137						
PV14	Lion Creek, Pa	23.75	340	IAmb	IAmb	21 41 03.0	
	comp=Z,10.0nm,1.1s						
PV23	Carpenter Ridg	23.82	340	IAmb	IAmb	21 41 02.9	
	comp=Z,18nm,1.0s						
PV22	Blue Mesa, Par	23.83	341	IAmb	IAmb	21 41 02.4	
	comp=Z,12nm,1.1s						
SMCO	Snowmass	23.91	345	IAmb	IAmb	21 41 07.0	
	comp=Z,25nm,1.1s						
V53A	Saluda	24.16	34	IAmb	IAmb	21 41 07.3	
	comp=Z,18nm,1.1s						
ISCO	Idaho Springs	24.18	348	P	P	21 40 59.4	+1.3
	baz=164,SNR=5.2						
ISCO	Idaho Springs	24.18	348	IAmb	IAmb	21 41 07.5	
	comp=Z,14nm,0.9s						
T50A	Nancy	24.22	29	IAmb	IAmb	21 41 05.8	
	comp=Z,22nm,1.1s						
KMSC	Kings Mountain	24.60	37	P	P	21 41 02.1	+0.4
	baz=224						
KMSC	Kings Mountain	24.60	37	IAmb	IAmb	21 41 12.6	
	comp=Z,7.4nm,0.8s						
WCI	Wyandotte Cave	24.61	25	P	P	21 41 02.2	+0.5
	baz=210						
WCI	Wyandotte Cave	24.61	25	P	P	21 41 01.2	-0.5
SHPR	Sheep Range	24.77	328	IAmb	IAmb	21 41 13.1	
	comp=Z,10.0nm,1.1s						
GSC	Goldstone, Bar	24.78	323	P	P	21 41 04.5	+1.1
	baz=136						
W56A	Indian Trail	25.03	38	P	P	21 41 06.4	+0.8
	baz=226						
O20A	White River Ci	25.14	343	P	P	21 41 09.7	+3.0
	baz=159,SNR=8.2						
V55A	Taylorsville	25.17	36	IAmb	IAmb	21 41 09.1	
	comp=Z,18nm,0.9s						
N23A	Red Feather La	25.30	348	P	P	21 41 10.2	+1.9
	baz=164						
S51A	Beattyville	25.30	30	IAmb	IAmb	21 41 16.3	
	comp=Z,21nm,1.1s						
U54A	Nelsons Funny	25.33	34	P	P	21 41 10.2	+1.8
	baz=221,SNR=7.3						
BLO	Bloomington	25.34	23	IAmb	IAmb	21 41 09.4	
	comp=Z,17nm,0.9s						
LRMC	Laurel Mtn Rad	25.41	322	P	P	21 41 12.0	+2.8
	baz=134						
PRN	Pahroc Range	25.42	329	IAmb	IAmb	21 41 20.4	
	comp=Z,22nm,1.2s						
V56A	Mocksville	25.55	37	P	P	21 41 11.5	+1.2
	baz=225						
HDIL	Hopedale	25.67	17	P	P	21 41 11.7	+0.5
	baz=202						
TPNV	Topopah Spring	25.68	327	P	P	21 41 13.8	+2.2
	baz=139,SNR=8.9						
TPNV	Topopah Spring	25.68	327	IAmb	IAmb	21 41 22.7	
	comp=Z,18nm,1.1s						
MPMC	Manual Prospec	25.70	324	P	P	21 41 12.8	+0.9
	baz=136						
W58A	Raeford	25.76	40	P	P	21 41 13.7	+1.5
	baz=228						
U56A	King	26.00	36	P	P	21 41 14.8	+0.5
	baz=224						
ISA	Isabella, Lake	26.00	322	P	P	21 41 18.0	+3.6
	baz=133						
V57A	Coltrane Farms	26.02	38	P	P	21 41 14.8	+0.2
	baz=226						
RWWY	Rawlins	26.34	346	IAmb	IAmb	21 41 26.5	
	comp=Z,17nm,0.9s						
V58A	Windy Hill, Pi	26.35	39	P	P	21 41 17.7	+0.2
	baz=227						
V58A	Windy Hill, Pi	26.35	39	IAmb	IAmb	21 41 27.3	
	comp=Z,17nm,0.9s						
P49A	Miami Univ. Ec	26.37	25	P	P	21 41 17.6	0.0
	baz=212,SNR=7.5						
R11A	Troy Canyon, C	26.42	330	P	P	21 41 21.2	+2.9
	baz=142,SNR=6.8						
R11A	Troy Canyon, C	26.42	330	IAmb	IAmb	21 41 29.6	
	comp=Z,9.1nm,1.0s						
VES	Vestal, Richgr	26.49	321	P	P	21 41 21.8	+3.0
	baz=133						
S54A	Dingess, Beckl	26.56	33	P	P	21 41 20.1	+0.7
	baz=220						
BLA	Blacksburg	26.60	35	P	P	21 41 20.0	+0.2
	baz=223						
BLA	Blacksburg	26.60	35	IAmb	IAmb	21 41 37.0	
	comp=Z,18nm,1.1s						
U57A	Blanch	26.66	37	P	P	21 41 20.7	+0.4
	baz=226						
DUG	Dugway, Tooele	26.73	336	P	P	21 41 22.8	+1.8
	baz=150						
V59A	Middlesex	26.86	40	P	P	21 41 25.1	+3.0
	baz=229						
R54A	Victor	27.02	32	P	P	21 41 26.0	+2.4
	baz=221						
U58A	Oxford	27.09	38	P	P	21 41 27.5	+3.3
	baz=227						
Q53A	Leroy	27.27	31	P	P	21 41 33.5	+7.8
	baz=219,SNR=5.1						
ECSD	EROS Data Cent	27.49	4	P	P	21 41 27.9	+0.1
	baz=185						
NV11	Mina Array Sit	27.79	326	IAmb	IAmb	21 41 46.8	
	comp=Z,10nm,1.1s						
NVAR	Mina Array Bea	27.87	326	P	P	21 41 32.9	+1.5
	comp=Z,0.9nm,0.8s,baz=151,slow=9.9,SNR=8.4						
NVAR				PcP	PcP	21 44 47.7	+0.4
	comp=Z,0.3nm,0.6s,baz=131,slow=3.7,SNR=2.5						
NVAR	Mina Array Bea	27.87	326	P	P	21 41 31.1	-0.3
BW06	Boulder Array	27.95	343	P	P	21 41 33.2	+1.1
	baz=158						
BW06	Boulder Array	27.95	343	IAmb	IAmb	21 41 46.4	
	comp=Z,7.0nm,0.9s						
PD31	Pinedale Array	27.95	343	IAmb	IAmb	21 41 46.4	
	comp=Z,6.3nm,0.9s						
PDAR	Pinedale Array	27.95	343	PcP	PcP	21 44 47.2	-0.2
	comp=Z,0.6nm,1.0s,baz=150,slow=0.7,SNR=2.3						
PDAR	Pinedale Array	27.95	343	P	P	21 41 31.9	-0.2
ELK	Elko	28.19	333	P	P	21 41 32.9	-1.4
	comp=Z,0.3nm,0.3s,baz=135,slow=18,SNR=2.0						
SDV	Santo Domingo	28.62	101	P	P	21 41 38.8	+0.5
	comp=Z,1.9nm,0.4s,baz=337,slow=7.7,SNR=1.4						
REDW	Red Top Meadow	28.87	342	IAmb	IAmb	21 41 50.9	
	comp=Z,7.6nm,1.1s						
LOHW	Long Hollow	29.02	342	IAmb	IAmb	21 41 51.5	
	comp=Z,7.6nm,1.0s						
BEKR	Beckworth	30.01	326	P	P	21 41 49.2	-1.2
HLID	Hailey	30.23	337	P	P	21 41 53.6	+1.3
	baz=150						
HLID	Hailey	30.23	337	P	P	21 41 51.1	-1.3
DLMT	Dillon	31.21	341	P	P	21 41 59.6	-1.3
DLMT				IAmb	IAmb	21 42 09.9	
	comp=Z,5.9nm,0.9s						
MOD	Modoc Plateau	31.46	329	P	P	21 42 01.8	-1.4
MOD				IAmb	IAmb	21 42 18.6	
	comp=Z,8.1nm,1.1s						
MDND	Maddock	31.54	359	P	P	21 42 04.7	+1.2
	baz=179						
MDND	Maddock	31.54	359	P	P	21 42 02.6	-1.0
AGMN	Agassiz Nation	32.09	4	P	P	21 42 08.3	-0.1
	baz=186,SNR=13						
AGMN	Agassiz Nation	32.09	4	P	P	21 42 07.0	-1.4
BMO	Blue Mountains	32.44	335	P	P	21 42 10.4	-1.2
MSO	Missoula	32.94	341	IAmb	IAmb	21 42 24.2	
	comp=Z,3.9nm,0.9s						
F10A	Beach Ranch, E	33.34	337	IAmb	IAmb	21 42 21.5	
	comp=Z,7.6nm,0.9s						
G08A	Pilot Rock	33.47	334	IAmb	IAmb	21 42 34.9	
	comp=Z,6.2nm,1.1s						
ULM	Lac du Bonnet	34.03	4	P	P	21 42 24.8	-0.5
	comp=Z,9.8nm,0.9s,baz=196,slow=7.4,SNR=17						
E09A	Wood Farm, Sta	34.14	336	IAmb	IAmb	21 42 33.8	
	comp=Z,5.1nm,1.1s						
NEW	Newport	35.24	339	P	P	21 42 36.4	+0.5
	baz=149						
C09A	Chrisman Ranch	35.26	337	P	P	21 42 34.5	-1.6
C09A				IAmb	IAmb	21 42 44.9	
	comp=Z,7.8nm,0.6s						
NNA	Nana	35.59	141	P	P	21 42 35.0	-4.3
NNA				IAmb	IAmb	21 42 42.9	
	comp=Z,11nm,1.1s						
LSQQ	Lebel-sur-Quev	37.35	24	P	P	21 42 53.7	-0.2
	baz=216						
FFC	Flin Flon	38.49	357	P	P	21 43 03.3	-0.1
FFC				IAmb	IAmb	21 43 04.3	
	comp=Z,5.8nm,0.8s						
YKA	Yellowknife Ar	47.50	350	P	P	21 44 15.7	-0.6
	comp=Z,2.0nm,0.9s,baz=155,slow=7.8,SNR=21						
H03N2	Juan Fernandez	52.98	159	T	T	22 42 08.1	
	baz=338,slow=77,SNR=49						
H03N1	Juan Fernandez	52.99	159	T	T	22 42 04.2	
	baz=338,slow=77,SNR=42						
H03N3	Juan Fernandez	52.99	159	T	T	22 42 05.5	
	baz=338,slow=77,SNR=68						
BCAR	Beaver Creek A	55.36	338	P	P	21 45 15.1	-0.2
EGAK	Eagle	56.21	340	P	P	21 45 20.5	-0.7
EGAK				IAmb	IAmb	21 45 29.5	
	comp=Z,7.2nm,0.8s						
INK	Inuvik	56.49	345	P	P	21 45 22.1	-1.0
PRP	Porcupine Dome	58.13	339	P	P	21 45 34.0	-1.0
IL31		58.19	338	P	P	21 45 35.0	-0.1
ILAR	Eielson Array	58.19	338	P	P	21 45 35.7	+0.5
	comp=Z,1.6nm,1.0s,baz=146,slow=4.2,SNR=13						
ILAR	Eielson Array	58.19	338	P	P	21 45 35.1	-0.1
RND	Reindeer	58.21	336	P	P	21 45 33.9	-1.6
BMAR	Burnt Mountain	58.95	341	P	P	21 45 40.2	-0.4
I23K	Minto, Yukon-K	59.29	338	P	P	21 45 41.8	-1.0
COLD	Coldfoot	60.65	340	P	P	21 45 53.2	+1.0
	baz=121						
PLCA	Paso Flores	62.53	156	P	P	21 46 07.0	+1.8
	comp=Z,4.1nm,0.9s,baz=284,slow=8.3,SNR=2.6						
ICESG	Greenland Ices	64.22	20	*i* P	P	21 46 23.4	+7.0
ICESG				IAmb	IAmb	21 46 24.7	
	comp=Z,7.0nm,0.9s						
SUMG	Summit	65.98	17	*i* P	P	21 46 28.0	+0.1
	comp=Z,10nm,0.8s						
SUMG	Summit	65.98	17	P	P	21 46 27.2	-0.7
SUMG	Summit	65.98	17	*i* P	P	21 46 28.0	+0.1
SUMG				IAmb	IAmb	21 46 29.1	
	comp=Z,10nm,0.8s						
LZH	Lanzhou	123.66	338	*e*PKP	PKPdf	21 54 38.5	-1.4
LZH				pPKP	sPKPdf	21 54 50.2	+7.0
LZH				sPKP		21 54 54.3	
CMAR	Chiang Mai Arr	141.27	332	PKP	PKPdf	21 55 13.0	-0.2
	comp=Z,0.5nm,0.3s,baz=8.5,slow=1.8,SNR=1.8						

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*IDC **01** 21:44:17.2±1.1, 0°.32N×125°.74E, h0^{km}, mb3.7/5, mb1 3.9/6, mb1mx3.5/46, mbtmp3.7/6, ML2.8/1, MS3.7/1, Ms1 3.7/1, ms1mx2.7/42, Error ellipse: s-maj=57.8km s-min=19.8km az=60.0*

*DJA **01** 21:44:23.0±1.0, 0°N±3°×12°6E±°, h13^{km}±8^{km}, M3.6/11, MLv3.6/11*

ISC 01 21:44:20.8±0.8**, 0°.30N**±0°.10×**126°.01E**±0°.05**, h10**^{km}**, n14, σ1^{s}.45**/14**, mb3.8**/5**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	1.43	71	P	Pg	21 44 48.7	+0.4
TNTI				S	Sg	21 45 07.7	+0.7
KMSI	Cibinong	2.05	278	P	Pb	21 44 58.3	+0.1
KMSI				S	Sb	21 45 24.5	+0.8
SANI	Sanana	2.33	181	P	Pn	21 45 00.6	+1.3
LUWI	Luwuk	3.50	248	P	Pn	21 45 17.3	+1.9
NLAI	Namlea	3.68	163	P	Pn	21 45 19.7	+1.9
MRSI	Marisa	4.08	272	P	Pn	21 45 24.8	+1.5
APSI	Ampana	4.53	255	P	Pn	21 45 30.3	+0.8
SIJI	Sorong	5.38	102	Pn	Pn	21 45 42.6	+1.4
	0.3nm,0.3s,baz=237,slow=22,SNR=1.5						
WRA	Warramunga Arr	21.71	158	P	P	21 49 11.2	-1.1
	4.6nm,0.6s,baz=336,slow=12,SNR=16						
ASAR	Alice Springs	25.03	163	P	P	21 49 44.4	-0.9
	1.1nm,0.5s,baz=344,slow=10.0,SNR=13						
STKA	Stephens Creek	35.24	157	P	P	21 51 14.7	-1.0
	0.9nm,0.5s,baz=334,slow=9.7,SNR=3.0						
DZM	Mont Dzumac	45.24	122	LR	LR	22 12 53.4	
	comp=Z,100nm,21.7s,baz=320,slow=38						
MKAR	Makanchi Array	59.98	327	P	P	21 54 25.4	-2.2
	0.3nm,0.5s,baz=122,slow=8.4,SNR=7.6						
KURBB	Kurchatov Arra	64.25	329	P	P	21 54 51.7	-4.4
	0.2nm,0.4s,baz=124,slow=6.1,SNR=2.9						

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*IDC **01** 21:49:05.0±1.2, 1°.63N×126°.10E, h0^{km}, mb3.8/6, mb1 3.9/6, mb1mx3.5/43, mbtmp3.8/6, Error ellipse: s-maj=138.7km s-min=17.3km az=66.0*

*DJA **01** 21:49:11.9±1.1, 2°N±2°×12°6E±°, h21^{km}±9^{km}, M4.0/13, mb4.4/4, mB6.4/1, MLv3.9/13, Mw(mB)6.1/1*

ISC 01 21:49:11.8±0.8**, 1°.76N**±0°.06×**126°.45E**±0°.06**, h47**^{km}**, n16, σ1^{s}.33**/19**, mb4.0**/6**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	1.35	137	P	Pn	21 49 35.3	+1.1
TNTI				S	Sn	21 49 53.8	+2.9
SGSI	Sangihe	2.12	334	P	Pn	21 49 45.6	+0.8
SGSI				S	Sn	21 50 11.8	+1.9
KMSI	Cibinong	2.74	244	P	Pn	21 49 54.1	+0.8
KMSI				S	Sn	21 50 26.4	+1.3
GTOI	Gorontalo	3.62	252	P	Pn	21 50 07.3	+2.0
SANI	Sanana	3.82	187	P	Pn	21 50 08.6	+0.5
LUWI	Luwuk	4.61	233	P	Pn	21 50 19.6	+0.5
MRSI	Marisa	4.69	254	P	Pn	21 50 20.2	+0.2
APSI	Ampana	5.49	241	P	Pn	21 50 31.8	+0.8
	0.1nm29nm,0.8s						
BNDI	Bandanaira	7.13	151	P	Pn	21 50 54.7	+1.0
	1.5nm25µm284nm,1.0s						
TTSI	Tana Toraja	8.17	234	P	Pn	21 51 08.5	+0.6
WRA	Warramunga Arr	22.92	161	P	P	21 54 10.9	-1.1
	1.8nm,0.4s,baz=338,slow=10,SNR=35						
ASAR	Alice Springs	26.30	164	P	P	21 54 43.0	-0.2
	0.6nm,0.5s,baz=343,slow=10,SNR=9.8						
STKA	Stephens Creek	36.41	158	P	P	21 56 10.1	-1.9
	1.5nm,0.6s,baz=355,slow=11,SNR=1.4						
SONM	Songino Array	49.06	342	P	P	21 57 54.2	-0.2
	0.3nm,0.6s,baz=144,slow=7.5,SNR=2.5						
MKAR	Makanchi Array	59.01	326	P	P	21 59 06.2	-0.7
	0.6nm,0.4s,baz=120,slow=7.8,SNR=21						
KURBB	Kurchatov Arra	63.24	328	P	P	21 59 34.6	-0.8
	1.0nm,0.6s,baz=130,slow=6.5,SNR=13						

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*IDC **01** 22:11:02.3±0.6, 10°.08N×126°.01E, h0^{km}, mb4.1/17, mb1 4.2/17, mb1mx3.9/47, mbtmp4.1/17, MS2.7/1, Ms1 2.7/1, ms1mx2.4/35, Error ellipse: s-maj=30.0km s-min=13.6km az=73.0*

*MAN **01** 22:11:09.3, 10°.07N×126°.03E, h17^{km}, mb4.6, ML3.5, MS3.4*

*NEIC **01** 22:11:09.6±0.9, 10°.0N±0°.1×126°.0E±0°.1, h62^{km}±9^{km}, mb4.2/11, Error ellipse: s-maj=19.0km s-min=8.8km az=138.0*

ISC 01 22:11:05.3±1.3**, 10°.11N**±0°.03×**126°.15E**±0°.05**, h20**^{km}±5^{km}**, n47, σ1^{s}.35**/57**, mb4.1**/22**, 1C-1D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLSP	General Luna,	0.33	184	*e*P	Pn	22 11 16.5	+1.5
GLSP				*e*S	Sn	22 11 21.9	+0.7
BUTP	Butuan	1.25	205	*e*P	Pg	22 11 29.4	-0.2
BUTP				*e*S	Sg	22 11 46.8	+0.8
LLP	Lapu-Lapu	2.16	276	⇓*e*P	Pb	22 11 44.4	+0.6
LLP				*i* S	Sg	22 12 13.4	-1.6
CGP	Cagayan de Oro	2.19	221	⇑*i*P	Pb	22 11 43.7	-0.6
CGP				*i* S	Sb	22 12 09.3	-1.6
BUKP	Musuan	2.47	206	*e*P	Pb	22 11 47.8	-1.3
BUKP				*e*S	Sb	22 12 18.5	-0.6
CNP	Catarman	2.79	329	*e*P	Pb	22 11 52.8	-1.8
CNP				*e*S	Sb	22 12 28.4	-0.1
MATI	Mati	3.15	178	*e*P	Pb	22 11 59.1	-1.5
MATI				*e*S	Sb	22 12 40.3	+1.7
CNOP	Candoni, Negro	3.47	266	*e*P	Pn	22 12 01.3	+3.0
GUIM	Jordan	3.54	279	*e*P	Pn	22 12 02.3	+3.0
PAGZ	Pagadian	3.54	231	*e*P	Pn	22 12 02.0	+2.7
PAGZ				*e*S	Sn	22 12 39.6	-1.1
DDMP	Don Marcelino,	4.01	186	*e*P	Pb	22 12 13.5	-1.8
DDMP				*e*S	Sn	22 12 55.8	+3.7
MYLDM	Lahad Datu	9.03	238	Pn	Pn	22 13 15.2	+0.5
MTN	Manton Dam	23.34	168	P	P	22 16 12.5	-0.1
MTN				IAmb	IAmb	22 16 23.8	
	comp=Z,20nm,1.1s						
KSRS	Korea Array	27.27	3	LR	LR	22 27 06.2	
	comp=Z,17nm,21.4s,baz=175,slow=35						
CMAR	Chiang Mai Arr	27.61	291	P	P	22 16 52.4	+0.7
	comp=Z,0.6nm,0.3s,baz=98,slow=6.6,SNR=5.0						
FITZ	Fitzroy Crossi	28.04	181	P	P	22 16 55.8	+0.4
	comp=Z,1.5nm,0.7s,baz=11,slow=3.5,SNR=5.6						
FITZ	Fitzroy Crossi	28.04	181	P	P	22 16 53.6	-1.8
WB0	Warramunga Arr	30.78	165	P	P	22 17 19.0	-0.8
WB0				IAmb	IAmb	22 17 37.5	
	comp=Z,3.5nm,1.0s						
WRA	Warramunga Arr	30.93	165	P	P	22 17 20.8	-0.4
	comp=Z,0.6nm,0.6s,baz=343,slow=9.3,SNR=9.3						
WB2	Warramunga Arr	30.94	165	P	P	22 17 20.3	-0.9
WB2				IAmb	IAmb	22 17 23.7	
	comp=Z,2.9nm,0.9s						
ASAR	Alice Springs	34.42	167	P	P	22 17 51.6	0.0
	comp=Z,0.6nm,0.5s,baz=350,slow=7.0,SNR=11						
ASAR	Alice Springs	34.42	167	P	P	22 17 50.3	-1.4
KLR	Kul'dur	39.27	6	P	P	22 18 33.6	+1.0
	comp=Z,0.8nm,0.7s,baz=90,slow=8.1,SNR=3.4						
SONM	Songino Array	41.12	340	P	P	22 18 49.3	+1.1
	comp=Z,1.1nm,0.6s,baz=155,slow=9.8,SNR=8.8						
SONM	Songino Array	41.12	340	P	P	22 18 48.1	-0.1
STKA	Stephens Creek	44.29	161	P	P	22 19 14.3	+0.4
	comp=Z,1.6nm,0.7s,baz=344,slow=13,SNR=3.0						
STKA	Stephens Creek	44.29	161	P	P	22 19 12.3	-1.6
PETK	Petropavlovsk-	49.83	24	P	P	22 19 59.3	+2.5
	comp=Z,3.9nm,1.0s,baz=208,slow=7.7,SNR=1.4						
MK31	Makanchi Array	52.08	323	P	P	22 20 13.5	-0.5
MK31				IAmb	IAmb	22 20 14.8	
	comp=Z,1.8nm,0.8s						
MKAR	Makanchi Array	52.08	323	P	P	22 20 14.0	0.0
	comp=Z,2.0nm,0.7s,baz=123,slow=8.0,SNR=28						
MKAR				PcP	PcP	22 21 25.6	-0.3
	comp=Z,0.4nm,0.5s,baz=111,slow=3.7,SNR=5.2						
MKAR	Makanchi Array	52.08	323	P	P	22 20 13.5	-0.5
MKAR					PcP	22 21 24.6	-1.3
ZALV	Zalesovo Beam	54.71	331	P	P	22 20 32.4	-0.8
	comp=Z,2.1nm,0.8s,baz=131,slow=6.9,SNR=6.3						
ZALV	Zalesovo Beam	54.71	331	P	P	22 20 31.8	-1.3
KURK	Kurchatov	56.13	326	P	P	22 20 42.5	-0.9
KURK				IAmb	IAmb	22 20 44.0	
	comp=Z,3.2nm,0.8s						
KURBB	Kurchatov Arra	56.14	325	P	P	22 20 43.1	-0.4
	comp=Z,1.6nm,0.5s,baz=126,slow=7.0,SNR=11						
ARU	Arti	69.29	327	P	P	22 22 10.1	-1.0
	comp=Z,1.4nm,0.5s,baz=98,slow=8.0,SNR=10.0						
ARU	Arti	69.29	327	P	P	22 22 10.3	-0.8
ILAR	Eielson Array	79.63	26	P	P	22 23 11.1	0.0
	comp=Z,0.6nm,0.7s,baz=251,slow=4.3,SNR=12						
ILAR	Eielson Array	79.63	26	P	P	22 23 11.0	-0.1
ARCES	ARCESS Array B	84.30	340	P	P	22 23 35.5	-0.1
	comp=Z,6.3nm,1.1s,baz=78,slow=6.7,SNR=5.9						
ARCES	ARCESS Array B	84.30	340	P	P	22 23 35.2	-0.4
FINES	FINESS Array B	85.97	332	P	P	22 23 43.5	-0.6
	comp=Z,4.2nm,0.8s,baz=74,slow=4.1,SNR=14						
AKASG	Malin Array Be	86.61	321	P	P	22 23 46.2	-1.3
	comp=Z,0.6nm,0.4s,baz=61,slow=5.0,SNR=4.0						
YKA	Yellowknife Ar	93.95	24	P	P	22 24 22.9	+1.3
	comp=Z,0.6nm,0.7s,baz=301,slow=4.0,SNR=12						
TXAR	Lajitas Array	118.02	49	PKP	PKPdf	22 29 50.7	-1.0
	comp=Z,0.0nm,0.3s,baz=38,slow=40,SNR=1.3						
TORD	Torodi Ar. Bea	120.22	292	PKP	PKPdf	22 29 54.7	-1.4
	comp=Z,0.3nm,0.4s,baz=86,slow=2.5,SNR=5.0						
PLCA	Paso Flores	146.11	157	PKPbc	PKPab	22 30 45.7	+0.6
	comp=Z,1.0nm,0.7s,baz=269,slow=9.0,SNR=4.1						

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*IDC **01** 22:13:48.7±1.4, 10°.07N×125°.97E, h0^{km}, mb3.7/6, mb1 3.8/6, mb1mx3.5/41, mbtmp3.6/6, Error ellipse: s-maj=94.2km s-min=29.0km az=69.0*

*MAN **01** 22:13:55.4, 10°.06N×126°.04E, h14^{km}, mb4.3, ML3.2, MS2.9*

ISC 01 22:13:51.7±3.5**, 10°.21N**±0°.06×**126°.26E**±0°.08**, h17**^{km}±22^{km}**, n14, σ1^{s}.29**/19**, mb3.7**/6**, 1C-1D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLSP	General Luna,	0.44	197	*e*P	Pb	22 14 01.6	+0.6
GLSP				*e*S	Sb	22 14 08.1	+0.8
BUTP	Butuan	1.38	207	*e*P	Pn	22 14 16.1	-0.1
BUTP				*e*S	Sn	22 14 33.5	-0.5
LLP	Lapu-Lapu	2.25	273	⇑*e*P	Pb	22 14 30.9	-1.2
LLP				*i* S	Sb	22 15 00.3	+0.7
CGP	Cagayan de Oro	2.32	222	⇓*e*P	Pn	22 14 30.3	+1.1
CGP				*e*S	Sn	22 14 56.4	-1.0
BUKP	Musuan	2.59	207	*e*P	Pb	22 14 35.6	-2.2
BUKP				*e*S	Sn	22 15 06.0	+1.8
MATI	Mati	3.24	180	*e*P	Pb	22 14 49.0	+0.2
CNOP	Candoni, Negro	3.58	264	*e*P	Pn	22 14 47.9	+1.4
GUIM	Jordan	3.63	277	*e*P	Pn	22 14 49.2	+2.0
ASAR	Alice Springs	34.48	168	P	P	22 20 38.1	-1.0
	0.2nm,0.5s,baz=346,slow=6.2,SNR=1.9						
SONM	Songino Array	41.07	340	P	P	22 21 35.3	+0.7
	0.2nm,0.6s,baz=164,slow=9.8,SNR=2.1						
MKAR	Makanchi Array	52.07	323	P	P	22 23 00.4	-0.3
	0.6nm,0.7s,baz=121,slow=8.8,SNR=5.5						
ZALV	Zalesovo Beam	54.67	331	P	P	22 23 18.1	-1.7
	0.4nm,0.5s,baz=124,slow=12,SNR=1.8						
FINES	FINESS Array B	85.94	332	P	P	22 26 30.2	-0.6
	2.1nm,0.9s,baz=87,slow=2.9,SNR=3.8						
YKA	Yellowknife Ar	93.82	24	P	P	22 27 08.7	+0.8
	0.2nm,0.5s,baz=297,slow=3.9,SNR=3.9						

JMA 01 22:16:17.9, 34°.97N×132°.31E, h11^{km}**, M2.4, Western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JGT2	ShimaneMisato	0.19	60	P	Pg	22 16 22.0	0.0
JGT2				S	Sg	22 16 24.8	+0.1
JHT	Toyohira	0.32	163	P	Pg	22 16 24.4	0.0
JHT				S	Sg	22 16 28.8	+0.1
JHIK	Hikimi	0.54	216	P	Pg	22 16 28.4	0.0
JHIK				S	Sg	22 16 35.7	+0.2
JHS	Saijyo	0.66	87	P	Pg	22 16 30.5	-0.3
JHS	Saijyo	0.66	87	P	Pg	22 16 30.6	-0.2
JISK	Izumosakaura	0.69	40	P	Pg	22 16 31.1	-0.2
JJG	Jouge	0.77	115	P	Pg	22 16 32.4	-0.4
JJG				S	Sg	22 16 42.7	-0.1
JNM	Ikuma	0.79	48	P	Pg	22 16 33.1	0.0
JHM	Kurahashi	0.85	168	P	Pg	22 16 33.8	-0.5
JHM				S	Sg	22 16 45.0	-0.3
JHGM	Hagimishima	0.98	259	P	Pg	22 16 36.4	-0.3

DJA 01 22:23:09.5±1.2**,0°S**±2°×**12°5E**±°**,h11**km±9km**,M3.8**/12**,mb4.1**/2**,MLv3.6**/12**,Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	Cibinong	1.50	307	P	Pn	22 23 36.0	-0.3
KMSI				S	Sn	22 23 54.7	-1.2
SANI	Sanana	1.89	155	P	Pn	22 23 41.5	-0.2
SANI				S	Sn	22 24 06.0	+0.4
TNTI	Ternate	2.44	63	P	Pn	22 23 48.6	-0.8
TNTI				S	Sn	22 24 20.3	+1.0
LUWI	Luwuk	2.51	254	P	Pn	22 23 49.8	-0.5
MRSI	Marisa	3.34	284	P	Pn	22 24 00.8	-0.9
NLAI	Namlea	3.47	146	P	Pn	22 24 03.0	-0.5
APSI	Ampana	3.58	261	P	Pn	22 24 04.5	-0.5
SPSI	Sidrap Palu	6.50	236	P	Pn	22 24 46.7	+1.5
	0.1nm13nm,1.2s						

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*IDC **01** 22:24:35.7±1.6,7°36S×128°73E,h138km±17km,mb3.7/5, mb1 3.8/10,mb1mx3.6/29,mbtmp4.2/10,MS2.9/1, Ms1 2.9/1,ms1mx2.5/26,Error ellipse: s-maj=20.6km s-min=12.4km az=107.0*

*DJA **01** 22:24:35.5±0.5,7°S±3°×12°9E±°,h211km±11km,M4.2/14, mb4.3/7,mB4.7/4,MLv4.3/14,Mw(mB)3.9/4*

ISC 01 22:24:36.2±0.7**,7°39S**±0°06×**128°70E**±0°06**,h150**km**,n23,** σ**2^{s}01**/26**,mb3.8**/5**,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	Saumlaki	2.65	103	P	Pn	22 25 19.7	+0.5
SAUI				S	Sn	22 25 55.7	+3.4
BNDI	Bandanaira	3.09	23	P	Pn	22 25 25.9	+1.1
MSAI	Masohi	4.02	3	P	Pn	22 25 37.9	+1.1
NLAI	Namlea	4.42	339	P	Pn	22 25 43.4	+1.4
SOEI	Soe	4.97	241	P	Pn	22 25 51.3	+1.9
	0.5nm2µm100nm,1.0s						
FAKI	Fak Fak	5.68	39	P	Pn	22 25 57.4	-1.3
	0.2nm33nm,0.7s						
BATI	Baumata	5.71	240	P	Pn	22 26 00.9	+1.8
	36nm,0.3s,baz=119,slow=3.1,SNR=26						
BATI				S	Sn	22 27 03.7	-0.2
	24nm,0.3s,baz=87,slow=11,SNR=7.4						
BATI	Baumata	5.71	240	P	Pn	22 26 01.3	+2.2
	0.3nm1µm84nm,0.6s						
MMRI	Maumere	6.52	259	P	Pn	22 26 11.7	+1.8
	0.4nm58nm,0.9s						
KDI	Kendari	6.94	299	P	Pn	22 26 16.0	+0.4
	0.5nm77nm,0.9s						
SIJI	Sorong	6.96	22	P	Pn	22 26 15.5	-0.4
	5.1nm,0.3s,baz=46,slow=23,SNR=18						
SIJI				S	Sn	22 27 32.0	-2.0
	2.0nm,0.3s,baz=246,slow=23,SNR=2.0						
SWI	Sorong	6.97	22	P	Pn	22 26 14.4	-1.5
	0.1nm26nm,0.4s						
EDFI	Ende, Flores	7.07	258	P	Pn	22 26 18.1	+0.8
	0.0nm12nm,0.8s						
BASI	Baing, Sumba	8.50	250	P	Pn	22 26 37.0	+0.6
KAPI	Kappang	9.20	284	LR	LR	22 31 07.6	
	comp=Z,75nm,19.2s,baz=60,slow=42						
FITZ	Fitzroy Crossi	11.05	195	P	Pn	22 27 09.0	-1.2
	0.8nm,0.3s,baz=4.0,slow=10.0,SNR=35						
FITZ				S	Sn	22 29 03.4	-9.1
	1.6nm,0.3s,baz=81,slow=19,SNR=3.4						
WRA	Warramunga Arr	13.63	157	P	Pn	22 27 41.8	-1.7
	0.5nm,0.3s,baz=341,slow=13,SNR=25						
WRA				S	Sn	22 30 04.8	-10
	1.0nm,0.3s,baz=334,slow=23,SNR=6.1						
ASAR	Alice Springs	16.94	163	P	P	22 28 25.4	+1.4
	1.2nm,0.3s,baz=339,slow=10,SNR=95						
ASAR				S	S	22 31 26.5	-6.4
	0.4nm,0.3s,baz=348,slow=25,SNR=5.7						
STKA	Stephens Creek	27.17	155	P	P	22 30 06.9	+1.2
	0.6nm,0.3s,baz=330,slow=11,SNR=2.8						
NWAO	Narrogin (SRO)	27.55	201	P	P	22 30 10.5	+1.4
	3.8nm,0.3s,baz=255,slow=2.5,SNR=3.2						
SONM	Songino Array	58.41	343	P	P	22 34 17.1	+0.9
	0.2nm,0.6s,baz=160,slow=4.6,SNR=1.9						
MKAR	Makanchi Array	67.85	328	P	P	22 35 19.1	+0.8
	0.7nm,0.4s,baz=112,slow=8.6,SNR=15						
ZALV	Zalesovo Beam	71.36	334	P	P	22 35 39.6	0.0
	0.8nm,0.5s,baz=146,slow=6.6,SNR=4.6						

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*IDC **01** 22:47:48.6±4.3,60°30S×22°69W,h0km,mb3.6/1, mb1 3.6/1,mb1mx3.4/20,mbtmp3.6/1,Error ellipse: s-maj=232.9km s-min=98.5km az=90.0*

ISC 01 22:47:50.0±2.1**,60°5S**±0°4×**24°1W**±0°7**,h35**km**,n7,**σ**3^{s}34**/6**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	12.08	154	P	P	22 50 50.7	-0.9
VNA3	Neumayer Olymp	12.26	158	P	P	22 50 51.6	-2.1
VNA2	Neumayer--Watz	12.47	154	P	P	22 50 55.6	-0.4
	baz=306,slow=16						
SNAA	Sanae	14.04	152	P	P	22 51 17.6	+4.2
TORD	Torodi Ar. Bea	76.22	26	P	P	22 59 36.0	+1.6
	0.2nm,0.4s,baz=195,slow=6.7,SNR=1.4						
YKA	Yellowknife Ar	140.49	313	PKP	PKiKP	23 07 18.2	+1.9
	0.3nm,0.8s,baz=102,slow=2.6,SNR=3.9						
SONM	Songino Array	149.16	92	PKPbc	PKPab	23 07 35.5	-2.7
	0.3nm,0.4s,baz=218,slow=3.8,SNR=4.7						

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*JMA **01** 22:49:48.2,34°32N×136°13E,h434km,M2.9*

*IDC **01** 22:49:52.9±1.6,34°28N×136°30E,h390km±32km,mb2.5/2, mb1 2.7/4,mb1mx2.4/35,mbtmp3.2/4,Error ellipse: s-maj=61.4km s-min=28.8km az=43.0*

ISC 01 22:49:52.8±1.1**,34°5N**±0°2×**136°5E**±0°1**,h400**km**,n12,** σ**1^{s}03**/13**,Western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAO	Obara	1.01	38	P	Pn	22 50 44.3	+0.3
HMMJ	Hamamatsu 2	1.08	69	P	Pn	22 50 44.6	+0.4
JYZW	Yoshizawa	1.15	63	P	Pn	22 50 44.7	+0.3
JNY	Yasuok	1.43	52	P	Pn	22 50 46.2	+0.5
MJAR	Matsushiro Arr	2.50	34	P	Pn	22 50 53.2	+1.2
	0.2nm,0.3s,baz=209,slow=7.3,SNR=11						
JRY	Ryogami san	2.50	51	P	Pn	22 50 53.4	+1.3
BSO4	Boso 4	3.21	80	P	Pn	22 50 58.8	+1.2
JHO	Hitachi	3.95	56	P	Pn	22 51 04.8	+0.4
JFK	Kawauchi	4.58	50	P	Pn	22 51 11.2	+0.7
JFK				S	S	22 52 11.7	-2.0
KSRS	Korea Array	7.55	296	P	Pn	22 51 42.0	-0.6
	0.3nm,0.3s,baz=110,slow=12,SNR=7.3						
MKAR	Makanchi Array	42.15	304	P	P	22 57 08.5	+0.5
	0.2nm,0.7s,baz=92,slow=10,SNR=2.0						
WRA	Warramunga Arr	54.15	182	P	P	22 58 38.1	-0.5
	0.2nm,0.3s,baz=359,slow=7.8,SNR=1.3						

IDC 01 22:54:33.8±10.0**,20°81N**×**108°20W,h0**km**,mb3.4**/1**, mb1 3.7**/3**,mb1mx3.4**/32**,mbtmp3.2**/3**,ML3.2**/2**,Error ellipse: s-maj=176.2km s-min=68.0km az=156.0,Revilla Gigedo Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TXAR	Lajitas Array	9.42	25	Pn	Pn	22 56 52.7	+1.7
	0.1nm,0.3s,baz=200,slow=13,SNR=6.0						
NVAR	Mina Array Bea	19.61	336	P	P	22 59 03.9	-0.1
	0.0nm,0.3s,baz=156,slow=12,SNR=4.5						
ILAR	Eielson Array	50.80	340	P	P	23 03 35.6	-0.1
	0.3nm,0.9s,baz=142,slow=6.5,SNR=4.7						
H03N2	Juan Fernandez	60.74	152	T	T	00 08 26.4	
	baz=329,slow=77,SNR=10						
H03N1	Juan Fernandez	60.76	152	T	T	00 08 27.5	
	baz=329,slow=77,SNR=6.5						
H03N3	Juan Fernandez	60.76	152	T	T	00 08 26.6	
	baz=329,slow=77,SNR=12						

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*IDC **01** 23:02:25.4±1.8,51°75N×173°38W,h0km,mb3.8/10, mb1 4.0/11,mb1mx3.8/48,mbtmp3.8/11,ML4.1/1,MS3.8/2, Ms1 3.8/2,ms1mx2.7/60,Error ellipse: s-maj=48.6km s-min=20.4km az=3.0*

*NEIC **01** 23:02:30.2±2.0,51°61N±0°10×173°5W±0°1,h38km±19km, Error ellipse: s-maj=14.3km s-min=10.8km az=180.0*

*AEIC **01** 23:02:31±1.8,51°7N±0°1×173°4W±0°1,h34km±8km,ML3.4, mb3.7/37(NEIC),Error ellipse: s-maj=15.0km s-min=9.5km az=181.0*

ISC 01 23:02:30.3±0.9**,51°6N**±0°1×**173°42W**±0°06**,h37**km**,n79,** σ**0^{s}93**/70**,mb3.7**/12**,Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATKA	Atka Island	0.78	322		Pn	23 02 44.2	-0.5
KOFP	Korovin Flat P	0.80	329		Pn	23 02 45.2	+0.2
KOKL	Mount Kliuchef	0.87	327		Pn	23 02 46.3	+0.2
KOWE	Korovin West	0.93	327		Pn	23 02 47.5	+0.7
ADK	Adak	2.05	279		Pn	23 03 02.7	+0.6
NIKH	Nikolski High	3.12	62		Pn	23 03 17.0	+0.1
CESW	Semis' Southwe	4.37	277		Pn	23 03 34.9	+0.9
MAPS	Pakushin South	4.52	58		Pn	23 03 36.8	+0.8
AMKA	Amchitka	4.55	270		Pn	23 03 37.0	+0.4
UNV	Unalaska Valle	4.77	59		Pn	23 03 40.6	+1.1
AKUT	Akutan	5.28	58	Pn	Pn	23 03 48.7	+2.2
SPIA	Saint Paul Isl	5.89	17	Pn	Pn	23 03 56.3	+1.4
FALS	False Pass	6.83	58	Pn	Pn	23 04 07.8	0.0
CHGN	Chignik	10.02	56	Pn	Pn	23 04 51.1	-0.2
OHAK	Old Harbor	12.98	56	Pn	Pn	23 05 31.4	-0.5
KDAK	Kodiak Island	13.52	55	Pn	Pn	23 05 38.6	-0.6
CNPM	China Poot	14.79	49	Pn	Pn	23 05 57.6	+1.1
BRLK	Bradley Lake	15.05	48	Pn	Pn	23 05 59.2	-0.8
SPU	Mount Spurr	15.16	42	Pn	Pn	23 06 01.5	0.0
SKT	Skwentna	15.78	40	Pn	Pn	23 06 10.0	+0.6
SEW	Seward	15.85	48	Pn	Pn	23 06 08.5	-1.8
SEW				IAmb	IAmb	23 06 16.4	
	comp=Z,8.2nm,1.1s						
SUA	Susitna One	15.85	43	Pn	Pn	23 06 10.4	0.0
PPLA	Purkeypile	16.03	37		P	23 06 15.8	0.0
GHO	Glory Hole Cre	16.77	43	Pn	Pn	23 06 21.9	-0.1
GHO				IAmb	IAmb	23 06 23.9	
	comp=Z,7.1nm,1.0s						
KNK	Knik Glacier	16.81	45	Pn	Pn	23 06 21.2	-1.3
KNK				IAmb	IAmb	23 06 26.7	
	comp=Z,5.3nm,1.2s						
KTH	Kantishna Hill	16.88	36		P	23 06 24.9	-0.2
SML	Sawmill	17.03	43	Pn	Pn	23 06 24.2	-1.1
SML				IAmb	IAmb	23 06 28.5	
	comp=Z,5.6nm,1.1s						
TRF	Thorofare Moun	17.05	37		P	23 06 26.6	-0.6
TRF				IAmb	IAmb	23 06 30.9	
	comp=Z,5.2nm,1.2s						
HIN	Hinchinbrook I	17.33	49	Pn	Pn	23 06 26.9	-2.0
FID	Port Fidalgo	17.45	48	Pn	Pn	23 06 27.2	-3.3
SCM	Sheep Creek Mo	17.48	44	Pn	Pn	23 06 30.2	-0.6
SCM				IAmb	IAmb	23 06 33.5	
	comp=Z,11nm,1.2s						
IMAR	Indian Mountai	17.53	27		P	23 06 32.8	+0.6
RND	Reindeer	17.58	38		Pn	23 06 32.2	+0.1
RND				IAmb	IAmb	23 06 38.3	
	comp=Z,5.9nm,1.2s						
M24K	Tolsona, Glenn	18.09	44		P	23 06 38.9	+0.4
M24K				IAmb	IAmb	23 06 42.4	
	comp=Z,3.6nm,0.7s						
MDM	Murphy Dome	18.64	35	P	P	23 06 44.0	-0.5
HDA	Harding Lake	18.82	37	P	P	23 06 46.3	-0.1
HDA				IAmb	IAmb	23 06 48.3	
	comp=Z,4.0nm,0.8s						
GLB	Gilahina Butte	18.91	47	P	Pn	23 06 48.0	-0.2
VRDI	Verde Repeater	19.00	48	P	P	23 06 48.9	+0.2
CRQM	Cirque	19.02	49	P	P	23 06 48.9	0.0
IL31		19.03	36	P	P	23 06 48.6	0.0
ILAR	Eielson Array	19.03	36	P	P	23 06 46.8	-1.9
	comp=Z,0.6nm,0.3s,baz=234,slow=9.0,SNR=38						
ILAR	Eielson Array	19.03	36	P	P	23 06 48.3	-0.3
TGL	Tana Glacier	19.17	50	P	P	23 06 48.9	-1.5
MCARA	McCarthy VSAT	19.25	48	P	Pn	23 06 51.8	-0.5
MCARA				IAmb	IAmb	23 06 52.5	
	comp=Z,6.1nm,1.1s						
RIDG	Independent Ri	19.32	40		Pn	23 06 52.8	-0.4
RIDG				IAmb	IAmb	23 06 53.9	
	comp=Z,3.5nm,0.6s						
ISLE	Juniper Island	19.36	50	P	Pn	23 06 53.9	+0.1
BALM	Baldy	19.47	49	P	P	23 06 52.9	-0.8
BALM				IAmb	IAmb	23 07 11.2	
	comp=Z,6.9nm,1.2s						
DOT	Dot Lake	19.59	41	P	P	23 06 55.4	+0.4
BARN	Barnard Glacie	19.80	49	P	Pn	23 06 59.2	+0.1
BARN				IAmb	IAmb	23 07 12.5	
	comp=Z,4.6nm,1.0s						
TABL	Table Mountain	19.90	51	P	Pn	23 06 59.5	-0.8
PRP	Porcupine Dome	19.91	35	P	P	23 06 57.5	-0.9
PRP				IAmb	IAmb	23 07 01.8	
	comp=Z,2.7nm,0.8s						
CTGM	Chitina Glacie	19.93	49	P	P	23 06 59.0	+0.2
CTGM				IAmb	IAmb	23 07 11.6	
	comp=Z,5.2nm,1.0s						
PCA	Pinnacle	20.27	52	P	P	23 07 01.6	-0.7
TOLK	Toolik Lake Re	20.56	25	P	P	23 07 06.0	+0.6
TOLK				IAmb	IAmb	23 07 06.9	
	comp=Z,2.5nm,0.7s						
FYU	Fort Yukon	20.57	33	P	Pn	23 07 08.9	+1.2
FYU				IAmb	IAmb	23 07 21.9	
	comp=Z,2.1nm,0.8s						
EGAK	Eagle	21.21	39	P	P	23 07 11.8	-0.5
BMAR	Burnt Mountain	21.26	31	P	P	23 07 12.7	-0.2
DAWY	Dawson	21.67	42	P	P	23 07 18.4	+1.1
DAWY				IAmb	IAmb	23 07 25.2	
	comp=Z,3.5nm,1.1s						
HYT	Haines Junctio	21.74	51	P	P	23 07 19.6	+1.4
INK	Inuvik	25.38	34	P	P	23 07 53.2	-0.3
	comp=Z,1.9nm,0.4s,baz=234,slow=7.7,SNR=16						
INK	Inuvik	25.38	34	P	P	23 07 53.1	-0.3
DLBC	Dease Lake	25.42	57	P	P	23 07 56.2	+2.1
DLBC				IAmb	IAmb	23 08 14.7	
	comp=Z,3.1nm,1.1s						
ASAJ	Asahikawa	30.06	273	LR	LR	23 20 09.8	
	comp=Z,26nm,21.5s,baz=358,slow=35						
YKA	Yellowknife Ar	32.62	47	P	P	23 08 57.3	-0.6
	comp=Z,0.1nm,0.4s,baz=274,slow=7.4,SNR=8.4						
H11N2	WAKE ISLAND Hy	35.36	213	T	T	23 47 16.7	
	baz=21,slow=76,SNR=10						
H11N3	WAKE ISLAND Hy	35.37	213	T	T	23 47 17.3	
	baz=21,slow=76,SNR=11						
H11N1	WAKE ISLAND Hy	35.38	213	T	T	23 47 18.0	
	baz=21,slow=76,SNR=11						
H11S1	WAKE ISLAND Hy	36.56	213	T	T	23 48 45.0	
	baz=20,slow=76,SNR=18						
H11S2	WAKE ISLAND Hy	36.57	213	T	T	23 48 44.1	
	baz=20,slow=76,SNR=14						
H11S3	WAKE ISLAND Hy	36.58	213	T	T	23 48 42.7	
	baz=20,slow=76,SNR=6.8						
PDAR	Pinedale Array	43.02	76	P	P	23 10 26.6	+0.4
	comp=Z,0.5nm,0.6s,baz=289,slow=5.1,SNR=6.1						
SONM	Songino Array	49.52	299	P	P	23 11 18.1	+1.1
	comp=Z,0.7nm,0.4s,baz=66,slow=6.0,SNR=14						
TXAR	Lajitas Array	55.29	85	P	P	23 11 59.9	-0.1
	comp=Z,0.2nm,0.5s,baz=306,slow=6.6,SNR=5.4						
ARCES	ARCESS Array B	58.39	352	P	P	23 12 21.0	-0.2
	comp=Z,4.1nm,1.0s,baz=24,slow=7.0,SNR=1.3						
MKAR	Makanchi Array	62.48	311	P	P	23 12 49.3	-0.2
	comp=Z,0.3nm,0.3s,baz=46,slow=6.9,SNR=12						
FINES	FINESS Array B	66.24	350	P	P	23 13 13.9	0.0
	comp=Z,3.7nm,1.1s,baz=3.8,slow=8.4,SNR=1.4						
AKASG	Malin Array Be	76.28	345	P	P	23 14 13.4	-1.3
	comp=Z,0.2nm,0.3s,baz=15,slow=5.4,SNR=4.3						
GERES	GERESS Array B	79.75	355	P	P	23 14 34.4	+0.3
	comp=Z,0.3nm,0.6s,baz=21,slow=5.7,SNR=3.5						
RPN	Rapa Nui	96.40	126	LR	LR	23 50 02.9	
	comp=Z,327nm,20.9s,baz=230,slow=30						

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*VAO **01** 23:06:37.8±1.1,19°58S×69°24W,h168km±10km,mb3.8*

*GUC **01** 23:06:39.8±0.5,19°74S×68°88W,h119km±2km,ML3.3*

ISC 01 23:06:38.0±0.8**,19°74S**±0°04×**68°97W**±0°09**, h134**km±10km**,n30,**σ**1^{s}01**/42**,8C-1D,Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB08	IPOC Station P	0.44	203	⇑*i*P	Pn	23 06 57.6	0.0
PB08				*e*S	Sn	23 07 11.7	-0.9
PB08				IAML		23 07 12.9	
	comp=N,2µm,0.2s						
MNMC	Minye Minye	0.84	315	⇑*i*P	Pn	23 07 00.9	+0.6
MNMC				*e*S	Sn	23 07 17.5	+0.4
HMBC	Humberstone	1.02	238	⇑*i*P	Pn	23 07 01.8	+0.2
HMBC				*e*S	Sn	23 07 19.4	-0.1
HMBC				IAML		23 07 20.4	
	comp=E,1µm,0.3s						
PSGC	Pisagua	1.10	277	⇑*i*P	Pn	23 07 02.8	+0.6
PSGC				*e*S	Sn	23 07 20.6	-0.1
PSGC				IAML		23 07 22.8	
	comp=E,591nm,0.5s						
PB01	IPOC Station P	1.39	200	⇑*i*P	Pn	23 07 05.8	+0.6
PB01				*e*S	Sn	23 07 25.9	-0.2
PB01				IAML		23 07 29.0	
	comp=N,745nm,0.2s						
TA01	Diego Aracena	1.41	234	⇑*i*P	Pn	23 07 05.8	+0.4
TA01				*e*S	Sn	23 07 26.2	0.0
TA01				IAML		23 07 31.3	
	comp=E,215nm,0.2s						
PB16	IPOC Station P	1.48	340	⇑*i*P	Pn	23 07 08.2	+1.4
PB16				*e*S	Sn	23 07 30.0	+1.3
PB16				IAML		23 07 31.8	
	comp=N,603nm,0.5s						
PB02	IPOC Station P	1.80	209	⇑*i*P	Pn	23 07 10.8	+0.9
PB02				*e*S	Sn	23 07 34.3	-0.1
PB02				IAML		23 07 41.4	
	comp=E,429nm,0.3s						
AP01	Chacalluta	1.88	316	⇓*i*P	Pn	23 07 11.8	+1.1
AP01				*e*S	Sn	23 07 36.7	+0.9
PB09	IPOC Station P	2.07	187	*e*P	Pn	23 07 14.1	+0.9
PB09				*e*S	Sn	23 07 40.6	+0.4
PB07	IPOC Station P	2.16	203	*e*P	Pn	23 07 15.2	+0.9
PB07				*e*S	Sn	23 07 42.3	+0.1
PB07				IAML		23 07 47.4	
	comp=E,224nm,0.3s						
PB03	IPOC Station P	2.42	198	*e*P	Pn	23 07 18.6	+1.2
PB03				*e*S	Sn	23 07 46.8	-1.0
PB03				IAML		23 07 51.9	
	comp=E,96nm,0.6s						
LVC	Limon Verde	2.86	179	*e*P	Pn	23 07 26.5	+3.2
VILB	Vilhena	10.78	53	*e*P	Pn	23 09 08.8	0.0
TRCB	Terra Rica	15.53	104	*e*P	P	23 10 12.4	+1.2
PTGB	Pitanga	16.41	111	*e*P	P	23 10 22.3	+1.2
ARAG	Araguaiana, MT	16.82	79	*e*P	P	23 10 26.3	+0.7
ITAB	Concordia	17.14	119	*e*P	Pn	23 10 29.9	+0.4
ITRB	Iturama	17.52	93	*e*P	P	23 10 33.9	+0.6
CPSB	Cacapava Do Su	17.61	130	*e*P	P	23 10 34.8	+0.7
NPGB	Novo Progresso	18.27	48	*e*P	P	23 10 39.7	-1.8
FRTB	Fartura	18.40	105	*e*P	P	23 10 42.9	0.0
SNDB	Serra Nova Dou	18.66	68	*e*P	P	23 10 45.5	-0.3
CNLB	Canela	19.02	124	*e*P	P	23 10 49.6	0.0
BB19B	Bebedouro	19.21	97	*e*P	P	23 10 51.1	-0.6
IPMB	Ipameri, GO	19.72	88	*e*P	P	23 10 56.6	-0.7
ITTB	Itaituba	19.99	42	*e*P	P	23 10 58.4	-1.8
DIAM	Diamantina, MG	23.95	91	*e*P	P	23 11 39.5	-0.8
JANB	Januaria	23.97	83	*e*P	P	23 11 39.0	-1.3
SDBA	SAO DESIDERIO	24.22	76	*e*P	P	23 11 41.2	-1.4

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*AEIC **01** 23:10:19±3.4,56°76N±0°05×168°70W±0°10,h23km±7km, Error ellipse: s-maj=9.4km s-min=4.7km az=47.0*

*NEIC **01** 23:10:20.1±2.5,56°72N±0°05×168°96W±0°09,h10km±2km, mb3.9/5,ML3.9/18(AEIC),Error ellipse: s-maj=10.2km s-min=6.7km az=219.0*

*IDC **01** 23:10:20.5±1.0,56°59N×169°04W,h0km,mb3.7/10, mb1 4.0/14,mb1mx3.8/52,mbtmp3.8/14,ML3.5/4,MS3.5/1, Ms1 3.5/1,ms1mx2.5/60,Error ellipse: s-maj=34.3km s-min=13.9km az=177.0*

ISC 01 23:10:21.7±0.5**,56°70N**±0°07×**168°91W**±0°05**,h10**km**,n67,** σ**1^{s}71**/67**,mb4.0**/12**,1C,Pribilof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPIA	Saint Paul Isl	0.88	304		Sb	23 10 50.6	-0.2
SPIA	Saint Paul Isl	0.88	304	Pn	Pg	23 10 37.7	-0.9
AKGG	Akutan Green G	3.00	145		Pn	23 11 07.9	-1.4
AKGG					Sn	23 11 45.2	-0.2
AKRB	Akutan Reef Bi	3.04	147		Pn	23 11 09.1	-0.7
MSW	Makushin Switc	3.04	156		Pn	23 11 09.2	-0.7
AKLV	Akutan Long Va	3.05	145		Pn	23 11 09.3	-0.6
MNAT	Makushin Natee	3.09	155		Pn	23 11 09.4	-1.1
MAPS	Pakushin South	3.11	158		Pn	23 11 09.9	-0.8
AKBBA	Akutan Broad B	3.11	146		Pn	23 11 09.9	-0.9
AKBBA					Sn	23 11 47.3	-0.6
AKUT	Akutan	3.13	144	Pn	Pn	23 11 09.9	-1.1
MGOD	Makushin Gods	3.13	157		Pn	23 11 10.6	-0.5
UNV	Unalaska Valle	3.17	153	Pn	Pn	23 11 10.0	-1.6
WESP	Westdahl Peak	3.24	131		Pn	23 11 10.5	-2.1
FALS	False Pass	3.61	118	Pn	Pn	23 11 15.3	-2.2
NIKH	Nikolski High	3.73	179	Pn	Pn	23 11 17.8	-1.5
SDPT	Sand Point	4.92	102	Pn	Pn	23 11 31.7	-3.9
ATKA	Atka Island	5.46	217		Pn	23 11 42.5	-0.5
CHGN	Chignik	5.83	90	Pn	Pn	23 11 44.5	-3.5
ADK	Adak	6.63	227	Pn	Pn	23 11 57.1	-1.9
GAMB	Gambell	7.24	350	Pn	Pn	23 12 03.1	-4.3
ANM	Nome	8.08	11	Pn	Pn	23 12 16.7	-2.2
SII	Sitkinak Islan	8.12	85	Pn	Pn	23 12 16.8	-2.7
OHAK	Old Harbor	8.56	80	Pn	Pn	23 12 26.5	+1.1
AMKA	Amchitka	8.74	237	Pn	Pn	23 12 29.1	+1.1
KDAK	Kodiak Island	8.92	76	Pn	Pn	23 12 32.8	+2.4
	0.9nm,0.3s,baz=270,slow=10.0,SNR=9.7						
TTA	Tatalina	9.00	41	Pn	Pn	23 12 33.4	+1.8
RSO	Redoubt South	9.24	59	Pn	Pn	23 12 35.4	+0.4
BRLK	Bradley Lake	9.98	65	Pn	Pn	23 12 46.5	+1.4
PPLA	Purkeypile	10.45	47	Pn	Pn	23 12 54.9	+3.5
I23K	Minto, Yukon-K	12.68	40	Pn	Pn	23 13 19.4	-2.4
KLU	Klutina	12.72	58	Pn	Pn	23 13 16.7	-5.8
POKR	Poker Plat Res	13.36	42	Pn	Pn	23 13 26.1	-5.0
ILAR	Eielson Array	13.40	44	Pn	Pn	23 13 32.4	+0.7
	0.1nm,0.3s,baz=215,slow=11,SNR=3.3						
DOT	Dot Lake	14.12	50	Pn	Pn	23 13 39.3	-2.2
PRP	Porcupine Dome	14.26	42	Pn	Pn	23 13 42.6	-0.9
ISLE	Juniper Island	14.32	63	Pn	Pn	23 13 42.5	-1.9
BALM	Baldy	14.36	61	Pn	Pn	23 13 42.9	-2.0
BARN	Barnard Glacie	14.69	61	Pn	Pn	23 13 46.6	-2.9
TOLK	Toolik Lake Re	14.81	28	Pn	Pn	23 13 51.2	+0.3
CTGM	Chitina Glacie	14.84	62	Pn	Pn	23 13 51.7	+0.2
FYU	Fort Yukon	14.87	39	Pn	Pn	23 13 48.9	-2.7
TABL	Table Mountain	14.90	64	Pn	Pn	23 13 50.6	-1.8
BCAR	Beaver Creek A	14.95	54	Pn	Pn	23 13 53.6	+0.8
BMAR	Burnt Mountain	15.54	36	Pn	Pn	23 14 00.8	+0.3
EGAK	Eagle	15.68	48		Pn	23 14 03.9	+1.6
EGAK				IAmb	IAmb	23 14 09.1	
	comp=Z,5.3nm,0.8s						
DAWY	Dawson	16.22	51		P	23 14 12.4	-0.1
DAWY				IAmb	IAmb	23 14 20.9	
	comp=Z,10nm,1.1s						
HYT	Haines Junctio	16.71	63		Pn	23 14 16.3	+0.6
PEA0B	Petropavlovsk-	19.41	273	P	P	23 14 45.3	-2.4
PETK	Petropavlovsk-	19.41	273	P	Pn	23 14 49.1	+0.2
	comp=Z,0.4nm,0.3s,baz=86,slow=11,SNR=7.2						
PETK	Petropavlovsk-	19.41	273	P	P	23 14 45.5	-2.3
INK	Inuvik	19.70	40	P	Pn	23 14 52.5	+0.4
	comp=Z,0.3nm,0.3s,baz=255,slow=8.2,SNR=13						
INK	Inuvik	19.70	40	P	Pn	23 14 52.2	+0.1
INK				IAmb	IAmb	23 14 57.2	
	comp=Z,9.0nm,0.7s						
DLBC	Dease Lake	20.73	69	P	P	23 15 03.4	+1.3
	comp=Z,1.2nm,0.7s,baz=315,slow=25,SNR=1.4						
YKA	Yellowknife Ar	27.36	55	P	P	23 16 08.1	+1.6
	comp=Z,0.9nm,0.8s,baz=281,slow=7.5,SNR=9.4						
YKA				LR	LR	23 28 40.7	
	comp=Z,98nm,19.9s,baz=0.0,slow=40						
NVAR	Mina Array Bea	37.70	97	P	P	23 17 39.0	+1.7
	comp=Z,0.3nm,0.6s,baz=302,slow=8.4,SNR=2.3						
PDAR	Pinedale Array	39.52	85	P	P	23 17 53.4	+0.8
	comp=Z,0.3nm,0.7s,baz=349,slow=0.9,SNR=2.9						
SONM	Songino Array	49.41	298	P	P	23 19 12.1	+0.7
	comp=Z,1.0nm,0.8s,baz=41,slow=7.2,SNR=7.8						
SONM				PcP	PcP	23 20 33.4	-0.1
	comp=Z,0.5nm,0.8s,baz=59,slow=2.9,SNR=3.6						
HHC	Hu-ho-hao-te	51.72	288	*e*P	P	23 19 30.4	+1.5
HHC				pmax	pmax		
	comp=Z,7.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,76nm,5.7s						
TXAR	Lajitas Array	52.54	93	P	P	23 19 35.1	0.0
	comp=Z,0.5nm,0.7s,baz=310,slow=3.4,SNR=7.1						
GTA	Gaotai	58.81	295	⇑P	P	23 20 21.1	+1.0
GTA				pP	sP	23 20 28.6	+4.2
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
MKAR	Makanchi Array	61.06	312	P	P	23 20 35.4	+0.1
	comp=Z,0.7nm,1.0s,baz=37,slow=8.4,SNR=4.4						
WMQ	Urumqi	61.12	306	*e*P	P	23 20 39.0	+3.2
KSH	Kashi	69.67	312	P	P	23 21 36.1	+4.8
KSH				pmax	pmax		
	comp=Z,4.0nm,1.2s						
KSH				pmax	pmax		
	comp=Z,140nm,5.7s						
AKASG	Malin Array Be	71.92	348	P	P	23 21 44.7	+0.1

	comp=Z,2.7nm,0.7s,baz=18,slow=6.1,SNR=6.2						
CMAR	Chiang Mai Arr	75.94	282	P	P	23 22 09.9	+1.3
	comp=Z,0.9nm,0.3s,baz=19,slow=5.7,SNR=5.4						
GEYT	Alibeck	77.69	324	P	P	23 22 17.7	-0.5
	comp=Z,1.7nm,1.0s,baz=298,slow=3.2,SNR=4.1						
BOSA	Boshof	150.19	334	PKPbc	PKPbc	23 30 11.9	-0.6
	comp=Z,3.2nm,0.8s,baz=18,slow=2.7,SNR=4.4						

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*IDC **01** 23:16:50.5±5.4, 51.°98N×178.°44E, h109^{km}±51^{km}, mb3.6/15, mb1 3.9/17, mb1mx3.6/58, mbtmp4.1/17, Error ellipse: s-maj=30.1km s-min=12.4km az=171.0*

*AEIC **01** 23:16:50±1.8, 51.°8N±0.°1×178.°35E±0.°08, h123^{km}±5^{km}, ML3.8, mb4.2/134(NEIC), Error ellipse: s-maj=21.1km s-min=7.2km az=181.0*

*NEIC **01** 23:16:50.9±1.7, 51.°9N±0.°2×178.°38E±0.°09, h120^{km}±5^{km}, Error ellipse: s-maj=24.8km s-min=7.7km az=184.0*

ISC 01 23:16:50.6±0.6**, 51.°9N**±0.°1×**178.°38E**±0.°05**, h113**^{km}**, n173, σ1**^{s}**00**/161**, mb4.2**/61**, 1C, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSSA	Little Sitkin	0.10	61		Pn	23 17 07.1	+0.9
LSNW	Little Sitkin	0.11	52		Pn	23 17 06.9	+0.7
LSNW					Sn	23 17 18.6	+0.7
LSPA	Little Sitkin	0.13	66		Pn	23 17 07.2	+1.0
LSPA					Sn	23 17 20.5	+2.5
CETU	Semis' Tuman	0.70	84		Pn	23 17 10.2	+1.0
CESW	Semis' Southwe	0.74	90		Pn	23 17 10.0	+0.4
CEAP	Semis' Anvil P	0.75	82		Pn	23 17 10.5	+0.8
CERB	Semis' Cerberu	0.78	87		Pn	23 17 10.9	+1.0
CERB					Sn	23 17 25.9	+1.4
AMKA	Amchitka	0.78	132		Pn	23 17 10.4	+0.5
AMKA	Amchitka	0.78	132		Sn	23 17 24.4	-0.1
CERAA	Semis' Rag'd T	0.81	89		Pn	23 17 10.7	+0.5
SMY	Shemya	2.75	289		Sn	23 18 06.3	+0.1
SMY	Shemya	2.75	289	Pn	Pn	23 17 33.0	-0.4
ADK	Adak	3.06	88	Sn	Sn	23 18 12.7	-0.8
ADK	Adak	3.06	88		Pn	23 17 36.8	-0.6
ATKA	Atka Island	4.59	83		Pn	23 17 57.8	-0.1
KOFP	Korovin Flat P	4.66	82		Pn	23 17 58.5	-0.3
NIKH	Nikolski High	7.88	77	Pn	Pn	23 18 43.3	+1.0
SPIA	Saint Paul Isl	8.46	47		Pn	23 18 51.9	+1.8
MGOD	Makushin Gods	9.13	72		Pn	23 18 58.8	-0.5
MSW	Makushin Switc	9.19	72		Pn	23 18 59.9	-0.2
MREP	Makushin Rep't	9.20	72		Pn	23 19 00.2	-0.1
UNV	Unalaska Valle	9.35	72	Pn	Pn	23 19 02.9	+0.7
AKUT	Akutan	9.81	71	Pn	Pn	23 19 07.5	-1.0
PEA0B	Petropavlovsk-	12.65	284	Pn	Pn	23 19 46.7	+0.3
PETK	Petropavlovsk-	12.65	284	P	Pn	23 19 47.8	+1.5
	0.8nm,0.3s,baz=102,slow=18,SNR=8.3						
PETK				S	Sn	23 22 01.5	-4.0
	0.4nm,0.3s,baz=24,slow=25,SNR=1.0						
PETK	Petropavlovsk-	12.65	284	Pn	Pn	23 19 45.6	-0.8
SDPT	Sand Point	13.01	66	Pn	Pn	23 19 50.0	-0.9
OHAK	Old Harbor	17.20	61	P	P	23 20 40.8	-2.6
OHAK				IAmb	IAmb	23 20 48.0	
	comp=Z,9.9nm,0.9s						
TTA	Tatalina	17.53	41	P	P	23 20 47.5	+0.4
KDAK	Kodiak Island	17.64	59	P	P	23 20 45.6	-2.6
	comp=Z,2.9nm,0.3s,baz=208,slow=2.7,SNR=50						
KDAK				S	S	23 23 55.3	-10
	comp=Z,0.1nm,0.3s,baz=348,slow=23,SNR=1.1						
KDAK	Kodiak Island	17.64	59	P	P	23 20 46.0	-2.3
KDAK				IAmb	IAmb	23 20 48.0	
	comp=Z,21nm,1.1s						
RSO	Redoubt South	18.08	50	P	P	23 20 54.2	+1.0
RDOG	Red Dog Mine	18.57	22	P	P	23 21 00.6	+2.2
RDOG				IAmb	IAmb	23 21 07.7	
	comp=Z,6.5nm,0.6s						
CNPM	China Poot	18.61	54	P	P	23 20 58.8	-0.1
BRLK	Bradley Lake	18.83	53	P	P	23 21 01.1	-0.2
BRLK				IAmb	IAmb	23 21 04.8	
	comp=Z,18nm,1.0s						
SKT	Skwentna	19.08	46	P	P	23 21 05.5	+1.5
PPLA	Purkeypile	19.11	43		P	23 21 05.7	+1.3
PPLA				IAmb	IAmb	23 21 17.4	
	comp=Z,9.4nm,0.9s						
SUA	Susitna One	19.29	48		P	23 21 08.1	+1.7
SUA				IAmb	IAmb	23 21 13.0	
	comp=Z,7.1nm,0.6s						
SEW	Seward	19.60	53	P	P	23 21 09.3	-0.3
KTH	Kantishna Hill	19.88	42	P	P	23 21 14.4	+1.6
KTH				IAmb	IAmb	23 21 14.7	
	comp=Z,13nm,1.1s						
IMAR	Indian Mountai	19.89	34	P	P	23 21 13.7	+0.9
PMR	Palmer	20.07	48	P	P	23 21 15.9	+1.2
TRF	Thorofare Moun	20.11	43	P	P	23 21 15.8	+0.5
TRF				IAmb	IAmb	23 21 18.6	
	comp=Z,6.0nm,0.6s						
GHO	Glory Hole Cre	20.21	48	P	P	23 21 17.4	+1.1
GHO				IAmb	IAmb	23 21 19.4	
	comp=Z,7.7nm,0.8s						
KNK	Knik Glacier	20.34	49	P	P	23 21 17.3	-0.4
KNK				IAmb	IAmb	23 21 20.3	
	comp=Z,13nm,0.9s						
SML	Sawmill	20.49	48	P	P	23 21 20.4	+1.1
SML				IAmb	IAmb	23 21 22.1	
	comp=Z,11nm,1.0s						
RND	Reindeer	20.70	44	P	P	23 21 22.3	+0.7
RND				IAmb	IAmb	23 21 24.8	
	comp=Z,9.9nm,1.2s						
BWN	Browne	20.71	41	P	P	23 21 22.6	+1.1
BWN				IAmb	IAmb	23 21 34.8	
	comp=Z,14nm,0.9s						
GLI	Glacier Island	20.88	51	P	P	23 21 22.3	-1.1
SCM	Sheep Creek Mo	20.96	48	P	P	23 21 24.1	-0.2
SCM				IAmb	IAmb	23 21 29.4	
	comp=Z,14nm,0.9s						
HIN	Hinchinbrook I	21.10	53	P	P	23 21 25.4	-0.4
I23K	Minto, Yukon-K	21.12	39	P	P	23 21 25.7	-0.2
FID	Port Fidalgo	21.16	52	P	P	23 21 25.0	-1.4
DHY	Denali Highway	21.25	45	P	P	23 21 27.8	+0.3
DHY				IAmb	IAmb	23 21 29.2	
	comp=Z,8.2nm,0.7s						
EYAK	Cordova Ski Ar	21.49	52	P	P	23 21 29.2	-0.6
MDM	Murphy Dome	21.49	40	P	P	23 21 30.5	+0.5
KLU	Klutina	21.55	50	P	P	23 21 30.4	-0.3
KLU				IAmb	IAmb	23 21 34.1	
	comp=Z,9.7nm,1.0s						
CCB	Clear Creek Bu	21.55	41	P	P	23 21 30.4	-0.2
M24K	Tolsona, Glenn	21.55	48	P	P	23 21 31.1	+0.5
M24K				IAmb	IAmb	23 21 34.1	
	comp=Z,9.8nm,0.7s						
COLD	Coldfoot	21.75	33	P	P	23 21 32.9	+0.3
HDA	Harding Lake	21.82	42	P	P	23 21 33.7	+0.3
POKR	Poker Plat Res	21.87	40	P	P	23 21 33.9	0.0
IL31		21.97	41	P	P	23 21 34.4	-0.5
ILAR	Eielson Array	21.97	41	P	P	23 21 33.1	-1.8
	comp=Z,0.7nm,0.6s,baz=243,slow=8.0,SNR=19						
ILAR	Eielson Array	21.97	41	P	P	23 21 33.8	-1.1
RAGM	Ragged Mountai	22.00	53	P	P	23 21 36.0	+0.6
KAIM	Kayak Island	22.08	54	P	P	23 21 37.1	+1.0
N25K	Chitina, Valde	22.20	50	P	P	23 21 37.1	-0.4
HMT	Hamilton	22.20	53	P	P	23 21 37.7	+0.3
SUCK	Suckling Hills	22.41	54	P	P	23 21 39.5	-0.1
RIDG	Independent Ri	22.52	44	P	P	23 21 40.0	-0.7
GLB	Gilahina Butte	22.55	50	P	P	23 21 41.4	+0.5
GLB				IAmb	IAmb	23 21 43.7	
	comp=Z,7.8nm,1.0s						
TOLK	Toolik Lake Re	22.67	30	P	P	23 21 42.9	+0.8
VRDI	Verde Repeater	22.69	51	P	P	23 21 41.8	-0.8
VRDI				IAmb	IAmb	23 21 45.2	
	comp=Z,7.5nm,0.9s						
PRP	Porcupine Dome	22.76	39	P	P	23 21 42.2	-0.9
DOT	Dot Lake	22.84	45	P	P	23 21 43.0	-0.8
MCARA	McCarthy VSAT	22.91	50	P	P	23 21 44.4	-0.1
MCARA				IAmb	IAmb	23 21 55.3	
	comp=Z,12nm,1.2s						
TGL	Tana Glacier	22.94	52	IAmb	IAmb	23 21 46.2	
	comp=Z,11nm,0.7s						
ISLE	Juniper Island	23.17	53	P	P	23 21 46.3	-0.8
ISLE				IAmb	IAmb	23 22 01.3	
	comp=Z,16nm,1.2s						
BALM	Baldy	23.20	51	P	P	23 21 46.6	-0.8
FYU	Fort Yukon	23.23	37	P	P	23 21 47.5	+0.1
YAH	Yahtse	23.45	53	P	P	23 21 49.9	+0.2
BARN	Barnard Glacie	23.54	51	P	P	23 21 50.0	-0.5
CTGM	Chitina Glacie	23.69	52	IAmb	IAmb	23 21 54.1	
	comp=Z,8.3nm,0.6s						
BCAR	Beaver Creek A	23.73	46	P	P	23 21 52.3	+0.2
TABL	Table Mountain	23.75	53	P	P	23 21 51.7	-0.7
BMAR	Burnt Mountain	23.79	35	P	P	23 21 50.7	-1.9
PCA	Pinnacle	24.18	54	P	P	23 21 56.5	+0.3
PCA				IAmb	IAmb	23 22 05.4	
	comp=Z,13nm,1.1s						
DAWY	Dawson	24.95	44	IAmb	IAmb	23 22 05.8	
	comp=Z,6.4nm,0.8s						
HYT	Haines Junctio	25.55	52	P	P	23 22 10.1	+1.4
INK	Inuvik	28.05	36	P	P	23 22 30.7	-0.1
	comp=Z,1.0nm,0.4s,baz=269,slow=10,SNR=7.0						
DLBC	Dease Lake	29.54	57	P	P	23 22 45.0	+0.8
	comp=Z,2.2nm,0.8s,baz=228,slow=16,SNR=1.8						
C36M	Paulatuk	31.59	35	P	P	23 23 02.6	+0.6
C36M				IAmb	IAmb	23 23 03.0	
	comp=Z,3.0nm,0.5s						
H11N2	WAKE ISLAND Hy	33.34	200	T	T	23 58 40.4	
	baz=11,slow=76,SNR=18						
H11N3	WAKE ISLAND Hy	33.35	200	T	T	23 58 40.4	
	baz=11,slow=76,SNR=15						
H11N1	WAKE ISLAND Hy	33.36	200	T	T	23 58 40.7	
	baz=11,slow=76,SNR=20						
H11S1	WAKE ISLAND Hy	34.57	200	T	T	00 00 10.8	
	baz=4.4						
H11S3	WAKE ISLAND Hy	34.59	200	T	T	00 00 22.4	
	baz=4.4						
H11S2	WAKE ISLAND Hy	34.59	200	T	T	00 00 24.0	
	baz=4.4						
YKA	Yellowknife Ar	36.15	46	P	P	23 23 41.5	+0.1
	comp=Z,1.3nm,0.6s,baz=282,slow=7.6,SNR=21						
NLWA	Neilton Lookou	36.82	74	P	P	23 23 46.6	-0.8
LTY	Liberty	38.78	72	P	P	23 24 03.3	-0.7
LTY				IAmb	IAmb	23 24 03.4	
	comp=Z,1.6nm,0.4s						
H04A	Detroit Lake	39.21	76	P	P	23 24 07.6	0.0
H04A				IAmb	IAmb	23 24 08.2	
	comp=Z,4.1nm,0.8s						
HUMO	Hull Mountain	39.89	80	P	P	23 24 13.3	+0.1
HAWA	Hanford	39.89	72	P	P	23 24 12.1	-1.0
HAWA				IAmb	IAmb	23 24 13.3	
	comp=Z,5.2nm,0.9s						
KRMB	Red Mountain	39.93	82	P	P	23 24 13.9	+0.4
KRMB				IAmb	IAmb	23 24 15.0	
	comp=Z,3.1nm,0.7s						
NEW	Newport	40.34	69	P	P	23 24 15.8	-1.1
	comp=Z,1.7nm,0.4s,baz=294,slow=11,SNR=10						
NEW	Newport	40.34	69	P	P	23 24 16.0	-0.9
YBH	Yreka Blue Hor	40.54	80	P	P	23 24 19.6	+1.0
	comp=Z,2.7nm,0.7s,baz=319,slow=6.3,SNR=10						
YBH	Yreka Blue Hor	40.54	80	P	P	23 24 19.5	+1.0
YBH				IAmb	IAmb	23 24 20.2	
	comp=Z,2.6nm,0.7s						
K05A	Summer Lake	41.08	78	P	P	23 24 23.9	+0.8
K05A				IAmb	IAmb	23 24 24.2	
	comp=Z,3.3nm,0.6s						
I07A	Izee	41.15	75	P	P	23 24 23.3	-0.4
KCPM	Cahto Peak	41.21	84	P	P	23 24 23.4	-0.8
WDC	Whiskeytown Da	41.31	82	P	P	23 24 25.7	+0.9
WDC				IAmb	IAmb	23 24 26.1	
	comp=Z,2.6nm,0.7s						
MOD	Modoc Plateau	41.91	79	P	P	23 24 29.6	-0.3
MOD				IAmb	IAmb	23 24 31.8	
	comp=Z,2.6nm,0.6s						
HOPS	Hopland Field	41.94	84	P	P	23 24 29.4	-0.6
BMO	Blue Mountains	42.04	73	P	P	23 24 29.8	-1.1
BMO				IAmb	IAmb	23 24 30.9	
	comp=Z,5.7nm,1.1s						
ORV	Oroville	42.57	82	P	P	23 24 35.1	0.0
ORV				IAmb	IAmb	23 24 35.6	
	comp=Z,2.8nm,0.8s						
WVOR	Wild Horse Val	42.61	77	P	P	23 24 35.1	-0.4
BEKR	Beckworth	43.08	81	IAmb	IAmb	23 24 40.2	
	comp=Z,5.0nm,1.2s						
PAHR	Pah Rah Range	43.77	81	P	P	23 24 45.1	+0.2
PAHR				IAmb	IAmb	23 24 46.0	
	comp=Z,4.4nm,1.2s						
CMB	Columbia Colle	44.19	83	P	P	23 24 48.6	+0.5
SONM	Songino Array	44.83	295	P	P	23 24 54.4	+1.1
	comp=Z,0.4nm,0.5s,baz=65,slow=7.8,SNR=6.7						
SONM	Songino Array	44.83	295	P	P	23 24 53.9	+0.6
BOZ	Bozeman (W)	44.95	69	P	P	23 24 52.8	-1.4
BOZ				IAmb	IAmb	23 24 53.7	
	comp=Z,4.0nm,0.8s						
RYN	Ryan	44.96	81	P	P	23 24 54.3	-0.1
RYN				IAmb	IAmb	23 24 55.4	
	comp=Z,7.0nm,1.2s						
LHV	Little Huntoon	45.21	82	P	P	23 24 56.6	+0.5
NVAR	Mina Array Bea	45.22	81	P	P	23 24 56.9	+0.3
	comp=Z,1.9nm,0.5s,baz=296,slow=7.6,SNR=23						
NVAR	Mina Array Bea	45.22	81	P	P	23 24 56.7	+0.1
MDPB	Devils Postpil	45.25	83	P	P	23 24 57.7	+0.9
MDPB				IAmb	IAmb	23 24 58.3	
	comp=Z,3.8nm,0.8s						
NV11	Mina Array Sit	45.31	81	P	P	23 24 57.5	+0.3
YHL	Hebgen Lake	45.63	70	P	P	23 24 58.7	-1.1
ELK	Elko	45.66	77	P	P	23 24 59.7	-0.3
	comp=Z,1.6nm,0.5s,baz=286,slow=8.5,SNR=9.4						
PAGB	Antelope Grade	45.74	86	P	P	23 25 00.9	+0.4
HHC	Hu-ho-hao-te	45.85	284	*e*P	P	23 25 03.6	+2.3
HHC				pmax	pmax		
	comp=Z,5.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,100nm,5.3s						
HVU	Hansel Valley	46.51	74	P	P	23 25 06.4	-0.1
R11A	Troy Canyon, C	46.93	80	IAmb	IAmb	23 25 10.3	
	comp=Z,2.4nm,0.5s						
TPNV	Topopah Spring	47.42	82	IAmb	IAmb	23 25 14.6	
	comp=Z,5.7nm,0.9s						
DUG	Dugway, Tooele	47.46	76	P	P	23 25 13.8	-0.1
DUG				IAmb	IAmb	23 25 14.0	
	comp=Z,2.7nm,0.6s						
BW06	Boulder Array	47.81	71	IAmb	IAmb	23 25 16.3	
	comp=Z,2.6nm,0.8s						
PD31	Pinedale Array	47.81	71	IAmb	IAmb	23 25 16.3	
	comp=Z,2.3nm,0.8s						
PDAR	Pinedale Array	47.81	71	P	P	23 25 15.5	-1.2
	comp=Z,2.3nm,0.7s,baz=314,slow=3.1,SNR=20						
PRN	Pahroc Range	47.86	80	IAmb	IAmb	23 25 19.9	
	comp=Z,2.5nm,0.7s						
MSU	Marysvale	48.90	77	P	P	23 25 24.8	-0.3
TMUT	Trail Mountain	48.98	76	P	P	23 25 25.7	-0.2
MTPU	Mount Pierson	49.20	78	P	P	23 25 27.4	-0.1
KNB	Kanab	49.47	79	P	P	23 25 29.5	+0.1
SRU	San Rafael Swe	49.51	75	P	P	23 25 29.5	-0.2
O20A	White River Ci	50.22	73	IAmb	IAmb	23 25 34.6	
	comp=Z,3.5nm,0.7s						
CBX	Cerro Bola	50.24	86	P	P	23 25 36.0	+0.8
CBX				IAmb	IAmb	23 25 36.7	
	comp=Z,2.4nm,0.7s						
PV23	Carpenter Ridg	50.84	75	P	P	23 25 38.7	-1.2
PV23				IAmb	IAmb	23 25 41.0	
	comp=Z,2.9nm,0.7s						
ULM	Lac du Bonnet	50.85	56	P	P	23 25 38.3	-1.1
	comp=Z,1.5nm,0.5s,baz=308,slow=7.9,SNR=6.3						
ULM	Lac du Bonnet	50.85	56	P	P	23 25 38.0	-1.4
PV14	Lion Creek, Pa	50.88	75	P	P	23 25 39.0	-1.1
PV14				IAmb	IAmb	23 25 39.8	
	comp=Z,2.9nm,0.7s						
PV22	Blue Mesa, Par	50.92	75	P	P	23 25 39.8	-0.5
PV20	West Nyswonger	50.94	75	P	P	23 25 38.9	-1.6
PV20				IAmb	IAmb	23 25 42.5	
	comp=Z,2.7nm,0.6s						
PV04	Paradox Valley	50.94	75	P	P	23 25 39.5	-1.0
PV04				IAmb	IAmb	23 25 40.4	
	comp=Z,3.1nm,0.6s						
PV19	Morning Glory	50.95	75	P	P	23 25 38.8	-1.8
PV19				IAmb	IAmb	23 25 40.0	
	comp=Z,3.4nm,0.7s						
PV16	Nyswonger Mesa	50.99	75	P	P	23 25 40.1	-0.8
PV16				IAmb	IAmb	23 25 41.7	
	comp=Z,5.9nm,1.2s						
PV12	Saucer Basin,	51.05	75	P	P	23 25 39.7	-1.7
PV12				IAmb	IAmb	23 25 41.3	
	comp=Z,2.4nm,0.7s						
PV02	Paradox Valley	51.16	75	P	P	23 25 40.8	-1.4
PV01	Paradox Valley	51.31	75	P	P	23 25 42.2	-1.1
PV01				IAmb	IAmb	23 25 45.6	
	comp=Z,1.7nm,0.6s						
SPX	San Pedro Mart	51.85	87	P	P	23 25 47.2	-0.4
SPX				IAmb	IAmb	23 25 48.6	
	comp=Z,2.2nm,0.8s						
LZH	Lanzhou	53.55	284	⇑P	P	23 25 59.0	-0.7
LZH				pP	pP	23 26 24.9	-1.7
LZH				sP	sP	23 26 37.1	-2.0
LZH				pmax	pmax		
	comp=Z,21nm,1.3s						
LZH				pmax	pmax		
	comp=Z,65nm,7.5s						
WMQ	Urumqi	57.57	301	*e*P	P	23 26 31.0	+2.7
MNTX	Cornudas Mount	57.59	79	P	P	23 26 28.7	+0.2
MNTX				IAmb	IAmb	23 26 29.2	
	comp=Z,2.2nm,0.7s						
MKAR	Makanchi Array	58.32	307	P	P	23 26 32.8	-0.7
	comp=Z,0.2nm,0.5s,baz=52,slow=6.1,SNR=8.0						
TX31	Lajitas Ar. Si	60.30	79	P	P	23 26 47.1	-0.2
TX32	Lajitas Array	60.30	79	P	P	23 26 46.5	-0.9
TX32				IAmb	IAmb	23 26 47.6	
	comp=Z,2.1nm,0.7s						
TXAR	Lajitas Array	60.30	79	P	P	23 26 47.1	-0.2
	comp=Z,1.5nm,0.6s,baz=303,slow=4.9,SNR=27						
TXAR	Lajitas Array	60.30	79	P	P	23 26 46.9	-0.5
WRA	Warramunga Arr	81.21	221	P	P	23 28 53.9	+0.2
	comp=Z,0.2nm,0.4s,baz=34,slow=6.3,SNR=8.1						
ASAR	Alice Springs	84.72	220	P	P	23 29 12.8	+1.0
	comp=Z,0.6nm,0.6s,baz=24,slow=4.7,SNR=5.3						

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*NEIC **01** 23:19:35.9±1.7, 9.°08S±0.°06×108.°45E±0.°05, h33^{km}±4^{km}, mb4.5/23, Error ellipse: s-maj=9.6km s-min=7.1km az=198.0*

*DJA **01** 23:19:38.0±0.4, 9°S±4°×10°9E±°, h47^{km}±5^{km}, M4.7/13, mb4.8/13, mB5.3/4, MLv4.5/12, Mw(mB)4.8/4*

*IDC **01** 23:19:41.2±2.8, 8.°78S×108.°68E, h72^{km}±23^{km}, mb4.0/9, mb1 4.1/12, mb1mx3.9/45, mbtmp4.3/12, MS3.4/7, Ms1 3.4/7, ms1mx3.1/37, Error ellipse: s-maj=46.4km s-min=12.4km az=49.0*

ISC 01 23:19:35.0±0.5**, 9.°11S**±0.°06×**108.°36E**±0.°07**, h31**^{km}**, n83, σ1**^{s}**77**/79**, mb4.5**/31**, MS3.4**/6**, 1C, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CISI	Cisompet, Garu	1.64	341		Pn	23 20 03.1	+1.4
CISI	Cisompet, Garu	1.64	341	S	Sn	23 20 21.4	-0.3
LEM	Lembang	2.38	342	P	Pb	23 20 16.0	-1.4
	113nm,0.3s,baz=358,slow=2.1,SNR=66						
LEM				S	Sb	23 20 49.2	+2.8
	90nm,0.3s,baz=162,slow=22,SNR=8.7						
LEM				LR	LR	23 21 28.3	
	comp=Z,946nm,18.8s,baz=193,slow=48						
LEM	Lembang	2.38	342	P	Pb	23 20 15.8	-1.6
UGM	Wanagama	2.45	61		Pn	23 20 11.5	-1.3
UGM	Wanagama	2.45	61	P	Pn	23 20 12.1	-0.8
SMRI	Semarang	2.91	45		Pn	23 20 19.2	+0.1
SMRI	Semarang	2.91	45	P	Pn	23 20 19.7	+0.6
XMIS	Christmas Isla	3.00	243		Pn	23 20 22.8	+2.4
KASI	Kota Agung	5.23	313	P	Pn	23 20 55.9	+4.8
	0.2nm27nm,1.3s						
KLSI		5.68	320	P	Pn	23 21 03.7	+6.4
JAGI	Jajag, Banyuwa	5.76	84	Pn	Pn	23 20 58.4	0.0
JAGI	Jajag, Banyuwa	5.76	84	P	Pn	23 20 58.5	+0.1
	0.6nm151nm,0.7s						
MDSI	Maura Dua	6.19	318	P	Pn	23 21 08.6	+4.3
	0.1nm756nm17nm,1.0s						
SRBI	Singaraja	6.85	82	P	Pn	23 21 15.3	+1.9
	0.3nm93nm,0.7s						
MNAI	Manna	7.14	311	Pn	Pn	23 21 17.9	+0.5
TWSI	Taliwang, Sumb	8.43	88	P	Pn	23 21 35.1	0.0
	50nm,0.7s						
PLAI	Plampang	9.31	89	P	Pn	23 21 47.2	+0.1
	107nm,0.7s						
RGRI	Rengat	10.57	325	P	Pn	23 22 09.4	+5.0
KAPI	Kappang	12.01	71	P	Pn	23 22 24.6	+0.4
	0.4nm,0.3s,baz=226,slow=19,SNR=1.4						
KAPI				LR	LR	23 27 12.0	
	comp=Z,161nm,19.7s,baz=246,slow=39						
EDFI	Ende, Flores	13.18	89	P	Pn	23 22 37.6	-2.6
GIRL	Giralia	14.59	158	Pn	Pn	23 22 59.3	-0.1
GSI	Gunungsitoli	14.91	313	Pn	Pn	23 23 02.1	-1.7
SOEI	Soe	15.71	94		Pn	23 23 12.7	-1.6
SOEI				IAmb	IAmb	23 23 20.2	
	comp=Z,31nm,0.7s						
FITZ	Fitzroy Crossi	19.01	120	P	Pn	23 23 56.1	+0.9
	comp=Z,0.1nm,0.3s,baz=278,slow=6.9,SNR=8.5						
FITZ				LR	LR	23 32 37.2	
	comp=Z,82nm,18.9s,baz=300,slow=41						
FITZ	Fitzroy Crossi	19.01	120	P	Pn	23 23 55.2	0.0
NWAO	Narrogin (SRO)	25.08	162	LR	LR	23 34 07.8	
	comp=Z,121nm,21.1s,baz=326,slow=34						
WB0	Warramunga Arr	27.30	116	P	P	23 25 17.6	+0.4
WB0				IAmb	IAmb	23 25 19.1	
	comp=Z,6.1nm,0.8s						
WRA	Warramunga Arr	27.31	116	P	P	23 25 18.2	+1.0
	comp=Z,3.1nm,0.7s,baz=288,slow=11,SNR=14						
WRA	Warramunga Arr	27.31	116	P	P	23 25 17.2	0.0
WRAB	Tennant Creek	27.32	116	P	P	23 25 16.9	-0.4
WB2	Warramunga Arr	27.32	116	P	P	23 25 17.1	-0.2
WR0	Warramunga Arr	27.50	116	P	P	23 25 19.1	+0.2
ASAR	Alice Springs	28.39	124	P	P	23 25 28.1	+1.3
	comp=Z,2.6nm,0.7s,baz=299,slow=8.3,SNR=10						
ASAR				LR	LR	23 38 40.1	
	comp=Z,59nm,18.5s,baz=312,slow=40						
CMAR	Chiang Mai Arr	28.93	341	P	P	23 25 31.2	-0.4
	comp=Z,0.9nm,0.3s,baz=184,slow=9.3,SNR=4.7						
CMAR				LR	LR	23 37 49.1	
	comp=Z,77nm,18.1s,baz=208,slow=38						
COEN	Coen	34.43	101	P	P	23 26 18.9	-1.1
COEN				IAmb	IAmb	23 26 29.8	
	comp=Z,8.6nm,1.4s						
KMI	Kunming	34.46	351	⇑P	P	23 26 26.2	+5.8
KMI				pmax	pmax		
	comp=Z,4.0nm,1.1s						
STKA	Stephens Creek	38.24	131	P	P	23 26 54.5	+2.1
	comp=Z,9.5nm,0.7s,baz=310,slow=9.2,SNR=19						
STKA				LR	LR	23 43 49.2	
	comp=Z,58nm,19.6s,baz=238,slow=38						
STKA	Stephens Creek	38.24	131	P	P	23 26 53.5	+1.1
NJ2	Nanjing	42.14	13	*e*P	P	23 27 27.0	+2.4
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
LZH	Lanzhou	45.16	355	*e*P	P	23 27 51.2	+2.2
LZH				pP	pwP	23 28 01.5	-0.1
LZH				sP	sP	23 28 05.3	+4.7
LZH				pmax	pmax		
	comp=Z,21nm,1.3s						
LZH				pmax	pmax		
	comp=Z,70nm,5.8s						
GTA	Gaotai	48.92	351	*e*P	P	23 28 19.8	+1.4
GTA				pP	sP	23 28 30.4	0.0
GTA				sP	pwP	23 28 33.9	+2.8
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,110nm,4.7s						
GTA				LR	LR		
	comp=Z,87nm,15.3s						
GTA				LR	LR		
	comp=Z,65nm,16.4s						
GTA				LR	LR		
	comp=Z,110nm,17.1s						
JHS	Saijyo	49.73	27	P	P	23 28 23.8	-0.7
HHC	Hu-ho-hao-te	49.80	3	*e*P	P	23 28 26.9	+1.9
HHC				pmax	pmax		
	comp=Z,8.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,100nm,5.5s						
WMQ	Urumqi	55.92	342	*e*P	P	23 29 12.7	+2.6
SONM	Songino Array	56.72	358	P	P	23 29 15.8	0.0
	comp=Z,1.8nm,0.7s,baz=172,slow=7.9,SNR=19						
SONM	Songino Array	56.72	358	P	P	23 29 16.3	+0.5
ULN	Ulaanbaatar	56.73	359	P	P	23 29 15.9	-0.1
ULN				IAmb	IAmb	23 29 17.1	
	comp=Z,3.6nm,0.8s						
KSH	Kashi	56.95	330	P	P	23 29 17.2	-0.4
KSH				pP	pwP	23 29 30.4	+0.7
KSH				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KSH				pmax	pmax		
	comp=Z,110nm,3.9s						
CASY	Casey	57.11	179	P	P	23 29 19.9	+1.7
CASY				IAmb	IAmb	23 29 27.3	
	comp=Z,6.3nm,1.0s						
KBL	Kabul	57.19	322	P	P	23 29 20.2	+0.7
KBL				IAmb	IAmb	23 29 20.8	
	comp=Z,3.0nm,0.9s						
USRK	Ussuriysk Ar.	57.22	20	P	P	23 29 17.7	-1.5
	comp=Z,2.1nm,0.8s,baz=214,slow=10,SNR=4.0						
USRK	Ussuriysk Ar.	57.22	20	P	P	23 29 18.2	-1.0
SHLS	Shalkode	58.30	335	*e*P	P	23 29 26.5	-0.6
	comp=Z,2.3nm,0.7s,baz=336						
SATY	Saty	58.66	335	*e*P	P	23 29 30.0	+0.5
	baz=335						

KPKS	Kokpek	58.88	335	eP	P	23 29 31.3	+0.2
	baz=335						
MDOK	Medeo	59.33	334	eP	P	23 29 34.7	+0.4
	baz=334						
CHKK	Chushkaly	59.91	334	eP	P	23 29 37.6	-0.5
	baz=334						
ZSN	Zaisan	60.05	342	eP	P	23 29 39.6	+0.6
	comp=Z,1.3nm,0.8s,baz=342						
KUU	Kurty	60.22	334	eP	P	23 29 40.0	-0.2
	comp=Z,3.6nm,0.7s,baz=334						
TDK	Taldyqorghan	60.25	336	eP	P	23 29 40.6	+0.2
	comp=Z,5.8nm,0.8s,baz=336						
MK31	Makanchi Array	60.32	340	IAmb	IAmb	23 29 42.1	
	comp=Z,2.6nm,0.7s						
MKAR	Makanchi Array	60.32	340	P	P	23 29 41.5	+0.7
	comp=Z,2.9nm,0.5s,baz=145,slow=7.7,SNR=51						
MKAR	Makanchi Array	60.32	340	P	P	23 29 41.4	+0.6
MAKZ	Makanchi	60.44	339	P	P	23 29 42.5	+0.9
SGDS	Sogindy	60.64	332	eP	P	23 29 43.1	-0.1
	baz=332						
DZA	Taraz	61.79	330	eP	P	23 29 50.6	-0.3
	baz=330						
IUG	Iuzhnay	61.90	328	eP	P	23 29 51.5	-0.3
	baz=328						
BTLS	Baital	62.14	333	eP	P	23 29 52.5	-0.6
	baz=333						
SEM	Semipalatinsk	64.12	340	eP	P	23 30 06.1	-0.4
	comp=Z,2.5nm,0.8s,baz=340						
KURK	Kurchatov	64.93	340	P	P	23 30 12.2	+0.8
KURK				IAmb	IAmb	23 30 13.1	
	comp=Z,5.8nm,0.8s						
ZAA0	Zalesovo Array	65.90	345	IAmb	IAmb	23 30 18.4	
	comp=Z,4.1nm,0.9s						
ZALV	Zalesovo Beam	65.90	345	P	P	23 30 17.5	-0.2
	comp=Z,4.3nm,0.8s,baz=127,slow=3.9,SNR=18						
GEYT	Alibeck	66.22	318	P	P	23 30 21.8	+1.6
	comp=Z,2.0nm,0.9s,baz=163,slow=6.2,SNR=4.7						
GEYT	Alibeck	66.22	318	P	P	23 30 20.6	+0.4
SNZO	South Karori	66.30	131	P	P	23 30 20.5	0.0
BRZS	Berezniki	66.56	336	eP	P	23 30 22.7	+0.7
	comp=Z,1.9nm,0.8s,baz=336						
URZ	Urewera	67.74	128	P	P	23 30 29.1	-0.7
BRVK	Borovoye	69.89	337	P	P	23 30 43.9	+1.1
BRVK				IAmb	IAmb	23 30 44.5	
	comp=Z,5.2nm,0.8s						
ABKAR	Akbulak array	71.90	329	P	P	23 30 56.1	+1.0
ABKAR	Akbulak array	71.90	329	IAmb	IAmb	23 30 57.1	
	comp=Z,8.2nm,0.8s						
KLMR	Klimovskoe	87.86	333	eP	P	23 32 18.3	-2.8
KLMR				AMP		23 32 23.8	
	comp=Z,11nm,1.2s						
MNK	Minsk	91.86	325	i P	P	23 32 35.1	-4.9
	comp=E,3.0nm,1.4s						
MNK				i P	P	23 32 35.1	-4.9
	comp=N,5.0nm,1.0s						
MNK				i P	P	23 32 35.1	-4.9
	comp=Z,7.0nm,1.0s						
MNK				i PP	PP	23 36 14.1	-5.4
MNK				i PPP	PPP	23 38 12.3	
MNK				i S	SKSac	23 43 04.6	-5.9
MNK				i SS	SS	23 49 41.7	-6.0
MNK				i SSS	SSS	23 53 20.3	
MNK				i LQ	LQ	00 06 44.9	
MNK				i LR	LR	00 12 52.6	
MNK				i LRM	MLR	00 14 26.2	
	comp=Z,101nm,19.0s						
MNK				i LRM	MLR	00 14 46.6	
	comp=E,8.0nm,21.7s						
MNK				i LRM	MLR	00 14 46.6	
	comp=N,54nm,14.9s						

VAO ***01*** *23:32:58.6±0.6, 3°.96S×76°.45W, h89^{km}±5^{km}, mb5.0*

MOS ***01*** *23:32:59.1±1.1, 3°.87S×76°.66W, h114^{km}, mb5.1/16, Error ellipse: s-maj=9.9km s-min=4.6km az=106.2*

IGQ ***01*** *23:32:59±0.8, 4°S±5°×7°7W±°, h12^{km}*

BJI ***01*** *23:32:59.0±0.0, 4°.24S×77°.06W, h115^{km}, mB5.2/11*

IDC ***01*** *23:32:59.7±0.5, 3°.90S×76°.64W, h111^{km}±3^{km}, mb4.5/26, mb1 4.7/33, mb1mx4.6/45, mbtmp4.9/33, MS3.6/13, Ms1 3.6/13, ms1mx3.4/31, Error ellipse: s-maj=11.9km s-min=9.0km az=58.0*

NEIC ***01*** *23:33:00.1±1.6, 3°.91S±0°.06×76°.62W±0°.09, h116^{km}±4^{km}, mb5.1/591, Error ellipse: s-maj=12.6km s-min=8.3km az=79.0*

GCMT ***01*** *23:33:02.1±0.2, 3°.98S±0°.01×76°.59W±0°.02, h112^{km}±1^{km}, MW5.0/116, Moment Tensor Solution. s76,c84; s116,c161; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-4.12±.10; $M_{\theta\theta}$1.33±.14; $M_{\phi\phi}$2.79±.15; $M_{r\theta}$-2.21±.08; $M_{\theta\phi}$-0.69±.13; $M_{\phi r}$0.48±.11; Best double couple: $M_0$4.12100×10^{16} NP1:ϕ_s347.00000°, δ36.00000°, λ-63.00000°. NP2:ϕ_s136.00000°, δ59.00000°, λ-108.00000°. Principal axes: T 3.3320, Plg12.0000°, Azm238.0000°; N 1.5790, Plg15.0000°, Azm145.0000°; P -4.9100, Plg71.0000°, Azm5.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 01 23:32:59.0±0.4**, 3°.96S**±0°.04×**76°.63W**±0°.04, **h106**^{km}±3^{km}**, h107**^{km}**:pP-P, n1131,** $\sigma 1^{s}.12$/1045**, mb5.1**/318**, 9C-2D, Northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LOJ1	Universidad t	1.72	269	P	Pn	23 33 37.0	+8.5
BOSC	San Juan Bosco	2.03	293	P	Pn	23 33 29.0	-3.3
BOSC				S	Sn	23 33 52.0	-5.8
ACUE	Ecuador-Cuenca	2.55	294	P	Pn	23 33 39.0	-0.2
ACUE				S	Sn	23 34 09.0	-1.1
GONZ	Gonzanam	2.77	264	P	Pn	23 33 41.0	-1.2
GONZ				S	Sn	23 34 12.0	-3.4
PUYO	Puyo, Santa Ro	2.82	330	P	Pn	23 33 41.0	-1.7
APUY	Puyo	2.84	331	P	Pn	23 33 42.0	-0.9
APUY				S	Sn	23 34 15.0	-1.6
COHC	Cochancay	3.01	300	P	Pn	23 33 44.0	-1.0
PAT1	Patacocha	3.04	324	P	Pn	23 33 45.0	-0.8
ARRY	Arrayan	3.04	323	P	Pn	23 33 44.0	-1.9
BMAS	Trigal station	3.06	323	P	Pn	23 33 45.0	-1.1
BMAS				S	Sn	23 34 19.0	-3.4
BULB	Ulba Tungurahu	3.07	325	P	Pn	23 33 45.0	-1.3
RETU	Refugio	3.08	324	P	Pn	23 33 45.0	-1.5
BRUN	Tungurahua Vol	3.09	325	P	Pn	23 33 45.0	-1.4
RUN5	Runtun	3.10	325	P	Pn	23 33 45.0	-1.6
BBIL	Ulba Tungurahu	3.11	323	P	Pn	23 33 46.0	-0.7
POND	Pondoa	3.11	324	P	Pn	23 33 45.0	-1.7
BIL2	Estacion Bilba	3.11	323	P	Pn	23 33 47.0	+0.3
JUI6	Juive	3.12	324	P	Pn	23 33 44.0	-2.8
IGUA	Igualata	3.17	321	P	Pn	23 33 48.0	+0.3
ARDO	Archidona, Ten	3.17	338	P	Pn	23 33 46.0	-1.3
ARDO				S	Sn	23 34 20.0	-4.5
ACH2	Ecuador-Machal	3.25	282	P	Pn	23 33 46.0	-2.2
CHSH	Refugio Sur-Vo	3.32	318	P	Pn	23 33 49.0	-0.7
MCRA	Macar, Loja	3.34	263	P	Pn	23 33 46.0	-3.5
MILO	Milagro-Astudi	3.36	300	P	Pn	23 33 49.0	-0.8
PIAT	Ana Tenorio	3.37	331	P	Pn	23 33 49.0	-1.2
PIAT				S	Sn	23 34 26.0	-3.6
PIS1	Pisayambo	3.38	329	P	Pn	23 33 49.0	-1.4
ARNL	Arenillas	3.45	277	P	Pn	23 33 47.0	-3.9
SAGO	Sagoatoa	3.45	324	P	Pn	23 33 51.0	-0.5
AMIL	Milagro (Trans	3.47	301	P	Pn	23 33 49.0	-2.2
ATAH	Atahualpa	3.60	209	P	Pn	23 33 54.6	+1.2
	182nm,0.3s,baz=24,slow=9.5,SNR=850						
ATAH				S	Sn	23 34 25.1	-10
	345nm,0.3s,baz=68,slow=14,SNR=5.9						
ISPG	Isla Puna-Puer	3.67	286	P	Pn	23 33 52.0	-1.9
TAMB	Tambo	3.68	332	P	Pn	23 33 54.0	-0.5
BMOR	Cotopaxi Volca	3.69	330	P	Pn	23 33 54.0	-0.7
BTAM	Cotopaxi Volca	3.71	332	P	Pn	23 33 54.0	-1.0
BREF	Cotopaxi Volca	3.74	331	P	Pn	23 33 55.0	-0.4
VC1	Cotopaxi 1	3.74	332	P	Pn	23 33 55.0	-0.4
BNAS	Cotopaxi Volca	3.76	331	P	Pn	23 33 55.0	-0.5
ANTM	Antisana-La Mi	3.76	335	P	Pn	23 33 54.0	-1.5
CAMI	Rancho Maria	3.76	330	P	Pn	23 33 55.0	-0.6
ANTS	Antisana-Sarah	3.77	336	P	Pn	23 33 54.0	-1.8
ANTG	Antisana-Guama	3.80	335	P	Pn	23 33 55.0	-1.1
ANTI	Antisana	3.81	336	P	Pn	23 33 55.0	-1.3
AGUAY	Guayaquil	3.82	300	P	Pn	23 33 53.0	-2.9
PITA	Cotopaxi Volc	3.83	332	P	Pn	23 33 56.0	-0.5
ILLI	Illinizas Sur	3.85	327	P	Pn	23 33 57.0	+0.3
MORR	Playas El Morr	3.93	289	P	Pn	23 33 55.0	-2.3
LAV4	Lava4-Reventad	3.97	345	P	Pn	23 33 57.0	-1.2
CONE	Cono NE Rev Vo	4.00	345	P	Pn	23 33 57.0	-1.6
GGPT	Toaza - Volcan	4.21	332	P	Pn	23 34 01.0	-0.5
ANGU	Angureal	4.21	341	P	Pn	23 34 02.0	+0.2
GGPC	Guagua Pichinc	4.24	332	P	Pn	23 34 02.0	-0.1
GGP	Refugio Guagua	4.24	332	P	Pn	23 34 02.0	-0.1
TERV	Terraza Guagua	4.25	332	P	Pn	23 34 02.0	-0.2
PINO	Pino	4.26	332	P	Pn	23 34 02.0	-0.4
YANA	Yana	4.28	333	P	Pn	23 34 02.0	-0.6
ASDO	Santo Domingo	4.44	326	P	Pn	23 34 06.0	+1.7
IMBA	Imbabura, San	4.49	340	P	Pn	23 34 07.0	+1.6
PTLC	Puerto Leguiza	4.50	24	eP	Pn	23 33 59.7	-5.3
YAHU	Yahuarcocha	4.54	342	P	Pn	23 34 07.0	+1.1
OTAV	Otavalo	4.55	336	P	Pn	23 34 06.0	-0.2
OTAV	Otavalo	4.55	336	Pn	Pn	23 34 06.0	-0.2
OTAV	Otavalo	4.55	336	eP	Pn	23 34 06.5	+0.4
OTAV	Otavalo	4.55	336	P	Pn	23 34 06.0	-0.2
OTAV	Otavalo	4.55	336	eP	Pn	23 34 06.1	-0.2
CUSW	Cuicocha Oeste	4.56	338	P	Pn	23 34 07.0	+0.8
CUIC	Cuicocha-Domo	4.58	338	P	Pn	23 34 07.0	+0.5
CUSE	Cuicocha Este	4.59	337	P	Pn	23 34 07.0	+0.3
APR2	Miler	4.64	330	P	Pn	23 34 08.0	+0.9
PECV	Mancha de Ca P	4.66	313	P	Pn	23 34 08.0	+0.8
URCU	Urcuqui	4.66	340	P	Pn	23 34 08.0	+0.3
SALI	Salinas	4.70	292	P	Pn	23 34 05.0	-2.7
PAC1	Pacto, Paraso	4.72	333	P	Pn	23 34 08.0	-0.2
PPLP	Puerto Lpez	4.78	300	P	Pn	23 34 06.0	-2.9
TULM	Tulcn-Chalpat	4.79	346	P	Pn	23 34 09.0	-0.4
FLFR	Flavio Alfaro	4.81	318	P	Pn	23 34 08.0	-1.3
ATUL	Tulcn	4.83	347	P	Pn	23 34 11.0	+1.2
BV15	Puerto Quito-O	4.84	328	P	Pn	23 34 09.0	-0.7
CHL1	Volc¡n Chiles	4.90	344	P	Pn	23 34 12.0	+1.0
CHL2	Volc¡n Chiles	4.91	345	P	Pn	23 34 12.0	+1.0
ECEN	Cerro Negro	4.94	344	P	Pn	23 34 13.0	+1.5
MAG1	Magdalena	4.98	321	P	Pn	23 34 10.0	-1.6
CPAS2	Pasto	5.19	353	eP	Pn	23 34 13.7	-0.9
CAB1	Cabo Pasado-Ma	5.20	313	P	Pn	23 34 12.0	-2.5
CABP	Cabo Pasado	5.20	313	P	Pn	23 34 12.0	-2.5
GCUF	Volcan Galeras	5.20	352	eP	Pn	23 34 15.6	+0.6
CCUFI	Cufio, Nario	5.21	352	eP	Pn	23 34 15.8	+0.7
GARC	Garzon, Huila	6.21	11	eP	Pn	23 34 27.7	-0.8
PCON	Cinco Dias	6.25	2	eP	Pn	23 34 28.5	-0.8
MACC	Macarena, Meta	6.68	25	eP	Pn	23 34 33.4	-1.2
BETC	Betania	6.71	10	eP	Pn	23 34 35.9	+0.8
MARP	Paez Belalcaza	6.79	6	eP	Pn	23 34 36.4	0.0
GUVC	San Jose del G	7.60	32	eP	Pn	23 34 47.4	+0.2
YOTC	Yotoco, Valle	7.90	2	eP	Pn	23 34 50.8	-0.5
ORTC	Ortega, Tolima	7.94	10	eP	Pn	23 34 52.4	+0.6
MALC	Bahia Malaga	7.96	355	eP	Pn	23 34 53.0	+1.1
NNA	Nana	7.97	181	P	Pn	23 34 52.6	+0.4
	125nm,0.3s,baz=359,slow=8.4,SNR=178						
NNA				S	Sn	23 36 15.0	-5.9
	67nm,0.3s,baz=110,slow=21,SNR=2.0						
NNA	Nana	7.97	181	d iP	Pn	23 34 53.0	+0.8
NNA	Nana	7.97	181	P	Pn	23 34 51.0	-1.2
ANIL	Santa Ana	8.49	8	eP	Pn	23 35 01.5	+2.0
TOLC	Tolima	8.59	9	eP	Pn	23 35 03.3	+2.4
PLMC	San Jos del P	8.82	2	eP	Pn	23 35 04.2	+0.5
RREF	El Recreo	8.90	8	eP	Pn	23 35 07.1	+1.8
RREF				eP		23 35 08.1	
CHIC	Chingaza	9.02	19	eP	Pn	23 35 06.6	-0.1
ROSC	El Rosal	9.04	15	P	Pn	23 35 08.9	+1.8
	4.9nm,0.3s,baz=191,slow=19,SNR=11						
ROSC	El Rosal	9.04	15	P	Pn	23 35 07.9	+0.8
ROSC	El Rosal	9.04	15	Pn	Pn	23 35 07.9	+0.8
GUY2C	Guyana, Caldas	9.21	8	eP	Pn	23 35 10.8	+1.4
PTGC	Puerto Gaitan,	9.27	29	eP	Pn	23 35 09.0	-0.8
NORC	Norcasia	9.63	11	eP	Pn	23 35 14.2	-0.5
CBOC	Ciudad Bolivar	9.78	4	eP	Pn	23 35 18.0	+1.1
SPBC	San Pablo de B	9.89	15	eP	Pn	23 35 17.8	-0.5
HELC	Santa Helena	10.15	6	eP	Pn	23 35 23.7	+1.6
RUSC	La Rusia	10.41	20	eP	Pn	23 35 25.6	-0.1
PTBC	PUERTO BERRIO,	10.66	12	eP	Pn	23 35 29.6	+0.9
BARC	Barichara	11.04	18	eP	Pn	23 35 34.6	+0.6
BRRC	Barranca, Sant	11.38	15	eP	Pn	23 35 38.1	-0.2
TAMC	Tame, Arauca	11.40	25	eP	Pn	23 35 38.3	-0.4
ZARC	Zaragoza, Cauc	11.52	9	eP	Pn	23 35 37.8	-2.4
UREC	San Jos de Ur	11.69	5	eP	Pn	23 35 43.9	+1.3
ETMB	Extrema	11.86	120	eP	Pn	23 35 41.1	-3.7
PAMC	Pamplona, Colo	11.89	19	eP	Pn	23 35 47.1	+1.5
OCAC	Ocana	12.56	15	eP	Pn	23 35 54.4	+0.2
SMLC	San Martn de	12.94	11	eP	Pn	23 35 58.4	-0.5
BCIP	Isla Barro Col	13.43	346	P	Pn	23 36 05.8	+0.5
BCIP	Isla Barro Col	13.43	346	Pn	Pn	23 36 05.8	+0.5
PAYG	Puerto Ayora	14.03	283	Pn	Pn	23 36 12.4	-0.8
SDV	Santo Domingo	14.10	25	P	Pn	23 36 15.0	+0.7
	5.5nm,0.3s,baz=202,slow=9.7,SNR=26						
SDV	Santo Domingo	14.10	25	eP	Pn	23 36 14.9	+0.7
SDV	Santo Domingo	14.10	25	eP	Pn	23 36 13.3	-1.0
SAML	Samuel	14.25	111	P	Pn	23 36 15.0	-1.0
SAML	Samuel	14.25	111	Pn	Pn	23 36 15.0	-1.0
SAML	Samuel	14.25	111	eP	Pn	23 36 12.6	-3.4
AP01	Chacalluta	15.59	157	Pn	Pn	23 36 33.7	+0.8
HDC	Heredia	15.75	332	Pn	Pn	23 36 35.0	-0.1
HDC				IAmb	IAmb	23 36 45.3	
	comp=Z,52nm,0.5s						
PB16	IPOC Station P	15.89	155	Pn	Pn	23 36 37.7	+0.4
PB16				IAmb	IAmb	23 36 45.9	
	comp=Z,85nm,0.9s						
MACA	Manacapuru-AM	15.94	88	eP	Pn	23 36 35.8	-1.5
JTS	Las Juntas de	16.41	330	i P	Pn	23 36 43.4	+0.3
JTS				pmax	pmax		
	comp=Z,33nm,0.9s						
JTS	Las Juntas de	16.41	330	Pn	Pn	23 36 42.4	-0.7
JTS				IAmb	IAmb	23 36 47.9	
	comp=Z,78nm,1.1s						
MNMC	Minye Minye	16.57	156		Pn	23 36 45.4	+0.1
MNMC				IAmb	IAmb	23 36 50.4	
	comp=Z,136nm,1.0s						
PSGCX	Pisagua	16.79	158		P	23 36 48.4	+0.2
PTGA	Pitinga	16.96	80	P	Pn	23 36 48.6	-1.2
	comp=Z,2.2nm,0.3s,baz=269,slow=14,SNR=17						
PTGA				S	Sn	23 39 49.7	-8.9
	comp=Z,4.1nm,0.3s,baz=354,slow=16,SNR=5.0						
PTGA	Pitinga	16.96	80		Pn	23 36 48.7	-1.2
PTGA	Pitinga	16.96	80	eP	Pn	23 36 48.2	-1.7
PB08	IPOC Station P	17.65	156	P	Pn	23 36 59.5	+0.9
TA01	Diego Aracena	17.66	160		Pn	23 36 59.7	+1.4
ESPN	Las Esperanzas	17.77	335	P	Pn	23 36 59.5	-0.2
ESPN				IAmb	IAmb	23 37 18.8	
	comp=Z,101nm,0.7s						
ACON	Acoyapa	17.96	332	P	P	23 37 01.5	+0.3
PB01	IPOC Station P	18.34	158	IAmb	IAmb	23 37 15.3	
	comp=Z,96nm,1.1s						
PCRV	Puerto La Cruz	18.44	40	P	Pn	23 37 07.5	-0.3
	comp=Z,4.2nm,0.3s,baz=203,slow=7.8,SNR=17						
VILB	Vilhena	18.53	120	eP	P	23 37 08.1	+0.7
PB07	IPOC Station P	18.83	160		Pn	23 37 13.2	+0.7
PB07				IAmb	IAmb	23 37 14.6	
	comp=Z,83nm,0.9s						
PB04	IPOC Station P	19.31	162	P	Pn	23 37 17.9	-0.3
PB04				IAmb	IAmb	23 37 19.5	
	comp=Z,72nm,1.0s						
SIV	San Ignacio	19.41	129	P	P	23 37 18.2	+1.1
	comp=Z,2.4nm,0.3s,baz=312,slow=8.9,SNR=34						
SIV				LR	LR	23 46 03.8	
	comp=Z,156nm,18.6s,baz=304,slow=40						
PB06	IPOC Station P	19.85	160	P	P	23 37 23.2	+1.4
PB06				IAmb	IAmb	23 37 35.3	
	comp=Z,54nm,0.7s						
LVC	Limon Verde	19.99	159	P	Pn	23 37 25.4	-0.9
	comp=Z,21nm,1.0s,baz=331,slow=7.0,SNR=13						
LVC				S	Sn	23 41 09.8	-1.8
	comp=Z,2.3nm,0.5s,baz=350,slow=13,SNR=1.6						
LVC	Limon Verde	19.99	159	ceP	Pn	23 37 26.6	+0.4
LVC				pmax	pmax		
	comp=Z,108nm,1.7s						
LVC	Limon Verde	19.99	159		Pn	23 37 25.6	-0.7
LVC				IAmb	IAmb	23 37 35.9	
	comp=Z,110nm,1.1s						
LVC	Limon Verde	19.99	159	eP	P	23 37 24.7	+1.1
PB10	IPOC Station P	20.30	164	P	P	23 37 28.0	+1.4
PB15	IPOC Station P	20.35	161	P	Pn	23 37 29.0	-1.3
TGUH	Tegucigalpa,Un	20.78	330	P	P	23 37 32.5	+0.6
TGUH				IAmb	IAmb	23 37 33.8	
	comp=Z,59nm,1.0s						
ITTB	Itaituba	20.85	92	eP	P	23 37 30.7	-1.8
NPGB	Novo Progresso	21.39	99	eP	P	23 37 36.0	-2.4
PB14	IPOC Station P	21.40	164	P	P	23 37 39.7	+1.0
GRGR	Grenville	21.85	43	P	P	23 37 44.0	+0.8
GRGR				IAmb	IAmb	23 37 55.4	
	comp=Z,108nm,0.9s						
TOSP	Speyside	22.05	46	P	P	23 37 47.0	+1.7
TOSP				IAmb	IAmb	23 37 51.0	
	comp=Z,56nm,0.7s						
MTDJ	Mount Denham	22.07	358	P	P	23 37 46.0	+0.5
MTO3	Montecristo	22.18	326	P	P	23 37 47.9	+1.0
MTO3				IAmb	IAmb	23 37 49.4	
	comp=Z,66nm,1.1s						
ESQI	Esquipulas	22.30	326	P	P	23 37 48.6	+0.6
JAKH	Jacmel	22.43	10	P	P	23 37 48.0	-1.2
JAKH				IAmb	IAmb	23 37 52.0	
	comp=Z,115nm,1.0s						
MALB	Monte Alegre	22.44	85	eP	P	23 37 49.2	-0.1
LGNH	Logne	22.68	10	P	P	23 37 52.7	+1.0
AC01	Pan de Azucar	22.80	166	P	P	23 37 55.2	+2.3
SVB	Belmont	22.95	41	P	P	23 37 53.5	-0.9
SVB				IAmb	IAmb	23 38 09.2	
	comp=Z,71nm,1.1s						
BANI	BANI	23.06	15	P	P	23 37 56.8	+1.3
SDD	Santo Domingo	23.24	16	P	P	23 37 57.5	+0.4
SDD				IAmb	IAmb	23 37 59.8	
	comp=Z,90nm,0.9s						
SDDR	Presa de Saban	23.40	13	P	P	23 37 58.5	-0.2
SDDR				IAmb	IAmb	23 38 17.9	
	comp=Z,59nm,0.9s						
FSCY	Frank Sound, G	23.56	349	P	P	23 38 00.7	+0.7
DR12	Loma Pena Alta	23.71	17	P	P	23 38 02.3	+0.9
LCCY	Blossom Villag	23.73	352	P	P	23 38 01.7	+0.2
CBCY	The Bluff, Cay	23.75	353	P	P	23 38 02.6	+0.9
CRPR	Cabo Rojo, PR	23.77	23	P	P	23 38 01.7	-0.1
GTBY	Guantanamo Bay	23.79	4	P	P	23 38 00.6	-1.4
GTBY				IAmb	IAmb	23 38 07.1	
	comp=Z,57nm,1.0s						
AC02	Maricunga	23.85	163	P	P	23 38 05.1	+1.9
ICMP	Isla Caja de M	23.89	24	P	P	23 38 01.6	-1.4
ICMP				IAmb	IAmb	23 38 04.2	
	comp=Z,84nm,1.1s						
MPR	Mayaguez	23.94	23	P	P	23 38 03.8	+0.4
MPR				IAmb	IAmb	23 38 09.4	
	comp=Z,56nm,1.1s						
SC01	Santiago de lo	23.96	14	P	P	23 38 04.7	+1.1
OBIP	Obispado Ponce	24.00	24	P	P	23 38 03.5	-0.4
PDPR	Patillas Dam,	24.22	25	IAmb	IAmb	23 38 07.0	
	comp=Z,60nm,0.8s						
SJG	San Juan	24.25	25	P	P	23 38 05.9	-0.2
	comp=Z,61nm,0.8s,baz=222,slow=4.9,SNR=20						
SJG	San Juan	24.25	25	P	P	23 38 06.0	-0.2
SJG				pmax	pmax		
	comp=Z,75nm,0.9s						
SJG	San Juan	24.25	25	P	P	23 38 06.0	-0.2
SJG				IAmb	IAmb	23 38 07.3	
	comp=Z,75nm,0.8s						
GO03	Copiap	24.28	166	P	P	23 38 08.1	+1.6
HUMP	Col San Antoni	24.40	26	P	P	23 38 02.7	-4.9
MTP	Monte Pirata	24.49	26	P	P	23 38 09.0	+0.6
CBYP	Canovanas	24.52	25	IAmb	IAmb	23 38 10.1	
	comp=Z,65nm,0.8s						
PETF	Flores	24.52	328	P	P	23 38 09.3	+0.6
CDVI	St. Croix	24.55	28	P	P	23 38 08.6	-0.3
CDVI				IAmb	IAmb	23 38 10.3	
	comp=Z,90nm,0.8s						
AC04	Llanos de Chal	24.68	168	P	P	23 38 11.4	+1.3
CUPR	Culebra, Puert	24.80	26	P	P	23 38 10.4	-0.8
MCPB	Macapa, AP	24.81	82	eP	P	23 38 12.2	+0.7
SKI	Saint Kitts	25.22	33	P	P	23 38 13.6	-1.5
SKI				pmax	pmax		
	comp=Z,147nm,0.8s						
SKI	Saint Kitts	25.22	33	P	P	23 38 13.6	-1.5
PP1B	Ponte de Pedra	25.26	124	eP	P	23 38 16.5	+1.0
CCIG	Comitan	25.29	323	P	P	23 38 16.3	+0.3
AC05	El Transito	25.46	167	P	P	23 38 17.9	+0.6
LCO	Las Campanas	25.54	168	P	P	23 38 19.6	+1.4
LCO				pmax	pmax		
	comp=Z,21nm,1.1s						
LCO	Las Campanas	25.54	168	P	P	23 38 19.6	+1.4
MDP	Montagnes des	25.60	70	P	P	23 38 19.3	+0.7
	comp=Z,13nm,0.4s,baz=256,slow=5.4,SNR=43						
AQDB	Aquidauana	26.17	131	eP	P	23 38 23.8	+0.2
SNDB	Serra Nova Dou	26.30	109	eP	P	23 38 25.4	+0.5
CO01	Juntas del Tor	26.60	167	P	P	23 38 29.0	+1.3
TEIG	Tepich	26.62	335	P	P	23 38 27.4	-0.2
GO04	Tololo Observa	26.65	169	P	P	23 38 28.8	+0.7
PRPB	Parauapebas	26.80	96	eP	P	23 38 29.2	-0.3
ARAG	Araguaiana, MT	27.05	117	eP	P	23 38 31.8	+0.1
CO03	El Pedregal	27.31	169	P	P	23 38 35.1	+1.2
CO02	Combarbal	27.61	170	P	P	23 38 38.0	+1.4
CMIG	Matias Romero	27.62	320	P	P	23 38 37.2	+0.5
	comp=Z,7.6nm,0.7s,baz=126,slow=8.2,SNR=16						
ZON	Zonda	28.44	166	P	P	23 38 45.0	+1.1
ZON				pmax	pmax		
	comp=Z,15nm,1.2s						
ZON	Zonda	28.44	166	P	P	23 38 45.0	+1.1
TMAB	Tom-Au,PA,Br	28.54	88	eP	P	23 38 44.1	-0.8
CPUP	Villa Florida	28.92	142	P	P	23 38 49.5	+1.3
	comp=Z,3.1nm,0.6s,baz=328,slow=9.7,SNR=12						
CPUP				LR	LR	23 52 45.0	
	comp=Z,106nm,18.1s,baz=319,slow=41						
CPUP	Villa Florida	28.92	142	P	P	23 38 49.0	+0.8
CPUP	Villa Florida	28.92	142	eP	P	23 38 49.1	+0.9
VA03	San Esteban	29.21	169	P	P	23 38 51.8	+1.0
SMTB	Santa Maria do	29.26	101	eP	P	23 38 51.4	+0.1
ROC1	El Roble	29.34	170	P	P	23 38 52.1	0.0
PEL	Peldehue	29.56	170	P	P	23 38 55.2	+1.4
PEL				pmax	pmax		
	comp=Z,57nm,0.8s						
PEL	Peldehue	29.56	170	P	P	23 38 55.1	+1.4
MT02	Curacav	29.59	171	P	P	23 38 55.9	+1.8
VA04	Juan Fernndez	29.60	184	P	P	23 38 55.3	+1.3
MT05	Renca	29.79	170	P	P	23 38 56.9	+1.1
TRCB	Terra Rica	29.83	131	eP	P	23 38 56.0	-0.4
061Z	Ochoppi	29.94	352	P	P	23 38 57.8	+0.7
ITRB	Iturama	30.02	124	eP	P	23 38 58.1	0.0
PCMB	Pacaembu	30.23	128	eP	P	23 38 58.8	-1.1
TLIG	Tlapa	30.43	315	P	P	23 39 02.6	+0.8
BDFB	Brasilia	30.44	114	P	P	23 39 02.5	+0.6
	comp=Z,2.2nm,0.5s,baz=279,slow=13,SNR=6.9						
BDFB				LR	LR	23 53 53.4	
	comp=Z,136nm,18.6s,baz=305,slow=41						
BDFB	Brasilia	30.44	114	P	P	23 39 02.9	+1.0
BDFB				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BDFB	Brasilia	30.44	114	P	P	23 39 02.9	+1.0
IPMB	Ipameri, GO	31.11	119	eP	P	23 39 07.7	0.0
BO02	Sierra Bellavi	31.15	171	P	P	23 39 09.3	+1.5
PTGB	Pitanga	31.38	133	eP	P	23 39 09.9	-0.1
ITQB	Itaqui	31.82	146	eP	P	23 39 14.5	+0.7
BB19B	Bebedouro	32.17	124	eP	P	23 39 16.9	-0.1
DWPF	Disney Wildern	32.22	352	P	P	23 39 18.7	+1.5
	baz=171						
DWPF	Disney Wildern	32.22	352	P	P	23 39 17.5	+0.3
ROSB	Rosrio	32.47	89	eP	P	23 39 19.2	-0.4
SDBA	SAO DESIDERIO	32.48	107	eP	P	23 39 19.3	-0.4
FRTB	Fartura	32.48	129	eP	P	23 39 19.3	-0.4
BI03	Tigo	32.89	175	P	P	23 39 23.6	+0.6
BI03				IAmb	IAmb	23 39 26.0	
	comp=Z,29nm,0.9s						
ITAB	Concordia	32.91	137	eP	P	23 39 23.0	-0.3
656A	Willston	33.62	351	P	P	23 39 29.1	-0.3
JANB	Januaria	33.67	111	eP	P	23 39 29.9	-0.2
MOIG	Morelia	33.69	315	P	P	23 39 30.4	0.0
MOIG				IAmb	IAmb	23 39 33.1	
	comp=Z,42nm,0.9s						
LC01	Cunco	35.04	174	IAmb	IAmb	23 39 43.4	
	comp=Z,21nm,0.8s						
NBPS	Pedro II - PI	35.09	92	eP	P	23 39 41.9	-0.6
PLTB	Pedras Altas	35.11	145	eP	P	23 39 41.8	-0.5
CNLB	Canela	35.11	139	eP	P	23 39 42.0	-0.4
DIAM	Diamantina, MG	35.24	116	eP	P	23 39 43.4	-0.3
BSCB	Bom Sucesso	35.29	121	eP	P	23 39 44.0	0.0
255A	Hazlehurst	36.12	352	P	P	23 39 51.3	+0.5
255A				IAmb	IAmb	23 39 54.4	
	comp=Z,17nm,0.8s						
ZAIG	Zacatecas	36.71	318	P	P	23 39 57.0	+0.7
154A	Montrose	36.89	351	P	P	23 39 57.2	-0.2
CSU	Charleston Sou	36.89	355	P	P	23 39 57.9	+0.5
250A	Grady	36.90	346	P	P	23 39 56.9	-0.6
PLCA	Paso Flores	37.01	172	P	P	23 39 59.3	+0.8
	comp=Z,11nm,0.9s,baz=346,slow=11,SNR=17						
PLCA	Paso Flores	37.01	172	eP	P	23 39 59.1	+0.7
NHSC	New Hope	37.02	355	P	P	23 39 59.9	+1.4
	baz=174,SNR=10						
Z59A	Georgetown, SC	37.09	356	P	P	23 40 00.3	+1.2
	baz=176						
346A	Big Creek Wild	37.22	342	P	P	23 39 59.8	-0.4
152A	Waverly Hall	37.23	349	IAmb	IAmb	23 40 01.3	
	comp=Z,27nm,0.9s						

Z56A	Williston	37.36	353	P	P	23 40 01.1	-0.2
SJMB	Sao Joao De Ma	37.61	116	eP	P	23 40 03.0	-0.7
344A	Westbrook Farm	37.70	340	P	P	23 40 04.3	+0.1
GOGA	Godfrey	37.73	351	P	P	23 40 04.9	+0.4
	baz=169,SNR=6.6						
GOGA	Godfrey	37.73	351	P	P	23 40 05.1	+0.6
GOGA				pmax	pmax		
	comp=Z,45nm,2.0s						
GOGA	Godfrey	37.73	351	IAmb	IAmb	23 40 05.7	
	comp=Z,27nm,1.0s						
Z51A	Franklin	37.95	348	P	P	23 40 06.3	0.0
Z51A				IAmb	IAmb	23 40 07.4	
	comp=Z,26nm,0.9s						
BSFB	Barra de Sao F	37.95	116	eP	P	23 40 06.3	-0.3
LRAL	Lakeview Retre	38.09	346	P	P	23 40 07.4	-0.1
	baz=163,SNR=13						
LRAL	Lakeview Retre	38.09	346	IAmb	IAmb	23 40 08.3	
	comp=Z,40nm,1.0s						
342A	Flagon Creek P	38.19	338	P	P	23 40 08.3	0.0
342A				IAmb	IAmb	23 40 10.5	
	comp=Z,31nm,0.8s						
VBMS	Vicksburg	38.33	341	P	P	23 40 09.3	-0.2
X60A	Albert Glenn T	38.36	358	P	P	23 40 10.4	+0.7
	baz=178						
HODGE	Hodges	38.36	352	IAmb	IAmb	23 40 10.7	
	comp=Z,14nm,0.7s						
X59A	McDuffie Farm,	38.38	357	P	P	23 40 10.9	+1.1
	baz=177,SNR=5.3						
HKT	Hockley	38.41	333	ceP	P	23 40 11.2	+1.1
HKT				pmax	pmax		
	comp=Z,14nm,1.7s						
HKT	Hockley	38.41	333	P	P	23 40 09.6	-0.6
735A	Kenedy	38.46	329	P	P	23 40 11.2	+0.5
BIRD	Birdtown, Kers	38.57	355	P	P	23 40 11.1	-0.4
BIRD				IAmb	IAmb	23 40 13.1	
	comp=Z,37nm,1.1s						
Y49A	Blount Mountai	38.74	347	IAmb	IAmb	23 40 12.8	
	comp=Z,16nm,0.8s						
W60A	Pink Hill	38.82	359	P	P	23 40 14.5	+0.9
	baz=178						
W58A	Raeford	38.85	357	P	P	23 40 14.5	+0.7
	baz=176,SNR=11						
833A	Chaparral WMA,	38.87	327	P	P	23 40 15.6	+1.5
	baz=142						
W61A	Ground Anchor	38.94	360	P	P	23 40 16.0	+1.5
	baz=179						
W59A	Clinton	38.96	358	P	P	23 40 15.7	+0.9
	baz=177						
CNNC	Cliffs of the	39.01	358	P	P	23 40 15.4	+0.2
CNNC				IAmb	IAmb	23 40 17.6	
	comp=Z,19nm,0.8s						
143A	Socs Landing,	39.07	340	IAmb	IAmb	23 40 17.5	
	comp=Z,43nm,0.9s						
W56A	Indian Trail	39.07	355	P	P	23 40 15.9	+0.3
	baz=174,SNR=7.1						
GO07	Milladeo Hill,	39.07	177	P	P	23 40 16.1	+0.5
X51A	Calhoun	39.10	349	P	P	23 40 16.1	+0.2
KMSC	Kings Mountain	39.15	354	P	P	23 40 16.8	+0.5
	baz=173,SNR=9.5						
KMSC	Kings Mountain	39.15	354	IAmb	IAmb	23 40 18.0	
	comp=Z,44nm,1.0s						
BG3	Lake Jocassee	39.20	352	IAmb	IAmb	23 40 18.4	
	comp=Z,24nm,0.9s						
FPAL	Fort Paine	39.22	348	IAmb	IAmb	23 40 17.6	
	comp=Z,41nm,0.9s						
NBPA	Parau_RN	39.41	94	eP	P	23 40 18.1	-0.7
X48A	Hartselle	39.45	346	IAmb	IAmb	23 40 19.2	
	comp=Z,28nm,0.8s						
W52A	Murphy	39.45	351	IAmb	IAmb	23 40 20.1	
	comp=Z,29nm,0.8s						
NATX	Nacogdoches	39.45	335	P	P	23 40 19.4	+0.5
	baz=151						
NATX	Nacogdoches	39.45	335	P	P	23 40 18.9	0.0
NATX				IAmb	IAmb	23 40 20.1	
	comp=Z,32nm,0.8s						
V60A	Jim Taylor Roa	39.52	359	P	P	23 40 20.3	+0.9
	baz=179						
V60A	Jim Taylor Roa	39.52	359	P	P	23 40 19.3	-0.1
V60A				IAmb	IAmb	23 40 21.4	
	comp=Z,38nm,0.9s						
V61A	Roper	39.55	0	P	P	23 40 21.3	+1.8
	baz=180						
V59A	Middlesex	39.55	358	P	P	23 40 20.3	+0.6
	baz=178,SNR=6.9						
V58A	Windy Hill, Pi	39.62	357	P	P	23 40 20.9	+0.7
	baz=176,SNR=6.3						
V58A	Windy Hill, Pi	39.62	357	IAmb	IAmb	23 40 21.6	
	comp=Z,38nm,1.1s						
NBLI	Livramento-PB	39.62	97	eP	P	23 40 20.5	-0.2
V56A	Mocksville	39.73	355	P	P	23 40 21.8	+0.6
	baz=174,SNR=9.9						
V57A	Coltrane Farms	39.75	356	P	P	23 40 21.6	+0.3
	baz=175,SNR=5.3						
V55A	Taylorsville	39.84	354	P	P	23 40 22.1	0.0
V53A	Saluda	39.85	352	P	P	23 40 21.6	-0.6
V53A				IAmb	IAmb	23 40 23.4	
	comp=Z,23nm,0.9s						
CPCT	Cooper Cave	39.90	350	IAmb	IAmb	23 40 23.7	
	comp=Z,40nm,0.9s						
435B	Jarrell	39.93	331	P	P	23 40 24.2	+1.3
	baz=146						
435B	Jarrell	39.93	331	P	P	23 40 22.5	-0.4
435B				IAmb	IAmb	23 40 24.7	
	comp=Z,30nm,0.9s						
SWET	Sewanee	39.94	348	IAmb	IAmb	23 40 23.4	
	comp=Z,34nm,0.8s						
TKL	Tuckaleechee C	39.98	351	P	P	23 40 23.1	-0.1
	comp=Z,9.8nm,0.7s,baz=170,slow=9.9,SNR=10						
TKL	Tuckaleechee C	39.98	351	IAmb	IAmb	23 40 24.1	
	comp=Z,28nm,1.1s						
Z41A	Richland Creek	40.06	339	P	P	23 40 23.8	-0.1
	baz=154						
U61A	Possum Corner	40.09	0	P	P	23 40 25.4	+1.3
	baz=180						
U61A	Possum Corner	40.09	0	P	P	23 40 23.1	-1.0
OXF	Oxford	40.12	344	P	P	23 40 24.0	-0.3
	baz=160						
OXF	Oxford	40.12	344	P	P	23 40 23.1	-1.3
OXF				pmax	pmax		
	comp=Z,23nm,0.7s						
OXF	Oxford	40.12	344	P	P	23 40 23.1	-1.3
OXF				IAmb	IAmb	23 40 24.2	
	comp=Z,23nm,0.7s						
U59A	Littleton	40.12	359	P	P	23 40 25.5	+1.1
	baz=178						
U59A	Littleton	40.12	359	P	P	23 40 23.9	-0.5
237A	Washetta, Mont	40.15	334	P	P	23 40 23.8	-0.8
U58A	Oxford	40.19	358	P	P	23 40 25.7	+0.8
	baz=177						
PLAL	Pickwick Lake	40.21	345	IAmb	IAmb	23 40 25.6	
	comp=Z,30nm,0.9s						
U60A	Pendleton	40.23	359	P	P	23 40 26.1	+0.9
	baz=179						
U56A	King	40.25	355	P	P	23 40 26.1	+0.6
	baz=174,SNR=14						
U57A	Blanch	40.27	357	P	P	23 40 25.7	+0.2
	baz=176,SNR=7.9						
WLAR	White Oak Lake	40.56	339	P	P	23 40 27.8	-0.2
WLAR				IAmb	IAmb	23 40 29.2	
	comp=Z,45nm,0.9s						
U54A	Nelsons Funny	40.56	354	P	P	23 40 28.4	+0.3
	baz=172,SNR=9.8						
U54A	Nelsons Funny	40.56	354	IAmb	IAmb	23 40 29.5	
	comp=Z,43nm,0.9s						
W45A	Hickory Valley	40.66	344	P	P	23 40 28.0	-0.8
T59A	Double "B" Far	40.73	359	P	P	23 40 30.0	+0.7
	baz=179,SNR=7.1						
T59A	Double "B" Far	40.73	359	P	P	23 40 29.7	+0.3
T59A				IAmb	IAmb	23 40 31.2	
	comp=Z,41nm,1.0s						
T58A	Grand View Acr	40.74	358	P	P	23 40 30.3	+0.9
	baz=177,SNR=9.0						
JCT	Junction City	40.79	329	P	P	23 40 30.8	+0.8
JCT				pmax	pmax		
	comp=Z,13nm,0.8s						
JCT	Junction City	40.79	329	P	P	23 40 30.8	+0.8
TZTN	Tazewell	40.81	351	P	P	23 40 29.7	-0.4
	baz=169,SNR=16						
T57A	Hurt	40.82	357	P	P	23 40 30.5	+0.4
	baz=176,SNR=12						
T57A	Hurt	40.82	357	IAmb	IAmb	23 40 31.6	
	comp=Z,41nm,0.9s						
MET	Memphis--Engin	40.84	343	P	P	23 40 29.7	-0.6
CLTN	Cedars of Leba	40.87	348	IAmb	IAmb	23 40 31.0	
	comp=Z,32nm,1.0s						
WHTX	Lake Whitney,	40.88	333	P	P	23 40 31.4	+0.8
	baz=147						
WHTX	Lake Whitney,	40.88	333	P	P	23 40 30.9	+0.3
T60A	Surry	40.89	360	P	P	23 40 31.8	+1.1
	baz=180						
T60A	Surry	40.89	360	P	P	23 40 31.1	+0.4
T60A				IAmb	IAmb	23 40 33.5	
	comp=Z,42nm,0.8s						
Z38A	Mt. Pleasant	40.90	336	P	P	23 40 31.0	+0.2
T56A	Rocky Mt	40.90	356	P	P	23 40 31.9	+1.1
	baz=175,SNR=5.8						
BLA	Blacksburg	41.12	355	P	P	23 40 33.4	+0.8
	baz=174,SNR=5.5						
BLA	Blacksburg	41.12	355	P	P	23 40 32.4	-0.2
BLA				pmax	pmax		
	comp=Z,32nm,1.0s						
BLA	Blacksburg	41.12	355	P	P	23 40 32.4	-0.2
BLA				IAmb	IAmb	23 40 34.5	
	comp=Z,32nm,0.9s						
X40A	Basin Creek Fa	41.18	340	P	P	23 40 32.1	-1.0
WVT	Waverly	41.24	346	P	P	23 40 31.9	-1.7
	baz=163						
WVT	Waverly	41.24	346	P	P	23 40 32.3	-1.2
WVT				pmax	pmax		
	comp=Z,28nm,1.1s						
WVT	Waverly	41.24	346	P	P	23 40 32.3	-1.2
WVT				IAmb	IAmb	23 40 32.9	
	comp=Z,28nm,1.1s						
S58A	Poland Farm, P	41.38	358	P	P	23 40 35.6	+0.8
	baz=178						
S58A	Poland Farm, P	41.38	358	P	P	23 40 34.8	+0.1
LPAR	Lepanto	41.39	343	P	P	23 40 33.8	-1.0
HALT	Halls	41.41	344	P	P	23 40 33.5	-1.4
HALT				IAmb	IAmb	23 40 35.0	
	comp=Z,37nm,0.7s						
HBAR	Harrisburg	41.45	343	P	P	23 40 34.8	-0.5
MIAR	Mount Ida	41.50	339	P	P	23 40 35.0	-0.7
	baz=154						
MIAR	Mount Ida	41.50	339	P	P	23 40 35.0	-0.7
MIAR				pmax	pmax		
	comp=Z,18nm,1.2s						
MIAR	Mount Ida	41.50	339	P	P	23 40 35.0	-0.7
NBRF	Rio Formoso -	41.50	99	eP	P	23 40 35.7	-0.4
S56A	Natural Bridge	41.52	356	P	P	23 40 36.6	+0.7
	baz=176						
S59A	Mechanicsville	41.52	359	P	P	23 40 36.9	+1.1
	baz=179						
S57A	Dark Hollow, R	41.57	357	P	P	23 40 36.6	+0.4
	baz=176,SNR=11						
S57A	Dark Hollow, R	41.57	357	IAmb	IAmb	23 40 38.0	
	comp=Z,32nm,1.0s						
W41B	Gary Mavity, V	41.60	341	P	P	23 40 35.8	-0.8
	baz=156						
LNXT	Lenox	41.63	344	P	P	23 40 35.5	-1.3
GNAR	Gosnell	41.65	344	P	P	23 40 36.3	-0.6
WHAR	Wooly Hollow	41.72	341	IAmb	IAmb	23 40 37.7	
	comp=Z,28nm,0.9s						
R58B	Mineral	41.73	359	P	P	23 40 38.2	+0.7
	baz=178						
R58B	Mineral	41.73	359	IAmb	IAmb	23 40 39.6	
	comp=Z,26nm,1.1s						
GLAT	Glass	41.74	345	P	P	23 40 36.6	-1.0
PEBM	Pemiscott Bayo	41.75	344	P	P	23 40 36.8	-0.9
S54A	Dingess, Beckl	41.78	354	P	P	23 40 38.2	+0.2
	baz=173,SNR=7.8						
S54A	Dingess, Beckl	41.78	354	P	P	23 40 37.3	-0.7
S54A				IAmb	IAmb	23 40 39.3	
	comp=Z,39nm,1.0s						
T47A	Sharon Grove	41.90	347	IAmb	IAmb	23 40 38.7	
	comp=Z,33nm,0.9s						
Z35A	Perchaven, San	41.91	334	P	P	23 40 39.6	+0.5
R59A	King George, V	41.95	359	P	P	23 40 40.5	+1.2
	baz=179						
CBN	Corbin Frederi	41.96	359	P	P	23 40 39.8	+0.4
CBN				IAmb	IAmb	23 40 41.4	
	comp=Z,30nm,0.9s						
HICK	Hickman	41.98	345	P	P	23 40 37.7	-1.9
TXAR	Lajitas Array	42.06	324	P	P	23 40 40.5	0.0
	comp=Z,4.4nm,0.8s,baz=147,slow=8.2,SNR=35						
TXAR				PcP	PcP	23 42 34.5	+0.9
	comp=Z,4.3nm,0.7s,baz=141,slow=5.9,SNR=8.1						
TX31	Lajitas Ar. Si	42.06	324	P	P	23 40 40.7	+0.2
TX31				IAmb	IAmb	23 40 42.3	
	comp=Z,36nm,1.1s						
TX32	Lajitas Array	42.06	324	P	P	23 40 40.4	-0.1
R58A	Rapidan	42.07	358	P	P	23 40 41.0	+0.7
	baz=178,SNR=12						
LCAR	Lake Charles	42.08	342	IAmb	IAmb	23 40 40.3	
	comp=Z,39nm,1.0s						
R57A	Stanardsville	42.08	358	P	P	23 40 41.4	+1.0
	baz=177						
R54A	Victor	42.13	355	P	P	23 40 41.1	+0.3
	baz=174,SNR=9.0						
W39A	Magazine	42.16	339	P	P	23 40 41.0	0.0
	baz=154,SNR=6.4						
W39A	Magazine	42.16	339	IAmb	IAmb	23 40 42.0	
	comp=Z,20nm,0.8s						
R55A	Marlinton	42.16	356	P	P	23 40 42.0	+0.9
	baz=175,SNR=8.8						
R55A	Marlinton	42.16	356	IAmb	IAmb	23 40 43.1	
	comp=Z,44nm,0.9s						
X37A	Clayton	42.21	337	P	P	23 40 41.7	+0.2
X37A				IAmb	IAmb	23 40 42.9	
	comp=Z,29nm,0.9s						
FCAR	Ozark Folk Cen	42.22	341	P	P	23 40 39.4	-2.2
FCAR				IAmb	IAmb	23 40 41.2	
	comp=Z,26nm,0.9s						
PARMO	Parma	42.23	344	P	P	23 40 39.9	-1.7
R56A	Bull Pasture M	42.24	357	P	P	23 40 42.5	+0.7
	baz=176						
R53A	Hurricane	42.37	354	IAmb	IAmb	23 40 43.7	
	comp=Z,35nm,1.0s						
ABTX	Abilene, Hawle	42.44	331	P	P	23 40 44.3	+0.9
	baz=145,SNR=14						
ABTX	Abilene, Hawle	42.44	331	IAmb	IAmb	23 40 45.2	
	comp=Z,54nm,1.1s						
PBMO	Poplar Bluff	42.53	344	IAmb	IAmb	23 40 43.8	
	comp=Z,30nm,0.8s						
SLBS	Sierra La Lagu	42.53	312	P	P	23 40 44.5	+0.1
SLBS				IAmb	IAmb	23 40 46.7	
	comp=Z,23nm,0.9s						
Q58A	Fox Den Farm,	42.70	359	P	P	23 40 46.0	+0.6
	baz=178,SNR=12						
Q60A	Greensboro	42.76	1	P	P	23 40 46.0	+0.1
Q60A				IAmb	IAmb	23 40 48.2	
	comp=Z,46nm,1.0s						
R49A	Shelbyville	42.78	350	IAmb	IAmb	23 40 46.3	
	comp=Z,35nm,0.8s						
Q57A	Strasburg	42.82	358	P	P	23 40 47.1	+0.8
	baz=177,SNR=5.2						
Q53A	Leroy	42.85	354	P	P	23 40 46.6	0.0
	baz=173,SNR=13						
Q56A	Snyder Ridge,	42.85	357	P	P	23 40 47.8	+1.1
	baz=176,SNR=5.4						
Q56A	Snyder Ridge,	42.85	357	P	P	23 40 46.5	-0.2
U40A	Yellville	42.88	341	P	P	23 40 46.5	-0.5
	baz=156,SNR=5.4						
U40A	Yellville	42.88	341	P	P	23 40 45.8	-1.1
U40A				IAmb	IAmb	23 40 48.0	
	comp=Z,20nm,0.8s						
Q54A	Coxs Mills	42.91	355	P	P	23 40 47.3	+0.2
Q54A				IAmb	IAmb	23 40 48.3	
	comp=Z,25nm,0.8s						
WCI	Wyandotte Cave	42.92	349	P	P	23 40 46.0	-1.3
	baz=166						
WCI	Wyandotte Cave	42.92	349	P	P	23 40 46.4	-0.8
WCI				pmax	pmax		
	comp=Z,42nm,1.1s						
WCI	Wyandotte Cave	42.92	349	P	P	23 40 46.4	-0.8
WCI				IAmb	IAmb	23 40 47.0	
	comp=Z,42nm,1.1s						
T42A	Van Buren	42.95	343	IAmb	IAmb	23 40 46.8	
	comp=Z,22nm,0.8s						
SDMD	Soldier’s Deli	43.16	360	P	P	23 40 47.9	-1.2
P58A	Pank, Wackersv	43.24	359	P	P	23 40 50.7	+1.0
	baz=179,SNR=7.4						
P57A	Homestead Farm	43.25	358	P	P	23 40 51.4	+1.5
	baz=178						
P57A	Homestead Farm	43.25	358	P	P	23 40 49.9	+0.1
P56A	Dayton Farm, R	43.30	358	P	P	23 40 51.4	+1.2
	baz=177,SNR=7.8						
P59A	Jarrettsville	43.36	0	P	P	23 40 52.3	+1.6
	baz=180						
MGMO	Mountain Grove	43.42	342	IAmb	IAmb	23 40 51.3	
	comp=Z,34nm,0.9s						
P61A	Hammonton	43.45	2	P	P	23 40 52.9	+1.5
	baz=183						
P61A	Hammonton	43.45	2	P	P	23 40 50.9	-0.6
P53A	Whipple	43.46	355	IAmb	IAmb	23 40 52.7	
	comp=Z,38nm,0.8s						
MCWV	Mont Chateau	43.51	356	P	P	23 40 52.6	+0.7
	baz=175						
MCWV	Mont Chateau	43.51	356	P	P	23 40 51.1	-0.8
TUL1	Leonard	43.54	337	P	P	23 40 52.1	-0.1
	baz=152						
TUL1	Leonard	43.54	337	P	P	23 40 51.6	-0.6
TUL1				IAmb	IAmb	23 40 53.0	
	comp=Z,31nm,1.1s						
P60A	Greenville	43.57	1	P	P	23 40 51.8	-0.6
FNO	Franklin	43.62	335	P	P	23 40 53.2	+0.4
P51A	Williamsport	43.63	353	P	P	23 40 52.1	-0.8
FVM	French Village	43.66	344	IAmb	IAmb	23 40 52.9	
	comp=Z,40nm,0.9s						
P52A	Corning	43.68	354	P	P	23 40 52.8	-0.5
	baz=172,SNR=7.0						
P52A	Corning	43.68	354	IAmb	IAmb	23 40 53.9	
	comp=Z,40nm,0.8s						
WUPA	West Chester U	43.69	1	P	P	23 40 53.7	+0.4
MVL	Millersville	43.75	0	P	P	23 40 54.2	+0.4
MVL				IAmb	IAmb	23 40 56.1	
	comp=Z,40nm,0.9s						
OKCSW	OKLAHOMA CITY	43.76	335	P	P	23 40 52.6	-1.5
OKCFA	Oklahoma City	43.77	335	P	P	23 40 53.5	-0.6
WMOK	Wichita Mounta	43.78	333	P	P	23 40 54.7	+0.5
	baz=147,SNR=21						
WMOK	Wichita Mounta	43.78	333	P	P	23 40 53.8	-0.4
WMOK				pmax	pmax		
	comp=Z,42nm,1.0s						
WMOK	Wichita Mounta	43.78	333	P	P	23 40 53.8	-0.4
WMOK				IAmb	IAmb	23 40 55.5	
	comp=Z,42nm,0.9s						
OLIL	Olney	43.79	347	IAmb	IAmb	23 40 53.6	
	comp=Z,31nm,0.8s						
OK025	Westminster Rd	43.87	335	IAmb	IAmb	23 40 55.5	
	comp=Z,40nm,0.9s						
O58A	Lewisberry	43.87	360	P	P	23 40 55.6	+0.7
	baz=180,SNR=6.2						
P49A	Miami Univ. Ec	43.92	351	P	P	23 40 53.8	-1.4
	baz=168,SNR=8.6						
P49A	Miami Univ. Ec	43.92	351	IAmb	IAmb	23 40 54.9	
	comp=Z,46nm,1.0s						
CCM	Cathedral Cave	43.95	343	P	P	23 40 54.3	-1.1
	baz=159						
CCM	Cathedral Cave	43.95	343	P	P	23 40 54.4	-1.1
CCM				pmax	pmax		
	comp=Z,13nm,0.7s						
CCM	Cathedral Cave	43.95	343	P	P	23 40 54.4	-1.1
P48A	Milroy	43.96	350	IAmb	IAmb	23 40 55.0	
	comp=Z,28nm,0.8s						
O57A	Amberson	43.97	359	P	P	23 40 56.3	+0.7
	baz=178,SNR=5.8						
PAGS	Pennsylvania G	43.98	360	P	P	23 40 55.3	-0.3
PAGS				IAmb	IAmb	23 40 57.8	
	comp=Z,33nm,1.1s						
OK031	S. Brethren Rd	43.99	336	P	P	23 40 54.5	-1.3
BCOK	Bluff Creek, N	44.05	335	P	P	23 40 53.5	-2.8
O56A	Blue Knob Stat	44.05	358	P	P	23 40 57.0	+0.7
	baz=177,SNR=8.8						
O56A	Blue Knob Stat	44.05	358	P	P	23 40 56.2	-0.1
O56A				IAmb	IAmb	23 40 58.5	
	comp=Z,40nm,1.1s						
O59A	Robesonia	44.06	0	P	P	23 40 57.4	+1.1
	baz=181						
O54A	Avella	44.06	356	P	P	23 40 54.9	-1.5
O60A	Telford	44.08	1	P	P	23 40 57.8	+1.4
	baz=182,SNR=5.3						
OK029	Liberty Lake	44.10	335	P	P	23 40 56.1	-0.6
O52A	Adamsville	44.12	354	IAmb	IAmb	23 40 57.6	
	comp=Z,34nm,0.8s						
QUOK	Quay	44.12	336	P	P	23 40 56.3	-0.6
QUOK				IAmb	IAmb	23 40 57.7	
	comp=Z,54nm,1.1s						
Q44A	Meyer Farm, Va	44.16	346	IAmb	IAmb	23 40 56.5	
	comp=Z,38nm,0.8s						
O53A	New Philadelph	44.20	355	P	P	23 40 57.7	+0.3
	baz=173,SNR=6.3						
SLM	Saint Louis	44.22	345	P	P	23 40 56.0	-1.6
SLM				pmax	pmax		
	comp=Z,24nm,0.8s						
SLM	Saint Louis	44.22	345	P	P	23 40 56.0	-1.6
SLM				IAmb	IAmb	23 40 57.2	
	comp=Z,24nm,0.8s						
CLNB	Carlsbad	44.36	326	P	P	23 40 58.9	-0.1
LUPA	Lehigh Univers	44.36	1	P	P	23 40 59.5	+0.8
LUPA				IAmb	IAmb	23 41 01.1	
	comp=Z,38nm,1.0s						
ACSO	Alum Creek Sta	44.37	353	P	P	23 40 58.3	-0.5
	baz=171,SNR=7.4						
ACSO	Alum Creek Sta	44.37	353	IAmb	IAmb	23 40 59.3	
	comp=Z,36nm,0.8s						
SSPA	Standing Stone	44.40	359	P	P	23 40 58.7	-0.3
SSPA				IAmb	IAmb	23 41 01.0	
	comp=Z,33nm,1.0s						
P46A	Rosedale	44.45	348	IAmb	IAmb	23 40 59.3	
	comp=Z,20nm,0.8s						
R40A	Maddies Statio	44.47	342	P	P	23 40 57.1	-2.5
O49A	Covington	44.50	352	IAmb	IAmb	23 40 59.9	
	comp=Z,49nm,1.1s						
N57A	Milroy	44.51	359	P	P	23 41 00.5	+0.6
	baz=179						
N61A	South Mountain	44.55	3	P	P	23 41 00.6	+0.5
	baz=183						
GDL2	Guadalupe Moun	44.58	326	P	P	23 41 01.7	+0.9
N58A	Sunbury	44.59	360	P	P	23 41 01.0	+0.5
	baz=180,SNR=5.9						
N58A	Sunbury	44.59	360	IAmb	IAmb	23 41 02.6	
	comp=Z,35nm,1.1s						
CPNY	Central Park	44.61	3	P	P	23 40 58.8	-1.8
N60A	Cedar Hill Far	44.64	2	P	P	23 41 01.6	+0.7
	baz=182						
N59A	State Game Lan	44.67	1	P	P	23 41 02.1	+0.9
	baz=181,SNR=10						
N59A	State Game Lan	44.67	1	IAmb	IAmb	23 41 03.6	
	comp=Z,43nm,0.9s						
N56A	West Decatur	44.69	358	P	P	23 41 02.2	+0.8
	baz=178,SNR=6.6						
T35A	Sooner Cattle	44.70	337	P	P	23 41 00.3	-1.2
N53A	Lisbon	44.72	355	P	P	23 41 00.9	-0.6
N53A				IAmb	IAmb	23 41 02.6	
	comp=Z,39nm,1.0s						
N62A	Caumsett State	44.77	3	P	P	23 41 02.8	+0.9
	baz=184						
MNTX	Cornudas Mount	44.79	324	P	P	23 41 02.7	+0.4
	baz=137,SNR=20						
N54A	Moraine State	44.81	356	P	P	23 41 02.7	+0.4
	baz=175,SNR=12						
PAL	Palisades	44.82	3	P	P	23 41 02.8	+0.4
	baz=184						
PAL	Palisades	44.82	3	P	P	23 41 02.4	0.0
PAL				pmax	pmax		
	comp=Z,29nm,1.0s						
PAL	Palisades	44.82	3	P	P	23 41 02.4	0.0
PAL				IAmb	IAmb	23 41 04.0	
	comp=Z,29nm,0.9s						
ODNJ	Ogdensburg	44.87	2	P	P	23 41 03.8	+1.1
CROK	Carrier	44.93	335	P	P	23 41 02.8	-0.6
TRNY	Table Rock, Ra	44.95	3	P	P	23 41 03.0	-0.3
TRNY				IAmb	IAmb	23 41 05.3	
	comp=Z,29nm,1.0s						
N51A	Ashland	44.97	354	P	P	23 41 02.4	-1.2
N51A				IAmb	IAmb	23 41 03.8	
	comp=Z,25nm,0.9s						
P43A	Skaggs, Pawnee	44.98	346	P	P	23 41 00.3	-3.4
P43A				IAmb	IAmb	23 41 03.3	
	comp=Z,39nm,0.9s						
WSPT	Westport, CT	45.02	4	P	P	23 41 03.6	-0.3
MSTX	Muleshoe	45.08	329	P	P	23 41 04.8	+0.1
	baz=142,SNR=12						
MSTX	Muleshoe	45.08	329	IAmb	IAmb	23 41 05.6	
	comp=Z,18nm,0.7s						
M57A	Sunshine Farm,	45.09	359	P	P	23 41 05.2	+0.8
	baz=179,SNR=7.0						
M57A	Sunshine Farm,	45.09	359	IAmb	IAmb	23 41 06.7	
	comp=Z,33nm,0.9s						
M60A	Port Jervis	45.11	2	P	P	23 41 05.3	+0.6
	baz=183						
M58A	Price’s Panora	45.12	0	P	P	23 41 06.3	+1.5
	baz=180						
YLE	Yale	45.19	4	P	P	23 41 05.4	+0.2
YLE				IAmb	IAmb	23 41 07.3	
	comp=Z,33nm,0.7s						
N49A	Columbus Grove	45.20	352	IAmb	IAmb	23 41 05.5	
	comp=Z,38nm,0.8s						
O44A	Mansfield	45.23	347	P	P	23 41 03.0	-2.6

M56A	**Emporium**	**45.25**	**358**	P	**P**	**23 41 06.1**	**+0.3**
	baz=178,SNR=10						
M56A	**Emporium**	**45.25**	**358**	IAmb	IAmb	23 41 07.5	
	comp=Z,45nm,0.8s						
U32A	**Winter Ranch,**	**45.25**	**334**	P	**P**	**23 41 06.0**	**+0.1**
AMTX	**Amarillo**	**45.26**	**331**	P	**P**	**23 41 06.5**	**+0.5**
	baz=144						
AMTX	**Amarillo**	**45.26**	**331**	IAmb	IAmb	23 41 07.4	
	comp=Z,38nm,0.8s						
M55A	**Ridgway**	**45.26**	**358**	IAmb	IAmb	23 41 06.9	
	comp=Z,20nm,0.8s						
M59A	**Waymart**	**45.30**	**1**	P	**P**	**23 41 07.5**	**+1.3**
	baz=182,SNR=5.3						
KSPA	**Keystone Colle**	**45.31**	**1**	P	**P**	**23 41 06.9**	**+0.7**
KSPA				IAmb	IAmb	23 41 08.3	
	comp=Z,25nm,1.0s						
M62A	**Hamden**	**45.32**	**4**	P	**P**	**23 41 06.8**	**+0.6**
	baz=185,SNR=9.6						
M53A	**WI Miller and**	**45.34**	**356**	P	**P**	**23 41 06.8**	**+0.3**
	baz=174						
M53A	**WI Miller and**	**45.34**	**356**	P	**P**	**23 41 05.8**	**-0.6**
M53A				IAmb	IAmb	23 41 07.4	
	comp=Z,42nm,1.1s						
M54A	**Oil Creek Stat**	**45.34**	**357**	P	**P**	**23 41 06.9**	**+0.4**
	baz=176,SNR=12						
M63A	**Gales Ferry**	**45.34**	**5**	P	**P**	**23 41 07.0**	**+0.5**
	baz=186						
M51A	**Elyria**	**45.36**	**354**	P	**P**	**23 41 06.2**	**-0.4**
	baz=172						
KAN01	**Argonia South**	**45.40**	**336**	P	**P**	**23 41 06.4**	**-0.6**
M52A	**Chesterland**	**45.49**	**355**	IAmb	IAmb	23 41 08.2	
	comp=Z,32nm,0.9s						
ALLY	**Alegheny Colle**	**45.51**	**356**	P	**P**	**23 41 07.6**	**-0.2**
ALLY				IAmb	IAmb	23 41 08.8	
	comp=Z,40nm,0.9s						
KSCT	**Kent School, K**	**45.56**	**3**	P	**P**	**23 41 07.5**	**-0.7**
UCCT	**U. Connecticut**	**45.72**	**5**	P	**P**	**23 41 09.1**	**-0.3**
UCCT				IAmb	IAmb	23 41 11.2	
	comp=Z,43nm,0.8s						
L57A	**Andrews Acres**	**45.75**	**360**	P	**P**	**23 41 10.2**	**+0.5**
	baz=180,SNR=8.2						
L58A	**Harry Jones Me**	**45.80**	**1**	P	**P**	**23 41 11.2**	**+1.1**
	baz=181,SNR=6.3						
L53A	**Girard**	**45.82**	**356**	P	**P**	**23 41 10.4**	**+0.1**
	baz=175,SNR=7.8						
L63A	**North Scituate**	**45.84**	**5**	P	**P**	**23 41 11.3**	**+1.0**
	baz=187						
L56A	**Greenwood**	**45.89**	**359**	P	**P**	**23 41 11.3**	**+0.4**
	baz=179,SNR=6.6						
L56A	**Greenwood**	**45.89**	**359**	P	**P**	**23 41 10.5**	**-0.4**
L56A				IAmb	IAmb	23 41 12.5	
	comp=Z,47nm,1.0s						
L62A	**Suffield**	**45.92**	**4**	P	**P**	**23 41 11.8**	**+0.8**
	baz=186						
L62A	**Suffield**	**45.92**	**4**	P	**P**	**23 41 10.6**	**-0.4**
L62A				IAmb	IAmb	23 41 12.8	
	comp=Z,32nm,0.8s						
BINY	**Binghamton**	**45.95**	**1**	P	**P**	**23 41 12.0**	**+0.7**
	baz=181,SNR=9.0						
BINY	**Binghamton**	**45.95**	**1**	P	**P**	**23 41 11.8**	**+0.5**
L59A	**Walton**	**45.96**	**2**	P	**P**	**23 41 12.7**	**+1.3**
	baz=182						
ERPA	**Erie**	**45.97**	**357**	P	**P**	**23 41 11.2**	**-0.1**
	baz=175,SNR=6.1						
ERPA	**Erie**	**45.97**	**357**	IAmb	IAmb	23 41 12.4	
	comp=Z,43nm,0.8s						
L64A	**Middleborough**	**45.99**	**6**	P	**P**	**23 41 11.0**	**-0.5**
L64A				IAmb	IAmb	23 41 13.0	
	comp=Z,48nm,1.1s						
L61A	**Hillsdale 1, H**	**46.02**	**3**	P	**P**	**23 41 12.4**	**+0.6**
	baz=184						
P38A	**Dawn**	**46.08**	**342**	P	**P**	**23 41 10.3**	**-2.0**
WVNY	**West Valley, N**	**46.19**	**358**	IAmb	IAmb	23 41 14.8	
	comp=Z,45nm,0.9s						
QUA2	**Belchertown**	**46.19**	**4**	IAmb	IAmb	23 41 14.7	
	comp=Z,31nm,0.9s						
L48A	**N Adams**	**46.24**	**352**	IAmb	IAmb	23 41 13.0	
	comp=Z,25nm,0.8s						
M44A	**Midewin, Midew**	**46.32**	**348**	P	**P**	**23 41 11.6**	**-2.5**
N41A	**Harden Midland**	**46.33**	**345**	IAmb	IAmb	23 41 16.5	
	comp=Z,27nm,1.1s						
K60A	**Five Rivers En**	**46.43**	**3**	P	**P**	**23 41 16.2**	**+1.3**
	baz=184						
K56A	**Middlesex**	**46.45**	**359**	P	**P**	**23 41 15.2**	**0.0**
	baz=179						
K57A	**Scipio Center**	**46.48**	**0**	P	**P**	**23 41 15.7**	**+0.3**
	baz=180,SNR=9.1						
HRV	**Adam Dziewonsk**	**46.48**	**5**	P	**P**	**23 41 16.6**	**+1.2**
	baz=187						
HSIG		**46.49**	**317**	P	**P**	**23 41 15.2**	**-0.6**
AAM	**Ann Arbor**	**46.49**	**353**	P	**P**	**23 41 14.0**	**-1.4**
AAM				pmax	pmax		
	comp=Z,45nm,1.1s						
AAM	**Ann Arbor**	**46.49**	**353**	P	**P**	**23 41 14.0**	**-1.4**
AAM				IAmb	IAmb	23 41 16.3	
	comp=Z,45nm,1.1s						
K61A	**Williamstown**	**46.52**	**3**	P	**P**	**23 41 16.9**	**+1.2**
	baz=185						
K58A	**Earlville**	**46.52**	**1**	P	**P**	**23 41 16.8**	**+1.1**
	baz=181,SNR=6.3						
K58A	**Earlville**	**46.52**	**1**	P	**P**	**23 41 15.7**	**0.0**
K58A				IAmb	IAmb	23 41 17.7	
	comp=Z,49nm,1.1s						
K59A	**Cooperstown**	**46.55**	**2**	P	**P**	**23 41 17.5**	**+1.5**
	baz=182						
TRY	**Troy**	**46.55**	**3**	P	**P**	**23 41 16.7**	**+0.7**
TRY				IAmb	IAmb	23 41 18.7	
	comp=Z,30nm,1.0s						
K62A	**Royalston**	**46.58**	**4**	P	**P**	**23 41 17.5**	**+1.3**
	baz=186						
KSU1	**Kansas State U**	**46.65**	**339**	P	**P**	**23 41 16.6**	**-0.2**
	baz=152,SNR=5.3						
KSU1	**Kansas State U**	**46.65**	**339**	P	**P**	**23 41 15.4**	**-1.4**
KSU1				IAmb	IAmb	23 41 17.2	
	comp=Z,47nm,1.1s						
K63A	**Dunstable**	**46.66**	**5**	P	**P**	**23 41 17.4**	**+0.6**
	baz=187						
121A	**Cookes Peak, D**	**46.81**	**323**	P	**P**	**23 41 19.7**	**+1.2**
	baz=135,SNR=13						
121A	**Cookes Peak, D**	**46.81**	**323**	P	**P**	**23 41 19.6**	**+1.2**
121A				IAmb	IAmb	23 41 20.9	
	comp=Z,47nm,1.1s						
MEDO	**Medina**	**46.94**	**358**	P	**P**	**23 41 18.3**	**-0.7**
MEDO				IAmb	IAmb	23 41 20.2	
	comp=Z,32nm,0.9s						
J56A	**Wolcott**	**47.02**	**360**	P	**P**	**23 41 20.0**	**+0.4**
	baz=180,SNR=5.3						
J55A	**Hilton**	**47.02**	**359**	P	**P**	**23 41 19.1**	**-0.5**
J55A				IAmb	IAmb	23 41 20.8	
	comp=Z,43nm,0.9s						
J54A	**Appleton**	**47.05**	**358**	P	**P**	**23 41 19.8**	**0.0**
J54A				IAmb	IAmb	23 41 24.5	
	comp=Z,27nm,1.1s						
N38A	**Joes South For**	**47.06**	**343**	P	**P**	**23 41 18.6**	**-1.4**
N38A				IAmb	IAmb	23 41 20.3	
	comp=Z,23nm,0.8s						
J60A	**Lant Hill Farm**	**47.08**	**3**	P	**P**	**23 41 20.5**	**+0.5**
	baz=184						
J58A	**Remsen**	**47.12**	**1**	P	**P**	**23 41 21.4**	**+1.0**
	baz=182,SNR=5.3						
J58A	**Remsen**	**47.12**	**1**	P	**P**	**23 41 20.9**	**+0.4**
J58A				IAmb	IAmb	23 41 22.2	
	comp=Z,19nm,0.8s						
J57A	**Williamstown**	**47.16**	**1**	P	**P**	**23 41 21.4**	**+0.8**
	baz=181,SNR=5.2						
J57A	**Williamstown**	**47.16**	**1**	IAmb	IAmb	23 41 22.9	
	comp=Z,23nm,0.8s						
ACCN	**Adirondack Com**	**47.21**	**3**	P	**P**	**23 41 20.6**	**-0.4**
J61A	**Chester**	**47.24**	**4**	P	**P**	**23 41 22.8**	**+1.5**
	baz=186						
J59A	**Piesco**	**47.25**	**2**	P	**P**	**23 41 22.3**	**+0.9**
	baz=183,SNR=9.1						
J59A	**Piesco**	**47.25**	**2**	IAmb	IAmb	23 41 23.4	
	comp=Z,36nm,0.8s						
L42A	**Oliver, Polo**	**47.26**	**347**	P	**P**	**23 41 19.9**	**-1.6**
L42A				IAmb	IAmb	23 41 21.5	
	comp=Z,37nm,0.9s						
GO09	**Cerro Castillo**	**47.28**	**176**	P	**P**	**23 41 22.2**	**+0.6**
GO09				IAmb	IAmb	23 41 35.2	
	comp=Z,21nm,0.8s						
BNM	**Barren Site**	**47.30**	**326**	P	**P**	**23 41 22.8**	**+0.6**
Y22D	**IRIS PASSCAL I**	**47.41**	**325**	P	**P**	**23 41 23.0**	**+0.1**
Y22D				IAmb	IAmb	23 41 26.5	
	comp=Z,27nm,1.0s						
I58A	**Old Forge**	**47.46**	**2**	P	**P**	**23 41 23.2**	**+0.2**
	baz=182						
LENM	**Lemitar**	**47.51**	**325**	P	**P**	**23 41 23.9**	**+0.2**
I59A	**Olmsteadville**	**47.61**	**3**	P	**P**	**23 41 25.0**	**+0.9**
	baz=184,SNR=6.6						
HNH	**Hanover**	**47.61**	**4**	P	**P**	**23 41 24.6**	**+0.4**
HNH				IAmb	IAmb	23 41 26.4	
	comp=Z,33nm,0.9s						
CBKS	**Cedar Bluff**	**47.62**	**335**	P	**P**	**23 41 25.5**	**+1.1**
	baz=148						
CBKS	**Cedar Bluff**	**47.62**	**335**	P	**P**	**23 41 24.8**	**+0.4**
CBKS				pmax	pmax		
	comp=Z,72nm,1.0s						
CBKS	**Cedar Bluff**	**47.62**	**335**	P	**P**	**23 41 24.8**	**+0.4**
K43A	**Burlington**	**47.65**	**348**	P	**P**	**23 41 22.6**	**-1.8**
PECO	**Prince Edward**	**47.68**	**360**	P	**P**	**23 41 24.1**	**-0.5**
I60A	**Shoreham**	**47.68**	**3**	P	**P**	**23 41 25.7**	**+1.0**
	baz=184						
I57A	**Carthage**	**47.69**	**1**	P	**P**	**23 41 26.0**	**+1.2**
	baz=181						
L40A	**Anamosa**	**47.69**	**345**	P	**P**	**23 41 23.6**	**-1.2**
L40A				IAmb	IAmb	23 41 25.0	
	comp=Z,46nm,1.1s						
I51A	**Listowel**	**47.71**	**356**	P	**P**	**23 41 24.2**	**-0.8**
	baz=174,SNR=7.4						
NCB	**Newcomb**	**47.77**	**2**	P	**P**	**23 41 25.2**	**-0.1**
ANMO	**Albuquerque**	**47.79**	**327**	P	**P**	**23 41 26.8**	**+0.8**
	baz=138						
ANMO	**Albuquerque**	**47.79**	**327**	*i* P	**P**	**23 41 26.1**	**+0.1**
ANMO				pmax	pmax		
	comp=Z,47nm,0.9s						
ANMO	**Albuquerque**	**47.79**	**327**	P	**P**	**23 41 26.4**	**+0.4**
ANMO				IAmb	IAmb	23 41 27.9	
	comp=Z,37nm,0.8s						
I61A	**Oroboro, Fairl**	**47.84**	**4**	P	**P**	**23 41 26.8**	**+0.8**
	baz=186						
N35A	**Tabor**	**47.88**	**341**	P	**P**	**23 41 24.8**	**-1.6**
SCIA	**State Center**	**48.09**	**343**	P	**P**	**23 41 26.5**	**-1.4**
LBNH	**Lisbon**	**48.17**	**5**	P	**P**	**23 41 29.4**	**+0.9**
	baz=186						
LBNH	**Lisbon**	**48.17**	**5**	IAmb	IAmb	23 41 30.6	
	comp=Z,34nm,0.9s						
VT1	**Waterbury**	**48.20**	**4**	P	**P**	**23 41 28.4**	**-0.4**
VT1				IAmb	IAmb	23 41 32.0	
	comp=Z,28nm,1.2s						
H58A	**Gabriels**	**48.21**	**2**	P	**P**	**23 41 29.3**	**+0.4**
	baz=183						
H57A	**Richville**	**48.22**	**1**	P	**P**	**23 41 28.9**	**0.0**
	baz=182,SNR=6.1						
DELO	**Deloro Mine**	**48.27**	**359**	P	**P**	**23 41 28.8**	**-0.4**
H53A	**Bobcaygeon**	**48.35**	**358**	P	**P**	**23 41 29.6**	**-0.2**
	baz=177,SNR=8.0						
T25A	**Trinidad**	**48.39**	**330**	P	**P**	**23 41 31.9**	**+1.3**
	baz=142,SNR=18						
N33A	**J Bar K, Exete**	**48.40**	**339**	P	**P**	**23 41 29.8**	**-0.5**
LONY	**Lake Ozonia**	**48.40**	**2**	P	**P**	**23 41 30.9**	**+0.6**
	baz=183						
LONY	**Lake Ozonia**	**48.40**	**2**	P	**P**	**23 41 30.2**	**0.0**
H60A	**Morristown**	**48.44**	**4**	P	**P**	**23 41 31.2**	**+0.7**
	baz=185						
H59A	**Cadyville**	**48.46**	**3**	P	**P**	**23 41 31.5**	**+0.8**
	baz=184,SNR=7.0						
H61A	**Lyndonville**	**48.46**	**4**	P	**P**	**23 41 32.2**	**+1.4**
	baz=186						
TUC	**Tucson**	**48.50**	**321**	P	**P**	**23 41 31.8**	**+0.4**
	baz=132						
TUC	**Tucson**	**48.50**	**321**	P	**P**	**23 41 31.5**	**+0.2**
TUC				pmax	pmax		
	comp=Z,20nm,0.9s						
TUC	**Tucson**	**48.50**	**321**	P	**P**	**23 41 31.5**	**+0.2**
TUC				IAmb	IAmb	23 41 33.0	
	comp=Z,20nm,0.8s						
SADO	**Sadowa**	**48.57**	**358**	P	**P**	**23 41 30.8**	**-0.7**
SADO				IAmb	IAmb	23 41 31.4	
	comp=Z,24nm,1.0s						
FRNY	**Flat Rock**	**48.66**	**3**	P	**P**	**23 41 32.8**	**+0.6**
FRNY				IAmb	IAmb	23 41 34.1	
	comp=Z,33nm,0.8s						
G57A	**Newington**	**48.87**	**2**	P	**P**	**23 41 33.8**	**0.0**
	baz=182,SNR=6.6						
G59A	**Clarenceville**	**48.92**	**3**	P	**P**	**23 41 34.7**	**+0.6**
	baz=184						
G58A	**Ormstown**	**48.95**	**2**	P	**P**	**23 41 35.3**	**+0.9**
	baz=183,SNR=5.0						
G60A	**Masonville**	**48.99**	**4**	P	**P**	**23 41 36.2**	**+1.4**
	baz=186						
KSCO	**Kaye Shedlock’**	**49.04**	**333**	P	**P**	**23 41 36.5**	**+1.1**
	baz=145,SNR=5.6						
KSCO	**Kaye Shedlock’**	**49.04**	**333**	P	**P**	**23 41 35.8**	**+0.4**
KSCO				IAmb	IAmb	23 41 38.5	
	comp=Z,36nm,1.1s						
G54A	**Lake Saint Pet**	**49.16**	**359**	P	**P**	**23 41 35.8**	**-0.3**
	baz=178,SNR=7.7						
MOQ	**Mont Orford**	**49.21**	**4**	P	**P**	**23 41 35.5**	**-1.0**
BGNE	**Belgrade**	**49.24**	**339**	P	**P**	**23 41 36.7**	**-0.1**
	baz=151						
BGNE	**Belgrade**	**49.24**	**339**	P	**P**	**23 41 36.2**	**-0.5**
G61A	**St-Isidore-de-**	**49.24**	**5**	P	**P**	**23 41 38.0**	**+1.3**
	baz=187,SNR=5.4						
G63A	**Kingsbury**	**49.26**	**7**	P	**P**	**23 41 38.1**	**+1.3**
	baz=189						
G62A	**West of Eustis**	**49.27**	**6**	P	**P**	**23 41 38.5**	**+1.6**
	baz=188,SNR=5.2						
G62A	**West of Eustis**	**49.27**	**6**	P	**P**	**23 41 36.6**	**-0.3**
G62A				IAmb	IAmb	23 41 38.8	
	comp=Z,37nm,1.0s						
I40A	**Norwalk**	**49.27**	**347**	P	**P**	**23 41 35.2**	**-1.7**
I40A				IAmb	IAmb	23 41 36.5	
	comp=Z,26nm,1.1s						
SDCO	**Great Sand Dun**	**49.41**	**330**	P	**P**	**23 41 39.2**	**+0.8**
	baz=141,SNR=41						
PKME	**Peaks-Kenny Pk**	**49.45**	**7**	P	**P**	**23 41 39.2**	**+1.0**
	baz=190						
G45A	**Suttons Bay**	**49.45**	**352**	P	**P**	**23 41 37.1**	**-1.1**
214A	**Organ Pipe Nat**	**49.58**	**319**	P	**P**	**23 41 40.3**	**+0.8**
	baz=129,SNR=21						
214A	**Organ Pipe Nat**	**49.58**	**319**	IAmb	IAmb	23 41 41.6	
	comp=Z,38nm,1.1s						
GGN	**Saint George**	**49.64**	**9**	P	**P**	**23 41 39.2**	**-0.5**
GGN				IAmb	IAmb	23 41 42.2	
	comp=Z,38nm,1.1s						
F59A	**Saint Guilaume**	**49.72**	**4**	P	**P**	**23 41 41.2**	**+1.0**
	baz=185						
ALGO	**Algonquin Park**	**49.72**	**359**	P	**P**	**23 41 39.5**	**-0.7**
	baz=178,SNR=12						
PIX	**Pinacate**	**49.77**	**318**	P	**P**	**23 41 39.8**	**-1.0**
W18A	**Petrified Fore**	**49.78**	**324**	P	**P**	**23 41 42.1**	**+0.9**
	baz=135,SNR=20						
F61A	**St Evariste**	**49.97**	**5**	P	**P**	**23 41 42.5**	**+0.3**
	baz=187						
TRQ	**Mont Tremblant**	**50.00**	**2**	P	**P**	**23 41 41.9**	**-0.6**
S22A	**4UR Ranch, Cre**	**50.08**	**329**	P	**P**	**23 41 44.8**	**+1.2**
	baz=139,SNR=18						
F64A	**Sherman**	**50.15**	**8**	P	**P**	**23 41 43.8**	**+0.3**
	baz=191						
F64A	**Sherman**	**50.15**	**8**	P	**P**	**23 41 43.9**	**+0.3**
F64A				IAmb	IAmb	23 41 45.1	
	comp=Z,20nm,0.9s						
Q24A	**Divide**	**50.18**	**331**	P	**P**	**23 41 45.0**	**+0.7**
	baz=142,SNR=6.4						
E55A	**Montcerf-Lytto**	**50.20**	**1**	P	**P**	**23 41 44.1**	**+0.2**
	baz=181,SNR=5.4						
E57A	**Chemin Saint G**	**50.20**	**2**	P	**P**	**23 41 44.0**	**+0.1**
	baz=183,SNR=10						
E58A	**La Victoria**	**50.21**	**3**	P	**P**	**23 41 44.1**	**+0.2**
	baz=184						
E56A	**St. Veronique**	**50.31**	**1**	P	**P**	**23 41 44.7**	**0.0**
	baz=182,SNR=7.4						
X16A	**Lo Mia Camp, P**	**50.32**	**322**	IAmb	IAmb	23 41 47.5	
	comp=Z,28nm,0.8s						
E60A	**Ste Agathe de**	**50.33**	**5**	P	**P**	**23 41 44.7**	**-0.2**
	baz=187						
SFX	**San Felipe**	**50.39**	**316**	P	**P**	**23 41 44.4**	**-1.2**
SFX				IAmb	IAmb	23 41 47.3	
	comp=Z,20nm,1.1s						
E61A	**Lac Etchemin**	**50.47**	**6**	P	**P**	**23 41 46.6**	**+0.6**
	baz=188						
G40A	**Rib Lake**	**50.49**	**348**	IAmb	IAmb	23 41 45.9	
	comp=Z,25nm,1.1s						
F42A	**Maple Grove Fa**	**50.55**	**350**	P	**P**	**23 41 44.2**	**-2.4**
F42A				IAmb	IAmb	23 41 46.2	
	comp=Z,26nm,0.8s						
E46A	**Sault Ste Mari**	**50.57**	**353**	P	**P**	**23 41 44.9**	**-1.8**
E46A				IAmb	IAmb	23 41 46.8	
	comp=Z,23nm,1.1s						
MVCO	**Mesa Verde**	**50.57**	**327**	P	**P**	**23 41 47.7**	**+0.5**
	baz=137,SNR=9.6						
E63A	**Oxbow**	**50.69**	**7**	P	**P**	**23 41 48.8**	**+1.2**
	baz=191						
E64A	**Bridgewater**	**50.77**	**8**	P	**P**	**23 41 49.1**	**+1.0**
	baz=191						
D55A	**Sainte-Anne-du**	**50.77**	**1**	P	**P**	**23 41 48.0**	**-0.2**
	baz=182,SNR=7.9						
ECSD	**EROS Data Cent**	**50.78**	**341**	P	**P**	**23 41 47.0**	**-1.3**
	baz=154,SNR=7.8						
ECSD	**EROS Data Cent**	**50.78**	**341**	IAmb	IAmb	23 41 48.0	
	comp=Z,14nm,0.8s						
SPX	**San Pedro Mart**	**50.81**	**316**	P	**P**	**23 41 48.7**	**-0.5**
D56A	**ZEC Mazanza, M**	**50.82**	**2**	P	**P**	**23 41 49.0**	**+0.4**
	baz=182,SNR=5.4						
D60A	**Saint Jean D’O**	**50.91**	**5**	P	**P**	**23 41 49.5**	**+0.3**
	baz=187						
D58A	**Chemin du LacG**	**50.95**	**3**	P	**P**	**23 41 50.2**	**+0.7**
	baz=185,SNR=8.5						
E43A	**Lone Tree Farm**	**50.96**	**351**	P	**P**	**23 41 47.5**	**-2.1**
E43A				IAmb	IAmb	23 41 49.0	
	comp=Z,20nm,0.8s						
WUAZ	**Wupatki**	**51.02**	**323**	P	**P**	**23 41 51.5**	**+1.0**
	baz=133,SNR=28						
ISCO	**Idaho Springs**	**51.06**	**331**	P	**P**	**23 41 51.6**	**+0.8**
	baz=142,SNR=7.5						
ISCO	**Idaho Springs**	**51.06**	**331**	P	**P**	**23 41 52.1**	**+1.2**
ISCO				pmax	pmax		
	comp=Z,26nm,1.8s						
SPMN	**Marine on St.**	**51.06**	**345**	P	**P**	**23 41 48.8**	**-1.6**
	baz=159						
SPMN	**Marine on St.**	**51.06**	**345**	IAmb	IAmb	23 41 49.7	
	comp=Z,23nm,0.9s						
LATQ	**La Tuque**	**51.24**	**3**	P	**P**	**23 41 52.0**	**+0.4**
	baz=185,SNR=9.7						
LATQ	**La Tuque**	**51.24**	**3**	IAmb	IAmb	23 41 53.4	
	comp=Z,17nm,0.9s						
D61A	**St Aubert, Com**	**51.26**	**6**	P	**P**	**23 41 52.8**	**+0.9**
	baz=188,SNR=9.8						
PV07	**Paradox Valley**	**51.55**	**328**	IAmb	IAmb	23 41 56.4	
	comp=Z,25nm,1.0s						
GLA	**Glamis**	**51.59**	**318**	P	**P**	**23 41 55.3**	**+0.6**
	baz=128						
GLA	**Glamis**	**51.59**	**318**	P	**P**	**23 41 56.0**	**+1.3**
GLA				pmax	pmax		
	comp=Z,18nm,0.9s						
GLA	**Glamis**	**51.59**	**318**	P	**P**	**23 41 56.0**	**+1.3**
GLA				IAmb	IAmb	23 41 56.5	
	comp=Z,18nm,0.9s						
PV16	**Nyswonger Mesa**	**51.60**	**328**	IAmb	IAmb	23 41 57.2	
	comp=Z,39nm,1.1s						
PV19	**Morning Glory**	**51.64**	**328**	IAmb	IAmb	23 41 57.4	
	comp=Z,27nm,0.9s						
PV20	**West Nyswonger**	**51.65**	**328**	IAmb	IAmb	23 41 57.5	
	comp=Z,19nm,0.9s						
PV04	**Paradox Valley**	**51.66**	**328**	P	**P**	**23 41 55.9**	**+0.7**
PV04				IAmb	IAmb	23 41 57.8	
	comp=Z,34nm,1.1s						
PV22	**Blue Mesa, Par**	**51.70**	**328**	IAmb	IAmb	23 41 57.2	
	comp=Z,20nm,0.8s						
PV14	**Lion Creek, Pa**	**51.70**	**328**	IAmb	IAmb	23 41 58.0	
	comp=Z,31nm,1.2s						
PV10	**Paradox Valley**	**51.72**	**328**	P	**P**	**23 41 55.5**	**-0.3**
ESJX	**Sierra Juarez**	**51.72**	**317**	P	**P**	**23 41 54.9**	**-0.9**
PV23	**Carpenter Ridg**	**51.76**	**328**	P	**P**	**23 41 55.7**	**-0.4**
PV23				IAmb	IAmb	23 41 57.7	
	comp=Z,20nm,1.0s						
F36A	**Milaca**	**51.83**	**345**	IAmb	IAmb	23 41 55.7	
	comp=Z,20nm,0.9s						
VLDQ	**Val d'Or**	**51.86**	**359**	IAmb	IAmb	23 41 57.4	
	comp=Z,24nm,0.9s						
D41A	**Chassel**	**51.89**	**350**	P	**P**	**23 41 55.4**	**-1.1**
PDMCI	**Parker Dam,Lak**	**51.93**	**320**	P	**P**	**23 41 58.2**	**+1.1**
	baz=130,SNR=6.5						
N23A	**Red Feather La**	**52.07**	**332**	P	**P**	**23 41 59.4**	**+1.0**
	baz=142						
RMX	**La Rumorosa**	**52.16**	**317**	P	**P**	**23 41 58.8**	**-0.2**
RMX				IAmb	IAmb	23 42 00.5	
	comp=Z,23nm,1.1s						
PHWY	**Pilot Hill**	**52.17**	**333**	P	**P**	**23 41 59.0**	**-0.1**
PHWY				IAmb	IAmb	23 42 00.6	
	comp=Z,20nm,1.1s						
SWSC	**Sam W. Stewart**	**52.18**	**318**	P	**P**	**23 42 00.2**	**+1.3**
	baz=127,SNR=7.4						
SUSD	**Miller**	**52.18**	**340**	P	**P**	**23 41 58.6**	**-0.2**
	baz=151						
SUSD	**Miller**	**52.18**	**340**	P	**P**	**23 41 58.2**	**-0.6**
U15A	**North Rim**	**52.18**	**323**	IAmb	IAmb	23 42 01.6	
	comp=Z,16nm,0.9s						
IKP	**In-Ko-Pah, Jac**	**52.21**	**317**	P	**P**	**23 42 00.3**	**+1.0**
	baz=127,SNR=8.6						
W13A	**Hualapai Mount**	**52.28**	**321**	IAmb	IAmb	23 42 02.2	
	comp=Z,24nm,0.8s						
BC3	**Big Chuckawall**	**52.38**	**319**	P	**P**	**23 42 01.3**	**+0.8**
	baz=128,SNR=9.6						
CBX	**Cerro Bola**	**52.39**	**317**	P	**P**	**23 42 01.4**	**+0.7**
IRM	**Iron Mountain**	**52.49**	**319**	P	**P**	**23 42 02.5**	**+1.2**
	baz=128,SNR=20						
TKX	**Tecate**	**52.50**	**317**	P	**P**	**23 41 58.3**	**-3.1**
TKX				IAmb	IAmb	23 42 10.8	
	comp=Z,12nm,0.7s						
MONP2	**Monument Peak**	**52.56**	**317**	P	**P**	**23 42 02.8**	**+0.7**
	baz=126,SNR=8.1						
F33A	**5 Mile Ranch,**	**52.58**	**343**	P	**P**	**23 41 59.3**	**-2.4**
O20A	**White River Ci**	**52.61**	**330**	P	**P**	**23 42 03.2**	**+1.0**
	baz=139,SNR=14						
O20A	**White River Ci**	**52.61**	**330**	P	**P**	**23 42 01.3**	**-0.9**
O20A				IAmb	IAmb	23 42 04.8	
	comp=Z,19nm,0.8s						
BAR	**Barrett**	**52.61**	**317**	P	**P**	**23 42 02.2**	**0.0**
LSQQ	**Lebel-sur-Quev**	**52.81**	**360**	P	**P**	**23 42 02.4**	**-0.8**
	baz=180						
PKCU	**Pink Cliffs**	**52.88**	**324**	P	**P**	**23 42 04.2**	**-0.3**
KNB	**Kanab**	**52.89**	**324**	P	**P**	**23 42 04.8**	**+0.4**
KNB				pmax	pmax		
	comp=Z,20nm,0.9s						
KNB	**Kanab**	**52.89**	**324**	P	**P**	**23 42 04.8**	**+0.4**
BELC	**Belle Mtn. Jos**	**52.95**	**319**	P	**P**	**23 42 05.3**	**+0.5**
	baz=128,SNR=17						
TPFO	**Pinon Flats**	**53.01**	**318**	P	**P**	**23 42 06.6**	**+1.3**
	baz=127,SNR=11						
XPFO	**Pion Flat**	**53.02**	**318**	P	**P**	**23 42 06.0**	**+0.7**
XPFO				IAmb	IAmb	23 42 07.3	
	comp=Z,17nm,1.0s						
PFO	**Pinyon Flats O**	**53.02**	**318**	P	**P**	**23 42 06.6**	**+1.3**
	baz=127,SNR=10						
PFO	**Pinyon Flats O**	**53.02**	**318**	⇑ *i* P	**P**	**23 42 06.8**	**+1.5**
PFO				pmax	pmax		
	comp=Z,32nm,1.0s						
PFO	**Pinyon Flats O**	**53.02**	**318**	P	**P**	**23 42 05.7**	**+0.4**
PFO				IAmb	IAmb	23 42 07.3	
	comp=Z,17nm,1.0s						
109C	**Camp Elliot, M**	**53.03**	**317**	P	**P**	**23 42 04.7**	**-0.5**
109C				IAmb	IAmb	23 42 06.9	
	comp=Z,14nm,0.9s						
LCMT	**Little Creek M**	**53.14**	**323**	P	**P**	**23 42 06.9**	**+0.7**
GMRC	**Granite Mounta**	**53.21**	**320**	P	**P**	**23 42 07.4**	**+0.7**
	baz=128,SNR=15						
MTPU	**Mount Pierson**	**53.22**	**325**	P	**P**	**23 42 06.7**	**-0.3**
RWWY	**Rawlins**	**53.29**	**332**	P	**P**	**23 42 06.6**	**-0.7**
RWWY				IAmb	IAmb	23 42 08.1	
	comp=Z,32nm,1.0s						
EYMN	**Ely**	**53.31**	**348**	P	**P**	**23 42 05.9**	**-1.1**
	baz=161,SNR=5.6						
EYMN	**Ely**	**53.31**	**348**	IAmb	IAmb	23 42 06.5	
	comp=Z,23nm,0.8s						
MURC	**Murrieta**	**53.51**	**318**	P	**P**	**23 42 10.0**	**+1.2**
	baz=126,SNR=8.2						
MATQ	**Matagami**	**53.51**	**359**	P	**P**	**23 42 07.4**	**-1.1**
	baz=179,SNR=13						
TMUT	**Trail Mountain**	**53.55**	**327**	P	**P**	**23 42 09.9**	**+0.6**
MVU	**Marysvale**	**53.56**	**325**	P	**P**	**23 42 10.1**	**+0.8**
CCUT	**Cedar City**	**53.57**	**324**	P	**P**	**23 42 10.1**	**+0.6**
HEC	**Hector,Ludlow**	**53.67**	**319**	P	**P**	**23 42 11.0**	**+1.0**
	baz=128,SNR=20						
BBRC	**Big Bear Solar**	**53.72**	**318**	P	**P**	**23 42 12.4**	**+1.9**
	baz=127,SNR=6.5						
K22A	**Casper**	**53.72**	**333**	P	**P**	**23 42 11.2**	**+0.9**
	baz=142,SNR=9.7						
K22A	**Casper**	**53.72**	**333**	P	**P**	**23 42 11.0**	**+0.7**
TCRU	**Three Creeks R**	**53.76**	**325**	P	**P**	**23 42 11.9**	**+1.1**
RSSD	**Black Hills**	**53.83**	**336**	P	**P**	**23 42 12.3**	**+1.2**
	baz=145						
RSSD	**Black Hills**	**53.83**	**336**	P	**P**	**23 42 12.3**	**+1.2**
RSSD				pmax	pmax		
	comp=Z,29nm,1.0s						
RSSD	**Black Hills**	**53.83**	**336**	P	**P**	**23 42 12.3**	**+1.2**
RSSD				IAmb	IAmb	23 42 13.0	
	comp=Z,29nm,1.0s						
D32A	**Dogwood Acres,**	**53.97**	**343**	P	**P**	**23 42 11.7**	**-0.1**
D32A				IAmb	IAmb	23 42 12.5	

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      comp=Z,14nm,0.7s
SHPR  Sheep Range        53.97 322  IAmb   IAmb   23 42 14.4
      comp=Z,23nm,1.0s
BFSC  Mount Baldy Ra     54.19 318  P      P      23 42 14.9 +1.0
      baz=126,SNR=8.8
GSC   Goldstone, Bar     54.27 319  P      P      23 42 15.3 +0.9
      baz=128,SNR=19
GSC   Goldstone, Bar     54.27 319  IAmb   IAmb   23 42 16.4
      comp=Z,22nm,0.9s
SHOC  Shoshone, Teco     54.29 320  P      P      23 42 16.0 +1.5
      baz=128,SNR=9.0
MWC   Mount Wilson       54.45 318  P      P      23 42 15.9 +0.1
MWC                                 pmax   pmax
      comp=Z,19nm,0.8s
MWC   Mount Wilson       54.45 318  P      P      23 42 15.9 +0.1
MWC                                 IAmb   IAmb   23 42 17.7
      comp=Z,19nm,0.8s
PRN   Pahroc Range       54.49 323  P      P      23 42 16.7 +0.7
PASC  Pasadena Art C     54.51 318  P      P      23 42 16.9 +0.9
PASC                                IAmb   IAmb   23 42 18.0
      comp=Z,27nm,1.1s
DECC  Green Verdugo      54.66 318  P      P      23 42 18.0 +0.9
      baz=126
EDW2  Edwards Air Fo     54.79 318  P      P      23 42 18.4 +0.3
      baz=126,SNR=24
CTU   Camp Tracy         54.84 328  P      P      23 42 18.1 -0.4
TPNV  Topopah Spring     54.93 321  P      P      23 42 20.6 +1.4
      baz=129,SNR=28
TPNV  Topopah Spring     54.93 321  IAmb   IAmb   23 42 21.5
      comp=Z,18nm,0.9s
LRMC  Laurel Mtn Rad     54.94 319  P      P      23 42 20.3 +1.0
      baz=127,SNR=14
FURC  Furnace Creek,     55.02 321  P      P      23 42 20.9 +1.3
      baz=128,SNR=5.3
DUG   Dugway, Tooele     55.06 327  P      P      23 42 20.8 +0.7
      baz=134,SNR=36
DUG   Dugway, Tooele     55.06 327  P      P      23 42 20.6 +0.5
DUG                                 pmax   pmax
      comp=Z,46nm,1.1s
DUG   Dugway, Tooele     55.06 327  IAmb   IAmb   23 42 22.1
      comp=Z,24nm,0.7s
MPMC  Manual Prospec     55.17 320  P      P      23 42 21.1 +0.1
      baz=127,SNR=10
BW06  Boulder Array      55.24 331  P      P      23 42 21.7 +0.4
      baz=139,SNR=24
BW06  Boulder Array      55.24 331  IAmb   IAmb   23 42 22.4
      comp=Z,22nm,1.0s
PD31  Pinedale Array     55.24 331  IAmb   IAmb   23 42 22.4
      comp=Z,20nm,1.0s
PDAR  Pinedale Array     55.24 331  P      P      23 42 21.1 -0.3
      comp=Z,9.1nm,0.8s,baz=129,slow=8.5,SNR=65
PDAR                                LR     LR     00 07 41.2
      comp=Z,34nm,19.1s,baz=128,slow=38
PDAR  Pinedale Array     55.24 331  P      P      23 42 19.7 -1.6
MDND  Maddock            55.39 341  P      P      23 42 22.6 +0.5
      baz=152,SNR=13
R11A  Troy Canyon, C     55.42 323  P      P      23 42 23.4 +0.7
      baz=130,SNR=22
ARVC  Arvin              55.49 318  P      P      23 42 24.1 +1.0
      baz=126
ISA   Isabella, Lake     55.57 319  P      P      23 42 24.4 +0.6
      baz=126,SNR=8.2
GRAC  Grapevine Rang     55.66 321  P      P      23 42 25.7 +1.4
      baz=128
CWC   Cottonwood Cre     55.78 320  P      P      23 42 25.8 +0.5
      baz=127
AHID  Auburn Hatcher     56.00 330  IAmb   IAmb   23 42 27.8
      comp=Z,20nm,0.9s
PKM   Mcpherson Peak     56.02 317  P      P      23 42 27.8 +0.7
      baz=125,SNR=7.1
VES   Vestal, Richgr     56.08 319  P      P      23 42 28.5 +1.3
      baz=126,SNR=7.4
TPH   Tonopah            56.24 322  P      P      23 42 28.3 -0.3
TPH                                 pmax   pmax
      comp=Z,17nm,0.7s
TPH   Tonopah            56.24 322  P      P      23 42 28.3 -0.3
TIN   Tinemaha, Big      56.24 320  P      P      23 42 29.7 +1.2
      baz=127,SNR=5.5
SNOW  Snow King Moun     56.34 331  IAmb   IAmb   23 42 33.9
      comp=Z,14nm,0.8s
LOHW  Long Hollow        56.38 331  IAmb   IAmb   23 42 30.9
      comp=Z,18nm,1.1s
SMMC  Simmler            56.38 318  P      P      23 42 30.8 +1.3
      baz=125,SNR=7.1
ULM   Lac du Bonnet      56.49 345  P      P      23 42 28.0 -1.9
      comp=Z,24nm,0.8s,baz=159,slow=8.2,SNR=37
ULM                                 LR     LR     00 06 59.2
      comp=Z,50nm,21.8s,baz=166,slow=36
ULM   Lac du Bonnet      56.49 345 i P     P      23 42 29.0 -0.9
MOOW  Moose Ponds        56.55 331  P      P      23 42 29.9 -0.8
IMW   Indian Meadow      56.75 331  IAmb   IAmb   23 42 34.6
      comp=Z,13nm,0.9s
PAGB  Antelope Grade     56.79 318  P      P      23 42 32.2 -0.1
PAGB                                IAmb   IAmb   23 42 34.0
      comp=Z,15nm,1.1s
LAO   LASA Array         56.81 336  P      P      23 42 31.8 -0.5
      baz=144
LAO   LASA Array         56.81 336  P      P      23 42 31.6 -0.7
RLMT  Red Lodge          56.89 333  P      P      23 42 33.4 +0.4
      baz=140,SNR=12
RLMT  Red Lodge          56.89 333  P      P      23 42 32.9 -0.2
H17A  Grant Village      56.95 331  P      P      23 42 34.7 +1.2
      baz=138
H17A  Grant Village      56.95 331  P      P      23 42 33.7 +0.2
YPP   Pitchstone Pla     56.96 331  P      P      23 42 33.1 -0.6
LKWY  Lake               56.99 332  P      P      23 42 33.9  0.0
LKWY                                pmax   pmax
      comp=Z,19nm,1.1s
LKWY  Lake               56.99 332  P      P      23 42 33.9  0.0
LKWY                                IAmb   IAmb   23 42 36.3
      comp=Z,19nm,1.1s
YMP   Mirror Lake Pl     57.01 332  P      P      23 42 33.9 -0.2
NV11  Mina Array Sit     57.04 322  IAmb   IAmb   23 42 36.0
      comp=Z,16nm,1.1s
OMMB  Old Mammoth Mi     57.07 320  IAmb   IAmb   23 42 36.4
      comp=Z,16nm,0.8s
NVAR  Mina Array Bea     57.13 322  P      P      23 42 35.0 +0.1
      comp=Z,11nm,0.8s,baz=129,slow=6.9,SNR=73
NVAR                                pP     pP     23 43 01.2 +0.4
      comp=Z,1.4nm,0.5s,baz=122,slow=7.2,SNR=3.2
MDPB  Devils Postpil     57.13 320  IAmb   IAmb   23 42 36.6
      comp=Z,11nm,0.8s
LHV   Little Huntoon     57.14 321  P      P      23 42 35.5 +0.8
LHV                                 IAmb   IAmb   23 42 37.0
      comp=Z,22nm,1.0s
YNR   Norris Junctio     57.23 332  P      P      23 42 35.7 +0.2
YMR   Madison River      57.34 331  P      P      23 42 37.3 +1.0
YHH   Holmes Hill        57.37 332  P      P      23 42 36.8 +0.3
RYN   Ryan               57.38 322  P      P      23 42 36.2 -0.4
PMPB  Monarch Peak       57.43 318  P      P      23 42 36.3 -0.6
PMPB                                IAmb   IAmb   23 42 38.9
      comp=Z,15nm,0.8s
YHB   Horse Butte        57.51 331  P      P      23 42 38.2 +0.8
QLMT  Earthquake Lak     57.68 331  P      P      23 42 39.8 +1.2
WAKR  Walker             57.88 321  IAmb   IAmb   23 42 42.2
      comp=Z,13nm,0.8s
HLID  Hailey             58.26 328  P      P      23 42 43.5 +0.8
      baz=134,SNR=21
HLID  Hailey             58.26 328  IAmb   IAmb   23 42 44.5
      comp=Z,21nm,1.1s
PNTR  Pine Nut           58.33 321  P      P      23 42 43.7 +0.4
PNTR                                IAmb   IAmb   23 42 45.3
      comp=Z,12nm,0.9s
BOZ   Bozeman (W)        58.34 332  P      P      23 42 43.4 +0.2
      baz=138,SNR=24
MCMT  McKenzie Canyo     58.37 330  P      P      23 42 44.5 +1.0
VCNR  Virginia City      58.49 322  P      P      23 42 43.6 -0.7
VCNR                                IAmb   IAmb   23 42 46.3
      comp=Z,20nm,1.1s
PAHR  Pah Rah Range      58.57 322  P      P      23 42 44.7 -0.2
DLMT  Dillon             58.63 331  IAmb   IAmb   23 42 46.8
      comp=Z,17nm,1.1s
RUBR  Rubicon Trail      58.66 321  P      P      23 42 45.6 +0.1
RUBR                                IAmb   IAmb   23 42 47.7
      comp=Z,17nm,1.1s
AFDM  Forest Hills D     59.11 321  P      P      23 42 46.5 -1.9
HRY   Holter Researc     59.26 333  P      P      23 42 49.2 -0.2
BEKR  Beckworth          59.27 322  IAmb   IAmb   23 42 51.5
      comp=Z,13nm,0.8s
EGMT  Eagleton           59.34 335  P      P      23 42 49.7 -0.2
      baz=141,SNR=11
WVOR  Wild Horse Val     59.82 325  P      P      23 42 53.7 +0.3
WVOR                                pmax   pmax
      comp=Z,27nm,1.8s
WVOR  Wild Horse Val     59.82 325  IAmb   IAmb   23 42 54.8
      comp=Z,21nm,1.1s
GDXM  Geysers            60.20 320  P      P      23 42 55.3 -0.7
MSO   Missoula           60.34 331  P      P      23 42 57.1 +0.3
      baz=136,SNR=35
O03E  Paynes Creek       60.41 321  P      P      23 42 56.8 -0.7
      baz=126,SNR=11
BMO   Blue Mountains     60.66 328  P      P      23 42 59.0 -0.1
BMO                                 pmax   pmax
      comp=Z,11nm,1.2s
BMO   Blue Mountains     60.66 328  P      P      23 42 59.0 -0.1
O02D  Mt. Diablo Mer     60.96 321  P      P      23 43 00.9 -0.3
      baz=125
WDC   Whiskeytown Da     61.04 321  P      P      23 42 59.8 -1.8
WDC                                 pmax   pmax
      comp=Z,6.0nm,0.7s
WDC   Whiskeytown Da     61.04 321  P      P      23 42 59.8 -1.8
KCPM  Cahto Peak         61.19 320  P      P      23 43 02.0 -0.8
KCPM                                IAmb   IAmb   23 43 05.0
      comp=Z,25nm,1.0s
M04C  Macdoel            61.31 323  P      P      23 43 03.6  0.0
      baz=126,SNR=7.7
K05A  Summer Lake        61.31 324  P      P      23 43 03.6  0.0
I07A  Izee               61.36 326  IAmb   IAmb   23 43 05.7
      comp=Z,33nm,1.1s
N02D  Trinity Center     61.37 322  P      P      23 43 02.4 -1.5
      baz=125
F10A  Beach Ranch, E     61.37 329  IAmb   IAmb   23 43 05.6
      comp=Z,34nm,1.1s
M02C  Callahan           61.70 322  P      P      23 43 05.1 -1.0
      baz=125
K04D  Chiloquin, OR      61.76 324  P      P      23 43 07.5 +1.0
      baz=127
G08A  Pilot Rock         61.84 327  IAmb   IAmb   23 43 08.8
      comp=Z,28nm,1.0s
L04D  Klamath Falls      61.84 323  P      P      23 43 06.9 -0.3
      baz=126,SNR=9.2
J05D  Fort Rock, OR      61.85 324  P      P      23 43 08.1 +0.9
      baz=127,SNR=13
WALA  Waterton Lakes     61.94 333  IAmb   IAmb   23 43 09.0
      comp=Z,26nm,1.0s
KHMM  Horse Mountain     61.95 321  P      P      23 43 08.8 +0.9
KHMM                                IAmb   IAmb   23 43 14.7
      comp=Z,12nm,0.8s
JCC   Jacoby Creek,      62.11 321  P      P      23 43 08.9 +0.2
JCC                                 IAmb   IAmb   23 43 10.7
      comp=Z,21nm,0.9s
FFC   Flin Flon          62.16 344  P      P      23 43 08.1 -0.7
FFC                                 pmax   pmax
      comp=Z,21nm,0.9s
FFC   Flin Flon          62.16 344  P      P      23 43 08.1 -0.7
FFC                                 IAmb   IAmb   23 43 09.4
      comp=Z,20nm,0.8s
E09A  Wood Farm, Sta     62.21 329  P      P      23 43 08.9 -0.4
E09A                                IAmb   IAmb   23 43 10.7
      comp=Z,12nm,0.9s
J04D  Umpqua Nationa     62.33 324  P      P      23 43 11.3 +0.9
      baz=127
KRMB  Red Mountain       62.42 322  P      P      23 43 11.8 +0.8
HUMO  Hull Mountain      62.46 323  P      P      23 43 10.8 -0.3
I05D  Terrebonne, OR     62.55 325  P      P      23 43 13.1 +1.3
      baz=128,SNR=10
L02E  Cave Junction      62.60 322  P      P      23 43 12.5 +0.5
      baz=125,SNR=6.7
I04A  Tendick Farm,      62.84 324  P      P      23 43 13.6 -0.1
      baz=127
HAWA  Hanford            62.85 328  P      P      23 43 13.6  0.0
NEW   Newport            62.88 331  P      P      23 43 13.8 -0.1
      baz=133,SNR=28
NEW   Newport            62.88 331  P      P      23 43 13.7 -0.1
NEW                                 pmax   pmax
      comp=Z,54nm,0.9s
NEW   Newport            62.88 331  IAmb   IAmb   23 43 15.1
      comp=Z,30nm,0.8s
K02D  Willamette Mer     62.94 323  P      P      23 43 14.6 +0.2
      baz=125,SNR=9.3
G05D  Wamic, OR          63.09 326  P      P      23 43 16.9 +1.6
      baz=128,SNR=5.9
E07A  Sunnyside          63.13 328  P      P      23 43 15.1 -0.3
E07A                                IAmb   IAmb   23 43 17.5
      comp=Z,21nm,0.9s
H04A  Detroit Lake       63.24 325  P      P      23 43 16.0 -0.3
H04A                                IAmb   IAmb   23 43 17.4
      comp=Z,25nm,1.2s
I03D  Drain, OR          63.33 324  P      P      23 43 17.0 +0.2
      baz=126
J01E  Myrtle Point       63.37 323  P      P      23 43 18.3 +1.2
      baz=125
F05D  White Salmon       63.57 327  P      P      23 43 19.6 +1.2
      baz=128
COR   Corvallis          63.82 325  P      P      23 43 19.3 -0.7
COR                                 pmax   pmax
      comp=Z,24nm,1.1s
COR   Corvallis          63.82 325  P      P      23 43 19.3 -0.7
COR                                 IAmb   IAmb   23 43 26.8
      comp=Z,24nm,1.1s
LTY   Liberty            64.01 328  IAmb   IAmb   23 43 23.1
      comp=Z,16nm,0.9s
FCC   Fort Churchill     64.06 350  IAmb   IAmb   23 43 21.3
      comp=Z,19nm,0.9s
LON   Longmire           64.30 327  IAmb   IAmb   23 43 24.5
      comp=Z,15nm,0.8s
F04D  Rainier, OR        64.55 326  P      P      23 43 25.9 +1.2
      baz=127
E04D  Cinebar            64.59 327  P      P      23 43 25.8 +0.8
      baz=128
E03A  Lebam              65.13 326  P      P      23 43 28.9 +0.4
B06A  Marblemount        65.23 329  IAmb   IAmb   23 43 30.2
      comp=Z,20nm,0.8s
B05A  Bryant             65.39 328  P      P      23 43 29.6 -0.5
      baz=129
D03D  Eldon              65.47 327  P      P      23 43 31.4 +0.7
      baz=127
NLWA  Neilton Lookou     65.80 327         P      23 43 33.2 +0.3
A05A  Maple Falls        65.84 329  P      P      23 43 32.5 -0.5
FRB   Frobisher Bay      67.80   4  P      P      23 43 44.6 -0.5
FRB                                 pmax   pmax
      comp=Z,46nm,0.8s
NRS   Narsarsuaq         69.29  16  P      P      23 43 54.0 -0.4
NRS                                 pmax   pmax
      comp=Z,40nm,0.9s
NRS   Narsarsuaq         69.29  16  P      P      23 43 54.0 -0.4
NRS                                 IAmb   IAmb   23 43 56.1
      comp=Z,40nm,0.9s
LIC   Lamto              72.21  82 eP      P      23 44 13.2 +0.1
      comp=Z,57nm,1.0s
TIC   Toumodi            72.26  82 eP      P      23 44 13.5  0.0
YKA   Yellowknife Ar     72.28 343  P      P      23 44 11.4 -1.1
      comp=Z,12nm,0.7s,baz=136,slow=6.1,SNR=135
YKA                                 LR     LR     00 17 20.2
      comp=Z,28nm,19.6s,baz=0.0,slow=37
DBIC  Dimbokro           72.42  82  P      P      23 44 14.4  0.0
      comp=Z,23nm,0.8s,baz=235,slow=5.5,SNR=30
DBIC                                pP     pP     23 44 42.7 +1.4
      comp=Z,8.6nm,0.5s,baz=243,slow=7.0,SNR=5.1
DBIC  Dimbokro           72.42  82  P      P      23 44 14.1 -0.4
DBIC                                IAmb   IAmb   23 44 16.1
      comp=Z,35nm,0.9s
KIC   Kosan Boka         72.50  82 eP      P      23 44 15.1 +0.2
      comp=Z,74nm,0.9s
SFJD  Kangerlussuaq      73.19  10  P      P      23 44 16.6 -1.2
SFJD                                pmax   pmax
      comp=Z,7.0nm,1.0s
SFJD  Kangerlussuaq      73.19  10  P      P      23 44 16.6 -1.2
KOWA  Kowa               74.24  74  P      P      23 44 25.1 +0.1
      comp=Z,17nm,0.7s,baz=264,slow=6.7,SNR=53
KOWA                                pP     pP     23 44 53.4 +1.2
      comp=Z,6.9nm,0.5s,baz=263,slow=7.3,SNR=4.7
KOWA  Kowa               74.24  74  P      P      23 44 25.3 +0.2
KOWA                                IAmb   IAmb   23 44 26.8
      comp=Z,22nm,0.8s
ANGG  Ammassalik, Gr     74.96  16  IAmb   IAmb   23 44 28.7
      comp=Z,23nm,0.9s
MORF  Marmelete          75.12  50 eP      P      23 44 30.6 +0.8
MORF                                AMb    AMB    23 44 43.3
      comp=Z,51nm,1.8s
MORF  Marmelete          75.12  50 eP      P      23 44 31.3 +1.5
DLBC  Dease Lake         75.26 334  P      P      23 44 30.4 +0.3
PNCL  Nicolau / Gran     75.45  49 eP      P      23 44 32.6 +1.0
PNCL                               epP     pP     23 44 59.8 +1.1
PCVE  Castro Verde       75.68  50 eP      P      23 44 34.2 +1.3
PCVE                               epP     pP     23 45 02.5 +2.4
PMTG  Montargil          75.95  48 eP      P      23 44 35.0 +0.6
PMTG                               epP     pP     23 45 02.7 +1.1
EVO   Evora              75.96  49 epP     pP     23 45 03.6 +1.9
PCAS  Casmilo, Conde     76.04  47 eP      P      23 44 36.3 +1.3
COI   Coimbra            76.15  47  P      P      23 44 35.0 -0.6
COI                                 pmax   pmax
      comp=Z,52nm,0.9s
COI   Coimbra            76.15  47  P      P      23 44 35.0 -0.6
COI   Coimbra            76.15  47 eP      P      23 44 36.5 +1.0
COI                                epP     pP     23 45 03.0 +0.3
PVIS  Viseu              76.68  47 eP      P      23 44 38.4 -0.2
PVIS                               epP     pP     23 45 04.8 -1.0
PCBR  Castelo Branco     76.73  48 eP      P      23 44 39.3 +0.5
MTE   Manteigas          76.84  47 eP      P      23 44 39.9 +0.4
POLO  Lamas de Olo       76.95  46 eP      P      23 44 40.4 +0.3
MDT   Midelt             77.16  55  P      P      23 44 42.1 +0.5
      comp=Z,5.7nm,0.9s,baz=260,slow=4.1,SNR=5.0
MDT                                 pP     pP     23 45 09.0 +0.2
      comp=Z,7.2nm,1.1s,baz=236,slow=2.8,SNR=4.4
ICESG Greenland Ices     77.17  13 i P     P      23 44 41.2 +0.1
ICESG                               IAmb   IAmb   23 44 43.2
      comp=Z,46nm,1.0s
MVO   Moncorvo           77.44  46 eP      P      23 44 43.3 +0.4
MVO                                epP     pP     23 45 11.8 +1.7
BESE  Bessie Mountai     77.48 333  P      P      23 44 42.0 -0.7
BESE                                IAmb   IAmb   23 44 44.7
      comp=Z,35nm,0.9s
PBRG  Braganca           77.83  46 eP      P      23 44 45.4 +0.4
PBRG                               epP     pP     23 45 11.6 -0.7
VNA3  Neumayer Olymp     78.97 162  P      P      23 44 50.7  0.0
VNA1  Neumayer--Stat     79.20 162  P      P      23 44 51.3 -0.6
ESDC  Sonseca Array      79.30  49  P      P      23 44 53.2 +0.1
      comp=Z,4.7nm,0.8s,baz=259,slow=6.4,SNR=20
ESDC                                pP     pP     23 45 22.1 +1.6
      comp=Z,3.1nm,0.8s,baz=273,slow=5.2,SNR=5.9
ESDC                                LR     LR     00 17 28.6
      comp=Z,41nm,19.1s,baz=325,slow=34
ESDC  Sonseca Array      79.30  49  P      P      23 44 52.9 -0.2
RES   Resolute Bay       79.31 355  P      P      23 44 52.8 +0.5
RES                                 pmax   pmax
      comp=Z,16nm,1.2s
TORD  Torodi Ar. Bea     79.57  76  P      P      23 44 54.1 -0.9
      comp=Z,8.5nm,0.8s,baz=297,slow=6.9,SNR=29
TORD                                LR     LR     00 19 08.8
      comp=Z,49nm,18.9s,baz=270,slow=35
TORD  Torodi Ar. Bea     79.57  76  P      P      23 44 54.5 -0.5
VNA2  Neumayer--Watz     79.57 162  P      P      23 44 53.3 -0.5
      baz=296,slow=6.5
SUMG  Summit             80.17  11 i P     P      23 44 57.3 -0.2
      comp=Z,70nm,0.9s
SUMG  Summit             80.17  11 i P     P      23 44 57.3 -0.2
SUMG  Summit             80.17  11  IAmb   IAmb   23 44 59.0
      comp=Z,28nm,0.9s
SUMG  Summit             80.17  11 i P     P      23 44 57.3 -0.2
SUMG                                IAmb   IAmb   23 44 58.8
      comp=Z,70nm,0.9s
TULEG Thule              80.51   2  IAmb   IAmb   23 45 00.4
      comp=Z,34nm,1.0s
SNAA  Sanae              81.19 162  P      P      23 45 03.1 +0.4
SNAA  Sanae              81.19 162 i P     P      23 45 02.5 -0.1
SNAA                                pmax   pmax
      comp=Z,12nm,1.1s
SNAA  Sanae              81.19 162  P      P      23 45 02.8 +0.1
ISLE  Juniper Island     81.79 333  P      P      23 45 05.0 -1.1
ISLE                                IAmb   IAmb   23 45 07.7
      comp=Z,31nm,1.2s
BALM  Baldy              81.97 333  P      P      23 45 05.7 -1.3
TGL   Tana Glacier       82.07 333  P      P      23 45 07.9 +0.4
TGL                                 IAmb   IAmb   23 45 09.2
      comp=Z,21nm,1.0s
CRQM  Cirque             82.22 333  P      P      23 45 07.2 -1.1
CRQM                                IAmb   IAmb   23 45 09.8
      comp=Z,25nm,1.1s
MCARA McCarthy VSAT      82.41 334  P      P      23 45 09.2 +0.1
MCARA                               IAmb   IAmb   23 45 11.8
      comp=Z,48nm,1.0s
KAIM  Kayak Island       82.49 332  P      P      23 45 09.1 -0.5
VRDI  Verde Repeater     82.54 333  P      P      23 45 09.1 -1.0
VRDI                                IAmb   IAmb   23 45 12.2
      comp=Z,34nm,0.9s
BCAR  Beaver Creek A     82.54 335  P      P      23 45 09.4 -0.4
SCO   Scoresbysund       82.58  16 i P     P      23 45 10.4 +0.6
      comp=Z,13nm,0.9s
SCO   Scoresbysund       82.58  16 i P     P      23 45 10.4 +0.6
SCO   Scoresbysund       82.58  16  P      P      23 45 09.9 +0.1
SCO   Scoresbysund       82.58  16 i P     P      23 45 10.4 +0.6
SCO                                 IAmb   IAmb   23 45 11.2
      comp=Z,13nm,0.9s
GLB   Gilahina Butte     82.78 333  IAmb   IAmb   23 45 12.6
      comp=Z,27nm,0.9s
RAGM  Ragged Mountai     82.78 332  P      P      23 45 11.1 -0.1
N25K  Chitina, Valde     83.19 333  P      P      23 45 13.4 +0.2
      baz=111
MENT  Mentasta           83.31 335  IAmb   IAmb   23 45 15.0
      comp=Z,14nm,0.7s
DOT   Dot Lake           83.72 336  IAmb   IAmb   23 45 17.2
      comp=Z,27nm,0.8s
KLU   Klutina            83.74 333  IAmb   IAmb   23 45 17.4
      comp=Z,32nm,0.9s
SCRK  Sand Creek         83.81 336  P      P      23 45 16.4 -0.1
      baz=112,SNR=19
EKB4  Eskdalemuir Ar     83.92  33  P      P      23 45 14.4 -2.6
EKA   Eskdalemuir Ar     83.93  33  P      P      23 45 16.9 -0.1
      comp=Z,5.3nm,0.8s,baz=233,slow=6.8,SNR=8.3
PAX   Paxson             84.06 335  IAmb   IAmb   23 45 18.6
      comp=Z,30nm,0.8s
M24K  Tolsona, Glenn     84.07 334  P      P      23 45 18.0 +0.3
      baz=110,SNR=12
EUNU  Eureka             84.07 358  IAmb   IAmb   23 45 19.8
      comp=Z,23nm,1.1s
TAM   Tamanrasset        84.31  67  P      P      23 45 20.5 +0.6
TAM                                 pmax   pmax
      comp=Z,16nm,1.0s
SCM   Sheep Creek Mo     84.49 333  IAmb   IAmb   23 45 21.1
      comp=Z,34nm,0.9s
DHY   Denali Highway     84.91 334  P      P      23 45 20.9 -1.2
PRP   Porcupine Dome     84.99 337  P      P      23 45 22.2 -0.1
DBG   Daneborg           85.17  13 i P     P      23 45 24.1 +1.1
DBG                                 IAmb   IAmb   23 45 25.0
      comp=Z,8.6nm,0.8s
HDA   Harding Lake       85.18 336  P      P      23 45 22.6 -0.5
      baz=110
HDA   Harding Lake       85.18 336  IAmb   IAmb   23 45 23.9
      comp=Z,21nm,0.8s
IL18  Eielson Array      85.22 336  P      P      23 45 23.1 -0.3
ILAR  Eielson Array      85.27 336  P      P      23 45 23.5 -0.2
      comp=Z,7.7nm,0.8s,baz=125,slow=3.9,SNR=81
ILAR                                PP     PP     23 48 39.4 -3.4
      comp=Z,2.1nm,0.9s,baz=103,slow=4.0,SNR=7.8
ILAR                                LR     LR     00 27 13.0
      comp=Z,40nm,18.2s,baz=170,slow=38
ILAR  Eielson Array      85.27 336  P      P      23 45 22.4 -1.2
BMAR  Burnt Mountain     85.34 339  P      P      23 45 21.4 -2.5
RC01  Rabbit Creek A     85.36 332  P      P      23 45 24.0 -0.1
      baz=107,SNR=6.7
BRLK  Bradley Lake       85.54 331  P      P      23 45 24.3 -0.8
BRLK                                IAmb   IAmb   23 45 25.9
      comp=Z,27nm,0.8s
POKR  Poker Plat Res     85.61 336  P      P      23 45 25.8 +0.5
      baz=109,SNR=7.6
POKR  Poker Plat Res     85.61 336  IAmb   IAmb   23 45 27.6
      comp=Z,14nm,0.8s
RND   Reindeer           85.65 335  IAmb   IAmb   23 45 27.1
      comp=Z,22nm,0.9s
COLA  College            85.70 336⇑i P     P      23 45 25.4 -0.3
COLA                                pmax   pmax
      comp=Z,15nm,0.9s
COLA  College            85.70 336  P      P      23 45 25.4 -0.3
COLA                                IAmb   IAmb   23 45 26.8
      comp=Z,14nm,0.8s
TCOL  CIGO, UAF Yank     85.70 336  P      P      23 45 24.9 -0.8
TCOL                                IAmb   IAmb   23 45 26.8
      comp=Z,14nm,0.8s
MCK   McKinley           85.79 335  P      P      23 45 26.0 -0.3
      baz=108,SNR=11
MDM   Murphy Dome        85.88 336  IAmb   IAmb   23 45 27.8
      comp=Z,35nm,1.0s
KDAK  Kodiak Island      85.89 329  LR     LR     00 25 09.0
      comp=Z,81nm,18.8s,baz=101,slow=36
SUA   Susitna One        85.93 332  IAmb   IAmb   23 45 28.4
      comp=Z,20nm,0.8s
CUT   Chulitna           85.98 333  P      P      23 45 27.0 -0.1
      baz=106,SNR=7.9
NEA2  Nenana             86.11 336  P      P      23 45 27.6 -0.2
      baz=108,SNR=5.7
QSPA  South Pole Qui     86.12 180  P      P      23 45 28.5 +0.6
BWN   Browne             86.14 335  P      P      23 45 27.5 -0.4
TRF   Thorofare Moun     86.28 334  IAmb   IAmb   23 45 29.8
      comp=Z,17nm,0.7s
I23K  Minto, Yukon-K     86.39 336  P      P      23 45 28.9 -0.2
      baz=107,SNR=28
KTH   Kantishna Hill     86.58 334  IAmb   IAmb   23 45 31.1
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              comp=Z,30nm,0.9s
DAG   Danmarks Havn     86.85  11 i P      P         23 45 31.2 +0.1
              comp=Z,10nm,0.8s
DAG   Danmarks Havn     86.85  11 i P      P         23 45 31.2 +0.1
DAG   Danmarks Havn     86.85  11 i P      P         23 45 31.2 +0.1
DAG                                IAmb    IAmb      23 45 32.1
              comp=Z,10nm,0.8s
MLY   Manley            86.92 336   P      P         23 45 31.7  0.0
              baz=106,SNR=16
COLD  Coldfoot          87.33 338   P      P         23 45 34.1 +0.4
              baz=107,SNR=27
COLD  Coldfoot          87.33 338   IAmb   IAmb      23 45 35.8
              comp=Z,31nm,1.1s
TOLK  Toolik Lake Re    87.52 339   P      P         23 45 34.9 +0.4
              baz=107,SNR=9.1
TOLK  Toolik Lake Re    87.52 339   IAmb   IAmb      23 45 36.0
              comp=Z,21nm,1.1s
IMAR  Indian Mountai    88.37 336   P      P         23 45 37.2 -1.4
KEST  Kesra             89.03  54   LR     LR        00 25 29.6
              comp=Z,34nm,18.5s,baz=324,slow=35
SLE   Schleitheim       89.63  42   P      P         23 45 45.3 +0.3
SLE                                 pmax   pmax
              comp=Z,21nm,0.9s
DAVOX Davos/Dischmat    90.47  43   P      P         23 45 49.5 +0.4
              comp=Z,8.2nm,0.8s,baz=272,slow=3.5,SNR=16
DAVOX                               pP     pP        23 46 17.4 +0.4
              comp=Z,11nm,0.8s,baz=294,slow=4.0,SNR=7.7
DAVA  Damuels           90.52  43 eP       P         23 45 49.5 +0.2
              comp=Z,10nm,1.1s
DAVA                              eP       pP        23 46 19.6 +2.4
              comp=Z,15nm,0.8s,SNR=5.8
A21K  Barrow            90.52 342   P      P         23 45 48.0 -0.5
A21K                                IAmb   IAmb      23 46 02.4
              comp=Z,11nm,1.1s
ZCCA  Zocca             91.03  46   P      P         23 45 50.3 -1.3
FETA  Feichten          91.07  43 eP       P         23 45 52.5 +0.7
              comp=Z,6.4nm,1.0s
FETA                              eP       pP        23 46 22.0 +2.2
              comp=Z,11nm,1.0s
MOTA  Moosalm           91.35  43 eP       P         23 45 53.5 +0.4
              comp=Z,7.9nm,0.8s,SNR=5.8
MOTA                              eP       pP        23 46 23.0 +2.0
              comp=Z,16nm,0.9s,SNR=6.7
SQTA  Sankt Quirin      91.41  43 eP       P         23 45 54.0 +0.6
              comp=Z,7.6nm,0.8s,SNR=5.9
SQTA                              eP       pP        23 46 23.6 +2.2
              comp=Z,11nm,0.7s,SNR=6.3
TEOL  Teolo             91.60  45   P      P         23 45 53.8 -0.3
TEOL                                IAmb   IAmb      23 45 55.1
              comp=Z,12nm,0.9s
CTI   Castel Tesino     91.63  44   P      P         23 45 54.2 -0.2
CTI                                 pmax   pmax
              comp=Z,6.0nm,0.8s
CTI   Castel Tesino     91.63  44   P      P         23 45 54.2 -0.2
WATA  Walderalm         91.67  43 eP       P         23 45 55.1 +0.5
              comp=Z,4.6nm,0.9s
WATA                              eP       pP        23 46 24.8 +2.2
              comp=Z,3.0nm,0.6s
WTTA  Wattenberg        91.70  43 eP       P         23 45 55.6 +0.8
              comp=Z,7.2nm,0.8s
WTTA                              eP       pP        23 46 24.8 +2.1
              comp=Z,15nm,0.9s,SNR=4.8
WTTA  Wattenberg        91.70  43   P      P         23 45 55.4 +0.6
WTTA                                pmax   pmax
              comp=Z,18nm,1.0s
ABTA  Abfaltersbach     92.27  43 eP       P         23 45 57.8 +0.4
              comp=Z,12nm,1.3s
ABTA                              eP       pP        23 46 27.5 +2.3
              comp=Z,13nm,0.9s,SNR=6.1
NOA   NORSAR Array B    92.39  29   P      P         23 45 58.8 +1.3
              comp=Z,1.0nm,0.7s,baz=268,slow=4.7,SNR=3.6
NOA                                 pP     pP        23 46 27.4 +2.0
              comp=Z,1.7nm,0.9s,baz=267,slow=4.5,SNR=3.2
CLL   Collm             92.84  39 eP       P         23 46 01.0 +1.3
CLL   Collm             92.84  39 eP       P         23 46 01.0 +1.3
KHC   Kasperske Hory    93.11  41 eP       P         23 45 59.3 -1.8
KHC                               e                  23 46 29.7
KHC   Kasperske Hory    93.11  41 eP       P         23 45 59.3 -1.8
KHC                               epP      pP        23 46 29.7 +0.7
GERES GERESS Array B    93.18  41   P      P         23 46 01.2 -0.3
              comp=Z,0.6nm,0.8s,baz=259,slow=2.2,SNR=5.2
GERES                               pP     pP        23 46 31.0 +1.6
              comp=Z,0.7nm,0.6s,baz=277,slow=3.9,SNR=4.5
GERES                               LR     LR        00 24 30.0
              comp=Z,18nm,20.6s,baz=288,slow=33
BRG   Berggiesshubel    93.41  39 eP       P         23 46 03.6 +1.3
BRG                                 Amp              23 46 05.0
              comp=Z,9.2nm,1.3s
TREC  Trest             94.36  41   P      P         23 46 06.8  0.0
TREC                                pmax   pmax
              comp=Z,2.0nm,1.8s
CONA  Conrad Observa    94.59  42 eP       P         23 46 08.8 +0.8
              comp=Z,3.5nm,0.7s
OSTC  Ostas             94.85  40 eP       P         23 46 09.9 +0.9
OSTC                              epP      pP        23 46 36.5 -0.5
DPC   Dobruska-Polom    94.92  40 eP       P         23 46 10.4 +1.1
DPC                               e                  23 46 38.9
DPC   Dobruska-Polom    94.92  40 eP       P         23 46 10.4 +1.1
DPC                               epP      pP        23 46 38.9 +1.6
KRUC  Moravsky          94.96  41   P      P         23 46 10.6 +1.1
KRUC                                pmax   pmax
              comp=Z,8.0nm,1.1s
VRAC  Vranov            95.09  41   P      P         23 46 10.6 +0.5
              comp=Z,2.7nm,0.7s,baz=283,slow=10,SNR=4.4
KRLC  Kraliky           95.21  40 eP       P         23 46 11.4 +0.7
KRLC                              e                  23 46 41.4
KRLC  Kraliky           95.21  40 eP       P         23 46 11.4 +0.7
KRLC                              epP      pP        23 46 41.4 +2.7
SYO   Syowa Base        95.44 161⇓epP      pP        23 46 42.0 +2.8
ARCES ARCESS Array B    97.94  20   P      P         23 46 21.5 -1.1
              comp=Z,5.1nm,0.9s,baz=25,slow=3.2,SNR=6.5
BOSA  Boshof            98.51 120   LR     LR        00 30 17.5
              comp=Z,31nm,18.5s,baz=206,slow=35
FINES FINESS Array B    99.54  28   P      Pdif      23 46 29.4 -0.5
              comp=Z,4.3nm,0.9s,baz=270,slow=7.6,SNR=4.1
MNK   Minsk            101.63  35 i P      Pdif      23 46 41.2 +1.9
              comp=E,2.0nm,1.0s
MNK                               i P      Pdif      23 46 41.2 +1.9
              comp=N,8.0nm,0.8s
MNK                               i P      Pdif      23 46 41.2 +1.9
              comp=Z,11nm,0.9s
MNK                               i pP     pP        23 47 07.7 +0.1
MNK                               i PP     PP        23 50 52.3 +1.6
MNK                               i PPP    PPP       23 53 01.3
MNK                               i S      SKSac     23 57 11.0 +2.1
MNK                               i sS     SKKSac    23 57 59.1  +13
MNK                               i SS     SS        00 05 17.6 +2.2
MNK                               i SSS    SSS       00 09 10.5
MNK                               i LQ     LQ        00 26 44.6
MNK                               i LR     LR        00 32 16.4
MNK                               i LRM    MLR       00 34 00.9
              comp=E,8.0nm,19.0s
MNK                               i LRM    MLR       00 34 33.5
              comp=N,141nm,23.1s
MNK                               i LRM    MLR       00 34 43.0
              comp=Z,76nm,25.8s
KIV   Kislovodsk       113.60  43 ePKIKP   PKiKP     23 51 24.4 -0.8
KIV                                 pmax   pmax
              comp=Z,16nm,1.0s
AKTO  Aktyubinsk       120.08  32   PKP    PKPdf     23 51 37.2 -0.1
              comp=Z,1.9nm,0.8s,baz=283,slow=6.9,SNR=4.6
ABKAR Akbulak array    121.78  32   PKPdf  PKPdf     23 51 40.1 -0.5
BRVK  Borovoye         124.01 23c iPKIKP   PKiKP     23 51 46.4 +1.3
BRVK                                pmax   pmax
              comp=Z,3.0nm,1.7s
BRVK  Borovoye         124.01  23          PKiKP     23 51 45.0 -0.1
GEYT  Alibeck          126.69  44   PKP    PKPdf     23 51 50.6 +0.1
              comp=Z,4.2nm,0.8s,baz=255,slow=5.7,SNR=13
ZALV  Zalesovo Beam    127.91  14   PKP    PKPdf     23 51 51.8 -0.4
              comp=Z,12nm,0.8s,baz=271,slow=1.9,SNR=39
KURK  Kurchatov        128.97  20   PKIKP  PKiKP     23 51 54.8 -0.3
KURK  Kurchatov        128.97  20   PKPdf  PKiKP     23 51 54.8 -0.3
STKA  Stephens Creek   129.10 223   PKP    PKPdf     23 51 55.1 -0.1
              comp=Z,2.6nm,0.7s,baz=123,slow=8.0,SNR=3.9
STKA                                pPKP   pPKPdf    23 52 25.5 +1.1
              comp=Z,4.4nm,0.8s,baz=328,slow=7.3,SNR=3.9
SEM   Semipalatinsk    129.78  19 ePKP     PKPdf     23 51 56.2 -0.1
              baz=19
SEM   Semipalatinsk    129.78  19 ePKIKP   PKPdf     23 51 56.1 -0.1
KKAR  Karatay Array    131.34  32   PKIKP  PKiKP     23 52 00.3 +0.2
KKAR  Karatay Array    131.34  32          PKiKP     23 52 00.3 +0.2
BTLS  Baital           131.69  28 ePKP     PKiKP     23 52 00.6 -0.2
              baz=28
BTLS  Baital           131.69  28 ePKIKP   PKiKP     23 52 00.5 -0.2
IUG   Iuzhnay          131.74  33 ePKP     PKPdf     23 52 00.1  0.0
              baz=33
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IUG   Iuzhnay          131.74  33 ePKIKP   PKPdf     23 52 00.1  0.0
DZA   Taraz            131.92  32 ePKP     PKPdf     23 52 00.6 +0.2
              baz=32
DZA   Taraz            131.92  32 ePKIKP   PKPdf     23 52 00.5 +0.2
SGDS  Sogindy          133.17  29 ePKP     PKiKP     23 52 03.6 -0.3
              baz=29
SGDS  Sogindy          133.17  29 ePKIKP   PKiKP     23 52 03.6 -0.3
MAKZ  Makanchi         133.47  20   PKIKP  PKPdf     23 52 02.6 -0.4
MAKZ  Makanchi         133.47  20   PKPdf  PKPdf     23 52 02.6 -0.4
MKAR  Makanchi Array   133.59  20   PKP    PKPdf     23 52 02.8 -0.5
              comp=Z,1.6nm,0.5s,baz=1.2,slow=2.4,SNR=29
KUU   Kurty            133.62  27 ePKP     PKPdf     23 52 03.8 +0.4
              baz=27
KUU   Kurty            133.62  27 ePKIKP   PKPdf     23 52 03.8 +0.4
TDK   Taldyqorghan     133.63  24 ePKP     PKPdf     23 52 03.6 +0.2
              baz=24
TDK   Taldyqorghan     133.63  24 ePKIKP   PKPdf     23 52 03.6 +0.2
AAK   Ala-Archa        133.71 30c iPKIKP   PKiKP     23 52 05.9 +0.8
AAK                                 pmax   pmax
              comp=Z,25nm,1.3s
AAK   Ala-Archa        133.71  30   PKPdf  PKiKP     23 52 05.2  0.0
CHKK  Chushkaly        133.95  27 ePKP     PKPdf     23 52 04.4 +0.4
              baz=26
CHKK  Chushkaly        133.95  27 ePKIKP   PKPdf     23 52 04.4 +0.4
MJAR  Matsushiro Arr   134.44 320   PKP    PKPdf     23 52 04.6 -0.6
              comp=Z,2.0nm,0.7s,baz=87,slow=1.4,SNR=4.1
MDOK  Medeo            134.52  27 ePKP     PKPdf     23 52 05.7 +0.3
              baz=27
MDOK  Medeo            134.52  27 ePKIKP   PKPdf     23 52 05.6 +0.3
KPKS  Kokpek           135.00  25 ePKP     PKPdf     23 52 06.5 +0.3
              baz=25
KPKS  Kokpek           135.00  25 ePKIKP   PKPdf     23 52 06.4 +0.3
KBL   Kabul            135.96  42   PKIKP  PKiKP     23 52 09.4 -0.6
KBL   Kabul            135.96  42   PKPdf  PKiKP     23 52 09.4 -0.6
ULN   Ulaanbaatar      136.15 356   PKIKP  PKiKP     23 52 09.5 -0.4
ULN   Ulaanbaatar      136.15 356   PKPdf  PKiKP     23 52 09.5 -0.4
SONM  Songino Array    136.22 357   PKP    PKPdf     23 52 08.4 +0.1
              comp=Z,2.3nm,0.8s,baz=304,slow=1.9,SNR=16
SONM  Songino Array    136.22 357   PKPdf  PKPdf     23 52 07.4 -0.9
KSH   Kashi            136.78  31   PKP    PKiKP     23 52 11.5 +0.1
KSH                                 sPKP             23 52 47.8
KSH                                 PP     PP        23 54 57.4 +4.9
KSH                                 AMB    AMB
              comp=Z,76nm,4.4s
WMQ   Urumqi           137.96  17 ePKP     PKPdf     23 52 11.6  0.0
WMQ                                 AMB    AMB
              comp=Z,380nm,6.1s
WMQ                                 LR     LR
              comp=Z,510nm,29.1s
WMQ                                 LR     LR
              comp=Z,170nm,29.0s
WMQ                                 LR     LR
              comp=Z,3µm,29.0s
ASAR  Alice Springs    139.50 226   PKP    PKPdf     23 52 14.6 -0.4
              comp=Z,3.2nm,0.8s,baz=45,slow=3.4,SNR=11
ASAR                                pPKP   pPKPdf    23 52 45.8 +1.6
              comp=Z,3.6nm,0.9s,baz=150,slow=3.0,SNR=4.6
KSRS  Korea Array      139.79 329   PKhKP  PKPpre    23 52 05.9
              comp=Z,2.8nm,0.9s,baz=58,slow=3.8,SNR=6.2
KSRS                                PKP    PKPdf     23 52 15.1 +0.1
              comp=Z,2.8nm,0.9s,baz=26,slow=2.3,SNR=7.6
WRA   Warramunga Arr   141.39 231   PKhKP  PKPpre    23 52 11.6
              comp=Z,3.0nm,0.8s,baz=125,slow=3.0,SNR=6.5
WRA                                 PKP    PKPdf     23 52 17.8 -0.6
              comp=Z,2.9nm,0.6s,baz=122,slow=1.9,SNR=8.2
BJI   Beijing          142.26 344   PKP    PKPdf     23 52 19.8 +0.4
HHC   Hu-ho-hao-te     142.54 350 eP       PKiKP     23 52 29.2 +6.1
GTA   Gaotai           144.57   5 ⇑PKP     PKPab     23 52 22.0 -0.3
GTA                                 pPKP   pPKPdf    23 52 52.1 -0.7
GTA                                 sPKP             23 53 03.4
GTA                                 LR     LR
              comp=Z,120nm,20.4s
GTA                                 LR     LR
              comp=Z,580nm,19.3s
GTA                                 LR     LR
              comp=Z,420nm,19.6s
TIA   Tai'an           145.49 340   PKPbc  PKPdf     23 52 24.8 -0.4
JOW   Kunigami         147.07 316   PKPbc  PKPbc     23 52 30.1 -0.2
              comp=Z,26nm,0.7s,baz=214,slow=4.6,SNR=8.7
JOW                                 pPKPbc pPKPbc    23 52 58.9 -0.3
              comp=Z,48nm,1.1s,baz=87,slow=6.6,SNR=4.9
LZH   Lanzhou          148.03 359 ⇑PKPbc   PKPbc     23 52 33.6 +0.7
LZH                                 pPKP   pPKPab    23 53 04.2 +0.2
LZH                                 sPKP             23 53 16.5
NJ2   Nanjing          148.50 334 ePKPbc   PKPdf     23 52 29.0 -1.3
FITZ  Fitzroy Crossi   148.97 224   PKPbc  PKPbc     23 52 35.6 +0.1
              comp=Z,8.8nm,0.9s,baz=275,slow=0.8,SNR=5.4
DANN  Dangsing         149.40  36 eP       PKPdf     23 52 32.9 +0.6
              comp=Z,188nm,0.8s
XAN   Xi'an            149.63 351   PKPbc  PKPdf     23 52 32.9 +0.8
PSA00 Pilbara Seismi   149.92 212          PKPbc     23 52 37.1 -0.8
KKN   Kakani           150.69  34 eP       PKPdf     23 52 35.1 +0.9
              comp=Z,105nm,0.8s
DMN   Daman            150.74  35 eP       PKPdf     23 52 34.9 +0.6
              comp=Z,106nm,1.2s
PKIN  Phulchoki        150.93  34 eP       PKPdf     23 52 35.2 +0.6
              comp=Z,72nm,0.9s
GUN   Gumba            150.93  33 eP       PKPdf     23 52 35.5 +0.8
              comp=Z,160nm,1.2s
PKI   Pulchoki         150.94  34 eP       PKPdf     23 52 35.3 +0.6
              comp=Z,85nm,0.9s
WHN   Wuhan            151.60 340 ⇑P       PKPbc     23 52 41.6 +0.1
SIJI  Sorong           151.71 261   PKPbc  PKPbc     23 52 42.0 -0.3
              comp=Z,10nm,0.7s,baz=30,slow=2.9,SNR=6.1
CD2   Chengdu          153.19 359   PKPbc  PKPdf     23 52 35.5 -2.1
ENH   Enshi            153.20 348          PKPdf     23 52 37.8 +0.2
ENH                                 PKPab  PKPab     23 52 56.9 -0.1
SHL   Shillong         155.85  26   PKIKP  PKPdf     23 52 42.2 +0.5
SHL   Shillong         155.85  26          PKPdf     23 52 42.2 +0.5
KMI   Kunming          158.95   2   PKP    PKPdf     23 52 42.2 -3.4
SLVN  Son La           162.73 358          PKPab     23 53 39.3 +1.0
CHTO  Chiang Mai       164.62  16   PKP2   PKPab     23 53 46.4 -0.3
CHTO                                                 00 52 50.4
CHTO  Chiang Mai       164.62  16   PKPdf  PKPdf     23 52 50.4 -0.9
CHTO                                       PKPab     23 53 46.4 -0.3
CMAR  Chiang Mai Arr   164.96  16   PKP    PKPdf     23 52 51.7 +0.1
              comp=Z,2.6nm,0.8s,baz=281,slow=1.3,SNR=18
CMAR                                PKPab  PKPab     23 53 47.0 -1.2
              comp=Z,4.5nm,0.5s,baz=327,slow=5.4,SNR=22
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*IDC **01** 23:38:25.2±1.5, 36.°59N×2.°99E, h0^{km}, mb3.2/2, mb1 3.3/5, mb1mx3.1/58, mbtmp3.2/5, ML3.0/3, Error ellipse: s-maj=29.9km s-min=19.5km az=170.0*

*NEIC **01** 23:38:25.4±2.8, 36.°54N±0.°07×2.°99E±0.°07, h10^{km}±2^{km}, mb4.2/5, Error ellipse: s-maj=12.7km s-min=9.7km az=155.0*

*CRAAG **01** 23:38:25.0, 36.°46N×3.°04E, Ml3.3*

*MDD **01** 23:38:27.1±0.5, 36.°48N×3.°03E, h5^{km}±6^{km}, mb4.1/20, Error ellipse: s-maj=6.6km s-min=3.8km az=117.0, PRXIMO*

MDD EMS: SENTIDO EN ARGELIA.

*LDG **01** 23:38:30.4±0.3, 36.°76N×2.°61E, h10^{km}, Ml3.1/11, Error ellipse: s-maj=6.9km s-min=3.0km az=153.0*

ISC 01 23:38:26.2±0.6**, 36.°54N**±0.°03×**3.°03E**±0.°03**, h18**^{km}**, n113,** σ2.^{s}**58**/169**, mb3.4**/3**, Northern Algeria**

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Code  Station Name        Δ°   AZ°   Phase ID             Time      Res
                                     Op     ISC          h  m  s    ISC
ABA   Alger-Bouzarea     0.26   1    P      Pg        23 38 32.9 +0.8
ABA   Alger-Bouzarea     0.26   1    P      Pg        23 38 32.9 +0.8
EMHD  Djebel Mahouad     0.34 190    P      Pg        23 38 32.2 -1.4
EMHD  Djebel Mahouad     0.34 190    P      Pg        23 38 32.2 -1.4
ABMS  Boumerdes          0.42  60    P      Pg        23 38 35.6 +0.8
ABMS  Boumerdes          0.42  60    P      Pg        23 38 35.6 +0.8
ADJB  Djebel Djouab      0.50 139    P      Pg        23 38 35.4 -1.0
ADJB  Djebel Djouab      0.50 139    P      Pg        23 38 35.4 -1.0
EBNR  Beni Rached        1.24 259    P      Pg        23 38 51.0 +0.9
ECHA  Ech Chlef          1.40 254    P      Pn        23 38 52.2 +1.4
ECHF  Ech Chlef          1.42 255    P      Pn        23 38 52.2 +1.1
EANR  'Ain N'Sour        1.67 250    P      Pb        23 38 58.0 +1.6
EANR  'Ain N'Sour        1.67 250    P      Pb        23 38 58.0 +1.6
ETRT  Tiaret             1.81 231    P      Pn        23 38 59.1 +2.5
ETRT  Tiaret             1.81 231    P      Pn        23 38 59.1 +2.5
SET   Setif              1.94  99    P      Pg        23 39 05.0 +1.5
SET   Setif              1.94  99    P      Pg        23 39 05.0 +1.5
OKGL  Djebel Kef Gue     1.99 256    P      Pn        23 38 58.9 -0.1
              10nm,0.1s,SNR=7.9
OKGL                                 S      Sn        23 39 25.0 +1.5
              SNR=7.9
OKGL  Djebel Kef Gue     1.99 256           Pn        23 38 58.9 -0.1
EIBI  Ibiza              2.82 332    P      Pn        23 39 13.2 +2.8
              12nm,0.2s,SNR=7.9
EIBI                                 S      Sn        23 39 42.0 -1.9
              72nm,0.6s,SNR=4.0
EIBI  Ibiza              2.82 332           Pn        23 39 13.2 +2.8
EIBI                                        Sn        23 39 42.2 -1.7
ETOS  Mallorca           3.23 357    P      Pn        23 39 17.8 +1.9
              10nm,0.2s,SNR=128
ETOS                                 S      Sn        23 39 54.1 +0.1
              16nm,0.3s,SNR=7.9
ETOS  Mallorca           3.23 357           Pn        23 39 17.8 +1.9
ETOS                                        Sn        23 39 54.0 +0.1
EBEN2 Beniarda presa     3.33 311    P      Pn        23 39 18.6 +1.2
              3.2nm,0.1s,SNR=7.9
EBEN2                                S      Sn        23 39 56.1 -0.4
              16nm,0.2s,SNR=7.9
EBEN2 Beniarda presa     3.33 311           Sn        23 39 55.6 -0.9
CART  Cartagena          3.39 289    Pn     Pn        23 39 17.9 -0.3
EMUR  La Murta           3.65 292    P      Pn        23 39 22.8 +1.0
              1.1nm,0.2s,SNR=9.4
EMUR                                 S      Sn        23 40 03.7 -0.7
              10nm,0.6s,SNR=6.1
EMUR  La Murta           3.65 292           Pn        23 39 22.8 +1.0
EMUR                                        Sn        23 40 03.7 -0.7
ETOB  Tobarra            4.20 301    P      Pn        23 39 31.2 +1.8
              5.0nm,0.2s,SNR=26
ETOB                                 S      Sn        23 40 18.1 +0.1
              3.1nm,0.2s
ETOB  Tobarra            4.20 301           Pn        23 39 31.2 +1.8
ETOB                                        Sn        23 40 18.1 +0.1
ENIJ  Nijar              4.23 277    P      Pn        23 39 30.4 +0.7
              3.2nm,0.3s,SNR=7.9
ENIJ                                 S      Sn        23 40 17.9 -0.8
              8.2nm,0.3s,SNR=7.9
ENIJ  Nijar              4.23 277           Pn        23 39 30.4 +0.7
ENIJ                                        Sn        23 40 17.9 -0.8
ECHE  Chera              4.38 315    P      Pn        23 39 34.4 +2.5
              6.5nm,0.3s,SNR=7.9
ECHE                                 S      Sn        23 40 22.4 -0.2
              2.0nm,0.3s,SNR=7.9
ECHE  Chera              4.38 315           Pn        23 39 34.4 +2.5
EMOS  Mosqueruela        4.70 325    P      Pn        23 39 38.7 +2.3
              2.6nm,0.2s,SNR=18
EMOS                                 S      Sn        23 40 30.2 -0.4
              32nm,0.9s
EMOS  Mosqueruela        4.70 325           Pn        23 39 38.7 +2.3
EMOS                                        Sn        23 40 30.2 -0.4
SESP  Santiago Espad     4.71 291    P      Pn        23 39 39.4 +2.9
              2.4nm,0.2s,SNR=7.9
SESP                                 S      Sn        23 40 30.8 -0.1
              4.3nm,0.2s,SNR=7.9
EBER  Berja              4.77 276    P      Pn        23 39 38.0 +0.7
              1.8nm,0.2s,SNR=8.2
EBER                                 S      Sn        23 40 32.6 +0.3
              34nm,0.8s
EBER  Berja              4.77 276           Pn        23 39 38.0 +0.7
EBER                                        Sn        23 40 32.6 +0.3
ERTA  Horta de San J     4.89 335    P      Pn        23 39 41.9 +3.1
              0.4nm,0.1s,SNR=7.9
ERTA                                 S      Sn        23 40 34.0 -0.9
              2.0nm,0.3s,SNR=7.9
EQES  Quesada            5.03 286    P      Pn        23 39 43.8 +2.9
              0.6nm,0.1s,SNR=14
EQES                                 S      Sn        23 40 39.6 +1.0
              5.9nm,0.4s
EPOB  Poblet             5.04 343    P      Pn        23 39 44.8 +3.8
              0.9nm,0.2s,SNR=7.9
EPOB                                 S      Sn        23 40 40.0 +1.2
              1.3nm,0.3s,SNR=7.9
KEST  Kesra              5.17  97    Pn     Pn        23 39 46.7 +3.9
              0.5nm,0.3s,baz=187,slow=8.1,SNR=6.0
KEST                                 Sn     Sn        23 40 47.2 +5.1
              0.4nm,0.3s,baz=14,slow=8.3,SNR=1.6
KEST  Kesra              5.17  97    Pn     Pn        23 39 47.2 +4.4
EQUE  Quentar            5.23 279    P      Pn        23 39 45.5 +1.9
              0.9nm,0.3s,SNR=5.4
EQUE                                 S      Sn        23 40 42.6 -0.9
              0.2nm,0.1s,SNR=4.0
CFON  Fontmartina        5.24 355    P      Pn        23 39 45.5 +1.8
              4.3nm,0.2s,SNR=10
CFON                                 S      Sn        23 40 41.3 -2.3
              18nm,0.6s,SNR=7.9
ELGU  Los Guajares,      5.36 275    P      Pn        23 39 46.5 +1.1
              0.9nm,0.2s,SNR=7.9
ELGU                                 S      Sn        23 40 46.4 -0.2
              8.6nm,0.7s,SNR=7.9
ELGU  Los Guajares,      5.36 275           Pn        23 39 46.5 +1.1
EMIR  Miracle            5.49 348    P      Pn        23 39 50.7 +3.6
              10nm,0.3s,SNR=7.9
EMIR                                 S      Sn        23 40 49.5 -0.4
              20nm,0.3s,SNR=7.9
VSL   Villasalto         5.81  58    Pn     Pn        23 39 52.0 +0.5
ETOR  Torete             5.84 319    P      Pn        23 39 56.8 +4.9
              2.0nm,0.3s,SNR=7.9
ETOR                                 S      Sn        23 41 00.3 +1.9
              2.0nm,0.4s,SNR=7.9
EJON  La Jonquera        5.90 359    P      Pn        23 39 55.5 +2.7
              3.8nm,0.2s,SNR=7.9
EJON                                 S      Sn        23 40 57.9 -2.0
              1.4nm,0.4s,SNR=7.9
EJON  La Jonquera        5.90 359           Pn        23 39 55.5 +2.7
SJAF  Saint Jean de      5.94 359    P      Pn        23 39 55.7 +2.5
              0.4nm,0.1s,SNR=7.9
SJAF                                 S      Sn        23 41 01.4 +0.7
              0.1nm,0.1s,SNR=7.9
SJAF  Saint Jean de      5.94 359           Pn        23 39 55.7 +2.5
CLLI  Llivia             5.99 352    P      Pn        23 39 57.5 +3.5
              2.6nm,0.3s,SNR=6.8
CLLI                                 S      Sn        23 41 00.3 -1.8
              0.4nm,0.2s,SNR=6.4
CSOR  Sort               6.01 346    P      Pn        23 39 57.4 +3.1
              1.4nm,0.2s,SNR=7.9
CSOR                                 S      Sn        23 41 01.7 -0.9
              2.2nm,0.2s,SNR=7.9
EADA  Adamuz             6.27 287    P      Pn        23 39 59.0 +1.2
              0.1nm,0.1s,SNR=7.9
EADA                                 S      Sn        23 41 07.5 -1.6
              0.5nm,0.3s,SNR=7.9
ESBB  Sonseca Array      6.34 302    Pn     Pn        23 39 58.5 -0.3
ESDC  Sonseca Array      6.34 302    Pn     Pn        23 40 00.6 +1.9
              0.2nm,0.3s,baz=118,slow=13,SNR=8.0
ESDC                                 Sn     Sn        23 41 10.0 -0.7
              0.1nm,0.3s,baz=118,slow=24,SNR=4.5
ESDC  Sonseca Array      6.34 302    P      Pn        23 40 00.2 +1.4
              1.0nm,0.2s,baz=116,slow=14,SNR=7.8
ESDC                                 S      Sn        23 41 10.7 -0.1
              1.3nm,0.5s,baz=117,slow=24,SNR=7.9
ESDC  Sonseca Array      6.34 302           Pn        23 39 58.5 -0.3
ECHI  Chisagues Biel     6.50 341    P      Pn        23 40 03.6 +2.6
              0.2nm,0.1s,SNR=7.9
ECHI                                 S      Sn        23 41 13.3 -1.4
              0.8nm,0.4s,SNR=7.9
PAB   San Pablo          6.55 299    P      Pn        23 40 03.5 +1.8
              2.6nm,0.5s,SNR=7.9
PAB                                  S      Sn        23 41 13.2 -2.7
              0.6nm,0.5s,SNR=7.9
PAB   San Pablo          6.55 299           Pn        23 40 01.4 -0.3
EPF   Esparros           6.80 343    P      Pn        23 40 03.8 -1.4
EPF                                  S      Sn        23 41 14.1 -8.1
EPF   Esparros           6.80 343   ePn     Pn        23 40 03.8 -1.4
EPF                                 eSn     Sn        23 41 14.1 -8.1
MTLF  Montolieu          6.82 355    P      Pn        23 40 09.7 +4.4
MTLF                                 S      Sn        23 41 15.9 -6.6
              0.3nm,0.2s
MTLF  Montolieu          6.82 355   eP      Pn        23 40 09.7 +4.4
MTLF                                eSn     Sn        23 41 15.9 -6.6
              0.7nm,0.2s
ECAB  El Cabril          6.91 285    P      Pn        23 40 07.2 +0.7
              0.3nm,0.2s,SNR=7.9
ECAB                                 S      Sn        23 41 23.0 -1.7
              0.5nm,0.3s,SNR=7.9
GUD   Guadarrama         6.96 308    P      Pn        23 40 09.4 +2.1
              0.6nm,0.3s,SNR=7.9
GUD                                  S      Sn        23 41 24.1 -2.0
              0.7nm,0.3s,SNR=7.9
ATE   Arette             7.14 337    P      Pn        23 40 14.0 +4.3
              0.2nm,0.1s,SNR=7.9
ATE                                  S      Sn        23 41 29.6 -0.8
              3.8nm,0.3s,SNR=7.9
LMR   La Mourre          7.29  20    P      Pn        23 40 13.0 +1.2
LMR                                  S      Sn        23 41 30.5 -3.5
              2.7nm,0.3s
LMR   La Mourre          7.29  20   ePn     Pn        23 40 13.0 +1.2
LMR                                 eSn     Sn        23 41 30.5 -3.5
              5.3nm,0.3s
MDT   Midelt             7.31 242    Pn     Pn        23 40 13.6 +1.5
              0.2nm,0.3s,baz=297,slow=10.0,SNR=13
MDT                                  Lg     Lg        23 42 19.4
              0.2nm,0.3s,baz=73,slow=9.1,SNR=2.2
```

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFS	San Fernando	7.44	272	Pn	Pn	23 40 12.3	-1.5
FRF	La Foret Royal	7.54	20	P	Pn	23 40 17.6	+2.4
FRF				S	Sn	23 41 36.2	-4.0
	2.6nm,0.3s						
FRF	La Foret Royal	7.54	20	*e*Pn	Pn	23 40 17.6	+2.4
FRF				*e*Sn	Sn	23 41 36.2	-4.0
	5.1nm,0.3s						
LASF	Ste Croix	7.55	5	P	Pn	23 40 16.8	+1.4
LASF				S	Sn	23 41 35.0	-5.5
	0.8nm,0.4s						
LASF	Ste Croix	7.55	5	*e*Pn	Pn	23 40 16.8	+1.4
LASF				*e*Sn	Sn	23 41 35.0	-5.5
	1.6nm,0.4s						
PGF	Pioggiola	7.56	36	P	Pn	23 40 18.8	+3.2
PGF				S	Sn	23 41 39.5	-1.5
PGF	Pioggiola	7.56	36	*e*Pn	Pn	23 40 18.8	+3.2
PGF				*e*Sn	Sn	23 41 39.5	-1.5
SBF	Sospel	8.05	23	P	Pn	23 40 24.1	+1.8
SBF				S	Sn	23 41 49.2	-3.7
	4.5nm,0.5s						
SBF	Sospel	8.05	23	*e*Pn	Pn	23 40 24.1	+1.8
SBF				*e*Sn	Sn	23 41 49.2	-3.7
	9.0nm,0.5s						
VIVF	Saint-Julien-l	8.40	8	P	Pn	23 40 28.2	+1.2
VIVF				S	Sn	23 41 55.7	-5.7
	0.7nm,0.3s						
VIVF	Saint-Julien-l	8.40	8	*e*Pn	Pn	23 40 28.2	+1.2
VIVF	Saint-Julien-l	8.40	8	*e*P	Pn	23 40 33.0	+6.0
VIVF				*e*Sn	Sn	23 41 55.7	-5.7
	1.4nm,0.3s						
ORIF	Oris-en-Rattie	8.64	14	P	Pn	23 40 31.4	+1.0
ORIF				S	Sn	23 42 02.1	-5.3
	0.2nm,0.3s						
ORIF	Oris-en-Rattie	8.64	14	*e*Pn	Pn	23 40 31.4	+1.0
ORIF	Oris-en-Rattie	8.64	14	*e*P	Pn	23 40 37.2	+6.8
ORIF				*e*Sn	Sn	23 42 02.1	-5.3
	0.4nm,0.3s						
MBDF	Montbardon	8.66	18	P	Pn	23 40 33.9	+3.3
MBDF				S	Sn	23 42 03.7	-4.2
	0.2nm,0.2s						
MBDF	Montbardon	8.66	18	*e*Pn	Pn	23 40 33.9	+3.3
MBDF				*e*Sn	Sn	23 42 03.7	-4.2
	0.4nm,0.2s						
SSB	Saint Sauveur	8.80	7	Pn	Pn	23 40 33.8	+1.2
BNI	Bardonecchia	8.94	17	Pn	Pn	23 40 35.1	+0.6
LPG	La Plagne	9.38	16	P	Pn	23 40 42.8	+2.1
LPG				S	Sn	23 42 20.2	-5.6
	0.2nm,0.3s						
LPG	La Plagne	9.38	16	*e*Pn	Pn	23 40 42.8	+2.1
LPG	La Plagne	9.38	16	*e*P	Pn	23 40 47.4	+6.7
LPG				*e*Sn	Sn	23 42 20.2	-5.6
	0.4nm,0.3s						
LPL	La Plagne	9.39	16	P	Pn	23 40 42.4	+1.6
LPL	La Plagne	9.39	16	*e*Pn	Pn	23 40 42.4	+1.6
LPL	La Plagne	9.39	16	*e*P	Pn	23 40 47.5	+6.7
SALO	Salr	10.68	30	Pn	Pn	23 40 58.6	+0.3
GEC2	GERESS Array S	14.57	29	Pn	Pn	23 41 49.5	-1.9
GEC2B	GERESS ARRAY S	14.57	29	Pn	Pn	23 41 49.5	-1.9
GERES	GERESS Array B	14.57	29	Pn	Pn	23 41 50.2	-1.2
CLL	Collm	16.39	23	Pn	Pn	23 42 15.5	+0.3
PMOZ	Porto Moniz, M	17.04	263		Pn	23 42 20.6	-3.1
EKR7	Eskdalemuir Ar	19.25	349	P	P	23 42 49.1	-0.3
EKR7				IAmb	IAmb	23 42 50.2	
	comp=Z,14nm,1.0s						
EKB6	Eskdalemuir Ar	19.28	349	P	P	23 42 48.0	-1.7
EKB6				IAmb	IAmb	23 43 03.9	
	comp=Z,11nm,1.1s						
BURAR	Bucovina Array	19.77	49	P	P	23 42 56.1	+0.8
TORD	Torodi Ar. Bea	23.32	183	P	P	23 43 34.4	+1.0
	comp=Z,0.4nm,0.5s,baz=357,slow=10,SNR=1.8						
NB201	NORSAR Array S	25.09	9	P	P	23 43 49.3	-0.2
NB201				IAmb	IAmb	23 43 51.1	
	comp=Z,13nm,1.1s						
DBIC	Dimbokro	30.59	196	P	P	23 44 38.7	-0.4
MKAR	Makanchi Array	57.73	53	P	P	23 48 17.1	+1.3
	comp=Z,0.2nm,0.5s,baz=278,slow=5.3,SNR=2.3						

*IDC **01** 23:46:37.1±1.9, 3°.83S×141°.39E, h57^{km}±16^{km}, mb3.6/6, mb1 3.9/9, mb1mx3.6/38, mbtmp4.0/9, MS3.8/1, Ms1 3.7/1, ms1mx2.5/37, Error ellipse: s-maj=28.7km s-min=12.8km az=77.0*

*NEIC **01** 23:46:38.2±1.5, 3°.73S±0°.08×141°.5E±0°.1, h61^{km}±8^{km}, mb4.2/20, Error ellipse: s-maj=17.1km s-min=10.4km az=61.0*

ISC 01 23:46:37.6±0.6**, 3°.79S**±0°.07×**141°.37E**±0°.09**, h54**^{km}**, n50,** σ1^{s}**01**/49**, mb4.1**/13**, New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	1.43	332	P	Pn	23 47 00.4	-0.9
	32nm,0.3s,baz=170,slow=9.9,SNR=65						
JAY				S	Sn	23 47 19.7	+0.6
	267nm,0.3s,baz=304,slow=24,SNR=20						
JAY				LR	LR	23 47 50.2	
	comp=Z,193nm,19.7s,baz=170,slow=50						
PMG	Port Moresby	8.01	134	P	Pn	23 48 32.3	+0.9
	1.8nm,0.3s,baz=24,slow=2.5,SNR=3.9						
PMG	Port Moresby	8.01	134		Pn	23 48 33.1	+1.7
FAKI	Fak Fak	9.15	275	Pn	Pn	23 48 49.4	+2.3
COEN	Coen	10.26	170	Pn	Pn	23 49 07.2	+4.9
SIJI	Sorong	10.51	286	P	Pn	23 49 05.5	-0.2
	baz=193,slow=22,SNR=2.7						
MTN	Manton Dam	13.54	228		Pn	23 49 45.1	-2.1
WB0	Warramunga Arr	17.28	203	Pn	Pn	23 50 34.9	-0.4
WR0	Warramunga Arr	17.40	202	Pn	Pn	23 50 36.7	0.0
WB2	Warramunga Arr	17.45	203		Pn	23 50 37.1	-0.3
WRA	Warramunga Arr	17.46	203	P	Pn	23 50 35.5	-2.0
	0.2nm,0.3s,baz=16,slow=13,SNR=5.5						
WRA	Warramunga Arr	17.46	203	P	P	23 50 38.9	+0.8
WC3	Warramunga Arr	17.46	202	Pn	Pn	23 50 36.9	-0.6
SOEI	Soe	17.98	250	P	Pn	23 50 45.2	+1.1
SOEI				IAmb	IAmb	23 51 00.7	
	comp=Z,25nm,0.8s						
FITZ	Fitzroy Crossi	20.96	226	P	P	23 51 15.7	-0.7
	comp=Z,0.7nm,0.5s,baz=15,slow=8.8,SNR=1.3						
FITZ	Fitzroy Crossi	20.96	226	P	P	23 51 16.5	+0.1
FITZ				IAmb	IAmb	23 51 26.8	
	comp=Z,7.2nm,1.2s						
ASAR	Alice Springs	21.04	199	P	P	23 51 15.6	-1.6
	comp=Z,1.7nm,0.7s,baz=29,slow=11,SNR=10.0						
ASAR	Alice Springs	21.04	199	P	P	23 51 18.0	+0.8
KAPI	Kappang	21.59	266	P	P	23 51 24.6	+1.5
EIDS	Eidsvold	23.40	157	P	P	23 51 42.2	+0.3
EIDS				IAmb	IAmb	23 51 48.5	
	comp=Z,6.9nm,1.1s						
CMAR	Chiang Mai Arr	47.28	299	P	P	23 55 05.3	-0.7
	comp=Z,1.7nm,0.5s,baz=111,slow=6.1,SNR=6.3						
MK31	Makanchi Array	72.27	322	P	P	23 57 57.5	+0.1
MK31				IAmb	IAmb	23 57 58.5	
	comp=Z,1.6nm,1.0s						
MKAR	Makanchi Array	72.27	322	P	P	23 57 57.6	+0.2
	comp=Z,1.5nm,0.5s,baz=94,slow=9.5,SNR=45						
MKAR	Makanchi Array	72.27	322	P	P	23 57 57.5	+0.1
MAKZ	Makanchi	72.47	322	P	P	23 57 58.7	+0.1
MAKZ				IAmb	IAmb	23 57 59.5	
	comp=Z,3.4nm,0.6s						
ZALV	Zalesovo Beam	74.21	329	P	P	23 58 07.8	-0.8
	comp=Z,0.7nm,0.6s,baz=29,slow=3.4,SNR=4.0						
KK06	Karatay Array	78.75	315	P	P	23 58 34.5	-0.2
KKAR	Karatay Array	78.76	315	P	P	23 58 34.1	-0.6
MAW	Mawson	82.13	202	LR	LR	00 33 34.0	
	comp=Z,45nm,18.9s,baz=241,slow=34						
PPLA	Purkeypile	82.86	25	P	P	23 58 55.3	-1.0
PPLA				IAmb	IAmb	23 58 56.2	
	comp=Z,3.9nm,1.0s						
IMAR	Indian Mountai	83.48	22	P	P	23 58 58.7	-0.5
KTH	Kantishna Hill	83.64	25	P	P	23 58 58.1	-2.1
RND	Reindeer	84.45	25	P	P	23 59 03.0	-1.4
CCB	Clear Creek Bu	85.30	24	P	P	23 59 06.9	-1.6
CCB				IAmb	IAmb	23 59 08.1	
	comp=Z,3.1nm,1.0s						
ILAR	Eielson Array	85.72	24	P	P	23 59 09.0	-1.6
	comp=Z,1.2nm,0.8s,baz=260,slow=4.5,SNR=14						
IL18	Eielson Array	85.76	24	P	P	23 59 09.6	-1.2
QSPA	South Pole Qui	86.16	180	P	P	23 59 11.8	-1.2
GEYT	Alibeck	86.99	308	P	P	23 59 17.8	+0.3
BARN	Barnard Glacie	87.01	28	P	P	23 59 16.5	-0.7
AB06	Akbulak array	87.24	320	P	P	23 59 18.5	+0.2
AB07	Akbulak array	87.25	320	P	P	23 59 18.8	+0.5
AB03	Akbulak array	87.26	320	P	P	23 59 18.6	+0.2
AB01	Akbulak array	87.26	320	P	P	23 59 17.9	-0.5
AB31	Akbulak array	87.26	320	P	P	23 59 18.8	+0.3
AB31				IAmb	IAmb	23 59 19.4	
	comp=Z,1.0nm,0.8s						
ABKAR	Akbulak array	87.26	320	P	P	23 59 18.5	0.0
ABKAR	Akbulak array	87.26	320	P	P	23 59 18.6	+0.2
ABKAR				IAmb	IAmb	23 59 19.4	
	comp=Z,1.0nm,0.8s						
AB05	Akbulak array	87.26	320	P	P	23 59 18.8	+0.3
BMAR	Burnt Mountain	87.40	22	P	P	23 59 20.0	+1.2
BCAR	Beaver Creek A	87.42	26	P	P	23 59 19.2	+0.2
DAWY	Dawson	88.68	26	P	P	23 59 25.1	+0.1
DAWY				IAmb	IAmb	23 59 42.8	
	comp=Z,3.3nm,1.2s						

*NEIC **01** 23:51:25.9±1.4, 3°.94N±0°.09×126°.04E±0°.09, h135^{km}±7^{km}, mb4.5/39, Error ellipse: s-maj=15.0km s-min=10.6km az=48.0*

*DJA **01** 23:51:25.0±0.3, 4°N±4°×12°6E±°, h128^{km}±3^{km}, M4.6/11, mB5.2/3, mb4.6/11, MLv4.6/10, Mw(mB)4.6/3*

*IDC **01** 23:51:25.9±1.8, 3°.85N×125°.72E, h131^{km}±16^{km}, mb4.1/24, mb1 4.1/26, mb1mx4.0/51, mbtmp4.4/26, MS3.4/2, Ms1 3.4/2, ms1mx2.5/48, Error ellipse: s-maj=21.4km s-min=9.2km az=70.0*

ISC 01 23:51:25.7±0.4**, 3°.87N**±0°.04×**125°.93E**±0°.07**, h131**^{km}**, n116,** σ1^{s}**11**/118**, mb4.5**/50**, 1C-1D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	0.44	245	P	Pn	23 51 45.6	+1.0
SGSI				S	Sn	23 52 00.8	+2.0
DDMP	Don Marcelino,	2.23	354	*e*P	Pn	23 52 01.7	-0.9
DDMP				*e*S	Sn	23 52 30.0	-0.9
SKMP	Bagumbayan, Su	2.97	332	*e*P	Pn	23 52 12.1	0.0
SKMP				*e*S	Sn	23 52 46.5	-1.2
MATI	Mati	3.07	6	*e*P	Pn	23 52 14.4	+1.1
MATI				*e*S	Sn	23 52 50.3	+0.2
DAV	Davao City (W)	3.20	354	S	Sn	23 52 55.9	+2.8
	33nm,0.3s,baz=97,slow=18,SNR=5.5						
KCP	Kidapawan	3.23	345	⇓*e*P	Pn	23 52 16.9	+1.5
KCP				*i* S	Sn	23 52 58.1	+4.2
TNTI	Ternate	3.40	155		Pn	23 52 18.3	+0.7
TNTI				Sn	Sn	23 52 56.7	-1.0
TNTI	Ternate	3.40	155	P	Pn	23 52 17.7	+0.1
BUKP	Musuan	4.07	348	*e*P	Pn	23 52 26.9	+0.3
BUKP				*e*S	Sn	23 53 12.7	-1.1
GTOI	Gorontalo	4.34	222	P	Pn	23 52 33.1	+3.1
PAGZ	Pagadian	4.69	327	*e*P	Pn	23 52 34.2	-0.6
PAGZ				*e*S	Sn	23 53 28.1	-0.4
MRSI	Marisa	5.22	230	P	Pn	23 52 45.7	+3.9
	0.7nm2μm191nm,0.6s						
LUWI	Luwuk	5.81	213	Pn	Pn	23 52 51.1	+1.4
TOLI2	Tolitoli	5.83	242		Pn	23 52 52.4	+2.5
SANI	Sanana	5.88	179	P	Pn	23 52 49.2	-1.5
MPSI	Mapaga	6.97	240	P	Pn	23 53 09.9	+4.5
	0.1nm28nm,0.9s						
SIJI	Sorong	7.12	131	P	Pn	23 53 07.7	+0.3
	2.1nm,0.3s,baz=296,slow=11,SNR=3.4						
NLAI	Namlea	7.16	171	P	Pn	23 53 07.7	-0.2
	1.5nm78nm,0.8s						
MYLDM	Lahad Datu	7.52	280	Pn	Pn	23 53 17.7	+4.9
FAKI	Fak Fak	9.24	137	Pn	Pn	23 53 35.8	-0.2
SBUM	Sibu	13.76	265		P	23 54 43.5	+3.9
KSM	Kuching	15.78	262		P	23 55 03.9	+1.8
KSM				IAmb	IAmb	23 55 06.0	
	comp=Z,18nm,0.5s						
JAY	Jayapura	16.07	113	P	P	23 55 07.3	+2.0
	comp=Z,1.5nm,0.3s,baz=185,slow=6.1,SNR=4.6						
JAGI	Jajag, Banyuwa	16.98	224		Pn	23 55 18.1	+2.6
MTN	Manton Dam	17.39	163	P	P	23 55 19.2	-0.6
YHNB	Yeheng	21.14	348	P	P	23 56 00.0	-0.5
YHNB				IAmb	IAmb	23 56 10.8	
	comp=Z,12nm,0.8s						
FITZ	Fitzroy Crossi	21.83	181	P	P	23 56 08.0	+0.2
	comp=Z,6.0nm,1.0s,baz=160,slow=20,SNR=1.8						
PMBI	Palembang	22.20	253	P	P	23 56 00.2	-11
JOW	Kunigami	22.94	5	P	P	23 56 19.6	+0.8
	comp=Z,14nm,0.5s,baz=196,slow=11,SNR=8.2						
UBPT	Khong Chiam	23.11	301	P	P	23 56 21.4	+1.0
UBPT				IAmb	IAmb	23 56 23.8	
	comp=Z,13nm,1.0s						
COEN	Coen	24.63	136	P	P	23 56 34.0	-0.3
WB0	Warramunga Arr	24.92	161	P	P	23 56 38.0	+1.2
WB0				IAmb	IAmb	23 56 39.3	
	comp=Z,14nm,0.9s						
WRA	Warramunga Arr	25.07	161	P	P	23 56 38.5	+0.4
	comp=Z,10nm,0.8s,baz=342,slow=10,SNR=21						
WRA				ScP	ScP	00 03 36.5	-0.2
	comp=Z,0.9nm,0.7s,baz=342,slow=3.0,SNR=6.7						
WRA	Warramunga Arr	25.07	161	P	P	23 56 38.5	+0.4
WB2	Warramunga Arr	25.07	161	P	P	23 56 38.4	+0.2
WB2				IAmb	IAmb	23 56 40.9	
	comp=Z,13nm,0.9s						
WR0	Warramunga Arr	25.15	161	P	P	23 56 39.1	+0.2
AS31	Alice Springs	28.45	165	P	P	23 57 09.0	+0.4
ASAR	Alice Springs	28.45	165	P	P	23 57 09.0	+0.5
	comp=Z,1.7nm,0.5s,baz=345,slow=7.6,SNR=12						
ASAR				ScP	ScP	00 03 46.8	0.0
	comp=Z,0.7nm,0.5s,baz=340,slow=3.1,SNR=9.2						
ASAR	Alice Springs	28.45	165	P	P	23 57 07.3	-1.2
NJ2	Nanjing	28.81	347	*e*P	P	23 57 12.1	+0.6
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
CMAR	Chiang Mai Arr	30.11	301	P	P	23 57 23.7	+0.4
	comp=Z,2.6nm,0.8s,baz=116,slow=7.8,SNR=11						
CHTO	Chiang Mai	30.27	301	P	P	23 57 25.3	+0.7
CHTO				IAmb	IAmb	23 57 26.7	
	comp=Z,6.0nm,1.1s						
KSRS	Korea Array	33.47	3	P	P	23 57 53.5	+1.1
	comp=Z,4.6nm,0.7s,baz=181,slow=10,SNR=19						
BBOO	Buckleboo	37.72	166	P	P	23 58 29.8	+1.0
EIDS	Eidsvold	37.96	141	P	P	23 58 31.0	+0.1
LZH	Lanzhou	37.98	330	⇑P	P	23 58 34.0	+2.8
LZH				pP	pwP	23 59 03.6	+3.8
LZH				sP	sP	23 59 19.2	+4.2
LZH				pmax	pmax		
	comp=Z,20nm,1.1s						
LZH				pmax	pmax		
	comp=Z,63nm,5.5s						
STKA	Stephens Creek	38.55	158	P	P	23 58 36.6	+0.9
	comp=Z,5.6nm,0.6s,baz=326,slow=8.1,SNR=12						
STKA	Stephens Creek	38.55	158	P	P	23 58 36.3	+0.6
HHC	Hu-ho-hao-te	39.02	343	*e*P	P	23 58 39.7	0.0
HHC				pmax	pmax		
	comp=Z,6.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,100nm,5.9s						
SHL	Shillong	39.15	307	P	P	23 58 41.3	+0.2
USA0B	Ussuriysk Arra	40.52	7	P	P	23 58 52.4	+0.5
USA0B				IAmb	IAmb	23 59 03.3	
	comp=Z,7.6nm,1.1s						
USRK	Ussuriysk Ar.	40.52	7	P	P	23 58 53.1	+1.2
	comp=Z,2.1nm,0.7s,baz=192,slow=6.7,SNR=4.4						
USRK	Ussuriysk Ar.	40.52	7	P	P	23 58 52.5	+0.6
GTA	Gaotai	42.57	330	*e*P	P	23 59 08.7	-0.2
GTA	Gaotai	42.57	330	pP	pP	23 59 40.0	+1.9
GTA	Gaotai	42.57	330	sP	sP	23 59 56.0	+3.2
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ASAJ	Asahikawa	42.70	18	P	P	23 59 10.7	+1.1
	comp=Z,3.2nm,0.3s,baz=193,slow=22,SNR=4.8						
ASAJ				LR	LR	00 20 05.0	
	comp=Z,141nm,18.9s,baz=150,slow=40						
JKA	Kamikawa-asahi	42.70	18	P	P	23 59 10.7	+1.1
JKA	Kamikawa-asahi	42.70	18	IAmb	IAmb	23 59 29.9	
	comp=Z,8.0nm,0.6s						
TAPN	Taplejung	43.29	307	*e*P	P	23 59 15.9	+0.8
GUN	Gumba	45.00	306	*e*P	P	23 59 29.0	+0.3
	comp=Z,28nm,0.4s						
GUN	Gumba	45.00	306	*e*P	PcP	00 01 08.1	+0.3
	comp=Z,12nm,0.4s						
PKI	Pulchoki	45.24	306	*e*P	P	23 59 30.4	-0.2
PKI	Pulchoki	45.24	306	*e*P	PcP	00 01 08.9	+0.3
	comp=Z,17nm,0.6s						
PKIN	Phulchoki	45.25	306	*e*P	P	23 59 30.9	+0.3
	comp=Z,4.0nm,0.3s						
PKIN	Phulchoki	45.25	306	*e*P	PcP	00 01 08.8	+0.3
	comp=Z,18nm,0.5s						
KKN	Kakani	45.43	306	*e*P	P	23 59 32.0	0.0
	comp=Z,10nm,0.4s						
KKN	Kakani	45.43	306	*e*P	PcP	00 01 09.5	+0.4
	comp=Z,8.2nm,0.5s						
KLR	Kul'dur	45.47	5	P	P	23 59 32.2	+0.6
	comp=Z,2.2nm,0.5s,baz=183,slow=7.8,SNR=8.9						
KLR				LR	LR	00 19 31.5	
	comp=Z,15nm,19.6s,baz=195,slow=37						
DMN	Daman	45.50	306	*e*P	P	23 59 33.1	+0.5
DANN	Dangsing	46.88	306	*e*P	P	23 59 43.5	0.0
	comp=Z,61nm,0.6s						
DANN	Dangsing	46.88	306	*e*P	PcP	00 01 11.0	-3.3
	comp=Z,14nm,0.6s						
SONM	Songino Array	46.91	342	P	P	23 59 42.6	-0.6
	comp=Z,1.3nm,0.4s,baz=158,slow=8.0,SNR=20						
SONM				PcP	PcP	00 01 15.5	+1.8
	comp=Z,0.3nm,0.4s,baz=155,slow=5.4,SNR=4.2						
SONM	Songino Array	46.91	342	P	P	23 59 42.6	-0.6
WMQ	Urumqi	52.15	325	*e*P	P	00 00 25.2	+2.3
MK31	Makanchi Array	56.99	326	P	P	00 00 57.3	-0.4
MK31				IAmb	IAmb	00 00 59.2	
	comp=Z,3.8nm,0.6s						
MKAR	Makanchi Array	56.99	326	P	P	00 00 57.4	-0.4
	comp=Z,4.1nm,0.5s,baz=122,slow=8.0,SNR=76						
MKAR				PcP	PcP	00 01 51.5	+0.1
	comp=Z,4.1nm,0.6s,baz=117,slow=3.8,SNR=16						
MKAR				ScP	ScP	00 05 38.0	-1.0
	comp=Z,0.3nm,0.6s,baz=107,slow=5.8,SNR=2.0						
MKAR	Makanchi Array	56.99	326	P	P	00 00 57.0	-0.7
MAKZ	Makanchi	57.17	325	P	P	00 00 58.5	-0.5
MAKZ				IAmb	IAmb	00 01 00.4	
	comp=Z,8.4nm,1.1s						
MAKZ				PcP	PcP	00 01 52.1	0.0
NIL	Nilore	57.21	308	P	P	00 00 59.6	0.0
NIL				IAmb	IAmb	00 01 00.8	
	comp=Z,7.0nm,1.0s						
KSH	Kashi	57.38	315	P	P	00 01 02.0	+1.3
KSH				pP	pP	00 01 36.1	+4.8
KSH				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KSH				pmax	pmax		
	comp=Z,81nm,5.7s						
ZAA0	Zalesovo Array	60.10	333	P	P	00 01 17.9	-1.1
ZAA0				IAmb	IAmb	00 01 20.6	
	comp=Z,4.0nm,0.8s						
ZALV	Zalesovo Beam	60.10	333	P	P	00 01 17.6	-1.4
	comp=Z,2.5nm,0.5s,baz=127,slow=7.1,SNR=14						
KBL	Kabul	60.80	308	P	P	00 01 24.2	-0.3
KBL				IAmb	IAmb	00 01 25.3	
	comp=Z,3.9nm,0.8s						
KURBB	Kurchatov Arra	61.19	328	P	P	00 01 25.9	-0.6
	comp=Z,8.8nm,0.7s,baz=124,slow=6.4,SNR=68						
KURK	Kurchatov	61.19	328	P	P	00 01 26.0	-0.6
KKAR	Karatay Array	62.58	317	P	P	00 01 35.7	-0.4
KHZ	Kahutara	63.06	142	P	P	00 01 39.0	-0.2
URZ	Urewera	63.19	137	P	P	00 01 41.3	+1.2
	comp=Z,4.1nm,0.6s,baz=203,slow=13,SNR=1.6						
BRVK	Borovoye	66.84	327	P	P	00 02 03.1	-0.4
BRVK				IAmb	IAmb	00 02 04.0	
	comp=Z,5.9nm,1.0s						
NRIK	Noril'sk	70.10	346	P	P	00 02 23.8	+0.4
	comp=Z,13nm,0.6s,baz=125,slow=6.3,SNR=35						
GEYT	Alibeck	70.18	309	P	P	00 02 24.2	-0.4
	comp=Z,1.3nm,0.7s,baz=207,slow=9.5,SNR=3.9						
GEYT	Alibeck	70.18	309	IAmb	IAmb	00 02 26.2	
	comp=Z,1.5nm,0.9s						
ABKAR	Akbulak array	71.54	321	P	P	00 02 31.5	-0.9
ABKAR	Akbulak array	71.54	321	IAmb	IAmb	00 02 32.4	
	comp=Z,3.7nm,0.8s						
SOCY	Socotra	71.55	281	P	P	00 02 31.4	-1.9
SOCY				IAmb	IAmb	00 02 40.2	
	comp=Z,13nm,1.1s						
AKTO	Aktyubinsk	73.05	322	P	P	00 02 41.1	-0.4
	comp=Z,3.8nm,0.6s,baz=109,slow=8.4,SNR=16						
ARU	Arti	74.39	328	P	P	00 02 47.9	-1.3
ARU	Arti	74.39	328	P	P	00 02 47.8	-1.4
ARU				IAmb	IAmb	00 02 48.6	
	comp=Z,6.7nm,0.7s						
RAYN	Ar Rayn	79.69	293	P	P	00 03 18.9	-0.7
RSO	Redoubt South	82.36	30	P	P	00 03 31.3	-1.8
OBN	Obninsk	86.49	325	P	P	00 03 52.1	-1.6
KMBO	Kilima Mbogo	88.75	269	P	P	00 04 05.5	-0.3
	comp=Z,0.8nm,0.7s,baz=44,slow=19,SNR=1.6						
BRTR	Keskin Array B	89.31	310	P	P	00 04 06.2	-1.6
	comp=Z,1.7nm,0.7s,baz=123,slow=5.1,SNR=4.2						
KEV	Kevo	89.48	340	P	P	00 04 06.9	-0.8
ARCES	ARCESS Array B	90.04	340	P	P	00 04 09.6	-0.7
	comp=Z,3.0nm,0.7s,baz=82,slow=4.4,SNR=11						
AKASG	Malin Array Be	91.28	321	P	P	00 04 14.8	-1.6
	comp=Z,0.7nm,0.4s,baz=65,slow=4.5,SNR=3.7						
FIA1	FINESS Array S	91.33	332	P	P	00 04 15.4	-1.0
FINES	FINESS Array B	91.33	332	P	P	00 04 15.4	-1.0
	comp=Z,1.8nm,0.6s,baz=60,slow=4.7,SNR=14						
FINES	FINESS Array B	91.33	332	P	P	00 04 15.6	-0.8
MLR	Muntele Rosu	94.24	316	P	P	00 04 29.8	-0.6
MLR				IAmb	IAmb	00 04 34.6	
	comp=Z,3.6nm,1.1s						
BURAR	Bucovina Array	94.36	318	P	P	00 04 30.4	-0.5
BUR08	Bucovina Ar. S	94.37	318	P	P	00 04 30.5	-0.4
BUR08				IAmb	IAmb	00 04 31.9	
	comp=Z,1.5nm,0.8s						
NB2	NORSAR Subarra	98.31	333	P	P	00 04 46.7	-1.7
	comp=Z,1.3nm,0.6s,baz=68,slow=4.6						
NOA	NORSAR Array B	98.31	333	P	P	00 04 47.0	-1.4
	comp=Z,1.3nm,0.8s,baz=68,slow=4.6,SNR=5.8						
TORD	Torodi Ar. Bea	122.11	288	PKP	PKPdf	00 10 05.9	-0.1
	comp=Z,0.5nm,0.6s,baz=23,slow=2.0,SNR=2.8						

*IDC **01** 23:57:05.8±1.6, 26°.93N×125°.48E, h229^{km}±13^{km}, mb3.5/11, mb1 3.7/14, mb1mx3.4/55, mbtmp4.1/14, Error ellipse: s-maj=21.8km s-min=16.1km az=31.0*

*NEIC **01** 23:57:05.2±1.5, 26°.83N±0°.09×125°.54E±0°.09, h230^{km}±9^{km}, mb4.1/13, Error ellipse: s-maj=12.6km s-min=11.1km az=195.0*

*NIED **01** 23:57:06.4, 26°.93N×125°.46E, h208^{km}, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-1.37; $M_{\theta\theta}$0.08; $M_{\phi\phi}$1.30; $M_{r\theta}$0.09; $M_{\theta\phi}$0.11; $M_{\phi r}$-0.52; Fault plane solution: $M_0$1.44000×10^{15} NP1:ϕ_s0.00000°, δ56.00000°, λ-96.00000°. NP2:ϕ_s190.00000°, δ35.00000°, λ-82.00000°.*

*JMA **01** 23:57:06.4±0.3, 26°.93N×125°.46E, h208^{km}, M3.8*

ISC 01 23:57:05.0±0.6**, 26°.93N**±0°.06×**125°.54E**±0°.05**, h223**^{km}±6^{km}**, n70,** σ1^{s}**49**/97**, mb4.0**/16**, Northeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKE	Kume jima 2	1.26	118	P	Pn	23 57 40.0	+1.1
JKE				S	S	23 58 05.0	-0.3
JAGN	Aguni-jima	1.56	102	P	Pn	23 57 42.3	+1.1
JAGN				*e*S	S	23 58 08.9	-0.4
JIKM	Ikemajima	2.01	188	P	Pn	23 57 45.8	+0.4
JIKM				S	S	23 58 16.0	-0.8
JIRB	Irabujima	2.12	189	P	Pn	23 57 47.2	+0.7
JIRB				S	S	23 58 16.9	-1.8
JJT3	Tamagusuku3	2.15	111	P	Pn	23 57 48.9	+2.1
JJT3				S	S	23 58 20.2	+0.9
JOGS	Gusukube	2.16	183	S	S	23 58 18.7	-0.8
JIH	Iheya	2.17	87	P	Pn	23 57 48.2	+1.3
JIH				S	S	23 58 18.9	-0.5
JMJ2	Miyako jima3	2.19	185	P	Pn	23 57 48.2	+1.0
JMJ2				S	S	23 58 18.7	-1.2
JNTH	Nagotoyohara	2.25	100	P	Pn	23 57 49.3	+1.5
JNTH				S	S	23 58 20.3	-0.7
JTJ	Tarama	2.40	199	P	Pn	23 57 49.9	+0.6
JTJ				S	S	23 58 22.0	-1.8
JOW	Kunigami	2.44	92	P	Pn	23 57 50.6	+0.9
	60nm,0.3s,baz=232,slow=4.6,SNR=153						
JOW				S	S	23 58 22.1	-2.5
	24nm,0.3s,baz=103,slow=29,SNR=5.7						
JOW	Kunigami	2.44	92	P	Pn	23 57 51.0	+1.2
JOW				S	S	23 58 22.7	-1.9
JISG	Ishigakijimahi	2.58	206	P	Pn	23 57 51.4	+0.1
JISG				S	S	23 58 25.0	-2.3
JYRO	Yoronjima	2.60	87	P	Pn	23 57 52.4	+1.0
JYRO				S	S	23 58 25.6	-1.9
JOKE	Okinoerabujima	2.73	80	P	Pn	23 57 53.8	+0.9
JOKE				S	S	23 58 28.3	-1.9
JIJ	Ishigaki jima	2.85	207	P	Pn	23 57 53.8	-0.4
JIJ				S	S	23 58 29.0	-3.6
JKRS	Kuro-shima	3.01	208	P	Pn	23 57 55.8	-0.3
JKRS				S	S	23 58 33.3	-2.7
JTK	Tokunoshima	3.15	73	P	Pn	23 57 57.9	+0.3
JTK				*e*S	S	23 58 36.8	-1.9
HATJ	Hateruma jima	3.26	209	P	Pn	23 57 58.7	-0.2
HATJ				S	S	23 58 38.9	-2.2
YOJ	Yonaguni jima	3.35	223	P	Pn	23 58 00.6	+0.6
YOJ				*e*S	S	23 58 42.6	-0.4

YOJ	**Yonaguni jima**	**3.35**	**223**	Pn	**Pn**	**23 57 59.2**	**-0.7**
JAMN	**Amaminishikomi**	**3.48**	**67**	P	**Pn**	**23 58 01.6**	**+0.2**
JAMN				S	**S**	**23 58 42.6**	**-3.0**
JAM	**Amami Oshima**	**3.90**	**67**	P	**Pn**	**23 58 07.0**	**+0.6**
JAM				S	**S**	**23 58 52.2**	**-2.3**
JZK	**Kikaishima**	**4.17**	**70**	*e*S	**S**	**23 58 59.6**	**-0.9**
YHNB	**Yeheng**	**4.38**	**240**	Pn	**Pn**	**23 58 13.4**	**+1.0**
NACB	**Ninganchiao**	**4.50**	**233**	Pn	**Pn**	**23 58 13.0**	**-0.8**
SSLB	**Suanglung**	**5.20**	**234**	Pn	**Pn**	**23 58 22.1**	**-0.4**
JMZ	**Minamidaito 2**	**5.21**	**101**	P	**Pn**	**23 58 24.6**	**+1.9**
JMZ				S	**S**	**23 59 21.6**	**-2.4**
JKDJ	**Kitadaitoujima**	**5.25**	**99**	P	**Pn**	**23 58 25.3**	**+2.1**
JKDJ				*e*S	**S**	**23 59 22.9**	**-2.0**
JTN	**Tanegashima 3**	**6.05**	**51**	P	**Pn**	**23 58 34.1**	**+0.9**
JTN				*e*S	**S**	**23 59 38.8**	**-4.4**
JSU	**Suzuyama**	**6.26**	**42**		**Pn**	**23 58 37.3**	**+1.3**
JNU	**Nakatsue**	**7.71**	**36**	P	**Pn**	**23 58 57.5**	**+2.9**
	1.1nm,0.3s,baz=199,slow=3.8,SNR=13						
JNU	**Nakatsue**	**7.71**	**36**		**Pn**	**23 58 57.9**	**+3.3**
JTU	**Tsushima**	**8.27**	**23**	Pn	**Pn**	**23 59 00.0**	**-1.6**
JMN	**Monobe**	**9.89**	**45**	Pn	**Pn**	**23 59 20.6**	**-1.9**
KSRS	**Korea Array**	**10.69**	**10**	P	**Pn**	**23 59 35.0**	**+2.4**
	0.2nm,0.3s,baz=189,slow=12,SNR=11						
ULN	**Ulaanbaatar**	**25.42**	**330**	P	**P**	**00 02 16.1**	**+3.7**
ULN				IAmb	IAmb	00 02 17.3	
	comp=Z,4.4nm,0.8s						
SONM	**Songino Array**	**25.70**	**329**	P	**P**	**00 02 15.0**	**+0.1**
	comp=Z,4.5nm,0.7s,baz=148,slow=11,SNR=39						
SONM				PcP	**PcP**	**00 05 39.7**	**+0.9**
	comp=Z,0.3nm,1.0s,baz=156,slow=2.9,SNR=3.8						
SONM				ScP	**ScP**	**00 08 57.1**	**+0.1**
	comp=Z,0.9nm,1.1s,baz=186,slow=1.4,SNR=3.9						
SONM	**Songino Array**	**25.70**	**329**	P	**P**	**00 02 15.4**	**+0.6**
MK31	**Makanchi Array**	**39.28**	**312**	P	**P**	**00 04 12.1**	**-0.2**
MKAR	**Makanchi Array**	**39.28**	**312**	P	**P**	**00 04 12.1**	**-0.2**
	comp=Z,2.4nm,0.5s,baz=98,slow=11,SNR=25						
MKAR				PcP	**PcP**	**00 06 16.4**	**+0.1**
	comp=Z,0.8nm,0.6s,baz=81,slow=4.0,SNR=6.4						
MKAR	**Makanchi Array**	**39.28**	**312**	P	**P**	**00 04 12.0**	**-0.2**
MAKZ	**Makanchi**	**39.49**	**312**	P	**P**	**00 04 14.2**	**+0.2**
MAKZ				IAmb	IAmb	00 04 14.8	
	comp=Z,4.1nm,1.0s						
ZAA0	**Zalesovo Array**	**40.25**	**323**	P	**P**	**00 04 19.4**	**-0.6**
ZALV	**Zalesovo Beam**	**40.25**	**323**	P	**P**	**00 04 19.6**	**-0.4**
	comp=Z,2.5nm,0.6s,baz=112,slow=8.0,SNR=11						
ZALV	**Zalesovo Beam**	**40.25**	**323**	P	**P**	**00 04 19.3**	**-0.7**
KURBB	**Kurchatov Arra**	**42.69**	**317**	P	**P**	**00 04 39.6**	**-0.3**
	comp=Z,1.7nm,0.8s,baz=107,slow=8.4,SNR=6.6						
KURBB				PcP	**PcP**	**00 06 26.8**	**-0.5**
	comp=Z,0.4nm,0.6s,baz=116,slow=4.1,SNR=4.4						
AMKA	**Amchitka**	**47.02**	**44**	P	**P**	**00 05 11.8**	**-2.1**
WB0	**Warramunga Arr**	**47.20**	**169**	P	**P**	**00 05 13.3**	**-2.4**
WB0				IAmb	IAmb	00 06 14.0	
	comp=Z,12nm,1.4s						
WRA	**Warramunga Arr**	**47.37**	**169**	P	**P**	**00 05 17.5**	**+0.6**
	comp=Z,0.5nm,0.7s,baz=349,slow=8.4,SNR=2.8						
WR0	**Warramunga Arr**	**47.42**	**168**	P	**P**	**00 05 18.0**	**+0.7**
AB01	**Akbulak array**	**54.41**	**313**	P	**P**	**00 06 09.4**	**+0.3**
AB03	**Akbulak array**	**54.41**	**313**	P	**P**	**00 06 09.0**	**-0.1**
AB31	**Akbulak array**	**54.41**	**313**	P	**P**	**00 06 08.8**	**-0.2**
AB31				IAmb	IAmb	00 06 18.7	
	comp=Z,7.2nm,1.8s						
ABKAR	**Akbulak array**	**54.41**	**313**	P	**P**	**00 06 09.1**	**0.0**
AB04	**Akbulak array**	**54.42**	**313**	P	**P**	**00 06 09.0**	**-0.1**
AB08	**Akbulak array**	**54.42**	**313**	P	**P**	**00 06 09.3**	**+0.2**
AB09	**Akbulak array**	**54.43**	**313**	P	**P**	**00 06 09.0**	**-0.2**
ANM	**Nome**	**57.05**	**29**	P	**P**	**00 06 28.7**	**+1.2**
ANM				IAmb	IAmb	00 06 37.5	
	comp=Z,21nm,1.9s						
FORT	**Forrest**	**57.43**	**177**	P	**P**	**00 06 29.6**	**-1.0**
TTA	**Tatalina**	**61.16**	**31**	P	**P**	**00 06 56.5**	**+0.6**
IMAR	**Indian Mountai**	**61.97**	**27**	P	**P**	**00 07 01.6**	**+0.5**
ILAR	**Eielson Array**	**64.97**	**28**	P	**P**	**00 07 20.4**	**-0.3**
	comp=Z,0.4nm,0.6s,baz=296,slow=9.6,SNR=19						
INK	**Inuvik**	**69.19**	**23**	P	**P**	**00 07 46.1**	**-1.1**
	comp=Z,3.2nm,1.1s,baz=282,slow=7.0,SNR=4.8						
INK	**Inuvik**	**69.19**	**23**	IAmb	IAmb	00 07 48.7	
	comp=Z,4.0nm,1.0s						
FINES	**FINESS Array B**	**71.07**	**330**	P	**P**	**00 07 58.4**	**-0.3**
	comp=Z,2.8nm,0.5s,baz=67,slow=5.9,SNR=32						
WHY	**Whitehorse**	**71.41**	**31**	P	**P**	**00 08 02.5**	**+1.7**
NOA	**NORSAR Array B**	**77.61**	**333**	P	**P**	**00 08 36.0**	**-0.4**
	comp=Z,0.6nm,0.6s,baz=64,slow=7.7,SNR=4.1						
YKA	**Yellowknife Ar**	**78.90**	**24**	P	**P**	**00 08 43.8**	**+0.4**
	comp=Z,2.8nm,0.7s,baz=306,slow=4.7,SNR=48						
NVAR	**Mina Array Bea**	**91.73**	**45**	P	**P**	**00 09 49.5**	**+1.7**
	comp=Z,0.3nm,0.6s,baz=309,slow=5.7,SNR=2.5						

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*IDC **02** 00:02:26.8±5.0, 20°.86S×169°.77E, h0^{km}, mb4.0/3, mb1 4.1/4, mb1mx3.8/34, mbtmp3.9/4, ML2.4/1, MS3.4/6, Ms1 3.4/6, ms1mx3.1/31, Error ellipse: s-maj=126.7km s-min=63.6km az=146.0*

*NEIC **02** 00:02:29.3±1.3, 21°.1S±0°.1×169°.62E±0°.09, h10^{km}±1^{km}, mb4.3/7, Error ellipse: s-maj=20.9km s-min=8.1km az=145.0*

ISC 02 00:02:29.4±1.0**, 21°.1S**±0°.1×**169°.63E**±0°.09**, h10**^{km}**, n19, σ0^{s}.78**/17**, mb4.3**/7**, MS3.4**/4**, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**3.12**	**251**	Pn	**Pn**	**00 03 18.2**	**-0.5**
	0.4nm,0.3s,baz=118,slow=18,SNR=6.5						
DZM				Sn	**Sb**	**00 04 03.0**	**-0.1**
	7.4nm,0.3s,baz=230,slow=12,SNR=9.5						
DZM	**Mont Dzumac**	**3.12**	**251**		**Pn**	**00 03 18.9**	**+0.2**
SANVU	**Saraoutou**	**6.08**	**337**	Pn	**Pn**	**00 03 58.9**	**-0.5**
MSVF	**Nonsavu**	**8.62**	**69**	Pn	**Pn**	**00 04 34.8**	**+0.3**
HNR	**Honiara**	**14.89**	**320**	LR	LR	00 11 07.4	
	comp=Z,78nm,20.1s,baz=165,slow=35						
URZ	**Urewera**	**18.27**	**161**	LR	LR	00 12 07.1	
	comp=Z,62nm,21.2s,baz=31,slow=31						
TUWZ	**Tuamarina**	**20.59**	**171**	P	**P**	**00 07 07.3**	**-1.2**
THZ	**Tophouse**	**20.78**	**173**	P	**P**	**00 07 10.7**	**0.0**
STKA	**Stephens Creek**	**27.21**	**241**	P	**P**	**00 08 14.3**	**+0.8**
	2.5nm,0.7s,baz=64,slow=11,SNR=3.8						
STKA				LR	LR	00 17 59.4	
	comp=Z,89nm,19.1s,baz=26,slow=34						
WR0	**Warramunga Arr**	**32.84**	**266**	P	**P**	**00 09 04.3**	**+0.8**
WR0				IAmb	IAmb	00 09 21.5	
	comp=Z,5.1nm,1.1s						
WC3	**Warramunga Arr**	**33.00**	**266**	P	**P**	**00 09 05.2**	**+0.3**
WC3				IAmb	IAmb	00 09 11.8	
	comp=Z,3.7nm,1.0s						
WB0	**Warramunga Arr**	**33.01**	**266**	P	**P**	**00 09 04.1**	**-0.8**
WB0				IAmb	IAmb	00 09 21.3	
	comp=Z,6.5nm,1.1s						
WB2	**Warramunga Arr**	**33.02**	**266**	P	**P**	**00 09 04.9**	**-0.2**
WB2				IAmb	IAmb	00 09 12.1	
	comp=Z,3.4nm,0.8s						
WRA	**Warramunga Arr**	**33.03**	**266**	P	**P**	**00 09 05.9**	**+0.7**
	comp=Z,0.6nm,0.4s,baz=95,slow=8.2,SNR=17						
WRA				LR	LR	00 21 39.7	
	comp=Z,70nm,19.9s,baz=110,slow=35						
WRA	**Warramunga Arr**	**33.03**	**266**	P	**P**	**00 09 04.9**	**-0.3**
ASAR	**Alice Springs**	**33.08**	**259**	P	**P**	**00 09 06.3**	**+0.7**
	comp=Z,1.1nm,0.6s,baz=83,slow=8.8,SNR=12						
ASAR				LR	LR	00 21 59.5	
	comp=Z,82nm,19.4s,baz=96,slow=35						
ASAR	**Alice Springs**	**33.08**	**259**	P	**P**	**00 09 04.3**	**-1.3**
FITZ	**Fitzroy Crossi**	**41.45**	**266**	P	**P**	**00 10 17.9**	**+1.2**
LPIG	**La Paz**	**89.89**	**64**	LR	LR	00 51 23.8	
	comp=Z,23nm,18.4s,baz=17,slow=33						

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*AEIC **02** 00:15:08±4.0, 56°.69N±0°.07×168°.8W±0°.1, h20^{km}±8^{km}, Error ellipse: s-maj=11.5km s-min=7.4km az=220.0*

*IDC **02** 00:15:09.1±1.7, 56°.33N×169°.19W, h0^{km}, mb3.8/5, mb1 4.1/8, mb1mx3.6/57, mbtmp3.9/8, ML3.1/3, Error ellipse: s-maj=40.9km s-min=19.3km az=177.0*

*NEIC **02** 00:15:11.6±3.0, 56°.58N±0°.04×169°.2W±0°.1, h14^{km}±7^{km}, ML3.6(AEIC), Error ellipse: s-maj=10.6km s-min=2.9km az=61.0*

ISC 02 00:15:11.5±0.8**, 56°.57N**±0°.09×**169°.10W**±0°.07**, h10**^{km}**, n37, σ1^{s}.34**/37**, mb3.8**/3**, Pribilof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPIA	**Saint Paul Isl**	**0.88**	**314**	Pg	**Pg**	**00 15 27.5**	**-0.9**
AKUT	**Akutan**	**3.09**	**141**	Pn	**Pn**	**00 15 59.6**	**-0.7**
UNV	**Unalaska Valle**	**3.11**	**150**	Pn	**Pn**	**00 16 00.9**	**+0.3**
NIKH	**Nikolski High**	**3.61**	**178**	Pn	**Pn**	**00 16 06.5**	**-0.9**
SDPT	**Sand Point**	**5.00**	**101**	Pn	**Pn**	**00 16 26.5**	**+0.1**
ATKA	**Atka Island**	**5.29**	**216**	Pn	**Pn**	**00 16 31.8**	**+1.3**
CHGN	**Chignik**	**5.94**	**88**	Pn	**Pn**	**00 16 40.9**	**+1.6**
ADK	**Adak**	**6.46**	**227**	Pn	**Pn**	**00 16 45.2**	**-1.4**
GAMB	**Gambell**	**7.34**	**351**	Pn	**Pn**	**00 16 57.7**	**-0.9**
ANM	**Nome**	**8.23**	**11**	Pn	**Pn**	**00 17 11.9**	**+1.2**
AMKA	**Amchitka**	**8.58**	**238**	Pn	**Pn**	**00 17 18.1**	**+2.4**
OHAK	**Old Harbor**	**8.68**	**79**	Pn	**Pn**	**00 17 18.1**	**+1.1**
KDAK	**Kodiak Island**	**9.05**	**75**	Pn	**Pn**	**00 17 23.6**	**+1.6**
	1.1nm,0.3s,baz=288,slow=5.3,SNR=16						
KDAK	**Kodiak Island**	**9.05**	**75**	Pn	**Pn**	**00 17 23.3**	**+1.2**
TTA	**Tatalina**	**9.17**	**41**	Pn	**Pn**	**00 17 25.6**	**+1.9**
RSO	**Redoubt South**	**9.39**	**59**	Pn	**Pn**	**00 17 28.4**	**+1.5**
BRLK	**Bradley Lake**	**10.13**	**64**	Pn	**Pn**	**00 17 35.2**	**-1.7**
SKT	**Skwentna**	**10.48**	**52**	Pn	**Pn**	**00 17 40.9**	**-0.7**
PPLA	**Purkeypile**	**10.61**	**46**	Pn	**Pn**	**00 17 42.9**	**-0.6**
SUA	**Susitna One**	**10.64**	**55**	Pn	**Pn**	**00 17 44.0**	**+0.1**
PMR	**Palmer**	**11.41**	**56**	Pn	**Pn**	**00 17 54.3**	**0.0**
KTH	**Kantishna Hill**	**11.43**	**45**	Pn	**Pn**	**00 17 54.1**	**-0.6**
GHO	**Glory Hole Cre**	**11.56**	**55**	Pn	**Pn**	**00 17 54.4**	**-2.0**
TRF	**Thorofare Moun**	**11.63**	**46**	Pn	**Pn**	**00 17 56.5**	**-1.1**
SML	**Sawmill**	**11.84**	**55**	Pn	**Pn**	**00 18 02.2**	**+2.0**
IMAR	**Indian Mountai**	**11.94**	**32**	Pn	**Pn**	**00 18 02.4**	**+0.8**
RND	**Reindeer**	**12.19**	**48**	Pn	**Pn**	**00 18 07.6**	**+2.6**
SCM	**Sheep Creek Mo**	**12.31**	**56**	Pn	**Pn**	**00 18 04.7**	**-1.9**
KLU	**Klutina**	**12.88**	**58**	Pn	**Pn**	**00 18 12.4**	**-2.0**
CCB	**Clear Creek Bu**	**13.16**	**43**	Pn	**Pn**	**00 18 18.4**	**+0.2**
ILAR	**Eielson Array**	**13.57**	**44**	Pn	**Pn**	**00 18 23.8**	**0.0**
	0.0nm,0.3s,baz=240,slow=8.0,SNR=4.1						
PETK	**Petropavlovsk-**	**19.32**	**274**	P	**P**	**00 19 36.9**	**+0.4**
	0.2nm,0.3s,baz=91,slow=10,SNR=4.1						
INK	**Inuvik**	**19.86**	**40**	P	**P**	**00 19 42.2**	**0.0**
	4.3nm,0.6s,baz=234,slow=8.6,SNR=15						
SEY	**Seymchan**	**20.16**	**304**	P	**P**	**00 19 46.6**	**+1.0**
	1.0nm,0.3s,baz=85,slow=16,SNR=4.5						
YKA	**Yellowknife Ar**	**27.52**	**55**	P	**P**	**00 20 59.4**	**+1.6**
	1.9nm,0.9s,baz=280,slow=8.7,SNR=13						
TXAR	**Lajitas Array**	**52.64**	**92**	P	**P**	**00 24 25.2**	**-0.4**
	0.6nm,0.9s,baz=311,slow=8.2,SNR=2.9						
AKASG	**Malin Array Be**	**72.02**	**348**	P	**P**	**00 26 33.8**	**-1.2**
	1.5nm,0.6s,baz=12,slow=5.9,SNR=2.4						

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*IDC **02** 00:20:29.9±1.0, 28°.23N×105°.03E, h0^{km}, mb3.8/6, mb1 3.8/7, mb1mx3.5/52, mbtmp3.7/7, ML3.5/1, Error ellipse: s-maj=46.9km s-min=19.2km az=56.0*

*NEIC **02** 00:20:31.4±0.6, 28°.05N±0°.10×104°.7E±0°.1, h10^{km}±2^{km}, mb4.0/10, ML3.5(BJI), Error ellipse: s-maj=23.0km s-min=12.2km az=303.0*

ISC 02 00:20:31.7±0.8**, 28°.1N**±0°.1×**104°.7E**±0°.1**, h10**^{km}**, n26, σ0^{s}.81**/25**, mb3.9**/11**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ENH	**Enshi**	**4.69**	**62**		**Pn**	**00 21 44.0**	**+1.4**
GUN	**Gumba**	**16.63**	**274**	*e*P	**P**	**00 24 28.7**	**+0.9**
	15nm,0.7s						
PKI	**Pulchoki**	**17.08**	**273**	*e*P	**P**	**00 24 32.5**	**-0.3**
	4.5nm,0.4s						
PKIN	**Phulchoki**	**17.09**	**273**	*e*P	**P**	**00 24 32.5**	**-0.3**
	6.5nm,0.4s						
KKN	**Kakani**	**17.17**	**273**	*e*P	**P**	**00 24 33.8**	**+0.1**
	11nm,0.5s						
DMN	**Daman**	**17.35**	**273**	*e*P	**P**	**00 24 36.0**	**+0.4**
	4.5nm,0.3s						
DANN	**Dangsing**	**18.46**	**276**	*e*P	**P**	**00 24 47.1**	**-0.9**
	8.5nm,0.5s						
SONM	**Songino Array**	**19.72**	**3**	P	**P**	**00 25 00.9**	**-0.6**
	0.1nm,0.3s,baz=183,slow=16,SNR=4.3						
SONM	**Songino Array**	**19.72**	**3**	P	**Pn**	**00 25 02.1**	**-0.8**
MK31	**Makanchi Array**	**25.62**	**323**	P	**P**	**00 26 01.2**	**0.0**
MKAR	**Makanchi Array**	**25.62**	**323**	P	**P**	**00 26 01.4**	**+0.2**
	1.2nm,0.6s,baz=122,slow=12,SNR=16						
MKAR	**Makanchi Array**	**25.62**	**323**	P	**P**	**00 26 01.0**	**-0.3**
MDJ	**Mudanjiang**	**25.78**	**44**	P	**P**	**00 26 02.5**	**-0.1**
MDJ				IAmb	IAmb	00 26 05.5	
	comp=Z,6.4nm,1.1s						
MAKZ	**Makanchi**	**25.80**	**322**	P	**P**	**00 26 02.9**	**0.0**
MAKZ				IAmb	IAmb	00 26 05.0	
	comp=Z,1.0nm,0.6s						
KURBB	**Kurchatov Arra**	**29.96**	**326**	P	**P**	**00 26 40.1**	**0.0**
	comp=Z,0.9nm,0.4s,baz=131,slow=9.8,SNR=4.2						
KURK	**Kurchatov**	**29.98**	**326**	P	**P**	**00 26 40.1**	**-0.1**
KURK	**Kurchatov**	**29.98**	**326**	IAmb	IAmb	00 26 45.2	
	comp=Z,2.1nm,1.1s						
GEYT	**Alibeck**	**39.92**	**296**	P	**P**	**00 28 08.0**	**+2.0**
	comp=Z,0.7nm,0.5s,baz=87,slow=13,SNR=3.2						
GEYT	**Alibeck**	**39.92**	**296**	P	**P**	**00 28 06.5**	**+0.5**
MBWA	**Marble Bar**	**51.10**	**162**	P	**P**	**00 29 35.1**	**+0.6**
WRA	**Warramunga Arr**	**55.72**	**146**	P	**P**	**00 30 07.8**	**-0.7**
	comp=Z,1.0nm,0.8s,baz=331,slow=7.9,SNR=5.8						
WB2	**Warramunga Arr**	**55.72**	**146**	P	**P**	**00 30 07.5**	**-1.1**
WC3	**Warramunga Arr**	**55.74**	**146**	P	**P**	**00 30 08.1**	**-0.7**
WC3				IAmb	IAmb	00 30 09.8	
	comp=Z,2.9nm,0.8s						
WR0	**Warramunga Arr**	**55.83**	**146**	P	**P**	**00 30 08.4**	**-1.0**
WR0				IAmb	IAmb	00 30 10.3	
	comp=Z,0.9nm,0.8s						
ASAR	**Alice Springs**	**58.68**	**148**	P	**P**	**00 30 28.9**	**-0.6**
	comp=Z,0.7nm,0.6s,baz=328,slow=6.7,SNR=7.5						
YKA	**Yellowknife Ar**	**84.38**	**17**	P	**P**	**00 33 02.7**	**-1.2**
	comp=Z,0.1nm,0.3s,baz=334,slow=4.6,SNR=4.1						

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*IDC **02** 00:20:35.0±0.7, 47°.64N×176°.55E, h0^{km}, mb3.9/18, mb1 4.1/18, mb1mx3.9/57, mbtmp3.9/18, ML4.6/1, MS3.3/5, Ms1 3.3/5, ms1mx2.8/48, Error ellipse: s-maj=21.3km s-min=15.5km az=158.0*

*NEIC **02** 00:20:42.4±2.9, 48°.5N±0°.1×176°.5E±0°.1, h16^{km}±7^{km}, Error ellipse: s-maj=20.0km s-min=11.5km az=175.0*

*AEIC **02** 00:20:48.7±2.9, 48°.7N±0°.1×177°.3E±0°.1, h20^{km}±8^{km}, ML4.1/17, mb4.3/48(NEIC), Error ellipse: s-maj=17.6km s-min=13.0km az=185.0*

ISC 02 00:20:38.0±0.7**, 48°.15N**±0°.08×**176°.57E**±0°.07**, h10**^{km}**, n91, σ2^{s}.57**/92**, mb4.3**/39**, MS3.4**/4**, South of Aleutian Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AMKA	**Amchitka**	**3.68**	**28**		**Pn**	**00 21 34.9**	**-0.1**
AMKA				Sn	**Sn**	**00 22 12.7**	**-5.7**
LSSA	**Little Sitkin**	**4.00**	**18**		**Pn**	**00 21 39.9**	**+0.5**
LSPA	**Little Sitkin**	**4.02**	**18**		**Pn**	**00 21 40.6**	**+1.0**
LSPA					**Sn**	**00 22 21.1**	**-5.7**
LSNW	**Little Sitkin**	**4.02**	**17**		**Pn**	**00 21 39.9**	**+0.2**
CESW	**Semis' Southwe**	**4.22**	**26**		**Pn**	**00 21 43.1**	**+0.8**
CESW					**Sn**	**00 22 23.9**	**-7.7**
CERAA	**Semis' Rag'd T**	**4.26**	**27**		**Pn**	**00 21 43.7**	**+0.8**
CEAP	**Semis' Anvil P**	**4.31**	**26**		**Pn**	**00 21 44.9**	**+1.3**
SMY	**Shemya**	**4.84**	**342**	Pn	**Pn**	**00 21 50.4**	**-0.5**
SMY				Sn	**Sn**	**00 22 44.2**	**-2.8**
ADK	**Adak**	**5.73**	**47**		**Pn**	**00 22 04.0**	**+0.9**
ADK				Sn	**Sn**	**00 23 09.3**	**+0.5**
ATKA	**Atka Island**	**7.18**	**52**	Pn	**Pn**	**00 22 22.3**	**-0.7**
KOWE	**Korovin West**	**7.24**	**51**		**Pn**	**00 22 25.2**	**+1.4**
KOFP	**Korovin Flat P**	**7.27**	**52**		**Pn**	**00 22 25.4**	**+1.1**
KOKV	**Korovin Volcan**	**7.28**	**51**		**Pn**	**00 22 25.7**	**+1.3**
NIKH	**Nikolski High**	**10.45**	**57**	Pn	**Pn**	**00 23 07.1**	**-0.6**
UNV	**Unalaska Valle**	**12.08**	**56**	Pn	**Pn**	**00 23 31.2**	**+1.2**
PETK	**Petropavlovsk-**	**12.95**	**300**	Pn	**Pn**	**00 23 41.6**	**-0.4**
	17nm,0.3s,baz=104,slow=19,SNR=207						
PETK				Sn	Sn	00 25 52.8	-13
	0.3nm,0.3s,baz=90,slow=19,SNR=3.0						
PETK				LR	LR	00 28 47.3	
	comp=Z,36nm,18.9s,baz=52,slow=37						
ANM	**Nome**	**19.12**	**24**	P	**P**	**00 24 58.9**	**-2.0**
SII	**Sitkinak Islan**	**19.62**	**54**	P	**Pn**	**00 25 08.3**	**+0.6**
SEY	**Seymchan**	**19.97**	**327**	P	**P**	**00 25 11.6**	**+1.5**
	1.7nm,0.4s,baz=23,slow=20,SNR=4.8						
OHAK	**Old Harbor**	**20.25**	**52**	P	**P**	**00 25 14.3**	**+1.1**
OHAK				IAmb	IAmb	00 25 18.5	
	comp=Z,14nm,1.0s						
KDAK	**Kodiak Island**	**20.75**	**51**	P	Pn	00 25 22.2	+1.2
	comp=Z,11nm,1.0s,baz=149,slow=19,SNR=3.9						
KDAK	**Kodiak Island**	**20.75**	**51**	P	**P**	**00 25 18.7**	**0.0**
KDAK				IAmb	IAmb	00 25 27.7	
	comp=Z,22nm,1.1s						
TTA	**Tatalina**	**21.19**	**36**	P	**P**	**00 25 25.3**	**+1.8**
TTA				IAmb	IAmb	00 25 32.4	
	comp=Z,11nm,1.1s						
RSO	**Redoubt South**	**21.49**	**44**	P	**P**	**00 25 28.1**	**+1.3**
SKT	**Skwentna**	**22.61**	**40**	P	**P**	**00 25 41.1**	**+2.5**
SKT				IAmb	IAmb	00 25 44.6	
	comp=Z,9.8nm,0.8s						
PPLA	**Purkeypile**	**22.71**	**38**	P	**P**	**00 25 42.4**	**+2.6**
PPLA				IAmb	IAmb	00 26 00.2	
	comp=Z,7.7nm,0.9s						
SUA	**Susitna One**	**22.76**	**42**	P	**P**	**00 25 40.2**	**-0.2**
SEW	**Seward**	**22.93**	**46**	P	**P**	**00 25 41.8**	**-0.2**
SEW				IAmb	IAmb	00 25 59.3	
	comp=Z,20nm,1.2s						
KTH	**Kantishna Hill**	**23.52**	**37**	P	**P**	**00 25 49.8**	**+1.9**
KTH				IAmb	IAmb	00 25 53.6	
	comp=Z,9.6nm,0.8s						
PMR	**Palmer**	**23.54**	**42**	P	**P**	**00 25 48.3**	**+0.2**
IMAR	**Indian Mountai**	**23.69**	**30**	P	**P**	**00 25 51.8**	**+2.3**
TRF	**Thorofare Moun**	**23.73**	**38**	P	**P**	**00 25 50.4**	**+0.2**
KNK	**Knik Glacier**	**23.78**	**43**	P	**P**	**00 25 46.5**	**-4.1**
KNK				IAmb	IAmb	00 26 02.9	
	comp=Z,9.0nm,0.9s						
RND	**Reindeer**	**24.30**	**38**	P	**P**	**00 25 56.5**	**+1.1**
SCM	**Sheep Creek Mo**	**24.43**	**43**	P	**P**	**00 25 51.8**	**-4.8**
HIN	**Hinchinbrook I**	**24.43**	**46**	P	**P**	**00 25 57.7**	**+1.2**
DHY	**Denali Highway**	**24.81**	**40**	P	**P**	**00 26 02.1**	**+2.0**
EYAK	**Cordova Ski Ar**	**24.83**	**46**	P	**P**	**00 26 00.3**	**+0.2**
EYAK				IAmb	IAmb	00 26 17.8	
	comp=Z,14nm,1.0s						
M24K	**Tolsona, Glenn**	**25.03**	**42**	P	**P**	**00 26 05.9**	**+3.9**
WRH	**Wood River Hil**	**25.04**	**36**	P	**P**	**00 26 04.5**	**+2.5**
WRH				IAmb	IAmb	00 26 07.1	
	comp=Z,6.2nm,0.8s						
MDM	**Murphy Dome**	**25.18**	**35**	P	**P**	**00 26 06.4**	**+3.1**
MDM				IAmb	IAmb	00 26 20.3	
	comp=Z,7.6nm,1.0s						
CCB	**Clear Creek Bu**	**25.22**	**36**	P	**P**	**00 26 05.2**	**+1.6**
CCB				IAmb	IAmb	00 26 21.3	
	comp=Z,5.5nm,0.9s						
RAGM	**Ragged Mountai**	**25.31**	**47**	P	**P**	**00 26 06.9**	**+2.3**
HDA	**Harding Lake**	**25.47**	**37**	P	**P**	**00 26 09.3**	**+3.5**
HMT	**Hamilton**	**25.51**	**47**	P	**P**	**00 26 08.5**	**+2.2**
POKR	**Poker Plat Res**	**25.55**	**35**	P	**P**	**00 26 07.8**	**+1.1**
POKR				IAmb	IAmb	00 26 19.5	
	comp=Z,4.7nm,0.7s						
PAX	**Paxson**	**25.59**	**41**	P	**P**	**00 26 09.6**	**+2.5**
N25K	**Chitina, Valde**	**25.62**	**44**	P	**P**	**00 26 06.4**	**-1.0**
N25K				IAmb	IAmb	00 26 14.4	
	comp=Z,8.6nm,0.8s						
IL31		**25.63**	**36**	P	**P**	**00 26 12.1**	**+4.8**
IL31				IAmb	IAmb	00 26 27.3	
	comp=Z,3.6nm,0.7s						
ILAR	**Eielson Array**	**25.63**	**36**	P	**P**	**00 26 09.0**	**+1.7**
	comp=Z,0.8nm,0.7s,baz=243,slow=8.1,SNR=11						
ILAR	**Eielson Array**	**25.63**	**36**	P	**P**	**00 26 09.6**	**+2.3**
GLB	**Gilahina Butte**	**25.95**	**44**	P	**P**	**00 26 13.8**	**+3.5**
VRDI	**Verde Repeater**	**26.07**	**45**	P	**P**	**00 26 13.5**	**+1.9**
RIDG	**Independent Ri**	**26.10**	**39**	P	**P**	**00 26 13.5**	**+1.8**
RIDG				IAmb	IAmb	00 26 25.6	
	comp=Z,8.5nm,1.0s						
CRQM	**Cirque**	**26.13**	**46**	P	**P**	**00 26 15.8**	**+3.6**
TGL	**Tana Glacier**	**26.28**	**46**	P	**P**	**00 26 14.9**	**+1.5**
TGL				IAmb	IAmb	00 26 18.7	
	comp=Z,6.8nm,1.0s						
MCARA	**McCarthy VSAT**	**26.30**	**45**	P	**P**	**00 26 15.6**	**+2.1**
MCARA				IAmb	IAmb	00 26 29.9	
	comp=Z,7.8nm,1.0s						
PRP	**Porcupine Dome**	**26.45**	**35**	P	**P**	**00 26 18.2**	**+3.2**
ISLE	**Juniper Island**	**26.49**	**47**	P	**P**	**00 26 20.1**	**+4.8**
TOLK	**Toolik Lake Re**	**26.52**	**27**	P	**P**	**00 26 18.7**	**+3.3**
BALM	**Baldy**	**26.56**	**46**	P	**P**	**00 26 18.8**	**+2.8**
YAH	**Yahtse**	**26.74**	**47**	P	**P**	**00 26 21.9**	**+4.2**
YAH				IAmb	IAmb	00 26 24.0	
	comp=Z,10nm,1.0s						
BARN	**Barnard Glacie**	**26.89**	**46**	P	**P**	**00 26 22.0**	**+3.0**
BARN				IAmb	IAmb	00 26 24.6	
	comp=Z,4.7nm,0.8s						
CTGM	**Chitina Glacie**	**27.04**	**46**	P	**P**	**00 26 24.0**	**+3.7**
CTGM				IAmb	IAmb	00 26 25.5	
	comp=Z,6.7nm,1.0s						
TABL	**Table Mountain**	**27.05**	**47**	P	**P**	**00 26 24.1**	**+3.7**
BCAR	**Beaver Creek A**	**27.24**	**41**	P	**P**	**00 26 25.9**	**+3.9**
PCA	**Pinnacle**	**27.45**	**48**	P	**P**	**00 26 26.8**	**+2.9**
BMAR	**Burnt Mountain**	**27.57**	**32**	P	**P**	**00 26 26.2**	**+1.3**
EGAK	**Eagle**	**27.95**	**38**	P	**P**	**00 26 31.7**	**+3.5**
EGAK				IAmb	IAmb	00 26 44.5	
	comp=Z,5.2nm,0.7s						
DAWY	**Dawson**	**28.51**	**40**	P	**P**	**00 26 36.5**	**+3.1**
DAWY				IAmb	IAmb	00 26 46.0	
	comp=Z,3.8nm,0.7s						
HYT	**Haines Junctio**	**28.88**	**47**	P	**P**	**00 26 38.9**	**+2.3**
HYT				IAmb	IAmb	00 26 58.5	
	comp=Z,4.2nm,1.1s						
INK	**Inuvik**	**31.81**	**33**	P	**P**	**00 27 04.1**	**+1.8**
	comp=Z,0.8nm,0.4s,baz=356,slow=2.6,SNR=7.2						
YKA	**Yellowknife Ar**	**39.64**	**43**	P	**P**	**00 28 11.5**	**+2.0**
	comp=Z,1.5nm,0.8s,baz=280,slow=7.3,SNR=15						
RES	**Resolute Bay**	**43.90**	**23**	LR	LR	00 50 23.5	
	comp=Z,39nm,21.2s,baz=54,slow=40						
SONM	**Songino Array**	**45.42**	**297**	P	**P**	**00 28 56.6**	**-0.3**
	comp=Z,0.6nm,0.6s,baz=55,slow=6.9,SNR=5.5						
SONM				LR	LR	00 48 41.6	
	comp=Z,36nm,19.2s,baz=130,slow=37						
HHC	**Hu-ho-hao-te**	**45.69**	**286**	*e*P	**P**	**00 28 59.9**	**+0.9**
HHC				pmax	pmax		
	comp=Z,7.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,64nm,5.5s						
NVAR	**Mina Array Bea**	**47.08**	**77**	P	**P**	**00 29 09.3**	**-0.9**
	comp=Z,0.4nm,0.7s,baz=279,slow=5.7,SNR=3.8						
PDAR	**Pinedale Array**	**50.25**	**67**	P	**P**	**00 29 33.0**	**-1.4**
	comp=Z,0.5nm,0.7s,baz=294,slow=1.5,SNR=4.6						
WMQ	**Urumqi**	**58.53**	**302**	*e*P	**P**	**00 30 35.7**	**+1.2**
KURBB	**Kurchatov Arra**	**59.14**	**313**	P	**P**	**00 30 40.1**	**+1.6**
	comp=Z,0.9nm,0.2s,baz=49,slow=6.4,SNR=7.9						
HNR	**Honiara**	**59.19**	**199**	LR	LR	00 51 56.6	
	comp=Z,35nm,19.6s,baz=298,slow=32						
MKAR	**Makanchi Array**	**59.65**	**307**	P	**P**	**00 30 43.2**	**+1.1**
	comp=Z,0.4nm,0.5s,baz=52,slow=5.9,SNR=9.9						
TXAR	**Lajitas Array**	**62.23**	**76**	P	**P**	**00 30 59.8**	**-0.2**
	comp=Z,0.6nm,0.9s,baz=266,slow=3.8,SNR=4.1						
FINES	**FINESS Array B**	**68.20**	**345**	P	**P**	**00 31 40.6**	**+2.5**
	comp=Z,2.3nm,0.7s,baz=17,slow=8.4,SNR=6.8						
NOA	**NORSAR Array B**	**70.52**	**352**	P	**P**	**00 31 55.1**	**+2.6**
	comp=Z,0.8nm,0.7s,baz=18,slow=5.0,SNR=3.7						
RAR	**Rarotonga**	**72.23**	**157**	LR	LR	00 55 05.6	
	comp=Z,57nm,20.6s,baz=203,slow=29						
AKASG	**Malin Array Be**	**77.60**	**339**	P	**P**	**00 32 34.0**	**0.0**
	comp=Z,1.1nm,0.5s,baz=25,slow=6.0,SNR=3.2						
WRA	**Warramunga Arr**	**77.61**	**220**	P	**P**	**00 32 30.3**	**-4.0**
	comp=Z,0.5nm,0.4s,baz=30,slow=6.4,SNR=7.1						
ASAR	**Alice Springs**	**81.08**	**219**	P	**P**	**00 32 49.9**	**-3.4**
	comp=Z,1.0nm,0.7s,baz=24,slow=4.7,SNR=7.0						
GERES	**GERESS Array B**	**82.25**	**349**	P	**P**	**00 33 00.8**	**+1.5**
	comp=Z,0.5nm,0.7s,baz=29,slow=9.0,SNR=3.1						
STKA	**Stephens Creek**	**85.61**	**209**	P	**P**	**00 33 13.1**	**-3.3**
	comp=Z,2.8nm,0.8s,baz=30,slow=21,SNR=3.4						

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*NEIC **02** 00:29:51.8±1.5, 15°.1S±0°.1×175°.8W±0°.1, h342^{km}±9^{km}, mb4.2/72, Error ellipse: s-maj=18.5km s-min=13.2km az=146.0*

*IDC **02** 00:29:51.7±2.1, 15°.17S×175°.89W, h335^{km}±22^{km}, mb3.7/12, mb1 3.8/13, mb1mx3.6/40, mbtmp4.3/13, Error ellipse: s-maj=29.8km s-min=11.1km az=139.0*

ISC 02 00:29:52.6±0.6**, 15°.10S**±0°.09×**175°.85W**±0°.09**, h350**^{km}**, n98, σ0^{s}.96**/94**, mb4.2**/45**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**4.12**	**74**	P	**Pn**	**00 31 01.8**	**-1.1**
	10nm,0.3s,baz=77,slow=2.3,SNR=6.7						
AFI	**Afiamalu**	**4.12**	**74**		**Pn**	**00 31 01.4**	**-1.5**
MSVF	**Nonsavu**	**6.41**	**245**		**Pn**	**00 31 29.0**	**+0.8**
NIUE	**Niue**	**6.90**	**126**	Pn	**Pn**	**00 31 33.6**	**-0.2**
FUNA	**Funafuti**	**8.14**	**323**	Pn	**Pn**	**00 31 46.8**	**-1.6**
DZM	**Mont Dzumac**	**18.15**	**245**	P	**P**	**00 33 42.2**	**+0.9**
URZ	**Urewera**	**23.89**	**194**	P	**P**	**00 34 34.4**	**-1.4**
	3.5nm,0.3s,baz=250,slow=3.6,SNR=6.2						
URZ	**Urewera**	**23.89**	**194**	P	**P**	**00 34 33.3**	**-2.5**
URZ				IAmb	IAmb	00 34 49.4	
	comp=Z,14nm,1.0s						
BKZ	**Black Stump Fm**	**24.90**	**194**		**P**	**00 34 43.9**	**-1.1**
BFZ	**Birch Farm**	**26.40**	**194**	P	**P**	**00 34 56.8**	**-1.4**
MSWZ	**Moikau Station**	**27.33**	**195**	P	**P**	**00 35 06.2**	**-0.3**
QRZ	**Quartz Range**	**27.55**	**199**	P	**P**	**00 35 07.9**	**-0.6**
QRZ				IAmb	IAmb	00 35 20.6	
	comp=Z,16nm,1.0s						
NNZ	**Nelson**	**27.65**	**198**	P	**P**	**00 35 08.9**	**-0.4**
THZ	**Tophouse**	**28.29**	**198**	P	**P**	**00 35 14.4**	**-0.6**

THZ				IAmb	IAmb	00 35 18.7	
	comp=Z,19nm,1.1s						
KHZ	**Kahutara**	**28.71**	**196**	P	**P**	**00 35 17.6**	**-1.1**
KHZ				IAmb	IAmb	00 35 17.7	
	comp=Z,16nm,1.2s						
LTZ	**Lake Taylor**	**29.41**	**198**	P	**P**	**00 35 23.2**	**-1.7**
LTZ				IAmb	IAmb	00 35 27.1	
	comp=Z,18nm,1.1s						
RPZ	**Rata Peaks**	**30.63**	**199**	P	**P**	**00 35 34.5**	**-1.0**
	comp=Z,6.3nm,0.5s,baz=14,slow=4.2,SNR=2.7						
RPZ	**Rata Peaks**	**30.63**	**199**	P	**P**	**00 35 35.6**	**+0.1**
RPZ				IAmb	IAmb	00 35 36.9	
	comp=Z,8.5nm,0.8s						
FOZ	**Fox Glacier**	**30.87**	**201**	P	**P**	**00 35 36.8**	**-0.7**
LBZ	**Lake Benmore**	**31.51**	**199**	P	**P**	**00 35 40.3**	**-2.8**
LBZ				IAmb	IAmb	00 35 54.6	
	comp=Z,15nm,1.0s						
ODZ	**Otahua Downs**	**31.96**	**198**	P	**P**	**00 35 46.7**	**-0.2**
WKZ	**Wanaka**	**32.28**	**200**	P	**P**	**00 35 48.8**	**-1.1**
MLZ	**Mavora Lakes**	**33.06**	**201**	P	**P**	**00 35 56.0**	**-0.5**
MLZ				IAmb	IAmb	00 36 12.8	
	comp=Z,12nm,1.0s						
WHZ	**Wether Hill Ro**	**33.58**	**201**	P	**P**	**00 36 00.9**	**-0.1**
WHZ				IAmb	IAmb	00 36 02.3	
	comp=Z,11nm,0.8s						
CTAO	**Charters Tower**	**36.41**	**257**	P	**P**	**00 36 25.0**	**-0.3**
STKA	**Stephens Creek**	**42.15**	**239**	P	**P**	**00 37 12.8**	**+0.7**
	comp=Z,2.3nm,0.3s,baz=75,slow=11,SNR=8.5						
STKA	**Stephens Creek**	**42.15**	**239**	IAmb	IAmb	00 37 14.1	
	comp=Z,0.7nm,0.7s						
BBOO	**Buckleboo**	**46.93**	**239**	P	**P**	**00 37 49.9**	**+0.4**
BBOO				IAmb	IAmb	00 37 50.5	
	comp=Z,8.1nm,0.7s						
WR0	**Warramunga Arr**	**47.42**	**257**	P	**P**	**00 37 53.7**	**+0.2**
WB0	**Warramunga Arr**	**47.57**	**257**	P	**P**	**00 37 55.2**	**+0.6**
WB2	**Warramunga Arr**	**47.60**	**257**	P	**P**	**00 37 55.5**	**+0.6**
WRA	**Warramunga Arr**	**47.61**	**257**	P	**P**	**00 37 54.7**	**-0.3**
	comp=Z,1.1nm,0.4s,baz=91,slow=6.5,SNR=40						
WRA	**Warramunga Arr**	**47.61**	**257**	P	**P**	**00 37 56.1**	**+1.2**
AS31	**Alice Springs**	**47.96**	**252**	P	**P**	**00 37 57.6**	**+0.1**
ASAR	**Alice Springs**	**47.96**	**252**	P	**P**	**00 37 57.6**	**0.0**
	comp=Z,10nm,0.5s,baz=86,slow=8.1,SNR=151						
ASAR	**Alice Springs**	**47.96**	**252**	P	**P**	**00 37 57.1**	**-0.5**
FORT	**Forrest**	**53.45**	**243**	P	**P**	**00 38 36.8**	**-1.2**
FITZ	**Fitzroy Crossi**	**55.96**	**258**	P	**P**	**00 38 57.3**	**+1.3**
PSAC2	**Pilbara Seismi**	**60.98**	**254**	P	**P**	**00 39 30.2**	**-0.1**
PSAC2				IAmb	IAmb	00 39 48.6	
	comp=Z,10nm,1.1s						
PSAB2	**Pilbara Seismi**	**61.01**	**254**	P	**P**	**00 39 30.1**	**-0.4**
PSAB2				IAmb	IAmb	00 39 34.1	
	comp=Z,6.8nm,0.9s						
PSAB3	**Pilbara Seismi**	**61.01**	**253**	P	**P**	**00 39 29.9**	**-0.7**
PSAB3				IAmb	IAmb	00 39 31.2	
	comp=Z,11nm,1.1s						
PSAA3	**Pilbara Seismi**	**61.02**	**253**	P	**P**	**00 39 30.2**	**-0.4**
PSAA3				IAmb	IAmb	00 39 36.8	
	comp=Z,6.6nm,1.0s						
PSA00	**Pilbara Seismi**	**61.02**	**253**	P	**P**	**00 39 30.2**	**-0.4**
PSAA2	**Pilbara Seismi**	**61.02**	**254**	P	**P**	**00 39 30.1**	**-0.5**
PSAA2				IAmb	IAmb	00 39 35.0	
	comp=Z,9.3nm,1.0s						
PSAA1	**Pilbara Seismi**	**61.03**	**253**	P	**P**	**00 39 30.4**	**-0.3**
PSAA1				IAmb	IAmb	00 39 35.3	
	comp=Z,8.5nm,1.1s						
PSAC3	**Pilbara Seismi**	**61.04**	**253**	P	**P**	**00 39 30.1**	**-0.7**
PSAC3				IAmb	IAmb	00 39 32.5	
	comp=Z,11nm,1.1s						
PSAB1	**Pilbara Seismi**	**61.05**	**253**	P	**P**	**00 39 30.4**	**-0.4**
PSAB1				IAmb	IAmb	00 39 37.2	
	comp=Z,11nm,1.1s						
PSAD1	**Pilbara Seismi**	**61.05**	**254**	P	**P**	**00 39 30.4**	**-0.4**
PSAD1				IAmb	IAmb	00 39 34.9	
	comp=Z,4.7nm,0.7s						
PSAC1	**Pilbara Seismi**	**61.06**	**254**	P	**P**	**00 39 30.8**	**-0.1**
PSAC1				IAmb	IAmb	00 39 46.5	
	comp=Z,11nm,1.1s						
PEA0B	**Petropavlovsk-**	**71.65**	**344**	P	**P**	**00 40 37.1**	**+0.4**
PETK	**Petropavlovsk-**	**71.65**	**344**	P	**P**	**00 40 36.7**	**0.0**
KRMB	**Red Mountain**	**73.97**	**38**	P	**P**	**00 40 52.4**	**+1.7**
YBH	**Yreka Blue Hor**	**74.81**	**38**	P	**P**	**00 40 57.4**	**+2.1**
	comp=Z,4.8nm,0.8s,baz=180,slow=1.1,SNR=15						
YBH	**Yreka Blue Hor**	**74.81**	**38**	P	**P**	**00 40 57.5**	**+2.1**
YBH				IAmb	IAmb	00 40 58.1	
	comp=Z,4.5nm,0.8s						
WAKR	**Walker**	**75.00**	**43**	P	**P**	**00 40 58.7**	**+2.0**
HUMO	**Hull Mountain**	**75.19**	**38**	P	**P**	**00 40 59.0**	**+1.6**
PNTR	**Pine Nut**	**75.22**	**42**	P	**P**	**00 40 59.1**	**+1.2**
PNTR				IAmb	IAmb	00 41 00.4	
	comp=Z,3.9nm,0.7s						
NVAR	**Mina Array Bea**	**75.71**	**43**	P	**P**	**00 41 02.2**	**+1.5**
	comp=Z,1.7nm,0.8s,baz=226,slow=9.0,SNR=16						
NV11	**Mina Array Sit**	**75.81**	**43**	P	**P**	**00 41 02.8**	**+1.6**
K05A	**Summer Lake**	**76.49**	**38**	P	**P**	**00 41 06.8**	**+1.9**
K05A				IAmb	IAmb	00 41 07.0	
	comp=Z,3.2nm,0.8s						
H04A	**Detroit Lake**	**76.89**	**36**	P	**P**	**00 41 07.3**	**+0.4**
H04A				IAmb	IAmb	00 41 13.1	
	comp=Z,3.7nm,1.0s						
PINE	**Pine Mountain**	**77.08**	**37**	P	**P**	**00 41 09.9**	**+1.7**
I07A	**Izee**	**78.09**	**38**	P	**P**	**00 41 15.2**	**+1.5**
I07A				IAmb	IAmb	00 41 15.9	
	comp=Z,5.0nm,1.0s						
SUA	**Susitna One**	**78.88**	**12**	P	**P**	**00 41 17.8**	**+0.3**
ELK	**Elko**	**78.94**	**42**	P	**P**	**00 41 19.2**	**+0.8**
	comp=Z,0.6nm,0.5s,baz=120,slow=8.1,SNR=3.9						
TTA	**Tatalina**	**79.31**	**9**	P	**P**	**00 41 20.8**	**+1.0**
ANM	**Nome**	**79.83**	**5**	P	**P**	**00 41 23.4**	**+1.0**
ISLE	**Juniper Island**	**80.09**	**16**	P	**P**	**00 41 24.5**	**+0.5**
TGL	**Tana Glacier**	**80.09**	**16**	P	**P**	**00 41 23.8**	**-0.2**
VRDI	**Verde Repeater**	**80.33**	**15**	P	**P**	**00 41 25.9**	**+0.5**
N25K	**Chitina, Valde**	**80.37**	**15**	P	**P**	**00 41 25.6**	**+0.2**
N25K				IAmb	IAmb	00 41 26.8	
	comp=Z,3.8nm,0.8s						
GLB	**Gilahina Butte**	**80.42**	**15**	P	**P**	**00 41 26.0**	**+0.3**
BALM	**Baldy**	**80.45**	**16**	P	**P**	**00 41 26.5**	**+0.6**
BALM				IAmb	IAmb	00 41 27.1	
	comp=Z,3.7nm,0.7s						
F10A	**Beach Ranch, E**	**80.49**	**37**	P	**P**	**00 41 26.6**	**+0.2**
F10A				IAmb	IAmb	00 41 27.9	
	comp=Z,2.6nm,0.8s						
BARN	**Barnard Glacie**	**80.65**	**16**	P	**P**	**00 41 27.9**	**+0.8**
CTGM	**Chitina Glacie**	**80.66**	**16**	P	**P**	**00 41 27.4**	**+0.3**
KTH	**Kantishna Hill**	**80.75**	**11**	P	**P**	**00 41 26.9**	**-0.5**
TRF	**Thorofare Moun**	**80.78**	**11**	P	**P**	**00 41 27.4**	**-0.2**
TRF				IAmb	IAmb	00 41 28.4	
	comp=Z,6.2nm,1.0s						
HLID	**Hailey**	**80.91**	**40**	P	**P**	**00 41 29.3**	**+0.5**
SEY	**Seymchan**	**81.64**	**346**	P	**P**	**00 41 31.2**	**-0.7**
	comp=Z,1.3nm,0.2s,baz=147,slow=20,SNR=4.1						
CCB	**Clear Creek Bu**	**82.34**	**12**	P	**P**	**00 41 35.6**	**+0.2**
CCB				IAmb	IAmb	00 41 35.9	
	comp=Z,2.6nm,0.6s						
I23K	**Minto, Yukon-K**	**82.49**	**11**	P	**P**	**00 41 36.3**	**+0.1**
MCMT	**McKenzie Canyo**	**82.52**	**40**	P	**P**	**00 41 37.9**	**+0.7**
IMAR	**Indian Mountai**	**82.53**	**9**	P	**P**	**00 41 36.8**	**+0.3**
MDM	**Murphy Dome**	**82.53**	**11**	P	**P**	**00 41 35.8**	**-0.7**
MDM				IAmb	IAmb	00 41 37.5	
	comp=Z,5.5nm,1.2s						
IL31		**82.63**	**12**	P	**P**	**00 41 37.0**	**+0.1**
IL31				IAmb	IAmb	00 41 38.6	
	comp=Z,4.6nm,1.1s						
ILAR	**Eielson Array**	**82.63**	**12**	P	**P**	**00 41 36.9**	**-0.1**
	comp=Z,1.4nm,0.5s,baz=218,slow=5.2,SNR=31						
ILAR	**Eielson Array**	**82.63**	**12**	P	**P**	**00 41 36.7**	**-0.3**
IL18	**Eielson Array**	**82.64**	**12**	P	**P**	**00 41 37.2**	**+0.2**
POKR	**Poker Plat Res**	**82.83**	**12**	P	**P**	**00 41 38.2**	**+0.2**
DLMT	**Dillon**	**82.94**	**39**	P	**P**	**00 41 39.7**	**+0.5**
DLMT				IAmb	IAmb	00 41 41.6	
	comp=Z,3.0nm,0.8s						
O20A	**White River Ci**	**83.34**	**46**	IAmb	IAmb	00 41 44.3	
	comp=Z,3.5nm,0.8s						
PRP	**Porcupine Dome**	**83.56**	**12**	IAmb	IAmb	00 41 43.5	
	comp=Z,3.5nm,0.8s						
PDAR	**Pinedale Array**	**83.64**	**43**	P	**P**	**00 41 43.6**	**+0.8**
	comp=Z,1.2nm,0.8s,baz=220,slow=3.7,SNR=10						
DAWY	**Dawson**	**83.74**	**15**	IAmb	IAmb	00 41 44.1	
	comp=Z,3.4nm,0.9s						
YKA	**Yellowknife Ar**	**90.78**	**24**	P	**P**	**00 42 16.5**	**+0.3**
	comp=Z,0.3nm,0.7s,baz=240,slow=4.2,SNR=5.9						
ARCES	**ARCESS Array B**	**123.97**	**351**	PKP	**PKiKP**	**00 48 09.6**	**+0.4**
	comp=Z,11nm,1.0s,baz=347,slow=2.8,SNR=4.6						
GERES	**GERESS Array B**	**145.45**	**349**	PKPbc	**PKPbc**	**00 48 50.7**	**+0.5**
	comp=Z,1.0nm,0.6s,baz=21,slow=2.8,SNR=7.6						

IDC ***02*** *00:39:26.8±1.4,35°.23N×101°.75W,h0^{km},mb1 3.6/3, mb1mx3.3/40,mbtmp3.4/3,ML2.9/3,Error ellipse: s-maj=26.2km s-min=11.2km az=98.0*

ANF ***02*** *00:39:26.8±1.3,35°.28N×101°.74W,h4^{km}±9^{km},ML4.2/9, Error ellipse: s-maj=8.2km s-min=6.5km az=98.0*

NEIC ***02*** *00:39:27.4±1.6,35°.30N±0°.04×101°.69W±0°.04,h4^{km}±7^{km}, mb_Lg3.1/92,Error ellipse: s-maj=6.5km s-min=3.5km az=136.0*

ISC 02 00:39:27.2±0.8,**35°.28N**±0°.04×**101°.74W**±0°.05,**h10^{km},n82,** σ1^{s}.**24**/73,**Northwestern Texas-Oklahoma border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AMTX	**Amarillo**	**0.40**	**173**	P	**Pg**	**00 39 34.4**	**-0.6**
	baz=359						
AMTX				S	**Sg**	**00 39 40.8**	**+0.6**
	baz=359						
AMTX	**Amarillo**	**0.40**	**173**	Pg	**Pg**	**00 39 34.4**	**-0.6**
AMTX				Sg	**Sg**	**00 39 40.9**	**+0.6**
AMTX	**Amarillo**	**0.40**	**173**	P		00 39 34.4	
	baz=359,SNR=542						
AMTX				S		00 39 41.4	
	baz=359						
MSTX	**Muleshoe**	**1.56**	**213**	P	**Pn**	**00 39 55.0**	**-0.1**
	baz=34						
MSTX				S	**Sb**	**00 40 16.7**	**+0.7**
	baz=34						
MSTX	**Muleshoe**	**1.56**	**213**	Pn	**Pn**	**00 39 54.9**	**-0.1**
MSTX	**Muleshoe**	**1.56**	**213**	P		00 39 54.8	
	baz=34,SNR=157						
MSTX				S		00 40 16.9	
	baz=34						
U32A	**Winter Ranch,**	**2.48**	**63**	Pn	**Pn**	**00 40 08.4**	**+0.6**
U32A	**Winter Ranch,**	**2.48**	**63**	P		00 40 08.7	
	baz=244						
WMOK	**Wichita Mounta**	**2.49**	**102**	P	**Pn**	**00 40 09.0**	**+1.2**
	baz=284						
WMOK				S	**Sn**	**00 40 40.6**	**+2.3**
	baz=284						
WMOK	**Wichita Mounta**	**2.49**	**102**		**Pn**	**00 40 08.8**	**+0.9**
WMOK	**Wichita Mounta**	**2.49**	**102**	P		00 40 08.4	
	baz=284,SNR=73						
WMOK				S		00 40 42.4	
	baz=284						
T25A	**Trinidad**	**2.85**	**311**	P	**Pn**	**00 40 14.4**	**+1.4**
	baz=129						
T25A				S	**Sb**	**00 40 53.0**	**-0.3**
	baz=129						
ABTX	**Abilene, Hawle**	**3.17**	**146**	P	**Pn**	**00 40 17.9**	**+0.7**
	baz=328						
ABTX				S	**Sn**	**00 40 56.5**	**+1.4**
	baz=328						
ABTX	**Abilene, Hawle**	**3.17**	**146**	Pn	**Pn**	**00 40 17.7**	**+0.5**
ABTX				IAmb_Lg		00 41 05.9	
	comp=Z,87nm,1.0s						
ABTX	**Abilene, Hawle**	**3.17**	**146**	P		00 40 17.7	
	baz=328,SNR=9.4						
X34A	**Smith Ranch, M**	**3.28**	**101**	Pn	**Pn**	**00 40 21.4**	**+2.7**
X34A				IAmb_Lg		00 41 16.6	
	comp=Z,32nm,0.7s						
CROK	**Carrier**	**3.29**	**67**	Pn	**Pn**	**00 40 20.2**	**+1.4**
BCOK	**Bluff Creek, N**	**3.39**	**82**	Pn	**Pn**	**00 40 22.8**	**+2.5**
BCOK				IAmb_Lg		00 41 12.5	
	comp=Z,40nm,0.7s						
KAN14	**Manchester OK**	**3.49**	**60**	Pn	**Pn**	**00 40 22.0**	**+0.5**
CLNB	**Carlsbad**	**3.49**	**211**	Pn	**Pb**	**00 40 27.5**	**-1.7**
OKCFA	**Oklahoma City**	**3.51**	**87**	Pn	**Pn**	**00 40 21.8**	**0.0**
GC02	**Grant County #**	**3.52**	**62**	Pn	**Pn**	**00 40 21.2**	**-0.7**
OKCSW	**OKLAHOMA CITY**	**3.52**	**87**	Pn	**Pn**	**00 40 23.9**	**+1.9**
OK029	**Liberty Lake**	**3.53**	**80**	Pn	**Pn**	**00 40 22.8**	**+0.6**
FNO	**Franklin**	**3.55**	**89**	Pn	**Pn**	**00 40 23.6**	**+1.1**
OK025	**Westminster Rd**	**3.61**	**84**	Pn	**Pn**	**00 40 23.1**	**-0.1**
OK025				IAmb_Lg		00 41 24.8	
	comp=Z,37nm,0.9s						
KAN08	**Anthony NE Sta**	**3.62**	**56**	Pn	**Pn**	**00 40 21.7**	**-1.6**
GDL2	**Guadalupe Moun**	**3.77**	**216**	Pn	**Pn**	**00 40 26.9**	**+1.5**
KSCO	**Kaye Shedlock'**	**3.79**	**350**	P	**Pn**	**00 40 26.1**	**+0.2**
	baz=168						
KSCO				S	**Sn**	**00 41 10.9**	**+0.2**
	baz=168						
KSCO	**Kaye Shedlock'**	**3.79**	**350**	Pn	**Pn**	**00 40 26.3**	**+0.4**
KSCO	**Kaye Shedlock'**	**3.79**	**350**	P		00 40 26.0	
	baz=168,SNR=11						
KS21	**Milan North St**	**3.86**	**57**	IAmb_Lg		00 41 30.0	
	comp=Z,66nm,0.7s						
KAN13	**South Haven SW**	**3.86**	**62**	Pn	**Pn**	**00 40 26.1**	**-0.6**
CBKS	**Cedar Bluff**	**3.88**	**24**	P	**Pn**	**00 40 27.0**	**+0.1**
	baz=204						
CBKS				S	**Sn**	**00 41 13.1**	**+0.5**
	baz=204						
CBKS	**Cedar Bluff**	**3.88**	**24**	Pn	**Pn**	**00 40 27.1**	**+0.1**
CBKS	**Cedar Bluff**	**3.88**	**24**	P		00 40 26.9	
	baz=204,SNR=7.1						
CBKS				S		00 41 13.1	
	baz=204						
ANMO	**Albuquerque**	**3.88**	**266**	Pn	**Pn**	**00 40 28.4**	**+1.3**
	comp=Z,0.8nm,0.3s,baz=84,slow=16,SNR=17						
ANMO				Pg	**Pb**	**00 40 37.0**	**+1.2**
	comp=Z,2.5nm,0.3s,baz=80,slow=16,SNR=33						
ANMO				Lg	Lg	00 41 24.8	
	comp=Z,7.7nm,0.3s,baz=53,slow=2.1,SNR=11						
ANMO	**Albuquerque**	**3.88**	**266**	P	**Pn**	**00 40 28.3**	**+1.2**
	baz=84						
ANMO	**Albuquerque**	**3.88**	**266**	Pn	**Pn**	**00 40 28.2**	**+1.1**
ANMO	**Albuquerque**	**3.88**	**266**	P		00 40 28.3	
	baz=84,SNR=9.4						
SDCO	**Great Sand Dun**	**3.90**	**310**		**Pn**	**00 40 30.0**	**+2.4**
SDCO				IAmb_Lg		00 41 38.1	
	comp=Z,51nm,0.7s						
SDCO	**Great Sand Dun**	**3.90**	**310**	P		00 40 30.0	
	baz=128,SNR=6.6						
SDCO				S		00 41 26.2	
	baz=128						
R32A	**Long Quarter,**	**3.97**	**37**		**Pn**	**00 40 28.0**	**-0.2**
R32A				IAmb_Lg		00 41 37.9	
	comp=Z,41nm,0.8s						
R32A	**Long Quarter,**	**3.97**	**37**	P		00 40 28.2	
	baz=218,SNR=7.3						
OK031	**S. Brethren Rd**	**4.05**	**79**	Pn	**Pn**	**00 40 29.7**	**+0.5**
OK030	**Cody Creek RV**	**4.09**	**79**	IAmb_Lg		00 41 45.4	
	comp=Z,48nm,0.7s						
BNM	**Barren Site**	**4.18**	**256**	Pn	**Pn**	**00 40 32.3**	**+1.0**
QUOK	**Quay**	**4.19**	**76**	Pn	**Pn**	**00 40 32.2**	**+1.0**
Z35A	**Perchaven, San**	**4.19**	**116**	Pn	**Pn**	**00 40 31.9**	**+0.7**
Z35A	**Perchaven, San**	**4.19**	**116**	P		00 40 31.8	
	baz=299						
T35A	**Sooner Cattle**	**4.54**	**67**	Pn	**Pn**	**00 40 36.2**	**+0.2**
T35A				IAmb_Lg		00 41 53.2	
	comp=Z,42nm,0.8s						
MNTX	**Cornudas Mount**	**4.69**	**221**	P	**Pn**	**00 40 39.5**	**+1.4**
	baz=40						
MNTX	**Cornudas Mount**	**4.69**	**221**	Pn	**Pn**	**00 40 38.8**	**+0.7**
MNTX				IAmb_Lg		00 41 57.0	
	comp=Z,51nm,0.8s						
MNTX	**Cornudas Mount**	**4.69**	**221**	P		00 40 38.7	
	baz=40,SNR=12						
WHTX	**Lake Whitney,**	**4.85**	**131**	IAmb_Lg		00 42 10.9	
	comp=Z,41nm,0.9s						
TUL1	**Leonard**	**4.89**	**81**	Pn	**Pn**	**00 40 41.2**	**+0.4**
TUL1				IAmb_Lg		00 42 06.6	
	comp=Z,47nm,1.1s						
JCT	**Junction City**	**5.05**	**161**	P		00 40 43.5	
	baz=342,SNR=5.5						
JCT	**Junction City**	**5.05**	**161**	Pn	**Pn**	**00 40 43.5**	**+0.4**
X37A	**Clayton**	**5.28**	**96**	Pn	**Pn**	**00 40 46.8**	**+0.7**
X37A				IAmb_Lg		00 42 16.1	
	comp=Z,31nm,0.9s						
ISCO	**Idaho Springs**	**5.46**	**327**	Pn	**Pn**	**00 40 49.6**	**+0.7**
ISCO				IAmb_Lg		00 42 16.8	
	comp=Z,20nm,0.9s						
KSU1	**Kansas State U**	**5.60**	**46**	Pn	**Pn**	**00 40 51.3**	**+0.7**
121A	**Cookes Peak, D**	**5.72**	**243**	IAmb_Lg		00 42 41.3	
	comp=Z,23nm,1.0s						
121A	**Cookes Peak, D**	**5.72**	**243**	P		00 40 53.6	
	baz=60						
MVCO	**Mesa Verde**	**5.79**	**291**	IAmb_Lg		00 42 41.1	
	comp=Z,21nm,1.2s						
Z38A	**Mt. Pleasant**	**5.95**	**108**	IAmb_Lg		00 42 31.7	
	comp=Z,29nm,0.8s						
U38A	**Gravette**	**6.08**	**77**	Pn	**Pn**	**00 40 56.2**	**-1.1**
TX31	**Lajitas Ar. Si**	**6.15**	**196**	Pn	**Pn**	**00 40 58.5**	**+0.3**
TX32	**Lajitas Array**	**6.15**	**196**	Pn	**Pn**	**00 40 58.4**	**+0.2**
TXAR	**Lajitas Array**	**6.15**	**196**	Pn	**Pn**	**00 40 58.1**	**-0.1**
	comp=Z,0.6nm,0.3s,baz=18,slow=12,SNR=38						
TXAR				Pg	Pb	00 41 09.1	-5.4
	comp=Z,1.4nm,0.3s,baz=15,slow=9.9,SNR=16						
TXAR				Lg	Lg	00 42 36.2	
	comp=Z,3.4nm,0.3s,baz=25,slow=37,SNR=4.0						
PV01	**Paradox Valley**	**6.18**	**299**	Pn	**Pn**	**00 40 59.7**	**+0.9**
PV15	**Paradox Valley**	**6.21**	**301**	IAmb_Lg		00 42 53.9	
	comp=Z,16nm,1.2s						
PV12	**Saucer Basin,**	**6.43**	**300**	IAmb_Lg		00 43 07.4	
	comp=Z,17nm,1.2s						
PV11	**David Mesa, Pa**	**6.47**	**300**	IAmb_Lg		00 42 57.9	
	comp=Z,24nm,1.2s						
W39A	**Magazine**	**6.51**	**88**	IAmb_Lg		00 43 01.0	
	comp=Z,28nm,0.8s						
PV17	**East Wray Mesa**	**6.52**	**299**	Pn	**Pn**	**00 41 07.1**	**+3.7**
PV05	**Paradox Valley**	**6.54**	**297**	Pn	**Pn**	**00 41 04.6**	**+0.9**
PV05				IAmb_Lg		00 42 52.4	
	comp=Z,17nm,1.3s						
PHWY	**Pilot Hill**	**6.69**	**335**	Pn	**Pn**	**00 41 07.0**	**+1.2**
PHWY				IAmb_Lg		00 43 01.5	
	comp=Z,20nm,0.8s						
MIAR	**Mount Ida**	**6.75**	**94**	Pn	**Pn**	**00 41 05.4**	**-0.9**
MIAR				IAmb_Lg		00 43 10.9	
	comp=Z,22nm,0.8s						
S39A	**Bolivar**	**7.20**	**68**	Pn	**Pn**	**00 41 12.6**	**+0.1**
S39A				IAmb_Lg		00 43 19.9	
	comp=Z,23nm,0.9s						
HKT	**Hockley**	**7.28**	**135**	Pn	**Pn**	**00 41 14.2**	**+0.6**
HKT				IAmb_Lg		00 43 33.8	
	comp=Z,14nm,1.2s						
U40A	**Yellville**	**7.30**	**79**	Pn	**Pn**	**00 41 14.1**	**+0.1**
U40A				IAmb_Lg		00 43 25.2	
	comp=Z,20nm,0.9s						
X40A	**Basin Creek Fa**	**7.36**	**94**	IAmb_Lg		00 43 22.2	
	comp=Z,14nm,0.8s						
319A	**Douglas**	**7.41**	**240**	IAmb_Lg		00 43 31.4	
	comp=Z,14nm,0.9s						
RWWY	**Rawlins**	**7.70**	**328**	IAmb_Lg		00 43 47.7	
	comp=Z,16nm,0.9s						
WHAR	**Wooly Hollow**	**7.73**	**87**	Pn	**Pn**	**00 41 19.2**	**-0.7**
WHAR				IAmb_Lg		00 43 40.0	
	comp=Z,20nm,1.1s						
P38A	**Dawn**	**7.84**	**54**	IAmb_Lg		00 43 38.3	
	comp=Z,22nm,0.8s						
MGMO	**Mountain Grove**	**7.88**	**73**	IAmb_Lg		00 43 46.3	
	comp=Z,23nm,0.8s						
R40A	**Maddies Statio**	**8.17**	**66**	Pn	**Pn**	**00 41 26.4**	**+0.5**
R40A				IAmb_Lg		00 43 45.8	
	comp=Z,19nm,0.9s						
K22A	**Casper**	**8.25**	**335**	Pn	**Pn**	**00 41 29.3**	**+2.2**
K22A				IAmb_Lg		00 43 57.5	
	comp=Z,16nm,1.0s						
LCAR	**Lake Charles**	**8.65**	**82**	Pn	**Pn**	**00 41 33.2**	**+0.7**
P40A	**Paris**	**8.80**	**58**	Pn	**Pn**	**00 41 33.5**	**-1.0**
P40A				IAmb_Lg		00 44 13.9	
	comp=Z,19nm,0.9s						
CCM	**Cathedral Cave**	**8.88**	**69**	IAmb_Lg		00 44 21.4	
	comp=Z,20nm,0.8s						
HPIG		**8.97**	**203**	IAmb_Lg		00 44 16.4	
	comp=Z,13nm,1.2s						
ECSD	**EROS Data Cent**	**9.33**	**24**	Pn	**Pn**	**00 41 42.6**	**+0.9**
PDAR	**Pinedale Array**	**9.63**	**323**	Pg	Pn	00 42 21.4	+35
	comp=Z,0.1nm,0.3s,baz=124,slow=13,SNR=2.6						
PDAR				Lg	Lg	00 44 28.1	
	comp=Z,0.4nm,0.3s,baz=126,slow=35,SNR=7.2						
146A	**Union**	**10.86**	**100**	P		00 42 03.0	
	baz=288,SNR=10						
ULM	**Lac du Bonnet**	**15.56**	**14**	Pn	**Pn**	**00 43 02.4**	**-4.2**
	comp=Z,0.2nm,0.3s,baz=191,slow=13,SNR=3.6						
ULM				Sn	Sn	00 45 46.6	-12
	comp=Z,0.1nm,0.3s,baz=86,slow=19,SNR=1.2						
ULM				Lg	Lg	00 47 30.1	
	comp=Z,0.1nm,0.3s,baz=132,slow=22,SNR=4.3						

TIF 02 00:59:04.2,41°.21N×43°.91E,h16^{km}±1^{km}, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DMNI	**Dmanisi**	**0.24**	**61**	P	Pb	00 59 10.1	-0.3
DMNI				S	Sb	00 59 14.2	-0.3
AKH	**Akhalkalaki**	**0.37**	**303**	P	Pb	00 59 12.4	-0.2
AKH				S	Sb	00 59 18.0	-0.2
KZRT	**Kazreti**	**0.41**	**64**	P	Pb	00 59 12.9	-0.3
KZRT				S	Sb	00 59 18.8	-0.4
BRNG	**Burnasheti**	**0.42**	**352**	P	Pb	00 59 13.9	+0.6
BRNG				S	Sb	00 59 21.2	+1.7
BKRG	**Bakuriani**	**0.62**	**332**	P	Pb	00 59 17.7	+0.9
BKRG				S	Sn	00 59 26.9	-1.4
BTNK	**Botanikuri**	**0.82**	**55**	P	Pn	00 59 22.7	+1.5
BTNK				S	Sn	00 59 34.7	+1.6
ABS	**Abastumani**	**0.98**	**304**	P	Pg	00 59 23.3	-0.1
ABS				S	Sn	00 59 37.3	0.0

TIF 02 00:59:11.8,41°.18N×43°.91E,h16^{km}±3^{km}, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DMNI	**Dmanisi**	**0.26**	**54**	P	Pb	00 59 18.2	0.0
DMNI				S	Sb	00 59 22.2	-0.3
AKH	**Akhalkalaki**	**0.39**	**307**	P	Pb	00 59 20.4	-0.1
AKH				S	Sb	00 59 25.9	-0.4
ABS	**Abastumani**	**1.01**	**306**	P	Pg	00 59 31.3	0.0
ABS				S	Sn	00 59 45.3	0.0

IDC ***02*** *00:59:23.4±1.6,30°.51N×50°.51E,h0^{km},mb3.7/8, mb1 3.7/10,mb1mx3.5/40,mbtmp3.7/10,ML3.2/2,MS2.2/1, Ms1 2.2/1,ms1mx1.9/51,Error ellipse: s-maj=32.2km s-min=22.6km az=172.0*

TEH ***02*** *00:59:25.8,30°.54N×50°.70E,h8^{km},ML3.6*

THR ***02*** *00:59:27.0±0.3,30°.51N×50°.74E,h15^{km}±3^{km},ML3.6*

OMAN ***02*** *00:59:33.6±1.2,30°.06N×51°.09E,h8^{km},Error ellipse: s-maj=49.3km s-min=21.5km az=290.0*

ISC 02 00:59:24.9±0.6,**30°.46N**±0°.04×**50°.67E**±0°.04,**h10^{km},n71,** σ2^{s}.**22**/83,**mb3.8**/8,**Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ABEH	**Behbahan**	**0.39**	**291**	*e*Pg	**Pb**	**00 59 34.3**	**+0.4**
ABEH				*e*		00 59 48.6	
	comp=Z,99nm,0.5s						
KLNJ	**Kolanjah**	**0.96**	**55**	*e*Pg	**Pg**	**00 59 43.5**	**0.0**
KLNJ				*e*		01 00 01.1	
	comp=Z,99nm,0.4s						
KAZ1	**Kazerun**	**1.19**	**135**	*e*Pg	**Pg**	**00 59 49.1**	**+1.4**
KAZ1				*e*		01 00 18.3	
	comp=Z,99nm,0.6s						
AHBU	**AHRAM**	**1.68**	**161**	*e*Pn	**Pg**	**00 59 58.2**	**+1.0**
AMIS	**Naft Sefid**	**1.69**	**316**	*e*Pg	**Pb**	**00 59 56.3**	**+0.2**
AMIS				*e*		01 00 24.3	
	comp=Z,99nm,0.3s						
SHI	**Shiraz**	**1.79**	**117**	*e*Pn	**Pb**	**00 59 59.6**	**+1.6**
SHI				*e*		01 00 33.4	
	comp=Z,99nm,0.4s						
SHK1	**Shahrekord**	**1.87**	**6**	*e*Pn	**Pn**	**00 59 59.6**	**+2.4**
IRAM	**Ramesheh**	**1.99**	**47**	*e*		01 00 05.3	
	comp=Z,99nm,0.2s						
IRAM				*e*Pg	**Pn**	**01 00 02.0**	**+3.2**
IPIR	**Pirpir**	**2.22**	**5**	*e*		01 00 39.9	
	comp=Z,99nm,0.6s						
IPIR				*e*Pn	**Pn**	**01 00 04.2**	**+2.1**
IGAR	**Gharneh**	**2.26**	**31**	*e*		01 00 10.3	
	comp=Z,99nm,0.2s						
IGAR				*e*Pn	**Pn**	**01 00 05.0**	**+2.4**
SHGR	**Shooshtar-Gavs**	**2.29**	**316**	*e*Pn	**Pb**	**01 00 06.3**	**-0.1**
SHGR				*e*Sg	**Sg**	**01 00 39.1**	**+0.5**
SHGR				IAML		01 00 47.9	
	comp=N,314nm,0.6s						
SHGR	**Shooshtar-Gavs**	**2.29**	**316**	*e*Pn	**Pb**	**01 00 06.3**	**-0.1**
UMR	**Umm Al-Rimmam**	**2.72**	**251**	*e*P		01 00 11.4	
IZEF	**Zefreh**	**2.81**	**30**	*e*Pn	**Pn**	**01 00 13.1**	**+3.0**
IKLH	**Kolahrood**	**2.95**	**15**	*e*Pn	**Pn**	**01 00 14.0**	**+1.9**
IKLH				*e*		01 00 26.6	
	comp=Z,99nm,0.4s						
NASN	**Na'in**	**2.96**	**38**	*e*Pn	**Pn**	**01 00 14.8**	**+2.5**
NASN	**Na'in**	**2.96**	**38**	*e*Pn	**Pn**	**01 00 14.8**	**+2.5**
ISAD	**Sadrabad**	**2.96**	**60**	*e*Pn	**Pn**	**01 00 15.0**	**+2.8**
ISAD				*e*		01 00 22.3	
	comp=Z,99nm,0.4s						
MIB	**Mutribah**	**2.96**	**258**	*e*P		01 00 14.8	
RDF	**Al-Radifah**	**3.12**	**241**	*e*P		01 00 17.4	

KHMZ	Khomeyn	3.32	350	*e*Pn	Pn	01 00 20.1	+3.0
KHMZ	Khomeyn	3.32	350	*e*Pn	Pn	01 00 20.1	+3.0
RST	Umm Al-Ruwaisa	3.33	254	*e*P		01 00 19.7	
QAM	Ghamsar	3.35	11	*e*Pn	Pn	01 00 20.2	+2.6
IMEH	Mehriz	3.51	74	*e*Pn	Pn	01 00 22.8	+3.0
IKMR	Kamar-syah	3.61	328	*e*Pn	Pn	01 00 22.8	+1.9
ICHK	Chekchek	3.66	60	*e*Pn	Pn	01 00 23.9	+2.1
ANAR	Anarak	3.76	43	*e*Pn	Pn	01 00 25.6	+2.5
IKFM	Kafar-mosalman	3.88	323	*e*Pn	Pn	01 00 26.1	+1.5
IDOB	Doab	3.93	328	*e*Pn	Pn	01 00 28.4	+2.9
IBAF	Bafgh	4.35	74	*e*Pn	Pn	01 00 33.3	+2.1
IQOM	Qom	4.38	4	*e*Pn	Pn	01 00 33.4	+1.7
IVRN	Varamin	4.61	11	*e*Pn	Pn	01 00 36.7	+2.0
IBZA	Bozab	4.65	330	*e*Pn	Pn	01 00 36.7	+1.3
IALM	Almabolaq	4.87	335	*e*Pn	Pn	01 00 39.3	+0.9
IRAZ	Razeghan	4.97	353	*e*Pn	Pn	01 00 41.6	+1.8
KHGB	Koh Gabri	5.01	90	*e*Pn	Pn	01 00 42.7	+2.2
ILAS	Lasjerd	5.27	21	*e*Pn	Pn	01 00 45.2	+1.3
TVBK	TV Kerman	5.29	94	*e*Pn	Pn	01 00 46.4	+2.0
TVBK				*e*		01 01 51.7	
	comp=Z,99nm,0.4s						
QABG	Abgarm-Qazvin	5.31	350	*e*Pn	Pn	01 00 45.1	+0.6
NGRK	Negar Kerman	5.32	97	*e*Pn	Pn	01 00 47.9	+3.2
NGRK				*e*		01 01 52.4	
	comp=Z,99nm,0.3s						
ILIN	Lien	5.43	326	*e*Pn	Pn	01 00 47.4	+1.2
IFIR	Firoozkooh	5.45	18	*e*Pn	Pn	01 00 48.1	+1.6
IANJ	Anjilo	5.69	28	*e*Pn	Pn	01 00 51.3	+1.6
TPRV	Parvadeh(Tabas	5.72	62	*e*Pn	Pn	01 00 52.5	+2.4
ISHM	Shahmirzad	5.76	22	*e*Pn	Pn	01 00 52.3	+1.5
IPRN	Peran	5.93	13	*e*Pn	Pn	01 00 55.3	+2.4
QALM	Alamut, Qazvin	5.95	360	*e*Pn	Pn	01 00 55.1	+1.8
TNSJ	Nastanj	6.12	54	*e*Pn	Pn	01 00 58.1	+2.5
TKDS	Koohdasht(Taba	6.31	59	*e*Pn	Pn	01 01 00.3	+2.1
SLWR	Sila	6.43	172	P	Pn	01 01 01.7	+2.0
SLWR				S	Sn	01 02 13.0	-0.2
SHME	Shamm	6.53	131	P	Pn	01 01 02.4	+1.4
SHME				S	Sn	01 02 12.8	-2.8
IGLO	Ghaloghah	6.58	23	*e*Pn	Pn	01 01 03.9	+2.0
BANOM	Banah	6.72	131	P	Pn	01 01 04.6	+0.9
	SNR=17						
BANOM				S	Sn	01 02 17.5	-2.8
MASF	Masafi	7.02	135	P	Pn	01 01 09.2	+1.4
MASF				S	Sn	01 02 24.5	-3.3
NAZ	Nazwa, Dubai	7.02	140	P	Pn	01 01 09.6	+1.8
ASUD	Al Ashush, Dub	7.13	143	P	Pn	01 01 11.5	+2.1
	SNR=17						
ASUD				S	Sn	01 02 29.4	-1.1
MDH	Madha	7.16	135	P	Pn	01 01 11.2	+1.5
MDH				S	Sn	01 02 27.7	-3.4
MDH				S	Sn	01 02 27.8	-3.4
MZWR	Madinat Zayed	7.26	156	P	Pn	01 01 13.3	+2.2
UOSS	Minazif	7.37	137	P	Pn	01 01 15.0	+2.4
UOSS				S	Sn	01 02 32.4	-3.8
ASHO	Ashiyiah	7.48	139	P	Pn	01 01 15.6	+1.4
ASHO				S	Sn	01 02 35.7	-3.5
ALNE	Al Ain	7.82	143	P	Pn	01 01 20.2	+1.4
ALNE				S	Sn	01 02 45.3	-2.1
SOHO	SOHO	8.18	139	P	Pn	01 01 25.1	+1.4
SOHO				S	Sn	01 02 52.1	-4.1
ARQ	Araqi	8.81	142	P	Pn	01 01 34.0	+1.6
	SNR=5.7						
GEYT	Alibeck	9.66	38	Pn	Pn	01 01 43.3	-0.8
	comp=Z,0.1nm,0.3s,baz=216,slow=17,SNR=2.1						
WSAR	Wadi Sarin	10.11	133	Pn	Pn	01 01 50.8	+0.6
	comp=Z,0.5nm,0.3s,baz=318,slow=10,SNR=8.1						
WSAR				Sn	Sn	01 03 36.7	-7.1
	comp=Z,0.7nm,0.3s,baz=100,slow=23,SNR=6.9						
MLR	Muntele Rosu	24.46	315	P	P	01 04 42.5	-1.6
	comp=Z,2.1nm,0.9s,baz=24,slow=20,SNR=2.2						
AKASG	Malin Array Be	25.79	328	P	P	01 04 54.8	-1.1
	comp=Z,0.4nm,0.4s,baz=119,slow=7.1,SNR=2.4						
OBN	Obninsk	26.62	342	LR	LR	01 17 14.4	
	comp=Z,4.3nm,18.0s,baz=200,slow=40						
BVAR	Borovoye Array	26.75	27	P	P	01 05 05.1	+0.5
	comp=Z,0.2nm,0.4s,baz=185,slow=11,SNR=3.9						
KURBB	Kurchatov Arra	28.94	38	P	P	01 05 24.9	+0.7
	comp=Z,0.8nm,0.5s,baz=243,slow=8.9,SNR=5.4						
MKAR	Makanchi Array	29.34	47	P	P	01 05 28.6	+0.8
	comp=Z,0.2nm,0.4s,baz=245,slow=9.7,SNR=8.5						
ZALV	Zalesovo Beam	33.98	36	P	P	01 06 08.9	+0.5
	comp=Z,0.4nm,0.3s,baz=259,slow=8.0,SNR=2.7						
FINES	FINESS Array B	34.95	340	P	P	01 06 15.5	-1.3
	comp=Z,0.9nm,0.6s,baz=144,slow=8.9,SNR=6.7						
TORD	Torodi Ar. Bea	48.23	260	P	P	01 08 05.5	-0.7
	comp=Z,0.4nm,0.4s,baz=54,slow=8.6,SNR=2.4						

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*MDD **02** 01:05:44.4±2.4, 37°.36N×13°.73W, h0^{km}, mb4.0/12, Error ellipse: s-maj=21.6km s-min=18.1km az=59.0, PRXIMO*

*IGIL **02** 01:05:44.7, 37°.37N×13°.77W, h2^{km}, ML2.3*

*INMG **02** 01:05:45.8±0.9, 37°.23N×14°.17W, h10^{km}±66^{km}, ML2.5, Error ellipse: s-maj=36.0km s-min=4.6km az=69.0*

ISC 02 01:05:44.5±3.7**, 37°.44N**±0°.10×**13°.7W**±0°.2**, h10**^{km}**, n38, σ1^{s}.33**/72**, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMAFR	Mafra	3.76	65	P	Pn	01 06 44.1	+1.5
	3.5nm,0.1s,SNR=9.6						
PMAFR				S	Sn	01 07 27.9	+0.9
	9.6nm,0.2s,SNR=7.9						
PMAFR	Mafra	3.76	65	*e*Pn	Pn	01 06 44.2	+1.6
PMAFR				*e*Sn	Sn	01 07 28.2	+1.2
PMAFR				A	A	01 07 29.8	
	15nm,0.6s						
PFVI	Vila Bisbo	3.86	93	P	Pn	01 06 44.3	+0.4
	2.3nm,0.1s,SNR=16						
PFVI				S	Sn	01 07 27.0	-2.4
	4.9nm,0.2s,SNR=6.0						
PFVI	Vila Bisbo	3.86	93	*e*Pn	Pn	01 06 44.4	+0.4
PFVI				*e*Sn	Sn	01 07 28.3	-1.1
PTEO	Sao Teotonio	3.92	87	*e*Pn	Pn	01 06 45.6	+0.8
PTEO				*e*Sn	Sn	01 07 30.7	-0.2
MORF	Marmelete	3.99	90	*e*P	Pn	01 06 46.3	+0.6
MORF				*e*S	Sn	01 07 31.2	-1.4
MORF				AML	AML	01 07 34.4	
	comp=N,8.1nm,0.2s						
MORF	Marmelete	3.99	90	P	Pn	01 06 46.3	+0.6
MORF				S	Sn	01 07 31.2	-1.4
	comp=N,8.1nm,0.2s						
MORF	Marmelete	3.99	90	*e*Pn	Pn	01 06 46.6	+0.8
MORF				*e*Sn	Sn	01 07 31.7	-0.9
MORF				A	A	01 07 35.7	
	comp=N,3.9nm,0.2s						
PNCL	Nicolau / Gran	4.12	79	*e*Pn	Pn	01 06 48.4	+0.9
PNCL				*e*Sn	Sn	01 07 35.7	0.0
PNCL				A	A	01 07 41.4	
	comp=N,2.9nm,0.1s						
MESJ	Messejana	4.33	83	*e*P	Pn	01 06 51.1	+0.7
MESJ				*e*S	Sn	01 07 39.5	-1.5
MESJ				AML	AML	01 07 45.0	
	comp=E,3.8nm,0.1s						
MESJ	Messejana	4.33	83	P	Pn	01 06 51.1	+0.7
MESJ				S	Sn	01 07 39.5	-1.5
	comp=E,3.8nm,0.1s						
MESJ	Messejana	4.33	83	*e*Pn	Pn	01 06 51.2	+0.7
MESJ				*e*Sn	Sn	01 07 41.5	+0.5
PSBE	So Bento	4.34	60	*e*Pn	Pn	01 06 51.8	+1.2
PCVE	Castro Verde	4.47	86	*e*Pn	Pn	01 06 52.8	+0.5
PCVE				*e*Sn	Sn	01 07 43.7	-0.7
PCVE				A	A	01 07 48.6	
	comp=E,1.6nm,0.2s						
PBDV	Barranco-do-Ve	4.57	91	*e*Pn	Pn	01 06 54.9	+1.2
PBDV				*e*Sn	Sn	01 07 46.5	-0.3
PMTG	Montargil	4.57	68	*e*Pn	Pn	01 06 54.9	+1.2
PMTG				*e*Sn	Sn	01 07 47.2	+0.3
EVO	Evora	4.59	75	P	Pn	01 06 54.6	+0.7
EVO				S	Sn	01 07 46.4	-0.9
EVO	Evora	4.59	75	*e*P	Pn	01 06 54.6	+0.7
EVO				*e*S	Sn	01 07 46.4	-0.9
EVO	Evora	4.59	75	*e*Pn	Pn	01 06 55.2	+1.2
EVO				*e*Sn	Sn	01 07 48.0	+0.7
PBEJ	Beja	4.63	81	*e*Pn	Pn	01 06 56.3	+1.8
PVAQ	Vaqueiros	4.73	89	*e*Pn	Pn	01 06 57.4	+1.5
PVAQ				*e*Sn	Sn	01 07 50.2	-0.5
PCAS	Casmilo, Conde	4.80	56	*e*Pn	Pn	01 06 58.2	+1.3
PCAS				*e*Sn	Sn	01 07 53.9	+1.3
EGRO	El Granado	4.91	87	P	Pn	01 06 59.8	+1.5
	comp=E,1.2nm,0.1s,SNR=10						
EGRO				S	Sn	01 07 54.3	-0.9
	comp=E,2.1nm,0.1s,SNR=5.4						
PESTR	Estremoz	4.99	72	*e*Pn	Pn	01 07 01.2	+1.7
PESTR				*e*Sn	Sn	01 07 57.6	+0.4
PBAR	Barrancos	5.29	80	*e*Pn	Pn	01 07 05.3	+1.7
PBAR				*e*Sn	Sn	01 08 03.3	-1.3
PMRV	Marv??o	5.30	66	*e*Pn	Pn	01 07 04.9	+1.1
PMRV				*e*Sn	Sn	01 08 05.3	+0.3
PCBR	Castelo Branco	5.40	62	*e*Pn	Pn	01 07 06.6	+1.6
EMIN	Mina Concepcio	5.56	85	P	Pn	01 07 08.2	+1.0
	comp=E,0.5nm,0.1s,SNR=13						
EMIN				S	Sn	01 08 10.0	-1.2
	comp=E,0.7nm,0.2s,SNR=5.7						
ELOB	Lobios	6.18	43	P	Pn	01 07 17.0	+1.2
	comp=E,0.6nm,0.1s,SNR=7.9						
ELOB				S	Sn	01 08 25.0	-1.6
	comp=E,0.4nm,0.1s,SNR=7.9						
MVO	Moncorvo	6.34	52	P	Pn	01 07 19.5	+1.4
	comp=E,0.4nm,0.1s,SNR=7.9						
MVO				S	Sn	01 08 29.6	-1.1
	comp=E,0.8nm,0.1s,SNR=7.9						
EPLA	Plasencia	6.47	64	P	Pn	01 07 21.4	+1.6
	comp=E,0.4nm,0.1s,SNR=7.9						
EPLA				S	Sn	01 08 33.2	-0.6
	comp=E,0.1nm,0.2s,SNR=7.9						
ECAB	El Cabril	6.56	82	P	Pn	01 07 22.0	+0.9
	comp=E,0.5nm,0.1s,SNR=12						
ECAB				S	Sn	01 08 33.6	-2.2
	comp=E,0.6nm,0.2s,SNR=6.5						
EMAZ	Mazaricos	6.56	32	S	Sn	01 08 32.9	-3.0
	comp=E,1.6nm,0.1s,SNR=7.9						
EAGO	Agolada(Pontev	6.85	37	P	Pn	01 07 25.5	+0.5
	comp=E,0.9nm,0.1s,SNR=7.9						
EAGO				S	Sn	01 08 40.0	-2.9
	comp=E,1.4nm,0.1s,SNR=7.9						
EADA	Adamuz	7.23	81	P	Pn	01 07 31.2	+1.0
	comp=E,0.9nm,0.1s,SNR=7.9						
EADA				S	Sn	01 08 51.4	-0.9
	comp=E,1.1nm,0.2s,SNR=7.9						
PAB	San Pablo	7.60	71	P	Pn	01 07 35.9	+0.6
	comp=E,0.2nm,0.2s,SNR=7.9						
PAB				S	Sn	01 08 59.3	-2.2
	comp=E,0.3nm,0.2s,SNR=7.9						
ESDC	Sonseca Array	7.92	71	P	Pn	01 07 40.4	+0.7
	comp=E,0.3nm,0.1s,baz=256,slow=13,SNR=16						
ESDC				S	Sn	01 09 05.4	-3.9
	comp=E,0.2nm,0.2s,baz=257,slow=23,SNR=7.9						
EQES	Quesada	8.41	84	P	Pn	01 07 46.8	+0.3
	comp=E,0.2nm,0.1s,SNR=7.9						
EQES				S	Sn	01 09 21.6	0.0
	comp=E,0.4nm,0.3s,SNR=7.9						

DJA 02 01:15:06.0±0.4**, 9°S**±6°×**11°8E**±°**, h116**^{km}±5^{km}**, M3.7**/10**, mb3.9**/2**, MLv3.5**/10**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	Plampang	0.60	251	P	Pn	01 15 25.3	+1.1
PLAI				S	Sn	01 15 39.8	+1.9
TWSI	Taliwang, Sumb	1.46	266	P	Pn	01 15 33.2	+0.6
BASI	Baing, Sumba	2.71	126	P	Pn	01 15 48.6	+0.3
SRBI	Singaraja	3.15	280	P	Pn	01 15 55.6	+1.4
BSSI	Bau Bau, Buton	3.26	41	P	Pn	01 15 55.1	-0.5
EDFI	Ende, Flores	3.31	92	P	Pn	01 15 56.2	-0.1
JAGI	Jajag, Banyuwa	4.16	272	P	Pn	01 16 06.3	-1.3
BATI	Baumata	5.47	107	P	Pn	01 16 25.3	0.0
	0.1nm14nm,0.9s						
SOEI	Soe	5.95	101	P	Pn	01 16 31.6	-0.2

IDC 02 01:23:13.8±2.2**, 20°.21S**×**169°.18E, h0**^{km}**, mb4.0**/3**, mb1 4.3**/4**, mb1mx3.9**/32**, mbtmp3.9**/4**, ML3.2**/1**, MS3.3**/6**, Ms1 3.3**/6**, ms1mx3.0**/34**, Error ellipse: s-maj=96.6km s-min=25.9km az=147.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	3.16	233	Pn	Pn	01 24 05.0	+0.1
	2.5nm,0.3s,baz=118,slow=11,SNR=47						
DZM				LR	LR	01 24 33.6	
	comp=Z,119nm,19.2s,baz=60,slow=25						
DZM				Sn	Sn	01 24 46.1	+2.7
	5.8nm,0.3s,baz=100,slow=23,SNR=13						
URZ	Urewera	19.26	161	LR	LR	01 32 44.2	
	comp=Z,113nm,20.5s,baz=31,slow=30						
STKA	Stephens Creek	27.29	239	LR	LR	01 39 13.1	
	comp=Z,48nm,20.1s,baz=31,slow=35						
WRA	Warramunga Arr	32.69	264	P	P	01 29 47.8	-0.4
	2.1nm,0.8s,baz=96,slow=8.1,SNR=16						
WRA				LR	LR	01 43 30.9	
	comp=Z,139nm,18.7s,baz=95,slow=37						
ASAR	Alice Springs	32.85	257	P	P	01 29 49.0	-0.6
	3.1nm,0.9s,baz=82,slow=9.3,SNR=24						
BATI	Baumata	44.90	276	LR	LR	01 50 04.2	
	comp=Z,104nm,20.0s,baz=89,slow=36						
KAPI	Kappang	50.33	281	LR	LR	01 51 12.7	
	comp=Z,28nm,21.4s,baz=141,slow=33						
NVAR	Mina Array Bea	89.48	49	P	P	01 36 12.5	-0.8
	0.3nm,0.7s,baz=229,slow=6.9,SNR=3.8						
GERES	GERESS Array B	145.31	331	PKPbc	PKPdf	01 42 54.4	+0.7
	0.3nm,0.4s,baz=50,slow=1.7,SNR=3.7						

IDC 02 01:37:36.7±6.7**, 19°.96S**×**168°.21E, h0**^{km}**, mb4.2**/4**, mb1 4.4**/4**, mb1mx4.0**/40**, mbtmp4.2**/4**, ML3.0**/1**, Error ellipse: s-maj=134.9km s-min=36.3km az=108.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	2.68	218	Pn	Pn	01 38 21.4	+0.2
	2.9nm,0.3s,baz=212,slow=22,SNR=7.7						
DZM				Sn	Sn	01 38 55.8	+1.4
	2.6nm,0.3s,baz=72,slow=20,SNR=3.4						
WRA	Warramunga Arr	31.81	264	P	P	01 44 02.4	-1.0
	2.3nm,0.8s,baz=98,slow=6.8,SNR=13						
ASAR	Alice Springs	32.02	257	P	P	01 44 05.0	-0.2
	2.2nm,0.8s,baz=85,slow=8.7,SNR=11						
FITZ	Fitzroy Crossi	40.21	265	P	P	01 45 16.1	+0.7
	4.0nm,0.7s,baz=101,slow=5.2,SNR=7.3						
CMAR	Chiang Mai Arr	77.92	295	P	P	01 49 37.4	+0.3
	0.9nm,0.3s,baz=144,slow=4.4,SNR=4.1						

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*NEIC **02** 01:40:27.3±1.5, 20°.7S±0°.1×169°.80E±0°.10, h29^{km}±6^{km}, mb4.3/8, Error ellipse: s-maj=20.1km s-min=12.3km az=166.0*

*IDC **02** 01:40:33.6±3.9, 20°.22S×168°.51E, h0^{km}, mb4.2/4, mb1 4.5/4, mb1mx4.0/35, mbtmp4.2/4, ML3.0/1, Error ellipse: s-maj=101.3km s-min=38.6km az=130.0*

*NOU **02** 01:40:46.5, 21°.82S×168°.38E, h0^{km}, MLv3.6, Loyalty Islands*

ISC 02 01:40:30.4±1.3**, 21°.3S**±0°.1×**169°.29E**±0°.09**, h10**^{km}**, n29, σ1^{s}.18**/26**, mb4.2**/7**, MS4.5**/3**, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	1.19	262	P	Pg	01 40 55.6	+2.4
PINNC	Pines Island,	2.14	233	P	Pb	01 41 08.4	-0.9
YATNC	Mamie plateau,	2.35	251	P	Pb	01 41 12.0	-0.9
OUENC	Ouen Island, N	2.52	244	P	Pb	01 41 14.7	-1.1
DZM	Mont Dzumac	2.75	254	Pn	Pb	01 41 18.8	-0.9
	2.7nm,0.3s,baz=168,slow=21,SNR=6.3						
DZM	Mont Dzumac	2.75	254	*e*Pn	Pb	01 41 18.8	-0.9
	19nm,0.3s						
DZM				*e*Sn	Sg	01 41 58.7	-0.1
	42nm,0.3s						
DZM	Mont Dzumac	2.75	254		Pb	01 41 19.2	-0.6
DZM	Mont Dzumac	2.75	254	P	Pb	01 41 19.0	-0.7
ONTNC	Ouen Toro	2.81	249	P	Pb	01 41 19.2	-1.5
NOUC	Port Laguerre	2.89	254	P	Pb	01 41 20.4	-1.6
MSVF	Nonsavu	9.00	68	Pn	Pn	01 42 26.1	-14
BKZ	Black Stump Fm	18.83	162	Pn	Pn	01 44 52.3	+1.5
BKZ				IAmb	IAmb	01 45 05.3	
	comp=Z,22nm,1.4s						
TUWZ	Tuamarina	20.43	170	P	P	01 45 07.2	-0.5
WR0	Warramunga Arr	32.51	266	P	P	01 46 60.0	-1.7
WR0				IAmb	IAmb	01 47 18.6	
	comp=Z,6.8nm,1.3s						
WC3	Warramunga Arr	32.67	266	P	P	01 47 02.4	-0.6
WC3				IAmb	IAmb	01 47 16.9	
	comp=Z,5.3nm,1.1s						
WB0	Warramunga Arr	32.68	266	P	P	01 47 01.6	-1.4
WB0				IAmb	IAmb	01 47 19.9	
	comp=Z,4.4nm,1.0s						
WB2	Warramunga Arr	32.69	266	P	P	01 47 01.9	-1.2
WRA	Warramunga Arr	32.70	266	P	P	01 47 02.1	-1.2
	comp=Z,1.3nm,0.4s,baz=94,slow=8.3,SNR=40						
WRA	Warramunga Arr	32.70	266	P	P	01 47 02.0	-1.2
AS31	Alice Springs	32.73	259	P	P	01 47 02.1	-1.4
ASAR	Alice Springs	32.73	259	P	P	01 47 02.8	-0.8
	comp=Z,1.4nm,0.5s,baz=83,slow=8.8,SNR=16						
ASAR	Alice Springs	32.73	259	P	P	01 47 03.5	-0.1
TBI	Tubuai	38.12	101	*e*S	S	01 54 03.7	+21
	comp=Z,288nm,42.2s						
TBI				*e*LQ	LQ	01 57 19.9	
	comp=Z,3µm,32.2s						
TBI				*e*LR	LR	01 59 02.2	
	comp=Z,470nm,28.5s						
PPT2	Papeete2	38.88	92	*e*S	S	01 54 09.2	+14
	comp=Z,120nm,24.6s						
PPT2				*e*LQ	LQ	01 57 28.8	
	comp=Z,4µm,28.0s						
PPT2				*e*LR	LR	01 59 11.8	
	comp=Z,913nm,25.5s						
FITZ	Fitzroy Crossi	41.13	267	P	P	01 48 14.2	-0.7
	comp=Z,3.9nm,0.8s,baz=73,slow=8.5,SNR=8.7						
FITZ	Fitzroy Crossi	41.13	267	P	P	01 48 14.5	-0.4
FITZ				IAmb	IAmb	01 48 21.3	
	comp=Z,4.6nm,0.8s						
TAOE	Nuku Hiva Isla	50.16	84	*e*LR	LR	02 04 07.4	
	comp=Z,1µm,23.2s						
CMAR	Chiang Mai Arr	79.41	295	P	P	01 52 37.9	+0.7
	comp=Z,1.1nm,0.4s,baz=120,slow=4.1,SNR=5.1						
GERES	GERESS Array B	146.33	330	PKPbc	PKPdf	02 00 10.3	0.0
	comp=Z,0.6nm,0.7s,baz=64,slow=3.1,SNR=5.5						

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*NEIC **02** 01:41:10.7±1.9, 20°.7S±0°.2×169°.7E±0°.1, h30^{km}±8^{km}, mb4.6/10, Error ellipse: s-maj=25.3km s-min=12.3km az=161.0*

*IDC **02** 01:41:12.8±3.7, 20°.11S×168°.68E, h0^{km}, mb4.2/4, mb1 4.4/5, mb1mx4.0/34, mbtmp4.2/5, ML3.8/1, Error ellipse: s-maj=98.1km s-min=41.0km az=128.0*

*GCMT **02** 01:41:21.7±0.3, 21°.08S±0°.02×170°.11E±0°.01, h18^{km}±1^{km}, MW5.2/104, Moment Tensor Solution. s17,c18; s104,c161; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.10±.27; $M_{\theta\theta}$-3.92±.23; $M_{\phi\phi}$4.02±.23; $M_{r\theta}$1.05±.51; $M_{\theta\phi}$-5.19±.20; $M_{\phi r}$0.28±.52; Best double couple: $M_0$6.62400×10^{16} NP1:ϕ_s198.00000°, δ82.00000°, λ-5.00000°. NP2:ϕ_s289.00000°, δ85.00000°, λ-172.00000°. Principal axes: T 6.5910, Plg2.0000°, Azm64.0000°; N 0.0660, Plg81.0000°, Azm322.0000°; P -6.6580, Plg9.0000°, Azm154.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 02 01:41:06.8±0.9**, 20°.6S**±0°.2×**169°.8E**±0°.1**, h10**^{km}**, n19, σ1^{s}.11**/19**, mb4.5**/8**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	3.42	244	Pn	Pn	01 41 59.5	-0.7
	13nm,0.3s,baz=236,slow=16,SNR=7.5						
DZM	Mont Dzumac	3.42	244		Pn	01 41 57.8	-2.5
MSVF	Nonsavu	8.34	71	Pn	Pn	01 43 07.2	-0.8
BKZ	Black Stump Fm	19.40	164		P	01 45 33.7	+0.6
BKZ				IAmb	IAmb	01 45 48.0	
	comp=Z,46nm,1.3s						
STKA	Stephens Creek	27.56	240	P	P	01 46 55.7	+1.6
	comp=Z,4.7nm,0.9s,baz=90,slow=8.1,SNR=5.1						
STKA	Stephens Creek	27.56	240	P	P	01 46 54.8	+0.8
WR0	Warramunga Arr	33.00	265	P	P	01 47 44.2	+2.0
WR0				IAmb	IAmb	01 47 48.6	
	comp=Z,6.4nm,0.8s						
WC3	Warramunga Arr	33.15	265	P	P	01 47 42.9	-0.8
WC3				IAmb	IAmb	01 47 51.6	
	comp=Z,8.6nm,1.0s						
WB0	Warramunga Arr	33.16	265	P	P	01 47 43.5	-0.1
WB0				IAmb	IAmb	01 47 50.0	
	comp=Z,7.4nm,0.8s						
WRA	Warramunga Arr	33.19	265	P	P	01 47 43.0	-0.9
	comp=Z,1.5nm,0.6s,baz=90,slow=8.4,SNR=6.6						
WRA	Warramunga Arr	33.19	265	P	P	01 47 44.8	+0.9
AS31	Alice Springs	33.29	258	P	P	01 47 44.7	-0.1
ASAR	Alice Springs	33.29	258	P	P	01 47 44.4	-0.5
	comp=Z,1.5nm,0.6s,baz=88,slow=9.0,SNR=5.3						
ASAR	Alice Springs	33.29	258	P	P	01 47 44.3	-0.6
MTN	Manton Dam	37.71	276	P	P	01 48 23.5	+0.6
MTN				IAmb	IAmb	01 48 28.2	
	comp=Z,14nm,1.0s						
FITZ	Fitzroy Crossi	41.60	266	P	P	01 48 55.6	+0.4
	comp=Z,6.3nm,1.0s,baz=114,slow=10.0,SNR=3.5						
FITZ	Fitzroy Crossi	41.60	266	P	P	01 48 56.1	+0.8
PSAC3	Pilbara Seismi	46.42	259	P	P	01 49 34.5	+0.5
GERES	GERESS Array B	145.90	331	PKPbc	PKiKP	02 00 50.7	+0.7
	comp=Z,1.4nm,0.8s,baz=26,slow=3.4,SNR=5.8						

IDC 02 01:41:31.8±3.6**, 21°.04S**×**169°.39E, h0**^{km}**, mb4.0**/5**, mb1 4.3**/5**, mb1mx4.0**/33**, mbtmp3.9**/5**, MS4.7**/1**, Ms1 4.7**/1**, ms1mx3.8**/15**, Error ellipse: s-maj=160.5km s-min=36.4km az=164.0, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	24.33	295	LR	LR	01 54 56.5	
	comp=Z,2µm,18.9s,baz=138,slow=33						
WRA	Warramunga Arr	32.81	266	P	P	01 48 06.8	-0.4
	1.6nm,0.8s,baz=96,slow=8.5,SNR=1.8						
CMAR	Chiang Mai Arr	79.37	294	P	P	01 53 40.9	+0.7
	1.3nm,0.3s,baz=104,slow=7.5,SNR=6.0						
SONM	Songino Array	88.74	323	P	P	01 54 26.5	-1.0
	0.7nm,0.8s,baz=134,slow=4.2,SNR=4.2						
NVAR	Mina Array Bea	89.88	48	P	P	01 54 33.0	-0.1
	0.5nm,0.7s,baz=209,slow=5.2,SNR=3.0						
ILAR	Eielson Array	91.90	17	P	P	01 54 41.9	+0.3
	0.2nm,0.7s,baz=239,slow=6.2,SNR=1.2						
GERES	GERESS Array B	146.13	331	PKPbc	PKPdf	02 01 13.0	-0.1
	1.3nm,0.8s,baz=46,slow=2.8,SNR=4.4						

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*AEIC **02** 01:41:55±3.1, 56°.65N±0°.06×169°.1W±0°.1, h26^{km}±5^{km}, Error ellipse: s-maj=10.2km s-min=5.5km az=223.0*

*IDC **02** 01:41:56.1±1.0, 56°.79N×169°.09W, h0^{km}, mb3.9/11, mb1 4.2/14, mb1mx4.0/54, mbtmp4.0/14, ML3.3/3, MS3.4/7, Ms1 3.4/7, ms1mx3.0/46, Error ellipse: s-maj=32.9km s-min=13.0km az=3.0*

*NEIC **02** 01:41:57.1±2.6, 56°.61N±0°.06×169°.2W±0°.1, h10^{km}±1^{km}, mb4.5/24, ML3.9/15(AEIC), Error ellipse: s-maj=11.5km s-min=6.9km az=223.0*

ISC 02 01:41:57.2±0.4**, 56°.63N**±0°.06×**169°.13W**±0°.05**, h10**^{km}**, n106, σ1^{s}.58**/110**, mb4.5**/21**, MS3.4**/6**, 2C-1D, Pribilof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPIA	Saint Paul Isl	0.82	312		Sg	01 42 23.2	-0.5
SPIA	Saint Paul Isl	0.82	312		Pg	01 42 11.0	-2.0
AKGG	Akutan Green G	3.02	142		Pn	01 42 43.6	-1.5
AKGG					Sn	01 43 19.5	-1.9
MSW	Makushin Switc	3.04	153		Pn	01 42 44.1	-1.2
AKRB	Akutan Reef Bi	3.06	144		Pn	01 42 44.7	-0.8
AKRB					Sn	01 43 21.2	-0.9
AKLV	Akutan Long Va	3.06	143		Pn	01 42 45.0	-0.7
MNAT	Makushin Natee	3.09	152		Pn	01 42 45.1	-0.9
MNAT					Sn	01 43 22.7	-0.3
MGOD	Makushin Gods	3.12	155		Pn	01 42 44.8	-1.7
AKUT	Akutan	3.15	141	Pn	Pn	01 42 45.6	-1.2
UNV	Unalaska Valle	3.17	151	Pn	Pn	01 42 46.4	-0.7
NIKH	Nikolski High	3.67	177	Pn	Pn	01 42 53.5	-0.4
FALS	False Pass	3.69	116	Pn	Pn	01 42 57.0	+2.9
SDPT	Sand Point	5.03	101	Pn	Pn	01 43 11.7	-0.8
ATKA	Atka Island	5.33	216	Pn	Pn	01 43 16.8	0.0
CHGN	Chignik	5.95	89	Pn	Pn	01 43 25.4	+0.1
ADK	Adak	6.50	226	Pn	Pn	01 43 31.2	-1.5
GAMB	Gambell	7.28	351	Pn	Pn	01 43 43.3	-0.2
ANM	Nome	8.17	11	Pn	Pn	01 43 57.9	+2.2
AMKA	Amchitka	8.60	237	Pn	Pn	01 44 03.8	+2.1
OHAK	Old Harbor	8.69	79	Pn	Pn	01 44 03.6	+0.9
KDAK	Kodiak Island	9.05	76	Pn	Pn	01 44 09.1	+1.3
	0.3nm,0.3s,baz=287,slow=9.9,SNR=5.5						
KDAK				Sn	Sn	01 45 48.1	-1.5
	baz=330,slow=20,SNR=1.7						
KDAK				LR	LR	01 47 50.2	
	comp=Z,145nm,20.2s,baz=211,slow=39						
KDAK	Kodiak Island	9.05	76	Pn	Pn	01 44 09.9	+2.1
TTA	Tatalina	9.13	41	Pn	Pn	01 44 10.6	+1.7
RSO	Redoubt South	9.37	59	Pn	Pn	01 44 15.5	+3.1

CNPM	China Poot	9.90	66	Pn	Pn	01 44 21.5	+2.0
BRLK	Bradley Lake	10.12	64	Pn	Pn	01 44 23.2	+0.8
SKT	Skwentna	10.45	52	Pn	Pn	01 44 29.1	+2.1
PPLA	Purkeypile	10.58	47	Pn	Pn	01 44 31.3	+2.5
SUA	Susitna One	10.62	55	Pn	Pn	01 44 31.8	+2.5
KTH	Kantishna Hill	11.40	45	Pn	Pn	01 44 41.7	+1.8
SML	Sawmill	11.82	55	Pn	Pn	01 44 49.7	+4.1
RND	Reindeer	12.16	48	Pn	Pn	01 44 54.6	+4.2
KLU	Klutina	12.86	58	Pn	Pn	01 45 03.3	+3.5
MDM	Murphy Dome	13.12	42	Pn	Pn	01 45 04.1	+0.8
CCB	Clear Creek Bu	13.12	44	Pn	Pn	01 45 06.3	+2.9
PAX	Paxson	13.44	52	Pn	Pn	01 45 11.1	+3.3
POKR	Poker Plat Res	13.49	42	Pn	Pn	01 45 06.5	-1.9
N25K	Chitina, Valde	13.50	58	Pn	Pn	01 45 11.4	+2.7
IL31		13.53	44	Pn	Pn	01 45 11.4	+2.5
ILAR	Eielson Array	13.53	44	Pn	Pn	01 45 09.2	+0.3
	0.1nm,0.3s,baz=242,slow=13,SNR=18						
ILAR				LR	LR	01 50 52.0	
	comp=Z,188nm,18.5s,baz=230,slow=40						
ILAR	Eielson Array	13.53	44	Pn	Pn	01 45 10.9	+1.9
GLB	Gilahina Butte	13.84	59	Pn	Pn	01 45 15.7	+2.4
MCARA	McCarthy VSAT	14.21	60	Pn	Pn	01 45 21.2	+2.9
DOT	Dot Lake	14.25	50	P	P	01 45 25.0	-1.1
PRP	Porcupine Dome	14.38	42		Pn	01 45 22.2	+1.4
YAH	Yahtse	14.74	64	Pn	Pn	01 45 27.9	+2.2
BARN	Barnard Glacie	14.83	61	Pn	Pn	01 45 29.2	+2.4
TOLK	Toolik Lake Re	14.92	28	P	P	01 45 33.2	-0.5
CTGM	Chitina Glacie	14.98	62	Pn	Pn	01 45 29.9	+1.0
FYU	Fort Yukon	14.99	39	P	P	01 45 34.0	-0.4
FYU				IAmb	IAmb	01 45 35.8	
	comp=Z,36nm,1.3s						
EGAK	Eagle	15.81	48	Pn	Pn	01 45 40.7	+1.2
DAWY	Dawson	16.35	51	P	P	01 45 50.5	+0.9
DAWY				IAmb	IAmb	01 45 55.6	
	comp=Z,24nm,1.1s						
HYT	Haines Junctio	16.84	62	P	P	01 45 56.6	+1.6
HYT				IAmb	IAmb	01 46 00.0	
	comp=Z,23nm,1.2s						
WHY	Whitehorse	18.14	63	P	P	01 46 12.5	+3.2
PETK	Petropavlovsk-	19.30	274	P	Pn	01 46 24.1	+1.0
	comp=Z,0.2nm,0.3s,baz=96,slow=14,SNR=4.4						
INK	Inuvik	19.82	40	P	P	01 46 26.6	-1.0
	comp=Z,0.2nm,0.3s,baz=233,slow=8.0,SNR=13						
INK	Inuvik	19.82	40	P	P	01 46 27.2	-0.4
INK				IAmb	IAmb	01 46 32.5	
	comp=Z,13nm,0.9s						
SEY	Seymchan	20.12	304	P	P	01 46 31.4	+0.5
	comp=Z,6.5nm,0.8s,baz=99,slow=9.1,SNR=16						
DLBC	Dease Lake	20.87	69	P	P	01 46 39.7	+0.6
	comp=Z,4.2nm,1.0s,baz=276,slow=10,SNR=2.8						
C36M	Paulatuk	23.41	39	P	P	01 47 05.4	-0.3
C36M				IAmb	IAmb	01 47 09.2	
	comp=Z,11nm,1.1s						
YKA	Yellowknife Ar	27.49	55	P	P	01 47 43.0	-0.2
	comp=Z,6.1nm,0.9s,baz=279,slow=8.3,SNR=13						
YKA				PcP	PcP	01 51 00.6	-0.4
	comp=Z,0.2nm,0.6s,baz=285,slow=3.4,SNR=4.8						
YKA				LR	LR	01 57 31.1	
	comp=Z,154nm,21.7s,baz=0.0,slow=34						
HRY	Holter Researc	35.88	81	P	P	01 48 55.5	-1.7
NVAR	Mina Array Bea	37.81	97	P	P	01 49 14.2	+0.5
	comp=Z,0.8nm,0.7s,baz=306,slow=7.5,SNR=6.8						
NVAR				PcP	PcP	01 51 30.8	+0.6
	comp=Z,0.6nm,0.7s,baz=294,slow=2.3,SNR=4.8						
NVAR	Mina Array Bea	37.81	97	P	P	01 49 14.5	+0.8
ELK	Elko	37.88	91	P	P	01 49 14.9	+0.6
TPH	Tonopah	38.66	96	P	P	01 49 20.8	-0.1
SRU	San Rafael Swe	41.62	89	P	P	01 49 45.1	-0.3
KSRS	Korea Array	45.20	273	P	P	01 50 14.4	+0.4
	comp=Z,0.9nm,0.8s,baz=48,slow=7.5,SNR=4.4						
X18A	Snowflake	45.25	93	P	P	01 50 14.1	-0.6
X18A				IAmb	IAmb	01 50 15.7	
	comp=Z,4.0nm,0.9s						
ULN	Ulaanbaatar	48.98	297	P	P	01 50 44.1	+0.4
ULN				IAmb	IAmb	01 50 45.2	
	comp=Z,4.0nm,0.9s						
SONM	Songino Array	49.33	298	P	P	01 50 46.8	+0.5
	comp=Z,2.1nm,0.9s,baz=50,slow=6.0,SNR=15						
SONM				PcP	PcP	01 52 09.0	+0.2
	comp=Z,1.3nm,1.0s,baz=54,slow=3.1,SNR=4.5						
SONM	Songino Array	49.33	298	P	P	01 50 46.1	-0.2
HHC	Hu-ho-hao-te	51.62	288	*e*P	P	01 51 04.7	+1.0
HHC				pmax	pmax		
	comp=Z,5.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,54nm,5.5s						
TXAR	Lajitas Array	52.66	92	P	P	01 51 10.7	-0.8
	comp=Z,0.9nm,0.8s,baz=265,slow=4.6,SNR=4.5						
TXAR	Lajitas Array	52.66	92	P	P	01 51 10.3	-1.2
ARCES	ARCESS Array B	53.69	354	LR	LR	02 15 59.8	
	comp=Z,19nm,18.1s,baz=255,slow=38						
ZALV	Zalesovo Beam	54.41	316	PcP	PcP	01 52 26.3	-1.2
	comp=Z,1.2nm,0.8s,baz=20,slow=4.6,SNR=4.5						
L59A	Walton	58.10	61	P	P	01 51 50.1	-0.4
GTA	Gaotai	58.73	295	⇑P	P	01 51 54.9	-0.1
GTA				pP	sP	01 51 59.8	+0.4
GTA				sP	pP	01 52 03.2	+5.0
GTA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
LZH	Lanzhou	59.20	290	⇓P	P	01 51 59.6	+1.2
LZH				pP	sP	01 52 07.1	+4.3
LZH				sP	pP	01 52 10.5	+8.9
LZH				pmax	pmax		
	comp=Z,13nm,0.9s						
BRVK	Borovoye	60.34	323	P	P	01 52 05.7	-0.1
BRVK				IAmb	IAmb	01 52 06.6	
	comp=Z,7.1nm,1.2s						
MK31	Makanchi Array	61.01	312	P	P	01 52 09.6	-0.9
MKAR	Makanchi Array	61.01	312	P	P	01 52 09.6	-0.9
	comp=Z,1.1nm,0.9s,baz=64,slow=5.5,SNR=6.9						
MKAR	Makanchi Array	61.01	312	P	P	01 52 09.7	-0.8
WMQ	Urumqi	61.06	306	*e*P	P	01 52 12.8	+1.9
FINES	FINESS Array B	61.66	352	P	P	01 52 14.1	-0.4
	comp=Z,3.9nm,1.1s,baz=24,slow=7.8,SNR=3.0						
FINES				LR	LR	02 21 03.0	
	comp=Z,19nm,18.5s,baz=6.5,slow=38						
NOA	NORSAR Array B	62.67	360	LR	LR	02 20 48.0	
	comp=Z,12nm,18.3s,baz=345,slow=37						
ABKAR	Akbulak array	66.89	327		P	01 52 48.8	-0.3
ABKAR				IAmb	IAmb	01 52 49.8	
	comp=Z,4.9nm,0.9s						
AAK	Ala-Archa	67.58	314	P	P	01 52 52.9	-0.9
AAK				IAmb	IAmb	01 52 59.9	
	comp=Z,4.7nm,1.1s						
KMI	Kunming	68.39	283	⇑P	P	01 52 59.9	+0.7
KMI				pP	sP	01 53 04.7	+1.1
KMI				pmax	pmax		
	comp=Z,9.0nm,1.4s						
KMI				LR	LR		
	comp=N,240nm,18.0s						
KMI				LR	LR		
	comp=E,120nm,33.7s						
KMI				LR	LR		
	comp=Z,250nm,24.1s						
KK31	Karatay Array	68.72	317	P	P	01 53 00.0	-0.7
KKAR	Karatay Array	68.72	317	P	P	01 53 00.0	-0.7
KKAR	Karatay Array	68.72	317	P	P	01 53 00.5	-0.3
KKAR				IAmb	IAmb	01 53 01.6	
	comp=Z,5.7nm,1.1s						
KSH	Kashi	69.62	312	P	P	01 53 10.1	+3.6
KSH				pP	PcP	01 53 29.1	-0.4
KSH				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KSH				pmax	pmax		
	comp=Z,100nm,4.9s						
AKASG	Malin Array Be	71.96	348	P	P	01 53 19.1	-1.3
	comp=Z,2.3nm,0.6s,baz=16,slow=6.1,SNR=9.7						
AKASG	Malin Array Be	71.96	348	P	P	01 53 17.9	-2.4
DPC	Dobruska-Polom	73.29	356	*e*P	P	01 53 28.6	+0.2
KRLC	Kraliky	73.55	356	*e*P	P	01 53 29.8	-0.1
KOLS	Kolonicke sedl	74.38	352	*e*P	P	01 53 34.7	0.0
KHC	Kasperske Hory	74.58	358	*e*P	P	01 53 34.8	-1.1
GERES	GERESS Array B	74.86	358	P	P	01 53 37.1	-0.6
	comp=Z,0.6nm,0.8s,baz=357,slow=6.7,SNR=4.6						
BURAR	Bucovina Array	75.43	350	P	P	01 53 40.2	-0.7
NIL	Nilore	75.76	310	P	P	01 53 43.7	+0.7
KVAR	Kislovodsk Arr	76.27	337	LR	LR	02 29 42.9	
	comp=Z,57nm,18.8s,baz=258,slow=38						
KBL	Kabul	76.71	314	P	P	01 53 46.9	-1.7
KBL				IAmb	IAmb	01 53 48.5	
	comp=Z,5.0nm,1.0s						
GEYT	Alibeck	77.67	324	P	P	01 53 53.9	+0.2

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*IDC **02** 01:42:27.2±1.7, 21°.16S×170°.23E, h0^{km}, mb4.5/8, mb1 4.7/9, mb1mx4.4/31, mbtmp4.5/9, ML4.1/1, MS5.1/1, Ms1 5.1/1, ms1mx4.0/10, Error ellipse: s-maj=78.7km s-min=21.5km az=151.0*

*NOU **02** 01:42:33.7, 21°.13S×170°.00E, h33^{km}, mb5.0, Southeast of Loyalty Islands*

ISC 02 01:42:30.6±0.6**, 21°.17S**±0°.09×**170°.03E**±0°.09**, h10^{km}, n43, σ1^{s}48**/42**, mb4.6**/10**, MS4.9**/3**, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	3.46	254	Pn	Pn	01 43 24.6	0.0
	15nm,0.3s,baz=18,slow=15,SNR=3.0						
DZM				Sn	Sn	01 44 04.7	-0.9
	61nm,0.3s,baz=220,slow=11,SNR=6.6						
ONTNC	Ouen Toro	3.51	251	P	Pn	01 43 25.9	+0.6
DVP	Devils Point	3.84	333	P	Pn	01 43 30.5	+0.7
SANVU	Saraoutou	6.29	334	P	Pn	01 44 02.8	-0.7
NFK	Norfolk Island	8.07	193	P	Pn	01 44 20.4	-7.4
	baz=8.7,SNR=5.0						
MSVF	Nonsavu	8.30	67	P	Pn	01 44 32.1	+0.9
ARMA	Armidale	18.94	237	P	Pn	01 46 54.8	+2.2
	baz=20,SNR=4.8						
RMQ	Roma	20.16	251	P	Pn	01 47 08.6	+1.5
	baz=22,SNR=7.2						
CNB	Canberra Magne	22.96	228	P	P	01 47 36.5	+1.1
	baz=24,SNR=5.8						
YNG	Young	23.13	231	P	P	01 47 38.5	+1.5
	baz=25						
CMSA	Cobar Meteorol	24.08	240	P	P	01 47 46.9	+0.5
	baz=26,SNR=12						
MTSU	Mount Surprise	24.39	273	P	P	01 47 50.4	+1.0
	baz=26,SNR=9.4						
STKA	Stephens Creek	27.51	241	P	P	01 48 17.2	-0.2
	baz=29,SNR=5.3						
STKA	Stephens Creek	27.51	241	P	P	01 48 17.6	+0.2
	5.0nm,0.7s,baz=86,slow=9.7,SNR=6.2						
HTT	Hallett	30.11	239	P	P	01 48 39.8	-0.8
	baz=32,SNR=4.5						
BBOO	Buckleboo	32.28	242	P	P	01 48 58.6	-1.1
	baz=34						
WRA	Warramunga Arr	33.40	266	P	P	01 49 08.3	-1.3
	6.8nm,0.6s,baz=94,slow=8.2,SNR=37						
WRA				LR	LR	02 01 32.8	
	comp=Z,3µm,21.2s,baz=100,slow=34						
ASAR	Alice Springs	33.44	259	P	P	01 49 09.2	-0.8
	7.5nm,0.6s,baz=83,slow=8.6,SNR=19						
MTN	Manton Dam	38.03	276	P	P	01 49 48.5	-0.9
	baz=40,SNR=5.8						
FORT	Forrest	38.74	247	P	P	01 49 53.1	-2.1
	baz=40,SNR=8.1						
FITZ	Fitzroy Crossi	41.82	266	P	P	01 50 20.4	-0.5
	baz=44,SNR=12						
FITZ	Fitzroy Crossi	41.82	266	P	P	01 50 21.1	+0.2
	19nm,0.7s,baz=108,slow=7.1,SNR=17						
MEEK	Meekatharra	47.07	253	P	P	01 51 01.4	-1.5
	baz=49,SNR=12						
KLBR	Kellerberrin	47.59	246	P	P	01 51 05.4	-1.4
	baz=49,SNR=5.8						
NWAO	Narrogin (SRO)	48.02	244	P	P	01 51 09.0	-1.2
	11nm,0.9s,baz=83,slow=4.7,SNR=6.1						
MORW	Morawa	49.16	249	P	P	01 51 16.6	-2.4
	baz=51						
CN2	Changchun	76.48	328	*e*P	P	01 54 23.9	+3.3
CN2				*e*S	S	02 04 07.2	+0.9
CN2				pmax	pmax		
	comp=Z,10.0nm,1.1s						
CN2				pmax	pmax		
	comp=Z,200nm,4.6s						
CN2				LR	LR		
	comp=N,330nm,20.0s						
CN2				LR	LR		
	comp=E,340nm,20.0s						
CN2				LR	LR		
	comp=Z,470nm,22.0s						
CMAR	Chiang Mai Arr	79.97	294	P	P	01 54 40.8	+0.3
	comp=Z,1.0nm,0.3s,baz=134,slow=5.2,SNR=3.3						
SNAA	Sanae	87.28	182	P	P	01 55 17.3	+0.1
VNA3	Neumayer Olymp	87.84	180	P	P	01 55 21.5	+1.6
VNA2	Neumayer--Watz	88.14	181	P	P	01 55 22.7	+1.4
	baz=175,slow=4.2						
VNA1	Neumayer--Stat	88.42	181	P	P	01 55 28.8	+6.2
SONM	Songino Array	89.20	323	P	P	01 55 30.4	+3.7
	comp=Z,1.4nm,1.0s,baz=131,slow=5.4,SNR=4.4						
NVAR	Mina Array Bea	89.52	48	P	P	01 55 26.6	-1.9
	comp=Z,0.5nm,0.8s,baz=234,slow=7.7,SNR=2.2						
ILAR	Eielson Array	91.84	17	P	P	01 55 35.4	-3.1
	comp=Z,0.4nm,0.9s,baz=244,slow=4.8,SNR=3.0						
BRG	Berggiesshubel	144.92	333	*e*PKP	PKiKP	02 02 11.9	+0.2
BRG				Amp		02 02 14.4	
	comp=Z,13nm,1.4s						
BRG				*e*x	x	02 16 41.7	
BRG				Amp		02 16 43.0	
	comp=Z,2.1nm,1.0s						
BRG				*e*x	x	02 17 06.7	
BRG				Amp		02 17 26.1	
	comp=Z,3.2nm,0.7s						
CLL	Collm	144.97	335	*e*PKPdf	PKiKP	02 02 11.0	-0.7
CLL				Lm	MLR	03 05 00.0	
	comp=N,200nm,20.6s						
CLL				Lm	MLR	03 05 00.0	
	comp=E,100nm,19.6s						
CLL				Lm	MLR	03 05 00.0	
	comp=Z,200nm,22.0s						
CKRC	Cesky Krumlov	146.28	331	*e*PKP	PKiKP	02 02 15.7	+1.1
KHC	Kasperske Hory	146.38	332	*e*PKP	PKiKP	02 02 14.6	-0.2
GERES	GERESS Array B	146.53	331	PKPbc	PKPdf	02 02 09.3	-1.5
	comp=Z,0.7nm,0.8s,baz=66,slow=3.3,SNR=2.3						
MOTA	Moosalm	148.81	332	*e*P	PKPbc	02 02 16.8	-1.8
	comp=Z,7.1nm,1.2s						
SQTA	Sankt Quirin	148.86	332	*e*P	PKiKP	02 02 20.1	0.0
	comp=Z,4.6nm,1.0s						
FETA	Feichten	149.22	332	*e*P	PKPab	02 02 23.4	-0.7
	comp=Z,3.5nm,1.0s						

IDC 02 01:43:28.5±2.0**, 20°.44S**×**169°.73E, h0^{km}, mb4.4**/5**, mb1 4.6**/5**, mb1mx4.1**/31**, mbtmp4.4**/5**, Error ellipse: s-maj=119.9km s-min=30.2km az=156.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	27.62	240	P	P	01 49 16.9	-1.0
	5.1nm,0.8s,baz=45,slow=9.5,SNR=2.2						
WRA	Warramunga Arr	33.18	265	P	P	01 50 06.0	-1.2
	2.9nm,0.6s,baz=94,slow=8.3,SNR=4.9						
ASAR	Alice Springs	33.31	258	P	P	01 50 08.5	+0.3
	5.3nm,0.8s,baz=82,slow=8.8,SNR=2.1						
FITZ	Fitzroy Crossi	41.59	265	P	P	01 51 20.1	+1.6
	12nm,0.8s,baz=114,slow=12,SNR=3.7						
NVAR	Mina Array Bea	89.25	48	P	P	01 56 26.8	0.0
	0.3nm,0.7s,baz=230,slow=8.1,SNR=1.9						

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*ISK **02** 02:03:46.9, 38°.26N×26°.56E, h2^{km}, ML2.6/4*

*DDA **02** 02:03:47.6, 38°.29N×26°.55E, h7^{km}±1^{km}, ML2.2*

ISC 02 02:03:47.7±1.2**, 38°.29N**±0°.04×**26°.60E**±0°.08**, h7^{km}**±11^{km}**, n7, σ0^{s}23**/11**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	Izmir	0.07	355	PG	Pg	02 03 49.4	-0.2
URLA				SG	Sg	02 03 51.3	+0.4
URLA	Izmir	0.07	355	*i* P	Pg	02 03 49.3	-0.2
URLA				IAML		02 03 51.0	
	comp=N,1µm,0.3s						
URLA				*i* S	Sg	02 03 51.2	+0.2
URLA				IAML		02 03 52.0	
	comp=E,910nm,0.4s						
ZEYE	Izmir, Urla-Ze	0.09	238	*i* P	Pg	02 03 49.9	0.0
ZEYE				IAML		02 03 51.0	
	comp=E,2µm,0.3s						
ZEYE				IAML		02 03 51.0	
	comp=N,3µm,0.2s						
ZEYE				*i* S	Sg	02 03 51.2	-0.1
GCAM	G?zelcaml?	0.77	140	PG	Pg	02 04 02.5	0.0
GCAM				SG	Sb	02 04 13.9	-0.2
ZEDA	zmir-Bergama	0.77	29	*i* P	Pb	02 04 03.6	+0.1
DKL	Dikili	0.81	17	PG	Pb	02 04 04.3	+0.1
AYDB	Zeytinkoy-Aydi	1.07	108	PN	Pb	02 04 08.7	0.0

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*IDC **02** 02:04:18.0±1.0, 38°.80N×23°.03E, h0^{km}, mb3.7/10, mb1 3.8/12, mb1mx3.6/51, mbtmp3.7/12, ML3.5/1, Error ellipse: s-maj=23.5km s-min=16.1km az=115.0*

*ISK **02** 02:04:17.0, 38°.74N×23°.27E, h6^{km}, ML3.4/8*

*ATH **02** 02:04:19.0, 38°.71N×23°.17E, h11^{km}±1^{km}, ML3.6/23, Error ellipse: s-maj=1.7km s-min=0.7km az=318.0*

*THE **02** 02:04:19.2, 38°.73N×23°.19E, h0^{km}±1^{km}, ML3.6/7, Error ellipse: s-maj=1.7km s-min=0.5km az=38.0*

*SOF **02** 02:04:24.6, 39°.22N×23°.39E, h11^{km}, MD3.1*

ISC 02 02:04:19.0±0.8**, 38°.73N**±0°.02×**23°.19E**±0°.02**, h10^{km}**±5^{km}**, n133, σ0^{s}91**/164**, mb3.5**/10**, 4C-5D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATAL	Atalanti	0.14	255	P	Pg	02 04 21.8	-0.3
ATAL				S	Sg	02 04 23.7	-0.6
ATAL				AML	AML	02 04 24.4	
ATAL				AML	AML	02 04 24.5	
	comp=N,81121µm,0.3s						
ATAL	Atalanti	0.14	255	P	Pg	02 04 21.9	-0.3
ATAL				S	Sg	02 04 24.0	-0.3
	comp=N,36µm,0.2s						
SMIA	Simia	0.15	6	P	Pg	02 04 22.6	+0.2
SMIA				S	Sg	02 04 25.3	+0.5
SMIA				AML	AML	02 04 25.9	
SMIA				AML	AML	02 04 27.9	
SMIA	Simia	0.15	6	P	Pg	02 04 22.7	+0.2
SMIA				S	Sg	02 04 24.9	+0.1
LKR	Lokris	0.17	243	P	Pg	02 04 22.4	-0.2
LKR				S	Sg	02 04 25.4	+0.3
LKR				AML	AML	02 04 26.1	
LKR				AML	AML	02 04 26.5	
LKR	Lokris	0.17	243	P	Pg	02 04 22.4	-0.2
AXAR	Agios Charalam	0.42	276	P	Pg	02 04 26.8	-0.4
AXAR				S	Sg	02 04 33.2	+0.5
AXAR				AML	AML	02 04 40.3	
	comp=N,28049µm,0.4s						
AXAR				AML	AML	02 04 42.7	
	comp=E,23580µm,0.3s						
AXAR	Agios Charalam	0.42	276	P	Pg	02 04 27.4	+0.2
VIL2	Platees	0.52	173	P	Pb	02 04 29.8	-0.4
VIL2				S	Sb	02 04 38.4	+0.6
VIL2				AML	AML	02 04 39.6	
	comp=N,49715µm,0.3s						
VIL2				AML	AML	02 04 40.9	
	comp=E,42943µm,0.6s						
VILL	Villia	0.57	170	P	Pg	02 04 29.9	-0.2
VILL				S	Sb	02 04 39.3	0.0
DLFA	Delphi	0.60	246	P	Pg	02 04 29.6	-1.0
XOR	Xorichti	0.64	0	P	Pg	02 04 31.2	-0.2
XOR				S	Sb	02 04 41.0	-0.3
XOR				AML	AML	02 04 45.0	
	comp=E,10630µm,0.3s						
XOR				AML	AML	02 04 45.4	
	comp=N,21428µm,0.6s						
XOR	Xorichti	0.64	0	P	Pg	02 04 31.6	+0.2
EREA	Eretria	0.66	118	P	Pg	02 04 31.6	-0.2
EREA				S	Sb	02 04 41.4	-0.5
EREA				AML	AML	02 04 45.9	
	comp=N,19727µm,0.3s						
EREA				AML	AML	02 04 45.9	
	comp=E,14010µm,0.5s						
EREA	Eretria	0.66	118	P	Pg	02 04 31.9	+0.1
EREA				S	Sb	02 04 42.1	+0.2
VOL2	Volos	0.66	344	P	Pn	02 04 34.5	0.0
VOL2				AML	AML	02 04 49.5	
	comp=E,55408µm,0.6s						
VOL2				AML	AML	02 04 50.1	
	comp=N,42165µm,0.5s						
ALNA	Alonissos	0.68	51	P	Pg	02 04 32.2	+0.1
ALNA				S	Sb	02 04 42.2	-0.1
ALNA				AML	AML	02 04 45.5	
	comp=E,12834µm,0.5s						
ALNA				AML	AML	02 04 45.7	
	comp=N,13679µm,0.8s						
KYMI	Kymi, Euboea I	0.72	97	P	Pg	02 04 32.4	-0.5
KYMI				S	Sg	02 04 42.8	+0.5
KYMI				AML	AML	02 04 48.2	
	comp=E,4117µm,0.6s						
KYMI				AML	AML	02 04 49.5	
	comp=N,5223µm,0.5s						
KYMI	Kymi, Euboea I	0.72	97	P	Pg	02 04 32.5	-0.4
LTK	Loutraki	0.72	194	P	Pg	02 04 32.4	-0.6
LTK				AML	AML	02 04 48.2	
	comp=N,16787µm,0.3s						
LTK				AML	AML	02 04 48.6	
	comp=E,10903µm,0.4s						
LTK	Loutraki	0.72	194	P	Pg	02 04 32.8	-0.2
LTK				S	Sb	02 04 44.7	+1.0
	comp=E,7µm,0.4s						
AGG	Agios Georgios	0.73	294	P	Pg	02 04 32.5	-0.7
AGG				AML	AML	02 04 45.0	
	comp=E,3120µm,0.4s						
AGG				AML	AML	02 04 47.4	
	comp=N,5055µm,0.6s						
AGG	Agios Georgios	0.73	294	P	Pg	02 04 32.9	-0.3
AGG	Agios Georgios	0.73	294	PG	Pg	02 04 32.5	-0.7
AGG				SG	Sb	02 04 43.5	-0.5
LOUT	Loutraki	0.76	193	P	Pg	02 04 33.0	-0.6
LOUT				S	Sb	02 04 44.9	+0.2
	comp=N,4µm,0.5s						
THAL	Thalero	0.80	211	P	Pg	02 04 34.2	-0.3
THAL				S	Sb	02 04 46.4	+0.4
ATH	Athens Observa	0.86	151	P	Pg	02 04 35.2	-0.4
PTL	Penteli	0.86	142	P	Pg	02 04 34.8	-0.8
PTL				AML	AML	02 04 50.7	
	comp=N,5742µm,0.5s						
PTL				AML	AML	02 04 51.5	
	comp=E,4770µm,0.5s						
PTL	Penteli	0.86	142	P	Pg	02 04 35.1	-0.5
DION	Dionisos Attik	0.87	138	P	Pg	02 04 35.3	-0.5
DION				AML	AML	02 04 50.9	
	comp=N,18900µm,0.5s						
DION				AML	AML	02 04 51.8	
	comp=E,9339µm,0.5s						
DION	Dionisos Attik	0.87	138	P	Pg	02 04 35.4	-0.5
MAKR	Makrakomi, Fth	0.87	289	P	Pg	02 04 35.7	-0.1
MAKR				AML	AML	02 04 49.9	
	comp=N,5332µm,0.4s						
MAKR				AML	AML	02 04 54.1	
	comp=E,5260µm,0.5s						
MAKR	Makrakomi, Fth	0.87	289	P	Pb	02 04 36.2	-0.1
MAKR				S	Sb	02 04 48.4	+0.3
	comp=E,2µm,0.5s						
KALE	Kalithea	0.89	248	P	Pg	02 04 34.7	-1.4
KALE				S	Sg	02 04 47.6	-0.1
KALE				AML	AML	02 04 52.1	
	comp=E,7837µm,0.3s						
KALE				AML	AML	02 04 52.2	
	comp=N,9560µm,0.6s						
KALE	Kalithea	0.89	248	P	Pg	02 04 35.5	-0.6
KALE				S	Sb	02 04 48.7	+0.2
	comp=N,4µm,0.4s						
ATHU	Athens Univers	0.89	148	P	Pg	02 04 35.7	-0.5
ATHU				S	Sb	02 04 49.2	+0.6
SERG	Sergoula	0.94	251	P	Pg	02 04 36.3	-0.8
SERG				S	Sb	02 04 50.9	+0.9
TRIZ	Trizonia	0.95	248	P	Pg	02 04 36.7	-0.5
TRIZ				S	Sb	02 04 51.0	+0.9
	comp=N,5µm,0.5s						
ALIK	Aliki, Aigiali	0.96	241	P	Pg	02 04 37.0	-0.6
ALIK				S	Sn	02 04 52.6	+0.2
VLY	Voula,Athens	0.99	151	P	Pg	02 04 37.3	-0.8
VLY				AML	AML	02 04 54.5	
	comp=E,10088µm,0.4s						
VLY				AML	AML	02 04 54.5	
	comp=N,8733µm,0.4s						
VLY	Voula,Athens	0.99	151	P	Pg	02 04 37.6	-0.5
EFP	Efpalio	1.05	254	P	Pg	02 04 37.7	-1.4
EFP				AML	AML	02 04 57.1	
	comp=E,5182µm,0.6s						
EFP				AML	AML	02 04 59.9	
	comp=N,3581µm,0.7s						
EFP	Efpalio	1.05	254	P	Pg	02 04 38.7	-0.5
EFP				S	Sn	02 04 54.1	-0.4
KLV	Kalavryta, Ach	1.06	230	P	Pg	02 04 38.6	-0.8
KLV				AML	AML	02 04 58.6	
	comp=N,2709µm,0.4s						
KLV				AML	AML	02 05 00.9	
	comp=E,2489µm,0.7s						
KLV	Kalavryta, Ach	1.06	230	P	Pg	02 04 39.1	-0.4
LAKA	Lakka	1.07	243	P	Pg	02 04 39.4	-0.1
LAKA				S	Sn	02 04 55.1	+0.1
	comp=E,4µm,0.7s						

SKY	Skiros Island	1.07	82	P	Pb	02 04 39.8	+0.1
SKY				AML	AML	02 04 57.9	
	comp=N,6242µm,0.7s						
SKY				AML	AML	02 04 58.2	
	comp=E,6759µm,0.3s						
EVR	Evrytania	1.09	280	P	Pg	02 04 39.6	-0.5
EVR	Evrytania	1.09	280	P	Pb	02 04 40.3	+0.2
EPID	Epidavros	1.11	183	P	Pb	02 04 39.9	-0.5
EPID				S	Sn	02 04 57.5	+1.4
LRSO	Larissa Observ	1.13	327	P	Pn	02 04 40.9	0.0
KARY	Karystos	1.20	125	P	Pb	02 04 41.3	-0.6
KARY				AML	AML	02 05 00.5	
	comp=N,1636µm,0.6s						
KARY				AML	AML	02 05 01.4	
	comp=E,1414µm,0.4s						
KARY	Karystos	1.20	125	P	Pb	02 04 41.7	-0.2
KARY				S	Sn	02 04 59.2	+0.9
THL	Klokotos Trika	1.24	313	P	Pn	02 04 41.9	-0.4
THL				AML	AML	02 05 11.1	
	comp=N,643µm,0.7s						
THL				AML	AML	02 05 15.4	
	comp=E,722µm,0.7s						
THL	Klokotos Trika	1.24	313	P	Pn	02 04 42.3	-0.1
KRND	KRANIDI	1.34	181	P	Pn	02 04 43.7	-0.1
DRO	Drossia	1.40	237	P	Pn	02 04 44.4	-0.2
DRO				S	Sg	02 05 06.1	+2.2
LIT	Litokhoron	1.48	339	P	Pn	02 04 45.7	0.0
VLX	Vlachokerasia	1.50	205	P	Pb	02 04 46.8	-0.2
RLS	Riolos of Patr	1.51	244	P	Pg	02 04 47.8	-0.2
PDO	Prodromos	1.57	266	P	Pg	02 04 49.1	-0.1
PLG	Polygyros	1.66	7	P	Pn	02 04 48.0	-0.2
PLG	Polygyros	1.66	7	P	Pn	02 04 47.9	-0.3
AMT	Artemida-Makis	1.67	225	P	Pb	02 04 49.3	-0.5
AMT				AML	AML	02 05 19.7	
	comp=E,1611µm,0.6s						
AMT				AML	AML	02 05 23.8	
	comp=N,2299µm,0.6s						
AMT	Artemida-Makis	1.67	225	P	Pb	02 04 49.5	-0.3
OUR	Ouranopolis	1.72	21	P	Pn	02 04 48.3	-0.7
OUR	Ouranopolis	1.72	21	PN	Pn	02 04 47.7	-1.3
OUR				SN	Sn	02 05 10.1	-0.9
ITM	Ithomi	1.84	213	PN	Pn	02 04 50.7	0.0
HORT	Hortiatis	1.87	358	P	Pn	02 04 51.0	-0.2
HORT	Hortiatis	1.87	358	PN	Pn	02 04 50.2	-1.0
KZN	Kozani	1.92	326	P	Pn	02 04 52.4	+0.5
SOH	Sokhos	2.10	3	P	Pn	02 04 54.6	+0.3
GRG	Griva	2.31	345	PN	Pn	02 04 56.7	-0.5
SRS	Serrai	2.41	7	P	Pn	02 04 58.5	0.0
KNT	Kendrikon	2.44	355	P	Pn	02 04 59.8	+0.8
KNT	Kendrikon	2.44	355	PN	Pn	02 04 58.5	-0.5
KTHR	Kythira	2.47	183	P	Pn	02 05 00.2	+0.9
KTHA	Kythira Island	2.47	182	PN	Pn	02 04 59.2	-0.1
APE	Apeiranthos	2.48	131	PN	Pn	02 04 58.4	-1.2
FNA	Florina	2.48	326	P	Pn	02 05 00.8	+1.2
FNA	Florina	2.48	326	PN	Pn	02 04 59.4	-0.2
GADA	Gvkgeada	2.56	54	PN	Pn	02 04 59.3	-1.2
VAY	Valandovo	2.63	350	i Pn	Pn	02 05 02.2	+0.6
EZN	Ezine	2.67	65	PN	Pn	02 05 00.9	-1.2
MMB	Musomiste	2.89	8	P	Pn	02 05 04.8	-0.3
OHR	Ohrid	3.01	323	i Pn	Pn	02 05 09.3	+2.5
RDO	Rodhopi	3.02	36	PN	Pn	02 05 06.0	-0.8
STIP	Stip	3.06	346	i Pn	Pn	02 05 08.3	+0.8
KKB	Krupnik	3.14	359	P	Pn	02 05 08.7	+0.2
RZN	Rozhen	3.18	21	P	Pn	02 05 09.6	+0.3
ERIK	Erikli-Kesan	3.22	52	PN	Pn	02 05 08.7	-0.9
IMMV	Iera Moni Meta	3.32	169	PN	Pn	02 05 11.1	+0.1
PLD	Plovdiv	3.57	18	PN	Pn	02 05 14.1	-0.3
PLD	Plovdiv	3.57	18	P	Pn	02 05 15.0	+0.6
IDI	Anoyia	3.69	158	Pn	Pn	02 05 17.9	+1.7
	comp=N,3.8nm,0.3s,baz=316,slow=12,SNR=16						
IDI				Sn	Sn	02 05 59.8	0.0
	comp=N,3.3nm,0.3s,baz=305,slow=18,SNR=3.2						
IDI	Anoyia	3.69	158	⇓P	Pn	02 05 19.7	+3.5
IDI	Anoyia	3.69	158	PN	Pn	02 05 16.3	+0.1
HRKL	Herakleio	3.74	155	PN	Pn	02 05 16.9	+0.2
DIM	Dimitrovgrad	3.77	28	P	Pn	02 05 17.1	-0.1
VTS	Vitosha	3.89	1	⇓P	Pn	02 05 20.0	+1.1
VTS	Vitosha	3.89	1	P	Pn	02 05 19.8	+0.8
GVD	Gavdhos	3.95	169	PN	Pn	02 05 19.9	+0.3
EDRB	Edirne	4.14	40	PN	Pn	02 05 21.2	-1.0
TIP	Timpagrande	5.03	277	⇑P	Pn	02 05 36.9	+2.3
DBRK	Dubrovnik	5.49	317	ePn	Pn	02 05 39.3	-1.6
STON	Ston	5.87	317	ePn	Pn	02 05 44.4	-1.7
MAKA	Makarska	6.52	316	Sn	Sn	02 07 07.6	-1.7
MAKA	Makarska	6.52	316	i Pn	Pn	02 05 55.2	+0.2
RICI	Ricice	6.60	318	Sn	Sn	02 07 11.3	-0.1
RICI	Ricice	6.60	318	ePn	Pn	02 05 55.6	-0.5
HVAR	Hvar	6.77	313	ePn	Pn	02 05 58.1	-0.2
VOIR		6.85	11	⇑P	Pn	02 06 01.0	+1.5
MLR	Muntele Rosu	7.06	16	Pn	Pn	02 06 02.7	+0.1
	baz=90,slow=1.0						
MLR	Muntele Rosu	7.06	16	⇓P	Pn	02 06 05.7	+3.2
KIJV	Kijevo	7.33	318	ePn	Pn	02 06 06.7	+0.5
DOPR	Dopca	7.42	12	⇓P	Pn	02 06 08.6	+1.2
ZIRJ	Zirje	7.52	313	ePn	Pn	02 06 10.0	+1.3
PLOR	Plostina	7.57	19	⇑P	Pn	02 06 11.8	+2.4
VRI	Vrincioaia	7.60	19	⇓P	Pn	02 06 13.9	+4.1
OZUR		7.61	14	⇑P	Pn	02 06 11.4	+1.4
MORI	Morici	7.62	315	ePn	Pn	02 06 10.3	+0.2
UDBI	Udbina	8.03	319	ePn	Pn	02 06 17.4	+1.6
NVLJ	Novalja	8.53	316	ePn	Pn	02 06 22.2	-0.2
ESDC	Sonseca Array	21.04	281	P	P	02 09 01.0	-2.0
	comp=N,1.9nm,0.9s,baz=77,slow=9.4,SNR=6.9						
HFS	Hagfors	22.25	347	P	P	02 09 15.1	-0.7
	comp=N,1.3nm,0.6s,baz=112,slow=10,SNR=2.3						
FINES	FINESS Array B	22.81	4	P	P	02 09 21.4	-0.4
	comp=N,5.9nm,1.0s,baz=165,slow=12,SNR=2.9						
NOA	NORSAR Array B	23.55	345	P	P	02 09 29.5	+0.1
	comp=N,1.6nm,1.1s,baz=152,slow=10.0,SNR=2.3						
EKA	Eskdalemuir Ar	24.24	322	P	P	02 09 35.3	-0.6
	comp=N,0.4nm,0.4s,baz=119,slow=9.0,SNR=6.9						
TORD	Torodi Ar. Bea	31.81	223	P	P	02 10 44.2	+0.3
	comp=N,0.8nm,0.5s,baz=35,slow=9.3,SNR=2.3						
DBIC	Dimbokro	40.74	226	P	P	02 12 00.4	+0.2
	comp=N,3.1nm,0.8s,baz=0.6,slow=7.9,SNR=6.6						
MKAR	Makanchi Array	43.23	59	P	P	02 12 21.2	+0.9
	comp=N,0.7nm,0.7s,baz=280,slow=7.1,SNR=7.7						
ZALV	Zalesovo Beam	43.76	49	P	P	02 12 25.0	+0.6
	comp=N,0.5nm,0.5s,baz=281,slow=10,SNR=4.4						
YKA	Yellowknife Ar	73.57	341	P	P	02 15 52.1	+0.2
	comp=N,0.3nm,0.6s,baz=38,slow=5.6,SNR=12						

IDC ***02*** *02:13:12.6±1.4, 43°.09N×17°.34E, h0^{km}, mb3.4/3, mb1 3.7/8, mb1mx3.5/50, mbtmp3.5/8, ML3.4/5, MS3.9/1, Ms1 3.9/1, ms1mx2.3/60, Error ellipse: s-maj=19.6km s-min=11.9km az=27.0*

BGR ***02*** *02:13:13.7±0.8, 42°.73N×17°.46E, h10^{km}, ML3.8/13, Error ellipse: s-maj=13.3km s-min=10.0km az=82.0*

KRSZO ***02*** *02:13:13.1±0.8, 43°.06N×17°.30E, h9^{km}±5^{km}, ML3.9/18, Error ellipse: s-maj=3.2km s-min=2.3km az=37.0*

LDG ***02*** *02:13:14.5±0.1, 43°.04N×17°.38E, h2^{km}, Ml3.4/19, Error ellipse: s-maj=3.6km s-min=1.7km az=19.0*

PDG ***02*** *02:13:14.3±0.3, 43°.03N×17°.36E, h7^{km}, MD3.4/2, ML3.0/12, Error ellipse: s-maj=0.7km s-min=0.8km az=0.0*

RHSSO ***02*** *02:13:14.7±0.3, 43°.05N×17°.35E, h5^{km}±2^{km}, ML3.5/16*

BEO ***02*** *02:13:15.5±0.3, 43°.12N×17°.44E, h0^{km}, ML3.4/17*

PRU ***02*** *02:13:15.4±0.0, 43°.14N×17°.56E, h0^{km}*

ISC 02 02:13:13.4±0.9**, 43°.05N**±0°.02×**17°.30E**±0°.01**, h14**^{km}±6^{km}**, n279,** σ**2**^{s}.**19**/459**, mb3.5**/3**, 23C-10D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MAKA	Makarska	0.32	320	i Pg	Pg	02 13 20.0	+0.1
MAKA				Sg	Sg	02 13 24.3	-0.1
MAKA	Makarska	0.32	320	Pg	Pg	02 13 20.0	+0.1
MAKA				Lg	Lg	02 13 24.3	
STON	Ston	0.34	120	ePg	Pg	02 13 19.9	-0.5
STON				eSg	Sg	02 13 25.3	+0.2
STON	Ston	0.34	120	i Pg	Pg	02 13 19.9	-0.5
STON				Sg	Sg	02 13 25.2	+0.2
STON	Ston	0.34	120	⇑iPg	Pg	02 13 19.8	-0.6
STON				eSg	Sg	02 13 25.3	+0.2
STON	Ston	0.34	120	Pg	Pg	02 13 19.8	-0.6
STON				Pb	Pg	02 13 19.9	-0.5
STON				Pg	Pg	02 13 19.9	-0.5
STON				Lg	Lg	02 13 25.2	
STON				Lg	Lg	02 13 25.3	
RICI	Ricice	0.47	345	i Pg	Pg	02 13 22.2	-0.5
RICI				Sg	Sg	02 13 28.7	-0.2
RICI	Ricice	0.47	345	Pg	Pg	02 13 22.2	-0.5
RICI				Lg	Lg	02 13 28.7	
HVAR	Hvar	0.64	282	i Pg	Pb	02 13 26.1	-0.2
HVAR				Sg	Sb	02 13 36.3	+1.3
HVAR	Hvar	0.64	282	Pg	Pb	02 13 26.1	-0.2
HVAR				Lg	Lg	02 13 36.3	
DBRK	Dubrovnik	0.73	121	i Pg	Pg	02 13 26.7	-0.8
DBRK				Sg	Sb	02 13 38.4	+0.8
DBRK	Dubrovnik	0.73	121	Pg	Pg	02 13 26.7	-0.8
DBRK				Lg	Lg	02 13 38.4	
TREB	Trebinje	0.84	113	ePg	Pg	02 13 29.3	-0.4
TREB				eSg	Sg	02 13 40.6	-0.1
TREB	Trebinje	0.84	113	⇑iPg	Pg	02 13 29.3	-0.4
TREB				eSg	Sb	02 13 41.5	+0.7
TREB	Trebinje	0.84	113	Pg	Pg	02 13 29.3	-0.4
TREB				Lg	Lg	02 13 40.6	
TREB				Sg	Sb	02 13 41.5	+0.7
BRY	Bratogost	0.92	99	⇑iPg	Pb	02 13 30.5	-0.7
BRY				eSg	Sg	02 13 43.8	+0.5
BRY	Bratogost	0.92	99	⇑iPg	Pb	02 13 30.1	-1.1
BRY				i Sg	Sg	02 13 43.5	+0.2
BRY	Bratogost	0.92	99	Pg	Pb	02 13 30.5	-0.7
BRY				Lg	Lg	02 13 43.8	
HCY	Herceg Novi	1.06	124	⇑iPg	Pb	02 13 33.6	+0.1
HCY				eSg	Sb	02 13 47.4	+0.1
HCY	Herceg Novi	1.06	124	ePg	Pb	02 13 33.2	-0.3
HCY				i Sg	Sn	02 13 49.1	+0.7
HCY	Herceg Novi	1.06	124	Pg	Pb	02 13 33.6	+0.1
HCY				Lg	Lg	02 13 47.4	
KIJV	Kijevo	1.16	326	ePg	Pn	02 13 34.5	-0.6
KIJV				Sg	Sg	02 13 51.4	+0.6
KIJV	Kijevo	1.16	326	Pn	Pn	02 13 34.5	-0.6
KIJV				Sn	Sg	02 13 51.4	+0.6
UPM	Unac-Piva	1.19	82	⇑iPg	Pn	02 13 35.2	-0.5
UPM				eSg	Sn	02 13 51.6	-0.1
UPM	Unac-Piva	1.19	82	⇑iPg	Pn	02 13 35.2	-0.5
UPM				i Sg	Sg	02 13 53.4	+1.6
UPM	Unac-Piva	1.19	82	Pn	Pn	02 13 35.2	-0.5
UPM				Sn	Sn	02 13 51.6	-0.1
NKME	Niksic	1.25	102	⇑iPg	Pn	02 13 36.2	-0.2
NKME				i Sg	Sg	02 13 55.4	+1.8
NKY	Niksic	1.27	100	ePg	Pb	02 13 36.9	-0.1
NKY				i Sg	Sg	02 13 55.0	+0.7
CEME	Cevo	1.29	112	ePg	Pn	02 13 37.2	+0.2
CEME				i Sg	Sg	02 13 56.8	+1.7
ZIRJ	Zirje	1.35	297	ePn	Pg	02 13 39.2	-0.2
ZIRJ				Sn	Sg	02 13 58.1	+1.1
ZIRJ	Zirje	1.35	297	Pn	Pg	02 13 39.2	-0.2
ZIRJ				Sn	Sg	02 13 58.1	+1.1
MGRS	Mrkonjic Grad	1.38	354	⇓iPg	Pb	02 13 39.0	0.0
MGRS				eSg	Sg	02 13 57.9	0.0
MGRS	Mrkonjic Grad	1.38	354	Pn	Pb	02 13 39.0	0.0
MGRS				Sn	Sg	02 13 57.9	0.0
BUM	Brajici-Budva	1.39	122	⇑iPg	Pb	02 13 39.2	0.0
BUM				i Sg	Sg	02 14 00.2	+1.9
MORI	Morici	1.42	306	ePn	Pb	02 13 40.0	+0.4
MORI				Sn	Sg	02 14 00.4	+1.2
MORI	Morici	1.42	306	Pn	Pb	02 13 40.0	+0.4
MORI				Sn	Sg	02 14 00.4	+1.2
PLE	Pljevlja	1.55	79	⇑iPg	Pb	02 13 42.4	+0.4
PLE				i Sg	Sg	02 14 05.2	+1.7
PDG	Podgorica	1.57	112	ePg	Pg	02 13 42.8	-0.7
PDG				eSg	Sg	02 14 04.9	+1.1
PDG	Podgorica	1.57	112	⇑P	Pg	02 13 43.2	-0.3
PDG	Podgorica	1.57	112	ePn	Pb	02 13 42.1	0.0
PDG				eSg	Sg	02 14 04.4	+0.6
PDG	Podgorica	1.57	112	Pn	Pb	02 13 42.1	0.0
PDG				Pg	Pg	02 13 42.8	-0.7
PDG				Pb	Pg	02 13 43.2	-0.3
PDG				Lg	Lg	02 14 04.4	
PDG				Sg	Sg	02 14 04.9	+1.1
TTG	Podgorica	1.57	112	⇓iPg	Pb	02 13 42.0	0.0
TTG				i Sg	Sg	02 14 05.5	+1.7
HAPS	Han Pijesak,Bl	1.59	49	ePn	Pn	02 13 41.7	+0.5
HAPS				eSn	Sg	02 14 03.7	-0.9
HAPS	Han Pijesak,Bl	1.59	49	⇑iPn	Pb	02 13 42.0	-0.6
HAPS				eSg	Sg	02 14 04.4	-0.2
HAPS	Han Pijesak,Bl	1.59	49	Pn	Pn	02 13 41.7	+0.5
HAPS				Pg	Pb	02 13 42.0	-0.6
HAPS				Sn	Sg	02 14 03.7	-0.9
HAPS				Lg	Lg	02 14 04.4	
RUDO	Rudo	1.62	69	⇑iPn	Pb	02 13 42.4	-0.6
RUDO				eSg	Sg	02 14 04.9	-0.5
RUDO	Rudo	1.62	69	Pn	Pb	02 13 42.4	-0.6
RUDO				Lg	Lg	02 14 04.9	
KOME	Kolasin	1.64	96	ePn	Pb	02 13 44.0	+0.6
KOME				i Sn	Sg	02 14 07.4	+1.2
BLY	Banja Luka	1.71	357	ePg	Pg	02 13 45.6	-0.5
BLY				eSg	Sg	02 14 08.7	+0.4
BLY	Banja Luka	1.71	357	⇑iPn	Pb	02 13 44.8	+0.3
BLY				eSn	Sg	02 14 07.4	-0.9
BLY	Banja Luka	1.71	357	Pn	Pb	02 13 44.8	+0.3
BLY				Pb	Pg	02 13 45.5	-0.7
	comp=Z,1.4nm,SNR=16						
BLY				Pg	Pg	02 13 45.6	-0.5
BLY				Sn	Sg	02 14 07.4	-0.9
BLY				Sg	Sb	02 14 07.5	+1.8
BLY				Lg	Lg	02 14 08.7	
BBLS	Lazići	1.74	61	ePg	Pg	02 13 46.0	-0.8
BBLS				eSg	Sg	02 14 08.3	-1.1
BBLS	Lazići	1.74	61	⇓iPn	Pb	02 13 45.2	+0.1
BBLS				eSn	Sb	02 14 06.9	+0.1
BBLS	Lazići	1.74	61	Pn	Pb	02 13 45.2	+0.1
BBLS				Pg	Pg	02 13 46.0	-0.8
BBLS				Pb	Pn	02 13 46.7	+3.5
	comp=Z,7.1nm,SNR=18						
BBLS				Sn	Sb	02 14 06.9	+0.1
BBLS				Lg	Lg	02 14 08.3	
BBLS				Sg	Sg	02 14 09.3	-0.1
ULC	Ulcinj	1.80	126	⇑iPn	Pb	02 13 45.8	-0.3
ULC				i Sn	Sg	02 14 11.9	+0.6
UDBI	Udbina	1.85	324	i Pn	Pg	02 13 48.2	-0.7
UDBI				Sn	Sg	02 14 12.4	-0.6
UDBI	Udbina	1.85	324	Pn	Pg	02 13 48.2	-0.7
UDBI				Sn	Sg	02 14 12.4	-0.6
DUGI	Dugi Otok	1.89	301	ePn	Pb	02 13 47.7	+0.2
DUGI	Dugi Otok	1.89	301	Pn	Pb	02 13 47.7	+0.2
IVA	Berane	1.91	94	⇓iPn	Pb	02 13 48.0	-0.1
IVA				i Sn	Sg	02 14 14.2	-0.7
PRIJ	Prijedor	1.98	348	ePn	Pb	02 13 48.9	-0.2
PRIJ				eSn	Sb	02 14 14.0	+0.5
PRIJ	Prijedor	1.98	348	Pn	Pb	02 13 48.9	-0.2
PRIJ				Sn	Sb	02 14 14.0	+0.5
PVY	Plav	2.01	102	ePn	Pb	02 13 49.3	-0.4
PVY				i Sn	Sg	02 14 16.5	-1.5
IVAS	Ivanjica	2.15	75	ePg	Pb	02 13 51.1	-1.0
IVAS				eSg	Sb	02 14 19.3	+0.7
IVAS	Ivanjica	2.15	75	Pn	Pb	02 13 51.1	-1.0
IVAS				Sn	Sb	02 14 19.3	+0.7
TEKS	Tekeris	2.21	46	ePg	Pb	02 13 51.5	-1.5
TEKS				eSg	Sb	02 14 20.8	+0.6
TEKS	Tekeris	2.21	46	ePn	Pn	02 13 51.1	+1.5
TEKS				eSn	Sn	02 14 18.3	+1.7
TEKS	Tekeris	2.21	46	Pn	Pn	02 13 51.1	+1.5
TEKS				Pg	Pb	02 13 51.5	-1.5
TEKS				Sn	Sn	02 14 18.3	+1.7
TEKS				Lg	Lg	02 14 20.8	
DIVS	Divibare	2.22	61	ePn	Pb	02 13 52.2	-1.1
DIVS				eSn	Sb	02 14 19.2	-1.5
DIVS	Divibare	2.22	61	⇑iPn	Pb	02 13 52.3	-1.1
DIVS				eSn	Sb	02 14 19.3	-1.5
DIVS	Divibare	2.22	61	Pn	Pb	02 13 52.3	-1.1
	comp=Z,0.8nm,SNR=9.1						
DIVS				Sn	Sb	02 14 19.2	-1.5
DIVS				Sn	Sb	02 14 19.3	-1.5
NVLJ	Novalja	2.32	312	ePn	Pb	02 13 54.9	-0.1
NVLJ	Novalja	2.32	312	Pn	Pb	02 13 54.9	-0.1
MATE	Matera	2.44	191	⇓P	Pg	02 13 60.0	-0.1
MATE	Matera	2.44	191	Pn	Pn	02 13 53.6	+0.9
	comp=Z,0.7nm,SNR=4.4						
MATE				Pb	Pg	02 13 59.9	-0.2
MATE				Pg	Pg	02 13 60.0	-0.1
MATE				Sn	Sn	02 14 22.6	+0.4
TRUS	Trudelj	2.54	61	ePn	Pb	02 13 56.7	-2.1
TRUS				eSn	Sn	02 14 26.4	+1.5
TRUS	Trudelj	2.54	61	Pn	Pb	02 13 56.7	-2.1
TRUS				Sn	Sn	02 14 26.4	+1.5
TIR	Tirane	2.55	131	Sn	Sb	02 14 29.0	-1.1
GRUS	Gruza	2.63	70	ePn	Pb	02 13 57.8	-2.4
GRUS				eSn	Sn	02 14 28.1	+1.2
GRUS	Gruza	2.63	70	Pn	Pb	02 13 57.8	-2.4
GRUS				Sn	Sn	02 14 28.1	+1.2
FRGS	Fruska Gora	2.78	40	ePn	Pn	02 13 58.5	+1.0
FRGS				eSn	Sn	02 14 32.6	+1.8
FRGS	Fruska Gora	2.78	40	⇓P	Pn	02 13 58.8	+1.3
FRGS	Fruska Gora	2.78	40	Pn	Pn	02 13 58.5	+1.0
	comp=Z,0.5nm,SNR=13						
FRGS				Pg	Pn	02 13 58.8	+1.3
FRGS				Sn	Sn	02 14 32.6	+1.8
OZLJ	Ozalj	2.89	334	ePn	Pb	02 14 01.9	-2.7
OZLJ	Ozalj	2.89	334	Pn	Pb	02 14 01.9	-2.7
BEO	Beograd	2.89	51	Pg	Pg	02 14 09.0	+0.2
ZAG	Zagreb	2.94	342	ePn	Pn	02 14 01.3	+1.8
ZAG	Zagreb	2.94	342	ePn	Pn	02 14 01.9	+2.4
ZAG				eSn	Sn	02 14 36.8	+2.2
ZAG	Zagreb	2.94	342	Pb	Pn	02 14 01.3	+1.8
ZAG				Pn	Pn	02 14 01.9	+2.4
ZAG				Sn	Sn	02 14 36.8	+2.2
PTJ	Puntijarka	3.02	342	Pn	Pn	02 14 03.1	+2.4
RIY	Rijeka	3.05	319	ePn	Pb	02 14 06.3	-1.1
RIY				eSn	Sb	02 14 41.8	-2.6
RIY	Rijeka	3.05	319	ePn	Pn	02 14 04.4	+3.3
RIY				eSn	Sn	02 14 40.3	+2.9
RIY	Rijeka	3.05	319	Pn	Pn	02 14 04.4	+3.3
RIY				Pg	Pb	02 14 06.3	-1.1
RIY				Sn	Sn	02 14 40.3	+2.9
RIY				Lg	Lg	02 14 41.8	
CRES	Cresnjev	3.08	335	⇓iPn	Pn	02 14 04.5	+3.0
CRES				eSn	Sn	02 14 41.3	+3.2
CRES	Cresnjev	3.08	335	Pg	Pn	02 14 04.5	+3.0
CRES				Sn	Sn	02 14 41.3	+3.2
KALN	Kalnik	3.14	349	i Pn	Pn	02 14 04.6	+2.2
KALN	Kalnik	3.14	349	Pn	Pn	02 14 04.6	+2.2
OHR	Ohrid	3.24	125	i Pn	Pb	02 14 07.6	-3.1
SKO	Skopje	3.24	108	i Pn	Pn	02 14 07.0	+3.3
MORH	Mrgy, Hungar	3.31	16	⇑P	Pn	02 14 06.3	+1.6
MORH	Mrgy, Hungar	3.31	16	ePn	Pn	02 14 06.1	+1.4
MORH				eSn	Sn	02 14 46.0	+2.2
MORH	Mrgy, Hungar	3.31	16	Pb	Pn	02 14 05.8	+1.1
	comp=Z,0.1nm,SNR=3.6						
MORH				Pn	Pn	02 14 06.1	+1.4
MORH				Pg	Pn	02 14 06.3	+1.6
MORH				Sn	Sn	02 14 46.0	+2.2
CEY	Cerknica	3.39	324	ePn	Pn	02 14 08.5	+2.7
CEY				eSn	Sb	02 14 51.3	-3.0
CEY	Cerknica	3.39	324	ePn	Pn	02 14 08.0	+2.2
CEY				eSn	Sn	02 14 48.9	+3.1
CEY	Cerknica	3.39	324	Pn	Pn	02 14 08.0	+2.2
CEY				Pg	Pn	02 14 08.5	+2.7
CEY				Sn	Sn	02 14 48.9	+3.1
CEY				Lg	Lg	02 14 51.3	
BEHE	Becsehely	3.44	354	⇑iPn	Pn	02 14 08.9	+2.3
BEHE				eSn	Sn	02 14 50.1	+3.0
BEHE	Becsehely	3.44	354	Pn	Pn	02 14 08.9	+2.3
BEHE				Pg	Pb	02 14 11.4	-2.7
	comp=Z,0.8nm,SNR=8.6						
BEHE				Sn	Sn	02 14 50.1	+3.0
LJU	Ljubljana	3.59	327	ePn	Pn	02 14 11.5	+2.9
LJU				eSn	Sb	02 14 55.5	-4.6
LJU	Ljubljana	3.59	327	ePn	Pn	02 14 11.2	+2.6
LJU				eSn	Sn	02 14 53.0	+2.2
LJU	Ljubljana	3.59	327	Pn	Pn	02 14 11.2	+2.6
LJU				Pg	Pn	02 14 11.5	+2.9
LJU				Sn	Sn	02 14 53.0	+2.2
LJU				Lg	Lg	02 14 55.5	
MDVR	Moldovita	3.63	60	⇓P	Pn	02 14 11.5	+2.4
MDVR	Moldovita	3.63	60	Pn	Pn	02 14 11.5	+2.4
ZAGS	Zajecar	3.67	76	ePn	Pn	02 14 11.8	+2.1
ZAGS				eSn	Sn	02 14 53.8	+1.0
ZAGS	Zajecar	3.67	76	Pn	Pn	02 14 11.8	+2.1
ZAGS				Sn	Sn	02 14 53.8	+1.0
TRI	Trieste	3.68	318	Pg	Pg	02 14 29.8	+6.0
STIP	Stip	3.86	109	i Pn	Pb	02 14 17.0	-4.3
TIH	Tihany	3.88	6	Pn	Pn	02 14 14.6	+2.1
	comp=Z,0.7nm,SNR=3.7						
ZAPS	Zavoj	3.91	85	ePn	Pn	02 14 15.0	+2.0
ZAPS				eSn	Sn	02 15 00.4	+1.8
ZAPS	Zavoj	3.91	85	Pn	Pn	02 14 15.0	+2.0
ZAPS				Sn	Sn	02 15 00.4	+1.8
SOKA	Soboth	3.97	337	i Pn	Pn	02 14 16.5	+2.6
	comp=Z,4.1nm,0.3s,SNR=36						
SOKA				eSn	Sn	02 15 02.1	+1.8
	comp=Z,13nm,0.4s						
SOKA	Soboth	3.97	337	Pn	Pn	02 14 16.5	+2.6
	comp=Z,4.1nm,0.3s,SNR=36						
SOKA				Sn	Sn	02 15 02.1	+1.8
	comp=Z,13nm,0.4s						
OBKA	Obir	3.98	331	ePn	Pn	02 14 17.0	+3.0
	comp=Z,0.9nm,0.2s						
OBKA	Obir	3.98	331	Pn	Pn	02 14 17.0	+3.0
	comp=Z,0.9nm,0.2s						
OBKA				Pg	Pn	02 14 17.7	+3.7
	comp=Z,0.2nm,SNR=4.2						
OBKA	Obir	3.98	331	ePn	Pn	02 14 17.1	+3.0
OBKA				eSn	Sn	02 15 04.0	+3.5
BZS	Buzias	4.03	49	ePn	Pn	02 14 15.8	+1.3
BZS				eSn	Sn	02 15 01.7	+0.3
BZS	Buzias	4.03	49	⇓P	Pn	02 14 16.2	+1.7
BZS	Buzias	4.03	49	Pb	Pn	02 14 15.4	+0.9
	comp=Z,0.2nm,SNR=6.6						
BZS				Pn	Pn	02 14 15.8	+1.3
BZS				Pg	Pn	02 14 16.2	+1.7
BZS				Sn	Sn	02 15 01.7	+0.3
HERR	Herculane	4.12	62	⇑P	Pn	02 14 18.3	+2.4
HERR	Herculane	4.12	62	Pn	Pn	02 14 18.3	+2.4
MPLH	Magyarpolny	4.13	2	Pn	Pn	02 14 18.2	+2.3
	comp=Z,0.1nm,SNR=4.3						
VAY	Valandovo	4.28	112	i Pn	Pn	02 14 20.4	+2.4
CSKK	Cskako	4.37	9	Pn	Pn	02 14 22.8	+3.5
	comp=Z,0.1nm,SNR=6.4						
EGYH	Egyhazaskeszo	4.37	0	Pn	Pb	02 14 25.1	-4.8
	comp=Z,0.2nm,SNR=3.0						
VTS	Vitosha	4.39	94	ePn	Pn	02 14 22.6	+3.0
VTS	Vitosha	4.39	94	⇑P	Pn	02 14 22.3	+2.7
VTS	Vitosha	4.39	94	Pn	Pn	02 14 22.3	+2.7
VTS				Pb	Pn	02 14 22.6	+3.0
VTS				Pg	Pg	02 14 40.3	+3.0
ARSA	Arzberg	4.39	344	i Pn	Pn	02 14 22.1	+2.6
	comp=Z,7.7nm,0.3s,SNR=24						
ARSA				eSn	Sn	02 15 11.5	+1.1
	comp=Z,12nm,0.5s						
ARSA	Arzberg	4.39	344	Pg	Pn	02 14 22.1	+2.6
	comp=Z,7.7nm,0.3s,SNR=24						
ARSA				Pn	Pn	02 14 22.4	+2.8
	comp=Z,0.2nm,SNR=6.9						
ARSA				Sn	Sn	02 15 11.5	+1.1
	comp=Z,12nm,0.5s						
ARSA	Arzberg	4.39	344	ePn	Pn	02 14 22.2	+2.6
ARSA				eSn	Sn	02 15 11.9	+1.4
MYKA	Terra Mystica	4.43	325	i Pn	Pn	02 14 22.4	+2.3
	comp=Z,2.8nm,0.3s						
MYKA	Terra Mystica	4.43	325	Pn	Pn	02 14 22.4	+2.3
	comp=Z,2.8nm,0.3s						
GZR	Gura Zlata	4.58	57	⇑P	Pn	02 14 24.5	+2.2
GZR	Gura Zlata	4.58	57	Pn	Pn	02 14 24.5	+2.2
BUD	Budapest	4.60	15	Pg	Pg	02 14 42.8	+1.4
SRO2	Moca	4.78	9	ePN	Pn	02 14 29.9	+5.0
SRO2				eSN	Sn	02 15 21.3	+1.3
SRO2				eLG	Lg	02 15 33.9	
SRO2	Moca	4.78	9	Pn	Pn	02 14 29.9	+5.0
SRO2				Sn	Sn	02 15 21.3	+1.3
SRO2				Lg	Lg	02 15 33.9	
SRO	Srobarova	4.82	8	ePN	Pn	02 14 29.6	+4.2
SRO				eSN	Sn	02 15 24.3	+3.3
SRO	Srobarova	4.82	8	Pn	Pn	02 14 29.6	+4.2
SRO				Sn	Sn	02 15 24.3	+3.3
KBA	Koelnbreinsper	4.91	327	ePn	Pn	02 14 30.1	+3.2
KBA				eSn	Sn	02 15 26.4	+2.9
CONA	Conrad Observa	4.99	349	i Pn	Pn	02 14 30.7	+2.9
	comp=Z,2.5nm,0.3s,SNR=17						
CONA				eSn	Sn	02 15 26.2	+1.0
	comp=Z,18nm,0.4s						
CONA	Conrad Observa	4.99	349	Pn	Pn	02 14 30.7	+2.9
	comp=Z,2.5nm,0.3s,SNR=17						
CONA				Sn	Sn	02 15 26.2	+1.0
	comp=Z,18nm,0.4s						
ABTA	Abfaltersbach	5.03	319	i Pn	Pn	02 14 30.6	+2.2
	comp=Z,0.2nm,0.1s						
ABTA	Abfaltersbach	5.03	319	Pn	Pn	02 14 30.6	+2.2
	comp=Z,0.2nm,0.1s						
ZST	Bratislava	5.15	359	ePN	Pn	02 14 32.6	+2.6

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZST				*e*SN	Sn	02 15 28.5	-0.7
ZST				*e*LG	Lg	02 15 29.8	
ZST	Bratislava	5.15	359	Pn	Pn	02 14 32.6	+2.6
ZST				Sn	Sn	02 15 28.5	-0.7
ZST				Lg	Lg	02 15 29.8	
PSZ	Piszkesteto	5.20	20	Pg	Pg	02 14 53.2	+0.2
MOA	Molln	5.26	337	*e*Pn	Pn	02 14 35.4	+3.9
	comp=Z,6.6nm,0.3s,SNR=22						
MOA				*e*Sn	Sn	02 15 34.6	+2.8
	comp=Z,22nm,0.4s						
MOA	Molln	5.26	337	Pn	Pn	02 14 35.4	+3.9
	comp=Z,6.6nm,0.3s,SNR=22						
MOA				Sn	Sn	02 15 34.6	+2.8
	comp=Z,22nm,0.4s						
MOA	Molln	5.26	337	*e*Pn	Pn	02 14 34.6	+3.1
MOA				*e*Sn	Sn	02 15 34.7	+2.9
MODS	Modra-Piesok	5.33	360	*e*PN	Pn	02 14 33.6	+1.1
MODS				*e*SN	Sn	02 15 31.8	-1.8
MODS				*e*LG	Lg	02 15 33.4	
MODS	Modra-Piesok	5.33	360	Pn	Pn	02 14 33.6	+1.1
MODS				Sn	Sn	02 15 31.8	-1.8
MODS				Lg	Lg	02 15 33.4	
DRGR		5.37	44	⇑P	Pn	02 14 34.4	+1.4
DRGR		5.37	44	Pn	Pn	02 14 34.4	+1.4
DRGR				Pg	Pb	02 14 45.8	-1.1
SMOL	Smolenice	5.47	1	*e*PN	Pn	02 14 36.8	+2.4
SMOL				*e*SN	Sn	02 15 36.3	-0.7
SMOL				*e*LG	Lg	02 15 39.8	
SMOL	Smolenice	5.47	1	Pn	Pn	02 14 36.8	+2.4
SMOL				Sn	Sn	02 15 36.3	-0.7
SMOL				Lg	Lg	02 15 39.8	
ARR	Arges	5.76	64	⇓P	Pn	02 14 42.1	+3.7
ARR	Arges	5.76	64	Pn	Pn	02 14 42.1	+3.7
WTTA	Wattenberg	5.81	318	*i* Pn	Pn	02 14 41.8	+2.5
	comp=Z,0.5nm,0.2s						
WTTA	Wattenberg	5.81	318	Pn	Pn	02 14 41.8	+2.5
	comp=Z,0.5nm,0.2s						
WTTA	Wattenberg	5.81	318	*e*Pn	Pn	02 14 41.7	+2.5
JAVC	Velka Javorina	5.82	2	*e*PN	Pn	02 14 43.9	+4.7
JAVC				*e*SN	Sn	02 15 48.4	+2.6
JAVC	Velka Javorina	5.82	2	Pn	Pn	02 14 43.9	+4.7
JAVC				Sn	Sn	02 15 48.4	+2.6
JAVC	Velka Javorina	5.82	2	*e*Pn	Pn	02 14 42.4	+3.2
JAVC				*e*Sn	Sn	02 15 48.3	+2.6
WATA	Walderalm	5.89	319	*e*Pn	Pn	02 14 44.0	+3.7
	comp=Z,2.0nm,0.2s						
WATA	Walderalm	5.89	319	Pn	Pn	02 14 44.0	+3.7
	comp=Z,2.0nm,0.2s						
SQTA	Sankt Quirin	6.00	316	*i* Pn	Pn	02 14 44.9	+3.2
	comp=Z,1.3nm,0.2s						
SQTA	Sankt Quirin	6.00	316	Pn	Pn	02 14 44.9	+3.2
	comp=Z,1.3nm,0.2s						
KRUC	Moravsky	6.05	354	*e*PN	Pn	02 14 44.7	+2.4
KRUC				*e*SN	Sn	02 15 51.1	-0.2
KRUC	Moravsky	6.05	354	Pn	Pn	02 14 44.7	+2.4
KRUC				Sn	Sn	02 15 51.1	-0.2
KRUC	Moravsky	6.05	354	*e*Pn	Pn	02 14 44.8	+2.4
KRUC				*e*Sn	Sn	02 15 51.2	-0.1
VOIR		6.06	64	⇑P	Pn	02 14 46.3	+3.8
VOIR		6.06	64	Pn	Pn	02 14 46.3	+3.8
FETA	Feichten	6.12	313	*i* Pn	Pn	02 14 48.4	+5.0
	comp=Z,0.3nm,0.1s						
FETA	Feichten	6.12	313	Pn	Pn	02 14 48.4	+5.0
	comp=Z,0.3nm,0.1s						
MOTA	Moosalm	6.13	317	*i* Pn	Pn	02 14 46.4	+2.7
	comp=Z,0.7nm,0.2s						
MOTA	Moosalm	6.13	317	Pn	Pn	02 14 46.4	+2.7
	comp=Z,0.7nm,0.2s						
CKRC	Cesky Krumlov	6.14	341	*e*PN	Pn	02 14 46.5	+2.9
CKRC				*e*SN	Sn	02 15 54.1	+0.5
CKRC	Cesky Krumlov	6.14	341	Pn	Pn	02 14 46.5	+2.9
CKRC				Sn	Sn	02 15 54.1	+0.5
VRAC	Vranov	6.28	356	Pn	Pn	02 14 47.2	+1.6
	comp=Z,0.3nm,0.3s,baz=144,slow=7.2,SNR=3.9						
VRAC				Sn	Sn	02 15 56.4	-0.7
	comp=Z,1.3nm,0.3s,baz=240,slow=12,SNR=6.6						
VRAC	Vranov	6.28	356	*e*PN	Pn	02 14 48.5	+2.9
VRAC				*e*SN	Sn	02 15 56.6	-0.5
VRAC	Vranov	6.28	356	Pn	Pn	02 14 47.2	+1.6
	comp=Z,0.3nm,0.3s,SNR=3.9						
VRAC				Pg	Pn	02 14 48.5	+2.9
VRAC				Sn	Sn	02 15 56.4	-0.7
	comp=Z,1.3nm,0.3s,SNR=6.6						
VRAC				Lg	Lg	02 15 56.6	
VRAC	Vranov	6.28	356	*e*Pn	Pn	02 14 49.1	+3.6
VRAC				*e*Sn	Sn	02 15 56.7	-0.4
GEC2	GERESS Array S	6.32	338	*e*Pn	Pn	02 14 49.2	+3.1
GEC2				*e*Sn	Sn	02 16 00.0	+1.9
GERES	GERESS Array B	6.32	338	Pn	Pn	02 14 48.9	+2.8
	comp=Z,1.8nm,0.3s,baz=158,slow=14,SNR=25						
GERES				Sn	Sn	02 15 58.4	+0.3
	comp=Z,2.5nm,0.3s,baz=144,slow=24,SNR=15						
GERES	GERESS Array B	6.32	338	Pn	Pn	02 14 48.9	+2.8
	comp=Z,1.8nm,0.3s,SNR=25						
GERES				Sn	Sn	02 15 58.4	+0.3
	comp=Z,2.5nm,0.3s,SNR=15						
TREC	Trest	6.38	349	*e*SN	Sn	02 15 59.7	+0.3
TREC	Trest	6.38	349	Sn	Sn	02 15 59.7	+0.3
TREC	Trest	6.38	349	*e*Sn	Sn	02 15 59.9	+0.5
RETA	Reutte	6.40	316	*e*Pn	Pn	02 14 49.3	+2.1
	comp=Z,0.4nm,0.2s						
RETA	Reutte	6.40	316	Pn	Pn	02 14 49.3	+2.1
	comp=Z,0.4nm,0.2s						
DAVOX	Davos/Dischmat	6.46	308	Pn	Pn	02 14 50.6	+2.5
	comp=Z,0.7nm,0.3s,baz=331,slow=14,SNR=13						
DAVOX				Sn	Sn	02 16 08.9	+7.3
	comp=Z,0.6nm,0.3s,baz=343,slow=23,SNR=5.6						
DAVOX	Davos/Dischmat	6.46	308	Pn	Pn	02 14 50.6	+2.5
	comp=Z,0.7nm,0.3s,SNR=13						
DAVOX				Sn	Sn	02 16 08.9	+7.3
	comp=Z,0.6nm,0.3s,SNR=5.6						
KHC	Kasperske Hory	6.61	338	*e*PN	Pn	02 14 52.9	+2.8
KHC				*e*x	x	02 15 12.0	
KHC				*e*SN	Sn	02 16 06.0	+0.8
KHC	Kasperske Hory	6.61	338	Pn	Pn	02 14 52.9	+2.8
KHC				x	x	02 15 12.0	
KHC				Sn	Sn	02 16 06.0	+0.8
KHC	Kasperske Hory	6.61	338	*e*Pn	Pn	02 14 53.1	+3.0
KHC				*e*Sn	Sn	02 16 05.4	+0.2
MLR	Muntele Rosu	6.67	66	Pn	Pn	02 14 53.4	+2.4
	comp=Z,0.2nm,0.3s,baz=241,slow=10,SNR=4.4						
MLR				Sn	Sn	02 16 07.3	+0.5
	comp=Z,0.4nm,0.3s,baz=269,slow=11,SNR=5.9						
MLR	Muntele Rosu	6.67	66	Pn	Pn	02 14 53.4	+2.4
	comp=Z,0.2nm,0.3s,SNR=4.4						
MLR				Sn	Sn	02 16 07.3	+0.5
	comp=Z,0.4nm,0.3s,SNR=5.9						
MORC	Moravsky Berou	6.74	1	*e*PN	Pn	02 14 53.4	+1.6
MORC				*e*SN	Sn	02 16 07.9	-0.4
MORC	Moravsky Berou	6.74	1	Pn	Pn	02 14 53.4	+1.6
MORC				Sn	Sn	02 16 07.9	-0.4
MORC	Moravsky Berou	6.74	1	*e*Pn	Pn	02 14 54.6	+2.8
MORC				*e*Sn	Sn	02 16 08.0	-0.2
DAVA	Damuels	6.74	312	*e*Pn	Pn	02 14 55.9	+3.9
	comp=Z,0.9nm,0.2s						
DAVA	Damuels	6.74	312	Pn	Pn	02 14 55.9	+3.9
	comp=Z,0.9nm,0.2s						
WET	Wettzell	6.83	335	*e*Pn	Pn	02 14 58.9	+5.8
WET				*e*Sn	Sn	02 16 11.0	+0.5
KRLC	Kraliky	7.04	357	*e*PN	Pn	02 14 56.0	0.0
KRLC	Kraliky	7.04	357	Pn	Pn	02 14 56.0	0.0
SBF	Sospel	7.22	280	*e*Pn	Pn	02 14 59.8	+1.3
SBF	Sospel	7.22	280	*e*P	Pn	02 15 04.5	+6.0
SBF				*e*Sn	Sn	02 16 17.9	-2.5
	comp=Z,76nm,1.0s						
SBF	Sospel	7.22	280	Pn	Pn	02 14 59.8	+1.3
SBF				Pg	Pb	02 15 04.5	-14
SBF				Sn	Sn	02 16 17.9	-2.5
	comp=Z,38nm,1.0s						
DPC	Dobruska-Polom	7.34	355	*e*SN	Sn	02 16 22.0	-1.1
DPC	Dobruska-Polom	7.34	355	Sn	Sn	02 16 22.0	-1.1
DPC	Dobruska-Polom	7.34	355	*e*Sn	Sn	02 16 22.8	-0.3
OSTC	Ostas	7.55	355	*e*SN	Sn	02 16 27.4	-0.9
OSTC	Ostas	7.55	355	Sn	Sn	02 16 27.4	-0.9
ROTZ	Rotzenmuhle	7.59	334	*e*Sn	Sn	02 16 27.6	-1.6
FRF	La Foret Royal	7.79	277	*e*Pn	Pn	02 15 07.5	+1.3
FRF	La Foret Royal	7.79	277	*e*P	Pn	02 15 13.1	+6.9
FRF				*e*Sn	Sn	02 16 31.2	-2.9
	comp=Z,1.9nm,0.3s						
FRF	La Foret Royal	7.79	277	Pn	Pn	02 15 07.5	+1.3
FRF				Pg	Pb	02 15 13.1	-15
FRF				Sn	Sn	02 16 31.2	-2.9
	comp=Z,0.9nm,0.3s						
MBDF	Montbardon	7.79	286	*e*Pn	Pn	02 15 07.7	+1.3
MBDF				*e*Sn	Sn	02 16 31.1	-3.3
	comp=Z,3.0nm,0.4s						
MBDF	Montbardon	7.79	286	Pn	Pn	02 15 07.7	+1.3
MBDF				Sn	Sn	02 16 31.1	-3.3
	comp=Z,1.5nm,0.4s						
LMR	La Mourre	7.89	276	*e*Pn	Pn	02 15 08.6	+1.0
LMR				*e*Sn	Sn	02 16 33.5	-3.1
	comp=Z,0.9nm,0.3s						
LMR	La Mourre	7.89	276	Pn	Pn	02 15 08.6	+1.0
LMR				Sn	Sn	02 16 33.5	-3.1
	comp=Z,0.5nm,0.3s						
LPG	La Plagne	7.96	292	*e*Pn	Pn	02 15 09.4	+0.6
LPG	La Plagne	7.96	292	*e*P	Pn	02 15 15.0	+6.2
LPG				*e*Sn	Sn	02 16 35.3	-3.4
	comp=Z,5.2nm,0.5s						
LPG	La Plagne	7.96	292	Pn	Pn	02 15 09.4	+0.6
LPG				Pg	Pb	02 15 15.0	-16
LPG				Sn	Sn	02 16 35.3	-3.4
	comp=Z,2.6nm,0.5s						
LPL	La Plagne	7.97	292	*e*Pn	Pn	02 15 10.2	+1.2
LPL	La Plagne	7.97	292	*e*P	Pn	02 15 15.9	+6.9
LPL				*e*Sn	Sn	02 16 35.6	-3.4
	comp=Z,6.9nm,0.5s						
LPL	La Plagne	7.97	292	Pn	Pn	02 15 10.2	+1.2
LPL				Pg	Pb	02 15 15.9	-15
LPL				Sn	Sn	02 16 35.6	-3.4
	comp=Z,3.5nm,0.5s						
ORIF	Oris-en-Rattie	8.45	287	*e*Pn	Pn	02 15 17.9	+2.6
ORIF	Oris-en-Rattie	8.45	287	*e*P	Pn	02 15 21.3	+6.0
ORIF				*e*Sn	Sn	02 16 46.9	-3.5
	comp=Z,3.4nm,0.4s						
ORIF	Oris-en-Rattie	8.45	287	Pn	Pn	02 15 17.9	+2.6
ORIF				Pg	Pb	02 15 21.3	-18
ORIF				Sn	Sn	02 16 46.9	-3.5
	comp=Z,1.7nm,0.4s						
HINF	Hinteralfeld	8.76	307	*e*P	Pn	02 15 24.5	+5.0
HINF				*e*Sn	Sn	02 16 54.2	-3.8
	comp=Z,3.8nm,0.4s						
HINF	Hinteralfeld	8.76	307	Pn	Pn	02 15 24.5	+5.0
HINF				Sn	Sn	02 16 54.2	-3.8
	comp=Z,1.9nm,0.4s						
CLL	Collm	8.77	342	*e*Pn	Pn	02 15 28.0	+8.4
CLL				*e*		02 15 39.0	
CLL				*e*Sn	Sn	02 16 56.0	-2.1
CLL				*e*Sb	Sg	02 17 26.0	-28
CLL				*e*Sg	Sg	02 17 55.0	+0.6
CLL	Collm	8.77	342	Pn	Pn	02 15 28.0	+8.4
CLL				Sn	Sn	02 16 56.0	-2.1
CLL				Lg	Lg	02 17 26.0	
CLL				Sg	Sg	02 17 55.0	+0.6
CDF	Champ du Feu	8.83	311	*e*P	Pn	02 15 26.8	+6.3
CDF				*e*Sn	Sn	02 16 56.0	-3.7
	comp=Z,0.8nm,0.3s						
CDF	Champ du Feu	8.83	311	Pn	Pn	02 15 26.8	+6.3
CDF				Sn	Sn	02 16 56.0	-3.7
	comp=Z,0.4nm,0.3s						
HAU	Haudompre	9.14	307	*e*P	Pn	02 15 31.4	+6.6
HAU				*e*Sn	Sn	02 17 03.6	-3.9
	comp=Z,3.0nm,0.3s						
HAU	Haudompre	9.14	307	Pn	Pn	02 15 31.4	+6.6
HAU				Sn	Sn	02 17 03.6	-3.9
	comp=Z,1.5nm,0.3s						
VIVF	Saint-Julien-l	9.29	286	*e*Pn	Pn	02 15 28.0	+1.2
VIVF	Saint-Julien-l	9.29	286	*e*P	Pn	02 15 33.8	+7.0
VIVF				*e*Sn	Sn	02 17 06.9	-4.1
	comp=Z,0.5nm,0.2s						
VIVF	Saint-Julien-l	9.29	286	Pn	Pn	02 15 28.0	+1.2
VIVF				Pg		02 15 33.8	
VIVF				Sn	Sn	02 17 06.9	-4.1
	comp=Z,0.2nm,0.2s						
IDI	Anoyia	9.73	140	Sn	Sn	02 17 16.5	-5.4
	comp=Z,0.2nm,0.3s,baz=196,slow=18,SNR=1.5						
IDI	Anoyia	9.73	140	Sn	Sn	02 17 16.5	-5.4
	comp=Z,0.2nm,0.3s,SNR=1.5						
SMF	Signal de Mont	10.21	295	*e*Pn	Pn	02 15 39.8	+0.4
SMF	Signal de Mont	10.21	295	*e*P	Pn	02 15 45.8	+6.4
SMF				*e*Sn	Sn	02 17 29.1	-4.5
	comp=Z,1.3nm,0.3s						
SMF	Signal de Mont	10.21	295	Pn	Pn	02 15 39.8	+0.4
SMF				Pg		02 15 45.8	
SMF				Sn	Sn	02 17 29.1	-4.5
	comp=Z,0.7nm,0.3s						
LOR	Lormes	10.39	299	*e*Pn	Pn	02 15 42.5	+0.7
LOR	Lormes	10.39	299	*e*P	Pn	02 15 48.5	+6.7
LOR				*e*Sn	Sn	02 17 33.2	-4.7
	comp=Z,4.9nm,0.3s						
LOR	Lormes	10.39	299	Pn	Pn	02 15 42.5	+0.7
LOR				Pg		02 15 48.5	
LOR				Sn	Sn	02 17 33.2	-4.7
	comp=Z,2.5nm,0.3s						
SSF	Saint Saulge	10.55	297	*e*P	Pn	02 15 50.4	+6.3
SSF				*e*Sn	Sn	02 17 37.0	-4.9
	comp=Z,1.7nm,0.5s						
SSF	Saint Saulge	10.55	297	Pn	Pn	02 15 50.4	+6.3
SSF				Sn	Sn	02 17 37.0	-4.9
	comp=Z,0.8nm,0.5s						
AVF	Avril sur Loir	10.57	296	*e*Pn	Pn	02 15 45.2	+0.8
AVF				*e*Sn	Sn	02 17 37.1	-5.4
	comp=Z,0.4nm,0.3s						
AVF	Avril sur Loir	10.57	296	Pn	Pn	02 15 45.2	+0.8
AVF				Sn	Sn	02 17 37.1	-5.4
	comp=Z,0.2nm,0.3s						
BGF	Bois d'Agland	10.85	294	*e*Pn	Pn	02 15 48.5	+0.3
BGF				*e*Sn	Sn	02 17 44.3	-5.0
	comp=Z,5.3nm,0.5s						
BGF	Bois d'Agland	10.85	294	Pn	Pn	02 15 48.5	+0.3
BGF				Sn	Sn	02 17 44.3	-5.0
	comp=Z,2.6nm,0.5s						
TCF	Toulx Ste Croi	11.22	292	*e*Pn	Pn	02 15 53.9	+0.6
TCF				*e*Sn	Sn	02 17 53.1	-5.4
	comp=Z,0.3nm,0.2s						
TCF	Toulx Ste Croi	11.22	292	Pn	Pn	02 15 53.9	+0.6
TCF				Sn	Sn	02 17 53.1	-5.4
	comp=Z,0.1nm,0.2s						
FINES	FINESS Array B	19.16	13	P	Pn	02 17 36.6	-0.4
	comp=Z,0.1nm,0.3s,baz=162,slow=26,SNR=1.0						
FINES	FINESS Array B	19.16	13	P	Pn	02 17 36.6	-0.4
	comp=Z,0.1nm,0.3s,SNR=1.0						
ZALV	Zalesovo Beam	44.42	51	LR	LR	02 40 53.0	
	comp=Z,158nm,21.9s,baz=86,slow=37						
ZALV	Zalesovo Beam	44.42	51	LR	LR	02 40 53.0	
	comp=Z,158nm,21.9s						
MKAR	Makanchi Array	45.00	62	P	P	02 21 28.1	-0.1
	comp=Z,0.3nm,0.5s,baz=269,slow=8.8,SNR=5.5						
MKAR	Makanchi Array	45.00	62	P	P	02 21 28.1	-0.1
	comp=Z,0.3nm,0.5s,SNR=5.5						
YKA	Yellowknife Ar	67.97	338	P	P	02 24 11.8	+0.5
	comp=Z,0.2nm,0.8s,baz=41,slow=5.8,SNR=6.0						
YKA	Yellowknife Ar	67.97	338	P	P	02 24 11.8	+0.5
	comp=Z,0.2nm,0.8s,SNR=6.0						
PETK	Petropavlovsk-	78.34	23	P	P	02 25 13.3	+0.5
	comp=Z,18nm,1.2s,baz=322,slow=16,SNR=3.7						
PETK	Petropavlovsk-	78.34	23	P	P	02 25 13.3	+0.5
	comp=Z,18nm,1.2s,SNR=3.7						
TXAR	Lajitas Array	89.88	312	P	P	02 26 13.1	+1.0
	comp=Z,0.2nm,0.6s,baz=47,slow=6.7,SNR=3.1						
TXAR	Lajitas Array	89.88	312	P	P	02 26 13.1	+1.0
	comp=Z,0.2nm,0.6s,SNR=3.1						

AEIC ***02*** *02:13:25±1.8, 56°.56N±0°.05×169°.3W±0°.1, h24^{km}±4^{km}, Error ellipse: s-maj=10.4km s-min=4.2km az=49.0*

IDC ***02*** *02:13:25.5±1.3, 56°.59N×169°.17W, h0^{km}, mb3.7/8, mb1 3.9/12, mb1mx3.6/71, mbtmp3.8/12, ML3.1/4, MS4.1/5, Ms1 4.1/5, ms1mx3.3/47, Error ellipse: s-maj=34.8km s-min=15.9km az=179.0*

NEIC ***02*** *02:13:26.9±1.9, 56°.63N±0°.05×169°.22W±0°.10, h10^{km}±1^{km}, mb3.8/3, ML3.5/13(AEIC), Error ellipse: s-maj=10.2km s-min=6.4km az=51.0*

ISC 02 02:13:27.3±0.6**, 56°.64N**±0°.06×**169°.16W**±0°.06**, h10**^{km}**, n51, σ1^{s}74**/50**, mb3.7**/7**, MS4.2**/5**, Pribilof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPIA	Saint Paul Isl	0.80	313		Pg	02 13 42.2	-0.5
SPIA	Saint Paul Isl	0.80	313		Sg	02 13 52.4	-0.8
AKGG	Akutan Green G	3.04	142		Pn	02 14 13.8	-1.6
AKGG					Sn	02 14 53.2	+1.3
MSW	Makushin Switc	3.05	153		Pn	02 14 14.2	-1.4
MSW					Sn	02 14 50.7	-1.5
AKRB	Akutan Reef Bi	3.07	144		Pn	02 14 15.0	-0.9
AKRB					Sn	02 14 54.1	+1.4
MNAT	Makushin Natee	3.11	152		Pn	02 14 15.3	-1.0
AKMO	Akutan Morgan	3.12	144		Pn	02 14 15.7	-0.9
MGOD	Makushin Gods	3.14	154		Pn	02 14 16.2	-0.6
AKUT	Akutan	3.17	141		Pn	02 14 15.8	-1.3
UNV	Unalaska Valle	3.19	150		Pn	02 14 16.6	-0.8
WESP	Westdahl Peak	3.32	129		Pn	02 14 18.4	-0.9
NIKH	Nikolski High	3.68	177	Pn	Pn	02 14 23.8	-0.4
SDPT	Sand Point	5.05	101	Pn	Pn	02 14 42.8	-0.1
ATKA	Atka Island	5.33	216	Pn	Pn	02 14 48.4	+1.6
CHGN	Chignik	5.97	89	Pn	Pn	02 14 55.4	-0.2
ADK	Adak	6.49	226	Pn	Pn	02 15 02.8	+0.1
GAMB	Gambell	7.27	351		Pn	02 15 12.1	-1.3
AMKA	Amchitka	8.59	237	Pn	Pn	02 15 33.5	+2.0
OHAK	Old Harbor	8.70	80	Pn	Pn	02 15 33.5	+0.4
KDAK	Kodiak Island	9.07	76	Pn	Pn	02 15 40.5	+2.4
	0.7nm,0.3s,baz=186,slow=19,SNR=13						
TTA	Tatalina	9.14	41	Pn	Pn	02 15 39.2	+0.2
BRLK	Bradley Lake	10.13	64	Pn	Pn	02 15 53.2	+0.5
PPLA	Purkeypile	10.59	47	Pn	Pn	02 16 02.1	+3.2
SUA	Susitna One	10.63	55	Pn	Pn	02 16 02.2	+2.7
PMR	Palmer	11.40	56	Pn	Pn	02 16 14.5	+4.5
SML	Sawmill	11.83	55	Pn	Pn	02 16 20.3	+4.4
IMAR	Indian Mountai	11.90	32	Pn	Pn	02 16 19.9	+3.1
KLU	Klutina	12.87	58	Pn	Pn	02 16 34.4	+4.3
N25K	Chitina, Valde	13.51	58	Pn	Pn	02 16 42.2	+3.4
ILAR	Eielson Array	13.54	44	Pn	Pn	02 16 37.3	-1.9
	0.0nm,0.3s,baz=238,slow=10,SNR=3.1						
TOLK	Toolik Lake Re	14.93	28	P	P	02 17 04.0	+0.2
BCAR	Beaver Creek A	15.10	54	P	Pn	02 17 02.5	+2.1
BMAR	Burnt Mountain	15.66	36	P	P	02 17 10.9	-1.0
DAWY	Dawson	16.36	51	P	P	02 17 20.5	+0.8
DAWY				IAmb	IAmb	02 17 26.7	
	comp=Z,18nm,1.4s						
HYT	Haines Junctio	16.86	62	P	P	02 17 25.1	-0.2
HYT				IAmb	IAmb	02 17 33.8	
	comp=Z,6.0nm,1.0s						
PETK	Petropavlovsk-	19.28	273	P	Pn	02 17 52.7	-0.2
	comp=Z,0.1nm,0.3s,baz=74,slow=11,SNR=2.7						
INK	Inuvik	19.83	40	P	P	02 17 57.7	0.0
	comp=Z,0.1nm,0.3s,baz=242,slow=7.7,SNR=8.9						
INK	Inuvik	19.83	40	P	P	02 17 57.6	0.0
INK				IAmb	IAmb	02 18 03.1	
	comp=Z,3.7nm,0.8s						
SEY	Seymchan	20.09	304	P	P	02 18 00.7	0.0
	comp=Z,0.8nm,0.2s,baz=132,slow=8.6,SNR=5.2						
YKA	Yellowknife Ar	27.50	55	P	P	02 19 12.9	-0.5
	comp=Z,0.5nm,0.8s,baz=281,slow=8.4,SNR=5.4						
YKA				PcP	PcP	02 22 31.1	0.0
	comp=Z,0.2nm,0.8s,baz=304,slow=1.6,SNR=4.1						
NVAR	Mina Array Bea	37.83	97	P	P	02 20 43.3	-0.8
	comp=Z,0.2nm,0.6s,baz=316,slow=9.9,SNR=2.3						
ULM	Lac du Bonnet	42.18	66	LR	LR	02 39 24.9	
	comp=Z,248nm,18.9s,baz=254,slow=37						
NRIK	Noril'sk	42.76	329	LR	LR	02 41 37.3	
	comp=Z,366nm,21.6s,baz=84,slow=40						
SONM	Songino Array	49.31	298	P	P	02 22 17.0	+0.8
	comp=Z,0.6nm,0.8s,baz=44,slow=8.7,SNR=3.9						
TXAR	Lajitas Array	52.67	92	P	P	02 22 40.7	-1.0
	comp=Z,0.3nm,0.6s,baz=342,slow=5.7,SNR=2.7						
AKTO	Aktyubinsk	66.38	329	P	P	02 24 16.1	+0.3
	comp=Z,1.8nm,0.7s,baz=60,slow=8.1,SNR=8.0						
EKA	Eskdalemuir Ar	67.80	9	P	P	02 24 24.3	-0.5
	comp=Z,2.0nm,0.8s,baz=348,slow=5.2,SNR=4.2						
AKASG	Malin Array Be	71.95	348	P	P	02 24 49.1	-1.3
	comp=Z,1.2nm,0.6s,baz=16,slow=5.5,SNR=4.3						
KBZ	Khabaz	76.42	337	LR	LR	03 01 06.4	
	comp=Z,118nm,19.7s,baz=49,slow=37						
MLR	Muntele Rosu	77.45	349	LR	LR	03 05 08.1	
	comp=Z,115nm,19.3s,baz=56,slow=40						
GNI	Garni	79.40	334	LR	LR	03 06 33.8	
	comp=Z,58nm,19.2s,baz=114,slow=40						

IDC ***02*** *02:22:23.6±1.2, 9°.67S×148°.93E, h0^{km}, mb4.1/8, mb1 4.3/10, mb1mx4.1/37, mbtmp4.1/10, ML3.7/2, Error ellipse: s-maj=28.7km s-min=19.1km az=118.0*

ISC 02 02:22:24.9±1.0**, 9°.7S**±0°.1×**148°.9E**±0°.1**, h10**^{km}**, n12, σ0^{s}69**/13**, mb4.2**/8**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	1.75	280	Pn	Pn	02 22 55.3	-0.2
	104nm,0.3s,baz=78,slow=6.1,SNR=140						
PMG				Sn	Sb	02 23 19.2	-0.1
	161nm,0.3s,baz=313,slow=23,SNR=23						
PMG				LR	LR	02 23 32.2	
	comp=Z,123nm,19.1s,baz=41,slow=39						
WRA	Warramunga Arr	17.36	232	P	Pn	02 26 26.8	-0.8
	0.1nm,0.3s,baz=55,slow=12,SNR=11						
ASAR	Alice Springs	19.95	224	P	Pn	02 26 59.3	+0.2
	0.7nm,0.3s,baz=58,slow=10,SNR=58						
STKA	Stephens Creek	23.08	196	P	P	02 27 31.2	+0.4
	4.9nm,0.8s,baz=9.5,slow=13,SNR=5.0						
FITZ	Fitzroy Crossi	24.06	247	P	P	02 27 40.4	-0.2
	6.7nm,0.9s,baz=52,slow=8.6,SNR=10.0						
MJAR	Matsushiro Arr	47.10	348	P	P	02 30 57.6	+0.4
	5.7nm,1.0s,baz=170,slow=8.9,SNR=7.2						
KSRS	Korea Array	50.88	338	P	P	02 31 25.6	-0.5
	3.5nm,0.8s,baz=157,slow=8.0,SNR=13						
CMAR	Chiang Mai Arr	56.69	300	P	P	02 32 09.9	+0.8
	0.7nm,0.3s,baz=133,slow=6.3,SNR=5.2						
SONM	Songino Array	68.55	331	P	P	02 33 28.9	+1.0
	1.0nm,0.9s,baz=150,slow=7.4,SNR=5.6						
MKAR	Makanchi Array	81.55	320	P	P	02 34 42.3	-0.6
	0.5nm,0.7s,baz=103,slow=5.8,SNR=6.0						
ILAR	Eielson Array	88.14	23	P	P	02 35 14.6	-1.1
	1.4nm,0.8s,baz=249,slow=5.3,SNR=4.4						
TORD	Torodi Ar. Bea	147.70	279	PKPbc	PKPbc	02 42 11.5	+0.5
	3.9nm,0.9s,baz=71,slow=2.6,SNR=7.5						

IDC ***02*** *02:29:11.2±0.7, 2°.89N×125°.77E, h0^{km}, mb4.4/9, mb1 4.6/9, mb1mx4.1/36, mbtmp4.4/9, MS3.5/4, Ms1 3.5/4, ms1mx3.0/38, Error ellipse: s-maj=61.9km s-min=14.3km az=75.0*

DJA ***02*** *02:29:16.0±1.0, 3°N±5°×12°6E±°, h14^{km}±10^{km}, M4.5/13, mb4.8/6, mB5.0/3, MLv4.4/13, Mw(mB)4.3/3*

NEIC ***02*** *02:29:22.4±2.5, 2°.40N±0°.04×125°.95E±0°.08, h53^{km}±8^{km}, mb4.6/21, Error ellipse: s-maj=11.2km s-min=5.3km az=87.0*

ISC 02 02:29:16.8±0.5**, 3°.03N**±0°.05×**126°.29E**±0°.08**, h35**^{km}**, n61, σ2^{s}21**/57**, mb4.7**/25**, 2C-1D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	1.00	311	P	Pn	02 29 33.8	-0.6
SGSI				S	Sn	02 29 47.2	-0.1
TNTI	Ternate	2.48	154		Pn	02 29 56.3	+1.5
TNTI	Ternate	2.48	154	P	Pn	02 29 58.4	+3.6
DDMP	Don Marcelino,	3.11	349	*e*P	Pn	02 30 03.3	-0.2
DDMP				*e*S	Sn	02 30 35.9	-3.6
SKMP	Bagumbayan, Su	3.88	333	*e*P	Pn	02 30 14.3	+0.3
SKMP				*e*S	Sn	02 30 59.4	+0.9
MATI	Mati	3.90	360	*e*P	Pn	02 30 14.1	-0.2
MATI				*e*S	Sn	02 30 50.4	-8.4
GTOI	Gorontalo	4.04	234	P	Pn	02 30 16.7	+0.4
DAV	Davao City (W)	4.08	350	LR	LR	02 31 35.9	
	comp=Z,106nm,20.4s,baz=136,slow=35						
KCP	Kidapawan	4.13	343	⇓*e*P	Pn	02 30 20.4	+2.8
KCP				*i* S	Sn	02 31 12.8	+8.1
BUKP	Musuan	4.97	346	*e*P	Pn	02 30 30.3	+1.2
BUKP				*e*S	Sn	02 31 27.1	+1.6
MRSI	Marisa	5.03	240	P	Pn	02 30 31.2	+1.4
LUWI	Luwuk	5.35	221	P	Pn	02 30 34.2	-0.1
	0.9nm123nm,0.7s						
PAGZ	Pagadian	5.60	329	*e*P	Pn	02 30 39.0	+1.4
PAGZ				*e*S	Sn	02 31 38.5	-2.3
TOLI2	Tolitoli	5.82	251	Pn	Pn	02 30 39.4	-1.3
APSI	Ampana	6.06	230	P	Pn	02 30 45.2	+1.2
	0.4nm1µm86nm,0.6s						
NLAI	Namlea	6.28	173	P	Pn	02 30 47.2	+0.3
	0.3nm2µm68nm,0.6s						
SWI	Sorong	6.29	128	P	Pn	02 30 49.9	+2.7
	0.1nm21nm,0.5s						
MPSI	Mapaga	6.92	247	P	Pn	02 30 54.7	-1.1
MYLDM	Lahad Datu	8.06	286	Pn	Pn	02 31 13.6	+2.2
FAKI	Fak Fak	8.39	135	Pn	Pn	02 31 21.3	+5.3
KAPI	Kappang	10.31	219	LR	LR	02 35 54.6	
	comp=Z,325nm,19.5s,baz=53,slow=41						
MTN	Manton Dam	16.48	163	Pn	Pn	02 33 02.8	-2.7
FITZ	Fitzroy Crossi	21.00	182	P	P	02 33 56.4	-0.9
	5.9nm,0.4s,baz=13,slow=8.6,SNR=32						
FITZ	Fitzroy Crossi	21.00	182	Pn	P	02 33 56.4	-0.9
FITZ				IAmb	IAmb	02 33 57.0	
	comp=Z,7.5nm,0.5s						

COEN	Coen	23.77	136	P	P	02 34 26.3	-0.1
WB0	Warramunga Arr	24.01	161	P	P	02 34 27.3	-1.2
WRAB	Tennant Creek	24.15	161	P	P	02 34 29.4	-0.5
WRAB				IAmb	IAmb	02 34 30.1	
	comp=Z,30nm,0.6s						
WRA	Warramunga Arr	24.16	161	P	P	02 34 28.9	-1.0
	comp=Z,17nm,0.6s,baz=341,slow=10,SNR=291						
WRA	Warramunga Arr	24.16	161	P	P	02 34 27.6	-2.3
WB2	Warramunga Arr	24.16	161	P	P	02 34 28.8	-1.2
WR0	Warramunga Arr	24.24	161	P	P	02 34 29.8	-0.9
WR0				IAmb	IAmb	02 34 30.6	
	comp=Z,21nm,0.6s						
PSA00	Pilbara Seismi	25.25	194	P	P	02 34 39.6	-0.1
PSA00				IAmb	IAmb	02 34 40.5	
	comp=Z,22nm,0.7s						
AS31	Alice Springs	27.55	165	P	P	02 34 59.9	-0.7
ASAR	Alice Springs	27.55	165	P	P	02 34 59.9	-0.7
	comp=Z,7.3nm,0.5s,baz=343,slow=7.4,SNR=129						
NJ2	Nanjing	29.71	347	eP	P	02 35 30.2	+11
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
MORW	Morawa	33.39	196	P	P	02 35 52.7	+0.6
MORW				IAmb	IAmb	02 36 05.4	
	comp=Z,12nm,1.2s						
FORT	Forrest	33.66	177	P	P	02 35 54.4	0.0
KSRS	Korea Array	34.30	2	P	P	02 36 02.1	+2.3
	comp=Z,0.7nm,0.6s,baz=179,slow=9.6,SNR=3.0						
CD2	Chengdu	34.95	325	eP	P	02 36 14.0	+8.3
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
BBOO	Buckleboo	36.82	166	P	P	02 36 21.4	-0.2
EIDS	Eidsvold	37.08	141	P	P	02 36 24.1	+0.2
EIDS				IAmb	IAmb	02 36 33.7	
	comp=Z,19nm,1.4s						
STKA	Stephens Creek	37.64	158	P	P	02 36 28.6	0.0
	comp=Z,7.6nm,0.7s,baz=345,slow=9.0,SNR=12						
STKA	Stephens Creek	37.64	158	P	P	02 36 28.5	0.0
HHC	Hu-ho-hao-te	39.93	343	eP	P	02 36 57.3	+9.5
HHC				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,140nm,5.6s						
ARMA	Armidale	41.13	146	P	P	02 36 59.1	+1.2
ARMA				IAmb	IAmb	02 36 59.6	
	comp=Z,6.9nm,0.7s						
USRK	Ussuriysk Ar.	41.31	6	P	P	02 37 06.4	+7.4
	comp=Z,1.0nm,0.7s,baz=186,slow=9.7,SNR=2.2						
USRK	Ussuriysk Ar.	41.31	6	P	P	02 37 10.1	+11
ASAJ	Asahikawa	43.39	17	LR	LR	02 56 07.9	
	comp=Z,253nm,20.3s,baz=314,slow=37						
SONM	Songino Array	47.82	342	P	P	02 37 49.4	-1.8
	comp=Z,0.1nm,0.3s,baz=159,slow=7.7,SNR=2.4						
WMQ	Urumqi	53.05	326	eP	P	02 38 39.0	+8.4
WMQ				pmax	pmax		
	comp=Z,9.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,5.0nm,4.9s						
PET	Petropavlovsk	56.55	23	P	P	02 39 04.3	+8.7
MK31	Makanchi Array	57.88	326	⇑Pn	P	02 39 04.8	-0.5
	comp=Z,0.1nm,0.4s,baz=119,slow=8.0,SNR=8.7						
MK31				Pg	pwP	02 39 16.7	-1.3
	comp=Z,0.3nm,0.5s,baz=119,slow=8.2,SNR=4.6						
MK31				⇑Lg	Lg	02 39 58.3	
	comp=Z,0.5nm,0.7s,baz=116,slow=4.2						
MKAR	Makanchi Array	57.88	326	P	P	02 39 04.8	-0.5
	comp=Z,0.2nm,0.3s,baz=120,slow=8.2,SNR=8.6						
MKAR				PcP	PcP	02 39 57.0	-0.4
	comp=Z,0.7nm,0.5s,baz=140,slow=3.7,SNR=6.6						
KURK	Kurchatov	62.10	328	P	P	02 39 38.2	+4.1
KURK				IAmb	IAmb	02 39 48.6	
	comp=Z,1.6nm,0.7s						
CASY	Casey	70.07	187	P	P	02 40 25.7	+0.7
CASY				IAmb	IAmb	02 40 37.6	
	comp=Z,20nm,1.2s						
NRIK	Noril'sk	71.00	346	P	P	02 40 29.0	-1.7
	comp=Z,1.8nm,0.6s,baz=174,slow=16,SNR=4.2						
NRIK				LR	LR	03 12 30.2	
	comp=Z,38nm,21.8s,baz=211,slow=37						
TTA	Tatalina	81.72	27	P	P	02 41 38.4	+6.7
SKT	Skwentna	83.67	28	P	P	02 41 49.7	+7.9
SKT				IAmb	IAmb	02 41 57.7	
	comp=Z,4.5nm,1.2s						
ILAR	Eielson Array	85.93	25	P	P	02 41 55.4	+2.4
	comp=Z,0.5nm,1.1s,baz=239,slow=10,SNR=1.7						
ARCES	ARCESS Array B	90.95	340	P	P	02 42 16.4	-0.5
	comp=Z,3.2nm,0.8s,baz=94,slow=5.0,SNR=2.3						
FINES	FINESS Array B	92.24	332	P	P	02 42 21.6	-1.3
	comp=Z,3.6nm,1.1s,baz=58,slow=3.4,SNR=3.1						

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*IDC **02** 02:41:53.4±0.8, 31°.44S×177°.73W, h0^{km}, mb4.7/5, mb1 4.9/6, mb1mx4.4/21, mbtmp4.7/6, ML4.6/1, MS4.1/16, Ms1 4.1/16, ms1mx4.0/32, Error ellipse: s-maj=28.5km s-min=22.3km az=124.0*

*NEIC **02** 02:41:55.7±1.8, 31°.46S±0°.05×177°.9W±0°.2, h10^{km}±1^{km}, mb4.8/22, Error ellipse: s-maj=24.8km s-min=6.5km az=100.0*

*GCMT **02** 02:42:00.7±0.4, 31°.58S±0°.04×177°.56W±0°.02, h24^{km}±1^{km}, MW4.9/60, Moment Tensor Solution. s23,c28; s60,c78; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.43±.21; $M_{\theta\theta}$0.22±.14; $M_{\phi\phi}$-2.65±.14; $M_{r\theta}$0.52±.21; $M_{\theta\phi}$-0.93±.09; $M_{\phi r}$0.78±.15; Best double couple: $M_0$2.84200×10^{16} NP1:ϕ_s189.00000°, δ36.00000°, λ78.00000°. NP2: ϕ_s24.00000°, δ55.00000°, λ99.00000°. Principal axes: T 2.6110, Plg78.0000°, Azm326.0000°; N 0.4600, Plg7.0000°, Azm198.0000°; P -3.0720, Plg9.0000°, Azm107.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 02 02:41:55.2±0.6, **31°.61S**±0°.06×**177°.9W**±0°.1, **h10^{km}, n109, σ1ˢ.92**/105, **mb4.8**/15, **MS4.1**/17, **1C, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	2.34	358	P	Pn	02 42 31.7	-2.0
GLKZ				S	Sn	02 42 59.9	-2.6
RAO	Raoul Island	2.35	359	Pn	Pn	02 42 30.9	-3.0
	192nm,0.3s,baz=85,slow=14,SNR=7.0						
RAO				LR	LR	02 43 00.6	
	comp=Z,1μm,18.4s,baz=154,slow=31						
RAO				Sn	Sn	02 43 00.6	-2.2
	544nm,0.3s,baz=345,slow=23,SNR=5.9						
RAO	Raoul Island	2.35	359		Pn	02 42 31.8	-2.1
RAO				Sn	Sn	02 42 58.5	-4.3
RIZ	Raoul Island	2.36	358	P	Pn	02 42 33.2	-0.8
MXZ	Matakaoa Point	6.73	207	Pn	Pn	02 43 36.0	+2.0
MXZ	Matakaoa Point	6.73	207	P	Pn	02 43 32.8	-1.3
MXZ				S	Sn	02 44 48.7	-2.0
WMGZ	Waiomatatini S	6.92	205	S	Sn	02 44 53.9	-1.4
PKGZ	Pakihiroa	7.10	207	P	Pn	02 43 36.8	-2.5
PKGZ				S	Sn	02 44 58.5	-1.5
HAZ	Te Kaha	7.11	209	P	Pn	02 43 37.4	-1.8
HAZ				S	Sn	02 45 00.8	+0.8
PUZ	Puketiti	7.20	205	S	Sn	02 45 00.9	-1.4
RUGZ	Raukumara Rang	7.33	209	P	Pn	02 43 41.7	-0.7
RUGZ				S	Sn	02 45 04.8	-0.9
TWGZ	Tauwhareparae	7.39	206	P	Pn	02 43 43.8	+0.7
TWGZ				S	Sn	02 45 05.2	-1.9
CNGZ	Carnagh Statio	7.58	204	P	Pn	02 43 45.3	-0.4
CNGZ				S	Sn	02 45 09.8	-1.8
URZ	Urewera	7.82	211	Pn	Pn	02 43 46.7	-2.3
	1.9nm,0.3s,baz=151,slow=1.0,SNR=9.7						
URZ				Sn	Sn	02 45 13.7	-3.8
	17nm,0.3s,baz=17,slow=22,SNR=14						
URZ	Urewera	7.82	211	Pn	Pn	02 43 48.5	-0.5
OUZ	Omahuta	8.01	241	Pn	Pn	02 43 57.4	+5.9
PRGZ	Paritu Road	8.09	204	P	Pn	02 43 47.8	-4.9
PRGZ				S	Sn	02 45 19.3	-4.8
MHGZ	Mahia Peninsul	8.28	204	P	Pn	02 43 51.8	-3.5
MHGZ				S	Sn	02 45 22.4	-6.6
RAHZ	Arahi	8.38	208	P	Pn	02 43 59.1	+2.3
RAHZ				S	Sn	02 45 28.0	-3.5
WHHZ	Waihua	8.46	207	S	Sn	02 45 29.9	-3.5
ARHZ	Aropaoanui	8.71	207	P	Pn	02 43 57.8	-3.5
ARHZ				S	Sn	02 45 36.0	-3.6
BKZ	Black Stump Fm	8.84	210	Pn	Pn	02 44 04.0	+0.9
BKZ	Black Stump Fm	8.84	210	P	Pn	02 44 00.2	-2.9
BKZ				S	Sn	02 45 38.0	-4.7
KWHZ	Kaweka Forest	9.09	209	P	Pn	02 44 05.2	-1.3
KWHZ				S	Sn	02 45 42.9	-5.9
BFZ	Birch Farm	10.23	206	Pn	Pn	02 44 20.1	-1.9
MQZ	McQueen's Vall	14.21	209	Pn	Pn	02 45 18.2	+1.7
RPZ	Rata Peaks	14.92	213	Pn	Pn	02 45 21.0	-5.2
	0.5nm,0.3s,baz=94,slow=13,SNR=2.2						
RPZ				Sn	Sn	02 47 55.1	-16
	1.2nm,0.3s,baz=41,slow=16,SNR=8.6						
RPZ	Rata Peaks	14.92	213	Pn	Pn	02 45 26.9	+0.7
RPZ				IAmb	IAmb	02 45 41.5	
	comp=Z,36nm,1.4s						
WKZ	Wanaka	16.72	214	P	P	02 45 52.7	+0.9
WKZ				IAmb	IAmb	02 46 01.1	
	comp=Z,83nm,1.5s						
DZM	Mont Dzumac	16.92	300	LR	LR	02 51 24.7	
	comp=Z,2μm,19.0s,baz=154,slow=34						
DZM	Mont Dzumac	16.92	300	eP	P	02 46 03.3	+9.1
	comp=Z,265nm,1.5s						
DZM				eLR	LR	02 50 00.9	
	comp=Z,2μm,22.6s						
TBI	Tubuai	26.44	79	eLQ	LQ	02 52 36.9	
	comp=Z,650nm,25.5s						
TBI				eLR	LR	02 54 04.9	
	comp=Z,605nm,23.8s						
TBI	Tubuai	26.44	79	eT	T	03 14 40.3	
	comp=Z,8.9nm,0.4s						
EIDS	Eidsvold	27.95	275	P	P	02 47 48.2	+2.3
EIDS				IAmb	IAmb	02 47 59.1	
	comp=Z,18nm,1.2s						
PAE	Paea	29.10	68	eT	T	03 18 01.7	
	comp=Z,1.8nm,0.3s						
PPT2	Papeete2	29.14	68	eLQ	LQ	02 53 38.2	
	comp=Z,487nm,24.0s						
PPT2				eLR	LR	02 55 29.0	
	comp=Z,422nm,24.5s,baz=241						
PPT2	Papeete2	29.14	68	eT	T	03 18 05.3	
	comp=Z,3.8nm,0.4s						
PPT	Papeete	29.16	68	LR	LR	03 00 41.9	
	comp=Z,269nm,18.0s,baz=243,slow=39						
HNR	Honiara	30.20	312	LR	LR	02 58 27.1	
	comp=Z,449nm,20.2s,baz=210,slow=33						
VAH	Vaihoa	32.02	66	eT	T	03 21 40.6	
	comp=Z,4.2nm,0.2s						
STKA	Stephens Creek	34.35	259	P	P	02 48 44.1	+1.9
	comp=Z,5.7nm,0.9s,baz=73,slow=11,SNR=7.2						
STKA				LR	LR	03 01 57.2	
	comp=Z,574nm,18.7s,baz=71,slow=35						
STKA	Stephens Creek	34.35	259	P	P	02 48 44.2	+2.0
BBOO	Buckleboo	38.78	256	P	P	02 49 20.2	+0.2
BBOO				IAmb	IAmb	02 49 21.2	
	comp=Z,21nm,1.1s						
RKT	Rikitea	38.80	88	eLR	LR	02 59 58.3	
	comp=Z,574nm,25.5s						
COEN	Coen	39.74	287	P	P	02 49 29.7	+1.5
AS31	Alice Springs	43.19	268	P	P	02 49 57.1	+0.6
ASAR	Alice Springs	43.19	268	P	P	02 49 57.0	+0.5
	comp=Z,5.8nm,0.9s,baz=114,slow=8.2,SNR=33						
ASAR				ScP	ScP	02 55 38.5	+1.2
	comp=Z,0.5nm,0.6s,baz=106,slow=4.1,SNR=4.1						
ASAR				LR	LR	03 07 45.5	
	comp=Z,301nm,18.5s,baz=113,slow=36						
ASAR	Alice Springs	43.19	268	P	P	02 49 56.7	+0.2
WR0	Warramunga Arr	44.11	273	P	P	02 50 04.4	+0.5
WR0				IAmb	IAmb	02 50 05.4	
	comp=Z,14nm,0.7s						
WB2	Warramunga Arr	44.27	273	P	P	02 50 05.6	+0.4
WRAB	Tennant Creek	44.28	273	P	P	02 50 05.0	-0.3
WRA	Warramunga Arr	44.28	273	P	P	02 50 05.8	+0.4
	comp=Z,17nm,0.8s,baz=112,slow=7.9,SNR=116						
WRA				ScP	ScP	02 55 42.5	+0.7
	comp=Z,1.1nm,0.9s,baz=112,slow=3.6,SNR=4.8						
WRA				LR	LR	03 08 18.6	
	comp=Z,773nm,18.1s,baz=125,slow=36						
WRA	Warramunga Arr	44.28	273	P	P	02 50 05.7	+0.3
WB0	Warramunga Arr	44.31	274	P	P	02 50 06.1	+0.5
VNDA	Vanda	46.91	186	LR	LR	03 06 29.0	
	comp=Z,205nm,20.7s,baz=0.0,slow=31						
JAY	Jayapura	48.57	298	LR	LR	03 09 13.8	
	comp=Z,135nm,21.5s,baz=175,slow=34						
MTN	Manton Dam	50.31	280	P	P	02 50 53.1	+0.8
MTN				IAmb	IAmb	02 50 53.1	
	comp=Z,18nm,1.1s						
CASY	Casey	54.14	208	P	P	02 51 21.2	+1.2
GUMO	Guam	57.43	316	LR	LR	03 14 50.8	
	comp=Z,139nm,18.9s,baz=130,slow=34						
GIRL	Giralia	60.27	260	P	P	02 52 04.9	+0.8
SYO	Syowa Base	75.97	193	⇑esP	sP	02 53 47.8	+3.8
SNAA	Sanae	76.94	178	P	P	02 53 48.3	+0.8
SNAA	Sanae	76.94	178	P	P	02 53 50.7	+3.2
SNAA				IAmb	IAmb	02 53 59.5	
	comp=Z,16nm,1.2s						
VNA3	Neumayer Olymp	77.09	176	P	P	02 53 48.9	+0.6
VNA2	Neumayer--Watz	77.53	177	P	P	02 53 51.0	+0.3
	baz=189,slow=5.2						
MJAR	Matsushiro Arr	79.31	325	LR	LR	03 24 14.5	
	comp=Z,49nm,21.4s,baz=135,slow=32						
KSRS	Korea Array	85.35	320	LR	LR	03 27 43.9	
	comp=Z,40nm,19.6s,baz=148,slow=32						
PETK	Petropavlovsk-	87.01	346	P	P	02 54 39.9	-0.4
	comp=Z,9.0nm,0.9s,baz=126,slow=7.5,SNR=4.8						
PETK				LR	LR	03 26 53.9	
	comp=Z,104nm,20.9s,baz=219,slow=31						
ISA	Isabella, Lake	87.07	45	P	P	02 54 41.5	+0.4
NJ2	Nanjing	87.13	311	eP	P	02 54 40.2	-1.2
NJ2				pmax	pmax		
	comp=Z,12nm,0.7s						
GSC	Goldstone, Bar	87.83	46	P	P	02 54 44.9	+0.1
GSC				IAmb	IAmb	02 54 51.0	
	comp=Z,4.3nm,1.1s						
USRK	Ussuriysk Ar.	88.24	326	LR	LR	03 36 22.9	
	comp=Z,62nm,18.3s,baz=138,slow=37						
WAKR	Walker	88.44	42	P	P	02 54 47.8	0.0
WAKR				IAmb	IAmb	02 54 54.4	
	comp=Z,6.0nm,1.4s						
NVAR	Mina Array Bea	89.04	43	P	P	02 54 51.2	+0.6
	comp=Z,2.5nm,1.1s,baz=218,slow=7.3,SNR=7.3						
NVAR	Mina Array Bea	89.04	43	P	P	02 54 51.4	+0.8
TPH	Tonopah	89.43	43	P	P	02 54 52.9	+0.4
W13A	Hualapai Mount	89.51	47	P	P	02 54 53.7	+0.8
PRN	Pahroc Range	90.28	45	P	P	02 54 58.0	+1.6
PRN				IAmb	IAmb	02 55 03.1	
	comp=Z,6.5nm,1.2s						
TXAR	Lajitas Array	92.93	57	LR	LR	03 31 02.0	
	comp=Z,72nm,18.4s,baz=0.0,slow=32						
HHC	Hu-ho-hao-te	97.17	314	eP	P	02 55 28.3	+0.4
HHC				pmax	pmax		
	comp=Z,7.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,99nm,5.8s						
CPUP	Villa Florida	99.13	128	LR	LR	03 37 10.4	
	comp=Z,44nm,18.6s,baz=206,slow=34						
WMQ	Urumqi	114.07	308	eP	PKiKP	03 00 35.3	+0.8
WMQ				pmax	pmax		
	comp=Z,100nm,3.9s						
MKAR	Makanchi Array	118.65	310	PKP	PKPdf	03 00 41.5	-1.7
	comp=Z,0.2nm,0.5s,baz=116,slow=1.6,SNR=4.8						
KURK	Kurchatov	121.97	313	PKPdf	PKPdf	03 00 48.5	-0.9
KURBB	Kurchatov Arra	122.01	313	PKP	PKPdf	03 00 48.6	-0.8
	comp=Z,1.2nm,0.8s,baz=98,slow=2.1,SNR=10.0						
GNI	Garni	144.73	296	PKP	PKPab	03 01 30.6	-0.6
	comp=Z,7.5nm,1.0s,baz=230,slow=5.0,SNR=5.1						
GNI	Garni	144.73	296	PKPdf	PKPab	03 01 31.1	-0.2
KBZ	Khabaz	145.88	302	PKPbc	PKPbc	03 01 34.7	+0.1
	comp=Z,14nm,1.0s,baz=47,slow=2.5,SNR=9.4						
FINES	FINESS Array B	146.32	339	PKPbc	PKPdf	03 01 34.6	+0.5
	comp=Z,15nm,0.9s,baz=54,slow=2.6,SNR=23						
FINES	FINESS Array B	146.32	339	PKPdf	PKPdf	03 01 33.7	-0.5
NB2	NORSAR Subarra	149.96	351	PKP	PKPbc	03 01 44.8	-0.4
	comp=Z,27nm,2.0s,baz=17,slow=2.6						
NOA	NORSAR Array B	149.96	351	PKPbc	PKPdf	03 01 41.9	+1.6
	comp=Z,0.5nm,0.8s,baz=44,slow=4.3,SNR=1.4						
HFS	Hagfors	150.45	348	PKPbc	PKPbc	03 01 45.6	-0.7
	comp=Z,2.0nm,0.8s,baz=90,slow=1.4,SNR=1.5						
AKASG	Malin Array Be	152.33	321	PKPbc	PKPbc	03 01 49.9	-1.0
	comp=Z,0.8nm,0.5s,baz=50,slow=2.6,SNR=12						
AKASG	Malin Array Be	152.33	321		PKPbc	03 01 50.2	-0.7
BRTR	Keskin Array B	153.27	296	PKPbc	PKPbc	03 01 52.5	-1.1
	comp=Z,1.8nm,0.9s,baz=190,slow=3.5,SNR=5.7						
DBIC	Dimbokro	154.34	164	PKPab	PKPab	03 02 10.7	+0.4
	comp=Z,1.6nm,0.7s,baz=162,slow=7.0,SNR=4.5						
DBIC	Dimbokro	154.34	164		PKPab	03 02 12.9	+2.6
CHVC	Chvalec	158.41	335	ePKPAB	PKPab	03 02 27.0	+0.1
DPC	Dobruska-Polom	158.51	335	ePKPAB	PKPab	03 02 27.5	+0.1
KRLC	Kraliky	158.56	334	ePKPAB	PKPab	03 02 26.9	-0.8
CLL	Collm	158.75	341	ePKPdf	PKPdf	03 01 53.0	+0.3
CLL				ePKPab	PKPab	03 02 28.0	-0.3
NKC	Novy Kostel	159.87	341	ePKPAB	PKPab	03 02 33.6	+0.3
KHC	Kasperske Hory	160.49	337	ePKPAB	PKPab	03 02 35.7	-0.4
CKRC	Cesky Krumlov	160.51	335	ePKPAB	PKPab	03 02 35.8	-0.3
GERES	GERESS Array B	160.70	336	PKPab	PKPab	03 02 36.7	-0.3
	comp=Z,1.1nm,0.9s,baz=56,slow=3.4,SNR=6.0						
GERES	GERESS Array B	160.70	336		PKPab	03 02 35.7	-1.3
TORD	Torodi Ar. Bea	161.62	179	PKPab	PKPab	03 02 42.5	+0.9
	comp=Z,0.9nm,0.4s,baz=180,slow=3.0,SNR=3.6						
TORD	Torodi Ar. Bea	161.62	179		PKPab	03 02 40.9	-0.7

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*IDC **02** 02:42:36.5±0.8, 53°.06N×170°.93E, h0^{km}, mb3.9/24, mb1 4.1/24, mb1mx3.9/54, mbtmp3.9/24, Error ellipse: s-maj=20.8km s-min=13.9km az=167.0*

*KRSC **02** 02:42:38.5±1.1, 52°.97N×170°.84E, h62^{km}±36^{km}, ML4.4*

*NEIC **02** 02:42:41.0±2.7, 53°.0N±0°.1×171°.1E±0°.1, h24^{km}±5^{km}, mb4.3/32, Error ellipse: s-maj=20.5km s-min=9.3km az=185.0*

ISC 02 02:42:40.0±0.6, **53°.00N**±0°.08×**170°.91E**±0°.05, **h24^{km}, n94, σ1ˢ.71**/98, **mb4.2**/40, **Near Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMY	Shemya	1.95	97	eP	Pn	02 43 11.0	-0.5
SMY				eS	Sn	02 43 34.8	-0.4
SMY	Shemya	1.95	97	Pn	Pn	02 43 11.0	-0.5
BKI	Bering	3.65	309	eP	Pn	02 43 35.5	+0.6
BKI				eS	Sn	02 44 15.5	-1.7
KBTR	Krutoberegovo	5.70	308	eP	Pn	02 44 02.9	-0.1
KBTR				S	Sn	02 45 06.3	-1.3
TUMD	Tumrok D	6.57	294	S	Sn	02 45 26.8	-2.2
KZV	Kizimen	6.60	293	eP	Pn	02 44 16.5	+0.9
KZV				eS	Sn	02 45 27.7	-2.4
SRKR	Sorokina	6.71	307	P	Pn	02 44 19.6	+2.6
TUMR	Tumrok	6.73	294	eP	Pn	02 44 19.1	+1.8
SDLR	Sedlovina	7.24	277	P	Pn	02 44 25.5	+1.1
SDLR				S	Sn	02 45 43.2	-2.6
UGLR	Uglovaya	7.28	276	P	Pn	02 44 27.1	+2.2
SRDR	Sredinnyy	7.29	302	P	Pn	02 44 27.3	+2.3
KRER	Koryakskii	7.32	277	P	Pn	02 44 27.3	+1.8
AVH	Avacha	7.33	277	P	Pn	02 44 27.3	+1.8
AVH				S	Sn	02 45 45.8	-2.2
KRX	Arik	7.38	278	P	Pn	02 44 27.6	+1.3
KOK	Koryaka	7.39	277	P	Pn	02 44 27.7	+1.3
PET	Petropavlovsk	7.40	275	Pn	Pn	02 44 30.4	+4.0
ESO	Esso	7.70	297	P	Pn	02 44 32.8	+2.3
KRMR	Karymshinskiy	7.73	274	eP	Pn	02 44 32.8	+1.9
KRMR				eS	Sn	02 45 54.4	-3.3
MTVR	Mutnovka	7.75	271	eP	Pn	02 44 32.2	+0.9
MTVR				S	Sn	02 45 54.7	-3.6
TILK	Tilichiki	7.91	343	P	Pn	02 44 36.4	+3.1
PEA0B	Petropavlovsk-	7.97	276	Pn	Pn	02 44 37.6	+3.4
PETK	Petropavlovsk-	7.97	276	Pn	Pn	02 44 36.8	+2.6
	1.9nm,0.3s,baz=94,slow=20,SNR=18						
PETK				Sn	Sn	02 46 00.2	-3.2
	2.5nm,0.3s,baz=75,slow=30,SNR=2.9						
PETK	Petropavlovsk-	7.97	276	Pn	Pn	02 44 37.2	+3.0
SEY	Seymchan	13.93	323	Pn	Pn	02 45 58.1	+2.4
	0.1nm,0.3s,baz=0.0,slow=20,SNR=1.3						
OHAK	Old Harbor	20.75	64	P	P	02 47 17.5	-1.0
KDAK	Kodiak Island	21.09	62	P	P	02 47 20.8	-1.5
	6.3nm,0.6s,baz=23,slow=3.4,SNR=13						
KDAK	Kodiak Island	21.09	62	P	P	02 47 22.2	-0.2
IMAR	Indian Mountai	21.77	40	P	P	02 47 29.3	-0.3
SUA	Susitna One	22.11	52	P	P	02 47 35.9	+2.5
SUA				IAmb	IAmb	02 47 44.5	
	comp=Z,10nm,1.3s						
TRF	Thorofare Moun	22.57	47	P	P	02 47 38.6	+0.2
TRF				IAmb	IAmb	02 47 57.6	
	comp=Z,11nm,1.5s						
BWN	Browne	23.06	46	P	P	02 47 44.7	+1.5
BWN				IAmb	IAmb	02 47 51.9	
	comp=Z,15nm,0.9s						
RND	Reindeer	23.20	48	P	P	02 47 45.7	+0.9
I23K	Minto, Yukon-K	23.29	43	P	P	02 47 45.6	0.0
COLD	Coldfoot	23.51	38	P	P	02 47 46.4	-1.3
MDM	Murphy Dome	23.73	44	P	P	02 47 49.1	-0.8
MDM				IAmb	IAmb	02 47 56.6	
	comp=Z,5.4nm,0.9s						
SCM	Sheep Creek Mo	23.76	52	P	P	02 47 51.5	+1.2
CCB	Clear Creek Bu	23.85	45	P	P	02 47 51.7	+0.7
POKR	Poker Plat Res	24.09	44	P	P	02 47 54.3	+1.1
TOLK	Toolik Lake Re	24.20	35	P	P	02 47 53.5	-0.8
TOLK				IAmb	IAmb	02 48 03.3	
	comp=Z,10.0nm,1.3s						
ILAR	Eielson Array	24.26	44	P	P	02 47 53.5	-1.3
	comp=Z,1.7nm,0.7s,baz=257,slow=7.2,SNR=20						
ILAR	Eielson Array	24.26	44	P	P	02 47 55.4	+0.6
EYAK	Cordova Ski Ar	24.52	55	P	P	02 47 58.7	+1.6
PAX	Paxson	24.69	49	P	P	02 48 00.2	+1.3
PAX				IAmb	IAmb	02 48 05.4	
	comp=Z,8.6nm,1.2s						
N25K	Chitina, Valde	25.06	52	P	P	02 48 03.8	+1.6
N25K				IAmb	IAmb	02 48 15.5	
	comp=Z,16nm,1.5s						
DOT	Dot Lake	25.36	47	P	P	02 48 06.5	+1.6
DOT				IAmb	IAmb	02 48 12.0	
	comp=Z,8.2nm,0.9s						
BMAR	Burnt Mountain	25.67	39	P	P	02 48 05.9	-1.7
BARN	Barnard Glacie	26.49	53	P	P	02 48 17.7	+2.4
BARN				IAmb	IAmb	02 48 24.5	
	comp=Z,8.0nm,1.0s						
HYT	Haines Junctio	28.54	53	P	P	02 48 35.3	+1.8
HYT				IAmb	IAmb	02 48 51.2	
	comp=Z,5.2nm,1.2s						
INK	Inuvik	29.93	38	P	P	02 48 44.5	-1.0
	comp=Z,0.6nm,0.5s,baz=262,slow=9.8,SNR=5.5						
INK	Inuvik	29.93	38	P	P	02 48 44.2	-1.3
C36M	Paulatuk	33.34	36	P	P	02 49 14.8	-0.7
C36M				IAmb	IAmb	02 49 17.7	
	comp=Z,5.3nm,1.1s						
H11N2	WAKE ISLAND Hy	33.35	187	T	T	03 24 32.6	
	baz=4.4,slow=76,SNR=882						
H11N3	WAKE ISLAND Hy	33.36	187	T	T	03 24 33.5	
	baz=4.4,slow=76,SNR=1009						
H11N1	WAKE ISLAND Hy	33.37	187	T	T	03 24 33.9	
	baz=4.4,slow=76,SNR=1000						
H11S1	WAKE ISLAND Hy	34.58	187	T	T	03 26 05.2	
	baz=4.2,slow=76,SNR=1480						
H11S3	WAKE ISLAND Hy	34.59	187	T	T	03 26 05.5	
	baz=4.2,slow=76,SNR=810						
H11S2	WAKE ISLAND Hy	34.60	187	T	T	03 26 06.7	
	baz=4.2,slow=76,SNR=728						
YKA	Yellowknife Ar	38.68	46	P	P	02 50 01.0	-0.2
	comp=Z,0.4nm,0.5s,baz=291,slow=7.6,SNR=5.6						
YKA				PP	PP	02 51 22.2	-7.5
	comp=Z,1.1nm,0.9s,baz=281,slow=8.4,SNR=4.0						
SONM	Songino Array	40.19	290	P	P	02 50 15.0	+0.7
	comp=Z,0.4nm,0.8s,baz=63,slow=8.3,SNR=4.3						
SONM	Songino Array	40.19	290	P	P	02 50 15.5	+1.3
JOW	Kunigami	40.98	247	P	P	02 50 20.4	-0.4
	comp=Z,6.7nm,0.8s,baz=323,slow=15,SNR=2.7						
ZALV	Zalesovo Beam	48.17	308	P	P	02 51 17.2	-0.7
	comp=Z,0.3nm,0.4s,baz=50,slow=12,SNR=2.1						
NVAR	Mina Array Bea	49.51	77	P	P	02 51 30.2	+1.6
	comp=Z,0.2nm,0.6s,baz=284,slow=5.5,SNR=2.4						
PDAR	Pinedale Array	51.69	67	P	P	02 51 45.1	+0.1
	comp=Z,0.4nm,0.5s,baz=314,slow=2.9,SNR=6.8						
PDAR	Pinedale Array	51.69	67	P	P	02 51 45.0	-0.1
KURK	Kurchatov	53.16	307	P	P	02 51 55.4	-0.1
KURK				IAmb	IAmb	02 51 56.2	
	comp=Z,3.7nm,0.9s						
KURBB	Kurchatov Arra	53.26	307	P	P	02 51 56.2	0.0
	comp=Z,1.8nm,0.7s,baz=53,slow=7.5,SNR=12						
MK31	Makanchi Array	53.92	302	P	P	02 52 00.8	-0.5
MKAR	Makanchi Array	53.92	302	P	P	02 52 00.5	-0.8
	comp=Z,0.3nm,0.4s,baz=49,slow=7.0,SNR=12						
MKAR	Makanchi Array	53.92	302	P	P	02 52 00.9	-0.3
ARCES	ARCESS Array B	55.19	346	P	P	02 52 10.0	-0.1
	comp=Z,1.3nm,0.4s,baz=38,slow=7.5,SNR=15						
ARCES	ARCESS Array B	55.19	346	P	P	02 52 09.9	-0.2
BVAR	Borovoye Array	55.37	314	P	P	02 52 11.0	-0.6
	comp=Z,0.7nm,0.6s,baz=27,slow=14,SNR=4.7						
EYMN	Ely	57.58	52	P	P	02 52 27.5	0.0
ARU	Arti	57.67	323	P	P	02 52 27.7	-0.2
	comp=Z,0.7nm,0.4s,baz=82,slow=6.4,SNR=4.0						
AKTO	Aktyubinsk	62.48	318	P	P	02 53 01.0	0.0
	comp=Z,1.9nm,0.6s,baz=69,slow=10,SNR=7.8						
FINES	FINESS Array B	62.53	342	P	P	02 53 01.2	+0.1
	comp=Z,1.1nm,0.4s,baz=30,slow=8.7,SNR=8.1						
FINES	FINESS Array B	62.53	342	P	P	02 53 01.1	0.0
ABKAR	Akbulak array	62.60	316	P	P	02 53 02.0	+0.2
ABKAR				IAmb	IAmb	02 53 02.2	
	comp=Z,1.4nm,0.6s						
TXAR	Lajitas Array	64.50	75	P	P	02 53 14.3	-0.4
	comp=Z,0.4nm,0.6s,baz=248,slow=6.6,SNR=2.5						
NB201	NORSAR Array S	65.14	349	P	P	02 53 18.7	+0.3

NB2	NORSAR Subarra	65.16	349	P	P	02 53 18.6	+0.1
	comp=Z,1.8nm,0.4s,baz=12,slow=6.5						
NOA	NORSAR Array B	65.16	349	P	P	02 53 18.5	+0.1
	comp=Z,2.4nm,0.5s,baz=360,slow=3.0,SNR=26						
HFS	Hagfors	65.74	348	P	P	02 53 21.9	-0.3
	comp=Z,3.9nm,0.4s,baz=30,slow=3.9,SNR=41						
AKASG	Malin Array Be	71.74	335	P	P	02 53 59.7	0.0
	comp=Z,0.7nm,0.5s,baz=27,slow=5.8,SNR=3.4						
DSB	Dublin	74.10	358	P	P	02 54 13.8	+0.2
BUR08	Bucovina Ar. S	75.57	337	P	P	02 54 23.4	+1.0
BUR08				IAmb	IAmb	02 54 27.1	
	comp=Z,3.6nm,1.1s						
BURAR	Bucovina Array	75.59	337	P	P	02 54 23.4	+0.9
GERES	GERESS Array B	76.70	345	P	P	02 54 29.6	+0.8
	comp=Z,1.8nm,0.7s,baz=36,slow=5.5,SNR=12						
MLR	Muntele Rosu	77.40	336	P	P	02 54 34.3	+1.5
	comp=Z,1.0nm,0.4s,baz=328,slow=8.0,SNR=4.0						
WR0	Warramunga Arr	79.20	215	P	P	02 54 43.3	+0.6
WR0				IAmb	IAmb	02 54 50.5	
	comp=Z,5.2nm,1.4s						
WB2	Warramunga Arr	79.25	215	P	P	02 54 43.7	+0.7
WB2				IAmb	IAmb	02 54 53.5	
	comp=Z,3.1nm,0.9s						
WRA	Warramunga Arr	79.25	215	P	P	02 54 43.5	+0.5
	comp=Z,1.0nm,0.5s,baz=27,slow=6.1,SNR=5.8						
ASAR	Alice Springs	82.85	214	P	P	02 55 03.1	+1.0
	comp=Z,1.0nm,0.7s,baz=13,slow=4.0,SNR=5.5						

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*AEIC **02** 02:45:35±2.8, 56°.55N±0°.07×169°.3W±0°.1, h20^{km}±2^{km}, Error ellipse: s-maj=14.9km s-min=6.3km az=226.0*

NEIC 02 02:45:36.4±1.8, **56°.68N**±0°.08×**169°.1W**±0°.1, **h16**^{km}±7^{km}, **mb3.7**/3, **ML3.5**(AEIC), **Error ellipse: s-maj=12.2km s-min=7.9km az=207.0, Pribilof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPIA	Saint Paul Isl	0.82	308		Pb	02 45 52.0	-0.2
AKGG	Akutan Green G	3.04	144		Pn	02 46 23.8	0.0
MSW	Makushin Switc	3.06	154		Pn	02 46 23.5	-0.6
MAPS	Pakushin South	3.12	156		Pn	02 46 24.6	-0.3
MGOD	Makushin Gods	3.15	156		Pn	02 46 25.0	-0.4
AKUT	Akutan	3.17	142	Pn	Pn	02 46 24.4	-1.1
UNV	Unalaska Valle	3.20	152	Pn	Pn	02 46 26.3	+0.4
NIKH	Nikolski High	3.72	178	Pn	Pn	02 46 34.4	+1.3
SDPT	Sand Point	5.00	102	Pn	Pn	02 46 50.1	-0.6
ATKA	Atka Island	5.39	216	Pn	Pn	02 46 56.9	+0.8
CHGN	Chignik	5.91	89	Pn	Pn	02 47 05.3	+2.2
ADK	Adak	6.56	226	Pn	Pn	02 47 11.6	-0.5
GAMB	Gambell	7.24	351	Pn	Pn	02 47 25.7	+4.3
AMKA	Amchitka	8.66	237	Pn	Pn	02 47 43.3	+2.4
PMR	Palmer	11.33	56	Pn	Pn	02 48 23.4	+6.0
SML	Sawmill	11.76	56	Pn	Pn	02 48 29.4	+6.1
ILAR	Eielson Array	13.47	44	Pn	Pn	02 48 46.4	-0.2
CTGM	Chitina Glacie	14.92	62	P	P	02 49 10.8	-1.4
BCAR	Beaver Creek A	15.03	54	P	P	02 49 13.2	0.0
DAWY	Dawson	16.29	51	P	P	02 49 30.3	+3.0
DAWY				IAmb	IAmb	02 49 31.6	
	comp=Z,8.1nm,1.2s						
HYT	Haines Junctio	16.79	63	P	P	02 49 34.8	+2.0
HYT				IAmb	IAmb	02 49 36.8	
	comp=Z,13nm,1.5s						
INK	Inuvik	19.76	40	P	Pn	02 50 06.6	-0.2
INK				IAmb	IAmb	02 50 11.8	
	comp=Z,3.4nm,0.8s						

IDC 02 02:51:34.9±1.8, **60°.03S**×**28°.12W**, **h0**^{km}, **mb4.2**/1, **mb1 4.2**/1, **mb1mx3.7**/15, **mbtmp4.2**/1, **MS3.9**/2, **Ms1 3.8**/2, **ms1mx3.2**/15, **Error ellipse: s-maj=91.0km s-min=24.3km az=153.0, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BDFB	Brasilia	46.64	333	LR	LR	03 15 47.5	
	comp=Z,91nm,19.9s,baz=146,slow=31						
ROSC	El Rosal	74.11	312	LR	LR	03 38 03.9	
	comp=Z,104nm,19.3s,baz=274,slow=38						
TORD	Torodi Ar. Bea	76.77	30	P	P	03 03 28.2	+0.2
	2.2nm,0.9s,baz=187,slow=3.9,SNR=2.8						
YKA	Yellowknife Ar	138.74	315	PKP	PKiKP	03 11 02.7	-0.6
	0.3nm,0.6s,baz=102,slow=3.1,SNR=4.7						
INK	Inuvik	148.48	317	PKPbc	PKPbc	03 11 20.3	-1.4
	5.9nm,0.9s,baz=134,slow=1.9,SNR=12						
ILAR	Eielson Array	152.24	306	PKPbc	PKiKP	03 11 31.5	+0.4
	0.3nm,0.7s,baz=91,slow=1.6,SNR=4.6						
ILAR				PKPab	PKPab	03 11 41.0	+0.1
	0.8nm,0.8s,baz=56,slow=1.3,SNR=9.0						

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*ISK **02** 02:54:17.3, 35°.04N×24°.85E, h9^{km}, ML2.9/5*
*ATH **02** 02:54:18.2, 35°.03N×24°.84E, h9^{km}±5^{km}, ML2.5/3, Error ellipse: s-maj=6.1km s-min=1.1km az=353.0*
*THE **02** 02:54:18.0, 35°.02N×24°.88E, h0^{km}±1^{km}, ML2.2/2, Error ellipse: s-maj=2.2km s-min=0.7km az=162.0*

ISC 02 02:54:18.2±0.9, **35°.05N**±0°.04×**24°.84E**±0°.02, **h12**^{km}±6^{km}, **n28**, σ**0**^{s}**.65**/42, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TMBK	Timbaki Herakl	0.06	291	P	Pg	02 54 20.5	-0.2
TMBK				S	Sg	02 54 22.6	+0.1
IDI	Anoyia	0.24	11	P	Pg	02 54 22.9	-0.4
IDI				S	Sg	02 54 26.9	0.0
IDI				AML	AML	02 54 27.2	
	comp=E,5795μm,0.1s						
IDI				AML	AML	02 54 28.1	
	comp=N,6478μm,0.2s						
IDI	Anoyia	0.24	11	P	Pg	02 54 23.0	-0.4
IDI	Anoyia	0.24	11	PG	Pg	02 54 22.8	-0.6
IDI				SG	Sg	02 54 26.9	0.0
KSTL	Kastelli Herak	0.32	37	P	Pb	02 54 26.3	+0.5
KSTL				S	Sb	02 54 33.4	+2.5
IACM	Heraklion	0.32	37	P	Pg	02 54 24.3	-0.4
IACM				S	Sb	02 54 30.5	-0.5
HRKL	Herakleio	0.34	40	P	Pg	02 54 24.7	-0.4
HRKL				S	Sb	02 54 31.5	-0.1
	comp=N,650nm,0.3s						
HRKL	Herakleio	0.34	40	PG	Pg	02 54 24.7	-0.4
HRKL				SG	Sg	02 54 29.7	0.0
LAST	Lasithi	0.54	78	P	Pg	02 54 28.0	-0.7
LAST				S	Sg	02 54 36.1	+0.1
LAST				AML	AML	02 54 36.6	
	comp=N,923μm,0.5s						
LAST				AML	AML	02 54 37.0	
	comp=E,1016μm,0.3s						
LAST	Lasithi	0.54	78	P	Pg	02 54 28.1	-0.7
VAM	Vamos	0.63	305	P	Pg	02 54 30.0	-0.6
VAM				S	Sb	02 54 40.1	+0.2
VAM				AML	AML	02 54 42.4	
	comp=E,721μm,0.2s						
VAM				AML	AML	02 54 43.2	
	comp=N,791μm,0.3s						
GVDS	Gavdos	0.65	252	P	Pb	02 54 32.3	+0.9
GVDS				S	Sn	02 54 42.4	-0.9
	comp=N,245nm,0.2s						
GVDS	Gavdos	0.65	252	PG	Pg	02 54 30.6	-0.2
GVD	Gavdhos	0.65	251	P	Pg	02 54 30.8	-0.1
GVD	Gavdhos	0.65	251	PG	Pg	02 54 30.5	-0.4
GVD				SG	Sb	02 54 40.0	-0.5
NPS	Neapolis	0.67	71	P	Pb	02 54 31.6	-0.3
NPS				S	Sg	02 54 40.3	+0.2
NPS	Neapolis	0.67	71	P	Pg	02 54 31.1	-0.2
IMMV	Iera Moni Meta	0.81	301	P	Pg	02 54 32.9	-1.0
IMMV				S	Sb	02 54 45.6	+0.5
IMMV	Iera Moni Meta	0.81	301	P	Pg	02 54 33.8	-0.1
IMMV	Iera Moni Meta	0.81	301	PG	Pg	02 54 33.1	-0.8
ZKR	Zakros	1.13	86	P	Pg	02 54 39.3	-0.8
ZKR				S	Sn	02 54 55.5	+0.1
ZKR	Zakros	1.13	86	PN	Pg	02 54 39.2	-0.8
SANT	Santorini	1.41	21	PN	Pn	02 54 43.9	+0.1
SNT5	Nea Kammeni, S	1.43	18	P	Pn	02 54 44.4	+0.5
THR3	Thira Island,	1.43	19	P	Pn	02 54 44.4	+0.4
KTHA	Kythira Island	1.88	310	PN	Pn	02 54 50.6	+0.4
KTHR	Kythira	1.92	310	P	Pb	02 54 52.4	-0.7
APE	Apeiranthos	2.09	15	PN	Pn	02 54 53.5	+0.4

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*MEX **02** 03:01:32.3±0.9, 30°.06N×114°.33W, h4^{km}±14^{km}, MD4.4*
*ECX **02** 03:01:34.3±1.2, 30°.70N×114°.11W, h13^{km}±11^{km}, MD3.8, ML4.0*
*IDC **02** 03:01:34.9±2.5, 30°.35N×114°.16W, h0^{km}, mb3.6/1, mb1 3.7/7, mb1mx3.5/44, mbtmp3.3/7, ML3.4/6, MS3.4/8, Ms1 3.4/8, ms1mx3.1/35, Error ellipse: s-maj=38.8km s-min=11.4km az=31.0*

ISC 02 03:01:30.9±0.8, **30°.18N**±0°.06×**114°.28W**±0°.04, **h10**^{km}, **n32**, σ**2**^{s}**.48**/34, **MS3.5**/3, **4C-1D, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFX	San Felipe	0.99	330	*e*P	Pg	03 01 47.2	-2.7
SFX				*e*S	Sg	03 01 57.6	-5.1
SPX	San Pedro Mart	1.33	310	*e*P	Pb	03 01 55.3	-0.8
SPX				⇑*e*		03 02 21.8	
SPX				IAML		03 02 21.8	
	comp=E,2μm,1.2s						
SPIG	San Pedro Mart	1.34	311	*e*P	Pn	03 01 55.2	-0.7
SPIG				*i* S	Sb	03 02 12.7	-0.9
SPIG	San Pedro Mart	1.34	311	*e*P	Pn	03 01 55.2	-0.7
SPIG				*e*S	Sb	03 02 12.7	-0.9
SQX	San Quintin	1.43	286	*e*P	Pg	03 01 59.9	+1.5
ECBX	El Chinero	1.45	333	*e*P	Pn	03 01 52.1	-5.0
PIX	Pinacate	1.55	27	⇓*e*P	Pn	03 01 52.4	-6.1
214A	Organ Pipe Nat	2.18	35	*e*P	Pn	03 02 03.0	-4.2
214A				*i* S	Sn	03 02 29.2	-5.0
MBIG	Mexicali	2.36	341	*i* P	Pn	03 02 10.7	+1.1
CPBX	Cerro Prieto	2.40	339	⇑*e*		03 03 09.0	
CPBX				IAML		03 03 09.0	
	comp=N,3μm,1.1s						
IKP	In-Ko-Pah, Jac	2.92	328	*e*P	Pn	03 02 15.9	-1.5
CBX	Cerro Bola	2.95	317	*e*P	Pn	03 02 18.0	+0.1
CBX				IAML		03 03 10.8	
	comp=N,907nm,0.8s						
CBX				⇑*e*		03 03 10.8	
TJIG	Tijuana	3.04	318	*i* P	Pn	03 02 18.1	-1.0
TJIG				*e*S	Sn	03 02 56.5	+0.9
HSIG		3.12	111	*i* P	Pn	03 02 19.0	-1.2
HSIG				*i* S	Sn	03 02 56.4	-1.2
HSIG		3.12	111	*e*P	Pb	03 02 25.3	-1.2
BAR	Barrett	3.22	321	*e*P	Pn	03 02 20.6	-1.0
TUC	Tucson	3.67	54	*i* P	Pn	03 02 28.5	+0.7
TUC				*i* S	Sn	03 03 13.6	+2.3
GUYB	Guaymas	3.75	126	*e*P	Pn	03 02 26.4	-2.4
GUYB				*e*S	Sn	03 03 10.3	-2.7
PFO	Pinyon Flats O	3.89	332	Pn	Pb	03 02 39.7	0.0
	comp=N,0.3nm,0.3s,baz=146,slow=15,SNR=4.2						
PFO				Lg	Lg	03 03 27.8	
	comp=N,2.4nm,0.3s,baz=122,slow=13,SNR=4.2						
PFO				LR	LR	03 04 22.3	
	comp=N,395nm,18.4s,baz=160,slow=44						
NZIG	Nacozari, Sono	4.09	86	*e*P	Pn	03 02 34.2	+0.5
NZIG				*i* S	Sn	03 03 22.9	+1.2
121A	Cookes Peak, D	6.03	65	*e*P	Pn	03 03 00.8	+0.5
121A				⇑*i*S	Sn	03 04 10.7	+1.2
LPIG	La Paz	7.01	149	LR	LR	03 06 05.6	
	comp=N,293nm,19.7s,baz=346,slow=38						
ANMO	Albuquerque	8.14	52	Pn	Pn	03 03 30.5	+1.2
	comp=N,0.1nm,0.3s,baz=238,slow=16,SNR=3.5						
ANMO				Lg	Lg	03 05 39.8	
	comp=N,0.2nm,0.3s,baz=337,slow=12,SNR=3.3						
ANMO				LR	LR	03 06 53.9	
	comp=N,152nm,21.7s,baz=246,slow=40						
NVAR	Mina Array Bea	8.88	339	Pn	Pn	03 03 45.8	+6.4
	comp=N,0.1nm,0.3s,baz=170,slow=16,SNR=4.6						
TXAR	Lajitas Array	9.27	93	Pn	Pn	03 03 50.0	+5.4
	comp=N,0.3nm,0.3s,baz=271,slow=12,SNR=6.2						
TXAR				Sn	Sn	03 05 31.2	+2.2
	comp=N,0.1nm,0.3s,baz=265,slow=28,SNR=2.2						
TXAR				Lg	Lg	03 06 26.7	
	comp=N,0.2nm,0.3s,baz=262,slow=28,SNR=6.0						
ELK	Elko	10.57	356	Pn	Pn	03 04 06.3	+3.6
	comp=N,0.1nm,0.3s,baz=198,slow=16,SNR=2.6						
ELK				Lg	Lg	03 07 15.0	
	comp=N,0.1nm,0.3s,baz=33,slow=6.7,SNR=3.5						
ELK				LR	LR	03 07 45.0	
	comp=N,77nm,20.0s,baz=174,slow=36						
PDAR	Pinedale Array	13.12	15	Pn	P	03 04 44.4	-3.5
	comp=N,0.0nm,0.3s,baz=196,slow=8.4,SNR=2.6						
PDAR				Lg	Lg	03 08 35.0	
	baz=197,slow=27,SNR=3.5						
NEW	Newport	18.19	354	P	P	03 05 48.3	+4.6
	comp=N,0.1nm,0.3s,baz=148,slow=12,SNR=5.6						
NEW				LR	LR	03 12 20.4	
	comp=N,144nm,20.8s,baz=267,slow=36						
CMIG	Matias Romero	21.99	122	LR	LR	03 15 38.5	
	comp=N,137nm,18.3s,baz=292,slow=38						
BBB	Bella Bella	24.24	339	LR	LR	03 17 16.1	
	comp=N,179nm,18.9s,baz=265,slow=39						
TKL	Tuckaleechee C	26.13	70	LR	LR	03 17 52.9	
	comp=N,160nm,21.0s,baz=262,slow=38						
ILAR	Eielson Array	40.13	339	P	P	03 09 09.4	+2.8
	comp=N,0.9nm,1.0s,baz=148,slow=7.9,SNR=5.7						
ILAR				ScP	ScP	03 15 05.9	+5.8
	comp=N,0.5nm,0.8s,baz=130,slow=4.4,SNR=5.8						

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*MEX **02** 03:07:47.0±0.3, 30°.11N×114°.35W, h5^{km}, MD4.1*
*ECX **02** 03:07:49.6±4.3, 30°.83N×114°.20W, h0^{km}±61^{km}, MD3.4, ML3.5*

ISC 02 03:07:46.6±2.0, **30°.7N**±0°.1×**114°.11W**±0°.06, **h10**^{km}, **n13**, σ**1**^{s}**.64**/15, **2C-2D, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFX	San Felipe	0.73	300	*e*P	Pb	03 08 01.0	-0.4
SFX				*e*S	Sb	03 08 10.7	-0.8
PIX	Pinacate	1.04	32	*e*P	Pg	03 08 06.4	-0.3
ECBX	El Chinero	1.13	315	*e*P	Pb	03 08 05.6	-2.7
SPX	San Pedro Mart	1.22	287	*e*P	Pb	03 08 09.1	-0.8
SPX				⇑*e*		03 08 34.9	
SPX				⇓*e*		03 08 35.1	
SPX				IAML		03 08 35.1	
	comp=N,1μm,0.5s						
SPIG	San Pedro Mart	1.22	288	*e*P	Pb	03 08 08.8	-1.2
SPIG				*i* S	Sn	03 08 26.2	-0.6
SPIG	San Pedro Mart	1.22	288	*e*P	Pb	03 08 09.5	-0.5
SQX	San Quintin	1.52	267	*e*P	Pn	03 08 13.5	-0.4
VTX	Valle De La Tr	1.60	297	*e*P	Pn	03 08 14.3	-0.8
214A	Organ Pipe Nat	1.69	41	*e*P	Pn	03 08 16.8	+0.5
214A				*i* S	Sg	03 08 43.4	+2.3
SJX	San Joaquin	1.92	305	*e*P	Pg	03 08 26.4	+3.0
CPBX	Cerro Prieto	2.01	330	⇓*e*		03 09 10.6	
CPBX				IAML		03 09 10.6	
	comp=N,1μm,0.8s						
CBX	Cerro Bola	2.72	307	⇑*e*		03 09 29.8	
CBX				IAML		03 09 29.8	
	comp=E,375nm,0.7s						
TJIG	Tijuana	2.80	309	*e*P	Pn	03 08 32.8	+1.3
TJIG				*i* S	Sb	03 09 09.1	-2.0

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*IDC **02** 03:15:07.9±1.2, 35°.69N×135°.68E, h359^{km}±13^{km}, mb2.7/4, mb1 2.9/10, mb1mx2.7/41, mbtmp3.5/10, Error ellipse: s-maj=21.3km s-min=20.0km az=144.0*
*JMA **02** 03:15:07.7±0.3, 35°.75N×135°.57E, h362^{km}±3^{km}, M2.7*

ISC 02 03:15:07.9±0.9, **35°.7N**±0°.1×**135°.58E**±0°.09, **h350**^{km}, **n21**, σ**1**^{s}**.14**/22, **mb2.9**/4, **Western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKY	Yasaka	0.41	255	P	Pn	03 15 53.2	+1.2
JWT	Wachi	0.48	198	P	Pn	03 15 53.3	+1.1
JWT				*e*S	S	03 16 28.4	+0.8
JKSM	Kasumi	0.76	259	P	Pn	03 15 53.8	+1.0
JTNC	Tanabenakahech	1.92	179	P	Pn	03 15 59.8	+1.1
JNG	Nsakai	2.15	71	P	Pn	03 16 01.6	+1.3
JAI	Aioi	2.15	206	P	Pn	03 16 01.6	+1.2
MAT	Matsushiro	2.27	69	P	Pn	03 16 02.5	+1.4
MJAR	Matsushiro Arr	2.27	69	P	Pn	03 16 02.4	+1.3
	0.3nm,0.3s,baz=234,slow=3.5,SNR=15						
JYN	Shimob	2.42	95	P	Pn	03 16 03.7	+1.3
JOD2	Odawara 2	2.90	98	P	Pn	03 16 08.1	+1.7
JAG	Ashikaga	3.21	77	P	Pn	03 16 09.4	+0.3
JFT	Otama	4.22	64	P	Pn	03 16 19.6	+0.5
JNU	Nakatsue	4.68	237	P	Pn	03 16 25.0	+0.9
	0.5nm,0.3s,baz=180,slow=20,SNR=1.8						
KSRS	Korea Array	6.40	288	P	Pn	03 16 44.0	+0.8
	0.2nm,0.3s,baz=109,slow=12,SNR=8.2						
USRK	Ussuriysk Ar.	8.89	343	P	Pn	03 17 12.9	+0.5
	baz=155,slow=9.5,SNR=8.6						
ASAJ	Asahikawa	9.95	31	P	Pn	03 17 24.4	-0.6
	2.2nm,0.3s,baz=236,slow=12,SNR=5.9						
KLR	Kul'dur	13.77	349	P	P	03 18 08.9	+0.1
	0.1nm,0.3s,baz=226,slow=4.8,SNR=4.5						
SONM	Songino Array	24.74	308	P	P	03 20 00.2	+1.4
	0.4nm,0.4s,baz=111,slow=5.4,SNR=5.0						
MKAR	Makanchi Array	40.83	303	P	P	03 22 16.1	-0.5
	0.4nm,0.7s,baz=87,slow=11,SNR=5.8						
ILAR	Eielson Array	53.08	32	P	P	03 23 48.7	-1.2
	0.3nm,0.7s,baz=269,slow=6.8,SNR=2.0						
WRA	Warramunga Arr	55.39	181	P	P	03 24 05.6	-1.3
	0.6nm,1.1s,baz=358,slow=7.6,SNR=1.8						

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*ISK **02** 03:17:54.8, 38°.29N×26°.59E, h5^{km}, ML2.5/5*
*DDA **02** 03:17:55.5, 38°.25N×26°.56E, h7^{km}±1^{km}, ML2.0*

ISC 02 03:17:55.2±1.1, **38°.29N**±0°.04×**26°.59E**±0°.06, **h6**^{km}±10^{km}, **n8**, σ**0**^{s}**.34**/13, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	Izmir	0.07	2	PG	Pg	03 17 56.8	-0.2
URLA				SG	Sg	03 17 58.3	+0.1
URLA	Izmir	0.07	2	*i* P	Pg	03 17 56.6	-0.3
URLA				*i* S	Sg	03 17 58.5	+0.3
ZEYE	Izmir, Urla-Ze	0.09	235	*i* P	Pg	03 17 57.2	+0.1
ZEYE				IAML		03 17 58.0	
	comp=E,2μm,0.2s						
ZEYE				IAML		03 17 58.0	
	comp=N,2μm,0.2s						
ZEYE				*i* S	Sg	03 17 58.8	+0.3
GCAM	G?zelcaml?	0.78	139	PG	Pg	03 18 10.2	+0.1
GCAM				SG	Sb	03 18 21.4	-0.5
ZEDA	zmir-Bergama	0.78	29	*i* P	Pb	03 18 11.2	0.0
ZEDA				*i* S	Sb	03 18 22.6	+0.6
ZEDA				IAML		03 18 26.0	
	comp=N,42nm,0.2s						
DKL	Dikili	0.82	17	PG	Pg	03 18 10.9	-0.1
AYDB	Zeytinkoy-Aydi	1.08	108	PN	Pg	03 18 16.0	+0.1
APE	Apeiranthos	1.48	215	PN	Pb	03 18 22.9	-0.3

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*JMA **02** 03:27:07.6±0.5, 32°.20N×138°.99E, h337^{km}, M3.3*
*IDC **02** 03:27:07.9±4.2, 31°.86N×137°.84E, h286^{km}±99^{km}, mb2.8/3, mb1 2.9/6, mb1mx2.7/34, mbtmp3.5/6, Error ellipse: s-maj=185.1km s-min=18.6km az=63.0*

ISC 02 03:27:09.5±1.1, **32°.3N**±0°.1×**138°.8E**±0°.1, **h350**^{km}, **n20**, σ**1**^{s}**.56**/21, **mb2.9**/3, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2	1.17	47	P	Pn	03 27 55.9	-0.1
	20nm,0.3s,baz=131,slow=19,SNR=4.4						
JHJ				S	S	03 28 30.9	-2.3
	15nm,0.3s,baz=66,slow=19,SNR=3.3						
TK02	Tokai 2	1.84	333	P	Pn	03 27 57.8	-1.5
HMMJ	Hamamatsu 2	2.68	341	P	Pn	03 28 04.8	-1.2
JOD2	Odawara 2	2.95	5	P	Pn	03 28 07.2	-1.2
BSO1	Boso 1	2.98	38	P	Pn	03 28 06.7	-1.2
JNY	Yasuok	3.13	346	P	Pn	03 28 09.3	-0.7
JYN	Shimob	3.18	357	P	Pn	03 28 10.0	-0.5
JAO	Obara	3.20	337	P	Pn	03 28 09.6	-1.1
JHU	Hanno	3.55	7	P	Pn	03 28 12.7	-1.2
JRY	Ryogami san	3.69	2	P	Pn	03 28 14.7	-0.7
JAI	Aioi	3.91	293	P	Pn	03 28 14.4	-3.1
JYT	Yasato	4.08	16	P	Pn	03 28 16.9	-2.3
JAG	Ashikaga	4.14	8	P	Pn	03 28 18.1	-1.7
MJAR	Matsushiro Arr	4.24	354	P	Pn	03 28 19.9	-1.0
	0.2nm,0.3s,baz=177,slow=11,SNR=6.6						
MAT	Matsushiro	4.24	354	P	Pn	03 28 20.0	-0.9
JHO	Hitachi	4.54	19	P	Pn	03 28 22.1	-1.9
USRK	Ussuriysk Ar.	13.00	338	P	Pn	03 30 03.9	+1.1
	baz=141,slow=9.3,SNR=2.7						
SONM	Songino Array	28.96	312	P	P	03 32 39.5	+1.6
	0.4nm,0.6s,baz=107,slow=9.1,SNR=1.9						
MKAR	Makanchi Array	44.94	306	P	P	03 34 51.6	+0.9
	0.2nm,0.6s,baz=86,slow=9.3,SNR=6.3						
WRA	Warramunga Arr	52.13	185	P	P	03 35 45.4	+0.2
	0.3nm,0.3s,baz=0.0,slow=7.7,SNR=11						

IDC 02 03:39:12.1±1.8, **5°.91S**×**146°.54E**, **h0**^{km}, **mb3.1**/2, **mb1 3.6**/4, **mb1mx3.3**/31, **mbtmp3.3**/4, **ML3.3**/1, **MS3.5**/1, **Ms1 3.5**/1, **ms1mx2.6**/13, **Error ellipse: s-maj=64.0km s-min=28.9km az=112.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.53	170	Pn	Pn	03 40 08.4	+0.2
	1.4nm,0.3s,baz=291,slow=8.6,SNR=2.5						
PMG				Sn	Sn	03 40 48.2	-2.5
	5.4nm,0.3s,baz=179,slow=18,SNR=6.0						
WRA	Warramunga Arr	18.31	219	P	P	03 43 28.3	+0.3
	0.1nm,0.3s,baz=43,slow=12,SNR=6.2						
ASAR	Alice Springs	21.44	213	P	P	03 44 01.1	-1.0
	0.4nm,0.6s,baz=55,slow=9.0,SNR=3.4						
PSI	Prapat	48.33	279	LR	LR	04 11 09.8	
	comp=Z,50nm,19.6s,baz=92,slow=40						
ILAR	Eielson Array	85.58	23	P	P	03 51 52.4	+0.3
	0.4nm,1.0s,baz=246,slow=6.8,SNR=4.1						

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*MAN **02** 04:03:59.8, 17°.91N×120°.29E, h16^{km}, mb4.5, ML3.4, MS3.2*
MAN INTENSITY I - SINAIT ILOCOS SUR.
*NEIC **02** 04:03:59.1±1.8, 17°.84N±0°.07×120°.2E±0°.1, h49^{km}±7^{km}, mb4.4/21, Error ellipse: s-maj=14.8km s-min=8.9km az=70.0*
*IDC **02** 04:04:01.8±3.0, 17°.91N×120°.37E, h80^{km}±29^{km}, mb3.6/12, mb1 3.8/13, mb1mx3.5/44, mbtmp4.0/13, MS3.2/4, Ms1 3.2/4, ms1mx2.9/31, Error ellipse: s-maj=26.7km s-min=14.0km az=73.0*

ISC 02 04:03:57.3±0.5, **17°.88N**±0°.06×**120°.10E**±0°.06, **h35**^{km}, **n58**, σ**1**^{s}**.15**/60, **mb4.2**/20, **MS2.9**/4, **1C-2D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIPP	Brgy, Tapao	0.34	83	⇑*i*P	Pn	04 04 05.5	-0.2
SIPP				*e*S	Sn	04 04 10.3	-1.2
SIPP	Brgy, Tapao	0.34	83	⇓*i*P	Pn	04 04 05.5	-0.2
SIPP				*e*S	Sn	04 04 10.3	-1.2
SZP	Santa	0.47	134		Pn	04 04 08.6	+1.1
SZP				Sn	Sn	04 04 17.0	+2.4
APYP	Conner	1.09	91	*e*P	Pn	04 04 16.1	+0.1
APYP				*e*S	Sn	04 04 31.0	+1.2
BOLP	Bolinao	1.50	187	*e*P	Pn	04 04 25.8	+4.1
BOLP				*e*S	Sn	04 04 49.8	+10
SGCP	Mt. Cagua	1.89	79	*e*P	Pn	04 04 27.9	+0.9
SGCP				*e*S	Sn	04 04 51.7	+2.2
TGY	Tagaytay City	3.84	168	P	Pn	04 04 59.8	+5.8
	68nm,0.3s,baz=54,slow=10,SNR=2.4						
LQP	Lukban	3.99	160	⇓*e*P	Pn	04 05 04.2	+8.0
TPUB	Ta-pu	5.42	5	Pn	Pn	04 05 18.4	+2.7
YULB	Yu-li	5.60	11	Pn	Pn	04 05 18.6	+0.5
SSLB	Suanglung	5.93	8	Pn	Pn	04 05 22.6	-0.1
YHNB	Yeheng	6.86	10	Pn	Pn	04 05 35.6	+0.1
QIZ	Qiongzhong	9.80	278	Pn	Pn	04 06 14.4	-1.5
JNU	Nakatsue	18.01	31	P	Pn	04 08 04.7	-0.2
	0.4nm,0.3s,baz=216,slow=19,SNR=2.1						
CMAR	Chiang Mai Arr	20.11	275	P	Pn	04 08 32.2	+2.0
	0.9nm,0.3s,baz=88,slow=9.3,SNR=4.9						
CMAR				LR	LR	04 15 49.3	
	comp=Z,31nm,20.0s,baz=200,slow=35						
KSRS	Korea Array	20.68	18	P	P	04 08 33.7	-0.5
	1.4nm,0.6s,baz=202,slow=12,SNR=6.7						
KSRS				LR	LR	04 16 26.2	
	comp=Z,33nm,18.9s,baz=198,slow=36						
SONM	Songino Array	31.92	342	P	P	04 10 18.8	-0.8
	0.4nm,0.7s,baz=164,slow=9.8,SNR=4.1						
SONM				PcP	PcP	04 13 08.4	-1.1
	0.3nm,0.3s,baz=156,slow=4.0,SNR=4.5						
WB0	Warramunga Arr	39.96	159	P	P	04 11 26.2	-2.4
WB0				IAmb	IAmb	04 11 29.7	
	comp=Z,5.4nm,1.4s						
WRA	Warramunga Arr	40.10	159	P	P	04 11 27.9	-1.9
	comp=Z,0.6nm,0.4s,baz=340,slow=9.3,SNR=14						
WRA				PcP	PcP	04 13 34.3	+0.3
	comp=Z,0.2nm,0.4s,baz=340,slow=3.1,SNR=2.3						
WRA	Warramunga Arr	40.10	159	P	P	04 11 28.1	-1.6
WB2	Warramunga Arr	40.10	159	P	P	04 11 27.9	-1.8
WR0	Warramunga Arr	40.19	159	P	P	04 11 29.5	-0.9
WR0				IAmb	IAmb	04 11 47.6	
	comp=Z,4.1nm,1.1s						
MK31	Makanchi Array	42.38	321	P	P	04 11 50.2	+1.9
MKAR	Makanchi Array	42.38	321	P	P	04 11 50.2	+1.9
	comp=Z,2.8nm,0.9s,baz=117,slow=9.0,SNR=23						
MKAR				PcP	PcP	04 13 41.2	0.0
	comp=Z,0.8nm,0.8s,baz=93,slow=4.9,SNR=5.0						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
MKAR	Makanchi Array	42.38	321	P	P	04 11 49.7	+1.4
MAKZ	Makanchi	42.58	321	P	P	04 11 51.6	+1.8
ASAR	Alice Springs	43.44	161	P	P	04 11 56.5	-0.6
	comp=Z,1.1nm,0.5s,baz=338,slow=6.8,SNR=14						
ASAR	Alice Springs	43.44	161	P	P	04 11 56.9	-0.2
KURK	Kurchatov	46.44	324	P	P	04 12 22.1	+1.5
KURK				IAmb	IAmb	04 12 22.7	
	comp=Z,4.4nm,0.8s						
KKAR	Karatay Array	48.71	312	P	P	04 12 39.6	+1.3
BBOO	Buckleboo	52.66	163	P	P	04 13 07.8	-0.4
NRIK	Noril'sk	55.24	347	P	P	04 13 26.1	-0.4
	comp=Z,3.0nm,0.7s,baz=149,slow=8.9,SNR=4.5						
ABKAR	Akbulak array	57.25	317	P	P	04 13 42.0	+0.8
KVAR	Kislovodsk Arr	68.84	311	LR	LR	04 50 52.6	
	comp=Z,94nm,19.0s,baz=87,slow=41						
TTA	Tatalina	71.47	29	P	P	04 15 15.0	+0.8
OBN	Obninsk	71.86	323	LR	LR	04 51 15.1	
	comp=Z,9.5nm,20.1s,baz=186,slow=39						
IMAR	Indian Mountai	72.27	25	P	P	04 15 19.7	+0.9
PPLA	Purkeypile	73.22	29	P	P	04 15 25.3	+0.6
PPLA				IAmb	IAmb	04 15 30.3	
	comp=Z,7.5nm,1.3s						
SUA	Susitna One	74.07	30	P	P	04 15 30.0	+0.3
SUA				IAmb	IAmb	04 15 33.1	
	comp=Z,6.4nm,1.1s						
RND	Reindeer	74.65	28	P	P	04 15 32.6	-0.4
RND				IAmb	IAmb	04 15 33.4	
	comp=Z,5.7nm,0.8s						
MDM	Murphy Dome	74.67	26	P	P	04 15 33.5	+0.5
MDM				IAmb	IAmb	04 15 34.3	
	comp=Z,2.5nm,0.7s						
ARCES	ARCESS Array B	75.00	339	P	P	04 15 33.8	-1.0
	comp=Z,7.0nm,1.1s,baz=81,slow=10,SNR=3.9						
KNK	Knik Glacier	75.17	30	P	P	04 15 35.8	-0.2
ILAR	Eielson Array	75.27	26	P	P	04 15 35.2	-1.2
	comp=Z,0.4nm,0.7s,baz=249,slow=5.3,SNR=7.9						
SCM	Sheep Creek Mo	75.62	29	P	P	04 15 38.9	+0.4
M24K	Tolsona, Glenn	76.10	29	P	P	04 15 42.5	+1.2
FINES	FINESS Array B	76.38	330	P	P	04 15 42.4	-0.4
	comp=Z,1.9nm,0.7s,baz=92,slow=4.6,SNR=6.0						
FINES	FINESS Array B	76.38	330	P	P	04 15 42.7	-0.1
N25K	Chitina, Valde	76.94	29	P	P	04 15 46.9	+0.8
N25K				IAmb	IAmb	04 15 53.7	
	comp=Z,9.7nm,1.2s						
GLB	Gilahina Butte	77.35	29	P	P	04 15 48.7	+0.3
GLB				IAmb	IAmb	04 16 05.0	
	comp=Z,8.0nm,1.4s						
BCAR	Beaver Creek A	77.85	27	P	P	04 15 52.4	+1.2
BARN	Barnard Glacie	78.45	29	P	P	04 15 55.6	+0.9
BURAR	Bucovina Array	80.22	317	P	P	04 16 05.1	+0.6
BUR08	Bucovina Ar. S	80.22	317	P	P	04 16 05.0	+0.5
KWP	Kalwaria Pacla	81.25	319	P	P	04 16 10.7	+0.9
KWP				IAmb	IAmb	04 16 29.4	
	comp=Z,10.0nm,1.3s						
NOA	NORSAR Array B	83.31	332	P	P	04 16 19.2	-1.1
	comp=Z,0.6nm,0.7s,baz=63,slow=8.9,SNR=2.3						
CLL	Collm	86.46	323	*e*P	P	04 16 37.0	+0.7
YKA	Yellowknife Ar	89.15	22	P	P	04 16 49.0	0.0
	comp=Z,0.5nm,0.7s,baz=318,slow=3.9,SNR=13						

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*ZUR **02** 04:05:18.1, 47°.15N×7°.15E, h10^{km}, MLh2.6/63, Error ellipse: s-maj=1.6km s-min=0.5km az=213.0*

*BGR **02** 04:05:18.0±0.5, 47°.18N×7°.11E, h10^{km}, ML2.8/26, Error ellipse: s-maj=3.3km s-min=2.2km az=43.0*

*STR **02** 04:05:18.5±0.4, 47°N±2°×°±°, h17^{km}±3^{km}, MLv2.5/9, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/alpes_taup-2.11 preliminary*

*LDG **02** 04:05:18.5±0.1, 47°.15N×7°.17E, h10^{km}, Ml3.0/31, Error ellipse: s-maj=1.2km s-min=1.0km az=115.0*

*PRU **02** 04:05:21.7±0.0, 47°.14N×7°.40E, h10^{km}*

ISC 02 04:05:17.2±0.8, **47°.15N**±0°.01×**7°.13E**±0°.01, **h18**^{km}±2^{km}, **n163**, σ**1^{s}12**/288, **28C-16D, Switzerland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SBIK	Biel, Kongress	0.08	102	Pg	Pg	04 05 20.4	-0.4
SBIK				Pg	Pg	04 05 20.4	-0.4
	15nm,SNR=18						
SBIK				Sg	Sg	04 05 22.2	-1.0
SNES2	Neuenburg, Obs	0.19	219	⇓Pg	Pg	04 05 22.5	+0.4
SNES2				⇓Pg	Pg	04 05 22.5	+0.4
	2.4nm,SNR=26						
SNES2				Sg	Sg	04 05 25.6	+0.1
MTI03	Mont Terri (fr	0.22	6	⇓Pg	Pg	04 05 23.1	+0.5
	1.4nm,SNR=2.3						
MTI03				⇓Pg	Pg	04 05 23.1	+0.5
MTI03				Sg	Sg	04 05 26.5	+0.2
MTI01	Mont Terri (ME	0.23	6	⇓Pg	Pg	04 05 23.2	+0.5
	0.6nm,SNR=3.4						
MTI01				⇓Pg	Pg	04 05 23.2	+0.5
MTI02	Mont Terri, (H	0.23	6	⇓Pg	Pg	04 05 23.2	+0.5
	0.5nm,SNR=6.6						
MTI02				⇓Pg	Pg	04 05 23.2	+0.5
MTI02				Sg	Sg	04 05 26.6	+0.1
BOURR	Bourrignon	0.25	16	⇓Pg	Pg	04 05 23.6	+0.5
BOURR				⇓Pg	Pg	04 05 23.6	+0.5
	0.9nm,SNR=10						
SOLB	Solothurn Schu	0.27	78	⇑Pg	Pb	04 05 23.7	+0.2
	1.2nm,SNR=5.0						
SOLB				⇑Pg	Pb	04 05 23.7	+0.2
SOLZ	Solothurn, Zeu	0.28	78	Pg	Pb	04 05 23.8	+0.1
SOLZ				Pg	Pb	04 05 23.8	+0.1
	0.7nm,SNR=2.5						
SBERN	Bern, Kleine S	0.29	134	Sg	Sb	04 05 28.6	+0.2
SCOU	Cournillens	0.30	184	⇑Pg	Pb	04 05 24.4	+0.4
SCOU				⇑Pg	Pb	04 05 24.4	+0.4
	0.4nm,SNR=2.7						
SCOU				Sg	Sb	04 05 28.9	+0.4
CHMF	Charmoille	0.34	287	Pg	Pb	04 05 25.3	+0.5
CHMF				Sg	Sb	04 05 30.4	+0.5
STAF	Tafers	0.35	170	⇓Pg	Pb	04 05 25.4	+0.4
	0.3nm,SNR=2.5						
STAF				⇓Pg	Pb	04 05 25.4	+0.4
STAF				Sg	Sb	04 05 30.5	+0.3
TORNY	Torny/Romont	0.40	197	⇑Pg	Pb	04 05 26.3	+0.6
	0.5nm,SNR=4.1						
TORNY				⇑Pg	Pb	04 05 26.3	+0.6
TORNY				Sg	Sb	04 05 32.1	+0.6
BALST	Balsthal	0.43	64	⇑Pg	Pb	04 05 26.5	+0.2
	0.3nm,SNR=2.6						
BALST				⇑Pg	Pb	04 05 26.5	+0.2
BALST	Balsthal	0.43	64	*e*Pg	Pb	04 05 26.5	+0.2
BALST				*e*Sg	Sb	04 05 32.5	0.0
SRER	Reinach, Raine	0.48	41	⇑Pg	Pb	04 05 27.8	+0.7
SRER				⇑Pg	Pb	04 05 27.8	+0.7
	0.3nm,SNR=1.6						
SBIS2	Binningen	0.50	38	⇑Pg	Pb	04 05 28.2	+0.8
	0.5nm,SNR=2.9						
SBIS2				⇑Pg	Pb	04 05 28.2	+0.8
BRANT	Les Verrieres	0.50	245	⇑Pg	Pb	04 05 28.4	+0.9
BRANT				⇑Pg	Pb	04 05 28.4	+0.9
	0.3nm,SNR=2.5						
SBAW	Basel, Wirtsch	0.51	39	Pg	Pb	04 05 28.4	+0.8
SBAW				Pg	Pb	04 05 28.4	+0.8
	0.3nm,SNR=1.2						
WIMIS	Wimmis	0.59	145	⇓Pg	Pb	04 05 29.6	+0.6
WIMIS				⇓Pg	Pb	04 05 29.6	+0.6
	0.2nm,SNR=3.2						
DAGMA	Lutertal, Dagm	0.61	82	⇑Pg	Pb	04 05 29.7	+0.5
DAGMA				⇑Pg	Pb	04 05 29.7	+0.5
	0.3nm,SNR=3.4						
ROTHE	Rothenfluh	0.63	59	⇑Pg	Pb	04 05 30.3	+0.7
ROTHE				⇑Pg	Pb	04 05 30.3	+0.7
	0.4nm,SNR=4.2						
EMMET	Emmethof	0.67	64	⇑Pg	Pb	04 05 31.0	+0.7
	0.7nm,SNR=6.2						
EMMET				⇑Pg	Pb	04 05 31.0	+0.7
HINF	Hinteralfeld	0.69	344	*e*Pg	Pb	04 05 31.3	+0.6
HINF				*e*Sg	Sb	04 05 40.4	+0.5
	65nm,0.3s						
MOF	Molkenrain	0.70	0	Sg	Sb	04 05 41.2	+1.0
MOF	Molkenrain	0.70	0	Pg	Pb	04 05 32.0	+1.1
MOF	Molkenrain	0.70	0	Sg	Sb	04 05 41.2	+1.0
SULZ	Cheisacher	0.77	60	⇑Pn	Pb	04 05 32.9	+0.8
	0.6nm,SNR=6.7						
SULZ				⇑Pn	Pb	04 05 32.9	+0.8
SULZ	Cheisacher	0.77	60	*e*Pg	Pb	04 05 32.8	+0.8
SULZ				*e*Sg	Sb	04 05 43.4	+1.3
HAMIK	Hmikon, Dlik	0.78	83	⇑Pn	Pb	04 05 33.0	+0.7
	0.4nm,SNR=1.8						
SENIN	Lac Senin/Sane	0.80	172	Pn	Pb	04 05 33.2	+0.6
SENIN				Pn	Pb	04 05 33.2	+0.6
	0.4nm,SNR=4.3						
HASLI	Hasliberg/Brie	0.80	119	Pn	Pb	04 05 33.5	+0.8
HASLI				Pn	Pb	04 05 33.5	+0.8
	0.5nm,SNR=7.3						
BOBI	Bbikon, Wasse	0.91	64	⇑Pn	Pn	04 05 35.6	+0.5
FELD	Feldberg im Sc	0.94	39	⇑Pn	Pb	04 05 35.7	+0.7
FELD				Sg	Sb	04 05 47.8	+0.7
METMA	Mettma DE	0.95	53	⇑Pn	Pb	04 05 35.9	+0.8
METMA	Mettma DE	0.95	53	*e*Pg	Pb	04 05 35.9	+0.8
METMA				*e*Sg	Sb	04 05 48.0	+0.8
EWZT2	Wettswil, ZR	0.95	78	Pn	Pb	04 05 36.1	+1.0
KIZ	Kirchzarten	0.97	33	Pn	Pn	04 05 36.4	+0.5
KIZ				Sg	Sb	04 05 48.6	+0.8
KIZ	Kirchzarten	0.97	33	Pg	Pb	04 05 36.0	+0.6
FIESA	Fiescheralp	0.98	136	Pn	Pb	04 05 36.9	+1.0
HAU	Haudompre	1.01	328	*e*Pg	Pn	04 05 37.2	+0.8
HAU	Haudompre	1.01	328	*e*Pn	Pn	04 05 37.8	+1.4
HAU				*e*Sg	Sb	04 05 50.3	+1.3
	86nm,0.2s						
BERGE	Lenzkirch (DE)	1.01	44	⇑Pn	Pb	04 05 36.7	+0.5
BERGE	Lenzkirch (DE)	1.01	44	*e*Pg	Pb	04 05 36.7	+0.5
BERGE				*e*Sg	Sb	04 05 50.5	+1.3
ZUR	Degenried	1.01	77	Pn	Pn	04 05 37.2	+0.7
ELFMC	Lycee	1.03	76	Sg	Sn	04 05 51.3	+0.6
ECH	Echery	1.06	1	Pn	Pb	04 05 37.8	+0.6
ECH	Echery	1.06	1	Pg	Pb	04 05 37.7	+0.6
ECH				Pn	Pn	04 05 38.8	+1.6
ECH				Sg	Sn	04 05 53.0	+1.4
ECH	Echery	1.06	1	Pg	Pb	04 05 37.8	+0.6
ECH				Pn	Pn	04 05 38.9	+1.6
ECH				Sg	Sn	04 05 53.0	+1.4
ECH	Echery	1.06	1	Pg	Pb	04 05 37.7	+0.6
ECH				Pn	Pn	04 05 38.8	+1.6
ECH				Sg	Sn	04 05 53.0	+1.4
ECH	Echery	1.06	1	*e*Pg	Pb	04 05 37.7	+0.6
ECH				*e*Sg	Sg	04 05 51.3	-0.6
STIEG	Stiegenhof Hun	1.09	71	Pn	Pn	04 05 38.4	+0.8
SLE	Schleitheim	1.11	56	⇑Pn	Pb	04 05 38.2	+0.3
SLE	Schleitheim	1.11	56	*e*Pg	Pb	04 05 38.2	+0.3
SLE				*e*Sg	Sb	04 05 53.0	+1.0
WILA	Wila	1.24	77	*e*Pg	Pg	04 05 41.9	+0.7
WILA				*e*Sn	Sb	04 05 56.5	+0.8
WILA				*e*Sg	Sn	04 05 58.6	+2.7
CDF	Champ du Feu	1.27	4	*e*Pn	Pg	04 05 41.2	-0.5
CDF				*e*Sg	Sg	04 05 57.6	-0.7
	55nm,0.3s						
WLS	Welschbruch	1.27	7	Pg	Pn	04 05 40.5	+0.4
WLS				Pn	Pg	04 05 42.3	+0.5
WLS				Sg	Sn	04 05 58.8	+2.1
LLS	Linth-Limmern	1.32	103	Pn	Pg	04 05 42.7	-0.1
SATI	Passo dei Sala	1.37	158	P	Pg	04 05 44.4	+0.6
EMING	Emmingen-Lipti	1.38	57	*e*Pg	Pg	04 05 44.0	+0.2
EMING				*e*Sn	Sb	04 05 59.7	+0.1
EMING				*e*Sg	Sg	04 06 02.1	+0.3
PANIX	Pigniu (Panix)	1.40	103	⇓Pn	Pg	04 05 43.8	-0.4
BFO	Black Forest	1.43	34	*e*Pn	Pn	04 05 42.8	+0.6
BFO				*e*Pg	Pg	04 05 45.1	+0.3
WALHA	Wallhausen, DE	1.48	65	*e*Pg	Pg	04 05 45.8	0.0
WALHA				*e*Sn	Sn	04 06 02.1	+0.3
WALHA				*e*Sg	Sg	04 06 05.2	+0.2
RSL	Roselend	1.50	194	Pn	Pb	04 05 45.0	+0.3
RSL				Pg	Pg	04 05 47.0	+0.7
RSL				Sg	Sg	04 06 07.5	+1.6
PLONS	Plons/SG	1.54	93	Pn	Pb	04 05 45.5	+0.3
PLONS	Plons/SG	1.54	93	*e*Pg	Pg	04 05 47.1	+0.2
PLONS				*e*Sn	Sn	04 06 04.1	+0.7
PLONS				*e*Sg	Sg	04 06 07.3	+0.3
OG35	Corcelles	1.54	225	Pn	Pn	04 05 44.8	+1.0
OG35				Pg	Pg	04 05 47.6	+0.7
OG35				Sg	Sg	04 06 07.6	+0.5
CIRO	Champorcher	1.58	169	P	Pn	04 05 43.9	-0.6
LPL	La Plagne	1.66	190	*e*Pn	Pn	04 05 46.8	+1.2
LPL	La Plagne	1.66	190	*e*Pg	Pg	04 05 49.5	+0.3
LPL				*e*Sg	Sg	04 06 11.2	+0.4
	40nm,0.4s						
LPG	La Plagne	1.68	189	*e*Pn	Pn	04 05 46.9	+1.0
LPG	La Plagne	1.68	189	*e*Pg	Pg	04 05 49.9	+0.4
LPG				*e*Sg	Sg	04 06 11.7	+0.4
	34nm,0.3s						
LSD	Lago del Serru	1.69	180	P	Pg	04 05 50.3	+0.5
PAGF	Fort de Pagny	1.69	327	*e*Pn	Pn	04 05 47.2	+1.3
PAGF	Fort de Pagny	1.69	327	*e*Pg	Pg	04 05 49.7	-0.1
PAGF				*e*Sg	Sg	04 06 11.8	-0.1
	22nm,0.2s						
TRAV	Traversella	1.69	165	P	Pb	04 05 48.9	+1.1
SFTF	Sexfontaines	1.76	307	*e*Pn	Pn	04 05 48.1	+1.3
	baz=131						
SFTF	Sexfontaines	1.76	307	*e*Pg	Pg	04 05 51.4	+0.3
SFTF				*e*Sg	Sg	04 06 14.2	+0.1
	30nm,0.2s						
MUGIO	Muggio	1.80	132	⇓Pn	Pb	04 05 49.8	+0.1
OGSM	Saint Maurice	1.83	213	Pg	Pg	04 05 53.0	+0.5
OGSM				Sg	Sg	04 06 16.7	+0.4
DAVA	Damuels	1.88	85	*e*Pn	Pn	04 05 50.1	+1.6
	0.4nm,0.1s,SNR=9.3						
DAVA				Pg	Pg	04 05 53.7	+0.3
	2.3nm,0.1s						
DAVA				Sg	Sg	04 06 17.8	0.0
	40nm,0.2s						
DAVA	Damuels	1.88	85	*e*Pg	Pg	04 05 53.5	+0.2
DAVA				*e*Sg	Sg	04 06 18.0	+0.2
MEZF	Maizieres J’vi	1.95	315	*e*Pn	Pn	04 05 50.6	+1.3
	baz=137						
MEZF	Maizieres J’vi	1.95	315	*e*Pg	Pg	04 05 55.1	+0.5
MEZF				*e*Sg	Sg	04 06 20.2	+0.3
	42nm,0.3s						
OGMO	Fort Saint-Gob	1.97	189	Pg	Pg	04 05 55.4	+0.3
SAVF	Savonnieres en	1.99	318	*e*Pn	Pn	04 05 51.2	+1.3
SAVF	Savonnieres en	1.99	318	*e*Pg	Pg	04 05 55.4	-0.1
SAVF				*e*Sn	Sn	04 06 15.2	+0.8
	11nm,0.2s						
SAVF				*e*Sg	Sg	04 06 21.1	-0.3
RSP	Reno Superiore	2.01	177	P	Pb	04 05 52.9	-0.3
UBR	Ueberruh	2.09	74	*e*Pg	Pg	04 05 57.4	0.0
UBR				*e*Sn	Sn	04 06 16.7	-0.2
UBR				*e*Sg	Sg	04 06 24.7	+0.1
STU	Stuttgart	2.13	40	*e*Pg	Pg	04 05 57.8	-0.3
STU				*e*Sg	Sg	04 06 25.0	-0.9
OBER	Oberstdorf	2.17	82	*e*Pg	Pg	04 05 59.0	+0.1
OBER				*e*Sg	Sg	04 06 27.0	0.0
LOR	Lormes	2.23	274	*e*Pn	Pn	04 05 54.6	+1.3
	baz=96						
LOR	Lormes	2.23	274	*e*Pg	Pg	04 06 00.1	0.0
LOR				*e*Sg	Sg	04 06 29.0	-0.1
	34nm,0.2s						
SMF	Signal de Mont	2.31	259	*e*Pn	Pn	04 05 55.5	+1.1
SMF	Signal de Mont	2.31	259	*e*Pg	Pg	04 06 01.7	+0.1
SMF				*e*Sn	Sn	04 06 23.5	+1.2
SMF				*e*Sg	Sg	04 06 31.6	0.0
	28nm,0.3s						
ORIF	Oris-en-Rattie	2.40	202	*e*Pn	Pn	04 05 57.0	+1.4
ORIF	Oris-en-Rattie	2.40	202	*e*Pg	Pg	04 06 02.8	-0.4
ORIF				*e*Sn	Sn	04 06 25.1	+0.6
ORIF				*e*Sg	Sg	04 06 34.0	-0.3
	26nm,0.3s						
MBDF	Montbardon	2.44	186	*e*Pn	Pn	04 05 57.5	+1.3
MBDF	Montbardon	2.44	186	*e*Pg	Pg	04 06 03.8	-0.2
MBDF				*e*Sn	Sn	04 06 25.3	-0.3
MBDF				*e*Sg	Sg	04 06 34.9	-0.7
	23nm,0.5s						
FETA	Feichten	2.46	92	*e*Pn	Pb	04 06 01.0	0.0
	0.2nm,0.1s						
SSF	Saint Saulge	2.48	269	*e*Pn	Pn	04 05 58.1	+1.5
SSF	Saint Saulge	2.48	269	*e*Pg	Pg	04 06 04.9	+0.2
SSF				*e*Sg	Sg	04 06 36.6	-0.3
	12nm,0.2s						
RETA	Reutte	2.49	81	Pg	Pg	04 06 04.9	-0.1
	4.2nm,0.3s,SNR=9.6						
RETA				Sn	Sn	04 06 26.5	-0.4
	1.1nm,0.2s						
RIVT	Riveris	2.57	355	*e*Sg	Sg	04 06 38.3	-1.5
WLF	Walferdange	2.60	346	*e*Sg	Sg	04 06 39.9	-0.8
AVF	Avril sur Loir	2.61	263	*e*Pn	Pn	04 05 59.7	+1.2
AVF	Avril sur Loir	2.61	263	*e*Pg	Pg	04 06 06.9	-0.4
AVF				*e*Sg	Sg	04 06 40.8	-0.4
	7.1nm,0.2s						
MOTA	Moosalm	2.71	84	Pn	Pb	04 06 03.7	-1.6
	0.3nm,0.2s						
MOTA				*e*Sg	Sg	04 06 44.2	-0.3
	3.3nm,0.1s						
PART	Garmisch-Parte	2.73	81	*e*Sg	Sg	04 06 44.2	-0.8
ABH	Alteburg	2.75	6	*e*Sg	Sg	04 06 44.4	-1.0
SQTA	Sankt Quirin	2.78	87	*e*Pn	Pb	04 06 04.7	-1.7
	0.8nm,0.1s						
SQTA				Sg	Sg	04 06 46.3	-0.3
	6.8nm,0.2s						
NORI	Noerdlinger Ri	2.83	55	*e*Pg	Pg	04 06 11.1	-0.3
NORI				*e*Sg	Sg	04 06 47.3	-0.7
VIVF	Saint-Julien-l	2.86	218	*e*Pn	Pn	04 06 03.5	+1.5
VIVF	Saint-Julien-l	2.86	218	*e*P	Pb	04 06 06.1	-1.7
VIVF	Saint-Julien-l	2.86	218	*e*Pg	Pg	04 06 11.7	-0.4
VIVF				*e*Sg	Sg	04 06 48.0	-1.2
	23nm,0.3s						
BODE	Bodenheim	2.87	15	*e*Pn	Pn	04 06 01.8	-0.2
BODE				*e*Sg	Sg	04 06 49.1	-0.2
BE1	Monatshausen	2.87	73	*e*Sg	Sg	04 06 49.0	-0.5
BGF	Bois d'Agland	3.00	260	*e*Pn	Pn	04 06 04.7	+0.9
BGF	Bois d'Agland	3.00	260	*e*Pg	Pg	04 06 14.3	-0.4
BGF				*e*Sg	Sg	04 06 52.9	-0.7
	19nm,0.4s						
WATA	Walderalm	3.03	85	*e*Pn	Pn	04 06 07.6	+3.2
	0.6nm,0.1s						
HYF	Humbligny	3.06	274	*e*Pn	Pn	04 06 06.0	+1.3
HYF				*e*Sg	Sg	04 06 54.9	-0.7
WTTA	Wattenberg	3.07	86	*e*Pn	Pn	04 06 08.3	+3.3
	0.4nm,0.1s						
WTTA				*i* Sn	Sn	04 06 42.4	+1.0
	1.9nm,0.2s						
WTTA				Sg	Sg	04 06 55.8	-0.1
	6.8nm,0.4s						
TNS	Taunus Mts	3.19	15	*e*Sg	Sg	04 06 58.8	-1.1
GIVF	Givet	3.33	333	*e*P	Pb	04 06 13.0	-2.6
GIVF				*e*Sg	Sg	04 07 02.3	-1.7
	4.1nm,0.3s						
SMRF	Simiane la Rot	3.36	200	*e*Pn	Pn	04 06 10.0	+1.2
SMRF				*e*Sg	Sg	04 07 05.2	+0.1
	2.1nm,0.3s						
TCF	Toulx Ste Croi	3.49	257	*e*Pn	Pn	04 06 11.2	+0.6
TCF	Toulx Ste Croi	3.49	257	*e*Pg	Pg	04 06 23.1	-1.0
TCF				*e*Sn	Sn	04 06 50.8	-0.7
TCF				*e*Sg	Sg	04 07 09.5	+0.1
	4.9nm,0.3s						
FRF	La Foret Royal	3.61	186	*e*Pn	Pn	04 06 13.0	+0.9
FRF	La Foret Royal	3.61	186	*e*Pg	Pg	04 06 25.2	-1.1
FRF				*e*Sn	Sn	04 06 53.8	-0.4
	2.1nm,0.3s						
ABTA	Abfaltersbach	3.71	94	*e*Sn	Sn	04 06 58.6	+1.7
	0.7nm,0.3s						
GRF	Grafenberg Arr	3.73	45	*e*Pg	Pg	04 06 27.7	-0.8
GRF				*e*Sg	Sg	04 07 15.3	-1.5
KW1	Garching a.d.	3.82	73	*e*Sg	Sg	04 07 19.9	0.0
LASF	Ste Croix	3.84	218	*e*Pn	Pn	04 06 16.1	+0.8
LASF	Ste Croix	3.84	218	*e*P	Pn	04 06 18.9	+3.6
LASF	Ste Croix	3.84	218	*e*Pg	Pg	04 06 29.5	-1.2
LASF				*e*Sn	Sn	04 07 00.0	0.0
LASF				*e*Sg	Sg	04 07 18.9	-1.5
	6.5nm,0.2s						
LMR	La Mourre	3.84	187	*e*Pg	Pg	04 06 28.9	-1.9
LMR				*e*Sn	Sn	04 06 59.6	-0.4
LMR				*e*Sg	Sg	04 07 17.3	-3.3
HROE	Hohe Rhon--Fla	3.93	29	*e*Pg	Pg	04 06 31.4	-1.2
HROE				*e*Sg	Sg	04 07 21.8	-1.7
CAF	Calviac	4.17	240	*e*Pn	Pn	04 06 21.0	+1.1
CAF	Calviac	4.17	240	*e*P	Pn	04 06 24.8	+4.9
CAF	Calviac	4.17	240	*e*Pg	Pg	04 06 35.8	-1.3
CAF				*e*Sn	Sn	04 07 07.9	-0.3
CAF				*e*Sg	Sg	04 07 29.4	-1.7
	2.8nm,0.2s						
KBA	Koelnbreinsper	4.24	89	*e*Sn	Sn	04 07 10.0	-0.2
KBA				*e*Sg	Sg	04 07 32.5	-1.0
ROTZ	Rotzenmuhle	4.27	50	*e*Sg	Sg	04 07 31.3	-3.0
RJF	Les Rejaudoux	4.31	247	*e*Pn	Pn	04 06 22.6	+0.8
RJF	Les Rejaudoux	4.31	247	*e*Pg	Pg	04 06 38.7	-1.1
RJF				*e*Sg	Sg	04 07 33.6	-2.0
	4.4nm,0.4s						
WET	Wettzell	4.33	60	*e*Pn	Pn	04 06 21.9	-0.2
WET				*e*Pg	Pg	04 06 38.6	-1.5
NKC	Novy Kostel	4.68	47	*e*PG	Pg	04 06 45.5	-1.3
NKC				*e*SG	Sg	04 07 44.8	-2.6
	comp=Z,5.5nm,0.5s						
NKC	Novy Kostel	4.68	47	*e*Pg	Pg	04 06 46.3	-0.5
KHC	Kasperske Hory	4.75	63	*e*PN	Pn	04 06 30.3	+2.4
KHC				*e*PG	Pg	04 06 45.9	-2.2
KHC				*e*SN	Sn	04 07 20.8	-1.6
KHC				*e*SG	Sg	04 07 47.2	-2.4
MFF	Saint Martin d	5.02	266	*e*Pn	Pn	04 06 32.4	+0.9
MFF	Saint Martin d	5.02	266	*e*Pg	Pg	04 06 51.3	-2.0
MFF				*e*Sn	Sn	04 07 27.7	-1.3
MFF				*e*Sg	Sg	04 07 56.2	-2.1
LDF	La Druitiere	5.09	289	*e*Pn	Pn	04 06 33.5	+1.0
LDF	La Druitiere	5.09	289	*e*Pg	Pg	04 06 52.3	-2.3
LDF				*e*Sn	Sn	04 07 29.4	-1.3
	2.9nm,0.2s						
CKRC	Cesky Krumlov	5.10	68	*e*SN	Sn	04 07 29.8	-1.3
CKRC				*e*SG	Sg	04 07 58.3	-2.6
	comp=Z,3.1nm,0.3s						
MTLF	Montolieu	5.15	224	*e*Pg	Pg	04 06 53.6	-2.2
MTLF				*e*Sn	Sn	04 07 31.3	-1.0
MTLF				*e*Sg	Sg	04 08 00.2	-2.3
	3.1nm,0.3s						
FLN	La Foliniere	5.36	290	*e*Pn	Pn	04 06 37.1	+0.9
FLN	La Foliniere	5.36	290	*e*Pg	Pg	04 06 58.1	-1.7
FLN				*e*Sg	Sg	04 08 06.6	-2.6
	6.4nm,0.3s						
GRR	Gorron	5.53	286	*e*Pn	Pn	04 06 39.5	+1.0
GRR	Gorron	5.53	286	*e*Pg	Pg	04 07 00.6	-2.4
GRR				*e*Sn	Sn	04 07 40.1	-1.4
	2.9nm,0.2s						
CLL	Collm	5.66	41	*e*Sg	Sg	04 08 15.0	-3.9
PRU	Pruhonice	5.68	57	*e*SG	Sg	04 08 17.3	-2.1
KRUC	Moravsky	6.49	69	*e*SN	Sn	04 08 01.7	-3.6
KRUC				*e*SG	Sg	04 08 44.8	-0.6
SGMF	Saint Gilles	6.63	283	*e*Pn	Pn	04 06 54.4	+0.8
QUIF	Quistinic	7.01	280	*e*Pn	Pn	04 06 59.6	+0.7

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*GCG **02** 04:17:44.0±0.4, 13°.44N×90°.94W, h15^{km}±3^{km}, MD3.6*

*SNET **02** 04:17:47.6±1.0, 13°.45N×90°.70W, h17^{km}±6^{km}, ML3.4*

ISC 02 04:17:41.8±3.1, **13°.3N**±0°.1×**90°.9W**±0°.1, **h7**^{km}±12^{km}, **n12**, σ**0^{s}72**/17, **Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IXG	Ixpaco	0.94	26	*e*P	Pg	04 18 00.6	+0.7
PCG	Pacaya	1.09	13	*e*P	Pg	04 18 02.6	-0.2
FUG	Fuego 3	1.12	1	*e*P	Pg	04 18 02.7	-0.7
CEVE	Cerro Verde	1.30	67	*e*P	Pg	04 18 07.7	+0.8
CEVE				*e*S	Sn	04 18 24.0	-0.5
CEVE				IAML		04 18 26.0	
	comp=Z,1µm,0.1s						
NBG	Las Nubes	1.35	22	*e*P	Pn	04 18 07.5	+0.1
NBG				*e*S	Sb	04 18 25.6	+0.2
JAYA	Jayaque - finc	1.41	76	*e*P	Pg	04 18 09.2	+0.3
JAYA				*e*S	Sb	04 18 25.8	-1.1
JAYA				IAML		04 18 32.0	
	comp=Z,1µm,0.2s						
CEDA	San Andres	1.50	71	IAML		04 18 34.5	
	comp=Z,859nm,0.3s						
LALI	Alcalda de L	1.51	84	*e*P	Pg	04 18 11.0	+0.3
LALI				*e*S	Sg	04 18 29.5	-0.8
LALI				IAML		04 18 35.0	
	comp=Z,140nm,0.2s						
TACO	Tacachico	1.60	66	*e*P	Pb	04 18 11.8	0.0
TACO				*e*S	Sn	04 18 30.9	-0.6
OPAM	Oficina de Pla	1.66	76	*e*S	Sb	04 18 33.3	-0.8
OPAM				IAML		04 18 35.6	
	comp=Z,553nm,0.5s						
COEG	Centro de Oper	1.95	81	*e*P	Pb	04 18 18.1	+0.4
COEG				IAML		04 18 45.9	
	comp=Z,319nm,0.2s						
MRL	Marmol	2.09	33	*e*P	Pn	04 18 18.1	+0.6
MRL				*e*S	Sn	04 18 45.0	+1.1

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*TEH **02** 04:28:33.7, 31°.19N×57°.23E, h6^{km}, ML3.5*

*THR **02** 04:28:35.7±0.6, 31°.27N×57°.20E, h14^{km}±7^{km}, ML3.1*

ISC 02 04:28:37.0±1.0, **31°.16N**±0°.04×**57°.17E**±0°.04, **h10**^{km}, **n38**, σ**1^{s}15**/40, **Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHGB	Koh Gabri	0.98	217	*e*Pg	Pg	04 28 54.3	-1.7
KHGB				*e*		04 29 11.2	
	comp=Z,99nm,0.6s						
TVBK	TV Kerman	1.22	197	*e*Pn	Pn	04 28 59.4	-1.1

TVBK				*e*		04 29 02.1	
	comp=Z,99nm,0.3s						
KRBR	Kerman	1.23	197	*e*Pg	Pb	04 29 00.7	+0.2
KRBR				IAML		04 29 24.1	
	comp=E,301nm,0.3s						
KRBR				IAML		04 29 25.6	
	comp=N,376nm,0.4s						
KRBR	Kerman	1.23	197	*e*Pg	Pb	04 29 00.7	+0.2
CHMN	Cheshme madani	1.34	166	*e*Pg	Pn	04 29 01.0	-1.1
CHMN				*e*Sg	Sg	04 29 20.8	+0.7
CHMN				*e*		04 29 26.4	
	comp=Z,99nm,0.4s						
IBAF	Bafgh	1.44	288	*e*Pg	Pn	04 29 01.9	-1.4
IBAF				*e*		04 29 26.6	
	comp=Z,99nm,0.4s						
NGRK	Negar Kerman	1.56	194	*e*		04 29 07.7	
	comp=Z,99nm,0.3s						
NGRK				*e*Pg	Pb	04 29 05.8	-0.4
BSRN	Basiran	1.85	64	*e*Pn	Pn	04 29 08.0	-1.0
BSRN				IAML		04 29 37.8	
	comp=N,153nm,0.4s						
BSRN				IAML		04 29 40.0	
	comp=E,112nm,0.4s						
BSRN	Basiran	1.85	64	*e*Pn	Pn	04 29 08.0	-1.0
TPRV	Parvadeh(Tabas	1.91	348	*e*		04 29 39.0	
	comp=Z,99nm,0.4s						
TPRV				*e*Pn	Pn	04 29 08.5	-1.2
IKOO	Kooshah	2.01	51	*e*Pn	Pn	04 29 10.2	-1.0
IKOO				*e*		04 29 40.6	
	comp=Z,99nm,0.4s						
ITEG	Tejag	2.19	37	*e*Pn	Pn	04 29 12.4	-1.3
ITEG				*e*		04 29 54.2	
	comp=Z,99nm,0.4s						
IMEH	Mehriz	2.20	277	*e*Pn	Pn	04 29 14.0	+0.1
IMEH				*e*		04 29 48.3	
	comp=Z,99nm,0.5s						
KBAM	BAM	2.31	151	*e*Pn	Pn	04 29 15.0	-0.2
KBAM				*e*		04 29 55.3	
	comp=Z,99nm,0.3s						
TKDS	Koohdasht(Taba	2.44	359	*e*Pn	Pn	04 29 16.2	-0.9
TKDS				*e*		04 30 00.1	
	comp=Z,99nm,0.6s						
NHDN	Nehbandan	2.48	84	*e*	Sg	04 30 00.8	+4.1
	comp=Z,99nm,0.8s						
TABS	Tabas	2.48	359	*e*Pn	Pn	04 29 16.6	-1.0
TABS				IAML		04 30 01.1	
	comp=N,93nm,0.4s						
TABS	Tabas	2.48	359	*e*Pn	Pn	04 29 16.6	-1.0
YZKH	Yazd	2.51	300	*e*Pn	Pn	04 29 17.9	-0.2
YZKH				*e*Sg	Sb	04 29 53.4	+0.1
YZKH				IAML		04 30 01.7	
	comp=E,95nm,0.6s						
YZKH				IAML		04 30 03.6	
	comp=N,95nm,0.7s						
YZKH	Yazd	2.51	300	*e*Pn	Pn	04 29 17.9	-0.2
ICHK	Chekchek	2.59	295	*e*Pn	Pn	04 29 19.5	+0.3
ICHK				*e*		04 30 02.3	
	comp=Z,99nm,0.5s						
AFRZ	Afriz	2.75	34	*e*Pn	Pn	04 29 20.1	-1.2
IDAH	Dahanechah	2.78	55	*e*Pn	Pn	04 29 21.7	-0.2
TNSJ	Nastanj	2.83	351	*e*Pn	Pn	04 29 21.2	-1.2
TNSJ				*e*		04 30 13.2	
	comp=Z,99nm,0.6s						
IMON	Monand	2.93	46	*e*Pn	Pn	04 29 24.4	+0.5
IMON				*e*		04 29 36.7	
	comp=Z,99nm,0.4s						
ISAD	Sadrabad	3.07	285	*e*Pn	Pn	04 29 26.2	+0.4
ISAD				*e*		04 30 24.3	
	comp=Z,99nm,0.4s						
ANAR	Anarak	3.55	306	*e*Pn	Pn	04 29 32.5	+0.2
SHRT	Shahrakht	3.62	46	*e*Pn	Pn	04 29 31.9	-1.3
SHRT	Shahrakht	3.62	46	*e*Pn	Pn	04 29 31.9	-1.3
BNDS	Bandar-Abbas	3.85	193	*e*Pn	Pn	04 29 38.3	+1.8
BNDS	Bandar-Abbas	3.85	193	*e*Pn	Pn	04 29 38.3	+1.8
IRAM	Ramesheh	4.14	280	*e*Pn	Pn	04 29 41.5	+1.0
IZEF	Zefreh	4.46	294	*e*Pn	Pn	04 29 45.9	+1.0
IANJ	Anjilo	5.08	328	*e*Pn	Pn	04 29 53.7	+0.2
SBZV	Sabzevar	5.23	4	*e*Pn	Pn	04 29 55.4	0.0
IAKL	Akhelmad	5.58	13	*e*Pn	Pn	04 30 00.4	0.0
IMYA	Miami	5.71	25	*e*Pn	Pn	04 30 02.3	+0.2
ISFR	Sfrayin	5.92	6	*e*Pn	Pn	04 30 05.1	+0.1

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*AEIC **02** 04:29:11±2.7, 56.°72N±0.°05×169.°25W±0.°10, h37^{km}±5^{km}, Error ellipse: s-maj=9.4km s-min=5.7km az=223.0*

*IDC **02** 04:29:11.8±0.8, 56.°74N×169.°07W, h0^{km}, mb4.1/21, mb1 4.2/24, mb1mx4.0/73, mbtmp4.1/24, ML3.8/3, MS3.4/6, Ms1 3.4/6, ms1mx3.0/32, Error ellipse: s-maj=25.6km s-min=12.1km az=9.0*

*NEIC **02** 04:29:14.4±2.4, 56.°70N±0.°04×169.°18W±0.°09, h18^{km}±4^{km}, mb4.4/49, ML4.1(AEIC), Error ellipse: s-maj=6.8km s-min=5.7km az=78.0*

ISC 02 04:29:13.2±0.4**, 56.°68N**±0.°06×**169.°17W**±0.°05**, h10**^{km}**, n170,** σ**1**^{s}**36**/171**, mb4.4**/46**, MS3.3**/4**, 1D, Pribilof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPIA	Saint Paul Isl	0.78	311		Pg	04 29 27.8	-0.4
SPIA	Saint Paul Isl	0.78	311		Sg	04 29 35.8	-2.5
AKGG	Akutan Green G	3.07	143		Pn	04 29 59.5	-2.3
AKGG					Sn	04 30 36.1	-2.4
MSW	Makushin Switc	3.08	153		Pn	04 30 00.1	-1.9
MSW					Sn	04 30 37.5	-1.3
AKRB	Akutan Reef Bi	3.10	144		Pn	04 30 00.8	-1.4
AKRB					Sn	04 30 39.6	+0.3
AKLV	Akutan Long Va	3.11	143		Pn	04 30 00.7	-1.7
MNAT	Makushin Natee	3.14	152		Pn	04 30 01.2	-1.5
MNAT					Sn	04 30 40.2	+0.1
MAPS	Pakushin South	3.14	155		Pn	04 30 01.8	-0.9
MGOD	Makushin Gods	3.17	155		Pn	04 30 01.8	-1.4
AKBBA	Akutan Broad B	3.17	143		Pn	04 30 00.5	-2.6
MREP	Makushin Rep't	3.19	153		Pn	04 30 02.7	-0.7
AKUT	Akutan	3.20	141	Pn	Pn	04 30 02.2	-1.2
UNV	Unalaska Valle	3.22	151	Pn	Pn	04 30 02.8	-1.0
WESP	Westdahl Peak	3.34	129		Pn	04 30 03.9	-1.6
OKSP	Okmok Steeple	3.47	171		Pn	04 30 06.2	-1.1
NIKH	Nikolski High	3.72	177	Pn	Pn	04 30 11.2	+0.6
FALS	False Pass	3.72	117	Pn	Pn	04 30 13.4	+2.7
SDPT	Sand Point	5.05	102	Pn	Pn	04 30 28.0	-0.9
ATKA	Atka Island	5.36	215	Pn	Pn	04 30 32.9	-0.2
CHGN	Chignik	5.97	89	Pn	Pn	04 30 40.4	-1.1
ADK	Adak	6.51	226	Pn	Pn	04 30 47.0	-2.0
GAMB	Gambell	7.24	351	Pn	Pn	04 30 58.2	-0.7
ANM	Nome	8.13	12	Pn	Pn	04 31 10.3	-0.9
SII	Sitkinak Islan	8.27	85	Pn	Pn	04 31 16.1	+3.0
AMKA	Amchitka	8.61	237	Pn	Pn	04 31 19.8	+2.0
OHAK	Old Harbor	8.70	80	Pn	Pn	04 31 19.2	+0.2
KDAK	Kodiak Island	9.06	76	Pn	Pn	04 31 24.9	+0.9
	1.0nm,0.3s,baz=288,slow=7.5,SNR=11						
KDAK				LR	LR	04 35 01.6	
	comp=Z,213nm,20.9s,baz=280,slow=39						
KDAK	Kodiak Island	9.06	76	Pn	Pn	04 31 25.1	+1.1
TTA	Tatalina	9.11	41	Pn	Pn	04 31 25.5	+0.8
RSO	Redoubt South	9.37	59	Pn	Pn	04 31 31.2	+2.9
CNPM	China Poot	9.91	66	Pn	Pn	04 31 36.6	+1.1
BRLK	Bradley Lake	10.12	65	Pn	Pn	04 31 38.7	+0.2
SKT	Skwentna	10.44	52	Pn	Pn	04 31 42.5	-0.4
PPLA	Purkeypile	10.56	47	Pn	Pn	04 31 45.4	+0.8
SUA	Susitna One	10.61	56	Pn	Pn	04 31 46.7	+1.5
KTH	Kantishna Hill	11.38	45	Pn	Pn	04 31 56.6	+0.8
PMR	Palmer	11.38	56	Pn	Pn	04 31 56.2	+0.5
GHO	Glory Hole Cre	11.53	55	Pn	Pn	04 31 58.9	+1.1
TRF	Thorofare Moun	11.59	46	Pn	Pn	04 32 03.4	+4.8
SML	Sawmill	11.81	56	Pn	Pn	04 32 04.3	+2.7
IMAR	Indian Mountai	11.87	32		Pn	04 32 05.5	+3.1
RND	Reindeer	12.15	48	Pn	Pn	04 32 11.5	+5.3
DHY	Denali Highway	12.64	51	Pn	Pn	04 32 15.5	+2.5
I23K	Minto, Yukon-K	12.78	40	Pn	Pn	04 32 14.0	-0.7
KLU	Klutina	12.85	58	Pn	Pn	04 32 16.4	+0.6
M24K	Tolsona, Glenn	12.87	56	Pn	Pn	04 32 20.3	+4.2
MDM	Murphy Dome	13.10	42	Pn	Pn	04 32 19.9	+0.8
CCB	Clear Creek Bu	13.11	44	Pn	Pn	04 32 22.1	+2.9
HDA	Harding Lake	13.33	45	Pn	Pn	04 32 26.8	+4.5
PAX	Paxson	13.43	52	Pn	Pn	04 32 27.6	+3.9
N25K	Chitina, Valde	13.49	58	Pn	Pn	04 32 24.5	-0.1
IL31		13.52	44	Pn	Pn	04 32 27.8	+3.1
ILAR	Eielson Array	13.52	44	Pn	Pn	04 32 25.1	+0.3
	0.1nm,0.3s,baz=230,slow=12,SNR=16						
ILAR				LR	LR	04 37 48.2	
	comp=Z,188nm,19.7s,baz=267,slow=38						
ILAR	Eielson Array	13.52	44	Pn	Pn	04 32 26.7	+1.9
COLD	Coldfoot	13.76	32	Pn	Pn	04 32 32.1	+4.0
GLB	Gilahina Butte	13.84	59	Pn	Pn	04 32 31.1	+1.9
VRDI	Verde Repeater	13.98	60	P	P	04 32 37.0	-2.4
CRQM	Cirque	14.08	62	Pn	Pn	04 32 33.7	+1.0
DOT	Dot Lake	14.24	50	P	P	04 32 41.2	-0.9
PRP	Porcupine Dome	14.37	42	P	P	04 32 41.5	-2.1
ISLE	Juniper Island	14.46	63	Pn	Pn	04 32 37.1	-0.7
BALM	Baldy	14.49	61	Pn	Pn	04 32 39.1	+0.9
BARN	Barnard Glacie	14.83	61	P	P	04 32 47.6	-1.2
TOLK	Toolik Lake Re	14.90	29	P	P	04 32 48.5	-0.9
FYU	Fort Yukon	14.97	39	P	P	04 32 50.4	+0.3
CTGM	Chitina Glacie	14.98	62	P	P	04 32 48.5	-1.9
BCAR	Beaver Creek A	15.07	54		Pn	04 32 45.1	-1.0
A21K	Barrow	15.64	15	P	P	04 32 56.6	-0.9
A21K				IAmb	IAmb	04 33 01.8	
	comp=Z,19nm,1.0s						
BMAR	Burnt Mountain	15.64	37		Pn	04 32 52.7	-0.7
EGAK	Eagle	15.79	48	P	P	04 32 59.3	0.0
DAWY	Dawson	16.34	51	P	P	04 33 06.3	+0.9
DAWY				IAmb	IAmb	04 33 11.5	
	comp=Z,38nm,1.2s						
HYT	Haines Junctio	16.84	63	P	P	04 33 11.0	-0.1
WHY	Whitehorse	18.13	63	P	P	04 33 25.4	+0.1
WHY				IAmb	IAmb	04 33 30.3	
	comp=Z,24nm,1.3s						
PEA0B	Petropavlovsk-	19.27	273	P	P	04 33 37.7	0.0
PETK	Petropavlovsk-	19.27	273	P	Pn	04 33 39.4	+0.6
	comp=Z,0.5nm,0.3s,baz=83,slow=12,SNR=12						
PETK	Petropavlovsk-	19.27	273	P	Pn	04 33 40.6	+1.8
INK	Inuvik	19.80	40	P	P	04 33 43.3	-0.1
	comp=Z,0.4nm,0.3s,baz=240,slow=7.9,SNR=14						
INK	Inuvik	19.80	40	P	P	04 33 43.2	-0.1
INK				IAmb	IAmb	04 33 50.3	
	comp=Z,13nm,1.1s						
CRAG	Craig	20.01	78	P	Pn	04 33 46.7	-0.7
SEY	Seymchan	20.07	304	P	P	04 33 46.6	+0.2
	comp=Z,2.8nm,0.5s,baz=103,slow=10,SNR=14						
DLBC	Dease Lake	20.87	69	P	P	04 33 54.7	-0.4
	comp=Z,3.8nm,0.9s,baz=288,slow=7.1,SNR=4.3						
DLBC	Dease Lake	20.87	69	P	P	04 33 55.4	+0.3
DLBC				IAmb	IAmb	04 34 09.8	
	comp=Z,20nm,1.4s						
C36M	Paulatuk	23.38	39	P	P	04 34 21.4	-0.1
C36M				IAmb	IAmb	04 34 26.0	
	comp=Z,22nm,1.4s						
YKA	Yellowknife Ar	27.48	55	P	P	04 34 59.1	0.0
	comp=Z,1.5nm,1.0s,baz=279,slow=8.9,SNR=11						
YKA				PcP	PcP	04 38 16.6	-0.4
	comp=Z,0.8nm,0.7s,baz=288,slow=1.9,SNR=11						
YKA				LR	LR	04 46 11.5	
	comp=Z,124nm,20.7s,baz=0.0,slow=37						
JCC	Jacoby Creek,	33.02	99	P	P	04 35 49.2	+0.9
K05A	Summer Lake	33.44	94	P	P	04 35 53.5	+1.2
K05A				IAmb	IAmb	04 35 58.4	
	comp=Z,3.3nm,0.9s						
EUNU	Eureka	33.56	18	P	P	04 35 52.9	+0.2
EUNU				IAmb	IAmb	04 36 09.2	
	comp=Z,7.1nm,1.1s						
BMO	Blue Mountains	34.05	88	P	P	04 35 58.7	+1.4
MOD	Modoc Plateau	34.32	94	P	P	04 36 01.2	+1.4
PAHR	Pah Rah Range	36.34	96	P	P	04 36 17.2	0.0
HLID	Hailey	36.47	87	P	P	04 36 18.4	+0.1
PNTR	Pine Nut	36.66	97	P	P	04 36 20.6	+0.6
PNTR				IAmb	IAmb	04 36 21.3	
	comp=Z,4.8nm,0.9s						
NVAR	Mina Array Bea	37.84	97	P	P	04 36 29.2	-0.8
	comp=Z,1.0nm,0.7s,baz=304,slow=8.5,SNR=12						
NVAR				PcP	PcP	04 38 46.7	+0.4
	comp=Z,0.9nm,0.7s,baz=285,slow=2.1,SNR=8.5						
NVAR	Mina Array Bea	37.84	97	P	P	04 36 30.2	+0.2
TULEG	Thule	38.05	22	P	P	04 36 33.0	+1.9
TULEG				IAmb	IAmb	04 36 36.7	
	comp=Z,5.9nm,0.8s						
FCC	Fort Churchill	38.21	54	P	P	04 36 32.2	-0.4
FCC				IAmb	IAmb	04 36 32.8	
	comp=Z,15nm,1.4s						
HVU	Hansel Valley	38.55	88	P	P	04 36 35.9	-0.1
PDAR	Pinedale Array	39.66	84	P	P	04 36 44.5	-0.8
	comp=Z,0.2nm,0.5s,baz=343,slow=3.1,SNR=4.1						
PDAR	Pinedale Array	39.66	84	P	P	04 36 44.8	-0.5
TPNV	Topopah Spring	40.03	96	P	P	04 36 48.7	+0.4
TPNV				IAmb	IAmb	04 36 55.0	
	comp=Z,8.2nm,1.4s						
PRN	Pahroc Range	40.36	95	P	P	04 36 51.5	+0.5
SRU	San Rafael Swe	41.64	89	P	P	04 37 01.6	0.0
KNB	Kanab	41.87	93	P	P	04 37 03.8	+0.3
ULM	Lac du Bonnet	42.16	66	P	P	04 37 04.4	-1.1
ULM				IAmb	IAmb	04 37 12.0	
	comp=Z,5.7nm,1.2s						
U15A	North Rim	42.59	93	P	P	04 37 09.8	+0.3
W13A	Hualapai Mount	42.69	96	P	P	04 37 10.4	+0.2
NRIK	Noril'sk	42.73	329	P	P	04 37 10.4	+0.5
	comp=Z,1.8nm,0.4s,baz=124,slow=7.3,SNR=3.6						
NRIK	Noril'sk	42.73	329	P	P	04 37 09.4	-0.5
NRIK				IAmb	IAmb	04 37 15.5	
	comp=Z,4.4nm,1.0s						
B35A	Bob, Littlefor	44.45	67	P	P	04 37 23.2	-0.8
B35A				IAmb	IAmb	04 37 25.2	
	comp=Z,16nm,1.4s						
X16A	Lo Mia Camp, P	44.53	95	P	P	04 37 26.0	+0.9
X18A	Snowflake	45.27	93	P	P	04 37 30.2	-0.7
X18A				IAmb	IAmb	04 37 31.6	
	comp=Z,5.6nm,0.8s						
SUMG	Summit	46.63	18	*i* P	P	04 37 42.0	+0.5
	comp=Z,24nm,0.9s						
SUMG	Summit	46.63	18	P	P	04 37 41.4	0.0
SUMG	Summit	46.63	18	*i* P	P	04 37 42.0	+0.5
SUMG				IAmb	IAmb	04 37 43.0	
	comp=Z,24nm,0.9s						
SONM	Songino Array	49.29	298	P	P	04 38 02.7	+0.7
	comp=Z,1.8nm,0.8s,baz=45,slow=7.8,SNR=3.6						
SONM	Songino Array	49.29	298	P	P	04 38 01.7	-0.3
ICESG	Greenland Ices	49.29	21	*i* P	P	04 38 01.7	-0.3
ICESG				IAmb	IAmb	04 38 02.5	
	comp=Z,8.2nm,0.6s						
P38A	Dawn	50.55	76	P	P	04 38 12.0	+0.5
HHC	Hu-ho-hao-te	51.59	288	*e*P	P	04 38 22.1	+2.6
HHC				pmax	pmax		
	comp=Z,11nm,1.0s						
HHC				pmax	pmax		
	comp=Z,120nm,5.1s						
TXAR	Lajitas Array	52.68	92	P	P	04 38 26.9	-0.8
	comp=Z,1.0nm,0.8s,baz=304,slow=6.0,SNR=6.8						
TXAR	Lajitas Array	52.68	92	P	P	04 38 26.4	-1.2
NJ2	Nanjing	54.17	275	*e*P	P	04 38 37.9	-0.6
NJ2				pmax	pmax		
	comp=Z,12nm,0.6s						
L56A	Greenwood	56.92	63	P	P	04 38 58.0	-0.2
H62A	Milan	58.11	56	P	P	04 39 06.0	-0.5
F64A	Sherman	58.39	54	P	P	04 39 07.3	-1.1
GTA	Gaotai	58.69	295	P	P	04 39 11.0	+0.2
GTA				pP	sP	04 39 17.3	+2.1
GTA				sP	pP	04 39 20.5	+6.5
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
SEM	Semipalatinsk	58.89	316	*e*P	P	04 39 10.7	-1.5
	baz=316						
LUPA	Lehigh Univers	59.15	62	P	P	04 39 13.4	-0.4
LZH	Lanzhou	59.17	290	⇓P	P	04 39 16.4	+2.2
LZH				pP	sP	04 39 23.0	+4.4
LZH				sP	pP	04 39 25.7	+8.3
LZH				pmax	pmax		
	comp=Z,15nm,1.1s						
KURK	Kurchatov	59.27	317	P	P	04 39 15.0	+0.6
KURK				IAmb	IAmb	04 39 16.2	
	comp=Z,3.9nm,1.1s						
KURBB	Kurchatov Arra	59.38	317	P	P	04 39 15.3	+0.1
	comp=Z,1.5nm,0.8s,baz=33,slow=7.4,SNR=7.9						
ZSN	Zaisan	59.38	311	*e*P	P	04 39 15.2	-0.1
	comp=Z,1.7nm,0.8s,baz=311						
BVAR	Borovoye Array	60.29	323	P	P	04 39 21.1	-0.3
	comp=Z,1.6nm,0.6s,baz=163,slow=16,SNR=6.9						
BRVK	Borovoye	60.30	323	P	P	04 39 21.6	+0.2
BRVK				IAmb	IAmb	04 39 22.9	
	comp=Z,6.4nm,1.1s						
HODGE	Hodges	60.55	72	P	P	04 39 22.4	-1.1
ARU	Arti	60.85	332	P	P	04 39 24.4	-0.8
	comp=Z,1.0nm,0.3s,baz=21,slow=5.9,SNR=5.1						
MKAR	Makanchi Array	60.97	312	P	P	04 39 25.9	-0.3
	comp=Z,0.6nm,0.7s,baz=45,slow=5.5,SNR=3.7						
MKAR	Makanchi Array	60.97	312	P	P	04 39 25.3	-0.9
WMQ	Urumqi	61.02	306	*e*P	P	04 39 29.2	+2.6
FINES	FINESS Array B	61.61	352	P	P	04 39 29.4	-0.8
	comp=Z,1.5nm,0.7s,baz=339,slow=4.9,SNR=4.8						
FINES	FINESS Array B	61.61	352	P	P	04 39 30.2	0.0
NOA	NORSAR Array B	62.62	360	LR	LR	05 08 04.6	
	comp=Z,14nm,18.1s,baz=165,slow=37						
SHLS	Shalkode	65.09	311	*e*P	P	04 39 52.6	-1.2
	comp=Z,4.9nm,1.2s,baz=311						
KPKS	Kokpek	65.16	312	*e*P	P	04 39 53.8	-0.4
	comp=Z,2.1nm,0.9s,baz=312						
BTLS	Baital	65.69	316	*e*P	P	04 39 57.4	-0.1
	baz=316						
KUU	Kurty	65.75	314	*e*P	P	04 39 56.9	-1.0
	baz=314						
AKTO	Aktyubinsk	66.35	329	P	P	04 40 01.9	+0.3
	comp=Z,5.3nm,0.6s,baz=39,slow=6.8,SNR=15						
ABKAR	Akbulak array	66.84	327	P	P	04 40 05.3	+0.6
ABKAR				IAmb	IAmb	04 40 06.1	
	comp=Z,5.1nm,0.9s						
BELG	Belogornoye	67.17	337	P	P	04 40 06.9	+0.2
	comp=Z,18nm,0.8s,baz=72,slow=3.2,SNR=2.7						
DZA	Taraz	68.55	317	*e*P	P	04 40 15.5	-0.2
	baz=317						
KK31	Karatay Array	68.67	317	P	P	04 40 16.5	0.0
KK31				IAmb	IAmb	04 40 17.8	
	comp=Z,3.8nm,0.9s						
KKAR	Karatay Array	68.67	317	P	P	04 40 16.5	0.0
KSH	Kashi	69.58	312	P	P	04 40 26.4	+4.2
KSH				pmax	pmax		
	comp=Z,4.0nm,0.5s						
KSH				pmax	pmax		
	comp=Z,98nm,5.5s						
AKASG	Malin Array Be	71.91	348	P	P	04 40 35.1	-0.9
	comp=Z,5.4nm,0.6s,baz=15,slow=6.1,SNR=19						
AKASG	Malin Array Be	71.91	348	P	P	04 40 35.4	-0.6
AKBB	Malin Array Si	71.91	348	P	P	04 40 35.3	-0.8
AKBB				IAmb	IAmb	04 40 36.0	
	comp=Z,5.1nm,0.8s						
KWP	Kalwaria Pacla	73.60	352	P	P	04 40 46.9	+0.7
LANS	Liptovska Anna	74.30	354	*e*P	P	04 40 50.3	0.0
KOLS	Kolonicke sedl	74.33	352	*e*P	P	04 40 49.9	-0.5
SIJI	Sorong	74.52	243	P	P	04 40 52.1	+0.2
	comp=Z,4.7nm,0.6s,baz=71,slow=12,SNR=3.5						
GERES	GERESS Array B	74.82	358	P	P	04 40 52.9	-0.5
	comp=Z,0.2nm,0.4s,baz=310,slow=4.7,SNR=4.6						
BUR08	Bucovina Ar. S	75.36	350	P	P	04 40 56.4	-0.1
BUR08				IAmb	IAmb	04 41 01.9	
	comp=Z,4.2nm,1.2s						
BURAR	Bucovina Array	75.39	350	P	P	04 40 56.6	-0.1
CMAR	Chiang Mai Arr	75.81	282	P	P	04 41 00.3	+0.9
	comp=Z,1.2nm,0.4s,baz=17,slow=6.9,SNR=9.9						
CMAR	Chiang Mai Arr	75.81	282	P	P	04 40 59.9	+0.5
KBZ	Khabaz	76.39	337	P	P	04 41 02.8	+0.5
	comp=Z,2.1nm,0.8s,baz=132,slow=5.2,SNR=4.0						
DAVOX	Davos/Dischmat	76.91	1	P	P	04 41 05.0	-0.5
	comp=Z,1.8nm,0.8s,baz=29,slow=13,SNR=2.6						
GEYT	Alibeck	77.62	324	P	P	04 41 10.2	+0.8
	comp=Z,2.1nm,0.6s,baz=230,slow=5.4,SNR=4.2						
GEYT				LR	LR	05 17 24.8	
	comp=Z,44nm,18.4s,baz=310,slow=37						
GEYT	Alibeck	77.62	324	P	P	04 41 10.4	+0.9
BRTR	Keskin Array B	82.05	342	LR	LR	05 22 37.1	
	comp=Z,8.7nm,19.0s,baz=312,slow=39						

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*BYKL **02** 04:30:02.7±0.3, 48.°11N×103.°53E*

*IDC **02** 04:30:05.8±1.4, 48.°25N×103.°75E, h0^{km}, mb3.2/2, mb1 3.2/5, mb1mx3.0/63, mbtmp3.2/5, ML2.4/3, Error ellipse: s-maj=17.2km s-min=10.8km az=36.0*

ISC 02 04:30:06.2±0.9**, 48.°23N**±0.°04×**103.°76E**±0.°03**, h10**^{km}**, n32,** σ**2**^{s}**66**/78**, 1C, Mongolia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	Songino Array	1.82	102	Pg	Pn	04 30 37.4	-0.2
	89nm,0.3s,baz=279,slow=18,SNR=942						
SONM				Lg	Lg	04 31 04.4	
	238nm,0.3s,baz=278,slow=29,SNR=68						
ZAK	Zakamensk	2.17	352	*e*	Pn	04 30 43.3	+0.8
ZAK				*e*Pg	Pb	04 30 44.3	-1.3
ZAK				Pmax			
	115nm,0.4s						
ZAK				Smax			
	436nm,0.3s						
ULN	Ulaanbaatar	2.24	98	⇑*i*Pn	Pn	04 30 42.9	-0.6
ULN				*e*Pg	Pb	04 30 45.6	-1.2
ULN				*e*Sg	Sb	04 31 16.5	+1.8
TLY	Talaya	3.45	359	Pn	Pn	04 31 00.2	+0.2
	0.0nm,0.3s,baz=121,slow=11,SNR=3.7						
TLY				Pg	Pb	04 31 07.0	-0.3
	0.1nm,0.3s,baz=168,slow=12,SNR=32						
TLY				Sn	Sn	04 31 39.1	-1.8
	0.1nm,0.3s,baz=252,slow=4.4,SNR=12						
TLY				Lg	Lg	04 31 54.6	
	0.3nm,0.3s,baz=293,slow=16,SNR=16						
TLY	Talaya	3.45	359	*e*Pn	Pn	04 30 59.9	-0.1
TLY				*e*Pg	Pb	04 31 06.9	-0.5
TLY				*e*PgPg	PnPn	04 31 07.7	+0.3
TLY				*e*Sg	Sg	04 31 54.0	-3.0
TLY				max			
	62nm,0.7s						
TLY				Smax			
	253nm,1.3s						
IVK	Ivanovka	3.60	7	*e*Pn	Pn	04 31 02.1	+0.1
IVK				*e*Pg	Pb	04 31 10.3	+0.5
IVK				*e*		04 31 13.7	
IVK				*e*Sg	Sg	04 31 59.7	-1.9
IVK				max			
	24nm,1.0s						
IVK				Smax			
	90nm,1.1s						
LSTR	Listvyanka	3.70	10	*e*Pn	Pn	04 31 03.6	+0.2
LSTR				*e*Pg	Pb	04 31 12.3	+0.6
LSTR				*e*PgPg	PbPb	04 31 13.2	-1.6
LSTR				*e*Sg	Sg	04 32 03.1	-1.9
LSTR				max			
	17nm,1.1s						
LSTR				Smax			
	98nm,1.5s						
ARS	Arshan	3.79	347	*e*Pn	Pn	04 31 03.1	-1.6
ARS				*e*Pg	Pb	04 31 12.6	-0.5
ARS				*e*PgPg	PbPb	04 31 14.9	-1.4
ARS				*e*		04 31 16.6	
ARS				*e*Sg	Sg	04 32 03.5	-4.3
ARS				max			
	20nm,0.6s						
ARS				Smax			
	224nm,1.0s						
MOY	Mondy	3.87	334	*e*Pn	Pn	04 31 03.6	-2.2
MOY				*e*Pg	Pb	04 31 13.2	-1.4
MOY				*e*Sg	Sb	04 32 04.4	+2.9
MOY				Pmax			
	21nm,0.9s						
MOY				Smax			
	242nm,1.2s						
BGT	Bolshoye Golou	3.96	15	*e*Pn	Pn	04 31 06.0	-1.0
BGT				*e*Pg	Pb	04 31 16.8	+0.8
BGT				*e*Sg	Sg	04 32 11.0	-2.3
BGT				*e*		04 32 13.1	
BGT				Pmax			
	38nm,0.8s						
BGT				max			
	162nm,0.8s						
HRMR	Khuramsha	3.98	30	*e*Pn	Pn	04 31 07.2	0.0
HRMR				*e*		04 31 16.4	
HRMR				*e*Pg	Pb	04 31 17.7	+1.4
HRMR				*e*Sg	Sg	04 32 12.2	-1.6
HRMR				Pmax			
	87nm,0.6s						
HRMR				Smax			
	823nm,0.7s						
IRK	Irkutsk	4.03	5	*e*Sn	Sn	04 31 55.1	0.0
IRK				*e*Sg	Sg	04 32 12.5	-2.9
IRK				Smax			
	430nm,0.5s						
KAB	Kabansk	4.25	25	*e*Sg	Sg	04 32 21.0	-1.6
KAB				Smax			
	546nm,1.0s						
FFNB	Fofonovo	4.28	26	*e*Pn	Pn	04 31 11.0	-0.3
FFNB				*e*Pg	Pb	04 31 22.6	+1.1
FFNB				*e*Sg	Sg	04 32 21.1	-2.4
STDB	Stepnoy Dvoret	4.28	22	*e*Pg	Pb	04 31 23.0	+1.5
STDB				*e*Sg	Sg	04 32 21.5	-2.1
KNGR	Kungurtug, Tuv	4.71	303	*e*Pn	Pn	04 31 13.4	-4.0
KNGR				*e*Pg	Pb	04 31 26.0	-2.9
KNGR				*e*Sg	Sb	04 32 27.1	+1.4
TRG	Tyrgan	4.83	19	*e*Pn	Pn	04 31 18.6	-0.2
TRG				*e*Pg	Pb	04 31 32.9	+2.1

TRG				*e*Sg	**Sg**	**04 32 38.2**	**-2.8**
TRG				Pmax			
	11nm,0.8s						
TRG				Smax			
	73nm,0.8s						
ZRHB	**Zarechye**	**4.84**	**25**	*e*Pg	**Pb**	**04 31 33.3**	**+2.3**
ZRHB				*e*Sg	**Sg**	**04 32 38.6**	**-2.9**
ZRHB				Pmax			
	119nm,0.9s						
ZRHB				Smax			
	1µm,1.1s						
ORL	**Orlik**	**4.99**	**331**	*e*Pn	**Pn**	**04 31 19.9**	**-1.3**
ORL				*e*Pg	**Pb**	**04 31 33.1**	**-0.6**
ORL				*e*Sg	**Sb**	**04 32 38.7**	**+4.9**
ORL				Pmax			
	14nm,1.2s						
ORL				Smax			
	58nm,1.3s						
KPC	**Khapcheranga**	**5.87**	**72**	*e*Pn	**Pn**	**04 31 32.0**	**-1.2**
KPC				*e*		04 31 41.0	
KPC				*e*Pg	**Pb**	**04 31 51.2**	**+2.7**
KPC				*e*Sn	**Sn**	**04 32 39.5**	**-1.0**
KPC				*e*Sg	**Sg**	**04 33 09.3**	**-5.1**
KPC				Pmax			
	12nm,1.0s						
KPC				Smax			
	83nm,1.7s						
OGRR	**Ongureny**	**5.94**	**23**	*e*Pn	**Pn**	**04 31 34.5**	**+0.4**
OGRR				*e*		04 31 42.3	
OGRR				*e*Pg	**Pb**	**04 31 53.2**	**+3.6**
OGRR				*e*Sn	**Sn**	**04 32 41.2**	**-0.9**
OGRR				*e*Sg	**Sg**	**04 33 12.6**	**-3.9**
OGRR				Pmax			
	17nm,1.0s						
OGRR				Smax			
	53nm,1.2s						
MXMB	**Maximikha**	**5.95**	**30**	*e*Pn	**Pn**	**04 31 35.5**	**+1.3**
MXMB				*e*		04 31 43.2	
MXMB				*e*Pg	**Pb**	**04 31 52.1**	**+2.2**
MXMB				*e*Sg	**Sg**	**04 33 12.0**	**-4.9**
TDJR	**Todzha**	**6.43**	**313**	*e*Pg	**Pb**	**04 31 58.1**	**-0.1**
TDJR				*e*Sg	**Sb**	**04 33 22.2**	**+7.0**
SYVR	**Suvo**	**6.71**	**34**	*e*Pn	**Pn**	**04 31 45.3**	**+0.6**
SYVR				*e*		04 31 54.6	
SYVR				*e*Pg	**Pb**	**04 32 06.9**	**+4.1**
SYVR				*e*Sn	**Sn**	**04 33 00.2**	**-1.0**
SYVR				*e*Sg	**Sg**	**04 33 36.9**	**-4.5**
SYVR				Pmax			
	18nm,1.5s						
SYVR				Smax			
	90nm,2.0s						
YLYR	**Ulyunkhan**	**8.09**	**32**	*e*Pn	**Pn**	**04 32 04.2**	**+0.6**
YLYR				*e*Sg	**Sg**	**04 34 19.2**	**-6.4**
YLYR				max			
	6.0nm,0.6s						
YLYR				Smax			
	68nm,1.4s						
NIZ	**Nizh Angarsk**	**8.35**	**23**	*e*Pn	**Pn**	**04 32 07.4**	**+0.2**
NIZ				*e*Pg	Pb	04 32 36.4	+5.7
NIZ				*e*Sg	**Sg**	**04 34 26.2**	**-7.7**
NIZ				Pmax			
	2.0nm,0.5s						
NIZ				Smax			
	26nm,1.4s						
KMO	**Kumora**	**8.93**	**28**	*e*Sg	**Sg**	**04 34 44.3**	**-8.1**
KMO				Smax			
	52nm,1.7s						
UKT	**Uakit**	**9.48**	**36**	*e*Pn	**Pn**	**04 32 23.5**	**+0.7**
UKT				*e*		04 32 32.4	
UKT				*e*		04 32 50.6	
UKT				*e*Pg		04 32 57.2	
UKT				*e*Sg	Sn	04 35 01.2	+52
UKT				Pmax			
	4.0nm,0.7s						
UKT				Smax			
	43nm,1.8s						
MKAR	**Makanchi Array**	**14.57**	**272**	Pn	**Pn**	**04 33 33.0**	**+0.7**
	0.0nm,0.3s,baz=88,slow=10,SNR=1.7						
KURBB	**Kurchatov Arra**	**16.56**	**288**	Pn	**Pn**	**04 33 57.1**	**-1.2**
	0.0nm,0.3s,baz=94,slow=12,SNR=4.7						
KSRS	**Korea Array**	**20.65**	**113**	P	**P**	**04 34 48.5**	**+2.7**
	1.9nm,0.8s,baz=312,slow=9.7,SNR=8.8						
BVAR	**Borovoye Array**	**21.58**	**295**	P	**P**	**04 34 57.6**	**+1.9**
	0.3nm,0.4s,baz=106,slow=15,SNR=2.4						

*BYKL **02** 04:30:33.2±0.4, 48°.12N×103°.61E*
*IDC **02** 04:30:35.8±1.7, 48°.05N×103°.72E, h0^{km}, mb3.5/1, mb1 3.4/3, mb1mx3.0/63, mbtmp3.4/3, ML2.8/2, Error ellipse: s-maj=35.7km s-min=13.1km az=9.0*
ISC 02 04:30:32.5±1.1**, 47°.92N**±0°.07×**103°.68E**±0°.03**, h10**^{km}**, n30, σ2^{s}.27**/56**, Mongolia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	**Songino Array**	**1.83**	**92**	Pg	**Pg**	**04 31 07.3**	**-0.3**
	226nm,0.3s,baz=275,slow=17,SNR=15						
SONM				Lg	Lg	04 31 33.8	
	262nm,0.3s,baz=276,slow=28,SNR=18						
ULN	**Ulaanbaatar**	**2.27**	**90**	*e*Pg	**Pg**	**04 31 14.7**	**-1.3**
ULN				*e*Sg	**Sg**	**04 31 45.6**	**+0.1**
ZAK	**Zakamensk**	**2.48**	**354**	*e*Pg	**Pn**	**04 31 14.2**	**+1.1**
ZAK				*e*Sg	**Sn**	**04 31 44.3**	**+0.8**
ZAK				Pmax			
	118nm,0.2s						
ZAK				Smax			
	469nm,0.4s						
ZAK	**Zakamensk**	**2.48**	**354**	*e*Sg	**Pn**	**04 31 13.9**	**+0.8**
TLY	**Talaya**	**3.77**	**360**	Lg	Lg	04 32 28.8	
	0.1nm,0.3s,baz=338,slow=20,SNR=4.1						
TLY	**Talaya**	**3.77**	**360**	*e*Pn	**Pn**	**04 31 28.5**	**-2.2**
TLY				*e*Pg	**Pb**	**04 31 37.0**	**-2.1**
TLY				*e*Sg	**Sb**	**04 32 23.3**	**-1.5**
TLY				Pmax			
	60nm,0.6s						
TLY				Smax			
	166nm,1.4s						
IVK	**Ivanovka**	**3.92**	**7**	*e*Pn	**Pn**	**04 31 31.4**	**-1.3**
IVK				*e*Pg	**Pb**	**04 31 40.7**	**-0.9**
IVK				*e*Sg	**Sb**	**04 32 28.9**	**-0.2**
IVK				Pmax			
	37nm,1.0s						
IVK				Smax			
	82nm,1.5s						
LSTR	**Listvyanka**	**4.03**	**10**	*e*Pn	**Pn**	**04 31 33.7**	**-0.5**
LSTR				*e*Pg	**Pb**	**04 31 42.8**	**-0.7**
LSTR				*e*Sg	**Sb**	**04 32 33.1**	**+0.9**
LSTR				Pmax			
	20nm,1.3s						
LSTR				Smax			
	93nm,1.2s						
ARS	**Arshan**	**4.09**	**349**	*e*Pg	**Pb**	**04 31 43.9**	**-0.7**
ARS				*e*Sg	**Sb**	**04 32 34.5**	**+0.4**
ARS				Pmax			
	25nm,0.6s						
ARS				Smax			
	190nm,1.3s						
MOY	**Mondy**	**4.14**	**336**	*e*Pn	**Pn**	**04 31 35.1**	**-0.7**
MOY				*e*Pg	**Pb**	**04 31 45.1**	**-0.3**
MOY				*e*Sg	**Sb**	**04 32 35.7**	**+0.2**
MOY				Pmax			
	39nm,1.2s						
MOY				Smax			
	249nm,1.3s						
HRMR	**Khuramsha**	**4.28**	**29**	*e*Pg	**Pb**	**04 31 48.3**	**+0.5**
HRMR				*e*Sg	**Sb**	**04 32 41.5**	**+2.0**
HRMR				Pmax			
	88nm,0.7s						
HRMR				Smax			
	739nm,0.9s						
BGT	**Bolshoye Golou**	**4.28**	**14**	*e*Pn	**Pn**	**04 31 36.8**	**-0.9**
BGT				*e*Pg	**Pb**	**04 31 47.0**	**-0.8**
BGT				*e*Sg	**Sb**	**04 32 40.3**	**+0.8**
BGT				Pmax			
	39nm,0.7s						
BGT				Smax			
	147nm,0.8s						
IRK	**Irkutsk**	**4.35**	**5**	*e*Sg	**Sb**	**04 32 42.0**	**+0.6**
IRK				Smax			
	424nm,0.6s						
KAB	**Kabansk**	**4.56**	**24**	*e*Sg	**Sb**	**04 32 50.4**	**+2.8**
KAB				Smax			
	853nm,1.2s						
FFNB	**Fofonovo**	**4.59**	**25**	*e*Pn	**Pn**	**04 31 41.8**	**-0.1**
FFNB				*e*Pg	**Pb**	**04 31 52.5**	**-0.6**
FFNB				*e*Sg	**Sb**	**04 32 50.2**	**+1.8**
STDB	**Stepnoy Dvoret**	**4.60**	**21**	*e*Pg	**Pb**	**04 31 53.0**	**-0.2**
STDB				*e*Sg	**Sb**	**04 32 51.4**	**+2.8**
KNGR	**Kungurtug, Tuv**	**4.85**	**306**	*e*Pn	**Pn**	**04 31 44.7**	**-0.9**
KNGR				*e*Pg	**Pb**	**04 31 56.8**	**-0.8**
KNGR				*e*Sg	**Sb**	**04 32 58.3**	**+2.4**
TRG	**Tyrgan**	**5.14**	**18**	*e*Pn	**Pn**	**04 31 48.8**	**-0.7**
TRG				*e*Pg	**Pb**	**04 32 02.0**	**-0.5**
TRG				*e*Sg	**Sb**	**04 33 06.7**	**+2.4**
TRG				Pmax			
	16nm,0.8s						
TRG				Smax			
	63nm,0.7s						
ZRHB	**Zarechye**	**5.15**	**24**	*e*Sg	**Sb**	**04 33 08.0**	**+3.5**
ZRHB				Smax			
	1µm,0.9s						
ORL	**Orlik**	**5.25**	**333**	*e*Pg	**Pb**	**04 32 04.3**	**-0.1**
ORL				*e*Sg	**Sb**	**04 33 09.3**	**+1.8**
ORL				Pmax			
	16nm,1.2s						
ORL				Smax			
	66nm,1.7s						
KPC	**Khapcheranga**	**6.02**	**69**	*e*Pn	**Pn**	**04 32 02.1**	**+0.5**
KPC				*e*Pg	**Pb**	**04 32 20.4**	**+2.9**
KPC				*e*Sg	**Sg**	**04 33 38.5**	**-7.1**
KPC				Pmax			
	12nm,0.9s						
KPC				Smax			
	102nm,1.8s						
MXMB	**Maximikha**	**6.25**	**29**	*e*Pg	**Pb**	**04 32 22.6**	**+1.3**
MXMB				*e*Sg	**Sb**	**04 33 41.6**	**+5.5**
OGRR	**Ongureny**	**6.25**	**22**	*e*Pn	**Pn**	**04 32 03.7**	**-1.0**
OGRR				*e*Pg	**Pb**	**04 32 22.5**	**+1.2**
OGRR				*e*Sg	**Sb**	**04 33 42.0**	**+6.0**
OGRR				Pmax			
	9.0nm,0.8s						
OGRR				Smax			
	51nm,1.6s						
TDJR	**Todzha**	**6.62**	**315**	*e*Pg	**Pb**	**04 32 29.8**	**+2.1**
TDJR				*e*Sg	**Sb**	**04 33 54.0**	**+7.2**
SYVR	**Suvo**	**7.00**	**32**	*e*Pn	**Pn**	**04 32 14.6**	**-0.5**
SYVR				*e*Pg	**Pb**	**04 32 37.2**	**+3.0**
SYVR				*e*Sg	Sb	04 34 07.2	+9.4
SYVR				Pmax			
	22nm,0.9s						
SYVR				Smax			
	76nm,1.4s						
YLYR	**Ulyunkhan**	**8.39**	**31**	*e*Pn	**Pn**	**04 32 33.2**	**-0.9**
YLYR				*e*Sg	Sb	04 34 48.9	+11
YLYR				max			
	6.0nm,0.3s						
YLYR				Smax			
	63nm,2.2s						
NIZ	**Nizh Angarsk**	**8.66**	**23**	*e*Sg	Sg	04 34 55.9	-14
NIZ				Smax			
	23nm,1.2s						
MKAR	**Makanchi Array**	**14.54**	**274**	Pn	**P**	**04 34 04.7**	**-0.1**
	0.1nm,0.3s,baz=96,slow=15,SNR=2.3						
KURBB	**Kurchatov Arra**	**16.61**	**289**	Pn	**P**	**04 34 26.8**	**-1.0**
	0.0nm,0.3s,baz=95,slow=12,SNR=6.0						
KSRS	**Korea Array**	**20.58**	**112**	P	Pn	04 35 17.9	+4.3
	1.5nm,0.7s,baz=307,slow=8.3,SNR=6.9						

*MOS **02** 04:41:02.9±1.0, 40°.30N×26°.00E, h9^{km}, mb4.4/7, Error ellipse: s-maj=5.5km s-min=3.5km az=105.0*
*IDC **02** 04:41:03.0±0.7, 40°.30N×26°.04E, h0^{km}, mb3.8/16, mb1 3.9/22, mb1mx3.8/42, mbtmp3.8/22, ML3.8/7, MS3.2/4, Ms1 3.2/4, ms1mx2.5/50, Error ellipse: s-maj=13.2km s-min=11.9km az=83.0*
*ISK **02** 04:41:03.6, 40°.34N×26°.06E, h13^{km}, ML4.1/30*
*DDA **02** 04:41:04.4, 40°.31N×26°.03E, h15^{km}, MW4.1*
*NEIC **02** 04:41:04.8±2.2, 40°.32N±0°.05×25°.96E±0°.07, h9^{km}±5^{km}, mb4.3/9, ML4.1(ISK), ML4.0(THE), ML4.0(ATH), Error ellipse: s-maj=8.1km s-min=7.7km az=135.0*
*THE **02** 04:41:04.4, 40°.34N×26°.03E, h8^{km}±1^{km}, ML4.0/12, Error ellipse: s-maj=1.4km s-min=0.5km az=222.0*
*ATH **02** 04:41:04.7, 40°.39N×25°.95E, h36^{km}±5^{km}, ML4.0/13, Error ellipse: s-maj=5.3km s-min=1.4km az=257.0*
*SOF **02** 04:41:04.3, 40°.33N×25°.95E, h17^{km}, MD3.9*
*MED_RC **02** 04:41:04.0±0.6, 40°.42N×26°.26E, h10^{km}, MW4.4/9, Moment Tensor Solution. Mantle waves: s9,c9; Duration: 1^{s}.0 Moment tensor: Scale 10^{15}Nm; M_{rr}-1.90±.79; $M_{\theta\theta}$1.44±.35; $M_{\phi\phi}$0.46±1.05; $M_{r\theta}$3.14±1.04; $M_{\theta\phi}$-0.37±.46; $M_{\phi r}$-3.36±1.98; Best double couple: $M_0$4.90000×10^{15} NP1: ϕ_s103.00000°, δ11.00000°, λ-121.00000°. NP2: ϕ_s315.00000°, δ80.00000°, λ-84.00000°. Principal axes: T 4.6100, Plg35.0000°, Azm40.0000°; N 0.5800, Plg6.0000°, Azm134.0000°; P -5.1900, Plg54.0000°, Azm232.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
ISC 02 04:41:04.8±0.9**, 40°.34N**±0°.02×**26°.03E**±0°.02**, h9**^{km}±5^{km}**, n359, σ1^{s}.31**/402**, mb3.9**/22**, 35C-12D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GADA	**Gvkgeada**	**0.17**	**215**	P	**Pg**	**04 41 08.7**	**+0.3**
GADA				S	**Sg**	**04 41 11.9**	**+1.0**
	111µm,0.4s						
GADA	**Gvkgeada**	**0.17**	**215**	PG	**Pg**	**04 41 08.7**	**+0.3**
GADA				SG	**Sg**	**04 41 11.9**	**+1.0**
ECEA	**Canakkale, Ece**	**0.31**	**159**	⇑*i*P	**Pg**	**04 41 10.8**	**-0.1**
ECEA				*i* S	**Sg**	**04 41 15.6**	**+0.6**
ECEA				IAML		04 41 19.0	
	comp=E,28µm,0.3s						
ECEA				IAML		04 41 20.0	
	comp=N,24µm,0.6s						
CAVK	**Edirne/Enez-Ca**	**0.37**	**16**	⇑*i*P	**Pg**	**04 41 12.1**	**0.0**
CAVK				IAML		04 41 22.0	
	comp=N,15µm,0.8s						
CAVK				*i* S	**Sb**	**04 41 22.1**	**+2.6**
CAVK				IAML		04 41 25.0	
	comp=E,11µm,0.7s						
SMTH	**Samothraki Isl**	**0.40**	**290**	P	**Pg**	**04 41 12.7**	**0.0**
SMTH				S	**Sg**	**04 41 18.5**	**+0.5**
SMTH				AML	AML	04 41 24.0	
	comp=N,59622µm,0.2s						
SMTH				AML	AML	04 41 24.0	
	comp=E,51110µm,0.3s						
SMTH	**Samothraki Isl**	**0.40**	**290**	P	**Pg**	**04 41 12.7**	**0.0**
SMTH				S	**Sg**	**04 41 18.5**	**+0.5**
	comp=E,28µm,0.2s						
BOZC	**Bozcaada**	**0.49**	**178**	PG	**Pg**	**04 41 13.9**	**-0.4**
BOZC	**Bozcaada**	**0.49**	**178**	*i* P	**Pg**	**04 41 13.9**	**-0.4**
BOZC				⇑*i*P	**Pg**	**04 41 13.9**	**-0.4**
BOZC				*i* S	**Sg**	**04 41 20.9**	**+0.2**
BOZC				IAML		04 41 21.0	
	comp=N,12µm,0.7s						
BOZC				IAML		04 41 21.0	
	comp=E,18µm,0.4s						
BOZC				IAML		04 41 21.0	
	comp=N,13µm,0.4s						
BOZC				IAML		04 41 21.0	
	comp=E,17µm,0.4s						
ERIK	**Erikli-Kesan**	**0.50**	**48**	PG	**Pg**	**04 41 13.9**	**-0.6**
ERIK				SG	**Sg**	**04 41 20.6**	**-0.4**
EZN	**Ezine**	**0.56**	**156**	P	**Pg**	**04 41 14.7**	**-0.8**
EZN				S	**Sg**	**04 41 22.6**	**-0.2**
	comp=E,6µm,0.4s						
EZN	**Ezine**	**0.56**	**156**	PG	**Pg**	**04 41 14.7**	**-0.8**
EZN	**Ezine**	**0.56**	**156**	P	**Pg**	**04 41 14.7**	**-0.8**
EZN				S	**Sg**	**04 41 22.6**	**-0.2**
BAYC	**CANAKKALE_Bayr**	**0.71**	**146**	⇑*i*P	**Pg**	**04 41 17.7**	**-0.8**
BAYC				*i* S	**Sg**	**04 41 27.4**	**-0.4**
BAYC				IAML		04 41 28.0	
	comp=N,3µm,0.4s						
BAYC				IAML		04 41 29.0	
	comp=E,2µm,0.4s						
LIA	**Limnos Island**	**0.78**	**236**	P	**Pg**	**04 41 19.6**	**-0.2**
LIA				S	**Sb**	**04 41 30.2**	**-1.0**
LIA				AML	AML	04 41 33.4	
	comp=E,48082µm,0.4s						
LIA				AML	AML	04 41 33.5	
	comp=N,78076µm,0.4s						
LIA	**Limnos Island**	**0.78**	**236**	P	**Pg**	**04 41 19.6**	**-0.2**
LIA				S	**Sb**	**04 41 30.2**	**-1.0**
	comp=N,31µm,0.4s						
KOCA	**Canakkale, Ayv**	**0.84**	**174**	⇑*i*P	**Pg**	**04 41 19.9**	**-0.9**
KOCA				*i* S	**Sb**	**04 41 32.9**	**+0.2**
KOCA				IAML		04 41 37.0	
	comp=N,5µm,0.5s						
KOCA				IAML		04 41 39.0	
	comp=E,4µm,0.4s						
RDO	**Rodhopi**	**0.89**	**335**	P	**Pg**	**04 41 20.8**	**-1.1**
RDO				S	**Sg**	**04 41 31.6**	**-2.0**
RDO				AML	AML	04 41 35.6	
	comp=E,16913µm,0.7s						
RDO				AML	AML	04 41 36.5	
	comp=N,19248µm,0.4s						
RDO	**Rodhopi**	**0.89**	**335**	P	**Pg**	**04 41 21.0**	**-0.9**
RDO				S	**Sg**	**04 41 33.0**	**-0.6**
	comp=N,10µm,0.8s						
RDO	**Rodhopi**	**0.89**	**335**	PG	**Pg**	**04 41 21.3**	**-0.6**
RDO				SG	**Sb**	**04 41 34.3**	**-0.1**
RKY	**Sarkoy-Tekirda**	**0.94**	**68**	PG	**Pg**	**04 41 21.7**	**-1.2**
SART	**Tekirdag**	**0.95**	**68**	*i* P	**Pg**	**04 41 20.4**	**-2.6**
SART				*i* S	**Sn**	**04 41 36.6**	**-1.4**
SART				IAML		04 41 42.0	
	comp=N,803nm,0.7s						
SART				IAML		04 41 53.0	
	comp=E,800nm,0.5s						
KRBG	**Karabiga-Canak**	**0.97**	**86**	PG	**Pg**	**04 41 21.9**	**-1.5**
THAS	**Thassos island**	**1.03**	**286**	P	**Pg**	**04 41 22.9**	**-1.7**
THAS				S	**Sg**	**04 41 36.3**	**-1.8**
THAS				AML	AML	04 41 39.4	
	comp=N,11582µm,0.3s						
THAS				AML	AML	04 41 41.7	
	comp=E,11399µm,0.4s						
THAS	**Thassos island**	**1.03**	**286**	P	**Pg**	**04 41 23.7**	**-0.9**
THAS				S	**Sb**	**04 41 38.4**	**-0.1**
	comp=E,6µm,0.3s						
GZKV	**Gazikoy-Tekird**	**1.07**	**67**	PG	**Pg**	**04 41 24.2**	**-1.2**
PRK	**Paraskevi**	**1.10**	**170**	P	**Pn**	**04 41 25.8**	**-0.5**
PRK				S	**Sn**	**04 41 41.0**	**-0.7**
PRK				AML	AML	04 41 43.5	
	comp=E,42040µm,0.4s						
PRK				AML	AML	04 41 43.9	
	comp=N,39590µm,0.3s						
PRK	**Paraskevi**	**1.10**	**170**	P	**Pn**	**04 41 25.8**	**-0.5**
PRK				S	**Sn**	**04 41 41.0**	**-0.7**
	comp=N,20µm,0.4s						
EFSA	**Agios Efstrati**	**1.13**	**226**	P	**Pg**	**04 41 25.8**	**-0.5**
EFSA				S	**Sb**	**04 41 40.0**	**-1.1**
EFSA				AML	AML	04 41 42.9	
	comp=N,39994µm,0.8s						
EFSA				AML	AML	04 41 44.3	
	comp=E,18832µm,0.4s						
AYVA	**Ayvalik**	**1.15**	**153**	⇑*i*P	**Pb**	**04 41 25.6**	**-1.1**
AYVA				*i* S	**Sg**	**04 41 41.2**	**-0.4**
AYVA				IAML		04 41 43.0	
	comp=N,9µm,0.6s						
AYVA				IAML		04 41 45.0	
	comp=E,5µm,0.5s						
BUHA	**Balikesir, Bur**	**1.16**	**136**	⇑*i*P	**Pb**	**04 41 25.9**	**-1.0**
BUHA				*i* S	**Sn**	**04 41 42.0**	**-1.1**
BUHA				IAML		04 41 44.0	
	comp=N,6µm,0.4s						
BUHA				IAML		04 41 49.0	
	comp=E,5µm,0.7s						
MRMT	**Marmara Adasi**	**1.23**	**77**	PN	**Pn**	**04 41 26.1**	**-2.0**
TKR	**Tekirdag**	**1.32**	**60**	PN	**Pn**	**04 41 28.1**	**-1.2**
KAVA	**Kavala**	**1.33**	**300**	P	**Pn**	**04 41 28.4**	**-1.1**
KAVA				AML	AML	04 41 48.6	
	comp=N,16104µm,0.3s						
KAVA				AML	AML	04 41 50.0	
	comp=E,15040µm,0.4s						
KAVA	**Kavala**	**1.33**	**300**	P	**Pn**	**04 41 28.4**	**-1.1**
KAVA				S	**Sb**	**04 41 46.2**	**-0.8**
	comp=E,6µm,0.4s						
BALY	**Balya**	**1.36**	**115**	⇑*i*P	**Pn**	**04 41 28.5**	**-1.5**
BALY				*i* S	**Sg**	**04 41 47.8**	**-0.7**
BALY				IAML		04 41 48.0	
	comp=N,6µm,0.5s						
BALY				IAML		04 41 49.0	
	comp=E,4µm,0.5s						
KVLA	**Kavala**	**1.39**	**296**	P	**Pn**	**04 41 29.4**	**-0.9**
KVLA				AML	AML	04 41 51.5	
	comp=E,9487µm,0.3s						
KVLA				AML	AML	04 41 52.1	
	comp=N,9794µm,0.3s						
EDC	**Edincik**	**1.40**	**89**	PN	**Pn**	**04 41 29.3**	**-1.2**
EDC	**Edincik**	**1.40**	**89**	P	**Pn**	**04 41 29.5**	**-1.0**
DKL	**Dikili**	**1.43**	**152**	PN	**Pn**	**04 41 29.6**	**-1.3**
OUR	**Ouranopolis**	**1.56**	**271**	P	**Pn**	**04 41 31.2**	**-1.5**
OUR				AML	AML	04 41 57.5	
	comp=N,6997µm,0.4s						
OUR				AML	AML	04 41 57.9	
	comp=E,8548µm,0.4s						
OUR	**Ouranopolis**	**1.56**	**271**	P	**Pn**	**04 41 31.2**	**-1.5**
OUR	**Ouranopolis**	**1.56**	**271**	PN	**Pn**	**04 41 31.5**	**-1.2**
OUR	**Ouranopolis**	**1.56**	**271**	P	**Pn**	**04 41 31.2**	**-1.5**
ZEDA	**zmir-Bergama**	**1.59**	**149**	⇑*i*P	**Pn**	**04 41 32.5**	**-0.5**
ZEDA				*i* S	**Sb**	**04 41 54.5**	**+0.1**
ZEDA				IAML		04 41 56.0	
	comp=N,5µm,0.3s						
ZEDA				IAML		04 41 56.0	
	comp=E,3µm,0.4s						
EDRB	**Edirne**	**1.60**	**19**	P	**Pn**	**04 41 32.1**	**-1.2**
EDRB				S	**Sb**	**04 41 54.5**	**-0.4**
	comp=E,2µm,0.5s						
EDRB	**Edirne**	**1.60**	**19**	PN	**Pn**	**04 41 31.9**	**-1.4**
KIRK	**Kırklareli**	**1.66**	**29**	*i* P	**Pn**	**04 41 32.5**	**-1.4**
KIRK				*i* S	**Sb**	**04 41 56.5**	**+0.1**
KIRK				IAML		04 41 57.0	
	comp=N,900nm,0.8s						
KIRK				IAML		04 42 10.0	
	comp=E,566nm,0.9s						
RZN	**Rozhen**	**1.68**	**324**	P	**Pn**	**04 41 33.7**	**-0.8**
RZN	**Rozhen**	**1.68**	**324**	P	**Pn**	**04 41 34.0**	**-0.5**
FOCM	**Foa**	**1.71**	**161**	PN	**Pn**	**04 41 33.5**	**-1.2**
PHSR	**Pinarhisar**	**1.72**	**41**	PN	**Pn**	**04 41 33.6**	**-1.3**
DIM	**Dimitrovgrad**	**1.75**	**348**	P	**Pn**	**04 41 34.7**	**-0.6**
KCTX	**Karacabey (Bur**	**1.78**	**91**	PN	**Pn**	**04 41 34.1**	**-1.6**
SKY	**Skiros Island**	**1.85**	**219**	P	**Pn**	**04 41 35.4**	**-1.2**
SKY	**Skiros Island**	**1.85**	**219**	P	**Pn**	**04 41 35.5**	**-1.2**
VIZE	**Kirklareli, Vi**	**1.85**	**47**	*i* P	**Pn**	**04 41 35.7**	**-1.0**
VIZE				*i* S	**Sb**	**04 42 01.7**	**-0.3**
VIZE				IAML		04 42 15.0	
	comp=N,626nm,0.7s						
VIZE				IAML		04 42 21.0	
	comp=E,433nm,0.8s						
ARMN	**Kirklareli, Me**	**1.86**	**34**	*i* P	**Pn**	**04 41 36.0**	**-0.8**
ARMN				*i* S	**Sn**	**04 41 59.5**	**-0.9**
ARMN				IAML		04 42 04.0	
	comp=E,705nm,0.5s						
ARMN				IAML		04 42 13.0	
	comp=N,418nm,0.5s						
SLVT	**Silivri**	**1.88**	**61**	PN	**Pn**	**04 41 35.8**	**-1.3**
NVR	**Nevrokopi**	**1.93**	**302**	P	**Pn**	**04 41 37.1**	**-0.7**
NVR				AML	AML	04 42 10.0	
	comp=N,3716µm,0.4s						
NVR				AML	AML	04 42 12.2	
	comp=E,3721µm,0.3s						
NVR	**Nevrokopi**	**1.93**	**302**	P	**Pn**	**04 41 37.1**	**-0.7**
PLG	**Polygyros**	**1.97**	**272**	P	**Pn**	**04 41 37.1**	**-1.3**
PLG	**Polygyros**	**1.97**	**272**	P	**Pn**	**04 41 37.1**	**-1.3**
AKHS	**Akhisar**	**2.00**	**136**	⇑*i*P	**Pn**	**04 41 38.4**	**-0.3**
AKHS				*i* S	**Sb**	**04 42 06.6**	**+0.2**
AKHS				IAML		04 42 14.0	
	comp=E,480nm,0.4s						
SRS	**Serrai**	**2.01**	**294**	P	**Pn**	**04 41 37.8**	**-1.0**
SRS				AML	AML	04 42 11.6	
	comp=E,5124µm,0.3s						
SRS				AML	AML	04 42 11.6	
	comp=N,3874µm,0.5s						
SRS	**Serrai**	**2.01**	**294**	P	**Pn**	**04 41 37.9**	**-1.0**
SRS				S	**Sg**	**04 42 09.2**	**-0.1**
	comp=N,2µm,0.4s						
SRS	**Serrai**	**2.01**	**294**	P	**Pn**	**04 41 37.9**	**-1.0**
DURS	**Dursunbey**	**2.02**	**111**	*i* P	**Pn**	**04 41 39.1**	**+0.1**
DURS				*i* S	**Sn**	**04 42 04.2**	**-0.2**
DURS				IAML		04 42 14.0	
	comp=N,441nm,0.5s						
DURS				IAML		04 42 14.0	
	comp=E,540nm,0.7s						
URLA	**Izmir**	**2.02**	**167**	PN	**Pn**	**04 41 37.4**	**-1.6**
URLA	**Izmir**	**2.02**	**167**	⇑*i*P	**Pn**	**04 41 37.2**	**-1.8**
URLA				*i* S	**Sn**	**04 42 03.2**	**-1.2**
URLA				IAML		04 42 05.0	
	comp=N,1µm,1.1s						
URLA				IAML		04 42 15.0	
	comp=E,839nm,0.6s						
PLD	**Plovdiv**	**2.03**	**331**	PN	**Pn**	**04 41 38.4**	**-0.7**
PLD	**Plovdiv**	**2.03**	**331**	P	**Pn**	**04 41 39.0**	**-0.1**

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CTYL  Yalikoy Yolu       2.06  56   PN    Pn    04 41 38.2 -1.3
CTKS  Kestanelik-??a     2.09  64   PN    Pn    04 41 38.7 -1.2
SOH   Sokhos             2.10 284   P     Pn    04 41 39.1 -0.9
SOH                                 AML   AML   04 42 13.7
      comp=N,3397µm,0.7s
SOH                                 AML   AML   04 42 15.4
      comp=E,6261µm,0.4s
SOH   Sokhos             2.10 284   P     Pn    04 41 39.1 -0.9
SOH                                 S     Sg    04 42 11.5 -0.6
      comp=E,2µm,0.5s
SOH   Sokhos             2.10 284   P     Pn    04 41 39.1 -0.9
DST   Dursunbey          2.12 109   PN    Pn    04 41 39.2 -1.2
DST   Dursunbey          2.12 109   P     Pn    04 41 39.8 -0.6
ZEYE  Izmir, Urla-Ze     2.12 170⇑i P     Pn    04 41 39.5 -0.9
ZEYE                              i S     Sg    04 42 11.9 -1.1
ZEYE                                IAML        04 42 18.0
      comp=N,2µm,0.8s
ZEYE                                IAML        04 42 20.0
      comp=E,1µm,0.5s
MMB   Musomiste          2.15 306   P     Pn    04 41 39.6 -1.2
MMB   Musomiste          2.15 306   P     Pn    04 41 39.8 -1.0
JMB   Yambol             2.17  11   PN    Pn    04 41 40.5 -0.6
JMB   Yambol             2.17  11   P     Pn    04 41 41.9 +0.8
ARMT  Armutlu            2.17  83   PN    Pn    04 41 40.1 -1.0
MDNY  Mudanya-Bursa      2.18  88   PN    Pn    04 41 40.2 -1.0
GOMA  Golmarmara-Man     2.19 137   PN    Pn    04 41 40.4 -0.8
ORLT  Orhaneli           2.21  97   PN    Pn    04 41 40.5 -1.2
BGKT  Bogazkoy           2.25  67   PN    Pn    04 41 41.1 -1.0
HORT  Hortiatis          2.25 278   P     Pn    04 41 41.0 -1.2
HORT  Hortiatis          2.25 278   PN    Pn    04 41 41.5 -0.7
KYMI  Kymi, Euboea I     2.26 222   P     Pn    04 41 40.8 -1.5
KYMI                                S     Sg    04 42 16.7 -0.7
      comp=E,2µm,0.8s
TRML  Termal-Yalova      2.42  82   PN    Pn    04 41 43.6 -0.8
GEMT  Gemlik             2.42  87   PN    Pn    04 41 43.4 -1.0
ISK   Istanbul-Kandi     2.42  71   P     Pn    04 41 43.3 -1.1
ISK   Istanbul-Kandi     2.42  71   PN    Pn    04 41 43.3 -1.1
ISK   Istanbul-Kandi     2.42  71   P     Pn    04 41 43.3 -1.1
KAVV  Kandilli-Istan     2.42  71   PN    Pn    04 41 43.4 -1.0
DEMI  Demirci            2.44 121 i P     Pn    04 41 45.2 +0.3
DEMI                              i S     Sn    04 42 13.9 -1.0
DEMI                                IAML        04 42 17.0
      comp=N,751nm,0.5s
DEMI                                IAML        04 42 17.0
      comp=E,1µm,0.5s
KLYT  Kilyos             2.46  67   PN    Pn    04 41 43.9 -1.2
EREA  Eretria            2.51 221   P     Pn    04 41 44.5 -1.2
KNT   Kendrikon          2.52 290   P     Pn    04 41 45.5 -0.4
KNT                                 AML   AML   04 42 26.6
      comp=N,2210µm,0.5s
KNT                                 AML   AML   04 42 28.6
      comp=E,1597µm,0.6s
KNT   Kendrikon          2.52 290   P     Pn    04 41 45.5 -0.4
KNT   Kendrikon          2.52 290   PN    Pn    04 41 45.4 -0.4
KNT   Kendrikon          2.52 290   P     Pn    04 41 45.5 -0.4
YLV   Yalova             2.56  84   PN    Pn    04 41 45.4 -1.1
SIMA  Simav-Kutahya      2.60 118   PN    Pn    04 41 46.2 -0.8
PGB   Panagyurishte      2.62 328   P     Pn    04 41 46.4 -0.9
MANT  Manisa             2.69 132 i P     Pn    04 41 48.4  0.0
MANT                                IAML        04 42 31.0
      comp=E,528nm,0.5s
MANT                                IAML        04 42 37.0
      comp=N,232nm,0.6s
MANT  Manisa             2.69 132   Pn    Pn    04 41 48.1 -0.3
KKB   Krupnik            2.70 305   P     Pn    04 41 48.2 -0.2
LIT   Litokhoron         2.72 266   P     Pn    04 41 47.3 -1.3
LIT   Litokhoron         2.72 266   Pn    Pn    04 41 47.3 -1.3
DION  Dionisos Attik     2.78 217   P     Pn    04 41 48.1 -1.4
GCAM  G?zelcaml?         2.79 160   PN    Pn    04 41 48.9 -0.7
GCAM  G?zelcaml?         2.79 160 i P     Pn    04 41 49.3 -0.3
GCAM                                IAML        04 43 18.0
      comp=N,435nm,3.2s
GCAM                                IAML        04 43 18.0
      comp=E,220nm,2.8s
VAY   Valandovo          2.80 292   P     Pn    04 41 49.3 -0.4
VAY   Valandovo          2.80 292 i Pn    Pn    04 41 49.8  0.0
USAK  Uak-Merkez         2.82 124 i P     Pn    04 41 50.4 +0.4
USAK                                IAML        04 42 38.0
      comp=E,208nm,0.6s
USAK                                IAML        04 42 43.0
      comp=N,159nm,0.9s
GRG   Griva              2.83 284   P     Pn    04 41 50.0 -0.1
GRG   Griva              2.83 284   P     Pn    04 41 50.0 -0.1
ATAL  Atalanti           2.85 236   P     Pn    04 41 49.0 -1.3
LKR   Lokris             2.88 235   P     Pn    04 41 49.5 -1.4
PVL   Pavlikeni          2.93 350   P     Pn    04 41 51.1 -0.3
SZH   Strazhica          2.93 359   P     Pn    04 41 51.4 -0.1
GDZ   Gediz              2.94 114 i P     Pn    04 41 51.7  0.0
GDZ                                 IAML        04 42 39.0
      comp=N,135nm,0.6s
GDZ                                 IAML        04 42 43.0
      comp=E,80nm,0.5s
AXAR  Agios Charalam     3.04 240   P     Pn    04 41 52.0 -1.0
ANDZ  Kutahya, Merke     3.09 104 i P     Pn    04 41 54.2 +0.5
ANDZ                                IAML        04 42 51.0
      comp=N,91nm,0.5s
ANDZ                                IAML        04 42 59.0
      comp=E,147nm,0.7s
VTS   Vitosha            3.10 318   P     Pn    04 41 53.9  0.0
VTS   Vitosha            3.10 318   P     Pn    04 41 54.0  0.0
AGG   Agios Georgios     3.14 247   P     Pn    04 41 53.3 -1.1
AGG   Agios Georgios     3.14 247   P     Pn    04 41 53.1 -1.3
AGG   Agios Georgios     3.14 247   Pn    Pn    04 41 53.1 -1.3
STIP  Stip               3.21 296 i Pn    Pn    04 41 53.3 -2.0
RAZG  Razgrad            3.25   6 ⇓ P     Pn    04 41 56.0 +0.1
RAZG  Razgrad            3.25   6         Pn    04 41 56.0 +0.1
KAND  Kocaeli-Kandir     3.25  75 i P     Pn    04 41 55.7 -0.2
KAND                                IAML        04 42 57.0
      comp=E,214nm,0.7s
KAND                                IAML        04 43 12.0
      comp=N,176nm,0.8s
APE   Apeiranthos        3.28 187 ⇑ P     Pn    04 41 55.1 -1.3
APE   Apeiranthos        3.28 187 i P     Pn    04 41 54.6 -1.8
APE   Apeiranthos        3.28 187         Pn    04 41 55.1 -1.3
KHAL  Karahalli          3.33 125 i P     Pn    04 41 57.5 +0.5
KHAL                              i S     Sn    04 42 34.6 -2.1
KHAL                                IAML        04 42 39.0
      comp=N,225nm,0.5s
KHAL                                IAML        04 42 39.0
      comp=E,426nm,0.7s
LOUT  Loutraki           3.34 226   P     Pn    04 41 56.3 -0.8
KAYN  Sakarya, Kayna     3.34  78 i P     Pn    04 41 57.2  0.0
KAYN                                IAML        04 42 57.0
      comp=E,109nm,0.5s
KAYN                                IAML        04 43 09.0
      comp=N,165nm,0.6s
SRCK  Saricakaya, Es     3.53  93 i P     Pn    04 41 59.8  0.0
SRCK                                IAML        04 43 08.0
      comp=E,134nm,0.5s
SRCK                                IAML        04 43 09.0
      comp=N,164nm,0.7s
MULA  Mugla, Merkez-     3.56 149 i P     Pn    04 41 59.8 -0.5
MULA                                IAML        04 42 59.0
      comp=N,97nm,1.1s
MULA                                IAML        04 43 01.0
      comp=E,140nm,1.1s
FNA   Florina            3.57 279   P     Pn    04 42 00.3 -0.1
FNA   Florina            3.57 279   Pn    Pn    04 42 00.3 -0.1
TAVA  DENIZLI_Tavas      3.64 141 i P     Pn    04 42 01.0 -0.3
TAVA                                IAML        04 43 03.0
      comp=N,72nm,0.8s
TAVA                                IAML        04 43 04.0
      comp=E,132nm,0.9s
AFYO  Afyonkarahisar     3.64 114 i P     Pn    04 42 02.8 +1.4
AFYO                                IAML        04 42 57.0
      comp=N,162nm,1.1s
AFYO                                IAML        04 43 03.0
      comp=E,300nm,0.8s
SGAZ  Eskisehir, Sey     3.78 101 i P     Pn    04 42 04.0 +0.7
SGAZ                                IAML        04 43 11.0
      comp=N,92nm,0.7s
SGAZ                                IAML        04 43 12.0
      comp=E,106nm,0.6s
KZIL  AFYON_Kizioren     3.81 122 i P     Pn    04 42 04.5 +0.9
KZIL                                IAML        04 42 53.0
      comp=N,143nm,0.8s
KZIL                                IAML        04 43 26.0
      comp=E,118nm,1.3s
SKO   Skopje             3.83 297   P     Pn    04 42 07.4 +3.5
SKO   Skopje             3.83 297 i Pn    Pn    04 42 04.2 +0.3
MDUB  Mudurnu            3.95  86   Pn    Pn    04 42 06.4 +0.8
SANT  Santorini          3.98 187   Pn    Pn    04 42 06.0  0.0
ICOR  Ion Corvin         4.00  19 ⇑ P     Pn    04 42 06.2  0.0
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ICOR  Ion Corvin         4.00  19         Pn    04 42 06.2  0.0
OHR   Ohrid              4.05 283 i Pn    Pn    04 42 07.3 +0.3
BRDR  BURDUR-Merkez      4.10 129 i P     Pn    04 42 07.8 +0.2
BRDR                                IAML        04 42 57.0
      comp=N,55nm,0.6s
BRDR                                IAML        04 42 59.0
      comp=E,124nm,0.6s
GOLH  Golhisar           4.14 137 i P     Pn    04 42 09.0 +0.7
GOLH                                IAML        04 43 01.0
      comp=N,70nm,0.7s
GOLH                                IAML        04 43 16.0
      comp=E,37nm,0.7s
HUMR  Humele             4.26 350 ⇑ P     Pn    04 42 09.6 -0.2
HUMR  Humele             4.26 350         Pn    04 42 09.6 -0.2
ISP   Isparta            4.30 124   P     Pn    04 42 10.1 -0.4
ISP   Isparta            4.30 124   Pn    Pn    04 42 10.1 -0.4
SULR                     4.34   2 ⇑ P     Pn    04 42 12.4 +1.5
SULR                     4.34   2         Pn    04 42 12.4 +1.5
IGT   Igoumenitsa        4.45 261   P     Pn    04 42 16.6 +4.2
TIRR  Tirgusor           4.48  22 ⇑ P     Pn    04 42 12.2 -0.6
TIRR  Tirgusor           4.48  22   P     Pn    04 42 12.2 -0.6
TIRR  Tirgusor           4.48  22   Pn    Pn    04 42 12.1 -0.6
TIRR  Tirgusor           4.48  22         Pn    04 42 12.2 -0.6
ITM   Ithomi             4.50 227   Pn    Pn    04 42 13.9 +0.8
YVAC  Isparta, Yalva     4.54 115 i P     Pn    04 42 14.7 +1.0
YVAC                                IAML        04 43 09.0
      comp=N,24nm,1.4s
YVAC                                IAML        04 43 14.0
      comp=E,37nm,0.8s
PUNG  Punghina           4.56 331 ⇓ P     Pn    04 42 13.3 -0.6
PUNG  Punghina           4.56 331         Pn    04 42 13.2 -0.6
HARR  Harsova            4.57  17   P     Pn    04 42 13.8 -0.3
STFAR Stefanesti-Arg     4.59 350 ⇑ P     Pn    04 42 14.5 +0.1
STFAR Stefanesti-Arg     4.59 350         Pn    04 42 14.5 +0.1
BOVS  Bovan              4.61 317 ⇑ P     Pn    04 42 14.4 -0.2
BOVS  Bovan              4.61 317         Pn    04 42 14.4 -0.2
BUCA  Burdur, Bucak-     4.64 129 i P     Pn    04 42 16.1 +1.1
BUCA                                IAML        04 43 12.0
      comp=E,51nm,0.7s
ELL   Elmali             4.70 138   P     Pn    04 42 17.7 +1.8
ELL   Elmali             4.70 138   Pn    Pn    04 42 17.7 +1.8
TIR   Tirane             4.78 284   P     Pn    04 42 17.8 +0.9
TIR   Tirane             4.78 284   Pn    Pn    04 42 17.8 +0.9
ISR   Istrita            4.80   4   P     Pn    04 42 20.9 +3.7
TPGR  Topolog            4.85  21 ⇑ P     Pn    04 42 17.8 -0.1
TPGR  Topolog            4.85  21         Pn    04 42 17.8 -0.1
AKAS  Kas                4.97 144   Pn    Pn    04 42 20.2 +0.5
CFR   Carcaliu           5.08  17   P     Pn    04 42 23.5 +2.5
CFR                                 pmax  pmax
      comp=Z,31nm,1.0s
IDI   Anoyia             5.12 191   Pn    Pn    04 42 21.5 -0.1
      comp=Z,1.1nm,0.3s,baz=324,slow=12,SNR=6.7
IDI                                 Sn    Sn    04 43 20.5 -0.4
      comp=Z,1.7nm,0.3s,baz=77,slow=22,SNR=1.3
IDI   Anoyia             5.12 191 ⇓ P     Pn    04 42 21.2 -0.5
IDI   Anoyia             5.12 191   Pn    Pn    04 42 22.1 +0.5
ARR   Arges              5.13 349 ⇑ P     Pn    04 42 21.1 -0.7
ARR   Arges              5.13 349         Pn    04 42 21.1 -0.7
VOIR                     5.15 352 ⇑ P     Pn    04 42 21.9 -0.2
VOIR                     5.15 352   P     Pn    04 42 21.9 -0.2
VOIR                     5.15 352         Pn    04 42 21.9 -0.2
MLR   Muntele Rosu       5.15 359   Pn    Pn    04 42 23.2 +1.0
      comp=Z,8.6nm,0.3s,baz=216,slow=3.7,SNR=151
MLR                                 Lg    Lg    04 43 50.2
      comp=Z,8.6nm,0.3s,baz=108,slow=23,SNR=2.8
MLR                                 LR    LR    04 44 55.6
      comp=Z,382nm,18.2s,baz=154,slow=45
MLR   Muntele Rosu       5.15 359 ⇓ P     Pn    04 42 23.5 +1.3
MLR   Muntele Rosu       5.15 359   P     Pn    04 42 23.7 +1.5
MLR   Muntele Rosu       5.15 359   Pn    Pn    04 42 23.7 +1.5
BR231 Keskin MP Arra     5.20  93   Pn    Pn    04 42 26.3 +3.5
HERR  Herculane          5.27 331 ⇓ P     Pn    04 42 22.5 -1.1
HERR  Herculane          5.27 331         Pn    04 42 22.5 -1.1
LOT   Lotru              5.37 343 ⇑ P     Pn    04 42 24.7 -0.5
LOT   Lotru              5.37 343         Pn    04 42 24.7 -0.5
MDVR  Moldovita          5.47 326 ⇓ P     Pn    04 42 26.1 -0.3
MDVR  Moldovita          5.47 326         Pn    04 42 26.1 -0.3
PDG   Podgorica          5.51 295 e Pn    Pn    04 42 28.5 +1.6
PDG   Podgorica          5.51 295   Pn    Pn    04 42 28.3 +1.4
PLOR  Plostina           5.53   5   P     Pn    04 42 28.8 +1.5
VRI   Vrincioaia         5.55   5 ⇑ P     Pn    04 42 29.1 +1.6
VRI   Vrincioaia         5.55   5   P     Pn    04 42 29.1 +1.6
VRI   Vrincioaia         5.55   5         Pn    04 42 29.1 +1.6
GZR   Gura Zlata         5.59 336 ⇓ P     Pn    04 42 27.2 -1.0
GZR   Gura Zlata         5.59 336         Pn    04 42 27.2 -1.0
DOPR  Dopca              5.65 355 ⇑ P     Pn    04 42 29.2 +0.3
DOPR  Dopca              5.65 355         Pn    04 42 29.2 +0.3
OZUR                     5.76 358 ⇓ P     Pn    04 42 31.5 +1.1
OZUR                     5.76 358         Pn    04 42 31.5 +1.1
SCTE  Santa Cesarea      5.79 270   Pn    Pn    04 42 31.6 +0.8
DIVS  Divibare           5.85 312⇓i Pn    Pn    04 42 30.9 -0.8
DIVS  Divibare           5.85 312   Pn    Pn    04 42 31.3 -0.4
BR131 Keskin Array S     5.87  93 i P     Pn    04 42 32.1 +0.1
BR131 Keskin Array S     5.87  93   Pn    Pn    04 42 32.9 +0.8
BRTR  Keskin Array B     5.87  93   Pn    Pn    04 42 32.2 +0.1
      comp=Z,2.0nm,0.3s,baz=270,slow=12,SNR=48
RUDO  Rudo               5.95 306 e Pn    Pn    04 42 31.6 -1.4
DEV   Deva               6.00 339   P     Pn    04 42 33.3 -0.3
DEV                                 pmax  pmax
      comp=Z,49nm,0.7s
HCY   Herceg Novi        6.05 293 e Pn    Pn    04 42 36.6 +2.3
UPM   Unac-Piva          6.05 301 e Pn    Pn    04 42 35.5 +1.0
BBLS  Lazi&#263;i        6.06 308 e Pn    Pn    04 42 33.8 -0.8
BRY   Bratogost          6.17 297 e Pn    Pn    04 42 38.3 +2.1
BZS   Buzias             6.19 330 ⇓ P     Pn    04 42 35.4 -0.9
BZS   Buzias             6.19 330   P     Pn    04 42 35.4 -0.9
BZS   Buzias             6.19 330         Pn    04 42 35.4 -0.9
TESR  Tescani            6.19   4 ⇑ P     Pn    04 42 37.6 +1.3
TESR  Tescani            6.19   4         Pn    04 42 37.6 +1.3
TREB  Trebinje           6.24 295 e Pn    Pn    04 42 38.0 +1.1
DBRK  Dubrovnik          6.36 294 i Pn    Pn    04 42 39.2 +0.6
DBRK                                Sn    Sn    04 43 51.2 -0.2
TEKS  Tekeris            6.39 313 e Pn    Pn    04 42 38.5 -0.6
HAPS  Han Pijesak,Bl     6.45 308⇑i Pn    Pn    04 42 38.9 -1.1
FRGS  Fruska Gora        6.65 319 e Pn    Pn    04 42 41.1 -1.5
SIRR  Siria              6.73 333 ⇑ P     Pn    04 42 42.9 -0.8
SIRR  Siria              6.73 333         Pn    04 42 42.9 -0.8
STON  Ston               6.74 295 e Pn    Pn    04 42 43.8  0.0
STON  Ston               6.74 295 e Pn    Pn    04 42 43.8  0.0
DRGR                     6.89 341 ⇑ P     Pn    04 42 45.0 -1.0
DRGR                     6.89 341   P     Pn    04 42 45.0 -1.0
DRGR                     6.89 341         Pn    04 42 45.0 -1.0
IAS   Iasi               6.95   9   P     Pn    04 42 48.2 +1.6
IAS                                 pmax  pmax
      comp=Z,174nm,0.7s
MATE  Matera             7.12 276 ⇑ P     Pn    04 42 48.6 -0.3
MATE  Matera             7.12 276         Pn    04 42 48.6 -0.3
TIP   Timpagrande        7.24 264 ⇑ P     Pn    04 42 50.8 +0.1
TIP   Timpagrande        7.24 264   Pn    Pn    04 42 50.4 -0.3
BURAR Bucovina Array     7.30 356   P     Pn    04 42 52.0 +0.4
BURAR Bucovina Array     7.30 356   Pn    Pn    04 42 53.0 +1.3
BUR08 Bucovina Ar. S     7.33 356   Pn    Pn    04 42 53.6 +1.5
RICI  Ricice             7.35 298 i Pn    Pn    04 42 53.9 +1.7
MAKA  Makarska           7.35 297 i Pn    Pn    04 42 53.4 +1.2
MAKA                                Sn    Sn    04 44 11.6 -4.0
HVAR  Hvar               7.70 295 e Pn    Pn    04 42 57.1  0.0
MGRS  Mrkonjic Grad      7.78 305 e Pn    Pn    04 42 58.9 +0.8
BLY   Banja Luka         7.88 307 e Pn    Pn    04 42 59.8 +0.3
SGRT  San Giovanni R     7.90 284   Pn    Pn    04 42 58.1 -1.8
MORH  Mrgy, Hungar       7.97 320 e Pn    Pn    04 42 59.8 -0.9
SORM  Soroca             7.97  11 ⇓ P     Pn    04 43 00.3 -0.4
SORM  Soroca             7.97  11   P     Pn    04 43 00.3 -0.4
SORM  Soroca             7.97  11         Pn    04 43 00.3 -0.4
TOKA  Tokat              7.98  87   Pn    Pn    04 43 02.1 +1.1
KIJV  Kijevo             8.03 300 e Pn    Pn    04 43 03.4 +1.8
CEL   Celeste            8.13 258   Pn    Pn    04 43 03.2 +0.2
KMPD  K-Podol'skiy       8.23   2   P     Pn    04 43 07.0 +2.7
ZIRJ  Zirje              8.41 297 e Pn    Pn    04 43 07.5 +0.7
ZIRJ                                Sn    Sn    04 44 40.2 -1.6
MORI  Morici             8.45 298 i Pn    Pn    04 43 08.3 +1.1
UDBI  Udbina             8.67 302 e Pn    Pn    04 43 12.6 +2.3
UZH   Uzhgorod           8.71 343⇑i P     Pn    04 43 15.0 +4.1
UZH                               e S     Sn    04 44 54.9 +5.8
PAOL  Paolisi            8.74 278   Pn    Pn    04 43 12.5 +1.2
PSZ   Piszkesteto        8.77 332   P     Pn    04 43 10.9 -0.8
PSZ   Piszkesteto        8.77 332   Pn    Pn    04 43 10.9 -0.8
DUGI  Dugi Otok          8.93 298 e Pn    Pn    04 43 14.2 +0.3
KOLS  Kolonicke sedl     9.00 344 e P     Pn    04 43 20.8 +5.9
KOLS  Kolonicke sedl     9.00 344 e PN    Pn    04 43 20.8 +5.9
BEHE  Becsehely          9.11 315 e Pn    Pn    04 43 17.7 +1.4
NVLJ  Novalja            9.27 301 i Pn    Pn    04 43 18.5  0.0
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INTR  Introdacqua        9.30 284   Pn    Pn    04 43 17.6 -1.4
CRES  Cresnjev           9.48 309⇑i Pn    Pn    04 43 20.2 -1.2
KWP   Kalwaria Pacla     9.59 347   P     Pn    04 43 24.4 +1.5
KWP   Kalwaria Pacla     9.59 347   Pn    Pn    04 43 24.4 +1.5
RAFF  Raffo Rosso        9.62 255   Pn    Pn    04 43 21.5 -1.9
CEY   Cerknica          10.06 306⇑i Pn    Pn    04 43 28.7 -0.7
MODS  Modra-Piesok      10.19 325 e P     Pn    04 43 35.9 +4.8
MODS  Modra-Piesok      10.19 325 e PN    Pn    04 43 35.9 +4.8
SOKA  Soboth            10.19 312 e P     Pn    04 43 31.6 +0.4
      comp=Z,0.5nm,0.2s
OBKA  Obir              10.38 310 e P     Pn    04 43 34.2 +0.4
      comp=Z,1.0nm,0.5s
MMAI  Mount Meron Ar    10.48 131   Pn    Pn    04 43 34.3 -1.0
      comp=Z,1.7nm,0.3s,baz=316,slow=12,SNR=4.8
MURB  Monte Urbino      10.50 291   Pn    Pn    04 43 36.4 +1.0
CONA  Conrad Observa    10.53 319 e P     Pn    04 43 37.1 +1.2
      comp=Z,4.4nm,0.9s
KIEV  Kiev              10.60  11   P     Pn    04 43 40.0 +3.4
AKASG Malin Array Be    10.61  11   Pn    Pn    04 43 36.3 -0.4
      comp=Z,1.2nm,0.3s,baz=200,slow=11,SNR=5.2
AKASG                               Sn    Sn    04 45 37.6 +2.0
      comp=Z,1.3nm,0.3s,baz=196,slow=23,SNR=3.0
AKASG Malin Array Be    10.61  11 i P     Pn    04 43 38.7 +1.9
AKASG                               pmax  pmax
      comp=Z,1.0nm,0.4s
AKASG Malin Array Be    10.61  11         Pn    04 43 35.8 -1.0
AKBB  Malin Array Si    10.61  11   P     Pn    04 43 36.9 +0.1
AKBB  Malin Array Si    10.61  11   Pn    Pn    04 43 36.9 +0.1
VRAC  Vranov            11.19 326   LR    LR    04 49 21.0
      comp=Z,87nm,18.5s,baz=144,slow=44
ZOU   Zoufplan          11.34 308   Pn    Pn    04 43 48.3 +1.2
ABTA  Abfaltersbach     11.71 308 e P     Pn    04 43 54.0 +2.0
      comp=Z,1.2nm,0.3s
GERES GERESS Array B    12.22 318   Pn    Pn    04 44 01.0 +2.1
      comp=Z,0.1nm,0.3s,baz=140,slow=15,SNR=2.4
WTTA  Wattenberg        12.48 308 e P     Pn    04 44 06.2 +3.5
      comp=Z,0.8nm,0.2s
SQTA  Sankt Quirin      12.72 308 i P     Pn    04 44 09.5 +3.6
      comp=Z,2.3nm,0.3s
MOTA  Moosalm           12.84 308 e P     Pn    04 44 11.1 +3.6
      comp=Z,2.2nm,0.4s
KIV   Kislovodsk        12.88  68 e P     Pn    04 44 10.8 +2.8
KIV                                 pmax  pmax
      comp=Z,17nm,1.1s
KIV                                 MLR   MLR
      comp=Z,49nm,11.0s
FETA  Feichten          12.92 306 e P     Pn    04 44 12.5 +3.8
      comp=Z,0.7nm,0.4s
KBZ   Khabaz            12.99  69 i P     Pn    04 44 12.1 +2.7
DAVOX Davos/Dischmat    13.36 304   Pn    Pn    04 44 15.2 +0.7
      comp=Z,0.2nm,0.3s,baz=142,slow=21,SNR=2.4
SENIN Lac Senin/Sane    14.88 300   Pn    Pn    04 44 36.0 +0.5
BNI   Bardonecchia      14.98 295   P     Pn    04 44 35.3 -1.4
BNI   Bardonecchia      14.98 295   Pn    Pn    04 44 35.3 -1.4
OBN   Obninsk           16.37  22 i P     Pn    04 44 53.9 -0.6
OBN                                 pmax  pmax
      comp=Z,5.0nm,1.0s
OBN                                 MLR   MLR
      comp=Z,65nm,16.0s
MOS   Moscow            17.21  23 e P     P     04 45 08.6 +1.8
FINES FINESS Array B    21.14   0   P     P     04 45 48.3 -1.4
      comp=Z,4.2nm,0.9s,baz=165,slow=12,SNR=2.7
FINES FINESS Array B    21.14   0   P     P     04 45 50.2 +0.6
FINES FINESS Array B    21.14   0   P     P     04 45 50.2 +0.6
FIA1  FINESS Array S    21.14   0   P     P     04 45 49.9 +0.3
FIA1                                IAmb  IAmb  04 45 56.9
      comp=Z,26nm,1.5s
HFS   Hagfors           21.26 343   P     P     04 45 49.7 -1.3
      comp=Z,2.1nm,0.6s,baz=126,slow=7.5,SNR=8.7
KLMR  Klimovskoe        22.17  18 e P     P     04 45 57.4 -3.3
KLMR                                pmax  pmax
      comp=Z,18nm,1.5s
KLMR  Klimovskoe        22.17  18 e P     P     04 45 57.4 -3.3
KLMR                                AMP         04 46 00.4
      comp=Z,18nm,1.5s
NAO01 NORSAR Array S    22.56 341   P     P     04 46 03.0 -2.0
NB2   NORSAR Subarra    22.65 341   P     P     04 46 04.3 -1.6
      comp=Z,1.6nm,0.6s,baz=146,slow=11
NOA   NORSAR Array B    22.65 341   P     P     04 46 04.4 -1.5
      comp=Z,1.9nm,0.7s,baz=146,slow=9.6,SNR=4.4
NOA                                 LR    LR    04 56 44.4
      comp=Z,34nm,20.7s,baz=170,slow=42
ESDC  Sonseca Array     22.94 278   P     P     04 46 09.8 +0.6
      comp=Z,1.7nm,0.9s,baz=72,slow=13,SNR=4.7
KIRV  Kirov             23.55  31   LR    LR    04 55 00.9
      comp=Z,67nm,21.0s,baz=274,slow=36
EKA   Eskdalemuir Ar    24.43 318   P     P     04 46 22.1 -1.4
      comp=Z,2.2nm,0.6s,baz=108,slow=8.6,SNR=8.5
AKTO  Aktyubinsk        24.46  55   P     P     04 46 23.5 -0.3
      comp=Z,0.9nm,0.6s,baz=274,slow=11,SNR=3.7
ARU   Arti              26.61  42   P     P     04 46 44.6 +1.5
      comp=Z,0.9nm,0.3s,baz=256,slow=8.4,SNR=5.6
ARU   Arti              26.61  42c i P    P     04 46 45.1 +2.0
ARU                                             04 47 23.8
ARU                                 S     S     04 51 24.0 +6.2
ARU                                 SS    SnSn  04 52 23.4 +3.5
ARU                                 pmax  pmax
      comp=Z,8.0nm,1.0s
ARU   Arti              26.61  42   P     P     04 46 43.2 +0.1
ARU                                 IAmb  IAmb  04 46 50.9
      comp=Z,12nm,1.3s
TOA0  Torodi Ar. Sit    34.49 225   P     P     04 47 53.1 -0.1
TOA0                                IAmb  IAmb  04 48 11.3
      comp=Z,3.6nm,1.4s
TORD  Torodi Ar. Bea    34.49 225   P     P     04 47 54.0 +0.8
      comp=Z,0.8nm,0.6s,baz=34,slow=9.4,SNR=4.5
TORD  Torodi Ar. Bea    34.49 225   P     P     04 47 52.9 -0.2
AAK   Ala-Archa         35.99  70 i P     P     04 48 07.0 +0.9
AAK                                 pmax  pmax
      comp=Z,1.0nm,0.4s
MK31  Makanchi Array    40.52  62 i P     P     04 48 43.9 -0.1
MK31  Makanchi Array    40.52  62   P     P     04 48 44.0 -0.1
MKAR  Makanchi Array    40.52  62   P     P     04 48 44.2 +0.1
      comp=Z,0.5nm,0.7s,baz=276,slow=6.5,SNR=6.3
ZALV  Zalesovo Beam     41.05  50   P     P     04 48 47.8 -0.4
      comp=Z,0.7nm,0.5s,baz=280,slow=8.6,SNR=2.7
ZALV  Zalesovo Beam     41.05  50 i P     P     04 48 52.2 +4.0
ZALV                                pmax  pmax
      comp=Z,1.0nm,0.4s
DBIC  Dimbokro          43.45 228   P     P     04 49 08.1  0.0
      comp=Z,1.5nm,0.5s,baz=11,slow=11,SNR=3.7
DBIC  Dimbokro          43.45 228   P     P     04 49 08.0 -0.2
WMQ   Urumqi            44.97  64 e P     P     04 49 22.2 +2.0
LZH   Lanzhou           59.42  67 ⇓ P     P     04 51 08.7 +0.8
LZH                                 pP    sP    04 51 15.9 +4.2
LZH                                 sP    pP    04 51 19.6 +9.0
LZH                                 pmax  pmax
      comp=Z,13nm,1.1s
HHC   Hu-ho-hao-te      62.28  59 e P     P     04 51 28.5 +1.3
HHC                                 pmax  pmax
      comp=Z,6.0nm,1.0s
HHC                                 pmax  pmax
      comp=Z,110nm,5.4s
CMAR  Chiang Mai Arr    65.41  86 i P     P     04 51 46.5 -1.5
CMAR                                pmax  pmax
      comp=Z,1.0nm,0.3s
TOLK  Toolik Lake Re    71.30 358   P     P     04 52 25.3 +1.1
YKA   Yellowknife Ar    72.75 342   P     P     04 52 31.9 -0.9
      comp=Z,0.3nm,0.7s,baz=40,slow=5.7,SNR=6.6
KSRS  Korea Array       74.63  54   P     P     04 52 43.6 -0.7
      comp=Z,1.3nm,0.7s,baz=304,slow=5.5,SNR=4.6
ULM   Lac du Bonnet     76.41 326   P     P     04 52 53.6 -0.7
      comp=Z,1.8nm,0.7s,baz=42,slow=12,SNR=3.3
ULM   Lac du Bonnet     76.41 326   P     P     04 52 54.0 -0.3
ULM                                 pmax  pmax
      comp=Z,5.0nm,1.3s
ULM   Lac du Bonnet     76.41 326   P     P     04 52 54.0 -0.3
ULM                                 IAmb  IAmb  04 52 54.9
      comp=Z,4.8nm,1.2s
PDAR  Pinedale Array    88.05 329   P     P     04 53 54.3 -1.5
      comp=Z,0.2nm,0.6s,baz=27,slow=8.1,SNR=1.9
NVAR  Mina Array Bea    95.09 333   P     P     04 54 27.7 -0.8
      comp=Z,0.3nm,0.8s,baz=352,slow=3.6,SNR=3.0
PFO   Pinyon Flats O    98.67 329 i P     Pdif  04 54 44.7  0.0
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*IDC **02** 04:50:08.9±2.5, 25°.10S×179°.79E, h499^{km}±28^{km}, mb3.2/5, mb1 3.7/6, mb1mx3.3/22, mbtmp4.2/6, Error ellipse: s-maj=40.5km s-min=17.1km az=163.0*

*NEIC **02** 04:50:09.7±2.0, 25°.2S±0°.1×179°.7E±0°.1, h501^{km}±8^{km}, mb4.2/16, Error ellipse: s-maj=19.1km s-min=11.1km az=218.0*

ISC 02 04:50:09.8±0.6, **25°.06S**±0°.07×**179°.72E**±0°.10, **h500**^{km}**, n77, σ1^{s}57**/86, **mb4.0**/14, **1D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	4.68	154	P	P	04 51 35.5	+1.8
GLKZ	Green Lake	4.69	154	P	P	04 51 35.2	+1.4
MSVF	Nonsavu	7.45	348	P	P	04 52 00.9	+0.1
OUZ	Omahuta	11.43	206	P	P	04 52 44.9	+2.8
KUZ	Kuaotunu	12.15	195	P	P	04 52 51.4	+1.7
MXZ	Matakaoa Point	12.53	185	P	P	04 52 54.8	+1.1
MXZ	Matakaoa Point	12.53	185	P	P	04 52 54.9	+1.1
ETAZ	East Tamaki Re	12.55	198	P	P	04 53 01.9	+7.9
HAZ	Te Kaha	12.77	187	P	P	04 52 56.2	-0.1
HAZ				S	S	04 55 15.4	+1.9
WMGZ	Waiomatatini S	12.77	185	P	P	04 52 57.5	+1.2
WMGZ				S	S	04 55 14.9	+1.2
PKGZ	Pakihiroa	12.87	186	P	P	04 52 59.1	+1.7
PKGZ				S	S	04 55 15.7	0.0
RUGZ	Raukumara Rang	12.99	187	P	P	04 52 59.9	+1.2
RUGZ				S	S	04 55 18.2	+0.2
PUZ	Puketiti	13.04	185	P	P	04 52 59.7	+0.6
TOZ	Tahuroa Road	13.14	195	P	P	04 53 01.7	+1.6
KMRZ	Kaimai	13.15	193	P	P	04 53 01.2	+0.8
TWGZ	Tauwhareparae	13.16	186	P	P	04 53 01.7	+1.1
URZ	Urewera	13.35	189	P	P	04 52 60.0	-2.4
	5.6nm,0.3s,baz=25,slow=1.6,SNR=31						
URZ				S	S	04 55 25.6	+0.8
	2.7nm,0.3s,baz=198,slow=22,SNR=14						
URZ	Urewera	13.35	189	P	P	04 53 00.3	-2.1
URZ	Urewera	13.35	189	P	P	04 53 00.6	-1.8
MWZ	Matawai	13.37	187	P	P	04 53 02.1	-0.6
MWZ				S	S	04 55 26.4	+1.1
CNGZ	Carnagh Statio	13.45	185	P	P	04 53 05.7	+2.3
WHTZ	Whakaora	13.94	192	P	P	04 53 04.8	-3.9
MTHZ	Maungataniwha	13.97	189	P	P	04 53 07.5	-1.5
HIZ	Hauiti	14.04	196	P	P	04 53 13.4	+3.8
RATZ	Rangitukua	14.17	193	P	P	04 53 03.6	-7.5
BKZ	Black Stump Fm	14.33	190	P	P	04 53 10.0	-2.9
BKZ	Black Stump Fm	14.33	190	P	P	04 53 09.8	-3.0
BKZ				S	S	04 55 40.3	-3.5
TMVZ	Te Maari	14.42	193	P	P	04 53 13.7	-0.2
OTVZ	Oturere	14.48	193	P	P	04 53 12.6	-1.9
OTVZ				S	S	04 55 47.5	+0.7
MCHZ	McNeill Hill	14.57	189	P	P	04 53 14.4	-0.9
WNVZ	Wahianoa	14.65	193	P	P	04 53 13.6	-2.7
BHHZ	Black Hill Sta	14.72	191	P	P	04 53 13.2	-3.7
KRHZ	Kereru	14.82	190	P	P	04 53 15.9	-1.9
KRHZ				S	S	04 55 52.1	-1.0
KAHZ	Kahuranaki	14.89	189	P	P	04 53 18.4	-0.3
PNHZ	Pukenui	15.11	190	P	P	04 53 19.6	-1.4
DVHZ	Dannevirke	15.49	190	P	P	04 53 23.9	-1.0
BFZ	Birch Farm	15.85	190	P	P	04 53 26.7	-1.9
TUWZ	Tuamarina	17.02	195	P	P	04 53 37.3	-3.5
KHZ	Kahutara	18.05	195	P	P	04 53 48.9	-1.5
CTAO	Charters Tower	31.25	272	P	P	04 55 49.4	+1.4
CTAO				IAmb	IAmb	04 55 55.1	
	comp=Z,9.4nm,1.2s						
COEN	Coen	36.06	281	P	P	04 56 30.8	+2.0
BBOO	Buckleboo	38.77	248	P	P	04 56 50.6	-0.1
BBOO				IAmb	IAmb	04 56 55.5	
	comp=Z,26nm,1.4s						
ASAR	Alice Springs	41.61	262	P	P	04 57 13.9	+0.2
	comp=Z,0.5nm,0.3s,baz=96,slow=7.3,SNR=9.3						
ASAR				S	S	05 02 52.6	-1.0
	comp=Z,0.2nm,0.3s,baz=99,slow=15,SNR=2.4						
ASAR	Alice Springs	41.61	262	P	P	04 57 13.6	-0.1
WR0	Warramunga Arr	41.90	268	P	P	04 57 15.7	-0.3
WB2	Warramunga Arr	42.08	268	P	P	04 57 17.2	-0.2
WB2				IAmb	IAmb	04 57 26.5	
	comp=Z,6.4nm,1.4s						
WB0	Warramunga Arr	42.09	268	P	P	04 57 17.2	-0.3
WB0				IAmb	IAmb	04 57 29.9	
	comp=Z,4.1nm,1.1s						
WRA	Warramunga Arr	42.09	268	P	P	04 57 17.1	-0.4
	comp=Z,0.7nm,0.3s,baz=100,slow=6.9,SNR=29						
WRA				ScP	ScP	05 02 04.8	+1.3
	comp=Z,0.5nm,0.8s,baz=110,slow=3.4,SNR=4.8						
WRA				S	S	05 02 57.5	-3.0
	comp=Z,0.8nm,1.1s,baz=99,slow=15,SNR=3.3						
WRA	Warramunga Arr	42.09	268	P	P	04 57 16.3	-1.2
FITZ	Fitzroy Crossi	50.50	267	P	P	04 58 22.4	+0.9
QSPA	South Pole Qui	65.03	180	P	P	05 00 00.5	+0.6
QSPA				IAmb	IAmb	05 00 01.0	
	comp=Z,4.0nm,0.9s						
QSPA				PcP	PcP	05 00 28.1	+0.2
SNAA	Sanae	83.52	179	P	P	05 01 43.2	-1.1
SNAA	Sanae	83.52	179	P	P	05 01 43.1	-1.1
SNAA				IAmb	IAmb	05 01 47.0	
	comp=Z,5.7nm,1.5s						
SLBS	Sierra La Lagu	83.59	60	P	P	05 01 46.2	+0.7
VNA3	Neumayer Olymp	83.74	177	P	P	05 01 44.8	-0.5
VNA2	Neumayer--Watz	84.15	178	P	P	05 01 47.0	-0.3
	baz=182,slow=3.9						
KRMB	Red Mountain	84.32	39	P	P	05 01 49.8	+1.1
KRMB				IAmb	IAmb	05 01 54.4	
	comp=Z,17nm,1.5s						
VNA1	Neumayer--Stat	84.39	177	P	P	05 01 47.9	-0.6
NVAR	Mina Array Bea	85.76	44	P	P	05 01 55.6	-0.3
	comp=Z,0.8nm,0.7s,baz=223,slow=8.7,SNR=8.8						
NVAR	Mina Array Bea	85.76	44	P	P	05 01 56.1	+0.2
PINE	Pine Mountain	87.45	39	P	P	05 02 03.9	+0.2
PINE				IAmb	IAmb	05 02 05.5	
	comp=Z,6.6nm,1.1s						
I07A	Izee	88.44	39	P	P	05 02 08.1	-0.2
I07A				IAmb	IAmb	05 02 09.6	
	comp=Z,2.9nm,0.8s						
CMAR	Chiang Mai Arr	89.69	290	P	P	05 02 15.8	+1.3
	comp=Z,0.8nm,0.3s,baz=155,slow=3.3,SNR=4.3						
TXAR	Lajitas Array	91.25	58	P	P	05 02 20.6	-1.0
	comp=Z,1.0nm,0.8s,baz=198,slow=7.8,SNR=6.5						
TXAR	Lajitas Array	91.25	58	P	P	05 02 21.9	+0.2
MKAR	Makanchi Array	112.74	312	PKiKP	PKiKP	05 07 47.7	-1.4
	comp=Z,0.2nm,0.6s,baz=107,slow=1.3,SNR=4.3						
ARCES	ARCESS Array B	132.96	348	PKP	PKPdf	05 08 26.0	-1.0
	comp=Z,7.8nm,1.1s,baz=64,slow=2.4,SNR=6.8						
ARCES	ARCESS Array B	132.96	348		PKPdf	05 08 27.1	+0.1
FINES	FINESS Array B	139.45	341	PKhKP	PKPpre	05 08 30.8	
	comp=Z,0.5nm,0.3s,baz=48,slow=2.8,SNR=4.9						
FINES				PKP	PKPdf	05 08 39.6	+0.3
	comp=Z,2.9nm,0.9s,baz=90,slow=2.7,SNR=5.2						
FINES	FINESS Array B	139.45	341	PKPdf	PKPdf	05 08 40.1	+0.9
NB2	NORSAR Subarra	143.18	351	PKP	PKPab	05 08 43.0	-0.7
	comp=Z,0.9nm,0.5s,baz=15,slow=3.2						
NOA	NORSAR Array B	143.18	351	PKP	PKPab	05 08 42.8	-0.8
	comp=Z,1.8nm,0.7s,baz=22,slow=3.9,SNR=7.4						
AKASG	Malin Array Be	145.79	326	PKPbc	PKPdf	05 08 49.8	-0.9
	comp=Z,4.2nm,0.7s,baz=46,slow=4.1,SNR=5.0						
AKASG	Malin Array Be	145.79	326		PKPdf	05 08 49.4	-1.3
BRTR	Keskin Array B	148.06	306	PKPbc	PKPbc	05 08 57.7	-1.3
	comp=Z,1.0nm,0.6s,baz=152,slow=3.7,SNR=2.5						
BURAR	Bucovina Array	149.77	325		PKPbc	05 09 02.6	-0.2
CLL	Collm	151.88	342	⇓ *i*PKPbc	PKPbc	05 09 07.0	-0.4
	comp=Z,5.0nm,0.8s						

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*IDC **02** 05:04:12.4±7.3, 15°.49N×98°.45W, h0^{km}, mb3.5/5, mb1 3.8/6, mb1mx3.7/23, mbtmp3.4/6, ML3.5/1, Error ellipse: s-maj=128.0km s-min=99.2km az=174.0*

*MEX **02** 05:04:20.7±0.6, 16°.03N×99°.20W, h16^{km}±13^{km}, MD4.2*

ISC 02 05:04:18.5±1.8**, 16°.11N**±0°.07×**99°.16W**±0°.04**, h11**^{km}±10^{km}**, n25, **σ1^{s}.**53**/37**, mb3.4**/5**, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRIG	Cruz Grande	0.62	2	*i* P	Pg	05 04 31.0	+0.3
CRIG				*i* S	Sg	05 04 39.9	+1.0
PNIG	Pinotepa	1.03	74	*i* P	Pb	05 04 37.3	-1.1
PNIG				*i* S	Sb	05 04 50.3	-1.6
ACP2	Acapulco	1.03	318	*e*P	Pb	05 04 36.9	-1.5
ACP2				*e*S	Sb	05 04 49.0	-3.0
CAIG	El Cayaco	1.42	311	*i* P	Pn	05 04 42.3	-1.9
TLIG	Tlapa	1.55	21	*i* P	Pn	05 04 45.5	-0.7
TLIG				*i* S	Sn	05 05 05.1	-1.4
YOIG	Yosondua	1.72	64	*i* P	Pn	05 04 48.0	-0.6
YOIG				*e*S	Sn	05 05 09.1	-1.6
TXIG	Tlaxiaco	1.75	49	*i* P	Pn	05 04 48.4	-0.7
TXIG				*i* S	Sn	05 05 09.9	-1.7
MEIG	Mezcala	1.86	346	*i* P	Pn	05 04 50.0	-0.4
MEIG				*i* S	Sn	05 05 12.2	-1.8
PEIG	Puerto Escondi	1.94	93	*i* P	Pn	05 04 50.5	-0.9
PEIG				*i* S	Sn	05 05 12.4	-3.3
FTIG	Fresnillo de T	2.04	29	*i* P	Pn	05 04 52.5	-0.4
FTIG				*i* S	Sn	05 05 17.3	-1.2
HLIG	Huajuapan de L	2.15	37	*i* P	Pn	05 04 54.0	-0.5
HLIG				*e*S	Sn	05 05 20.0	-1.2
PLIG	Platanillo	2.29	352	*e*P	Pn	05 04 56.6	+0.2
PLIG				*i* S	Sn	05 05 23.1	-1.6
VHO	Vista Hermosa	2.52	67	*i* P	Pn	05 04 59.8	+0.2
VHO				*i* S	Sn	05 05 29.1	-1.2
YAIG	Yautepec	2.74	2	*i* P	Pn	05 05 02.1	-0.5
YAIG				*i* S	Sn	05 05 34.8	-0.9
TOIG	Toxpalan	2.81	45	*i* P	Pn	05 05 03.5	0.0
TOIG				*i* S	Sn	05 05 36.8	-0.7
HUIG	Huatulco	2.95	96	*i* P	Pn	05 05 05.1	-0.3
HUIG				*i* S	Sn	05 05 39.5	-1.3
TXAR	Lajitas Array	13.80	343	Pn	P	05 07 42.2	-0.6
	0.1nm,0.3s,baz=146,slow=16,SNR=2.1						
NVAR	Mina Array Bea	27.89	327	P	P	05 10 12.4	+3.7
	0.3nm,0.7s,baz=146,slow=8.2,SNR=3.0						
PDAR	Pinedale Array	28.02	344	P	P	05 10 12.4	+2.5
	0.5nm,0.8s,baz=145,slow=9.5,SNR=4.0						
ULM	Lac du Bonnet	34.16	4	P	P	05 11 04.1	+0.6
	1.9nm,0.9s,baz=182,slow=9.4,SNR=3.8						
YKA	Yellowknife Ar	47.59	350	P	P	05 12 55.3	+1.2
	0.4nm,0.9s,baz=157,slow=8.0,SNR=4.6						
H03N2	Juan Fernandez	52.92	159	T	T	06 10 42.5	
	baz=337,slow=77,SNR=12						
H03N1	Juan Fernandez	52.93	159	T	T	06 10 43.6	
	baz=337,slow=77,SNR=20						
H03N3	Juan Fernandez	52.94	159	T	T	06 10 42.6	
	baz=337,slow=77,SNR=23						
ILAR	Eielson Array	58.25	338	P	P	05 14 14.1	+1.3
	0.4nm,1.0s,baz=163,slow=4.7,SNR=2.3						

IDC 02 05:17:53.2±2.1**, 33°.58N×38°.86W, h0**^{km}**, mb3.6**/6**, mb1 3.8**/6**, mb1mx3.5**/44**, mbtmp3.6**/6**, MS3.3**/13**, Ms1 3.3**/13**, ms1mx3.1**/36**, Error ellipse: s-maj=69.8km s-min=28.0km az=19.0, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SJG	San Juan	28.87	245	LR	LR	05 34 14.8	
	comp=Z,20nm,19.9s,baz=47,slow=34						
MDP	Montagnes des	31.10	207	LR	LR	05 33 24.9	
	comp=Z,50nm,21.7s,baz=40,slow=30						
SADO	Sadowa	32.86	302	LR	LR	05 35 18.5	
	comp=Z,60nm,21.7s,baz=148,slow=32						
TKL	Tuckaleechee C	36.78	286	LR	LR	05 37 06.1	
	comp=Z,47nm,18.9s,baz=48,slow=31						
PTGA	Pitinga	39.48	214	LR	LR	05 39 12.6	
	comp=Z,32nm,20.5s,baz=33,slow=32						
DBIC	Dimbokro	41.33	123	LR	LR	05 40 44.5	
	comp=Z,29nm,19.0s,baz=340,slow=33						
GERES	GERESS Array B	41.54	52	LR	LR	05 40 19.5	
	comp=Z,37nm,18.6s,baz=272,slow=32						
TORD	Torodi Ar. Bea	42.07	109	P	P	05 25 46.4	-0.6
	1.2nm,0.8s,baz=303,slow=6.4,SNR=3.1						
NOA	NORSAR Array B	42.13	34	LR	LR	05 40 14.8	
	comp=Z,26nm,18.2s,baz=265,slow=32						
ULM	Lac du Bonnet	44.45	310	LR	LR	05 43 24.3	
	comp=Z,49nm,20.4s,baz=110,slow=34						
H10N2	ASCENSION HYDR	47.24	146	T	T	06 16 37.4	
	baz=332,slow=75,SNR=381						
H10N3	ASCENSION HYDR	47.24	146	T	T	06 16 37.8	
	baz=332,slow=75,SNR=287						
H10N1	ASCENSION HYDR	47.26	146	T	T	06 16 36.3	
	baz=332,slow=75,SNR=421						
H10S3	ASCENSION HYDR	48.15	147	T	T	06 17 52.0	
	baz=332,slow=74,SNR=121						
H10S2	ASCENSION HYDR	48.16	147	T	T	06 17 53.0	
	baz=248,slow=74,SNR=84						
AKASG	Malin Array Be	51.47	49	P	P	05 26 58.5	-1.7
	0.5nm,0.5s,baz=277,slow=7.1,SNR=2.4						
AKASG				LR	LR	05 46 33.5	
	comp=Z,50nm,18.1s,baz=310,slow=33						
YKA	Yellowknife Ar	54.34	326	P	P	05 27 20.3	-0.9
	0.6nm,0.9s,baz=87,slow=7.8,SNR=7.3						
YKA				LR	LR	05 48 16.2	
	comp=Z,61nm,20.6s,baz=0.0,slow=34						
PDAR	Pinedale Array	54.85	302	P	P	05 27 25.6	+0.1
	0.8nm,0.8s,baz=88,slow=7.6,SNR=5.5						
PDAR				LR	LR	05 48 33.9	
	comp=Z,33nm,20.4s,baz=329,slow=34						
BRTR	Keskin Array B	57.04	61	LR	LR	05 50 23.5	
	comp=Z,11nm,19.3s,baz=276,slow=34						
KURBB	Kurchatov Arra	79.65	35	P	P	05 30 03.7	+1.3
	0.4nm,0.8s,baz=305,slow=6.5,SNR=2.3						
MKAR	Makanchi Array	84.07	36	P	P	05 30 27.2	+1.4
	0.5nm,0.9s,baz=306,slow=3.4,SNR=3.6						

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*NNC **02** 05:20:10.9±1.6, 44°.85N×80°.45E, h0^{km}, mb2.6, mpv2.5, Error ellipse: s-maj=14.1km s-min=5.3km az=64.0*

SOME 02 05:20:09.9, 42°.17N×81°.08E, h10^{km}**, 1C-1D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	Ketmen	1.39	337	*e*P	Pg	05 20 36.3	-0.3
	1.4nm,0.2s						
KTMS				*e*S	Sg	05 20 55.3	+0.7
	1.7nm,0.3s						
KTMS	Ketmen	1.39	337	P	Pg	05 20 36.4	-0.1
	2.8nm,0.1s						
KTMS				S	Sg	05 20 55.4	+0.9
	1.7nm,0.3s						
PDGK	Podgornoye	1.65	315	P	Pg	05 20 41.3	-0.3
	1.5nm,1.1s						
PDGK				S	Sg	05 21 03.7	+0.7
	1.2nm,0.2s						
PDGK	Podgornoye	1.65	315	⇑Pn	Pg	05 20 41.9	+0.3
	6.6nm,2.1s						
PDGK				⇓Sn	Sg	05 21 05.0	+2.0
	1.6nm,0.6s						
UZB	Uzynbulak	1.81	303	*e*P	Pb	05 20 43.2	0.0
	0.5nm,0.1s						
UZB				*e*S	Sg	05 21 07.2	-0.9
	1.8nm,0.2s						
SATY	Saty	2.17	295	*e*P	Pg	05 20 50.5	-1.0
	2.1nm,0.5s						
SATY				*e*S	Sg	05 21 19.6	0.0
	3.8nm,0.2s						
KPKS	Kokpek	2.19	307	*e*P	Pb	05 20 49.5	-0.2
	2.3nm,0.2s						
KPKS				*e*S	Sb	05 21 17.8	+0.8
	5.8nm,0.4s						
MNBS	Baschi	2.74	315	*e*P	Pb	05 20 59.0	-0.1
	0.6nm,0.1s						
MNBS				*e*S	Sb	05 21 34.2	+1.5
	3.8nm,0.3s						
KAPS	Kapalarasan	3.36	339	Lg	Lg	05 20 40.3	
	2.0nm,0.6s						

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*NEIC **02** 05:27:43.6±1.7, 13°.12N±0°.10×88°.00W±0°.08, h152^{km}±9^{km}, mb4.4/65, Error ellipse: s-maj=16.3km s-min=8.8km az=215.0*

*SNET **02** 05:27:43.8±1.2, 13°.09N×88°.05W, h141^{km}±5^{km}, ML4.1*

*IDC **02** 05:27:43.4±3.3, 13°.30N×87°.89W, h152^{km}±23^{km}, mb3.4/9, mb1 3.7/11, mb1mx3.4/44, mbtmp3.9/11, MS3.1/2, Ms1 3.1/2, ms1mx2.5/21, Error ellipse: s-maj=40.4km s-min=23.1km az=16.0*

*GCG **02** 05:27:43.1±0.7, 13°.23N×87°.74W, h29^{km}±321^{km}, MD4.3*

*INET **02** 05:27:45.0, 13°.16N×88°.01W, h131^{km}, MD3.5, ML4.2*

*UCR **02** 05:27:46.2±2.3, 12°.44N×88°.41W, h21^{km}±9^{km}, ML3.8, MW3.8*

ISC 02 05:27:43.2±0.6**, 13°.15N**±0°.06×**87°.99W**±0°.04**, h149**^{km}±4^{km}**, n145, **σ1^{s}.**06**/171**, mb4.3**/38**, 1D, Honduras**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCND	La Caada	0.19	30	*i* P	Pn	05 28 03.5	+0.2
LCND				*e*S	Sn	05 28 18.8	+0.1
LCND				IAML		05 28 29.0	
	comp=Z,3µm,0.2s						
LCND	La Caada	0.19	30	*i* P	Pn	05 28 03.5	+0.2
LCND				*e*S	Sn	05 28 18.8	+0.1
LCND				IAML		05 28 29.0	
	comp=Z,3µm,0.2s						
CNCH	Conchagua	0.20	49	*e*P	Pn	05 28 03.5	+0.1
CNCH				*e*P		05 28 03.9	
CNCH				*e*S	Sn	05 28 18.6	-0.3
CNCH	Conchagua	0.20	49	*e*P	Pn	05 28 03.5	+0.1
CNCH				*e*P		05 28 03.9	
CNCH				*e*S	Sn	05 28 18.6	-0.3
JUCU	Jucuar¡n	0.28	293	*e*P	Pn	05 28 03.5	-0.1
JUCU				*e*S	Sn	05 28 18.8	-0.3
JUCU	Jucuar¡n	0.28	293	*e*P	Pn	05 28 03.5	-0.1
JUCU				*e*S	Sn	05 28 18.8	-0.3
PACA	Pacayal	0.46	315	*e*P	Pn	05 28 05.2	+0.9
PACA	Pacayal	0.46	315	*e*P	Pn	05 28 05.2	+0.9
PQSS	Presa 15 de Se	0.73	311	*e*P	Pn	05 28 06.0	+0.2
COEG	Centro de Oper	0.99	299	*e*P	Pn	05 28 08.0	+0.2
COEG				*e*S	Sn	05 28 26.8	+0.2
COEG	Centro de Oper	0.99	299	*e*P	Pn	05 28 08.0	+0.2
COEG				*e*S	Sn	05 28 26.8	+0.2
CRIN	San Cristobal	1.02	116		Pn	05 28 09.0	+1.0
TGUH	Tegucigalpa,Un	1.14	37	⇓*i*P	Pn	05 28 09.9	+0.6
TGUH	Tegucigalpa,Un	1.14	37		Pn	05 28 09.8	+0.5
LFRS	El Faro	1.15	295	*e*P	Pn	05 28 09.3	0.0
LFRS	El Faro	1.15	295	*e*P	Pn	05 28 09.3	0.0
LBRS	Las Brisas	1.18	300	*e*P	Pn	05 28 10.1	+0.5
LBRS	Las Brisas	1.18	300	*e*P	Pn	05 28 10.1	+0.5
OPAM	Oficina de Pla	1.30	296	*e*P	Pn	05 28 10.7	0.0
OPAM	Oficina de Pla	1.30	296	*e*P	Pn	05 28 10.7	0.0
SNET	Serv Nac Est T	1.32	294	*e*P	Pn	05 28 10.9	-0.1
SNET				*e*S	Sn	05 28 31.9	-0.2
SNET				IAML		05 28 37.4	
	comp=Z,1µm,0.3s						
SNET	Serv Nac Est T	1.32	294	*e*P	Pn	05 28 10.9	-0.1
SNET				*e*S	Sn	05 28 31.9	-0.2
SNET				IAML		05 28 37.4	
	comp=Z,1µm,0.3s						
SNET	Serv Nac Est T	1.32	294		Pn	05 28 10.8	-0.1
LALI	Alcalda de L	1.34	285	*e*P	Pn	05 28 10.7	-0.3
LALI				*e*S	Sn	05 28 31.2	-1.0
LALI	Alcalda de L	1.34	285	*e*P	Pn	05 28 10.7	-0.3
LALI				*e*S	Sn	05 28 31.2	-1.0
BOQS	Boqueron	1.39	295	*e*P	Pn	05 28 13.1	+1.4
BOQS	Boqueron	1.39	295	*e*P	Pn	05 28 13.1	+1.4
CNGN	Cerro Negro	1.41	117	*e*S	Sn	05 28 34.2	+0.6
CNGN	Cerro Negro	1.41	117	*e*S	Sn	05 28 34.2	+0.6
JAYA	Jayaque - finc	1.51	290	*e*P	Pn	05 28 12.8	-0.1
JAYA				*e*S	Sn	05 28 35.6	0.0
JAYA				IAML		05 28 37.9	
	comp=Z,2µm,0.1s						
JAYA	Jayaque - finc	1.51	290	*e*P	Pn	05 28 12.8	-0.1
JAYA				*e*S	Sn	05 28 35.6	0.0
JAYA				IAML		05 28 37.9	
	comp=Z,2µm,0.1s						
CEDA	San Andres	1.52	296	*e*P	Pn	05 28 12.7	-0.1
CEDA				*e*S	Sn	05 28 36.2	+0.6
CEDA				IAML		05 28 45.7	
	comp=Z,866nm,0.3s						
CEDA	San Andres	1.52	296	*e*P	Pn	05 28 12.7	-0.1
CEDA				*e*S	Sn	05 28 36.2	+0.6
CEDA				IAML		05 28 45.7	
	comp=Z,866nm,0.3s						
CEVE	Cerro Verde	1.73	293	*e*P	Pn	05 28 15.7	+0.2
CEVE				*e*S	Sn	05 28 41.6	+1.5
CEVE				IAML		05 28 47.9	
	comp=Z,1µm,0.3s						
CEVE	Cerro Verde	1.73	293	*e*P	Pn	05 28 15.7	+0.2
CEVE				*e*S	Sn	05 28 41.6	+1.5
CEVE				IAML		05 28 47.9	
	comp=Z,1µm,0.3s						
MTO3	Montecristo	1.83	313	*e*P	Pn	05 28 17.1	+0.7
MTO3	Montecristo	1.83	313	*e*P	Pn	05 28 17.1	+0.7
MTO3	Montecristo	1.83	313		Pn	05 28 17.1	+0.7
ESQI	Esquipulas	1.93	317	*e*P	Pn	05 28 18.6	+1.1
ESQI				*e*S	Sn	05 28 44.5	+0.7
ESQI	Esquipulas	1.93	317		Pn	05 28 18.4	+1.0
MRL	Marmol	2.53	320	*e*S	Sn	05 28 56.9	-0.1
IXG	Ixpaco	2.59	293	*e*P	Pn	05 28 26.6	+1.0
IXG				*e*S	Sn	05 28 59.8	+1.6
NBG	Las Nubes	2.70	302	*e*P	Pn	05 28 29.1	+2.0
NBG				*e*S	Sn	05 29 02.8	+2.0
PCG	Pacaya	2.83	296	*e*P	Pn	05 28 30.4	+1.8
PCG				*e*S	Sn	05 29 06.7	+3.0
ACON	Acoyapa	2.99	113		Pn	05 28 31.4	+1.1
FUG	Fuego 3	3.06	295	*e*P	Pn	05 28 32.7	+1.2
FUG				*e*S	Sn	05 29 12.0	+3.3
LAPC	Finca la Perla	3.44	133	*i* P	Pn	05 28 38.2	+2.0
LAPC				*i* S	Sn	05 29 17.5	+0.2
CUI	Cuipilapa	3.71	132	*i* P	Pn	05 28 41.8	+2.1
ESPN	Las Esperanzas	3.72	104		Pn	05 28 41.2	+1.4
GUAI	GUAI	3.75	139	*i* P	Pn	05 28 42.1	+2.0
GUAI				*i* S	Sn	05 29 23.1	-1.3
ACAL	Aguas Claras	3.82	130	*i* P	Pn	05 28 43.7	+2.5
RTAL	Retalhuleu	3.85	291		Pn	05 28 42.0	+0.5
HUEH	Huehuetenango	4.04	303		Pn	05 28 45.5	+1.4
JTS	Las Juntas de	4.11	133		Pn	05 28 45.3	+0.4
PETF	Flores	4.17	334		Pn	05 28 46.7	+1.1
HDC	Heredia	4.92	129		Pn	05 28 55.1	-0.5
CCIG	Comitan	5.08	308		Pn	05 28 59.0	+1.2
EDDO	Dominical	5.60	133	*e*P	Pn	05 29 07.5	+3.0
EDLM	Las Mercedes	5.78	131	*e*P	Pn	05 29 09.8	+2.8
EDBA	Buenos Aires	6.09	130	*e*P	Pn	05 29 14.3	+3.2
EDSV	San Vito	6.54	131	*e*P	Pn	05 29 20.1	+2.9
TEIG	Tepich	7.05	358	Pn	Pn	05 29 24.5	+0.6
CMIG	Matias Romero	7.73	301	P	Pn	05 29 32.9	-0.1
	comp=Z,1.8nm,0.3s,baz=164,slow=9.7,SNR=52						
CMIG				S	Sn	05 30 50.7	-8.5
	comp=Z,0.3nm,0.3s,baz=95,slow=11,SNR=3.4						
TLIG	Tlapa	11.11	295		Pn	05 30 18.9	+0.9
SDV	Santo Domingo	17.55	102	P	P	05 31 37.1	-0.9
	comp=Z,0.6nm,0.3s,baz=333,slow=14,SNR=2.5						
SDV				LR	LR	05 39 54.7	
	comp=Z,23nm,21.6s,baz=35,slow=42						
LRAL	Lakeview Retre	19.82	2	P	Pn	05 32 04.5	-0.9
Z51A	Franklin	20.24	7	P	P	05 32 08.9	+2.1
GOGA	Godfrey	20.59	11	P	P	05 32 11.8	+1.3
GOGA				IAmb	IAmb	05 32 12.5	
	comp=Z,9.9nm,0.8s						
Y49A	Blount Mountai	20.67	4	P	P	05 32 11.8	+0.4
Y49A				IAmb	IAmb	05 32 12.7	
	comp=Z,11nm,0.7s						
Y52A	Lilburn	20.93	9	P	P	05 32 15.2	+0.9
Y52A				IAmb	IAmb	05 32 15.4	
	comp=Z,9.3nm,0.7s						
FPAL	Fort Paine	21.41	5	P	P	05 32 19.6	+0.2
FPAL				IAmb	IAmb	05 32 46.8	
	comp=Z,19nm,1.2s						
HODGE	Hodges	21.63	13	P	P	05 32 22.7	+1.1
HODGE				IAmb	IAmb	05 32 23.7	
	comp=Z,15nm,0.7s						
GCPR	Guaynabo City	21.69	73	P	P	05 32 24.3	+1.8
TXAR	Lajitas Array	21.71	320	P	P	05 32 22.7	+0.1
	comp=Z,1.2nm,0.6s,baz=142,slow=10,SNR=8.7						
TXAR	Lajitas Array	21.71	320	P	P	05 32 23.0	+0.4
TX31	Lajitas Ar. Si	21.71	320	P	P	05 32 22.7	0.0
TX32	Lajitas Array	21.71	320	P	P	05 32 22.8	+0.1
SWET	Sewanee	22.05	4	P	P	05 32 26.0	-0.1
SWET				IAmb	IAmb	05 32 44.2	
	comp=Z,18nm,1.4s						
W50A	Signal Mountai	22.09	6	P	P	05 32 26.4	-0.1
W50A				IAmb	IAmb	05 32 48.1	
	comp=Z,23nm,1.5s						
W52A	Murphy	22.16	9	P	P	05 32 27.7	+0.6
BG3	Lake Jocassee	22.23	11	P	P	05 32 28.8	+1.0
PAULI	Pauline	22.29	13	P	P	05 32 29.6	+1.2
PAULI				IAmb	IAmb	05 32 30.0	
	comp=Z,9.7nm,0.9s						
WHAR	Wooly Hollow	22.39	351	P	P	05 32 28.8	-0.5
WHAR				IAmb	IAmb	05 32 51.1	
	comp=Z,14nm,1.3s						
KMSC	Kings Mountain	22.71	14	P	P	05 32 33.0	+0.6
KMSC				IAmb	IAmb	05 32 33.8	
	comp=Z,14nm,0.8s						
TKL	Tuckaleechee C	22.74	9	P	P	05 32 32.2	-0.4
	comp=Z,12nm,0.9s,baz=176,slow=8.1,SNR=9.1						
TKL	Tuckaleechee C	22.74	9	P	P	05 32 32.9	+0.2
V51A	Loudon	22.80	8	P	P	05 32 33.5	+0.3
V51A				IAmb	IAmb	05 32 53.2	
	comp=Z,14nm,1.2s						
CLTN	Cedars of Leba	22.90	3	P	P	05 32 33.6	-0.4
CLTN				IAmb	IAmb	05 32 34.9	
	comp=Z,7.8nm,0.7s						
V53A	Saluda	22.91	11	P	P	05 32 35.0	+0.8
V53A				IAmb	IAmb	05 32 39.4	
	comp=Z,19nm,1.2s						
V52A	Sevierville	22.94	9	P	P	05 32 35.3	+0.8
FCAR	Ozark Folk Cen	22.95	351	P	P	05 32 33.9	-0.7
LCAR	Lake Charles	23.00	353	P	P	05 32 34.4	-0.7
X34A	Smith Ranch, M	23.15	339	P	P	05 32 35.4	-1.1
X34A				IAmb	IAmb	05 32 38.6	
	comp=Z,11nm,0.6s						
U49A	Red Boiling Sp	23.35	4	P	P	05 32 38.0	-0.3
V55A	Taylorsville	23.42	14	P	P	05 32 39.7	+0.8
V55A				IAmb	IAmb	05 32 41.9	

	comp=Z,29nm,1.4s						
U40A	**Yellville**	**23.52**	**350**	P	**P**	**05 32 39.9**	**+0.1**
U40A				IAmb	IAmb	05 33 05.3	
	comp=Z,13nm,1.2s						
FNO	**Franklin**	**23.60**	**340**	P	**P**	**05 32 41.0**	**+0.4**
TZTN	**Tazewell**	**23.64**	**9**	P	**P**	**05 32 41.0**	**+0.1**
TZTN				IAmb	IAmb	05 32 43.7	
	comp=Z,28nm,1.4s						
T47A	**Sharon Grove**	**23.76**	**2**	P	**P**	**05 32 41.3**	**-0.6**
T47A				IAmb	IAmb	05 32 42.1	
	comp=Z,11nm,0.6s						
U38A	**Gravette**	**23.90**	**347**	P	**P**	**05 32 43.0**	**-0.2**
U54A	**Nelsons Funny**	**23.93**	**12**	P	**P**	**05 32 44.1**	**+0.6**
V58A	**Windy Hill, Pi**	**23.93**	**18**	P	**P**	**05 32 44.1**	**+0.6**
T42A	**Van Buren**	**23.95**	**354**	P	**P**	**05 32 42.8**	**-0.9**
T42A				IAmb	IAmb	05 32 43.2	
	comp=Z,5.6nm,0.7s						
S51A	**Beattyville**	**24.71**	**8**	P	**P**	**05 32 50.5**	**0.0**
S51A				IAmb	IAmb	05 32 58.2	
	comp=Z,22nm,1.4s						
MSTX	**Muleshoe**	**24.71**	**330**	P	**P**	**05 32 48.9**	**-1.9**
S39A	**Bolivar**	**24.91**	**350**	P	**P**	**05 32 51.3**	**-1.0**
S39A				IAmb	IAmb	05 32 52.3	
	comp=Z,8.2nm,0.7s						
CCM	**Cathedral Cave**	**24.98**	**354**	P	**P**	**05 32 52.6**	**-0.4**
CCM				IAmb	IAmb	05 32 52.6	
	comp=Z,8.4nm,0.8s						
WCI	**Wyandotte Cave**	**25.03**	**3**	P	**P**	**05 32 53.0**	**-0.5**
WCI				IAmb	IAmb	05 32 53.9	
	comp=Z,9.0nm,0.8s						
R40A	**Maddies Statio**	**25.33**	**352**	P	**P**	**05 32 55.3**	**-0.9**
R55A	**Marlinton**	**26.00**	**14**	P	**P**	**05 33 03.1**	**+0.8**
R55A				IAmb	IAmb	05 33 07.4	
	comp=Z,9.4nm,1.1s						
Q51A	**Peebles**	**26.10**	**8**	P	**P**	**05 33 03.2**	**+0.1**
Q51A				IAmb	IAmb	05 33 06.2	
	comp=Z,6.6nm,0.9s						
Q54A	**Coxs Mills**	**26.50**	**13**	P	**P**	**05 33 07.3**	**+0.5**
Q56A	**Snyder Ridge,**	**26.95**	**15**	P	**P**	**05 33 11.8**	**+1.1**
O53A	**New Philadelph**	**27.65**	**11**	P	**P**	**05 33 16.5**	**-0.5**
P57A	**Homestead Farm**	**27.68**	**17**	P	**P**	**05 33 18.2**	**+1.0**
P57A				IAmb	IAmb	05 33 18.3	
	comp=Z,8.6nm,0.7s						
N54A	**Moraine State**	**28.58**	**13**	P	**P**	**05 33 25.3**	**0.0**
N54A				IAmb	IAmb	05 33 26.0	
	comp=Z,4.8nm,0.8s						
SSPA	**Standing Stone**	**28.78**	**16**	P	**P**	**05 33 27.6**	**+0.6**
SSPA				IAmb	IAmb	05 33 41.5	
	comp=Z,13nm,1.4s						
M54A	**Oil Creek Stat**	**29.18**	**13**	P	**P**	**05 33 30.5**	**-0.1**
M54A				IAmb	IAmb	05 33 31.5	
	comp=Z,7.8nm,0.8s						
M57A	**Sunshine Farm,**	**29.65**	**17**	P	**P**	**05 33 35.1**	**+0.4**
N59A	**State Game Lan**	**29.66**	**19**	P	**P**	**05 33 35.5**	**+0.6**
N59A				IAmb	IAmb	05 33 35.9	
	comp=Z,5.0nm,0.7s						
BRNJ	**Basking Ridge**	**29.85**	**21**	P	**P**	**05 33 37.0**	**+0.5**
BRNJ				IAmb	IAmb	05 33 58.4	
	comp=Z,11nm,1.1s						
I42A	**Draeger Farm,**	**30.65**	**359**	P	**P**	**05 33 42.4**	**-1.1**
L59A	**Walton**	**31.05**	**19**	P	**P**	**05 33 46.4**	**-0.7**
KSCT	**Kent School, K**	**31.15**	**21**	P	**P**	**05 33 48.4**	**+0.5**
PV12	**Saucer Basin,**	**31.15**	**327**	P	**P**	**05 33 50.2**	**+2.0**
PV17	**East Wray Mesa**	**31.21**	**327**	P	**P**	**05 33 49.8**	**+1.1**
UCCT	**U. Connecticut**	**31.67**	**23**	P	**P**	**05 33 53.4**	**+0.9**
SADO	**Sadowa**	**32.41**	**12**	P	**P**	**05 33 57.4**	**-1.5**
	comp=Z,5.0nm,0.5s,baz=215,slow=8.8,SNR=10.0						
SADO	**Sadowa**	**32.41**	**12**	P	**P**	**05 33 57.8**	**-1.1**
F33A	**5 Mile Ranch,**	**33.34**	**349**	P	**P**	**05 34 05.5**	**-1.5**
PDAR	**Pinedale Array**	**34.92**	**332**	P	**P**	**05 34 20.5**	**-0.4**
	comp=Z,0.2nm,0.5s,baz=128,slow=8.2,SNR=2.5						
SNOW	**Snow King Moun**	**36.01**	**331**	P	**P**	**05 34 31.6**	**+1.4**
NVAR	**Mina Array Bea**	**36.84**	**319**	P	**P**	**05 34 37.5**	**+0.2**
	comp=Z,0.2nm,0.4s,baz=119,slow=7.3,SNR=2.8						
NVAR				ScP	**ScP**	**05 40 28.4**	**-0.8**
	comp=Z,0.3nm,0.6s,baz=121,slow=4.3,SNR=3.9						
ULM	**Lac du Bonnet**	**37.56**	**352**	P	**P**	**05 34 40.9**	**-2.0**
	comp=Z,3.5nm,0.6s,baz=176,slow=8.6,SNR=7.2						
DGMT	**Dagmar**	**37.70**	**342**	P	**P**	**05 34 44.4**	**+0.1**
MCMT	**McKenzie Canyo**	**38.03**	**331**	P	**P**	**05 34 48.3**	**+1.1**
FCC	**Fort Churchill**	**45.76**	**356**	P	**P**	**05 35 48.0**	**-1.4**
FCC				IAmb	IAmb	05 35 49.2	
	comp=Z,8.6nm,1.2s						
BDFB	**Brasilia**	**48.80**	**125**	LR	LR	05 59 37.7	
	comp=Z,61nm,20.2s,baz=236,slow=39						
YKA	**Yellowknife Ar**	**52.81**	**345**	P	**P**	**05 36 41.1**	**-1.8**
	comp=Z,0.6nm,0.8s,baz=142,slow=7.3,SNR=11						
YKA				pP	**pP**	**05 37 18.0**	**+0.6**
	comp=Z,0.7nm,0.9s,baz=137,slow=8.4,SNR=6.5						
ILAR	**Eielson Array**	**65.18**	**336**	P	**P**	**05 38 06.3**	**-1.8**
	comp=Z,0.3nm,0.8s,baz=103,slow=7.8,SNR=4.1						
ESDC	**Sonseca Array**	**77.18**	**52**	P	**P**	**05 39 20.0**	**-0.9**
	comp=Z,0.6nm,0.8s,baz=303,slow=5.0,SNR=2.8						
WRA	**Warramunga Arr**	**138.95**	**255**	PKP	**PKPdf**	**05 46 53.8**	**+0.8**
	comp=Z,0.9nm,0.8s,baz=92,slow=2.2,SNR=11						
WRA	**Warramunga Arr**	**138.95**	**255**		**PKPdf**	**05 46 53.5**	**+0.6**
ASAR	**Alice Springs**	**139.03**	**249**	PKP	**PKPdf**	**05 46 53.6**	**+0.6**
	comp=Z,0.5nm,0.7s,baz=138,slow=2.3,SNR=6.2						
ASAR	**Alice Springs**	**139.03**	**249**		**PKPdf**	**05 46 53.4**	**+0.4**

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*NEIC **02** 06:04:51.0±1.7, 33°.71S±0°.09×178°.2W±0°.1, h10^{km}±2^{km}, mb4.3/5, Error ellipse: s-maj=22.9km s-min=9.1km az=53.0*

*IDC **02** 06:04:51.4±2.4, 33°.52S×178°.55W, h0^{km}, mb4.2/3, mb1 4.4/4, mb1mx4.0/20, mbtmp4.2/4, ML4.3/1, Error ellipse: s-maj=66.7km s-min=42.2km az=132.0*

ISC 02 06:04:51.7±1.2, **33°.7S**±0°.1×**178°.3W**±0°.2, **h10^{km}, n36,** σ1^{s}**21**/38, **mb4.2**/5, **South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**4.71**	**215**	Pn	**Pn**	**06 06 03.1**	**+0.2**
MXZ	**Matakaoa Point**	**4.71**	**215**	P	**Pn**	**06 06 04.1**	**+1.2**
WMGZ	**Waiomatatini S**	**4.87**	**212**	P	**Pn**	**06 06 07.6**	**+2.6**
PKGZ	**Pakihiroa**	**5.08**	**214**	P	**Pn**	**06 06 08.0**	**0.0**
HAZ	**Te Kaha**	**5.12**	**217**	P	**Pn**	**06 06 08.9**	**+0.4**
PUZ	**Puketiti**	**5.15**	**212**	P	**Pn**	**06 06 11.1**	**+2.2**
RUGZ	**Raukumara Rang**	**5.34**	**216**	P	**Pn**	**06 06 12.0**	**+0.5**
TWGZ	**Tauwhareparae**	**5.36**	**213**	P	**Pn**	**06 06 13.9**	**+2.1**
CNGZ	**Carnagh Statio**	**5.52**	**210**	P	**Pn**	**06 06 14.3**	**+0.4**
TKGZ	**Te Karaka**	**5.63**	**212**	P	**Pn**	**06 06 17.2**	**+1.7**
MWZ	**Matawai**	**5.70**	**215**	P	**Pn**	**06 06 15.8**	**-0.6**
URZ	**Urewera**	**5.85**	**218**	Pn	**Pn**	**06 06 19.5**	**+1.1**
	7.1nm,0.3s,baz=238,slow=1.6,SNR=43						
URZ				Sn	**Sn**	**06 07 24.2**	**-1.3**
	8.0nm,0.3s,baz=250,slow=22,SNR=9.7						
URZ	**Urewera**	**5.85**	**218**	Pn	**Pn**	**06 06 19.4**	**+1.0**
URZ	**Urewera**	**5.85**	**218**	P	**Pn**	**06 06 19.2**	**+0.8**
RIGZ	**Rimuhau**	**5.89**	**211**	P	**Pn**	**06 06 20.5**	**+1.4**
PRGZ	**Paritu Road**	**6.03**	**209**	P	**Pn**	**06 06 22.2**	**+1.3**
SNGZ	**Shannon Statio**	**6.14**	**214**	P	**Pn**	**06 06 24.4**	**+1.8**
MHGZ	**Mahia Peninsul**	**6.21**	**208**	P	**Pn**	**06 06 24.9**	**+1.4**
RAHZ	**Arahi**	**6.37**	**214**	P	**Pn**	**06 06 27.2**	**+1.6**
OUZ	**Omahuta**	**6.84**	**255**	Pn	**Pn**	**06 06 33.2**	**+1.2**
BKZ	**Black Stump Fm**	**6.85**	**216**		**Pn**	**06 06 32.7**	**+0.4**
MSWZ	**Moikau Station**	**9.22**	**212**	Pn	**Pn**	**06 07 05.6**	**+0.9**
SNZO	**South Karori**	**9.38**	**214**	Pn	**Pn**	**06 07 07.6**	**+0.8**
THZ	**Tophouse**	**10.61**	**218**	Pn	**Pn**	**06 07 25.5**	**+1.7**
KHZ	**Kahutara**	**10.79**	**214**	Pn	**Pn**	**06 07 25.2**	**-0.9**
ASAR	**Alice Springs**	**42.77**	**271**	P	**P**	**06 12 49.0**	**-0.6**
	0.8nm,0.6s,baz=114,slow=7.2,SNR=12						
ASAR				PcP	**PcP**	**06 14 40.8**	**-0.2**
	0.3nm,0.4s,baz=124,slow=3.5,SNR=2.6						
ASAR	**Alice Springs**	**42.77**	**271**	P	**P**	**06 12 49.2**	**-0.4**
WR0	**Warramunga Arr**	**43.88**	**276**	P	**P**	**06 12 58.3**	**-0.3**
WB2	**Warramunga Arr**	**44.04**	**276**	P	**P**	**06 12 59.1**	**-0.8**
WB2				IAmb	IAmb	06 13 05.4	
	comp=Z,6.7nm,1.3s						
WRA	**Warramunga Arr**	**44.05**	**276**	P	**P**	**06 12 59.3**	**-0.7**
	comp=Z,0.7nm,0.3s,baz=116,slow=8.0,SNR=20						
WRA	**Warramunga Arr**	**44.05**	**276**	P	**P**	**06 12 59.2**	**-0.8**
WB0	**Warramunga Arr**	**44.09**	**276**	P	**P**	**06 12 59.7**	**-0.6**
WB0				IAmb	IAmb	06 13 12.0	
	comp=Z,4.2nm,0.9s						
QSPA	**South Pole Qui**	**56.40**	**180**	P	**P**	**06 14 32.5**	**-0.6**
CMAR	**Chiang Mai Arr**	**94.24**	**289**	P	**P**	**06 18 13.0**	**+1.6**
	comp=Z,1.2nm,0.3s,baz=89,slow=3.7,SNR=2.5						
FINES	**FINESS Array B**	**148.14**	**338**	PKPbc	**PKPbc**	**06 24 36.8**	**-0.1**
	comp=Z,1.1nm,0.5s,baz=97,slow=4.7,SNR=12						
FINES	**FINESS Array B**	**148.14**	**338**		**PKiKP**	**06 24 37.3**	**-1.4**

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*IDC **02** 06:11:57.1±0.9, 26°.58S×175°.72W, h0^{km}, mb4.2/10, mb1 4.4/11, mb1mx4.3/23, mbtmp4.2/11, ML5.0/1, MS3.4/5, Ms1 3.4/5, ms1mx3.1/30, Error ellipse: s-maj=31.4km s-min=22.1km az=142.0*

*NEIC **02** 06:12:01.9±1.9, 27°.03S±0°.09×176°.5W±0°.2, h10^{km}±2^{km}, mb4.5/11, Error ellipse: s-maj=27.3km s-min=14.6km az=92.0*

ISC 02 06:12:02.1±0.9, **27°.09S**±0°.07×**176°.6W**±0°.2, **h10^{km}, n38,** σ1^{s}**98**/34, **mb4.2**/13, **MS3.4**/4, **Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.47**	**209**	Pn	**Pb**	**06 12 47.8**	**+1.3**
	151nm,0.3s,baz=259,slow=23,SNR=5.4						
RAO				Sn	**Sb**	**06 13 17.3**	**+0.3**
	348nm,0.3s,baz=90,slow=22,SNR=16						
RAO	**Raoul Island**	**2.47**	**209**		**Pn**	**06 12 43.3**	**+0.9**
MSVF	**Nonsavu**	**10.57**	**331**	Pn	**Pn**	**06 14 33.5**	**-0.2**
URZ	**Urewera**	**12.34**	**204**	Pn	**Pn**	**06 14 58.5**	**+0.7**
	0.8nm,0.3s,baz=275,slow=17,SNR=1.6						
URZ				Sn	**Sn**	**06 17 08.7**	**-6.8**
	2.4nm,0.3s,baz=218,slow=22,SNR=19						
BKZ	**Black Stump Fm**	**13.37**	**204**	Pn	**Pn**	**06 15 11.5**	**-0.5**
TUWZ	**Tuamarina**	**16.30**	**206**		**Pn**	**06 15 50.7**	**-0.4**
RAR	**Rarotonga**	**16.39**	**73**	LR	LR	06 21 38.5	
	comp=Z,128nm,18.6s,baz=272,slow=37						
THZ	**Tophouse**	**17.00**	**208**	Pn	**Pn**	**06 15 60.0**	**-0.1**
THZ				IAmb	IAmb	06 16 07.3	
	comp=Z,53nm,1.4s						
KHZ	**Kahutara**	**17.30**	**205**		**Pn**	**06 16 04.4**	**+0.8**
KHZ				IAmb	IAmb	06 16 13.2	
	comp=Z,63nm,1.4s						
PPT	**Papeete**	**26.64**	**75**	LR	LR	06 25 24.4	
	comp=Z,43nm,19.7s,baz=246,slow=31						
HNR	**Honiara**	**28.31**	**304**	LR	LR	06 27 26.7	
	comp=Z,116nm,21.0s,baz=232,slow=32						
CTAO	**Charters Tower**	**34.70**	**274**	P	**P**	**06 18 52.0**	**-0.3**
CTAO				IAmb	IAmb	06 19 00.1	
	comp=Z,11nm,0.9s						
STKA	**Stephens Creek**	**36.58**	**252**	P	**P**	**06 19 12.2**	**+3.8**
	comp=Z,3.0nm,0.8s,baz=139,slow=15,SNR=3.3						
STKA				LR	LR	06 32 44.4	
	comp=Z,53nm,19.1s,baz=29,slow=33						
STKA	**Stephens Creek**	**36.58**	**252**	P	**P**	**06 19 08.3**	**-0.1**
ASAR	**Alice Springs**	**44.67**	**263**	P	**P**	**06 20 18.1**	**+2.7**
	comp=Z,0.7nm,0.5s,baz=96,slow=6.7,SNR=13						
ASAR				LR	LR	06 38 46.7	
	comp=Z,80nm,18.1s,baz=110,slow=35						
ASAR	**Alice Springs**	**44.67**	**263**	P	**P**	**06 20 14.3**	**-1.1**
WR0	**Warramunga Arr**	**45.18**	**268**	P	**P**	**06 20 19.4**	**0.0**
WB2	**Warramunga Arr**	**45.35**	**268**	P	**P**	**06 20 20.8**	**0.0**
WB2				IAmb	IAmb	06 20 28.9	
	comp=Z,9.9nm,1.4s						
WRA	**Warramunga Arr**	**45.36**	**268**	P	**P**	**06 20 23.4**	**+2.5**
	comp=Z,1.2nm,0.7s,baz=108,slow=6.4,SNR=9.1						
WRA	**Warramunga Arr**	**45.36**	**268**	P	**P**	**06 20 22.1**	**+1.2**
WB0	**Warramunga Arr**	**45.37**	**268**	P	**P**	**06 20 21.2**	**+0.2**
WB0				IAmb	IAmb	06 20 36.4	
	comp=Z,3.9nm,0.8s						
CASY	**Casey**	**58.65**	**207**	P	**P**	**06 22 00.9**	**+1.8**
QSPA	**South Pole Qui**	**63.01**	**180**	P	**P**	**06 22 29.9**	**+0.8**
MJAR	**Matsushiro Arr**	**76.29**	**324**	P	**P**	**06 23 48.2**	**-2.9**
	comp=Z,0.8nm,0.3s,baz=161,slow=5.2,SNR=1.4						
SNAA	**Sanae**	**81.41**	**178**	P	**P**	**06 24 20.8**	**+1.9**
SNAA	**Sanae**	**81.41**	**178**	P	**P**	**06 24 18.4**	**-0.5**
	comp=Z,2.7nm,0.9s,baz=198,slow=2.5,SNR=5.2						
SNAA	**Sanae**	**81.41**	**178**	P	**P**	**06 24 18.7**	**-0.2**
SNAA				IAmb	IAmb	06 24 22.5	
	comp=Z,4.7nm,1.0s						
VNA2	**Neumayer--Watz**	**81.95**	**176**	P	**P**	**06 24 22.9**	**+1.2**
	baz=184,slow=3.2						
KSRS	**Korea Array**	**82.69**	**319**	P	**P**	**06 24 23.6**	**-2.3**
	comp=Z,1.3nm,0.7s,baz=160,slow=3.9,SNR=4.1						
NVAR	**Mina Array Bea**	**84.95**	**42**	P	P	06 24 28.8	-8.9
	comp=Z,0.8nm,0.8s,baz=227,slow=8.5,SNR=8.0						
PDAR	**Pinedale Array**	**92.86**	**43**	P	P	06 25 08.6	-6.8
	comp=Z,0.7nm,0.8s,baz=198,slow=4.2,SNR=5.5						
CMAR	**Chiang Mai Arr**	**93.53**	**289**	P	**P**	**06 25 19.1**	**+0.4**
	comp=Z,1.4nm,0.3s,baz=75,slow=7.6,SNR=1.2						
ILAR	**Eielson Array**	**94.43**	**12**	P	P	06 25 14.9	-6.8
	comp=Z,0.7nm,1.0s,baz=232,slow=7.1,SNR=4.1						
MKAR	**Makanchi Array**	**116.59**	**311**	PKP	**PKPdf**	**06 30 42.4**	**-3.9**
	comp=Z,0.2nm,0.6s,baz=104,slow=6.1,SNR=2.2						
NB2	**NORSAR Subarra**	**145.65**	**353**	PKP	**PKiKP**	**06 31 43.2**	**-1.1**
	comp=Z,9.4nm,1.4s,baz=10,slow=3.2						
AKASG	**Malin Array Be**	**149.33**	**327**		**PKiKP**	**06 31 53.4**	**+1.3**
CLL	**Collm**	**154.75**	**346**	*e*PKPab	**PKPab**	**06 32 19.0**	**+0.8**
TORD	**Torodi Ar. Bea**	**166.03**	**173**	PKPab	**PKPab**	**06 33 07.4**	**-0.6**
	comp=Z,1.8nm,0.8s,baz=195,slow=3.6,SNR=5.5						

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*IDC **02** 06:14:12.0±1.1, 52°.79S×27°.65E, h0^{km}, mb3.8/4, mb1 3.9/4, mb1mx3.7/24, mbtmp3.9/4, MS3.3/1, Ms1 3.3/1, ms1mx2.7/25, Error ellipse: s-maj=39.3km s-min=29.0km az=76.0*

ISC 02 06:14:14.3±1.1, **52°.8S**±0°.2×**27°.7E**±0°.3, **h13^{km}, n9,** σ1^{s}**41**/9, **mb3.7**/3, **South of Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SUR	**Sutherland**	**20.99**	**344**	P	**P**	**06 18 58.9**	**+1.5**
	8.2nm,1.0s,baz=182,slow=5.5,SNR=5.7						
SUR				LR	LR	06 25 46.0	
	comp=Z,72nm,19.2s,baz=166,slow=33						
SNAA	**Sanae**	**23.20**	**204**	P	**P**	**06 19 21.2**	**+0.7**
SNAA	**Sanae**	**23.20**	**204**	P	**P**	**06 19 21.1**	**+0.6**
	2.8nm,0.7s,baz=65,slow=10,SNR=11						
VNA2	**Neumayer--Watz**	**23.99**	**208**	P	**P**	**06 19 27.6**	**-0.5**
	baz=45,slow=9.8						
VNA1	**Neumayer--Stat**	**24.10**	**209**	P	**P**	**06 19 30.8**	**+1.7**
ASAR	**Alice Springs**	**80.70**	**117**	P	**P**	**06 26 27.3**	**+0.2**
	0.5nm,0.7s,baz=212,slow=5.2,SNR=7.7						
WRA	**Warramunga Arr**	**83.93**	**115**	P	**P**	**06 26 44.1**	**+0.1**
	0.4nm,0.8s,baz=211,slow=3.6,SNR=5.0						
NVAR	**Mina Array Bea**	**152.53**	**252**	PKPbc	**PKPbc**	**06 34 09.1**	**-0.9**
	0.1nm,0.3s,baz=134,slow=3.9,SNR=2.6						
YKA	**Yellowknife Ar**	**157.93**	**311**	PKPab	**PKPab**	**06 34 40.3**	**-2.3**
	0.3nm,0.9s,baz=89,slow=5.4,SNR=4.8						

IDC 02 06:32:57.8±1.8, **6°.11S**×**129°.65E, h0^{km}, mb3.6**/2, **mb1 3.6**/4, **mb1mx3.5**/21, **mbtmp3.5**/4, **ML3.5**/2, **Error ellipse: s-maj=133.5km s-min=29.1km az=71.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.48**	**162**	Pn	Pn	06 36 24.8	+0.5
	0.3nm,0.3s,baz=344,slow=14,SNR=18						
WRA				Sn	Sn	06 38 57.5	-8.2
	0.3nm,0.3s,baz=335,slow=22,SNR=5.7						
ASAR	**Alice Springs**	**17.93**	**167**	P	Pn	06 37 08.3	-0.4
	0.1nm,0.3s,baz=346,slow=8.9,SNR=4.3						
SONM	**Songino Array**	**57.50**	**342**	P	P	06 42 48.5	-0.5
	0.5nm,0.8s,baz=153,slow=9.0,SNR=2.9						
MKAR	**Makanchi Array**	**67.30**	**327**	P	P	06 43 54.7	+0.2
	0.4nm,0.4s,baz=119,slow=8.4,SNR=13						

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*NIED **02** 06:48:10.1, 39°.93N×142°.58E, h33^{km}, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$3.23; M$_{\theta\theta}$-2.31; M$_{\phi\phi}$-0.92; M$_{r\theta}$-1.99; M$_{\theta\phi}$7.20; M$_{\phi r}$-1.61; Fault plane solution: M$_0$8.04000×10^{14} NP1: φ$_s$272.00000°, δ69.00000°, λ25.00000°. NP2: φ$_s$173.00000°, δ66.00000°, λ157.00000°.*

*JMA **02** 06:48:10.0±0.1, 39°.93N×142°.58E, h33^{km}±1^{km}, M4.1*

JMA Felt II J1.

*IDC **02** 06:48:14.3±3.0, 39°.84N×142°.64E, h70^{km}±30^{km}, mb3.1/5, mb1 3.5/9, mb1mx3.3/45, mbtmp3.5/9, MS2.6/2, Ms1 2.6/2, ms1mx2.3/12, Error ellipse: s-maj=38.4km s-min=14.6km az=111.0*

ISC 02 06:48:10.1±1.6, **39°.98N**±0°.04×**142°.55E**±0°.08, **h30^{km}**±11^{km}, **n27,** σ1^{s}**55**/29, **mb3.3**/5, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	**Tanohata**	**0.53**	**266**	P	**Pb**	**06 48 21.2**	**+0.2**
JTH				S	**Sb**	**06 48 29.2**	**+0.8**
JKEN	**Kujiedanarisaw**	**0.69**	**290**	P	**Pn**	**06 48 23.6**	**-0.1**
JKEN				*e*S	**Sn**	**06 48 33.0**	**-0.4**
MIYJ	**Miyakonagasawa**	**0.69**	**235**	P	**Pn**	**06 48 23.1**	**-0.7**
MIYJ				*e*S	**Sb**	**06 48 32.6**	**-0.3**
JANG	**Nango**	**0.89**	**297**	P	**Pn**	**06 48 26.6**	**0.0**
JKZ	**Kuzumaki**	**0.94**	**271**	P	**Pn**	**06 48 27.7**	**+0.4**
JOM	**Ohasama**	**1.09**	**243**	P	**Pn**	**06 48 29.6**	**+0.2**
JOM				*e*S	**Sn**	**06 48 43.4**	**-0.1**
OFUJ	**Ofunato**	**1.12**	**218**	P	**Pn**	**06 48 29.3**	**-0.5**
JTM	**Tenmabayashi**	**1.39**	**306**	P	**Pn**	**06 48 34.9**	**+1.4**
JTM				*e*S	**Sb**	**06 48 52.9**	**0.0**
JMK	**Ichinoseki**	**1.45**	**226**	P	**Pn**	**06 48 34.4**	**+0.1**
JMK				*e*S	**Sn**	**06 48 52.6**	**+0.3**
JAH	**Hinai**	**1.48**	**279**	P	**Pb**	**06 48 36.4**	**-0.6**
JAH				S	**Sb**	**06 48 55.1**	**-0.4**
JRG	**Rokugo**	**1.59**	**249**	P	**Pb**	**06 48 37.8**	**-1.0**
JRG				*e*S	**Sb**	**06 48 58.8**	**+0.3**
ASAJ	**Asahikawa**	**4.14**	**0**	P	**Pn**	**06 49 14.9**	**+3.7**
	2.1nm,0.3s,baz=218,slow=23,SNR=2.6						
ASAJ				S	**Sb**	**06 50 06.6**	**-5.1**
	6.8nm,0.3s,baz=4.4,slow=23,SNR=3.0						
MAT	**Matsushiro**	**4.84**	**226**	P	**Pn**	**06 49 23.1**	**+2.2**
MAT				*e*S	**Sn**	**06 50 16.1**	**+0.1**
MJAR	**Matsushiro Arr**	**4.84**	**226**	P	**Pn**	**06 49 23.7**	**+2.8**
	0.4nm,0.3s,baz=33,slow=13,SNR=25						
MJAR				LR	LR	06 51 35.5	
	comp=Z,90nm,18.3s,baz=35,slow=42						
USRK	**Ussuriysk Ar.**	**8.91**	**302**	P	Pn	06 50 23.1	+6.3
	baz=111,slow=13,SNR=11						
KSRS	**Korea Array**	**11.70**	**262**	P	Pn	06 51 00.0	+5.1
	0.2nm,0.3s,baz=72,slow=14,SNR=1.9						
KSRS				LR	LR	06 55 38.2	
	comp=Z,17nm,18.2s,baz=95,slow=38						
H11N2	**WAKE ISLAND Hy**	**29.04**	**127**	T	T	07 24 47.1	
	baz=318,slow=75,SNR=202						
H11N1	**WAKE ISLAND Hy**	**29.05**	**127**	T	T	07 24 47.8	
	baz=318,slow=75,SNR=185						
H11N3	**WAKE ISLAND Hy**	**29.06**	**127**	T	T	07 24 48.4	
	baz=318,slow=75,SNR=194						
H11S1	**WAKE ISLAND Hy**	**29.86**	**129**	T	T	07 25 48.2	
	baz=320,slow=76,SNR=26						
H11S3	**WAKE ISLAND Hy**	**29.86**	**129**	T	T	07 25 47.7	
	baz=320,slow=76,SNR=24						
H11S2	**WAKE ISLAND Hy**	**29.87**	**129**	T	T	07 25 48.6	
	baz=320,slow=76,SNR=18						
MKAR	**Makanchi Array**	**43.38**	**300**	P	**P**	**06 56 09.8**	**+0.1**
	0.2nm,0.4s,baz=88,slow=10,SNR=2.6						
ILAR	**Eielson Array**	**46.55**	**34**	P	**P**	**06 56 35.0**	**+0.4**
	0.2nm,0.5s,baz=270,slow=6.4,SNR=2.0						
WRA	**Warramunga Arr**	**60.10**	**189**	P	**P**	**06 58 13.3**	**-1.2**
	0.7nm,0.6s,baz=6.8,slow=7.1,SNR=9.1						
YKA	**Yellowknife Ar**	**60.83**	**31**	P	**P**	**06 58 19.5**	**+0.5**
	0.1nm,0.7s,baz=302,slow=5.5,SNR=1.9						
ASAR	**Alice Springs**	**63.82**	**189**	P	**P**	**06 58 38.5**	**-1.0**
	0.7nm,0.9s,baz=11,slow=7.2,SNR=4.7						

IDC 02 07:11:05.3±8.1, **3°.61S**×**100°.47W, h0^{km}, mb3.4**/5, **mb1 3.8**/5, **mb1mx3.5**/32, **mbtmp3.4**/5, **Error ellipse: s-maj=253.3km s-min=173.6km az=70.0, Central East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H03N2	**Juan Fernandez**	**35.85**	**148**	T	T	07 57 35.7	
	baz=322,slow=77						
H03N1	**Juan Fernandez**	**35.86**	**148**	T	T	07 57 37.1	
	baz=322,slow=77						
H03N3	**Juan Fernandez**	**35.87**	**148**	T	T	07 57 36.2	
	baz=322,slow=77						
NVAR	**Mina Array Bea**	**44.97**	**340**	P	P	07 19 21.8	-0.9
	0.1nm,0.6s,baz=163,slow=9.8,SNR=2.0						
PDAR	**Pinedale Array**	**46.89**	**351**	P	P	07 19 38.4	+0.6
	0.2nm,0.6s,baz=159,slow=5.4,SNR=1.8						
YKA	**Yellowknife Ar**	**66.80**	**353**	P	P	07 21 59.0	+0.5
	0.6nm,0.8s,baz=156,slow=6.6,SNR=5.3						
INK	**Inuvik**	**75.35**	**348**	P	P	07 22 50.5	+0.3
	1.2nm,1.0s,baz=150,slow=8.1,SNR=3.1						
ILAR	**Eielson Array**	**76.21**	**341**	P	P	07 22 54.4	-0.8
	0.4nm,1.0s,baz=142,slow=5.3,SNR=3.0						

IDC 02 07:14:12.4±8.1, **2°.88S**×**99°.73W, h0^{km}, mb3.4**/5, **mb1 3.8**/5, **mb1mx3.6**/32, **mbtmp3.4**/5, **MS3.7**/6, **Ms1 3.7**/6, **ms1mx3.3**/17, **Error ellipse: s-maj=252.1km s-min=171.8km az=66.0, Southwest of Galapagos Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPIG	**La Paz**	**28.72**	**340**	LR	LR	07 28 37.4	
	comp=Z,154nm,20.2s,baz=172,slow=30						
TXAR	**Lajitas Array**	**32.25**	**354**	LR	LR	07 32 27.4	
	comp=Z,163nm,21.6s,baz=0.0,slow=34						
H03N2	**Juan Fernandez**	**36.09**	**150**	T	T	08 00 40.1	
	baz=322,slow=78,SNR=12						
H03N1	**Juan Fernandez**	**36.10**	**150**	T	T	08 00 41.6	
	baz=322,slow=78,SNR=19						
H03N3	**Juan Fernandez**	**36.11**	**150**	T	T	08 00 43.6	
	baz=322,slow=78,SNR=15						
NVAR	**Mina Array Bea**	**44.55**	**339**	P	P	07 22 26.4	0.0
	0.2nm,0.6s,baz=155,slow=8.7,SNR=2.3						
NVAR				LR	LR	07 37 38.8	
	comp=Z,61nm,18.6s,baz=187,slow=32						
PLCA	**Paso Flores**	**45.97**	**149**	LR	LR	07 37 15.8	
	comp=Z,178nm,19.9s,baz=340,slow=30						
PDAR	**Pinedale Array**	**46.29**	**350**	P	P	07 22 40.9	+0.7
	0.2nm,0.7s,baz=167,slow=9.3,SNR=2.2						
PDAR				LR	LR	07 38 56.9	
	comp=Z,66nm,18.1s,baz=164,slow=32						
YKA	**Yellowknife Ar**	**66.17**	**353**	P	P	07 25 00.8	-0.8
	0.5nm,0.9s,baz=164,slow=7.2,SNR=5.1						
YKA				LR	LR	07 53 33.0	
	comp=Z,62nm,19.9s,baz=0.0,slow=36						
INK	**Inuvik**	**74.79**	**348**	P	P	07 25 55.4	+1.2
	0.8nm,0.8s,baz=122,slow=5.8,SNR=4.0						
ILAR	**Eielson Array**	**75.76**	**341**	P	P	07 25 58.6	-1.2
	0.3nm,0.9s,baz=153,slow=5.6,SNR=2.1						

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*IDC **02** 07:20:19.6±2.6, 5°.82N×126°.31E, h0^{km}, mb3.5/4, mb1 3.6/4, mb1mx3.4/55, mbtmp3.5/4, Error ellipse: s-maj=268.2km s-min=22.6km az=66.0*

ISC 02 07:20:20.1±1.7, **6°.1N**±0°.3×**126°.9E**±0°.3, **h10^{km}, n5,** σ**0^{s}98**/5, **mb3.5**/4, **1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCP	**Kidapawan**	**2.05**	**298**	⇓*e*P	**Pb**	**07 20 57.6**	**0.0**
WRA	**Warramunga Arr**	**26.84**	**164**	P	**P**	**07 26 02.3**	**+1.2**
	0.5nm,0.7s,baz=343,slow=10,SNR=6.0						
ASAR	**Alice Springs**	**30.31**	**167**	P	**P**	**07 26 31.4**	**-0.6**
	0.2nm,0.7s,baz=345,slow=6.8,SNR=1.8						
MKAR	**Makanchi Array**	**55.78**	**324**	P	**P**	**07 29 57.6**	**+0.1**
	0.2nm,0.3s,baz=116,slow=7.4,SNR=7.4						
KURBB	**Kurchatov Arra**	**59.91**	**327**	P	**P**	**07 30 26.1**	**-0.2**
	0.7nm,0.8s,baz=125,slow=6.1,SNR=8.3						

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*BGR **02** 07:20:42.2±0.0, 19°.99S×170°.44E, h210^{km}*

*BJI **02** 07:20:42.5±0.0, 19°.19S×169°.80E, h205^{km}, mB5.0/33, mb4.9/48*

*IDC **02** 07:20:46.3±0.8, 19°.56S×169°.53E, h228^{km}±6^{km}, mb4.4/27, mb1 4.5/28, mb1mx4.3/49, mbtmp4.9/28, Error ellipse: s-maj=13.0km s-min=9.2km az=133.0*

*NOU **02** 07:20:47.1, 19°.50S×169°.41E, h224^{km}, mb4.8, Vanuatu Islands*

*NEIC **02** 07:20:47.0±1.4, 19°.48S±0°.08×169°.40E±0°.09, h233^{km}±5^{km}, mb4.9/170, Error ellipse: s-maj=12.3km s-min=11.1km az=118.0*

*GCMT **02** 07:20:49.0±0.4, 19°.37S±0°.03×169°.29E±0°.03, h241^{km}±3^{km}, MW5.0/63, Moment Tensor Solution. s27,c33; s63,c81; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.39±.17; M$_{\theta\theta}$1.17±.20; M$_{\phi\phi}$-3.56±.18; M$_{r\theta}$1.95±.15; M$_{\theta\phi}$0.67±.21; M$_{\phi r}$-1.07±.16; Best double couple: M$_0$3.90700×10^{16} NP1: φ$_s$22.00000°, δ43.00000°, λ142.00000°. NP2: φ$_s$142.00000°, δ65.00000°, λ54.00000°. Principal axes: T 3.8540, Plg55.0000°, Azm7.0000°; N 0.1060, Plg32.0000°, Azm159.0000°; P -3.9600, Plg13.0000°, Azm258.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 02 07:20:48.3±0.3, **19°.56S**±0°.05×**169°.45E**±0°.06, **h250^{km}, n488,** σ1^{s}**12**/468, **mb4.9**/106, **36C-26D, Fault plane solution: NP1:**φ$_s$148.43675°, δ81.62421°, λ33.86011°. **NP2:**φ$_s$52.85464°, δ56.54895°, λ169.94557°. **Principal**

axes: T Plg29.5232°, Azm15.9981°; N Plg55.2396°, Azm160.6855°; P Plg16.6649°, Azm276.2381°; **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	Devils Point	2.18	326	P	Pn	07 21 29.0	-3.5
MARNC	Mare, Loyalty	2.33	215	P	Pn	07 21 30.2	-3.7
YATNC	Mamie plateau,	3.45	223	P	Pn	07 21 42.4	-3.4
PINNC	Pines Island,	3.57	211	P	Pn	07 21 45.1	-2.0
OUENC	Ouen Island, N	3.75	220	P	Pn	07 21 47.5	-1.7
DZM	Mont Dzumac	3.76	228	P	Pn	07 21 47.8	-1.7
	18nm,0.3s,baz=63,slow=17,SNR=96						
DZM				S	S	07 22 35.2	-2.8
	25nm,0.3s,baz=328,slow=21,SNR=8.1						
DZM	Mont Dzumac	3.76	228	*e*LR	LR	07 21 33.3	
	comp=Z,2µm,25.1s						
DZM	Mont Dzumac	3.76	228	Pn	Pn	07 21 46.5	-2.9
SANVU	Saraoutou	4.62	332		Pn	07 21 55.5	-4.1
SANVU	Saraoutou	4.62	332	P	Pn	07 21 57.7	-1.9
MSVF	Nonsavu	8.35	79		Pn	07 22 45.9	-0.3
LHI	Lord Howe Isla	15.14	216		Pn	07 24 11.0	+0.8
LHI	Lord Howe Isla	15.14	216	P	Pn	07 24 11.5	+1.3
	163nm,0.8s						
OUZ	Omahuta	16.02	168	P	Pn	07 24 21.3	+0.7
OUZ				IAmb	IAmb	07 24 33.3	
	comp=Z,43nm,1.2s						
EIDS	Eidsvold	17.93	248	P	Pn	07 24 42.1	-1.0
EIDS				IAmb	IAmb	07 24 43.3	
	comp=Z,56nm,1.1s						
ARMA	Armidale	19.41	233	P	P	07 24 56.2	0.0
URZ	Urewera	19.79	162	P	P	07 25 00.5	+0.5
	comp=Z,0.3nm,0.3s,baz=57,slow=11,SNR=1.8						
BKZ	Black Stump Fm	20.46	164	P	P	07 25 07.7	+0.4
CTAO	Charters Tower	21.83	265	P	P	07 25 21.4	+0.5
PMG	Port Moresby	23.80	292	P	P	07 25 39.8	+0.9
	comp=Z,17nm,0.9s,baz=194,slow=2.7,SNR=5.0						
CAN	Canberra	23.93	225	P	P	07 25 41.0	+1.1
CAN				IAmb	IAmb	07 25 41.9	
	comp=Z,23nm,0.8s						
COEN	Coen	25.75	278	P	P	07 25 55.9	-0.7
TOO	Toolangi	27.53	224	P	P	07 26 13.4	+1.2
STKA	Stephens Creek	27.85	238	P	P	07 26 16.1	+1.1
	comp=Z,32nm,0.7s,baz=68,slow=8.9,SNR=62						
STKA	Stephens Creek	27.85	238	P	P	07 26 15.7	+0.7
BBOO	Buckleboo	32.59	239	P	P	07 26 57.0	+0.3
BBOO				IAmb	IAmb	07 26 58.2	
	comp=Z,29nm,0.8s						
WR0	Warramunga Arr	32.82	263	P	P	07 26 58.5	-0.3
WR0				IAmb	IAmb	07 26 59.2	
	comp=Z,27nm,1.1s						
WB0	Warramunga Arr	32.98	264	P	P	07 26 59.9	-0.3
WB0				IAmb	IAmb	07 27 00.6	
	comp=Z,24nm,0.7s						
WB2	Warramunga Arr	33.00	263	P	P	07 26 59.5	-0.9
WB2				IAmb	IAmb	07 27 01.0	
	comp=Z,37nm,1.2s						
WRAB	Tennant Creek	33.00	263	P	P	07 26 58.3	-2.1
WRAB				IAmb	IAmb	07 27 01.0	
	comp=Z,38nm,1.4s						
WRA	Warramunga Arr	33.01	263	P	P	07 27 00.0	-0.4
	comp=Z,11nm,0.5s,baz=94,slow=8.4,SNR=69						
WRA				pP	pP	07 27 47.3	-1.7
	comp=Z,2.8nm,0.8s,baz=95,slow=8.4,SNR=2.0						
WRA				PP	PP	07 28 25.5	+4.7
	comp=Z,3.5nm,0.9s,baz=94,slow=10.0,SNR=3.2						
WRA				PcP	PcP	07 29 38.3	+0.2
	comp=Z,2.8nm,0.6s,baz=94,slow=3.1,SNR=7.3						
WRA				S	S	07 31 58.9	-1.5
	comp=Z,2.4nm,0.9s,baz=94,slow=19,SNR=6.9						
WRA				ScP	ScP	07 33 02.1	+3.7
	comp=Z,1.7nm,0.9s,baz=84,slow=3.6,SNR=4.6						
WRA	Warramunga Arr	33.01	263	P	P	07 26 59.2	-1.3
AS31	Alice Springs	33.24	256	P	P	07 27 02.5	0.0
ASAR	Alice Springs	33.25	256	P	P	07 27 02.7	+0.2
	comp=Z,110nm,0.6s,baz=84,slow=9.2,SNR=1694						
ASAR				PcP	PcP	07 29 38.8	0.0
	comp=Z,2.8nm,0.8s,baz=106,slow=3.2,SNR=5.3						
ASAR				S	S	07 32 03.7	-0.2
	comp=Z,2.7nm,0.9s,baz=78,slow=16,SNR=8.3						
ASAR				ScP	ScP	07 33 02.5	+3.4
	comp=Z,3.3nm,0.7s,baz=100,slow=4.0,SNR=14						
ASAR	Alice Springs	33.25	256	P	P	07 27 01.8	-0.7
MTN	Manton Dam	37.34	274	P	P	07 27 37.0	-0.3
MTN				IAmb	IAmb	07 27 38.5	
	comp=Z,19nm,0.5s						
FITZ	Fitzroy Crossi	41.41	265	P	P	07 28 11.7	+0.9
	comp=Z,17nm,0.7s,baz=105,slow=6.2,SNR=31						
FITZ	Fitzroy Crossi	41.41	265	P	P	07 28 11.2	+0.4
PSA00	Pilbara Seismi	46.33	259	P	P	07 28 50.5	+0.6
PSA00	Pilbara Seismi	46.33	259	P	P	07 28 48.9	-1.0
PSA00				IAmb	IAmb	07 28 49.5	
	comp=Z,7.5nm,0.8s						
NWAO	Narrogin (SRO)	48.25	243	P	P	07 29 04.4	+0.1
	comp=Z,14nm,0.7s,baz=92,slow=7.4,SNR=5.8						
NWAO	Narrogin (SRO)	48.25	243	P	P	07 29 04.5	+0.1
MORW	Morawa	49.24	248	P	P	07 29 12.4	+0.4
GIRL	Giralia	51.37	256	P	P	07 29 29.6	+1.6
KHU	Kahuku	51.58	44	P	P	07 29 29.4	-0.4
KHU				IAmb	IAmb	07 29 40.5	
	comp=Z,55nm,1.2s						
VNDA	Vanda	58.12	182	P	P	07 30 15.8	+0.4
	comp=Z,2.4nm,0.8s,baz=344,slow=15,SNR=1.6						
VNDA	Vanda	58.12	182	P	P	07 30 16.0	+0.6
CASY	Casey	59.91	204	P	P	07 30 28.4	+0.6
JOW	Kunigami	61.00	318	P	P	07 30 36.3	+0.5
	comp=Z,17nm,0.9s,baz=130,slow=9.1,SNR=5.4						
JGF	Kuroka	62.73	331	P	P	07 30 46.3	-0.8
MJAR	Matsushiro Arr	63.13	332	P	P	07 30 49.4	-0.3
	comp=Z,14nm,0.8s,baz=166,slow=6.9,SNR=18						
MJAR	Matsushiro Arr	63.13	332	P	P	07 30 49.4	-0.3
MAJO	Matsushiro	63.13	332	P	P	07 30 49.7	0.0
MAJO				IAmb	IAmb	07 30 50.7	
	comp=Z,33nm,1.1s						
MAT	Matsushiro	63.13	332	P	P	07 30 49.5	-0.2
SSLB	Suanglung	63.96	310	P	P	07 30 54.6	-0.8
SSLB				IAmb	IAmb	07 30 55.7	
	comp=Z,24nm,0.7s						
JNU	Nakatsue	64.04	324	P	P	07 30 55.8	+0.1
	comp=Z,18nm,0.9s,baz=74,slow=3.2,SNR=7.5						
JNU	Nakatsue	64.04	324	P	P	07 30 55.7	-0.1
JNU				IAmb	IAmb	07 30 56.9	
	comp=Z,38nm,1.1s						
YHNB	Yeheng	64.21	311	P	P	07 30 56.4	-0.7
YHNB				IAmb	IAmb	07 30 59.4	
	comp=Z,37nm,1.1s						
JHS	Saijyo	64.30	327	P	P	07 30 58.2	+0.8
JSD	Sado	64.36	333	P	P	07 30 58.8	+1.2
JTM	Tenmabayashi	65.58	337	P	P	07 31 06.0	+0.6
JKA	Kamikawa-asahi	67.97	339	P	P	07 31 21.8	+1.4
KSRS	Korea Array	68.88	326	P	P	07 31 27.2	+1.1
	comp=Z,5.6nm,1.0s,baz=140,slow=5.8,SNR=15						
QSPA	South Pole Qui	70.50	180	P	P	07 31 36.8	+1.0
NJ2	Nanjing	70.58	316	*e*P	P	07 31 37.6	+1.0
NJ2				pmax	pmax		
	comp=Z,18nm,0.5s						
SMY	Shemya	72.10	3	P	P	07 31 45.8	+0.7
USA0B	Ussuriysk Arra	72.11	333	P	P	07 31 46.8	+1.4
USA0B				IAmb	IAmb	07 31 47.6	
	comp=Z,32nm,1.1s						
USRK	Ussuriysk Ar.	72.11	333	P	P	07 31 46.4	+0.9
	comp=Z,15nm,0.9s,baz=146,slow=5.1,SNR=19						
ADK	Adak	72.16	9	P	P	07 31 45.4	-0.2
WHN	Wuhan	72.71	312	⇓P	P	07 31 50.3	+1.0
WHN				pmax	pmax		
	comp=Z,60nm,1.0s						
ATKA	Atka Island	72.87	10	P	P	07 31 49.6	-0.1
PET	Petropavlovsk	72.88	353	P	P	07 31 50.6	+0.9
PEA0B	Petropavlovsk-	73.08	353	P	P	07 31 51.8	+0.8
PEA0B				IAmb	IAmb	07 31 56.6	
	comp=Z,56nm,1.4s						
PETK	Petropavlovsk-	73.08	353	P	P	07 31 51.6	+0.7
	comp=Z,14nm,0.7s,baz=138,slow=4.4,SNR=24						
MDJ	Mudanjiang	73.50	331	P	P	07 31 54.5	+0.9
MDJ				pmax	pmax		
	comp=Z,25nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,280nm,5.9s						
NIKH	Nikolski High	74.64	13	P	P	07 32 00.2	+0.2
CN2	Changchun	74.84	329	*e*P	P	07 32 01.8	+0.5
CN2				pmax	pmax		
	comp=Z,40nm,0.8s						
UNV	Unalaska Valle	75.98	14	P	P	07 32 07.0	-0.6
GYA	Guiyang	76.17	305	⇑P	P	07 32 10.9	+1.4
GYA				pmax	pmax		
	comp=Z,16nm,1.1s						
KLR	Kul'dur	76.24	336	P	P	07 32 10.2	+1.0
	comp=Z,13nm,0.9s,baz=124,slow=2.9,SNR=40						
UTHA	Uthaitani	77.17	292	P	P	07 32 18.0	+3.0
BJI	Beijing	77.31	321	P	P	07 32 16.2	+0.9
BJI				pmax	pmax		
	comp=Z,14nm,0.8s						
XAN	Xi'an	78.47	312	P	P	07 32 23.0	+1.0
XAN				pmax	pmax		
	comp=Z,30nm,0.9s						
XAN				pmax	pmax		
	comp=Z,68nm,3.6s						
XAN				LR	LR		
	comp=Z,310nm,15.2s						
XAN				LR	LR		
	comp=Z,200nm,14.3s						
XAN				LR	LR		
	comp=Z,560nm,15.0s						
KMI	Kunming	78.61	302	⇑P	P	07 32 25.1	+2.0
KMI				pmax	pmax		
	comp=Z,24nm,0.8s						
CM04	Chiang Mai Arr	78.76	294	P	P	07 32 26.1	+2.3
CM09	Chiang Mai Arr	78.77	294	P	P	07 32 26.6	+2.7
CM01	Chiang Mai Arr	78.79	294	P	P	07 32 26.6	+2.6
CM05	Chiang Mai Arr	78.79	294	P	P	07 32 26.0	+2.0
CM02	Chiang Mai Arr	78.81	294	P	P	07 32 26.6	+2.5
CMAR	Chiang Mai Arr	78.82	294	P	P	07 32 26.1	+2.0
	comp=Z,6.4nm,0.8s,baz=130,slow=3.9,SNR=24						
CMAR				pP	pP	07 33 19.6	-3.1
	comp=Z,0.7nm,0.2s,baz=103,slow=4.1,SNR=1.4						
CM15	Chiang Mai Arr	78.83	294	P	P	07 32 26.0	+1.8
CM13	Chiang Mai Arr	78.83	294	P	P	07 32 26.6	+2.5
CMMT	Chiang Mai	78.96	295	P	P	07 32 25.8	+0.9
CM33	Chiang Mai Arr	78.97	295	P	P	07 32 26.0	+1.1
CHGN	Chignik	80.28	18	P	P	07 32 31.3	+0.2
CHGN				IAmb	IAmb	07 32 32.9	
	comp=Z,29nm,0.9s						
HHC	Hu-ho-hao-te	80.59	319	*e*P	P	07 32 34.5	+1.2
HHC				pmax	pmax		
	comp=Z,28nm,1.1s						
HHC				pmax	pmax		
	comp=Z,150nm,5.2s						
SII	Sitkinak Islan	81.76	19	P	P	07 32 40.0	+1.1
BELA	Belgrano 2	81.76	175	P	P	07 32 38.3	-0.5
OHAK	Old Harbor	82.59	19	P	P	07 32 43.6	+0.5
LZH	Lanzhou	83.09	312	⇑P	P	07 32 48.4	+1.9
LZH				pmax	pmax		
	comp=Z,28nm,1.3s						
KDAK	Kodiak Island	83.27	19	P	P	07 32 46.8	+0.2
	comp=Z,25nm,0.8s,baz=283,slow=2.3,SNR=16						
KDAK	Kodiak Island	83.27	19	P	P	07 32 47.1	+0.6
KDAK				IAmb	IAmb	07 32 48.1	
	comp=Z,30nm,1.0s						
SEY	Seymchan	83.31	352	P	P	07 32 46.9	+0.1
	comp=Z,2.6nm,0.4s,baz=146,slow=5.4,SNR=11						
GAMB	Gambell	84.36	8	P	P	07 32 52.5	+0.5
GAMB				IAmb	IAmb	07 32 53.8	
	comp=Z,30nm,1.0s						
HOM	Homer	85.08	19	P	P	07 32 57.1	+1.5
	baz=216						
CNPM	China Poot	85.09	19	P	P	07 32 55.9	+0.1
BRLK	Bradley Lake	85.39	19	P	P	07 32 57.9	+0.6
BRLK				IAmb	IAmb	07 32 59.1	
	comp=Z,18nm,0.9s						
RSO	Redoubt South	85.40	18	P	P	07 32 57.8	+0.3
MCCM	Marconi Confer	85.54	47	P	P	07 32 58.4	0.0
KCPM	Cahto Peak	85.81	45	P	P	07 33 01.5	+1.6
HOPS	Hopland Field	85.82	46	P	P	07 33 00.9	+1.1
SAO	San Andreas Ge	85.88	49	P	P	07 32 59.3	-0.9
SAO				IAmb	IAmb	07 33 02.3	
	comp=Z,28nm,1.1s						
SCZ2	Santa Cruz Isl	85.93	52	P	P	07 33 01.4	+0.9
	baz=243						
ANM	Nome	86.08	11	P	P	07 33 01.7	+1.2
PKM	Mcpherson Peak	86.20	51	P	P	07 33 02.8	+0.8
	baz=243						
SMMC	Simmler	86.26	51	P	P	07 33 03.3	+1.2
	baz=243						
PAGB	Antelope Grade	86.26	50	P	P	07 33 02.8	+0.7
PAGB				IAmb	IAmb	07 33 03.8	
	comp=Z,11nm,0.6s						
SCI2	San Clemente I	86.30	53	P	P	07 33 03.0	+0.7
	baz=244						
KHMM	Horse Mountain	86.30	44	P	P	07 33 04.1	+1.8
KRMB	Red Mountain	86.50	44	P	P	07 33 04.8	+1.5
O02D	Mt. Diablo Mer	86.58	45	P	P	07 33 05.2	+1.6
	baz=241,SNR=46						
Q23K	Middleton Isla	86.59	21	P	P	07 33 04.8	+1.8
	baz=221						
TTA	Tatalina	86.59	15	P	P	07 33 03.2	+0.1
SUA	Susitna One	86.79	18	P	P	07 33 03.5	-0.6
SUA				IAmb	IAmb	07 33 07.1	
	comp=Z,13nm,1.0s						
RC01	Rabbit Creek A	86.79	19	P	P	07 33 05.5	+1.5
	baz=218						
FMP	Fort Macarthur	86.81	53	P	P	07 33 05.6	+0.9
	baz=244						
OSI	Osito Audit: C	86.88	52	P	P	07 33 05.6	+0.5
	baz=244						
WDC	Whiskeytown Da	86.94	45	P	P	07 33 06.5	+1.2
WDC				IAmb	IAmb	07 33 07.6	
	comp=Z,37nm,1.2s						
DECC	Green Verdugo	87.01	52	P	P	07 33 06.0	+0.2
	baz=244						
L02E	Cave Junction	87.02	43	P	P	07 33 06.7	+1.1
	baz=240,SNR=5.6						
N02D	Trinity Center	87.03	45	P	P	07 33 07.2	+1.5
	baz=241,SNR=29						
ARVC	Arvin	87.03	51	P	P	07 33 06.5	+0.7
	baz=244,SNR=6.1						
PASC	Pasadena Art C	87.09	52	P	P	07 33 06.7	+0.6
PASC				IAmb	IAmb	07 33 08.1	
	comp=Z,11nm,0.8s						
M02C	Callahan	87.13	44	P	P	07 33 07.8	+1.6
	baz=241,SNR=30						
ORV	Oroville	87.16	46	P	P	07 33 06.8	+0.5
ORV				IAmb	IAmb	07 33 08.2	
	comp=Z,22nm,1.1s						
VES	Vestal, Richgr	87.16	50	P	P	07 33 06.7	+0.3
	baz=244,SNR=5.5						
MWC	Mount Wilson	87.20	52	P	P	07 33 06.2	-0.7
MWC				IAmb	IAmb	07 33 08.6	
	comp=Z,46nm,1.4s						
CMB	Columbia Colle	87.22	48	P	P	07 33 06.7	0.0
CMB				IAmb	IAmb	07 33 08.5	
	comp=Z,28nm,1.2s						
AFDM	Forest Hills D	87.23	47	P	P	07 33 07.4	+0.7
AFDM				IAmb	IAmb	07 33 08.6	
	comp=Z,36nm,1.1s						
ULN	Ulaanbaatar	87.24	323	P	P	07 33 07.2	+0.6
ULN				IAmb	IAmb	07 33 08.6	
	comp=Z,29nm,1.1s						
K02D	Willamette Mer	87.24	43	P	P	07 33 07.7	+1.0
	baz=240,SNR=6.8						
O03E	Paynes Creek	87.30	46	P	P	07 33 07.7	+0.6
	baz=242,SNR=24						
J01E	Myrtle Point	87.31	42	P	P	07 33 07.8	+0.9
	baz=240,SNR=5.6						
109C	Camp Elliot, M	87.35	54	P	P	07 33 07.8	+0.5
	baz=245						
109C	Camp Elliot, M	87.35	54	P	P	07 33 08.2	+0.8
109C				IAmb	IAmb	07 33 09.2	
	comp=Z,21nm,1.2s						
PMR	Palmer	87.37	18	P	P	07 33 06.4	-0.3
YBH	Yreka Blue Hor	87.39	44	P	P	07 33 08.7	+1.2
	comp=Z,9.5nm,0.6s,baz=207,slow=1.4,SNR=50						
YBH	Yreka Blue Hor	87.39	44	P	P	07 33 08.3	+0.8
YBH				IAmb	IAmb	07 33 09.9	
	comp=Z,22nm,0.9s						
GTA	Gaotai	87.49	313	⇑P	P	07 33 09.2	+1.2
GTA				pP	pP	07 34 04.6	-3.4
GTA				pmax	pmax		
	comp=Z,11nm,1.0s						
BFSC	Mount Baldy Ra	87.51	52	P	P	07 33 08.7	+0.4
	baz=244,SNR=9.9						
ISA	Isabella, Lake	87.53	51	P	P	07 33 09.2	+1.0
	baz=244,SNR=22						
ISA	Isabella, Lake	87.53	51	P	P	07 33 08.3	+0.1
ISA				IAmb	IAmb	07 33 10.3	
	comp=Z,41nm,1.3s						
EDW2	Edwards Air Fo	87.54	52	P	P	07 33 09.0	+0.7
	baz=244,SNR=15						
MURC	Murrieta	87.58	53	P	P	07 33 09.0	+0.5
	baz=245,SNR=6.0						
BAR	Barrett	87.59	54	P	P	07 33 08.8	+0.2
BAR				IAmb	IAmb	07 33 10.2	
	comp=Z,23nm,1.4s						
SONM	Songino Array	87.60	323	P	P	07 33 08.9	+0.6
	comp=Z,14nm,0.8s,baz=138,slow=6.0,SNR=77						
SONM				pP	pP	07 34 04.6	-3.8
	comp=Z,2.4nm,0.9s,baz=122,slow=6.2,SNR=2.9						
SONM	Songino Array	87.60	323	P	P	07 33 08.9	+0.6
HUMO	Hull Mountain	87.66	43	P	P	07 33 09.7	+1.1
HUMO				IAmb	IAmb	07 33 11.2	
	comp=Z,30nm,0.9s						
CUT	Chulitna	87.68	18	P	P	07 33 08.9	+0.7
	baz=218						
I02D	Swisshome	87.83	41	P	P	07 33 09.5	+0.2
	baz=240						
RUBR	Rubicon Trail	87.85	47	P	P	07 33 10.3	+0.5
RUBR				IAmb	IAmb	07 33 12.0	
	comp=Z,48nm,1.4s						
ESJX	Sierra Juarez	87.87	55	P	P	07 33 10.3	+0.3
MONP2	Monument Peak	87.87	54	P	P	07 33 11.0	+0.9
	baz=245,SNR=13						
L04D	Klamath Falls	87.89	44	P	P	07 33 10.7	+0.9
	baz=241,SNR=15						
I03D	Drain, OR	87.94	42	P	P	07 33 10.8	+1.0
	baz=240						
MDPB	Devils Postpil	87.96	49	P	P	07 33 11.3	+0.8
MDPB				IAmb	IAmb	07 33 12.6	
	comp=Z,37nm,1.4s						
M04C	Macdoel	87.98	44	P	P	07 33 11.3	+1.0
	baz=242,SNR=13						
OMMB	Old Mammoth Mi	88.01	49	P	P	07 33 11.1	+0.4
OMMB				IAmb	IAmb	07 33 13.6	
	comp=Z,29nm,1.4s						
IKP	In-Ko-Pah, Jac	88.01	54	P	P	07 33 11.6	+1.0
	baz=245						
LRMC	Laurel Mtn Rad	88.03	51	P	P	07 33 11.5	+0.8
	baz=244,SNR=17						
BEKR	Beckworth	88.08	46	P	P	07 33 11.3	+0.4
BEKR				IAmb	IAmb	07 33 12.9	
	comp=Z,18nm,1.1s						
WAKR	Walker	88.10	48	P	P	07 33 12.1	+1.0
MLAC	Mammoth, Mammo	88.13	49	P	P	07 33 12.5	+1.3
	baz=244,SNR=8.1						
PFO	Pinyon Flats O	88.14	53	P	P	07 33 11.9	+0.7
	comp=Z,4.3nm,0.9s,baz=243,slow=5.3,SNR=6.4						
PFO	Pinyon Flats O	88.14	53	P	P	07 33 12.0	+0.7
	baz=245,SNR=7.5						
PFO	Pinyon Flats O	88.14	53	P	P	07 33 11.9	+0.7
TPFO	Pinon Flats	88.15	53	P	P	07 33 12.0	+0.8
	baz=245,SNR=7.1						
CWC	Cottonwood Cre	88.15	50	P	P	07 33 12.0	+0.7
	baz=244						
PNTR	Pine Nut	88.25	47	P	P	07 33 11.9	+0.2
PNTR				IAmb	IAmb	07 33 13.9	
	comp=Z,32nm,1.3s						
RRX	Edison Barstow	88.28	52	P	P	07 33 11.8	+0.1
	baz=245						
VCNR	Virginia City	88.31	47	P	P	07 33 12.5	+0.5
TIN	Tinemaha, Big	88.31	50	P	P	07 33 12.9	+1.0
	baz=244,SNR=5.4						
SWSC	Sam W. Stewart	88.37	54	P	P	07 33 13.1	+0.9
	baz=246,SNR=10.0						
KTH	Kantishna Hill	88.42	17	P	P	07 33 10.1	-1.6
KTH				IAmb	IAmb	07 33 13.0	
	comp=Z,22nm,1.4s						
MPMC	Manual Prospec	88.42	51	P	P	07 33 13.4	+0.8
	baz=244,SNR=27						
TRF	Thorofare Moun	88.50	17	P	P	07 33 10.8	-1.5
J04D	Umpqua Nationa	88.51	43	P	P	07 33 13.8	+1.0
	baz=241,SNR=6.5						
I04A	Tendick Farm,	88.58	42	P	P	07 33 13.5	+0.6
	baz=241,SNR=7.4						
GSC	Goldstone, Bar	88.60	52	P	P	07 33 14.2	+0.9
	baz=245,SNR=8.3						
GSC	Goldstone, Bar	88.60	52	P	P	07 33 13.5	+0.2
LHV	Little Huntoon	88.64	49	P	P	07 33 13.9	+0.7
LHV				IAmb	IAmb	07 33 15.8	
	comp=Z,19nm,0.8s						
PAHR	Pah Rah Range	88.68	47	P	P	07 33 14.4	+0.8
PAHR				IAmb	IAmb	07 33 15.7	
	comp=Z,34nm,1.3s						
H04D	Lebanon	88.73	41	P	P	07 33 14.7	+1.1
	baz=241,SNR=5.4						
G03D	McMinnville, O	88.74	41	P	P	07 33 14.7	+1.1
	baz=240						
HEC	Hector,Ludlow	88.75	52	P	P	07 33 14.7	+0.7
	baz=245						
N25K	Chitina, Valde	88.79	20	P	P	07 33 15.2	+1.6
	baz=223						
RYN	Ryan	88.80	48	P	P	07 33 15.1	+0.9
RYN				IAmb	IAmb	07 33 16.2	
	comp=Z,15nm,0.9s						
SNAA	Sanae	88.85	182	P	P	07 33 13.5	-0.3
SNAA	Sanae	88.85	182	P	P	07 33 13.7	-0.2
NVAR	Mina Array Bea	88.86	48	P	P	07 33 15.4	+0.8
	comp=Z,7.1nm,0.6s,baz=227,slow=7.8,SNR=66						
NVAR	Mina Array Bea	88.86	48	P	P	07 33 14.8	+0.2
RND	Reindeer	88.87	17	P	P	07 33 11.9	-2.0
RND				IAmb	IAmb	07 33 19.1	
	comp=Z,12nm,1.0s						
GRAC	Grapevine Rang	88.91	50	P	P	07 33 15.8	+1.1
	baz=244,SNR=19						
BC3	Big Chuckawall	88.93	54	P	P	07 33 15.9	+1.0
	baz=246,SNR=13						
NV11	Mina Array Sit	88.97	48	P	P	07 33 15.2	+0.1
NV11				IAmb	IAmb	07 33 17.0	
	comp=Z,35nm,1.2s						
K05A	Summer Lake	89.05	44	P	P	07 33 15.9	+0.5
FURC	Furnace Creek,	89.05	51	P	P	07 33 16.1	+0.9
	baz=245,SNR=17						
J05D	Fort Rock, OR	89.09	43	P	P	07 33 16.7	+1.2
	baz=242,SNR=40						
MCK	McKinley	89.10	17	P	P	07 33 16.9	+2.0
	baz=219						
H04A	Detroit Lake	89.15	42	P	P	07 33 16.0	+0.4
GLA	Glamis	89.16	54	P	P	07 33 17.1	+1.2
	baz=246,SNR=7.1						
GLA	Glamis	89.16	54	P	P	07 33 17.2	+1.3
E03A	Lebam	89.22	39	P	P	07 33 16.9	+1.1
GMRC	Granite Mounta	89.23	53	P	P	07 33 17.1	+0.7
	baz=246,SNR=9.5						
SHOC	Shoshone, Teco	89.24	51	P	P	07 33 16.9	+0.7
	baz=245,SNR=7.9						
BWN	Browne	89.30	17	P	P	07 33 16.5	+0.7
BWN				IAmb	IAmb	07 33 19.4	
	comp=Z,17nm,0.8s						
F04D	Rainier, OR	89.32	40	P	P	07 33 17.4	+1.1
	baz=241						
IRM	Iron Mountain	89.37	53	P	P	07 33 17.9	+1.0
	baz=246,SNR=18						
BARN	Barnard Glacie	89.38	21	P	P	07 33 16.2	-0.2
BARN				IAmb	IAmb	07 33 17.0	
	comp=Z,14nm,1.0s						
VNA3	Neumayer Olymp	89.43	180	P	P	07 33 16.1	-0.5
VNA3	Neumayer Olymp	89.43	180	pP	pP	07 34 10.4	-6.3
NLWA	Neilton Lookou	89.46	39	P	P	07 33 18.2	+1.3
TPH	Tonopah	89.47	49	P	P	07 33 18.0	+0.5
PINE	Pine Mountain	89.52	43	P	P	07 33 18.3	+0.8
I05D	Terrebonne, OR	89.52	42	P	P	07 33 18.2	+0.8
	baz=242						
SLBS	Sierra La Lagu	89.53	65	P	P	07 33 19.7	+1.8
PIX	Pinacate	89.62	56	IAmb	IAmb	07 33 18.8	
	comp=Z,12nm,0.9s						
IMAR	Indian Mountai	89.69	14	P	P	07 33 17.4	-0.2
TPNV	Topopah Spring	89.70	50	P	P	07 33 19.5	+1.0
	baz=245,SNR=28						
VNA2	Neumayer--Watz	89.73	181	P	P	07 33 17.8	-0.1
	baz=162,slow=4.2						
VNA2	Neumayer--Watz	89.73	181	pP	pP	07 34 12.1	-5.9
E04D	Cinebar	89.82	40	P	P	07 33 19.8	+1.2
	baz=241						
G05D	Wamic, OR	89.96	41	P	P	07 33 20.0	+0.7
	baz=242						
D03D	Eldon	89.99	39	P	P	07 33 20.3	+0.9
	baz=241						
D04E	Lakebay	90.00	39	P	P	07 33 20.9	+1.5
	baz=241						
NEE2	Needles Airpor	90.01	53	P	P	07 33 20.5	+0.7
	baz=246						
F05D	White Salmon	90.17	41	P	P	07 33 21.1	+0.8
	baz=242						
HDA	Harding Lake	90.18	17	IAmb	IAmb	07 33 23.5	
	comp=Z,10nm,0.9s						
PDMCI	Parker Dam,Lak	90.19	54	P	P	07 33 21.7	+1.1
	baz=246,SNR=14						
TCOL	CIGO, UAF Yank	90.29	17	IAmb	IAmb	07 33 21.7	
	comp=Z,24nm,1.4s						
214A	Organ Pipe Nat	90.29	56	P	P	07 33 22.5	+1.3

	baz=247						
SHPR	Sheep Range	90.31	51	P	P	07 33 22.1	+0.7
SHPR				IAmb	IAmb	07 33 23.1	
	comp=Z,8.5nm,0.9s						
LON	Longmire	90.37	40	P	P	07 33 21.7	+0.4
LON				IAmb	IAmb	07 33 22.2	
	comp=Z,8.2nm,0.8s						
WVOR	Wild Horse Val	90.40	45	P	P	07 33 22.2	+0.7
D05A	Enumclaw	90.47	39	P	P	07 33 23.1	+1.5
IL31		90.48	17	P	P	07 33 20.0	-1.2
ILAR	Eielson Array	90.48	17	P	P	07 33 19.6	-1.6
	comp=Z,4.4nm,0.8s,baz=234,slow=4.9,SNR=39						
ILAR	Eielson Array	90.48	17	P	P	07 33 19.8	-1.4
I07A	Izee	90.57	43	IAmb	IAmb	07 33 24.3	
	comp=Z,16nm,0.9s						
HSIG		90.66	59	IAmb	IAmb	07 33 24.8	
	comp=Z,21nm,1.0s						
W13A	Hualapai Mount	90.69	53	P	P	07 33 24.1	+0.8
W13A				IAmb	IAmb	07 33 24.8	
	comp=Z,8.0nm,0.8s						
HYT	Haines Junctio	90.71	23	P	P	07 33 22.2	-0.4
HYT				IAmb	IAmb	07 33 23.1	
	comp=Z,13nm,0.9s						
BCAR	Beaver Creek A	90.76	20	P	P	07 33 21.8	-0.8
PRN	Pahroc Range	90.76	50	P	P	07 33 24.2	+0.8
R11A	Troy Canyon, C	90.76	49	P	P	07 33 23.8	+0.4
	baz=246,SNR=14						
R11A	Troy Canyon, C	90.76	49	P	P	07 33 23.5	+0.1
A04D	Lummi Island	90.79	38	P	P	07 33 24.0	+1.0
	baz=241						
B05A	Bryant	90.93	38	P	P	07 33 24.7	+1.1
	baz=241						
TLY	Talaya	91.14	325	P	P	07 33 24.8	+0.2
	comp=Z,8.2nm,0.7s,baz=180,slow=3.3,SNR=18						
TLY	Talaya	91.14	325	P	P	07 33 24.8	+0.2
TLY				IAmb	IAmb	07 33 25.9	
	comp=Z,13nm,0.9s						
LTY	Liberty	91.30	40	P	P	07 33 25.8	+0.3
G08A	Pilot Rock	91.46	42	IAmb	IAmb	07 33 28.1	
	comp=Z,11nm,0.8s						
E07A	Sunnyside	91.47	41	IAmb	IAmb	07 33 29.1	
	comp=Z,8.6nm,0.7s						
COLD	Coldfoot	91.53	15	P	P	07 33 26.6	+0.5
	baz=218						
WHY	Whitehorse	91.59	24	IAmb	IAmb	07 33 27.1	
	comp=Z,16nm,0.9s						
HAWA	Hanford	91.60	41	P	P	07 33 27.9	+1.1
HAWA				IAmb	IAmb	07 33 29.8	
	comp=Z,13nm,0.9s						
ELK	Elko	91.99	47	P	P	07 33 29.6	+0.5
TUC	Tucson	92.01	56	P	P	07 33 30.4	+1.2
	baz=248						
TUC	Tucson	92.01	56	P	P	07 33 30.4	+1.2
TUC				IAmb	IAmb	07 33 31.6	
	comp=Z,16nm,1.0s						
CCUT	Cedar City	92.05	51	P	P	07 33 30.6	+1.1
PSUT	Pine Spring	92.08	50	P	P	07 33 29.9	+0.3
EGAK	Eagle	92.16	19	P	P	07 33 28.6	-0.4
EGAK				IAmb	IAmb	07 33 31.7	
	comp=Z,10nm,1.0s						
DLBC	Dease Lake	92.23	27	P	P	07 33 28.9	-0.7
	comp=Z,13nm,0.9s,baz=212,slow=5.4,SNR=11						
DLBC	Dease Lake	92.23	27	P	P	07 33 29.9	+0.3
DLBC				IAmb	IAmb	07 33 31.7	
	comp=Z,18nm,1.1s						
KNB	Kanab	92.24	52	P	P	07 33 31.5	+1.2
D08A	Wollman Farm,	92.27	40	IAmb	IAmb	07 33 32.2	
	comp=Z,11nm,1.0s						
X16A	Lo Mia Camp, P	92.29	54	P	P	07 33 30.9	+0.3
X16A				IAmb	IAmb	07 33 32.9	
	comp=Z,14nm,0.9s						
U15A	North Rim	92.41	52	P	P	07 33 32.1	+0.9
U15A				IAmb	IAmb	07 33 34.5	
	comp=Z,19nm,1.1s						
MFID	Camas Ranch	92.68	45	IAmb	IAmb	07 33 33.6	
	comp=Z,6.8nm,0.8s						
WUAZ	Wupatki	92.75	53	P	P	07 33 33.8	+1.1
	baz=248						
WUAZ	Wupatki	92.75	53	P	P	07 33 33.7	+1.1
WUAZ				IAmb	IAmb	07 33 34.8	
	comp=Z,11nm,0.9s						
TOLK	Toolik Lake Re	92.80	14	P	P	07 33 32.0	+0.1
	baz=218						
319A	Douglas	92.86	58	P	P	07 33 33.5	+0.3
MTPU	Mount Pierson	93.10	51	P	P	07 33 34.3	-0.1
TCRU	Three Creeks R	93.12	50	P	P	07 33 34.7	+0.3
MVU	Marysvale	93.25	50	P	P	07 33 35.7	+0.7
DUG	Dugway, Tooele	93.47	49	P	P	07 33 36.0	+0.1
	baz=247						
HLID	Hailey	93.69	45	P	P	07 33 37.4	+0.6
	baz=246						
HLID	Hailey	93.69	45	P	P	07 33 36.6	-0.2
W18A	Petrified Fore	93.85	54	P	P	07 33 38.3	+0.6
	baz=249						
NLU	North Lily Min	93.90	49	P	P	07 33 38.3	+0.4
HVU	Hansel Valley	94.10	47	P	P	07 33 38.6	-0.1
121A	Cookes Peak, D	94.46	57	P	P	07 33 41.1	+0.5
	baz=250						
JLU	Jordanelle	94.59	49	P	P	07 33 41.4	+0.3
EPYK	Eagle Plains	94.60	19	P	P	07 33 40.0	-0.2
EPYK				IAmb	IAmb	07 33 40.8	
	comp=Z,12nm,0.9s						
SRU	San Rafael Swe	94.70	50	P	P	07 33 40.9	-0.7
TCUT	Toone Canyon	94.81	48	P	P	07 33 41.2	-0.9
PV04	Paradox Valley	95.63	51	IAmb	IAmb	07 34 05.7	
	comp=Z,5.0nm,1.1s						
PV01	Paradox Valley	95.79	52	P	P	07 33 47.8	+1.1
MNTX	Cornudas Mount	96.10	59	P	P	07 33 48.2	+0.3
	baz=251						
MNTX	Cornudas Mount	96.10	59	P	P	07 33 47.8	-0.1
ANMO	Albuquerque	96.32	55	P	P	07 33 49.1	+0.1
	comp=Z,0.9nm,0.7s,baz=208,slow=7.2,SNR=4.7						
ANMO	Albuquerque	96.32	55	P	P	07 33 49.1	+0.1
	baz=251						
H17A	Grant Village	96.56	45	P	P	07 33 50.9	+0.9
	baz=249						
BW06	Boulder Array	96.69	47	P	P	07 33 50.4	-0.2
	baz=250						
PDAR	Pinedale Array	96.69	47	P	P	07 33 50.1	-0.4
	comp=Z,0.5nm,0.5s,baz=208,slow=3.3,SNR=7.2						
PDAR				PP	PP	07 37 47.3	-1.8
	comp=Z,0.3nm,0.7s,baz=250,slow=4.4,SNR=4.4						
PDAR	Pinedale Array	96.69	47	P	P	07 33 46.8	-3.7
O20A	White River Ci	96.71	50	P	P	07 33 50.8	+0.1
	baz=250						
TX31	Lajitas Ar. Si	96.74	61	P	P	07 33 50.8	-0.2
TX31				IAmb	IAmb	07 33 52.8	
	comp=Z,9.8nm,0.9s						
TX32	Lajitas Array	96.74	61	P	P	07 33 50.9	-0.1
TXAR	Lajitas Array	96.74	61	P	P	07 33 52.0	+1.1
	comp=Z,1.6nm,0.8s,baz=226,slow=6.5,SNR=12						
TXAR	Lajitas Array	96.74	61	P	P	07 33 51.4	+0.5
INK	Inuvik	96.78	18	P	P	07 33 49.1	-0.9
	comp=Z,5.0nm,1.0s,baz=224,slow=6.1,SNR=9.6						
INK	Inuvik	96.78	18	P	P	07 33 48.9	-1.1
INK				IAmb	IAmb	07 33 50.2	
	comp=Z,9.3nm,1.1s						
S22A	4UR Ranch, Cre	96.95	53	P	P	07 33 52.1	+0.1
	baz=251						
WMQ	Urumqi	97.57	314	eP	Pdif	07 33 55.6	+1.3
WMQ				pmax	pmax		
	comp=Z,12nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,45nm,4.9s						
MSTX	Muleshoe	98.90	57	P	Pdif	07 34 00.5	-0.1
	baz=252						
AMTX	Amarillo	100.03	57	P	Pdif	07 34 05.6	+0.1
	baz=253						
YKA	Yellowknife Ar	100.86	27	P	Pdif	07 34 08.4	0.0
	comp=Z,1.9nm,0.8s,baz=250,slow=4.1,SNR=21						
YKA				PP	PP	07 38 17.1	-2.8
	comp=Z,0.3nm,0.8s,baz=254,slow=6.9,SNR=3.6						
MKAR	Makanchi Array	102.11	315	P	Pdif	07 34 15.7	+1.3
	comp=Z,1.7nm,0.9s,baz=96,slow=6.7,SNR=11						
MKAR				PKiKP	PKiKP	07 38 34.5	-0.8
	comp=Z,0.8nm,0.8s,baz=81,slow=3.8,SNR=3.8						
ZALV	Zalesovo Beam	102.49	323	P	Pdif	07 34 15.5	-0.4
	comp=Z,1.1nm,0.6s,baz=113,slow=3.9,SNR=3.7						
ZALV	Zalesovo Beam	102.49	323		Pdif	07 34 14.2	-1.7
BVAR	Borovoye Array	110.79	320	PKiKP	PKiKP	07 38 51.1	-0.1
	comp=Z,0.7nm,0.4s,baz=46,slow=6.4,SNR=4.9						
ABKAR	Akbulak array	117.24	316		PKPdf	07 39 03.6	-0.1
ARU	Arti	117.61	324	PKP	PKPdf	07 39 04.2	0.0
	comp=Z,6.1nm,0.5s,baz=117,slow=1.6,SNR=28						
N54A	Moraine State	117.91	53	P	PKPdf	07 39 04.5	-0.8
	baz=268						
M54A	Oil Creek Stat	118.18	53	P	PKPdf	07 39 05.0	-0.8
	baz=268						
GEYT	Alibeck	118.36	303	PKP	PKiKP	07 39 06.2	-0.1
	comp=Z,2.7nm,0.7s,baz=29,slow=3.4,SNR=5.2						
GEYT	Alibeck	118.36	303		PKPdf	07 39 05.5	-0.8
AKTO	Aktyubinsk	118.44	317	PKP	PKPdf	07 39 05.8	-0.2
	comp=Z,3.9nm,0.6s,baz=55,slow=2.6,SNR=14						
Q56A	Snyder Ridge,	118.44	56	P	PKiKP	07 39 07.1	+0.7
	baz=267						
N56A	West Decatur	119.19	53	P	PKPdf	07 39 06.3	-1.5
	baz=269						
S58A	Poland Farm, P	119.26	57	P	PKPdf	07 39 06.5	-1.4
	baz=267						
M56A	Emporium	119.29	53	P	PKPdf	07 39 07.1	-0.8
	baz=269						
ALGO	Algonquin Park	119.35	48	P	PKPdf	07 39 06.3	-1.5
	baz=272						
MATQ	Matagami	119.43	43	P	PKPdf	07 39 06.8	-1.1
	baz=274						
LSQQ	Lebel-sur-Quev	119.91	44	P	PKPdf	07 39 07.3	-1.6
	baz=274						
L57A	Andrews Acres	120.29	52	P	PKPdf	07 39 09.2	-0.7
	baz=270						
BOSA	Boshof	120.92	217	PKP	PKPdf	07 39 11.2	-0.5
	comp=Z,0.7nm,0.5s,baz=161,slow=18,SNR=1.0						
L58A	Harry Jones Me	121.03	52	P	PKPdf	07 39 10.2	-1.0
	baz=271						
D55A	Sainte-Anne-du	121.07	46	P	PKPdf	07 39 09.6	-1.6
	baz=274						
I57A	Carthage	121.12	50	P	PKPdf	07 39 10.3	-1.1
	baz=272						
D56A	ZEC Mazanza, M	121.56	46	P	PKPdf	07 39 10.8	-1.4
	baz=275						
I58A	Old Forge	121.63	50	P	PKPdf	07 39 11.0	-1.4
	baz=273						
LONY	Lake Ozonia	121.86	49	P	PKPdf	07 39 11.1	-1.7
	baz=274						
J59A	Piesco	121.98	50	P	PKPdf	07 39 11.7	-1.4
	baz=273						
E57A	Chemin Saint G	122.03	47	P	PKPdf	07 39 11.9	-1.2
	baz=275						
KIRV	Kirov	122.06	328	PKP	PKPdf	07 39 11.9	-0.8
	comp=Z,13nm,0.6s,baz=114,slow=3.2,SNR=5.4						
G58A	Ormstown	122.20	48	P	PKPdf	07 39 12.6	-0.8
	baz=274						
E58A	La Victoria	122.64	47	P	PKPdf	07 39 13.3	-0.9
	baz=276						
D58A	Chemin du LacG	122.83	46	P	PKPdf	07 39 13.3	-1.3
	baz=276						
I60A	Shoreham	122.83	50	P	PKPdf	07 39 13.5	-1.1
	baz=274						
D59A	Saint-Raymond	123.55	46	P	PKPdf	07 39 14.9	-1.0
	baz=277						
F60A	Warwick	123.59	47	P	PKPdf	07 39 15.3	-0.7
	baz=276						
E60A	Ste Agathe de	123.90	47	P	PKPdf	07 39 15.2	-1.4
	baz=277						
M63A	Gales Ferry	123.90	53	P	PKPdf	07 39 15.8	-0.9
	baz=273						
E61A	Lac Etchemin	124.55	47	P	PKPdf	07 39 17.6	-0.3
	baz=278						
BELG	Belogornoye	124.59	321	PKP	PKPdf	07 39 17.1	-0.6
	comp=Z,56nm,0.9s,baz=266,slow=0.9,SNR=12						
D61A	St Aubert, Com	124.64	46	P	PKPdf	07 39 17.2	-0.8
	baz=279						
G62A	West of Eustis	124.67	48	P	PKPdf	07 39 17.6	-0.6
	baz=277						
G63A	Kingsbury	125.32	48	P	PKPdf	07 39 18.8	-0.6
	baz=278						
ARCES	ARCESS Array B	125.43	345	PKP	PKPdf	07 39 18.5	-0.4
	comp=Z,5.3nm,0.5s,baz=60,slow=1.7,SNR=32						
G64A	Maxfield	125.91	48	P	PKPdf	07 39 19.8	-0.7
	baz=278						
KLMR	Klimovskoe	125.91	332	AMP		07 39 20.4	
	comp=Z,13nm,0.8s						
KLMR	Klimovskoe	125.91	332	ePKPdf	PKPdf	07 39 18.5	-1.5
BDFB	Brasilia	129.19	131	PKP	PKPdf	07 39 27.6	-0.2
	comp=Z,2.5nm,0.6s,baz=164,slow=3.9,SNR=3.8						
KBZ	Khabaz	129.52	311	PKP	PKiKP	07 39 28.3	+0.2
	comp=Z,2.3nm,0.8s,baz=34,slow=3.6,SNR=2.8						
FINES	FINESS Array B	130.96	338	PKP	PKPdf	07 39 28.8	-0.8
	comp=Z,2.6nm,0.5s,baz=354,slow=1.9,SNR=10						
FINES				SKPbc	SKPab	07 42 32.6	+2.0
	comp=Z,2.3nm,0.8s,baz=85,slow=4.0,SNR=5.4						
NB2	NORSAR Subarra	135.80	345	PKPdf	PKPdf	07 39 38.9	+0.1
	comp=Z,1.0nm,0.6s,baz=31,slow=1.9						
NOA	NORSAR Array B	135.80	345	PKP	PKPdf	07 39 38.7	-0.1
	comp=Z,2.0nm,0.7s,baz=37,slow=2.1,SNR=8.9						
AKASG	Malin Array Be	135.87	324	PKP	PKPdf	07 39 39.4	+0.2
	comp=Z,3.6nm,0.6s,baz=54,slow=2.2,SNR=10						
AKASG				SKPbc	SKPbc	07 42 49.1	+2.1
	comp=Z,4.6nm,0.9s,baz=44,slow=3.5,SNR=11						
AKASG	Malin Array Be	135.87	324		PKPdf	07 39 38.4	-0.8
BRTR	Keskin Array B	137.17	308	PKP	PKPdf	07 39 42.6	+0.4
	comp=Z,2.5nm,0.9s,baz=168,slow=2.2,SNR=2.3						
KOLS	Kolonicke sedl	140.60	326	ePKP	PKPdf	07 39 42.8	-5.1
MORC	Moravsky Berou	142.44	330	ePKP	PKPdf	07 39 48.7	-2.5
KRLC	Kraliky	142.59	331	ePKP	PKPdf	07 39 48.1	-3.4
DPC	Dobruska-Polom	142.60	332	ePKP	PKPdf	07 39 48.2	-3.3
UPC	Upice	142.63	332	ePKP	PKPdf	07 39 49.1	-2.4
JAVC	Velka Javorina	143.00	329	ePKP	PKPdf	07 39 51.5	-0.8
VRAC	Vranov	143.21	330	PKP	PKPbc	07 39 50.2	-0.1
	comp=Z,3.0nm,0.5s,baz=62,slow=3.4,SNR=5.1						
VRAC	Vranov	143.21	330	ePKP	PKPbc	07 39 50.7	+0.4
BRG	Berggiesshubel	143.24	334	i PKP	PKPbc	07 39 50.0	-0.3
BRG				Amp		07 39 51.6	
	comp=Z,17nm,0.9s						
BRG				SKP		07 43 10.3	
BRG				Amp		07 43 12.2	
	comp=Z,12nm,1.5s						
BRG	Berggiesshubel	143.24	334	ePKPbc	PKPbc	07 39 50.3	-0.1
	baz=37,slow=3.0						
CLL	Collm	143.29	335	ePKPpre	PKPbc	07 39 50.0	-0.4
CLL				ePKPdf	PKiKP	07 39 55.0	-1.0
CLL				epPKPdf	pPKPdf	07 40 54.0	-2.3
CLL	Collm	143.29	335	ePKPbc	PKPbc	07 39 50.2	-0.2
	baz=37,slow=3.0						
FBE	Freiberg	143.45	334	ePKPbc	PKPbc	07 39 51.5	+0.7
	baz=37,slow=3.0						
KRUC	Moravsky	143.48	330	ePKP	PKPbc	07 39 50.9	-0.1
MODS	Modra-Piesok	143.52	328	ePKP	PKPbc	07 39 51.5	+0.3
PRU	Pruhonice	143.65	332	ePKP	PKPbc	07 39 52.0	+0.5
EKA	Eskdalemuir Ar	143.85	353	PKP	PKPab	07 39 51.3	+0.1
	comp=Z,3.2nm,0.5s,baz=356,slow=1.9,SNR=12						
CLZ	Clausthal	143.85	338	ePKPbc	PKPbc	07 39 52.4	+0.3
	baz=37,slow=3.0						
PBCC	Pribram	144.11	333	ePKP	PKPbc	07 39 53.2	+0.3
FRGS	Fruska Gora	144.18	322	⇑iP	PKPbc	07 39 53.9	+0.6
EDMD	Edmundbyers	144.19	352	eP	PKPab	07 39 50.9	-1.7
TANN	Tannenbergstha	144.20	335	ePKPbc	PKPbc	07 39 53.6	+0.4
	baz=37,slow=3.0						
MORH	Mrgy, Hungar	144.21	325	⇑iP	PKPbc	07 39 53.4	+0.2
WERD	Werda	144.24	335	ePKPbc	PKPbc	07 39 53.6	+0.4
	baz=37,slow=3.0						
GTTG	Gottingen	144.24	338	ePKPbc	PKPdf	07 39 54.0	-0.3
	baz=37,slow=3.0						
IBBN	Ibbenburen	144.33	341	ePKPbc	PKPbc	07 39 53.9	+0.6
	baz=37,slow=3.0						
WERN	Wernitzgruen	144.34	335	ePKPbc	PKPdf	07 39 54.2	-0.3
	baz=37,slow=3.0						
NKC	Novy Kostel	144.35	335	ePKP	PKPbc	07 39 54.0	+0.4
MOX	Moxa	144.36	336	ePKPbc	PKPbc	07 39 53.8	+0.3
	baz=37,slow=3.0						
VAY	Valandovo	144.47	315	i Pg	PKPbc	07 39 54.3	+0.1
CONA	Conrad Observa	144.52	329	eP	PKPdf	07 39 54.8	-0.2
	comp=Z,34nm,0.8s,SNR=23						
STIP	Stip	144.55	316	i Pg	PKPab	07 39 53.9	-0.5
CKRC	Cesky Krumlov	144.61	331	ePKP	PKPdf	07 39 55.0	0.0
MANZ	Manzenberg	144.68	335	ePKPbc	PKPdf	07 39 55.1	0.0
	baz=37,slow=3.0						
DIVS	Divibare	144.68	321	⇑iP	PKPdf	07 39 55.6	+0.2
TEKS	Tekeris	144.70	322	⇑iP	PKPdf	07 39 55.7	+0.4
KHC	Kasperske Hory	144.71	332	ePKP	PKPdf	07 39 55.4	+0.2
ROTZ	Rotzenmuhle	144.81	334	ePKPbc	PKPab	07 39 55.7	+0.6
	baz=37,slow=3.0						
UBBA	Unterbreizbach	144.82	337	ePKPbc	PKPab	07 39 55.6	+0.7
	baz=37,slow=3.0						
GEC2	GERESS Array S	144.87	332	ePKPbc	PKPab	07 39 55.8	+0.3
	baz=37,slow=3.0						
GERES	GERESS Array B	144.87	332	PKP	PKPab	07 39 55.7	+0.3
	comp=Z,18nm,0.7s,baz=44,slow=4.1,SNR=113						
GERES	GERESS Array B	144.87	332		PKPbc	07 39 55.4	+0.1
SKO	Skopje	144.90	317	i Pg	PKPab	07 39 56.6	+0.9
HPK	Haverah Park	144.99	351	eP	PKPdf	07 39 54.3	-1.1
WET	Wettzell	145.00	333	ePKPbc	PKPab	07 39 56.2	+0.3
	baz=37,slow=3.0						
BEHE	Becsehely	145.04	326	⇑iP	PKPab	07 39 57.2	+1.1
IOMK	Kirk Michael	145.06	354	eP	PKPdf	07 39 54.4	-1.2
KASTN	Kahler Asten	145.06	339	ePKPbc	PKPbc	07 39 56.0	+0.2
	baz=37,slow=3.0						
IDI	Anoyia	145.08	304	PKPbc	PKPab	07 39 56.8	+0.2
	comp=Z,30nm,0.8s,baz=14,slow=1.7,SNR=12						
ARSA	Arzberg	145.15	328	eP	PKPab	07 39 56.7	+0.2
	comp=Z,23nm,0.8s,SNR=12						
BBLS	Lazići	145.16	321	⇑iP	PKPab	07 39 57.2	+0.5
WIM	Isle of Man	145.18	354	eP	PKPdf	07 39 55.0	-0.8
BUG	Bochum--Univer	145.23	340	ePKPbc	PKPbc	07 39 56.4	+0.3
	baz=37,slow=3.0						
HAPS	Han Pijesak,Bl	145.31	321	⇑iP	PKPbc	07 39 56.9	+0.1
MOA	Molln	145.34	330	eP	PKPbc	07 39 57.2	+0.5
	comp=Z,31nm,0.8s,SNR=17						
LBWR	Ladybower, Pea	145.54	351	eP	PKPdf	07 39 56.1	-0.4
OHR	Ohrid	145.74	316	i Pg	PKPbc	07 39 58.5	+0.3
SOKA	Soboth	145.79	328	eP	PKPbc	07 39 58.4	+0.2
	comp=Z,12nm,0.5s,SNR=7.9						
PTJ	Puntijarka	145.83	326	P	PKPbc	07 39 58.8	+0.4
UPM	Unac-Piva	145.84	320	⇑iP	PKPdf	07 39 57.9	+0.4
BLY	Banja Luka	145.92	324	⇑iP	PKPbc	07 39 59.1	+0.6
WLF1	Llynfaes	146.00	353	eP	PKPdf	07 39 57.3	+0.1
PDG	Podgorica	146.05	319	⇑iP	PKPbc	07 39 59.1	+0.1
YRC	Rhoscolyn	146.06	354	eP	PKPdf	07 39 57.5	+0.3
CWF	Charnwood Fore	146.11	350	eP	PKPdf	07 39 56.6	-0.9
CRES	Cresnjev	146.15	327	i PKPbc	PKPbc	07 39 59.7	+0.5
CRES	Cresnjev	146.15	327	⇑iP	PKPbc	07 39 59.5	+0.3
MGRS	Mrkonjic Grad	146.18	323	⇑iP	PKPbc	07 39 59.3	-0.1
PDKS	Podkum	146.23	327	ePKPbc	PKPbc	07 39 59.7	+0.2
KBA	Koelnbreinsper	146.33	330	eP	PKPbc	07 39 59.4	-0.5
	comp=Z,28nm,1.1s,SNR=9.0						
BTNL	Ternell	146.33	341	dPKP	PKPbc	07 39 59.7	+0.1
LLW	Llanuwychllyn	146.35	352	eP	PKPdf	07 39 57.1	-0.7
MEM	Membach	146.35	341	dPKP	PKPbc	07 39 59.8	+0.2
VNDS	Vrh nad Dolski	146.35	328	i PKPbc	PKPbc	07 40 00.0	+0.2
TREB	Trebinje	146.45	320	eP	PKPbc	07 39 59.6	-0.5
BOJS	Bojanci	146.48	326	i PKPbc	PKPbc	07 40 00.9	+0.8
LJU	Ljubljana	146.48	328	⇑iP	PKPbc	07 40 00.3	+0.2
BSTI	Sart Tilman	146.51	341	dPKP	PKPbc	07 40 00.4	+0.4
MYKA	Terra Mystica	146.51	329	i P	PKPbc	07 39 59.7	-0.6
	comp=Z,12nm,0.6s,SNR=6.6						
HCY	Herceg Novi	146.51	319	eP	PKPbc	07 39 59.9	-0.4
DBRK	Dubrovnik	146.60	320	i P	PKPdf	07 39 59.4	+0.8
RICI	Ricice	146.72	322	P	PKPbc	07 40 00.7	-0.2
CEY	Cerknica	146.74	327	⇑iP	PKPbc	07 40 00.9	0.0
STON	Ston	146.75	321	i P	PKPdf	07 39 59.5	+0.7
STON	Ston	146.75	321	eP	PKPdf	07 39 58.8	0.0
VOJS	Vojsko	146.81	328	i PKPbc	PKPbc	07 40 01.0	-0.2
KIJV	Kijevo	146.82	323	i P	PKPbc	07 40 01.1	-0.1
WATA	Walderalm	146.94	332	i P	PKPbc	07 40 01.5	-0.1
	comp=Z,26nm,1.0s,SNR=7.1						
ABTA	Abfaltersbach	146.96	330	i P	PKPbc	07 40 01.1	-0.5
	comp=Z,11nm,0.6s						
WTTA	Wattenberg	146.97	332	eP	PKPbc	07 40 01.9	+0.2
	comp=Z,38nm,1.1s,SNR=7.9						
BMRD	Maredsous	146.99	342	dPKP	PKPbc	07 40 01.7	+0.3
RIY	Rijeka	147.00	327	⇑iP	PKPbc	07 40 01.6	0.0
MCH1	Michaelchurch	147.09	351	eP	PKPdf	07 40 00.5	+1.4
WLF	Walferdange	147.13	340	dPKP	PKPbc	07 40 02.6	+0.9
WLF	Walferdange	147.13	340	ePKPbc	PKPbc	07 40 02.9	+1.1
	baz=37,slow=3.0						
MOTA	Moosalm	147.14	332	i P	PKPbc	07 40 02.2	0.0
	comp=Z,40nm,0.9s,SNR=11						
RETA	Reutte	147.18	333	eP	PKPbc	07 40 02.2	+0.1
	comp=Z,7.9nm,0.6s						
SQTA	Sankt Quirin	147.19	332	eP	PKPbc	07 40 02.4	+0.1
	comp=Z,19nm,0.6s,SNR=12						
DOU	Dourbes	147.23	342	dPKP	PKPbc	07 40 02.4	+0.4
MORI	Morici	147.30	324	i P	PKPbc	07 40 01.9	-0.6
NVLJ	Novalja	147.30	325	i P	PKPbc	07 40 02.1	-0.2
HVAR	Hvar	147.31	322	i P	PKPbc	07 40 01.9	-0.6
UBR	Ueberruh	147.31	334	ePKPbc	PKPbc	07 40 02.8	+0.3
	baz=37,slow=3.0						
ZIRJ	Zirje	147.47	323	i P	PKPbc	07 40 02.4	-0.5
BFO	Black Forest	147.49	336	ePKPbc	PKPbc	07 40 03.0	+0.2
	baz=37,slow=3.0						
BATH	Bath	147.53	350	eP	PKPbc	07 40 03.4	+0.6
FETA	Feichten	147.56	332	eP	PKPbc	07 40 03.6	+0.3
	comp=Z,35nm,0.8s,SNR=10.0						
DUGI	Dugi Otok	147.58	324	i P	PKPbc	07 40 02.8	-0.4
DAVA	Damuels	147.71	334	i P	PKPbc	07 40 04.0	+0.3
	comp=Z,37nm,1.2s,SNR=6.1						
DAVOX	Davos/Dischmat	148.11	333	PKPbc	PKPbc	07 40 05.3	+0.6
	comp=Z,48nm,0.6s,baz=145,slow=0.2,SNR=64						
CCA1	Carnmenellis	149.15	353	eP	PKPbc	07 40 05.4	-1.6
ESDC	Sonseca Array	159.17	346	PKPab	PKPab	07 40 54.9	-0.2
	comp=Z,1.0nm,0.8s,baz=356,slow=3.1,SNR=3.5						
ESDC	Sonseca Array	159.17	346		PKPab	07 40 53.6	-1.5
TORD	Torodi Ar. Bea	166.64	243	PKP	PKPdf	07 40 24.1	-0.6
	comp=Z,1.4nm,0.9s,baz=81,slow=1.3,SNR=3.6						
TORD				PKPab	PKPab	07 41 27.8	-0.9
	comp=Z,1.0nm,0.8s,baz=90,slow=1.4,SNR=2.7						
KOWA	Kowa	171.98	232	PKP	PKPdf	07 40 27.7	-0.2
	comp=Z,1.6nm,0.8s,baz=22,slow=1.7,SNR=4.0						

IDC 02 07:29:21.4±6.7, 11°.14N×138°.80E, h82km±67km, mb3.7/11, mb1 3.8/12, mb1mx3.5/62, mbtmp4.0/12, ML4.5/1 Error ellipse: s-maj=31.1km s-min=24.8km az=71.0

ISC 02 07:29:16.9±0.7, 11°.25N±0°.08×138°.8E±0°.2, h35km, n18, σ1s.15/13, mb4.1/11, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	13.81	172	P	Pn	07 32 31.9	+1.5
	2.2nm,0.3s,baz=345,slow=12,SNR=6.8						
JAY				S	Sn	07 35 01.6	-1.0
	0.8nm,0.3s,baz=225,slow=21,SNR=1.6						
H11S3	WAKE ISLAND Hy	27.87	72	T	T	08 05 04.4	
	baz=253						
H11S1	WAKE ISLAND Hy	27.88	72	T	T	08 05 02.3	
	baz=253						
H11S2	WAKE ISLAND Hy	27.89	72	T	T	08 05 02.8	
	baz=253						
H11N1	WAKE ISLAND Hy	28.31	69	T	T	08 05 36.8	
	baz=263						
H11N2	WAKE ISLAND Hy	28.32	69	T	T	08 05 36.8	
	baz=263						
H11N3	WAKE ISLAND Hy	28.33	69	T	T	08 05 35.1	
	baz=263						
ASAR	Alice Springs	35.03	188	P	P	07 36 06.0	-0.5
	0.4nm,0.6s,baz=14,slow=12,SNR=2.5						
KLR	Kul'dur	38.31	353	P	P	07 36 34.5	+0.4
	2.3nm,0.7s,baz=163,slow=7.8,SNR=5.7						
CMAR	Chiang Mai Arr	39.12	285	P	P	07 36 41.8	+0.4
	2.8nm,0.3s,baz=95,slow=6.8,SNR=7.4						
SONM	Songino Array	45.47	330	P	P	07 37 33.8	+1.0
	0.6nm,0.8s,baz=145,slow=5.4,SNR=3.6						
SEY	Seymchan	52.51	8	P	P	07 38 27.6	+1.3
	1.0nm,0.2s,baz=284,slow=4.2,SNR=4.2						
MKAR	Makanchi Array	59.15	318	P	P	07 39 14.4	+0.1
	1.0nm,0.7s,baz=102,slow=10,SNR=5.1						
ZALV	Zalesovo Beam	60.17	327	P	P	07 39 20.5	-0.7
	0.6nm,0.4s,baz=119,slow=8.4,SNR=2.2						
KURBB	Kurchatov Arra	62.66	321	P	P	07 39 37.5	-0.5
	0.6nm,0.3s,baz=115,slow=6.4,SNR=2.7						
ILAR	Eielson Array	73.21	26	P	P	07 40 43.2	-0.9
	0.2nm,0.7s,baz=243,slow=6.0,SNR=1.4						
YKA	Yellowknife Ar	87.61	26	P	P	07 42 01.6	+0.2
	0.7nm,0.8s,baz=292,slow=4.3,SNR=10						
FINES	FINESS Array B	90.69	334	P	P	07 42 13.6	-2.3
	4.3nm,0.9s,baz=29,slow=3.2,SNR=3.1						

IDC 02 07:29:20.7±2.9, 7°.02S×129°.46E, h102km±40km, mb3.5/1, mb1 3.5/5, mb1mx3.2/50, mbtmp3.8/5, Error ellipse: s-maj=64.0km s-min=22.4km az=92.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	6.37	17	P	Pn	07 30 52.8	+0.6
	2.1nm,0.3s,baz=206,slow=22,SNR=8.5						
SIJI				S	Sn	07 31 59.5	-4.0
	1.9nm,0.3s,baz=232,slow=22,SNR=1.7						
FITZ	Fitzroy Crossi	11.62	198	P	Pn	07 32 03.8	+0.4
	0.5nm,0.3s,baz=35,slow=14,SNR=21						
FITZ				S	Sn	07 34 07.2	-4.0
	0.9nm,0.3s,baz=87,slow=21,SNR=6.6						
WRA	Warramunga Arr	13.69	160	P	Pn	07 32 29.4	-1.3
	0.6nm,0.3s,baz=339,slow=13,SNR=21						
WRA				S	Sn	07 34 52.5	-9.0
	0.8nm,0.3s,baz=331,slow=22,SNR=9.7						
ASAR	Alice Springs	17.09	166	P	P	07 33 14.5	+0.9
	0.3nm,0.3s,baz=341,slow=9.3,SNR=13						
ASAR				S	Sn	07 36 15.3	-8.2

	0.2nm,0.3s,baz=0.6,slow=28,SNR=3.0						
MKAR	Makanchi Array	67.95	327	P	P	07 40 08.5	-0.2
	0.4nm,0.4s,baz=124,slow=6.6,SNR=4.3						

IDC 02 07:31:50.5±3.5, 53°.54N×87°.73E, h0km, mb1 2.6/2, mb1mx2.6/67, mbtmp2.6/2, ML2.4/2, Error ellipse: s-maj=34.6km s-min=16.3km az=52.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.78	284	i		07 42 00.0	
	baz=101,slow=271,SNR=3.8						
ZALV	Zalesovo Beam	1.78	284	Pg	Pn	07 32 21.8	-0.6
	0.5nm,0.3s,baz=106,slow=16,SNR=8.1						
ZALV				Lg	Lg	07 32 47.6	
	1.2nm,0.3s,baz=104,slow=30,SNR=7.9						
KURBB	Kurchatov Arra	6.38	246	Pn	Pn	07 33 26.1	+0.4
	0.0nm,0.3s,baz=62,slow=13,SNR=4.0						
MKAR	Makanchi Array	7.61	209	Pn	Pn	07 33 43.9	+1.4
	0.1nm,0.3s,baz=29,slow=13,SNR=11						

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*BGS **02** 07:32:22.0±1.3, 46°.90N×7°.08W, h13km, ML3.3*
*INMG **02** 07:32:23.7±1.8, 46°.78N×7°.30W, h31km±23km, ML2.8, Error ellipse: s-maj=23.0km s-min=8.3km az=117.0*
*LDG **02** 07:32:23.8±0.1, 46°.80N×7°.18W, h30km, Ml3.9/34, Error ellipse: s-maj=2.5km s-min=1.6km az=113.0*
*IGIL **02** 07:32:28.3, 46°.64N×7°.39W, h31km*
ISC 02 07:32:17.7±1.1, 46°.71N±0°.04×7°.07W±0°.07, h10km, n72, σ3ˢ.10/118, 1D, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QUIF	Quistinic	2.92	64	ePn	Pn	07 33 06.8	+2.7
QUIF				eSn	Sn	07 33 39.5	+0.3
	26nm,0.2s						
ROSF	Rostrenen	3.04	56	eP	Pn	07 33 08.6	+2.7
ROSF				eS	Sn	07 33 42.3	-0.1
ROSF	Rostrenen	3.04	56	ePn	Pn	07 33 08.5	+2.7
ROSF				eSn	Sn	07 33 42.6	+0.3
	51nm,0.3s						
SGMF	Saint Gilles	3.43	61	ePn	Pn	07 33 14.0	+2.9
SGMF				eSn	Sn	07 33 52.0	+0.2
	29nm,0.2s						
CCA1	Carnmenellis	3.69	19	eP	Pn	07 33 16.0	+1.3
CCA1				eS	Sn	07 33 54.5	-3.8
CCA1				IAML		07 33 56.2	
	comp=E,45nm,0.1s						
CCA1				IAML		07 33 58.4	
	comp=N,34nm,0.2s						
JSA	Saint Aubin	4.12	51	eP	Pn	07 33 22.8	+2.1
JSA				eS	Sn	07 34 06.8	-2.1
JSA				IAML		07 34 09.4	
	comp=E,36nm,0.3s						
JSA				IAML		07 34 10.3	
	comp=N,32nm,0.3s						
DYA	Yadsworthy	4.27	28	eP	Pn	07 33 24.4	+1.7
DYA				eS	Sn	07 34 10.9	-1.8
DYA				IAML		07 34 13.7	
	comp=N,24nm,0.2s						
DYA				IAML		07 34 13.8	
	comp=E,22nm,0.2s						
GRR	Gorron	4.53	66	ePn	Pn	07 33 29.5	+3.2
GRR				eSn	Sn	07 34 18.7	-0.2
	comp=E,22nm,0.2s						
HTL	Hartland	4.62	21	eP	Pn	07 33 28.9	+1.4
HTL				eS	Sn	07 34 17.3	-3.8
HTL				IAML		07 34 21.7	
	comp=N,81nm,0.4s						
HTL				IAML		07 34 21.7	
	comp=E,76nm,0.4s						
CHIF	Chize	4.64	95	eP	Pn	07 33 32.2	+4.4
CHIF				eS	Sn	07 34 22.0	+0.4
MFF	Saint Martin d	4.77	89	ePn	Pn	07 33 33.5	+4.0
MFF				eSn	Sn	07 34 24.7	-0.1
	comp=E,26nm,0.3s						
FLN	La Foliniere	4.90	63	ePn	Pn	07 33 34.4	+3.1
	baz=244						
FLN				eSn	Sn	07 34 27.0	-1.0
	comp=E,40nm,0.3s						
PBRG	Braganca	4.91	177	ePn	Pn	07 33 34.3	+2.8
PBRG				eSn	Sn	07 34 26.8	-1.5
PBRG				A	A	07 34 31.7	
	comp=E,8.3nm,0.5s						
PCAB	Cabril	5.04	188	ePn	Pn	07 33 36.3	+3.0
PCAB				eSn	Sn	07 34 28.9	-2.7
PCAB				A	A	07 34 32.4	
	comp=E,14nm,0.7s						
LDF	La Druitiere	5.06	66	ePn	Pn	07 33 37.0	+3.5
LDF				eSn	Sn	07 34 31.4	-0.6
	comp=E,16nm,0.2s						
POLO	Lamas de Olo	5.36	186	ePn	Pn	07 33 40.7	+3.0
POLO				eSn	Sn	07 34 36.7	-2.8
POLO				A	A	07 34 39.4	
	comp=E,3.0nm,0.5s						
PVRL	Vila Real	5.45	185	ePn	Pn	07 33 42.1	+3.2
PVRL				eSn	Sn	07 34 39.0	-2.7
RSBS	Rosebush, Pemb	5.47	15	eP	Pn	07 33 40.1	+1.0
MVO	Moncorvo	5.54	180	ePn	Pn	07 33 43.4	+3.2
MVO				eSn	Sn	07 34 42.1	-1.9
MVO				A	A	07 34 43.1	
	comp=E,10nm,0.3s						
LFF	La Frestale	5.73	105	ePn	Pn	07 33 46.9	+4.1
LFF				eSn	Sn	07 34 48.7	+0.1
	comp=E,29nm,0.4s						
MCH1	Michaelchurch	5.93	25	eP	Pn	07 33 47.2	+1.7
MCH1				eS	Sn	07 34 49.3	-4.0
MCH1				IAML		07 34 54.4	
	comp=E,20nm,0.3s						
MCH1				IAML		07 34 56.5	
	comp=N,26nm,0.3s						
ETSF	Etsaut	5.99	127	ePn	Pn	07 33 50.2	+3.8
ETSF				eSn	Sn	07 34 54.3	-0.8
	comp=N,18nm,0.3s						
PVIS	Viseu	6.02	186	ePn	Pn	07 33 49.6	+2.8
PVIS				eSn	Sn	07 34 52.3	-3.4
PVIS				A	A	07 34 54.7	
	comp=N,6.9nm,0.5s						
RJF	Les Rejaudoux	6.14	100	ePn	Pn	07 33 51.9	+3.5
RJF				eSn	Sn	07 34 57.0	-1.7
	comp=N,14nm,0.3s						
MTE	Manteigas	6.31	183	ePn	Pn	07 33 53.8	+3.0
MTE				eSn	Sn	07 35 00.0	-3.0
EPF	Esparros	6.42	122	ePn	Pn	07 33 55.8	+3.5
EPF				eSn	Sn	07 35 04.3	-1.3
	comp=N,15nm,0.3s						
TCF	Toulx Ste Croi	6.42	90	ePn	Pn	07 33 55.5	+3.3
TCF				eSn	Sn	07 35 03.0	-2.5
	comp=N,29nm,0.3s						
LLW	Llanuwychllyn	6.53	18	eP	Pn	07 33 55.2	+1.4
LLW				eS	Sn	07 35 02.5	-5.7
LLW				IAML		07 35 07.5	
	comp=N,7.0nm,0.4s						
LLW				IAML		07 35 17.4	
	comp=E,4.7nm,0.3s						
CAF	Calviac	6.62	102	ePn	Pn	07 33 58.9	+3.8
CAF				eSn	Sn	07 35 08.1	-2.5
	comp=E,15nm,0.3s						
HYF	Humbligny	6.66	82	ePn	Pn	07 33 59.5	+3.9
HYF				eSn	Sn	07 35 09.5	-2.1
YRC	Rhoscolyn	6.75	13	eP	Pn	07 33 58.5	+1.8
BGF	Bois d'Agland	6.83	88	ePn	Pn	07 34 01.3	+3.5
BGF				eSn	Sn	07 35 13.4	-2.2
	comp=E,50nm,0.3s						
PCBR	Castelo Branco	6.87	183	ePn	Pn	07 34 01.4	+3.0
AVF	Avril sur Loir	7.16	86	ePn	Pn	07 34 05.5	+3.1
AVF				eSn	Sn	07 35 20.1	-3.6
	comp=E,18nm,0.6s						
SSF	Saint Saulge	7.25	83	ePn	Pn	07 34 06.8	+3.1
SSF				eSn	Sn	07 35 23.4	-2.7
	comp=E,6.6nm,0.2s						
PMRV	Marv??o	7.28	182	ePn	Pn	07 34 06.8	+2.8
PMRV				A	A	07 35 25.6	
	comp=E,2.2nm,0.4s						
PSBE	So Bento	7.30	191	⇓ePn	Pn	07 34 07.3	+3.0
PSBE				eSn	Sn	07 35 23.8	-3.4
PSBE				A	A	07 35 27.6	
	comp=E,7.4nm,0.6s						
MTLF	Montolieu	7.39	114	ePn	Pn	07 34 09.6	+4.1
MTLF				eSn	Sn	07 35 27.8	-1.6
	comp=E,14nm,0.2s						
LOR	Lormes	7.50	82	ePn	Pn	07 34 09.8	+2.8
	baz=262						
LOR				eSn	Sn	07 35 27.7	-4.3
	comp=E,8.1nm,0.3s,baz=257						
SMF	Signal de Mont	7.50	86	ePn	Pn	07 34 10.5	+3.4
SMF				eSn	Sn	07 35 29.2	-3.1
	comp=E,6.4nm,0.2s						
LBWR	Ladybower, Pea	7.53	25	eP	Pn	07 34 09.9	+2.4
PMTG	Montargil	7.68	187	ePn	Pn	07 34 12.2	+2.7
PMTG				eSn	Sn	07 35 34.4	-2.1
PMTG				A	A	07 35 34.8	
	comp=E,1.6nm,0.7s						
PESTR	Estremoz	7.84	183	ePn	Pn	07 34 14.7	+2.9
PMAFR	Mafra	7.91	193	ePn	Pn	07 34 15.9	+3.1
HPK	Haverah Park	8.05	24	eP	Pn	07 34 15.8	+1.2
LASF	Ste Croix	8.12	105	ePn	Pn	07 34 19.4	+3.7
LASF				eSn	Sn	07 35 45.2	-2.3
	comp=E,17nm,0.6s						
SFTF	Sexfontaines	8.34	75	ePn	Pn	07 34 21.6	+3.0
	baz=256						
SFTF				eSn	Sn	07 35 49.4	-3.4
	comp=E,17nm,0.3s						
MEZF	Maizieres J'vi	8.39	73	eSn	Sn	07 35 50.2	-3.7
	comp=E,17nm,0.3s						
VIVF	Saint-Julien-l	8.41	98	ePn	Pn	07 34 23.7	+4.1
VIVF				eSn	Sn	07 35 52.9	-1.7
	comp=E,8.3nm,0.4s						
SAVF	Savonnieres en	8.45	72	ePn	Pn	07 34 22.9	+2.8
SAVF				eSn	Sn	07 35 51.4	-4.0
	comp=E,9.0nm,0.3s						
PBAR	Barrancos	8.52	180	ePn	Pn	07 34 25.0	+3.9
GIVF	Givet	8.61	62	ePn	Pn	07 34 27.2	+5.0
GIVF				eSn	Sn	07 35 55.4	-3.9
	comp=E,12nm,0.2s						
PNCL	Nicolau / Gran	8.65	188	ePn	Pn	07 34 26.1	+3.2
EDMD	Edmundbyers	8.75	20	eP	Pn	07 34 25.5	+1.3
PAGF	Fort de Pagny	8.84	73	eSn	Sn	07 35 59.7	-5.3
	comp=E,16nm,0.5s,baz=254						
MESJ	Messejana	8.90	186	eP	Pn	07 34 29.1	+2.8
MESJ	Messejana	8.90	186	ePn	Pn	07 34 29.1	+2.8
PCVE	Castro Verde	9.10	185	ePn	Pn	07 34 32.1	+3.1
HAU	Haudompre	9.20	77	ePn	Pn	07 34 32.5	+2.1
HAU				eSn	Sn	07 36 08.6	-5.3
	comp=E,7.2nm,0.2s						
ORIF	Oris-en-Rattie	9.22	96	ePn	Pn	07 34 34.1	+3.4
PVAQ	Vaqueiros	9.31	183	ePn	Pn	07 34 34.7	+2.9
PVAQ				eSn	Sn	07 36 10.3	-6.3
SMRF	Simiane la Rot	9.31	102	ePn	Pn	07 34 35.1	+3.2
SMRF				eSn	Sn	07 36 13.5	-3.2
	comp=E,1.9nm,0.3s						
MORF	Marmelete	9.46	188	eP	Pn	07 34 36.3	+2.3
MORF	Marmelete	9.46	188	ePn	Pn	07 34 38.1	+4.0
HINF	Hinteralfeld	9.53	78	ePn	Pn	07 34 36.9	+1.9
HINF				eSn	Sn	07 36 15.8	-6.3
	comp=E,8.0nm,0.4s						
LPL	La Plagne	9.66	92	ePn	Pn	07 34 40.1	+3.2
LPG	La Plagne	9.68	92	ePn	Pn	07 34 40.1	+2.9
CDF	Champ du Feu	9.85	75	ePn	Pn	07 34 41.8	+2.5
CDF				eSn	Sn	07 36 23.3	-6.6
	comp=E,3.6nm,0.3s						
MBDF	Montbardon	9.88	97	ePn	Pn	07 34 43.2	+3.4
LMR	La Mourre	10.19	104	ePn	Pn	07 34 46.8	+2.9
SBF	Sospel	10.61	100	ePn	Pn	07 34 52.2	+2.5
PGF	Pioggiola	12.18	104	ePn	Pn	07 35 14.1	+2.9

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*IDC **02** 07:33:54.7±1.1, 50°.03N×78°.72E, h0km, mb1 2.7/2, mb1mx2.7/62, mbtmp2.7/2, ML2.3/2, Error ellipse: s-maj=20.5km s-min=6.6km az=68.0*
*NNC **02** 07:33:54.5±0.4, 50°.01N×78°.70E, h0km, mb3.3, mpv2.9, Error ellipse: s-maj=5.2km s-min=2.1km az=69.0, Suspected Mining explosion.*
ISC 02 07:33:51.9±0.8, 49°.89N±0°.03×78°.88E±0°.05, h0km, n25, σ1ˢ.35/37, 7C-4D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR07	Kurchatov Arra	0.73	342	P	Pg	07 34 06.0	+0.1
KUR07				S	Sg	07 34 14.9	-0.5
KUR14	Kurchatov Arra	0.75	346	P	Pg	07 34 06.3	+0.1
KUR14				S	Sg	07 34 15.0	-1.0
KUR06	Kurchatov Arra	0.75	343	P	Pg	07 34 06.2	0.0
KUR06				S	Sg	07 34 16.1	+0.1
KUR15	Kurchatov Arra	0.76	345	P	Pg	07 34 06.4	0.0
KUR15				S	Sg	07 34 15.2	-1.0
KURBB	Kurchatov Arra	0.77	343	Pg	Pg	07 34 06.3	-0.2
	1.8nm,0.3s,baz=168,slow=18,SNR=138						
KURBB				Lg	Lg	07 34 14.9	
	3.2nm,0.3s,baz=170,slow=31,SNR=10						
KURBB	Kurchatov Arra	0.77	343	⇑P	Pg	07 34 06.5	-0.1
	11nm,0.3s						
KURBB				⇑S	Sg	07 34 15.8	-0.7
	66nm,0.4s						
KUR16	Kurchatov Arra	0.78	342	P	Pg	07 34 06.6	-0.2
KUR16				S	Sg	07 34 16.4	-0.5
KUR05	Kurchatov Arra	0.79	344	P	Pg	07 34 06.8	-0.1
KUR05				S	Sg	07 34 16.1	-1.0
KUR17	Kurchatov Arra	0.79	341	P	Pg	07 34 07.0	0.0
KUR17				S	Sg	07 34 16.8	-0.4
KUR04	Kurchatov Arra	0.80	345	P	Pg	07 34 07.3	0.0
KUR04				S	Sg	07 34 17.8	+0.1
KURK	Kurchatov	0.84	349	⇓P	Pg	07 34 07.8	-0.2
	3.8nm,0.3s						
KURK				⇓S	Sg	07 34 18.3	-0.7
	16nm,0.5s						
SEM	Semipalatinsk	1.03	59	P	Pn	07 34 14.3	+0.6
	4.3nm,0.1s						
SEM				S	Sn	07 34 29.7	+0.8
	27nm,0.2s						
MAKZ	Makanchi	3.71	145	⇓Pn	Pb	07 34 56.8	-1.5
	0.9nm,0.9s						
MAKZ				⇑Pg	Pg	07 35 03.8	+0.9
	1.6nm,0.8s						
MAKZ				⇑Lg	Lg	07 35 54.2	
	2.9nm,0.5s						
MK31	Makanchi Array	3.84	142	⇑Pn	Pb	07 34 58.7	-1.9
	baz=333,slow=12,SNR=13						
MK31				⇓Pg	Pg	07 35 06.4	+0.9
	0.1nm,0.2s,baz=335,slow=16,SNR=10						
MK31				⇑Sn	Sb	07 35 47.7	+0.1
	2.1nm,0.5s						
MK31				⇑Lg	Lg	07 35 58.1	
	3.4nm,0.4s,baz=329,slow=27						
MKAR	Makanchi Array	3.84	142	Pn	Pb	07 34 58.8	-1.8
	0.2nm,0.3s,baz=321,slow=10,SNR=12						
MKAR				Pg	Pg	07 35 04.1	-1.4
	0.5nm,0.3s,baz=327,slow=16,SNR=12						
MKAR				Lg	Lg	07 35 59.1	
	0.6nm,0.3s,baz=325,slow=26,SNR=4.3						
BRZS	Berezniki	4.00	274	Pg	Pb	07 35 04.6	+1.3
	1.9nm,0.5s						
BRZS				Lg	Lg	07 35 55.9	
	5.5nm,0.6s						
KAPS	Kapalarasan	4.62	176	Pg	Pg	07 35 21.7	+1.4
KAPS				Lg	Lg	07 36 24.6	
ZSN	Zaisan	4.66	119	Pg	Pg	07 35 20.6	-0.5
	4.6nm,0.5s						
ZALV	Zalesovo Beam	5.48	40	Pn	Pn	07 35 18.8	+4.1
	0.6nm,0.3s,baz=233,slow=15,SNR=3.5						
I46RU	ZALESOVO INFRA	5.48	40	i		08 07 50.0	
	baz=225,slow=328,SNR=2.6						
DJR	Jarkent	5.59	173	Pg	Pg	07 35 39.7	+0.7
	2.2nm,0.6s						
DJR				Lg	Lg	07 36 55.4	
	2.5nm,0.7s						
ARXS	Arharly	5.72	188	Lg	Lg	07 36 56.4	
BVAR	Borovoye Array	6.16	304	Sn	Sn	07 36 30.5	-4.7
	0.2nm,0.3s,baz=93,slow=26,SNR=1.8						
BVAR				Lg	Lg	07 37 02.6	
	0.4nm,0.3s,baz=114,slow=25,SNR=2.3						
KTBS	Karatobe	6.36	195	Pg	Pg	07 35 53.5	-0.1
KTBS				Lg	Lg	07 37 19.4	
DGS	Degeres	6.98	199	Lg	Lg	07 37 34.2	

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*KRNET **02** 07:43:22.4±0.1, 42°.43N×78°.09E, h35km, mb2.0*
*NNC **02** 07:43:27.5±1.6, 41°.82N×78°.26E, h0km, mb3.0, mpv2.9, Error ellipse: s-maj=11.4km s-min=6.3km az=165.0, Suspected Mining explosion.*
ISC 02 07:43:25.0±2.6, 41°.8N±0°.1×78°.25E±0°.06, h0km, n14, σ0ˢ.90/18, 8C-2D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRZ	Przheval'sk	0.72	9	⇑iP	Pg	07 43 36.7	-2.1
	baz=72						
PRZ				⇑iS	Sg	07 43 47.4	-0.8
	baz=72						
KDJ	Kajisay	0.88	295	⇑iP	Pg	07 43 40.3	-1.5
	baz=46						
KDJ				⇑iS	Sg	07 43 53.3	+0.1
	baz=46						
ANVS	Anan'yevo	1.10	337	⇓iP	Pg	07 43 38.2	-7.9
	baz=19						
ANVS				⇓iS	Sg	07 43 49.6	-11
	baz=19						
SATY	Saty	1.29	5	P	Pb	07 43 50.1	-0.2
	1.3nm,0.2s						
SATY				S	Sn	07 44 08.7	+0.1
	4.7nm,0.2s						
KOTS	Kotyrbulak	1.69	330	P	Pb	07 43 56.7	-0.3
	4.2nm,0.2s						
KOTS				S	Sg	07 44 19.9	+0.6
	3.5nm,0.3s						
IZV	Izvestkoviy	1.75	317	P	Pb	07 43 58.2	+0.1
	2.1nm,0.1s						
IZV				S	Sg	07 44 22.4	+1.1
	3.3nm,0.1s						
PDGK	Podgornoye	1.81	30	Pg	Pg	07 43 59.9	+0.2
	0.9nm,0.4s						
PDGK				Lg	Lg	07 44 25.3	
	1.2nm,0.4s						
TKM2	Tokmak 2	2.28	301	⇑Pn	Pb	07 44 07.2	0.0
	1.0nm,0.5s						
TKM2				⇑Sn	Sb	07 44 37.6	+1.6
	1.2nm,0.3s						
CHKK	Chushkaly	2.28	336	Pg	Pb	07 44 07.6	+0.6
	3.3nm,0.2s						
CHKK				Lg	Lg	07 44 38.8	
	7.9nm,0.5s						
KTMS	Ketmen	2.28	42	Pg	Pg	07 44 08.6	-0.2
	1.1nm,0.2s						
KTMS				Lg	Lg	07 44 40.6	
	1.6nm,0.3s						
DGS	Degeres	2.35	310	Pg	Pb	07 44 08.4	+0.1
	2.1nm,0.2s						
DGS				Lg	Lg	07 44 40.1	
	3.5nm,0.5s						
ARXS	Arharly	2.46	353	Pg	Pb	07 44 10.2	0.0
	5.3nm,0.2s						
ARXS				Lg	Lg	07 44 43.2	
	3.9nm,0.8s						
KUU	Kurty	2.55	327	Pg	Pb	07 44 11.9	+0.4
	3.2nm,0.1s						
KUU				Lg	Lg	07 44 45.9	
	4.2nm,0.5s						
ARLS	Aral	2.94	273	⇑iP	Pn	07 44 07.1	-6.0
	baz=60						
ARLS				⇑iS	Sn	07 44 39.7	-9.5
	baz=60						

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*IDC **02** 07:47:25.6±0.5, 13°.95N×124°.55E, h0km, mb4.4/26, mb1 4.5/28, mb1mx4.4/48, mbtmp4.4/28, ML4.3/1, MS3.8/17, Ms1 3.8/17, ms1mx3.6/49, Error ellipse: s-maj=21.4km s-min=11.3km az=71.0*
*MAN **02** 07:47:26.7, 14°.13N×124°.57E, h3km, mb5.1, ML4.1, MS4.2 MAN INTENSITY II - SAN JOSE.*
*NEIC **02** 07:47:27.0±1.5, 13°.87N±0°.09×124°.5E±0°.1, h10km±1km, mb4.8/59, Error ellipse: s-maj=20.6km s-min=13.5km az=70.0*
*BJI **02** 07:47:27.7±0.0, 13°.44N×124°.33E, h35km, mB5.0/35, mb4.5/51, Ms4.3/25, Ms7 4.1/22*
*DJA **02** 07:47:33.2±0.9, 14°N±7°×12°4E±°, h68km±9km, M5.0/16, mB5.4/5, mb4.7/16, MLv5.2/1, Mw(mB)4.8/5*
ISC 02 07:47:26.8±0.3, 13°.90N±0°.03×124°.56E±0°.04, h10km, n205, σ1ˢ.80/211, mb4.7/92, MS3.8/17, 5C-5D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PVCP	Virac	0.50	233	eP	Pn	07 47 39.7	-0.3
PVCP				eS	Sb	07 47 49.9	+4.8
GQP	Guinayangan	2.05	270	⇓eP	Pb	07 48 04.1	-0.1
GQP				eS	Sg	07 48 34.8	+1.9
POLP	Polilio Island	2.67	288	eP	Pn	07 48 10.6	+0.7
POLP				eS	Sg	07 48 52.2	-0.5
BOAC	Boac	2.68	261	eP	Pb	07 48 12.6	-2.3
BOAC				eS	Sg	07 48 52.5	-0.4
LQP	Lukban	2.94	274	⇓eP	Pb	07 48 17.1	-2.4
QVP	Quezon City--P	3.52	282	eP	Pn	07 48 22.5	+0.9
QVP				eS	Sb	07 49 12.6	+0.4
TGY	Tagaytay City	3.52	274	Pn	Pn	07 48 25.2	+3.5
	107nm,0.3s,baz=149,slow=3.4,SNR=12						
TGY				Lg	Lg	07 49 19.7	
	72nm,0.3s,baz=341,slow=16,SNR=3.8						
TGY				LR	LR	07 49 53.4	
	comp=Z,3μm,18.6s,baz=46,slow=42						
TGY	Tagaytay City	3.52	274	eP	Pb	07 48 27.7	-1.7
TGY				i S	Sg	07 49 19.4	-0.7
PGP	Puerto Galera	3.53	264	⇑eP	Pn	07 48 23.7	+2.0
PGP				i S	Sb	07 49 13.2	+0.9
LLP	Lapu-Lapu	3.61	189	⇑eP	Pb	07 48 28.0	-2.8
LLP				eS	Sb	07 49 14.8	+0.1
MSLP	Maasin	3.76	176	eP	Pb	07 48 32.1	-1.1
MSLP				eS	Sg	07 49 26.5	-1.1
GUIM	Jordan	3.78	211	eP	Pn	07 48 28.5	+3.3
GUIM				eS	Sb	07 49 17.5	-2.2
CAUP	Cauayan	4.01	319	eP	Pn	07 48 26.8	-1.6
GLSP	General Luna,	4.37	159	eP	Pb	07 48 45.0	+1.2
GLSP				eS	Sg	07 49 44.2	-3.1
CNOP	Candoni, Negro	4.46	205	eP	Pn	07 48 38.5	+3.9
CNOP				eS	Sb	07 49 39.4	+0.1
SZP	Santa	5.37	313	Pn	Pn	07 48 47.0	+0.1
DAV	Davao City (W)	6.86	172	LR	LR	07 52 29.8	
	comp=Z,2μm,18.5s,baz=330,slow=44						
KCP	Kidapawan	6.87	176	⇓eP	Pb	07 49 23.5	-2.9
YULB	Yu-li	9.93	342	Pn	Pn	07 49 51.1	+1.4
JOW	Kunigami	13.33	15	LR	LR	07 55 01.5	
	comp=Z,416nm,20.4s,baz=154,slow=34						
MRSI	Marisa	13.59	191	P	P	07 50 44.9	-3.9
	30nm,0.7s						
LUWI	Luwuk	14.95	187	P	P	07 51 03.6	-0.4
	5μm55nm,0.8s						
APSI	Ampana	15.00	191	P	P	07 51 06.2	+1.7
	690nm53nm,0.7s						
QIZ	Qiongzhong	15.01	292	P	Pn	07 50 58.6	-0.5
QIZ				S	Sn	07 53 40.3	-5.2
QIZ				LR	LR		
	comp=N,560nm,23.5s						
QIZ				LR	LR		
	comp=E,780nm,20.1s						
QIZ				LR	LR		
	comp=Z,720nm,19.1s						
SIJI	Sorong	16.11	155	Pn	Pn	07 51 15.6	+2.0
	1.2nm,0.3s,baz=180,slow=20,SNR=2.0						
NLAI	Namlea	17.21	171	P	P	07 51 32.5	+3.4
	2μm28nm,0.9s						
TTSI	Tana Toraja	17.48	196	P	P	07 51 33.1	+1.0
	51nm,0.8s						
SPSI	Sidrap Palu	18.38	195	P	P	07 51 45.0	+3.1
	34nm,0.9s						
BNSI	Bone	18.71	194	P	Pn	07 51 48.8	+2.8
	53nm,1.1s						
NJ2	Nanjing	18.81	345	eP	Pn	07 51 48.7	+1.7
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
WHN	Wuhan	19.05	332	⇓P	Pn	07 52 04.0	+14
KAPI	Kappang	19.39	195	P	Pn	07 51 55.4	+1.2
	baz=107,slow=13,SNR=1.8						
KAPI				LR	LR	07 59 53.5	
	comp=Z,205nm,19.8s,baz=16,slow=38						
GUMO	Guam	19.73	88	LR	LR	07 59 11.4	
	comp=Z,329nm,18.7s,baz=296,slow=36						
BBKI	Banjar Baru	19.76	210	P	P	07 51 58.0	+0.8
	27nm,0.8s						
JNU	Nakatsue	19.98	16	LR	LR	07 59 22.2	
	comp=Z,151nm,18.3s,baz=182,slow=36						
GYA	Guiyang	20.90	309	⇓P	Pn	07 52 11.7	-0.4
GYA				pP	sP	07 52 22.6	+9.3
GYA				S	S	07 56 02.3	-0.6
GYA				sS	pS	07 56 16.1	+4.6
GYA				pmax	pmax		
	comp=Z,13nm,1.5s						
GYA				pmax	pmax		
	comp=Z,180nm,4.1s						
GYA				LR	LR		
	comp=N,510nm,16.5s						
GYA				LR	LR		
	comp=E,490nm,13.8s						

GYA				LR	LR		
	comp=Z,750nm,14.4s						
SLVN	Son La	21.01	293	P	P	07 52 10.7	-0.2
JCJ	Chichijima	21.05	49	LR	LR	08 00 12.4	
	comp=Z,173nm,18.1s,baz=312,slow=36						
ENH	Enshi	21.42	322	P	P	07 52 16.2	+1.1
ENH				IAmb	IAmb	07 52 33.2	
	comp=Z,26nm,0.9s						
CHAI	Chaiyaphum	21.91	278	P	P	07 52 24.7	+4.3
	comp=Z,34nm,1.0s						
EDFI	Ende, Flores	22.68	187	P	P	07 52 30.2	+1.4
	comp=Z,14nm,0.8s						
JAY	Jayapura	22.85	134	LR	LR	08 00 22.1	
	comp=Z,154nm,18.8s,baz=346,slow=34						
KMMI	Kalianget	23.32	207	P	P	07 52 38.5	+3.2
	comp=Z,178nm,1.0s						
KMI	Kunming	23.36	302	⇑P	P	07 52 37.3	+1.4
KMI				pP	sP	07 52 47.0	+7.3
KMI				sP	pP	07 52 51.6	+13
KMI				PP	PnPn	07 53 10.1	+8.1
KMI				S	S	07 56 41.9	-7.3
KMI				sS	sS	07 56 59.2	+5.0
KMI				pmax	pmax		
	comp=Z,22nm,1.1s						
KMI				pmax	pmax		
	comp=Z,150nm,3.5s						
KMI				LR	LR		
	comp=Z,370nm,14.8s						
KMI				LR	LR		
	comp=Z,390nm,19.5s						
KMI				LR	LR		
	comp=Z,550nm,17.6s						
KMI	Kunming	23.36	302	P	P	07 52 37.7	+1.7
KMI				IAmb	IAmb	07 52 39.2	
	comp=Z,34nm,1.2s						
UTTA	Uttaradit	23.41	283	P	P	07 52 38.0	+1.9
	comp=Z,16nm,0.8s						
SOEI	Soe	23.50	181	P	P	07 52 37.7	+0.5
SOEI				IAmb	IAmb	07 53 00.9	
	comp=Z,35nm,1.1s						
PLAI	Plampang	23.56	197	P	P	07 52 39.2	+1.5
	comp=Z,1μmcomp=Z,112nm,0.7s						
JHJ	Hachijo jima 2	23.63	33	LR	LR	08 00 25.1	
	comp=Z,307nm,21.9s,baz=222,slow=33						
KSAR	Wonju Array Be	23.63	7	P	P	07 52 38.0	-0.2
KSRS	Korea Array	23.65	7	P	P	07 52 39.0	+0.7
	comp=Z,1.0nm,0.5s,baz=188,slow=8.6,SNR=5.7						
KSRS				LR	LR	08 01 58.4	
	comp=Z,207nm,18.9s,baz=192,slow=37						
TWSI	Taliwang, Sumb	23.75	199	P	P	07 52 40.9	+1.4
	comp=Z,1μmcomp=Z,47nm,1.3s						
WSI	Waingapu	23.80	190	P	P	07 52 54.9	+15
BATI	Baumata	23.97	182	LR	LR	08 03 03.0	
	comp=Z,172nm,21.3s,baz=349,slow=39						
SUKH	Sukhothai	24.26	282	P	P	07 52 47.0	+2.7
	comp=Z,26nm,1.0s						
PAYA	Payao	24.26	286	P	P	07 52 44.0	-0.4
	comp=Z,4μmcomp=Z,384nm,0.9s						
LAMP	Lampang	24.36	284	P	P	07 52 52.2	+6.9
JAGI	Jajag, Banyuwa	24.51	206	P	P	07 52 46.4	-0.3
JAGI				IAmb	IAmb	07 52 59.6	
	comp=Z,42nm,1.2s						
JAGI	Jajag, Banyuwa	24.51	206	P	P	07 52 47.6	+1.0
	comp=Z,26nm,1.1s						
XAN	Xi'an	24.56	327	P	P	07 52 46.8	-0.2
XAN				pP	sP	07 52 53.4	+2.5
XAN				pmax	pmax		
	comp=Z,14nm,0.9s						
XAN				pmax	pmax		
	comp=Z,81nm,3.5s						
CM09	Chiang Mai Arr	24.96	284	P	P	07 52 51.0	+0.3
	comp=Z,160nmcomp=Z,22nm,0.8s						
CM04	Chiang Mai Arr	24.96	284	P	P	07 52 51.0	+0.2
	comp=Z,171nmcomp=Z,20nm,0.9s						
CM05	Chiang Mai Arr	25.00	284	P	P	07 52 52.0	+1.0
	comp=Z,112nmcomp=Z,13nm,1.1s						
CM02	Chiang Mai Arr	25.00	284	P	P	07 52 52.0	+1.0
	comp=Z,188nmcomp=Z,24nm,0.8s						
CM31	Chiang Mai Arr	25.01	284	P	P	07 52 53.3	+2.2
	comp=Z,527nm,0.6s						
CM31	Chiang Mai Arr	25.01	284	P	P	07 52 51.1	0.0
CM31				IAmb	IAmb	07 52 53.7	
	comp=Z,35nm,1.2s						
CMAR	Chiang Mai Arr	25.01	284	P	P	07 52 51.2	+0.1
	comp=Z,16nm,1.0s,baz=95,slow=7.6,SNR=40						
CMAR				PcP	PcP	07 56 27.6	+1.4
	comp=Z,1.3nm,0.3s,baz=48,slow=1.3,SNR=5.2						
CMAR				LR	LR	08 03 10.3	
	comp=Z,260nm,19.3s,baz=134,slow=38						
CMAR	Chiang Mai Arr	25.01	284	P	P	07 52 50.2	-1.0
CM13	Chiang Mai Arr	25.04	284	P	P	07 52 51.0	-0.4
	comp=Z,210nmcomp=Z,21nm,1.0s						
CMMT	Chiang Mai	25.04	285	P	P	07 52 51.2	-0.3
	comp=Z,5.9nm,0.8s						
CHTO	Chiang Mai	25.05	285	P	P	07 52 50.6	-0.9
CD2	Chengdu	25.54	315	P	P	07 52 56.5	+0.6
CD2				S	S	07 57 22.6	-1.1
CD2				pmax	pmax		
	comp=Z,50nm,0.8s						
CD2				LR	LR		
	comp=Z,660nm,16.7s						
CD2				LR	LR		
	comp=Z,560nm,19.1s						
MJAR	Matsushiro Arr	25.64	26	LR	LR	08 02 10.7	
	comp=Z,251nm,19.1s,baz=225,slow=35						
MDSI	Maura Dua	27.25	229	P	P	07 53 11.5	0.0
MTN	Manton Dam	27.36	166	P	P	07 53 12.8	+0.5
PSI	Prapat	27.62	249	LR	LR	08 04 39.8	
	comp=Z,337nm,19.8s,baz=89,slow=37						
LZH	Lanzhou	28.87	324	⇑P	P	07 53 28.5	+2.6
LZH				pP	sP	07 53 36.8	+6.9
LZH				sP	pP	07 53 43.5	+15
LZH				S	S	07 58 18.6	+2.3
LZH				sS	sS	07 58 30.4	+9.1
LZH				pmax	pmax		
	comp=Z,13nm,1.0s						
LZH				pmax	pmax		
	comp=Z,82nm,8.1s						
LZH				LR	LR		
	comp=Z,370nm,16.8s						
LZH				LR	LR		
	comp=Z,330nm,15.2s						
HHC	Hu-ho-hao-te	29.15	339	*e*P	P	07 53 30.6	+2.3
HHC				pmax	pmax		
	comp=Z,8.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,140nm,5.3s						
CN2	Changchun	29.81	1	*e*P	P	07 53 28.1	-5.8
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
USA0B	Ussuriysk Arra	30.86	10	P	P	07 53 43.4	+0.3
USA0B				IAmb	IAmb	07 53 51.9	
	comp=Z,15nm,0.9s						
USRK	Ussuriysk Ar.	30.86	10	P	P	07 53 43.8	+0.6
	comp=Z,4.0nm,0.8s,baz=189,slow=7.0,SNR=8.2						
USRK	Ussuriysk Ar.	30.86	10	P	P	07 53 44.2	+1.0
FITZ	Fitzroy Crossi	31.82	178	P	P	07 53 51.1	-0.8
SHL	Shillong	32.78	296	P	P	07 54 00.4	-0.2
GTA	Gaotai	33.47	324	⇑P	P	07 54 06.7	+0.3
GTA				pP	sP	07 54 16.3	+5.9
GTA				sP	pP	07 54 20.5	+11
GTA				pmax	pmax		
	comp=Z,2.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,77nm,5.1s						
GTA				LR	LR		
	comp=Z,150nm,15.6s						
GTA				LR	LR		
	comp=Z,180nm,15.3s						
GTA				LR	LR		
	comp=Z,190nm,16.4s						
LSA	Lhasa	34.62	303	P	P	07 54 17.3	+0.4
LSA				pmax	pmax		
	comp=Z,54nm,0.9s						
LSA	Lhasa	34.62	303	P	P	07 54 17.5	+0.6
WB0	Warramunga Arr	34.83	164	P	P	07 54 17.2	-0.9
WRA	Warramunga Arr	34.98	164	P	P	07 54 18.8	-0.7
	comp=Z,1.9nm,0.4s,baz=342,slow=9.2,SNR=26						
WRA				PcP	PcP	07 56 52.0	0.0
	comp=Z,1.2nm,0.6s,baz=342,slow=3.0,SNR=1.4						
WRA				S	S	07 59 44.2	-7.3
	comp=Z,1.8nm,1.0s,baz=340,slow=14,SNR=7.2						
WRA	Warramunga Arr	34.98	164	P	P	07 54 19.0	-0.5
WB2	Warramunga Arr	34.98	164	P	P	07 54 19.5	0.0
WB2				IAmb	IAmb	07 54 32.3	
	comp=Z,18nm,1.5s						
WR0	Warramunga Arr	35.05	164	P	P	07 54 20.4	+0.3
PSA00	Pilbara Seismi	35.56	188	P	P	07 54 23.5	-0.9
KLR	Kul'dur	35.72	8	P	P	07 54 24.9	-0.7
	comp=Z,1.5nm,0.6s,baz=193,slow=4.0,SNR=6.2						
TAPN	Taplejung	36.84	297	*e*P	P	07 54 36.7	+0.9
	comp=Z,17nm,0.6s						
ULN	Ulaanbaatar	36.86	340	P	P	07 54 35.9	+0.4
ULN				IAmb	IAmb	07 54 47.0	
	comp=Z,22nm,1.2s						
SONM	Songino Array	37.05	340	P	P	07 54 36.1	-1.0
	comp=Z,2.2nm,0.6s,baz=156,slow=9.0,SNR=15						
SONM	Songino Array	37.05	340	P	P	07 54 37.0	-0.1
AS31	Alice Springs	38.44	166	P	P	07 54 49.4	+0.4
ASAR	Alice Springs	38.44	166	P	P	07 54 49.5	+0.6
	comp=Z,5.8nm,0.4s,baz=348,slow=7.3,SNR=107						
ASAR				PcP	PcP	07 57 02.2	-0.1
	comp=Z,1.1nm,0.5s,baz=347,slow=3.6,SNR=2.9						
ASAR				S	S	08 00 39.4	-4.9
	comp=Z,1.9nm,0.8s,baz=353,slow=20,SNR=9.7						
ASAR	Alice Springs	38.44	166	P	P	07 54 48.9	0.0
GUN	Gumba	38.55	297	*e*P	P	07 54 50.8	+0.4
	comp=Z,64nm,0.8s						
PKI	Pulchoki	38.88	297	*e*P	P	07 54 52.9	-0.2
	comp=Z,41nm,1.1s						
PKIN	Phulchoki	38.90	297	*e*P	P	07 54 52.7	-0.5
	comp=Z,29nm,1.1s						
DMN	Daman	39.16	297	*e*P	P	07 54 55.3	0.0
	comp=Z,65nm,1.1s						
GKN	Gorkha	39.65	297	*e*P	P	07 54 59.1	-0.2
	comp=Z,76nm,1.1s						
DANN	Dangsing	40.48	297	*e*P	P	07 55 06.2	-0.1
	comp=Z,54nm,1.0s						
KOLN	Koldanda	40.50	297	*e*P	P	07 55 06.5	+0.1
	comp=Z,71nm,1.2s						
H11S3	WAKE ISLAND Hy	40.65	78	T	T	08 38 36.5	
	baz=270,slow=75,SNR=336						
H11S1	WAKE ISLAND Hy	40.66	78	T	T	08 38 27.5	
	baz=270,slow=75,SNR=213						
H11S2	WAKE ISLAND Hy	40.66	78	T	T	08 38 31.2	
	baz=270,slow=75,SNR=271						
H11N1	WAKE ISLAND Hy	40.85	76	T	T	08 38 44.6	
	baz=267,slow=74,SNR=491						
H11N2	WAKE ISLAND Hy	40.86	76	T	T	08 38 49.2	
	baz=267,slow=74,SNR=324						
H11N3	WAKE ISLAND Hy	40.87	76	T	T	08 38 46.1	
	baz=267,slow=74,SNR=459						
WMQ	Urumqi	43.36	321	*e*P	P	07 55 31.1	+1.7
WMQ				pP	sP	07 55 39.2	+5.8
WMQ				sP	pP	07 55 46.5	+14
WMQ				pmax	pmax		
	comp=Z,16nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,200nm,4.9s						
WMQ				LR	LR		
	comp=Z,370nm,17.1s						
WMQ				LR	LR		
	comp=Z,330nm,17.9s						
WMQ				LR	LR		
	comp=Z,140nm,17.1s						
MORW	Morawa	43.50	191	P	P	07 55 30.1	-0.4
MORW				IAmb	IAmb	07 55 54.3	
	comp=Z,29nm,1.4s						
FORT	Forrest	44.55	176	P	P	07 55 37.9	-1.0
EIDS	Eidsvold	46.82	146	P	P	07 55 58.6	+1.6
EIDS				IAmb	IAmb	07 56 05.4	
	comp=Z,9.6nm,0.8s						
ZSN	Zaisan	46.96	324	*e*P	P	07 55 58.0	0.0
	baz=323						
NWAO	Narrogin (SRO)	47.09	188	P	P	07 55 59.4	+0.4
PETK	Petropavlovsk-	47.10	27	P	P	07 55 58.7	-0.2
	comp=Z,5.7nm,1.0s,baz=130,slow=4.6,SNR=3.6						
PETK	Petropavlovsk-	47.10	27	P	P	07 55 59.8	+0.9
BBOO	Buckleboo	47.73	167	P	P	07 56 04.4	+0.4
MK31	Makanchi Array	48.15	322	P	P	07 56 07.0	-0.2
MK31				IAmb	IAmb	07 56 16.4	
	comp=Z,5.3nm,0.8s						
MKAR	Makanchi Array	48.15	322	P	P	07 56 07.7	+0.5
	comp=Z,5.2nm,0.9s,baz=116,slow=8.4,SNR=30						
MKAR	Makanchi Array	48.15	322	P	P	07 56 07.2	0.0
YAK	Yakutsk	48.20	3	LR	LR	08 17 13.5	
	comp=Z,79nm,20.4s,baz=80,slow=37						
MAKZ	Makanchi	48.35	322	P	P	07 56 09.7	+1.0
STKA	Stephens Creek	48.36	161	P	P	07 56 10.0	+1.1
	comp=Z,13nm,0.8s,baz=353,slow=6.8,SNR=17						
STKA	Stephens Creek	48.36	161	P	P	07 56 10.4	+1.5
SHLS	Shalkode	48.37	316	*e*P	P	07 56 07.4	-1.6
	comp=Z,5.1nm,0.8s,baz=316						
KPKS	Kokpek	49.01	316	*e*P	P	07 56 14.0	0.0
	comp=Z,4.0nm,0.9s,baz=316						
SATY	Saty	49.05	316	*e*P	P	07 56 14.8	+0.5
	comp=Z,3.5nm,0.8s,baz=315						
KSH	Kashi	49.60	310	P	P	07 56 20.8	+2.2
KSH				pP	sP	07 56 27.0	+4.4
KSH				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KSH				pmax	pmax		
	comp=Z,100nm,5.3s						
KSH				LR	LR		
	comp=Z,100nm,5.7s						
KSH				LR	LR		
	comp=Z,140nm,7.4s						
TDK	Taldyqorghan	49.80	318	*e*P	P	07 56 20.3	+0.4
	comp=Z,8.6nm,0.6s,baz=318						
MDOK	Medeo	50.01	315	*e*P	P	07 56 22.4	+0.7
	baz=315						
TNSS	Tian-Shan	50.03	315	*e*P	P	07 56 22.9	+0.7
	baz=315						
AAA	Alma-Ata	50.12	315	*e*P	P	07 56 22.6	+0.2
	baz=315						
CHKK	Chushkaly	50.30	316	*e*P	P	07 56 23.4	-0.3
	baz=316						
NIL	Nilore	50.35	302	P	P	07 56 24.4	+0.1
NIL				IAmb	IAmb	07 56 27.4	
	comp=Z,15nm,0.9s						
ZALV	Zalesovo Beam	50.66	331	P	P	07 56 26.0	-0.2
	comp=Z,2.6nm,0.7s,baz=114,slow=7.2,SNR=4.6						
ZALV				LR	LR	08 18 17.4	
	comp=Z,40nm,19.2s,baz=92,slow=37						
ZALV	Zalesovo Beam	50.66	331	P	P	07 56 25.5	-0.7
KUU	Kurty	50.75	316	*e*P	P	07 56 27.2	+0.1
	comp=Z,26nm,1.3s,baz=316						
AAK	Ala-Archa	51.60	314	P	P	07 56 35.0	+1.3
	comp=Z,1.2nm,0.6s,baz=143,slow=10,SNR=2.8						
KURK	Kurchatov	52.15	325	P	P	07 56 36.5	-0.9
KURK				IAmb	IAmb	07 56 46.2	
	comp=Z,13nm,0.8s						
KURBB	Kurchatov Arra	52.16	325	P	P	07 56 37.8	+0.3
	comp=Z,6.7nm,0.7s,baz=121,slow=7.9,SNR=40						
BTLS	Baital	52.69	317	*e*P	P	07 56 41.5	-0.1
	comp=Z,4.9nm,1.1s,baz=316						
KBL	Kabul	53.94	303	P	P	07 56 51.7	+0.5
KBL				IAmb	IAmb	07 56 53.6	
	comp=Z,12nm,1.4s						
KK31	Karatay Array	54.54	313	P	P	07 56 55.3	+0.1
KK31				IAmb	IAmb	07 56 56.8	
	comp=Z,11nm,0.9s						
KKAR	Karatay Array	54.54	313	P	P	07 56 55.4	+0.2
KKAR				IAmb	IAmb	07 56 56.8	
	comp=Z,11nm,0.9s						
IUG	Iuzhnay	54.64	312	*e*P	P	07 56 56.7	+0.6
	comp=Z,5.6nm,1.1s,baz=312						
TOO	Toolangi	54.85	160	P	P	07 56 59.1	+1.7
BRZS	Berezniki	55.30	322	*e*P	P	07 57 00.8	+0.2
	comp=Z,5.7nm,1.0s,baz=322						
BVAR	Borovoye Array	57.75	325	P	P	07 57 18.6	+0.6
	comp=Z,1.6nm,0.8s,baz=229,slow=31,SNR=14						
TIXI	Tiksi	57.78	2	P	P	07 57 17.5	-0.3
TIXI				IAmb	IAmb	07 57 27.1	
	comp=Z,15nm,1.1s						
BRVK	Borovoye	57.82	325	P	P	07 57 18.3	-0.1
NRIK	Noril'sk	60.10	346	P	P	07 57 34.1	+0.2
	comp=Z,5.6nm,1.0s,baz=124,slow=8.8,SNR=9.2						
NRIK	Noril'sk	60.10	346	P	P	07 57 33.0	-1.0
NRIK				IAmb	IAmb	07 57 43.9	
	comp=Z,12nm,1.1s						
ABKAR	Akbulak array	63.06	318	P	P	07 57 54.5	+0.2
ABKAR				IAmb	IAmb	07 57 55.5	
	comp=Z,13nm,1.3s						
ABKAR	Akbulak array	63.06	318	P	P	07 57 54.3	0.0
GEYT	Alibeck	63.06	306	P	P	07 57 55.0	+0.4
	comp=Z,2.9nm,0.7s,baz=134,slow=4.2,SNR=4.9						
GEYT	Alibeck	63.06	306	P	P	07 57 55.0	+0.4
AKTO	Aktyubinsk	64.49	319	P	P	07 58 03.8	+0.1
	comp=Z,4.9nm,1.0s,baz=88,slow=5.8,SNR=10						
AKTO				LR	LR	08 27 34.5	
	comp=Z,72nm,20.0s,baz=79,slow=37						
ARU	Arti	65.30	326	P	P	07 58 08.9	+0.1
	comp=Z,2.1nm,0.2s,baz=113,slow=5.5,SNR=11						
ARU	Arti	65.30	326	P	P	07 58 08.5	-0.4
SOCY	Socotra	68.54	278	P	P	07 58 28.6	-1.8
KIRV	Kirov	70.50	328	P	P	07 58 41.6	+0.1
	comp=Z,13nm,0.5s,baz=180,slow=1.7,SNR=6.1						
BELG	Belogornoye	71.15	321	P	P	07 58 45.3	-0.3
	comp=Z,36nm,0.7s,baz=76,slow=2.4,SNR=5.6						
TTA	Tatalina	72.91	28	P	P	07 58 56.4	+0.3
IMAR	Indian Mountai	74.02	25	P	P	07 59 03.5	+1.0
KBZ	Khabaz	74.54	312	P	P	07 59 05.8	-0.1
	comp=Z,11nm,0.9s,baz=90,slow=6.1,SNR=12						
KIV	Kislovodsk	74.68	312	P	P	07 59 07.1	+0.2
RAYN	Ar Rayn	74.70	291	P	P	07 59 06.5	-0.8
RAYN				IAmb	IAmb	07 59 08.4	
	comp=Z,17nm,1.2s						
BPAW	Bear Paw Mtn.	75.18	27	P	P	07 59 09.8	+0.5
SUA	Susitna One	75.37	30	P	P	07 59 10.0	-0.6
SUA				IAmb	IAmb	07 59 19.6	
	comp=Z,7.7nm,0.9s						
TRF	Thorofare Moun	75.51	28	P	P	07 59 12.4	+1.0
TRF				IAmb	IAmb	07 59 35.9	
	comp=Z,7.1nm,1.0s						
KLMR	Klimovskoe	75.57	330	*e*P	P	07 59 09.9	-1.6
KLMR				AMP		07 59 12.2	
	comp=Z,26nm,1.2s						
TOLK	Toolik Lake Re	75.65	22	P	P	07 59 13.3	+1.3
TOLK				IAmb	IAmb	07 59 22.9	
	comp=Z,7.0nm,1.1s						
I23K	Minto, Yukon-K	75.85	26	P	P	07 59 13.8	+0.7
I23K				IAmb	IAmb	07 59 22.8	
	comp=Z,7.8nm,1.0s						
RND	Reindeer	76.16	28	P	P	07 59 14.6	-0.4
RND				IAmb	IAmb	07 59 23.5	
	comp=Z,12nm,1.0s						
ILAR	Eielson Array	76.93	26	P	P	07 59 19.4	+0.2
	comp=Z,0.7nm,0.8s,baz=250,slow=5.8,SNR=6.7						
ILAR	Eielson Array	76.93	26	P	P	07 59 20.4	+1.2
BMAR	Burnt Mountain	77.61	23	P	P	07 59 24.9	+1.9
ARCES	ARCESS Array B	80.23	339	P	P	07 59 37.2	-0.2
	comp=Z,4.0nm,0.9s,baz=79,slow=4.9,SNR=1.7						
ARCES	ARCESS Array B	80.23	339	P	P	07 59 37.8	+0.5
DAWY	Dawson	80.25	26	P	P	07 59 37.3	-0.3
INK	Inuvik	81.54	22	P	P	07 59 44.0	-0.3
FINES	FINESS Array B	81.92	331	P	P	07 59 46.2	-0.3
	comp=Z,5.5nm,0.9s,baz=69,slow=7.6,SNR=3.7						
BRTR	Keskin Array B	81.96	309	P	P	07 59 46.5	-0.8
	comp=Z,0.9nm,0.8s,baz=52,slow=7.9,SNR=3.0						
AKASG	Malin Array Be	82.72	320	P	P	07 59 49.8	-1.0
	comp=Z,4.2nm,0.8s,baz=61,slow=5.1,SNR=9.6						
AKASG	Malin Array Be	82.72	320	P	P	07 59 50.0	-0.9
AKBB	Malin Array Si	82.72	320	P	P	07 59 49.7	-1.1
NACGM	Naroch	83.17	325	*i* P	P	07 59 53.3	+0.2
NACGM				*i* P	P	07 59 53.3	+0.2
NACGM				*i* P	P	07 59 53.3	+0.2
NACGM				*i* PP	PP	08 02 58.9	-5.1
NACGM				*i* PPP	PPP	08 04 49.2	
NACGM				*i* S	S	08 10 02.0	-11
NACGM				*i* SS	SS	08 15 16.2	-21
NACGM				*i* SSS	SSS	08 18 40.7	
NACGM				*i* LR	LR	08 38 41.8	
BURAR	Bucovina Array	86.04	318	P	P	08 00 07.9	-0.1
BUR08	Bucovina Ar. S	86.04	318	P	P	08 00 07.8	-0.2
MLR	Muntele Rosu	86.14	316	P	P	08 00 08.2	-0.3
MLR				IAmb	IAmb	08 00 10.8	
	comp=Z,8.9nm,1.0s						
KOLS	Kolonicke sedl	87.53	320	*e*P	P	08 00 18.0	+2.9
CRVS	Cervenica-Dubn	88.04	320	*e*P	P	08 00 18.4	+0.9
RES	Resolute Bay	88.23	10	P	P	08 00 17.4	-0.4
RES				IAmb	IAmb	08 00 28.5	
	comp=Z,4.8nm,0.9s						
YKA	Yellowknife Ar	91.13	24	P	P	08 00 32.7	+1.1
	comp=Z,0.6nm,0.9s,baz=301,slow=4.0,SNR=6.2						
NVAR	Mina Array Bea	101.54	46	P	Pdif	08 01 18.5	-1.3
	comp=Z,0.1nm,0.3s,baz=289,slow=5.6,SNR=2.1						
TORD	Torodi Ar. Bea	117.35	293	PKP	PKPdf	08 06 13.1	-0.6
	comp=Z,1.4nm,0.8s,baz=50,slow=2.4,SNR=5.3						
TORD				PP	PP	08 07 18.6	-5.9
	comp=Z,1.6nm,1.0s,baz=75,slow=6.8,SNR=3.8						
TORD	Torodi Ar. Bea	117.35	293		PKPdf	08 06 12.6	-1.0
PLCA	Paso Flores	150.18	157	PKPbc	PKPbc	08 07 19.3	+0.9
	comp=Z,5.8nm,1.0s,baz=172,slow=3.0,SNR=7.3						
PLCA	Paso Flores	150.18	157		PKPbc	08 07 19.1	+0.6

IDC 02 07:50:29.7±2.5**, 54°.07N**×**86°.51E, h0^{km}, mb1 3.1**/2**, mb1mx2.9**/53**, mbtmp3.1**/2**, ML2.9**/2**, Error ellipse: s-maj=20.5km s-min=12.2km az=60.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.00	264	*i*		07 56 10.0	
	baz=83,slow=333,SNR=3.0						
ZALV	Zalesovo Beam	1.00	264	Pg	Pg	07 50 47.5	-1.4
	1.4nm,0.3s,baz=81,slow=17,SNR=11						
ZALV				Lg	Lg	07 51 03.3	
	2.9nm,0.3s,baz=81,slow=29,SNR=9.4						
ZALV				Rg	Rg	07 51 09.1	
	10nm,0.6s,baz=80,slow=26,SNR=8.6						
KURBB	Kurchatov Arra	5.98	238	Pn	Pn	07 52 00.8	+1.3
	0.2nm,0.3s,baz=56,slow=14,SNR=9.6						
KURBB				Lg	Lg	07 53 39.1	
	0.0nm,0.3s,baz=56,slow=34,SNR=2.1						
MKAR	Makanchi Array	7.77	202	Pn	Pn	07 52 24.8	+0.8
	0.3nm,0.3s,baz=26,slow=14,SNR=12						
MKAR				Sn	Sn	07 53 52.7	+0.1
	0.1nm,0.3s,baz=22,slow=27,SNR=5.2						
MKAR				Lg	Lg	07 54 34.7	
	0.1nm,0.3s,baz=23,slow=27,SNR=5.6						

IDC 02 08:00:13.7±2.6**, 54°.33N**×**86°.18E, h0^{km}, mb1 3.2**/2**, mb1mx3.0**/42**, mbtmp3.2**/2**, ML3.1**/2**, Error ellipse: s-maj=19.8km s-min=11.6km az=53.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	0.89	245	*i*		08 05 03.3	
	baz=65,slow=342,SNR=1.9						
ZALV	Zalesovo Beam	0.89	245	Pg	Pg	08 00 29.2	-1.4
	1.8nm,0.3s,baz=68,slow=17,SNR=18						
ZALV				Lg	Lg	08 00 43.6	
	7.1nm,0.3s,baz=66,slow=28,SNR=16						
KURBB	Kurchatov Arra	5.97	235	Pn	Pn	08 01 43.8	+0.6
	0.2nm,0.3s,baz=52,slow=13,SNR=4.2						
MKAR	Makanchi Array	7.94	200	Pn	Pn	08 02 11.2	+0.9
	0.7nm,0.3s,baz=22,slow=11,SNR=20						
MKAR				Sn	Sn	08 03 41.9	+1.1
	0.1nm,0.3s,baz=12,slow=21,SNR=3.6						
MKAR				Lg	Lg	08 04 25.5	
	baz=99,slow=40,SNR=2.4						

IDC 02 08:15:41.1±3.0**, 54°.33N**×**86°.05E, h0^{km}, mb1 2.7**/1**, mb1mx2.7**/46**, mbtmp2.7**/1**, ML2.9**/1**, Error ellipse: s-maj=20.6km s-min=11.7km az=50.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	0.82	243	*i*		08 20 25.9	
	baz=61,slow=341,SNR=2.8						
ZALV	Zalesovo Beam	0.82	243	Pg	Pg	08 15 55.6	-1.1
	0.5nm,0.3s,baz=60,slow=17,SNR=16						
ZALV				Lg	Lg	08 16 09.0	
	3.4nm,0.3s,baz=66,slow=27,SNR=21						
ZALV				Rg	Rg	08 16 12.0	
	4.7nm,0.3s,baz=63,slow=33,SNR=22						
MKAR	Makanchi Array	7.92	199	Pn	Pn	08 17 38.8	+1.4
	0.2nm,0.3s,baz=26,slow=14,SNR=7.9						

*IDC **02** 08:25:46.6±0.3, 1°.56S×145°.23E, h0^{km}, mb5.4/43, mb1 5.4/48, mb1mx5.4/49, mbtmp5.4/48, ML5.0/4, MS5.2/30, Ms1 5.2/30, ms1mx5.1/41, Error ellipse: s-maj=10.7km s-min=7.8km az=101.0*

*BJI **02** 08:25:47.2±0.0, 1°.51S×145°.85E, h32^{km}, mB5.7/73, mb5.3/87, Ms5.8/95, Ms7 5.4/89*

*NEIC **02** 08:25:48, 1°.52S×145°.22E, h23^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-0.12; $M_{\theta\theta}$-0.94; $M_{\phi\phi}$1.07; $M_{r\theta}$-0.11; $M_{\theta\phi}$0.40; $M_{\phi r}$0.13; Fault plane solution: $M_0$1.10000×10^{18} NP1:ϕ_s146.07000°,* *δ87.53000°,λ-170.61000°. NP2:ϕ_s55.67000°,δ80.62000°, λ-2.51000°. Principal axes: T 1.1516, Plg5.0000°, Azm281.0000°; N -0.1142, Plg80.0000°, Azm161.0000°; P -1.0374, Plg8.0000°, Azm11.0000°;*

NEIC ***02*** *08:25:48.5±1.5,1°.54S±0°.07×145°.21E±0°.05,h14^{km}±1^{km}, mb5.8/256,Ms_20 5.6/594,Mwb6.0/47,Mww5.9, Mwc6.0(GCMT) Error ellipse: s-maj=11.5km s-min=9.3km az=186.0*

MOS ***02*** *08:25:48.6±1.0,1°.50S×145°.15E,h24^{km},mb5.8/93, MS5.5/26,Error ellipse: s-maj=6.6km s-min=4.3km az=112.4*

DJA ***02*** *08:25:49.1±0.2,2°S±3°×14°5E±°,h10^{km},M5.8/74, mB6.2/65,mb5.7/74,MLv6.1/6,Mw(mB)5.8/65, MwMwp5.6/39,Mwp5.8/39*

GCMT ***02*** *08:25:52.5±0.1,1°.47S×145°.18E,h16^{km},MW6.0/165, Moment Tensor Solution. s150,c317; s165,c528; Duration: 2^{s}3 Moment tensor: Scale 10^{18}Nm; M_{rr}-0.21±.01; $M_{\theta\theta}$-0.70±.01; $M_{\phi\phi}$0.91±.01; $M_{r\theta}$-0.30±.02; $M_{\theta\phi}$0.42±.01; $M_{\phi r}$0.40±.02; Best double couple: $M_0$1.05800×10^{18} NP1:ϕ_s57.00000°,δ60.00000°, λ-10.00000°. NP2:ϕ_s152.00000°,δ81.00000°, λ-149.00000°. Principal axes: T 1.1050, Plg14.0000°, Azm281.0000°; N -0.0920, Plg58.0000°, Azm166.0000°; P -1.0120, Plg28.0000°, Azm19.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

NEIC ***02*** *08:25:53,1°.48S×145°.20E,h16^{km},Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-0.22; $M_{\theta\theta}$-0.74; $M_{\phi\phi}$0.96; $M_{r\theta}$-0.36; $M_{\theta\phi}$0.44; $M_{\phi r}$0.29; Fault plane solution: $M_0$1.08000×10^{18} NP1:ϕ_s56.00000°, δ64.00000°,λ-14.00000°. NP2:ϕ_s152.00000°,δ78.00000°, λ-154.00000°. Principal axes: T 1.0990, Plg9.0000°, Azm282.0000°; N -0.0353, Plg61.0000°, Azm175.0000°; P -1.0637, Plg27.0000°, Azm16.0000°;*

NEIC ***02*** *08:25:56,1°.34S×145°.02E,h20^{km},Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-1.41; $M_{\theta\theta}$-6.29; $M_{\phi\phi}$7.70; $M_{r\theta}$-3.70; $M_{\theta\phi}$3.70; $M_{\phi r}$0.56; Fault plane solution: $M_0$8.84000×10^{17} NP1:ϕ_s152.00000°, δ70.00000°,λ-162.00000°. NP2:ϕ_s56.00000°,δ73.00000°, λ-20.00000°. Principal axes: T 8.6333, Plg2.0000°, Azm104.0000°; N 0.4019, Plg64.0000°, Azm199.0000°; P -9.0352, Plg26.0000°, Azm13.0000°;*

ISC 02 08:25:51.3±0.2,**1°.58S**±0°.03×**145°.32E**±0°.03,**h34**^{km},**n1258,** σ**1^{s}55**/1075,**mb5.7**/287,**MS5.6**/376,**14C-38D,Admiralty Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANU	Manus Island	2.10	103		Pn	08 26 22.8	-1.3
JAY	Jayapura	4.70	259	Pn	Pn	08 26 57.7	-2.2
	190nm,0.3s,baz=74,slow=15,SNR=214						
JAY				Sn	Sn	08 27 51.6	-1.7
	128nm,0.3s,baz=300,slow=14,SNR=4.9						
JAY				LR	LR	08 28 27.7	
	comp=Z,48µm,18.7s,baz=46,slow=35						
JAY	Jayapura	4.70	259	P	Pn	08 26 56.8	-3.1
GENI	Genyem	5.24	259	P	Pn	08 27 05.5	-1.8
	25nm149µm52µm4µm,1.2s						
SMPI	Sarmi	6.61	266	P	Pn	08 27 25.2	-1.0
	6.7nm88µm25µm2µm,1.4s						
WAMI	Wamena	6.98	251	P	Pn	08 27 29.5	-1.7
	14nm60µm29µm3µm,1.1s						
RABL	Rabaul	7.31	111	Pn	Pn	08 27 38.1	+2.3
RABL	Rabaul	7.31	111	P	Pn	08 27 38.8	+3.0
PMG	Port Moresby	7.99	167	Pn	Pn	08 27 46.0	+1.0
	18nm,0.3s,baz=342,slow=7.9,SNR=58						
PMG				LR	LR	08 30 53.8	
	comp=Z,35µm,18.7s,baz=348,slow=38						
PMG	Port Moresby	7.99	167	Pn	Pn	08 27 45.7	+0.7
PMG	Port Moresby	7.99	167	P	Pn	08 27 46.6	+1.6
MMPI	Merauke	8.42	216	P	Pn	08 27 52.1	+1.1
	24µm18µm738nm,0.7s						
SRPI	Serui, Papua	9.07	268	P	Pn	08 27 59.9	-0.1
	56µm13µm714nm,1.2s						
BAKI	Biak	9.21	272	P	Pn	08 28 01.8	-0.1
	56µm22µm1µm,1.2s						
COEN	Coen	12.48	190	Pn	Pn	08 28 48.5	+2.0
FAKI	Fak Fak	13.12	264	Pn	Pn	08 28 52.9	-2.6
FAKI	Fak Fak	13.12	264	P	Pn	08 28 54.5	-0.9
	40µm25µm1µm,1.6s						
SIJI	Sorong	14.06	273	Pn	Pn	08 29 06.7	-1.6
	1.1nm,0.3s,baz=88,slow=11,SNR=40						
SIJI				LR	LR	08 34 01.3	
	comp=Z,26µm,18.5s,baz=92,slow=35						
SWI	Sorong	14.07	273	P	Pn	08 29 06.4	-2.0
SWI				pmax	pmax		
	comp=Z,451nm,1.0s						
SWI	Sorong	14.07	273	P	Pn	08 29 06.8	-1.6
	comp=Z,34µmcomp=Z,13µmcomp=Z,452nm,0.9s						
GUMO	Guam	15.08	358	Pn	Pn	08 29 21.4	-0.6
	comp=Z,8.3nm,0.3s,baz=174,slow=3.6,SNR=4.3						
GUMO				LR	LR	08 34 36.6	
	comp=Z,5µm,21.4s,baz=183,slow=35						
GUMO	Guam	15.08	358	P	Pn	08 29 18.3	-3.7
GUMO				pmax	pmax		
	comp=Z,706nm,1.1s						
GUMO	Guam	15.08	358	Pn	Pn	08 29 18.3	-3.7
GUMO				IAmb	IAmb	08 29 28.8	
	comp=Z,706nm,1.1s						
GUMO	Guam	15.08	358	P	Pn	08 29 22.2	+0.2
SAUI	Saumlaki	15.34	245	Pn	Pn	08 29 22.5	-2.9
SAUI	Saumlaki	15.34	245	P	Pn	08 29 24.5	-0.9
	comp=Z,15µmcomp=Z,14µmcomp=Z,1µm,1.0s						
PATS	Pohnpei	15.44	57	P	Pn	08 29 26.0	-0.6
	baz=16,SNR=7.9						
PATS	Pohnpei	15.44	57	Pn	Pn	08 29 25.7	-1.0
BNDI	Bandanaira	15.66	259	P	Pn	08 29 29.2	-0.4
	comp=Z,28µmcomp=Z,20µmcomp=Z,927nm,1.5s						
MSAI	Masohi	16.46	264	P	Pn	08 29 39.4	-0.5
	comp=Z,3µmcomp=Z,140nm,1.3s						
MTSU	Mount Surprise	16.48	183	P	Pn	08 29 40.4	+0.3
	baz=17,SNR=146						
HNR	Honiara	16.51	119	Pn	P	08 29 41.8	-0.9
	comp=Z,15nm,0.3s,baz=331,slow=7.5,SNR=1.5						
HNR	Honiara	16.51	119	Pn	Pn	08 29 39.6	-0.9
HNR				IAmb	IAmb	08 29 59.6	
	comp=Z,994nm,1.1s						
KDU	Kakadu	16.84	228	P	Pn	08 29 42.6	-2.0
	baz=17,SNR=31						
MTN	Manton Dam	17.96	231	P	P	08 29 58.7	-0.1
	baz=18,SNR=16						
MTN	Manton Dam	17.96	231		Pn	08 29 58.1	-0.4
MTN				IAmb	IAmb	08 30 04.9	
	comp=Z,732nm,1.4s						
TNTI	Ternate	18.10	277	P	Pn	08 29 58.7	-1.5
TNTI				IAmb	IAmb	08 30 12.3	
	comp=Z,774nm,1.3s						
TNTI	Ternate	18.10	277	P	Pn	08 29 59.5	-0.7
	comp=Z,15µmcomp=Z,10µmcomp=Z,477nm,1.6s						
NLAI	Namlea	18.27	264	P	P	08 30 01.6	-0.7
	comp=Z,10µmcomp=Z,268nm,1.3s						
CTAO	Charters Tower	18.41	177	P	Pn	08 30 05.0	+0.9
CTAO				pmax	pmax		
	comp=Z,383nm,1.2s						
CTAO	Charters Tower	18.41	177	P	Pn	08 30 05.0	+0.9
SANI	Sanana	19.32	268	P	P	08 30 11.7	-2.1
	comp=Z,24µmcomp=Z,12µmcomp=Z,294nm,2.1s						
QIS	Mount Isa	19.67	196	P	P	08 30 17.9	+0.4
	baz=20,SNR=167						
SGSI	Sangihe	20.46	285	P	P	08 30 25.5	-0.7
	comp=Z,8µmcomp=Z,456nm,0.7s						
MNI	Manado	20.69	278	P	P	08 30 26.9	-1.9
MNI				pmax	pmax		
	comp=Z,656nm,1.7s						
MATI	Mati	20.82	294	eP	P	08 30 30.7	+0.6
WB0	Warramunga Arr	21.00	210	P	P	08 30 31.1	-0.9
DDMP	Don Marcelino,	21.01	291	eP	P	08 30 32.8	+0.6
WR0	Warramunga Arr	21.09	209	P	P	08 30 32.4	-0.5
WRAB	Tennant Creek	21.16	210	d iP	P	08 30 33.0	-0.7
WRAB				pmax	pmax		
	comp=Z,536nm,0.9s						
WRAB				MLR	MLR		
	comp=Z,9µm,15.0s						
WRAB	Tennant Creek	21.16	210	P	P	08 30 33.1	-0.6
WB2	Warramunga Arr	21.16	210	P	P	08 30 33.2	-0.6
WRA	Warramunga Arr	21.17	210	P	P	08 30 33.5	-0.3
	comp=Z,314nm,0.7s,baz=33,slow=10,SNR=507						
WRA				S	S	08 34 22.4	-5.2
	comp=Z,14nm,1.3s,baz=20,slow=18,SNR=1.2						
WRA				LR	LR	08 38 45.1	
	comp=Z,11µm,19.5s,baz=20,slow=37						
WRA	Warramunga Arr	21.17	210	iP	P	08 30 33.0	-0.9
WRA				pmax	pmax		
	comp=Z,315nm,0.7s						
WRA	Warramunga Arr	21.17	210	P	P	08 30 32.5	-1.3
KMSI	Cibinong	21.44	276	P	P	08 30 37.3	+0.5
	comp=Z,1µmcomp=Z,18µmcomp=Z,3µm,1.0s						
DAV	Davao City (W)	21.49	294	P	P	08 30 38.8	+1.5
	comp=Z,123nm,0.3s,baz=241,slow=3.3,SNR=11						
DAV				LR	LR	08 39 08.3	
	comp=Z,8µm,18.7s,baz=104,slow=38						
KNRA	Kununurra	21.51	228	P	P	08 30 38.8	+1.3
KCP	Kidapawan	21.91	293	⇓eP	P	08 30 40.9	-1.1
GLSP	General Luna,	22.20	301	eP	P	08 30 42.5	-2.4
SKMP	Bagumbayan, Su	22.24	291	eP	P	08 30 45.2	-0.2
BUTP	Butuan	22.25	298	eP	P	08 30 45.6	+0.1
BUKP	Musuan	22.28	295	eP	P	08 30 43.6	-2.2
GTOI	Gorontalo	22.41	275	P	P	08 30 47.7	+0.5
	comp=Z,9µmcomp=Z,390nm,1.0s						
SOEI	Soe	22.45	248	P	P	08 30 45.9	-1.9
SOEI	Soe	22.45	248	P	P	08 30 48.1	+0.3
	comp=Z,14µmcomp=Z,20µmcomp=Z,1µm,1.2s						
LUWI	Luwuk	22.54	271	P	P	08 30 47.0	-1.7
LUWI	Luwuk	22.54	271	P	P	08 30 49.5	+0.8
	comp=Z,16µmcomp=Z,13µmcomp=Z,886nm,1.2s						
CGP	Cagayan de Oro	22.85	296	⇓eP	P	08 30 50.8	-1.0
BATI	Baumata	23.16	247	P	P	08 30 55.0	-0.1
	comp=Z,160nm,0.9s,baz=243,slow=1.0,SNR=14						
BATI				LR	LR	08 41 11.4	
	comp=Z,6µm,22.0s,baz=76,slow=40						
BATI	Baumata	23.16	247	P	P	08 30 56.3	+1.2
	comp=Z,8µmcomp=Z,8µmcomp=Z,394nm,1.5s						
MSLP	Maasin	23.45	300	eP	P	08 30 56.4	-1.5
MRSI	Marisa	23.46	275	P	P	08 30 57.4	-0.6
	comp=Z,14µmcomp=Z,9µmcomp=Z,337nm,0.9s						
APSI	Ampana	23.67	271	P	P	08 30 59.7	-0.3
	comp=Z,9µmcomp=Z,11µmcomp=Z,751nm,1.4s						
PAGZ	Pagadian	23.80	293	eP	P	08 31 00.3	-0.9
MMRI	Maumere	24.02	252	P	P	08 31 02.8	-0.5
MMRI				IAmb	IAmb	08 31 24.2	
	comp=Z,276nm,1.1s						
MMRI	Maumere	24.02	252	P	P	08 31 17.5	+14
OCLP	Ormoc	24.12	302	eP	P	08 31 06.0	+1.8
EIDS	Eidsvold	24.29	167	P	P	08 31 06.7	+1.0
	baz=24,SNR=17						
EIDS	Eidsvold	24.29	167	P	P	08 31 06.0	+0.2
EDFI	Ende, Flores	24.57	252	P	P	08 31 07.0	-1.5
	comp=Z,4µmcomp=Z,2µmcomp=Z,82nm,2.9s						
AS31	Alice Springs	24.58	206	P	P	08 31 08.7	+0.3
ASAR	Alice Springs	24.58	206	P	P	08 31 08.8	+0.3
	comp=Z,133nm,0.9s,baz=32,slow=10,SNR=365						
ASAR				S	S	08 35 31.4	+4.0
	comp=Z,7.9nm,1.1s,baz=29,slow=21,SNR=2.3						
ASAR				LR	LR	08 41 27.0	
	comp=Z,15µm,18.2s,baz=28,slow=38						
ASAR				P3KPbc		09 04 10.6	
	comp=Z,0.1nm,0.6s,baz=207,slow=3.9,SNR=0.9						
ASAR	Alice Springs	24.58	206	P	P	08 31 08.5	+0.1
ASAR	Alice Springs	24.58	206	P	P	08 31 08.5	+0.1
TOLI2	Tolitoli	24.68	276	P	P	08 31 07.0	-2.3
TOLI2				IAmb	IAmb	08 31 17.6	
	comp=Z,316nm,1.2s						
QLP	Quilpie	24.88	182	P	P	08 31 12.0	+1.0
	baz=25,SNR=34						
RMQ	Roma	24.98	173	P	P	08 31 13.6	+1.7
	baz=25,SNR=123						
BSSI	Bau Bau, Buton	25.17	259	P	P	08 31 15.7	+1.9
	comp=Z,6µmcomp=Z,6µmcomp=Z,232nm,1.2s						
CNOP	Candoni, Negro	25.27	297	eP	P	08 31 13.2	-1.5
BNSI	Bone	25.33	263	P	P	08 31 17.2	+2.0
	comp=Z,8µmcomp=Z,378nm,1.5s						
FITZ	Fitzroy Crossi	25.34	228	P	P	08 31 14.2	-1.1
	baz=25,SNR=37						
FITZ	Fitzroy Crossi	25.34	228	P	P	08 31 14.9	-0.5
	comp=Z,40nm,0.6s,baz=43,slow=9.4,SNR=31						
FITZ				S	S	08 35 43.3	+3.7
	comp=Z,21nm,1.0s,baz=341,slow=17,SNR=1.8						
FITZ	Fitzroy Crossi	25.34	228	P	P	08 31 14.3	-1.1
FITZ				IAmb	IAmb	08 31 37.8	
	comp=Z,492nm,1.4s						
MPSI	Mapaga	25.49	274	P	P	08 31 16.4	-0.3
	comp=Z,10µmcomp=Z,5µmcomp=Z,142nm,1.3s						
TTSI	Tana Toraja	25.52	266	P	P	08 31 20.4	+3.5
	comp=Z,9µmcomp=Z,6µmcomp=Z,215nm,1.1s						
SANVU	Saraoutou	25.61	124	P	P	08 31 18.9	+1.2
SANVU				IAmb	IAmb	08 31 29.2	
	comp=Z,513nm,1.5s						
SANVU	Saraoutou	25.61	124	P	P	08 31 20.2	+2.4
SPSI	Sidrap Palu	25.62	264	P	P	08 31 19.6	+1.7
	comp=Z,6µmcomp=Z,305nm,1.9s						
KAPI	Kappang	25.74	262	P	P	08 31 18.6	-0.4
	comp=Z,10nm,0.7s,baz=82,slow=11,SNR=4.1						
KAPI				S	S	08 35 49.4	+3.3
	comp=Z,2.8nm,0.6s,baz=246,slow=19,SNR=0.9						
KAPI				LR	LR	08 43 36.6	
	comp=Z,6µm,20.3s,baz=68,slow=42						
KAPI	Kappang	25.74	262	P	P	08 31 18.2	-0.8
KAPI				pmax	pmax		
	comp=Z,557nm,1.9s						
KAPI				MLR	MLR		
	comp=Z,6µm,21.0s						
KAPI	Kappang	25.74	262	P	P	08 31 18.2	-0.8
KAPI				IAmb	IAmb	08 31 49.7	
	comp=Z,557nm,1.9s						
PVCP	Virac	25.84	306	eP	P	08 31 19.0	-0.8
BASI	Baing, Sumba	26.04	250	P	P	08 31 38.7	+17
WSI	Waingapu	26.14	251	P	P	08 31 29.9	+7.3
CUYO	Cuyo Island	27.14	298	eP	P	08 31 20.4	-11
MYLDM	Lahad Datu	27.62	284	P	P	08 31 35.8	-0.2
LQP	Lukban	28.25	304	⇓eP	P	08 31 41.5	-0.3
PLAI	Plampang	28.34	254	P	P	08 31 46.1	+3.8
	comp=Z,2µmcomp=Z,81nm,1.1s						
BUSP	Coron	28.37	299	eP	P	08 31 43.0	+0.4
BKB	Balikpapan	28.41	270	P	P	08 31 43.2	+0.2
BKB				IAmb	IAmb	08 32 26.2	
	comp=Z,435nm,1.6s						
JCJ	Chichijima	28.67	354	P	P	08 31 44.2	-0.9
	comp=Z,324nm,0.9s,baz=164,slow=8.3,SNR=8.1						
JCJ				S	S	08 36 36.1	+4.3
	comp=Z,56nm,0.8s,baz=336,slow=20,SNR=1.2						
JCJ	Chichijima	28.67	354	P	P	08 31 43.4	-1.7
ENPP	El Nido	28.71	297	eP	P	08 31 44.9	-0.7
TGY	Tagaytay City	28.75	304	P	P	08 31 46.3	+0.3
	comp=Z,177nm,0.3s,baz=180,slow=14,SNR=3.1						
TGY				LR	LR	08 41 29.0	
	comp=Z,5µm,20.2s,baz=114,slow=33						
DZM	Mont Dzumac	28.94	136	P	P	08 31 48.2	+0.5
	comp=Z,11nm,0.5s,baz=310,slow=7.9,SNR=22						
DZM				LR	LR	08 42 01.0	
	comp=Z,12µm,19.2s,baz=322,slow=34						
DZM	Mont Dzumac	28.94	136	eP	P	08 31 47.7	0.0
	comp=Z,140nm,1.3s						
DZM				eS	S	08 36 35.2	-1.2
	comp=Z,6µm,26.6s						
DZM				eLQ	LQ	08 37 56.9	
	comp=Z,33µm,28.1s						
DZM				eLR	LR	08 39 10.2	
	comp=Z,27µm,29.8s						
DZM	Mont Dzumac	28.94	136	P	P	08 31 48.0	+0.3
DZM				IAMs_20	IAMs_20	08 41 50.4	
	comp=Z,13µm,18.0s						
DZM	Mont Dzumac	28.94	136	P	P	08 31 49.0	+1.3
H11S3	WAKE ISLAND Hy	28.98	46	P	P	08 31 48.6	+0.7
	baz=231,slow=8.4,SNR=3.3						
H11S3				T	T	09 02 12.5	
	baz=228,slow=75						
H11S2	WAKE ISLAND Hy	29.00	46	P	P	08 31 48.7	+0.8
	baz=231,slow=8.4,SNR=4.1						
H11S2				T	T	09 02 13.2	
	baz=228,slow=75						
H11S1	WAKE ISLAND Hy	29.00	46	P	P	08 31 48.7	+0.8
	baz=231,slow=8.4,SNR=3.0						
H11S1				T	T	09 02 13.8	
	baz=228,slow=75						
YATNC	Mamie plateau,	29.24	136	P	P	08 31 51.4	+1.1
ARMA	Armidale	29.30	169	P	P	08 31 52.5	+1.7
	baz=29,SNR=11						
ARMA	Armidale	29.30	169	P	P	08 31 51.5	+0.7
ARMA				IAMs_20	IAMs_20	08 45 16.8	
	comp=Z,12µm,18.0s						
CMSA	Cobar Meteorol	29.80	179	P	P	08 31 56.1	+1.0
	baz=30,SNR=25						
H11N1	WAKE ISLAND Hy	29.94	44	T	T	09 03 25.4	
	baz=227,slow=76,SNR=9059						
H11N2	WAKE ISLAND Hy	29.95	44	T	T	09 03 27.6	
	baz=227,slow=76,SNR=8810						
H11N3	WAKE ISLAND Hy	29.95	44	T	T	09 03 26.0	
	baz=227,slow=76,SNR=4693						
KKM	Kota Kinabalu	30.03	285	P	P	08 31 56.4	-1.1
KKM				IAmb	IAmb	08 31 57.8	
	comp=Z,88nm,0.8s						
SMPP	San Manuel, Pa	30.04	307	eP	P	08 31 54.0	-3.4
STKA	Stephens Creek	30.34	186	P	P	08 32 00.0	+0.1
	baz=30,SNR=21						
STKA	Stephens Creek	30.34	186	P	P	08 31 60.0	+0.1
	comp=Z,17nm,0.8s,baz=11,slow=8.7,SNR=30						
STKA				LR	LR	08 45 12.3	
	comp=Z,12µm,18.4s,baz=357,slow=38						
STKA	Stephens Creek	30.34	186	P	P	08 31 59.8	-0.1
MTKI	Muara Teweh, K	30.42	271	P	P	08 32 07.8	+7.0
BBKI	Banjar Baru	30.50	266	P	P	08 32 09.6	+8.0
KMMI	Kalianget	31.71	259	P	P	08 32 23.7	+11
PSAB2	Pilbara Seismi	31.76	229	IAMs_20	IAMs_20	08 45 47.7	
	comp=Z,13µm,19.0s						
JAGI	Jajag, Banyuwa	31.77	256	P	P	08 32 12.7	-0.1
PSAA2	Pilbara Seismi	31.78	229	IAMs_20	IAMs_20	08 45 48.1	
	comp=Z,12µm,19.0s						
PSAA3	Pilbara Seismi	31.78	229	IAMs_20	IAMs_20	08 45 47.9	
	comp=Z,14µm,19.0s						
PSA00	Pilbara Seismi	31.78	229	P	P	08 32 11.6	-1.2
PSA00				IAmb	IAmb	08 32 36.8	
	comp=Z,297nm,1.9s						
PSA00	Pilbara Seismi	31.78	229	P	P	08 32 11.0	-1.8
PSA00				IAmb	IAmb	08 32 36.2	
	comp=Z,78nm,1.6s						
PSAC1	Pilbara Seismi	31.79	230	IAMs_20	IAMs_20	08 45 48.4	
	comp=Z,13µm,21.0s						
PSAA1	Pilbara Seismi	31.79	229	IAMs_20	IAMs_20	08 45 48.6	
	comp=Z,13µm,20.0s						
HTT	Hallett	32.24	190	P	P	08 32 17.1	+0.3
	baz=32,SNR=25						
BBOO	Buckleboo	32.26	195	P	P	08 32 16.7	-0.1
	baz=32,SNR=40						
BBOO	Buckleboo	32.26	195	P	P	08 32 16.7	-0.1
BBOO				IAmb	IAmb	08 32 28.1	
	comp=Z,105nm,0.9s						
BBOO				IAMs_20	IAMs_20	08 45 44.3	
	comp=Z,13µm,22.0s						
YNG	Young	32.67	175	P	P	08 32 21.8	+1.4
	baz=33,SNR=12						
JOW	Kunigami	32.68	331	P	P	08 32 20.1	-0.4
	comp=Z,83nm,0.7s,baz=152,slow=8.7,SNR=21						
JOW				LR	LR	08 42 23.3	
	comp=Z,3µm,21.2s,baz=154,slow=31						
FORT	Forrest	33.32	208	P	P	08 32 26.2	+0.1
	baz=33,SNR=21						
FORT	Forrest	33.32	208	P	P	08 32 25.8	-0.3
FORT				IAMs_20	IAMs_20	08 47 45.0	
	comp=Z,8µm,19.0s						
SBUM	Sibu	33.33	277	P	P	08 32 25.4	-1.0
SBUM	Sibu	33.33	277	P	P	08 32 27.0	+0.6
CAN	Canberra	33.74	175	P	P	08 32 30.8	+1.0
CAN				pmax	pmax		
	comp=Z,253nm,1.5s						
CAN				MLR	MLR		
	comp=Z,8µm,19.0s						
CAN	Canberra	33.74	175	P	P	08 32 30.8	+1.0
CAN				IAmb	IAmb	08 32 38.9	
	comp=Z,253nm,1.5s						
YOJ	Yonaguni jima	33.75	321	P	P	08 32 30.1	+0.2
YOJ				pmax	pmax		
	comp=Z,343nm,1.2s						
YOJ	Yonaguni jima	33.75	321	P	P	08 32 30.1	+0.2
YOJ				IAMs_20	IAMs_20	08 41 58.9	
	comp=Z,11µm,18.0s						
CNB	Canberra Magne	33.77	174	P	P	08 32 31.5	+1.4
	baz=34,SNR=5.1						
STKI	Sintang	33.87	272	P	P	08 32 37.6	+6.4
YULB	Yu-li	34.10	318	P	P	08 32 31.1	-1.8
YULB				IAMs_20	IAMs_20	08 41 16.1	
	comp=Z,9µm,18.0s						
NACB	Ninganchiao	34.44	319	P	P	08 32 36.3	+0.4
NACB				IAmb	IAmb	08 32 39.1	
	comp=Z,162nm,1.0s						
TPUB	Ta-pu	34.48	317	P	P	08 32 35.7	-0.6
SSLB	Suanglung	34.60	318	P	P	08 32 36.5	-0.8
SSLB				IAmb	IAmb	08 32 47.2	
	comp=Z,105nm,1.1s						
YHNB	Yeheng	34.93	320	P	P	08 32 40.7	+0.4
YHNB				IAMs_20	IAMs_20	08 41 18.2	
	comp=Z,9µm,19.0s						
TATO	Taipei	35.08	320	P	P	08 32 41.2	-0.2
KSM	Kuching	35.13	275	P	P	08 32 41.1	-0.9
KSM				IAmb	IAmb	08 32 43.9	
	comp=Z,178nm,1.1s						
KSM	Kuching	35.13	275	P	P	08 32 42.0	-0.1
ARPS	Mount Arapiles	35.16	185	P	P	08 32 43.7	+1.7
	baz=35,SNR=8.2						
SMRI	Semarang	35.18	260	P	P	08 32 42.8	+0.3
SMRI				IAmb	IAmb	08 33 02.1	
	comp=Z,214nm,1.2s						
MEEK	Meekatharra	35.75	223	P	P	08 32 46.2	-1.0
	baz=36,SNR=11						
JSU	Suzuyama	35.81	338	P	P	08 32 46.1	-1.6
TOO	Toolangi	35.81	180	P	P	08 32 49.5	+1.9
	baz=36,SNR=5.1						
TOO	Toolangi	35.81	180	P	P	08 32 48.3	+0.7
TOO				pmax	pmax		
	comp=Z,235nm,1.5s						
TOO				MLR	MLR		
	comp=Z,7µm,20.0s						
TOO	Toolangi	35.81	180	P	P	08 32 48.3	+0.7
TOO				IAmb	IAmb	08 33 00.9	
	comp=Z,235nm,1.4s						
MSVF	Nonsavu	35.93	119	P	P	08 32 49.2	+0.2
MSVF				pmax	pmax		
	comp=Z,59nm,1.2s						
MSVF				MLR	MLR		
	comp=Z,12µm,19.0s						
MSVF	Nonsavu	35.93	119	P	P	08 32 49.2	+0.2
MSVF	Nonsavu	35.93	119	IAMs_20	IAMs_20	08 46 42.4	
	comp=Z,11µm,19.0s						
GIRL	Giralia	36.73	233	P	P	08 32 56.5	+0.8
	baz=37,SNR=7.3						
GIRL	Giralia	36.73	233	P	P	08 32 54.7	-1.0
GIRL				IAmb	IAmb	08 33 06.1	
	comp=Z,178nm,1.1s						
JMN	Monobe	36.74	344	P	P	08 32 54.8	-0.8
JMN				IAmb	IAmb	08 33 05.6	
	comp=Z,104nm,0.9s						
QZH	Quanzhou	36.96	317	⇑iP	P	08 32 58.0	+0.5
QZH				S	S	08 38 40.0	-0.7
QZH				pmax	pmax		
	comp=Z,120nm,1.7s						
QZH				LR	LR		
	comp=Z,7µm,19.0s						
QZH				LR	LR		
	comp=Z,6µm,17.5s						
QZH				LR	LR		
	comp=Z,4µm,17.1s						
KMBL	Kambalda	36.99	214	P	P	08 32 57.1	-0.7
	baz=37,SNR=10.0						
JNU	Nakatsue	37.11	340	P	P	08 32 57.9	-0.9
	comp=Z,46nm,0.9s,baz=153,slow=8.9,SNR=15						
JNU	Nakatsue	37.11	340	P	P	08 32 57.9	-0.9
INU	Inuyama	37.55	349	P	P	08 33 01.7	-0.7
INU				IAmb	IAmb	08 33 09.5	
	comp=Z,192nm,1.3s						
TPI	Tanjungpandan	37.65	268	P	P	08 33 05.0	+1.4
	comp=Z,1µmcomp=Z,60nm,1.1s						
JGF	Kuroka	37.73	349	P	P	08 33 03.6	-0.3
CISI	Cisompet, Garu	37.83	260	P	P	08 33 03.6	-1.5
CISI	Cisompet, Garu	37.83	260	P	P	08 33 08.3	+3.1
	comp=Z,2µmcomp=Z,73nm,0.9s						
JYT	Yasato	37.92	353	IAmb	IAmb	08 33 08.0	
	comp=Z,200nm,1.0s						
LEM	Lembang	37.94	261	P	P	08 33 06.0	-0.2
LEM				pmax	pmax		
	comp=Z,39nm,1.5s						
JHS	Saijyo	38.14	344	IAmb	IAmb	08 33 16.6	
	comp=Z,370nm,1.9s						
MJAR	Matsushiro Arr	38.50	351	P	P	08 33 09.1	-1.3
	comp=Z,25nm,0.8s,baz=177,slow=9.2,SNR=50						
MJAR				LR	LR	08 48 54.5	
	comp=Z,830nm,19.0s,baz=160,slow=36						
MJAR	Matsushiro Arr	38.50	351	P	P	08 33 08.7	-1.8
MJAR				pmax	pmax		
	comp=Z,129nm,1.7s						
MJAR	Matsushiro Arr	38.50	351	P	P	08 33 08.7	-1.8
MAJO	Matsushiro	38.50	351	d iP	P	08 33 08.8	-1.6
MAJO				pmax	pmax		
	comp=Z,80nm,1.0s						

MAJO				MLR	MLR		
	comp=Z,2µm,17.0s						
MAJO	**Matsushiro**	**38.50**	**351**	P	**P**	**08 33 09.7**	**-0.8**
MAJO				IAmb	IAmb	08 33 10.6	
	comp=Z,474nm,1.7s						
MAT	**Matsushiro**	**38.50**	**351**	P	**P**	**08 33 08.9**	**-1.5**
MAT				S	**S**	**08 39 02.8**	**-1.1**
JTU	**Tsushima**	**38.90**	**339**	P	**P**	**08 33 13.6**	**-0.2**
MORW	**Morawa**	**39.05**	**223**	P	**P**	**08 33 14.5**	**-0.6**
	baz=39,SNR=14						
MORW	**Morawa**	**39.05**	**223**	P	**P**	**08 33 14.7**	**-0.5**
MORW				IAMs_20	IAMs_20	08 49 15.0	
	comp=Z,12µm,20.0s						
PPBI	**Pangkal Pinang**	**39.16**	**269**	P	P	08 33 29.1	+13
JMM	**Marumori**	**39.47**	**354**	P	**P**	**08 33 17.7**	**-0.8**
JMM				IAmb	IAmb	08 33 19.1	
	comp=Z,415nm,1.7s						
KLBR	**Kellerberrin**	**39.60**	**218**	P	**P**	**08 33 18.8**	**-0.9**
	baz=40,SNR=15						
BLDU	**Ballidu**	**39.60**	**220**	P	**P**	**08 33 19.6**	**-0.1**
	baz=40,SNR=17						
GZH	**Guangzhou**	**39.63**	**310**	P	**P**	**08 33 22.1**	**+2.1**
GZH				PcS	**PcS**	**08 39 17.4**	**+0.5**
GZH				S	**S**	**08 39 26.3**	**+5.2**
GZH				SS	**SnSn**	**08 42 19.2**	**-0.7**
GZH				LR	LR		
	comp=Z,3µm,16.3s						
GZH				LR	LR		
	comp=Z,2µm,16.1s						
SSE	**Sheshan**	**39.78**	**327**	P	**P**	**08 33 20.7**	**-0.5**
SSE				S	**S**	**08 39 22.4**	**-0.8**
SSE				pmax	pmax		
	comp=Z,25nm,1.9s						
SSE				pmax	pmax		
	comp=Z,400nm,8.6s						
SSE				LR	LR		
	comp=Z,3µm,19.8s						
SSE				LR	LR		
	comp=Z,4µm,23.1s						
JSD	**Sado**	**39.96**	**351**	P	**P**	**08 33 22.3**	**-0.3**
QIZ	**Qiongzhong**	**40.42**	**302**	P	**P**	**08 33 26.3**	**-0.4**
QIZ				S	**S**	**08 39 35.4**	**+2.2**
QIZ				pmax	pmax		
	comp=Z,590nm,8.6s						
QIZ				LR	LR		
	comp=Z,6µm,18.6s						
QIZ				LR	LR		
	comp=Z,4µm,20.6s						
QIZ				LR	LR		
	comp=Z,5µm,39.2s						
KLSI		**40.63**	**265**	P	**P**	**08 33 30.4**	**+1.9**
	comp=Z,433nmcomp=Z,9.9nm,1.8s						
MUN	**Mundaring**	**40.83**	**219**	P	**P**	**08 33 29.8**	**-0.1**
	baz=41,SNR=4.0						
NWAO	**Narrogin (SRO)**	**40.84**	**217**	P	**P**	**08 33 30.4**	**+0.5**
	baz=41,SNR=3.7						
NWAO	**Narrogin (SRO)**	**40.84**	**217**	P	**P**	**08 33 29.9**	**0.0**
NWAO				pmax	pmax		
	comp=Z,51nm,1.1s						
NWAO				MLR	MLR		
	comp=Z,16µm,19.0s						
NWAO	**Narrogin (SRO)**	**40.84**	**217**	P	**P**	**08 33 29.9**	**0.0**
KASI	**Kota Agung**	**40.92**	**263**	P	**P**	**08 33 30.3**	**-0.6**
	comp=Z,1µmcomp=Z,43nm,1.0s						
MDSI	**Maura Dua**	**41.17**	**265**	P	**P**	**08 33 31.9**	**-1.1**
	comp=Z,1µmcomp=Z,52nm,1.9s						
TAU	**Tasmania Unive**	**41.19**	**178**	IAMs_20	IAMs_20	08 53 45.3	
	comp=Z,8µm,19.0s						
TJN	**Taejon**	**41.30**	**338**	*d i*P	**P**	**08 33 33.0**	**-0.6**
LHSI	**Lahat**	**41.80**	**266**	P	P	08 33 44.4	+6.3
NJ2	**Nanjing**	**41.80**	**325**	*e*P	**P**	**08 33 37.6**	**-0.2**
NJ2				S	**S**	**08 39 56.5**	**+3.2**
NJ2				pmax	pmax		
	comp=Z,33nm,1.1s						
NJ2				pmax	pmax		
	comp=Z,870nm,3.8s						
NJ2				LR	LR		
	comp=Z,5µm,23.2s						
NJ2				LR	LR		
	comp=Z,8µm,19.9s						
NJ2				LR	LR		
	comp=Z,3µm,20.8s						
KSRS	**Korea Array**	**42.05**	**339**	P	**P**	**08 33 40.0**	**+0.2**
	comp=Z,60nm,0.9s,baz=155,slow=9.8,SNR=176						
KSRS				PcP	**PcP**	**08 35 35.2**	**+0.9**
	comp=Z,9.6nm,1.0s,baz=160,slow=4.5,SNR=4.8						
KSRS				LR	LR	08 50 37.4	
	comp=Z,3µm,20.7s,baz=162,slow=36						
KSAR	**Wonju Array Be**	**42.06**	**339**	P	**P**	**08 33 39.3**	**-0.5**
KSAR	**Wonju Array Be**	**42.06**	**339**	P	**P**	**08 33 39.2**	**-0.5**
KS19	**Wonju Array Si**	**42.12**	**339**	P	**P**	**08 33 40.1**	**-0.2**
JTM	**Tenmabayashi**	**42.35**	**355**	P	**P**	**08 33 42.5**	**+0.3**
OUZ	**Omahuta**	**42.56**	**145**	IAMs_20	IAMs_20	08 49 04.0	
	comp=Z,9µm,19.0s						
KSI	**Kapahiang**	**42.72**	**266**	P	**P**	**08 33 49.3**	**+3.6**
	comp=Z,9µmcomp=Z,73nm,0.9s						
UBPT	**Khong Chiam**	**42.82**	**295**	P	**P**	**08 33 48.0**	**+1.6**
	comp=Z,55nm,1.0s						
UBPT	**Khong Chiam**	**42.82**	**295**	P	**P**	**08 33 46.8**	**+0.5**
WHN	**Wuhan**	**43.48**	**320**	⇑P	**P**	**08 33 53.0**	**+1.5**
WHN				S	**S**	**08 40 22.7**	**+4.7**
WHN				pmax	pmax		
	comp=Z,180nm,1.2s						
WHN				pmax	pmax		
	comp=Z,3µm,4.0s						
WHN				LR	LR		
	comp=Z,9µm,16.0s						
WHN				LR	LR		
	comp=Z,9µm,14.1s						
WHN				LR	LR		
	comp=Z,11µm,29.8s						
SDSI	**Sungai Dareh**	**43.88**	**270**	P	**P**	**08 33 54.1**	**-0.9**
	comp=Z,2µmcomp=Z,79nm,2.2s						
AFI	**Afiamalu**	**44.15**	**108**	IAMs_20	IAMs_20	08 53 01.6	
	comp=Z,6µm,18.0s						
BKNI	**Bangkinang**	**44.31**	**272**	P	P	08 34 13.7	+15
JEW	**Eniwo**	**44.36**	**356**	P	**P**	**08 33 58.7**	**+0.4**
IPM	**Ipoh**	**44.66**	**278**	P	**P**	**08 34 01.0**	**-0.3**
IPM	**Ipoh**	**44.66**	**278**	P	**P**	**08 34 01.0**	**-0.3**
PDSI	**Padang**	**44.85**	**270**	P	P	08 34 18.3	+16
KULM	**Kulim**	**45.13**	**279**	P	**P**	**08 34 04.5**	**-0.5**
ASAJ	**Asahikawa**	**45.56**	**357**	P	**P**	**08 34 08.5**	**+0.6**
	comp=Z,275nm,1.2s,baz=224,slow=9.1,SNR=19						
ASAJ				LR	LR	08 51 02.8	
	comp=Z,1µm,21.2s,baz=178,slow=33						
JKA	**Kamikawa-asahi**	**45.56**	**357**	P	**P**	**08 34 08.6**	**+0.7**
SRAK	**Srakaew**	**45.59**	**291**	P	**P**	**08 34 05.0**	**-3.5**
	comp=Z,5µmcomp=Z,385nm,1.4s						
MSHR	**Mys Shultsa**	**45.78**	**345**	*c i*P	**P**	**08 34 10.7**	**+1.1**
MSHR				pmax	pmax		
	comp=Z,119nm,1.0s						
MSHR				MLR	MLR		
	comp=Z,1µm,17.0s						
MNSI	**Mandailing Nat**	**45.79**	**273**	P	**P**	**08 34 12.0**	**+1.8**
	comp=Z,29nm,1.1s						
DL2	**Dalian**	**45.81**	**334**	⇓*i*P	**P**	**08 34 10.2**	**+0.3**
DL2				S	**S**	**08 40 51.1**	**-0.4**
DL2				sS	**sS**	**08 41 10.1**	**+3.0**
DL2				pmax	pmax		
	comp=Z,120nm,1.4s						
DL2				pmax	pmax		
	comp=Z,850nm,5.8s						
DL2				LR	LR		
	comp=Z,4µm,18.0s						
DL2				LR	LR		
	comp=Z,5µm,17.7s						
DL2				LR	LR		
	comp=Z,3µm,21.3s						
TIA	**Tai'an**	**45.86**	**328**	P	**P**	**08 34 09.9**	**-0.5**
TIA				S	**S**	**08 40 52.7**	**+0.2**
TIA				pmax	pmax		
	comp=Z,36nm,1.3s						
TIA				pmax	pmax		
	comp=Z,480nm,4.9s						
TIA				LR	LR		
	comp=Z,6µm,16.7s						
TIA				LR	LR		
	comp=Z,9µm,19.8s						
TIA				LR	LR		
	comp=Z,2µm,22.6s						
NONG	**Nongkai**	**45.86**	**297**	P	**P**	**08 34 11.7**	**+0.9**
	comp=Z,108nm,1.0s						
QRZ	**Quartz Range**	**46.17**	**151**	P	**P**	**08 34 14.1**	**+1.3**
QRZ				IAmb	IAmb	08 34 22.2	
	comp=Z,216nm,1.6s						
CHAI	**Chaiyaphum**	**46.20**	**294**	P	**P**	**08 34 14.2**	**+0.8**
	comp=Z,998nmcomp=Z,137nm,0.9s						
SISI	**Saibi**	**46.21**	**270**	P	P	08 34 26.7	+13
SLVN	**Son La**	**46.45**	**302**	P	**P**	**08 34 15.3**	**0.0**
SLVN				IAmb	IAmb	08 34 31.3	
	comp=Z,180nm,1.7s						
TRTT	**Trang**	**46.45**	**282**	P	**P**	**08 34 14.9**	**-0.5**
	comp=Z,133nm,1.0s						
GYA	**Guiyang**	**46.55**	**310**	⇑P	**P**	**08 34 17.6**	**+1.4**
GYA				pP	pP	08 34 22.6	-3.3
GYA				PP	**PP**	**08 36 08.5**	**+2.4**
GYA				S	**S**	**08 41 06.3**	**+3.4**
GYA				SS	**SS**	**08 44 26.3**	**-3.1**
GYA				pmax	pmax		
	comp=Z,28nm,1.1s						
GYA				pmax	pmax		
	comp=Z,470nm,4.8s						
GYA				LR	LR		
	comp=Z,3µm,16.5s						
GYA				LR	LR		
	comp=Z,1µm,16.1s						
GYA				LR	LR		
	comp=Z,2µm,20.7s						
KUR	**Kuril'sk**	**46.67**	**2**	⇓*e*P	**P**	**08 34 15.5**	**-1.1**
KUR				pmax	pmax		
	comp=Z,431nm,1.0s						
URZ	**Urewera**	**46.70**	**145**	P	**P**	**08 34 18.9**	**+1.9**
URZ				IAmb	IAmb	08 34 41.1	
	comp=Z,115nm,1.5s						
URZ				IAMs_20	IAMs_20	08 52 02.6	
	comp=Z,7µm,19.0s						
MXZ	**Matakaoa Point**	**46.93**	**144**	IAMs_20	IAMs_20	08 50 33.6	
	comp=Z,8µm,22.0s						
BKZ	**Black Stump Fm**	**46.99**	**147**	P	**P**	**08 34 20.0**	**+0.6**
TEY	**Ternei**	**47.06**	**352**	⇓*e*P	**P**	**08 34 18.7**	**-0.9**
TEY				*e*		08 41 06.1	
TEY				pmax	pmax		
	comp=Z,30nm,1.4s						
TEY				pmax	pmax		
	comp=E,10.0nm,1.0s						
TEY				pmax	pmax		
	comp=N,30nm,1.2s						
THZ	**Tophouse**	**47.08**	**152**	IAMs_20	IAMs_20	08 57 11.3	
	comp=Z,6µm,18.0s						
USA0B	**Ussuriysk Arra**	**47.11**	**347**	*d i*P	**P**	**08 34 20.2**	**+0.1**
USA0B	**Ussuriysk Arra**	**47.11**	**347**	P	**P**	**08 34 21.0**	**+0.9**
USRK	**Ussuriysk Ar.**	**47.11**	**347**	P	**P**	**08 34 20.6**	**+0.5**
	comp=Z,114nm,0.7s,baz=179,slow=7.3,SNR=162						
FOZ	**Fox Glacier**	**47.13**	**156**	IAMs_20	IAMs_20	08 55 40.4	
	comp=Z,5µm,18.0s						
TUWZ	**Tuamarina**	**47.32**	**151**	P	**P**	**08 34 22.5**	**+0.7**
SNY	**Shenyang**	**47.49**	**338**	⇓P	**P**	**08 34 22.8**	**-0.2**
SNY				PP	**PP**	**08 36 13.8**	**-1.0**
SNY				S	**S**	**08 41 11.9**	**-3.6**
SNY				pmax	pmax		
	comp=Z,91nm,2.0s						
SNY				LR	LR		
	comp=Z,3µm,14.7s						
SNY				LR	LR		
	comp=Z,2µm,16.1s						
SNY				LR	LR		
	comp=Z,3µm,23.2s						
BSWZ	**Blackbirch Sta**	**47.51**	**151**	P	**P**	**08 34 24.3**	**+1.1**
PHET	**Kaeng Krachan**	**47.56**	**289**	P	**P**	**08 34 25.6**	**+1.6**
	comp=Z,1µmcomp=Z,153nm,0.9s						
PHET	**Kaeng Krachan**	**47.56**	**289**	P	**P**	**08 34 24.7**	**+0.7**
LTZ	**Lake Taylor**	**47.58**	**153**	P	**P**	**08 34 25.0**	**+1.1**
LTZ				IAmb	IAmb	08 34 32.8	
	comp=Z,173nm,1.6s						
LTZ				IAMs_20	IAMs_20	08 53 51.5	
	comp=Z,6µm,20.0s						
BHW	**Baring Head**	**47.77**	**150**	P	**P**	**08 34 25.1**	**-0.1**
PKDT	**Phuket**	**47.79**	**282**	P	**P**	**08 34 25.7**	**-0.2**
RPZ	**Rata Peaks**	**47.79**	**155**	P	**P**	**08 34 26.6**	**+1.1**
RPZ				IAmb	IAmb	08 34 49.1	
	comp=Z,162nm,1.4s						
RPZ				IAMs_20	IAMs_20	08 51 31.1	
	comp=Z,8µm,22.0s						
GSI	**Gunungsitoli**	**47.82**	**273**	P	**P**	**08 34 24.5**	**-1.7**
GSI	**Gunungsitoli**	**47.82**	**273**	P	**P**	**08 34 26.2**	**+0.1**
	comp=Z,7µmcomp=Z,165nm,1.0s						
KHZ	**Kahutara**	**47.88**	**152**	P	**P**	**08 34 26.8**	**+0.7**
KHZ				IAmb	IAmb	08 34 33.2	
	comp=Z,175nm,1.7s						
KHZ				IAMs_20	IAMs_20	08 54 38.5	
	comp=Z,7µm,18.0s						
WKZ	**Wanaka**	**47.89**	**157**	IAMs_20	IAMs_20	08 56 35.4	
	comp=Z,5µm,18.0s						
OXZ	**Oxford**	**47.91**	**154**	IAMs_20	IAMs_20	08 53 42.2	
	comp=Z,7µm,20.0s						
LBZ	**Lake Benmore**	**47.98**	**156**	P	**P**	**08 34 27.1**	**+0.3**
LBZ				IAmb	IAmb	08 34 34.6	
	comp=Z,187nm,1.6s						
LBZ				IAMs_20	IAMs_20	08 58 37.0	
	comp=Z,7µm,18.0s						
MLZ	**Mavora Lakes**	**48.01**	**158**	IAMs_20	IAMs_20	08 55 12.5	
	comp=Z,5µm,18.0s						
UTTA	**Uttaradit**	**48.08**	**296**	P	**P**	**08 34 29.5**	**+1.5**
	comp=Z,811nmcomp=Z,82nm,1.4s						
UTTA	**Uttaradit**	**48.08**	**296**	P	**P**	**08 34 29.0**	**+1.0**
MDJ	**Mudanjiang**	**48.09**	**345**	P	**P**	**08 34 28.4**	**+0.8**
MDJ				pmax	pmax		
	comp=Z,860nm,6.1s						
MDJ				LR	LR		
	comp=Z,2µm,24.4s						
MDJ				LR	LR		
	comp=Z,5µm,23.1s						
MDJ				LR	LR		
	comp=Z,4µm,16.3s						
NANT	**Nan**	**48.30**	**297**	P	**P**	**08 34 31.3**	**+1.6**
	comp=Z,17µmcomp=Z,751nm,0.7s						
TPTI		**48.35**	**276**	P	**P**	**08 34 30.8**	**+0.6**
	comp=Z,801nmcomp=Z,29nm,1.0s						
YSS	**Yuzh-Sakhalins**	**48.39**	**358**	⇓*e*P	**P**	**08 34 29.7**	**-0.2**
YSS				*e*		08 35 50.9	
YSS				*e*S	**S**	**08 41 24.8**	**-3.2**
YSS				*e*SS	**SS**	**08 44 52.0**	**-6.2**
YSS				pmax	pmax		
	comp=Z,100nm,1.2s						
YSS				pmax	pmax		
	comp=Z,2µm,5.5s						
YSS				pmax	pmax		
	comp=N,1µm,5.4s						
YSS	**Yuzh-Sakhalins**	**48.39**	**358**	P	**P**	**08 34 30.6**	**+0.7**
YSS				IAmb	IAmb	08 34 31.4	
	comp=Z,178nm,1.2s						
WHZ	**Wether Hill Ro**	**48.39**	**159**	IAmb	IAmb	08 34 37.6	
	comp=Z,185nm,1.7s						
SRDT	**SRDT**	**48.40**	**291**	P	**P**	**08 34 31.9**	**+1.4**
	comp=Z,64nm,0.9s						
UTHA	**Uthaitani**	**48.43**	**292**	P	**P**	**08 34 32.0**	**+1.2**
	comp=Z,853nmcomp=Z,102nm,1.0s						
MQZ	**McQueen's Vall**	**48.48**	**154**	IAMs_20	IAMs_20	08 53 58.4	
	comp=Z,6µm,19.0s						
CN2	**Changchun**	**48.56**	**341**	*e*P	**P**	**08 34 30.4**	**-0.9**
CN2				*e*S	**S**	**08 41 27.4**	**-3.3**
CN2				pmax	pmax		
	comp=Z,30nm,1.9s						
CN2				pmax	pmax		
	comp=Z,840nm,5.5s						
CN2				LR	LR		
	comp=Z,2µm,25.0s						
CN2				LR	LR		
	comp=Z,4µm,25.0s						
CN2				LR	LR		
	comp=Z,2µm,23.0s						
SUKH	**Sukhothai**	**48.83**	**295**	P	**P**	**08 34 36.0**	**+2.2**
	comp=Z,76nm,1.1s						
SUKH	**Sukhothai**	**48.83**	**295**	P	**P**	**08 34 36.7**	**+2.9**
KMI	**Kunming**	**49.03**	**306**	⇑P	**P**	**08 34 37.4**	**+1.9**
KMI				pP	pP	08 34 43.6	-1.7
KMI				sP	sP	08 34 46.3	-2.8
KMI				PcP	**PcP**	**08 36 00.2**	**+1.0**
KMI				PP	**PP**	**08 36 32.2**	**+2.9**
KMI				S	**S**	**08 41 43.1**	**+4.8**
KMI				sS	sS	08 41 53.7	-0.7
KMI				SS	**SS**	**08 45 07.5**	**-2.3**
KMI				pmax	pmax		
	comp=Z,54nm,1.4s						
KMI				pmax	pmax		
	comp=Z,440nm,4.0s						
KMI				LR	LR		
	comp=Z,7µm,22.5s						
KMI				LR	LR		
	comp=Z,3µm,21.6s						
KMI				LR	LR		
	comp=Z,4µm,22.2s						
LAMP	**Lampang**	**49.16**	**296**	P	**P**	**08 34 38.1**	**+1.8**
	comp=Z,71nm,0.8s						
COCO	**West Island**	**49.18**	**255**	*i* P	**P**	**08 34 36.2**	**-0.4**
MLSI	**Meulaboh, Aceh**	**49.22**	**277**	P	**P**	**08 34 36.1**	**-0.8**
	comp=Z,214nm,1.0s						
PAYA	**Payao**	**49.22**	**297**	P	**P**	**08 34 38.3**	**+1.4**
	comp=Z,13µmcomp=Z,2µm,0.9s						
PAYA	**Payao**	**49.22**	**297**	P	**P**	**08 34 38.6**	**+1.8**
BJT	**Baijiatuau**	**49.24**	**330**	P	**P**	**08 34 35.8**	**-0.8**
BJT				pmax	pmax		
	comp=Z,61nm,1.4s						
BJT	**Baijiatuau**	**49.24**	**330**	P	**P**	**08 34 35.8**	**-0.8**
XAN	**Xi'an**	**49.24**	**319**	P	**P**	**08 34 36.7**	**-0.1**
XAN				pP	pP	08 34 43.8	-2.9
XAN				S	**S**	**08 41 42.1**	**+1.4**
XAN				pmax	pmax		
	comp=Z,65nm,1.1s						
XAN				pmax	pmax		
	comp=Z,480nm,3.5s						
XAN				LR	LR		
	comp=Z,7µm,18.6s						
XAN				LR	LR		
	comp=Z,4µm,19.8s						
XAN				LR	LR		
	comp=Z,4µm,22.1s						
BJI	**Beijing**	**49.25**	**330**	P	**P**	**08 34 36.0**	**-0.7**
BJI				S	**S**	**08 41 40.7**	**+0.2**
BJI				SS	**SS**	**08 45 12.2**	**-0.2**
BJI				pmax	pmax		
	comp=Z,20nm,1.4s						
BJI				pmax	pmax		
	comp=Z,480nm,3.5s						
BJI				LR	LR		
	comp=Z,3µm,25.6s						
BJI				LR	LR		
	comp=Z,3µm,23.7s						
BJI				LR	LR		
	comp=Z,3µm,22.7s						
TIY	**Taiyuan**	**49.53**	**326**	*e*P	**P**	**08 34 43.1**	**+4.1**
TIY				PP	**PP**	**08 36 35.9**	**+2.4**
TIY				S	**S**	**08 41 47.0**	**+2.3**
TIY				SS	**SS**	**08 45 17.4**	**+0.2**
TIY				pmax	pmax		
	comp=Z,250nm,5.0s						
TIY				LR	LR		
	comp=Z,7µm,21.3s						
TIY				LR	LR		
	comp=Z,4µm,16.1s						
TIY				LR	LR		
	comp=Z,3µm,19.1s						
CM35	**Chiang Mai Arr**	**49.64**	**296**	P	**P**	**08 34 41.0**	**+1.0**
CM36	**Chiang Mai Arr**	**49.64**	**296**	P	**P**	**08 34 41.0**	**+1.0**
CM34	**Chiang Mai Arr**	**49.70**	**296**	P	**P**	**08 34 42.0**	**+1.5**
CM04	**Chiang Mai Arr**	**49.71**	**296**	P	**P**	**08 34 42.0**	**+1.5**
	comp=Z,680nmcomp=Z,74nm,1.1s						
CM09	**Chiang Mai Arr**	**49.71**	**296**	P	**P**	**08 34 42.5**	**+2.0**
	comp=Z,693nmcomp=Z,78nm,0.9s						
CM01	**Chiang Mai Arr**	**49.73**	**296**	P	**P**	**08 34 42.0**	**+1.3**
	comp=Z,68nm,0.9s						
CM05	**Chiang Mai Arr**	**49.74**	**296**	P	**P**	**08 34 42.5**	**+1.7**
	comp=Z,540nmcomp=Z,62nm,1.2s						
CM02	**Chiang Mai Arr**	**49.75**	**296**	P	**P**	**08 34 42.8**	**+1.9**
	comp=Z,577nmcomp=Z,78nm,0.9s						
CM31	**Chiang Mai Arr**	**49.76**	**296**	P	**P**	**08 34 43.0**	**+2.0**
	comp=Z,21µmcomp=Z,2µm,0.9s						
CM31	**Chiang Mai Arr**	**49.76**	**296**	P	**P**	**08 34 42.4**	**+1.5**
CM31				IAmb	IAmb	08 34 45.7	
	comp=Z,129nm,1.1s						
CMAR	**Chiang Mai Arr**	**49.76**	**296**	P	**P**	**08 34 42.5**	**+1.6**
	comp=Z,64nm,1.0s,baz=115,slow=5.7,SNR=94						
CMAR				S	**S**	**08 41 51.6**	**+3.4**
	comp=Z,1.3nm,0.3s,baz=143,slow=24,SNR=2.1						
CMAR				LR	LR	08 54 37.7	
	comp=Z,1µm,21.6s,baz=115,slow=35						
CMAR	**Chiang Mai Arr**	**49.76**	**296**	P	**P**	**08 34 42.2**	**+1.3**
CMAR	**Chiang Mai Arr**	**49.76**	**296**	P	**P**	**08 34 42.2**	**+1.3**
CM15	**Chiang Mai Arr**	**49.77**	**296**	P	**P**	**08 34 43.0**	**+2.0**
	comp=Z,708nmcomp=Z,90nm,0.9s						
CM15	**Chiang Mai Arr**	**49.77**	**296**	P	**P**	**08 34 43.0**	**+2.0**
CM13	**Chiang Mai Arr**	**49.78**	**296**	P	**P**	**08 34 42.8**	**+1.7**
	comp=Z,612nmcomp=Z,68nm,0.9s						
CMMT	**Chiang Mai**	**49.87**	**296**	P	**P**	**08 34 42.0**	**+0.2**
	comp=Z,1µmcomp=Z,33nm,1.3s						
CMMT	**Chiang Mai**	**49.87**	**296**	P	**P**	**08 34 41.5**	**-0.2**
CM33	**Chiang Mai Arr**	**49.87**	**296**	P	**P**	**08 34 43.0**	**+1.2**
CHTO	**Chiang Mai**	**49.87**	**296**	P	**P**	**08 34 39.8**	**-2.0**
CHTO				pmax	pmax		
	comp=Z,180nm,1.5s						
CHTO	**Chiang Mai**	**49.87**	**296**	P	**P**	**08 34 39.8**	**-2.0**
CHTO				IAmb	IAmb	08 34 49.3	
	comp=Z,180nm,1.5s						
CM32	**Chiang Mai Arr**	**49.91**	**296**	P	**P**	**08 34 44.0**	**+2.0**
BSI	**Banda Aceh**	**50.45**	**278**	P	**P**	**08 34 41.9**	**-4.4**
	comp=Z,347nm,0.8s						
MHMT	**Maesarieng**	**50.58**	**295**	P	**P**	**08 34 47.9**	**+0.7**
MHMT	**Maesarieng**	**50.58**	**295**	P	**P**	**08 34 48.6**	**+1.4**
CD2	**Chengdu**	**51.03**	**313**	P	**P**	**08 34 51.2**	**+0.8**
CD2				S	**S**	**08 42 07.9**	**+2.2**
CD2				pmax	pmax		
	comp=Z,60nm,0.7s						
CD2				pmax	pmax		
	comp=Z,1µm,4.4s						
CD2				LR	LR		
	comp=Z,12µm,19.7s						
CD2				LR	LR		
	comp=Z,8µm,18.7s						
CD2				LR	LR		
	comp=Z,5µm,17.5s						
KLR	**Kul'dur**	**51.95**	**349**	P	**P**	**08 34 57.4**	**+0.5**
	comp=Z,76nm,1.0s,baz=165,slow=5.7,SNR=117						
KLR				LR	LR	08 55 53.4	
	comp=Z,792nm,20.5s,baz=159,slow=35						
KLR	**Kul'dur**	**51.95**	**349**	*d i*P	**P**	**08 34 56.9**	**0.0**
HHC	**Hu-ho-hao-te**	**52.22**	**328**	*e*P	**P**	**08 34 59.2**	**0.0**
HHC				S	**S**	**08 42 21.3**	**-0.6**
HHC				pmax	pmax		
	comp=Z,36nm,1.2s						
HHC				pmax	pmax		
	comp=Z,390nm,5.0s						
HHC				LR	LR		
	comp=Z,5µm,21.4s						
HHC				LR	LR		
	comp=Z,6µm,23.5s						
HHC				LR	LR		
	comp=Z,850nm,21.2s						
TYV	**Tymovskoe**	**52.30**	**358**	*e*P	**P**	**08 34 59.8**	**+0.4**
TYV				*e*S	**S**	**08 42 26.9**	**+4.6**
TYV				pmax	pmax		
	comp=Z,2µm,4.8s						
TYV				pmax	pmax		
	comp=Z,111nm,1.6s						
TYV				smax	smax		
	comp=E,2µm,7.2s						
GRNR	**Gornyy**	**52.70**	**353**	⇓*i*P	**P**	**08 35 03.2**	**+0.7**
GRNR				*e*S	**S**	**08 42 32.9**	**+4.9**
GRNR				pmax	pmax		
	comp=N,20nm,1.3s						
GRNR				pmax	pmax		
	comp=Z,40nm,1.3s						
GRNR				smax	smax		
	comp=N,3.0nm,0.8s						
GRNR				MLR	MLR		
	comp=N,370nm,15.0s						
SKR	**Severo-Kuril's**	**52.88**	**9**	⇓*e*P	**P**	**08 35 02.7**	**-1.0**
BTO	**Baotou**	**52.89**	**327**	*e*P	**P**	**08 35 05.0**	**+0.9**
BTO				S	**S**	**08 42 34.5**	**+3.5**
LZH	**Lanzhou**	**53.80**	**318**	⇑P	**P**	**08 35 12.1**	**+1.1**
LZH				S	**S**	**08 42 45.6**	**+1.9**
LZH				SS	**SKiKP**	**08 46 21.9**	**-0.9**
LZH				pmax	pmax		
	comp=N,77nm,1.1s						
LZH				pmax	pmax		
	comp=N,1µm,6.5s						
LZH				LR	LR		
	comp=N,3µm,18.4s						
LZH				LR	LR		
	comp=N,3µm,19.5s						
LZH				LR	LR		
	comp=N,2µm,17.9s						
DGPR	**DIGLIPUR**	**53.98**	**287**	*e*P	**P**	**08 35 11.3**	**-1.1**
DGPR				IAmb	IAmb	08 35 18.3	
	comp=Z,146nm,1.7s						
NKL	**Nikolayevsk**	**54.68**	**357**	*e*P	**P**	**08 35 16.3**	**-0.5**
NKL				*e*S	S	08 43 06.2	+12
NKL				pmax	pmax		
	comp=E,41nm,0.7s						

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NKL                                  pmax    pmax
       comp=N,7.0nm,1.0s
NKL                                  pmax    pmax
       comp=Z,99nm,1.0s
NKL                                  pmax    pmax
       comp=Z,153nm,2.4s
HIA    Hailar            55.26 340 d iP      P        08 35 20.8 -0.4
HIA                                  pmax    pmax
       comp=Z,65nm,1.3s
HIA    Hailar            55.26 340   P       P        08 35 19.9 -1.2
HIA                                  IAmb    IAmb     08 35 22.7
       comp=Z,215nm,1.6s
PEA0B  Petropavlovsk-    55.48   9   P       P        08 35 23.6 +1.0
PEA0B                                pmax    pmax
       comp=Z,299nm,1.4s
PEA0B  Petropavlovsk-    55.48   9   P       P        08 35 23.6 +1.0
PETK   Petropavlovsk-    55.48   9   P       P        08 35 23.8 +1.1
       comp=Z,48nm,0.8s,baz=162,slow=6.5,SNR=45
PETK                                 LR      LR       08 55 27.9
       comp=Z,3µm,22.0s,baz=198,slow=32
PETK   Petropavlovsk-    55.48   9   P       P        08 35 23.3 +0.7
PETK   Petropavlovsk-    55.48   9   P       P        08 35 23.3 +0.7
PET    Petropavlovsk     55.55  10⇓ eP       P        08 35 21.7 -1.4
PET                                  pmax    pmax
       comp=Z,447nm,1.4s
IMP    Imphal            56.25 301  eP       P        08 35 26.2 -2.6
MOKO   MOKOCHONG         56.29 303  eP       P        08 35 31.4 +2.2
SAIH   SAIHA             56.32 298  ex       S        08 43 17.6 -0.3
KOHI   KOHIMA            56.42 302  ex       P        08 35 24.3 -5.8
KOHI                                ex       x        08 43 30.2
ZEA    Zeya              57.15 347 deP       P        08 35 34.7 +0.2
ZEA                                 e                 08 37 49.9
ZEA                                 eS       S        08 43 29.4 +2.0
ZEA                                 e                 08 45 23.1
ZEA                                 eSS      SS       08 47 16.1 -0.8
ZEA                                  pmax    pmax
       comp=E,10.0nm,1.3s
ZEA                                  pmax    pmax
       comp=N,40nm,1.0s
ZEA                                  pmax    pmax
       comp=Z,80nm,1.3s
ZEA                                  pmax    pmax
       comp=Z,400nm,4.1s
ZEA                                  pmax    pmax
       comp=N,200nm,4.1s
ZEA                                  pmax    pmax
       comp=Z,200nm,6.0s
ZEA                                  smax    smax
       comp=E,600nm,8.1s
ZIRO   ZIRO              57.29 304  eP       P        08 35 37.9 +1.6
XMAS   Kiritimati        57.34  87   IAMs_20 IAMs_20  08 57 39.2
       comp=Z,6µm,20.0s
TEZP   TEZPUR            57.84 303  eP       P        08 35 40.8 +0.9
BELO   BELONIA           57.90 299  eP       P        08 35 40.8 +0.4
BELO                                ex       x        08 43 51.6
SHL    Shillong          58.26 301   P       P        08 35 43.3 +0.2
SHL                                  pmax    pmax
       comp=Z,91nm,0.8s
SHL    Shillong          58.26 301  eP       P        08 35 43.8 +0.6
SHL                                 eP       P        08 35 45.5 +2.4
SHL                                 ex       x        08 43 46.0
SHL    Shillong          58.26 301   P       P        08 35 43.3 +0.2
SHL                                  IAmb    IAmb     08 35 46.8
       comp=Z,91nm,0.8s
GTA    Gaotai            58.30 320  ⇓P       P        08 35 43.5 +0.4
GTA                                  pP      pP       08 35 49.7 -3.5
GTA                                  sP      sP       08 35 53.3 -3.5
GTA                                  S       S        08 43 47.0 +3.6
GTA                                  pmax    pmax
       comp=Z,43nm,1.2s
GTA                                  pmax    pmax
       comp=Z,430nm,7.5s
GTA                                  LR      LR
       comp=Z,2µm,17.8s
GTA                                  LR      LR
       comp=Z,2µm,19.3s
GTA                                  LR      LR
       comp=Z,2µm,19.3s
GUWA   GUWAHATI          58.62 302  eP       P        08 35 46.1 +0.7
GUWA                                eS       S        08 43 55.6 +7.9
SMY    Shemya            59.27  20   P       P        08 35 51.2 +1.9
SMY                                  pmax    pmax
       comp=Z,370nm,1.3s
SMY    Shemya            59.27  20   P       P        08 35 51.2 +1.9
SMY                                  IAMs_20 IAMs_20  08 56 08.0
       comp=Z,5µm,22.0s
ULN    Ulaanbaatar       59.45 331 d iP      P        08 35 51.3 +0.3
ULN                                  pmax    pmax
       comp=Z,88nm,1.7s
ULN                                  MLR     MLR
       comp=Z,2µm,20.0s
ULN    Ulaanbaatar       59.45 331   P       P        08 35 50.6 -0.4
SONM   Songino Array     59.75 331   P       P        08 35 53.8 +0.8
       comp=Z,9.9nm,0.8s,baz=144,slow=7.9,SNR=56
SONM                                 LR      LR       09 03 06.5
       comp=Z,2µm,19.2s,baz=133,slow=38
SONM                                 PKP2bc           09 05 18.5
       comp=Z,0.4nm,0.9s,baz=300,slow=2.8,SNR=2.2
SONM   Songino Array     59.75 331   P       P        08 35 52.6 -0.4
SONM                                 pmax    pmax
       comp=Z,26nm,1.2s
SONM   Songino Array     59.75 331   P       P        08 35 52.5 -0.4
CIT    Chita             59.76 338  eP       P        08 35 52.4 -0.5
CIT                                 e                 08 36 05.8
CIT                                 e                 08 36 38.8
CIT                                 e                 08 37 59.4
CIT                                  pmax    pmax
       comp=Z,263nm,2.0s
KIP    Kipapa            59.88  64⇓ eP       P        08 35 55.3 +1.1
KIP                                  pmax    pmax
       comp=Z,73nm,1.1s
KIP    Kipapa            59.88  64   P       P        08 35 55.6 +1.4
AMKA   Amchitka          60.13  24   P       P        08 35 55.5 +0.2
LSA    Lhasa             60.29 306   P       P        08 35 58.3 +0.9
LSA                                  S       S        08 44 07.4 -2.7
LSA                                  pmax    pmax
       comp=Z,110nm,1.5s
LSA                                  LR      LR
       comp=Z,17µm,22.8s
LSA                                  LR      LR
       comp=Z,6µm,22.1s
LSA                                  LR      LR
       comp=Z,3µm,17.1s
LSA    Lhasa             60.29 306   P       P        08 35 57.5  0.0
LSA                                  pmax    pmax
       comp=Z,223nm,2.0s
LSA    Lhasa             60.29 306   P       P        08 35 57.5  0.0
LSA                                  IAmb    IAmb     08 36 09.3
       comp=Z,223nm,2.0s
MA2    Magadan           61.13   3   P       P        08 36 02.4 +0.4
       comp=Z,46nm,1.0s,baz=181,slow=7.6,SNR=12
MA2    Magadan           61.13   3 d iP      P        08 36 02.4 +0.4
MA2                                  pmax    pmax
       comp=Z,188nm,1.7s
MA2    Magadan           61.13   3   P       P        08 36 02.3 +0.3
GTK    Tadong            61.60 302  eP       P        08 36 03.7 -2.3
HMH    Humu‘ula Sheep    61.75  67   P       P        08 36 08.4 +1.1
ADK    Adak              62.18  26   P       P        08 36 10.0 +0.8
ADK                                  pmax    pmax
       comp=Z,150nm,1.1s
ADK    Adak              62.18  26   P       P        08 36 10.0 +0.8
ADK    Adak              62.18  26   IAMs_20 IAMs_20  08 57 35.3
       comp=Z,5µm,21.0s
TAPN   Taplejung         62.37 302  eP       P        08 36 12.6 +1.2
       comp=Z,321nm,1.1s
BOK    Bokaro            62.95 298   IAmb    IAmb     08 37 04.2
       comp=Z,68nm,0.7s
BOK                                 ex       S        08 44 46.6 +3.5
ZAK    Zakamensk         62.98 331  eP       P        08 36 14.0 -0.8
ZAK                                  pmax    pmax
       comp=Z,50nm,1.1s
ATKA   Atka Island       63.50  27   IAMs_20 IAMs_20  08 58 01.2
       comp=Z,5µm,21.0s
TLY    Talaya            63.68 332   P       P        08 36 19.6 +0.4
       comp=Z,11nm,0.8s,baz=161,slow=5.1,SNR=24
TLY    Talaya            63.68 332 d iP      P        08 36 15.5 -3.7
TLY                                 e                 08 36 53.6
TLY                                 eS       S        08 44 53.3 +2.1
TLY                                 e                 08 46 09.7
TLY                                 eSS      SS       08 48 57.0 -2.5
TLY                                  pmax    pmax
       comp=Z,119nm,1.3s
TLY                                  MLR     MLR
       comp=Z,4µm,20.0s
TLY    Talaya            63.68 332   P       P        08 36 19.4 +0.2
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IRK    Irkutsk           63.77 333  eP       P        08 36 19.5 -0.3
IRK                                  pmax    pmax
       comp=Z,152nm,2.9s
GUN    Gumba             64.08 302  eP       P        08 36 23.8 +1.0
       comp=Z,270nm,0.7s
BOD    Bodaibo           64.29 342  eP       P        08 36 22.3 -0.8
BOD                                  pmax    pmax
       comp=Z,109nm,1.8s
PKI    Pulchoki          64.39 302  eP       P        08 36 25.3 +0.5
       comp=Z,80nm,0.7s
PKIN   Phulchoki         64.40 302  eP       P        08 36 25.3 +0.5
       comp=Z,112nm,0.9s
YAK    Yakutsk           64.56 352   P       P        08 36 25.4 +0.7
       comp=Z,17nm,0.6s,baz=136,slow=1.3,SNR=21
YAK    Yakutsk           64.56 352 d iP      P        08 36 25.1 +0.4
YAK                                 e*PP     pP       08 36 30.0 -4.6
YAK                                 e                 08 36 58.9
YAK                                 e                 08 38 45.8
YAK                                 eS       S        08 45 04.2 +2.6
YAK                                 e*SS     sS       08 45 16.8 -1.7
YAK                                 e                 08 46 15.6
YAK                                 eSS      SS       08 49 12.7 +0.1
YAK                                  pmax    pmax
       comp=Z,99nm,1.1s
YAK                                  pmax    pmax
       comp=N,51nm,1.2s
YAK                                  pmax    pmax
       comp=E,11nm,1.3s
YAK                                  pmax    pmax
       comp=Z,353nm,5.3s
YAK                                  pmax    pmax
       comp=N,220nm,4.7s
YAK                                  pmax    pmax
       comp=E,283nm,5.4s
YAK                                  smax    smax
       comp=E,813nm,3.8s
YAK                                  smax    smax
       comp=N,586nm,4.3s
YAK                                  MLR     MLR
       comp=Z,2µm,23.0s
YAK                                  MLR     MLR
       comp=N,890nm,18.0s
YAK                                  MLR     MLR
       comp=E,339nm,21.0s
YAK    Yakutsk           64.56 352   P       P        08 36 24.8 +0.1
KKN    Kakani            64.56 302  eP       P        08 36 26.7 +1.0
       comp=E,0.9nm,0.6s
SEY    Seymchan          64.57   4   P       P        08 36 25.6 +0.8
       comp=E,62nm,1.1s,baz=183,slow=5.8,SNR=66
SEY    Seymchan          64.57   4⇑ eP       P        08 36 25.9 +1.1
DMN    Daman             64.65 302  eP       P        08 36 27.4 +1.0
       comp=E,314nm,0.9s
MOY    Mondy             64.92 331  eP       P        08 36 27.7 +0.2
MOY                                  pmax    pmax
       comp=Z,227nm,2.6s
PALK   Pallekele         65.06 279   P       P        08 36 28.5 -0.6
PALK                                 pmax    pmax
       comp=Z,47nm,1.1s
PALK                                 MLR     MLR
       comp=Z,1µm,20.0s
PALK   Pallekele         65.06 279   P       P        08 36 28.4 -0.6
PALK                                 IAmb    IAmb     08 36 38.7
       comp=Z,47nm,1.1s
GKN    Gorkha            65.16 302  eP       P        08 36 30.4 +0.8
       comp=Z,174nm,0.6s
PPT    Papeete           65.82 108   P       P        08 36 36.7 +2.8
       comp=Z,17nm,0.8s,baz=306,slow=19,SNR=2.2
PPT                                  LR      LR       09 01 22.8
       comp=Z,2µm,20.1s,baz=268,slow=32
PPT2   Papeete2          65.82 108  eS       S        08 45 17.4 -1.5
       comp=Z,10µm,30.5s
PPT2                                eLQ      LQ       08 53 33.4
       comp=Z,6µm,26.0s
PPT2                                eLR      LR       08 56 24.7
       comp=Z,6µm,29.8s
KOLN   Koldanda          65.98 301  eP       P        08 36 35.8 +0.8
       comp=Z,280nm,1.0s
DANN   Dangsing          66.00 302  eP       P        08 36 35.7 +0.5
       comp=Z,128nm,0.6s
MDRS   Chennai           66.14 285  eP       P        08 36 36.2 +0.3
MDRS                                 IAmb    IAmb     08 36 39.6
       comp=Z,83nm,1.2s
TBI    Tubuai            66.68 115  eS       S        08 45 28.0 -1.1
       comp=Z,8µm,30.0s
TBI                                 eLQ      LQ       08 53 52.5
       comp=Z,6µm,36.5s
TBI                                 eLR      LR       08 56 38.5
       comp=Z,12µm,34.8s
WMQ    Urumqi            68.37 319   P       P        08 36 50.8 +1.1
WMQ                                  sP      pP       08 36 59.9  0.0
WMQ                                  S       S        08 45 50.9 +2.1
WMQ                                  pmax    pmax
       comp=Z,49nm,1.3s
WMQ                                  pmax    pmax
       comp=Z,840nm,4.1s
WMQ                                  LR      LR
       comp=Z,3µm,17.5s
WMQ                                  LR      LR
       comp=Z,2µm,17.7s
WMQ                                  LR      LR
       comp=Z,2µm,22.1s
WMQ    Urumqi            68.37 319   P       P        08 36 49.6 -0.1
WMQ                                  pmax    pmax
       comp=Z,55nm,1.1s
WMQ    Urumqi            68.37 319   P       P        08 36 49.5 -0.1
WMQ                                  IAmb    IAmb     08 36 54.2
       comp=Z,55nm,1.1s
HYB    Hyderabad         68.38 289  i P      P        08 36 50.0 -0.2
HYB                                 esP      pP       08 36 56.0 -4.3
HYB                                 ePcP     PcP      08 37 15.0 -0.5
HYB    Hyderabad         68.38 289  eP       P        08 36 49.1 -1.0
HYB                                  IAmb    IAmb     08 36 52.0
       comp=Z,40nm,1.0s
SPIA   Saint Paul Isl    68.55  24   IAMs_20 IAMs_20  08 59 46.7
       comp=Z,5µm,22.0s
TRD    Trivandrum        68.86 280  eP       P        08 36 54.0 +0.8
TRD                                  IAmb    IAmb     08 36 57.1
       comp=Z,231nm,1.2s
CASY   Casey             69.07 194   P       P        08 36 53.3 -0.1
CASY                                 IAmb    IAmb     08 37 08.7
       comp=Z,57nm,1.1s
BHPL   Bhopal            70.41 295   IAmb    IAmb     08 37 04.3
       comp=Z,139nm,1.4s
BHPL                                ex       P        08 36 58.3 -4.4
BHPL                                eP       P        08 37 01.6 -1.1
BHPL                                ex       x        08 46 23.5
DGZ    Jazzator, Alta    71.08 324 d iP      P        08 37 06.4 +0.1
DGZ                                  pmax    pmax
       comp=Z,40nm,1.0s
DDI    Dehra Dun         71.32 303  eP       P        08 37 09.0 +0.9
DDI                                  IAmb    IAmb     08 37 11.4
       comp=Z,82nm,0.6s
ZSN    Zaisan            71.67 322  eP       P        08 37 08.7 -1.1
       comp=Z,8.6nm,1.4s,baz=321
ZSN                                 eS       S        08 46 28.8 +1.5
       baz=321
ZSN    Zaisan            71.67 322  eP       P        08 37 08.6 -1.2
ZSN                                 eS       S        08 46 28.7 +1.5
ZSN                                  pmax    pmax
       comp=Z,9.0nm,1.4s
SDPT   Sand Point        71.86  29   P       P        08 37 11.3 +0.7
SMLA   Simla             72.25 303  eP       P        08 37 12.9 -0.6
SMLA                                 IAmb    IAmb     08 37 16.0
       comp=Z,123nm,1.4s
GAMB   Gambell           72.52  19   P       P        08 37 15.2 +0.8
GAMB                                 IAmb    IAmb     08 37 29.7
       comp=Z,184nm,1.7s
GOA    Goa               72.62 287  ex       P        08 37 11.1 -4.9
GOA                                  IAmb    IAmb     08 37 18.6
       comp=Z,32nm,0.6s
POO    Poona             72.97 290  eP       P        08 37 18.9 +0.8
MK31   Makanchi Array    73.05 320  i P      P        08 37 18.3 +0.3
MK31                                 pmax    pmax
       comp=Z,69nm,1.1s
MK31   Makanchi Array    73.05 320   P       P        08 37 18.0  0.0
MKAR   Makanchi Array    73.05 320   P       P        08 37 18.8 +0.8
       comp=Z,44nm,1.0s,baz=92,slow=7.1,SNR=139
MKAR                                 PKPPKP  P'P'df   09 04 57.5 -1.2
       comp=Z,0.4nm,0.8s,baz=329,slow=1.7,SNR=3.6
MKAR   Makanchi Array    73.05 320   P       P        08 37 17.4 -0.6
DHRM   DHARAMSHALA       73.22 304  eP       P        08 37 18.3 -1.2
DHRM                                 IAmb    IAmb     08 37 22.4
       comp=Z,198nm,1.3s
MAKZ   Makanchi          73.25 320   P       P        08 37 19.1 -0.1
MAKZ                                 pmax    pmax
       comp=Z,63nm,1.0s
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MAKZ   Makanchi          73.25 320   P       P        08 37 19.1 -0.1
MAKZ                                 IAmb    IAmb     08 37 22.9
       comp=Z,63nm,0.9s
CHGN   Chignik           73.34  29   P       P        08 37 19.9 +0.5
CHGN                                 IAmb    IAmb     08 37 33.0
       comp=Z,172nm,1.4s
SHLS   Shalkode          73.71 316  eP       P        08 37 18.1 -4.0
       comp=Z,35nm,1.0s,baz=316
SHLS                                i S      SKiKP    08 46 48.2 -1.3
       baz=316
SHLS   Shalkode          73.71 316  eP       P        08 37 18.9 -3.2
SHLS                                i S      SKiKP    08 46 48.2 -1.3
SHLS                                 pmax    pmax
       comp=Z,35nm,1.0s
PDGK   Podgornoye        73.74 316  i P      P        08 37 22.1 -0.2
PDGK                                 pmax    pmax
       comp=Z,33nm,0.6s
TIXI   Tiksi             73.88 355 d iP      P        08 37 21.5 -0.8
TIXI                                 pmax    pmax
       comp=Z,175nm,1.7s
TIXI   Tiksi             73.88 355   P       P        08 37 22.1 -0.2
TIXI                                 IAMs_20 IAMs_20  09 14 17.5
       comp=Z,2µm,19.0s
KPKS   Kokpek            74.34 316  eP       P        08 37 24.1 -1.7
       comp=Z,80nm,1.8s,baz=316
KPKS                                eS       S        08 46 58.6 +0.6
       baz=316
KPKS   Kokpek            74.34 316  eP       P        08 37 24.0 -1.7
KPKS                                eS       S        08 46 58.5 +0.6
KPKS                                 pmax    pmax
       comp=Z,80nm,1.8s
ZAA0   Zalesovo Array    74.40 328   P       P        08 37 24.5 -1.3
ZALV   Zalesovo Beam     74.40 328   P       P        08 37 25.5 -0.2
       comp=Z,11nm,0.5s,baz=106,slow=6.4,SNR=47
ZALV                                 PKPPKP  P'P'df   09 04 54.0 -1.7
       comp=Z,0.7nm,0.4s,baz=302,slow=2.7,SNR=3.6
ZALV                                 LR      LR       09 08 48.9
       comp=Z,2µm,21.8s,baz=119,slow=35
ZALV   Zalesovo Beam     74.40 328   P       P        08 37 24.7 -1.1
ZALV   Zalesovo Beam     74.40 328   P       P        08 37 24.7 -1.1
SATY   Saty              74.41 316  eP       P        08 37 25.8 -0.4
       comp=Z,47nm,1.5s,baz=315
SATY                                eS       S        08 47 00.7 +1.8
       baz=315
SATY   Saty              74.41 316  eP       P        08 37 25.8 -0.4
SATY                                eS       S        08 47 00.6 +1.8
SATY                                 pmax    pmax
       comp=Z,47nm,1.5s
TAOE   Nuku Hiva Isla    74.48  99  eLQ      LQ       08 57 14.2
       comp=Z,7µm,24.9s
TAOE                                eLR      LR       09 00 19.0
       comp=Z,4µm,26.0s
TAOE   Nuku Hiva Isla    74.48  99  eT       T        09 59 03.6
       comp=Z,31nm,0.2s
TDK    Taldyqorghan      75.00 317  eP       P        08 37 28.0 -1.4
       comp=Z,62nm,0.7s,baz=317
TDK                                 eS       S        08 47 06.0 +1.0
       baz=317
TDK    Taldyqorghan      75.00 317  eP       P        08 37 28.0 -1.4
TDK                                 eS       S        08 47 06.0 +1.0
TDK                                  pmax    pmax
       comp=Z,62nm,0.7s
ANM    Nome              75.13  20   P       P        08 37 30.5 +0.8
ANM                                  pmax    pmax
       comp=Z,243nm,1.9s
ANM    Nome              75.13  20   P       P        08 37 30.5 +0.8
ANM                                  IAmb    IAmb     08 37 32.6
       comp=Z,243nm,1.9s
KSH    Kashi             75.20 312   P       P        08 37 33.0 +2.1
KSH                                  pP      pP       08 37 38.2 -3.0
KSH                                  S       S        08 47 13.0 +5.3
KSH                                  SKS     SKSac    08 47 35.3 -2.8
KSH                                  pmax    pmax
       comp=Z,4.0nm,0.5s
KSH                                  pmax    pmax
       comp=Z,340nm,4.0s
KSH                                  LR      LR
       comp=Z,4µm,18.0s
KSH                                  LR      LR
       comp=Z,2µm,18.5s
KSH                                  LR      LR
       comp=Z,4µm,26.7s
MDOK   Medeo             75.40 315  eP       P        08 37 30.8 -1.2
       baz=315
MDOK                                eS       S        08 47 10.6 +0.8
       baz=315
MDOK   Medeo             75.40 315  eP       P        08 37 30.7 -1.2
MDOK                                eS       S        08 47 10.6 +0.8
TNSS   Tian-Shan         75.43 315  eP       P        08 37 32.5  0.0
       baz=315
TNSS   Tian-Shan         75.43 315  eP       P        08 37 32.4  0.0
AAA    Alma-Ata          75.50 315  eP       P        08 37 32.5 +0.1
       baz=315
AAA                                 eS       S        08 47 13.1 +2.2
       baz=315
AAA    Alma-Ata          75.50 315  eP       P        08 37 32.5 +0.1
AAA                                 eS       S        08 47 13.0 +2.2
SEM    Semipalatinsk     75.61 323  eP       P        08 37 31.0 -2.1
       comp=Z,39nm,1.3s,baz=323
SEM    Semipalatinsk     75.61 323  eP       P        08 37 31.0 -2.1
SEM                                  pmax    pmax
       comp=Z,39nm,1.3s
CHKK   Chushkaly         75.63 316  eP       P        08 37 33.0 -0.1
       baz=316
CHKK   Chushkaly         75.63 316  eP       P        08 37 33.0 -0.1
MTBS   Maitube           75.82 315  eP       P        08 37 34.5 +0.2
       baz=315
MTBS   Maitube           75.82 315  eP       P        08 37 34.5 +0.2
NIL    Nilore            76.02 305   P       P        08 37 36.0 +0.4
NIL                                  pmax    pmax
       comp=Z,118nm,1.1s
NIL    Nilore            76.02 305   P       P        08 37 36.0 +0.4
NIL                                  IAmb    IAmb     08 37 39.4
       comp=Z,118nm,1.1s
KUU    Kurty             76.09 316  eP       P        08 37 35.5 -0.2
       comp=Z,130nm,1.6s,baz=316
KUU                                 eS       S        08 47 19.3 +2.1
       baz=316
KUU    Kurty             76.09 316  eP       P        08 37 35.5 -0.2
KUU                                 eS       S        08 47 19.3 +2.1
KUU                                  pmax    pmax
       comp=Z,130nm,1.6s
OHAK   Old Harbor        76.27  29   P       P        08 37 38.1 +1.7
OHAK                                 IAmb    IAmb     08 37 50.9
       comp=Z,208nm,1.4s
VNDA   Vanda             76.39 176   P       P        08 37 37.5 +0.7
       comp=Z,9.0nm,0.8s,baz=340,slow=7.1,SNR=13
VNDA                                 LR      LR       09 09 32.2
       comp=Z,2µm,19.6s,baz=348,slow=34
VNDA   Vanda             76.39 176   P       P        08 37 37.8 +1.1
KURK   Kurchatov         76.69 323 d iP      P        08 37 38.6 -0.3
KURK                                 pmax    pmax
       comp=Z,170nm,1.7s
KURK   Kurchatov         76.69 323   P       P        08 37 38.4 -0.5
KURK                                 IAmb    IAmb     08 37 40.2
       comp=Z,139nm,1.3s
KURBB  Kurchatov Arra    76.71 323   P       P        08 37 39.2 +0.2
       comp=Z,36nm,0.9s,baz=109,slow=5.1,SNR=117
KDAK   Kodiak Island     76.86  29   P       P        08 37 40.9 +1.3
       comp=Z,43nm,0.9s,baz=248,slow=4.1,SNR=30
KDAK   Kodiak Island     76.86  29 deP       P        08 37 40.5 +0.8
KDAK                                 pmax    pmax
       comp=Z,122nm,1.2s
KDAK   Kodiak Island     76.86  29   P       P        08 37 41.4 +1.7
KDAK                                 IAmb    IAmb     08 37 42.4
       comp=Z,186nm,1.3s
KDAK   Kodiak Island     76.86  29   IAMs_20 IAMs_20  09 08 56.7
       comp=Z,3µm,21.0s
AAK    Ala-Archa         77.07 314   P       P        08 37 42.2 +0.7
       comp=Z,11nm,0.9s,baz=103,slow=4.9,SNR=21
AAK    Ala-Archa         77.07 314 d iP      P        08 37 41.7 +0.2
AAK                                  pmax    pmax
       comp=Z,124nm,1.7s
AAK                                  MLR     MLR
       comp=Z,5µm,21.0s
AAK    Ala-Archa         77.07 314   P       P        08 37 42.1 +0.7
SGDS   Sogindy           77.17 315  eP       P        08 37 42.0 +0.1
       baz=315
SGDS                                eS       S        08 47 31.7 +2.6
       baz=315
SGDS   Sogindy           77.17 315  eP       P        08 37 42.0 +0.1
SGDS                                eS       S        08 47 31.7 +2.6
BHUJ   Bhuj              77.47 294  eP       P        08 37 44.8 +0.9
BHUJ                                 IAmb    IAmb     08 37 48.9
       comp=Z,95nm,1.0s
TTA    Tatalina          77.68  24   P       P        08 37 45.0 +0.7
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TTA				pmax	pmax		
	comp=Z,81nm,1.2s						
TTA	**Tatalina**	**77.68**	**24**	P	**P**	**08 37 45.0**	**+0.7**
TTA				IAmb	IAmb	08 37 47.0	
	comp=Z,81nm,1.2s						
TTA				IAMs_20	IAMs_20	09 06 10.0	
	comp=Z,4µm,22.0s						
RSO	**Redoubt South**	**77.92**	**27**	P	**P**	**08 37 46.0**	**+0.1**
BTLS	**Baital**	**77.98**	**317**	*e*P	**P**	**08 37 45.1**	**-1.3**
	comp=Z,30nm,1.4s,baz=316						
BTLS	**Baital**	**77.98**	**317**	*e*P	**P**	**08 37 45.0**	**-1.3**
BTLS				pmax	pmax		
	comp=Z,30nm,1.4s						
RDOG	**Red Dog Mine**	**78.05**	**18**	P	**P**	**08 37 47.0**	**+0.8**
RDOG				IAMs_20	IAMs_20	09 06 33.3	
	comp=Z,4µm,22.0s						
HOM	**Homer**	**78.09**	**28**	P	**P**	**08 37 47.3**	**+0.7**
	baz=246						
CNPM	**China Poot**	**78.22**	**28**	P	**P**	**08 37 48.0**	**+0.7**
CNPM				IAMs_20	IAMs_20	09 09 08.7	
	comp=Z,3µm,21.0s						
BRLK	**Bradley Lake**	**78.48**	**28**	P	**P**	**08 37 49.4**	**+0.6**
BRLK				IAmb	IAmb	08 37 52.0	
	comp=Z,221nm,1.7s						
BRLK				IAMs_20	IAMs_20	09 06 06.2	
	comp=Z,3µm,21.0s						
CAPN	**Captain Cook N**	**78.77**	**27**	P	**P**	**08 37 50.9**	**+0.7**
	baz=246						
SKT	**Skwentna**	**79.11**	**25**	IAmb	IAmb	08 37 53.3	
	comp=Z,160nm,1.9s						
SKT				IAMs_20	IAMs_20	09 08 29.9	
	comp=Z,3µm,21.0s						
PPLA	**Purkeypile**	**79.22**	**24**	P	**P**	**08 37 53.5**	**+0.6**
PPLA				IAmb	IAmb	08 38 04.7	
	comp=Z,203nm,1.5s						
PPLA				IAMs_20	IAMs_20	09 06 33.8	
	comp=Z,3µm,21.0s						
SUA	**Susitna One**	**79.23**	**26**	IAMs_20	IAMs_20	09 08 54.3	
	comp=Z,2µm,21.0s						
SEW	**Seward**	**79.28**	**28**	IAmb	IAmb	08 37 55.3	
	comp=Z,164nm,1.2s						
SEW				IAMs_20	IAMs_20	09 06 29.6	
	comp=Z,4µm,22.0s						
O22K	**Cooper Landing**	**79.30**	**27**	IAMs_20	IAMs_20	09 06 45.2	
	comp=Z,4µm,22.0s						
DZA	**Taraz**	**79.39**	**314**	*e*P	**P**	**08 37 53.9**	**-0.3**
	baz=314						
DZA				*e*S	**S**	**08 47 54.9**	**+2.0**
	baz=314						
DZA	**Taraz**	**79.39**	**314**	*e*P	**P**	**08 37 53.9**	**-0.3**
DZA				*e*S	**S**	**08 47 54.9**	**+2.0**
RC01	**Rabbit Creek A**	**79.53**	**27**	P	**P**	**08 37 55.0**	**+0.5**
	baz=247						
KBL	**Kabul**	**79.61**	**305**	P	**P**	**08 37 55.1**	**-0.7**
KBL				pmax	pmax		
	comp=Z,39nm,1.4s						
KBL	**Kabul**	**79.61**	**305**	P	**P**	**08 37 55.1**	**-0.7**
CUT	**Chulitna**	**79.82**	**25**	P	**P**	**08 37 56.0**	**0.0**
	baz=246						
RKT	**Rikitea**	**79.92**	**113**	*e*S	**S**	**08 47 57.0**	**-2.1**
	comp=Z,4µm,30.8s						
RKT	**Rikitea**	**79.92**	**113**	*e*LQ	LQ	08 59 26.7	
	comp=Z,3µm,36.8s						
RKT				*e*LR	LR	09 02 50.4	
	comp=Z,10µm,31.8s						
PMR	**Palmer**	**80.00**	**26**	P	**P**	**08 37 56.7**	**-0.3**
PMR	**Palmer**	**80.00**	**26**	P	**P**	**08 37 56.6**	**-0.3**
PMR				IAMs_20	IAMs_20	09 06 31.5	
	comp=Z,2µm,21.0s						
IMAR	**Indian Mountai**	**80.00**	**21**	P	**P**	**08 37 56.9**	**0.0**
KTH	**Kantishna Hill**	**80.02**	**24**	P	**P**	**08 37 56.5**	**-0.7**
KTH				IAmb	IAmb	08 37 58.7	
	comp=Z,105nm,1.1s						
KTH				IAMs_20	IAMs_20	09 07 44.8	
	comp=Z,2µm,22.0s						
KK31	**Karatay Array**	**80.02**	**314**	P	**P**	**08 37 56.8**	**-0.8**
KK31				pmax	pmax		
	comp=Z,37nm,1.2s						
KK31	**Karatay Array**	**80.02**	**314**	P	**P**	**08 37 56.8**	**-0.8**
KKAR	**Karatay Array**	**80.02**	**314**	P	**P**	**08 37 56.8**	**-0.8**
KKAR				pmax	pmax		
	comp=Z,37nm,1.2s						
KKAR	**Karatay Array**	**80.02**	**314**	P	**P**	**08 37 56.8**	**-0.8**
BRZS	**Berezniki**	**80.12**	**321**	*e*P	**P**	**08 37 57.4**	**-0.5**
	comp=Z,43nm,1.5s,baz=321						
BRZS				*e*S	**S**	**08 48 02.0**	**+1.7**
	baz=321						
BRZS	**Berezniki**	**80.12**	**321**	*e*P	**P**	**08 37 57.3**	**-0.6**
BRZS				*e*S	**S**	**08 48 01.9**	**+1.7**
BRZS				pmax	pmax		
	comp=Z,43nm,1.5s						
GHO	**Glory Hole Cre**	**80.16**	**26**	P	**P**	**08 37 58.6**	**+0.7**
GHO				IAmb	IAmb	08 37 59.8	
	comp=Z,93nm,1.0s						
GHO				IAMs_20	IAMs_20	09 06 48.6	
	comp=Z,3µm,22.0s						
IUG	**Iuzhnay**	**80.18**	**313**	*e*P	**P**	**08 37 57.8**	**-0.9**
	baz=313						
IUG				*e*S	**S**	**08 48 02.8**	**+1.3**
	baz=313						
IUG	**Iuzhnay**	**80.18**	**313**	*e*P	**P**	**08 37 57.7**	**-0.9**
IUG				*e*S	**S**	**08 48 02.7**	**+1.3**
BPAW	**Bear Paw Mtn.**	**80.22**	**24**	P	**P**	**08 37 58.2**	**+0.1**
BPAW				IAMs_20	IAMs_20	09 10 45.1	
	comp=Z,3µm,20.0s						
KNK	**Knik Glacier**	**80.23**	**27**	P	**P**	**08 37 58.5**	**+0.2**
KNK				IAmb	IAmb	08 38 00.5	
	comp=Z,158nm,1.0s						
KNK				IAMs_20	IAMs_20	09 06 06.6	
	comp=Z,3µm,22.0s						
TRF	**Thorofare Moun**	**80.23**	**24**	IAmb	IAmb	08 38 11.6	
	comp=Z,139nm,1.7s						
TRF				IAMs_20	IAMs_20	09 10 57.6	
	comp=Z,3µm,21.0s						
SML	**Sawmill**	**80.43**	**26**	IAMs_20	IAMs_20	09 06 33.9	
	comp=Z,3µm,22.0s						
BRLS	**Borolday**	**80.50**	**314**	*e*S	**S**	**08 48 06.9**	**+2.4**
	baz=314						
Q23K	**Middleton Isla**	**80.50**	**29**	P	**P**	**08 38 00.7**	**+1.1**
	baz=250						
CHM	**Chimkent**	**80.53**	**313**	*e*S	**S**	**08 48 06.9**	**+2.0**
	baz=313						
NRIK	**Noril'sk**	**80.58**	**342**	P	**P**	**08 38 00.5**	**+0.5**
	comp=Z,63nm,1.1s,baz=118,slow=6.0,SNR=78						
NRIK				LR	LR	09 14 02.2	
	comp=Z,719nm,20.1s,baz=128,slow=36						
NRIK	**Noril'sk**	**80.58**	**342**	*d i*P	**P**	**08 37 59.6**	**-0.4**
NRIK				pmax	pmax		
	comp=Z,172nm,1.4s						
NRIK				MLR	MLR		
	comp=Z,1µm,17.0s						
NRIK	**Noril'sk**	**80.58**	**342**	IAmb	IAmb	08 38 01.6	
	comp=Z,189nm,1.4s						
GLI	**Glacier Island**	**80.65**	**27**	IAmb	IAmb	08 38 08.3	
	comp=Z,103nm,1.0s						
GLI				IAMs_20	IAMs_20	09 09 37.8	
	comp=Z,3µm,21.0s						
MLY	**Manley**	**80.70**	**23**	P	**P**	**08 38 01.8**	**+1.0**
	baz=246,SNR=20						
RND	**Reindeer**	**80.81**	**25**	IAmb	IAmb	08 38 02.7	
	comp=Z,165nm,1.0s						
RND				IAMs_20	IAMs_20	09 10 14.8	
	comp=Z,2µm,21.0s						
BWN	**Browne**	**80.86**	**24**	P	**P**	**08 38 01.8**	**+0.3**
BWN				IAMs_20	IAMs_20	09 07 58.9	
	comp=Z,3µm,21.0s						
SCM	**Sheep Creek Mo**	**80.88**	**26**	IAMs_20	IAMs_20	09 08 44.9	
	comp=Z,3µm,21.0s						
FID	**Port Fidalgo**	**80.89**	**28**	IAmb	IAmb	08 38 03.8	
	comp=Z,123nm,1.1s						
FID				IAMs_20	IAMs_20	09 08 46.5	
	comp=Z,3µm,20.0s						
MCK	**McKinley**	**80.90**	**24**	P	**P**	**08 38 01.6**	**-0.2**
	baz=248,SNR=56						
EYAK	**Cordova Ski Ar**	**81.16**	**28**	IAmb	IAmb	08 38 04.9	
	comp=Z,82nm,1.2s						
NEA2	**Nenana**	**81.18**	**23**	P	**P**	**08 38 03.3**	**0.0**
	baz=247						
I23K	**Minto, Yukon-K**	**81.29**	**23**	P	**P**	**08 38 04.2**	**+0.4**
	baz=247,SNR=37						
I23K	**Minto, Yukon-K**	**81.29**	**23**	IAmb	IAmb	08 38 06.2	
	comp=Z,184nm,1.5s						
I23K				IAMs_20	IAMs_20	09 11 27.3	
	comp=Z,3µm,20.0s						
DHY	**Denali Highway**	**81.31**	**25**	IAmb	IAmb	08 38 06.3	
	comp=Z,156nm,1.1s						
DHY				IAMs_20	IAMs_20	09 09 47.1	
	comp=Z,3µm,20.0s						
KLU	**Klutina**	**81.39**	**27**	P	**P**	**08 38 05.4**	**+0.8**
KLU				IAmb	IAmb	08 38 07.1	
	comp=Z,160nm,1.2s						
KLU				IAMs_20	IAMs_20	09 08 10.5	
	comp=Z,4µm,22.0s						
M24K	**Tolsona, Glenn**	**81.49**	**26**	P	**P**	**08 38 06.3**	**+1.3**
	baz=250						
M24K	**Tolsona, Glenn**	**81.49**	**26**	P	**P**	**08 38 05.7**	**+0.7**
M24K				IAMs_20	IAMs_20	09 09 14.0	
	comp=Z,4µm,22.0s						
WRH	**Wood River Hil**	**81.53**	**24**	P	**P**	**08 38 04.7**	**-0.4**
WRH				IAmb	IAmb	08 38 06.4	
	comp=Z,134nm,1.1s						
WRH				IAMs_20	IAMs_20	09 11 57.7	
	comp=Z,3µm,20.0s						
RAGM	**Ragged Mountai**	**81.61**	**28**	IAmb	IAmb	08 38 08.3	
	comp=Z,186nm,1.2s						
RAGM				IAMs_20	IAMs_20	09 06 54.3	
	comp=Z,3µm,19.0s						
MDM	**Murphy Dome**	**81.66**	**23**	P	**P**	**08 38 05.9**	**+0.1**
MDM				IAmb	IAmb	08 38 08.1	
	comp=Z,174nm,1.8s						
MDM				IAMs_20	IAMs_20	09 11 37.1	
	comp=Z,3µm,21.0s						
A21K	**Barrow**	**81.70**	**16**	P	**P**	**08 38 06.9**	**+1.0**
	baz=239						
A21K	**Barrow**	**81.70**	**16**	IAMs_20	IAMs_20	09 08 57.6	
	comp=Z,3µm,22.0s						
CCB	**Clear Creek Bu**	**81.71**	**24**	P	**P**	**08 38 05.4**	**-0.6**
CCB				IAmb	IAmb	08 38 07.2	
	comp=Z,134nm,1.1s						
CCB				IAMs_20	IAMs_20	09 11 29.5	
	comp=Z,3µm,20.0s						
TCOL	**CIGO, UAF Yank**	**81.77**	**23**	P	**P**	**08 38 06.3**	**-0.1**
	baz=248,SNR=15						
TCOL	**CIGO, UAF Yank**	**81.77**	**23**	P	**P**	**08 38 06.0**	**-0.4**
TCOL				IAmb	IAmb	08 38 07.5	
	comp=Z,91nm,1.0s						
TCOL				IAMs_20	IAMs_20	09 11 52.1	
	comp=Z,2µm,20.0s						
COLA	**College**	**81.77**	**23**	*d i*P	**P**	**08 38 05.9**	**-0.5**
COLA				pmax	pmax		
	comp=Z,59nm,1.0s						
COLA	**College**	**81.77**	**23**	P	**P**	**08 38 06.8**	**+0.4**
COLA				IAmb	IAmb	08 38 07.5	
	comp=Z,91nm,1.0s						
COLA	**College**	**81.77**	**23**	IAMs_20	IAMs_20	09 08 55.1	
	comp=Z,2µm,20.0s						
HMT	**Hamilton**	**81.79**	**28**	P	**P**	**08 38 07.5**	**+0.9**
HMT				IAmb	IAmb	08 38 09.1	
	comp=Z,135nm,1.0s						
COLD	**Coldfoot**	**81.82**	**21**	P	**P**	**08 38 08.0**	**+1.4**
	baz=246						
COLD	**Coldfoot**	**81.82**	**21**	P	**P**	**08 38 07.4**	**+0.8**
COLD				IAmb	IAmb	08 38 09.6	
	comp=Z,122nm,1.1s						
SUCK	**Suckling Hills**	**81.94**	**29**	IAMs_20	IAMs_20	09 04 15.1	
	comp=Z,2µm,22.0s						
HDA	**Harding Lake**	**81.97**	**24**	P	**P**	**08 38 06.7**	**-0.7**
	baz=249						
HDA	**Harding Lake**	**81.97**	**24**	P	**P**	**08 38 07.5**	**+0.1**
HDA				IAMs_20	IAMs_20	09 08 07.4	
	comp=Z,4µm,22.0s						
POKR	**Poker Plat Res**	**82.03**	**23**	P	**P**	**08 38 07.0**	**-0.8**
	baz=249,SNR=20						
POKR	**Poker Plat Res**	**82.03**	**23**	P	**P**	**08 38 07.5**	**-0.3**
POKR	**Poker Plat Res**	**82.03**	**23**	IAMs_20	IAMs_20	09 11 38.9	
	comp=Z,3µm,21.0s						
N25K	**Chitina, Valde**	**82.03**	**27**	P	**P**	**08 38 09.1**	**+1.2**
	baz=252						
N25K	**Chitina, Valde**	**82.03**	**27**	P	**P**	**08 38 08.8**	**+0.9**
N25K				IAmb	IAmb	08 38 10.7	
	comp=Z,268nm,1.9s						
N25K				IAMs_20	IAMs_20	09 07 53.3	
	comp=Z,2µm,22.0s						
PAX	**Paxson**	**82.09**	**26**	P	**P**	**08 38 08.9**	**+0.7**
PAX				pmax	pmax		
	comp=Z,59nm,1.1s						
PAX	**Paxson**	**82.09**	**26**	P	**P**	**08 38 08.9**	**+0.7**
PAX				IAmb	IAmb	08 38 10.3	
	comp=Z,59nm,1.1s						
PAX				IAMs_20	IAMs_20	09 09 06.7	
	comp=Z,3µm,22.0s						
IL31		**82.12**	**24**	P	**P**	**08 38 07.4**	**-0.8**
IL31				IAmb	IAmb	08 38 08.9	
	comp=Z,89nm,1.0s						
ILAR	**Eielson Array**	**82.12**	**24**	P	**P**	**08 38 08.1**	**-0.1**
	comp=Z,43nm,0.8s,baz=254,slow=5.2,SNR=350						
ILAR				PKKPbc	**PKKPbc**	**08 56 36.8**	**-3.3**
	comp=Z,0.4nm,0.8s,baz=33,slow=0.4,SNR=6.8						
ILAR				LR	LR	09 12 43.9	
	comp=Z,2µm,19.4s,baz=266,slow=34						
ILAR	**Eielson Array**	**82.12**	**24**	P	**P**	**08 38 07.1**	**-1.1**
ILAR	**Eielson Array**	**82.12**	**24**	P	**P**	**08 38 07.1**	**-1.1**
BVAR	**Borovoye Array**	**82.23**	**324**	P	**P**	**08 38 09.1**	**0.0**
	comp=Z,23nm,0.6s,baz=44,slow=16,SNR=186						
BRVK	**Borovoye**	**82.30**	**324**	P	**P**	**08 38 09.4**	**0.0**
BRVK				pmax	pmax		
	comp=Z,371nm,1.9s						
BRVK	**Borovoye**	**82.30**	**324**	P	**P**	**08 38 09.3**	**0.0**
GLB	**Gilahina Butte**	**82.34**	**27**	P	**P**	**08 38 09.8**	**+0.3**
GLB				IAmb	IAmb	08 38 11.8	
	comp=Z,98nm,1.1s						
VRDI	**Verde Repeater**	**82.44**	**28**	IAMs_20	IAMs_20	09 11 46.2	
	comp=Z,2µm,22.0s						
CRQM	**Cirque**	**82.44**	**28**	IAMs_20	IAMs_20	09 07 33.0	
	comp=Z,2µm,21.0s						
TGL	**Tana Glacier**	**82.59**	**28**	IAmb	IAmb	08 38 13.4	
	comp=Z,137nm,1.1s						
TGL				IAMs_20	IAMs_20	09 09 40.3	
	comp=Z,2µm,22.0s						
TOLK	**Toolik Lake Re**	**82.61**	**20**	P	**P**	**08 38 12.1**	**+1.3**
	baz=246						
TOLK	**Toolik Lake Re**	**82.61**	**20**	IAmb	IAmb	08 38 13.7	
	comp=Z,101nm,1.1s						
TOLK				IAMs_20	IAMs_20	09 14 58.1	
	comp=Z,3µm,20.0s						
MCARA	**McCarthy VSAT**	**82.68**	**27**	P	**P**	**08 38 12.5**	**+1.3**
MCARA				IAmb	IAmb	08 38 20.0	
	comp=Z,66nm,1.0s						
MCARA				IAMs_20	IAMs_20	09 13 22.6	
	comp=Z,2µm,20.0s						
ISLE	**Juniper Island**	**82.78**	**28**	IAMs_20	IAMs_20	09 08 27.2	
	comp=Z,3µm,20.0s						
MENT	**Mentasta**	**82.84**	**26**	P	**P**	**08 38 13.1**	**+1.0**
MENT				IAmb	IAmb	08 38 14.4	
	comp=Z,52nm,0.9s						
MENT				IAMs_20	IAMs_20	09 09 45.5	
	comp=Z,3µm,21.0s						
MESA	**MESA**	**82.85**	**29**	IAmb	IAmb	08 38 15.0	
	comp=Z,84nm,1.1s						
BALM	**Baldy**	**82.90**	**28**	P	**P**	**08 38 12.6**	**+0.1**
BALM				IAmb	IAmb	08 38 14.9	
	comp=Z,98nm,1.0s						
BALM				IAMs_20	IAMs_20	09 07 59.3	
	comp=Z,3µm,19.0s						
DOT	**Dot Lake**	**82.91**	**25**	IAMs_20	IAMs_20	09 10 46.3	
	comp=Z,3µm,20.0s						
PRP	**Porcupine Dome**	**82.92**	**23**	IAMs_20	IAMs_20	09 12 27.5	
	comp=Z,3µm,20.0s						
YAH	**Yahtse**	**83.00**	**29**	IAmb	IAmb	08 38 15.2	
	comp=Z,43nm,0.9s						
SCRK	**Sand Creek**	**83.04**	**25**	P	**P**	**08 38 13.9**	**+0.7**
	baz=252,SNR=33						
BARN	**Barnard Glacie**	**83.22**	**28**	IAmb	IAmb	08 38 17.0	
	comp=Z,95nm,0.8s						
CTGM	**Chitina Glacie**	**83.35**	**28**	P	**P**	**08 38 16.3**	**+1.4**
FYU	**Fort Yukon**	**83.39**	**22**	P	**P**	**08 38 15.3**	**+0.6**
FYU				IAMs_20	IAMs_20	09 09 17.7	
	comp=Z,3µm,22.0s						
PCA	**Pinnacle**	**83.64**	**29**	P	**P**	**08 38 17.4**	**+1.1**
PCA				IAmb	IAmb	08 38 18.1	
	comp=Z,61nm,1.0s						
BCAR	**Beaver Creek A**	**83.72**	**26**	P	**P**	**08 38 16.5**	**-0.1**
BMAR	**Burnt Mountain**	**83.92**	**21**	P	**P**	**08 38 16.0**	**-1.5**
EGAK	**Eagle**	**84.45**	**24**	P	**P**	**08 38 21.9**	**+1.6**
EGAK				IAmb	IAmb	08 38 22.7	
	comp=Z,109nm,1.1s						
DAWY	**Dawson**	**85.01**	**25**	P	**P**	**08 38 23.9**	**+0.8**
HYT	**Haines Junctio**	**85.14**	**29**	P	**P**	**08 38 25.0**	**+1.0**
HRA	**Herat**	**85.16**	**305**	P	**P**	**08 38 24.8**	**0.0**
HRA				IAmb	IAmb	08 38 27.0	
	comp=Z,176nm,1.7s						
MAW	**Mawson**	**85.66**	**202**	P	**P**	**08 38 26.7**	**+0.5**
	comp=Z,59nm,1.3s,baz=74,slow=4.5,SNR=4.3						
MAW				LR	LR	09 12 58.5	
	comp=Z,2µm,20.8s,baz=77,slow=33						
SKAG	**Skagway**	**85.95**	**30**	P	**P**	**08 38 29.6**	**+1.8**
SKAG				IAmb	IAmb	08 38 30.7	
	comp=Z,97nm,1.2s						
BESE	**Bessie Mountai**	**86.04**	**31**	IAmb	IAmb	08 38 31.1	
	comp=Z,116nm,1.1s						
WHY	**Whitehorse**	**86.37**	**29**	P	**P**	**08 38 31.2**	**+1.2**
WHY				IAmb	IAmb	08 38 32.8	
	comp=Z,130nm,1.2s						
WHY				IAMs_20	IAMs_20	09 10 17.3	
	comp=Z,3µm,22.0s						
DIB	**Dawson Inlet,**	**86.58**	**37**	IAmb	IAmb	08 38 41.9	
	comp=Z,117nm,1.2s						
EPYK	**Eagle Plains**	**86.62**	**23**	P	**P**	**08 38 31.6**	**+0.5**
EPYK				IAMs_20	IAMs_20	09 20 22.4	
	comp=Z,2µm,19.0s						
AB31	**Akbulak array**	**88.16**	**319**	⇑*e*P	**P**	**08 38 37.9**	**-0.9**
AB31				pmax	pmax		
	comp=Z,28nm,0.9s						
ABKAR	**Akbulak array**	**88.16**	**319**	P	**P**	**08 38 37.2**	**-1.6**
ABKAR	**Akbulak array**	**88.16**	**319**	P	**P**	**08 38 38.3**	**-0.5**
ABKAR				IAmb	IAmb	08 38 39.8	
	comp=Z,92nm,1.4s						
INK	**Inuvik**	**88.19**	**22**	P	**P**	**08 38 39.2**	**+0.7**
	comp=Z,49nm,1.0s,baz=256,slow=5.1,SNR=81						
QSPA	**South Pole Qui**	**88.36**	**180**	P	**P**	**08 38 39.6**	**+0.1**
QSPA				IAmb	IAmb	08 38 49.1	
	comp=Z,52nm,1.0s						
SVE	**Sverdlovsk**	**88.39**	**327**	*ce*P	**P**	**08 38 38.8**	**-0.9**
SVE				*e*S	**SKSac**	**08 49 08.7**	**+2.7**
SVE				pmax	pmax		
	comp=Z,53nm,1.3s						
DLBC	**Dease Lake**	**88.53**	**32**	P	**P**	**08 38 41.7**	**+1.2**
	comp=Z,42nm,1.1s,baz=268,slow=4.8,SNR=26						
DLBC	**Dease Lake**	**88.53**	**32**	P	**P**	**08 38 41.1**	**+0.7**
GEYT	**Alibeck**	**88.75**	**308**	P	**P**	**08 38 41.8**	**-0.1**
	comp=Z,7.2nm,0.9s,baz=132,slow=4.4,SNR=11						
GEYT				LR	LR	09 20 51.5	
	comp=Z,1µm,20.7s,baz=75,slow=37						
GEYT	**Alibeck**	**88.75**	**308**	P	**P**	**08 38 41.6**	**-0.3**
GYA0B	**ALIBECK ARRAY**	**88.75**	**308**	P	**P**	**08 38 41.9**	**0.0**
AKTO	**Aktyubinsk**	**89.48**	**320**	P	**P**	**08 38 44.3**	**-0.7**
	comp=Z,6.0nm,0.8s,baz=79,slow=5.9,SNR=20						
ARU	**Arti**	**89.50**	**326**	P	**P**	**08 38 43.8**	**-1.2**
	comp=Z,2.4nm,0.2s,baz=75,slow=1.9,SNR=18						
ARU	**Arti**	**89.50**	**326**	*d i*P	**P**	**08 38 43.6**	**-1.4**
ARU				PPP	PPP	08 44 12.5	
ARU				S	**SKSac**	**08 49 13.5**	**+0.8**
ARU				SS	**SS**	**08 55 27.9**	**-1.2**
ARU				pmax	pmax		
	comp=Z,28nm,1.0s						
ARU	**Arti**	**89.50**	**326**	P	**P**	**08 38 43.7**	**-1.2**
UOSS	**Minazif**	**89.85**	**295**	P	**P**	**08 38 46.6**	**-0.8**
KBO	**Bosley Butte**	**91.39**	**48**	IAMs_20	IAMs_20	09 20 32.4	
	comp=Z,2µm,19.0s						
KRMB	**Red Mountain**	**91.62**	**49**	IAMs_20	IAMs_20	09 24 01.4	
	comp=Z,2µm,18.0s						
J01E	**Myrtle Point**	**91.62**	**47**	P	**P**	**08 38 56.9**	**+1.8**
	baz=270						
SOCY	**Socotra**	**91.63**	**282**	P	**P**	**08 38 55.0**	**-0.8**
C36M	**Paulatuk**	**91.69**	**21**	P	**P**	**08 38 55.0**	**+0.2**
	baz=270						
C36M	**Paulatuk**	**91.69**	**21**	P	**P**	**08 38 55.1**	**+0.2**
C36M				IAmb	IAmb	08 38 56.3	
	comp=Z,52nm,1.2s						
C36M				IAMs_20	IAMs_20	09 15 12.0	
	comp=Z,3µm,21.0s						
I02D	**Swisshome**	**91.69**	**46**	P	**P**	**08 38 57.3**	**+1.9**
	baz=270						
NLWA	**Neilton Lookou**	**91.71**	**43**	P	**P**	**08 38 55.6**	**+0.2**
NLWA				IAmb	IAmb	08 39 04.8	
	comp=Z,72nm,1.1s						
KHMM	**Horse Mountain**	**91.75**	**49**	IAmb	IAmb	08 39 15.1	
	comp=Z,34nm,1.2s						
KHMM				IAMs_20	IAMs_20	09 12 13.8	
	comp=Z,2µm,20.0s						
K02D	**Willamette Mer**	**91.81**	**48**	P	**P**	**08 38 57.5**	**+1.4**
	baz=270						
KCPM	**Cahto Peak**	**91.85**	**51**	IAmb	IAmb	08 39 00.4	
	comp=Z,34nm,1.1s						
KCPM				IAMs_20	IAMs_20	09 14 25.7	
	comp=Z,2µm,19.0s						
L02E	**Cave Junction**	**91.86**	**48**	P	**P**	**08 38 58.0**	**+1.7**
	baz=270						
PGC	**Sidney**	**92.00**	**42**	IAmb	IAmb	08 39 05.4	
	comp=Z,77nm,1.2s						
I03D	**Drain, OR**	**92.05**	**47**	P	**P**	**08 38 58.7**	**+1.6**
	baz=270						
G03D	**McMinnville, O**	**92.12**	**45**	P	**P**	**08 38 58.7**	**+1.3**
	baz=270						
D03D	**Eldon**	**92.24**	**43**	P	**P**	**08 39 00.0**	**+2.1**
	baz=270,SNR=16						
HOPS	**Hopland Field**	**92.24**	**51**	IAMs_20	IAMs_20	09 14 36.1	
	comp=Z,2µm,20.0s						
F04D	**Rainier, OR**	**92.29**	**44**	P	**P**	**08 38 59.9**	**+1.8**
	baz=270						
HUMO	**Hull Mountain**	**92.34**	**48**	P	**P**	**08 39 00.4**	**+1.9**
HUMO				IAMs_20	IAMs_20	09 17 41.2	
	comp=Z,2µm,21.0s						
MCCM	**Marconi Confer**	**92.39**	**52**	IAMs_20	IAMs_20	09 11 24.2	
	comp=Z,2µm,21.0s						
M02C	**Callahan**	**92.41**	**49**	P	**P**	**08 39 00.8**	**+1.8**
	baz=270,SNR=12						
D04E	**Lakebay**	**92.45**	**43**	P	**P**	**08 39 01.2**	**+2.4**
	baz=270						
GDXM	**Geysers**	**92.46**	**51**	IAMs_20	IAMs_20	09 11 26.9	
	comp=Z,2µm,20.0s						
O02D	**Mt. Diablo Mer**	**92.46**	**50**	P	**P**	**08 39 01.3**	**+2.1**
	baz=270						
A04D	**Lummi Island**	**92.49**	**41**	P	**P**	**08 39 01.0**	**+2.1**
	baz=270						
H04D	**Lebanon**	**92.49**	**46**	P	**P**	**08 39 00.4**	**+1.3**
	baz=270,SNR=6.3						
YBH	**Yreka Blue Hor**	**92.52**	**48**	P	**P**	**08 38 59.6**	**+0.1**
YBH				pmax	pmax		
	comp=Z,45nm,1.5s						
YBH	**Yreka Blue Hor**	**92.52**	**48**	P	**P**	**08 38 59.6**	**+0.1**
YBH				IAmb	IAmb	08 39 02.6	
	comp=Z,45nm,1.4s						
YBH				IAMs_20	IAMs_20	09 13 50.2	
	comp=Z,2µm,20.0s						
N02D	**Trinity Center**	**92.53**	**49**	P	**P**	**08 39 01.4**	**+1.9**
	baz=270,SNR=13						
E04D	**Cinebar**	**92.60**	**44**	P	**P**	**08 39 01.7**	**+2.1**
	baz=271,SNR=10						
WDC	**Whiskeytown Da**	**92.65**	**50**	P	**P**	**08 39 00.9**	**+0.9**
WDC				pmax	pmax		
	comp=Z,84nm,1.8s						
WDC	**Whiskeytown Da**	**92.65**	**50**	P	**P**	**08 39 00.9**	**+0.9**
WDC				IAmb	IAmb	08 39 03.1	
	comp=Z,84nm,1.8s						
WDC				IAMs_20	IAMs_20	09 12 32.8	
	comp=Z,2µm,20.0s						
I04A	**Tendick Farm,**	**92.73**	**46**	P	**P**	**08 39 01.5**	**+1.2**
	baz=270,SNR=7.9						
L04D	**Klamath Falls**	**92.82**	**48**	P	**P**	**08 39 02.2**	**+1.3**
	baz=270,SNR=8.9						
H04A	**Detroit Lake**	**92.88**	**46**	P	**P**	**08 39 01.5**	**+0.5**
H04A				IAmb	IAmb	08 39 03.6	
	comp=Z,93nm,1.7s						
B05A	**Bryant**	**92.90**	**42**	P	**P**	**08 39 02.2**	**+1.3**
	baz=271,SNR=13						
J04D	**Umpqua Nationa**	**92.95**	**47**	P	**P**	**08 39 02.9**	**+1.3**
	baz=271						
D05A	**Enumclaw**	**92.99**	**43**	P	**P**	**08 39 02.1**	**+0.8**
LON	**Longmire**	**93.12**	**43**	P	**P**	**08 39 03.0**	**+0.9**
LON				pmax	pmax		
	comp=Z,70nm,1.8s						
LON	**Longmire**	**93.12**	**43**	P	**P**	**08 39 03.0**	**+0.9**
LON				IAmb	IAmb	08 39 04.6	
	comp=Z,70nm,1.8s						
LON				IAMs_20	IAMs_20	09 27 34.4	
	comp=Z,2µm,18.0s						
M04C	**Macdoel**	**93.17**	**48**	P	**P**	**08 39 03.4**	**+0.9**
	baz=271,SNR=11						
O03E	**Paynes Creek**	**93.22**	**50**	P	**P**	**08 39 03.5**	**+0.8**
	baz=271,SNR=18						
K04D	**Chiloquin, OR**	**93.22**	**48**	P	**P**	**08 39 04.1**	**+1.4**
	baz=271						
B06A	**Marblemount**	**93.30**	**42**	P	**P**	**08 39 03.1**	**+0.4**
B06A				IAmb	IAmb	08 39 11.0	
	comp=Z,73nm,1.2s						
F05D	**White Salmon**	**93.38**	**44**	P	**P**	**08 39 04.7**	**+1.5**
	baz=271,SNR=7.2						
ORV	**Oroville**	**93.46**	**51**	P	**P**	**08 39 03.9**	**+0.2**
ORV				pmax	pmax		
	comp=Z,47nm,1.7s						

ORV	**Oroville**	**93.46**	**51**	P	**P**	**08 39 03.9**	**+0.2**
ORV				IAmb	IAmb	08 39 12.0	
	comp=Z,47nm,1.6s						
G05D	**Wamic, OR**	**93.49**	**45**	P	**P**	**08 39 05.4**	**+1.7**
	baz=271,SNR=9.6						
I05D	**Terrebonne, OR**	**93.50**	**46**	P	**P**	**08 39 04.9**	**+1.0**
	baz=271,SNR=9.6						
J05D	**Fort Rock, OR**	**93.59**	**47**	P	**P**	**08 39 06.0**	**+1.6**
	baz=271,SNR=17						
C06D	**Leavenworth**	**93.71**	**42**	P	**P**	**08 39 06.1**	**+1.4**
	baz=272						
PINE	**Pine Mountain**	**93.80**	**46**	P	**P**	**08 39 05.6**	**+0.2**
PINE				IAmb	IAmb	08 39 14.5	
	comp=Z,62nm,1.3s						
PINE				IAMs_20	IAMs_20	09 15 04.7	
	comp=Z,2µm,20.0s						
K05A	**Summer Lake**	**93.86**	**47**	IAMs_20	IAMs_20	09 19 35.4	
	comp=Z,2µm,20.0s						
AFDM	**Forest Hills D**	**93.88**	**51**	IAmb	IAmb	08 39 09.4	
	comp=Z,59nm,1.7s						
LTY	**Liberty**	**93.89**	**43**	IAmb	IAmb	08 39 19.7	
	comp=Z,49nm,1.2s						
SYO	**Syowa Base**	**94.13**	**200**	⇑*e*P	**P**	**08 39 05.6**	**-0.5**
SYO	**Syowa Base**	**94.13**	**200**	⇓*e*pP	**P**	**08 39 10.0**	**+3.9**
SYO	**Syowa Base**	**94.13**	**200**	⇓*e*PP	**PP**	**08 42 51.2**	**-1.3**
MOD	**Modoc Plateau**	**94.32**	**48**	IAmb	IAmb	08 39 15.7	
	comp=Z,62nm,1.6s						
MOD				IAMs_20	IAMs_20	09 17 09.7	
	comp=Z,2µm,20.0s						
BEKR	**Beckworth**	**94.33**	**50**	IAMs_20	IAMs_20	09 15 57.4	
	comp=Z,2µm,20.0s						
CMB	**Columbia Colle**	**94.36**	**52**	IAMs_20	IAMs_20	09 21 21.3	
	comp=Z,2µm,18.0s						
KIRV	**Kirov**	**94.43**	**328**	P	**P**	**08 39 06.6**	**-1.1**
	comp=Z,18nm,0.6s,baz=183,slow=1.4,SNR=8.0						
E07A	**Sunnyside**	**94.47**	**44**	P	**P**	**08 39 10.0**	**+1.8**
E07A				IAmb	IAmb	08 39 17.0	
	comp=Z,59nm,1.2s						
RUBR	**Rubicon Trail**	**94.51**	**51**	IAMs_20	IAMs_20	09 10 38.3	
	comp=Z,2µm,22.0s						
PAGB	**Antelope Grade**	**94.52**	**54**	P	**P**	**08 39 10.2**	**+1.5**
PAGB				IAMs_20	IAMs_20	09 22 53.9	
	comp=Z,2µm,18.0s						
HAWA	**Hanford**	**94.70**	**44**	P	**P**	**08 39 10.4**	**+1.1**
SMMC	**Simmler**	**94.74**	**55**	P	**P**	**08 39 11.0**	**+1.2**
	baz=272						
I07A	**Izee**	**94.82**	**46**	P	**P**	**08 39 11.1**	**+1.1**
VCNR	**Virginia City**	**94.90**	**51**	P	**P**	**08 39 11.1**	**+0.5**
PKM	**Mcpherson Peak**	**94.90**	**55**	P	**P**	**08 39 11.6**	**+0.9**
	baz=272						
PNTR	**Pine Nut**	**94.94**	**51**	IAMs_20	IAMs_20	09 10 51.7	
	comp=Z,2µm,22.0s						
D08A	**Wollman Farm,**	**95.09**	**43**	P	**P**	**08 39 12.6**	**+1.6**
PAHR	**Pah Rah Range**	**95.09**	**50**	P	**P**	**08 39 12.5**	**+1.1**
WAKR	**Walker**	**95.09**	**52**	P	**P**	**08 39 11.8**	**+0.3**
WAKR				IAMs_20	IAMs_20	09 27 27.6	
	comp=Z,2µm,18.0s						
G08A	**Pilot Rock**	**95.15**	**45**	IAmb	IAmb	08 39 20.2	
	comp=Z,44nm,1.2s						
SNCC	**San Nicolas Is**	**95.18**	**57**	IAMs_20	IAMs_20	09 20 15.7	
	comp=Z,2µm,19.0s						
MDPB	**Devils Postpil**	**95.41**	**53**	IAMs_20	IAMs_20	09 22 49.0	
	comp=Z,2µm,18.0s						
C09A	**Chrisman Ranch**	**95.48**	**42**	IAmb	IAmb	08 39 21.1	
	comp=Z,30nm,1.1s						
C09A				IAMs_20	IAMs_20	09 23 29.8	
	comp=Z,2µm,19.0s						
WVOR	**Wild Horse Val**	**95.53**	**48**	P	**P**	**08 39 13.9**	**+0.6**
WVOR				pmax	pmax		
	comp=Z,37nm,1.4s						
WVOR				MLR	MLR		
	comp=Z,2µm,18.0s						
WVOR	**Wild Horse Val**	**95.53**	**48**	P	**P**	**08 39 13.9**	**+0.6**
WVOR				IAmb	IAmb	08 39 17.3	
	comp=Z,37nm,1.4s						
WVOR				IAMs_20	IAMs_20	09 23 35.8	
	comp=Z,2µm,18.0s						
E09A	**Wood Farm, Sta**	**95.65**	**44**	P	**P**	**08 39 14.9**	**+1.3**
RYN	**Ryan**	**95.80**	**52**	IAMs_20	IAMs_20	09 13 23.4	
	comp=Z,2µm,21.0s						
OSI	**Osito Audit: C**	**95.81**	**56**	IAMs_20	IAMs_20	09 16 58.0	
	comp=Z,2µm,20.0s						
LHV	**Little Huntoon**	**95.83**	**52**	P	**P**	**08 39 13.6**	**-1.0**
LHV				IAmb	IAmb	08 39 29.5	
	comp=Z,49nm,1.9s						
LHV				IAMs_20	IAMs_20	09 13 25.3	
	comp=Z,2µm,21.0s						
BELG	**Belogornoye**	**95.95**	**322**	P	**P**	**08 39 13.8**	**-1.0**
	comp=Z,48nm,1.0s,baz=290,slow=1.2,SNR=13						
BELG	**Belogornoye**	**95.95**	**322**	*de*P	**P**	**08 39 13.0**	**-1.8**
BELG				pmax	pmax		
	comp=Z,12nm,1.1s						
BELG				MLR	MLR		
	comp=Z,186nm,20.0s						
ISA	**Isabella, Lake**	**95.97**	**54**	P	**P**	**08 39 16.4**	**+1.0**
	baz=272						
ISA	**Isabella, Lake**	**95.97**	**54**	IAMs_20	IAMs_20	09 12 17.2	
	comp=Z,2µm,22.0s						
NVAR	**Mina Array Bea**	**95.98**	**52**	P	**P**	**08 39 16.5**	**+0.9**
	comp=Z,1.7nm,0.7s,baz=252,slow=6.3,SNR=16						
NVAR				PP	**PP**	**08 43 02.0**	**-6.3**
	comp=Z,1.4nm,0.9s,baz=261,slow=7.8,SNR=3.6						
NVAR				LR	LR	09 15 08.9	
	comp=Z,1µm,20.6s,baz=268,slow=31						
NVAR	**Mina Array Bea**	**95.98**	**52**	P	**P**	**08 39 16.2**	**+0.6**
YKA	**Yellowknife Ar**	**96.06**	**27**	P	**P**	**08 39 15.7**	**+0.6**
	comp=Z,14nm,0.9s,baz=279,slow=4.1,SNR=198						
YKA				PP	**PP**	**08 43 06.6**	**-1.1**
	comp=Z,2.5nm,1.1s,baz=286,slow=6.9,SNR=3.5						
YKA				PKiKP	**PKiKP**	**08 43 54.2**	**+0.6**
	comp=Z,0.9nm,0.9s,baz=304,slow=0.3,SNR=4.8						
YKA				PKKPbc	**PKKPbc**	**08 56 02.8**	**-2.4**
	comp=Z,0.8nm,0.9s,baz=104,slow=3.5,SNR=8.7						
YKA				LR	LR	09 20 42.5	
	comp=Z,1µm,20.4s,baz=0.0,slow=34						
YKA	**Yellowknife Ar**	**96.06**	**27**	*ce*P	**P**	**08 39 15.6**	**+0.6**
YKA				pmax	pmax		
	comp=Z,13nm,0.8s						
NV11	**Mina Array Sit**	**96.10**	**52**	P	**P**	**08 39 16.7**	**+0.7**
NV11				IAMs_20	IAMs_20	09 22 09.3	
	comp=Z,2µm,18.0s						
NEW	**Newport**	**96.22**	**42**	P	**P**	**08 39 17.4**	**+1.2**
	baz=275						
NEW	**Newport**	**96.22**	**42**	P	**P**	**08 39 16.2**	**0.0**
NEW				pmax	pmax		
	comp=Z,31nm,1.3s						
NEW	**Newport**	**96.22**	**42**	P	**P**	**08 39 16.2**	**0.0**
NEW				IAmb	IAmb	08 39 24.5	
	comp=Z,31nm,1.2s						
CWC	**Cottonwood Cre**	**96.25**	**54**	P	**P**	**08 39 17.7**	**+0.9**
	baz=273						
PASC	**Pasadena Art C**	**96.27**	**56**	IAMs_20	IAMs_20	09 19 06.3	
	comp=Z,2µm,18.0s						
F10A	**Beach Ranch, E**	**96.32**	**44**	P	**P**	**08 39 17.0**	**+0.2**
BMO	**Blue Mountains**	**96.35**	**45**	P	**P**	**08 39 18.5**	**+1.5**
BMO				pmax	pmax		
	comp=Z,61nm,1.3s						
BMO	**Blue Mountains**	**96.35**	**45**	P	**P**	**08 39 18.5**	**+1.5**
BMO				IAmb	IAmb	08 39 25.5	
	comp=Z,61nm,1.2s						
MWC	**Mount Wilson**	**96.37**	**56**	P	**P**	**08 39 17.2**	**-0.2**
MWC				pmax	pmax		
	comp=Z,31nm,1.4s						
MWC	**Mount Wilson**	**96.37**	**56**	P	**P**	**08 39 17.2**	**-0.2**
MWC				IAmb	IAmb	08 39 31.0	
	comp=Z,31nm,1.4s						
MWC				IAMs_20	IAMs_20	09 17 35.0	
	comp=Z,2µm,20.0s						
EDW2	**Edwards Air Fo**	**96.39**	**55**	P	**P**	**08 39 18.3**	**+1.0**
	baz=273						
LRMC	**Laurel Mtn Rad**	**96.62**	**55**	P	**P**	**08 39 19.2**	**+0.8**
	baz=273						
MPMC	**Manual Prospec**	**96.75**	**54**	P	**P**	**08 39 19.9**	**+0.8**
	baz=273						
GRAC	**Grapevine Rang**	**96.80**	**53**	P	**P**	**08 39 19.7**	**+0.6**
	baz=273						
ABPO	**Ambohimpanom**	**97.13**	**251**	IAMs_20	IAMs_20	09 23 33.2	
	comp=Z,2µm,20.0s						
109C	**Camp Elliot, M**	**97.22**	**57**	IAMs_20	IAMs_20	09 16 14.8	
	comp=Z,2µm,21.0s						
FURC	**Furnace Creek,**	**97.23**	**54**	P	Pdif	08 39 21.7	+0.7
	baz=274						
TJX	**Tijuana**	**97.29**	**58**	IAMs_20	IAMs_20	09 18 16.5	
	comp=Z,2µm,19.0s						
GSC	**Goldstone, Bar**	**97.35**	**55**	IAMs_20	IAMs_20	09 12 57.7	
	comp=Z,2µm,22.0s						
MFID	**Camas Ranch**	**97.52**	**47**	P	Pdif	08 39 23.0	+0.6
MFID				IAMs_20	IAMs_20	09 21 33.4	
	comp=Z,1µm,19.0s						
BAR	**Barrett**	**97.60**	**57**	IAMs_20	IAMs_20	09 14 12.7	
	comp=Z,2µm,20.0s						
TKX	**Tecate**	**97.66**	**58**	IAMs_20	IAMs_20	09 30 37.3	
	comp=Z,2µm,21.0s						
TPNV	**Topopah Spring**	**97.69**	**53**	P	Pdif	08 39 24.0	+0.7
	baz=274						
TPNV	**Topopah Spring**	**97.69**	**53**	IAMs_20	IAMs_20	09 21 20.7	
	comp=Z,2µm,18.0s						
PFO	**Pinyon Flats O**	**97.73**	**56**	IAMs_20	IAMs_20	09 19 30.1	
	comp=Z,2µm,18.0s						
XPFO	**Pion Flat**	**97.73**	**56**	IAMs_20	IAMs_20	09 19 30.1	
	comp=Z,2µm,18.0s						
EUNU	**Eureka**	**97.74**	**8**	P	Pdif	08 39 22.6	+0.1
SHOC	**Shoshone, Teco**	**97.74**	**54**	P	Pdif	08 39 24.7	+1.3
	baz=274						
HEC	**Hector,Ludlow**	**97.76**	**55**	P	Pdif	08 39 24.4	+0.8
	baz=274						
MONP2	**Monument Peak**	**97.80**	**57**	P	Pdif	08 39 25.0	+1.0
	baz=273						
IKP	**In-Ko-Pah, Jac**	**98.08**	**57**	P	Pdif	08 39 26.1	+1.0
	baz=273						
RMX	**La Rumorosa**	**98.10**	**57**	IAMs_20	IAMs_20	09 14 41.3	
	comp=Z,2µm,20.0s						
R11A	**Troy Canyon, C**	**98.12**	**52**	IAMs_20	IAMs_20	09 14 59.8	
	comp=Z,2µm,20.0s						
JTMT	**Jette**	**98.17**	**42**	IAMs_20	IAMs_20	09 25 03.8	
	comp=Z,2µm,19.0s						
ELK	**Elko**	**98.19**	**49**	P	Pdif	08 39 26.4	+0.8
ELK				pmax	pmax		
	comp=Z,24nm,1.7s						
ELK				MLR	MLR		
	comp=Z,1µm,18.0s						
ELK	**Elko**	**98.19**	**49**	P	Pdif	08 39 26.4	+0.8
ELK				IAMs_20	IAMs_20	09 25 31.4	
	comp=Z,1µm,18.0s						
WALA	**Waterton Lakes**	**98.25**	**41**	IAmb	IAmb	08 39 35.5	
	comp=Z,60nm,1.7s						
GMRC	**Granite Mounta**	**98.32**	**55**	P	Pdif	08 39 27.0	+0.9
	baz=274						
SWSC	**Sam W. Stewart**	**98.32**	**57**	P	Pdif	08 39 26.9	+0.9
	baz=274						
HLID	**Hailey**	**98.53**	**46**	P	Pdif	08 39 28.5	+1.5
	baz=276						
BC3	**Big Chuckawall**	**98.56**	**56**	P	Pdif	08 39 28.5	+1.2
	baz=274						
SHPR	**Sheep Range**	**98.60**	**53**	IAMs_20	IAMs_20	09 22 05.8	
	comp=Z,2µm,18.0s						
PRN	**Pahroc Range**	**98.62**	**53**	IAMs_20	IAMs_20	09 19 52.0	
	comp=Z,2µm,19.0s						
IRM	**Iron Mountain**	**98.78**	**56**	P	Pdif	08 39 29.6	+1.5
	baz=274						
TMCR	**Tamitsa**	**98.90**	**335**	*e*P	**P**	**08 39 25.6**	**-2.2**
TMCR				pmax	pmax		
	comp=Z,32nm,1.1s						
KLMR	**Klimovskoe**	**99.04**	**332**	*e*P	**Pdif**	**08 39 25.7**	**-2.8**
KLMR				*e*SS	SS	08 57 44.5	-0.1
KLMR				pmax	pmax		
	comp=Z,65nm,1.3s						
KLMR	**Klimovskoe**	**99.04**	**332**	*e*P	**Pdif**	**08 39 25.8**	**-2.8**
KLMR				AMP		08 39 28.7	
	comp=Z,65nm,1.3s						
KLMR				*e*PP	**PP**	**08 43 23.0**	**-7.7**
KLMR				*e*SS	**SS**	**08 57 44.6**	**0.0**
KLMR				*e*SS	**SS**	**08 57 44.6**	**0.0**
KLMR				LQ	LQ	09 13 45.9	
KLMR				LQ	LQ	09 13 45.9	
KLMR				LR	LR	09 20 00.0	
RES	**Resolute Bay**	**99.11**	**14**	IAmb	IAmb	08 41 40.2	
	comp=Z,12nm,0.4s						
GLA	**Glamis**	**99.13**	**57**	IAMs_20	IAMs_20	09 22 15.1	
	comp=Z,2µm,18.0s						
BCYI	**Bear Canyon**	**99.18**	**45**		**Pdif**	**08 39 31.8**	**+1.9**
SFX	**San Felipe**	**99.24**	**59**	IAMs_20	IAMs_20	09 23 34.4	
	comp=Z,1µm,18.0s						
ZEI	**Tsey**	**99.45**	**313**	*e*P	**Pdif**	**08 39 29.0**	**-2.1**
ZEI				pmax	pmax		
	comp=Z,9.0nm,1.0s						
PSUT	**Pine Spring**	**99.46**	**51**	P	**Pdif**	**08 39 29.8**	**-1.5**
MCMT	**McKenzie Canyo**	**99.51**	**45**	P	**Pdif**	**08 39 30.9**	**-0.5**
PDMCI	**Parker Dam,Lak**	**99.60**	**56**	P	**Pdif**	**08 39 33.6**	**+2.0**
	baz=275						
RAYN	**Ar Rayn**	**99.63**	**293**	P	**Pdif**	**08 39 30.9**	**-1.2**
RAYN				pmax	pmax		
	comp=Z,7.0nm,1.1s						
RAYN	**Ar Rayn**	**99.63**	**293**		**Pdif**	**08 39 30.9**	**-1.2**
APA	**Apatity**	**99.70**	**339**	⇓*i*P	**Pdif**	**08 39 25.3**	**-6.0**
APA				*i*		08 43 32.0	
APA				*i*		08 50 11.0	
APA				*i* PS	PS	08 52 35.0	+1.0
APA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
APA				MLR	MLR		
	comp=Z,3µm,16.0s						
W13A	**Hualapai Mount**	**99.75**	**55**	IAMs_20	IAMs_20	09 25 16.3	
	comp=Z,1µm,18.0s						
KBZ	**Khabaz**	**100.06**	**314**	P	**Pdif**	**08 39 33.9**	**+0.4**
	comp=Z,1.9nm,0.7s,baz=90,slow=9.1,SNR=3.2						
KBZ				LR	LR	09 28 10.5	
	comp=Z,561nm,20.6s,baz=86,slow=37						
KBZ	**Khabaz**	**100.06**	**314**	⇓*e*P	**Pdif**	**08 39 33.0**	**-0.5**
KBZ				pmax	pmax		
	comp=Z,12nm,2.0s						
KBZ				MLR	MLR		
	comp=Z,1µm,23.0s						
DUG	**Dugway, Tooele**	**100.09**	**50**	P	**Pdif**	**08 39 36.1**	**+2.2**
	baz=277						
KIV	**Kislovodsk**	**100.18**	**314**	*e*P	**Pdif**	**08 39 33.0**	**-1.2**
KIV				*e*		08 50 11.7	
KIV				*e*SS	SS	08 58 03.2	+1.4
KIV				pmax	pmax		
	comp=Z,32nm,4.1s						
KIV				pmax	pmax		
	comp=Z,22nm,1.1s						
KIV				MLR	MLR		
	comp=Z,3µm,20.0s						
BOZ	**Bozeman (W)**	**100.26**	**44**	P	**Pdif**	**08 39 36.5**	**+2.0**
	baz=278						
BOZ	**Bozeman (W)**	**100.26**	**44**	IAMs_20	IAMs_20	09 31 18.4	
	comp=Z,2µm,19.0s						
214A	**Organ Pipe Nat**	**100.91**	**58**	IAMs_20	IAMs_20	09 27 10.5	
	comp=Z,1µm,19.0s						
AHID	**Auburn Hatcher**	**101.04**	**47**	IAMs_20	IAMs_20	09 19 27.4	
	comp=Z,2µm,21.0s						
REDW	**Red Top Meadow**	**101.13**	**46**	IAMs_20	IAMs_20	09 20 38.8	
	comp=Z,2µm,21.0s						
EGMT	**Eagleton**	**101.14**	**41**	P	**Pdif**	**08 39 40.2**	**+1.8**
	baz=280						
MOS	**Moscow**	**101.21**	**327**	*e*P	**Pdif**	**08 39 43.3**	**+5.0**
MOS				*e*		08 43 50.8	
MOS				MLR	MLR		
	comp=Z,1µm,18.0s						
LOHW	**Long Hollow**	**101.27**	**46**	IAMs_20	IAMs_20	09 19 37.5	
	comp=Z,2µm,21.0s						
ARCES	**ARCESS Array B**	**101.56**	**342**	P	**Pdif**	**08 39 39.8**	**+0.2**
	comp=Z,7.1nm,0.9s,baz=74,slow=6.7,SNR=2.8						
ARCES				PKiKP	**PKiKP**	**08 44 03.6**	**+0.4**
	comp=Z,4.3nm,1.0s,baz=145,slow=1.9,SNR=4.9						
ARCES				PKKPbc	**PKKPbc**	**08 55 47.8**	**-2.2**
	comp=Z,5.4nm,1.0s,baz=251,slow=2.8,SNR=6.0						
NVL	**N'lazarevskaya**	**101.66**	**194**	*e*P	**Pdif**	**08 39 47.0**	**+7.0**
NVL				pmax	pmax		
	comp=Z,8.0nm,0.7s						
WUAZ	**Wupatki**	**101.75**	**54**	P	**Pdif**	**08 39 43.3**	**+1.8**
	baz=277						
WUAZ	**Wupatki**	**101.75**	**54**	IAMs_20	IAMs_20	09 19 04.2	
	comp=Z,2µm,20.0s						
SRIG	**Santa Rosalia**	**101.78**	**63**	IAMs_20	IAMs_20	09 24 50.1	
	comp=Z,1µm,19.0s						
X16A	**Lo Mia Camp, P**	**101.81**	**55**	IAMs_20	IAMs_20	09 20 46.1	
	comp=Z,2µm,18.0s						
OBN	**Obninsk**	**101.95**	**326**	⇑*i*P	**Pdif**	**08 39 40.4**	**-1.2**
OBN				pmax	pmax		
	comp=Z,46nm,1.5s						
OBN				MLR	MLR		
	comp=Z,2µm,20.6s						
OBN	**Obninsk**	**101.95**	**326**	IAMs_20	IAMs_20	09 24 43.1	
	comp=Z,2µm,20.0s						
RLMT	**Red Lodge**	**101.98**	**44**	P	**Pdif**	**08 39 44.0**	**+1.7**
	baz=280						
BW06	**Boulder Array**	**102.16**	**47**	P	**Pdif**	**08 39 44.6**	**+1.4**
	baz=279						
BW06	**Boulder Array**	**102.16**	**47**	IAMs_20	IAMs_20	09 27 51.1	
	comp=Z,2µm,19.0s						
PDAR	**Pinedale Array**	**102.16**	**47**	P	**Pdif**	**08 39 44.1**	**+0.9**
	comp=Z,1.5nm,0.9s,baz=230,slow=1.2,SNR=8.6						
PDAR				PP	PP	08 43 46.1	-9.1
	comp=Z,1.1nm,1.0s,baz=278,slow=7.2,SNR=2.9						
PDAR				PKiKP	**PKiKP**	**08 44 06.6**	**+1.2**
	comp=Z,2.7nm,1.2s,baz=294,slow=0.9,SNR=3.9						
SOC	**Sochi**	**102.37**	**314**	*e*P	**Pdif**	**08 39 42.6**	**-1.2**
SOC				*e*		08 43 51.0	
TUC	**Tucson**	**102.59**	**57**	IAMs_20	IAMs_20	09 17 15.8	
	comp=Z,1µm,20.0s						
HSIG		**102.78**	**61**	IAMs_20	IAMs_20	09 25 32.2	
	comp=Z,2µm,18.0s						
X18A	**Snowflake**	**103.03**	**55**	IAMs_20	IAMs_20	09 21 34.1	
	comp=Z,1µm,19.0s						
W18A	**Petrified Fore**	**103.13**	**54**	IAMs_20	IAMs_20	09 17 29.7	
	comp=Z,2µm,21.0s						
O20A	**White River Ci**	**103.56**	**49**	P	**Pdif**	**08 39 51.0**	**+1.5**
	baz=280						
O20A	**White River Ci**	**103.56**	**49**	IAMs_20	IAMs_20	09 21 49.6	
	comp=Z,2µm,20.0s						
LAO	**LASA Array**	**103.76**	**42**	P	**Pdif**	**08 39 52.2**	**+2.2**
	baz=283						
MVCO	**Mesa Verde**	**103.83**	**52**	P	**Pdif**	**08 39 51.7**	**+1.0**
	baz=279						
319A	**Douglas**	**103.97**	**58**	IAMs_20	IAMs_20	09 26 54.4	
	comp=Z,1µm,19.0s						
SNAA	**Sanae**	**104.04**	**190**	Pdiff	**Pdif**	**08 39 51.5**	**+0.8**
DAG	**Danmarks Havn**	**104.36**	**356**	*i* P	**Pdif**	**08 39 50.0**	**-1.9**
	comp=Z,5.8nm,0.9s						
DAG	**Danmarks Havn**	**104.36**	**356**	*i* P	**Pdif**	**08 39 50.0**	**-1.9**
DAG	**Danmarks Havn**	**104.36**	**356**	*i* P	**Pdif**	**08 39 50.0**	**-1.9**
DAG				IAmb	IAmb	08 39 51.3	
	comp=Z,5.8nm,0.9s						
K22A	**Casper**	**104.38**	**46**	P	**Pdif**	**08 39 54.1**	**+1.1**
	baz=282						
FINES	**FINESS Array B**	**104.99**	**334**	Pdiff	**Pdif**	**08 39 53.7**	**-1.3**
	comp=Z,3.3nm,0.7s,baz=68,slow=5.5,SNR=13						
VNA2	**Neumayer--Watz**	**105.44**	**189**	Pdiff	**Pdif**	**08 39 53.8**	**-3.0**
VNA3	**Neumayer Olymp**	**105.49**	**188**	Pdiff	**Pdif**	**08 39 55.4**	**-1.7**
Y22D	**IRIS PASSCAL I**	**105.57**	**55**	IAMs_20	IAMs_20	09 24 52.6	
	comp=Z,1µm,20.0s						
ISCO	**Idaho Springs**	**105.61**	**49**	IAMs_20	IAMs_20	09 20 32.8	
	comp=Z,2µm,20.0s						
ANMO	**Albuquerque**	**105.81**	**54**	IAMs_20	IAMs_20	09 19 06.8	
	comp=Z,1µm,19.0s						
SDCO	**Great Sand Dun**	**106.09**	**51**	P	**PKiKP**	**08 44 14.4**	**+1.6**
	baz=281						
SDCO	**Great Sand Dun**	**106.09**	**51**	IAMs_20	IAMs_20	09 19 40.7	
	comp=Z,2µm,21.0s						
EPT	**El Paso**	**106.26**	**57**	IAMs_20	IAMs_20	09 28 21.1	
	comp=Z,1µm,18.0s						
MNK	**Minsk**	**106.91**	**327**	*i* PP	**PP**	**08 44 27.1**	**-2.5**
MNK				*i* PP	**PP**	**08 44 27.1**	**-2.5**
MNK				*i* PP	**PP**	**08 44 27.1**	**-2.5**
MNK				*i* SKS	SKSdf	08 51 48.2	+25
MNK				*i* PS	**PS**	**08 54 02.4**	**+12**
MNK				*i* SS	**SS**	**08 59 34.1**	**+0.9**
MNK				*i* SKKS	**SKKSdf**	**09 02 52.6**	**-2.8**
MNK				*i* SSS	SSS	09 03 35.1	
MNK				*i* LQ	LQ	09 17 55.9	
MNK				*i* LR	LR	09 20 31.5	
MNK				*i* LRM	MLR	09 27 35.0	
	comp=N,960nm,19.4s						
MNK				*i* LRM	MLR	09 29 24.6	
	comp=E,147nm,19.2s						
MNK				*i* LRM	MLR	09 29 31.1	
	comp=Z,998nm,19.2s						
MNTX	**Cornudas Mount**	**107.22**	**57**	P	**PKiKP**	**08 44 15.5**	**+0.8**
	baz=279						
MNTX	**Cornudas Mount**	**107.22**	**57**	IAMs_20	IAMs_20	09 29 20.4	
	comp=Z,1µm,20.0s						
NACGM	**Naroch**	**107.35**	**328**	*i* P	**Pdif**	**08 40 05.6**	**0.0**
NACGM				*i* P	**Pdif**	**08 40 05.6**	**0.0**
NACGM				*i* P	**Pdif**	**08 40 05.6**	**0.0**
NACGM				*i* PPP	PPP	08 46 29.7	
NACGM				*i* SKS		08 50 03.2	
NACGM				*i* SKS	SKSac	08 50 03.4	-40
NACGM				*i* PS	PS	08 53 20.6	-34
NACGM				*i* SS	**SKKPbc**	**08 59 11.4**	**-1.7**
NACGM				*i* SSS	SSS	09 04 39.8	
NACGM				*i* LQ	LQ	09 15 00.5	
NACGM				*i* LR	LR	09 21 45.7	
AKASG	**Malin Array Be**	**107.50**	**323**	Pdiff	**Pdif**	**08 40 05.0**	**-1.4**
	comp=Z,0.2nm,0.3s,baz=52,slow=4.8,SNR=4.2						
AKASG				PKiKP	**PKiKP**	**08 44 14.8**	**+0.2**
	comp=Z,0.2nm,0.2s,baz=58,slow=3.8,SNR=4.1						
AKASG				PKKPbc	**PKKPbc**	**08 55 30.1**	**-1.3**
	comp=Z,0.5nm,0.5s,baz=265,slow=3.3,SNR=4.7						
MSTX	**Muleshoe**	**108.98**	**55**	IAMs_20	IAMs_20	09 26 59.8	
	comp=Z,1µm,18.0s						
TXAR	**Lajitas Array**	**109.05**	**60**	PKiKP	**PKiKP**	**08 44 19.3**	**+1.0**
	comp=Z,0.9nm,0.9s,baz=204,slow=2.0,SNR=2.9						
SUW	**Suwalki**	**109.63**	**328**	IAMs_20	IAMs_20	09 30 16.1	
	comp=Z,1µm,21.0s						
AMTX	**Amarillo**	**109.68**	**53**	IAMs_20	IAMs_20	09 32 41.1	
	comp=Z,1µm,20.0s						
K31A	**O'Neill**	**109.95**	**45**	IAMs_20	IAMs_20	09 25 05.9	
	comp=Z,2µm,20.0s						
CBKS	**Cedar Bluff**	**110.28**	**49**	IAMs_20	IAMs_20	09 29 40.2	
	comp=Z,2µm,20.0s						
BGNE	**Belgrade**	**110.73**	**46**	IAMs_20	IAMs_20	09 29 23.8	
	comp=Z,2µm,21.0s						
ZAIG	**Zacatecas**	**110.97**	**66**	IAMs_20	IAMs_20	09 29 48.0	
	comp=Z,2µm,19.0s						
ECSD	**EROS Data Cent**	**111.09**	**43**	IAMs_20	IAMs_20	09 31 13.0	
	comp=Z,2µm,20.0s						
R32A	**Long Quarter,**	**111.15**	**49**	IAMs_20	IAMs_20	09 23 09.4	
	comp=Z,2µm,19.0s						
B35A	**Bob, Littlefor**	**111.31**	**38**	IAMs_20	IAMs_20	09 22 28.9	
	comp=Z,2µm,21.0s						
MLR	**Muntele Rosu**	**111.37**	**319**	IAMs_20	IAMs_20	09 32 08.8	
	comp=Z,2µm,20.0s						
N33A	**J Bar K, Exete**	**111.44**	**47**	IAMs_20	IAMs_20	09 31 33.5	
	comp=Z,2µm,20.0s						
U32A	**Winter Ranch,**	**111.46**	**51**	IAMs_20	IAMs_20	09 26 04.9	
	comp=Z,2µm,18.0s						
KWP	**Kalwaria Pacla**	**111.78**	**324**	IAMs_20	IAMs_20	09 30 38.4	
	comp=Z,2µm,19.0s						
ABTX	**Abilene, Hawle**	**111.83**	**55**	IAMs_20	IAMs_20	09 41 03.1	
	comp=Z,2µm,19.0s						
L34A	**Svendsen Farm,**	**111.83**	**45**	IAMs_20	IAMs_20	09 34 09.7	
	comp=Z,2µm,18.0s						
WMOK	**Wichita Mounta**	**112.04**	**53**	IAMs_20	IAMs_20	09 22 13.4	
	comp=Z,1µm,20.0s						
JCT	**Junction City**	**112.14**	**58**	IAMs_20	IAMs_20	09 39 20.9	
	comp=Z,1µm,18.0s						
KOLS	**Kolonicke sedl**	**112.34**	**323**	*e*PKIKP	**PKiKP**	**08 44 24.7**	**+0.9**
KOLS	**Kolonicke sedl**	**112.34**	**323**	*e*PKP	**PKiKP**	**08 44 24.7**	**+0.9**
F36A	**Milaca**	**112.40**	**40**	IAMs_20	IAMs_20	09 24 55.1	
	comp=Z,2µm,22.0s						
UZH	**Uzhgorod**	**112.45**	**323**	*e*PKIKP	**PKiKP**	**08 44 25.3**	**+1.3**
UZH				*e*		08 47 28.8	
KSU1	**Kansas State U**	**112.54**	**48**	IAMs_20	IAMs_20	09 27 52.9	
	comp=Z,2µm,20.0s						
N35A	**Tabor**	**112.70**	**46**	IAMs_20	IAMs_20	09 26 53.0	
	comp=Z,2µm,22.0s						
KONO	**Kongsberg**	**112.77**	**337**	IAMs_20	IAMs_20	09 31 08.6	
	comp=Z,2µm,21.0s						
OK029	**Liberty Lake**	**112.82**	**52**	IAMs_20	IAMs_20	09 23 53.9	
	comp=Z,2µm,21.0s						
OKCFA	**Oklahoma City**	**112.92**	**52**	IAMs_20	IAMs_20	09 26 17.7	
	comp=Z,1µm,20.0s						
OK025	**Westminster Rd**	**112.97**	**52**	IAMs_20	IAMs_20	09 38 34.9	
	comp=Z,2µm,21.0s						
T35A	**Sooner Cattle**	**113.25**	**50**	IAMs_20	IAMs_20	09 26 22.0	
	comp=Z,1µm,20.0s						
OK031	**S. Brethren Rd**	**113.26**	**51**	IAMs_20	IAMs_20	09 35 22.5	
	comp=Z,2µm,18.0s						
OK030	**Cody Creek RV**	**113.31**	**51**	IAMs_20	IAMs_20	09 24 40.8	
	comp=Z,2µm,21.0s						
Z35A	**Perchaven, San**	**113.61**	**54**	IAMs_20	IAMs_20	09 32 46.3	
	comp=Z,1µm,20.0s						
LANS	**Liptovska Anna**	**113.89**	**324**	*e*PKP	PKiKP	08 44 35.7	+8.8
435B	**Jarrell**	**113.95**	**57**	IAMs_20	IAMs_20	09 29 25.5	
	comp=Z,1µm,20.0s						
TUL1	**Leonard**	**114.09**	**51**	IAMs_20	IAMs_20	09 30 17.4	
	comp=Z,2µm,20.0s						
PSZ	**Piszkesteto**	**114.21**	**323**	IAMs_20	IAMs_20	09 30 46.5	
	comp=Z,1µm,21.0s						
OKC	**Ostrava-Krasne**	**114.33**	**326**	AMS	AMS	09 38 40.0	
	comp=Z,1µm,17.6s						
UNM	**Universidad Na**	**114.55**	**70**	IAMs_20	IAMs_20	09 23 31.2	
	comp=Z,2µm,21.0s						
P38A	**Dawn**	**114.63**	**47**	IAMs_20	IAMs_20	09 32 59.2	
	comp=Z,2µm,20.0s						
MORC	**Moravsky Berou**	**114.70**	**326**	*e*PKP	PKPdf	08 44 28.8	+0.4
MORC	**Moravsky Berou**	**114.70**	**326**	IAMs_20	IAMs_20	09 34 01.3	
	comp=Z,1µm,21.0s						

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G40A  Rib Lake         114.78  40  IAMs_20  IAMs_20   09 34 41.9
      comp=Z,2µm,18.0s
KRLC  Kraliky          114.97 326 ePKIKP    PKPdf     08 44 30.0 +1.1
KRLC                               MLR      MLR
      comp=Z,1µm,18.5s
KRLC  Kraliky          114.97 326 ePKP      PKPdf     08 44 30.0 +1.1
KRLC                               AMS      AMS       09 34 30.0
      comp=Z,1µm,18.5s
U38A  Gravette         115.02  50  IAMs_20  IAMs_20   09 25 38.9
      comp=Z,2µm,22.0s
OSTC  Ostas            115.04 327  AMS      AMS       09 32 20.0
      comp=Z,1µm,19.0s
JAVC  Velka Javorina   115.08 325 ePKP      PKPdf     08 44 30.6 +1.4
DPC   Dobruska-Polom   115.09 327 ePKP      PKPdf     08 44 36.9 +7.8
DPC                                AMS      AMS       09 38 10.0
      comp=Z,900nm,17.5s
CHVC  Chvalec          115.11 327  AMS      AMS       09 32 40.0
      comp=Z,1µm,18.3s
237A  Washetta, Mont   115.13  55  IAMs_20  IAMs_20   09 34 10.5
      comp=Z,2µm,20.0s
UPC   Upice            115.18 327  AMS      AMS       09 32 40.0
      comp=Z,1µm,15.9s
BOSA  Boshof           115.29 237  PKP      PKPdf     08 44 30.7 +0.5
      comp=Z,1.8nm,0.6s,baz=107,slow=3.2,SNR=4.4
S39A  Bolivar          115.43  49           PKiKP     08 44 28.9 -1.2
VRAC  Vranov           115.47 326 ePKP      PKiKP     08 44 29.7 -0.1
VRAC                              ePP       PP        08 45 29.2 -2.0
MODS  Modra-Piesok     115.54 324 ePKP      PKPdf     08 44 41.6  +12
LSZ   Lusaka           115.64 252  PKIKP    PKiKP     08 44 32.0 +0.8
LSZ                                MLR      MLR
      comp=Z,1µm,20.0s
LSZ   Lusaka           115.64 252           PKiKP     08 44 32.0 +0.8
LSZ   Lusaka           115.64 252  IAMs_20  IAMs_20   09 35 20.6
      comp=Z,1µm,20.0s
KRUC  Moravsky         115.70 325 ePKP      PKPdf     08 44 30.3  0.0
KRUC                              ePP       PP        08 45 29.1 -3.8
P40A  Paris            115.74  46  IAMs_20  IAMs_20   09 28 58.5
      comp=Z,2µm,20.0s
DIVS  Divibare         115.81 319           PKPdf     08 44 31.9 +1.2
W39A  Magazine         115.86  51  P        PKiKP     08 44 30.8 -0.2
      baz=288
W39A  Magazine         115.86  51  IAMs_20  IAMs_20   09 31 36.4
      comp=Z,2µm,19.0s
PVCC  Panska Ves       115.95 327  AMS      AMS       09 33 20.0
      comp=Z,2µm,22.7s
R40A  Maddies Statio   116.02  48  IAMs_20  IAMs_20   09 25 10.9
      comp=Z,2µm,22.0s
BRG   Berggiesshubel   116.09 328 ePKP      PKPdf     08 44 31.9 +0.9
BRG                                Amp                08 44 32.7
      comp=Z,15nm,1.1s
NATX  Nacogdoches      116.13  55  IAMs_20  IAMs_20   09 41 12.2
      comp=Z,2µm,20.0s
N41A  Harden Midland   116.16  45  IAMs_20  IAMs_20   09 33 55.3
      comp=Z,2µm,20.0s
U40A  Yellville        116.22  50  P        PKPdf     08 44 31.6 -0.1
      baz=289
U40A  Yellville        116.22  50  IAMs_20  IAMs_20   09 26 04.6
      comp=Z,2µm,22.0s
MIAR  Mount Ida        116.22  52  IAMs_20  IAMs_20   09 24 27.0
      comp=Z,2µm,22.0s
PRU   Pruhonice        116.25 327  AMS      AMS       09 36 40.0
      comp=Z,1µm,17.9s
PRA   Prague           116.27 327  AMS      AMS       09 33 20.0
      comp=Z,700nm,21.2s
E43A  Lone Tree Farm   116.29  38  IAMs_20  IAMs_20   09 34 26.7
      comp=Z,2µm,21.0s
CLL   Collm            116.34 329 ePKiKP    PKiKP     08 44 32.0 +0.6
CLL                               ePP       PP        08 45 36.0 -1.2
CLL                               ePS       PS        08 55 18.0 -2.0
CLL                               ePPS      PPS       08 56 30.0
CLL                               e                   08 58 48.0
CLL                               eSS       SS        09 01 30.0 -8.7
CLL                               eSKKSacre           09 02 42.0
CLL                               eSSS      SSS       09 05 48.0
CLL                               e                   09 08 00.0
CLL                               eSSSS               09 09 12.0
CLL   Collm            116.34 329 ePKIKP    PKiKP     08 44 32.0 +0.6
CLL   Collm            116.34 329  IAMs_20  IAMs_20   09 35 12.6
      comp=Z,1µm,19.0s
MGMO  Mountain Grove   116.40  49  IAMs_20  IAMs_20   09 33 15.3
      comp=Z,2µm,19.0s
CONA  Conrad Observa   116.58 325 eP        PKiKP     08 44 32.6 +0.5
      comp=Z,6.0nm,1.2s
X40A  Basin Creek Fa   116.82  52  IAMs_20  IAMs_20   09 35 23.9
      comp=Z,2µm,20.0s
CCM   Cathedral Cave   116.85  48  P        PKiKP     08 44 32.8  0.0
      baz=291
CCM   Cathedral Cave   116.85  48  IAMs_20  IAMs_20   09 32 12.1
      comp=Z,1µm,20.0s
CKRC  Cesky Krumlov    117.01 326 ePKP      PKiKP     08 44 33.5 +0.7
CKRC                               AMS      AMS       09 35 40.0
      comp=Z,2µm,17.1s
W41B  Gary Mavity, V   117.06  51  P        PKPdf     08 44 33.1 -0.2
      baz=289
K43A  Burlington       117.08  42  IAMs_20  IAMs_20   09 31 48.3
      comp=Z,2µm,20.0s
NKC   Novy Kostel      117.24 328 ePKIKP    PKiKP     08 44 34.3 +1.1
NKC                                MLR      MLR
      comp=Z,2µm,17.1s
NKC   Novy Kostel      117.24 328 ePKP      PKiKP     08 44 34.3 +1.1
NKC                                AMS      AMS       09 35 10.0
      comp=Z,2µm,17.1s
KHC   Kasperske Hory   117.25 327⇑iPKIKP    PKiKP     08 44 34.1 +0.8
KHC                                pmax     pmax
      comp=Z,35nm,1.7s
KHC                                MLR      MLR
      comp=Z,2µm,19.0s
KHC   Kasperske Hory   117.25 327 ePKP      PKiKP     08 44 33.6 +0.3
KHC                                AMS      AMS       09 32 40.0
      comp=Z,1µm,19.1s
KHC   Kasperske Hory   117.25 327           PKPdf     08 44 33.2 -0.1
KHC                                IAMs_20  IAMs_20   09 32 55.6
      comp=Z,1µm,20.0s
HDIL  Hopedale         117.31  44  IAMs_20  IAMs_20   09 33 33.9
      comp=Z,2µm,21.0s
T42A  Van Buren        117.33  49  IAMs_20  IAMs_20   09 24 56.8
      comp=Z,2µm,22.0s
GEC2  GERESS Array S   117.33 326  PKPdf    PKiKP     08 44 33.8 +0.3
GEC2                               IAMs_20  IAMs_20   09 36 12.9
      comp=Z,2µm,21.0s
GERES GERESS Array B   117.33 326  PKP      PKiKP     08 44 33.9 +0.3
      comp=Z,1.9nm,0.5s,baz=70,slow=1.6,SNR=14
GERES GERESS Array B   117.33 326  PKIKP    PKPdf     08 44 33.5  0.0
GERES GERESS Array B   117.33 326           PKPdf     08 44 33.5  0.0
FVM   French Village   117.48  47  IAMs_20  IAMs_20   09 32 16.7
      comp=Z,2µm,19.0s
P43A  Skaggs, Pawnee   117.51  45  IAMs_20  IAMs_20   09 35 57.2
      comp=Z,2µm,20.0s
L44A  Lake County Fo   117.59  42  P        PKPdf     08 44 34.1  0.0
      baz=296
BISS  Bistriski jare   117.66 324 ePKiKP    PKiKP     08 44 34.2 +0.1
SOKA  Soboth           117.70 324 eP        PKiKP     08 44 34.7 +0.4
      comp=Z,5.0nm,0.9s,SNR=6.2
G45A  Suttons Bay      117.75  38  IAMs_20  IAMs_20   09 32 31.4
      comp=Z,2µm,21.0s
PBMO  Poplar Bluff     117.91  49  IAMs_20  IAMs_20   09 31 02.3
      comp=Z,2µm,20.0s
O44A  Mansfield        118.06  44  IAMs_20  IAMs_20   09 35 02.5
      comp=Z,2µm,20.0s
GRA1  Grafenberg Arr   118.20 328  IAMs_20  IAMs_20   09 35 10.8
      comp=Z,1µm,21.0s
LJU   Ljubljana        118.33 323 i PKiKP   PKiKP     08 44 35.9 +0.5
S44A  Carbondale       118.45  47  IAMs_20  IAMs_20   09 34 40.3
      comp=Z,2µm,20.0s
SIUC  Southern Illin   118.47  47  IAMs_20  IAMs_20   09 34 40.5
      comp=Z,2µm,20.0s
KBA   Koelnbreinsper   118.48 325 eP        PKPdf     08 44 35.7 -0.2
      comp=Z,5.4nm,1.0s
143A  Socs Landing,    118.51  53  IAMs_20  IAMs_20   09 35 06.7
      comp=Z,2µm,20.0s
L46A  Eue Claire       118.75  42  IAMs_20  IAMs_20   09 33 16.2
      comp=Z,2µm,20.0s
MET   Memphis--Engin   118.87  50  IAMs_20  IAMs_20   09 38 43.9
      comp=Z,1µm,19.0s
OLIL  Olney            118.89  46  IAMs_20  IAMs_20   09 34 15.6
      comp=Z,2µm,19.0s
SFIN  Lafayette        118.92  44  P        PKPdf     08 44 36.6 -0.1
      baz=295
SFIN  Lafayette        118.92  44  IAMs_20  IAMs_20   09 32 37.0
      comp=Z,2µm,21.0s
TRI   Trieste          118.96 323  IAMs_20  IAMs_20   09 36 46.2
      comp=Z,2µm,20.0s
J47A  Sunmer           119.14  40  IAMs_20  IAMs_20   09 39 34.4
      comp=Z,2µm,19.0s
ABTA  Abfaltersbach    119.14 325 eP        PKPdf     08 44 37.0 -0.1
      comp=Z,10nm,1.2s
WATA  Walderalm        119.35 326 eP        PKiKP     08 44 37.7 +0.1
      comp=Z,5.3nm,0.6s
WTTA  Wattenberg       119.36 326 eP        PKiKP     08 44 37.9 +0.2
      comp=Z,21nm,1.2s,SNR=8.4
OXF   Oxford           119.48  51  IAMs_20  IAMs_20   09 34 00.2
      comp=Z,2µm,19.0s
MOTA  Moosalm          119.61 326 eP        PKPdf     08 44 37.9 -0.2
      comp=Z,6.3nm,0.7s
SQTA  Sankt Quirin     119.62 326 eP        PKiKP     08 44 38.4 +0.3
      comp=Z,12nm,1.1s
MATQ  Matagami         119.69  31  P        PKPdf     08 44 37.8 -0.2
      baz=309
RETA  Reutte           119.72 326 eP        PKiKP     08 44 38.7 +0.5
      comp=Z,19nm,1.8s
STU   Stuttgart        119.82 328  IAMs_20  IAMs_20   09 36 49.5
      comp=Z,1µm,21.0s
FETA  Feichten         120.01 326 eP        PKiKP     08 44 39.4 +0.5
      comp=Z,16nm,1.2s
L48A  N Adams          120.01  41  IAMs_20  IAMs_20   09 29 48.6
      comp=Z,2µm,21.0s
WVT   Waverly          120.10  48  P        PKPdf     08 44 38.8 -0.3
      baz=293
WVT   Waverly          120.10  48  IAMs_20  IAMs_20   09 33 05.1
      comp=Z,2µm,20.0s
T47A  Sharon Grove     120.30  47  IAMs_20  IAMs_20   09 31 12.3
      comp=Z,2µm,21.0s
DAVA  Damuels          120.33 326 eP        PKiKP     08 44 39.8 +0.3
      comp=Z,4.6nm,0.6s
PLAL  Pickwick Lake    120.34  50  IAMs_20  IAMs_20   09 28 18.8
      comp=Z,2µm,20.0s
AAM   Ann Arbor        120.34  40  IAMs_20  IAMs_20   09 27 29.3
      comp=Z,1µm,20.0s
WCI   Wyandotte Cave   120.39  46  P        PKPdf     08 44 39.4 -0.2
      baz=295
146A  Union            120.40  53  IAMs_20  IAMs_20   09 29 44.8
      comp=Z,2µm,20.0s
LSQQ  Lebel-sur-Quev   120.47  31  P        PKPdf     08 44 39.1 -0.3
      baz=309
BFO   Black Forest     120.54 328  IAMs_20  IAMs_20   09 36 43.7
      comp=Z,1µm,20.0s
INTR  Introdacqua      120.73 319  IAMs_20  IAMs_20   09 36 12.5
      comp=Z,1µm,22.0s
VLDQ  Val d'Or         120.81  32  PKPdf    PKPdf     08 44 38.8 -1.3
WLF   Walferdange      120.81 330  IAMs_20  IAMs_20   09 37 47.8
      comp=Z,2µm,20.0s
P49A  Miami Univ. Ec   120.93  44  P        PKPdf     08 44 40.1 -0.5
      baz=297
Z47A  Carrollton       120.99  52  IAMs_20  IAMs_20   09 32 20.2
      comp=Z,2µm,21.0s
V48A  Smith Brothers   121.00  49  IAMs_20  IAMs_20   09 33 32.1
      comp=Z,2µm,20.0s
ECH   Echery           121.23 329  IAMs_20  IAMs_20   09 34 24.8
      comp=Z,2µm,20.0s
I51A  Listowel         121.24  38  P        PKPdf     08 44 41.1  0.0
      baz=302
X48A  Hartselle        121.33  50  IAMs_20  IAMs_20   09 28 48.9
      comp=Z,2µm,22.0s
U49A  Red Boiling Sp   121.47  47  IAMs_20  IAMs_20   09 37 51.2
      comp=Z,2µm,19.0s
HINF  Hinteralfeld     121.64 328 ePKIKP    PKPdf     08 44 41.7 -0.1
HINF                               pmax     pmax
      comp=Z,37nm,1.4s
OSSC  Osservatorio P   121.64 322  IAMs_20  IAMs_20   09 39 27.2
      comp=Z,1µm,22.0s
ALGO  Algonquin Park   121.78  34  P        PKPdf     08 44 41.6 -0.4
      baz=306
M51A  Elyria           121.78  41  P        PKiKP     08 44 42.4  0.0
      baz=300
HAU   Haudompre        121.78 329 ePKIKP    PKPdf     08 44 42.1 +0.1
HAU                                pmax     pmax
      comp=Z,3.0nm,0.2s
ACSO  Alum Creek Sta   121.79  42  P        PKPdf     08 44 42.1 -0.2
      baz=299
VLC   Villacollemand   121.81 323  IAMs_20  IAMs_20   09 39 09.8
      comp=Z,1µm,19.0s
N51A  Ashland          121.86  41           PKPdf     08 44 42.2 -0.2
LRAL  Lakeview Retre   121.89  52  P        PKPdf     08 44 42.5 -0.2
      baz=292
LRAL  Lakeview Retre   121.89  52  IAMs_20  IAMs_20   09 39 24.9
      comp=Z,2µm,20.0s
Y49A  Blount Mountai   122.04  50  IAMs_20  IAMs_20   09 29 20.8
      comp=Z,2µm,20.0s
G54A  Lake Saint Pet   122.08  35  P        PKPdf     08 44 42.6 -0.1
      baz=306
P51A  Williamsport     122.09  43  IAMs_20  IAMs_20   09 33 23.0
      comp=Z,2µm,21.0s
Q51A  Peebles          122.11  44  IAMs_20  IAMs_20   09 32 36.5
      comp=Z,1µm,20.0s
H53A  Bobcaygeon       122.28  36  P        PKPdf     08 44 42.7 -0.3
      baz=305
W50A  Signal Mountai   122.35  49  IAMs_20  IAMs_20   09 35 52.7
      comp=Z,2µm,21.0s
BRAL  Brewton          122.50  54  P        PKPdf     08 44 43.5 -0.3
      baz=290
D55A  Sainte-Anne-du   122.54  32  P        PKiKP     08 44 43.6  0.0
      baz=309
E55A  Montcerf-Lytto   122.58  33  P        PKPdf     08 44 43.5 -0.1
      baz=309
P52A  Corning          122.65  43  P        PKPdf     08 44 43.9  0.0
      baz=299
L53A  Girard           122.70  39  P        PKPdf     08 44 43.5 -0.4
      baz=302
M53A  WI Miller and    122.70  40  P        PKPdf     08 44 43.3 -0.6
      baz=302
ERPA  Erie             122.78  39  P        PKiKP     08 44 44.3  0.0
      baz=302
V51A  Loudon           122.81  48  IAMs_20  IAMs_20   09 40 05.9
      comp=Z,2µm,20.0s
250A  Grady            122.84  52  IAMs_20  IAMs_20   09 43 29.4
      comp=Z,1µm,19.0s
Q52A  Bidwell          122.88  43  IAMs_20  IAMs_20   09 33 25.9
      comp=Z,1µm,18.0s
D56A  ZEC Mazanza, M   122.90  32  P        PKiKP     08 44 44.4  0.0
      baz=310
N53A  Lisbon           122.92  41           PKiKP     08 44 44.7  0.0
X51A  Calhoun          122.95  49  IAMs_20  IAMs_20   09 29 50.6
      comp=Z,2µm,20.0s
O53A  New Philadelph   122.96  41  P        PKiKP     08 44 44.6 -0.1
      baz=300
E56A  St. Veronique    123.07  32  P        PKiKP     08 44 44.9 +0.1
      baz=310
TZTN  Tazewell         123.08  46  IAMs_20  IAMs_20   09 36 48.8
      comp=Z,2µm,20.0s
LPL   La Plagne        123.13 326 ePKIKP    PKiKP     08 44 46.3 +1.1
LPL                                pmax     pmax
      comp=Z,7.0nm,0.6s
LPG   La Plagne        123.13 326 ePKIKP    PKiKP     08 44 45.3  0.0
LPG                                pmax     pmax
      comp=Z,9.0nm,0.6s
P53A  Whipple          123.22  42  PKPdf    PKPdf     08 44 45.1  0.0
P53A                               IAMs_20  IAMs_20   09 35 05.8
      comp=Z,2µm,21.0s
M54A  Oil Creek Stat   123.31  39  P        PKiKP     08 44 45.5 +0.1
      baz=302
M54A  Oil Creek Stat   123.31  39  IAMs_20  IAMs_20   09 42 04.7
      comp=Z,2µm,19.0s
V52A  Sevierville      123.35  47  IAMs_20  IAMs_20   09 35 05.1
      comp=Z,1µm,20.0s
N54A  Moraine State    123.39  40  P        PKPdf     08 44 45.3  0.0
      baz=302
W52A  Murphy           123.43  48  IAMs_20  IAMs_20   09 38 57.2
      comp=Z,1µm,20.0s
BNI   Bardonecchia     123.45 326  PKIKP    PKPdf     08 44 44.8 -0.7
BNI   Bardonecchia     123.45 326  PKPdf    PKPdf     08 44 44.8 -0.7
MBDF  Montbardon       123.59 325 ePKIKP    PKiKP     08 44 46.0  0.0
MBDF                               pmax     pmax
      comp=Z,8.0nm,0.9s
E57A  Chemin Saint G   123.63  32  P        PKiKP     08 44 45.8 -0.1
      baz=310
PETF  Flores           123.66  71  IAMs_20  IAMs_20   09 28 51.7
      comp=Z,1µm,22.0s
LATQ  La Tuque         123.69  30  P        PKiKP     08 44 45.8 -0.1
      baz=312
152A  Waverly Hall     123.80  51  IAMs_20  IAMs_20   09 40 35.6
      comp=Z,2µm,20.0s
Y52A  Lilburn          123.83  49           PKPdf     08 44 46.3 -0.1
D58A  Chemin du LacG   123.83  31  P        PKiKP     08 44 46.2  0.0
      baz=312
ORIF  Oris-en-Rattie   123.97 326 ePKIKP    PKiKP     08 44 46.6 -0.1
ORIF                               pmax     pmax
      comp=Z,21nm,0.9s
G57A  Newington        124.01  34  P        PKPdf     08 44 46.3  0.0
      baz=309
S54A  Dingess, Beckl   124.09  44  P        PKiKP     08 44 47.0 -0.1
      baz=299
E58A  La Victoria      124.11  31  P        PKPdf     08 44 46.4 -0.1
      baz=311
R54A  Victor           124.13  44  P        PKPdf     08 44 46.6 -0.2
      baz=299
MCWV  Mont Chateau     124.16  41  P        PKPdf     08 44 46.8  0.0
      baz=301
H57A  Richville        124.18  34  P        PKPdf     08 44 46.8 +0.1
      baz=308
M56A  Emporium         124.26  39  P        PKiKP     08 44 47.2 -0.1
      baz=304
M56A  Emporium         124.26  39  IAMs_20  IAMs_20   09 40 13.7
      comp=Z,2µm,20.0s
L56A  Greenwood        124.28  38  P        PKiKP     08 44 47.2 -0.1
      baz=305
L56A  Greenwood        124.28  38           PKPdf     08 44 46.7 -0.4
FRF   La Foret Royal   124.37 324 ePKIKP    PKiKP     08 44 47.3 -0.1
FRF                                pmax     pmax
      comp=Z,123nm,1.8s
D59A  Saint-Raymond    124.42  30  P        PKiKP     08 44 47.7 +0.3
      baz=313
GOGA  Godfrey          124.47  50  P        PKPdf     08 44 47.5 -0.1
      baz=294
GOGA  Godfrey          124.47  50  IAMs_20  IAMs_20   09 41 09.1
      comp=Z,2µm,20.0s
N56A  West Decatur     124.50  39  P        PKiKP     08 44 48.2 +0.4
      baz=303
TEIG  Tepich           124.51  67  IAMs_20  IAMs_20   09 34 37.7
      comp=Z,1µm,20.0s
ESQI  Esquipulas       124.53  73  IAMs_20  IAMs_20   09 35 27.9
      comp=Z,1µm,18.0s
MTO3  Montecristo      124.53  74  IAMs_20  IAMs_20   09 29 39.0
      comp=Z,1µm,21.0s
LONY  Lake Ozonia      124.53  34  P        PKiKP     08 44 47.9 +0.2
      baz=309
K57A  Scipio Center    124.57  37  P        PKPdf     08 44 47.3 -0.2
      baz=306
FLN   La Foliniere     124.58 333 ePKIKP    PKiKP     08 44 47.5 -0.2
FLN                                pmax     pmax
      comp=Z,37nm,1.3s
O56A  Blue Knob Stat   124.68  40  P        PKiKP     08 44 48.1 -0.1
      baz=303
R55A  Marlinton        124.68  43  P        PKPdf     08 44 47.9  0.0
      baz=300
VIVF  Saint-Julien-l   124.68 327 ePKIKP    PKiKP     08 44 48.0  0.0
VIVF                               pmax     pmax
      comp=Z,38nm,1.4s
TSUM  Tsumeb           124.69 245  PKPdf    PKiKP     08 44 49.4 +0.5
F59A  Saint Guilaume   124.71  32  P        PKPdf     08 44 47.4 -0.2
      baz=312
SNET  Serv Nac Est T   124.75  75  IAMs_20  IAMs_20   09 29 38.0
      comp=Z,1µm,20.0s
L57A  Andrews Acres    124.79  38  P        PKiKP     08 44 48.4 +0.1
      baz=305
H58A  Gabriels         124.88  34  P        PKiKP     08 44 48.6 +0.1
      baz=309
I58A  Old Forge        124.89  35  P        PKiKP     08 44 48.6 +0.1
      baz=308
P56A  Dayton Farm, R   124.91  41  P        PKiKP     08 44 48.5 -0.1
      baz=302
Q56A  Snyder Ridge,    124.92  42  P        PKPdf     08 44 48.1 -0.2
      baz=302
D60A  Saint Jean D'O   124.94  30  P        PKiKP     08 44 48.4  0.0
      baz=314
BLA   Blacksburg       125.00  44  P        PKiKP     08 44 48.9  0.0
      baz=299
M57A  Sunshine Farm,   125.00  38  P        PKiKP     08 44 48.9 +0.2
      baz=305
G59A  Clarenceville    125.00  33  P        PKPdf     08 44 48.2  0.0
      baz=311
E60A  Ste Agathe de    125.05  30  P        PKiKP     08 44 48.7 +0.1
      baz=313
N57A  Milroy           125.06  39  P        PKiKP     08 44 48.9 +0.1
      baz=304
K58A  Earlville        125.06  36  P        PKiKP     08 44 48.9 +0.1
      baz=307
F60A  Warwick          125.06  31  P        PKiKP     08 44 48.7  0.0
      baz=312
154A  Montrose         125.07  50  IAMs_20  IAMs_20   09 41 14.1
      comp=Z,2µm,19.0s
D61A  St Aubert, Com   125.10  29  P        PKiKP     08 44 48.7  0.0
      baz=315
R56A  Bull Pasture M   125.10  43  P        PKiKP     08 44 49.4 +0.3
      baz=301
BINY  Binghamton       125.20  37  P        PKiKP     08 44 49.4 +0.3
      baz=306
J59A  Piesco           125.30  35  P        PKPdf     08 44 49.0 +0.1
      baz=309
O57A  Amberson         125.31  40  P        PKiKP     08 44 49.2 -0.2
      baz=304
KMSC  Kings Mountain   125.32  47  P        PKiKP     08 44 49.4 -0.1
      baz=297
T56A  Rocky Mt         125.36  44  P        PKiKP     08 44 49.7 +0.1
      baz=300
S56A  Natural Bridge   125.36  43  P        PKPdf     08 44 49.2  0.0
      baz=300
L58A  Harry Jones Me   125.37  37  P        PKPdf     08 44 49.1  0.0
      baz=306
Q57A  Strasburg        125.44  41  P        PKiKP     08 44 50.4 +0.7
      baz=302
U56A  King             125.44  45  IAMs_20  IAMs_20   09 31 40.0
      comp=Z,2µm,22.0s
P57A  Homestead Farm   125.46  41  P        PKiKP     08 44 50.4 +0.7
      baz=303
E61A  Lac Etchemin     125.49  30  P        PKiKP     08 44 50.3 +0.7
      baz=314
K59A  Cooperstown      125.52  36  P        PKiKP     08 44 50.0 +0.3
      baz=308
N58A  Sunbury          125.54  39  P        PKiKP     08 44 50.2 +0.4
      baz=305
N58A  Sunbury          125.54  39           PKiKP     08 44 49.8  0.0
N58A                               IAMs_20  IAMs_20   09 30 47.5
      comp=Z,2µm,21.0s
F61A  St Evariste      125.55  31  P        PKiKP     08 44 50.3 +0.6
      baz=314
V56A  Mocksville       125.61  46  P        PKiKP     08 44 50.2 +0.1
      baz=298
S57A  Dark Hollow, R   125.74  43  P        PKPdf     08 44 49.8 -0.1
      baz=301
I60A  Shoreham         125.74  34  P        PKiKP     08 44 50.3 +0.2
      baz=310
O58A  Lewisberry       125.81  39  P        PKiKP     08 44 50.6 +0.2
      baz=304
255A  Hazlehurst       125.84  51  IAMs_20  IAMs_20   09 33 38.5
      comp=Z,1µm,20.0s
T57A  Hurt             125.91  44  P        PKiKP     08 44 51.2 +0.5
      baz=300
M59A  Waymart          125.92  37  P        PKiKP     08 44 50.8 +0.2
      baz=307
P58A  Pank, Wackersv   125.92  40  P        PKiKP     08 44 51.2 +0.6
      baz=304
Q58A  Fox Den Farm,    125.97  41  P        PKiKP     08 44 50.9 +0.2
      baz=303
CAF   Calviac          126.04 328 ePKIKP    PKiKP     08 44 52.2 +1.5
CAF                                pmax     pmax
      comp=Z,41nm,1.4s
H61A  Lyndonville      126.04  32  P        PKiKP     08 44 51.1 +0.4
      baz=312
J60A  Lant Hill Farm   126.05  34  P        PKiKP     08 44 51.2 +0.5
      baz=310
RJF   Les Rejaudoux    126.06 329 ePKIKP    PKiKP     08 44 50.9 +0.2
RJF                                pmax     pmax
      comp=Z,63nm,1.8s
N59A  State Game Lan   126.08  38  P        PKiKP     08 44 51.3 +0.4
      baz=306
V57A  Coltrane Farms   126.09  45  P        PKiKP     08 44 51.3 +0.2
      baz=299
R58A  Rapidan          126.10  42  P        PKiKP     08 44 51.4 +0.4
      baz=302
O59A  Robesonia        126.17  39  P        PKiKP     08 44 51.4 +0.3
      baz=305
LBNH  Lisbon           126.23  33  P        PKiKP     08 44 51.7 +0.6
      baz=312
MVL   Millersville     126.24  39           PKiKP     08 44 51.4 +0.2
G62A  West of Eustis   126.31  31  P        PKiKP     08 44 51.7 +0.5
      baz=314
P59A  Jarrettsville    126.41  40  P        PKiKP     08 44 52.0 +0.4
      baz=304
S58A  Poland Farm, P   126.42  43  P        PKiKP     08 44 51.9 +0.3
      baz=302
T58A  Grand View Acr   126.44  44  P        PKiKP     08 44 51.9 +0.2
      baz=301
J61A  Chester          126.47  34  P        PKiKP     08 44 51.7 +0.1
      baz=310
K61A  Williamstown     126.50  35  P        PKiKP     08 44 52.1 +0.4
      baz=309
N60A  Cedar Hill Far   126.52  38  P        PKiKP     08 44 52.2 +0.4
      baz=306
M60A  Port Jervis      126.53  37  P        PKiKP     08 44 52.2 +0.4
      baz=307
TGUH  Tegucigalpa,Un   126.58  74  IAMs_20  IAMs_20   09 30 39.4
      comp=Z,2µm,21.0s
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V58A	Windy Hill, Pi	126.61	45	IAMs_20	IAMs_20	09 44 28.9	
	comp=Z,1μm,20.0s						
L61A	Hillsdale 1, H	126.64	36	P	PKiKP	08 44 52.9	+1.0
	baz=309						
O60A	Telford	126.65	38	P	PKiKP	08 44 52.8	+0.8
	baz=306						
PLCA	Paso Flores	126.71	146	PKP	PKiKP	08 44 52.6	+0.3
	comp=Z,7.0nm,0.8s,baz=210,slow=3.2,SNR=16						
PLCA	Paso Flores	126.71	146	PKPdf	PKiKP	08 44 52.9	+0.6
PLCA	Paso Flores	126.71	146	*e*P	PKiKP	08 44 53.2	+0.9
P60A	Greenville	126.80	39	P	PKiKP	08 44 52.7	+0.4
	baz=305						
G63A	Kingsbury	126.84	30	P	PKiKP	08 44 52.6	+0.3
	baz=315						
PSUB	Penn St. - Bra	126.85	39		PKPdf	08 44 52.0	+0.1
S59A	Mechanicsville	126.86	42	P	PKiKP	08 44 52.8	+0.3
	baz=302						
W58A	Raeford	126.90	46	P	PKiKP	08 44 53.1	+0.4
	baz=299						
KEST	Kesra	126.92	315	PKP	PKiKP	08 44 53.0	+0.1
	comp=Z,13nm,1.0s,baz=144,slow=4.9,SNR=4.0						
F64A	Sherman	126.94	29	P	PKiKP	08 44 52.8	+0.3
	baz=316						
H63A	New Sharon	126.95	31	P	PKiKP	08 44 53.0	+0.6
	baz=314						
L61B	Northampton	126.98	35	P	PKiKP	08 44 53.0	+0.4
	baz=310						
MTLF	Montolieu	127.01	327	*e*PKIKP	PKiKP	08 44 52.5	-0.2
MTLF				pmax	pmax		
	comp=Z,40nm,1.4s						
M61A	Granite Spring	127.06	37	P	PKiKP	08 44 53.4	+0.6
	baz=308						
K62A	Royalston	127.09	34	P	PKiKP	08 44 53.6	+0.7
	baz=310						
T59A	Double "B" Far	127.10	43	P	PKiKP	08 44 53.6	+0.6
	baz=302						
Q60A	Greensboro	127.13	40	P	PKiKP	08 44 53.7	+0.7
	baz=305						
Q60A	Greensboro	127.13	40	IAMs_20	IAMs_20	09 39 23.9	
	comp=Z,2μm,20.0s						
PAL	Palisades	127.16	37	P	PKiKP	08 44 53.2	+0.3
	baz=308						
LC01	Cunco	127.17	144	PKPdf	PKiKP	08 44 53.2	0.0
U59A	Littleton	127.25	44	P	PKiKP	08 44 55.0	+1.6
	baz=301						
S60A	Water View	127.31	42	P	PKiKP	08 44 54.5	+1.1
	baz=303						
I64A	Boothbay	127.67	32	P	PKiKP	08 44 54.4	+0.5
	baz=314						
G65A	Princeton	127.80	29	P	PKiKP	08 44 54.4	+0.2
	baz=317						
L63A	North Scituate	127.96	35	P	PKiKP	08 44 55.0	+0.4
	baz=311						
EPF	Esparros	128.24	328	*e*PKIKP	PKPdf	08 44 51.3	-3.3
EPF				pmax	pmax		
	comp=Z,21nm,1.4s						
M64A	Tiverton	128.39	35	P	PKiKP	08 44 56.8	+1.4
	baz=311						
ETSF	Etsaut	128.81	328	*e*PKIKP	PKiKP	08 44 58.5	+2.1
ETSF				pmax	pmax		
	comp=Z,78nm,1.8s						
BI02	San Fabin de	128.98	142		PKPdf	08 44 56.1	-0.1
JTS	Las Juntas de	129.32	78	⇓*i*PKIKP	PKiKP	08 44 58.7	+0.6
BO02	Sierra Bellavi	130.48	140	PKPdf	PKiKP	08 45 00.6	+0.6
ES06	SONSECA Array	132.89	327	IAMs_20	IAMs_20	09 36 25.2	
	comp=Z,937nm,21.0s						
ESDC	Sonseca Array	132.90	327	PKP	PKiKP	08 45 04.4	-0.3
	comp=Z,1.1nm,0.9s,baz=357,slow=1.4,SNR=5.2						
ESDC				PP	PP	08 47 26.6	-1.6
	comp=Z,1.7nm,0.9s,baz=42,slow=7.8,SNR=4.8						
ESDC	Sonseca Array	132.90	327		PKPdf	08 45 03.8	+0.3
ES05	SONSECA Array	132.90	327	IAMs_20	IAMs_20	09 48 56.8	
	comp=Z,955nm,20.0s						
ES14	SONSECA Array	132.93	327	IAMs_20	IAMs_20	09 44 18.5	
	comp=Z,942nm,18.0s						
ZON	Zonda	133.89	139	PKIKP	PKPdf	08 45 06.2	+0.5
ZON	Zonda	133.89	139		PKPdf	08 45 06.2	+0.5
AZU	Azuero	134.18	81	*e*P	PKiKP	08 45 11.5	+3.6
AC05	El Transito	134.43	134		PKPdf	08 45 07.0	+0.1
COI	Coimbra	134.76	331	IAMs_20	IAMs_20	09 46 29.6	
	comp=Z,1μm,20.0s						
MTDJ	Mount Denham	134.84	66	*e*P	PKiKP	08 45 12.4	+3.2
TAM	Tamanrasset	135.65	302	PKIKP	PKiKP	08 45 11.9	+1.0
NNA	Nana	136.01	109	⇑*i*PKIKP	PKPdf	08 45 10.2	+0.2
NNA				pmax	pmax		
	comp=Z,22nm,1.3s						
NNA	Nana	136.01	109	IAMs_20	IAMs_20	09 40 33.8	
	comp=Z,936nm,18.0s						
OTAV	Otavalo	136.22	91	PKIKP	PKPdf	08 45 11.2	+0.2
OTAV				MLR	MLR		
	comp=Z,1μm,18.0s						
OTAV	Otavalo	136.22	91	PKPdf	PKPdf	08 45 11.2	+0.2
OTAV	Otavalo	136.22	91	IAMs_20	IAMs_20	09 41 46.0	
	comp=Z,1μm,18.0s						
OTAV	Otavalo	136.22	91	*e*P	PKiKP	08 45 11.9	-0.7
PVAQ	Vaqueiros	136.56	328	IAMs_20	IAMs_20	09 45 24.5	
	comp=Z,1μm,20.0s						
GO02	Mina Guanaco	137.00	131	IAMs_20	IAMs_20	09 36 32.8	
	comp=Z,979nm,21.0s						
SOLC	Bahia Solano	137.14	83	*e*P	PKiKP	08 45 13.1	-0.9
GCUF	Volcan Galeras	137.35	90	*e*P	PKiKP	08 45 14.9	-0.1
PB04	IPOC Station P	138.03	127	IAMs_20	IAMs_20	09 32 07.6	
	comp=Z,1μm,20.0s						
YOTC	Yotoco, Valle	138.33	86	*e*P	PKPdf	08 45 14.0	-0.5
PB07	IPOC Station P	138.54	126	IAMs_20	IAMs_20	09 36 33.3	
	comp=Z,1μm,22.0s						
CBOC	Ciudad Bolivar	138.55	83	*e*P	PKPdf	08 45 12.1	-2.8
LVC	Limon Verde	138.87	128	*e*P	PKPdf	08 45 16.6	+1.0
HELC	Santa Helena	139.01	82	*e*P	PKPdf	08 45 16.7	+0.7
GUY2C	Guyana, Caldas	139.24	84	*e*P	PKPdf	08 45 16.1	-0.4
ANIL	Santa Ana	139.24	85	*e*P	PKPdf	08 45 16.8	+0.5
BETC	Betania	139.26	88	*e*P	PKiKP	08 45 17.5	-0.9
RREF	El Recreo	139.28	84	*e*P	PKPdf	08 45 17.7	+0.8
TOLC	Tolima	139.32	85	*e*P	PKPdf	08 45 16.1	-0.4
PSGCX	Pisagua	139.35	123	IAMs_20	IAMs_20	09 36 35.9	
	comp=Z,1μm,20.0s						
ORTC	Ortega, Tolima	139.42	86	*e*P	PKPdf	08 45 16.7	+0.4
ZARC	Zaragoza, Cauc	139.55	80	*e*P	PKPdf	08 45 16.7	+0.2
AP01	Chacalluta	139.71	121	IAMs_20	IAMs_20	09 34 36.8	
	comp=Z,1μm,22.0s						
PTLC	Puerto Leguiza	139.87	92	*e*P	PKPdf	08 45 17.4	+0.2
PB08	IPOC Station P	139.90	124	IAMs_20	IAMs_20	09 33 41.4	
	comp=Z,1μm,22.0s						
MNMC	Minye Minye	140.00	123	IAMs_20	IAMs_20	09 37 06.3	
	comp=Z,1μm,18.0s						
PTBC	PUERTO BERRIO,	140.04	82	*e*P	PKPdf	08 45 16.4	-1.0
SDDR	Presa de Saban	140.20	62	IAMs_20	IAMs_20	09 50 21.7	
	comp=Z,1μm,18.0s						
ROSC	El Rosal	140.30	84	PKP	PKPdf	08 45 19.4	+1.0
	comp=Z,8.4nm,0.4s,baz=225,slow=2.9,SNR=8.1						
ROSC	El Rosal	140.30	84	PKIKP	PKPdf	08 45 19.1	+0.7
ROSC	El Rosal	140.30	84		PKPdf	08 45 19.1	+0.7
MACC	Macarena, Meta	140.85	89	*e*P	PKPdf	08 45 17.7	-1.3
CHIC	Chingaza	140.90	85	*e*P	PKPdf	08 45 15.6	-3.9
CRJC	Cerrejon, Guaj	140.94	74	*e*P	PKPdf	08 45 20.1	+1.0
CZSB	Cruzeiro do Su	140.97	104	*e*P	PKiKP	08 45 20.5	-1.3
OCAC	Ocana	140.97	79	*e*P	PKPdf	08 45 13.4	-5.9
BARC	Barichara	141.29	81	*e*P	PKPdf	08 45 14.0	-6.0
RUSC	La Rusia	141.46	83	*e*P	PKPdf	08 45 14.9	-5.7
PAMC	Pamplona, Colo	141.69	80	*e*P	PKPdf	08 45 16.7	-4.3
TORD	Torodi Ar. Bea	142.20	289	PKhKP	PKPdf	08 45 16.2	-5.1
	comp=Z,4.9nm,0.8s,baz=59,slow=3.4,SNR=22						
TORD				PP	PP	08 48 26.1	-1.5
	comp=Z,6.1nm,1.0s,baz=77,slow=6.2,SNR=5.1						
TORD	Torodi Ar. Bea	142.20	289		PKPdf	08 45 17.0	-4.3
ITQB	Itaqui	142.51	148	*e*P	PKPdf	08 45 22.9	+1.5
PTGC	Puerto Gaitan,	142.51	85	*e*P	PKPdf	08 45 17.4	-4.5
TAMC	Tame, Arauca	142.69	82	*e*P	PKPdf	08 45 18.9	-3.3
SDV	Santo Domingo	143.50	77	PKPdf	PKPbc	08 45 21.8	+0.7
SDV	Santo Domingo	143.50	77	IAMs_20	IAMs_20	09 39 20.0	
	comp=Z,1μm,21.0s						
SDV	Santo Domingo	143.50	77	*e*P	PKPdf	08 45 22.6	-1.3
CPSB	Cacapava Do Su	143.51	152	*e*P	PKPdf	08 45 24.7	+1.5
AOPR	Arecibo Observ	144.41	60		PKPab	08 45 22.6	-0.6
OBIP	Obispado Ponce	144.66	60	PKPdf	PKPab	08 45 23.5	-0.6
CPUP	Villa Florida	144.67	143	PKP	PKPdf	08 45 25.1	-0.2
	comp=Z,28nm,1.0s,baz=211,slow=2.5,SNR=35						
CPUP	Villa Florida	144.67	143	PKIKP	PKPbc	08 45 24.4	+0.3
CPUP	Villa Florida	144.67	143	PKPdf	PKPbc	08 45 24.4	+0.3
ICMP	Isla Caja de M	144.79	61	PKPdf	PKPbc	08 45 24.7	0.0
PMOZ	Porto Moniz, M	144.84	334		PKPdf	08 45 25.8	+0.2
GCPR	Guaynabo City	145.00	60		PKPbc	08 45 24.3	-1.1
SJG	San Juan	145.02	60	PKP2	PKPbc	08 45 24.8	-0.7
SJG				MLR	MLR		
	comp=Z,1μm,20.0s						
SJG	San Juan	145.02	60		PKPbc	08 45 24.8	-0.7
SJG	San Juan	145.02	60	IAMs_20	IAMs_20	09 49 49.2	
	comp=Z,1μm,20.0s						
SJG	San Juan	145.02	60	*e*P	PKPbc	08 45 25.3	-0.1
PDPR	Patillas Dam,	145.17	60		PKPab	08 45 26.0	0.0
CBYP	Canovanas	145.21	60		PKPdf	08 45 26.6	+0.1
HUMP	Col San Antoni	145.27	60		PKPdf	08 45 26.6	0.0
MTP	Monte Pirata	145.55	60	PKPdf	PKPdf	08 45 25.2	-1.8
CNLB	Canela	145.60	155	*e*P	PKPab	08 45 28.3	+0.9
CDVI	St. Croix	146.37	60	PKPdf	PKPdf	08 45 27.6	-0.8
ETMB	Extrema	146.63	110	*e*P	PKPbc	08 45 30.1	-0.5
ITAB	Concordia	146.78	151	*e*P	PKPbc	08 45 30.9	+0.2
KOWA	Kowa	147.10	295	PKPbc	PKPbc	08 45 31.9	0.0
SEUS	St. Eustatius	148.01	59	IAMs_20	IAMs_20	09 41 19.3	
	comp=Z,1μm,21.0s						
PTGB	Pitanga	148.89	148	*e*P	PKPdf	08 45 34.4	+1.8
SAML	Samuel	149.74	111	PKP2	PKiKP	08 45 39.6	-0.2
SAML	Samuel	149.74	111	PKPbc	PKiKP	08 45 39.6	-0.2
KIC	Kosan Boka	149.76	280	*e*PKIKP	PKPbc	08 45 38.3	-0.6
	comp=Z,324nm,1.6s						
DBIC	Dimbokro	149.83	281	PKPbc	PKPbc	08 45 39.2	+0.2
	comp=Z,43nm,0.7s,baz=66,slow=2.8,SNR=67						
DBIC	Dimbokro	149.83	281		PKPbc	08 45 38.9	-0.2
AQDB	Aquidauana	149.92	138	*e*P	PKPdf	08 45 36.3	+2.1
TIC	Toumodi	150.00	281	*e*PKIKP	PKPbc	08 45 38.7	-0.8
LIC	Lamto	150.06	280	*e*PKIKP	PKPbc	08 45 38.8	-0.8
	comp=Z,204nm,1.1s						
TRCB	Terra Rica	150.11	145	*e*P	PKPdf	08 45 36.6	+2.0
VILB	Vilhena	150.85	120	*e*P	PKPdf	08 45 38.1	+2.3
FRTB	Fartura	151.30	151	*e*P	PKPdf	08 45 38.1	+1.8
SPB	Sao Paulo	152.07	154	IAMs_20	IAMs_20	09 49 15.7	
	comp=Z,1μm,21.0s						
SPB	Sao Paulo	152.07	154	*e*P	PKPdf	08 45 40.0	+2.6
PP1B	Ponte de Pedra	152.44	135	*e*P	PKPdf	08 45 40.9	+2.8
TOSP	Speyside	152.59	68		PKiKP	08 45 46.3	+0.7
PTGA	Pitinga	154.62	95		PKPdf	08 45 40.4	-1.0
PTGA				PKPab	PKPab	08 46 06.0	+1.4
PTGA				IAMs_20	IAMs_20	09 50 15.6	
	comp=Z,1μm,20.0s						
ARAG	Araguaiana, MT	155.88	136	*e*P	PKPdf	08 45 43.4	+0.4
BDFB	Brasilia	158.40	143	PKP	PKPdf	08 45 46.8	+0.5
	comp=Z,5.9nm,0.9s,baz=259,slow=1.8,SNR=6.4						
BDFB				PKPab	PKPab	08 46 21.4	+0.7
	comp=Z,12nm,0.9s,baz=213,slow=3.5,SNR=7.6						
BDFB	Brasilia	158.40	143		PKPdf	08 45 45.4	-0.9
BDFB					PKPab	08 46 20.4	-0.4

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*IDC **02** 09:06:07.3±1.0, 35°.73N×140°.92E, h0^{km}, mb3.5/7, mb1 3.7/10, mb1mx3.6/34, mbtmp3.5/10, ML3.3/3, Error ellipse: s-maj=23.3km s-min=18.2km az=94.0*

*JMA **02** 09:06:09.4±0.1, 35°.83N×140°.94E, h15^{km}±1^{km}, M4.0*

JMA Felt II J1.

ISC 02 09:06:09.3±1.0**, 35°.81N**±0°.03×**140°.93E**±0°.06**, h15^{km}**±6^{km}**, n30, σ0^{s}.86**/29**, mb3.5**/7**, 4C-2D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHOJ	Chosi	0.12	207	⇓P	Pg	09 06 13.1	+0.2
CHOJ				*e*S	Sg	09 06 15.6	+0.4
JIHU	Itakohorinouch	0.36	295	⇑P	Pb	09 06 17.4	0.0
JSMT	Sammumatsuo	0.43	247	⇑P	Pb	09 06 18.6	0.0
JSMT				*e*S	Sb	09 06 24.8	0.0
JHYU	Hitachinakayam	0.59	332	⇑P	Pb	09 06 21.2	-0.2
JHYU				*e*S	Sg	09 06 29.2	+0.3
JCN	Nagara	0.71	237	P	Pn	09 06 24.2	-0.7
JYT	Yasato	0.72	305	⇑P	Pg	09 06 22.7	-0.8
JYT				S	Sg	09 06 32.5	-0.5
JHO	Hitachi	0.85	340	⇓P	Pg	09 06 24.6	-1.2
JHO				*e*S	Sg	09 06 35.8	-1.1
BSO4	Boso 4	0.95	211	P	Pn	09 06 28.4	+0.3
BSO3	Boso 3	1.07	199	P	Pn	09 06 29.3	-0.2
BSO1	Boso 1	1.16	178	P	Pb	09 06 29.8	-0.9
MJAR	Matsushiro Arr	2.32	289	Pn	Pn	09 06 46.5	-0.5
	3.5nm,0.3s,baz=94,slow=8.7,SNR=108						
MJAR				Sn	Sn	09 07 17.1	+1.8
	2.1nm,0.3s,baz=125,slow=17,SNR=2.0						
MAT	Matsushiro	2.32	289	P	Pn	09 06 46.7	-0.3
MAT				*e*S	Sn	09 07 13.9	-1.4
JHJ	Hachijo jima 2	2.85	200	Pn	Pn	09 06 54.4	+0.1
	25nm,0.3s,baz=58,slow=19,SNR=1.9						
JHJ				Sn	Sn	09 07 27.3	-1.0
	21nm,0.3s,baz=239,slow=19,SNR=2.4						
ASAJ	Asahikawa	8.39	8	Pn	Pn	09 08 12.0	+1.6
	0.4nm,0.3s,baz=37,slow=20,SNR=1.8						
H11N2	WAKE ISLAND Hy	27.89	118	T	T	09 41 01.2	
	baz=311,slow=75,SNR=75						
H11N1	WAKE ISLAND Hy	27.90	118	T	T	09 41 05.4	
	baz=311,slow=75,SNR=69						
H11N3	WAKE ISLAND Hy	27.91	118	T	T	09 41 05.2	
	baz=311,slow=75,SNR=76						
SONM	Songino Array	28.16	306	P	P	09 12 00.9	-0.2
	0.2nm,0.5s,baz=93,slow=7.5,SNR=1.9						
H11S1	WAKE ISLAND Hy	28.55	120	T	T	09 41 47.1	
	baz=313,slow=75,SNR=96						
H11S3	WAKE ISLAND Hy	28.55	120	T	T	09 41 49.8	
	baz=313,slow=75,SNR=84						
H11S2	WAKE ISLAND Hy	28.57	120	T	T	09 41 51.7	
	baz=313,slow=75,SNR=47						
ZALV	Zalesovo Beam	42.46	313	P	P	09 14 04.6	+1.1
	0.4nm,0.4s,baz=104,slow=6.1,SNR=0.9						
MKAR	Makanchi Array	44.45	303	P	P	09 14 20.2	+0.5
	0.3nm,0.5s,baz=87,slow=9.5,SNR=3.9						
ILAR	Eielson Array	50.73	32	P	P	09 15 09.3	+1.1
	0.5nm,0.8s,baz=274,slow=6.7,SNR=5.9						
WRA	Warramunga Arr	55.80	188	P	P	09 15 45.0	-1.0
	0.4nm,0.4s,baz=4.4,slow=7.6,SNR=2.8						
ASAR	Alice Springs	59.53	187	P	P	09 16 11.9	-0.3
	0.4nm,0.9s,baz=13,slow=8.6,SNR=2.1						
YKA	Yellowknife Ar	65.06	30	P	P	09 16 49.2	+0.4
	0.3nm,0.9s,baz=306,slow=6.6,SNR=5.2						
H03N2	Juan Fernandez	147.27	98	T	T	12 10 20.7	
	baz=290,slow=76,SNR=58						
H03N3	Juan Fernandez	147.28	98	T	T	12 10 21.9	
	baz=290,slow=76,SNR=45						
H03N1	Juan Fernandez	147.28	98	T	T	12 10 21.9	
	baz=290,slow=76,SNR=76						

IDC 02 09:43:37.2±2.2**, 1°.20N×126°.11E, h0^{km}, mb3.5**/3**, mb1 3.8**/3**, mb1mx3.4**/39**, mbtmp3.5**/3**, Error ellipse: s-maj=179.2km s-min=27.7km az=65.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	22.51	159	P	P	09 48 38.7	0.0
	0.9nm,0.4s,baz=338,slow=11,SNR=15						
ASAR	Alice Springs	25.86	163	P	P	09 49 10.6	-0.1
	0.8nm,0.6s,baz=348,slow=13,SNR=10						
MKAR	Makanchi Array	59.28	326	P	P	09 53 40.8	0.0
	0.1nm,0.3s,baz=120,slow=7.2,SNR=2.1						

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*KRNET **02** 10:01:56.3±0.1, 42°.10N×77°.72E, h7^{km}, mb1.8*

*NNC **02** 10:02:02.8±0.3, 43°.16N×78°.06E, h0^{km}, mpv2.6, Error ellipse: s-maj=3.7km s-min=1.7km az=178.0*

*SOME **02** 10:02:03.7, 43°.13N×78°.07E, h5^{km}*

ISC 02 10:02:03.4±0.8**, 43°.10N**±0°.03×**78°.04E**±0°.02**, h10^{km}, n29, σ1^{s}.76**/58**, 6C, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SATY	Saty	0.27	98	*e*P	Pg	10 02 08.8	-0.2
	3.7nm,0.1s						
SATY				*e*S	Sg	10 02 12.6	-0.1
	83nm,0.1s						
SATY	Saty	0.27	98	P	Pg	10 02 08.8	-0.2
SATY				P	Pg	10 02 08.8	-0.2
	7.1nm,0.1s						
SATY				S	Sg	10 02 12.6	-0.1
	83nm,0.1s						
KURS	Kuram	0.40	14	*e*P	Pg	10 02 10.2	-1.2
	3.8nm,0.1s						
KURS				*e*S	Sg	10 02 14.9	-1.9
	8.5nm,0.3s						
KURS	Kuram	0.40	14	P	Pg	10 02 10.2	-1.2
	3.8nm,0.1s						
KURS				S	Sg	10 02 14.9	-1.9
	9.2nm,0.2s						
ANVS	Anan'yevo	0.42	221	⇑*i*P	Pg	10 02 09.5	-2.2
	baz=57						
ANVS				⇑*i*S	Sb	10 02 19.0	-0.4
	baz=57						
PRZ	Przheval'sk	0.67	157	⇑*i*P	Pg	10 02 08.7	-7.7
	baz=51						
PRZ				⇑*i*S	Sg	10 02 17.4	-7.7
	baz=51						
KOTS	Kotyrbulak	0.69	282	*e*P	Pb	10 02 17.1	-0.6
	7.2nm,0.1s						
KOTS				*e*S	Sb	10 02 26.6	-0.8
	16nm,0.1s						
KOTS	Kotyrbulak	0.69	282	P	Pb	10 02 17.1	-0.6
	7.2nm,0.1s						
KOTS				P	Pb	10 02 17.2	-0.6
KOTS				S	Sb	10 02 26.6	-0.8
KOTS				S	Sb	10 02 26.6	-0.8
	16nm,0.1s						
UZB	Uzynbulak	0.72	86	*e*P	Pg	10 02 16.4	-1.0
	3.5nm,0.1s						
UZB				*e*S	Sg	10 02 25.3	-1.5
	7.2nm,0.1s						
UZB	Uzynbulak	0.72	86	P	Pg	10 02 16.4	-1.0
	3.5nm,0.1s						
UZB				S	Sg	10 02 25.3	-1.5
	7.2nm,0.1s						
MDOK	Medeo	0.73	276	*e*P	Pg	10 02 17.6	0.0
	2.5nm,0.3s						
MDOK				*e*S	Sb	10 02 27.6	-0.8
	6.4nm,0.2s						
MDOK	Medeo	0.73	276	⇑P	Pg	10 02 17.2	-0.4
	2.7nm,0.9s						
MDOK				⇑S	Sg	10 02 27.0	-0.1
	4.3nm,0.4s						
MDOK	Medeo	0.73	276	Pg	Pg	10 02 17.6	0.0
	2.5nm,0.3s						
MDOK				Lg	Lg	10 02 27.6	
	6.4nm,0.2s						
TNSS	Tian-Shan	0.80	266	*e*P	Pb	10 02 19.2	-0.5
	0.9nm,0.1s						
TNSS				*e*S	Sb	10 02 30.1	-0.7
	3.3nm,0.1s						
TNSS	Tian-Shan	0.80	266	P	Pb	10 02 19.2	-0.5
	0.9nm,0.1s						
TNSS				S	Sb	10 02 30.1	-0.7
	3.3nm,0.1s						
SHLS	Shalkode	1.04	86	*e*P	Pn	10 02 27.8	+3.6
SHLS				*e*S	Sn	10 02 44.7	+5.8
IZV	Izvestkoviy	1.05	267	*e*P	Pb	10 02 23.6	-0.2
IZV				*e*S	Sb	10 02 37.7	+0.1
IZV	Izvestkoviy	1.05	267	P	Pg	10 02 23.3	-0.3
IZV				P	Pb	10 02 23.6	-0.2
PDGK	Podgornoye	1.08	77	P	Pg	10 02 22.7	-1.6
	0.5nm,0.1s						
PDGK				S	Sg	10 02 35.9	-2.6
	1.4nm,0.2s						
ARXS	Arharly	1.13	352	*e*P	Pg	10 02 23.3	-1.9
	1.1nm,0.1s						
ARXS				*e*S	Sg	10 02 37.3	-2.5
	2.5nm,0.2s						
ARXS	Arharly	1.13	352	P	Pg	10 02 23.3	-1.9
	1.1nm,0.1s						
ARXS				S	Sg	10 02 37.3	-2.5
	2.5nm,0.2s						
KTBS	Karatobe	1.17	302	*e*P	Pb	10 02 25.0	-0.7
	0.5nm,0.2s						
KTBS				*e*S	Sb	10 02 40.2	-0.7
	1.9nm,0.3s						
KTBS	Karatobe	1.17	302	P	Pb	10 02 25.0	-0.7
	0.5nm,0.2s						
KTBS				S	Sb	10 02 40.2	-0.7
	1.9nm,0.3s						
DGS	Degeres	1.67	276	*e*P	Pb	10 02 34.3	0.0
	1.2nm,0.4s						
DGS				*e*S	Sg	10 02 56.4	-0.6
	3.9nm,0.3s						
KTMS	Ketmen	1.72	77	*e*P	Pb	10 02 34.3	-1.0
	1.9nm,0.2s						
KTMS				*e*S	Sb	10 02 55.8	-1.3
	1.9nm,0.3s						
KTMS	Ketmen	1.72	77	P	Pb	10 02 34.3	-1.0
	1.9nm,0.2s						
DJR	Jarkent	1.77	45	*e*P	Pb	10 02 35.1	-1.0
	1.5nm,0.2s						
DJR				*e*S	Sb	10 02 57.6	-0.8
	3.3nm,0.3s						
DJR	Jarkent	1.77	45	P	Pb	10 02 35.1	-1.0
	1.5nm,0.2s						
DJR				S	Sb	10 02 57.6	-0.8
	3.3nm,0.3s						
KAPS	Kapalarasan	2.38	23	*e*P	Pb	10 02 46.0	-0.5
	0.4nm,0.3s						
KAPS				*e*S	Sb	10 03 16.1	+0.1
	1.3nm,0.3s						

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*ISK **02** 10:17:08.2, 39°.38N×39°.05E, h5^{km}, ML2.5/3*

*DDA **02** 10:17:18.9, 39°.29N×38°.51E, h8^{km}±2^{km}, ML1.4*

ISC 02 10:17:08.2±1.2**, 39°.4N**±0°.1×**39°.03E**±0°.04**, h9^{km}, n6, σ0^{s}.94**/9**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ILIC	ilic-Erzincan	0.36	273	PG	Pg	10 17 16.2	+0.8
KEMA	Kemaliye	0.45	249	*i* P	Pb	10 17 19.9	+1.5
KEMA				*i* S	Sg	10 17 22.8	-0.2
KEMA				IAML		10 17 26.0	
	comp=N,190nm,0.8s						
ARPR	Arapgir-MALATY	0.64	238	PG	Pg	10 17 20.7	+0.1
ARPR				SG	Sb	10 17 29.9	-0.9
ELZG	Elazig	0.94	182	*i* P	Pn	10 17 35.6	+7.9
ELZG				*i* S	Sn	10 17 49.5	+8.2
ELZG				IAML		10 17 51.0	
	comp=E,37nm,0.8s						
ELZG				IAML		10 17 52.0	
	comp=N,14nm,0.4s						
YEDI	Yedisu-Bingol	1.17	89	PN	Pg	10 17 30.8	+0.1
YEDI				SN	Sn	10 17 47.2	+0.1
CUKAN	kangal_SIVAS	1.22	265	*i* P	Pb	10 17 30.7	-0.9
CUKAN				*i* S	Sb	10 17 46.6	-0.9

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*SNET **02** 10:38:35.2±1.1, 14°.51N×89°.12W, h15^{km}±8^{km}, ML3.0*

*GCG **02** 10:38:36.1±0.8, 14°.65N×89°.19W, h12^{km}±20^{km}, MD3.4*

ISC 02 10:38:32.1±1.6**, 14°.61N**±0°.06×**89°.04W**±0°.05**, h18^{km}**±11^{km}**, n14, σ0^{s}.59**/23**, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TACO	Tacachico	0.71	206	*e*P	Pg	10 38 45.6	-0.4
MRL	Marmol	0.78	307	*e*P	Pn	10 38 48.8	+0.3
MRL				*e*S	Sn	10 38 59.1	-0.7
CEDA	San Andres	0.88	203	*e*S	Sb	10 39 00.6	+0.3
CEVE	Cerro Verde	0.96	216	*e*P	Pb	10 38 50.8	+0.3
CEVE				*e*S	Sb	10 39 03.7	+0.6
CEVE				IAML		10 39 07.3	
	comp=Z,454nm,0.2s						
COEG	Centro de Oper	1.00	171	*e*P	Pn	10 38 52.0	+0.6
COEG				IAML		10 39 11.3	
	comp=Z,584nm,0.3s						
JAYA	Jayaque - finc	1.03	203	*e*P	Pg	10 38 51.9	-0.4
JAYA				*e*S	Sb	10 39 04.5	-0.4
JAYA				IAML		10 39 10.2	
	comp=Z,490nm,0.2s						
LALI	Alcalda de L	1.15	194	*e*P	Pn	10 38 53.6	+0.2
LALI				*e*S	Sb	10 39 07.4	-0.7
COEB	Comit de Eme	1.21	156	*e*P	Pg	10 38 55.7	+0.1
COEB				*e*S	Sg	10 39 12.6	+1.1
COEB				IAML		10 39 19.6	
	comp=Z,361nm,0.4s						
NBG	Las Nubes	1.27	269	*e*P	Pg	10 38 57.1	+0.5
NBG				*e*S	Sg	10 39 13.3	+0.1
IXG	Ixpaco	1.43	252	*e*P	Pg	10 38 59.6	-0.1
IXG				*e*S	Sg	10 39 17.8	-0.6
PCG	Pacaya	1.53	262	*e*P	Pg	10 39 02.2	+0.4
PCG				*e*S	Sg	10 39 22.0	+0.2
JUCU	Jucuar¡n	1.55	150	*e*P	Pg	10 39 02.0	-0.1
JUCU				*e*S	Sg	10 39 21.7	-0.7
LCND	La Caada	1.71	139	*e*P	Pg	10 39 04.5	-0.6
FUG	Fuego 3	1.75	265	*e*P	Pg	10 39 04.8	-1.1

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*BJI **02** 10:49:46.1±0.0, 32°.55S×67°.10W, h160^{km}, mB6.0/65*

*VAO **02** 10:49:47.2±0.3, 32°.66S×67°.13W, h154^{km}±2^{km}, mb6.1*

*SJA **02** 10:49:47.9±0.7, 32°.65S×67°.21W, h150^{km}±6^{km}, ML6.1, MW6.0*

*NEIC **02** 10:49:48.7, 32°.74S×67°.07W, h172^{km}, Moment Tensor*

Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}0.54; $M_{\theta\theta}$-0.20; $M_{\phi\phi}$-0.33; $M_{r\theta}$-2.70; $M_{\theta\phi}$0.48; $M_{\phi r}$-1.80; Fault plane solution: $M_0$3.32000×10^{18} NP1:ϕ_s237.19000°, δ88.49000°,λ87.55000°. NP2:ϕ_s115.56000°,δ2.87000°, λ148.33000°. Principal axes: T 3.6244, Plg46.0000°, Azm145.0000°; N -0.7344, Plg2.0000°, Azm237.0000°; P -2.8900, Plg43.0000°, Azm330.0000°;

*NEIC **02** 10:49:48.5±2.0,32°.72S±0°.06×67°.12W±0°.09,h172km±1km, mb6.2/615,Mwb6.3/49,Mwc6.3/28,Mww6.3,Md6.2(SJA), Mwc6.3(GCMT) Error ellipse: s-maj=13.3km s-min=9.4km az=278.0*

*MOS **02** 10:49:49.8±0.9,32°.42S×67°.26W,h182km,mb6.1/41, Error ellipse: s-maj=9.5km s-min=6.4km az=88.9*

*IDC **02** 10:49:49.5±0.3,32°.68S×67°.10W,h175km±2km,mb5.7/23, mb1 5.8/26,mb1mx5.7/27,mbtmp6.2/26,MS5.2/8, Ms1 5.1/8,ms1mx4.8/20,Error ellipse: s-maj=8.4km s-min=6.5km az=84.0*

*GUC **02** 10:49:49.5±0.6,31°.94S×67°.55W,h167km±9km,ML6.4, MW6.2*

*GCMT **02** 10:49:51.5±0.1,32°.77S×67°.14W,h177km,MW6.3/168, Moment Tensor Solution. s168,c423; s164,c640; Duration: 3^{s}3 Moment tensor: Scale 10^{18}Nm; M_{rr}0.59±.01; $M_{\theta\theta}$-0.02±.02; $M_{\phi\phi}$-0.57±.02; $M_{r\theta}$-2.40±.01; $M_{\theta\phi}$1.07±.01; $M_{\phi r}$-2.07±.01; Best double couple: $M_0$3.17500×10^{18} NP1:ϕ_s304.00000°,δ4.00000°, λ-13.00000°. NP2:ϕ_s47.00000°,δ89.00000°,λ-94.00000°. Principal axes: T 3.8690, Plg44.0000°, Azm141.0000°; N -1.3880, Plg4.0000°, Azm47.0000°; P -2.4810, Plg46.0000°, Azm313.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*NEIC **02** 10:49:52,32°.82S×67°.21W,h176km,Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}0.56; $M_{\theta\theta}$0.13; $M_{\phi\phi}$-0.70; $M_{r\theta}$-2.38; $M_{\theta\phi}$1.09; $M_{\phi r}$-2.07; Fault plane solution: $M_0$3.40000×10^{18} NP1:ϕ_s308.00000°, δ8.00000°,λ-6.00000°. NP2:ϕ_s44.00000°,δ89.00000°, λ-98.00000°. Principal axes: T 3.8738, Plg44.0000°, Azm142.0000°; N -1.3951, Plg8.0000°, Azm44.0000°; P -2.4787, Plg45.0000°, Azm305.0000°;*

*NEIC **02** 10:49:54,32°.71S×66°.94W,h180km,Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-0.24; $M_{\theta\theta}$0.11; $M_{\phi\phi}$0.13; $M_{r\theta}$-2.85; $M_{\theta\phi}$0.47; $M_{\phi r}$-2.08; Fault plane solution: $M_0$3.57000×10^{18} NP1:ϕ_s197.00000°, δ4.00000°,λ-127.00000°. NP2:ϕ_s54.00000°,δ87.00000°, λ-87.00000°. Principal axes: T 3.7188, Plg42.0000°, Azm142.0000°; N -0.3220, Plg2.0000°, Azm234.0000°; P -3.3968, Plg48.0000°, Azm327.0000°;*

*NEIC **02** 10:50:07.5,33°.18S×66°.70W,h197km,Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-0.02; $M_{\theta\theta}$0.47; $M_{\phi\phi}$-0.45; $M_{r\theta}$-2.32; $M_{\theta\phi}$0.87; $M_{\phi r}$-1.89; Fault plane solution: $M_0$3.05000×10^{18} NP1:ϕ_s284.73000°, δ7.96000°,λ-33.73000°. NP2:ϕ_s48.20000°,δ85.59000°, λ-96.63000°. Principal axes: T 3.5113, Plg40.0000°, Azm144.0000°; N -0.9269, Plg7.0000°, Azm49.0000°; P -2.5844, Plg49.0000°, Azm311.0000°;*

*UCR **02** 10:50:41.7±1.7,31°.29S×68°.37W,h662km±999km, mb6.3(NEIC)*

ISC 02 10:49:48.4±0.2,**32°.65S**±0°.03×**67°.15W**±0°.03,**h173**km±1km, **h173**km**:pP-P,n1678,**σ1^{s}58/1980,**mb6.1**/364,**122C-318D, Fault plane solution: NP1:**ϕ_s42.58132°,δ88.64336°, λ-87.19929°. **NP2:**ϕ_s158.40634°,δ3.11175°, λ-154.14182°. **Principal axes:** T Plg43.5765°, Azm129.8477°; N Plg2.7999°, Azm222.5150°; P Plg46.2866°, Azm315.4472°; **Mendoza Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRA	San Martin	1.23	80	eP	Pn	10 50 19.0	+1.6
RTCV	Cerro Valdivia	1.42	303	eP	Pn	10 50 19.0	0.0
ASAL	Salagasta	1.42	272	eP	Pn	10 50 19.6	+0.4
AAGR	Agrelo	1.48	252	eP	Pn	10 50 20.2	+0.5
ARCO	CERRO ARCO	1.51	262	eP	Pn	10 50 20.4	+0.3
ACHE	Chepes	1.54	16	eP	Pn	10 50 21.0	+0.6
ZON	Zonda	1.70	310	P	Pn	10 50 22.1	+0.2
ZON	Zonda	1.70	310		Pn	10 50 22.1	+0.2
ZON	Zonda	1.70	310	eP	Pn	10 50 21.9	0.0
ZON				eS	Sn	10 50 47.4	-0.4
ZON				IAML		10 50 49.0	
	comp=Z,167µm,0.5s						
RTLL	Cerro Villicun	1.73	319	⇑iP	Pn	10 50 22.4	+0.2
RTLL				iS	Sn	10 50 47.4	-0.9
RTLL	Cerro Villicun	1.73	319	eP	Pn	10 50 22.5	+0.2
RTLL				eS	Sn	10 50 48.0	-0.3
AUSP	Uspallata	1.94	282	eP	Pn	10 50 24.8	+0.2
AVFE	Valle Fertil	2.00	352	eP	Pn	10 50 25.6	+0.5
AVFE				iP		10 50 26.1	
AVFE				eS	Sn	10 50 53.1	-0.4
AVFE				IAML		10 50 56.4	
	comp=Z,143µm,0.6s						
RFA	San Rafael	2.38	207	eP	Pn	10 50 29.4	-0.1
TCA	Tanti	2.53	60	⇑iP	Pn	10 50 32.2	+1.0
TCA				iS	Sn	10 51 04.7	+0.2
TCA	Tanti	2.53	60	eP	Pn	10 50 32.0	+0.8
TCA				eS	Sn	10 51 04.8	+0.4
ACCO	Cerro Coronel	2.62	321	eP	Pn	10 50 33.2	+0.7
LMEL	Las Melosas	2.82	244	⇑iP	Pn	10 50 35.0	+0.2
LMEL				iS	Sn	10 51 11.3	+0.5
LAMA	Las Malvinas	2.85	216	eP	Pn	10 50 35.2	+0.2
VA03	San Esteban	2.87	267	⇑iP	Pn	10 50 35.4	+0.1
VA03				eS	Sn	10 51 10.8	-0.8
VA03				IAML		10 51 14.4	
	comp=N,164µm,0.5s						
VA03	San Esteban	2.87	267		Pn	10 50 35.5	+0.3
PIL	Pilar	2.94	71	eP	Pn	10 50 38.8	+2.8
PIL				IAML		10 51 57.8	
	comp=Z,26µm,0.8s						
MT03	Universidad Ad	2.94	252	⇑iP	Pn	10 50 36.0	-0.1
MT03				iS	Sn	10 51 12.3	-1.0
MT03				IAML		10 51 17.5	
	comp=E,74µm,0.5s						
ACDV	Cuesta del Vie	2.99	325	iP	Pn	10 50 37.6	+0.8
ACDV				eS	Sn	10 51 13.8	-0.6
ACDV				IAML		10 51 17.4	
	comp=Z,31µm,0.4s						
PEL	Peldehue	3.02	260	⇑eP	Pn	10 50 36.3	-0.6
PEL				iS	Sn	10 51 11.4	-3.3
PEL				IAML		10 51 19.0	
	comp=N,65µm,0.4s						
PEL	Peldehue	3.02	260	P	Pn	10 50 36.3	-0.6
PEL	Peldehue	3.02	260	Pn	Pn	10 50 36.3	-0.6
PEL	Peldehue	3.02	260	eP	Pn	10 50 36.4	-0.6
PEL				eS	Sn	10 51 13.2	-1.6
MT05	Renca	3.10	255	⇑iP	Pn	10 50 37.5	-0.5
MT05				eS	Sn	10 51 15.3	-1.4
MT05	Renca	3.10	255		Pn	10 50 37.6	-0.5
AROD	Rodeo	3.17	321	eP	Pn	10 50 34.1	-5.1
AROD				iP	Pn	10 50 40.3	+1.0
COIS	El Sosneado	3.19	219	eP	Pn	10 50 39.1	+0.1
ACLC	CERRO LA CRUZ	3.22	3	eP	Pn	10 50 49.1	+9.5
ACLC				eS	Sn	10 51 17.8	-1.7
ROCH	El Roble	3.27	263	⇑iP	Pn	10 50 39.1	-1.1
ROCH				eS	Sn	10 51 17.8	-2.8
ROC1	El Roble	3.27	263	eP	Pn	10 50 39.1	-1.2
ROC1				eS	Sn	10 51 19.4	-1.3
AGUA	GUANDACOL	3.35	340	eP	Pn	10 50 42.3	+1.0
AGUA				eS	Sn	10 51 21.9	-0.5
MT02	Curacav	3.41	259	⇑iP	Pn	10 50 40.2	-1.6
MT02				eS	Sn	10 51 19.9	-3.5
MT02				IAML		10 51 23.9	
	comp=E,34µm,0.6s						
MT02	Curacav	3.41	259		Pn	10 50 40.2	-1.6
MT09	Talagante	3.41	250	⇑iP	Pn	10 50 40.4	-1.5
MT09				iS	Sn	10 51 20.9	-2.7
PUMA	Malargue	3.42	213	eP	Pn	10 50 42.5	+0.6
CO03	El Pedregal	3.51	300	⇑iP	Pn	10 50 43.9	+0.6
CO03	El Pedregal	3.51	300	Pn	Pn	10 50 44.0	+0.7
CO02	Combarbal	3.58	293		Pn	10 50 44.3	+0.2
EDS3	Malargue	3.63	210	eP	Pn	10 50 45.4	+0.7
CO01	Juntas del Tor	3.67	316	⇑iP	Pn	10 50 47.0	+1.6
CO01				iS	Sn	10 51 29.5	-0.2
CO01	Juntas del Tor	3.67	316		Pn	10 50 46.9	+1.6
BO02	Sierra Bellavi	3.71	234	⇑iP	Pn	10 50 45.1	-0.5
BO02	Sierra Bellavi	3.71	234	Pn	Pn	10 50 45.2	-0.4
VA05	Santo Domingo	3.88	254	eP	Pn	10 50 45.1	-2.6
VA05				eS	Sn	10 51 29.0	-5.0
VA05				⇑e		10 54 37.4	
GO04	Tololo Observa	3.98	307	⇑iP	Pn	10 50 49.2	-0.1
GO04				eS	Sn	10 51 27.3	-9.4
GO04	Tololo Observa	3.98	307	Pn	Pn	10 50 49.5	+0.2
VCA	Vinchina	4.00	347	⇓iP	Pn	10 50 50.3	+0.7
VCA	Vinchina	4.00	347	eP	Pn	10 50 50.7	+1.1
VCA				eS	Sn	10 51 35.9	-1.4
CYA	Choya	4.35	16	eP	Pn	10 50 53.7	-0.2
CYA				eS	Sn	10 51 38.6	-6.5
BO03	Pichilemu	4.42	244	⇑eP	Pn	10 50 51.4	-3.2
AC05	El Transito	4.66	324	⇓eP	Pn	10 50 58.9	+0.9
AC05	El Transito	4.66	324		Pn	10 50 59.4	+1.5
LCO	Las Campanas	4.74	319	P	Pn	10 50 59.3	+0.1
LCO	Las Campanas	4.74	319	Pn	Pn	10 50 59.3	+0.1
BI02	San Fabin de	5.25	219	Pn	Pn	10 51 04.6	-1.0
AC04	Llanos de Chal	5.58	322	eP	Pn	10 51 08.6	-1.3
AC04	Llanos de Chal	5.58	322	Pn	Pn	10 51 09.2	-0.6
GO03	Copiap	5.70	331		Pn	10 51 11.5	0.0
AC02	Maricunga	6.04	343	Pn	Pn	10 51 17.6	+1.2
AHML	Horco Molle	6.05	16	eP	Pn	10 51 14.8	-1.4
AHML				eS	Sn	10 52 21.1	-4.0
AHML				IAML		10 53 06.3	
	comp=Z,8µm,1.6s						
BI03	Tigo	6.39	228	Pn	Pn	10 51 16.1	-4.3
AC01	Pan de Azucar	7.14	334	Pn	Pn	10 51 29.7	-0.8
LC01	Cunco	7.32	210		Pn	10 51 30.1	-2.6
LPA	La Plata	8.00	109	eP	Pn	10 51 39.3	-2.4
LPA				sP		10 52 13.5	
LPA				S	Sn	10 53 03.7	-7.5
PB14	IPOC Station P	8.49	340	Pn	Pn	10 51 47.4	-1.1
PLCA	Paso Flores	8.52	198	P	Pn	10 51 47.7	-0.8
	comp=Z,56nm,0.3s,baz=12,slow=12,SNR=568						
PLCA				S	Sn	10 53 21.6	-2.0
	comp=Z,5.2nm,0.3s,baz=12,slow=14,SNR=1.5						
PLCA				P3KPbc		11 28 51.0	
	comp=Z,0.0nm,0.3s,baz=238,slow=5.4,SNR=3.9						
PLCA	Paso Flores	8.52	198	Pn	Pn	10 51 47.5	-1.1
PLCA	Paso Flores	8.52	198	eP	Pn	10 51 47.5	-1.1
ITQB	Itaqui	9.49	75	eP	Pn	10 51 59.9	-1.6
I14CL	ROBINSON CRUSO	9.82	261	i		11 37 20.0	
	baz=81,slow=323,SNR=0.5						
H03N1	Juan Fernandez	9.90	262	P	Pn	10 52 05.1	-1.5
	baz=125,slow=22,SNR=4702						
H03N3	Juan Fernandez	9.92	262	P	Pn	10 52 05.1	-1.7
	baz=125,slow=22,SNR=5486						
H03S1	Juan Fernandez	9.92	260	P	Pn	10 52 04.3	-2.4
H03S3	Juan Fernandez	9.92	260	P	Pn	10 52 04.7	-2.0
H03N2	Juan Fernandez	9.92	262	P	Pn	10 52 05.3	-1.4
	baz=125,slow=22,SNR=3788						
H03S2	Juan Fernandez	9.93	260	P	Pn	10 52 04.7	-2.2
LVC	Limon Verde	10.12	351	P	Pn	10 52 09.5	-0.6
	comp=Z,203nm,0.3s,baz=169,slow=9.1,SNR=1041						
LVC				S	Sn	10 53 57.1	-5.7
	comp=Z,28nm,0.3s,baz=189,slow=18,SNR=1.3						
LVC	Limon Verde	10.12	351		Pn	10 52 09.3	-0.8
LVC	Limon Verde	10.12	351	eP	Pn	10 52 09.0	-1.1
LL01	San Ignacio de	10.57	202		Pn	10 52 10.9	-4.5
PB04	IPOC Station P	10.61	345	Pn	Pn	10 52 14.3	-2.0
CPUP	Villa Florida	10.62	56	P	Pn	10 52 13.4	-2.8
	comp=Z,15nm,0.3s,baz=234,slow=12,SNR=170						
CPUP				S	Sn	10 54 10.7	-3.5
	comp=Z,43nm,0.3s,baz=248,slow=18,SNR=1.1						
CPUP				LR	LR	10 56 54.1	
	comp=Z,9µm,21.7s,baz=300,slow=40						
CPUP				P3KPbc		11 28 37.1	
	comp=Z,0.1nm,0.3s,baz=212,slow=3.7,SNR=3.2						
CPUP	Villa Florida	10.62	56	P	Pn	10 52 13.3	-2.9
CPUP				pmax	pmax		
	comp=Z,1µm,1.0s						
PB09	IPOC Station P	10.97	350		Pn	10 52 19.9	-1.0
PLTB	Pedras Altas	11.51	89	eP	Pn	10 52 25.5	-2.2
CPSB	Cacapava Do Su	11.91	83	eP	Pn	10 52 30.9	-2.0
PB08	IPOC Station P	12.59	351	Pn	Pn	10 52 41.2	-0.8
MNMC	Minye Minye	13.64	350	Pn	Pn	10 52 54.0	-1.2
ITAB	Concordia	14.09	71	eP	Pn	10 52 59.7	-0.9
CNLB	Canela	14.37	81	eP	Pn	10 53 02.9	-1.3
PTGB	Pitanga	15.41	63	eP	P	10 53 17.6	-0.2
AQDB	Aquidauana	15.86	43	eP	Pn	10 53 21.9	-0.5
TRCB	Terra Rica	16.16	56	eP	P	10 53 25.8	-0.2
SIV	San Ignacio	17.48	20	P	Pn	10 53 41.3	-0.6
	comp=Z,99nm,0.3s,baz=218,slow=10,SNR=1094						
SIV				S	S	10 56 52.2	-1.3
	comp=Z,2.9nm,0.3s,baz=302,slow=23,SNR=3.4						
PCMB	Pacaembu	17.89	56	eP	Pn	10 53 46.1	-0.6
FRTB	Fartura	18.07	64	eP	P	10 53 47.8	+0.9
PP1B	Ponte de Pedra	18.63	39	eP	Pn	10 53 54.5	-0.9
GO09	Cerro Castillo	19.00	190	P	P	10 53 55.9	-0.8
SPB	Sao Paulo	19.57	68	P	P	10 54 03.8	+0.6
SPB	Sao Paulo	19.57	68	eP	P	10 54 04.5	+1.4
ITRB	Iturama	19.80	53	eP	P	10 54 06.5	+0.9
EFI	East Falkland	20.14	163	c iP	P	10 54 08.0	-1.0
EFI				pmax	pmax		
	comp=Z,2µm,0.8s						
EFI	East Falkland	20.14	163	P	P	10 54 07.6	-1.4
BB19B	Bebedouro	20.19	60	eP	P	10 54 09.9	0.0
VAO	Valinhos	20.24	67	eP	P	10 54 11.3	+0.9
VILB	Vilhena	20.61	20	eP	P	10 54 13.9	-0.5
GO10	Punta Arenas	20.69	187	P	P	10 54 15.6	+0.7
PARB	Paraibuna	21.12	69	eP	P	10 54 19.9	+0.1
ARAG	Araguaiana, MT	21.87	43	eP	P	10 54 26.8	-0.8
USHA	Ushuaia	22.20	182	P	P	10 54 29.3	-1.1
	comp=Z,2µm,0.9s,baz=11,slow=4.7,SNR=89						
MG01	Puerto William	22.28	181	P	P	10 54 29.2	-2.0
NNA	Nana	22.41	334	P	P	10 54 32.9	0.0
	comp=Z,174nm,0.5s,baz=155,slow=13,SNR=88						
NNA				PcP	PcP	10 58 22.7	+1.4
	comp=Z,71nm,0.7s,baz=82,slow=7.7,SNR=4.6						
NNA	Nana	22.41	334	d iP	P	10 54 33.0	0.0
NNA				pmax	pmax		
	comp=Z,860nm,1.1s						
NNA	Nana	22.41	334	P	P	10 54 32.9	0.0
IPMB	Ipameri, GO	22.45	54	eP	P	10 54 32.8	-0.5
ETMB	Extrema	22.74	2	eP	P	10 54 36.8	+0.9
BSCB	Bom Sucesso	23.04	65	eP	P	10 54 38.9	+0.2
SAML	Samuel	23.87	10	P	P	10 54 46.1	0.0
SAML				pmax	pmax		
	comp=Z,2µm,1.6s						
SAML	Samuel	23.87	10	P	P	10 54 46.1	0.0
BDFB	Brasilia	24.25	50	P	P	10 54 49.6	-0.2
	comp=Z,333nm,0.9s,baz=219,slow=9.3,SNR=137						
BDFB				pP	pP	10 55 23.9	+0.1
	comp=Z,999nm,1.0s,baz=224,slow=9.5,SNR=10						
BDFB				PcP	PcP	10 58 26.5	+1.2
	comp=Z,159nm,0.9s,baz=219,slow=1.0,SNR=5.5						
BDFB				S	S	10 58 52.7	-3.3
	comp=Z,82nm,1.0s,baz=111,slow=17,SNR=1.3						
BDFB	Brasilia	24.25	50	P	P	10 54 49.5	-0.2
BDFB				IAmb	IAmb	10 55 25.1	
	comp=Z,1µm,1.1s						
SNDB	Serra Nova Dou	25.20	39	eP	P	10 54 58.2	-0.1
CZSB	Cruzeiro do Su	25.33	347	eP	P	10 54 59.9	+0.5
DIAM	Diamantina, MG	25.48	62	eP	P	10 55 01.6	+0.6
SJMB	Sao Joao De Ma	27.12	66	eP	P	10 55 15.7	+0.3
JANB	Januaria	27.16	55	eP	P	10 55 15.8	-0.1
BSFB	Barra de Sao F	27.31	66	eP	P	10 55 17.3	+0.2
ATAH	Atahualpa	27.45	335	P	P	10 55 21.1	+2.2
	comp=Z,126nm,0.9s,baz=165,slow=7.3,SNR=126						
ATAH				PcP	PcP	10 58 35.0	+2.0
	comp=Z,110nm,0.9s,baz=13,slow=1.8,SNR=5.7						
NPGB	Novo Progresso	27.74	26	eP	P	10 55 20.7	-0.2
SDBA	SAO DESIDERIO	28.66	50	eP	P	10 55 29.1	-0.2
SMTB	Santa Maria do	29.80	42	eP	P	10 55 39.1	-0.1
MACA	Manacapuru-AM	29.95	13	eP	P	10 55 40.6	+0.1
ITTB	Itaituba	30.10	23	eP	P	10 55 42.0	+0.2
HOPE	Hope Point	30.63	144	P	P	10 55 46.0	-0.2
HOPE				pmax	pmax		
	comp=Z,1µm,1.6s						
HOPE	Hope Point	30.63	144	P	P	10 55 46.0	-0.2
HOPE				IAmb	IAmb	10 56 25.4	
	comp=Z,1µm,1.6s						
PRPB	Parauapebas	30.90	35	eP	P	10 55 48.6	-0.3
PRPB				epP	pP	10 56 21.9	-3.2
PMSA	Palmer Station	32.21	178	P	P	10 56 00.9	+1.2
	comp=Z,431nm,0.9s,baz=7.2,slow=8.5,SNR=42						
PMSA				PP	PnPn	10 57 11.6	-1.5
	comp=Z,192nm,1.2s,baz=347,slow=11,SNR=4.2						
PMSA				PcP	PcP	10 58 46.3	+2.3
	comp=Z,61nm,0.8s,baz=139,slow=6.8,SNR=3.2						
PMSA				S	S	11 00 59.2	-0.4
	comp=Z,12nm,0.8s,baz=319,slow=20,SNR=1.1						
PMSA				ScP	ScP	11 02 10.9	-0.4
	comp=Z,41nm,1.1s,baz=1.4,slow=6.6,SNR=4.7						
PMSA	Palmer Station	32.21	178	P	P	10 55 59.5	-0.3
PMSA				IAmb	IAmb	10 56 03.8	
	comp=Z,656nm,1.0s						
PMSA	Palmer Station	32.21	178	eP	P	10 55 60.0	+0.2
PTGA	Pitinga	32.46	13	P	P	10 56 02.7	+0.1
PTGA				IAmb	IAmb	10 56 04.3	
	comp=Z,748nm,1.3s						
PTGA	Pitinga	32.46	13	eP	P	10 56 02.4	-0.2
MALB	Monte Alegre	32.94	24	eP	P	10 56 07.2	+0.5
PTLC	Puerto Leguiza	33.43	346	eP	P	10 56 07.9	-3.1
OTAV	Otavalo	34.41	340	P	P	10 56 20.8	+0.9
OTAV				pmax	pmax		
	comp=Z,399nm,1.2s						
OTAV	Otavalo	34.41	340	P	P	10 56 20.8	+0.9
OTAV				IAmb	IAmb	10 56 25.4	
	comp=Z,399nm,1.2s						
OTAV	Otavalo	34.41	340	eP	P	10 56 21.3	+1.4
OTAV	Otavalo	34.41	340	eP	P	10 56 21.6	+1.7
CPAS1	Pasto	35.00	342	eP	P	10 56 26.9	+2.0
TMAB	Tom-Au,PA,Br	35.03	35	eP	P	10 56 25.7	+0.9
GCUF	Volcan Galeras	35.04	342	eP	P	10 56 27.3	+1.9
CCUFI	Cufio, Nario	35.05	342	eP	P	10 56 28.3	+2.8
MCPB	Macapa, AP	35.13	27	eP	P	10 56 25.8	+0.2
MACC	Macarena, Meta	35.18	348	eP	P	10 56 25.3	-0.8
GARC	Garzon, Huila	35.53	346	eP	P	10 56 30.4	+1.0
SOTA	Rioblanco	35.73	344	eP	P	10 56 34.1	+2.8
PCON	Cinco Dias	35.87	344	eP	P	10 56 34.9	+2.3
TUMC	Tumaco	35.99	340	eP	P	10 56 34.8	+1.9
BETC	Betania	36.01	346	eP	P	10 56 35.3	+2.2
MARP	Paez Belalcaza	36.27	345	eP	P	10 56 37.0	+1.3
ROSB	Rosrio	36.64	41	eP	P	10 56 38.4	-0.1
RPN	Rapa Nui	36.81	267	P	P	10 56 40.6	+0.9
	comp=Z,330nm,1.1s,baz=68,slow=3.0,SNR=24						
RPN	Rapa Nui	36.81	267	P	P	10 56 41.8	+2.0
PTGC	Puerto Gaitan,	36.95	352	eP	P	10 56 40.3	-0.7
NBPS	Pedro II - PI	36.98	46	eP	P	10 56 41.6	+0.2
NBPS				epP	pP	10 57 15.1	-3.3
ORTC	Ortega, Tolima	37.16	347	eP	P	10 56 44.0	+1.2
YOTC	Yotoco, Valle	37.46	345	eP	P	10 56 45.8	+0.4
CHIC	Chingaza	37.60	349	eP	P	10 56 47.3	+0.4
NBLI	Livramento-PB	37.67	55	eP	P	10 56 46.9	-0.3
MALC	Bahia Malaga	37.72	343	eP	P	10 56 49.0	+1.5
ANIL	Santa Ana	37.76	346	eP	P	10 56 48.5	+0.4
TOLC	Tolima	37.83	347	eP	P	10 56 49.4	+0.5
ROSC	El Rosal	37.90	348	P	P	10 56 50.9	+1.4
	comp=Z,84nm,0.6s,baz=193,slow=4.4,SNR=45						
ROSC	El Rosal	37.90	348	IAmb	IAmb	10 57 07.9	
	comp=Z,507nm,1.4s						
NBRF	Rio Formoso -	38.03	58	eP	P	10 56 49.5	-0.7
RREF	El Recreo	38.15	347	eP	P	10 56 53.4	+1.6
PLMC	San Jos del P	38.34	345	eP	P	10 56 53.2	+0.4
GUY2C	Guyana, Caldas	38.46	347	eP	P	10 56 55.1	+0.8
PAYG	Puerto Ayora	38.55	321	P	P	10 56 56.8	+2.2
PIZC	Pizarro, Choco	38.64	344	eP	P	10 56 56.7	+1.5
SPBC	San Pablo de B	38.65	349	eP	P	10 56 54.7	-0.7
NBMO	Morrinhos-CE	38.69	47	eP	P	10 56 55.5	-0.2
NORC	Norcasia	38.70	348	eP	P	10 56 55.1	-0.7
NBPA	Parau_RN	38.73	53	eP	P	10 56 56.2	+0.3
RUSC	La Rusia	38.74	351	eP	P	10 56 57.0	+0.4
TAMC	Tame, Arauca	39.12	353	eP	P	10 56 58.6	-0.6
HELC	Santa Helena	39.44	347	eP	P	10 57 02.1	-0.2
BARC	Barichara	39.44	351	eP	P	10 57 00.3	-1.8
NBPV	Pedro Velho	39.49	56	eP	P	10 57 02.9	+0.5
NBPV				epP	pP	10 57 35.4	-4.2
RCBR	Riachuelo	39.49	54	P	P	10 57 02.8	+0.4
RCBR				pmax	pmax		
	comp=Z,368nm,1.2s						
RCBR	Riachuelo	39.49	54	P	P	10 57 02.8	+0.4
RCBR	Riachuelo	39.49	54	eP	P	10 57 02.6	+0.2
PTBC	PUERTO BERRIO,	39.59	349	eP	P	10 57 01.1	-1.9
SOLC	Bahia Solano	39.87	344	eP	P	10 57 07.0	+1.6
BRRC	Barranca, Sant	40.02	350	eP	P	10 57 04.2	-2.4
ZARC	Zaragoza, Cauc	40.59	348	eP	P	10 57 10.3	-1.0
PTAC	Punta Ardita,	40.85	344	eP	P	10 57 15.2	+1.7
UREC	San Jos de Ur	40.96	347	eP	P	10 57 13.6	-0.8
OCAC	Ocana	41.08	351	eP	P	10 57 12.6	-2.8
SDV	Santo Domingo	41.44	355	P	P	10 57 17.0	-1.4
SDV				IAmb	IAmb	10 57 19.1	
	comp=Z,425nm,1.1s						
SDV	Santo Domingo	41.44	355	eP	P	10 57 17.4	-1.0
SDV	Santo Domingo	41.44	355	eP	P	10 57 17.4	-1.0
SMLC	San Martn de	41.74	350	eP	P	10 57 18.6	-2.1
MOTC	Monteria, Cord	41.99	347	eP	P	10 57 22.0	-0.6
CAPC	Capurgana	42.19	345	eP	P	10 57 25.5	+1.2
ARGC	Ariguani, Magd	42.81	350	eP	P	10 57 28.6	-0.7
BCIP	Isla Barro Col	43.31	342	P	P	10 57 34.5	+1.2
BCIP				pmax	pmax		
	comp=Z,683nm,1.2s						
BCIP	Isla Barro Col	43.31	342	P	P	10 57 34.5	+1.2
BCIP				IAmb	IAmb	10 57 36.0	
	comp=Z,683nm,1.2s						
BCIP	Isla Barro Col	43.31	342	eP	P	10 57 33.9	+0.7
TRN	Trinidad (W)	43.40	8	eP	P	10 57 33.7	-0.3
EDSV	San Vito	43.91	337	iP	P	10 57 40.9	+2.6
TOSP	Speyside	44.15	9	eP	P	10 57 38.8	-1.2
TOSP	Speyside	44.15	9	P	P	10 57 39.7	-0.3
TOSP				IAmb	IAmb	10 57 42.0	
	comp=Z,795nm,1.3s						
H09W1	TRISTAN DA CUN	44.67	112	P	P	10 57 45.1	+1.2
	SNR=21						
PEZE	Perez Zeledon,	44.67	336	⇓iP	P	10 57 46.0	+1.7
GRGR	Grenville	44.84	8	eP	P	10 57 45.0	-0.4
GRGR	Grenville	44.84	8	P	P	10 57 45.3	-0.1
CDM	Cerro de Muert	44.86	336	⇓iP	P	10 57 47.9	+1.7
RIMA	Rio Macho	45.09	336	⇓iP	P	10 57 49.4	+1.7
LCR2	La Lucha 2	45.12	336	⇓iP	P	10 57 49.0	+1.1
GCMP	Grenada, Carri	45.21	8	eP	P	10 57 48.2	-0.2
HDC	Heredia	45.40	336	IAmb	IAmb	10 57 53.7	
	comp=Z,764nm,0.9s						
LAFE	Finca La Fe, P	45.49	335	⇓iP	P	10 57 52.5	+1.8
SRA1	San Ramn	45.60	336	⇓iP	P	10 57 53.5	+1.9
DUNO	Dulce Nombre,	45.95	334	⇓iP	P	10 57 55.6	+1.4
JTS	Las Juntas de	45.96	335	d iP	P	10 57 55.6	+1.2
JTS				pmax	pmax		
	comp=Z,338nm,1.1s						
JTS	Las Juntas de	45.96	335	⇓iP	P	10 57 56.0	+1.7
JTS	Las Juntas de	45.96	335	P	P	10 57 55.5	+1.2
JTS				IAmb	IAmb	10 57 56.9	
	comp=Z,503nm,1.1s						
SVB	Belmont	46.01	8	eP	P	10 57 54.3	-0.3
SVB	Belmont	46.01	8	pP	pP	10 58 35.5	+2.6
ARE1	Arenal 1	46.03	336	⇓iP	P	10 57 57.0	+2.1
SVV	Soufriere Volc	46.06	8	eP	P	10 57 55.7	+0.7
BBGH	Gun Hill	46.11	10	eP	P	10 57 57.5	+2.0
BBGH	Gun Hill	46.11	10	P	P	10 57 54.4	-1.0
COVE	Coope Vega, Sa	46.16	336	⇓iP	P	10 57 57.1	+1.2
CUI	Cuipilapa	46.37	335	⇓iP	P	10 57 59.0	+1.4
MCLT	Moule a Chique	46.48	8	eP	P	10 57 57.4	-0.9
GPS2	Hotel Rincn d	46.53	335	⇓iP	P	10 58 00.1	+1.3
HZTE	Horizontes, Gu	46.58	335	⇓iP	P	10 58 00.7	+1.5
SLB	Belfond	46.58	8	eP	P	10 57 58.6	-0.6
SLBI	Saint Lucia, B	46.78	8	eP	P	10 57 59.0	-1.6
BIM	Bigot	47.26	8	eP	P	10 58 03.9	-0.5
FDF	Fort de France	47.46	8	P	P	10 58 05.2	-0.7
FDF				pmax	pmax		
	comp=Z,754nm,0.8s						
FDF	Fort de France	47.46	8	P	P	10 58 05.2	-0.7
FDF				IAmb	IAmb	10 58 07.6	
	comp=Z,754nm,0.8s						
ESPN	Las Esperanzas	47.51	337	IAmb	IAmb	10 58 08.7	
	comp=Z,992nm,1.2s						
BELA	Belgrano 2	47.53	171	P	P	10 58 06.6	+0.8
ILAM	Ilet Lapin Mar	47.53	8	eP	P	10 58 05.7	-0.7
ACON	Acoyapa	47.59	336	P	P	10 58 06.8	-0.1
DLPL	La Plaine	48.04	8	eP	P	10 58 10.1	-0.3
TDBA	Terre de Bas,	48.51	7	eP	P	10 58 12.0	-2.0
MAGL	Barre de l’ile	48.65	8	eP	P	10 58 15.0	+0.1
CBE	Ff, Capester	48.73	7	eP	P	10 58 14.7	-1.0
CRIN	San Cristobal	48.94	334	P	P	10 58 17.5	+0.1
VNA3	Neumayer Olymp	49.10	159	P	P	10 58 18.9	+1.0
VNA3	Neumayer Olymp	49.10	159	PcP	PcP	10 59 38.9	+0.3
VNA3				S	S	11 05 14.7	+5.6
ABD	La Joyeuse, An	49.14	7	eP	P	10 58 20.5	+1.8
VNA1	Neumayer--Stat	49.34	158	P	P	10 58 21.2	+1.5
VNA1	Neumayer--Stat	49.34	158	PcP	PcP	10 59 39.9	+0.4
ANBD	Bethesda, Anti	49.68	7	eP	P	10 58 26.5	+3.7
VNA2	Neumayer--Watz	49.70	158	P	P	10 58 23.4	+1.0
	baz=287,slow=8.5						
VNA2	Neumayer--Watz	49.70	158	PcP	PcP	10 59 41.1	+0.3
VNA2				S	S	11 05 19.2	+1.7
SKI	Saint Kitts	49.88	6	eP	P	10 58 22.4	-1.9

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SKI   Saint Kitts      49.88   6   IAmb    IAmb     10 58 25.4
        comp=Z,461nm,1.0s
SABA  Saba             50.12   5   IAmb    IAmb     10 58 26.7
        comp=Z,823nm,1.4s
CDVI  St. Croix        50.17   3   P       P        10 58 25.4 -1.0
TGUH  Tegucigalpa,Un   50.27 334   P       P        10 58 27.4  0.0
PDPR  Patillas Dam,    50.39   1   IAmb    IAmb     10 58 28.7
        comp=Z,1µm,1.3s
SJG   San Juan         50.48   1   P       P        10 58 27.3 -1.5
SJG                                pmax    pmax
        comp=Z,1µm,1.2s
SJG   San Juan         50.48   1   P       P        10 58 27.3 -1.5
SJG   San Juan         50.48   1  eP       P        10 58 27.7 -1.1
GCPR  Guaynabo City    50.68   1   P       P        10 58 28.2 -2.1
GCPR                               IAmb    IAmb     10 58 30.5
        comp=Z,577nm,1.1s
SNET  Serv Nac Est T   50.68 332   IAmb    IAmb     10 58 34.0
        comp=Z,466nm,1.0s
CUPR  Culebra, Puert   50.70   2   P       P        10 58 28.7 -1.7
CUPR                               IAmb    IAmb     10 58 30.7
        comp=Z,585nm,1.2s
AGPR  Aguadilla, PR    50.83   0   P       P        10 58 30.2 -1.2
AGPR                               IAmb    IAmb     10 58 39.8
        comp=Z,460nm,1.1s
EMPR  Esperanza - Ma   50.84   1   IAmb    IAmb     10 58 31.4
        comp=Z,868nm,1.1s
LGNH  Logne            51.14 353   IAmb    IAmb     10 59 49.8
        comp=Z,829nm,1.4s
SNAA  Sanae            51.31 159   P       P        10 58 35.4 +0.8
SNAA  Sanae            51.31 159   PcP     PcP      10 59 47.4 +0.5
SNAA                               S       S        11 05 40.2 +0.3
SNAA  Sanae            51.31 159   P       P        10 58 35.2 +0.7
        comp=Z,447nm,0.8s,baz=282,slow=7.1,SNR=890
SNAA                               ScP     ScP      11 03 26.8 -0.1
        comp=Z,16nm,1.0s,baz=281,slow=8.9,SNR=3.9
SNAA                               S       S        11 05 39.4 -0.5
        comp=Z,25nm,0.9s,baz=22,slow=21,SNR=11
SNAA  Sanae            51.31 159c iP       P        10 58 35.0 +0.4
SNAA                               pmax    pmax
        comp=Z,2µm,1.4s
SNAA  Sanae            51.31 159   P       P        10 58 34.0 -0.5
SDDR  Presa de Saban   51.49 355   P       P        10 58 36.2 -0.2
SDDR                               IAmb    IAmb     10 58 39.7
        comp=Z,622nm,1.4s
MTDJ  Mount Denham     51.55 347   IAmb    IAmb     10 58 38.5
        comp=Z,660nm,1.4s
RTAL  Retalhuleu       52.45 330   IAmb    IAmb     10 58 45.4
        comp=Z,638nm,1.4s
GTBY  Guantanamo Bay   52.83 351   IAmb    IAmb     10 58 47.6
        comp=Z,795nm,1.2s
FSCY  Frank Sound, G   53.38 343   P       P        10 58 49.7 -0.5
H10S3 ASCENSION HYDR53.80  76      P       P        10 58 53.9 +0.6
        baz=200,slow=74,SNR=15
H10S2 ASCENSION HYDR53.81  76      P       P        10 58 54.3 +0.9
        baz=20,slow=74,SNR=11
GRTK  Grand Turk       53.99 355   IAmb    IAmb     10 58 56.5
        comp=Z,725nm,1.2s
CCIG  Comitan          54.21 330   IAmb    IAmb     10 58 57.7
        comp=Z,608nm,1.4s
H10N3 ASCENSION HYDR54.56  75      P       P        10 59 00.0 +1.4
        baz=223,slow=7.6,SNR=12
H10N1 ASCENSION HYDR54.57  75      P       P        10 59 00.0 +1.2
        baz=223,slow=7.6,SNR=20
H10N2 ASCENSION HYDR54.58  75      P       P        10 59 00.1 +1.4
        baz=223,slow=7.6,SNR=25
ASCN  Ascension        54.62  75   P       P        10 59 00.4 +0.9
ASCN                               IAmb    IAmb     10 59 02.0
        comp=Z,465nm,0.8s
PTCN  Pitcairn Islan   54.95 261   P       P        10 59 03.0 +1.2
NVL   N'lazarevskaya   55.94 157⇓iP       P        10 59 07.6 -0.5
NVL                               iS       S        11 06 38.2 -3.8
NVL                                pmax    pmax
        comp=Z,684nm,0.8s
TEIG  Tepich           56.33 336   P       P        10 59 11.3  0.0
QSPA  South Pole Qui   57.59 180   P       P        10 59 20.8 +0.9
        comp=Z,336nm,0.6s,baz=297,slow=0.4,SNR=677
QSPA                               pP      pP       11 00 00.9 +1.1
        comp=Z,140nm,0.8s,baz=141,slow=5.6,SNR=1.5
QSPA                               S       S        11 07 03.0 -1.0
        comp=Z,16nm,1.0s,baz=79,slow=21,SNR=11
QSPA  South Pole Qui   57.59 180   P       P        10 59 20.7 +0.8
SHEL  Horse Pasture    57.65  89   P       P        10 59 22.2 +1.2
SHEL                               pmax    pmax
        comp=Z,839nm,1.0s
SHEL  Horse Pasture    57.65  89   P       P        10 59 22.2 +1.2
TLIG  Tlapa            58.28 324   IAmb    IAmb     10 59 27.9
        comp=Z,295nm,0.8s
RKT   Rikitea          59.81 260  eS       S        11 07 28.7 -5.0
        comp=Z,8µm,29.2s
RKT                               eLQ      LQ       11 14 49.4
        comp=Z,10µm,30.0s
RKT                               eLR      LR       11 17 19.9
        comp=Z,5µm,27.2s
060A  Indiantown       60.67 346   P       P        10 59 41.6 +0.3
MOIG  Morelia          61.38 323   P       P        10 59 47.5 +1.0
DWPF  Disney Wildern   61.93 346   P       P        10 59 49.9 +0.1
        baz=166
DWPF                               S       S        11 07 56.7 -3.3
        baz=166
DWPF  Disney Wildern   61.93 346   P       P        10 59 49.2 -0.5
DWPF                               IAmb    IAmb     10 59 50.6
        comp=Z,314nm,0.8s
SACV  Santiago Islan   63.05  48   P       P        10 59 57.6 +0.1
SACV                               IAmb    IAmb     11 00 00.7
        comp=Z,459nm,0.9s
BBSR  BB Station       64.71   2   IAmb    IAmb     11 00 09.8
        comp=Z,313nm,1.0s
SYO   Syowa Base       65.59 158⇑iP       P        11 00 13.4 +0.2
SYO   Syowa Base       65.59 158⇑iPcP     PcP      11 00 44.6 +1.3
TIGA  Tifton           65.61 345   S       S        11 08 43.4 -1.9
        baz=165
255A  Hazlehurst       65.84 346   IAmb    IAmb     11 00 16.4
        comp=Z,330nm,0.8s
352A  Blakely          65.96 343   P       P        11 00 14.7 -1.3
H06S1 SOCORRO T        66.07 314   P       P        11 00 18.4 +1.4
        SNR=32
H06N1 SOCORRO T-PHAS66.19 314      P       P        11 00 19.6 +1.9
        SNR=21
VNDA  Vanda            66.19 190   P       P        11 00 18.6 +1.6
        comp=Z,23nm,0.6s,baz=141,slow=6.8,SNR=69
VNDA                               PKPPKP  P'P'df   11 28 43.9 -7.3
        comp=Z,8.9nm,0.9s,baz=320,slow=7.0,SNR=5.2
VNDA  Vanda            66.19 190   P       P        11 00 17.3 +0.3
VNDA                               pmax    pmax
        comp=Z,524nm,1.7s
VNDA  Vanda            66.19 190   P       P        11 00 17.3 +0.3
VNDA                               IAmb    IAmb     11 00 20.8
        comp=Z,524nm,1.6s
BRAL  Brewton          66.21 341   P       P        11 00 17.6  0.0
        baz=162,SNR=11
BRAL                               S       S        11 08 48.1 -4.3
        baz=162
Z59A  Georgetown, SC   66.53 349   P       P        11 00 19.8 +0.3
        baz=169
Z59A                               S       S        11 08 56.7 +0.4
        baz=169
NHSC  New Hope         66.55 348   P       P        11 00 20.5 +0.8
        baz=168,SNR=32
Z56A  Williston        66.98 347   IAmb    IAmb     11 00 23.7
        comp=Z,554nm,0.9s
MBO   M'Bour           67.00  54   IAmb    IAmb     11 00 27.4
        comp=Z,499nm,1.0s
152A  Waverly Hall     67.05 344   IAmb    IAmb     11 00 23.8
        comp=Z,379nm,1.2s
346A  Big Creek Wild   67.10 339   IAmb    IAmb     11 00 25.1
        comp=Z,781nm,1.2s
GOGA  Godfrey          67.48 345   P       P        11 00 25.4 -0.2
        baz=165,SNR=60
GOGA                               S       S        11 09 02.8 -4.9
        baz=165
GOGA  Godfrey          67.48 345   P       P        11 00 24.7 -0.9
GOGA                               pmax    pmax
        comp=Z,450nm,1.3s
GOGA  Godfrey          67.48 345   P       P        11 00 24.7 -0.9
GOGA                               IAmb    IAmb     11 00 26.6
        comp=Z,450nm,1.3s
X60A  Albert Glenn T   67.64 350   P       P        11 00 27.1 +0.5
        baz=170,SNR=26
X59A  McDuffie Farm,   67.73 350   P       P        11 00 27.6 +0.5
        baz=170,SNR=26
X59A                               S       S        11 09 08.2 -2.3
        baz=170
Z51A  Franklin         67.78 344   IAmb    IAmb     11 00 28.8
        comp=Z,521nm,1.3s
X57A  Johnson Farm,    67.86 348   P       P        11 00 28.3 +0.4
        baz=168,SNR=36
X57A                               S       S        11 09 10.4 -1.8
        baz=168
833A  Chaparral WMA,   67.94 330   P       P        11 00 29.6 +1.1
        baz=151,SNR=207
833A                               S       S        11 09 14.3 +0.9
        baz=151
HKT   Hockley          67.94 333d iP       P        11 00 28.8 +0.4
HKT                                pmax    pmax
        comp=Z,185nm,1.4s
HKT   Hockley          67.94 333   IAmb    IAmb     11 00 31.0
        comp=Z,841nm,1.8s
LRAL  Lakeview Retre   67.96 342   P       P        11 00 28.4 -0.1
        baz=162,SNR=74
LRAL  Lakeview Retre   67.96 342   IAmb    IAmb     11 00 29.8
        comp=Z,320nm,1.1s
342A  Flagon Creek P   67.98 337   P       P        11 00 29.5 +0.8
Y52A  Lilburn          68.05 345   IAmb    IAmb     11 00 30.4
        comp=Z,663nm,1.1s
W60A  Pink Hill        68.07 351   P       P        11 00 30.0 +0.8
        baz=170,SNR=20
W60A                               S       S        11 09 13.2 -1.5
        baz=170
W61A  Ground Anchor    68.10 351   P       P        11 00 30.4 +1.0
        baz=171,SNR=19
146A  Union            68.15 340   IAmb    IAmb     11 00 31.8
        comp=Z,730nm,1.1s
VBMS  Vicksburg        68.19 339   P       P        11 00 31.0 +1.0
        baz=159,SNR=49
VBMS                               S       S        11 09 17.1 +0.9
        baz=159
W58A  Raeford          68.26 349   P       P        11 00 31.2 +0.8
        baz=169,SNR=100
W58A                               S       S        11 09 15.9 -1.0
        baz=169
CNNC  Cliffs of the    68.28 351   P       P        11 00 31.2 +0.8
        baz=170,SNR=36
W59A  Clinton          68.29 350   P       P        11 00 31.4 +0.9
        baz=170,SNR=31
W59A                               S       S        11 09 17.8 +0.6
        baz=170
V62A  Hyde County Ai   68.35 352   P       P        11 00 31.8 +0.9
        baz=172
Z47A  Carrollton       68.40 341   P       P        11 00 30.4 -0.9
Z47A                               IAmb    IAmb     11 00 32.6
        comp=Z,559nm,0.8s
PAULI Pauline          68.51 347   IAmb    IAmb     11 00 33.6
        comp=Z,412nm,1.0s
Y49A  Blount Mountai   68.59 343   IAmb    IAmb     11 00 33.7
        comp=Z,314nm,0.9s
W56A  Indian Trail     68.60 348   P       P        11 00 32.5  0.0
        baz=168,SNR=40
W56A                               S       S        11 09 18.0 -2.8
        baz=168
V61A  Roper            68.65 352   P       P        11 00 32.6 -0.2
        baz=171,SNR=9.3
V60A  Jim Taylor Roa   68.71 351   P       P        11 00 33.8 +0.6
        baz=171,SNR=21
V60A  Jim Taylor Roa   68.71 351   IAmb    IAmb     11 00 35.3
        comp=Z,435nm,1.1s
KMSC  Kings Mountain   68.74 348   P       P        11 00 33.5 +0.1
        baz=167,SNR=57
KMSC                               S       S        11 09 19.5 -3.1
        baz=167
KMSC  Kings Mountain   68.74 348   IAmb    IAmb     11 00 34.9
        comp=Z,372nm,1.1s
V59A  Middlesex        68.85 350   P       P        11 00 34.7 +0.7
        baz=170,SNR=63
V59A                               S       S        11 09 22.3 -1.4
        baz=170
BG3   Lake Jocassee    68.90 346   IAmb    IAmb     11 00 35.9
        comp=Z,398nm,1.2s
V58A  Windy Hill, Pi   69.00 350   P       P        11 00 35.3 +0.4
        baz=169,SNR=132
V58A                               S       S        11 09 24.4 -1.2
        baz=169
V58A  Windy Hill, Pi   69.00 350   P       P        11 00 35.1 +0.1
FPAL  Fort Paine       69.05 344   IAmb    IAmb     11 00 36.4
        comp=Z,430nm,0.9s
NATX  Nacogdoches      69.14 335   P       P        11 00 36.9 +1.0
        baz=155,SNR=74
NATX                               S       S        11 09 27.3 -0.1
        baz=155
U61A  Possum Corner    69.17 352   P       P        11 00 36.9 +1.0
        baz=172,SNR=31
V57A  Coltrane Farms   69.20 349   P       P        11 00 36.3 +0.2
        baz=169,SNR=46
V57A                               S       S        11 09 25.1 -2.9
        baz=169
W52A  Murphy           69.20 345   IAmb    IAmb     11 00 37.7
        comp=Z,432nm,1.1s
V56A  Mocksville       69.24 348   P       P        11 00 37.0 +0.5
        baz=168,SNR=121
V56A                               S       S        11 09 25.9 -2.6
        baz=168
SLBS  Sierra La Lagu   69.33 318   IAmb    IAmb     11 00 39.6
        comp=Z,272nm,1.1s
435B  Jarrell          69.36 332   P       P        11 00 38.0 +0.7
        baz=153,SNR=44
435B                               S       S        11 09 29.7 -0.3
        baz=153
435B  Jarrell          69.36 332   IAmb    IAmb     11 00 39.4
        comp=Z,456nm,1.1s
U59A  Littleton        69.36 351   P       P        11 00 37.9 +0.7
        baz=170,SNR=76
U59A                               S       S        11 09 27.7 -2.1
        baz=170
U59A  Littleton        69.36 351   P       P        11 00 37.2  0.0
U59A                               IAmb    IAmb     11 00 39.4
        comp=Z,490nm,1.1s
U60A  Pendleton        69.40 351   P       P        11 00 38.0 +0.6
        baz=171,SNR=27
U60A                               S       S        11 09 27.4 -2.8
        baz=171
U58A  Oxford           69.51 350   P       P        11 00 38.7 +0.7
        baz=170,SNR=77
U58A                               S       S        11 09 30.3 -1.3
        baz=170
U57A  Blanch           69.66 350   P       P        11 00 39.5 +0.4
        baz=169,SNR=110
U57A                               S       S        11 09 32.9 -0.5
        baz=169
HPIG                   69.67 324   IAmb    IAmb     11 00 41.9
        comp=Z,343nm,1.0s
CPCT  Cooper Cave      69.67 345   IAmb    IAmb     11 00 40.3
        comp=Z,546nm,1.0s
TKL   Tuckaleechee C   69.71 346   IAmb    IAmb     11 00 40.3
        comp=Z,732nm,1.2s
U56A  King             69.75 349   P       P        11 00 40.3 +0.8
        baz=168,SNR=100
U56A                               S       S        11 09 32.8 -1.6
        baz=168
U56A  King             69.75 349   P       P        11 00 39.5  0.0
V52A  Sevierville      69.85 346   IAmb    IAmb     11 00 41.1
        comp=Z,653nm,1.1s
Z41A  Richland Creek   69.87 337   P       P        11 00 41.1 +0.8
        baz=157,SNR=62
Z41A                               S       S        11 09 36.2 +0.3
        baz=157
T59A  Double "B" Far   69.94 351   P       P        11 00 41.4 +0.8
        baz=171,SNR=52
T59A                               S       S        11 09 36.8 +0.2
        baz=171
T59A  Double "B" Far   69.94 351   IAmb    IAmb     11 00 42.9
        comp=Z,697nm,1.4s
V51A  Loudon           69.98 345   IAmb    IAmb     11 00 41.9
        comp=Z,510nm,1.1s
JCT   Junction City    69.99 330   P       P        11 00 41.8 +0.6
        baz=151,SNR=252
JCT                                S       S        11 09 36.8 -0.7
        baz=151
T60A  Surry            70.00 352   P       P        11 00 42.1 +1.0
        baz=171,SNR=18
T60A                               S       S        11 09 36.6 -0.7
        baz=171
OXF   Oxford           70.01 341   P       P        11 00 40.9 -0.2
        baz=160,SNR=98
T58A  Grand View Acr   70.05 350   P       P        11 00 42.1 +0.7
        baz=170,SNR=129
T58A                               S       S        11 09 36.9 -1.0
        baz=170
PLAL  Pickwick Lake    70.09 342   P       P        11 00 40.8 -0.8
PLAL                               IAmb    IAmb     11 00 42.2
        comp=Z,263nm,0.7s
CCAR  Cane Creek       70.15 338   IAmb    IAmb     11 00 43.7
        comp=Z,560nm,0.8s
U54A  Nelsons Funny    70.17 347   P       P        11 00 42.4 +0.2
        baz=167,SNR=116
U54A                               S       S        11 09 34.8 -4.6
        baz=167
T57A  Hurt             70.20 350   P       P        11 00 42.8 +0.5
        baz=169,SNR=46
T57A                               S       S        11 09 38.9 -0.7
        baz=169
T57A  Hurt             70.20 350   IAmb    IAmb     11 00 43.6
        comp=Z,261nm,0.9s
T56A  Rocky Mt         70.36 349   P       P        11 00 44.1 +0.8
        baz=168,SNR=107
T56A                               S       S        11 09 40.4 -1.1
        baz=168
WHTX  Lake Whitney,    70.38 333   P       P        11 00 43.7 +0.3
        baz=153,SNR=9.0
WHTX                               S       S        11 09 39.2 -2.6
        baz=153
WHTX  Lake Whitney,    70.38 333   IAmb    IAmb     11 00 44.5
        comp=Z,311nm,1.0s
S61A  Accomac          70.42 353   P       P        11 00 45.1 +1.5
        baz=172
X43A  Marvell          70.44 339   P       P        11 00 44.6 +0.8
        baz=159,SNR=44
X43A                               S       S        11 09 41.3 -1.1
        baz=159
LIC   Lamto            70.47  69  eP       P        11 00 45.0 +0.5
        comp=Z,2µm,1.4s
TZTN  Tazewell         70.52 346   P       P        11 00 44.0 -0.3
        baz=165,SNR=55
TZTN                               S       S        11 09 38.6 -4.8
        baz=165
TZTN  Tazewell         70.52 346   IAmb    IAmb     11 00 45.4
        comp=Z,952nm,1.6s
S60A  Water View       70.55 352   P       P        11 00 45.4 +1.0
        baz=172,SNR=12
BLA   Blacksburg       70.60 349   P       P        11 00 45.3 +0.6
        baz=168,SNR=53
BLA                                S       S        11 09 42.4 -1.9
        baz=168
BLA   Blacksburg       70.60 349   P       P        11 00 44.7 -0.1
BLA                                pmax    pmax
        comp=Z,261nm,0.8s
BLA   Blacksburg       70.60 349   P       P        11 00 44.7 -0.1
BLA                                IAmb    IAmb     11 00 46.1
        comp=Z,261nm,0.8s
S58A  Poland Farm, P   70.64 351   P       P        11 00 45.9 +1.0
        baz=170,SNR=69
S58A                               S       S        11 09 44.8 +0.2
        baz=170
S58A  Poland Farm, P   70.64 351   IAmb    IAmb     11 00 47.2
        comp=Z,586nm,1.1s
S59A  Mechanicsville   70.69 351   P       P        11 00 46.1 +0.9
        baz=171,SNR=51
S59A                               S       S        11 09 45.1  0.0
        baz=171
CLTN  Cedars of Leba   70.70 344   IAmb    IAmb     11 00 46.5
        comp=Z,720nm,1.3s
TX31  Lajitas Ar. Si   70.71 327   P       P        11 00 45.6 -0.1
TX31                               IAmb    IAmb     11 00 47.2
        comp=Z,720nm,1.1s
TXAR  Lajitas Array    70.71 327   P       P        11 00 46.1 +0.4
        comp=Z,77nm,0.7s,baz=148,slow=7.4,SNR=331
TXAR                               pP      pP       11 01 29.0 +1.8
        comp=Z,40nm,0.8s,baz=148,slow=7.4,SNR=3.8
TXAR                               PKiKP   PKiKP    11 06 54.5 +0.7
        comp=Z,1.1nm,0.8s,baz=197,slow=0.9,SNR=1.9
TXAR                               PKP2ab           11 28 40.4
        comp=Z,15nm,0.9s,baz=282,slow=2.4,SNR=16
TXAR  Lajitas Array    70.71 327   P       P        11 00 45.1 -0.6
TXAR  Lajitas Array    70.71 327   P       P        11 00 45.1 -0.6
MET   Memphis--Engin   70.73 340   P       P        11 00 45.2 -0.3
TIC   Toumodi          70.73  68  eP       P        11 00 46.6 +0.5
KIC   Kosan Boka       70.78  69  eP       P        11 00 47.1 +0.8
        comp=Z,3µm,1.3s
DBIC  Dimbokro         70.87  69   P       P        11 00 47.7 +0.8
        comp=Z,625nm,0.8s,baz=205,slow=6.8,SNR=396
DBIC                               pP      pP       11 01 28.6 +0.2
        comp=Z,108nm,0.8s,baz=205,slow=9.5,SNR=2.3
DBIC                               S       S        11 09 49.3 +0.9
        comp=Z,7.7nm,1.0s,baz=114,slow=24,SNR=26
DBIC                               LR      LR       11 28 21.2
        comp=Z,1µm,21.8s,baz=216,slow=33
DBIC                               PKP2ab           11 28 35.9
        comp=Z,6.4nm,0.9s,baz=56,slow=7.5,SNR=3.9
S57A  Dark Hollow, R   70.91 350   P       P        11 00 47.3 +0.8
        baz=170,SNR=90
S57A                               S       S        11 09 48.7 +0.9
        baz=170
S57A  Dark Hollow, R   70.91 350   IAmb    IAmb     11 00 48.7
        comp=Z,676nm,1.2s
S56A  Natural Bridge   70.92 350   P       P        11 00 47.3 +0.7
        baz=169,SNR=103
S56A                               S       S        11 09 47.6 -0.3
        baz=169
R58B  Mineral          70.96 351   P       P        11 00 47.9 +1.0
        baz=170,SNR=52
R58B                               S       S        11 09 47.9 -0.4
        baz=170
R58B  Mineral          70.96 351   IAmb    IAmb     11 00 49.4
        comp=Z,457nm,1.1s
U49A  Red Boiling Sp   70.98 344   P       P        11 00 46.0 -1.0
U49A                               IAmb    IAmb     11 00 47.4
        comp=Z,215nm,0.7s
TAOE  Nuku Hiva Isla   70.98 272⇓iP       P        11 00 48.5 +0.8
        comp=Z,915nm,1.1s
TAOE                              eS       S        11 09 44.7 -5.2
        comp=Z,5µm,23.9s
TAOE                              eLQ      LQ       11 19 31.0
        comp=Z,6µm,25.5s
TAOE                              eLR      LR       11 22 30.8
        comp=Z,3µm,23.5s
TAOE  Nuku Hiva Isla   70.98 272   IAmb    IAmb     11 00 49.2
        comp=Z,334nm,0.8s
X40A  Basin Creek Fa   71.01 338   P       P        11 00 47.1 -0.2
        baz=157,SNR=34
X40A                               S       S        11 09 47.5 -1.6
        baz=157
R61A  Willards         71.03 353   P       P        11 00 48.9 +1.7
        baz=173
R61A                               S       S        11 09 51.0 +2.0
        baz=173
R59A  King George, V   71.10 352   P       P        11 00 48.7 +1.1
        baz=171,SNR=23
R59A                               S       S        11 09 50.3 +0.5
        baz=171
R60A  Leonardtown, M   71.10 352   P       P        11 00 49.1 +1.5
        baz=172,SNR=6.5
WVT   Waverly          71.11 342   P       P        11 00 47.7 -0.1
        baz=162
WVT                                S       S        11 09 46.0 -4.2
        baz=162
WVT   Waverly          71.11 342   P       P        11 00 47.2 -0.6
CBN   Corbin Frederi   71.13 352   P       P        11 00 48.7 +0.9
        baz=171,SNR=19
CBN                                S       S        11 09 50.0 -0.3
        baz=171
CBN   Corbin Frederi   71.13 352   P       P        11 00 48.2 +0.3
CBN                                IAmb    IAmb     11 00 49.5
        comp=Z,195nm,0.6s
MIAR  Mount Ida        71.31 337   P       P        11 00 49.3 +0.3
        baz=157,SNR=59
MIAR                               S       S        11 09 51.5 -1.0
        baz=157
MIAR  Mount Ida        71.31 337   P       P        11 00 48.6 -0.4
MIAR                               pmax    pmax
        comp=Z,322nm,1.2s
MIAR  Mount Ida        71.31 337   P       P        11 00 48.6 -0.4
MIAR                               IAmb    IAmb     11 00 50.7
        comp=Z,322nm,1.1s
R58A  Rapidan          71.31 351   P       P        11 00 49.8 +0.9
        baz=170,SNR=46
R58A                               S       S        11 09 52.1 -0.2
        baz=170
S54A  Dingess, Beckl   71.32 348   P       P        11 00 49.1  0.0
        baz=167,SNR=83
S54A                               S       S        11 09 48.9 -3.7
        baz=167
S54A  Dingess, Beckl   71.32 348   IAmb    IAmb     11 00 50.4
        comp=Z,681nm,1.1s
R57A  Stanardsville    71.37 351   P       P        11 00 50.2 +0.9
        baz=170,SNR=63
R57A                               S       S        11 09 52.0 -1.1
        baz=170
W41B  Gary Mavity, V   71.46 338   P       P        11 00 50.1 +0.2
        baz=158,SNR=128
W41B                               S       S        11 09 52.4 -1.8
        baz=158
Q61A  Milford          71.57 353   P       P        11 00 51.7 +1.3
        baz=173
WHAR  Wooly Hollow     71.58 339   IAmb    IAmb     11 00 51.6
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	comp=Z,273nm,1.0s						
S51A	Beattyville	71.59	346	P	P	11 00 50.2	-0.4
S51A				IAmb	IAmb	11 00 51.9	
	comp=Z,617nm,1.1s						
R55A	Marlinton	71.59	349	P	P	11 00 51.7	+1.0
	baz=168,SNR=131						
R55A				S	S	11 09 54.4	-1.4
	baz=168						
R56A	Bull Pasture M	71.61	350	P	P	11 00 51.9	+1.1
	baz=169,SNR=45						
R56A				S	S	11 09 56.7	+0.7
	baz=169						
TBI	Tubuai	71.62	254	⇓*i*P	P	11 00 52.5	+1.2
	comp=Z,1µm,1.4s						
TBI				*e*S	S	11 09 53.5	-3.3
	comp=Z,6µm,28.0s						
TBI				*e*LQ	LQ	11 19 26.4	
	comp=Z,7µm,33.5s						
TBI				*e*LR	LR	11 22 49.5	
	comp=Z,10µm,27.0s						
R54A	Victor	71.64	349	P	P	11 00 51.2	+0.2
	baz=168,SNR=76						
R54A				S	S	11 09 54.2	-2.0
	baz=168						
Q59A	Harwood	71.70	352	P	P	11 00 52.3	+1.1
	baz=172,SNR=16						
Q59A				S	S	11 09 57.2	+0.5
	baz=172						
T47A	Sharon Grove	71.74	343	IAmb	IAmb	11 00 52.4	
	comp=Z,836nm,1.1s						
Q60A	Greensboro	71.74	353	P	P	11 00 52.8	+1.3
	baz=172,SNR=17						
Q60A				S	S	11 09 58.1	+0.8
	baz=172						
Q60A	Greensboro	71.74	353	IAmb	IAmb	11 00 54.2	
	comp=Z,793nm,1.3s						
ABTX	Abilene, Hawle	71.80	331	P	P	11 00 52.4	+0.3
	baz=152,SNR=216						
ABTX				S	S	11 09 56.5	-1.8
	baz=152						
ABTX	Abilene, Hawle	71.80	331	P	P	11 00 51.9	-0.1
ABTX				IAmb	IAmb	11 00 53.7	
	comp=Z,555nm,0.9s						
Q58A	Fox Den Farm,	71.90	351	P	P	11 00 53.3	+0.8
	baz=171,SNR=24						
Q58A				S	S	11 10 00.6	+1.6
	baz=171						
R53A	Hurricane	71.95	348	IAmb	IAmb	11 00 53.5	
	comp=Z,220nm,0.7s						
X37A	Clayton	71.95	336	IAmb	IAmb	11 00 54.6	
	comp=Z,1µm,1.8s						
LCAR	Lake Charles	71.96	340	IAmb	IAmb	11 00 54.2	
	comp=Z,697nm,0.9s						
W39A	Magazine	71.97	337	P	P	11 00 53.9	+0.9
	baz=157,SNR=310						
W39A				S	S	11 09 59.3	-0.7
	baz=157						
W39A	Magazine	71.97	337	P	P	11 00 53.1	+0.1
FCAR	Ozark Folk Cen	72.08	339	IAmb	IAmb	11 00 54.3	
	comp=Z,244nm,0.9s						
Q57A	Strasburg	72.08	351	P	P	11 00 54.9	+1.3
	baz=170,SNR=84						
Q57A				S	S	11 10 02.8	+1.6
	baz=170						
Q56A	Snyder Ridge,	72.20	350	P	P	11 00 55.3	+1.1
	baz=169,SNR=32						
Q56A				S	S	11 10 03.5	+1.0
	baz=169						
P61A	Hammonton	72.31	354	P	P	11 00 55.9	+1.1
	baz=173,SNR=14						
P61A				S	S	11 10 05.7	+2.1
	baz=173						
P61A	Hammonton	72.31	354	IAmb	IAmb	11 00 57.2	
	comp=Z,843nm,1.2s						
R50A	Paris	72.36	346	IAmb	IAmb	11 00 56.3	
	comp=Z,385nm,1.0s						
Q53A	Leroy	72.39	348	P	P	11 00 55.5	+0.1
	baz=167,SNR=67						
Q53A				S	S	11 10 02.9	-1.8
	baz=167						
P58A	Pank, Wackersv	72.39	352	P	P	11 00 56.4	+1.1
	baz=171,SNR=69						
P58A				S	S	11 10 06.2	+1.6
	baz=171						
Q54A	Coxs Mills	72.39	349	P	P	11 00 54.6	-0.8
P59A	Jarrettsville	72.41	352	P	P	11 00 56.8	+1.4
	baz=172,SNR=145						
P59A				S	S	11 10 06.8	+1.9
	baz=172						
P57A	Homestead Farm	72.47	351	P	P	11 00 57.1	+1.3
	baz=170,SNR=99						
P57A				S	S	11 10 07.8	+2.2
	baz=170						
P57A	Homestead Farm	72.47	351	IAmb	IAmb	11 00 58.5	
	comp=Z,628nm,1.2s						
P60A	Greenville	72.52	353	P	P	11 00 57.0	+0.9
	baz=172,SNR=35						
P60A				S	S	11 10 07.7	+1.6
	baz=172						
R49A	Shelbyville	72.55	345	IAmb	IAmb	11 00 57.2	
	comp=Z,598nm,1.2s						
P56A	Dayton Farm, R	72.60	351	P	P	11 00 57.8	+1.2
	baz=170,SNR=66						
P56A				S	S	11 10 08.6	+1.5
	baz=170						
Q52A	Bidwell	72.62	348	IAmb	IAmb	11 00 58.0	
	comp=Z,567nm,1.1s						
WUPA	West Chester U	72.64	353	IAmb	IAmb	11 00 59.3	
	comp=Z,307nm,1.1s						
O61A	Allentown	72.70	354	P	P	11 00 58.3	+1.1
	baz=173,SNR=15						
O61A				S	S	11 10 10.5	+2.4
	baz=173						
WCI	Wyandotte Cave	72.73	344	P	P	11 00 56.9	-0.5
	baz=163						
WCI				S	S	11 10 04.7	-3.9
	baz=163						
WCI	Wyandotte Cave	72.73	344	P	P	11 00 56.9	-0.5
WCI	Wyandotte Cave	72.73	344	IAmb	IAmb	11 00 58.1	
	comp=Z,520nm,1.0s						
U40A	Yellville	72.74	338	P	P	11 00 57.7	+0.2
	baz=158,SNR=267						
U40A				S	S	11 10 07.3	-1.5
	baz=158						
U40A	Yellville	72.74	338	P	P	11 00 57.5	0.0
MVL	Millersville	72.78	353	IAmb	IAmb	11 01 01.1	
	comp=Z,436nm,1.3s						
Q51A	Peebles	72.88	347	IAmb	IAmb	11 00 59.5	
	comp=Z,677nm,1.2s						
MCWV	Mont Chateau	72.90	350	P	P	11 00 59.0	+0.6
	baz=169,SNR=37						
MCWV				S	S	11 10 09.9	-0.5
	baz=169						
S44A	Carbondale	72.95	342	IAmb	IAmb	11 00 59.5	
	comp=Z,835nm,1.3s						
SIUC	Southern Illin	72.97	342	IAmb	IAmb	11 00 59.6	
	comp=Z,924nm,1.4s						
O58A	Lewisberry	72.97	352	P	P	11 00 59.9	+1.1
	baz=171,SNR=54						
O58A				S	S	11 10 12.3	+1.1
	baz=171						
P53A	Whipple	72.98	349	IAmb	IAmb	11 01 00.5	
	comp=Z,515nm,1.1s						
O60A	Telford	73.00	353	P	P	11 01 00.2	+1.2
	baz=173,SNR=64						
O60A				S	SKiKP	11 10 12.9	-0.8
	baz=173						
PAGS	Pennsylvania G	73.05	352	IAmb	IAmb	11 01 01.4	
	comp=Z,412nm,1.2s						
O59A	Robesonia	73.08	353	P	P	11 01 00.6	+1.2
	baz=172,SNR=86						
O59A				S	SKiKP	11 10 14.7	+0.8
	baz=172						
MEH	Mehetia	73.10	259	⇓*i*P	P	11 01 01.3	+1.1
	comp=Z,207nm,1.1s						
O57A	Amberson	73.14	352	P	P	11 01 00.8	+1.0
	baz=171,SNR=44						
O57A				S	SKiKP	11 10 14.4	+0.4
	baz=171						
P52A	Corning	73.25	348	P	P	11 01 00.2	-0.3
	baz=167,SNR=95						
P52A	Corning	73.25	348	IAmb	IAmb	11 01 01.5	
	comp=Z,799nm,1.2s						
MAW	Mawson	73.26	162	P	P	11 01 00.9	+0.7
	comp=Z,737nm,0.8s,baz=214,slow=5.9,SNR=152						
MAW				S	S	11 10 14.7	+0.7
	comp=Z,21nm,1.1s,baz=45,slow=15,SNR=14						
P51A	Williamsport	73.27	347	IAmb	IAmb	11 01 01.6	
	comp=Z,542nm,1.1s						
LUPA	Lehigh Univers	73.28	353	P	P	11 01 01.1	+0.6
LUPA				IAmb	IAmb	11 01 03.0	
	comp=Z,307nm,1.1s						
BRNJ	Basking Ridge	73.29	354	IAmb	IAmb	11 01 03.1	
	comp=Z,332nm,0.9s						
TUL1	Leonard	73.29	336	P	P	11 01 00.7	-0.1
	baz=155,SNR=84						
TUL1				S	SKiKP	11 10 12.7	-1.6
	baz=155						
TUL1	Leonard	73.29	336	IAmb	IAmb	11 01 02.1	
	comp=Z,317nm,1.1s						
MGMO	Mountain Grove	73.30	339	IAmb	IAmb	11 01 02.4	
	comp=Z,736nm,1.1s						
O56A	Blue Knob Stat	73.32	351	P	P	11 01 01.7	+0.9
	baz=170,SNR=53						
O56A				S	S	11 10 15.7	+0.4
	baz=170						
O56A	Blue Knob Stat	73.32	351	IAmb	IAmb	11 01 02.5	
	comp=Z,209nm,0.7s						
WMOK	Wichita Mounta	73.32	333	P	P	11 01 00.8	-0.2
	baz=153,SNR=133						
WMOK				S	SKiKP	11 10 13.7	-0.7
	baz=153						
WMOK	Wichita Mounta	73.32	333	P	P	11 00 59.9	-1.1
WMOK				pmax	pmax		
	comp=Z,154nm,0.9s						
WMOK	Wichita Mounta	73.32	333	P	P	11 00 59.9	-1.1
N61A	South Mountain	73.33	354	P	P	11 01 02.0	+1.2
	baz=174,SNR=19						
N61A				S	S	11 10 16.6	+1.4
	baz=174						
OKCFA	Oklahoma City	73.43	335	IAmb	IAmb	11 01 02.8	
	comp=Z,668nm,1.0s						
N63A	Mattituck	73.44	356	P	P	11 01 03.0	+1.5
	baz=175						
SRIG	Santa Rosalia	73.45	319	IAmb	IAmb	11 01 03.9	
	comp=Z,303nm,1.1s						
MNTX	Cornudas Mount	73.49	327	P	P	11 01 01.7	-0.4
	baz=147,SNR=380						
MNTX				S	SKiKP	11 10 15.5	+0.7
	baz=147						
MNTX	Cornudas Mount	73.49	327	P	P	11 01 01.1	-1.0
N60A	Cedar Hill Far	73.52	354	P	P	11 01 02.9	+1.0
	baz=173,SNR=92						
N60A				S	S	11 10 18.9	+1.5
	baz=173						
PAL	Palisades	73.55	355	P	P	11 01 02.9	+0.8
	baz=174,SNR=16						
PAL				S	S	11 10 19.3	+1.6
	baz=174						
N59A	State Game Lan	73.63	353	P	P	11 01 04.0	+1.3
	baz=172,SNR=96						
N59A				S	S	11 10 19.7	+1.0
	baz=172						
N59A	State Game Lan	73.63	353	IAmb	IAmb	11 01 05.3	
	comp=Z,713nm,1.2s						
OLIL	Olney	73.64	343	IAmb	IAmb	11 01 03.4	
	comp=Z,582nm,1.1s						
P49A	Miami Univ. Ec	73.64	346	P	P	11 01 02.3	-0.4
	baz=165,SNR=72						
P49A				S	SKiKP	11 10 15.3	+0.6
	baz=165						
P49A	Miami Univ. Ec	73.64	346	P	P	11 01 01.8	-0.9
P49A				IAmb	IAmb	11 01 03.7	
	comp=Z,983nm,1.3s						
OK030	Cody Creek RV	73.65	335	IAmb	IAmb	11 01 04.3	
	comp=Z,856nm,1.2s						
N58A	Sunbury	73.66	352	P	P	11 01 03.6	+0.9
	baz=172,SNR=55						
N58A				S	S	11 10 20.5	+1.7
	baz=172						
N58A	Sunbury	73.66	352	IAmb	IAmb	11 01 05.0	
	comp=Z,303nm,1.0s						
O52A	Adamsville	73.67	348	IAmb	IAmb	11 01 04.0	
	comp=Z,347nm,1.0s						
N57A	Milroy	73.67	352	P	P	11 01 03.4	+0.5
	baz=171,SNR=63						
N57A				S	S	11 10 18.6	-0.5
	baz=171						
WSPT	Westport, CT	73.67	355	IAmb	IAmb	11 01 05.2	
	comp=Z,321nm,1.1s						
BLO	Bloomington	73.69	344	IAmb	IAmb	11 01 03.2	
	comp=Z,370nm,0.7s						
ODNJ	Ogdensburg	73.69	354	IAmb	IAmb	11 01 05.3	
	comp=Z,351nm,1.0s						
O53A	New Philadelph	73.69	349	P	P	11 01 03.0	0.0
	baz=168,SNR=35						
O53A				S	SKiKP	11 10 16.1	+1.3
	baz=168						
O53A	New Philadelph	73.69	349	IAmb	IAmb	11 01 04.5	
	comp=Z,434nm,1.4s						
OK031	S. Brethren Rd	73.69	335	P	P	11 01 02.9	-0.2
P48A	Milroy	73.72	345	IAmb	IAmb	11 01 04.0	
	comp=Z,937nm,1.2s						
OK029	Liberty Lake	73.77	335	IAmb	IAmb	11 01 05.0	
	comp=Z,695nm,1.0s						
YLE	Yale	73.79	355	IAmb	IAmb	11 01 06.3	
	comp=Z,505nm,1.1s						
M63A	Gales Ferry	73.83	356	P	P	11 01 04.7	+1.0
	baz=176						
M63A				S	S	11 10 20.2	-0.5
	baz=176						
CCM	Cathedral Cave	73.84	340	P	P	11 01 04.2	+0.3
	baz=159						
CCM				S	S	11 10 18.6	-2.4
	baz=159						
CCM	Cathedral Cave	73.84	340	P	P	11 01 03.5	-0.4
QUOK	Quay	73.84	335	IAmb	IAmb	11 01 05.6	
	comp=Z,816nm,1.2s						
M61A	Granite Spring	73.85	355	P	P	11 01 04.8	+0.9
	baz=174,SNR=27						
M61A				S	S	11 10 21.2	+0.2
	baz=174						
M62A	Hamden	73.92	356	P	P	11 01 05.6	+1.3
	baz=175,SNR=30						
M62A				S	S	11 10 21.8	+0.1
	baz=175						
M65A	Busby, Falmout	73.92	357	P	P	11 01 05.1	+0.9
	baz=177						
M65A	Busby, Falmout	73.92	357	IAmb	IAmb	11 01 06.5	
	comp=Z,472nm,1.3s						
N56A	West Decatur	73.92	351	P	P	11 01 05.1	+0.8
	baz=170,SNR=47						
N56A				S	S	11 10 21.4	-0.5
	baz=170						
M64A	Tiverton	73.93	357	P	P	11 01 05.2	+0.9
	baz=176,SNR=9.4						
M64A				S	S	11 10 22.8	+0.9
	baz=176						
M60A	Port Jervis	73.93	354	P	P	11 01 05.5	+1.1
	baz=173,SNR=66						
M60A				S	S	11 10 23.5	+1.5
	baz=173						
ACSO	Alum Creek Sta	73.98	347	P	P	11 01 04.6	-0.1
	baz=166,SNR=102						
ACSO				S	SKiKP	11 10 18.2	+3.0
	baz=166						
ACSO	Alum Creek Sta	73.98	347	IAmb	IAmb	11 01 05.8	
	comp=Z,758nm,1.1s						
Q44A	Meyer Farm, Va	74.03	342	IAmb	IAmb	11 01 05.5	
	comp=Z,459nm,1.1s						
VAH	Vaihoa	74.04	262	⇓*i*P	P	11 01 06.8	+1.1
	comp=Z,668nm,1.3s						
HSIG		74.09	321	IAmb	IAmb	11 01 08.1	
	comp=Z,404nm,1.1s						
SLM	Saint Louis	74.10	341	IAmb	IAmb	11 01 05.9	
	comp=Z,345nm,0.9s						
TVO	Taravao	74.13	259	⇓*i*P	P	11 01 07.7	+1.4
	comp=Z,210nm,1.2s						
M58A	Price's Panora	74.15	353	P	P	11 01 06.7	+1.0
	baz=172,SNR=69						
M58A				S	S	11 10 25.0	+0.4
	baz=172						
N53A	Lisbon	74.18	349	P	P	11 01 05.3	-0.5
M57A	Sunshine Farm,	74.19	352	P	P	11 01 06.8	+0.9
	baz=171,SNR=38						
M57A				S	S	11 10 25.6	+0.7
	baz=171						
N54A	Moraine State	74.20	350	P	P	11 01 06.5	+0.5
	baz=169,SNR=76						
N54A				S	S	11 10 23.4	-1.6
	baz=169						
N54A	Moraine State	74.20	350	IAmb	IAmb	11 01 07.3	
	comp=Z,285nm,0.7s						
M59A	Waymart	74.22	354	P	P	11 01 07.2	+1.1
	baz=173,SNR=108						
M59A				S	S	11 10 26.7	+1.5
	baz=173						
MSTX	Muleshoe	74.26	330	P	P	11 01 06.9	+0.3
	baz=149,SNR=381						
MSTX				S	S	11 10 24.2	-2.0
	baz=149						
MSTX	Muleshoe	74.26	330	IAmb	IAmb	11 01 08.1	
	comp=Z,741nm,1.0s						
L63A	North Scituate	74.26	357	P	P	11 01 07.4	+1.2
	baz=176,SNR=39						
L63A				S	S	11 10 26.9	+1.3
	baz=176						
L63A	North Scituate	74.26	357	IAmb	IAmb	11 01 08.8	
	comp=Z,822nm,1.2s						
P46A	Rosedale	74.27	344	P	P	11 01 05.1	-1.2
P46A				IAmb	IAmb	11 01 07.0	
	comp=Z,545nm,0.9s						
L64A	Middleborough	74.30	357	P	P	11 01 07.5	+1.1
	baz=177,SNR=18						
L64A	Middleborough	74.30	357	IAmb	IAmb	11 01 09.0	
	comp=Z,345nm,1.1s						
BRYW	Bryant College	74.31	357	IAmb	IAmb	11 01 09.1	
	comp=Z,509nm,1.1s						
TIAR	Tiarei	74.32	259	⇓*i*P	P	11 01 08.5	+1.2
	comp=Z,72nm,1.0s						
PAE	Paea	74.46	259	⇓*i*P	P	11 01 09.4	+1.3
	comp=Z,117nm,1.1s						
M56A	Emporium	74.47	351	P	P	11 01 08.1	+0.6
	baz=170,SNR=101						
M56A				S	S	11 10 27.9	-0.1
	baz=170						
M56A	Emporium	74.47	351	IAmb	IAmb	11 01 09.5	
	comp=Z,872nm,1.4s						
L62A	Suffield	74.49	356	P	P	11 01 08.5	+1.0
	baz=175,SNR=5.9						
L62A				S	S	11 10 28.7	+0.6
	baz=175						
PPT2	Papeete2	74.50	259	⇓*i*P	P	11 01 09.9	+1.5
	comp=Z,711nm,1.1s						
PPT2				*e*pP	pP	11 01 51.9	+1.6
	comp=Z,173nm,1.2s						
PPT2				*e*S	S	11 10 25.4	-4.2
	comp=Z,9µm,25.8s						
PPT2	Papeete2	74.50	259	*e*LR	LR	11 24 07.7	
	comp=Z,6µm,27.2s						
PPT	Papeete	74.50	259	P	P	11 01 09.9	+1.5
	comp=Z,433nm,0.8s,baz=88,slow=3.5,SNR=51						
PPT				LR	LR	11 26 30.5	
	comp=Z,1µm,18.6s,baz=110,slow=30						
M55A	Ridgway	74.53	351	IAmb	IAmb	11 01 09.7	
	comp=Z,691nm,1.1s						
N51A	Ashland	74.54	348	IAmb	IAmb	11 01 09.1	
	comp=Z,629nm,1.2s						
L60A	Shokan	74.56	355	P	P	11 01 09.3	+1.4
	baz=174,SNR=43						
L60A				S	S	11 10 30.8	+1.9
	baz=174						
AMTX	Amarillo	74.59	331	P	P	11 01 09.0	+0.5
	baz=150						
AMTX				S	S	11 10 28.8	-1.0
	baz=150						
AMTX	Amarillo	74.59	331	IAmb	IAmb	11 01 10.2	
	comp=Z,708nm,1.1s						
M54A	Oil Creek Stat	74.69	350	P	P	11 01 09.2	+0.4
	baz=169,SNR=71						
M54A				S	S	11 10 28.5	-2.0
	baz=169						
M54A	Oil Creek Stat	74.69	350	IAmb	IAmb	11 01 10.4	
	comp=Z,517nm,1.1s						
L61A	Hillsdale 1, H	74.71	355	P	P	11 01 09.9	+1.1
	baz=174,SNR=25						
L61A				S	S	11 10 31.7	+1.1
	baz=174						
L58A	Harry Jones Me	74.76	353	P	P	11 01 10.2	+1.0
	baz=172,SNR=87						
L58A				S	S	11 10 31.8	+0.6
	baz=172						
M53A	WI Miller and	74.77	350	P	P	11 01 09.4	+0.2
	baz=168,SNR=53						
M53A				S	S	11 10 28.7	-2.6
	baz=168						
M53A	WI Miller and	74.77	350	IAmb	IAmb	11 01 10.8	
	comp=Z,366nm,1.1s						
L57A	Andrews Acres	74.82	353	P	P	11 01 10.2	+0.7
	baz=172,SNR=42						
L57A				S	S	11 10 32.8	+0.9
	baz=172						
L59A	Walton	74.83	354	P	P	11 01 10.8	+1.3
	baz=173,SNR=89						
L59A				S	S	11 10 33.9	+1.9
	baz=173						
L59A	Walton	74.83	354	P	P	11 01 10.4	+0.8
L59A				IAmb	IAmb	11 01 12.1	
	comp=Z,604nm,1.1s						
ALLY	Alegheny Colle	74.89	350	IAmb	IAmb	11 01 11.5	
	comp=Z,403nm,1.0s						
HRV	Adam Dziewonsk	74.90	357	P	P	11 01 11.2	+1.4
	baz=176						
HRV				S	S	11 10 33.2	+0.6
	baz=176						
HRV	Adam Dziewonsk	74.90	357	P	P	11 01 11.3	+1.4
HRV	Adam Dziewonsk	74.90	357	IAmb	IAmb	11 01 12.6	
	comp=Z,350nm,1.1s						
L61B	Northampton	74.91	356	P	P	11 01 11.1	+1.1
	baz=175,SNR=67						
L61B				S	S	11 10 34.6	+1.9
	baz=175						
M51A	Elyria	74.91	348	P	P	11 01 10.1	+0.1
	baz=167,SNR=72						
M51A				S	S	11 10 29.5	-3.3
	baz=167						
BINY	Binghamton	74.92	353	P	P	11 01 11.0	+0.9
	baz=172,SNR=50						
BINY				S	S	11 10 33.4	+0.4
	baz=172						
BINY	Binghamton	74.92	353	IAmb	IAmb	11 01 12.4	
	comp=Z,457nm,1.2s						
SFIN	Lafayette	74.97	344	P	P	11 01 09.5	-0.8
	baz=163,SNR=28						
SFIN				S	S	11 10 28.1	-5.5
	baz=163						
SFIN	Lafayette	74.97	344	P	P	11 01 08.9	-1.5
SFIN				IAmb	IAmb	11 01 10.9	
	comp=Z,514nm,1.3s						
M52A	Chesterland	74.98	349	IAmb	IAmb	11 01 11.8	
	comp=Z,516nm,1.1s						
L56A	Greenwood	75.03	352	P	P	11 01 11.5	+0.8
	baz=171,SNR=90						
L56A				S	S	11 10 34.2	-0.1
	baz=171						
O44A	Mansfield	75.08	343	IAmb	IAmb	11 01 11.5	
	comp=Z,617nm,1.0s						
K63A	Dunstable	75.08	357	P	P	11 01 12.2	+1.2
	baz=176,SNR=7.6						
K63A				S	S	11 10 35.6	+1.1
	baz=176						
K62A	Royalston	75.09	356	P	P	11 01 12.4	+1.4
	baz=176,SNR=26						
K62A				S	S	11 10 35.7	+0.9
	baz=176						
K62A	Royalston	75.09	356	IAmb	IAmb	11 01 13.9	
	comp=Z,362nm,1.2s						
KAN01	Argonia South	75.09	335	P	P	11 01 11.1	0.0
319A	Douglas	75.11	324	IAmb	IAmb	11 01 14.3	
	comp=Z,870nm,1.1s						
M50A	Fremont	75.13	348	IAmb	IAmb	11 01 12.4	
	comp=Z,597nm,1.1s						
K60A	Five Rivers En	75.15	355	P	P	11 01 12.8	+1.5
	baz=174,SNR=32						
K60A				S	S	11 10 37.2	+1.8
	baz=174						
K61A	Williamstown	75.16	355	P	P	11 01 12.9	+1.4
	baz=175,SNR=25						
K61A				S	S	11 10 37.9	+2.3
	baz=175						
KAN10	Anthony SW Sta	75.19	335	P	P	11 01 11.8	+0.1
L53A	Girard	75.21	350	P	P	11 01 11.9	+0.2
	baz=169,SNR=53						
L53A				S	S	11 10 32.9	-3.2
	baz=169						
KAN08	Anthony NE Sta	75.23	335		pP	11 01 55.7	+1.7
TRY	Troy	75.25	355	IAmb	IAmb	11 01 14.7	
	comp=Z,870nm,1.2s						
KAN12	Harper NE Stat	75.31	335		pP	11 01 55.9	+1.4
121A	Cookes Peak, D	75.32	325	P	P	11 01 14.3	+1.5
	baz=146,SNR=349						
121A				S	S	11 10 38.5	+0.3
	baz=146						
121A	Cookes Peak, D	75.32	325	IAmb	IAmb	11 01 15.6	

	comp=Z,663nm,1.1s						
ERPA	**Erie**	**75.33**	**350**	P	**P**	**11 01 12.8**	**+0.4**
	baz=169,SNR=67						
ERPA				S	**S**	**11 10 34.8**	**-2.7**
	baz=169						
ERPA	**Erie**	**75.33**	**350**	IAmb	IAmb	11 01 14.1	
	comp=Z,634nm,1.0s						
K59A	**Cooperstown**	**75.39**	**354**	P	**P**	**11 01 13.7**	**+1.0**
	baz=173,SNR=83						
K59A				S	**S**	**11 10 39.2**	**+1.0**
	baz=173						
WVNY	**West Valley, N**	**75.43**	**351**	IAmb	IAmb	11 01 15.1	
	comp=Z,801nm,1.1s						
P40A	**Paris**	**75.44**	**340**	P	**P**	**11 01 12.7**	**-0.4**
K58A	**Earlville**	**75.45**	**354**	P	**P**	**11 01 13.9**	**+0.8**
	baz=173,SNR=85						
K58A				S	**S**	**11 10 37.2**	**-1.6**
	baz=173						
K58A	**Earlville**	**75.45**	**354**	IAmb	IAmb	11 01 15.2	
	comp=Z,677nm,1.1s						
K56A	**Middlesex**	**75.56**	**352**	P	**P**	**11 01 14.2**	**+0.5**
	baz=171,SNR=38						
K56A				S	**S**	**11 10 39.0**	**-1.1**
	baz=171						
TSUM	**Tsumeb**	**75.60**	**104**	P	**P**	**11 01 15.6**	**+0.9**
TSUM				IAmb	IAmb	11 01 17.9	
	comp=Z,499nm,1.2s						
TSUM	**Tsumeb**	**75.60**	**104**	*i* P	**P**	**11 01 16.5**	**+1.7**
TSUM	**Tsumeb**	**75.60**	**104**	*i* P	**P**	**11 01 16.5**	**+1.7**
J62A	**Henniker**	**75.63**	**356**	P	**P**	**11 01 15.9**	**+1.8**
	baz=176,SNR=35						
J62A				S	**S**	**11 10 42.8**	**+2.2**
	baz=176						
J63A	**Strafford**	**75.65**	**357**	P	**P**	**11 01 15.4**	**+1.3**
	baz=176,SNR=7.4						
J63A				S	**S**	**11 10 42.9**	**+2.1**
	baz=176						
HDIL	**Hopedale**	**75.66**	**343**	P	**P**	**11 01 14.2**	**-0.2**
	baz=161						
HDIL				S	**S**	**11 10 37.2**	**-4.0**
	baz=161						
HDIL	**Hopedale**	**75.66**	**343**	IAmb	IAmb	11 01 15.4	
	comp=Z,888nm,1.2s						
J60A	**Lant Hill Farm**	**75.74**	**355**	P	**P**	**11 01 15.9**	**+1.2**
	baz=174,SNR=18						
J60A				S	**S**	**11 10 44.1**	**+2.1**
	baz=174						
J61A	**Chester**	**75.79**	**356**	P	**P**	**11 01 16.5**	**+1.6**
	baz=175,SNR=60						
J61A				S	**S**	**11 10 43.2**	**+0.7**
	baz=175						
FFD	**Franklin Falls**	**75.86**	**357**	IAmb	IAmb	11 01 18.6	
	comp=Z,707nm,1.2s						
L48A	**N Adams**	**75.91**	**347**	IAmb	IAmb	11 01 16.6	
	comp=Z,766nm,1.2s						
P38A	**Dawn**	**75.96**	**339**	IAmb	IAmb	11 01 16.6	
	comp=Z,287nm,0.7s						
J59A	**Piesco**	**76.05**	**354**	P	**P**	**11 01 17.5**	**+1.0**
	baz=174,SNR=81						
J59A				S	**S**	**11 10 45.2**	**-0.1**
	baz=174						
J59A	**Piesco**	**76.05**	**354**	IAmb	IAmb	11 01 18.8	
	comp=Z,501nm,1.1s						
J56A	**Wolcott**	**76.08**	**353**	P	**P**	**11 01 17.1**	**+0.5**
	baz=172,SNR=26						
J56A				S	**S**	**11 10 45.4**	**-0.2**
	baz=172						
J56A	**Wolcott**	**76.08**	**353**	P	**P**	**11 01 16.7**	**+0.1**
J56A				IAmb	IAmb	11 01 18.2	
	comp=Z,760nm,1.1s						
AAM	**Ann Arbor**	**76.11**	**347**	P	**P**	**11 01 16.6**	**-0.2**
	baz=166,SNR=14						
AAM				S	**S**	**11 10 40.3**	**-5.7**
	baz=166						
AAM	**Ann Arbor**	**76.11**	**347**	IAmb	IAmb	11 01 18.1	
	comp=Z,447nm,1.4s						
J57A	**Williamstown**	**76.12**	**353**	P	**P**	**11 01 17.6**	**+0.7**
	baz=172,SNR=36						
J57A				S	**S**	**11 10 45.1**	**-1.0**
	baz=172						
J57A	**Williamstown**	**76.12**	**353**	IAmb	IAmb	11 01 18.8	
	comp=Z,579nm,1.1s						
HNH	**Hanover**	**76.13**	**356**	IAmb	IAmb	11 01 20.1	
	comp=Z,669nm,1.2s						
M44A	**Midewin, Midew**	**76.15**	**344**	IAmb	IAmb	11 01 18.0	
	comp=Z,739nm,1.0s						
Y22D	**IRIS PASSCAL I**	**76.18**	**327**	P	**P**	**11 01 19.2**	**+1.5**
	baz=146,SNR=14						
Y22D				S	**S**	**11 10 51.5**	**+4.0**
	baz=146						
N41A	**Harden Midland**	**76.21**	**342**	P	**P**	**11 01 16.6**	**-0.8**
I64A	**Boothbay**	**76.23**	**358**	P	**P**	**11 01 19.2**	**+1.7**
	baz=178,SNR=40						
I64A				S	**S**	**11 10 49.7**	**+2.5**
	baz=178						
I62A	**Tamworth**	**76.25**	**357**	P	**P**	**11 01 19.1**	**+1.5**
	baz=176,SNR=21						
I62A				S	**S**	**11 10 50.4**	**+2.9**
	baz=176						
I58A	**Old Forge**	**76.31**	**354**	P	**P**	**11 01 18.7**	**+0.7**
	baz=173,SNR=69						
I58A				S	**S**	**11 10 47.2**	**-0.9**
	baz=173						
I60A	**Shoreham**	**76.33**	**355**	P	**P**	**11 01 19.2**	**+1.2**
	baz=175,SNR=79						
I60A				S	**S**	**11 10 49.7**	**+1.4**
	baz=175						
KOWA	**Kowa**	**76.37**	**63**	P	**P**	**11 01 20.0**	**+1.1**
K50A	**Casco**	**76.39**	**348**		pP	11 01 59.8	-0.7
I63A	**Otisfield**	**76.40**	**357**	P	**P**	**11 01 20.3**	**+1.9**
	baz=177,SNR=61						
I63A				S	**S**	**11 10 51.8**	**+2.8**
	baz=177						
I63A	**Otisfield**	**76.40**	**357**	P	**P**	**11 01 19.1**	**+0.8**
I63A				IAmb	IAmb	11 01 21.7	
	comp=Z,795nm,1.1s						
KSU1	**Kansas State U**	**76.45**	**337**	P	**P**	**11 01 18.9**	**+0.1**
	baz=155,SNR=156						
KSU1				S	**S**	**11 10 46.2**	**-3.7**
	baz=155						
KSU1	**Kansas State U**	**76.45**	**337**	IAmb	IAmb	11 01 20.1	
	comp=Z,902nm,1.2s						
I57A	**Carthage**	**76.61**	**354**	P	**P**	**11 01 20.5**	**+0.9**
	baz=173,SNR=49						
I57A				S	**S**	**11 10 50.7**	**-0.7**
	baz=173						
TUC	**Tucson**	**76.62**	**323**	P	**P**	**11 01 21.1**	**+1.1**
	baz=143						
TUC				S	**S**	**11 10 52.1**	**0.0**
	baz=143						
TUC	**Tucson**	**76.62**	**323**	P	**P**	**11 01 20.8**	**+0.8**
TUC				pmax	pmax		
	comp=Z,204nm,1.3s						
TUC	**Tucson**	**76.62**	**323**	P	**P**	**11 01 20.8**	**+0.8**
LBNH	**Lisbon**	**76.65**	**356**	P	**P**	**11 01 21.4**	**+1.6**
	baz=176,SNR=91						
LBNH				S	**S**	**11 10 54.4**	**+2.6**
	baz=176						
LBNH	**Lisbon**	**76.65**	**356**	IAmb	IAmb	11 01 23.5	
	comp=Z,355nm,0.8s						
ANMO	**Albuquerque**	**76.70**	**328**	P	**P**	**11 01 21.8**	**+1.2**
	baz=147						
ANMO				S	**S**	**11 10 52.1**	**-1.1**
	baz=147						
ANMO	**Albuquerque**	**76.70**	**328**	*d i*P	**P**	**11 01 21.2**	**+0.6**
ANMO				pmax	pmax		
	comp=Z,268nm,1.0s						
ANMO	**Albuquerque**	**76.70**	**328**	P	**P**	**11 01 21.4**	**+0.9**
ANMO				IAmb	IAmb	11 01 23.2	
	comp=Z,447nm,1.2s						
PECO	**Prince Edward**	**76.74**	**353**	IAmb	IAmb	11 01 22.3	
	comp=Z,927nm,1.3s						
L44A	**Lake County Fo**	**76.87**	**344**	P	**P**	**11 01 20.9**	**-0.1**
	baz=162,SNR=21						
L44A				S	**S**	**11 10 48.6**	**-5.6**
	baz=162						
WVL	**Waterville**	**76.88**	**358**	IAmb	IAmb	11 01 23.9	
	comp=Z,342nm,1.2s						
H61A	**Lyndonville**	**76.94**	**356**	P	**P**	**11 01 23.0**	**+1.6**
	baz=176,SNR=104						
H61A				S	**S**	**11 10 56.6**	**+1.6**
	baz=176						
H62A	**Milan**	**76.94**	**357**	P	**P**	**11 01 23.0**	**+1.5**
	baz=176,SNR=13						
H62A				S	**S**	**11 10 56.6**	**+1.6**
	baz=176						
H64A	**Troy**	**76.95**	**358**	P	**P**	**11 01 22.9**	**+1.5**
	baz=178,SNR=20						
H64A				S	**S**	**11 10 55.4**	**+0.5**
	baz=178						
H58A	**Gabriels**	**76.97**	**355**	P	**P**	**11 01 22.6**	**+1.0**
	baz=174,SNR=118						
H58A				S	**S**	**11 10 57.3**	**+2.0**
	baz=174						
H65A	**Eastbrook**	**76.98**	**359**	P	**P**	**11 01 23.2**	**+1.5**
	baz=179,SNR=35						
H65A				S	**S**	**11 10 57.4**	**+2.1**
	baz=179						
HAL	**Halifax**	**76.99**	**3**	P	**P**	**11 01 23.2**	**+1.6**
HAL	**Halifax**	**76.99**	**3**	IAmb	IAmb	11 01 23.6	
	comp=Z,201nm,0.7s						
HAL					pP	11 02 07.1	+3.2
H63A	**New Sharon**	**76.99**	**358**	P	**P**	**11 01 23.5**	**+1.8**
	baz=177,SNR=40						
H63A				S	**S**	**11 10 58.0**	**+2.6**
	baz=177						
EMMW	**East Machias**	**76.99**	**360**	IAmb	IAmb	11 01 24.6	
	comp=Z,408nm,1.1s						
H60A	**Morristown**	**77.01**	**356**	P	**P**	**11 01 23.2**	**+1.4**
	baz=175,SNR=58						
H60A				S	**S**	**11 10 58.7**	**+3.0**
	baz=175						
BOSA	**Boshof**	**77.02**	**116**	P	**P**	**11 01 23.4**	**+0.8**
	comp=Z,1µm,0.8s,baz=240,slow=5.1,SNR=546						
BOSA				S	**S**	**11 10 56.6**	**-0.5**
	comp=Z,20nm,1.2s,baz=32,slow=18,SNR=3.9						
BOSA				LR	LR	11 33 37.6	
	comp=Z,1µm,18.2s,baz=240,slow=34						
BOSA	**Boshof**	**77.02**	**116**	P	**P**	**11 01 23.1**	**+0.5**
BOSA				pmax	pmax		
	comp=Z,1µm,0.9s						
BOSA	**Boshof**	**77.02**	**116**	P	**P**	**11 01 23.1**	**+0.5**
H66A	**Whiting**	**77.07**	**360**	P	**P**	**11 01 23.8**	**+1.7**
	baz=180						
H66A				S	**S**	**11 10 57.3**	**+1.0**
	baz=180						
H57A	**Richville**	**77.11**	**354**	P	**P**	**11 01 23.1**	**+0.7**
	baz=173,SNR=41						
H57A				S	**S**	**11 10 56.4**	**-0.4**
	baz=173						
L42A	**Oliver, Polo**	**77.12**	**343**	IAmb	IAmb	11 01 23.6	
	comp=Z,476nm,1.1s						
I51A	**Listowel**	**77.14**	**350**	P	**P**	**11 01 22.9**	**+0.4**
	baz=168,SNR=70						
I51A				S	**S**	**11 10 53.0**	**-4.1**
	baz=168						
H59A	**Cadyville**	**77.16**	**355**	P	**P**	**11 01 23.7**	**+1.1**
	baz=174,SNR=71						
H59A				S	**S**	**11 10 57.8**	**+0.5**
	baz=174						
LONY	**Lake Ozonia**	**77.20**	**355**	P	**P**	**11 01 23.9**	**+1.0**
	baz=174,SNR=58						
LONY				S	**S**	**11 10 59.2**	**+1.4**
	baz=174						
LONY	**Lake Ozonia**	**77.20**	**355**	P	**P**	**11 01 23.1**	**+0.2**
LONY				IAmb	IAmb	11 01 25.2	
	comp=Z,378nm,1.1s						
J47A	**Sunmer**	**77.23**	**347**	IAmb	IAmb	11 01 24.0	
	comp=Z,375nm,0.9s						
CBKS	**Cedar Bluff**	**77.28**	**334**	P	**P**	**11 01 24.5**	**+0.9**
	baz=152,SNR=246						
CBKS				S	**S**	**11 10 57.2**	**-1.8**
	baz=152						
FRNY	**Flat Rock**	**77.34**	**355**	IAmb	IAmb	11 01 26.0	
	comp=Z,500nm,1.1s						
MACI	**Morro de la Ar**	**77.34**	**44**	P	**P**	**11 01 26.1**	**+1.9**
MACI				IAmb	IAmb	11 01 29.2	
	comp=Z,335nm,0.9s						
214A	**Organ Pipe Nat**	**77.39**	**321**	P	**P**	**11 01 25.8**	**+1.5**
	baz=142,SNR=138						
214A				S	**S**	**11 11 02.7**	**+2.4**
	baz=142						
214A	**Organ Pipe Nat**	**77.39**	**321**	IAmb	IAmb	11 01 26.4	
	comp=Z,261nm,0.9s						
GGN	**Saint George**	**77.40**	**0**		pP	11 02 08.4	+2.2
G63A	**Kingsbury**	**77.43**	**358**	P	**P**	**11 01 25.6**	**+1.5**
	baz=178,SNR=51						
G63A				S	**S**	**11 11 03.3**	**+3.2**
	baz=178						
K43A	**Burlington**	**77.47**	**344**	P	**P**	**11 01 22.1**	**-2.3**
K43A				IAmb	IAmb	11 01 25.6	
	comp=Z,806nm,1.1s						
G65A	**Princeton**	**77.48**	**360**	P	**P**	**11 01 25.9**	**+1.5**
	baz=180,SNR=12						
G65A				S	**S**	**11 11 01.9**	**+1.2**
	baz=180						
G60A	**Masonville**	**77.52**	**356**	P	**P**	**11 01 25.8**	**+1.1**
	baz=176,SNR=33						
G60A				S	**S**	**11 11 04.5**	**+3.2**
	baz=176						
G64A	**Maxfield**	**77.55**	**359**	P	**P**	**11 01 26.0**	**+1.3**
	baz=178,SNR=38						
G64A				S	**S**	**11 11 03.4**	**+2.0**
	baz=178						
G59A	**Clarenceville**	**77.56**	**356**	P	**P**	**11 01 25.7**	**+0.9**
	baz=175,SNR=37						
H53A	**Bobcaygeon**	**77.56**	**352**	P	**P**	**11 01 25.3**	**+0.4**
	baz=170,SNR=75						
H53A				S	**S**	**11 11 00.0**	**-1.6**
	baz=170						
G62A	**West of Eustis**	**77.56**	**358**	P	**P**	**11 01 26.4**	**+1.5**
	baz=177,SNR=57						
G62A				S	**S**	**11 11 02.9**	**+1.3**
	baz=177						
G62A	**West of Eustis**	**77.56**	**358**	IAmb	IAmb	11 01 27.7	
	comp=Z,441nm,1.1s						
PKME	**Peaks-Kenny Pk**	**77.57**	**358**	P	**P**	**11 01 26.3**	**+1.4**
	baz=178,SNR=38						
PKME				S	**S**	**11 11 03.0**	**+1.3**
	baz=178						
PKME	**Peaks-Kenny Pk**	**77.57**	**358**	IAmb	IAmb	11 01 27.6	
	comp=Z,479nm,1.2s						
T25A	**Trinidad**	**77.66**	**330**	P	**P**	**11 01 27.3**	**+1.5**
	baz=149,SNR=350						
T25A				S	**S**	**11 11 05.6**	**+2.1**
	baz=149						
G61A	**St-Isidore-de-**	**77.67**	**357**	P	**P**	**11 01 27.0**	**+1.6**
	baz=176,SNR=39						
G61A				S	**S**	**11 11 06.4**	**+3.7**
	baz=176						
G58A	**Ormstown**	**77.69**	**355**	P	**P**	**11 01 26.4**	**+0.9**
	baz=174,SNR=43						
G58A				S	**S**	**11 11 03.6**	**+0.8**
	baz=174						
G57A	**Newington**	**77.71**	**354**	P	**P**	**11 01 26.5**	**+0.8**
	baz=173,SNR=48						
G57A				S	**S**	**11 11 04.3**	**+1.2**
	baz=173						
SFX	**San Felipe**	**77.77**	**319**	P	**P**	**11 01 27.1**	**+0.8**
SFX				IAmb	IAmb	11 01 28.7	
	comp=Z,297nm,1.1s						
SADO	**Sadowa**	**77.82**	**351**	P	**P**	**11 01 26.1**	**-0.2**
SADO				IAmb	IAmb	11 01 27.9	
	comp=Z,592nm,1.2s						
PLVO	**Plevna**	**77.85**	**353**	IAmb	IAmb	11 01 28.5	
	comp=Z,566nm,1.1s						
F63A	**Nahmakanta, Br**	**78.00**	**359**	P	**P**	**11 01 28.8**	**+1.5**
	baz=178,SNR=43						
F63A				S	**S**	**11 11 07.7**	**+1.3**
	baz=178						
F63A	**Nahmakanta, Br**	**78.00**	**359**	IAmb	IAmb	11 01 30.1	
	comp=Z,412nm,1.1s						
JFWS	**Jewell Farm**	**78.12**	**343**	P	**P**	**11 01 28.1**	**0.0**
	baz=160,SNR=55						
JFWS				S	**S**	**11 11 04.8**	**-2.9**
	baz=160						
JFWS	**Jewell Farm**	**78.12**	**343**	IAmb	IAmb	11 01 29.4	
	comp=Z,991nm,1.3s						
F64A	**Sherman**	**78.15**	**359**	P	**P**	**11 01 29.6**	**+1.5**
	baz=179,SNR=32						
F64A				S	**S**	**11 11 09.6**	**+1.8**
	baz=179						
LMN	**Caledonia Moun**	**78.16**	**2**	P	**P**	**11 01 28.9**	**+0.7**
LMN				IAmb	IAmb	11 01 30.6	
	comp=Z,388nm,1.2s						
I45A	**Fountain**	**78.28**	**346**	IAmb	IAmb	11 01 28.9	
	comp=Z,234nm,0.8s						
F59A	**Saint Guilaume**	**78.30**	**356**	P	**P**	**11 01 29.5**	**+0.6**
	baz=175,SNR=9.9						
F59A				S	**S**	**11 11 10.5**	**+1.1**
	baz=175						
G54A	**Lake Saint Pet**	**78.31**	**352**	P	**P**	**11 01 29.7**	**+0.6**
	baz=171,SNR=79						
G54A				S	**S**	**11 11 08.8**	**-0.9**
	baz=171						
F61A	**St Evariste**	**78.33**	**357**	P	**P**	**11 01 29.9**	**+0.8**
	baz=177,SNR=14						
F61A				S	**S**	**11 11 12.4**	**+2.5**
	baz=177						
W18A	**Petrified Fore**	**78.36**	**326**	P	**P**	**11 01 31.0**	**+1.2**
	baz=144,SNR=87						
W18A				S	**S**	**11 11 13.4**	**+2.4**
	baz=144						
W18A	**Petrified Fore**	**78.36**	**326**	IAmb	IAmb	11 01 32.4	
	comp=Z,439nm,1.1s						
F60A	**Warwick**	**78.37**	**357**	P	**P**	**11 01 30.0**	**+0.7**
	baz=176,SNR=51						
F60A				S	**S**	**11 11 12.0**	**+1.8**
	baz=176						
F58A	**St-Lin Laurent**	**78.38**	**355**	P	**P**	**11 01 30.0**	**+0.7**
	baz=174,SNR=7.7						
F58A				S	**S**	**11 11 10.9**	**+0.6**
	baz=174						
F57A	**Harrington**	**78.39**	**355**	P	**P**	**11 01 29.9**	**+0.5**
	baz=174,SNR=15						
F57A				S	**S**	**11 11 11.0**	**+0.5**
	baz=174						
K38A	**Parkersburg**	**78.53**	**341**	IAmb	IAmb	11 01 31.4	
	comp=Z,999nm,1.4s						
KSCO	**Kaye Shedlock’**	**78.54**	**333**	P	**P**	**11 01 31.8**	**+1.2**
	baz=150,SNR=112						
KSCO				S	**S**	**11 11 12.8**	**+0.1**
	baz=150						
SDCO	**Great Sand Dun**	**78.63**	**330**	P	**P**	**11 01 32.6**	**+1.3**
	baz=148,SNR=235						
SDCO				S	**S**	**11 11 15.0**	**+1.0**
	baz=148						
X16A	**Lo Mia Camp, P**	**78.63**	**324**	P	**P**	**11 01 31.9**	**+0.6**
X16A				IAmb	IAmb	11 01 34.0	
	comp=Z,511nm,1.1s						
E64A	**Bridgewater**	**78.70**	**360**	P	**P**	**11 01 32.5**	**+1.4**
	baz=179,SNR=24						
E64A				S	**S**	**11 11 16.1**	**+2.4**
	baz=179						
E63A	**Oxbow**	**78.71**	**359**	P	**P**	**11 01 32.4**	**+1.3**
	baz=179,SNR=35						
E63A				S	**S**	**11 11 16.2**	**+2.4**
	baz=179						
I42A	**Draeger Farm,**	**78.72**	**344**	IAmb	IAmb	11 01 32.7	
	comp=Z,705nm,1.1s						
GLMI	**Grayling**	**78.73**	**347**	P	**P**	**11 01 31.5**	**+0.2**
	baz=165,SNR=21						
GLMI				S	**S**	**11 11 09.3**	**-4.8**
	baz=165						
GLMI	**Grayling**	**78.73**	**347**	IAmb	IAmb	11 01 32.7	
	comp=Z,540nm,1.1s						
E60A	**Ste Agathe de**	**78.75**	**357**	P	**P**	**11 01 32.3**	**+1.0**
	baz=176,SNR=39						
E60A				S	**S**	**11 11 14.6**	**+0.5**
	baz=176						
E61A	**Lac Etchemin**	**78.77**	**358**	P	**P**	**11 01 32.7**	**+1.2**
	baz=177,SNR=13						
E61A				S	**S**	**11 11 17.7**	**+3.1**
	baz=177						
E58A	**La Victoria**	**78.85**	**356**	P	**P**	**11 01 32.7**	**+0.8**
	baz=175,SNR=72						
E58A				S	**S**	**11 11 15.8**	**+0.5**
	baz=175						
ALGO	**Algonquin Park**	**78.86**	**352**	P	**P**	**11 01 32.3**	**+0.3**
	baz=171,SNR=99						
ALGO				S	**S**	**11 11 14.7**	**-0.7**
	baz=171						
E59A	**St. Maurice**	**78.91**	**356**	P	**P**	**11 01 33.3**	**+1.1**
	baz=175,SNR=7.3						
E59A				S	**S**	**11 11 16.1**	**+0.2**
	baz=175						
E57A	**Chemin Saint G**	**78.95**	**355**	P	**P**	**11 01 33.0**	**+0.5**
	baz=174,SNR=59						
E57A				S	**S**	**11 11 16.3**	**-0.1**
	baz=174						
L34A	**Svendsen Farm,**	**78.97**	**338**	IAmb	IAmb	11 01 33.9	
	comp=Z,541nm,0.8s						
H43A	**Windswept, Lux**	**79.02**	**345**	IAmb	IAmb	11 01 34.4	
	comp=Z,822nm,1.3s						
BGNE	**Belgrade**	**79.04**	**337**	P	**P**	**11 01 33.6**	**+0.5**
	baz=154,SNR=58						
BGNE				S	**S**	**11 11 17.3**	**-0.3**
	baz=154						
H07S1	**FLORES T-PHASE**	**79.04**	**28**	*e*P	**P**	**11 01 33.2**	**0.0**
CPBX	**Cerro Prieto**	**79.07**	**320**	IAmb	IAmb	11 01 35.9	
	comp=Z,310nm,1.0s						
LBTB	**Lobatse**	**79.10**	**113**	P	**P**	**11 01 34.6**	**+0.5**
LBTB				pmax	pmax		
	comp=Z,2µm,1.0s						
LBTB	**Lobatse**	**79.10**	**113**	P	**P**	**11 01 34.6**	**+0.5**
LBTB	**Lobatse**	**79.10**	**113**	*i* P	**P**	**11 01 34.9**	**+0.7**
LBTB	**Lobatse**	**79.10**	**113**	*i* P	**P**	**11 01 34.9**	**+0.7**
ESJX	**Sierra Juarez**	**79.11**	**319**	P	**P**	**11 01 34.7**	**+0.8**
I40A	**Norwalk**	**79.13**	**343**	IAmb	IAmb	11 01 34.8	
	comp=Z,591nm,1.2s						
E55A	**Montcerf-Lytto**	**79.15**	**354**	P	**P**	**11 01 33.9**	**+0.4**
	baz=172,SNR=41						
E55A				S	**S**	**11 11 18.0**	**-0.4**
	baz=172						
E56A	**St. Veronique**	**79.15**	**354**	P	**P**	**11 01 34.1**	**+0.5**
	baz=173,SNR=83						
E56A				S	**S**	**11 11 18.0**	**-0.5**
	baz=173						
S22A	**4UR Ranch, Cre**	**79.20**	**329**	P	**P**	**11 01 35.6**	**+1.2**
	baz=147,SNR=283						
S22A				S	**S**	**11 11 20.9**	**+0.9**
	baz=147						
D60A	**Saint Jean D’O**	**79.27**	**357**	P	**P**	**11 01 35.2**	**+1.1**
	baz=177,SNR=34						
D60A				S	**S**	**11 11 20.9**	**+1.3**
	baz=177						
GLA	**Glamis**	**79.30**	**321**	P	**P**	**11 01 36.0**	**+1.3**
	baz=141,SNR=22						
GLA				S	**S**	**11 11 23.1**	**+2.3**
	baz=141						
UABX	**UABC, Campus M**	**79.31**	**320**	IAmb	IAmb	11 01 38.1	
	comp=Z,636nm,0.9s						
D63A	**Stockholm**	**79.32**	**359**	P	**P**	**11 01 35.7**	**+1.2**
	baz=179,SNR=39						
D63A				S	**S**	**11 11 21.2**	**+1.0**
	baz=179						
H07N1	**FLORES T-PHASE**	**79.34**	**28**	*e*P	**P**	**11 01 34.4**	**-0.4**
PCAN	**Candelaria**	**79.37**	**30**	*e*P	**P**	**11 01 35.2**	**+0.2**
	comp=Z,245nm,0.9s						
CALA	**Caldeira**	**79.38**	**30**	*e*P	**P**	**11 01 36.0**	**+0.9**
CCX	**Cicese**	**79.40**	**319**		pP	11 02 20.3	+2.6
D59A	**Saint-Raymond**	**79.40**	**357**	P	**P**	**11 01 35.8**	**+0.9**
	baz=176,SNR=21						
D59A				S	**S**	**11 11 21.1**	**0.0**
	baz=176						
PICO	**Pico**	**79.42**	**30**	*e*P	**P**	**11 01 35.5**	**+0.2**
	comp=Z,255nm,0.9s						
PPNO	**Prainha do Nor**	**79.47**	**30**	*e*P	**P**	**11 01 35.2**	**-0.3**
	comp=Z,503nm,1.0s						
WUAZ	**Wupatki**	**79.47**	**325**	P	**P**	**11 01 37.3**	**+1.5**
	baz=143,SNR=203						
WUAZ				S	**S**	**11 11 27.0**	**+4.2**
	baz=143						
WUAZ	**Wupatki**	**79.47**	**325**	IAmb	IAmb	11 01 38.7	
	comp=Z,308nm,1.1s						
MVCO	**Mesa Verde**	**79.50**	**328**	P	**P**	**11 01 37.1**	**+1.1**
	baz=146,SNR=220						
MVCO				S	**S**	**11 11 24.8**	**+1.8**
	baz=146						
MVCO	**Mesa Verde**	**79.50**	**328**	P	**P**	**11 01 36.5**	**+0.6**
MVCO				IAmb	IAmb	11 01 38.5	
	comp=Z,337nm,1.1s						
PID	**Ribeirinha**	**79.50**	**30**	*e*P	**P**	**11 01 35.8**	**+0.1**
Q24A	**Divide**	**79.51**	**331**	P	**P**	**11 01 37.4**	**+1.3**
	baz=148,SNR=232						
Q24A				S	**S**	**11 11 24.4**	**+1.1**
	baz=148						
D61A	**St Aubert, Com**	**79.53**	**358**	P	**P**	**11 01 36.6**	**+1.1**
	baz=177,SNR=33						
D61A				S	**S**	**11 11 24.7**	**+2.3**
	baz=177						
D58A	**Chemin du LacG**	**79.55**	**356**	P	**P**	**11 01 36.6**	**+0.9**
	baz=175,SNR=144						
D58A				S	**S**	**11 11 23.0**	**+0.4**
	baz=175						
D56A	**ZEC Mazanza, M**	**79.63**	**355**	P	**P**	**11 01 36.7**	**+0.5**
	baz=173,SNR=83						
D56A				S	**S**	**11 11 24.3**	**+0.8**
	baz=173						
PSMA	**Santa Maria**	**79.63**	**33**	*e*P	**P**	**11 01 35.9**	**-0.4**
	comp=Z,182nm,1.0s						
D55A	**Sainte-Anne-du**	**79.66**	**354**	P	**P**	**11 01 36.7**	**+0.4**
	baz=173,SNR=115						
PSMN	**Pico do Norte,**	**79.66**	**33**	*e*P	**P**	**11 01 35.9**	**-0.7**

	comp=Z,244nm,1.1s						
PMAN	Manadas	79.68	30	*e*P	P	11 01 36.5	-0.1
	comp=Z,758nm,1.0s						
ROSA	Rosais	79.69	30	*e*P	P	11 01 36.6	0.0
	comp=Z,377nm,1.2s						
ROSA	Rosais	79.69	30	IAmb	IAmb	11 01 41.2	
	comp=Z,344nm,1.0s						
IKP	In-Ko-Pah, Jac	79.69	320	P	P	11 01 38.4	+1.5
	baz=140,SNR=100						
IKP				S	S	11 11 26.9	+1.9
	baz=140						
SWSC	Sam W. Stewart	79.74	320	P	P	11 01 38.4	+1.3
	baz=140,SNR=81						
SWSC				S	S	11 11 28.9	+3.6
	baz=140						
LATQ	La Tuque	79.83	356	P	P	11 01 37.9	+0.7
	baz=175,SNR=48						
LATQ				S	S	11 11 26.0	+0.5
	baz=175						
TKX	Tecate	79.90	319	IAmb	IAmb	11 01 40.7	
	comp=Z,359nm,1.2s						
TORD	Torodi Ar. Bea	79.91	67	P	P	11 01 39.0	+0.7
	comp=Z,845nm,0.8s,baz=258,slow=4.6,SNR=1333						
TORD				S	S	11 11 28.3	+0.5
	comp=Z,21nm,1.1s,baz=243,slow=9.1,SNR=17						
TORD				PKKPbc	PKKPbc	11 20 23.1	+1.1
	comp=Z,2.9nm,0.6s,baz=50,slow=2.1,SNR=7.3						
TORD				LR	LR	11 34 08.5	
	comp=Z,2µm,21.9s,baz=230,slow=33						
TORD	Torodi Ar. Bea	79.91	67	P	P	11 01 38.2	-0.2
PDMCI	Parker Dam,Lak	79.91	322	P	P	11 01 39.0	+1.1
	baz=141,SNR=55						
PDMCI				S	S	11 11 29.2	+2.2
	baz=141						
I37A	Lemond, Waseca	79.97	341	P	P	11 01 37.7	-0.4
BAR	Barrett	80.02	319	P	P	11 01 39.8	+1.1
BAR				IAmb	IAmb	11 01 41.3	
	comp=Z,440nm,1.2s						
SRBC	Serra Branca	80.04	30	*e*P	P	11 01 38.4	-0.1
MONP2	Monument Peak	80.04	320	P	P	11 01 40.4	+1.4
	baz=140,SNR=119						
MONP2				S	S	11 11 31.7	+2.8
	baz=140						
PGRA	Graciosa	80.06	30	*e*P	P	11 01 38.8	+0.2
ADH	Angra Heroismo	80.06	31	*e*P	P	11 01 38.9	+0.3
	comp=Z,382nm,1.2s						
CMLA	Cha da Macela	80.08	32	*e*P	P	11 01 38.9	+0.1
CMLA	Cha da Macela	80.08	32	P	P	11 01 40.6	+1.8
CMLA				pmax	pmax		
	comp=Z,149nm,0.7s						
CMLA	Cha da Macela	80.08	32	P	P	11 01 40.6	+1.8
BC3	Big Chuckawall	80.10	321	P	P	11 01 40.3	+1.2
	baz=140,SNR=161						
BC3				S	S	11 11 32.2	+2.9
	baz=140						
TJX	Tijuana	80.10	319	P	P	11 01 39.8	+0.8
TJX				IAmb	IAmb	11 01 41.9	
	comp=Z,710nm,1.3s						
PSCM	Serra do Cume	80.15	31	*e*P	P	11 01 39.1	0.0
	comp=Z,414nm,1.1s						
PAGU	Agualva, Azore	80.17	31	*e*P	P	11 01 40.2	+0.9
	comp=Z,242nm,1.1s						
BART	Pico Bartolome	80.25	33	*e*P	P	11 01 39.7	-0.1
	comp=Z,481nm,0.9s						
IRM	Iron Mountain	80.32	321	P	P	11 01 41.5	+1.2
	baz=141,SNR=174						
F42A	Maple Grove Fa	80.33	345	IAmb	IAmb	11 01 42.6	
	comp=Z,228nm,0.8s						
G40A	Rib Lake	80.33	344	P	P	11 01 39.3	-0.6
PMOZ	Porto Moniz, M	80.36	41	*e*P	P	11 01 42.3	+1.7
PMOZ				*e*S	S	11 11 35.2	+3.2
FUL	Funchal	80.40	41	*e*P	P	11 01 42.4	+1.8
	comp=Z,425nm,1.0s						
ISCO	Idaho Springs	80.41	331	P	P	11 01 42.2	+1.3
	baz=148,SNR=301						
ISCO				S	S	11 11 34.5	+1.8
	baz=148						
ISCO	Idaho Springs	80.41	331	IAmb	IAmb	11 01 43.4	
	comp=Z,645nm,1.3s						
109C	Camp Elliot, M	80.41	319	P	P	11 01 41.7	+1.1
	baz=139,SNR=33						
109C				S	S	11 11 35.3	+3.0
	baz=139						
PV13	Radium Mtn., P	80.42	328		pP	11 02 25.7	+2.3
PMAR	Madeira	80.45	41	*e*P	P	11 01 42.9	+1.8
	comp=Z,624nm,1.1s						
SMCO	Snowmass	80.46	330	P	P	11 01 42.3	+1.0
SMCO				IAmb	IAmb	11 01 44.2	
	comp=Z,576nm,1.0s						
PV05	Paradox Valley	80.48	328	P	P	11 01 41.2	0.0
NEE2	Needles Airpor	80.52	322	P	P	11 01 42.2	+1.0
	baz=141,SNR=27						
NEE2				S	S	11 11 35.5	+2.1
	baz=141						
PV11	David Mesa, Pa	80.56	328	IAmb	IAmb	11 01 44.0	
	comp=Z,510nm,1.5s						
PV16	Nyswonger Mesa	80.59	328	P	P	11 01 42.4	+0.6
TPFO	Pinon Flats	80.60	320	P	P	11 01 43.4	+1.5
	baz=140,SNR=190						
TPFO				S	S	11 11 38.6	+4.0
	baz=140						
PFO	Pinyon Flats O	80.61	320	P	P	11 01 43.4	+1.5
	baz=140,SNR=197						
PFO				S	S	11 11 38.2	+3.6
	baz=140						
PFO	Pinyon Flats O	80.61	320	*d i*P	P	11 01 42.8	+0.9
PFO				pmax	pmax		
	comp=Z,384nm,1.1s						
PFO	Pinyon Flats O	80.61	320	P	P	11 01 43.1	+1.3
PFO				IAmb	IAmb	11 01 44.1	
	comp=Z,330nm,1.1s						
ECSD	EROS Data Cent	80.64	339	P	P	11 01 42.0	+0.3
	baz=155,SNR=741						
ECSD				S	S	11 11 39.5	+5.2
	baz=155						
U15A	North Rim	80.65	325	P	P	11 01 43.0	+0.8
E43A	Lone Tree Farm	80.68	346	IAmb	IAmb	11 01 43.6	
	comp=Z,441nm,0.9s						
PV14	Lion Creek, Pa	80.69	328	IAmb	IAmb	11 01 44.6	
	comp=Z,334nm,1.1s						
PV10	Paradox Valley	80.70	328	IAmb	IAmb	11 01 44.2	
	comp=Z,352nm,1.1s						
COWI	Conover	80.87	345	IAmb	IAmb	11 01 44.6	
	comp=Z,360nm,1.0s						
SPMN	Marine on St.	80.93	342	P	P	11 01 42.8	-0.3
	baz=158,SNR=86						
SPMN				S	S	11 11 42.1	+4.9
	baz=158						
SPMN	Marine on St.	80.93	342	IAmb	IAmb	11 01 44.2	
	comp=Z,461nm,1.1s						
RAR	Rarotonga	80.96	251	P	P	11 01 44.4	+0.4
RAR				pmax	pmax		
	comp=Z,322nm,1.4s						
RAR	Rarotonga	80.96	251	P	P	11 01 44.4	+0.4
MURC	Murrieta	81.00	320	P	P	11 01 45.3	+1.4
	baz=139,SNR=119						
MURC				S	S	11 11 41.9	+3.4
	baz=139						
PMPS	Porto Santo	81.02	41	*e*P	P	11 01 44.6	+0.7
PMPST	Porto Santo, M	81.03	41	*e*P	P	11 01 46.6	+2.6
GMRC	Granite Mounta	81.08	321	P	P	11 01 45.8	+1.5
	baz=140,SNR=236						
GMRC				S	S	11 11 42.1	+2.7
	baz=140						
SCI2	San Clemente I	81.28	318	P	P	11 01 46.7	+1.4
	baz=138,SNR=22						
SCI2				S	S	11 11 44.6	+3.2
	baz=138						
BBRC	Big Bear Solar	81.35	320	P	P	11 01 47.5	+1.6
	baz=140,SNR=61						
BBRC				S	S	11 11 45.6	+3.1
	baz=140						
CASY	Casey	81.37	179	P	P	11 01 45.5	+0.1
CASY				IAmb	IAmb	11 01 48.1	
	comp=Z,523nm,0.9s						
HEC	Hector,Ludlow	81.47	321	P	P	11 01 47.9	+1.6
	baz=140,SNR=159						
HEC				S	S	11 11 46.0	+2.7
	baz=140						
N23A	Red Feather La	81.47	331	P	P	11 01 47.7	+1.3
	baz=148,SNR=238						
N23A				S	S	11 11 45.6	+2.1
	baz=148						
PHWY	Pilot Hill	81.62	332	IAmb	IAmb	11 01 49.0	
	comp=Z,432nm,0.7s						
FMP	Fort Macarthur	81.69	319	P	P	11 01 49.0	+1.6
	baz=138,SNR=17						
FMP				S	S	11 11 47.7	+2.3
	baz=138						
F36A	Milaca	81.72	342	IAmb	IAmb	11 01 48.3	
	comp=Z,496nm,1.1s						
BFSC	Mount Baldy Ra	81.73	320	P	P	11 01 49.0	+1.2
	baz=139,SNR=177						
BFSC				S	S	11 11 48.8	+2.6
	baz=139						
O20A	White River Ci	81.79	329	P	P	11 01 49.2	+1.1
	baz=146,SNR=121						
O20A				S	S	11 11 49.1	+2.4
	baz=146						
O20A	White River Ci	81.79	329	IAmb	IAmb	11 01 50.7	
	comp=Z,678nm,1.6s						
LSQQ	Lebel-sur-Quev	81.81	353	P	P	11 01 48.1	+0.4
	baz=172						
LSQQ				S	S	11 11 43.4	-2.6
	baz=172						
RRX	Edison Barstow	81.86	321	P	P	11 01 49.9	+1.6
	baz=140,SNR=14						
RRX				S	S	11 11 49.9	+2.7
	baz=140						
E38A	The Farm, Brul	81.91	343	IAmb	IAmb	11 01 49.5	
	comp=Z,746nm,1.2s						
MWC	Mount Wilson	81.94	319	P	P	11 01 49.5	+0.5
MWC				pmax	pmax		
	comp=Z,326nm,1.1s						
MWC	Mount Wilson	81.94	319	P	P	11 01 49.5	+0.5
MWC				IAmb	IAmb	11 01 51.5	
	comp=Z,326nm,1.1s						
PASC	Pasadena Art C	81.97	319	IAmb	IAmb	11 01 51.6	
	comp=Z,390nm,1.1s						
DRLN	Deer Lake	81.99	6	IAmb	IAmb	11 01 50.4	
	comp=Z,352nm,0.7s						
SUSD	Miller	82.02	338	P	P	11 01 48.9	0.0
	baz=153,SNR=32						
SUSD				S	S	11 11 49.3	+0.9
	baz=153						
SUSD	Miller	82.02	338	IAmb	IAmb	11 01 50.1	
	comp=Z,772nm,1.1s						
SNCC	San Nicolas Is	82.03	318	P	P	11 01 50.4	+1.2
	baz=138,SNR=22						
SNCC				S	S	11 11 50.1	+1.1
	baz=138						
SNCC	San Nicolas Is	82.03	318	IAmb	IAmb	11 01 51.8	
	comp=Z,464nm,1.1s						
SNCC				pP	pP	11 02 34.2	+2.3
GSC	Goldstone, Bar	82.08	321	P	P	11 01 50.9	+1.3
	baz=140,SNR=158						
GSC				S	S	11 11 51.8	+2.3
	baz=140						
GSC	Goldstone, Bar	82.08	321	P	P	11 01 49.9	+0.4
GSC				pmax	pmax		
	comp=Z,185nm,1.1s						
GSC	Goldstone, Bar	82.08	321	P	P	11 01 49.9	+0.4
DECC	Green Verdugo	82.11	319	P	P	11 01 51.1	+1.5
	baz=138,SNR=48						
SHOC	Shoshone, Teco	82.25	322	P	P	11 01 51.3	+1.0
	baz=140,SNR=48						
SHOC				S	S	11 11 54.2	+3.0
	baz=140						
EDW2	Edwards Air Fo	82.40	320	P	P	11 01 52.0	+0.9
	baz=139,SNR=120						
F33A	5 Mile Ranch,	82.46	340	P	P	11 01 50.3	-0.9
F33A				IAmb	IAmb	11 01 52.3	
	comp=Z,367nm,1.1s						
MATQ	Matagami	82.57	353	P	P	11 01 51.7	+0.1
	baz=171,SNR=96						
OSI	Osito Audit: C	82.60	319	P	P	11 01 53.5	+1.3
	baz=138,SNR=46						
OSI				S	S	11 11 56.1	+1.3
	baz=138						
OSI	Osito Audit: C	82.60	319	IAmb	IAmb	11 01 54.7	
	comp=Z,385nm,1.1s						
SCZ2	Santa Cruz Isl	82.64	318	P	P	11 01 53.8	+1.4
	baz=138,SNR=56						
SCZ2				S	S	11 11 57.6	+2.3
	baz=138						
RWWY	Rawlins	82.65	331		pP	11 02 35.5	+0.2
LRMC	Laurel Mtn Rad	82.68	321	P	P	11 01 53.8	+1.1
	baz=139,SNR=249						
LRMC				S	S	11 11 57.2	+1.4
	baz=139						
PRN	Pahroc Range	82.78	323	IAmb	IAmb	11 01 56.2	
	comp=Z,344nm,1.1s						
FURC	Furnace Creek,	82.99	322	P	P	11 01 55.6	+1.5
	baz=140,SNR=107						
FURC				S	S	11 11 59.0	+0.5
	baz=140						
MPMC	Manual Prospec	83.01	321	P	P	11 01 55.5	+1.0
	baz=139,SNR=145						
MPMC				S	S	11 12 00.3	+1.1
	baz=139						
SBC	Santa Barbara	83.02	319	P	P	11 01 55.6	+1.4
	baz=138,SNR=19						
SBC				S	S	11 11 59.3	+0.4
	baz=138						
ARVC	Arvin	83.04	320	P	P	11 01 55.6	+1.3
	baz=138,SNR=29						
ARVC				S	S	11 12 00.0	+0.9
	baz=138						
TPNV	Topopah Spring	83.04	322	P	P	11 01 56.1	+1.6
	baz=140,SNR=254						
TPNV				S	S	11 12 00.5	+1.1
	baz=140						
EYMN	Ely	83.15	344	P	P	11 01 54.6	0.0
	baz=160,SNR=135						
EYMN				S	S	11 11 57.4	-2.3
	baz=160						
EYMN	Ely	83.15	344	IAmb	IAmb	11 01 56.1	
	comp=Z,414nm,1.1s						
K22A	Casper	83.18	332	P	P	11 01 56.3	+1.1
	baz=147,SNR=290						
K22A				S	S	11 11 59.1	-1.5
	baz=147						
K22A	Casper	83.18	332	IAmb	IAmb	11 01 57.7	
	comp=Z,672nm,1.1s						
MPU	Maple Canyon	83.20	327	P	P	11 01 55.9	+0.5
ISA	Isabella, Lake	83.24	320	P	P	11 01 57.0	+1.5
	baz=139,SNR=190						
ISA				S	S	11 12 01.3	-0.1
	baz=139						
PKM	Mcpherson Peak	83.40	319	P	P	11 01 58.1	+1.6
	baz=138,SNR=216						
PKM				S	S	11 12 02.1	-1.2
	baz=138						
RSSD	Black Hills	83.48	334	P	P	11 01 57.5	+0.7
	baz=149						
RSSD				S	S	11 12 04.2	+0.5
	baz=149						
RSSD	Black Hills	83.48	334	P	P	11 01 57.1	+0.4
RSSD				pmax	pmax		
	comp=Z,319nm,0.9s						
RSSD	Black Hills	83.48	334	P	P	11 01 57.1	+0.4
RSSD				IAmb	IAmb	11 01 59.1	
	comp=Z,319nm,0.8s						
CWC	Cottonwood Cre	83.61	321	S	S	11 12 06.7	+1.4
	baz=139						
GRAC	Grapevine Rang	83.66	322	P	P	11 01 59.0	+1.5
	baz=139,SNR=26						
VES	Vestal, Richgr	83.71	320	P	P	11 01 58.9	+1.2
	baz=138,SNR=246						
MATP	Matopo	83.78	110	S	S	11 12 06.9	-0.8
	comp=Z,11nm,1.2s,baz=251,slow=20,SNR=6.3						
MATP				PKKPbc	PKKPbc	11 20 13.0	+0.3
	comp=Z,4.5nm,0.5s,baz=29,slow=5.0,SNR=8.9						
R11A	Troy Canyon, C	83.78	324	P	P	11 01 59.7	+1.4
	baz=141,SNR=106						
R11A				S	S	11 12 09.0	+2.1
	baz=141						
SMMC	Simmler	83.82	319	P	P	11 02 00.2	+1.8
	baz=138,SNR=130						
SMMC				S	S	11 12 09.3	+2.3
	baz=138						
D32A	Dogwood Acres,	83.85	340	P	P	11 01 58.0	-0.2
DUG	Dugway, Tooele	83.89	327	P	P	11 01 59.7	+1.0
	baz=143,SNR=173						
CRZF	Crozet Islands	83.99	143	P	P	11 01 59.7	+0.5
B35A	Bob, Littlefor	84.08	343	IAmb	IAmb	11 02 00.8	
	comp=Z,475nm,1.0s						
TIN	Tinemaha, Big	84.15	321	P	P	11 02 01.6	+1.5
	baz=139,SNR=42						
VOG	Valley Oaks Go	84.22	320	P	P	11 02 00.5	+0.1
	baz=138,SNR=7.7						
PAGB	Antelope Grade	84.26	319	IAmb	IAmb	11 02 02.9	
	comp=Z,251nm,0.8s						
E28A	Huff	84.47	337		pP	11 02 44.5	+0.2
PDAR	Pinedale Array	84.52	330	P	P	11 02 02.2	+0.2
	comp=Z,44nm,0.6s,baz=128,slow=7.3,SNR=364						
PDAR				pP	pP	11 02 45.7	+0.8
	comp=Z,39nm,0.8s,baz=127,slow=5.6,SNR=5.7						
PDAR				PKiKP	PKiKP	11 07 13.9	-0.6
	comp=Z,2.5nm,0.8s,baz=145,slow=3.3,SNR=2.1						
PDAR				PKKPbc	PKKPbc	11 20 11.3	-2.1
	comp=Z,2.9nm,0.6s,baz=154,slow=0.8,SNR=17						
PDAR				PKPPKP	P'P'df	11 28 16.4	+0.1
	comp=Z,2.2nm,0.8s,baz=145,slow=5.4,SNR=6.3						
PDAR				LR	LR	11 40 09.1	
	comp=Z,813nm,18.3s,baz=162,slow=36						
PDAR	Pinedale Array	84.52	330	P	P	11 02 01.6	-0.5
BW06	Boulder Array	84.52	330	P	P	11 02 02.4	+0.4
	baz=145,SNR=136						
MLAC	Mammoth, Mammo	84.90	321	P	P	11 02 05.6	+1.5
	baz=138,SNR=190						
PMPB	Monarch Peak	84.92	319	IAmb	IAmb	11 02 07.3	
	comp=Z,667nm,1.5s						
OMMB	Old Mammoth Mi	84.98	321	IAmb	IAmb	11 02 06.9	
	comp=Z,305nm,1.1s						
HVU	Hansel Valley	85.13	328	P	P	11 02 05.0	0.0
HVU				pmax	pmax		
	comp=Z,340nm,1.0s						
HVU	Hansel Valley	85.13	328	P	P	11 02 05.0	0.0
AHID	Auburn Hatcher	85.18	329	IAmb	IAmb	11 02 07.2	
	comp=Z,439nm,1.2s						
LHV	Little Huntoon	85.19	322	IAmb	IAmb	11 02 07.5	
	comp=Z,199nm,0.8s						
NVAR	Mina Array Bea	85.22	322	P	P	11 02 06.5	+0.9
	comp=Z,95nm,0.8s,baz=158,slow=5.8,SNR=680						
NVAR				pP	pP	11 02 50.3	+1.7
	comp=Z,69nm,0.9s,baz=158,slow=5.4,SNR=6.3						
NVAR				PKiKP	PKiKP	11 07 16.7	+1.0
	comp=Z,1.9nm,0.9s,baz=118,slow=2.5,SNR=1.9						
NVAR				S	SKSac	11 12 12.7	-1.4
	comp=Z,1.0nm,0.8s,baz=134,slow=3.9,SNR=2.8						
NVAR				PKKPbc	PKKPbc	11 20 11.7	+0.2
	comp=Z,14nm,0.8s,baz=293,slow=2.3,SNR=26						
NVAR				SKKPbc	SKKPbc	11 23 46.9	+11
	comp=Z,1.6nm,0.7s,baz=345,slow=3.1,SNR=4.7						
NVAR				PKPPKP	P'P'df	11 28 20.4	+4.9
	comp=Z,5.0nm,0.9s,baz=292,slow=0.4,SNR=7.6						
NVAR	Mina Array Bea	85.22	322	P	P	11 02 04.7	-0.9
MDND	Maddock	85.26	339	P	P	11 02 06.0	+0.7
	baz=153,SNR=94						
REDW	Red Top Meadow	85.56	330	P	P	11 02 06.6	-0.6
REDW				IAmb	IAmb	11 02 09.2	
	comp=Z,312nm,1.1s						
SNOW	Snow King Moun	85.60	330	IAmb	IAmb	11 02 10.4	
	comp=Z,206nm,0.9s						
WAKR	Walker	85.87	322	IAmb	IAmb	11 02 11.2	
	comp=Z,240nm,1.1s						
SYZ	Scrubby Hill	86.26	215	P	P	11 02 11.5	+1.0
H17A	Grant Village	86.28	330	P	P	11 02 11.9	+1.2
	baz=144,SNR=87						
H17A				S	S	11 12 32.7	+1.4
	baz=144						
RLMT	Red Lodge	86.34	332	P	P	11 02 11.9	+1.0
	baz=146,SNR=230						
RLMT				S	S	11 12 32.6	+0.8
	baz=146						
ULM	Lac du Bonnet	86.37	342	P	P	11 02 10.7	0.0
	comp=Z,358nm,0.9s,baz=159,slow=4.8,SNR=425						
ULM				pP	pP	11 02 54.6	+0.9
	comp=Z,87nm,0.9s,baz=139,slow=3.4,SNR=3.1						
ULM				PKKP	PKKPbc	11 20 06.5	-2.6
	comp=Z,36nm,0.9s,baz=338,slow=3.1,SNR=35						
ULM				PKPPKP	P'P'df	11 28 09.6	-2.3
	comp=Z,3.4nm,1.0s,baz=352,slow=5.2,SNR=3.3						
ULM				LR	LR	11 44 58.7	
	comp=Z,779nm,19.4s,baz=154,slow=38						
ULM	Lac du Bonnet	86.37	342	*d i*P	P	11 02 10.3	-0.4
ULM	Lac du Bonnet	86.37	342	IAmb	IAmb	11 02 12.1	
	comp=Z,423nm,0.9s						
PNTR	Pine Nut	86.39	322	IAmb	IAmb	11 02 14.0	
	comp=Z,369nm,0.9s						
TMWZ	Te Maipa	86.41	222	P	P	11 02 13.2	+1.7
MQZ	McQueen’s Vall	86.45	219	P	P	11 02 11.5	0.0
MQZ	McQueen’s Vall	86.45	219	P	P	11 02 12.4	+0.9
PLWZ	Palliser	86.46	222	P	P	11 02 12.2	+0.5
LAO	LASA Array	86.48	334	P	P	11 02 12.0	+0.6
	baz=148,SNR=183						
LAO				S	S	11 12 32.1	-0.6
	baz=148						
LAO	LASA Array	86.48	334	IAmb	IAmb	11 02 13.3	
	comp=Z,550nm,1.0s						
BFZ	Birch Farm	86.48	223	IAmb	IAmb	11 02 14.7	
	comp=Z,527nm,1.7s						
BFZ				pP	pP	11 02 57.0	+2.2
ANWZ	Angora Road	86.50	223	P	P	11 02 14.0	+2.2
ODZ	Otahua Downs	86.56	217	P	P	11 02 13.2	+1.1
MSWZ	Moikau Station	86.57	222	P	P	11 02 12.4	+0.2
MSWZ	Moikau Station	86.57	222	P	P	11 02 14.1	+1.9
RUBR	Rubicon Trail	86.65	321	IAmb	IAmb	11 02 18.2	
	comp=Z,249nm,0.9s						
YMR	Madison River	86.66	330	P	P	11 02 13.7	+1.1
WACZ	Wakanui South	86.71	218	P	P	11 02 14.4	+1.6
PAHR	Pah Rah Range	86.74	322	IAmb	IAmb	11 02 15.0	
	comp=Z,232nm,0.9s						
GVZ	Greta Valley S	86.75	220	P	P	11 02 14.1	+1.1
HOWZ	Holdsworth Sta	86.76	222	P	P	11 02 14.9	+1.7
TMZ	Timaru	86.84	218	P	P	11 02 14.6	+1.1
KHZ	Kahutara	86.85	220	P	P	11 02 13.9	+0.4
KHZ				IAmb	IAmb	11 02 15.9	
	comp=Z,401nm,1.6s						
KHZ	Kahutara	86.85	220	P	P	11 02 14.8	+1.3
CAW	Cannon Point	86.88	222	P	P	11 02 15.5	+1.8
MRZ	Mangatainoka R	86.88	223	P	P	11 02 15.5	+1.9
SNZO	South Karori	86.94	222	P	P	11 02 15.7	+1.7
SNZO				IAmb	IAmb	11 02 16.1	
	comp=Z,184nm,0.8s						
OXZ	Oxford	87.03	219	P	P	11 02 14.3	0.0
OXZ	Oxford	87.03	219	P	P	11 02 17.0	+2.6
ARCZ	Arundel	87.06	218	P	P	11 02 15.8	+1.3
EAZ	Earnscleugh	87.10	216	P	P	11 02 15.5	+0.9
BSWZ	Blackbirch Sta	87.14	221	P	P	11 02 15.6	+0.7
BSWZ	Blackbirch Sta	87.14	221	P	P	11 02 17.6	+2.7
TCW	Tory Channel	87.25	222	P	P	11 02 17.2	+1.7
LBZ	Lake Benmore	87.26	217	P	P	11 02 16.4	+0.9
HLID	Hailey	87.28	328	P	P	11 02 16.8	+1.3
	baz=142,SNR=456						
HLID				S	S	11 12 44.0	+3.2
	baz=142						
HLID	Hailey	87.28	328	IAmb	IAmb	11 02 18.1	
	comp=Z,322nm,1.0s						
RPZ	Rata Peaks	87.28	218	P	P	11 02 16.8	+1.3
	comp=Z,122nm,0.8s,baz=181,slow=1.6,SNR=40						
RPZ				pP	pP	11 03 00.1	+1.4
	comp=Z,41nm,0.9s,baz=106,slow=5.6,SNR=2.8						
RPZ				S	S	11 12 41.9	+0.9
	comp=Z,8.8nm,0.9s,baz=126,slow=21,SNR=5.8						
RPZ				PKKPbc	PKKPbc	11 20 05.5	+0.6
	comp=Z,12nm,0.5s,baz=309,slow=3.6,SNR=11						
RPZ	Rata Peaks	87.28	218	IAmb	IAmb	11 02 18.0	
	comp=Z,251nm,1.1s						
RPZ	Rata Peaks	87.28	218	P	P	11 02 16.7	+1.1
LTZ	Lake Taylor	87.28	219	IAmb	IAmb	11 02 18.3	
	comp=Z,224nm,1.0s						
LTZ					pP	11 03 01.1	+2.3
LTZ	Lake Taylor	87.28	219	P	P	11 02 17.3	+1.6
TUWZ	Tuamarina	87.29	221	P	P	11 02 18.2	+2.6
WHZ	Wether Hill Ro	87.30	215	P	P	11 02 15.7	+0.1
WHZ				IAmb	IAmb	11 02 18.0	
	comp=Z,292nm,1.4s						
WHZ					pP	11 03 01.4	+2.7
BKZ	Black Stump Fm	87.33	224	IAmb	IAmb	11 02 19.2	
	comp=Z,408nm,1.9s						
MCCM	Marconi Confer	87.46	319	IAmb	IAmb	11 02 18.7	
	comp=Z,291nm,1.1s						
MCCM				pP	pP	11 03 01.6	+2.3
WKZ	Wanaka	87.54	216	P	P	11 02 18.9	+2.1
WKZ	Wanaka	87.54	216	P	P	11 02 18.7	+1.9
URZ	Urewera	87.55	225	P	P	11 02 18.0	+1.1
	comp=Z,27nm,0.7s,baz=255,slow=3.0,SNR=9.3						
URZ	Urewera	87.55	225	IAmb	IAmb	11 02 20.6	
	comp=Z,63nm,1.0s						
THZ	Tophouse	87.64	220	P	P	11 02 17.4	0.0
THZ				IAmb	IAmb	11 02 19.7	
	comp=Z,169nm,0.7s						
THZ	Tophouse	87.64	220	P	P	11 02 19.0	+1.6
BOZ	Bozeman (W)	87.69	331	P	P	11 02 18.0	+0.7
	baz=144,SNR=106						
BOZ				S	S	11 12 45.8	+1.2
	baz=144						
ORV	Oroville	87.73	321	IAmb	IAmb	11 02 19.4	
	comp=Z,298nm,1.3s						

NNZ	Nelson	87.75	221	IAmb	IAmb	11 02 20.7	
	comp=Z,519nm,1.2s						
NNZ	Nelson	87.75	221	P	P	11 02 19.7	+1.9
WVZ	Waitaha Valley	87.89	218	P	P	11 02 19.6	+1.2
DLMT	Dillon	87.91	330	IAmb	IAmb	11 02 21.0	
	comp=Z,605nm,1.3s						
FOZ	Fox Glacier	88.05	218	P	P	11 02 20.1	+1.0
HOPS	Hopland Field	88.17	320	pP	pP	11 03 05.4	+2.6
JCZ	Jackson Bay	88.19	217	P	P	11 02 21.5	+1.5
PFVI	Vila Bisbo	88.20	43	P	P	11 02 19.9	+0.1
PFVI	Vila Bisbo	88.20	43	*e*P	P	11 02 20.7	+0.9
	comp=Z,145nm,1.1s						
DSZ	Denniston Nort	88.25	220	P	P	11 02 20.4	+0.2
WVOR	Wild Horse Val	88.40	325	IAmb	IAmb	11 02 23.1	
	comp=Z,286nm,1.2s						
MORF	Marmelete	88.43	43	*e*P	P	11 02 21.6	+0.7
MORF				AMb	AMB	11 02 26.0	
	comp=Z,88nm,1.2s						
MORF				*e*pP	pP	11 03 04.4	+0.3
MORF				*e*SKSac	SKSac	11 12 33.6	+0.2
MORF	Marmelete	88.43	43	*e*P	P	11 02 21.6	+0.7
MORF				*e*		11 12 33.5	
MORF	Marmelete	88.43	43	*e*P	P	11 02 22.0	+1.1
	comp=Z,94nm,1.2s						
O03E	Paynes Creek	88.43	321	P	P	11 02 20.8	-0.1
	baz=137,SNR=105						
O03E				S	S	11 12 51.2	-0.5
	baz=137						
QRZ	Quartz Range	88.48	221	IAmb	IAmb	11 02 22.4	
	comp=Z,545nm,1.4s						
QRZ	Quartz Range	88.48	221	P	P	11 02 21.4	+0.1
PTEO	Sao Teotonio	88.55	43	*e*P	P	11 02 23.1	+1.7
	comp=Z,182nm,1.0s						
TAM	Tamanrasset	88.56	62	P	P	11 02 23.1	+1.1
PBDV	Barranco-do-Ve	88.80	43	*e*P	P	11 02 24.2	+1.6
	comp=Z,169nm,1.0s						
MOD	Modoc Plateau	88.83	323	IAmb	IAmb	11 02 24.6	
	comp=Z,175nm,0.8s						
O02D	Mt. Diablo Mer	88.86	321	P	P	11 02 23.6	+0.7
	baz=136,SNR=53						
O02D				S	S	11 12 55.7	-0.1
	baz=136						
EGMT	Eagleton	88.92	333	P	P	11 02 23.3	+0.3
	baz=145,SNR=135						
EGMT				S	S	11 12 54.6	-1.2
	baz=145						
EGMT	Eagleton	88.92	333	P	P	11 02 22.8	-0.2
EGMT				IAmb	IAmb	11 02 24.6	
	comp=Z,361nm,1.1s						
KCPM	Cahto Peak	88.94	320	IAmb	IAmb	11 02 26.5	
	comp=Z,317nm,1.1s						
PCVE	Castro Verde	89.00	43	*e*P	P	11 02 25.0	+1.5
	comp=Z,83nm,1.0s						
PVAQ	Vaqueiros	89.03	43	*e*P	P	11 02 24.5	+0.9
	comp=Z,78nm,1.3s						
PVAQ	Vaqueiros	89.03	43	*e*SKS	SKSac	11 12 40.0	+3.1
MESJ	Messejana	89.04	43	*e*P	P	11 02 24.4	+0.7
MESJ				AMb	AMB	11 02 29.7	
	comp=Z,94nm,1.3s						
MESJ				*e*pP	pP	11 03 07.4	+0.5
MESJ				*e*SKSac	SKSac	11 12 36.9	+0.1
MESJ	Messejana	89.04	43	*e*P	P	11 02 24.4	+0.7
MESJ				*e*		11 12 36.9	
MESJ	Messejana	89.04	43	*e*P	P	11 02 24.7	+1.0
	comp=Z,94nm,1.1s						
PNCL	Nicolau / Gran	89.05	42	*e*P	P	11 02 24.6	+0.9
	comp=Z,107nm,1.2s						
LIS	Lisbon	89.12	42	*e*pP	pP	11 03 07.7	+0.4
LIS				*e*SKSac	SKSac	11 12 37.5	+0.2
PMAFR	Mafra	89.22	41	*e*P	P	11 02 25.3	+0.8
	comp=Z,241nm,1.2s						
PBEJ	Beja	89.37	43	*e*P	P	11 02 26.4	+1.2
	comp=Z,47nm,1.0s						
KMRM	Mail Ridge	89.39	320	IAmb	IAmb	11 02 28.5	
	comp=Z,400nm,1.2s						
N02D	Trinity Center	89.39	321	P	P	11 02 25.6	+0.3
	baz=136,SNR=61						
N02D				S	S	11 13 00.8	+0.2
	baz=136						
M04C	Macdoel	89.53	322	P	P	11 02 27.0	+1.0
	baz=137,SNR=87						
EVO	Evora	89.64	42	*e*P	P	11 02 27.5	+1.0
	comp=Z,56nm,2.2s						
MSO	Missoula	89.64	330	P	P	11 02 27.4	+1.0
	baz=142,SNR=49						
MSO				S	S	11 13 04.3	+1.6
	baz=142						
MSO	Missoula	89.64	330	IAmb	IAmb	11 02 28.1	
	comp=Z,275nm,1.6s						
M02C	Callahan	89.77	322	P	P	11 02 27.8	+0.6
	baz=136,SNR=43						
M02C				S	S	11 13 05.0	+0.9
	baz=136						
KHMM	Horse Mountain	89.87	321	P	P	11 02 28.9	+1.2
PSBE	So Bento	89.88	41	*e*P	P	11 02 28.6	+1.0
	comp=Z,229nm,1.1s						
PMTG	Montargil	89.89	42	*e*P	P	11 02 28.4	+0.8
	comp=Z,256nm,1.0s						
YBH	Yreka Blue Hor	89.94	322	PKKP	PKKPdf	11 19 56.9	+0.7
	comp=Z,3.6nm,0.8s,baz=300,slow=1.8,SNR=6.2						
YBH	Yreka Blue Hor	89.94	322	P	P	11 02 27.3	-0.6
YBH				pmax	pmax		
	comp=Z,59nm,0.9s						
YBH	Yreka Blue Hor	89.94	322	P	P	11 02 27.3	-0.6
PBAR	Barrancos	89.95	43	*e*P	P	11 02 28.5	+0.6
	comp=Z,67nm,1.1s						
JCC	Jacoby Creek,	89.99	321	IAmb	IAmb	11 02 30.1	
	comp=Z,249nm,1.3s						
I07A	Izee	90.05	325	IAmb	IAmb	11 02 30.4	
	comp=Z,149nm,0.9s						
L04D	Klamath Falls	90.08	322	P	P	11 02 28.9	+0.3
	baz=136,SNR=32						
L04D				S	S	11 13 08.1	+1.1
	baz=136						
K04D	Chiloquin, OR	90.09	323	P	P	11 02 29.5	+0.9
	baz=137,SNR=37						
K04D				S	S	11 13 06.9	-0.1
	baz=137						
J05D	Fort Rock, OR	90.31	324	P	P	11 02 30.8	+1.1
	baz=137,SNR=145						
J05D				S	S	11 13 11.0	+1.9
	baz=137						
PCAS	Casmilo, Conde	90.42	41	*e*P	P	11 02 30.9	+0.8
KRMB	Red Mountain	90.42	321		pP	11 03 16.4	+2.9
JTMT	Jette	90.51	330	IAmb	IAmb	11 02 31.9	
	comp=Z,179nm,0.7s						
PINE	Pine Mountain	90.54	324	P	P	11 02 31.9	+1.1
COI	Coimbra	90.57	41	IAmb	IAmb	11 02 34.0	
	comp=Z,145nm,1.1s						
COI	Coimbra	90.57	41	*e*P	P	11 02 32.2	+1.5
	comp=Z,164nm,1.5s						
PMRV	Marv??o	90.60	42	*e*P	P	11 02 31.7	+0.7
	comp=Z,124nm,1.0s						
PMRV	Marv??o	90.60	42	*e*S	SKSac	11 12 49.5	+3.5
PMRV				*e*SS	SS	11 19 24.3	+6.2
HUMO	Hull Mountain	90.69	322	P	P	11 02 30.9	-0.4
L02E	Cave Junction	90.71	322	P	P	11 02 32.5	+1.2
	baz=135,SNR=22						
L02E				S	S	11 13 14.3	+1.8
	baz=135						
J04D	Umpqua Nationa	90.72	323	P	P	11 02 32.6	+0.9
	baz=136,SNR=13						
J04D				S	S	11 13 13.3	+0.4
	baz=136						
PCBR	Castelo Branco	90.84	42	*e*P	P	11 02 32.9	+0.9
	comp=Z,126nm,1.1s						
KBO	Bosley Butte	91.08	321	IAmb	IAmb	11 03 23.3	
	comp=Z,426nm,2.0s						
PTO	Porto	91.11	40	*e*P	P	11 02 33.8	+0.6
	comp=Z,157nm,1.4s						
K02D	Willamette Mer	91.12	322	P	P	11 02 34.7	+1.3
	baz=135,SNR=37						
K02D				S	S	11 13 18.3	+1.9
	baz=135						
I05D	Terrebonne, OR	91.13	324	P	P	11 02 34.8	+1.5
	baz=137,SNR=83						
I05D				S	S	11 13 17.5	+1.2
	baz=137						
MTE	Manteigas	91.18	41	IAmb	IAmb	11 02 36.7	
	comp=Z,166nm,1.0s						
MTE	Manteigas	91.18	41	*e*P	P	11 02 34.4	+0.7
	comp=Z,202nm,1.2s						
MTE	Manteigas	91.18	41	*e*S	SKSac	11 12 54.8	+5.5
MTE				*e*SS	SS	11 19 30.2	+3.7
PVIS	Viseu	91.21	41	*e*P	P	11 02 34.5	+0.7
I04A	Tendick Farm,	91.27	323	P	P	11 02 34.4	+0.5
	baz=136,SNR=40						
I04A				S	S	11 13 17.1	-0.5
	baz=136						
XMAS	Kiritimati	91.34	272	P	P	11 02 37.4	+2.4
WALA	Waterton Lakes	91.39	331	IAmb	IAmb	11 02 36.4	
	comp=Z,275nm,0.9s						
J01E	Myrtle Point	91.59	322	P	P	11 02 36.6	+1.2
	baz=135,SNR=5.7						
J01E				S	S	11 13 21.9	+1.5
	baz=135						
KEBM	Edson Butte	91.60	322	IAmb	IAmb	11 02 38.1	
	comp=Z,194nm,1.1s						
I03D	Drain, OR	91.67	323	P	P	11 02 36.6	+0.8
	baz=136,SNR=15						
I03D				S	S	11 13 23.1	+2.0
	baz=136						
OUZ	Omahuta	91.68	226	P	P	11 02 37.1	+0.9
PVRL	Vila Real	91.69	40	*e*P	P	11 02 36.7	+0.7
	comp=Z,143nm,1.1s						
POLO	Lamas de Olo	91.71	40	*e*P	P	11 02 36.9	+0.7
G05D	Wamic, OR	91.78	325	P	P	11 02 37.7	+1.4
	baz=137,SNR=40						
G05D				S	S	11 13 24.6	+2.6
	baz=137						
HAWA	Hanford	91.78	327	IAmb	IAmb	11 02 38.4	
	comp=Z,198nm,1.1s						
H04A	Detroit Lake	91.80	324	P	P	11 02 36.5	+0.1
H04A				IAmb	IAmb	11 02 38.1	
	comp=Z,296nm,1.2s						
PCAB	Cabril	91.82	40	*e*P	P	11 02 37.5	+0.9
H04D	Lebanon	91.96	324	P	P	11 02 37.5	+0.4
	baz=136,SNR=12						
H04D				S	S	11 13 26.4	+2.9
	baz=136						
MVO	Moncorvo	91.99	41	*e*P	P	11 02 38.0	+0.6
	comp=Z,179nm,1.0s						
MVO	Moncorvo	91.99	41	*e*S	SKSac	11 12 58.8	+5.0
D08A	Wollman Farm,	92.00	327	IAmb	IAmb	11 02 38.5	
	comp=Z,118nm,0.8s						
FFC	Flin Flon	92.04	341	P	P	11 02 37.2	0.0
FFC				pmax	pmax		
	comp=Z,86nm,1.0s						
FFC	Flin Flon	92.04	341	P	P	11 02 37.2	0.0
NEW	Newport	92.11	329	PKKP	PKKPdf	11 19 52.8	+0.3
	comp=Z,8.2nm,0.9s,baz=298,slow=2.2,SNR=9.3						
NEW	Newport	92.11	329	P	P	11 02 37.4	-0.3
	baz=140,SNR=40						
I02D	Swisshome	92.22	323	P	P	11 02 39.5	+1.2
	baz=135,SNR=9.4						
I02D				S	S	11 13 28.4	+2.6
	baz=135						
COR	Corvallis	92.28	324	P	P	11 02 39.9	+1.3
COR				pmax	pmax		
	comp=Z,219nm,0.9s						
COR	Corvallis	92.28	324	P	P	11 02 39.9	+1.3
COR				IAmb	IAmb	11 02 40.7	
	comp=Z,219nm,0.8s						
F05D	White Salmon	92.32	325	P	P	11 02 39.6	+0.9
	baz=137,SNR=21						
F05D				S	S	11 13 30.4	+3.6
	baz=137						
PAB	San Pablo	92.43	43	P	P	11 02 39.9	+0.4
PAB				pmax	pmax		
	comp=Z,74nm,1.1s						
PAB	San Pablo	92.43	43	P	P	11 02 39.9	+0.4
PBRG	Braganca	92.58	41	*e*P	P	11 02 41.1	+1.0
	comp=Z,111nm,1.3s						
G03D	McMinnville, O	92.71	324	P	P	11 02 41.4	+0.9
	baz=136,SNR=6.1						
G03D				S	S	11 13 30.7	+0.5
	baz=136						
ESDC	Sonseca Array	92.73	44	P	P	11 02 42.1	+1.2
	comp=Z,72nm,1.0s,baz=247,slow=4.2,SNR=89						
ESDC				pP	pP	11 03 25.5	+1.2
	comp=Z,13nm,0.8s,baz=237,slow=4.9,SNR=2.9						
ESDC	Sonseca Array	92.73	44	P	P	11 02 41.6	+0.8
ESBB	Sonseca Array	92.74	44	P	P	11 02 41.2	+0.3
CART	Cartagena	93.16	47	IAmb	IAmb	11 02 45.6	
	comp=Z,196nm,1.1s						
F04D	Rainier, OR	93.21	325	P	P	11 02 43.9	+1.1
	baz=136						
F04D				S	S	11 13 35.0	+0.5
	baz=136						
E04D	Cinebar	93.33	325	P	P	11 02 43.9	+0.5
	baz=136						
E04D				S	S	11 13 36.0	+0.4
	baz=136						
C06D	Leavenworth	93.54	327	P	P	11 02 44.2	-0.1
	baz=137						
FCC	Fort Churchill	93.80	346	IAmb	IAmb	11 02 46.8	
	comp=Z,274nm,1.2s						
D04E	Lakebay	93.88	326	P	P	11 02 46.9	+1.1
	baz=136						
D04E				S	S	11 13 40.6	+0.3
	baz=136						
B06A	Marblemount	94.24	327	pP	pP	11 03 31.8	+0.9
D03D	Eldon	94.28	326	P	P	11 02 48.3	+0.6
	baz=136						
D03D				S	S	11 13 44.1	+0.2
	baz=136						
B05A	Bryant	94.34	327	P	P	11 02 47.9	0.0
	baz=136						
B05A				S	S	11 13 45.6	+1.2
	baz=136						
A04D	Lummi Island	94.95	327	P	P	11 02 51.3	+0.6
	baz=136						
A04D				S	S	11 13 52.0	+2.5
	baz=136						
NRS	Narsarsuaq	95.14	10	P	P	11 02 52.0	+0.8
NRS				pmax	pmax		
	comp=Z,63nm,0.9s						
NRS	Narsarsuaq	95.14	10	P	P	11 02 52.0	+0.8
MBAR	Mbarara	96.33	95	PKKP	PKKPdf	11 19 43.7	+1.1
	comp=Z,1.9nm,0.2s,baz=209,slow=20,SNR=3.9						
MBAR	Mbarara	96.33	95	*ce*P	P	11 02 59.8	+1.7
MBAR				pmax	pmax		
	comp=Z,21nm,1.0s						
MBAR	Mbarara	96.33	95	P	P	11 03 00.3	+2.2
ETSF	Etsaut	96.77	43	*e*P	P	11 03 00.1	+0.8
ETSF				pmax	pmax		
	comp=Z,59nm,1.0s						
NUUK	Nuuk	97.27	7	*i* P	Pdif	11 03 02.0	+1.2
NUUK				IAmb	IAmb	11 03 02.4	
	comp=Z,100nm,1.1s						
EPF	Esparros	97.37	43	*e*P	Pdif	11 03 02.6	+0.6
EPF				pmax	pmax		
	comp=Z,18nm,0.8s						
MAHO	Mahon	97.83	47	*e*S	S	11 14 16.6	+2.0
VAL	Valentia	97.84	32	P	Pdif	11 03 04.8	+1.1
QUIF	Quistinic	98.53	38	*e*P	Pdif	11 03 07.7	+0.8
QUIF				pmax	pmax		
	comp=Z,58nm,1.0s						
MTLF	Montolieu	98.64	44	*e*P	Pdif	11 03 07.8	+0.2
MTLF				pmax	pmax		
	comp=Z,52nm,1.0s						
KEST	Kesra	98.74	53	P	Pdif	11 03 10.0	+1.7
	comp=Z,38nm,0.8s,baz=248,slow=3.9,SNR=19						
KEST				PKKPbc	PKKPbc	11 19 37.2	+1.2
	comp=Z,11nm,0.9s,baz=326,slow=6.9,SNR=3.5						
KEST				LR	LR	11 51 29.4	
	comp=Z,2µm,18.4s,baz=200,slow=38						
KEST	Kesra	98.74	53	IAmb	IAmb	11 03 13.1	
	comp=Z,44nm,0.9s						
ABPO	Ambohimpanom	98.95	119	P	Pdif	11 03 13.6	+3.8
ABPO				pmax	pmax		
	comp=Z,41nm,0.9s						
ABPO	Ambohimpanom	98.95	119		Pdif	11 03 13.6	+3.8
CCA1	Carnmenellis	98.98	35	*e*P	Pdif	11 03 09.1	+0.3
CCA1				IAmb	IAmb	11 03 10.9	
	comp=Z,90nm,1.2s						
SGMF	Saint Gilles	99.06	38	*e*P	Pdif	11 03 09.9	+0.6
SGMF				pmax	pmax		
	comp=Z,22nm,0.9s						
OPO	Ambohidratompo	99.20	119	PKKPbc	PKKPbc	11 19 34.7	+0.8
	comp=Z,8.1nm,0.9s,baz=8.2,slow=3.8,SNR=4.4						
RJF	Les Rejaudoux	99.43	42	*e*P	Pdif	11 03 11.2	+0.2
RJF				pmax	pmax		
	comp=Z,38nm,1.0s						
CAF	Calviac	99.51	42	*e*P	Pdif	11 03 11.9	+0.5
CAF				pmax	pmax		
	comp=Z,32nm,0.9s						
DYA	Yadsworthy	99.77	35	*e*P	Pdif	11 03 12.1	-0.3
DYA				IAmb	IAmb	11 03 13.6	
	comp=Z,67nm,1.2s						
JSA	Saint Aubin	99.85	37	*e*P	Pdif	11 03 12.2	-0.5
HTL	Hartland	99.86	35	*e*P	Pdif	11 03 12.3	-0.4
HTL				IAmb	IAmb	11 03 14.2	
	comp=Z,82nm,1.1s						
GRR	Gorron	100.03	38	*e*P	Pdif	11 03 13.2	-0.4
GRR				pmax	pmax		
	comp=Z,51nm,1.0s						
SFJD	Kangerlussuaq	100.13	7	PKKPbc	PKKPbc	11 19 31.2	-2.0
	comp=Z,4.8nm,0.5s,baz=189,slow=1.1,SNR=5.5						
SFJD	Kangerlussuaq	100.13	7	*i* P	Pdif	11 03 13.8	+0.3
SFJD	Kangerlussuaq	100.13	7	*i* P	Pdif	11 03 13.8	+0.3
SFJD	Kangerlussuaq	100.13	7	*i* P	Pdif	11 03 13.9	+0.3
RSBS	Rosebush, Pemb	100.36	34	*e*P	Pdif	11 03 14.5	-0.5
FLN	La Foliniere	100.46	38	*e*P	Pdif	11 03 15.3	-0.2
FLN				pmax	pmax		
	comp=Z,28nm,0.9s						
ANGG	Ammassalik, Gr	100.58	12	*i* P	Pdif	11 03 16.0	+0.4
ANGG				IAmb	IAmb	11 03 16.3	
	comp=Z,20nm,0.7s						
BGF	Bois d'Agland	100.92	41	*e*P	Pdif	11 03 18.0	+0.4
BGF				pmax	pmax		
	comp=Z,35nm,0.9s						
VIVF	Saint-Julien-l	100.97	43	*e*P	Pdif	11 03 18.8	+0.9
VIVF				pmax	pmax		
	comp=Z,32nm,1.2s						
ILTH	Belurgan, Co L	101.00	32	*e*P	Pdif	11 03 17.8	+0.1
AVF	Avril sur Loir	101.34	41	*e*P	Pdif	11 03 19.7	+0.2
AVF				pmax	pmax		
	comp=Z,23nm,1.0s						
FRF	La Foret Royal	101.39	45	*e*P	Pdif	11 03 20.5	+0.7
FRF				pmax	pmax		
	comp=Z,68nm,1.5s						
KIBK	Kibwezi	101.49	100	P	Pdif	11 03 24.7	+3.6
	SNR=5.1						
KMBO	Kilima Mbogo	101.50	99	P	Pdif	11 03 25.4	+4.1
	comp=Z,1.5nm,0.3s,baz=200,slow=4.5,SNR=5.8						
WME	Myndd Eilian	101.50	33	*e*P	Pdif	11 03 19.8	-0.2
ORIF	Oris-en-Rattie	101.71	44	*e*P	Pdif	11 03 22.4	+1.1
ORIF				pmax	pmax		
	comp=Z,13nm,0.7s						
CLGH	Cloghs, Cushen	101.80	31	*e*P	Pdif	11 03 21.3	+0.1
CLGH				IAmb	IAmb	11 03 23.7	
	comp=Z,65nm,0.9s						
WIM	Isle of Man	101.82	32	*e*P	Pdif	11 03 21.9	+0.5
LOR	Lormes	101.90	41	*e*P	Pdif	11 03 22.1	+0.1
LOR				pmax	pmax		
	comp=Z,31nm,1.0s						
YKA	Yellowknife Ar	102.16	340	P	Pdif	11 03 23.1	+0.4
	comp=Z,22nm,0.6s,baz=135,slow=4.8,SNR=424						
YKA				pP	pPdif	11 04 06.5	+0.2
	comp=Z,7.2nm,0.7s,baz=137,slow=4.9,SNR=3.3						
YKA				PP	PP	11 07 35.6	-1.7
	comp=Z,15nm,1.0s,baz=142,slow=8.6,SNR=8.3						
YKA				PKiKP	PKiKP	11 07 44.2	+0.4
	comp=Z,6.7nm,0.8s,baz=138,slow=2.2,SNR=11						
YKA				PKKPbc	PKKPbc	11 19 24.2	-2.9
	comp=Z,6.0nm,0.9s,baz=330,slow=3.4,SNR=11						
YKA				PKPPKP	P'P'df	11 27 37.6	-4.6
	comp=Z,1.5nm,1.0s,baz=331,slow=2.3,SNR=5.4						
GAL1	Galloway	102.27	32	*e*P	Pdif	11 03 23.2	-0.2
GAL1				IAmb	IAmb	11 03 25.7	
	comp=Z,58nm,1.1s						
LODK	Lodwar	102.37	94	P	Pdif	11 03 28.6	+3.6
	SNR=8.7						
CWF	Charnwood Fore	102.49	35	*e*P	Pdif	11 03 23.7	-0.7
CWF				IAmb	IAmb	11 03 24.4	
	comp=Z,48nm,1.0s						
LPG	La Plagne	102.54	44	*e*P	Pdif	11 03 26.5	+1.3
LPG				pmax	pmax		
	comp=Z,32nm,1.2s						
LPL	La Plagne	102.54	44	*e*P	Pdif	11 03 26.3	+1.2
LPL				pmax	pmax		
	comp=Z,13nm,0.9s						
LBWR	Ladybower, Pea	102.70	34	*e*P	Pdif	11 03 25.8	+0.4
KESW	Keswick, Cumbr	102.81	32	*e*P	Pdif	11 03 26.1	+0.4
KESW				IAmb	IAmb	11 03 28.0	
	comp=Z,47nm,0.9s						
LAWE	Loch Awe, Argy	102.87	30	*e*P	Pdif	11 03 25.9	-0.1
LAWE				IAmb	IAmb	11 03 26.4	
	comp=Z,42nm,0.8s						
EKA	Eskdalemuir Ar	103.25	32	PKiKP	PKiKP	11 07 47.9	+1.8
	comp=Z,7.8nm,0.9s,baz=225,slow=1.1,SNR=5.7						
ICESG	Greenland Ices	103.44	10	*i* P	Pdif	11 03 29.5	+0.8
ICESG				IAmb	IAmb	11 03 31.1	
	comp=Z,31nm,0.9s						
INVG	Invergeldie, C	103.56	31	*e*P	Pdif	11 03 28.9	-0.1
HAU	Haudompre	103.70	42	*e*P	Pdif	11 03 30.2	+0.2
HAU				pmax	pmax		
	comp=Z,13nm,0.9s						
HINF	Hinteralfeld	103.88	42	*e*P	Pdif	11 03 31.9	+1.1
HINF				pmax	pmax		
	comp=Z,41nm,1.8s						
DOU	Dourbes	103.92	39	*d*Pdif	Pdif	11 03 32.2	+1.4
DOU				*d*PKiKP	PKiKP	11 07 47.7	+0.2
GIVF	Givet	104.04	39	*e*P	Pdif	11 03 31.8	+0.4
GIVF				pmax	pmax		
	comp=Z,37nm,1.1s						
BMRD	Maredsous	104.13	39	*d*Pdif	Pdif	11 03 32.3	+0.6
BGES	Gesves	104.34	39	*d*Pdif	Pdif	11 03 33.7	+1.0
BGES				*d*PKiKP	PKiKP	11 07 49.1	+0.9
WLF	Walferdange	104.51	40	*d*Pdif	Pdif	11 03 35.1	+1.6
DLBC	Dease Lake	104.73	331	PP	PP	11 07 56.4	-0.3
	comp=Z,18nm,0.9s,baz=101,slow=6.3,SNR=9.7						
DLBC				PKKPbc	PKKPbc	11 19 18.9	-0.4
	comp=Z,13nm,0.9s,baz=301,slow=5.5,SNR=12						
MEM	Membach	104.96	39	*d*PKiKP	PKiKP	11 07 50.2	+0.9
BTNL	Ternell	105.01	39	*d*Pdif	Pdif	11 03 37.3	+1.6
DAVOX	Davos/Dischmat	105.06	44	PKiKP	PKiKP	11 07 50.6	+0.7
	comp=Z,10nm,0.6s,baz=278,slow=4.0,SNR=9.6						
DAVOX				PKKPbc	PKKPbc	11 19 18.0	-0.1
	comp=Z,10nm,0.9s,baz=8.4,slow=2.2,SNR=5.4						
DZM	Mont Dzumac	105.30	231	*e*SP	SP	11 16 58.6	-0.2
	comp=Z,1µm,20.5s						
DAVA	Damuels	105.33	43	*e*P	Pdif	11 03 38.8	+1.3
	comp=Z,12nm,1.0s						
DAVA				*e*P	PKiKP	11 07 51.2	+0.8
	comp=Z,20nm,1.1s						
DAVA	Damuels	105.33	43	*e*P	PKKPbc	11 19 15.4	-1.8
	comp=Z,9.6nm,1.0s						
DAVA				*e*P	PKKPab	11 19 34.8	+2.9
	comp=Z,19nm,1.1s						
FETA	Feichten	105.69	44	*e*P	Pdif	11 03 40.3	+1.3
	comp=Z,10nm,1.0s						
FETA				*e*P	PKiKP	11 07 53.8	+2.7
	comp=Z,18nm,1.1s						
FETA	Feichten	105.69	44	*e*P	PKKPbc	11 19 13.5	-2.6
	comp=Z,9.2nm,1.0s						
FETA				*e*P	PKKPab	11 19 33.2	+2.9
	comp=Z,12nm,1.2s						
RETA	Reutte	105.95	44	*e*P	Pdif	11 03 41.2	+1.2
	comp=Z,6.9nm,1.0s						
RETA				*e*P	PKiKP	11 07 52.2	+0.8
	comp=Z,14nm,1.0s						
RETA	Reutte	105.95	44	*e*P	PKKPbc	11 19 13.2	-2.0
	comp=Z,9.2nm,1.2s						
RETA				*e*P	PKKPab	11 19 30.6	+1.6
	comp=Z,5.8nm,1.1s						
SQTA	Sankt Quirin	106.07	44	*e*P	Pdif	11 03 41.7	+1.0
	comp=Z,13nm,0.8s						
SQTA				*e*P	PKiKP	11 07 52.2	+0.5
	comp=Z,23nm,1.1s						
SQTA	Sankt Quirin	106.07	44	*e*P	PKKPbc	11 19 14.0	-0.9
	comp=Z,8.8nm,0.8s						
SQTA				*e*P	PKKPab	11 19 30.3	+1.7
	comp=Z,15nm,1.3s						
MOTA	Moosalm	106.07	44	*e*P	Pdif	11 03 41.7	+1.0
	comp=Z,8.0nm,0.9s						
MOTA				*i* P	PKiKP	11 07 52.7	+0.9
	comp=Z,17nm,0.7s,SNR=6.4						
MOTA	Moosalm	106.07	44	*e*P	PKKPbc	11 19 12.8	-2.2
	comp=Z,14nm,1.1s						
MOTA				*e*P	PKKPab	11 19 29.9	+1.3
	comp=Z,13nm,1.1s						
WTTA	Wattenberg	106.34	44	*e*P	Pdif	11 03 43.4	+1.4
	comp=Z,7.3nm,1.0s						
WTTA				*e*P	PKiKP	11 07 53.3	+0.9
	comp=Z,19nm,1.0s						
WTTA	Wattenberg	106.34	44	*e*P	PKKPbc	11 19 12.6	-1.5
	comp=Z,11nm,1.1s						
WTTA				*e*P	PKKPab	11 19 30.4	+3.0
	comp=Z,8.4nm,0.6s						
WATA	Walderalm	106.34	44	*e*P	Pdif	11 03 42.2	+0.3
	comp=Z,3.8nm,0.6s						
WATA				*e*P	PKiKP	11 07 53.6	+1.4
	comp=Z,17nm,1.4s						
WATA	Walderalm	106.34	44	*e*P	PKKPbc	11 19 12.9	-1.2
	comp=Z,8.8nm,1.0s						
WATA				*e*P	PKKPab	11 19 29.1	+1.7

	comp=Z,5.4nm,0.6s						
ABTA	Abfaltersbach	106.60	45	eP	Pdif	11 03 43.0	0.0
	comp=Z,9.8nm,0.9s						
ABTA				eP	PKiKP	11 07 52.8	+0.1
	comp=Z,12nm,0.7s						
ABTA	Abfaltersbach	106.60	45	eP	PKKPbc	11 19 11.9	-1.3
	comp=Z,9.8nm,1.0s						
ABTA				eP	PKKPab	11 19 27.5	+1.3
	comp=Z,6.7nm,0.8s						
SUMG	Summit	106.80	9	i P	Pdif	11 03 44.9	+1.3
	comp=Z,36nm,1.1s						
SUMG	Summit	106.80	9	i P	Pdif	11 03 44.9	+1.3
SUMG	Summit	106.80	9	i P	Pdif	11 03 45.0	+1.3
SUMG				IAmb	IAmb	11 03 45.7	
	comp=Z,36nm,1.1s						
CADS	Cadrg	107.08	46	eSKSac	SKSac	11 14 09.8	+1.6
CADS				e		11 16 52.6	
CADS				eSS	SS	11 23 01.2	-6.9
MYKA	Terra Mystica	107.22	45	eP	Pdif	11 03 46.8	+1.1
	comp=Z,2.3nm,0.5s						
MYKA				eP	PKiKP	11 07 54.3	+0.5
	comp=Z,11nm,0.7s						
MYKA	Terra Mystica	107.22	45	eP	PKKPdf	11 19 24.4	+0.1
	comp=Z,6.5nm,1.1s						
CEY	Cerknica	107.26	47	ePKiKP	PKiKP	11 07 53.2	-0.6
CEY				eSKSac	SKSac	11 14 10.6	+1.7
CEY				e		11 16 54.5	
CEY				e		11 17 42.6	
CEY				eSS	SS	11 23 03.9	-6.6
KBA	Koelnbreinsper	107.26	45	eP	Pdif	11 03 46.6	+0.6
	comp=Z,6.5nm,1.0s						
KBA				eP	PKiKP	11 07 54.0	0.0
	comp=Z,7.0nm,0.6s						
KBA	Koelnbreinsper	107.26	45	eP	PKKPbc	11 19 09.2	-2.0
KBA				eP	PKKPdf	11 19 24.5	+0.1
	comp=Z,13nm,1.3s						
OBKA	Obir	107.71	46	eP	Pdif	11 03 48.7	+0.8
	comp=Z,11nm,1.3s						
OBKA				i P	PKiKP	11 07 55.4	+0.7
	comp=Z,15nm,0.8s,SNR=6.8						
OBKA	Obir	107.71	46	eP	PKKPbc	11 19 08.4	-1.3
	comp=Z,4.7nm,1.0s						
OBKA				eP	PKKPdf	11 19 23.4	0.0
	comp=Z,7.0nm,1.1s						
SOKA	Soboth	108.08	46	eP	Pdif	11 03 49.9	+0.3
	comp=Z,5.9nm,1.5s						
SOKA				i P	PKiKP	11 07 55.9	+0.4
	comp=Z,20nm,1.2s,SNR=7.3						
SOKA	Soboth	108.08	46	eP	PKKPbc	11 19 06.2	-2.3
	comp=Z,6.4nm,1.0s						
SOKA				eP	PKKPab	11 19 20.1	+0.4
	comp=Z,13nm,1.4s						
MOA	Molln	108.18	45	eP	Pdif	11 03 49.1	-0.8
	comp=Z,3.4nm,1.0s						
MOA				eP	PKiKP	11 07 55.9	+0.4
	comp=Z,9.3nm,0.6s						
MOA	Molln	108.18	45	eP	PKKPbc	11 19 08.1	-0.1
	comp=Z,4.6nm,0.9s						
MOA				eP	PKKPab	11 19 20.6	+1.4
	comp=Z,0.2nm,0.3s						
AAE	Adis Abeba	108.19	91	eP	PKiKP	11 07 54.4	-2.5
GROS	Grobnik	108.26	46	i PKiKP	PKiKP	11 07 56.5	+0.7
NKC	Novy Kostel	108.28	42	ePKP	PKiKP	11 07 56.2	+0.6
GERES	GERESS Array B	108.33	43	Pdiff	Pdif	11 03 51.1	+0.5
	comp=Z,0.4nm,0.5s,baz=224,slow=2.7,SNR=3.8						
GERES				PKiKP	PKiKP	11 07 56.4	+0.6
	comp=Z,19nm,0.8s,baz=194,slow=1.0,SNR=33						
GERES				PKKPbc	PKKPbc	11 19 07.9	+0.1
	comp=Z,4.1nm,0.9s,baz=64,slow=3.1,SNR=6.7						
GERES				PKKP	PKKPdf	11 19 21.6	-0.7
	comp=Z,5.0nm,0.9s,baz=57,slow=4.9,SNR=6.1						
KHC	Kasperske Hory	108.39	43	ePKP	PKiKP	11 07 56.1	+0.2
KHC				eSKS	SKSac	11 14 14.3	+0.6
KHC				eSDIF	Sdif	11 15 43.7	+1.0
KHC				ex	x	11 17 00.0	
KHC				eSS	SS	11 23 16.5	-9.2
RES	Resolute Bay	108.61	352	PKKPbc	PKKPbc	11 19 05.9	-1.6
	comp=Z,10nm,0.8s,baz=351,slow=4.1,SNR=12						
RES				PKKPab	PKKPab	11 19 19.0	+3.0
	comp=Z,13nm,0.9s,baz=338,slow=4.1,SNR=8.8						
ARSA	Arzberg	108.65	45	eP	Pdif	11 03 53.3	+1.3
	comp=Z,4.7nm,1.4s						
ARSA				i P	PKiKP	11 07 56.8	+0.4
	comp=Z,11nm,0.7s,SNR=9.0						
ARSA	Arzberg	108.65	45	eP	PKKPbc	11 19 07.7	+1.1
	comp=Z,2.7nm,1.0s						
ARSA				eP	PKKPab	11 19 19.2	+2.1
	comp=Z,11nm,1.4s						
CKRC	Cesky Krumlov	108.67	44	ePKP	PKiKP	11 07 56.4	0.0
CKRC				eSDIF	Sdif	11 15 48.7	+3.7
PBCC	Pribram	108.90	43	ePKP	PKiKP	11 07 57.7	+0.9
CLL	Collm	109.11	41	ePdif	Pdif	11 03 55.0	+1.1
CLL				e		11 04 14.0	
CLL				i PKiKP	PKiKP	11 07 57.4	+0.3
	comp=Z,17nm,1.0s						
CLL				ePP	PP	11 08 26.0	-2.8
	comp=Z,260nm,3.1s						
CLL				epPP		11 09 09.0	
CLL				ePPP	PPP	11 10 46.0	
CLL				eSKSac	SKSac	11 14 16.0	-0.5
CLL				eSdif	Sdif	11 15 51.0	+2.5
CLL				esSdiff	sSdif	11 17 02.0	-3.0
CLL				eSP	SP	11 17 32.0	-4.9
CLL				ePS	PS	11 18 06.0	+8.2
CLL				ePPS	PPS	11 18 48.0	
CLL				i PKKPbc	PKKPbc	11 19 05.7	+0.4
	comp=Z,14nm,1.2s						
CLL				ePKKPab	PKKPdf	11 19 20.0	-0.8
CLL				epPKKPbc		11 19 49.0	
CLL				eSKKPdf	SKKPbc	11 22 37.0	+2.4
CLL				eSS	SS	11 23 30.0	-5.1
CLL				esSS		11 24 39.0	
CLL				eSSS	SSS	11 27 38.0	
CLL				e		11 29 25.0	
CLL	Collm	109.11	41	eP	Pdif	11 03 55.0	+1.1
CLL				e		11 14 16.0	
CLL				i		11 19 05.7	
CLL				pmax	pmax		
	comp=Z,17nm,1.0s						
CLL				pmax	pmax		
	comp=Z,14nm,1.2s						
CONA	Conrad Observa	109.17	45	eP	Pdif	11 03 55.4	+1.0
	comp=Z,2.6nm,0.8s						
CONA				i P	PKiKP	11 07 57.2	-0.2
	comp=Z,11nm,0.6s,SNR=9.3						
CONA	Conrad Observa	109.17	45	eP	PKKPbc	11 19 05.3	+0.2
	comp=Z,15nm,1.3s						
CONA				eP	PKKPdf	11 19 18.0	-2.7
	comp=Z,16nm,1.1s						
ANKE	Ethiopia-Afar	109.30	91	eP	PKiKP	11 07 54.4	-4.6
PRA	Prague	109.33	42	eSKS	SKSac	11 14 19.9	+2.4
PRA				eSDIF	Sdif	11 15 56.9	+6.6
PRA				ex	x	11 17 13.1	
PRU	Pruhonice	109.35	43	ePKP	PKiKP	11 07 58.4	+0.8
PRU				eSKS	SKSac	11 14 20.4	+2.8
PRU				eSDIF	Sdif	11 15 54.8	+4.2
PRU				AMS	AMS	11 50 50.0	
	comp=Z,1μm,18.3s						
BRG	Berggiesshubel	109.43	42	i PKP	PKiKP	11 07 58.8	+1.1
BRG				Amp		11 08 00.1	
	comp=Z,18nm,1.0s						
BRG				pPKP	PP	11 08 28.2	-2.9
BRG				Amp		11 08 32.1	
	comp=Z,290nm,2.7s						
BRG				ex	x	11 14 24.0	
BRG				ex	x	11 15 58.0	
BRG				ex	x	11 17 13.0	
PVCC	Panska Ves	109.62	42	ePKP	PKiKP	11 07 59.3	+1.2
DESE	Dese	110.00	89	eP	PKiKP	11 07 59.7	-0.5
KRUC	Moravsky	110.00	44	ePKIKP	PKiKP	11 07 59.4	+0.6
KRUC				ePP	PP	11 08 31.8	-3.5
KRUC				ePKKP	PKKPbc	11 19 02.8	+0.5
KRUC				e		11 19 14.0	
ZST	Bratislava	110.03	45	ePP	PP	11 08 34.5	-1.0
MORH	Mrgy, Hungar	110.08	48	⇑P	PKiKP	11 07 59.0	0.0
MODS	Modra-Piesok	110.21	45	ePKIKP	PKiKP	11 07 59.0	-0.3
MODS	Modra-Piesok	110.21	45	ePKP	PKiKP	11 07 59.0	-0.3
MODS				eSDIFF	Sdif	11 16 03.4	+5.5
MODS				e		11 17 11.6	
MODS				eSS	SS	11 23 33.0	-17
VRAC	Vranov	110.23	44	PKiKP	PKiKP	11 07 59.6	+0.4
	comp=Z,11nm,0.7s,baz=28,slow=2.0,SNR=8.2						
VRAC				PP	PP	11 08 35.4	-1.5
	comp=Z,7.3nm,0.7s,baz=252,slow=6.7,SNR=9.9						
VRAC				PKKPab	PKKPab	11 19 13.6	+3.6
	comp=Z,5.9nm,1.0s,baz=66,slow=3.5,SNR=5.1						
VRAC	Vranov	110.23	44	⇑P	PKiKP	11 08 00.4	+1.1
VRAC	Vranov	110.23	44	ePKIKP	PKiKP	11 08 00.0	+0.7
VRAC				ePP	PP	11 08 33.3	-3.6
VRAC				ePKKP	PKKPbc	11 19 02.0	+0.4
VRAC				e		11 19 12.9	
STKA	Stephens Creek	110.31	206	PKiKP	PKiKP	11 07 58.9	-1.3
	comp=Z,5.0nm,0.8s,baz=70,slow=3.9,SNR=5.0						
STKA				PKKPbc	PKKPbc	11 18 59.5	-1.4
	comp=Z,3.1nm,0.5s,baz=324,slow=5.2,SNR=8.9						
FRGS	Fruska Gora	110.35	49	⇑P	PKiKP	11 08 00.7	+1.0
UPC	Upice	110.43	43	ePKIKP	PKiKP	11 08 00.5	+0.9
UPC	Upice	110.43	43	ePKP	PKiKP	11 08 00.5	+0.9
CHVC	Chvalec	110.49	43	ePKP	PKiKP	11 08 01.0	+1.2
DPC	Dobruska-Polom	110.54	43	ePKIKP	PKiKP	11 08 00.8	+0.9
DPC	Dobruska-Polom	110.54	43	ePKP	PKiKP	11 08 00.8	+0.9
DPC				eSDIF	Sdif	11 16 04.8	+4.2
OSTC	Ostas	110.57	43	ePKP	PKiKP	11 08 00.8	+0.9
OSTC				ePKP	PKiKP	11 08 00.8	+0.9
OSTC				eSDIF	Sdif	11 16 02.1	+1.4
SRO	Srobarova	110.59	46	ePP	PP	11 08 38.1	-1.4
JAVC	Velka Javorina	110.66	45	ePKIKP	PKiKP	11 08 01.9	+1.7
JAVC				ePKKP	PKKPbc	11 19 02.0	+1.8
JAVC				e		11 19 12.4	
KRLC	Kraliky	110.68	43	ePKIKP	PKiKP	11 08 01.4	+1.2
KRLC	Kraliky	110.68	43	ePKP	PKiKP	11 08 01.4	+1.2
KRLC				eSDIF	Sdif	11 16 07.3	+5.5
KRLC				ex	x	11 17 21.7	
KSP	Ksiaz	110.74	42	ePKP	PKiKP	11 08 01.2	+1.0
KSP				epPKP	PP	11 08 37.5	-3.1
BOVS	Bovan	110.91	51	⇑P	PKiKP	11 08 01.8	+1.1
KOLL	Kolacno	110.98	45	ePKP	PKiKP	11 08 01.8	+1.1
MORC	Moravsky Berou	110.99	44	⇓P	PKiKP	11 08 02.0	+1.2
MORC	Moravsky Berou	110.99	44	⇓PKIKP	PKiKP	11 08 02.0	+1.2
MDVR	Moldovita	111.41	50	⇑P	PKiKP	11 08 02.6	+0.9
TEND	Ethiopian Broa	111.49	90	eP	PKiKP	11 08 02.4	-0.3
VTS	Vitosha	111.49	52	⇑P	PKiKP	11 08 02.2	+0.1
VTS	Vitosha	111.49	52	⇑PKIKP	PKiKP	11 08 02.2	+0.1
BZS	Buzias	111.70	49	⇑P	PKiKP	11 08 02.6	+0.4
BZS	Buzias	111.70	49	⇑PKIKP	PKiKP	11 08 02.6	+0.4
LANS	Liptovska Anna	111.86	45	ePKIKP	PKiKP	11 08 04.2	+1.8
LANS	Liptovska Anna	111.86	45	ePKP	PKiKP	11 08 04.2	+1.8
INK	Inuvik	111.88	338	PKKPbc	PKKPbc	11 18 55.3	-1.4
	comp=Z,20nm,0.8s,baz=334,slow=3.3,SNR=17						
HERR	Herculane	111.90	50	⇑P	PKiKP	11 08 03.6	+1.0
KECS	Kecovo	112.19	46	ePP	PP	11 08 49.2	-1.8
GZR	Gura Zlata	112.35	50	⇑P	PKiKP	11 08 04.4	+0.9
GZR	Gura Zlata	112.35	50	⇑PKIKP	PKiKP	11 08 04.4	+0.9
NIE	Niedzica	112.46	45	ePKP	PKiKP	11 08 05.0	+1.4
NIE				epPKP	PP	11 08 51.3	-1.6
OJC	Ojcow	112.50	44	ePKP	PKiKP	11 08 04.2	+0.7
OJC				epPKP	PP	11 08 49.3	-3.8
N25K	Chitina, Valde	112.58	330	PKiKP	PKiKP	11 08 04.6	+1.2
	baz=117						
DEV	Deva	112.63	49	⇑P	PKiKP	11 08 04.7	+0.7
NB2	NORSAR Subarra	112.72	31	PKPdf	PKiKP	11 08 04.0	+0.3
	comp=Z,14nm,1.0s,baz=248,slow=1.9						
NB2	NORSAR Subarra	112.72	31	PKPdf	PKiKP	11 08 04.0	+0.3
	baz=248,slow=1.9						
NOA	NORSAR Array B	112.72	31	PKiKP	PKiKP	11 08 04.2	+0.5
	comp=Z,11nm,0.9s,baz=245,slow=1.9,SNR=18						
NOA				PKKPbc	PKKPbc	11 18 52.2	-1.6
	comp=Z,1.7nm,0.5s,baz=65,slow=4.1,SNR=9.2						
NOA				PKKPab	PKKPab	11 18 60.0	+1.4
	comp=Z,7.4nm,0.8s,baz=65,slow=4.5,SNR=14						
PLVB	Pleven	112.74	52	⇑P	PKiKP	11 08 03.8	-0.4
DRGR		112.87	48	⇑P	PKiKP	11 08 04.7	+0.2
DRGR		112.87	48	⇑PKIKP	PKiKP	11 08 04.7	+0.2
ATD	Arta Tunnel	112.92	91	PKiKP	PKiKP	11 08 07.0	+1.5
	baz=268,slow=10						
CRVS	Cervenica-Dubn	112.95	46	ePKIKP	PKiKP	11 08 05.1	+0.6
CRVS				e		11 08 54.4	
CRVS	Cervenica-Dubn	112.95	46	ePKP	PKiKP	11 08 05.1	+0.6
CRVS				ePP	PP	11 08 54.4	-2.0
LOT	Lotru	113.01	50	⇑P	PKiKP	11 08 05.1	+0.2
ZIMR		113.34	52	⇑P	PKiKP	11 08 07.0	+1.7
ZIMR		113.34	52	⇑PKIKP	PKiKP	11 08 07.0	+1.7
UZH	Uzhgorod	113.35	46	ePKIKP	PKiKP	11 08 03.7	-1.5
UZH				e		11 08 53.3	
UZH				e		11 14 53.6	
UZH				e		11 18 29.7	
SCRK	Sand Creek	113.40	332	PKiKP	PKiKP	11 08 06.1	+1.1
	baz=116						
HFS	Hagfors	113.43	33	PKiKP	PKiKP	11 08 04.2	-0.8
	comp=Z,25nm,0.9s,baz=208,slow=2.9,SNR=16						
HFS				PP	PP	11 08 56.9	-2.6
	comp=Z,22nm,1.0s,baz=258,slow=5.6,SNR=6.3						
HUMR	Humele	113.43	51	⇑P	PKiKP	11 08 06.4	+0.9
KOLS	Kolonicke sedl	113.45	46	ePKIKP	PKiKP	11 08 06.1	+0.7
KOLS	Kolonicke sedl	113.45	46	ePKP	PKiKP	11 08 06.1	+0.7
M24K	Tolsona, Glenn	113.47	330	PKiKP	PKiKP	11 08 06.5	+1.3
	baz=116						
ARR	Arges	113.54	50	⇑P	PKiKP	11 08 06.1	+0.3
VOIR		113.83	50	⇑P	PKiKP	11 08 07.4	+1.1
VOIR		113.83	50	⇑PKIKP	PKiKP	11 08 07.4	+1.1
KWP	Kalwaria Pacla	113.99	45	ePKP	PKiKP	11 08 07.0	+0.6
KWP				epPKP	pPKiKP	11 08 53.2	+1.3
ARCR	ARCALIA	114.02	48	⇑P	PKiKP	11 08 06.9	+0.3
RAZG	Razgrad	114.07	53	⇑P	PKiKP	11 08 06.9	+0.1
DOPR	Dopca	114.26	50	⇑P	PKiKP	11 08 07.8	+0.7
MLR	Muntele Rosu	114.44	50	PKP	PKiKP	11 08 08.0	+0.4
	comp=Z,34nm,0.9s,baz=162,slow=1.8,SNR=19						
MLR				PP	PP	11 09 05.0	-2.1
	comp=Z,23nm,1.0s,baz=238,slow=2.9,SNR=9.6						
MLR	Muntele Rosu	114.44	50	⇑P	PKiKP	11 08 08.2	+0.6
MLR	Muntele Rosu	114.44	50	PKIKP	PKiKP	11 08 08.0	+0.4
OZUR		114.56	50	⇑P	PKPdf	11 08 07.5	-0.2
RC01	Rabbit Creek A	114.61	328	PKiKP	PKiKP	11 08 08.1	+0.9
	baz=113						
NEHR	Nehoiu	114.64	51	⇑P	PKiKP	11 08 08.2	+0.4
NWAO	Narrogin (SRO)	114.64	184	PKP	PKiKP	11 08 08.1	-0.3
	comp=Z,22nm,0.9s,baz=184,slow=2.5,SNR=7.4						
NWAO				PKKPbc	PKKPbc	11 18 43.9	-2.8
	comp=Z,7.6nm,0.6s,baz=8.5,slow=2.9,SNR=7.9						
KDAK	Kodiak Island	114.67	324	PKKPbc	PKKPbc	11 18 46.7	-0.2
	comp=Z,50nm,0.9s,baz=58,slow=2.1,SNR=12						
HDA	Harding Lake	114.75	332	PKiKP	PKiKP	11 08 07.7	+0.3
	baz=114						
BURAR	Bucovina Array	114.77	48	⇑P	PKiKP	11 08 08.3	+0.2
BURAR	Bucovina Array	114.77	48	⇑PKIKP	PKiKP	11 08 08.3	+0.2
LVV	L'vov	114.86	46	ePKIKP	PKiKP	11 08 08.2	+0.1
ILAR	Eielson Array	114.88	332	PKP	PKiKP	11 08 08.2	+0.5
	comp=Z,27nm,0.9s,baz=190,slow=0.8,SNR=58						
ILAR				pPKP	pPKiKP	11 08 54.0	+0.9
	comp=Z,10.0nm,1.0s,baz=188,slow=1.6,SNR=1.7						
ILAR				PP	PP	11 09 04.1	-5.4
	comp=Z,29nm,1.2s,baz=110,slow=5.1,SNR=8.3						
ILAR				PKKPbc	PKKPbc	11 18 44.8	-1.8
	comp=Z,11nm,0.8s,baz=293,slow=3.4,SNR=18						
BISRR	Bisoca	114.96	51	⇑P	PKiKP	11 08 09.0	+0.5
FYU	Fort Yukon	114.99	334		PKiKP	11 08 08.5	+0.8
PLOR	Plostina	115.03	50	⇑P	PKPdf	11 08 08.5	-0.1
PLOR	Plostina	115.03	50	⇑PKIKP	PKPdf	11 08 08.5	-0.1
BIZ	Bicaz	115.08	49	⇑P	PKiKP	11 08 08.8	+0.2
VRI	Vrincioaia	115.08	50	⇑P	PKPdf	11 08 07.7	-1.0
VRI	Vrincioaia	115.08	50	⇑PKIKP	PKPdf	11 08 07.7	-1.0
UPP	Uppsala	115.14	34	eP	PKPdf	11 08 07.7	-0.6
POKR	Poker Plat Res	115.23	333	PKiKP	PKiKP	11 08 08.5	+0.1
	baz=113						
ODBI	Odobesti	115.26	51	⇓P	PKiKP	11 08 09.8	+0.8
TESR	Tescani	115.27	50	⇑P	PKPdf	11 08 08.9	-0.1
MCK	McKinley	115.29	331	PKiKP	PKiKP	11 08 09.2	+0.7
	baz=112						
COLA	College	115.30	332d	iPKIKP	PKPdf	11 08 08.4	0.0
COLA	College	115.30	332		PKPdf	11 08 08.2	-0.2
TCOL	CIGO, UAF Yank	115.30	332	PKiKP	PKiKP	11 08 08.7	+0.3
	baz=113						
CUT	Chulitna	115.35	329	PKiKP	PKiKP	11 08 09.3	+0.7
	baz=112						
HARR	Harsova	115.44	52	⇑P	PKiKP	11 08 10.2	+0.8
HARR	Harsova	115.44	52	⇑PKIKP	PKiKP	11 08 10.2	+0.8
TLBR	Topalu	115.47	52	⇓P	PKiKP	11 08 11.3	+1.9
MFTR	Murfatlar	115.58	53	⇑P	PKiKP	11 08 10.3	+0.6
NEA2	Nenana	115.67	332	PKiKP	PKiKP	11 08 09.5	+0.3
	baz=112						
BWN	Browne	115.67	331		PKPdf	11 08 08.8	-0.5
TIRR	Tirgusor	115.68	52	PKIKP	PKPdf	11 08 09.4	-0.4
TIRR	Tirgusor	115.68	52		PKPdf	11 08 09.4	-0.4
CFR	Carcaliu	115.76	51	⇑P	PKPdf	11 08 09.9	0.0
CFR	Carcaliu	115.76	51	⇑PKIKP	PKPdf	11 08 09.9	0.0
TPGR	Topolog	115.83	52	⇑P	PKiKP	11 08 10.7	+0.6
SUW	Suwalki	115.87	41	ePKP	PKPdf	11 08 09.7	-0.2
SUW				epPKP	pPKiKP	11 08 57.3	+2.0
SUW	Suwalki	115.87	41	eP	PKiKP	11 08 10.0	+0.2
PBUR	Paburge	115.89	39	eP	PKPdf	11 08 09.7	-0.2
I23K	Minto, Yukon-K	116.00	332	PKiKP	PKiKP	11 08 09.9	+0.1
	baz=112						
VASR	Vaslui	116.05	50	⇑P	PKiKP	11 08 10.6	+0.2
IAS	Iasi	116.10	49	⇑P	PKiKP	11 08 10.9	+0.4
IAS	Iasi	116.10	49	⇑PKIKP	PKiKP	11 08 10.9	+0.4
TLCR		116.21	52	⇑P	PKiKP	11 08 11.3	+0.5
TLCR		116.21	52	⇑PKIKP	PKiKP	11 08 11.3	+0.5
PPLA	Purkeypile	116.35	329	PKPdf	PKPdf	11 08 10.5	-0.3
AAL	Aland	116.36	34	eP	PKPdf	11 08 08.8	-1.8
PABE	Paberze	116.80	40	eP	PKiKP	11 08 11.8	+0.3
MILM	Milestii Mici	116.81	50	⇑P	PKPdf	11 08 11.7	-0.2
SORM	Soroca	116.92	48	⇑P	PKPdf	11 08 11.4	-0.7
SORM	Soroca	116.92	48	⇑PKIKP	PKPdf	11 08 11.4	-0.7
COLD	Coldfoot	117.05	334	PKiKP	PKiKP	11 08 13.0	+1.2
	baz=110						
TOLK	Toolik Lake Re	117.31	336	PKiKP	PKiKP	11 08 13.4	+1.1
	baz=110						
BR131	Keskin Array S	117.62	59c	iPKIKP	PKPdf	11 08 13.8	-0.1
BRTR	Keskin Array B	117.62	59	PKP	PKPdf	11 08 13.6	-0.4
	comp=Z,32nm,0.8s,baz=197,slow=3.1,SNR=52						
BRTR				PKKPab	PKKPab	11 18 41.0	+2.5
	comp=Z,3.8nm,0.9s,baz=27,slow=1.4,SNR=5.5						
BRTR	Keskin Array B	117.62	59c	iPKIKP	PKiKP	11 08 14.1	+0.2
BRTR				pmax	pmax		
	comp=Z,33nm,0.9s						
BRTR	Keskin Array B	117.62	59		PKPdf	11 08 13.8	-0.1
MTSE	Matsula	117.74	36	eP	PKPdf	11 08 12.9	-0.4
IMAR	Indian Mountai	118.00	332		PKiKP	11 08 14.3	+0.7
TTA	Tatalina	118.02	329	PKIKP	PKiKP	11 08 14.5	+0.6
TTA	Tatalina	118.02	329	PKPdf	PKiKP	11 08 14.5	+0.6
NACGM	Naroch	118.15	41	i PKP	PKPdf	11 08 12.4	-1.8
NACGM				i PKP	PKPdf	11 08 12.4	-1.8
NACGM				i PKP	PKPdf	11 08 12.4	-1.8
NACGM				i PP	PKiKP	11 08 36.9	+23
NACGM				i PPP	PPP	11 10 43.9	
NACGM				i SSS	SSS	11 29 00.0	
NACGM				i LQ	LQ	11 41 51.8	
NACGM				i LR	LR	11 46 50.2	
AKASG	Malin Array Be	118.29	46	PKhKP	PKPpre	11 08 03.0	
	comp=Z,0.7nm,0.4s,baz=237,slow=10,SNR=5.9						
AKASG				PKP	PKPdf	11 08 14.0	-0.6
	comp=Z,35nm,0.5s,baz=265,slow=2.2,SNR=89						
AKASG				PKKPab	PKKPbc	11 18 33.9	-0.1
	comp=Z,3.4nm,0.8s,baz=57,slow=4.0,SNR=6.6						
AKASG	Malin Array Be	118.29	46	PKIKP	PKPdf	11 08 14.0	-0.6
AKBB	Malin Array Si	118.29	46c	iPKIKP	PKPdf	11 08 13.9	-0.7
CTAO	Charters Tower	118.60	216	PKIKP	PKPdf	11 08 16.1	-0.2
CTAO	Charters Tower	118.60	216		PKPdf	11 08 16.1	-0.2
MNK	Minsk	118.64	41	ePKIKP	PKPdf	11 08 14.0	-1.2
MNK				e		11 09 01.0	
MNK				e		11 19 00.0	
MNK	Minsk	118.64	41	i PKP	PKPdf	11 08 14.7	-0.5
	comp=E,4.0nm,0.9s						
MNK				i PKP	PKPdf	11 08 14.7	-0.5
	comp=N,28nm,0.9s						
MNK				i PKP	PKPdf	11 08 14.7	-0.5
	comp=Z,284nm,0.9s						
MNK				i pPKP	pPKPdf	11 09 01.7	+1.1
MNK				i sPKP		11 09 14.3	
MNK				i PP	PP	11 09 35.6	-0.3
MNK				i SKP		11 11 18.6	
MNK				i PKS	PKSdf	11 11 51.4	-0.2
MNK				i PPP	PPP	11 12 07.9	
MNK				i SKS	SKSdf	11 15 02.0	-8.6
MNK				i SP	PKKPab	11 18 26.3	-6.5
MNK				i PS	PKKPdf	11 18 56.6	-6.0
MNK				i SS	SS	11 25 34.6	-5.7
MNK				i SKKS	SKKSdf	11 25 53.9	-5.2
MNK				i SSS	SSS	11 30 07.3	
MNK				i LRM	MLR	11 56 05.5	
	comp=E,55nm,18.7s						
MNK				i LRM	MLR	11 56 05.5	
	comp=N,715nm,18.7s						
MNK				i LRM	MLR	11 56 09.7	
	comp=Z,319nm,18.7s						
VSU	Vasula	119.13	37	eP	PKiKP	11 08 16.1	0.0
VSU	Vasula	119.13	37d	iPKIKP	PKiKP	11 08 16.0	0.0
FINES	FINESS Array B	119.58	33	PKP	PKiKP	11 08 16.9	+0.1
	comp=Z,42nm,0.8s,baz=334,slow=0.4,SNR=46						
FINES				PKKPbc	PKKPab	11 18 27.2	-1.1
	comp=Z,5.4nm,0.4s,baz=89,slow=4.8,SNR=12						
FIA1	FINESS Array S	119.58	33	PKPdf	PKPdf	11 08 16.6	-0.2
SIM	Simferopol'	119.67	53	i PKIKP	PKPdf	11 08 17.5	0.0
SIM				pmax	pmax		
	comp=Z,103nm,0.8s						
KBS	Kingsbay	119.73	13d	iPKIKP	PKiKP	11 08 18.0	+1.3
KBS	Kingsbay	119.73	13	PKPdf	PKiKP	11 08 17.3	+0.6
HSPB	Hornsund (broa	119.91	15	ePKP	PKPpre	11 08 02.7	
A21K	Barrow	120.38	338	PKiKP	PKiKP	11 08 19.1	+1.0
	baz=102						
ASAR	Alice Springs	120.50	202	PKhKP	PKPpre	11 08 09.8	
	comp=Z,0.6nm,0.5s,baz=116,slow=1.3,SNR=6.4						
ASAR				PKP	PKPdf	11 08 19.0	-1.0
	comp=Z,44nm,0.5s,baz=136,slow=1.6,SNR=150						
ASAR				PKKPbc	PKKPbc	11 18 25.0	-0.8
	comp=Z,13nm,0.7s,baz=341,slow=3.3,SNR=49						
ASAR				PKKP	PKKPdf	11 18 59.0	+1.9
	comp=Z,2.1nm,0.5s,baz=360,slow=1.6,SNR=9.2						
ASAR				SKKPbc	SKKPbc	11 21 59.8	+5.4
	comp=Z,4.1nm,0.9s,baz=329,slow=4.4,SNR=4.5						
ASAR				PKPPKP	P'P'df	11 27 00.9	-10
	comp=Z,1.5nm,1.0s,baz=345,slow=1.5,SNR=7.3						
ASAR	Alice Springs	120.50	202	PKIKP	PKPdf	11 08 18.6	-1.4
ASAR	Alice Springs	120.50	202	PKPdf	PKPdf	11 08 18.6	-1.4
RAYN	Ar Rayn	120.75	80	i PKiKP	PKiKP	11 08 21.2	+0.7
	SNR=30						
RAYN	Ar Rayn	120.75	80	PKIKP	PKiKP	11 08 21.4	+1.0
RAYN	Ar Rayn	120.75	80	PKPdf	PKiKP	11 08 21.4	+1.0
ARCES	ARCESS Array B	121.09	24	PKhKP	PKPpre	11 08 10.5	
	comp=Z,3.6nm,1.1s,baz=321,slow=5.2,SNR=4.0						
ARCES				PKP	PKiKP	11 08 19.9	+0.3
	comp=Z,36nm,0.7s,baz=245,slow=3.7,SNR=123						
ARCES				PKKPab	PKKPbc	11 18 23.0	-1.2
	comp=Z,77nm,1.2s,baz=82,slow=4.7,SNR=15						
PUL	Pulkovo	121.24	36	⇑iPKIKP	PKiKP	11 08 20.9	+0.8
PUL				pmax	pmax		
	comp=Z,354nm,1.0s						
KEV	Kevo	121.64	24	PKIKP	PKiKP	11 08 20.9	+0.2
KEV	Kevo	121.64	24		PKiKP	11 08 20.9	+0.2
ANN	Anapa	121.89	54	i PKIKP	PKPdf	11 08 21.4	-0.3
ANN				e		11 09 56.4	
ANN				pmax	pmax		
	comp=Z,97nm,0.7s						
NIKH	Nikolski High	122.08	316	PKPdf	PKiKP	11 08 22.0	0.0
KTUT	Trabzon	122.46	59	⇑P	PKiKP	11 08 23.2	0.0
SOC	Sochi	123.14	56c	iPKIKP	PKiKP	11 08 25.2	+0.8
SOC				e		11 10 10.4	
SOC				ePPP	PPP	11 12 55.6	
SOC				e		11 15 12.5	
SOC				ePS	PS	11 20 08.0	+2.8
SOC				eSSS	SSS	11 31 15.0	
SOC				pmax	pmax		
	comp=Z,135nm,0.7s						
OBN	Obninsk	123.67	42	PKP	PKPdf	11 08 24.9	+0.1
	comp=Z,30nm,0.5s,baz=36,slow=0.8,SNR=37						
OBN	Obninsk	123.67	42	⇑P	PKiKP	11 08 25.1	0.0
OBN	Obninsk	123.67	42d	iPKIKP	PKiKP	11 08 25.0	0.0
OBN				i *PP	pPKPdf	11 09 11.7	+1.5
OBN				i		11 10 09.7	
OBN				pmax	pmax		
	comp=Z,338nm,1.3s						
OBN	Obninsk	123.67	42	PKPdf	PKPdf	11 08 24.5	-0.3
APA	Apatity	123.72	27	⇓iPKIKP	PKPdf	11 08 24.3	-0.3
APA				i		11 09 10.5	
APA				i		11 15 12.0	
APA				pmax	pmax		
	comp=Z,95nm,0.8s						
WRA	Warramunga Arr	123.81	205	PKP	PKPdf	11 08 25.5	-0.9
	comp=Z,95nm,0.5s,baz=174,slow=1.7,SNR=394						
WRA				pPKP	pPKPdf	11 09 10.7	-1.1
	comp=Z,20nm,0.6s,baz=174,slow=1.3,SNR=2.6						
WRA				SKP		11 11 44.9	
	comp=Z,6.1nm,1.0s,baz=171,slow=1.8,SNR=6.2						
WRA				PKKPbc	PKKPbc	11 18 13.4	+0.3
	comp=Z,7.2nm,0.6s,baz=339,slow=4.2,SNR=37						
WRA				PKKP	PKKPdf	11 18 51.6	+0.7
	comp=Z,0.9nm,0.6s,baz=329,slow=1.9,SNR=5.0						
WRA				SKKPbc	SKKPbc	11 21 36.6	-6.9
	comp=Z,6.8nm,0.9s,baz=353,slow=5.3,SNR=7.5						
WRAB	Tennant Creek	123.81	205c	iPKIKP	PKPdf	11 08 25.7	-0.7
WRAB	Tennant Creek	123.81	205		PKPdf	11 08 25.8	-0.5
LVZ	Lovozero	124.21	27d	iPKIKP	PKiKP	11 08 26.3	+0.4

LVZ				pmax	pmax		
	comp=Z,163nm,1.0s						
LVZ	**Lovozero**	124.21	27	PKPdf	PKPdf	11 08 25.7	+0.2
RST	**Umm Al-Ruwaisa**	124.33	74	*e*P		11 08 26.9	
MOS	**Moscow**	124.37	41	*i* PKIKP	PKPdf	11 08 25.7	-0.4
MOS				*e*		11 09 12.1	
MOS				*e*		11 10 15.7	
MOS				pmax	pmax		
	comp=Z,217nm,0.8s						
VSR	**Storozhevoye**	124.51	47	*e*PKIKP	PKPdf	11 08 25.8	-0.8
VSR				pmax	pmax		
	comp=Z,140nm,0.8s						
VORD	**Divnogorie**	124.54	47	*e*PKIKP	PKPdf	11 08 26.3	-0.3
VORD				pmax	pmax		
	comp=Z,130nm,0.9s						
RDF	**Al-Radifah**	124.57	75	*e*P		11 08 27.2	
CHVG	**Ch'k'valeri**	124.59	58	⇑P	PKiKP	11 08 31.0	+3.6
CHVG	**Ch'k'valeri**	124.59	58	⇑PKIKP	PKiKP	11 08 31.0	+3.6
LPSR	**Galich'ya Gora**	124.61	45	*e*PKIKP	PKPdf	11 08 26.8	+0.1
LPSR				pmax	pmax		
	comp=Z,390nm,1.0s						
DGAR	**Diego Garcia**	124.64	129⇑	*i*PKIKP	PKiKP	11 08 28.8	+0.5
MIB	**Mutribah**	124.71	74	*e*P		11 08 27.9	
UMR	**Umm Al-Rimmam**	124.93	75	*e*P		11 08 27.6	
NEY	**Neytrino**	125.18	57*d*	*i*PKIKP	PKiKP	11 08 29.5	+0.8
AKH	**Akhalkalaki**	125.28	60	⇑P	PKiKP	11 08 29.4	+0.4
KIV	**Kislovodsk**	125.32	56	⇑P	PKiKP	11 08 29.7	+0.8
KIV	**Kislovodsk**	125.32	56	*i* PKiKP	PKiKP	11 08 29.3	+0.4
	SNR=34						
KIV	**Kislovodsk**	125.32	56	*i* PKIKP	PKPdf	11 08 28.5	0.0
KIV				*e**PP	pPKPdf	11 09 14.2	+0.2
KIV				*e*		11 10 20.6	
KIV				*e*PS	PS	11 20 21.6	-3.0
KIV				*e*SS	SS	11 27 04.9	-1.1
KIV				pmax	pmax		
	comp=Z,650nm,1.1s						
KIV	**Kislovodsk**	125.32	56	PKPdf	PKiKP	11 08 28.8	-0.1
KVAR	**Kislovodsk Arr**	125.33	56	PKP	PKiKP	11 08 29.9	+1.0
	comp=Z,55nm,0.9s,baz=270,slow=20,SNR=38						
TMCR	**Tamitsa**	125.41	31	*e*PKIKP	PKiKP	11 08 28.4	+0.1
TMCR				pmax	pmax		
	comp=Z,141nm,0.8s						
KBZ	**Khabaz**	125.41	57	PKP	PKiKP	11 08 29.6	+0.6
	comp=Z,82nm,0.9s,baz=209,slow=2.6,SNR=50						
KBZ	**Khabaz**	125.41	57*c*	*i*PKIKP	PKiKP	11 08 28.8	-0.1
PSA00	**Pilbara Seismi**	125.67	188		PKPpre	11 08 20.6	
PSA00					PKPdf	11 08 29.0	-0.9
GOF	**Gofitskoye**	125.81	55⇑	*i*PKIKP	PKPdf	11 08 29.5	+0.2
GOF				pmax	pmax		
	comp=Z,488nm,0.9s						
NCK	**Nalchik**	125.85	57⇓	*i*PKIKP	PKiKP	11 08 30.7	+0.8
GNI	**Garni**	125.87	61	PKP	PKiKP	11 08 30.7	+0.5
	comp=Z,98nm,0.8s,baz=348,slow=5.0,SNR=8.4						
GNI				pPKP	pPKPdf	11 09 16.6	+1.3
	comp=Z,26nm,0.9s,baz=106,slow=10.0,SNR=1.2						
GNI	**Garni**	125.87	61	PKiKP	PKiKP	11 08 30.5	+0.2
GNI	**Garni**	125.87	61*c*	*i*PKIKP	PKiKP	11 08 30.4	+0.2
GNI				pmax	pmax		
	comp=Z,107nm,0.8s						
ZEI	**Tsey**	125.91	58	*i* PKIKP	PKiKP	11 08 30.1	-0.1
ZEI				pmax	pmax		
	comp=Z,67nm,0.9s						
KLMR	**Klimovskoe**	125.92	35	*e*PKIKP	PKPdf	11 08 27.7	-1.2
KLMR				*e*		11 09 14.6	
KLMR				*e*		11 10 26.1	
KLMR				pmax	pmax		
	comp=Z,324nm,1.1s						
KLMR	**Klimovskoe**	125.92	35	*e*PKPdf	PKPdf	11 08 27.7	-1.2
KLMR				AMP		11 08 31.3	
	comp=Z,324nm,1.1s						
KLMR				*e*pPKPdf	pPKPdf	11 09 14.6	+0.2
KLMR				*e*PP	PP	11 10 26.2	+1.3
VRH	**Novokhopyorsk**	126.09	47	*e*PKIKP	PKPdf	11 08 29.5	-0.1
VRH				pmax	pmax		
	comp=Z,70nm,1.0s						
ADK	**Adak**	126.60	313	PKIKP	PKPdf	11 08 30.3	-0.2
ADK	**Adak**	126.60	313	PKPdf	PKPdf	11 08 30.3	-0.2
SHAO	**Shalim**	126.85	91	*i* PKiKP	PKiKP	11 08 32.4	-0.2
	SNR=27						
PMG	**Port Moresby**	126.90	224*c*	*i*PKIKP	PKPdf	11 08 32.6	+0.3
PMG	**Port Moresby**	126.90	224	PKPdf	PKPdf	11 08 31.9	-0.4
GROC	**Groznyy**	127.36	58	*i* PKIKP	PKiKP	11 08 32.9	+0.1
GROC				*e*		11 09 18.9	
GROC				*e*		11 10 32.8	
GROC				*e*		11 15 23.9	
GROC				pmax	pmax		
	comp=Z,112nm,0.8s						
MAK	**Makhachkala**	128.53	59	*e*P	Pdif	11 05 22.2	+1.8
MAK				*i*		11 08 35.9	
MAK				*e*		11 09 19.0	
MAK				*e*		11 15 25.9	
MAK				*e*SS	SS	11 27 38.4	-7.3
MAK				*e*SSS	SSS	11 32 35.4	
MAK				pmax	pmax		
	comp=Z,431nm,1.1s						
AJN	**Ajban**	129.09	83	*i* PKiKP	PKiKP	11 08 36.7	-0.2
	SNR=7.3						
ASUD	**Al Ashush, Dub**	129.41	84	*i* PKiKP	PKiKP	11 08 37.2	-0.3
	SNR=21						
ALNE	**Al Ain**	129.54	84	*i* PKiKP	PKiKP	11 08 37.7	-0.1
	SNR=19						
FAQ	**Al Faqa, Dubai**	129.67	84	*i* PKiKP	PKPdf	11 08 37.5	+0.2
	SNR=38						
NAZ	**Nazwa, Dubai**	129.82	83	*i* PKiKP	PKPdf	11 08 37.9	+0.3
	SNR=12						
BELG	**Belogornoye**	129.86	46*d*	*i*PKIKP	PKPdf	11 08 36.8	+0.1
ASHO	**Ashiyiah**	130.04	84	*i* PKPdf	PKPdf	11 08 37.3	-0.7
	SNR=16						
HATD	**Hatta, Dubai**	130.16	84	*i* PKPdf	PKPdf	11 08 38.1	-0.1
	SNR=14						
SOHO	**SOHO**	130.22	85	*i* PKPdf	PKPdf	11 08 38.0	-0.3
	SNR=88						
UOSS	**Minazif**	130.26	84	*i* PKPdf	PKPdf	11 08 37.7	-0.7
	SNR=22						
UOSS	**Minazif**	130.26	84	PKPdf	PKPdf	11 08 38.2	-0.2
WAKE	**Wake Island**	130.31	268		PKiKP	11 08 40.2	+0.8
MSFE	**Esma-Masafi**	130.38	83	*i* PKPdf	PKPdf	11 08 38.5	-0.2
	SNR=28						
MDH	**Madha**	130.47	83	*i* PKPdf	PKPdf	11 08 38.2	-0.6
	SNR=15						
SHME	**Shamm**	130.62	82	*i* PKPdf	PKPdf	11 08 39.2	+0.2
	SNR=28						
BANOM	**Banah**	130.71	82	*i* PKPdf	PKPdf	11 08 39.3	0.0
	SNR=11						
KIRV	**Kirov**	130.92	38	PKhKP	PKPpre	11 08 29.2	
	comp=Z,12nm,0.7s,baz=296,slow=0.3,SNR=4.1						
KIRV				PKP	PKiKP	11 08 39.5	0.0
	comp=Z,110nm,0.7s,baz=264,slow=2.4,SNR=34						
KIRV				pPKP	pPKPdf	11 09 25.5	+1.5
	comp=Z,24nm,0.6s,baz=294,slow=1.8,SNR=1.8						
WSAR	**Wadi Sarin**	131.63	87	PP	PP	11 11 03.4	+0.2
	comp=Z,28nm,0.9s,baz=256,slow=4.9,SNR=6.5						
GEYT	**Alibeck**	135.55	67	PKhKP	PKPpre	11 08 37.8	
	comp=Z,7.5nm,0.8s,baz=282,slow=7.4,SNR=7.6						
GEYT				PKP	PKiKP	11 08 49.5	-0.1
	comp=Z,71nm,0.7s,baz=250,slow=2.9,SNR=32						
GEYT				pPKP	pPKPdf	11 09 34.3	+0.7
	comp=Z,26nm,0.9s,baz=270,slow=3.9,SNR=1.9						
GEYT	**Alibeck**	135.55	67		PKPpre	11 08 36.5	
MNCY	**Minicoy**	135.89	114	*e*x	x	11 08 50.2	
MNCY				*e*P	PKiKP	11 08 50.9	-0.1
MNCY				*i* x	x	11 11 58.4	
ARU	**Arti**	136.06	41	PKhKP	PKPpre	11 08 35.4	
	comp=Z,4.0nm,0.6s,baz=276,slow=1.6,SNR=13						
ARU				PKP	PKiKP	11 08 49.2	-0.7
	comp=Z,42nm,0.7s,baz=285,slow=2.0,SNR=41						
ARU	**Arti**	136.06	41	*i* PKIKP	PKPdf	11 08 49.1	+0.8
ARU						11 11 28.8	
ARU				PPP	PPP	11 14 29.2	
AKTO	**Aktyubinsk**	136.34	49	PKhKP	PKPpre	11 08 35.9	
	comp=Z,6.0nm,0.7s,baz=176,slow=4.4,SNR=14						
AKTO				PKP	PKiKP	11 08 50.5	-0.2
	comp=Z,95nm,0.9s,baz=296,slow=1.6,SNR=41						
AKTO				pPKP	pPKPdf	11 09 36.1	+1.5
	comp=Z,13nm,1.0s,baz=159,slow=2.6,SNR=0.7						
GENI	**Genyem**	136.44	222	PKP	PKiKP	11 08 51.3	-0.8
SVE	**Sverdlovsk**	137.11	40	*e*PKIKP	PKPdf	11 08 50.9	+0.7
SVE				pmax	pmax		
	comp=Z,70nm,1.3s						
ABKAR	**Akbulak array**	137.65	51		PKPpre	11 08 38.3	
EDFI	**Ende, Flores**	137.98	193	PKP	PKPpre	11 08 41.5	
EDFI				PKP	PKPpre	11 08 43.0	
MMRI	**Maumere**	137.98	194	PKP	PKPdf	11 08 53.1	-0.1
TRD	**Trivandrum**	139.02	118	*e*x	PKPdf	11 08 48.6	-6.5
TRD				*i* x	x	11 12 09.8	
TIXI	**Tiksi**	140.01	352*d*	*i*PKIKP	PKPdf	11 08 55.5	+0.4
TIXI				pmax	pmax		
	comp=Z,470nm,1.0s						
FAKI	**Fak Fak**	140.13	211	PKPdf	PKPpre	11 08 51.3	
LEM	**Lembang**	140.43	172	PKhKP	PKPpre	11 08 51.7	
	comp=Z,187nm,0.9s,baz=75,slow=3.2,SNR=21						
LEM				PP	PP	11 11 57.1	+0.6
	comp=Z,65nm,0.9s,baz=179,slow=6.4,SNR=8.0						
LEM				SKPbc	SKPbc	11 12 19.0	+1.0
	comp=Z,89nm,0.8s,baz=226,slow=3.8,SNR=6.6						
SMRI	**Semarang**	140.46	176	PKPdf	PKPdf	11 08 52.5	-5.3
NRIK	**Noril'sk**	140.59	14	PKhKP	PKPpre	11 08 49.6	
	comp=Z,32nm,0.9s,baz=29,slow=2.1,SNR=19						
NRIK				PKP	PKiKP	11 08 58.1	-0.8
	comp=Z,68nm,1.0s,baz=95,slow=1.9,SNR=23						
NRIK				pPKP	pPKPdf	11 09 43.5	+1.8
	comp=Z,29nm,0.9s,baz=79,slow=3.1,SNR=1.6						
NRIK	**Noril'sk**	140.59	14*d*	*i*PKIKP	PKiKP	11 08 57.7	-1.2
GOA	**Goa**	140.75	106	*e*P	PKiKP	11 08 59.9	-0.9
GOA				*i* PP	PP	11 12 00.1	+0.1
SEY	**Seymchan**	140.81	333	PKhKP	PKPpre	11 08 50.8	
	comp=Z,52nm,0.9s,baz=111,slow=2.0,SNR=84						
SEY				PKP	PKiKP	11 08 58.6	-0.9
	comp=Z,105nm,0.5s,baz=102,slow=2.4,SNR=48						
SEY				pPKP	pPKPdf	11 09 44.7	+2.5
	comp=Z,42nm,0.7s,baz=140,slow=2.3,SNR=2.0						
SEY				SKPbc	SKPbc	11 12 18.1	+1.0
	comp=Z,31nm,1.0s,baz=69,slow=4.4,SNR=11						
SEY	**Seymchan**	140.81	333*d*	*i*PKIKP	PKiKP	11 08 58.5	-1.0
PALK	**Pallekele**	140.91	123	PKhKP	PKPpre	11 08 54.2	
	comp=Z,54nm,0.8s,baz=344,slow=4.2,SNR=11						
PALK	**Pallekele**	140.91	123*d*	*i*PKIKP	PKPdf	11 08 59.5	+0.9
BHUJ	**Bhuj**	140.94	93	*i* x	pPKiKP	11 09 46.9	+0.5
BHUJ				*e*x	x	11 11 57.2	
PET	**Petropavlovsk**	141.55	316	*i* PKHKP	PKPdf	11 08 53.8	-4.6
PET				*e*		11 12 11.3	
PET				*e*SS	SS	11 30 23.8	+3.2
PET				*e*SSS	SSS	11 35 44.6	
PET				pmax	pmax		
	comp=Z,112nm,1.2s						
PET				pmax	pmax		
	comp=Z,2µm,15.2s						
KAPI	**Kappang**	141.97	191	PKhKP	PKPdf	11 08 55.8	-4.7
	comp=Z,54nm,0.9s,baz=196,slow=4.1,SNR=18						
KAPI	**Kappang**	141.97	191	PKHKP	PKPdf	11 08 54.4	-6.1
KAPI	**Kappang**	141.97	191		PKPdf	11 08 54.4	-6.1
PEA0B	**Petropavlovsk-**	142.09	316	*i* PKHKP	PKPdf	11 08 55.5	-3.9
PEA0B	**Petropavlovsk-**	142.09	316		PKPdf	11 08 55.0	-4.5
PETK	**Petropavlovsk-**	142.09	316	PKhKP	PKPdf	11 08 55.3	-4.1
	comp=Z,28nm,0.6s,baz=73,slow=9.9,SNR=79						
PETK				PKP	PKiKP	11 09 00.6	-1.8
	comp=Z,167nm,0.9s,baz=107,slow=5.0,SNR=26						
PETK				pPKP	pPKPdf	11 09 46.5	+1.6
	comp=Z,42nm,1.0s,baz=109,slow=8.0,SNR=1.6						
PETK				SKP		11 12 20.3	
	comp=Z,30nm,0.9s,baz=90,slow=5.9,SNR=4.3						
PETK	**Petropavlovsk-**	142.09	316	PKHKP	PKPdf	11 08 54.5	-4.9
PETK	**Petropavlovsk-**	142.09	316		PKPdf	11 08 54.5	-4.9
POO	**Poona**	142.34	102	*e*P	PKPdf	11 08 57.0	-4.0
POO				*i* x	x	11 11 59.2	
MA2	**Magadan**	143.22	329	PKhKP	PKPdf	11 08 58.8	-2.4
	baz=80,slow=6.0						
MA2				pPKP	pPKPdf	11 09 48.8	+2.2
	comp=Z,60nm,0.8s,baz=100,slow=7.3,SNR=2.6						
MA2				SKPbc	SKiKP	11 12 25.3	+1.0
	comp=Z,29nm,1.0s,baz=49,slow=3.0,SNR=4.8						
BRVK	**Borovoye**	143.43	43*c*	*e*PKIKP	PKPbc	11 08 59.6	+0.1
BRVK	**Borovoye**	143.43	43		PKPbc	11 08 59.8	+0.3
BRVK	**Borovoye**	143.43	43	P	PKPbc	11 08 59.9	+0.4
BVAR	**Borovoye Array**	143.50	43	PKP	PKPdf	11 09 01.3	-0.6
	comp=Z,59nm,0.6s,baz=14,slow=6.7,SNR=160						
SKR	**Severo-Kuril's**	143.62	313*d*	*e*PKIKP	PKPab	11 08 59.4	+0.2
KBL	**Kabul**	143.67	75	P	PKPab	11 08 59.9	-0.3
	SNR=78						
MDRS	**Chennai**	144.41	116	*e*P	PKPab	11 09 03.1	-0.1
GUMO	**Guam**	145.17	245	PKPbc	PKPbc	11 09 05.8	0.0
	comp=Z,779nm,1.0s,baz=138,slow=3.4,SNR=16						
GUMO				pPKPbc	pPKPdf	11 09 51.8	+0.4
	comp=Z,1µm,0.8s,baz=190,slow=7.1,SNR=7.6						
GUMO	**Guam**	145.17	245		PKPbc	11 09 05.7	-0.2
KKAR	**Karatay Array**	145.31	60	PKIKP	PKPdf	11 09 03.9	-1.5
KKAR	**Karatay Array**	145.31	60	PKPdf	PKPdf	11 09 03.9	-1.5
HYB	**Hyderabad**	145.60	108	*i* PKP	PKPbc	11 09 07.0	-0.2
HYB				*e*pPKP	pPKPab	11 09 51.5	-0.5
HYB				*e*PP	PP	11 12 30.0	+0.8
HYB				*e*		11 13 32.0	
HYB				*e*SKKS		11 19 02.0	
HYB	**Hyderabad**	145.60	108	*e*P	PKPdf	11 09 05.5	-1.2
DZA	**Taraz**	145.93	60	*e*PKP	PKPdf	11 09 06.5	-0.1
	comp=Z,279nm,0.8s,baz=60						
DZA	**Taraz**	145.93	60	*e*PKIKP	PKPdf	11 09 06.4	-0.1
DZA				pmax	pmax		
	comp=Z,279nm,0.8s						
NIL	**Nilore**	146.97	77	PKIKP	PKPdf	11 09 09.3	+0.7
NIL	**Nilore**	146.97	77	PKPdf	PKPdf	11 09 09.2	+0.7
NIL	**Nilore**	146.97	77	P	PKPdf	11 09 09.4	+0.9
BHPL	**Bhopal**	147.46	98	*e*P	PKPdf	11 09 09.5	-0.2
PSI	**Prapat**	147.56	153	PKP	PKPdf	11 09 10.5	+0.3
	comp=Z,530nm,0.8s,baz=182,slow=0.6,SNR=46						
PSI				PKPbc	PKPbc	11 09 13.4	+0.3
	comp=Z,617nm,0.9s,baz=181,slow=0.9,SNR=21						
PSI				pPKPbc	pPKPbc	11 09 58.0	0.0
	comp=Z,151nm,0.8s,baz=180,slow=8.1,SNR=1.9						
BTLS	**Baital**	147.65	56	*e*PKP	PKPdf	11 09 09.9	+0.6
	comp=Z,60nm,1.1s,baz=56						
BTLS				*e*PKiKP	PKPab	11 09 15.8	+0.8
	baz=56						
BTLS	**Baital**	147.65	56	*e*PKIKP	PKPdf	11 09 09.8	+0.6
BTLS				*i*		11 09 15.7	
BTLS				pmax	pmax		
	comp=Z,60nm,1.1s						
NGP	**Nagpur**	147.89	102	*e*P	PKPdf	11 09 10.8	+0.4
AAK	**Ala-Archa**	148.27	61*c*	*e*PKIKP	PKPdf	11 09 11.8	+1.2
AAK	**Ala-Archa**	148.27	61	P	PKPdf	11 09 12.2	+1.6
SGDS	**Sogindy**	148.28	59	*e*PKP	PKPdf	11 09 10.8	+0.3
	baz=59						
SGDS	**Sogindy**	148.28	59	*e*PKIKP	PKPdf	11 09 10.7	+0.3
YAK	**Yakutsk**	148.67	345	PKP	PKPdf	11 09 10.8	+0.5
	comp=Z,559nm,0.7s,baz=32,slow=0.1,SNR=36						
YAK				PKPbc	PKiKP	11 09 15.2	-0.4
	comp=Z,559nm,0.7s,baz=118,slow=0.2,SNR=82						
YAK				pPKPbc	pPKPbc	11 09 58.4	-1.0
	comp=Z,82nm,0.6s,baz=307,slow=2.4,SNR=1.6						
YAK	**Yakutsk**	148.67	345	*e*PKIKP	PKPdf	11 09 10.6	+0.3
YAK				*e*		11 12 47.0	
YAK				*e*SS	SS	11 31 45.6	+5.3
YAK				pmax	pmax		
	comp=Z,1µm,0.9s						
YAK				pmax	pmax		
	comp=N,82nm,0.9s						
YAK				pmax	pmax		
	comp=E,70nm,1.0s						
YAK	**Yakutsk**	148.67	345	PKPdf	PKPdf	11 09 10.6	+0.3
KSM	**Kuching**	148.90	175	PKPdf	PKPdf	11 09 12.5	+0.2
KURBB	**Kurchatov Arra**	149.06	44	pPKPbc	pPKPbc	11 09 58.7	-2.1
	comp=E,133nm,0.7s,baz=298,slow=3.0,SNR=1.2						
KURK	**Kurchatov**	149.08	44	PKPdf	PKPdf	11 09 12.4	+1.0
KURK	**Kurchatov**	149.08	44	P	PKPdf	11 09 12.2	+0.9
DHRM	**DHARAMSHALA**	149.25	81	*e*P	PKPdf	11 09 13.1	+0.5
DHRM				*i* pP	pPKPdf	11 09 57.5	-0.7
KUU	**Kurty**	149.45	58	*e*PKP	PKPdf	11 09 12.3	+0.1
	baz=58						
KUU				*e*PP	PP	11 12 52.4	+1.0
	baz=58						
KUU	**Kurty**	149.45	58	*e*PKIKP	PKPdf	11 09 12.3	+0.1
KUU				*e*		11 12 52.3	
VIS	**Vishakhapatnam**	149.56	112	*e*x	PKPbc	11 09 17.1	-0.7
KSH	**Kashi**	149.57	66	PKPbc	PKPdf	11 09 13.6	+0.9
KSH				PKS	PKSdf	11 12 49.0	+1.3
KSH				SKKS		11 19 23.3	
KSH				AMB	AMB		
	comp=E,830nm,3.9s						
KSH				LR	LR		
	comp=E,380nm,13.9s						
KSH				LR	LR		
	comp=E,340nm,13.4s						
KSH				LR	LR		
	comp=E,3µm,30.2s						
SMLA	**Simla**	149.75	83	*e*P	PKPdf	11 09 14.2	+1.1
CHKK	**Chushkaly**	149.92	58	*e*PKP	PKPdf	11 09 13.1	0.0
	baz=58						
CHKK	**Chushkaly**	149.92	58	*e*PKIKP	PKPdf	11 09 13.0	0.0
AAA	**Alma-Ata**	149.97	59	*e*PKP	PKPdf	11 09 14.2	+1.0
	baz=59						
TNSS	**Tian-Shan**	150.01	59	*e*PKP	PKPdf	11 09 14.3	+0.6
	baz=59						
MDOK	**Medeo**	150.07	59	*e*PKP	PKPdf	11 09 14.2	+0.8
	baz=59						
MDOK	**Medeo**	150.07	59	*e*PKIKP	PKPdf	11 09 14.2	+0.8
SEM	**Semipalatinsk**	150.16	44	*e*PKP	PKPdf	11 09 13.2	-0.3
	baz=44						
SEM	**Semipalatinsk**	150.16	44	*e*PKIKP	PKPdf	11 09 13.1	-0.3
KUR	**Kuril'sk**	150.24	305*d*	*i*PKIKP	PKiKP	11 09 19.3	-0.1
KUR				pmax	pmax		
	comp=Z,1µm,1.1s						
DDI	**Dehra Dun**	150.31	85	*e*P	PKPbc	11 09 17.1	-2.4
DDI				*i* x	x	11 10 00.8	
TDK	**Taldyqorghan**	150.69	55	*e*PKP	PKPdf	11 09 15.9	+1.8
	baz=55						
TDK				*e*pPKP	pPKPbc	11 10 03.0	-2.0
	baz=55						
TDK	**Taldyqorghan**	150.69	55	*e*PKIKP	PKPdf	11 09 15.9	+1.8
TDK				*e*		11 10 03.0	
ZALV	**Zalesovo Beam**	150.84	35	PKP	PKPdf	11 09 14.3	+0.3
	comp=Z,54nm,0.8s,baz=276,slow=2.8,SNR=148						
ZALV				PKPbc	PKiKP	11 09 20.6	+0.2
	comp=Z,1µm,0.5s,baz=317,slow=3.0,SNR=720						
ZALV				pPKPbc	pPKPbc	11 10 05.1	0.0
	comp=Z,273nm,0.8s,baz=294,slow=3.0,SNR=3.2						
ZALV	**Zalesovo Beam**	150.84	35	PKIKP	PKPdf	11 09 13.8	-0.2
ZALV	**Zalesovo Beam**	150.84	35	PKPdf	PKPdf	11 09 13.8	-0.2
SATY	**Saty**	151.07	59	*e*PKP	PKPdf	11 09 14.6	-0.4
	baz=59						
SATY	**Saty**	151.07	59	*e*PKIKP	PKPdf	11 09 14.5	-0.4
KPKS	**Kokpek**	151.20	58	*e*PKP	PKPdf	11 09 15.1	-0.1
	baz=58						
KPKS	**Kokpek**	151.20	58	*e*PKIKP	PKPdf	11 09 15.0	-0.1
NKL	**Nikolayevsk**	151.40	324	*i* PKIKP	PKPdf	11 09 12.1	-2.8
NKL				*e*		11 13 01.8	
SHLS	**Shalkode**	151.81	58	*e*PKP	PKPdf	11 09 16.9	+0.8
	baz=58						
SHLS	**Shalkode**	151.81	58	*e*PKIKP	PKPdf	11 09 16.9	+0.8
DAV	**Davao City (W)**	151.93	208	PKPbc	PKPbc	11 09 23.7	+0.1
	comp=Z,163nm,0.4s,baz=33,slow=4.8,SNR=5.6						
MAKZ	**Makanchi**	152.57	50	PKIKP	PKPdf	11 09 17.0	0.0
MAKZ	**Makanchi**	152.57	50	PKPdf	PKPdf	11 09 17.0	0.0
MKAR	**Makanchi Array**	152.78	50	PKP	PKPdf	11 09 17.4	+0.1
	comp=Z,29nm,0.9s,baz=293,slow=1.2,SNR=150						
MKAR				PKPbc	PKiKP	11 09 25.4	+0.7
	comp=Z,205nm,0.6s,baz=282,slow=2.0,SNR=250						
MKAR	**Makanchi Array**	152.78	50	PKIKP	PKPdf	11 09 16.6	-0.7
MKAR	**Makanchi Array**	152.78	50	PKPdf	PKPdf	11 09 16.6	-0.7
YSS	**Yuzh-Sakhalins**	153.14	311⇑	*i*PKIKP	PKPdf	11 09 17.9	+0.2
YSS				*e*		11 09 38.4	
YSS				*e*SSS	SSS	11 33 23.0	
YSS				pmax	pmax		
	comp=Z,470nm,1.0s						
YSS				pmax	pmax		
	comp=N,300nm,1.2s						
YSS	**Yuzh-Sakhalins**	153.14	311	PKPdf	PKPdf	11 09 18.0	+0.4
YSS				PKPbc	PKPbc	11 09 25.2	0.0
YSS				PKPab	PKPab	11 09 38.8	+1.2
DGPR	**DIGLIPUR**	153.40	132	*e*P	PKPdf	11 09 17.3	-1.7
DGPR				*i* x	x	11 09 40.2	
DGPR				*e*PP	PP	11 13 14.0	+0.5
JCJ	**Chichijima**	154.01	265	PKPbc	PKPbc	11 09 27.3	-0.5
	comp=N,84nm,0.5s,baz=279,slow=18,SNR=5.6						
JCJ				PKPab	PKPab	11 09 42.5	+0.5
	comp=N,223nm,0.5s,baz=275,slow=2.4,SNR=16						
JCJ	**Chichijima**	154.01	265	PKPbc	PKPbc	11 09 26.9	-0.9
JKA	**Kamikawa-asahi**	154.16	305	PKPbc	PKiKP	11 09 27.9	+0.3
JKA				PKPab	PKPab	11 09 42.7	+0.7
ASAJ	**Asahikawa**	154.16	305	PKP	PKPdf	11 09 19.9	+0.6
	comp=N,104nm,0.9s,baz=243,slow=8.6,SNR=20						
ASAJ				PKPbc	PKiKP	11 09 27.9	+0.3
	comp=N,164nm,0.8s,baz=257,slow=5.3,SNR=22						
ASAJ				PKPab	PKPab	11 09 43.0	+0.9
	comp=N,121nm,1.0s,baz=99,slow=12,SNR=8.7						
JEM	**Erimo**	154.26	300		PKPdf	11 09 20.4	+1.0
ERM	**Erimo**	154.26	300	PKIKP	PKPdf	11 09 19.7	+0.3
ERM	**Erimo**	154.26	300		PKPdf	11 09 19.7	+0.3
ERM					PKPbc	11 09 27.4	-0.4
ERM				PKPab	PKPab	11 09 44.0	+1.5
KOLN	**Koldanda**	154.30	93	*e*P	PKPdf	11 09 20.6	+0.3
	comp=N,231nm,1.0s						
DANN	**Dangsing**	154.61	92	*e*P	PKPdf	11 09 21.4	+0.6
	comp=N,622nm,0.8s						
BOK	**Bokaro**	154.71	104	*e*P	PKPdf	11 09 19.5	-1.2
BOK				*i* x	x	11 09 43.2	
BOK				*e*PP	PP	11 13 17.4	-4.2
BOD	**Bodaibo**	154.82	359	*e*PKIKP	PKPdf	11 09 19.1	-0.6
BOD				pmax	pmax		
	comp=Z,184nm,0.9s						
GRNR	**Gornyy**	154.93	323⇑	*i*PKIKP	PKPdf	11 09 19.4	-0.7
GRNR				pmax	pmax		
	comp=Z,30nm,1.1s						
GKN	**Gorkha**	155.25	93	*e*P	PKPdf	11 09 21.8	+0.3
	comp=Z,293nm,1.1s						
DMN	**Daman**	155.52	95	*e*P	PKPdf	11 09 22.4	+0.4
	comp=Z,130nm,1.0s						
KKN	**Kakani**	155.72	94	*e*P	PKPdf	11 09 22.5	+0.3
	comp=Z,158nm,1.0s						
PKIN	**Phulchoki**	155.75	95	*e*P	PKPdf	11 09 22.4	+0.1
	comp=Z,115nm,1.0s						
PKI	**Pulchoki**	155.76	95	*e*P	PKPdf	11 09 22.4	0.0
	comp=Z,178nm,1.1s						
GUN	**Gumba**	156.26	94	*e*P	PKPdf	11 09 23.4	+0.3
	comp=Z,102nm,0.8s						
ZEA	**Zeya**	156.54	338	*i* PKIKP	PKPdf	11 09 21.6	-0.5
ZEA				*e*		11 13 30.0	
ZEA				pmax	pmax		
	comp=Z,20nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,600nm,2.9s						
ZEA				pmax	pmax		
	comp=N,20nm,1.0s						
ZEA				pmax	pmax		
	comp=N,20nm,0.7s						
ZEA				pmax	pmax		
	comp=Z,100nm,1.2s						
ZEA				pmax	pmax		
	comp=N,400nm,6.9s						
ZEA				pmax	pmax		
	comp=Z,800nm,13.0s						
WMQ	**Urumqi**	157.40	53	PKP	PKPdf	11 09 24.5	+0.8
WMQ				PKPab	PKPab	11 09 57.5	+1.4
WMQ				PP	PP	11 13 37.5	+1.5
WMQ				SKKS		11 20 09.6	
WMQ				SS	SS	11 33 17.4	-0.2
WMQ				AMB	AMB		
	comp=Z,640nm,3.9s						
PATY	**Pattaya**	157.51	148	P	PKPab	11 09 57.8	+0.8
TAPN	**Taplejung**	157.62	97	*e*P	PKPdf	11 09 25.4	+0.6
	comp=Z,233nm,1.1s						
TEY	**Ternei**	157.84	311⇓	*e*PKIKP	PKPdf	11 09 23.9	-0.1
TEY				pmax	pmax		
	comp=Z,20nm,1.8s						
KLR	**Kul'dur**	158.23	325	PKP	PKPdf	11 09 24.2	-0.2
	comp=Z,47nm,0.9s,baz=33,slow=2.6,SNR=37						
KLR				PKPab	PKPab	11 09 59.3	-0.1
	comp=Z,28nm,0.7s,baz=219,slow=0.5,SNR=8.0						
GTK	**Tadong**	158.35	98	*e*x	PKPdf	11 09 30.4	+4.9
GTK				*i* x	x	11 10 02.5	
GTK				*e*x	x	11 13 36.7	
MJAR	**Matsushiro Arr**	158.79	288	PKP	PKPdf	11 09 25.1	-0.5
	comp=Z,28nm,1.0s,baz=171,slow=0.8,SNR=40						
MJAR				PKPab	PKPab	11 10 02.7	+0.4
	comp=Z,108nm,0.9s,baz=113,slow=2.3,SNR=27						
MJAR	**Matsushiro Arr**	158.79	288	PKIKP	PKPdf	11 09 24.4	-1.1
MJAR	**Matsushiro Arr**	158.79	288	PKPdf	PKPdf	11 09 24.4	-1.1
MAJO	**Matsushiro**	158.79	288	PKIKP	PKPdf	11 09 25.0	-0.5
MAJO	**Matsushiro**	158.79	288	PKPdf	PKPdf	11 09 25.0	-0.5
MAT	**Matsushiro**	158.79	288	PKP	PKPdf	11 09 24.2	-1.3
BELO	**BELONIA**	158.93	111	*e*P	PKPdf	11 09 24.8	-1.3
BELO				*i* x	x	11 10 04.6	
BELO				*e*PP	PP	11 13 41.9	-2.8
SRAK	**Srakaew**	158.99	149	P	PKPdf	11 09 28.6	+2.3
	comp=Z,49µmcomp=Z,523nm,0.9s						
UTHA	**Uthaitani**	159.08	141	P	PKPdf	11 09 28.5	+2.1
UTHA	**Uthaitani**	159.08	141	P	PKPdf	11 09 28.5	+2.1
AGT	**Agartala**	159.10	109	*e*P	PKPdf	11 09 27.6	+1.4
AGT				*i* x	x	11 10 06.0	
AGT				*e*x	x	11 13 44.1	
MOY	**Mondy**	159.11	21	*e*PKIKP	PKPdf	11 09 26.6	+1.1
MOY				pmax	pmax		
	comp=Z,107nm,2.6s						
IRK	**Irkutsk**	159.45	15	*e*PKIKP	PKPdf	11 09 25.7	-0.1
IRK				*e*		11 10 04.6	

IRK				pmax	pmax		
	comp=Z,152nm,1.2s						
SAIH	**SAIHA**	**159.72**	**115**	*e*P	**PKPdf**	**11 09 27.9**	**+0.8**
SAIH				*i* x	x	11 10 08.0	
TLY	**Talaya**	**159.82**	**17**	PKP	**PKPdf**	**11 09 27.4**	**+1.1**
	comp=Z,51nm,1.0s,baz=270,slow=1.7,SNR=74						
TLY				PKPab	**PKPab**	**11 10 08.1**	**+1.9**
	comp=Z,106nm,1.0s,baz=312,slow=5.3,SNR=13						
TLY	**Talaya**	**159.82**	**17**	*de*PKIKP	**PKPdf**	**11 09 26.9**	**+0.7**
TLY				*i*		11 10 07.2	
TLY				*e*		11 13 52.3	
TLY				*e*SS	SS	11 33 37.5	-3.8
TLY				pmax	pmax		
	comp=Z,376nm,1.1s						
TLY	**Talaya**	**159.82**	**17**	P	**PKPdf**	**11 09 27.0**	**+0.8**
TGY	**Tagaytay City**	**160.12**	**204**	PKP	**PKPdf**	**11 09 28.0**	**+0.3**
	comp=Z,118nm,0.3s,baz=289,slow=6.3,SNR=3.2						
TGY	**Tagaytay City**	**160.12**	**204**	PKIKP	**PKPdf**	**11 09 28.0**	**+0.3**
MHMT	**Maesarieng**	**160.31**	**133**	P	**PKPab**	**11 10 08.7**	**-0.5**
	comp=Z,6µmcomp=Z,417nm,0.9s						
MHMT	**Maesarieng**	**160.31**	**133**	P	**PKPdf**	**11 09 28.2**	**+0.4**
SHL	**Shillong**	**160.39**	**106**	*e*x	PKPdf	11 09 16.0	-12
SHL				*i* x	x	11 10 10.4	
GUWA	**GUWAHATI**	**160.49**	**104**	*e*P	**PKPdf**	**11 09 27.0**	**-0.7**
GUWA				*i* x	x	11 10 07.0	
GUWA				*e*x	x	11 13 50.3	
CHAI	**Chaiyaphum**	**160.63**	**147**	P	**PKPdf**	**11 09 29.8**	**+1.7**
CIT	**Chita**	**160.63**	**359**	*e*PKP2	**PKPab**	**11 10 10.8**	**+1.1**
CIT				*e*		11 13 51.2	
CIT				pmax	pmax		
	comp=Z,301nm,2.3s						
SUKH	**Sukhothai**	**160.76**	**139**	P	PKPab	11 10 03.1	-8.0
	comp=Z,5µmcomp=Z,823nm,0.8s						
SUKH	**Sukhothai**	**160.76**	**139**	P	**PKPdf**	**11 09 30.0**	**+1.8**
ZAK	**Zakamensk**	**160.92**	**19**	*e*PKIKP	**PKPdf**	**11 09 27.7**	**+0.1**
ZAK				pmax	pmax		
	comp=Z,24nm,1.0s						
CM13	**Chiang Mai Arr**	**161.08**	**135**	P	**PKPab**	**11 10 13.6**	**+1.0**
	comp=Z,896nmcomp=Z,106nm,0.9s						
CM05	**Chiang Mai Arr**	**161.09**	**135**	P	**PKPab**	**11 10 13.6**	**+0.9**
	comp=Z,865nmcomp=Z,101nm,0.9s						
CM04	**Chiang Mai Arr**	**161.11**	**135**	P	**PKPab**	**11 10 13.0**	**+0.3**
	comp=Z,1µmcomp=Z,157nm,0.9s						
CM01	**Chiang Mai Arr**	**161.11**	**135**	P	**PKPab**	**11 10 13.0**	**+0.3**
	comp=Z,1µmcomp=Z,150nm,0.9s						
CM02	**Chiang Mai Arr**	**161.12**	**135**	P	**PKPab**	**11 10 13.0**	**+0.3**
	comp=Z,1µmcomp=Z,156nm,0.9s						
CM15	**Chiang Mai Arr**	**161.12**	**135**	P	**PKPab**	**11 10 13.3**	**+0.6**
	comp=Z,1µmcomp=Z,142nm,0.9s						
CM31	**Chiang Mai Arr**	**161.13**	**135**	P	**PKPab**	**11 10 13.3**	**+0.5**
	comp=Z,29µmcomp=Z,4µm,0.9s						
CMAR	**Chiang Mai Arr**	**161.13**	**135**	PKP	**PKPdf**	**11 09 29.3**	**+0.7**
	comp=Z,33nm,0.9s,baz=249,slow=2.9,SNR=36						
CMAR				PKPab	**PKPab**	**11 10 12.8**	**+0.1**
	comp=Z,94nm,0.8s,baz=240,slow=5.1,SNR=21						
CMAR				PP	**PP**	**11 13 56.9**	**+1.0**
	comp=Z,9.2nm,1.0s,baz=222,slow=5.7,SNR=2.8						
CMAR	**Chiang Mai Arr**	**161.13**	**135**	PKIKP	**PKPdf**	**11 09 28.9**	**+0.3**
CMAR	**Chiang Mai Arr**	**161.13**	**135**		**PKPdf**	**11 09 28.9**	**+0.3**
USRK	**Ussuriysk Ar.**	**161.13**	**313**	PKP	**PKPdf**	**11 09 27.7**	**-0.2**
	comp=Z,24nm,0.9s,baz=241,slow=1.9,SNR=36						
USRK				PKPab	**pPKPdf**	**11 10 13.0**	**-0.6**
	comp=Z,62nm,0.9s,baz=60,slow=4.0,SNR=22						
USRK	**Ussuriysk Ar.**	**161.13**	**313**	PKIKP	**PKPdf**	**11 09 26.8**	**-1.1**
USRK	**Ussuriysk Ar.**	**161.13**	**313**	PKPdf	**PKPdf**	**11 09 26.8**	**-1.1**
CM09	**Chiang Mai Arr**	**161.15**	**135**	P	**PKPab**	**11 10 13.8**	**+1.0**
	comp=Z,1µmcomp=Z,173nm,0.9s						
LSA	**Lhasa**	**161.20**	**93**	PKP	**PKPdf**	**11 09 29.6**	**+0.6**
LSA				LR	LR		
	comp=Z,3µm,17.1s						
LSA				LR	LR		
	comp=Z,4µm,21.0s						
LSA				LR	LR		
	comp=Z,4µm,21.0s						
LSA	**Lhasa**	**161.20**	**93**	PKPdf	**PKPdf**	**11 09 30.2**	**+1.1**
LSA	**Lhasa**	**161.20**	**93**	PKIKP	**PKPdf**	**11 09 30.0**	**+1.0**
LSA	**Lhasa**	**161.20**	**93**		**PKPdf**	**11 09 30.0**	**+1.0**
CM32	**Chiang Mai Arr**	**161.22**	**135**	P	**PKPab**	**11 10 13.0**	**-0.2**
CM36	**Chiang Mai Arr**	**161.27**	**135**	P	**PKPab**	**11 10 13.0**	**-0.4**
CHTO	**Chiang Mai**	**161.41**	**134**	PKIKP	**PKPdf**	**11 09 30.0**	**+1.1**
CMMT	**Chiang Mai**	**161.41**	**134**	P	**PKPab**	**11 10 12.9**	**-1.1**
	comp=Z,2µmcomp=Z,170nm,0.9s						
CMMT	**Chiang Mai**	**161.41**	**134**	P	**PKPdf**	**11 09 29.1**	**+0.1**
CM33	**Chiang Mai Arr**	**161.41**	**134**	P	**PKPab**	**11 10 14.0**	**0.0**
CM35	**Chiang Mai Arr**	**161.43**	**135**	P	**PKPab**	**11 10 14.0**	**-0.1**
UTTA	**Uttaradit**	**161.48**	**140**	P	**PKPab**	**11 10 14.7**	**+0.4**
	comp=Z,5µmcomp=Z,691nm,0.9s						
UTTA	**Uttaradit**	**161.48**	**140**	P	**PKPdf**	**11 09 30.1**	**+1.2**
CM34	**Chiang Mai Arr**	**161.56**	**135**	P	**PKPab**	**11 10 14.0**	**-0.7**
TEZP	**TEZPUR**	**161.57**	**104**	*e*P	**PKPdf**	**11 09 28.1**	**-0.8**
TEZP				*i* x	x	11 10 15.1	
LAMP	**Lampang**	**161.59**	**137**	P	**PKPab**	**11 10 15.0**	**+0.2**
	comp=Z,3µmcomp=Z,378nm,0.9s						
LAMP	**Lampang**	**161.59**	**137**	P	**PKPdf**	**11 09 30.0**	**+0.9**
KOHI	**KOHIMA**	**162.25**	**108**	*e*x	x	11 09 16.2	
KOHI				*i* x	**PKPdf**	**11 09 31.7**	**+1.9**
KOHI				*e*x	x	11 10 18.8	
MDJ	**Mudanjiang**	**162.32**	**317**	PKP	**PKPdf**	**11 09 28.7**	**-0.4**
MDJ				LR	LR		
	comp=Z,2µm,22.7s						
MDJ				LR	LR		
	comp=Z,2µm,20.3s						
MDJ				LR	LR		
	comp=Z,3µm,21.8s						
PAYA	**Payao**	**162.38**	**136**	P	**PKPdf**	**11 09 31.2**	**+1.3**
ZIRO	**ZIRO**	**162.79**	**102**	*e*P	**PKPdf**	**11 09 30.1**	**-0.2**
ZIRO				*i* x	x	11 10 20.9	
JORH	**JORHAT**	**162.81**	**105**	*e*P	**PKPdf**	**11 09 28.8**	**-1.3**
JORH				*i* x	x	11 10 17.5	
JORH				*e*x	x	11 14 06.6	
MOKO	**MOKOCHONG**	**162.85**	**107**	*e*x	PKPdf	11 09 20.6	-10
NONG	**Nongkai**	**163.05**	**147**	P	**PKPab**	**11 10 21.3**	**+0.2**
	comp=Z,11µmcomp=Z,711nm,0.9s						
SZP	**Santa**	**163.47**	**206**		**PKPdf**	**11 09 30.9**	**-0.1**
DIBR	**DIBRUGARH**	**163.64**	**104**	*e*P	**PKPdf**	**11 09 31.2**	**+0.4**
DIBR				*i* x	x	11 10 19.6	
DIBR				*e*x	x	11 14 07.9	
SONM	**Songino Array**	**164.06**	**16**	PKP	**PKPdf**	**11 09 31.2**	**+0.4**
	comp=Z,63nm,1.0s,baz=214,slow=0.8,SNR=115						
SONM				pPKP	**pPKPdf**	**11 10 17.8**	**+1.2**
	comp=Z,15nm,0.9s,baz=152,slow=0.9,SNR=2.4						
SONM				PKPab	**PKPab**	**11 10 25.5**	**+0.5**
	comp=Z,62nm,0.9s,baz=338,slow=4.5,SNR=14						
SONM				PP	**PP**	**11 14 10.2**	**-0.6**
	comp=Z,7.8nm,1.0s,baz=320,slow=4.3,SNR=2.9						
SONM	**Songino Array**	**164.06**	**16**	PKIKP	**PKPdf**	**11 09 31.1**	**+0.3**
SONM	**Songino Array**	**164.06**	**16**		**PKPdf**	**11 09 31.1**	**+0.3**
ULN	**Ulaanbaatar**	**164.18**	**14**	PKIKP	**PKPdf**	**11 09 31.5**	**+0.6**
ULN	**Ulaanbaatar**	**164.18**	**14**		**PKPdf**	**11 09 31.5**	**+0.6**
ULN	**Ulaanbaatar**	**164.18**	**14**	P	**PKPdf**	**11 09 31.6**	**+0.7**
LKP	**Lekhapani**	**164.35**	**105**	*i* x	**PKPab**	**11 10 28.6**	**+1.7**
JNU	**Nakatsue**	**164.84**	**277**	PKP	**PKPdf**	**11 09 31.4**	**-0.4**
	comp=Z,14nm,1.0s,baz=63,slow=7.2,SNR=4.6						
JNU				PKPab	**PKPab**	**11 10 29.2**	**+0.3**
	comp=Z,64nm,0.9s,baz=68,slow=4.6,SNR=12						
JOW	**Kunigami**	**165.41**	**251**	PKP	**PKPdf**	**11 09 32.7**	**+0.2**
	comp=Z,68nm,1.0s,baz=194,slow=3.8,SNR=9.5						
JOW				PKPab	**PKPab**	**11 10 33.0**	**+1.4**
	comp=Z,77nm,0.9s,baz=142,slow=5.5,SNR=8.1						
JTU	**Tsushima**	**166.08**	**282**		**PKPdf**	**11 09 32.3**	**-0.5**
QIZ	**Qiongzhong**	**166.17**	**168**	PKP	**PKPdf**	**11 09 31.9**	**-1.4**
QIZ				pPKP	**pPKPdf**	**11 10 15.9**	**-3.1**
QIZ				PP	**PP**	**11 14 21.2**	**-0.2**
QIZ				SS	SS	11 34 51.9	+5.4
QIZ				AMB	AMB		
	comp=Z,2µm,13.3s						
QIZ				LR	LR		
	comp=Z,660nm,22.6s						
QIZ				LR	LR		
	comp=Z,780nm,21.6s						
QIZ				LR	LR		
	comp=Z,830nm,35.3s						
QIZ	**Qiongzhong**	**166.17**	**168**		**PKPdf**	**11 09 34.2**	**+1.0**
KSRS	**Korea Array**	**166.76**	**295**	PKP	**PKPdf**	**11 09 33.3**	**+0.1**
	comp=Z,36nm,0.9s,baz=144,slow=0.5,SNR=127						
KSRS				pPKP	**pPKPdf**	**11 10 19.1**	**+0.3**
	comp=Z,7.8nm,0.8s,baz=115,slow=0.4,SNR=2.2						
KSRS				PKPab	**PKPab**	**11 10 38.5**	**+1.3**
	comp=Z,23nm,1.0s,baz=73,slow=4.5,SNR=13						
KSRS				PP	**PP**	**11 14 19.1**	**-6.8**
	comp=Z,2.9nm,1.0s,baz=84,slow=9.1,SNR=4.3						
KSAR	**Wonju Array Be**	**166.79**	**295**	PKIKP	**PKPdf**	**11 09 33.2**	**0.0**
KSAR	**Wonju Array Be**	**166.79**	**295**		**PKPdf**	**11 09 33.2**	**0.0**
GTA	**Gaotai**	**167.48**	**54**	⇑PKP	**PKPdf**	**11 09 34.6**	**+0.7**
GTA				pPKP	pPKPdf	11 10 20.4	+0.7
GTA				PKPab	**PKPab**	**11 10 41.9**	**+1.4**
GTA				PP	**PP**	**11 14 35.2**	**+5.7**
GTA				SKKS		11 20 59.5	
GTA				AMB	AMB		
	comp=Z,680nm,8.5s						
GTA				LR	LR		
	comp=Z,390nm,20.0s						
GTA				LR	LR		
	comp=Z,580nm,20.7s						
GTA				LR	LR		
	comp=Z,1µm,22.5s						
INCN	**Inchon**	**167.72**	**297**	PKIKP	**PKPdf**	**11 09 34.2**	**+0.3**
INCN	**Inchon**	**167.72**	**297**		**PKPdf**	**11 09 34.2**	**+0.3**
KMI	**Kunming**	**168.40**	**128**	⇑PKP	**PKPdf**	**11 09 35.4**	**+0.4**
KMI				sPKP		11 10 37.7	
GZH	**Guangzhou**	**170.47**	**183**	PKP	**PKPdf**	**11 09 37.5**	**+1.5**
GZH				pPKP	**pPKPdf**	**11 10 19.7**	**-2.1**
GZH				PKPab	**PKPab**	**11 10 54.1**	**+0.5**
GZH				PP	**PP**	**11 14 44.2**	**+1.2**
GZH				SS	SS	11 35 35.2	+6.1
DL2	**Dalian**	**170.53**	**314**	⇓*i*PKP	**PKPdf**	**11 09 35.6**	**0.0**
DL2				pPKP	**pPKPdf**	**11 10 21.1**	**-0.2**
DL2				PKPab	**PKPab**	**11 10 54.1**	**+0.3**
DL2				PP	**PP**	**11 14 43.9**	**-0.5**
DL2				SS	SS	11 35 30.1	-1.5
DL2				AMB	AMB		
	comp=Z,1µm,4.3s						
QZH	**Quanzhou**	**170.82**	**215**	*i* PKP	**PKPdf**	**11 09 37.3**	**+1.1**
QZH				PP	**PP**	**11 14 46.6**	**+1.2**
QZH				SS	SS	11 35 39.6	+5.9
QZH				AMB	AMB		
	comp=Z,930nm,6.0s						
BTO	**Baotou**	**171.74**	**15**	*e*PKP	**PKPdf**	**11 09 36.7**	**+0.4**
HHC	**Hu-ho-hao-te**	**171.75**	**7**	*e*PKP	**PKPdf**	**11 09 36.9**	**+0.6**
HHC				PP	**PP**	**11 14 50.1**	**+0.5**
HHC				SKKS		11 21 23.0	
HHC				SS	**SS**	**11 35 45.0**	**+2.8**
HHC				AMB	AMB		
	comp=Z,1µm,5.8s						
LZH	**Lanzhou**	**171.80**	**63**	*e*PKP	**PKPdf**	**11 09 37.9**	**+1.3**
LZH				pPKP	pPKPdf	11 10 23.0	+0.7
LZH				sPKP		11 10 36.0	
LZH				PP	**PP**	**11 14 53.7**	**+2.2**
LZH				SKKS		11 21 21.2	
LZH				SS	**SS**	**11 35 47.4**	**+1.9**
LZH				AMB	AMB		
	comp=Z,860nm,8.7s						
LZH				LR	LR		
	comp=Z,970nm,18.1s						
LZH				LR	LR		
	comp=Z,990nm,18.6s						
LZH				LR	LR		
	comp=Z,990nm,19.1s						
GYA	**Guiyang**	**171.81**	**137**	PKP	**PKPdf**	**11 09 37.1**	**+0.3**
GYA				pPKP	pPKPdf	11 10 22.8	+0.2
GYA				PKPab	**PKPab**	**11 10 59.8**	**-0.1**
GYA				PP	**PP**	**11 14 48.8**	**-2.0**
GYA				SS	SS	11 35 41.7	-2.6
GYA				AMB	AMB		
	comp=Z,2µm,10.8s						
CD2	**Chengdu**	**172.07**	**100**	PKP	**PKPdf**	**11 09 35.8**	**-0.9**
CD2				pPKP	pPKPdf	11 10 23.0	+0.5
CD2				sPKP		11 10 37.2	
CD2				PP	**PP**	**11 14 50.2**	**-2.8**
CD2				SKKS		11 21 20.9	
CD2				SS	**SS**	**11 35 45.6**	**-2.8**
CD2				AMB	AMB		
	comp=Z,5µm,7.6s						
CD2				LR	LR		
	comp=Z,2µm,43.1s						
CD2				LR	LR		
	comp=Z,2µm,29.4s						
CD2				LR	LR		
	comp=Z,2µm,29.4s						
BJI	**Beijing**	**172.15**	**341**	PKP	**PKPdf**	**11 09 36.6**	**+0.3**
BJI				sPKP		11 10 37.8	
BJI				PP	**PP**	**11 14 50.2**	**-1.4**
BJI				SS	SS	11 35 47.2	+1.1
BJI				AMB	AMB		
	comp=Z,700nm,6.1s						
SSE	**Sheshan**	**172.74**	**260**	PKP	**PKPdf**	**11 09 37.0**	**+0.1**
SSE				PP	**PP**	**11 14 54.2**	**-2.0**
SSE				AMB	AMB		
	comp=Z,310nm,5.7s						
SSE				LR	LR		
	comp=Z,260nm,27.5s						
SSE				LR	LR		
	comp=Z,300nm,26.1s						
NJ2	**Nanjing**	**174.88**	**265**	*e*PKP	**PKPdf**	**11 09 37.9**	**+0.3**
NJ2				pPKP	**pPKPdf**	**11 10 23.9**	**+0.5**
NJ2				PKPab	**PKPab**	**11 11 14.1**	**+0.6**
NJ2				PP	**PP**	**11 15 06.2**	**-0.4**
NJ2				SKKS		11 21 33.2	
NJ2				AMB	AMB		
	comp=Z,2µm,4.9s						
TIY	**Taiyuan**	**174.94**	**4**	PKP	**PKPdf**	**11 09 38.6**	**+1.0**
TIY				PKPab	**PKPab**	**11 11 14.3**	**+1.0**
TIY				PP	**PP**	**11 15 05.5**	**+0.4**
TIY				SKKS		11 21 37.9	
TIY				SS	**SS**	**11 36 16.1**	**+3.3**
TIY				AMB	AMB		
	comp=Z,2µm,4.5s						
TIY				LR	LR		
	comp=Z,250nm,6.2s						
TIY				LR	LR		
	comp=Z,140nm,4.5s						
TIY				LR	LR		
	comp=Z,440nm,17.1s						
TIA	**Tai'an**	**174.99**	**316**	PKP	**PKPdf**	**11 09 38.0**	**+0.5**
TIA				pPKP	**pPKPdf**	**11 10 23.5**	**+0.2**
TIA				LR	LR		
	comp=Z,1µm,16.7s						
TIA				LR	LR		
	comp=Z,1µm,13.2s						
TIA				LR	LR		
	comp=Z,2µm,20.1s						
XAN	**Xi'an**	**176.43**	**66**	PKP	**PKPdf**	**11 09 38.3**	**+0.3**
XAN				SKKS		11 21 41.6	
XAN				AMB	AMB		
	comp=Z,2µm,12.5s						
XAN				LR	LR		
	comp=Z,480nm,19.1s						
XAN				LR	LR		
	comp=Z,630nm,19.8s						
XAN				LR	LR		
	comp=Z,770nm,25.0s						
WHN	**Wuhan**	**177.54**	**212**	⇓PKP	**PKPdf**	**11 09 39.0**	**+0.8**
WHN				pPKP	**pPKPdf**	**11 10 24.5**	**+0.4**
WHN				PKPab	PKPab	11 11 25.0	0.0
WHN				pPP		11 16 20.8	
WHN				AMB	AMB		
	comp=Z,4µm,6.8s						

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*NEIC **02** 11:04:28.1±1.5, 3°.94N±0°.06×95°.79E±0°.07, h35^{km}±1^{km},*
mb4.9/30 Error ellipse: s-maj=14.1km s-min=8.3km
az=52.0
*KLM **02** 11:04:31, 3°.98N×95°.76E, h58^{km}, mb5.1*
*IDC **02** 11:04:31.1±3.4, 4°.19N×95°.88E, h51^{km}±31^{km}, mb4.5/37,*
mb1 4.5/38, mb1mx4.4/71, mbtmp4.7/38, ML4.1/1, MS4.4/4,
Ms1 4.4/4, ms1mx3.8/41, Error ellipse: s-maj=14.6km
s-min=10.7km az=65.0
*DJA **02** 11:04:32.5±1.1, 4°N±3°×9°6E±°, h23^{km}±5^{km}, M5.0/12,*
mb5.0/4, mB5.5/3, MLv5.0/12, Mw(mB)5.0/3
ISC 02 11:04:30.2±0.4**, 3°.99N**±0°.05×**95°.86E**±0°.06**, h50**^{km}**, n171,**
σ**1^s.53**/166**, mb4.7**/61**, MS4.6**/4**, 1D, Off west coast of**
northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
MLSI	**Meulaboh, Aceh**	**0.61**	**63**	P	**Pn**	**11 04 44.1**	**+1.2**
MLSI				S	**Sn**	**11 04 52.9**	**+0.9**
TPTI		**1.51**	**119**	P	**Pn**	**11 04 56.4**	**+1.6**
TPTI				S	**Sn**	**11 05 14.5**	**+1.1**
LHMI	**Lhok Sumawe**	**1.65**	**41**		**Pn**	**11 04 58.4**	**+1.7**
LHMI	**Lhok Sumawe**	**1.65**	**41**	P	**Pn**	**11 04 58.7**	**+1.9**
LHMI				S	**Sn**	**11 05 19.7**	**+2.9**
TSI	**Tuntungan**	**2.75**	**100**	P	**Pn**	**11 05 14.7**	**+2.9**
GSI	**Gunungsitoli**	**3.17**	**147**		**Pn**	**11 05 19.0**	**+1.3**
GSI	**Gunungsitoli**	**3.17**	**147**	P	**Pn**	**11 05 19.2**	**+1.5**
PSI	**Prapat**	**3.28**	**111**	P	**Pn**	**11 05 23.1**	**+3.8**
	18nm,0.3s,baz=359,slow=4.9,SNR=34						
PSI				S	**Sn**	**11 05 55.6**	**-1.6**
	27nm,0.3s,baz=360,slow=14,SNR=8.6						
PKDT	**Phuket**	**4.60**	**32**	P	**Pn**	**11 05 37.0**	**-0.3**
	3.5nm18µm639nm,0.7s						
MNSI	**Mandailing Nat**	**4.89**	**130**	P	**Pn**	**11 05 43.4**	**+2.1**
KULM	**Kulim**	**4.95**	**75**	Pn	**Pn**	**11 05 43.0**	**+0.9**
KULM	**Kulim**	**4.95**	**75**	P	**Pn**	**11 05 44.0**	**+1.9**
IPM	**Ipoh**	**5.18**	**84**		**Pn**	**11 05 46.2**	**+0.9**
IPM	**Ipoh**	**5.18**	**84**	P	**Pn**	**11 05 47.0**	**+1.7**
TRTT	**Trang**	**5.40**	**45**	P	**Pn**	**11 05 48.0**	**-0.3**
	1.1nm3µm92nm,0.8s						
BKNI	**Bangkinang**	**6.33**	**125**	Pn	**Pn**	**11 06 02.7**	**+1.7**
BKNI	**Bangkinang**	**6.33**	**125**	P	**Pn**	**11 06 03.4**	**+2.4**
	4.8nm4µm156nm,0.5s						
PDSI	**Padang**	**6.70**	**136**	P	**Pn**	**11 06 08.4**	**+2.3**
	6.2nm9µm62nm,0.9s						
SDSI	**Sungai Dareh**	**7.41**	**131**	P	**Pn**	**11 06 18.8**	**+2.9**
PHET	**Kaeng Krachan**	**9.62**	**23**	P	**Pn**	**11 06 49.4**	**+3.2**
	1µm78nm,0.7s						
KSI	**Kapahiang**	**10.14**	**138**	P	Pn	11 06 59.4	+6.0
LHSI	**Lahat**	**10.91**	**135**	P	**Pn**	**11 07 06.0**	**+2.2**
MNAI	**Manna**	**10.91**	**139**		**Pn**	**11 07 04.5**	**+0.6**
SRAK	**Srakaew**	**11.68**	**31**	P	Pn	11 07 22.3	+7.9
MDSI	**Maura Dua**	**11.83**	**135**	P	**Pn**	**11 07 16.7**	**+0.3**
UTHA	**Uthaitani**	**12.03**	**17**	P	**Pn**	**11 07 22.3**	**+3.2**
	437nm26nm,0.8s						
KLSI		**12.37**	**134**	P	**Pn**	**11 07 24.3**	**+0.6**
CHAI	**Chaiyaphum**	**13.29**	**27**	P	**Pn**	**11 07 39.0**	**+2.7**
	749nm40nm,0.7s						
SUKH	**Sukhothai**	**13.91**	**15**	P	**P**	**11 07 51.0**	**-0.6**
	47nm,0.7s						
MHMT	**Maesarieng**	**14.25**	**8**	P	**Pn**	**11 07 49.8**	**+0.5**
	46nm,0.8s						
UTTA	**Uttaradit**	**14.43**	**18**	P	**Pn**	**11 07 54.2**	**+2.5**
	541nm65nm,0.6s						
CM05	**Chiang Mai Arr**	**14.64**	**12**	P	**Pn**	**11 07 58.0**	**+3.5**
	228nm29nm,0.8s						
CM04	**Chiang Mai Arr**	**14.65**	**12**	P	**Pn**	**11 07 58.0**	**+3.4**
	383nm50nm,0.8s						
CM13	**Chiang Mai Arr**	**14.65**	**12**	P	**Pn**	**11 07 57.0**	**+2.3**
	331nm45nm,0.8s						
CM01	**Chiang Mai Arr**	**14.66**	**12**	P	**Pn**	**11 07 58.1**	**+3.3**
	346nm37nm,0.9s						
CM02	**Chiang Mai Arr**	**14.67**	**12**	P	**Pn**	**11 07 58.0**	**+3.1**
	310nm41nm,0.9s						
CM15	**Chiang Mai Arr**	**14.69**	**12**	P	**P**	**11 08 00.1**	**-0.2**
	298nm41nm,0.7s						
CM09	**Chiang Mai Arr**	**14.69**	**12**	P	**Pn**	**11 07 58.0**	**+2.7**
	330nm47nm,0.8s						
CM31	**Chiang Mai Arr**	**14.70**	**12**	P	**P**	**11 08 00.3**	**0.0**
	11µm887nm,0.8s						
CM31	**Chiang Mai Arr**	**14.70**	**12**		**Pn**	**11 07 56.8**	**+1.6**
CMAR	**Chiang Mai Arr**	**14.70**	**12**	P	**Pn**	**11 07 57.5**	**+2.2**
	1.7nm,0.3s,baz=200,slow=11,SNR=40						
CMAR				LR	LR	11 13 22.4	
	comp=Z,640nm,21.8s,baz=274,slow=37						
CMAR	**Chiang Mai Arr**	**14.70**	**12**		**Pn**	**11 07 55.3**	**0.0**
CM36	**Chiang Mai Arr**	**14.79**	**12**	P	**Pn**	**11 07 59.0**	**+2.6**
DLV	**T Lat**	**14.79**	**57**		**Pn**	**11 07 56.3**	**-0.4**
CM32	**Chiang Mai Arr**	**14.87**	**11**	P	**Pn**	**11 08 00.0**	**+2.5**
LAMP	**Lampang**	**14.91**	**14**	P	**Pn**	**11 08 00.6**	**+2.5**
	55nm,0.7s						
CM35	**Chiang Mai Arr**	**14.95**	**12**	P	**Pn**	**11 08 00.0**	**+1.4**
CMMT	**Chiang Mai**	**15.04**	**11**	P	**Pn**	**11 08 00.3**	**+0.5**
	342nm16nm,1.2s						
CHTO	**Chiang Mai**	**15.04**	**11**	Pn	**Pn**	**11 07 60.0**	**+0.2**
CM33	**Chiang Mai Arr**	**15.05**	**11**	P	**Pn**	**11 08 01.0**	**+1.2**
CM34	**Chiang Mai Arr**	**15.12**	**12**	P	**Pn**	**11 08 02.0**	**+1.2**
PALK	**Pallekele**	**15.43**	**283**	P	**P**	**11 08 11.6**	**+3.1**
	0.7nm,0.3s,baz=198,slow=12,SNR=6.3						
PALK				S	Sn	11 10 39.8	-15
	1.2nm,0.3s,baz=192,slow=19,SNR=5.4						
PAYA	**Payao**	**15.78**	**14**	P	**Pn**	**11 08 11.3**	**+2.0**
	17µm326nm,0.9s						
SBUM	**Sibu**	**16.41**	**95**		**Pn**	**11 08 15.1**	**-2.2**
SLVN	**Son La**	**18.93**	**24**		**P**	**11 08 46.8**	**-0.5**
SPMM	**Sapulut**	**20.56**	**87**	P	Pn	11 09 18.0	+10
KMI	**Kunming**	**22.03**	**17**	⇓P	**P**	**11 09 22.5**	**+1.5**
KMI				pmax	pmax		
	comp=Z,10.0nm,0.6s						
MYLDM	**Lahad Datu**	**22.60**	**86**		**P**	**11 09 24.4**	**-2.5**
H08S2	**Diego Garcia H**	**26.02**	**244**	T	T	11 37 09.8	
	baz=65,slow=74,SNR=21						
H08S3	**Diego Garcia H**	**26.02**	**244**	T	T	11 37 06.9	
	baz=65,slow=74,SNR=168						
H08S1	**Diego Carcia H**	**26.03**	**244**	T	T	11 37 12.0	
	baz=65,slow=74,SNR=3.3						
FITZ	**Fitzroy Crossi**	**36.66**	**128**	P	**P**	**11 11 32.0**	**-0.4**
	baz=37,SNR=5.4						
JOW	**Kunigami**	**38.42**	**50**	P	**P**	**11 11 46.9**	**-0.3**
	11nm,0.6s,baz=149,slow=15,SNR=5.9						
JOW				LR	LR	11 27 15.6	
	comp=Z,528nm,20.6s,baz=206,slow=36						
MTN	**Manton Dam**	**38.83**	**116**	P	**P**	**11 11 48.8**	**-1.9**
	baz=39,SNR=27						
MTN	**Manton Dam**	**38.83**	**116**		**P**	**11 11 48.6**	**-2.1**
MUN	**Mundaring**	**40.67**	**153**	P	**P**	**11 12 08.2**	**+2.4**
	baz=41,SNR=3.8						
NWAO	**Narrogin (SRO)**	**41.93**	**153**	P	**P**	**11 12 17.4**	**+1.2**
	13nm,0.7s,baz=311,slow=8.6,SNR=7.2						
NWAO	**Narrogin (SRO)**	**41.93**	**153**	P	**P**	**11 12 15.8**	**-0.4**
NWAO				IAmb	IAmb	11 12 19.1	
	comp=Z,13nm,0.9s						
NWAO	**Narrogin (SRO)**	**41.93**	**153**	P	**P**	**11 12 15.8**	**-0.4**
NWAO				IAmb	IAmb	11 12 19.1	
	comp=Z,17nm,0.9s						
H01W3	**Cape Leeuwin H**	**42.32**	**157**	T	T	11 56 15.8	
	baz=334,slow=76,SNR=5.3						
H01W2	**Cape Leeuwin H**	**42.33**	**157**	T	T	11 56 11.6	
	baz=334,slow=76,SNR=6.2						
H01W1	**Cape Leeuwin H**	**42.33**	**157**	T	T	11 56 14.9	
	baz=334,slow=76,SNR=4.8						
MKAR	**Makanchi Array**	**44.23**	**347**	P	**P**	**11 12 33.5**	**-1.2**
	comp=Z,11nm,0.4s,baz=163,slow=7.6,SNR=18						
KSRS	**Korea Array**	**44.39**	**37**	P	**P**	**11 12 35.5**	**-0.5**
	comp=Z,4.7nm,0.6s,baz=218,slow=9.4,SNR=13						
SONM	**Songino Array**	**44.62**	**10**	P	**P**	**11 12 36.8**	**-1.0**
	comp=Z,23nm,0.7s,baz=191,slow=8.3,SNR=17						
SONM				PcP	**PcP**	**11 14 19.5**	**-0.5**
	comp=Z,4.6nm,0.6s,baz=206,slow=4.3,SNR=5.6						
SONM	**Songino Array**	**44.62**	**10**	P	**P**	**11 12 36.8**	**-1.0**
WB0	**Warramunga Arr**	**44.63**	**123**	P	**P**	**11 12 38.0**	**-0.1**
WB0				IAmb	IAmb	11 12 54.2	
	comp=Z,19nm,0.8s						
WRA	**Warramunga Arr**	**44.66**	**124**	P	**P**	**11 12 39.4**	**+0.9**
	comp=Z,21nm,0.9s,baz=302,slow=9.0,SNR=18						
WRAB	**Tennant Creek**	**44.67**	**124**	P	**P**	**11 12 38.2**	**-0.3**
WRAB				IAmb	IAmb	11 12 54.7	
	comp=Z,25nm,0.9s						
WB2	**Warramunga Arr**	**44.67**	**124**	P	**P**	**11 12 38.2**	**-0.3**
WR0	**Warramunga Arr**	**44.84**	**124**		**P**	**11 12 39.6**	**-0.3**
AS31	**Alice Springs**	**46.15**	**128**	P	**P**	**11 12 49.9**	**-0.4**
ASAR	**Alice Springs**	**46.15**	**128**	P	**P**	**11 12 51.0**	**+0.8**
	comp=Z,3.3nm,0.7s,baz=294,slow=7.5,SNR=6.4						
FORT	**Forrest**	**46.26**	**141**	P	**P**	**11 12 50.4**	**-0.5**
CN2	**Changchun**	**47.49**	**29**	*e*P	**P**	**11 12 59.4**	**-0.9**
CN2				pmax	pmax		
	comp=Z,20nm,0.8s						
CN2				pmax	pmax		
	comp=Z,160nm,6.4s						
CN2				LR	LR		
	comp=Z,2µm,21.0s						
CN2				LR	LR		
	comp=Z,2µm,21.0s						
CN2				LR	LR		
	comp=Z,1µm,21.0s						
TLY	**Talaya**	**47.98**	**7**	P	**P**	**11 13 03.9**	**-0.1**
	comp=Z,8.2nm,0.6s,baz=261,slow=21,SNR=3.5						
GEYT	**Alibeck**	**48.23**	**320**	P	**P**	**11 13 06.0**	**-0.2**
	comp=Z,6.7nm,0.5s,baz=148,slow=8.7,SNR=6.5						
GEYT	**Alibeck**	**48.23**	**320**	P	**P**	**11 13 06.1**	**-0.2**
KURBB	**Kurchatov Arra**	**48.71**	**345**	P	**P**	**11 13 08.2**	**-1.4**
	comp=Z,13nm,0.6s,baz=163,slow=6.9,SNR=15						
MJAR	**Matsushiro Arr**	**50.60**	**45**	P	**P**	**11 13 23.9**	**-0.5**
	comp=Z,3.6nm,0.8s,baz=224,slow=6.9,SNR=5.0						
ZAA0	**Zalesovo Array**	**50.62**	**352**	P	**P**	**11 13 23.4**	**-0.7**
ZALV	**Zalesovo Beam**	**50.62**	**352**	P	**P**	**11 13 22.9**	**-1.2**
	comp=Z,39nm,0.5s,baz=165,slow=6.9,SNR=15						
USRK	**Ussuriysk Ar.**	**51.13**	**33**	P	**P**	**11 13 29.2**	**+1.0**
	comp=Z,5.1nm,0.7s,baz=238,slow=5.5,SNR=8.0						
BBOO	**Buckleboo**	**52.81**	**137**	P	**P**	**11 13 41.6**	**+0.8**
	baz=53,SNR=6.2						
BVAR	**Borovoye Array**	**53.20**	**341**	P	**P**	**11 13 42.5**	**-0.9**
	comp=Z,3.6nm,0.6s,baz=148,slow=11,SNR=4.5						
KLR	**Kul'dur**	**54.41**	**28**	P	**P**	**11 13 50.8**	**-1.5**

	comp=Z,19nm,1.0s,baz=33,slow=5.5,SNR=5.1						
ABKAR	**Akbulak array**	**54.44**	**332**	P	**P**	**11 13 52.0**	**-0.5**
ABKAR	**Akbulak array**	**54.44**	**332**	P	**P**	**11 13 52.5**	**0.0**
ABKAR				IAmb	IAmb	11 13 53.3	
	comp=Z,33nm,1.2s						
HTT	**Hallett**	**55.14**	**136**	P	**P**	**11 13 59.2**	**+1.3**
	baz=55,SNR=4.0						
QLP	**Quilpie**	**55.76**	**126**	P	**P**	**11 14 03.8**	**+1.4**
	baz=56,SNR=4.8						
AKTO	**Aktyubinsk**	**56.16**	**332**	P	**P**	**11 14 04.4**	**-0.4**
	comp=Z,7.2nm,0.4s,baz=118,slow=7.5,SNR=11						
STKA	**Stephens Creek**	**56.22**	**133**	P	**P**	**11 14 06.8**	**+1.2**
	baz=56,SNR=10						
STKA	**Stephens Creek**	**56.22**	**133**	P	**P**	**11 14 06.7**	**+1.2**
	comp=Z,9.7nm,0.7s,baz=311,slow=8.6,SNR=15						
STKA	**Stephens Creek**	**56.22**	**133**	P	**P**	**11 14 05.2**	**-0.4**
CMSA	**Cobar Meteorol**	**59.11**	**130**	P	**P**	**11 14 27.3**	**+1.4**
	baz=59,SNR=26						
ARU	**Arti**	**60.11**	**337**	P	**P**	**11 14 31.5**	**-0.9**
	comp=Z,2.3nm,0.3s,baz=72,slow=3.2,SNR=3.9						
KBZ	**Khabaz**	**61.10**	**319**	P	**P**	**11 14 39.8**	**+0.5**
	comp=Z,8.2nm,0.9s,baz=113,slow=6.4,SNR=5.3						
KIRV	**Kirov**	**65.23**	**335**	P	**P**	**11 15 05.6**	**-0.8**
	comp=Z,16nm,0.5s,baz=243,slow=0.7,SNR=4.4						
NRIK	**Noril'sk**	**65.49**	**357**	P	**P**	**11 15 06.4**	**-1.4**
	comp=Z,4.2nm,0.3s,baz=134,slow=3.3,SNR=7.3						
NRIK	**Noril'sk**	**65.49**	**357**	P	**P**	**11 15 06.0**	**-1.9**
BR131	**Keskin Array S**	**66.26**	**312**	P	**P**	**11 15 12.5**	**-1.1**
BR131				IAmb	IAmb	11 15 34.1	
	comp=Z,8.2nm,0.9s						
BRTR	**Keskin Array B**	**66.26**	**312**	P	**P**	**11 15 13.2**	**-0.4**
	comp=Z,2.3nm,0.4s,baz=139,slow=4.4,SNR=8.3						
BRTR	**Keskin Array B**	**66.26**	**312**	P	**P**	**11 15 12.9**	**-0.8**
MA2	**Magadan**	**69.43**	**26**	P	**P**	**11 15 32.6**	**-0.3**
	comp=Z,16nm,0.7s,baz=236,slow=7.0,SNR=10.0						
PETK	**Petropavlovsk-**	**70.19**	**34**	P	**P**	**11 15 36.6**	**-1.2**
	comp=Z,5.0nm,0.8s,baz=256,slow=3.9,SNR=7.2						
PETK	**Petropavlovsk-**	**70.19**	**34**	P	**P**	**11 15 36.3**	**-1.4**
MATP	**Matopo**	**70.35**	**247**	P	**P**	**11 15 41.4**	**+1.8**
	comp=Z,1.7nm,0.9s,baz=75,slow=10,SNR=3.8						
TIXI	**Tiksi**	**70.70**	**11**	P	**P**	**11 15 39.3**	**-1.2**
TIXI				IAmb	IAmb	11 15 39.8	
	comp=Z,10nm,0.6s						
SEY	**Seymchan**	**71.75**	**24**	P	**P**	**11 15 46.4**	**-0.6**
	comp=Z,5.6nm,0.4s,baz=238,slow=6.0,SNR=15						
AKASG	**Malin Array Be**	**72.25**	**322**	P	**P**	**11 15 49.4**	**-0.9**
	comp=Z,2.4nm,0.4s,baz=87,slow=5.0,SNR=11						
AKASG	**Malin Array Be**	**72.25**	**322**	P	**P**	**11 15 49.3**	**-1.0**
MLR	**Muntele Rosu**	**73.14**	**316**	P	**P**	**11 15 55.7**	**-0.1**
	comp=Z,6.1nm,0.9s,baz=280,slow=14,SNR=3.5						
MLR	**Muntele Rosu**	**73.14**	**316**	P	**P**	**11 15 55.2**	**-0.6**
MLR				IAmb	IAmb	11 16 14.5	
	comp=Z,16nm,1.1s						
BURAR	**Bucovina Array**	**74.06**	**318**	P	**P**	**11 16 01.3**	**+0.1**
BUR08	**Bucovina Ar. S**	**74.08**	**318**	P	**P**	**11 16 01.2**	**0.0**
BUR08				IAmb	IAmb	11 16 19.7	
	comp=Z,7.9nm,1.1s						
BOSA	**Boshof**	**75.02**	**239**	P	**P**	**11 16 08.3**	**+1.1**
	comp=Z,3.8nm,1.0s,baz=86,slow=19,SNR=3.3						
LVZ	**Lovozero**	**75.77**	**340**	P	**P**	**11 16 10.0**	**-0.6**
KWP	**Kalwaria Pacla**	**76.08**	**320**	P	**P**	**11 16 11.6**	**-1.1**
KWP				IAmb	IAmb	11 16 34.6	
	comp=Z,24nm,1.3s						
KOLS	**Kolonicke sedl**	**76.24**	**319**	*e*P	**P**	**11 16 15.0**	**+1.4**
CRVS	**Cervenica-Dubn**	**76.76**	**319**	*e*P	**P**	**11 16 18.4**	**+1.9**
FIA1	**FINESS Array S**	**76.92**	**332**	P	**P**	**11 16 16.0**	**-1.1**
FIA1				IAmb	IAmb	11 16 17.6	
	comp=Z,13nm,0.8s						
FINES	**FINESS Array B**	**76.92**	**332**	P	**P**	**11 16 17.0**	**-0.1**
	comp=Z,9.6nm,0.6s,baz=101,slow=6.2,SNR=25						
FINES	**FINESS Array B**	**76.92**	**332**	P	**P**	**11 16 16.8**	**-0.4**
JAVC	**Velka Javorina**	**79.24**	**319**	*e*P	**P**	**11 16 31.6**	**+1.3**
JAVC				*e*		11 16 46.2	
MORC	**Moravsky Berou**	**79.42**	**320**	*e*P	**P**	**11 16 31.5**	**+0.2**
MORC				*e*		11 16 44.6	
ARCES	**ARCESS Array B**	**79.48**	**340**	P	**P**	**11 16 30.8**	**-0.3**
	comp=Z,4.8nm,0.4s,baz=100,slow=6.9,SNR=60						
ARCES				LR	LR	11 55 58.0	
	comp=Z,298nm,20.3s,baz=225,slow=39						
ARCES	**ARCESS Array B**	**79.48**	**340**	P	**P**	**11 16 30.4**	**-0.8**
VRAC	**Vranov**	**79.99**	**319**	*e*P	**P**	**11 16 34.0**	**-0.3**
KRUC	**Moravsky**	**80.09**	**319**	*e*P	**P**	**11 16 34.1**	**-0.8**
CONA	**Conrad Observa**	**80.35**	**318**	*e*P	**P**	**11 16 33.4**	**-3.0**
	comp=Z,7.4nm,1.9s						
ARSA	**Arzberg**	**80.52**	**317**	*e*P	**P**	**11 16 37.1**	**-0.2**
	comp=Z,12nm,1.2s						
SOKA	**Soboth**	**80.81**	**316**	*e*P	**P**	**11 16 39.7**	**+0.7**
	comp=Z,5.6nm,0.7s						
OBKA	**Obir**	**81.14**	**316**	*e*P	**P**	**11 16 42.9**	**+2.2**
	comp=Z,6.2nm,1.1s						
MOA	**Molln**	**81.41**	**318**	*e*P	**P**	**11 16 39.5**	**-2.5**
	comp=Z,6.0nm,1.6s						
MYKA	**Terra Mystica**	**81.77**	**316**	*e*P	**P**	**11 16 44.0**	**0.0**
	comp=Z,0.9nm,0.4s						
GEC2	**GERESS Array S**	**81.85**	**319**	P	**P**	**11 16 43.9**	**-0.5**
GEC2				IAmb	IAmb	11 17 01.0	
	comp=Z,27nm,1.5s						
GERES	**GERESS Array B**	**81.85**	**319**	P	**P**	**11 16 45.4**	**+1.0**
	comp=Z,1.5nm,0.5s,baz=90,slow=5.3,SNR=10.0						
GERES	**GERESS Array B**	**81.85**	**319**	P	**P**	**11 16 43.9**	**-0.5**
KBA	**Koelnbreinsper**	**81.99**	**317**	*e*P	**P**	**11 16 42.1**	**-3.2**
	comp=Z,0.6nm,0.6s						
ABTA	**Abfaltersbach**	**82.55**	**316**	*e*P	**P**	**11 16 46.7**	**-1.4**
	comp=Z,5.6nm,1.4s						
HFS	**Hagfors**	**82.65**	**330**	P	**P**	**11 16 48.1**	**-0.1**
	comp=Z,2.4nm,0.4s,baz=109,slow=4.7,SNR=27						
WTTA	**Wattenberg**	**83.17**	**317**	*e*P	**P**	**11 16 51.3**	**-0.1**
	comp=Z,13nm,1.5s						
WATA	**Walderalm**	**83.21**	**317**	*e*P	P	11 16 48.1	-3.5
	comp=Z,4.9nm,0.8s						
SQTA	**Sankt Quirin**	**83.46**	**317**	*e*P	**P**	**11 16 54.6**	**+1.8**
	comp=Z,4.7nm,0.6s						
MOTA	**Moosalm**	**83.53**	**317**	*e*P	**P**	**11 16 52.9**	**-0.3**
	comp=Z,7.9nm,0.9s						
RETA	**Reutte**	**83.76**	**317**	*e*P	**P**	**11 16 54.7**	**+0.3**
	comp=Z,5.9nm,0.6s						
FETA	**Feichten**	**83.78**	**317**	*e*P	**P**	**11 16 53.5**	**-1.0**
	comp=Z,8.0nm,2.0s						
NB2	**NORSAR Subarra**	**83.93**	**331**	P	**P**	**11 16 54.2**	**-0.7**
	comp=Z,0.8nm,0.5s,baz=93,slow=5.3						
NOA	**NORSAR Array B**	**83.93**	**331**	P	**P**	**11 16 54.1**	**-0.7**
	comp=Z,2.2nm,0.8s,baz=94,slow=5.0,SNR=6.1						
NOA				LR	LR	11 55 55.4	
	comp=Z,287nm,20.1s,baz=250,slow=37						
DAVOX	**Davos/Dischmat**	**84.36**	**316**	P	**P**	**11 16 58.1**	**+0.5**
	comp=Z,2.6nm,0.4s,baz=62,slow=6.2,SNR=7.0						
DAVA	**Damuels**	**84.36**	**317**	*e*P	**P**	**11 16 56.0**	**-1.5**
	comp=Z,19nm,1.1s						
TORD	**Torodi Ar. Bea**	**93.15**	**283**	P	**P**	**11 17 41.5**	**+1.7**
	comp=Z,0.7nm,0.8s,baz=86,slow=5.0,SNR=2.5						
QSPA	**South Pole Qui**	**93.91**	**180**	P	**P**	**11 17 44.2**	**+1.9**
	comp=Z,0.6nm,0.5s,baz=234,slow=1.2,SNR=7.8						
QSPA	**South Pole Qui**	**93.91**	**180**		**P**	**11 17 40.2**	**-2.2**
IMAR	**Indian Mountai**	**94.55**	**23**		**P**	**11 17 44.7**	**-0.4**
TTA	**Tatalina**	**94.62**	**26**	P	**P**	**11 17 44.9**	**-0.9**
TTA				IAmb	IAmb	11 18 07.2	
	comp=Z,3.9nm,1.3s						
ULM	**Lac du Bonnet**	**125.04**	**9**	PKP	**PKPdf**	**11 23 26.6**	**+1.5**
	comp=Z,1.8nm,0.6s,baz=315,slow=8.6,SNR=4.7						
NVAR	**Mina Array Bea**	**127.27**	**34**	PKP	**PKPdf**	**11 23 31.5**	**+1.5**
	comp=Z,0.8nm,0.8s,baz=279,slow=1.7,SNR=2.4						
PDAR	**Pinedale Array**	**128.09**	**24**	PKP	**PKPdf**	**11 23 32.0**	**+0.4**
	comp=Z,0.4nm,0.7s,baz=46,slow=3.1,SNR=2.8						
TXAR	**Lajitas Array**	**141.94**	**28**	PKP	**PKPdf**	**11 23 54.9**	**-2.7**
	comp=Z,0.3nm,0.5s,baz=343,slow=5.6,SNR=3.6						
CPUP	**Villa Florida**	**146.04**	**226**	PKPbc	**PKPdf**	**11 24 05.5**	**+0.9**
	comp=Z,2.4nm,0.7s,baz=196,slow=2.4,SNR=5.8						

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*ECX **02** 11:04:34.5±0.6, 28°.00N×112°.05W, h0^{km}±8^{km}, MD2.5*
*MEX **02** 11:04:36.7±1.0, 27°.86N×111°.89W, h5^{km}±16^{km}, MD3.6*
ISC 02 11:04:33.8±2.0**, 28°.0N**±0°.1×**111°.95W**±0°.07**, h6**^{km}±17^{km}**, n6, σ0^{s}.59**/12**, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SRIG	**Santa Rosalia**	**0.72**	**201**	*i* P	**Pg**	**11 04 47.5**	**-0.1**
	baz=32,slow=6.5						
SRIG				*i* S	**Sg**	**11 04 57.3**	**+0.4**
SRIG	**Santa Rosalia**	**0.72**	**201**	*e*P	**Pg**	**11 04 47.3**	**-0.3**
SRIG				*e*S	**Sg**	**11 04 57.2**	**+0.3**
GUYB	**Guaymas**	**0.96**	**95**	*i* P	**Pg**	**11 04 52.6**	**+0.4**
GUYB				*i* S	**Sg**	**11 05 03.8**	**-0.9**
GUYB	**Guaymas**	**0.96**	**95**	*e*P	**Pg**	**11 04 52.5**	**+0.4**
GUYB				*e*S	**Sn**	**11 05 07.8**	**+0.1**
HSIG		**1.35**	**41**	*i* P	**Pn**	**11 04 59.1**	**-0.1**
HSIG				*i* S	**Sn**	**11 05 16.8**	**-0.7**
HSIG		**1.35**	**41**	*e*P	**Pn**	**11 04 59.1**	**-0.1**
HSIG				*e*S	**Sn**	**11 05 18.5**	**+1.0**

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*ROM **02** 12:10:07.7±0.2, 43°.41N±0°.01×8°.28E±0°.02, h15^{km}±2^{km}, ML2.7/13, Error ellipse: s-maj=1.6km s-min=0.3km az=232.0*
*STR **02** 12:10:08.7±0.4, 43°N±2°×°±°, h0^{km}, MLv3.2/13, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/alpes_taup-2.11 preliminary*
*LDG **02** 12:10:08.2±0.1, 43°.39N×8°.24E, h10^{km}, Md2.9/1, Ml2.9/22, Error ellipse: s-maj=2.6km s-min=1.9km az=39.0*
*GEN **02** 12:10:09.2, 43°.44N×8°.26E, h14^{km}±1^{km}, Ml2.8*
ISC 02 12:10:07.0±1.1**, 43°.36N**±0°.02×**8°.17E**±0°.02**, h18**^{km}±4^{km}**, n83, σ1^{s}.44**/114**, 2C-2D, Corsica**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IMI	**Imperia**	**0.58**	**340**	P	**Pg**	**12 10 19.8**	**+1.1**
IMI				S	**Sg**	**12 10 26.7**	**+0.2**
IMI	**Imperia**	**0.58**	**340**	⇓P	**Pg**	**12 10 19.8**	**+1.1**
IMI				S	**Sg**	**12 10 26.8**	**+0.2**
IMI				AML	AML		
	comp=E,1420µm,0.8s						
IMI				AML	AML		
	comp=N,1010µm,0.1s						
IMI				AML	AML		
	comp=E,1420µm,0.8s						
IMI				AML	AML		
	comp=N,1011µm,0.1s						
MON	**Monaco**	**0.66**	**304**	Pg	**Pb**	**12 10 21.6**	**+1.7**
MON				Sg	**Sb**	**12 10 29.5**	**+0.8**
MGRO	**Montegrosso**	**0.73**	**339**	P	**Pg**	**12 10 22.2**	**+0.8**
MGRO				S	**Sg**	**12 10 31.0**	**-0.2**
MGRO	**Montegrosso**	**0.73**	**339**	P	**Pg**	**12 10 22.2**	**+0.8**
MGRO				S	**Sg**	**12 10 30.9**	**-0.2**
MGRO				AML	AML		
	comp=E,522µm,0.5s						
MGRO				AML	AML		
	comp=N,534µm,0.2s						
MGRO				AML	AML		
	comp=N,534µm,0.2s						
SBF	**Sospel**	**0.73**	**313**	*e*Pg	**Pg**	**12 10 22.0**	**+0.6**
SBF				*e*Sg	**Sg**	**12 10 30.9**	**-0.3**
	comp=N,344nm,0.3s						
RORO	**Rocca Rossa**	**0.75**	**354**	P	**Pg**	**12 10 22.1**	**+0.3**
RORO				S	**Sg**	**12 10 30.7**	**-1.2**
RORO	**Rocca Rossa**	**0.75**	**354**	⇑P	**Pg**	**12 10 22.1**	**+0.3**
RORO				S	**Sg**	**12 10 30.6**	**-1.2**
RORO				AML	AML		
	comp=E,949µm,1.0s						
RORO				AML	AML		
	comp=N,808µm,1.0s						
SAOF	**Saorge**	**0.77**	**325**	Pg	**Pg**	**12 10 22.8**	**+0.7**
SAOF				Sg	**Sg**	**12 10 32.2**	**0.0**
SAOF	**Saorge**	**0.77**	**325**	⇓P	**Pg**	**12 10 22.8**	**+0.7**
SAOF				S	**Sg**	**12 10 32.3**	**0.0**
SAOF	**Saorge**	**0.77**	**325**	AML	AML		
	comp=N,1275µm,0.1s						
SAOF				AML	AML		
	comp=E,1545µm,1.5s						
FINB	**Finale Ligure**	**0.82**	**8**	P	**Pg**	**12 10 23.1**	**0.0**
FINB				S	**Sg**	**12 10 32.9**	**-1.1**
FINB				AML	AML		
	comp=N,590µm,0.3s						
FINB				AML	AML		
	comp=E,402µm,1.2s						
TURF	**col de Turini**	**0.83**	**317**	Pg	**Pg**	**12 10 23.9**	**+0.6**
TURF				Sg	**Sb**	**12 10 34.6**	**+0.6**
GBOS	**Grotte di Boss**	**0.91**	**345**	S	**Sg**	**12 10 35.5**	**-1.3**
GBOS	**Grotte di Boss**	**0.91**	**345**	P	**Pg**	**12 10 25.1**	**+0.3**
GBOS				S	**Sg**	**12 10 35.6**	**-1.3**
CALF	**Calern**	**0.99**	**294**	Pg	**Pn**	**12 10 26.6**	**+0.4**
CALF				Sg	**Sn**	**12 10 38.8**	**-0.9**
PGF	**Pioggiola**	**1.02**	**143**	*e*Pn	**Pg**	**12 10 26.1**	**-0.7**
PGF				*e*Sn	**Sg**	**12 10 38.6**	**-1.6**
	comp=E,33nm,0.2s						
PGF	**Pioggiola**	**1.02**	**143**	P	**Pg**	**12 10 26.4**	**-0.4**
PGF				S	**Sg**	**12 10 38.5**	**-1.7**
ENR	**Entracque**	**1.02**	**328**	P	**Pg**	**12 10 26.9**	**+0.1**
ENR				S	**Sg**	**12 10 39.2**	**-1.1**
ENR	**Entracque**	**1.02**	**328**	P	**Pg**	**12 10 27.0**	**+0.1**
ENR				S	**Sg**	**12 10 39.2**	**-1.1**
ENR				AML	AML		
	comp=E,783µm,0.1s						
ENR				AML	AML		
	comp=N,806µm,0.1s						
ENR				AML	AML		
	comp=N,805µm,0.1s						
ENR				AML	AML		
	comp=E,782µm,0.1s						
STV	**Sant Anna di V**	**1.07**	**326**	P	**Pg**	**12 10 27.8**	**-0.1**
STV				S	**Sg**	**12 10 40.6**	**-1.4**
STV	**Sant Anna di V**	**1.07**	**326**	P	**Pg**	**12 10 27.8**	**-0.1**
STV				S	**Sg**	**12 10 40.5**	**-1.5**
STV				AML	AML		
	comp=E,372µm,0.9s						
STV				AML	AML		
	comp=E,372µm,0.9s						
STV				AML	AML		
	comp=N,218µm,1.5s						
FRF	**La Foret Royal**	**1.13**	**281**	*e*Pn	**Pn**	**12 10 28.5**	**+0.6**
FRF				*e*Sn	**Sn**	**12 10 42.1**	**-0.9**
	comp=N,109nm,0.2s						
PCP	**Piancastagn**	**1.21**	**13**	P	**Pn**	**12 10 28.7**	**-0.4**
PCP	**Piancastagn**	**1.21**	**13**	P	**Pn**	**12 10 28.7**	**-0.4**
PCP				S	**Sb**	**12 10 42.8**	**-1.9**
PCP				AML	AML		
	comp=E,125µm,0.8s						
PCP				AML	AML		
	comp=N,118µm,0.8s						
PCP				AML	AML		
	comp=E,125µm,0.8s						
LMR	**La Mourre**	**1.21**	**269**	*e*Pn	**Pn**	**12 10 29.7**	**+0.6**
LMR				*e*Sn	**Sn**	**12 10 44.1**	**-1.0**
	comp=E,31nm,0.2s						
GROG	**Isola di Gorgo**	**1.25**	**87**	P	Pn	12 10 27.9	-1.7
MSSA	**Maissana**	**1.36**	**45**	⇑P	Pn	12 10 31.1	-0.1
MSSA				S	Sn	12 10 46.4	-2.5
PZZ	**Stroppo**	**1.37**	**327**	P	**Pn**	**12 10 32.2**	**+0.7**
PZZ				AML	AML		
	comp=N,158µm,0.4s						
PZZ				AML	AML		
	comp=E,146µm,0.5s						
GORR	**Gorreto**	**1.48**	**33**	P	Pn	12 10 32.6	-0.3
AJAC	**Base Areonaval**	**1.50**	**163**	Pn	**Pg**	**12 10 38.3**	**+2.3**
AJAC				Sn	**Sb**	**12 10 56.3**	**+3.3**
AJAC	**Base Areonaval**	**1.50**	**163**	P	**Pg**	**12 10 38.2**	**+2.3**
SMPL	**Sampolo**	**1.51**	**147**	P	**Pn**	**12 10 34.3**	**+1.1**
OGDI	**Digne**	**1.55**	**299**	Pn	**Pg**	**12 10 36.4**	**-0.5**
ASEAF	**Site Antares,**	**1.58**	**250**	Pn	**Pg**	**12 10 35.5**	**-1.8**
ASEAF				Sn	**Sg**	**12 10 54.5**	**-3.4**
OGAG	**Argentiere**	**1.61**	**313**	Pn	**Pg**	**12 10 41.9**	**+3.9**
OGAG				Sn	**Sg**	**12 11 04.2**	**+5.3**
CELB	**S.Piero in Cam**	**1.62**	**112**	P	Pn	12 10 34.7	0.0
EQUI	**Equi**	**1.64**	**60**	P	Pn	12 10 35.2	+0.2
BLAF	**les Blancs**	**1.65**	**292**	Pn	**Pn**	**12 10 34.1**	**-1.1**
BLAF				Pg	**Pb**	**12 10 37.1**	**+0.1**
BLAF				Sn	**Sg**	**12 10 57.1**	**-3.2**
BOB	**Bobbio (Coli)**	**1.68**	**33**	P	**Pn**	**12 10 36.4**	**+0.8**
MBDF	**Montbardon**	**1.70**	**324**	*e*Pn	**Pn**	**12 10 37.4**	**+1.5**
MBDF				*e*Sn	**Sn**	**12 10 58.2**	**+1.0**
	comp=E,30nm,0.2s						
ARTF	**Artigues**	**1.74**	**278**	Pn	**Pb**	**12 10 38.1**	**-0.3**
PII	**Pisa**	**1.75**	**77**	P	Pn	12 10 36.9	+0.5
PII				AML	AML		
	comp=N,97µm,0.4s						
PII				AML	AML		
	comp=E,79µm,1.3s						
MAIM	**Mastiano**	**1.77**	**71**	P	Pn	12 10 37.2	+0.4
MAIM				AML	AML		
	comp=E,78µm,1.4s						
MAIM				AML	AML		
	comp=N,62µm,1.5s						
MAIM				AML	AML		
	comp=E,79µm,1.4s						
VLC	**Villacollemand**	**1.79**	**63**	P	Pn	12 10 37.7	+0.6
SARO	**Sassorosso**	**1.81**	**62**	P	Pn	12 10 38.1	+0.6
BSTF	**la Bastide-des**	**1.91**	**287**	Pn	**Pb**	**12 10 40.2**	**-1.1**
BSTF				Sn	**Sn**	**12 11 02.1**	**-0.1**
SMRF	**Simiane la Rot**	**1.98**	**289**	*e*Pn	**Pb**	**12 10 41.4**	**-1.2**
SMRF				*e*Sn	**Sn**	**12 11 04.2**	**+0.1**
	comp=E,16nm,0.3s						
POPM	**Popiglio**	**2.00**	**69**	P	**Pn**	**12 10 40.8**	**+0.9**
RUSF	**Rustrel**	**2.04**	**287**	Pn	**Pb**	**12 10 42.3**	**-1.2**
CASP	**Castiglione de**	**2.06**	**105**	P	Pn	12 10 40.9	+0.2
MTCR	**Monte La Croce**	**2.15**	**71**	P	**Pn**	**12 10 43.4**	**+1.3**
ORIF	**Oris-en-Rattie**	**2.27**	**314**	*e*Pg	**Pg**	**12 10 51.3**	**+0.7**
ORIF				*e*Sn	**Sn**	**12 11 11.2**	**0.0**
	comp=E,26nm,0.4s						
GDM	**Grand'Maison**	**2.36**	**322**	Pn	**Pn**	**12 10 48.4**	**+3.4**
LPG	**La Plagne**	**2.36**	**335**	*e*Pn	**Pn**	**12 10 46.1**	**+0.9**
LPG				*e*Sn	**Sn**	**12 11 14.3**	**+0.4**
	comp=E,22nm,0.6s						
MAON	**Monte Argentar**	**2.37**	**112**	P	**Pn**	**12 10 45.3**	**+0.3**
LPL	**La Plagne**	**2.39**	**335**	*e*Pn	**Pn**	**12 10 46.1**	**+0.6**
LPL				*e*Sn	**Sn**	**12 11 14.5**	**+0.1**
	comp=E,13nm,0.5s						
RSL	**Roselend**	**2.57**	**335**	Pn	**Pn**	**12 10 52.1**	**+4.1**
MMK	**Mattmark**	**2.69**	**357**	P	**Pn**	**12 10 50.6**	**+0.9**
VIVF	**Saint-Julien-l**	**2.93**	**302**	*e*Pn	**Pn**	**12 10 53.7**	**+1.0**
VIVF				*e*Sn	**Sn**	**12 11 25.8**	**-1.7**
	comp=E,9.1nm,0.2s						
ROVR	**Rover Verones**	**3.08**	**41**	P	Pn	12 10 54.5	-0.5
MABI	**Malga Bissina**	**3.17**	**31**	P	**Pn**	**12 10 57.4**	**+1.2**
LASF	**Ste Croix**	**3.21**	**284**	*e*Pn	**Pn**	**12 10 57.5**	**+0.9**
LASF				*e*Sn	**Sn**	**12 11 32.4**	**-1.9**
	comp=E,11nm,0.6s						
CTI	**Castel Tesino**	**3.65**	**42**	AML	AML		
	comp=N,46µm,1.2s						
CTI				AML	AML		
	comp=E,43µm,0.2s						
SJAF	**Saint Jean de**	**3.98**	**259**	Pn	**Pn**	**12 11 08.1**	**+0.9**
FETA	**Feichten**	**4.08**	**25**	*e*Pn	**Pn**	**12 11 09.0**	**+0.3**
	comp=E,0.3nm,0.1s						
MTLF	**Montolieu**	**4.34**	**272**	*e*Pn	**Pn**	**12 11 13.0**	**+0.9**
MTLF				*e*Sn	**Sn**	**12 12 01.0**	**-1.3**
	comp=E,3.3nm,0.4s						
SQTA	**Sankt Quirin**	**4.41**	**28**	*e*Pn	**Pn**	**12 11 14.1**	**+0.9**
	comp=E,0.7nm,0.1s						
FNEB	**Nbias**	**4.46**	**266**	Pn	**Pn**	**12 11 15.2**	**+1.4**
MOTA	**Moosalm**	**4.49**	**26**	*e*Pn	**Pn**	**12 11 14.9**	**+0.7**
	comp=E,0.8nm,0.3s						
SMF	**Signal de Mont**	**4.49**	**318**	*e*Sn	**Sn**	**12 12 05.5**	**-0.5**
	comp=E,4.6nm,0.4s						
RETA	**Reutte**	**4.51**	**23**	*e*Pn	**Pn**	**12 11 15.4**	**+0.9**
	comp=E,0.2nm,0.1s						
HINF	**Hinteralfeld**	**4.55**	**349**	*e*Pn	**Pn**	**12 11 15.3**	**+0.3**
HINF				*e*Sn	**Sn**	**12 12 04.6**	**-2.8**
	comp=E,2.2nm,0.3s						
ABTA	**Abfaltersbach**	**4.57**	**41**	*e*Pn	**Pn**	**12 11 16.1**	**+0.8**
	comp=E,0.2nm,0.1s						
WTTA	**Wattenberg**	**4.60**	**31**	*e*Pn	**Pn**	**12 11 16.1**	**+0.2**
	comp=E,0.8nm,0.2s						
WATA	**Walderalm**	**4.64**	**30**	*e*Pn	**Pn**	**12 11 16.9**	**+0.6**
	comp=E,1.4nm,0.3s						
CAF	**Calviac**	**4.67**	**292**	*e*Pn	**Pn**	**12 11 17.1**	**+0.5**
CAF				*e*Sn	**Sn**	**12 12 08.9**	**-1.4**
	comp=E,0.9nm,0.2s						
HAU	**Haudompre**	**4.81**	**345**	*e*Pn	**Pn**	**12 11 18.6**	**0.0**
HAU				*e*Sn	**Sn**	**12 12 11.2**	**-2.7**
	comp=E,8.2nm,0.3s						
AVF	**Avril sur Loir**	**4.84**	**317**	*e*Pn	**Pn**	**12 11 19.5**	**+0.6**
AVF				*e*Sn	**Sn**	**12 12 12.2**	**-2.2**
	comp=E,0.9nm,0.2s						
BGF	**Bois d'Agland**	**4.95**	**312**	*e*Pn	**Pn**	**12 11 20.8**	**+0.4**
BGF				*e*Sn	**Sn**	**12 12 15.3**	**-1.9**
	comp=E,3.9nm,0.5s						
LOR	**Lormes**	**4.95**	**324**	*e*Pn	**Pn**	**12 11 20.9**	**+0.4**
	baz=143						
LOR				*e*Sn	**Sn**	**12 12 15.2**	**-2.0**
	comp=E,2.4nm,0.3s						
MONQ	**Montcuq**	**5.14**	**284**	Pn	**Pn**	**12 11 24.8**	**+1.7**
MLS	**Moulis**	**5.19**	**268**	Pn	**Pn**	**12 11 25.9**	**+2.1**
MLS				Sn	**Sn**	**12 12 23.3**	**0.0**

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*ISU **02** 12:52:56, 41°.13N×71°.44E, h5^{km}, Hypocentre not reviewed by the ISC*
*SOME **02** 12:52:57.3, 41°.10N×71°.52E, h5^{km}*
*KRNET **02** 12:52:57.1±0.1, 41°.05N×71°.43E, h20^{km}, mb3.1*
*NNC **02** 12:52:58.1±1.0, 41°.08N×71°.53E, h0^{km}, mb3.8, mpv3.6, Error ellipse: s-maj=8.1km s-min=3.0km az=12.0*
ISC 02 12:52:54.6±1.3**, 41°.07N**±0°.03×**71°.47E**±0°.03**, h5**^{km}±12^{km}**, n34, σ1^{s}.46**/56**, 15C, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NAM	**Namangan**	**0.16**	**119**	*e*P		12 53 02.0	
NAM				*e*S		12 53 06.0	
FRG	**Fergana**	**0.41**	**144**	*e*P		12 53 13.0	
FRG				*e*S		12 53 22.0	
TRKS	**Terek-Say**	**0.52**	**332**	⇑*i*P	**Pb**	**12 53 06.1**	**-0.3**
	baz=35						
TRKS				⇑*i*S	**Sb**	**12 53 12.7**	**-1.6**
	baz=35						
ANR	**Andizhan**	**0.74**	**115**	*e*x		12 53 13.0	
BTK	**Batken**	**1.13**	**206**	⇑*i*P	**Pn**	**12 53 17.5**	**+0.4**
	baz=5.0						
BTK				⇑*i*S	**Sn**	**12 53 32.2**	**-0.8**
	baz=5.0						
BTK	**Batken**	**1.13**	**206**	*e*P		12 53 19.0	
BTK				*e*S		12 53 22.0	
OHH	**Osh**	**1.14**	**118**	⇑*i*P	**Pn**	**12 53 18.6**	**+1.3**
	baz=17						
OHH				⇑*i*S	**Sn**	**12 53 34.1**	**+0.8**
	baz=17						
ARSB	**Arslanbob**	**1.17**	**77**	⇑*i*P	**Pn**	**12 53 19.4**	**+1.6**
	baz=76						
ARSB				⇑*i*S	**Sn**	**12 53 35.4**	**+1.2**
	baz=76						
ARSB	**Arslanbob**	**1.17**	**77**	*e*P		12 53 19.0	
ARSB				*e*S		12 53 36.0	
CHMG	**Chimgan**	**1.20**	**294**	*e*P		12 53 19.0	
CHMG				*e*S		12 53 35.0	
CHRV	**Charvak**	**1.28**	**297**	*e*x		12 53 38.0	
CHRV				*e*x		12 53 04.0	
DRK	**Karamyk**	**1.61**	**171**	⇑*i*P	**Pg**	**12 53 26.4**	**+0.9**
	baz=70						
DRK				⇑*i*S	**Sg**	**12 53 47.4**	**+1.1**
	baz=70						
MNAS	**Manas**	**1.61**	**28**	⇑*i*P	**Pg**	**12 53 27.1**	**+1.6**
	baz=29						
MNAS				⇑*i*S	**Sg**	**12 53 48.9**	**+2.4**
	baz=29						
DZA	**Taraz**	**1.82**	**357**	*e*P	**Pg**	**12 53 31.6**	**+2.1**
	107nm,0.1s						
DZA				*e*S	**Sg**	**12 53 56.2**	**+3.0**
	177nm,0.3s						
DZA	**Taraz**	**1.82**	**357**	P	**Pg**	**12 53 31.6**	**+2.1**
	107nm,0.1s						
MRKS	**Merke**	**2.13**	**38**	*e*P	**Pg**	**12 53 36.8**	**+1.5**
	4.7nm,0.2s						
MRKS				*e*S	**Sg**	**12 54 05.4**	**+2.5**
	44nm,0.4s						
MRKS	**Merke**	**2.13**	**38**	Pg	**Pg**	**12 53 37.0**	**+1.7**
	13nm,0.3s						
MRKS				Lg	Lg	12 54 05.8	
	40nm,0.3s						
KK31	**Karatay Array**	**2.15**	**341**	Pn	**Pg**	**12 53 35.2**	**-0.6**
	2.1nm,0.2s,baz=159,slow=12,SNR=32						
KK31				⇑Sn	**Sg**	**12 54 04.3**	**+0.5**
	37nm,0.5s,baz=170,slow=31						
ARLS	**Aral**	**2.29**	**69**	⇑*i*P	**Pg**	**12 53 36.9**	**-1.5**
	baz=69						
ARLS				⇑*i*S	**Sg**	**12 54 05.6**	**-2.4**
	baz=69						
BRLS	**Borolday**	**2.31**	**329**	*e*P	**Pg**	**12 53 37.7**	**-1.1**
	29nm,0.3s						
BRLS				*e*S	**Sg**	**12 54 06.4**	**-2.2**
	53nm,0.3s						
BRLS	**Borolday**	**2.31**	**329**	Pg	**Pg**	**12 53 37.7**	**-1.1**
	29nm,0.3s						
BRLS				Lg	Lg	12 54 06.4	
	53nm,0.3s						
SGDS	**Sogindy**	**3.34**	**44**	Pg	**Pg**	**12 53 58.0**	**-0.7**
	3.8nm,0.5s						
SGDS				Lg	Lg	12 54 41.5	
	10nm,0.5s						
DGS	**Degeres**	**3.87**	**54**	*e*P	**Pg**	**12 54 08.0**	**-0.6**
	5.6nm,0.6s						
DGS				*e*S	**Sg**	**12 54 59.0**	**+0.3**
	10.0nm,0.8s						
DGS	**Degeres**	**3.87**	**54**	Pg	**Pg**	**12 54 08.0**	**-0.6**
	5.6nm,0.6s						
DGS				Lg	Lg	12 54 59.0	
	10.0nm,0.8s						

KST	Kastek	3.88	58	*e*P	Pg	12 54 08.9	-0.1
	4.6nm,0.3s						
KST				*e*S	Sg	12 55 00.3	+1.0
	11nm,0.4s						
KST	Kastek	3.88	58	Pg	Pg	12 54 08.9	-0.1
	4.6nm,0.3s						
KST				Lg	Lg	12 55 00.3	
	11nm,0.4s						
MTBS	Maitube	4.22	59	*e*P	Pg	12 54 14.1	-1.4
	1.2nm,0.1s						
MTBS				*e*S	Sg	12 55 09.4	-0.9
	11nm,0.3s						
MTBS	Maitube	4.22	59	Pg	Pg	12 54 14.1	-1.4
	1.2nm,0.1s						
MTBS				Lg	Lg	12 55 09.4	
	11nm,0.3s						
IZV	Izvestkoviy	4.30	61	*e*P	Pg	12 54 16.6	-0.5
	3.2nm,0.4s						
IZV				*e*S	Sg	12 55 13.5	+0.6
	7.1nm,0.4s						
IZV	Izvestkoviy	4.30	61	Pg	Pg	12 54 16.6	-0.5
	3.2nm,0.4s						
IZV				Lg	Lg	12 55 13.5	
	7.1nm,0.4s						
BTLS	Baital	4.39	25	*e*P	Pg	12 54 16.9	-1.9
	0.8nm,0.3s						
BTLS				*e*S	Sg	12 55 13.8	-1.9
	2.6nm,0.4s						
TNSS	Tian-Shan	4.53	62	*e*P	Pg	12 54 20.7	-0.6
	1.6nm,0.2s						
TNSS				*e*S	Sg	12 55 20.8	+0.8
	2.7nm,0.5s						
TNSS	Tian-Shan	4.53	62	Pg	Pg	12 54 20.7	-0.6
	1.6nm,0.2s						
MDOK	Medeo	4.65	61	*e*P	Pg	12 54 21.9	-1.7
	3.6nm,0.5s						
MDOK				*e*S	Sg	12 55 22.9	-0.9
	6.3nm,0.9s						
KTBS	Karatobe	4.68	54	*e*P	Pg	12 54 22.1	-2.1
	1.6nm,0.4s						
KTBS				*e*S	Sg	12 55 23.1	-1.7
	11nm,0.5s						
KTBS	Karatobe	4.68	54	Pg	Pg	12 54 22.1	-2.1
	1.6nm,0.4s						
KTBS				Lg	Lg	12 55 23.1	
	11nm,0.5s						
KOTS	Kotyrbulak	4.72	61	*e*P	Pg	12 54 24.0	-1.0
	7.3nm,0.4s						
KOTS				*e*S	Sg	12 55 26.3	+0.2
	17nm,0.6s						
KOTS	Kotyrbulak	4.72	61	Pg	Pg	12 54 24.0	-1.0
	7.3nm,0.4s						
KOTS				Lg	Lg	12 55 26.3	
	17nm,0.6s						
CHKK	Chushkaly	4.94	54	*e*P	Pg	12 54 27.6	-1.6
	1.2nm,0.1s						
CHKK				*e*S	Sg	12 55 32.3	-0.9
	7.3nm,0.2s						
CHKK	Chushkaly	4.94	54	Pg	Pg	12 54 27.6	-1.6
	1.2nm,0.1s						
CHKK				Lg	Lg	12 55 32.3	
	7.3nm,0.2s						
KPKS	Kokpek	5.86	64	*e*P	Pg	12 54 44.9	-2.0
	2.8nm,0.3s						
KPKS				*e*S	Sg	12 56 01.7	-1.1
	6.9nm,0.5s						

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*JMA **02** 13:12:35.5±0.1, 33°.56N×140°.87E, h50^{km}, M3.2*

*IDC **02** 13:12:36.5±3.7, 33°.40N×140°.91E, h57^{km}±28^{km}, mb3.5/3, mb1 3.7/4, mb1mx3.2/37, mbtmp3.7/4, ML2.5/1, Error ellipse: s-maj=40.9km s-min=17.7km az=80.0*

ISC 02 13:12:35.4±1.8, **33°.50N**±0°.06×**140°.9E**±0°.1, **h49**^{km}±18^{km}, **n17**, σ**0^{s}.72**/23, **mb3.8**/3, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	Mitsune	1.00	248	P	Pn	13 12 53.4	+0.3
JHJ	Hachijo jima 2	1.02	249	P	Pn	13 12 53.5	+0.1
	238nm,0.3s,baz=75,slow=22,SNR=38						
JHJ				S	Sn	13 13 07.5	+0.7
	214nm,0.3s,baz=75,slow=23,SNR=10						
JHCJ	Hachijojimakas	1.03	246	P	Pn	13 12 53.6	+0.1
JHCJ				S	Sn	13 13 06.8	-0.1
BSO1	Boso 1	1.16	2	P	Pn	13 12 54.9	+0.2
JMKN	Mikurajimanish	1.18	290	P	Pn	13 12 55.3	-0.2
BSO3	Boso 3	1.35	345	P	Pn	13 12 57.5	-0.1
BSO4	Boso 4	1.57	342	P	Pn	13 13 01.1	+0.4
BSO4				S	Sn	13 13 19.1	-0.7
JKO	Kozu shima	1.64	295	P	Pn	13 13 01.9	+0.1
JTHY	Toshimahigashi	1.70	308	P	Pn	13 13 02.8	+0.2
JTHY				S	Sn	13 13 22.8	-0.4
JIM2	Oshima 3	1.73	315	P	Pn	13 13 02.7	-0.5
JIM2				S	Sn	13 13 23.0	-1.1
JIZS	Izushimoda	2.09	306	P	Pn	13 13 08.3	+0.4
JOD2	Odawara 2	2.32	320	P	Pn	13 13 11.0	-0.2
MJAR	Matsushiro Arr	3.77	325	P	Pn	13 13 32.9	+1.9
	0.4nm,0.3s,baz=154,slow=12,SNR=14						
MAT	Matsushiro	3.77	325	P	Pn	13 13 32.7	+1.7
MAT				*e*S	Sn	13 14 14.4	+0.3
MKAR	Makanchi Array	45.73	305	P	P	13 20 51.9	+0.1
	0.4nm,0.8s,baz=79,slow=9.5,SNR=3.4						
WRA	Warramunga Arr	53.51	188	P	P	13 21 50.6	-0.5
	1.6nm,0.3s,baz=5.7,slow=7.6,SNR=41						
ASAR	Alice Springs	57.24	188	P	P	13 22 17.6	-0.2
	0.4nm,0.5s,baz=3.8,slow=6.7,SNR=18						

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*CRAAG **02** 13:31:11.7, 36°.72N×5°.38E, Ml3.2*

*MDD **02** 13:31:13.7±0.9, 36°.73N×5°.36E, h0^{km}, mb3.9/2, Error ellipse: s-maj=10.5km s-min=8.3km az=56.0, PRXIMO SIN SOLUCIN*

ISC 02 13:31:11.8±1.0, **36°.85N**±0°.08×**5°.42E**±0°.09, **h10**^{km}, **n10**, σ**2^{s}.73**/14, **Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DFRA	Djebel Bou Aff	0.48	129	P	Pb	13 31 21.6	-0.8
DFRA	Djebel Bou Aff	0.48	129	P	Pb	13 31 21.6	-0.8
SET	Setif	0.65	181	P	Pg	13 31 24.0	-0.3
SET	Setif	0.65	181	P	Pg	13 31 24.0	-0.3
CAEH	'Ain El Ouahch	1.15	93	P	Pn	13 31 36.2	+2.2
CAEH	'Ain El Ouahch	1.15	93	P	Pn	13 31 36.2	+2.2
ETOS	Mallorca	3.56	326	P	Pn	13 32 10.2	+3.1
	1.1nm,0.1s,SNR=6.9						
ETOS				S	Sn	13 32 46.2	-3.1
	0.6nm,0.2s,SNR=7.9						
CFON	Fontmartina	5.42	336	P	Pn	13 32 35.0	+2.3
	1.6nm,0.2s,SNR=7.9						
CFON				S	Sn	13 33 33.3	-1.9
	0.4nm,0.1s,SNR=7.9						
CLLI	Llivia	6.22	336	P	Pn	13 32 46.9	+3.2
	0.3nm,0.1s,SNR=7.9						
CLLI				S	Sn	13 33 52.1	-2.8
	0.1nm,0.2s,SNR=7.9						
CSOR	Sort	6.43	330	P	Pn	13 32 50.0	+3.3
	0.1nm,0.2s,SNR=6.7						
CSOR				S	Sn	13 33 56.4	-3.8
	0.4nm,0.2s,SNR=7.9						

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*ANF **02** 13:34:22.0±0.8, 36°.65N×97°.66W, h5^{km}, ML3.9/6, Error ellipse: s-maj=9.1km s-min=7.9km az=40.0*

*CERI **02** 13:34:21.0, 36°.65N×97°.66W, h5^{km}*

*TUL **02** 13:34:21.7±1.3, 36°.65N±0°.01×97°.66W±0°.01, h5^{km}±7^{km}, ML3.1, mb_Lg3.1/62(NEIC), Error ellipse: s-maj=1.9km s-min=1.1km az=151.0*

*NEIC **02** 13:34:21.8±1.0, 36°.63N±0°.02×97°.68W±0°.03, h6^{km}±7^{km}, Error ellipse: s-maj=3.8km s-min=1.0km az=51.0*

ISC 02 13:34:22.0±1.1, **36°.64N**±0°.02×**97°.66W**±0°.02, **h6**^{km}±10^{km}, **n61**, σ**0^{s}.77**/59, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	Grant County #	0.26	323	Pg	Pg	13 34 27.3	+0.1
GC02				Sg	Sg	13 34 31.1	+0.4
CROK	Carrier	0.29	242		Pg	13 34 27.8	0.0
CROK				Sg	Sg	13 34 32.2	+0.6
KAN14	Manchester OK	0.40	323		Pg	13 34 29.7	0.0
KAN14				Sg	Sg	13 34 35.2	+0.3
KAN13	South Haven SW	0.40	22		Pg	13 34 29.7	0.0
KAN13				Sg	Sg	13 34 35.4	+0.4
KAN01	Argonia South	0.52	351		Pg	13 34 31.9	-0.2
KAN01				Sg	Sg	13 34 39.0	+0.2
KAN10	Anthony SW Sta	0.59	324		Pg	13 34 33.3	-0.2
KAN10				Sg	Sg	13 34 41.4	+0.2
KAN08	Anthony NE Sta	0.64	337	Pg	Pg	13 34 34.0	-0.3
KAN08				Sg	Sg	13 34 42.9	+0.3
KAN12	Harper NE Stat	0.71	338	Pg	Pg	13 34 35.4	-0.3
KAN12				Sg	Sg	13 34 45.1	+0.3
QUOK	Quay	0.90	121	Pg	Pg	13 34 38.9	-0.4
OK031	S. Brethren Rd	0.96	136		Pg	13 34 40.0	-0.4
T35A	Sooner Cattle	0.96	73	Pg	Pg	13 34 40.0	-0.5
T35B	Sooner Cattle	0.96	73	P		13 34 40.0	
	baz=254						
T35B				S		13 34 52.9	
	baz=254						
BCOK	Bluff Creek, N	0.98	177	Pg	Pg	13 34 40.5	-0.4
OK030	Cody Creek RV	1.00	135		Pg	13 34 40.9	-0.4
OK030				Sg	Sg	13 34 54.4	0.0
OK025	Westminster Rd	1.09	166	Pg	Pg	13 34 42.4	-0.5
U32A	Winter Ranch,	1.11	257	Pg	Pg	13 34 42.5	-0.8
U32A	Winter Ranch,	1.11	257	P		13 34 42.5	
	baz=76						
U32A				S		13 34 57.9	
	baz=76						
OKCFA	Oklahoma City	1.23	172		Pg	13 34 45.0	-0.7
OKCSW	OKLAHOMA CITY	1.25	172		Pg	13 34 45.2	-0.7
FNO	Franklin	1.40	171		Pn	13 34 48.0	-0.1
TUL1	Leonard	1.68	115	P	Pn	13 34 52.1	+0.1
	baz=297						
TUL1				S	Sb	13 35 14.8	0.0
	baz=297						
TUL1	Leonard	1.68	115	Pn	Pn	13 34 52.0	+0.1
TUL1				IAmb_Lg		13 35 18.5	
	comp=Z,155nm,0.8s						
TUL1	Leonard	1.68	115	P		13 34 52.3	
	baz=297						
TUL1				S		13 35 14.8	
	baz=297						
R32A	Long Quarter,	1.96	335	Pn	Pn	13 34 55.6	-0.3
R32A	Long Quarter,	1.96	335	S		13 35 23.4	
	baz=155						
WMOK	Wichita Mounta	2.11	206	P	Pn	13 34 58.2	+0.3
	baz=25						
WMOK				S	Sn	13 35 25.7	+1.3
	baz=25						
WMOK	Wichita Mounta	2.11	206		Pn	13 34 58.2	+0.3
WMOK				IAmb_Lg		13 35 32.0	
	comp=Z,61nm,0.8s						
WMOK	Wichita Mounta	2.11	206	P		13 34 58.2	
	baz=25						
WMOK				S		13 35 25.9	
	baz=25						
KSU1	Kansas State U	2.59	18	P	Pn	13 35 04.7	+0.2
	baz=199						
KSU1	Kansas State U	2.59	18	Pn	Pn	13 35 04.7	+0.2
KSU1	Kansas State U	2.59	18	P		13 35 04.8	
	baz=199						
U38A	Gravette	2.65	93	Pn	Pn	13 35 05.8	+0.5
U38A	Gravette	2.65	93	P		13 35 05.9	
	baz=276						
CBKS	Cedar Bluff	2.72	323	S	Sn	13 35 40.4	+0.7
	baz=142						
CBKS	Cedar Bluff	2.72	323	Pn	Pn	13 35 05.6	-0.8
CBKS	Cedar Bluff	2.72	323	Sb		13 35 46.5	
	baz=142						
X37A	Clayton	2.77	137	Pn	Pn	13 35 07.4	+0.4
X37A				IAmb_Lg		13 35 56.3	
	comp=Z,36nm,0.8s						
X37A	Clayton	2.77	137	P		13 35 07.5	
	baz=318						
X37A				Sb		13 35 48.0	
	baz=318						
Z35A	Perchaven, San	3.32	174		Pn	13 35 14.9	+0.4
W39A	Magazine	3.46	113	IAmb_Lg		13 36 14.2	
	comp=Z,40nm,0.8s						
AMTX	Amarillo	3.71	243	P	Pn	13 35 20.3	+0.3
	baz=60						
AMTX				S	Sn	13 36 04.7	+0.6
	baz=60						
AMTX	Amarillo	3.71	243	Pn	Pn	13 35 20.0	0.0
U40A	Yellville	3.88	93	P	Pn	13 35 22.3	0.0
	baz=276						
U40A				S	Sn	13 36 08.2	-0.1
	baz=276						
U40A	Yellville	3.88	93		Pn	13 35 22.1	-0.2
U40A				IAmb_Lg		13 36 27.6	
	comp=Z,44nm,0.8s						
MIAR	Mount Ida	3.93	121	Pn	Pn	13 35 24.6	+1.7
MIAR				IAmb_Lg		13 36 27.2	
	comp=Z,28nm,0.8s						
ABTX	Abilene, Hawle	4.33	203		Pn	13 35 26.6	-1.9
ABTX				IAmb_Lg		13 36 39.6	
	comp=Z,32nm,1.1s						
MGMO	Mountain Grove	4.35	82		Pn	13 35 28.6	-0.2
MGMO				IAmb_Lg		13 36 44.1	
	comp=Z,47nm,0.8s						
P38A	Dawn	4.41	46		Pn	13 35 28.8	-0.8
P38A				IAmb_Lg		13 36 47.8	
	comp=Z,41nm,0.7s						
X40A	Basin Creek Fa	4.48	117		Pn	13 35 28.7	-1.8
X40A				IAmb_Lg		13 36 47.0	
	comp=Z,31nm,0.7s						
N35A	Tabor	4.50	20		Pn	13 35 27.7	-3.1
FCAR	Ozark Folk Cen	4.54	98	IAmb_Lg		13 36 44.3	
	comp=Z,21nm,1.0s						
WHAR	Wooly Hollow	4.56	106	Pn	Pn	13 35 33.3	+1.7
KSCO	Kaye Shedlock'	4.59	303	IAmb_Lg		13 36 54.3	
	comp=Z,33nm,0.7s						
R40A	Maddies Statio	4.60	67		Pn	13 35 31.3	-0.8
R40A				IAmb_Lg		13 36 50.2	
	comp=Z,36nm,0.9s						
WHTX	Lake Whitney,	4.64	178	Pn	Pn	13 35 32.5	-0.2
WHTX				IAmb_Lg		13 37 00.5	
	comp=Z,23nm,1.0s						
BGNE	Belgrade	4.78	356	IAmb_Lg		13 36 49.7	
	comp=Z,26nm,0.8s						
BGNE	Belgrade	4.78	356	P		13 35 34.4	
	baz=175						
P40A	Paris	5.28	55	IAmb_Lg		13 37 14.6	
	comp=Z,39nm,0.8s						
T42A	Van Buren	5.28	84	Pn	Pn	13 35 40.9	-0.6
T42A				IAmb_Lg		13 37 16.7	
	comp=Z,17nm,0.7s						
CCM	Cathedral Cave	5.30	73	Pn	Pn	13 35 41.1	-0.7
CCM				IAmb_Lg		13 37 14.8	
	comp=Z,48nm,0.9s						
N38A	Joes South For	5.40	39	IAmb_Lg		13 37 16.0	
	comp=Z,51nm,0.7s						
PBMO	Poplar Bluff	5.81	86	IAmb_Lg		13 37 26.9	
	comp=Z,22nm,0.7s						
435B	Jarrell	5.84	179	IAmb_Lg		13 37 26.5	
	comp=Z,15nm,0.8s						
FVM	French Village	5.92	75	IAmb_Lg		13 37 28.7	
	comp=Z,32nm,0.8s						
SLM	Saint Louis	6.22	69	IAmb_Lg		13 37 44.2	
	comp=Z,37nm,0.8s						
JCT	Junction City	6.40	197		Pn	13 35 56.4	-0.5
JCT				IAmb_Lg		13 37 47.8	
	comp=Z,23nm,1.1s						
ANMO	Albuquerque	7.34	259	IAmb_Lg		13 38 17.8	
	comp=Z,11nm,1.2s						
ANMO				IAmb_Lg		13 38 17.8	
	comp=Z,11nm,1.2s						
L42A	Oliver, Polo	8.19	47	IAmb_Lg		13 38 43.4	
	comp=Z,28nm,0.7s						
K22A	Casper	9.09	314	IAmb_Lg		13 39 30.1	
	comp=Z,16nm,0.9s						
WCI	Wyandotte Cave	9.18	77	IAmb_Lg		13 39 15.8	
	comp=Z,19nm,0.9s						
121A	Cookes Peak, D	9.30	247	IAmb_Lg		13 39 21.9	
	comp=Z,9.9nm,1.1s						

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*IDC **02** 13:40:48.3±8.4, 4°.47S×105°.22E, h0^{km}, mb3.6/4, mb1 3.8/5, mb1mx3.4/42, mbtmp3.7/5, ML3.7/1, MS3.7/1, Ms1 3.7/1, ms1mx2.7/39, Error ellipse: s-maj=206.3km s-min=114.7km az=61.0*

*DJA **02** 13:40:59.9±0.7, 6°S±9°×10°5E±°, h10^{km}, M3.0/7, MLv3.0/7*

*NEIC **02** 13:41:10.6±0.3, 6°.0S±0°.2×105°.8E±0°.3, h87^{km}±12^{km}, mb4.1/6, Error ellipse: s-maj=46.9km s-min=13.3km az=50.0*

ISC 02 13:40:59.8±0.8, **6°.17S**±0°.08×**105°.39E**±0°.06, **h10**^{km}, **n21**, σ**1^{s}.12**/22, **mb3.9**/7, **Sunda Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BLSI	Bandar Lampung	0.81	350	P	Pg	13 41 15.3	-0.1
BLSI				S	Sn	13 41 28.8	-0.5
KASI	Kota Agung	1.09	306	P	Pg	13 41 20.1	-0.7
KASI				S	Sn	13 41 35.4	-1.0
TNG	Tangerang	1.25	90	P	Sn	13 41 36.6	-3.7
DBJI	Dramaga	1.41	106	P	Pn	13 41 25.9	+0.4
DBJI				S	Sg	13 41 45.7	+0.5
KLSI		1.61	336	P	Pn	13 41 28.8	+0.5
KLSI				S	Sg	13 41 51.6	0.0
LWLI	Liwa	1.75	311	P	Pn	13 41 29.3	-1.0
MDSI	Maura Dua	2.06	324	P	Pn	13 41 35.2	+0.7
LEM	Lembang	2.31	107	Pn	Pb	13 41 42.2	+0.5
	6.8nm,0.3s,baz=162,slow=20,SNR=4.8						
CISI	Cisompet, Garu	2.78	120	Pn	Pn	13 41 45.7	+1.2
LHSI	Lahat	2.98	321	P	Pg	13 41 57.6	+0.7
FITZ	Fitzroy Crossi	23.05	123	P	P	13 46 04.3	-1.1
	2.3nm,1.0s,baz=307,slow=5.1,SNR=2.4						
WB0	Warramunga Arr	31.26	118	P	P	13 47 19.7	-0.4
WB0				IAmb	IAmb	13 47 27.6	
	comp=Z,5.6nm,1.2s						
WRA	Warramunga Arr	31.28	119	P	P	13 47 20.7	+0.4
	comp=Z,0.3nm,0.4s,baz=301,slow=9.0,SNR=6.4						
WRA	Warramunga Arr	31.28	119	IAmb	IAmb	13 47 29.2	
	comp=Z,0.2nm,1.2s						
WB2	Warramunga Arr	31.29	119	P	P	13 47 20.1	-0.2
WB2				IAmb	IAmb	13 47 48.8	
	comp=Z,9.1nm,1.5s						
ASAR	Alice Springs	32.47	125	P	P	13 47 30.6	-0.2
	comp=Z,0.2nm,0.5s,baz=298,slow=7.7,SNR=9.3						
STKA	Stephens Creek	42.38	132	P	P	13 48 54.8	+0.2
	comp=Z,1.6nm,0.7s,baz=314,slow=13,SNR=3.7						
STKA	Stephens Creek	42.38	132	IAmb	IAmb	13 48 55.6	
	comp=Z,2.0nm,1.5s						
WSAR	Wadi Sarin	54.22	304	LR	LR	14 11 56.5	
	comp=Z,71nm,19.2s,baz=270,slow=35						
MAKZ	Makanchi	56.69	341	P	P	13 50 44.9	+1.4
MAKZ				IAmb	IAmb	13 51 01.3	
	comp=Z,1.7nm,1.1s						
YAK	Yakutsk	70.54	12	P	P	13 52 14.3	-0.4

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*IDC **02** 14:06:30.2±3.3, 55°.87N×169°.70W, h0^{km}, mb3.5/4, mb1 3.8/6, mb1mx3.4/76, mbtmp3.7/6, ML3.1/2, MS3.3/2, Ms1 3.2/2, ms1mx2.6/40, Error ellipse: s-maj=74.0km s-min=21.8km az=174.0*

*AEIC **02** 14:06:34±2.1, 57°.0N±0°.1×168°.8W±0°.2, h32^{km}±8^{km}, Error ellipse: s-maj=20.3km s-min=5.9km az=213.0*

*NEIC **02** 14:06:37.1±1.7, 56°.73N±0°.06×169°.4W±0°.1, h21^{km}±7^{km}, ML3.8/11(AEIC), Error ellipse: s-maj=10.8km s-min=4.9km az=222.0*

ISC 02 14:06:36.1±0.8, **56°.71N**±0°.06×**169°.52W**±0°.07, **h10**^{km}, **n19**, σ**1^{s}.59**/23, **Pribilof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPIA	Saint Paul Isl	0.62	320		Pn	14 06 51.2	+0.3
SPIA					Sn	14 07 01.4	+0.6
MSW	Makushin Switc	3.21	150		Pn	14 07 25.8	-0.7
MSW					Sn	14 08 04.8	0.0
AKGG	Akutan Green G	3.22	140		Pn	14 07 24.1	-2.6
AKGG					Sn	14 08 04.0	-1.0
AKRB	Akutan Reef Bi	3.25	141		Pn	14 07 25.9	-1.2
MNAT	Makushin Natee	3.26	149		Pn	14 07 26.0	-1.3
MNAT					Sn	14 08 07.9	+1.7
MGOD	Makushin Gods	3.29	152		Pn	14 07 27.1	-0.7
AKUT	Akutan	3.35	139	Pn	Pn	14 07 27.0	-1.5
UNV	Unalaska Valle	3.35	148		Pn	14 07 26.9	-1.6
ATKA	Atka Island	5.28	213		Pn	14 07 55.5	+0.6
ADK	Adak	6.40	224	Pn	Pn	14 08 11.4	+1.1
AMKA	Amchitka	8.47	236		Pn	14 08 40.9	+2.1
TTA	Tatalina	9.21	42	Pn	Pn	14 08 47.9	-1.1
KDAK	Kodiak Island	9.24	76	Pn	Pn	14 08 52.3	+3.0
	0.9nm,0.3s,baz=282,slow=8.8,SNR=21						
PPLA	Purkeypile	10.68	47	Pn	Pn	14 09 08.6	-0.6
ILAR	Eielson Array	13.63	44	Pn	Pn	14 09 52.1	+2.9
	0.0nm,0.3s,baz=241,slow=12,SNR=5.8						
SEY	Seymchan	19.89	304	P	P	14 11 07.2	-0.1
	1.9nm,0.8s,baz=72,slow=19,SNR=4.0						
INK	Inuvik	19.90	40	P	Pn	14 11 09.8	+0.8
	1.5nm,0.5s,baz=250,slow=6.9,SNR=14						
INK				LR	LR	14 19 56.4	
	comp=Z,59nm,20.4s,baz=222,slow=39						
YKA	Yellowknife Ar	27.62	55	P	P	14 12 23.5	+0.1
	0.9nm,1.0s,baz=287,slow=10.0,SNR=4.6						
YKA				LR	LR	14 24 59.3	
	comp=Z,74nm,20.7s,baz=0.0,slow=39						
SONM	Songino Array	49.10	298	P	P	14 15 21.5	-2.0
	0.2nm,0.4s,baz=63,slow=8.1,SNR=2.7						

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*JMA **02** 14:06:57.6, 40°.04N×140°.54E, h9^{km}±1^{km}, M3.4 Broadband fault plane solution: P waves. NP1: ϕ_s330.00000°, δ26.00000°, λ73.00000°. NP2: ϕ_s168.00000°, δ65.00000°, λ98.00000°. Principal axes: T Plg69.0000°, Azm94.0000°; N Plg7.0000°, Azm345.0000°; P Plg20.0000°, Azm252.0000°;*

JMA Felt II J1.

*IDC **02** 14:07:03.1±2.5, 40°.19N×140°.66E, h42^{km}±27^{km}, mb3.2/4, mb1 3.6/8, mb1mx3.1/69, mbtmp3.6/8, ML3.0/4 Error ellipse: s-maj=36.8km s-min=19.5km az=125.0*

ISC 02 14:06:58.3±1.0, **40°.05N**±0°.03×**140°.60E**±0°.04, **h8**^{km}±7^{km}, **n16**, σ**1^{s}.51**/23, **mb3.5**/4, **4D**, **Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAH	Hinai	0.14	10	⇓P	Pg	14 07 01.3	-0.1
JAH				S	Sg	14 07 03.9	+0.3
JKZ	Kuzumaki	0.56	96	⇓P	Pg	14 07 09.3	+0.2
JKZ				S	Sb	14 07 17.0	-1.6
JRG	Rokugo	0.65	178	P	Pg	14 07 10.2	-0.6
JRG				S	Sg	14 07 19.1	-0.1
JIW	Iwasaki	0.71	320	⇓P	Pg	14 07 10.5	-1.5
JIW				S	Sg	14 07 20.3	-1.0
JANG	Nango	0.77	65	⇓P	Pg	14 07 12.9	-0.2
JANG				S	Sb	14 07 23.4	-1.2
JOM	Ohasama	0.78	137	P	Pg	14 07 12.7	-0.6
JTM	Tenmabayashi	0.82	25	P	Pg	14 07 13.7	-0.4
JTM				S	Sg	14 07 24.2	-0.6
MAT	Matsushiro	3.97	209	P	Pn	14 07 58.8	-0.7
MAT				*e*S	Sn	14 08 44.3	-2.0
MJAR	Matsushiro Arr	3.97	209	P	Pn	14 08 02.1	+2.5
	0.2nm,0.3s,baz=344,slow=31,SNR=9.4						
ASAJ	Asahikawa	4.33	19	P	Pn	14 08 05.5	+1.0
	1.0nm,0.3s,baz=243,slow=12,SNR=9.2						
KSRS	Korea Array	10.24	259	P	Pn	14 09 28.1	+2.7
	0.6nm,0.3s,baz=67,slow=14,SNR=28						
PETK	Petropavlovsk-	17.51	36	P	P	14 11 04.0	+0.1
	0.2nm,0.3s,baz=76,slow=14,SNR=6.5						
CMAR	Chiang Mai Arr	41.75	251	P	P	14 14 50.4	+2.3
	0.3nm,0.4s,baz=226,slow=42,SNR=2.3						
KURBB	Kurchatov Arra	43.70	305	P	P	14 15 02.3	-1.2
	0.4nm,0.4s,baz=41,slow=26,SNR=3.6						
ILAR	Eielson Array	47.32	34	P	P	14 15 29.5	-2.6
	0.1nm,0.6s,baz=284,slow=7.3,SNR=1.7						
WRA	Warramunga Arr	59.96	187	P	P	14 17 06.4	+1.3
	0.3nm,0.7s,baz=4.2,slow=7.4,SNR=1.8						

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*THR **02** 14:07:35.8±0.3, 27°.14N×56°.04E, h8^{km}±5^{km}, ML3.9*

*IDC **02** 14:07:38.1±0.9, 27°.40N×56°.23E, h0^{km}, mb3.8/16, mb1 3.9/19, mb1mx3.8/64, mbtmp3.8/19, ML3.7/3, MS3.1/2, Ms1 3.1/2, ms1mx2.6/55, Error ellipse: s-maj=19.8km s-min=16.8km az=34.0*

*OMAN **02** 14:07:40.9±6.6, 27°.48N×56°.18E, h7^{km}, ms2.9/4, Error ellipse: s-maj=268.4km s-min=113.8km az=256.0*

*TEH **02** 14:07:40.1, 27°.47N×56°.19E, h10^{km}, ML3.9*

*NEIC **02** 14:07:40.2±1.9, 27°.46N±0°.10×56°.2E±0°.1, h10^{km}±1^{km}, mb4.3/16, mb_Lg3.9(TEH), Error ellipse: s-maj=17.3km s-min=15.2km az=205.0*

*DSN **02** 14:07:41.1±1.2, 27°.51N×56°.16E, h10^{km}, ML3.8/11, Error ellipse: s-maj=29.6km s-min=9.7km az=80.0*

ISC 02 14:07:39.9±0.9, **27°.47N**±0°.03×**56°.19E**±0°.04, **h9**^{km}±6^{km}, **n129**, σ**1^{s}.62**/131, **mb3.9**/22, **Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDS	Bandar-Abbas	0.07	191	*e*Pg	Pg	14 07 41.7	-0.6
BNDS				IAML		14 07 45.2	
	comp=N,39µm,0.2s						
BNDS	Bandar-Abbas	0.07	191	*e*Pg	Pg	14 07 41.7	-0.6
GENO	Geno	0.07	190	*e*Pg	Pg	14 07 41.7	-0.6

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SHME  Shamm              1.42 182 eP       Pb       14 08 06.4 -0.2
      SNR=5.1
SHME                              S        Sg       14 08 27.9 +2.3
SHME  Shamm              1.42 182 ePn      Pb       14 08 06.6 +0.1
SHME  Shamm              1.42 182 P        Pb       14 08 06.7 +0.1
      SNR=5.9
SHME                              S        Sg       14 08 27.4 +1.8
KHNJ  Kahnooj            1.43  70 ePg      Pb       14 08 06.7  0.0
BANOM Banah              1.55 176 eP       Pb       14 08 08.3 -0.4
      SNR=36
BANOM                             S        Sg       14 08 30.8 +1.1
BANOM Banah              1.55 176 ePn      Pb       14 08 08.5 -0.3
BANOM Banah              1.55 176 P        Pb       14 08 09.0 +0.2
      SNR=58
BANOM                             S        Sg       14 08 29.5 -0.2
LAR1  LAR                1.62 277 ePg      Pg       14 08 10.8 -0.3
LAR1                              e                 14 09 06.3
      comp=Z,99nm,0.6s
UMQ   Umm Al-Quwin       2.00 194 ePn      Pb       14 08 17.0 +0.6
MASF  Masafi             2.09 181 P        Pb       14 08 17.3 -0.8
      SNR=16
MASF                              S        Sb       14 08 44.3 +0.1
MSFE  Esma-Masafi        2.10 181 eP       Pn       14 08 16.4 +1.0
      SNR=12
MSFE  Esma-Masafi        2.10 181 ePn      Pb       14 08 17.6 -0.7
MDH   Madha              2.17 177 eP       Pn       14 08 17.2 +1.0
      SNR=9.8
MDH   Madha              2.17 177 ePn      Pb       14 08 17.8 -1.5
MDH   Madha              2.17 177 P        Pb       14 08 17.9 -1.5
      SNR=10
NGRK  Negar Kerman       2.22  12 ePn      Pb       14 08 19.1 -1.3
NGRK                              e                 14 09 04.4
      comp=Z,99nm,0.4s
UOSS  Minazif            2.52 180 eP       Pn       14 08 22.2 +1.2
      SNR=14
UOSS  Minazif            2.52 180          Pn       14 08 21.9 +0.9
UOSS  Minazif            2.52 180 ePn      Pn       14 08 22.0 +1.0
UOSS  Minazif            2.52 180 P        Pn       14 08 22.2 +1.2
UOSS                              S        Sb       14 08 54.1 -2.2
NAZ   Nazwa, Dubai       2.52 191 P        Pn       14 08 23.0 +2.0
NAZ   Nazwa, Dubai       2.52 191 ePn      Pb       14 08 23.6 -1.7
NAZ   Nazwa, Dubai       2.52 191 P        Pb       14 08 23.9 -1.4
JHRM  Jahrom             2.53 295 ePn      Pb       14 08 23.6 -1.9
JHRM                              e                 14 09 29.6
      comp=Z,99nm,0.5s
KRBR  Kerman             2.55  11 ePn      Pb       14 08 24.6 -1.5
KRBR                               IAML             14 09 06.5
      comp=N,189nm,0.6s
KRBR                               IAML             14 09 12.2
      comp=E,239nm,0.6s
KRBR  Kerman             2.55  11 ePn      Pb       14 08 24.6 -1.5
TVBK  TV Kerman          2.55  11 ePn      Pb       14 08 24.8 -1.3
TVBK                              e                 14 09 23.5
      comp=Z,99nm,0.5s
KBAM  BAM                2.59  50 ePn      Pb       14 08 24.6 -2.1
KBAM                              e                 14 08 28.9
      comp=Z,99nm,0.5s
HATD  Hatta, Dubai       2.64 181 P        Pb       14 08 25.2 -2.2
HATD  Hatta, Dubai       2.64 181 ePn      Pn       14 08 24.9 +2.3
HATD  Hatta, Dubai       2.64 181 P        Pn       14 08 25.0 +2.3
      SNR=12
FAQ   Al Faqa, Dubai     2.77 191 eP       Pn       14 08 26.4 +2.0
      SNR=7.0
FAQ   Al Faqa, Dubai     2.77 191 ePn      Pn       14 08 26.8 +2.3
FAQ   Al Faqa, Dubai     2.77 191 P        Pb       14 08 28.0 -1.5
      SNR=7.0
ASHO  Ashiyiah           2.78 182 eP       Pn       14 08 27.0 +2.3
      SNR=22
ASHO  Ashiyiah           2.78 182 ePn      Pn       14 08 26.8 +2.1
ASHO  Ashiyiah           2.78 182 P        Pn       14 08 26.7 +2.0
      SNR=22
KHGB  Koh Gabri          2.90   5 ePn      Pn       14 08 29.2 +2.7
KHGB                              e                 14 09 24.6
      comp=Z,99nm,0.4s
ASUD  Al Ashush, Dub     2.94 195 eP       Pn       14 08 28.5 +1.7
      SNR=8.9
ASUD  Al Ashush, Dub     2.94 195 P        Pn       14 08 29.6 +2.8
      SNR=16
SOHO  SOHO               3.34 175 P        Pn       14 08 35.6 +3.3
SOHO  SOHO               3.34 175 ePn      Pn       14 08 33.2 +0.9
SOHO  SOHO               3.34 175 P        Pn       14 08 33.7 +1.4
ALNE  Al Ain             3.42 187 ePn      Pn       14 08 34.3 +0.8
SHI   Shiraz             3.89 305 ePn      Pn       14 08 42.0 +2.0
IMEH  Mehriz             4.14 341 ePn      Pn       14 08 46.4 +2.9
IBAF  Bafgh              4.14 353 ePn      Pn       14 08 45.4 +1.9
ZHSF  Zahedan            4.56  61 ePn      Pn       14 08 51.3 +2.0
ZHSF  Zahedan            4.56  61 ePn      Pn       14 08 51.3 +2.0
WSAR  Wadi Sarin         4.76 152 Pn       Pn       14 08 52.0 +0.1
      comp=Z,2.6nm,0.3s,baz=5.3,slow=13,SNR=22
WSAR                              Sn       Sn       14 09 46.0 -1.2
      comp=Z,3.3nm,0.3s,baz=10,slow=21,SNR=6.5
UMZA  Um Al Zommool      4.83 191 ePn      Pn       14 08 54.1 +1.3
ISAD  Sadrabad           4.93 334 ePn      Pn       14 08 57.2 +2.7
ICHK  Chekchek           5.00 342 ePn      Pn       14 08 58.6 +3.2
YZKH  Yazd               5.09 345 ePn      Pn       14 08 58.8 +2.3
YZKH  Yazd               5.09 345 ePn      Pn       14 08 58.5 +2.0
BSRN  Basiran            5.16  29 ePn      Pn       14 09 00.5 +3.1
BSRN  Basiran            5.16  29 ePn      Pn       14 09 00.5 +3.1
NHDN  Nehbandan          5.16  40 ePn      Pn       14 09 00.1 +2.7
KLNJ  Kolanjah           5.34 312 ePn      Pn       14 09 01.6 +1.4
IRAM  Ramesheh           5.44 323 ePn      Pn       14 09 03.6 +2.1
IKOO  Kooshah            5.51  26 ePn      Pn       14 09 05.0 +2.7
TPRV  Parvadeh(Tabas     5.55   4 ePn      Pn       14 09 04.4 +1.6
NASN  Na'in              6.06 332 ePn      Pn       14 09 11.6 +1.5
NASN  Na'in              6.06 332 ePn      Pn       14 09 11.6 +1.5
ANAR  Anarak             6.08 340 ePn      Pn       14 09 12.5 +2.4
IGAR  Gharneh            6.09 325 ePn      Pn       14 09 12.2 +1.9
IDAH  Dahanechah         6.14  30 ePn      Pn       14 09 13.9 +2.8
TABS  Tabas              6.21   7 ePn      Pn       14 09 15.0 +3.1
TABS  Tabas              6.21   7 ePn      Pn       14 09 15.0 +3.1
IZEF  Zefreh             6.35 329 ePn      Pn       14 09 15.0 +1.0
AFRZ  Afriz              6.42  22 ePn      Pn       14 09 17.1 +2.4
IPIR  Pirpir             6.93 320 ePn      Pn       14 09 23.7 +1.8
IKLH  Kolahrood          7.06 327 ePn      Pn       14 09 23.9 +0.3
AMIS  Naft Sefid         7.32 306 ePn      Pn       14 09 28.3 +1.3
KRSH  Karshahi           7.35 333 ePn      Pn       14 09 29.9 +2.3
UMR   Umm Al-Rimmam      7.74 288 eP                14 09 32.8
RDF   Al-Radifah         7.76 283 eP                14 09 32.9
MIB   Mutribah           8.11 289 eP                14 09 38.6
MIB                                IAML             14 11 11.9
      comp=Z,92nm,0.6s
RST   Umm Al-Ruwaisa     8.34 286 eP                14 09 40.7
SHAO  Shalim             9.42 183 i P      Pn       14 09 57.0 +1.1
      SNR=19
SHAO  Shalim             9.42 183 P        Pn       14 09 57.0 +1.1
      SNR=19
WHFO  Wadi Hawf          9.77 194 P        Pn       14 10 02.0 +1.3
      SNR=55
DMTO  DMTO               9.78 187 P        Pn       14 10 02.0 +1.2
      SNR=16
ABTO  Aybut             10.42 195 P        Pn       14 10 10.0 +0.3
      SNR=9.6
RAYN  Ar Rayn           10.42 250          Pn       14 10 09.3 -0.4
IDHR  Dehrash           11.06 313 ePn      Pn       14 10 17.6 -0.9
SOCY  Socotra           15.35 188 Pn       Pn       14 11 12.3 -4.6
MMAI  Mount Meron Ar    18.78 292 P        Pn       14 12 00.8 +0.8
      comp=Z,1.3nm,0.3s,baz=102,slow=16,SNR=4.7
KK31  Karatay Array     19.45  33          Pn       14 12 08.0 +0.1
KKAR  Karatay Array     19.45  33          Pn       14 12 07.5 -0.4
KBZ   Khabaz            19.45 330 P        Pn       14 12 07.8 -0.1
      comp=Z,0.1nm,0.3s,baz=218,slow=2.8,SNR=3.7
KIV   Kislovodsk        19.72 330 P        Pn       14 12 10.8 -0.5
KIV                               IAmb     IAmb     14 12 24.4
      comp=Z,18nm,1.4s
AAK   Ala-Archa         21.23  40 P        P        14 12 26.5 +0.3
      comp=Z,1.4nm,0.5s,baz=198,slow=8.2,SNR=7.1
AAK                               LR       LR       14 22 52.5
      comp=Z,21nm,21.8s,baz=327,slow=43
AAK   Ala-Archa         21.23  40 P        P        14 12 27.3 +1.1
ABKAR Akbulak array     21.94   7 P        P        14 12 34.1 +0.4
BRTR  Keskin Array B    22.34 309 P        P        14 12 39.5 +1.3
      comp=Z,3.5nm,0.8s,baz=126,slow=12,SNR=7.3
BRTR  Keskin Array B    22.34 309 P        P        14 12 39.7 +1.6
AKTO  Aktyubinsk        22.97   3 P        P        14 12 44.6  0.0
      comp=Z,4.3nm,0.9s,baz=215,slow=6.4,SNR=6.4
BVAR  Borovoye Array    27.62  19 P        P        14 13 26.9 -0.7
      comp=Z,0.3nm,0.4s,baz=186,slow=7.3,SNR=2.6
MAKZ  Makanchi          27.99  40 P        P        14 13 31.9 +0.9
MAKZ                              IAmb     IAmb     14 13 35.1
      comp=Z,6.9nm,1.3s
MK31  Makanchi Array    28.16  40 P        P        14 13 32.5  0.0
MKAR  Makanchi Array    28.16  40 P        P        14 13 32.1 -0.4
      comp=Z,0.3nm,0.6s,baz=223,slow=11,SNR=6.1
MKAR  Makanchi Array    28.16  40 P        P        14 13 32.5  0.0
KURBB Kurchatov Arra    28.69  30 P        P        14 13 37.9 +0.8
      comp=Z,0.2nm,0.3s,baz=231,slow=9.2,SNR=1.5
KURK  Kurchatov         28.80  30 P        P        14 13 37.9 -0.1
KURK  Kurchatov         28.80  30 IAmb     IAmb     14 13 51.7
      comp=Z,5.3nm,1.3s
AKASG Malin Array Be    30.94 326 P        P        14 13 56.6 -0.4
      comp=Z,0.3nm,0.3s,baz=119,slow=7.7,SNR=4.5
AKASG Malin Array Be    30.94 326 IAmb     IAmb     14 13 57.1
      comp=Z,0.9nm,1.1s
ZAA0  Zalesovo Array    33.79  31 P        P        14 14 22.2 +0.3
ZAA0                              IAmb     IAmb     14 14 24.5
      comp=Z,3.8nm,1.2s
ZALV  Zalesovo Beam     33.79  31 P        P        14 14 20.8 -1.2
      comp=Z,0.9nm,0.4s,baz=231,slow=11,SNR=6.7
ZALV  Zalesovo Beam     33.79  31 P        P        14 14 22.0 +0.1
KHC   Kasperske Hory    39.15 315 eP       P        14 15 07.6 -0.2
FINES FINESS Array B    39.49 338 P        P        14 15 10.7 +0.3
      comp=Z,0.9nm,0.4s,baz=138,slow=9.3,SNR=4.9
CLL   Collm             40.19 318 i P      P        14 15 17.2 +0.8
      comp=Z,7.0nm,1.1s
SONM  Songino Array     43.76  48 P        P        14 15 46.5 +0.6
      comp=Z,4.1nm,1.2s,baz=278,slow=6.8,SNR=7.7
SONM  Songino Array     43.76  48 P        P        14 15 46.3 +0.5
NOA   NORSAR Array B    45.03 331 P        P        14 15 55.3 -0.3
      comp=Z,0.8nm,0.7s,baz=109,slow=9.5,SNR=3.3
ARCES ARCESS Array B    45.71 345 P        P        14 16 02.7 +1.8
      comp=Z,7.4nm,0.9s,baz=37,slow=12,SNR=2.2
ARCES ARCESS Array B    45.71 345 IAmb     IAmb     14 16 10.8
      comp=Z,17nm,1.1s
NRIK  Noril'sk          45.71  15 LR       LR       14 37 16.1
      comp=Z,53nm,18.2s,baz=222,slow=39
TOA0  Torodi Ar. Sit    52.67 266 P        P        14 16 54.1 -0.8
TOA0                              IAmb     IAmb     14 16 56.9
      comp=Z,2.6nm,0.7s
TORD  Torodi Ar. Bea    52.67 266 P        P        14 16 54.0 -0.9
      comp=Z,2.3nm,0.6s,baz=61,slow=7.4,SNR=8.5
TORD  Torodi Ar. Bea    52.67 266 P        P        14 16 54.3 -0.6
TIXI  Tiksi             58.73  21 P        P        14 17 37.0 -0.6
TIXI                              IAmb     IAmb     14 17 38.4
      comp=Z,4.2nm,1.1s
SBUM  Sibu              58.97 105 P        P        14 17 39.5 -0.7
ILULI Ilulissat         70.47 339 P        P        14 18 55.7 +1.4
TULEG Thule             70.93 348 eP       P        14 19 04.5 +7.5
TULEG                             IAML              14 20 13.8
      comp=Z,26nm,0.4s
ILAR  Eielson Array     86.31  10 P        P        14 20 20.6 -1.3
      comp=Z,0.2nm,0.6s,baz=339,slow=4.1,SNR=2.2
WRA   Warramunga Arr    89.08 113 P        P        14 20 34.4 -1.6
      comp=Z,0.4nm,0.7s,baz=315,slow=4.1,SNR=2.1
ASAR  Alice Springs     90.56 116 P        P        14 20 42.3 -0.6
      comp=Z,0.3nm,0.6s,baz=305,slow=4.6,SNR=7.5
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*ANF **02** 14:10:11.3±0.4, 37°.08N×104°.96W, h7^{km}±3^{km}, ML3.5/15, Error ellipse: s-maj=2.4km s-min=2.1km az=58.0*

*NEIC **02** 14:10:13.0±1.6, 37°.09N±0°.04×104°.98W±0°.03, h5^{km}±2^{km}, mb_Lg3.5/101, ML3.1/36, Error ellipse: s-maj=6.1km s-min=3.4km az=3.0*

ISC 02 14:10:11.9±1.4**, 37°.09N**±0°.03×**104°.95W**±0°.03**, h0**^{km}±12^{km}**, n62, σ1^s.03**/57**, Colorado**

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Code  Station Name         Δ°  AZ°    Phase ID          Time     Res
                                  Op       ISC       h  m  s    ISC
T25A  Trinidad           0.43  84 P        Pg       14 10 20.3 +0.1
      baz=261
T25A                              S        Sg       14 10 26.4 +0.6
      baz=261
SDCO  Great Sand Dun     0.79 326 P        Pg       14 10 26.9 -0.1
      baz=148,SNR=100
SDCO                              S        Sg       14 10 37.7 +0.5
      baz=148
SDCO  Great Sand Dun     0.79 326 Pg       Pg       14 10 26.9 -0.1
SDCO                              Sg       Sg       14 10 37.9 +0.7
S22A  4UR Ranch, Cre     1.63 294 Pb       Pn       14 10 42.0 -0.2
      baz=114,SNR=544
S22A                              S        Sn       14 11 03.1 -1.0
      baz=114
Q24A  Divide             1.88 355 Pb       Pb       14 10 46.8 -0.4
      baz=176
Q24A                              Sb       Sg       14 11 12.2  0.0
      baz=176
ANMO  Albuquerque        2.47 210 P        Pn       14 10 52.6 -1.0
      baz=29
ANMO  Albuquerque        2.47 210 Pn       Pn       14 10 52.9 -0.7
ANMO                              Sn       Sn       14 11 24.0 -0.5
SMCO  Snowmass           2.62 323          Pn       14 10 57.4 +1.5
SMCO                              IAML              14 11 38.4
      164nm,0.6s
KSCO  Kaye Shedlock'     2.65  43 Pb       Pb       14 10 58.7 -1.6
      baz=224
KSCO                              Sb       Sb       14 11 34.9 +1.4
      baz=224
KSCO  Kaye Shedlock'     2.65  43          Pn       14 10 56.7 +0.7
KSCO                              IAmb_Lg           14 11 40.6
      comp=Z,222nm,0.9s
ISCO  Idaho Springs      2.75 349 Pb       Pb       14 11 00.1 -2.1
      baz=169
ISCO                              Sb       Sb       14 11 38.6 +2.0
      baz=169
ISCO  Idaho Springs      2.75 349          Pn       14 10 58.4 +0.8
MVCO  Mesa Verde         2.84 273 P        Pn       14 10 59.0 +0.4
      baz=92,SNR=165
MVCO                              Sb       Sb       14 11 39.5 +0.6
      baz=92
MVCO  Mesa Verde         2.84 273          Pn       14 10 59.3 +0.6
PV01  Paradox Valley     3.06 291          Pn       14 11 02.6 +0.9
PV01                              IAML              14 11 51.2
      comp=N,33nm,1.3s
PV01                              IAML              14 11 55.7
      comp=E,56nm,0.7s
PV15  Paradox Valley     3.07 295 Pn       Pn       14 11 02.8 +0.9
PV15                              IAML              14 11 54.2
      comp=E,75nm,1.0s
PV15                              IAML              14 11 58.6
      comp=N,70nm,0.7s
PV02  Paradox Valley     3.21 291          Pn       14 11 04.8 +1.1
PV07  Paradox Valley     3.22 296          Pn       14 11 04.5 +0.6
PV07                              IAML              14 11 55.4
      comp=E,36nm,0.8s
PV07                              IAML              14 12 11.0
      comp=N,38nm,1.2s
BNM   Barren Site        3.24 205          Pn       14 11 04.0 -0.2
PV03  Paradox Valley     3.30 292          Pn       14 11 05.6 +0.6
PV03                              IAML              14 12 06.5
      comp=N,41nm,1.0s
PV03                              IAML              14 12 11.9
      comp=E,43nm,1.0s
PV11  David Mesa, Pa     3.34 292          Pn       14 11 05.9 +0.4
PV22  Blue Mesa, Par     3.36 297          Pn       14 11 06.8 +0.9
PV22                              IAML              14 11 59.6
      comp=E,48nm,0.7s
PV22                              IAML              14 12 02.1
      comp=N,51nm,0.9s
Y22D  IRIS PASSCAL I     3.41 209 Sb       Sb       14 11 55.3 -0.1
      baz=27
AMTX  Amarillo           3.45 129 P        Pn       14 11 06.4 -0.5
      baz=310
AMTX  Amarillo           3.45 129 Pn       Pn       14 11 06.6 -0.3
AMTX                              IAmb_Lg           14 12 02.6
      comp=Z,107nm,0.9s
MSTX  Muleshoe           3.59 150 Pb       Pb       14 11 15.4 -0.9
      baz=331
MSTX                              Sb       Sb       14 12 00.2 -0.2
      baz=331
MSTX  Muleshoe           3.59 150          Pn       14 11 08.6 -0.2
O20A  White River Ci     3.98 321          Pn       14 11 12.9 -1.4
O20A                              IAML              14 12 22.1
      comp=E,31nm,2.2s
O20A                              IAML              14 12 28.2
      comp=N,35nm,4.4s
W18A  Petrified Fore     4.35 244 Pb       Pb       14 11 28.6 -0.7
      baz=62
CBKS  Cedar Bluff        4.46  66 P        Pn       14 11 21.1 +0.3
      baz=249,SNR=12
CBKS                              Sb       Sb       14 12 27.5 +2.0
      baz=249
CBKS  Cedar Bluff        4.46  66 Pn       Pn       14 11 21.3 +0.4
CBKS                              IAmb_Lg           14 12 37.9
      comp=Z,127nm,0.8s
X18A  Snowflake          4.80 239 Pn       Pn       14 11 25.4 -0.2
X18A                              IAML              14 12 47.7
      comp=E,27nm,0.7s
SRU   San Rafael Swe     4.84 296 Pn       Pn       14 11 25.9 -0.2
121A  Cookes Peak, D     5.11 208 P        Pn       14 11 29.8 -0.1
      baz=26
121A                              Sb       Sb       14 12 45.9 +1.5
      baz=26
MNTX  Cornudas Mount     5.39 184 Pb       Pb       14 11 46.8 -0.2
      baz=3.5
MNTX                              Sb       Sb       14 12 54.2 +1.9
      baz=3.5
WUAZ  Wupatki            5.42 255 P        Pn       14 11 34.2 +0.1
      baz=71
WUAZ  Wupatki            5.42 255 Pn       Pn       14 11 34.5 +0.4
WMOK  Wichita Mounta     5.53 113 Pb       Pb       14 11 47.0 -2.3
      baz=297
WMOK  Wichita Mounta     5.53 113 IAmb_Lg           14 13 24.5
      comp=Z,55nm,1.1s
CROK  Carrier            5.62  94 IAmb_Lg           14 13 10.1
      comp=Z,56nm,0.8s
KS21  Milan North St     5.82  86 IAmb_Lg           14 13 26.8
      comp=Z,91nm,1.2s
U15A  North Rim          5.93 266 Pn       Pn       14 11 42.0 +0.8
KAN13 South Haven SW     5.98  89 Pn       Pn       14 11 43.4 +1.8
BCOK  Bluff Creek, N     6.09 101 IAmb_Lg           14 13 32.1
      comp=Z,64nm,0.7s
TCRU  Three Creeks R     6.12 287 Pn       Pn       14 11 44.6 +0.7
OKCFA Oklahoma City      6.29 103 IAmb_Lg           14 13 41.3
      comp=Z,44nm,0.7s
T35A  Sooner Cattle      6.75  89 IAmb_Lg           14 13 59.1
      comp=Z,64nm,1.2s
BGNE  Belgrade           6.81  49 IAmb_Lg           14 13 55.4
      comp=Z,73nm,0.9s
KSU1  Kansas State U     6.88  71 IAmb_Lg           14 13 51.7
      comp=Z,57nm,1.1s
N33A  J Bar K, Exete     6.89  56 IAmb_Lg           14 14 05.0
      comp=Z,37nm,0.8s
RSSD  Black Hills        7.05   5 Pn       Pn       14 11 54.0 -2.5
Z35A  Perchaven, San     7.33 119 IAmb_Lg           14 14 12.6
      comp=Z,36nm,0.8s
TUL1  Leonard            7.47  96 IAmb_Lg           14 14 24.2
      comp=Z,59nm,1.1s
JCT   Junction City      7.86 146 IAmb_Lg           14 14 29.2
      comp=Z,34nm,1.0s
X37A  Clayton            8.17 105 IAmb_Lg           14 14 53.3
      comp=Z,42nm,0.8s
U38A  Gravette           8.50  91 IAmb_Lg           14 14 55.7
      comp=Z,36nm,1.1s
R11A  Troy Canyon, C     8.52 282 Pn       Pn       14 12 16.4 -0.3
SUSD  Miller             8.63  30 IAmb_Lg           14 14 52.4
      comp=Z,44nm,1.1s
P38A  Dawn               9.32  71 IAmb_Lg           14 15 10.3
      comp=Z,31nm,0.7s
MIAR  Mount Ida          9.58 102          Pn       14 12 30.7 -0.3
U40A  Yellville          9.74  91 IAmb_Lg           14 15 21.8
      comp=Z,36nm,1.1s
N38A  Joes South For     9.84  64 IAmb_Lg           14 15 32.1
      comp=Z,39nm,0.9s
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*MAN **02** 14:14:18.4, 13°.70N×120°.48E, h99^{km}, mb4.2, ML3.0, MS2.7*

*IDC **02** 14:14:18.6±0.7, 13°.84N×121°.03E, h119^{km}±3^{km}, mb3.3/7, mb1 3.3/7, mb1mx3.0/50, mbtmp3.7/7, Error ellipse: s-maj=45.7km s-min=15.8km az=68.0*

ISC 02 14:14:18.1±0.8**, 13°.68N**±0°.06×**120°.52E**±0°.08**, h114**^{km}±6^{km}**, n18, σ1^s.48**/24**, mb3.8**/7**, 1C-1D, Mindoro**

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Code  Station Name         Δ°  AZ°    Phase ID          Time     Res
                                  Op       ISC       h  m  s    ISC
LUBP  Lubang             0.28 281 eP       Pn       14 14 33.9 -0.3
LUBP                              eS       Sn       14 14 45.6 -0.8
PGP   Puerto Galera      0.45 113⇑eP       Pn       14 14 35.4 +0.2
PGP                               eS       Sn       14 14 47.8 -0.2
TGY   Tagaytay City      0.58  44 P        Pn       14 14 37.4 +1.4
      248nm,0.3s,baz=272,slow=4.4,SNR=8.3
TGY                               S        Sn       14 14 49.7 +0.2
      1µm,0.3s,baz=326,slow=23,SNR=19
TGY   Tagaytay City      0.58  44 eP       Pn       14 14 36.8 +0.7
TGY                               i S      Sn       14 14 50.5 +0.9
LQP   Lukban             1.08  66⇓i P      Pn       14 14 41.8 +1.2
LQP                               i S      Sn       14 14 59.0 +1.4
POLP  Polilio Island     1.72  53 eP       Pn       14 14 48.9 +1.0
JCNP  Jose Panganiba     2.19  74 eP       Pn       14 14 54.4 +0.7
BALP  Baler              2.29  26 eP       Pn       14 14 55.0 +0.1
ENPP  El Nido            2.68 204 eP       Pn       14 15 01.1 +1.0
ENPP                              eS       Sn       14 15 35.3 +2.9
CUYO  Cuyo Island        2.85 170 eP       Pn       14 15 03.4 +1.0
CAUP  Cauayan            3.48  21 eP       Pn       14 15 14.1 +3.5
SONM  Songino Array     36.03 344 P        P        14 21 07.9 -0.6
      0.8nm,0.5s,baz=165,slow=16,SNR=4.8
WRA   Warramunga Arr    36.07 158 P        P        14 21 08.1 -0.8
      0.3nm,0.7s,baz=336,slow=9.8,SNR=1.9
ASAR  Alice Springs     39.36 160 P        P        14 21 36.1 -0.5
      0.3nm,0.8s,baz=335,slow=7.2,SNR=9.0
MKAR  Makanchi Array    45.95 324 P        P        14 22 31.0 +1.4
      0.5nm,0.5s,baz=134,slow=8.7,SNR=7.9
ZALV  Zalesovo Beam     49.00 333 P        P        14 22 53.1 +0.1
      0.6nm,0.3s,baz=119,slow=6.6,SNR=4.7
PETK  Petropavlovsk-    49.12  29 P        P        14 22 51.2 -2.8
      1.3nm,0.7s,baz=275,slow=8.5,SNR=5.5
KURBB Kurchatov Arra    50.11 326 P        P        14 23 02.6 +1.1
      1.4nm,0.5s,baz=126,slow=7.8,SNR=12
```

IDC 02 14:21:30.4±4.3**, 4°.90N**×**127°.72E, h130**^{km}±41^{km}**, mb3.1**/4**, mb1 3.4**/5**, mb1mx3.1**/42**, mbtmp3.6**/5**, Error ellipse: s-maj=57.9km s-min=23.5km az=75.0, Talaud Islands**

```
Code  Station Name         Δ°  AZ°    Phase ID          Time     Res
                                  Op       ISC       h  m  s    ISC
SIJI  Sorong             6.74 148 P        Pn       14 23 07.8 +0.8
      5.5nm,0.3s,baz=212,slow=22,SNR=44
SIJI                              S        Sn       14 24 21.5 -0.9
      1.4nm,0.3s,baz=148,slow=23,SNR=2.7
WRA   Warramunga Arr    25.53 165 P        P        14 26 47.2 +0.1
      0.5nm,0.5s,baz=343,slow=10,SNR=11
ASAR  Alice Springs     29.03 168 P        P        14 27 18.6 +0.2
      0.3nm,0.6s,baz=350,slow=7.2,SNR=7.8
MKAR  Makanchi Array    57.18 324 P        P        14 31 03.8  0.0
      0.3nm,0.6s,baz=121,slow=7.0,SNR=4.9
ILAR  Eielson Array     83.63  25 P        P        14 33 43.8 -0.3
      0.3nm,0.8s,baz=251,slow=5.6,SNR=5.8
```

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*IDC **02** 14:35:05.5±2.0, 5°.68S×152°.21E, h0^{km}, mb3.8/4, mb1 4.0/5, mb1mx3.6/46, mbtmp3.8/5, ML1.9/1, MS2.8/2, Ms1 2.8/2, ms1mx2.4/33, Error ellipse: s-maj=108.6km s-min=25.1km az=131.0*

ISC 02 14:35:08.6±2.3**, 5°.5S**±0°.7×**151°.7E**±0°.8**, h10**^{km}**, n7, σ2^s.35**/7**,** **mb3.6**/4**, New Britain region**

```
Code  Station Name         Δ°  AZ°    Phase ID          Time     Res
                                  Op       ISC       h  m  s    ISC
PMG   Port Moresby       6.00 229 Pn       Pn       14 36 39.4 +1.9
      1.7nm,0.3s,baz=44,slow=7.0,SNR=7.0
PMG                               Sn       Sn       14 37 43.2 -3.2
      3.6nm,0.3s,baz=149,slow=23,SNR=8.4
PMG                               LR       LR       14 39 03.2
      comp=Z,35nm,19.8s,baz=12,slow=38
GUMO  Guam              20.11 340 LR       LR       14 46 01.9
      comp=Z,53nm,21.4s,baz=105,slow=32
WRA   Warramunga Arr    22.22 228 P        P        14 40 06.4 +0.8
      1.6nm,0.6s,baz=53,slow=9.8,SNR=13
ASAR  Alice Springs     24.95 222 P        P        14 40 31.7 -0.8
      1.1nm,0.7s,baz=58,slow=9.0,SNR=22
FITZ  Fitzroy Crossi    28.41 242 P        P        14 41 05.2 +1.5
      2.2nm,0.5s,baz=52,slow=8.4,SNR=18
ILAR  Eielson Array     83.16  22 P        P        14 47 34.2 -0.4
      0.3nm,0.6s,baz=243,slow=5.3,SNR=5.8
TORD  Torodi Ar. Bea   149.49 287 PKPbc    PKPbc    14 54 57.2 -2.1
      0.9nm,0.6s,baz=82,slow=3.5,SNR=3.8
```

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*IDC **02** 14:59:19.8±2.9, 17°.04N×101°.35W, h0^{km}, mb3.7/4, mb1 4.0/6, mb1mx3.8/34, mbtmp3.6/6, ML3.4/2, MS3.4/5, Ms1 3.4/5, ms1mx3.2/35, Error ellipse: s-maj=56.1km s-min=23.1km az=21.0*

*MEX **02** 14:59:22.4±0.9, 17°.13N×101°.39W, h5^{km}, MD4.3*

*NEIC **02** 14:59:25.7±0.6, 17°.2N±0°.1×101°.2W±0°.1, h34^{km}±9^{km}, mb4.1/13, Error ellipse: s-maj=20.1km s-min=11.0km az=223.0*

ISC 02 14:59:20.8±1.5**, 17°.10N**±0°.05×**101°.37W**±0°.04**, h8**^{km}±9^{km}**, n51, σ1^s.62**/62**, mb3.9**/6**, Near coast of Guerrero**

```
Code  Station Name         Δ°  AZ°    Phase ID          Time     Res
                                  Op       ISC       h  m  s    ISC
ZIIG  Zihuatanejo        0.52 350 eP       Pg       14 59 31.3 +0.5
ZIIG                              eS       Sg       14 59 38.3 +0.7
CAIG  El Cayaco          1.06  92 eP       Pg       14 59 39.8 -1.3
CAIG                              i S      Sg       14 59 53.4 -1.5
```

ACP2	Acapulco	1.44	99	eP	Pn	14 59 48.4	+1.2
ACP2				eS	Sn	15 00 06.3	+0.1
ARIG	Puente Sto Nin	1.53	40	eP	Pn	14 59 47.5	-1.0
ARIG				eS	Sn	15 00 06.0	-2.7
MEIG	Mezcala	1.87	63	eP	Pn	14 59 51.3	-1.8
MEIG				i S	Sn	15 00 14.5	-2.4
CRIG	Cruz Grande	2.18	99	eP	Pn	14 59 56.5	-0.8
CRIG				i S	Sn	15 00 22.4	-2.1
PLIG	Platanillo	2.20	54	eP	Pn	14 59 57.1	-0.6
PLIG				eS	Sn	15 00 24.0	-1.2
MMIG	Aquila	2.22	303	eP	Pn	14 59 55.6	-2.4
MMIG				i S	Sn	15 00 22.9	-2.7
MAVM	Malinalco, Edo	2.57	44	i P	Pn	15 00 05.1	+2.1
MAVM				i S	Sn	15 00 35.7	+1.0
MOIG	Morelia	2.58	4	eP	Pn	15 00 01.1	-2.0
MOIG				i S	Sn	15 00 31.6	-3.1
MOIG	Morelia	2.58	4	Pn	Pn	15 00 04.2	+1.2
TOVM	TOLUCA	2.71	36	eP	Pn	15 00 03.8	-1.1
TOVM				eS	Sn	15 00 36.7	-1.4
TLIG	Tlapa	2.72	80	i P	Pn	15 00 03.9	-1.1
TLIG				i S	Sn	15 00 36.3	-1.8
TLIG	Tlapa	2.72	80		Pn	15 00 04.5	-0.4
ATVM	ATLACOMULCO	3.02	29	eP	Pn	15 00 08.4	-0.9
ATVM				eS	Sn	15 00 43.9	-2.0
UNM	Universidad Na	3.05	43	Pn	Pn	15 00 09.4	-0.2
CVM	Colonia del Va	3.09	42	eS	Sn	15 00 45.6	-1.3
AMVM	AMECAMECA	3.19	50	eS	Sn	15 00 49.2	-0.6
PNIG	Pinotepa	3.19	102	eP	Pn	15 00 10.0	-1.2
PNIG				i S	Sn	15 00 47.6	-1.9
PBVM	Pinon	3.19	43	eP	Pn	15 00 11.1	-0.1
PBVM				eS	Sn	15 00 48.3	-1.2
ACIG	Acambay	3.20	26	eP	Pn	15 00 10.7	-0.9
ACIG				eS	Sn	15 00 49.3	-0.7
PTVM	Pico Tres Padr	3.28	40	eP	Pn	15 00 12.0	-0.8
PTVM				eS	Sn	15 00 50.2	-2.0
ZUVM	ZUMPANGO	3.48	38	eP	Pn	15 00 14.2	-1.3
ZUVM				eS	Sn	15 00 56.2	-0.9
CMIG	Matias Romero	6.21	89	Pn	Pn	15 00 52.9	+0.2
	0.5nm,0.3s,baz=281,slow=12,SNR=5.4						
CMIG				Sn	Sn	15 02 08.4	+4.4
	0.9nm,0.3s,baz=280,slow=18,SNR=3.7						
CMIG				Lg	Lg	15 02 37.3	
	2.1nm,0.3s,baz=333,slow=8.2,SNR=4.7						
CMIG				LR	LR	15 03 04.6	
	comp=Z,152nm,21.8s,baz=268,slow=36						
H06E1	SOCORRO T-PHAS	9.24	282	T	T	15 10 55.1	
	SNR=17						
H06S1	SOCORRO T	9.27	282	T	T	15 10 55.3	
	SNR=5.6						
LPIG	La Paz	10.89	311	LR	LR	15 05 31.3	
	comp=Z,165nm,18.4s,baz=113,slow=34						
TXAR	Lajitas Array	12.36	351	Pn	Pn	15 02 19.9	+2.7
	0.1nm,0.3s,baz=175,slow=13,SNR=2.1						
TXAR				Lg	Lg	15 05 54.4	
	0.1nm,0.3s,baz=169,slow=24,SNR=2.8						
TXAR				LR	LR	15 07 42.7	
	comp=Z,241nm,19.3s,baz=0.0,slow=40						
TGUH	Tegucigalpa,Un	13.92	101	Pn	Pn	15 02 38.3	-0.3
GDL2	Guadalupe Moun	15.28	350	P	P	15 03 03.2	+1.3
ANMO	Albuquerque	18.35	347	LR	LR	15 11 22.0	
	comp=Z,241nm,21.9s,baz=140,slow=39						
WUAZ	Wupatki	20.40	336	P	Pn	15 04 00.8	+0.4
WUAZ				IAmb	IAmb	15 04 02.5	
	comp=Z,11nm,1.1s						
SDCO	Great Sand Dun	20.89	351	P	P	15 04 03.7	-0.1
SDCO				IAmb	IAmb	15 04 05.4	
	comp=Z,6.8nm,1.2s						
U15A	North Rim	21.55	335	P	P	15 04 12.9	+1.9
KNB	Kanab	22.27	335	P	P	15 04 20.0	+1.4
LCMT	Little Creek M	22.44	334	P	P	15 04 21.8	+1.4
255A	Hazlehurst	22.61	46	P	P	15 04 19.8	-2.2
MTPU	Mount Pierson	22.93	338	P	P	15 04 27.2	+1.5
TPNV	Topopah Spring	23.75	329	P	P	15 04 35.9	+2.1
TPNV				IAmb	IAmb	15 04 55.9	
	comp=Z,5.2nm,1.2s						
DUG	Dugway, Tooele	25.07	339	P	P	15 04 47.0	+1.1
TPH	Tonopah	25.11	329	P	P	15 04 48.0	+1.7
NVAR	Mina Array Bea	25.92	328	P	P	15 04 55.2	+1.5
	comp=Z,4.5nm,1.0s,baz=146,slow=9.5,SNR=17						
PDAR	Pinedale Array	26.52	346	P	P	15 05 00.1	+1.0
	comp=Z,1.0nm,0.9s,baz=175,slow=8.9,SNR=6.3						
PDAR				LR	LR	15 15 37.4	
	comp=Z,81nm,19.9s,baz=176,slow=37						
YKA	Yellowknife Ar	46.29	352	P	P	15 07 46.0	-0.7
	comp=Z,0.9nm,0.8s,baz=156,slow=7.8,SNR=8.2						
H03N2	Juan Fernandez	54.63	157	T	T	16 07 41.9	
	baz=334,slow=77,SNR=23						
H03N1	Juan Fernandez	54.64	157	T	T	16 07 46.2	
	baz=334,slow=77,SNR=20						
H03N3	Juan Fernandez	54.65	157	T	T	16 07 42.2	
	baz=334,slow=77,SNR=14						
BRLK	Bradley Lake	55.51	332	P	P	15 08 57.5	+1.3
SUA	Susitna One	56.27	334	P	P	15 09 02.9	+1.1
SUA				IAmb	IAmb	15 09 19.4	
	comp=Z,4.3nm,1.0s						
ILAR	Eielson Array	56.55	339	P	P	15 09 04.2	+0.7
	comp=Z,0.5nm,1.0s,baz=159,slow=4.3,SNR=4.0						
IMAR	Indian Mountai	59.63	338	P	P	15 09 24.6	-0.6

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*IDC **02** 15:13:37.1±0.4, 13°.90N×124°.52E, h0^{km}, mb4.7/28, mb1 4.8/32, mb1mx4.8/39, mbtmp4.7/32, ML4.3/4, MS4.9/35, Ms1 4.9/35, ms1mx4.8/49, Error ellipse: s-maj=16.6km s-min=9.6km az=85.0*

*BJI **02** 15:13:37.2±0.0, 13°.79N×124°.67E, h18^{km}, mB5.3/72, mb5.0/76, Ms5.4/90, Ms7 5.1/84*

*NEIC **02** 15:13:38.5, 13°.96N×124°.46E, h21^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.95; M$_{\theta\theta}$-0.16; M$_{\phi\phi}$-0.79; M$_{r\theta}$-0.34; M$_{\theta\phi}$0.51; M$_{\phi r}$1.54; Fault plane solution: M$_0$1.88000×10^{17} NP1:ϕ_s135.36000°, δ18.11000°, λ61.64000°. NP2:ϕ_s344.95000°, δ74.12000°, λ98.83000°. Principal axes: T 1.8504, Plg60.0000°, Azm267.0000°; N 0.0520, Plg8.0000°, Azm163.0000°; P -1.9024, Plg29.0000°, Azm68.0000°;*

*NEIC **02** 15:13:39.8±2.8, 13°.98N±0°.06×124°.58E±0°.08, h17^{km}±1^{km}, mb5.3/132, Mwb5.4/53 Error ellipse: s-maj=13.2km s-min=10.9km az=81.0*

*MOS **02** 15:13:41.7±1.1, 13°.89N×124°.48E, h42^{km}, mb5.4/76, MS5.0/16, Error ellipse: s-maj=7.3km s-min=3.8km az=118.0*

*MAN **02** 15:13:42.1, 13°.92N×124°.48E, h17^{km}, mb6.1, ML5.2, MS5.7*

MAN INTENSITY V - GIGMOTO.

*GCMT **02** 15:13:43.8±0.1, 14°.11N±0°.01×124°.65E±0°.01, h23^{km}, MW5.5/147, Moment Tensor Solution. s112,c170; s147,c265; Duration: 1^{s}4 Moment tensor: Scale 10^{17} Nm; M$_{rr}$1.71±.04; M$_{\theta\theta}$-0.24±.02; M$_{\phi\phi}$-1.47±.03; M$_{r\theta}$-0.66±.04; M$_{\theta\phi}$0.64±.02; M$_{\phi r}$1.74±.06; Best double couple: M$_0$2.53900×10^{17} NP1:ϕ_s155.00000°, δ21.00000°, λ87.00000°. NP2:ϕ_s339.00000°, δ69.00000°, λ91.00000°. Principal axes: T 2.5230, Plg66.0000°, Azm251.0000°; N 0.0330, Plg1.0000°, Azm158.0000°; P -2.5540, Plg24.0000°, Azm68.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*DJA **02** 15:13:45.4±0.4, 14°N±2°×12°5E±°, h64^{km}±4^{km}, M5.3/80, mb5.3/80, mB5.7/65, MLv6.3/1, Mw(mB)5.2/65, MwMwp5.3/27, Mwp5.5/27*

*KLM **02** 15:13:48, 13°.90N×124°.95E, h98^{km}, mb5.5*

ISC 02 15:13:41.7±0.5, **13°.88N**±0°.02×**124°.57E**±0°.03, **h28**^{km}±3^{km}, **h28**^{km}**:pP-P, n716,** σ1^s**87**/780, **mb5.3**/230, **MS5.0**/81, **58C-35D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PVCP	Virac	0.49	235	eP	Pb	15 13 51.8	-0.1
PVCP				eS	Sn	15 14 01.7	+1.3
GQP	Guinayangan	2.06	271	⇑eP	Pn	15 14 15.9	+1.5
GQP				eS	Sb	15 14 45.3	+1.7
POLP	Polilio Island	2.68	289	eP	Pn	15 14 22.5	-0.5
OCLP	Ormoc	2.81	179	eP	Pn	15 14 27.7	+2.9
OCLP				eS	Sb	15 15 10.9	+5.6
LQP	Lukban	2.95	275	⇑iP	Pn	15 14 28.4	+1.5
LQP				i S	Sn	15 15 02.6	+1.1
TGY	Tagaytay City	3.53	274	Pn	Pn	15 14 36.5	+1.7
	949nm,0.3s,baz=91,slow=1.2,SNR=64						
TGY				Sn	Sn	15 15 10.8	-4.8
	1µm,0.3s,baz=221,slow=4.8,SNR=9.4						
TGY	Tagaytay City	3.53	274	eP	Pn	15 14 36.8	+2.0
TGY				i S	Sb	15 15 41.0	+15
PGP	Puerto Galera	3.53	264	⇑eP	Pn	15 14 35.9	+1.1
PGP				i S	Sb	15 15 24.2	-1.8
LLP	Lapu-Lapu	3.59	189	⇑eP	Pn	15 14 37.9	+2.4
LLP				eS	Sb	15 15 25.9	-1.7
MSLP	Maasin	3.73	176	eP	Pb	15 14 44.0	-3.0
MSLP				eS	Sb	15 15 34.2	+2.3
GUIM	Jordan	3.77	211	eP	Pn	15 14 39.9	+1.9
GUIM				eS	Sn	15 15 26.1	+4.7
JAP	San Jose, Anti	4.03	220	⇓eP	Pb	15 14 48.8	-3.3
CNOP	Candoni, Negro	4.45	205	eP	Pn	15 14 49.7	+2.4
CNOP				eS	Sb	15 15 48.7	-3.6
BCP	Baguio City	4.58	304	⇓iP	Pn	15 14 49.2	-0.1
BCP				i S	Sb	15 15 56.7	+0.4
BUTP	Butuan	4.99	168	eP	Pb	15 15 01.7	-6.7
SZP	Santa	5.38	313	Pn	Pn	15 14 56.9	-3.3
CGP	Cagayan de Oro	5.39	179	⇓eP	Pn	15 15 06.6	+6.3
SIPP	Brgy, Tapao	5.64	316	⇑eP	Pn	15 15 01.5	-2.2
SIPP				eS	Sn	15 15 36.5	-31
BUKP	Musuan	5.99	175	eP	Pn	15 15 13.2	+4.7
PAGZ	Pagadian	6.11	191	eP	Pn	15 15 14.3	+4.2
PAGZ				eS	Sb	15 16 30.4	-10
DAV	Davao City (W)	6.84	172	Pn	Pb	15 15 31.8	-8.2
	31nm,0.3s,baz=278,slow=2.5,SNR=5.7						
DAV				Sn	Sn	15 16 47.0	+10
	33nm,0.3s,baz=81,slow=24,SNR=1.0						
DAV				LR	LR	15 17 41.4	
	comp=Z,5µm,18.2s,baz=3.5,slow=36						
KCP	Kidapawan	6.85	176	⇑eP	Pn	15 15 23.4	+3.0
KCP				i S	Sb	15 17 13.8	+12
SKMP	Bagumbayan, Su	7.32	180	eP	Pn	15 15 34.0	+7.3
ZCP	Zamboanga City	7.33	200	⇑eP	Pn	15 15 32.4	+5.5
TWG	Pinlang	9.49	340	Pn	Pn	15 15 53.2	-3.4
YULB	Yu-li	9.95	342	Pn	Pn	15 15 58.3	-4.6
TPUB	Ta-pu	10.08	339	Pn	Pn	15 16 02.0	-2.8
MYLDM	Lahad Datu	10.51	215		Pn	15 16 10.4	-0.2
QZH	Quanzhou	12.36	334	⇓iP	Pn	15 16 38.6	+2.8
QZH				S	Sn	15 18 51.2	-1.5
QZH				SS	SnSn	15 19 16.3	+11
QZH				LR	LR		
	comp=N,3µm,13.7s						
QZH				LR	LR		
	comp=E,4µm,16.1s						
QZH				LR	LR		
	comp=Z,4µm,12.7s						
MNI	Manado	12.36	179	P	Pn	15 16 37.4	+1.5
MNI				pmax	pmax		
	comp=Z,262nm,0.9s						
TOLI2	Tolitoli	13.23	197	Pn	Pn	15 16 51.6	+3.8
KMSI	Cibinong	13.23	183	P	P	15 16 52.7	-4.7
	comp=Z,146nm,1.3s						
TNTI	Ternate	13.32	168		Pn	15 16 49.4	+0.4
TNTI	Ternate	13.32	168	P	Pn	15 16 53.6	+4.6
	comp=Z,1µmcomp=Z,80nm,0.9s						
JOW	Kunigami	13.35	15	Pn	Pn	15 16 47.8	-1.5
	comp=Z,16nm,0.3s,baz=162,slow=17,SNR=52						
JOW				LR	LR	15 21 15.1	
	comp=Z,8µm,20.4s,baz=177,slow=34						
JMZ	Minamidaito 2	13.42	27	Pn	Pn	15 16 45.9	-4.5
MRSI	Marisa	13.57	191	P	Pn	15 16 56.1	+3.7
	comp=Z,5µmcomp=Z,2µmcomp=Z,186nm,1.3s						
GZH	Guangzhou	14.03	312	P	Pn	15 17 00.2	+1.5
GZH				S	Sn	15 19 39.0	+5.4
GZH				LR	LR		
	comp=Z,9µm,18.0s						
GZH				LR	LR		
	comp=Z,12µm,18.6s						
LUWI	Luwuk	14.93	187		P	15 17 17.8	+1.5
LUWI	Luwuk	14.93	187	P	P	15 17 14.2	-2.1
	comp=Z,9µmcomp=Z,6µmcomp=Z,284nm,1.3s						
APSI	Ampana	14.98	191	P	P	15 17 15.4	-1.4
	comp=Z,7µmcomp=Z,4µmcomp=Z,311nm,1.0s						
QIZ	Qiongzhong	15.02	292	P	Pn	15 17 10.3	-1.8
QIZ				S	Sn	15 19 58.6	+0.9
QIZ				pmax	pmax		
	comp=Z,41nm,3.3s						
QIZ				pmax	pmax		
	comp=Z,1µm,11.8s						
QIZ				LR	LR		
	comp=Z,6µm,19.6s						
QIZ				LR	LR		
	comp=Z,8µm,19.6s						
QIZ				LR	LR		
	comp=Z,11µm,19.1s						
DLV	T Lat	15.79	265	P	Pn	15 17 23.0	+0.5
DLV				IAmb	IAmb	15 17 44.3	
	comp=Z,388nm,1.3s						
SANI	Sanana	15.89	175	P	Pn	15 17 20.8	-2.7
SWI	Sorong	16.08	155	P	P	15 17 28.2	-0.9
SWI				pmax	pmax		
	comp=Z,87nm,0.9s						
SWI	Sorong	16.08	155	P	Pn	15 17 26.9	+0.9
	comp=Z,3µmcomp=Z,2µmcomp=Z,88nm,0.9s						
SIJI	Sorong	16.09	155	Pn	Pn	15 17 25.9	-0.2
	comp=Z,0.8nm,0.3s,baz=330,slow=13,SNR=9.5						
SBUM	Sibu	16.67	228	Pn	Pn	15 17 34.3	+0.9
SBUM				IAmb	IAmb	15 17 48.6	
	comp=Z,155nm,0.9s						
SBUM	Sibu	16.67	228	P	P	15 17 36.0	+0.4
BKB	Balikpapan	16.85	207	P	Pn	15 17 35.0	-0.8
BKB				IAmb	IAmb	15 17 49.1	
	comp=Z,430nm,1.2s						
BKB	Balikpapan	16.85	207	P	Pn	15 17 32.9	-2.9
	comp=Z,17µmcomp=Z,7µmcomp=Z,358nm,1.2s						
NLAI	Namlea	17.19	171	P	Pn	15 17 39.1	-0.9
SSE	Sheshan	17.41	350	P	P	15 17 43.2	-0.5
SSE				S	Sn	15 20 56.7	+1.0
SSE				pmax	pmax		
	comp=Z,520nm,9.5s						
SSE				LR	LR		
	comp=Z,1µm,19.5s						
SSE				LR	LR		
	comp=Z,2µm,17.1s						
TTSI	Tana Toraja	17.46	196	P	P	15 17 46.7	+2.3
	comp=Z,8µmcomp=Z,3µmcomp=Z,424nm,1.0s						
MTKI	Muara Teweh, K	17.57	214	P	P	15 17 47.4	+1.8
	comp=Z,6µmcomp=Z,2µmcomp=Z,124nm,1.5s						
MSAI	Masohi	17.65	165	P	P	15 17 47.1	+0.6
	comp=Z,1µmcomp=Z,55nm,0.9s						
FAKI	Fak Fak	18.35	155		P	15 17 52.9	-1.3
FAKI	Fak Fak	18.35	155	P	Pn	15 17 56.9	+2.6
	comp=Z,2µmcomp=Z,113nm,1.2s						
JSU	Suzuyama	18.36	16		P	15 17 51.3	-2.8
SPSI	Sidrap Palu	18.36	195	P	Pn	15 17 55.0	+0.6
	comp=Z,2µmcomp=Z,140nm,1.1s						
BNSI	Bone	18.69	194	P	Pn	15 18 00.7	+2.2
	comp=Z,4µmcomp=Z,239nm,1.2s						
KSM	Kuching	18.73	230	P	P	15 17 58.5	+0.1
KSM	Kuching	18.73	230	P	Pn	15 18 01.0	+2.1
NJ2	Nanjing	18.83	345	eP	P	15 17 58.1	-1.2
NJ2				PP	PnPn	15 18 15.2	+2.6
NJ2				S	Sn	15 21 28.4	-1.5
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,1µm,11.4s						
NJ2				LR	LR		
	comp=Z,2µm,13.7s						
NJ2				LR	LR		
	comp=Z,2µm,11.4s						
NJ2				LR	LR		
	comp=Z,3µm,13.1s						
BAKI	Biak	18.84	142	P	P	15 17 59.7	+0.1
	comp=Z,6µmcomp=Z,289nm,1.7s						
STKI	Sintang	18.88	224	P	Pn	15 18 01.7	+1.0
	comp=Z,81nm,1.0s						
WHN	Wuhan	19.07	332	⇓P	Pn	15 18 04.0	+1.1
WHN				pP	sP	15 18 13.0	+0.2
WHN				S	Sn	15 21 30.2	-5.6
WHN				pmax	pmax		
	comp=Z,310nm,1.7s						
WHN				pmax	pmax		
	comp=Z,3µm,6.5s						
WHN				LR	LR		
	comp=Z,6µm,12.0s						
WHN				LR	LR		
	comp=Z,3µm,12.7s						
WHN				LR	LR		
	comp=Z,8µm,18.3s						
KAPI	Kappang	19.37	195	P	P	15 18 05.3	-0.1
	comp=Z,0.7nm,0.3s,baz=3.7,slow=3.4,SNR=9.4						
KAPI				LR	LR	15 25 55.8	
	comp=Z,4µm,20.4s,baz=16,slow=38						
KAPI	Kappang	19.37	195	ceP	Pn	15 18 07.7	+1.1
KAPI	Kappang	19.37	195	P	Pn	15 18 07.2	+0.6
KAPI				IAmb	IAmb	15 18 30.2	
	comp=Z,148nm,1.1s						
KAPI	Kappang	19.37	195	P	Pn	15 18 06.9	+0.3
SRPI	Serui, Papua	19.46	143	P	Pn	15 18 07.8	0.0
	comp=Z,144nm,1.0s						
GUMO	Guam	19.73	88	LR	LR	15 25 24.5	
	comp=Z,6µm,18.5s,baz=259,slow=36						
BBKI	Banjar Baru	19.75	210	P	Pn	15 18 10.8	-0.3
	comp=Z,7µmcomp=Z,2µmcomp=Z,155nm,1.1s						
JNU	Nakatsue	20.00	16	P	P	15 18 12.3	+0.1
	comp=Z,0.2nm,0.3s,baz=198,slow=12,SNR=5.0						
JNU				LR	LR	15 24 54.6	
	comp=Z,4µm,21.4s,baz=189,slow=34						
JNU	Nakatsue	20.00	16	P	P	15 18 10.8	-1.4
JNU				IAmb	IAmb	15 18 24.2	
	comp=Z,128nm,1.3s						
BSSI	Bau Bau, Buton	20.30	192	P	P	15 18 12.9	-2.6
	comp=Z,3µmcomp=Z,2µmcomp=Z,95nm,1.3s						
GYA	Guiyang	20.92	309	⇑P	P	15 18 23.3	+1.0
GYA				SS	Sn	15 22 43.6	+23
GYA				pmax	pmax		
	comp=Z,99nm,1.6s						
GYA				pmax	pmax		
	comp=Z,880nm,4.1s						
GYA				LR	LR		
	comp=Z,6µm,15.4s						
GYA				LR	LR		
	comp=Z,8µm,15.1s						
GYA				LR	LR		
	comp=Z,12µm,15.8s						
NONG	Nongkai	21.00	284	P	P	15 18 24.0	+0.9
	comp=Z,16µmcomp=Z,166nm,1.3s						
SLVN	Son La	21.03	294	P	P	15 18 22.8	-0.7
SLVN				IAmb	IAmb	15 18 25.8	
	comp=Z,169nm,1.4s						
JCJ	Chichijima	21.07	49	LR	LR	15 25 02.0	
	comp=Z,4µm,20.1s,baz=248,slow=32						
SMPI	Sarmi	21.10	137	P	P	15 18 26.7	+2.5
	comp=Z,2µmcomp=Z,2µmcomp=Z,144nm,1.3s						
ENH	Enshi	21.44	322	P	P	15 18 27.1	-0.6
ENH				IAmb	IAmb	15 18 46.5	
	comp=Z,148nm,1.0s						
JMN	Monobe	21.50	22	P	P	15 18 28.6	+0.2
JMN				IAmb	IAmb	15 18 47.4	
	comp=Z,203nm,1.2s						
SRAK	Srakaew	21.86	273	P	P	15 18 31.2	-1.2
CHAI	Chaiyaphum	21.91	278	P	P	15 18 32.7	-0.2
	comp=Z,1µmcomp=Z,154nm,1.1s						
JHS	Saijyo	22.40	19	P	P	15 18 36.6	-1.4
MMRI	Maumere	22.49	186	P	P	15 18 39.9	+0.8
MMRI	Maumere	22.49	186	P	P	15 18 39.4	+0.3
GENI	Genyem	22.52	135	P	P	15 18 41.7	+2.2
	comp=Z,5µmcomp=Z,194nm,1.8s						
TJN	Taejon	22.54	6	deP	P	15 18 40.9	+1.4
EDFI	Ende, Flores	22.66	187	P	P	15 18 42.0	+0.9
	comp=Z,3µmcomp=Z,778nmcomp=Z,44nm,1.1s						
JAY	Jayapura	22.84	134	LR	LR	15 26 47.5	
	comp=Z,2µm,21.5s,baz=334,slow=34						
PATY	Pattaya	23.07	270	P	P	15 18 47.0	+1.8
	comp=Z,99nm,0.9s						
TIA	Tai'an	23.22	345	P	P	15 18 46.2	-0.3
TIA				S	S	15 22 55.3	-1.4
TIA				pmax	pmax		
	comp=Z,16nm,1.4s						
TIA				pmax	pmax		
	comp=Z,540nm,5.3s						
TIA				LR	LR		
	comp=Z,2µm,12.4s						
TIA				LR	LR		
	comp=Z,3µm,14.5s						
TIA				LR	LR		
	comp=Z,2µm,23.0s						
KMMI	Kalianget	23.30	207	P	P	15 18 49.3	+1.8
	comp=Z,6µmcomp=Z,8µmcomp=Z,896nm,1.2s						
KMI	Kunming	23.38	302	⇑P	P	15 18 49.3	+0.8
KMI				pP	pP	15 18 56.0	-0.3
KMI				sP	sP	15 18 59.3	-0.6
KMI				PP	PnPn	15 19 15.2	+0.1
KMI				S	S	15 23 03.8	+3.8
KMI				SS	SnSn	15 23 47.6	+11
KMI				pmax	pmax		
	comp=Z,110nm,1.6s						
KMI				pmax	pmax		
	comp=Z,2µm,5.6s						
KMI				LR	LR		
	comp=Z,6µm,15.3s						
KMI				LR	LR		
	comp=Z,6µm,18.4s						
KMI				LR	LR		
	comp=Z,9µm,18.0s						
KMI	Kunming	23.38	302	P	P	15 18 48.2	-0.3
KMI				pmax	pmax		
	comp=Z,187nm,1.4s						
KMI	Kunming	23.38	302	P	P	15 18 48.2	-0.3
KMI				IAmb	IAmb	15 19 03.3	
	comp=Z,187nm,1.4s						
UTTA	Uttaradit	23.41	283	P	P	15 18 48.8	+0.2
	comp=Z,645nmcomp=Z,48nm,1.0s						
JWT	Wachi	23.44	23	P	P	15 18 47.2	-1.6
JWT				IAmb	IAmb	15 19 00.5	
	comp=Z,106nm,1.2s						
SOEI	Soe	23.48	181	P	P	15 18 48.1	-1.3
SOEI				IAmb	IAmb	15 19 03.7	
	comp=Z,88nm,0.9s						
SOEI	Soe	23.48	181	P	P	15 18 48.7	-0.7
	comp=Z,2µmcomp=Z,114nm,1.1s						
PHIT	Phitsanulok	23.49	281	P	P	15 18 50.5	+1.1
	comp=Z,265nm,1.1s						
PLAI	Plampang	23.55	197	P	P	15 18 49.4	-0.5
	comp=Z,4µmcomp=Z,4µmcomp=Z,462nm,1.0s						
TPI	Tanjungpandan	23.55	227	P	P	15 18 49.2	-0.8
	comp=Z,8µmcomp=Z,2µmcomp=Z,112nm,1.2s						
JHJ	Hachijo jima 2	23.64	33	LR	LR	15 26 47.4	
	comp=Z,4µm,18.3s,baz=241,slow=33						
KSAR	Wonju Array Be	23.65	7	P	P	15 18 48.1	-2.6
KSAR	Wonju Array Be	23.65	7	P	P	15 18 48.1	-2.6
KSRS	Korea Array	23.67	7	P	P	15 18 50.8	-0.1
	comp=Z,3.8nm,0.5s,baz=183,slow=9.6,SNR=26						
KSRS				LR	LR	15 28 02.1	
	comp=Z,4µm,19.3s,baz=192,slow=37						
KS19	Wonju Array Si	23.71	7	P	P	15 18 48.8	-2.5
SRBI	Singaraja	23.71	204	P	P	15 18 50.1	-1.4
	comp=Z,3µmcomp=Z,264nm,0.8s						
TWSI	Taliwang, Sumb	23.73	199	P	P	15 18 50.7	-1.0
	comp=Z,3µmcomp=Z,2µmcomp=Z,186nm,1.1s						
BATI	Baumata	23.95	182	P	P	15 18 52.9	-0.9
	comp=Z,146nm,1.0s,baz=210,slow=1.1,SNR=12						
BATI				LR	LR	15 29 16.1	
	comp=Z,3µm,21.1s,baz=359,slow=39						
BATI	Baumata	23.95	182	P	P	15 18 52.6	-1.1
	comp=Z,1µmcomp=Z,77nm,0.8s						
INU	Inuyama	24.14	26	P	P	15 18 53.8	-1.6
INU				IAmb	IAmb	15 19 06.8	
	comp=Z,83nm,1.1s						
PPBI	Pangkal Pinang	24.25	230	P	P	15 18 56.8	+0.3
	comp=Z,8µmcomp=Z,63nm,1.3s						
DNP	Denpasar	24.26	203	P	P	15 18 58.5	+1.9
SUKH	Sukhothai	24.27	282	P	P	15 18 56.7	0.0
	comp=Z,91nm,1.2s						
PAYA	Payao	24.27	286	P	P	15 18 56.0	-0.8
	comp=Z,13µmcomp=Z,1µm,1.4s						
PHET	Kaeng Krachan	24.27	271	P	P	15 19 04.1	+7.3
UTHA	Uthaitani	24.35	277	P	P	15 18 57.9	+0.4
	comp=Z,624nmcomp=Z,54nm,1.1s						
LAMP	Lampang	24.37	284	P	P	15 18 57.9	+0.2
	comp=Z,749nmcomp=Z,67nm,0.8s						
JAGI	Jajag, Banyuwa	24.49	206	P	P	15 18 58.1	-0.6
JAGI				IAmb	IAmb	15 19 17.9	
	comp=Z,120nm,0.9s						
JAGI	Jajag, Banyuwa	24.49	206	P	P	15 18 59.7	+0.9
	comp=Z,5µmcomp=Z,3µmcomp=Z,144nm,1.1s						
JGF	Kuroka	24.50	26	P	P	15 18 56.1	-2.6
JGF				IAmb	IAmb	15 19 10.1	
	comp=Z,78nm,1.1s						
XAN	Xi'an	24.58	327	P	P	15 18 59.1	-0.3
XAN				pP	pP	15 19 06.0	-1.7
XAN				pmax	pmax		
	comp=Z,21nm,0.6s						
XAN				pmax	pmax		
	comp=Z,1µm,5.9s						
XAN				LR	LR		
	comp=Z,6µm,14.9s						
XAN				LR	LR		
	comp=Z,2µm,14.5s						
XAN				LR	LR		

	comp=Z,8µm,15.7s						
SRDT	SRDT	24.68	274	P	P	15 19 11.0	+11
CM35	Chiang Mai Arr	24.84	284	P	P	15 19 01.0	-1.0
CM34	Chiang Mai Arr	24.87	285	P	P	15 19 01.0	-1.2
CM36	Chiang Mai Arr	24.88	284	P	P	15 19 02.0	-0.3
CM09	Chiang Mai Arr	24.97	284	P	P	15 19 03.0	-0.1
	comp=Z,699nmcomp=Z,66nm,1.1s						
CM04	Chiang Mai Arr	24.97	284	P	P	15 19 03.0	-0.2
	comp=Z,650nmcomp=Z,62nm,0.8s						
CM01	Chiang Mai Arr	25.00	284	P	P	15 19 03.0	-0.3
	comp=Z,828nmcomp=Z,78nm,1.1s						
CM05	Chiang Mai Arr	25.01	284	P	P	15 19 03.0	-0.5
	comp=Z,563nmcomp=Z,46nm,1.1s						
CM02	Chiang Mai Arr	25.01	284	P	P	15 19 03.2	-0.3
	comp=Z,577nmcomp=Z,60nm,1.0s						
CM31	Chiang Mai Arr	25.02	284	P	P	15 19 03.2	-0.3
	comp=Z,20µmcomp=Z,2µm,1.2s						
CM31	Chiang Mai Arr	25.02	284	P	P	15 19 01.1	-2.5
CM31				IAmb	IAmb	15 19 25.3	
	comp=Z,111nm,1.1s						
CMAR	Chiang Mai Arr	25.02	284	P	P	15 19 02.2	-1.3
	comp=Z,69nm,1.1s,baz=96,slow=7.4,SNR=133						
CMAR				PcP	PcP	15 22 40.0	+1.8
	comp=Z,3.8nm,0.7s,baz=105,slow=0.9,SNR=12						
CMAR				ScP	ScP	15 26 18.1	+2.5
	comp=Z,1.1nm,0.3s,baz=63,slow=2.6,SNR=5.7						
CMAR				LR	LR	15 29 23.0	
	comp=Z,5µm,19.7s,baz=128,slow=38						
CMAR	Chiang Mai Arr	25.02	284	i P	P	15 19 03.0	-0.5
CMAR				pmax	pmax		
	comp=Z,69nm,1.1s						
CMAR	Chiang Mai Arr	25.02	284	P	P	15 19 02.1	-1.4
IPM	Ipoh	25.02	250	P	P	15 19 01.4	-2.2
IPM				IAmb	IAmb	15 19 23.9	
	comp=Z,147nm,1.2s						
IPM	Ipoh	25.02	250	P	P	15 19 09.0	+5.4
CM15	Chiang Mai Arr	25.03	284	P	P	15 19 03.5	-0.2
	comp=Z,592nmcomp=Z,66nm,1.2s						
CM13	Chiang Mai Arr	25.04	284	P	P	15 19 03.6	-0.1
	comp=Z,484nmcomp=Z,64nm,1.0s						
CMMT	Chiang Mai	25.05	285	P	P	15 19 02.1	-1.8
	comp=Z,578nmcomp=Z,18nm,1.5s						
CM33	Chiang Mai Arr	25.05	285	P	P	15 19 02.0	-1.9
KULM	Kulim	25.06	252	P	P	15 19 10.0	+6.1
CHTO	Chiang Mai	25.06	285	P	P	15 19 02.4	-1.5
CHTO				pmax	pmax		
	comp=Z,42nm,1.2s						
CHTO	Chiang Mai	25.06	285	P	P	15 19 02.4	-1.5
CHTO	Chiang Mai	25.06	285	P	P	15 19 02.9	-1.0
DL2	Dalian	25.06	355	P	P	15 19 04.8	+1.1
DL2				S	S	15 23 23.9	-2.4
DL2				pmax	pmax		
	comp=Z,22nm,0.9s						
DL2				pmax	pmax		
	comp=Z,810nm,4.2s						
DL2				LR	LR		
	comp=Z,2µm,21.6s						
DL2				LR	LR		
	comp=Z,4µm,16.1s						
DL2				LR	LR		
	comp=Z,3µm,18.1s						
CM32	Chiang Mai Arr	25.13	284	P	P	15 19 04.5	-0.1
TRTT	Trang	25.14	259	P	P	15 19 13.0	+8.3
CD2	Chengdu	25.56	315	P	P	15 19 08.3	-0.1
CD2				sP	pP	15 19 15.1	-1.5
CD2				S	S	15 23 33.0	-1.6
CD2				sS	pS	15 23 45.0	+1.4
CD2				pmax	pmax		
	comp=Z,150nm,0.8s						
CD2				pmax	pmax		
	comp=Z,2µm,5.3s						
CD2				LR	LR		
	comp=Z,11µm,18.1s						
CD2				LR	LR		
	comp=Z,10µm,20.6s						
CD2				LR	LR		
	comp=Z,8µm,16.2s						
MAJO	Matsushiro	25.66	26	⇓eP	P	15 19 12.1	+2.9
MAJO				pmax	pmax		
	comp=Z,79nm,2.5s						
MAT	Matsushiro	25.66	26	P	P	15 19 06.4	-2.8
MAT				S	S	15 23 38.8	+2.8
MJAR	Matsushiro Arr	25.66	26	P	P	15 19 07.4	-1.8
	comp=Z,3.1nm,0.9s,baz=194,slow=9.1,SNR=4.0						
MJAR				LR	LR	15 28 24.2	
	comp=Z,5µm,19.2s,baz=205,slow=35						
MJAR	Matsushiro Arr	25.66	26	P	P	15 19 06.3	-2.9
MJAR				pmax	pmax		
	comp=Z,12nm,1.1s						
MJAR	Matsushiro Arr	25.66	26	P	P	15 19 06.2	-2.9
UGM	Wanagama	25.75	214	P	P	15 19 09.5	-0.7
UGM	Wanagama	25.75	214	P	P	15 19 10.3	+0.1
	comp=Z,5µmcomp=Z,4µmcomp=Z,174nm,1.3s						
MHMT	Maesarieng	25.94	283	P	P	15 19 10.8	-1.1
	comp=Z,1µmcomp=Z,76nm,1.2s						
LEM	Lembang	26.58	220	P	P	15 19 17.5	-0.3
	comp=Z,20nm,0.8s,baz=0.3,slow=10,SNR=5.4						
LEM				LR	LR	15 30 51.3	
	comp=Z,3µm,22.0s,baz=34,slow=39						
CBJI	Citeko	26.76	222	P	P	15 19 20.2	+0.9
KLSI		26.98	228	P	P	15 19 21.4	+0.1
	comp=Z,366nmcomp=Z,24nm,1.1s						
CISI	Cisompet, Garu	27.02	219	P	P	15 19 20.4	-1.3
CISI	Cisompet, Garu	27.02	219	P	P	15 19 20.9	-0.8
	comp=Z,4µmcomp=Z,2µmcomp=Z,102nm,1.3s						
BJT	Baijiatuau	27.06	346	P	P	15 19 21.1	-0.7
BJT				pmax	pmax		
	comp=Z,50nm,1.2s						
BJT	Baijiatuau	27.06	346	P	P	15 19 21.1	-0.7
BJI	Beijing	27.08	346	P	P	15 19 21.4	-0.5
BJI				S	S	15 23 59.1	+0.9
BJI				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BJI				pmax	pmax		
	comp=Z,370nm,5.8s						
BJI				LR	LR		
	comp=Z,2µm,14.2s						
BJI				LR	LR		
	comp=Z,990nm,11.2s						
BJI				LR	LR		
	comp=Z,890nm,17.1s						
MDSI	Maura Dua	27.24	229	P	P	15 19 23.7	0.0
	comp=Z,4µmcomp=Z,831nmcomp=Z,56nm,1.3s						
LHSI	Lahat	27.30	231	P	P	15 19 25.1	+0.9
	comp=Z,2µmcomp=Z,129nm,1.3s						
MTN	Manton Dam	27.34	166	P	P	15 19 24.9	+0.4
	baz=27,SNR=15						
MTN	Manton Dam	27.34	166	P	P	15 19 24.6	+0.1
MTN				IAmb	IAmb	15 19 53.7	
	comp=Z,52nm,0.9s						
KDU	Kakadu	27.54	163	P	P	15 19 26.2	0.0
	baz=28,SNR=7.2						
PSI	Prapat	27.62	249	P	P	15 19 25.2	-1.9
	comp=Z,11nm,0.9s,baz=0.7,slow=2.7,SNR=7.7						
PSI				LR	LR	15 30 41.9	
	comp=Z,6µm,20.6s,baz=90,slow=37						
LWLI	Liwa	27.69	229	P	P	15 19 27.4	-0.4
	comp=Z,3µmcomp=Z,164nm,1.0s						
SNY	Shenyang	27.86	358	⇓P	P	15 19 29.0	+0.1
SNY				S	S	15 24 09.0	-1.4
SNY				pmax	pmax		
	comp=Z,29nm,1.6s						
SNY				LR	LR		
	comp=Z,3µm,18.2s						
SNY				LR	LR		
	comp=Z,2µm,14.2s						
SNY				LR	LR		
	comp=Z,4µm,17.1s						
KSI	Kapahiang	27.90	233	P	P	15 19 29.4	-0.3
	comp=Z,5µmcomp=Z,139nm,1.3s						
MNSI	Mandailing Nat	27.93	244	P	P	15 19 29.7	-0.2
	comp=Z,1µmcomp=Z,41nm,1.1s						
LZH	Lanzhou	28.89	324	⇓P	P	15 19 39.8	+1.4
LZH				pP	pP	15 19 42.7	-3.9
LZH				sP	sP	15 19 45.5	-4.1
LZH				S	S	15 24 30.9	+3.7
LZH				sS	pS	15 24 37.8	+1.5
LZH				SS	SnSn	15 25 54.2	+3.6
LZH				pmax	pmax		
	comp=Z,19nm,1.1s						
LZH				LR	LR		
	comp=Z,6µm,14.1s						
LZH				LR	LR		
	comp=Z,3µm,13.6s						
LZH				LR	LR		
	comp=Z,5µm,14.1s						
HHC	Hu-ho-hao-te	29.17	340	eP	P	15 19 41.4	+0.7
HHC				S	S	15 24 32.9	+1.5
HHC				SS	SnSn	15 26 01.4	+4.1
HHC				pmax	pmax		
	comp=Z,9.0nm,1.2s						
HHC				pmax	pmax		
	comp=Z,300nm,5.8s						
HHC				LR	LR		
	comp=Z,1µm,13.3s						
HHC				LR	LR		
	comp=Z,2µm,15.9s						
HHC				LR	LR		
	comp=Z,2µm,16.3s						
GSI	Gunungsitoli	29.48	247	P	P	15 19 43.4	-0.3
GSI				IAmb	IAmb	15 20 02.1	
	comp=Z,60nm,1.1s						
BTO	Baotou	29.51	337	eP	P	15 19 45.0	+1.3
BTO				S	S	15 24 36.6	-0.1
CN2	Changchun	29.83	1	eP	P	15 19 48.2	+1.8
CN2				eS	S	15 24 44.1	+2.7
CN2				sS	pS	15 24 51.5	+1.5
CN2				pmax	pmax		
	comp=Z,10.0nm,2.7s						
CN2				pmax	pmax		
	comp=Z,300nm,3.8s						
CN2				LR	LR		
	comp=Z,2µm,16.0s						
CN2				LR	LR		
	comp=Z,3µm,16.0s						
CN2				LR	LR		
	comp=Z,2µm,17.0s						
LKP	Lekhapani	29.94	301	IAMs_20	IAMs_20	15 32 56.4	
	comp=Z,5µm,15.5s						
MOKO	MOKOCHONG	30.73	298	eP	P	15 19 52.8	-2.0
MOKO				IAmb	IAmb	15 20 05.2	
	comp=Z,49nm,0.5s						
MOKO				IAMs_20	IAMs_20	15 32 58.6	
	comp=Z,2µm,14.2s						
USA0B	Ussuriysk Arra	30.88	10	⇓eP	P	15 19 56.0	+0.4
USA0B	Ussuriysk Arra	30.88	10	P	P	15 19 52.6	-3.1
USA0B				IAmb	IAmb	15 20 07.4	
	comp=Z,101nm,1.3s						
USRK	Ussuriysk Ar.	30.88	10	P	P	15 19 54.7	-0.9
	comp=Z,7.4nm,0.7s,baz=193,slow=7.0,SNR=14						
USRK				LR	LR	15 32 34.1	
	comp=Z,2µm,19.2s,baz=190,slow=37						
USRK	Ussuriysk Ar.	30.88	10	P	P	15 19 55.2	-0.4
USRK	Ussuriysk Ar.	30.88	10	P	P	15 19 55.2	-0.4
KOHI	KOHIMA	30.90	297	ex	P	15 19 54.8	-1.5
KOHI				IAmb	IAmb	15 19 58.0	
	comp=Z,91nm,1.4s						
KOHI				IAMs_20	IAMs_20	15 33 37.2	
	comp=Z,5µm,18.8s						
MDJ	Mudanjiang	30.93	7	P	P	15 19 56.6	+0.5
MDJ				S	S	15 25 00.9	+2.2
MDJ				pmax	pmax		
	comp=Z,14nm,1.9s						
MDJ				pmax	pmax		
	comp=Z,440nm,4.3s						
MDJ				LR	LR		
	comp=Z,2µm,17.6s						
MDJ				LR	LR		
	comp=Z,3µm,15.4s						
MDJ				LR	LR		
	comp=Z,3µm,21.1s						
MDJ	Mudanjiang	30.93	7	P	P	15 19 54.0	-2.1
MDJ				IAmb	IAmb	15 20 07.8	
	comp=Z,59nm,1.3s						
JORH	JORHAT	31.08	299	eP	P	15 19 57.9	+0.2
SAIH	SAIHA	31.14	291	eP	P	15 19 55.8	-2.6
SAIH				IAmb	IAmb	15 19 59.2	
	comp=Z,74nm,1.3s						
SAIH				IAMs_20	IAMs_20	15 33 41.4	
	comp=Z,3µm,14.0s						
ZIRO	ZIRO	31.67	300	eP	P	15 20 02.7	-0.4
ZIRO				IAmb	IAmb	15 20 05.9	
	comp=Z,82nm,0.5s						
ZIRO				IAMs_20	IAMs_20	15 35 55.1	
	comp=Z,2µm,12.4s						
FITZ	Fitzroy Crossi	31.79	178	P	P	15 20 03.4	-0.5
	baz=32,SNR=12						
FITZ	Fitzroy Crossi	31.79	178	P	P	15 20 03.1	-0.8
	comp=Z,16nm,0.8s,baz=16,slow=8.8,SNR=18						
FITZ				LR	LR	15 35 16.1	
	comp=Z,534nm,18.1s,baz=1.0,slow=41						
FITZ	Fitzroy Crossi	31.79	178	P	P	15 20 02.5	-1.5
PMG	Port Moresby	32.22	135	⇓eP	P	15 20 09.2	+1.4
PMG				pmax	pmax		
	comp=Z,17nm,1.1s						
TEZP	TEZPUR	32.28	298	eP	P	15 20 07.2	-1.1
TEZP				IAmb	IAmb	15 20 15.1	
	comp=Z,116nm,1.2s						
TEZP				IAMs_20	IAMs_20	15 34 09.4	
	comp=Z,2µm,9.3s						
BELO	BELONIA	32.68	291	eP	P	15 20 11.2	-0.5
SHL	Shillong	32.80	296	P	P	15 20 11.6	-1.4
SHL				pmax	pmax		
	comp=Z,174nm,1.2s						
SHL	Shillong	32.80	296	eP	P	15 20 11.3	-1.7
SHL				IAmb	IAmb	15 20 14.2	
	comp=Z,117nm,1.2s						
SHL				IAMs_20	IAMs_20	15 33 45.3	
	comp=Z,2µm,18.6s						
SHL				IAMs_20	IAMs_20	15 34 53.4	
	comp=Z,2µm,17.3s						
SHL	Shillong	32.80	296	P	P	15 20 11.6	-1.4
SHL	Shillong	32.80	296	P	P	15 20 13.3	+0.3
	SNR=45						
AGT	Agartala	32.98	293	eP	P	15 20 15.2	+0.8
AGT				IAMs_20	IAMs_20	15 36 41.9	
	comp=Z,4µm,19.1s						
GUWA	GUWAHATI	33.12	297	eP	P	15 20 13.9	-1.7
GUWA				IAmb	IAmb	15 20 22.0	
	comp=Z,64nm,1.3s						
GUWA				IAMs_20	IAMs_20	15 34 53.7	
	comp=Z,2µm,10.9s						
COEN	Coen	33.23	146	P	P	15 20 15.8	-0.9
GTA	Gaotai	33.49	324	⇑P	P	15 20 19.1	+0.3
GTA				pP	pP	15 20 26.7	-0.4
GTA				sP	sP	15 20 30.6	+0.5
GTA				S	S	15 25 40.5	+1.5
GTA				sS	sS	15 25 55.2	+2.6
GTA				SS	SnSn	15 27 48.1	+5.8
GTA				pmax	pmax		
	comp=Z,12nm,1.5s						
GTA				pmax	pmax		
	comp=Z,450nm,6.2s						
GTA				LR	LR		
	comp=Z,2µm,14.2s						
GTA				LR	LR		
	comp=Z,3µm,13.8s						
GTA				LR	LR		
	comp=Z,3µm,14.5s						
LSA	Lhasa	34.63	303	P	P	15 20 29.4	+0.1
LSA				pmax	pmax		
	comp=Z,210nm,1.2s						
LSA	Lhasa	34.63	303	P	P	15 20 30.1	+0.9
LSA	Lhasa	34.63	303	P	P	15 20 30.2	+0.9
LSA				pmax	pmax		
	comp=Z,46nm,0.7s						
LSA	Lhasa	34.63	303	P	P	15 20 30.2	+0.9
LSA				IAmb	IAmb	15 20 33.1	
	comp=Z,46nm,0.7s						
LSA	Lhasa	34.63	303	P	P	15 20 30.3	+0.9
WB0	Warramunga Arr	34.81	164	P	P	15 20 28.7	-1.6
WB0				IAmb	IAmb	15 20 45.9	
	comp=Z,20nm,0.8s						
WRAB	Tennant Creek	34.95	164	⇑eP	P	15 20 30.1	-1.4
WRAB				pmax	pmax		
	comp=Z,8.0nm,0.9s						
WRAB	Tennant Creek	34.95	164	P	P	15 20 30.5	-1.0
WRAB				IAmb	IAmb	15 20 47.7	
	comp=Z,27nm,0.8s						
WRA	Warramunga Arr	34.96	164	P	P	15 20 30.8	-0.8
	comp=Z,2.9nm,0.5s,baz=341,slow=8.7,SNR=72						
WRA				S	S	15 25 55.9	-5.9
	comp=Z,13nm,0.9s,baz=344,slow=16,SNR=7.7						
WRA				LR	LR	15 37 33.0	
	comp=Z,710nm,18.3s,baz=0.0,slow=41						
WRA	Warramunga Arr	34.96	164	i P	P	15 20 30.7	-0.8
WRA				pmax	pmax		
	comp=Z,2.0nm,0.3s						
WRA	Warramunga Arr	34.96	164	P	P	15 20 30.2	-1.4
WB2	Warramunga Arr	34.96	164	P	P	15 20 30.9	-0.6
WB2				IAmb	IAmb	15 20 47.7	
	comp=Z,30nm,0.8s						
WR0	Warramunga Arr	35.03	164	P	P	15 20 31.8	-0.3
WR0				IAmb	IAmb	15 20 46.4	
	comp=Z,21nm,0.8s						
HIA	Hailar	35.51	355	⇓eP	P	15 20 36.0	0.0
HIA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
PSA00	Pilbara Seismi	35.54	188	P	P	15 20 35.0	-1.5
PSA00	Pilbara Seismi	35.54	188	P	P	15 20 34.9	-1.6
PSA00				IAmb	IAmb	15 20 36.5	
	comp=Z,35nm,1.1s						
KLR	Kul'dur	35.74	8	⇓eP	P	15 20 37.8	-0.2
KLR				pmax	pmax		
	comp=Z,9.0nm,1.4s						
KLR				MLR	MLR		
	comp=Z,2µm,18.0s						
GTK	Tadong	36.08	297	eP	P	15 20 41.6	+0.3
GTK				IAmb	IAmb	15 20 49.0	
	comp=Z,70nm,0.9s						
GTK				IAMs_20	IAMs_20	15 37 00.3	
	comp=Z,2µm,18.6s						
YSS	Yuzh-Sakhalins	36.32	21	eP	P	15 20 44.2	+1.2
YSS				e		15 22 08.6	
YSS				eS	S	15 26 21.9	-0.2
YSS				eSSS	SSS	15 30 55.0	
YSS				pmax	pmax		
	comp=Z,20nm,1.3s						
TAPN	Taplejung	36.86	297	eP	P	15 20 48.2	0.0
	comp=Z,288nm,1.3s						
ULN	Ulaanbaatar	36.88	340	ceP	P	15 20 48.0	0.0
ULN				pmax	pmax		
	comp=Z,39nm,1.8s						
ULN	Ulaanbaatar	36.88	340	P	P	15 20 47.2	-0.8
ULN	Ulaanbaatar	36.88	340	P	P	15 20 48.7	+0.8
SONM	Songino Array	37.07	340	P	P	15 20 49.7	+0.2
	comp=Z,5.4nm,0.6s,baz=156,slow=9.5,SNR=28						
SONM				LR	LR	15 37 07.5	
	comp=Z,1µm,19.6s,baz=154,slow=38						
SONM				PKKPbc	PKKPdf	15 46 09.6	+52
	comp=Z,0.9nm,0.8s,baz=336,slow=5.4,SNR=4.2						
SONM	Songino Array	37.07	340	P	P	15 20 49.0	-0.6
SONM				pmax	pmax		
	comp=Z,15nm,0.8s						
SONM	Songino Array	37.07	340	P	P	15 20 49.0	-0.6
QIS	Mount Isa	37.28	156	P	P	15 20 51.6	+0.1
	baz=37,SNR=16						
MTSU	Mount Surprise	37.30	148	P	P	15 20 52.1	+0.4
	baz=37,SNR=12						
GIRL	Giralia	37.68	196	P	P	15 20 55.9	+1.1
	baz=38,SNR=18						
GIRL	Giralia	37.68	196	P	P	15 20 53.5	-1.3
COCO	West Island	37.77	228	i P	P	15 20 55.5	-0.1
BOK	Bokaro	37.80	291	⇑iP	P	15 20 56.0	+0.1
BOK				IAmb	IAmb	15 20 58.2	
	comp=Z,84nm,1.3s						
GRNR	Gornyy	38.03	12	⇑iP	P	15 20 58.2	+0.7
GRNR				pmax	pmax		
	comp=Z,7.0nm,1.2s						
GRNR				MLR	MLR		
	comp=E,720nm,16.0s						
AS31	Alice Springs	38.42	166	P	P	15 21 00.9	-0.1
ASAR	Alice Springs	38.42	166	P	P	15 21 01.4	+0.4
	comp=E,20nm,0.5s,baz=344,slow=6.7,SNR=242						
ASAR				S	S	15 26 50.4	-4.1
	comp=E,14nm,0.9s,baz=354,slow=20,SNR=20						
ASAR				LR	LR	15 37 50.0	
	comp=E,665nm,19.2s,baz=339,slow=38						
ASAR	Alice Springs	38.42	166	P	P	15 21 00.4	-0.7
ASAR	Alice Springs	38.42	166	P	P	15 21 00.4	-0.7
GUN	Gumba	38.57	297	eP	P	15 21 02.9	+0.2
	comp=E,820nm,1.3s						
PKI	Pulchoki	38.90	297	eP	P	15 21 05.0	-0.5
	comp=E,399nm,1.4s						
PKIN	Phulchoki	38.91	297	eP	P	15 21 05.0	-0.5
	comp=E,445nm,1.6s						
KKN	Kakani	39.06	297	eP	P	15 21 06.3	-0.4
	comp=E,500nm,1.3s						
CIT	Chita	39.06	349	eP	P	15 21 02.7	-3.4
CIT				e		15 21 24.0	
CIT				pmax	pmax		
	comp=Z,114nm,2.4s						
DMN	Daman	39.17	297	eP	P	15 21 07.4	-0.3
	comp=Z,628nm,1.5s						
ZEA	Zeya	39.82	2	eP	P	15 21 14.1	+1.7
ZEA				eS	S	15 27 14.3	-0.6
ZEA				eSS	SS	15 30 03.1	-8.5
ZEA				pmax	pmax		
	comp=Z,200nm,6.1s						
ZEA				pmax	pmax		
	comp=N,10.0nm,1.7s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.6s						
ZEA				smax	smax		
	comp=E,300nm,7.4s						
ZAK	Zakamensk	40.32	339	eP	P	15 21 14.2	-2.5
DANN	Dangsing	40.49	297	eP	P	15 21 18.3	-0.4
	comp=E,595nm,1.3s						
H11S3	WAKE ISLAND Hy	40.65	78	T	T	16 04 44.9	
	baz=270,slow=75,SNR=1585						
H11S1	WAKE ISLAND Hy	40.66	78	T	T	16 04 45.3	
	baz=270,slow=75,SNR=1245						
H11S2	WAKE ISLAND Hy	40.66	78	T	T	16 04 45.2	
	baz=270,slow=75,SNR=2178						
MEEK	Meekatharra	40.69	188	P	P	15 21 19.1	-0.8
	baz=41,SNR=30						
H11N1	WAKE ISLAND Hy	40.85	76	T	T	16 05 05.4	
	baz=266,slow=74,SNR=3995						
H11N2	WAKE ISLAND Hy	40.86	76	T	T	16 05 00.7	
	baz=266,slow=74,SNR=3530						
H11N3	WAKE ISLAND Hy	40.87	76	T	T	16 05 03.5	
	baz=266,slow=74,SNR=3648						
TLY	Talaya	41.29	340	eP	P	15 21 26.7	+2.1
TLY				e		15 23 03.4	
TLY				eS	S	15 27 42.4	+5.4
TLY				pmax	pmax		
	comp=Z,91nm,1.6s						
TLY				MLR	MLR		
	comp=Z,3µm,19.0s						
TLY	Talaya	41.29	340		P	15 21 21.4	-3.3
MOY	Mondy	42.19	338	eP	P	15 21 32.2	+0.1
MOY				pmax	pmax		
	comp=Z,96nm,3.4s						
MDRS	Chennai	43.06	274	IAMs_20	IAMs_20	15 39 06.3	
	comp=Z,3µm,18.8s						
WMQ	Urumqi	43.38	321	P	P	15 21 42.8	+1.0
WMQ				PcP	PcP	15 23 30.7	+0.6
WMQ				S	S	15 28 10.2	+2.1
WMQ				ScS	ScS	15 31 41.5	+1.5
WMQ				pmax	pmax		
	comp=Z,24nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,530nm,4.9s						
WMQ				LR	LR		
	comp=Z,4µm,15.3s						
WMQ				LR	LR		
	comp=Z,4µm,14.9s						
WMQ				LR	LR		
	comp=Z,2µm,15.9s						
MORW	Morawa	43.48	191	P	P	15 21 42.1	-0.5
	baz=44,SNR=18						
MORW	Morawa	43.48	191	P	P	15 21 41.4	-1.3
MORW				IAmb	IAmb	15 21 43.6	
	comp=Z,40nm,0.9s						
PALK	Pallekele	43.56	266	LR	LR	15 39 39.6	
	comp=Z,2µm,19.8s,baz=175,slow=36						
NGP	Nagpur	43.88	286	eP	P	15 21 45.7	-0.4
HYB	Hyderabad	44.37	281	i P	P	15 21 50.0	-0.1
HYB				esP	pP	15 21 57.0	-1.6
HYB				ePP	PcP	15 23 34.0	+0.1
HYB	Hyderabad	44.37	281	eP	P	15 21 48.7	-1.4
HYB				IAmb	IAmb	15 21 56.6	
	comp=Z,53nm,1.3s						
FORT	Forrest	44.53	176	P	P	15 21 50.5	-0.4
QLP	Quilpie	44.53	155	P	P	15 21 52.0	+0.9
	baz=45,SNR=18						
BOD	Bodaibo	44.58	352	eP	P	15 21 55.8	+4.7
BOD				pmax	pmax		
	comp=Z,34nm,1.9s						
SKR	Severo-Kuril's	44.73	28	eP	P	15 21 40.9	-11
SKR				eS	S	15 28 17.2	-10
SKR				pmax	pmax		
	comp=Z,600nm,5.5s						
SKR				pmax	pmax		
	comp=Z,1µm,5.6s						
SKR				MLR	MLR		
	comp=Z,1µm,16.0s						
BLDU	Ballidu	44.88	190	P	P	15 21 52.9	-0.9

	baz=45,SNR=5.5						
KMBL	Kambalda	45.06	183	P	P	15 21 54.6	-0.7
	baz=45,SNR=7.8						
BHPL	Bhopal	45.48	289	eP	P	15 21 56.7	-2.1
BHPL				i x	x	15 37 54.6	
BHPL				IAMs_20	IAMs_20	15 42 05.0	
	comp=Z,2μm,24.2s						
KLBR	Kellerberrin	45.68	188	P	P	15 21 59.8	-0.3
	baz=46,SNR=7.7						
DDI	Dehra Dun	45.76	299	eP	P	15 22 00.8	-0.2
DDI				IAmb	IAmb	15 22 02.6	
	comp=Z,124nm,1.0s						
DDI				IAMs_20	IAMs_20	15 43 12.1	
	comp=Z,1μm,18.8s						
MUN	Mundaring	46.30	190	P	P	15 22 04.0	-1.0
	baz=46,SNR=5.6						
RMQ	Roma	46.51	150	P	P	15 22 07.3	+0.5
	baz=47,SNR=5.2						
SMLA	Simla	46.66	300	eP	P	15 22 06.6	-1.4
SMLA				IAmb	IAmb	15 22 09.9	
	comp=Z,170nm,1.5s						
EIDS	Eidsvold	46.80	146	P	P	15 22 09.9	+0.9
	baz=47,SNR=6.1						
EIDS	Eidsvold	46.80	146	P	P	15 22 09.5	+0.4
EIDS				IAmb	IAmb	15 22 20.2	
	comp=Z,37nm,1.1s						
DGZ	Jazzator, Alta	46.84	327	ceP	P	15 22 09.7	+0.4
DGZ				pmax	pmax		
	comp=Z,27nm,1.7s						
DGZ				MLR	MLR		
	comp=Z,2μm,17.0s						
TRD	Trivandrum	46.94	269	IAMs_20	IAMs_20	15 41 13.9	
	comp=Z,8μm,18.8s						
ZSN	Zaisan	46.98	324	eP	P	15 22 09.8	-0.6
	baz=324						
ZSN				LR	LR	15 43 11.1	
	comp=Z,381nm,13.8s,baz=324						
ZSN	Zaisan	46.98	324	eP	P	15 22 09.7	-0.6
ZSN				MLR	MLR		
	comp=Z,381nm,14.0s						
NWAO	Narrogin (SRO)	47.07	188	P	P	15 22 10.8	-0.2
	baz=47,SNR=8.6						
NWAO	Narrogin (SRO)	47.07	188	LR	LR	15 43 16.5	
	comp=Z,642nm,21.0s,baz=9.5,slow=38						
NWAO	Narrogin (SRO)	47.07	188	P	P	15 22 09.9	-1.1
NWAO				pmax	pmax		
	comp=Z,55nm,1.3s						
NWAO	Narrogin (SRO)	47.07	188	P	P	15 22 09.2	-1.8
NWAO	Narrogin (SRO)	47.07	188	P	P	15 22 09.9	-1.1
NWAO				IAmb	IAmb	15 22 19.7	
	comp=Z,55nm,1.2s						
PEA0B	Petropavlovsk-	47.12	27	⇑eP	P	15 22 11.6	+0.4
PETK	Petropavlovsk-	47.12	27	P	P	15 22 11.8	+0.6
	comp=Z,8.7nm,0.9s,baz=184,slow=2.6,SNR=12						
PETK				LR	LR	15 43 40.8	
	comp=Z,969nm,18.9s,baz=213,slow=38						
PET	Petropavlovsk	47.48	27	eP	P	15 22 23.3	+9.3
PET				eS	S	15 29 14.3	+7.5
PET				pmax	pmax		
	comp=Z,154nm,1.4s						
PET				MLR	MLR		
	comp=Z,2μm,18.0s						
DHRM	DHARAMSHALA	47.59	301	eP	P	15 22 12.7	-2.8
DHRM				IAmb	IAmb	15 22 17.1	
	comp=Z,35nm,0.8s						
BBOO	Buckleboo	47.71	167	P	P	15 22 16.7	+0.7
	baz=48,SNR=40						
BBOO	Buckleboo	47.71	167	P	P	15 22 15.3	-0.7
MK31	Makanchi Array	48.17	322	ceP	P	15 22 19.9	+0.4
MK31				pmax	pmax		
	comp=Z,43nm,1.3s						
MK31	Makanchi Array	48.17	322	P	P	15 22 19.5	-0.1
MK31				IAmb	IAmb	15 22 31.3	
	comp=Z,46nm,1.4s						
MKAR	Makanchi Array	48.17	322	P	P	15 22 19.9	+0.3
	comp=Z,6.7nm,0.6s,baz=114,slow=9.0,SNR=73						
MKAR				LR	LR	15 43 30.8	
	comp=Z,1μm,19.2s,baz=122,slow=37						
MKAR	Makanchi Array	48.17	322	P	P	15 22 19.5	-0.1
YAK	Yakutsk	48.22	3	eP	P	15 22 17.7	-1.9
YAK				e*PP	sP	15 22 31.8	+0.4
YAK				e		15 23 46.5	
YAK				eS	S	15 29 14.1	-2.9
YAK				e*SS	pS	15 29 27.0	+1.0
YAK				e		15 32 07.7	
YAK				eSS	SS	15 32 45.8	-0.7
YAK				pmax	pmax		
	comp=Z,25nm,1.0s						
YAK				pmax	pmax		
	comp=E,2.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,8.0nm,1.1s						
YAK				smax	smax		
	comp=N,265nm,4.4s						
YAK				smax	smax		
	comp=E,249nm,4.3s						
YAK				MLR	MLR		
	comp=Z,2μm,19.0s						
YAK				MLR	MLR		
	comp=N,1μm,18.0s						
YAK				MLR	MLR		
	comp=E,202nm,19.0s						
YAK	Yakutsk	48.22	3	P	P	15 22 17.0	-2.6
STKA	Stephens Creek	48.34	161	P	P	15 22 22.2	+1.3
	baz=48,SNR=32						
STKA	Stephens Creek	48.34	161	P	P	15 22 22.2	+1.3
	comp=E,43nm,1.0s,baz=341,slow=7.9,SNR=39						
STKA				S	S	15 29 17.6	-1.8
	comp=E,7.0nm,1.1s,baz=225,slow=21,SNR=5.4						
STKA				LR	LR	15 47 21.7	
	comp=E,538nm,18.2s,baz=337,slow=42						
STKA	Stephens Creek	48.34	161	c iP	P	15 22 21.9	+1.0
STKA	Stephens Creek	48.34	161	P	P	15 22 21.3	+0.4
MAKZ	Makanchi	48.37	322	P	P	15 22 20.8	-0.3
MAKZ				pmax	pmax		
	comp=Z,55nm,1.4s						
MAKZ	Makanchi	48.37	322	P	P	15 22 20.8	-0.3
MAKZ				IAmb	IAmb	15 22 32.9	
	comp=Z,56nm,1.4s						
SHLS	Shalkode	48.39	316	eP	P	15 22 18.1	-3.3
	comp=Z,57nm,1.6s,baz=316						
SHLS	Shalkode	48.39	316	eP	P	15 22 18.1	-3.3
SHLS				pmax	pmax		
	comp=Z,57nm,1.6s						
POO	Poona	48.80	283	eP	P	15 22 22.0	-2.8
POO				eP	P	15 22 24.6	-0.3
POO				IAmb	IAmb	15 22 32.3	
	comp=Z,38nm,0.9s						
POO				IAMs_20	IAMs_20	15 42 33.2	
	comp=Z,2μm,24.2s						
HTT	Hallett	49.00	164	P	P	15 22 27.6	+1.6
	baz=49,SNR=6.5						
GOA	Goa	49.02	279	eP	P	15 22 26.5	+0.1
GOA				IAmb	IAmb	15 22 35.1	
	comp=Z,116nm,1.6s						
KPKS	Kokpek	49.03	316	eP	P	15 22 25.1	-1.3
	comp=Z,61nm,1.7s,baz=316						
KPKS	Kokpek	49.03	316	eP	P	15 22 25.0	-1.3
KPKS				pmax	pmax		
	comp=Z,61nm,1.7s						
SATY	Saty	49.06	316	eP	P	15 22 25.4	-1.2
	comp=Z,52nm,1.7s,baz=316						
SATY	Saty	49.06	316	eP	P	15 22 25.4	-1.2
SATY				pmax	pmax		
	comp=Z,52nm,1.7s						
CMSA	Cobar Meteorol	49.50	156	P	P	15 22 31.9	+2.1
	baz=50,SNR=41						
KSH	Kashi	49.61	310	P	P	15 22 33.4	+2.5
KSH				PP	PP	15 24 29.9	+4.5
KSH				PcS	PcS	15 27 45.5	-3.5
KSH				S	S	15 29 42.3	+4.6
KSH				ScS	ScS	15 32 22.2	+1.2
KSH				SS	SS	15 33 13.8	+3.8
KSH				pmax	pmax		
	comp=Z,130nm,1.8s						
KSH				pmax	pmax		
	comp=Z,610nm,5.1s						
KSH				LR	LR		
	comp=Z,3μm,18.4s						
KSH				LR	LR		
	comp=Z,2μm,16.0s						
KSH				LR	LR		
	comp=Z,2μm,20.1s						
TDK	Taldyqorghan	49.82	318	eP	P	15 22 31.8	-0.4
	comp=Z,50nm,1.6s,baz=318						
TDK	Taldyqorghan	49.82	318	eP	P	15 22 31.7	-0.4
TDK				pmax	pmax		
	comp=Z,50nm,1.6s						
MDOK	Medeo	50.03	315	eP	P	15 22 32.7	-1.3
	baz=315						
MDOK	Medeo	50.03	315	eP	P	15 22 32.7	-1.3
TNSS	Tian-Shan	50.05	315	eP	P	15 22 33.7	-0.9
	baz=315						
TNSS	Tian-Shan	50.05	315	eP	P	15 22 33.6	-0.9
AAA	Alma-Ata	50.13	315	eP	P	15 22 33.6	-1.2
	baz=315						
AAA	Alma-Ata	50.13	315	eP	P	15 22 33.5	-1.2
CHKK	Chushkaly	50.32	316	eP	P	15 22 35.5	-0.6
	baz=316						
CHKK	Chushkaly	50.32	316	eP	P	15 22 35.4	-0.6
NIL	Nilore	50.37	302	P	P	15 22 36.3	-0.3
NIL				pmax	pmax		
	comp=Z,172nm,1.5s						
NIL	Nilore	50.37	302	P	P	15 22 36.3	-0.3
NIL	Nilore	50.37	302	P	P	15 22 36.6	0.0
MTBS	Maitube	50.44	315	eP	P	15 22 36.9	-0.1
	baz=315						
MTBS	Maitube	50.44	315	eP	P	15 22 36.9	-0.1
ZAA0	Zalesovo Array	50.68	331	P	P	15 22 37.0	-1.6
ZALV	Zalesovo Beam	50.68	331	P	P	15 22 38.0	-0.5
	comp=Z,6.6nm,0.6s,baz=121,slow=8.2,SNR=32						
ZALV				PcP	PcP	15 23 53.5	-2.1
	comp=Z,7.1nm,0.9s,baz=105,slow=5.0,SNR=1.6						
ZALV				LR	LR	15 44 40.6	
	comp=Z,635nm,19.8s,baz=126,slow=37						
ZALV	Zalesovo Beam	50.68	331	P	P	15 22 37.0	-1.6
KUU	Kurty	50.77	316	eP	P	15 22 38.4	-1.1
	comp=Z,106nm,1.7s,baz=316						
KUU	Kurty	50.77	316	eP	P	15 22 38.3	-1.1
KUU				pmax	pmax		
	comp=Z,106nm,1.7s						
SEM	Semipalatinsk	51.11	325	eP	P	15 22 41.0	-1.1
	baz=325						
SEM				LR	LR	15 45 25.5	
	comp=Z,369nm,14.6s,baz=325						
SEM	Semipalatinsk	51.11	325	eP	P	15 22 41.0	-1.1
SEM				MLR	MLR		
	comp=Z,369nm,15.0s						
ARMA	Armidale	51.17	150	P	P	15 22 40.9	-1.7
	baz=51,SNR=6.4						
AAK	Ala-Archa	51.62	314	c iP	P	15 22 46.6	+0.6
AAK				pmax	pmax		
	comp=Z,27nm,1.3s						
AAK	Ala-Archa	51.62	314	P	P	15 22 46.2	+0.2
AAK				IAmb	IAmb	15 22 57.6	
	comp=Z,43nm,1.4s						
SGDS	Sogindy	51.79	315	eP	P	15 22 46.1	-1.1
	baz=315						
SGDS	Sogindy	51.79	315	eP	P	15 22 46.0	-1.1
KURK	Kurchatov	52.17	325	c iP	P	15 22 49.9	+0.2
KURK				pmax	pmax		
	comp=Z,22nm,0.9s						
KURK	Kurchatov	52.17	325	P	P	15 22 49.5	-0.2
KURK	Kurchatov	52.17	325	P	P	15 22 49.9	+0.2
KURK				P	P	15 22 49.9	+0.2
BHUJ	Bhuj	52.62	289	eP	P	15 22 53.3	-0.3
SEY	Seymchan	52.78	16	⇑eP	P	15 22 55.8	+1.8
DZA	Taraz	53.92	313	eP	P	15 23 02.0	-0.9
	comp=Z,11nm,0.7s,baz=313						
DZA	Taraz	53.92	313	eP	P	15 23 02.0	-0.9
DZA				pmax	pmax		
	comp=Z,11nm,0.7s						
KBL	Kabul	53.96	303	P	P	15 23 02.4	-1.1
KBL				pmax	pmax		
	comp=Z,72nm,1.5s						
KBL	Kabul	53.96	303	P	P	15 23 02.4	-1.1
KBL				IAmb	IAmb	15 23 15.2	
	comp=Z,72nm,1.5s						
KBL	Kabul	53.96	303	P	P	15 23 03.5	0.0
	SNR=40						
CAN	Canberra	54.14	155	P	P	15 23 04.7	+0.3
CAN				pmax	pmax		
	comp=Z,91nm,1.4s						
CAN	Canberra	54.14	155	P	P	15 23 04.7	+0.3
CNB	Canberra Magne	54.28	155	P	P	15 23 07.4	+1.9
	baz=54,SNR=6.4						
DZM	Mont Dzumac	54.43	130	eS	S	15 30 47.1	+3.0
	comp=Z,2μm,27.5s						
DZM				eLR	LR	15 39 01.8	
	comp=Z,1μm,24.3s						
KK31	Karatay Array	54.56	313	P	P	15 23 06.9	-0.6
KK31				pmax	pmax		
	comp=Z,27nm,0.9s						
KK31	Karatay Array	54.56	313	P	P	15 23 06.9	-0.6
KK31				IAmb	IAmb	15 23 09.4	
	comp=Z,27nm,0.9s						
KKAR	Karatay Array	54.56	313	P	P	15 23 06.9	-0.6
KKAR				pmax	pmax		
	comp=Z,27nm,0.9s						
KKAR	Karatay Array	54.56	313	P	P	15 23 06.9	-0.6
KKAR	Karatay Array	54.56	313	P	P	15 23 07.5	0.0
KKAR				IAmb	IAmb	15 23 09.4	
	comp=Z,27nm,0.9s						
TOO	Toolangi	54.83	160	P	P	15 23 11.1	+1.7
	baz=55,SNR=13						
TOO	Toolangi	54.83	160	P	P	15 23 10.9	+1.5
TOO				pmax	pmax		
	comp=Z,59nm,1.1s						
TOO	Toolangi	54.83	160	P	P	15 23 10.9	+1.5
TOO				IAmb	IAmb	15 23 12.5	
	comp=Z,59nm,1.1s						
BRLS	Borolday	55.02	313	LR	LR	15 47 13.3	
	comp=Z,341nm,16.5s,baz=313						
BRZS	Berezniki	55.32	322	eP	P	15 23 12.4	-0.4
	comp=Z,44nm,1.7s,baz=322						
BRZS	Berezniki	55.32	322	eP	P	15 23 12.4	-0.4
BRZS				pmax	pmax		
	comp=Z,44nm,1.7s						
TIXI	Tiksi	57.80	2	⇓eP	P	15 23 29.6	-0.5
TIXI	Tiksi	57.80	2	P	P	15 23 28.7	-1.4
BRVK	Borovoye	57.84	325	c iP	P	15 23 31.0	+0.3
BRVK				pmax	pmax		
	comp=Z,41nm,1.1s						
BRVK	Borovoye	57.84	325	P	P	15 23 30.5	-0.2
BRVK	Borovoye	57.84	325	P	P	15 23 31.1	+0.3
HRA	Herat	59.53	302	P	P	15 23 42.6	-0.5
HRA				IAmb	IAmb	15 23 51.7	
	comp=Z,45nm,1.4s						
MOO	Moorlands	59.78	161	P	P	15 23 43.9	-0.4
	baz=60,SNR=60						
NRIK	Noril'sk	60.12	346	P	P	15 23 46.1	-0.2
	comp=Z,6.1nm,0.6s,baz=118,slow=6.5,SNR=14						
NRIK				LR	LR	15 52 17.3	
	comp=Z,1μm,18.2s,baz=144,slow=39						
NRIK	Noril'sk	60.12	346	c iP	P	15 23 45.9	-0.4
NRIK				pmax	pmax		
	comp=Z,97nm,2.2s						
NRIK				MLR	MLR		
	comp=Z,1μm,19.0s						
NRIK	Noril'sk	60.12	346	P	P	15 23 45.8	-0.4
MSVF	Nonsavu	61.41	119	P	P	15 23 58.4	+2.5
MSVF				pmax	pmax		
	comp=Z,43nm,1.1s						
MSVF	Nonsavu	61.41	119	P	P	15 23 58.4	+2.5
MSVF				IAmb	IAmb	15 24 10.9	
	comp=Z,43nm,1.1s						
JLN	Jalan Bani Buh	62.12	288	P	P	15 23 59.6	-1.0
AB31	Akbulak array	63.08	318	i P	P	15 24 06.4	-0.1
AB31				pmax	pmax		
	comp=Z,17nm,0.7s						
ABKAR	Akbulak array	63.08	318	P	P	15 24 06.0	-0.6
ABKAR	Akbulak array	63.08	318	P	P	15 24 06.2	-0.3
ABKAR				IAmb	IAmb	15 24 18.2	
	comp=Z,35nm,1.0s						
GEYT	Alibeck	63.08	306	P	P	15 24 07.2	+0.3
	comp=Z,18nm,1.0s,baz=90,slow=1.5,SNR=26						
GEYT				LR	LR	15 54 22.3	
	comp=Z,2μm,19.6s,baz=95,slow=39						
GEYT	Alibeck	63.08	306	P	P	15 24 07.0	+0.2
GEYT				IAmb	IAmb	15 24 10.2	
	comp=Z,36nm,1.2s						
GYA0B	ALIBECK ARRAY	63.08	306	P	P	15 24 07.2	+0.4
SMDO	Samad	63.30	289	P	P	15 24 07.8	-0.8
SMDO				P	P	15 24 07.8	-0.8
JMDO	Jabal Madar	63.31	288	P	P	15 24 07.6	-1.0
MHTO	MHTO	63.55	287	P	P	15 24 11.0	+0.8
	SNR=8.2						
DQM	DQM	64.06	286	P	P	15 24 12.8	-0.8
SVE	Sverdlovsk	64.29	327	d iP	P	15 24 14.6	+0.2
SVE				eS	S	15 32 48.4	-2.0
SVE				pmax	pmax		
	comp=Z,144nm,1.5s						
SVE				MLR	MLR		
	comp=Z,876nm,21.0s						
SOHO	SOHO	64.61	290	i P	P	15 24 16.4	-0.7
	SNR=7.9						
SOHO	SOHO	64.61	290	P	P	15 24 16.6	-0.5
BANOM	Banah	64.69	292	P	P	15 24 17.8	+0.1
BANOM	Banah	64.69	292	P	P	15 24 18.1	+0.5
MDH	Madha	64.73	292	P	P	15 24 16.6	-1.3
SHME	Shamm	64.82	292	P	P	15 24 18.6	+0.2
UOSS	Minazif	64.84	291	P	P	15 24 17.5	-1.1
UOSS	Minazif	64.84	291	P	P	15 24 17.8	-0.9
UOSS				P	P	15 24 17.8	-0.9
MASF	Masafi	64.85	292	P	P	15 24 18.6	-0.2
MSFE	Esma-Masafi	64.85	292	P	P	15 24 18.9	+0.1
HATD	Hatta, Dubai	64.92	291	i P	P	15 24 19.1	0.0
	SNR=6.2						
HATD	Hatta, Dubai	64.92	291	P	P	15 24 19.1	0.0
	SNR=5.8						
HATD				P	P	15 24 19.1	0.0
	SNR=5.8						
ASHO	Ashiyiah	65.00	291	i P	P	15 24 19.4	-0.2
	SNR=6.7						
ASHO	Ashiyiah	65.00	291	P	P	15 24 19.5	-0.2
	SNR=7.5						
ARU	Arti	65.31	326	c iP	P	15 24 20.7	-0.4
ARU						15 24 53.1	
ARU						15 26 44.6	
ARU				S	S	15 33 02.3	-0.7
ARU				pmax	pmax		
	comp=Z,47nm,0.9s						
ARU				MLR	MLR		
	comp=Z,1μm,16.0s						
ARU	Arti	65.31	326	P	P	15 24 20.6	-0.5
ALNE	Al Ain	65.32	290	P	P	15 24 22.1	+0.4
	SNR=6.2						
ALNE				P	P	15 24 22.1	+0.4
	SNR=6.2						
FAQ	Al Faqa, Dubai	65.41	291	P	P	15 24 22.0	-0.3
UMZA	Um Al Zommool	65.98	289	P	P	15 24 25.1	-0.9
SHAO	Shalim	66.08	284	P	P	15 24 27.0	+0.2
DMTO	DMTO	66.77	284	P	P	15 24 31.1	0.0
	SNR=6.4						
DOK	Doka	67.42	285	P	P	15 24 34.9	-0.3
	SNR=8.4						
RBK	Rabkut	67.50	283	P	P	15 24 35.7	-0.1
	SNR=7.4						
WHFO	Wadi Hawf	67.85	284	P	P	15 24 37.4	-0.6
	SNR=7.7						
WHFO				P	P	15 24 37.4	-0.6
	SNR=7.7						
ABTO	Aybut	68.38	283	P	P	15 24 41.1	-0.2
	SNR=8.6						
SOCY	Socotra	68.55	278	P	P	15 24 41.5	-0.9
SOCY	Socotra	68.55	278	P	P	15 24 39.9	-2.6
	SNR=5.1						
ANM	Nome	69.02	26	P	P	15 24 45.8	+1.4
ANM				pmax	pmax		
	comp=Z,16nm,1.2s						
ANM	Nome	69.02	26	P	P	15 24 45.8	+1.4
LKRN	Lenkeran, Azer	70.42	306	P	P	15 24 53.7	+0.1
KIRV	Kirov	70.52	328	c iP	P	15 24 53.4	-0.3
RDOG	Red Dog Mine	70.70	22	P	P	15 24 55.0	+0.2
BELG	Belogornoye	71.16	321	c iP	P	15 24 57.5	-0.3
BELG				pmax	pmax		
	comp=Z,12nm,0.9s						
BELG				MLR	MLR		
	comp=Z,94nm,16.0s						
MAK	Makhachkala	71.25	311	c iP	P	15 24 57.1	-1.4
MAK				e		15 27 33.5	
MAK				ePPP	PPP	15 29 14.5	
MAK				eS	S	15 34 13.7	-0.5
MAK				pmax	pmax		
	comp=Z,237nm,0.9s						
SEKA	Sheki	71.54	309	P	P	15 24 59.5	-0.9
MNGR	Mingechevir, A	71.64	309	P	P	15 25 01.3	+0.4
ZKTA	Zakatala	71.95	310	P	P	15 25 03.4	+0.6
UMR	Umm Al-Rimmam	71.97	297	eP		15 25 02.1	
KBD	Kabd	72.03	296	eP		15 25 01.9	
RDF	Al-Radifah	72.18	296	eP		15 25 03.2	
GANJ	Ganja	72.23	309	P	P	15 25 04.3	-0.2
MIB	Mutribah	72.27	297	eP		15 25 03.6	
GROC	Groznyy	72.49	311	eP	P	15 25 04.9	-1.1
GROC				e		15 25 22.6	
GROC				e		15 27 45.0	
GROC				pmax	pmax		
	comp=Z,112nm,1.7s						
RST	Umm Al-Ruwaisa	72.60	297	eP		15 25 05.0	
TTA	Tatalina	72.93	28	P	P	15 25 09.0	+0.7
TTA				pmax	pmax		
	comp=Z,22nm,1.3s						
TTA	Tatalina	72.93	28	P	P	15 25 09.0	+0.7
NAX	Nakhchivan	72.96	307	P	P	15 25 09.0	+0.1
GNI	Garni	73.46	308	c iP	P	15 25 12.6	+0.6
GNI				pmax	pmax		
	comp=Z,89nm,1.7s						
GNI	Garni	73.46	308	P	P	15 25 12.6	+0.6
ZEI	Tsey	73.90	311	eP	P	15 25 14.0	-0.6
ZEI				pmax	pmax		
	comp=Z,56nm,1.4s						
IMAR	Indian Mountai	74.04	25	P	P	15 25 15.2	+0.5
NCK	Nalchik	74.07	312	⇓iP	P	15 25 15.3	-0.1
NCK				pmax	pmax		
	comp=Z,97nm,2.1s						
AKH	Akhalkalaki	74.31	309	P	P	15 25 16.7	-0.3
AKH				pmax	pmax		
	comp=Z,273nm,1.4s						
AKH	Akhalkalaki	74.31	309	P	P	15 25 16.7	-0.3
GOF	Gofitskoye	74.36	313	⇑eP	P	15 25 16.3	-0.6
GOF				pmax	pmax		
	comp=Z,51nm,0.9s						
RSO	Redoubt South	74.43	31	P	P	15 25 18.5	+1.2
KBZ	Khabaz	74.56	312	P	P	15 25 18.4	+0.3
	comp=Z,18nm,1.0s,baz=104,slow=2.4,SNR=15						
KBZ				LR	LR	16 02 31.4	
	comp=Z,1μm,18.2s,baz=76,slow=39						
KBZ	Khabaz	74.56	312	ceP	P	15 25 18.4	+0.3
KBZ				pmax	pmax		
	comp=Z,64nm,1.5s						
KDAK	Kodiak Island	74.57	33	⇓eP	P	15 25 21.6	+3.7
KDAK				pmax	pmax		
	comp=Z,63nm,1.7s						
PPLA	Purkeypile	74.68	28	P	P	15 25 19.1	+0.5
PPLA				IAmb	IAmb	15 25 46.1	
	comp=Z,41nm,1.5s						
KIV	Kislovodsk	74.69	312	i P	P	15 25 20.1	+1.0
	SNR=9.8						
KIV	Kislovodsk	74.69	312	eP	P	15 25 19.4	+0.3
KIV				eS	S	15 34 55.9	+2.3
KIV				pmax	pmax		
	comp=Z,396nm,4.0s						
KIV				pmax	pmax		
	comp=Z,128nm,1.1s						
KIV				MLR	MLR		
	comp=Z,2μm,18.0s						
KIV	Kislovodsk	74.69	312	P	P	15 25 18.8	-0.3
KIV				IAmb	IAmb	15 25 27.5	
	comp=Z,71nm,1.3s						
RAYN	Ar Rayn	74.71	291	i P	P	15 25 20.0	+0.5
	SNR=12						
RAYN	Ar Rayn	74.71	291	P	P	15 25 18.5	-1.0
RAYN				pmax	pmax		
	comp=Z,34nm,0.9s						
RAYN	Ar Rayn	74.71	291	P	P	15 25 18.5	-1.0
RAYN				IAmb	IAmb	15 25 20.9	
	comp=Z,34nm,0.9s						
NEY	Neytrino	74.73	311	⇓eP	P	15 25 20.9	+1.5
NEY				pmax	pmax		
	comp=Z,12nm,1.4s						
VRH	Novokhopyorsk	74.85	320	eP	P	15 25 18.2	-1.4
VRH				pmax	pmax		
	comp=Z,60nm,0.8s						
GEVA	Gevas	74.93	306	P	P	15 25 20.5	-0.1
GEVA				IAmb	IAmb	15 25 29.4	
	comp=Z,62nm,1.4s						
BPAW	Bear Paw Mtn.	75.20	27	P	P	15 25 22.0	+0.5
MLY	Manley	75.29	26	P	P	15 25 22.9	+0.8
	baz=271						
SUA	Susitna One	75.39	30	P	P	15 25 23.3	+0.5
SUA				IAmb	IAmb	15 25 33.2	
	comp=Z,50nm,1.4s						
COLD	Coldfoot	75.46	24	P	P	15 25 23.2	+0.2
	baz=271						
COLD	Coldfoot	75.46	24	P	P	15 25 23.9	+1.0
TRF	Thorofare Moun	75.53	28	P	P	15 25 24.7	+1.2

TRF				IAmb	IAmb	15 25 37.1	
	comp=Z,65nm,1.4s						
CUT	**Chulitna**	**75.58**	**29**	P	**P**	**15 25 24.3**	**+0.7**
	baz=272						
KLMR	**Klimovskoe**	**75.59**	**330**	*e*P	**P**	**15 25 21.7**	**-1.9**
KLMR				*e*S	**S**	**15 35 02.4**	**-0.2**
KLMR				pmax	pmax		
	comp=Z,165nm,1.5s						
KLMR	**Klimovskoe**	**75.59**	**330**	*e*P	**P**	**15 25 21.8**	**-1.9**
KLMR				AMP		15 25 34.8	
	comp=Z,165nm,1.5s						
KLMR				*e*S	**S**	**15 35 02.5**	**-0.2**
KLMR				*e*S	**S**	**15 35 02.5**	**-0.2**
KLMR				LQ	LQ	15 53 20.0	
KLMR				LQ	LQ	15 53 20.0	
KLMR				LR	LR	15 58 19.3	
TOLK	**Toolik Lake Re**	**75.67**	**22**	P	**P**	**15 25 24.8**	**+0.6**
	baz=271						
TOLK	**Toolik Lake Re**	**75.67**	**22**	P	**P**	**15 25 25.5**	**+1.3**
BWN	**Browne**	**75.87**	**27**	P	**P**	**15 25 26.2**	**+1.0**
BWN				IAmb	IAmb	15 25 39.7	
	comp=Z,52nm,1.2s						
I23K	**Minto, Yukon-K**	**75.87**	**26**	P	**P**	**15 25 26.2**	**+1.0**
	baz=272						
I23K	**Minto, Yukon-K**	**75.87**	**26**	P	**P**	**15 25 26.2**	**+1.0**
RC01	**Rabbit Creek A**	**75.89**	**30**	P	**P**	**15 25 25.5**	**0.0**
	baz=273						
O22K	**Cooper Landing**	**75.93**	**31**	P	**P**	**15 25 26.1**	**+0.4**
	baz=273						
NEA2	**Nenana**	**76.02**	**26**	P	**P**	**15 25 26.3**	**+0.1**
	baz=273						
TMCR	**Tamitsa**	**76.11**	**333**	*e*P	**P**	**15 25 24.7**	**-1.9**
TMCR				pmax	pmax		
	comp=Z,25nm,1.0s						
MCK	**McKinley**	**76.12**	**27**	P	**P**	**15 25 26.5**	**-0.3**
	baz=273						
PMR	**Palmer**	**76.16**	**29**	P	**P**	**15 25 27.1**	**+0.2**
PMR				pmax	pmax		
	comp=Z,18nm,1.2s						
PMR	**Palmer**	**76.16**	**29**	P	**P**	**15 25 27.1**	**+0.2**
RND	**Reindeer**	**76.18**	**28**	P	**P**	**15 25 27.5**	**+0.3**
RND				pmax	pmax		
	comp=Z,97nm,1.5s						
RND	**Reindeer**	**76.18**	**28**	P	**P**	**15 25 27.4**	**+0.3**
MDM	**Murphy Dome**	**76.36**	**26**	P	**P**	**15 25 28.3**	**+0.2**
VSR	**Storozhevoye**	**76.45**	**320**	*e*P	**P**	**15 25 27.2**	**-1.6**
VSR				pmax	pmax		
	comp=Z,80nm,1.8s						
WRH	**Wood River Hil**	**76.45**	**26**	P	**P**	**15 25 28.9**	**+0.3**
WRH				IAmb	IAmb	15 25 40.3	
	comp=Z,45nm,1.4s						
LPSR	**Galich'ya Gora**	**76.47**	**321**	*e*P	**P**	**15 25 26.7**	**-2.2**
LPSR				pmax	pmax		
	comp=Z,30nm,0.8s						
KNK	**Knik Glacier**	**76.49**	**30**	P	**P**	**15 25 28.2**	**-0.7**
KNK				IAmb	IAmb	15 25 40.7	
	comp=Z,77nm,1.5s						
TCOL	**CIGO, UAF Yank**	**76.52**	**26**	P	**P**	**15 25 29.5**	**+0.5**
	baz=274						
SML	**Sawmill**	**76.52**	**29**	P	**P**	**15 25 28.1**	**-1.0**
SML				IAmb	IAmb	15 25 40.8	
	comp=Z,65nm,1.4s						
COLA	**College**	**76.52**	**26**	⇓*e*P	**P**	**15 25 29.9**	**+1.0**
COLA				pmax	pmax		
	comp=Z,12nm,1.1s						
CCB	**Clear Creek Bu**	**76.56**	**26**	P	**P**	**15 25 29.8**	**+0.6**
CCB				IAmb	IAmb	15 25 55.7	
	comp=Z,32nm,1.5s						
POKR	**Poker Plat Res**	**76.68**	**26**	P	**P**	**15 25 30.5**	**+0.6**
	baz=274						
POKR	**Poker Plat Res**	**76.68**	**26**	P	**P**	**15 25 30.1**	**+0.1**
POKR				IAmb	IAmb	15 25 42.5	
	comp=Z,45nm,1.5s						
KOPT	**Kop Dagi**	**76.72**	**308**	P	**P**	**15 25 32.0**	**+1.0**
KOPT				IAmb	IAmb	15 25 47.6	
	comp=Z,50nm,1.3s						
MARD	**Mardin**	**76.84**	**306**	P	**P**	**15 25 31.9**	**+0.4**
SOC	**Sochi**	**76.87**	**312**	*e*P	**P**	**15 25 31.8**	**+0.4**
SOC				*e*		15 28 23.4	
SOC				*e*PPP	PPP	15 30 12.9	
SOC				*e*S	**S**	**15 35 18.0**	**+0.5**
SOC				*e*SS	**SS**	**15 40 07.4**	**-6.5**
SOC				*e*SSS	SSS	15 43 27.1	
SOC				pmax	pmax		
	comp=Z,47nm,1.1s						
SOC				MLR	MLR		
	comp=Z,1µm,19.0s						
IL31		**76.94**	**26**	P	**P**	**15 25 30.3**	**-1.0**
ILAR	**Eielson Array**	**76.94**	**26**	P	**P**	**15 25 30.7**	**-0.7**
	comp=Z,1.3nm,0.8s,baz=247,slow=4.1,SNR=9.9						
ILAR				LR	LR	15 58 02.8	
	comp=Z,435nm,22.0s,baz=278,slow=35						
ILAR	**Eielson Array**	**76.94**	**26**	P	**P**	**15 25 30.2**	**-1.2**
ILAR	**Eielson Array**	**76.94**	**26**	P	**P**	**15 25 30.1**	**-1.2**
MOS	**Moscow**	**76.94**	**325**	*e*P	**P**	**15 25 29.4**	**-2.1**
MOS				pmax	pmax		
	comp=Z,164nm,1.3s						
HDA	**Harding Lake**	**76.95**	**26**	P	**P**	**15 25 31.2**	**-0.2**
	baz=275						
SCM	**Sheep Creek Mo**	**76.99**	**29**	P	**P**	**15 25 32.1**	**+0.3**
SCM				pmax	pmax		
	comp=Z,101nm,1.4s						
SCM	**Sheep Creek Mo**	**76.99**	**29**	P	**P**	**15 25 32.1**	**+0.3**
FYU	**Fort Yukon**	**77.46**	**24**	P	**P**	**15 25 35.9**	**+1.7**
FYU				IAmb	IAmb	15 25 46.4	
	comp=Z,72nm,1.5s						
M24K	**Tolsona, Glenn**	**77.51**	**29**	P	**P**	**15 25 35.3**	**+0.6**
	baz=276						
OBN	**Obninsk**	**77.61**	**324**	c *i*P	**P**	**15 25 34.6**	**-0.7**
OBN				*i*		15 25 40.7	
OBN				*i* S	S	15 35 13.8	-11
OBN				pmax	pmax		
	comp=Z,32nm,1.4s						
OBN				MLR	MLR		
	comp=Z,836nm,18.0s						
OBN	**Obninsk**	**77.61**	**324**	P	**P**	**15 25 34.5**	**-0.7**
BMAR	**Burnt Mountain**	**77.62**	**23**	P	**P**	**15 25 33.3**	**-1.9**
APA	**Apatity**	**77.73**	**337**	⇓*i*P	P	15 25 28.2	-7.5
APA				*i*		15 25 44.6	
APA				pmax	pmax		
	comp=Z,13nm,0.8s						
APA				MLR	MLR		
	comp=Z,900nm,16.0s						
PAX	**Paxson**	**77.74**	**28**	P	**P**	**15 25 36.2**	**+0.2**
PAX				pmax	pmax		
	comp=Z,47nm,1.4s						
PAX	**Paxson**	**77.74**	**28**	P	**P**	**15 25 36.2**	**+0.2**
PAX				IAmb	IAmb	15 25 47.3	
	comp=Z,47nm,1.4s						
RIDG	**Independent Ri**	**77.93**	**27**		**P**	**15 25 37.8**	**+0.8**
SCRK	**Sand Creek**	**78.28**	**27**	P	**P**	**15 25 38.4**	**-0.6**
	baz=278						
N25K	**Chitina, Valde**	**78.31**	**29**	P	**P**	**15 25 38.6**	**-0.6**
	baz=278						
N25K	**Chitina, Valde**	**78.31**	**29**	P	**P**	**15 25 40.2**	**+1.0**
N25K				IAmb	IAmb	15 25 51.7	
	comp=Z,54nm,1.4s						
ANN	**Anapa**	**78.35**	**313**	*e*P	**P**	**15 25 40.9**	**+1.3**
ANN				pmax	pmax		
	comp=Z,290nm,1.8s						
GLB	**Gilahina Butte**	**78.71**	**29**	P	**P**	**15 25 37.9**	**-3.4**
GLB				IAmb	IAmb	15 25 52.7	
	comp=Z,36nm,1.2s						
JOF	**Joensuu**	**79.24**	**332**	P	**P**	**15 25 44.5**	**+0.4**
JOF				pmax	pmax		
	comp=Z,29nm,1.7s						
BCAR	**Beaver Creek A**	**79.39**	**28**	P	**P**	**15 25 44.6**	**-0.5**
GAZ	**Gaziantep**	**79.67**	**306**	P	**P**	**15 25 46.4**	**-0.8**
CTGM	**Chitina Glacie**	**79.97**	**30**	P	**P**	**15 25 45.2**	**-3.1**
CTGM				IAmb	IAmb	15 25 58.4	
	comp=Z,52nm,1.4s						
SPITS	**Spitsbergen Ar**	**80.17**	**349**	P	**P**	**15 25 49.0**	**0.0**
SPITS				pmax	pmax		
	comp=Z,4.0nm,0.4s						
ARCES	**ARCESS Array B**	**80.25**	**339**	P	**P**	**15 25 48.5**	**-1.0**
	comp=Z,9.3nm,0.9s,baz=94,slow=9.0,SNR=13						
ARCES	**ARCESS Array B**	**80.25**	**339**	P	**P**	**15 25 48.5**	**-1.0**
ARCES				pmax	pmax		
	comp=Z,21nm,1.0s						
ARCES	**ARCESS Array B**	**80.25**	**339**	IAmb	IAmb	15 26 04.7	
	comp=Z,21nm,0.9s						
DAWY	**Dawson**	**80.26**	**26**	P	**P**	**15 25 50.4**	**+0.6**
CASY	**Casey**	**80.61**	**186**	P	**P**	**15 25 51.2**	**-0.1**
CASY				IAmb	IAmb	15 25 52.9	
	comp=Z,69nm,1.2s						
EPYK	**Eagle Plains**	**80.86**	**24**	P	**P**	**15 25 52.6**	**-0.3**
	baz=284						
EPYK	**Eagle Plains**	**80.86**	**24**	P	**P**	**15 25 52.5**	**-0.4**
EPYK				IAmb	IAmb	15 26 06.5	
	comp=Z,23nm,1.0s						
INK	**Inuvik**	**81.56**	**22**	P	**P**	**15 25 56.9**	**+0.4**
INK				pmax	pmax		
	comp=Z,23nm,1.3s						
INK	**Inuvik**	**81.56**	**22**	P	**P**	**15 25 56.9**	**+0.4**
SUF	**Sumiainen**	**81.60**	**333**	P	**P**	**15 25 56.3**	**-0.5**
SUF				pmax	pmax		
	comp=Z,47nm,1.2s						
HYT	**Haines Junctio**	**81.83**	**29**	P	**P**	**15 25 57.8**	**-0.4**
FINES	**FINESS Array B**	**81.94**	**331**	P	**P**	**15 25 58.1**	**-0.5**
	comp=Z,6.9nm,0.7s,baz=69,slow=5.4,SNR=27						
FINES				LR	LR	16 05 34.0	
	comp=Z,804nm,18.1s,baz=82,slow=38						
FINES	**FINESS Array B**	**81.94**	**331**	P	**P**	**15 25 57.5**	**-1.1**
BR131	**Keskin Array S**	**81.97**	**309**	P	**P**	**15 25 58.2**	**-1.3**
BR131				pmax	pmax		
	comp=Z,11nm,1.1s						
BR131	**Keskin Array S**	**81.97**	**309**	P	**P**	**15 25 58.2**	**-1.3**
BRTR	**Keskin Array B**	**81.97**	**309**	P	**P**	**15 25 58.9**	**-0.6**
	comp=Z,2.2nm,0.7s,baz=107,slow=3.9,SNR=6.4						
BRTR	**Keskin Array B**	**81.97**	**309**	P	**P**	**15 25 58.4**	**-1.0**
BRTR	**Keskin Array B**	**81.97**	**309**	P	**P**	**15 25 58.4**	**-1.0**
VSU	**Vasula**	**82.34**	**328**	*e*P	**P**	**15 26 00.9**	**+0.1**
MNK	**Minsk**	**82.66**	**324**	*e*P	**P**	**15 26 03.0**	**+0.5**
MNK	**Minsk**	**82.66**	**324**	*i* P	**P**	**15 26 01.3**	**-1.3**
	comp=E,2.0nm,0.9s						
MNK				*i* P	**P**	**15 26 01.3**	**-1.3**
	comp=N,6.0nm,0.9s						
MNK				*i* P	**P**	**15 26 01.3**	**-1.3**
	comp=Z,21nm,0.9s						
MNK				*i* PcP	**PcP**	**15 26 06.0**	**-1.4**
MNK				*i* PP	**PP**	**15 29 10.5**	**-1.6**
MNK				*i* PPP	PPP	15 31 01.5	
MNK				*i* S	**S**	**15 36 14.7**	**-3.5**
MNK				*i* ScS	**ScS**	**15 36 33.4**	**+0.3**
MNK				*i* SS	**SS**	**15 41 41.6**	**+1.7**
MNK				*i* SSS	SSS	15 45 10.0	
MNK				*i* LQ	LQ	15 55 33.1	
MNK				*i* LR	LR	16 00 02.1	
MNK				*i* LRM	MLR	16 03 32.0	
	comp=N,420nm,19.3s						
MNK				*i* LRM	MLR	16 05 44.5	
	comp=E,80nm,19.6s						
MNK				*i* LRM	MLR	16 06 34.8	
	comp=Z,478nm,19.3s						
AKASG	**Malin Array Be**	**82.73**	**320**	P	**P**	**15 26 02.1**	**-0.9**
	comp=Z,4.8nm,0.7s,baz=62,slow=4.5,SNR=17						
AKASG	**Malin Array Be**	**82.73**	**320**	P	**P**	**15 26 01.9**	**-1.1**
AKASG				pmax	pmax		
	comp=Z,20nm,1.5s						
AKASG	**Malin Array Be**	**82.73**	**320**	P	**P**	**15 26 01.9**	**-1.1**
AKBB	**Malin Array Si**	**82.73**	**320**	P	**P**	**15 26 01.1**	**-1.9**
AKBB				pmax	pmax		
	comp=Z,20nm,1.1s						
AKBB	**Malin Array Si**	**82.73**	**320**	P	**P**	**15 26 01.1**	**-1.9**
AKBB				IAmb	IAmb	15 26 12.0	
	comp=Z,20nm,1.1s						
ABPO	**Ambohimpanom**	**82.87**	**248**	P	**P**	**15 26 03.0**	**-1.5**
ABPO				pmax	pmax		
	comp=Z,33nm,1.0s						
ABPO	**Ambohimpanom**	**82.87**	**248**	P	**P**	**15 26 03.0**	**-1.5**
ABPO				IAmb	IAmb	15 26 06.2	
	comp=Z,33nm,1.0s						
IDID	**Didziasalis**	**83.11**	**325**	*e*P	**P**	**15 26 05.0**	**+0.2**
CSS	**Mathiatis**	**83.18**	**304**	P	**P**	**15 26 03.9**	**-1.8**
NACGM	**Naroch**	**83.19**	**325**	*i* P	**P**	**15 26 05.0**	**-0.2**
NACGM				*i* P	**P**	**15 26 05.0**	**-0.2**
NACGM				*i* P	**P**	**15 26 05.0**	**-0.2**
NACGM				*i* PcP	**pP**	**15 26 13.4**	**-0.5**
NACGM				*i* PP	**PP**	**15 29 13.3**	**-3.0**
NACGM				*i* PPP	PPP	15 31 08.8	
NACGM				*i* S	**S**	**15 36 18.6**	**-4.9**
NACGM				*i* PS	**PnS**	**15 37 31.1**	**+14**
NACGM				*i* SS	**SS**	**15 41 37.1**	**-11**
NACGM				*i* SSS	SSS	15 45 09.7	
NACGM				*i* LQ	LQ	15 57 30.8	
NACGM				*i* LR	LR	16 03 20.9	
ISAL	**Salakas**	**83.38**	**326**	*e*P	**P**	**15 26 06.4**	**+0.1**
MDUB	**Mudurnu**	**83.65**	**310**	P	**P**	**15 26 05.6**	**-2.5**
KIS	**Kishinev**	**83.84**	**317**	*e*P	**P**	**15 26 06.0**	**-2.8**
	comp=Z,230nm,11.5s						
KIS	**Kishinev**	**83.84**	**317**	*e*P	**P**	**15 26 06.0**	**-2.8**
KIS				pmax	pmax		
	comp=Z,200nm,4.5s						
SORM	**Soroca**	**83.88**	**318**	⇓P	**P**	**15 26 08.1**	**-0.9**
SORM	**Soroca**	**83.88**	**318**	⇓P	**P**	**15 26 08.1**	**-0.9**
TLCR		**84.28**	**315**	⇓P	**P**	**15 26 12.1**	**+1.1**
TLCR		**84.28**	**315**	⇓P	**P**	**15 26 12.1**	**+1.1**
C36M	**Paulatuk**	**84.41**	**19**	P	**P**	**15 26 11.2**	**0.0**
	baz=295						
C36M	**Paulatuk**	**84.41**	**19**	P	**P**	**15 26 11.4**	**+0.2**
C36M				IAmb	IAmb	15 26 22.1	
	comp=Z,42nm,1.4s						
PABE	**Paberze**	**84.58**	**326**	*e*P	**P**	**15 26 12.4**	**+0.1**
VASR	**Vaslui**	**84.61**	**317**	⇓P	P	15 26 22.1	+9.4
TPGR	**Topolog**	**84.63**	**315**	⇓P	**P**	**15 26 13.1**	**+0.2**
CFR	**Carcaliu**	**84.74**	**315**	⇑P	**P**	**15 26 14.2**	**+0.8**
CFR	**Carcaliu**	**84.74**	**315**	⇑P	**P**	**15 26 14.2**	**+0.8**
VARL	**Varlezi**	**84.76**	**316**	⇓P	**P**	**15 26 12.7**	**-0.7**
EUNU	**Eureka**	**84.84**	**5**	P	**P**	**15 26 12.7**	**-0.6**
HORU	**Horodok**	**84.85**	**319**	P	**P**	**15 26 12.8**	**-1.1**
HARR	**Harsova**	**85.01**	**315**	⇑P	**P**	**15 26 16.1**	**+1.4**
HARR	**Harsova**	**85.01**	**315**	⇑P	**P**	**15 26 16.1**	**+1.4**
PETR	**Petresti**	**85.22**	**316**	⇑P	**P**	**15 26 18.1**	**+2.4**
ODBI	**Odobesti**	**85.33**	**316**	⇑P	**P**	**15 26 17.8**	**+1.5**
TESR	**Tescani**	**85.41**	**317**	⇑P	**P**	**15 26 16.7**	**0.0**
SUW	**Suwalki**	**85.45**	**325**	*e*P	**P**	**15 26 16.5**	**-0.2**
SUW	**Suwalki**	**85.45**	**325**	P	**P**	**15 26 15.4**	**-1.3**
SUW				pmax	pmax		
	comp=Z,88nm,1.1s						
SUW	**Suwalki**	**85.45**	**325**	P	**P**	**15 26 15.4**	**-1.3**
PRAR	**RASCA**	**85.46**	**318**	⇓P	**P**	**15 26 17.9**	**+0.9**
PBUR	**Paburge**	**85.53**	**327**	*e*P	**P**	**15 26 17.2**	**+0.2**
VRI	**Vrincioaia**	**85.53**	**316**	⇓P	**P**	**15 26 16.0**	**-1.4**
VRI	**Vrincioaia**	**85.53**	**316**	⇓P	**P**	**15 26 16.0**	**-1.4**
PLOR	**Plostina**	**85.58**	**316**	⇑P	**P**	**15 26 18.2**	**+0.5**
PLOR	**Plostina**	**85.58**	**316**	⇑P	**P**	**15 26 18.2**	**+0.5**
BISRR	**Bisoca**	**85.62**	**316**	⇑P	**P**	**15 26 19.2**	**+1.3**
BIZ	**Bicaz**	**85.66**	**317**	⇑P	**P**	**15 26 18.4**	**+0.4**
ISR	**Istrita**	**85.85**	**315**	⇑P	**P**	**15 26 20.6**	**+1.6**
ISR	**Istrita**	**85.85**	**315**	⇑P	**P**	**15 26 20.6**	**+1.6**
NEHR	**Nehoiu**	**85.94**	**316**	⇑P	**P**	**15 26 20.8**	**+1.4**
KSV	**Kosov**	**85.96**	**319**	P	**P**	**15 26 18.2**	**-1.2**
BURAR	**Bucovina Array**	**86.05**	**318**	⇑P	**P**	**15 26 20.2**	**+0.2**
BURAR	**Bucovina Array**	**86.05**	**318**	⇑P	**P**	**15 26 20.2**	**+0.2**
BURAR	**Bucovina Array**	**86.05**	**318**	P	**P**	**15 26 19.5**	**-0.6**
BUR08	**Bucovina Ar. S**	**86.06**	**318**	P	**P**	**15 26 19.5**	**-0.6**
BUR08				IAmb	IAmb	15 26 35.9	
	comp=Z,32nm,1.0s						
OZUR		**86.10**	**316**	⇓P	**P**	**15 26 22.5**	**+2.2**
MLR	**Muntele Rosu**	**86.16**	**316**	⇓P	**P**	**15 26 20.9**	**+0.3**
MLR	**Muntele Rosu**	**86.16**	**316**	P	**P**	**15 26 20.4**	**-0.2**
MLR				pmax	pmax		
	comp=Z,51nm,1.3s						
MLR	**Muntele Rosu**	**86.16**	**316**	P	**P**	**15 26 20.4**	**-0.2**
LVV	**L'vov**	**86.18**	**320**	*e*P	**P**	**15 26 18.2**	**-2.3**
LVV				*e*		15 29 37.6	
LVV				*e*PPP	PPP	15 31 34.0	
LVV				*e*S	**S**	**15 36 46.6**	**-6.9**
RAZG	**Razgrad**	**86.29**	**314**	⇑P	**P**	**15 26 21.7**	**+0.6**
DOPR	**Dopca**	**86.40**	**316**	⇑P	**P**	**15 26 22.9**	**+1.2**
MORS	**Morshin**	**86.47**	**320**	P	**P**	**15 26 21.7**	**-0.2**
ARCR	**ARCALIA**	**86.77**	**318**	⇑P	**P**	**15 26 24.9**	**+1.5**
VOIR		**86.78**	**316**	⇓P	**P**	**15 26 24.5**	**+0.9**
VOIR		**86.78**	**316**	⇓P	**P**	**15 26 24.5**	**+0.9**
DAG	**Danmarks Havn**	**86.97**	**352**	*i* P	**P**	**15 26 23.0**	**-0.8**
DAG				*i*		15 26 53.0	
DAG	**Danmarks Havn**	**86.97**	**352**	*i* P	**P**	**15 26 23.0**	**-0.8**
DAG	**Danmarks Havn**	**86.97**	**352**	*i* P	**P**	**15 26 23.1**	**-0.8**
DAG				*i*		15 26 53.0	
KWP	**Kalwaria Pacla**	**87.06**	**320**	*e*P	**P**	**15 26 25.2**	**+0.4**
KWP	**Kalwaria Pacla**	**87.06**	**320**	P	**P**	**15 26 24.0**	**-0.8**
KWP				pmax	pmax		
	comp=Z,98nm,1.5s						
KWP	**Kalwaria Pacla**	**87.06**	**320**	P	**P**	**15 26 24.0**	**-0.8**
ARR	**Arges**	**87.08**	**316**	⇓P	**P**	**15 26 25.4**	**+0.4**
BMR	**Baia Mare**	**87.15**	**318**	⇑P	**P**	**15 26 29.0**	**+3.7**
BMR	**Baia Mare**	**87.15**	**318**	⇑P	**P**	**15 26 29.0**	**+3.7**
TRSU	**Trosnyk**	**87.37**	**319**	P	**P**	**15 26 24.5**	**-1.8**
KOLS	**Kolonicke sedl**	**87.54**	**320**	*e*P	**P**	**15 26 27.9**	**+0.7**
KOLS	**Kolonicke sedl**	**87.54**	**320**	*e*P	**P**	**15 26 27.9**	**+0.7**
UZH	**Uzhgorod**	**87.62**	**320**	⇑*i*P	**P**	**15 26 28.0**	**+0.5**
UZH				*e*		15 26 39.9	
UZH				*e*		15 29 54.6	
UZH				*e*		15 36 48.0	
UZH				*e*S	**S**	**15 37 08.2**	**+0.7**
UZH				*i*		15 38 11.4	
UZH				*e*SS	**SS**	**15 42 46.0**	**-7.2**
KMBO	**Kilima Mbogo**	**87.66**	**268**	P	**P**	**15 26 29.3**	**+0.6**
	comp=Z,15nm,1.2s,baz=42,slow=5.0,SNR=13						
DRGR		**87.93**	**318**	⇑P	**P**	**15 26 29.8**	**+0.7**
DRGR		**87.93**	**318**	⇑P	**P**	**15 26 29.8**	**+0.7**
CRVS	**Cervenica-Dubn**	**88.06**	**320**	*e*P	**P**	**15 26 30.1**	**+0.5**
CRVS	**Cervenica-Dubn**	**88.06**	**320**	*e*P	**P**	**15 26 30.1**	**+0.5**
RES	**Resolute Bay**	**88.25**	**10**	LR	LR	16 07 24.4	
	comp=Z,493nm,20.5s,baz=322,slow=37						
RES	**Resolute Bay**	**88.25**	**10**	P	**P**	**15 26 29.5**	**-0.5**
RES				pmax	pmax		
	comp=Z,17nm,1.1s						
RES	**Resolute Bay**	**88.25**	**10**	P	**P**	**15 26 29.5**	**-0.5**
RES				IAmb	IAmb	15 26 41.9	
	comp=Z,17nm,1.1s						
NIE	**Niedzica**	**88.61**	**321**	*e*P	**P**	**15 26 32.9**	**+0.6**
NIE	**Niedzica**	**88.61**	**321**	P	**P**	**15 26 33.7**	**+1.4**
NIE				pmax	pmax		
	comp=Z,7.0nm,0.9s						
OJC	**Ojcow**	**88.64**	**322**	*e*P	**P**	**15 26 31.8**	**-0.6**
OJC	**Ojcow**	**88.64**	**322**	P	**P**	**15 26 31.9**	**-0.5**
OJC				pmax	pmax		
	comp=Z,15nm,0.9s						
NB2	**NORSAR Subarra**	**88.80**	**333**	P	**P**	**15 26 32.0**	**-0.9**
	comp=Z,4.0nm,0.8s,baz=66,slow=5.1						
NOA	**NORSAR Array B**	**88.80**	**333**	P	**P**	**15 26 31.8**	**-1.1**
	comp=Z,0.7nm,0.6s,baz=150,slow=22,SNR=2.6						
NOA				LR	LR	16 08 29.1	
	comp=Z,821nm,20.4s,baz=75,slow=37						
VTS	**Vitosha**	**88.85**	**314**	⇑P	**P**	**15 26 34.4**	**+0.7**
VTS	**Vitosha**	**88.85**	**314**	⇑P	**P**	**15 26 34.4**	**+0.7**
BBB	**Bella Bella**	**89.44**	**36**	LR	LR	16 05 27.4	
	comp=Z,365nm,18.2s,baz=293,slow=35						
PPT2	**Papeete2**	**90.27**	**108**	*e*S	**S**	**15 37 31.5**	**-2.1**
	comp=Z,981nm,26.5s						
PPT2	**Papeete2**	**90.27**	**108**	*e*LR	LR	15 55 31.0	
	comp=Z,2µm,23.5s,baz=288						
JAVC	**Velka Javorina**	**90.42**	**321**	*e*P	**P**	**15 26 41.3**	**+0.5**
KSP	**Ksiaz**	**90.50**	**323**	*e*P	**P**	**15 26 41.0**	**0.0**
KSP	**Ksiaz**	**90.50**	**323**	P	**P**	**15 26 41.2**	**+0.2**
KSP				pmax	pmax		
	comp=Z,9.0nm,1.1s						
VRAC	**Vranov**	**90.91**	**321**	*e*P	**P**	**15 26 41.0**	**-2.0**
KRUC	**Moravsky**	**91.12**	**321**	*e*P	**P**	**15 26 42.6**	**-1.4**
YKA	**Yellowknife Ar**	**91.14**	**24**	P	**P**	**15 26 43.0**	**-0.7**
	comp=Z,0.9nm,0.6s,baz=302,slow=4.0,SNR=17						
YKA				PKKPbc	**PKKPdf**	**15 44 06.1**	**+1.7**
	comp=Z,0.8nm,0.6s,baz=119,slow=2.9,SNR=13						
YKA				LR	LR	16 07 12.7	
	comp=Z,246nm,21.9s,baz=0.0,slow=35						
YKA	**Yellowknife Ar**	**91.14**	**24**	*i* P	**P**	**15 26 44.2**	**+0.5**
TBI	**Tubuai**	**91.79**	**113**	*e*S	**S**	**15 37 43.8**	**-3.3**
	comp=Z,877nm,26.2s						
TBI	**Tubuai**	**91.79**	**113**	*e*LQ	LQ	15 52 06.6	
	comp=Z,572nm,33.0s						
TBI				*e*LR	LR	15 56 17.5	
	comp=Z,1µm,25.5s,baz=292						
CONA	**Conrad Observa**	**91.89**	**320**	*e*P	**P**	**15 26 46.2**	**-1.5**
	comp=Z,5.2nm,1.3s						
CLL	**Collm**	**92.20**	**324**	*e*P	**P**	**15 26 47.0**	**-1.9**
CLL				*e*PP	**PP**	**15 30 29.0**	**+0.1**
CLL				*e*PPP	PPP	15 32 36.0	
CLL				*e*SKSac	**SKSac**	**15 37 21.0**	**+0.7**
CLL				*e*S	**S**	**15 37 50.0**	**+0.1**
CLL				*e*PS	PnS	15 39 05.0	+0.5
CLL				*e*SS	**SS**	**15 44 02.0**	**+2.8**
CLL				*e*		15 45 42.0	
CLL				*e*SSS	SSS	15 47 30.0	
CLL				*e*SSSS		15 50 24.0	
CLL				LmV		16 14 00.0	
	comp=Z,700nm,19.2s						
CLL	**Collm**	**92.20**	**324**	*e*P	**P**	**15 26 47.0**	**-1.9**
CLL				*e*		15 37 21.0	
CLL				*e*S	**S**	**15 37 50.0**	**+0.1**
CLL				MLR	MLR		
	comp=Z,700nm,19.2s						
ARSA	**Arzberg**	**92.37**	**320**	*e*P	**P**	**15 26 48.0**	**-1.9**
	comp=Z,5.5nm,1.3s						
GERES	**GERESS Array B**	**92.84**	**322**	P	**P**	**15 26 51.1**	**-0.9**
	comp=Z,0.4nm,0.5s,baz=72,slow=4.3,SNR=4.5						
SOKA	**Soboth**	**92.91**	**319**	*e*P	**P**	**15 26 50.9**	**-1.4**
	comp=Z,4.8nm,1.3s						
MOA	**Molln**	**92.91**	**321**	*e*P	**P**	**15 26 50.7**	**-1.6**
	comp=Z,6.6nm,1.2s						
OBKA	**Obir**	**93.28**	**319**	*e*P	**P**	**15 26 51.6**	**-2.5**
	comp=Z,8.1nm,1.3s						
VNDA	**Vanda**	**93.70**	**172**	P	**P**	**15 26 54.7**	**-0.4**
	comp=Z,4.8nm,1.0s,baz=105,slow=5.6,SNR=3.5						
VNDA				LR	LR	16 08 21.8	
	comp=Z,221nm,21.7s,baz=345,slow=35						
KBA	**Koelnbreinsper**	**93.80**	**320**	*e*P	**P**	**15 26 54.2**	**-2.4**
	comp=Z,2.5nm,0.9s						
MYKA	**Terra Mystica**	**93.80**	**320**	*e*P	**P**	**15 26 54.9**	**-1.6**
	comp=Z,1.5nm,0.5s						
ABTA	**Abfaltersbach**	**94.45**	**320**	*e*P	**P**	**15 26 58.8**	**-0.7**
	comp=Z,3.7nm,0.7s						
WTTA	**Wattenberg**	**94.77**	**321**	*e*P	**P**	**15 26 57.7**	**-3.3**
	comp=Z,6.1nm,1.0s						
WATA	**Walderalm**	**94.77**	**321**	*e*P	**P**	**15 26 59.4**	**-1.6**
	comp=Z,4.6nm,0.9s						
SQTA	**Sankt Quirin**	**95.05**	**321**	*e*P	**P**	**15 26 59.5**	**-2.7**
	comp=Z,5.7nm,1.4s						
MOTA	**Moosalm**	**95.06**	**321**	*e*P	**P**	**15 27 00.6**	**-1.7**
	comp=Z,2.8nm,0.8s						
RETA	**Reutte**	**95.20**	**321**	*e*P	**P**	**15 27 00.9**	**-2.0**
	comp=Z,7.9nm,1.7s						
FETA	**Feichten**	**95.43**	**321**	*e*P	**P**	**15 27 04.0**	**-0.1**
	comp=Z,3.9nm,1.4s						
TAOE	**Nuku Hiva Isla**	**97.17**	**97**	*e*T	T	17 15 13.6	
	comp=Z,44nm,0.2s						
RKT	**Rikitea**	**104.80**	**111**	*e*LR	LR	16 02 19.2	
	comp=Z,873nm,29.0s						
MESJ	**Messejana**	**112.13**	**321**	*e*PP	**PP**	**15 32 57.9**	**-0.8**
MORF	**Marmelete**	**112.73**	**321**	*e*PP	**PP**	**15 33 02.2**	**-0.9**
H06N1	**SOCORRO T-PHAS**	**116.33**	**61**	T	T	17 39 41.0	
	SNR=9.5						
H06S1	**SOCORRO T**	**116.42**	**61**	T	T	17 39 37.8	
	SNR=6.3						
H06E1	**SOCORRO T-PHAS**	**116.42**	**61**	T	T	17 39 25.8	
	SNR=6.0						
TXAR	**Lajitas Array**	**116.66**	**47**	PKKPbc	PKKPbc	15 42 54.2	+2.7
	comp=Z,1.9nm,1.1s,baz=144,slow=7.3,SNR=5.1						
TORD	**Torodi Ar. Bea**	**117.36**	**293**	PKP	**PKPdf**	**15 32 24.9**	**-0.7**
	comp=Z,1.3nm,0.6s,baz=52,slow=2.3,SNR=4.3						
KOWA	**Kowa**	**121.82**	**297**	PKPdf	**PKPdf**	**15 32 33.3**	**-0.9**
DBIC	**Dimbokro**	**125.81**	**289**	PKP	**PKPdf**	**15 32 42.0**	**+0.1**
	comp=Z,4.3nm,0.6s,baz=46,slow=2.9,SNR=8.2						
DBIC	**Dimbokro**	**125.81**	**289**	PKIKP	**PKPdf**	**15 32 42.0**	**+0.1**
KIC	**Kosan Boka**	**125.82**	**288**	*e*PKP1	**PKPdf**	**15 32 41.4**	**-0.5**
	comp=Z,13nm,0.7s						
TIC	**Toumodi**	**125.97**	**289**	*e*PKP1	**PKPdf**	**15 32 41.8**	**-0.4**
LIC	**Lamto**	**126.13**	**288**	*e*PKP1	**PKPdf**	**15 32 42.1**	**-0.4**
	comp=Z,24nm,0.9s						
MOTC	**Monteria, Cord**	**149.84**	**43**	*e*P	**PKPbc**	**15 33 30.6**	**+0.4**
PLCA	**Paso Flores**	**150.16**	**157**	PKPbc	**PKPbc**	**15 33 28.9**	**-1.5**
	comp=Z,21nm,1.0s,baz=189,slow=6.6,SNR=15						
PLCA	**Paso Flores**	**150.16**	**157**	PKIKP	**PKPdf**	**15 33 26.3**	**+1.0**
PLCA	**Paso Flores**	**150.16**	**157**	PKPdf	**PKPdf**	**15 33 26.2**	**+1.0**
PLCA	**Paso Flores**	**150.16**	**157**	*e*P	**PKPbc**	**15 33 29.2**	**-1.2**
UREC	**San Jos de Ur**	**150.68**	**44**	*e*P	**PKPbc**	**15 33 30.7**	**-1.6**
SMLC	**San Martn de**	**150.85**	**40**	*e*P	**PKPdf**	**15 33 28.8**	**+1.8**
LC01	**Cunco**	**151.16**	**153**		**PKPbc**	**15 33 32.9**	**+0.2**
OCAC	**Ocana**	**151.75**	**40**	*e*P	**PKPbc**	**15 33 34.4**	**-0.5**
PLMC	**San Jos del P**	**152.14**	**49**	*e*P	**PKiKP**	**15 33 37.2**	**+1.2**
PTBC	**PUERTO BERRIO,**	**152.28**	**44**	*e*P	**PKiKP**	**15 33 36.2**	**-0.1**
BRRC	**Barranca, Sant**	**152.36**	**42**	*e*P	**PKPbc**	**15 33 35.4**	**-0.7**
GUY2C	**Guyana, Caldas**	**152.59**	**48**	*e*P	**PKiKP**	**15 33 37.5**	**0.0**
SDV	**Santo Domingo**	**152.81**	**35**	PKPbc	**PKPbc**	**15 33 36.0**	**-1.4**
	comp=Z,5.4nm,0.4s,baz=323,slow=2.6,SNR=5.2						
SDV	**Santo Domingo**	**152.81**	**35**	PKPdf	**PKPdf**	**15 33 28.4**	**-1.9**
TOLC	**Tolima**	**153.06**	**48**	*e*P	**PKiKP**	**15 33 39.3**	**+1.0**
BARC	**Barichara**	**153.09**	**42**	*e*P	**PKPbc**	**15 33 38.0**	**-0.1**
SPBC	**San Pablo de B**	**153.19**	**45**	*e*P	**PKiKP**	**15 33 38.2**	**-0.1**
BI02	**San Fabin de**	**153.25**	**151**		**PKPdf**	**15 33 29.2**	**-0.8**
CHIC	**Chingaza**	**154.16**	**46**	*e*P	**PKPdf**	**15 33 34.8**	**+2.4**
ATAH	**Atahualpa**	**156.47**	**76**	PKP	**PKPdf**	**15 33 37.0**	**+1.5**

	comp=Z,1.8nm,0.5s,baz=110,slow=5.6,SNR=1.6						
CPUP	**Villa Florida**	**167.49**	**172**	PKP	**PKPdf**	**15 33 46.0**	**+0.1**
	comp=Z,3.2nm,1.0s,baz=170,slow=1.2,SNR=2.4						
BSCB	**Bom Sucesso**	**167.61**	**234**	*e*P	**PKPdf**	**15 33 50.5**	**+4.2**
SPB	**Sao Paulo**	**167.73**	**217**	*e*P	**PKPdf**	**15 33 50.5**	**+4.4**
SIV	**San Ignacio**	**174.16**	**112**	PKP	**PKPdf**	**15 33 48.4**	**-1.3**
	comp=Z,2.1nm,0.8s,baz=294,slow=12,SNR=3.6						
SIV				PKPab	**PKPab**	**15 35 22.5**	**+1.1**
	comp=Z,1.2nm,0.6s,baz=245,slow=7.8,SNR=1.4						

TAP 02 15:15:34.1, 24°.07N×122°.31E, h33^{km}, ML2.6, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ENA	**Nanau**	**0.63**	**304**	*e*P	Pn	15 15 46.5	-0.3
	baz=304						
ENA				*e*S	Sn	15 15 56.0	+0.2
	baz=304						
TWD	**Chiawan**	**0.66**	**271**	*e*S	Sb	15 15 55.7	-0.4
	baz=271						
NACB	**Ninganchiao**	**0.66**	**279**	*e*P	Pn	15 15 46.9	-0.4
	baz=279						
NACB				*e*S	Sb	15 15 56.2	-0.1
	baz=279						
TWC	**Suao**	**0.68**	**322**	*e*P	Pn	15 15 46.7	-0.8
	baz=322						
YOJ	**Yonaguni jima**	**0.75**	**58**	*e*P	Pb	15 15 48.6	-0.1
	baz=57						
ETLH	**Xiulin Townshi**	**0.77**	**280**	*e*P	Pn	15 15 48.3	-0.5
	baz=280						
ETLH				*e*S	Sn	15 15 58.7	-0.7
	baz=280						
ESL	**Shilin**	**0.84**	**253**	*e*P	Pn	15 15 49.0	-0.8
	baz=252						
ESL				S	Sn	15 16 00.8	-0.2
	baz=252						
TWE	**Neicheng**	**0.88**	**318**	P	Pn	15 15 49.9	-0.2
	baz=318						
TWE				*e*S	Sn	15 16 01.2	-0.6
	baz=318						
ENTT	**Nioudou**	**0.89**	**310**	P	Pn	15 15 50.1	-0.3
	baz=310						
ENTT				S	Sn	15 16 01.8	-0.3
	baz=310						
NDT	**Datong Townshi**	**0.90**	**306**	P	Pn	15 15 50.4	-0.1
	baz=306						
NDT				S	Sn	15 16 02.3	-0.2
	baz=306						
EGFH	**Guangfu**	**0.90**	**244**	*e*P	Pn	15 15 50.2	-0.3
	baz=243						
EGFH				*e*S	Sn	15 16 02.7	+0.3
	baz=243						
NNSB	**Datong**	**0.92**	**293**	P	Pn	15 15 50.6	-0.3
	baz=292						
NNSB				S	Sn	15 16 02.8	-0.3
	baz=292						
NNSH	**Datong**	**0.92**	**293**	P	Pn	15 15 50.7	-0.2
	baz=292						
NNSH				*e*S	Sn	15 16 02.5	-0.6
	baz=292						
NNS	**Nan Shan**	**0.93**	**293**	P	Pn	15 15 50.8	-0.3
	baz=293						
NNS				S	Sn	15 16 03.0	-0.4
	baz=293						
WHF	**Hehuan Shan**	**0.96**	**275**	*e*P	Pn	15 15 51.5	-0.2
	baz=274						
WHF				*e*S	Sn	15 16 04.1	-0.4
	baz=274						
FUSS	**Fushou**	**0.99**	**280**	P	Pn	15 15 51.8	-0.2
	baz=280						
FUSS				S	Sn	15 16 04.6	-0.4
	baz=280						
HGSD	**Ruisui**	**1.00**	**235**	*e*P	Pn	15 15 51.2	-0.6
	baz=234						
TIPB	**Shuangxi**	**1.00**	**334**	*e*P	Pn	15 15 51.5	-0.5
	baz=333						
TIPB				S	Sn	15 16 04.9	-0.1
	baz=333						
NWLT	**Wulai**	**1.02**	**314**	*e*P	Pn	15 15 52.0	-0.2
	baz=313						
NWLT				*e*S	Sn	15 16 05.0	-0.4
	baz=313						
CHGB	**Renai**	**1.04**	**270**	*e*P	Pn	15 15 52.5	-0.1
	baz=269						
CHGB				S	Sn	15 16 05.8	-0.4
	baz=269						
YHNB	**Yeheng**	**1.04**	**305**	P	Pn	15 15 52.5	-0.1
	baz=304						
TWT	**Tachien**	**1.05**	**280**	*e*P	Pn	15 15 53.2	+0.4
	baz=279						
TWT				S	Sn	15 16 06.3	-0.2
	baz=279						
NSK	**Sanguang**	**1.06**	**305**	P	Pn	15 15 52.5	-0.2
	baz=304						
NSK				*e*S	Sn	15 16 05.6	-0.9
	baz=304						
EHY	**Hungye**	**1.07**	**238**	*e*P	Pn	15 15 52.2	-0.6
	baz=237						
TDCB	**Techi**	**1.07**	**280**	*e*P	Pn	15 15 52.4	-0.6
	baz=279						
TDCB				S	Sn	15 16 06.5	-0.3
	baz=279						
VWDT	**VWDT**	**1.12**	**254**	*e*P	Pn	15 15 53.8	+0.3
	baz=253						
VWDT				*e*S	Sn	15 16 07.9	+0.2
	baz=253						
TWA	**Mucha**	**1.12**	**324**	*e*P	Pn	15 15 54.0	+0.4
	baz=324						
TWA				*e*S	Sn	15 16 07.4	-0.5
	baz=324						
NHDH	**Xindian Distri**	**1.14**	**321**	*e*P	Pn	15 15 54.5	+0.6
	baz=321						
YULB	**Yu-li**	**1.15**	**234**	*e*P	Pn	15 15 53.6	-0.3
	baz=234						
EYUL	**Yuli**	**1.16**	**232**	P	Pn	15 15 54.1	0.0
	baz=231						
TWF1	**Yuli**	**1.17**	**233**	*e*P	Pn	15 15 54.1	-0.2
	baz=232						
WHP	**Taichung City**	**1.27**	**280**	*e*P	Pn	15 15 56.5	+0.8
	baz=279						
WHP				*e*S	Sn	15 16 11.7	+0.2
	baz=279						
DPDB	**Guoxing**	**1.27**	**269**	*e*P	Pb	15 15 56.6	-0.9
	baz=268						
DPDB				*e*S	Sn	15 16 11.3	-0.2
	baz=268						
FULB	**Fuli**	**1.27**	**227**	*e*P	Pn	15 15 55.3	-0.4
	baz=227						
FULB				*e*S	Sn	15 16 12.2	+0.5
	baz=227						
SSLB	**Suanglung**	**1.27**	**258**	*e*P	Pb	15 15 57.6	0.0
	baz=257						
SMLT	**Sun Moon Lake**	**1.30**	**262**	*e*P	Pn	15 15 57.0	+0.8
	baz=261						
SMLT				*e*S	Sb	15 16 13.7	-0.9
	baz=261						
LIOB	**Emei**	**1.31**	**296**	*e*P	Pn	15 15 57.1	+0.9
	baz=295						
LIOB				*e*S	Sb	15 16 13.8	-0.9
	baz=295						
NSTT	**Nanjuang**	**1.32**	**295**	*e*P	Pn	15 15 57.0	+0.7
	baz=295						
NSTT				*e*S	Sn	15 16 12.8	0.0
	baz=295						
TYC	**Yuchr**	**1.34**	**263**	*e*P	Pb	15 15 58.6	-0.1
	baz=262						
TYC				*e*S	Sn	15 16 13.1	-0.2
	baz=262						
YUS	**Yu-Shan**	**1.37**	**245**	*e*P	Pn	15 15 57.9	+0.4
	baz=244						
YUS				*e*S	Sn	15 16 14.2	-0.5
	baz=244						
EDH	**Donghe**	**1.43**	**220**	*e*P	Pn	15 15 56.9	-0.9
	baz=220						
EDH				*e*S	Sn	15 16 13.9	-1.6
	baz=220						
TWQ1	**Liyutan**	**1.43**	**281**	*e*P	Pn	15 15 58.5	+0.7
	baz=281						
WJS	**Zhushan**	**1.47**	**261**	*e*P	Pb	15 16 00.4	-0.5
	baz=260						
ELDTW	**Lidau**	**1.48**	**234**	*e*S	Sn	15 16 16.0	-0.8
	baz=233						
ALS	**Alishan**	**1.49**	**248**	*e*P	Pn	15 15 59.7	+0.9
	baz=247						
CHN5	**Tsauling**	**1.57**	**253**	*e*P	Pn	15 16 01.0	+1.2
	baz=252						
CHN5				*e*S	Sn	15 16 20.4	+1.3
	baz=252						
STYT	**Tauyuan**	**1.69**	**238**	*e*P	Pn	15 16 01.9	+0.5
	baz=237						
STYT				*e*S	Sn	15 16 22.3	+0.4
	baz=237						
TPUB	**Ta-pu**	**1.72**	**244**	*e*P	Pn	15 16 03.4	+1.6
	baz=243						
CHN4	**Tsaushan**	**1.73**	**246**	*e*P	Pb	15 16 04.4	-0.9
	baz=245						
WTP	**Ta-pu**	**1.76**	**243**	*e*P	Pn	15 16 03.9	+1.5
	baz=242						
TWK	**Hsinying**	**1.85**	**245**	*e*P	Pn	15 16 04.8	+1.1
	baz=244						
SGST	**Jiashian**	**1.87**	**239**	*e*P	Pn	15 16 03.8	0.0
	baz=238						
SLGT	**Liugui**	**1.87**	**235**	*e*P	Pn	15 16 04.5	+0.7
	baz=234						
ECL	**Taimali**	**1.93**	**221**	*e*P	Pn	15 16 04.0	-0.6
	baz=220						
TSMG	**Majia**	**2.05**	**229**	*e*P	Pn	15 16 07.0	+0.7
	baz=228						

VAO ***02*** *15:22:08.3±0.4, 22°.28S×70°.77W, h10^{km}, mb5.2*

NEIC ***02*** *15:22:09, 22°.34S×70°.91W, h26^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M$_{rr}$1.62; M$_{\theta\theta}$2.29; M$_{\phi\phi}$-3.91; M$_{r\theta}$1.83; M$_{\theta\phi}$-2.03; M$_{\phi r}$-1.70; Fault plane solution: M$_0$4.68000×10^{16} NP1:φ$_s$157.96000°, δ72.65000°, λ36.47000°. NP2:φ$_s$55.53000°, δ55.44000°, λ158.77000°. Principal axes: T 4.6358, Plg38.0000°, Azm22.0000°; N 0.0923, Plg50.0000°, Azm180.0000°; P -4.7281, Plg11.0000°, Azm283.0000°;*

BJI ***02*** *15:22:09.3±0.0, 22°.30S×70°.90W, h10^{km}, mB5.9/12, Ms5.6/6, Ms7 5.3/6*

NEIC ***02*** *15:22:10.8±2.0, 22°.31S±0°.04×70°.93W±0°.07, h26^{km}±1^{km}, mb5.3/284, Mwr5.0/41, ML5.0(GUC), Error ellipse: s-maj=10.1km s-min=7.1km az=271.0*

SJA ***02*** *15:22:11.0±0.9, 22°.13S×70°.77W, h32^{km}±4^{km}, ML4.8, MW5.1*

GUC ***02*** *15:22:11.6±0.7, 22°.27S×70°.83W, h39^{km}±3^{km}, ML5.0*

MOS ***02*** *15:22:12.4±0.9, 21°.68S×70°.71W, h28^{km}, mb5.2/38, Error ellipse: s-maj=13.8km s-min=6.6km az=114.6*

IDC ***02*** *15:22:12.0±2.7, 22°.17S×70°.60W, h29^{km}±18^{km}, mb4.7/25, mb1 4.8/28, mb1mx4.7/40, mbtmp4.9/28, ML4.5/3, MS4.6/12, Ms1 4.6/12, ms1mx4.3/27, Error ellipse: s-maj=19.9km s-min=11.9km az=46.0*

GCMT ***02*** *15:22:16.8±0.2, 22°.16S±0°.01×71°.11W±0°.02, h36^{km}±1^{km}, MW5.3/113, Moment Tensor Solution. s44,c55; s113,c167; Duration: 1^{s}.1 Moment tensor: Scale 10^{17} Nm; M$_{rr}$0.42±.05; M$_{\theta\theta}$0.69±.03; M$_{\phi\phi}$-1.11±.04; M$_{r\theta}$0.28±.03; M$_{\theta\phi}$-0.66±.03; M$_{\phi r}$-0.41±.04; Best double couple: M$_0$1.25800×10^{17} NP1:φ$_s$60.00000°, δ61.00000°, λ165.00000°. NP2:φ$_s$158.00000°, δ76.00000°, λ29.00000°. Principal axes: T 1.1360, Plg30.0000°, Azm22.0000°; N 0.2480, Plg58.0000°, Azm180.0000°; P -1.3800, Plg10.0000°, Azm286.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 02 15:22:08.7±1.2, 22°.33S±0°.02×70°.86W±0°.04, h14^{km}±7^{km}, n863, σ1^{s}.22/870, mb5.3/174, 26C-13D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB04	**IPOC Station P**	**0.66**	**90**⇑	*e*P	**Pn**	**15 22 23.4**	**-0.4**
PB04				*e*S	**Sn**	**15 22 33.0**	**-1.1**
PB04				IAML		15 22 34.3	
	comp=N,311µm,0.4s						
PB04	**IPOC Station P**	**0.66**	**90**		**Pn**	**15 22 24.0**	**+0.2**
PB04	**IPOC Station P**	**0.66**	**90**	*e*P	**Pn**	**15 22 24.2**	**+0.4**
PB04				*e*S	**Sn**	**15 22 33.4**	**-0.7**
PB04				IAML		15 22 34.3	
	comp=Z,84µm,0.2s						
PB05	**IPOC Station P**	**0.80**	**131**⇓	*e*P	**Pn**	**15 22 26.4**	**+0.7**
PB05				*e*S	**Sn**	**15 22 37.0**	**-0.5**
PB05				IAML		15 22 38.2	
	comp=E,122µm,0.8s						
PB03	**IPOC Station P**	**1.06**	**75**	*e*P	**Pg**	**15 22 29.7**	**+0.4**
PB03				*i* S	**Sb**	**15 22 43.0**	**+0.1**
PB03				IAML		15 22 43.9	
	comp=N,87µm,0.7s						
PB07	**IPOC Station P**	**1.09**	**57**	*e*P	**Pb**	**15 22 29.4**	**0.0**
PB07				*i* S	**Sb**	**15 22 43.1**	**-0.4**
PB07				IAML		15 22 45.1	
	comp=E,68µm,0.7s						
PB07	**IPOC Station P**	**1.09**	**57**		**Pg**	**15 22 30.0**	**+0.3**
PB10	**IPOC Station P**	**1.21**	**167**⇑	*i*P	**Pg**	**15 22 32.0**	**-0.1**
PB10				*i* S	**Sb**	**15 22 46.8**	**-0.2**
PB10				IAML		15 22 48.7	
	comp=E,37µm,0.2s						
PB10	**IPOC Station P**	**1.21**	**167**	Pn	**Pg**	**15 22 31.9**	**-0.1**
PB06	**IPOC Station P**	**1.25**	**108**⇓	*e*P	**Pg**	**15 22 33.0**	**+0.2**
PB06				*e*S	**Sn**	**15 22 48.6**	**0.0**
PB06				IAML		15 22 49.5	
	comp=N,59µm,0.5s						
PB06	**IPOC Station P**	**1.25**	**108**		**Pg**	**15 22 32.6**	**-0.2**
PB02	**IPOC Station P**	**1.35**	**42**⇑	*i*P	**Pn**	**15 22 33.3**	**+0.1**
PB02				*i* S	**Sn**	**15 22 49.2**	**-1.8**
PB15	**IPOC Station P**	**1.55**	**125**	*e*P	**Pn**	**15 22 35.3**	**-0.8**
PB15				*i* S	**Sb**	**15 22 56.8**	**-0.2**
PB15	**IPOC Station P**	**1.55**	**125**		**Pb**	**15 22 37.4**	**0.0**
PB09	**IPOC Station P**	**1.59**	**71**⇓	*i*P	**Pb**	**15 22 38.3**	**+0.2**
PB09				*i* S	**Sn**	**15 22 57.4**	**+0.3**
PB09				IAML		15 23 02.6	
	comp=E,26µm,0.7s						
PB09	**IPOC Station P**	**1.59**	**71**	Pn	**Pb**	**15 22 38.7**	**+0.7**
PB01	**IPOC Station P**	**1.81**	**45**⇑	*e*P	**Pn**	**15 22 39.8**	**+0.2**
PB01				*i* S	**Sn**	**15 23 01.1**	**-1.3**
PB01	**IPOC Station P**	**1.81**	**45**	Pn	**Pn**	**15 22 40.1**	**+0.5**
LVC	**Limon Verde**	**1.82**	**99**	Pg	**Pb**	**15 22 42.0**	**-0.1**
	comp=E,475nm,0.3s,baz=270,slow=12,SNR=4171						
LVC				Lg	Lg	15 23 04.1	
	comp=E,1µm,0.3s,baz=297,slow=11,SNR=5.9						
LVC	**Limon Verde**	**1.82**	**99**⇓	*e*P	**Pb**	**15 22 42.3**	**+0.2**
LVC				*e*S	**Sb**	**15 23 04.3**	**-0.7**
LVC	**Limon Verde**	**1.82**	**99**	Pn	**Pb**	**15 22 42.3**	**+0.2**
LVC	**Limon Verde**	**1.82**	**99**	*e*P	**Pb**	**15 22 42.5**	**+0.3**
LVC				*e*S	**Sb**	**15 23 05.0**	**0.0**
LVC				IAML		15 23 17.4	
	comp=Z,8µm,0.8s						
LVC	**Limon Verde**	**1.82**	**99**	*e*P	**Pb**	**15 22 42.4**	**+0.3**
TA01	**Diego Aracena**	**1.87**	**20**⇑	*i*P	**Pn**	**15 22 40.0**	**-0.3**
TA01				*i* S	**Sn**	**15 23 00.8**	**-2.8**
TA01	**Diego Aracena**	**1.87**	**20**	Pn	**Pn**	**15 22 39.9**	**-0.4**
TA02	**Huaiquique**	**2.16**	**18**⇑	*e*P	**Pn**	**15 22 44.1**	**-0.2**
HMBC	**Humberstone**	**2.23**	**24**⇑	*e*P	**Pn**	**15 22 45.3**	**-0.2**
HMBC				*e*S	**Sn**	**15 23 11.7**	**-1.2**
PB14	**IPOC Station P**	**2.32**	**170**⇑	*i*P	**Pn**	**15 22 47.2**	**+0.3**
PB14				*i* S	**Sn**	**15 23 13.1**	**-2.3**
PB14	**IPOC Station P**	**2.32**	**170**	Pn	**Pn**	**15 22 46.9**	**+0.1**
PB08	**IPOC Station P**	**2.70**	**36**	*e*P	**Pn**	**15 22 52.2**	**+0.1**
PB08				*e*S	**Sn**	**15 23 24.2**	**-0.5**
PB08				IAML		15 23 42.7	
	comp=N,6µm,0.8s						
PB08	**IPOC Station P**	**2.70**	**36**	Pn	**Pn**	**15 22 53.1**	**+1.0**
PSGC	**Pisagua**	**2.81**	**14**⇑	*i*P	**Pn**	**15 22 52.9**	**-0.4**
PSGC				*i* S	**Sn**	**15 23 23.9**	**-3.1**
PSGCX	**Pisagua**	**2.81**	**14**	Pn	**Pn**	**15 22 52.9**	**-0.4**
GO02	**Mina Guanaco**	**3.05**	**158**	*e*P	**Pn**	**15 22 58.7**	**+1.8**
GO02				*e*S	**Sn**	**15 23 34.2**	**+0.9**
GO02	**Mina Guanaco**	**3.05**	**158**	Pn	**Pn**	**15 22 58.6**	**+1.8**
MNMC	**Minye Minye**	**3.40**	**21**⇑	*e*P	**Pn**	**15 23 01.9**	**+0.3**
MNMC	**Minye Minye**	**3.40**	**21**	Pn	**Pn**	**15 23 01.9**	**+0.3**
MNMCX	**Minye Minye**	**3.40**	**21**	*e*P	**Pn**	**15 23 02.0**	**+0.4**
MNMCX				*e*S	**Sg**	**15 24 00.1**	**+2.2**
MNMCX				IAML		15 24 03.8	
	comp=Z,4µm,0.9s						
AC01	**Pan de Azucar**	**3.81**	**176**	Pn	**Pn**	**15 23 05.8**	**-1.2**
AP01	**Chacalluta**	**3.97**	**7**⇑	*e*P	**Pn**	**15 23 09.0**	**-0.2**
AP01	**Chacalluta**	**3.97**	**7**	Pn	**Pn**	**15 23 09.0**	**-0.2**
PB16	**IPOC Station P**	**4.17**	**18**⇑	*e*P	**Pn**	**15 23 13.1**	**+0.5**
PB16	**IPOC Station P**	**4.17**	**18**	Pn	**Pn**	**15 23 13.0**	**+0.5**
PB16	**IPOC Station P**	**4.17**	**18**	*i* P	**Pn**	**15 23 13.0**	**+0.5**
PB16				IAML		15 24 30.3	
	comp=Z,2µm,1.1s						
AC02	**Maricunga**	**4.75**	**161**	Pn	**Pn**	**15 23 22.3**	**+1.8**
YJA	**Yavi**	**4.96**	**89**	*e*P	Pn	15 23 28.3	+5.2
YJA				IAML		15 24 54.7	
	comp=Z,200nm,1.5s						
GO03	**Copiap**	**5.27**	**174**	Pn	**Pn**	**15 23 26.4**	**-0.7**
AZAP	**Zapla**	**5.65**	**111**	*e*P	**Pn**	**15 23 37.3**	**+4.7**
AZAP				IAML		15 25 15.1	
	comp=Z,422nm,2.0s						
AC04	**Llanos de Chal**	**5.85**	**182**	Pn	**Pn**	**15 23 32.5**	**-2.6**
ASTB	**Santa Barbara**	**6.11**	**107**	*e*P	**Pn**	**15 23 43.1**	**+4.2**
AC05	**El Transito**	**6.50**	**175**	Pn	**Pn**	**15 23 43.2**	**-0.9**
AHML	**Horco Molle**	**6.71**	**133**	*e*P	**Pn**	**15 23 50.4**	**+3.5**
AHML				*e*S	**Sb**	**15 25 20.9**	**-4.2**
AHML				IAML		15 25 52.1	
	comp=Z,263nm,2.8s						
CO01	**Juntas del Tor**	**7.65**	**175**		**Pn**	**15 23 59.6**	**-0.3**
GO04	**Tololo Observa**	**7.81**	**180**	Pn	**Pn**	**15 24 00.2**	**-2.0**
ACLC	**CERRO LA CRUZ**	**7.89**	**154**	*e*P	**Pn**	**15 24 05.6**	**+2.3**
CO03	**El Pedregal**	**8.47**	**179**	Pn	**Pn**	**15 24 09.2**	**-2.0**
CO02	**Combarbal**	**8.84**	**181**		**Pn**	**15 24 14.3**	**-1.9**
VA03	**San Esteban**	**10.40**	**179**		**Pn**	**15 24 35.8**	**-1.7**
ROC1	**El Roble**	**10.61**	**181**		**Pn**	**15 24 38.0**	**-2.5**
MT02	**Curacav**	**10.89**	**181**	Pn	**Pn**	**15 24 41.6**	**-2.6**
SIV	**San Ignacio**	**11.19**	**57**	Pn	**Pn**	**15 24 47.3**	**-1.1**
	comp=Z,5.1nm,0.3s,baz=243,slow=12,SNR=79						
SIV				LR	LR	15 29 57.3	
	comp=Z,5µm,18.6s,baz=260,slow=43						
NNA	**Nana**	**11.76**	**330**	Pn	**Pn**	**15 24 59.6**	**+3.3**
	comp=Z,2.0nm,0.3s,baz=265,slow=9.9,SNR=4.9						
NNA				Sn	**Sn**	**15 27 00.6**	**-6.9**
	comp=Z,10nm,0.3s,baz=243,slow=15,SNR=6.4						
NNA				LR	LR	15 29 13.2	
	comp=Z,758nm,19.6s,baz=162,slow=36						
NNA	**Nana**	**11.76**	**330**	*de*P	**Pn**	**15 24 55.4**	**-0.9**
NNA				pmax	pmax		
	comp=Z,13nm,1.0s						
NNA	**Nana**	**11.76**	**330**	Pn	**Pn**	**15 24 54.8**	**-1.5**
CPUP	**Villa Florida**	**12.96**	**111**	Pn	**Pn**	**15 25 10.9**	**-1.7**
	comp=Z,0.8nm,0.3s,baz=295,slow=11,SNR=35						
CPUP	**Villa Florida**	**12.96**	**111**	Pn	**Pn**	**15 25 12.0**	**-0.6**
CPUP	**Villa Florida**	**12.96**	**111**	*e*P	**Pn**	**15 25 11.9**	**-0.7**
H03N1	**Juan Fernandez**	**13.15**	**211**	T	T	15 39 00.0	
	baz=37,slow=72,SNR=507						
H03N2	**Juan Fernandez**	**13.16**	**211**	T	T	15 38 44.9	
	baz=37,slow=72,SNR=406						
H03N3	**Juan Fernandez**	**13.17**	**211**	T	T	15 38 49.6	
	baz=37,slow=72,SNR=490						
ETMB	**Extrema**	**13.22**	**20**	*e*P	**Pn**	**15 25 13.2**	**-2.9**
VA04	**Juan Fernndez**	**13.28**	**210**	Pn	**Pn**	**15 25 14.5**	**-2.4**
VILB	**Vilhena**	**13.78**	**49**	*e*P	**Pn**	**15 25 22.9**	**-0.9**
AQDB	**Aquidauana**	**14.24**	**85**	*e*P	**Pn**	**15 25 30.2**	**+0.1**
BI02	**San Fabin de**	**14.29**	**181**	Pn	**Pn**	**15 25 32.5**	**+1.8**
CZSB	**Cruzeiro do Su**	**14.62**	**353**	*e*P	**Pn**	**15 25 34.0**	**-1.4**
ITQB	**Itaqui**	**14.73**	**123**	*e*P	**Pn**	**15 25 36.0**	**-0.7**
SAML	**Samuel**	**15.21**	**30**	P	**Pn**	**15 25 39.2**	**-4.1**
SAML				pmax	pmax		
	comp=Z,67nm,0.8s						
SAML	**Samuel**	**15.21**	**30**	Pn	**Pn**	**15 25 39.2**	**-4.1**
SAML	**Samuel**	**15.21**	**30**	*e*P	**Pn**	**15 25 39.8**	**-3.5**
PP1B	**Ponte de Pedra**	**15.74**	**75**	*e*P	**Pn**	**15 25 49.1**	**-1.1**
LC01	**Cunco**	**16.54**	**183**	P	**Pn**	**15 25 59.6**	**-0.7**
ATAH	**Atahualpa**	**16.76**	**333**	Pn	**P**	**15 26 08.6**	**+2.7**
	baz=174,slow=9.4,SNR=5.3						
TRCB	**Terra Rica**	**16.84**	**95**	*e*P	**Pn**	**15 26 03.5**	**-0.8**
LPA	**La Plata**	**16.89**	**141**	*e*P	**P**	**15 26 07.4**	**+0.7**
LPA				pPP		15 27 01.3	
LPA				S	**Sn**	**15 29 06.8**	**-5.3**
LPA				SSS	SSS	15 30 40.2	
LPA				PKIKP	**PKiKP**	**15 38 42.0**	**-2.7**
LPA				SKIKP		15 42 12.0	
LPA				SKIKS		15 45 42.1	
PTGB	**Pitanga**	**17.40**	**102**	*e*P	**Pn**	**15 26 11.2**	**-0.1**
CPSB	**Cacapava Do Su**	**17.55**	**121**	*e*P	**Pn**	**15 26 10.1**	**-2.9**
ITAB	**Concordia**	**17.69**	**110**	*e*P	**Pn**	**15 26 12.8**	**-1.9**
PLTB	**Pedras Altas**	**18.00**	**125**	*e*P	**Pn**	**15 26 15.5**	**-3.0**
PCMB	**Pacaembu**	**18.19**	**91**	*e*P	**Pn**	**15 26 20.0**	**-1.0**
PLCA	**Paso Flores**	**18.35**	**179**	P	**Pn**	**15 26 23.0**	**+0.1**
	comp=Z,0.5nm,0.3s,baz=1.3,slow=13,SNR=21						
PLCA				LR	LR	15 34 02.1	
	comp=Z,976nm,18.7s,baz=353,slow=38						
PLCA	**Paso Flores**	**18.35**	**179**	P	**P**	**15 26 23.2**	**+0.3**
PLCA	**Paso Flores**	**18.35**	**179**	*e*P	**P**	**15 26 23.5**	**+0.6**
ARAG	**Araguaiana, MT**	**19.17**	**73**	*e*P	**P**	**15 26 31.6**	**-0.4**
CNLB	**Canela**	**19.29**	**115**	*e*P	**P**	**15 26 32.8**	**-0.6**
ITRB	**Iturama**	**19.32**	**86**	*e*P	**P**	**15 26 33.5**	**-0.1**
FRTB	**Fartura**	**19.66**	**97**	*e*P	**P**	**15 26 36.6**	**-0.7**
BB19B	**Bebedouro**	**20.79**	**91**	*e*P	**P**	**15 26 48.9**	**-0.8**
NPGB	**Novo Progresso**	**21.32**	**47**	*e*P	**P**	**15 26 53.4**	**-2.0**
SNDB	**Serra Nova Dou**	**21.32**	**64**	*e*P	**P**	**15 26 54.9**	**-0.5**
MACA	**Manacapuru-AM**	**21.46**	**29**	*e*P	**P**	**15 26 56.7**	**-0.2**
SPB	**Sao Paulo**	**21.61**	**98**	P	**P**	**15 26 57.1**	**-1.3**
SPB	**Sao Paulo**	**21.61**	**98**	*e*P	**P**	**15 26 57.1**	**-1.3**
IPMB	**Ipameri, GO**	**21.69**	**83**	*e*P	**P**	**15 26 57.7**	**-1.7**
PET01	**Itanhaem-SP**	**21.75**	**100**	*e*P	**P**	**15 26 58.5**	**-1.4**
VAO	**Valinhos**	**22.06**	**96**	*e*P	**P**	**15 27 01.8**	**-1.5**
BDFB	**Brasilia**	**22.59**	**77**	P	**P**	**15 27 08.1**	**-1.0**
	comp=Z,13nm,0.6s,baz=245,slow=12,SNR=9.2						
BDFB				LR	LR	15 37 20.6	
	comp=Z,2µm,18.6s,baz=254,slow=41						
BDFB	**Brasilia**	**22.59**	**77**	P	**P**	**15 27 09.3**	**+0.2**
BDFB				pmax	pmax		
	comp=Z,18nm,1.0s						
BDFB	**Brasilia**	**22.59**	**77**	P	**P**	**15 27 09.3**	**+0.2**
ITTB	**Itaituba**	**23.10**	**42**	*e*P	**P**	**15 27 13.0**	**-1.3**
PARB	**Paraibuna**	**23.28**	**97**	*e*P	**P**	**15 27 15.8**	**-0.4**
OTAV	**Otavalo**	**23.62**	**341**	P	**P**	**15 27 21.9**	**+1.9**
OTAV				pmax	pmax		
	comp=Z,72nm,0.9s						
OTAV	**Otavalo**	**23.62**	**341**	P	**P**	**15 27 21.9**	**+1.9**
OTAV				IAmb	IAmb	15 27 44.9	
	comp=Z,72nm,0.9s						
OTAV	**Otavalo**	**23.62**	**341**	*e*P	**P**	**15 27 21.9**	**+1.9**
OTAV	**Otavalo**	**23.62**	**341**	*e*P	**P**	**15 27 20.9**	**+0.9**
PTGA	**Pitinga**	**23.95**	**28**	P	**P**	**15 27 21.6**	**-1.0**
	comp=Z,117nm,0.8s,baz=207,slow=9.2,SNR=96						
PTGA				LR	LR	15 37 40.5	
	comp=Z,3µm,18.1s,baz=204,slow=39						
PTGA	**Pitinga**	**23.95**	**28**	P	**P**	**15 27 21.6**	**-1.0**
PTGA				IAmb	IAmb	15 27 23.8	
	comp=Z,139nm,0.8s						
PTGA	**Pitinga**	**23.95**	**28**	*e*P	**P**	**15 27 21.7**	**-1.0**
GCUF	**Volcan Galeras**	**24.25**	**344**	*e*P	**P**	**15 27 29.4**	**+3.3**
BSCB	**Bom Sucesso**	**24.27**	**92**	*e*P	**P**	**15 27 25.3**	**-0.6**
MACC	**Macarena, Meta**	**24.50**	**353**	*e*P	**P**	**15 27 23.3**	**-4.5**
GUVC	**San Jose del G**	**24.78**	**356**	*e*P	**P**	**15 27 29.1**	**-1.2**
MAN01	**Angra dos Reis**	**24.83**	**96**	*e*P	**P**	**15 27 30.0**	**-0.8**
SOTA	**Rioblanco**	**24.96**	**346**	*e*P	**P**	**15 27 38.6**	**+6.2**
PCON	**Cinco Dias**	**25.10**	**347**	*e*P	**P**	**15 27 37.8**	**+4.0**
BETC	**Betania**	**25.26**	**349**	*e*P	**P**	**15 27 37.4**	**+2.7**
VAS01	**Vassouras-RJ**	**25.36**	**95**	*e*P	**P**	**15 27 36.1**	**+0.6**
MARP	**Paez Belalcaza**	**25.51**	**348**	*e*P	**P**	**15 27 37.0**	**-0.3**
PRPB	**Parauapebas**	**25.90**	**55**	*e*P	**P**	**15 27 39.7**	**-0.9**
MALB	**Monte Alegre**	**25.97**	**41**	*e*P	**P**	**15 27 40.9**	**-0.2**
SMTB	**Santa Maria do**	**26.06**	**63**	*e*P	**P**	**15 27 41.9**	**0.0**
JANB	**Januaria**	**26.14**	**79**	*e*P	**P**	**15 27 42.6**	**-0.2**
DUB01	**Friburgo-RJ**	**26.36**	**95**	*e*P	**P**	**15 27 44.6**	**-0.1**
ORTC	**Ortega, Tolima**	**26.43**	**350**	*e*P	**P**	**15 27 47.1**	**+1.9**
SDBA	**SAO DESIDERIO**	**26.62**	**73**	*e*P	**P**	**15 27 46.9**	**-0.2**
YOTC	**Yotoco, Valle**	**26.70**	**348**	*e*P	**P**	**15 27 48.0**	**+0.2**
CHIC	**Chingaza**	**26.94**	**354**	*e*P	**P**	**15 27 49.8**	**-0.6**
ANIL	**Santa Ana**	**27.02**	**350**	*e*P	**P**	**15 27 52.0**	**+1.1**
CAM01	**Campos-RJ**	**27.05**	**95**	*e*P	**P**	**15 27 51.0**	**+0.1**
TOLC	**Tolima**	**27.10**	**350**	*e*P	**P**	**15 27 53.0**	**+1.4**
ROSC	**El Rosal**	**27.21**	**352**	P	**P**	**15 27 53.9**	**+1.2**
	comp=Z,18nm,0.5s,baz=330,slow=3.2,SNR=5.1						
ROSC				LR	LR	15 39 24.7	
	comp=Z,1µm,21.6s,baz=231,slow=38						
RREF	**El Recreo**	**27.42**	**350**	*e*P	**P**	**15 27 57.6**	**+2.8**
PLMC	**San Jos del P**	**27.58**	**348**	*e*P	**P**	**15 27 56.8**	**+1.1**
GUY2C	**Guyana, Caldas**	**27.74**	**350**	*e*P	**P**	**15 27 58.8**	**+1.2**
SPBC	**San Pablo de B**	**27.99**	**353**	*e*P	**P**	**15 27 59.6**	**+0.2**
NORC	**Norcasia**	**28.00**	**351**	*e*P	**P**	**15 28 00.1**	**+0.8**
SJMB	**Sao Joao De Ma**	**28.00**	**88**	*e*P	**P**	**15 27 59.5**	**+0.1**
ALF01	**Guarapari-ES**	**28.07**	**92**	*e*P	**P**	**15 27 59.9**	**-0.1**
RUSC	**La Rusia**	**28.13**	**355**	*e*P	**P**	**15 28 02.0**	**+0.9**
BSFB	**Barra de Sao F**	**28.29**	**88**	*e*P	**P**	**15 28 01.3**	**-0.6**
MCPB	**Macapa, AP**	**28.50**	**42**	*e*P	**P**	**15 28 03.9**	**0.0**
BARC	**Barichara**	**28.83**	**355**	*e*P	**P**	**15 28 06.4**	**-0.7**
PTBC	**PUERTO BERRIO,**	**28.91**	**353**	*e*P	**P**	**15 28 06.3**	**-1.1**
DBBC	**Dabeiba**	**29.63**	**349**	*e*P	**P**	**15 28 15.9**	**+1.9**
TMAB	**Tom-Au,PA,Br**	**29.71**	**51**	*e*P	**P**	**15 28 14.8**	**+0.2**
ZARC	**Zaragoza, Cauc**	**29.90**	**352**	*e*P	**P**	**15 28 15.9**	**-0.3**
GDU01	**Guandu, BA**	**30.91**	**79**	*e*P	**P**	**15 28 25.0**	**-0.2**
SDV	**Santo Domingo**	**31.02**	**0**	P	**P**	**15 28 25.2**	**-1.2**
	comp=Z,9.4nm,0.9s,baz=283,slow=10,SNR=6.8						
SDV				LR	LR	15 42 25.2	

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      comp=Z,930nm,18.1s,baz=182,slow=39
SDV   Santo Domingo   31.02   0  P     P      15 28 25.4 -0.9
SDV   Santo Domingo   31.02   0 eP     P      15 28 25.5 -0.9
SMLC  San Martn de    31.10 354 eP     P      15 28 24.6 -2.2
MDP   Montagnes des   32.58  35  P     P      15 28 39.6 -0.2
      comp=Z,60nm,0.8s,baz=211,slow=10,SNR=12
PLCV  Puerto La Cruz  32.87  11  P     P      15 28 41.4 -1.0
PCRV  Puerto La Cruz  32.88  11  P     P      15 28 41.4 -1.1
      comp=Z,15nm,0.8s,baz=160,slow=4.7,SNR=5.7
NBPS  Pedro II - PI   33.60  62 eP     P      15 28 46.4 -2.5
TOSP  Speyside        34.92  18  P     P      15 28 60.0 -0.2
TOSP                             IAmb  IAmb   15 29 01.1
      comp=Z,57nm,0.9s
JTS   Las Juntas de   35.24 335⇓eP    P      15 29 00.1 -2.9
JTS                              pmax  pmax
      comp=Z,12nm,0.9s
NBMO  Morrinhos-CE    35.36  62 eP     P      15 29 03.6 -0.5
NBLI  Livramento-PB   35.88  71 eP     P      15 29 08.3 -0.4
RCBR  Riachuelo       37.53  69ceP     P      15 29 24.1 +1.4
RCBR                             pmax  pmax
      comp=Z,23nm,0.8s
RCBR  Riachuelo       37.53  69  P     P      15 29 23.5 +0.9
RCBR                             IAmb  IAmb   15 29 24.5
      comp=Z,38nm,0.9s
RCBR  Riachuelo       37.53  69 eP     P      15 29 22.4 -0.3
NBPV  Pedro Velho     37.77  71 eP     P      15 29 23.9 -0.8
ICMP  Isla Caja de M  40.19   6  P     P      15 29 45.1 +0.3
MLPR  Magueyes Islan  40.23   6  P     P      15 29 42.2 -2.8
MLPR                             IAmb  IAmb   15 29 43.7
      comp=Z,88nm,1.0s
CRPR  Cabo Rojo, PR   40.26   6  P     P      15 29 44.0 -1.4
PDPR  Patillas Dam,   40.38   7  P     P      15 29 44.5 -1.8
SJG   San Juan        40.46   7  P     P      15 29 44.9 -2.1
      comp=Z,88nm,0.8s,baz=174,slow=1.7,SNR=20
SJG   San Juan        40.46   7  P     P      15 29 44.9 -2.1
SJG                              IAmb  IAmb   15 29 46.3
      comp=Z,80nm,0.8s
MPR   Mayaguez        40.46   5  P     P      15 29 45.0 -2.0
MTP   Monte Pirata    40.51   8  P     P      15 29 45.3 -2.2
HUMP  Col San Antoni  40.52   7  P     P      15 29 45.4 -2.1
CBYP  Canovanas       40.65   7  P     P      15 29 46.7 -1.9
GCPR  Guaynabo City   40.66   7  P     P      15 29 46.4 -2.3
CUPR  Culebra, Puert  40.76   8  P     P      15 29 47.2 -2.3
MTO3  Montecristo     40.76 332  P     P      15 29 51.6 +1.8
MTDJ  Mount Denham    40.83 350  P     P      15 29 51.4 +1.1
MTDJ                             IAmb  IAmb   15 29 52.2
      comp=Z,55nm,0.8s
TEIG  Tepich          45.59 337  P     P      15 30 29.2 +0.7
TEIG                             IAmb  IAmb   15 30 30.2
      comp=Z,32nm,1.0s
CMIG  Matias Romero   45.70 327  P     P      15 30 30.0 +0.5
      comp=Z,7.0nm,0.9s,baz=140,slow=5.7,SNR=9.1
656A  Willston        52.62 347  P     P      15 31 22.8 +0.6
ZAIG  Zacatecas       54.43 323  P     P      15 31 38.4 +2.4
ZAIG                             IAmb  IAmb   15 31 46.0
      comp=Z,18nm,0.9s
352A  Blakely         55.18 345  P     P      15 31 41.3 +0.3
BRAL  Brewton         55.41 343  P     P      15 31 43.6 +0.9
      baz=162
NHSC  New Hope        55.84 351  P     P      15 31 46.4 +0.7
      baz=170
250A  Grady           55.98 344  P     P      15 31 46.5 -0.3
152A  Waverly Hall    56.27 346  P     P      15 31 48.1 -0.6
152A                             IAmb  IAmb   15 31 49.4
      comp=Z,35nm,0.9s
H06E1 SOCORRO T-PHAS56.60 313   T     T      16 33 31.5
      SNR=32
GOGA  Godfrey         56.72 347  P     P      15 31 52.3 +0.4
      baz=166
Z51A  Franklin        57.00 346  P     P      15 31 53.9  0.0
Z51A                             IAmb  IAmb   15 31 54.6
      comp=Z,20nm,0.9s
X59A  McDuffie Farm,  57.06 352  P     P      15 31 54.7 +0.3
      baz=172
LRAL  Lakeview Retre  57.17 344  P     P      15 31 55.4 +0.2
      baz=162
LRAL  Lakeview Retre  57.17 344  P     P      15 31 54.8 -0.3
LRAL                             IAmb  IAmb   15 31 55.9
      comp=Z,35nm,1.1s
342A  Flagon Creek P  57.23 338  P     P      15 31 57.1 +1.5
HKT   Hockley         57.26 334⇑eP    P      15 31 55.6 -0.2
HKT                              pmax  pmax
      comp=Z,10.0nm,1.1s
Y52A  Lilburn         57.28 347  P     P      15 31 55.1 -0.9
Y52A                             IAmb  IAmb   15 31 56.1
      comp=Z,21nm,1.1s
833A  Chaparral WMA,  57.40 330  P     P      15 31 57.9 +1.0
      baz=149
W58A  Raeford         57.59 352  P     P      15 31 59.0 +1.0
      baz=171
Y49A  Blount Mountai  57.81 345  P     P      15 31 59.1 -0.6
Y49A                             IAmb  IAmb   15 32 00.1
      comp=Z,16nm,0.9s
W56A  Indian Trail    57.89 351  P     P      15 32 00.6 +0.4
      baz=170
KMSC  Kings Mountain  58.02 350  P     P      15 32 01.7 +0.6
      baz=169
KMSC  Kings Mountain  58.02 350  P     P      15 32 01.4 +0.3
KMSC                             IAmb  IAmb   15 32 02.5
      comp=Z,50nm,1.2s
V60A  Jim Taylor Roa  58.10 354  P     P      15 32 03.2 +1.6
      baz=173
X51A  Calhoun         58.13 346  P     P      15 32 01.8 -0.1
X51A                             IAmb  IAmb   15 32 02.8
      comp=Z,32nm,0.9s
BG3   Lake Jocassee   58.15 348  P     P      15 32 02.2 +0.1
V59A  Middlesex       58.20 353  P     P      15 32 02.9 +0.5
      baz=172
FPAL  Fort Paine      58.27 346  P     P      15 32 03.0 +0.1
FPAL                             IAmb  IAmb   15 32 03.5
      comp=Z,29nm,1.0s
V58A  Windy Hill, Pi  58.33 352  P     P      15 32 03.8 +0.5
      baz=171
W52A  Murphy          58.44 347  P     P      15 32 04.1  0.0
W52A                             IAmb  IAmb   15 32 05.1
      comp=Z,26nm,0.9s
X48A  Hartselle       58.53 344  P     P      15 32 04.4 -0.3
V56A  Mocksville      58.54 351  P     P      15 32 05.4 +0.7
      baz=170
U61A  Possum Corner   58.58 355  P     P      15 32 05.7 +0.7
      baz=174
Y45A  Yeager Farm, C  58.65 342  P     P      15 32 05.2 -0.3
V55A  Taylorsville    58.69 350  P     P      15 32 06.2 +0.4
V55A                             IAmb  IAmb   15 32 07.3
      comp=Z,37nm,0.9s
V53A  Saluda          58.78 349  P     P      15 32 06.3 -0.2
V53A                             IAmb  IAmb   15 32 07.4
      comp=Z,13nm,0.8s
W50A  Signal Mountai  58.84 346  P     P      15 32 06.7 -0.2
W50A                             IAmb  IAmb   15 32 07.7
      comp=Z,34nm,0.8s
U58A  Oxford          58.86 353  P     P      15 32 07.5 +0.5
      baz=172
CPCT  Cooper Cave     58.91 347  P     P      15 32 07.1 -0.3
CPCT                             IAmb  IAmb   15 32 08.2
      comp=Z,43nm,1.0s
TKL   Tuckaleechee C  58.96 348  P     P      15 32 07.3 -0.3
      comp=Z,30nm,0.8s,baz=161,slow=9.4,SNR=20
TKL   Tuckaleechee C  58.96 348  P     P      15 32 07.5 -0.2
TKL                              pmax  pmax
      comp=Z,33nm,0.9s
TKL   Tuckaleechee C  58.96 348  P     P      15 32 07.5 -0.2
TKL                              IAmb  IAmb   15 32 08.4
      comp=Z,33nm,0.8s
SWET  Sewanee         58.99 346  P     P      15 32 07.5 -0.4
U57A  Blanch          58.99 352  P     P      15 32 08.2 +0.3
      baz=171
U56A  King            59.05 351  P     P      15 32 09.0 +0.7
      baz=170
U56A  King            59.05 351  P     P      15 32 07.8 -0.5
U56A                             IAmb  IAmb   15 32 10.1
      comp=Z,33nm,0.8s
V52A  Sevierville     59.10 348  P     P      15 32 08.5 -0.2
Z41A  Richland Creek  59.11 339  P     P      15 32 09.5 +0.7
      baz=156
V51A  Loudon          59.21 347  P     P      15 32 09.2 -0.2
V51A                             IAmb  IAmb   15 32 10.2
      comp=Z,30nm,0.8s
OXF   Oxford          59.22 342  P     P      15 32 08.6 -0.9
      baz=160,SNR=7.0
OXF   Oxford          59.22 342  P     P      15 32 09.2 -0.2
OXF                              pmax  pmax
      comp=Z,78nm,1.0s
OXF   Oxford          59.22 342  P     P      15 32 09.2 -0.2
PLAL  Pickwick Lake   59.30 344  P     P      15 32 09.3 -0.7
PLAL                             IAmb  IAmb   15 32 10.7
      comp=Z,26nm,0.9s
T59A  Double "B" Far  59.32 354  P     P      15 32 10.7 +0.6
      baz=173,SNR=7.4
T58A  Grand View Acr  59.40 353  P     P      15 32 11.2 +0.6
      baz=172,SNR=9.0
JCT   Junction City   59.41 331  P     P      15 32 11.6 +0.6
      baz=149,SNR=8.0
JCT   Junction City   59.41 331  P     P      15 32 11.7 +0.7
JCT                              pmax  pmax
      comp=Z,20nm,1.0s
JCT   Junction City   59.41 331  P     P      15 32 11.7 +0.7
JCT                              IAmb  IAmb   15 32 12.8
      comp=Z,20nm,0.9s
HPIG                  59.44 324  P     P      15 32 12.9 +1.5
U54A  Nelsons Funny   59.44 350  P     P      15 32 11.1  0.0
      baz=168,SNR=6.4
T57A  Hurt            59.54 352  P     P      15 32 11.9 +0.3
      baz=171
WLAR  White Oak Lake  59.61 339  P     P      15 32 13.8 +1.6
X43A  Marvell         59.65 341  P     P      15 32 13.0 +0.5
      baz=159
T56A  Rocky Mt        59.67 352  P     P      15 32 13.6 +1.1
      baz=170
V48A  Smith Brothers  59.70 345  P     P      15 32 12.5 -0.3
WHTX  Lake Whitney,   59.71 334  P     P      15 32 13.7 +0.8
      baz=152
W45A  Hickory Valley  59.76 343  P     P      15 32 12.6 -0.6
TZTN  Tazewell        59.77 348  P     P      15 32 13.6 +0.3
      baz=167
VNA3  Neumayer Olymp  59.88 161  P     P      15 32 22.2 +8.5
BLA   Blacksburg      59.90 351  P     P      15 32 15.1 +0.9
      baz=170
CLTN  Cedars of Leba  59.92 346  P     P      15 32 14.1 -0.2
S60A  Water View      59.96 355  P     P      15 32 15.9 +1.4
      baz=174
S58A  Poland Farm, P  60.01 353  P     P      15 32 15.7 +0.9
      baz=172
S58A  Poland Farm, P  60.01 353  P     P      15 32 14.9  0.0
S58A                             IAmb  IAmb   15 32 16.6
      comp=Z,27nm,0.8s
S59A  Mechanicsville  60.08 354  P     P      15 32 16.4 +1.0
      baz=173
U49A  Red Boiling Sp  60.20 346  P     P      15 32 14.8 -1.4
U49A                             IAmb  IAmb   15 32 16.3
      comp=Z,23nm,0.8s
X40A  Basin Creek Fa  60.24 339  P     P      15 32 17.0 +0.4
      baz=157
S56A  Natural Bridge  60.25 352  P     P      15 32 17.4 +0.8
      baz=171
S57A  Dark Hollow, R  60.25 353  P     P      15 32 17.3 +0.7
      baz=172,SNR=7.0
S57A  Dark Hollow, R  60.25 353  P     P      15 32 16.7 +0.1
TX32  Lajitas Array   60.30 327  P     P      15 32 17.7 +0.5
TXAR  Lajitas Array   60.30 327  P     P      15 32 18.3 +1.1
      comp=Z,4.9nm,0.8s,baz=141,slow=8.1,SNR=24
TXAR  Lajitas Array   60.30 327  P     P      15 32 18.0 +0.8
TX31  Lajitas Ar. Si  60.30 327  P     P      15 32 18.4 +1.2
TX31                             IAmb  IAmb   15 32 18.9
      comp=Z,17nm,0.8s
WVT   Waverly         60.32 344  P     P      15 32 16.7 -0.3
      baz=162
WVT   Waverly         60.32 344  P     P      15 32 16.3 -0.7
WVT                              pmax  pmax
      comp=Z,46nm,0.9s
WVT   Waverly         60.32 344  P     P      15 32 16.3 -0.7
R58B  Mineral         60.34 354  P     P      15 32 17.9 +0.8
      baz=173
R58B  Mineral         60.34 354  P     P      15 32 17.3 +0.3
VNA2  Neumayer--Watz  60.48 160  P     P      15 32 27.3  +10
      baz=295,slow=4.6
T50A  Nancy           60.49 347  P     P      15 32 17.4 -0.8
T50A                             IAmb  IAmb   15 32 18.8
      comp=Z,29nm,0.9s
R59A  King George, V  60.49 354  P     P      15 32 18.9 +0.7
      baz=174
CBN   Corbin Frederi  60.52 354  P     P      15 32 18.7 +0.4
      baz=173
MIAR  Mount Ida       60.54 339  P     P      15 32 19.0 +0.4
      baz=156,SNR=12
MIAR  Mount Ida       60.54 339  P     P      15 32 18.8 +0.2
MIAR                             pmax  pmax
      comp=Z,27nm,0.9s
MIAR  Mount Ida       60.54 339  P     P      15 32 18.8 +0.2
MIAR                             IAmb  IAmb   15 32 20.2
      comp=Z,27nm,0.8s
S54A  Dingess, Beckl  60.61 351  P     P      15 32 19.4 +0.3
      baz=169
S54A  Dingess, Beckl  60.61 351  P     P      15 32 18.5 -0.5
S54A                             IAmb  IAmb   15 32 20.1
      comp=Z,38nm,0.9s
R58A  Rapidan         60.68 354  P     P      15 32 20.1 +0.7
      baz=173,SNR=5.5
W41B  Gary Mavity, V  60.68 340  P     P      15 32 19.7 +0.2
      baz=157,SNR=8.3
R57A  Stanardsville   60.73 353  P     P      15 32 20.8 +1.0
      baz=172
WHAR  Wooly Hollow    60.80 340  P     P      15 32 20.4  0.0
WHAR                             IAmb  IAmb   15 32 21.6
      comp=Z,29nm,0.9s
Z35A  Perchaven, San  60.81 335  P     P      15 32 19.9 -0.6
S51A  Beattyville     60.84 348  P     P      15 32 20.4 -0.2
S51A                             IAmb  IAmb   15 32 21.7
      comp=Z,18nm,1.0s
R55A  Marlinton       60.92 352  P     P      15 32 21.8 +0.7
      baz=170
R55A  Marlinton       60.92 352  P     P      15 32 21.3 +0.1
R55A                             IAmb  IAmb   15 32 31.7
      comp=Z,45nm,1.4s
R56A  Bull Pasture M  60.95 352  P     P      15 32 22.8 +1.5
      baz=171
T47A  Sharon Grove    60.96 345  P     P      15 32 20.3 -1.1
LCAR  Lake Charles    61.17 341  P     P      15 32 22.6 -0.2
LCAR                             IAmb  IAmb   15 32 23.6
      comp=Z,25nm,0.9s
ABTX  Abilene, Hawle  61.18 332  P     P      15 32 23.6 +0.6
      baz=150,SNR=12
ABTX  Abilene, Hawle  61.18 332  P     P      15 32 23.5 +0.5
ABTX                             IAmb  IAmb   15 32 24.9
      comp=Z,42nm,1.1s
Q60A  Greensboro      61.19 356  P     P      15 32 24.1 +1.2
      baz=175
W39A  Magazine        61.21 339  P     P      15 32 23.9 +0.8
      baz=156,SNR=7.3
W39A  Magazine        61.21 339  P     P      15 32 23.6 +0.5
W39A                             IAmb  IAmb   15 32 25.1
      comp=Z,27nm,1.0s
X37A  Clayton         61.21 337  P     P      15 32 23.7 +0.6
X37A                             IAmb  IAmb   15 32 25.1
      comp=Z,35nm,0.9s
Q58A  Fox Den Farm,   61.28 354  P     P      15 32 24.2 +0.7
      baz=173
FCAR  Ozark Folk Cen  61.30 340  P     P      15 32 23.4 -0.3
FCAR                             IAmb  IAmb   15 32 24.7
      comp=Z,26nm,1.0s
T45A  Paducah         61.37 344  P     P      15 32 23.9 -0.2
Q57A  Strasburg       61.45 353  P     P      15 32 25.8 +1.1
      baz=172
Q56A  Snyder Ridge,   61.55 353  P     P      15 32 26.3 +1.0
      baz=171
Q56A  Snyder Ridge,   61.55 353  P     P      15 32 25.8 +0.5
R50A  Paris           61.60 348  P     P      15 32 25.0 -0.7
R50A                             IAmb  IAmb   15 32 25.9
      comp=Z,22nm,0.9s
PBMO  Poplar Bluff    61.62 342  P     P      15 32 24.8 -1.1
SDMD  Soldier’s Deli  61.67 355  P     P      15 32 26.6 +0.5
SDMD                             IAmb  IAmb   15 32 27.9
      comp=Z,16nm,1.0s
Q53A  Leroy           61.68 351  P     P      15 32 26.6 +0.4
      baz=169
Q54A  Coxs Mills      61.70 351  P     P      15 32 25.7 -0.7
Q54A                             IAmb  IAmb   15 32 27.2
      comp=Z,22nm,0.7s
R49A  Shelbyville     61.78 347  P     P      15 32 26.2 -0.8
R49A                             IAmb  IAmb   15 32 27.3
      comp=Z,26nm,0.8s
P58A  Pank, Wackersv  61.79 354  P     P      15 32 28.1 +1.2
      baz=173
P59A  Jarrettsville   61.84 355  P     P      15 32 28.2 +1.0
      baz=174,SNR=7.0
P57A  Homestead Farm  61.85 354  P     P      15 32 28.5 +1.1
      baz=173,SNR=7.7
P57A  Homestead Farm  61.85 354  P     P      15 32 27.8 +0.4
WCI   Wyandotte Cave  61.96 346  P     P      15 32 27.4 -0.7
      baz=164
WCI   Wyandotte Cave  61.96 346  P     P      15 32 27.2 -0.9
WCI                              pmax  pmax
      comp=Z,57nm,0.8s
WCI   Wyandotte Cave  61.96 346  P     P      15 32 27.2 -0.9
P56A  Dayton Farm, R  61.96 353  P     P      15 32 29.3 +1.2
      baz=172,SNR=6.7
U40A  Yellville       61.96 340  P     P      15 32 28.3 +0.1
      baz=157,SNR=22
U40A  Yellville       61.96 340  P     P      15 32 27.7 -0.5
P60A  Greenville      61.98 356  P     P      15 32 28.6 +0.4
      baz=175
USIN  University of   62.02 345  P     P      15 32 27.1 -1.5
T42A  Van Buren       62.05 342  P     P      15 32 28.2 -0.6
T42A                             IAmb  IAmb   15 32 29.2
      comp=Z,22nm,1.0s
SNAA  Sanae           62.10 161  P     P      15 32 38.4  +10
SNAA  Sanae           62.10 161⇑eP    P      15 32 30.7 +1.9
SNAA                             pmax  pmax
      comp=Z,11nm,1.5s
SNAA  Sanae           62.10 161  P     P      15 32 31.2 +2.5
SNAA                             IAmb  IAmb   15 32 47.4
      comp=Z,26nm,1.1s
WUPA  West Chester U  62.10 356  P     P      15 32 29.8 +0.8
WUPA                             IAmb  IAmb   15 32 30.7
      comp=Z,17nm,1.1s
Q51A  Peebles         62.15 349  P     P      15 32 28.5 -0.9
Q51A                             IAmb  IAmb   15 32 30.0
      comp=Z,38nm,1.0s
S44A  Carbondale      62.16 344  P     P      15 32 28.8 -0.7
SIUC  Southern Illin  62.17 344  P     P      15 32 29.2 -0.4
O61A  Allentown       62.20 357  P     P      15 32 30.4 +0.8
      baz=176
MCWV  Mont Chateau    62.23 352  P     P      15 32 30.6 +0.7
      baz=171
MCWV  Mont Chateau    62.23 352  P     P      15 32 29.5 -0.4
MCWV                             IAmb  IAmb   15 32 31.6
      comp=Z,14nm,0.8s
HHAR  Hobbs           62.25 339  P     P      15 32 30.2  0.0
HHAR                             IAmb  IAmb   15 32 30.9
      comp=Z,15nm,0.9s
P53A  Whipple         62.28 351  P     P      15 32 30.1 -0.1
P53A                             IAmb  IAmb   15 32 31.4
      comp=Z,26nm,0.8s
O58A  Lewisberry      62.39 355  P     P      15 32 31.8 +0.8
      baz=174
O60A  Telford         62.47 356  P     P      15 32 32.2 +0.8
      baz=175
MGMO  Mountain Grove  62.51 341  P     P      15 32 31.7 -0.2
MGMO                             IAmb  IAmb   15 32 33.0
      comp=Z,38nm,1.0s
P52A  Corning         62.53 350  P     P      15 32 31.0 -1.0
P52A                             IAmb  IAmb   15 32 32.5
      comp=Z,31nm,0.8s
O57A  Amberson        62.54 354  P     P      15 32 33.0 +1.1
      baz=173,SNR=6.1
U38A  Gravette        62.54 339  P     P      15 32 32.1 +0.1
U38A                             IAmb  IAmb   15 32 32.7
      comp=Z,11nm,0.8s
P51A  Williamsport    62.54 349  P     P      15 32 31.4 -0.6
P51A                             IAmb  IAmb   15 32 32.0
      comp=Z,27nm,0.7s
TUL1  Leonard         62.55 337  P     P      15 32 32.2  0.0
      baz=154
TUL1  Leonard         62.55 337  P     P      15 32 31.6 -0.5
TUL1                             IAmb  IAmb   15 32 33.4
      comp=Z,35nm,0.9s
WMOK  Wichita Mounta  62.65 334  P     P      15 32 32.8  0.0
      baz=151
WMOK  Wichita Mounta  62.65 334  P     P      15 32 32.3 -0.6
WMOK                             pmax  pmax
      comp=Z,4.0nm,1.0s
WMOK  Wichita Mounta  62.65 334  P     P      15 32 32.3 -0.6
O56A  Blue Knob Stat  62.69 353  P     P      15 32 33.8 +0.7
      baz=172
N61A  South Mountain  62.84 357  P     P      15 32 35.4 +1.4
      baz=176
P49A  Miami Univ. Ec  62.89 348  P     P      15 32 33.5 -0.9
      baz=166,SNR=7.1
P49A  Miami Univ. Ec  62.89 348  P     P      15 32 33.2 -1.1
BLO   Bloomington     62.91 346  P     P      15 32 33.6 -0.9
BLO                              pmax  pmax
      comp=Z,47nm,0.6s
BLO   Bloomington     62.91 346  P     P      15 32 33.6 -0.9
OK030 Cody Creek RV   62.92 337  P     P      15 32 34.5 -0.1
OK030                            IAmb  IAmb   15 32 35.7
      comp=Z,19nm,0.6s
P48A  Milroy          62.96 347  P     P      15 32 33.8 -1.0
P48A                             IAmb  IAmb   15 32 34.2
      comp=Z,26nm,0.7s
O52A  Adamsville      62.96 351  P     P      15 32 34.1 -0.7
O52A                             IAmb  IAmb   15 32 35.4
      comp=Z,23nm,0.8s
OK031 S. Brethren Rd  62.97 336  P     P      15 32 34.8 -0.1
OK031                            IAmb  IAmb   15 32 36.0
      comp=Z,24nm,0.8s
GDL2  Guadalupe Moun  62.99 328  P     P      15 32 36.7 +1.4
N60A  Cedar Hill Far  63.00 356  P     P      15 32 35.9 +0.9
      baz=176
O53A  New Philadelph  63.00 351  P     P      15 32 35.7 +0.6
      baz=169
CCM   Cathedral Cave  63.05 342  P     P      15 32 35.5 +0.1
      baz=159
CCM   Cathedral Cave  63.05 342  P     P      15 32 34.9 -0.5
CCM                              pmax  pmax
      comp=Z,36nm,0.9s
CCM   Cathedral Cave  63.05 342  P     P      15 32 34.9 -0.5
N57A  Milroy          63.07 354  P     P      15 32 35.9 +0.4
      baz=173,SNR=7.4
N58A  Sunbury         63.08 355  P     P      15 32 36.2 +0.6
      baz=174
MNTX  Cornudas Mount  63.08 327  P     P      15 32 36.0 +0.2
      baz=144,SNR=13
MNTX  Cornudas Mount  63.08 327  P     P      15 32 35.4 -0.4
QUOK  Quay            63.11 337  P     P      15 32 35.7 -0.2
QUOK                             IAmb  IAmb   15 32 37.1
      comp=Z,28nm,0.9s
Q44A  Meyer Farm, Va  63.24 344  P     P      15 32 35.6 -1.0
ACSO  Alum Creek Sta  63.26 350  P     P      15 32 36.4 -0.4
      baz=168,SNR=7.4
ACSO  Alum Creek Sta  63.26 350  P     P      15 32 36.6 -0.1
N56A  West Decatur    63.30 354  P     P      15 32 37.8 +0.8
      baz=172
S39A  Bolivar         63.33 340  P     P      15 32 36.8 -0.6
M60A  Port Jervis     63.43 357  P     P      15 32 38.5 +0.6
      baz=176
O49A  Covington       63.45 348  P     P      15 32 36.5 -1.5
O49A                             IAmb  IAmb   15 32 38.5
      comp=Z,34nm,0.9s
M62A  Hamden          63.48 358  P     P      15 32 39.4 +1.3
      baz=178
P46A  Rosedale        63.49 346  P     P      15 32 37.2 -1.1
N54A  Moraine State   63.54 352  P     P      15 32 39.2 +0.5
      baz=171
N54A  Moraine State   63.54 352  P     P      15 32 38.8 +0.2
N54A                             IAmb  IAmb   15 32 40.1
      comp=Z,27nm,1.1s
R40A  Maddies Statio  63.56 341  P     P      15 32 38.3 -0.5
M58A  Price’s Panora  63.59 355  P     P      15 32 40.0 +1.0
      baz=174
M57A  Sunshine Farm,  63.61 355  P     P      15 32 40.1 +1.1
      baz=174
M59A  Waymart         63.69 356  P     P      15 32 40.7 +1.1
      baz=175,SNR=6.4
MSTX  Muleshoe        63.70 331  P     P      15 32 40.3 +0.3
      baz=147,SNR=8.2
MSTX  Muleshoe        63.70 331  P     P      15 32 38.1 -1.9
MSTX                             IAmb  IAmb   15 32 48.9
      comp=Z,26nm,1.0s
T35A  Sooner Cattle   63.70 337  P     P      15 32 39.7 -0.1
T35A                             IAmb  IAmb   15 32 41.3
      comp=Z,32nm,1.2s
M56A  Emporium        63.85 354  P     P      15 32 41.1 +0.5
      baz=173,SNR=5.8
L63A  North Scituate  63.87 359  P     P      15 32 41.3 +0.6
      baz=179
L63A  North Scituate  63.87 359  P     P      15 32 40.8  0.0
M55A  Ridgway         63.90 353  P     P      15 32 40.7 -0.3
BRYW  Bryant College  63.92 359  P     P      15 32 41.5 +0.4
L64A  Middleborough   63.94   0  P     P      15 32 41.9 +0.7
      baz=180
M54A  Oil Creek Stat  64.04 353  P     P      15 32 42.4 +0.5
      baz=171
M54A  Oil Creek Stat  64.04 353  P     P      15 32 41.4 -0.5
M54A                             IAmb  IAmb   15 32 43.2
      comp=Z,32nm,0.9s
P43A  Skaggs, Pawnee  64.07 344  P     P      15 32 41.6 -0.5
L60A  Shokan          64.07 357  P     P      15 32 43.3 +1.2
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	baz=177						
M53A	WI Miller and	64.09	352	P	P	15 32 42.5	+0.2
	baz=170						
M53A	WI Miller and	64.09	352	P	P	15 32 41.9	-0.4
M53A				IAmb	IAmb	15 32 43.4	
	comp=Z,34nm,1.1s						
N49A	Columbus Grove	64.14	349	P	P	15 32 41.9	-0.7
KAN13	South Haven SW	64.14	337	P	P	15 32 42.3	-0.4
SFIN	Lafayette	64.19	346	P	P	15 32 41.2	-1.7
	baz=163						
SFIN	Lafayette	64.19	346	P	P	15 32 41.7	-1.3
M51A	Elyria	64.20	351	P	P	15 32 42.5	-0.5
	baz=168						
L58A	Harry Jones Me	64.22	356	P	P	15 32 44.1	+1.1
	baz=175						
L57A	Andrews Acres	64.25	355	P	P	15 32 44.1	+0.8
	baz=174						
L61A	Hillsdale 1, H	64.25	358	P	P	15 32 44.4	+1.2
	baz=177						
O44A	Mansfield	64.29	345	P	P	15 32 42.0	-1.6
O44A				IAmb	IAmb	15 32 43.0	
	comp=Z,41nm,1.1s						
L59A	Walton	64.31	357	P	P	15 32 44.7	+0.9
	baz=176,SNR=6.8						
L59A	Walton	64.31	357	P	P	15 32 44.3	+0.6
KAN01	Argonia South	64.37	336	P	P	15 32 44.5	+0.3
BINY	Binghamton	64.38	356	P	P	15 32 45.4	+1.3
	baz=175						
BINY	Binghamton	64.38	356	P	P	15 32 45.7	+1.6
BINY				IAmb	IAmb	15 32 46.2	
	comp=Z,47nm,1.2s						
M50A	Fremont	64.41	350	P	P	15 32 43.5	-0.8
M50A				IAmb	IAmb	15 32 44.4	
	comp=Z,21nm,0.8s						
L56A	Greenwood	64.44	354	P	P	15 32 45.3	+0.8
	baz=173						
L61B	Northampton	64.48	359	P	P	15 32 45.7	+1.0
	baz=178						
HRV	Adam Dziewonsk	64.51	359	P	P	15 32 45.8	+0.8
	baz=179						
L53A	Girard	64.55	352	P	P	15 32 45.3	+0.1
	baz=170						
P40A	Paris	64.65	342	P	P	15 32 44.9	-1.1
P40A				IAmb	IAmb	15 32 47.0	
	comp=Z,34nm,0.9s						
ERPA	Erie	64.68	352	P	P	15 32 46.5	+0.5
	baz=171						
K60A	Five Rivers En	64.68	358	P	P	15 32 46.7	+0.7
	baz=177						
K61A	Williamstown	64.71	358	P	P	15 32 47.0	+0.7
	baz=178						
WVNY	West Valley, N	64.81	354	P	P	15 32 47.1	+0.2
319A	Douglas	64.87	324	P	P	15 32 49.0	+1.3
319A				IAmb	IAmb	15 32 58.1	
	comp=Z,19nm,0.9s						
HDIL	Hopedale	64.88	345	P	P	15 32 46.8	-0.6
	baz=161						
HDIL	Hopedale	64.88	345	P	P	15 32 46.6	-0.7
K59A	Cooperstown	64.88	357	P	P	15 32 48.1	+0.7
	baz=176						
K58A	Earlville	64.92	356	P	P	15 32 48.6	+0.9
	baz=175						
K58A	Earlville	64.92	356	P	P	15 32 48.0	+0.4
K58A				IAmb	IAmb	15 32 49.9	
	comp=Z,42nm,1.1s						
121A	Cookes Peak, D	64.97	326	P	P	15 32 48.6	+0.1
	baz=142						
121A	Cookes Peak, D	64.97	326	P	P	15 32 46.7	-1.7
121A				IAmb	IAmb	15 32 53.0	
	comp=Z,11nm,0.8s						
K56A	Middlesex	64.98	355	P	P	15 32 48.9	+0.9
	baz=174						
P38A	Dawn	65.17	341	P	P	15 32 48.7	-0.7
P38A				IAmb	IAmb	15 32 51.8	
	comp=Z,22nm,0.8s						
J62A	Henniker	65.24	359	P	P	15 32 51.1	+1.5
	baz=179						
J60A	Lant Hill Farm	65.29	358	P	P	15 32 51.2	+1.2
	baz=178						
J61A	Chester	65.37	359	P	P	15 32 51.9	+1.3
	baz=178						
AAM	Ann Arbor	65.39	350	P	P	15 32 51.3	+0.7
	baz=167						
N41A	Harden Midland	65.42	343	P	P	15 32 50.1	-0.7
J59A	Piesco	65.55	357	P	P	15 32 52.6	+0.8
	baz=176						
J59A	Piesco	65.55	357	P	P	15 32 52.0	+0.2
J57A	Williamstown	65.58	356	P	P	15 32 52.0	+0.1
	baz=175						
BNM	Barren Site	65.67	328	P	P	15 32 51.7	-1.3
K50A	Casco	65.68	351	P	P	15 32 51.8	-0.8
I58A	Old Forge	65.80	357	P	P	15 32 53.8	+0.5
	baz=176						
LENM	Lemitar	65.86	328	P	P	15 32 53.7	-0.4
I60A	Shoreham	65.89	358	P	P	15 32 54.7	+0.9
	baz=178,SNR=6.5						
I57A	Carthage	66.09	356	P	P	15 32 55.6	+0.4
	baz=175						
N38A	Joes South For	66.16	342	P	P	15 32 54.8	-0.9
ANMO	Albuquerque	66.23	328	P	P	15 32 58.2	+1.7
	comp=Z,6.3nm,0.9s,baz=146,slow=7.9,SNR=15						
ANMO	Albuquerque	66.23	328	P	P	15 32 57.7	+1.1
	baz=144						
ANMO	Albuquerque	66.23	328⇓	eP	P	15 32 57.6	+1.1
ANMO				pmax	pmax		
	comp=Z,12nm,1.0s						
ANMO	Albuquerque	66.23	328	P	P	15 32 57.9	+1.3
TUC	Tucson	66.40	324	P	P	15 32 59.1	+1.5
	baz=140						
TUC	Tucson	66.40	324	P	P	15 32 58.7	+1.1
TUC				pmax	pmax		
	comp=Z,14nm,1.4s						
TUC	Tucson	66.40	324	P	P	15 32 58.7	+1.1
I51A	Listowel	66.47	352	P	P	15 32 57.7	+0.1
	baz=170						
H58A	Gabriels	66.49	357	P	P	15 32 58.7	+0.9
	baz=177						
H61A	Lyndonville	66.55	359	P	P	15 32 59.3	+1.2
	baz=179						
CBKS	Cedar Bluff	66.57	336	P	P	15 32 58.8	+0.4
	baz=151						
CBKS	Cedar Bluff	66.57	336	P	P	15 32 58.2	-0.2
CBKS				pmax	pmax		
	comp=Z,38nm,1.0s						
CBKS	Cedar Bluff	66.57	336	P	P	15 32 58.2	-0.2
CBKS				IAmb	IAmb	15 33 00.5	
	comp=Z,38nm,1.0s						
H62A	Milan	66.58	360	P	P	15 32 59.3	+1.0
	baz=180						
H57A	Richville	66.59	356	P	P	15 32 58.8	+0.5
	baz=176,SNR=5.3						
H63A	New Sharon	66.67	1	P	P	15 33 00.1	+1.3
	baz=181						
H59A	Cadyville	66.70	358	P	P	15 32 59.7	+0.6
	baz=177,SNR=6.7						
NVL	N'lazarevskaya	66.71	159	eP	P	15 33 07.6	+8.7
NVL				pmax	pmax		
	comp=Z,32nm,1.1s						
LONY	Lake Ozonia	66.71	357	P	P	15 32 60.0	+0.8
	baz=176						
LONY	Lake Ozonia	66.71	357	P	P	15 32 59.0	-0.1
LONY				IAmb	IAmb	15 33 00.9	
	comp=Z,22nm,0.9s						
H65A	Eastbrook	66.74	2	P	P	15 33 00.3	+1.1
	baz=183						
L40A	Anamosa	66.78	344	P	P	15 32 58.8	-0.8
H66A	Whiting	66.87	3	P	P	15 33 00.8	+0.7
	baz=184						
FRNY	Flat Rock	66.89	358	P	P	15 33 00.7	+0.5
FRNY				IAmb	IAmb	15 33 02.1	
	comp=Z,36nm,0.9s						
H53A	Bobcaygeon	66.95	354	P	P	15 33 01.2	+0.5
	baz=172						
N35A	Tabor	66.96	340	P	P	15 33 00.2	-0.7
T25A	Trinidad	67.08	331	P	P	15 33 02.9	+1.0
	baz=146						
G60A	Masonville	67.11	359	P	P	15 33 03.6	+1.9
	baz=179						
G59A	Clarenceville	67.12	358	P	P	15 33 02.8	+1.2
	baz=178						
G63A	Kingsbury	67.13	1	P	P	15 33 03.2	+1.5
	baz=181						
SADO	Sadowa	67.20	354	P	P	15 33 02.2	-0.1
	comp=Z,29nm,0.8s,baz=188,slow=4.8,SNR=13						
G57A	Newington	67.21	357	P	P	15 33 02.9	+0.6
	baz=176,SNR=6.3						
G58A	Ormstown	67.22	358	P	P	15 33 03.0	+0.7
	baz=177						
G62A	West of Eustis	67.22	0	P	P	15 33 03.6	+1.2
	baz=180,SNR=7.9						
G62A	West of Eustis	67.22	0	P	P	15 33 03.4	+1.0
214A	Organ Pipe Nat	67.27	322	P	P	15 33 04.7	+1.6
	baz=138						
214A	Organ Pipe Nat	67.27	322	P	P	15 33 03.5	+0.5
214A				IAmb	IAmb	15 33 23.0	
	comp=Z,14nm,1.1s						
G65A	Princeton	67.27	3	P	P	15 33 03.4	+0.7
	baz=183						
PKME	Peaks-Kenny Pk	67.28	1	P	P	15 33 03.3	+0.6
	baz=182						
G64A	Maxfield	67.28	2	P	P	15 33 03.6	+0.8
	baz=182						
G61A	St-Isidore-de-	67.29	359	P	P	15 33 03.6	+0.8
	baz=179						
JFWS	Jewell Farm	67.33	345	P	P	15 33 03.0	-0.1
	baz=161,SNR=6.3						
JFWS	Jewell Farm	67.33	345	P	P	15 33 02.7	-0.4
JFWS				pmax	pmax		
	comp=Z,40nm,0.7s						
JFWS	Jewell Farm	67.33	345	P	P	15 33 02.7	-0.4
G54A	Lake Saint Pet	67.72	355	P	P	15 33 05.9	+0.4
	baz=173						
K38A	Parkersburg	67.74	343	P	P	15 33 05.3	-0.4
QSPA	South Pole Qui	67.86	180	P	P	15 33 07.4	+0.9
QSPA				IAmb	IAmb	15 33 25.6	
	comp=Z,46nm,1.4s						
F64A	Sherman	67.91	2	P	P	15 33 07.8	+1.1
	baz=183,SNR=7.3						
F64A	Sherman	67.91	2	P	P	15 33 07.7	+1.1
I42A	Draeger Farm,	67.95	346	P	P	15 33 06.1	-0.9
I42A				IAmb	IAmb	15 33 07.8	
	comp=Z,29nm,0.7s						
F60A	Warwick	67.98	359	P	P	15 33 08.0	+0.9
	baz=179						
W18A	Petrified Fore	68.00	326	P	P	15 33 07.2	-0.6
W18A				IAmb	IAmb	15 33 11.1	
	comp=Z,16nm,1.1s						
SDCO	Great Sand Dun	68.06	331	P	P	15 33 09.2	+0.9
	baz=146,SNR=20						
SDCO	Great Sand Dun	68.06	331	P	P	15 33 09.7	+1.4
SDCO				IAmb	IAmb	15 33 11.1	
	comp=Z,18nm,0.9s						
LMN	Caledonia Moun	68.08	5	P	P	15 33 08.3	+0.5
L34A	Svendsen Farm,	68.19	340	P	P	15 33 07.3	-1.3
ALGO	Algonquin Park	68.27	355	P	P	15 33 09.2	+0.3
	baz=173						
BGNE	Belgrade	68.28	338	P	P	15 33 09.5	+0.3
	baz=153						
TRQ	Mont Tremblant	68.31	357	P	P	15 33 09.1	-0.2
X16A	Lo Mia Camp, P	68.36	325	P	P	15 33 11.6	+1.6
E60A	Ste Agathe de	68.38	360	P	P	15 33 10.7	+1.1
	baz=180						
E58A	La Victoria	68.41	358	P	P	15 33 10.6	+0.7
	baz=178,SNR=6.2						
E61A	Lac Etchemin	68.44	0	P	P	15 33 11.2	+1.2
	baz=180						
E63A	Oxbow	68.46	2	P	P	15 33 11.4	+1.3
	baz=182						
E64A	Bridgewater	68.48	2	P	P	15 33 11.2	+0.9
	baz=183						
E56A	St. Veronique	68.65	357	P	P	15 33 12.0	+0.6
	baz=176						
S22A	4UR Ranch, Cre	68.67	330	P	P	15 33 12.5	+0.4
	baz=144						
Q24A	Divide	68.91	332	P	P	15 33 15.2	+1.6
	baz=146						
D60A	Saint Jean D'O	68.92	360	P	P	15 33 14.8	+1.8
	baz=180						
MVCO	Mesa Verde	69.03	329	P	P	15 33 15.4	+1.2
	baz=143,SNR=6.3						
MVCO	Mesa Verde	69.03	329	P	P	15 33 15.6	+1.3
MVCO				IAmb	IAmb	15 33 17.2	
	comp=Z,14nm,0.9s						
D63A	Stockholm	69.09	2	P	P	15 33 15.0	+1.0
	baz=183,SNR=5.8						
D58A	Chemin du LacG	69.12	359	P	P	15 33 15.0	+0.7
	baz=178,SNR=10						
D56A	ZEC Mazanza, M	69.14	357	P	P	15 33 14.7	+0.3
	baz=176,SNR=5.2						
WUAZ	Wupatki	69.16	325	P	P	15 33 16.8	+1.9
	baz=140,SNR=13						
WUAZ	Wupatki	69.16	325	P	P	15 33 17.2	+2.2
WUAZ				IAmb	IAmb	15 33 18.5	
	comp=Z,20nm,0.9s						
I37A	Lemond, Waseca	69.18	343	P	P	15 33 14.6	-0.1
I37A				IAmb	IAmb	15 33 15.7	
	comp=Z,26nm,0.8s						
D61A	St Aubert, Com	69.21	0	P	P	15 33 16.0	+1.3
	baz=181						
LATQ	La Tuque	69.41	359	P	P	15 33 17.3	+1.2
	baz=178						
BATG	Bathurst New B	69.42	3	P	P	15 33 17.2	+1.1
K31A	O'Neill	69.57	338	P	P	15 33 17.3	+0.2
IKP	In-Ko-Pah, Jac	69.69	320	P	P	15 33 19.2	+0.9
	baz=136						
PDMCI	Parker Dam,Lak	69.75	323	P	P	15 33 20.3	+1.9
	baz=138						
PV01	Paradox Valley	69.80	329	P	P	15 33 20.3	+1.4
PV01				IAmb	IAmb	15 33 39.0	
	comp=Z,29nm,1.4s						
ISCO	Idaho Springs	69.81	332	P	P	15 33 20.6	+1.5
	baz=146						
ISCO	Idaho Springs	69.81	332	P	P	15 33 19.7	+0.6
ISCO				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ISCO	Idaho Springs	69.81	332	P	P	15 33 19.7	+0.6
ECSD	EROS Data Cent	69.86	340	P	P	15 33 19.0	0.0
	baz=155,SNR=11						
ECSD	EROS Data Cent	69.86	340	P	P	15 33 18.8	-0.2
ECSD				IAmb	IAmb	15 33 20.3	
	comp=Z,35nm,1.2s						
SMCO	Snowmass	69.90	331	P	P	15 33 20.0	+0.2
PV15	Paradox Valley	69.92	329	P	P	15 33 19.4	-0.3
PV15				IAmb	IAmb	15 33 23.2	
	comp=Z,27nm,1.1s						
PV13	Radium Mtn., P	69.94	329	P	P	15 33 21.7	+1.9
PV13				IAmb	IAmb	15 33 39.6	
	comp=Z,20nm,1.2s						
PV05	Paradox Valley	70.01	329	P	P	15 33 20.7	+0.5
PV05				IAmb	IAmb	15 33 23.1	
	comp=Z,16nm,1.1s						
PV03	Paradox Valley	70.03	329	P	P	15 33 22.3	+1.9
BC3	Big Chuckawall	70.03	321	P	P	15 33 22.4	+2.1
	baz=136,SNR=8.7						
BAR	Barrett	70.05	320	P	P	15 33 22.4	+2.0
BAR				IAmb	IAmb	15 33 23.6	
	comp=Z,10nm,0.8s						
MONP2	Monument Peak	70.05	320	P	P	15 33 22.5	+1.9
	baz=136						
PV18	Skein Mesa, Pa	70.05	329	P	P	15 33 20.9	+0.4
PV18				IAmb	IAmb	15 33 23.6	
	comp=Z,15nm,1.2s						
PV12	Saucer Basin,	70.06	329	P	P	15 33 20.5	0.0
PV12				IAmb	IAmb	15 33 30.1	
	comp=Z,15nm,1.1s						
PV11	David Mesa, Pa	70.07	329	P	P	15 33 19.6	-1.1
PV11				IAmb	IAmb	15 33 39.8	
	comp=Z,19nm,1.3s						
PV17	East Wray Mesa	70.10	329	P	P	15 33 21.9	+1.1
PV17				IAmb	IAmb	15 33 23.7	
	comp=Z,26nm,1.5s						
PV16	Nyswonger Mesa	70.10	329	P	P	15 33 22.2	+1.4
SPMN	Marine on St.	70.14	344	P	P	15 33 20.6	0.0
	baz=159						
SPMN	Marine on St.	70.14	344	P	P	15 33 20.5	-0.1
SPMN				IAmb	IAmb	15 33 21.4	
	comp=Z,36nm,1.0s						
PV04	Paradox Valley	70.16	329	P	P	15 33 22.1	+1.0
W13A	Hualapai Mount	70.20	324	P	P	15 33 23.3	+1.8
PV14	Lion Creek, Pa	70.20	329	P	P	15 33 22.0	+0.5
IRM	Iron Mountain	70.21	322	P	P	15 33 23.0	+1.6
	baz=137,SNR=7.3						
PV22	Blue Mesa, Par	70.22	329	P	P	15 33 20.1	-1.5
PV22				IAmb	IAmb	15 33 41.4	
	comp=Z,23nm,1.4s						
U15A	North Rim	70.33	325	P	P	15 33 19.6	-2.7
U15A				IAmb	IAmb	15 33 26.2	
	comp=Z,19nm,1.1s						
LIC	Lamto	70.36	74	eP	P	15 33 21.9	-0.7
	comp=Z,30nm,1.2s						
VLDQ	Val d'Or	70.37	355	P	P	15 33 22.5	+0.6
VLDQ				IAmb	IAmb	15 33 22.9	
	comp=Z,33nm,0.9s						
TIC	Toumodi	70.55	74	eP	P	15 33 23.3	-0.5
TPFO	Pinon Flats	70.57	321	P	P	15 33 25.5	+1.8
	baz=136						
PFO	Pinyon Flats O	70.58	321	P	P	15 33 25.7	+2.0
	comp=Z,5.6nm,0.9s,baz=124,slow=6.4,SNR=6.5						
PFO	Pinyon Flats O	70.58	321	P	P	15 33 25.5	+1.8
	baz=136						
PFO	Pinyon Flats O	70.58	321⇑	eP	P	15 33 24.7	+1.0
PFO				pmax	pmax		
	comp=Z,12nm,1.0s						
PFO	Pinyon Flats O	70.58	321	P	P	15 33 22.9	-0.9
KIC	Kosan Boka	70.67	74	eP	P	15 33 24.3	-0.3
	comp=Z,65nm,1.1s						
DBIC	Dimbokro	70.70	74	P	P	15 33 23.8	-1.0
	comp=Z,21nm,0.8s,baz=217,slow=5.7,SNR=15						
DBIC				LR	LR	16 03 10.5	
	comp=Z,496nm,20.5s,baz=166,slow=35						
DBIC	Dimbokro	70.70	74	P	P	15 33 24.5	-0.2
DBIC				pmax	pmax		
	comp=Z,24nm,0.9s						
DBIC	Dimbokro	70.70	74	P	P	15 33 24.5	-0.2
DBIC				IAmb	IAmb	15 33 25.6	
	comp=Z,24nm,0.8s						
N23A	Red Feather La	70.85	333	P	P	15 33 26.9	+1.5
	baz=146,SNR=5.6						
D41A	Chassel	70.89	347	P	P	15 33 25.1	0.0
F36A	Milaca	70.92	343	P	P	15 33 24.9	-0.5
F36A				IAmb	IAmb	15 33 26.2	
	comp=Z,26nm,0.9s						
GMRC	Granite Mounta	70.96	322	P	P	15 33 27.9	+1.9
	baz=137,SNR=14						
PHWY	Pilot Hill	70.98	333	P	P	15 33 24.9	-1.4
PHWY				IAmb	IAmb	15 33 30.9	
	comp=Z,13nm,0.8s						
MURC	Murrieta	71.01	320	P	P	15 33 28.0	+1.8
	baz=135						
KNB	Kanab	71.06	326	P	P	15 33 26.8	+0.2
KNB				pmax	pmax		
	comp=Z,37nm,1.3s						
KNB	Kanab	71.06	326	P	P	15 33 26.8	+0.2
E38A	The Farm, Brul	71.12	345	P	P	15 33 26.1	-0.5
E38A				IAmb	IAmb	15 33 27.3	
	comp=Z,14nm,0.9s						
O20A	White River Ci	71.25	331	P	P	15 33 29.6	+1.9
	baz=144,SNR=8.6						
O20A	White River Ci	71.25	331	P	P	15 33 28.8	+1.1
O20A				IAmb	IAmb	15 33 30.7	
	comp=Z,19nm,0.8s						
LCMT	Little Creek M	71.28	325	P	P	15 33 28.4	+0.5
HEC	Hector,Ludlow	71.38	322	P	P	15 33 30.4	+1.9
	baz=136,SNR=11						
MTPU	Mount Pierson	71.51	327	P	P	15 33 31.3	+1.7
SRU	San Rafael Swe	71.51	328	P	P	15 33 30.3	+1.0
SRU				pmax	pmax		
	comp=Z,19nm,0.8s						
SRU	San Rafael Swe	71.51	328	P	P	15 33 30.3	+1.0
SZCU	Shurtz Canyon	71.63	326	P	P	15 33 31.1	+0.9
F33A	5 Mile Ranch,	71.67	342	P	P	15 33 29.2	-0.6
F33A				IAmb	IAmb	15 33 30.4	
	comp=Z,13nm,0.8s						
BFSC	Mount Baldy Ra	71.73	321	P	P	15 33 32.2	+1.6
	baz=135,SNR=5.1						
CCUT	Cedar City	71.74	326	P	P	15 33 33.5	+2.7
MSU	Marysvale	71.86	327	P	P	15 33 33.7	+2.2
MSU	Marysvale	71.86	327	P	P	15 33 33.7	+2.2
MVU	Marysvale	71.87	327	P	P	15 33 33.9	+2.3
P17A	Butcher Ranch,	71.89	329	P	P	15 33 32.8	+1.2
SHPR	Sheep Range	71.93	324	P	P	15 33 34.1	+2.2
GSC	Goldstone, Bar	71.98	322	P	P	15 33 34.0	+1.9
	baz=136						
GSC	Goldstone, Bar	71.98	322	P	P	15 33 33.9	+1.7
GSC				pmax	pmax		
	comp=Z,5.0nm,0.8s						
GSC	Goldstone, Bar	71.98	322	P	P	15 33 33.9	+1.7
MATQ	Matagami	72.02	355	P	P	15 33 31.4	-0.4
	baz=174,SNR=6.0						
SHOC	Shoshone, Teco	72.11	323	P	P	15 33 35.5	+2.7
	baz=136						
EYMN	Ely	72.37	346	P	P	15 33 33.6	-0.4
	baz=160,SNR=7.1						
EYMN	Ely	72.37	346	P	P	15 33 33.3	-0.7
EYMN				IAmb	IAmb	15 33 35.1	
	comp=Z,18nm,0.8s						
EDW2	Edwards Air Fo	72.38	321	P	P	15 33 35.5	+1.1
	baz=135,SNR=6.5						
PRN	Pahroc Range	72.53	324	P	P	15 33 37.7	+2.3
PRN				IAmb	IAmb	15 33 58.5	
	comp=Z,24nm,1.4s						
K22A	Casper	72.55	333	P	P	15 33 36.9	+1.5
	baz=146						
K22A	Casper	72.55	333	P	P	15 33 36.3	+0.9
K22A				IAmb	IAmb	15 33 54.8	
	comp=Z,22nm,1.2s						
LRMC	Laurel Mtn Rad	72.61	321	P	P	15 33 37.9	+1.9
	baz=135						
PSUT	Pine Spring	72.74	326	P	P	15 33 38.9	+2.2
MPU	Maple Canyon	72.75	328	P	P	15 33 37.0	+0.2
RSSD	Black Hills	72.78	336	P	P	15 33 38.5	+1.6
	baz=148						
RSSD	Black Hills	72.78	336	P	P	15 33 37.1	+0.2
RSSD				pmax	pmax		
	comp=Z,12nm,0.8s						
RSSD	Black Hills	72.78	336	P	P	15 33 37.0	+0.2
FURC	Furnace Creek,	72.85	323	P	P	15 33 39.1	+2.0
	baz=136						
TPNV	Topopah Spring	72.85	323	P	P	15 33 38.9	+1.5
	baz=137,SNR=10						
TPNV	Topopah Spring	72.85	323	P	P	15 33 39.3	+1.9
TPNV				pmax	pmax		
	comp=Z,17nm,1.2s						
TPNV	Topopah Spring	72.85	323	P	P	15 33 39.3	+1.9
MPMC	Manual Prospec	72.91	322	P	P	15 33 39.5	+1.7
	baz=135						
NLU	North Lily Min	72.92	328	P	P	15 33 37.3	-0.5
JLU	Jordanelle	73.11	329	P	P	15 33 40.4	+1.4
ISA	Isabella, Lake	73.20	321	P	P	15 33 41.6	+2.3
	baz=135,SNR=9.9						
ISA	Isabella, Lake	73.20	321	P	P	15 33 41.7	+2.3
ISA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ISA	Isabella, Lake	73.20	321	P	P	15 33 41.6	+2.3
B35A	Bob, Littlefor	73.29	344	P	P	15 33 38.8	-0.7
B35A				IAmb	IAmb	15 33 40.4	
	comp=Z,17nm,0.8s						
SPR3	Spring Creek 3	73.33	326	P	P	15 33 40.4	0.0
PKM	Mcpherson Peak	73.46	320	P	P	15 33 42.8	+1.8
	baz=133						
DUG	Dugway, Tooele	73.47	328	P	P	15 33 43.1	+2.2
	baz=140,SNR=11						
DUG	Dugway, Tooele	73.47	328	P	P	15 33 41.5	+0.6
DUG				pmax	pmax		
	comp=Z,14nm,1.0s						
DUG	Dugway, Tooele	73.47	328	P	P	15 33 41.5	+0.6
TCUT	Toone Canyon	73.50	329	P	P	15 33 41.8	+0.6
R11A	Troy Canyon, C	73.51	325	P	P	15 33 43.6	+2.3
	baz=137,SNR=11						
R11A	Troy Canyon, C	73.51	325	P	P	15 33 42.3	+1.0
CWC	Cottonwood Cre	73.52	322	P	P	15 33 43.7	+2.4
	baz=135						
AGMN	Agassiz Nation	73.79	343	P	P	15 33 42.4	0.0
	baz=156						
AGMN	Agassiz Nation	73.79	343	P	P	15 33 42.4	0.0
AGMN				IAmb	IAmb	15 33 43.6	
	comp=Z,20nm,0.8s						
BW06	Boulder Array	73.95	331	P	P	15 33 44.8	+1.0
	baz=143						
BW06	Boulder Array	73.95	331	P	P	15 33 43.9	+0.1
PD31	Pinedale Array	73.95	331	P	P	15 33 43.6	-0.2
PDAR	Pinedale Array	73.95	331	P	P	15 33 44.7	+0.9
	comp=Z,1.1nm,0.5s,baz=151,slow=7.0,SNR=10.0						
TIN	Tinemaha, Big	74.04	322	P	P	15 33 46.6	+2.3
	baz=135						
TPH	Tonopah	74.20	324	P	P	15 33 45.9	+0.6
TPH				pmax	pmax		
	comp=Z,43nm,0.9s						
TPH	Tonopah	74.20	324	P	P	15 33 45.9	+0.6
MDND	Maddock	74.48	340	P	P	15 33 47.3	+0.8
	baz=153,SNR=6.6						
MDND	Maddock	74.48	340	P	P	15 33 46.9	+0.5
AHID	Auburn Hatcher	74.64	330	P	P	15 33 47.7	-0.1
AHID				IAmb	IAmb	15 33 50.3	
	comp=Z,20nm,0.9s						
HVU	Hansel Valley	74.66	329	P	P	15 33 48.6	+0.7
HVU				pmax	pmax		
	comp=Z,11nm,0.9s						

HVU	Hansel Valley	74.66	329	P	P	15 33 48.6	+0.7
OMMB	Old Mammoth Mi	74.87	322	P	P	15 33 51.1	+1.8
MDPB	Devils Postpil	74.92	322	P	P	15 33 50.6	+1.0
NV11	Mina Array Sit	74.97	323	P	P	15 33 51.2	+1.4
ECR	Eagle Creek	74.99	330	P	P	15 33 50.9	+1.1
REDW	Red Top Meadow	75.00	331	P	P	15 33 51.1	+1.2
REDW				IAmb	IAmb	15 34 07.4	
	comp=Z,16nm,1.0s						
KOWA	Kowa	75.01	67	P	P	15 33 49.7	-0.5
SNOW	Snow King Moun	75.03	331	P	P	15 33 51.3	+1.2
LHV	Little Huntoon	75.03	323	P	P	15 33 50.5	+0.6
NVAR	Mina Array Bea	75.05	323	P	P	15 33 52.0	+1.7
	comp=Z,4.4nm,0.8s,baz=154,slow=6.6,SNR=30						
NVAR				LR	LR	16 05 19.7	
	comp=Z,307nm,20.5s,baz=288,slow=34						
LOHW	Long Hollow	75.08	331	P	P	15 33 50.9	+0.6
ELK	Elko	75.10	327	P	P	15 33 51.7	+1.2
	comp=Z,4.9nm,0.9s,baz=145,slow=4.5,SNR=18						
ELK				LR	LR	16 06 54.2	
	comp=Z,502nm,19.8s,baz=301,slow=36						
ELK	Elko	75.10	327	P	P	15 33 50.7	+0.2
ELK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ELK	Elko	75.10	327	P	P	15 33 50.7	+0.2
MOOW	Moose Ponds	75.25	331	P	P	15 33 51.9	+0.6
RYN	Ryan	75.31	323	P	P	15 33 52.5	+0.7
FLWY	Flagg Ranch	75.50	332	P	P	15 33 53.6	+0.9
FLWY				IAmb	IAmb	15 33 55.9	
	comp=Z,23nm,0.9s						
ULM	Lac du Bonnet	75.58	344	P	P	15 33 52.6	-0.1
	comp=Z,12nm,0.8s,baz=153,slow=6.0,SNR=23						
ULM	Lac du Bonnet	75.58	344	⇓*e*P	P	15 33 52.8	0.0
ULM	Lac du Bonnet	75.58	344	P	P	15 33 52.4	-0.4
RLMT	Red Lodge	75.71	333	P	P	15 33 55.8	+1.9
	baz=144						
RLMT	Red Lodge	75.71	333	P	P	15 33 54.0	+0.1
WAKR	Walker	75.73	323	P	P	15 33 54.6	+0.4
LKWY	Lake	75.75	332	P	P	15 33 55.3	+1.1
LKWY				pmax	pmax		
	comp=Z,12nm,1.0s						
LKWY	Lake	75.75	332	P	P	15 33 55.3	+1.1
LAO	LASA Array	75.77	336	P	P	15 33 55.7	+1.7
	baz=147						
YNE	Yellowstone No	75.93	333	P	P	15 33 56.2	+1.0
YNR	Norris Junctio	75.99	332	P	P	15 33 55.9	+0.3
YMR	Madison River	76.08	332	P	P	15 33 56.9	+0.9
YHH	Holmes Hill	76.12	332	P	P	15 33 58.4	+2.0
PNTR	Pine Nut	76.23	323	P	P	15 33 56.9	-0.1
YHL	Hebgen Lake	76.31	332	P	P	15 33 59.2	+1.7
SYO	Syowa Base	76.36	160	⇓*e*pP	pP	15 34 03.3	+3.0
SYO	Syowa Base	76.36	160	⇑*e*sP	sP	15 34 06.2	+4.7
SYO	Syowa Base	76.36	160	⇑*e*PP	PP	15 36 47.0	-1.2
PAHR	Pah Rah Range	76.55	324	P	P	15 33 59.0	+0.3
PAHR				IAmb	IAmb	15 34 02.1	
	comp=Z,18nm,0.9s						
HLID	Hailey	76.80	329	P	P	15 34 02.3	+2.2
	baz=139						
HLID	Hailey	76.80	329	P	P	15 34 01.9	+1.8
MCMT	McKenzie Canyo	77.04	331	P	P	15 34 03.3	+1.8
BOZ	Bozeman (W)	77.10	332	P	P	15 34 03.1	+1.4
	baz=142						
BOZ	Bozeman (W)	77.10	332	P	P	15 34 02.4	+0.7
BOZ				pmax	pmax		
	comp=Z,11nm,1.4s						
BOZ	Bozeman (W)	77.10	332	P	P	15 34 02.4	+0.7
DLMT	Dillon	77.34	331	P	P	15 34 01.8	-1.2
MFID	Camas Ranch	77.37	328	P	P	15 34 05.2	+1.9
ORV	Oroville	77.62	322	P	P	15 34 06.5	+1.9
ORV				pmax	pmax		
	comp=Z,21nm,1.2s						
ORV	Oroville	77.62	322	P	P	15 34 06.5	+1.9
ORV				IAmb	IAmb	15 34 07.9	
	comp=Z,20nm,1.2s						
HRY	Holter Researc	78.06	333	P	P	15 34 06.8	-0.2
EGMT	Eagleton	78.24	334	P	P	15 34 09.1	+1.1
	baz=144						
EGMT	Eagleton	78.24	334	P	P	15 34 08.4	+0.5
EGMT				IAmb	IAmb	15 34 10.2	
	comp=Z,19nm,1.1s						
O03E	Paynes Creek	78.30	323	P	P	15 34 09.0	+0.6
	baz=133,SNR=5.2						
MOD	Modoc Plateau	78.58	325	P	P	15 34 11.6	+1.5
O02D	Mt. Diablo Mer	78.77	322	P	P	15 34 12.2	+1.1
	baz=132						
WDC	Whiskeytown Da	78.90	322	P	P	15 34 11.4	-0.2
WDC				pmax	pmax		
	comp=Z,7.0nm,1.1s						
WDC	Whiskeytown Da	78.90	322	P	P	15 34 11.4	-0.2
MSO	Missoula	79.06	331	P	P	15 34 14.0	+1.4
	baz=140						
BMO	Blue Mountains	79.15	328	P	P	15 34 14.1	+1.0
BMO				pmax	pmax		
	comp=Z,11nm,1.0s						
BMO	Blue Mountains	79.15	328	P	P	15 34 14.1	+1.0
N02D	Trinity Center	79.26	323	P	P	15 34 14.6	+0.9
	baz=132						
M04C	Macdoel	79.33	324	P	P	15 34 15.8	+1.7
	baz=133						
TOA0	Torodi Ar. Sit	79.34	71	P	P	15 34 13.9	-0.7
TOA0				IAmb	IAmb	15 34 15.6	
	comp=Z,44nm,0.9s						
TORD	Torodi Ar. Bea	79.34	71	P	P	15 34 14.6	0.0
	comp=Z,31nm,0.8s,baz=255,slow=5.0,SNR=72						
TORD	Torodi Ar. Bea	79.34	71	P	P	15 34 14.4	-0.2
K05A	Summer Lake	79.46	325	P	P	15 34 13.7	-1.2
K05A				IAmb	IAmb	15 34 38.8	
	comp=Z,22nm,1.0s						
I07A	Izee	79.69	327	P	P	15 34 17.7	+1.6
YBH	Yreka Blue Hor	79.77	323	P	P	15 34 16.2	-0.2
	comp=Z,3.6nm,0.8s,baz=110,slow=3.5,SNR=7.3						
YBH	Yreka Blue Hor	79.77	323	P	P	15 34 16.3	-0.2
YBH				pmax	pmax		
	comp=Z,8.0nm,1.1s						
YBH	Yreka Blue Hor	79.77	323	IAmb	IAmb	15 34 18.0	
	comp=Z,8.1nm,1.1s						
K04D	Chiloquin, OR	79.85	324	P	P	15 34 19.1	+2.1
	baz=133						
L04D	Klamath Falls	79.88	324	P	P	15 34 18.5	+1.4
	baz=133						
JTMT	Jette	79.92	332	P	P	15 34 17.0	-0.2
F10A	Beach Ranch, E	79.93	329	P	P	15 34 18.6	+1.3
J05D	Fort Rock, OR	80.03	325	P	P	15 34 20.0	+2.0
	baz=134						
PINE	Pine Mountain	80.23	326	P	P	15 34 21.1	+2.1
G08A	Pilot Rock	80.28	328	P	P	15 34 19.9	+0.7
L02E	Cave Junction	80.55	323	P	P	15 34 22.1	+1.5
	baz=132						
E09A	Wood Farm, Sta	80.76	329	P	P	15 34 22.1	+0.5
WALA	Waterton Lakes	80.76	333	P	P	15 34 22.7	+1.0
WALA				IAmb	IAmb	15 34 40.7	
	comp=Z,26nm,1.1s						
I05D	Terrebonne, OR	80.81	326	P	P	15 34 23.8	+1.8
	baz=134						
K02D	Willamette Mer	80.94	324	P	P	15 34 24.4	+1.7
	baz=132						
FFC	Flin Flon	81.25	342	P	P	15 34 23.9	-0.1
FFC				pmax	pmax		
	comp=Z,16nm,1.2s						
FFC	Flin Flon	81.25	342	P	P	15 34 23.9	-0.1
HAWA	Hanford	81.34	328	P	P	15 34 26.0	+1.3
HAWA				IAmb	IAmb	15 34 27.6	
	comp=Z,27nm,1.0s						
G05D	Wamic, OR	81.42	327	P	P	15 34 27.4	+2.2
	baz=134						
I03D	Drain, OR	81.44	324	P	P	15 34 27.2	+2.0
	baz=132						
D08A	Wollman Farm,	81.52	329	P	P	15 34 27.2	+1.6
TSUM	Tsumeb	81.53	107	P	P	15 34 28.0	+1.4
TSUM				IAmb	IAmb	15 34 45.1	
	comp=Z,31nm,1.1s						
NEW	Newport	81.57	331	P	P	15 34 26.3	+0.4
	comp=Z,4.7nm,1.1s,baz=132,slow=5.7,SNR=3.9						
NEW	Newport	81.57	331	P	P	15 34 27.5	+1.6
	baz=138						
NEW	Newport	81.57	331	P	P	15 34 25.7	-0.2
C09A	Chrisman Ranch	81.75	330	P	P	15 34 27.0	+0.1
C09A				IAmb	IAmb	15 34 29.5	
	comp=Z,18nm,0.8s						
F05D	White Salmon	81.94	327	P	P	15 34 29.7	+1.8
	baz=134						
FCC	Fort Churchill	83.05	348	P	P	15 34 33.9	+0.6
FCC				pmax	pmax		
	comp=Z,21nm,0.8s						
FCC	Fort Churchill	83.05	348	P	P	15 34 33.9	+0.6
FCC				IAmb	IAmb	15 34 34.5	
	comp=Z,21nm,0.8s						
B05A	Bryant	83.90	328	P	P	15 34 38.5	+0.6
	baz=134						
PMTG	Montargil	84.60	44	*e*P	P	15 34 43.3	+1.6
BOSA	Boshof	84.65	119	P	P	15 34 42.8	+0.2
	comp=Z,2.8nm,0.7s,baz=283,slow=1.8,SNR=6.6						
BOSA	Boshof	84.65	119	IAmb	IAmb	15 35 00.3	
	comp=Z,34nm,1.1s						
PBAR	Barrancos	84.87	45	*e*P	P	15 34 44.6	+1.5
PCAS	Casmilo, Conde	84.98	43	*e*P	P	15 34 45.0	+1.4
COI	Coimbra	85.12	43	*e*P	P	15 34 46.2	+1.9
PMRV	Marv??o	85.33	44	*e*P	P	15 34 46.4	+0.9
PCBR	Castelo Branco	85.51	44	*e*P	P	15 34 47.0	+0.7
MTE	Manteigas	85.78	43	*e*P	P	15 34 48.7	+1.0
PVRL	Vila Real	86.16	42	*e*P	P	15 34 50.7	+1.2
PCAB	Cabril	86.21	42	*e*P	P	15 34 50.6	+0.8
TAM	Tamanrasset	86.81	64	P	P	15 34 54.4	+1.1
TAM				pmax	pmax		
	comp=Z,9.0nm,0.9s						
TAM	Tamanrasset	86.81	64	P	P	15 34 54.4	+1.1
TAM				IAmb	IAmb	15 34 55.7	
	comp=Z,9.2nm,0.9s						
ESDC	Sonseca Array	87.70	45	P	P	15 34 57.6	+0.5
	comp=Z,2.9nm,1.0s,baz=244,slow=6.5,SNR=7.0						
ESDC				LR	LR	16 14 06.5	
	comp=Z,242nm,18.1s,baz=185,slow=36						
ESDC	Sonseca Array	87.70	45	P	P	15 34 57.6	+0.5
ANGG	Ammassalik, Gr	91.27	13	P	P	15 35 13.2	+0.1
YKA	Yellowknife Ar	91.38	341	P	P	15 35 14.0	+0.3
	comp=Z,5.3nm,0.7s,baz=132,slow=4.8,SNR=94						
DLBC	Dease Lake	94.11	333	P	P	15 35 27.6	+1.0
	comp=Z,7.3nm,0.8s,baz=106,slow=7.0,SNR=9.9						
DLBC	Dease Lake	94.11	333	P	P	15 35 27.6	+1.0
DLBC				IAmb	IAmb	15 35 28.7	
	comp=Z,10nm,0.9s						
KEST	Kesra	95.25	54	LR	LR	16 20 15.6	
	comp=Z,564nm,18.8s,baz=342,slow=37						
INK	Inuvik	101.11	340	P	Pdif	15 35 57.2	-0.5
	comp=Z,1.9nm,1.0s,baz=98,slow=4.3,SNR=4.0						
ILAR	Eielson Array	104.21	335	Pdiff	Pdif	15 36 10.8	-0.9
	comp=Z,0.4nm,0.8s,baz=154,slow=4.6,SNR=5.6						
KLMR	Klimovskoe	119.16	32	*e*PKIKP	PKPdf	15 40 56.4	-0.3
KLMR				pmax	pmax		
	comp=Z,15nm,1.3s						
KLMR	Klimovskoe	119.16	32	*e*PKPdf	PKPdf	15 40 56.5	-0.3
KLMR				AMP		15 40 58.7	
	comp=Z,15nm,1.3s						
KBZ	Khabaz	122.05	52	PKP	PKPdf	15 41 02.7	-0.2
	comp=Z,4.3nm,0.8s,baz=30,slow=3.6,SNR=7.0						
H11S2	WAKE ISLAND Hy	126.18	277	T	T	18 00 45.2	
	baz=105,slow=75,SNR=124						
H11S1	WAKE ISLAND Hy	126.19	277	T	T	18 00 39.9	
	baz=105,slow=75,SNR=139						
H11S3	WAKE ISLAND Hy	126.20	277	T	T	18 00 56.5	
	baz=105,slow=75,SNR=116						
H11N3	WAKE ISLAND Hy	126.29	279	T	T	18 00 56.5	
	baz=105,slow=74,SNR=121						
H11N2	WAKE ISLAND Hy	126.31	279	T	T	18 00 48.3	
	baz=105,slow=74,SNR=96						
H11N1	WAKE ISLAND Hy	126.31	279	T	T	18 00 57.7	
	baz=105,slow=74,SNR=142						
ASAR	Alice Springs	128.32	209	PKP	PKiKP	15 41 16.4	+0.1
	comp=Z,2.4nm,0.8s,baz=148,slow=2.0,SNR=23						
ASAR	Alice Springs	128.32	209	PKIKP	PKPdf	15 41 15.7	0.0
ASAR	Alice Springs	128.32	209	PKPdf	PKPdf	15 41 15.7	0.0
AS31	Alice Springs	128.32	209	PKPdf	PKPdf	15 41 15.8	+0.2
TIXI	Tiksi	129.37	352	⇓*i*PKIKP	PKPdf	15 41 16.1	+0.1
TIXI	Tiksi	129.37	352	PKPdf	PKPdf	15 41 16.2	+0.1
ARU	Arti	129.85	34	*i* PKIKP	PKiKP	15 41 18.8	+0.6
ARU						15 43 31.8	
ARU	Arti	129.85	34		PKiKP	15 41 17.9	-0.3
SEY	Seymchan	130.13	336	PKP	PKiKP	15 41 19.1	+0.6
	comp=Z,4.5nm,0.8s,baz=141,slow=3.6,SNR=14						
SEY	Seymchan	130.13	336	⇑*i*PKIKP	PKiKP	15 41 18.9	+0.4
NRIK	Noril'sk	131.20	10	PKP	PKiKP	15 41 20.4	-0.2
	comp=Z,2.3nm,0.9s,baz=45,slow=7.1,SNR=4.2						
NRIK	Noril'sk	131.20	10	⇓*i*PKIKP	PKiKP	15 41 20.7	+0.2
WRA	Warramunga Arr	131.31	212	PKP	PKiKP	15 41 21.9	-0.4
	comp=Z,0.9nm,0.6s,baz=150,slow=1.6,SNR=9.6						
WRA	Warramunga Arr	131.31	212	PKIKP	PKPdf	15 41 21.8	+0.4
WRA	Warramunga Arr	131.31	212		PKPdf	15 41 21.8	+0.4
WRAB	Tennant Creek	131.31	212	⇑*i*PKIKP	PKiKP	15 41 21.9	-0.4
ABKAR	Akbulak array	132.99	43	PKPdf	PKPdf	15 41 22.9	-0.7
ABKAR	Akbulak array	132.99	43	PKPdf	PKiKP	15 41 24.8	+0.1
BRVK	Borovoye	137.43	34	⇑*i*PKIKP	PKiKP	15 41 33.2	-0.4
BRVK	Borovoye	137.43	34	PKPdf	PKiKP	15 41 32.9	-0.7
YAK	Yakutsk	137.90	346	⇑*i*PKIKP	PKPdf	15 41 32.6	+0.3
KURK	Kurchatov	143.00	32	⇓*i*PKIKP	PKPdf	15 41 43.4	+1.5
KURK	Kurchatov	143.00	32	PKPdf	PKPdf	15 41 40.3	-1.6
ZALV	Zalesovo Beam	143.46	24	PKP	PKPbc	15 41 40.2	+0.4
	comp=Z,18nm,0.9s,baz=301,slow=2.2,SNR=21						
ZALV	Zalesovo Beam	143.46	24		PKPbc	15 41 39.0	-0.8
BOD	Bodaibo	144.38	356	*e*PKIKP	PKPab	15 41 41.9	-0.3
BOD				pmax	pmax		
	comp=Z,30nm,0.9s						
AAK	Ala-Archa	144.79	47*c*	*i*PKIKP	PKPdf	15 41 46.3	+0.8
AAK	Ala-Archa	144.79	47	PKPdf	PKPdf	15 41 46.2	+0.6
KUU	Kurty	145.45	44	*e*PKP	PKPbc	15 41 46.2	-0.3
	baz=43						
KUU	Kurty	145.45	44	*e*PKIKP	PKPbc	15 41 46.1	-0.3
CHKK	Chushkaly	145.88	43	*e*PKP	PKPab	15 41 48.5	+0.2
	baz=43						
CHKK	Chushkaly	145.88	43	*e*PKIKP	PKPab	15 41 48.4	+0.2
AAA	Alma-Ata	146.14	44	*e*PKP	PKPab	15 41 49.5	+0.2
	baz=44						
AAA	Alma-Ata	146.14	44	*e*PKP2	PKPab	15 41 49.5	+0.2
TDK	Taldyqorghan	146.19	41	*e*PKP	PKPab	15 41 49.8	+0.4
	baz=40						
TDK	Taldyqorghan	146.19	41	*e*PKP2	PKPab	15 41 49.8	+0.4
TNSS	Tian-Shan	146.24	45	*e*PKP	PKPab	15 41 50.0	-0.2
	baz=44						
TNSS	Tian-Shan	146.24	45	*e*PKP2	PKPab	15 41 49.9	-0.2
MDOK	Medeo	146.25	44	*e*PKP	PKPbc	15 41 49.0	-0.1
	baz=44						
MDOK	Medeo	146.25	44	*e*PKP2	PKPbc	15 41 49.0	-0.1
NIL	Nilore	146.52	62	PKIKP	PKPdf	15 41 48.7	+0.1
NIL	Nilore	146.52	62		PKPdf	15 41 48.6	+0.1
KSH	Kashi	147.03	51	PKPbc	PKPbc	15 41 50.6	-0.9
KSH				PP	PP	15 45 19.9	+3.7
KSH				SKS	SKSdf	15 48 58.8	+0.8
KSH				AMB	AMB		
	comp=Z,2µm,13.8s						
KPKS	Kokpek	147.15	43	*e*PKP	PKPdf	15 41 49.8	+0.4
	baz=42						
KPKS	Kokpek	147.15	43	*e*PKIKP	PKPdf	15 41 49.8	+0.4
SATY	Saty	147.17	44	*e*PKP	PKPbc	15 41 51.5	-0.3
	baz=43						
SATY	Saty	147.17	44	*e*PKP2	PKPbc	15 41 51.4	-0.3
MAKZ	Makanchi	147.18	35	PKIKP	PKPdf	15 41 49.7	+0.4
MAKZ	Makanchi	147.18	35	PKPdf	PKPdf	15 41 49.7	+0.4
MK31	Makanchi Array	147.36	35	⇓*e*PKIKP	PKPdf	15 41 50.7	+1.1
MK31	Makanchi Array	147.36	35		PKPdf	15 41 50.0	+0.4
MKAR	Makanchi Array	147.36	35	PKPbc	PKPdf	15 41 50.5	+0.9
	comp=Z,21nm,0.8s,baz=349,slow=1.3,SNR=66						
MKAR	Makanchi Array	147.36	35	PKPdf	PKPdf	15 41 49.4	-0.2
SHLS	Shalkode	147.79	43	*e*PKP	PKPbc	15 41 52.2	-1.2
	baz=42						
SHLS	Shalkode	147.79	43	*e*PKIKP	PKPbc	15 41 52.2	-1.2
ZSN	Zaisan	148.24	32	*e*PKP	PKPbc	15 41 53.5	-0.9
	baz=31						
ZSN	Zaisan	148.24	32	*e*PKIKP	PKPbc	15 41 53.4	-0.9
SIJI	Sorong	148.42	226	PKPbc	PKiKP	15 41 58.0	+0.6
	comp=Z,5.9nm,0.9s,baz=112,slow=5.2,SNR=4.3						
IRK	Irkutsk	149.90	6	*e*PKP2	PKPbc	15 41 58.4	0.0
IRK				pmax	pmax		
	comp=Z,50nm,2.1s						
MOY	Mondy	150.04	10	*e*PKP2	PKPbc	15 41 58.7	-0.2
MOY				pmax	pmax		
	comp=Z,34nm,1.4s						
CISI	Cisompet, Garu	150.27	177		PKiKP	15 42 01.3	0.0
TLY	Talaya	150.39	7*c*	*i*PKP2	PKiKP	15 42 01.5	+1.1
TLY				pmax	pmax		
	comp=Z,7.0nm,1.0s						
HYB	Hyderabad	150.85	94	*i* PKP	PKPbc	15 42 01.0	-0.7
LEM	Lembang	150.98	177	PKPbc	PKiKP	15 42 02.9	0.0
	comp=Z,20nm,0.6s,baz=8.6,slow=5.3,SNR=10.0						
MJAR	Matsushiro Arr	151.13	306	PKPbc	PKiKP	15 42 02.3	-0.1
	comp=Z,8.5nm,0.8s,baz=86,slow=1.8,SNR=15						
MJAR	Matsushiro Arr	151.13	306	PKIKP	PKPbc	15 42 01.9	+0.1
MJAR	Matsushiro Arr	151.13	306		PKPbc	15 42 01.9	+0.1
MAJO	Matsushiro	151.13	306*c*	*i*PKIKP	PKiKP	15 42 03.3	+0.9
MAJO				pmax	pmax		
	comp=Z,33nm,1.7s						
MAJO	Matsushiro	151.13	306		PKiKP	15 42 02.7	+0.3
USA0B	Ussuriysk Arra	151.18	325	PKIKP	PKiKP	15 42 02.1	-0.1
USA0B	Ussuriysk Arra	151.18	325		PKiKP	15 42 02.1	-0.1
USRK	Ussuriysk Ar.	151.18	325	PKPbc	PKiKP	15 42 02.4	+0.2
	comp=Z,10.0nm,0.9s,baz=36,slow=2.4,SNR=12						
USRK	Ussuriysk Ar.	151.18	325	PKIKP	PKiKP	15 42 02.0	-0.2
USRK	Ussuriysk Ar.	151.18	325		PKiKP	15 42 01.9	-0.2
ZAK	Zakamensk	151.63	8	*e*PKIKP	PKPdf	15 41 57.2	+0.8
ZAK				pmax	pmax		
	comp=Z,11nm,1.1s						
WMQ	Urumqi	152.18	35	*e*PKPbc	PKPdf	15 41 57.1	-0.3
WMQ				AMB	AMB		
	comp=Z,140nm,4.7s						
WMQ	Urumqi	152.18	35	PKIKP	PKPdf	15 41 56.2	-1.2
WMQ	Urumqi	152.18	35		PKPdf	15 41 56.2	-1.2
SONM	Songino Array	154.46	4	PKP	PKPdf	15 42 02.3	+1.6
	comp=Z,2.2nm,0.9s,baz=304,slow=1.4,SNR=12						
SONM				PKPbc	PKPbc	15 42 08.3	-0.6
	comp=Z,4.0nm,0.8s,baz=335,slow=1.1,SNR=14						
SONM				PKPab	PKPab	15 42 22.4	-0.8
	comp=Z,3.5nm,0.7s,baz=328,slow=3.9,SNR=10						
SONM	Songino Array	154.46	4	PKIKP	PKPdf	15 42 01.3	+0.7
SONM	Songino Array	154.46	4		PKPdf	15 42 01.3	+0.7
ULN	Ulaanbaatar	154.47	3	PKIKP	PKPdf	15 41 59.3	-1.4
ULN	Ulaanbaatar	154.47	3		PKPdf	15 41 59.3	-1.4
KSRS	Korea Array	157.87	317	PKPbc	PKPbc	15 42 24.2	
	comp=Z,0.5nm,0.7s,baz=22,slow=1.3,SNR=4.7						
KSRS				PKPab	PKPab	15 42 38.1	+0.1
	comp=Z,1.1nm,0.9s,baz=53,slow=4.2,SNR=4.2						
GTA	Gaotai	161.21	23	⇑PKP	PKPdf	15 42 10.7	+1.5
GTA				PKPab	PKPab	15 42 53.2	+0.6
GTA				LR	LR		
	comp=Z,100nm,18.9s						
GTA				LR	LR		
	comp=Z,99nm,20.4s						
GTA				LR	LR		
	comp=Z,190nm,18.9s						
HHC	Hu-ho-hao-te	161.42	354	*e*PKP	PKPdf	15 42 10.2	+0.8
NJ2	Nanjing	167.03	320	*e*PKP	PKPdf	15 42 14.4	-0.1
CMAR	Chiang Mai Arr	169.69	110	PKP	PKPdf	15 42 17.3	+0.6
	comp=Z,0.8nm,0.8s,baz=296,slow=3.0,SNR=7.1						
CMAR				PKPab	PKPab	15 43 31.0	+0.4
	comp=Z,1.0nm,0.9s,baz=259,slow=4.8,SNR=5.5						
CD2	Chengdu	170.19	28	PKP	PKPdf	15 42 15.5	-1.2

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*IDC **02** 15:30:14.9±2.4, 8°.15S×120°.95E, h196^{km}±20^{km}, mb3.0/1, mb1 3.0/5, mb1mx2.9/36, mbtmp3.5/5, Error ellipse: s-maj=80.4km s-min=15.8km az=55.0*

*DJA **02** 15:30:15.4±0.5, 8°S±3°×12°1E±°, h165^{km}±6^{km}, M3.5/12, MLv3.5/12*

ISC 02 15:30:13.3±0.9, **8°.44S**±0°.05×**120°.72E**±0°.05, **h200**^{km}**, n16,** σ**1^{s}.78**/25**, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EDFI	Ende, Flores	1.01	108	P	Pn	15 30 42.4	-0.8
EDFI				S	Sn	15 31 02.9	-3.5
WSI	Waingapu	1.29	199	P	Pn	15 30 44.9	-0.3
MMRI	Maumere	1.51	97	P	Pn	15 30 46.7	-0.4
MMRI				S	Sn	15 31 11.3	-2.0
BASI	Baing, Sumba	1.77	185	P	Pn	15 30 49.4	-0.1
BASI				S	Sn	15 31 16.0	-1.9
BSSI	Bau Bau, Buton	2.30	354	P	Pn	15 30 54.0	-1.0
PLAI	Plampang	2.94	262	P	Pn	15 31 02.7	+0.5
PLAI				S	Sn	15 31 38.3	-2.1
BKSI	Bulukumba	3.16	349	P	Pn	15 31 04.4	-0.4
BKSI				S	Sn	15 31 44.2	-1.0
BATI	Baumata	3.39	121	P	Pn	15 31 08.3	+0.6
	11nm,0.3s,baz=164,slow=5.8,SNR=14						
BATI				S	Sn	15 31 51.5	+1.2
	14nm,0.3s,baz=165,slow=21,SNR=5.5						
BATI	Baumata	3.39	121	P	Pn	15 31 09.4	+1.7
SOEI	Soe	3.74	111	P	Pn	15 31 12.9	+0.9
TWSI	Taliwang, Sumb	3.81	265	P	Pn	15 31 13.4	+0.7
BNSI	Bone	4.06	351	P	Pn	15 31 16.8	+0.9
FITZ	Fitzroy Crossi	10.72	154	P	Pn	15 32 44.0	+2.1
	0.3nm,0.3s,baz=342,slow=12,SNR=6.6						
FITZ				S	Sn	15 34 38.8	-2.9
	0.3nm,0.3s,baz=81,slow=23,SNR=2.7						
WRA	Warramunga Arr	17.45	132	P	Pn	15 34 07.1	+2.2
	0.1nm,0.3s,baz=308,slow=13,SNR=8.1						
WRA				S	S	15 37 12.5	-1.9
	0.1nm,0.3s,baz=306,slow=24,SNR=3.4						
ASAR	Alice Springs	19.71	142	P	Pn	15 34 32.1	+0.4
	0.1nm,0.3s,baz=323,slow=10,SNR=12						
ASAR				S	S	15 38 02.9	+3.7
	0.0nm,0.3s,baz=325,slow=24,SNR=2.6						
MKAR	Makanchi Array	64.75	332	P	P	15 40 31.1	+0.8
	0.3nm,0.6s,baz=152,slow=7.9,SNR=5.7						

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*DJA **02** 16:00:08.8±0.4, 6°S±3°×10°3E±°, h58^{km}±9^{km}, M4.4/13, mb4.6/6, mB5.2/4, MLv4.3/13, Mw(mB)4.6/4*

*NEIC **02** 16:00:11.4±1.6, 5°.74S±0°.10×102°.78E±0°.10, h43^{km}±7^{km}, mb4.2/15, Error ellipse: s-maj=17.4km s-min=9.6km az=224.0*

*IDC **02** 16:00:13.3±5.3, 5°.69S×102°.85E, h52^{km}±45^{km}, mb3.7/11, mb1 3.8/12, mb1mx3.6/54, mbtmp4.0/12, ML3.9/1, Error ellipse: s-maj=46.7km s-min=16.4km az=58.0*

ISC 02 16:00:09.9±0.7, **5°.97S**±0°.07×**102°.68E**±0°.07, **h35**^{km}**, n57,** σ**1^{s}.20**/57**, mb4.2**/21**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MNAI	Manna	1.62	10		Pn	16 00 35.0	-1.0
MNAI	Manna	1.62	10	P	Pn	16 00 34.8	-1.1
MNAI				S	Sn	16 00 56.7	+1.1
LWLI	Liwa	1.67	56	P	Pn	16 00 35.2	-1.5
LWLI				S	Sn	16 00 57.0	0.0
KASI	Kota Agung	1.86	76	P	Pn	16 00 38.4	-0.9
KASI				S	Sn	16 01 01.0	-0.6
MDSI	Maura Dua	2.10	46	P	Pn	16 00 41.2	-1.3
MDSI				S	Sn	16 01 06.9	-0.5
LHSI	Lahat	2.29	22	P	Pn	16 00 44.8	-0.3
KSI	Kapahiang	2.30	358	P	Pn	16 00 45.0	-0.4
KLSI		2.41	58	P	Pn	16 00 46.3	-0.5
LEM	Lembang	4.99	100	P	Pn	16 01 25.9	+3.5
	5.3nm,0.3s,baz=269,slow=12,SNR=7.1						
SDSI	Sungai Dareh	5.15	346	P	Pn	16 01 24.4	-0.2
	0.1nm23nm,0.7s						
CISI	Cisompet, Garu	5.34	107		Pn	16 01 26.7	-0.5
CISI	Cisompet, Garu	5.34	107	P	Pn	16 01 27.0	-0.2
	0.3nm2µm59nm,0.5s						
XMIS	Christmas Isla	5.37	147		Pn	16 01 24.2	-3.3
PDSI	Padang	5.49	336	P	Pn	16 01 28.9	-0.3
	0.2nm929nm27nm,0.4s						
JCJI	Jatiwangi	5.58	96	P	Pn	16 01 28.9	-1.6
	1.5nm6µm190nm,0.4s						
MNSI	Mandailing Nat	7.39	335	P	Pn	16 01 54.4	-1.0
	0.1nm14nm,0.5s						
UGM	Wanagama	8.03	104	Pn	Pn	16 02 05.4	+1.3
UGM	Wanagama	8.03	104	P	Pn	16 02 02.9	-1.2
	0.4nm96nm,1.3s						
GSI	Gunungsitoli	8.84	325	Pn	Pn	16 02 14.2	-0.9
GSI	Gunungsitoli	8.84	325	P	Pn	16 02 14.3	-0.9
JAGI	Jajag, Banyuwa	11.65	103	Pn	Pn	16 02 54.0	+0.2
LUWI	Luwuk	20.64	77	P	P	16 04 45.1	-1.5
SOEI	Soe	21.71	101	P	P	16 04 58.3	0.0
CMAR	Chiang Mai Arr	24.55	351	P	P	16 05 25.4	-1.1
	1.7nm,0.4s,baz=182,slow=8.7,SNR=16						
CMAR	Chiang Mai Arr	24.55	351	P	P	16 05 24.3	-2.2
CHTO	Chiang Mai	24.90	352	P	P	16 05 27.8	-1.9
H08S2	Diego Garcia H	30.01	265	T	T	16 37 40.1	
	baz=90,slow=74,SNR=3.7						
H08S3	Diego Garcia H	30.02	265	T	T	16 37 41.7	
	baz=90,slow=74,SNR=32						
H08S1	Diego Carcia H	30.03	265	T	T	16 37 41.7	
	baz=90						
WB0	Warramunga Arr	33.74	117	P	P	16 06 48.7	+0.3
WB0				IAmb	IAmb	16 07 05.9	
	comp=Z,12nm,1.4s						
WRA	Warramunga Arr	33.75	117	P	P	16 06 49.1	+0.6
	comp=Z,0.7nm,0.7s,baz=287,slow=10.0,SNR=6.2						
WB2	Warramunga Arr	33.76	117	P	P	16 06 49.1	+0.5
WB2				IAmb	IAmb	16 06 51.7	
	comp=Z,6.1nm,1.2s						
WR0	Warramunga Arr	33.94	117	P	P	16 06 49.9	-0.1
WR0				IAmb	IAmb	16 07 15.8	
	comp=Z,5.6nm,1.4s						
AS31	Alice Springs	34.81	124	P	P	16 06 58.3	+0.6
ASAR	Alice Springs	34.81	124	P	P	16 06 58.9	+1.3
	comp=Z,1.4nm,0.7s,baz=304,slow=8.3,SNR=28						
TAPN	Taplejung	36.15	337	*e*P	P	16 07 10.8	+1.5

	comp=Z,22nm,0.9s						
PKIN	**Phulchoki**	**37.30**	**334**	*e*P	P	16 07 24.8	+5.7
GUN	**Gumba**	**37.38**	**335**	*e*P	**P**	**16 07 20.8**	**+0.9**
	comp=Z,7.2nm,0.5s						
DANN	**Dangsing**	**38.69**	**333**	*e*P	**P**	**16 07 31.7**	**+0.9**
	comp=Z,9.6nm,0.6s						
STKA	**Stephens Creek**	**44.55**	**130**	P	**P**	**16 08 20.8**	**+2.3**
	comp=Z,1.7nm,0.6s,baz=341,slow=9.1,SNR=4.6						
KSRS	**Korea Array**	**49.20**	**27**	P	**P**	**16 08 53.6**	**-1.0**
	comp=Z,0.7nm,0.5s,baz=224,slow=7.6,SNR=8.4						
SONM	**Songino Array**	**53.67**	**3**	P	**P**	**16 09 28.2**	**+0.1**
	comp=Z,1.4nm,0.5s,baz=184,slow=8.7,SNR=14						
SONM	**Songino Array**	**53.67**	**3**	P	**P**	**16 09 28.4**	**+0.2**
MK31	**Makanchi Array**	**55.56**	**343**	P	**P**	**16 09 41.9**	**+0.1**
MK31				IAmb	IAmb	16 09 56.0	
	comp=Z,1.3nm,0.9s						
MKAR	**Makanchi Array**	**55.56**	**343**	P	**P**	**16 09 42.0**	**+0.2**
	comp=Z,1.0nm,0.5s,baz=148,slow=9.4,SNR=29						
MKAR	**Makanchi Array**	**55.56**	**343**	P	**P**	**16 09 41.4**	**-0.4**
USRK	**Ussuriysk Ar.**	**56.49**	**25**	P	**P**	**16 09 47.7**	**-0.8**
	comp=Z,1.2nm,0.5s,baz=218,slow=9.0,SNR=4.4						
USRK	**Ussuriysk Ar.**	**56.49**	**25**	P	**P**	**16 09 46.9**	**-1.6**
KURK	**Kurchatov**	**60.15**	**343**	P	**P**	**16 10 13.7**	**-0.1**
KURK				IAmb	IAmb	16 10 14.7	
	comp=Z,1.6nm,0.9s						
KLR	**Kul'dur**	**60.53**	**21**	P	**P**	**16 10 15.4**	**-1.1**
	comp=Z,1.2nm,0.7s,baz=304,slow=2.6,SNR=6.0						
ZAA0	**Zalesovo Array**	**61.55**	**348**	P	**P**	**16 10 22.6**	**-0.7**
ZALV	**Zalesovo Beam**	**61.55**	**348**	P	**P**	**16 10 23.1**	**-0.2**
	comp=Z,1.9nm,0.4s,baz=156,slow=5.6,SNR=14						
BRVK	**Borovoye**	**64.87**	**339**	P	**P**	**16 10 45.5**	**+0.1**
BRVK				IAmb	IAmb	16 10 54.0	
	comp=Z,2.3nm,1.1s						
ABKAR	**Akbulak array**	**66.38**	**331**	P	**P**	**16 10 55.3**	**+0.2**
ABKAR				IAmb	IAmb	16 10 56.4	
	comp=Z,2.0nm,0.9s						
BRTR	**Keskin Array B**	**77.95**	**313**	P	**P**	**16 12 06.2**	**+1.4**
	comp=Z,0.7nm,0.6s,baz=158,slow=4.7,SNR=3.5						
TXAR	**Lajitas Array**	**145.96**	**44**	PKPbc	**PKPab**	**16 19 48.4**	**+1.2**
	comp=Z,1.1nm,0.8s,baz=265,slow=1.2,SNR=7.9						
TXAR	**Lajitas Array**	**145.96**	**44**	PKPdf	**PKPdf**	**16 19 44.5**	**-1.5**

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*IDC **02** 16:02:31.3±1.3, 52°.46N×132°.23W, h0^{km}, mb3.7/3, mb1 3.7/9, mb1mx3.5/52, mbtmp3.5/9, ML3.6/6, MS4.0/2, Ms1 4.0/2, ms1mx3.2/44, Error ellipse: s-maj=17.0km s-min=8.9km az=39.0*

*PGC **02** 16:02:34.0±0.8, 52°.68N×132°.18W, h22^{km}, ML3.5/13, ML3.1/14, 67km Ssw of Sandspit, Bc Queen Charlotte Islands Region*

ISC 02 16:02:33.0±1.4,**52°.61N**±0°.04×**132°.20W**±0°.05,**h10**^{km}±8^{km}, **n37**,σ**1^{s}.62**/50,**mb3.8**/3,**Queen Charlotte Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNB	**Barry Inlet**	**0.28**	**98**	P	**Pb**	**16 02 40.2**	**+0.1**
BNB				S	**Sb**	**16 02 44.2**	**-0.5**
HG1B	**Mitchell Dam**	**0.32**	**7**	P	**Pg**	**16 02 39.9**	**+0.4**
HG1B				S	**Sg**	**16 02 43.9**	**0.0**
MOBC	**Moresby Island**	**0.55**	**15**	P	**Pg**	**16 02 43.7**	**0.0**
MOBC				S	**Sg**	**16 02 50.0**	**-1.0**
DIB	**Dawson Inlet,**	**0.61**	**344**	P	**Pg**	**16 02 44.7**	**-0.3**
DIB				S	**Sg**	**16 02 52.1**	**-0.9**
H02S1	**DAWSON INLET T**	**0.61**	**344**	Pg	**Pg**	**16 02 44.6**	**-0.3**
H02S1				Lg	Lg	16 02 52.2	
BNAB	**Bonilla**	**1.29**	**46**	P	**Pn**	**16 02 55.6**	**-1.4**
BNAB				S	**Sb**	**16 03 12.6**	**-1.4**
MASB	**Masset**	**1.41**	**4**	P	**Pn**	**16 02 57.8**	**-0.8**
MASB				S	**Sn**	**16 03 14.7**	**-2.5**
NDB	**Naden**	**1.42**	**342**	P	**Pn**	**16 02 57.6**	**-1.3**
NDB				S	**Sn**	**16 03 15.3**	**-2.2**
LIB	**Langara Island**	**1.72**	**343**	Pn	**Pn**	**16 03 01.4**	**-1.5**
LIB				Sn	**Sn**	**16 03 23.0**	**-2.0**
GRNB	**Grenville Isla**	**1.83**	**47**	Pn	**Pn**	**16 03 02.9**	**-1.6**
GRNB				Pg	**Pb**	**16 03 05.5**	**-1.0**
GRNB				Sg	**Sn**	**16 03 28.3**	**+0.7**
RUBB	**Prince Rupert**	**2.07**	**33**	Pn	**Pn**	**16 03 06.6**	**-1.2**
RUBB				Pg	**Pb**	**16 03 09.8**	**-0.9**
RUBB				Sn	**Sn**	**16 03 31.6**	**-2.0**
RUBB				Sg	**Sb**	**16 03 35.8**	**-0.6**
BBB	**Bella Bella**	**2.54**	**98**	Pn	**Pn**	**16 03 13.3**	**-0.9**
	4.1nm,0.3s,baz=280,slow=10,SNR=36						
BBB				Lg	Lg	16 03 50.2	
	70nm,0.3s,baz=196,slow=23,SNR=21						
BBB	**Bella Bella**	**2.54**	**98**	Pn	**Pn**	**16 03 13.4**	**-0.8**
BBB				Pg	**Pb**	**16 03 19.3**	**+0.7**
BBB				Sg	**Sb**	**16 03 50.4**	**+0.5**
KITB	**Kitimat**	**2.59**	**54**	Pn	**Pn**	**16 03 13.8**	**-1.1**
KITB				Pg	**Pb**	**16 03 18.8**	**-0.7**
KITB				Sg	**Sb**	**16 03 50.9**	**-0.4**
HOLB	**Holberg**	**3.21**	**126**	Sn	**Sn**	**16 04 00.2**	**-1.7**
PHC	**Port Hardy**	**3.53**	**121**	Pn	**Pn**	**16 03 26.8**	**-1.0**
PHC				Sn	**Sn**	**16 04 06.3**	**-3.2**
MAYB	**Maynard**	**3.84**	**123**	Pn	**Pn**	**16 03 31.1**	**-1.2**
TLCB	**Telegraph Cove**	**3.93**	**120**	Pn	**Pn**	**16 03 32.8**	**-0.6**
TLCB				Sn	**Sn**	**16 04 16.2**	**-3.3**
WOSB	**Woss**	**4.30**	**123**	Pn	**Pn**	**16 03 39.2**	**+0.8**
NCRB	**Newcastle Ridg**	**4.43**	**118**	Pn	**Pn**	**16 03 40.0**	**-0.3**
FSB	**Fort Saint Jam**	**5.05**	**65**	Pn	**Pn**	**16 03 48.4**	**-0.4**
FSB				Pg	**Pb**	**16 04 03.8**	**+2.4**
DLBC	**Dease Lake**	**5.96**	**11**	Pn	**Pn**	**16 04 03.7**	**+2.4**
	3.2nm,0.3s,baz=171,slow=6.8,SNR=60						
DLBC				Sn	**Sn**	**16 05 15.5**	**+5.9**
	1.3nm,0.3s,baz=193,slow=15,SNR=2.2						
DLBC				Lg	Lg	16 05 34.5	
	1.7nm,0.3s,baz=321,slow=18,SNR=7.2						
NEW	**Newport**	**10.55**	**108**	LR	LR	16 08 57.4	
	comp=Z,617nm,19.3s,baz=292,slow=37						
YKA	**Yellowknife Ar**	**13.63**	**37**	Pn	**Pn**	**16 05 45.6**	**-0.5**
	0.2nm,0.3s,baz=221,slow=12,SNR=16						
YKA				Lg	Lg	16 09 37.8	
	0.0nm,0.3s,baz=196,slow=24,SNR=3.4						
ILAR	**Eielson Array**	**14.33**	**334**	Pn	**Pn**	**16 05 57.8**	**+2.1**
	0.0nm,0.3s,baz=164,slow=10,SNR=3.3						
INK	**Inuvik**	**15.76**	**358**	Pn	**Pn**	**16 06 14.8**	**+0.2**
	0.1nm,0.3s,baz=144,slow=8.7,SNR=2.5						
PDAR	**Pinedale Array**	**18.08**	**114**	P	**P**	**16 06 45.4**	**+0.6**
	0.1nm,0.3s,baz=320,slow=8.3,SNR=2.6						
TXAR	**Lajitas Array**	**31.34**	**127**	P	**P**	**16 08 54.0**	**+0.4**
	0.4nm,0.6s,baz=342,slow=8.5,SNR=2.7						
H11N2	**WAKE ISLAND Hy**	**56.95**	**259**	T	T	17 14 10.7	
	baz=39,slow=76,SNR=1466						
H11N3	**WAKE ISLAND Hy**	**56.96**	**259**	T	T	17 14 08.1	
	baz=39,slow=76,SNR=1118						
H11N1	**WAKE ISLAND Hy**	**56.97**	**259**	T	T	17 14 11.8	
	baz=39,slow=76,SNR=1388						
H11S1	**WAKE ISLAND Hy**	**58.02**	**258**	T	T	17 15 32.1	
	baz=39,slow=76,SNR=41						
H11S2	**WAKE ISLAND Hy**	**58.02**	**258**	T	T	17 15 29.7	
	baz=39,slow=76,SNR=44						
H11S3	**WAKE ISLAND Hy**	**58.03**	**258**	T	T	17 15 30.9	
	baz=39,slow=76,SNR=41						
ZALV	**Zalesovo Beam**	**69.42**	**338**	P	**P**	**16 13 40.2**	**-0.5**
	1.1nm,0.7s,baz=5.7,slow=6.3,SNR=3.7						
JOW	**Kunigami**	**74.59**	**294**	LR	LR	16 44 49.4	
	comp=Z,94nm,19.5s,baz=165,slow=34						
MKAR	**Makanchi Array**	**76.67**	**336**	P	**P**	**16 14 24.5**	**+0.8**
	0.6nm,0.6s,baz=38,slow=5.3,SNR=6.8						

IDC 02 16:03:59.3±3.6,**15°.15N**×**145°.30E**,**h0**^{km},**mb3.5**/4, **mb1 3.7**/4,**mb1mx3.4**/52,**mbtmp3.5**/4,**MS3.2**/1,**Ms1 3.2**/1, **ms1mx2.7**/31,**Error ellipse: s-maj=127.9km s-min=18.3km az=85.0,Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**1.60**	**195**	Pn	Pn	16 04 26.7	-2.1
	2.9nm,0.3s,baz=9.5,slow=12,SNR=4.6						
GUMO				Sn	Sg	16 04 51.6	+0.8
	13nm,0.3s,baz=157,slow=20,SNR=12						
JCJ	**Chichijima**	**12.24**	**347**	LR	LR	16 10 17.5	
	comp=Z,127nm,21.6s,baz=216,slow=31						
WRA	**Warramunga Arr**	**36.50**	**197**	P	P	16 11 07.5	+1.0
	1.0nm,0.8s,baz=22,slow=8.7,SNR=10.0						
ASAR	**Alice Springs**	**40.15**	**196**	P	P	16 11 37.4	+0.1
	0.6nm,0.6s,baz=22,slow=7.0,SNR=13						
SONM	**Songino Array**	**45.72**	**324**	P	P	16 12 22.1	-0.2
	0.3nm,0.5s,baz=106,slow=8.1,SNR=3.6						
MKAR	**Makanchi Array**	**60.67**	**315**	P	P	16 14 12.2	-0.3
	0.2nm,0.6s,baz=91,slow=7.6,SNR=2.5						

IDC 02 16:04:20.3±9.8,**29°.76S**×**178°.88W**,**h350**^{km}±98^{km}, **mb3.0**/2,**mb1 3.3**/3,**mb1mx3.0**/39,**mbtmp3.8**/3,**Error ellipse: s-maj=96.0km s-min=48.5km az=14.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**9.11**	**200**	P	Pn	16 06 28.1	+0.7
	2.0nm,0.3s,baz=268,slow=4.8,SNR=26						
URZ				S	S	16 08 10.3	-1.1
	2.8nm,0.3s,baz=120,slow=20,SNR=11						
ASAR	**Alice Springs**	**42.38**	**267**	P	P	16 11 41.7	-0.1
	0.5nm,0.5s,baz=101,slow=6.9,SNR=15						
WRA	**Warramunga Arr**	**43.31**	**272**	P	P	16 11 48.8	-0.3
	0.8nm,0.5s,baz=110,slow=7.5,SNR=11						
FINES	**FINESS Array B**	**144.28**	**340**	PKP	PKPbc	16 23 13.4	0.0
	1.6nm,0.3s,baz=44,slow=3.9,SNR=24						

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*DDA **02** 16:14:34.4, 35°.11N×32°.02E, h11^{km}±3^{km}, MW3.2*

*NIC **02** 16:14:35.3±0.0, 35°.17N×32°.01E, h14^{km}±2^{km}, Ml3.5/5*

*ISK **02** 16:14:35.5, 35°.22N×32°.09E, h10^{km}, ML3.2/22*

ISC 02 16:14:36.1±1.2,**35°.19N**±0°.03×**32°.08E**±0°.04,**h9**^{km}±9^{km}, **n42**,σ**1^{s}.23**/59,**Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKMS	**Akamas**	**0.27**	**129**	P	**Pg**	**16 14 41.5**	**0.0**
AKMS				S	**Sg**	**16 14 44.4**	**-0.7**
AKMS				AML	AML	16 14 45.2	
	108nm,0.3s						
AKMS				AML	AML	16 14 45.2	
	108nm,0.3s						
AKMS				AML	AML	16 14 45.3	
	63nm,0.3s						
AKMS				AML	AML	16 14 45.3	
	63nm,0.3s						
ALFC	**Alefka**	**0.42**	**94**	P	**Pg**	**16 14 44.9**	**+0.5**
ALFC				S	**Sb**	**16 14 52.1**	**-0.1**
ALFC				AML	AML	16 14 53.0	
	5.5nm,0.2s						
ALFC				AML	AML	16 14 53.0	
	5.5nm,0.2s						
NATA	**Nata**	**0.57**	**135**	P	**Pg**	**16 14 47.2**	**0.0**
NATA				S	**Sb**	**16 14 56.0**	**-0.5**
NATA				AML	AML	16 15 00.7	
	9.5nm,0.4s						
NATA				AML	AML	16 15 00.7	
	9.5nm,0.4s						
LEF	**Lefka**	**0.67**	**96**	PG	**Pg**	**16 14 48.1**	**-0.8**
LEF				SG	**Sg**	**16 14 57.1**	**-0.6**
LEF	**Lefka**	**0.67**	**96**	*i* P	**Pg**	**16 14 47.9**	**-1.0**
LEF				*i* S	**Sg**	**16 14 57.0**	**-0.6**
LEF				IAML		16 15 00.0	
	comp=N,466nm,0.7s						
AKDN	**Akdeniz- Kıbrı**	**0.73**	**81**	PG	**Pg**	**16 14 50.0**	**-0.2**
AKDN				SG	**Sg**	**16 15 00.5**	**+0.7**
SZAC	**Souni**	**0.79**	**123**	P	**Pg**	**16 14 51.3**	**+0.1**
ASGA	**Asgata**	**1.04**	**112**	P	**Pn**	**16 14 56.6**	**-0.2**
ASGA				S	**Sn**	**16 15 13.1**	**+1.7**
ASGA				AML	AML	16 15 14.0	
	comp=N,4.8nm,0.8s						
ASGA				AML	AML	16 15 14.0	
	comp=N,4.8nm,0.8s						
ASGA				AML	AML	16 15 14.0	
	comp=N,4.6nm,0.9s						
ASGA				AML	AML	16 15 14.0	
	comp=N,4.6nm,0.9s						
CSS	**Mathiatis**	**1.05**	**102**	PG	**Pb**	**16 14 56.2**	**-0.2**
CSS				SG	**Sg**	**16 15 11.2**	**+1.3**
CSS	**Mathiatis**	**1.05**	**102**	P	**Pg**	**16 14 56.4**	**+0.1**
CSS				S	**Sn**	**16 15 12.9**	**+1.2**
CSS				AML	AML	16 15 14.0	
	comp=N,0.3nm,0.6s						
CSS				AML	AML	16 15 14.0	
	comp=N,0.3nm,0.6s						
CSS				AML	AML	16 15 19.8	
	comp=N,0.4nm,0.4s						
CSS				AML	AML	16 15 19.8	
	comp=N,0.4nm,0.4s						
GAZI	**Gazipasa**	**1.06**	**10**	PG	**Pb**	**16 14 55.8**	**-0.8**
GAZI	**Gazipasa**	**1.06**	**10**	*i* P	**Pb**	**16 14 55.5**	**-1.1**
GAZI				*i* S	**Sn**	**16 15 12.9**	**+0.9**
GAZI				IAML		16 15 18.0	
	comp=E,155nm,0.6s						
GAZI				IAML		16 15 19.0	
	comp=N,142nm,0.5s						
AKIN	**Akıncılar- Kıb**	**1.15**	**98**	PN	**Pb**	**16 14 58.0**	**-0.1**
TEKE	**Tekeli-Mersin**	**1.27**	**41**	PN	**Pn**	**16 14 59.4**	**-0.6**
TEKE				SN	**Sb**	**16 15 17.0**	**+0.4**
MVOU	**Mavrovouni**	**1.28**	**97**	P	**Pn**	**16 14 59.3**	**-0.8**
ALAN	**Alanya-ANTALYA**	**1.37**	**358**	PN	**Pn**	**16 15 00.8**	**-0.5**
ALAN				SN	**Sn**	**16 15 19.1**	**-0.4**
BERE	**Bereket-Mersin**	**1.48**	**38**	PN	**Pn**	**16 15 02.5**	**-0.5**
AKKU	**Akkuyu-Mersin**	**1.54**	**51**	PN	**Pn**	**16 15 03.4**	**-0.2**
GULN	**MERSIN_Gulnar**	**1.55**	**50**	*i* P	**Pn**	**16 15 04.2**	**+0.4**
GULN				*i* S	**Sn**	**16 15 19.2**	**-4.8**
ERMK	**Ermenek**	**1.60**	**25**	*i* P	**Pg**	**16 15 06.3**	**-0.5**
ERMK				*i* S	**Sg**	**16 15 33.1**	**+5.6**
ERMK				IAML		16 15 40.0	
	comp=N,100nm,0.9s						
TEVE	**Tevekalti-Mers**	**1.67**	**41**	PN	**Pn**	**16 15 05.0**	**-0.5**
KARG	**Kargicak-Mersi**	**1.67**	**52**	PN	**Pn**	**16 15 05.2**	**-0.2**
IKL	**Isikli**	**1.67**	**51**	PN	**Pn**	**16 15 05.2**	**-0.3**
EREN	**Erenkoy**	**1.74**	**78**	PN	**Pn**	**16 15 06.6**	**+0.2**
KEPZ	**Antalya-Kepez**	**1.75**	**347**	*i* P	**Pg**	**16 15 08.9**	**-0.8**
KEPZ				*i* S	**Sg**	**16 15 31.3**	**-1.1**
KEBE	**Keben-Mersin**	**1.83**	**46**	PN	**Pn**	**16 15 07.5**	**-0.2**
SILI	**Silifke-Mersin**	**1.90**	**51**	PN	**Pn**	**16 15 08.5**	**-0.2**
KIZK	**Mersin**	**2.11**	**52**	PN	**Pn**	**16 15 11.6**	**0.0**
KIZK	**Mersin**	**2.11**	**52**	*i* P	**Pb**	**16 15 14.6**	**0.0**
KKBE	**Karaman, Kazim**	**2.14**	**19**	*i* P	**Pg**	**16 15 18.1**	**+0.9**
KKBE				*i* S	**Sg**	**16 15 45.1**	**+0.2**
SEDI	**Konya, Seydise**	**2.27**	**353**	*i* P	**Pg**	**16 15 19.2**	**-0.4**
SEDI				*i* S	**Sb**	**16 15 46.1**	**+0.5**
KONT	**Konya--Tatoy**	**2.76**	**5**	PN	**Pn**	**16 15 20.6**	**+0.1**
KERG	**Konya-Eregli**	**2.77**	**36**	*i* P	**Pn**	**16 15 21.6**	**+0.9**
DED	**Mersin**	**2.82**	**50**	*i* P	**Pn**	**16 15 23.6**	**+2.2**
FETY	**Fethiye**	**2.83**	**302**	PN	**Pn**	**16 15 21.8**	**+0.4**
GULE	**Gulek**	**3.02**	**45**	*i* P	**Pb**	**16 15 28.8**	**-1.3**
KARA	**Karaisali**	**3.17**	**48**	PN	**Pn**	**16 15 26.5**	**+0.4**
DALY	**Dalyan (Mula)**	**3.22**	**301**	PN	**Pn**	**16 15 27.3**	**+0.6**
CMRD	**Camardi-Nigde**	**3.41**	**43**	PN	**Pn**	**16 15 29.8**	**+0.4**
YER	**Yerkesik**	**3.63**	**303**	PN	**Pn**	**16 15 33.5**	**+1.0**
KOZT	**Kozan**	**3.79**	**52**	PN	**Pn**	**16 15 35.4**	**+0.8**
MMLI	**Mount Malkishu**	**3.91**	**134**	PN	**Pn**	**16 15 36.7**	**+0.5**

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*IDC **02** 16:28:31.8±23.0, 18°.67S×177°.21W, h522^{km}±199^{km}, mb3.0/3, mb1 3.3/3, mb1mx2.8/40, mbtmp3.9/3, Error ellipse: s-maj=268.5km s-min=39.5km az=132.0*

*NEIC **02** 16:28:39.1±0.8, 18°.9S±0°.2×177°.4W±0°.2, h610^{km}±13^{km}, mb4.0/10, Error ellipse: s-maj=34.9km s-min=26.5km az=139.0*

ISC 02 16:28:38.4±1.5,**18°.9S**±0°.2×**177°.3W**±0°.2,**h600**^{km},**n16**, σ**1^{s}.02**/18,**mb3.9**/8,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.58**	**284**	P	**P**	**16 30 10.1**	**+1.9**
MQZ	**McQueen’s Vall**	**26.15**	**197**	P	**P**	**16 33 26.5**	**0.0**
CTAO	**Charters Tower**	**34.35**	**262**	P	**P**	**16 34 36.2**	**-0.8**
CTAO				IAmb	IAmb	16 34 47.1	
	comp=Z,7.5nm,1.1s						
COEN	**Coen**	**38.18**	**271**	P	**P**	**16 35 07.4**	**-1.2**
COEN				IAmb	IAmb	16 35 32.9	
	comp=Z,12nm,1.4s						
WR0	**Warramunga Arr**	**45.32**	**260**	P	**P**	**16 36 03.8**	**-0.7**
WB0	**Warramunga Arr**	**45.48**	**261**	P	**P**	**16 36 04.7**	**-1.1**
WB0				IAmb	IAmb	16 36 13.5	
	comp=Z,3.0nm,1.0s						
WB2	**Warramunga Arr**	**45.50**	**260**	P	**P**	**16 36 04.6**	**-1.2**
WB2				IAmb	IAmb	16 36 23.6	
	comp=Z,6.6nm,1.2s						
WRA	**Warramunga Arr**	**45.51**	**260**	P	**P**	**16 36 05.2**	**-0.7**
	comp=Z,0.6nm,0.4s,baz=96,slow=6.9,SNR=26						
WRA				PcP	**PcP**	**16 37 33.0**	**+1.1**
	comp=Z,0.1nm,0.4s,baz=92,slow=3.7,SNR=5.1						
WRA	**Warramunga Arr**	**45.51**	**260**	P	**P**	**16 36 04.7**	**-1.3**
AS31	**Alice Springs**	**45.56**	**255**	P	**P**	**16 36 05.8**	**-0.5**
ASAR	**Alice Springs**	**45.56**	**255**	P	**P**	**16 36 06.0**	**-0.4**
	comp=Z,1.8nm,0.5s,baz=93,slow=7.8,SNR=69						
ASAR				PcP	**PcP**	**16 37 33.0**	**+1.0**
	comp=Z,0.4nm,0.5s,baz=103,slow=4.0,SNR=9.8						
ASAR	**Alice Springs**	**45.56**	**255**	P	**P**	**16 36 05.4**	**-0.9**
FORT	**Forrest**	**50.56**	**245**	P	**P**	**16 36 43.8**	**+0.6**
FITZ	**Fitzroy Crossi**	**53.92**	**261**	P	**P**	**16 37 06.9**	**-0.5**
FITZ				IAmb	IAmb	16 37 19.9	
	comp=Z,7.2nm,1.2s						
ILAR	**Eielson Array**	**86.60**	**13**	P	**P**	**16 40 18.1**	**-0.6**
	comp=Z,0.2nm,0.4s,baz=218,slow=5.0,SNR=9.4						
GERES	**GERESS Array B**	**148.82**	**346**	PKPbc	**PKPbc**	**16 47 19.1**	**-0.2**
	comp=Z,0.4nm,0.5s,baz=26,slow=3.7,SNR=3.9						

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*IDC **02** 16:43:55.4±1.8, 10°.03S×121°.34E, h0^{km}, mb3.7/2, mb1 3.5/5, mb1mx3.3/30, mbtmp3.4/5, ML3.2/3, Error ellipse: s-maj=60.1km s-min=21.2km az=33.0*

*DJA **02** 16:44:03.3±0.9, 10°S±4°×12°2E±°, h10^{km}±8^{km}, M3.5/9, MLv3.5/9*

ISC 02 16:44:03.4±2.0,**9°.70S**±0°.05×**121°.83E**±0°.03,**h16**^{km}±16^{km}, **n22**,σ**1^{s}.98**/29,**Savu Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EDFI	**Ende, Flores**	**0.95**	**352**	P	**Pb**	**16 44 21.7**	**+0.2**
EDFI				S	**Sb**	**16 44 34.9**	**+1.0**
EDFI	**Ende, Flores**	**0.95**	**352**	P	**Pb**	**16 44 21.6**	**+0.1**
EDFI				S	**Sb**	**16 44 33.8**	**-0.1**
MMRI	**Maumere**	**1.13**	**21**	P	**Pb**	**16 44 24.3**	**-0.2**
MMRI				S	**Sn**	**16 44 40.2**	**+0.5**
MMRI	**Maumere**	**1.13**	**21**	P	**Pb**	**16 44 24.1**	**-0.4**
MMRI				S	**Sn**	**16 44 40.2**	**+0.5**
BASI	**Baing, Sumba**	**1.34**	**247**	P	**Pn**	**16 44 27.6**	**+0.2**
BASI				S	**Sg**	**16 44 48.0**	**+1.4**
BASI	**Baing, Sumba**	**1.34**	**247**	P	**Pn**	**16 44 27.7**	**+0.3**
WSI	**Waingapu**	**1.51**	**271**	P	**Pb**	**16 44 31.0**	**0.0**
WSI	**Waingapu**	**1.51**	**271**	P	**Pn**	**16 44 30.2**	**+0.4**
BATI	**Baumata**	**1.88**	**106**	Pn	**Pn**	**16 44 35.6**	**+0.6**
	18nm,0.3s,baz=306,slow=2.9,SNR=33						
BATI				Sn	**Sb**	**16 45 02.9**	**+2.2**
	17nm,0.3s,baz=63,slow=23,SNR=13						
BATI	**Baumata**	**1.88**	**106**	P	**Pn**	**16 44 36.0**	**+1.1**
BATI	**Baumata**	**1.88**	**106**	P	**Pn**	**16 44 35.5**	**+0.6**
SOEI	**Soe**	**2.41**	**92**	P	**Pn**	**16 44 43.9**	**+1.7**
SOEI	**Soe**	**2.41**	**92**	P	**Pn**	**16 44 43.8**	**+1.6**
SOEI				S	**Sn**	**16 45 14.6**	**+3.1**
PLAI	**Plampang**	**4.09**	**282**	P	**Pn**	**16 45 07.1**	**+1.8**
PLAI				S	**Sn**	**16 45 55.0**	**+2.1**
PLAI	**Plampang**	**4.09**	**282**	P	**Pn**	**16 45 03.8**	**-1.5**
BKSI	**Bulukumba**	**4.66**	**339**	P	**Pn**	**16 45 13.1**	**-0.1**
TWSI	**Taliwang, Sumb**	**4.97**	**281**	P	**Pn**	**16 45 20.0**	**+2.5**
TWSI				S	**Sn**	**16 46 16.8**	**+2.1**
TWSI	**Taliwang, Sumb**	**4.97**	**281**	P	**Pn**	**16 45 18.0**	**+0.5**
WRA	**Warramunga Arr**	**15.80**	**132**	Pn	**Pn**	**16 47 39.8**	**-5.7**
	0.1nm,0.3s,baz=306,slow=14,SNR=3.8						
WRA				Sn	Sn	16 50 23.1	-17
	0.1nm,0.3s,baz=308,slow=24,SNR=6.9						
ASAR	**Alice Springs**	**18.06**	**142**	P	**Pn**	**16 48 09.5**	**-4.3**
	0.1nm,0.3s,baz=314,slow=12,SNR=5.5						
MKAR	**Makanchi Array**	**66.37**	**331**	P	P	16 54 47.3	-4.2
	0.4nm,0.6s,baz=138,slow=7.5,SNR=6.6						
ZALV	**Zalesovo Beam**	**70.71**	**338**	P	P	16 55 13.1	-5.3
	0.4nm,0.5s,baz=128,slow=4.2,SNR=2.5						

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*IDC **02** 16:56:57.0±4.6, 28°.22S×68°.00W, h134^{km}±35^{km}, mb3.4/2, mb1 3.6/4, mb1mx3.3/27, mbtmp3.8/4, Error ellipse: s-maj=53.8km s-min=31.0km az=30.0*

*NEIC **02** 16:57:00.3±1.5, 27°.94S±0°.06×67°.9W±0°.1, h161^{km}±5^{km}, mb4.5/6, Error ellipse: s-maj=14.6km s-min=8.8km az=97.0*

ISC 02 16:56:59.6±0.6,**27°.95S**±0°.06×**67°.86W**±0°.10,**h150**^{km},**n37**, σ**1^{s}.19**/36,**mb4.0**/4,**Catamarca Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AC02	**Maricunga**	**1.58**	**314**	Pn	**Pn**	**16 57 31.7**	**+1.2**
GO03	**Copiap**	**2.13**	**279**		**Pn**	**16 57 37.9**	**+1.6**
AC05	**El Transito**	**2.30**	**247**		**Pn**	**16 57 40.3**	**+1.9**
LCO	**Las Campanas**	**2.71**	**246**		**Pn**	**16 57 44.9**	**+1.3**
CO01	**Juntas del Tor**	**2.81**	**224**		**Pn**	**16 57 46.3**	**+1.5**
AC04	**Llanos de Chal**	**2.85**	**264**		**Pn**	**16 57 46.1**	**+1.1**
GO02	**Mina Guanaco**	**3.18**	**330**	Pn	**Pn**	**16 57 50.7**	**+1.2**
GO04	**Tololo Observa**	**3.39**	**229**		**Pn**	**16 57 52.3**	**+0.1**
CO03	**El Pedregal**	**3.79**	**220**		**Pn**	**16 57 57.2**	**0.0**
PB14	**IPOC Station P**	**4.02**	**325**	Pn	**Pn**	**16 58 00.8**	**+0.3**
CO02	**Combarbal**	**4.24**	**219**		**Pn**	**16 58 02.2**	**-0.9**
PB10	**IPOC Station P**	**5.04**	**331**	Pn	**Pn**	**16 58 13.6**	**0.0**
VA03	**San Esteban**	**5.33**	**205**	Pn	**Pn**	**16 58 16.7**	**-0.8**
LVC	**Limon Verde**	**5.40**	**350**	P	**Pn**	**16 58 18.2**	**-0.5**
	2.7nm,0.3s,baz=254,slow=7.4,SNR=2.4						
LVC	**Limon Verde**	**5.40**	**350**		**Pn**	**16 58 18.1**	**-0.6**
PB06	**IPOC Station P**	**5.45**	**343**	Pn	**Pn**	**16 58 18.7**	**-0.4**
ROC1	**El Roble**	**5.70**	**208**	Pn	**Pn**	**16 58 20.4**	**-2.1**
MT02	**Curacav**	**6.00**	**207**	Pn	**Pn**	**16 58 23.6**	**-2.6**
PB01	**IPOC Station P**	**7.03**	**348**	Pn	**Pn**	**16 58 38.3**	**-1.9**
CPUP	**Villa Florida**	**9.52**	**83**	P	**Pn**	**16 59 14.2**	**+1.0**
	0.3nm,0.3s,baz=261,slow=13,SNR=3.9						
CPUP				S	Sn	17 01 11.5	+13
	0.1nm,0.3s,baz=336,slow=20,SNR=1.1						
HOPE	**Hope Point**	**34.86**	**148**	P	**P**	**17 03 36.2**	**+0.1**
RCBR	**Riachuelo**	**37.46**	**60**	P	**P**	**17 03 59.9**	**+1.1**
QSPA	**South Pole Qui**	**62.27**	**180**	P	**P**	**17 07 05.2**	**-0.2**
WVT	**Waverly**	**66.46**	**342**	P	**P**	**17 07 32.4**	**-0.3**
WVT				IAmb	IAmb	17 07 32.7	
	comp=Z,6.5nm,0.8s						
TXAR	**Lajitas Array**	**66.47**	**326**	P	**P**	**17 07 34.6**	**+1.6**
CCM	**Cathedral Cave**	**69.22**	**340**	P	**P**	**17 07 49.7**	**-0.3**
CCM				IAmb	IAmb	17 07 50.8	
	comp=Z,5.0nm,0.6s						
TORD	**Torodi Ar. Bea**	**78.72**	**69**	P	**P**	**17 08 45.3**	**-0.4**
	comp=Z,0.4nm,0.5s,baz=261,slow=6.2,SNR=1.7						
TORD	**Torodi Ar. Bea**	**78.72**	**69**	IAmb	IAmb	17 08 54.3	
	comp=Z,1.3nm,1.1s						
PDAR	**Pinedale Array**	**80.16**	**330**	P	**P**	**17 08 53.9**	**+0.7**
	comp=Z,0.9nm,0.7s,baz=128,slow=7.6,SNR=7.5						
PDAR	**Pinedale Array**	**80.16**	**330**	P	**P**	**17 08 52.1**	**-1.1**
ASAR	**Alice Springs**	**124.56**	**204**	PKP	**PKPdf**	**17 15 40.5**	**-1.2**
	comp=Z,0.3nm,0.5s,baz=131,slow=1.5,SNR=16						
WRA	**Warramunga Arr**	**127.77**	**207**	PKP	**PKPdf**	**17 15 45.8**	**-2.1**
	comp=Z,0.4nm,0.6s,baz=168,slow=1.8,SNR=7.3						
ZALV	**Zalesovo Beam**	**147.21**	**30**	PKPbc	**PKPbc**	**17 16 24.4**	**-0.3**
	comp=Z,1.6nm,0.3s,baz=299,slow=3.7,SNR=9.6						
ZALV	**Zalesovo Beam**	**147.21**	**30**		**PKPbc**	**17 16 24.1**	**-0.6**
MK31	**Makanchi Array**	**149.99**	**43**		**PKPbc**	**17 16 31.3**	**-0.9**
MKAR	**Makanchi Array**	**149.99**	**43**	PKPbc	**PKPbc**	**17 16 31.6**	**-0.5**
	comp=Z,1.5nm,0.7s,baz=305,slow=2.9,SNR=16						
MKAR	**Makanchi Array**	**149.99**	**43**		**PKPbc**	**17 16 31.0**	**-1.1**

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*JMA **02** 17:28:36.9±0.2, 36°.37N×141°.79E, h66^{km}±5^{km}, M3.4*

*IDC **02** 17:28:46.4±7.1, 36°.06N×141°.02E, h77^{km}±45^{km}, mb3.3/3, mb1 3.5/5, mb1mx3.1/42, mbtmp3.7/5, ML3.1/2, MS2.8/2, Ms1 2.9/2, ms1mx2.4/30, Error ellipse: s-maj=89.7km s-min=17.0km az=75.0*

ISC 02 17:28:38.6±1.3,**36°.35N**±0°.04×**141°.81E**±0°.10,**h35**^{km},**n19**, σ**1^{s}.19**/24,**mb3.5**/3,**Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHYU	**Hitachinakayam**	**0.99**	**270**	P	**Pn**	**17 28 54.9**	**-1.0**
CHOJ	**Chosi**	**1.00**	**231**	P	**Pn**	**17 28 55.6**	**-0.5**
CHOJ				*e*S	**Sn**	**17 29 09.7**	**+0.6**
JHO	**Hitachi**	**1.04**	**285**	P	**Pn**	**17 28 55.1**	**-1.5**
JIHU	**Itakohorinouch**	**1.11**	**250**	P	**Pn**	**17 28 57.4**	**-0.2**
ONAJ	**Iwakimizuishiy**	**1.11**	**313**	P	**Pn**	**17 28 56.1**	**-1.6**
JFK	**Kawauchi**	**1.27**	**324**	P	**Pn**	**17 28 58.6**	**-1.2**
JFT	**Otama**	**1.66**	**315**	P	**Pn**	**17 29 05.2**	**0.0**
JFT				S	**Sn**	**17 29 25.6**	**+0.2**
JMM	**Marumori**	**1.72**	**332**	P	**Pn**	**17 29 05.1**	**-0.9**
JMM				S	**Sn**	**17 29 26.5**	**-0.3**
BSO1	**Boso 1**	**1.82**	**202**	P	**Pn**	**17 29 06.3**	**-0.6**
BSO1				*e*S	**Sn**	**17 29 28.5**	**0.0**
BSO3	**Boso 3**	**1.87**	**215**	P	**Pn**	**17 29 07.4**	**-0.4**
JAG	**Ashikaga**	**1.90**	**273**	P	**Pn**	**17 29 07.9**	**-0.6**
JOD2	**Odawara 2**	**2.46**	**245**	S	**Sn**	**17 29 45.2**	**+0.1**
MJAR	**Matsushiro Arr**	**2.91**	**275**	P	**Pn**	**17 29 22.7**	**+0.3**
	1.6nm,0.3s,baz=113,slow=9.4,SNR=70						
MJAR				LR	LR	17 30 38.1	
	comp=Z,53nm,18.1s,baz=240,slow=49						
MAT	**Matsushiro**	**2.91**	**275**	P	**Pn**	**17 29 23.1**	**+0.7**
MAT				*e*S	**Sn**	**17 29 55.1**	**-1.1**
JHJ	**Hachijo jima 2**	**3.63**	**208**	P	**Pn**	**17 29 31.8**	**-0.4**
	16nm,0.3s,baz=246,slow=20,SNR=4.7						
JHJ				S	**Sn**	**17 30 09.9**	**-3.9**
	37nm,0.3s,baz=126,slow=22,SNR=9.2						

SONM	Songino Array 1.0nm,0.5s,baz=100,slow=9.3,SNR=7.6	28.44	305	P	P	17 34 31.1	+1.0
MKAR	Makanchi Array 0.6nm,0.8s,baz=91,slow=9.0,SNR=5.4	44.76	303	P	P	17 36 48.2	-0.4
WRA	Warramunga Arr 0.5nm,0.9s,baz=5.2,slow=7.6,SNR=2.4	56.43	188	P	P	17 38 17.9	+1.2
ARCES	ARCESS Array B comp=Z,24nm,18.7s,baz=150,slow=40	64.75	340	LR	LR	18 11 40.1	

IDC 02 17:40:51.4±52.0, 18°.53S×177°.04W, h0^{km}, mb3.9/3, mb1 4.1/3, mb1mx3.6/37, mbtmp3.9/3, Error ellipse: s-maj=960.9km s-min=152.4km az=81.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek 0.7nm,0.5s,baz=77,slow=14,SNR=3.1	39.49	242	P	P	17 48 23.7	-0.1
WRA	Warramunga Arr 0.8nm,0.4s,baz=97,slow=7.5,SNR=23	45.81	260	P	P	17 49 15.2	-0.2
ASAR	Alice Springs 1.0nm,0.5s,baz=87,slow=8.1,SNR=42	45.88	255	P	P	17 49 15.9	-0.1

IDC 02 17:41:12.2±12.0, 25°.25N×141°.71E, h0^{km}, mb3.2/3, mb1 3.5/3, mb1mx3.1/49, mbtmp3.2/3, MS3.3/1, Ms1 3.3/1, ms1mx2.4/22, Error ellipse: s-maj=489.2km s-min=31.1km az=71.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W) comp=Z,67nm,18.8s,baz=290,slow=38	23.76	223	LR	LR	17 56 10.8	
WRA	Warramunga Arr 0.6nm,0.8s,baz=6.8,slow=9.0,SNR=5.5	45.49	190	P	P	17 49 33.4	-0.1
ASAR	Alice Springs 0.2nm,0.5s,baz=13,slow=6.9,SNR=5.7	49.21	189	P	P	17 50 02.4	-0.1
MKAR	Makanchi Array 0.1nm,0.4s,baz=74,slow=7.3,SNR=3.1	51.33	311	P	P	17 50 18.3	-0.1

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*SOME **02** 17:54:43.2, 39°.47N×72°.98E, h10^{km}*
*KRNET **02** 17:54:43.7±0.1, 39°.43N×72°.88E, h15^{km}, mb2.8*
*NNC **02** 17:54:44.2±2.4, 39°.42N×73°.08E, h0^{km}, mb3.6, mpv3.3, Error ellipse: s-maj=18.3km s-min=9.2km az=168.0*
ISC 02 17:54:46.5±1.7, 39°.38N±0°.10×72°.72E±0°.04, h10^{km}, n26, σ2^{s}.33/45, 12C-6D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	Karamyk baz=74	0.72	278	⇑iP	Pg	17 54 59.8	-0.7
DRK	baz=74			⇑iS	Sb	17 55 11.7	+0.2
OHH	Osh baz=56	1.14	2	⇑iP	Pb	17 55 04.6	-3.8
OHH	baz=56			⇑iS	Sb	17 55 20.0	-3.3
BTK	Batken baz=92	1.62	295	⇓iP	Pb	17 55 15.6	-0.9
BTK	baz=92			⇓iS	Sg	17 55 39.0	+0.5
ARSB	Arslanbob baz=2.0	1.95	6	⇑iP	Pn	17 55 18.8	-1.0
ARSB	baz=2.0			⇑iS	Sn	17 55 44.9	+0.5
TRKS	Terek-Say baz=28	2.46	331	⇓iP	Pn	17 55 26.6	-0.3
TRKS	baz=28			⇓iS	Sn	17 55 57.9	+0.8
ARLS	Aral baz=24	2.76	26	⇑iP	Pn	17 55 30.3	-0.6
ARLS	baz=24			⇑iS	Sn	17 56 04.1	-0.3
MNAS	Manas baz=55	3.10	357	⇑iP	Pn	17 55 35.5	-0.2
MNAS	baz=55			⇑iS	Sn	17 56 13.5	+0.6
MRKS	Merke 5.2nm,0.2s	3.38	6	eP	Pb	17 55 43.3	-3.3
MRKS	6.9nm,0.3s			eS	Sb	17 56 27.1	-0.6
MRKS	Merke 5.2nm,0.2s	3.38	6	Pg	Pb	17 55 43.3	-3.3
MRKS	6.9nm,0.3s			Lg	Lg	17 56 27.1	
KK31	Karatay Array 0.2nm,0.2s,baz=150,slow=13,SNR=8.9	4.07	337	⇓Pn	Pn	17 55 50.0	+1.1
KK31	0.4nm,0.3s,baz=151,slow=14,SNR=4.2			⇑Pg	Pb	17 55 59.8	+1.4
KK31	0.8nm,0.3s,baz=154,slow=25			⇓Sn	Sn	17 56 40.3	+3.7
KK31	2.3nm,0.4s,baz=154,slow=30			⇑Lg	Lg	17 56 51.0	
SGDS	Sogindy 1.3nm,0.2s	4.31	19	Pg	Pb	17 55 59.9	-2.5
SGDS	4.8nm,0.7s			Lg	Lg	17 56 55.3	
KST	Kastek 2.6nm,0.4s	4.40	33	eP	Pb	17 56 01.9	-2.0
KST	4.6nm,0.6s			eS	Sb	17 56 58.8	+1.8
KST	Kastek 2.6nm,0.4s	4.40	33	Pg	Pb	17 56 01.9	-2.0
KST	4.6nm,0.6s			Lg	Lg	17 56 58.8	
DGS	Degeres 2.9nm,0.7s	4.49	30	eP	Pb	17 56 03.2	-2.2
DGS	4.6nm,0.5s			eS	Sb	17 57 01.6	+2.0
DGS	Degeres 2.5nm,0.4s	4.49	30	Pg	Pb	17 56 03.5	-1.9
DGS	4.4nm,0.4s			Lg	Lg	17 57 03.0	
MTBS	Maitube 1.1nm,0.1s	4.67	36	eP	Pb	17 56 07.2	-1.4
MTBS	5.5nm,0.6s			eS	Sb	17 57 07.5	+2.7
IZV	Izvestkoviy 2.7nm,0.7s	4.68	38	eP	Pb	17 56 06.9	-1.9
IZV	10nm,0.6s			eS	Sb	17 57 07.7	+2.5
IZV	Izvestkoviy 4.0nm,0.4s	4.68	38	Pg	Pb	17 56 07.1	-1.7
IZV	9.0nm,0.5s			Lg	Lg	17 57 07.4	
MDOK	Medeo 2.0nm,0.4s	4.99	39	eP	Pb	17 56 12.0	-2.0
MDOK	5.6nm,0.7s			eS	Sb	17 57 16.5	+2.4
KTBS	Karatobe 2.6nm,0.4s	5.25	33	eP	Pb	17 56 15.7	-2.6
KTBS	6.2nm,0.3s			eS	Sb	17 57 23.4	+2.0
KTBS	Karatobe 2.6nm,0.4s	5.25	33	Pg	Pb	17 56 15.7	-2.6
KTBS	6.2nm,0.3s			Lg	Lg	17 57 23.4	
KUU	Kurty 1.4nm,0.2s	5.26	30	eP	Pb	17 56 16.9	-1.6
KUU	3.7nm,0.5s			eS	Sb	17 57 24.4	+2.8
KUU	Kurty 1.4nm,0.2s	5.26	30	Pg	Pb	17 56 16.9	-1.6
KUU	3.7nm,0.5s			Lg	Lg	17 57 24.4	
CHKK	Chushkaly 0.9nm,0.1s	5.49	34	eP	Pb	17 56 22.1	-0.4
CHKK	3.6nm,0.3s			eS	Sb	17 57 34.4	+6.0
ARXS	Arharly 1.2nm,0.7s	6.15	37	eP	Pb	17 56 32.3	-1.4
ARXS	4.4nm,0.6s			eS	Sb	17 57 52.0	+4.6
ARXS	Arharly 2.1nm,0.5s	6.15	37	Pg	Pb	17 56 30.6	-3.1
ARXS	4.8nm,0.4s			Lg	Lg	17 57 49.4	

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*TEH **02** 18:12:24.6, 26°.72N×53°.88E, h12^{km}, ML3.6*
*THR **02** 18:12:24.4±0.3, 26°.81N×53°.84E, h14^{km}±7^{km}, ML3.3*
*OMAN **02** 18:12:26.2±0.9, 26°.72N×53°.88E, h10^{km}, mb5.0/2, ml3.5/17, Error ellipse: s-maj=24.5km s-min=17.2km az=266.0*
ISC 02 18:12:25.3±0.8, 26°.74N±0°.04×53°.89E±0°.04, h10^{km}, n52, σ1^{s}.02/62, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LMD1	Lamerd	0.88	313	ePg	Pg	18 12 42.3	0.0
LAR1	LAR	1.02	25	ePg	Pg	18 12 44.3	-0.7
LAR1	comp=Z,99nm,0.7s			e		18 13 11.4	
JHRM	Jahrom	1.78	351	ePg	Pn	18 12 57.6	+1.4
JHRM	comp=Z,99nm,0.5s			e		18 13 34.7	
JRN	Qarnain Island	2.02	208	P	Pb	18 13 01.6	-0.6
JRN				S	Sb	18 13 27.4	0.0
SHME	Shamm	2.13	108	ePn	Pn	18 12 59.5	-1.5
SHME	Shamm	2.13	108	P	Pn	18 13 00.6	-0.5
BNDS	Bandar-Abbas	2.14	72	ePn	Pn	18 13 02.2	+0.9
BNDS				eSg	Sb	18 13 32.6	+1.7
BNDS	comp=N,141nm,0.6s			IAML		18 13 38.3	
BNDS	Bandar-Abbas	2.14	72	ePn	Pn	18 13 02.2	+0.9
GENO	Geno	2.14	72	ePn	Pn	18 13 02.3	+1.0
GENO	comp=Z,99nm,0.7s			e		18 13 49.1	
BANOM	Banah	2.31	110	ePn	Pn	18 13 02.4	-1.1
BANOM	Banah SNR=7.7	2.31	110	P	Pn	18 13 04.1	+0.6
NAZ	Nazwa, Dubai	2.37	137	ePn	Pn	18 13 05.0	+0.8
NAZ	Nazwa, Dubai	2.37	137	P	Pn	18 13 05.8	+1.6
MASF	Masafi	2.46	123	P	Pn	18 13 06.5	+1.0
MASF				S	Sb	18 13 38.5	-1.5
MSFE	Esma-Masafi	2.46	124	ePn	Pn	18 13 05.6	0.0
ASUD	Al Ashush, Dub	2.48	148	ePn	Pn	18 13 06.3	+0.6
ASUD	Al Ashush, Dub SNR=20	2.48	148	P	Pn	18 13 07.2	+1.5
FAQ	Al Faqa, Dubai	2.51	142	ePn	Pn	18 13 07.0	+0.8
FAQ	Al Faqa, Dubai	2.51	142	P	Pn	18 13 07.7	+1.5
MDH	Madha	2.60	123	P	Pn	18 13 08.1	+0.6
UOSS	Minazif	2.75	130	ePn	Pn	18 13 09.3	-0.2
UOSS	Minazif	2.75	130	P	Pn	18 13 09.7	+0.2
HATD	Hatta, Dubai	2.78	133	ePn	Pn	18 13 09.9	0.0
HATD	Hatta, Dubai	2.78	133	P	Pn	18 13 10.6	+0.7
ASHO	Ashiyiah SNR=7.2	2.83	136	P	Pn	18 13 11.4	+0.7
MZWR	Madinat Zayed	2.97	180	ePn	Pn	18 13 12.5	0.0
MZWR	Madinat Zayed	2.97	180	P	Pn	18 13 13.1	+0.6
SHI	Shiraz	3.13	338	ePn	Pn	18 13 15.3	+0.4
ALNE	Al Ain	3.16	147	ePn	Pn	18 13 16.2	+1.0
ALNE	Al Ain	3.16	147	P	Pn	18 13 16.2	+1.0
SOHO	SOHO	3.53	137	ePn	Pn	18 13 19.6	-0.6
SOHO	SOHO	3.53	137	P	Pn	18 13 20.2	0.0
SOHO				S	Sn	18 14 03.5	+1.5
KRBR	Kerman	4.10	37	ePn	Pn	18 13 28.8	+0.5
KRBR	comp=N,34nm,0.6s			IAML		18 14 41.7	
KRBR	Kerman	4.10	37	ePn	Pn	18 13 28.8	+0.5
TVBK	TV Kerman	4.10	37	ePn	Pn	18 13 29.2	+0.8
TVBK	comp=Z,99nm,0.8s			e		18 14 55.3	
ARQ	Araqi SNR=27	4.15	144	P	Pn	18 13 28.9	+0.1
KHGB	Koh Gabri	4.28	32	ePn	Pn	18 13 32.1	+1.4
KHGB	comp=Z,99nm,0.9s			e		18 14 29.4	
HOQ	Hoqain SNR=12	4.42	135	P	Pn	18 13 33.0	+0.5
HOQ				S	Sn	18 14 24.1	+0.1
CHMN	Cheshme madani	4.47	45	ePn	Pn	18 13 35.1	+1.6
KBAM	BAM	4.69	58	ePn	Pn	18 13 37.5	+1.3
KLNJ	Kolanjah	4.70	335	ePn	Pn	18 13 36.8	+0.1
BSY	Bisya	4.99	142	P	Pn	18 13 40.7	+0.3
BSY				S	Sn	18 14 38.7	+0.5
BIDO	Bidbid	5.00	129	P	Pn	18 13 40.8	+0.3
BIDO				S	Sn	18 14 40.5	+2.1
SMDO	Samad	5.26	133	P	Pn	18 13 45.2	+1.0
SMDO				S	Sn	18 14 47.1	+2.1
JMDO	Jabal Madar	5.80	138	P	Pn	18 13 51.3	-0.2
NASN	Na'in	6.11	351	ePn	Pn	18 13 55.8	-0.2
NASN				Sn	Sn	18 15 02.7	-3.4
NASN	Na'in	6.11	351	ePn	Pn	18 13 55.8	-0.2
WBK	Wadi Bani Khal SNR=10	6.19	131	P	Pn	18 13 56.1	-0.7
WBK				S	Sn	18 15 08.4	+0.7
IZEF	Zefreh	6.28	348	ePn	Pn	18 13 57.5	-0.8
ANAR	Anarak	6.43	359	ePn	Pn	18 13 59.8	-0.4
JLN	Jalan Bani Buh	6.80	131	P	Pn	18 14 04.9	-0.3
MHTO	MHTO	6.84	146	P	Pn	18 14 05.6	-0.1

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*KRNET **02** 18:33:49.0±0.1, 42°.32N×76°.18E, h15^{km}, mb2.8*
*SOME **02** 18:33:50.0, 42°.33N×76°.20E, h10^{km}*
*NNC **02** 18:33:50.4±0.5, 42°.39N×76°.19E, h0^{km}, mb2.3, mpv2.9, Error ellipse: s-maj=3.1km s-min=1.9km az=171.0*
ISC 02 18:33:49.2±1.2, 42°.31N±0°.03×76°.19E±0°.02, h7^{km}±10^{km}, n38, σ0^{s}.44/74, 8C-8D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KST	Kastek baz=48	0.75	347	⇓eP	Pg	18 34 03.5	-0.1
KST	baz=48			⇓eS	Sg	18 34 13.3	-0.1
KST	Kastek 5.3nm,0.1s	0.75	347	⇓eP	Pg	18 34 03.5	-0.1
KST	3.6nm,0.2s			eS	Sg	18 34 13.4	-0.1
KST	Kastek 7.3nm,0.1s	0.75	347	P	Pg	18 34 03.5	-0.1
KST	3.6nm,0.2s			S	Sg	18 34 13.3	-0.1
KDJ	Kajisay baz=4.0	0.76	103	⇑iP	Pg	18 34 03.2	-0.6
KDJ	baz=4.0			⇑iS	Sg	18 34 14.2	+0.5
IZV	Izvestkoviy baz=24	0.79	23	⇓eP	Pg	18 34 04.5	+0.1
IZV	baz=24			⇓eS	Sg	18 34 15.1	+0.4
IZV	Izvestkoviy 4.6nm,0.1s	0.79	23	⇓eP	Pg	18 34 04.5	+0.1
IZV	19nm,0.1s			eS	Sg	18 34 15.1	+0.4
IZV	Izvestkoviy 5.2nm,0.1s	0.79	23	P	Pg	18 34 04.6	+0.1
IZV	18nm,0.2s			S	Sg	18 34 15.1	+0.4
MTBS	Maitube baz=13	0.84	12	eP	Pg	18 34 05.3	0.0
MTBS	baz=13			eS	Sg	18 34 16.0	-0.2
MTBS	Maitube 3.7nm,0.1s	0.84	12	eP	Pg	18 34 05.3	0.0
MTBS	10.0nm,0.1s			eS	Sg	18 34 16.1	-0.2
MTBS	Maitube 2.2nm,0.1s	0.84	12	P	Pg	18 34 05.1	-0.2
MTBS	12nm,0.1s			S	Sg	18 34 15.9	-0.3
TNSS	Tian-Shan baz=38	0.92	37	eP	Pg	18 34 06.9	0.0
TNSS	baz=38			eS	Sg	18 34 18.9	0.0
TNSS	Tian-Shan 3.6nm,0.1s	0.92	37	eP	Pg	18 34 06.8	0.0
TNSS	6.7nm,0.1s			eS	Sg	18 34 18.8	0.0
TNSS	Tian-Shan 3.6nm,0.1s	0.92	37	P	Pg	18 34 06.9	0.0
TNSS	6.7nm,0.1s			S	Sg	18 34 18.8	0.0
DGS	Degeres baz=42	0.98	342	eP	Pg	18 34 07.7	-0.3
DGS	baz=42			eS	Sg	18 34 20.4	-0.4
DGS	Degeres 3.9nm,0.1s	0.98	342	eP	Pg	18 34 07.7	-0.3
DGS	7.1nm,0.1s			eS	Sg	18 34 20.4	-0.4
DGS	Degeres 3.9nm,0.1s	0.98	342	P	Pg	18 34 07.7	-0.3
DGS	7.1nm,0.1s			S	Sg	18 34 20.4	-0.4
MDOK	Medeo baz=37	1.06	36	eP	Pg	18 34 09.2	-0.4
MDOK	baz=37			eS	Sg	18 34 23.0	-0.4
MDOK	Medeo 0.9nm,0.1s	1.06	36	eP	Pg	18 34 09.2	-0.4
MDOK	4.1nm,0.2s			eS	Sg	18 34 23.0	-0.4
MDOK	Medeo 0.5nm,0.4s	1.06	36	P	Pg	18 34 09.2	-0.4
MDOK	2.0nm,0.4s			S	Sg	18 34 22.9	-0.5
MDOK	Medeo 0.9nm,0.1s	1.06	36	Pg	Pg	18 34 09.2	-0.4
MDOK	4.1nm,0.2s			Lg	Lg	18 34 23.0	
KNDC	Almaty 2.5nm,0.2s	1.07	32	⇓P	Pg	18 34 10.0	+0.3
KNDC	6.6nm,0.2s			⇓S	Sg	18 34 23.9	+0.2
KOTS	Kotyrbulak 1.6nm,0.1s	1.15	36	eP	Pg	18 34 11.1	-0.1
KOTS	21nm,0.4s			eS	Sg	18 34 26.2	+0.1
KOTS	Kotyrbulak 1.6nm,0.1s	1.15	36	P	Pg	18 34 11.1	-0.1
KOTS	21nm,0.4s			S	Sg	18 34 26.2	+0.1
ANVS	Anan'yevo baz=66	1.19	66	⇑iP	Pb	18 34 10.9	-1.3
ANVS	baz=66			⇑iS	Sb	18 34 27.8	-0.1
KTBS	Karatobe baz=15	1.45	14	eP	Pn	18 34 16.1	+0.3
KTBS	baz=15			eS	Sn	18 34 34.7	-0.4
KTBS	Karatobe 1.7nm,0.1s	1.45	14	eP	Pn	18 34 16.1	+0.3
KTBS	6.6nm,0.2s			eS	Sn	18 34 34.7	-0.4
KTBS	Karatobe 1.7nm,0.1s	1.45	14	P	Pn	18 34 16.1	+0.3
KTBS	6.6nm,0.2s			S	Sn	18 34 34.7	-0.4
ARLS	Aral baz=52	1.46	253	⇑iP	Pn	18 34 15.3	-0.7
ARLS	baz=52			⇑iS	Sn	18 34 35.4	-0.1
KUU	Kurty baz=4.0	1.59	4	eP	Pn	18 34 18.4	+0.7
KUU	baz=4.0			eS	Sb	18 34 38.7	-0.3
KUU	Kurty 1.4nm,0.1s	1.59	4	eP	Pn	18 34 18.4	+0.7
KUU	7.6nm,0.2s			eS	Sb	18 34 38.7	-0.3
KUU	Kurty 1.4nm,0.1s	1.59	4	P	Pn	18 34 18.4	+0.7
KUU	7.6nm,0.2s			S	Sb	18 34 38.7	-0.3
SGDS	Sogindy 0.9nm,0.1s	1.62	315	P	Pb	18 34 19.1	-0.2
SGDS	2.2nm,0.1s			S	Sb	18 34 40.0	0.0
PRZ	Przheval'sk baz=83	1.65	83	⇑iP	Pn	18 34 19.5	+0.8
PRZ	baz=83			⇑iS	Sg	18 34 42.7	+0.5
SATY	Saty baz=65	1.80	65	eP	Pb	18 34 23.0	+0.5
SATY	baz=65			eS	Sg	18 34 46.6	-0.4
SATY	Saty 1.3nm,0.2s	1.80	65	eP	Pb	18 34 23.0	+0.5
SATY	4.9nm,0.2s			eS	Sg	18 34 46.6	-0.4
SATY	Saty 1.3nm,0.2s	1.80	65	P	Pb	18 34 23.0	+0.5
SATY	4.9nm,0.2s			S	Sg	18 34 46.6	-0.4
MRKS	Merke 0.7nm,0.1s	2.23	282	eP	Pb	18 34 31.0	+1.2
MRKS	3.4nm,0.2s			eS	Sg	18 35 00.4	-0.5
MRKS	Merke 0.7nm,0.1s	2.23	282	Pg	Pb	18 34 31.0	+1.2
MRKS	3.4nm,0.2s			Lg	Lg	18 35 00.4	

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*IDC **02** 18:56:01.8±2.0, 7°.47S×128°.54E, h145^{km}±24^{km}, mb3.1/1, mb1 3.5/6, mb1mx3.2/28, mbtmp3.9/6, Error ellipse: s-maj=24.8km s-min=19.1km az=121.0*
*NEIC **02** 18:56:02.5±1.5, 7°.7S±0°.1×128°.71E±0°.09, h175^{km}±10^{km}, mb4.3/1, Error ellipse: s-maj=18.8km s-min=13.2km az=170.0*
ISC 02 18:55:59.6±0.8, 7°.60S±0°.06×128°.82E±0°.08, h150^{km}, n18, σ2^{s}.26/21, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	2.49	99	Pn	Pn	18 56 46.5	+5.9
SOEI	Soe	4.98	244		Pn	18 57 14.6	+1.6
MTN	Manton Dam	5.68	157	Pn	Pn	18 57 27.7	+5.6
BATI	Baumata 16nm,0.3s,baz=122,slow=4.2,SNR=31	5.71	243	P	Pn	18 57 24.2	+1.6
BATI	10nm,0.3s,baz=92,slow=18,SNR=8.2			S	Sn	18 58 25.1	-2.3
FAKI	Fak Fak	5.77	36	Pn	Pn	18 57 24.0	+0.7
SIJI	Sorong 2.3nm,0.3s,baz=218,slow=24,SNR=27	7.12	20	P	Pn	18 57 42.9	+1.5
SIJI	0.4nm,0.3s,baz=253,slow=19,SNR=1.2			S	Sn	18 58 58.3	-2.9
FITZ	Fitzroy Crossi 0.1nm,0.3s,baz=21,slow=12,SNR=6.2	10.88	196	P	Pn	18 58 32.9	+1.6
FITZ	0.6nm,0.3s,baz=273,slow=22,SNR=6.1			S	Sn	19 00 28.4	-3.2
FITZ	Fitzroy Crossi	10.88	196		Pn	18 58 29.8	-1.5
WB0	Warramunga Arr	13.24	156		P	18 59 05.5	-0.9
WRAB	Tennant Creek	13.38	157	Pn	Pn	18 59 03.8	+0.1
WRA	Warramunga Arr 0.3nm,0.3s,baz=330,slow=13,SNR=24	13.38	157	P	P	18 59 07.7	-0.2
WRA	0.5nm,0.3s,baz=323,slow=24,SNR=5.0			S	Sn	19 01 30.3	-1.6
WRA	Warramunga Arr	13.38	157	Pn	Pn	18 59 06.5	+2.7
WB2	Warramunga Arr	13.39	157	Pn	Pn	18 59 05.5	+1.7
COEN	Coen	15.45	115	Pn	Pn	18 59 29.1	-0.6
COEN	comp=Z,22nm,1.7s			IAmb	IAmb	18 59 52.0	
ASAR	Alice Springs comp=Z,0.4nm,0.3s,baz=338,slow=10,SNR=50	16.70	164	P	Pn	18 59 51.2	+6.2
ASAR	comp=Z,0.2nm,0.3s,baz=78,slow=18,SNR=4.1			S	S	19 02 49.6	-1.1
ASAR	Alice Springs	16.70	164	P	P	18 59 44.9	+0.2
MKAR	Makanchi Array comp=Z,0.2nm,0.4s,baz=118,slow=8.2,SNR=9.3	68.09	327	P	P	19 06 44.3	+1.1
MKAR	Makanchi Array	68.09	327	P	P	19 06 43.2	0.0

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*MAN **02** 19:57:42.1, 14°.15N×124°.56E, h3^{km}, mb4.7, ML3.6, MS3.6*
*IDC **02** 19:57:43.1±2.3, 13°.62N×124°.04E, h0^{km}, mb3.6/5, mb1 3.9/5, mb1mx3.5/53, mbtmp3.6/5, MS2.9/3, Ms1 2.9/3, ms1mx2.5/32, Error ellipse: s-maj=86.7km s-min=22.4km az=56.0*
ISC 02 19:57:41.5±2.1, 14°.11N±0°.07×124°.59E±0°.07, h5^{km}±13^{km}, n22, σ1^{s}.47/22, mb3.6/5, MS2.6/3, 1C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PVCP	Virac	0.66	220	eP	Pb	19 57 55.2	-0.3
PVCP				eS	Sg	19 58 03.9	+0.9
SCSP	San Jose Seism	1.13	246	eP	Pg	19 58 03.3	0.0
SCSP				eS	Sb	19 58 19.8	+1.2
CNP	Catarman	1.59	177	eP	Pg	19 58 12.0	-0.1
CNP				eS	Sg	19 58 34.0	+1.3
JCNP	Jose Panganiba	1.84	276	eP	Pb	19 58 14.5	-1.1
JCNP				eS	Sg	19 58 40.5	-0.3
GQP	Guinayangan	2.09	265	⇓eP	Pb	19 58 19.4	-0.5
GQP				eS	Sb	19 58 46.2	+0.1
POLP	Polilio Island	2.64	284	eP	Pn	19 58 26.3	+1.5
POLP				eS	Sg	19 59 06.6	+0.3
BOAC	Boac	2.74	257	eP	Pn	19 58 27.1	+0.9
BOAC				eS	Sb	19 59 05.2	+0.2
LQP	Lukban	2.96	270	⇑eP	Pb	19 58 31.9	-3.0
CAUP	Cauayan	3.88	317	eP	Pn	19 58 42.9	+1.1
CAUP				eS	Sn	19 59 28.8	+1.1
KSRS	Korea Array comp=Z,14nm,21.1s,baz=70,slow=34	23.44	7	LR	LR	20 11 12.7	

CMAR	Chiang Mai Arr	24.98	283	P	P	20 03 05.8	-0.6
	1.4nm,1.0s,baz=99,slow=7.3,SNR=7.2						
CMAR				LR	LR	20 13 16.4	
	comp=Z,21nm,19.4s,baz=105,slow=38						
PSI	Prapat	27.72	248	LR	LR	20 14 57.7	
	comp=Z,66nm,21.8s,baz=88,slow=38						
FITZ	Fitzroy Crossi	32.02	178	P	P	20 04 05.4	-3.7
	2.3nm,1.0s,baz=0.0,slow=11,SNR=2.1						
WRA	Warramunga Arr	35.17	164	P	P	20 04 37.0	+0.5
	0.4nm,0.7s,baz=344,slow=9.0,SNR=4.5						
ASAR	Alice Springs	38.63	166	P	P	20 05 06.2	+0.2
	0.9nm,0.4s,baz=347,slow=7.3,SNR=14						
H11S3	WAKE ISLAND Hy	40.58	78	T	T	20 48 49.0	
	baz=270,slow=75,SNR=58						
H11S1	WAKE ISLAND Hy	40.59	78	T	T	20 48 49.5	
	baz=270,slow=75,SNR=41						
H11S2	WAKE ISLAND Hy	40.59	78	T	T	20 48 48.6	
	baz=270,slow=75,SNR=36						
H11N1	WAKE ISLAND Hy	40.78	76	T	T	20 49 03.2	
	baz=267,slow=74,SNR=86						
H11N2	WAKE ISLAND Hy	40.78	76	T	T	20 49 03.9	
	baz=267,slow=74,SNR=66						
H11N3	WAKE ISLAND Hy	40.80	76	T	T	20 49 03.0	
	baz=267,slow=74,SNR=65						
MKAR	Makanchi Array	48.00	322	P	P	20 06 23.6	+2.1
	0.4nm,0.9s,baz=132,slow=8.0,SNR=3.1						

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*NEIC **02** 19:57:52.0±0.5, 19.°4S±0.°1×169.°6E±0.°2, h246^{km}±5^{km}, mb4.2/10, Error ellipse: s-maj=24.0km s-min=14.5km az=116.0*
*IDC **02** 19:57:52.1±3.4, 19.°25S×169.°46E, h236^{km}±35^{km}, mb3.5/5, mb1 3.6/6, mb1mx3.3/47, mbtmp4.0/6, Error ellipse: s-maj=79.6km s-min=26.2km az=155.0*
*NOU **02** 19:58:31.3, 21.°45S×167.°67E, h0^{km}, MLv3.0, Loyalty Islands*
ISC 02 19:57:52.6±0.8**, 19.°42S**±0.°09×**169.°5E**±0.°1**, h250^{km}, n30, σ0^{s}.75**/29**, mb4.0**/9**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	2.49	214	P	Pn	19 58 38.1	-1.5
YATNC	Mamie plateau,	3.60	223	P	Pn	19 58 50.0	-1.8
PINNC	Pines Island,	3.73	211	P	Pn	19 58 53.2	+0.1
DZM	Mont Dzumac	3.91	227	P	Pn	19 58 55.2	-0.2
	1.2nm,0.3s,baz=112,slow=23,SNR=9.2						
DZM	Mont Dzumac	3.91	227		Pn	19 58 54.9	-0.5
DZM	Mont Dzumac	3.91	227	P	Pn	19 58 55.4	0.0
NOUC	Port Laguerre	4.03	228	P	Pn	19 58 57.0	+0.3
ONTNC	Ouen Toro	4.07	225	P	Pn	19 58 57.2	+0.1
SANVU	Saraoutou	4.53	330	Pn	Pn	19 59 02.0	-0.7
MSVF	Nonsavu	8.25	80	Pn	Pn	19 59 49.3	+0.1
STKA	Stephens Creek	27.98	238	P	P	20 03 21.0	+0.5
	1.5nm,0.6s,baz=63,slow=11,SNR=6.6						
STKA	Stephens Creek	27.98	238	P	P	20 03 20.6	+0.2
BBOO	Buckleboo	32.73	239	P	P	20 04 02.0	0.0
BBOO				IAmb	IAmb	20 04 27.0	
	comp=Z,28nm,1.4s						
WR0	Warramunga Arr	32.91	263	P	P	20 04 03.6	-0.2
WR0				IAmb	IAmb	20 04 22.1	
	comp=Z,13nm,1.5s						
WB0	Warramunga Arr	33.07	263	P	P	20 04 05.2	0.0
WB0				IAmb	IAmb	20 04 06.1	
	comp=Z,4.8nm,1.2s						
WB2	Warramunga Arr	33.09	263	P	P	20 04 05.5	+0.1
WB2				IAmb	IAmb	20 04 06.7	
	comp=Z,3.5nm,0.9s						
WRA	Warramunga Arr	33.10	263	P	P	20 04 05.7	+0.2
	comp=Z,0.8nm,0.4s,baz=91,slow=8.0,SNR=34						
WRA	Warramunga Arr	33.10	263	P	P	20 04 04.0	-1.4
AS31	Alice Springs	33.35	256	P	P	20 04 08.3	+0.7
ASAR	Alice Springs	33.35	256	P	P	20 04 08.4	+0.8
	comp=Z,5.7nm,0.5s,baz=83,slow=9.1,SNR=124						
ASAR	Alice Springs	33.35	256	P	P	20 04 08.0	+0.4
MTN	Manton Dam	37.40	274	P	P	20 04 43.1	+1.1
FITZ	Fitzroy Crossi	41.50	264	P	P	20 05 15.7	0.0
	comp=Z,2.2nm,0.9s,baz=85,slow=10,SNR=4.8						
FITZ	Fitzroy Crossi	41.50	264	P	P	20 05 15.7	0.0
FITZ				IAmb	IAmb	20 05 23.7	
	comp=Z,9.0nm,1.3s						
PSA00	Pilbara Seismi	46.43	258	P	P	20 05 53.3	-1.6
ILAR	Eielson Array	90.32	17	P	P	20 10 24.7	0.0
	comp=Z,0.2nm,0.6s,baz=226,slow=4.8,SNR=3.7						
ILAR	Eielson Array	90.32	17	P	P	20 10 24.6	-0.1
ARCES	ARCESS Array B	125.31	345	PKP	PKiKP	20 16 24.0	+0.7
	comp=Z,14nm,1.1s,baz=66,slow=5.0,SNR=5.0						
GERES	GERESS Array B	144.78	332	PKP	PKPdf	20 17 00.0	+0.3
	comp=Z,0.4nm,0.4s,baz=45,slow=2.9,SNR=4.4						
GERES	GERESS Array B	144.78	332		PKPbc	20 16 57.8	-1.5

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*IDC **02** 20:40:00.4±22.0, 43.°35N×142.°78E, h0^{km}, mb3.5/4, mb1 3.5/4, mb1mx3.3/38, mbtmp3.5/4, Error ellipse: s-maj=474.7km s-min=79.8km az=157.0*
*JMA **02** 20:40:01.1±0.1, 42.°12N×142.°76E, h47^{km}±1^{km}, M3.3*
JMA Felt I J1.
ISC 02 20:40:01.1±1.0**, 42.°10N**±0.°07×**142.°75E**±0.°04**, h47^{km}**±8^{km}**, n16, σ0^{s}.83**/24**, mb3.5**/4**, 3C-3D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNBK	Urakawa-nobuka	0.18	0	⇑P	Pn	20 40 08.7	-0.3
JNBK				*e*S	Sn	20 40 14.8	+0.2
JEM	Erimo	0.31	105	⇑P	Pn	20 40 10.1	+0.1
JEM				*e*S	Sn	20 40 16.9	+0.5
JSHD	Hidakashinhida	0.38	326	⇑P	Pn	20 40 10.5	-0.2
JTHR	Tokachihiroo	0.45	64	⇓P	Pn	20 40 11.3	-0.2
JTHR				*e*S	Sn	20 40 18.9	-0.1
JCH	Churui	0.69	41	⇓P	Pn	20 40 14.2	-0.3
JBT2	Biratori 2	0.74	337	P	Pn	20 40 15.1	-0.1
JFR	Furan	1.07	354	P	Pn	20 40 19.6	-0.1
JFR				*e*S	Sn	20 40 33.0	-0.5
JOB	Onbets	1.14	44	⇓P	Pn	20 40 21.2	+0.7
JEW	Eniwo	1.22	308	P	Pn	20 40 22.3	+0.7
JEW				*e*S	Sn	20 40 38.7	+1.7
JKB	Kayabe	1.30	261	P	Pn	20 40 22.4	-0.3
JKB				*e*S	Sn	20 40 38.6	-0.3
JNB	Noboribetsu	1.32	287	P	Pn	20 40 22.6	-0.5
JNB				*e*S	Sn	20 40 38.8	-0.8
JAR	Ashorobuto	1.42	32	P	Pn	20 40 24.1	-0.3
JAR				*e*S	Sn	20 40 41.4	-0.4
SONM	Songino Array	26.18	295	P	P	20 45 33.6	+2.5
	0.2nm,0.5s,baz=83,slow=10,SNR=1.6						
ZALV	Zalesovo Beam	39.44	308	P	P	20 47 25.2	-1.0
	1.3nm,0.6s,baz=78,slow=9.2,SNR=6.8						
MKAR	Makanchi Array	42.49	298	P	P	20 47 51.4	-0.1
	0.4nm,0.9s,baz=77,slow=8.1,SNR=2.5						
FINES	FINESS Array B	64.84	332	P	P	20 50 33.7	-0.9
	0.4nm,0.4s,baz=52,slow=7.5,SNR=6.7						

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*IDC **02** 20:43:18.8±9.2, 31.°01S×68.°54W, h112^{km}±74^{km}, mb3.7/1, mb1 3.8/2, mb1mx3.3/30, mbtmp4.2/2, ML4.2/1, Error ellipse: s-maj=82.0km s-min=63.2km az=122.0*
*GUC **02** 20:43:19.7±0.7, 31.°25S×68.°72W, h137^{km}±18^{km}, ML4.0*
ISC 02 20:43:17.0±1.8**, 31.°25S**±0.°06×**68.°3W**±0.°2**, h104^{km}**±20^{km}**, n16, σ1^{s}.78**/27**, 7C, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO01	Juntas del Tor	2.03	308	⇑*i*P	Pn	20 43 52.4	+2.0
CO01				*i* S	Sn	20 44 16.9	+1.2
CO01				IAML		20 44 17.7	
	comp=N,2μm,0.3s						
CO03	El Pedregal	2.12	281	⇑*i*P	Pn	20 43 52.2	+0.7
CO03				*i* S	Sn	20 44 16.8	-1.0
CO03				IAML		20 44 20.2	
	comp=E,2μm,0.3s						
CO02	Combarbal	2.35	270	⇑*i*P	Pn	20 43 54.5	+0.1
CO02				*i* S	Sn	20 44 20.9	-2.1
CO02				IAML		20 44 23.5	
	comp=N,2μm,0.3s						
GO04	Tololo Observa	2.44	296	⇑*i*P	Pn	20 43 55.9	+0.2
GO04				*i* S	Sn	20 44 24.5	-0.7
GO04				IAML		20 44 30.9	
	comp=N,1μm,0.4s						
VA03	San Esteban	2.46	232	*e*P	Pn	20 43 56.9	+1.0
VA03				*i* S	Sn	20 44 25.3	-0.3
VA03				IAML		20 44 29.8	
	comp=N,483nm,0.3s						
ROCH	El Roble	2.90	233	⇑*i*P	Pn	20 44 01.4	-0.3
ROCH				*i* S	Sn	20 44 34.8	-1.3
MT03	Universidad Ad	2.94	220	*e*P	Pn	20 44 03.7	+1.5
MT03				*i* S	Sn	20 44 38.3	+1.5
MT03				IAML		20 44 42.4	
	comp=E,251nm,0.5s						
AC05	El Transito	2.97	324	⇑*i*P	Pn	20 44 04.6	+1.9
AC05				*i* S	Sn	20 44 38.2	+0.5
MT05	Renca	2.99	224	⇑*i*P	Pn	20 44 03.8	+1.0
MT05				*i* S	Sn	20 44 38.0	-0.1
MT05				IAML		20 44 41.8	
	comp=E,497nm,0.3s						
MT09	Talagante	3.41	222	*e*P	Pn	20 44 08.2	-0.3
MT09				IAML		20 44 48.2	
	comp=E,148nm,0.6s						
GO03	Copiap	4.03	334	*e*P	Pn	20 44 17.7	+0.9
LVC	Limon Verde	8.63	356	P	Pn	20 45 19.2	-0.2
	comp=E,3.0nm,0.3s,baz=179,slow=8.0,SNR=13						
LVC				S	Sn	20 46 48.6	-6.6
	comp=E,0.2nm,0.3s,baz=100,slow=23,SNR=1.2						
TORD	Torodi Ar. Bea	80.25	68	P	P	20 55 17.2	+0.5
	comp=E,1.1nm,0.6s,baz=255,slow=4.2,SNR=3.9						
WRA	Warramunga Arr	124.67	206	PKP	PKPdf	21 02 04.8	-0.2
	comp=E,0.3nm,0.6s,baz=166,slow=1.9,SNR=3.0						
ZALV	Zalesovo Beam	150.20	33	PKPbc	PKiKP	21 02 56.8	+0.6
	comp=E,1.7nm,0.6s,baz=298,slow=2.5,SNR=6.3						
MKAR	Makanchi Array	152.56	47	PKPbc	PKPbc	21 03 00.4	-0.7
	comp=E,0.4nm,0.8s,baz=311,slow=1.8,SNR=4.0						
MKAR				PKPab	PKPab	21 03 13.9	+1.9
	comp=E,0.8nm,0.8s,baz=285,slow=4.0,SNR=6.6						

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*UCR **02** 20:51:04.3±1.0, 13.°31N×89.°51W, h66^{km}±4^{km}, ML4.4*
*SNET **02** 20:51:04.2±0.9, 13.°31N×89.°51W, h66^{km}±3^{km}, ML4.4*
*INET **02** 20:51:06.6, 13.°27N×89.°32W, h16^{km}, ML4.0, MW3.3*
*GCG **02** 20:51:06.3±0.6, 13.°35N×89.°55W, h33^{km}±119^{km}, MD4.0*
ISC 02 20:51:05.6±1.5**, 13.°30N**±0.°07×**89.°48W**±0.°04**, h59^{km}**±7^{km}**, n68, σ0^{s}.66**/98**, 2D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LALI	Alcalda de L	0.24	40	*e*P	Pn	20 51 14.6	-0.6
LALI				*e*S	Sn	20 51 22.8	+0.7
LALI	Alcalda de L	0.24	40	*e*P	Pn	20 51 14.6	-0.6
LALI				*e*S	Sn	20 51 22.8	+0.7
JAYA	Jayaque - finc	0.35	5	*e*P	Pn	20 51 15.4	-0.8
JAYA				*e*S	Sn	20 51 24.1	+0.1
JAYA				IAML		20 51 25.2	
	comp=Z,21μm,0.4s						
JAYA	Jayaque - finc	0.35	5	*e*P	Pn	20 51 15.4	-0.8
JAYA				*e*S	Sn	20 51 24.1	+0.1
JAYA				IAML		20 51 25.2	
	comp=Z,21μm,0.4s						
ITCA	Escuela Especi	0.42	28	*e*P	Pn	20 51 16.2	-0.6
ITCA	Escuela Especi	0.42	28	*e*P	Pn	20 51 16.2	-0.6
PMON	Piamonte	0.44	21	*e*P	Pn	20 51 16.6	-0.4
PMON	Piamonte	0.44	21	*e*P	Pn	20 51 16.6	-0.4
SNET	Serv Nac Est T	0.45	32	*e*P	Pn	20 51 16.6	-0.5
SNET				*e*S	Sn	20 51 26.2	+0.7
SNET				IAML		20 51 27.9	
	comp=Z,20μm,0.4s						
SNET	Serv Nac Est T	0.45	32	*e*P	Pn	20 51 16.6	-0.5
SNET				*e*S	Sn	20 51 26.2	+0.7
SNET				IAML		20 51 27.9	
	comp=Z,20μm,0.4s						
BOQS	Boqueron	0.47	24	*e*P	Pn	20 51 17.1	-0.3
BOQS	Boqueron	0.47	24	*e*P	Pn	20 51 17.1	-0.3
OPAM	Oficina de Pla	0.49	34	*e*P	Pn	20 51 17.1	-0.3
OPAM	Oficina de Pla	0.49	34	*e*P	Pn	20 51 17.1	-0.3
CEDA	San Andres	0.51	9	*e*P	Pn	20 51 16.9	-0.7
CEDA				IAML		20 51 18.0	
	comp=Z,18μm,0.4s						
CEDA	San Andres	0.51	9	*e*P	Pn	20 51 16.9	-0.7
CEDA				IAML		20 51 18.0	
	comp=Z,18μm,0.4s						
IGN	Direccin Gen	0.51	36	*e*P	Pn	20 51 17.2	-0.5
IGN				*e*S	Sn	20 51 27.5	+1.1
IGN	Direccin Gen	0.51	36	*e*P	Pn	20 51 17.2	-0.5
IGN				*e*S	Sn	20 51 27.5	+1.1
LFRS	El Faro	0.52	52	*e*P	Pn	20 51 17.4	-0.4
LFRS	El Faro	0.52	52	*e*P	Pn	20 51 17.4	-0.4
UDBS	Universidad Do	0.52	37	*e*P	Pn	20 51 17.4	-0.4
UDBS				*e*S	Sn	20 51 27.6	+1.0
UDBS	Universidad Do	0.52	37	*e*P	Pn	20 51 17.4	-0.4
UDBS				*e*S	Sn	20 51 27.6	+1.0
AEIL	Aeropuerto Ilo	0.53	42	*e*P	Pn	20 51 17.7	-0.2
AEIL				IAML		20 51 18.5	
	comp=Z,24μm,0.3s						
AEIL	Aeropuerto Ilo	0.53	42	*e*P	Pn	20 51 17.7	-0.2
AEIL				IAML		20 51 18.5	
	comp=Z,24μm,0.3s						
CEVE	Cerro Verde	0.54	345	⇓*i*P	Pn	20 51 17.6	-0.7
CEVE				IAML		20 51 29.1	
	comp=Z,16μm,0.4s						
CEVE	Cerro Verde	0.54	345	⇓*i*P	Pn	20 51 17.6	-0.7
CEVE				IAML		20 51 29.1	
	comp=Z,16μm,0.4s						
SBLS	San Blas	0.55	345	*e*P	Pn	20 51 17.7	-0.7
SBLS	San Blas	0.55	345	*e*P	Pn	20 51 17.7	-0.7
QUEZ	Alcaldia de Qu	0.57	21	*e*P	Pn	20 51 17.8	-0.5
LFU	La Fuente	0.57	39	*e*P	Pn	20 51 18.0	-0.4
LFU	La Fuente	0.57	39	*e*P	Pn	20 51 18.0	-0.4
SNJE	San Jose	0.58	348	*e*P	Pn	20 51 17.9	-0.7
SNJE	San Jose	0.58	348	*e*P	Pn	20 51 17.9	-0.7
LBRS	Las Brisas	0.61	44	*e*P	Pn	20 51 18.3	-0.5
LBRS	Las Brisas	0.61	44	*e*P	Pn	20 51 18.3	-0.5
RTR	El Retiro	0.61	345	*e*P	Pn	20 51 18.5	-0.5
RTR	El Retiro	0.61	345	*e*P	Pn	20 51 18.5	-0.5
COEG	Centro de Oper	0.66	61	*e*P	Pn	20 51 18.9	-0.6
COEG				*e*S	Sn	20 51 29.8	+0.3
COEG				IAML		20 51 31.9	
	comp=Z,8μm,0.3s						
COEG	Centro de Oper	0.66	61	*e*P	Pn	20 51 18.9	-0.6
COEG				*e*S	Sn	20 51 29.8	+0.3
COEG				IAML		20 51 31.9	
	comp=Z,8μm,0.3s						
PAVA	Las Pavas	0.67	52	*e*P	Pn	20 51 19.1	-0.4
PAVA				IAML		20 51 20.1	
	comp=Z,7μm,0.3s						
PAVA				*e*S	Sn	20 51 30.4	+0.7
PAVA	Las Pavas	0.67	52	*e*P	Pn	20 51 19.1	-0.4
PAVA				IAML		20 51 20.1	
	comp=Z,7μm,0.3s						
PAVA				*e*S	Sn	20 51 30.4	+0.7
TACO	Tacachico	0.68	10	*e*P	Pn	20 51 18.6	-1.0
TACO				*e*S	Sn	20 51 29.8	+0.1
TACO	Tacachico	0.68	10	*e*P	Pn	20 51 18.6	-1.0
TACO				*e*S	Sn	20 51 29.8	+0.1
UESV	Universidad de	0.75	64	*e*P	Pn	20 51 19.7	-0.7
UESV				*e*S	Sn	20 51 32.5	+1.2
UESV	Universidad de	0.75	64	*e*P	Pn	20 51 19.7	-0.7
UESV				*e*S	Sn	20 51 32.5	+1.2
COEB	Comit de Eme	0.94	78	*e*P	Pn	20 51 22.4	-0.6
COEB				*e*S	Sn	20 51 35.6	-0.2
COEB				IAML		20 51 37.0	
	comp=Z,9μm,0.3s						
COEB	Comit de Eme	0.94	78	*e*P	Pn	20 51 22.4	-0.6
COEB				*e*S	Sn	20 51 35.6	-0.2
COEB				IAML		20 51 37.0	
	comp=Z,9μm,0.3s						
PQSS	Presa 15 de Se	0.95	70	*e*P	Pn	20 51 22.4	-0.5
PQSS				*e*S	Sn	20 51 36.6	+0.9
LLGN	La Laguna	1.00	31	*e*P	Pn	20 51 22.9	-0.9
LLGN				*e*S	Sn	20 51 37.1	0.0
LLGN	La Laguna	1.00	31	*e*P	Pn	20 51 22.9	-0.9
LLGN				*e*S	Sn	20 51 37.1	0.0
MTO3	Montecristo	1.10	6	*e*P	Pn	20 51 24.2	-0.9
MTO3	Montecristo	1.10	6	*e*P	Pn	20 51 24.2	-0.9
JUCU	Jucuar¡n	1.20	92	*e*P	Pn	20 51 26.0	-0.3
JUCU	Jucuar¡n	1.20	92	*e*P	Pn	20 51 26.0	-0.3
ESQI	Esquipulas	1.26	6	*e*P	Pn	20 51 26.4	-0.7
ESQI				*e*S	Sn	20 51 43.8	+0.6
IXG	Ixpaco	1.27	313	*e*P	Pn	20 51 27.0	-0.4
IXG				*e*S	Sn	20 51 43.0	-0.7
NBG	Las Nubes	1.53	327	*e*P	Pn	20 51 31.2	+0.3
PCG	Pacaya	1.54	315	*e*P	Pn	20 51 31.4	+0.3
PCG				*e*S	Sn	20 51 50.6	+0.4
LCND	La Caada	1.55	89	*e*P	Pn	20 51 30.4	-0.5
LCND				*e*S	Sn	20 51 51.3	+1.3
LCND				IAML		20 51 54.1	
	comp=Z,6μm,0.3s						
LCND	La Caada	1.55	89	*e*P	Pn	20 51 30.4	-0.5
LCND				*e*S	Sn	20 51 51.3	+1.3
LCND				IAML		20 51 54.1	
	comp=Z,6μm,0.3s						
CNCH	Conchagua	1.60	91	*e*P	Pn	20 51 31.3	-0.4
CNCH	Conchagua	1.60	91	*e*P	Pn	20 51 31.3	-0.4
FUG	Fuego 3	1.75	311	*e*P	Pn	20 51 33.7	-0.1
FUG				*e*S	Sn	20 51 55.8	+0.7
MRL	Marmol	1.78	354	*i* P	Pn	20 51 34.7	+0.4
MRL				*e*S	Sn	20 51 57.1	+1.1
TGUH	Tegucigalpa,Un	2.27	70	*e*P	Pn	20 51 40.1	-0.8
TGUH	Tegucigalpa,Un	2.27	70	*e*P	Pn	20 51 40.1	-0.8
CNGN	Cerro Negro	2.83	106	*e*P	Pn	20 51 47.4	-1.0
CNGN	Cerro Negro	2.83	106	*e*P	Pn	20 51 47.4	-1.0

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*TAP **02** 21:17:32.8, 24.°14N×121.°88E, h50^{km}, ML3.4, C*
*JMA **02** 21:17:32.1, 24.°09N×121.°87E, h53^{km}±1^{km}, M2.6*
ISC 02 21:17:33.5±1.2**, 24.°11N**±0.°02×**121.°92E**±0.°02**, h40^{km}**±8^{km}**, n115, σ0^{s}.90**/217**, 1C-10D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWD	Chiawan	0.30	265	⇑*i*P	Pn	21 17 41.6	-0.2
	baz=250						
TWD				*i* S	Sn	21 17 47.9	+0.4
	baz=250						
NACB	Ninganchiao	0.31	283	⇓P	Pn	21 17 41.5	-0.4
	baz=273						
NACB				S	Sn	21 17 47.9	+0.2
	baz=273						
HWA	Hwalien	0.32	246	*i* P	Pn	21 17 42.3	+0.3
	baz=233						
HWA				S	Sn	21 17 49.5	+1.7
	baz=233						
ENA	Nanau	0.36	333	*i* P	Pn	21 17 42.3	-0.2
	baz=334						
ENA				*i* S	Sn	21 17 49.4	+0.7
	baz=334						
ETLH	Xiulin Townshi	0.41	284	P	Pn	21 17 42.6	-0.6
	baz=274						
ETLH				S	Sn	21 17 49.9	-0.2
	baz=274						
TWC	Suao	0.51	352	⇓*i*P	Pn	21 17 44.3	-0.1
	baz=2.0						
TWC				*i* S	Sn	21 17 52.4	+0.4
	baz=2.0						
ESL	Shilin	0.53	237	P	Pn	21 17 44.5	-0.2
	baz=240						
ESL				S	Sn	21 17 53.2	+0.6
	baz=240						
NNSB	Datong	0.59	303	⇓P	Pn	21 17 44.8	-0.7
	baz=295						
NNSB				S	Sn	21 17 53.4	-0.7
	baz=295						
NNSH	Datong	0.59	303	⇓*i*P	Pn	21 17 44.8	-0.7
	baz=295						
NNSH				*i* S	Sn	21 17 53.4	-0.7
	baz=295						
NNS	Nan Shan	0.60	304	⇓*i*P	Pn	21 17 45.0	-0.7
	baz=296						
NNS				*i* S	Sn	21 17 53.9	-0.5
	baz=296						
WHF	Hehuan Shan	0.60	274	*i* P	Pn	21 17 45.2	-0.8
	baz=263						
WHF				*i* S	Sn	21 17 54.0	-0.8
	baz=263						
NDT	Datong Townshi	0.62	323	*i* P	Pn	21 17 45.2	-0.7
	baz=318						
NDT				*i* S	Sn	21 17 54.1	-0.6
	baz=318						
ENTT	Nioudou	0.62	329	⇓*i*P	Pn	21 17 45.2	-0.7
	baz=332						
ENTT				S	Sn	21 17 54.8	0.0
	baz=332						
EGFH	Guangfu	0.63	226	*e*P	Pn	21 17 45.3	-0.6
	baz=229						
EGFH				*e*S	Sn	21 17 54.2	-0.6
	baz=229						
FUSS	Fushou	0.64	283	P	Pn	21 17 45.8	-0.5
	baz=280						
FUSS				S	Sn	21 17 54.7	-0.7
	baz=280						
TWE	Neicheng	0.66	339	⇓*i*P	Pn	21 17 45.8	-0.5
	baz=343						
TWE				*i* S	Sn	21 17 56.0	+0.4
	baz=343						
ILA	Ilan	0.68	346	*i* S	Sn	21 17 57.1	+1.0
	baz=351						
CHGB	Renai	0.69	266	P	Pn	21 17 46.5	-0.5
	baz=256						
CHGB				S	Sn	21 17 56.0	-0.5
	baz=256						
TWT	Tachien	0.70	282	*i* P	Pn	21 17 46.7	-0.4
	baz=273						
TWT				*i* S	Sn	21 17 56.6	-0.2
	baz=273						
TDCB	Techi	0.71	282	P	Pn	21 17 46.9	-0.3
	baz=273						
TDCB				S	Sn	21 17 56.4	-0.8
	baz=273						
NTC	Toucheng	0.75	354	*e*P	Pn	21 17 47.5	-0.1
	baz=9.0						
NTC				*e*S	Sn	21 17 58.1	+0.3
	baz=9.0						
YHNB	Yeheng	0.75	319	⇓P	Pn	21 17 47.0	-0.7
	baz=312						
YHNB				S	Sn	21 17 56.9	-1.1
	baz=312						
HGSD	Ruisui	0.76	217	P	Pn	21 17 47.3	-0.4
	baz=202						
HGSD				S	Sn	21 17 58.7	+0.7
	baz=202						
NSK	Sanguang	0.77	318	⇓*i*P	Pn	21 17 47.2	-0.7
	baz=312						
NSK				*i* S	Sn	21 17 57.0	-1.3
	baz=312						
NWLT	Wulai	0.77	330	P	Pn	21 17 47.1	-0.8
	baz=332						
NWLT				S	Sn	21 17 57.1	-1.2
	baz=332						
VWDT	VWDT	0.80	244	P	Pn	21 17 48.0	-0.2
	baz=232						
VWDT				S	Sn	21 17 58.5	-0.4
	baz=232						
EHY	Hungye	0.81	223	P	Pn	21 17 46.8	-1.7
	baz=216						
EHY				S	Sn	21 17 58.3	-1.1
	baz=216						
TIPB	Shuangxi	0.87	354	*i* P	Pn	21 17 49.2	0.0
	baz=7.0						
TIPB				*e*S	Sn	21 18 00.3	-0.4
	baz=7.0						
WPL	Puli Township	0.89	264	P	Pn	21 17 49.1	-0.4
	baz=258						
WPL				S	Sn	21 18 00.8	-0.4
	baz=258						
TWB1	Santiao Chiao	0.90	4	*i* P	Pn	21 17 49.3	-0.4
	baz=22						
TWB1				S	Sn	21 18 01.1	-0.4
	baz=22						
WHP	Taichung City	0.91	281	P	Pn	21 17 50.1	+0.2
	baz=279						
WHP				S	Sn	21 18 01.6	-0.3
	baz=279						
YULB	Yu-li	0.91	219	P	Pn	21 17 48.5	-1.3
	baz=222						
YULB				S	Sn	21 18 00.6	-1.2
	baz=222						
DPDB	Guoxing	0.91	266	P	Pn	21 17 49.3	-0.6
	baz=260						
DPDB				*e*S	Sn	21 18 01.0	-0.9
	baz=260						
TWA	Mucha	0.93	341	*i* P	Pn	21 17 49.9	-0.1
	baz=335						
TWA				S	Sn	21 18 02.3	+0.1
	baz=335						
NHDH	Xindian Distri	0.93	337	*e*P	Pn	21 17 49.6	-0.4
	baz=330						
NHDH				*e*S	Sn	21 18 01.9	-0.2
	baz=330						
EYUL	Yuli	0.94	216	*e*P	Pn	21 17 50.0	-0.1
	baz=222						
SSLB	Suanglung	0.94	251	*e*P	Pn	21 17 50.2	0.0
	baz=246						
SSLB				*e*S	Sn	21 18 02.1	-0.4
	baz=246						
TWF1	Yuli	0.94	218	P	Pn	21 17 49.1	-1.1
	baz=221						
TWF1				*e*S	Sn	21 18 01.8	-0.8
	baz=221						
TATO	Taipei	0.95	336	P	Pn	21 17 49.8	-0.6

	baz=329						
TATO	baz=329			*e*S	Sn	21 18 02.5	-0.3
SMLT	**Sun Moon Lake** baz=247	0.96	257	*i* P	Pn	21 17 51.0	+0.4
SMLT	baz=247			S	Sn	21 18 03.6	+0.5
NWF	**Wu-fen Shan** baz=356	0.97	352	⇓*i*P	Pn	21 17 50.8	+0.1
NWF	baz=356			S	Sn	21 18 03.8	+0.5
WFSB	**Wu-fen Shan** baz=356	0.97	352	P	Pn	21 17 50.5	-0.2
WFSB	baz=356			S	Sn	21 18 04.2	+0.9
LIOB	**Emei** baz=303	0.99	303	P	Pn	21 17 51.0	+0.1
LIOB	baz=303			S	Sn	21 18 03.7	0.0
NSTT	**Nanjuang** baz=298	0.99	302	P	Pn	21 17 51.2	+0.3
NSTT	baz=298			S	Sn	21 18 03.2	-0.5
JYNG	**Yonagunijimaku**	0.99	70	P	Pn	21 17 50.6	-0.3
JYNG				*e*S	Sn	21 18 04.5	+0.7
TAP	**Taipei** baz=330	1.00	338	S	Sn	21 18 03.9	-0.1
TNOU	**National Taiwa** baz=356	1.05	353	P	Pn	21 17 51.4	-0.3
TNOU	baz=356			*e*S	Sn	21 18 05.1	-0.1
YOJ	**Yonaguni jima** baz=74	1.05	70	*e*P	Pn	21 17 52.0	+0.2
YOJ	baz=74			*e*S	Sn	21 18 06.8	+1.6
YOJ	**Yonaguni jima**	1.05	70	P	Pn	21 17 51.9	+0.2
YOJ				*e*S	Sn	21 18 05.6	+0.3
NTY	**Taoyuan** baz=329	1.06	328	P	Pn	21 17 51.7	-0.1
NTY	baz=329			*e*S	Sn	21 18 05.1	-0.2
WHYT	**Xinyi Township** baz=243	1.06	248	P	Pn	21 17 52.6	+0.7
WHYT	baz=243			*e*S	Sn	21 18 06.2	+0.7
HSN1	**Hsinchu** baz=309	1.06	309	P	Pn	21 17 52.0	+0.1
HSN1	baz=309			*e*S	Sn	21 18 06.3	+0.9
FULB	**Fuli** baz=217	1.07	213	P	Pn	21 17 52.1	+0.1
FULB	baz=217			S	Sn	21 18 06.6	+0.9
TWQ1	**Liyutan** baz=281	1.08	283	P	Pn	21 17 52.1	0.0
TWQ1	baz=281			*e*S	Sn	21 18 06.5	+0.6
YUS	**Yu-Shan** baz=223	1.08	236	P	Pn	21 17 52.4	-0.2
YUS	baz=223			*e*S	Sn	21 18 06.0	-0.6
YM01	**YM01** baz=333	1.09	343	*e*P	Pn	21 17 50.5	-1.8
YM01	baz=333			*e*S	Sn	21 18 04.5	-1.6
NCU	**National Centr** baz=323	1.09	322	P	Pn	21 17 52.0	-0.3
NCU	baz=323			S	Sn	21 18 06.8	+0.6
NCUH	**Zhongli** baz=323	1.09	322	P	Pn	21 17 52.0	-0.3
NCUH	baz=323			*e*S	Sn	21 18 06.1	-0.1
TWS1	**Kuangyinshan** baz=338	1.09	335	P	Pn	21 17 51.8	-0.5
TWS1	baz=338			S	Sn	21 18 06.1	-0.2
SBCB	**Hsinchu** baz=309	1.09	309	*e*S	Sn	21 18 07.3	+1.1
YM10	**YM10** baz=333	1.10	343	*e*P	Pn	21 17 51.6	-0.9
YM10	baz=333			*e*S	Sn	21 18 05.8	-0.7
YM04	**YM04** baz=330	1.10	341	P	Pn	21 17 51.8	-0.7
YM04	baz=330			*e*S	Sn	21 18 06.1	-0.4
YM05	**YM05** baz=333	1.10	343	P	Pn	21 17 51.8	-0.8
YM05	baz=333			*e*S	Sn	21 18 06.1	-0.5
YM11	**YM11** baz=334	1.10	343	P	Pn	21 17 51.9	-0.6
YM11	baz=334			*e*S	Sn	21 18 07.8	+1.2
NSY	**Sanyi** baz=285	1.10	287	*e*P	Pn	21 17 52.4	0.0
NSY	baz=285			*e*S	Sn	21 18 07.1	+0.5
HSN	**Hsinchu** baz=311	1.11	309	P	Pn	21 17 52.2	-0.4
HSN	baz=311			S	Sn	21 18 07.1	+0.4
NMLH	**Miaoli** baz=291	1.12	293	*e*P	Pn	21 17 52.2	-0.5
NMLH	baz=291			*e*S	Sn	21 18 08.3	+1.4
YM08	**YM08** baz=334	1.12	344	P	Pn	21 17 51.7	-1.0
YM08	baz=334			*e*S	Sn	21 18 06.1	-0.8
WWF	**Wufeng** baz=264	1.12	267	*e*P	Pn	21 17 52.4	-0.2
WWF	baz=264			*e*S	Sn	21 18 08.8	+1.9
CHKT	**Chengkung** baz=192	1.12	207	*e*P	Pn	21 17 52.7	0.0
CHKT	baz=192			*e*S	Sn	21 18 05.1	-1.8
YM03	**YM03** baz=332	1.12	342	*e*P	Pn	21 17 51.7	-1.1
YM03	baz=332			*e*S	Sn	21 18 05.6	-1.5
WJS	**Zhushan** baz=252	1.13	256	P	Pn	21 17 53.6	+0.8
WJS	baz=252			*e*S	Sn	21 18 09.0	+1.9
ANP	**Anpu** baz=332	1.14	341	P	Pn	21 17 51.7	-1.3
NTST	**Danshui** baz=340	1.14	338	*e*P	Pn	21 17 52.0	-1.0
NTST	baz=340			*e*S	Sn	21 18 06.6	-0.8
TCU	**Taichung** baz=269	1.14	272	*e*P	Pn	21 17 52.7	-0.2
TCU	baz=269			*e*S	Sn	21 18 08.5	+1.2
WNT1	**Nantou City** baz=257	1.15	260	P	Pn	21 17 54.1	+1.0
WNT1	baz=257			S	Sn	21 18 09.5	+1.8
WNT	**Mingjian** baz=255	1.16	259	P	Pn	21 17 54.1	+1.0
WNT	baz=255			S	Sn	21 18 08.5	+0.8
ALS	**Alishan** baz=226	1.18	240	P	Pn	21 17 54.3	+0.5
ALS	baz=226			*e*S	Sn	21 18 10.1	+1.2
WDJ	**Dajia District** baz=280	1.20	282	*e*P	Pn	21 17 53.2	-0.5
WDJ	baz=280			*e*S	Sn	21 18 09.3	+0.5
TWY	**Chenhua** baz=349	1.20	346	P	Pn	21 17 53.4	-0.4
TWY	baz=349			*e*S	Sn	21 18 08.8	-0.1
ELDTW	**Lidau** baz=210	1.23	223	P	Pn	21 17 52.9	-1.4
ELDTW	baz=210			*e*S	Sn	21 18 08.5	-1.3
CHN5	**Tsauling** baz=232	1.25	246	P	Pn	21 17 55.0	+0.5
CHN5	baz=232			S	Sn	21 18 11.7	+1.6
WCHH	**Zhanghua** baz=266	1.25	269	*e*P	Pn	21 17 55.1	+0.7
WCHH	baz=266			S	Sn	21 18 11.2	+1.2
EDH	**Donghe** baz=193	1.26	207	*e*P	Pn	21 17 52.9	-1.7
EDH	baz=193			*e*S	Sn	21 18 09.0	-1.3
WGK	**Gukeng** baz=247	1.31	252	P	Pn	21 17 56.1	+0.8
WGK	baz=247			*e*S	Sn	21 18 12.9	+1.3
WDLH	**Douliu** baz=248	1.33	252	*e*P	Pn	21 17 55.9	+0.3
WDLH	baz=248			*e*S	Sn	21 18 14.6	+2.5
LONT	**Longtian** baz=206	1.40	212	*e*P	Pn	21 17 56.1	-0.4
LONT	baz=206			*e*S	Sn	21 18 13.9	+0.2
STYT	**Tauyuan** baz=223	1.42	229	*e*P	Pn	21 17 57.6	+0.8
STYT	baz=223			S	Sn	21 18 15.7	+1.2
TPUB	**Ta-pu** baz=231	1.43	236	*e*P	Pn	21 17 57.1	+0.1
TPUB	baz=231			*e*S	Sn	21 18 16.1	+1.5
CHN2	**Minshiung** baz=233	1.44	247	*e*S	Sn	21 18 17.8	+3.0
RLNB	**Erlin** baz=260	1.45	262	*e*P	Pn	21 17 57.5	+0.4
WTK	**Tuku** baz=263	1.46	254	*e*P	Pn	21 17 57.1	-0.3
WTK	baz=263			*e*S	Sn	21 18 16.1	+0.7
WTP	**Ta-pu** baz=229	1.47	235	*e*P	Pn	21 17 57.5	0.0
WTP	baz=229			*e*S	Sn	21 18 16.8	+1.2
LDUT	**Ludao** baz=183	1.48	196	P	Pn	21 17 55.9	-1.8
LDUT	baz=183			*e*S	Sn	21 18 13.4	-2.4
TWGBT	**Beinan** baz=205	1.50	211	*e*P	Pn	21 17 56.6	-1.3
TWGBT	baz=205			*e*S	Sn	21 18 14.4	-1.8
TWG	**Pinlang** baz=205	1.50	212	*e*P	Pn	21 17 56.8	-1.0
TWG	baz=205			*e*S	Sn	21 18 13.7	-2.5
CHY	**Chiayi** baz=232	1.50	247	*e*P	Pn	21 17 59.5	+1.6
CHY	baz=232			*e*S	Sn	21 18 17.6	+1.3
PCYT	**Pengchaiyu** baz=10.0	1.52	5	*e*P	Pn	21 17 57.5	-0.7
PCYT	baz=10.0			*e*S	Sn	21 18 18.5	+1.7
TWK	**Hsinying** baz=232	1.56	238	*e*P	Pn	21 17 59.8	+1.1
TWK	baz=232			*e*S	Sn	21 18 18.3	+0.6
CHN1	**Nanshi** baz=229	1.57	235	*e*P	Pn	21 17 59.2	+0.3
CHN1	baz=229			*e*S	Sn	21 18 18.8	+0.7
SGST	**Jiashian** baz=215	1.60	231	*e*P	Pn	21 17 59.3	0.0
SGST	baz=215			*e*S	Sn	21 18 19.0	+0.4
SLGT	**Liugui** baz=221	1.61	227	*e*P	Pn	21 18 00.2	+0.8
SLGT	baz=221			*e*S	Sn	21 18 20.7	+1.7
WSF	**Szhu** baz=262	1.62	254	*e*S	Sn	21 18 21.0	+1.7
IRIF	**Iriomote-Funau**	1.67	82	P	Pn	21 18 00.2	0.0
IRIF				S	Sn	21 18 20.3	0.0
ICHU	**Yijhu** baz=227	1.68	244	*e*S	Sn	21 18 21.2	+0.6
HATJ	**Hateruma jima**	1.72	91	*e*S	Sn	21 18 22.9	+1.2
ECL	**Taimali** baz=198	1.75	211	*e*S	Sn	21 18 21.9	-0.3
SSD	**Sandimen** baz=217	1.80	221	*e*P	Pn	21 18 02.7	+0.7
TSMG	**Majia** baz=201	1.82	220	*e*P	Pn	21 18 03.4	+1.1
TSMG	baz=201			*e*S	Sn	21 18 25.1	+0.9
MASBT	**Mashibuluo** baz=202	1.90	219	P	Pn	21 18 03.9	+0.5
MASBT	baz=202			*e*S	Sn	21 18 26.7	+0.6
JKRS	**Kuro-shima**	1.91	86	P	Pn	21 18 04.3	+0.8
JKRS				S	Sn	21 18 27.6	+1.3
EAST	**Anshuo** baz=201	1.98	210	*e*P	Pn	21 18 05.1	+0.6
JIJ	**Ishigaki jima**	2.04	82	P	Pn	21 18 05.3	0.0
JIJ				S	Sn	21 18 28.9	-0.7
JISG	**Ishigakijimahi**	2.23	77	P	Pn	21 18 07.6	-0.3
JISG				S	Sn	21 18 33.4	-0.8
JTJ	**Tarama**	2.59	78	P	Pn	21 18 13.3	+0.4
JTJ				*e*S	Sn	21 18 44.3	+1.2

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*JMA **02** 21:19:03.7, 38°.89N×141°.98E, h49^{km}±1^{km}, M3.9*
JMA Felt II J1.
*NIED **02** 21:19:03.7, 38°.89N×141°.98E, h49^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}2.70; $M_{\theta\theta}$-0.03; $M_{\phi\phi}$-2.68; $M_{r\theta}$1.60; $M_{\theta\phi}$-0.90; $M_{\phi r}$3.27; Fault plane solution: $M_0 4.61000\times10^{14}$ NP1:ϕ_s24.00000°, δ71.00000°, λ95.00000°. NP2:ϕ_s189.00000°, δ19.00000°, λ75.00000°.*
*IDC **02** 21:19:05.4±2.3, 38°.90N×142°.14E, h74^{km}±20^{km}, mb3.4/8, mb1 3.5/13, mb1mx3.3/59, mbtmp3.7/13, MS2.6/4, Ms1 2.6/4, ms1mx2.5/36 Error ellipse: s-maj=24.7km s-min=14.6km az=107.0*
ISC 02 21:19:03.3±1.2, **38°.85N**±0°.05×**142°.05E**±0°.09, **h50**^{km}±9^{km}, **n36**, σ**1^{s}.37**/41, **mb3.9**/11, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	0.38	308	P	Pn	21 19 12.9	-0.3
OFUJ				S	Sn	21 19 19.2	-1.0
JKMT	**Kesennumamotoy**	0.45	266	P	Pn	21 19 13.7	-0.3
JKMT				S	Sn	21 19 20.5	-1.1
JMK	**Ichinoseki**	0.65	279	P	Pn	21 19 16.0	-0.5
JMK				S	Sn	21 19 24.7	-1.2
JIO	**Ouri**	0.67	235	P	Pn	21 19 16.6	-0.1
JIO				S	Sn	21 19 25.4	-1.0
JOM	**Ohasama**	0.86	317	P	Pn	21 19 18.7	-0.4
JOM				S	Sn	21 19 29.5	-1.2
JOU	**Okura**	1.19	247	P	Pn	21 19 23.3	-0.3
JOU				S	Sn	21 19 38.0	-0.6
JRG	**Rokugo**	1.23	297	P	Pn	21 19 23.6	-0.5
JRG				*e*S	Sn	21 19 37.8	-1.8
JYK	**Kaneyama**	1.32	274	P	Pn	21 19 25.0	-0.4
JMM	**Marumori**	1.39	226	P	Pn	21 19 26.2	-0.1
JMM				S	Sn	21 19 42.8	-0.7
JANG	**Nango**	1.58	345	P	Pn	21 19 28.5	-0.4
MAT	**Matsushiro**	3.82	234	P	Pn	21 20 00.8	+1.2
MAT				*e*S	Sn	21 20 43.5	+0.3
MJAR	**Matsushiro Arr** 0.6nm,0.3s,baz=40,slow=12,SNR=32	3.82	234	P	Pn	21 20 01.8	+2.2
MJAR	comp=Z,89nm,18.1s,baz=60,slow=40			LR	LR	21 21 40.5	
ASAJ	**Asahikawa** 0.7nm,0.3s,baz=194,slow=16,SNR=5.6	5.28	4	P	Pn	21 20 21.1	+1.5
ASAJ	0.8nm,0.3s,baz=349,slow=27,SNR=1.4			S	Sn	21 21 20.4	+1.3
ASAJ	comp=Z,52nm,21.1s,baz=188,slow=35			LR	LR	21 22 06.0	
USRK	**Ussuriysk Ar.** baz=110,slow=14,SNR=8.1	9.24	309	P	Pn	21 21 17.0	+3.1
KSRS	**Korea Array** 0.2nm,0.3s,baz=85,slow=15,SNR=2.7	11.21	267	P	Pn	21 21 45.1	+4.2
KSRS	comp=Z,32nm,19.1s,baz=90,slow=35			LR	LR	21 25 37.6	
KLR	**Kul'dur** 0.1nm,0.3s,baz=102,slow=12,SNR=1.4	12.74	328	P	Pn	21 22 02.3	+0.7
KLR	comp=Z,31nm,20.0s,baz=132,slow=35			LR	LR	21 26 25.9	
SONM	**Songino Array** 0.2nm,0.4s,baz=89,slow=9.2,SNR=2.9	27.24	301	P	P	21 24 42.7	0.0
SONM	0.2nm,0.6s,baz=126,slow=2.0,SNR=1.8			PcP	PcP	21 27 59.9	-1.6
H11N2	**WAKE ISLAND Hy** baz=317,slow=75,SNR=127	28.70	124	T	T	21 55 20.3	
H11N1	**WAKE ISLAND Hy** baz=317,slow=75,SNR=90	28.71	125	T	T	21 55 21.0	
H11N3	**WAKE ISLAND Hy** baz=317,slow=75,SNR=116	28.72	124	T	T	21 55 20.5	
H11S1	**WAKE ISLAND Hy** baz=318,slow=76,SNR=74	29.48	126	T	T	21 56 25.4	
H11S3	**WAKE ISLAND Hy** baz=318,slow=76,SNR=83	29.48	126	T	T	21 56 15.2	
H11S2	**WAKE ISLAND Hy** baz=318,slow=76,SNR=49	29.49	126	T	T	21 56 18.4	
ZALV	**Zalesovo Beam** 1.5nm,0.6s,baz=95,slow=9.7,SNR=8.7	41.09	311	P	P	21 26 41.8	-0.2
MKAR	**Makanchi Array** 1.8nm,0.6s,baz=84,slow=9.7,SNR=27	43.60	301	P	P	21 27 02.4	-0.2
GUN	**Gumba** 3.7nm,0.4s	47.50	274	*e*P	P	21 27 35.0	+1.1
ILAR	**Eielson Array** 0.4nm,0.8s,baz=266,slow=5.5,SNR=2.7	47.70	33	P	P	21 27 34.2	-0.4
KKN	**Kakani** 2.3nm,0.3s	48.02	275	*e*P	P	21 27 39.4	+1.6
PKI	**Pulchoki**	48.02	274	*e*P	P	21 27 39.1	+1.1
DMN	**Daman**	48.24	274	*e*P	P	21 27 41.9	+2.3
DANN	**Dangsing** 11nm,0.7s	48.94	276	*e*P	P	21 27 45.2	+0.2
WRA	**Warramunga Arr** 0.4nm,0.5s,baz=6.4,slow=7.4,SNR=7.6	58.92	188	P	P	21 28 57.5	+0.1
YKA	**Yellowknife Ar** 0.1nm,0.4s,baz=309,slow=3.9,SNR=1.6	61.99	31	P	P	21 29 16.0	-1.8
ASAR	**Alice Springs** 0.3nm,0.6s,baz=0.0,slow=4.7,SNR=2.0	62.65	188	P	P	21 29 22.8	+0.1
FINES	**FINESS Array B** 2.5nm,0.8s,baz=32,slow=8.2,SNR=6.1	67.45	332	P	P	21 29 52.9	-0.5
TORD	**Torodi Ar. Bea** 1.2nm,0.8s,baz=27,slow=0.3,SNR=2.9	116.39	316	PKP	PKPdf	21 37 40.1	-1.8

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*IDC **02** 21:20:50.7±1.5, 13°.91N×124°.47E, h0^{km}, mb3.6/5, mb1 3.8/5, mb1mx3.4/53, mbtmp3.6/5, ML4.5/1, MS4.3/1, Ms1 4.3/1, ms1mx2.6/40, Error ellipse: s-maj=43.5km s-min=20.4km az=49.0*
*MAN **02** 21:20:54.8, 14°.03N×124°.36E, h3^{km}, mb4.8, ML3.7, MS3.7*
ISC 02 21:20:52.2±2.4, **14°.13N**±0°.08×**124°.47E**±0°.07, **h7**^{km}±13^{km}, **n22**, σ**1^{s}.88**/23, **mb3.6**/5, **1C-1D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PVCP	**Virac**	0.61	210	*e*P	Pg	21 21 04.2	+0.3
PVCP				*e*S	Sb	21 21 13.8	-0.2
CNP	**Catarman**	1.62	173	*e*P	Pb	21 21 22.5	+0.2
CNP				*e*S	Sg	21 21 43.8	-0.4
JCNP	**Jose Panganiba**	1.73	276	*e*P	Pb	21 21 23.4	-0.9
JCNP				*e*S	Sg	21 21 47.5	-0.3
GQP	**Guinayangan**	1.98	264	⇓*e*P	Pb	21 21 28.4	-0.2
GQP				*e*S	Sg	21 21 56.4	+0.6
POLP	**Polilio Island**	2.53	284	*e*P	Pb	21 21 36.0	-1.9
POLP				*e*S	Sb	21 22 10.5	+1.3
BOAC	**Boac**	2.64	256	*e*P	Pn	21 21 36.9	+1.7
BOAC				*e*S	Sg	21 22 14.3	-2.7
LQP	**Lukban**	2.84	270	⇑*e*P	Pn	21 21 40.2	+1.9
LQP				*i* S	Sg	21 22 26.4	+2.7
OCLP	**Ormoc**	3.06	177	*e*P	Pb	21 21 44.4	-2.6
TGY	**Tagaytay City** 43nm,0.3s,baz=96,slow=2.1,SNR=6.7	3.43	270	Pn	Pn	21 21 45.2	-1.0
TGY	30nm,0.3s,baz=185,slow=2.3,SNR=1.5			Sn	Sn	21 22 27.4	+0.3
MSLP	**Maasin**	3.98	174	*e*P	Pn	21 21 57.8	+4.1
CMAR	**Chiang Mai Arr** 0.5nm,0.3s,baz=96,slow=7.6,SNR=7.2	24.87	283	P	P	21 26 16.1	+0.4
PSI	**Prapat** comp=Z,617nm,21.4s,baz=91,slow=36	27.62	248	LR	LR	21 37 20.1	
WRA	**Warramunga Arr** 0.2nm,0.4s,baz=344,slow=9.4,SNR=1.8	35.22	164	P	P	21 27 44.4	-3.0
ASAR	**Alice Springs** 0.8nm,0.4s,baz=348,slow=7.1,SNR=14	38.68	166	P	P	21 28 15.0	-1.9
H11S3	**WAKE ISLAND Hy** baz=275,slow=74,SNR=68	40.68	78	T	T	22 11 59.4	
H11S1	**WAKE ISLAND Hy** baz=275,slow=74,SNR=54	40.70	78	T	T	22 11 55.8	
H11S2	**WAKE ISLAND Hy** baz=275,slow=74,SNR=51	40.70	78	T	T	22 11 57.0	
H11N1	**WAKE ISLAND Hy** baz=267,slow=74,SNR=49	40.88	76	T	T	22 12 15.2	
H11N2	**WAKE ISLAND Hy** baz=267,slow=74,SNR=51	40.89	76	T	T	22 12 15.7	
H11N3	**WAKE ISLAND Hy** baz=267,slow=74,SNR=52	40.90	76	T	T	22 12 15.0	
MKAR	**Makanchi Array** 0.3nm,0.6s,baz=113,slow=9.4,SNR=3.6	47.92	322	P	P	21 29 32.4	+1.1
ZALV	**Zalesovo Beam** 0.4nm,0.5s,baz=116,slow=3.4,SNR=2.1	50.42	331	P	P	21 29 50.8	+0.5

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*SFS **02** 21:23:58.0, 34°.08N×3°.69W, ML3.8, MSOUN (MARRUECOS)*
*MDD **02** 21:23:58.2±1.8, 34°.05N×3°.74W, h0^{km}, mb3.9/14, Error ellipse: s-maj=17.3km s-min=9.9km az=168.0, PRXIMO*
*INMG **02** 21:23:59.9±1.4, 34°.07N×3°.75W, h11^{km}±12^{km}, ML2.3, Error ellipse: s-maj=6.0km s-min=4.6km az=153.0*
*IGIL **02** 21:23:59.6, 34°.08N×3°.69W, h0^{km}, ML2.1*
ISC 02 21:23:59.3±1.6, **34°.09N**±0°.06×**3°.75W**±0°.04, **h19**^{km}±4^{km}, **n33**, σ**1^{s}.14**/59, **1C, Morocco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IFR	**Ifrane**	1.28	244	⇑*i*P	Pg	21 24 23.5	-0.6
IFR				*e*S	Sn	21 24 41.0	+1.9
EMEL	**Melilla** 37nm,0.2s,SNR=7.9	1.38	28	P	Pn	21 24 23.5	+0.1
EMEL	83nm,0.3s,SNR=7.9			S	Sn	21 24 42.5	+1.4
MELI	**Melilla** 28nm,0.1s,SNR=7.9	1.38	29	P	Pn	21 24 23.9	+0.5
MELI	52nm,0.3s,SNR=7.9			S	Sg	21 24 44.1	+0.2
ELGU	**Los Guajares,** 5.9nm,0.2s,SNR=7.9	2.78	2	P	Pn	21 24 41.9	-0.9
ELGU	5.3nm,0.3s,SNR=7.9			S	Sn	21 25 15.1	-0.8
EBER	**Berja** 1.2nm,0.2s,SNR=6.3	2.89	14	P	Pn	21 24 44.1	-0.4
EBER	5.7nm,0.4s			S	Sn	21 25 19.2	+0.4
EGOR	**Sierra Gorda,** 2.4nm,0.2s,SNR=7.9	3.03	355	S	Sn	21 25 22.8	+0.6
EQUE	**Quentar** 3.1nm,0.3s,SNR=10	3.12	5	P	Pn	21 24 47.8	+0.2
EQUE	2.4nm,0.4s			S	Sn	21 25 24.3	-0.1
AVE	**Averroes**	3.15	257	*e*S	Sb	21 25 32.7	-0.1
EQES	**Quesada** 5.4nm,0.2s,SNR=34	3.75	8	P	Pn	21 24 57.8	+1.6
EQES	1.6nm,0.3s			S	Sn	21 25 40.2	+0.4
OKGL	**Djebel Kef Gue** 17nm,0.2s,SNR=7.9	4.09	60	S	Sn	21 25 46.7	-1.6
EADA	**Adamuz** 0.6nm,0.1s,SNR=7.9	4.13	351	P	Pn	21 25 02.5	+1.2
EADA	1.1nm,0.3s,SNR=7.9			S	Sn	21 25 51.1	+2.0
ECAB	**El Cabril** 0.7nm,0.2s,SNR=6.8	4.21	342	P	Pn	21 25 03.2	+0.8
ECAB	4.2nm,0.7s			S	Sn	21 25 51.6	+0.6
EMUR	**La Murta** 3.6nm,0.3s,SNR=7.9	4.26	28	P	Pn	21 25 02.7	-0.5
EMUR	SNR=7.9			S	Sn	21 25 51.4	-1.1
EMIN	**Mina Concepcio** 0.5nm,0.1s,SNR=8.6	4.37	328	P	Pn	21 25 06.2	+1.5
EMIN	0.9nm,0.3s			S	Sn	21 25 54.2	-0.9
EGRO	**El Granado** 2.8nm,0.1s,SNR=12	4.59	320	P	Pn	21 25 08.7	+1.1
EGRO	2.8nm,0.3s			S	Sn	21 25 57.6	-2.7
PVAQ	**Vaqueiros**	4.62	317	*e*Pn	Pn	21 25 09.0	+0.9
PVAQ				*e*Sn	Sn	21 26 00.4	-0.8
PVAQ	4.6nm,0.6s			A	A	21 26 08.8	
PBDV	**Barranco-do-Ve**	4.64	314	*e*Pn	Pn	21 25 09.3	+1.0
PBDV				*e*Sn	Sn	21 26 00.8	-0.9
PBDV				A	A	21 26 06.3	

	4.6nm,0.6s						
PBAR	Barrancos	4.87	328	ePn	Pn	21 25 12.8	+1.3
PBAR				eSn	Sn	21 26 07.3	-0.1
PBAR				A	A	21 26 18.0	
	2.1nm,0.5s						
ETOB	Tobarra	4.88	21	P	Pn	21 25 11.8	+0.1
	1.7nm,0.2s,SNR=6.1						
ETOB				S	Sn	21 26 07.4	-0.4
	0.6nm,0.3s,SNR=7.9						
PCVE	Castro Verde	4.97	317	ePn	Pn	21 25 13.6	+0.8
PCVE				eSn	Sn	21 26 08.1	-1.6
PCVE				A	A	21 26 10.8	
	3.9nm,0.8s						
MORF	Marmelete	5.12	310	ePn	Pn	21 25 15.7	+0.7
PFVI	Vila Bisbo	5.13	308	P	Pn	21 25 15.4	+0.3
	3.1nm,0.2s,SNR=7.9						
PFVI				S	Sn	21 26 11.6	-2.2
	2.3nm,0.2s,SNR=7.9						
MESJ	Messejana	5.21	317	eP	Pn	21 25 17.0	+0.8
MESJ				eS	Sn	21 26 13.8	-2.0
MESJ				AML	AML	21 26 16.8	
	comp=N,2.9nm,0.2s						
MESJ	Messejana	5.21	317	P	Pn	21 25 17.0	+0.8
MESJ				S	Sn	21 26 13.8	-2.0
	comp=N,2.9nm,0.2s						
MESJ	Messejana	5.21	317	ePn	Pn	21 25 17.0	+0.8
MESJ				eSn	Sn	21 26 14.9	-0.9
MESJ				A	A	21 26 21.3	
	comp=N,3.5nm,0.8s						
PTEO	Sao Teotonio	5.32	312	ePn	Pn	21 25 18.4	+0.8
PTEO				eSn	Sn	21 26 17.1	-1.2
PAB	San Pablo	5.47	355	P	Pn	21 25 20.9	+1.1
	comp=N,0.8nm,0.2s,SNR=7.9						
PAB				S	Sn	21 26 23.1	+0.9
	comp=N,0.4nm,0.3s,SNR=7.9						
PNCL	Nicolau / Gran	5.58	317	ePn	Pn	21 25 21.8	+0.6
PNCL				eSn	Sn	21 26 24.0	-0.8
PNCL				A	A	21 26 30.5	
	comp=N,2.4nm,0.5s						
ESDC	Sonseca Array	5.58	358	P	Pn	21 25 22.4	+1.1
	comp=N,2.2nm,0.2s,baz=178,slow=12,SNR=14						
EVO	Evora	5.62	323	ePn	Pn	21 25 22.9	+1.2
EVO				eSn	Sn	21 26 24.9	-0.8
EVO				A	A	21 26 35.3	
	comp=N,3.0nm,0.6s						
PESTR	Estremoz	5.69	328	ePn	Pn	21 25 23.8	+1.1
PESTR				eSn	Sn	21 26 27.1	-0.4
PMRV	Marv??o	6.08	332	ePn	Pn	21 25 29.5	+1.4
PMTG	Montargil	6.14	325	ePn	Pn	21 25 30.5	+1.6

DJA ***02*** *21:29:36.9±0.2, 6°S±2°×10°5E±°, h10^{km}, M4.9/44, mb4.9/44, mB5.4/35, MLv5.2/25, Mw(mB)4.9/35, MwMwp4.9/7, Mwp5.2/7*

IDC ***02*** *21:29:39.0±3.2, 5°.91S×105°.46E, h28^{km}±21^{km}, mb4.8/40, mb1 4.7/44, mb1mx4.6/60, mbtmp4.9/44, ML4.1/3, MS3.8/20, Ms1 3.8/20, ms1mx3.7/37, Error ellipse: s-maj=12.9km s-min=8.3km az=42.0*

MOS ***02*** *21:29:39.6±1.5, 5°.77S×105°.59E, h39^{km}, mb5.3/51, Error ellipse: s-maj=9.4km s-min=4.1km az=120.9*

BJI ***02*** *21:29:40.0±0.0, 6°.00S×105°.40E, h40^{km}, mB5.2/49, mb4.8/70, Ms4.9/51, Ms7 4.7/49*

NEIC ***02*** *21:29:40.4±2.6, 6°.12S±0°.06×105°.36E±0°.06, h43^{km}±4^{km}, mb5.2/100, Error ellipse: s-maj=9.5km s-min=7.3km az=47.0*

KLM ***02*** *21:29:42, 6°.06S×105°.41E, h45^{km}, mb4.9*

ISC 02 21:29:39.6±0.6, **6°.11S**±0°.04×**105°.39E**±0°.04, **h33**^{km}±2^{km}, **n736**, σ**1^{s}50**/767, **mb5.1**/169, **MS4.1**/32, **47C-42D, Sunda Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BLSI	Bandar Lampung	0.75	349	P	Pb	21 29 51.2	-3.1
KASI	Kota Agung	1.06	303	P	Pn	21 29 56.4	-1.8
TNG	Tangerang	1.25	93	P	Pn	21 29 59.6	-1.2
DBJI	Dramaga	1.42	108	P	Pn	21 30 02.2	-1.0
CBJI	Citeko	1.48	102	P	Pb	21 30 05.5	-1.1
KLSI		1.55	335	P	Pn	21 30 04.9	-0.1
LWLI	Liwa	1.71	309	P	Pn	21 30 07.3	0.0
MDSI	Maura Dua	2.01	323	P	Pn	21 30 12.1	+0.8
LEM	Lembang	2.33	108	Pn	Pn	21 30 16.1	+0.3
	10nm,0.3s,baz=222,slow=6.0,SNR=49						
LEM				Sn	Sb	21 30 50.1	+0.7
	49nm,0.3s,baz=54,slow=15,SNR=1.6						
LEM	Lembang	2.33	108	P	Pn	21 30 16.2	+0.4
CISI	Cisompet, Garu	2.81	121	Pn	Pn	21 30 21.6	-0.7
CISI	Cisompet, Garu	2.81	121	P	Pn	21 30 21.6	-0.7
JCJI	Jatiwangi	2.89	98	P	Pn	21 30 23.8	+0.5
LHSI	Lahat	2.93	320	P	Pn	21 30 24.8	+0.9
MNAI	Manna	2.98	305	Pn	Pn	21 30 25.4	+0.7
MNAI	Manna	2.98	305	P	Pn	21 30 25.3	+0.7
PMBI	Palembang	3.22	349	Pn	Pn	21 30 29.4	+1.5
PMBI	Palembang	3.22	349	P	Pn	21 30 29.4	+1.5
KSI	Kapahiang	3.70	311	P	Pn	21 30 37.2	+2.5
KSI	Kapahiang	3.70	311	P	Pn	21 30 36.5	+1.8
PPBI	Pangkal Pinang	3.99	11	P	Pn	21 30 39.7	+1.2
TPI	Tanjungpandan	4.02	34	P	Pn	21 30 39.1	+0.2
XMI	Christmas Isla	4.33	176	P	Pn	21 30 41.0	-2.2
XMIS	Christmas Isla	4.36	177	Pn	Pn	21 30 38.4	-5.2
XMIS	Christmas Isla	4.36	177	P	Pn	21 30 41.8	-1.8
JMBI	JAMBI	4.77	338	P	Pn	21 30 50.8	+1.5
SMRI	Semarang	5.10	101		Pn	21 30 54.7	+0.8
SMRI	Semarang	5.10	101	P	Pn	21 30 54.2	+0.3
	8.6nm6μm17μm1μm,1.0s						
UGM	Wanagama	5.40	110	Pn	Pn	21 30 59.2	+1.2
UGM	Wanagama	5.40	110	P	Pn	21 30 57.5	-0.5
	2.2nm5μm7μm300nm,1.2s						
PBKI	Pangkalan Bun	7.11	62	P	Pn	21 31 20.7	-0.8
	4.5nm154μm398nm,0.9s						
PDSI	Padang	7.13	316	P	Pn	21 31 24.3	+2.6
	0.3nm761nm60nm,1.3s						
BKNI	Bangkinang	7.73	326	Pn	Pn	21 31 30.3	+0.4
BKNI	Bangkinang	7.73	326	P	Pn	21 31 31.6	+1.7
	1.0nm2μm236nm,1.1s						
MYKOM	Kota Tinggi	7.99	349		Pn	21 31 35.6	+2.1
MYKOM	Kota Tinggi	7.99	349	P	Pn	21 31 37.0	+3.5
KMMI	Kalianget	8.57	97	P	Pn	21 31 42.1	+0.6
	3μm165nm,1.3s						
MNSI	Mandailing Nat	8.98	320	P	Pn	21 31 48.4	+1.3
	1μm63nm,1.2s						
JAGI	Jajag, Banyuwa	9.00	106	Pn	Pn	21 31 49.3	+1.9
JAGI	Jajag, Banyuwa	9.00	106	P	Pn	21 31 48.4	+1.0
	3μm132nm,1.1s						
SRBI	Singaraja	9.94	102	P	Pn	21 31 59.4	-0.9
	3μm107nm,0.8s						
COCO	West Island	10.39	234	P	Pn	21 32 06.4	0.0
COCO	West Island	10.39	234	Pn	Pn	21 32 06.4	0.0
GSI	Gunungsitoli	10.73	313	Pn	Pn	21 32 11.4	+0.3
GSI	Gunungsitoli	10.73	313	P	Pn	21 32 10.4	-0.7
	48nm,0.8s						
MTKI	Muara Teweh, K	10.78	62	P	Pn	21 32 29.0	+17
RPSI	Rantau Prapat	10.87	323		Pn	21 32 12.7	-0.4
SBUM	Sibu	10.89	39	Pn	Pn	21 32 15.6	+2.2
SBUM	Sibu	10.89	39	P	Pn	21 32 17.0	+3.6
PSI	Prapat	10.95	324	Pn	Pn	21 32 12.7	-1.6
	baz=180,slow=15,SNR=0.9						
IPM	Ipoh	11.38	337	Pn	Pn	21 32 21.4	+1.4
IPM	Ipoh	11.38	337	P	Pn	21 32 28.0	+7.9
TWSI	Taliwang, Sumb	11.69	104	P	Pn	21 32 24.0	-0.3
	26nm,0.9s						
TSI	Tuntungan	11.73	324	P	Pn	21 32 27.3	+2.5
	177nm,1.6s						
KCSI	Kotacane, Aceh	12.22	321	P	Pn	21 32 34.1	+2.6
	1μm33nm,1.5s						
KULM	Kulim	12.27	337		Pn	21 32 35.5	+3.3
KULM	Kulim	12.27	337	P	P	21 32 38.0	-6.1
TPTI		12.40	318	P	Pn	21 32 35.6	+1.6
	15nm,1.2s						
PLAI	Plampang	12.57	103	P	Pn	21 32 34.6	-1.8
	1μm77nm,1.2s						
KAPI	Kappang	14.33	86	Pn	Pn	21 32 58.2	-2.2
	0.6nm,0.3s,baz=264,slow=22,SNR=1.3						
KAPI				LR	LR	21 38 32.1	
	comp=Z,592nm,19.1s,baz=268,slow=37						
SPSI	Sidrap Palu	14.48	82	P	Pn	21 33 04.0	+1.6
	1μm34nm,2.4s						
BKSI	Bulukumba	14.68	88	P	Pn	21 33 06.8	+1.7
	2μm55nm,1.9s						
TTSI	Tana Toraja	14.70	79	P	Pn	21 33 06.4	+1.1
	1μm49nm,1.1s						
BNSI	Bone	14.75	84	P	Pn	21 33 06.8	+0.8
	3μm84nm,1.2s						
TRTT	Trang	14.97	338	P	P	21 33 18.5	+4.3
	61nm,1.1s						
SPMM	Sapulut	15.41	46	P	Pn	21 33 15.0	+0.1
BASI	Baing, Sumba	15.57	106	P	Pn	21 33 12.9	-4.0
	2μm150nm,1.3s						
PKDT	Phuket	15.58	333	P	P	21 33 26.9	+5.9
	63nm,1.1s						
MPSI	Mapaga	15.83	67	P	Pn	21 33 21.2	+1.0
	1μm47nm,1.2s						
KKM	Kota Kinabalu	16.20	42	P	P	21 33 27.6	-0.3
SURT	Suratani	16.34	336	P	P	21 33 41.1	+12
EDFI	Ende, Flores	16.37	100	P	Pn	21 33 23.6	-3.7
	548nm31nm,1.7s						
MMRI	Maumere	16.89	100	P	P	21 33 35.0	-0.5
MMRI				IAmb	IAmb	21 34 01.9	
	comp=Z,116nm,1.0s						
MMRI	Maumere	16.89	100	P	Pn	21 33 32.3	-1.5
	comp=Z,2μmcomp=Z,125nm,1.1s						
TOLI2	Tolitoli	16.95	65	P	P	21 33 37.5	+1.4
APSI	Ampana	17.02	73	P	P	21 33 37.3	+0.4
	comp=Z,2μmcomp=Z,197nm,1.4s						
MRSI	Marisa	17.77	69	P	P	21 33 46.6	+1.4
	comp=Z,2μmcomp=Z,53nm,2.5s						
LUWI	Luwuk	18.05	74	P	P	21 33 49.8	+1.5
LUWI				IAmb	IAmb	21 34 12.8	
	comp=Z,227nm,1.2s						
LUWI	Luwuk	18.05	74	P	P	21 33 50.2	+1.9
DLV	T Lat	18.19	10	P	P	21 33 50.2	+0.1
DLV				IAmb	IAmb	21 33 57.0	
	comp=Z,144nm,1.3s						
BATI	Baumata	18.54	104	P	P	21 33 52.4	-1.3
	comp=Z,4.2nm,0.3s,baz=151,slow=7.5,SNR=10						
BATI	Baumata	18.54	104	P	P	21 33 53.6	-0.1
	comp=Z,1μmcomp=Z,2μmcomp=Z,139nm,1.1s						
GTOI	Gorontalo	18.82	70	P	P	21 33 56.7	-0.1
	comp=Z,1μmcomp=Z,92nm,1.7s						
SOEI	Soe	19.04	102	P	Pn	21 34 00.4	+0.1
SOEI				IAmb	IAmb	21 34 24.9	
	comp=Z,319nm,1.2s						
SOEI	Soe	19.04	102	P	P	21 33 57.7	-1.6
	comp=Z,3μmcomp=Z,218nm,1.0s						
PATY	Pattaya	19.43	347	P	Pn	21 34 08.8	+4.0
	comp=Z,17μmcomp=Z,130nm,1.2s						
KMSI	Cibinong	19.71	71	P	Pn	21 34 24.2	+16
PHET	Kaeng Krachan	19.74	343	P	Pn	21 34 11.9	+3.4
	comp=Z,1μmcomp=Z,135nm,1.2s						
SRAK	Srakaew	20.26	351	P	Pn	21 34 13.7	-0.8
	comp=Z,24μmcomp=Z,3μm,1.1s						
MBWA	Marble Bar	20.42	139	P	P	21 34 10.2	-4.0
PSA00	Pilbara Seismi	20.79	139	P	P	21 34 17.8	-0.3
PSA00				IAmb	IAmb	21 34 26.0	
	comp=Z,72nm,1.0s						
PSA00	Pilbara Seismi	20.79	139	P	P	21 34 17.6	-0.6
PSA00				IAmb	IAmb	21 34 27.2	
	comp=Z,41nm,0.9s						
SANI	Sanana	20.93	80	P	P	21 34 19.2	-0.6
	comp=Z,847nmcomp=Z,55nm,1.2s						
UBPT	Khong Chiam	21.25	0	P	P	21 34 27.7	+4.6
	comp=Z,64nm,1.3s						
UBPT	Khong Chiam	21.25	0	P	P	21 34 26.0	+2.9
UBPT				IAmb	IAmb	21 34 33.2	
	comp=Z,170nm,1.3s						
SRDT	SRDT	21.25	343	P	P	21 34 31.0	+7.8
	comp=Z,27nm,1.0s						
TNTI	Ternate	22.98	73	P	P	21 34 41.6	-0.1
TNTI	Ternate	22.98	73	P	P	21 34 43.2	+1.5
	comp=Z,3μmcomp=Z,167nm,1.7s						
FITZ	Fitzroy Crossi	23.08	123	P	P	21 34 42.9	+0.2
	baz=23,SNR=15						
FITZ	Fitzroy Crossi	23.08	123	P	P	21 34 42.0	-0.6
	comp=Z,21nm,0.9s,baz=314,slow=8.0,SNR=17						
FITZ				LR	LR	21 45 12.0	
	comp=Z,193nm,19.6s,baz=315,slow=40						
FITZ	Fitzroy Crossi	23.08	123	P	P	21 34 42.1	-0.6
PHIT	Phitsanulok	23.66	348	P	P	21 34 50.6	+2.3
	comp=Z,178nm,0.7s						
MEEK	Meekatharra	24.00	150	P	P	21 34 53.0	+1.5
	baz=24,SNR=5.6						
DAV	Davao City (W)	24.02	57	P	P	21 34 50.2	-1.6
	comp=Z,164nm,0.5s,baz=227,slow=14,SNR=1.4						
UTTA	Uttaradit	24.17	349	P	P	21 34 56.8	+3.7
	comp=Z,291nmcomp=Z,33nm,1.0s						
MORW	Morawa	24.96	157	P	P	21 35 00.1	-0.2
	baz=25,SNR=6.2						
MORW	Morawa	24.96	157	P	P	21 35 00.2	0.0
MORW				IAmb	IAmb	21 35 07.4	
	comp=Z,85nm,1.5s						
LAMP	Lampang	25.12	347	P	P	21 35 04.5	+2.8
	comp=Z,707nmcomp=Z,83nm,1.1s						
CM04	Chiang Mai Arr	25.16	346	P	P	21 35 02.5	+0.5
	comp=Z,185nmcomp=Z,20nm,1.2s						
CM05	Chiang Mai Arr	25.17	345	P	P	21 35 02.0	-0.2
	comp=Z,102nmcomp=Z,13nm,1.2s						
CM15	Chiang Mai Arr	25.22	345	P	P	21 35 03.5	+0.8
	comp=Z,138nmcomp=Z,13nm,1.0s						
CM31	Chiang Mai Arr	25.22	346	P	P	21 35 06.3	+3.7
	comp=Z,9μmcomp=Z,410nm,0.7s						
CM31	Chiang Mai Arr	25.22	346	P	P	21 35 01.2	-1.5
CMAR	Chiang Mai Arr	25.22	346	P	P	21 35 00.6	-2.0
	comp=Z,5.3nm,0.9s,baz=181,slow=8.4,SNR=38						
CMAR				PcP	PcP	21 38 37.4	+1.5
	comp=Z,5.3nm,0.9s,baz=202,slow=3.1,SNR=11						
CMAR				LR	LR	21 45 55.8	
	comp=Z,224nm,20.5s,baz=196,slow=39						
CMAR	Chiang Mai Arr	25.22	346	ceP	P	21 35 01.2	-1.5
CMAR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
CMAR	Chiang Mai Arr	25.22	346	P	P	21 35 00.5	-2.1
MHMT	Maesarieng	25.23	343	P	P	21 35 02.0	-0.7
	comp=Z,567nmcomp=Z,39nm,1.3s						
CM36	Chiang Mai Arr	25.24	346	P	P	21 35 03.0	+0.2
TGY	Tagaytay City	25.32	37	P	P	21 35 01.9	-1.7
	comp=Z,80nm,0.3s,baz=98,slow=19,SNR=1.3						
QIZ	Qiongzhong	25.36	10	P	P	21 35 03.7	-0.2
QIZ				S	S	21 39 31.8	+3.5
QIZ				pmax	pmax		
	comp=Z,32nm,2.2s						
QIZ				LR	LR		
	comp=Z,1μm,13.7s						
QIZ				LR	LR		
	comp=Z,670nm,21.1s						
QIZ				LR	LR		
	comp=Z,1μm,12.8s						
CM32	Chiang Mai Arr	25.43	345	P	P	21 35 04.0	-0.6
CM34	Chiang Mai Arr	25.55	346	P	P	21 35 05.0	-0.6
CMMT	Chiang Mai	25.56	346	P	P	21 35 04.7	-1.1
	comp=Z,9.1nm,1.3s						
CHTO	Chiang Mai	25.56	346	P	P	21 35 03.6	-2.1
CHTO				pmax	pmax		
	comp=Z,21nm,1.1s						
CHTO	Chiang Mai	25.56	346	P	P	21 35 03.6	-2.1
CHTO	Chiang Mai	25.56	346	P	P	21 35 04.5	-1.2
CM33	Chiang Mai Arr	25.57	346	P	P	21 35 05.0	-0.8
MTN	Manton Dam	26.24	107	P	P	21 35 11.5	-0.5
	baz=26,SNR=4.8						
MTN	Manton Dam	26.24	107	P	P	21 35 10.5	-1.5
MTN				IAmb	IAmb	21 35 17.5	
	comp=Z,47nm,0.9s						
SIJI	Sorong	26.34	80	P	P	21 35 12.2	-0.6
	comp=Z,7.6nm,0.9s,baz=283,slow=5.5,SNR=6.1						
SIJI				LR	LR	21 46 08.3	
	comp=Z,160nm,20.7s,baz=274,slow=38						
SLVN	Son La	27.31	357	P	P	21 35 22.6	+1.0
KDU	Kakadu	27.49	106	P	P	21 35 21.7	-1.5
	baz=27,SNR=7.4						
KLBR	Kellerberrin	27.87	157	P	P	21 35 27.4	+0.9
	baz=28,SNR=3.9						
PALK	Pallekele	27.99	298	LR	LR	21 46 12.0	
	comp=Z,247nm,18.1s,baz=222,slow=36						
NWAO	Narrogin (SRO)	28.88	159	P	P	21 35 37.6	+2.2
	comp=Z,12nm,1.1s,baz=346,slow=11,SNR=3.5						
NWAO				LR	LR	21 47 01.2	
	comp=Z,503nm,19.0s,baz=344,slow=36						
H01W3	Cape Leeuwin H	29.75	165	T	T	22 06 07.8	
	baz=348,slow=76						
H01W1	Cape Leeuwin H	29.77	165	T	T	22 05 58.3	
	baz=348,slow=76						
H01W2	Cape Leeuwin H	29.77	165	T	T	22 06 10.9	
	baz=348,slow=76						
KMI	Kunming	31.15	355	⇑P	P	21 35 58.6	+2.8
KMI				pP	sP	21 36 08.0	-1.3
KMI				sP	pP	21 36 12.9	+7.6
KMI				PcP	PcP	21 38 53.3	+2.7
KMI				S	S	21 41 07.2	+7.4
KMI				sS	sS	21 41 22.6	+7.1
KMI				pmax	pmax		
	comp=Z,15nm,1.1s						
KMI				pmax	pmax		
	comp=Z,120nm,4.2s						
KMI				LR	LR		
	comp=Z,3μm,10.1s						
KMI				LR	LR		
	comp=Z,390nm,7.0s						
KMI				LR	LR		
	comp=Z,3μm,10.8s						
KMI	Kunming	31.15	355	P	P	21 35 58.2	+2.4
KMI				pmax	pmax		
	comp=Z,23nm,1.3s						
KMI	Kunming	31.15	355	P	P	21 35 58.2	+2.4
WB0	Warramunga Arr	31.28	118	P	P	21 35 55.6	-1.3
WB0				IAmb	IAmb	21 35 59.7	
	comp=Z,34nm,1.2s						
WRA	Warramunga Arr	31.30	119	P	P	21 35 56.9	-0.2
	comp=Z,4.3nm,0.4s,baz=304,slow=9.0,SNR=5.4						
WRA				PcP	PcP	21 38 51.0	+0.1
	comp=Z,3.2nm,0.7s,baz=299,slow=2.4,SNR=6.2						
WRA				LR	LR	21 48 53.5	
	comp=Z,189nm,21.9s,baz=260,slow=37						
WRA	Warramunga Arr	31.30	119	P	P	21 35 55.8	-1.3
WRA				pmax	pmax		
	comp=Z,3.0nm,1.3s						
WRA	Warramunga Arr	31.30	119	P	P	21 35 55.8	-1.3
WRAB	Tennant Creek	31.31	119	ceP	P	21 35 56.0	-1.1
WRAB				pmax	pmax		
	comp=Z,23nm,1.2s						
WRAB	Tennant Creek	31.31	119	P	P	21 35 56.5	-0.6
WRAB				IAmb	IAmb	21 36 02.7	
	comp=Z,24nm,0.7s						
WB2	Warramunga Arr	31.31	119	P	P	21 35 56.6	-0.5
WB2				IAmb	IAmb	21 36 02.7	
	comp=Z,21nm,0.8s						
WR0	Warramunga Arr	31.48	119	IAmb	IAmb	21 36 03.5	
	comp=Z,26nm,0.8s						
GYA	Guiyang	32.39	2	⇓P	P	21 36 08.2	+1.6
GYA				pP	sP	21 36 19.9	-0.2
GYA				pmax	pmax		
	comp=Z,18nm,1.0s						
GYA				LR	LR		
	comp=Z,720nm,9.9s						
GYA				LR	LR		
	comp=Z,500nm,7.5s						
GYA				LR	LR		
	comp=Z,690nm,10.3s						
ASAR	Alice Springs	32.51	125	P	P	21 36 07.7	+0.1
	comp=Z,8.5nm,0.5s,baz=295,slow=7.6,SNR=63						
ASAR				PcP	PcP	21 38 54.6	+0.4
	comp=Z,7.5nm,0.9s,baz=298,slow=2.6,SNR=12						
ASAR				S	S	21 41 20.9	+0.1
	comp=Z,3.4nm,1.0s,baz=296,slow=15,SNR=9.2						
ASAR	Alice Springs	32.51	125	P	P	21 36 06.7	-0.9
ASAR	Alice Springs	32.51	125	P	P	21 36 06.7	-0.9
H08S2	Diego Garcia H	32.69	265	T	T	22 10 26.6	
	baz=90,slow=74						
H08S3	Diego Garcia H	32.70	265	T	T	22 10 29.1	
	baz=90,slow=74						
H08S1	Diego Carcia H	32.71	265	T	T	22 10 28.4	
	baz=90						
YULB	Yu-li	33.18	27	P	P	21 36 14.4	+1.0
YULB				IAmb	IAmb	21 36 22.0	
	comp=Z,35nm,1.0s						
SSLB	Suanglung	33.37	27	P	P	21 36 16.1	+1.0
SSLB				IAmb	IAmb	21 36 19.9	
	comp=Z,53nm,1.0s						
SHL	Shillong	34.11	338	P	P	21 36 20.4	-1.3
SHL				pmax	pmax		
	comp=Z,14nm,1.0s						
SHL	Shillong	34.11	338	P	P	21 36 20.4	-1.3
SHL	Shillong	34.11	338	P	P	21 36 20.8	-0.9
	SNR=5.1						
TATO	Taipei	34.64	26	P	P	21 36 17.3	-8.7
QIS	Mount Isa	36.15	117	P	P	21 36 38.5	-0.7
	baz=36,SNR=10						
ENH	Enshi	36.38	6	IAmb	IAmb	21 36 43.1	
	comp=Z,18nm,1.0s						
CD2	Chengdu	36.84	358	P	P	21 36 45.2	+0.3
CD2				S	S	21 42 29.2	+1.9
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				LR	LR		
	comp=Z,1μm,9.5s						
CD2				LR	LR		
	comp=Z,2μm,8.9s						
CD2				LR	LR		
	comp=Z,2μm,8.8s						
TAPN	Taplejung	37.40	334	eP	P	21 36 53.1	+3.1
	comp=Z,69nm,1.0s						
COEN	Coen	37.97	105	IAmb	IAmb	21 36 57.0	
	comp=Z,43nm,1.1s						
LSA	Lhasa	38.14	340	P	P	21 36 54.4	-2.1
LSA	Lhasa	38.14	340	i P	P	21 36 55.7	-0.8
	SNR=17						
LSA	Lhasa	38.14	340	IAmb	IAmb	21 37 01.5	
	comp=Z,21nm,1.1s						
PKI	Pulchoki	38.65	331	eP	P	21 36 59.0	-1.7
	comp=Z,39nm,1.3s						
PKIN	Phulchoki	38.66	331	eP	P	21 36 59.5	-1.2
	comp=Z,29nm,1.3s						
GUN	Gumba	38.71	332	eP	P	21 37 00.3	-0.9
	comp=Z,66nm,1.0s						
DMN	Daman	38.83	331	eP	P	21 37 00.6	-1.5
	comp=Z,43nm,1.0s						
KKN	Kakani	38.90	331	eP	P	21 37 01.4	-1.2
	comp=Z,46nm,1.1s						
POO	Poona	39.58	309	eP	P	21 37 07.0	-1.2
MTSU	Mount Surprise	39.79	111	P	P	21 37 09.7	-0.3
	baz=40,SNR=24						
SSE	Sheshan	39.96	21	P	P	21 37 11.7	+0.6
SSE				S	S	21 43 15.2	+0.9
SSE				pmax	pmax		
	comp=Z,4.0nm,0.5s						
SSE				pmax	pmax		
	comp=Z,43nm,3.2s						
SSE				LR	LR		
	comp=Z,140nm,15.6s						
SSE				LR	LR		
	comp=Z,180nm,10.6s						
NJ2	Nanjing	40.05	18	eP	P	21 37 13.1	+1.2
NJ2				S	S	21 43 16.9	+1.1
NJ2				pmax	pmax		
	comp=Z,14nm,1.1s						
NJ2				pmax	pmax		
	comp=Z,250nm,10.3s						
NJ2				LR	LR		
	comp=Z,590nm,10.4s						
NJ2				LR	LR		
	comp=Z,410nm,8.5s						
NJ2				LR	LR		
	comp=Z,630nm,13.7s						
XAN	Xi'an	40.06	5	P	P	21 37 11.6	-0.4
XAN				pP	pP	21 37 18.4	-3.3
XAN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
XAN				pmax	pmax		
	comp=Z,170nm,4.1s						
XAN				LR	LR		
	comp=Z,810nm,10.9s						
XAN				LR	LR		
	comp=Z,710nm,11.5s						
XAN				LR	LR		
	comp=Z,1μm,12.6s						
DANN	Dangsing	40.11	330	eP	P	21 37 11.5	-1.3
	comp=Z,82nm,1.2s						
HTT	Hallett	41.31	136	P	P	21 37 23.6	+1.2
	baz=41,SNR=5.3						
PMG	Port Moresby	41.50	97	P	P	21 37 23.5	-0.6
	comp=Z,16nm,0.6s,baz=281,slow=7.7,SNR=5.8						
PMG	Port Moresby	41.50	97	⇑eP	P	21 37 23.6	-0.5
PMG				pmax	pmax		
	comp=Z,86nm,1.8s						
PMG	Port Moresby	41.50	97	P	P	21 37 23.7	-0.4
PMG				IAmb	IAmb	21 37 25.7	
	comp=Z,56nm,1.3s						
LZH	Lanzhou	41.99	358	⇑P	P	21 37 27.5	-0.5
LZH				pP	sP	21 37 39.3	-2.4
LZH				sP	pP	21 37 45.0	+7.3
LZH				PcP	PcP	21 39 22.0	-0.9
LZH				pmax	pmax		
	comp=Z,16nm,1.0s						
LZH				pmax	pmax		
	comp=Z,82nm,7.6s						
LZH				LR	LR		
	comp=Z,780nm,18.4s						
LZH				LR	LR		

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      comp=Z,880nm,19.5s
LZH                                LR      LR
      comp=Z,620nm,17.4s
STKA  Stephens Creek  42.42 132    P       P       21 37 31.8 +0.4
      baz=42,SNR=27
STKA  Stephens Creek  42.42 132    P       P       21 37 31.6 +0.2
      comp=Z,41nm,0.6s,baz=311,slow=7.1,SNR=27
STKA                               LR      LR      21 56 59.3
      comp=Z,147nm,21.1s,baz=286,slow=39
STKA  Stephens Creek  42.42 132ceP         P       21 37 31.4  0.0
STKA  Stephens Creek  42.42 132    P       P       21 37 31.2 -0.2
CMSA  Cobar Meteorol  45.37 129    P       P       21 37 55.8 +0.7
      baz=45,SNR=14
GTA   Gaotai          45.58 354    P       P       21 37 56.3 -0.4
GTA                                pP      sP      21 38 07.6 -2.9
GTA                                sP      pP      21 38 13.0 +6.5
GTA                                PcP     PcP     21 39 35.0 +0.1
GTA                                ScP     ScP     21 43 26.7 +1.2
GTA                                PcS     PcS     21 43 29.0 -0.1
GTA                                pmax    pmax
      comp=Z,4.0nm,1.1s
GTA                                pmax    pmax
      comp=Z,120nm,6.7s
GTA                                LR      LR
      comp=Z,240nm,16.4s
GTA                                LR      LR
      comp=Z,400nm,15.3s
GTA                                LR      LR
      comp=Z,290nm,13.8s
JNU   Nakatsue        45.91  30    P       P       21 37 59.6 +0.3
      comp=Z,34nm,1.1s,baz=213,slow=2.7,SNR=6.8
JNU   Nakatsue        45.91  30    P       P       21 37 59.0 -0.3
JNU                                IAmb    IAmb    21 38 03.3
      comp=Z,56nm,1.2s
RMQ   Roma            45.99 121    P       P       21 38 01.2 +1.1
      baz=46,SNR=7.8
BTO   Baotou          46.67   5   eP       P       21 38 07.4 +2.1
BJT   Baijiatuau      46.96  11    P       P       21 38 06.5 -0.9
BJT                                pmax    pmax
      comp=Z,8.0nm,1.0s
BJT   Baijiatuau      46.96  11    P       P       21 38 06.5 -0.9
BJI   Beijing         46.98  11    P       P       21 38 08.9 +1.4
BJI                                sP      sP      21 38 25.8 +4.5
BJI                                pmax    pmax
      comp=Z,7.0nm,0.8s
BJI                                LR      LR
      comp=Z,470nm,14.7s
BJI                                LR      LR
      comp=Z,270nm,6.6s
BJI                                LR      LR
      comp=Z,220nm,18.2s
HHC   Hu-ho-hao-te    47.07   6   eP       P       21 38 19.4  +11
HHC                                pmax    pmax
      comp=Z,3.0nm,1.1s
HHC                                pmax    pmax
      comp=Z,98nm,5.3s
EIDS  Eidsvold        47.67 119    P       P       21 38 13.2 -0.1
JMN   Monobe          47.93  32    P       P       21 38 15.8 +0.6
JMN                                IAmb    IAmb    21 38 19.2
      comp=Z,30nm,1.0s
TOO   Toolangi        48.05 137    P       P       21 38 17.6 +1.6
      baz=48,SNR=3.9
TOO   Toolangi        48.05 137    P       P       21 38 17.2 +1.1
TOO                                pmax    pmax
      comp=Z,49nm,1.3s
TOO   Toolangi        48.05 137    P       P       21 38 17.2 +1.1
TOO                                IAmb    IAmb    21 38 21.8
      comp=Z,49nm,1.3s
KSAR  Wonju Array Be  48.14  24    P       P       21 38 16.6  0.0
KSAR  Wonju Array Be  48.14  24    P       P       21 38 16.6  0.0
KSRS  Korea Array     48.16  24    P       P       21 38 16.5 -0.3
      comp=Z,17nm,1.1s,baz=198,slow=8.3,SNR=27
KSRS                               PcP     PcP     21 39 43.3 -0.6
      comp=Z,3.3nm,1.1s,baz=185,slow=4.7,SNR=4.3
KSRS                               LR      LR      22 00 20.3
      comp=Z,48nm,19.2s,baz=195,slow=38
KS19  Wonju Array Si  48.18  24    P       P       21 38 18.7 +1.7
KS19                               IAmb    IAmb    21 38 20.9
      comp=Z,16nm,1.1s
JHS   Saijyo          48.52  31    P       P       21 38 20.8 +1.1
JCJ   Chichijima      48.54  45    LR      LR      21 56 46.2
      comp=Z,84nm,21.1s,baz=344,slow=34
YNG   Young           48.60 131    P       P       21 38 20.9 +0.6
      baz=49,SNR=7.8
CAN   Canberra        49.49 132    P       P       21 38 27.8 +0.6
CAN                                pmax    pmax
      comp=Z,84nm,1.5s
CAN   Canberra        49.49 132    P       P       21 38 27.8 +0.6
NIL   Nilore          49.90 325    P       P       21 38 29.0 -1.3
NIL                                pmax    pmax
      comp=Z,40nm,1.1s
NIL   Nilore          49.90 325    P       P       21 38 29.0 -1.3
NIL                                IAmb    IAmb    21 38 33.6
      comp=Z,40nm,1.1s
NIL   Nilore          49.90 325    P       P       21 38 27.9 -2.4
WMQ   Urumqi          52.21 344   eP       P       21 38 48.1 +0.7
WMQ                                pP      sP      21 39 02.6 +1.3
WMQ                                PcP     PcP     21 40 00.3 +1.6
WMQ                                pmax    pmax
      comp=Z,42nm,1.3s
WMQ                                pmax    pmax
      comp=Z,190nm,4.1s
WMQ   Urumqi          52.21 344    IAmb    IAmb    21 38 49.6
      comp=Z,44nm,1.1s
MAT   Matsushiro      52.38  33    P       P       21 38 47.9 -0.9
MJAR  Matsushiro Arr  52.38  33    P       P       21 38 47.8 -1.0
      comp=Z,3.1nm,0.8s,baz=170,slow=7.4,SNR=4.6
MJAR                               LR      LR      22 02 44.7
      comp=Z,54nm,18.1s,baz=210,slow=38
CN2   Changchun       52.88  18   eP       P       21 38 52.9 +0.6
CN2                               eS       S       21 46 17.8 -1.3
CN2                                pmax    pmax
      comp=Z,30nm,1.3s
CN2                                pmax    pmax
      comp=Z,170nm,4.1s
CN2                                LR      LR
      comp=Z,320nm,15.0s
CN2                                LR      LR
      comp=Z,260nm,15.0s
CN2                                LR      LR
      comp=Z,330nm,14.0s
KSH   Kashi           52.91 332    P       P       21 38 49.5 -3.3
KSH                                sP      sP      21 39 13.6 +7.0
KSH                                PcP     PcP     21 40 03.0 +1.4
KSH                                S       S       21 46 08.6  -11
KSH                                pmax    pmax
      comp=Z,5.0nm,0.8s
KSH                                pmax    pmax
      comp=Z,100nm,5.7s
KSH                                LR      LR
      comp=Z,160nm,5.4s
KSH                                LR      LR
      comp=Z,150nm,6.7s
KBL   Kabul           53.02 322    P       P       21 38 51.8 -2.0
KBL                                pmax    pmax
      comp=Z,27nm,1.2s
KBL   Kabul           53.02 322    P       P       21 38 51.8 -2.0
KBL                                IAmb    IAmb    21 38 55.6
      comp=Z,27nm,1.1s
KBL   Kabul           53.02 322    P       P       21 38 52.7 -1.1
      SNR=16
JLN   Jalan Bani Buh  53.06 303    P       P       21 38 55.4 +1.3
JLN                                P       P       21 38 55.4 +1.3
WBK   Wadi Bani Khal  53.63 304    P       P       21 38 59.4 +1.1
WBK                                P       P       21 38 59.4 +1.1
DQM   DQM             53.70 300    P       P       21 39 01.2 +2.4
SONM  Songino Array   53.71   1    P       P       21 38 57.0 -1.6
      comp=Z,13nm,1.0s,baz=180,slow=5.2,SNR=45
SONM                               PcP     PcP     21 40 03.8 -0.7
      comp=Z,4.1nm,0.8s,baz=166,slow=4.3,SNR=5.8
SONM                               LR      LR      22 04 45.7
      comp=Z,352nm,18.2s,baz=174,slow=39
SONM  Songino Array   53.71   1    P       P       21 38 57.6 -1.0
SONM                                               21 40 04.5
SONM                               pmax    pmax
      comp=Z,13nm,1.0s
SONM  Songino Array   53.71   1    P       P       21 38 57.6 -1.0
SONM                               PcP     PcP     21 40 04.5  0.0
ULN   Ulaanbaatar     53.76   1⇑eP         P       21 38 58.3 -0.6
ULN                                pmax    pmax
      comp=Z,15nm,1.3s
ULN   Ulaanbaatar     53.76   1    P       P       21 38 57.8 -1.1
MHTO  MHTO            53.77 301    P       P       21 38 59.8 +0.6
      SNR=7.5
MHTO                               P       P       21 38 59.8 +0.6
      SNR=7.5
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WSAR  Wadi Sarin      54.19 304    P       P       21 39 03.0 +0.7
      comp=Z,42nm,1.2s,baz=154,slow=5.9,SNR=11
JMDO  Jabal Madar     54.24 303    P       P       21 39 05.3 +2.5
JMDO                               P       P       21 39 05.3 +2.5
SOCY  Socotra         54.24 290    P       P       21 39 05.3 +2.3
SOCY                               IAmb    IAmb    21 39 09.5
      comp=Z,33nm,1.2s
SHLS  Shalkode        54.38 337   eP       P       21 39 00.7 -2.8
      comp=Z,9.5nm,1.0s,baz=337
SHLS                              ePcP     PcP     21 40 04.0 -3.1
      baz=337
SHLS  Shalkode        54.38 337   eP       P       21 39 00.7 -2.8
SHLS                              e                21 40 03.9
SHLS                               pmax    pmax
      comp=Z,9.0nm,1.0s
SMDO  Samad           54.59 304    P       P       21 39 06.7 +1.4
      SNR=7.4
SMDO                               P       P       21 39 06.7 +1.4
      SNR=7.4
SHAO  Shalim          54.64 297    P       P       21 39 07.1 +1.4
SHAO  Shalim          54.64 297    P       P       21 39 07.5 +1.8
SHAO                               P       P       21 39 07.5 +1.8
SATY  Saty            54.72 336   eP       P       21 39 04.9 -1.1
      comp=Z,5.5nm,1.1s,baz=336
SATY                              eS       S       21 46 44.8 +0.4
      baz=336
SATY  Saty            54.72 336   eP       P       21 39 04.9 -1.1
SATY                              eS       S       21 46 44.7 +0.4
SATY                               pmax    pmax
      comp=Z,5.0nm,1.1s
BIDO  Bidbid          54.73 304    P       P       21 39 07.9 +1.7
      SNR=14
KPKS  Kokpek          54.95 336   eP       P       21 39 06.3 -1.3
      comp=Z,8.8nm,1.3s,baz=336
KPKS                              ePcP     PcP     21 40 07.4 -1.8
      baz=336
KPKS  Kokpek          54.95 336   eP       P       21 39 06.3 -1.3
KPKS                              e                21 40 07.3
KPKS                               pmax    pmax
      comp=Z,9.0nm,1.3s
DMTO  DMTO            55.13 296    P       P       21 39 09.9 +0.6
BSY   Bisya           55.16 303    P       P       21 39 10.7 +1.3
      SNR=7.3
BSY                                P       P       21 39 10.7 +1.3
      SNR=7.3
MDOK  Medeo           55.36 335   eP       P       21 39 08.7 -2.0
      baz=335
MDOK  Medeo           55.36 335   eP       P       21 39 08.6 -2.0
HOQ   Hoqain          55.42 304    P       P       21 39 13.7 +2.4
      SNR=12
HOQ                                P       P       21 39 13.7 +2.4
      SNR=12
AAA   Alma-Ata        55.46 335   eP       P       21 39 09.9 -1.3
      comp=Z,8.8nm,1.0s,baz=335
AAA   Alma-Ata        55.46 335   eP       P       21 39 09.9 -1.3
AAA                                pmax    pmax
      comp=Z,9.0nm,1.0s
USA0B Ussuriysk Arra  55.52  23⇑eP         P       21 39 11.1 -0.4
USRK  Ussuriysk Ar.   55.52  23    P       P       21 39 10.9 -0.7
      comp=Z,28nm,1.0s,baz=222,slow=7.0,SNR=28
USRK  Ussuriysk Ar.   55.52  23    P       P       21 39 10.6 -1.0
USRK  Ussuriysk Ar.   55.52  23    P       P       21 39 10.6 -1.0
MTBS  Maitube         55.60 335   eP       P       21 39 11.2 -1.2
      baz=335
MTBS  Maitube         55.60 335   eP       P       21 39 11.1 -1.2
RBK   Rabkut          55.72 296    P       P       21 39 15.6 +2.0
      SNR=14
RBK                                P       P       21 39 15.6 +2.0
      SNR=14
CHKK  Chushkaly       55.95 335   eP       P       21 39 12.6 -2.1
      baz=336
CHKK  Chushkaly       55.95 335   eP       P       21 39 12.6 -2.1
ARQ   Araqi           55.97 303    P       P       21 39 17.2 +2.0
ARQ                                P       P       21 39 17.2 +2.0
AAK   Ala-Archa       56.06 333    P       P       21 39 14.0 -1.7
      comp=Z,3.9nm,1.0s,baz=181,slow=6.5,SNR=10
AAK                                PcP     PcP     21 40 13.7 +0.1
      comp=Z,16nm,0.9s,baz=174,slow=4.0,SNR=19
AAK   Ala-Archa       56.06 333⇓eP         P       21 39 15.0 -0.7
AAK                                pmax    pmax
      comp=Z,15nm,1.0s
AAK   Ala-Archa       56.06 333    P       P       21 39 14.4 -1.3
DOK   Doka            56.18 297    P       P       21 39 18.2 +1.4
      SNR=11
WHFO  Wadi Hawf       56.26 296    P       P       21 39 18.6 +1.2
      SNR=11
WHFO                               P       P       21 39 18.6 +1.2
      SNR=11
KUU   Kurty           56.26 335   eP       P       21 39 14.0 -3.0
      comp=Z,14nm,1.1s,baz=335
KUU   Kurty           56.26 335   eP       P       21 39 13.9 -3.0
KUU                                pmax    pmax
      comp=Z,14nm,1.1s
ZAK   Zakamensk       56.29 358   eP       P       21 39 15.0 -2.1
ZAK                                pmax    pmax
      comp=Z,9.0nm,1.1s
SOHO  SOHO            56.30 304   i P      P       21 39 18.4 +0.8
      SNR=6.7
SOHO  SOHO            56.30 304    P       P       21 39 19.4 +1.9
SOHO                               P       P       21 39 19.4 +1.9
ZSN   Zaisan          56.33 343   eP       P       21 39 15.8 -1.6
      comp=Z,10nm,1.0s,baz=343
ZSN   Zaisan          56.33 343   eP       P       21 39 15.7 -1.6
ZSN                                pmax    pmax
      comp=Z,10.0nm,1.0s
TDK   Taldyqorghan    56.34 337   eP       P       21 39 15.9 -1.6
      comp=Z,12nm,1.1s,baz=337
TDK   Taldyqorghan    56.34 337   eP       P       21 39 15.9 -1.6
TDK                                pmax    pmax
      comp=Z,12nm,1.1s
ABTO  Aybut           56.49 295    P       P       21 39 20.1 +1.1
      SNR=16
ABTO                               P       P       21 39 20.1 +1.1
      SNR=16
MK31  Makanchi Array  56.52 341⇑eP         P       21 39 16.3 -2.4
MK31  Makanchi Array  56.52 341    P       P       21 39 15.4 -3.3
MKAR  Makanchi Array  56.52 341    P       P       21 39 16.2 -2.5
      comp=Z,9.6nm,0.9s,baz=149,slow=5.6,SNR=35
MKAR                               PcP     PcP     21 40 15.8 +0.6
      comp=Z,5.6nm,1.0s,baz=126,slow=6.2,SNR=5.3
MKAR  Makanchi Array  56.52 341    P       P       21 39 16.3 -2.4
HIA   Hailar          56.55  11⇓eP         P       21 39 19.0 +0.1
HIA                                pmax    pmax
      comp=Z,14nm,1.0s
HIA   Hailar          56.55  11    IAmb    IAmb    21 39 20.2
      comp=Z,14nm,0.9s
MAKZ  Makanchi        56.63 341    P       P       21 39 17.4 -2.1
MAKZ                               pmax    pmax
      comp=Z,14nm,1.1s
MAKZ  Makanchi        56.63 341    P       P       21 39 17.4 -2.1
ALNE  Al Ain          56.92 304   i P      P       21 39 23.4 +1.4
      SNR=5.8
ALNE  Al Ain          56.92 304    P       P       21 39 23.9 +1.9
      SNR=6.8
ALNE                               P       P       21 39 23.9 +1.9
      SNR=6.8
UOSS  Minazif         56.93 305   i P      P       21 39 22.5 +0.4
      SNR=7.3
UOSS  Minazif         56.93 305    P       P       21 39 22.8 +0.7
UOSS                               IAmb    IAmb    21 39 24.8
      comp=Z,41nm,1.1s
UOSS  Minazif         56.93 305    P       P       21 39 23.5 +1.4
UOSS                               P       P       21 39 23.5 +1.4
ASHO  Ashiyiah        56.93 305   i P      P       21 39 22.5 +0.3
      SNR=8.2
ASHO  Ashiyiah        56.93 305    P       P       21 39 23.4 +1.3
      SNR=6.2
ASHO                               P       P       21 39 23.4 +1.3
      SNR=6.2
HATD  Hatta, Dubai    56.94 305   i P      P       21 39 23.5 +1.4
      SNR=12
HATD  Hatta, Dubai    56.94 305    P       P       21 39 24.1 +2.1
      SNR=9.5
HATD                               P       P       21 39 24.1 +2.1
      SNR=9.5
MDH   Madha           57.01 305   i P      P       21 39 23.8 +1.3
      SNR=6.6
MDH   Madha           57.01 305    P       P       21 39 24.1 +1.5
MDH                                P       P       21 39 24.1 +1.5
MSFE  Esma-Masafi     57.15 305   i P      P       21 39 24.9 +1.3
      SNR=6.3
MASF  Masafi          57.15 305    P       P       21 39 26.0 +2.3
HRA   Herat           57.27 318    P       P       21 39 22.4 -2.1
BANOM Banah           57.28 306    P       P       21 39 25.2 +0.7
BANOM Banah           57.28 306    P       P       21 39 26.3 +1.8
FAQ   Al Faqa, Dubai  57.34 304   i P      P       21 39 25.8 +0.8
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      SNR=15
FAQ   Al Faqa, Dubai  57.34 304    P       P       21 39 25.4 +0.4
      SNR=8.8
FAQ                                P       P       21 39 25.4 +0.4
      SNR=8.8
NAZ   Nazwa, Dubai    57.39 305   i P      P       21 39 26.6 +1.3
      SNR=7.0
NAZ   Nazwa, Dubai    57.39 305    P       P       21 39 27.2 +1.9
      SNR=5.1
NAZ                                P       P       21 39 27.2 +1.9
      SNR=5.1
ASUD  Al Ashush, Dub  57.51 304    P       P       21 39 26.1  0.0
ASUD  Al Ashush, Dub  57.51 304    P       P       21 39 27.7 +1.6
ASUD                               P       P       21 39 27.7 +1.6
TLY   Talaya          57.58 359    P       P       21 39 24.6 -1.5
      comp=Z,5.7nm,0.8s,baz=190,slow=6.0,SNR=12
TLY   Talaya          57.58 359   eP       P       21 39 25.8 -0.3
TLY                               eS       S       21 47 16.8 -5.0
TLY                                pmax    pmax
      comp=Z,26nm,1.0s
TLY                                MLR     MLR
      comp=Z,1µm,15.0s
TLY   Talaya          57.58 359    P       P       21 39 25.8 -0.3
TAS   Tashkent        57.61 328    P       P       21 39 24.7 -1.9
TAS                                pmax    pmax
      comp=Z,40nm,1.0s
TAS   Tashkent        57.61 328    P       P       21 39 24.7 -1.9
MOY   Mondy           57.67 357   eP       P       21 39 27.3 +0.5
MOY                                pmax    pmax
      comp=Z,24nm,3.0s
DGZ   Jazzator, Alta  57.73 346deP         P       21 39 26.4 -1.0
DGZ                                pmax    pmax
      comp=Z,45nm,1.1s
DZA   Taraz           57.74 331   eP       P       21 39 25.4 -2.1
      baz=331
DZA   Taraz           57.74 331   eP       P       21 39 25.3 -2.1
OPO   Ambohidratompo  57.97 252    P       P       21 39 30.7 +1.0
      comp=Z,5.4nm,0.9s,baz=31,slow=21,SNR=2.5
IRK   Irkutsk         58.13 359   eP       P       21 39 30.4 +0.5
IRK                                pmax    pmax
      comp=Z,31nm,2.5s
BTLS  Baital          58.16 334   eP       P       21 39 28.0 -2.3
      baz=334
BTLS  Baital          58.16 334   eP       P       21 39 27.9 -2.3
KKAR  Karatay Array   58.30 331    P       P       21 39 28.5 -2.8
KKAR                               pmax    pmax
      comp=Z,4.0nm,1.1s
KKAR  Karatay Array   58.30 331    P       P       21 39 28.5 -2.8
KKAR  Karatay Array   58.30 331    P       P       21 39 28.8 -2.6
MZWR  Madinat Zayed   58.35 303    P       P       21 39 34.0 +1.9
KLR   Kul'dur         59.71  20    P       P       21 39 38.0 -3.0
      comp=Z,8.0nm,0.9s,baz=238,slow=5.2,SNR=22
KLR   Kul'dur         59.71  20deP         P       21 39 41.3 +0.3
KLR                                pmax    pmax
      comp=Z,11nm,1.0s
ASAJ  Asahikawa       60.19  30    P       P       21 39 43.2 -1.2
      comp=Z,16nm,0.9s,baz=244,slow=12,SNR=4.6
SLWR  Sila            60.31 302    P       P       21 39 48.2 +2.6
SEM   Semipalatinsk   60.34 342   eP       P       21 39 43.9 -1.7
      comp=Z,7.2nm,1.2s,baz=342
SEM   Semipalatinsk   60.34 342   eP       P       21 39 43.9 -1.7
SEM                                pmax    pmax
      comp=Z,7.0nm,1.2s
DZM   Mont Dzumac     60.93 112    P       P       21 39 51.3 +1.4
      comp=Z,16nm,0.9s,baz=208,slow=19,SNR=2.5
KURBB Kurchatov Arra  61.08 341    P       P       21 39 48.0 -2.3
      comp=Z,8.5nm,1.0s,baz=160,slow=6.0,SNR=32
KURBB                              PcP     PcP     21 40 33.9 +0.8
      comp=Z,5.4nm,1.0s,baz=153,slow=4.7,SNR=8.6
KURK  Kurchatov       61.13 341deP         P       21 39 48.8 -1.8
KURK                               pmax    pmax
      comp=Z,23nm,1.3s
KURK  Kurchatov       61.13 341    P       P       21 39 48.0 -2.5
KURK                               IAmb    IAmb    21 39 51.2
      comp=Z,22nm,1.1s
KURK  Kurchatov       61.13 341    P       P       21 39 49.2 -1.4
SANVU Saraoutou       61.25 104    P       P       21 39 53.0 +0.9
GEYT  Alibeck         62.04 319    P       P       21 39 56.1 -1.0
      comp=Z,31nm,1.0s,baz=170,slow=9.0,SNR=30
GEYT                               LR      LR      22 10 40.3
      comp=Z,63nm,18.5s,baz=165,slow=40
GEYT  Alibeck         62.04 319    P       P       21 39 56.5 -0.6
ZAA0  Zalesovo Array  62.28 346    P       P       21 39 55.9 -2.4
ZAA0                               IAmb    IAmb    21 39 58.6
      comp=Z,29nm,1.1s
ZALV  Zalesovo Beam   62.28 346    P       P       21 39 55.9 -2.4
      comp=Z,22nm,1.0s,baz=147,slow=3.5,SNR=44
ZALV  Zalesovo Beam   62.28 346   i P      P       21 39 56.2 -2.1
ZALV                               pmax    pmax
      comp=Z,22nm,1.0s
ZALV  Zalesovo Beam   62.28 346    P       P       21 39 55.6 -2.7
YSS   Yuzh-Sakhalins  62.33  28⇑eP         P       21 40 00.1 +1.4
YSS                                pmax    pmax
      comp=Z,46nm,1.1s
YSS   Yuzh-Sakhalins  62.33  28    P       P       21 39 58.2 -0.5
ZEA   Zeya            62.40  14   eP       P       21 39 58.1 -1.0
ZEA                                pmax    pmax
      comp=N,10.0nm,0.9s
ZEA                                pmax    pmax
      comp=Z,20nm,0.9s
BRZS  Berezniki       62.65 337   eP       P       21 39 59.3 -1.6
      baz=337
BRZS  Berezniki       62.65 337   eP       P       21 39 59.3 -1.6
BOD   Bodaibo         64.09   5   eP       P       21 40 08.3 -1.9
BOD                                pmax    pmax
      comp=Z,11nm,1.2s
RAYN  Ar Rayn         65.42 299   i P      P       21 40 20.0 +0.3
      SNR=6.4
RAYN  Ar Rayn         65.42 299    P       P       21 40 19.2 -0.5
RAYN                               pmax    pmax
      comp=Z,31nm,1.1s
RAYN  Ar Rayn         65.42 299    P       P       21 40 19.2 -0.5
RAYN                               IAmb    IAmb    21 40 22.8
      comp=Z,31nm,1.1s
RDF   Al-Radifah      65.60 305   eP               21 40 19.9
BRVK  Borovoye        66.00 338⇓eP         P       21 40 21.6 -1.1
BRVK                               pmax    pmax
      comp=Z,7.0nm,1.3s
BRVK  Borovoye        66.00 338    P       P       21 40 21.4 -1.3
MIB   Mutribah        66.10 306   eP               21 40 23.2
RST   Umm Al-Ruwaisa  66.26 306   eP               21 40 23.9
MAW   Mawson          67.76 196    LR      LR      22 03 24.9
      comp=Z,76nm,21.1s,baz=45,slow=30
ABKAR Akbulak array   67.83 330    P       P       21 40 32.0 -2.5
KMBO  Kilima Mbogo    68.15 271    P       P       21 40 36.9 -0.6
      comp=Z,2.9nm,0.9s,baz=66,slow=14,SNR=3.6
LKRN  Lenkeran, Azer  68.76 316    P       P       21 40 41.3 +0.8
YAK   Yakutsk         70.48  12   eP       P       21 40 47.2 -3.4
YAK                               e*PP     pP      21 40 56.1 -4.7
YAK                               e                21 41 08.2
YAK                               eS       S       21 49 57.5 -3.7
YAK                               e*SS     sS      21 50 18.5 +0.4
YAK                               e                21 50 46.7
YAK                                pmax    pmax
      comp=Z,37nm,0.9s
YAK                                pmax    pmax
      comp=N,12nm,1.0s
YAK                                pmax    pmax
      comp=E,8.0nm,1.2s
YAK                                smax    smax
      comp=E,217nm,4.8s
YAK                                smax    smax
      comp=N,129nm,3.8s
YAK                                MLR     MLR
      comp=Z,185nm,16.0s
YAK                                MLR     MLR
      comp=N,138nm,19.0s
YAK                                MLR     MLR
      comp=E,173nm,16.0s
YAK   Yakutsk         70.48  12    P       P       21 40 47.3 -3.3
YAK                                IAmb    IAmb    21 40 51.3
      comp=Z,45nm,1.0s
LODK  Lodwar          70.56 276    P       P       21 40 54.1 +1.8
      SNR=7.3
MNGR  Mingechevir, A  70.85 317    P       P       21 40 54.0 +0.7
SEKA  Sheki           70.97 317    P       P       21 40 55.0 +0.8
NAX   Nakhchivan      71.26 315    P       P       21 40 56.7 +0.7
GANJ  Ganja           71.31 316    P       P       21 40 56.5 +0.3
BKZ   Black Stump Fm  71.53 129    P       P       21 40 56.8 -0.9
BKZ                                IAmb    IAmb    21 41 00.7
      comp=Z,56nm,1.3s
LGD   Lagodekhi       71.89 318    P       P       21 41 01.2 +1.6
GNI   Garni           72.20 315    P       P       21 41 01.2 -0.5
GNI   Garni           72.20 315deP         P       21 41 02.8 +1.1
GNI                                pmax    pmax
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	comp=Z,53nm,1.3s						
GNI	Garni	72.20	315	P	P	21 41 02.5	+0.8
GNI				IAmb	IAmb	21 41 04.3	
	comp=Z,48nm,1.1s						
GNI	Garni	72.20	315	P	P	21 41 03.2	+1.4
GNI				P	P	21 41 03.2	+1.4
SVE	Sverdlovsk	72.55	336	eP	P	21 41 02.4	-0.8
SVE				pmax	pmax		
	comp=Z,38nm,1.3s						
GROC	Groznyy	72.79	319	eP	P	21 41 05.2	+0.3
GROC				e		21 41 23.0	
GROC				pmax	pmax		
	comp=Z,96nm,1.1s						
SEAG	Tbilisi Sea	72.83	317	P	P	21 41 07.4	+2.1
KZRT	Kazreti	72.95	317	P	P	21 41 06.3	+0.3
ARU	Arti	73.14	335	c iP	P	21 41 05.1	-1.6
ARU				S	S	21 50 31.9	-0.2
ARU				SS	SS	21 55 09.2	-4.7
ARU				pmax	pmax		
	comp=Z,22nm,1.3s						
ARU	Arti	73.14	335	P	P	21 41 04.7	-2.0
ARU				IAmb	IAmb	21 41 07.8	
	comp=Z,20nm,1.2s						
BGD	Bogdanovka	73.45	316	P	P	21 41 10.7	+1.5
AKH	Akhalkalaki	73.58	316	P	P	21 41 11.9	+2.0
PETK	Petropavlovsk-	73.60	30	P	P	21 41 08.8	-0.8
	comp=Z,6.4nm,1.0s,baz=152,slow=6.6,SNR=4.0						
PETK				LR	LR	22 15 09.7	
	comp=Z,52nm,18.9s,baz=265,slow=37						
PETK	Petropavlovsk-	73.60	30	P	P	21 41 08.0	-1.6
PETK	Petropavlovsk-	73.60	30	P	P	21 41 08.0	-1.6
ZEI	Tsey	73.87	318	eP	P	21 41 10.3	-1.3
ZEI				pmax	pmax		
	comp=Z,24nm,1.0s						
ONI	Oni	74.09	317	P	P	21 41 14.3	+1.6
NCK	Nalchik	74.36	318	⇓eP	P	21 41 15.0	+0.8
NCK				pmax	pmax		
	comp=Z,59nm,1.2s						
MA2	Magadan	74.66	22	P	P	21 41 15.2	-0.4
	comp=Z,4.2nm,0.8s,baz=245,slow=22,SNR=2.1						
MA2	Magadan	74.66	22	⇑eP	P	21 41 16.5	+0.9
MA2				pmax	pmax		
	comp=Z,9.0nm,1.2s						
MBAR	Mbarara	74.68	271	ceP	P	21 41 17.8	+0.9
MBAR				pmax	pmax		
	comp=Z,15nm,1.1s						
MBAR	Mbarara	74.68	271	P	P	21 41 17.9	+1.1
NEY	Neytrino	74.84	318	⇑eP	P	21 41 18.0	+0.8
NEY				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KBZ	Khabaz	74.92	318	P	P	21 41 16.6	-0.8
	comp=Z,41nm,1.0s,baz=117,slow=3.1,SNR=21						
KBZ	Khabaz	74.92	318	ceP	P	21 41 16.9	-0.5
KBZ				pmax	pmax		
	comp=Z,60nm,1.1s						
KOPT	Kop Dagi	75.15	314	IAmb	IAmb	21 41 23.2	
	comp=Z,68nm,1.5s						
KIV	Kislovodsk	75.15	318	i P	P	21 41 18.5	-0.4
	SNR=9.2						
KIV	Kislovodsk	75.15	318	eP	P	21 41 19.5	+0.6
KIV				pmax	pmax		
	comp=Z,118nm,1.1s						
KIV	Kislovodsk	75.15	318	P	P	21 41 19.5	+0.6
KIV				IAmb	IAmb	21 41 21.7	
	comp=Z,41nm,1.1s						
KIV	Kislovodsk	75.15	318	P	P	21 41 18.8	-0.1
GOF	Gofitskoye	75.37	320	⇑iP	P	21 41 20.5	+0.5
GOF				pmax	pmax		
	comp=Z,54nm,1.3s						
SYO	Syowa Base	75.79	200	⇓eP	P	21 41 23.2	+1.2
SYO	Syowa Base	75.79	200	⇑eX	P	21 41 31.0	+9.0
BELG	Belogornoye	76.02	328	⇓eP	P	21 41 24.3	+0.8
BELG				pmax	pmax		
	comp=Z,4.0nm,1.2s						
MALT	Malatya	76.06	312	P	P	21 41 25.1	+0.8
LSZ	Lusaka	76.10	256	P	P	21 41 25.4	+0.4
LSZ				pmax	pmax		
	comp=Z,20nm,1.3s						
LSZ	Lusaka	76.10	256	P	P	21 41 25.4	+0.4
LSZ				IAmb	IAmb	21 41 31.8	
	comp=Z,20nm,1.2s						
LSZ	Lusaka	76.10	256	P	P	21 41 26.2	+1.3
LSZ				P	P	21 41 26.2	+1.3
NRIK	Noril'sk	76.28	354	P	P	21 41 23.1	-1.5
	comp=Z,6.4nm,0.9s,baz=155,slow=5.7,SNR=7.7						
NRIK	Noril'sk	76.28	354	deP	P	21 41 24.1	-0.6
NRIK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
SOC	Sochi	76.99	317	eP	P	21 41 27.6	-1.6
SOC				e		21 44 20.3	
SOC				ePPP	PPP	21 46 16.7	
SOC				eS	S	21 51 15.0	-0.5
SOC				eSS	SS	21 56 12.0	-1.1
SOC				pmax	pmax		
	comp=Z,28nm,0.8s						
SOC				MLR	MLR		
	comp=Z,379nm,21.0s						
VNDA	Vanda	77.14	169	LR	LR	22 12 26.4	
	comp=Z,85nm,20.2s,baz=316,slow=33						
SEY	Seymchan	77.50	20	P	P	21 41 30.3	-1.3
	comp=Z,2.6nm,0.9s,baz=232,slow=7.5,SNR=5.4						
SEY	Seymchan	77.50	20	⇓eP	P	21 41 31.2	-0.5
TOKA	Tokat	78.14	313	P	P	21 41 36.9	+1.0
TOKA				IAmb	IAmb	21 41 40.3	
	comp=Z,45nm,1.3s						
KIRV	Kirov	78.38	334	deP	P	21 41 36.0	-0.6
BOSA	Boshof	78.46	242	P	P	21 41 38.1	+0.1
	comp=Z,16nm,1.1s,baz=158,slow=7.6,SNR=5.9						
BOSA	Boshof	78.46	242	P	P	21 41 37.7	-0.3
BOSA				pmax	pmax		
	comp=Z,39nm,1.3s						
BOSA	Boshof	78.46	242	P	P	21 41 37.7	-0.3
BOSA				IAmb	IAmb	21 41 44.2	
	comp=Z,39nm,1.3s						
VRH	Novokhopyorsk	78.73	325	eP	P	21 41 37.9	-0.8
VRH				pmax	pmax		
	comp=Z,40nm,0.9s						
CSS	Mathiatis	78.97	307	IAmb	IAmb	21 41 43.7	
	comp=Z,50nm,1.0s						
TIXI	Tiksi	79.12	7	⇑eP	P	21 41 37.7	-2.8
TIXI	Tiksi	79.12	7	P	P	21 41 37.9	-2.6
BR131	Keskin Array S	80.05	312	ceP	P	21 41 46.4	0.0
BR131	Keskin Array S	80.05	312	IAmb	IAmb	21 41 48.4	
	comp=Z,46nm,1.1s						
BRTR	Keskin Array B	80.05	312	P	P	21 41 45.6	-0.8
	comp=Z,26nm,1.1s,baz=139,slow=5.9,SNR=30						
BRTR				LR	LR	22 20 55.8	
	comp=Z,44nm,18.1s,baz=134,slow=38						
VSR	Storozhevoye	80.21	324	eP	P	21 41 45.8	-1.0
VSR				pmax	pmax		
	comp=Z,60nm,1.2s						
ILGA	Ilgaz	80.37	313	P	P	21 41 47.6	-0.6
ILGA				IAmb	IAmb	21 41 50.9	
	comp=Z,45nm,1.0s						
LPSR	Galich'ya Gora	80.88	326	eP	P	21 41 49.7	-0.7
LPSR				pmax	pmax		
	comp=Z,40nm,1.2s						
SIM	Simferopol'	81.24	317	eP	P	21 41 52.7	+0.2
SIM				pmax	pmax		
	comp=Z,92nm,1.2s						
ELL	Elmali	82.11	308	P	P	21 41 57.4	0.0
ELL				pmax	pmax		
	comp=Z,222nm,1.4s						
ELL	Elmali	82.11	308	P	P	21 41 57.4	0.0
MOS	Moscow	82.78	328	eP	P	21 42 00.0	-0.3
MOS				pmax	pmax		
	comp=Z,64nm,1.3s						
OBN	Obninsk	83.11	327	P	P	21 42 00.8	-1.2
	comp=Z,22nm,1.3s,baz=94,slow=1.7,SNR=14						
OBN	Obninsk	83.11	327	⇓P	P	21 42 01.9	-0.1
OBN	Obninsk	83.11	327	i P	P	21 42 01.4	-0.6
OBN				i		21 42 15.4	
OBN				pmax	pmax		
	comp=Z,90nm,1.3s						
OBN	Obninsk	83.11	327	P	P	21 42 02.6	+0.6
KLMR	Klimovskoe	83.87	333	eP	P	21 42 05.9	+0.2
KLMR				pmax	pmax		
	comp=Z,49nm,1.4s						
KLMR	Klimovskoe	83.87	333	eP	P	21 42 06.0	+0.2
KLMR				AMP		21 42 08.4	
	comp=Z,49nm,1.4s						
JURR	Jurilovca	84.78	316	⇑P	P	21 42 11.3	+0.5
TLCR		84.92	316	⇓P	P	21 42 12.8	+1.4
TLCR		84.92	316	P	P	21 42 12.8	+1.4
TIRR	Tirgusor	85.03	316	⇑P	P	21 42 12.3	+0.2
TIRR	Tirgusor	85.03	316	P	P	21 42 12.2	+0.2
TPGR	Topolog	85.11	316	⇑P	P	21 42 12.4	-0.1
TLBR	Topalu	85.30	316	⇓P	P	21 42 14.0	+0.6
MILM	Milestii Mici	85.34	318	⇑P	P	21 42 14.0	+0.5
KIS	Kishinev	85.35	318	⇓P	P	21 42 14.7	+1.0
ICOR	Ion Corvin	85.38	315	⇑P	P	21 42 15.7	+2.0
CFR	Carcaliu	85.38	316	⇓P	P	21 42 14.8	+1.0
HARR	Harsova	85.42	316	⇓P	P	21 42 14.4	+0.4
HARR	Harsova	85.42	316	P	P	21 42 14.3	+0.4
VARL	Varlezi	85.75	317	⇑P	P	21 42 16.8	+1.2
IDI	Anoyia	85.79	306	⇑P	P	21 42 16.6	+0.4
TMCR	Tamitsa	85.83	336	eP	P	21 42 12.1	-3.4
TMCR				pmax	pmax		
	comp=Z,12nm,0.9s						
RASA	Rasa	85.86	315	⇑P	P	21 42 16.8	+0.7
VASR	Vaslui	85.95	318	⇑P	P	21 42 16.7	+0.1
TSUM	Tsumeb	85.96	251	P	P	21 42 18.3	+0.8
TSUM				IAmb	IAmb	21 42 22.9	
	comp=Z,16nm,1.1s						
AKASG	Malin Array Be	86.01	322	P	P	21 42 15.2	-1.6
	comp=Z,18nm,1.0s,baz=85,slow=4.8,SNR=40						
AKASG	Malin Array Be	86.01	322	i P	P	21 42 15.1	-1.7
AKASG				pmax	pmax		
	comp=Z,26nm,1.0s						
AKASG	Malin Array Be	86.01	322	P	P	21 42 15.1	-1.7
AKBB	Malin Array Si	86.01	322	deP	P	21 42 17.2	+0.4
AKBB	Malin Array Si	86.01	322	IAmb	IAmb	21 42 18.6	
	comp=Z,24nm,1.0s						
PETR	Petresti	86.13	317	⇑P	P	21 42 19.3	+1.8
RAZG	Razgrad	86.17	314	⇑P	P	21 42 19.7	+1.9
IAS	Iasi	86.23	318	⇑P	P	21 42 19.4	+1.4
IAS	Iasi	86.23	318	P	P	21 42 19.3	+1.4
BISRR	Bisoca	86.45	316	⇓P	P	21 42 20.7	+1.6
VRI	Vrincioaia	86.50	317	⇓P	P	21 42 19.5	+0.1
VRI	Vrincioaia	86.50	317	P	P	21 42 19.5	+0.1
PLOR	Plostina	86.55	317	⇓P	P	21 42 20.7	+1.0
PLOR	Plostina	86.55	317	P	P	21 42 20.6	+1.0
TESR	Tescani	86.69	317	⇑P	P	21 42 20.6	+0.3
NEHR	Nehoiu	86.71	316	⇑P	P	21 42 21.5	+1.1
MLR	Muntele Rosu	86.96	316	⇓P	P	21 42 21.9	+0.1
ZIMR		87.00	314	⇑P	P	21 42 23.8	+2.0
BIZ	Bicaz	87.15	318	⇑P	P	21 42 22.8	+0.3
PRAR	RASCA	87.16	318	⇑P	P	21 42 22.7	+0.1
PLD	Plovdiv	87.18	313	P	P	21 42 24.8	+2.1
PLD				pmax	pmax		
	comp=Z,138nm,1.6s						
OZUR		87.19	317	⇓P	P	21 42 24.9	+2.1
COPA	Copaceanca	87.20	315	⇑P	P	21 42 23.9	+1.1
DOPR	Dopca	87.44	317	⇓P	P	21 42 24.5	+0.6
HUMR	Humele	87.44	315	⇑P	P	21 42 25.8	+1.8
PLVB	Pleven	87.48	314	⇑P	P	21 42 24.7	+0.5
VOIR		87.57	316	⇓P	P	21 42 25.8	+1.2
VOIR		87.57	316	P	P	21 42 25.8	+1.2
MNK	Minsk	87.73	325	eP	P	21 42 26.0	+0.9
MNK	Minsk	87.73	325	i P	P	21 42 24.4	-0.6
	comp=E,8.0nm,0.9s						
MNK				i P	P	21 42 24.4	-0.6
	comp=N,13nm,0.9s						
MNK				i P	P	21 42 24.4	-0.6
	comp=Z,72nm,0.9s						
MNK				i PP	PP	21 45 49.8	-1.1
MNK				i PPP	PPP	21 47 45.1	
MNK				i S	SKSac	21 52 47.9	-2.7
MNK				i ScS	ScS	21 53 09.6	-1.9
MNK				i SS	SS	21 58 51.4	-0.7
MNK				i SSS	SSS	22 02 25.2	
MNK				i LQ	LQ	22 13 23.5	
MNK				i LR	LR	22 17 39.7	
MNK				i LRM	MLR	22 22 56.0	
	comp=E,6.0nm,19.7s						
MNK				i LRM	MLR	22 22 56.0	
	comp=N,157nm,19.7s						
MNK				i LRM	MLR	22 22 56.0	
	comp=Z,84nm,19.7s						
ARR	Arges	87.84	316	⇑P	P	21 42 25.8	-0.2
BURAR	Bucovina Array	87.88	318	⇑P	P	21 42 26.8	+0.6
BURAR	Bucovina Array	87.88	318	P	P	21 42 26.7	+0.6
BURAR	Bucovina Array	87.88	318	P	P	21 42 26.4	+0.3
VTS	Vitosha	88.34	313	⇓P	P	21 42 29.5	+1.0
VTS	Vitosha	88.34	313	P	P	21 42 29.5	+1.0
ARCR	ARCALIA	88.35	318	⇓P	P	21 42 29.6	+1.3
NACGM	Naroch	88.44	326	i P	P	21 42 28.2	-0.2
NACGM				i P	P	21 42 28.2	-0.2
NACGM				i P	P	21 42 28.2	-0.2
NACGM				i PcP	PcP	21 42 29.4	-0.6
NACGM				i PP	PP	21 45 58.5	+1.9
NACGM				i PPP	PPP	21 48 01.1	
NACGM				i S	SKKSac	21 53 04.9	-0.8
NACGM				i SS	SS	21 59 10.7	+8.3
NACGM				i SSS	SSS	22 02 49.5	
NACGM				i LR	LR	22 23 37.2	
LOT	Lotru	88.46	316	⇓P	P	21 42 29.4	+0.5
ISAL	Salakas	88.95	326	eP	P	21 42 31.4	+0.5
BMR	Baia Mare	89.03	318	⇓P	P	21 42 32.8	+1.4
LVV	L'vov	89.07	320	eP	P	21 42 31.8	+0.3
DEV	Deva	89.13	316	⇓P	P	21 42 33.8	+1.8
DEV	Deva	89.13	316	P	P	21 42 33.7	+1.8
GZR	Gura Zlata	89.14	316	⇑P	P	21 42 33.4	+1.4
VSU	Vasula	89.26	329	eP	P	21 42 32.8	+0.6
VSU	Vasula	89.26	329	deP	P	21 42 33.2	+1.0
HERR	Herculane	89.30	315	⇓P	P	21 42 33.8	+1.0
DRGR		89.41	317	⇓P	P	21 42 34.0	+0.7
DRGR		89.41	317	P	P	21 42 34.3	+1.0
DRGR				pmax	pmax		
	comp=Z,16nm,1.3s						
BOVS	Bovan	89.61	314	⇓P	P	21 42 35.3	+1.1
MDVR	Moldovita	89.78	315	⇑P	P	21 42 35.4	+0.3
KWP	Kalwaria Pacla	89.88	320	eP	P	21 42 37.7	+2.4
SNAA	Sanae	89.90	197	P	P	21 42 37.6	+2.5
SNAA	Sanae	89.90	197	deP	P	21 42 35.6	+0.5
SNAA				pmax	pmax		
	comp=Z,28nm,1.4s						
SNAA	Sanae	89.90	197	P	P	21 42 36.2	+1.1
BZS	Buzias	89.98	316	⇑P	P	21 42 35.7	-0.2
BZS	Buzias	89.98	316	P	P	21 42 36.3	+0.4
BZS				pmax	pmax		
	comp=Z,37nm,0.9s						
UZH	Uzhgorod	89.99	319	eP	P	21 42 38.0	+2.2
UZH				e		21 42 46.8	
UZH				i		21 42 51.9	
IGT	Igoumenitsa	90.04	310	P	P	21 42 39.0	+2.6
IGT				pmax	pmax		
	comp=Z,64nm,1.3s						
SIRR	Siria	90.05	316	⇓P	P	21 42 37.2	+1.0
KOLS	Kolonicke sedl	90.05	319	eP	P	21 42 36.6	+0.4
KOLS				pmax	pmax		
	comp=Z,61nm,1.1s						
KOLS	Kolonicke sedl	90.05	319	eP	P	21 42 36.6	+0.4
LTVH	Ltavrtes, Hu	90.05	318	⇓P	P	21 42 38.6	+2.5
PABE	Paberze	90.14	326	eP	P	21 42 36.5	+0.2
FINES	FINESS Array B	90.23	332	P	P	21 42 35.9	-0.8
	comp=Z,19nm,1.0s,baz=56,slow=4.8,SNR=13						
FINES	FINESS Array B	90.23	332	i P	P	21 42 37.4	+0.7
FINES				pmax	pmax		
	comp=Z,19nm,1.0s						
FINES	FINESS Array B	90.23	332	P	P	21 42 34.2	-2.4
SUW	Suwalki	90.33	324	eP	P	21 42 38.4	+1.1
SUW	Suwalki	90.33	324	eP	P	21 42 37.3	0.0
CRVS	Cervenica-Dubn	90.57	319	eP	P	21 42 40.7	+2.1
CRVS				pmax	pmax		
	comp=Z,31nm,1.2s						
CRVS	Cervenica-Dubn	90.57	319	eP	P	21 42 40.7	+2.1
MTSE	Matsula	90.81	329	eP	P	21 42 39.2	-0.2
DIVS	Divibare	90.91	314	P	P	21 42 41.0	+0.6
KECS	Kecovo	91.15	318	eP	P	21 42 43.3	+2.0
KECS	Kecovo	91.15	318	eP	P	21 42 43.3	+2.0
FRGS	Fruska Gora	91.17	315	⇑P	P	21 42 43.4	+1.9
NIE	Niedzica	91.40	319	eP	P	21 42 44.9	+2.4
BEL	Belsk	91.42	322	eP	P	21 42 44.7	+2.3
PSZ	Piszkesteto	91.47	318	⇓P	P	21 42 45.2	+2.3
PSZ	Piszkesteto	91.47	318	P	P	21 42 45.1	+2.2
PSZ				pmax	pmax		
	comp=Z,16nm,1.6s						
VNA2	Neumayer--Watz	91.54	198	P	P	21 42 46.1	+3.4
	baz=93,slow=3.5						
OJC	Ojcow	91.83	320	eP	P	21 42 46.4	+2.0
LANS	Liptovska Anna	91.91	319	eP	P	21 42 46.9	+2.1
LANS				pmax	pmax		
	comp=Z,3.0nm,1.0s						
LANS	Liptovska Anna	91.91	319	eP	P	21 42 46.9	+2.1
VNA1	Neumayer--Stat	91.91	198	P	P	21 42 49.3	+4.9
VNA3	Neumayer Olymp	92.08	197	P	P	21 42 49.9	+4.6
MORH	Mrgy, Hungar	92.11	316	⇓P	P	21 42 46.2	+0.4
ARCES	ARCESS Array B	92.15	340	LR	LR	22 30 33.1	
	comp=Z,53nm,18.5s,baz=90,slow=40						
JAVC	Velka Javorina	93.05	319	eP	P	21 42 52.1	+1.9
SMOL	Smolenice	93.18	318	eP	P	21 42 52.2	+1.5
SMOL	Smolenice	93.18	318	eP	P	21 42 52.2	+1.5
MORC	Moravsky Berou	93.22	320	⇑P	P	21 42 52.3	+1.4
MORC	Moravsky Berou	93.22	320	eP	P	21 42 52.3	+1.4
MORC	Moravsky Berou	93.22	320	P	P	21 42 52.3	+1.4
MORC	Moravsky Berou	93.22	320	IAmb	IAmb	21 42 53.8	
	comp=Z,8.8nm,1.0s						
MODS	Modra-Piesok	93.26	318	eP	P	21 42 51.9	+0.8
MODS				pmax	pmax		
	comp=Z,19nm,1.4s						
MODS	Modra-Piesok	93.26	318	eP	P	21 42 51.9	+0.8
KRLC	Kraliky	93.74	320	eP	P	21 42 53.7	+0.4
KRLC	Kraliky	93.74	320	eP	P	21 42 53.7	+0.4
KOGS	Kog	93.79	316	i P	P	21 42 55.2	+1.7
VRAC	Vranov	93.80	319	eP	P	21 42 54.7	+1.2
KRUC	Moravsky	93.91	319	eP	P	21 42 53.4	-0.6
DPC	Dobruska-Polom	94.06	320	eP	P	21 42 54.9	+0.2
DPC	Dobruska-Polom	94.06	320	eP	P	21 42 54.9	+0.2
CHVC	Chvalec	94.25	320	eP	P	21 42 55.4	-0.2
ARSA	Arzberg	94.35	317	eP	P	21 42 56.5	+0.4
	comp=Z,8.4nm,1.4s						
SOKA	Soboth	94.64	316	eP	P	21 42 58.0	+0.4
	comp=Z,11nm,1.2s						
LJU	Ljubljana	94.95	316	eP	P	21 43 00.7	+1.8
OBKA	Obir	94.96	316	eP	P	21 42 59.7	+0.7
	comp=Z,9.1nm,1.4s						
PRU	Pruhonice	95.18	320	eP	P	21 43 01.4	+1.6
PRU	Pruhonice	95.18	320	eP	P	21 43 01.4	+1.6
MOA	Molln	95.23	317	eP	P	21 42 59.4	-0.7
	comp=Z,5.9nm,1.4s						
GEC2	GERESS Array S	95.66	318	IAmb	IAmb	21 43 04.8	
	comp=Z,7.2nm,1.2s						
GERES	GERESS Array B	95.66	318	P	P	21 43 01.7	-0.5
	comp=Z,3.4nm,1.1s,baz=101,slow=4.2,SNR=12						
GERES	GERESS Array B	95.66	318	P	P	21 43 01.3	-0.9
GERES	GERESS Array B	95.66	318	P	P	21 43 01.3	-0.9
KHC	Kasperske Hory	95.76	319	eP	P	21 43 04.1	+1.6
KHC	Kasperske Hory	95.76	319	eP	P	21 43 04.1	+1.6
KBA	Koelnbreinsper	95.82	317	eP	P	21 43 02.9	-0.1
	comp=Z,3.3nm,1.1s						
HFS	Hagfors	96.10	330	P	P	21 43 03.3	-0.5
	comp=Z,13nm,1.0s,baz=39,slow=9.6,SNR=8.3						
CLL	Collm	96.22	321	eP	P	21 43 06.0	+1.5
CLL	Collm	96.22	321	eP	P	21 43 06.0	+1.5
STAL	STALIGIAL	96.22	316	IAmb	IAmb	21 43 07.0	
	comp=Z,17nm,1.3s						
WTTA	Wattenberg	96.99	317	eP	P	21 43 08.8	+0.4
	comp=Z,8.2nm,1.1s						
WATA	Walderalm	97.03	317	eP	Pdif	21 43 08.6	0.0
	comp=Z,7.5nm,1.3s						
SQTA	Sankt Quirin	97.28	317	eP	P	21 43 09.2	-0.4
	comp=Z,5.0nm,1.2s						
NOA	NORSAR Array B	97.33	331	P	Pdif	21 43 10.1	+0.6
	comp=Z,1.0nm,1.0s,baz=221,slow=21,SNR=5.4						
NOA				LR	LR	22 31 46.0	
	comp=Z,22nm,18.7s,baz=335,slow=38						
MOTA	Moosalm	97.36	317	eP	P	21 43 08.8	-1.2
	comp=Z,6.8nm,1.5s						
RETA	Reutte	97.59	317	eP	P	21 43 09.9	-1.0
	comp=Z,9.3nm,1.6s						
FETA	Feichten	97.61	317	eP	P	21 43 11.1	0.0
	comp=Z,7.0nm,1.4s						
DAVA	Damuels	98.19	317	eP	P	21 43 13.0	-0.7
	comp=Z,11nm,1.3s						
COLD	Coldfoot	101.16	23	P	Pdif	21 43 26.5	+0.1
	baz=281						
NEA2	Nenana	102.14	25	P	Pdif	21 43 30.2	-0.5
	baz=282						
MCK	McKinley	102.36	26	P	Pdif	21 43 31.3	-0.5
	baz=282						
INK	Inuvik	106.79	19	PKiKP	PKiKP	21 48 02.3	+1.0
	comp=Z,5.2nm,1.2s,baz=217,slow=2.6,SNR=3.8						
YKA	Yellowknife Ar	116.57	19	PKP	PKPdf	21 48 18.6	-1.3
	comp=Z,5.3nm,1.0s,baz=315,slow=1.6,SNR=22						
YKA				PKKPbc	PKKPbc	21 58 50.1	0.0
	comp=Z,0.7nm,0.7s,baz=122,slow=3.7,SNR=9.1						
B05A	Bryant	121.84	35	P	PKiKP	21 48 30.9	+0.2
	baz=300						
FRB	Frobisher Bay	122.30	357	PKP	PKPdf	21 48 30.0	-0.9
	comp=Z,7.7nm,1.0s,baz=257,slow=2.1,SNR=5.7						
B08A	Colville Reser	123.36	34	PKPdf	PKPdf	21 48 33.1	-0.4
I04A	Tendick Farm,	123.82	40	P	PKiKP	21 48 35.8	+0.9
	baz=298						
I05D	Terrebonne, OR	124.24	39	P	PKiKP	21 48 36.2	+0.6
	baz=299						
J04D	Umpqua Nationa	124.27	41	P	PKiKP	21 48 37.1	+1.2
	baz=298						
M02C	Callahan	124.60	43	P	PKiKP	21 48 36.9	+0.4
	baz=296						
L04D	Klamath Falls	124.60	42	P	PKiKP	21 48 37.7	+1.1
	baz=297						
J05D	Fort Rock, OR	124.81	40	P	PKiKP	21 48 37.7	+0.8
	baz=298						
N02D	Trinity Center	124.88	43	P	PKiKP	21 48 39.3	+2.2
	baz=296						
M04C	Macdoel	125.11	42	P	PKiKP	21 48 37.7	+0.1
	baz=297						
O02D	Mt. Diablo Mer	125.16	44	P	PKiKP	21 48 38.1	+0.4
	baz=295						
FCC	Fort Churchill	125.36	12	PKIKP	PKPdf	21 48 35.9	-1.0
FCC	Fort Churchill	125.36	12	PKPdf	PKPdf	21 48 35.9	-1.0
O03E	Paynes Creek	125.80	44	P	PKiKP	21 48 40.3	+1.3
	baz=296						
F10A	Beach Ranch, E	125.88	36	PKPdf	PKPdf	21 48 38.2	-0.3
ORV	Oroville	126.33	44	PKIKP	PKiKP	21 48 40.5	+0.6
ORV	Oroville	126.33	44	PKPdf	PKiKP	21 48 40.5	+0.6
JTMT	Jette	126.48	32	PKPdf	PKiKP	21 48 40.6	+0.5
FFC	Flin Flon	126.75	19	PKIKP	PKiKP	21 48 40.9	+0.6
FFC	Flin Flon	126.75	19	PKPdf	PKiKP	21 48 40.9	+0.6
WVOR	Wild Horse Val	126.89	40	PKIKP	PKPdf	21 48 40.9	+0.3
WVOR	Wild Horse Val	126.89	40	PKPdf	PKPdf	21 48 40.9	+0.3
BEKR	Beckworth	126.98	44	PKPdf	PKPdf	21 48 40.5	-0.5
DLMT	Dillon	128.86	34	PKPdf	PKiKP	21 48 45.4	+0.4
NVAR	Mina Array Bea	129.06	44	PKP	PKPdf	21 48 44.5	-0.5
	comp=Z,3.2nm,0.9s,baz=265,slow=1.5,SNR=18						
NVAR	Mina Array Bea	129.06	44	PKPdf	PKPdf	21 48 44.8	-0.2
ELK	Elko	129.95	40	PKIKP	PKPdf	21 48 47.1	+0.5
ELK	Elko	129.95	40	PKPdf	PKPdf	21 48 47.1	+0.5
CWC	Cottonwood Cre	130.12	47	P	PKiKP	21 48 47.9	+0.1
	baz=297						
ISA	Isabella, Lake	130.17	48	P	PKiKP	21 48 47.7	-0.1
	baz=296						
MPMC	Manual Prospec	130.72	47	P	PKPdf	21 48 48.7	+0.5
	baz=297						
LRMC	Laurel Mtn Rad	130.84	47	P	PKiKP	21 48 49.1	-0.2
	baz=296						
EDW2	Edwards Air Fo	130.87	48	P	PKiKP	21 48 49.2	0.0
	baz=296						
R11A	Troy Canyon, C	130.96	43	P	PKiKP	21 48 49.5	0.0
	baz=300						
REDW	Red Top Meadow	131.09	35	PKPdf	PKiKP	21 48 50.4	+0.8
BFSC	Mount Baldy Ra	131.39	49	P	PKPdf	21 48 49.5	0.0
	baz=295						
GSC	Goldstone, Bar	131.56	47	P	PKPdf	21 48 50.0	+0.3
	baz=297						
GSC	Goldstone, Bar	131.56	47	PKIKP	PKPdf	21 48 50.2	+0.5
GSC	Goldstone, Bar	131.56	47	PKPdf	PKPdf	21 48 50.2	+0.5
HEC	Hector,Ludlow	132.11	48	P	PKiKP	21 48 53.0	+1.3
	baz=297						
PDAR	Pinedale Array	132.20	35	PKP	PKiKP	21 48 52.0	+0.1
	comp=Z,2.2nm,0.9s,baz=289,slow=1.3,SNR=10						
PDAR	Pinedale Array	132.20	35	PKPdf	PKiKP	21 48 51.7	-0.2
ULM	Lac du Bonnet	132.53	18	PKP	PKiKP	21 48 51.7	-0.3
	comp=Z,11nm,0.9s,baz=327,slow=3.2,SNR=17						
TPFO	Pinon Flats	132.56	49	P	PKiKP	21 48 54.0	+1.2
	baz=296						
GMRC	Granite Mounta	132.63	47	P	PKiKP	21 48 54.3	+1.5
	baz=298						
BELC	Belle Mtn. Jos	132.73	48	P	PKiKP	21 48 54.4	+1.3
	baz=297						
MONP2	Monument Peak	132.90	50	P	PKiKP	21 48 54.0	+0.4
	baz=295						
IKP	In-Ko-Pah, Jac	133.24	50	P	PKiKP	21 48 53.7	-0.4
	baz=295						
MDND	Maddock	133.25	23	P	PKiKP	21 48 53.9	+0.3
	baz=325						
IRM	Iron Mountain	133.29	48	P	PKiKP	21 48 54.9	+0.8
	baz=298						
RSSD	Black Hills	134.19	30	PKIKP	PKPdf	21 48 53.7	-0.8
RSSD	Black Hills	134.19	30	PKPdf	PKPdf	21 48 53.7	-0.8
O20A	White River Ci	134.63	37	P	PKPdf	21 48 56.0	+0.5
	baz=309						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
N23A	Red Feather La	135.46	34	P	PKiKP	21 48 58.0	-0.6
	baz=313						
SUSD	Miller	136.27	25	P	PKiKP	21 48 59.7	-0.1
	baz=324						
S22A	4UR Ranch, Cre	136.99	38	P	PKiKP	21 49 02.5	+0.6
	baz=309						
F36A	Milaca	137.13	19	PKPdf	PKPdf	21 49 00.0	+0.4
T25A	Trinidad	138.86	37	P	PKiKP	21 49 07.2	+1.6
	baz=311						
ANMO	Albuquerque	138.95	41	PKP	PKPdf	21 49 04.7	+1.0
	comp=Z,3.2nm,0.9s,baz=253,slow=2.7,SNR=4.1						
ANMO	Albuquerque	138.95	41	⇑ *i*PKIKP	PKiKP	21 49 06.1	+0.3
ANMO				pmax	pmax		
	comp=Z,8.0nm,1.3s						
D56A	ZEC Mazanza, M	139.21	0	P	PKiKP	21 49 07.1	+1.4
	baz=360						
D55A	Sainte-Anne-du	139.23	1	P	PKiKP	21 49 06.3	+0.5
	baz=359						
E61A	Lac Etchemin	139.67	356	P	PKiKP	21 49 07.3	+0.6
	baz=6.4						
E56A	St. Veronique	139.71	0	P	PKiKP	21 49 06.5	-0.2
	baz=359						
E57A	Chemin Saint G	139.84	360	P	PKiKP	21 49 06.5	-0.5
	baz=0.8						
F64A	Sherman	140.02	353	P	PKiKP	21 49 08.7	+1.3
	baz=9.7						
F61A	St Evariste	140.16	356	P	PKiKP	21 49 08.3	+0.6
	baz=5.7						
F60A	Warwick	140.22	357	P	PKiKP	21 49 07.4	-0.4
	baz=4.2						
G54A	Lake Saint Pet	140.74	4	P	PKiKP	21 49 07.7	-1.2
	baz=355						
SADO	Sadowa	141.28	5	PKP	PKPdf	21 49 06.9	-0.3
	comp=Z,10nm,0.9s,baz=345,slow=4.3,SNR=4.9						
T35A	Sooner Cattle	143.38	30	PKPdf	PKPdf	21 49 10.3	-0.9
CPUP	Villa Florida	143.66	207	PKP	PKPbc	21 49 10.7	+1.3
	comp=Z,7.0nm,0.9s,baz=107,slow=2.2,SNR=3.8						
CPUP	Villa Florida	143.66	207	PKIKP	PKPbc	21 49 10.3	+0.8
CPUP	Villa Florida	143.66	207	PKPdf	PKPbc	21 49 10.3	+0.8
CO01	Juntas del Tor	143.86	187	PKPdf	PKPbc	21 49 11.2	+0.9
TX31	Lajitas Ar. Si	144.14	46	PKPdf	PKPbc	21 49 11.2	+0.2
TX32	Lajitas Array	144.14	46	PKPdf	PKPab	21 49 10.5	0.0
TXAR	Lajitas Array	144.14	46	PKP	PKPbc	21 49 11.1	+0.1
	comp=Z,14nm,1.0s,baz=270,slow=1.3,SNR=25						
TXAR	Lajitas Array	144.14	46	PKIKP	PKPab	21 49 09.9	-0.7
TXAR	Lajitas Array	144.14	46	PKPdf	PKPab	21 49 09.9	-0.7
N49A	Columbus Grove	144.29	12	PKPdf	PKPdf	21 49 12.9	+0.2
M53A	WI Miller and	144.40	8	PKPdf	PKPbc	21 49 12.1	+0.8
CCM	Cathedral Cave	144.78	23	PKIKP	PKPab	21 49 12.3	-0.2
CCM	Cathedral Cave	144.78	23	PKPdf	PKPab	21 49 12.3	-0.2
U38A	Gravette	144.79	28	PKPdf	PKPab	21 49 11.5	-1.1
AC05	El Transito	145.01	187		PKPab	21 49 13.7	-0.1
HHAR	Hobbs	145.13	28		PKPbc	21 49 13.2	-0.6
ACSO	Alum Creek Sta	145.20	11		PKPdf	21 49 14.2	-0.1
SDBA	SAO DESIDERIO	145.21	238	*e*P	PKPdf	21 49 15.8	+0.7
N58A	Sunbury	145.36	3		PKPdf	21 49 15.2	+0.6
O53A	New Philadelph	145.49	9	PKPdf	PKPbc	21 49 14.7	-0.2
U40A	Yellville	145.56	27	PKPdf	PKPdf	21 49 13.4	-1.7
X37A	Clayton	145.77	31	PKPdf	PKPbc	21 49 16.0	+0.1
BDFB	Brasilia	145.93	230	PKPbc	PKPab	21 49 18.1	+0.5
	comp=Z,18nm,1.0s,baz=108,slow=3.4,SNR=13						
BDFB	Brasilia	145.93	230	PKIKP	PKPdf	21 49 16.5	+0.1
BDFB	Brasilia	145.93	230	PKPdf	PKPdf	21 49 16.5	+0.1
JCT	Junction City	146.11	41	PKP2	PKPdf	21 49 16.1	-0.1
JCT	Junction City	146.11	41	PKPdf	PKPdf	21 49 16.1	-0.1
WCI	Wyandotte Cave	146.31	17	PKP2	PKPbc	21 49 17.5	+0.1
WCI	Wyandotte Cave	146.31	17		PKPbc	21 49 17.5	+0.1
LCAR	Lake Charles	146.53	25		PKPdf	21 49 16.3	-0.4
WHTX	Lake Whitney,	146.55	37	PKPbc	PKPdf	21 49 16.8	-0.1
MIAR	Mount Ida	146.71	29	PKP2	PKPbc	21 49 19.2	+0.5
MIAR	Mount Ida	146.71	29	PKPbc	PKPbc	21 49 19.2	+0.5
Q54A	Coxs Mills	146.79	9	PKPbc	PKPbc	21 49 19.2	+0.4
T47A	Sharon Grove	147.21	19	PKPbc	PKPbc	21 49 20.2	+0.1
R53A	Hurricane	147.24	11	PKPbc	PKPbc	21 49 19.5	-0.6
435B	Jarrell	147.32	38	PKPbc	PKPbc	21 49 19.5	-1.0
WVT	Waverly	147.75	20	PKP2	PKPbc	21 49 20.4	-1.2
WVT	Waverly	147.75	20	PKPbc	PKPbc	21 49 20.4	-1.2
U49A	Red Boiling Sp	148.05	17	PKPbc	PKPbc	21 49 22.0	-0.4
W45A	Hickory Valley	148.12	23	PKPbc	PKPbc	21 49 21.8	-0.7
S57A	Dark Hollow, R	148.24	7	PKPbc	PKPbc	21 49 22.9	0.0
NATX	Nacogdoches	148.33	34	PKPbc	PKPbc	21 49 22.5	-0.8
ZAIG	Zacatecas	148.36	56	PKPbc	PKPbc	21 49 23.5	-0.4
V48A	Smith Brothers	148.44	19	PKPbc	PKPdf	21 49 21.5	+1.6
OXF	Oxford	148.59	24	PKP2	PKPbc	21 49 22.6	-1.2
OXF	Oxford	148.59	24	PKPbc	PKPbc	21 49 22.6	-1.2
PLAL	Pickwick Lake	148.69	22	PKPbc	PKPbc	21 49 22.3	-1.7
HKT	Hockley	148.98	38	PKP2	PKPbc	21 49 24.2	-0.6
HKT	Hockley	148.98	38	PKPbc	PKPbc	21 49 24.2	-0.6
U54A	Nelsons Funny	149.01	11	PKPdf	PKPdf	21 49 19.0	-1.9
Y45A	Yeager Farm, C	149.10	25	PKPbc	PKPbc	21 49 24.7	-0.4
V52A	Sevierville	149.27	14	PKPdf	PKPdf	21 49 20.8	-0.4
V52A				PKPbc	PKiKP	21 49 26.8	+0.1
CPCT	Cooper Cave	149.40	16	PKPbc	PKPbc	21 49 25.0	-0.8
TKL	Tuckaleechee C	149.40	15	PKPbc	PKPbc	21 49 25.4	-0.4
	comp=Z,57nm,0.9s,baz=280,slow=2.3,SNR=18						
X48A	Hartselle	149.54	21	PKPbc	PKPbc	21 49 25.8	-0.4
W52A	Murphy	149.90	15	PKPbc	PKiKP	21 49 27.8	-0.3
Z47A	Carrollton	150.28	23	PKPbc	PKPbc	21 49 27.0	-1.0
LRAL	Lakeview Retre	150.83	22	PKPbc	PKPbc	21 49 29.0	-0.4
LVC	Limon Verde	150.92	191	PKPbc	PKiKP	21 49 31.7	+0.8
	comp=Z,21nm,0.9s,baz=23,slow=0.7,SNR=8.5						
LVC	Limon Verde	150.92	191	PKIKP	PKiKP	21 49 31.1	+0.1
LVC	Limon Verde	150.92	191	PKPbc	PKiKP	21 49 31.1	+0.1
LVC	Limon Verde	150.92	191	*e*P	PKPdf	21 49 24.9	+0.2
Y52A	Lilburn	151.02	16	PKPbc	PKPbc	21 49 29.3	-0.5
PB07	IPOC Station P	151.96	189	PKPbc	PKPbc	21 49 32.5	0.0
250A	Grady	152.05	21	PKPbc	PKPbc	21 49 31.3	-0.9
SIV	San Ignacio	154.28	211	PKP	PKPdf	21 49 29.6	+0.3
	comp=Z,0.9nm,0.4s,baz=208,slow=2.0,SNR=5.4						
SIV				PKPbc	pPKPdf	21 49 39.6	-0.6
	comp=Z,4.8nm,1.0s,baz=180,slow=3.2,SNR=10.0						
SIV				PKPab	PKPab	21 49 52.0	+0.6
	comp=Z,6.0nm,0.9s,baz=123,slow=5.9,SNR=8.7						
SAML	Samuel	161.20	217	PKIKP	PKPdf	21 49 37.7	-0.2
SAML	Samuel	161.20	217	PKPdf	PKPdf	21 49 37.7	-0.2
OTAV	Otavalo	173.02	147	*e*P	PKPdf	21 49 47.3	0.0

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*IDC **02** 21:30:44.0±7.3, 7°.05S×156°.68E, h270km±74km, mb3.6/13, mb1 3.7/14, mb1mx3.4/50, mbtmp4.2/14, Error ellipse: s-maj=28.3km s-min=20.4km az=4.0*

*NEIC **02** 21:30:55.1±1.3, 7°.3S±0°.1×156°.7E±0°.1, h384km±9km, mb4.4/20, Error ellipse: s-maj=21.7km s-min=9.4km az=47.0*

ISC 02 21:30:55.9±0.6, **7°.33S**±0°.09×**156°.77E**±0°.10, **h400**km, **n39**, σ**1s.26**/38, **mb3.8**/16, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	3.78	124	Pn	Pn	21 32 05.2	-0.8
COEN	Coen	14.89	243	P	P	21 34 09.7	+2.4
CTAO	Charters Tower	16.27	218	P	P	21 34 22.9	+0.7
CTAO				IAmb	IAmb	21 34 33.6	
	comp=Z,24nm,1.4s						
DZM	Mont Dzumac	17.38	149	P	P	21 34 32.3	-1.7
	comp=Z,0.7nm,0.3s,baz=279,slow=8.3,SNR=6.7						
DZM	Mont Dzumac	17.38	149	P	P	21 34 32.8	-1.3
DZM				IAmb	IAmb	21 34 38.0	
	comp=Z,15nm,1.1s						
EIDS	Eidsvold	18.75	196	P	P	21 34 48.5	+0.1
EIDS				IAmb	IAmb	21 34 53.8	
	comp=Z,13nm,1.2s						
WR0	Warramunga Arr	24.94	238	P	P	21 35 44.6	-0.6
WB0	Warramunga Arr	24.98	238	P	P	21 35 44.8	-0.8
WRAB	Tennant Creek	25.09	238	P	P	21 35 45.8	-0.7
WB2	Warramunga Arr	25.09	238	P	P	21 35 46.0	-0.6
WRA	Warramunga Arr	25.10	238	P	P	21 35 45.8	-0.8
	comp=Z,2.9nm,0.3s,baz=64,slow=8.8,SNR=68						
WRA	Warramunga Arr	25.10	238	P	P	21 35 46.0	-0.7
AS31	Alice Springs	27.30	231	P	P	21 36 05.1	-1.0
ASAR	Alice Springs	27.30	231	P	P	21 36 04.5	-1.6
	comp=Z,2.3nm,0.8s,baz=60,slow=9.7,SNR=8.6						
ASAR	Alice Springs	27.30	231	P	P	21 36 04.8	-1.3
BBOO	Buckleboo	31.82	214	P	P	21 36 44.3	-1.3
BBOO				IAmb	IAmb	21 36 51.1	
	comp=Z,28nm,1.4s						
FITZ	Fitzroy Crossi	32.14	248	P	P	21 36 46.7	-1.7
	comp=Z,1.4nm,0.3s,baz=79,slow=11,SNR=7.7						
FITZ	Fitzroy Crossi	32.14	248	P	P	21 36 47.0	-1.4
MMRI	Maumere	34.21	265	P	P	21 37 06.0	-0.2
HIZ	Hauiti	35.09	155	P	P	21 37 14.1	+0.8
FORT	Forrest	35.58	225	P	P	21 37 17.3	-0.3
FORT				IAmb	IAmb	21 37 17.6	
	comp=Z,26nm,0.7s						
KAPI	Kappang	36.86	271	P	P	21 37 26.3	-2.2
	comp=Z,6.6nm,0.3s,baz=101,slow=16,SNR=2.1						
KKM	Kota Kinabalu	42.58	287	P	P	21 38 15.7	+0.6
KKM				IAmb	IAmb	21 38 22.0	
	comp=Z,28nm,1.2s						
MORW	Morawa	44.00	235	P	P	21 38 24.8	-1.2
NWAO	Narrogin (SRO)	44.60	230	P	P	21 38 29.6	-1.1
	comp=Z,3.9nm,0.5s,baz=65,slow=5.2,SNR=6.5						
NWAO	Narrogin (SRO)	44.60	230	P	P	21 38 29.7	-1.0
NWAO				IAmb	IAmb	21 38 48.3	
	comp=Z,19nm,1.3s						
MJAR	Matsushiro Arr	46.98	339	P	P	21 38 49.0	+0.1
CMAR	Chiang Mai Arr	62.51	295	P	P	21 40 39.9	+0.7
	comp=Z,1.0nm,0.7s,baz=112,slow=5.0,SNR=6.0						
VNDA	Vanda	70.21	179	P	P	21 41 30.3	+3.9
	comp=Z,6.2nm,0.8s,baz=357,slow=2.4,SNR=3.3						
VNDA	Vanda	70.21	179	P	P	21 41 32.2	+5.8
VNDA				IAmb	IAmb	21 41 37.6	
	comp=Z,17nm,1.1s						
SONM	Songino Array	70.57	327	P	P	21 41 28.8	-0.4
	comp=Z,0.6nm,0.7s,baz=127,slow=6.3,SNR=1.7						
ILAR	Eielson Array	83.04	21	P	P	21 42 36.4	-1.0
	comp=Z,0.3nm,0.8s,baz=243,slow=5.5,SNR=1.6						
MK31	Makanchi Array	84.81	318	P	P	21 42 47.5	+0.8
MKAR	Makanchi Array	84.81	318	P	P	21 42 47.4	+0.6
	comp=Z,1.1nm,0.6s,baz=96,slow=4.8,SNR=10						
ZALV	Zalesovo Beam	85.44	326	P	P	21 42 49.5	-0.1
	comp=Z,0.5nm,0.4s,baz=134,slow=5.4,SNR=1.7						
KURBB	Kurchatov Arra	88.21	321	P	P	21 43 02.8	-0.1
	comp=Z,0.2nm,0.6s,baz=104,slow=5.8,SNR=2.2						
YKA	Yellowknife Ar	95.81	28	P	P	21 43 38.0	+0.4
	comp=Z,0.2nm,0.6s,baz=259,slow=4.2,SNR=2.7						
BUR08	Bucovina Ar. S	122.57	323	PKPdf	PKiKP	21 49 05.9	+0.7
BURAR	Bucovina Array	122.58	323	PKPdf	PKiKP	21 49 05.9	+0.7

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*UCR **02** 21:31:08.7±0.9, 14°.11N×89°.75W, h174km±4km, ML3.9, mb4.6(NEIC)*

*SNET **02** 21:31:08.6±0.9, 14°.10N×89°.76W, h175km±4km, ML4.0*

*NEIC **02** 21:31:08.9±2.2, 14°.11N±0°.08×89°.78W±0°.07, h179km±5km, mb4.6/58, Error ellipse: s-maj=12.4km s-min=8.8km az=202.0*

*INET **02** 21:31:11.2, 13°.42N×90°.20W, h15km, MW3.9*

*IDC **02** 21:31:16.4±9.1, 14°.44N×89°.53W, h249km±70km, mb3.7/14, mb1 3.8/15, mb1mx3.6/48, mbtmp4.3/15, Error ellipse: s-maj=59.5km s-min=24.5km az=174.0*

*GCG **02** 21:31:17.6±0.4, 14°.33N×89°.96W, h107km±71km, MD3.9*

ISC 02 21:31:08.1±0.6, **14°.07N**±0°.06×**89°.77W**±0°.05, **h183**km±4km, **n134**, σ**1s.08**/151, **mb4.4**/31, **Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RTR	El Retiro	0.21	145	*e*P	Pn	21 31 32.8	+0.1
RTR	El Retiro	0.21	145	*e*P	Pn	21 31 32.8	+0.1
SNJE	San Jose	0.26	141	*e*P	Pn	21 31 32.8	0.0
SNJE	San Jose	0.26	141	*e*P	Pn	21 31 32.8	0.0
SBLS	San Blas	0.27	148	*e*P	Pn	21 31 32.8	-0.1
SBLS	San Blas	0.27	148	*e*P	Pn	21 31 32.8	-0.1
CEVE	Cerro Verde	0.28	149	*i* P	Pn	21 31 32.9	0.0
CEVE				IAML		21 31 33.3	
	comp=Z,3μm,0.3s						
CEVE	Cerro Verde	0.28	149	*i* P	Pn	21 31 32.9	0.0
CEVE				IAML		21 31 33.3	
	comp=Z,3μm,0.3s						
TACO	Tacachico	0.41	103	*e*P	Pn	21 31 32.8	-0.1
TACO				*e*S	Sn	21 31 51.0	-1.0
TACO	Tacachico	0.41	103	*e*P	Pn	21 31 32.8	-0.1
TACO				*e*S	Sn	21 31 51.0	-1.0
CEDA	San Andres	0.45	126	*e*P	Pn	21 31 32.9	-0.3
CEDA	San Andres	0.45	126	*e*P	Pn	21 31 32.9	-0.3
JAYA	Jayaque - finc	0.52	143	*e*P	Pn	21 31 33.1	-0.4
JAYA				*e*S	Sn	21 31 52.8	-0.3
JAYA				IAML		21 31 58.6	
	comp=Z,2μm,0.2s						
JAYA	Jayaque - finc	0.52	143	*e*P	Pn	21 31 33.1	-0.4
JAYA				*e*S	Sn	21 31 52.8	-0.3
JAYA				IAML		21 31 58.6	
	comp=Z,2μm,0.2s						
MTO3	Montecristo	0.52	50	*e*P	Pn	21 31 33.5	-0.1
MTO3				*e*S	Sn	21 31 52.8	-0.4
MTO3	Montecristo	0.52	50	*e*P	Pn	21 31 33.5	-0.1
MTO3				*e*S	Sn	21 31 52.8	-0.4
MTO3	Montecristo	0.52	50		Pn	21 31 33.3	-0.3
MTO3				Sn	Sn	21 31 52.2	-1.1
BOQS	Boqueron	0.58	125	*e*P	Pn	21 31 34.0	+0.2
BOQS	Boqueron	0.58	125	*e*P	Pn	21 31 34.0	+0.2
ESQI	Esquipulas	0.64	40	*e*P	Pn	21 31 34.3	+0.3
ESQI				*e*S	Sn	21 31 53.9	-0.3
ESQI	Esquipulas	0.64	40		Pn	21 31 34.3	+0.3
ESQI				Sn	Sn	21 31 53.8	-0.3
SNET	Serv Nac Est T	0.65	126		Pn	21 31 33.4	-0.7
IXG	Ixpaco	0.66	279	*e*P	Pn	21 31 34.6	+0.4
LFU	La Fuente	0.71	116	*e*P	Pn	21 31 34.7	+0.3
LFU	La Fuente	0.71	116	*e*P	Pn	21 31 34.7	+0.3
LALI	Alcalda de L	0.72	143	*e*P	Pn	21 31 34.4	+0.1
LALI				IAML		21 31 35.4	
	comp=Z,917nm,0.5s						
LALI				*e*S	Sn	21 31 54.3	-0.2
LALI	Alcalda de L	0.72	143	*e*P	Pn	21 31 34.4	+0.1
LALI				IAML		21 31 35.4	
	comp=Z,917nm,0.5s						
LALI				*e*S	Sn	21 31 54.3	-0.2
NBG	Las Nubes	0.76	313	*i* P	Pn	21 31 36.1	+1.2
LBRS	Las Brisas	0.78	115	*e*P	Pn	21 31 35.1	+0.3
LBRS	Las Brisas	0.78	115	*e*P	Pn	21 31 35.1	+0.3
LFRS	El Faro	0.82	123	*e*P	Pn	21 31 35.2	+0.2
LFRS	El Faro	0.82	123	*e*P	Pn	21 31 35.2	+0.2
PCG	Pacaya	0.87	292	*e*P	Pn	21 31 36.2	+0.7
PAVA	Las Pavas	0.88	113	*e*P	Pn	21 31 35.8	+0.4
PAVA				IAML		21 31 36.8	
	comp=Z,1μm,0.5s						
PAVA				*e*S	Sn	21 31 56.5	0.0
PAVA	Las Pavas	0.88	113	*e*P	Pn	21 31 35.8	+0.4
PAVA				IAML		21 31 36.8	
	comp=Z,1μm,0.5s						
PAVA				*e*S	Sn	21 31 56.5	0.0
MRL	Marmol	1.01	5	*i* P	Pn	21 31 37.4	+0.9
FUG	Fuego 3	1.11	290	*e*P	Pn	21 31 37.8	+0.7
COEB	Comit de Eme	1.33	115	*e*P	Pn	21 31 39.5	+0.5
COEB				*e*S	Sn	21 32 03.1	+0.4
COEB	Comit de Eme	1.33	115	*e*P	Pn	21 31 39.5	+0.5
COEB				*e*S	Sn	21 32 03.1	+0.4
JUCU	Jucuar¡n	1.69	119	*e*P	Pn	21 31 41.9	-0.3
JUCU				IAML		21 32 16.1	
	comp=Z,982nm,0.2s						
JUCU	Jucuar¡n	1.69	119	*e*P	Pn	21 31 41.9	-0.3
JUCU				IAML		21 32 16.1	
	comp=Z,982nm,0.2s						
RTAL	Retalhuleu	1.92	284	Pn	Pn	21 31 44.3	-0.2
RTAL				Sn	Sn	21 32 11.6	-1.2
TGUH	Tegucigalpa,Un	2.42	90	*e*P	Pn	21 31 50.9	+0.6
TGUH	Tegucigalpa,Un	2.42	90	*e*P	Pn	21 31 50.9	+0.6
TGUH	Tegucigalpa,Un	2.42	90	Pn	Pn	21 31 50.8	+0.6
PETF	Flores	2.83	358	Pn	Pn	21 31 55.0	+0.2
CRIN	San Cristobal	2.98	117	Pn	Pn	21 31 58.9	+2.2
CCIG	Comitan	3.17	314	Pn	Pn	21 31 59.0	-0.2
ACON	Acoyapa	4.94	114	Pn	Pn	21 32 22.6	+1.2
JTS	Las Juntas de	6.02	128	Pn	Pn	21 32 36.4	+0.9
TEIG	Tepich	6.29	13	Pn	Pn	21 32 38.5	-0.4
VBMS	Vicksburg	18.08	358	P	Pn	21 35 08.2	+0.3
TIGA	Tifton	18.20	17	P	Pn	21 35 10.1	+0.8
JCT	Junction City	18.77	332	P	P	21 35 13.6	+0.1
JCT				IAmb	IAmb	21 35 15.0	
	comp=Z,13nm,0.7s						
152A	Waverly Hall	19.08	13	P	P	21 35 17.5	+0.7
152A				IAmb	IAmb	21 35 19.2	
	comp=Z,23nm,1.0s						
WHTX	Lake Whitney,	19.18	340	P	P	21 35 17.8	0.0
TXAR	Lajitas Array	19.91	322	P	P	21 35 27.6	+1.9
	comp=Z,1.8nm,0.3s,baz=143,slow=11,SNR=45						
TXAR	Lajitas Array	19.91	322	P	P	21 35 27.0	+1.2
TX31	Lajitas Ar. Si	19.91	322	P	P	21 35 27.0	+1.2
TX31				IAmb	IAmb	21 35 28.5	
	comp=Z,25nm,0.7s						
TX32	Lajitas Array	19.91	322	P	P	21 35 27.7	+1.9
TX32				IAmb	IAmb	21 35 28.5	
	comp=Z,8.6nm,0.7s						
OXF	Oxford	20.36	1	P	P	21 35 31.4	+1.0
Y52A	Lilburn	20.38	14	P	P	21 35 32.0	+1.3
Y52A				IAmb	IAmb	21 35 32.1	
	comp=Z,11nm,0.7s						
X48A	Hartselle	20.44	6	P	P	21 35 32.5	+1.2
X48A				IAmb	IAmb	21 35 33.6	
	comp=Z,23nm,1.4s						
MIAR	Mount Ida	20.68	351	P	P	21 35 35.3	+1.5
MIAR				IAmb	IAmb	21 35 37.6	
	comp=Z,12nm,0.8s						
FPAL	Fort Paine	20.73	10	P	P	21 35 35.2	+0.8
FPAL				IAmb	IAmb	21 35 36.4	
	comp=Z,29nm,1.2s						
PLAL	Pickwick Lake	20.88	4	P	P	21 35 37.0	+1.0
W45A	Hickory Valley	21.00	1	P	P	21 35 39.2	+1.9
SWET	Sewanee	21.34	9	P	P	21 35 41.0	+0.1
SWET				IAmb	IAmb	21 35 42.0	
	comp=Z,20nm,0.7s						
V48A	Smith Brothers	21.74	6	P	P	21 35 46.2	+1.2
V48A				IAmb	IAmb	21 35 47.8	
	comp=Z,16nm,0.9s						
FCAR	Ozark Folk Cen	21.83	355	P	P	21 35 46.2	+0.2
LCAR	Lake Charles	21.94	357	P	P	21 35 47.5	+0.4
TKL	Tuckaleechee C	22.16	13	P	P	21 35 48.7	-0.5
	comp=Z,7.4nm,0.6s,baz=206,slow=10,SNR=7.3						
TKL	Tuckaleechee C	22.16	13	P	P	21 35 50.1	+0.8
TKL				IAmb	IAmb	21 35 51.6	
	comp=Z,12nm,0.8s						
U40A	Yellville	22.37	353	P	P	21 35 51.8	+0.6
U40A				IAmb	IAmb	21 35 53.0	
	comp=Z,8.9nm,0.7s						
T45A	Paducah	22.88	2	P	P	21 35 56.9	+1.2
T42A	Van Buren	22.90	357	P	P	21 35 56.7	+0.8
T42A				IAmb	IAmb	21 35 58.0	
	comp=Z,9.0nm,0.8s						
T47A	Sharon Grove	22.95	5	P	P	21 35 57.3	+0.9
MGMO	Mountain Grove	23.10	355	P	P	21 35 58.2	+0.4
MGMO				IAmb	IAmb	21 36 00.0	
	comp=Z,28nm,1.4s						
AMTX	Amarillo	23.35	335	P	P	21 36 01.0	+0.8
AMTX				IAmb	IAmb	21 36 01.7	
	comp=Z,32nm,1.3s						
V58A	Windy Hill, Pi	23.66	22	P	P	21 36 03.7	+0.9
S39A	Bolivar	23.74	353	P	P	21 36 03.8	+0.3
S39A				IAmb	IAmb	21 36 04.8	
	comp=Z,9.9nm,0.6s						
CCM	Cathedral Cave	23.93	357	P	P	21 36 05.9	+0.6
CCM				IAmb	IAmb	21 36 08.4	
	comp=Z,13nm,0.8s						
R40A	Maddies Statio	24.23	355	P	P	21 36 08.2	+0.2
OLIL	Olney	24.61	3	P	P	21 36 14.6	+3.1
Q44A	Meyer Farm, Va	24.75	1	P	P	21 36 15.2	+2.5
Q44A				IAmb	IAmb	21 36 17.2	
	comp=Z,16nm,0.7s						
T59A	Double "B" Far	25.28	23	P	P	21 36 18.0	+0.4
P40A	Paris	25.44	356	P	P	21 36 18.6	-0.3
P40A				IAmb	IAmb	21 36 20.6	
	comp=Z,10nm,0.8s						
P43A	Skaggs, Pawnee	25.48	0	P	P	21 36 22.4	+3.1
P43A				IAmb	IAmb	21 36 23.3	
	comp=Z,14nm,0.6s						
Q54A	Coxs Mills	26.04	16	P	P	21 36 24.9	+0.5
Q54A				IAmb	IAmb	21 36 37.4	
	comp=Z,26nm,1.4s						
M50A	Fremont	27.86	11	P	P	21 36 40.9	+0.4
SPX	San Pedro Mart	29.01	310	P	P	21 36 53.1	+1.7
M56A	Emporium	29.12	18	P	P	21 36 51.5	-0.3
M56A				IAmb	IAmb	21 37 09.9	
	comp=Z,28nm,1.4s						
SMCO	Snowmass	29.25	332	P	P	21 36 54.6	+1.2
SMCO				IAmb	IAmb	21 37 04.8	
	comp=Z,12nm,1.5s						
PV13	Radium Mtn., P	29.34	328	P	P	21 36 55.7	+1.6
PV05	Paradox Valley	29.43	328	P	P	21 36 56.5	+1.7
PV23	Carpenter Ridg	29.66	328	P	P	21 36 59.1	+2.2
PV23				IAmb	IAmb	21 37 00.4	
	comp=Z,5.9nm,0.8s						
SRU	San Rafael Swe	30.94	328	P	P	21 37 10.1	+2.1
K58A	Earlville	31.08	20	P	P	21 37 08.9	-0.2
K58A				IAmb	IAmb	21 37 11.8	
	comp=Z,29nm,1.4s						
P17A	Butcher Ranch,	31.32	328	P	P	21 37 13.4	+2.1
J57A	Williamstown	31.54	19	P	P	21 37 12.9	-0.1
SADO	Sadowa	31.91	14	P	P	21 37 15.3	-0.9
	comp=Z,3.9nm,0.6s,baz=248,slow=8.9,SNR=5.9						
SADO	Sadowa	31.91	14	P	P	21 37 15.7	-0.5
SADO				IAmb	IAmb	21 37 31.0	
	comp=Z,26nm,1.4s						
E43A	Lone Tree Farm	32.29	4	P	P	21 37 19.4	-0.1
RSSD	Black Hills	32.34	341	P	P	21 37 21.6	+1.3
TCUT	Toone Canyon	32.89	329	P	P	21 37 27.2	+2.0
PD31	Pinedale Array	33.30	333	P	P	21 37 29.9	+1.2
PDAR	Pinedale Array	33.30	333	P	P	21 37 29.2	+0.6
	comp=Z,1.0nm,0.6s,baz=128,slow=11,SNR=12						
PDAR	Pinedale Array	33.30	333	P	P	21 37 29.7	+1.0
SPUT	South Promonto	33.55	328	P	P	21 37 33.0	+2.2
HVU	Hansel Valley	34.07	329	P	P	21 37 37.3	+2.1
ECR	Eagle Creek	34.35	331	P	P	21 37 39.9	+2.3
SNOW	Snow King Moun	34.38	333	P	P	21 37 40.0	+2.0
LOHW	Long Hollow	34.44	333	P	P	21 37 40.2	+1.8
LOHW				IAmb	IAmb	21 37 40.9	
	comp=Z,6.4nm,0.7s						
MOOW	Moose Ponds	34.61	333	P	P	21 37 41.6	+1.7
SAML	Samuel	34.91	129	P	P	21 37 41.7	-0.9
NVAR	Mina Array Bea	35.01	319	P	P	21 37 45.2	+1.8
	comp=Z,1.4nm,0.9s,baz=128,slow=5.8,SNR=6.0						
NVAR	Mina Array Bea	35.01	319	P	P	21 37 45.5	+2.1
YNE	Yellowstone No	35.30	335	P	P	21 37 47.0	+1.2
BCYI	Bear Canyon	36.26	331	P	P	21 37 57.0	+3.0
ULM	Lac du Bonnet	36.42	353	P	P	21 37 54.2	-0.8
	comp=Z,5.1nm,0.5s,baz=166,slow=10.0,SNR=13						
YKA	Yellowknife Ar	51.48	346	P	P	21 39 54.3	-0.2
	comp=Z,4.4nm,0.9s,baz=141,slow=8.2,SNR=43						
YKA				pP	pP	21 40 36.9	+0.9
	comp=Z,1.0nm,0.9s,baz=142,slow=8.5,SNR=3.0						
FRB	Frobisher Bay	51.78	12	P	P	21 39 55.0	-1.7
	comp=Z,6.0nm,0.4s,baz=219,slow=8.7,SNR=19						
RES	Resolute Bay	60.68	358	P	P	21 40 58.9	-0.6
	comp=Z,1.9nm,0.4s,baz=181,slow=9.5,SNR=12						
INK	Inuvik	61.00	343	P	P	21 41 01.7	-0.1
	comp=Z,2.0nm,0.8s,baz=121,slow=4.3,SNR=5.7						
ILAR	Eielson Array	63.64	336	P	P	21 41 18.6	-0.8
	comp=Z,0.6nm,0.6s,baz=164,slow=4.5,SNR=8.7						
ILAR	Eielson Array	63.64	336	P	P	21 41 18.7	-0.6
BPAW	Bear Paw Mtn.	65.03	335	P	P	21 41 27.7	-0.7
EKA	Eskdalemuir Ar	76.64	36	P	P	21 42 36.1	-2.4
	comp=Z,0.3nm,0.3s,baz=275,slow=5.7,SNR=7.5						
ESDC	Sonseca Array	77.97	52	P	P	21 42 46.7	+0.3
	comp=Z,0.4nm,0.4s,baz=300,slow=5.8,SNR=4.0						
ESDC	Sonseca Array	77.97	52	P	P	21 42 46.4	+0.1
SPITS	Spitsbergen Ar	79.59	12	P	P	21 42 54.1	-0.2
	comp=Z,9.1nm,1.0s,baz=282,slow=6.9,SNR=2.3						
HFS	Hagfors	84.49	29	P	P	21 43 18.1	-2.1
	comp=Z,2.9nm,0.8s,baz=251,slow=8.7,SNR=2.2						
WRA	Warramunga Arr	137.51	256	PKP	PKPdf	21 50 12.2	+1.3
	comp=Z,1.7nm,0.7s,baz=91,slow=2.1,SNR=21						
ASAR	Alice Springs	137.73	250	PKP	PKPdf	21 50 11.9	+0.6
	comp=Z,0.6nm,0.5s,baz=89,slow=2.4,SNR=6.2						

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*REY **02** 21:34:30.9, 64°.62N×17°.48W, h6km*

*IDC **02** 21:34:31.6±0.7, 64°.51N×17°.57W, h0km, mb3.8/14, mb1 3.9/18, mb1mx3.7/63, mbtmp3.8/18, ML2.6/3, MS3.3/15, Ms1 3.3/15, ms1mx3.1/50, Error ellipse: s-maj=19.6km s-min=10.0km az=15.0*

*NEIC **02** 21:34:33.1±2.7, 64°.22N±0°.08×18°.0W±0°.2, h10km±2km, mb4.3/5, Error ellipse: s-maj=20.9km s-min=4.5km az=230.0*

ISC 02 21:34:32.4±0.5, **64°.61N**±0°.02×**17°.48W**±0°.02, **h10**km, **n84**, σ**2s.30**/77, **mb3.9**/17, **MS3.3**/10, **Iceland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IVON	Vonarskard	0.14	298	P	Pg	21 34 33.7	-1.9
	baz=295						
IDJK	Dyngjujokull	0.15	135	P	Pg	21 34 34.2	-1.7
	baz=137						
IDYN	Dyngjuhals	0.19	15	P	Pg	21 34 34.6	-1.8
	baz=16						
IHAM	Hamarinn	0.20	229	P	Pg	21 34 34.9	-1.8
	baz=227						
IHAM				S	Sg	21 34 38.1	-1.4
	baz=227						
IURH	Urdarhals	0.25	34	P	Pg	21 34 35.9	-1.8
	baz=35						
IVOT	Vottur	0.36	159	P	Pg	21 34 38.0	-1.7

	baz=160						
ISKR	Skrokkalda	0.40	263	P	Pg	21 34 38.3	-1.9
	baz=262						
ISKR				S	Sg	21 34 43.8	-1.7
	baz=262						
IJOK	Jokulheimar	0.44	228	S	Sg	21 34 45.4	-1.4
	baz=227						
THOR	Thorvaldshraun	0.47	46	P	Pg	21 34 39.4	-2.2
	baz=47						
THOR				S	Sg	21 34 46.1	-1.8
	baz=47						
IKRE	Kreppuhraun	0.50	69	P	Pg	21 34 39.9	-2.3
	baz=70						
IKRE				S	Sg	21 34 47.3	-1.5
	baz=70						
IASK	Askja	0.57	38	P	Pg	21 34 40.9	-2.6
	baz=39						
IIEY	Innrieyrar	0.59	209	P	Pg	21 34 41.6	-2.2
	baz=208						
IMKO	Mokollar	0.61	52	P	Pg	21 34 41.8	-2.5
	baz=53						
IMKO				S	Sg	21 34 50.2	-2.1
	baz=53						
IKSK	Karasker	0.63	135	P	Pg	21 34 41.8	-2.7
	baz=136						
IKAL	Kalfafell	0.67	188	P	Pg	21 34 43.1	-2.2
	baz=188						
ISVA	Svartarkot	0.74	7	P	Pg	21 34 43.8	-2.9
	baz=7.5						
IVSH	V-Sauoahnukur	0.78	74	P	Pg	21 34 44.4	-3.0
	baz=75						
IFAG	Fagurholsmyri	0.82	154	P	Pg	21 34 45.5	-2.7
	baz=154						
IADA	Aoalbol	0.91	62	P	Pg	21 34 46.6	-3.4
	baz=63						
IADA				S	Sg	21 34 58.8	-3.0
	baz=63						
IHVE	Hveravellir	0.93	287	P	Pg	21 34 47.0	-3.4
	baz=287						
IHVE				S	Sg	21 34 59.5	-3.0
	baz=287						
ISNB	Snabyli	1.01	210	P	Pg	21 34 48.7	-3.2
	baz=210						
ISNB				S	Sg	21 35 01.7	-3.3
	baz=210						
IMEL	Melhnausar	1.02	19	P	Pg	21 34 48.4	-3.7
	baz=20						
IREN	Reynihlio	1.07	13	P	Pg	21 34 49.2	-3.8
	baz=13						
IRJU	Rjupnafell	1.13	208	P	Pb	21 34 50.9	-3.0
	baz=208						
IFED	Fedgar	1.13	240	P	Pb	21 34 51.0	-3.0
	baz=239						
IGRS	Grimsstaoir	1.18	28	P	Pb	21 34 51.1	-3.8
	baz=29						
IGYG	Gygjarholskot	1.23	256	P	Pb	21 34 52.1	-3.6
	baz=255						
IHVO	Lagu-Hvolar	1.24	210	P	Pn	21 34 52.9	-3.0
	baz=209						
ISKI	Skildingahlsh	1.28	8	P	Pn	21 34 52.7	-3.6
	baz=8.5						
BORG	Borgarnes	1.66	277	Pg	Pn	21 34 59.4	-2.2
	14nm,0.3s,baz=106,slow=18,SNR=62						
BORG				Lg	Lg	21 35 23.5	
	12nm,0.3s,baz=248,slow=19,SNR=7.0						
BORG	Borgarnes	1.66	277		Pn	21 34 59.2	-2.4
SCO	Scoresbysund	6.14	346	*e*	Pn	21 36 00.4	-2.6
	baz=160,slow=7.4						
SCO				*i* P	Pn	21 36 04.0	+0.9
SCO				*i* S	Sn	21 37 17.5	+4.3
SCO				IAML		21 37 32.9	
	comp=Z,1.0nm,0.4s						
JMIC	Jan Mayen	7.24	24	LR	LR	21 38 37.0	
	comp=Z,274nm,18.9s,baz=310,slow=33						
SUMG	Summit	10.99	326	Pn	Pn	21 37 15.5	+5.6
EKA	Eskdalemuir Ar	11.71	136	Pn	Pn	21 37 18.0	-1.3
	baz=320,slow=13,SNR=14						
EKA	Eskdalemuir Ar	11.71	136		Pn	21 37 18.0	-1.3
ESK	Eskdalemuir	11.71	136	Pn	Pn	21 37 19.7	+0.3
DAG	Danmarks Havn	12.23	359	*i* P	Pn	21 37 32.1	+5.8
DAG	Danmarks Havn	12.23	359	*e*P	Pn	21 37 32.2	+5.8
NOA	NORSAR Array B	13.52	92	Pn	Pn	21 37 43.2	-0.8
	comp=Z,0.0nm,0.3s,baz=297,slow=16,SNR=2.4						
NOA				LR	LR	21 42 22.6	
	comp=Z,41nm,21.7s,baz=295,slow=35						
HFS	Hagfors	15.03	93	Pn	Pn	21 38 04.9	+0.3
	comp=Z,0.1nm,0.3s,baz=178,slow=40,SNR=1.4						
HFS				LR	LR	21 43 22.1	
	comp=Z,46nm,20.3s,baz=276,slow=35						
ARCES	ARCESS Array B	17.14	54	LR	LR	21 43 54.2	
	comp=Z,71nm,20.8s,baz=235,slow=33						
FINES	FINESS Array B	19.71	79	P	Pn	21 39 03.5	+0.5
	comp=Z,0.1nm,0.3s,baz=290,slow=14,SNR=2.2						
FINES				LR	LR	21 45 60.0	
	comp=Z,55nm,19.1s,baz=294,slow=35						
CLL	Collm	20.67	116	*e*(P)	Pn	21 39 17.0	+2.6
NKC	Novy Kostel	21.32	118	*e*P	P	21 39 22.1	+3.0
BRG	Berggiesshubel	21.38	115	*e*P	P	21 39 21.9	+2.2
BRG				Amp		21 39 32.7	
	comp=Z,44nm,1.8s						
BRG				*e*x	x	21 43 02.5	
BRG				Amp		21 43 04.4	
	comp=Z,7.8nm,1.3s						
KHC	Kasperske Hory	22.64	118	*e*P	P	21 39 34.7	+1.4
KHC	Kasperske Hory	22.64	118	P	P	21 39 34.1	+0.8
DPC	Dobruska-Polom	22.73	113	*e*P	P	21 39 35.5	+1.3
GERES	GERESS Array B	22.92	119	P	P	21 39 37.5	+1.2
	comp=Z,1.1nm,0.8s,baz=345,slow=9.7,SNR=6.0						
GERES				LR	LR	21 48 18.7	
	comp=Z,66nm,19.8s,baz=356,slow=36						
GERES	GERESS Array B	22.92	119	P	P	21 39 37.2	+0.9
CKRC	Cesky Krumlov	23.17	118	*e*P	P	21 39 41.1	+2.3
TREC	Trest	23.24	115	*e*P	P	21 39 41.9	+2.4
DAVOX	Davos/Dischmat	23.28	127	P	P	21 39 41.0	+0.9
	comp=Z,2.8nm,0.8s,baz=309,slow=11,SNR=4.5						
DAVOX				LR	LR	21 50 01.6	
	comp=Z,57nm,18.1s,baz=273,slow=40						
VRAC	Vranov	23.66	114	LR	LR	21 49 51.6	
	comp=Z,45nm,19.2s,baz=329,slow=39						
EUNU	Eureka	23.73	336	P	P	21 39 46.8	+2.6
EUNU				IAmb	IAmb	21 39 51.3	
	comp=Z,6.4nm,1.1s						
SMOL	Smolenice	24.63	114	*e*P	P	21 39 55.2	+2.5
LANS	Liptovska Anna	24.93	111	*e*P	P	21 39 59.5	+4.0
ESDC	Sonseca Array	26.20	156	P	P	21 40 06.1	-0.8
	comp=Z,1.7nm,1.0s,baz=324,slow=8.4,SNR=4.0						
ESDC				LR	LR	21 50 16.0	
	comp=Z,76nm,18.5s,baz=295,slow=36						
KOLS	Kolonicke sedl	26.25	108	*e*P	P	21 40 09.5	+2.2
AKASG	Malin Array Be	27.82	97	P	P	21 40 21.7	+0.3
	comp=Z,0.7nm,0.5s,baz=313,slow=6.2,SNR=1.9						
BURAR	Bucovina Array	28.50	106	P	P	21 40 27.8	+0.2
KEST	Kesra	33.11	138	LR	LR	21 53 39.1	
	comp=Z,55nm,20.1s,baz=225,slow=35						
YKA	Yellowknife Ar	39.26	313	P	P	21 42 02.0	+1.5
	comp=Z,1.5nm,0.9s,baz=45,slow=8.9,SNR=8.5						
TOLK	Toolik Lake Re	42.80	336	P	P	21 42 32.9	+3.2
TOLK				IAmb	IAmb	21 42 39.0	
	comp=Z,10nm,1.4s						
ILAR	Eielson Array	45.74	332	P	P	21 42 54.9	+1.8
	comp=Z,1.5nm,1.0s,baz=15,slow=7.8,SNR=8.9						
ILAR	Eielson Array	45.74	332	P	P	21 42 57.6	+4.5
IMAR	Indian Mountai	45.91	337	P	P	21 42 57.5	+3.0
BCAR	Beaver Creek A	46.16	329	P	P	21 42 59.5	+2.9
ZALV	Zalesovo Beam	47.66	51	P	P	21 43 08.8	+0.5
	comp=Z,2.2nm,0.7s,baz=35,slow=24,SNR=1.6						
KURK	Kurchatov	48.13	58	P	P	21 43 13.5	+1.5
KURK				IAmb	IAmb	21 43 16.2	
	comp=Z,3.3nm,1.0s						
KURBB	Kurchatov Arra	48.18	58	P	P	21 43 13.0	+0.7
	comp=Z,1.3nm,0.8s,baz=326,slow=7.2,SNR=8.8						
MKAR	Makanchi Array	52.75	58	P	P	21 43 47.5	+0.5
	comp=Z,0.2nm,0.7s,baz=339,slow=6.5,SNR=2.2						
TORD	Torodi Ar. Bea	53.09	156	P	P	21 43 49.6	-0.2
	comp=Z,0.8nm,0.8s,baz=353,slow=5.8,SNR=1.9						
TORD				LR	LR	22 07 48.6	
	comp=Z,19nm,18.1s,baz=330,slow=38						
DBIC	Dimbokro	58.53	165	P	P	21 44 29.9	+1.1
	comp=Z,3.7nm,0.9s,baz=0.0,slow=4.0,SNR=3.7						
DBIC	Dimbokro	58.53	165	P	P	21 44 30.7	+1.9
YBH	Yreka Blue Hor	59.10	303	LR	LR	22 10 39.4	
	comp=Z,75nm,19.9s,baz=6.5,slow=37						
SONM	Songino Array	59.68	40	P	P	21 44 38.0	+1.4
	comp=Z,0.4nm,0.8s,baz=322,slow=4.7,SNR=2.4						
NVAR	Mina Array Bea	60.34	297	LR	LR	22 11 02.8	
	comp=Z,99nm,18.1s,baz=326,slow=36						
TXAR	Lajitas Array	62.30	280	P	P	21 44 56.1	+1.5
	comp=Z,1.5nm,1.1s,baz=352,slow=5.5,SNR=5.6						
TXAR	Lajitas Array	62.30	280	P	P	21 44 58.8	+4.2
PFO	Pinyon Flats O	63.83	293	LR	LR	22 11 53.6	
	comp=Z,51nm,19.1s,baz=347,slow=35						
KSRS	Korea Array	74.69	28	LR	LR	22 22 31.5	
	comp=Z,15nm,19.2s,baz=60,slow=38						
CMAR	Chiang Mai Arr	84.15	59	P	P	21 47 05.5	+1.9
	comp=Z,0.4nm,0.3s,baz=316,slow=6.3,SNR=2.0						

*DJA **02** 21:36:22.1±0.4, 6°S±3°×10°4E±°, h10km, M3.9/13, MLv3.9/13*

ISC 02 21:36:23.2±1.2**, 6°.00S**±0°.06×**103°.92E**±0°.07**, h10km, n14, σ1s.66**/18**, mb3.7**/3**, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KASI	Kota Agung	0.74	51	P	Pg	21 36 37.7	+0.1
KASI				S	Sb	21 36 48.0	-0.5
LWLI	Liwa	0.99	8	P	Pg	21 36 42.1	-0.1
LWLI				S	Sb	21 36 56.1	+0.5
BLSI	Bandar Lampung	1.46	65	P	Pn	21 36 48.7	-1.0
BLSI				S	Sn	21 37 08.6	-0.3
MDSI	Maura Dua	1.53	10	P	Pn	21 36 49.8	-0.7
MDSI				S	Sn	21 37 10.8	+0.3
KLSI		1.53	32	P	Pn	21 36 50.0	-0.6
MNAI	Manna	1.89	329	P	Pn	21 36 54.4	-1.2
LHSI	Lahat	2.19	350	P	Pn	21 36 59.4	-0.4
KSI	Kapahiang	2.68	330	P	Pn	21 37 05.7	-0.8
DBJI	Dramaga	2.87	101	P	Pn	21 37 07.5	-1.5
CBJI	Citeko	2.94	98	P	Pn	21 37 10.7	+0.7
CISI	Cisompet, Garu	4.17	112	P	Pn	21 37 25.4	-1.5
WRA	Warramunga Arr	32.64	118	P	P	21 42 57.3	+1.6
	0.2nm,0.4s,baz=311,slow=8.9,SNR=8.8						
ASAR	Alice Springs	33.77	124	P	P	21 43 10.0	+4.6
	0.3nm,0.3s,baz=297,slow=7.3,SNR=6.0						
STKA	Stephens Creek	43.59	131	P	P	21 44 25.0	-2.8
	1.8nm,0.7s,baz=311,slow=9.3,SNR=4.0						

*IDC **02** 21:39:51.4±2.0, 2°.29S×141°.86E, h0km, mb3.4/3, mb1 3.7/4, mb1mx3.4/39, mbtmp3.5/4, ML3.3/1, Error ellipse: s-maj=31.3km s-min=18.8km az=176.0*

*DJA **02** 21:39:55.1±1.2, 2°S±13°×14°0E±°, h10km, M3.3/4, MLv3.3/4*

ISC 02 21:40:00.4±1.5**, 2°.3S**±0°.1×**140°.03E**±0°.10**, h10km, n12, σ2s.09**/8**, mb3.4**/3**, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GENI	Genyem	0.37	158	P	Pb	21 40 09.3	+0.2
JAY	Jayapura	0.73	111	Pg	Pg	21 40 14.6	+0.1
	14nm,0.3s,baz=246,slow=12,SNR=67						
JAY				Lg	Lg	21 40 30.1	
	29nm,0.3s,baz=314,slow=24,SNR=12						
JAY	Jayapura	0.73	111	P	Pg	21 40 14.6	+0.1
SMPI	Sarmi	1.34	281	P	Pn	21 40 16.8	-8.3
WAMI	Wamena	2.09	219	P	Pn	21 40 34.5	-1.0
WRA	Warramunga Arr	18.45	197	P	P	21 44 16.9	+0.6
	0.1nm,0.3s,baz=17,slow=12,SNR=7.4						
FITZ	Fitzroy Crossi	21.15	221	P	P	21 44 49.6	+3.8
	1.6nm,0.7s,baz=49,slow=11,SNR=2.1						
ASAR	Alice Springs	22.10	195	P	P	21 44 53.6	-2.5
	1.0nm,0.7s,baz=26,slow=10,SNR=8.2						
H11N1	WAKE ISLAND Hy	34.24	49	T	T	22 22 58.0	
	baz=230,slow=74						
H11N2	WAKE ISLAND Hy	34.25	49	T	T	22 23 00.2	
	baz=230,slow=74						
H11N3	WAKE ISLAND Hy	34.25	49	T	T	22 22 59.2	
	baz=230						
MKAR	Makanchi Array	70.23	322	P	P	21 51 13.4	-0.4
	0.2nm,0.6s,baz=134,slow=6.2,SNR=2.3						

VIE 02 21:40:28.8±0.1**, 46°.85N**×**11°.00E, h2km, ml0.6**/6**, Error ellipse: s-maj=1.1km s-min=1.0km az=169.0 4 km SW of Obergurgl, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FETA	Feichten	0.25	313	*e*Pg	Pg	21 40 34.0	+0.3
	0.2nm,0.0s						
FETA				*e*Sg	Sg	21 40 37.3	+0.4
	0.3nm,0.0s						
SQTA	Sankt Quirin	0.40	21	*e*Pg	Pg	21 40 36.8	+0.3
	0.7nm,0.1s						
SQTA				*e*Sg	Sg	21 40 42.2	+0.5
	0.9nm,0.2s						
MOTA	Moosalm	0.50	9	*e*Pg	Pg	21 40 38.8	+0.4
	0.5nm,0.1s						
MOTA				*e*Sg	Sg	21 40 45.5	+0.5
	0.2nm,0.1s						

*ANF **02** 21:40:53.4±0.4, 32°.82N×115°.46W, h28km±2km, ML2.2/8, Error ellipse: s-maj=3.7km s-min=1.8km az=164.0*

*SCEDC **02** 21:40:54.9, 32°.79N×115°.45W, h12km*

*ECX **02** 21:40:54.9±0.8, 32°.82N×115°.47W, h20km±2km, MD2.3, ML2.5*

ISC 02 21:40:53.2±0.9**, 32°.76N**±0°.04×**115°.45W**±0°.02**, h29**km±7km**, n22, σ0s.77**/38**, 6C-1D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WESC	Westside Schoo	0.24	270	⇑*i*P	Pb	21 41 00.0	+0.3
WESC				*i* S	Sb	21 41 04.5	+0.3
COK2	Cook Ranch 2	0.25	291	*e*P	Pb	21 41 00.0	+0.1
SGL	Mount Signal	0.26	244	⇓*i*P	Pb	21 41 00.4	+0.4
SGL				*i* S	Sb	21 41 04.6	0.0
COA	Coachella	0.29	70	*e*P	Pb	21 41 01.2	+0.7
COA				*i* S	Sb	21 41 05.3	-0.2
SWSC	Sam W. Stewart	0.35	302	P	Pb	21 41 01.2	0.0
	baz=118,SNR=26						
SWSC				S	Sb	21 41 06.3	-0.4
	baz=118						
SWSC	Sam W. Stewart	0.35	302	⇑*i*P	Pb	21 41 01.3	0.0
SWSC				*e*S	Sb	21 41 06.3	-0.4
CPBX	Cerro Prieto	0.36	160	*e*P	Pn	21 41 02.9	+0.5
CPBX				IAML		21 41 11.7	
	comp=E,2µm,0.2s						
CPBX				⇑*e*		21 41 11.7	
EMSC	East Mesa	0.39	93	*e*P	Pn	21 41 03.4	+0.5
CRR	Carrizo Plain	0.45	286	⇑*i*P	Pb	21 41 03.2	+0.3
RMX	La Rumorosa	0.55	254	*e*P	Pb	21 41 05.2	+0.6
RMX				*e*S	Sb	21 41 12.3	0.0
IKP	In-Ko-Pah, Jac	0.57	259	P	Pn	21 41 05.5	+0.2
	baz=76,SNR=11						
IKP				S	Sb	21 41 13.0	+0.4
	baz=76						
IKP	In-Ko-Pah, Jac	0.57	259	*e*P	Pn	21 41 05.5	+0.2
IKP				*e*S	Sb	21 41 13.2	+0.6
GLA	Glamis	0.60	61	P	Pb	21 41 05.6	+0.3
	baz=243,SNR=8.4						
GLA				S	Sb	21 41 13.3	-0.2
	baz=243						
GLA	Glamis	0.60	61	*e*P	Pb	21 41 05.7	+0.4
GLA				*e*S	Sb	21 41 13.4	-0.2
MONP2	Monument Peak	0.83	279	P	Pn	21 41 09.5	+0.4
	baz=97,SNR=14						
MONP2				S	Sb	21 41 20.3	+0.2
	baz=97						
MONP2	Monument Peak	0.83	279	*e*P	Pn	21 41 09.6	+0.4
MONP2				*e*S	Sb	21 41 20.5	+0.4
BC3	Big Chuckawall	0.89	360	P	Pn	21 41 10.0	+0.2
	baz=180,SNR=26						
BC3				S	Sb	21 41 21.1	-0.7
	baz=180						
SJX	San Joaquin	1.08	204	*e*P	Pn	21 41 11.2	-1.2
SJX				*e*S	Sn	21 41 23.4	-3.0
SJX				IAML		21 41 24.9	
	comp=N,110nm,0.1s						
SJX				⇑*e*		21 41 24.9	
CBX	Cerro Bola	1.12	247	*e*P	Pb	21 41 14.7	+0.8
CBX				*e*S	Sb	21 41 29.8	+1.6
CBX				IAML		21 41 33.4	
	comp=N,81nm,0.3s						
CBX				⇑*e*		21 41 33.4	
PFO	Pinyon Flats O	1.20	315	P	Pn	21 41 14.1	0.0
	baz=134						
PFO				S	Sn	21 41 29.1	-0.3
	baz=134						
109C	Camp Elliot, M	1.40	276	Sb	Sb	21 41 37.4	+1.3
	baz=94						
214A	Organ Pipe Nat	2.37	109	P	Pn	21 41 31.3	+1.1
	baz=291						

*ANF **02** 22:09:36.5±1.0, 36°.25N×97°.26W, h4km±7km, ML4.2/8, Error ellipse: s-maj=8.3km s-min=5.1km az=167.0*

*TUL **02** 22:09:36.9±1.6, 36°.26N±0°.02×97°.29W±0°.06, h7km±7km, ML3.5, mb_Lg3.4/94(NEIC), Error ellipse: s-maj=6.5km s-min=2.5km az=74.0*

*NEIC **02** 22:09:37.0±1.1, 36°.27N±0°.02×97°.30W±0°.06, h4km±7km, Error ellipse: s-maj=6.9km s-min=2.5km az=74.0*

*IDC **02** 22:09:40.4±2.4, 36°.44N×97°.81W, h0km, mb3.4/1, mb1 3.5/3, mb1mx3.2/40, mbtmp3.1/3, ML3.7/2, Error ellipse: s-maj=30.1km s-min=17.4km az=94.0*

ISC 02 22:09:37.5±1.1**, 36°.27N**±0°.03×**97°.28W**±0°.02**, h4**km±9km**, n91, σ0s.90**/78**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
QUOK	Quay	0.47	102		Pg	22 09 46.3	-0.3
QUOK				Sg	Sg	22 09 52.8	0.0
OK031	S. Brethren Rd	0.48	131		Pg	22 09 46.2	-0.4
OK031				Sg	Sg	22 09 52.8	-0.1
OK029	Liberty Lake	0.49	197		Pg	22 09 46.4	-0.5
OK029				Sg	Sg	22 09 53.1	-0.3
OK030	Cody Creek RV	0.53	130		Pg	22 09 47.1	-0.5
OK030				Sg	Sg	22 09 54.4	-0.1
CROK	Carrier	0.61	293	Pg	Pg	22 09 48.7	-0.5
CROK				Sg	Sg	22 09 57.0	-0.2
BCOK	Bluff Creek, N	0.67	204		Pg	22 09 49.4	-0.8
BCOK				Sg	Sg	22 09 58.6	-0.3
OK025	Westminster Rd	0.69	184	Pg	Pg	22 09 50.0	-0.6
GC02	Grant County #	0.74	321	Pg	Pg	22 09 51.1	-0.6
OKCFA	Oklahoma City	0.86	189	Pg	Pg	22 09 53.0	-1.0
KAN14	Manchester OK	0.88	322	Pg	Pg	22 09 53.5	-0.8
T35A	Sooner Cattle	0.89	44	Pg	Pg	22 09 54.0	-0.6
T35B	Sooner Cattle	0.90	44	P		22 09 53.8	
	baz=224						
T35B				S		22 10 05.9	
	baz=224						
KAN01	Argonia South	0.96	337	Pg	Pg	22 09 55.1	-0.8
FNO	Franklin	1.01	185	Pg	Pg	22 09 56.0	-0.9
TUL1	Leonard	1.26	106	P	Pg	22 09 59.9	-1.7
	baz=287						
TUL1				S	Sg	22 10 17.2	-0.7
	baz=287						
TUL1	Leonard	1.26	106	P		22 09 59.6	
	baz=287						
TUL1				S		22 10 17.0	
	baz=287						
U32A	Winter Ranch,	1.39	275	Pn	Pn	22 10 02.3	-1.4
U32A	Winter Ranch,	1.39	275	P		22 10 02.2	
	baz=94						
U32A				S		22 10 21.5	
	baz=94						
X34A	Smith Ranch, M	1.73	195	Pn	Pn	22 10 08.3	+0.1
X34A				IAmb_Lg		22 10 34.9	
	comp=Z,324nm,1.1s						
WMOK	Wichita Mounta	1.96	219	P	Pn	22 10 10.9	-0.5
	baz=38						
WMOK				S	Sn	22 10 36.1	-0.3
	baz=38						
WMOK	Wichita Mounta	1.96	219	Pn	Pn	22 10 11.2	-0.2
WMOK	Wichita Mounta	1.96	219	P		22 10 11.0	
	baz=38						
WMOK				S		22 10 37.2	
	baz=38						
X37A	Clayton	2.29	137	IAmb_Lg		22 10 53.0	
	comp=Z,161nm,0.7s						
X37A	Clayton	2.29	137	P		22 10 15.8	
	baz=318						
U38A	Gravette	2.34	85	Pn	Pn	22 10 17.8	+1.0
R32A	Long Quarter,	2.43	333		Pn	22 10 17.5	-0.5
R32A	Long Quarter,	2.43	333	P		22 10 17.8	
	baz=152						
R32A				S		22 10 52.5	
	baz=152						
HHAR	Hobbs	2.70	89	Pn	Pn	22 10 22.1	+0.4
HHAR	Hobbs	2.70	89	S		22 11 00.7	
	baz=271						
KSU1	Kansas State U	2.88	10	P	Pn	22 10 23.6	-0.4
	baz=191						
KSU1	Kansas State U	2.88	10	Pn	Pn	22 10 23.9	-0.2
Z35A	Perchaven, San	2.93	180	Pn	Pn	22 10 24.8	-0.1
Z35A	Perchaven, San	2.93	180	P		22 10 24.6	
	baz=360						
Z35A				S		22 11 01.3	
	baz=360						
W39A	Magazine	3.04	110	P	Pn	22 10 26.0	-0.3
	baz=292						
W39A				S	Sn	22 11 02.3	-0.9
	baz=292						
W39A	Magazine	3.04	110	Pn	Pn	22 10 26.2	-0.1
W39A				IAmb_Lg		22 11 20.4	
	comp=Z,192nm,0.7s						
W39A	Magazine	3.04	110	S		22 11 03.3	
	baz=292						
CBKS	Cedar Bluff	3.20	323	P	Pn	22 10 27.8	-0.8
	baz=142						
CBKS				S	Sn	22 11 06.6	-0.7
	baz=142						
CBKS	Cedar Bluff	3.20	323	Pn	Pn	22 10 27.7	-0.8
CBKS				IAmb_Lg		22 11 22.5	
	comp=Z,99nm,0.7s						
S39A	Bolivar	3.47	65	Pn	Pn	22 10 31.8	-0.5
MIAR	Mount Ida	3.48	119	P	Pn	22 10 32.0	-0.3
	baz=301						
MIAR				S	Sn	22 11 13.7	-0.3
	baz=301						
MIAR	Mount Ida	3.48	119	Pn	Pn	22 10 32.1	-0.3
MIAR				IAmb_Lg		22 11 36.3	
	comp=Z,111nm,0.8s						
Z38A	Mt. Pleasant	3.55	147	Pn	Pn	22 10 32.9	-0.4
Z38A				IAmb_Lg		22 11 38.4	
	comp=Z,101nm,0.8s						
U40A	Yellville	3.58	87	P	Pn	22 10 32.6	-1.1
	baz=270						
U40A				S	Sn	22 11 15.7	-0.7
	baz=270						
U40A	Yellville	3.58	87	Pn	Pn	22 10 33.9	+0.2
U40A				IAmb_Lg		22 11 39.7	
	comp=Z,89nm,0.7s						
AMTX	Amarillo	3.84	250	P	Pn	22 10 36.5	-0.9
	baz=68						
AMTX				S	Sn	22 11 22.3	-0.8
	baz=68						
AMTX	Amarillo	3.84	250	Pn	Pn	22 10 37.5	0.0
AMTX				IAmb_Lg		22 11 45.4	
	comp=Z,76nm,0.8s						
X40A	Basin Creek Fa	4.05	115	Pn	Pn	22 10 40.2	+0.1
X40A				IAmb_Lg		22 11 51.6	
	comp=Z,118nm,0.8s						
MGMO	Mountain Grove	4.12	76	Pn	Pn	22 10 41.3	+0.1
WHAR	Wooly Hollow	4.18	102	Pn	Pn	22 10 44.0	+2.1
WHAR				IAmb_Lg		22 11 51.3	
	comp=Z,96nm,0.9s						
FCAR	Ozark Folk Cen	4.20	94	Pn	Pn	22 10 42.4	+0.2
WHTX	Lake Whitney,	4.27	182	Pn	Pn	22 10 42.8	-0.5
WLAR	White Oak Lake	4.29	126	Pn	Pn	22 10 42.5	-0.9
WLAR				IAmb_Lg		22 11 50.5	
	comp=Z,67nm,0.7s						
237A	Washetta, Mont	4.43	164	Pn	Pn	22 10 43.7	-1.7
N33A	J Bar K, Exete	4.46	358	IAmb_Lg		22 12 08.7	
	comp=Z,69nm,0.8s						
P38A	Dawn	4.47	40	Pn	Pn	22 10 46.1	+0.2
R40A	Maddies Statio	4.48	62	Pn	Pn	22 10 45.9	-0.2
LCAR	Lake Charles	4.96	91	Pn	Pn	22 10 52.7	0.0
LCAR				IAmb_Lg		22 12 14.5	
	comp=Z,85nm,0.9s						
T42A	Van Buren	5.03	80	Pn	Pn	22 10 52.8	-0.9
KSCO	Kaye Shedlock'	5.05	304	Pn	Pn	22 10 55.1	+1.1
KSCO				IAmb_Lg		22 12 28.0	
	comp=Z,52nm,0.7s						
CCM	Cathedral Cave	5.14	68	Pn	Pn	22 10 55.7	+0.5
CCM				IAmb_Lg		22 12 26.2	
	comp=Z,57nm,0.9s						
BGNE	Belgrade	5.17	353	Pn	Pn	22 10 54.4	-1.3
P40A	Paris	5.26	50	Pn	Pn	22 10 58.0	+1.1
P40A				IAmb_Lg		22 12 31.6	
	comp=Z,52nm,0.7s						
435B	Jarrell	5.48	183	IAmb_Lg		22 12 39.1	
	comp=Z,53nm,0.8s						
N38A	Joes South For	5.52	34	Pn	Pn	22 10 58.8	-1.6
N38A				IAmb_Lg		22 12 36.6	

	comp=Z,93nm,0.8s						
PBMO	Poplar Bluff	5.54	83	IAmb_Lg		22 12 33.2	
	comp=Z,90nm,0.8s						
FVM	French Village	5.74	71	Pn	Pn	22 11 03.0	-0.4
FVM				IAmb_Lg		22 12 43.8	
	comp=Z,67nm,0.9s						
OGNE	Ogallala	5.97	323	Pn	Pn	22 11 07.2	+0.5
OGNE				IAmb_Lg		22 12 52.7	
	comp=Z,50nm,0.8s						
143A	Socs Landing,	6.02	125	IAmb_Lg		22 13 02.1	
	comp=Z,62nm,0.9s						
JCT	Junction City	6.15	201	Pn	Pn	22 11 07.4	-1.7
JCT				IAmb_Lg		22 12 53.9	
	comp=Z,74nm,0.9s						
HENM	Henderson Moun	6.31	84	IAmb_Lg		22 12 58.6	
	comp=Z,85nm,0.7s						
K31A	O'Neill	6.45	350	Pn	Pn	22 11 13.3	+0.2
S44A	Carbondale	6.58	75	Pn	Pn	22 11 15.5	+0.5
S44A				IAmb_Lg		22 13 06.2	
	comp=Z,84nm,0.9s						
SIUC	Southern Illin	6.61	75	IAmb_Lg		22 13 06.1	
	comp=Z,75nm,0.8s						
OXF	Oxford	6.67	103	IAmb_Lg		22 13 11.8	
	comp=Z,62nm,0.7s						
N41A	Harden Midland	6.71	47	Pn	Pn	22 11 16.4	-0.3
SDCO	Great Sand Dun	6.74	285	IAmb_Lg		22 13 15.6	
	comp=Z,45nm,1.1s						
Y45A	Yeager Farm, C	6.78	108	IAmb_Lg		22 13 23.3	
	comp=Z,48nm,1.0s						
P43A	Skaggs, Pawnee	6.99	59	IAmb_Lg		22 13 26.7	
	comp=Z,47nm,0.8s						
Q44A	Meyer Farm, Va	7.07	66	Pn	Pn	22 11 20.9	-0.8
Q44A				IAmb_Lg		22 13 29.8	
	comp=Z,46nm,0.8s						
L40A	Anamosa	7.46	37	Pn	Pn	22 11 25.8	-1.1
L40A				IAmb_Lg		22 13 35.5	
	comp=Z,46nm,0.8s						
ISCO	Idaho Springs	7.46	301	IAmb_Lg		22 13 38.5	
	comp=Z,31nm,1.0s						
ECSD	EROS Data Cent	7.47	4	Pn	Pn	22 11 25.9	-1.3
ANMO	Albuquerque	7.59	263	Pg	Pb	22 11 53.5	+3.8
	comp=Z,0.4nm,0.3s,baz=83,slow=18,SNR=2.3						
ANMO				Lg	Lg	22 13 29.9	
	comp=Z,0.6nm,0.3s,baz=357,slow=21,SNR=2.4						
ANMO	Albuquerque	7.59	263	IAmb_Lg		22 13 38.2	
	comp=Z,8.0nm,0.9s						
USIN	University of	7.87	75	IAmb_Lg		22 13 50.5	
	comp=Z,41nm,1.0s						
O44A	Mansfield	7.95	58	IAmb_Lg		22 14 03.3	
	comp=Z,36nm,0.8s						
T47A	Sharon Grove	8.21	82	IAmb_Lg		22 14 07.3	
	comp=Z,57nm,1.1s						
I37A	Lemond, Waseca	8.29	20	IAmb_Lg		22 14 11.2	
	comp=Z,47nm,1.0s						
JFWS	Jewell Farm	8.57	37	IAmb_Lg		22 14 24.2	
	comp=Z,37nm,0.9s						
TXAR	Lajitas Array	8.76	220	Pn	Pn	22 11 44.4	-0.5
	comp=Z,0.1nm,0.3s,baz=39,slow=13,SNR=1.6						
TXAR				Pg	Pg	22 12 14.9	-10
	comp=Z,0.6nm,0.3s,baz=38,slow=15,SNR=5.1						
TXAR				Lg	Lg	22 14 07.5	
	comp=Z,1.1nm,0.3s,baz=33,slow=25,SNR=7.9						
CLTN	Cedars of Leba	8.86	88	IAmb_Lg		22 14 22.2	
	comp=Z,34nm,1.2s						
SFIN	Lafayette	8.99	60	IAmb_Lg		22 14 22.1	
	comp=Z,31nm,0.9s						
BLO	Bloomington	9.00	68	IAmb_Lg		22 14 20.6	
	comp=Z,44nm,0.8s						
RSSD	Black Hills	9.39	329	IAmb_Lg		22 14 57.3	
	comp=Z,16nm,1.1s						
K43A	Burlington	9.44	44	IAmb_Lg		22 14 40.5	
	comp=Z,34nm,0.8s						
K22A	Casper	9.57	315	IAmb_Lg		22 14 55.0	
	comp=Z,24nm,0.9s						
F33A	5 Mile Ranch,	9.59	4	IAmb_Lg		22 14 43.0	
	comp=Z,27nm,1.2s						
TKL	Tuckaleechee C	10.97	89	Lg	Lg	22 15 17.1	
	comp=Z,1.0nm,0.3s,baz=359,slow=24,SNR=3.4						
PDAR	Pinedale Array	11.48	308	Pn	Pn	22 12 21.1	-1.3
	comp=Z,0.1nm,0.3s,baz=118,slow=14,SNR=1.7						
PDAR				Lg	Lg	22 15 22.7	
	comp=Z,0.2nm,0.3s,baz=119,slow=21,SNR=2.1						
ILAR	Eielson Array	40.83	330	P	P	22 17 20.6	+0.8
	comp=Z,0.4nm,0.7s,baz=111,slow=7.0,SNR=6.0						

IDC 02 22:13:12.3±59.0**, 22°.81S**×**178°.48W, h0**^{km}**, mb3.9**/3**, mb1 4.1**/3**, mb1mx3.7**/28**, mbtmp3.9**/3**, MS4.2**/1**, Ms1 4.2**/1**, ms1mx2.9**/24**, Error ellipse: s-maj=1080.0km s-min=161.9km az=86.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAR	Rarotonga	17.42	88	LR	LR	22 22 39.4	
	comp=Z,774nm,20.7s,baz=106,slow=32						
STKA	Stephens Creek	36.43	247	P	P	22 20 18.2	-0.6
	0.9nm,0.4s,baz=96,slow=11,SNR=1.6						
ASAR	Alice Springs	43.60	259	P	P	22 21 18.2	-0.5
	0.4nm,0.4s,baz=95,slow=9.0,SNR=6.9						
WRA	Warramunga Arr	43.89	265	P	P	22 21 21.4	+0.5
	1.2nm,0.4s,baz=101,slow=8.3,SNR=15						

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*MAN **02** 22:28:51.1, 10°.26N×126°.00E, h5^{km}, mb4.7, ML3.6, MS3.5*
*IDC **02** 22:29:09.5±24.0, 10°.10N×125°.91E, h237^{km}±257^{km}, mb2.9/6, mb1 3.1/6, mb1mx2.9/55, mbtmp3.5/6, Error ellipse: s-maj=76.9km s-min=20.9km az=57.0*
ISC 02 22:28:47.4±1.7**, 10°.42N**±0°.06×**126°.3E**±0°.1**, h16**^{km}±10^{km}**, n17, σ1^{s}39**/19**, mb3.5**/6**, 1C-1D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLSP	General Luna,	0.64	193	*e*P	Pg	22 28 59.9	-0.1
GLSP				*e*S	Sg	22 29 07.1	-1.5
BUTP	Butuan	1.57	204	*e*P	Pn	22 29 16.6	+1.9
BUTP				*e*S	Sn	22 29 34.8	+0.1
LLP	Lapu-Lapu	2.27	268⇓	*e*P	Pn	22 29 25.4	+1.2
LLP				*e*S	Sn	22 29 51.1	-0.7
CGP	Cagayan de Oro	2.49	219⇑	*e*P	Pn	22 29 29.0	+1.8
CGP				*i* S	Sn	22 29 57.1	-0.2
CNP	Catarman	2.61	323	*e*P	Pb	22 29 35.2	+1.5
BUKP	Musuan	2.79	205	*e*P	Pn	22 29 33.4	+2.0
BUKP				*e*S	Sn	22 30 06.3	+1.6
CNOP	Candoni, Negro	3.62	261	*e*P	Pn	22 29 43.3	+0.5
PAGZ	Pagadian	3.83	228	*e*P	Pn	22 29 46.4	+0.8
CMAR	Chiang Mai Arr	27.61	290	P	P	22 34 33.4	-0.9
	0.9nm,0.4s,baz=109,slow=6.6,SNR=4.2						
WRA	Warramunga Arr	31.20	165	P	P	22 35 05.0	-1.0
	0.2nm,0.5s,baz=343,slow=9.2,SNR=1.9						
ASAR	Alice Springs	34.69	168	P	P	22 35 35.0	-1.6
	0.2nm,0.3s,baz=352,slow=7.2,SNR=1.8						
H11N1	WAKE ISLAND Hy	40.21	72	T	T	23 19 44.6	
	baz=264,slow=74,SNR=11						
H11N2	WAKE ISLAND Hy	40.22	72	T	T	23 19 45.8	
	baz=264,slow=74,SNR=9.3						
H11N3	WAKE ISLAND Hy	40.23	72	T	T	23 19 44.4	
	baz=264,slow=74,SNR=11						
SONM	Songino Array	40.88	340	P	P	22 36 29.6	+0.9
	0.3nm,0.7s,baz=162,slow=7.3,SNR=2.7						
MKAR	Makanchi Array	51.91	323	P	P	22 37 54.7	-0.6
	0.3nm,0.5s,baz=117,slow=8.2,SNR=7.0						
KURBB	Kurchatov Arra	55.95	325	P	P	22 38 23.1	-1.6
	0.5nm,0.5s,baz=124,slow=6.8,SNR=1.9						

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*NEIC **02** 22:34:13.3±2.8, 33°.15S±0°.09×179°.5E±0°.2, h175^{km}±11^{km}, mb4.5/13, Error ellipse: s-maj=25.5km s-min=11.7km az=105.0*
*WEL **02** 22:34:13.1±0.6, 33°S±7°×17°9W±1°6, h33^{km}, M5.0/33, mB5.5/25, ML5.4/32, MLv5.2/33, Mw(mB)5.0/25, Error ellipse: s-maj=0.0km s-min=0.0km az=110.7*
*IDC **02** 22:34:15.1±6.8, 33°.42S×179°.99E, h220^{km}±74^{km}, mb3.9/3, mb1 4.1/5, mb1mx3.7/32, mbtmp4.6/5, Error ellipse: s-maj=79.7km s-min=36.9km az=176.0*
ISC 02 22:34:14.2±0.8**, 33°.21S**±0°.06×**180°.0E**±0°.1**, h200**^{km}**, n127, σ2^{s}37**/134**, mb4.3**/8**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	4.32	25	P	Pn	22 35 12.8	-7.3
GLKZ				S	Sn	22 36 00.5	-11
RAO	Raoul Island	4.33	25	Pn	Pn	22 35 22.4	+2.2
MXZ	Matakaoa Point	4.56	197	Pn	Pn	22 35 22.9	-0.1
MXZ	Matakaoa Point	4.56	197	P	Pn	22 35 22.9	-0.1
MXZ				S	Sn	22 36 15.8	-1.3
WMGZ	Waiomatatini S	4.78	195	P	Pn	22 35 28.7	+3.0
WMGZ				S	Sn	22 36 22.9	+0.7
HAZ	Te Kaha	4.88	201	P	Pn	22 35 27.9	+0.8
HAZ				S	Sn	22 36 24.4	-0.2
PKGZ	Pakihiroa	4.93	198	P	Pn	22 35 27.5	-0.2
PKGZ				S	Sn	22 36 25.0	-0.7
KUZ	Kuaotunu	4.98	224	P	Pn	22 35 31.6	+3.3
PUZ	Puketiti	5.06	196	P	Pn	22 35 31.5	+2.2
PUZ				S	Sn	22 36 27.4	-1.2
RUGZ	Raukumara Rang	5.11	201	P	Pn	22 35 30.4	+0.3
RUGZ				S	Sn	22 36 28.7	-1.3
TWGZ	Tauwhareparae	5.22	198	P	Pn	22 35 34.0	+2.5
TWGZ				S	Sn	22 36 33.5	+1.0
WHRZ	Whale Island	5.25	207	P	Pn	22 35 36.1	+4.3
WHRZ				S	Sn	22 36 34.9	+1.8
OPRZ	Ohinepanea	5.41	210	P	Pn	22 35 34.4	+0.5
TGRZ	Tauranga	5.45	213	P	Pn	22 35 38.0	+3.8
CNGZ	Carnagh Statio	5.46	195	P	Pn	22 35 31.3	-3.2
CNGZ				S	Sn	22 36 29.0	-8.9
MARZ	Manawahe	5.48	209	P	Pn	22 35 38.1	+3.3
MWZ	Matawai	5.50	201	P	Pn	22 35 34.2	-0.8
MWZ				S	Sn	22 36 37.5	-1.3
TKGZ	Te Karaka	5.50	198	P	Pn	22 35 37.1	+2.1
TKGZ				S	Sn	22 36 38.2	-0.7
URZ	Urewera	5.56	204	P	Pn	22 35 36.1	+0.4
	20nm,0.3s,baz=277,slow=2.6,SNR=80						
URZ				S	Sn	22 36 36.7	-3.5
	17nm,0.3s,baz=63,slow=8.2,SNR=3.9						
URZ	Urewera	5.56	204	Pn	Pn	22 35 36.4	+0.6
URZ	Urewera	5.56	204	P	Pn	22 35 35.1	-0.6
URZ				S	Sn	22 36 38.5	-1.7
RAGZ	Rawiri	5.68	201	P	Pn	22 35 39.9	+2.6
RAGZ				S	Sn	22 36 42.3	-0.8
KMRZ	Kaimai	5.69	214	P	Pn	22 35 41.5	+4.1
OMRZ	Omania	5.71	210	P	Pn	22 35 41.5	+3.8
RIGZ	Rimuhau	5.78	198	P	Pn	22 35 41.1	+2.6
RIGZ				S	Sn	22 36 44.4	-1.0
TOZ	Tahuroa Road	5.81	218	P	Pn	22 35 43.7	+4.7
MUGZ	Murupara	5.88	206	P	Pn	22 35 41.2	+1.4
RTZ	Ruatahuna	5.93	204	P	Pn	22 35 39.2	-1.4
RTZ				S	Sn	22 36 45.4	-3.4
HSRZ	Hossack Road	5.94	210	P	Pn	22 35 46.8	+6.2
PRGZ	Paritu Road	5.96	196	P	Pn	22 35 42.0	+1.1
PRGZ				S	Sn	22 36 46.2	-3.2
SNGZ	Shannon Statio	5.96	200	P	Pn	22 35 41.8	+0.8
SNGZ				S	Sn	22 36 48.0	-1.7
HRRZ	Handcock Road	5.99	209	P	Pn	22 35 44.8	+3.5
PRRZ	Plateau Road	6.04	208	P	Pn	22 35 44.1	+2.2
KNZ	Kokohu	6.10	197	P	Pn	22 35 42.8	+0.1
ALRZ	Allen Road	6.11	208	P	Pn	22 35 44.5	+1.7
WPRZ	Whakapapatarin	6.15	209	P	Pn	22 35 43.1	-0.2
RAHZ	Arahi	6.17	202	P	Pn	22 35 44.3	+0.7
MHGZ	Mahia Peninsul	6.17	195	P	Pn	22 35 45.2	+1.6
MTHZ	Maungataniwha	6.19	204	P	Pn	22 35 45.9	+2.0
TLZ	Tolley Road	6.26	214	P	Pn	22 35 48.5	+3.6
KUTZ	Kaahu Road	6.27	212	P	Pn	22 35 40.5	-4.4
WHHZ	Waihua	6.27	200	P	Pn	22 35 46.1	+1.3
MRHZ	Matea Rd	6.32	206	P	Pn	22 35 46.8	+1.2
NMHZ	Naumai	6.42	203	P	Pn	22 35 48.3	+1.4
WATZ	Wairara	6.49	211	P	Pn	22 35 46.8	-0.9
ARHZ	Aropaoanui	6.51	201	P	Pn	22 35 47.3	-0.8
BKZ	Black Stump Fm	6.59	204	Pn	Pn	22 35 49.0	-0.1
BKZ	Black Stump Fm	6.59	204	P	Pn	22 35 49.5	+0.4
RATZ	Rangitukua	6.60	210	P	Pn	22 35 51.1	+1.8
RITZ	Rihia Road	6.66	209	P	Pn	22 35 51.6	+1.6
HIZ	Hauiti	6.74	217	P	Pn	22 35 55.3	+4.2
MCHZ	McNeill Hill	6.77	202	P	Pn	22 35 52.2	+0.8
TMVZ	Te Maari	6.84	209	P	Pn	22 35 53.3	+0.9
KRVZ	Karewarewa	6.85	210	P	Pn	22 35 53.9	+1.4
CKHZ	Cape Kidnapper	6.85	199	P	Pn	22 35 52.5	+0.1
ETVZ	East Tongariro	6.86	209	P	Pn	22 35 53.7	+1.1
WTVZ	West Tongariro	6.89	210	P	Pn	22 35 54.2	+1.1
OTVZ	Oturere	6.90	209	P	Pn	22 35 54.3	+1.1
TWVZ	Taurewa	6.92	211	P	Pn	22 35 55.0	+1.6
NGZ	Ngauruhoe	6.94	210	P	Pn	22 35 55.0	+1.3
TUVZ	Tukino	6.99	209	P	Pn	22 35 54.9	+0.5
FWVZ	Far West T-bar	7.02	209	P	Pn	22 35 55.6	+0.8
BHHZ	Black Hill Sta	7.03	206	P	Pn	22 35 54.8	0.0
WHVZ	Whangaehu Hut	7.03	209	P	Pn	22 35 56.0	+1.0
KAHZ	Kahuranaki	7.04	200	P	Pn	22 35 53.8	-1.1
KRHZ	Kereru	7.06	203	P	Pn	22 35 52.8	-2.3
WNVZ	Wahianoa	7.07	209	P	Pn	22 35 55.6	+0.3
MOVZ	Moawhango	7.07	208	P	Pn	22 35 55.0	-0.4
PKVZ	Pokaka	7.14	210	P	Pn	22 35 56.9	+0.6
MTVZ	Mangateitei	7.17	209	P	Pn	22 35 57.4	+0.8
PXZ	Pawanui	7.26	199	P	Pn	22 35 57.7	0.0
PXZ	Pawanui	7.26	199	P	Sn	22 37 13.0	-7.0
VRZ	Vera Road	7.27	214	P	Pn	22 36 00.5	+2.7
PNHZ	Pukenui	7.36	203	P	Pn	22 35 57.5	-1.5
PNHZ	Pukenui	7.36	203	P	Sn	22 37 19.2	-3.2
WPHZ	Waipukurau	7.42	202	P	Pn	22 35 59.9	+0.1
WPHZ	Waipukurau	7.42	202	P	Sn	22 37 20.9	-2.9
TSZ	Takapari Road	7.57	204	P	Pn	22 36 00.9	-0.8
TSZ	Takapari Road	7.57	204	P	Sn	22 37 23.9	-3.5
PKE	Pukeiti	7.70	217	P	Pn	22 36 07.0	+3.5
NEZ	North Egmont	7.70	217	P	Pn	22 36 06.9	+3.3
DVHZ	Dannevirke	7.72	202	P	Pn	22 36 02.8	-0.9
DVHZ	Dannevirke	7.72	202	P	Sn	22 37 21.6	-9.2
KHEZ	Kahui Hut	7.76	217	P	Pn	22 36 07.5	+3.1
ANWZ	Angora Road	7.77	200	P	Pn	22 36 03.9	-0.5
ANWZ	Angora Road	7.77	200	P	Sn	22 37 26.3	-5.8
POWZ	Post Office Ro	7.93	204	P	Pn	22 36 05.7	-0.7
PRWZ	Pori Road	8.01	203	P	Pn	22 36 06.7	-0.8
PRWZ	Pori Road	8.01	203	P	Sn	22 37 31.6	-6.2
BFZ	Birch Farm	8.04	201	Pn	Pn	22 36 06.7	-1.2
BFZ	Birch Farm	8.04	201	P	Pn	22 36 06.8	-1.1
BFZ	Birch Farm	8.04	201	P	Sn	22 37 30.7	-7.8
MSWZ	Moikau Station	9.02	203	Pn	Pn	22 36 17.6	-3.1
SNZO	South Karori	9.12	206	Pn	Pn	22 36 18.9	-3.0
BHW	Baring Head	9.15	205	Pn	Pn	22 36 19.1	-3.2
PLWZ	Palliser	9.16	203	Pn	Pn	22 36 19.1	-3.3
TUWZ	Tuamarina	9.52	209	Pn	Pn	22 36 23.4	-3.6
NNZ	Nelson	9.58	212	Pn	Pn	22 36 24.9	-2.9
QRZ	Quartz Range	9.66	216	Pn	Pn	22 36 26.9	-2.1
BSWZ	Blackbirch Sta	9.78	208	Pn	Pn	22 36 28.0	-2.6
THZ	Tophouse	10.23	211	Pn	Pn	22 36 33.5	-2.9
KHZ	Kahutara	10.51	207	Pn	Pn	22 36 35.7	-4.2
LTZ	Lake Taylor	11.33	210	Pn	Pn	22 36 46.8	-3.7
MQZ	McQueen's Vall	11.95	207	Pn	Pn	22 36 53.7	-4.6
RPZ	Rata Peaks	12.61	211	P	Pn	22 37 03.4	-3.3
	7.8nm,0.3s,baz=293,slow=2.9,SNR=16						
RPZ				S	Sn	22 39 13.2	-14
	1.7nm,0.3s,baz=71,slow=14,SNR=2.1						
FOZ	Fox Glacier	13.03	215	Pn	Pn	22 37 09.2	-2.7
LBZ	Lake Benmore	13.52	212	Pn	Pn	22 37 14.3	-3.8
ODZ	Otahua Downs	13.86	209	Pn	Pn	22 37 19.8	-2.5
WKZ	Wanaka	14.39	213	Pn	Pn	22 37 23.9	-4.9
MLZ	Mavora Lakes	15.21	214		Pn	22 37 35.0	-3.9
MSVF	Nonsavu	15.51	353		Pn	22 37 40.3	-2.5
MSVF				IAmb	IAmb	22 37 42.2	
	comp=Z,26nm,0.7s						
WHZ	Wether Hill Ro	15.69	213		Pn	22 37 41.5	-3.2
WHZ				IAmb	IAmb	22 37 46.3	
	comp=Z,28nm,1.2s						
AS31	Alice Springs	41.35	271	P	P	22 41 40.1	-0.7
ASAR	Alice Springs	41.35	271	P	P	22 41 40.1	-0.7
	comp=Z,1.7nm,0.3s,baz=110,slow=7.6,SNR=28						
ASAR	Alice Springs	41.35	271	P	P	22 41 40.7	-0.1
WR0	Warramunga Arr	42.42	276	P	P	22 41 48.1	-1.3
WR0				IAmb	IAmb	22 41 48.7	
	comp=Z,3.9nm,0.6s						
WC3	Warramunga Arr	42.57	276	P	P	22 41 49.6	-1.0
WC3				IAmb	IAmb	22 41 49.9	
	comp=Z,6.8nm,0.5s						
WB2	Warramunga Arr	42.59	276	P	P	22 41 49.3	-1.5
WB2				IAmb	IAmb	22 41 50.1	
	comp=Z,7.7nm,0.5s						
WRA	Warramunga Arr	42.60	276	P	P	22 41 49.5	-1.4
	comp=Z,4.6nm,0.4s,baz=116,slow=7.5,SNR=65						
WRA	Warramunga Arr	42.60	276	P	P	22 41 49.4	-1.6
WB0	Warramunga Arr	42.64	277	P	P	22 41 50.1	-1.1
WB0				IAmb	IAmb	22 41 50.6	
	comp=Z,7.6nm,0.7s						
SOEI	Soe	56.14	281	P	P	22 43 31.0	-2.5
QSPA	South Pole Qui	56.91	180	P	P	22 43 42.1	+3.9
QSPA				IAmb	IAmb	22 44 00.5	
	comp=Z,6.5nm,1.4s						
BELA	Belgrano 2	67.24	173	P	P	22 44 49.1	+2.7
SNAA	Sanae	75.39	179	P	P	22 45 37.7	+2.2
PETK	Petropavlovsk-	88.12	347	P	P	22 46 40.7	-1.0
	comp=Z,1.4nm,0.7s,baz=131,slow=5.9,SNR=1.3						
FINES	FINESS Array B	147.13	337	PKPbc	PKPdf	22 53 31.1	+0.8
	comp=Z,2.4nm,0.8s,baz=56,slow=4.8,SNR=8.5						

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*IDC **02** 22:35:06.5±1.4, 63°.05N×151°.28W, h100^{km}±15^{km}, mb3.5/10, mb1 3.5/13, mb1mx3.3/59, mbtmp3.7/13, Error ellipse: s-maj=19.4km s-min=10.0km az=114.0*
*AEIC **02** 22:35:09±1.0, 63°.04N±0°.04×150°.85W±0°.05, h124^{km}±4^{km}, ML3.2, ML3.5/98(NEIC), Error ellipse: s-maj=5.2km s-min=3.0km az=188.0*
*NEIC **02** 22:35:09.3±0.9, 63°.07N±0°.03×150°.87W±0°.08, h127^{km}±3^{km}, Error ellipse: s-maj=5.8km s-min=4.5km az=64.0*
*ANF **02** 22:35:10.2±0.6, 63°.07N×150°.72W, h117^{km}±9^{km}, ML3.4/15, Error ellipse: s-maj=6.0km s-min=2.6km az=100.0*
ISC 02 22:35:09.3±0.7**, 63°.06N**±0°.03×**150°.87W**±0°.04**, h130**^{km}±5^{km}**, n151, σ0^{s}94**/177**, mb3.6**/10**, Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRF	Thorofare Moun	0.47	33		Pn	22 35 28.3	-0.1
TRF					Sn	22 35 42.2	-0.6
TRF				IAML		22 35 43.2	
	comp=E,1µm,0.5s						
TRF				IAML		22 35 44.9	
	comp=N,702nm,0.6s						
KTH	Kantishna Hill	0.50	357		Pn	22 35 28.3	-0.1
KTH					Sn	22 35 41.7	-1.2
HUR	Hurricane	0.57	97		Pn	22 35 28.5	-0.2
HUR					Sn	22 35 42.7	-0.7
PPLA	Purkeypile	0.62	256		Pn	22 35 29.3	0.0
CAST	Castle Rocks	0.66	304		Pn	22 35 28.9	-0.4
CAST					Sn	22 35 43.3	-1.3
CUT	Chulitna	0.71	157	P	Pn	22 35 29.6	-0.1
	baz=337,SNR=136						
CUT				S	Sn	22 35 44.7	-0.4
	baz=337						
CUT	Chulitna	0.71	157		Pn	22 35 29.6	-0.1
CUT					Sn	22 35 45.1	+0.1
RND	Reindeer	0.98	68	Pn	Pn	22 35 32.0	0.0
RND					Sn	22 35 48.5	-0.8
RND				IAML		22 35 49.6	
	comp=N,932nm,0.6s						
RND				IAML		22 35 50.5	
	comp=E,932nm,0.4s						
WAT2	Susitna Watana	1.05	94		Pn	22 35 32.5	-0.2
BPAW	Bear Paw Mtn.	1.05	357	Pn	Pn	22 35 32.5	-0.2
CHUM	Lake Minchumin	1.05	323		Pn	22 35 32.6	0.0
CHUM					Sn	22 35 49.7	-0.7
WAT1	Susitna Watana	1.08	101		Pn	22 35 33.0	0.0
WAT1					Sn	22 35 50.2	-0.8
MCK	McKinley	1.10	51	P	Pn	22 35 33.3	+0.1
	baz=232,SNR=73						
MCK				S	Sn	22 35 50.4	-0.9
	baz=232						
MCK	McKinley	1.10	51		Pn	22 35 33.3	+0.1
SKT	Skwentna	1.12	196	Pn	Pn	22 35 33.2	-0.2
SKT				Sn	Sn	22 35 50.9	-0.8
SKT				IAML		22 35 52.0	
	comp=N,838nm,0.2s						
SKT				IAML		22 35 52.1	
	comp=E,936nm,0.3s						
BWN	Browne	1.28	29		Pn	22 35 35.6	+0.7
BWN				IAML		22 35 56.1	
	comp=N,356nm,1.1s						
WAT6	Susitna Watana	1.51	107		Pn	22 35 37.2	-0.4
GHO	Glory Hole Cre	1.57	144	Pn	Pn	22 35 38.3	0.0
GHO				Sn	Sn	22 36 00.4	0.0
SUA	Susitna One	1.60	178	Pn	Pn	22 35 38.6	0.0
SUA				IAML		22 36 02.3	
	comp=E,389nm,0.5s						
SUA				IAML		22 36 02.7	
	comp=N,318nm,0.8s						
STLK	Strandline Lak	1.63	196		Pn	22 35 38.6	-0.2
PMR	Palmer	1.68	150	Pn	Pn	22 35 38.9	-0.4
PMR				IAML		22 36 02.7	
	comp=E,341nm,0.4s						
PMR				IAML		22 36 02.9	
	comp=N,319nm,0.3s						
SML	Sawmill	1.72	136	Pn	Pn	22 35 39.6	-0.4
SML				IAML		22 36 04.2	
	comp=E,550nm,0.5s						
SML				IAML		22 36 04.6	
	comp=N,565nm,0.4s						
NEA2	Nenana	1.74	27	P	Pn	22 35 39.8	-0.3
	baz=208,SNR=126						
NEA2				S	Sn	22 36 02.2	-1.4
	baz=208						
NEA2	Nenana	1.74	27		Pn	22 35 39.8	-0.3
NEA2					Sn	22 36 02.2	-1.4
SPCG	Spurr Capps Gl	1.85	197		Pn	22 35 41.5	-0.1
WRH	Wood River Hil	1.88	40	Pn	Pn	22 35 41.8	0.0
SPBG	Spurr Blockage	1.94	202		Pn	22 35 41.9	-0.7
SPCN	Chakachatna No	1.94	199		Pn	22 35 42.6	+0.1
FIS	Fire Island	1.94	171		Pn	22 35 43.5	+1.1
SPCR	Spurr Chakacha	1.97	199		Pn	22 35 42.8	0.0
MLY	Manley	1.98	2	P	Pn	22 35 43.0	0.0
	baz=181,SNR=123						
MLY				S	Sn	22 36 07.5	-1.4
	baz=181						
MLY	Manley	1.98	2		Pn	22 35 43.0	0.0
KNK	Knik Glacier	2.00	145	Pn	Pn	22 35 42.8	-0.4
KNK				IAML		22 36 13.3	
	comp=N,348nm,0.4s						
RC01	Rabbit Creek A	2.04	164	P	Pn	22 35 43.4	-0.4
	baz=346						
RC01				S	Sn	22 36 09.0	-1.1
	baz=346						
RC01	Rabbit Creek A	2.04	164		Pn	22 35 43.4	-0.4
SCM	Sheep Creek Mo	2.05	125	Pn	Pn	22 35 43.4	-0.6
SCM				IAML		22 36 11.8	
	comp=E,435nm,0.6s						
SCM				IAML		22 36 12.1	
	comp=N,346nm,0.7s						
CCB	Clear Creek Bu	2.10	39	Pn	Pn	22 35 44.3	0.0
I23K	Minto, Yukon-K	2.20	17	P	Pn	22 35 45.9	+0.2
	baz=198,SNR=146						
I23K				S	Sn	22 36 12.6	-1.0
	baz=198						
I23K	Minto, Yukon-K	2.20	17	Pn	Pn	22 35 45.8	+0.2
HDA	Harding Lake	2.21	50	P	Pn	22 35 45.6	-0.2
	baz=233,SNR=35						
HDA				S	Sn	22 36 12.3	-1.5
	baz=233						
HDA				S	Sn	22 36 12.3	-1.5
	baz=233						
HDA	Harding Lake	2.21	50	Pn	Pn	22 35 45.8	0.0
HDA				IAML		22 36 17.9	
	comp=E,176nm,0.4s						
MDM	Murphy Dome	2.24	30	Pn	Pn	22 35 46.1	0.0
TCOL	CIGO, UAF Yank	2.26	35	P	Pn	22 35 46.4	+0.1
	baz=217,SNR=14						
TCOL				S	Sn	22 36 13.4	-1.3
	baz=217						
TCOL	CIGO, UAF Yank	2.26	35	Pn	Pn	22 35 46.4	+0.1
TCOL				IAML		22 36 16.8	
	comp=N,266nm,0.7s						
TCOL				IAML		22 36 31.5	
	comp=E,199nm,0.5s						
COLA	College	2.26	35		Pn	22 35 46.3	0.0
COLA	College	2.26	35	IAML		22 36 17.1	
	comp=E,284nm,0.6s						
COLA				IAML		22 36 31.5	
	comp=E,217nm,0.5s						
CAPN	Captain Cook N	2.30	183	P	Pn	22 35 48.6	+1.7
	baz=3.4						
CAPN	Captain Cook N	2.30	183		Pn	22 35 48.6	+1.7
PS08	TAPS Pump Stn8	2.34	49		Pn	22 35 47.5	+0.2
TTA	Tatalina	2.35	269	Pn	Pn	22 35 47.3	-0.3
TT01	Tatalina	2.36	269		Pn	22 35 47.1	-0.5
M24K	Tolsona, Glenn	2.37	112	P	Pn	22 35 48.0	+0.2
	baz=295,SNR=41						
M24K	Tolsona, Glenn	2.37	112	Pn	Pn	22 35 48.1	+0.2
IL31		2.46	44	Pn	Pn	22 35 48.8	0.0
ILAR	Eielson Array	2.46	44	P	Pn	22 35 48.6	-0.3
	comp=E,4.1nm,0.3s,baz=227,slow=13,SNR=255						
ILAR				S	Sn	22 36 18.1	-1.3
	comp=E,4.7nm,0.3s,baz=233,slow=18,SNR=8.5						
ILAR	Eielson Array	2.46	44	Pn	Pn	22 35 48.5	-0.4
PAX	Paxson	2.46	90		Pn	22 35 49.3	+0.2
PWL	Port Wells	2.51	150		Pn	22 35 49.0	-0.6
POKR	Poker Plat Res	2.56	35	P	Pn	22 35 50.4	+0.2
	baz=217,SNR=17						

POKR				S	Sn	22 36 20.0	-1.7
	baz=217						
POKR	Poker Plat Res	2.56	35		Pn	22 35 50.3	+0.1
SLKM	Skilak Lake	2.58	173		Pn	22 35 50.1	-0.3
DFR	Drift River	2.62	200		Pn	22 35 51.0	-0.1
O22K	Cooper Landing	2.64	168		Pn	22 35 51.3	+0.1
PS11	TAPS Pump St11	2.68	109		Pn	22 35 52.3	+0.6
NCT	North Crescent	2.69	202		Pn	22 35 52.1	+0.2
RSO	Redoubt South	2.75	200	Pn	Pn	22 35 52.8	0.0
KLU	Klutina	2.79	122	Pn	Pn	22 35 52.4	-0.9
KLU				IAML		22 36 37.2	
	comp=N,229nm,0.5s						
KLU				IAML		22 36 40.9	
	comp=E,161nm,0.4s						
RIDG	Independent Ri	2.80	73	Pn	Pn	22 35 53.6	+0.4
RIDG				IAML		22 36 34.9	
	comp=N,118nm,0.7s						
RIDG				IAML		22 36 38.1	
	comp=E,129nm,0.5s						
RED	Redoubt Volcan	2.80	200		Pn	22 35 53.6	+0.3
GLI	Glacier Island	2.82	139	Pn	Pn	22 35 52.7	-0.8
PS06	TAPS Pump Stn6	2.85	9		Pn	22 35 54.2	+0.4
SVW2	Sparrevohn	2.96	231	Pn	Pn	22 35 54.7	-0.7
SEW	Seward	3.04	166	Pn	Pn	22 35 56.0	-0.3
DIV	Divide	3.08	127		Pn	22 35 55.6	-1.3
FID	Port Fidalgo	3.11	136	Pn	Pn	22 35 56.6	-0.7
DOT	Dot Lake	3.12	76	Pn	Pn	22 35 57.3	-0.2
IM03		3.19	338		Pn	22 35 58.2	0.0
IMAR	Indian Mountai	3.19	338		Pn	22 35 58.2	-0.1
IVE	Iliamna Volcan	3.22	200		Pn	22 35 56.7	-2.1
SCRK	Sand Creek	3.22	70	P	Pn	22 35 58.6	-0.2
	baz=256,SNR=30						
SCRK	Sand Creek	3.22	70		Pn	22 35 58.5	-0.2
MENT	Mentasta	3.26	89		Pn	22 35 59.3	0.0
MENT				IAML		22 36 49.5	
	comp=N,167nm,0.7s						
N25K	Chitina, Valde	3.27	114	P	Pn	22 35 58.9	-0.5
	baz=299,SNR=16						
N25K				S	Sn	22 36 37.0	-1.1
	baz=299						
N25K	Chitina, Valde	3.27	114	Pn	Pn	22 35 59.0	-0.5
N25K				IAML		22 36 39.4	
	comp=E,77nm,0.6s						
N25K				IAML		22 36 40.2	
	comp=N,106nm,0.5s						
BRLK	Bradley Lake	3.30	180		Pn	22 35 59.7	-0.1
BRLK				IAML		22 36 39.2	
	comp=E,77nm,0.2s						
BRLK				IAML		22 36 39.5	
	comp=N,73nm,0.3s						
BRSE	Bradley Lake S	3.33	179		Pn	22 35 59.7	-0.4
HIN	Hinchinbrook I	3.38	140	Pn	Pn	22 36 00.3	-0.5
HIN				IAML		22 36 43.6	
	comp=N,146nm,0.4s						
PRP	Porcupine Dome	3.40	41	Pn	Pn	22 36 01.0	-0.1
HOM	Homer	3.43	187	P	Pn	22 36 02.0	+0.5
	baz=6.1						
HOM				S	Sn	22 36 41.1	-0.7
	baz=6.1						
EYAK	Cordova Ski Ar	3.50	134	Pn	Pn	22 36 01.6	-0.7
CNPM	China Poot	3.55	183	Pn	Pn	22 36 02.7	-0.3
CNPM				IAML		22 36 45.2	
	comp=E,92nm,0.4s						
CNPM				IAML		22 36 47.1	
	comp=N,86nm,0.4s						
OPT	Oil Point	3.60	199		Pn	22 36 04.1	+0.4
BMRM	Bremner River	3.62	123		Pn	22 36 02.7	-1.3
GLB	Gilahina Butte	3.68	113	Pn	Pn	22 36 04.4	-0.4
GLB				IAML		22 36 48.1	
	comp=E,76nm,0.4s						
GLB				IAML		22 36 48.6	
	comp=N,77nm,0.5s						
PS05	TAPS Pump Stn5	3.77	1		Pn	22 36 06.4	+0.5
VRDI	Verde Repeater	3.94	114	Pn	Pn	22 36 07.5	-0.8
VRDI				IAML		22 36 55.9	
	comp=N,40nm,0.8s						
RAGM	Ragged Mountai	3.98	129	Pn	Pn	22 36 08.2	-0.5
MCARA	McCarthy VSAT	4.04	111	Pn	Pn	22 36 09.5	0.0
MCARA				IAML		22 37 00.4	
	comp=N,77nm,0.5s						
BC03		4.13	86		Pn	22 36 10.2	-0.5
BCAR	Beaver Creek A	4.13	86	Pn	Pn	22 36 09.7	-1.1
HMT	Hamilton	4.17	128	Pn	Pn	22 36 10.4	-0.8
COLD	Coldfoot	4.20	4	P	Pn	22 36 11.9	+0.3
	baz=184,SNR=13						
COLD				S	Sn	22 36 58.1	-1.8
	baz=184						
COLD	Coldfoot	4.20	4	Pn	Pn	22 36 11.4	-0.1
FYU	Fort Yukon	4.27	32	Pn	Pn	22 36 12.5	+0.1
FYU				IAML		22 36 60.0	
	comp=E,46nm,4.6s						
FYU				IAML		22 39 06.8	
	comp=N,65nm,4.5s						
CRQM	Cirque	4.32	119	Pn	Pn	22 36 13.0	-0.4
CRQM				IAML		22 37 04.7	
	comp=E,75nm,0.7s						
BERG	Berg Lake	4.33	125		Pn	22 36 12.6	-0.8
PTPK	Patty Peak	4.37	112		Pn	22 36 13.9	-0.1
TGL	Tana Glacier	4.45	118	Pn	Pn	22 36 14.1	-0.9
TGL				IAML		22 37 06.6	
	comp=E,56nm,0.8s						
TGL				IAML		22 37 31.1	
	comp=N,57nm,0.7s						
KHIT	Khitrov Hills	4.47	122		Pn	22 36 14.2	-1.1
BALM	Baldy	4.50	113	Pn	Pn	22 36 15.2	-0.5
BALM				IAML		22 37 12.9	
	comp=E,26nm,0.8s						
BALM				IAML		22 37 33.9	
	comp=N,36nm,1.3s						
SUCK	Suckling Hills	4.52	128	Pn	Pn	22 36 15.2	-0.7
SUCK				IAML		22 36 53.4	
	comp=E,71nm,2.8s						
KIAG	Kiagna River	4.55	114		Pn	22 36 15.4	-1.0
BVCY	Beaver Creek	4.65	94		Pn	22 36 17.4	-0.2
ISLE	Juniper Island	4.73	118	Pn	Pn	22 36 17.8	-1.1
ISLE				IAML		22 37 35.4	
	comp=E,45nm,0.7s						
BARN	Barnard Glacie	4.77	111	Pn	Pn	22 36 19.8	+0.3
BARN				IAML		22 37 38.5	
	comp=N,24nm,1.6s						
KULT	Kultieth River	4.80	122		Pn	22 36 18.9	-0.7
YUK2	White River	4.83	101		Pn	22 36 20.5	+0.4
GRNC	Granite Creek	4.90	114		Pn	22 36 20.1	-1.0
CTGM	Chitina Glacie	4.96	111	Pn	Pn	22 36 22.1	+0.3
CTGM				IAML		22 37 02.7	
	comp=E,20nm,4.2s						
CTGM				IAML		22 37 41.7	
	comp=N,27nm,2.4s						
YUK3	Moose Creek	5.01	100		Pn	22 36 22.9	+0.3
BM03	Burnt Mountain	5.11	28		Pn	22 36 23.6	-0.1
YAH	Yahtse	5.11	118	Pn	Pn	22 36 23.0	-1.0
YAH				IAML		22 37 05.5	
	comp=E,31nm,3.3s						
BMAR	Burnt Mountain	5.12	28	Pn	Pn	22 36 24.0	+0.1
MESA	MESA	5.14	120	Pn	Pn	22 36 24.1	-0.3
LOGN	Logan Glacier	5.17	111		Pn	22 36 24.6	-0.1
KABU	Katmai Buttres	5.27	206		Pn	22 36 26.3	+0.3
KDAK	Kodiak Island	5.36	190	P	Pn	22 36 24.4	-2.7
	comp=E,1.5nm,0.3s,baz=34,slow=11,SNR=55						
KDAK				S	Sn	22 37 22.7	-5.0
	comp=E,1.8nm,0.3s,baz=51,slow=21,SNR=10						
KDAK	Kodiak Island	5.36	190	Pn	Pn	22 36 25.7	-1.3
TOLK	Toolik Lake Re	5.63	5	Pn	Pn	22 36 33.1	+2.3
PCA	Pinnacle	5.87	116	Pn	Pn	22 36 34.2	+0.2
OHAK	Old Harbor	5.98	193	Pn	Pn	22 36 35.2	-0.1
BCPM	Bancas Point	6.21	115	Pn	Pn	22 36 38.2	-0.3
ANM	Nome	6.60	290	Pn	Pn	22 36 44.5	+0.8
HYT	Haines Junctio	6.69	104	Pn	Pn	22 36 45.1	+0.1
CHGN	Chignik	7.77	213	Pn	Pn	22 36 58.2	-1.2
INK	Inuvik	8.86	46	P	Pn	22 37 16.5	+2.5
	comp=E,0.2nm,0.3s,baz=236,slow=11,SNR=1.8						
INK				S	Sn	22 38 48.3	-3.7
	comp=E,0.0nm,0.3s,baz=166,slow=8.0,SNR=1.6						
INK	Inuvik	8.86	46	Pn	Pn	22 37 17.7	+3.7
JIS	Juneau Island	9.39	113	Pn	Pn	22 37 20.3	-0.9
SIT	Sitka	9.81	121	Pn	Pn	22 37 28.2	+1.4
AKUT	Akutan	11.81	228	Pn	Pn	22 37 54.0	+0.5
YKA	Yellowknife Ar	16.47	76	P	P	22 38 53.1	+0.3
	comp=E,0.0nm,0.3s,baz=287,slow=11,SNR=3.7						
RES	Resolute Bay	22.19	36	P	P	22 39 54.5	+0.2
	comp=E,1.8nm,0.5s,baz=250,slow=6.1,SNR=8.9						
PDAR	Pinedale Array	31.32	111	P	P	22 41 19.0	+1.8
	comp=E,0.2nm,0.7s,baz=310,slow=7.0,SNR=2.2						
SPITS	Spitsbergen Ar	38.79	4	P	P	22 42 20.7	+0.2
	comp=E,11nm,1.0s,baz=352,slow=6.0,SNR=13						
ASAJ	Asahikawa	41.56	275	P	P	22 42 42.5	-1.2
	comp=E,9.9nm,0.9s,baz=85,slow=32,SNR=6.2						
TXAR	Lajitas Array	45.24	116	P	P	22 43 15.2	+1.7
	comp=E,0.5nm,0.8s,baz=332,slow=7.1,SNR=3.6						
ARCES	ARCESS Array B	47.67	2	P	P	22 43 31.6	-0.2
	comp=E,13nm,1.2s,baz=9.8,slow=5.9,SNR=1.9						
SONM	Songino Array	53.83	306	P	P	22 44 17.5	-0.9
	comp=E,0.3nm,0.8s,baz=14,slow=6.4,SNR=2.6						
KURBB	Kurchatov Arra	60.17	326	P	P	22 45 02.3	-0.4
	comp=E,0.2nm,0.3s,baz=30,slow=7.7,SNR=1.5						
MKAR	Makanchi Array	62.67	322	P	P	22 45 19.1	-0.5
	comp=E,0.3nm,0.5s,baz=40,slow=6.4,SNR=7.5						
AKASG	Malin Array Be	66.59	360	P	P	22 45 45.0	+0.1
	comp=E,0.2nm,0.3s,baz=1.8,slow=6.5,SNR=2.2						

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*IDC **02** 22:37:36.0±0.5, 21°.21S×170°.26E, h0km, mb4.6/18, mb1 4.8/21, mb1mx4.8/26, mbtmp4.7/21, ML4.5/3, MS4.7/25, Ms1 4.8/25, ms1mx4.7/29, Error ellipse: s-maj=18.9km s-min=15.0km az=153.0*

*BJI **02** 22:37:35.6±0.0, 22°.17S×170°.78E, h24km, mB5.3/40, mb4.9/61, Ms5.2/40, Ms7 4.8/41*

*MOS **02** 22:37:38.5±1.6, 21°.37S×170°.27E, h24km, mb5.5/18, MS5.1/5, Error ellipse: s-maj=9.2km s-min=8.7km az=28.7*

*NEIC **02** 22:37:38.5±3.0, 21°.46S±0°.07×170°.26E±0°.08, h15km±2km, mb5.4/116, Error ellipse: s-maj=11.4km s-min=9.5km az=127.0*

*GCMT **02** 22:37:41.5±0.1, 21°.25S±0°.01×170°.28E±0°.01, h15km, MW5.4/147, Moment Tensor Solution. s119,c206; s147,c284; Duration: 1s.3 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.15±.02; $M_{\theta\theta}$-1.24±.02; $M_{\phi\phi}$1.39±.02; $M_{r\theta}$0.10±.04; $M_{\theta\phi}$-1.04±.02; $M_{\phi r}$0.25±.04; Best double couple: $M_0$1.69800×10^{17} NP1:ϕ_s296.00000°, δ81.00000°, λ-179.00000°. NP2:ϕ_s206.00000°, δ89.00000°, λ-9.00000°. Principal axes: T 1.7730, Plg6.0000°, Azm251.0000°; N -0.1470, Plg81.0000°, Azm22.0000°; P -1.6230, Plg7.0000°, Azm160.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 02 22:37:37.9±0.3**, 21°.45S**±0°.05×**170°.33E**±0°.04**, h10**km**, n523, σ1s.71**/505**, mb5.3**/120**, MS4.9**/49**, 54C-39D, Fault plane solution: NP1:**ϕ_s3.57792°**,** δ72.11389°**,** λ-8.31124°. **NP2:**ϕ_s96.14685°**,** δ82.09309°**,** λ-161.93633°. **Principal axes:** T Plg6.8862°, Azm228.7674°**;** N Plg70.3346°, Azm119.0160°**;** P Plg18.3272°, Azm321.0601°**;**

Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	3.66	260	Pn	Pn	22 38 33.6	-1.1
	25nm,0.3s,baz=56,slow=5.6,SNR=361						
DZM				LR	LR	22 39 05.3	
	comp=Z,5µm,21.9s,baz=140,slow=24						
DZM				Sn	Sn	22 39 15.7	-2.4
	77nm,0.3s,baz=322,slow=22,SNR=14						
DZM	Mont Dzumac	3.66	260	*e*Pn	Pn	22 38 33.4	-1.3
	5µm,1.6s						
DZM				*e*Sn	Sn	22 39 15.0	-3.1
	3µm,1.4s						
DZM				*e*LR	LR	22 39 22.5	
	comp=Z,51µm,23.7s						
DZM	Mont Dzumac	3.66	260	Pn	Pn	22 38 34.4	-0.3
SANVU	Saraoutou	6.67	333	Pn	Pn	22 39 15.8	-0.1
MSVF	Nonsavu	8.16	64	P	Pn	22 39 37.8	+1.2
MSVF	Nonsavu	8.16	64	Pn	Pn	22 39 37.8	+1.2
RAO	Raoul Island	13.16	129	LR	LR	22 44 06.0	
	comp=Z,3µm,21.4s,baz=307,slow=29						
OUZ	Omahuta	14.02	169	Pn	Pn	22 40 58.5	+1.9
HNR	Honiara	15.57	319	Pn	Pn	22 41 14.2	-3.5
	16nm,0.3s,baz=180,slow=7.1,SNR=1.4						
HNR				LR	LR	22 46 13.3	
	comp=Z,2µm,19.6s,baz=159,slow=34						
HNR	Honiara	15.57	319	P	Pn	22 41 16.5	-1.2
HNR				pmax	pmax		
	comp=Z,350nm,1.0s						
HNR	Honiara	15.57	319	Pn	Pn	22 41 16.5	-1.2
HIZ	Hauiti	17.45	168	P	P	22 41 44.2	+1.6
HIZ				IAmb	IAmb	22 41 50.9	
	comp=Z,553nm,1.4s						
URZ	Urewera	17.74	162	P	P	22 41 47.7	+1.8
	comp=Z,0.2nm,0.3s,baz=360,slow=5.4,SNR=17						
URZ				LR	LR	22 47 13.7	
	comp=Z,6µm,20.1s,baz=30,slow=32						
URZ	Urewera	17.74	162	P	P	22 41 47.6	+1.8
EIDS	Eidsvold	18.09	254	P	P	22 41 52.0	+2.2
	baz=18,SNR=11						
EIDS	Eidsvold	18.09	254	P	P	22 41 51.2	+1.4
EIDS				IAmb	IAmb	22 42 01.7	
	comp=Z,574nm,1.8s						
BKZ	Black Stump Fm	18.43	165	P	Pn	22 41 55.6	+2.1
AFI	Afiamalu	18.62	69	P	P	22 41 50.8	-4.9
	comp=Z,1.5nm,0.3s,baz=38,slow=21,SNR=4.7						
AFI				LR	LR	22 47 47.4	
	comp=Z,3µm,20.4s,baz=258,slow=33						
AFI	Afiamalu	18.62	69	P	P	22 41 51.7	-4.0
AFI				pmax	pmax		
	comp=Z,225nm,1.2s						
AFI	Afiamalu	18.62	69	P	P	22 41 51.7	-4.0
ARMA	Armidale	19.02	238	P	Pn	22 42 01.4	+0.5
	baz=19,SNR=13						
ARMA	Armidale	19.02	238		Pn	22 42 03.1	+2.2
ARMA				IAmb	IAmb	22 42 11.4	
	comp=Z,561nm,1.8s						
QRZ	Quartz Range	19.41	175	P	Pn	22 42 07.4	+2.1
BFZ	Birch Farm	19.82	167	P	P	22 42 08.5	-0.2
BFZ				IAmb	IAmb	22 42 30.9	
	comp=Z,297nm,1.5s						
NNZ	Nelson	19.88	173	P	Pn	22 42 11.3	+0.5
TUWZ	Tuamarina	20.15	172	P	P	22 42 13.4	+1.1
BHW	Baring Head	20.26	170	P	Pn	22 42 15.2	-0.2
RMQ	Roma	20.33	252	P	Pn	22 42 17.1	+0.7
	baz=20,SNR=12						
MSWZ	Moikau Station	20.34	169	P	P	22 42 14.3	0.0
THZ	Tophouse	20.37	174	P	P	22 42 16.2	+1.5
THZ				IAmb	IAmb	22 42 31.7	
	comp=Z,341nm,1.6s						
PLWZ	Palliser	20.48	169	P	P	22 42 16.2	+0.2
MGCD	Mangrove Creek	20.67	231	P	Pn	22 42 19.7	-0.5
	baz=21,SNR=9.4						
RIV	Riverview	20.94	230	P	Pn	22 42 23.5	0.0
	baz=21						
KHZ	Kahutara	21.08	173	P	P	22 42 24.3	+2.0
KHZ				IAmb	IAmb	22 42 34.8	
	comp=Z,210nm,1.1s						
LTZ	Lake Taylor	21.33	176	P	P	22 42 27.0	+1.9
LTZ				IAmb	IAmb	22 42 43.7	
	comp=Z,218nm,1.3s						
OXZ	Oxford	21.86	177	P	P	22 42 32.2	+1.5
OXZ				IAmb	IAmb	22 42 38.6	
	comp=Z,124nm,0.9s						
RPZ	Rata Peaks	22.21	179	P	P	22 42 34.0	-0.5
	comp=Z,36nm,1.0s,baz=27,slow=7.7,SNR=4.4						
RPZ				LR	LR	22 50 39.6	
	comp=Z,3µm,18.7s,baz=4.0,slow=35						
RPZ	Rata Peaks	22.21	179	P	P	22 42 35.9	+1.4
CNB	Canberra Magne	22.98	229	P	P	22 42 45.0	+2.1
	baz=23,SNR=15						
YNG	Young	23.17	232	P	P	22 42 47.0	+2.2
	baz=23,SNR=8.5						
CAN	Canberra	23.24	229	P	P	22 42 46.3	+0.8
CAN				pmax	pmax		
	comp=Z,205nm,1.3s						
CAN	Canberra	23.24	229	P	P	22 42 46.2	+0.8
CAN				IAmb	IAmb	22 43 03.8	
	comp=Z,205nm,1.3s						
DCZ	Deep Cove	24.09	185	P	P	22 42 56.0	+2.5
DCZ				IAmb	IAmb	22 43 05.7	
	comp=Z,109nm,1.0s						
CMSA	Cobar Meteorol	24.18	240	P	P	22 42 55.3	+0.7
	baz=24,SNR=61						
QLP	Quilpie	24.36	253	P	P	22 42 56.4	+0.2
	baz=24,SNR=14						
MTSU	Mount Surprise	24.69	273	P	P	22 42 59.1	-0.2
	baz=25,SNR=39						
PMG	Port Moresby	25.30	295	P	P	22 43 03.5	-1.3
	comp=Z,60nm,0.9s,baz=132,slow=8.7,SNR=7.5						
PMG				LR	LR	22 51 25.3	
	comp=Z,3µm,18.8s,baz=112,slow=33						
PMG	Port Moresby	25.30	295	*de*P	P	22 43 05.0	+0.2
PMG				pmax	pmax		
	comp=Z,218nm,1.3s						
PMG	Port Moresby	25.30	295	P	P	22 43 05.1	+0.2
TOO	Toolangi	26.81	228	P	P	22 43 19.3	+0.8
	baz=27,SNR=5.0						
TOO	Toolangi	26.81	228	P	P	22 43 19.7	+1.3
TOO				pmax	pmax		
	comp=Z,94nm,1.4s						
TOO	Toolangi	26.81	228	P	P	22 43 19.7	+1.3
TOO				IAmb	IAmb	22 43 45.0	
	comp=Z,94nm,1.4s						
COEN	Coen	26.89	282	P	P	22 43 19.2	-0.1
STKA	Stephens Creek	27.62	242	P	P	22 43 26.4	+0.6
	baz=28,SNR=8.6						
STKA	Stephens Creek	27.62	242	P	P	22 43 26.0	+0.3
	comp=Z,31nm,0.9s,baz=76,slow=10,SNR=24						
STKA				LR	LR	22 54 23.9	
	comp=Z,4µm,18.1s,baz=71,slow=36						
STKA	Stephens Creek	27.62	242	*ce*P	P	22 43 26.2	+0.5
STKA	Stephens Creek	27.62	242	P	P	22 43 26.1	+0.3
RAR	Rarotonga	27.83	95	P	P	22 43 27.1	-0.6
	comp=Z,16nm,1.0s,baz=326,slow=3.6,SNR=2.3						
RAR				LR	LR	22 52 12.1	
	comp=Z,1µm,21.0s,baz=260,slow=31						
QIS	Mount Isa	28.68	266	P	P	22 43 34.5	-0.8
	baz=29,SNR=7.5						
HTT	Hallett	30.20	240	P	P	22 43 48.6	-0.1
	baz=30,SNR=15						
BBOO	Buckleboo	32.40	242	P	P	22 44 08.0	0.0
	baz=32,SNR=10						
BBOO	Buckleboo	32.40	242	IAmb	IAmb	22 44 11.5	
	comp=Z,43nm,0.9s						
WR0	Warramunga Arr	33.47	266	P	P	22 44 15.2	-2.3
WB0	Warramunga Arr	33.63	266	P	P	22 44 17.0	-2.0
WB2	Warramunga Arr	33.65	266	P	P	22 44 16.7	-2.4
WRAB	Tennant Creek	33.65	266	*c i*P	P	22 44 16.9	-2.2
WRAB				pmax	pmax		
	comp=Z,82nm,1.0s						
WRAB	Tennant Creek	33.65	266	P	P	22 44 17.0	-2.1
AS31	Alice Springs	33.65	259	P	P	22 44 17.5	-1.7
ASAR	Alice Springs	33.65	259	P	P	22 44 17.9	-1.2
	comp=Z,70nm,0.9s,baz=84,slow=8.9,SNR=160						
ASAR				PcP	PcP	22 46 59.7	+0.4
	comp=Z,2.5nm,0.9s,baz=95,slow=3.8,SNR=2.1						
ASAR				LR	LR	22 57 36.0	
	comp=Z,3µm,20.9s,baz=89,slow=36						
ASAR	Alice Springs	33.65	259	P	P	22 44 16.9	-2.3
WRA	Warramunga Arr	33.66	266	P	P	22 44 16.9	-2.3
	comp=Z,56nm,0.9s,baz=95,slow=9.1,SNR=37						
WRA				PcP	PcP	22 47 00.9	+1.7
	comp=Z,1.9nm,0.9s,baz=100,slow=2.6,SNR=2.2						
WRA				LR	LR	22 58 01.4	
	comp=Z,6µm,19.6s,baz=100,slow=36						
WRA	Warramunga Arr	33.66	266	P	P	22 44 16.2	-3.0
JAY	Jayapura	34.42	299	P	P	22 44 30.0	+4.1
JAY				pmax	pmax		
	comp=Z,82nm,1.1s						
JAY	Jayapura	34.42	299	P	P	22 44 26.4	+0.5
	comp=Z,527nmcomp=Z,51nm,1.1s						
GENI	Genyem	34.82	298	P	P	22 44 28.5	-0.7
	comp=Z,3µmcomp=Z,204nm,1.3s						
SMPI	Sarmi	36.36	298	P	P	22 44 41.2	-1.3
	comp=Z,9µmcomp=Z,34nm,1.2s						
KDU	Kakadu	37.14	277	P	P	22 44 47.2	-2.0
	baz=37,SNR=5.0						
PPT2	Papeete2	37.91	91	*e*S	S	22 50 46.1	-1.6
	comp=Z,383nm,25.0s						
PPT2				*e*LQ	LQ	22 53 32.2	
	comp=Z,7µm,27.8s						
PPT2				*e*LR	LR	22 55 08.4	
	comp=Z,4µm,26.0s,baz=256						
PPT	Papeete	37.92	91	LR	LR	22 56 50.4	
	comp=Z,904nm,19.6s,baz=256,slow=30						
MTN	Manton Dam	38.33	276	P	P	22 44 57.8	-1.5
	baz=38,SNR=6.1						
MTN	Manton Dam	38.33	276	IAmb	IAmb	22 45 09.2	
	comp=Z,50nm,0.7s						
FORT	Forrest	38.88	247	IAmb	IAmb	22 45 10.5	
	comp=Z,169nm,1.5s						
H11S2	WAKE ISLAND Hy	39.85	355	T	T	23 27 23.4	
	baz=171						
H11S3	WAKE ISLAND Hy	39.86	355	T	T	23 27 34.4	
	baz=171						
H11S1	WAKE ISLAND Hy	39.87	355	T	T	23 27 45.8	
	baz=171						
H11N1	WAKE ISLAND Hy	41.05	355	T	T	23 28 37.9	
	baz=180						
H11N3	WAKE ISLAND Hy	41.05	355	T	T	23 29 15.7	
	baz=180						
H11N2	WAKE ISLAND Hy	41.07	355	T	T	23 28 53.5	
	baz=180						
FAKI	Fak Fak	41.34	291	P	P	22 45 21.9	-2.4
FAKI				IAmb	IAmb	22 45 36.5	
	comp=Z,112nm,1.2s						
FAKI	Fak Fak	41.34	291	P	P	22 45 22.3	-2.0
	comp=Z,92nm,1.1s						
FITZ	Fitzroy Crossi	42.08	266	P	P	22 45 30.0	-0.3
	baz=42,SNR=46						
SWI	Sorong	43.23	293	P	P	22 45 39.9	+0.2
SWI				pmax	pmax		
	comp=Z,87nm,1.3s						
SWI	Sorong	43.23	293	P	P	22 45 38.1	-1.6
	comp=Z,86nm,1.3s						
KMBL	Kambalda	44.20	247	P	P	22 45 46.6	-0.7
	baz=44,SNR=18						
SOEI	Soe	45.70	277	P	P	22 45 57.4	-2.2
	comp=Z,1µmcomp=Z,75nm,1.1s						
NLAI	Namlea	45.73	287	P	P	22 45 57.9	-1.8
	comp=Z,4µmcomp=Z,60nm,1.4s						
BATI	Baumata	46.11	277	P	P	22 46 02.4	-0.3
	comp=Z,42nm,1.5s						
MEEK	Meekatharra	47.25	253	P	P	22 46 10.3	-1.3
	baz=47,SNR=19						
SANI	Sanana	47.25	288	P	P	22 46 10.5	-1.2
	comp=Z,2µmcomp=Z,115nm,1.6s						
KLBR	Kellerberrin	47.73	246	P	P	22 46 14.3	-0.9
	baz=48,SNR=13						
MMRI	Maumere	47.97	278	P	P	22 46 14.1	-3.2
	comp=Z,4µmcomp=Z,52nm,1.0s						
NWAO	Narrogin (SRO)	48.15	245	P	P	22 46 17.8	-0.7
	baz=48,SNR=6.8						
NWAO	Narrogin (SRO)	48.15	245	P	P	22 46 17.4	-1.1
NWAO				pmax	pmax		
	comp=Z,100nm,1.0s						
NWAO	Narrogin (SRO)	48.15	245	P	P	22 46 17.4	-1.1
EDFI	Ende, Flores	48.44	277	P	P	22 46 19.7	-1.3
	comp=Z,15nm,1.3s						
BLDU	Ballidu	48.65	248	P	P	22 46 21.3	-1.0
	baz=49,SNR=11						
BASI	Baing, Sumba	48.96	275	P	P	22 46 23.8	-1.1
	comp=Z,2µmcomp=Z,165nm,1.4s						
MUN	Mundaring	49.03	246	P	P	22 46 24.5	-0.7
	baz=49,SNR=6.5						
TAOE	Nuku Hiva Isla	49.22	83	*e*LR	LR	23 00 23.2	
	comp=Z,4µm,26.9s,baz=254						
MORW	Morawa	49.33	250	P	P	22 46 26.6	-0.9
	baz=49,SNR=9.1						
MORW	Morawa	49.33	250	P	P	22 46 26.7	-0.9
MNI	Manado	49.93	291	P	P	22 46 32.3	0.0
MNI				pmax	pmax		
	comp=Z,115nm,0.9s						
RKT	Rikitea	50.39	103	*e*LR	LR	23 00 54.9	
	comp=Z,1µm,29.5s						
LUWI	Luwuk	50.57	287	P	P	22 46 36.1	-1.0
	comp=Z,123nm,1.2s						
H01W1	Cape Leeuwin H	50.70	242	P	P	22 46 35.8	-1.8
	baz=93,slow=9.0,SNR=6.4						
H01W3	Cape Leeuwin H	50.72	242	P	P	22 46 37.2	-0.6
	baz=93,slow=9.0,SNR=6.7						
H01W2	Cape Leeuwin H	50.72	242	P	P	22 46 37.4	-0.4
	baz=93,slow=9.0,SNR=6.5						
BKSI	Bulukumba	51.16	281	P	P	22 46 39.9	-1.7
BNSI	Bone	51.54	282	P	P	22 46 44.9	+0.5
	comp=Z,880nmcomp=Z,62nm,1.4s						
KAPI	Kappang	51.62	281	P	P	22 46 43.9	-1.1
KAPI				pmax	pmax		
	comp=Z,55nm,1.0s						
KAPI	Kappang	51.62	281	P	P	22 46 43.9	-1.1
KAPI				IAmb	IAmb	22 46 51.4	
	comp=Z,55nm,0.9s						
APSI	Ampana	51.63	287	P	P	22 46 44.3	-0.8
	comp=Z,975nmcomp=Z,76nm,1.4s						
MRSI	Marisa	52.00	288	P	P	22 46 46.6	-1.3
	comp=Z,42nm,1.2s						
SPSI	Sidrap Palu	52.02	282	P	P	22 46 46.4	-1.6
	comp=Z,34nm,1.1s						
PLAI	Plampang	52.03	276	P	P	22 46 47.9	-0.2
	comp=Z,710nmcomp=Z,52nm,1.2s						
MPSI	Mapaga	53.75	287	P	P	22 46 59.1	-1.7

	comp=Z,860nmcomp=Z,42nm,1.1s						
SRBI	**Singaraja**	**54.66**	**275**	P	**P**	**22 47 06.2**	**-1.3**
JAGI	**Jajag, Banyuwa**	**55.52**	**274**	P	**P**	**22 47 13.1**	**-0.5**
JAGI				IAmb	IAmb	22 47 19.0	
	comp=Z,41nm,0.9s						
VNDA	**Vanda**	**56.27**	**182**	P	**P**	**22 47 20.2**	**+2.1**
	comp=Z,5.6nm,1.0s,baz=334,slow=4.9,SNR=3.2						
VNDA				LR	LR	23 08 30.0	
	comp=Z,1µm,19.6s,baz=19,slow=33						
KKM	**Kota Kinabalu**	**59.67**	**291**	P	**P**	**22 47 42.5**	**-0.5**
SBUM	**Sibu**	**61.56**	**285**	P	**P**	**22 47 57.1**	**+1.3**
SBUM				IAmb	IAmb	22 48 10.8	
	comp=Z,50nm,1.5s						
KSM	**Kuching**	**62.87**	**283**	P	**P**	**22 48 06.0**	**+1.4**
MJAR	**Matsushiro Arr**	**65.17**	**332**	P	**P**	**22 48 16.7**	**-2.6**
	comp=Z,3.8nm,0.9s,baz=164,slow=7.4,SNR=8.3						
MJAR				LR	LR	23 12 13.7	
	comp=Z,408nm,21.9s,baz=145,slow=32						
MJAR	**Matsushiro Arr**	**65.17**	**332**	P	**P**	**22 48 21.0**	**+1.6**
MAJO	**Matsushiro**	**65.18**	**332**	P	**P**	**22 48 20.7**	**+1.4**
MAJO				pmax	pmax		
	comp=Z,18nm,1.0s						
MAJO	**Matsushiro**	**65.18**	**332**	P	**P**	**22 48 20.7**	**+1.4**
MAT	**Matsushiro**	**65.18**	**332**	P	**P**	**22 48 16.8**	**-2.5**
MAT				S	**S**	**22 56 59.6**	**-2.8**
NACB	**Ninganchiao**	**65.60**	**311**	P	**P**	**22 48 24.9**	**+2.6**
SSLB	**Suanglung**	**65.81**	**310**	P	**P**	**22 48 23.0**	**-0.7**
SSLB				IAmb	IAmb	22 48 31.5	
	comp=Z,25nm,0.8s						
JNU	**Nakatsue**	**66.05**	**324**	P	**P**	**22 48 24.7**	**-0.4**
SSE	**Sheshan**	**70.37**	**316**	P	**P**	**22 48 53.8**	**+1.6**
SSE				S	**S**	**22 58 05.5**	**+0.7**
SSE				pmax	pmax		
	comp=Z,4.0nm,1.2s						
SSE				pmax	pmax		
	comp=Z,70nm,4.8s						
SSE				LR	LR		
	comp=Z,130nm,21.8s						
SSE				LR	LR		
	comp=Z,170nm,17.9s						
TJN	**Taejon**	**70.40**	**324**	⇑*e*P	**P**	**22 48 51.6**	**-0.6**
KSRS	**Korea Array**	**70.90**	**325**	P	**P**	**22 48 54.0**	**-1.2**
	comp=Z,1.2nm,0.6s,baz=155,slow=5.6,SNR=3.8						
KSRS				LR	LR	23 18 47.8	
	comp=Z,246nm,19.1s,baz=136,slow=35						
KSRS	**Korea Array**	**70.90**	**325**	P	**P**	**22 48 54.0**	**-1.2**
KSAR	**Wonju Array Be**	**70.91**	**325**	P	**P**	**22 48 56.0**	**+0.7**
KSAR	**Wonju Array Be**	**70.91**	**325**	P	**P**	**22 48 56.0**	**+0.7**
QIZ	**Qiongzhong**	**71.56**	**300**	P	**P**	**22 48 59.4**	**-0.3**
QIZ				S	**S**	**22 58 21.0**	**+1.9**
QIZ				LR	LR		
	comp=Z,460nm,22.1s						
QIZ				LR	LR		
	comp=Z,390nm,20.6s						
QIZ				LR	LR		
	comp=Z,450nm,29.9s						
NJ2	**Nanjing**	**72.50**	**316**	*e*P	**P**	**22 49 08.5**	**+3.5**
NJ2				pmax	pmax		
	comp=Z,15nm,1.3s						
IPM	**Ipoh**	**72.54**	**282**	P	**P**	**22 49 07.0**	**+1.3**
KULM	**Kulim**	**73.21**	**283**	P	**P**	**22 49 11.8**	**+2.1**
KULM				IAmb	IAmb	22 49 18.4	
	comp=Z,49nm,1.3s						
KULM	**Kulim**	**73.21**	**283**	P	**P**	**22 49 10.0**	**+0.3**
ADK	**Adak**	**73.90**	**8**	P	**P**	**22 49 15.6**	**+2.8**
ADK				pmax	pmax		
	comp=Z,88nm,1.1s						
ADK	**Adak**	**73.90**	**8**	P	**P**	**22 49 15.6**	**+2.8**
USA0B	**Ussuriysk Arra**	**74.16**	**332**	⇑*e*P	**P**	**22 49 13.8**	**-0.7**
USA0B	**Ussuriysk Arra**	**74.16**	**332**	P	**P**	**22 49 17.5**	**+3.0**
USRK	**Ussuriysk Ar.**	**74.16**	**332**	P	**P**	**22 49 12.8**	**-1.7**
	comp=Z,2.0nm,0.8s,baz=174,slow=5.5,SNR=3.1						
USRK				LR	LR	23 17 55.0	
	comp=Z,440nm,21.4s,baz=138,slow=33						
USRK	**Ussuriysk Ar.**	**74.16**	**332**	P	**P**	**22 49 14.5**	**0.0**
GSI	**Gunungsitoli**	**74.46**	**278**	P	**P**	**22 49 16.2**	**-0.8**
WHN	**Wuhan**	**74.58**	**312**	⇓P	P	22 49 21.4	+4.1
PETK	**Petropavlovsk-**	**75.05**	**352**	P	**P**	**22 49 18.1**	**-1.4**
	comp=Z,11nm,1.1s,baz=153,slow=4.4,SNR=2.8						
PETK				LR	LR	23 15 21.0	
	comp=Z,878nm,20.9s,baz=163,slow=30						
PETK	**Petropavlovsk-**	**75.05**	**352**	P	**P**	**22 49 21.2**	**+1.7**
DL2	**Dalian**	**75.39**	**323**	P	P	22 49 26.0	+4.2
DL2				*e*S	**S**	**22 59 05.9**	**+4.2**
DL2				pmax	pmax		
	comp=Z,48nm,1.0s						
DL2				pmax	pmax		
	comp=Z,240nm,4.9s						
DL2				LR	LR		
	comp=Z,250nm,22.9s						
DL2				LR	LR		
	comp=Z,490nm,24.5s						
DL2				LR	LR		
	comp=Z,650nm,22.6s						
MDJ	**Mudanjiang**	**75.55**	**331**		pP	22 49 26.2	+1.1
TIA	**Tai'an**	**76.27**	**318**	P	**P**	**22 49 25.4**	**-1.5**
TIA				pmax	pmax		
	comp=Z,19nm,1.4s						
TIA				LR	LR		
	comp=Z,260nm,19.1s						
TIA				LR	LR		
	comp=Z,220nm,19.1s						
TIA				LR	LR		
	comp=Z,250nm,15.2s						
CN2	**Changchun**	**76.87**	**328**	*e*P	**P**	**22 49 33.8**	**+3.7**
CN2				*e*S	**S**	**22 59 17.2**	**-0.6**
CN2				pmax	pmax		
	comp=Z,20nm,1.1s						
CN2				pmax	pmax		
	comp=Z,360nm,4.4s						
CN2				LR	LR		
	comp=Z,520nm,22.0s						
CN2				LR	LR		
	comp=Z,560nm,22.0s						
CN2				LR	LR		
	comp=Z,590nm,22.0s						
ENH	**Enshi**	**77.86**	**309**	IAmb	IAmb	22 49 44.9	
	comp=Z,47nm,1.1s						
GYA	**Guiyang**	**77.92**	**305**	⇓P	P	22 49 40.8	+4.3
GYA				sP	PcP	22 49 48.8	+2.4
GYA				S	**S**	**22 59 31.6**	**+1.4**
GYA				pmax	pmax		
	comp=Z,13nm,1.0s						
GYA				pmax	pmax		
	comp=Z,130nm,4.2s						
GYA				LR	LR		
	comp=Z,280nm,32.3s						
KLR	**Kul'dur**	**78.30**	**335**	⇓*e*P	**P**	**22 49 36.9**	**-1.1**
KLR				pmax	pmax		
	comp=Z,3.0nm,1.0s						
PHIT	**Phitsanulok**	**78.52**	**294**	P	P	22 49 47.1	+7.2
UTTA	**Uttaradit**	**78.65**	**294**	P	**P**	**22 49 42.2**	**+1.6**
BJI	**Beijing**	**79.29**	**321**	P	**P**	**22 49 46.5**	**+2.9**
BJI				S	**S**	**22 59 45.3**	**+1.3**
BJI				pmax	pmax		
	comp=Z,5.0nm,0.5s						
BJI				LR	LR		
	comp=Z,380nm,20.2s						
BJI				LR	LR		
	comp=Z,430nm,19.3s						
BJI				LR	LR		
	comp=Z,680nm,25.6s						
SUKH	**Sukhothai**	**79.32**	**294**	P	**P**	**22 49 46.2**	**+1.9**
LAMP	**Lampang**	**79.78**	**295**	P	**P**	**22 49 48.8**	**+2.0**
BELA	**Belgrano 2**	**79.81**	**175**	P	**P**	**22 49 43.9**	**-2.1**
CM36	**Chiang Mai Arr**	**80.23**	**294**	P	**P**	**22 49 50.0**	**+0.7**
CM35	**Chiang Mai Arr**	**80.26**	**294**	P	**P**	**22 49 50.0**	**+0.6**
CM04	**Chiang Mai Arr**	**80.28**	**294**	P	**P**	**22 49 51.0**	**+1.5**
CM09	**Chiang Mai Arr**	**80.29**	**294**	P	**P**	**22 49 51.0**	**+1.4**
KMI	**Kunming**	**80.30**	**302**	⇓P	**P**	**22 49 50.9**	**+1.1**
KMI				pP	pwP	22 49 55.4	0.0
KMI				sP	PcP	22 49 58.5	+1.6
KMI				S	**S**	**22 59 54.4**	**-1.5**
KMI				SS	**SS**	**23 05 08.8**	**+1.2**
KMI				pmax	pmax		
	comp=Z,13nm,0.8s						
KMI				pmax	pmax		
	comp=Z,140nm,3.5s						
KMI				LR	LR		
	comp=Z,230nm,28.9s						
KMI				LR	LR		
	comp=Z,160nm,23.9s						
KMI				LR	LR		
	comp=Z,360nm,25.6s						
KMI	**Kunming**	**80.30**	**302**	P	**P**	**22 49 50.3**	**+0.5**
KMI				pmax	pmax		
	comp=Z,95nm,1.4s						
KMI	**Kunming**	**80.30**	**302**	P	**P**	**22 49 50.3**	**+0.5**
CM01	**Chiang Mai Arr**	**80.31**	**294**	P	**P**	**22 49 51.0**	**+1.3**
CM05	**Chiang Mai Arr**	**80.31**	**294**	P	**P**	**22 49 51.4**	**+1.7**
CM02	**Chiang Mai Arr**	**80.33**	**294**	P	**P**	**22 49 51.0**	**+1.2**
CM34	**Chiang Mai Arr**	**80.34**	**295**	P	**P**	**22 49 51.0**	**+1.2**
CM31	**Chiang Mai Arr**	**80.34**	**294**	P	P	22 49 55.7	+5.9
CM31	**Chiang Mai Arr**	**80.34**	**294**	P	**P**	**22 49 49.7**	**-0.1**
CMAR	**Chiang Mai Arr**	**80.34**	**294**	P	**P**	**22 49 48.9**	**-0.9**
	comp=Z,6.3nm,0.7s,baz=133,slow=4.2,SNR=28						
CMAR	**Chiang Mai Arr**	**80.34**	**294**	*ce*P	**P**	**22 49 51.2**	**+1.4**
CMAR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**80.34**	**294**	P	**P**	**22 49 48.6**	**-1.2**
XAN	**Xi'an**	**80.35**	**312**	P	**P**	**22 49 49.6**	**0.0**
XAN				pmax	pmax		
	comp=Z,10.0nm,1.0s						
XAN				pmax	pmax		
	comp=Z,140nm,4.5s						
XAN				LR	LR		
	comp=Z,360nm,21.1s						
XAN				LR	LR		
	comp=Z,170nm,17.2s						
XAN				LR	LR		
	comp=Z,430nm,24.0s						
CM15	**Chiang Mai Arr**	**80.35**	**294**	P	**P**	**22 49 52.0**	**+2.1**
CM13	**Chiang Mai Arr**	**80.35**	**294**	P	**P**	**22 49 51.0**	**+1.1**
CMMT	**Chiang Mai**	**80.49**	**294**	P	**P**	**22 49 50.7**	**0.0**
CHTO	**Chiang Mai**	**80.50**	**294**	P	**P**	**22 49 51.7**	**+1.0**
CHTO				pmax	pmax		
	comp=Z,30nm,1.0s						
CHTO	**Chiang Mai**	**80.50**	**294**	P	**P**	**22 49 51.7**	**+1.0**
CM33	**Chiang Mai Arr**	**80.50**	**294**	P	**P**	**22 49 51.0**	**+0.3**
CM32	**Chiang Mai Arr**	**80.51**	**294**	P	**P**	**22 49 52.0**	**+1.3**
CD2	**Chengdu**	**82.39**	**307**	*e*P	P	22 50 04.8	+4.3
CD2				S	**S**	**23 00 20.2**	**+3.3**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CD2				LR	LR		
	comp=Z,410nm,19.1s						
CD2				LR	LR		
	comp=Z,510nm,13.2s						
HHC	**Hu-ho-hao-te**	**82.56**	**319**	⇓*i*P	P	22 50 05.7	+4.5
HHC				pP	pwP	22 50 13.6	+6.7
HHC				S	**S**	**23 00 19.6**	**+1.2**
HHC				sS	ScS	23 00 32.7	-0.9
HHC				SS	**SS**	**23 05 44.2**	**+3.7**
HHC				pmax	pmax		
	comp=Z,20nm,1.4s						
HHC				pmax	pmax		
	comp=Z,230nm,6.0s						
HHC				LR	LR		
	comp=Z,280nm,18.2s						
HHC				LR	LR		
	comp=Z,320nm,19.8s						
HHC				LR	LR		
	comp=Z,580nm,19.0s						
SYO	**Syowa Base**	**83.10**	**196**	⇑*e*pP	pP	22 50 07.8	+1.7
BTO	**Baotou**	**83.36**	**318**	*e*P	**P**	**22 50 08.2**	**+2.8**
HIA	**Hailar**	**83.53**	**329**	⇑*e*P	**P**	**22 50 03.3**	**-2.7**
HIA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ZEA	**Zeya**	**83.58**	**336**	*e*P	P	22 50 10.4	+4.3
ZEA				pmax	pmax		
	comp=N,10.0nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,20nm,1.2s						
OHAK	**Old Harbor**	**84.10**	**19**	P	**P**	**22 50 09.2**	**+0.7**
KDAK	**Kodiak Island**	**84.78**	**19**	⇑*e*P	**P**	**22 50 09.8**	**-2.2**
KDAK				pmax	pmax		
	comp=Z,71nm,1.5s						
KDAK	**Kodiak Island**	**84.78**	**19**	P	**P**	**22 50 13.8**	**+1.8**
LZH	**Lanzhou**	**84.96**	**312**	*e*P	**P**	**22 50 15.1**	**+1.4**
LZH				pP	pwP	22 50 23.4	+4.0
LZH				sP	sP	22 50 27.7	+11
LZH				S	**S**	**23 00 49.7**	**+6.8**
LZH				sS	ScS	23 00 58.0	+4.3
LZH				pmax	pmax		
	comp=Z,32nm,1.2s						
LZH				pmax	pmax		
	comp=Z,190nm,5.7s						
SEY	**Seymchan**	**85.29**	**352**	P	**P**	**22 50 13.5**	**-1.0**
	comp=Z,2.2nm,0.8s,baz=108,slow=6.4,SNR=2.2						
SEY	**Seymchan**	**85.29**	**352**	⇑*e*P	**P**	**22 50 11.2**	**-3.3**
GAMB	**Gambell**	**86.10**	**8**	P	**P**	**22 50 19.3**	**+0.8**
GAMB				IAmb	IAmb	22 50 24.2	
	comp=Z,24nm,1.0s						
SCZ2	**Santa Cruz Isl**	**86.45**	**51**	P	**P**	**22 50 21.7**	**+0.7**
	baz=241						
SAO	**San Andreas Ge**	**86.51**	**48**	P	**P**	**22 50 21.5**	**+0.3**
SAO				pmax	pmax		
	comp=Z,14nm,1.0s						
SAO	**San Andreas Ge**	**86.51**	**48**	P	**P**	**22 50 21.5**	**+0.3**
PKM	**Mcpherson Peak**	**86.75**	**51**	P	**P**	**22 50 24.8**	**+2.2**
	baz=241						
NVL	**N'lazarevskaya**	**86.80**	**187**	*e*P	**P**	**22 50 20.6**	**-1.5**
NVL				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SMMC	**Simmler**	**86.83**	**50**	P	**P**	**22 50 24.6**	**+1.7**
	baz=241						
RSO	**Redoubt South**	**86.95**	**17**	P	**P**	**22 50 24.6**	**+1.5**
SNAA	**Sanae**	**87.00**	**182**	P	**P**	**22 50 21.5**	**-1.7**
SNAA	**Sanae**	**87.00**	**182**	⇑*e*P	**P**	**22 50 21.7**	**-1.5**
SNAA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
SNAA	**Sanae**	**87.00**	**182**	P	**P**	**22 50 21.2**	**-2.1**
SAIH	**SAIHA**	**87.10**	**295**	*e*P	**P**	**22 50 24.5**	**-0.1**
O02D	**Mt. Diablo Mer**	**87.33**	**45**	P	**P**	**22 50 25.6**	**+0.4**
	baz=239						
VNA3	**Neumayer Olymp**	**87.55**	**180**	P	**P**	**22 50 24.1**	**-1.8**
WDC	**Whiskeytown Da**	**87.70**	**45**	P	**P**	**22 50 26.4**	**-0.5**
WDC				pmax	pmax		
	comp=Z,29nm,1.3s						
WDC	**Whiskeytown Da**	**87.70**	**45**	P	**P**	**22 50 26.4**	**-0.5**
WDC				IAmb	IAmb	22 50 33.7	
	comp=Z,29nm,1.3s						
N02D	**Trinity Center**	**87.79**	**44**	P	**P**	**22 50 27.7**	**+0.3**
	baz=239						
VNA2	**Neumayer--Watz**	**87.86**	**181**	P	**P**	**22 50 24.8**	**-2.5**
	baz=191,slow=3.8						
ORV	**Oroville**	**87.87**	**46**	P	**P**	**22 50 26.3**	**-1.4**
ORV				pmax	pmax		
	comp=Z,13nm,1.1s						
ORV	**Oroville**	**87.87**	**46**	P	**P**	**22 50 26.3**	**-1.4**
CMB	**Columbia Colle**	**87.87**	**48**	P	**P**	**22 50 26.8**	**-1.1**
CMB				pmax	pmax		
	comp=Z,40nm,1.7s						
CMB	**Columbia Colle**	**87.87**	**48**	P	**P**	**22 50 26.8**	**-1.1**
CMB				IAmb	IAmb	22 50 44.4	
	comp=Z,40nm,1.7s						
M02C	**Callahan**	**87.91**	**44**	P	**P**	**22 50 28.3**	**+0.3**
	baz=239						
BFSC	**Mount Baldy Ra**	**88.01**	**52**	P	**P**	**22 50 28.5**	**-0.2**
	baz=242						
O03E	**Paynes Creek**	**88.04**	**45**	P	**P**	**22 50 28.0**	**-0.7**
	baz=240						
EDW2	**Edwards Air Fo**	**88.06**	**51**	P	**P**	**22 50 28.2**	**-0.6**
	baz=242						
ISA	**Isabella, Lake**	**88.08**	**50**	P	**P**	**22 50 29.0**	**0.0**
	baz=242						
ISA	**Isabella, Lake**	**88.08**	**50**	P	**P**	**22 50 28.8**	**-0.1**
ISA				pmax	pmax		
	comp=Z,25nm,1.2s						
ISA	**Isabella, Lake**	**88.08**	**50**	P	**P**	**22 50 28.8**	**-0.1**
ISA				IAmb	IAmb	22 50 38.7	
	comp=Z,25nm,1.1s						
VNA1	**Neumayer--Stat**	**88.14**	**180**	P	**P**	**22 50 32.4**	**+3.8**
YBH	**Yreka Blue Hor**	**88.18**	**44**	P	**P**	**22 50 28.5**	**-0.8**
	comp=Z,8.6nm,1.0s,baz=111,slow=7.3,SNR=4.4						
YBH	**Yreka Blue Hor**	**88.18**	**44**	P	**P**	**22 50 31.1**	**+1.8**
YBH				IAmb	IAmb	22 50 50.8	
	comp=Z,28nm,1.2s						
TTA	**Tatalina**	**88.20**	**15**	P	**P**	**22 50 31.4**	**+2.6**
TTA				pmax	pmax		
	comp=Z,11nm,1.0s						
TTA	**Tatalina**	**88.20**	**15**	P	**P**	**22 50 31.4**	**+2.6**
MONP2	**Monument Peak**	**88.32**	**54**	P	**P**	**22 50 30.4**	**+0.1**
	baz=243						
RC01	**Rabbit Creek A**	**88.32**	**18**	P	**P**	**22 50 30.5**	**+1.2**
	baz=217						
SUA	**Susitna One**	**88.33**	**18**	P	**P**	**22 50 31.2**	**+1.7**
SUA				IAmb	IAmb	22 50 42.5	
	comp=Z,19nm,1.2s						
IKP	**In-Ko-Pah, Jac**	**88.44**	**54**	P	**P**	**22 50 30.4**	**-0.4**
	baz=243						
HUMO	**Hull Mountain**	**88.47**	**43**	P	**P**	**22 50 29.5**	**-1.1**
HUMO				IAmb	IAmb	22 50 45.2	
	comp=Z,23nm,1.1s						
LRMC	**Laurel Mtn Rad**	**88.57**	**51**	P	**P**	**22 50 31.1**	**-0.2**
	baz=242						
PFO	**Pinyon Flats O**	**88.61**	**53**	LR	LR	23 24 02.6	
	comp=Z,375nm,18.1s,baz=242,slow=32						
PFO	**Pinyon Flats O**	**88.61**	**53**	P	**P**	**22 50 31.3**	**-0.3**
	baz=243						
PFO	**Pinyon Flats O**	**88.61**	**53**	⇑*e*P	**P**	**22 50 28.6**	**-3.0**
PFO				pmax	pmax		
	comp=Z,4.0nm,1.4s						
OMMB	**Old Mammoth Mi**	**88.63**	**49**	P	**P**	**22 50 31.0**	**-0.8**
OMMB				IAmb	IAmb	22 50 57.1	
	comp=Z,37nm,1.5s						
L04D	**Klamath Falls**	**88.69**	**43**	P	**P**	**22 50 31.9**	**+0.2**
	baz=239						
CWC	**Cottonwood Cre**	**88.73**	**50**	P	**P**	**22 50 32.5**	**+0.5**
	baz=242						
WAKR	**Walker**	**88.75**	**48**	IAmb	IAmb	22 50 39.1	
	comp=Z,24nm,1.2s						
BEKR	**Beckworth**	**88.79**	**46**	IAmb	IAmb	22 50 53.2	
	comp=Z,28nm,1.4s						
SWSC	**Sam W. Stewart**	**88.81**	**54**	P	**P**	**22 50 32.3**	**0.0**
	baz=243						
TEZP	**TEZPUR**	**88.97**	**299**	*e*P	**P**	**22 50 29.3**	**-3.9**
MPMC	**Manual Prospec**	**88.97**	**50**	P	**P**	**22 50 33.6**	**+0.3**
	baz=242						
GSC	**Goldstone, Bar**	**89.12**	**51**	P	**P**	**22 50 34.5**	**+0.6**
	baz=243						
BELC	**Belle Mtn. Jos**	**89.13**	**53**	P	**P**	**22 50 34.5**	**+0.5**
	baz=243						
ULN	**Ulaanbaatar**	**89.24**	**323**	⇓*e*P	**P**	**22 50 33.4**	**-0.8**
ULN				pmax	pmax		
	comp=Z,6.0nm,1.5s						
ULN	**Ulaanbaatar**	**89.24**	**323**	P	**P**	**22 50 35.2**	**+1.0**
HEC	**Hector,Ludlow**	**89.25**	**52**	P	**P**	**22 50 34.5**	**0.0**
	baz=243						
LHV	**Little Huntoon**	**89.28**	**48**	IAmb	IAmb	22 50 55.9	
	comp=Z,38nm,1.5s						
YAK	**Yakutsk**	**89.28**	**342**	*i* P	**P**	**22 50 35.9**	**+2.1**
YAK				pmax	pmax		
	comp=Z,19nm,1.1s						
SHL	**Shillong**	**89.28**	**298**	IAmb	IAmb	22 50 41.1	
	comp=Z,24nm,1.2s						
PAHR	**Pah Rah Range**	**89.37**	**47**	IAmb	IAmb	22 50 56.0	
	comp=Z,24nm,1.2s						
GTA	**Gaotai**	**89.38**	**313**	⇑P	**P**	**22 50 35.5**	**+0.5**
GTA				S	**S**	**23 01 20.2**	**-5.2**
GTA				sS	ScS	23 01 39.3	+9.2
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,49nm,6.5s						
GTA				LR	LR		
	comp=Z,230nm,18.2s						
GTA				LR	LR		
	comp=Z,390nm,18.2s						
GTA				LR	LR		
	comp=Z,490nm,17.8s						
BC3	**Big Chuckawall**	**89.38**	**53**	P	**P**	**22 50 34.7**	**-0.5**
	baz=244						
NVAR	**Mina Array Bea**	**89.50**	**48**	P	**P**	**22 50 34.7**	**-1.1**
	comp=Z,2.5nm,1.0s,baz=226,slow=8.3,SNR=9.4						
NVAR	**Mina Array Bea**	**89.50**	**48**	P	**P**	**22 50 34.3**	**-1.5**
GLA	**Glamis**	**89.59**	**54**	P	**P**	**22 50 37.4**	**+1.4**
	baz=244						
SONM	**Songino Array**	**89.59**	**323**	P	**P**	**22 50 35.1**	**-0.8**
	comp=Z,9.2nm,1.2s,baz=138,slow=3.9,SNR=19						
SONM				LR	LR	23 32 42.2	
	comp=Z,178nm,18.0s,baz=112,slow=37						
SONM	**Songino Array**	**89.59**	**323**	P	**P**	**22 50 35.0**	**-0.8**
SONM				pmax	pmax		
	comp=Z,13nm,1.4s						
SONM	**Songino Array**	**89.59**	**323**	P	**P**	**22 50 35.0**	**-0.8**
NV11	**Mina Array Sit**	**89.61**	**48**	IAmb	IAmb	22 50 48.5	
	comp=Z,26nm,1.3s						
FURC	**Furnace Creek,**	**89.61**	**50**	P	**P**	**22 50 36.1**	**+0.2**
	baz=243						
GMRC	**Granite Mounta**	**89.73**	**52**	P	**P**	**22 50 37.3**	**+0.5**
	baz=244						
MOD	**Modoc Plateau**	**89.82**	**44**	IAmb	IAmb	22 50 49.3	
	comp=Z,28nm,1.2s						
IRM	**Iron Mountain**	**89.83**	**53**	P	**P**	**22 50 37.5**	**+0.4**
	baz=244						
J05D	**Fort Rock, OR**	**89.91**	**43**	P	**P**	**22 50 37.5**	**+0.1**
	baz=240						
TRF	**Thorofare Moun**	**90.07**	**17**	P	**P**	**22 50 37.7**	**0.0**
M24K	**Tolsona, Glenn**	**90.18**	**19**	P	**P**	**22 50 39.2**	**+1.0**
	baz=220						
N25K	**Chitina, Valde**	**90.28**	**20**	P	**P**	**22 50 39.4**	**+0.7**
	baz=221						
GLB	**Gilahina Butte**	**90.41**	**20**	P	**P**	**22 50 40.9**	**+1.7**
RND	**Reindeer**	**90.42**	**17**	IAmb	IAmb	22 50 58.0	
	comp=Z,25nm,1.2s						
BALM	**Baldy**	**90.59**	**21**	IAmb	IAmb	22 50 44.9	
	comp=Z,22nm,1.0s						
MCARA	**McCarthy VSAT**	**90.62**	**20**	P	**P**	**22 50 42.2**	**+2.1**
MCARA				IAmb	IAmb	22 50 50.4	
	comp=Z,32nm,1.1s						
PDMCI	**Parker Dam,Lak**	**90.65**	**53**	P	**P**	**22 50 41.0**	**+0.2**
	baz=244						
214A	**Organ Pipe Nat**	**90.66**	**56**	P	**P**	**22 50 41.5**	**+0.4**
	baz=245						
MCK	**McKinley**	**90.66**	**17**	P	**P**	**22 50 40.0**	**-0.3**
	baz=218						
E04D	**Cinebar**	**90.75**	**39**	P	**P**	**22 50 43.4**	**+2.3**
	baz=239						
BBB	**Bella Bella**	**90.77**	**33**	LR	LR	23 24 09.0	
	comp=Z,271nm,19.8s,baz=274,slow=31						
BWN	**Browne**	**90.87**	**16**	IAmb	IAmb	22 50 55.3	
	comp=Z,34nm,1.2s						
D03D	**Eldon**	**90.95**	**38**	P	**P**	**22 50 43.0**	**+1.0**
	baz=239						
WVOR	**Wild Horse Val**	**91.16**	**44**	IAmb	IAmb	22 51 05.0	
	comp=Z,24nm,1.1s						
W13A	**Hualapai Mount**	**91.18**	**53**	IAmb	IAmb	22 51 05.0	
	comp=Z,22nm,1.4s						
MLY	**Manley**	**91.24**	**15**	P	**P**	**22 50 45.0**	**+2.0**
	baz=216						
NEA2	**Nenana**	**91.31**	**16**	P	**P**	**22 50 43.8**	**+0.5**
	baz=217						
PRN	**Pahroc Range**	**91.33**	**50**	P	**P**	**22 50 43.8**	**-0.4**
PRN				IAmb	IAmb	22 50 59.9	
	comp=Z,21nm,1.0s						
R11A	**Troy Canyon, C**	**91.36**	**49**	P	**P**	**22 50 44.3**	**-0.1**
	baz=244						
WRH	**Wood River Hil**	**91.47**	**17**	P	**P**	**22 50 42.5**	**-1.5**
MENT	**Mentasta**	**91.55**	**19**	IAmb	IAmb	22 52 55.6	
	comp=Z,14nm,0.7s						
I23K	**Minto, Yukon-K**	**91.68**	**16**	P	**P**	**22 50 47.4**	**+2.5**
	baz=217						
HDA	**Harding Lake**	**91.73**	**17**	P	**P**	**22 50 46.5**	**+1.2**
	baz=219						
HDA	**Harding Lake**	**91.73**	**17**	P	**P**	**22 50 46.9**	**+1.7**
HDA				IAmb	IAmb	22 50 58.8	
	comp=Z,18nm,1.0s						
BOD	**Bodaibo**	**91.76**	**334**	*e*P	**P**	**22 50 48.2**	**+2.7**
BOD				pmax	pmax		
	comp=Z,15nm,1.8s						
A04D	**Lummi Island**	**91.78**	**38**	P	**P**	**22 50 48.0**	**+2.3**
	baz=239						
MDM	**Murphy Dome**	**91.82**	**16**	P	**P**	**22 50 47.5**	**+1.8**
MDM				IAmb	IAmb	22 50 55.2	
	comp=Z,17nm,1.2s						
COLA	**College**	**91.86**	**17**	⇑*e*P	**P**	**22 50 45.2**	**-0.5**
COLA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
B05A	**Bryant**	**91.89**	**38**	P	**P**	**22 50 48.4**	**+2.1**
	baz=240						
IL31		**92.03**	**17**	IAmb	IAmb	22 50 56.3	
	comp=Z,16nm,1.1s						
ILAR	**Eielson Array**	**92.03**	**17**	P	**P**	**22 50 44.8**	**-1.8**
	comp=Z,1.3nm,0.9s,baz=234,slow=4.8,SNR=5.2						
ILAR				LR	LR	23 30 53.0	
	comp=Z,203nm,18.3s,baz=234,slow=35						
ILAR	**Eielson Array**	**92.03**	**17**	P	**P**	**22 50 46.4**	**-0.3**
HYT	**Haines Junctio**	**92.12**	**23**	IAmb	IAmb	22 50 52.3	
	comp=Z,22nm,1.0s						
POKR	**Poker Plat Res**	**92.16**	**17**	P	**P**	**22 50 48.8**	**+1.6**
	baz=219						
SCRK	**Sand Creek**	**92.25**	**18**	P	**P**	**22 50 48.0**	**+0.3**
	baz=222						
G08A	**Pilot Rock**	**92.31**	**42**	IAmb	IAmb	22 50 57.1	
	comp=Z,17nm,1.2s						
SPR3	**Spring Creek 3**	**92.53**	**49**	IAmb	IAmb	22 51 10.6	

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       comp=Z,20nm,1.4s
CCUT   Cedar City        92.60  51   P        P        22 50 50.1  -0.1
ZAK    Zakamensk         92.68 324  eP        P        22 50 51.1  +1.0
ZAK                                  pmax     pmax
       comp=Z,15nm,1.4s
X16A   Lo Mia Camp, P    92.72  54   P        P        22 50 50.7  -0.1
X16A                                 IAmb     IAmb     22 51 09.7
       comp=Z,18nm,1.2s
U15A   North Rim         92.91  52   IAmb     IAmb     22 51 07.6
       comp=Z,18nm,1.0s
COLD   Coldfoot          93.15  14   P        P        22 50 50.8  -1.0
       baz=216
TLY    Talaya            93.15 325  eP        P        22 50 55.7  +3.6
TLY                                 eSS       SS       23 08 24.8  +10
TLY                                  pmax     pmax
       comp=Z,21nm,1.5s
TLY                                  MLR      MLR
       comp=Z,571nm,19.0s
WUAZ   Wupatki           93.22  53   P        P        22 50 52.5  -0.5
WUAZ                                 IAmb     IAmb     22 51 03.1
       comp=Z,17nm,1.0s
DLBC   Dease Lake        93.53  27   LR       LR       23 27 07.7
       comp=Z,288nm,19.8s,baz=348,slow=32
DLBC   Dease Lake        93.53  27   IAmb     IAmb     22 51 07.9
       comp=Z,16nm,1.1s
MTPU   Mount Pierson     93.66  51   P        P        22 50 55.5  +0.3
EGAK   Eagle             93.67  19   P        P        22 50 55.6  +1.4
TOLK   Toolik Lake Re    94.43  14   P        P        22 50 58.1  +0.5
       baz=217
DGAR   Diego Garcia      94.59 260⇑eP         P        22 50 54.3  -5.3
DGAR                                 pmax     pmax
       comp=Z,93nm,1.1s
121A   Cookes Peak, D    94.79  57   P        P        22 50 59.6  -0.7
       baz=248
PLCA   Paso Flores       96.21 138   LR       LR       23 24 26.3
       comp=Z,231nm,21.7s,baz=236,slow=29
ANMO   Albuquerque       96.71  55   LR       LR       23 28 27.9
       comp=Z,352nm,19.1s,baz=244,slow=32
TXAR   Lajitas Array     96.92  61   P        P        22 51 09.7  -0.3
       comp=Z,0.5nm,1.0s,baz=226,slow=4.8,SNR=3.2
TXAR                                 LR       LR       23 26 28.6
       comp=Z,872nm,20.5s,baz=0.0,slow=30
TIXI   Tiksi             97.11 348⇑eP         P        22 51 05.8  -3.9
PDAR   Pinedale Array    97.37  47   P        P        22 51 11.0  -0.9
       comp=Z,0.9nm,0.9s,baz=274,slow=2.4,SNR=5.1
PDAR                                 PP       PP       22 55 06.9  -2.2
       comp=Z,0.4nm,0.7s,baz=239,slow=6.2,SNR=1.9
S22A   4UR Ranch, Cre    97.45  52   P        Pdif     22 51 12.7  +0.1
       baz=249
INK    Inuvik            98.31  18   P        Pdif     22 51 17.9  +2.7
INK                                  pmax     pmax
       comp=Z,17nm,1.2s
INK    Inuvik            98.31  18   P        Pdif     22 51 17.9  +2.7
INK                                  IAmb     IAmb     22 51 19.6
       comp=Z,17nm,1.1s
WMQ    Urumqi            99.46 313  eP        Pdif     22 51 21.5  +0.5
WMQ                                  pP       pwP      22 51 31.7  +5.0
WMQ                                  pmax     pmax
       comp=Z,12nm,1.1s
WMQ                                  pmax     pmax
       comp=Z,200nm,4.7s
WMQ                                  LR       LR
       comp=Z,590nm,16.3s
WMQ                                  LR       LR
       comp=Z,360nm,26.3s
WMQ                                  LR       LR
       comp=Z,400nm,25.3s
C36M   Paulatuk         101.74  19   Pdif     Pdif     22 51 33.7  +3.3
YKA    Yellowknife Ar   102.16  27   P        Pdif     22 51 31.0  -1.5
       comp=Z,0.4nm,0.8s,baz=252,slow=4.1,SNR=5.3
YKA                                  PP       PP       22 55 44.2  -0.4
       comp=Z,0.2nm,0.8s,baz=254,slow=6.5,SNR=3.6
YKA    Yellowknife Ar   102.16  27   P        Pdif     22 51 31.0  -1.5
ZSN    Zaisan           102.53 316  ePKiKP    PKiKP    22 55 53.1  -2.7
       baz=316
MKAR   Makanchi Array   104.02 315   Pdiff    Pdif     22 51 39.3  -1.9
       comp=Z,0.3nm,0.8s,baz=96,slow=5.8,SNR=2.0
MKAR                                 PKiKP    PKiKP    22 55 58.1  -0.4
       comp=Z,7.4nm,1.3s,baz=95,slow=3.5,SNR=9.6
MKAR                                 PKKPbc   PKKPbc   23 07 31.7  -0.1
       comp=Z,0.3nm,0.7s,baz=317,slow=1.6,SNR=3.9
MKAR   Makanchi Array   104.02 315   P        Pdif     22 51 45.7  +4.5
MKAR   Makanchi Array   104.02 315   Pdif     Pdif     22 51 45.7  +4.5
ZALV   Zalesovo Beam    104.49 323   Pdiff    Pdif     22 51 41.6  -1.5
       comp=Z,0.4nm,0.6s,baz=131,slow=4.2,SNR=1.8
TDK    Taldyqorghan     106.17 312  ePKiKP    PKiKP    22 56 00.3  -2.3
       baz=312
TDK                                 ePP       PP       22 56 12.0  -3.0
       baz=312
KUU    Kurty            107.34 311  ePKiKP    PKiKP    22 56 01.9  -2.9
       baz=311
KUU                                 ePP       PP       22 56 20.6  -3.2
       baz=311
KURBB  Kurchatov Arra   107.39 318   PKiKP    PKiKP    22 56 03.8  -0.8
       comp=Z,0.9nm,0.9s,baz=108,slow=2.2,SNR=4.0
KURBB                                PP       PP       22 56 20.7  -3.1
       comp=Z,0.8nm,0.8s,baz=83,slow=1.9,SNR=4.9
RES    Resolute Bay     111.78  17   PKiKP    PKiKP    22 56 10.6  -1.6
       comp=Z,1.3nm,0.8s,baz=344,slow=2.7,SNR=1.9
JSC    Jenkinsville     116.58  61   PKIKP    PKPdf    22 56 20.4  -2.2
JSC    Jenkinsville     116.58  61            PKPdf    22 56 20.4  -2.2
ABKAR  Akbulak array    119.16 315   PKPdf    PKiKP    22 56 30.1  +3.0
ARU    Arti             119.62 324  i PKIKP   PKiKP    22 56 30.2  +2.4
ARU                                                    23 03 39.3
ARU                                  SS       SS       23 14 27.9  +14
ARU    Arti             119.62 324            PKPdf    22 56 27.0  -0.7
GEYT   Alibeck          120.07 302   PKhKP    PKPpre   22 56 25.2
       comp=Z,0.4nm,0.3s,baz=184,slow=2.3,SNR=1.9
DAG    Danmarks Havn    124.45   2  i P       PKiKP    22 56 38.5  +1.7
DAG    Danmarks Havn    124.45   2  ePKIKP    PKiKP    22 56 38.5  +1.7
DAG    Danmarks Havn    124.45   2  eP        PKiKP    22 56 38.5  +1.7
HUMP   Col San Antoni   127.27  83   PKPdf    PKiKP    22 56 44.9  +0.9
ARCES  ARCESS Array B   127.46 345   PKP      PKPdf    22 56 40.9  -1.5
       comp=Z,7.7nm,1.0s,baz=354,slow=1.8,SNR=2.4
KLMR   Klimovskoe       127.96 332  ePKIKP    PKPdf    22 56 40.3  -3.2
KLMR                                 pmax     pmax
       comp=Z,25nm,1.4s
KLMR   Klimovskoe       127.96 332  ePKPdf    PKPdf    22 56 40.3  -3.2
KLMR                                 AMP               22 56 50.3
       comp=Z,25nm,1.4s
MOS    Moscow           131.08 327  i PKIKP   PKiKP    22 56 52.8  +2.2
AKH    Akhalkalaki      131.28 307 ⇑P         PKiKP    22 56 54.9  +3.2
KIV    Kislovodsk       131.48 310  i PKIKP   PKPdf    22 56 50.2  -0.7
KIV                                  pmax     pmax
       comp=Z,18nm,1.1s
LPSR   Galich'ya Gora   131.60 322  ePKIKP    PKiKP    22 56 54.2  +2.5
LPSR                                 pmax     pmax
       comp=Z,20nm,1.5s
OBN    Obninsk          131.89 326  i PKIKP   PKPdf    22 56 49.4  -1.8
OBN                                  pmax     pmax
       comp=Z,7.0nm,1.1s
VSR    Storozhevoye     131.94 320  ePKIKP    PKPdf    22 56 49.2  -2.2
VSR                                  pmax     pmax
       comp=Z,7.0nm,0.7s
FINES  FINESS Array B   133.01 337   PKP      PKPdf    22 56 52.1  -1.0
       comp=Z,3.4nm,0.9s,baz=79,slow=7.2,SNR=2.3
MNK    Minsk            136.56 329  i PKP     PKiKP    22 57 02.6  +0.9
       comp=E,2.0nm,1.0s
MNK                                 i PKP     PKiKP    22 57 02.6  +0.9
       comp=N,8.0nm,1.0s
MNK                                 i PKP     PKiKP    22 57 02.6  +0.9
       comp=Z,12nm,1.0s
MNK                                 i PP      PP       22 59 43.2  +1.7
MNK                                 i SKP              23 00 34.9
MNK                                 i PKS     PKSdf    23 00 38.9  +2.9
MNK                                 i PPP     PPP      23 02 40.9
MNK                                 i SKS     SKSdf    23 04 10.8   0.0
MNK                                 i SP      SKKPbc   23 09 34.6  +4.2
MNK                                 i PS      PS       23 10 07.3  +0.1
MNK                                 i SKKS    SKKSdf   23 13 51.1  -1.2
MNK                                 i SS      SS       23 17 52.7  +8.8
MNK                                 i SSS     SSS      23 22 46.5
MNK                                 i LQ      LQ       23 45 00.8
MNK                                 i LR      LR       23 48 52.4
MNK                                 i LRM     MLR      23 56 18.6
       comp=N,319nm,19.7s
MNK                                 i LRM     MLR      23 56 22.1
       comp=E,25nm,19.7s
MNK                                 i LRM     MLR      23 56 22.1
       comp=Z,301nm,19.7s
NACGM  Naroch           136.85 330  i PKP     PKiKP    22 57 01.5  -0.8
NACGM                               i PKP     PKiKP    22 57 01.5  -0.8
NACGM                               i PKP     PKiKP    22 57 01.5  -0.8
NACGM                               i PP      PP       22 59 15.5  -28
NACGM                               i PPP     PPP      23 02 04.6
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NACGM                               i SKS     SKSdf    23 04 10.8  -0.5
NACGM                               i SKKS    SKKSac   23 06 13.2  -25
NACGM                               i PS      PS       23 09 41.8  -28
NACGM                               i SS      SS       23 17 05.0  -42
NACGM                               i SSS     SSS      23 22 09.8
NACGM                               i LQ      LQ       23 41 45.1
NACGM                               i LR      LR       23 47 43.8
NOA    NORSAR Array B   137.84 345   PKP      PKPdf    22 57 01.4  -0.9
       comp=Z,3.3nm,1.1s,baz=29,slow=1.9,SNR=2.3
AKASG  Malin Array Be   137.87 323   PKP      PKPdf    22 56 59.3  -3.2
       comp=Z,0.6nm,0.5s,baz=80,slow=1.6,SNR=2.4
AKBB   Malin Array Si   137.87 323⇓i PKIKP    PKPdf    22 57 02.4  -0.1
BRTR   Keskin Array B   138.96 306   PKP      PKPdf    22 57 04.9  -0.2
       comp=Z,0.6nm,0.4s,baz=45,slow=6.3,SNR=3.1
BRTR   Keskin Array B   138.96 306   PKIKP    PKPdf    22 57 04.0  -1.1
BRTR   Keskin Array B   138.96 306            PKPdf    22 57 04.0  -1.1
BIZ    Bicaz            141.51 320 ⇑P         PKiKP    22 57 16.8  +4.7
VRI    Vrincioaia       141.63 318 ⇑P         PKiKP    22 57 13.8  +1.4
VRI    Vrincioaia       141.63 318 ⇑PKIKP     PKiKP    22 57 13.8  +1.4
BURAR  Bucovina Array   141.69 321 ⇑P         PKiKP    22 57 13.7  +1.1
BURAR  Bucovina Array   141.69 321 ⇑PKIKP     PKiKP    22 57 13.7  +1.1
BURAR  Bucovina Array   141.69 321   PKPdf    PKPdf    22 57 08.9  -0.9
MLR    Muntele Rosu     142.29 318 ⇓P         PKiKP    22 57 15.4  +1.5
MLR    Muntele Rosu     142.29 318 ⇓PKIKP     PKiKP    22 57 15.4  +1.5
ARCR   ARCALIA          142.47 321 ⇓P         PKiKP    22 57 12.3  -1.8
CRVS   Cervenica-Dubn   143.07 325  ePKIKP    PKiKP    22 57 14.8  -0.5
CRVS   Cervenica-Dubn   143.07 325  ePKP      PKiKP    22 57 14.8  -0.5
OJC    Ojcow            143.09 328   PKIKP    PKPdf    22 57 11.5  -0.5
OJC    Ojcow            143.09 328   PKPdf    PKPdf    22 57 11.5  -0.5
ARR    Arges            143.16 318 ⇑P         PKiKP    22 57 14.9  -0.7
NIE    Niedzica         143.35 327  ePKP      PKiKP    22 57 17.6  +1.8
NIE    Niedzica         143.35 327   PKIKP    PKiKP    22 57 16.7  +0.8
DRGR                    143.58 322 ⇑P         PKiKP    22 57 14.7  -1.7
DRGR                    143.58 322 ⇑PKIKP     PKiKP    22 57 14.7  -1.7
LANS   Liptovska Anna   143.95 327  ePKIKP    PKiKP    22 57 18.6  +1.5
LANS   Liptovska Anna   143.95 327  ePKP      PKiKP    22 57 18.6  +1.5
VLAD   Vladila          143.95 317 ⇑P         PKiKP    22 57 16.6  -0.6
PLVB   Pleven           144.09 316 ⇑P         PKiKP    22 57 16.9  -0.6
OKC    Ostrava-Krasne   144.15 329   AMS      AMS      23 58 10.0
       comp=Z,500nm,15.8s
GZR    Gura Zlata       144.28 320 ⇓P         PKiKP    22 57 15.9  -2.0
GZR    Gura Zlata       144.28 320 ⇓PKIKP     PKiKP    22 57 15.9  -2.0
SIRR   Siria            144.48 322 ⇑P         PKPbc    22 57 12.5  -0.6
MORC   Moravsky Berou   144.48 329  ePKP      PKPdf    22 57 15.8  +1.3
MORC   Moravsky Berou   144.48 329   PKIKP    PKPdf    22 57 15.5  +1.0
MORC   Moravsky Berou   144.48 329   PKPdf    PKPdf    22 57 15.5  +1.0
PSZ    Piszkesteto      144.50 325 ⇓P         PKiKP    22 57 17.3  -1.0
PSZ    Piszkesteto      144.50 325   PKIKP    PKiKP    22 57 17.0  -1.3
PSZ    Piszkesteto      144.50 325   PKPdf    PKiKP    22 57 17.0  -1.3
OSTC   Ostas            144.55 331  ePKP      PKiKP    22 57 17.2  -1.1
OSTC                                ex        x        22 57 26.8
OSTC                                 AMS      AMS      23 57 00.0
       comp=Z,600nm,22.0s
CHVC   Chvalec          144.60 331  ePKP      PKPdf    22 57 15.8  +1.1
CHVC                                 AMS      AMS      23 56 30.0
       comp=Z,700nm,26.1s
BAIL   Bailesti         144.62 317 ⇓P         PKiKP    22 57 19.3  +0.8
KRLC   Kraliky          144.63 330  ePKIKP    PKPab    22 57 12.7  -0.7
KRLC                                 MLR      MLR
       comp=Z,500nm,25.1s
KRLC   Kraliky          144.63 330  ePKP      PKPab    22 57 12.7  -0.7
KRLC                                 AMS      AMS      23 56 50.0
       comp=Z,500nm,25.1s
DPC    Dobruska-Polom   144.65 331  ePKIKP    PKiKP    22 57 17.8  -0.7
DPC                                 e                  22 57 28.9
DPC                                  MLR      MLR
       comp=Z,700nm,27.0s
DPC    Dobruska-Polom   144.65 331  ePKP      PKiKP    22 57 17.8  -0.7
DPC                                 ex        x        22 57 28.9
DPC                                  AMS      AMS      23 57 00.0
       comp=Z,700nm,27.1s
UPC    Upice            144.67 331   AMS      AMS      23 56 30.0
       comp=Z,700nm,23.9s
HERR   Herculane        144.77 319 ⇓P         PKPab    22 57 12.4  -1.6
BZS    Buzias           144.86 321 ⇓P         PKiKP    22 57 17.8  -1.2
BZS    Buzias           144.86 321 ⇓PKIKP     PKiKP    22 57 17.8  -1.2
JAVC   Velka Javorina   145.03 328  ePKP      PKPdf    22 57 16.6  +1.1
MDVR   Moldovita        145.25 319 ⇓P         PKPab    22 57 15.4  -0.4
VRAC   Vranov           145.25 329   PKPbc    PKPbc    22 57 14.8  -0.7
       comp=Z,4.0nm,0.8s,baz=22,slow=5.0,SNR=6.7
VRAC   Vranov           145.25 329 ⇑P         PKPdf    22 57 16.4  +0.6
VRAC   Vranov           145.25 329  ePKP      PKPdf    22 57 15.8   0.0
BANR   Banloc           145.27 321 ⇑P         PKiKP    22 57 21.0  +1.1
PVCC   Panska Ves       145.29 333   PKIKP    PKiKP    22 57 19.9  +0.2
PVCC   Panska Ves       145.29 333   AMS      AMS      00 00 10.0
       comp=Z,400nm,23.6s
BRG    Berggiesshubel   145.29 334  ePKP      PKPbc    22 57 14.8  -0.7
BRG                                  Amp               22 57 17.9
       comp=Z,33nm,1.3s
BRG                                 ex        x        22 57 19.3
BRG                                  Amp               22 57 21.1
       comp=Z,33nm,1.3s
BRG                                 ex        x        22 57 34.9
BRG                                  Amp               22 57 35.5
       comp=Z,25nm,1.2s
CLL    Collm            145.34 335  i PKPdf   PKPbc    22 57 14.8  -0.9
       comp=Z,7.0nm,0.9s
CLL                                 i PKiKP   sPKPdf   22 57 19.1  -0.3
       comp=Z,26nm,1.1s
CLL                                 i sPKPdf  PKiKP    22 57 22.3  +2.5
CLL                                 ePP       PP       23 00 36.0  +1.0
CLL                                 eSKPdf    SKPdf    23 00 48.0  -2.3
CLL                                 ePPP      PPP      23 03 54.0
CLL                                 ePSKS              23 10 54.0
CLL                                 e                  23 13 48.0
CLL                                 eSS       SS       23 19 30.0  +3.9
CLL                                 ePSPS              23 20 30.0
CLL                                 eSSS      SSS      23 24 54.0
CLL                                 eSSSS              23 28 36.0
CLL    Collm            145.34 335   PKIKP    PKPbc    22 57 14.1  -1.6
CLL    Collm            145.34 335            PKPbc    22 57 14.1  -1.6
VTS    Vitosha          145.34 315 ⇓P         PKPbc    22 57 15.6  -0.6
VTS    Vitosha          145.34 315 ⇓PKIKP     PKPbc    22 57 15.6  -0.6
KRUC   Moravsky         145.51 329  ePKP      PKPbc    22 57 15.5  -0.8
MODS   Modra-Piesok     145.55 328  ePKIKP    PKPbc    22 57 16.0  -0.5
MODS                                e                  22 57 20.6
MODS   Modra-Piesok     145.55 328  ePKP      PKPbc    22 57 16.0  -0.5
MODS                                e                  22 57 20.6
PRU    Pruhonice        145.70 332  ePKP2     PKiKP    22 57 20.8  +0.2
PRU    Pruhonice        145.70 332  ePKP      PKiKP    22 57 20.8  +0.2
PRU                                  AMS      AMS      23 56 10.0
       comp=Z,600nm,27.8s
ZST    Bratislava       145.76 328  ePKP2     PKPab    22 57 17.8  +0.3
ZST    Bratislava       145.76 328  ePKP      PKPab    22 57 17.8  +0.3
TREC   Trest            145.78 330   AMS      AMS      23 57 30.0
       comp=Z,600nm,22.9s
EKA    Eskdalemuir Ar   145.82 353   PKPbc    PKPdf    22 57 13.9  -2.6
       comp=Z,12nm,0.8s,baz=359,slow=2.2,SNR=15
FRGS   Fruska Gora      146.17 321  eP        PKPdf    22 57 16.2  -1.3
MORH   Mrgy, Hungar     146.21 324 ⇑P         PKPbc    22 57 18.3  -0.2
MORH   Mrgy, Hungar     146.21 324  eP        PKPdf    22 57 16.8  -0.7
CONA   Conrad Observa   146.55 328  eP        PKPab    22 57 20.0  -0.7
       comp=Z,30nm,1.8s
DIVS   Divibare         146.65 320  eP        PKPdf    22 57 17.9  -0.6
DIVS   Divibare         146.65 320            PKPbc    22 57 20.0   0.0
CKRC   Cesky Krumlov    146.66 331  ePKP      PKPbc    22 57 19.5  -0.3
CKRC                                 AMS      AMS      23 58 00.0
       comp=Z,700nm,25.3s
KHC    Kasperske Hory   146.76 332  ePKP2     PKPdf    22 57 18.6  +0.2
KHC                                  MLR      MLR
       comp=Z,700nm,25.6s
KHC    Kasperske Hory   146.76 332  ePKP      PKPdf    22 57 18.6  +0.2
KHC                                  AMS      AMS      23 57 40.0
       comp=Z,700nm,25.6s
KHC    Kasperske Hory   146.76 332   PKPbc    PKPbc    22 57 19.8  -0.3
IDI    Anoyia           146.79 302 ⇑P         PKiKP    22 57 24.5  +1.1
GEC2   GERESS Array S   146.91 331   PKPdf    PKPdf    22 57 19.1  +0.3
GERES  GERESS Array B   146.91 331   PKPbc    PKPdf    22 57 18.1  -0.6
       comp=Z,5.4nm,0.9s,baz=29,slow=3.0,SNR=25
BEHE   Becsehely        147.06 326  eP        PKiKP    22 57 27.1  +3.6
BBLS   Lazi&#263;i      147.13 320  eP        PKPdf    22 57 13.2  -6.1
ARSA   Arzberg          147.18 328  eP        PKPbc    22 57 21.2  -0.2
       comp=Z,11nm,1.5s
MOA    Molln            147.38 330  eP        PKiKP    22 57 25.6  +1.4
       comp=Z,16nm,1.2s
FNA    Florina          147.42 313   PKP2     PKPbc    22 57 21.9  -0.4
FNA    Florina          147.42 313   PKPbc    PKPbc    22 57 21.9  -0.4
UPM    Unac-Piva        147.80 319  eP        PKPbc    22 57 23.1  -0.3
SOKA   Soboth           147.82 327  eP        PKPbc    22 57 22.7  -0.5
       comp=Z,6.4nm,1.0s
BLY    Banja Luka       147.92 323  eP        PKPbc    22 57 21.8  -1.6
PDG    Podgorica        148.00 317 ⇑P         PKPbc    22 57 21.8  -1.9
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PDG    Podgorica        148.00 317  eP        PKPdf    22 57 19.2  -1.4
CRES   Cresnjev         148.18 326  eP        PKPbc    22 57 22.1  -2.0
MGRS   Mrkonjic Grad    148.18 322  eP        PKPdf    22 57 15.7  -5.2
OBKA   Obir             148.18 327  eP        PKPbc    22 57 23.6  -0.6
       comp=Z,11nm,1.8s
BRY    Bratogost        148.19 319  eP        PKPdf    22 57 21.1   0.0
KBA    Koelnbreinsper   148.37 329  eP        PKPbc    22 57 24.0  -0.8
       comp=Z,18nm,1.3s
BTNL   Ternell          148.38 341  dpPKPdf   PKPab    22 57 28.0  +0.3
LJU    Ljubljana        148.51 327  i PKPbc   PKPbc    22 57 24.7  -0.3
LJU    Ljubljana        148.51 327  eP        PKPbc    22 57 24.0  -1.0
MYKA   Terra Mystica    148.54 328  eP        PKPbc    22 57 23.5  -1.6
       comp=Z,6.9nm,0.9s
GORS   Gorjuse          148.59 328  ePKPbc    PKPbc    22 57 24.2  -1.1
GORS                                ePKPab    PKPab    22 57 28.2  -0.6
STON   Ston             148.72 319  eP        PKiKP    22 57 27.2  +0.2
CEY    Cerknica         148.77 327  eP        PKPdf    22 57 23.2  +1.4
ZOU    Zoufplan         148.92 329   PKPbc    PKPbc    22 57 25.1  -1.2
SNF    Seneffe          148.99 343  dPKiKP    PKiKP    22 57 26.4  -0.9
WATA   Walderalm        148.99 331  eP        PKPbc    22 57 26.5  +0.1
       comp=Z,20nm,1.2s
ABTA   Abfaltersbach    149.00 330  i P       PKPbc    22 57 25.5  -0.8
       comp=Z,12nm,1.1s,SNR=7.7
WTTA   Wattenberg       149.02 331  i P       PKiKP    22 57 27.5  -0.2
       comp=Z,34nm,1.6s,SNR=5.7
RIY    Rijeka           149.02 326  eP        PKPbc    22 57 26.3   0.0
WLF    Walferdange      149.18 340  dPKiKP    PKPbc    22 57 26.3  -0.3
WLF    Walferdange      149.18 340   PKP2     PKPbc    22 57 26.2  -0.3
WLF    Walferdange      149.18 340   PKPbc    PKPbc    22 57 26.2  -0.3
MOTA   Moosalm          149.19 332  eP        PKPbc    22 57 25.7  -1.2
       comp=Z,31nm,1.4s
RETA   Reutte           149.23 332  eP        PKPab    22 57 29.7  -1.6
       comp=Z,34nm,1.5s
SQTA   Sankt Quirin     149.24 332  eP        PKPbc    22 57 26.2  -0.8
       comp=Z,32nm,1.6s
STAL   STALIGIAL        149.26 329   PKPbc    PKPbc    22 57 25.6  -1.3
DOU    Dourbes          149.27 342  dPKiKP    PKPbc    22 57 26.5  -0.2
DOU                                 dpPKPdf   sPKPbc   22 57 30.1  -0.2
BFO    Black Forest     149.54 336   PKP2     PKPbc    22 57 26.7  -0.9
BFO    Black Forest     149.54 336   PKPbc    PKPbc    22 57 26.7  -0.9
FETA   Feichten         149.60 332  eP        PKPbc    22 57 25.7  -2.2
       comp=Z,27nm,1.1s
DAVA   Damuels          149.76 333  eP        PKPbc    22 57 28.4  +0.1
       comp=Z,24nm,1.2s
ECH    Echery           150.07 337   PKP2     PKPbc    22 57 28.8   0.0
ECH    Echery           150.07 337   PKPbc    PKPbc    22 57 28.8   0.0
TEOL   Teolo            150.41 329   PKPbc    PKPbc    22 57 29.0  -0.7
SALO   Salr             150.76 330   PKPbc    PKPbc    22 57 30.0  -0.6
TIP    Timpagrande      151.30 314 ⇓P         PKPab    22 57 36.2  -3.9
TIP    Timpagrande      151.30 314            PKiKP    22 57 35.6  +3.0
MURB   Monte Urbino     151.45 325   PKPbc    PKPbc    22 57 30.2  -2.1
ZCCA   Zocca            151.48 328   PKPbc    PKPbc    22 57 31.7  -0.6
INTR   Introdacqua      151.49 321   PKPbc    PKPbc    22 57 31.4  -1.1
SENIN  Lac Senin/Sane   151.56 335   PKPbc    PKPbc    22 57 31.2  -1.4
CLF    Chambon-Foret    151.80 343   PKPbc    PKPbc    22 57 30.9  -1.9
BNI    Bardonecchia     152.88 334   PKIKP    PKiKP    22 57 35.4  -0.4
BNI    Bardonecchia     152.88 334   PKPbc    PKiKP    22 57 35.4  -0.4
SSB    Saint Sauveur    153.52 337   PKIKP    PKPbc    22 57 34.7  -2.1
SSB    Saint Sauveur    153.52 337   PKPbc    PKPbc    22 57 34.7  -2.1
ESDC   Sonseca Array    161.19 346   PKPab    PKPab    22 58 21.6  -0.7
       comp=Z,2.0nm,1.1s,baz=19,slow=4.7,SNR=4.2
DBIC   Dimbokro         164.59 198   PKPab    PKPab    22 58 37.3  -0.3
       comp=Z,3.8nm,0.8s,baz=113,slow=5.4,SNR=3.8
TORD   Torodi Ar. Bea   166.37 235   PKP      PKPdf    22 57 44.0  -0.4
       comp=Z,1.0nm,1.0s,baz=166,slow=1.2,SNR=2.5
TORD                                 PKPab    PKPab    22 58 45.4  -0.4
       comp=Z,2.7nm,0.9s,baz=98,slow=3.9,SNR=2.0
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JMA ***02*** *23:38:07.9±0.2, 43°.72N×147°.19E, $h32^{km}$, M4.2*

SKHL ***02*** *23:38:08.7±0.4, 43°.80N×147°.20E, $h34^{km}±2^{km}$, mb4.4/1*

IDC ***02*** *23:38:09.0±2.9, 43°.85N×147°.28E, $h77^{km}±29^{km}$, mb3.2/6, mb1 3.4/9, mb1mx3.2/32, mbtmp3.5/9, MS3.0/1, Ms1 3.0/1, ms1mx2.5/25, Error ellipse: s-maj=52.1km s-min=21.2km az=159.0*

ISC 02 23:38:06.1±1.4**, 43°.70N**±0°.08×**147°.46E**±0°.08**,** $\mathbf{h55^{km}}±13^{km}$**, n34, σ1s.88**/40**, mb3.5**/6**, Kuril Islands**

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Code   Station Name      Δ°    AZ°    Phase ID            Time      Res
                                     Op       ISC      h  m  s     ISC
NEM2   Nemuro 2           1.29 256   P        Pn       23 38 27.7  -0.1
NEM2                                eS        Sn       23 38 42.0  -2.0
NMR    Nemuro--Hokkai     1.30 256  eP        Pn       23 38 27.8  -0.1
NMR                                 eS        Sn       23 38 42.3  -1.9
KUR    Kuril'sk           1.57  11  eP        Pn       23 38 32.0  +0.5
KUR                                  AMB      AMB      23 38 36.0
       117nm,0.3s
KUR                                 i S       Sn       23 38 49.2  -1.5
KUR                                  A        A        23 38 50.0
       1μm,0.3s
KUR                                  A        A        23 38 50.0
       800nm,0.3s
JRA    Rausu              1.71 279   P        Pn       23 38 33.4  -0.1
JRA                                 eS        Sn       23 38 51.9  -2.3
JNSB   Nemuroshibetsu     1.78 273   P        Pn       23 38 34.7  +0.3
JKHN   Kushirohamanak     1.78 251   P        Pn       23 38 34.9  +0.4
JKHN                                eS        Sn       23 38 54.7  -1.3
JNK    Nakash             1.99 268   P        Pn       23 38 37.5  +0.2
JNK                                 eS        Sn       23 38 59.2  -1.9
JAK    Akkeshi            2.13 252   P        Pn       23 38 39.7  +0.5
JAK                                 eS        Sn       23 39 02.9  -1.6
JTKR   Abashiri--Toko     2.58 277   P        Pn       23 38 46.0  +0.6
JAR    Ashorobuto         2.71 263   P        Pn       23 38 48.1  +0.9
JAR                                 eS        Sn       23 39 18.2  -0.6
JOB    Onbets             2.76 255   P        Pn       23 38 48.9  +1.1
JOB                                 eS        Sn       23 39 19.3  -0.6
JMP    Maruseppu          2.98 277   P        Pn       23 38 51.6  +0.7
JCH    Churui             3.19 252   P        Pn       23 38 55.0  +1.3
JCH                                 eS        Sn       23 39 29.6  -0.8
MYR    Moyori             3.37 247  eP        Pn       23 38 57.6  +1.4
MYR                                 eS        Sn       23 39 34.5  -0.4
JKK2   Kamakawa 2         3.42 275   P        Pn       23 38 58.7  +1.9
ASAJ   Asahikawa          3.54 279   P        Pn       23 39 00.2  +1.7
       4.7nm,0.3s,baz=73,slow=13,SNR=23
ASAJ                                 S        Sn       23 39 46.9  +7.8
       6.1nm,0.3s,baz=7.3,slow=29,SNR=5.1
ASAJ   Asahikawa          3.54 279   P        Pn       23 39 00.2  +1.7
ERM    Erimo              3.58 244  eP        Pn       23 39 01.5  +2.4
ERM                                 eS        Sn       23 39 41.2  +1.1
JFR    Furan              3.58 263   P        Pn       23 39 01.3  +2.2
MJAR   Matsushiro Arr    10.05 228   P        Pn       23 40 29.8  +2.0
       0.1nm,0.3s,baz=26,slow=16,SNR=1.5
PETK   Petropavlovsk-    11.61  32   P        Pn       23 40 50.5  +1.6
       0.3nm,0.3s,baz=187,slow=10,SNR=1.5
SONM   Songino Array     28.70 293   P        P        23 43 56.7  -1.3
       0.2nm,0.5s,baz=95,slow=8.1,SNR=2.0
H11N2  WAKE ISLAND Hy    28.91 140   T        T        00 14 47.7
       baz=330,slow=76,SNR=146
H11N1  WAKE ISLAND Hy    28.93 140   T        T        00 14 49.3
       baz=330,slow=76,SNR=111
H11N3  WAKE ISLAND Hy    28.93 140   T        T        00 14 49.8
       baz=330,slow=76,SNR=131
H11S1  WAKE ISLAND Hy    29.88 141   T        T        00 16 00.2
       baz=331,slow=76,SNR=290
H11S3  WAKE ISLAND Hy    29.89 141   T        T        00 16 02.4
       baz=331,slow=76,SNR=252
H11S2  WAKE ISLAND Hy    29.90 141   T        T        00 16 02.7
       baz=331,slow=76,SNR=171
GUMO   Guam              30.08 185   LR       LR       23 56 16.2
       comp=Z,27nm,18.7s,baz=60,slow=36
NRIK   Noril'sk          39.41 331   P        P        23 45 28.1  -1.9
       1.2nm,0.6s,baz=79,slow=5.2,SNR=2.1
ILAR   Eielson Array     41.40  36   P        P        23 45 46.7  +0.1
       0.6nm,0.8s,baz=251,slow=6.2,SNR=5.5
MKAR   Makanchi Array    44.81 298   P        P        23 46 14.2  -0.2
       0.2nm,0.6s,baz=50,slow=7.8,SNR=2.1
INK    Inuvik            46.34  30   P        P        23 46 25.8  -0.3
       0.8nm,0.5s,baz=297,slow=6.3,SNR=4.4
YKA    Yellowknife Ar    55.72  34   P        P        23 47 37.1  +0.5
       0.3nm,0.6s,baz=300,slow=6.0,SNR=5.2
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IDC ***02*** *23:51:32.9±0.7, 36°.63N×73°.12E, $h0^{km}$, mb3.8/21, mb1 4.0/25, mb1mx3.8/58, mbtmp3.9/25, ML3.8/4, MS3.6/6, Ms1 3.6/6, ms1mx3.1/52, Error ellipse: s-maj=17.4km s-min=13.5km az=26.0*

MOS ***02*** *23:51:35.2±1.5, 36°.72N×73°.12E, $h23^{km}$, mb4.4/8, Error ellipse: s-maj=10.6km s-min=5.8km az=83.8*

NNC ***02*** *23:51:39.9±8.1, 37°.17N×72°.96E, $h0^{km}$, mb4.6, mpv4.2, Error ellipse: s-maj=105.3km s-min=34.3km az=154.0*

NEIC ***02*** *23:51:42.0±2.6, 36°.81N±0°.06×72°.95E±0°.04, $h62^{km}±7^{km}$, mb4.5/29, Error ellipse: s-maj=10.1km s-min=3.8km*

az=157.0

ISC 02 23:51:34.3±0.3**, 36°.58N**±0°.03×**73°.21E**±0°.04**, h10^{km}, n154,** σ**$2^{s}.68$**/159**, mb4.1**/38**, MS3.5**/5**, 25C-9D, Northwestern Kashmir**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIL	Nilore	2.92	179	PN	Pn	23 52 22.0	+1.1
NIL	Nilore	2.92	179	Pn	Pg	23 52 30.9	+0.6
NIL				Sn	Sg	23 53 11.5	+3.3
CEP	Cherat	2.95	202	P	Pb	23 52 24.4	-2.6
KSH	Kashi	3.66	36	P	Pn	23 52 21.5	-10
KSH				pP	Pb	23 52 30.1	-9.0
KSH				S	Sn	23 53 07.4	-6.9
KSH				pmax	pmax		
	comp=Z,16nm,0.7s						
KSH				pmax	pmax		
	comp=Z,250nm,7.1s						
KSH				smax	smax		
	comp=N,1µm,0.9s						
KSH				smax	smax		
	comp=E,810nm,0.7s						
KSH				LR	LR		
	comp=N,3µm,2.3s						
KSH				LR	LR		
	comp=E,4µm,4.8s						
KSH				LR	LR		
	comp=Z,3µm,8.3s						
KBL	Kabul	3.96	240	PN	Pb	23 52 42.1	-2.2
KBL	Kabul	3.96	240	Pn	Pb	23 52 42.1	-2.2
THW	Thamme Wali	3.96	198	P	Pn	23 52 37.4	+2.2
THN	Thein Dam	4.63	153	*e*P	Pn	23 52 45.0	+0.8
THN				*e*S	Sb	23 53 46.0	-5.3
DHRM	DHARAMSHALA	5.02	148	*e*PN	Pn	23 52 47.9	-1.9
DHRM				*i* x	x	23 52 55.2	
DHRM				*e*S	Sn	23 53 55.0	+7.0
DHRM				IAML		23 54 33.8	
	comp=E,350nm,0.7s						
DHRM				IAML		23 54 34.1	
	comp=N,426nm,0.7s						
BHK	Bhakra	5.80	152	*e*P	Pn	23 53 05.0	+4.6
BHK				*e*S	Sn	23 54 15.0	+8.0
AAK	Ala-Archa	6.13	9	Pn	Pn	23 53 03.4	-1.7
	comp=N,0.7nm,0.3s,baz=164,slow=7.8,SNR=22						
AAK				Sn	Sn	23 54 19.1	+3.7
	comp=N,1.4nm,0.3s,baz=278,slow=21,SNR=1.8						
AAK				Lg	Lg	23 54 43.7	
	comp=N,2.0nm,0.3s,baz=297,slow=17,SNR=4.1						
AAK	Ala-Archa	6.13	9	*de*PN	Pn	23 53 03.0	-2.1
AAK	Ala-Archa	6.13	9	Pn	Pn	23 53 10.6	+5.5
SMLA	Simla	6.36	148	*e*P	Pn	23 53 06.3	-1.7
SMLA				*i* x	x	23 53 13.2	
SMLA				*e*x	x	23 54 23.1	
KK31	Karatay Array	6.84	343	⇑Pn	Pn	23 53 11.6	-3.0
	comp=N,0.3nm,0.2s,baz=146,slow=11,SNR=80						
KK31				⇑Pg	Pb	23 53 19.7	-13
	comp=N,5.6nm,0.3s,baz=152,slow=11,SNR=20						
KK31				⇓Lg	Lg	23 54 29.2	
	comp=N,16nm,0.5s						
KK31	Karatay Array	6.84	343	PN	Pn	23 53 16.9	+2.3
KK31	Karatay Array	6.84	343	Pn	Pn	23 53 16.9	+2.3
KKAR	Karatay Array	6.84	343	PN	Pn	23 53 16.5	+1.8
KKAR	Karatay Array	6.84	343	Pn	Pn	23 53 16.5	+1.8
MDOK	Medeo	7.21	23	⇑Pn	Pn	23 53 23.2	+3.3
	comp=N,16nm,1.1s						
MDOK				⇓Pg	Pb	23 53 43.2	+3.5
	comp=N,29nm,0.8s						
MDOK				⇑Lg	Lg	23 55 13.4	
	comp=N,133nm,1.3s						
MDOK	Medeo	7.21	23	PN	Pn	23 53 23.2	+3.3
KNDC	Almaty	7.23	22	⇑Pn	Pn	23 53 27.3	+7.2
	comp=N,20nm,0.6s						
KNDC				⇑Pg	Pb	23 53 43.7	+3.7
	comp=N,87nm,0.7s						
KNDC				⇓Lg	Lg	23 55 15.2	
	comp=N,226nm,1.1s						
KNDC	Almaty	7.23	22	PN	Pn	23 53 27.3	+7.2
DDI	Dehra Dun	7.44	146	*e*S	Sn	23 54 44.9	-2.5
DDI				IAML		23 54 53.2	
	comp=N,134nm,0.0s						
DDI				IAML		23 55 04.0	
	comp=E,187nm,0.7s						
PDGK	Podgornoye	8.29	34	⇑Pn	Pn	23 53 29.7	-5.0
	comp=E,17nm,0.9s						
PDGK				⇑Lg	Lg	23 55 40.4	
	comp=E,164nm,2.0s						
NDI	New Delhi	8.57	156	*e*P	Pn	23 53 45.0	+6.6
NDI				*e*S	Sn	23 55 15.5	+0.4
AYAN	Aya Nagar	8.72	157	*e*P	Pn	23 53 46.0	+5.4
KHET	Khetri	8.76	165	*e*P	Pn	23 53 43.4	+2.3
KHET				*e*S	Sn	23 55 16.7	-3.2
SONA	Sohna	8.93	157	*e*P	Pn	23 53 48.5	+5.2
SONA				*e*S	Sn	23 55 24.4	+0.5
HRA	Herat	9.20	259	Pn	Pn	23 53 48.5	+1.2
GEYT	Alibeck	12.10	281	Pn	Pn	23 54 25.5	-1.3
	comp=E,1.4nm,0.3s,baz=105,slow=11,SNR=10						
GEYT				Sn	Sn	23 56 39.7	-2.1
	comp=E,0.8nm,0.3s,baz=88,slow=16,SNR=2.4						
GEYT	Alibeck	12.10	281		Pn	23 54 27.0	+0.2
GYA0B	ALIBECK ARRAY	12.10	281	⇓Pn	Pn	23 54 27.5	+0.7
GYA0B				⇑Lg	Lg	23 56 41.0	
GYA0B	ALIBECK ARRAY	12.10	281	Pn	Pn	23 54 26.7	-0.1
DANN	Dangsing	12.11	130	*e*Pn	Pn	23 54 26.8	-0.4
DANN				*e*Sn	Sn	23 56 34.6	-7.8
	comp=E,26nm,0.4s						
MAKZ	Makanchi	12.13	30	⇑Pn	Pn	23 54 27.5	+0.3
	comp=E,13nm,1.4s						
MAKZ	Makanchi	12.13	30	P	Pn	23 54 30.2	+3.0
MAKZ	Makanchi	12.13	30	Pn	Pn	23 54 30.2	+3.0
MK31	Makanchi Array	12.25	31	Pn	Pn	23 54 30.6	+1.8
	comp=E,14nm,1.1s,baz=203,slow=15,SNR=36						
MK31	Makanchi Array	12.25	31	⇑*e*P	Pn	23 54 28.6	-0.2
MK31	Makanchi Array	12.25	31		Pn	23 54 32.2	+3.5
MKAR	Makanchi Array	12.25	31	Pn	Pn	23 54 25.2	-3.6
	comp=E,0.0nm,0.3s,baz=219,slow=15,SNR=2.3						
MKAR				Lg	Lg	23 57 48.3	
	comp=E,0.0nm,0.3s,baz=210,slow=25,SNR=1.1						
MKAR				LR	LR	23 59 32.0	
	comp=E,194nm,19.4s,baz=216,slow=39						
MKAR	Makanchi Array	12.25	31	P	Pn	23 54 31.4	+2.6
MKAR	Makanchi Array	12.25	31	Pn	Pn	23 54 31.4	+2.6
WMQ	Urumqi	13.22	52	*e*P	Pn	23 54 43.0	+0.9
WMQ				sP	P	23 54 51.8	-0.3
WMQ				PP	PnPn	23 54 54.9	+5.0
WMQ				S	Sn	23 56 59.3	-10
WMQ				sS	S	23 57 05.0	-29
WMQ				SS	SnSn	23 57 15.0	-6.3
WMQ				pmax	pmax		
	comp=Z,11nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,61nm,4.7s						
WMQ				smax	smax		
	comp=N,17nm,1.1s						
WMQ				smax	smax		
	comp=E,25nm,1.1s						
WMQ				LR	LR		
	comp=N,780nm,16.5s						
WMQ				LR	LR		
	comp=E,530nm,15.1s						
WMQ				LR	LR		
	comp=Z,170nm,19.1s						
WMQ	Urumqi	13.22	52	P	Pn	23 54 42.2	+0.1
WMQ	Urumqi	13.22	52		Pn	23 54 42.2	+0.1
KKN	Kakani	13.46	127	*e*Pn	Pn	23 54 44.3	-1.2
KKN				*e*Sn	Sn	23 57 06.3	-9.0
	comp=Z,18nm,0.6s						
DMN	Daman	13.47	128	*e*Pn	Pn	23 54 45.5	-0.3
DMN				*e*Sn	Sn	23 57 06.4	-9.3
	comp=Z,50nm,0.8s						
PKIN	Phulchoki	13.68	128	*e*Pn	Pn	23 54 47.4	-1.2
PKIN				*e*Sn	Sn	23 57 11.2	-10
	comp=Z,34nm,0.7s						
PKI	Pulchoki	13.69	128	*e*Pn	Pn	23 54 47.6	-1.2
PKI				*e*Sn	Sn	23 57 11.5	-10
	comp=Z,90nm,1.3s						
GUN	Gumba	13.76	125	*e*Pn	Pn	23 54 48.6	-1.2
GUN				*e*Sn	Sn	23 57 14.4	-8.6
	comp=Z,66nm,1.1s						
BHPL	Bhopal	13.78	164	*e*P	Pn	23 54 45.6	-4.2
BHPL				*e*S	Sn	23 57 16.6	-6.5
KURBB	Kurchatov Arra	14.55	14	Pn	Pn	23 54 54.3	-5.9
	comp=Z,0.0nm,0.3s,baz=205,slow=12,SNR=5.6						
KURBB				Lg	Lg	23 59 05.8	
	baz=194,slow=22,SNR=1.8						
KURBB	Kurchatov Arra	14.55	14	⇑Pn	Pn	23 55 00.7	+0.5
	comp=Z,9.5nm,0.7s						
KURK	Kurchatov	14.66	14	⇑Pn	Pn	23 55 01.6	0.0
	comp=Z,15nm,1.2s						
KURK	Kurchatov	14.66	14	*de*P	Pn	23 55 01.7	0.0
KURK				pmax	pmax		
	comp=Z,8.0nm,1.3s						
KURK	Kurchatov	14.66	14	Pn	Pn	23 55 01.8	+0.2
TAPN	Taplejung	15.35	123	*e*Pn	Pn	23 55 11.7	+0.3
TAPN				*e*Sn	Sn	23 57 53.6	-8.0
	comp=Z,30nm,1.0s						
AB31	Akbulak array	15.93	327	⇓P	Pn	23 55 11.9	-6.6
	comp=Z,4.3nm,0.6s,baz=132,slow=13,SNR=63						
AB31				⇓S	Sn	23 58 03.0	-12
	comp=Z,5.1nm,0.8s						
AB31	Akbulak array	15.93	327	P	Pn	23 55 11.9	-6.6
AB31				S	Sn	23 58 03.3	-12
ABKAR	Akbulak array	15.93	327	Pn	Pn	23 55 16.8	-1.7
LSA	Lhasa	16.51	109	P	P	23 55 28.7	-0.5
LSA				pmax	pmax		
	comp=Z,6.0nm,1.3s						
LSA	Lhasa	16.51	109	Pn	P	23 55 28.7	-0.5
BVAR	Borovoye Array	16.56	354	Pn	Pn	23 55 23.4	-3.1
	comp=Z,0.3nm,0.3s,baz=173,slow=25,SNR=6.3						
BRVK	Borovoye	16.61	354	⇑Pn	Pn	23 55 26.9	-0.2
	comp=Z,13nm,1.2s						
BRVK	Borovoye	16.61	354	⇓*e*P	Pn	23 55 26.4	-0.7
DGZ	Jazzator, Alta	16.69	34	⇑*e*P	Pn	23 55 25.4	-2.9
BOK	Bokaro	16.79	136	*e*P	Pn	23 55 23.3	-6.2
BOK				IAmb	IAmb	23 55 34.0	
	comp=Z,39nm,0.2s						
AKTO	Aktyubinsk	17.65	326	P	Pn	23 55 38.9	-1.2
	comp=Z,0.5nm,0.3s,baz=118,slow=9.1,SNR=6.9						
AKTO				LR	LR	00 02 56.3	
	comp=Z,246nm,19.3s,baz=123,slow=39						
AKTO	Aktyubinsk	17.65	326	⇑Pn	Pn	23 55 39.5	-0.6
	comp=Z,8.5nm,0.8s						
WSAR	Wadi Sarin	18.31	227	P	Pn	23 55 48.0	-0.5
	comp=Z,0.2nm,0.3s,baz=54,slow=8.7,SNR=3.4						
UOSS	Minazif	18.62	236		Pn	23 55 52.0	-0.3
UOSS				IAmb	IAmb	23 56 00.6	
	comp=Z,15nm,1.1s						
ZAA0	Zalesovo Array	19.15	21	P	P	23 55 56.6	-0.9
ZAA0				IAmb	IAmb	23 56 01.1	
	comp=Z,26nm,1.2s						
ZALV	Zalesovo Beam	19.15	21	P	P	23 55 51.2	-6.4
	comp=Z,0.4nm,0.3s,baz=208,slow=11,SNR=10						
ZALV	Zalesovo Beam	19.15	21	P	P	23 55 56.2	-1.4
ZALV	Zalesovo Beam	19.15	21	P	P	23 55 56.2	-1.4
HYB	Hyderabad	19.66	165	*i* P	Pn	23 56 05.0	+0.1
HYB				*e*S	Sn	23 59 51.0	+5.2
GTA	Gaotai	21.13	74	⇑P	P	23 56 21.0	+1.5
GTA				pP	pP	23 56 24.4	+0.8
GTA				sP	sP	23 56 27.0	+1.6
GTA				pmax	pmax		
	comp=Z,6.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,72nm,4.5s						
GTA				LR	LR		
	comp=N,130nm,13.8s						
GTA				LR	LR		
	comp=E,180nm,12.7s						
GTA				LR	LR		
	comp=Z,170nm,16.4s						
ARU	Arti	22.18	338	P	P	23 56 29.1	-1.2
	comp=Z,0.5nm,0.5s,baz=137,slow=9.0,SNR=1.9						
ARU				LR	LR	00 04 36.1	
	comp=Z,134nm,19.5s,baz=206,slow=35						
ARU	Arti	22.18	338	*ce*P	P	23 56 35.1	+4.8
ARU				pmax	pmax		
	comp=Z,16nm,2.5s						
ARU	Arti	22.18	338	P	P	23 56 29.2	-1.2
GNI	Garni	22.56	288	P	P	23 56 34.3	-0.4
	comp=Z,3.6nm,0.8s,baz=74,slow=15,SNR=1.9						
GNI				LR	LR	00 06 57.4	
	comp=Z,154nm,19.5s,baz=112,slow=41						
GNI	Garni	22.56	288	*ce*P	P	23 56 45.0	+10
GNI				pmax	pmax		
	comp=Z,22nm,1.3s						
GNI	Garni	22.56	288	P	P	23 56 32.5	-2.3
GNI				IAmb	IAmb	23 56 48.3	
	comp=Z,15nm,1.0s						
BELG	Belogornoye	23.96	319	P	P	23 56 48.2	-0.4
	comp=Z,2.9nm,0.7s,baz=274,slow=12,SNR=2.3						
KBZ	Khabaz	24.15	297	P	P	23 56 50.8	+0.4
	comp=Z,2.8nm,1.1s,baz=54,slow=8.7,SNR=1.9						
LZH	Lanzhou	24.64	82	⇑P	P	23 56 58.1	+2.9
LZH				pP	sP	23 57 07.2	+5.8
LZH				sP	pP	23 57 11.8	+12
LZH				pmax	pmax		
	comp=Z,19nm,1.5s						
MOY	Mondy	24.81	44	*e*P	P	23 56 57.8	+1.3
ZAK	Zakamensk	25.61	48	*e*P	P	23 57 03.4	-0.4
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
SONM	Songino Array	26.83	55	P	P	23 57 15.4	+0.5
	comp=Z,1.6nm,0.8s,baz=274,slow=12,SNR=7.0						
SONM				LR	LR	00 08 56.1	
	comp=Z,137nm,20.4s,baz=274,slow=39						
SONM	Songino Array	26.83	55	P	P	23 57 15.4	+0.5
RAYN	Ar Rayn	27.17	249	P	P	23 57 19.6	+1.5
RAYN				pmax	pmax		
	comp=Z,3.0nm,1.2s						
RAYN	Ar Rayn	27.17	249	P	P	23 57 19.6	+1.5
ULN	Ulaanbaatar	27.27	55	*ce*P	P	23 57 20.9	+2.0
ULN				pmax	pmax		
	comp=Z,2.0nm,1.0s						
CMAR	Chiang Mai Arr	28.96	122	P	P	23 57 35.2	+1.2
	comp=Z,0.9nm,0.3s,baz=305,slow=10,SNR=5.3						
CMAR	Chiang Mai Arr	28.96	122	*ce*P	P	23 57 39.2	+5.2
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
HHC	Hu-ho-hao-te	30.07	70	*e*P	P	23 57 47.5	+3.7
HHC				pmax	pmax		
	comp=Z,4.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,120nm,5.5s						
BRTR	Keskin Array B	31.10	288	P	P	23 57 52.3	-0.7
	comp=Z,0.5nm,0.5s,baz=86,slow=9.1,SNR=2.1						
NRIK	Noril'sk	33.75	9	P	P	23 58 15.4	-0.2
	comp=Z,0.9nm,0.5s,baz=172,slow=4.1,SNR=2.0						
NRIK	Noril'sk	33.75	9	*ce*P	P	23 58 20.7	+5.1
AKASG	Malin Array Be	34.28	308	P	P	23 58 19.0	-1.5
	comp=Z,0.1nm,0.3s,baz=82,slow=7.3,SNR=2.1						
FIA1	FINESS Array S	38.42	325	P	P	23 58 55.8	+0.1
FINES	FINESS Array B	38.42	325	P	P	23 58 55.2	-0.5
	comp=Z,3.7nm,0.9s,baz=117,slow=9.2,SNR=2.3						
FINES	FINESS Array B	38.42	325	*i* P	P	23 59 00.8	+5.1
FINES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
FINES	FINESS Array B	38.42	325	P	P	23 58 56.0	+0.4
ARCES	ARCESS Array B	41.76	337	P	P	23 59 23.5	+0.2
	comp=Z,5.0nm,0.8s,baz=46,slow=7.4,SNR=13						
ARCES	ARCESS Array B	41.76	337	P	P	23 59 23.8	+0.5
ARCES				pmax	pmax		
	comp=Z,17nm,1.2s						
ARCES	ARCESS Array B	41.76	337	P	P	23 59 23.8	+0.5
KSRS	Korea Array	43.17	72	LR	LR	00 19 26.5	
	comp=Z,68nm,20.6s,baz=305,slow=39						
KLR	Kul'dur	43.66	54	P	P	23 59 39.4	+0.4
	comp=Z,1.7nm,0.6s,baz=291,slow=6.8,SNR=5.8						
KLR	Kul'dur	43.66	54	*ce*P	P	23 59 40.4	+1.4
TIXI	Tiksi	45.04	22	*ce*P	P	23 59 53.4	+3.7
TIXI				pmax	pmax		
	comp=Z,15nm,1.0s						
NC602	NORSAR Array S	45.21	322	P	P	23 59 49.8	-1.5
NC303	NORSAR Array S	45.32	323	P	P	23 59 51.7	-0.5
NB201	NORSAR Array S	45.35	323	P	P	23 59 52.2	-0.2
NB2	NORSAR Subarra	45.39	323	P	P	23 59 52.9	+0.2
	comp=Z,5.0nm,1.1s,baz=94,slow=7.9						
NOA	NORSAR Array B	45.39	323	P	P	23 59 51.7	-1.0
	comp=Z,2.1nm,0.8s,baz=94,slow=7.7,SNR=7.3						
NBO00	NORSAR Array S	45.60	323	P	P	23 59 52.5	-1.9
NC204	NORSAR Array S	45.62	323	P	P	23 59 53.7	-0.8
KMBO	Kilima Mbogo	50.22	230	P	P	00 00 31.2	+0.3
	comp=Z,0.3nm,0.4s,baz=327,slow=20,SNR=3.0						
ESDC	Sonseca Array	58.98	299	P	P	00 01 34.0	-0.2
	comp=Z,0.9nm,0.9s,baz=61,slow=7.6,SNR=2.1						
SUMG	Summit	61.56	341	P	P	00 01 52.5	+0.8
SUMG				pmax	pmax		
	comp=Z,7.0nm,1.1s						
SUMG	Summit	61.56	341	P	P	00 01 52.5	+0.8
SUMG				IAmb	IAmb	00 02 03.2	
	comp=Z,6.7nm,1.1s						
TOA0	Torodi Ar. Sit	67.50	270	P	P	00 02 29.5	-1.3
TOA0				IAmb	IAmb	00 02 42.7	
	comp=Z,3.7nm,1.2s						
TORD	Torodi Ar. Bea	67.50	270	P	P	00 02 29.7	-1.2
	comp=Z,0.7nm,0.4s,baz=50,slow=6.0,SNR=8.7						
TORD	Torodi Ar. Bea	67.50	270	P	P	00 02 29.3	-1.6
RES	Resolute Bay	68.73	357	P	P	00 02 36.9	-0.8
RES	Resolute Bay	68.73	357	P	P	00 02 36.9	-0.8
TOLK	Toolik Lake Re	70.39	15	P	P	00 02 48.6	+0.5
TOLK				IAmb	IAmb	00 03 07.7	
	comp=Z,5.4nm,1.1s						
COLD	Coldfoot	71.40	16	P	P	00 02 53.4	-0.8
IMAR	Indian Mountai	71.55	18	P	P	00 02 55.2	+0.1
BMAR	Burnt Mountain	72.44	14	P	P	00 03 01.1	+0.6
INK	Inuvik	73.53	10	P	P	00 03 06.7	-0.2
	comp=Z,0.7nm,0.6s,baz=346,slow=3.5,SNR=1.8						
INK	Inuvik	73.53	10	P	P	00 03 06.6	-0.2
ILAR	Eielson Array	74.21	17	P	P	00 03 09.1	-1.8
	comp=Z,0.2nm,0.5s,baz=328,slow=4.4,SNR=2.5						
ILAR	Eielson Array	74.21	17	P	P	00 03 11.1	+0.2
ILAR	Eielson Array	74.21	17	P	P	00 03 11.1	+0.2
KTH	Kantishna Hill	74.23	19	P	P	00 03 11.7	+0.6
KTH				IAmb	IAmb	00 03 14.9	
	comp=Z,4.2nm,1.1s						
PPLA	Purkeypile	74.42	20	P	P	00 03 12.0	-0.3
PPLA				IAmb	IAmb	00 03 28.2	
	comp=Z,8.5nm,1.2s						
LBTB	Lobatse	75.94	224	P	P	00 03 22.4	+0.9
LBTB				pmax	pmax		
	comp=Z,10.0nm,1.3s						
LBTB	Lobatse	75.94	224	P	P	00 03 22.4	+0.9
LBTB				IAmb	IAmb	00 03 37.5	
	comp=Z,9.7nm,1.3s						
SUA	Susitna One	75.98	20	P	P	00 03 23.8	+2.4
SUA				IAmb	IAmb	00 03 28.6	
	comp=Z,11nm,1.4s						
RSO	Redoubt South	76.22	22	P	P	00 03 20.5	-2.3
WRA	Warramunga Arr	80.54	123	P	P	00 03 47.7	+0.7
	comp=Z,1.4nm,0.6s,baz=324,slow=5.0,SNR=17						
WRA	Warramunga Arr	80.54	123	P	P	00 03 48.1	+1.1
WRA	Warramunga Arr	80.54	123	P	P	00 03 48.1	+1.1
WB2	Warramunga Arr	80.55	123	P	P	00 03 48.5	+1.5
WB2				IAmb	IAmb	00 04 05.6	
	comp=Z,8.1nm,1.2s						
WC3	Warramunga Arr	80.57	123	P	P	00 03 48.2	+1.0
WC3				IAmb	IAmb	00 03 52.7	
	comp=Z,14nm,1.4s						
WR0	Warramunga Arr	80.68	123	P	P	00 03 48.9	+1.2
WR0				IAmb	IAmb	00 04 01.0	
	comp=Z,11nm,1.4s						
YKA	Yellowknife Ar	81.07	4	P	P	00 03 49.1	-0.1
	comp=Z,0.8nm,0.6s,baz=359,slow=5.2,SNR=9.6						
ASAR	Alice Springs	82.86	126	P	P	00 04 00.1	+0.9
	comp=Z,0.7nm,0.5s,baz=318,slow=5.3,SNR=10						
ASAR	Alice Springs	82.86	126	P	P	00 04 00.5	+1.3
ASAR	Alice Springs	82.86	126	P	P	00 04 00.5	+1.3

IDC ***02*** *23:58:08.3±0.8, 18°.45S×63°.31W, h0^{km}, mb3.9/6, mb1 4.1/11, mb1mx4.0/35, mbtmp3.9/11, ML3.7/5, MS3.9/9, Ms1 3.9/9, ms1mx3.6/30, Error ellipse: s-maj=18.5km s-min=14.4km az=128.0*

SJA ***02*** *23:58:10.1±0.5, 18°.54S×63°.23W, h20^{km}±25^{km}, ML4.4, MW4.5*

NEIC ***02*** *23:58:14.1±1.4, 18°.56S±0°.08×63°.19W±0°.08, h41^{km}±9^{km}, mb4.0/8, Error ellipse: s-maj=13.1km s-min=8.9km az=140.0*

ISC 02 23:58:10.7±0.6**, 18°.48S**±0°.06×**63°.22W**±0°.07**, h10^{km}, n68,** σ**$1^{s}.38$**/67**, mb3.9**/7**, MS4.0**/5**, Central Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIV	San Ignacio	3.21	40	Pn	Pn	23 59 02.5	+1.2
	25nm,0.3s,baz=244,slow=7.1,SNR=346						
SIV				Sn	Sn	23 59 40.7	+1.0
	47nm,0.3s,baz=174,slow=17,SNR=9.0						
SIV				LR	LR	23 59 45.9	
	comp=Z,757nm,18.5s,baz=236,slow=30						
SIV				Lg	Lg	23 59 52.6	
	88nm,0.3s,baz=154,slow=21,SNR=11						
YJA	Yavi	4.26	210	*e*P	Pn	23 59 17.5	+1.4
YJA				*e*S	Sn	00 00 07.6	+1.5
YJA				IAML		00 00 42.4	
	comp=Z,174nm,0.9s						
HJA	Humahuaca	5.13	203	*e*P	Pn	23 59 29.7	+1.7
ASTB	Santa Barbara	5.56	192	*e*P	Pn	23 59 35.2	+1.5
PB08	IPOC Station P	5.84	253		Pn	23 59 38.7	+0.9
PB08	IPOC Station P	5.84	253	*e*P	Pn	23 59 39.7	+1.9
AZAP	Zapla	5.97	196	*e*P	Pn	23 59 40.7	+1.4
AZAP				IAML		00 01 34.6	
	comp=Z,347nm,0.7s						
PB16	IPOC Station P	5.98	270		Pn	23 59 41.4	+1.6
PB16	IPOC Station P	5.98	270	*e*P	Pn	23 59 41.7	+1.9
MNMC	Minye Minye	6.08	263		Pn	23 59 41.8	+0.9
MNMCX	Minye Minye	6.08	263	*e*P	Pn	23 59 42.3	+1.4
PB01	IPOC Station P	6.43	246		Pn	23 59 46.7	+1.1
PB01	IPOC Station P	6.43	246	*e*P	Pn	23 59 46.7	+1.1
PB09	IPOC Station P	6.55	239		Pn	23 59 49.3	+2.0
PB09	IPOC Station P	6.55	239	*e*P	Pn	23 59 49.5	+2.2
SLA	San Lorenzo	6.56	199	*e*P	Pn	23 59 48.2	+0.7
SLA				IAML		00 00 01.9	
	comp=Z,101nm,0.5s						
PSGCX	Pisagua	6.63	259	Pn	Pn	23 59 49.1	+0.7
PSGCX	Pisagua	6.63	259	*e*P	Pn	23 59 49.0	+0.7
LVC	Limon Verde	6.73	231	Pn	Pn	23 59 50.1	+0.1
	comp=Z,2.6nm,0.3s,baz=43,slow=9.0,SNR=21						
LVC				Sn	Sn	00 01 08.3	+1.4
	baz=230,slow=21,SNR=0.9						
LVC				LR	LR	00 03 07.0	
	comp=Z,704nm,19.5s,baz=40,slow=45						
LVC	Limon Verde	6.73	231		Pn	23 59 51.4	+1.4
LVC	Limon Verde	6.73	231	*e*P	Pn	23 59 51.9	+1.9
PB02	IPOC Station P	6.89	245	*e*P	Pn	23 59 52.1	+0.2
PB07	IPOC Station P	7.05	242		Pn	23 59 54.7	+0.5
PB07	IPOC Station P	7.05	242	*e*P	Pn	23 59 55.4	+1.2
PB03	IPOC Station P	7.09	239	*e*P	Pn	23 59 55.5	+0.8
PB06	IPOC Station P	7.29	234		Pn	23 59 57.2	-0.2
PB06	IPOC Station P	7.29	234	*e*P	Pn	23 59 58.8	+1.4
PB15	IPOC Station P	7.50	230		Pn	00 00 02.1	+1.7
PB15	IPOC Station P	7.50	230	*e*P	Pn	00 00 02.6	+2.2
FSA	Cafayete	8.01	198	*e*P	Pn	00 00 08.6	+1.3
PB10	IPOC Station P	8.49	233	Pn	Pn	00 00 14.1	+0.3
GO02	Mina Guanaco	8.90	221	Pn	Pn	00 00 20.2	+0.5
PB14	IPOC Station P	9.06	226	Pn	Pn	00 00 22.1	+0.2
SAML	Samuel	9.48	0		Pn	00 00 28.2	+0.8
CPUP	Villa Florida	9.52	146	Pn	Pn	00 00 27.1	-0.8
	comp=Z,0.1nm,0.3s,baz=173,slow=20,SNR=1.6						
CPUP				Pg		00 01 03.1	
	comp=Z,0.4nm,0.3s,baz=331,slow=10,SNR=4.4						
CPUP				Lg	Lg	00 03 13.9	
	comp=Z,0.8nm,0.3s,baz=241,slow=18,SNR=1.7						
CPUP				LR	LR	00 04 38.9	
	comp=Z,457nm,20.0s,baz=326,slow=41						
CPUP	Villa Florida	9.52	146		Pn	00 00 27.8	-0.1
AC02	Maricunga	9.94	212		Pn	00 00 35.2	+1.0
AC01	Pan de Azucar	10.24	221	Pn	Pn	00 00 36.7	-1.0
AC05	El Transito	12.16	211	Pn	Pn	00 01 03.3	-0.9
CO01	Juntas del Tor	13.04	207	Pn	Pn	00 01 15.8	-0.6
GO04	Tololo Observa	13.53	209	Pn	Pn	00 01 23.4	+0.4
CO03	El Pedregal	14.04	207		Pn	00 01 31.6	+1.7
BDFB	Brasilia	14.81	81	Pn	Pn	00 01 40.6	+0.2
	comp=Z,0.1nm,0.3s,baz=256,slow=13,SNR=1.8						
BDFB				Sn	S	00 04 32.4	-11
	comp=Z,0.1nm,0.3s,baz=316,slow=6.6,SNR=1.6						
BDFB				Lg	Lg	00 06 02.1	
	comp=Z,0.2nm,0.3s,baz=206,slow=22,SNR=6.8						
BDFB				LR	LR	00 08 04.9	
	comp=Z,835nm,20.3s,baz=280,slow=40						
ROC1	El Roble	16.04	204	Pn	Pn	00 01 53.2	-3.5
MT02	Curacav	16.34	204		Pn	00 02 01.9	+1.7
MT02				IAmb	IAmb	00 02 06.7	
	comp=Z,8.7nm,0.8s						
BO02	Sierra Bellavi	17.58	201		Pn	00 02 16.3	+0.3
BO02				IAmb	IAmb	00 02 18.7	
	comp=Z,34nm,1.4s						
PTGA	Pitinga	17.93	11	P	Pn	00 02 19.4	-0.8
	comp=Z,0.1nm,0.3s,baz=328,slow=23,SNR=1.1						
PTGA				Lg	Lg	00 07 32.9	
	comp=Z,0.6nm,0.3s,baz=312,slow=22,SNR=1.7						
PTGA	Pitinga	17.93	11	P	P	00 02 24.5	+3.6
PTGA				IAmb	IAmb	00 02 28.5	
	comp=Z,11nm,1.4s						
PLCA	Paso Flores	23.05	194	P	P	00 03 16.0	-0.3
	comp=Z,1.8nm,0.8s,baz=42,slow=9.2,SNR=3.9						
SDV	Santo Domingo	28.16	344	LR	LR	00 16 33.2	
	comp=Z,187nm,18.4s,baz=208,slow=39						

RCBR	Riachuelo	29.46	68	LR	LR	00 16 35.9	
	comp=Z,381nm,21.4s,baz=135,slow=38						
TX31	Lajitas Ar. Si	61.51	320	P	P	00 08 26.5	-1.6
TXAR	Lajitas Array	61.51	320	P	P	00 08 27.0	-1.2
	comp=Z,0.7nm,0.7s,baz=139,slow=8.3,SNR=8.9						
TORD	Torodi Ar. Bea	71.29	69	P	P	00 09 30.8	-0.2
	comp=Z,2.5nm,0.7s,baz=259,slow=6.3,SNR=8.7						
TORD				LR	LR	00 40 22.8	
	comp=Z,148nm,18.4s,baz=215,slow=36						
TORD	Torodi Ar. Bea	71.29	69	P	P	00 09 31.6	+0.7
ULM	Lac du Bonnet	74.26	339	P	P	00 09 46.4	-1.5
	comp=Z,2.3nm,0.7s,baz=141,slow=6.5,SNR=6.3						
BW06	Boulder Array	74.38	326	P	P	00 09 48.3	-0.8
PD31	Pinedale Array	74.38	326	P	P	00 09 48.7	-0.4
PD31				IAmb	IAmb	00 10 02.0	
	comp=Z,0.2nm,0.6s						
PDAR	Pinedale Array	74.38	326	P	P	00 09 48.1	-0.9
	comp=Z,0.5nm,0.5s,baz=125,slow=8.5,SNR=7.3						
TPNV	Topopah Spring	74.42	318	P	P	00 09 48.7	-0.6
TPNV				IAmb	IAmb	00 09 59.0	
	comp=Z,5.9nm,1.4s						
NVAR	Mina Array Bea	76.61	319	P	P	00 10 01.1	-0.8
	comp=Z,0.1nm,0.3s,baz=131,slow=3.7,SNR=1.9						
BOSA	Boshof	80.07	117	LR	LR	00 42 30.7	
	comp=Z,90nm,18.7s,baz=326,slow=33						
YKA	Yellowknife Ar	90.24	339	LR	LR	00 52 01.5	
	comp=Z,38nm,21.0s,baz=0.0,slow=36						
ASAR	Alice Springs	134.90	202	PKP	PKPdf	00 17 29.8	-1.1
	comp=Z,0.3nm,0.5s,baz=129,slow=1.9,SNR=5.0						
ZALV	Zalesovo Beam	136.90	27	PKP	PKPdf	00 17 32.4	-1.1
	comp=Z,0.6nm,0.5s,baz=298,slow=3.1,SNR=2.5						
WRA	Warramunga Arr	138.11	205	PKP	PKPdf	00 17 35.4	-1.4
	comp=Z,0.4nm,0.5s,baz=159,slow=1.8,SNR=7.3						
MKAR	Makanchi Array	140.03	37	PKP	PKPdf	00 17 36.9	-2.6
	comp=Z,0.2nm,0.6s,baz=314,slow=2.2,SNR=2.0						
SONM	Songino Array	149.52	14	PKPbc	PKPdf	00 17 57.7	+1.7
	comp=Z,1.0nm,0.7s,baz=301,slow=1.6,SNR=8.1						

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*IDC **03** 00:05:07.1±0.9, 56°.66N×169°.07W, h0^{km}, mb3.8/10, mb1 4.1/13, mb1mx3.9/48, mbtmp3.9/13, ML3.6/4, MS3.5/2, Ms1 3.5/2, ms1mx2.8/31, Error ellipse: s-maj=29.4km s-min=14.1km az=176.0*

*AEIC **03** 00:05:07±2.5, 56°.57N±0°.07×169°.1W±0°.1, h21^{km}±6^{km}, Error ellipse: s-maj=9.9km s-min=9.5km az=153.0*

*NEIC **03** 00:05:07.9±3.0, 56°.47N±0°.05×168°.98W±0°.10, h10^{km}±2^{km}, mb4.3/9, ML3.9(AEIC), Error ellipse: s-maj=11.3km s-min=5.0km az=228.0*

ISC 03 00:05:10.9±0.5**, 56°.56N**±0°.08×**168°.98W**±0°.06**, h35**^{km}**, n70,** σ1^{s}.**39**/69**, mb3.9**/10**, Pribilof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPIA	Saint Paul Isl	0.93	312		Pn	00 05 25.1	-2.2
UNV	Unalaska Valle	3.07	151	Pn	Pn	00 05 56.4	-0.5
FALS	False Pass	3.58	116	Pn	Pn	00 06 02.5	-1.3
NIKH	Nikolski High	3.60	179	Pn	Pn	00 06 03.5	-0.6
SDPT	Sand Point	4.93	101	Pn	Pn	00 06 22.8	+0.4
ATKA	Atka Island	5.33	217	Pn	Pn	00 06 27.7	-0.1
CHGN	Chignik	5.87	88		Pn	00 06 34.8	-0.4
ADK	Adak	6.51	227	Pn	Pn	00 06 43.7	-0.3
GAMB	Gambell	7.36	351		Pn	00 06 55.0	-0.7
SII	Sitkinak Islan	8.18	84	Pn	Pn	00 07 06.9	0.0
ANM	Nome	8.22	11	Pn	Pn	00 07 08.6	+1.1
SVW2	Sparrevohn	8.30	51	Pn	Pn	00 07 09.5	+1.0
OHAK	Old Harbor	8.62	79	Pn	Pn	00 07 14.3	+1.4
AMKA	Amchitka	8.64	238	Pn	Pn	00 07 15.3	+2.1
KDAK	Kodiak Island	8.99	75	Pn	Pn	00 07 20.1	+2.1
	1.3nm,0.3s,baz=326,slow=13,SNR=8.7						
KDAK				LR	LR	00 10 52.0	
	comp=Z,77nm,20.4s,baz=211,slow=38						
KDAK	Kodiak Island	8.99	75		Pn	00 07 18.9	+0.9
TTA	Tatalina	9.13	40	Pn	Pn	00 07 19.5	-0.5
CNPM	China Poot	9.86	65	Pn	Pn	00 07 32.3	+2.4
BRLK	Bradley Lake	10.07	64	Pn	Pn	00 07 33.2	+0.3
SKT	Skwentna	10.43	51	Pn	Pn	00 07 39.1	+1.3
PPLA	Purkeypile	10.56	46	Pn	Pn	00 07 41.8	+2.1
SUA	Susitna One	10.59	55	Pn	Pn	00 07 40.9	+0.9
SEW	Seward	10.85	63	Pn	Pn	00 07 41.1	-2.3
KTH	Kantishna Hill	11.39	45	Pn	Pn	00 07 52.4	+1.5
GHO	Glory Hole Cre	11.51	55	Pn	Pn	00 07 53.5	+0.9
TRF	Thorofare Moun	11.59	46	Pn	Pn	00 07 56.4	+2.7
KNK	Knik Glacier	11.62	57	Pn	Pn	00 07 55.6	+1.6
BPAW	Bear Paw Mtn.	11.64	42		Pn	00 07 55.1	+0.7
SML	Sawmill	11.79	55	Pn	Pn	00 07 57.5	+1.1
IMAR	Indian Mountai	11.91	31	Pn	Pn	00 07 58.1	+0.2
RND	Reindeer	12.14	47	Pn	Pn	00 08 02.4	+1.1
SCM	Sheep Creek Mo	12.25	56	Pn	Pn	00 08 02.0	-0.7
I23K	Minto, Yukon-K	12.80	40	Pn	Pn	00 08 10.6	+0.5
KLU	Klutina	12.82	58	Pn	Pn	00 08 10.5	0.0
M24K	Tolsona, Glenn	12.85	55	Pn	Pn	00 08 12.0	+1.1
PAX	Paxson	13.41	52	Pn	Pn	00 08 18.9	+0.4
N25K	Chitina, Valde	13.47	58	Pn	Pn	00 08 18.9	-0.4
ILAR	Eielson Array	13.53	44	Pn	Pn	00 08 17.6	-2.3
	0.0nm,0.3s,baz=233,slow=10,SNR=4.4						
VRDI	Verde Repeater	13.95	60	Pn	Pn	00 08 25.8	-0.1
MENT	Mentasta	14.17	53	Pn	Pn	00 08 28.6	-0.2
DOT	Dot Lake	14.23	50	Pn	Pn	00 08 28.9	-0.7
ISLE	Juniper Island	14.42	63	Pn	Pn	00 08 32.7	+0.4
BARN	Barnard Glacie	14.79	61	Pn	Pn	00 08 36.6	-0.8
CTGM	Chitina Glacie	14.94	61	Pn	Pn	00 08 40.4	+1.1
TOLK	Toolik Lake Re	14.94	28		P	00 08 42.8	-1.6
TOLK	Toolik Lake Re	14.94	28	Pn	P	00 08 41.6	-2.8
TOLK				IAmb	IAmb	00 08 51.5	
	comp=Z,14nm,0.8s						
FYU	Fort Yukon	15.00	38	Pn	Pn	00 08 40.8	+1.0
FYU				IAmb	IAmb	00 08 51.2	
	comp=Z,8.1nm,0.8s						
BCAR	Beaver Creek A	15.06	53		Pn	00 08 40.3	-0.5
BMAR	Burnt Mountain	15.66	36		Pn	00 08 48.9	+0.3
HYT	Haines Junctio	16.80	62		Pn	00 09 04.7	+1.5
WHY	Whitehorse	18.09	63	P	Pn	00 09 19.2	0.0
PEA0B	Petropavlovsk-	19.39	274	P	P	00 09 31.0	-2.5
PEA0B				IAmb	IAmb	00 09 38.4	
	comp=Z,23nm,1.1s						
PETK	Petropavlovsk-	19.39	274	P	Pn	00 09 34.5	-0.2
	comp=Z,0.3nm,0.3s,baz=82,slow=11,SNR=5.2						
PETK	Petropavlovsk-	19.39	274	P	P	00 09 29.7	-3.7
INK	Inuvik	19.82	39	P	Pn	00 09 39.7	0.0
	comp=Z,0.6nm,0.3s,baz=246,slow=6.9,SNR=19						
INK	Inuvik	19.82	39		P	00 09 38.0	0.0
INK				IAmb	IAmb	00 09 44.2	
	comp=Z,5.9nm,0.7s						
SEY	Seymchan	20.22	304	P	Pn	00 09 42.2	-2.3
	comp=Z,0.9nm,0.3s,baz=123,slow=7.3,SNR=6.8						
YKA	Yellowknife Ar	27.46	55	P	P	00 10 54.0	+0.8
	comp=Z,1.3nm,0.9s,baz=282,slow=7.9,SNR=12						
YKA				PcP	PcP	00 14 11.4	+0.8
	comp=Z,1.6nm,1.2s,baz=277,slow=1.2,SNR=5.4						
NLWA	Neilton Lookou	28.78	89	P	P	00 11 03.6	-1.5
NLWA				IAmb	IAmb	00 11 15.8	
	comp=Z,7.6nm,1.1s						
A05A	Maple Falls	28.86	85	P	P	00 11 03.9	-1.9
MIDW	Midway	28.96	195	P	P	00 11 04.4	-2.3
NVAR	Mina Array Bea	37.72	97	P	P	00 12 25.2	+2.1
	comp=Z,0.7nm,0.8s,baz=296,slow=8.4,SNR=4.7						
SONM	Songino Array	49.43	298	P	P	00 13 58.9	+1.8
	comp=Z,0.9nm,0.9s,baz=44,slow=6.4,SNR=6.5						
TXAR	Lajitas Array	52.57	92	P	P	00 14 22.1	+1.3
	comp=Z,1.9nm,1.1s,baz=301,slow=3.6,SNR=11						
MKAR	Makanchi Array	61.12	312	P	P	00 15 21.1	-0.1
	comp=Z,0.5nm,0.9s,baz=66,slow=8.1,SNR=3.6						
TGY	Tagaytay City	67.38	261	LR	LR	00 44 29.0	
	comp=Z,138nm,19.4s,baz=308,slow=35						
AKASG	Malin Array Be	72.04	348	P	P	00 16 31.2	+0.5
	comp=Z,2.6nm,0.9s,baz=18,slow=6.1,SNR=4.8						
GERES	GERESS Array B	74.94	358	P	P	00 16 47.5	-0.4
	comp=Z,0.4nm,0.7s,baz=323,slow=11,SNR=3.7						
CMAR	Chiang Mai Arr	75.94	282	P	P	00 16 55.5	+1.5
	comp=Z,0.7nm,0.3s,baz=18,slow=6.9,SNR=8.2						
ASAR	Alice Springs	93.26	230	P	P	00 18 23.6	+2.1
	comp=Z,0.2nm,0.3s,baz=17,slow=7.7,SNR=2.0						

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*IDC **03** 00:09:22.8±0.9, 6°.76N×72°.99W, h159^{km}±16^{km}, mb3.0/4, mb1 3.4/6, mb1mx3.2/27, mbtmp3.6/6, Error ellipse: s-maj=48.0km s-min=8.4km az=132.0*

*RSNC **03** 00:09:24.0±1.5, 6°.81N×73°.15W, h146^{km}±5^{km}, ML3.4, Mw3.7, Fault plane solution: NP1:ϕ_s68.00000°, δ88.00000°, λ-142.00000°.*

ISC 03 00:09:22.7±0.8**, 6°.83N**±0°.03×**73°.13W**±0°.04**, h155**^{km}±5^{km}**, n42,** σ1^{s}.**18**/74**, mb3.3**/4**, 6C-3D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.24	194	⇓iP	Pn	00 09 44.2	+0.2
BARC				eS	Sn	00 09 58.8	-1.4
BARC				i		00 10 00.4	
	comp=Z,517nm,0.3s						
BRRC	Barranca, Sant	0.65	296	⇑iP	Pn	00 09 46.1	+0.7
BRRC				eS	Sn	00 10 02.7	0.0
BRRC				i		00 10 06.2	
	comp=Z,333nm,0.3s						
PAMC	Pamplona, Colo	0.66	40	⇑iP	Pn	00 09 47.0	+0.9
PAMC				i		00 09 47.3	
	comp=Z,836nm,0.2s						
PAMC				eS	Sn	00 10 03.8	-0.1
RUSC	La Rusia	0.93	177	⇓iP	Pn	00 09 48.1	+0.1
RUSC				eS	Sn	00 10 06.4	-0.9
RUSC				i		00 10 08.4	
	comp=Z,189nm,0.5s						
PTBC	PUERTO BERRIO,	1.35	258	eP	Pn	00 09 50.8	-0.4
PTBC				eS	Sn	00 10 11.7	-1.3
PTBC				i		00 10 19.3	
	comp=Z,232nm,0.4s						
TAMC	Tame, Arauca	1.38	106	⇑iP	Pn	00 09 52.6	+1.1
TAMC				i		00 09 52.7	
	comp=Z,185nm,0.2s						
TAMC				eS	Sn	00 10 12.6	-0.9
OCAC	Ocana	1.42	352	eP	Pn	00 09 52.1	+0.1
OCAC				eS	Sn	00 10 14.2	-0.3
OCAC				i		00 10 22.7	
	comp=Z,256nm,0.2s						
SPBC	San Pablo de B	1.50	219	eP	Pn	00 09 53.0	+0.2
SPBC				eS	Sn	00 10 15.2	-0.7
SPBC				i		00 10 19.9	
	comp=Z,419nm,0.3s						
ZARC	Zaragoza, Cauc	1.84	291	eP	Pn	00 09 56.5	+0.2
ZARC				eS	Sn	00 10 21.3	-1.0
ZARC				i		00 10 27.4	
	comp=Z,288nm,0.3s						
NORC	Norcasia	2.14	234	⇑eP	Pn	00 09 60.0	+0.1
NORC				eS	Sn	00 10 27.9	-0.5
NORC				i		00 10 35.6	
	comp=Z,144nm,0.2s						
SMLC	San Martn de	2.17	335	eP	Pn	00 10 00.1	-0.1
SMLC				eS	Sn	00 10 28.8	-0.3
SMLC				i		00 10 38.8	
	comp=Z,233nm,0.1s						
CHIC	Chingaza	2.27	195	eP	Pn	00 10 02.1	+0.4
CHIC				eS	Sn	00 10 31.4	-0.3
CHIC				i		00 10 35.2	
	comp=Z,195nm,0.6s						
ROSC	El Rosal	2.30	211	P	Pn	00 10 03.2	+1.0
	comp=Z,33nm,0.3s,baz=148,slow=21,SNR=36						
ROSC				S	Sn	00 10 33.7	+1.2
	comp=Z,44nm,0.3s,baz=293,slow=17,SNR=7.4						
ROSC	El Rosal	2.30	211	eP	Pn	00 10 03.9	+1.7
ROSC				eS	Sn	00 10 30.5	-2.0
ROSC				i		00 10 38.6	
	comp=Z,445nm,0.4s						
HELC	Santa Helena	2.47	255	eP	Pn	00 10 04.8	+0.7
HELC				eS	Sn	00 10 35.5	-0.5
HELC				i		00 10 42.3	
	comp=Z,136nm,0.3s						
UREC	San Jos de Ur	2.56	291	eP	Pn	00 10 04.1	-0.7
UREC				eS	Sn	00 10 34.6	-2.8
UREC				i		00 10 48.1	
	comp=Z,117nm,0.2s						
GUY2C	Guyana, Caldas	2.74	235	eP	Pn	00 10 08.2	+0.7
GUY2C				eS	Sn	00 10 41.8	-0.2
GUY2C				i		00 10 50.6	
	comp=Z,147nm,0.5s						
PTGC	Puerto Gaitan,	2.79	159	⇓eP	Pn	00 10 07.3	-0.4
PTGC				eS	Sn	00 10 40.5	-2.1
RREF	El Recreo	2.92	229	eP	Pn	00 10 10.4	+0.4
RREF				eS	Sn	00 10 45.7	-0.7
RREF				i		00 10 56.2	
	comp=Z,163nm,0.4s						
CBOC	Ciudad Bolivar	3.02	252	eP	Pn	00 10 11.7	+1.0
CBOC				eS	Sn	00 10 46.9	-1.1
CBOC				i		00 10 54.0	
	comp=Z,37nm,0.2s						
DBBC	Dabeiba	3.07	274	eP	Pn	00 10 11.4	+0.1
DBBC				i		00 10 50.5	
	comp=Z,320nm,0.5s						
TOLC	Tolima	3.12	225	eP	Pn	00 10 12.9	+0.7
TOLC				eS	Sn	00 10 49.7	-0.6
SDV	Santo Domingo	3.21	50	P	Pn	00 10 13.7	+0.6
	comp=Z,32nm,0.3s,baz=184,slow=3.1,SNR=94						
SDV				S	Sn	00 10 51.1	-1.0
	comp=Z,11nm,0.3s,baz=271,slow=19,SNR=8.2						
SDV	Santo Domingo	3.21	50	⇑iP	Pn	00 10 13.6	+0.6
SDV				i		00 10 14.4	
	comp=Z,98nm,0.2s						
SDV				eS	Sn	00 10 51.3	-0.8
ARGC	Ariguani, Magd	3.21	340	eP	Pn	00 10 14.3	+1.4
ARGC				eS	Sn	00 10 52.0	0.0
ARGC				i		00 10 59.9	
	comp=Z,46nm,0.3s						
ANIL	Santa Ana	3.24	224	eP	Pn	00 10 14.5	+0.8
ANIL				eS	Sn	00 10 53.0	-0.2
ANIL				i		00 11 04.3	
	comp=Z,48nm,0.3s						
ORTC	Ortega, Tolima	3.59	216	eP	Pn	00 10 18.4	+0.5
ORTC				eS	Sn	00 11 00.5	-0.2
ORTC				i		00 11 05.6	
	comp=Z,90nm,0.3s						
CVALL	Valledupar, Ce	3.66	358	eP	Pn	00 10 17.9	-0.9
CVALL				eS	Sn	00 10 60.0	-2.4
PLMC	San Jos del P	3.68	239	eP	Pn	00 10 19.5	+0.5
PLMC				i		00 10 21.4	
	comp=Z,72nm,0.2s						
PLMC				eS	Sn	00 11 00.4	-2.4
CRJC	Cerrejon, Guaj	4.17	3	⇑eP	Pn	00 10 24.4	-1.1
CRJC				eS	Sn	00 11 11.7	-2.7
CRJC				i		00 11 19.6	
	comp=Z,65nm,0.2s						
GUVC	San Jose del G	4.28	173	eP	Pn	00 10 26.7	-0.2
GUVC				eS	Sn	00 11 14.6	-2.3
GUVC				i		00 11 21.3	
	comp=Z,72nm,0.4s						
SMRC	Santa Marta, M	4.44	346	eP	Pn	00 10 28.4	-0.6
SMRC				eS	Sn	00 11 17.0	-3.6
SMRC				i		00 11 19.8	
	comp=Z,27nm,0.2s						
MACC	Macarena, Meta	4.71	189	eP	Pn	00 10 31.4	-1.1
MARP	Paez Belalcaza	4.86	216	eP	Pn	00 10 34.7	0.0
GARC	Garzon, Huila	5.18	207	eP	Pn	00 10 37.8	-1.1
GARC				i		00 10 41.7	
	comp=Z,49nm,0.2s						
GARC				eS	Sn	00 11 35.4	-2.9
PCON	Cinco Dias	5.53	216	eP	Pn	00 10 45.5	+1.6
BBAC	Balboa, Cauca	6.30	221	eP	Pn	00 10 54.6	+0.9
BBAC				i		00 10 60.0	
	comp=Z,9.7nm,0.5s						
TXAR	Lajitas Array	36.45	312	P	P	00 16 13.6	+0.6
	comp=Z,0.1nm,0.4s,baz=127,slow=9.7,SNR=4.7						
ULM	Lac du Bonnet	47.28	340	P	P	00 17 40.7	+0.4
	comp=Z,1.0nm,0.5s,baz=135,slow=4.3,SNR=2.3						
PDAR	Pinedale Array	48.07	324	P	P	00 17 47.8	+0.9
	comp=Z,0.2nm,0.6s,baz=127,slow=8.2,SNR=1.8						
YKA	Yellowknife Ar	63.26	340	P	P	00 19 34.9	+0.3
	comp=Z,0.4nm,0.5s,baz=128,slow=7.4,SNR=9.4						
WRA	Warramunga Arr	150.34	241	PKPbc	PKPbc	00 28 56.0	-0.7
	comp=Z,0.2nm,0.7s,baz=108,slow=2.7,SNR=1.1						

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*DJA **03** 00:17:00.9±0.9, 10°S±3°×12°2E±°, h14^{km}±7^{km}, M4.1/10, mb4.4/7, mB4.7/1, MLv4.0/10, Mw(mB)4.0/1*

*NEIC **03** 00:17:01.5±1.6, 10°.06S±0°.06×122°.39E±0°.03, h75^{km}±9^{km}, mb4.4/15, Error ellipse: s-maj=9.0km s-min=4.5km az=197.0*

*IDC **03** 00:17:02.1±2.1, 10°.24S×122°.45E, h91^{km}±19^{km}, mb4.0/5, mb1 3.9/9, mb1mx3.6/33, mbtmp4.2/9, MS2.9/3, Ms1 2.9/3, ms1mx2.6/33, Error ellipse: s-maj=31.6km s-min=21.3km az=63.0*

ISC 03 00:17:01.4±0.8**, 10°.10S**±0°.05×**122°.44E**±0°.05**, h74**^{km}±8^{km}**, n52,** σ1^{s}.**91**/57**, mb4.3**/8**, Savu Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	1.21	95	P	Pn	00 17 23.6	+0.8
	125nm,0.3s,baz=316,slow=3.9,SNR=37						
BATI				LR	LR	00 17 39.5	
	comp=Z,56nm,19.1s,baz=319,slow=31						
BATI				S	Sn	00 17 41.1	+2.4
	286nm,0.3s,baz=18,slow=19,SNR=9.2						
BATI	Baumata	1.21	95	P	Pn	00 17 24.0	+1.3
BATI				S	Sn	00 17 39.8	+1.1
MMRI	Maumere	1.47	352	Pn	Pn	00 17 25.4	-0.7
MMRI				Sn	Sn	00 17 44.6	-0.1
MMRI	Maumere	1.47	352	P	Pn	00 17 25.0	-1.1
MMRI				S	Sn	00 17 45.1	+0.3
EDFI	Ende, Flores	1.53	331	P	Pn	00 17 25.1	-2.0
EDFI				S	Sn	00 17 46.2	-0.2
SOEI	Soe	1.83	79		Pn	00 17 32.2	+1.2
SOEI	Soe	1.83	79	P	Pn	00 17 32.4	+1.4
BASI	Baing, Sumba	1.84	266	P	Pn	00 17 32.9	+1.9
BASI				S	Sn	00 17 56.9	+3.4
WSI	Waingapu	2.16	281	P	Pn	00 17 49.7	+14
BSSI	Bau Bau, Buton	4.38	334	P	Pn	00 18 08.0	+2.5
PLAI	Plampang	4.78	285	P	Pn	00 18 12.6	+1.7
BKSI	Bulukumba	5.28	334	P	Pn	00 18 18.7	+1.0
	0.1nm34nm,0.7s						
TWSI	Taliwang, Sumb	5.65	283	P	Pn	00 18 25.2	+2.3
	0.3nm706nm64nm,0.7s						
KAPI	Kappang	5.71	332	P	Pn	00 18 25.8	+2.1
	2.0nm,0.3s,baz=154,slow=12,SNR=7.2						
KAPI				LR	LR	00 20 48.1	
	comp=Z,77nm,19.3s,baz=146,slow=39						
KAPI	Kappang	5.71	332		Pn	00 18 23.1	-0.7
BNSI	Bone	6.12	338	P	Pn	00 18 31.3	+2.0
	0.1nm35nm,1.3s						
JAGI	Jajag, Banyuwa	8.34	281	Pn	Pn	00 18 58.9	-0.7
FITZ	Fitzroy Crossi	8.53	159	P	Pn	00 19 00.7	-1.6
	0.5nm,0.3s,baz=350,slow=8.1,SNR=14						
FITZ				S	Sn	00 20 31.6	-5.4
	4.8nm,0.3s,baz=174,slow=9.0,SNR=14						
FITZ				LR	LR	00 23 22.7	
	comp=Z,64nm,18.0s,baz=355,slow=45						
FITZ	Fitzroy Crossi	8.53	159	Pn	Pn	00 19 03.5	+1.3
SANI	Sanana	8.74	24	P	Pn	00 19 06.2	+1.1
	26nm,1.2s						
MTN	Manton Dam	8.94	109	Pn	Pn	00 19 08.6	+0.7
PSA00	Pilbara Seismi	11.68	192	Pn	Pn	00 19 45.6	+0.5
PSA00	Pilbara Seismi	11.68	192	Pn	Pn	00 19 45.0	-0.2
UGM	Wanagama	11.97	279	Pn	Pn	00 19 48.4	-0.8
GIRL	Giralia	14.74	211	Pn	Pn	00 20 25.6	-0.4
WB0	Warramunga Arr	15.01	131	Pn	Pn	00 20 25.4	-4.1
WRA	Warramunga Arr	15.08	132	P	Pn	00 20 27.3	-3.1
	0.5nm,0.3s,baz=312,slow=13,SNR=18						
WRA				S	Sn	00 23 03.4	-13
	1.7nm,0.3s,baz=231,slow=11,SNR=11						
WRA				LR	LR	00 26 55.5	
	comp=Z,84nm,19.2s,baz=230,slow=40						
WRA	Warramunga Arr	15.08	132	Pn	Pn	00 20 28.1	-2.4
WB2	Warramunga Arr	15.09	132	Pn	Pn	00 20 28.0	-2.5
WR0	Warramunga Arr	15.24	131	Pn	Pn	00 20 29.2	-3.3
WR0				IAmb	IAmb	00 20 45.5	
	comp=Z,40nm,1.8s						
CBJI	Citeko	15.86	282	P	P	00 20 46.4	+3.8
AS31	Alice Springs	17.37	142	P	P	00 20 59.5	+0.2
ASAR	Alice Springs	17.37	142	P	Pn	00 20 58.8	-0.3
	comp=Z,0.7nm,0.3s,baz=319,slow=12,SNR=53						
ASAR				S	Sn	00 24 01.1	-11
	comp=Z,0.7nm,0.3s,baz=311,slow=22,SNR=10.0						
ASAR	Alice Springs	17.37	142		P	00 20 59.8	+0.4
PMBI	Palembang	18.94	291	P	Pn	00 21 25.4	+7.3
MORW	Morawa	19.80	197	Pn	Pn	00 21 29.1	+1.0
MORW				IAmb	IAmb	00 21 31.8	
	comp=Z,25nm,1.6s						
MNAI	Manna	20.15	285	P	P	00 21 29.0	-0.9
MNAI				IAmb	IAmb	00 21 53.1	
	comp=Z,108nm,1.1s						
COEN	Coen	20.63	103	P	P	00 21 35.8	+0.7
COEN				IAmb	IAmb	00 22 19.8	
	comp=Z,22nm,1.7s						
BBOO	Buckleboo	25.86	153	P	P	00 22 29.1	+2.9
BBOO				IAmb	IAmb	00 23 18.4	
	comp=Z,75nm,2.0s						
ARMA	Armidale	33.86	131	P	P	00 23 37.9	+0.7
NNZ	Nelson	54.37	134	P	P	00 26 21.9	+1.2
HIZ	Hauiti	54.60	130	P	P	00 26 18.6	-3.8
USRK	Ussuriysk Ar.	54.73	8	P	P	00 26 22.3	-0.9
	comp=Z,1.3nm,0.4s,baz=111,slow=7.9,SNR=6.6						
SONM	Songino Array	59.41	348	P	P	00 26 56.0	-0.3
	comp=Z,1.5nm,0.6s,baz=165,slow=7.9,SNR=14						
SONM	Songino Array	59.41	348	P	P	00 26 56.2	-0.1
MK31	Makanchi Array	67.01	331	P	P	00 27 47.9	+1.4
MK31				IAmb	IAmb	00 27 48.4	
	comp=Z,2.2nm,0.8s						
MKAR	Makanchi Array	67.01	331	P	P	00 27 47.1	+0.6
	comp=Z,3.0nm,0.7s,baz=139,slow=7.7,SNR=27						
MKAR	Makanchi Array	67.01	331	P	P	00 27 46.8	+0.3
KKAR	Karatay Array	70.97	322	P	P	00 28 12.4	+1.3
ZAA0	Zalesovo Array	71.31	338	P	P	00 28 11.8	-1.1
ZAA0				IAmb	IAmb	00 28 13.6	
	comp=Z,2.5nm,0.8s						
ZALV	Zalesovo Beam	71.31	338	P	P	00 28 12.0	-0.9
	comp=Z,2.1nm,0.4s,baz=139,slow=4.7,SNR=11						
SEY	Seymchan	76.38	14	P	P	00 28 41.9	-0.5
	comp=Z,0.9nm,0.2s,baz=198,slow=20,SNR=1.5						

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*DJA **03** 00:19:10.5±0.4, 10°S±4°×12°2E±°, h10^{km}, M3.5/7, MLv3.5/7*

*IDC **03** 00:19:13.9±2.7, 9°.79S×122°.88E, h92^{km}±28^{km}, mb3.3/1, mb1 3.3/3, mb1mx3.0/31, mbtmp3.5/3, Error ellipse: s-maj=98.7km s-min=36.3km az=58.0*

ISC 03 00:19:03.9±1.1**, 10°.21S**±0°.07×**122°.12E**±0°.05**, h10**^{km}**, n10,** σ1^{s}.**11**/13**, Savu Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDFI	Ende, Flores	1.51	344	P	Pg	00 19 34.1	+1.1
EDFI				S	Sg	00 19 52.5	-0.1
BATI	Baumata	1.52	90	P	Pg	00 19 32.5	-0.5
	46nm,0.3s,baz=292,slow=7.2,SNR=3.5						
BATI				S	Sn	00 19 50.6	-0.4
	40nm,0.3s,baz=127,slow=18,SNR=2.6						
BATI	Baumata	1.52	90	P	Pg	00 19 32.9	-0.1
BATI				S	Sg	00 19 52.1	-0.7
BASI	Baing, Sumba	1.52	270	P	Pg	00 19 41.8	+8.7
MMRI	Maumere	1.57	4	P	Pb	00 19 32.6	-0.4
MMRI				S	Sn	00 19 51.1	-1.1
SOEI	Soe	2.16	78	P	Pb	00 19 43.1	-0.1
PLAI	Plampang	4.50	287	P	Pb	00 20 21.6	-1.5
WRA	Warramunga Arr	15.25	131	P	Pn	00 22 39.6	+0.1
	0.1nm,0.3s,baz=306,slow=11,SNR=1.6						
ASAR	Alice Springs	17.48	141	P	P	00 23 11.7	+2.5
	0.2nm,0.3s,baz=319,slow=12,SNR=1.9						
MKAR	Makanchi Array	66.96	331	P	P	00 29 56.5	-0.2
	0.4nm,0.5s,baz=142,slow=6.9,SNR=4.3						

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*IDC **03** 00:28:26.5±1.2, 56°.50N×169°.05W, h0^{km}, mb3.7/6, mb1 4.0/10, mb1mx3.6/42, mbtmp3.7/10, ML3.2/4, Error ellipse: s-maj=36.5km s-min=16.8km az=173.0*

*AEIC **03** 00:28:26±4.8, 56°.60N±0°.07×169°.0W±0°.1, h22^{km}±7^{km}, Error ellipse: s-maj=10.7km s-min=10.0km az=131.0*

*NEIC **03** 00:28:27.6±2.5, 56°.58N±0°.06×169°.1W±0°.1, h10^{km}±2^{km}, mb3.9/6, ML3.6(AEIC), Error ellipse: s-maj=11.9km s-min=9.1km az=250.0*

ISC 03 00:28:27.5±0.7**, 56°.55N**±0°.08×**169°.08W**±0°.06**, h10**^{km}**, n58,** σ1^{s}.**23**/58**, mb3.6**/6**, Pribilof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPIA	Saint Paul Isl	0.89	315		Pg	00 28 43.9	-0.7
AKUT	Akutan	3.07	141	Pn	Pn	00 29 15.9	-0.1
UNV	Unalaska Valle	3.09	150		Pn	00 29 16.5	+0.2
NIKH	Nikolski High	3.59	178	Pn	Pn	00 29 23.5	+0.3
FALS	False Pass	3.63	116	Pn	Pn	00 29 22.5	-1.1
SDPT	Sand Point	4.99	100	Pn	Pn	00 29 41.9	-0.4
ATKA	Atka Island	5.29	217	Pn	Pn	00 29 47.3	+0.9
CNBA	Chernabura Isl	5.64	104	Pn	Pn	00 29 49.0	-2.4
CHGN	Chignik	5.93	88	Pn	Pn	00 29 54.5	-0.6
GSTR	Great Sitkin T	6.05	225	Pn	Pn	00 29 54.6	-2.3
ADK	Adak	6.46	227	Pn	Pn	00 30 00.7	-1.8
GAMB	Gambell	7.36	351		Pn	00 30 13.7	-1.1
ANM	Nome	8.24	11		Pn	00 30 28.5	+1.6
AMKA	Amchitka	8.58	238	Pn	Pn	00 30 32.1	+0.5
OHAK	Old Harbor	8.68	79	Pn	Pn	00 30 34.2	+1.3
KDAK	Kodiak Island	9.05	75	Pn	Pn	00 30 40.2	+2.2
	0.9nm,0.3s,baz=266,slow=9.4,SNR=17						
KDAK	Kodiak Island	9.05	75		Pn	00 30 36.7	-1.3
TTA	Tatalina	9.17	40	Pn	Pn	00 30 39.4	-0.3

RSO	Redoubt South	9.39	59	Pn	Pn	00 30 43.7	+0.8
CNPM	China Poot	9.91	65	Pn	Pn	00 30 50.0	+0.2
BRLK	Bradley Lake	10.13	64	Pn	Pn	00 30 53.0	+0.2
SKT	Skwentna	10.48	52	Pn	Pn	00 30 59.0	+1.4
PPLA	Purkeypile	10.61	46	Pn	Pn	00 30 60.0	+0.4
SUA	Susitna One	10.64	55	Pn	Pn	00 31 01.1	+1.2
SEW	Seward	10.90	63	Pn	Pn	00 31 04.0	+0.6
KTH	Kantishna Hill	11.44	45	Pn	Pn	00 31 11.8	+1.1
GHO	Glory Hole Cre	11.56	55	Pn	Pn	00 31 12.7	+0.3
TRF	Thorofare Moun	11.64	46	Pn	Pn	00 31 14.9	+1.4
BPAW	Bear Paw Mtn.	11.69	42	Pn	Pn	00 31 13.9	-0.2
SML	Sawmill	11.84	55	Pn	Pn	00 31 16.7	+0.4
IMAR	Indian Mountai	11.95	32		Pn	00 31 18.5	+0.8
M24K	Tolsona, Glenn	12.91	55	Pn	Pn	00 31 31.6	+0.9
WRH	Wood River Hil	12.97	44	Pn	Pn	00 31 32.8	+1.2
MDM	Murphy Dome	13.16	42	Pn	Pn	00 31 35.6	+1.4
CCB	Clear Creek Bu	13.16	43	Pn	Pn	00 31 35.6	+1.4
ILAR	Eielson Array	13.57	44	Pn	Pn	00 31 39.0	-0.7
	0.0nm,0.3s,baz=240,slow=12,SNR=5.5						
DOT	Dot Lake	14.28	50	Pn	Pn	00 31 47.0	-2.5
YAH	Yahtse	14.75	64	Pn	Pn	00 31 56.3	+0.2
TOLK	Toolik Lake Re	14.98	28		Pn	00 32 00.3	+1.3
TOLK	Toolik Lake Re	14.98	28	Pn	Pn	00 31 56.4	-2.6
CTGM	Chitina Glacie	14.99	61	Pn	Pn	00 31 59.3	-0.1
FYU	Fort Yukon	15.04	39	Pn	Pn	00 31 59.7	-0.1
FYU				IAmb	IAmb	00 32 10.3	
	comp=Z,7.7nm,1.1s						
BCAR	Beaver Creek A	15.11	53	Pn	Pn	00 32 00.3	-0.5
PCA	Pinnacle	15.48	65	Pn	Pn	00 32 04.3	-1.5
BMAR	Burnt Mountain	15.71	36	Pn	Pn	00 32 09.3	+0.7
HYT	Haines Junctio	16.86	62	Pn	Pn	00 32 20.2	-3.1
HYT				IAmb	IAmb	00 32 31.3	
	comp=Z,8.5nm,1.1s						
WHY	Whitehorse	18.15	63		Pn	00 32 38.9	-0.5
BESE	Bessie Mountai	18.35	69	Pn	Pn	00 32 39.9	-2.0
BESE				IAmb	IAmb	00 32 46.5	
	comp=Z,16nm,0.9s						
PETK	Petropavlovsk-	19.33	274	P	Pn	00 32 53.4	-0.2
	comp=Z,0.1nm,0.3s,baz=72,slow=14,SNR=3.1						
PETK	Petropavlovsk-	19.33	274	P	P	00 32 52.5	-0.1
INK	Inuvik	19.87	40	P	P	00 32 58.2	0.0
	comp=Z,0.1nm,0.3s,baz=232,slow=8.5,SNR=6.6						
INK	Inuvik	19.87	40	P	P	00 32 58.6	+0.3
INK				IAmb	IAmb	00 33 09.7	
	comp=Z,4.5nm,1.1s						
YKA	Yellowknife Ar	27.52	55	P	P	00 34 13.5	-0.2
	comp=Z,0.8nm,0.9s,baz=280,slow=8.7,SNR=6.3						
NVAR	Mina Array Bea	37.77	97	P	P	00 35 43.8	0.0
	comp=Z,0.1nm,0.3s,baz=321,slow=7.0,SNR=3.9						
SONM	Songino Array	49.39	298	P	P	00 37 18.8	+1.8
	comp=Z,0.6nm,1.0s,baz=72,slow=4.7,SNR=2.9						
TXAR	Lajitas Array	52.63	92	P	P	00 37 41.9	+0.3
	comp=Z,0.7nm,0.9s,baz=285,slow=4.9,SNR=6.6						
AKASG	Malin Array Be	72.04	348	P	P	00 39 50.3	-0.8
	comp=Z,0.8nm,0.6s,baz=7.5,slow=5.5,SNR=2.6						
CMAR	Chiang Mai Arr	75.88	282	P	P	00 40 15.6	+1.5
	comp=Z,1.1nm,0.3s,baz=7.1,slow=5.7,SNR=4.9						

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*HEL **03** 00:53:35.2, 67°.79N×20°.15E, h0^{km}, ML1.9, Explosion*

UPP 03 00:53:35.6±0.0**, 67°.85N×20°.20E, h0^{km}, ML2.4, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUA	Kurravaara	0.12	26	P	Pg	00 53 38.1	+0.3
KUA				S	Sg	00 53 39.8	+0.4
KUA	Kurravaara	0.12	26	iP	Pg	00 53 38.1	+0.3
KUA				iS	Sg	00 53 39.8	+0.4
RATU	Laukkuluspa	0.23	264	P	Pg	00 53 40.3	+0.3
RATU	Laukkuluspa	0.23	264	iP	Pg	00 53 40.3	+0.3
KOVU	Salmi	0.38	358	P	Pg	00 53 42.9	+0.1
KOVU				S	Sg	00 53 48.0	+0.3
KOVU	Salmi	0.38	358	iP	Pg	00 53 42.9	+0.1
KOVU				iS	Sg	00 53 48.0	+0.3
NIKU	Nikkaluokta	0.44	273	P	Pg	00 53 44.2	+0.1
NIKU	Nikkaluokta	0.44	273	iP	Pg	00 53 44.2	+0.1
LANU	Lannavaara	0.70	73	P	Pg	00 53 49.0	0.0
LANU				S	Sg	00 53 58.4	+0.2
LANU	Lannavaara	0.70	73	eP	Pg	00 53 48.8	-0.2
LANU				eS	Sg	00 53 58.5	+0.4
DUNU	Dundret	0.74	169	P	Pg	00 53 49.5	-0.3
DUNU	Dundret	0.74	169	iP	Pg	00 53 49.5	-0.3
MASU	Masugnsbyn	0.79	119	P	Pg	00 53 50.6	-0.1
MASU	Masugnsbyn	0.79	119	iP	Pg	00 53 50.6	-0.1
SALU	Saltoluokta	0.80	235	P	Pg	00 53 50.7	-0.2
SALU	Saltoluokta	0.80	235	iP	Pg	00 53 50.7	-0.2
KIF	Kilpisjarvi	1.18	11	eP	Pg	00 53 58.1	-0.2
KIF	Kilpisjarvi	1.18	11	ePB	Pg	00 53 58.5	+0.3
KIF				MSG		00 54 13.8	
	comp=Z,15nm,0.2s						
KIF				eSB	Sb	00 54 14.1	-0.6
PAJU	Pajala	1.40	125	P	Pn	00 54 01.1	-1.2
PAJU	Pajala	1.40	125	ePG	Pn	00 54 01.0	-1.3
PAJU				eSN	Sg	00 54 20.5	+0.1
TOF	Tornio	2.41	136	ePB	Pn	00 54 17.6	+1.5
	baz=314						
TOF				MSG		00 54 45.4	
	comp=Z,4.7nm,0.2s						
TOF				eSG	Sb	00 54 50.2	+0.4
SGF	Sodankyl	2.45	97	ePB	Pb	00 54 18.7	-1.8
SGF				eSB	Sn	00 54 49.0	+1.5
ARA0	ARCESS Array S	2.57	46	eP	Pn	00 54 19.1	+0.6
ARA0	ARCESS Array S	2.57	46	eP	Pn	00 54 19.1	+0.6
	baz=226						
ARA0				eSG	Sg	00 54 57.6	-0.6
RNF	Rovaniemi	2.58	116	ePB	Pb	00 54 20.8	-1.9
RNF				eSG	Sb	00 54 54.8	-0.1
BURU	Burvik	3.31	171	eP	Pn	00 54 30.8	+2.2
	baz=355						
OLKF	Oulanka, Finla	3.91	109	eSG	Sg	00 55 37.5	-3.6
OUF	Merijarvi	3.95	150	ePG	Pb	00 54 45.8	-0.2
MSF	Maaselka	3.99	115	eP	Pn	00 54 40.2	+2.3
KU6	Riekki	4.23	111	eP	Pn	00 54 43.4	+2.2

UPP 03 00:53:51.8±0.4**, 67°.86N×20°.21E, h1^{km}**±3^{km}**, ML2.5, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUA	Kurravaara	0.11	26	P	Pg	00 53 54.0	+0.2
KUA				S	Sg	00 53 55.6	+0.4
RATU	Laukkuluspa	0.24	262	P	Pg	00 53 56.4	+0.1
KOVU	Salmi	0.37	357	S	Sg	00 54 04.0	+0.4
DUNU	Dundret	0.75	169	S	Sg	00 54 16.1	+0.2
SALU	Saltoluokta	0.81	234	P	Pg	00 54 07.1	-0.2
PAJU	Pajala	1.40	125	P	Pn	00 54 17.3	-1.2

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*IDC **03** 01:07:04.3±1.2, 4°.95N×78°.42W, h0^{km}, mb3.6/5, mb1 3.8/7, mb1mx3.6/27, mbtmp3.7/7, ML2.6/2, MS3.2/1, Ms1 3.2/1, ms1mx2.4/28, Error ellipse: s-maj=40.9km s-min=22.2km az=43.0*

*RSNC **03** 01:07:08.5±1.4, 5°.29N×78°.13W, h32^{km}±14^{km}, ML2.8*

ISC 03 01:07:06.7±3.5**, 5°.29N**±0°.05×**78°.14W**±0°.05**, h15^{km}**±22^{km}**, n28, σ1^{s}59**/40**, mb3.7**/5**, 2C-9D, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PIZC	Pizarro, Choco	0.84	112	⇓iP	Pb	01 07 22.5	-0.6
PIZC				eS	Sb	01 07 34.1	-0.2
PIZC				i		01 07 42.8	
	comp=Z,689nm,0.5s						
SOLC	Bahia Solano	1.19	38	eP	Pn	01 07 27.9	-0.9
SOLC				i		01 07 50.2	
	comp=Z,64nm,0.5s						
MALC	Bahia Malaga	1.50	147	⇓iP	Pn	01 07 31.7	-1.4
MALC				eS	Sn	01 07 50.5	-1.9
MALC				i		01 07 52.0	
	comp=Z,94nm,0.4s						
PTAC	Punta Ardita,	1.88	10	eP	Pn	01 07 37.8	-0.6
PTAC				eS	Sn	01 07 59.1	-2.8
PLMC	San Jos del P	1.89	101	⇓iP	Pn	01 07 37.6	-1.0
PLMC				eS	Sn	01 07 59.8	-2.4
PLMC				i		01 08 03.1	
	comp=Z,184nm,0.6s						
CBOC	Ciudad Bolivar	2.20	75	eP	Pn	01 07 41.9	-1.0
CBOC				eS	Sn	01 08 08.1	-1.9
CBOC				i		01 08 10.6	
	comp=Z,42nm,0.7s						
YOTC	Yotoco, Valle	2.21	126	⇓eP	Pn	01 07 41.6	-1.5
YOTC				i		01 07 42.8	
	comp=Z,53nm,0.3s						
DBBC	Dabeiba	2.58	48	eP	Pn	01 07 48.8	+0.7
DBBC				i		01 08 27.3	
	comp=Z,128nm,0.6s						
HELC	Santa Helena	2.75	71	⇑eP	Pn	01 07 51.8	+1.1
HELC				eS	Sn	01 08 22.3	-1.6
HELC				i		01 08 28.3	
	comp=Z,12nm,0.5s						
GUY2C	Guyana, Caldas	2.77	91	⇓eP	Pn	01 07 51.7	+0.7
GUY2C				eS	Sn	01 08 22.9	-1.6
GUY2C				i		01 08 29.3	
	comp=Z,47nm,0.5s						
RREF	El Recreo	2.81	98	⇓iP	Pn	01 07 52.9	+1.1
RREF				i		01 07 54.5	
	comp=Z,50nm,0.6s						
RREF				eS	Sn	01 08 24.8	-1.0
ANIL	Santa Ana	2.84	106	⇓eP	Pn	01 07 52.2	+0.3
ANIL				eS	Sn	01 08 26.1	0.0
TOLC	Tolima	2.90	104	⇓iP	Pn	01 07 53.3	+0.6
ORTC	Ortega, Tolima	3.19	115	⇓iP	Pn	01 07 58.0	+1.5
ORTC				i		01 08 01.9	
	comp=Z,55nm,0.6s						
ORTC				eS	Sn	01 08 32.1	-2.4
AZU	Azuero	3.27	320	eP	Pn	01 07 58.1	+0.6
AZU				eS	Sn	01 08 34.7	-1.5
NORC	Norcasia	3.27	85	eP	Pn	01 07 59.5	+2.0
NORC				⇑eS	Sn	01 08 34.0	-2.3
NORC				i		01 08 41.0	
	comp=Z,23nm,0.6s						
ROSC	El Rosal	3.83	96	Pn	Pn	01 08 08.7	+3.1
	comp=Z,5.4nm,0.3s,baz=223,slow=12,SNR=4.9						
PTBC	PUERTO BERRIO,	3.87	71	eP	Pn	01 08 05.1	-0.8
PTBC				i		01 08 11.0	
	comp=Z,15nm,0.6s						
PTBC				eS	Sn	01 08 49.5	-1.6
BCIP	Isla Barro Col	4.21	337	eP	Pn	01 08 09.4	-1.0
BCIP				eS	Sn	01 08 56.8	-2.5
BCIP				i		01 09 16.2	
	comp=Z,8.9nm,0.7s						
SDV	Santo Domingo	8.27	64	Pn	Pn	01 09 10.7	+4.3
	comp=Z,1.2nm,0.3s,baz=280,slow=11,SNR=5.0						
MDP	Montagnes des	25.40	89	LR	LR	01 22 22.2	
	comp=Z,49nm,18.8s,baz=264,slow=36						
SIV	San Ignacio	27.06	142	P	P	01 12 47.6	-1.4
	comp=Z,1.1nm,0.7s,baz=321,slow=7.0,SNR=6.8						
TXAR	Lajitas Array	33.98	318	P	P	01 13 48.8	-1.3
	comp=Z,0.2nm,0.8s,baz=130,slow=12,SNR=2.0						
ULM	Lac du Bonnet	47.23	345	P	P	01 15 40.7	+1.6
	comp=Z,0.9nm,0.5s,baz=163,slow=8.2,SNR=2.0						
YKA	Yellowknife Ar	63.07	342	P	P	01 17 34.6	+1.3
	comp=Z,0.5nm,0.7s,baz=130,slow=6.8,SNR=11						
ILAR	Eielson Array	76.27	336	P	P	01 18 57.0	+2.3
	comp=Z,0.2nm,0.6s,baz=118,slow=5.1,SNR=6.6						
ASAR	Alice Springs	144.14	236	PKP	PKPab	01 26 40.9	+0.3
	comp=Z,0.7nm,0.6s,baz=111,slow=3.8,SNR=6.0						
WRA	Warramunga Arr	145.22	242	PKP	PKPbc	01 26 45.0	+0.5
	comp=Z,1.2nm,0.8s,baz=102,slow=3.5,SNR=7.7						

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*NEIC **03** 01:31:56.8±0.4, 60°.1N±0°.1×141°.0W±0°.4, h24^{km}±25^{km}, Error ellipse: s-maj=30.3km s-min=7.7km az=118.0*

*PGC **03** 01:31:56.4±0.0, 60°.10N×141°.16W, h1^{km}, ML2.1/7, 129km Wnw of Yakutat, Ak Southeastern Alaska*

*AEIC **03** 01:31:57.5±1.1, 60°.2N±0°.1×141°.1W±0°.2, h15^{km}±9^{km}, ML3.0, ML3.2/20(NEIC), Error ellipse: s-maj=19.9km s-min=9.5km az=132.0*

ISC 03 01:31:55.9±1.5**, 60°.12N**±0°.04×**141°.17W**±0°.03**, h6^{km}**±11^{km}**, n30, σ0^{s}80**/45**, Southeastern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GRNC	Granite Creek	0.68	335	P	Pg	01 32 09.6	+0.6
LOGN	Logan Glacier	0.71	7	P	Pg	01 32 09.6	0.0
LOGN				S	Sg	01 32 18.6	-0.3
CTGM	Chitina Glacie	0.85	355	P	Pb	01 32 12.0	-1.1
CTGM				S	Sb	01 32 23.3	-1.6
KIAG	Kiagna River	1.00	325	P	Pb	01 32 14.9	-0.8
PNL	Peninsula	1.00	116	P	Pb	01 32 14.5	-1.2
BALM	Baldy	1.09	328	P	Pb	01 32 16.0	-1.1
PTPK	Patty Peak	1.25	330	P	Pn	01 32 18.6	-1.4
PTPK				S	Sb	01 32 35.8	-0.5
YUK7	Dusty Glacier	1.56	73	Pn	Pb	01 32 24.6	-0.7
YUK7				Sn	Sb	01 32 44.4	-1.0
YUK6	Outpost Mounta	1.62	58	Pn	Pn	01 32 25.2	0.0
YUK6				Sn	Sb	01 32 46.9	-0.1
KAIM	Kayak Island	1.64	265	Pn	Pn	01 32 25.5	+0.3
KAIM					Sn	01 32 46.8	+0.2
KAIM				IAML		01 32 51.8	
	comp=E,353nm,0.5s						
KAIM				IAML		01 32 52.8	
	comp=N,284nm,0.7s						
YUK2	White River	1.68	5	Pn	Pn	01 32 26.4	+0.5
YUK2				Sn	Sb	01 32 49.3	+0.6
YUK3	Moose Creek	1.70	12	Pn	Pn	01 32 26.7	+0.5
YUK3				Sn	Sb	01 32 49.6	+0.3
YUK4	Talbot Arm	1.75	44	Pn	Pg	01 32 29.6	+0.2
YUK4				Sn	Sg	01 32 53.4	+1.4
YUK5	Granite Creek	1.92	57	Pn	Pn	01 32 30.0	+0.7
YUK5				Sn	Sb	01 32 54.7	-1.0
HYT	Haines Junctio	1.95	67	Pn	Pn	01 32 30.1	+0.5
HYT				Sn	Sn	01 32 54.5	0.0
BVCY	Beaver Creek	2.31	4	Pn	Pn	01 32 35.7	+1.3
BVCY				Sn	Sn	01 33 04.8	+1.7
DIV	Divide	2.48	296	Pn	Pn	01 32 37.1	+0.2
DIV				Sn	Sn	01 33 08.5	+1.0
PLBC	Pleasant Camp	2.52	103	Pn	Pn	01 32 37.7	+0.4
PLBC				Sg	Sb	01 33 13.3	+0.6
BCAR	Beaver Creek A	2.97	355	Pn	Pn	01 32 43.3	-0.3
MENT	Mentasta	3.08	338	Pn	Pn	01 32 44.6	-0.5
M24K	Tolsona, Glenn	3.14	312	Pn	Pn	01 32 46.7	+0.8
M24K				IAML		01 33 55.9	
	comp=E,52nm,1.1s						
M24K				IAML		01 33 59.5	
	comp=N,58nm,4.4s						
WHY	Whitehorse	3.17	77	Pn	Pn	01 32 46.3	0.0
WHY				Sn	Sn	01 33 24.2	-0.3
PAX	Paxson	3.52	326	Pn	Pn	01 32 52.1	+1.0
KNK	Knik Glacier	3.80	293	Pn	Pn	01 32 55.2	+0.3
KNK				IAML		01 33 50.9	
	comp=N,35nm,1.2s						
SML	Sawmill	3.88	299	Pn	Pn	01 32 56.5	+0.5
SML				IAML		01 34 02.3	
	comp=N,32nm,1.0s						
SML				IAML		01 34 07.8	
	comp=E,29nm,2.7s						
RIDG	Independent Ri	4.03	336	Pn	Pn	01 32 57.1	-1.0
RIDG				IAML		01 34 18.6	
	comp=E,28nm,4.7s						
PMR	Palmer	4.16	294	Pn	Pn	01 32 59.8	0.0
PMR				IAML		01 35 47.9	
	comp=N,47nm,0.1s						
SUA	Susitna One	4.88	290	Pn	Pn	01 33 10.4	+0.5
HDA	Harding Lake	5.08	330	Pn	Pn	01 33 12.7	+0.3
HDA				IAML		01 35 16.1	
	comp=N,13nm,5.0s						
SKT	Skwentna	5.37	295	Pn	Pn	01 33 16.9	+0.5

WEL 03 01:44:17.1±1.3**, 33°S**±32°×**17°9W**±3°8**, h614^{km}**±30^{km}**, M4.0**/14**, mB4.4**/6**, MLv4.4**/14**, Mw(mB)3.5**/6**, Error ellipse: s-maj=0.1km s-min=0.0km az=127.2, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	4.90	203	P	P	01 45 49.0	-1.0
MXZ				S	S	01 47 05.3	-0.7
WMGZ	Waiomatatini S	5.11	201	P	P	01 45 51.4	-0.1
WMGZ				S	S	01 47 11.9	+3.0
HAZ	Te Kaha	5.26	206	P	P	01 45 50.6	-2.1
PKGZ	Pakihiroa	5.28	203	P	P	01 45 51.4	-1.6
PKGZ				S	S	01 47 12.2	+0.7
RUGZ	Raukumara Rang	5.48	206	P	P	01 45 53.7	-1.0
RUGZ				S	S	01 47 14.2	-0.5
TKGZ	Te Karaka	5.85	203	P	P	01 45 58.4	+0.8
MWZ	Matawai	5.87	205	P	P	01 45 57.3	-0.5
MWZ				S	S	01 47 22.3	+2.0
URZ	Urewera	5.96	209	P	P	01 45 56.0	-2.5
URZ				S	S	01 47 22.7	+1.1
MKAZ	Moumakai	6.08	227	P	P	01 46 00.2	+0.7
MUGZ	Murupara	6.28	210	P	P	01 46 01.4	+0.2
MTHZ	Maungataniwha	6.58	207	P	P	01 46 02.1	-1.8
NMHZ	Naumai	6.80	207	P	P	01 46 07.5	+1.6
NMHZ				S	S	01 47 30.3	-4.8
ARHZ	Aropaoanui	6.88	205	P	P	01 46 09.2	+2.8
BKZ	Black Stump Fm	6.98	208	P	P	01 46 08.0	+0.5
HIZ	Hauiti	7.23	220	P	P	01 46 12.0	+2.3
TWVZ	Taurewa	7.36	214	P	P	01 46 07.4	-3.6
KRHZ	Kereru	7.44	207	P	P	01 46 13.5	+1.9
WNVZ	Wahianoa	7.50	212	P	P	01 46 14.0	+1.8

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*IDC **03** 02:31:48.1±2.0, 56°.44S×27°.96W, h0^{km}, mb3.7/1, mb1 3.7/1, mb1mx3.5/19, mbtmp3.7/1, Error ellipse: s-maj=108.3km s-min=84.4km az=143.0*

ISC 03 02:31:50.6±1.8**, 55°.9S**±0°.2×**28°.7W**±0°.6**, h10^{km}, n6, σ1^{s}31**/6**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA3	Neumayer Olymp	17.45	159	P	P	02 35 55.4	+0.5
VNA2	Neumayer--Watz	17.68	157	P	P	02 35 58.0	+0.5
	baz=312,slow=13						
SNAA	Sanae	19.25	155	P	P	02 36 14.8	0.0
TORD	Torodi Ar. Bea	73.34	31	P	P	02 43 23.0	+0.7
	0.3nm,0.5s,baz=198,slow=6.5,SNR=2.1						
ILAR	Eielson Array	149.36	312	PKPbc	PKPbc	02 51 38.5	+0.4
	0.8nm,1.0s,baz=106,slow=2.0,SNR=5.9						
SONM	Songino Array	151.58	87	PKPbc	PKPbc	02 51 42.1	-2.0
	0.6nm,0.4s,baz=220,slow=4.4,SNR=6.9						

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*RSNC **03** 02:32:34.7±1.8, 6°.83N×73°.15W, h142^{km}±7^{km}, ML2.7*

*IDC **03** 02:32:35.7±4.3, 6°.69N×73°.38W, h183^{km}±34^{km}, mb2.8/2, mb1 3.2/3, mb1mx2.9/26, mbtmp3.3/3, Error ellipse: s-maj=89.7km s-min=42.8km az=84.0*

ISC 03 02:32:33.2±1.0**, 6°.87N**±0°.03×**73°.11W**±0°.04**, h150^{km}**±6^{km}**, n28, σ1^{s}21**/51**, 4C, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	Barichara	0.29	195	⇑iP	Pn	02 32 54.3	+0.2
BARC				i		02 32 54.4	
	comp=Z,145nm,0.4s						
BARC				eS	Sn	02 33 09.1	-0.9
PAMC	Pamplona, Colo	0.62	41	⇑eP	Pn	02 32 57.0	+1.2
PAMC				i		02 32 57.4	
	comp=Z,124nm,0.2s						
PAMC				eS	Sn	02 33 13.8	+0.8
BRRC	Barranca, Sant	0.65	291	⇑iP	Pn	02 32 56.1	+0.7
BRRC				eS	Sn	02 33 11.5	-0.8
BRRC				i		02 33 16.6	
	comp=Z,120nm,0.2s						
RUSC	La Rusia	0.97	179	eP	Pn	02 32 58.2	-0.1
RUSC				i		02 32 59.2	
	comp=Z,52nm,0.1s						
RUSC				eS	Sn	02 33 16.7	-0.9
OCAC	Ocana	1.38	351	eP	Pn	02 33 02.2	+0.5
OCAC				eS	Sn	02 33 23.8	+0.2
OCAC				i		02 33 28.9	
	comp=Z,38nm,0.2s						
PTBC	PUERTO BERRIO,	1.38	256	eP	Pn	02 33 00.9	-0.7
PTBC				eS	Sn	02 33 21.7	-1.6
PTBC				i		02 33 22.9	
	comp=Z,59nm,0.3s						
SPBC	San Pablo de B	1.54	219	eP	Pn	02 33 03.2	-0.2
SPBC				eS	Sn	02 33 25.2	-1.3
SPBC				i		02 33 31.1	
	comp=Z,75nm,0.3s						
ZARC	Zaragoza, Cauc	1.85	290	eP	Pn	02 33 07.0	+0.4
ZARC				eS	Sn	02 33 32.1	-0.1
ZARC				i		02 33 38.2	
	comp=Z,96nm,0.4s						
SMLC	San Martn de	2.14	334	eP	Pn	02 33 10.8	+0.7
SMLC				eS	Sn	02 33 38.1	-0.4
SMLC				i		02 33 49.5	
	comp=Z,64nm,0.1s						
NORC	Norcasia	2.18	234	eP	Pn	02 33 10.8	+0.2
NORC				eS	Sn	02 33 38.1	-1.2
NORC				i		02 33 43.4	
	comp=Z,37nm,0.2s						
CHIC	Chingaza	2.31	196	eP	Pn	02 33 12.7	+0.2
CHIC				eS	Sn	02 33 41.7	-1.0
CHIC				i		02 33 47.1	
	comp=Z,17nm,0.2s						
ROSC	El Rosal	2.35	211	P	Pn	02 33 14.1	+1.1
	comp=Z,5.3nm,0.3s,baz=302,slow=19,SNR=18						
ROSC				S	Sn	02 33 44.3	+0.8
	comp=Z,13nm,0.3s,baz=324,slow=21,SNR=8.2						
ROSC	El Rosal	2.35	211	eP	Pn	02 33 14.2	+1.2
ROSC				eS	Sn	02 33 43.0	-0.5
ROSC				i		02 33 48.2	
	comp=Z,34nm,0.5s						
HELC	Santa Helena	2.50	254	eP	Pn	02 33 15.3	+0.6
HELC				eS	Sn	02 33 45.7	-0.9
HELC				i		02 33 52.5	
	comp=Z,41nm,0.3s						
UREC	San Jos de Ur	2.56	290	eP	Pn	02 33 15.2	0.0
UREC				eS	Sn	02 33 44.5	-3.0
UREC				i		02 33 49.9	
	comp=Z,38nm,0.2s						
GUY2C	Guyana, Caldas	2.78	234	eP	Pn	02 33 18.6	+0.3
GUY2C				eS	Sn	02 33 52.6	-0.4
GUY2C				i		02 34 03.4	
	comp=Z,20nm,0.4s						
PTGC	Puerto Gaitan,	2.82	160	eP	Pn	02 33 17.4	-1.0
PTGC				i		02 33 18.7	
	comp=Z,20nm,0.2s						
PTGC				eS	Sn	02 33 50.4	-3.0
RREF	El Recreo	2.97	229	eP	Pn	02 33 21.1	+0.3
RREF				eS	Sn	02 33 57.1	-0.4
RREF				i		02 34 08.6	
	comp=Z,23nm,0.3s						
CBOC	Ciudad Bolivar	3.06	251	eP	Pn	02 33 22.2	+0.7
CBOC				i		02 33 23.4	
	comp=Z,13nm,0.2s						
CBOC				eS	Sn	02 33 58.1	-0.7
DBBC	Dabeiba	3.08	273	eP	Pn	02 33 22.0	+0.3
DBBC				i		02 34 10.6	
	comp=Z,53nm,0.5s						
SDV	Santo Domingo	3.16	51	⇑iP	Pn	02 33 23.9	+1.0
SDV				i		02 33 24.4	
	comp=Z,14nm,0.2s						
SDV				eS	Sn	02 34 00.3	-1.0
TOLC	Tolima	3.16	224	eP	Pn	02 33 23.9	+0.9
TOLC				eS	Sn	02 33 59.8	-1.7
TOLC				i		02 34 08.7	
	comp=Z,23nm,0.4s						
ANIL	Santa Ana	3.29	224	eP	Pn	02 33 25.0	+0.4
ANIL				eS	Sn	02 34 03.7	-0.7
ORTC	Ortega, Tolima	3.63	216	eP	Pn	02 33 29.3	+0.5
ORTC				eS	Sn	02 34 11.7	-0.2
ORTC				i		02 34 16.9	
	comp=Z,15nm,0.3s						
CRJC	Cerrejon, Guaj	4.13	3	eP	Pn	02 33 34.8	-0.5
CRJC				eS	Sn	02 34 19.6	-3.9
CRJC				i		02 34 32.3	
	comp=Z,8.5nm,0.2s						
TXAR	Lajitas Array	36.44	312	P	P	02 39 22.6	-1.2
	comp=Z,0.5nm,1.1s,baz=135,slow=10,SNR=2.2						
YKA	Yellowknife Ar	63.22	340	P	P	02 42 44.8	-0.5
	comp=Z,0.3nm,0.7s,baz=128,slow=7.4,SNR=5.2						
WRA	Warramunga Arr	150.37	241	PKPbc	PKPdf	02 52 05.2	+2.8
	comp=Z,0.4nm,0.9s,baz=102,slow=4.0,SNR=1.8						

IDC 03 02:50:17.6±1.2**, 21°.48S×66°.65W, h218^{km}**±16^{km}**, mb3.3**/2**, mb1 3.5**/4**, mb1mx3.2**/33**, mbtmp3.8**/4**, Error ellipse: s-maj=65.3km s-min=21.9km az=148.0, Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	Limon Verde	2.38	241	P	Pn	02 51 03.1	+1.3
	3.8nm,0.3s,baz=54,slow=6.0,SNR=47						
LVC				S	S	02 51 36.3	+0.3
	8.8nm,0.3s,baz=241,slow=21,SNR=37						
SIV	San Ignacio	7.60	45	P	Pn	02 52 05.8	0.0
	2.4nm,0.3s,baz=245,slow=8.2,SNR=50						
TORD	Torodi Ar. Bea	75.37	69	P	P	03 01 37.5	-0.3
	0.8nm,0.5s,baz=258,slow=5.5,SNR=8.0						
YKA	Yellowknife Ar	91.88	340	P	P	03 03 00.4	-0.1
	0.3nm,0.8s,baz=125,slow=4.6,SNR=5.4						
MKAR	Makanchi Array	144.36	37	PKP	PKPdf	03 09 27.7	0.0
	0.6nm,0.7s,baz=304,slow=3.8,SNR=6.8						

*KRNET **03** 02:59:00.5±0.1, 39°.21N×74°.76E, mb3.2*
*SOME **03** 02:59:00.3, 39°.43N×74°.87E, h5^{km}*
*NNC **03** 02:59:03.0±0.7, 39°.49N×74°.92E, h0^{km}, mb4.0, mpv3.6, Error ellipse: s-maj=4.9km s-min=2.7km az=168.0*
ISC 03 02:58:56.2±1.8**, 39°.33N**±0°.08×**74°.96E**±0°.04**, h10^{km}, n40, σ1^s.14**/63**, 14C-2D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHH	Osh	2.06	306	⇑iP	Pg	02 59 38.1	+2.4
	baz=11						
OHH				⇑iS	Sg	03 00 05.0	+2.6
	baz=11						
ARSB	Arslanbob	2.51	323	⇑iP	Pg	02 59 44.6	+0.4
	baz=28						
ARSB				⇑iS	Sg	03 00 17.3	+0.6
	baz=28						
ARLS	Aral	2.58	349	⇑eP	Pg	02 59 46.8	+1.1
	baz=53						
ARLS				⇑iS	Sg	03 00 21.4	+2.3
	baz=53						
KDJ	Kajisay	3.27	30	⇓iP	Pg	02 59 57.9	-0.9
	baz=32						
KDJ				⇓iS	Sg	03 00 40.0	-1.2
	baz=32						
BTK	Batken	3.28	284	⇑iP	Pb	02 59 54.2	-0.4
	baz=87						
BTK				⇑iS	Sb	03 00 33.6	-1.0
	baz=87						
TRKS	Terek-Say	3.66	308	⇑iP	Pb	02 59 58.8	-2.2
	baz=10.0						
TRKS				⇑iS	Sb	03 00 42.0	-3.5
	baz=10.0						
MRKS	Merke	3.66	340	eP	Pg	03 00 05.9	-0.4
	8.9nm,0.4s						
MRKS				eS	Sg	03 00 53.2	-0.5
	7.4nm,0.5s						
MRKS	Merke	3.66	340	Pg	Pg	03 00 05.9	-0.4
	8.9nm,0.4s						
MRKS				Lg	Lg	03 00 53.2	
	7.4nm,0.5s						
MNAS	Manas	3.67	330	⇑iP	Pb	03 00 01.4	+0.2
	baz=33						
MNAS				⇑iS	Sb	03 00 45.8	0.0
	baz=33						
KST	Kastek	3.79	11	eP	Pg	03 00 09.5	+0.7
	9.3nm,0.4s						
KST				eS	Sg	03 00 59.2	+1.3
	14nm,0.3s						
KST	Kastek	3.79	11	Pg	Pg	03 00 09.5	+0.7
	9.3nm,0.4s						
KST				Lg	Lg	03 00 59.2	
	14nm,0.3s						
IZV	Izvestkoviy	3.91	18	eP	Pg	03 00 11.8	+0.6
	5.3nm,0.3s						
IZV				eS	Sg	03 01 03.2	+1.4
	15nm,0.5s						
IZV	Izvestkoviy	3.91	18	Pg	Pg	03 00 11.8	+0.6
	5.3nm,0.3s						
IZV				Lg	Lg	03 01 03.2	
	15nm,0.5s						
DGS	Degeres	3.96	9	eP	Pg	03 00 12.1	0.0
	12nm,0.3s						
DGS				eS	Sg	03 01 03.6	+0.2
	10nm,0.4s						
DGS	Degeres	3.96	9	Pg	Pg	03 00 12.1	0.0
	12nm,0.3s						
DGS				Lg	Lg	03 01 03.6	
	10nm,0.4s						
TNSS	Tian-Shan	4.00	21	eP	Pg	03 00 13.0	+0.1
	3.9nm,0.2s						
TNSS				eS	Sg	03 01 05.2	+0.6
	5.1nm,0.4s						
TNSS	Tian-Shan	4.00	21	Pg	Pg	03 00 13.0	+0.1
	3.9nm,0.2s						
TNSS				Lg	Lg	03 01 05.2	
	5.1nm,0.4s						
SGDS	Sogindy	4.13	357	Pg	Pg	03 00 15.0	-0.4
	4.3nm,0.3s						
SGDS				Lg	Lg	03 01 08.6	
	4.6nm,0.4s						
MDOK	Medeo	4.14	22	eP	Pg	03 00 16.4	+0.9
	3.4nm,0.2s						
MDOK				eS	Sg	03 01 11.2	+1.9
	9.1nm,0.5s						
MDOK	Medeo	4.14	22	Pg	Pg	03 00 16.4	+0.9
	3.4nm,0.2s						
MDOK				Lg	Lg	03 01 11.2	
	9.1nm,0.5s						
KOTS	Kotyrbulak	4.23	22	eP	Pg	03 00 17.5	+0.3
	7.3nm,0.2s						
KOTS				eS	Sg	03 01 13.1	+1.2
	13nm,0.3s						
KOTS	Kotyrbulak	4.23	22	Pg	Pg	03 00 17.5	+0.3
	7.3nm,0.2s						
KOTS				Lg	Lg	03 01 13.1	
	13nm,0.3s						
SATY	Saty	4.54	34	eP	Pg	03 00 23.9	+0.7
	4.6nm,0.5s						
SATY				eS	Sg	03 01 24.1	+2.0
	5.1nm,0.4s						
SATY	Saty	4.54	34	Pg	Pg	03 00 23.9	+0.7
	4.6nm,0.5s						
SATY				Lg	Lg	03 01 24.1	
	5.1nm,0.4s						
KTBS	Karatobe	4.57	16	eP	Pg	03 00 23.9	+0.2
	2.7nm,0.4s						
KTBS				eS	Sg	03 01 23.9	+1.0
	10nm,0.6s						
KTBS	Karatobe	4.57	16	Pg	Pg	03 00 23.9	+0.2
	2.7nm,0.4s						
KTBS				Lg	Lg	03 01 23.9	
	10nm,0.6s						
KUU	Kurty	4.68	12	eP	Pg	03 00 26.1	+0.3
	2.1nm,0.1s						
KUU				eS	Sg	03 01 27.7	+1.3
	14nm,0.5s						
KUU	Kurty	4.68	12	Pg	Pg	03 00 26.1	+0.3
	2.1nm,0.1s						
KUU				Lg	Lg	03 01 27.7	
	14nm,0.5s						
CHKK	Chushkaly	4.77	18	⇑iP	Pg	03 00 27.3	-0.3
	2.6nm,0.2s						
CHKK				⇑iS	Sg	03 01 30.0	+0.6
	5.2nm,0.4s						
CHKK	Chushkaly	4.77	18	Pg	Pg	03 00 27.3	-0.3
	2.6nm,0.2s						
CHKK				Lg	Lg	03 01 30.0	
	5.2nm,0.4s						
KURS	Kuram	4.81	29	eP	Pg	03 00 28.2	0.0
	3.6nm,0.4s						
KURS				eS	Sg	03 01 31.5	+1.0
	4.7nm,0.3s						
KURS	Kuram	4.81	29	Pg	Pg	03 00 28.2	0.0
	3.6nm,0.4s						
KURS				Lg	Lg	03 01 31.5	
	4.7nm,0.3s						
UZB	Uzynbulak	4.89	37	eP	Pg	03 00 30.1	+0.2
	1.9nm,0.3s						
UZB				eS	Sg	03 01 34.4	+1.2
	4.4nm,0.5s						
UZB	Uzynbulak	4.89	37	Pg	Pg	03 00 30.1	+0.2
	1.9nm,0.3s						
UZB				Lg	Lg	03 01 34.4	
	4.4nm,0.5s						
KPKS	Kokpek	4.99	33	eP	Pg	03 00 30.9	-0.9
	6.4nm,0.5s						
KPKS				eS	Sg	03 01 35.9	-0.6
	9.9nm,0.4s						
PDGK	Podgornoye	5.25	39	Pg	Pg	03 00 37.0	+0.1
	1.3nm,0.3s						
PDGK				Lg	Lg	03 01 46.6	
	2.8nm,0.7s						
ARXS	Arharly	5.33	23	eP	Pg	03 00 38.7	+0.4
	3.7nm,0.5s						
ARXS				eS	Sg	03 01 49.6	+2.2
	5.0nm,0.5s						
ARXS	Arharly	5.33	23	Pg	Pg	03 00 38.7	+0.4
	3.7nm,0.5s						
ARXS				Lg	Lg	03 01 49.6	
	5.0nm,0.5s						
KTMS	Ketmen	5.78	43	eP	Pg	03 00 47.5	+0.7
	0.7nm,0.1s						
KTMS				eS	Sg	03 02 04.1	+2.5
	3.5nm,0.3s						
KTMS	Ketmen	5.78	43	Pg	Pg	03 00 47.5	+0.7
	0.7nm,0.1s						
KTMS				Lg	Lg	03 02 04.1	
	3.5nm,0.3s						

IDC 03 03:09:47.5±13.0**, 6°.80S×129°.09E, h170^{km}**±144^{km}**, mb3.0**/1**, mb1 3.0**/4**, mb1mx2.9**/28**, mbtmp3.5**/4**, ML3.2**/3**, Error ellipse: s-maj=87.2km s-min=52.6km az=27.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	11.72	196	P	Pn	03 12 30.6	+1.0
	0.1nm,0.3s,baz=20,slow=12,SNR=1.7						
FITZ				S	Sn	03 14 39.8	+0.1
	0.1nm,0.3s,baz=358,slow=15,SNR=2.0						
WRA	Warramunga Arr	14.02	159	P	Pn	03 12 59.1	+0.1
	0.1nm,0.3s,baz=337,slow=13,SNR=6.1						
WRA				S	Sn	03 15 22.9	-12
	0.2nm,0.3s,baz=346,slow=28,SNR=5.6						
ASAR	Alice Springs	17.39	165	P	P	03 13 38.4	-0.5
	0.1nm,0.3s,baz=343,slow=9.2,SNR=6.3						
MKAR	Makanchi Array	67.57	327	P	P	03 20 25.6	-0.1
	0.2nm,0.4s,baz=125,slow=6.5,SNR=4.1						

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*IDC **03** 03:23:52.5±1.0, 55°.26S×28°.08W, h0^{km}, mb4.3/4, mb1 4.3/4, mb1mx4.0/14, mbtmp4.3/4, MS3.4/1, Ms1 3.3/1, ms1mx2.8/14, Error ellipse: s-maj=49.4km s-min=30.5km az=112.0*
*NEIC **03** 03:23:57.2±1.3, 55°.4S±0°.1×28°.1W±0°.2, h31^{km}±5^{km}, mb4.5/12, Error ellipse: s-maj=17.5km s-min=16.1km az=99.0*
ISC 03 03:23:56.3±0.6**, 55°.4S**±0°.1×**28°.0W**±0°.1**, h26^{km}, n26, σ0^s.61**/26**, mb4.4**/9**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	5.00	279	Pn	Pn	03 25 09.3	-0.3
VNA3	Neumayer Olymp	17.81	161	P	P	03 28 03.1	+0.6
VNA2	Neumayer--Watz	18.02	158	P	P	03 28 05.2	+0.4
	baz=312,slow=14						
SNAA	Sanae	19.57	156	P	P	03 28 22.0	+0.1
SNAA	Sanae	19.57	156	P	P	03 28 21.5	-0.5
BELA	Belgrano 2	22.74	184	P	P	03 28 55.0	-0.9
QSPA	South Pole Qui	34.90	180	P	P	03 30 45.5	+0.1
QSPA				IAmb	IAmb	03 30 57.5	
	comp=Z,3.9nm,0.9s						
PB06	IPOC Station P	44.78	300	P	P	03 32 08.2	+0.4
PB01	IPOC Station P	46.14	301	P	P	03 32 19.5	+1.0
PB01				IAmb	IAmb	03 32 20.4	
	comp=Z,4.3nm,0.9s						
BOSA	Boshof	46.28	77	P	P	03 32 19.6	0.0
	comp=Z,3.1nm,1.0s,baz=200,slow=9.3,SNR=4.4						
BOSA				LR	LR	03 49 15.2	
	comp=Z,44nm,19.1s,baz=168,slow=33						
BOSA	Boshof	46.28	77	P	P	03 32 19.5	-0.1
VNDA	Vanda	47.24	183	P	P	03 32 27.2	+0.8
	comp=Z,3.4nm,0.8s,baz=184,slow=6.0,SNR=5.2						
VNDA	Vanda	47.24	183	P	P	03 32 26.8	+0.4
PSGCX	Pisagua	47.68	301	P	P	03 32 31.0	+0.4
PSGCX				IAmb	IAmb	03 32 31.8	
	comp=Z,7.4nm,1.0s						
MNMC	Minye Minye	47.82	302	P	P	03 32 32.7	+0.9
MNMC				IAmb	IAmb	03 32 33.6	
	comp=Z,5.3nm,0.8s						
PB16	IPOC Station P	48.46	303	P	P	03 32 37.8	+0.7
DBIC	Dimbokro	64.74	26	P	P	03 34 32.0	-0.2
	comp=Z,7.2nm,1.1s,baz=205,slow=6.5,SNR=3.2						
DBIC	Dimbokro	64.74	26	P	P	03 34 32.4	+0.2
DBIC				IAmb	IAmb	03 34 32.5	
	comp=Z,4.3nm,0.9s						
TOA0	Torodi Ar. Sit	72.69	30	P	P	03 35 22.0	+0.3
TOA0				IAmb	IAmb	03 35 24.2	
	comp=Z,3.1nm,0.9s						
TORD	Torodi Ar. Bea	72.69	30	P	P	03 35 21.5	-0.2
	comp=Z,1.9nm,0.7s,baz=203,slow=5.7,SNR=8.0						
TORD	Torodi Ar. Bea	72.69	30	P	P	03 35 21.8	+0.1
FINES	FINESS Array B	123.99	28	PKP	PKiKP	03 42 50.4	-0.5
	comp=Z,4.1nm,1.0s,baz=142,slow=4.6,SNR=4.3						
YKA	Yellowknife Ar	135.33	319	PKP	PKPdf	03 43 10.9	-1.1
	comp=Z,0.4nm,0.7s,baz=118,slow=2.6,SNR=7.0						
ILAR	Eielson Array	149.29	313	PKPbc	PKiKP	03 43 41.2	-1.0
	comp=Z,3.4nm,0.7s,baz=100,slow=2.1,SNR=40						
SONM	Songino Array	151.16	86	PKPbc	PKiKP	03 43 46.5	-0.3
	comp=Z,1.2nm,0.8s,baz=210,slow=4.0,SNR=9.0						
SONM	Songino Array	151.16	86	PKPdf	PKPdf	03 43 41.4	+1.0

IDC 03 03:29:28.9±2.0**, 55°.56S×28°.05W, h0^{km}, mb3.7**/1**, mb1 3.7**/1**, mb1mx3.5**/14**, mbtmp3.7**/1**, Error ellipse: s-maj=114.1km s-min=76.3km az=151.0, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TORD	Torodi Ar. Bea	72.87	30	P	P	03 40 59.5	0.0
	0.5nm,0.6s,baz=196,slow=6.4,SNR=2.7						
YKA	Yellowknife Ar	135.48	319	PKP	PKPdf	03 48 49.6	+0.3
	0.3nm,0.8s,baz=125,slow=2.1,SNR=4.1						
ILAR	Eielson Array	149.42	312	PKPbc	PKPbc	03 49 17.6	-0.7
	1.5nm,0.8s,baz=117,slow=3.3,SNR=18						
SONM	Songino Array	151.18	86	PKPbc	PKPbc	03 49 22.9	-0.3
	0.5nm,0.8s,baz=217,slow=2.4,SNR=4.0						

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*IDC **03** 03:34:28.4±7.1, 32°.18N×46°.93E, h0^{km}, mb3.7/5, mb1 3.8/7, mb1mx3.4/54, mbtmp3.8/7, ML3.7/1, Error ellipse: s-maj=124.3km s-min=44.8km az=67.0*
*TEH **03** 03:34:36.7, 32°.70N×47°.63E, h8^{km}, ML3.6*
*THR **03** 03:34:36.5±0.5, 32°.69N×47°.48E, h18^{km}±8^{km}, ML3.6*
ISC 03 03:34:37.4±0.8**, 32°.65N**±0°.04×**47°.56E**±0°.04**, h10^{km}, n47, σ1^s.27**/50**, mb3.7**/4**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DHL1	Dehloran	0.24	277	ePg	Pg	03 34 42.2	-0.1
DHL1				eSg	Sb	03 34 47.8	+2.2
IKMR	Kamar-syah	1.10	38	ePg	Pb	03 34 55.9	-2.6
IKMR				e		03 35 17.1	
	comp=Z,99nm,0.6s						
SHGR	Shooshtar-Gavs	1.18	117	ePg	Pn	03 34 59.9	-0.1
SHGR				eSg	Sn	03 35 16.9	+0.8
SHGR				IAML		03 35 26.6	
	comp=E,1μm,0.5s						
SHGR				IAML		03 35 31.1	
	comp=N,1μm,0.4s						
SHGR	Shooshtar-Gavs	1.18	117	ePg	Pn	03 34 59.9	-0.1
IDOB	Doab	1.24	24	ePg	Pn	03 34 59.9	-1.1
AHWZ	Ahwaz	1.61	145	ePg	Pg	03 35 07.9	-0.3
KCHF	Cheshme Sefid,	1.68	345	e		03 35 37.8	
	comp=Z,99nm,0.8s						
KCHF				ePg	Pn	03 35 08.2	+1.2
AMIS	Naft Sefid	1.76	124	ePg	Pb	03 35 09.1	-0.7
KER	Kermanshah	1.76	348	ePg	Pn	03 35 09.2	+1.1
IBZA	Bozab	1.83	8	ePn	Pn	03 35 09.9	+0.8
IGHG	Ghaleghazi	1.87	334	ePn	Pn	03 35 10.6	+1.0
IGHG				e		03 35 47.0	
	comp=Z,99nm,0.8s						
IDHR	Dehrash	2.26	335	ePn	Pn	03 35 16.5	+1.4
IDHR				e		03 36 03.4	
	comp=Z,99nm,0.7s						
KHMZ	Khomeyn	2.28	61	ePn	Pn	03 35 16.3	+1.0
KHMZ	Khomeyn	2.28	61	ePn	Pn	03 35 16.3	+1.0
ASAO	Ashtian	2.79	47	ePn	Pn	03 35 23.1	+0.8
ASAO				eSg	Sb	03 36 04.9	+3.0
ASAO				IAML		03 36 09.4	
	comp=E,158nm,0.7s						
ASAO				IAML		03 36 09.9	
	comp=N,218nm,0.6s						
ASAO	Ashtian	2.79	47	ePn	Pn	03 35 23.2	+0.8
IPIR	Pirpir	2.81	88	ePn	Pn	03 35 23.8	+1.2
IPIR				e		03 36 16.9	
	comp=Z,99nm,0.5s						
SHK1	Shahrekord	2.83	96	ePn	Pn	03 35 23.0	+0.2
SHK1				e		03 36 12.2	
	comp=Z,99nm,0.6s						
ABEH	Behbahan	3.08	131	ePn	Pn	03 35 27.8	+1.7
IRAZ	Razeghan	3.38	35	ePn	Pn	03 35 31.4	+1.0
QAM	Ghamsar	3.43	70	ePn	Pn	03 35 31.5	+0.4
IKLH	Kolahrood	3.44	78	ePn	Pn	03 35 32.5	+1.2
IKLH				e		03 36 30.6	
	comp=Z,99nm,0.5s						
QABG	Abgarm-Qazvin	3.48	28	ePn	Pn	03 35 32.1	+0.3
GHVR	GHOM	3.61	59	ePn	Pn	03 35 33.4	-0.1
GHVR				eSg	Sb	03 36 28.7	+3.5
GHVR	GHOM	3.61	59	ePn	Pn	03 35 33.4	-0.1
IQOM	Qom	3.65	52	ePn	Pn	03 35 34.6	+0.5
IQOM				e		03 36 43.8	
	comp=Z,99nm,0.9s						
IGAR	Gharneh	3.79	93	e	Sb	03 36 33.7	+3.1
	comp=Z,99nm,0.7s						
KLNJ	Kolanjah	3.80	114	ePn	Pn	03 35 36.2	-0.2
KLNJ				e		03 36 49.9	
	comp=Z,99nm,0.6s						
IMHD	Mahdasht	3.97	40	ePn	Pn	03 35 39.2	+0.7
IZEF	Zefreh	4.02	85	ePn	Pn	03 35 39.9	+0.6
KRSH	Karshahi	4.05	70	ePn	Pn	03 35 40.2	+0.6
IRAM	Ramesheh	4.17	100	ePn	Pn	03 35 41.0	-0.3
IVRN	Varamin	4.18	55	ePn	Pn	03 35 41.6	+0.3
QALM	Alamut, Qazvin	4.55	33	ePn	Pn	03 35 46.5	0.0
ANAR	Anarak	5.21	82	ePn	Pn	03 35 55.1	-0.5
ISAD	Sadrabad	5.24	96	ePn	Pn	03 35 56.1	+0.1
ILAS	Lasjerd	5.24	57	ePn	Pn	03 35 56.7	+0.6
IPRN	Peran	5.33	46	ePn	Pn	03 35 57.3	+0.2
ISHM	Shahmirzad	5.69	55	ePn	Pn	03 36 03.1	+0.8
IANJ	Anjilo	5.97	60	ePn	Pn	03 36 06.5	+0.4
GEYT	Alibeck	10.10	56	Pn	Pn	03 37 04.5	+1.9
	comp=Z,0.5nm,0.3s,baz=241,slow=15,SNR=1.7						
WSAR	Wadi Sarin	13.54	131	Pn	Pn	03 37 43.4	-6.2
	baz=339,slow=8.6						
AKTO	Aktyubinsk	19.38	20	P	P	03 39 02.4	-0.9
	comp=Z,1.1nm,0.8s,baz=204,slow=16,SNR=3.9						
BVAR	Borovoye Array	26.15	32	P	P	03 40 10.2	-1.5
	comp=Z,0.4nm,0.5s,baz=209,slow=12,SNR=3.9						
KURBB	Kurchatov Arra	28.99	43	P	P	03 40 36.3	-0.8
	comp=Z,0.8nm,0.7s,baz=248,slow=9.4,SNR=6.3						
MKAR	Makanchi Array	29.94	52	P	P	03 40 44.5	-1.2
	comp=Z,1.2nm,0.7s,baz=249,slow=7.8,SNR=12						
ZALV	Zalesovo Beam	33.90	40	P	P	03 41 18.9	-1.4
	comp=Z,0.9nm,0.5s,baz=251,slow=9.2,SNR=4.6						

JMA 03 03:38:59.4, 34°.93N×137°.97E, h36^{km}±1^{km}**, M3.3, 3C-3D Broadband fault plane solution: P waves. NP1:** φs37.00000°, δ67.00000°, λ7.00000°. **NP2:** φs304.00000°, δ83.00000°, λ157.00000°. **Principal axes:** T Plg21.0000°, Azm258.0000°; N Plg66.0000°, Azm108.0000°; P Plg11.0000°, Azm352.0000°; **Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKKG	Kakegawa	0.14	179	P	Pn	03 39 05.5	-4.1
JKKG				S	Sn	03 39 10.2	-9.1
JKKS	Kakegawashinom	0.18	176	⇓P	Pn	03 39 06.3	-2.3
JYZW	Yoshizawa	0.20	289	P	Pn	03 39 06.1	-2.0
JHMK	Hamakita	0.21	237	P	Pn	03 39 06.0	-2.0
JHMK				S	Sn	03 39 10.9	-5.0
HMMJ	Hamamatsu 2	0.22	250	⇑P	Pn	03 39 06.3	-1.6
HMMJ				S	Sn	03 39 11.3	-4.4
SHZ3	Shizuoka 3	0.24	55	P	Pn	03 39 06.5	-1.2
SHZ3				S	Sn	03 39 11.8	-3.4
TK04	Tokai 4	0.55	188	⇓P	Pn	03 39 10.8	+0.1
JFNN	Fujinakano	0.64	66	⇑P	Pn	03 39 11.9	-0.2
JFNN				S	Sn	03 39 21.3	+0.3
JYN	Shimob	0.74	40	⇑P	Pn	03 39 13.5	+0.2
JIZS	Izushimoda	0.78	106	P	Pn	03 39 13.2	-0.6
JIZS				S	Sn	03 39 23.8	-0.4
JOD2	Odawara 2	0.97	70	P	Pn	03 39 16.4	-0.2
JOD2				S	Sn	03 39 29.2	0.0
TK02	Tokai 2	1.00	190	⇓P	Pn	03 39 16.0	-0.6
TK02				S	Sn	03 39 29.1	-0.2
MAT	Matsushiro	1.62	7	P	Pn	03 39 26.7	+1.3
MAT				S	Sn	03 39 48.8	+3.7

IDC 03 03:45:04.4±2.8**, 3°.57S×134°.40E, h0^{km}, mb3.3**/1**, mb1 3.7**/5**, mb1mx3.5**/33**, mbtmp3.5**/5**, ML3.4**/4**, MS2.7**/1**, Ms1 2.7**/1**, ms1mx2.2**/16 **Error ellipse: s-maj=76.6km s-min=24.5km az=70.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	4.12	311	Pn	Pn	03 46 09.4	+0.7
	1.4nm,0.3s,baz=210,slow=23,SNR=2.3						
SIJI				Sn	Sn	03 46 57.7	0.0
	1.3nm,0.3s,baz=273,slow=23,SNR=2.3						
PMG	Port Moresby	13.94	115	LR	LR	03 56 07.8	
	comp=Z,28nm,19.6s,baz=173,slow=48						
WRA	Warramunga Arr	16.27	180	Pn	P	03 48 56.1	-1.5
	0.1nm,0.3s,baz=0.9,slow=12,SNR=3.8						
FITZ	Fitzroy Crossi	16.80	210	Pn	Pn	03 48 59.8	-1.4
	0.2nm,0.3s,baz=40,slow=12,SNR=1.8						
ASAR	Alice Springs	19.98	181	P	P	03 49 38.5	-0.1
	0.3nm,0.3s,baz=6.6,slow=11,SNR=18						
MKAR	Makanchi Array	67.90	324	P	P	03 56 04.9	0.0
	0.2nm,0.7s,baz=113,slow=7.4,SNR=1.8						

TAP 03 03:56:19.2, 23°.71N×121°.40E, h21^{km}, ML1.9, 2C, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EGFH	Guangfu	0.05	144	P	Pb	03 56 23.4	+0.5
	baz=144						
EGFH				S	Sb	03 56 26.2	+0.8
	baz=144						
ESL	Shilin	0.11	19	iP	Pb	03 56 24.2	-1.6
	baz=22						
ESL				iS	Sb	03 56 26.9	-3.7
	baz=22						
EHY	Hungye	0.21	198	eP	Pb	03 56 24.9	-0.2
	baz=196						
EHY				eS	Sb	03 56 29.0	-0.3
	baz=196						
HGSD	Ruisui	0.22	173	P	Pb	03 56 25.7	+0.6
	baz=173						
HGSD				eS	Sb	03 56 29.6	+0.4
	baz=173						
VWDT	VWDT	0.24	281	⇑iP	Pb	03 56 25.9	+0.7
	baz=280						
VWDT				iS	Sb	03 56 30.0	+0.6
	baz=280						
YULB	Yu-li	0.33	196	P	Pb	03 56 26.6	+0.3
	baz=195						
YULB				S	Sb	03 56 32.1	+1.0
	baz=195						
TWF1	Yuli	0.37	194	P	Pb	03 56 27.4	+0.5
	baz=193						
TWF1				eS	Sb	03 56 33.1	+0.9
	baz=193						
EYUL	Yuli	0.37	191	eP	Pb	03 56 27.5	+0.6
	baz=190						
EYUL				eS	Sb	03 56 33.3	+1.2
	baz=190						
CHGB	Renai	0.40	330	eP	Pb	03 56 27.9	+0.2
	baz=329						
CHGB				eS	Sb	03 56 33.9	+0.4
	baz=329						
SSLB	Suanglung	0.41	281	⇑iP	Pb	03 56 28.1	+0.4
	baz=280						
SSLB				eS	Sb	03 56 33.8	+0.4
	baz=280						
TWD	Chiawan	0.41	27	eP	Pb	03 56 28.5	+0.8
	baz=27						
WHF	Hehuan Shan	0.45	345	P	Pb	03 56 29.2	+0.6
	baz=345						
WHF				S	Sb	03 56 36.0	+1.0
	baz=345						
YUS	Yu-Shan	0.46	242	iP	Pb	03 56 29.5	+0.7
	baz=241						
YUS				S	Sb	03 56 36.1	+0.7
	baz=241						
SMLT	Sun Moon Lake	0.48	291	iP	Pb	03 56 29.7	+0.6
	baz=290						
SMLT				iS	Sb	03 56 37.2	+1.4
	baz=290						
NACB	Ninganchiao	0.50	22	eP	Pb	03 56 30.0	+0.8
	baz=21						
NACB				eS	Sb	03 56 37.0	+1.0
	baz=21						
ETLH	Xiulin Townshi	0.50	9	eP	Pb	03 56 29.9	+0.6
	baz=9.0						
ETLH				eS	Sb	03 56 36.5	+0.2
	baz=9.0						
FULB	Fuli	0.52	190	eP	Pn	03 56 30.9	-0.5
	baz=190						
FULB				eS	Sn	03 56 39.0	-0.6
	baz=190						

TYC	**Yuchr**	**0.53**	**292**	*e*P	Pn	03 56 31.0	-0.5
	baz=291						
TYC				*e*S	Sb	03 56 38.3	+1.3
	baz=291						
FUSS	**Fushou**	**0.55**	**346**	P	Pb	03 56 31.0	+0.5
	baz=345						
FUSS				*e*S	Sb	03 56 38.1	0.0
	baz=345						
TWT	**Tachien**	**0.58**	**340**	*e*S	Sb	03 56 38.9	+0.2
	baz=338						
ELDTW	**Lidau**	**0.62**	**214**	*e*P	Pb	03 56 31.6	0.0
	baz=213						
ELDTW				*e*S	Sb	03 56 39.9	0.0
	baz=213						
CHN5	**Tsauling**	**0.67**	**260**	*e*S	Sn	03 56 43.9	+0.5
	baz=260						
NNSB	**Datong**	**0.71**	**359**	*e*P	Pn	03 56 33.7	-0.5
	baz=359						
NNSB				*e*S	Sb	03 56 43.2	+0.7
	baz=359						
NNSH	**Datong**	**0.71**	**359**	*e*P	Pb	03 56 33.5	+0.4
	baz=359						
NNSH				*e*S	Sb	03 56 43.1	+0.6
	baz=359						
TPUB	**Ta-pu**	**0.81**	**240**	*e*P	Pn	03 56 35.7	+0.3
	baz=239						
TPUB				*e*S	Sn	03 56 47.5	+0.6
	baz=239						
CHN4	**Tsaushan**	**0.82**	**244**	*e*P	Pn	03 56 36.6	+1.1
	baz=244						
CHN4				*e*S	Sn	03 56 48.5	+1.5
	baz=244						
WTP	**Ta-pu**	**0.85**	**237**	*e*P	Pn	03 56 36.1	+0.1
	baz=236						
WTP				*e*S	Sn	03 56 48.5	+0.6
	baz=236						
YHNB	**Yeheng**	**0.96**	**359**	*e*P	Pn	03 56 38.5	+1.1
	baz=358						
YHNB				*e*S	Sn	03 56 50.4	-0.2
	baz=358						
NSK	**Sanguang**	**0.96**	**358**	*e*S	Sn	03 56 50.5	-0.2
	baz=358						

JMA 03 03:56:44.9±0.1**,24°.43N×123°.10E,h55km**±1km**,M1.4,**
Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.09**	**291**	P	Pn	03 56 53.3	0.0
YOJ				*e*S	Sn	03 56 59.3	0.0
JYNG	**Yonagunijimaku**	**0.14**	**279**	P	Pn	03 56 53.4	-0.1
JYNG				S	Sn	03 56 59.6	0.0
JKRS	**Kuro-shima**	**0.85**	**103**	P	Pn	03 57 01.1	+0.3
JKRS				S	Sn	03 57 12.9	+0.4
JIJ	**Ishigaki jima**	**0.95**	**94**	P	Pn	03 57 02.0	-0.1
JIJ				S	Sn	03 57 14.6	-0.2
JISG	**Ishigakijimahi**	**1.11**	**82**	P	Pn	03 57 04.7	+0.4
JISG				S	Sn	03 57 19.2	+0.5

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*MOS **03** 04:06:02.7±1.5,52°.62N×160°.79E,h22km,mb4.6/32,
MS3.7/4,Error ellipse: s-maj=6.1km s-min=4.0km
az=103.3*

*KRSC **03** 04:06:03.3±1.8,52°.70N×160°.78E,h39km±16km,ML4.7*

*BJI **03** 04:06:03.5±0.0,52°.60N×161°.11E,h48km,mB4.8/9,
mb4.3/15,Ms7 4.4/1*

*IDC **03** 04:06:08.0±2.0,52°.90N×160°.51E,h45km±18km,mb3.9/24,
mb1 4.1/26,mb1mx4.0/47,mbtmp4.1/26,ML3.8/2,MS3.7/18,
Ms1 3.7/18,ms1mx3.4/37,Error ellipse: s-maj=15.0km
s-min=11.2km az=150.0*

*NEIC **03** 04:06:07.3±0.8,52°.8N±0°.1×160°.56E±0°.09,h38km±8km,
mb4.4/59,Error ellipse: s-maj=20.9km s-min=8.2km
az=179.0*

ISC 03 04:06:05.0±0.8**,52°.71N**±0°.03×**160°.69E**±0°.03**,h24**km±5km**,
n248,**σ1s.54/292**,mb4.4**/85**,MS3.6**/19**,12C-7D,Off east
coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.56**	**314**	PN	**Pb**	**04 06 15.4**	**-0.7**
SPN				S	**Sb**	**04 06 23.0**	**-0.7**
SPN	**Mys Shipunski**	**0.56**	**314**	*e*P	**Pb**	**04 06 15.3**	**-0.8**
SPN				*e*S	**Sb**	**04 06 22.4**	**-1.3**
NLC	**Nalytchevo**	**0.93**	**300**	PN	**Pn**	**04 06 21.2**	**-1.4**
NLC				S	**Sb**	**04 06 33.3**	**-1.1**
NLC	**Nalytchevo**	**0.93**	**300**	*e*P	**Pn**	**04 06 21.2**	**-1.4**
NLC				*e*S	**Sb**	**04 06 33.3**	**-1.1**
DALK	**Dalny**	**1.21**	**286**	PN	**Pn**	**04 06 25.9**	**-0.5**
DALK				S	**Sn**	**04 06 41.7**	**-0.4**
DALK	**Dalny**	**1.21**	**286**	*e*P	**Pn**	**04 06 25.8**	**-0.6**
DALK				*e*S	**Sn**	**04 06 42.0**	**-0.1**
SDLR	**Sedlovina**	**1.23**	**298**	PN	**Pn**	**04 06 26.1**	**-0.7**
SDLR	**Sedlovina**	**1.23**	**298**	*e*P	**Pn**	**04 06 27.5**	**+0.7**
SDLR				*e*S	**Sn**	**04 06 42.2**	**-0.5**
UGLR	**Uglovaya**	**1.23**	**295**	PN	**Pn**	**04 06 26.4**	**-0.4**
UGLR	**Uglovaya**	**1.23**	**295**	*e*P	**Pn**	**04 06 26.8**	**0.0**
UGLR				*e*S	**Sn**	**04 06 43.1**	**+0.4**
SMAR	**Somma**	**1.27**	**297**	PN	**Pn**	**04 06 26.9**	**-0.5**
SMAR	**Somma**	**1.27**	**297**	*e*P	**Pn**	**04 06 26.8**	**-0.6**
SMAR				*e*S	**Sn**	**04 06 44.0**	**+0.3**
PET	**Petropavlovsk**	**1.27**	**285**⇓	*i*PN	**Pn**	**04 06 26.7**	**-0.5**
PET				*e*S	**Sn**	**04 06 42.7**	**-0.8**
PET				pmax	pmax		
	comp=Z,717nm,0.4s						
PET				smax	smax		
	comp=N,6µm,0.5s						
PET				smax	smax		
	comp=E,6µm,0.5s						
PET	**Petropavlovsk**	**1.27**	**285**	*e*P	**Pn**	**04 06 26.7**	**-0.5**
PET				*e*S	**Sn**	**04 06 43.5**	**0.0**
PET	**Petropavlovsk**	**1.27**	**285**	Pn	**Pn**	**04 06 26.7**	**-0.5**
PET				Sn	**Sn**	**04 06 41.9**	**-1.6**
AVH	**Avacha**	**1.30**	**296**	PN	**Pn**	**04 06 27.4**	**-0.3**
AVH	**Avacha**	**1.30**	**296**	*e*P	**Pn**	**04 06 27.5**	**-0.3**
AVH				*e*S	**Sn**	**04 06 41.5**	**-2.9**
KRER	**Koryakskii**	**1.31**	**298**	PN	**Pn**	**04 06 27.7**	**-0.3**
KRER	**Koryakskii**	**1.31**	**298**	*e*P	**Pn**	**04 06 27.6**	**-0.4**
KRER				*e*S	**Sn**	**04 06 43.0**	**-1.8**
RUS	**Russkaya**	**1.35**	**259**	PN	**Pn**	**04 06 28.4**	**0.0**
RUS				S	**Sn**	**04 06 46.2**	**+0.7**
RUS	**Russkaya**	**1.35**	**259**	*e*P	**Pn**	**04 06 27.9**	**-0.5**
RUS				*e*S	**Sn**	**04 06 45.9**	**+0.3**
KOK	**Koryaka**	**1.37**	**296**	PN	**Pn**	**04 06 28.7**	**0.0**
KOK	**Koryaka**	**1.37**	**296**	*e*P	**Pn**	**04 06 28.3**	**-0.4**
KOK				*e*S	**Sn**	**04 06 45.8**	**-0.3**
KRX	**Arik**	**1.39**	**299**	PN	**Pn**	**04 06 28.7**	**-0.3**
KRX				S	**Sn**	**04 06 46.2**	**-0.5**
KRX	**Arik**	**1.39**	**299**	*e*P	**Pn**	**04 06 28.5**	**-0.5**
KRX				*e*S	**Sn**	**04 06 45.6**	**-1.1**
KII	**Karymskiy**	**1.52**	**331**	PN	**Pn**	**04 06 31.8**	**+1.0**
KII				S	**Sn**	**04 06 50.3**	**+0.5**
KII	**Karymskiy**	**1.52**	**331**	*e*P	**Pn**	**04 06 31.7**	**+1.0**
KII				*e*S	**Sn**	**04 06 50.2**	**+0.5**
MTVR	**Mutnovka**	**1.54**	**262**	PN	**Pn**	**04 06 31.5**	**+0.4**
MTVR				S	**Sn**	**04 06 51.3**	**+0.9**
MTVR	**Mutnovka**	**1.54**	**262**	*e*P	**Pn**	**04 06 31.3**	**+0.2**
MTVR				*e*S	**Sn**	**04 06 51.3**	**+0.9**
KRMR	**Karymshinskiy**	**1.56**	**275**	PN	**Pn**	**04 06 32.5**	**+1.4**
KRMR				S	**Sb**	**04 06 52.7**	**+0.4**
KRMR	**Karymshinskiy**	**1.56**	**275**	*e*P	**Pn**	**04 06 32.5**	**+1.4**
KRMR				*e*S	**Sb**	**04 06 52.5**	**+0.2**
GRL	**Gorelyy**	**1.60**	**265**	PN	**Pn**	**04 06 32.6**	**+0.7**
GRL				S	**Sn**	**04 06 52.4**	**+0.6**
GRL	**Gorelyy**	**1.60**	**265**	*e*P	**Pn**	**04 06 32.6**	**+0.7**
GRL				*e*S	**Sn**	**04 06 51.4**	**-0.4**
KDTR	**Khodutka, Kamc**	**1.84**	**242**	PN	**Pn**	**04 06 36.1**	**+1.0**
KDTR				S	**Sn**	**04 06 58.9**	**+1.4**
KDTR	**Khodutka, Kamc**	**1.84**	**242**	*e*P	**Pn**	**04 06 36.0**	**+1.0**
KDTR				*e*S	**Sn**	**04 06 58.9**	**+1.4**
PEA0B	**Petropavlovsk-**	**1.85**	**284**⇓	*e*PN	**Pn**	**04 06 35.7**	**+0.5**
PEA0B	**Petropavlovsk-**	**1.85**	**284**	Pn	**Pn**	**04 06 35.4**	**+0.2**
PEA0B				Sn	**Sn**	**04 06 58.3**	**+0.4**
PETK	**Petropavlovsk-**	**1.85**	**284**	P	**Pn**	**04 06 35.3**	**+0.1**
	comp=E,165nm,0.3s,baz=97,slow=20,SNR=262						
PETK				S	**Sn**	**04 06 56.3**	**-1.6**
	comp=E,98nm,0.3s,baz=99,slow=18,SNR=5.5						
PETK				LR	LR	04 07 24.1	
	comp=E,1µm,20.9s,baz=92,slow=44						
PETK	**Petropavlovsk-**	**1.85**	**284**	Pn	**Pn**	**04 06 35.1**	**-0.1**
PETK				Sn	**Sn**	**04 06 57.6**	**-0.3**
GNL	**Ganaly**	**1.92**	**302**	PN	**Pn**	**04 06 37.5**	**+1.2**
GNL				S	**Sn**	**04 07 01.4**	**+1.6**
GNL	**Ganaly**	**1.92**	**302**	*e*P	**Pn**	**04 06 37.4**	**+1.2**
GNL				*e*S	**Sn**	**04 07 01.3**	**+1.5**
APC	**Apacha**	**2.15**	**277**	PN	**Pn**	**04 06 41.3**	**+2.0**
APC				S	**Sn**	**04 07 08.1**	**+2.9**
APC	**Apacha**	**2.15**	**277**	*e*P	**Pn**	**04 06 41.3**	**+2.0**
APC				*e*S	**Sb**	**04 07 08.8**	**-0.6**
KZV	**Kizimen**	**2.42**	**355**	PN	**Pn**	**04 06 44.3**	**+1.2**
KZV				S	**Sn**	**04 07 13.5**	**+1.5**
KZV	**Kizimen**	**2.42**	**355**	*e*P	**Pn**	**04 06 44.0**	**+0.9**
KZV				*e*S	**Sn**	**04 07 10.1**	**-1.9**
TUMD	**Tumrok D**	**2.50**	**356**	*e*P	**Pn**	**04 06 44.7**	**+0.5**
TUMD				*e*S	**Sn**	**04 07 14.2**	**+0.3**
TUMR	**Tumrok**	**2.60**	**353**	PN	**Pn**	**04 06 46.9**	**+1.3**
TUMR				S	**Sn**	**04 07 17.0**	**+0.6**
TUMR	**Tumrok**	**2.60**	**353**	*e*P	**Pn**	**04 06 46.7**	**+1.1**
TUMR				*e*S	**Sn**	**04 07 17.2**	**+0.8**
PAU	**Pauzhetka**	**2.70**	**244**	PN	**Pn**	**04 06 49.3**	**+2.5**
PAU	**Pauzhetka**	**2.70**	**244**	*e*P	**Pn**	**04 06 48.5**	**+1.7**
PAU				*e*S	**Sn**	**04 07 21.4**	**+2.8**
KMNR	**Kamenistaya**	**3.06**	**355**	PN	**Pn**	**04 06 54.6**	**+2.7**
KMNR	**Kamenistaya**	**3.06**	**355**	*e*P	**Pn**	**04 06 54.4**	**+2.5**
BZMR	**Bezymyannaya**	**3.23**	**358**	*e*P	**Pn**	**04 06 57.3**	**+3.0**
BZGR	**Bezymyannyi-Gr**	**3.24**	**0**	*e*P	**Pn**	**04 06 56.5**	**+2.2**
KIRR	**Kirishev**	**3.25**	**357**	PN	**Pn**	**04 06 58.1**	**+3.5**
KIRR	**Kirishev**	**3.25**	**357**	*e*P	**Pn**	**04 06 57.3**	**+2.7**
BZWR	**Bezymyannyi-We**	**3.26**	**358**	PN	**Pn**	**04 06 57.4**	**+2.7**
BZWR	**Bezymyannyi-We**	**3.26**	**358**	*e*P	**Pn**	**04 06 57.7**	**+3.0**
KOZ	**Kozyrevsk**	**3.39**	**352**	PN	**Pn**	**04 06 58.9**	**+2.6**
KOZ	**Kozyrevsk**	**3.39**	**352**	*e*P	**Pn**	**04 06 58.6**	**+2.3**
ESO	**Esso**	**3.42**	**341**	PN	**Pn**	**04 06 59.6**	**+2.7**
ESO	**Esso**	**3.42**	**341**	*e*P	**Pn**	**04 06 59.5**	**+2.7**
SKR	**Severo-Kuril’s**	**3.49**	**236**	*e*PN	**Pn**	**04 06 58.8**	**+1.1**
SKR				*e*S	**Sn**	**04 07 38.6**	**+0.3**
SKR				pmax	pmax		
	comp=Z,76nm,0.7s						
SKR				smax	smax		
	comp=E,470nm,0.9s						
SKR				smax	smax		
	comp=N,533nm,0.7s						
SKR	**Severo-Kuril’s**	**3.49**	**236**	*e*P	**Pn**	**04 06 59.0**	**+1.3**
SKR				*e*S	**Sn**	**04 07 39.0**	**+0.7**
KRSR	**Krestovskiy**	**3.51**	**359**	PN	**Pn**	**04 07 01.3**	**+3.2**
KRSR	**Krestovskiy**	**3.51**	**359**	*e*P	**Pn**	**04 07 01.4**	**+3.3**
KLY	**Klyuchi**	**3.61**	**360**	PN	**Pn**	**04 07 02.1**	**+2.8**
KLY				S	**Sn**	**04 07 45.9**	**+4.8**
KLY	**Klyuchi**	**3.61**	**360**	*e*P	**Pn**	**04 07 01.6**	**+2.3**
KLY				*e*S	**Sn**	**04 07 44.0**	**+2.9**
SRDR	**Sredinnyy**	**3.66**	**352**	PN	**Pn**	**04 07 01.9**	**+1.8**
SRDR	**Sredinnyy**	**3.66**	**352**	*e*P	**Pn**	**04 07 02.1**	**+2.0**
KBTR	**Krutoberegovo**	**3.72**	**19**	PN	**Pn**	**04 07 01.3**	**+0.5**
KBTR	**Krutoberegovo**	**3.72**	**19**	*e*P	**Pn**	**04 07 01.3**	**+0.5**
KBTR				*e*S	**Sn**	**04 07 43.2**	**-0.6**
BDR	**Baidarnaya**	**3.88**	**4**	PN	**Pn**	**04 07 06.4**	**+3.3**
BDR	**Baidarnaya**	**3.88**	**4**	*e*P	**Pn**	**04 07 05.0**	**+1.9**
SMKR	**Semkarok**	**3.91**	**6**	PN	**Pn**	**04 07 06.5**	**+3.0**
SMKR	**Semkarok**	**3.91**	**6**	*e*P	**Pn**	**04 07 04.1**	**+0.6**
SMKR				*e*S	**Sn**	**04 07 49.3**	**+0.7**
SRKR	**Sorokina**	**3.96**	**4**	PN	**Pn**	**04 07 07.3**	**+3.0**
SRKR	**Sorokina**	**3.96**	**4**	*e*P	**Pn**	**04 07 06.2**	**+1.9**
SRKR				*e*S	**Sn**	**04 07 52.2**	**+2.3**
BKI	**Bering**	**4.00**	**49**	*e*P	**Pn**	**04 07 03.5**	**-1.2**
BKI				*e*S	**Sn**	**04 07 45.5**	**-5.2**
PALN	**Palana**	**6.41**	**357**	P	**Pn**	**04 07 42.3**	**+4.6**
SMY	**Shemya**	**8.15**	**85**	PN	**Pn**	**04 08 01.8**	**+0.2**
SMY	**Shemya**	**8.15**	**85**	Pn	**Pn**	**04 08 01.8**	**+0.2**
MA2	**Magadan**	**8.82**	**325**	LR	LR	04 12 05.5	
	comp=N,425nm,18.6s,baz=154,slow=42						
JKA	**Kamikawa-asahi**	**14.74**	**242**	Pn	**Pn**	**04 09 33.2**	**+1.5**
ASAJ	**Asahikawa**	**14.74**	**242**	P	**Pn**	**04 09 31.9**	**+0.1**
	comp=N,1.1nm,0.3s,baz=64,slow=18,SNR=5.0						
ASAJ				LR	LR	04 16 20.0	
	comp=N,114nm,18.3s,baz=158,slow=42						
KLR	**Kul'dur**	**18.49**	**271**	P	**P**	**04 10 18.6**	**-0.5**
	comp=N,0.1nm,0.3s,baz=72,slow=10,SNR=3.6						
KLR				S	**S**	**04 13 52.7**	**+4.1**
	comp=N,0.4nm,0.3s,baz=23,slow=22,SNR=5.0						
KLR				LR	LR	04 17 43.4	
	comp=N,161nm,19.8s,baz=73,slow=38						
KLR	**Kul'dur**	**18.49**	**271**⇓	*e*P	**Pn**	**04 10 20.0**	**+0.6**
YAK	**Yakutsk**	**18.96**	**312**	*e*P	**P**	**04 10 23.1**	**-1.0**
YAK				*e*S	**Sn**	**04 13 53.1**	**-3.1**
YAK				pmax	pmax		
	comp=Z,31nm,0.9s						
YAK				pmax	pmax		
	comp=E,3.0nm,0.9s						
YAK				smax	smax		
	comp=E,153nm,4.3s						
YAK				smax	smax		
	comp=N,73nm,3.5s						
YAK				MLR	MLR		
	comp=Z,232nm,18.0s						
YAK				MLR	MLR		
	comp=E,224nm,20.0s						
ZEA	**Zeya**	**19.95**	**286**	*e*P	**Pn**	**04 10 38.3**	**+1.6**
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.2s						
USRK	**Ussuriysk Ar.**	**20.74**	**257**	P	**P**	**04 10 43.9**	**+0.3**
	comp=Z,5.4nm,0.9s,baz=57,slow=12,SNR=4.7						
USRK				LR	LR	04 19 31.4	
	comp=Z,207nm,18.0s,baz=52,slow=39						
ANM	**Nome**	**20.97**	**42**	P	**P**	**04 10 47.1**	**+1.1**
ANM				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ANM	**Nome**	**20.97**	**42**	P	**P**	**04 10 47.1**	**+1.1**
MAJO	**Matsushiro**	**22.60**	**233**	P	**P**	**04 11 05.1**	**+1.4**
MAJO				pmax	pmax		
	comp=Z,18nm,0.8s						
MAJO	**Matsushiro**	**22.60**	**233**	P	**P**	**04 11 05.1**	**+1.4**
MAJO				IAmb	IAmb	04 11 14.0	
	comp=Z,18nm,0.8s						
MAT	**Matsushiro**	**22.60**	**233**	P	**P**	**04 11 05.6**	**+1.9**
MJAR	**Matsushiro Arr**	**22.60**	**233**	P	**P**	**04 11 05.4**	**+1.8**
	comp=Z,2.3nm,0.4s,baz=22,slow=11,SNR=9.1						
MJAR	**Matsushiro Arr**	**22.60**	**233**	P	**P**	**04 11 03.3**	**-0.4**
MJAR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MJAR	**Matsushiro Arr**	**22.60**	**233**	P	**P**	**04 11 03.3**	**-0.4**
RDOG	**Red Dog Mine**	**23.15**	**35**	P	**P**	**04 11 09.9**	**+0.8**
RDOG				IAmb	IAmb	04 11 10.6	
	comp=Z,11nm,0.9s						
CNBA	**Chernabura Isl**	**23.36**	**69**	P	**P**	**04 11 11.6**	**+0.3**
TIXI	**Tiksi**	**23.58**	**335**⇑	*e*P	**P**	**04 11 11.4**	**-1.9**
TIXI				pmax	pmax		
	comp=Z,23nm,1.0s						
TIXI	**Tiksi**	**23.58**	**335**	P	**P**	**04 11 11.4**	**-1.9**
TTA	**Tatalina**	**24.73**	**49**	P	**P**	**04 11 24.8**	**+0.6**
TTA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
TTA	**Tatalina**	**24.73**	**49**	P	**P**	**04 11 24.8**	**+0.6**
TTA				IAmb	IAmb	04 11 26.2	
	comp=Z,7.4nm,0.8s						
KDAK	**Kodiak Island**	**26.68**	**60**	P	**P**	**04 11 41.0**	**-0.7**
	comp=Z,6.0nm,0.9s,baz=288,slow=8.0,SNR=5.3						
KDAK				LR	LR	04 22 54.2	
	comp=Z,134nm,19.6s,baz=263,slow=38						
KSRS	**Korea Array**	**27.41**	**249**	P	**P**	**04 11 49.1**	**+0.7**
	comp=Z,1.6nm,0.7s,baz=45,slow=11,SNR=7.0						
KSRS				LR	LR	04 23 26.4	
	comp=Z,104nm,18.3s,baz=50,slow=38						
COLA	**College**	**28.42**	**45**⇑	*e*P	**P**	**04 11 56.7**	**-0.5**
COLA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
SCM	**Sheep Creek Mo**	**28.79**	**51**	P	**P**	**04 12 00.9**	**+0.2**
SCM				pmax	pmax		
	comp=Z,10.0nm,1.2s						
SCM	**Sheep Creek Mo**	**28.79**	**51**	P	**P**	**04 12 00.9**	**+0.2**
SCM				IAmb	IAmb	04 12 18.1	
	comp=Z,9.6nm,1.2s						
HDA	**Harding Lake**	**28.81**	**46**	P	**P**	**04 12 00.1**	**-0.6**
ILAR	**Eielson Array**	**28.83**	**45**	P	**P**	**04 12 00.7**	**-0.2**
	comp=Z,0.9nm,0.8s,baz=267,slow=8.4,SNR=12						
ILAR	**Eielson Array**	**28.83**	**45**	P	**P**	**04 12 01.1**	**+0.2**
FYU	**Fort Yukon**	**29.53**	**41**	P	**P**	**04 12 08.1**	**+1.1**
N25K	**Chitina, Valde**	**30.11**	**51**	P	**P**	**04 12 12.9**	**+0.5**
BCAR	**Beaver Creek A**	**31.21**	**48**	P	**P**	**04 12 22.7**	**+0.7**
H11N2	**WAKE ISLAND Hy**	**33.27**	**169**	T	T	04 49 06.7	
	SNR=422						
H11N3	**WAKE ISLAND Hy**	**33.28**	**169**	T	T	04 48 17.5	
	baz=160,slow=74,SNR=348						
H11N1	**WAKE ISLAND Hy**	**33.29**	**169**	T	T	04 48 16.5	
	baz=353,slow=74,SNR=438						
HYT	**Haines Junctio**	**33.63**	**51**	P	**P**	**04 12 43.9**	**+0.5**
HYT				IAmb	IAmb	04 12 58.7	
	comp=Z,4.1nm,1.1s						
ULN	**Ulaanbaatar**	**33.94**	**284**⇑	*e*P	**P**	**04 12 45.2**	**-1.0**
ULN				pmax	pmax		
	comp=Z,5.0nm,1.7s						
INK	**Inuvik**	**33.95**	**37**	LR	LR	04 27 43.9	
	comp=Z,61nm,18.4s,baz=180,slow=38						
SONM	**Songino Array**	**34.34**	**284**	P	**P**	**04 12 48.9**	**-0.7**
	comp=Z,0.7nm,0.5s,baz=60,slow=7.5,SNR=6.3						
SONM				PcP	**PcP**	**04 15 25.9**	**+0.8**
	comp=Z,0.4nm,0.7s,baz=92,slow=2.1,SNR=3.0						
SONM				LR	LR	04 27 49.5	
	comp=Z,180nm,18.6s,baz=61,slow=38						
SONM	**Songino Array**	**34.34**	**284**	P	**P**	**04 12 49.0**	**-0.6**
H11S1	**WAKE ISLAND Hy**	**34.46**	**170**	T	T	04 50 35.4	
	baz=351,slow=76,SNR=33						
H11S3	**WAKE ISLAND Hy**	**34.47**	**170**	T	T	04 50 35.4	
	baz=351,slow=76,SNR=51						
H11S2	**WAKE ISLAND Hy**	**34.47**	**170**	T	T	04 50 33.5	
	baz=351,slow=76,SNR=26						
NRIK	**Noril'sk**	**36.43**	**325**	LR	LR	04 29 32.6	
	comp=Z,381nm,18.9s,baz=66,slow=39						
WHN	**Wuhan**	**40.21**	**255**	P	**P**	**04 13 40.4**	**+1.0**
EUNU	**Eureka**	**42.24**	**14**	P	**P**	**04 13 56.0**	**+0.5**
EUNU				IAmb	IAmb	04 13 57.0	
	comp=Z,6.9nm,0.7s						
YKA	**Yellowknife Ar**	**43.20**	**42**	P	**P**	**04 14 03.0**	**-0.5**
	comp=Z,1.5nm,0.8s,baz=300,slow=7.4,SNR=18						
YKA	**Yellowknife Ar**	**43.20**	**42**	*ce*P	**P**	**04 14 03.9**	**+0.4**
YKA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ZALV	**Zalesovo Beam**	**43.29**	**303**	P	**P**	**04 14 01.8**	**-2.5**
	comp=Z,0.4nm,0.4s,baz=44,slow=13,SNR=1.9						
ZALV				LR	LR	04 33 15.9	
	comp=Z,130nm,19.3s,baz=64,slow=38						
DGZ	**Jazzator, Alta**	**44.16**	**297**⇑	*e*P	**P**	**04 14 10.8**	**-0.8**
DGZ				pmax	pmax		
	comp=Z,3.0nm,1.0s						
DGZ				MLR	MLR		
	comp=Z,60nm,16.0s						
KIP	**Kipapa**	**44.43**	**119**⇑	*e*P	**P**	**04 14 13.6**	**-0.2**
KIP				pmax	pmax		
	comp=Z,250nm,2.5s						
SPITS	**Spitsbergen Ar**	**47.57**	**351**	P	**P**	**04 14 36.5**	**-1.4**
	comp=Z,3.1nm,0.7s,baz=50,slow=9.1,SNR=18						
KURK	**Kurchatov**	**48.24**	**302**	*ce*P	**P**	**04 14 41.9**	**-1.5**
KURK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KURK	**Kurchatov**	**48.24**	**302**	P	**P**	**04 14 42.5**	**-0.9**
MK31	**Makanchi Array**	**48.65**	**296**⇓	*e*P	**P**	**04 14 45.2**	**-1.5**
MK31	**Makanchi Array**	**48.65**	**296**	P	**P**	**04 14 45.1**	**-1.5**
MKAR	**Makanchi Array**	**48.65**	**296**	P	**P**	**04 14 43.9**	**-2.8**
	comp=Z,0.6nm,0.4s,baz=58,slow=6.5,SNR=15						
MKAR				LR	LR	04 36 37.6	
	comp=Z,65nm,18.6s,baz=34,slow=38						
MKAR	**Makanchi Array**	**48.65**	**296**	*i* P	**P**	**04 14 45.4**	**-1.3**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MKAR	**Makanchi Array**	**48.65**	**296**	P	**P**	**04 14 44.2**	**-2.5**
BRVK	**Borovoye**	**50.94**	**309**⇑	*e*P	**P**	**04 15 03.1**	**-0.9**
BRVK				pmax	pmax		
	comp=Z,12nm,2.5s						
JTMT	**Jette**	**51.60**	**59**	P	**P**	**04 15 08.6**	**-0.5**
WDC	**Whiskeytown Da**	**51.66**	**71**	P	**P**	**04 15 10.5**	**+0.9**
WDC				pmax	pmax		
	comp=Z,4.0nm,1.0s						
WDC	**Whiskeytown Da**	**51.66**	**71**	P	**P**	**04 15 10.4**	**+0.9**
WDC				IAmb	IAmb	04 15 11.8	
	comp=Z,3.6nm,1.0s						
FCC	**Fort Churchill**	**53.55**	**39**	P	**P**	**04 15 23.7**	**+0.4**
FCC				pmax	pmax		
	comp=Z,1.0nm,1.0s						
FCC	**Fort Churchill**	**53.55**	**39**	P	**P**	**04 15 23.6**	**+0.4**
ARCES	**ARCESS Array B**	**53.76**	**342**	P	**P**	**04 15 23.3**	**-1.4**
	comp=Z,9.7nm,1.0s,baz=25,slow=7.9,SNR=7.6						
ARCES	**ARCESS Array B**	**53.76**	**342**	P	**P**	**04 15 23.7**	**-1.0**
ARCES	**ARCESS Array B**	**53.76**	**342**	P	**P**	**04 15 23.7**	**-1.0**
ARU	**Arti**	**53.92**	**318**	*d i*P	**P**	**04 15 24.6**	**-1.4**
ARU						04 16 29.0	
ARU						04 17 23.6	
ARU				S	**S**	**04 22 57.6**	**-2.0**
ARU				SS	**SKiKP**	**04 26 35.1**	**-1.8**
ARU				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MCMT	**McKenzie Canyo**	**54.25**	**61**	P	**P**	**04 15 27.5**	**-1.4**
PNTR	**Pine Nut**	**54.34**	**70**	P	**P**	**04 15 30.4**	**+0.8**
PNTR				IAmb	IAmb	04 15 31.9	
	comp=Z,6.5nm,0.9s						
WAKR	**Walker**	**54.83**	**71**	P	**P**	**04 15 33.9**	**+0.7**
WAKR				IAmb	IAmb	04 15 35.1	
	comp=Z,3.4nm,0.8s						
RYN	**Ryan**	**55.27**	**70**	P	**P**	**04 15 37.0**	**+0.7**
RYN				IAmb	IAmb	04 15 38.3	
	comp=Z,3.1nm,1.0s						
YHH	**Holmes Hill**	**55.33**	**60**	P	**P**	**04 15 37.3**	**+0.5**
YHH				IAmb	IAmb	04 15 38.2	
	comp=Z,3.1nm,0.9s						
NVAR	**Mina Array Bea**	**55.53**	**70**	P	**P**	**04 15 39.0**	**+0.7**
	comp=Z,1.4nm,0.6s,baz=298,slow=7.4,SNR=17						
LHV	**Little Huntoon**	**55.54**	**70**	P	**P**	**04 15 39.3**	**+1.4**
LHV				IAmb	IAmb	04 15 40.4	
	comp=Z,2.6nm,0.8s						
AAK	**Ala-Archa**	**55.57**	**297**⇑	*e*P	**P**	**04 15 37.3**	**-1.1**
AAK				pmax	pmax		
	comp=Z,11nm,0.9s						
AAK				MLR	MLR		
	comp=Z,66nm,14.0s						
AAK	**Ala-Archa**	**55.57**	**297**	P	**P**	**04 15 38.3**	**-0.1**
AAK				IAmb	IAmb	04 15 42.9	
	comp=Z,4.3nm,0.8s						
NV11	**Mina Array Sit**	**55.62**	**70**	P	**P**	**04 15 39.3**	**+0.5**
NV11				IAmb	IAmb	04 15 40.6	
	comp=Z,2.2nm,0.8s						
ELK	**Elko**	**55.69**	**66**	P	**P**	**04 15 39.8**	**+0.4**
ELK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ELK	**Elko**	**55.69**	**66**	P	**P**	**04 15 39.8**	**+0.4**
H17A	**Grant Village**	**55.74**	**60**	P	**P**	**04 15 40.4**	**+0.6**
H17A				IAmb	IAmb	04 15 43.9	
	comp=Z,3.7nm,0.9s						
HVU	**Hansel Valley**	**56.34**	**64**	P	**P**	**04 15 44.4**	**+0.5**
HVU				pmax	pmax		
	comp=Z,2.0nm,1.1s						
HVU	**Hansel Valley**	**56.34**	**64**	P	**P**	**04 15 44.4**	**+0.5**
TPH	**Tonopah**	**56.40**	**70**	P	**P**	**04 15 45.2**	**+0.8**
TPH				pmax	pmax		
	comp=Z,17nm,1.0s						
TPH	**Tonopah**	**56.40**	**70**	P	**P**	**04 15 45.2**	**+0.8**
SPUT	**South Promonto**	**56.84**	**64**	P	**P**	**04 15 48.2**	**+0.7**
KSH	**Kashi**	**56.88**	**293**	P	P	04 15 54.2	+6.4
KSH				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KSH				pmax	pmax		
	comp=Z,57nm,5.0s						
KK31	**Karatay Array**	**57.38**	**300**	P	**P**	**04 15 51.1**	**0.0**
KK31				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KK31	**Karatay Array**	**57.38**	**300**	P	**P**	**04 15 51.1**	**0.0**
KK31				IAmb	IAmb	04 15 55.1	
	comp=Z,2.9nm,0.8s						
KKAR	**Karatay Array**	**57.38**	**300**	P	**P**	**04 15 50.4**	**-0.7**
KKAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KKAR	**Karatay Array**	**57.38**	**300**	P	**P**	**04 15 51.1**	**0.0**
KKAR				IAmb	IAmb	04 15 55.1	
	comp=Z,2.9nm,0.8s						
KKAR	**Karatay Array**	**57.38**	**300**	P	**P**	**04 15 50.4**	**-0.7**
SPR3	**Spring Creek 3**	**57.39**	**67**	P	**P**	**04 15 52.5**	**+0.9**
SPR3				IAmb	IAmb	04 15 54.3	
	comp=Z,5.0nm,0.9s						
BW06	**Boulder Array**	**57.40**	**61**	P	**P**	**04 15 52.1**	**+0.7**
BW06				IAmb	IAmb	04 15 53.4	
	comp=Z,4.0nm,0.9s						
PD31	**Pinedale Array**	**57.40**	**61**	P	**P**	**04 15 52.2**	**+0.8**
PD31				IAmb	IAmb	04 15 53.3	
	comp=Z,3.6nm,0.9s						
PDAR	**Pinedale Array**	**57.40**	**61**	P	**P**	**04 15 52.5**	**+1.0**
	comp=Z,3.3nm,0.9s,baz=306,slow=3.3,SNR=20						
PDAR				LR	LR	04 39 33.8	
	comp=Z,27nm,19.7s,baz=318,slow=35						
PDAR	**Pinedale Array**	**57.40**	**61**	P	**P**	**04 15 52.0**	**+0.6**
DUG	**Dugway, Tooele**	**57.41**	**65**	P	**P**	**04 15 52.7**	**+1.2**
DUG				pmax	pmax		
	comp=Z,1.0nm,0.8s						
DUG	**Dugway, Tooele**	**57.41**	**65**	P	**P**	**04 15 52.7**	**+1.2**

FRB	Frobisher Bay	57.72	23	P	P	04 15 51.8	-1.3
	comp=Z,2.6nm,0.9s,baz=321,slow=8.3,SNR=4.3						
TPNV	Topopah Spring	57.73	70	P	P	04 15 54.7	+0.8
TPNV				pmax	pmax		
	comp=Z,3.0nm,1.0s						
TPNV	Topopah Spring	57.73	70	P	P	04 15 54.7	+0.8
TPNV				IAmb	IAmb	04 15 55.4	
	comp=Z,3.1nm,0.9s						
NLU	North Lily Min	57.98	65	P	P	04 15 56.0	+0.4
NLU				IAmb	IAmb	04 15 57.6	
	comp=Z,2.9nm,0.8s						
PRN	Pahroc Range	58.10	69	P	P	04 15 57.3	+0.9
PRN				IAmb	IAmb	04 15 58.6	
	comp=Z,2.8nm,0.9s						
CMAR	Chiang Mai Arr	58.46	259	LR	LR	04 42 25.0	
	comp=Z,34nm,18.5s,baz=40,slow=37						
GSC	Goldstone, Bar	58.57	72	P	P	04 16 00.2	+0.6
GSC				pmax	pmax		
	comp=Z,4.0nm,1.1s						
GSC	Goldstone, Bar	58.57	72	P	P	04 16 00.2	+0.6
GSC				IAmb	IAmb	04 16 01.9	
	comp=Z,3.7nm,1.1s						
RSSD	Black Hills	59.32	56	P	P	04 16 05.4	+0.5
RSSD				pmax	pmax		
	comp=Z,7.0nm,0.8s						
RSSD	Black Hills	59.32	56	P	P	04 16 05.4	+0.5
SRU	San Rafael Swe	59.43	65	P	P	04 16 06.1	+0.4
SRU				pmax	pmax		
	comp=Z,6.0nm,0.9s						
SRU	San Rafael Swe	59.43	65	P	P	04 16 06.1	+0.4
W13A	Hualapai Mount	60.39	70	P	P	04 16 12.5	+0.1
FINES	FINESS Array B	60.61	337	P	P	04 16 12.1	-1.1
	comp=Z,2.7nm,0.6s,baz=35,slow=7.8,SNR=16						
FINES				LR	LR	04 45 50.0	
	comp=Z,43nm,18.3s,baz=25,slow=39						
FINES	FINESS Array B	60.61	337	*i* P	P	04 16 13.1	0.0
FINES				pmax	pmax		
	comp=Z,3.0nm,0.6s						
TKX	Tecate	60.63	74	P	P	04 16 13.4	-0.4
PV17	East Wray Mesa	60.88	64	P	P	04 16 16.2	+0.6
PV11	David Mesa, Pa	60.91	64	P	P	04 16 16.2	+0.4
PV11				IAmb	IAmb	04 16 18.8	
	comp=Z,5.9nm,0.8s						
PV05	Paradox Valley	60.95	65	P	P	04 16 16.9	+0.8
PV03	Paradox Valley	60.96	64	P	P	04 16 17.1	+1.0
PV03				IAmb	IAmb	04 16 25.6	
	comp=Z,6.4nm,1.2s						
PV13	Radium Mtn., P	61.04	64	P	P	04 16 17.5	+0.7
NIL	Nilore	62.59	290	P	P	04 16 25.6	-1.3
NIL				pmax	pmax		
	comp=Z,10.0nm,1.0s						
NIL	Nilore	62.59	290	P	P	04 16 25.6	-1.3
OBN	Obninsk	63.03	328	⇓*i*P	P	04 16 29.8	+0.3
OBN				*e*		04 16 36.4	
OBN				*e**PP	sP	04 16 41.2	+1.4
OBN				S	S	04 25 01.0	+2.9
OBN				pmax	pmax		
	comp=Z,20nm,1.7s						
OBN				MLR	MLR		
	comp=Z,62nm,16.0s						
X18A	Snowflake	63.04	68	P	P	04 16 30.7	+0.5
X18A				IAmb	IAmb	04 16 32.4	
	comp=Z,4.6nm,1.0s						
NB2	NORSAR Subarra	64.01	344	P	P	04 16 35.0	-1.0
	comp=Z,8.3nm,1.2s,baz=23,slow=6.9						
NOA	NORSAR Array B	64.01	344	P	P	04 16 35.3	-0.7
	comp=Z,0.4nm,0.4s,baz=24,slow=5.9,SNR=7.9						
LPSR	Galich'ya Gora	64.30	325	*e*P	P	04 16 36.7	-1.2
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
HFS	Hagfors	64.42	342	P	P	04 16 37.6	-1.0
	comp=Z,1.2nm,0.5s,baz=53,slow=7.6,SNR=7.8						
VRH	Novokhopyorsk	64.44	322	*e*P	P	04 16 36.8	-2.0
VRH				pmax	pmax		
	comp=Z,10.0nm,0.4s						
VSR	Storozhevoye	65.36	324	*e*P	P	04 16 42.6	-2.2
VSR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
VORD	Divnogorie	65.52	324	*e*P	P	04 16 44.9	-1.0
VORD				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MNK	Minsk	66.20	332	*i* P	P	04 16 54.8	+4.6
	comp=E,3.0nm,1.4s						
MNK				*i* P	P	04 16 54.8	+4.6
	comp=N,26nm,1.4s						
MNK				*i* P	P	04 16 54.8	+4.6
	comp=Z,12nm,0.8s						
MNK				*i* PP	PP	04 19 21.9	+6.5
MNK				*i* PPP	PPP	04 20 58.0	
MNK				*i* S	S	04 25 42.7	+5.5
MNK				*i* SS	SS	04 30 04.5	+12
MNK				*i* SSS	SSS	04 33 16.2	
MNK				*i* LQ	LQ	04 41 28.0	
MNK				*i* LR	LR	04 46 33.0	
MNK				*i* LRM	MLR	04 48 42.4	
	comp=E,10.0nm,19.5s						
MNK				*i* LRM	MLR	04 48 42.4	
	comp=N,169nm,24.7s						
MNK				*i* LRM	MLR	04 48 42.4	
	comp=Z,111nm,20.2s						
AKASG	Malin Array Be	69.13	329	P	P	04 17 07.4	-1.3
	comp=Z,1.6nm,0.4s,baz=30,slow=6.8,SNR=9.6						
AKASG				LR	LR	04 50 51.7	
	comp=Z,89nm,18.9s,baz=25,slow=39						
AKASG	Malin Array Be	69.13	329	*ce*P	P	04 17 09.0	+0.3
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.4s						
AKBB	Malin Array Si	69.13	329	⇑*e*P	P	04 17 09.3	+0.6
KBZ	Khabaz	70.06	317	P	P	04 17 14.0	-0.6
	comp=Z,5.0nm,1.0s,baz=351,slow=5.2,SNR=5.5						
KBZ				LR	LR	04 52 49.0	
	comp=Z,90nm,18.5s,baz=36,slow=40						
KBZ	Khabaz	70.06	317	⇓*e*P	P	04 17 14.8	+0.2
KBZ				pmax	pmax		
	comp=Z,5.0nm,1.0s						
TX31	Lajitas Ar. Si	70.45	67	P	P	04 17 18.4	+1.0
TX32	Lajitas Array	70.45	67	P	P	04 17 18.5	+1.1
TX32				IAmb	IAmb	04 17 18.8	
	comp=Z,4.6nm,0.8s						
TXAR	Lajitas Array	70.46	67	P	P	04 17 18.0	+0.6
	comp=Z,2.5nm,0.6s,baz=300,slow=4.5,SNR=40						
EKA	Eskdalemuir Ar	71.49	350	P	P	04 17 22.8	-0.3
	comp=Z,1.9nm,0.8s,baz=18,slow=5.6,SNR=5.3						
KWP	Kalwaria Pacla	72.00	333	P	P	04 17 26.6	+0.3
KWP				pmax	pmax		
	comp=Z,11nm,1.0s						
KWP	Kalwaria Pacla	72.00	333	P	P	04 17 26.6	+0.3
CLL	Collm	72.84	339	*i* P	P	04 17 31.4	+0.2
CLL	Collm	72.84	339	*i* P	P	04 17 31.4	+0.2
CLL				*e*		04 17 38.0	
BUR08	Bucovina Ar. S	73.06	330	P	P	04 17 32.8	0.0
BUR08				IAmb	IAmb	04 17 38.9	
	comp=Z,4.0nm,0.8s						
KHC	Kasperske Hory	74.76	338	*e*P	P	04 17 41.2	-1.4
KHC	Kasperske Hory	74.76	338	*e*P	P	04 17 41.2	-1.4
GERES	GERESS Array B	75.00	338	P	P	04 17 43.5	-0.6
	comp=Z,0.5nm,0.5s,baz=74,slow=4.9,SNR=4.2						
GERES				LR	LR	04 54 31.1	
	comp=Z,35nm,19.5s,baz=5.5,slow=39						
CONA	Conrad Observa	75.35	336	*e*P	P	04 17 48.5	+2.4
	comp=Z,5.1nm,1.4s						
WRAB	Tennant Creek	75.88	205	⇑*e*P	P	04 17 49.6	+0.4
WRAB				pmax	pmax		
	comp=Z,12nm,1.7s						
WRA	Warramunga Arr	75.89	206	P	P	04 17 49.4	+0.1
	comp=Z,3.2nm,0.9s,baz=19,slow=6.3,SNR=15						
ARSA	Arzberg	76.07	336	*e*P	P	04 17 54.7	+4.6
	comp=Z,9.0nm,1.1s						
MARD	Mardin	76.28	315	P	P	04 17 51.9	+0.3
MARD				IAmb	IAmb	04 17 53.7	
	comp=Z,6.0nm,0.8s						
KBA	Koelnbreinsper	76.75	338	*e*P	P	04 17 56.7	+2.5
	comp=Z,8.3nm,1.1s						
WATA	Walderalm	76.90	339	*e*P	P	04 17 47.3	-7.7
	comp=Z,7.5nm,1.3s						
WTTA	Wattenberg	76.95	339	*e*P	P	04 17 52.6	-2.8
	comp=Z,7.5nm,1.3s						
MOTA	Moosalm	76.99	339	*e*P	P	04 17 51.7	-3.8
	comp=Z,6.3nm,1.4s						
SQTA	Sankt Quirin	77.09	339	*e*P	P	04 17 52.5	-3.5
	comp=Z,3.0nm,0.6s						
BRTR	Keskin Array B	77.14	321	LR	LR	04 58 02.1	
	comp=Z,23nm,19.1s,baz=18,slow=40						
ABTA	Abfaltersbach	77.25	338	*e*P	P	04 17 53.6	-3.2
	comp=Z,3.6nm,0.8s						
FETA	Feichten	77.38	339	*e*P	P	04 17 53.7	-4.0
	comp=Z,5.3nm,1.2s						
ASAR	Alice Springs	79.56	205	P	P	04 18 10.8	+1.2
	comp=Z,2.9nm,0.8s,baz=15,slow=5.6,SNR=20						
STKA	Stephens Creek	85.87	196	P	P	04 18 43.3	+1.1
	baz=350,slow=9.8,SNR=4.8						

*IDC **03** 04:21:55.9±0.7, 55°.28S×27°.95W, h0^{km}, mb4.4/7, mb1 4.5/8, mb1mx4.2/26, mbtmp4.4/8, ML4.4/1, MS3.8/3, Ms1 3.7/3, ms1mx3.4/13, Error ellipse: s-maj=26.6km s-min=21.9km az=49.0*

*NEIC **03** 04:21:58.6±1.3, 55°.35S±0°.07×28°.0W±0°.2, h17^{km}±5^{km}, mb4.6/12, Error ellipse: s-maj=16.1km s-min=8.0km az=66.0*

ISC 03 04:21:59.6±0.6, **55°.3S**±0°.1×**27°.92W**±0°.09, **h26**^{km}, **n37**, σ**0s.78**/34, **mb4.5**/9, **MS3.7**/3, **South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	5.07	278	Pn	Pn	04 23 12.8	-0.9
HOPE				Sn	Sn	04 24 12.8	+1.5
VNA1	Neumayer--Stat	17.63	158	P	P	04 26 04.6	+0.9
VNA3	Neumayer Olymp	17.82	161	P	P	04 26 06.1	+0.2
VNA2	Neumayer--Watz	18.02	158	P	P	04 26 08.4	+0.3
	baz=312,slow=14						
SNAA	Sanae	19.57	156	P	P	04 26 24.9	-0.3
SNAA	Sanae	19.57	156	P	P	04 26 24.6	-0.6
	1.1nm,0.3s,baz=302,slow=10,SNR=48						
SNAA	Sanae	19.57	156	P	P	04 26 25.1	-0.1
PMSA	Palmer Station	20.08	227	LR	LR	04 33 00.1	
	comp=Z,196nm,18.9s,baz=120,slow=33						
PMSA	Palmer Station	20.08	227	P	Pn	04 26 31.8	-0.7
PMSA				IAmb	IAmb	04 26 38.4	
	comp=Z,50nm,1.1s						
BELA	Belgrano 2	22.78	184	P	P	04 26 58.8	-0.7
QSPA	South Pole Qui	34.93	180	P	P	04 28 48.7	-0.2
QSPA				IAmb	IAmb	04 28 51.9	
	comp=Z,5.7nm,0.9s						
CPUP	Villa Florida	36.02	311	P	P	04 28 57.4	-1.0
	comp=Z,4.2nm,0.9s,baz=169,slow=8.4,SNR=5.0						
CPUP	Villa Florida	36.02	311	P	P	04 28 58.6	+0.2
BDFB	Brasilia	42.52	331	LR	LR	04 46 00.1	
	comp=Z,94nm,18.8s,baz=142,slow=34						
LVC	Limon Verde	44.58	300	P	P	04 30 09.9	+0.2
	comp=Z,4.4nm,0.7s,baz=211,slow=9.0,SNR=4.3						
LVC	Limon Verde	44.58	300	P	P	04 30 09.6	-0.1
LVC				IAmb	IAmb	04 30 12.6	
	comp=Z,6.7nm,0.9s						
PB01	IPOC Station P	46.18	301	P	P	04 30 22.4	+0.3
PB01				IAmb	IAmb	04 30 25.5	
	comp=Z,7.5nm,0.9s						
BOSA	Boshof	46.20	77	P	P	04 30 22.9	+0.6
	comp=Z,1.8nm,0.8s,baz=241,slow=14,SNR=3.1						
BOSA	Boshof	46.20	77	P	P	04 30 23.3	+1.1
BOSA				IAmb	IAmb	04 30 36.2	
	comp=Z,4.7nm,1.0s						
VNDA	Vanda	47.28	183	P	P	04 30 31.5	+1.5
	comp=Z,5.8nm,0.8s,baz=171,slow=6.1,SNR=7.7						
VNDA	Vanda	47.28	183	P	P	04 30 30.5	+0.6
MNMC	Minye Minye	47.86	302	P	P	04 30 36.5	+1.0
LBTB	Lobatse	49.20	74	P	P	04 30 45.6	+0.1
	comp=Z,3.8nm,0.8s,baz=276,slow=20,SNR=5.1						
TOA0	Torodi Ar. Sit	72.63	30	P	P	04 33 25.6	+1.0
TOA0				IAmb	IAmb	04 33 26.2	
	comp=Z,4.0nm,0.8s						
TORD	Torodi Ar. Bea	72.63	30	P	P	04 33 25.3	+0.7
	comp=Z,3.9nm,0.9s,baz=200,slow=6.5,SNR=13						
TORD	Torodi Ar. Bea	72.63	30	P	P	04 33 25.0	+0.4
KMBO	Kilima Mbogo	75.17	70	LR	LR	05 05 19.4	
	comp=Z,80nm,19.0s,baz=89,slow=35						
ASAR	Alice Springs	99.81	163	P	Pdif	04 35 40.7	-0.8
	comp=Z,0.6nm,0.8s,baz=197,slow=6.3,SNR=4.6						
FINES	FINESS Array B	123.93	28	PKP	PKiKP	04 40 53.7	-0.3
	comp=Z,3.0nm,0.8s,baz=197,slow=6.0,SNR=4.0						
FINES	FINESS Array B	123.93	28		PKiKP	04 40 54.1	+0.1
ARCES	ARCESS Array B	130.42	22	PKP	PKiKP	04 41 06.0	-0.8
	comp=Z,2.7nm,0.8s,baz=297,slow=5.3,SNR=4.5						
YKA	Yellowknife Ar	135.35	319	PKP	PKPdf	04 41 14.9	-0.5
	comp=Z,1.1nm,0.9s,baz=123,slow=2.6,SNR=12						
ZALV	Zalesovo Beam	142.42	63	PKP	PKiKP	04 41 29.9	-1.7
	comp=Z,0.4nm,0.4s,baz=325,slow=1.8,SNR=2.5						
ILAR	Eielson Array	149.32	313	PKPbc	PKiKP	04 41 44.8	-0.8
	comp=Z,6.0nm,0.8s,baz=130,slow=2.1,SNR=63						
ILAR	Eielson Array	149.32	313		PKiKP	04 41 45.2	-0.4
SONM	Songino Array	151.09	86	PKPbc	PKiKP	04 41 49.9	-0.1
	comp=Z,2.0nm,0.7s,baz=219,slow=3.4,SNR=15						
SONM	Songino Array	151.09	86		PKiKP	04 41 50.1	+0.2

*IDC **03** 04:22:58.7±0.9, 55°.27S×27°.91W, h0^{km}, mb4.2/6, mb1 4.3/7, mb1mx4.1/24, mbtmp4.2/7, ML4.6/1, Error ellipse: s-maj=30.3km s-min=25.6km az=70.0*

*NEIC **03** 04:23:05.3±0.9, 55°.3S±0°.1×28°.0W±0°.2, h52^{km}±7^{km}, mb4.4/15, Error ellipse: s-maj=21.9km s-min=18.5km az=48.0*

ISC 03 04:23:02.2±0.6, **55°.3S**±0°.1×**28°.0W**±0°.1, **h26**^{km}, **n33**, σ**0s.47**/33, **mb4.4**/11, **South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNAA	Sanae	19.61	156	P	P	04 27 28.3	+0.1
	1.9nm,0.3s,baz=306,slow=12,SNR=8.8						
SNAA	Sanae	19.61	156	P	P	04 27 28.5	+0.4
BELA	Belgrano 2	22.79	184	P	P	04 28 01.5	-0.8
QSPA	South Pole Qui	34.95	180	P	P	04 29 51.6	0.0
QSPA				IAmb	IAmb	04 29 54.5	
	comp=Z,4.8nm,0.9s						
CPUP	Villa Florida	35.97	312	P	P	04 30 00.6	-0.1
	comp=Z,1.0nm,0.5s,baz=155,slow=8.3,SNR=3.9						
CPUP	Villa Florida	35.97	312	P	P	04 30 00.4	-0.2
CO02	Combarbal	38.62	291	P	P	04 30 22.5	-0.7
GO02	Mina Guanaco	42.74	298	P	P	04 30 58.1	+0.7
GO02				IAmb	IAmb	04 31 03.0	
	comp=Z,7.0nm,1.1s						
PB01	IPOC Station P	46.13	301	P	P	04 31 24.6	+0.3
PB01				IAmb	IAmb	04 31 26.2	
	comp=Z,3.4nm,0.6s						
BOSA	Boshof	46.24	77	P	P	04 31 24.6	-0.6
	comp=Z,4.8nm,1.0s,baz=255,slow=5.6,SNR=3.9						
BOSA	Boshof	46.24	77	P	P	04 31 25.0	-0.2
PB08	IPOC Station P	46.74	302	P	P	04 31 30.1	+0.7
PB08				IAmb	IAmb	04 31 38.0	
	comp=Z,4.8nm,1.0s						
VNDA	Vanda	47.29	183	P	P	04 31 33.6	+0.9
	comp=Z,2.6nm,0.6s,baz=176,slow=8.6,SNR=2.2						
VNDA	Vanda	47.29	183	P	P	04 31 33.2	+0.5
VNDA				IAmb	IAmb	04 31 34.7	
	comp=Z,3.2nm,0.7s						
MNMC	Minye Minye	47.81	302	P	P	04 31 38.1	+0.4
PB16	IPOC Station P	48.45	303	P	P	04 31 43.4	+0.5
LBTB	Lobatse	49.24	75	P	P	04 31 48.7	+0.2
	comp=Z,1.4nm,0.5s,baz=243,slow=9.0,SNR=1.9						
LBTB	Lobatse	49.24	75	P	P	04 31 48.5	0.0
LBTB				IAmb	IAmb	04 31 49.2	
	comp=Z,2.9nm,0.8s						
DBIC	Dimbokro	64.69	26	P	P	04 33 38.2	+0.5
	comp=Z,3.9nm,1.0s,baz=216,slow=3.5,SNR=2.0						
TOA0	Torodi Ar. Sit	72.64	30	P	P	04 34 27.0	-0.2
TOA0				IAmb	IAmb	04 34 28.9	
	comp=Z,2.8nm,0.8s						
TORD	Torodi Ar. Bea	72.64	30	P	P	04 34 27.9	+0.7
	comp=Z,2.3nm,0.7s,baz=202,slow=5.6,SNR=5.2						
TORD	Torodi Ar. Bea	72.64	30	P	P	04 34 26.9	-0.3
FINES	FINESS Array B	123.94	28	PKP	PKPdf	04 41 56.1	-0.2
	comp=Z,3.4nm,0.9s,baz=216,slow=4.5,SNR=3.8						
FINES	FINESS Array B	123.94	28		PKiKP	04 41 56.6	-0.1
YKA	Yellowknife Ar	135.31	319	PKP	PKiKP	04 42 18.8	-0.6
	comp=Z,0.4nm,0.6s,baz=121,slow=2.5,SNR=4.9						
HYT	Haines Junctio	143.97	308		PKPdf	04 42 33.6	-0.3
INK	Inuvik	144.94	321		PKPdf	04 42 35.6	+0.5
BCAR	Beaver Creek A	146.66	311		PKPab	04 42 40.9	-0.4
IL31		149.28	313		PKiKP	04 42 47.8	-0.2
ILAR	Eielson Array	149.28	313	PKPbc	PKiKP	04 42 47.7	-0.4
	comp=Z,3.8nm,0.7s,baz=132,slow=2.5,SNR=11						
TOLK	Toolik Lake Re	150.81	320		PKiKP	04 42 51.4	+0.2
SONM	Songino Array	151.14	86	PKPbc	PKiKP	04 42 52.3	-0.3
	comp=Z,1.5nm,0.7s,baz=211,slow=3.4,SNR=5.8						
SONM	Songino Array	151.14	86		PKiKP	04 42 52.2	-0.5

*ISK **03** 04:40:49.3, 39°.45N×25°.97E, h12^{km}, ML2.9/30*

*DDA **03** 04:40:50.3, 39°.47N×25°.98E, h13^{km}±1^{km}, ML2.5*

*ATH **03** 04:40:50.6, 39°.45N×25°.87E, h13^{km}±2^{km}, ML2.5/3, Error ellipse: s-maj=2.8km s-min=0.9km az=153.0*

*THE **03** 04:40:50.6, 39°.48N×25°.93E, h2^{km}±8^{km}, ML2.3/8, Error ellipse: s-maj=8.7km s-min=0.5km az=169.0*

ISC 03 04:40:50.0±0.8, **39°.45N**±0°.02×**25°.95E**±0°.02, **h15**^{km}±6^{km}, **n62**, σ**0s.45**/90, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOCA	Canakkale, Ayv	0.15	71	*i* P	Pg	04 40 53.9	-0.1
KOCA				IAML		04 40 56.0	
	comp=N,2µm,0.3s						
KOCA				*i* S	Sg	04 40 56.4	-0.2
KOCA				IAML		04 40 58.0	
	comp=E,1µm,0.3s						
SIGR	SIGRI	0.25	197	P	Pg	04 40 55.4	0.0
SIGR				S	Sg	04 40 59.1	0.0
SIGR				AML	AML	04 40 59.7	
	comp=E,4305µm,0.2s						
SIGR				AML	AML	04 40 59.9	
	comp=N,3867µm,0.4s						
SIGR	SIGRI	0.25	197	P	Pg	04 40 55.4	0.0
SIGR				S	Sg	04 40 59.5	+0.4
	comp=N,2µm,0.3s						
SIGR	SIGRI	0.25	197	PG	Pg	04 40 55.2	-0.3
SIGR				SG	Sg	04 40 59.2	0.0
PRK	Paraskevi	0.32	129	P	Pb	04 40 58.0	+0.5
PRK				S	Sb	04 41 03.2	+0.7
PRK				AML	AML	04 41 03.7	
	comp=N,1412µm,0.3s						
PRK				AML	AML	04 41 04.9	
	comp=E,1273µm,0.3s						
PRK	Paraskevi	0.32	129	P	Pb	04 40 58.0	+0.5
PRK				S	Sb	04 41 02.9	+0.4
	comp=E,668nm,0.3s						
BOZC	Bozcaada	0.40	11	PG	Pg	04 40 57.9	-0.2
BOZC				SG	Sg	04 41 03.8	+0.3
BOZC	Bozcaada	0.40	11	*i* P	Pg	04 40 57.4	-0.6
BOZC				*i* P	Pb	04 40 58.2	-0.6
BOZC				*i* S	Sg	04 41 03.5	0.0
BOZC				*i* S	Sg	04 41 03.8	+0.3
EZN	Ezine	0.47	38	P	Pg	04 40 59.3	-0.1
EZN				S	Sg	04 41 06.1	+0.3
	comp=E,682nm,0.2s						
EZN	Ezine	0.47	38	PG	Pg	04 40 59.0	-0.4
EZN				SG	Sg	04 41 05.9	+0.1
BAYC	CANAKKALE_Bayr	0.54	58	*i* P	Pg	04 41 00.6	-0.2
BAYC				*i* S	Sg	04 41 07.6	-0.5
BAYC				IAML		04 41 12.0	
	comp=E,204nm,0.4s						
AYVA	Ayvalik	0.59	104	*i* P	Pg	04 41 01.8	+0.1
AYVA				*i* S	Sg	04 41 09.9	+0.4
AYVA				IAML		04 41 17.0	
	comp=N,168nm,0.1s						
GADA	Gvkgeada	0.74	357	P	Pg	04 41 03.9	-0.5
GADA				S	Sb	04 41 14.9	+0.3
	comp=N,132nm,0.2s						
GADA	Gvkgeada	0.74	357	PG	Pg	04 41 03.9	-0.5
LIA	Limnos Island	0.74	307	P	Pg	04 41 04.3	-0.2
LIA	Limnos Island	0.74	307	P	Pg	04 41 04.3	-0.2
LIA				S	Sb	04 41 15.1	+0.5
	comp=N,228nm,0.4s						
DKL	Dikili	0.83	117	PG	Pg	04 41 05.7	-0.5
BUHA	Balikesir, Bur	0.87	86	*i* P	Pn	04 41 07.5	-0.3
BUHA				*i* S	Sb	04 41 19.2	+0.9
BUHA				IAML		04 41 21.0	
	comp=N,102nm,0.7s						
BUHA				IAML		04 41 25.0	
	comp=E,127nm,0.3s						
FOCM	Foa	0.95	140	PG	Pb	04 41 07.8	-0.5
PSRA	Psara	0.96	199	P	Pg	04 41 08.5	0.0
PSRA				S	Sg	04 41 21.1	+0.1
ZEDA	zmir-Bergama	1.00	119	*i* P	Pn	04 41 09.5	0.0
ZEDA				*i* S	Sn	04 41 23.7	+0.4
ZEDA				IAML		04 41 25.0	
	comp=N,99nm,0.3s						
GELI	Tayfur-Gelibol	1.03	23	PG	Pb	04 41 09.3	-0.2
SMTH	Samothraki Isl	1.07	343	P	Pb	04 41 10.1	-0.1
SMTH				S	Sg	04 41 24.6	0.0
SMTH				AML	AML	04 41 26.5	
	comp=N,532µm,0.2s						
SMTH				AML	AML	04 41 26.8	
	comp=E,402µm,0.4s						
SMTH	Samothraki Isl	1.07	343	P	Pb	04 41 10.1	-0.1
SMTH				S	Sg	04 41 24.5	-0.1
	comp=E,258nm,0.3s						
LPK	Lapseki	1.11	34	PN	Pb	04 41 09.9	-1.0
URLA	Izmir	1.20	155	PN	Pn	04 41 11.0	-1.3
URLA	Izmir	1.20	155	*i* P	Pn	04 41 12.0	-0.3
URLA				*i* S	Sb	04 41 26.8	-1.0
ZEYE	Izmir, Urla-Ze	1.28	160	*i* P	Pg	04 41 14.5	-0.3
ZEYE				*i* S	Sb	04 41 29.5	-0.7
ZEYE				IAML		04 41 34.0	
	comp=N,85nm,0.5s						
ZEYE				IAML		04 41 36.0	
	comp=E,80nm,0.3s						
ERIK	Erikli-Kesan	1.29	19	PN	Pn	04 41 13.5	0.0
ENEZ	Enez	1.29	7	P	Pb	04 41 14.2	+0.2
ENEZ				S	Sg	04 41 32.7	+0.9
	comp=E,222nm,0.8s						
ENEZ	Enez	1.29	7	PN	Pn	04 41 13.4	-0.1
BALY	Balya	1.32	77	*i* P	Pb	04 41 14.5	-0.1
BALY				*i* S	Sb	04 41 31.2	-0.1
BALY				IAML		04 41 33.0	
	comp=N,71nm,0.8s						
KRBG	Karabiga-Canak	1.40	47	PN	Pn	04 41 15.0	0.0
ALN	Alexandroupoli	1.45	3	P	Pb	04 41 16.8	+0.1
ALN				S	Sg	04 41 36.1	-0.6
ALN	Alexandroupoli	1.45	3	P	Pb	04 41 16.8	+0.1
ALN				S	Sg	04 41 36.2	-0.4
	comp=N,50nm,0.5s						
ALN	Alexandroupoli	1.45	3	PN	Pn	04 41 15.9	+0.2
RKY	Sarkoy-Tekirda	1.55	37	PN	Pn	04 41 17.1	-0.1
KYMI	Kymi, Euboea I	1.66	241	P	Pn	04 41 18.2	-0.4
GZKV	Gazikoy-Tekird	1.67	39	PN	Pn	04 41 19.0	+0.3
MRMT	Marmara Adasi	1.71	47	PN	Pn	04 41 19.5	+0.2
EDC	Edincik	1.72	58	PN	Pn	04 41 19.5	0.0
RDO	Rodhopi	1.72	350	P	Pn	04 41 20.2	+0.7
RDO	Rodhopi	1.72	350	PN	Pn	04 41 19.9	+0.4
OUR	Ouranopolis	1.75	301	PN	Pn	04 41 20.3	+0.4
SMG	Samos	1.87	158	P	Pb	04 41 24.9	+1.0
KAVA	Kavala	1.90	325	P	Pn	04 41 22.3	+0.4
DURS	Dursunbey	1.96	85	*i* P	Pn	04 41 22.9	+0.1
DURS				*i* S	Sn	04 41 46.6	-0.5
TKR	Tekirdag	1.96	38	PN	Pn	04 41 22.9	+0.2
GCAM	G?zelcaml?	2.02	150	PN	Pn	04 41 23.3	-0.2
KCTX	Karacabey (Bur	2.02	66	PN	Pn	04 41 23.4	-0.2
AYDB	Zeytinkoy-Aydi	2.13	134	PN	Pn	04 41 25.5	+0.2
SIMA	Simav-Kutahya	2.38	98	PN	Pn	04 41 28.8	+0.2
APE	Apeiranthos	2.40	188	PN	Pn	04 41 28.1	-0.8
MDNY	Mudanya-Bursa	2.44	67	PN	Pn	04 41 29.7	+0.5
EDRB	Edirne	2.47	14	PN	Pn	04 41 30.7	+1.0
SLVT	Silivri	2.48	43	PN	Pn	04 41 30.2	+0.4
ARMT	Armutlu	2.50	63	PN	Pn	04 41 30.2	+0.1
CTKS	Kestanelik-??a	2.64	47	PN	Pn	04 41 32.6	+0.5
CTYL	Yalikoy Yolu	2.70	41	PN	Pn	04 41 33.5	+0.7
TVSB	Tavsanli	2.72	89	PN	Pn	04 41 33.3	+0.1
TRML	Termal-Yalova	2.73	64	PN	Pn	04 41 33.7	+0.4
BGKT	Bogazkoy	2.76	50	PN	Pn	04 41 34.0	+0.2

*JMA **03** 05:07:38.9, 33°.56N×132°.74E, h44^{km}, M3.9 Broadband fault plane solution: P waves. NP1:ϕ_s186.00000°, δ60.00000°, λ-27.00000°. NP2:ϕ_s290.00000°, δ67.00000°, λ-147.00000°. Principal axes: T Plg4.0000°, Azm57.0000°; N Plg51.0000°, Azm322.0000°; P Plg39.0000°, Azm150.0000°;*

JMA Felt III J1.

*NEIC **03** 05:07:39.0±1.7, 33°.51N±0°.06×132°.73E±0°.06, h53^{km}±9^{km}, mb4.5/6 Error ellipse: s-maj=9.1km s-min=7.2km az=170.0*

*NIED **03** 05:07:38.9, 33°.56N×132°.74E, h44^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.57; $M_{\theta\theta}$-0.30; $M_{\phi\phi}$0.86; $M_{r\theta}$0.44; $M_{\theta\phi}$-0.80; $M_{\phi r}$0.20; Fault plane solution: $M_0$1.20000×10^{15} NP1: ϕ_s296.00000°, δ63.00000°, λ-148.00000°. NP2: ϕ_s190.00000°, δ62.00000°, λ-31.00000°.*

*IDC **03** 05:07:38.8±0.9, 33°.63N×132°.73E, h47^{km}±9^{km}, mb3.6/5, mb1 3.7/7, mb1mx3.3/54, mbtmp3.9/7, ML3.7/3, MS2.8/4,* *Ms1 2.8/4, ms1mx2.6/39 Error ellipse: s-maj=21.8km s-min=18.9km az=43.0*

ISC 03 05:07:38.5±0.7, **33°.55N**±0°.03×**132°.72E**±0°.03, **h46**^{km}±5^{km}, **n42**, σ**0^{s}89**/52, **mb4.0**/8, **4C-5D, Shikoku**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNA	Nagahama	0.20	273	⇓P	Pn	05 07 46.7	+0.4
JNA				S	Sn	05 07 52.2	+0.3
UWA2	Uwa jima 2	0.34	194	⇑P	Pn	05 07 48.0	+0.4
UWA2				S	Sn	05 07 54.4	+0.3
JET	Tanbara	0.36	49	⇑P	Pn	05 07 47.8	0.0
JET				S	Sn	05 07 53.9	-0.6
JKU	Kubokawa	0.37	129	⇓P	Pn	05 07 48.0	+0.1
JKU				S	Sn	05 07 54.6	0.0
JHM	Kurahashi	0.61	345	⇓P	Pn	05 07 51.3	+0.4
JHM				S	Sn	05 08 00.1	+0.3
JTO	Tosashimizu	0.69	174	⇓P	Pn	05 07 52.4	+0.5
JTO				S	Sn	05 08 02.1	+0.6
JMN	Monobe	0.98	79	⇑P	Pn	05 07 55.6	-0.3
JMN				S	Sn	05 08 08.0	-0.7
JMN	Monobe	0.98	79		Pn	05 07 55.7	-0.2
JHT	Toyohira	1.14	347	⇓P	Pn	05 07 58.6	+0.5
JHT				S	Sn	05 08 12.7	+0.1
JJS	Sakaide	1.30	50	⇑P	Pn	05 08 00.0	-0.2
JHS	Saijyo	1.49	13		Pn	05 08 03.0	+0.3
JNU	Nakatsue	1.60	255	P	Pn	05 08 05.2	+0.9
	48nm,0.3s,baz=81,slow=4.4,SNR=189						
JNU				S	Sn	05 08 24.0	+0.2
	94nm,0.3s,baz=278,slow=0.5,SNR=6.9						
JSU	Suzuyama	2.79	224	Pn	Pn	05 08 21.1	+0.5
JWT	Wachi	2.81	51		Pn	05 08 20.9	0.0
JTU	Tsushima	2.93	290	Pn	Pn	05 08 22.6	+0.1
INU	Inuyama	3.98	62	Pn	Pn	05 08 38.0	+1.1
JGF	Kuroka	4.34	61	Pn	Pn	05 08 42.7	+0.8
JSG	Sagara	4.67	75		Pn	05 08 47.5	+1.1
MAJO	Matsushiro	5.40	55	Pn	Pn	05 08 58.0	+1.5
MAT	Matsushiro	5.40	55	P	Pn	05 08 58.1	+1.6
MAT				*e*S	Sn	05 09 59.7	+2.3
MJAR	Matsushiro Arr	5.40	55	P	Pn	05 08 57.9	+1.4
	2.9nm,0.3s,baz=237,slow=13,SNR=72						
MJAR	Matsushiro Arr	5.40	55	Pn	Pn	05 08 58.0	+1.5
KSRS	Korea Array	5.53	316	P	Pn	05 08 58.1	0.0
	0.3nm,0.3s,baz=131,slow=14,SNR=1.9						
KSRS				S	Sn	05 09 59.3	-1.0
	1.5nm,0.3s,baz=134,slow=23,SNR=5.4						
KSRS				LR	LR	05 11 21.8	
	comp=Z,76nm,20.8s,baz=138,slow=41						
KSAR	Wonju Array Be	5.54	316	Pn	Pn	05 09 01.6	+3.2
KS19	Wonju Array Si	5.59	316	Pn	Pn	05 08 59.0	0.0
JHJ	Hachijo jima 2	5.93	92	P	Pn	05 09 03.3	-0.4
	37nm,0.3s,baz=64,slow=21,SNR=6.1						
USRK	Ussuriysk Ar.	10.65	357	LR	LR	05 13 48.7	
	comp=Z,60nm,21.0s,baz=175,slow=35						
KLR	Kul'dur	15.69	358	LR	LR	05 16 37.8	
	comp=Z,40nm,20.4s,baz=198,slow=34						
SONM	Songino Array	24.39	314	P	P	05 12 52.4	-0.1
	0.8nm,0.6s,baz=134,slow=10,SNR=7.1						
SONM				pP	pP	05 13 04.8	+0.4
	1.0nm,0.6s,baz=131,slow=9.6,SNR=6.3						
TLY	Talaya	27.77	319	LR	LR	05 26 18.3	
	comp=Z,28nm,18.9s,baz=82,slow=40						
KKAR	Karatay Array	48.73	300	P	P	05 16 17.9	-0.6
FITZ	Fitzroy Crossi	51.80	189	P	P	05 16 41.1	-0.7
FITZ				IAmb	IAmb	05 16 46.9	
	comp=Z,7.6nm,1.4s						
WB0	Warramunga Arr	53.04	178	P	P	05 16 51.4	+0.5
WRA	Warramunga Arr	53.21	178	P	P	05 16 52.6	+0.4
	comp=Z,0.9nm,0.7s,baz=355,slow=8.2,SNR=10						
WRA	Warramunga Arr	53.21	178	P	P	05 16 51.7	-0.6
WB2	Warramunga Arr	53.21	178	P	P	05 16 51.1	-1.1
WR0	Warramunga Arr	53.23	178	P	P	05 16 52.4	0.0
WR0				IAmb	IAmb	05 16 52.8	
	comp=Z,4.7nm,1.1s						
ABKAR	Akbulak array	54.72	310	P	P	05 17 03.3	+0.3
ILAR	Eielson Array	56.17	31	pP	pP	05 17 26.9	+0.6
	comp=Z,0.3nm,0.6s,baz=269,slow=5.5,SNR=2.0						
ASAR	Alice Springs	56.91	179	P	P	05 17 20.1	+1.2
	comp=Z,0.7nm,0.7s,baz=8.6,slow=8.5,SNR=6.1						
FINES	FINESS Array B	68.44	330	P	P	05 18 35.0	-0.4
	comp=Z,2.0nm,0.8s,baz=60,slow=4.6,SNR=3.3						
FINES				pP	pP	05 18 48.5	+0.1
	comp=Z,1.4nm,0.7s,baz=83,slow=4.3,SNR=1.9						
AKASG	Malin Array Be	72.51	320	P	P	05 18 59.5	-0.8
	comp=Z,0.7nm,0.4s,baz=56,slow=6.4,SNR=3.0						
AKASG				pP	pP	05 19 13.2	-0.4
	comp=Z,1.5nm,0.5s,baz=53,slow=6.4,SNR=5.6						

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*WEL **03** 05:20:43.6±1.1, 37°S±9°×18°0E±°, h33^{km}, M3.8/12, ML4.0/12, MLv3.8/12, Error ellipse: s-maj=0.0km s-min=0.0km az=157.6*

*IDC **03** 05:20:47.8±3.0, 36°.70S×178°.58E, h0^{km}, mb3.8/2, mb1 4.1/2, mb1mx3.8/18, mbtmp3.8/2, MS3.8/1, Ms1 3.8/1, ms1mx2.8/24, Error ellipse: s-maj=64.3km s-min=30.0km az=112.0*

ISC 03 05:20:38.0±2.3, **37°.48S**±0°.06×**179°.93W**±0°.09, **h5**^{km}±11^{km}, **n70**, σ**1^{s}51**/99, **East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	1.36	255	P	Pn	05 21 05.7	+2.0
WMGZ				S	Sn	05 21 23.2	+1.1
MXZ	Matakaoa Point	1.41	266	P	Pg	05 21 05.3	+0.3
MXZ				S	Sg	05 21 22.1	-1.1
PUZ	Puketiti	1.56	247	P	Pb	05 21 08.3	+0.9
PUZ				S	Sn	05 21 27.5	+0.5
PKGZ	Pakihiroa	1.64	255	P	Pn	05 21 08.9	+1.4
PKGZ				S	Sn	05 21 28.3	-0.7
CNGZ	Carnagh Statio	1.78	235	P	Pg	05 21 12.4	+0.2
TWGZ	Tauwhareparae	1.80	247	P	Pb	05 21 11.8	+0.3
TWGZ				S	Sb	05 21 34.0	-0.4
HAZ	Te Kaha	1.84	261	P	Pn	05 21 11.9	+1.7
HAZ				S	Sn	05 21 33.5	-0.4
RUGZ	Raukumara Rang	1.96	255	P	Pn	05 21 13.5	+1.4
TKGZ	Te Karaka	2.00	241	P	Pb	05 21 14.8	-0.1
TKGZ				S	Sn	05 21 38.5	+0.6
MWZ	Matawai	2.19	246	P	Pn	05 21 16.6	+1.5
MWZ				S	Sn	05 21 41.9	-0.7
RIGZ	Rimuhau	2.20	235	P	Pb	05 21 17.4	-0.9
RIGZ				S	Sb	05 21 44.4	-1.4
PRGZ	Paritu Road	2.25	229	P	Pb	05 21 18.1	-1.1
PRGZ				S	Sn	05 21 44.7	+0.6
RAGZ	Rawiri	2.33	243	P	Pn	05 21 18.7	+1.6
RAGZ				S	Sn	05 21 46.4	+0.1
MHGZ	Mahia Peninsul	2.39	225	P	Pb	05 21 20.0	-1.4
KNZ	Kokohu	2.44	230	P	Pn	05 21 20.2	+1.7
KNZ				S	Sn	05 21 49.0	+0.3
URZ	Urewera	2.47	251	Pn	Pn	05 21 21.0	+2.1
	36nm,0.3s,baz=45,slow=2.7,SNR=183						
URZ				Sn	Sn	05 21 49.0	-0.5
	51nm,0.3s,baz=179,slow=23,SNR=28						
URZ	Urewera	2.47	251	P	Pn	05 21 21.0	+2.1
URZ				S	Sn	05 21 49.3	-0.2
WHRZ	Whale Island	2.49	260	P	Pb	05 21 22.6	-0.6
RTZ	Ruatahuna	2.69	244	P	Pn	05 21 24.3	+2.2
RTZ				S	Sn	05 21 55.3	+0.1
EDRZ	Edgecumbe	2.71	256	P	Pn	05 21 24.2	+1.9
EDRZ				S	Sn	05 21 55.3	-0.4
WHHZ	Waihua	2.75	234	P	Pn	05 21 24.7	+2.0
WHHZ				S	Sn	05 21 57.0	+0.7
RAHZ	Arahi	2.76	238	P	Pn	05 21 25.0	+2.1
RAHZ				S	Sn	05 21 57.1	+0.5
MUGZ	Murupara	2.79	248	P	Pn	05 21 25.2	+1.8
MUGZ				S	Sn	05 21 56.5	-1.0
OPRZ	Ohinepanea	2.82	261	P	Pn	05 21 25.0	+1.3
MTHZ	Maungataniwha	2.89	241	P	Pn	05 21 26.8	+2.0
MTHZ				S	Sn	05 22 00.4	+0.4
TARZ	Mount Tarawera	2.92	254	P	Pn	05 21 28.2	+2.9
RRRZ	Republican Roa	2.94	252	P	Pn	05 21 27.7	+2.3
ARHZ	Aropaoanui	3.00	233	P	Pn	05 21 28.5	+2.2
NMHZ	Naumai	3.04	237	P	Pn	05 21 29.0	+2.2
NMHZ				S	Sn	05 22 04.3	+0.7
PRRZ	Plateau Road	3.08	250	P	Pn	05 21 29.1	+1.8
HRRZ	Handcock Road	3.13	252	P	Pn	05 21 30.4	+2.3
ALRZ	Allen Road	3.14	249	P	Pn	05 21 30.2	+2.1
MRHZ	Matea Rd	3.18	244	P	Pn	05 21 30.6	+1.8
MRHZ				S	Sn	05 22 06.0	-1.2
CKHZ	Cape Kidnapper	3.20	226	P	Pn	05 21 30.8	+1.8
CKHZ				S	Sn	05 22 07.5	-0.1
BKZ	Black Stump Fm	3.28	238	P	Pn	05 21 32.1	+2.0
BKZ				S	Sn	05 22 09.8	+0.2
MCHZ	McNeill Hill	3.30	232	P	Pn	05 21 32.2	+1.9
MCHZ				S	Sn	05 22 09.9	0.0
KAHZ	Kahuranaki	3.41	226	P	Pn	05 21 33.4	+1.5
KAHZ				S	Sn	05 22 14.3	+1.6
KWHZ	Kaweka Forest	3.46	235	P	Pn	05 21 34.3	+1.6
KWHZ				S	Sn	05 22 13.5	-0.6
KUZ	Kuaotunu	3.56	281	P	Pn	05 21 34.2	+0.4
KUZ				S	Sn	05 22 11.7	-4.5
KRHZ	Kereru	3.62	232	P	Pn	05 21 36.1	+1.3
BHHZ	Black Hill Sta	3.73	236	P	Pn	05 21 37.8	+1.5
BHHZ				S	Sn	05 22 19.3	-1.5
TMVZ	Te Maari	3.81	243	P	Pn	05 21 38.7	+1.3
ETVZ	East Tongariro	3.81	243	P	Pn	05 21 38.9	+1.4
KRVZ	Karewarewa	3.84	244	P	Pn	05 21 39.2	+1.3
KRVZ				S	Sn	05 22 21.1	-2.4
OTVZ	Oturere	3.85	243	P	Pn	05 21 39.5	+1.3
PNHZ	Pukenui	3.88	230	P	Pn	05 21 39.3	+0.8
PNHZ				S	Sn	05 22 22.8	-1.7
WTVZ	West Tongariro	3.89	244	P	Pn	05 21 40.7	+2.2
MOVZ	Moawhango	3.90	239	P	Pn	05 21 39.8	+1.1
NGZ	Ngauruhoe	3.90	243	P	Pn	05 21 40.2	+1.4
MKAZ	Moumakai	3.94	274	P	Pn	05 21 40.1	+1.1
WNVZ	Wahianoa	3.97	241	P	Pn	05 21 40.9	+1.2
TSZ	Takapari Road	4.12	230	P	Pn	05 21 42.3	+0.6
DVHZ	Dannevirke	4.15	226	P	Pn	05 21 42.6	+0.5
MBAZ	Motutapu North	4.20	278	P	Pn	05 21 44.4	+1.8
HIZ	Hauiti	4.25	254	P	Pn	05 21 46.1	+2.7
BFZ	Birch Farm	4.37	222	P	Pn	05 21 44.9	-0.2
PRWZ	Pori Road	4.43	225	P	Pn	05 21 46.6	+0.6
POWZ	Post Office Ro	4.44	228	P	Pn	05 21 47.2	+1.1
MRZ	Mangatainoka R	4.73	226	P	Pn	05 21 50.1	+0.2
WCZ	Waipu Caves	4.85	287	P	Pn	05 21 53.3	+1.6
HOWZ	Holdsworth Sta	4.92	225	P	Pn	05 21 52.4	-0.3
NEZ	North Egmont	5.03	247	P	Pn	05 21 57.4	+3.3
KHEZ	Kahui Hut	5.09	247	P	Pn	05 21 58.1	+3.0
KIW	Kapiti Island	5.25	228	P	Pn	05 21 56.7	-0.4
TCW	Tory Channel	5.84	229	P	Pn	05 22 05.0	-0.2
CTZ	Chatham Island	6.74	159	P	Pn	05 22 23.5	+5.9
ASAR	Alice Springs	41.67	276	P	P	05 28 27.8	+0.1
	1.0nm,0.5s,baz=121,slow=7.6,SNR=19						
WRA	Warramunga Arr	43.30	281	P	P	05 28 40.7	-0.2
	0.3nm,0.3s,baz=119,slow=7.9,SNR=11						
SIJI	Sorong	57.79	297	LR	LR	05 56 07.9	
	comp=Z,83nm,18.5s,baz=113,slow=38						
FINES	FINESS Array B	151.03	334	PKPbc	PKPab	05 40 38.6	-0.1
	2.1nm,1.0s,baz=46,slow=5.5,SNR=5.2						

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*NIC **03** 05:25:45.9±0.0, 35°.03N×34°.20E, h0^{km}±4^{km}, Ml2.6/4*

*ISK **03** 05:25:46.5, 34°.95N×34°.15E, h23^{km}, ML2.8/16*

*GII **03** 05:25:47.3±0.0, 34°.90N×34°.61E, h1^{km}±1^{km}*

ISC 03 05:25:45.4±1.4, **35°.01N**±0°.03×**34°.24E**±0°.03, **h13**^{km}±11^{km}, **n35**, σ**0^{s}91**/45, **Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MVOU	Mavrovouni	0.50	271	P	Pb	05 25 56.2	+0.2
MVOU				S	Sb	05 26 02.8	-0.3
MVOU				AML	AML	05 26 02.9	
	1.6nm,0.3s						
MVOU				AML	AML	05 26 02.9	
	1.6nm,0.3s						
MVOU				AML	AML	05 26 03.1	
	3.0nm,0.4s						
MVOU				AML	AML	05 26 03.1	
	3.0nm,0.4s						
EREN	Erenkoy	0.52	354	PG	Pn	05 25 58.7	+0.1
AKIN	Akıncılar- Kıb	0.63	271	PG	Pb	05 25 57.9	-0.4
AKIN				SG	Sb	05 26 06.9	-0.2
ATHAL	Athalassa	0.70	281	P	Pn	05 26 00.6	-0.4
ATHAL				S	Sn	05 26 10.5	-1.3
CSS	Mathiatis	0.74	267	PG	Pb	05 26 00.3	+0.1
CSS				SG	Sb	05 26 10.9	+0.6
CSS	Mathiatis	0.74	267	P	Pb	05 26 00.3	+0.1
CSS				S	Sn	05 26 11.3	-1.5
CSS				AML	AML	05 26 11.9	
	0.4nm,0.7s						
CSS				AML	AML	05 26 11.9	
	0.4nm,0.7s						
CSS				AML	AML	05 26 15.8	
	0.3nm,0.6s						
CSS				AML	AML	05 26 15.8	
	0.3nm,0.6s						
ASGA	Asgata	0.84	255	P	Pb	05 26 02.1	+0.2
ASGA				S	Sn	05 26 15.8	+0.6
ASGA				AML	AML	05 26 17.8	
	0.8nm,0.3s						
ASGA				AML	AML	05 26 17.8	
	0.8nm,0.3s						
ASGA				AML	AML	05 26 21.6	
	0.9nm,0.4s						
ASGA				AML	AML	05 26 21.6	
	0.9nm,0.4s						
LEF	Lefka	1.11	276	PN	Pn	05 26 06.6	0.0
SZAC	Souni	1.14	258	P	Pn	05 26 07.9	+0.8
SZAC				S	Sn	05 26 24.2	+1.6
SZAC				AML	AML	05 26 25.6	
	0.9nm,0.4s						
SZAC				AML	AML	05 26 25.6	
	0.9nm,0.4s						
SZAC				AML	AML	05 26 27.8	
	0.9nm,0.6s						
SZAC				AML	AML	05 26 27.8	
	0.9nm,0.6s						
TISA	Tisan-Mersin	1.24	339	PN	Pg	05 26 09.3	+0.1
AKK2	Akkuyu-Mersin	1.26	334	PN	Pg	05 26 09.5	-0.1
AKK1	Akkuyu-Mersin	1.27	334	PN	Pg	05 26 09.5	-0.3
KARG	Kargicak-Mersi	1.27	340	PN	Pg	05 26 09.8	0.0
AKKU	Akkuyu-Mersin	1.28	334	PN	Pg	05 26 09.6	-0.4
YESI	Yesilovacik-Me	1.28	338	PN	Pg	05 26 09.8	-0.2
IKL	Isikli	1.31	340	PN	Pb	05 26 09.7	-0.1
IKL				SN	Sg	05 26 27.8	+0.2
ALFC	Alefka	1.35	277	P	Pg	05 26 11.0	-0.3
SILI	Silifke-Mersin	1.38	349	PN	Pg	05 26 11.8	-0.1
NATA	Nata	1.39	261	P	Pg	05 26 12.3	+0.2
TEKE	Tekeli-Mersin	1.46	321	PN	Pb	05 26 12.0	-0.4
KIZK	Mersin	1.47	357	PN	Pg	05 26 13.3	-0.4
AKMS	Akamas	1.56	271	P	Pg	05 26 14.8	-0.6
TEVE	Tevekalti-Mers	1.56	336	PN	Pb	05 26 13.7	-0.6
BERE	Bereket-Mersin	1.57	329	PN	Pb	05 26 13.9	-0.5
KRTS	Karatas	1.82	30	PN	Pb	05 26 18.2	-0.3
GAZI	Gazipasa	1.99	309	PN	Pn	05 26 19.1	+0.4
NATI	Neve Ativ	2.14	144	Sn	Sn	05 26 45.7	-1.5
GEM	Giv'at Ha'Em	2.15	146	Pn	Pn	05 26 21.3	+0.4
KARA	Karaisali	2.34	16	PN	Pb	05 26 25.9	-1.6
CMRD	Camardi-Nigde	2.72	13	PN	Pn	05 26 31.1	+2.2
MMLI	Mount Malkishu	2.75	159	PN	Pn	05 26 30.2	+1.0
MMLI	Mount Malkishu	2.75	159	Sn	Sn	05 27 00.3	-2.0
KOZT	Kozan	2.78	27	PN	Pn	05 26 32.3	+2.6
HMDT	Nahal Hemdat	2.95	158	Pn	Pn	05 26 32.4	+0.4
HMDT				Sn	Sn	05 27 06.9	-0.3
DSI	Dead Sea	3.56	164	Pn	Pn	05 26 41.6	+1.3
DSI				Sn	Sn	05 27 22.2	-0.1

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*IDC **03** 05:44:57.4±1.8, 15°.27S×176°.61W, h0^{km}, mb4.0/7, mb1 4.3/7, mb1mx4.1/33, mbtmp4.0/7, MS4.0/2, Ms1 4.0/2, ms1mx3.0/23, Error ellipse: s-maj=110.6km s-min=21.4km az=150.0*

*NEIC **03** 05:45:37.2±1.2, 16°.1S±0°.2×176°.6W±0°.1, h379^{km}±9^{km}, mb4.2/32, Error ellipse: s-maj=24.9km s-min=12.6km az=146.0*

ISC 03 05:45:35.1±0.6, **16°.1S**±0°.1×**176°.7W**±0°.1, **h350**^{km}, **n47**, σ**0^{s}97**/44, **mb4.1**/24, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	5.25	66	Pn	Pn	05 46 59.5	+2.0
MSVF	Nonsavu	5.26	251		Pn	05 47 04.7	+6.9
URZ	Urewera	22.74	193	P	P	05 50 06.2	-1.7
MLZ	Mavora Lakes	31.84	200	P	P	05 51 29.4	+0.9
WHZ	Wether Hill Ro	32.36	200	P	P	05 51 32.9	0.0
COEN	Coen	38.75	268	P	P	05 52 27.6	+0.3
BBOO	Buckleboo	45.70	240	P	P	05 53 23.0	+0.5
BBOO				IAmb	IAmb	05 53 32.8	
	comp=Z,8.1nm,0.9s						
WR0	Warramunga Arr	46.38	258	P	P	05 53 28.4	+0.4
WB2	Warramunga Arr	46.56	258	P	P	05 53 30.0	+0.6
WB2				IAmb	IAmb	05 53 46.5	
	comp=Z,16nm,1.5s						
WRA	Warramunga Arr	46.57	258	P	P	05 53 29.5	0.0
	comp=Z,0.7nm,0.3s,baz=97,slow=7.8,SNR=27						
WRA	Warramunga Arr	46.57	258	P	P	05 53 29.7	+0.2
AS31	Alice Springs	46.85	253	P	P	05 53 32.1	+0.4
ASAR	Alice Springs	46.85	253	P	P	05 53 31.9	+0.3
	comp=Z,6.0nm,0.5s,baz=88,slow=8.0,SNR=96						
ASAR	Alice Springs	46.85	253	P	P	05 53 31.5	-0.2
GUMO	Guam	48.08	306	LR	LR	06 09 07.4	
	comp=Z,154nm,20.5s,baz=200,slow=30						
FORT	Forrest	52.25	243	P	P	05 54 12.3	+0.6
FORT				IAmb	IAmb	05 54 35.9	
	comp=Z,18nm,1.0s						
FITZ	Fitzroy Crossi	54.94	259	P	P	05 54 33.2	+2.0
	comp=Z,1.1nm,0.5s,baz=104,slow=4.2,SNR=2.2						
PSA00	Pilbara Seismi	59.94	254	P	P	05 55 06.1	+0.2
QSPA	South Pole Qui	73.95	180	P	P	05 56 32.5	-0.2
KMRM	Mail Ridge	74.60	39	P	P	05 56 37.6	+0.9
KMRM				IAmb	IAmb	05 56 38.4	
	comp=Z,10nm,1.1s						
SUA	Susitna One	80.02	12	P	P	05 57 05.5	-0.6
SUA				IAmb	IAmb	05 57 06.0	
	comp=Z,6.1nm,1.0s						
TTA	Tatalina	80.42	9	P	P	05 57 08.1	-0.1
TTA				IAmb	IAmb	05 57 20.9	
	comp=Z,5.6nm,1.4s						
GHO	Glory Hole Cre	80.68	13	P	P	05 57 09.3	-0.3
GHO				IAmb	IAmb	05 57 23.4	
	comp=Z,14nm,1.4s						
SCM	Sheep Creek Mo	81.09	14	P	P	05 57 10.4	-1.3
ISLE	Juniper Island	81.27	16	P	P	05 57 12.4	-0.3
VRDI	Verde Repeater	81.50	16	P	P	05 57 13.1	-0.9
VRDI				IAmb	IAmb	05 57 28.4	
	comp=Z,3.7nm,1.1s						
N25K	Chitina, Valde	81.54	15	P	P	05 57 13.9	-0.1
N25K				IAmb	IAmb	05 57 30.9	
	comp=Z,8.1nm,1.5s						
GLB	Gilahina Butte	81.60	15	P	P	05 57 13.5	-0.7
GLB				IAmb	IAmb	05 57 22.5	
	comp=Z,12nm,1.5s						
BALM	Baldy	81.63	16	P	P	05 57 13.7	-0.9
BALM				IAmb	IAmb	05 57 39.2	
	comp=Z,7.1nm,1.2s						
BARN	Barnard Glacie	81.84	16	P	P	05 57 13.9	-1.8
BARN				IAmb	IAmb	05 57 35.9	
	comp=Z,8.4nm,1.3s						
TRF	Thorofare Moun	81.91	12	P	P	05 57 14.8	-1.2
TRF				IAmb	IAmb	05 57 19.5	
	comp=Z,2.2nm,0.9s						
RND	Reindeer	82.16	12	P	P	05 57 16.1	-1.1
RND				IAmb	IAmb	05 57 25.0	
	comp=Z,7.3nm,1.4s						
BPAW	Bear Paw Mtn.	82.37	11	P	P	05 57 17.3	-0.9
BPAW				IAmb	IAmb	05 57 20.2	
	comp=Z,3.8nm,1.3s						
BWN	Browne	82.72	12	P	P	05 57 18.9	-1.1
HDA	Harding Lake	83.44	13	P	P	05 57 23.0	-0.6
HDA				IAmb	IAmb	05 57 51.5	
	comp=Z,5.2nm,1.5s						
CCB	Clear Creek Bu	83.48	12	P	P	05 57 23.2	-0.6
CCB				IAmb	IAmb	05 57 23.6	
	comp=Z,3.9nm,0.6s						
I23K	Minto, Yukon-K	83.62	11	P	P	05 57 23.1	-1.4
IMAR	Indian Mountai	83.64	9	P	P	05 57 24.9	+0.3
TXAR	Lajitas Array	83.66	57	P	P	05 57 26.4	+0.7
	comp=Z,0.9nm,0.9s,baz=216,slow=5.8,SNR=10						
TXAR	Lajitas Array	83.66	57	P	P	05 57 24.5	-1.2
MDM	Murphy Dome	83.67	12	P	P	05 57 23.6	-1.2
IL31		83.78	12	P	P	05 57 24.5	-0.7
ILAR	Eielson Array	83.78	12	P	P	05 57 24.3	-1.0
	comp=Z,1.3nm,0.6s,baz=217,slow=5.2,SNR=32						
ILAR	Eielson Array	83.78	12	P	P	05 57 24.0	-1.3
PMSA	Palmer Station	84.83	157	LR	LR	06 26 19.4	
	comp=Z,78nm,20.1s,baz=114,slow=29						
PDAR	Pinedale Array	84.93	43	P	P	05 57 30.5	-1.4
	comp=Z,0.2nm,0.5s,baz=147,slow=3.5,SNR=3.5						
YKA	Yellowknife Ar	92.02	24	P	P	05 58 03.5	-1.0
	comp=Z,0.3nm,0.7s,baz=232,slow=3.9,SNR=5.7						

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*IDC **03** 05:50:57.8±6.8, 2°.21S×128°.11E, h80^{km}±72^{km}, mb3.3/3, mb1 3.5/5, mb1mx3.3/41, mbtmp3.6/5, ML3.8/2, Error ellipse: s-maj=54.8km s-min=18.1km az=86.0*

ISC 03 05:50:53.2±1.2, **2°.2S**±0°.1×**127°.9E**±0°.1, **h33**^{km}, **n6**, σ**0^{s}82**/7, **mb3.6**/3, **Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	3.65	68	P	Pn	05 51 47.8	+0.3
	12nm,0.3s,baz=61,slow=23,SNR=36						
SIJI				S	Sn	05 52 29.2	-0.2
	11nm,0.3s,baz=190,slow=23,SNR=15						
WRA	Warramunga Arr	18.70	161	P	Pn	05 55 10.2	+0.7
	0.3nm,0.3s,baz=341,slow=12,SNR=10						
ASAR	Alice Springs	22.09	165	P	P	05 55 46.4	+0.6
	0.7nm,0.3s,baz=344,slow=12,SNR=13						
STKA	Stephens Creek	32.19	158	P	P	05 57 17.1	-1.2
	baz=346,slow=12,SNR=2.9						
MKAR	Makanchi Array	63.11	327	P	P	06 01 18.0	+0.4
	0.4nm,0.7s,baz=123,slow=8.2,SNR=5.0						
KURBB	Kurchatov Arra	67.37	328	P	P	06 01 44.8	-0.3
	0.4nm,0.7s,baz=131,slow=6.6,SNR=6.3						

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*PRU **03** 05:56:28.2±0.0, 50°.93N×34°.38E, h3^{km}, M4.6*

*MOS **03** 05:56:28.4±1.6, 50°.56N×34°.18E, h10^{km}, mb4.4/17, Error ellipse: s-maj=4.0km s-min=3.5km az=45.8*

MOS Felt (II-III) at Vasil'evka, Gadyach, Kursk.

*IDC **03** 05:56:30.1±0.4, 50°.43N×34°.19E, h0^{km}, mb4.0/16, mb1 4.3/31, mb1mx4.2/53, mbtmp4.2/31, ML4.3/14, MS2.7/2, Ms1 2.7/2, ms1mx2.1/56, Error ellipse: s-maj=6.7km s-min=5.8km az=169.0*

*NEIC **03** 05:56:30.5±2.7, 50°.52N±0°.07×34°.13E±0°.01, h10^{km}±1^{km}, mb4.4/28, Error ellipse: s-maj=11.3km s-min=2.9km az=358.0*

ISC 03 05:56:30.0±0.4, **50°.58N**±0°.04×**34°.10E**±0°.03, **h10**^{km}, **n333**, σ**2^{s}06**/375, **mb4.2**/33, **31C-25D, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKASG	Malin Array Be	3.11	274	Pn	Pn	05 57 22.2	+3.2
	64nm,0.3s,baz=148,slow=12,SNR=178						
AKASG				Sn	Sb	05 58 00.4	-2.8
	92nm,0.3s,baz=89,slow=25,SNR=6.1						
AKASG				Lg	Lg	05 58 08.2	
	113nm,0.3s,baz=37,slow=32,SNR=5.6						
AKASG	Malin Array Be	3.11	274	P	Pn	05 57 21.9	+2.8
AKASG	Malin Array Be	3.11	274		Pn	05 57 21.9	+2.8
AKBB	Malin Array Si	3.11	274	*c i*P	Pn	05 57 21.7	+2.6
AKBB	Malin Array Si	3.11	274		Pn	05 57 21.6	+2.6
KIEV	Kiev	3.12	274	P	Pn	05 57 21.0	+1.8
VSR	Storozhevoye	3.27	77	*e*P	Pn	05 57 22.3	+1.0
VSR				pmax	pmax		
	comp=Z,40nm,0.9s						
VSR				MLR	MLR		
	comp=Z,340nm,7.0s						
VORR	Voronezh	3.40	69	P	Pn	05 57 23.0	-0.1
VORR				pmax	pmax		
	comp=Z,300nm,0.3s						
LPSR	Galich'ya Gora	3.63	54	*e*P	Pn	05 57 27.7	+1.5
LPSR				pmax	pmax		
	comp=Z,20nm,0.8s						
LPSR				MLR	MLR		
	comp=Z,240nm,6.0s						
SORM	Soroca	4.48	239	P	Pn	05 57 39.9	+1.9
SORM	Soroca	4.48	239	⇓S	Sn	05 58 28.0	-2.1
SORM	Soroca	4.48	239	*e*P	Pn	05 57 39.8	+1.9
OBN	Obninsk	4.78	17	Pn	Pn	05 57 46.0	+3.9
	comp=Z,8.8nm,0.3s,baz=178,slow=4.5,SNR=7.6						
OBN				Sn	Sn	05 58 41.1	+3.7
	comp=Z,10nm,0.3s,baz=138,slow=22,SNR=7.2						
OBN				Lg	Lg	05 58 59.5	
	comp=Z,21nm,0.3s,baz=19,slow=21,SNR=9.5						
OBN	Obninsk	4.78	17	*de*P	Pn	05 57 42.3	+0.3
OBN				*e*S	Sn	05 58 40.9	+3.4
OBN				pmax	pmax		
	comp=Z,15nm,0.9s						
OBN				MLR	MLR		
	comp=Z,254nm,3.0s						
OBN	Obninsk	4.78	17		Pn	05 57 44.7	+2.6
VRH	Novokhopyorsk	4.87	80	*e*P	Pn	05 57 44.6	+1.4
VRH				pmax	pmax		
	comp=Z,20nm,0.4s						
VRH				MLR	MLR		
	comp=Z,290nm,6.0s						
KIS	Kishinev	5.00	226	*e*P	Pn	05 57 40.0	-5.1

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KIS                            eS     Sn     05 58 41.0  -2.0
       comp=Z,400nm,1.6s
KIS    Kishinev         5.00 226 eP   Pn     05 57 40.0  -5.1
KIS                            eS     Sn     05 58 41.0  -2.0
KIS                             MLR   MLR
       comp=Z,400nm,1.6s
KIS                             MLR   MLR
       comp=E,2µm,1.1s
MILM   Milestii Mici    5.06 226 ⇑P   Pn     05 57 47.1  +1.1
MILM                           ⇓S     Sn     05 58 41.6  -2.8
MILM   Milestii Mici    5.06 226  P   Pn     05 57 47.0  +1.1
KMPD   K-Podol'skiy     5.36 251  P   Pn     05 57 52.0  +1.9
MNK    Minsk            5.46 318 eP   Pn     05 57 51.0  -0.4
MNK                            eS     Sn     05 58 55.0  +0.8
MNK    Minsk            5.46 318 i P  Pn     05 57 50.8  -0.6
MNK                            i P    Pn     05 57 50.8  -0.6
MNK                            i P    Pn     05 57 50.8  -0.6
MNK                            i S    Sn     05 58 55.8  +1.6
IAS    Iasi             5.48 234 ⇓P   Pn     05 57 53.2  +1.5
IAS    Iasi             5.48 234  P   Pn     05 57 53.2  +1.5
MOS    Moscow           5.59  21 eP   Pn     05 57 59.6  +6.5
MOS                            eS     Sn     05 59 00.7  +3.4
MOS                             pmax  pmax
       comp=Z,38nm,0.5s
SUDU   Sudak            5.72 174 eP   Pn     05 57 55.9  +0.9
SUDU                           eS     Sn     05 59 03.2  +2.4
SUDU                            pmax  pmax
       comp=Z,19nm,0.3s
SUDU                            smax  smax
       comp=E,48nm,0.5s
SUDU                            smax  smax
       comp=N,49nm,0.6s
VASR   Vaslui           5.75 229 ⇓P   Pn     05 57 57.0  +1.7
SEV    Sevastopol'      6.04 183 eP   Pn     05 57 58.8  -0.6
SEV                            eS     Sn     05 59 09.9  +1.3
SEV                             pmax  pmax
       comp=Z,7.0nm,0.3s
SEV                             smax  smax
       comp=N,41nm,0.6s
NACGM  Naroch           6.20 317 i P  Pn     05 58 03.6  +2.0
NACGM                          i P    Pn     05 58 03.6  +2.0
NACGM                          i P    Pn     05 58 03.6  +2.0
NACGM                          i PP   PnPn   05 58 11.2  +2.3
NACGM                          i S    Sn     05 59 13.1  +0.6
NACGM                          i SS   SnSn   05 59 25.4  +1.8
NACGM                          i LQ   LQ     05 59 49.9
NACGM                          i LR   LR     06 00 02.6
ANN    Anapa            6.21 157 eP   Pn     05 58 00.1  -1.5
ANN                            eS     Sn     05 59 09.8  -2.7
ANN                             pmax  pmax
       comp=Z,68nm,1.1s
VARL   Varlezi          6.27 224 ⇓P   Pn     05 58 04.7  +2.2
TESR   Tescani          6.40 233 ⇑P   Pn     05 58 06.1  +1.7
TESR                           ⇑S     Sn     05 59 14.2  -3.4
BIZ    Bicaz            6.42 238 ⇑P   Pn     05 58 06.5  +1.9
GIUM   Giurgiulesti     6.45 220 ⇓P   Pn     05 58 07.2  +2.3
TLCR                    6.46 215 ⇑P   Pn     05 58 07.0  +1.8
TLCR                    6.46 215  P   Pn     05 58 06.9  +1.8
LVV    L'vov            6.51 267 eP   Pn     05 58 07.1  +1.3
LVV                            eS     Sn     05 59 21.2  +1.1
LVV                             MLR   MLR
       comp=Z,700nm,1.4s
BUR08  Bucovina Ar. S   6.54 247      Pn     05 58 07.9  +1.5
BURAR  Bucovina Array   6.54 246 ⇓P   Pn     05 58 07.8  +1.4
BURAR                          ⇑S     Sn     05 59 18.1  -3.0
BURAR  Bucovina Array   6.54 246  P   Pn     05 58 07.7  +1.4
BURAR  Bucovina Array   6.54 246      Pn     05 58 07.8  +1.4
SCHL   Schela           6.59 222 ⇓P   Pn     05 58 08.4  +1.5
PETR   Petresti         6.69 226 ⇑P   Pn     05 58 11.3  +3.1
CFR    Carcaliu         6.73 219 ⇓P   Pn     05 58 09.5  +0.7
CFR    Carcaliu         6.73 219  P   Pn     05 58 10.2  +1.4
CFR                             pmax  pmax
       comp=Z,29nm,0.5s
ODBI   Odobesti         6.74 227 ⇓P   Pn     05 58 11.9  +2.9
MORS   Morshin          6.76 262  P   Pn     05 58 14.0  +4.8
VRI    Vrincioaia       6.82 229 ⇑P   Pn     05 58 11.4  +1.3
VRI    Vrincioaia       6.82 229  P   Pn     05 58 11.9  +1.8
VRI                             pmax  pmax
       comp=Z,36nm,0.6s
PLOR   Plostina         6.87 229 ⇓P   Pn     05 58 12.6  +1.9
PLOR   Plostina         6.87 229  P   Pn     05 58 12.6  +1.9
JOSR   Joseni           6.88 239 ⇑P   Pn     05 58 13.7  +2.7
HARR   Harsova          7.21 218 ⇑P   Pn     05 58 17.0  +1.5
HARR   Harsova          7.21 218  P   Pn     05 58 16.9  +1.5
TIRR   Tirgusor         7.23 214 ⇓P   Pn     05 58 17.8  +2.1
TIRR   Tirgusor         7.23 214  P   Pn     05 58 17.1  +1.4
TIRR   Tirgusor         7.23 214  Pn  Pn     05 58 17.1  +1.4
TIRR                                  LR     06 00 15.2
TLBR   Topalu           7.29 216 ⇑P   Pn     05 58 18.3  +1.7
KWP    Kalwaria Pacla   7.39 267 eP   Pn     05 58 22.8  +4.9
KWP                            eS     Sg     06 00 25.0  -2.0
KWP    Kalwaria Pacla   7.39 267  P   Pn     05 58 19.9  +2.0
KWP    Kalwaria Pacla   7.39 267      Pn     05 58 19.9  +2.0
DOPR   Dopca            7.42 235 ⇓P   Pn     05 58 20.1  +1.8
ISR    Istrita          7.46 226 ⇑P   Pn     05 58 21.0  +2.1
ISR    Istrita          7.46 226  P   Pn     05 58 20.7  +1.8
ISR                             pmax  pmax
       comp=Z,41nm,0.9s
MLR    Muntele Rosu     7.47 230  Pn  Pn     05 58 20.1  +1.0
       comp=Z,3.3nm,0.3s,baz=17,slow=7.9,SNR=16
MLR                             Sn    Sn     05 59 42.4  -1.4
       comp=Z,2.9nm,0.3s,baz=278,slow=18,SNR=1.9
MLR                             Lg    Lg     06 00 19.4
       comp=Z,4.3nm,0.3s,baz=120,slow=23,SNR=4.3
MLR    Muntele Rosu     7.47 230 ⇓P   Pn     05 58 20.0  +0.9
MLR    Muntele Rosu     7.47 230  P   Pn     05 58 19.2  +0.1
MLR                                          05 59 42.4
MLR    Muntele Rosu     7.47 230      Pn     05 58 19.2  +0.1
MFTR   Murfatlar        7.47 213 ⇑P   Pn     05 58 22.2  +3.2
SUW    Suwalki          7.53 301 eP   Pn     05 58 23.1  +3.4
SUW                            eS     Sg     06 00 25.8  -5.5
SUW    Suwalki          7.53 301 eP   Pn     05 58 21.2  +1.5
SUW                            eS     Sn     05 59 41.6  -3.4
SUW    Suwalki          7.53 301  P   Pn     05 58 22.1  +2.4
SUW    Suwalki          7.53 301      Pn     05 58 22.1  +2.4
BMR    Baia Mare        7.54 251 ⇑P   Pn     05 58 22.2  +2.2
BMR    Baia Mare        7.54 251  P   Pn     05 58 23.5  +3.6
BMR                             pmax  pmax
       comp=Z,57nm,0.7s
TRSU   Trosnyk          7.69 255  P   Pn     05 58 24.0  +2.0
KOLS   Kolonicke sedl   7.84 262 eP   Pn     05 58 28.1  +4.1
KOLS                           e             05 59 54.9
KOLS   Kolonicke sedl   7.84 262 ePN  Pn     05 58 28.1  +4.1
KOLS                           eSN    Sn     05 59 54.9  +2.2
KOLS                           eSG    Sg     06 00 41.6  +0.3
PABE   Paberze          7.85 313 eP   Pn     05 58 25.1  +1.0
MDB    Medias           7.85 239 ⇓P   Pn     05 58 25.9  +1.7
MDB    Medias           7.85 239  P   Pn     05 58 25.9  +1.7
UZH    Uzhgorod         7.92 260 eP   Pn     05 58 28.0  +2.9
UZH                            eS     Sn     05 59 59.0  +4.4
VOIR                    7.95 233 ⇑P   Pn     05 58 27.0  +1.3
VOIR                           ⇑S     Sn     05 59 52.4  -3.3
VOIR                    7.95 233  P   Pn     05 58 26.9  +1.2
VOIR                            pmax  pmax
       comp=Z,19nm,0.7s
CJR    Cluj-Napoca      7.96 245 ⇓P   Pn     05 58 27.5  +1.7
CJR                            ⇓S     Sn     05 59 53.2  -2.6
CJR    Cluj-Napoca      7.96 245  P   Pn     05 58 27.4  +1.7
GOF    Gofitskoye       8.17 129⇑eP   Pn     05 58 28.1  -0.5
GOF                            eS     Sn     05 59 59.8  -1.0
GOF                             pmax  pmax
       comp=Z,122nm,0.5s
GOF                             smax  smax
       comp=E,108nm,1.2s
GOF                             smax  smax
       comp=N,181nm,0.9s
CRVS   Cervenica-Dubn   8.36 263 eP   Pn     05 58 32.7  +1.5
CRVS   Cervenica-Dubn   8.36 263 ePN  Pn     05 58 32.7  +1.5
DRGR                    8.43 248 ⇓P   Pn     05 58 34.1  +1.8
DRGR                           ⇑S     Sn     06 00 03.8  -3.7
DRGR                    8.43 248  P   Pn     05 58 34.4  +2.1
DRGR                            pmax  pmax
       comp=Z,8.0nm,0.6s
BEL    Belsk            8.46 284 eP   Pn     05 58 36.3  +3.8
BEL                            eS     Sn     06 00 08.6  +0.7
BEL    Belsk            8.46 284  P   Pn     05 58 35.2  +2.7
BEL                             pmax  pmax
       comp=Z,144nm,0.6s
LOT    Lotru            8.62 237 ⇑P   Pn     05 58 35.7  +0.8
BELG   Belogornoye      8.64  73  Pn  Pn     05 58 35.3  +0.4
       comp=Z,12nm,0.3s,baz=249,slow=3.0,SNR=26
BELG                            Lg    Lg     06 01 00.4
       comp=Z,12nm,0.3s,baz=274,slow=23,SNR=10
BELG                            LR    LR     06 01 09.1
       comp=Z,39nm,20.3s,baz=328,slow=32
BELG   Belogornoye      8.64  73ceP   Pn     05 58 35.0  +0.1
KIV    Kislovodsk       8.83 135 eP   Pn     05 58 36.1  -1.6
KIV                            eS     Sn     06 00 15.5  -1.7
KIV                             pmax  pmax
       comp=Z,54nm,0.9s
KIV                             MLR   MLR
       comp=Z,31nm,10.0s
KIV    Kislovodsk       8.83 135  Pn  Pn     05 58 36.6  -1.1
KVAR   Kislovodsk Arr   8.83 135  Sn  Sn     06 00 13.2  -4.1
       baz=294,slow=12,SNR=2.4
NIE    Niedzica         8.97 268 eP   Pn     05 58 40.9  +1.3
NIE                            eS     Sn     06 00 20.8  +0.2
NIE    Niedzica         8.97 268  P   Pn     05 58 41.1  +1.5
NIE                             pmax  pmax
       comp=Z,38nm,0.7s
VSU    Vasula           8.98 334 eP   Pn     05 58 42.4  +2.8
VSU                            eS     Sn     06 00 17.6  -3.1
VSU    Vasula           8.98 334deP   Pn     05 58 41.7  +2.1
PBUR   Paburge          9.10 312 eP   Pn     05 58 41.5  +0.3
KBZ    Khabaz           9.10 135  Pn  Pn     05 58 40.2  -1.1
       comp=Z,5.5nm,0.3s,baz=1.2,slow=5.7,SNR=49
KBZ                             Sn    Sn     06 00 19.6  -4.2
       comp=Z,3.0nm,0.3s,baz=7.1,slow=15,SNR=3.6
KBZ    Khabaz           9.10 135c iP  Pn     05 58 40.4  -0.9
KECS   Kecovo           9.10 262 eP   Pn     05 58 42.5  +1.2
KECS                           e             06 00 20.1
KECS   Kecovo           9.10 262 ePN  Pn     05 58 42.5  +1.2
KECS                           eSN    Sn     06 00 20.1  -3.7
OJC    Ojcow            9.14 273 eP   Pn     05 58 42.0  +0.1
OJC                            eS     Sn     06 00 23.3  -1.6
OJC    Ojcow            9.14 273  P   Pn     05 58 41.8  -0.1
OJC    Ojcow            9.14 273  Pn  Pn     05 58 41.8  -0.1
GZR    Gura Zlata       9.19 240 ⇓P   Pn     05 58 44.0  +1.3
LANS   Liptovska Anna   9.56 267 eP   Pn     05 58 49.4  +1.7
LANS                           e             06 00 33.6
LANS   Liptovska Anna   9.56 267 ePN  Pn     05 58 49.4  +1.7
LANS                           eSN    Sn     06 00 33.6  -1.5
PSZ    Piszkesteto      9.66 259 ⇑P   Pn     05 58 50.4  +1.3
PSZ    Piszkesteto      9.66 259  P   Pn     05 58 50.2  +1.0
PSZ    Piszkesteto      9.66 259  Pn  Pn     05 58 50.2  +1.0
BZS    Buzias           9.71 244 ⇑P   Pn     05 58 50.7  +1.0
BZS    Buzias           9.71 244  P   Pn     05 58 51.1  +1.4
BZS                             pmax  pmax
       comp=Z,14nm,0.8s
PRTR   Priterechnaya    9.73 131ceP   Pn     05 58 48.3  -1.6
LSNR   Lesken           9.87 134deP   Pn     05 58 50.6  -1.4
SLIT   Slitere, Latvi   9.89 320 eP   Pn     05 58 52.0  -0.1
MTSE   Matsula         10.09 328 eP   Pn     05 58 56.5  +1.8
MTSE                           eS     Sn     06 00 44.3  -3.5
MDVR   Moldovita       10.16 240 ⇓P   Pn     05 58 57.1  +1.1
ONI    Oni             10.25 138⇓eP   Pn     05 58 58.1  +0.9
BUD    Budapest        10.37 258  P   Pn     05 58 57.7  -1.1
BUD                             pmax  pmax
       comp=Z,27nm,0.7s
MORC   Moravsky Berou  10.65 272 ePN  Pn     05 59 01.4  -1.2
MORC                           eSN    Sn     06 00 57.3  -4.6
MORC   Moravsky Berou  10.65 272  P   Pn     05 59 01.8  -0.8
MORC   Moravsky Berou  10.65 272  Pn  Pn     05 59 01.8  -0.8
KLMR   Klimovskoe      10.74  14 eP   Pn     05 59 02.9  -0.8
KLMR                           e             06 01 04.0
KLMR                            pmax  pmax
       comp=Z,13nm,0.5s
KLMR   Klimovskoe      10.74  14 ePn  Pn     05 59 02.9  -0.8
KLMR                            AMP          05 59 17.6
       comp=Z,13nm,0.5s
KLMR                           eSn    Sn     06 01 04.1  +0.3
KLMR                           eSn    Sn     06 01 04.1  +0.3
KLMR                           ⇓Lg    Lg     06 02 09.3
ANTO   Ankara          10.75 185  P   Pn     05 59 03.1  -0.9
ANTO   Ankara          10.75 185  Pn  Pn     05 59 03.1  -0.9
GKP    Gorka Klasztor  10.76 291 eP   Pn     05 59 04.7  +0.8
GKP                            eS     Sn     06 01 01.3  -3.0
GKP    Gorka Klasztor  10.76 291 eP   Pn     05 59 05.5  +1.6
GKP                            eS     Sn     06 00 59.4  -4.9
GKP    Gorka Klasztor  10.76 291  P   Pn     05 59 04.8  +0.8
GKP                             pmax  pmax
       comp=Z,68nm,0.7s
JAVC   Velka Javorina  10.78 267 ePN  Pn     05 59 04.8  +0.4
VTS    Vitosha         10.91 227 ⇑P   Pn     05 59 08.0  +1.7
VTS    Vitosha         10.91 227  P   Pn     05 59 08.0  +1.7
VTS                             pmax  pmax
       comp=Z,5.0nm,2.5s
KRLC   Kraliky         11.09 274 eP   Pn     05 59 07.5  -1.1
KRLC                           e             06 01 09.2
KRLC   Kraliky         11.09 274 ePN  Pn     05 59 07.5  -1.1
KRLC                           eSN    Sn     06 01 09.2  -3.3
MODS   Modra-Piesok    11.17 265 eP   Pn     05 59 10.0  +0.3
MODS   Modra-Piesok    11.17 265 ePN  Pn     05 59 10.0  +0.3
MODS                           eSN    Sn     06 01 08.1  -6.4
AKH    Akhalkalaki     11.25 141 i P  Pn     05 59 10.6  -0.4
KSP    Ksiaz           11.30 278 eP   Pn     05 59 10.1  -1.3
KSP                            eS     Sn     06 01 13.2  -4.4
KSP    Ksiaz           11.30 278  P   Pn     05 59 10.3  -1.1
KSP                             pmax  pmax
       comp=Z,18nm,0.9s
DPC    Dobruska-Polom  11.34 276 eP   Pn     05 59 11.1  -0.9
DPC                            e             06 01 13.4
DPC    Dobruska-Polom  11.34 276 ePN  Pn     05 59 11.1  -0.9
DPC                            eSN    Sn     06 01 13.4  -5.2
VRAC   Vranov          11.35 270  Pn  Pn     05 59 11.3  -0.9
       comp=Z,2.3nm,0.3s,baz=68,slow=12,SNR=13
VRAC   Vranov          11.35 270 ePN  Pn     05 59 11.6  -0.6
OSTC   Ostas           11.38 277 ePN  Pn     05 59 11.3  -1.2
OSTC                           eSN    Sn     06 01 15.3  -4.3
CHVC   Chvalec         11.47 277 ePN  Pn     05 59 13.3  -0.6
CHVC                           eSN    Sn     06 01 17.3  -4.7
KOPT   Kop Dagi        11.48 155  Pn  Pn     05 59 14.4  +0.2
UPC    Upice           11.51 277 eP   Pn     05 59 13.5  -0.8
UPC                            e             06 01 18.4
UPC    Upice           11.51 277 ePN  Pn     05 59 13.5  -0.8
UPC                            eSN    Sn     06 01 18.4  -4.5
KRUC   Moravsky        11.54 269 ePN  Pn     05 59 14.1  -0.6
KRUC   Moravsky        11.54 269  P   Pn     05 59 14.6  -0.1
KRUC                            pmax  pmax
       comp=Z,12nm,0.8s
DIVS   Divibare        11.55 241  Pn  Pn     05 59 16.8  +1.8
FINES  FINESS Array B  11.77 341  Pn  Pn     05 59 17.2  -0.5
       comp=Z,2.8nm,0.3s,baz=150,slow=12,SNR=65
FINES                           Sn    Sn     06 01 22.2  -6.7
       comp=Z,5.0nm,0.3s,baz=149,slow=24,SNR=4.4
FINES                           Lg    Lg     06 02 43.2
       comp=Z,1.9nm,0.3s,baz=159,slow=27,SNR=2.2
FINES  FINESS Array B  11.77 341  P   Pn     05 59 17.6  -0.1
FINES  FINESS Array B  11.77 341      Pn     05 59 17.6  -0.1
FIA1   FINESS Array S  11.77 341      Pn     05 59 17.6  -0.1
KIRV   Kirov           11.94  42  Pn  Pn     05 59 19.7  -0.4
       comp=Z,5.6nm,0.3s,baz=250,slow=7.4,SNR=6.7
KIRV                            Lg    Lg     06 02 45.7
       comp=Z,3.3nm,0.3s,baz=176,slow=6.6,SNR=7.1
KIRV   Kirov           11.94  42⇑eP   Pn     05 59 21.0  +0.8
TREC   Trest           12.06 271  P   Pn     05 59 22.7  +0.8
TREC                            pmax  pmax
       comp=Z,8.0nm,1.2s
CONA   Conrad Observa  12.21 264 eP   Pn     05 59 25.2  +1.3
       comp=Z,0.7nm,0.5s
SOH    Sokhos          12.30 222  P   Pn     05 59 25.8  +0.6
SOH                             pmax  pmax
       comp=Z,6.0nm,1.2s
PVCC   Panska Ves      12.42 277 eP   Pn     05 59 25.5  -1.3
PVCC   Panska Ves      12.42 277 ePN  Pn     05 59 25.5  -1.3
BSD    Bornholm Skovb  12.44 299 i P  Pn     05 59 25.5  -1.5
BSD    Bornholm Skovb  12.44 299 eP   Pn     05 59 25.4  -1.5
BSD    Bornholm Skovb  12.44 299  P   Pn     05 59 28.0  +1.0
BSD                             pmax  pmax
       comp=Z,43nm,1.4s
BSD    Bornholm Skovb  12.44 299 i P  Pn     05 59 25.6  -1.5
BSD                             IAML         06 02 11.1
       comp=Z,5.0nm,0.3s
JOF    Joensuu         12.46 354  P   Pn     05 59 27.3  +0.1
JOF                             pmax  pmax
       comp=Z,28nm,1.0s
ARSA   Arzberg         12.66 262 eP   Pn     05 59 31.8  +1.7
       comp=Z,8.0nm,0.8s
BRG    Berggiesshubel  12.78 279 eP   Pn     05 59 30.6  -1.0
BRG                             Amp          05 59 34.0
       comp=Z,11nm,0.9s
BRG                            ex     x      06 01 51.9
BRG                             Amp          06 01 56.1
       comp=Z,11nm,1.1s
SUF    Sumiainen       12.92 343  P   Pn     05 59 32.2  -1.2
SUF                             pmax  pmax
       comp=Z,36nm,0.6s
CKRC   Cesky Krumlov   12.93 270 ePN  Pn     05 59 33.8  +0.1
SOKA   Soboth          13.20 260 eP   Pn     05 59 40.4  +3.0
       comp=Z,4.7nm,0.9s
RGN    Rugen           13.24 295 eP   Pn     05 59 36.9  -0.9
RGN    Rugen           13.24 295  Pn  Pn     05 59 36.9  -0.9
MOA    Molln           13.25 266 eP   Pn     05 59 40.1  +2.0
       comp=Z,1.7nm,0.8s
GEC2   GERESS Array S  13.31 270  Pn  Pn     05 59 39.8  +0.7
GERES  GERESS Array B  13.31 270  Pn  Pn     05 59 38.7  -0.3
       comp=Z,0.8nm,0.3s,baz=74,slow=14,SNR=16
GERES  GERESS Array B  13.31 270  P   Pn     05 59 39.7  +0.7
GERES  GERESS Array B  13.31 270      Pn     05 59 39.7  +0.7
KHC    Kasperske Hory  13.32 272 eP   Pn     05 59 39.1  +0.1
KHC    Kasperske Hory  13.32 272 ePN  Pn     05 59 39.1  +0.1
KHC                            eSG           06 03 34.0
KHC    Kasperske Hory  13.32 272      Pn     05 59 38.9  -0.1
CLL    Collm           13.32 281 eP   Pn     05 59 37.0  -2.0
       comp=Z,17nm,0.6s
CLL                            e             05 59 40.0
       comp=Z,17nm,0.6s
CLL                            i PP   P      05 59 48.1  -0.7
CLL                            e             06 02 02.0
CLL    Collm           13.32 281 eP   Pn     05 59 37.0  -2.0
CLL                            e             06 02 02.0
CLL                             pmax  pmax
       comp=Z,17nm,0.6s
CLL    Collm           13.32 281  Pn  Pn     05 59 36.8  -2.2
OBKA   Obir            13.57 260 eP   Pn     05 59 44.4  +1.8
       comp=Z,10nm,0.9s
WET    Wettzell        13.76 272  P   Pn     05 59 46.4  +1.3
WET                             pmax  pmax
       comp=Z,8.0nm,0.8s
TMCR   Tamitsa         13.78   7 eP   Pn     05 59 46.6  +1.4
TMCR                           e             06 02 22.6
TMCR                            pmax  pmax
       comp=Z,18nm,0.6s
NKC    Novy Kostel     13.81 277 eP   Pn     05 59 45.1  -0.6
NKC    Novy Kostel     13.81 277 ePN  Pn     05 59 45.1  -0.6
VAF    Ylistaro        13.94 338  P   Pn     05 59 46.0  -1.4
VAF                             pmax  pmax
       comp=Z,31nm,0.8s
MYKA   Terra Mystica   14.09 262 eP   Pn     05 59 51.2  +1.6
       comp=Z,6.8nm,1.1s
ABTA   Abfaltersbach   14.76 263 eP   P      06 00 09.6  +4.7
       comp=Z,6.7nm,1.3s
HFS    Hagfors         14.97 318  Pn  Pn     05 59 57.7  -3.8
       comp=Z,2.2nm,0.3s,baz=122,slow=14,SNR=31
HFS                             Sn    Sn     06 02 42.0  -5.3
       comp=Z,1.3nm,0.3s,baz=116,slow=23,SNR=2.6
HFS                             Lg    Lg     06 04 26.4
       comp=Z,1.8nm,0.3s,baz=132,slow=26,SNR=2.6
WTTA   Wattenberg      15.12 266 eP   P      06 00 08.6  -0.4
       comp=Z,21nm,1.0s
WTTA   Wattenberg      15.12 266  P   P      06 00 07.2  -1.8
WTTA                            pmax  pmax
       comp=Z,22nm,1.0s
WATA   Walderalm       15.13 266 eP   P      06 00 13.6  +4.5
       comp=Z,14nm,1.1s
AKTO   Aktyubinsk      15.21  81  Pn  Pn     06 00 00.5  -4.2
       comp=Z,1.1nm,0.3s,baz=260,slow=9.4,SNR=14
AKTO                            Sn    Sn     06 02 40.7   -12
       comp=Z,0.4nm,0.3s,baz=202,slow=23,SNR=1.9
SQTA   Sankt Quirin    15.41 266 eP   P      06 00 14.7  +2.5
       comp=Z,16nm,0.9s
MOTA   Moosalm         15.43 267 eP   P      06 00 14.5  +2.1
       comp=Z,20nm,1.0s
RETA   Reutte          15.60 268 eP   Pn     06 00 12.0  +2.1
       comp=Z,9.0nm,0.7s
ARU    Arti            15.64  59  Pn  Pn     06 00 07.1  -3.2
       comp=Z,0.0nm,0.3s,baz=235,slow=9.3,SNR=8.4
ARU    Arti            15.64  59  P   Pn     06 00 05.2  -5.1
ARU                             S     Sn     06 02 58.3  -5.1
FETA   Feichten        15.79 266 eP   P      06 00 17.3  +1.0
       comp=Z,17nm,0.7s
NC602  NORSAR Array S  16.20 318  Pn  Pn     06 00 14.4  -3.1
NORES  NORESS Array B  16.20 318  P   Pn     06 00 17.2  -0.3
NORES                           pmax  pmax
       comp=Z,2.0nm,0.2s
OSL    Oslo            16.20 314 eP   P      06 00 20.5  -0.1
DAVA   Damuels         16.23 268 eP   Pn     06 00 17.6  -0.6
       comp=Z,5.8nm,0.6s
NC405  NORSAR Array S  16.31 319  Pn  Pn     06 00 15.7  -3.2
NC405                           IAmb  IAmb   06 00 26.7
       comp=Z,29nm,0.7s
TNS    Taunus Mts      16.34 279  P   P      06 00 21.6  -0.7
TNS                             pmax  pmax
       comp=Z,16nm,0.7s
DAVOX  Davos/Dischmat  16.42 266  Pn  Pn     06 00 21.7  +1.2
       comp=Z,0.7nm,0.3s,baz=116,slow=8.7,SNR=6.1
NB201  NORSAR Array S  16.46 318      Pn     06 00 16.9  -3.9
NB201                           IAmb  IAmb   06 00 27.6
       comp=Z,26nm,0.8s
NOA    NORSAR Array B  16.49 318  Pn  Pn     06 00 16.8  -4.4
       comp=Z,0.2nm,0.3s,baz=298,slow=9.3,SNR=18
NOA                             Sn    Sn     06 03 20.4  -3.7
       comp=Z,0.1nm,0.3s,baz=73,slow=7.0,SNR=3.6
NC303  NORSAR Array S  16.52 319  Pn  Pn     06 00 18.2  -3.3
NAO01  NORSAR Array S  16.54 317      Pn     06 00 19.8  -2.0
KONO   Kongsberg       16.61 313 eP   P      06 00 25.5  +0.4
NBO00  NORSAR Array S  16.67 318      Pn     06 00 19.3  -4.2
NBO00                           IAmb  IAmb   06 00 48.6
       comp=Z,52nm,1.5s
ABKAR  Akbulak array   16.67  85      Pn     06 00 20.3  -3.3
ABKAR  Akbulak array   16.67  85      Pn     06 00 20.5  -3.1
ABKAR                           IAmb  IAmb   06 00 29.7
       comp=Z,6.9nm,0.6s
HOMB   Homborsund      16.68 307 eP   Pn     06 00 24.6  +1.0
NC204  NORSAR Array S  16.80 319      Pn     06 00 22.1  -3.0
NC204                           IAmb  IAmb   06 00 33.9
       comp=Z,38nm,1.1s
BUG    Bochum--Univer  16.88 283  P   P      06 00 29.5  +1.3
BUG                             pmax  pmax
       comp=Z,33nm,1.0s
SLE    Schleitheim     16.95 270  P   P      06 00 30.9  +1.8
SLE                             pmax  pmax
       comp=Z,10.0nm,1.2s
SNART  Snartemo        17.36 307 eP   Pn     06 00 31.1  -1.1
LVZ    Lovozero        17.38   1  P   Pn     06 00 31.4  -0.9
LVZ                             pmax  pmax
       comp=Z,23nm,0.9s
LVZ    Lovozero        17.38   1  Pn  Pn     06 00 31.4  -0.9
LVZ                             IAmb  IAmb   06 00 37.8
       comp=Z,23nm,0.9s
SKAR   Skarslia        17.61 315 eP   Pn     06 00 34.5  -0.7
DOMB   Dombas          17.88 319 eP   Pn     06 00 38.7  +0.2
BLS5   Blasjo          18.04 310 eP   Pn     06 00 40.1  -0.5
ODD1   Odda            18.11 312 eP   Pn     06 00 40.8  -0.6
NSS    Namsos          18.19 329 eP   Pn     06 00 41.7  -0.6
SENIN  Lac Senin/Sane  18.22 267      P      06 00 44.0  +0.7
KMY    Karmoy          18.57 309 eP   P      06 00 45.6  -1.3
MOR8   Moi Rana        18.58 335 eP   Pn     06 00 47.2  +0.1
HYA    Hoyanger        18.75 315 eP   P      06 00 48.9  +0.2
MOL    Molde           18.75 320 eP   P      06 00 49.0  +0.2
BER    Bergen          18.87 312 eP   P      06 00 50.3  +0.2
LPG    La Plagne       18.92 265 eP   Pn     06 00 55.1  +3.4
LPG                             pmax  pmax
       comp=Z,6.0nm,0.7s
LPL    La Plagne       18.93 265 eP   Pn     06 00 55.1  +3.4
LPL                             pmax  pmax
       comp=Z,4.0nm,0.6s
ASK    Askoy           18.97 313 eP   P      06 00 49.1  -2.1
STOK   Stokkvaagen     19.09 334 eP   P      06 00 51.6  -0.8
SAOF   Saorge          19.11 260  P   Pn     06 00 54.4  +0.6
SAOF                            pmax  pmax
       comp=Z,21nm,1.4s
BNI    Bardonecchia    19.17 264  P   Pn     06 00 55.2  +0.7
BNI                             pmax  pmax
       comp=Z,7.0nm,0.9s
BNI    Bardonecchia    19.17 264  P   Pn     06 00 55.1  +0.7
KONS   Konsvik         19.18 334 eP   P      06 00 53.3  -0.2
KTK1   Kautokeino      19.22 348 eP   P      06 00 52.9  -1.0
SBF    Sospel          19.25 260 eP   Pn     06 00 58.1  +2.6
SBF                             pmax  pmax
       comp=Z,26nm,0.8s
MBDF   Montbardon      19.25 263 eP   Pn     06 00 58.3  +2.7
MBDF                            pmax  pmax
       comp=Z,9.0nm,0.6s
FAUS   Fauske          19.29 338 eP   P      06 00 54.3  -0.3
SUE    Sulen           19.36 314 eP   P      06 00 54.4  -1.0
NBB30  Finnes          19.36 336 eP   P      06 00 55.1  -0.4
ARA0   ARCESS Array S  19.46 351 eP   P      06 00 56.3  -0.1
ARCES  ARCESS Array B  19.46 351  Pn  P      06 00 56.3  -0.2
```

	baz=161,slow=12,SNR=27						
ARCES				Lg	Lg	06 06 50.5	
	baz=178,slow=32,SNR=5.0						
ARCES	**ARCESS Array B**	**19.46**	**351**	P	**P**	**06 00 56.6**	**+0.1**
ARCES				pmax	pmax		
	comp=Z,15nm,1.0s						
ARCES	**ARCESS Array B**	**19.46**	**351**	P	**P**	**06 00 56.6**	**+0.1**
N2TV	**T¥rnvik**	**19.47**	**338**	*e*P	**P**	**06 00 57.2**	**+0.6**
KEV	**Kevo**	**19.53**	**353**	P	**P**	**06 00 57.7**	**+0.4**
KEV				pmax	pmax		
	comp=Z,105nm,1.5s						
KEV	**Kevo**	**19.53**	**353**	P	**P**	**06 00 57.7**	**+0.4**
N2IH	**Innhavet**	**19.60**	**339**	*e*P	**P**	**06 00 57.1**	**-1.0**
ORIF	**Oris-en-Rattie**	**19.73**	**264**	*e*P	**Pn**	**06 01 04.5**	**+3.3**
ORIF				pmax	pmax		
	comp=Z,7.0nm,0.8s						
STEI	**Steigen**	**19.73**	**339**	*e*P	**P**	**06 00 58.9**	**-0.5**
FRF	**La Foret Royal**	**19.90**	**260**	*e*P	**Pn**	**06 01 04.7**	**+1.6**
FRF				pmax	pmax		
	comp=Z,21nm,1.0s						
LMR	**La Mourre**	**20.10**	**260**	*e*P	Pn	06 01 06.6	+1.1
LMR				pmax	pmax		
	comp=Z,11nm,1.0s						
LOF	**Lofoten**	**20.29**	**338**	*e*P	Pn	06 01 07.7	+0.2
SMF	**Signal de Mont**	**20.32**	**271**	*e*P	Pn	06 01 08.0	0.0
SMF				pmax	pmax		
	comp=Z,11nm,1.2s						
SSB	**Saint Sauveur**	**20.42**	**266**	P	Pn	06 01 08.7	-0.6
SSB						06 01 09.1	
SSB				pmax	pmax		
	comp=Z,6.0nm,0.8s						
SSB	**Saint Sauveur**	**20.42**	**266**		Pn	06 01 08.7	-0.7
TRO	**Tromso**	**20.43**	**345**	*e*P	**P**	**06 01 07.2**	**+0.1**
VIVF	**Saint-Julien-l**	**20.53**	**265**	*e*P	Pn	06 01 11.4	+0.8
VIVF				pmax	pmax		
	comp=Z,4.0nm,0.6s						
AVF	**Avril sur Loir**	**20.57**	**271**	*e*P	Pn	06 01 11.5	+0.5
AVF				pmax	pmax		
	comp=Z,42nm,1.9s						
HAMF	**Hammerfest**	**20.71**	**350**	*e*P	**P**	**06 01 09.2**	**-0.9**
EIL	**Elat**	**20.90**	**178**	LR	LR	06 09 47.2	
	comp=Z,25nm,21.2s,baz=290,slow=38						
BGF	**Bois d'Agland**	**20.98**	**271**	*e*P	Pn	06 01 17.8	+2.0
BGF				pmax	pmax		
	comp=Z,19nm,1.2s						
GEYT	**Alibeck**	**21.24**	**117**	P	**P**	**06 01 14.3**	**-1.8**
	comp=Z,4.1nm,0.6s,baz=312,slow=11,SNR=4.6						
GEYT	**Alibeck**	**21.24**	**117**	P	**P**	**06 01 16.3**	**+0.2**
GYA0B	**ALIBECK ARRAY**	**21.24**	**117**	IAmb	IAmb	06 01 21.2	
	comp=Z,26nm,1.3s						
TCF	**Toulx Ste Croi**	**21.49**	**271**	*e*P	**P**	**06 01 23.1**	**+4.3**
TCF				pmax	pmax		
	comp=Z,105nm,2.4s						
CAF	**Calviac**	**22.16**	**268**	*e*P	**P**	**06 01 30.9**	**+5.0**
CAF				pmax	pmax		
	comp=Z,7.0nm,0.8s						
LDF	**La Druitiere**	**22.16**	**278**	*e*P	**P**	**06 01 27.1**	**+1.2**
LDF				pmax	pmax		
	comp=Z,17nm,1.3s						
FLN	**La Foliniere**	**22.34**	**279**	*e*P	**P**	**06 01 31.3**	**+3.5**
FLN				pmax	pmax		
	comp=Z,26nm,1.1s						
RJF	**Les Rejaudoux**	**22.34**	**269**	*e*P	**P**	**06 01 31.5**	**+3.7**
RJF				pmax	pmax		
	comp=Z,30nm,1.4s						
BRVK	**Borovoye**	**22.36**	**70**	*ce*P	**P**	**06 01 28.7**	**+0.8**
BRVK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
BRVK	**Borovoye**	**22.36**	**70**		**P**	**06 01 27.7**	**-0.2**
BRVK				IAmb	IAmb	06 01 34.2	
	comp=Z,19nm,1.1s						
BVAR	**Borovoye Array**	**22.42**	**70**	P	**P**	**06 01 28.7**	**0.0**
	comp=Z,4.2nm,0.7s,baz=284,slow=6.8,SNR=15						
EKA	**Eskdalemuir Ar**	**22.75**	**297**	P	**P**	**06 01 32.0**	**0.0**
	comp=Z,5.3nm,0.8s,baz=98,slow=9.2,SNR=8.2						
MIB	**Mutribah**	**23.02**	**149**	*e*P		06 01 33.0	
RST	**Umm Al-Ruwaisa**	**23.19**	**150**	*e*P		06 01 35.0	
RDF	**Al-Radifah**	**23.90**	**150**	*e*P		06 01 42.4	
EPF	**Esparros**	**24.15**	**265**	*e*P	**P**	**06 01 47.5**	**+1.4**
EPF				pmax	pmax		
	comp=Z,94nm,2.3s						
KK31	**Karatay Array**	**25.80**	**93**	P	**P**	**06 02 02.0**	**+0.9**
KK31				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KK31	**Karatay Array**	**25.80**	**93**	P	**P**	**06 02 02.0**	**+0.9**
KK31				IAmb	IAmb	06 02 17.3	
	comp=Z,3.5nm,0.8s						
KKAR	**Karatay Array**	**25.80**	**93**	P	**P**	**06 02 01.0**	**-0.1**
KKAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KKAR	**Karatay Array**	**25.80**	**93**	P	**P**	**06 02 01.4**	**+0.3**
KKAR	**Karatay Array**	**25.80**	**93**	P	**P**	**06 02 01.0**	**-0.1**
KKAR				IAmb	IAmb	06 02 17.3	
	comp=Z,3.5nm,0.8s						
KURBB	**Kurchatov Arra**	**27.89**	**72**	P	**P**	**06 02 19.9**	**+0.2**
	comp=Z,0.9nm,0.5s,baz=281,slow=8.2,SNR=8.2						
KURK	**Kurchatov**	**27.91**	**72**	⇑*e*P	**P**	**06 02 20.2**	**+0.2**
KURK	**Kurchatov**	**27.91**	**72**	P	**P**	**06 02 21.2**	**+1.2**
KURK				IAmb	IAmb	06 02 24.9	
	comp=Z,4.6nm,1.1s						
SPITS	**Spitsbergen Ar**	**28.47**	**352**	P	**P**	**06 02 26.3**	**+1.5**
	comp=Z,1.7nm,0.6s,baz=141,slow=11,SNR=8.3						
AAK	**Ala-Archa**	**28.57**	**90**	⇑*e*P	**P**	**06 02 24.6**	**-1.5**
AAK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
ESDC	**Sonseca Array**	**28.68**	**262**	P	**P**	**06 02 28.7**	**+1.7**
	comp=Z,1.2nm,0.9s,baz=50,slow=8.7,SNR=6.1						
ZAA0	**Zalesovo Array**	**30.68**	**64**	IAmb	IAmb	06 02 49.5	
	comp=Z,2.5nm,0.8s						
ZALV	**Zalesovo Beam**	**30.68**	**64**	P	**P**	**06 02 45.4**	**+0.8**
	comp=Z,1.4nm,0.3s,baz=286,slow=7.4,SNR=9.8						
ZALV	**Zalesovo Beam**	**30.68**	**64**	P	**P**	**06 02 45.6**	**+1.1**
KSH	**Kashi**	**31.19**	**94**	P	**P**	**06 02 50.7**	**+1.4**
KSH				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KSH				pmax	pmax		
	comp=Z,51nm,3.9s						
MKAR	**Makanchi Array**	**31.59**	**78**	P	**P**	**06 02 53.4**	**+0.8**
	comp=Z,0.8nm,0.4s,baz=297,slow=6.3,SNR=13						
MKAR	**Makanchi Array**	**31.59**	**78**	*e*P	**P**	**06 02 53.8**	**+1.1**
MKAR	**Makanchi Array**	**31.59**	**78**	P	**P**	**06 02 53.6**	**+0.9**
DAG	**Danmarks Havn**	**33.01**	**340**	P	**P**	**06 03 06.5**	**+1.8**
DGZ	**Jazzator, Alta**	**33.58**	**70**	⇑*e*P	**P**	**06 03 10.7**	**+0.5**
DGZ				pmax	pmax		
	comp=Z,2.0nm,1.3s						
DGZ				MLR	MLR		
	comp=Z,28nm,8.0s						
SOCY	**Socotra**	**41.60**	**150**	P	**P**	**06 04 16.2**	**-2.1**
SOCY				IAmb	IAmb	06 04 29.0	
	comp=Z,13nm,1.1s						
SONM	**Songino Array**	**45.58**	**64**	P	**P**	**06 04 51.5**	**+1.4**
	comp=Z,0.8nm,0.4s,baz=297,slow=8.5,SNR=9.7						
SONM	**Songino Array**	**45.58**	**64**	IAmb	IAmb	06 04 52.6	
	comp=Z,1.0nm,1.0s						
TORD	**Torodi Ar. Bea**	**45.70**	**227**	P	**P**	**06 04 52.0**	**+0.8**
	comp=Z,3.9nm,0.8s,baz=21,slow=8.5,SNR=12						
TORD	**Torodi Ar. Bea**	**45.70**	**227**	P	**P**	**06 04 52.2**	**+1.1**
KOWA	**Kowa**	**47.35**	**234**	P	**P**	**06 05 05.1**	**+0.9**
	comp=Z,2.2nm,0.7s,baz=41,slow=9.6,SNR=6.3						
KOWA	**Kowa**	**47.35**	**234**	P	**P**	**06 05 04.8**	**+0.7**
KOWA				IAmb	IAmb	06 05 22.3	
	comp=Z,6.4nm,1.2s						
FRB	**Frobisher Bay**	**51.10**	**326**	P	**P**	**06 05 33.7**	**+1.5**
DBIC	**Dimbokro**	**54.45**	**230**	P	**P**	**06 05 57.5**	**-0.1**
	comp=Z,2.1nm,0.4s,baz=9.4,slow=8.7,SNR=8.9						
DBIC	**Dimbokro**	**54.45**	**230**	P	**P**	**06 05 57.0**	**-0.6**
DBIC				pmax	pmax		
	comp=Z,8.0nm,1.2s						
DBIC	**Dimbokro**	**54.45**	**230**	P	**P**	**06 05 57.0**	**-0.6**
YKA	**Yellowknife Ar**	**64.57**	**345**	P	**P**	**06 07 08.4**	**+1.6**
	comp=Z,0.9nm,0.3s,baz=26,slow=6.9,SNR=42						
YKA	**Yellowknife Ar**	**64.57**	**345**	*i* P	**P**	**06 07 08.3**	**+1.5**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ULM	**Lac du Bonnet**	**70.87**	**329**	P	**P**	**06 07 47.6**	**+0.9**
	comp=Z,1.0nm,0.4s,baz=38,slow=5.2,SNR=6.0						
BOSA	**Boshof**	**79.23**	**188**	P	**P**	**06 08 35.8**	**+0.5**
	comp=Z,1.1nm,0.5s,baz=5.4,slow=6.1,SNR=4.7						
BOSA	**Boshof**	**79.23**	**188**	P	**P**	**06 08 35.7**	**+0.5**
BOSA				pmax	pmax		
	comp=Z,11nm,1.4s						
BOSA	**Boshof**	**79.23**	**188**	P	**P**	**06 08 35.7**	**+0.5**
PDAR	**Pinedale Array**	**81.78**	**334**	P	**P**	**06 08 50.3**	**+1.2**
	comp=Z,0.3nm,0.6s,baz=40,slow=5.8,SNR=4.1						
TXAR	**Lajitas Array**	**92.10**	**324**	P	**P**	**06 09 41.9**	**+2.3**
	comp=Z,0.6nm,1.1s,baz=70,slow=5.8,SNR=2.3						

*SOME **03** 06:08:17.6, 43°.18N×75°.73E, h10^{km}*
*NNC **03** 06:08:17.5±0.5, 43°.17N×75°.77E, h1^{km}±3^{km}, mb3.0, mpv3.1, Error ellipse: s-maj=3.8km s-min=2.4km az=19.0*
*KRNET **03** 06:08:18.4±0.1, 43°.12N×75°.72E, h8^{km}, mb1.9*
ISC 03 06:08:17.7±0.8**, 43°.18N**±0°.02×**75°.74E**±0°.02**, h11**^{km}±5^{km}**, n38, σ0^s.80**/69**, 7C-5D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DGS	**Degeres**	**0.07**	**18**	*e*P	**Pg**	**06 08 20.1**	**-0.2**
	152nm,0.0s						
DGS				*e*S	**Sg**	**06 08 21.5**	**-0.6**
	417nm,0.1s						
DGS	**Degeres**	**0.07**	**18**	P	**Pg**	**06 08 20.1**	**-0.2**
	152nm,0.0s						
DGS				S	**Sg**	**06 08 21.6**	**-0.5**
	417nm,0.1s						
KST	**Kastek**	**0.21**	**129**	⇑*i*P	**Pg**	**06 08 22.1**	**-0.2**
	20nm,0.1s						
KST				*e*S	**Sg**	**06 08 25.1**	**-0.2**
	78nm,0.2s						
KST	**Kastek**	**0.21**	**129**	P	**Pg**	**06 08 22.1**	**-0.2**
	20nm,0.1s						
KST				S	**Sg**	**06 08 25.1**	**-0.2**
	90nm,0.1s						
MTBS	**Maitube**	**0.51**	**95**	*e*P	**Pg**	**06 08 27.3**	**-0.3**
	3.9nm,0.1s						
MTBS				*e*S	**Sg**	**06 08 34.1**	**-0.2**
	25nm,0.1s						
MTBS	**Maitube**	**0.51**	**95**	P	**Pg**	**06 08 27.3**	**-0.3**
	3.9nm,0.1s						
MTBS				S	**Sg**	**06 08 34.1**	**-0.2**
	25nm,0.1s						
IZV	**Izvestkoviy**	**0.65**	**102**	*e*P	**Pg**	**06 08 30.0**	**-0.4**
	3.7nm,0.1s						
IZV				*e*S	**Sg**	**06 08 38.9**	**-0.2**
	17nm,0.1s						
IZV	**Izvestkoviy**	**0.65**	**102**	P	**Pg**	**06 08 30.0**	**-0.4**
	3.7nm,0.1s						
IZV				S	**Sg**	**06 08 38.9**	**-0.2**
	17nm,0.1s						
KUU	**Kurty**	**0.84**	**31**	*e*P	**Pg**	**06 08 33.5**	**-0.5**
	2.9nm,0.1s						
KUU				*e*S	**Sg**	**06 08 44.3**	**-0.6**
	15nm,0.2s						
KUU	**Kurty**	**0.84**	**31**	P	**Pg**	**06 08 33.5**	**-0.5**
	2.9nm,0.1s						
KUU				S	**Sg**	**06 08 44.3**	**-0.6**
	15nm,0.2s						
SGDS	**Sogindy**	**0.86**	**289**	P	**Pg**	**06 08 33.7**	**-0.6**
	3.3nm,0.1s						
SGDS				S	**Sg**	**06 08 44.8**	**-0.7**
	19nm,0.1s						
KTBS	**Karatobe**	**0.87**	**52**	*e*P	**Pb**	**06 08 34.0**	**-0.9**
	7.4nm,0.1s						
KTBS				*e*S	**Sg**	**06 08 45.2**	**-0.7**
	49nm,0.2s						
KTBS	**Karatobe**	**0.87**	**52**	P	**Pb**	**06 08 34.0**	**-0.9**
	7.4nm,0.1s						
KTBS				S	**Sg**	**06 08 45.2**	**-0.7**
	49nm,0.2s						
TNSS	**Tian-Shan**	**0.89**	**98**	*e*P	**Pg**	**06 08 34.3**	**-0.7**
	1.4nm,0.1s						
TNSS				*e*S	**Sg**	**06 08 46.2**	**-0.5**
	5.5nm,0.1s						
TNSS	**Tian-Shan**	**0.89**	**98**	P	**Pg**	**06 08 34.3**	**-0.7**
	1.4nm,0.1s						
TNSS				S	**Sg**	**06 08 46.2**	**-0.5**
	5.5nm,0.1s						
MDOK	**Medeo**	**0.96**	**90**	*e*P	**Pb**	**06 08 35.6**	**-0.8**
	5.1nm,0.2s						
MDOK				*e*S	**Sb**	**06 08 48.2**	**-0.9**
	8.6nm,0.3s						
MDOK	**Medeo**	**0.96**	**90**	⇑P	**Pb**	**06 08 35.2**	**-1.2**
	0.8nm,0.2s						
MDOK				S	**Sg**	**06 08 48.4**	**-0.2**
	3.8nm,0.5s						
MDOK	**Medeo**	**0.96**	**90**	Pg	**Pb**	**06 08 35.6**	**-0.8**
	5.1nm,0.2s						
MDOK				Lg	Lg	06 08 48.2	
	8.6nm,0.3s						
CHKK	**Chushkaly**	**1.13**	**53**	*e*P	**Pb**	**06 08 38.7**	**-0.6**
	2.8nm,0.1s						
CHKK				*e*S	**Sb**	**06 08 53.5**	**-0.6**
	15nm,0.1s						
CHKK	**Chushkaly**	**1.13**	**53**	P	**Pb**	**06 08 38.7**	**-0.6**
	2.8nm,0.1s						
CHKK				S	**Sb**	**06 08 53.5**	**-0.6**
	15nm,0.1s						
ANVS	**Anan'yevo**	**1.47**	**105**	⇑*e*P	**Pg**	**06 08 45.1**	**-0.8**
	baz=3.0						
ANVS				⇑*i*S	**Sg**	**06 09 05.2**	**+0.3**
	baz=3.0						
KDJ	**Kajisay**	**1.49**	**134**	⇑*e*P	**Pg**	**06 08 45.5**	**-0.8**
	baz=32						
KDJ				⇑*i*S	**Sg**	**06 09 05.2**	**-0.4**
	baz=32						
ARLS	**Aral**	**1.68**	**219**	⇓*i*P	**Pb**	**06 08 48.4**	**-0.4**
	baz=20						
ARLS				⇓*i*S	**Sb**	**06 09 10.1**	**+0.1**
	baz=20						
ARXS	**Arharly**	**1.83**	**55**	*e*P	**Pb**	**06 08 51.5**	**+0.2**
	5.9nm,0.1s						
ARXS				*e*S	**Sg**	**06 09 15.3**	**-1.4**
	16nm,0.3s						
ARXS	**Arharly**	**1.83**	**55**	P	**Pb**	**06 08 51.5**	**+0.2**
	5.9nm,0.1s						
ARXS				S	**Sg**	**06 09 15.4**	**-1.4**
	16nm,0.3s						
MRKS	**Merke**	**1.90**	**258**	*e*P	**Pb**	**06 08 52.6**	**+0.2**
	1.8nm,0.1s						
MRKS				*e*S	**Sg**	**06 09 17.4**	**-1.3**
	4.9nm,0.2s						
MRKS	**Merke**	**1.90**	**258**	P	**Pb**	**06 08 52.6**	**+0.2**
	1.8nm,0.1s						
MRKS				S	**Sg**	**06 09 17.4**	**-1.3**
	4.9nm,0.2s						
SATY	**Saty**	**1.95**	**92**	*e*P	**Pb**	**06 08 53.6**	**+0.2**
	1.6nm,0.1s						
SATY				*e*S	**Sg**	**06 09 19.3**	**-1.2**
	13nm,0.1s						
SATY	**Saty**	**1.95**	**92**	Pg	**Pb**	**06 08 53.6**	**+0.2**
	1.6nm,0.1s						
SATY				Lg	Lg	06 09 19.3	
	13nm,0.1s						
PRZ	**Przheval'sk**	**2.07**	**109**	⇓*i*P	**Pb**	**06 08 55.2**	**-0.3**
	baz=7.0						
PRZ				⇓*i*S	**Sb**	**06 09 21.6**	**+0.2**
	baz=7.0						
KPKS	**Kokpek**	**2.17**	**81**	*e*P	**Pb**	**06 08 57.0**	**0.0**
	3.1nm,0.1s						
KPKS				*e*S	**Sb**	**06 09 24.9**	**+0.9**
	20nm,0.1s						
BTLS	**Baital**	**2.23**	**327**	*e*P	**Pb**	**06 08 58.8**	**+0.8**
	1.4nm,0.2s						
BTLS				*e*S	**Sg**	**06 09 27.6**	**-1.8**
	6.2nm,0.2s						
BTLS	**Baital**	**2.23**	**327**	Pg	**Pb**	**06 08 58.8**	**+0.8**
	1.4nm,0.2s						
BTLS				Lg	Lg	06 09 27.6	
	6.2nm,0.2s						
PDGK	**Podgornoye**	**2.74**	**86**	Pg	**Pb**	**06 09 08.0**	**+1.1**
	0.5nm,0.3s						
PDGK				Lg	Lg	06 09 43.2	
	1.4nm,0.3s						
KAPS	**Kapalarasan**	**3.35**	**50**	*e*P	**Pb**	**06 09 17.9**	**+0.8**
	0.4nm,0.2s						
KAPS				*e*S	**Sb**	**06 09 59.7**	**+1.8**
	4.4nm,0.5s						
KAPS	**Kapalarasan**	**3.35**	**50**	Pg	**Pb**	**06 09 19.0**	**+1.9**
	0.7nm,0.2s						
KAPS				Lg	Lg	06 10 01.3	
	3.6nm,0.4s						
KTMS	**Ketmen**	**3.38**	**84**	Pg	**Pb**	**06 09 19.2**	**+1.5**
	1.0nm,0.1s						
KTMS				Lg	Lg	06 10 02.4	
	2.6nm,0.2s						
KK31	**Karatay Array**	**3.83**	**271**	⇓Pn	**Pn**	**06 09 17.9**	**+1.3**
	2.3nm,0.8s,baz=329,slow=23,SNR=4.3						
KK31				⇑Lg	Lg	06 10 17.6	
	2.4nm,0.8s						

*IDC **03** 06:10:32.2±0.7, 60°.69S×26°.52W, h0^{km}, mb4.3/9, mb1 4.4/10, mb1mx4.2/23, mbtmp4.3/10, ML4.2/1, MS3.4/7, Ms1 3.4/7, ms1mx3.1/23, Error ellipse: s-maj=25.4km s-min=18.5km az=74.0*
*NEIC **03** 06:10:33.9±2.1, 60°.6S±0°.1×26°.2W±0°.1, h10^{km}±1^{km}, mb4.7/31, Error ellipse: s-maj=21.0km s-min=6.9km az=28.0*
ISC 03 06:10:35.0±0.5**, 60°.67S**±0°.09×**26°.3W**±0°.1**, h20**^{km}**, n57, σ1^s.13**/50**, mb4.6**/22**, MS3.3**/6**, 1D, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**12.40**	**151**	P	**Pn**	**06 13 29.3**	**-0.9**
VNA3	**Neumayer Olymp**	**12.52**	**155**	P	**Pn**	**06 13 30.6**	**-1.3**
VNA2	**Neumayer--Watz**	**12.80**	**151**	P	**Pn**	**06 13 34.2**	**-1.4**
	baz=305,slow=15						
SNAA	**Sanae**	**14.40**	**150**	P	**Pn**	**06 13 55.7**	**-1.8**
SNAA	**Sanae**	**14.40**	**150**	Pn	**Pn**	**06 13 55.7**	**-1.8**
	1.1nm,0.3s,baz=314,slow=16,SNR=100						
SNAA				Sn	Sn	06 16 23.9	-12
	0.7nm,0.3s,baz=316,slow=21,SNR=5.6						
SNAA				LR	LR	06 18 26.6	
	comp=Z,189nm,18.3s,baz=0.0,slow=33						
BELA	**Belgrano 2**	**17.50**	**186**	Pn	**Pn**	**06 14 37.7**	**+0.3**
SYO	**Syowa Base**	**27.82**	**135**	⇓*e*P	**P**	**06 16 21.0**	**-1.4**
QSPA	**South Pole Qui**	**29.57**	**180**	P	**P**	**06 16 38.3**	**+0.1**
	4.0nm,0.5s,baz=218,slow=1.0,SNR=38						
QSPA	**South Pole Qui**	**29.57**	**180**	P	**P**	**06 16 41.8**	**+3.6**
QSPA				IAmb	IAmb	06 16 42.8	
	comp=Z,15nm,1.3s						
PLCA	**Paso Flores**	**33.51**	**286**	P	**P**	**06 17 11.9**	**-1.0**
	comp=Z,0.8nm,0.7s,baz=122,slow=9.0,SNR=5.0						
PLCA				LR	LR	06 28 34.4	
	comp=Z,44nm,21.1s,baz=154,slow=32						
LC01	**Cunco**	**35.58**	**287**	P	**P**	**06 17 30.2**	**-0.6**
LC01				IAmb	IAmb	06 17 43.8	
	comp=Z,12nm,1.4s						
BO02	**Sierra Bellavi**	**38.41**	**292**	P	**P**	**06 17 56.4**	**+1.4**
PEL	**Peldehue**	**39.75**	**293**	P	**P**	**06 18 06.2**	**+0.1**
MT02	**Curacav**	**39.86**	**293**	P	**P**	**06 18 07.1**	**+0.2**
MT02				IAmb	IAmb	06 18 20.8	
	comp=Z,33nm,1.3s						
VA03	**San Esteban**	**40.01**	**294**	P	**P**	**06 18 09.5**	**+1.2**
VA03				IAmb	IAmb	06 18 10.5	
	comp=Z,14nm,0.6s						
CPUP	**Villa Florida**	**40.30**	**314**	P	**P**	**06 18 09.5**	**-1.2**
	comp=Z,3.2nm,0.6s,baz=160,slow=7.8,SNR=10						
CPUP				LR	LR	06 34 56.5	
	comp=Z,29nm,19.0s,baz=163,slow=36						
CPUP	**Villa Florida**	**40.30**	**314**	P	**P**	**06 18 10.2**	**-0.5**
CO02	**Combarbal**	**41.53**	**295**	P	**P**	**06 18 21.9**	**+1.0**
CO02				IAmb	IAmb	06 18 47.4	
	comp=Z,13nm,0.9s						
CO03	**El Pedregal**	**41.70**	**295**	P	**P**	**06 18 23.4**	**+1.1**
VNDA	**Vanda**	**41.97**	**183**	P	**P**	**06 18 23.6**	**-0.2**
	comp=Z,2.7nm,0.6s,baz=118,slow=10,SNR=3.0						
VNDA				LR	LR	06 34 40.7	
	comp=Z,80nm,18.1s,baz=190,slow=34						
VNDA	**Vanda**	**41.97**	**183**	P	**P**	**06 18 25.1**	**+1.3**
CO01	**Juntas del Tor**	**42.17**	**297**	P	**P**	**06 18 27.9**	**+1.5**
CO01				IAmb	IAmb	06 18 29.2	
	comp=Z,9.9nm,0.9s						
GO04	**Tololo Observa**	**42.32**	**296**	P	**P**	**06 18 27.5**	**0.0**
GO04				IAmb	IAmb	06 18 31.5	
	comp=Z,21nm,1.1s						
AC05	**El Transito**	**43.24**	**297**	P	**P**	**06 18 35.6**	**+0.8**
AC04	**Llanos de Chal**	**44.13**	**297**	P	**P**	**06 18 42.4**	**+0.5**
AC04				IAmb	IAmb	06 18 43.8	
	comp=Z,19nm,1.1s						
AC02	**Maricunga**	**44.48**	**300**	P	**P**	**06 18 45.9**	**+0.6**
AC02				IAmb	IAmb	06 18 46.6	
	comp=Z,4.7nm,0.7s						
AC01	**Pan de Azucar**	**45.71**	**299**	P	**P**	**06 18 53.9**	**-0.6**
GO02	**Mina Guanaco**	**46.15**	**301**	P	**P**	**06 18 58.5**	**+0.2**
BOSA	**Boshof**	**46.86**	**71**	P	**P**	**06 19 04.4**	**+0.7**
	comp=Z,1.6nm,0.8s,baz=199,slow=7.8,SNR=3.9						
BOSA	**Boshof**	**46.86**	**71**	P	**P**	**06 19 03.6**	**0.0**
PB14	**IPOC Station P**	**46.96**	**300**	P	**P**	**06 19 04.1**	**-0.6**
BDFB	**Brasilia**	**47.63**	**331**	P	**P**	**06 19 09.1**	**-0.6**
	comp=Z,1.5nm,0.5s,baz=334,slow=15,SNR=3.2						
BDFB				LR	LR	06 35 38.4	
	comp=Z,36nm,21.7s,baz=114,slow=32						
PB10	**IPOC Station P**	**48.01**	**300**	P	**P**	**06 19 11.8**	**-0.6**
LVC	**Limon Verde**	**48.12**	**303**	P	**P**	**06 19 13.9**	**+0.2**
LVC				IAmb	IAmb	06 19 16.8	
	comp=Z,4.6nm,0.7s						
PB09	**IPOC Station P**	**48.98**	**303**	P	**P**	**06 19 20.6**	**+0.4**
PB07	**IPOC Station P**	**49.31**	**302**	P	**P**	**06 19 22.5**	**-0.2**
PB01	**IPOC Station P**	**49.75**	**303**	P	**P**	**06 19 25.6**	**-0.4**
PB01				IAmb	IAmb	06 19 27.0	
	comp=Z,9.7nm,0.8s						
H10S2	**ASCENSION HYDR**	**52.34**	**15**	T	T	07 16 25.7	
	baz=33,slow=74,SNR=8.4						
H10S3	**ASCENSION HYDR**	**52.34**	**15**	T	T	07 16 25.7	
	baz=187,slow=74,SNR=63						
H10N1	**ASCENSION HYDR**	**53.45**	**15**	T	T	07 18 06.0	
	baz=190						
H10N3	**ASCENSION HYDR**	**53.46**	**15**	T	T	07 18 01.9	
	baz=190,slow=74,SNR=8.9						
H10N2	**ASCENSION HYDR**	**53.47**	**15**	T	T	07 18 07.7	
	baz=190,slow=74,SNR=6.2						
SAML	**Samuel**	**58.42**	**316**	P	**P**	**06 20 28.5**	**-0.6**
SAML				IAmb	IAmb	06 20 29.1	
	comp=Z,5.4nm,1.1s						
NNA	**Nana**	**60.94**	**300**	LR	LR	06 50 28.5	
	comp=Z,20nm,18.3s,baz=164,slow=39						
PTGA	**Pitinga**	**65.12**	**322**	LR	LR	06 49 47.6	
	comp=Z,31nm,18.0s,baz=154,slow=36						
DBIC	**Dimbokro**	**69.22**	**23**	P	**P**	**06 21 40.7**	**+0.6**
	comp=Z,2.0nm,0.4s,baz=175,slow=3.7,SNR=6.0						
DBIC	**Dimbokro**	**69.22**	**23**	P	**P**	**06 21 39.9**	**-0.2**
DBIC				IAmb	IAmb	06 21 43.1	
	comp=Z,7.0nm,0.9s						
TOA0	**Torodi Ar. Sit**	**76.89**	**28**	P	**P**	**06 22 26.8**	**+1.3**
TOA0				IAmb	IAmb	06 22 30.0	
	comp=Z,5.8nm,0.7s						
TORD	**Torodi Ar. Bea**	**76.89**	**28**	P	**P**	**06 22 26.9**	**+1.4**
	comp=Z,4.4nm,0.5s,baz=200,slow=6.0,SNR=38						
TORD	**Torodi Ar. Bea**	**76.89**	**28**	P	**P**	**06 22 27.3**	**+1.8**
KOWA	**Kowa**	**77.01**	**22**	P	**P**	**06 22 28.4**	**+2.2**
KOWA				IAmb	IAmb	06 22 28.8	
	comp=Z,9.1nm,1.4s						
ASAR	**Alice Springs**	**94.44**	**162**	P	**P**	**06 23 54.6**	**+1.1**
	comp=Z,0.7nm,0.5s,baz=181,slow=4.2,SNR=12						
MKAR	**Makanchi Array**	**137.76**	**76**	PKP	**PKiKP**	**06 29 57.4**	**-1.3**
	comp=Z,0.1nm,0.3s,baz=108,slow=4.7,SNR=1.8						
YKA	**Yellowknife Ar**	**139.83**	**314**	PKP	**PKiKP**	**06 30 02.0**	**-0.3**
	comp=Z,0.4nm,0.6s,baz=120,slow=3.0,SNR=8.1						
INK	**Inuvik**	**149.56**	**315**	PKPbc	**PKiKP**	**06 30 22.6**	**+0.5**
	comp=Z,1.0nm,0.6s,baz=16,slow=3.1,SNR=6.2						
SONM	**Songino Array**	**150.24**	**94**	PKPbc	**PKPbc**	**06 30 22.3**	**-1.3**
	comp=Z,0.9nm,0.8s,baz=236,slow=3.1,SNR=5.6						
ILAR	**Eielson Array**	**153.35**	**305**	PKPbc	**PKiKP**	**06 30 30.4**	**+0.3**
	comp=Z,1.1nm,0.7s,baz=112,slow=0.1,SNR=14						

*SNET **03** 06:27:33.3±1.0, 13°.15N×89°.62W, h44^{km}±11^{km}, ML4.2, MW4.3*
*GCG **03** 06:27:33.4±0.9, 13°.07N×89°.75W, h30^{km}±169^{km}, MD4.0*
*UCR **03** 06:27:33.8±1.0, 13°.19N×89°.62W, h48^{km}±9^{km}, ML4.0, MW4.3*
ISC 03 06:27:33.1±1.4**, 13°.16N**±0°.07×**89°.61W**±0°.04**, h22**^{km}±7^{km}**, n79, σ0^s.54**/94**, 10C-45D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LALI	**Alcalda de L**	**0.43**	**40**	⇓*i*P	**Pn**	**06 27 43.6**	**-0.4**
LALI				*e*S	**Sn**	**06 27 51.9**	**+0.7**
LALI	**Alcalda de L**	**0.43**	**40**	⇓*i*P	**Pn**	**06 27 43.6**	**-0.4**
LALI				*e*S	**Sn**	**06 27 51.9**	**+0.7**
JAYA	**Jayaque - finc**	**0.52**	**17**	⇓*i*P	**Pn**	**06 27 44.7**	**-0.7**
JAYA				IAML		06 27 55.0	
	comp=Z,11µm,0.2s						
JAYA	**Jayaque - finc**	**0.52**	**17**	⇓*i*P	**Pn**	**06 27 44.7**	**-0.7**
JAYA				IAML		06 27 55.0	
	comp=Z,11µm,0.2s						
ITCA	**Escuela Especi**	**0.60**	**32**	⇓*i*P	**Pn**	**06 27 45.8**	**-0.7**
ITCA	**Escuela Especi**	**0.60**	**32**	⇓*i*P	**Pn**	**06 27 45.8**	**-0.7**
MAGS	**Ministerio de**	**0.61**	**31**	*e*P	**Pn**	**06 27 46.3**	**-0.3**
PMON	**Piamonte**	**0.62**	**27**	⇑*i*P	**Pn**	**06 27 46.0**	**-0.7**
PMON	**Piamonte**	**0.62**	**27**	⇑*i*P	**Pn**	**06 27 46.0**	**-0.7**
SNET	**Serv Nac Est T**	**0.64**	**35**	⇓*i*P	**Pn**	**06 27 46.3**	**-0.7**
SNET				*e*S	**Sn**	**06 27 56.6**	**+0.1**
SNET				IAML		06 28 00.6	

	comp=Z,6µm,0.2s						
SNET	Serv Nac Est T	0.64	35	⇓iP	Pn	06 27 46.3	-0.7
SNET				eS	Sn	06 27 56.6	+0.1
SNET				IAML		06 28 00.6	
	comp=Z,6µm,0.2s						
BOQS	Boqueron	0.66	29	⇓iP	Pn	06 27 46.8	-0.5
BOQS				eS	Sn	06 27 57.1	0.0
BOQS	Boqueron	0.66	29	⇓iP	Pn	06 27 46.8	-0.5
BOQS				eS	Sn	06 27 57.1	0.0
CEVE	Cerro Verde	0.67	359	⇓iP	Pn	06 27 46.9	-0.6
CEVE	Cerro Verde	0.67	359	⇓iP	Pn	06 27 46.9	-0.6
UTEC	Universidad Te	0.67	36	⇓iP	Pn	06 27 46.8	-0.6
UTEC	Universidad Te	0.67	36	⇓iP	Pn	06 27 46.8	-0.6
CEDA	San Andres	0.67	18	⇓iP	Pn	06 27 46.9	-0.5
CEDA				IAML		06 28 01.9	
	comp=Z,6µm,0.3s						
CEDA	San Andres	0.67	18	⇓iP	Pn	06 27 46.9	-0.5
CEDA				IAML		06 28 01.9	
	comp=Z,6µm,0.3s						
SBLS	San Blas	0.68	359	⇓iP	Pn	06 27 47.0	-0.6
SBLS	San Blas	0.68	359	⇓iP	Pn	06 27 47.0	-0.6
CIGS	Centro de Inve	0.68	38	⇓iP	Pn	06 27 47.0	-0.6
CIGS				eS	Sn	06 27 57.7	+0.2
CIGS				AML	AML	06 27 58.2	
	comp=Z,8µm,0.1s						
UESS	Universidad de	0.69	35	eP	Pb	06 27 46.9	+0.4
UESS	Universidad de	0.69	35	eP	Pb	06 27 46.9	+0.4
IGN	Direccin Gen	0.70	38	⇓iP	Pn	06 27 47.2	-0.6
IGN	Direccin Gen	0.70	38	⇓iP	Pn	06 27 47.2	-0.6
LFRS	El Faro	0.70	49	⇓iP	Pn	06 27 47.2	-0.7
LFRS	El Faro	0.70	49	⇓iP	Pn	06 27 47.2	-0.7
SNJE	San Jose	0.71	0	⇓iP	Pn	06 27 47.4	-0.7
SNJE	San Jose	0.71	0	⇓iP	Pn	06 27 47.4	-0.7
UDBS	Universidad Do	0.71	38	eP	Pn	06 27 47.4	-0.5
UDBS	Universidad Do	0.71	38	eP	Pn	06 27 47.4	-0.5
AEIL	Aeropuerto Ilo	0.72	42	eP	Pn	06 27 47.9	-0.1
AEIL	Aeropuerto Ilo	0.72	42	eP	Pn	06 27 47.9	-0.1
RTR	El Retiro	0.74	357	⇓iP	Pn	06 27 47.9	-0.5
RTR	El Retiro	0.74	357	⇓iP	Pn	06 27 47.9	-0.5
QUEZ	Alcaldia de Qu	0.75	26	⇓eP	Pn	06 27 48.1	-0.3
LFU	La Fuente	0.76	39	⇑eP	Pn	06 27 48.3	-0.3
LFU	La Fuente	0.76	39	⇑eP	Pn	06 27 48.3	-0.3
LBRS	Las Brisas	0.80	43	⇓iP	Pn	06 27 48.8	-0.3
LBRS	Las Brisas	0.80	43	⇓iP	Pn	06 27 48.8	-0.3
UNIC	Universidad Ca	0.82	4	⇓eP	Pn	06 27 49.0	-0.5
UNIC	Universidad Ca	0.82	4	⇓eP	Pn	06 27 49.0	-0.5
COEG	Centro de Oper	0.84	57	⇓iP	Pb	06 27 49.1	-0.1
COEG				IAML		06 28 02.7	
	comp=Z,10µm,0.3s						
COEG	Centro de Oper	0.84	57	⇓iP	Pb	06 27 49.1	-0.1
COEG				IAML		06 28 02.7	
	comp=Z,10µm,0.3s						
TACO	Tacachico	0.84	17	⇓iP	Pb	06 27 49.1	0.0
TACO	Tacachico	0.84	17	⇓iP	Pb	06 27 49.1	0.0
PAVA	Las Pavas	0.85	50	⇓iP	Pn	06 27 49.8	-0.2
PAVA				eS	Sn	06 28 02.7	+0.8
PAVA	Las Pavas	0.85	50	⇓iP	Pn	06 27 49.8	-0.2
PAVA				eS	Sn	06 28 02.7	+0.8
UESV	Universidad de	0.93	59	⇓eP	Pb	06 27 50.3	-0.3
UESV	Universidad de	0.93	59	⇓eP	Pb	06 27 50.3	-0.3
COEB	Comit de Eme	1.10	72	eP	Pn	06 27 52.5	-0.9
COEB				eS	Sb	06 28 07.3	-0.3
COEB				IAML		06 28 12.0	
	comp=Z,2µm,0.3s						
COEB	Comit de Eme	1.10	72	eP	Pn	06 27 52.5	-0.9
COEB				eS	Sb	06 28 07.3	-0.3
COEB				IAML		06 28 12.0	
	comp=Z,2µm,0.3s						
PQSS	Presa 15 de Se	1.12	65	⇓iP	Pn	06 27 52.8	-0.7
TECA	Tecapa	1.13	73	⇑eP	Pn	06 27 53.0	-0.7
TECA	Tecapa	1.13	73	⇑eP	Pn	06 27 53.0	-0.7
LLGN	La Laguna	1.19	33	⇑eP	Pn	06 27 54.3	-0.2
LLGN	La Laguna	1.19	33	⇑eP	Pn	06 27 54.3	-0.2
MTO3	Montecristo	1.26	11	⇓iP	Pn	06 27 55.3	-0.3
MTO3	Montecristo	1.26	11	⇓iP	Pn	06 27 55.3	-0.3
PACA	Pacayal	1.29	76	eP	Pn	06 27 56.0	+0.1
PACA	Pacayal	1.29	76	eP	Pn	06 27 56.0	+0.1
IXG	Ixpaco	1.29	321	eP	Pn	06 27 55.6	-0.5
IXG				eS	Sn	06 28 12.2	-0.7
LCY	Lacayo	1.30	78	⇑eP	Pn	06 27 56.2	0.0
LCY	Lacayo	1.30	78	⇑eP	Pn	06 27 56.2	0.0
RANC	El Ranchito	1.31	78	eP	Pn	06 27 55.9	-0.4
RANC	El Ranchito	1.31	78	eP	Pn	06 27 55.9	-0.4
JUCU	Jucuar¡n	1.33	86	eP	Pn	06 27 55.6	-0.8
JUCU	Jucuar¡n	1.33	86	eP	Pn	06 27 55.6	-0.8
ESQI	Esquipulas	1.42	10	eP	Pn	06 27 57.8	+0.1
PCG	Pacaya	1.57	322	eP	Pn	06 28 00.2	+0.3
PCG				eS	Sn	06 28 19.8	+0.1
NBG	Las Nubes	1.59	333	eP	Pb	06 28 01.2	-0.9
NBG				eS	Sb	06 28 22.9	+1.1
LCND	La Caada	1.68	85	⇓iP	Pn	06 28 00.5	-0.7
LCND	La Caada	1.68	85	⇓iP	Pn	06 28 00.5	-0.7
CNCH	Conchagua	1.73	86	eP	Pn	06 28 01.5	-0.5
CNCH	Conchagua	1.73	86	eP	Pn	06 28 01.5	-0.5
FUG	Fuego 3	1.76	317	eP	Pn	06 28 02.4	0.0
FUG				eS	Sn	06 28 24.4	+0.1
MRL	Marmol	1.91	358	eP	Pn	06 28 05.7	+1.0
EDLM	Las Mercedes	7.05	123	eP	Pn	06 29 16.1	+0.9

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*IDC **03** 06:30:19.5±2.7, 24°.12S×179°.97E, h482km±27km, mb3.7/12, mb1 3.8/14, mb1mx3.5/51, mbtmp4.5/14, Error ellipse: s-maj=22.6km s-min=15.8km az=58.0*

*NEIC **03** 06:30:20.3±1.1, 24°.2S±0°.1×180°.0E±0°.2, h496km±4km, mb4.4/28, Error ellipse: s-maj=21.6km s-min=18.0km az=86.0*

ISC 03 06:30:22.8±0.7, **24°.08S**±0°.07×**179°.9E**±0°.1, **h526**km, **n69**, σ1.s**60**/75, **mb4.2**/19, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	5.52	160	P	P	06 31 55.2	-0.5
GLKZ				S	S	06 33 00.4	-11
MSVF	Nonsavu	6.54	344	P	P	06 32 02.7	-3.0
OUZ	Omahuta	12.37	205	P	P	06 33 03.3	-1.7
OUZ	Omahuta	12.37	205	P	P	06 33 06.8	+1.7
DZM	Mont Dzumac	12.54	276	P	P	06 33 06.3	-0.8
	0.1nm,0.3s,baz=170,slow=11,SNR=3.0						
DZM	Mont Dzumac	12.54	276	P	P	06 33 05.2	-1.9
HAZ	Te Kaha	13.75	187	P	P	06 33 17.1	-2.3
HAZ				S	S	06 35 45.5	+0.5
PKGZ	Pakihiroa	13.85	186	P	P	06 33 21.3	+0.8
PKGZ				S	S	06 35 46.3	-0.8
RUGZ	Raukumara Rang	13.97	187	P	P	06 33 22.4	+0.5
RUGZ				S	S	06 35 51.3	+1.8
PUZ	Puketiti	14.02	185	P	P	06 33 23.9	+1.6
PUZ				S	S	06 35 51.2	+1.0
KMRZ	Kaimai	14.13	193	P	P	06 33 26.1	+2.7
URZ	Urewera	14.33	189	P	P	06 33 21.5	-3.9
	4.4nm,0.3s,baz=274,slow=2.4,SNR=18						
URZ	Urewera	14.33	189	P	P	06 33 21.7	-3.8
URZ	Urewera	14.33	189	P	P	06 33 24.1	-1.4
URZ				S	S	06 35 53.6	-2.6
MWZ	Matawai	14.35	188	P	P	06 33 25.6	-0.2
MUGZ	Murupara	14.60	190	P	P	06 33 26.7	-1.6
MUGZ				S	S	06 36 00.3	-1.0
NMHZ	Naumai	15.20	189	P	P	06 33 35.3	+0.7
BKZ	Black Stump Fm	15.31	190	P	P	06 33 34.1	-1.7
TMVZ	Te Maari	15.41	192	P	P	06 33 35.5	-1.3
ETVZ	East Tongariro	15.42	192	P	P	06 33 37.1	0.0
OTVZ	Oturere	15.46	192	P	P	06 33 37.6	+0.2
NGZ	Ngauruhoe	15.48	193	P	P	06 33 37.2	-0.5
TUVZ	Tukino	15.56	192	P	P	06 33 36.9	-1.6
MOVZ	Moawhango	15.68	192	P	P	06 33 38.2	-1.4
BHHZ	Black Hill Sta	15.70	191	P	P	06 33 36.4	-3.4
BFZ	Birch Farm	16.84	190	P	P	06 33 48.3	-2.6
MSWZ	Moikau Station	17.72	192	P	P	06 33 56.3	-2.8
SNZO	South Karori	17.72	193	P	P	06 33 57.0	-2.1
BHW	Baring Head	17.78	192	P	P	06 33 56.7	-2.9
QRZ	Quartz Range	17.80	199	P	P	06 33 57.5	-2.4
NNZ	Nelson	17.94	196	P	P	06 33 59.1	-1.9
THZ	Tophouse	18.57	197	P	P	06 34 05.9	-1.0
KHZ	Kahutara	19.03	195	P	P	06 34 09.7	-1.3
LTZ	Lake Taylor	19.69	197	P	P	06 34 15.7	-1.4
LTZ				IAmb	IAmb	06 34 19.6	
	comp=Z,22nm,1.0s						
RPZ	Rata Peaks	20.89	198	P	P	06 34 26.7	-1.2
	comp=Z,19nm,1.0s,baz=284,slow=0.5,SNR=5.5						
RPZ	Rata Peaks	20.89	198	IAmb	IAmb	06 34 31.9	
	comp=Z,55nm,1.3s						
FOZ	Fox Glacier	21.10	201	P	P	06 34 28.6	-1.2
ARMA	Armidale	25.87	250	P	P	06 35 14.0	+1.3
ARMA				IAmb	IAmb	06 35 16.0	
	comp=Z,9.9nm,0.9s						
EIDS	Eidsvold	26.18	261	P	P	06 35 16.3	+0.9
EIDS				IAmb	IAmb	06 35 28.7	
	comp=Z,19nm,1.4s						
CTAO	Charters Tower	31.38	271	P	P	06 36 02.1	+1.5
PMG	Port Moresby	34.46	289	P	P	06 36 25.5	-1.3
	comp=Z,18nm,0.7s,baz=319,slow=15,SNR=4.5						
STKA	Stephens Creek	34.56	248	P	P	06 36 27.0	-0.5
	baz=86,slow=7.6,SNR=5.4						
COEN	Coen	36.05	279	P	P	06 36 41.1	+1.1
COEN				IAmb	IAmb	06 36 55.4	
	comp=Z,7.9nm,1.1s						
BBOO	Buckleboo	39.28	247	P	P	06 37 06.3	0.0
BBOO				IAmb	IAmb	06 37 19.8	
	comp=Z,28nm,1.5s						
AS31	Alice Springs	41.91	261	P	P	06 37 27.2	-0.2
ASAR	Alice Springs	41.91	261	P	P	06 37 27.9	+0.5
	comp=Z,3.5nm,0.5s,baz=96,slow=7.1,SNR=46						
ASAR				ScP	ScP	06 42 14.6	+3.5
	comp=Z,0.8nm,0.7s,baz=111,slow=3.9,SNR=5.5						
ASAR	Alice Springs	41.91	261	P	P	06 37 27.2	-0.2
WR0	Warramunga Arr	42.11	266	P	P	06 37 29.1	+0.2
WR0				IAmb	IAmb	06 37 29.7	
	comp=Z,5.3nm,0.7s						
WB2	Warramunga Arr	42.28	266	P	P	06 37 30.2	-0.1
WB2				IAmb	IAmb	06 37 31.1	
	comp=Z,11nm,0.7s						
WB0	Warramunga Arr	42.29	267	P	P	06 37 29.8	-0.5
WB0				IAmb	IAmb	06 37 31.1	
	comp=Z,14nm,0.7s						
WRA	Warramunga Arr	42.30	266	P	P	06 37 30.5	+0.1
	comp=Z,9.7nm,0.6s,baz=97,slow=8.4,SNR=151						
WRA	Warramunga Arr	42.30	266	P	P	06 37 30.1	-0.3
FORT	Forrest	46.16	250	P	P	06 37 58.4	-1.7
FITZ	Fitzroy Crossi	50.72	266	P	P	06 38 34.3	0.0
	comp=Z,3.9nm,0.4s,baz=103,slow=6.4,SNR=16						
FITZ	Fitzroy Crossi	50.72	266	P	P	06 38 34.2	0.0
FITZ				IAmb	IAmb	06 38 36.0	
	comp=Z,7.0nm,0.8s						
SIJI	Sorong	52.40	289	P	P	06 38 46.6	+0.1
	comp=Z,22nm,0.7s,baz=51,slow=4.4,SNR=5.8						
PSA00	Pilbara Seismi	55.03	260	P	P	06 39 05.1	+0.1
PSA00				IAmb	IAmb	06 39 33.3	
	comp=Z,23nm,1.4s						
MORW	Morawa	56.72	250	P	P	06 39 16.7	+0.1
QSPA	South Pole Qui	66.00	180	P	P	06 40 17.0	+0.1
	comp=Z,3.0nm,0.6s,baz=348,slow=0.8,SNR=24						
QSPA	South Pole Qui	66.00	180	P	P	06 40 17.8	+0.9
BELA	Belgrano 2	76.27	173	P	P	06 41 16.8	0.0
KSRS	Korea Array	78.32	320	P	P	06 41 29.9	+1.5
	comp=Z,1.2nm,0.6s,baz=140,slow=5.9,SNR=6.3						
PETK	Petropavlovsk-	79.25	347	P	P	06 41 33.4	+0.3
	comp=Z,7.5nm,1.1s,baz=146,slow=8.7,SNR=2.5						
USRK	Ussuriysk Ar.	80.86	327	P	P	06 41 42.9	+1.3
	comp=Z,1.2nm,0.6s,baz=64,slow=3.4,SNR=1.5						
SNAA	Sanae	84.49	179	P	P	06 41 59.0	-0.7
CMAR	Chiang Mai Arr	89.50	290	P	P	06 42 26.1	+1.9
	comp=Z,0.7nm,0.3s,baz=131,slow=2.5,SNR=4.4						
TXAR	Lajitas Array	90.61	58	P	P	06 42 29.8	+0.5
	comp=Z,0.3nm,0.7s,baz=218,slow=5.7,SNR=3.9						
AKASG	Malin Array Be	145.07	327	PKPbc	PKPdf	06 48 59.6	-0.3
	comp=Z,1.1nm,0.3s,baz=43,slow=4.4,SNR=7.8						
BRTR	Keskin Array B	147.61	307	PKPbc	PKiKP	06 49 11.1	+1.3
	comp=Z,1.5nm,0.6s,baz=90,slow=3.7,SNR=4.3						

IDC 03 06:35:51.1±1.1, **0°.88N×123°.69E, h0**km, **mb3.9**/5, **mb1 4.0**/6, **mb1mx3.7**/48, **mbtmp3.9**/6, **ML4.0**/1, **Error ellipse: s-maj=107.7km s-min=17.7km az=68.0, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	18.95	174	P	Pn	06 40 15.1	+0.6
	0.4nm,0.3s,baz=8.9,slow=8.8,SNR=5.7						
WRA	Warramunga Arr	23.18	154	P	P	06 40 59.8	+0.2
	2.8nm,0.4s,baz=334,slow=11,SNR=44						
ASAR	Alice Springs	26.34	158	P	P	06 41 28.3	-0.7
	0.7nm,0.5s,baz=343,slow=15,SNR=14						
SONM	Songino Array	49.12	345	P	P	06 44 42.0	+1.4
	1.0nm,0.7s,baz=155,slow=9.0,SNR=6.8						
MKAR	Makanchi Array	58.24	328	P	P	06 45 47.0	-0.3
	0.6nm,0.3s,baz=126,slow=8.6,SNR=7.7						
ZALV	Zalesovo Beam	61.81	335	P	P	06 46 10.4	-1.3
	0.5nm,0.3s,baz=124,slow=6.0,SNR=3.8						

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*IDC **03** 06:36:46.7±5.1, 20°.92S×169°.21E, h62km±43km, mb3.6/6, mb1 3.9/7, mb1mx3.7/38, mbtmp3.9/7, ML2.9/1, MS3.6/6, Ms1 3.6/6, ms1mx3.3/41, Error ellipse: s-maj=83.7km s-min=35.3km az=153.0*

ISC 03 06:36:44.5±1.7, **20°.8S**±0°.4×**169°.5E**±0°.3, **h50**km, **n14**, σ1.s**96**/12, **mb3.8**/6, **MS3.6**/3, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	3.06	246	P	Pn	06 37 29.5	-1.0
	1.7nm,0.3s,baz=119,slow=17,SNR=29						
DZM				S	Sn	06 38 09.8	+3.7
	7.8nm,0.3s,baz=191,slow=23,SNR=3.6						
DZM	Mont Dzumac	3.06	246	ePn	Pn	06 37 28.6	-1.9
	20nm,0.3s						
DZM				eSn	Sn	06 38 08.4	+2.4
	35nm,0.2s						
DZM				eLR	LR	06 38 17.3	
	comp=Z,1µm,23.8s						
RAO	Raoul Island	14.17	129	LR	LR	06 43 54.1	
	comp=Z,169nm,19.5s,baz=318,slow=30						
HNR	Honiara	14.59	320	LR	LR	06 45 14.9	
	comp=Z,130nm,18.8s,baz=5.5,slow=35						
URZ	Urewera	18.58	161	LR	LR	06 46 22.7	
	comp=Z,220nm,19.0s,baz=31,slow=31						
STKA	Stephens Creek	27.20	240	P	P	06 42 22.9	-0.8
	baz=56,slow=7.3						
WRA	Warramunga Arr	32.90	265	P	P	06 43 12.4	-1.7
	0.5nm,0.5s,baz=97,slow=7.8,SNR=6.3						
WRA				LR	LR	06 55 46.4	
	comp=Z,120nm,21.7s,baz=120,slow=35						
ASAR	Alice Springs	32.98	258	P	P	06 43 13.7	-1.1
	1.2nm,0.8s,baz=84,slow=9.2,SNR=4.1						
ASAR				LR	LR	06 56 03.7	
	comp=Z,85nm,21.8s,baz=109,slow=35						
FITZ	Fitzroy Crossi	41.31	266	P	P	06 44 24.4	-1.1
	1.7nm,0.7s,baz=76,slow=8.3,SNR=4.3						
VNDA	Vanda	56.84	182	LR	LR	07 08 16.9	
	comp=Z,69nm,18.2s,baz=212,slow=33						
CMAR	Chiang Mai Arr	79.35	294	P	P	06 48 45.4	-0.1
	1.8nm,0.3s,baz=115,slow=4.1,SNR=1.1						
SONM	Songino Array	88.62	323	P	P	06 49 33.5	+1.3
	0.6nm,1.0s,baz=116,slow=6.6,SNR=2.1						
NVAR	Mina Array Bea	89.70	48	P	P	06 49 39.2	+1.5
	0.4nm,0.8s,baz=262,slow=1.8,SNR=2.3						
GERES	GERESS Array B	145.99	331	PKPbc	PKPdf	06 56 18.4	+0.4
	0.2nm,0.3s,baz=26,slow=2.7,SNR=2.0						

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*NNC **03** 06:36:59.4±1.1, 54°.53N×86°.37E, h0km, mb2.6, mpv2.6, Error ellipse: s-maj=28.3km s-min=5.8km az=151.0, Suspected Mining explosion.*

*IDC **03** 06:37:01.6±2.7, 54°.21N×86°.47E, h0km, mb1 2.8/2, mb1mx2.8/50, mbtmp2.8/2, ML2.5/2, Error ellipse: s-maj=21.3km s-min=13.5km az=55.0*

ISC 03 06:37:03.0±9.7, **54°.6N**±0°.7×**83°.83E**±0°.08, **h0**km, **n7**, σ0.s**87**/7, **4C-3D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	0.85	136	i		06 42 33.1	
	baz=75,slow=336,SNR=1.4						
ZAA0	Zalesovo Array	0.85	136	⇑P	Pg	06 37 19.8	+0.5
	0.4nm,0.3s						
ZAA0				⇑S	Sn	06 37 34.9	-0.5
	3.4nm,0.8s						
ZAA0				⇓Rg	Rg	06 37 39.4	
ZALV	Zalesovo Beam	0.85	136	Pg	Pb	06 37 19.9	-0.7
	3.0nm,0.3s,baz=74,slow=17,SNR=27						
ZALV				Lg	Lg	06 37 35.2	
	4.7nm,0.3s,baz=75,slow=26,SNR=21						
KURBB	Kurchatov Arra	5.10	221	Pn	Pb	06 38 32.9	-0.2
	0.1nm,0.3s,baz=54,slow=14,SNR=9.9						
KURBB				Lg	Lg	06 40 13.7	
	0.0nm,0.3s,baz=62,slow=32,SNR=4.9						
KURBB	Kurchatov Arra	5.10	221	⇑Pn	Pb	06 38 32.1	-1.0
	2.8nm,1.1s						
KURBB				⇓Lg	Lg	06 40 16.2	
	3.0nm,0.7s						
MK31	Makanchi Array	7.84	188	⇓Pn	Pn	06 38 59.3	+0.9
	0.1nm,0.3s,baz=26,slow=14,SNR=6.6						
MK31				⇑Lg	Lg	06 41 17.8	
	1.1nm,0.8s,baz=28,slow=30,SNR=4.4						
MKAR	Makanchi Array	7.84	188	Pn	Pn	06 38 58.5	+0.2
	0.2nm,0.3s,baz=24,slow=15,SNR=6.8						
MKAR				Lg	Lg	06 41 13.6	
	0.1nm,0.3s,baz=25,slow=27,SNR=8.5						

IDC 03 06:55:30.3±0.9, **27°.33N×140°.35E, h413**km±14km, **mb3.0**/4, **mb1 3.2**/4, **mb1mx2.6**/50, **mbtmp3.7**/4, **Error ellipse: s-maj=42.0km s-min=21.5km az=87.0, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	1.66	98	P	P	06 56 27.4	+1.8
	7.4nm,0.3s,baz=291,slow=18,SNR=1.6						
JCJ				S	S	06 57 10.1	-0.1
	23nm,0.3s,baz=286,slow=22,SNR=7.0						
WRA	Warramunga Arr	47.35	188	P	P	07 03 24.7	-0.4
	0.2nm,0.4s,baz=1.9,slow=7.7,SNR=7.2						
BVAR	Borovoye Array	56.76	317	P	P	07 04 33.1	+0.1
	0.8nm,0.4s,baz=82,slow=11,SNR=9.0						
YKA	Yellowknife Ar	72.71	28	P	P	07 06 14.5	+0.1
	0.2nm,0.6s,baz=300,slow=5.5,SNR=4.8						
FINES	FINESS Array B	77.01	333	P	P	07 06 38.6	-0.1
	1.1nm,0.5s,baz=46,slow=5.5,SNR=7.1						

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*NNC **03** 07:03:20.4±0.4, 50°.02N×78°.76E, h0km, mb2.7, mpv2.4, Error ellipse: s-maj=13.5km s-min=1.6km az=71.0, Suspected Mining explosion.*

*IDC **03** 07:03:21.6±1.0, 50°.08N×78°.81E, h0km, mb1 2.7/2, mb1mx2.7/48, mbtmp2.7/2, ML2.1/2, Error ellipse: s-maj=11.3km s-min=6.6km az=62.0*

ISC 03 07:03:21.1±1.1, **50°.01N**±0°.06×**78°.7E**±0°.1, **h0**km, **n16**, σ0.s**51**/25, **17C-4D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR07	Kurchatov Arra	0.58	352	⇑P	Pg	07 03 31.8	-0.4
KUR07				⇑S	Sg	07 03 40.5	+0.8
KUR06	Kurchatov Arra	0.60	352	⇑P	Pg	07 03 32.2	-0.4
KUR06				⇓S	Sg	07 03 40.9	+0.6
KUR14	Kurchatov Arra	0.60	357	⇑P	Pg	07 03 32.3	-0.4
KUR14				⇑S	Sg	07 03 40.6	+0.1
KUR15	Kurchatov Arra	0.61	355	⇑P	Pg	07 03 32.4	-0.5
KUR15				⇑S	Sg	07 03 40.9	+0.1
KURBB	Kurchatov Arra	0.62	353	Pg	Pg	07 03 32.4	-0.5
	0.8nm,0.3s,baz=160,slow=19,SNR=109						
KURBB				Lg	Lg	07 03 41.3	
	1.3nm,0.3s,baz=161,slow=34,SNR=38						
KURBB	Kurchatov Arra	0.62	353	⇑P	Pg	07 03 32.5	-0.5
	11nm,0.5s						
KURBB				⇑S	Sg	07 03 41.4	+0.4
	114nm,0.6s						
KUR16	Kurchatov Arra	0.62	351	⇑P	Pg	07 03 32.6	-0.5
KUR16				⇓S	Sg	07 03 41.5	+0.3
KUR17	Kurchatov Arra	0.63	350	⇑P	Pg	07 03 32.8	-0.4
KUR17				⇑S	Sg	07 03 41.9	+0.5
KUR05	Kurchatov Arra	0.64	354	⇑P	Pg	07 03 32.8	-0.5
KUR05				⇑S	Sg	07 03 41.7	+0.1
KUR04	Kurchatov Arra	0.66	354	⇑P	Pg	07 03 33.1	-0.6
KUR04				⇓S	Sg	07 03 42.2	0.0
MAKZ	Makanchi	3.90	144	⇓Lg	Lg	07 05 21.8	
	6.8nm,0.9s						
MK31	Makanchi Array	4.03	142	⇑Pn	Pn	07 04 24.1	0.0
	0.1nm,0.2s,baz=339,slow=12,SNR=6.7						
MK31				⇑Pg	Pb	07 04 33.5	+0.5
	0.4nm,0.5s,baz=314,slow=13,SNR=7.3						
MK31				Lg	Lg	07 05 26.6	
	2.7nm,0.6s,baz=332,slow=24,SNR=9.6						
MKAR	Makanchi Array	4.03	142	Pn	Pn	07 04 24.9	+0.8
	0.1nm,0.3s,baz=326,slow=10,SNR=6.3						
MKAR				Pg	Pb	07 04 32.0	-1.0
	0.2nm,0.3s,baz=333,slow=16,SNR=11						
MKAR				Lg	Lg	07 05 27.1	
	0.6nm,0.3s,baz=333,slow=22,SNR=17						
ZALV	Zalesovo Beam	5.48	42	Pn	Pn	07 04 44.3	+0.3
	0.3nm,0.3s,baz=230,slow=14,SNR=6.9						
ZALV				Lg	Lg	07 06 15.3	
	0.3nm,0.3s,baz=220,slow=24,SNR=3.1						
I46RU	ZALESOVO INFRA	5.48	42	i		07 38 27.2	
	baz=227,slow=304,SNR=2.6						
BVAR	Borovoye Array	5.97	304	Sn	Sn	07 05 59.8	0.0
	0.4nm,0.3s,baz=112,slow=24,SNR=9.7						

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*IDC **03** 07:05:35.0±1.0, 27°.91N×52°.60E, h0km, mb4.0/18, mb1 4.1/23, mb1mx3.9/55, mbtmp4.0/23, ML4.0/5, MS2.9/4, Ms1 2.9/4, ms1mx2.7/62, Error ellipse: s-maj=22.2km s-min=15.9km az=168.0*

*TEH **03** 07:05:36.5, 27°.94N×52°.76E, h20km, ML4.1*

*OMAN **03** 07:05:38.9±0.7, 27°.80N×52°.76E, h19km±3km, mb5.5/12, ml4.1/11, Error ellipse: s-maj=4.9km s-min=1.9km az=65.0*

*SGS **03** 07:05:38.7, 28°.03N×52°.63E, h2km, Ml4.1*

*NEIC **03** 07:05:38.1±1.4, 27°.9N±0°.2×52°.7E±0°.2, h30km±10km, Error ellipse: s-maj=32.4km s-min=12.7km az=138.0*

*DSN **03** 07:05:39.6±0.7, 27°.84N×52°.70E, h43km, ML4.4/8, Error ellipse: s-maj=9.6km s-min=4.5km az=15.0*

*THR **03** 07:05:42.3±0.7, 28°.22N×52°.62E, h46km±7km, ML4.2*

ISC 03 07:05:36.8±0.4, **27°.87N**±0°.03×**52°.69E**±0°.03, **h15**km, **n141**, σ1.s**17**/154, **mb4.0**/22, **1C, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LMD1	Lamerd	0.68	141	ePg	Pb	07 05 49.8	-0.6
LMD1				e		07 06 10.0	
	comp=Z,99nm,0.7s						
QIR1	Qir	0.68	28	ePg	Pg	07 05 47.9	-2.3
JHRM	Jahrom	1.01	51	ePg	Pb	07 05 53.6	-2.5
JHRM				e		07 06 13.4	
	comp=Z,99nm,0.4s						
LAR1	LAR	1.51	97	ePg	Pb	07 06 04.4	-0.2
LAR1				e		07 06 40.4	
	comp=Z,99nm,0.5s						
AHBU	AHRAM	1.57	309	ePg	Pg	07 06 07.0	-0.1
SHI	Shiraz	1.77	355	e		07 06 37.6	
	comp=Z,99nm,0.5s						
SHI				ePg	Pb	07 06 08.7	-0.4
KAZ1	Kazerun	1.97	333	ePg	Pb	07 06 12.4	-0.1
KAZ1				e		07 06 50.7	
	comp=Z,99nm,0.7s						
JRN	Qarnain Island	2.92	177	ePn	Pb	07 06 25.0	-3.6
BNDS	Bandar-Abbas	3.13	98	eP	Pb	07 06 32.3	0.0
BNDS				eSg	Sg	07 07 21.5	+4.1
GENO	Geno	3.13	98	ePn	Pn	07 06 27.0	+1.2
KLNJ	Kolanjah	3.27	343	ePn	Pn	07 06 27.3	-0.6
SHME	Shamm	3.58	120	P	Pn	07 06 31.9	+0.1
SHME	Shamm	3.58	120	ePn	Pn	07 06 32.3	+0.5
SHME	Shamm	3.58	120	P	Pn	07 06 32.1	+0.3
BANOM	Banah	3.77	120	i P	Pn	07 06 34.4	0.0
	SNR=15						
BANOM	Banah	3.77	120	ePn	Pn	07 06 34.5	+0.1
BANOM	Banah	3.77	120	P	Pn	07 06 34.8	+0.3
	SNR=15						
BANOM				S	Sn	07 07 18.5	0.0
IMEH	Mehriz	3.89	25	ePn	Pn	07 06 35.5	-0.8
AJN	Ajban	3.89	147	ePn	Pn	07 06 37.0	+0.9
AJN	Ajban	3.89	147	P	Pn	07 06 37.2	+1.1
AJN				S	Sn	07 07 21.6	+0.1
SLWR	Sila	3.89	194	ePn	Pn	07 06 37.9	+1.8
SLWR	Sila	3.89	194	P	Pn	07 06 37.6	+1.5
SLWR				S	Sn	07 07 24.0	+2.5
NAZ	Nazwa, Dubai	3.92	136	i P	Pn	07 06 37.7	+1.2
	SNR=13						
NAZ				S	Sn	07 07 22.0	-0.2
NAZ	Nazwa, Dubai	3.92	136	ePn	Pn	07 06 37.9	+1.4
NAZ	Nazwa, Dubai	3.92	136	P	Pn	07 06 37.6	+1.2
	SNR=13						
NAZ				S	Sn	07 07 22.5	+0.3
IRAM	Ramesheh	3.93	356	ePn	Pn	07 06 37.1	+0.2
NGRK	Negar Kerman	3.97	63	ePn	Pn	07 06 37.3	-0.2
NGRK				e		07 07 49.0	
	comp=Z,99nm,0.9s						
MASF	Masafi	3.98	128	P	Pn	07 06 38.3	+0.9
	SNR=8.6						
MSFE	Esma-Masafi	3.99	128	i P	Pn	07 06 38.3	+0.8
	SNR=8.6						

MSFE	Esma-Masafi	3.99	128	ePn	Pn	07 06 38.5	+1.0
ASUD	Al Ashush, Dub	4.01	143	P	Pn	07 06 38.1	+0.4
FAQ	Al Faqa, Dubai	4.06	139	ePn	Pn	07 06 39.0	+0.5
FAQ	Al Faqa, Dubai	4.06	139	P	Pn	07 06 39.4	+1.0
FAQ				S	Sn	07 07 25.9	+0.2
MDH	Madha	4.13	128	ePn	Pn	07 06 39.5	+0.2
MDH	Madha	4.13	128	P	Pn	07 06 39.9	+0.6
TVBK	TV Kerman	4.15	58	ePn	Pn	07 06 40.3	+0.4
TVBK				e		07 07 59.6	
	comp=Z,99nm,0.7s						
KHGB	Koh Gabri	4.15	52	ePn	Pn	07 06 40.1	+0.2
KHGB				e		07 07 59.8	
	comp=Z,99nm,0.8s						
MZWR	Madinat Zayed	4.23	165	P	Pn	07 06 42.6	+1.8
MZWR				S	Sn	07 07 29.9	0.0
HATD	Hatta, Dubai	4.33	134	i P	Pn	07 06 43.0	+0.8
	SNR=9.2						
HATD	Hatta, Dubai	4.33	134	ePn	Pn	07 06 42.8	+0.6
HATD	Hatta, Dubai	4.33	134	P	Pn	07 06 42.9	+0.8
	SNR=9.2						
HATD				S	Sn	07 07 34.0	+1.5
ASHO	Ashiyiah	4.39	136	i P	Pn	07 06 43.4	+0.4
	SNR=17						
ASHO				i P	Pb	07 06 43.4	-10
	SNR=22						
ASHO	Ashiyiah	4.39	136	ePn	Pn	07 06 43.6	+0.6
ASHO	Ashiyiah	4.39	136	P	Pn	07 06 43.4	+0.4
	SNR=17						
SMAN	Sihmah	4.45	249	P	Pn	07 06 45.1	+1.2
SMAN				S	Sn	07 07 36.0	+0.6
IBAF	Bafgh	4.47	33	ePn	Pn	07 06 44.9	+0.6
NHRD	Haradh	4.55	227	P	Pn	07 06 48.0	+2.9
IGAR	Gharneh	4.55	353	ePn	Pn	07 06 45.9	+0.5
KBD	Kabd	4.58	288	eP		07 06 46.0	
ICHK	Chekchek	4.61	18	ePn	Pn	07 06 46.9	+0.8
RDF	Al-Radifah	4.64	284	eP		07 06 46.9	
ALNE	Al Ain	4.70	143	P	Pn	07 06 47.7	+0.5
ALNE	Al Ain	4.70	143	ePn	Pn	07 06 48.7	+1.5
ALNE	Al Ain	4.70	143	P	Pn	07 06 48.3	+1.2
ALNE				S	Sn	07 07 41.2	-0.2
CHMN	Cheshme madani	4.70	64	e	Pg	07 07 18.6	+12
	comp=Z,99nm,0.6s						
YZKH	Yazd	4.80	20	eP	Pn	07 06 49.8	+1.2
YZKH	Yazd	4.80	20	ePn	Pn	07 06 49.8	+1.2
AMIS	Naft Sefid	4.80	323	ePn	Pn	07 06 48.9	+0.3
IZEF	Zefreh	5.02	357	ePn	Pn	07 06 52.5	+0.7
IPIR	Pirpir	5.04	343	ePn	Pn	07 06 51.4	-0.8
MIB	Mutribah	5.07	294	eP		07 06 52.5	
SOHO	SOHO	5.08	136	i P	Pn	07 06 53.0	+0.5
	SNR=13						
SOHO	SOHO	5.08	136	P	Pn	07 06 52.6	+0.2
SOHO				S	Sn	07 07 51.3	+0.4
QYSM	Um Kedad	5.14	271	P	Pn	07 06 54.3	+0.9
KBAM	BAM	5.23	75	ePn	Pn	07 06 54.7	+0.1
KBAM				e		07 08 00.9	
	comp=Z,99nm,0.6s						
RST	Umm Al-Ruwaisa	5.25	289	eP		07 06 55.2	
ANAR	Anarak	5.38	9	ePn	Pn	07 06 56.8	+0.1
IKLH	Kolahrood	5.51	350	ePn	Pn	07 06 57.9	-0.7
UMZA	Um Al Zommool	5.60	156	ePn	Pn	07 07 00.7	+1.1
ARQ	Araqi	5.69	142	P	Pn	07 07 01.0	+0.1
	SNR=17						
ARQ				S	Sn	07 08 04.5	-1.5
QAM	Ghamsar	5.97	350	ePn	Pn	07 07 04.4	-0.4
HOQ	Hoqain	5.97	135	P	Pn	07 07 05.0	+0.3
	SNR=16						
HOQ				S	Sn	07 08 10.3	-2.6
RQBS	RQBS	5.99	266	P	Pn	07 07 05.8	+0.8
KRSH	Karshahi	6.10	356	ePn	Pn	07 07 06.5	-0.1
TPRV	Parvadeh(Tabas	6.19	33	ePn	Pn	07 07 07.7	-0.1
BSY	Bisya	6.54	140	P	Pn	07 07 13.0	+0.5
	SNR=20						
BIDO	Bidbid	6.54	130	P	Pn	07 07 11.2	-1.4
BIDO				S	Sn	07 08 25.0	-2.0
SMDO	Samad	6.81	133	P	Pn	07 07 16.3	-0.1
	SNR=22						
TKDS	Koohdasht(Taba	6.88	33	ePn	Pn	07 07 17.1	-0.2
TNSJ	Nastanj	6.94	28	ePn	Pn	07 07 17.9	-0.3
IKFM	Kafar-mosalman	7.01	325	ePn	Pn	07 07 18.8	-0.1
ASAO	Ashtian	7.03	342	ePn	Pn	07 07 18.9	-0.6
ASAO				IAML		07 08 39.1	
	comp=N,51nm,0.6s						
ASAO	Ashtian	7.03	342	ePn	Pn	07 07 18.9	-0.6
IDOB	Doab	7.06	328	ePn	Pn	07 07 17.6	-2.2
WSAR	Wadi Sarin	7.08	129	Pn	Pn	07 07 19.5	-0.4
	comp=N,4.6nm,0.3s,baz=316,slow=10,SNR=34						
WSAR				Sn	Sn	07 08 35.8	-4.3
	comp=N,1.4nm,0.3s,baz=141,slow=20,SNR=7.1						
WSAR				LR	LR	07 10 45.4	
	comp=N,124nm,19.1s,baz=310,slow=43						
IQOM	Qom	7.08	349	ePn	Pn	07 07 19.1	-1.1
IVRN	Varamin	7.15	354	ePn	Pn	07 07 20.1	-0.8
IANJ	Anjilo	7.64	8	ePn	Pn	07 07 27.7	-0.2
WBK	Wadi Bani Khal	7.73	131	P	Pn	07 07 28.0	-0.9
	SNR=6.5						
RAYN	Ar Rayn	7.79	238	i P	Pn	07 07 30.7	+1.0
	SNR=11						
RAYN	Ar Rayn	7.79	238	Pn	Pn	07 07 29.9	+0.1
IRAZ	Razeghan	7.87	343	ePn	Pn	07 07 29.8	-1.1
JLN	Jalan Bani Buh	8.34	132	P	Pn	07 07 35.9	-1.4
MHTO	MHTO	8.37	144	P	Pn	07 07 37.7	0.0
	SNR=8.5						
IDHR	Dehrash	8.68	323	ePn	Pn	07 07 41.4	-0.7
QALM	Alamut, Qazvin	8.71	349	ePn	Pn	07 07 40.8	-1.7
DQM	DQM	9.07	150	P	Pn	07 07 46.0	-1.2
DOK	Doka	9.31	172	P	Pn	07 07 50.0	-0.5
	SNR=12						
WHFO	Wadi Hawf	9.96	174	P	Pn	07 07 58.3	-1.2
	SNR=17						
SHAO	Shalim	10.17	164	i P	Pn	07 08 02.0	-0.4
	SNR=10						
SHAO	Shalim	10.17	164	P	Pn	07 08 02.0	-0.4
	SNR=10						
GEYT	Alibeck	11.02	23	Pn	Pn	07 08 12.8	-1.1
	comp=N,0.5nm,0.3s,baz=210,slow=13,SNR=3.5						
GEYT	Alibeck	11.02	23		Pn	07 08 13.7	-0.2
GNI	Garni	13.90	334	LR	LR	07 14 30.8	
	comp=N,60nm,19.0s,baz=146,slow=39						
EIL	Elat	15.66	281	Pn	Pn	07 09 14.9	-2.1
	comp=N,0.3nm,0.3s,baz=29,slow=19,SNR=1.3						
MMAI	Mount Meron Ar	15.76	293	Pn	Pn	07 09 16.0	-2.4
	comp=N,1.9nm,0.3s,baz=98,slow=16,SNR=2.7						
NIL	Nilore	18.58	67		Pn	07 09 53.3	-0.3
ATD	Arta Tunnel	18.69	212	LR	LR	07 17 56.7	
	comp=N,28nm,20.4s,baz=37,slow=40						
BRTR	Keskin Array B	19.71	312	P	Pn	07 10 06.3	-1.0
	comp=N,0.6nm,0.3s,baz=131,slow=14,SNR=6.4						
BRTR				LR	LR	07 19 33.8	
	comp=N,26nm,18.2s,baz=104,slow=43						
KK31	Karatay Array	20.95	39	P	P	07 10 18.3	-0.9
KK31				IAmb	IAmb	07 10 22.2	
	comp=Z,6.0nm,1.1s						
KKAR	Karatay Array	20.95	39	P	P	07 10 17.6	-1.6
KKAR	Karatay Array	20.95	39	P	P	07 10 18.1	-1.1
KKAR				IAmb	IAmb	07 10 22.2	
	comp=Z,6.0nm,1.1s						
ELL	Elmali	21.15	300	P	P	07 10 22.1	+0.6
ABKAR	Akbulak array	22.07	13	P	P	07 10 30.2	-0.9
ABKAR	Akbulak array	22.07	13	P	P	07 10 29.9	-1.2
ABKAR				IAmb	IAmb	07 10 53.7	
	comp=Z,2.3nm,0.8s						
AKTO	Aktyubinsk	22.90	9	P	P	07 10 41.6	+1.8
	comp=Z,1.2nm,0.3s,baz=220,slow=14,SNR=6.1						
IDI	Anoyia	24.75	294	P	P	07 10 57.4	-0.5
	comp=Z,7.8nm,0.7s,baz=1.0,slow=3.5,SNR=1.8						
BELG	Belogornoye	24.79	353	P	P	07 10 57.5	-0.4
	comp=Z,4.1nm,0.4s,baz=228,slow=13,SNR=2.2						
MLR	Muntele Rosu	27.54	317	P	P	07 11 23.8	+0.6
	comp=Z,0.7nm,0.3s,baz=75,slow=10,SNR=1.6						
BVAR	Borovoye Array	28.35	23	P	P	07 11 31.1	+1.0
	comp=Z,0.6nm,0.7s,baz=226,slow=6.9,SNR=5.0						
AKASG	Malin Array Be	28.92	328	P	P	07 11 34.2	-1.0
	comp=Z,0.4nm,0.4s,baz=136,slow=7.7,SNR=2.6						
BUR08	Bucovina Ar. S	29.11	320	P	P	07 11 36.9	-0.1
BUR08				IAmb	IAmb	07 11 38.8	
	comp=Z,3.0nm,1.1s						
MK31	Makanchi Array	29.92	43	P	P	07 11 44.3	+0.1
MKAR	Makanchi Array	29.92	43	P	P	07 11 44.6	+0.4
	comp=Z,0.4nm,0.5s,baz=227,slow=9.1,SNR=7.2						
MKAR	Makanchi Array	29.92	43	P	P	07 11 44.3	+0.1
KURBB	Kurchatov Arra	30.00	34	P	P	07 11 44.4	-0.4
	comp=Z,2.3nm,0.9s,baz=234,slow=9.0,SNR=12						
ZAA0	Zalesovo Array	35.09	33	P	P	07 12 28.8	-0.4
ZAA0				IAmb	IAmb	07 12 33.4	
	comp=Z,4.1nm,0.8s						
ZALV	Zalesovo Beam	35.09	33	P	P	07 12 28.7	-0.5
	comp=Z,3.8nm,0.7s,baz=245,slow=9.6,SNR=8.8						
FIA1	FINESS Array S	37.99	340	P	P	07 12 53.3	-0.5
FINES	FINESS Array B	37.99	340	P	P	07 12 53.5	-0.3
	comp=Z,2.2nm,0.4s,baz=147,slow=9.8,SNR=20						
FINES	FINESS Array B	37.99	340	P	P	07 12 54.0	+0.2
GTA	Gaotai	40.48	61	⇑P	P	07 13 18.4	+3.2
GTA				pP	sP	07 13 23.4	+1.5
GTA				sP	pP	07 13 26.9	+6.9
GTA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
NC405	NORSAR Array S	43.02	332	P	P	07 13 34.7	-0.8
NB2	NORSAR Subarra	43.19	332	P	P	07 13 36.3	-0.6
	comp=Z,0.5nm,0.5s,baz=121,slow=8.6						
NOA	NORSAR Array B	43.19	332	P	P	07 13 35.8	-1.1
	comp=Z,0.9nm,0.6s,baz=121,slow=8.1,SNR=5.8						
ARCES	ARCESS Array B	44.58	347	P	P	07 13 47.2	-0.7
	comp=Z,4.8nm,0.9s,baz=148,slow=8.7,SNR=11						
SONM	Songino Array	45.84	49	P	P	07 14 00.6	+2.2
	comp=Z,0.4nm,0.4s,baz=260,slow=8.3,SNR=4.1						
TOA0	Torodi Ar. Sit	49.62	264	P	P	07 14 28.4	+0.5
TORD	Torodi Ar. Bea	49.62	264	P	P	07 14 27.6	-0.4
	comp=Z,2.1nm,0.7s,baz=64,slow=8.5,SNR=10						
TORD	Torodi Ar. Bea	49.62	264	P	P	07 14 27.0	-1.0
KOWA	Kowa	54.10	268	P	P	07 15 00.4	-1.1
KOWA				IAmb	IAmb	07 15 05.1	
	comp=Z,3.8nm,1.1s						
DBIC	Dimbokro	58.29	260	P	P	07 15 32.3	+0.9
	comp=Z,3.4nm,0.9s,baz=28,slow=12,SNR=1.9						
ILAR	Eielson Array	86.41	8	P	P	07 18 20.6	+2.2
	comp=Z,0.3nm,0.9s,baz=329,slow=4.7,SNR=4.2						
YKA	Yellowknife Ar	89.38	354	P	P	07 18 32.6	+0.1
	comp=Z,0.8nm,0.7s,baz=14,slow=5.1,SNR=10.0						
ASAR	Alice Springs	93.54	115	P	P	07 18 53.8	+1.2
	comp=Z,0.2nm,0.6s,baz=320,slow=4.1,SNR=2.0						

IDC ***03*** *07:16:51.9±0.4, 52°.34N×168°.74W, h0^{km}, mb5.2/54, mb1 5.2/55, mb1mx5.2/63, mbtmp5.2/55, ML4.3/1, MS5.0/38, Ms1 5.0/38, ms1mx4.9/59, Error ellipse: s-maj=13.4km s-min=8.1km az=178.0*

NEIC ***03*** *07:16:52.2, 52°.17N×168°.53W, h13^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.32; $M_{\theta\theta}$-1.26; $M_{\phi\phi}$-0.06; $M_{r\theta}$0.99; $M_{\theta\phi}$-0.62; $M_{\phi r}$0.46; Fault plane solution: $M_0$1.81000×10^{17} NP1:ϕ_s248.81000°, δ26.22000°, λ92.86000°. NP2:ϕ_s65.63000°, δ63.82000°, λ88.59000°. Principal axes: T 1.6987, Plg71.0000°, Azm333.0000°; N 0.2006, Plg1.0000°, Azm66.0000°; P -1.8993, Plg19.0000°, Azm157.0000°;*

NEIC ***03*** *07:16:53.9±2.2, 52°.22N±0°.04×168°.60W±0°.06, h14^{km}±1^{km}, mb5.6/590, Ms_20 5.2/430, Mwb5.4/87, Mww5.5, ML4.9(AEIC), Mwc5.6(GCMT) Error ellipse: s-maj=7.3km s-min=5.8km az=176.0*

BJI ***03*** *07:16:54.6±0.0, 52°.63N×169°.34W, h9^{km}, mB5.6/67, mb5.4/82, Ms5.7/87, Ms7 5.5/79*

MOS ***03*** *07:16:54.2±1.1, 52°.36N×168°.73W, h27^{km}, mb5.7/181, MS5.2/60, Error ellipse: s-maj=5.6km s-min=3.9km az=93.3*

AEIC ***03*** *07:16:56±2.0, 52°.30N±0°.05×168°.56W±0°.05, h28^{km}±3^{km}, Error ellipse: s-maj=7.9km s-min=4.1km az=171.0*

GCMT ***03*** *07:16:56.9±0.1, 52°.18N±0°.01×168°.57W±0°.01, h15^{km}, MW5.5/152, Moment Tensor Solution. s135,c241; s152,c312; Duration: 1^{s}4 Moment tensor: Scale 10^{17} Nm; M_{rr}2.10±.03; $M_{\theta\theta}$-2.09±.03; $M_{\phi\phi}$0.00±.02; $M_{r\theta}$1.38±.06; $M_{\theta\phi}$-0.62±.02; $M_{\phi r}$0.37±.05; Best double couple: $M_0$2.60600×10^{17} NP1:ϕ_s254.00000°, δ28.00000°, λ90.00000°. NP2:ϕ_s75.00000°, δ62.00000°, λ90.00000°. Principal axes: T 2.5260, Plg73.0000°, Azm345.0000°; N 0.1670, Plg0.0000°, Azm255.0000°; P -2.6850, Plg17.0000°, Azm165.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***03*** *07:16:57, 52°.13N×168°.63W, h16^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}2.17; $M_{\theta\theta}$-2.17; $M_{\phi\phi}$0.00; $M_{r\theta}$2.57; $M_{\theta\phi}$-0.60; $M_{\phi r}$0.83; Fault plane solution: $M_0$3.52000×10^{17} NP1:ϕ_s259.00000°, δ20.00000°, λ96.00000°. NP2:ϕ_s73.00000°, δ70.00000°, λ88.00000°. Principal axes: T 3.4398, Plg65.0000°, Azm339.0000°; N 0.1483, Plg2.0000°, Azm73.0000°; P -3.5882, Plg25.0000°, Azm164.0000°;*

NEIC ***03*** *07:16:59, 52°.03N×168°.47W, h14^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.95; $M_{\theta\theta}$-1.94; $M_{\phi\phi}$-0.01; $M_{r\theta}$1.41; $M_{\theta\phi}$-0.38; $M_{\phi r}$0.07; Fault plane solution: $M_0$2.43000×10^{17} NP1:ϕ_s254.00000°, δ28.00000°, λ82.00000°. NP2:ϕ_s84.00000°, δ63.00000°, λ94.00000°. Principal axes: T 2.4077, Plg72.0000°, Azm4.0000°; N 0.0503, Plg4.0000°, Azm262.0000°; P -2.4580, Plg18.0000°, Azm171.0000°;*

BGR ***03*** *07:17:03.5±0.0, 53°.56N×168°.65W, h33^{km}, mb5.9, Ms4.9*

ISC 03 07:16:54.9±0.3, **52°.33N**±0°.03×**168°.67W**±0°.03, **h19**^{km}±1^{km}, **h19**^{km}**:pP-P, n1969, σ1^{s}32**/1998, **mb5.6**/560, **MS5.2**/317, **72C-74D, Fault plane solution: NP1:**ϕ_s52.02384°, δ74.60533°, λ57.74729°. **NP2:**ϕ_s299.20761°, δ35.37714°, λ152.70796°. **Principal axes:** T Plg49.8411°, Azm286.2122°; N Plg30.9645°, Azm61.5334°; P Plg22.8819°, Azm166.2024°; **Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIKH	Nikolski High	0.65	350		Pn	07 17 09.6	+0.5
NIKH	Nikolski High	0.65	350		Sn	07 17 20.0	+1.1
OKSP	Okmok Steeple	0.95	14		Pg	07 17 13.9	+0.5
OKSO	Okmok South	1.07	17		Pb	07 17 14.6	-0.3
OKSO					Sg	07 17 30.8	+0.9
OKFG	Magazine Ridge	1.18	23		Pn	07 17 16.1	-0.3
OKRE	Okmok R'deer P	1.23	14		Pg	07 17 18.4	-0.3
MAPS	Pakushin South	1.81	35		Pn	07 17 25.4	+0.3
MAPS					Sb	07 17 48.8	-1.0
MGOD	Makushin Gods	1.83	36		Pn	07 17 25.9	+0.6
MREP	Makushin Rep't	1.89	37		Pn	07 17 26.6	+0.5
MCIR	Makushin Cirqu	1.95	33		Pn	07 17 28.2	+1.2
MSW	Makushin Switc	1.95	35		Pn	07 17 27.8	+0.8
MSW					Sb	07 17 52.5	-1.3
MNAT	Makushin Natee	1.96	37		Pn	07 17 27.9	+0.8
UNV	Unalaska Valle	2.00	40		Pn	07 17 27.9	+0.2
MTBL	Makushin Table	2.04	35		Pn	07 17 29.1	+0.9
AKMO	Akutan Morgan	2.38	41		Pn	07 17 33.8	+0.9
AKMO					Sn	07 18 03.1	+1.5
AKRB	Akutan Reef Bi	2.39	40		Pn	07 17 34.1	+1.1
ZRO	Akutan Zero	2.40	42		Pn	07 17 34.0	+0.9
AKBBA	Akutan Broad B	2.42	42		Pn	07 17 34.4	+1.0
AKLV	Akutan Long Va	2.46	41		Pn	07 17 35.0	+1.1
AKGG	Akutan Green G	2.47	40		Pn	07 17 34.9	+0.8
AKUT	Akutan	2.51	43		Pn	07 17 36.2	+1.6
AKUT	Akutan	2.51	43		Sn	07 18 05.3	+0.5
AKSA	Akutan Strait	2.54	44		Pn	07 17 35.7	+0.6
KOFP	Korovin Flat P	3.33	271		Pn	07 17 47.3	+1.3
ATKA	Atka Island	3.40	270	Pn	Pn	07 17 47.3	+0.5
BRPK	Brown Peak	3.75	50		Pn	07 17 52.3	+0.6
FALS	False Pass	4.03	49	Pn	Pn	07 17 55.7	+0.2
GSTR	Great Sitkin T	4.55	270	Pn	Pn	07 18 04.0	+1.3
GSMY	Great Sitkin M	4.55	269		Pn	07 18 03.8	+1.1
GSTD	Great Sitkin T	4.61	270		Pn	07 18 04.5	+1.0
DT1	Dutton Round H	4.71	51		Pn	07 18 05.2	+0.4
ADAG	Mount Adagdak	4.89	269		Pn	07 18 09.1	+1.6
SPIA	Saint Paul Isl	4.94	350		Pn	07 18 11.0	+3.0
ADK	Adak	4.96	268	P	Pn	07 18 08.8	+0.6
ADK	Adak	4.96	268	Pn	Pn	07 18 08.8	+0.6
HAG	Hague Volcano	5.00	51	⇑P	Pn	07 18 09.9	+1.0
HAG	Hague Volcano	5.00	51		Pn	07 18 09.9	+1.0
PS4A	Pavlof South-4	5.04	50		Pn	07 18 10.4	+0.9
KIKV	Kanaga Island	5.26	268		Pn	07 18 14.2	+1.8
KIMD	Kanaga Island	5.32	267		Pn	07 18 14.1	+0.9
SDPT	Sand Point	5.72	55	Pn	Pn	07 18 17.8	-0.8
TAFP	Tanaga Falls P	5.75	269		Pn	07 18 20.6	+1.4
TASE	Tanaga Southea	5.79	269		Pn	07 18 20.2	+0.4
CNBA	Chernabura Isl	5.96	62	Pn	Pn	07 18 21.3	-0.7
CERAA	Semis' Rag'd T	7.18	271		Pn	07 18 40.0	+1.2
CEAP	Semis' Anvil P	7.24	272		Pn	07 18 41.0	+1.5
CESW	Semis' Southwe	7.26	271		Pn	07 18 41.0	+1.1
AMKA	Amchitka	7.51	267	Pn	Pn	07 18 43.7	+0.4
LSPA	Little Sitkin	7.86	272		Pn	07 18 49.6	+1.6
LSNW	Little Sitkin	7.89	272		Pn	07 18 50.0	+1.5
LSSA	Little Sitkin	7.89	272		Pn	07 18 49.9	+1.3
PLK1	Peulik 1	8.82	47		Pn	07 19 01.6	+0.4
SII	Sitkinak Islan	9.44	58		Pn	07 19 10.1	+0.4
KABU	Katmai Buttres	9.67	47		Pn	07 19 14.0	+1.0
OHAK	Old Harbor	10.14	55	Pn	Pn	07 19 18.0	-1.3
SMY	Shemya	10.51	279	P	Pn	07 19 26.9	+2.6
SMY	Shemya	10.51	279		Pn	07 19 26.9	+2.6
KDAK	Kodiak Island	10.71	53	Pn	Pn	07 19 25.9	-1.2
	20nm,0.3s,baz=243,slow=6.5,SNR=347						
KDAK	Kodiak Island	10.71	53	i P	Pn	07 19 25.2	-1.9
KDAK	Kodiak Island	10.71	53		Pn	07 19 26.2	-0.9
SVW2	Sparrevohn	11.33	34		Pn	07 19 40.5	+4.9
GAMB	Gambell	11.59	353		Pn	07 19 42.9	+3.8
RSO	Redoubt South	11.98	41		Pn	07 19 45.7	+1.1
CNPM	China Poot	12.12	47		Pn	07 19 46.2	-0.1
ANM	Nome	12.39	7	P	Pn	07 19 53.3	+3.3
ANM	Nome	12.39	7		Pn	07 19 53.2	+3.3
BRLK	Bradley Lake	12.39	46		Pn	07 19 50.9	+0.8
TTA	Tatalina	12.57	27	P	Pn	07 19 53.6	+1.0
TTA	Tatalina	12.57	27		Pn	07 19 53.6	+1.0
CAPN	Captain Cook N	12.80	42	P	Pn	07 19 54.9	-0.7
	baz=236						
SEW	Seward	13.19	46		Pn	07 20 00.0	-0.9
O22K	Cooper Landing	13.25	45	P	Pn	07 20 00.8	-1.0
	baz=240						
O22K	Cooper Landing	13.25	45		Pn	07 20 00.8	-1.0
SUA	Susitna One	13.36	40		Pn	07 20 03.6	+0.3
SKT	Skwentna	13.37	37		Pn	07 20 05.0	+1.6
RC01	Rabbit Creek A	13.56	42	P	Pn	07 20 04.4	-1.6
	baz=238,SNR=23						
PPLA	Purkeypile	13.74	33		Pn	07 20 10.6	+2.1
PMR	Palmer	14.07	41	P	Pn	07 20 14.1	+1.1
PMR	Palmer	14.07	41		Pn	07 20 14.1	+1.1
CUT	Chulitna	14.10	37	P	Pn	07 20 12.5	-0.8
	baz=232						
GHO	Glory Hole Cre	14.25	41		Pn	07 20 13.9	-1.6
KNK	Knik Glacier	14.25	42		Pn	07 20 13.7	-1.8
Q23K	Middleton Isla	14.35	52	P	Pn	07 20 17.4	+0.6
	baz=250						
Q23K	Middleton Isla	14.35	52		Pn	07 20 14.6	-2.3
SML	Sawmill	14.51	41		Pn	07 20 16.8	-2.2
GLI	Glacier Island	14.58	46		Pn	07 20 17.1	-2.9
KTH	Kantishna Hill	14.61	33		Pn	07 20 21.2	+0.9
HIN	Hinchinbrook I	14.64	48		Pn	07 20 18.6	-2.2
TRF	Thorofare Moun	14.75	34		Pn	07 20 22.4	-0.1
FID	Port Fidalgo	14.80	47		Pn	07 20 19.7	-3.2
SCM	Sheep Creek Mo	14.93	42	P	Pn	07 20 23.0	-1.8
SCM	Sheep Creek Mo	14.93	42		Pn	07 20 23.0	-1.8
BPAW	Bear Paw Mtn.	14.96	31		Pn	07 20 25.4	+0.3
BPAW				IAmb	IAmb	07 20 44.2	
	comp=Z,886nm,2.0s						
EYAK	Cordova Ski Ar	15.04	48		Pn	07 20 22.2	-3.9
RND	Reindeer	15.22	36	P	Pn	07 20 28.3	-0.4
RND				pmax	pmax		
	comp=Z,90nm,0.9s						
RND	Reindeer	15.22	36		Pn	07 20 28.3	-0.4
KLU	Klutina	15.36	44	Pn	Pn	07 20 27.5	-2.9
KLU				IAmb	IAmb	07 20 41.0	
	comp=Z,237nm,1.0s						
MCK	McKinley	15.40	34	P	Pn	07 20 32.2	+1.4
	baz=231,SNR=17						
KAIM	Kayak Island	15.44	51		Pn	07 20 31.2	-0.3
KAIM				IAmb	IAmb	07 21 06.7	
	comp=Z,321nm,1.0s						
RAGM	Ragged Mountai	15.48	49		Pn	07 20 29.6	-2.3
RAGM				IAmb	IAmb	07 20 40.8	
	comp=Z,202nm,0.7s						
BWN	Browne	15.50	33		Pn	07 20 33.2	+1.0
BWN				IAmb	IAmb	07 20 59.2	
	comp=Z,267nm,1.1s						
M24K	Tolsona, Glenn	15.54	42	P	Pn	07 20 30.6	-2.2
	baz=241,SNR=86						
M24K	Tolsona, Glenn	15.54	42		Pn	07 20 30.4	-2.4
M24K				IAmb	IAmb	07 20 48.9	
	comp=Z,469nm,0.9s						
IMAR	Indian Mountai	15.62	23		Pn	07 20 34.0	+0.3
HMT	Hamilton	15.65	50		Pn	07 20 32.5	-1.7
MLY	Manley	15.69	29	P	Pn	07 20 34.5	-0.2
	baz=224,SNR=351						
SUCK	Suckling Hills	15.79	51		Pn	07 20 35.8	-0.2
SUCK				IAmb	IAmb	07 20 56.6	
	comp=Z,522nm,1.2s						
NEA2	Nenana	15.91	32	P	Pn	07 20 37.1	-0.4
	baz=228,SNR=48						
N25K	Chitina, Valde	15.98	45	P	Pn	07 20 36.1	-2.4
	baz=245,SNR=50						
N25K	Chitina, Valde	15.98	45		Pn	07 20 35.5	-3.0
RDOG	Red Dog Mine	16.02	8		Pn	07 20 39.3	+0.4
WRH	Wood River Hil	16.15	33		Pn	07 20 37.9	-2.6
I23K	Minto, Yukon-K	16.19	30	P	Pn	07 20 41.3	+0.2
	baz=226,SNR=128						
I23K	Minto, Yukon-K	16.19	30		Pn	07 20 41.0	0.0
I23K				IAmb	IAmb	07 21 00.2	
	comp=Z,473nm,1.4s						
PAX	Paxson	16.25	40	P	Pn	07 20 40.2	-1.8
PAX				pmax	pmax		
	comp=Z,59nm,0.8s						
PAX	Paxson	16.25	40		Pn	07 20 40.2	-1.8
GLB	Gilahina Butte	16.26	46		Pn	07 20 39.3	-2.8
CRQM	Cirque	16.32	49		Pn	07 20 41.1	-1.8
CRQM				IAmb	IAmb	07 20 57.4	
	comp=Z,361nm,1.1s						
VRDI	Verde Repeater	16.34	47		Pn	07 20 40.7	-2.5
VRDI				IAmb	IAmb	07 21 05.1	
	comp=Z,530nm,1.7s						
CCB	Clear Creek Bu	16.36	33		Pn	07 20 42.1	-1.1
MDM	Murphy Dome	16.42	32		Pn	07 20 43.1	-0.9
TGL	Tana Glacier	16.46	49	Pn	Pn	07 20 44.3	-0.4
TGL				IAmb	IAmb	07 20 52.8	
	comp=Z,392nm,1.0s						
TCOL	CIGO, UAF Yank	16.48	32	P	Pn	07 20 43.6	-1.2
	baz=230,SNR=28						
TCOL	CIGO, UAF Yank	16.48	32		Pn	07 20 44.0	-0.7
COLA	College	16.49	32	i P	Pn	07 20 43.3	-1.5
COLA	College	16.49	32		Pn	07 20 43.9	-0.9
HDA	Harding Lake	16.50	34	P	Pn	07 20 43.6	-1.4
	baz=233,SNR=36						
HDA	Harding Lake	16.50	34		Pn	07 20 44.1	-0.9
MCARA	McCarthy VSAT	16.59	47		Pn	07 20 44.2	-2.0
ISLE	Juniper Island	16.64	50		Pn	07 20 45.6	-1.4
ISLE				IAmb	IAmb	07 21 08.5	
	comp=Z,595nm,1.3s						
MESA	MESA	16.70	51		Pn	07 20 47.9	+0.1
MESA				IAmb	IAmb	07 20 56.9	
	comp=Z,773nm,1.0s						
IL31		16.75	34		Pn	07 20 46.6	-1.5
ILAR	Eielson Array	16.75	34	Pn	Pn	07 20 46.1	-2.0
	comp=Z,1.1nm,0.3s,baz=237,slow=8.1,SNR=113						
ILAR				LR	LR	07 27 54.8	
	comp=Z,8μm,18.1s,baz=235,slow=40						
ILAR				ScP	ScP	07 29 09.2	-0.1
	comp=Z,0.0nm,0.3s,baz=294,slow=4.5,SNR=5.0						
BALM	Baldy	16.78	48	P	Pn	07 20 47.0	-1.7
BALM				pmax	pmax		
	comp=Z,140nm,1.0s						
BALM	Baldy	16.78	48		Pn	07 20 48.0	-0.7
POKR	Poker Plat Res	16.78	32	P	Pn	07 20 47.1	-1.4
	baz=230,SNR=36						
POKR	Poker Plat Res	16.78	32		Pn	07 20 46.7	-1.8
YAH	Yahtse	16.85	51		Pn	07 20 49.1	-0.6
YAH				IAmb	IAmb	07 21 05.1	
	comp=Z,477nm,0.8s						
RIDG	Independent Ri	16.89	38		Pn	07 20 48.8	-1.3
BARN	Barnard Glacie	17.10	49		Pn	07 20 51.5	-1.3
DOT	Dot Lake	17.15	39		Pn	07 20 52.1	-1.1
CTGM	Chitina Glacie	17.22	49		Pn	07 20 52.9	-1.4
CTGM				IAmb	IAmb	07 21 11.7	
	comp=Z,781nm,1.6s						
SCRK	Sand Creek	17.34	38	P	Pn	07 20 54.4	-1.3
	baz=239,SNR=65						
COLD	Coldfoot	17.47	24	P	P	07 20 57.7	-0.5
	baz=220,SNR=59						
COLD	Coldfoot	17.47	24		Pn	07 20 56.0	-1.2
PCA	Pinnacle	17.50	52		Pn	07 20 55.9	-1.7
PRP	Porcupine Dome	17.66	33		Pn	07 20 57.3	-2.4
BCPM	Bancas Point	17.77	53	P	Pn	07 20 59.3	-1.6
BCAR	Beaver Creek A	17.79	42	P	Pn	07 20 59.3	-1.9
FYU	Fort Yukon	18.41	30	P	P	07 21 06.0	-2.6
FYU				IAmb	IAmb	07 21 24.6	
	comp=Z,461nm,1.6s						
TOLK	Toolik Lake Re	18.72	22	P	Pn	07 21 12.6	+0.1
	baz=218,SNR=39						
TOLK	Toolik Lake Re	18.72	22	P	P	07 21 11.9	-0.1
EGAK	Eagle	18.81	38	P	P	07 21 11.8	-1.2
HYT	Haines Junctio	18.99	51	P	P	07 21 15.2	0.0

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HYT                                   IAmb     IAmb     07 21 33.9
        comp=Z,779nm,1.3s
SIT     Sitka             19.72  63   P        P        07 21 22.8  -0.1
SIT                                   pmax     pmax
        comp=Z,159nm,1.1s
SIT     Sitka             19.72  63   P        P        07 21 22.8  -0.1
PET     Petropavlovsk     19.73 285  eP        P        07 21 21.8  -1.4
PET                                  eS        S        07 24 56.1  -8.5
PET                                   pmax     pmax
        comp=Z,3µm,6.6s
PET                                   pmax     pmax
        comp=Z,160nm,1.4s
PET                                   MLR      MLR
        comp=Z,7µm,21.0s
PET     Petropavlovsk     19.73 285   P        P        07 21 23.8  +0.6
PET                                   IAmb     IAmb     07 21 41.1
        comp=Z,241nm,1.0s
A21K    Barrow            19.81  11   P        P        07 21 22.8  -1.0
        baz=202
A21K    Barrow            19.81  11   P        P        07 21 23.5  -0.4
SKAG    Skagway           19.84  56   P        Pn       07 21 26.6  +0.6
BESE    Bessie Mountai    20.01  58   P        P        07 21 26.1  -0.1
BESE                                  IAmb     IAmb     07 21 48.3
        comp=Z,311nm,1.1s
BESE                                  IAMs_20  IAMs_20  07 29 48.4
        comp=Z,8µm,20.0s
WHY     Whitehorse        20.23  52   P        Pn       07 21 29.7  -0.9
WHY                                   IAMs_20  IAMs_20  07 30 34.5
        comp=Z,8µm,20.0s
JIS     Juneau Island     20.24  59   P        Pn       07 21 29.9  -0.8
JIS                                   IAmb     IAmb     07 21 54.1
        comp=Z,387nm,1.4s
PEA0B   Petropavlovsk-    20.28 286ceP         P        07 21 28.6  -0.6
PEA0B   Petropavlovsk-    20.28 286   P        P        07 21 28.7  -0.5
PEA0B                                 IAmb     IAmb     07 21 44.1
        comp=Z,518nm,1.2s
PETK    Petropavlovsk-    20.28 286   P        P        07 21 28.8  -0.4
        comp=Z,100nm,0.5s,baz=88,slow=13,SNR=279
PETK                                  PcP      PcP      07 25 43.7  +1.7
        comp=Z,12nm,0.9s,baz=74,slow=8.0,SNR=3.5
PETK                                  LR       LR       07 29 46.3
        comp=Z,4µm,20.7s,baz=93,slow=38
PETK    Petropavlovsk-    20.28 286   P        P        07 21 28.0  -1.2
PETK    Petropavlovsk-    20.28 286   P        P        07 21 28.0  -1.2
CRAG    Craig             21.04  67   P        P        07 21 40.0  +2.7
CRAG                                  IAmb     IAmb     07 22 11.8
        comp=Z,798nm,1.9s
WRAK    Wrangell Islan    21.38  65   IAMs_20  IAMs_20  07 30 37.4
        comp=Z,8µm,19.0s
DLBC    Dease Lake        22.54  59   P        P        07 21 54.3  +0.8
        comp=Z,47nm,1.0s,baz=256,slow=12,SNR=24
DLBC    Dease Lake        22.54  59   P        P        07 21 53.7  +0.2
DLBC                                  IAMs_20  IAMs_20  07 31 24.3
        comp=Z,9µm,19.0s
SEY     Seymchan          23.01 313   P        P        07 21 57.9  -0.3
        comp=Z,27nm,0.8s,baz=101,slow=9.0,SNR=70
SEY                                   PcP      PcP      07 25 48.3  +1.1
        comp=Z,19nm,0.8s,baz=165,slow=2.1,SNR=5.4
SEY                                   LR       LR       07 31 23.6
        comp=Z,8µm,18.1s,baz=107,slow=38
SEY     Seymchan          23.01 313 i P        P        07 21 58.0  -0.3
INK     Inuvik            23.14  33   P        P        07 21 58.3  -1.3
        comp=Z,37nm,0.7s,baz=229,slow=11,SNR=90
INK                                   PcP      PcP      07 25 48.8  +1.4
        comp=Z,18nm,0.9s,baz=293,slow=4.3,SNR=3.1
INK     Inuvik            23.14  33   P        P        07 21 57.4  -2.2
INK                                   pmax     pmax
        comp=Z,284nm,1.6s
INK                                   MLR      MLR
        comp=Z,7µm,20.0s
INK     Inuvik            23.14  33   P        P        07 21 57.4  -2.2
INK                                   IAmb     IAmb     07 22 04.2
        comp=Z,284nm,1.6s
INK                                   IAMs_20  IAMs_20  07 31 47.5
        comp=Z,7µm,20.0s
MA2     Magadan           23.52 304   P        P        07 22 04.2  +0.8
        comp=Z,29nm,0.6s,baz=82,slow=9.5,SNR=20
MA2                                   PcP      PcP      07 25 49.3  +1.0
        comp=Z,4.4nm,0.5s,baz=102,slow=4.3,SNR=3.9
MA2     Magadan           23.52 304ceP         P        07 22 03.2  -0.2
MA2                                   pmax     pmax
        comp=Z,168nm,2.5s
MA2     Magadan           23.52 304   P        P        07 22 03.2  -0.2
BBB     Bella Bella       24.60  74   P        P        07 22 13.9  +0.3
        comp=Z,42nm,1.0s,baz=276,slow=5.8,SNR=3.1
C36M    Paulatuk          26.72  34   P        P        07 22 31.8  -0.9
        baz=253,SNR=48
C36M    Paulatuk          26.72  34   P        P        07 22 31.7  -0.9
C36M                                  IAMs_20  IAMs_20  07 34 01.9
        comp=Z,5µm,18.0s
D03D    Eldon             29.34  81   P        P        07 22 57.0  +0.7
        baz=296,SNR=12
B05A    Bryant            29.62  79   P        P        07 22 59.0  +0.3
        baz=296,SNR=33
D04E    Lakebay           29.70  81   P        P        07 22 59.6  +0.2
        baz=297
TYV     Tymovskoe         29.82 287  eP        P        07 23 01.1  +0.7
TYV                                  eS        S        07 28 00.2  +4.3
TYV                                   pmax     pmax
        comp=Z,22nm,1.5s
TYV                                   pmax     pmax
        comp=Z,600nm,4.5s
TYV                                   smax     smax
        comp=E,1µm,5.0s
B06A    Marblemount       29.88  78   P        P        07 23 01.9  +0.9
B06A                                  IAMs_20  IAMs_20  07 33 35.6
        comp=Z,4µm,19.0s
YKA     Yellowknife Ar    29.95  49   P        P        07 23 01.8  +0.3
        comp=Z,14nm,0.6s,baz=274,slow=7.0,SNR=104
YKA                                   PcP      PcP      07 26 05.1  +1.7
        comp=Z,7.5nm,0.8s,baz=282,slow=1.5,SNR=7.5
YKA                                   ScP      ScP      07 29 45.0  +0.7
        comp=Z,3.5nm,1.0s,baz=292,slow=2.5,SNR=6.9
YKA                                   LR       LR       07 37 07.3
        comp=Z,8µm,19.2s,baz=0.0,slow=41
F04D    Rainier, OR       30.07  84   P        P        07 23 02.2  -0.5
        baz=299
E04D    Cinebar           30.11  82   P        P        07 23 03.6  +0.5
        baz=298,SNR=14
NKL     Nikolayevsk       30.16 292  eP        P        07 22 56.9  -6.4
NKL                                  eS        S        07 27 52.8  -8.3
NKL                                   pmax     pmax
        comp=E,86nm,0.9s
NKL                                   pmax     pmax
        comp=N,20nm,1.4s
NKL                                   pmax     pmax
        comp=Z,53nm,1.6s
NKL                                   smax     smax
        comp=E,40nm,0.7s
NKL                                   smax     smax
        comp=N,10.0nm,0.5s
NKL                                   MLR      MLR
        comp=N,166nm,12.0s
NKL                                   MLR      MLR
        comp=E,974nm,17.0s
NKL                                   MLR      MLR
        comp=Z,5µm,17.0s
D05A    Enumclaw          30.17  81   P        P        07 23 05.4  +1.8
G03D    McMinnville, O    30.34  85   P        P        07 23 05.2  +0.1
        baz=300
LON     Longmire          30.48  82   P        P        07 23 07.3  +0.9
LON                                   pmax     pmax
        comp=Z,203nm,2.0s
LON                                   MLR      MLR
        comp=Z,2µm,20.0s
LON     Longmire          30.48  82   P        P        07 23 07.3  +0.9
LON                                   IAmb     IAmb     07 23 31.4
        comp=Z,202nm,1.9s
C06D    Leavenworth       30.50  79   P        P        07 23 07.0  +0.5
        baz=296
I02D    Swisshome         30.55  87   P        P        07 23 06.9   0.0
        baz=302
COR     Corvallis         30.64  86   P        P        07 23 10.0  +2.3
COR                                   pmax     pmax
        comp=Z,83nm,1.3s
LTY     Liberty           30.93  80   P        P        07 23 11.0  +0.5
LTY                                   IAmb     IAmb     07 23 34.8
        comp=Z,152nm,1.7s
LTY                                   IAMs_20  IAMs_20  07 34 11.5
        comp=Z,4µm,18.0s
J01E    Myrtle Point      31.01  89   P        P        07 23 10.8  -0.1
        baz=303
H04D    Lebanon           31.02  86   P        P        07 23 11.0  -0.1
        baz=301,SNR=7.0
I03D    Drain, OR         31.07  88   P        P        07 23 12.0  +0.4
        baz=302,SNR=5.9
F05D    White Salmon      31.11  83   P        P        07 23 12.9  +1.0
        baz=299,SNR=5.7
B08A    Colville Reser    31.24  77   P        P        07 23 13.3  +0.2
B08A                                  IAmb     IAmb     07 23 17.4
        comp=Z,151nm,1.5s
H04A    Detroit Lake      31.27  85   P        P        07 23 14.3  +1.0
H04A                                  IAmb     IAmb     07 23 27.7
        comp=Z,134nm,1.2s
YSS     Yuzh-Sakhalins    31.42 280⇓eP         P        07 23 14.0  -0.6
YSS                                  e                  07 23 24.3
YSS                                  eS        S        07 28 20.0  -1.0
YSS                                   pmax     pmax
        comp=Z,30nm,0.8s
YSS                                   MLR      MLR
        comp=Z,3µm,15.0s
YSS     Yuzh-Sakhalins    31.42 280   P        P        07 23 14.4  -0.1
YSS                                   IAmb     IAmb     07 23 28.9
        comp=Z,153nm,1.5s
YSS                                   IAMs_20  IAMs_20  07 34 24.2
        comp=Z,6µm,22.0s
K02D    Willamette Mer    31.43  90   P        P        07 23 14.9  +0.1
        baz=304,SNR=12
G05D    Wamic, OR         31.52  84   P        P        07 23 15.7  +0.2
        baz=300,SNR=9.3
I04A    Tendick Farm,     31.60  87   P        P        07 23 15.9  -0.4
        baz=302,SNR=19
E07A    Sunnyside         31.76  81   P        P        07 23 19.1  +1.5
E07A                                  IAmb     IAmb     07 23 23.0
        comp=Z,150nm,1.6s
L02E    Cave Junction     31.77  90   P        P        07 23 18.3  +0.6
        baz=304,SNR=9.5
HUMO    Hull Mountain     31.91  89   P        P        07 23 18.7  -0.3
I05D    Terrebonne, OR    31.97  85   P        P        07 23 20.3  +0.8
        baz=302,SNR=14
HAWA    Hanford           32.03  81   P        P        07 23 20.4  +0.4
HAWA                                  IAmb     IAmb     07 23 24.5
        comp=Z,138nm,1.2s
F07A    Phinny Hill Vi    32.04  82   P        P        07 23 21.5  +1.5
F07A                                  IAmb     IAmb     07 23 25.4
        comp=Z,200nm,1.5s
J04D    Umpqua Nationa    32.08  88   P        P        07 23 21.8  +1.1
        baz=303,SNR=8.8
D08A    Wollman Farm,     32.09  79   P        P        07 23 21.0  +0.5
D08A                                  IAmb     IAmb     07 23 24.4
        comp=Z,100nm,1.3s
C09A    Chrisman Ranch    32.13  78   P        P        07 23 21.4  +0.5
C09A                                  IAmb     IAmb     07 23 24.9
        comp=Z,114nm,1.3s
KHMM    Horse Mountain    32.42  93   P        P        07 23 24.4  +0.8
KHMM                                  IAmb     IAmb     07 23 44.9
        comp=Z,80nm,1.0s
KHMM                                  IAMs_20  IAMs_20  07 35 42.3
        comp=Z,3µm,18.0s
PINE    Pine Mountain     32.50  86   P        P        07 23 25.6  +1.3
PINE                                  IAmb     IAmb     07 23 39.3
        comp=Z,89nm,1.2s
L04D    Klamath Falls     32.53  89   P        P        07 23 25.4  +0.9
        baz=304,SNR=12
YBH     Yreka Blue Hor    32.55  90   P        P        07 23 25.5  +0.8
        comp=Z,14nm,0.8s,baz=299,slow=6.6,SNR=30
YBH     Yreka Blue Hor    32.55  90   P        P        07 23 26.1  +1.4
YBH                                   pmax     pmax
        comp=Z,128nm,1.6s
YBH     Yreka Blue Hor    32.55  90   P        P        07 23 26.1  +1.4
YBH                                   IAmb     IAmb     07 23 42.2
        comp=Z,128nm,1.6s
J05D    Fort Rock, OR     32.59  87   P        P        07 23 25.8  +0.7
        baz=303,SNR=23
NEW     Newport           32.61  76   P        P        07 23 26.0  +0.9
        comp=Z,27nm,0.8s,baz=298,slow=6.4,SNR=36
NEW     Newport           32.61  76   P        P        07 23 25.7  +0.6
        baz=297,SNR=34
NEW     Newport           32.61  76   P        P        07 23 25.2  +0.1
NEW                                   pmax     pmax
        comp=Z,82nm,1.3s
NEW     Newport           32.61  76   P        P        07 23 25.2  +0.1
NEW                                   IAmb     IAmb     07 23 42.6
        comp=Z,82nm,1.2s
K04D    Chiloquin, OR     32.64  88   P        P        07 23 25.6  +0.1
        baz=304,SNR=5.2
M02C    Callahan          32.66  91   P        P        07 23 27.1  +1.4
        baz=305,SNR=15
E09A    Wood Farm, Sta    32.81  80   P        P        07 23 27.6  +0.8
E09A                                  IAmb     IAmb     07 23 31.5
        comp=Z,201nm,1.4s
E09A                                  IAMs_20  IAMs_20  07 35 37.1
        comp=Z,3µm,18.0s
KMRM    Mail Ridge        32.83  93   P        P        07 23 28.5  +1.4
G08A    Pilot Rock        32.93  82   P        P        07 23 26.3  -1.7
G08A                                  IAmb     IAmb     07 23 32.8
        comp=Z,84nm,1.4s
JKA     Kamikawa-asahi    32.93 275   P        P        07 23 27.4  -0.5
JKA                                   IAmb     IAmb     07 23 46.5
        comp=Z,110nm,1.0s
JKA                                   IAMs_20  IAMs_20  07 36 25.4
        comp=Z,5µm,20.0s
ASAJ    Asahikawa         32.94 275   P        P        07 23 28.7  +0.8
        comp=Z,36nm,0.8s,baz=6.1,slow=6.2,SNR=13
ASAJ                                  LR       LR       07 36 26.3
        comp=Z,5µm,20.6s,baz=80,slow=36
ASAJ    Asahikawa         32.94 275   P        P        07 23 27.4  -0.5
ASAJ                                  pmax     pmax
        comp=Z,110nm,1.0s
ASAJ                                  MLR      MLR
        comp=Z,5µm,20.0s
TIXI    Tiksi             32.99 329c iP        P        07 23 26.9  -1.2
TIXI    Tiksi             32.99 329   P        P        07 23 27.6  -0.4
TIXI                                  IAMs_20  IAMs_20  07 38 59.8
        comp=Z,4µm,18.0s
N02D    Trinity Center    33.00  92   P        P        07 23 30.0  +1.4
        baz=306,SNR=12
M04C    Macdoel           33.06  90   P        P        07 23 30.5  +1.3
        baz=305,SNR=17
K05A    Summer Lake       33.11  87   P        P        07 23 28.7  -1.0
K05A                                  IAmb     IAmb     07 23 47.2
        comp=Z,151nm,1.3s
I07A    Izee              33.22  84   P        P        07 23 30.9  +0.4
I07A                                  IAmb     IAmb     07 24 06.1
        comp=Z,106nm,1.5s
KCPM    Cahto Peak        33.23  94   P        P        07 23 32.1  +1.4
KCPM                                  IAmb     IAmb     07 23 53.2
        comp=Z,123nm,1.3s
WDC     Whiskeytown Da    33.33  92   P        P        07 23 31.4   0.0
WDC                                   pmax     pmax
        comp=Z,58nm,1.1s
WDC     Whiskeytown Da    33.33  92   P        P        07 23 31.4   0.0
WDC                                   IAmb     IAmb     07 23 52.9
        comp=Z,58nm,1.1s
O02D    Mt. Diablo Mer    33.42  93   P        P        07 23 33.6  +1.3
        baz=307,SNR=26
GRNR    Gornyy            33.49 290⇓iP         P        07 23 32.8  +0.1
GRNR                                 eS        S        07 28 55.3  +2.0
GRNR                                  pmax     pmax
        comp=N,20nm,1.0s
GRNR                                  pmax     pmax
        comp=E,30nm,1.0s
GRNR                                  pmax     pmax
        comp=Z,70nm,1.0s
GRNR                                  smax     smax
        comp=N,6.0nm,0.9s
GRNR                                  MLR      MLR
        comp=N,2µm,16.0s
YAK     Yakutsk           33.52 311   P        P        07 23 32.3  -0.5
        comp=N,16nm,0.4s,baz=88,slow=4.8,SNR=7.1
YAK                                   PcP      PcP      07 26 13.9  +0.9
        comp=N,8.2nm,0.4s,baz=9.8,slow=1.6,SNR=4.7
YAK     Yakutsk           33.52 311  eP        P        07 23 30.7  -2.1
YAK                                  e*PP      pwP      07 23 42.3  +0.6
YAK                                  ePPP      PPP      07 24 49.7
YAK                                  e                  07 26 12.2
YAK                                  eS        S        07 28 49.9  -3.5
YAK                                  eSS       SnSn     07 30 54.7  -1.1
YAK                                   pmax     pmax
        comp=Z,34nm,0.9s
YAK                                   pmax     pmax
        comp=E,19nm,1.4s
YAK                                   smax     smax
        comp=N,155nm,5.0s
YAK                                   smax     smax
        comp=E,164nm,4.3s
YAK                                   MLR      MLR
        comp=Z,10µm,24.0s
YAK                                   MLR      MLR
        comp=N,4µm,21.0s
YAK                                   MLR      MLR
        comp=E,6µm,21.0s
YAK     Yakutsk           33.52 311   P        P        07 23 31.3  -1.5
YAK                                   IAmb     IAmb     07 23 45.1
        comp=Z,62nm,0.8s
F10A    Beach Ranch, E    33.63  80   P        P        07 23 34.2  +0.1
F10A                                  IAmb     IAmb     07 23 59.1
        comp=Z,75nm,1.1s
JEM     Erimo             33.74 272   IAMs_20  IAMs_20  07 39 20.4
        comp=Z,5µm,20.0s
ERM     Erimo             33.75 272ceP         P        07 23 35.9  +0.9
ERM                                   pmax     pmax
        comp=Z,212nm,1.7s
ERM     Erimo             33.75 272   P        P        07 23 36.2  +1.3
ERM     Erimo             33.75 272   IAMs_20  IAMs_20  07 39 48.6
        comp=Z,5µm,20.0s
MOD     Modoc Plateau     33.93  88   P        P        07 23 38.6  +1.8
MOD                                   IAmb     IAmb     07 23 41.4
        comp=Z,66nm,1.1s
O03E    Paynes Creek      33.95  92   P        P        07 23 37.6  +0.7
        baz=307,SNR=28
HOPS    Hopland Field     33.97  95   P        P        07 23 38.1  +1.1
HOPS                                  IAmb     IAmb     07 23 56.1
        comp=Z,196nm,1.5s
POHA    Pohakuloa         34.09 158   IAMs_20  IAMs_20  07 39 20.1
        comp=Z,4µm,18.0s
WALA    Waterton Lakes    34.15  73   P        P        07 23 38.2  -0.3
WALA                                  IAmb     IAmb     07 23 56.3
        comp=Z,72nm,1.1s
WALA                                  IAMs_20  IAMs_20  07 36 47.7
        comp=Z,4µm,20.0s
BMO     Blue Mountains    34.16  82   P        P        07 23 40.1  +1.4
BMO                                   pmax     pmax
        comp=Z,113nm,1.6s
BMO                                   MLR      MLR
        comp=Z,2µm,19.0s
BMO     Blue Mountains    34.16  82   P        P        07 23 40.1  +1.4
BMO                                   IAmb     IAmb     07 23 43.7
        comp=Z,113nm,1.6s
KHLU    Kahalu`u          34.16 158   IAMs_20  IAMs_20  07 39 12.1
        comp=Z,4µm,18.0s
GDXM    Geysers           34.25  95   P        P        07 23 40.9  +1.4
GDXM                                  IAmb     IAmb     07 24 02.1
        comp=Z,84nm,1.3s
JEW     Eniwo             34.33 274   IAMs_20  IAMs_20  07 36 18.2
        comp=Z,3µm,21.0s
ORV     Oroville          34.58  93   P        P        07 23 42.4  +0.1
ORV                                   pmax     pmax
        comp=Z,34nm,1.3s
ORV                                   MLR      MLR
        comp=Z,2µm,18.0s
ORV     Oroville          34.58  93   P        P        07 23 42.4  +0.1
WVOR    Wild Horse Val    34.66  86   P        P        07 23 43.5  +0.5
WVOR                                  pmax     pmax
        comp=Z,63nm,1.2s
WVOR    Wild Horse Val    34.66  86   P        P        07 23 43.5  +0.5
WVOR                                  IAmb     IAmb     07 23 57.4
        comp=Z,63nm,1.1s
WVOR                                  IAMs_20  IAMs_20  07 36 04.6
        comp=Z,3µm,18.0s
BEKR    Beckworth         35.09  91   P        P        07 23 47.2  +0.3
MSO     Missoula          35.18  77   P        P        07 23 47.2  -0.3
        baz=300,SNR=88
MSO     Missoula          35.18  77   P        P        07 23 47.2  -0.3
MSO                                   IAmb     IAmb     07 23 51.9
        comp=Z,125nm,1.2s
AFDM    Forest Hills D    35.28  93   P        P        07 23 48.6  +0.3
JTM     Tenmabayashi      35.74 272   IAMs_20  IAMs_20  07 41 24.7
        comp=Z,4µm,21.0s
PAHR    Pah Rah Range     35.79  91   P        P        07 23 53.7  +0.8
PAHR                                  IAmb     IAmb     07 24 10.2
        comp=Z,66nm,1.0s
MFID    Camas Ranch       35.83  83   P        P        07 23 53.0  -0.1
MFID                                  IAmb     IAmb     07 23 57.7
        comp=Z,94nm,1.4s
VCNR    Virginia City     35.88  91   P        P        07 23 54.8  +1.1
VCNR                                  IAmb     IAmb     07 24 08.0
        comp=Z,84nm,1.4s
PNTR    Pine Nut          36.03  92   P        P        07 23 55.8  +0.8
PNTR                                  IAmb     IAmb     07 24 09.4
        comp=Z,63nm,0.9s
TEY     Ternei            36.09 281⇑eP         P        07 23 54.2  -1.0
TEY                                  e                  07 24 07.2
TEY                                   pmax     pmax
        comp=N,10.0nm,1.0s
TEY                                   pmax     pmax
        comp=Z,40nm,0.7s
TEY                                   pmax     pmax
        comp=E,30nm,0.6s
TEY                                   MLR      MLR
        comp=N,300nm,40.0s
CMB     Columbia Colle    36.21  94   P        P        07 23 56.9  +0.6
CMB                                   pmax     pmax
        comp=Z,76nm,1.4s
CMB     Columbia Colle    36.21  94   P        P        07 23 56.9  +0.6
RES     Resolute Bay      36.22  26   P        P        07 23 55.5  -0.4
RES                                   pmax     pmax
        comp=Z,78nm,1.9s
RES                                   MLR      MLR
        comp=Z,4µm,20.0s
RES     Resolute Bay      36.22  26   P        P        07 23 55.5  -0.4
RES                                   IAMs_20  IAMs_20  07 40 46.3
        comp=Z,4µm,20.0s
SAO     San Andreas Ge    36.37  96   P        P        07 23 59.6  +1.9
SAO                                   pmax     pmax
        comp=Z,32nm,1.1s
SAO                                   MLR      MLR
        comp=Z,2µm,18.0s
SAO     San Andreas Ge    36.37  96   P        P        07 23 59.6  +1.9
WAKR    Walker            36.49  92   P        P        07 24 00.4  +1.4
WAKR                                  IAmb     IAmb     07 24 34.4
        comp=Z,145nm,1.7s
HRY     Holter Researc    36.50  76   P        P        07 23 58.7  -0.1
HLID    Hailey            36.60  82   P        P        07 24 00.0  +0.2
        baz=303,SNR=64
HLID    Hailey            36.60  82   P        P        07 24 00.4  +0.6
HLID                                  IAmb     IAmb     07 24 24.2
        comp=Z,140nm,1.6s
DLMT    Dillon            36.74  78   P        P        07 24 00.8  -0.1
BCYI    Bear Canyon       36.81  80   P        P        07 24 01.9  +0.3
MCMT    McKenzie Canyo    36.87  79   P        P        07 24 02.6  +0.5
KLR     Kul'dur           36.87 290   P        P        07 24 00.4  -1.4
        comp=Z,12nm,0.5s,baz=66,slow=8.5,SNR=40
KLR     Kul'dur           36.87 290ceP         P        07 24 00.1  -1.7
KLR                                   pmax     pmax
        comp=Z,45nm,1.2s
RYN     Ryan              36.98  91   P        P        07 24 02.9  -0.1
EGMT    Eagleton          37.07  73   P        P        07 24 03.6   0.0
        baz=299,SNR=35
EGMT    Eagleton          37.07  73   P        P        07 24 02.8  -0.8
EGMT                                  IAmb     IAmb     07 24 18.7
        comp=Z,112nm,1.1s
EGMT                                  IAMs_20  IAMs_20  07 39 41.0
        comp=Z,3µm,19.0s
PMPB    Monarch Peak      37.12  96   P        P        07 24 05.1  +1.0
PMPB                                  IAmb     IAmb     07 24 40.6
        comp=Z,84nm,1.1s
BOZ     Bozeman (W)       37.19  77   P        P        07 24 04.2  -0.5
        baz=302,SNR=48
BOZ     Bozeman (W)       37.19  77   P        P        07 24 05.4  +0.6
BOZ                                   pmax     pmax
        comp=Z,167nm,1.5s
BOZ                                   MLR      MLR
        comp=Z,2µm,19.0s
BOZ     Bozeman (W)       37.19  77   P        P        07 24 05.4  +0.6
BOZ                                   IAmb     IAmb     07 24 09.1
        comp=Z,167nm,1.5s
LHV     Little Huntoon    37.23  92   P        P        07 24 05.2  +0.4
NVAR    Mina Array Bea    37.24  91   P        P        07 24 06.5  +1.2
        comp=Z,6.3nm,0.8s,baz=295,slow=8.6,SNR=32
NVAR    Mina Array Bea    37.24  91   P        P        07 24 05.2  -0.1
MDPB    Devils Postpil    37.26  93   P        P        07 24 06.4  +0.9
OMMB    Old Mammoth Mi    37.32  93   P        P        07 24 07.3  +1.1
NV11    Mina Array Sit    37.33  91   P        P        07 24 07.3  +1.3
ZEA     Zeya              37.39 298ceP         P        07 24 04.9  -1.2
ZEA                                  e                  07 24 18.2
ZEA                                  e                  07 25 35.7
ZEA                                  ePPP      PPP      07 25 55.4
ZEA                                  eS        S        07 29 46.2  -6.8
ZEA                                   pmax     pmax
        comp=Z,30nm,1.0s
ZEA                                   pmax     pmax
        comp=Z,200nm,5.9s
ZEA                                   pmax     pmax
        comp=N,200nm,6.1s
ZEA                                   pmax     pmax
        comp=E,300nm,10.6s
ZEA                                   pmax     pmax
        comp=Z,300nm,10.4s
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ZEA                                    smax     smax
       comp=N,200nm,5.3s
ZEA                                    smax     smax
       comp=E,500nm,7.7s
ZEA                                    MLR      MLR
       comp=E,2µm,16.0s
ZEA                                    MLR      MLR
       comp=Z,2µm,16.0s
MLAC   Mammoth, Mammo37.41  93         P        P        07 24 06.1 -0.8
       baz=310
EUNU   Eureka          37.64  16       P        P        07 24 08.2 +0.2
JMM    Marumori        37.69 268       IAMs_20  IAMs_20  07 39 45.9
       comp=Z,3µm,21.0s
H11N2  WAKE ISLAND Hy  37.69 220       T        T        08 05 11.5
       baz=24,slow=76,SNR=214
H11N3  WAKE ISLAND Hy  37.70 220       T        T        08 05 10.2
       baz=24,slow=76,SNR=247
ELK    Elko            37.71  86       P        P        07 24 09.8 +0.5
ELK                                    pmax     pmax
       comp=Z,21nm,1.0s
ELK    Elko            37.71  86       P        P        07 24 09.8 +0.5
ELK                                    IAMs_20  IAMs_20  07 38 04.4
       comp=Z,2µm,18.0s
H11N1  WAKE ISLAND Hy  37.71 220       T        T        08 05 11.0
       baz=24,slow=76,SNR=162
QLMT   Earthquake Lak  37.72  78       P        P        07 24 09.7 +0.3
PAGB   Antelope Grade  37.78  97       P        P        07 24 10.7 +1.0
PAGB                                   IAmb     IAmb     07 24 28.7
       comp=Z,174nm,1.7s
YHL    Hebgen Lake     37.86  78       P        P        07 24 10.5 -0.1
YHL                                    IAmb     IAmb     07 24 14.9
       comp=Z,158nm,1.3s
YHB    Horse Butte     37.90  78       P        P        07 24 11.1 +0.3
YHB                                    IAmb     IAmb     07 24 14.4
       comp=Z,124nm,1.3s
VOG    Valley Oaks Go  37.92  95       P        P        07 24 09.8 -1.0
       baz=311
YMR    Madison River   38.09  78       P        P        07 24 13.0 +0.5
YMR                                    IAmb     IAmb     07 24 16.1
       comp=Z,144nm,1.3s
YHH    Holmes Hill     38.09  78       P        P        07 24 12.5 -0.1
YHH                                    IAmb     IAmb     07 24 16.0
       comp=Z,116nm,1.1s
TPH    Tonopah         38.12  91       P        P        07 24 14.0 +1.3
TPH    Tonopah         38.12  91       P        P        07 24 14.0 +1.3
TPH                                    IAmb     IAmb     07 24 29.9
       comp=Z,151nm,1.1s
TIN    Tinemaha, Big   38.15  93       P        P        07 24 13.6 +0.6
       baz=310
SMMC   Simmler         38.21  97       P        P        07 24 11.4 -1.9
       baz=312,SNR=5.8
YNM    Yellowstone No  38.21  78       P        P        07 24 14.7 +1.2
YNM                                    IAmb     IAmb     07 24 37.7
       comp=Z,132nm,1.3s
YNR    Norris Junctio  38.23  78       P        P        07 24 14.4 +0.7
YNR                                    IAmb     IAmb     07 24 18.5
       comp=Z,243nm,1.4s
YUF    Upper Falls     38.33  78       P        P        07 24 14.6 +0.1
YUF                                    IAmb     IAmb     07 24 19.2
       comp=Z,101nm,1.2s
FFC    Flin Flon       38.38  59       P        P        07 24 14.7 +0.2
FFC                                    pmax     pmax
       comp=Z,93nm,1.7s
FFC                                    MLR      MLR
       comp=Z,7µm,19.0s
FFC    Flin Flon       38.38  59       P        P        07 24 14.7 +0.2
YPP    Pitchstone Pla  38.40  78       P        P        07 24 15.5 +0.4
VES    Vestal, Richgr  38.42  95       P        P        07 24 13.1 -1.9
       baz=311
H17A   Grant Village   38.47  78       P        P        07 24 14.6 -1.1
       baz=303,SNR=56
H17A   Grant Village   38.47  78       P        P        07 24 17.1 +1.4
H17A                                   IAmb     IAmb     07 24 21.5
       comp=Z,194nm,1.4s
H17A                                   IAMs_20  IAMs_20  07 34 03.8
       comp=Z,3µm,19.0s
YNE    Yellowstone No  38.48  77       P        P        07 24 15.7 -0.1
LKWY   Lake            38.48  78       P        P        07 24 17.2 +1.4
LKWY                                   pmax     pmax
       comp=Z,53nm,0.9s
LKWY   Lake            38.48  78       P        P        07 24 17.2 +1.4
LKWY                                   IAMs_20  IAMs_20  07 34 04.1
       comp=Z,2µm,19.0s
YMP    Mirror Lake Pl  38.53  77       P        P        07 24 16.7 +0.4
FLWY   Flagg Ranch     38.56  79       P        P        07 24 17.2 +0.8
FLWY                                   IAmb     IAmb     07 24 20.7
       comp=Z,92nm,1.2s
PKM    Mcpherson Peak  38.60  97       P        P        07 24 17.3 +0.5
       baz=312,SNR=7.5
HVU    Hansel Valley   38.61  83       P        P        07 24 17.1 +0.3
HVU                                    pmax     pmax
       comp=Z,46nm,1.0s
HVU    Hansel Valley   38.61  83       P        P        07 24 17.1 +0.3
CWC    Cottonwood Cre  38.64  94       P        P        07 24 17.2 +0.1
       baz=311
GRAC   Grapevine Rang  38.72  93       P        P        07 24 18.5 +0.9
       baz=310,SNR=13
MOOW   Moose Ponds     38.72  79       P        P        07 24 17.4 -0.4
ECR    Eagle Creek     38.73  80       P        P        07 24 18.9 +1.0
RLMT   Red Lodge       38.85  76       P        P        07 24 19.3 +0.4
       baz=303,SNR=63
RLMT   Red Lodge       38.85  76       P        P        07 24 19.0 +0.1
RLMT                                   IAmb     IAmb     07 24 22.8
       comp=Z,176nm,1.4s
REDW   Red Top Meadow  38.87  80       P        P        07 24 19.4 +0.4
REDW                                   IAmb     IAmb     07 24 24.0
       comp=Z,153nm,1.4s
SNOW   Snow King Moun  38.88  79       P        P        07 24 20.2 +1.1
H11S1  WAKE ISLAND Hy  38.88 219       T        T        08 06 33.7
       baz=23,slow=76,SNR=731
LOHW   Long Hollow     38.88  79       P        P        07 24 19.3 +0.1
H11S2  WAKE ISLAND Hy  38.89 219       T        T        08 06 33.6
       baz=23,slow=76,SNR=575
H11S3  WAKE ISLAND Hy  38.89 219       T        T        08 06 33.6
       baz=23,slow=76,SNR=671
ISA    Isabella, Lake  38.91  95       P        P        07 24 20.1 +0.8
       baz=311,SNR=14
ISA    Isabella, Lake  38.91  95       P        P        07 24 19.3 +0.1
ISA                                    pmax     pmax
       comp=Z,28nm,1.1s
ISA                                    MLR      MLR
       comp=Z,2µm,18.0s
ISA    Isabella, Lake  38.91  95       P        P        07 24 19.3 +0.1
BGU    Big Grassy Mou  38.95  84       P        P        07 24 20.2 +0.5
R11A   Troy Canyon, C  38.95  89       P        P        07 24 20.3 +0.6
       baz=309,SNR=9.9
R11A   Troy Canyon, C  38.95  89       P        P        07 24 21.1 +1.4
AHID   Auburn Hatcher  39.06  81       P        P        07 24 21.0 +0.4
AHID                                   IAMs_20  IAMs_20  07 39 28.4
       comp=Z,3µm,19.0s
SPUT   South Promonto  39.08  83       P        P        07 24 20.7  0.0
JYT    Yasato          39.11 266       IAMs_20  IAMs_20  07 39 22.4
       comp=Z,3µm,20.0s
JSD    Sado            39.14 270       P        P        07 24 21.8 +0.8
MPMC   Manual Prospec  39.25  94       P        P        07 24 21.8 -0.5
       baz=311,SNR=13
USA0B  Ussuriysk Arra  39.32 282     i P        P        07 24 20.5 -2.0
USA0B  Ussuriysk Arra  39.32 282       IAMs_20  IAMs_20  07 38 28.4
       comp=Z,3µm,22.0s
USRK   Ussuriysk Ar.   39.32 282       P        P        07 24 20.6 -1.8
       comp=Z,13nm,0.6s,baz=53,slow=11,SNR=16
USRK                                   PcP      PcP      07 26 32.0 +1.3
       comp=Z,14nm,0.8s,baz=88,slow=2.9,SNR=7.8
USRK                                   LR       LR       07 43 00.2
       comp=Z,3µm,18.9s,baz=61,slow=40
USRK   Ussuriysk Ar.   39.32 282       P        P        07 24 21.2 -1.3
USRK   Ussuriysk Ar.   39.32 282       P        P        07 24 21.2 -1.3
SPR3   Spring Creek 3  39.32  88       P        P        07 24 24.7 +1.8
FURC   Furnace Creek,  39.37  93       P        P        07 24 23.7 +0.8
       baz=310,SNR=14
TPNV   Topopah Spring  39.43  92       P        P        07 24 24.4 +0.7
       baz=310,SNR=15
TPNV   Topopah Spring  39.43  92       P        P        07 24 24.7 +1.0
TPNV                                   pmax     pmax
       comp=Z,145nm,1.8s
TPNV                                   MLR      MLR
       comp=Z,2µm,18.0s
TPNV   Topopah Spring  39.43  92       P        P        07 24 24.7 +1.0
OSI    Osito Audit: C  39.45  97       P        P        07 24 24.1 +0.3
       baz=312
LRMC   Laurel Mtn Rad  39.51  95       P        P        07 24 24.2 -0.2
       baz=312,SNR=7.6
DUG    Dugway, Tooele  39.52  85       P        P        07 24 25.3 +0.9
       baz=307,SNR=41
DUG    Dugway, Tooele  39.52  85       P        P        07 24 25.1 +0.7
DUG                                    pmax     pmax
       comp=Z,100nm,1.5s
DUG    Dugway, Tooele  39.52  85       P        P        07 24 25.1 +0.7
EDW2   Edwards Air Fo  39.72  96       P        P        07 24 26.1 +0.1
       baz=312,SNR=6.9
LAO    LASA Array      39.82  72       P        P        07 24 27.0 +0.3
       baz=302,SNR=14
LAO    LASA Array      39.82  72       P        P        07 24 26.8 +0.1
LAO                                    IAMs_20  IAMs_20  07 39 14.7
       comp=Z,3µm,21.0s
TCUT   Toone Canyon    39.83  83       P        P        07 24 28.2 +1.1
CTU    Camp Tracy      39.87  84       P        P        07 24 27.8 +0.4
SNCC   San Nicolas Is  39.90  99       P        P        07 24 27.7 +0.3
       baz=314
PSUT   Pine Spring     39.90  88       P        P        07 24 29.0 +1.4
DECC   Green Verdugo   39.93  97       P        P        07 24 27.9 +0.1
       baz=313
BW06   Boulder Array   39.99  80       P        P        07 24 28.5 +0.1
       baz=305,SNR=83
BW06   Boulder Array   39.99  80       P        P        07 24 28.0 -0.4
BW06                                   IAmb     IAmb     07 24 31.8
       comp=Z,121nm,1.2s
PD31   Pinedale Array  39.99  80       P        P        07 24 28.3 -0.1
PD31                                   IAmb     IAmb     07 24 31.8
       comp=Z,109nm,1.2s
PDAR   Pinedale Array  39.99  80       P        P        07 24 28.3 -0.1
       comp=Z,33nm,0.7s,baz=300,slow=4.5,SNR=100
PDAR                                   LR       LR       07 40 13.3
       comp=Z,1µm,18.4s,baz=322,slow=35
PDAR   Pinedale Array  39.99  80       P        P        07 24 28.7 +0.3
DGMT   Dagmar          40.07  69       P        P        07 24 28.5 -0.3
       baz=301
DGMT   Dagmar          40.07  69       P        P        07 24 28.6 -0.2
DGMT                                   IAmb     IAmb     07 24 33.0
       comp=Z,121nm,1.2s
DGMT   Dagmar          40.07  69       IAMs_20  IAMs_20  07 41 42.4
       comp=Z,4µm,20.0s
PASC   Pasadena Art C  40.08  97       P        P        07 24 29.1 +0.2
SHOC   Shoshone, Teco  40.10  93       P        P        07 24 28.7 -0.4
       baz=311
JLU    Jordanelle      40.11  84       P        P        07 24 30.4 +0.9
NLU    North Lily Min  40.12  85       P        P        07 24 30.7 +1.2
MAJO   Matsushiro      40.12 268     i P        P        07 24 28.6 -0.7
MAJO                                   pmax     pmax
       comp=Z,48nm,1.1s
MAJO   Matsushiro      40.12 268       P        P        07 24 29.4 +0.2
MAJO                                   IAmb     IAmb     07 24 45.6
       comp=Z,123nm,0.9s
MAJO   Matsushiro      40.12 268       IAMs_20  IAMs_20  07 40 12.3
       comp=Z,4µm,20.0s
MAT    Matsushiro      40.12 268       P        P        07 24 28.3 -1.0
MAT                                    S        S        07 30 34.0 -0.6
MJAR   Matsushiro Arr  40.12 268       P        P        07 24 28.9 -0.4
       comp=Z,18nm,0.9s,baz=51,slow=7.1,SNR=17
MJAR                                   PcP      PcP      07 26 34.9 +1.4
       comp=Z,11nm,1.0s,baz=49,slow=0.7,SNR=4.8
MJAR                                   LR       LR       07 40 44.7
       comp=Z,4µm,21.1s,baz=65,slow=36
MJAR   Matsushiro Arr  40.12 268       P        P        07 24 29.5 +0.2
MJAR                                   pmax     pmax
       comp=Z,68nm,1.2s
MJAR   Matsushiro Arr  40.12 268       P        P        07 24 29.5 +0.2
MWC    Mount Wilson    40.12  96       P        P        07 24 30.2 +0.7
MWC                                    pmax     pmax
       comp=Z,146nm,1.8s
MWC    Mount Wilson    40.12  96       P        P        07 24 30.2 +0.7
GSC    Goldstone, Bar  40.17  94       P        P        07 24 30.5 +0.8
       baz=312,SNR=17
GSC    Goldstone, Bar  40.17  94       P        P        07 24 30.3 +0.6
GSC                                    pmax     pmax
       comp=Z,47nm,1.0s
GSC                                    MLR      MLR
       comp=Z,2µm,19.0s
GSC    Goldstone, Bar  40.17  94       P        P        07 24 30.3 +0.6
RRX    Edison Barstow  40.33  95       S        S        07 30 38.7 +0.9
       baz=312
MPU    Maple Canyon    40.35  84       P        P        07 24 31.6 +0.2
BFSC   Mount Baldy Ra  40.36  96       P        P        07 24 31.5 +0.1
       baz=313,SNR=14
BFSC                                   S        S        07 30 39.7 +1.4
       baz=313
SHPR   Sheep Range     40.39  91       P        P        07 24 33.9 +2.2
MDJ    Mudanjiang      40.52 284       P        P        07 24 31.4 -1.0
MDJ                                    pP       pP       07 24 37.0 -0.3
MDJ                                    sP       sP       07 24 39.4 +0.2
MDJ                                    PP       PP       07 26 05.6  0.0
MDJ                                    S        S        07 30 41.8 +1.5
MDJ                                    pmax     pmax
       comp=Z,17nm,0.8s
MDJ                                    pmax     pmax
       comp=Z,580nm,5.2s
MDJ                                    LR       LR
       comp=Z,1µm,19.9s
MDJ                                    LR       LR
       comp=Z,3µm,24.2s
MDJ                                    LR       LR
       comp=Z,4µm,21.4s
MDJ    Mudanjiang      40.52 284       P        P        07 24 31.2 -1.3
MDJ                                    IAMs_20  IAMs_20  07 44 24.2
       comp=Z,5µm,18.0s
ALE    Alert           40.53  11       IAMs_20  IAMs_20  07 43 58.5
       comp=Z,3µm,18.0s
FCC    Fort Churchill  40.64  50       P        P        07 24 32.8 -0.4
FCC                                    pmax     pmax
       comp=Z,141nm,0.9s
FCC                                    MLR      MLR
       comp=Z,7µm,19.0s
FCC    Fort Churchill  40.64  50       P        P        07 24 32.8 -0.4
FCC                                    IAmb     IAmb     07 24 36.5
       comp=Z,141nm,0.8s
SCI2   San Clemente I  40.67  98       P        P        07 24 33.9 +0.1
       baz=314
SCI2                                   S        S        07 30 44.6 +1.8
       baz=314
MSHR   Mys Shultsa     40.73 281ceP             P        07 24 34.4 +0.2
MSHR                                   pmax     pmax
       comp=Z,303nm,1.7s
HEC    Hector,Ludlow   40.77  94       P        P        07 24 35.6 +0.9
       baz=312,SNR=11
HEC                                    S        S        07 30 45.7 +1.3
       baz=312
BBRC   Big Bear Solar  40.79  95       P        P        07 24 35.7 +0.6
       baz=312,SNR=7.6
BBRC                                   S        S        07 30 45.5 +0.5
       baz=312
CCUT   Cedar City      40.82  89       P        P        07 24 36.6 +1.3
MVU    Marysvale       40.93  87       P        P        07 24 38.0 +1.8
MSU    Marysvale       40.94  87       P        P        07 24 37.6 +1.3
MSU    Marysvale       40.94  87       P        P        07 24 37.6 +1.3
SZCU   Shurtz Canyon   40.96  88       P        P        07 24 37.8 +1.4
TMUT   Trail Mountain  41.05  85       P        P        07 24 38.3 +1.0
MURC   Murrieta        41.07  96       P        P        07 24 38.1 +0.9
       baz=313,SNR=5.7
MURC                                   S        S        07 30 50.9 +2.1
       baz=313
GMRC   Granite Mounta  41.21  94       P        P        07 24 39.8 +1.4
       baz=312,SNR=13
GMRC                                   S        S        07 30 51.6 +0.5
       baz=312
P17A   Butcher Ranch,  41.23  84       P        P        07 24 40.2 +1.7
MTPU   Mount Pierson   41.23  87       P        P        07 24 40.5 +1.7
LCMT   Little Creek M  41.24  89       P        P        07 24 40.3 +1.7
JGF    Kuroka          41.26 268       P        P        07 24 38.6 -0.1
JGF                                    IAmb     IAmb     07 25 00.0
       comp=Z,182nm,1.3s
JGF                                    IAMs_20  IAMs_20  07 41 58.3
       comp=Z,3µm,20.0s
JSG    Sagara          41.36 266       IAMs_20  IAMs_20  07 41 08.1
       comp=Z,3µm,19.0s
KNB    Kanab           41.49  89       P        P        07 24 43.1 +2.3
KNB                                    pmax     pmax
       comp=Z,32nm,1.2s
KNB    Kanab           41.49  89       P        P        07 24 43.1 +2.3
PFO    Pinyon Flats O  41.51  96       P        P        07 24 40.9  0.0
       baz=313,SNR=7.1
PFO                                    S        S        07 30 56.3 +0.7
       baz=313
PFO    Pinyon Flats O  41.51  96     i P        P        07 24 40.7 -0.2
PFO                                    pmax     pmax
       comp=Z,17nm,1.1s
PFO    Pinyon Flats O  41.51  96       P        P        07 24 42.4 +1.5
TPFO   Pinon Flats     41.52  96       P        P        07 24 41.1 +0.1
       baz=313,SNR=6.3
TPFO                                   S        S        07 30 56.8 +1.1
       baz=313
PKCU   Pink Cliffs     41.53  88       P        P        07 24 43.5 +2.2
PKCU                                   IAmb     IAmb     07 25 33.5
       comp=Z,205nm,2.0s
SRU    San Rafael Swe  41.58  85       P        P        07 24 43.2 +1.7
SRU                                    pmax     pmax
       comp=Z,84nm,1.1s
SRU    San Rafael Swe  41.58  85       P        P        07 24 43.2 +1.7
SRU                                    IAmb     IAmb     07 24 58.9
       comp=Z,84nm,1.1s
109C   Camp Elliot, M  41.61  97       P        P        07 24 42.0 +0.4
       baz=314
109C                                   S        S        07 30 57.6 +0.8
       baz=314
109C   Camp Elliot, M  41.61  97       P        P        07 24 42.8 +1.2
INU    Inuyama         41.63 268       IAMs_20  IAMs_20  07 42 10.0
       comp=Z,2µm,20.0s
NEE2   Needles Airpor  41.86  93       P        P        07 24 43.6  0.0
       baz=312
K22A   Casper          41.88  78       P        P        07 24 43.4 -0.5
       baz=306,SNR=18
K22A   Casper          41.88  78       P        P        07 24 43.4 -0.5
IRM    Iron Mountain   41.95  94       P        P        07 24 44.9 +0.5
       baz=312,SNR=14
IRM                                    S        S        07 31 03.3 +1.5
       baz=312
TULEG  Thule           42.01  20       P        P        07 24 44.1 -0.2
TULEG                                  IAMs_20  IAMs_20  07 45 21.4
       comp=Z,4µm,18.0s
TULEG  Thule           42.01  20⇑i P            P        07 24 44.2 -0.2
TULEG                                  IAmb     IAmb     07 24 46.7
       comp=Z,13nm,0.6s
BAR    Barrett         42.02  97       P        P        07 24 46.8 +1.8
MONP2  Monument Peak   42.03  96       P        P        07 24 45.0 -0.2
       baz=314,SNR=9.8
MONP2                                  S        S        07 31 04.0 +0.7
       baz=314
RWWY   Rawlins         42.04  79       P        P        07 24 44.1 -1.1
RWWY                                   IAmb     IAmb     07 24 47.1
       comp=Z,184nm,1.6s
W13A   Hualapai Mount  42.09  92       P        P        07 24 46.1 +0.4
BC3    Big Chuckawall  42.10  95       P        P        07 24 46.2 +0.6
       baz=313,SNR=5.5
U15A   North Rim       42.20  89       P        P        07 24 48.0 +1.3
U15A                                   IAmb     IAmb     07 25 02.0
       comp=Z,164nm,1.9s
CBX    Cerro Bola      42.28  97       P        P        07 24 48.4 +1.2
O20A   White River Ci  42.34  82       P        P        07 24 47.4 -0.4
       baz=308,SNR=83
O20A   White River Ci  42.34  82       P        P        07 24 47.9 +0.2
O20A                                   IAmb     IAmb     07 24 50.9
       comp=Z,190nm,1.1s
BOD    Bodaibo         42.35 309     eP         P        07 24 46.5 -0.8
BOD                                    pmax     pmax
       comp=Z,78nm,1.7s
SWSC   Sam W. Stewart  42.37  96       P        P        07 24 48.1 +0.4
       baz=314,SNR=6.0
SWSC                                   S        S        07 31 10.8 +2.8
       baz=314
IKP    In-Ko-Pah, Jac  42.38  96       P        P        07 24 48.0 +0.1
       baz=314,SNR=7.9
IKP                                    S        S        07 31 10.4 +2.1
       baz=314
PDMCI  Parker Dam,Lak  42.46  93       P        P        07 24 48.9 +0.4
       baz=312,SNR=12
RSSD   Black Hills     42.52  74       P        P        07 24 48.2 -0.9
       baz=305
RSSD   Black Hills     42.52  74       P        P        07 24 48.5 -0.6
RSSD                                   pmax     pmax
       comp=Z,45nm,1.1s
RSSD                                   MLR      MLR
       comp=Z,3µm,21.0s
RSSD   Black Hills     42.52  74       P        P        07 24 48.5 -0.6
RSSD   Black Hills     42.52  74       IAMs_20  IAMs_20  07 41 50.1
       comp=Z,3µm,21.0s
JWT    Wachi           42.67 269       P        P        07 24 50.8 +0.7
JWT                                    IAmb     IAmb     07 25 09.8
       comp=Z,220nm,1.1s
JWT                                    IAMs_20  IAMs_20  07 42 37.7
       comp=Z,4µm,20.0s
GLA    Glamis          42.89  95       P        P        07 24 51.7 -0.4
       baz=313
GLA                                    S        S        07 31 18.0 +2.3
       baz=313
PV23   Carpenter Ridg  42.92  84       P        P        07 24 53.3 +0.8
PV23                                   IAMs_20  IAMs_20  07 41 57.3
       comp=Z,3µm,21.0s
ESJX   Sierra Juarez   42.93  97       P        P        07 24 53.2 +0.7
PV10   Paradox Valley  42.95  84       P        P        07 24 54.7 +2.0
PV10                                   IAmb     IAmb     07 24 56.2
       comp=Z,89nm,1.1s
PV14   Lion Creek, Pa  42.96  84       P        P        07 24 52.4 -0.4
PV22   Blue Mesa, Par  43.00  84       P        P        07 24 52.8 -0.3
MDND   Maddock         43.01  67       P        P        07 24 52.7 -0.1
       baz=303,SNR=26
MDND   Maddock         43.01  67       P        P        07 24 53.5 +0.7
MDND                                   IAMs_20  IAMs_20  07 43 27.3
       comp=Z,5µm,19.0s
PV04   Paradox Valley  43.02  84       P        P        07 24 53.5 +0.2
PV19   Morning Glory   43.02  85       P        P        07 24 54.2 +0.9
PV17   East Wray Mesa  43.06  85       P        P        07 24 53.5 -0.1
PV17                                   IAmb     IAmb     07 25 24.5
       comp=Z,95nm,1.1s
PV16   Nyswonger Mesa  43.06  84       P        P        07 24 54.0 +0.4
E28A   Huff            43.09  69       P        P        07 24 54.1 +0.6
E28A                                   IAMs_20  IAMs_20  07 43 56.3
       comp=Z,4µm,20.0s
PV11   David Mesa, Pa  43.10  84       P        P        07 24 53.8 -0.1
PV11                                   IAmb     IAmb     07 25 22.9
       comp=Z,73nm,0.7s
PV18   Skein Mesa, Pa  43.11  85       P        P        07 24 54.1 +0.1
N23A   Red Feather La  43.27  79       P        P        07 24 55.2 -0.1
       baz=307,SNR=15
PHWY   Pilot Hill      43.32  79       P        P        07 24 55.8 +0.1
WUAZ   Wupatki         43.36  89       P        P        07 24 55.6 -0.3
       baz=311,SNR=15
WUAZ   Wupatki         43.36  89       P        P        07 24 57.4 +1.4
PV01   Paradox Valley  43.39  84       P        P        07 24 56.1 -0.1
CN2    Changchun       43.43 286     eP         P        07 24 55.0 -1.2
CN2                                    pP       pwP      07 25 06.9 +1.7
CN2                                    sS       sS       07 31 32.5 +1.5
CN2                                    pmax     pmax
       comp=Z,70nm,0.6s
CN2                                    pmax     pmax
       comp=Z,400nm,10.9s
CN2                                    LR       LR
       comp=Z,2µm,16.7s
CN2                                    LR       LR
       comp=Z,3µm,17.9s
CN2                                    LR       LR
       comp=Z,3µm,17.0s
HIA    Hailar          43.65 296       P        P        07 24 56.9 -1.1
HIA                                    pmax     pmax
       comp=Z,279nm,1.9s
HIA                                    MLR      MLR
       comp=Z,4µm,21.0s
HIA    Hailar          43.65 296       P        P        07 24 56.9 -1.1
HIA                                    IAmb     IAmb     07 24 59.6
       comp=Z,279nm,1.9s
HIA    Hailar          43.65 296       IAMs_20  IAMs_20  07 43 28.3
       comp=Z,3µm,21.0s
SMCO   Snowmass        43.70  82       P        P        07 24 58.4 -0.6
ULM    Lac du Bonnet   43.79  62       P        P        07 24 58.8 -0.2
       comp=Z,22nm,0.9s,baz=294,slow=8.9,SNR=28
ULM                                    LR       LR       07 44 27.6
       comp=Z,3µm,18.3s,baz=312,slow=38
ULM    Lac du Bonnet   43.79  62     i P        P        07 24 58.0 -1.0
ULM    Lac du Bonnet   43.79  62       P        P        07 24 58.8 -0.2
ULM                                    IAmb     IAmb     07 25 02.1
       comp=Z,158nm,1.8s
ULM                                    IAMs_20  IAMs_20  07 44 07.1
       comp=Z,4µm,20.0s
SPX    San Pedro Mart  43.90  98       P        P        07 25 01.7 +1.2
MVCO   Mesa Verde      44.02  85       P        P        07 25 01.3  0.0
       baz=310,SNR=18
MVCO                                   S        S        07 31 32.1 -0.4
       baz=310
MVCO   Mesa Verde      44.02  85       P        P        07 25 01.9 +0.6
X16A   Lo Mia Camp, P  44.04  91       P        P        07 25 03.4 +1.9
ISCO   Idaho Springs   44.15  80       P        P        07 25 01.3 -1.1
       baz=308,SNR=15
ISCO                                   S        S        07 31 35.7 +1.2
       baz=308
ISCO   Idaho Springs   44.15  80       P        P        07 25 03.4 +1.0
ISCO                                   pmax     pmax
       comp=Z,48nm,1.3s
ISCO                                   MLR      MLR
       comp=Z,2µm,19.0s
ISCO   Idaho Springs   44.15  80       P        P        07 25 03.4 +1.0
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ISCO				IAMs_20	IAMs_20	07 42 37.9	
	comp=Z,2µm,19.0s						
JHS	**Saijyo**	**44.26**	**271**	P	**P**	**07 25 03.4**	**+0.4**
JHS				IAmb	IAmb	07 25 17.8	
	comp=Z,88nm,0.9s						
W18A	**Petrified Fore**	**44.62**	**89**	P	**P**	**07 25 06.5**	**+0.3**
	baz=312						
W18A	**Petrified Fore**	**44.62**	**89**	IAMs_20	IAMs_20	07 41 12.4	
	comp=Z,2µm,20.0s						
JMN	**Monobe**	**44.64**	**269**	IAMs_20	IAMs_20	07 45 32.9	
	comp=Z,2µm,20.0s						
S22A	**4UR Ranch, Cre**	**44.70**	**84**	P	**P**	**07 25 06.1**	**-0.7**
	baz=310,SNR=39						
AGMN	**Agassiz Nation**	**44.86**	**65**	IAMs_20	IAMs_20	07 45 08.4	
	comp=Z,4µm,19.0s						
D32A	**Dogwood Acres,**	**44.87**	**67**	P	**P**	**07 25 06.9**	**-0.8**
214A	**Organ Pipe Nat**	**44.88**	**94**	P	**P**	**07 25 08.0**	**0.0**
	baz=314,SNR=6.8						
214A				S	**S**	**07 31 47.1**	**+2.4**
	baz=314						
214A	**Organ Pipe Nat**	**44.88**	**94**	P	**P**	**07 25 09.6**	**+1.6**
X18A	**Snowflake**	**44.88**	**89**	P	**P**	**07 25 10.6**	**+2.4**
Q24A	**Divide**	**44.95**	**81**	P	**P**	**07 25 08.6**	**-0.2**
	baz=309,SNR=6.6						
SUSD	**Miller**	**45.31**	**71**	P	**P**	**07 25 10.6**	**-0.6**
	baz=306,SNR=23						
SUSD				S	**S**	**07 31 48.7**	**-2.0**
	baz=306						
SUSD	**Miller**	**45.31**	**71**	P	**P**	**07 25 10.4**	**-0.8**
SUSD				IAMs_20	IAMs_20	07 43 55.0	
	comp=Z,3µm,20.0s						
CIT	**Chita**	**45.49**	**302**	*e*P	**P**	**07 25 12.6**	**0.0**
CIT				*e*		07 25 19.2	
CIT				*e*		07 25 22.9	
SDCO	**Great Sand Dun**	**45.51**	**83**	P	**P**	**07 25 12.9**	**-0.3**
	baz=310,SNR=37						
SDCO	**Great Sand Dun**	**45.51**	**83**	P	**P**	**07 25 13.1**	**-0.2**
SDCO				IAmb	IAmb	07 25 16.8	
	comp=Z,90nm,1.4s						
OGNE	**Ogallala**	**45.59**	**77**	P	**P**	**07 25 13.2**	**-0.4**
	baz=308,SNR=6.2						
OGNE	**Ogallala**	**45.59**	**77**	P	**P**	**07 25 14.7**	**+1.0**
SNY	**Shenyang**	**45.71**	**285**	⇑P	**P**	**07 25 14.2**	**-0.2**
SNY				S	**S**	**07 31 59.8**	**+3.4**
SNY				pmax	pmax		
	comp=Z,91nm,1.6s						
SNY				LR	LR		
	comp=Z,3µm,16.9s						
SNY				LR	LR		
	comp=Z,2µm,15.9s						
SNY				LR	LR		
	comp=Z,5µm,16.9s						
KSRS	**Korea Array**	**45.83**	**277**	P	**P**	**07 25 15.9**	**+0.5**
	comp=Z,42nm,0.8s,baz=52,slow=7.5,SNR=98						
KSRS				LR	LR	07 42 08.8	
	comp=Z,2µm,21.9s,baz=56,slow=33						
KS19	**Wonju Array Si**	**45.84**	**277**	P	**P**	**07 25 16.6**	**+1.1**
KS19				IAmb	IAmb	07 25 29.7	
	comp=Z,86nm,0.9s						
TUC	**Tucson**	**45.88**	**92**	P	**P**	**07 25 16.2**	**+0.2**
	baz=314						
TUC	**Tucson**	**45.88**	**92**	P	**P**	**07 25 18.1**	**+2.1**
TUC				pmax	pmax		
	comp=Z,38nm,1.2s						
TUC	**Tucson**	**45.88**	**92**	P	**P**	**07 25 18.1**	**+2.1**
B35A	**Bob, Littlefor**	**46.01**	**64**	P	**P**	**07 25 15.4**	**-1.3**
B35A				IAmb	IAmb	07 25 18.4	
	comp=Z,43nm,0.7s						
B35A				IAMs_20	IAMs_20	07 46 16.7	
	comp=Z,2µm,19.0s						
F33A	**5 Mile Ranch,**	**46.02**	**68**	P	**P**	**07 25 15.5**	**-1.3**
F33A				IAmb	IAmb	07 25 19.7	
	comp=Z,69nm,1.2s						
F33A				IAMs_20	IAMs_20	07 45 08.9	
	comp=Z,5µm,20.0s						
KSCO	**Kaye Shedlock’**	**46.44**	**79**	P	**P**	**07 25 20.5**	**+0.1**
	baz=309,SNR=20						
KSCO	**Kaye Shedlock’**	**46.44**	**79**	P	**P**	**07 25 20.2**	**-0.2**
KSCO				IAmb	IAmb	07 25 43.4	
	comp=Z,126nm,1.1s						
K31A	**O'Neill**	**46.51**	**73**	P	**P**	**07 25 20.3**	**-0.5**
K31A				IAMs_20	IAMs_20	07 44 27.8	
	comp=Z,2µm,20.0s						
T25A	**Trinidad**	**46.56**	**82**	P	**P**	**07 25 21.2**	**-0.3**
	baz=310,SNR=60						
INCN	**Inchon**	**46.60**	**278**	P	**P**	**07 25 22.1**	**+0.6**
INCN				pmax	pmax		
	comp=Z,216nm,1.0s						
INCN	**Inchon**	**46.60**	**278**	P	**P**	**07 25 22.1**	**+0.6**
INCN	**Inchon**	**46.60**	**278**	P	**P**	**07 25 21.6**	**0.0**
INCN				P	**P**	**07 25 21.6**	**0.0**
NRIK	**Noril'sk**	**46.66**	**332**	P	**P**	**07 25 21.4**	**-0.2**
	comp=Z,18nm,0.7s,baz=62,slow=7.0,SNR=25						
NRIK				LR	LR	07 48 50.0	
	comp=Z,3µm,18.2s,baz=74,slow=41						
NRIK	**Noril'sk**	**46.66**	**332**	*ce*P	**P**	**07 25 21.3**	**-0.3**
NRIK				pmax	pmax		
	comp=Z,25nm,0.9s						
NRIK	**Noril'sk**	**46.66**	**332**	P	**P**	**07 25 21.0**	**-0.6**
NRIK				IAmb	IAmb	07 25 35.8	
	comp=Z,58nm,1.1s						
NRIK				IAMs_20	IAMs_20	07 48 48.1	
	comp=Z,3µm,18.0s						
ANMO	**Albuquerque**	**46.75**	**86**	P	**P**	**07 25 23.5**	**+0.5**
	baz=312						
ANMO	**Albuquerque**	**46.75**	**86**	*ce*P	**P**	**07 25 23.6**	**+0.7**
ANMO				pmax	pmax		
	comp=Z,41nm,1.7s						
ANMO	**Albuquerque**	**46.75**	**86**	P	**P**	**07 25 24.3**	**+1.4**
ANMO	**Albuquerque**	**46.75**	**86**	IAMs_20	IAMs_20	07 43 56.7	
	comp=Z,2µm,19.0s						
JTU	**Tsushima**	**46.85**	**273**	P	**P**	**07 25 24.3**	**+0.8**
JTU				IAmb	IAmb	07 25 38.3	
	comp=Z,97nm,1.0s						
JTU				IAMs_20	IAMs_20	07 44 30.6	
	comp=Z,3µm,20.0s						
UPNV	**Upernavik**	**46.87**	**22**	*i* P	**P**	**07 25 23.9**	**+0.8**
UPNV				IAmb	IAmb	07 25 26.5	
	comp=Z,41nm,0.8s						
TJN	**Taejon**	**46.87**	**277**	*ce*P	**P**	**07 25 23.4**	**-0.2**
JNU	**Nakatsue**	**46.89**	**271**	P	**P**	**07 25 23.7**	**-0.1**
	comp=Z,23nm,0.7s,baz=64,slow=5.6,SNR=13						
JNU	**Nakatsue**	**46.89**	**271**	P	**P**	**07 25 23.6**	**-0.3**
LENM	**Lemitar**	**46.95**	**87**	P	**P**	**07 25 25.4**	**+0.9**
Y22D	**IRIS PASSCAL I**	**47.05**	**87**	P	**P**	**07 25 23.6**	**-1.7**
	baz=312						
Y22D	**IRIS PASSCAL I**	**47.05**	**87**	P	**P**	**07 25 24.8**	**-0.4**
Y22D				IAMs_20	IAMs_20	07 42 42.6	
	comp=Z,2µm,20.0s						
ECSD	**EROS Data Cent**	**47.08**	**70**	P	**P**	**07 25 24.3**	**-1.0**
	baz=307,SNR=39						
ECSD	**EROS Data Cent**	**47.08**	**70**	P	**P**	**07 25 23.9**	**-1.3**
ECSD				IAmb	IAmb	07 25 26.6	
	comp=Z,48nm,0.8s						
ECSD	**EROS Data Cent**	**47.08**	**70**	IAMs_20	IAMs_20	07 44 50.0	
	comp=Z,4µm,21.0s						
BNM	**Barren Site**	**47.17**	**87**	P	**P**	**07 25 26.1**	**-0.2**
319A	**Douglas**	**47.44**	**92**	P	**P**	**07 25 29.6**	**+1.2**
319A				IAmb	IAmb	07 25 52.1	
	comp=Z,46nm,1.2s						
EYMN	**Ely**	**47.47**	**63**	P	**P**	**07 25 27.3**	**-0.8**
	baz=306,SNR=14						
EYMN	**Ely**	**47.47**	**63**	P	**P**	**07 25 27.3**	**-0.8**
EYMN				IAmb	IAmb	07 25 30.1	
	comp=Z,71nm,1.1s						
121A	**Cookes Peak, D**	**47.56**	**90**	P	**P**	**07 25 29.6**	**+0.3**
	baz=313,SNR=10						
121A	**Cookes Peak, D**	**47.56**	**90**	P	**P**	**07 25 30.3**	**+1.0**
F36A	**Milaca**	**47.57**	**66**	P	**P**	**07 25 28.0**	**-0.9**
F36A				IAmb	IAmb	07 25 42.6	
	comp=Z,30nm,0.8s						
BGNE	**Belgrade**	**47.61**	**74**	P	**P**	**07 25 28.7**	**-0.7**
	baz=308,SNR=18						
BGNE	**Belgrade**	**47.61**	**74**	P	**P**	**07 25 28.5**	**-0.9**
E38A	**The Farm, Brul**	**48.22**	**64**	P	**P**	**07 25 32.6**	**-1.4**
E38A				IAmb	IAmb	07 25 35.5	
	comp=Z,71nm,0.9s						
JSU	**Suzuyama**	**48.26**	**269**	P	**P**	**07 25 34.7**	**+0.2**
JSU				IAMs_20	IAMs_20	07 45 01.8	
	comp=Z,2µm,21.0s						
CBKS	**Cedar Bluff**	**48.30**	**78**	P	**P**	**07 25 33.8**	**-1.0**
	baz=310,SNR=24						
CBKS	**Cedar Bluff**	**48.30**	**78**	P	**P**	**07 25 34.5**	**-0.3**
CBKS				pmax	pmax		
	comp=Z,123nm,1.1s						
CBKS	**Cedar Bluff**	**48.30**	**78**	P	**P**	**07 25 34.5**	**-0.3**
L34A	**Svendsen Farm,**	**48.30**	**72**	P	**P**	**07 25 34.4**	**-0.4**
L34A				IAMs_20	IAMs_20	07 47 51.3	
	comp=Z,3µm,19.0s						
SPMN	**Marine on St.**	**48.36**	**67**	P	**P**	**07 25 34.0**	**-1.1**
	baz=307,SNR=14						
SPMN	**Marine on St.**	**48.36**	**67**	P	**P**	**07 25 34.4**	**-0.7**
NUUG	**Nuugaatsiaq**	**48.37**	**23**	*i* P	**P**	**07 25 34.8**	**0.0**
NUUG				IAmb	IAmb	07 25 36.8	
	comp=Z,28nm,0.9s						
N33A	**J Bar K, Exete**	**48.44**	**74**	P	**P**	**07 25 34.9**	**-0.9**
N33A				IAMs_20	IAMs_20	07 45 38.9	
	comp=Z,2µm,21.0s						
DL2	**Dalian**	**48.70**	**283**	⇑P	**P**	**07 25 37.0**	**-0.8**
DL2				PP	**PP**	**07 27 30.9**	**+0.3**
DL2				S	**S**	**07 32 43.4**	**+4.3**
DL2				pmax	pmax		
	comp=Z,57nm,0.9s						
DL2				pmax	pmax		
	comp=Z,630nm,4.3s						
DL2				LR	LR		
	comp=Z,1µm,18.7s						
DL2				LR	LR		
	comp=Z,2µm,18.7s						
DL2				LR	LR		
	comp=Z,3µm,18.6s						
I37A	**Lemond, Waseca**	**48.76**	**68**	P	**P**	**07 25 37.9**	**-0.3**
EPT	**El Paso**	**48.87**	**89**	IAMs_20	IAMs_20	07 47 30.8	
	comp=Z,2µm,18.0s						
KBS	**Kingsbay**	**49.00**	**360**	*ce*P	**P**	**07 25 39.0**	**-0.6**
KBS				pmax	pmax		
	comp=Z,92nm,2.5s						
KBS	**Kingsbay**	**49.00**	**360**	IAMs_20	IAMs_20	07 48 46.8	
	comp=Z,2µm,19.0s						
KBS	**Kingsbay**	**49.00**	**360**	*e*P	**P**	**07 25 40.3**	**+0.7**
KBS	**Kingsbay**	**49.00**	**360**	*i* P	**P**	**07 25 40.5**	**+0.9**
R32A	**Long Quarter,**	**49.17**	**77**	P	**P**	**07 25 41.4**	**0.0**
R32A				IAmb	IAmb	07 25 44.0	
	comp=Z,111nm,1.1s						
N35A	**Tabor**	**49.43**	**73**	P	**P**	**07 25 42.5**	**-0.9**
MNTX	**Cornudas Mount**	**49.61**	**89**	P	**P**	**07 25 44.7**	**-0.2**
	baz=314,SNR=21						
MNTX				S	**S**	**07 32 55.5**	**+3.3**
	baz=314						
MNTX	**Cornudas Mount**	**49.61**	**89**	P	**P**	**07 25 45.1**	**+0.2**
MSTX	**Muleshoe**	**49.66**	**84**	P	**P**	**07 25 45.0**	**-0.3**
	baz=313,SNR=35						
MSTX	**Muleshoe**	**49.66**	**84**	P	**P**	**07 25 44.8**	**-0.5**
AMTX	**Amarillo**	**49.71**	**83**	P	**P**	**07 25 44.6**	**-1.1**
	baz=312						
AMTX	**Amarillo**	**49.71**	**83**	P	**P**	**07 25 45.2**	**-0.5**
AMTX				IAmb	IAmb	07 25 48.6	
	comp=Z,118nm,1.6s						
SPA0	**Spitsbergen Ar**	**49.72**	**359**	P	**P**	**07 25 44.6**	**-0.5**
SPA0				IAmb	IAmb	07 26 05.1	
	comp=Z,66nm,1.1s						
SPA0	**Spitsbergen Ar**	**49.72**	**359**	*e*P	**P**	**07 25 44.6**	**-0.5**
SPITS	**Spitsbergen Ar**	**49.72**	**359**	P	**P**	**07 25 44.8**	**-0.3**
	comp=Z,11nm,0.4s,baz=22,slow=6.8,SNR=131						
SPITS	**Spitsbergen Ar**	**49.72**	**359**	P	**P**	**07 25 44.7**	**-0.4**
SPITS				pmax	pmax		
	comp=Z,13nm,0.3s						
DAG	**Danmarks Havn**	**49.77**	**9**	*i* P	**P**	**07 25 44.8**	**-0.6**
	comp=Z,31nm,0.7s						
DAG	**Danmarks Havn**	**49.77**	**9**	*i* P	**P**	**07 25 44.8**	**-0.6**
DAG				pmax	pmax		
	comp=Z,31nm,0.7s						
DAG	**Danmarks Havn**	**49.77**	**9**	*i* P	**P**	**07 25 44.9**	**-0.6**
DAG				IAmb	IAmb	07 25 48.2	
	comp=Z,31nm,0.7s						
G40A	**Rib Lake**	**49.79**	**65**	P	**P**	**07 25 45.9**	**-0.2**
G40A				IAmb	IAmb	07 25 47.7	
	comp=Z,49nm,0.9s						
G40A				IAMs_20	IAMs_20	07 46 30.7	
	comp=Z,3µm,21.0s						
COWI	**Conover**	**49.86**	**64**	P	**P**	**07 25 46.0**	**-0.7**
GDL2	**Guadalupe Moun**	**49.89**	**87**	P	**P**	**07 25 48.1**	**+1.0**
K38A	**Parkersburg**	**49.97**	**69**	P	**P**	**07 25 46.5**	**-0.9**
K38A				IAmb	IAmb	07 25 49.0	
	comp=Z,85nm,1.1s						
K38A				IAMs_20	IAMs_20	07 46 59.3	
	comp=Z,4µm,20.0s						
KSU1	**Kansas State U**	**49.98**	**75**	P	**P**	**07 25 46.4**	**-1.2**
	baz=310,SNR=17						
KSU1	**Kansas State U**	**49.98**	**75**	P	**P**	**07 25 46.9**	**-0.7**
KSU1				IAmb	IAmb	07 25 49.5	
	comp=Z,78nm,1.1s						
IRK	**Irkutsk**	**50.05**	**307**	*e*P	**P**	**07 25 47.4**	**-0.6**
IRK				*e*		07 25 58.6	
IRK				*e*		07 27 08.8	
U32A	**Winter Ranch,**	**50.33**	**79**	P	**P**	**07 25 49.5**	**-0.8**
U32A				IAmb	IAmb	07 26 12.3	
	comp=Z,68nm,0.9s						
I40A	**Norwalk**	**50.41**	**67**	P	**P**	**07 25 50.3**	**-0.5**
I40A				IAmb	IAmb	07 25 52.3	
	comp=Z,92nm,1.2s						
KAN01	**Argonia South**	**50.57**	**78**	P	**P**	**07 25 51.8**	**-0.3**
KAN01				IAmb	IAmb	07 25 54.2	
	comp=Z,75nm,1.2s						
KAN14	**Manchester OK**	**50.58**	**78**	P	**P**	**07 25 52.1**	**0.0**
KAN14				IAmb	IAmb	07 26 14.5	
	comp=Z,96nm,1.7s						
F42A	**Maple Grove Fa**	**50.62**	**63**	P	**P**	**07 25 51.7**	**-0.6**
F42A				IAmb	IAmb	07 25 54.4	
	comp=Z,81nm,0.8s						
SUMG	**Summit**	**50.69**	**17**	*i* P	**P**	**07 25 53.6**	**+0.6**
	comp=Z,220nm,0.9s						
SUMG	**Summit**	**50.69**	**17**	*i* P	**P**	**07 25 53.6**	**+0.6**
SUMG				pmax	pmax		
	comp=Z,220nm,0.9s						
SUMG	**Summit**	**50.69**	**17**	P	**P**	**07 25 52.4**	**-0.6**
SUMG				IAmb	IAmb	07 25 57.0	
	comp=Z,82nm,0.8s						
SUMG	**Summit**	**50.69**	**17**	*i* P	**P**	**07 25 53.7**	**+0.6**
SUMG				IAmb	IAmb	07 25 57.2	
	comp=Z,221nm,0.9s						
TLY	**Talaya**	**50.70**	**307**	P	**P**	**07 25 53.4**	**+0.5**
	comp=Z,29nm,0.6s,baz=48,slow=4.5,SNR=40						
TLY	**Talaya**	**50.70**	**307**	*c i*P	**P**	**07 25 52.8**	**-0.1**
TLY				pmax	pmax		
	comp=Z,28nm,0.8s						
TLY	**Talaya**	**50.70**	**307**	P	**P**	**07 25 53.2**	**+0.3**
TLY				IAmb	IAmb	07 26 07.1	
	comp=Z,79nm,0.9s						
TLY				IAMs_20	IAMs_20	07 48 23.1	
	comp=Z,3µm,19.0s						
TLY	**Talaya**	**50.70**	**307**	P	**P**	**07 25 52.2**	**-0.7**
TLY				P	**P**	**07 25 52.2**	**-0.7**
KAN13	**South Haven SW**	**50.83**	**78**	P	**P**	**07 25 53.0**	**-1.0**
KAN13				IAmb	IAmb	07 25 56.1	
	comp=Z,143nm,1.2s						
E43A	**Lone Tree Farm**	**50.86**	**62**	P	**P**	**07 25 53.0**	**-1.1**
E43A				IAmb	IAmb	07 25 56.0	
	comp=Z,72nm,0.8s						
CROK	**Carrier**	**50.86**	**79**	P	**P**	**07 25 54.2**	**-0.1**
CROK				IAmb	IAmb	07 26 17.6	
	comp=Z,177nm,1.3s						
N38A	**Joes South For**	**50.88**	**71**	P	**P**	**07 25 53.0**	**-1.3**
HSPB	**Hornsund (broa**	**50.91**	**359**	*e*P	**P**	**07 25 54.8**	**+0.7**
HOPEN	**Hopen**	**51.13**	**356**	*e*P	**P**	**07 25 56.6**	**+0.8**
BJI	**Beijing**	**51.19**	**288**	P	**P**	**07 25 56.8**	**+0.1**
BJI				S	**S**	**07 33 17.1**	**+3.2**
BJI				pmax	pmax		
	comp=Z,25nm,1.2s						
BJI				pmax	pmax		
	comp=Z,670nm,3.9s						
BJI				LR	LR		
	comp=Z,3µm,16.5s						
BJI				LR	LR		
	comp=Z,3µm,17.1s						
BJI				LR	LR		
	comp=Z,3µm,17.3s						
BJT	**Baijiatuau**	**51.21**	**288**	P	**P**	**07 25 56.9**	**+0.1**
BJT				pmax	pmax		
	comp=Z,140nm,2.0s						
BJT				MLR	MLR		
	comp=Z,5µm,18.0s						
BJT	**Baijiatuau**	**51.21**	**288**	P	**P**	**07 25 56.9**	**+0.1**
BJT				IAmb	IAmb	07 25 58.4	
	comp=Z,140nm,2.0s						
L40A	**Anamosa**	**51.22**	**69**	P	**P**	**07 25 55.7**	**-1.2**
L40A				IAmb	IAmb	07 25 58.1	
	comp=Z,93nm,1.1s						
L40A				IAMs_20	IAMs_20	07 48 29.6	
	comp=Z,4µm,20.0s						
JFWS	**Jewell Farm**	**51.23**	**67**	P	**P**	**07 25 55.4**	**-1.6**
	baz=310,SNR=15						
JFWS	**Jewell Farm**	**51.23**	**67**	P	**P**	**07 25 56.0**	**-1.0**
JFWS				pmax	pmax		
	comp=Z,50nm,0.8s						
JFWS				MLR	MLR		
	comp=Z,6µm,19.0s						
JFWS	**Jewell Farm**	**51.23**	**67**	P	**P**	**07 25 56.0**	**-1.0**
JFWS				IAmb	IAmb	07 25 57.9	
	comp=Z,50nm,0.8s						
ULN	**Ulaanbaatar**	**51.32**	**301**	*ce*P	**P**	**07 25 57.0**	**-0.8**
ULN				pmax	pmax		
	comp=Z,36nm,0.8s						
ULN	**Ulaanbaatar**	**51.32**	**301**	P	**P**	**07 25 56.5**	**-1.3**
ULN				IAmb	IAmb	07 26 11.5	
	comp=Z,54nm,0.9s						
ULN	**Ulaanbaatar**	**51.32**	**301**	P	**P**	**07 25 57.3**	**-0.5**
ULN				P	**P**	**07 25 57.3**	**-0.5**
I42A	**Draeger Farm,**	**51.37**	**66**	P	**P**	**07 25 57.0**	**-0.9**
P38A	**Dawn**	**51.46**	**73**	P	**P**	**07 25 57.0**	**-1.7**
P38A				IAmb	IAmb	07 25 59.7	
	comp=Z,89nm,0.9s						
P38A				IAMs_20	IAMs_20	07 47 02.8	
	comp=Z,3µm,22.0s						
T35A	**Sooner Cattle**	**51.47**	**77**	P	**P**	**07 25 57.6**	**-1.3**
T35A				IAmb	IAmb	07 26 21.0	
	comp=Z,246nm,1.9s						
WMOK	**Wichita Mounta**	**51.57**	**81**	P	**P**	**07 25 58.9**	**-0.7**
	baz=313,SNR=34						
WMOK	**Wichita Mounta**	**51.57**	**81**	P	**P**	**07 25 59.5**	**-0.1**
WMOK				pmax	pmax		
	comp=Z,48nm,1.0s						
WMOK	**Wichita Mounta**	**51.57**	**81**	P	**P**	**07 25 59.5**	**-0.1**
WMOK				IAmb	IAmb	07 26 21.8	
	comp=Z,48nm,0.9s						
H43A	**Windswept, Lux**	**51.63**	**64**	P	**P**	**07 25 59.3**	**-0.6**
H43A				IAmb	IAmb	07 26 01.5	
	comp=Z,90nm,0.8s						
OK029	**Liberty Lake**	**51.66**	**79**	P	**P**	**07 25 60.0**	**-0.3**
OK029				IAmb	IAmb	07 26 21.9	
	comp=Z,74nm,1.0s						
BCOK	**Bluff Creek, N**	**51.66**	**79**	P	**P**	**07 25 59.2**	**-1.0**
BCOK				IAmb	IAmb	07 26 19.1	
	comp=Z,104nm,0.8s						
SONM	**Songino Array**	**51.69**	**301**	P	**P**	**07 26 00.1**	**-0.3**
	comp=Z,13nm,0.6s,baz=53,slow=6.0,SNR=80						
SONM				ScP	**ScP**	**07 31 09.9**	**+0.6**
	comp=Z,1.6nm,0.8s,baz=104,slow=4.6,SNR=4.3						
SONM				LR	LR	07 50 45.9	
	comp=Z,3µm,18.2s,baz=56,slow=39						
SONM	**Songino Array**	**51.69**	**301**	P	**P**	**07 26 00.0**	**-0.4**
SONM				pmax	pmax		
	comp=Z,83nm,1.6s						
SONM	**Songino Array**	**51.69**	**301**	P	**P**	**07 26 00.0**	**-0.4**
SONM				IAmb	IAmb	07 26 02.9	
	comp=Z,82nm,1.6s						
ZAK	**Zakamensk**	**51.69**	**305**	*e*P	**P**	**07 26 00.7**	**+0.3**
ZAK				*e*		07 27 15.2	
ZAK				pmax	pmax		
	comp=Z,38nm,1.6s						
ZAK				pmax	pmax		
	comp=Z,27nm,1.2s						
QUOK	**Quay**	**51.85**	**78**	P	**P**	**07 26 00.7**	**-1.0**
QUOK				IAmb	IAmb	07 26 03.1	
	comp=Z,64nm,1.1s						
OK025	**Westminster Rd**	**51.87**	**79**	P	**P**	**07 26 01.5**	**-0.3**
OK025				IAmb	IAmb	07 26 23.5	
	comp=Z,48nm,1.0s						
DBG	**Daneborg**	**51.87**	**10**	*i* P	**P**	**07 26 00.7**	**-0.6**
DBG				IAmb	IAmb	07 26 02.1	
	comp=Z,48nm,1.1s						
OKCFA	**Oklahoma City**	**51.91**	**79**	P	**P**	**07 26 02.6**	**+0.4**
OKCFA				IAmb	IAmb	07 26 24.0	
	comp=Z,59nm,0.9s						
OK031	**S. Brethren Rd**	**51.92**	**78**	P	**P**	**07 26 00.9**	**-1.3**
OK031				IAmb	IAmb	07 26 03.9	
	comp=Z,116nm,1.0s						
OK030	**Cody Creek RV**	**51.97**	**78**	P	**P**	**07 26 01.8**	**-0.7**
MOY	**Mondy**	**52.01**	**308**	*e*P	**P**	**07 26 02.6**	**-0.2**
MOY				pmax	pmax		
	comp=Z,109nm,2.1s						
FNO	**Franklin**	**52.05**	**79**	P	**P**	**07 26 03.1**	**-0.1**
FNO				IAmb	IAmb	07 26 25.5	
	comp=Z,75nm,0.9s						
L42A	**Oliver, Polo**	**52.15**	**68**	P	**P**	**07 26 02.8**	**-1.0**
L42A				IAmb	IAmb	07 26 06.0	
	comp=Z,230nm,1.8s						
SFJD	**Kangerlussuaq**	**52.22**	**26**	P	**P**	**07 26 04.1**	**+0.2**
	comp=Z,31nm,0.9s,baz=323,slow=9.4,SNR=9.1						
SFJD	**Kangerlussuaq**	**52.22**	**26**	*i* P	**P**	**07 26 05.5**	**+1.5**
SFJD	**Kangerlussuaq**	**52.22**	**26**	*i* P	**P**	**07 26 05.5**	**+1.5**
SFJD	**Kangerlussuaq**	**52.22**	**26**	P	**P**	**07 26 04.7**	**+0.7**
SFJD				IAmb	IAmb	07 26 09.7	
	comp=Z,63nm,1.1s						
SFJD	**Kangerlussuaq**	**52.22**	**26**	*i* P	**P**	**07 26 05.5**	**+1.5**
X34A	**Smith Ranch, M**	**52.23**	**80**	P	**P**	**07 26 05.2**	**+0.7**
X34A				IAmb	IAmb	07 26 28.2	
	comp=Z,172nm,1.7s						
N41A	**Harden Midland**	**52.31**	**70**	P	**P**	**07 26 04.1**	**-0.9**
N41A				IAmb	IAmb	07 26 07.7	
	comp=Z,189nm,1.3s						
N41A				IAMs_20	IAMs_20	07 48 23.3	
	comp=Z,3µm,20.0s						
E46A	**Sault Ste Mari**	**52.31**	**61**	P	**P**	**07 26 04.4**	**-0.6**
E46A				IAmb	IAmb	07 26 06.9	
	comp=Z,63nm,0.8s						
TX31	**Lajitas Ar. Si**	**52.32**	**89**	P	**P**	**07 26 04.6**	**-0.8**
TX31				IAmb	IAmb	07 26 17.6	
	comp=Z,127nm,1.1s						
TX32	**Lajitas Array**	**52.32**	**89**	P	**P**	**07 26 05.6**	**+0.2**
TXAR	**Lajitas Array**	**52.32**	**89**	P	**P**	**07 26 05.1**	**-0.3**
	comp=Z,7.9nm,0.7s,baz=300,slow=5.4,SNR=68						
TXAR				ScP	**ScP**	**07 31 13.1**	**+0.8**
	comp=Z,0.7nm,1.0s,baz=308,slow=4.5,SNR=2.2						
TXAR				LR	LR	07 46 58.4	
	comp=Z,1µm,19.4s,baz=0.0,slow=34						
TXAR	**Lajitas Array**	**52.32**	**89**	P	**P**	**07 26 05.4**	**0.0**
TXAR	**Lajitas Array**	**52.32**	**89**	P	**P**	**07 26 05.4**	**0.0**
P40A	**Paris**	**52.39**	**72**	P	**P**	**07 26 04.7**	**-1.0**
P40A				IAMs_20	IAMs_20	07 47 45.4	
	comp=Z,3µm,20.0s						
W35A	**Tecumseh**	**52.44**	**79**	P	**P**	**07 26 05.2**	**-0.9**
K43A	**Burlington**	**52.45**	**66**	P	**P**	**07 26 05.6**	**-0.5**
K43A				IAmb	IAmb	07 26 07.1	
	comp=Z,90nm,1.0s						
ABTX	**Abilene, Hawle**	**52.48**	**83**	P	**P**	**07 26 06.0**	**-0.5**
	baz=314,SNR=16						
ABTX				S	**S**	**07 33 31.0**	**-0.9**
	baz=314						
ABTX	**Abilene, Hawle**	**52.48**	**83**	P	**P**	**07 26 06.6**	**+0.1**
ABTX				IAmb	IAmb	07 26 09.4	
	comp=Z,146nm,1.4s						
ABTX				IAMs_20	IAMs_20	07 48 13.7	
	comp=Z,2µm,18.0s						
TUL1	**Leonard**	**52.58**	**78**	P	**P**	**07 26 06.1**	**-0.9**
	baz=312,SNR=13						
TUL1	**Leonard**	**52.58**	**78**	P	**P**	**07 26 06.3**	**-0.7**
TUL1				IAmb	IAmb	07 26 28.6	
	comp=Z,52nm,1.0s						
SLBS	**Sierra La Lagu**	**52.60**	**99**	P	**P**	**07 26 07.0**	**-0.4**
S39A	**Bolivar**	**52.86**	**74**	P	**P**	**07 26 06.9**	**-2.2**
JOW	**Kunigami**	**52.91**	**267**	P	**P**	**07 26 09.5**	**-0.2**
	comp=Z,32nm,1.0s,baz=270,slow=26,SNR=4.7						
L44A	**Lake County Fo**	**53.03**	**67**	P	**P**	**07 26 08.8**	**-1.5**
	baz=311						
L44A	**Lake County Fo**	**53.03**	**67**	P	**P**	**07 26 09.6**	**-0.7**
L44A				IAmb	IAmb	07 26 11.5	
	comp=Z,93nm,0.9s						
U38A	**Gravette**	**53.06**	**76**	P	**P**	**07 26 10.0**	**-0.7**
U38A				IAmb	IAmb	07 26 11.6	
	comp=Z,53nm,1.0s						
R40A	**Maddies Statio**	**53.08**	**73**	P	**P**	**07 26 09.2**	**-1.6**
R40A				IAmb	IAmb	07 26 12.2	
	comp=Z,35nm,0.7s						
GLMI	**Grayling**	**53.14**	**62**	P	**P**	**07 26 10.2**	**-0.9**
	baz=310,SNR=7.8						
GLMI				S	**S**	**07 33 39.3**	**-1.2**
	baz=310						
GLMI	**Grayling**	**53.14**	**62**	P	**P**	**07 26 10.7**	**-0.4**
GLMI				IAmb	IAmb	07 26 12.9	
	comp=Z,127nm,1.0s						
TIA	**Tai'an**	**53.16**	**284**	P	**P**	**07 26 10.9**	**-0.5**
TIA				pP	**pwP**	**07 26 21.9**	**+1.5**
TIA				PP	**PP**	**07 28 13.4**	**+2.2**
TIA				S	**S**	**07 33 44.2**	**+3.2**
TIA				sS	**sS**	**07 33 55.9**	**+6.8**

TIA				pmax	pmax		
	comp=Z,46nm,1.6s						
TIA				LR	LR		
	comp=Z,1µm,19.9s						
TIA				LR	LR		
	comp=Z,2µm,19.2s						
TIA				LR	LR		
	comp=Z,1µm,19.9s						
ICESG	**Greenland Ices**	**53.26**	**20**	*i* P	**P**	**07 26 11.9**	**-0.2**
ICESG				IAmb	IAmb	07 26 14.0	
	comp=Z,77nm,1.1s						
HDIL	**Hopedale**	**53.31**	**69**	P	**P**	**07 26 10.8**	**-1.6**
	baz=311,SNR=16						
HDIL	**Hopedale**	**53.31**	**69**	P	**P**	**07 26 11.4**	**-1.0**
HDIL				IAMs_20	IAMs_20	07 49 33.7	
	comp=Z,4µm,20.0s						
HHC	**Hu-ho-hao-te**	**53.33**	**291**	*e*P	**P**	**07 26 15.4**	**+2.7**
HHC				PP	**PP**	**07 28 17.4**	**+4.7**
HHC				S	**S**	**07 33 45.5**	**+2.1**
HHC				pmax	pmax		
	comp=Z,25nm,1.1s						
HHC				pmax	pmax		
	comp=Z,780nm,7.8s						
HHC				LR	LR		
	comp=Z,2µm,19.7s						
HHC				LR	LR		
	comp=Z,3µm,17.5s						
HHC				LR	LR		
	comp=Z,3µm,18.8s						
HHAR	**Hobbs**	**53.43**	**76**	P	**P**	**07 26 12.2**	**-1.2**
HHAR				IAmb	IAmb	07 26 14.8	
	comp=Z,158nm,1.8s						
Z35A	**Perchaven, San**	**53.45**	**81**	P	**P**	**07 26 13.2**	**-0.3**
Z35A				IAMs_20	IAMs_20	07 47 46.3	
	comp=Z,2µm,21.0s						
M44A	**Midewin, Midew**	**53.47**	**68**	P	**P**	**07 26 13.1**	**-0.5**
M44A				IAmb	IAmb	07 26 15.4	
	comp=Z,175nm,1.4s						
MATQ	**Matagami**	**53.57**	**54**	P	**P**	**07 26 13.1**	**-1.1**
	baz=310,SNR=12						
X37A	**Clayton**	**53.73**	**79**	P	**P**	**07 26 14.8**	**-0.7**
X37A				IAmb	IAmb	07 26 17.6	
	comp=Z,94nm,1.1s						
P43A	**Skaggs, Pawnee**	**53.78**	**70**	P	**P**	**07 26 14.8**	**-1.0**
P43A				IAmb	IAmb	07 26 18.4	
	comp=Z,83nm,0.9s						
CCM	**Cathedral Cave**	**53.84**	**73**	P	**P**	**07 26 14.3**	**-2.0**
	baz=312						
CCM	**Cathedral Cave**	**53.84**	**73**	P	**P**	**07 26 14.3**	**-2.0**
CCM	**Cathedral Cave**	**53.84**	**73**	P	**P**	**07 26 14.3**	**-2.0**
CCM	**Cathedral Cave**	**53.84**	**73**	IAMs_20	IAMs_20	07 51 13.7	
	comp=Z,2µm,20.0s						
MGMO	**Mountain Grove**	**53.84**	**74**	P	**P**	**07 26 14.8**	**-1.5**
MGMO				IAmb	IAmb	07 26 16.4	
	comp=Z,51nm,1.0s						
JCT	**Junction City**	**53.88**	**85**	P	**P**	**07 26 16.3**	**-0.5**
	baz=315,SNR=23						
JCT				S	**S**	**07 33 49.3**	**-1.7**
	baz=315						
JCT	**Junction City**	**53.88**	**85**	P	**P**	**07 26 16.1**	**-0.7**
JCT				pmax	pmax		
	comp=Z,71nm,1.2s						
JCT				MLR	MLR		
	comp=Z,1µm,18.0s						
JCT	**Junction City**	**53.88**	**85**	P	**P**	**07 26 16.1**	**-0.7**
JCT				IAmb	IAmb	07 26 19.7	
	comp=Z,71nm,1.1s						
U40A	**Yellville**	**54.03**	**75**	P	**P**	**07 26 15.7**	**-2.1**
	baz=313,SNR=32						
U40A	**Yellville**	**54.03**	**75**	P	**P**	**07 26 16.4**	**-1.4**
U40A				IAmb	IAmb	07 26 19.6	
	comp=Z,49nm,0.8s						
U40A				IAMs_20	IAMs_20	07 52 08.8	
	comp=Z,2µm,18.0s						
SLM	**Saint Louis**	**54.04**	**71**	P	**P**	**07 26 16.9**	**-0.8**
SLM				pmax	pmax		
	comp=Z,367nm,1.9s						
SLM	**Saint Louis**	**54.04**	**71**	P	**P**	**07 26 16.9**	**-0.8**
SLM				IAMs_20	IAMs_20	07 48 44.0	
	comp=Z,3µm,21.0s						
L46A	**Eue Claire**	**54.05**	**66**	P	**P**	**07 26 17.1**	**-0.7**
L46A				IAmb	IAmb	07 26 31.5	
	comp=Z,63nm,0.8s						
L46A				IAMs_20	IAMs_20	07 49 57.4	
	comp=Z,3µm,19.0s						
O44A	**Mansfield**	**54.05**	**69**	P	**P**	**07 26 17.3**	**-0.5**
O44A				IAmb	IAmb	07 26 18.8	
	comp=Z,40nm,0.8s						
O44A				IAMs_20	IAMs_20	07 50 16.3	
	comp=Z,4µm,21.0s						
J47A	**Sunmer**	**54.06**	**64**	P	**P**	**07 26 17.9**	**+0.1**
SSE	**Sheshan**	**54.22**	**276**	P	**P**	**07 26 19.6**	**+0.4**
SSE				S	**S**	**07 33 55.8**	**+0.4**
SSE				pmax	pmax		
	comp=Z,59nm,2.2s						
SSE				LR	LR		
	comp=Z,490nm,20.3s						
SSE				LR	LR		
	comp=Z,460nm,18.9s						
SSE	**Sheshan**	**54.22**	**276**	P	**P**	**07 26 20.5**	**+1.3**
SSE	**Sheshan**	**54.22**	**276**	IAMs_20	IAMs_20	07 51 52.8	
	comp=Z,2µm,20.0s						
WHTX	**Lake Whitney,**	**54.26**	**82**	S	**S**	**07 33 56.7**	**+0.8**
	baz=314						
W39A	**Magazine**	**54.26**	**77**	P	**P**	**07 26 18.1**	**-1.4**
	baz=313,SNR=17						
W39A	**Magazine**	**54.26**	**77**	P	**P**	**07 26 18.8**	**-0.7**
LSQQ	**Lebel-sur-Quev**	**54.36**	**54**	P	**P**	**07 26 18.2**	**-1.8**
	baz=311						
FVM	**French Village**	**54.36**	**72**	P	**P**	**07 26 18.8**	**-1.3**
FVM				pmax	pmax		
	comp=Z,64nm,1.1s						
FVM	**French Village**	**54.36**	**72**	P	**P**	**07 26 18.8**	**-1.3**
FVM				IAmb	IAmb	07 26 21.0	
	comp=Z,64nm,1.1s						
BTO	**Baotou**	**54.37**	**292**⇑	*e*P	**P**	**07 26 20.3**	**0.0**
BTO				S	**S**	**07 33 49.3**	**-8.2**
Q44A	**Meyer Farm, Va**	**54.56**	**70**	P	**P**	**07 26 20.6**	**-1.0**
T42A	**Van Buren**	**54.62**	**73**	P	**P**	**07 26 19.9**	**-2.1**
SFIN	**Lafayette**	**54.68**	**68**	P	**P**	**07 26 21.3**	**-1.1**
	baz=312,SNR=12						
SFIN	**Lafayette**	**54.68**	**68**	P	**P**	**07 26 21.2**	**-1.2**
SFIN				IAmb	IAmb	07 26 23.9	
	comp=Z,73nm,0.9s						
VLDQ	**Val d'Or**	**54.74**	**55**	P	**P**	**07 26 20.4**	**-2.4**
VLDQ				IAmb	IAmb	07 26 39.5	
	comp=Z,55nm,1.0s						
FCAR	**Ozark Folk Cen**	**54.78**	**75**	P	**P**	**07 26 21.1**	**-2.1**
FCAR				IAmb	IAmb	07 26 23.5	
	comp=Z,65nm,1.0s						
FCAR				IAMs_20	IAMs_20	07 52 29.6	
	comp=Z,2µm,18.0s						
MIAR	**Mount Ida**	**54.83**	**77**	P	**P**	**07 26 22.7**	**-0.9**
	baz=314,SNR=33						
MIAR	**Mount Ida**	**54.83**	**77**	P	**P**	**07 26 21.9**	**-1.7**
MIAR				pmax	pmax		
	comp=Z,192nm,1.5s						
MIAR	**Mount Ida**	**54.83**	**77**	P	**P**	**07 26 21.9**	**-1.7**
Z38A	**Mt. Pleasant**	**54.87**	**79**	P	**P**	**07 26 23.1**	**-0.8**
Z38A				IAmb	IAmb	07 26 45.8	
	comp=Z,144nm,1.5s						
TIY	**Taiyuan**	**54.92**	**288**	*e*P	**P**	**07 26 24.9**	**+0.6**
TIY				sP	**pwP**	**07 26 36.9**	**+3.6**
TIY				S	**S**	**07 34 10.7**	**+5.8**
TIY				SS	**SS**	**07 37 41.6**	**-6.3**
TIY				pmax	pmax		
	comp=Z,600nm,3.1s						
TIY				LR	LR		
	comp=Z,1µm,18.9s						
TIY				LR	LR		
	comp=Z,2µm,15.6s						
TIY				LR	LR		
	comp=Z,3µm,17.2s						
NJ2	**Nanjing**	**54.98**	**279**⇑	*i*P	**P**	**07 26 24.2**	**-0.4**
NJ2				pP	**pP**	**07 26 28.3**	**-1.4**
NJ2				sP	**sP**	**07 26 31.3**	**-0.2**
NJ2				S	**S**	**07 34 08.3**	**+2.8**
NJ2				sS	**sS**	**07 34 16.5**	**+2.8**
NJ2				pmax	pmax		
	comp=Z,51nm,1.6s						
NJ2				pmax	pmax		
	comp=Z,900nm,3.5s						
NJ2				LR	LR		
	comp=Z,1µm,18.9s						
NJ2				LR	LR		
	comp=Z,1µm,17.1s						
NJ2				LR	LR		
	comp=Z,2µm,18.0s						
435B	**Jarrell**	**55.02**	**84**	P	**P**	**07 26 24.2**	**-0.8**
	baz=315,SNR=9.2						
435B				S	**S**	**07 34 06.3**	**0.0**
	baz=315						
435B	**Jarrell**	**55.02**	**84**	P	**P**	**07 26 25.4**	**+0.4**
435B				IAmb	IAmb	07 26 49.0	
	comp=Z,78nm,1.2s						
435B				IAMs_20	IAMs_20	07 49 42.9	
	comp=Z,2µm,20.0s						
WHAR	**Wooly Hollow**	**55.09**	**76**	P	**P**	**07 26 25.0**	**-0.4**
WHAR				IAmb	IAmb	07 26 27.8	
	comp=Z,143nm,1.8s						
P46A	**Rosedale**	**55.12**	**69**	P	**P**	**07 26 24.6**	**-1.0**
L48A	**N Adams**	**55.13**	**65**	P	**P**	**07 26 25.0**	**-0.7**
L48A				IAmb	IAmb	07 26 28.4	
	comp=Z,59nm,0.8s						
N47A	**Urbana**	**55.14**	**67**	P	**P**	**07 26 24.5**	**-1.2**
SCO	**Scoresbysund**	**55.17**	**13**	*i* P	**P**	**07 26 25.5**	**+0.1**
	comp=Z,78nm,1.3s						
SCO	**Scoresbysund**	**55.17**	**13**	*i* P	**P**	**07 26 25.5**	**+0.1**
SCO				pmax	pmax		
	comp=Z,78nm,1.3s						
SCO	**Scoresbysund**	**55.17**	**13**	P	**P**	**07 26 25.0**	**-0.5**
SCO				IAmb	IAmb	07 26 29.0	
	comp=Z,51nm,1.1s						
SCO	**Scoresbysund**	**55.17**	**13**	*i* P	**P**	**07 26 25.6**	**+0.1**
SCO				IAmb	IAmb	07 26 27.1	
	comp=Z,78nm,1.3s						
PBMO	**Poplar Bluff**	**55.17**	**73**	P	**P**	**07 26 24.5**	**-1.6**
PBMO				IAmb	IAmb	07 26 27.1	
	comp=Z,46nm,1.1s						
W41B	**Gary Mavity, V**	**55.20**	**76**	P	**P**	**07 26 24.6**	**-1.6**
	baz=313,SNR=7.1						
OLIL	**Olney**	**55.21**	**70**	P	**P**	**07 26 25.2**	**-1.0**
OLIL				IAMs_20	IAMs_20	07 50 02.0	
	comp=Z,4µm,21.0s						
LCAR	**Lake Charles**	**55.23**	**74**	P	**P**	**07 26 24.5**	**-2.0**
LCAR				IAmb	IAmb	07 26 27.9	
	comp=Z,151nm,2.0s						
LCAR				IAMs_20	IAMs_20	07 49 48.6	
	comp=Z,2µm,20.0s						
S44A	**Carbondale**	**55.24**	**72**	P	**P**	**07 26 25.3**	**-1.2**
S44A				IAmb	IAmb	07 26 27.3	
	comp=Z,53nm,1.0s						
S44A				IAMs_20	IAMs_20	07 49 22.9	
	comp=Z,3µm,22.0s						
SIUC	**Southern Illin**	**55.25**	**72**	P	**P**	**07 26 24.8**	**-1.8**
SIUC				IAmb	IAmb	07 26 28.8	
	comp=Z,47nm,0.8s						
SIUC				IAMs_20	IAMs_20	07 49 22.9	
	comp=Z,3µm,22.0s						
237A	**Washetta, Mont**	**55.25**	**81**	P	**P**	**07 26 26.9**	**+0.3**
X40A	**Basin Creek Fa**	**55.32**	**77**	P	**P**	**07 26 26.0**	**-1.1**
	baz=314,SNR=12						
X40A	**Basin Creek Fa**	**55.32**	**77**	P	**P**	**07 26 26.1**	**-1.1**
X40A				IAmb	IAmb	07 26 29.0	
	comp=Z,85nm,1.6s						
X40A				IAMs_20	IAMs_20	07 54 35.8	
	comp=Z,3µm,18.0s						
AAM	**Ann Arbor**	**55.32**	**64**	P	**P**	**07 26 25.1**	**-1.9**
	baz=312						
AAM	**Ann Arbor**	**55.32**	**64**	P	**P**	**07 26 25.7**	**-1.3**
AAM				pmax	pmax		
	comp=Z,33nm,0.9s						
AAM	**Ann Arbor**	**55.32**	**64**	P	**P**	**07 26 25.6**	**-1.3**
K50A	**Casco**	**55.57**	**63**	P	**P**	**07 26 28.9**	**+0.1**
K50A				IAmb	IAmb	07 26 30.3	
	comp=Z,60nm,1.1s						
PARMO	**Parma**	**55.65**	**73**	P	**P**	**07 26 27.9**	**-1.6**
PARMO				IAMs_20	IAMs_20	07 52 09.7	
	comp=Z,2µm,20.0s						
833A	**Chaparral WMA,**	**55.66**	**87**	P	**P**	**07 26 30.0**	**+0.3**
	baz=316,SNR=9.7						
WLAR	**White Oak Lake**	**55.70**	**78**	P	**P**	**07 26 28.7**	**-1.2**
I51A	**Listowel**	**55.75**	**61**	P	**P**	**07 26 28.8**	**-1.3**
	baz=312,SNR=8.8						
HENM	**Henderson Moun**	**55.78**	**73**	P	**P**	**07 26 28.6**	**-1.8**
BLO	**Bloomington**	**55.82**	**69**	P	**P**	**07 26 28.9**	**-1.8**
BLO				pmax	pmax		
	comp=Z,66nm,1.0s						
BLO				MLR	MLR		
	comp=Z,5µm,20.0s						
BLO	**Bloomington**	**55.82**	**69**	P	**P**	**07 26 28.9**	**-1.8**
BLO				IAmb	IAmb	07 26 31.8	
	comp=Z,66nm,0.9s						
ALGO	**Algonquin Park**	**55.87**	**57**	P	**P**	**07 26 30.3**	**-0.6**
	baz=312,SNR=9.3						
HBAR	**Harrisburg**	**55.88**	**74**	P	**P**	**07 26 30.4**	**-0.6**
N49A	**Columbus Grove**	**55.95**	**66**	P	**P**	**07 26 30.6**	**-1.0**
N49A				IAmb	IAmb	07 26 32.7	
	comp=Z,51nm,0.9s						
N49A				IAMs_20	IAMs_20	07 51 14.9	
	comp=Z,3µm,20.0s						
PEBM	**Pemiscott Bayo**	**55.96**	**73**	P	**P**	**07 26 31.1**	**-0.6**
GNAR	**Gosnell**	**55.97**	**74**	P	**P**	**07 26 31.6**	**-0.2**
GNAR				IAmb	IAmb	07 26 33.5	
	comp=Z,138nm,1.3s						
GNAR				IAMs_20	IAMs_20	07 49 52.2	
	comp=Z,2µm,19.0s						
USIN	**University of**	**55.98**	**70**	P	**P**	**07 26 31.4**	**-0.4**
HICK	**Hickman**	**56.04**	**73**	P	**P**	**07 26 31.1**	**-1.1**
HICK				IAmb	IAmb	07 26 33.8	
	comp=Z,126nm,1.1s						
HICK				IAMs_20	IAMs_20	07 52 21.1	
	comp=Z,2µm,20.0s						
LPAR	**Lepanto**	**56.06**	**74**	P	**P**	**07 26 32.5**	**+0.1**
LPAR				IAmb	IAmb	07 26 34.8	
	comp=Z,106nm,1.1s						
T45A	**Paducah**	**56.06**	**72**	P	**P**	**07 26 31.3**	**-1.1**
T45A				IAMs_20	IAMs_20	07 49 58.5	
	comp=Z,3µm,20.0s						
SADO	**Sadowa**	**56.10**	**59**	P	**P**	**07 26 31.4**	**-1.1**
SADO				IAmb	IAmb	07 26 34.3	
	comp=Z,33nm,0.8s						
NATX	**Nacogdoches**	**56.11**	**81**	P	**P**	**07 26 32.5**	**-0.3**
	baz=315,SNR=12						
NATX	**Nacogdoches**	**56.11**	**81**	P	**P**	**07 26 32.6**	**-0.3**
Z41A	**Richland Creek**	**56.19**	**78**	P	**P**	**07 26 33.3**	**-0.1**
	baz=314,SNR=7.7						
LNXT	**Lenox**	**56.19**	**73**	P	**P**	**07 26 32.7**	**-0.6**
GLAT	**Glass**	**56.19**	**73**	P	**P**	**07 26 33.5**	**+0.1**
G54A	**Lake Saint Pet**	**56.23**	**58**	P	**P**	**07 26 32.9**	**-0.6**
	baz=312,SNR=7.4						
P48A	**Milroy**	**56.24**	**68**	P	**P**	**07 26 32.4**	**-1.3**
735A	**Kenedy**	**56.25**	**85**	P	**P**	**07 26 34.0**	**+0.2**
M50A	**Fremont**	**56.26**	**64**	P	**P**	**07 26 33.3**	**-0.5**
ISOG	**Isortoq, Green**	**56.31**	**23**	*i* P	**P**	**07 26 33.8**	**+0.1**
ISOG				IAmb	IAmb	07 26 34.5	
	comp=Z,24nm,0.9s						
CCAR	**Cane Creek**	**56.35**	**77**	P	**P**	**07 26 33.8**	**-0.7**
O49A	**Covington**	**56.37**	**66**	P	**P**	**07 26 34.0**	**-0.6**
O49A				IAmb	IAmb	07 26 35.4	
	comp=Z,48nm,0.9s						
HALT	**Halls**	**56.41**	**73**	P	**P**	**07 26 34.3**	**-0.6**
HALT				IAMs_20	IAMs_20	07 52 33.8	
	comp=Z,2µm,18.0s						
X43A	**Marvell**	**56.46**	**76**	P	**P**	**07 26 34.1**	**-1.1**
	baz=314,SNR=8.2						
D55A	**Sainte-Anne-du**	**56.47**	**55**	P	**P**	**07 26 34.2**	**-1.0**
	baz=313						
H53A	**Bobcaygeon**	**56.53**	**59**	P	**P**	**07 26 35.2**	**-0.5**
	baz=313,SNR=5.1						
E55A	**Montcerf-Lytto**	**56.56**	**56**	P	**P**	**07 26 34.4**	**-1.4**
	baz=313						
ANGG	**Ammassalik, Gr**	**56.56**	**22**	P	**P**	**07 26 35.8**	**+0.2**
ANGG				IAmb	IAmb	07 27 45.5	
	comp=Z,195nm,1.8s						
ANGG	**Ammassalik, Gr**	**56.56**	**22**	*i* P	**P**	**07 26 35.2**	**-0.3**
ANGG				IAmb	IAmb	07 26 37.7	
	comp=Z,34nm,0.8s						
WCI	**Wyandotte Cave**	**56.59**	**69**	P	**P**	**07 26 35.1**	**-1.0**
	baz=313						
WCI	**Wyandotte Cave**	**56.59**	**69**	P	**P**	**07 26 34.8**	**-1.3**
WCI				pmax	pmax		
	comp=Z,69nm,1.0s						
WCI				MLR	MLR		
	comp=Z,4µm,21.0s						
WCI	**Wyandotte Cave**	**56.59**	**69**	P	**P**	**07 26 34.8**	**-1.3**
WCI				IAmb	IAmb	07 26 37.3	
	comp=Z,69nm,1.0s						
P49A	**Miami Univ. Ec**	**56.60**	**67**	P	**P**	**07 26 34.5**	**-1.7**
	baz=313,SNR=15						
P49A	**Miami Univ. Ec**	**56.60**	**67**	P	**P**	**07 26 34.2**	**-2.0**
HKT	**Hockley**	**56.68**	**83**	*i* P	**P**	**07 26 36.4**	**-0.4**
HKT				pmax	pmax		
	comp=Z,49nm,1.3s						
HKT	**Hockley**	**56.68**	**83**	P	**P**	**07 26 37.9**	**+1.1**
HKT	**Hockley**	**56.68**	**83**	IAMs_20	IAMs_20	07 51 02.4	
	comp=Z,2µm,18.0s						
D56A	**ZEC Mazanza, M**	**56.81**	**55**	P	**P**	**07 26 36.6**	**-1.0**
	baz=313,SNR=6.1						
D56A				S	**S**	**07 34 29.0**	**-0.7**
	baz=313						
N51A	**Ashland**	**56.96**	**64**	P	**P**	**07 26 37.8**	**-1.0**
N51A				IAMs_20	IAMs_20	07 52 03.6	
	comp=Z,3µm,19.0s						
T47A	**Sharon Grove**	**56.97**	**71**	P	**P**	**07 26 38.3**	**-0.6**
T47A				IAmb	IAmb	07 26 41.6	
	comp=Z,100nm,1.1s						
T47A				IAMs_20	IAMs_20	07 50 56.7	
	comp=Z,3µm,20.0s						
PLVO	**Plevna**	**57.00**	**58**	P	**P**	**07 26 38.6**	**-0.4**
HAMF	**Hammerfest**	**57.01**	**355**	*e*P	**P**	**07 26 38.9**	**+0.2**
E56A	**St. Veronique**	**57.02**	**55**	P	**P**	**07 26 37.3**	**-1.8**
	baz=313						
W45A	**Hickory Valley**	**57.02**	**74**	P	**P**	**07 26 38.8**	**-0.4**
DELO	**Deloro Mine**	**57.07**	**58**	P	**P**	**07 26 40.0**	**+0.6**
DELO				IAmb	IAmb	07 26 41.6	
	comp=Z,46nm,1.1s						
ACSO	**Alum Creek Sta**	**57.09**	**65**	P	**P**	**07 26 38.5**	**-1.2**
	baz=313,SNR=6.4						
ACSO	**Alum Creek Sta**	**57.09**	**65**	P	**P**	**07 26 39.7**	**-0.1**
ACSO				IAmb	IAmb	07 26 41.7	
	comp=Z,60nm,1.2s						
M52A	**Chesterland**	**57.10**	**63**	P	**P**	**07 26 39.0**	**-0.8**
M52A				IAmb	IAmb	07 26 41.1	
	comp=Z,53nm,0.8s						
WVT	**Waverly**	**57.14**	**72**	P	**P**	**07 26 39.0**	**-1.1**
	baz=314						
WVT	**Waverly**	**57.14**	**72**	P	**P**	**07 26 39.3**	**-0.8**
WVT				pmax	pmax		
	comp=Z,188nm,1.5s						
WVT	**Waverly**	**57.14**	**72**	P	**P**	**07 26 39.3**	**-0.8**
WVT	**Waverly**	**57.14**	**72**	IAMs_20	IAMs_20	07 49 34.2	
	comp=Z,3µm,21.0s						
OXF	**Oxford**	**57.34**	**75**	P	**P**	**07 26 40.5**	**-1.0**
	baz=314,SNR=18						
OXF	**Oxford**	**57.34**	**75**	P	**P**	**07 26 40.7**	**-0.8**
OXF				pmax	pmax		
	comp=Z,175nm,1.0s						
OXF	**Oxford**	**57.34**	**75**	P	**P**	**07 26 40.7**	**-0.8**
OXF				IAMs_20	IAMs_20	07 50 22.3	
	comp=Z,2µm,21.0s						
J54A	**Appleton**	**57.38**	**60**	P	**P**	**07 26 40.5**	**-1.2**
J54A				IAmb	IAmb	07 26 43.9	
	comp=Z,65nm,0.8s						
143A	**Socs Landing,**	**57.41**	**77**	P	**P**	**07 26 42.0**	**-0.1**
L53A	**Girard**	**57.41**	**62**	P	**P**	**07 26 40.8**	**-1.1**
	baz=313,SNR=8.4						
ERPA	**Erie**	**57.45**	**62**	P	**P**	**07 26 41.3**	**-0.9**
	baz=313						
ERPA	**Erie**	**57.45**	**62**	P	**P**	**07 26 41.5**	**-0.7**
ERPA				IAmb	IAmb	07 26 44.2	
	comp=Z,129nm,1.2s						
TRQ	**Mont Tremblant**	**57.48**	**55**	P	**P**	**07 26 41.8**	**-0.7**
M53A	**WI Miller and**	**57.54**	**63**	P	**P**	**07 26 41.6**	**-1.2**
	baz=313,SNR=15						
M53A	**WI Miller and**	**57.54**	**63**	P	**P**	**07 26 42.4**	**-0.5**
M53A				IAmb	IAmb	07 26 44.5	
	comp=Z,78nm,0.9s						
M53A				IAMs_20	IAMs_20	07 50 56.0	
	comp=Z,2µm,20.0s						
E57A	**Chemin Saint G**	**57.55**	**55**	P	**P**	**07 26 41.5**	**-1.4**
	baz=314						
MEDO	**Medina**	**57.56**	**60**	P	**P**	**07 26 42.5**	**-0.4**
MEDO				IAmb	IAmb	07 26 45.0	
	comp=Z,63nm,0.8s						
LATQ	**La Tuque**	**57.56**	**53**	P	**P**	**07 26 41.6**	**-1.3**
	baz=314						
LATQ	**La Tuque**	**57.56**	**53**	P	**P**	**07 26 43.0**	**+0.2**
P51A	**Williamsport**	**57.56**	**66**	P	**P**	**07 26 42.8**	**-0.3**
P51A				IAmb	IAmb	07 26 44.9	
	comp=Z,57nm,1.2s						
R50A	**Paris**	**57.68**	**68**	P	**P**	**07 26 43.3**	**-0.6**
ALLY	**Alegheny Colle**	**57.69**	**62**	P	**P**	**07 26 43.6**	**-0.3**
KEV	**Kevo**	**57.69**	**354**	P	**P**	**07 26 43.9**	**+0.5**
KEV				pmax	pmax		
	comp=Z,43nm,0.8s						
KEV				MLR	MLR		
	comp=Z,2µm,19.0s						
KEV	**Kevo**	**57.69**	**354**	P	**P**	**07 26 43.9**	**+0.5**
KEV				IAmb	IAmb	07 26 46.4	
	comp=Z,43nm,0.8s						
KEV				IAMs_20	IAMs_20	07 55 21.1	
	comp=Z,2µm,19.0s						
F57A	**Harrington**	**57.69**	**56**	P	**P**	**07 26 42.5**	**-1.3**
	baz=314						
D58A	**Chemin du LacG**	**57.71**	**54**	P	**P**	**07 26 42.7**	**-1.2**
	baz=314,SNR=5.1						
D58A				S	**S**	**07 34 40.5**	**-0.9**
	baz=314						
Y45A	**Yeager Farm, C**	**57.71**	**75**	P	**P**	**07 26 43.9**	**-0.2**
Q51A	**Peebles**	**57.72**	**67**	P	**P**	**07 26 42.9**	**-1.2**
Q51A				IAmb	IAmb	07 26 45.7	
	comp=Z,108nm,0.9s						
ZAA0	**Zalesovo Array**	**57.74**	**318**	P	**P**	**07 26 42.8**	**-1.3**
ZAA0				IAMs_20	IAMs_20	07 52 39.0	
	comp=Z,2µm,20.0s						
ZALV	**Zalesovo Beam**	**57.74**	**318**	P	**P**	**07 26 42.9**	**-1.2**
	comp=Z,5.3nm,0.5s,baz=38,slow=6.9,SNR=19						
ZALV				LR	LR	07 53 00.5	
	comp=Z,2µm,19.6s,baz=54,slow=38						
ZALV	**Zalesovo Beam**	**57.74**	**318**	*i* P	**P**	**07 26 43.7**	**-0.3**
ZALV				pmax	pmax		
	comp=Z,5.0nm,0.5s						
PLAL	**Pickwick Lake**	**57.80**	**73**	P	**P**	**07 26 43.3**	**-1.4**
PLAL				IAmb	IAmb	07 26 45.7	
	comp=Z,61nm,1.0s						
342A	**Flagon Creek P**	**57.80**	**79**	P	**P**	**07 26 45.8**	**+1.0**
PECO	**Prince Edward**	**57.80**	**59**	P	**P**	**07 26 44.6**	**0.0**
O52A	**Adamsville**	**57.81**	**65**	P	**P**	**07 26 43.7**	**-1.1**
O52A				IAmb	IAmb	07 26 46.1	
	comp=Z,90nm,0.9s						
N53A	**Lisbon**	**57.89**	**64**	P	**P**	**07 26 44.5**	**-0.8**
P52A	**Corning**	**57.98**	**65**	P	**P**	**07 26 44.8**	**-1.2**
	baz=314						
WVNY	**West Valley, N**	**58.00**	**61**	P	**P**	**07 26 45.6**	**-0.5**
WVNY				IAmb	IAmb	07 26 48.1	
	comp=Z,71nm,0.9s						
V48A	**Smith Brothers**	**58.00**	**72**	P	**P**	**07 26 45.2**	**-0.9**
V48A				IAmb	IAmb	07 26 48.6	
	comp=Z,46nm,1.1s						
ARA0	**ARCESS Array S**	**58.00**	**354**	*e*P	**P**	**07 26 44.8**	**-0.9**
ARCES	**ARCESS Array B**	**58.00**	**354**	P	**P**	**07 26 44.5**	**-1.2**
	comp=Z,8.2nm,0.4s,baz=15,slow=8.1,SNR=52						
ARCES				LR	LR	07 53 34.6	
	comp=Z,2µm,19.6s,baz=355,slow=38						
ARCES	**ARCESS Array B**	**58.00**	**354**	P	**P**	**07 26 44.8**	**-0.9**
ARCES				pmax	pmax		
	comp=Z,32nm,1.0s						
ARCES	**ARCESS Array B**	**58.00**	**354**	P	**P**	**07 26 44.8**	**-0.9**
E58A	**La Victoria**	**58.01**	**54**	P	**P**	**07 26 44.3**	**-1.8**
	baz=314						
G57A	**Newington**	**58.03**	**56**	P	**P**	**07 26 44.7**	**-1.5**
	baz=314						
CLTN	**Cedars of Leba**	**58.04**	**71**	P	**P**	**07 26 45.3**	**-1.1**
CLTN				IAmb	IAmb	07 26 48.7	
	comp=Z,88nm,1.3s						
M54A	**Oil Creek Stat**	**58.05**	**62**	P	**P**	**07 26 45.1**	**-1.4**
	baz=314,SNR=6.4						
M54A	**Oil Creek Stat**	**58.05**	**62**	P	**P**	**07 26 46.1**	**-0.3**
O53A	**New Philadelph**	**58.06**	**64**	P	**P**	**07 26 45.4**	**-1.2**
	baz=314,SNR=9.2						
O53A	**New Philadelph**	**58.06**	**64**	P	**P**	**07 26 46.0**	**-0.5**
O53A				IAmb	IAmb	07 26 47.8	
	comp=Z,53nm,0.9s						
O53A				IAMs_20	IAMs_20	07 52 56.8	
	comp=Z,3µm,19.0s						
U49A	**Red Boiling Sp**	**58.07**	**70**	P	**P**	**07 26 45.5**	**-1.1**
U49A				IAmb	IAmb	07 26 48.6	
	comp=Z,137nm,1.7s						
U49A				IAMs_20	IAMs_20	07 51 20.8	
	comp=Z,3µm,21.0s						
TRO	**Tromso**	**58.22**	**357**	*e*P	**P**	**07 26 47.3**	**+0.1**
N54A	**Moraine State**	**58.25**	**63**	P	**P**	**07 26 46.9**	**-0.9**
	baz=314						
N54A	**Moraine State**	**58.25**	**63**	P	**P**	**07 26 47.3**	**-0.5**
N54A				IAmb	IAmb	07 26 50.2	
	comp=Z,115nm,1.4s						
T50A	**Nancy**	**58.26**	**69**	P	**P**	**07 26 47.4**	**-0.6**

H57A	**Richville**	**58.27**	**57**	P	**P**	**07 26 47.1**	**-0.8**
	baz=314,SNR=6.4						
H57A				S	**S**	**07 34 50.2**	**+1.5**
	baz=314						
D59A	**Saint-Raymond**	**58.28**	**53**	P	**P**	**07 26 46.9**	**-1.1**
	baz=314,SNR=8.1						
VBMS	**Vicksburg**	**58.28**	**77**	P	**P**	**07 26 47.5**	**-0.7**
	baz=315,SNR=5.2						
VBMS	**Vicksburg**	**58.28**	**77**	P	**P**	**07 26 47.5**	**-0.7**
E59A	**St. Maurice**	**58.32**	**54**	P	**P**	**07 26 47.2**	**-1.0**
	baz=314						
J56A	**Wolcott**	**58.32**	**59**	P	**P**	**07 26 46.7**	**-1.6**
	baz=314						
TATO	**Taipei**	**58.43**	**271**	IAMs_20	IAMs_20	07 51 04.1	
	comp=Z,3µm,22.0s						
G58A	**Ormstown**	**58.47**	**56**	P	**P**	**07 26 47.6**	**-1.7**
	baz=314						
K56A	**Middlesex**	**58.48**	**60**	P	**P**	**07 26 48.5**	**-1.0**
	baz=314,SNR=6.4						
I57A	**Carthage**	**58.49**	**58**	P	**P**	**07 26 48.4**	**-1.1**
	baz=314,SNR=10						
P53A	**Whipple**	**58.49**	**65**	P	**P**	**07 26 48.5**	**-1.0**
S51A	**Beattyville**	**58.54**	**68**	P	**P**	**07 26 49.6**	**-0.3**
S51A				IAmb	IAmb	07 26 50.6	
	comp=Z,57nm,1.1s						
M55A	**Ridgway**	**58.56**	**62**	P	**P**	**07 26 50.1**	**0.0**
LONY	**Lake Ozonia**	**58.57**	**57**	P	**P**	**07 26 48.3**	**-1.8**
	baz=314						
LONY	**Lake Ozonia**	**58.57**	**57**	P	**P**	**07 26 49.8**	**-0.3**
O54A	**Avella**	**58.57**	**64**	P	**P**	**07 26 49.6**	**-0.5**
F59A	**Saint Guilaume**	**58.62**	**55**	P	**P**	**07 26 48.4**	**-1.9**
	baz=314						
KTK1	**Kautokeino**	**58.65**	**355**	*e*P	**P**	**07 26 50.4**	**+0.2**
J57A	**Williamstown**	**58.68**	**58**	P	**P**	**07 26 49.0**	**-1.8**
	baz=314,SNR=6.6						
J57A	**Williamstown**	**58.68**	**58**	P	**P**	**07 26 51.2**	**+0.4**
344A	**Westbrook Farm**	**58.70**	**78**	P	**P**	**07 26 51.2**	**+0.2**
YHNB	**Yeheng**	**58.73**	**271**	IAMs_20	IAMs_20	07 51 36.0	
	comp=Z,2µm,19.0s						
L56A	**Greenwood**	**58.74**	**60**	P	**P**	**07 26 50.7**	**-0.6**
	baz=314,SNR=10						
L56A	**Greenwood**	**58.74**	**60**	P	**P**	**07 26 50.7**	**-0.6**
WHN	**Wuhan**	**58.76**	**281**	⇑P	**P**	**07 26 51.5**	**0.0**
WHN				sP	**pwP**	**07 27 04.5**	**+3.9**
WHN				pmax	pmax		
	comp=Z,510nm,1.6s						
WHN				LR	LR		
	comp=Z,1µm,14.3s						
WHN				LR	LR		
	comp=Z,3µm,18.9s						
WHN				LR	LR		
	comp=Z,4µm,17.5s						
X48A	**Hartselle**	**58.77**	**73**	P	**P**	**07 26 50.6**	**-0.9**
X48A				IAmb	IAmb	07 26 52.2	
	comp=Z,54nm,1.1s						
X48A				IAMs_20	IAMs_20	07 50 46.3	
	comp=Z,2µm,20.0s						
D60A	**Saint Jean D'O**	**58.80**	**53**	P	**P**	**07 26 50.1**	**-1.4**
	baz=315						
LVZ	**Lovozero**	**58.83**	**350**	*ce*P	**P**	**07 26 51.0**	**-0.5**
LVZ				pmax	pmax		
	comp=Z,105nm,1.0s						
LVZ	**Lovozero**	**58.83**	**350**	P	**P**	**07 26 51.3**	**-0.2**
Q53A	**Leroy**	**58.86**	**66**	P	**P**	**07 26 50.4**	**-1.8**
	baz=314						
146A	**Union**	**58.86**	**76**	P	**P**	**07 26 51.6**	**-0.6**
K57A	**Scipio Center**	**58.88**	**59**	P	**P**	**07 26 51.4**	**-0.8**
	baz=314						
SWET	**Sewanee**	**58.89**	**72**	P	**P**	**07 26 52.5**	**+0.1**
SWET				IAmb	IAmb	07 26 53.9	
	comp=Z,98nm,1.6s						
SWET				IAMs_20	IAMs_20	07 51 35.4	
	comp=Z,3µm,22.0s						
H58A	**Gabriels**	**58.92**	**57**	P	**P**	**07 26 51.5**	**-1.0**
	baz=314						
E60A	**Ste Agathe de**	**58.92**	**53**	P	**P**	**07 26 51.5**	**-1.0**
	baz=315						
FRNY	**Flat Rock**	**58.93**	**56**	P	**P**	**07 26 53.0**	**+0.5**
D61A	**St Aubert, Com**	**58.95**	**52**	P	**P**	**07 26 51.2**	**-1.4**
	baz=315						
F60A	**Warwick**	**58.95**	**54**	P	**P**	**07 26 51.1**	**-1.5**
	baz=315						
NACB	**Ninganchiao**	**58.96**	**270**	IAMs_20	IAMs_20	07 51 06.1	
	comp=Z,2µm,20.0s						
G59A	**Clarenceville**	**58.96**	**55**	P	**P**	**07 26 51.6**	**-1.1**
	baz=314						
R53A	**Hurricane**	**58.99**	**66**	P	**P**	**07 26 52.7**	**-0.3**
H59A	**Cadyville**	**59.01**	**56**	P	**P**	**07 26 52.1**	**-1.0**
	baz=314						
I58A	**Old Forge**	**59.02**	**58**	P	**P**	**07 26 52.6**	**-0.6**
	baz=314,SNR=11						
Z47A	**Carrollton**	**59.05**	**75**	P	**P**	**07 26 53.0**	**-0.5**
Q54A	**Coxs Mills**	**59.16**	**65**	P	**P**	**07 26 53.2**	**-1.0**
Q54A				IAmb	IAmb	07 26 55.7	
	comp=Z,76nm,1.0s						
N56A	**West Decatur**	**59.20**	**62**	P	**P**	**07 26 53.7**	**-0.8**
	baz=314,SNR=16						
NCB	**Newcomb**	**59.21**	**57**	P	**P**	**07 26 54.7**	**+0.2**
L57A	**Andrews Acres**	**59.22**	**60**	P	**P**	**07 26 54.0**	**-0.6**
	baz=314,SNR=7.3						
MCWV	**Mont Chateau**	**59.23**	**64**	P	**P**	**07 26 53.6**	**-1.1**
	baz=314,SNR=12						
MCWV	**Mont Chateau**	**59.23**	**64**	P	**P**	**07 26 54.2**	**-0.5**
MCWV				IAmb	IAmb	07 26 56.4	
	comp=Z,45nm,0.9s						
W50A	**Signal Mountai**	**59.26**	**71**	P	**P**	**07 26 53.8**	**-1.2**
W50A				IAmb	IAmb	07 26 56.1	
	comp=Z,62nm,1.1s						
MOQ	**Mont Orford**	**59.27**	**55**	P	**P**	**07 26 54.1**	**-0.8**
APA	**Apatity**	**59.28**	**350**	⇓*i*P	**P**	**07 26 57.4**	**+2.8**
APA				*i*		07 27 41.0	
APA				*i*		07 29 12.0	
APA				*i* PPP	PPP	07 30 36.0	
APA				*i* S	**S**	**07 35 01.0**	**-0.3**
APA				*i* PS	**PnS**	**07 35 27.0**	**+13**
APA				pmax	pmax		
	comp=Z,19nm,0.9s						
K58A	**Earlville**	**59.32**	**59**	P	**P**	**07 26 54.1**	**-1.2**
	baz=315						
TZTN	**Tazewell**	**59.33**	**69**	P	**P**	**07 26 54.6**	**-0.8**
	baz=315,SNR=5.4						
TZTN	**Tazewell**	**59.33**	**69**	P	**P**	**07 26 54.6**	**-0.8**
E61A	**Lac Etchemin**	**59.35**	**53**	P	**P**	**07 26 54.0**	**-1.5**
	baz=315						
G60A	**Masonville**	**59.38**	**55**	P	**P**	**07 26 54.0**	**-1.7**
	baz=315						
V51A	**Loudon**	**59.39**	**70**	P	**P**	**07 26 55.2**	**-0.6**
V51A				IAmb	IAmb	07 26 57.7	
	comp=Z,146nm,1.8s						
J59A	**Piesco**	**59.42**	**58**	P	**P**	**07 26 54.6**	**-1.4**
	baz=315						
J59A	**Piesco**	**59.42**	**58**	P	**P**	**07 26 56.6**	**+0.6**
J59A				IAmb	IAmb	07 26 57.7	
	comp=Z,35nm,0.8s						
F61A	**St Evariste**	**59.42**	**53**	P	**P**	**07 26 54.9**	**-1.1**
	baz=315						
346A	**Big Creek Wild**	**59.51**	**77**	P	**P**	**07 26 56.1**	**-0.6**
O56A	**Blue Knob Stat**	**59.51**	**63**	P	**P**	**07 26 55.4**	**-1.3**
	baz=315,SNR=7.3						
O56A	**Blue Knob Stat**	**59.51**	**63**	P	**P**	**07 26 56.4**	**-0.3**
XAN	**Xi'an**	**59.52**	**287**	P	**P**	**07 26 56.6**	**-0.2**
XAN				pP	sP	07 27 03.4	-0.2
XAN				PP	**PP**	**07 29 10.9**	**+3.0**
XAN				pmax	pmax		
	comp=Z,64nm,1.7s						
XAN				pmax	pmax		
	comp=Z,910nm,5.3s						
XAN				LR	LR		
	comp=Z,3µm,19.5s						
XAN				LR	LR		
	comp=Z,2µm,20.3s						
XAN				LR	LR		
	comp=Z,4µm,18.4s						
M57A	**Sunshine Farm,**	**59.53**	**61**	P	**P**	**07 26 55.5**	**-1.2**
	baz=315						
M57A	**Sunshine Farm,**	**59.53**	**61**	P	**P**	**07 26 56.1**	**-0.6**
M57A				IAmb	IAmb	07 27 06.0	
	comp=Z,57nm,1.1s						
BINY	**Binghamton**	**59.53**	**59**	P	**P**	**07 26 55.7**	**-1.1**
	baz=315,SNR=6.0						
BINY	**Binghamton**	**59.53**	**59**	P	**P**	**07 26 56.9**	**+0.1**
BINY				IAmb	IAmb	07 27 13.5	
	comp=Z,80nm,1.1s						
CPCT	**Cooper Cave**	**59.54**	**70**	P	**P**	**07 26 56.5**	**-0.4**
CPCT				IAmb	IAmb	07 27 37.2	
	comp=Z,103nm,1.6s						
FPAL	**Fort Paine**	**59.55**	**72**	P	**P**	**07 26 56.0**	**-1.0**
FPAL				IAmb	IAmb	07 26 57.9	
	comp=Z,76nm,0.9s						
Y49A	**Blount Mountai**	**59.56**	**73**	P	**P**	**07 26 55.9**	**-1.2**
Y49A				IAmb	IAmb	07 26 57.6	
	comp=Z,63nm,1.1s						
H60A	**Morristown**	**59.57**	**56**	P	**P**	**07 26 55.7**	**-1.3**
	baz=315						
R54A	**Victor**	**59.63**	**66**	P	**P**	**07 26 56.2**	**-1.3**
	baz=315,SNR=13						
SSLB	**Suanglung**	**59.63**	**270**	P	**P**	**07 26 58.2**	**+0.5**
SSLB				IAMs_20	IAMs_20	07 52 19.1	
	comp=Z,2µm,20.0s						
G61A	**St-Isidore-de-**	**59.65**	**54**	P	**P**	**07 26 56.1**	**-1.4**
	baz=315						
DGZ	**Jazzator, Alta**	**59.68**	**313**	*c i*P	**P**	**07 26 57.5**	**-0.3**
DGZ				pmax	pmax		
	comp=Z,34nm,1.0s						
N57A	**Milroy**	**59.71**	**62**	P	**P**	**07 26 57.1**	**-0.9**
	baz=315,SNR=6.8						
L58A	**Harry Jones Me**	**59.72**	**59**	P	**P**	**07 26 57.5**	**-0.5**
	baz=315,SNR=9.6						
YULB	**Yu-li**	**59.72**	**270**	P	**P**	**07 26 59.2**	**+1.0**
YULB				IAMs_20	IAMs_20	07 51 52.2	
	comp=Z,1µm,20.0s						
S54A	**Dingess, Beckl**	**59.72**	**66**	P	**P**	**07 26 57.6**	**-0.5**
	baz=315,SNR=7.1						
S54A	**Dingess, Beckl**	**59.72**	**66**	P	**P**	**07 26 58.0**	**-0.1**
S54A				IAmb	IAmb	07 26 59.7	
	comp=Z,58nm,0.8s						
K59A	**Cooperstown**	**59.73**	**58**	P	**P**	**07 26 56.9**	**-1.2**
	baz=315						
I60A	**Shoreham**	**59.78**	**56**	P	**P**	**07 26 57.2**	**-1.1**
	baz=315						
V52A	**Sevierville**	**59.80**	**69**	P	**P**	**07 26 57.0**	**-1.6**
V52A				IAmb	IAmb	07 27 25.3	
	comp=Z,42nm,1.0s						
LRAL	**Lakeview Retre**	**59.80**	**74**	P	**P**	**07 26 57.2**	**-1.5**
	baz=315,SNR=7.3						
LRAL	**Lakeview Retre**	**59.80**	**74**	P	**P**	**07 26 57.2**	**-1.5**
TKL	**Tuckaleechee C**	**59.82**	**70**	P	**P**	**07 26 58.2**	**-0.6**
TKL				pmax	pmax		
	comp=Z,223nm,2.0s						
TKL				MLR	MLR		
	comp=Z,3µm,20.0s						
TKL	**Tuckaleechee C**	**59.82**	**70**	P	**P**	**07 26 58.2**	**-0.6**
LOF	**Lofoten**	**59.85**	**359**	*e*P	**P**	**07 26 59.2**	**+0.7**
M58A	**Price's Panora**	**59.87**	**60**	P	**P**	**07 26 57.7**	**-1.4**
	baz=315						
P56A	**Dayton Farm, R**	**59.89**	**63**	P	**P**	**07 26 58.4**	**-0.8**
	baz=315,SNR=12						
X51A	**Calhoun**	**59.97**	**71**	P	**P**	**07 26 59.6**	**-0.2**
H61A	**Lyndonville**	**59.98**	**55**	P	**P**	**07 26 58.5**	**-1.3**
	baz=315						
SGF	**Sodankyl**	**60.00**	**353**	P	**P**	**07 27 00.1**	**+0.5**
SGF				pmax	pmax		
	comp=Z,81nm,1.6s						
STEI	**Steigen**	**60.02**	**358**	*e*P	**P**	**07 26 59.2**	**-0.5**
Q56A	**Snyder Ridge,**	**60.03**	**64**	P	**P**	**07 26 59.3**	**-0.9**
	baz=315						
Q56A	**Snyder Ridge,**	**60.03**	**64**	P	**P**	**07 27 00.2**	**0.0**
Q56A				IAmb	IAmb	07 27 48.1	
	comp=Z,52nm,1.1s						
Q56A				IAMs_20	IAMs_20	07 53 58.7	
	comp=Z,2µm,19.0s						
L59A	**Walton**	**60.04**	**59**	P	**P**	**07 26 60.0**	**-0.3**
	baz=315,SNR=5.4						
L59A	**Walton**	**60.04**	**59**	P	**P**	**07 27 01.6**	**+1.3**
L59A				IAmb	IAmb	07 27 02.7	
	comp=Z,93nm,1.1s						
O57A	**Amberson**	**60.05**	**62**	P	**P**	**07 26 59.6**	**-0.8**
	baz=315,SNR=12						
D63A	**Stockholm**	**60.07**	**51**	P	**P**	**07 26 59.6**	**-0.7**
	baz=316						
KSPA	**Keystone Colle**	**60.10**	**60**	P	**P**	**07 27 01.5**	**+0.8**
KSPA				IAmb	IAmb	07 27 46.4	
	comp=Z,140nm,1.7s						
N58A	**Sunbury**	**60.10**	**61**	P	**P**	**07 27 00.5**	**-0.2**
	baz=315,SNR=5.9						
N58A	**Sunbury**	**60.10**	**61**	P	**P**	**07 27 02.0**	**+1.3**
N58A				IAmb	IAmb	07 27 02.7	
	comp=Z,65nm,1.1s						
W52A	**Murphy**	**60.13**	**70**	P	**P**	**07 27 01.1**	**0.0**
J60A	**Lant Hill Farm**	**60.14**	**57**	P	**P**	**07 27 00.7**	**-0.1**
	baz=315,SNR=5.7						
G62A	**West of Eustis**	**60.19**	**54**	P	**P**	**07 27 00.7**	**-0.5**
	baz=316						
TPUB	**Ta-pu**	**60.19**	**270**	IAMs_20	IAMs_20	07 52 37.9	
	comp=Z,2µm,20.0s						
QZH	**Quanzhou**	**60.23**	**273**	P	**P**	**07 27 03.6**	**+1.9**
QZH				S	**S**	**07 35 17.1**	**+2.5**
QZH				pmax	pmax		
	comp=Z,94nm,1.6s						
QZH				pmax	pmax		
	comp=Z,420nm,7.6s						
QZH				LR	LR		
	comp=Z,820nm,18.3s						
QZH				LR	LR		
	comp=Z,350nm,14.3s						
QZH				LR	LR		
	comp=Z,840nm,16.4s						
I61A	**Oroboro, Fairl**	**60.27**	**56**	P	**P**	**07 27 01.0**	**-0.7**
	baz=315						
M59A	**Waymart**	**60.29**	**60**	P	**P**	**07 27 00.8**	**-1.2**
	baz=315						
U54A	**Nelsons Funny**	**60.33**	**68**	P	**P**	**07 27 01.3**	**-1.1**
	baz=315,SNR=8.4						
U54A	**Nelsons Funny**	**60.33**	**68**	P	**P**	**07 27 01.5**	**-0.9**
K60A	**Five Rivers En**	**60.34**	**58**	P	**P**	**07 27 01.5**	**-0.8**
	baz=315						
H62A	**Milan**	**60.34**	**55**	P	**P**	**07 27 01.6**	**-0.6**
	baz=316						
H62A	**Milan**	**60.34**	**55**	P	**P**	**07 27 02.5**	**+0.3**
H62A				IAmb	IAmb	07 27 17.6	
	comp=Z,56nm,0.9s						
E63A	**Oxbow**	**60.36**	**52**	P	**P**	**07 27 01.6**	**-0.7**
	baz=316						
E63A	**Oxbow**	**60.36**	**52**	P	**P**	**07 27 02.7**	**+0.4**
P57A	**Homestead Farm**	**60.36**	**63**	P	**P**	**07 27 01.7**	**-0.7**
	baz=315,SNR=8.3						
P57A	**Homestead Farm**	**60.36**	**63**	P	**P**	**07 27 01.8**	**-0.7**
V53A	**Saluda**	**60.37**	**69**	P	**P**	**07 27 02.4**	**-0.2**
V53A				IAmb	IAmb	07 27 04.8	
	comp=Z,86nm,1.4s						
TRY	**Troy**	**60.37**	**58**	P	**P**	**07 27 02.9**	**+0.5**
Q57A	**Strasburg**	**60.46**	**64**	P	**P**	**07 27 02.6**	**-0.5**
	baz=315,SNR=6.8						
N2RO	**R¸st**	**60.47**	**360**	*e*P	**P**	**07 27 02.9**	**+0.1**
O58A	**Lewisberry**	**60.50**	**62**	P	**P**	**07 27 02.6**	**-0.8**
	baz=315,SNR=6.0						
J61A	**Chester**	**60.51**	**56**	P	**P**	**07 27 02.6**	**-0.8**
	baz=316						
PAGS	**Pennsylvania G**	**60.53**	**62**	P	**P**	**07 27 04.2**	**+0.6**
F63A	**Nahmakanta, Br**	**60.54**	**53**	P	**P**	**07 27 02.4**	**-1.2**
	baz=316						
N59A	**State Game Lan**	**60.55**	**60**	P	**P**	**07 27 03.4**	**-0.4**
	baz=315,SNR=6.4						
N59A	**State Game Lan**	**60.55**	**60**	P	**P**	**07 27 04.1**	**+0.3**
FAUS	**Fauske**	**60.57**	**358**	*e*P	**P**	**07 27 03.5**	**+0.1**
L60A	**Shokan**	**60.61**	**59**	P	**P**	**07 27 03.1**	**-1.0**
	baz=315						
K61A	**Williamstown**	**60.62**	**57**	P	**P**	**07 27 03.5**	**-0.7**
	baz=316						
BLA	**Blacksburg**	**60.63**	**66**	P	**P**	**07 27 03.6**	**-0.9**
	baz=315,SNR=14						
BLA	**Blacksburg**	**60.63**	**66**	P	**P**	**07 27 04.5**	**+0.1**
BLA				pmax	pmax		
	comp=Z,130nm,0.9s						
BLA	**Blacksburg**	**60.63**	**66**	P	**P**	**07 27 04.5**	**+0.1**
E64A	**Bridgewater**	**60.64**	**51**	P	**P**	**07 27 03.5**	**-0.7**
	baz=316						
Z51A	**Franklin**	**60.67**	**73**	P	**P**	**07 27 03.2**	**-1.4**
Z51A				IAMs_20	IAMs_20	07 52 31.6	
	comp=Z,3µm,21.0s						
P58A	**Pank, Wackersv**	**60.74**	**62**	P	**P**	**07 27 04.7**	**-0.4**
	baz=315						
O59A	**Robesonia**	**60.76**	**61**	P	**P**	**07 27 04.8**	**-0.4**
	baz=315						
BG3	**Lake Jocassee**	**60.78**	**70**	P	**P**	**07 27 05.0**	**-0.4**
BG3				IAmb	IAmb	07 27 07.4	
	comp=Z,126nm,1.8s						
BG3				IAMs_20	IAMs_20	07 54 19.6	
	comp=Z,3µm,20.0s						
S56A	**Natural Bridge**	**60.78**	**65**	P	**P**	**07 27 05.1**	**-0.3**
	baz=315,SNR=24						
F64A	**Sherman**	**60.79**	**52**	P	**P**	**07 27 04.6**	**-0.7**
	baz=316						
L61A	**Hillsdale 1, H**	**60.81**	**58**	P	**P**	**07 27 03.9**	**-1.6**
	baz=316						
H63A	**New Sharon**	**60.84**	**54**	P	**P**	**07 27 04.7**	**-0.9**
	baz=316						
BATG	**Bathurst New B**	**60.86**	**50**	P	**P**	**07 27 07.1**	**+1.4**
M60A	**Port Jervis**	**60.87**	**59**	P	**P**	**07 27 05.6**	**-0.3**
	baz=316,SNR=6.7						
GTA	**Gaotai**	**60.88**	**298**	⇑P	**P**	**07 27 05.5**	**-0.6**
GTA				pP	pP	07 27 10.1	-1.1
GTA				sP	sP	07 27 12.7	-0.3
GTA				ScP	**ScP**	**07 31 50.3**	**+0.5**
GTA				S	**S**	**07 35 24.6**	**+1.7**
GTA				sS	sS	07 35 36.3	+5.5
GTA				ScS	SKKSac	07 36 54.1	-1.9
GTA				pmax	pmax		
	comp=Z,32nm,1.5s						
GTA				pmax	pmax		
	comp=Z,520nm,7.6s						
GTA				LR	LR		
	comp=Z,2µm,20.0s						
GTA				LR	LR		
	comp=Z,5µm,19.3s						
GTA				LR	LR		
	comp=Z,5µm,19.3s						
MVL	**Millersville**	**60.90**	**61**	P	**P**	**07 27 06.7**	**+0.6**
MVL				IAmb	IAmb	07 27 07.8	
	comp=Z,40nm,0.9s						
R57A	**Stanardsville**	**60.92**	**64**	P	**P**	**07 27 05.3**	**-0.9**
	baz=315,SNR=12						
Q58A	**Fox Den Farm,**	**60.92**	**63**	P	**P**	**07 27 05.6**	**-0.7**
	baz=315,SNR=11						
Y52A	**Lilburn**	**60.93**	**71**	P	**P**	**07 27 06.5**	**0.0**
Y52A				IAmb	IAmb	07 27 08.8	
	comp=Z,52nm,1.1s						
Y52A				IAMs_20	IAMs_20	07 53 21.5	
	comp=Z,3µm,20.0s						
N60A	**Cedar Hill Far**	**60.95**	**60**	P	**P**	**07 27 05.3**	**-1.1**
	baz=316,SNR=5.9						
J62A	**Henniker**	**60.97**	**56**	P	**P**	**07 27 05.6**	**-0.9**
	baz=316						
T56A	**Rocky Mt**	**60.98**	**66**	P	**P**	**07 27 05.8**	**-0.9**
	baz=316,SNR=8.6						
250A	**Grady**	**60.98**	**74**	IAMs_20	IAMs_20	07 55 07.9	
	comp=Z,2µm,19.0s						
LUPA	**Lehigh Univers**	**60.99**	**60**	P	**P**	**07 27 07.3**	**+0.6**
LZH	**Lanzhou**	**61.00**	**292**	⇑P	**P**	**07 27 07.4**	**+0.4**
LZH				pP	pP	07 27 12.4	+0.3
LZH				sP	pwP	07 27 16.3	+0.2
LZH				S	**S**	**07 35 26.2**	**+1.6**
LZH				SS	**SS**	**07 39 23.8**	**+0.3**
LZH				pmax	pmax		
	comp=Z,73nm,1.1s						
LZH				pmax	pmax		
	comp=Z,570nm,7.1s						
LZH				LR	LR		
	comp=Z,3µm,17.9s						
LZH				LR	LR		
	comp=Z,2µm,18.4s						
LZH				LR	LR		
	comp=Z,990nm,19.5s						
NBB30	**Finnes**	**61.01**	**359**	*e*P	**P**	**07 27 06.3**	**-0.1**
SDMD	**Soldier's Deli**	**61.05**	**62**	P	**P**	**07 27 07.0**	**-0.2**
ODNJ	**Ogdensburg**	**61.06**	**60**	P	**P**	**07 27 08.5**	**+1.4**
ODNJ				IAmb	IAmb	07 27 23.4	
	comp=Z,75nm,1.2s						
S57A	**Dark Hollow, R**	**61.06**	**65**	P	**P**	**07 27 06.7**	**-0.6**
	baz=316,SNR=8.5						
S57A	**Dark Hollow, R**	**61.06**	**65**	P	**P**	**07 27 07.0**	**-0.3**
S57A				IAmb	IAmb	07 27 09.4	
	comp=Z,53nm,0.9s						
S57A				IAMs_20	IAMs_20	07 54 33.2	
	comp=Z,3µm,19.0s						
BRAL	**Brewton**	**61.10**	**76**	P	**P**	**07 27 07.3**	**-0.3**
	baz=316,SNR=6.2						
BRAL	**Brewton**	**61.10**	**76**	P	**P**	**07 27 07.3**	**-0.3**
P59A	**Jarrettsville**	**61.13**	**62**	P	**P**	**07 27 07.2**	**-0.5**
	baz=316,SNR=7.6						
V55A	**Taylorsville**	**61.15**	**68**	P	**P**	**07 27 08.3**	**+0.4**
V55A				IAmb	IAmb	07 27 10.9	
	comp=Z,87nm,1.2s						
K62A	**Royalston**	**61.16**	**57**	P	**P**	**07 27 06.8**	**-1.0**
	baz=316						
O60A	**Telford**	**61.18**	**61**	P	**P**	**07 27 06.7**	**-1.3**
	baz=316						
KSCT	**Kent School, K**	**61.19**	**58**	P	**P**	**07 27 09.2**	**+1.2**
KSCT				IAmb	IAmb	07 27 14.2	
	comp=Z,123nm,1.5s						
R58A	**Rapidan**	**61.21**	**64**	P	**P**	**07 27 07.9**	**-0.4**
	baz=316,SNR=8.5						
H64A	**Troy**	**61.25**	**53**	P	**P**	**07 27 07.0**	**-1.4**
	baz=316						
U56A	**King**	**61.27**	**67**	P	**P**	**07 27 07.9**	**-0.8**
	baz=316,SNR=7.3						
U56A	**King**	**61.27**	**67**	P	**P**	**07 27 08.6**	**-0.1**
J63A	**Strafford**	**61.31**	**56**	P	**P**	**07 27 07.2**	**-1.6**
	baz=316						
MSF	**Maaselka**	**61.31**	**352**	P	**P**	**07 27 08.6**	**+0.1**
MSF				pmax	pmax		
	comp=Z,50nm,1.1s						
WUPA	**West Chester U**	**61.34**	**61**	IAMs_20	IAMs_20	07 54 57.6	
	comp=Z,3µm,20.0s						
L62A	**Suffield**	**61.39**	**58**	P	**P**	**07 27 08.9**	**-0.5**
	baz=316						
152A	**Waverly Hall**	**61.40**	**73**	P	**P**	**07 27 08.2**	**-1.4**
152A				IAMs_20	IAMs_20	07 52 07.0	
	comp=Z,2µm,21.0s						
P60A	**Greenville**	**61.41**	**61**	P	**P**	**07 27 08.0**	**-1.6**
	baz=316						
T57A	**Hurt**	**61.44**	**66**	P	**P**	**07 27 09.1**	**-0.7**
	baz=316,SNR=7.6						
T57A	**Hurt**	**61.44**	**66**	P	**P**	**07 27 10.0**	**+0.2**
T57A				IAmb	IAmb	07 27 11.4	
	comp=Z,68nm,1.0s						
N61A	**South Mountain**	**61.46**	**60**	P	**P**	**07 27 09.0**	**-0.9**
	baz=316						
PAL	**Palisades**	**61.48**	**59**	P	**P**	**07 27 08.3**	**-1.6**
	baz=316						
KONS	**Konsvik**	**61.49**	**359**	*e*P	**P**	**07 27 09.9**	**+0.3**
R58B	**Mineral**	**61.51**	**64**	P	**P**	**07 27 09.8**	**-0.5**
	baz=316,SNR=9.7						
R58B	**Mineral**	**61.51**	**64**	P	**P**	**07 27 11.0**	**+0.8**
R58B				IAmb	IAmb	07 27 12.5	
	comp=Z,70nm,1.1s						
R58B				IAMs_20	IAMs_20	07 55 01.1	
	comp=Z,3µm,19.0s						
Q59A	**Harwood**	**61.54**	**63**	P	**P**	**07 27 09.8**	**-0.7**
	baz=316						
I64A	**Boothbay**	**61.57**	**54**	P	**P**	**07 27 09.4**	**-1.1**
	baz=316						
V56A	**Mocksville**	**61.59**	**67**	P	**P**	**07 27 09.9**	**-1.0**
	baz=316,SNR=9.4						
KMSC	**Kings Mountain**	**61.59**	**69**	P	**P**	**07 27 10.2**	**-0.6**
	baz=316,SNR=5.8						
KMSC	**Kings Mountain**	**61.59**	**69**	P	**P**	**07 27 10.0**	**-0.8**
GOGA	**Godfrey**	**61.60**	**71**	P	**P**	**07 27 09.4**	**-1.6**
	baz=316						
GOGA	**Godfrey**	**61.60**	**71**	P	**P**	**07 27 09.3**	**-1.6**
GOGA				pmax	pmax		
	comp=Z,41nm,1.0s						
GOGA	**Godfrey**	**61.60**	**71**	P	**P**	**07 27 09.3**	**-1.6**
GOGA				IAmb	IAmb	07 27 12.9	
	comp=Z,41nm,1.0s						
CBN	**Corbin Frederi**	**61.62**	**64**	P	**P**	**07 27 10.2**	**-0.8**
	baz=316						
CBN	**Corbin Frederi**	**61.62**	**64**	P	**P**	**07 27 10.8**	**-0.2**
CBN				IAmb	IAmb	07 27 13.0	
	comp=Z,72nm,1.0s						
S58A	**Poland Farm, P**	**61.67**	**64**	P	**P**	**07 27 10.7**	**-0.7**
	baz=316,SNR=9.9						
S58A	**Poland Farm, P**	**61.67**	**64**	P	**P**	**07 27 10.6**	**-0.7**
S58A				IAmb	IAmb	07 27 13.4	
	comp=Z,82nm,0.9s						
M62A	**Hamden**	**61.70**	**58**	P	**P**	**07 27 10.6**	**-0.9**
	baz=316						
HODGE	**Hodges**	**61.71**	**70**	P	**P**	**07 27 11.3**	**-0.4**
HODGE				IAmb	IAmb	07 27 14.1	
	comp=Z,31nm,0.8s						
N62A	**Caumsett State**	**61.76**	**59**	P	**P**	**07 27 11.2**	**-0.7**
	baz=316						
R59A	**King George, V**	**61.76**	**63**	P	**P**	**07 27 12.0**	**0.0**
	baz=316,SNR=8.6						
O61A	**Allentown**	**61.79**	**60**	P	**P**	**07 27 11.3**	**-0.8**
	baz=316						
U57A	**Blanch**	**61.80**	**66**	P	**P**	**07 27 11.7**	**-0.5**
	baz=316,SNR=14						

MOR8	**Moi Rana**	61.80	359	*e*P	P	07 27 10.7	-1.1
ENH	**Enshi**	61.88	284	P	P	07 27 12.8	0.0
ENH				IAMs_20	IAMs_20	07 56 38.4	
	comp=Z,2µm,18.0s						
T58A	**Grand View Acr**	61.88	65	P	P	07 27 11.9	-0.9
	baz=316,SNR=13						
Q60A	**Greensboro**	61.88	62	P	P	07 27 12.3	-0.5
	baz=316						
V57A	**Coltrane Farms**	61.94	67	P	P	07 27 12.5	-0.8
	baz=316						
P61A	**Hammonton**	61.97	61	P	P	07 27 13.0	-0.2
	baz=316						
S59A	**Mechanicsville**	61.98	64	P	P	07 27 13.2	-0.2
	baz=316,SNR=14						
TMCR	**Tamitsa**	62.00	347	*e*P	P	07 27 11.1	-2.0
TMCR				*e*S	S	07 35 38.5	+2.5
TMCR				pmax	pmax		
	comp=Z,61nm,0.9s						
R60A	**Leonardtown, M**	62.01	63	P	P	07 27 13.4	-0.2
	baz=316						
W56A	**Indian Trail**	62.02	68	P	P	07 27 13.3	-0.5
	baz=316,SNR=7.0						
L63A	**North Scituate**	62.06	57	P	P	07 27 13.4	-0.5
	baz=316						
H66A	**Whiting**	62.08	52	P	P	07 27 13.1	-0.9
	baz=317						
352A	**Blakely**	62.13	74	P	P	07 27 12.4	-2.2
M63A	**Gales Ferry**	62.16	58	P	P	07 27 13.9	-0.7
	baz=316						
JSC	**Jenkinsville**	62.25	69	P	P	07 27 14.9	-0.4
JSC				pmax	pmax		
	comp=Z,144nm,1.9s						
JSC				MLR	MLR		
	comp=Z,2µm,19.0s						
JSC	**Jenkinsville**	62.25	69	P	P	07 27 14.9	-0.4
JSC				IAmb	IAmb	07 27 17.4	
	comp=Z,144nm,1.9s						
JSC				IAMs_20	IAMs_20	07 55 23.5	
	comp=Z,2µm,19.0s						
SEM	**Semipalatinsk**	62.25	318	*e*P	P	07 27 13.1	-2.3
	baz=318						
SEM				*e*S	S	07 35 38.6	-1.6
	baz=318						
SEM				LR	LR	07 54 28.7	
	comp=Z,884nm,15.8s,baz=318						
SEM	**Semipalatinsk**	62.25	318	*e*P	P	07 27 13.0	-2.3
SEM				*e*S	S	07 35 38.6	-1.6
SEM				MLR	MLR		
	comp=Z,884nm,16.0s						
U58A	**Oxford**	62.27	66	P	P	07 27 15.2	-0.2
	baz=316,SNR=6.3						
S60A	**Water View**	62.37	63	P	P	07 27 15.1	-1.0
	baz=316						
OUL	**Oulu**	62.38	353	P	P	07 27 15.8	+0.1
OUL				pmax	pmax		
	comp=Z,97nm,0.9s						
V58A	**Windy Hill, Pi**	62.38	67	P	P	07 27 15.7	-0.4
	baz=316,SNR=14						
V58A	**Windy Hill, Pi**	62.38	67	P	P	07 27 15.8	-0.3
L64A	**Middleborough**	62.40	57	P	P	07 27 15.7	-0.5
	baz=317						
T59A	**Double "B" Far**	62.41	65	P	P	07 27 16.0	-0.3
	baz=316,SNR=15						
T59A	**Double "B" Far**	62.41	65	P	P	07 27 16.3	0.0
BIRD	**Birdtown, Kers**	62.45	68	P	P	07 27 15.5	-1.1
BIRD				IAmb	IAmb	07 27 18.0	
	comp=Z,59nm,1.0s						
M64A	**Tiverton**	62.49	57	P	P	07 27 16.4	-0.4
	baz=317						
ZSN	**Zaisan**	62.49	313	*e*P	P	07 27 15.3	-1.5
	comp=Z,86nm,1.5s,baz=313						
ZSN	**Zaisan**	62.49	313	*e*P	P	07 27 15.2	-1.5
ZSN				pmax	pmax		
	comp=Z,86nm,1.5s						
KURK	**Kurchatov**	62.69	319	*i* P	P	07 27 18.3	+0.4
KURK				pmax	pmax		
	comp=Z,29nm,1.0s						
KURK				MLR	MLR		
	comp=Z,6µm,16.0s						
KURK	**Kurchatov**	62.69	319	P	P	07 27 17.1	-0.8
KURK	**Kurchatov**	62.69	319	P	P	07 27 17.6	-0.4
KURK				P	P	07 27 17.6	-0.4
T60A	**Surry**	62.74	64	P	P	07 27 18.2	-0.3
	baz=316						
X57A	**Johnson Farm,**	62.78	68	P	P	07 27 18.2	-0.7
	baz=316,SNR=10						
KURBB	**Kurchatov Arra**	62.79	319	P	P	07 27 18.1	-0.5
	comp=Z,21nm,0.9s,baz=45,slow=7.3,SNR=62						
W58A	**Raeford**	62.87	67	P	P	07 27 18.9	-0.5
	baz=316,SNR=8.6						
Z56A	**Williston**	62.88	70	P	P	07 27 18.9	-0.6
V59A	**Middlesex**	62.89	66	P	P	07 27 19.1	-0.5
	baz=316,SNR=14						
U60A	**Pendleton**	62.98	65	P	P	07 27 19.2	-1.0
	baz=316,SNR=6.5						
DRLN	**Deer Lake**	63.17	43	P	P	07 27 21.3	+0.1
DRLN				IAmb	IAmb	07 27 23.9	
	comp=Z,79nm,0.9s						
W59A	**Clinton**	63.21	67	P	P	07 27 21.2	-0.5
	baz=317						
V60A	**Jim Taylor Roa**	63.44	65	P	P	07 27 22.8	-0.4
	baz=317						
CNNC	**Cliffs of the**	63.47	66	P	P	07 27 22.3	-1.1
	baz=317						
NSS	**Namsos**	63.48	360	*e*P	P	07 27 23.4	+0.4
U61A	**Possum Corner**	63.48	64	P	P	07 27 22.2	-1.2
	baz=317						
X59A	**McDuffie Farm,**	63.55	67	P	P	07 27 22.9	-1.0
	baz=317						
W60A	**Pink Hill**	63.71	66	P	P	07 27 24.5	-0.5
	baz=317						
NHSC	**New Hope**	63.72	69	P	P	07 27 24.1	-1.0
	baz=317,SNR=5.5						
NHSC	**New Hope**	63.72	69	P	P	07 27 25.7	+0.6
WMQ	**Urumqi**	63.89	308	⇑P	P	07 27 26.1	-0.1
WMQ				pP	sP	07 27 34.1	+1.0
WMQ				PcP	PcP	07 28 04.8	+3.1
WMQ				PcS		07 32 06.6	
WMQ				pmax	pmax		
	comp=Z,73nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,770nm,4.9s						
WMQ				LR	LR		
	comp=Z,5µm,18.5s						
WMQ				LR	LR		
	comp=Z,3µm,17.9s						
WMQ				LR	LR		
	comp=Z,2µm,18.9s						
WMQ	**Urumqi**	63.89	308	P	P	07 27 26.6	+0.4
WMQ				pmax	pmax		
	comp=Z,144nm,1.4s						
WMQ				MLR	MLR		
	comp=Z,4µm,18.0s						
WMQ	**Urumqi**	63.89	308	P	P	07 27 26.6	+0.4
X60A	**Albert Glenn T**	63.90	67	P	P	07 27 25.2	-1.0
	baz=317						
APYP	**Conner**	63.91	266	*e*P	P	07 27 26.4	0.0
SVE	**Sverdlovsk**	63.92	332*d*	*e*P	P	07 27 26.1	+0.1
SVE				*e*S	S	07 35 55.8	-4.6
SVE				pmax	pmax		
	comp=Z,101nm,1.6s						
SVE				MLR	MLR		
	comp=Z,2µm,20.0s						
BVAR	**Borovoye Array**	63.98	325	P	P	07 27 26.2	-0.3
	comp=Z,18nm,0.7s,baz=20,slow=27,SNR=98						
BRVK	**Borovoye**	63.99	325	*i* P	P	07 27 26.4	-0.2
BRVK				pmax	pmax		
	comp=Z,38nm,1.1s						
BRVK				MLR	MLR		
	comp=Z,8µm,18.0s						
BRVK	**Borovoye**	63.99	325	P	P	07 27 25.8	-0.8
BRVK				IAmb	IAmb	07 27 28.2	
	comp=Z,70nm,1.2s						
BRVK	**Borovoye**	63.99	325	P	P	07 27 26.6	0.0
BRVK				P	P	07 27 26.6	0.0
W61A	**Ground Anchor**	64.02	66	P	P	07 27 25.7	-1.3
	baz=317						
JOF	**Joensuu**	64.02	350	P	P	07 27 26.3	-0.3
JOF				pmax	pmax		
	comp=Z,73nm,1.4s						
Z59A	**Georgetown, SC**	64.14	69	P	P	07 27 27.0	-0.8
	baz=317						
MK31	**Makanchi Array**	64.14	314	*i* P	P	07 27 26.5	-1.2
MK31				pmax	pmax		
	comp=Z,22nm,0.8s						
MK31	**Makanchi Array**	64.14	314	P	P	07 27 26.6	-1.2
MKAR	**Makanchi Array**	64.14	314	P	P	07 27 26.6	-1.1
	comp=Z,18nm,0.7s,baz=51,slow=6.4,SNR=123						
MKAR				LR	LR	07 56 33.5	
	comp=Z,4µm,18.3s,baz=36,slow=37						
MKAR	**Makanchi Array**	64.14	314	P	P	07 27 26.5	-1.2
MKAR	**Makanchi Array**	64.14	314	P	P	07 27 26.5	-1.2
MAKZ	**Makanchi**	64.27	314	P	P	07 27 27.1	-1.4
MAKZ				pmax	pmax		
	comp=Z,139nm,2.0s						
MAKZ				MLR	MLR		
	comp=Z,4µm,19.0s						
MAKZ	**Makanchi**	64.27	314	P	P	07 27 27.1	-1.4
MAKZ				IAmb	IAmb	07 27 28.4	
	comp=Z,139nm,1.9s						
V62A	**Hyde County Ai**	64.31	65	P	P	07 27 28.8	-0.2
	baz=317						
VAF	**Ylistaro**	64.62	354	P	P	07 27 30.5	0.0
VAF				pmax	pmax		
	comp=Z,86nm,0.8s						
SUF	**Sumiainen**	64.70	353	P	P	07 27 30.5	-0.5
SUF				pmax	pmax		
	comp=Z,89nm,0.9s						
TBLU	**Trondheim**	64.76	1	*e*P	P	07 27 29.5	-1.9
CD2	**Chengdu**	64.79	288	P	P	07 27 33.3	+1.1
CD2				sP	pwP	07 27 40.6	-0.7
CD2				SS	SS	07 40 23.2	+0.5
CD2				pmax	pmax		
	comp=Z,60nm,0.7s						
CD2				pmax	pmax		
	comp=Z,940nm,3.9s						
CD2				LR	LR		
	comp=Z,2µm,20.6s						
CD2				LR	LR		
	comp=Z,4µm,19.6s						
CD2				LR	LR		
	comp=Z,3µm,19.1s						
ARU	**Arti**	64.85	333	P	P	07 27 31.9	-0.3
	comp=Z,8.6nm,0.4s,baz=21,slow=5.2,SNR=40						
ARU				LR	LR	07 58 53.8	
	comp=Z,623nm,18.5s,baz=45,slow=39						
ARU	**Arti**	64.85	333*c*	*i*P	P	07 27 31.8	-0.3
ARU						07 28 04.3	
ARU						07 29 54.8	
ARU				S	S	07 36 13.5	+1.7
ARU						07 37 29.1	
ARU				SS	SS	07 40 20.7	-1.5
ARU				pmax	pmax		
	comp=Z,114nm,1.5s						
ARU	**Arti**	64.85	333	P	P	07 27 31.5	-0.6
KLMR	**Klimovskoe**	64.93	345	*e*P	P	07 27 30.9	-1.7
KLMR				pmax	pmax		
	comp=Z,89nm,1.2s						
KLMR	**Klimovskoe**	64.93	345	*e*P	P	07 27 30.9	-1.7
KLMR				AMP		07 27 34.9	
	comp=Z,89nm,1.2s						
KLMR				LQ	LQ	07 52 05.2	
KLMR				LQ	LQ	07 52 05.2	
KLMR				LR	LR	07 56 41.4	
KIRV	**Kirov**	65.19	339	P	P	07 27 34.2	-0.1
	comp=Z,28nm,0.4s,baz=14,slow=3.6,SNR=25						
KIRV				LR	LR	07 58 29.5	
	comp=Z,2µm,21.1s,baz=30,slow=38						
KIRV	**Kirov**	65.19	339*c*	*e*P	P	07 27 33.5	-0.8
RABL	**Rabaul**	65.34	224	IAMs_20	IAMs_20	07 58 03.9	
	comp=Z,1µm,19.0s						
MOL	**Molde**	65.41	2	*e*P	P	07 27 34.9	-0.7
BRZS	**Berezniki**	65.60	322	*e*P	P	07 27 35.1	-2.0
	comp=Z,44nm,1.9s,baz=322						
BRZS	**Berezniki**	65.60	322	*e*P	P	07 27 35.1	-2.0
BRZS				pmax	pmax		
	comp=Z,45nm,1.9s						
TAOE	**Nuku Hiva Isla**	65.66	149	*e*S	S	07 36 25.8	+3.0
	comp=Z,549nm,23.8s						
TAOE	**Nuku Hiva Isla**	65.66	149	*e*LR	LR	07 47 04.5	
	comp=Z,2µm,31.3s,baz=348						
TAOE	**Nuku Hiva Isla**	65.66	149	*e*T	T	08 39 04.5	
	comp=Z,26nm,0.2s						
TAOE	**Nuku Hiva Isla**	65.66	149	IAMs_20	IAMs_20	07 54 01.9	
	comp=Z,1µm,22.0s						
AKN	**Aaknes**	65.78	2	*e*P	P	07 27 38.5	+0.4
DOMB	**Dombas**	65.96	1	*e*P	P	07 27 39.0	-0.2
FIA1	**FINESS Array S**	65.97	352	P	P	07 27 38.9	-0.3
FINES	**FINESS Array B**	65.97	352	P	P	07 27 38.6	-0.6
	comp=Z,70nm,0.8s,baz=20,slow=6.4,SNR=155						
FINES				LR	LR	07 58 34.4	
	comp=Z,2µm,20.0s,baz=22,slow=38						
FINES	**FINESS Array B**	65.97	352	*i* P	P	07 27 38.7	-0.6
FINES				pmax	pmax		
	comp=Z,69nm,0.8s						
GYA	**Guiyang**	66.35	283	⇓P	P	07 27 42.9	+0.4
GYA				pP	pwP	07 27 51.6	0.0
GYA				sP	sP	07 27 55.5	+6.2
GYA				S	S	07 36 34.3	+2.9
GYA				sS	sS	07 36 45.5	+5.9
GYA				pmax	pmax		
	comp=Z,75nm,2.1s						
GYA				pmax	pmax		
	comp=Z,800nm,3.5s						
GYA				LR	LR		
	comp=Z,760nm,18.5s						
GYA				LR	LR		
	comp=Z,810nm,18.5s						
GYA				LR	LR		
	comp=Z,1µm,20.1s						
LQP	**Lukban**	66.61	263⇑	*e*P	P	07 27 45.0	+0.8
DWPF	**Disney Wildern**	66.66	74	P	P	07 27 43.7	-0.5
	baz=318						
NC204	**NORSAR Array S**	66.74	0	P	P	07 27 43.9	-0.4
HYA	**Hoyanger**	66.78	3	*e*	P	07 27 45.3	+0.9
NC303	**NORSAR Array S**	66.79	360	P	P	07 27 44.0	-0.6
SUE	**Sulen**	66.84	3	*e*P	P	07 27 45.5	+0.6
NC405	**NORSAR Array S**	66.91	360	P	P	07 27 44.4	-0.9
NB201	**NORSAR Array S**	66.97	0	P	P	07 27 45.3	-0.5
NB2	**NORSAR Subarra**	66.98	0	P	P	07 27 46.0	+0.2
	comp=Z,9.4nm,0.6s,baz=359,slow=6.2						
NB2	**NORSAR Subarra**	66.98	0	P	P	07 27 46.0	+0.2
	baz=359,slow=6.2						
NOA	**NORSAR Array B**	66.98	0	P	P	07 27 45.4	-0.5
	comp=Z,18nm,0.8s,baz=0.4,slow=6.3,SNR=62						
NOA				LR	LR	08 00 18.5	
	comp=Z,769nm,18.0s,baz=350,slow=39						
NBO00	**NORSAR Array S**	66.99	0	P	P	07 27 46.1	+0.3
NBO00				IAmb	IAmb	07 27 46.5	
	comp=Z,122nm,1.5s						
PUL	**Pulkovo**	67.20	350	*i* P	P	07 27 47.4	+0.2
PUL				pmax	pmax		
	comp=Z,107nm,0.8s						
TDK	**Taldyqorghan**	67.24	315	*e*P	P	07 27 46.0	-1.8
	comp=Z,43nm,0.8s,baz=315						
TDK				LR	LR	07 57 48.8	
	comp=Z,2µm,15.9s,baz=315						
TDK	**Taldyqorghan**	67.24	315	*e*P	P	07 27 45.9	-1.8
TDK				pmax	pmax		
	comp=Z,43nm,0.8s						
TDK				MLR	MLR		
	comp=Z,2µm,16.0s						
NC602	**NORSAR Array S**	67.28	360	P	P	07 27 47.3	-0.4
NC602				IAmb	IAmb	07 27 47.9	
	comp=Z,121nm,1.5s						
NC602	**NORSAR Array S**	67.28	360	*e*P	P	07 27 47.9	+0.2
NORES	**NORESS Array B**	67.28	360	P	P	07 27 47.6	-0.1
NORES				pmax	pmax		
	comp=Z,19nm,0.8s						
SKAR	**Skarslia**	67.31	2	*e*P	P	07 27 48.6	+0.6
ASK	**Askoy**	67.43	3	*e*P	P	07 27 49.0	+0.4
BER	**Bergen**	67.53	3	*e*P	P	07 27 49.1	-0.1
HFS	**Hagfors**	67.87	359	LR	LR	07 59 16.1	
	comp=Z,673nm,18.1s,baz=355,slow=38						
ODD1	**Odda**	68.05	3	*e*P	P	07 27 52.8	+0.2
UPP	**Uppsala**	68.05	357	*e*P	P	07 27 52.5	0.0
PDGK	**Podgornoye**	68.08	313	*i* P	P	07 27 52.6	-0.6
PDGK				pmax	pmax		
	comp=Z,58nm,0.7s						
OSL	**Oslo**	68.08	0	*e*P	P	07 27 53.7	+1.0
SHLS	**Shalkode**	68.23	313	*e*P	P	07 27 51.6	-2.5
	comp=Z,206nm,1.8s,baz=313						
SHLS	**Shalkode**	68.23	313	*e*P	P	07 27 51.6	-2.5
SHLS				pmax	pmax		
	comp=Z,206nm,1.8s						
KPKS	**Kokpek**	68.33	314	*e*P	P	07 27 53.3	-1.5
	baz=314						
KPKS	**Kokpek**	68.33	314	*e*P	P	07 27 53.2	-1.5
KONO	**Kongsberg**	68.37	1*c*	*e*P	P	07 27 54.4	-0.1
KONO				pmax	pmax		
	comp=Z,75nm,1.7s						
KONO				MLR	MLR		
	comp=Z,1µm,17.0s						
KONO	**Kongsberg**	68.37	1	P	P	07 27 55.6	+1.1
KONO				IAmb	IAmb	07 27 56.1	
	comp=Z,46nm,1.0s						
KONO	**Kongsberg**	68.37	1	*e*P	P	07 27 54.8	+0.3
BLS5	**Blasjo**	68.53	3	*e*P	P	07 27 56.0	+0.4
CHKK	**Chushkaly**	68.77	315	*e*P	P	07 27 55.7	-1.6
	baz=315						
CHKK	**Chushkaly**	68.77	315	*e*P	P	07 27 55.6	-1.7
SATY	**Saty**	68.78	314	*e*P	P	07 27 56.2	-1.4
	comp=Z,40nm,1.3s,baz=314						
SATY	**Saty**	68.78	314	*e*P	P	07 27 56.2	-1.4
SATY				pmax	pmax		
	comp=Z,40nm,1.3s						
MTSE	**Matsula**	68.85	353	*e*P	P	07 27 54.1	-3.3
VSU	**Vasula**	68.86	351	*e*P	P	07 27 58.0	+0.4
VSU	**Vasula**	68.86	351	*i* P	P	07 27 57.2	-0.3
VSU				pmax	pmax		
	comp=Z,201nm,0.9s						
VSU				MLR	MLR		
	comp=Z,4µm,18.0s						
KUU	**Kurty**	69.02	315	*e*P	P	07 27 56.1	-2.8
	comp=Z,99nm,1.8s,baz=316						
KUU				LR	LR	07 59 10.4	
	comp=Z,2µm,15.4s,baz=316						
KUU	**Kurty**	69.02	315	*e*P	P	07 27 56.9	-2.0
KUU				pmax	pmax		
	comp=Z,99nm,1.8s						
KUU				MLR	MLR		
	comp=Z,2µm,15.0s						
BTLS	**Baital**	69.06	318	*e*P	P	07 27 57.6	-1.5
	comp=Z,56nm,1.9s,baz=318						
BTLS	**Baital**	69.06	318	*e*P	P	07 27 57.6	-1.5
BTLS				pmax	pmax		
	comp=Z,56nm,1.9s						
BUSP	**Coron**	69.06	262	*e*P	P	07 28 02.5	+3.0
MDOK	**Medeo**	69.30	315	*e*P	P	07 27 59.1	-1.7
	baz=315						
MDOK				LR	LR	07 59 06.0	
	comp=Z,903nm,16.5s,baz=315						
MDOK	**Medeo**	69.30	315	*e*P	P	07 27 59.1	-1.7
MDOK				MLR	MLR		
	comp=Z,903nm,17.0s						
AAA	**Alma-Ata**	69.32	315	*e*P	P	07 27 59.5	-1.3
	comp=Z,79nm,1.9s,baz=315						
AAA				LR	LR	07 59 10.4	
	comp=Z,1µm,16.8s,baz=315						
AAA	**Alma-Ata**	69.32	315	*e*P	P	07 27 59.5	-1.3
AAA				pmax	pmax		
	comp=Z,79nm,1.9s						
AAA				MLR	MLR		
	comp=Z,1µm,17.0s						
TNSS	**Tian-Shan**	69.44	314	*e*P	P	07 28 00.6	-1.5
	baz=315						
TNSS	**Tian-Shan**	69.44	314	*e*P	P	07 28 00.5	-1.5
MTBS	**Maitube**	69.59	315	*e*P	P	07 28 01.2	-1.4
	baz=315						
MTBS	**Maitube**	69.59	315	*e*P	P	07 28 01.1	-1.4
SNART	**Snartemo**	69.64	2	*i* P	P	07 28 02.0	-0.4
SNART				*i* P	pP	07 28 03.3	-4.3
KMI	**Kunming**	69.69	285	⇑P	P	07 28 03.8	+0.2
KMI				pP	pP	07 28 09.2	+0.5
KMI				sP	pwP	07 28 12.5	-0.2
KMI				S	S	07 37 14.3	+2.8
KMI				sS	sS	07 37 24.0	+4.2
KMI				SKS	SKSac	07 38 03.5	0.0
KMI				pmax	pmax		
	comp=Z,42nm,1.2s						
KMI				pmax	pmax		
	comp=Z,860nm,4.7s						
KMI				LR	LR		
	comp=Z,2µm,17.4s						
KMI				LR	LR		
	comp=Z,700nm,14.9s						
KMI				LR	LR		
	comp=Z,2µm,16.2s						
KMI	**Kunming**	69.69	285	P	P	07 28 04.7	+1.1
KMI				pmax	pmax		
	comp=Z,107nm,1.3s						
KMI	**Kunming**	69.69	285	P	P	07 28 04.7	+1.1
KMI				IAmb	IAmb	07 28 17.1	
	comp=Z,107nm,1.3s						
KMI	**Kunming**	69.69	285	IAMs_20	IAMs_20	07 57 54.6	
	comp=Z,1µm,20.0s						
HOMB	**Homborsund**	69.73	2	*e*P	P	07 28 03.8	+0.8
HOMB	**Homborsund**	69.73	2	*i* P	P	07 28 04.0	+1.0
PETF	**Flores**	69.98	88	P	P	07 28 05.5	+0.4
QIZ	**Qiongzhong**	70.01	275	P	P	07 28 06.4	+1.1
QIZ				S	S	07 37 17.0	+2.2
QIZ				ScS	SKKSac	07 38 06.1	+0.5
QIZ				pmax	pmax		
	comp=Z,32nm,2.0s						
QIZ				pmax	pmax		
	comp=Z,500nm,3.5s						
QIZ				LR	LR		
	comp=Z,720nm,21.6s						
QIZ				LR	LR		
	comp=Z,870nm,16.2s						
QIZ				LR	LR		
	comp=Z,810nm,22.1s						
QIZ	**Qiongzhong**	70.01	275	IAMs_20	IAMs_20	07 55 24.0	
	comp=Z,965nm,21.0s						
SLIT	**Slitere, Latvi**	70.03	354	*e*P	P	07 28 05.0	+0.2
SGDS	**Sogindy**	70.10	316	*e*P	P	07 28 03.4	-2.3
	comp=Z,49nm,1.8s,baz=316						
SGDS	**Sogindy**	70.10	316	*e*P	P	07 28 03.3	-2.3
SGDS				pmax	pmax		
	comp=Z,49nm,1.8s						
TKM2	**Tokmak 2**	70.12	315	P	P	07 28 06.2	+0.2
	SNR=29						
MOS	**Moscow**	70.12	345	*e*P	P	07 28 01.5	-3.9
MOS				*e*		07 28 13.6	
MOS				*e*		07 28 25.1	
MOS				*e*S	S	07 37 07.3	-7.8
MOS				pmax	pmax		
	comp=Z,140nm,0.9s						
ENPP	**El Nido**	70.15	263	*e*P	P	07 28 02.0	-4.2
HUEH	**Huehuetenango**	70.20	90	P	P	07 28 04.6	-2.2
HUEH				IAmb	IAmb	07 28 32.1	
	comp=Z,43nm,0.7s						
AKTO	**Aktyubinsk**	70.26	330	P	P	07 28 06.2	-0.1
	comp=Z,39nm,0.8s,baz=49,slow=6.6,SNR=89						
AKTO				LR	LR	08 02 22.5	
	comp=Z,918nm,20.2s,baz=43,slow=39						
AKTO	**Aktyubinsk**	70.26	330	*i* P	P	07 28 06.6	+0.2
AKTO				pmax	pmax		
	comp=Z,49nm,0.8s						
USP	**Ospenovka**	70.31	316	P	P	07 28 07.0	+0.1
	SNR=40						
PAGZ	**Pagadian**	70.40	257	*e*P	P	07 28 07.1	-0.6
CHMS	**Chumysh**	70.42	316	P	P	07 28 08.0	+0.4
	SNR=17						
DRUM	**Mains of Drumt**	70.53	8	*e*P	P	07 28 07.9	0.0
KBK	**Karagaybulak**	70.61	316	P	P	07 28 09.3	+0.4
	SNR=32						
SANVU	**Saraoutou**	70.66	205	IAMs_20	IAMs_20	07 56 43.3	
	comp=Z,1µm,20.0s						
AB31	**Akbulak array**	70.69	329	*i* P	P	07 28 09.0	0.0
AB31				pmax	pmax		
	comp=Z,26nm,0.6s						
ABKAR	**Akbulak array**	70.69	329	P	P	07 28 08.5	-0.6
ABKAR				IAmb	IAmb	07 28 10.6	
	comp=Z,42nm,0.8s						
ABKAR	**Akbulak array**	70.69	329	P	P	07 28 08.7	-0.4
MSVF	**Nonsavu**	70.72	193	*i* P	P	07 28 09.8	+0.3
MSVF				pmax	pmax		
	comp=Z,15nm,1.2s						
MSVF				MLR	MLR		
	comp=Z,824nm,17.0s						
AAK	**Ala-Archa**	70.82	316	P	P	07 28 10.3	+0.1
	comp=Z,30nm,0.8s,baz=113,slow=3.6,SNR=73						
AAK				LR	LR	08 01 13.9	
	comp=Z,2µm,18.9s,baz=32,slow=38						
AAK	**Ala-Archa**	70.82	316	P	P	07 28 10.5	+0.3
	SNR=32						
AAK	**Ala-Archa**	70.82	316	*i* P	P	07 28 11.4	+1.2
AAK				pmax	pmax		
	comp=Z,83nm,0.9s						
AAK				MLR	MLR		
	comp=Z,9µm,16.0s						
AAK	**Ala-Archa**	70.82	316	P	P	07 28 09.7	-0.5
AAK				IAmb	IAmb	07 28 16.1	
	comp=Z,48nm,0.9s						
AAK	**Ala-Archa**	70.82	316	⇑P	P	07 28 10.5	+0.3
AAK				⇑P	P	07 28 10.5	+0.3

OBN	Obninsk	70.89	345	P	P	07 28 10.2	+0.1
	comp=Z,14nm,0.4s,baz=50,slow=3.4,SNR=18						
OBN				LR	LR	08 03 22.7	
	comp=Z,238nm,18.0s,baz=20,slow=39						
OBN	Obninsk	70.89	345*c*	*i*P	P	07 28 09.0	-1.1
OBN				*e**SP	sP	07 28 16.4	-0.7
OBN				*e*		07 28 21.8	
OBN						07 30 48.0	
OBN				*e*PPP	PPP	07 32 26.6	
OBN				*e*S	S	07 37 30.3	+6.2
OBN				*e*		07 38 04.5	
OBN				pmax	pmax		
	comp=Z,192nm,1.7s						
OBN	Obninsk	70.89	345	P	P	07 28 09.2	-1.0
OBN				IAMs_20	IAMs_20	08 03 10.4	
	comp=Z,2µm,20.0s						
EKS2	Erkin-Say	71.11	316	P	P	07 28 12.3	+0.4
	SNR=24						
NIUE	Niue	71.11	181	P	P	07 28 13.4	+1.6
UCH	Uchtor	71.15	316	P	P	07 28 12.6	+0.1
	SNR=17						
BELG	Belogornoye	71.29	337	P	P	07 28 12.6	0.0
	comp=Z,96nm,0.8s,baz=194,slow=2.2,SNR=26						
BELG				LR	LR	08 02 16.1	
	comp=Z,886nm,21.1s,baz=17,slow=38						
BELG	Belogornoye	71.29	337*c*	*i*P	P	07 28 12.0	-0.6
BELG				pmax	pmax		
	comp=Z,19nm,0.9s						
PPT	Papeete	71.56	161	LR	LR	07 53 02.5	
	comp=Z,532nm,20.1s,baz=354,slow=30						
MUD	Monsted U'grnd	71.56	1	*i* P	P	07 28 15.6	+1.4
	comp=Z,40nm,0.9s						
MUD	Monsted U'grnd	71.56	1	P	P	07 28 15.4	+1.2
MUD				pmax	pmax		
	comp=Z,74nm,1.6s						
MUD	Monsted U'grnd	71.56	1	*i* P	P	07 28 15.2	+1.0
MUD				*i* P	P	07 28 15.6	+1.4
MUD				IAmb	IAmb	07 28 17.3	
	comp=Z,40nm,0.9s						
AML	Almayashu	71.58	316	P	P	07 28 15.8	+0.7
	SNR=25						
PPT2	Papeete2	71.58	161	*e*P	P	07 28 16.2	+1.5
	comp=Z,47nm,1.4s						
PPT2				*e*S	S	07 37 34.6	+1.7
	comp=Z,3µm,26.0s						
PPT2	Papeete2	71.58	161	*e*LR	LR	07 49 43.2	
	comp=Z,3µm,31.2s,baz=349						
ISAL	Salakas	71.77	351	*e*P	P	07 28 15.8	+0.4
SLVN	Son La	71.86	281	P	P	07 28 16.7	+0.1
SLVN				IAmb	IAmb	07 28 31.4	
	comp=Z,108nm,1.4s						
SLVN				IAMs_20	IAMs_20	08 03 07.2	
	comp=Z,1µm,19.0s						
DZA	Taraz	71.94	318	*e*P	P	07 28 15.6	-1.2
	baz=318						
DZA				LR	LR	08 00 24.2	
	comp=Z,346nm,14.7s,baz=318						
DZA	Taraz	71.94	318	*e*P	P	07 28 15.6	-1.2
DZA				MLR	MLR		
	comp=Z,346nm,15.0s						
IDID	Didziasalis	71.96	351	*e*P	P	07 28 17.1	+0.6
PABE	Paberze	72.02	352	*e*P	P	07 28 17.1	+0.2
LKP	Lekhapani	72.03	291	*e*P	P	07 28 16.9	-0.6
EKA	Eskdalemuir Ar	72.03	9	P	P	07 28 17.5	+0.5
ESK	Eskdalemuir	72.05	9	*e*P	P	07 28 17.8	+0.7
ESK	Eskdalemuir	72.05	9	P	P	07 28 17.3	+0.2
ESK				pmax	pmax		
	comp=Z,245nm,2.0s						
ESK	Eskdalemuir	72.05	9	P	P	07 28 17.3	+0.2
KK31	Karatay Array	72.10	319	P	P	07 28 17.4	-0.3
KK31				pmax	pmax		
	comp=Z,42nm,1.0s						
KK31	Karatay Array	72.10	319	P	P	07 28 17.4	-0.3
KK31				IAmb	IAmb	07 28 19.1	
	comp=Z,42nm,0.9s						
KKAR	Karatay Array	72.10	319	P	P	07 28 18.4	+0.7
KKAR				pmax	pmax		
	comp=Z,42nm,1.0s						
KKAR	Karatay Array	72.10	319	P	P	07 28 18.4	+0.7
KKAR				IAmb	IAmb	07 28 19.1	
	comp=Z,42nm,0.9s						
KKAR	Karatay Array	72.10	319	P	P	07 28 18.5	+0.7
ESQI	Esquipulas	72.11	89	P	P	07 28 17.9	-0.3
ESQI				IAmb	IAmb	07 28 40.2	
	comp=Z,69nm,1.3s						
PMG	Port Moresby	72.17	226	*i* P	P	07 28 16.1	-2.2
PMG				pmax	pmax		
	comp=Z,33nm,1.0s						
PMG	Port Moresby	72.17	226	P	P	07 28 19.0	+0.7
MTO3	Montecristo	72.22	89	P	P	07 28 17.8	-1.2
NACGM	Naroch	72.36	351	*i* P	P	07 28 18.6	-0.4
NACGM				*i* P	P	07 28 18.6	-0.4
NACGM				*i* P	P	07 28 18.6	-0.4
NACGM				*i* PP	PP	07 30 58.0	-1.1
NACGM				*i* PPP	PPP	07 32 42.0	
NACGM				*i* S	S	07 37 37.3	-3.8
NACGM				*i* SS	SS	07 42 18.8	+0.8
NACGM				*i* SSS	SSS	07 45 39.3	
NACGM				*i* LQ	LQ	07 55 12.1	
NACGM				*i* LR	LR	08 00 42.2	
DIBR	DIBRUGARH	72.46	292	*e*P	P	07 28 20.6	+0.5
EDMD	Edmundbyers	72.64	8	*e*P	P	07 28 20.7	+0.1
MNK	Minsk	72.65	350	*e*P	P	07 28 20.0	-0.7
MNK				pmax	pmax		
	comp=Z,310nm,1.5s						
MNK	Minsk	72.65	350	*i* P	P	07 28 21.2	+0.5
	comp=E,3.0nm,0.8s						
MNK				*i* P	P	07 28 21.2	+0.5
	comp=N,60nm,0.8s						
MNK				*i* P	P	07 28 21.2	+0.5
	comp=Z,108nm,0.8s						
MNK				*i* PP	PP	07 31 02.9	+1.3
MNK				*i* PPP	PPP	07 32 47.3	
MNK				*i* S	S	07 37 46.0	+1.7
MNK				*i* SS	SS	07 42 46.3	+24
MNK				*i* SSS	SSS	07 46 07.5	
MNK				*i* LQ	LQ	07 55 25.4	
MNK				*i* LR	LR	08 00 57.8	
MNK				*i* LRM	MLR	08 02 34.6	
	comp=N,2µm,25.6s						
MNK				*i* LRM	MLR	08 02 48.8	
	comp=Z,566nm,17.9s						
MNK				*i* LRM	MLR	08 03 15.5	
	comp=E,156nm,16.2s						
KSH	Kashi	72.72	313	P	P	07 28 24.7	+3.1
KSH				sP	PcP	07 28 34.9	-4.0
KSH				pmax	pmax		
	comp=E,70nm,0.8s						
KSH				pmax	pmax		
	comp=E,230nm,3.8s						
LSA	Lhasa	72.85	296	P	P	07 28 24.1	+1.2
LSA				pmax	pmax		
	comp=E,320nm,1.3s						
LSA	Lhasa	72.85	296	P	P	07 28 23.7	+0.8
LSA				pmax	pmax		
	comp=Z,61nm,0.9s						
LSA				MLR	MLR		
	comp=Z,2µm,20.0s						
LSA	Lhasa	72.85	296	P	P	07 28 23.7	+0.8
LSA				IAmb	IAmb	07 28 38.6	
	comp=Z,60nm,0.9s						
LSA				IAMs_20	IAMs_20	08 01 42.5	
	comp=Z,1µm,20.0s						
SWI	Sorong	72.88	245	P	P	07 28 22.9	+0.3
SWI				pmax	pmax		
	comp=Z,108nm,1.4s						
SWI	Sorong	72.88	245	P	P	07 28 22.5	-0.1
	comp=Z,109nm,1.4s						
BSD	Bornholm Skovb	72.88	358	*i* P	P	07 28 22.6	+0.6
BSD	Bornholm Skovb	72.88	358	*i* P	P	07 28 22.6	+0.6
BSD	Bornholm Skovb	72.88	358	*i* P	P	07 28 22.7	+0.6
LPSR	Galich'ya Gora	72.90	343	*e*P	P	07 28 21.9	-0.3
LPSR				pmax	pmax		
	comp=Z,40nm,1.0s						
ZIRO	ZIRO	73.02	293	*e*P	P	07 28 23.2	-0.4
ZIRO				*e*P	pP	07 28 24.1	-4.6
IUG	Iuzhnay	73.09	318	*e*P	P	07 28 22.7	-1.0
	comp=Z,44nm,1.8s,baz=319						
IUG	Iuzhnay	73.09	318	*e*P	P	07 28 22.7	-1.0
IUG				pmax	pmax		
	comp=Z,44nm,1.8s						
JORH	JORHAT	73.39	292	*e*P	P	07 28 25.3	-0.3
RGN	Rugen	73.48	359	IAMs_20	IAMs_20	08 03 11.4	
	comp=Z,2µm,20.0s						
HPK	Haverah Park	73.53	8	*e*P	P	07 28 26.9	+1.0
HPK				IAmb	IAmb	07 28 28.5	
	comp=Z,226nm,1.7s						
SUW	Suwalki	73.57	353	*e*P	P	07 28 26.0	-0.2
SUW	Suwalki	73.57	353	*e*P	P	07 28 25.9	-0.2
SUW	Suwalki	73.57	353	P	P	07 28 25.6	-0.5
SUW				pmax	pmax		
	comp=Z,187nm,1.1s						
SUW	Suwalki	73.57	353	P	P	07 28 25.6	-0.5
MOKO	MOKOCHONG	73.57	292	*e*P	P	07 28 26.7	-0.1
MOKO				*e*P	pP	07 28 27.7	-4.3
MOKO				IAmb	IAmb	07 28 33.4	
	comp=Z,74nm,1.0s						
VRH	Novokhopyorsk	73.70	341	*e*P	P	07 28 25.0	-2.0
VRH				pmax	pmax		
	comp=Z,20nm,0.4s						
TGUH	Tegucigalpa,Un	73.76	88	P	P	07 28 28.2	+0.2
WME	Myndd Eilian	73.83	10	*e*P	P	07 28 28.2	+0.4
WLF1	Llynfaes	73.93	10	*e*P	P	07 28 29.1	+0.8
WLF1				IAmb	IAmb	07 28 29.3	
	comp=Z,54nm,0.8s						
FAKI	Fak Fak	74.04	243	IAMs_20	IAMs_20	08 03 56.1	
	comp=Z,935nm,20.0s						
LBWR	Ladybower, Pea	74.07	8	*e*P	P	07 28 29.5	+0.3
LBWR				IAmb	IAmb	07 28 31.2	
	comp=Z,64nm,1.0s						
BSEG	Bad Segeberg	74.10	1	P	P	07 28 30.6	+1.3
BSEG				pmax	pmax		
	comp=Z,48nm,1.4s						
BSEG	Bad Segeberg	74.10	1	*e*P	P	07 28 29.7	+0.4
	comp=Z,440nm,2.5s,baz=0.0,slow=5.7						
VSR	Storozhevoye	74.18	342	*e*P	P	07 28 29.5	-0.3
VSR				pmax	pmax		
	comp=Z,40nm,0.5s						
KOHI	KOHIMA	74.26	292	*e*P	P	07 28 30.2	-0.7
KOHI				*e*P	pP	07 28 31.5	-4.6
TEZP	TEZPUR	74.31	293	*e*P	P	07 28 30.1	-0.8
TEZP				*e*P	pP	07 28 30.2	-5.9
TEZP				IAmb	IAmb	07 28 32.6	
	comp=Z,62nm,1.2s						
VORD	Divnogorie	74.40	342	*e*P	P	07 28 30.6	-0.5
VORD				pmax	pmax		
	comp=Z,50nm,0.7s						
LLW	Llanuwychllyn	74.44	9	*e*P	P	07 28 31.7	+0.4
FOEL	Foel Wylfa	74.45	9	*e*P	P	07 28 30.9	-0.4
FOEL				IAmb	IAmb	07 28 33.8	
	comp=Z,115nm,0.9s						
GKP	Gorka Klasztor	74.65	356	*e*P	P	07 28 32.7	+0.2
GKP	Gorka Klasztor	74.65	356	*e*P	P	07 28 33.0	+0.5
GKP	Gorka Klasztor	74.65	356	P	P	07 28 33.6	+1.1
GKP				pmax	pmax		
	comp=Z,77nm,0.8s						
WACR	West Acre	74.93	7	*e*P	P	07 28 35.4	+1.3
IMP	Imphal	75.04	291	*e*P	P	07 28 34.2	-1.1
IMP				*e*P	pP	07 28 34.4	-6.1
IMP				IAmb	IAmb	07 28 45.5	
	comp=Z,205nm,1.8s						
RSBS	Rosebush, Pemb	75.21	10	*e*P	P	07 28 35.7	0.0
RSBS				IAmb	IAmb	07 28 37.3	
	comp=Z,86nm,1.1s						
GUWA	GUWAHATI	75.27	294	*e*P	P	07 28 35.1	-1.4
GUWA				*e*P	pP	07 28 36.0	-5.7
GUWA				IAmb	IAmb	07 28 45.9	
	comp=Z,89nm,1.1s						
MCH1	Michaelchurch	75.35	9	*e*P	P	07 28 36.8	+0.3
MYLDM	Lahad Datu	75.45	259		P	07 28 38.5	+0.8
MYLDM				IAmb	IAmb	07 28 55.4	
	comp=Z,113nm,1.1s						
RUE	Ruedersdorf	75.54	358	*e*P	P	07 28 38.4	+0.7
	comp=Z,278nm,1.8s,baz=0.0,slow=5.7						
UBPT	Khong Chiam	75.55	276	P	P	07 28 38.9	+0.7
SHL	Shillong	75.64	293	P	P	07 28 38.1	-0.8
SHL				pmax	pmax		
	comp=Z,531nm,1.9s						
SHL				MLR	MLR		
	comp=Z,3µm,18.0s						
SHL	Shillong	75.64	293	*e*P	P	07 28 37.9	-1.0
SHL				*e*P	P	07 28 38.1	-0.8
SHL				IAmb	IAmb	07 28 47.2	
	comp=Z,46nm,0.5s						
SHL	Shillong	75.64	293	P	P	07 28 38.0	-0.8
SHL	Shillong	75.64	293	P	P	07 28 38.3	-0.6
	SNR=45						
STRD	Stroud	75.65	9	*e*P	P	07 28 38.4	+0.1
STRD				IAmb	IAmb	07 28 40.0	
	comp=Z,209nm,1.2s						
IBBN	Ibbenburen	75.69	2	*e*P	P	07 28 39.1	+0.6
	comp=Z,84nm,1.1s,baz=0.0,slow=5.7						
FLTG	Flechtingen	75.71	0	*e*P	P	07 28 38.5	-0.1
	comp=Z,215nm,2.0s,baz=0.0,slow=5.7						
BEL	Belsk	75.90	354	*e*P	P	07 28 40.7	+1.0
BEL	Belsk	75.90	354	P	P	07 28 40.9	+1.2
BEL				pmax	pmax		
	comp=Z,228nm,1.6s						
ASSE	Asse, Remlinge	75.91	0	*e*P	P	07 28 40.0	+0.4
	comp=Z,275nm,2.1s,baz=0.0,slow=5.7						
GTK	Tadong	76.10	297	*e*P	P	07 28 41.4	0.0
KKM	Kota Kinabalu	76.15	262	IAMs_20	IAMs_20	07 57 08.5	
	comp=Z,914nm,21.0s						
CLZ	Clausthal	76.20	1	*e*P	P	07 28 42.1	+0.6
	comp=Z,98nm,1.3s,baz=0.0,slow=5.7						
AKASG	Malin Array Be	76.23	348	P	P	07 28 40.6	-1.0
	comp=Z,28nm,0.6s,baz=15,slow=5.8,SNR=63						
AKASG				LR	LR	08 07 13.6	
	comp=Z,2µm,19.0s,baz=5.0,slow=40						
AKBB	Malin Array Si	76.23	348	*i* P	P	07 28 40.4	-1.2
AKBB	Malin Array Si	76.23	348	P	P	07 28 41.0	-0.6
AKBB				IAmb	IAmb	07 29 00.8	
	comp=Z,43nm,0.8s						
AKBB				IAMs_20	IAMs_20	08 06 53.5	
	comp=Z,2µm,20.0s						
DLV	T Lat	76.28	272	IAMs_20	IAMs_20	08 01 08.0	
	comp=Z,1µm,22.0s						
GTTG	Gottingen	76.49	1	*e*P	P	07 28 44.0	+0.9
	comp=Z,87nm,1.2s,baz=0.0,slow=5.7						
BUG	Bochum--Univer	76.55	3	P	P	07 28 44.3	+0.9
BUG				pmax	pmax		
	comp=Z,36nm,1.1s						
BUG	Bochum--Univer	76.55	3	*e*P	P	07 28 43.7	+0.3
	comp=Z,265nm,2.0s,baz=0.0,slow=5.7						
TAPN	Taplejung	76.57	297	*e*P	P	07 28 43.7	-0.6
	comp=Z,223nm,1.0s						
GTBY	Guantanamo Bay	76.61	75	IAMs_20	IAMs_20	08 02 55.7	
	comp=Z,1µm,20.0s						
CLL	Collm	76.73	359⇑	*i*P	P	07 28 44.5	+0.1
	comp=Z,266nm,2.2s						
CLL				*e*PP	PP	07 31 42.0	+5.9
CLL				*e*S	S	07 38 34.0	+4.0
CLL				*e*PPS	PPS	07 39 17.0	
CLL				*e*SS	SS	07 43 23.0	-1.3
CLL				*e*SSS	SSS	07 46 54.0	
CLL				*e*		07 48 05.0	
CLL				*e*SSSS		07 48 54.0	
CLL	Collm	76.73	359⇑	*i*P	P	07 28 44.5	+0.1
CLL				*e*S	S	07 38 34.0	+4.0
CLL				pmax	pmax		
	comp=Z,266nm,2.2s						
CLL				MLR	MLR		
	comp=Z,1µm,20.6s						
CLL	Collm	76.73	359	P	P	07 28 44.3	-0.1
CLL				IAMs_20	IAMs_20	08 07 12.4	
	comp=Z,1µm,20.0s						
CLL	Collm	76.73	359	*e*P	P	07 28 44.6	+0.1
	comp=Z,266nm,2.2s,baz=0.0,slow=5.7						
CHTO	Chiang Mai	76.77	284	P	P	07 28 44.8	-0.4
CHTO				pmax	pmax		
	comp=Z,138nm,1.6s						
CHTO				MLR	MLR		
	comp=Z,2µm,20.0s						
CHTO	Chiang Mai	76.77	284	P	P	07 28 44.8	-0.4
CHTO				IAmb	IAmb	07 28 58.4	
	comp=Z,138nm,1.6s						
CHTO	Chiang Mai	76.77	284	IAMs_20	IAMs_20	08 05 39.0	
	comp=Z,1µm,20.0s						
CHTO	Chiang Mai	76.77	284	P	P	07 28 44.9	-0.2
CHTO				P	P	07 28 44.9	-0.2
KASTN	Kahler Asten	76.81	2	*e*P	P	07 28 45.4	+0.4
	comp=Z,226nm,2.2s,baz=0.0,slow=5.7						
SANI	Sanana	76.83	249	P	P	07 28 44.3	-1.2
	comp=Z,920nmcomp=Z,54nm,1.8s						
NEUB	Neuenburg	76.83	360	*e*P	P	07 28 45.6	+0.6
	comp=Z,238nm,1.8s,baz=0.0,slow=5.7						
ESPN	Las Esperanzas	77.02	87	P	P	07 28 46.9	+0.3
ESPN				IAmb	IAmb	07 29 09.0	
	comp=Z,139nm,1.6s						
CM31	Chiang Mai Arr	77.04	283	P	P	07 28 46.7	0.0
CM31				IAmb	IAmb	07 29 01.1	
	comp=Z,88nm,0.9s						
CMAR	Chiang Mai Arr	77.04	283	P	P	07 28 46.9	+0.2
	comp=Z,40nm,0.8s,baz=26,slow=6.6,SNR=92						
CMAR				LR	LR	08 06 25.3	
	comp=Z,2µm,19.1s,baz=80,slow=39						
CMAR	Chiang Mai Arr	77.04	283	*i* P	P	07 28 46.9	+0.2
CMAR				pmax	pmax		
	comp=Z,43nm,0.8s						
FBE	Freiberg	77.11	359	*e*P	P	07 28 47.2	+0.6
	comp=Z,402nm,2.1s,baz=0.0,slow=5.7						
GUN	Gumba	77.11	299	*e*P	P	07 28 47.1	-0.3
	comp=Z,397nm,1.1s						
KSP	Ksiaz	77.12	357	*e*P	P	07 28 47.1	+0.5
KSP	Ksiaz	77.12	357	P	P	07 28 47.1	+0.5
KSP				pmax	pmax		
	comp=Z,46nm,0.9s						
MRSI	Marisa	77.14	254	P	P	07 28 45.1	-2.1
	comp=Z,1µmcomp=Z,109nm,1.2s						
BRG	Berggiesshubel	77.15	358	P	P	07 28 47.3	+0.5
BRG				pmax	pmax		
	comp=Z,47nm,1.9s						
BRG	Berggiesshubel	77.15	358⇓	*i*P	P	07 28 47.1	+0.3
BRG				Amp		07 28 50.5	
	comp=Z,236nm,2.1s						
BRG				*e*x	x	07 29 12.3	
BRG				Amp		07 29 14.5	
	comp=Z,33nm,1.3s						
BRG	Berggiesshubel	77.15	358	S	S	07 38 45.0	+10
BRG	Berggiesshubel	77.15	358	*e*P	P	07 28 47.0	+0.3
	comp=Z,236nm,2.1s,baz=0.0,slow=5.7						
DZM	Mont Dzumac	77.21	204	*e*P	P	07 28 48.0	+0.6
	comp=Z,97nm,1.6s						
DZM	Mont Dzumac	77.21	204	*e*LR	LR	07 52 11.6	
	comp=Z,1µm,21.8s						
UBBA	Unterbreizbach	77.22	1	*e*P	P	07 28 47.6	+0.5
	comp=Z,160nm,2.0s,baz=0.0,slow=5.7						
MEM	Membach	77.34	3	*d*P	P	07 28 48.0	+0.1
MEM	Membach	77.34	3	P	P	07 28 48.8	+0.9
MEM				pmax	pmax		
	comp=Z,54nm,1.7s						
BSTI	Sart Tilman	77.34	4	*d*P	P	07 28 48.4	+0.5
BSTI				*d*x	x	07 29 00.8	
BSTI				*d*x	x	07 29 12.1	
SNF	Seneffe	77.36	5	*d*P	P	07 28 48.9	+0.9
SNF				*d*PcP	PcP	07 29 00.3	+1.9
BTNL	Ternell	77.36	3	*d*P	P	07 28 48.4	+0.4
BTNL				*d*PcP	pwP	07 28 56.7	-0.7
BTNL				*d*x	x	07 29 12.3	
CHVC	Chvalec	77.38	357	*e*P	P	07 28 48.1	0.0
CHVC				AMS	AMS	08 12 10.0	
	comp=Z,1µm,16.8s						
OSTC	Ostas	77.41	357	*e*P	P	07 28 48.2	-0.1
OSTC				AMS	AMS	08 12 10.0	
	comp=Z,1µm,18.9s						
SAIH	SAIHA	77.41	290	IAmb	IAmb	07 28 54.2	
	comp=Z,142nm,1.1s						
SAIH				*e*P	P	07 28 47.8	-1.1
SAIH				*e*P	P	07 28 48.5	-0.4
AHRW	Bad Neuenahr-A	77.44	3	*e*P	P	07 28 49.2	+0.7
	comp=Z,255nm,2.2s,baz=0.0,slow=5.7						
UPC	Upice	77.46	357	*e*P	P	07 28 48.7	+0.1
UPC				MLR	MLR		
	comp=Z,2µm,16.9s						
UPC	Upice	77.46	357	*e*P	P	07 28 48.7	+0.1
UPC				AMS	AMS	08 12 00.0	
	comp=Z,2µm,16.9s						
PVCC	Panska Ves	77.48	358	*e*P	P	07 28 49.7	+1.0
PVCC				MLR	MLR		
	comp=Z,1µm,22.3s						
PVCC	Panska Ves	77.48	358	*e*P	P	07 28 49.7	+1.0
PVCC				AMS	AMS	08 06 40.0	
	comp=Z,1µm,22.3s						
BCLA	Clavier	77.50	4	κP	P	07 28 49.5	+0.7
BGES	Gesves	77.52	4	*d*P	P	07 28 49.2	+0.3
BGES				*d*x	x	07 29 13.3	
KKN	Kakani	77.53	299	*e*P	P	07 28 49.2	-0.4
	comp=Z,357nm,1.7s						
PLN	Plauen	77.56	359	*e*P	P	07 28 49.5	+0.4
	comp=Z,213nm,2.2s,baz=0.0,slow=5.7						
OJC	Ojcow	77.57	354	*e*P	P	07 28 49.8	+0.6
OJC	Ojcow	77.57	354	P	P	07 28 49.5	+0.3
OJC				pmax	pmax		
	comp=Z,287nm,1.9s						
OJC	Ojcow	77.57	354	P	P	07 28 49.5	+0.3
BHOU	Houvegnez	77.59	3	*d*P	P	07 28 50.0	+0.6
BHOU				*d*PcP	PcP	07 29 00.6	+1.0
BHOU				*d*x	x	07 29 19.6	
BHOU				*d*x	x	07 29 30.4	
BMRD	Maredsous	77.59	4	*d*P	P	07 28 49.5	+0.2
BMRD				*d*PcP	pwP	07 28 58.4	-0.2
BMRD				*d*x	x	07 29 13.6	
WERD	Werda	77.59	359	*e*P	P	07 28 49.9	+0.5
	comp=Z,217nm,2.2s,baz=0.0,slow=5.7						
DPC	Dobruska-Polom	77.61	357	*e*P	P	07 28 50.1	+0.6
DPC				MLR	MLR		
	comp=Z,1µm,17.6s						
DPC	Dobruska-Polom	77.61	357	*e*P	P	07 28 50.1	+0.6
DPC				AMS	AMS	08 16 20.0	
	comp=Z,1µm,17.6s						
TANN	Tannenbergstha	77.63	359	*e*P	P	07 28 50.1	+0.5
	comp=Z,254nm,2.1s,baz=0.0,slow=5.7						
PKI	Pulchoki	77.64	299	*e*P	P	07 28 49.6	-0.7
	comp=Z,431nm,1.4s						
PKIN	Phulchoki	77.64	299	*e*P	P	07 28 49.6	-0.7
	comp=Z,368nm,1.4s						
LVV	L'vov	77.66	352	*e*P	P	07 28 49.0	-0.7
LVV				*e*		07 31 51.4	
LVV				*e*PPP	PPP	07 33 35.3	
LVV				*e*S	S	07 38 37.2	-3.0
LVV				*e*PS	PnS	07 39 44.1	+24
LVV				pmax	pmax		
	comp=Z,110nm,1.6s						
LVV				MLR	MLR		
	comp=E,900nm,18.0s						
LVV				MLR	MLR		
	comp=N,2µm,19.0s						
LVV				MLR	MLR		
	comp=Z,2µm,19.0s						
BELO	BELONIA	77.70	292	*e*P	P	07 28 50.6	+0.3
GKN	Gorkha	77.70	300	*e*P	P	07 28 50.1	-0.4
	comp=Z,321nm,1.0s						
WERN	Wernitzgruen	77.75	359	*e*P	P	07 28 51.0	+0.7
	comp=Z,287nm,2.2s,baz=0.0,slow=5.7						
RCHB	Rochefort	77.76	4	*d*P	P	07 28 50.2	0.0
RCHB				*d*x	x	07 29 04.4	
DMN	Daman	77.77	299	*e*P	P	07 28 50.0	-1.0
	comp=Z,196nm,0.9s						
DOU	Dourbes	77.79	4	κP	P	07 28 51.1	+0.7
DOU				*d*x	x	07 29 02.6	
DOU	Dourbes	77.79	4	P	P	07 28 51.5	+1.1
DOU				pmax	pmax		
	comp=Z,48nm,2.7s						
TNS	Taunus Mts	77.79	2	P	P	07 28 51.6	+1.1
TNS				pmax	pmax		
	comp=Z,30nm,1.1s						
TNS	Taunus Mts	77.79	2	*e*P	P	07 28 51.0	+0.5
	comp=Z,275nm,2.3s,baz=0.0,slow=5.7						
NKC	Novy Kostel	77.81	359	AMS	AMS	08 10 40.0	
	comp=Z,1µm,22.2s						
KRLC	Kraliky	77.86	356	P	P	07 28 51.5	+0.6
KRLC	Kraliky	77.86	356	AMS	AMS	08 11 30.0	
	comp=Z,1µm,19.0s						
LUWI	Luwuk	77.87	252	P	P	07 28 50.0	-1.3
LUWI	Luwuk	77.87	252	P	P	07 28 50.0	-1.3
	comp=Z,3µmcomp=Z,250nm,1.1s						
DANN	Dangsing	77.89	301	*e*P	P	07 28 51.6	-0.1
	comp=Z,405nm,0.8s						
PRA	Prague	77.94	358	AMS	AMS	08 08 50.0	
	comp=Z,600nm,19.3s						
KWP	Kalwaria Pacla	77.95	352	*e*P	P	07 28 52.0	+0.7
KWP	Kalwaria Pacla	77.95	352	P	P	07 28 52.1	+0.7
KWP				pmax	pmax		
	comp=Z,145nm,1.5s						
KWP	Kalwaria Pacla	77.95	352	IAMs_20	IAMs_20	08 05 32.0	
	comp=Z,2µm,20.0s						
PRU	Pruhonice	78.02	358	*e*P	P	07 28 51.7	0.0
PRU				*e*		07 28 59.6	
PRU				MLR	MLR		
	comp=Z,1µm,16.9s						
PRU	Pruhonice	78.02	358	*e*P	P	07 28 51.7	0.0
PRU				*e*pP	sP	07 28 59.6	+0.9
PRU				AMS	AMS	08 08 40.0	
	comp=Z,1µm,16.9s						
OKC	Ostrava-Krasne	78.04	355	AMS	AMS	08 08 50.0	

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      comp=Z,1µm,17.0s
MANZ  Manzenberg        78.06 359 eP        P         07 28 52.3 +0.3
      comp=Z,182nm,2.1s,baz=0.0,slow=5.7
MORC  Moravsky Berou    78.13 356 ⇓P        P         07 28 53.3 +1.0
MORC  Moravsky Berou    78.13 356⇑iP        P         07 28 52.7 +0.3
MORC  Moravsky Berou    78.13 356  P        P         07 28 52.6 +0.2
MORC                               pmax     pmax
      comp=Z,194nm,1.8s
MORC                               MLR      MLR
      comp=Z,900nm,20.0s
MORC  Moravsky Berou    78.13 356  P        P         07 28 52.6 +0.2
MORC                               IAMs_20  IAMs_20   08 06 13.6
      comp=Z,860nm,20.0s
ROTZ  Rotzenmuhle       78.28 359 eP        P         07 28 53.9 +0.7
      comp=Z,175nm,1.9s,baz=0.0,slow=5.7
WLF   Walferdange       78.29   3 dP        P         07 28 54.0 +0.8
WLF                               dx        x         07 29 04.1
WLF                               dx        x         07 29 16.5
WLF   Walferdange       78.29   3  P        P         07 28 53.9 +0.8
WLF                                pmax     pmax
      comp=Z,64nm,1.2s
WLF   Walferdange       78.29   3  P        P         07 28 53.9 +0.8
WLF                                IAmb     IAmb      07 28 56.8
      comp=Z,64nm,1.2s
WLF   Walferdange       78.29   3 eP        P         07 28 53.9 +0.7
      comp=Z,342nm,2.3s,baz=0.0,slow=5.7
NIE   Niedzica          78.34 354 eP        P         07 28 54.6 +1.0
NIE   Niedzica          78.34 354  P        P         07 28 54.5 +1.0
NIE                                pmax     pmax
      comp=Z,23nm,1.7s
GRA1  Grafenberg Arr    78.35   0  P        P         07 28 53.8 +0.2
GRA1                               IAmb     IAmb      07 28 57.3
      comp=Z,118nm,1.3s
GRF   Grafenberg Arr    78.35   0  P        P         07 28 53.8 +0.2
GRF                                pmax     pmax
      comp=Z,118nm,1.3s
GRF   Grafenberg Arr    78.35   0 eP        P         07 28 54.6 +1.1
      comp=Z,450nm,2.1s,baz=0.0,slow=5.7
GRF                               eL        L         08 02 14.7
      comp=Z,675nm,21.3s
GRFO  Grafenberg        78.36   0  P        P         07 28 54.3 +0.7
GRFO                               pmax     pmax
      comp=Z,109nm,1.3s
GRFO  Grafenberg        78.36   0  P        P         07 28 54.3 +0.7
GRFO                               IAmb     IAmb      07 28 57.3
      comp=Z,109nm,1.3s
KOLN  Koldanda          78.44 301 eP        P         07 28 54.0 -0.7
      comp=Z,160nm,1.0s
MPSI  Mapaga            78.46 255  P        P         07 28 54.3 -0.3
      comp=Z,1µmcomp=Z,124nm,1.1s
DHRM  DHARAMSHALA       78.50 308 eP        P         07 28 53.5 -1.5
DHRM                               IAmb     IAmb      07 28 57.9
      comp=Z,60nm,0.5s
VRAC  Vranov            78.64 356  LR       LR        08 03 20.0
      comp=Z,347nm,19.9s,baz=4.5,slow=36
VRAC  Vranov            78.64 356 ⇓P        P         07 28 56.4 +1.3
VRAC  Vranov            78.64 356⇑iP        P         07 28 55.7 +0.6
VRAC  Vranov            78.64 356  P        P         07 28 56.1 +1.0
VRAC                               pmax     pmax
      comp=Z,76nm,1.2s
LANS  Liptovska Anna    78.66 355 eP        P         07 28 56.7 +1.4
LANS                               pmax     pmax
      comp=Z,95nm,1.7s
LANS  Liptovska Anna    78.66 355 eP        P         07 28 56.7 +1.4
KOLS  Kolonicke sedl    78.68 353 eP        P         07 28 55.5 +0.1
KOLS                               pmax     pmax
      comp=Z,102nm,1.9s
KOLS  Kolonicke sedl    78.68 353 eP        P         07 28 55.5 +0.1
TREC  Trest             78.69 357 eP        P         07 28 56.1 +0.7
TREC                               MLR      MLR
      comp=Z,1µm,16.3s
TREC  Trest             78.69 357 eP        P         07 28 56.1 +0.7
TREC                               AMS      AMS       08 12 50.0
      comp=Z,1µm,16.3s
CRVS  Cervenica-Dubn    78.78 353 eP        P         07 28 56.7 +0.8
CRVS                               pmax     pmax
      comp=Z,375nm,2.0s
CRVS  Cervenica-Dubn    78.78 353 eP        P         07 28 56.7 +0.8
NIL   Nilore            78.78 311  P        P         07 28 56.5 +0.3
NIL                                pmax     pmax
      comp=Z,101nm,1.0s
NIL   Nilore            78.78 311  P        P         07 28 56.5 +0.3
NIL                                IAmb     IAmb      07 29 13.9
      comp=Z,101nm,0.9s
NIL   Nilore            78.78 311  P        P         07 28 56.6 +0.4
NIL                                P        P         07 28 56.6 +0.4
SORM  Soroca            78.86 348 ⇓P        P         07 28 55.9 -0.4
SORM  Soroca            78.86 348  P        P         07 28 55.9 -0.4
KRUC  Moravsky          78.89 357⇑iP        P         07 28 56.8 +0.3
KRUC  Moravsky          78.89 357  P        P         07 28 57.2 +0.7
KRUC                               pmax     pmax
      comp=Z,71nm,1.9s
WET   Wettzell          78.89 359  P        P         07 28 57.4 +0.8
WET                                pmax     pmax
      comp=Z,43nm,2.3s
WET   Wettzell          78.89 359 eP        P         07 28 57.3 +0.8
      comp=Z,217nm,2.1s,baz=0.0,slow=5.7
KHC   Kasperske Hory    78.90 358ceP        P         07 28 57.3 +0.7
KHC                                pmax     pmax
      comp=Z,266nm,1.7s
KHC   Kasperske Hory    78.90 358 eP        P         07 28 57.5 +0.9
KHC                               epP       sP        07 29 03.7 +0.1
KHC                               ex        x         07 29 19.0
KHC                                AMS      AMS       08 07 40.0
      comp=Z,1µm,19.2s
KHC   Kasperske Hory    78.90 358  P        P         07 28 57.0 +0.4
KHC                                IAMs_20  IAMs_20   08 07 57.8
      comp=Z,1µm,20.0s
UZH   Uzhgorod          78.98 353 eP        P         07 28 57.1 +0.1
UZH                               e                   07 29 11.3
UZH                               eS        S         07 38 54.1 -0.3
UZH                               e                   07 39 45.9
SMLA  Simla             79.00 307 eP        P         07 28 56.9 -0.5
SMLA                               IAmb     IAmb      07 29 01.5
      comp=Z,183nm,0.4s
JAVC  Velka Javorina    79.04 356⇑iP        P         07 28 58.7 +1.3
GEC2  GERESS Array S    79.18 358  P        P         07 28 58.4 +0.1
GEC2                               IAmb     IAmb      07 29 01.5
      comp=Z,69nm,1.3s
GEC2                               IAMs_20  IAMs_20   08 08 06.3
      comp=Z,1µm,19.0s
GEC2  GERESS Array S    79.18 358 eP        P         07 28 58.6 +0.3
      comp=Z,262nm,2.1s,baz=0.0,slow=5.7
GERES GERESS Array B    79.18 358  P        P         07 28 58.2  0.0
      comp=Z,14nm,0.9s,baz=5.7,slow=4.0,SNR=55
CKRC  Cesky Krumlov     79.19 358 eP        P         07 28 58.3 +0.1
CKRC                              ex        x         07 29 06.5
DDI   Dehra Dun         79.22 306 eP        P         07 28 59.0 +0.3
DDI                               i x       x         07 29 11.4
GOF   Gofitskoye        79.22 338⇑iP        P         07 28 59.0 +0.6
GOF                               eS        S         07 39 01.6 +4.5
GOF                                pmax     pmax
      comp=Z,380nm,1.4s
GOF                                smax     smax
      comp=N,81nm,1.4s
GOF                                smax     smax
      comp=E,86nm,1.5s
STU   Stuttgart         79.26   1  P        P         07 29 00.0 +1.5
STU                                pmax     pmax
      comp=Z,53nm,1.2s
STU   Stuttgart         79.26   1 eP        P         07 28 59.0 +0.5
      comp=Z,82nm,1.4s,baz=0.0,slow=5.7
KECS  Kecovo            79.26 354 eP        P         07 28 59.6 +1.1
KECS                               pmax     pmax
      comp=Z,25nm,1.1s
KECS  Kecovo            79.26 354 eP        P         07 28 59.6 +1.1
SMOL  Smolenice         79.40 356 eP        P         07 29 00.8 +1.5
SMOL                               pmax     pmax
      comp=Z,53nm,1.3s
SMOL  Smolenice         79.40 356 eP        P         07 29 00.8 +1.5
MODS  Modra-Piesok      79.55 356 eP        P         07 29 00.6 +0.5
MODS                               pmax     pmax
      comp=Z,202nm,1.5s
MODS  Modra-Piesok      79.55 356 eP        P         07 29 00.6 +0.5
SDDR  Presa de Saban    79.59  73  P        P         07 29 00.2 -0.7
SDDR                               IAMs_20  IAMs_20   08 02 58.8
      comp=Z,2µm,22.0s
BFO   Black Forest      79.68   2  P        P         07 29 01.1 +0.2
BFO                                pmax     pmax
      comp=Z,41nm,1.1s
BFO                                MLR      MLR
      comp=Z,1µm,19.0s
BFO   Black Forest      79.68   2  P        P         07 29 01.1 +0.2
BFO                                IAMs_20  IAMs_20   08 07 22.6
      comp=Z,1µm,19.0s
BFO   Black Forest      79.68   2 eP        P         07 29 01.2 +0.3
      comp=Z,284nm,2.2s,baz=0.0,slow=5.7
BUR08 Bucovina Ar. S    79.70 351  P        P         07 29 00.6 -0.5
CLF   Chambon-Foret     79.72   6  P        P         07 29 01.4 +0.4
BURAR Bucovina Array    79.73 350 ⇓P        P         07 29 01.6 +0.3
BURAR Bucovina Array    79.73 350  P        P         07 29 01.5 +0.3
BURAR Bucovina Array    79.73 350  P        P         07 29 01.1 -0.2
ZST   Bratislava        79.73 356 eP        P         07 29 02.9 +1.8
ZST                                pmax     pmax
      comp=Z,1µm,2.2s
ZST   Bratislava        79.73 356 eP        P         07 29 02.9 +1.8
ECH   Echery            79.77   3  P        P         07 29 01.4 +0.1
ECH                                pmax     pmax
      comp=Z,51nm,0.9s
ECH   Echery            79.77   3  P        P         07 29 01.4 +0.1
ECH                                IAmb     IAmb      07 29 05.1
      comp=Z,51nm,0.9s
BMR   Baia Mare         79.83 352 ⇓P        P         07 29 03.1 +1.4
BMR   Baia Mare         79.83 352  P        P         07 29 02.8 +1.1
BMR                                pmax     pmax
      comp=Z,40nm,0.8s
PSZ   Piszkesteto       79.86 354 ⇑P        P         07 29 02.7 +0.8
PSZ   Piszkesteto       79.86 354  P        P         07 29 02.7 +0.8
PSZ                                pmax     pmax
      comp=Z,311nm,1.9s
PSZ   Piszkesteto       79.86 354  P        P         07 29 02.7 +0.8
FUR   Furstenfeldbru    79.88   0  P        P         07 29 03.0 +1.0
FUR                                pmax     pmax
      comp=Z,97nm,1.4s
FUR   Furstenfeldbru    79.88   0 eP        P         07 29 02.9 +1.0
      comp=Z,206nm,1.5s,baz=0.0,slow=5.7
KBL   Kabul             79.92 315  P        P         07 29 00.6 -2.0
KBL                                pmax     pmax
      comp=Z,55nm,0.9s
KBL   Kabul             79.92 315  P        P         07 29 00.6 -2.0
KBL                                IAmb     IAmb      07 29 15.3
      comp=Z,55nm,0.9s
KBL   Kabul             79.92 315  P        P         07 29 01.6 -1.0
      SNR=54
KBL                                P        P         07 29 01.6 -1.0
      SNR=54
KIS   Kishinev          79.92 348⇑iP        P         07 29 01.7 -0.4
      comp=Z,170nm,1.8s
KIS                               eLR       LR        08 06 45.0
      comp=Z,600nm,18.0s
KIS   Kishinev          79.92 348c iP       P         07 29 01.7 -0.4
KIS                                pmax     pmax
      comp=Z,170nm,1.8s
MILM  Milestii Mici     80.00 348 ⇓P        P         07 29 02.7 +0.2
CONA  Conrad Observa    80.04 357 i P       P         07 29 04.0 +1.1
      comp=Z,112nm,1.2s,SNR=52
SRO   Srobarova         80.06 355 eP        P         07 29 04.8 +2.0
SRO                                pmax     pmax
      comp=Z,226nm,1.9s
SRO   Srobarova         80.06 355 eP        P         07 29 04.8 +2.0
MAK   Makhachkala       80.07 334⇑iP        P         07 29 01.4 -1.6
MAK                               e                   07 31 59.9
MAK                               ePPP      PPP       07 33 50.3
MAK                               eS        S         07 39 03.5 -2.6
MAK                               eSS       SS        07 44 18.5 +3.6
MAK                                pmax     pmax
      comp=Z,963nm,1.5s
MOF   Molkenrain        80.13   3  P        P         07 29 04.5 +1.1
MOA   Molln             80.17 358 i P       P         07 29 04.3 +0.8
      comp=Z,35nm,1.2s,SNR=12
LTVH  Ltavrtes, Hu      80.25 353 ⇑P        P         07 29 05.0 +1.1
SLE   Schleitheim       80.25   2  P        P         07 29 04.4 +0.4
SLE                                pmax     pmax
      comp=Z,43nm,1.2s
SOP   Sopron            80.26 356  P        P         07 29 05.5 +1.5
SOP                                pmax     pmax
      comp=Z,40nm,1.3s
GROC  Groznyy           80.29 335 eP        P         07 29 05.3 +1.1
GROC                              e                   07 29 13.9
GROC                              e                   07 32 10.6
GROC                               pmax     pmax
      comp=Z,86nm,1.5s
BIZ   Bicaz             80.30 350 ⇓P        P         07 29 04.9 +0.7
ARCR  ARCALIA           80.34 351 ⇓P        P         07 29 05.6 +1.2
BUD   Budapest          80.35 355  P        P         07 29 06.3 +1.9
BUD                                pmax     pmax
      comp=Z,53nm,1.5s
KIV   Kislovodsk        80.35 338 ⇓P        P         07 29 07.0 +2.4
KIV   Kislovodsk        80.35 338 eP        P         07 29 05.3 +0.7
KIV                               e                   07 32 06.7
KIV                               eS        S         07 39 10.9 +1.6
KIV                               eSS       SS        07 44 23.3 +4.0
KIV                                pmax     pmax
      comp=Z,376nm,3.8s
KIV                                pmax     pmax
      comp=Z,201nm,1.0s
KIV   Kislovodsk        80.35 338  P        P         07 29 05.1 +0.5
KIV                                IAmb     IAmb      07 29 11.0
      comp=Z,65nm,1.0s
KIV   Kislovodsk        80.35 338  P        P         07 29 05.1 +0.5
KIV                                P        P         07 29 05.1 +0.5
UBR   Ueberruh          80.36   1 eP        P         07 29 05.2 +0.6
      comp=Z,232nm,2.0s,baz=0.0,slow=5.7
BOK   Bokaro            80.38 296 eP        P         07 29 04.6 -0.5
BOK                                IAmb     IAmb      07 29 18.6
      comp=Z,153nm,1.3s
VASR  Vaslui            80.40 349 ⇓P        P         07 29 05.3 +0.5
KBZ   Khabaz            80.51 337  P        P         07 29 06.3 +1.0
      comp=Z,47nm,0.9s,baz=36,slow=2.0,SNR=34
KBZ   Khabaz            80.51 337ceP        P         07 29 06.0 +0.6
KBZ                                pmax     pmax
      comp=Z,50nm,0.9s
RETA  Reutte            80.56   0 i P       P         07 29 06.6 +0.9
      comp=Z,40nm,1.3s,SNR=14
LOR   Lormes            80.57   5  P        P         07 29 06.4 +0.7
LOR                                pmax     pmax
      comp=Z,61nm,1.3s
ANN   Anapa             80.67 341 eP        P         07 29 04.8 -1.4
ANN                                pmax     pmax
      comp=Z,229nm,1.8s
MOTA  Moosalm           80.70   0 i P       P         07 29 07.1 +0.5
      comp=Z,94nm,1.1s,SNR=23
WATA  Walderalm         80.71 360 i P       P         07 29 07.5 +0.9
      comp=Z,98nm,1.1s,SNR=26
ARSA  Arzberg           80.73 357 i P       P         07 29 07.7 +1.1
      comp=Z,117nm,2.3s,SNR=29
DAVA  Damuels           80.75   1 i P       P         07 29 08.0 +1.2
      comp=Z,52nm,1.2s,SNR=11
CJR   Cluj-Napoca       80.78 351 ⇓P        P         07 29 08.2 +1.3
DRGR                    80.78 352 ⇓P        P         07 29 07.5 +0.6
DRGR                    80.78 352  P        P         07 29 07.5 +0.6
DRGR                               pmax     pmax
      comp=Z,33nm,1.0s
WTTA  Wattenberg        80.78 360 i P       P         07 29 07.7 +0.7
      comp=Z,142nm,1.3s,SNR=38
WTTA  Wattenberg        80.78 360  P        P         07 29 08.1 +1.1
WTTA                               pmax     pmax
      comp=Z,98nm,1.8s
SQTA  Sankt Quirin      80.83   0 i P       P         07 29 08.3 +1.1
      comp=Z,131nm,1.1s,SNR=35
KBA   Koelnbreinsper    80.95 359 i P       P         07 29 09.3 +1.3
      comp=Z,206nm,1.1s,SNR=70
KBA   Koelnbreinsper    80.95 359  P        P         07 29 09.4 +1.5
KBA                                pmax     pmax
      comp=Z,180nm,1.2s
NDI   New Delhi         80.98 306 eP        P         07 29 07.0 -1.2
FETA  Feichten          81.03   0 i P       P         07 29 09.3 +1.0
      comp=Z,81nm,0.9s,SNR=24
ZEI   Tsey              81.16 336 eP        P         07 29 07.8 -1.3
ZEI                                pmax     pmax
      comp=Z,72nm,1.6s
TTSI  Tana Toraja       81.22 253  P        P         07 29 09.7 +0.2
      comp=Z,1µmcomp=Z,112nm,1.2s
VRI   Vrincioaia        81.29 349 ⇓P        P         07 29 11.1 +1.6
VRI   Vrincioaia        81.29 349  P        P         07 29 10.4 +0.9
VRI                                pmax     pmax
      comp=Z,25nm,0.9s
ABTA  Abfaltersbach     81.30 359 i P       P         07 29 09.9 +0.2
      comp=Z,127nm,2.1s,SNR=23
GEYT  Alibeck           81.31 324  P        P         07 29 10.2 +0.4
      comp=Z,54nm,1.0s,baz=323,slow=4.4,SNR=36
GEYT                               LR       LR        08 09 30.2
      comp=Z,3µm,18.1s,baz=45,slow=39
GEYT  Alibeck           81.31 324  P        P         07 29 09.8  0.0
GEYT                               IAmb     IAmb      07 29 24.8
      comp=Z,44nm,0.9s
GYA0B ALIBECK ARRAY     81.31 324  P        P         07 29 10.4 +0.5
GYA0B                              IAmb     IAmb      07 29 24.8
      comp=Z,64nm,0.8s
PLOR  Plostina          81.31 349 ⇓P        P         07 29 10.2 +0.5
PLOR  Plostina          81.31 349  P        P         07 29 09.8 +0.1
PLOR                               pmax     pmax
      comp=Z,31nm,1.8s
SOKA  Soboth            81.32 357 i P       P         07 29 10.5 +0.7
      comp=Z,234nm,2.1s,SNR=56
DOPR  Dopca             81.34 350 ⇓P        P         07 29 11.1 +1.2
PERS  Pernice           81.36 357 i P       P         07 29 10.6 +0.7
PERS                              i pP      pwP       07 29 21.6 +2.3
SOC   Sochi             81.37 340c iP       P         07 29 10.3 +0.3
SOC                               e                   07 32 17.8
SOC                               ePPP      PPP       07 34 08.8
SOC                               eS        S         07 39 22.3 +2.6
SOC                                pmax     pmax
      comp=Z,82nm,1.3s
SOC                                MLR      MLR
      comp=Z,2µm,20.0s
SIRR  Siria             81.38 353 ⇓P        P         07 29 11.0 +0.9
MYKA  Terra Mystica     81.40 358 i P       P         07 29 10.9 +0.8
      comp=Z,69nm,1.4s,SNR=18
SBUM  Sibu              81.41 263  P        P         07 29 11.7 +1.2
SBUM                               IAmb     IAmb      07 29 27.7
      comp=Z,105nm,1.6s
SBUM                               IAMs_20  IAMs_20   08 03 56.0
      comp=Z,1µm,21.0s
LGD   Lagodekhi         81.45 334  P        P         07 29 11.9 +1.4
ONI   Oni               81.45 337  P        P         07 29 13.2 +2.7
BEHE  Becsehely         81.47 356⇑iP        P         07 29 13.8 +3.4
ZOU   Zoufplan          81.48 359  P        P         07 29 10.7 -0.1
ZOU                                IAMs_20  IAMs_20   08 10 37.1
      comp=Z,1µm,20.0s
OBKA  Obir              81.50 358 i P       P         07 29 11.4 +0.7
      comp=Z,105nm,1.1s,SNR=20
SENIN Lac Senin/Sane    81.62   3  P        P         07 29 11.9 +0.4
MORH  Mrgy, Hungar      81.63 355 ⇓P        P         07 29 12.1 +0.8
MORH  Mrgy, Hungar      81.63 355⇑iP        P         07 29 11.3  0.0
CHVG  Ch'k'valeri       81.66 338 ⇑P        P         07 29 12.3 +0.7
DEV   Deva              81.66 352  P        P         07 29 12.4 +0.9
DEV                                pmax     pmax
      comp=Z,24nm,1.6s
TLCR                    81.70 348 ⇓P        P         07 29 13.2 +1.5
TLCR                    81.70 348  P        P         07 29 13.2 +1.5
MLR   Muntele Rosu      81.75 350 ⇓P        P         07 29 13.6 +1.5
MLR   Muntele Rosu      81.75 350  P        P         07 29 12.8 +0.7
MLR                                pmax     pmax
      comp=Z,21nm,0.9s
MLR                                MLR      MLR
      comp=Z,2µm,20.0s
MLR   Muntele Rosu      81.75 350  P        P         07 29 12.8 +0.7
MLR                                IAMs_20  IAMs_20   08 08 19.4
      comp=Z,2µm,20.0s
NEHR  Nehoiu            81.77 349 ⇑P        P         07 29 13.1 +0.9
STAL  STALIGIAL         81.78 359  P        P         07 29 12.0 -0.2
CFR   Carcaliu          81.80 348 ⇓P        P         07 29 12.7 +0.5
CFR   Carcaliu          81.80 348  P        P         07 29 12.1 -0.1
CFR                                pmax     pmax
      comp=Z,29nm,1.1s
VOIR                    81.90 350 ⇓P        P         07 29 14.1 +1.3
VOIR                    81.90 350  P        P         07 29 13.9 +1.0
VOIR                               pmax     pmax
      comp=Z,28nm,1.6s
LJU   Ljubljana         81.97 358 i P       P         07 29 13.0 -0.1
LJU                               epP       pwP       07 29 24.4 +1.9
LJU   Ljubljana         81.97 358⇑iP        P         07 29 12.8 -0.3
CTI   Castel Tesino     82.00 360  P        P         07 29 13.6 +0.2
CTI                                pmax     pmax
      comp=Z,60nm,1.3s
CTI                                MLR      MLR
      comp=Z,900nm,21.0s
CTI   Castel Tesino     82.00 360  P        P         07 29 13.6 +0.2
CTI                                IAmb     IAmb      07 29 15.1
      comp=Z,60nm,1.3s
CTI                                IAMs_20  IAMs_20   08 10 08.8
      comp=Z,893nm,21.0s
ARR   Arges             82.01 351 ⇑P        P         07 29 13.7 +0.2
BZS   Buzias            82.03 353 ⇓P        P         07 29 14.0 +0.5
BZS   Buzias            82.03 353  P        P         07 29 13.5 +0.1
BZS                                pmax     pmax
      comp=Z,34nm,1.5s
TPGR  Topolog           82.08 348 ⇓P        P         07 29 14.2 +0.5
CTAO  Charters Tower    82.08 222  P        P         07 29 13.7 -0.2
CTAO                               pmax     pmax
      comp=Z,56nm,1.5s
CTAO  Charters Tower    82.08 222  P        P         07 29 13.7 -0.2
CTAO                               IAmb     IAmb      07 29 52.8
      comp=Z,56nm,1.5s
BNSI  Bone              82.14 252  P        P         07 29 13.5 -0.8
      comp=Z,41nm,1.1s
ZAG   Zagreb            82.14 357 eP        P         07 29 14.7 +0.7
CRES  Cresnjev          82.16 357⇑iP        P         07 29 14.4 +0.3
GZR   Gura Zlata        82.16 352 ⇓P        P         07 29 14.5 +0.3
CEY   Cerknica          82.27 358⇑iP        P         07 29 14.9 +0.2
HARR  Harsova           82.30 348 ⇓P        P         07 29 16.0 +1.1
HARR  Harsova           82.30 348  P        P         07 29 16.0 +1.1
KZRT  Kazreti           82.35 336  P        P         07 29 17.4 +2.1
SALO  Salr              82.43   1  P        P         07 29 16.1 +0.6
TLBR  Topalu            82.43 348 ⇓P        P         07 29 16.4 +0.8
MTKI  Muara Teweh, K    82.47 259  P        P         07 29 16.2 +0.1
      comp=Z,7µmcomp=Z,58nm,1.1s
TIRR  Tirgusor          82.47 348 ⇓P        P         07 29 17.0 +1.3
TIRR  Tirgusor          82.47 348 ⇓P        P         07 29 17.0 +1.3
TIRR  Tirgusor          82.47 348  P        P         07 29 16.4 +0.7
TIRR                               pmax     pmax
      comp=Z,87nm,0.8s
TIRR                               MLR      MLR
      comp=Z,3µm,20.0s
TIRR  Tirgusor          82.47 348  P        P         07 29 16.4 +0.7
BOJS  Bojanci           82.49 357 i P       P         07 29 16.1 +0.3
AKH   Akhalkalaki       82.56 336 ⇓P        P         07 29 18.1 +1.6
AKH   Akhalkalaki       82.56 336  P        P         07 29 17.4 +0.9
AKH                                pmax     pmax
      comp=Z,88nm,1.0s
AKH                                MLR      MLR
      comp=Z,4µm,21.0s
AKH   Akhalkalaki       82.56 336  P        P         07 29 17.4 +0.9
SSB   Saint Sauveur     82.59   5  P        P         07 29 16.7 +0.3
SSB                                pmax     pmax
      comp=Z,42nm,1.0s
SSB   Saint Sauveur     82.59   5  P        P         07 29 16.7 +0.3
SSB                                IAmb     IAmb      07 29 20.1
      comp=Z,42nm,1.0s
FRGS  Fruska Gora       82.62 354 ⇓P        P         07 29 17.1 +0.6
FRGS  Fruska Gora       82.62 354⇑iP        P         07 29 16.4 -0.1
BGD   Bogdanovka        82.67 336  P        P         07 29 18.3 +1.2
RIY   Rijeka            82.69 358⇑iP        P         07 29 16.9 +0.1
TEOL  Teolo             82.69 360  P        P         07 29 17.2 +0.3
HERR  Herculane         82.70 352 ⇓P        P         07 29 17.1 +0.2
KAPI  Kappang           82.84 252  LR       LR        08 01 17.6
      comp=Z,277nm,21.2s,baz=348,slow=32
KAPI  Kappang           82.84 252  P        P         07 29 18.7 +0.7
KAPI                               pmax     pmax
      comp=Z,172nm,1.6s
KAPI                               MLR      MLR
      comp=Z,400nm,22.0s
KAPI  Kappang           82.84 252  P        P         07 29 18.7 +0.7
MDVR  Moldovita         82.85 353 ⇓P        P         07 29 18.1 +0.2
BKSI  Bulukumba         82.87 252  P        P         07 29 17.3 -0.9
      comp=Z,1µmcomp=Z,106nm,1.1s
HRA   Herat             82.88 320  P        P         07 29 18.3  0.0
BNI   Bardonecchia      82.91   3  P        P         07 29 19.4 +1.1
BNI                                pmax     pmax
      comp=Z,78nm,1.0s
BNI                                MLR      MLR
      comp=Z,1µm,21.0s
BNI   Bardonecchia      82.91   3  P        P         07 29 19.4 +1.1
BNI                                IAmb     IAmb      07 29 30.4
      comp=Z,78nm,1.0s
BNI                                IAMs_20  IAMs_20   08 10 29.0
      comp=Z,964nm,21.0s
MTN   Manton Dam        82.93 239  P        P         07 29 17.9 -0.5
MTN                                IAmb     IAmb      07 29 37.6
      comp=Z,29nm,0.8s
MTN                                IAMs_20  IAMs_20   08 04 25.6
      comp=Z,780nm,20.0s
ORIF  Oris-en-Rattie    83.02   4  P        P         07 29 20.1 +1.4
ORIF                               pmax     pmax
      comp=Z,54nm,0.7s
OBIP  Obispado Ponce    83.05  70  P        P         07 29 16.9 -2.2
GCPR  Guaynabo City     83.14  69  P        P         07 29 19.1 -0.5
BLY   Banja Luka        83.17 356⇑iP        P         07 29 19.3 -0.1
TEKS  Tekeris           83.24 354⇑iP        P         07 29 19.6 -0.2
BSSI  Bau Bau, Buton    83.32 251  P        P         07 29 19.1 -1.4
      comp=Z,461nmcomp=Z,39nm,1.1s
KSM   Kuching           83.34 264  P        P         07 29 21.1 +0.4
GNI   Garni             83.43 335  P        P         07 29 22.3 +1.3
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      comp=Z,15nm,0.8s,baz=220,slow=4.4,SNR=10
GNI   Garni              83.43 335c iP      P         07 29 22.2 +1.2
GNI                                 pmax    pmax
      comp=Z,44nm,1.2s
GNI   Garni              83.43 335  P       P         07 29 22.8 +1.7
GNI   Garni              83.43 335  IAMs_20 IAMs_20   08 10 10.3
      comp=Z,1µm,21.0s
GNI   Garni              83.43 335  P       P         07 29 22.2 +1.2
GNI                                 P       P         07 29 22.2 +1.2
MTP   Monte Pirata       83.61  69  P       P         07 29 21.7 -0.3
MTP                                 IAmb    IAmb      07 29 41.0
      comp=Z,67nm,0.9s
DIVS  Divibare           83.66 354⇑iP       P         07 29 21.9 -0.1
DIVS  Divibare           83.66 354  P       P         07 29 21.6 -0.4
DIVS                                IAmb    IAmb      07 29 24.7
      comp=Z,33nm,1.1s
DIVS                                IAMs_20 IAMs_20   08 09 12.9
      comp=Z,1µm,21.0s
ZCCA  Zocca              83.70   0  P       P         07 29 24.4 +2.3
ZCCA                                IAMs_20 IAMs_20   08 13 47.8
      comp=Z,1µm,18.0s
HAPS  Han Pijesak,BI     83.74 354 eP       P         07 29 23.7 +1.2
ISO   Isola              83.79   3  P       P         07 29 24.2 +1.5
ISO                                 pmax    pmax
      comp=Z,113nm,2.0s
KTUT  Trabzon            83.84 339 ⇓P       P         07 29 23.9 +1.0
BBLS  Lazi&#263;i        83.93 354⇑iP       P         07 29 23.8 +0.4
PLVB  Pleven             83.97 350 ⇓P       P         07 29 25.3 +1.8
BOVS  Bovan              83.99 352 ⇓P       P         07 29 24.1 +0.5
SOEI  Soe                84.09 246  P       P         07 29 22.4 -2.2
      comp=Z,55nm,1.3s
DIKM  Dikmen             84.12 342 ⇓P       P         07 29 27.0 +2.7
MTLF  Montolieu          84.38   7  P       P         07 29 27.2 +1.6
MTLF                                pmax    pmax
      comp=Z,98nm,1.0s
KVT   Kavak              84.52 341  P       P         07 29 28.6 +2.2
OSSC  Osservatorio P     84.52   0  P       P         07 29 25.9 -0.4
OSSC                                IAMs_20 IAMs_20   08 14 48.6
      comp=Z,698nm,20.0s
UPM   Unac-Piva          84.62 354 eP       P         07 29 27.2 +0.1
EDFI  Ende, Flores       84.73 249  P       P         07 29 24.6 -3.2
      comp=Z,511nmcomp=Z,18nm,1.0s
MURB  Monte Urbino       84.78 359  P       P         07 29 28.2 +0.5
MURB                                IAMs_20 IAMs_20   08 06 37.4
      comp=Z,791nm,22.0s
BATI  Baumata            84.80 246  LR      LR        08 03 26.5
      comp=Z,216nm,21.6s,baz=40,slow=33
VTS   Vitosha            84.87 351 ⇓P       P         07 29 28.7 +0.4
VTS   Vitosha            84.87 351  P       P         07 29 28.7 +0.4
VTS                                 pmax    pmax
      comp=Z,24nm,1.0s
BRY   Bratogost          84.94 355 eP       P         07 29 27.4 -1.2
PBRG  Braganca           84.94  13 eP       P         07 29 29.5 +1.0
      comp=Z,76nm,2.0s
EIDS  Eidsvold           84.99 216  IAMs_20 IAMs_20   08 08 18.3
      comp=Z,991nm,20.0s
STON  Ston               85.02 355⇑iP       P         07 29 27.0 -1.8
TREB  Trebinje           85.14 355 eP       P         07 29 27.5 -1.9
POLO  Lamas de Olo       85.21  14 eP       P         07 29 32.4 +2.5
PLD   Plovdiv            85.23 350 eP       P         07 29 28.9 -1.0
PLD   Plovdiv            85.23 350  P       P         07 29 30.2 +0.3
PLD                                 pmax    pmax
      comp=Z,4.0nm,1.4s
EDRB  Edirne             85.25 349 eP       P         07 29 29.1 -0.9
CASP  Castiglione de     85.26   0  P       P         07 29 30.3 +0.3
CASP                                IAMs_20 IAMs_20   08 13 32.0
      comp=Z,986nm,20.0s
SABA  Saba               85.31  67  IAMs_20 IAMs_20   08 12 01.2
      comp=Z,2µm,20.0s
BHPL  Bhopal             85.35 302 eP       P         07 29 28.4 -2.4
BHPL                               eP       PcP       07 29 29.9 -4.0
BHPL                                IAmb    IAmb      07 29 35.7
      comp=Z,64nm,1.1s
PDG   Podgorica          85.37 354 ⇓P       P         07 29 31.6 +1.0
PDG   Podgorica          85.37 354⇑iP       P         07 29 30.0 -0.6
PDG   Podgorica          85.37 354  P       P         07 29 30.2 -0.4
PDG                                 IAMs_20 IAMs_20   08 13 14.1
      comp=Z,1µm,20.0s
HCY   Herceg Novi        85.40 355 eP       P         07 29 29.9 -0.8
LATE  Laterza            85.43 360  P       P         07 29 31.2 +0.2
LATE                                IAmb    IAmb      07 29 38.4
      comp=Z,56nm,1.0s
MVO   Moncorvo           85.53  14 eLR      LR        08 01 00.5
      comp=Z,1µm,18.0s
KLYT  Kilyos             85.53 347 eP       P         07 29 30.9 -0.5
SILT  Sile               85.55 346 eP       P         07 29 31.0 -0.5
GEVA  Gevas              85.59 335  P       P         07 29 32.6 +0.5
CTKS  Kestanelik-??a     85.62 347 eP       P         07 29 32.9 +1.1
BGKT  Bogazkoy           85.64 347 eP       P         07 29 31.7 -0.2
ISK   Istanbul-Kandi     85.72 347 eP       P         07 29 30.1 -2.2
PVIS  Viseu              85.84  15 eP       P         07 29 35.0 +2.0
HRT   Hereke             85.87 346 eP       P         07 29 32.6 -0.6
STIP  Stip               85.88 352 i P      P         07 29 33.1  0.0
SMLC  San Martn de       85.91  81 eP       P         07 29 34.0 +0.4
YUVA  Yuva-Kibriscik     85.97 345 eP       P         07 29 34.3 +0.5
MDUB  Mudurnu            85.97 345 eP       P         07 29 33.9 +0.1
MDUB  Mudurnu            85.97 345  P       P         07 29 33.5 -0.3
INTR  Introdacqua        86.01 358  P       P         07 29 34.8 +0.9
INTR                                IAmb    IAmb      07 29 38.2
      comp=Z,76nm,1.0s
RDO   Rodhopi            86.09 349 eP       P         07 29 34.9 +0.8
YLV   Yalova             86.16 346 eP       P         07 29 35.5 +0.9
MTE   Manteigas          86.20  14  IAMs_20 IAMs_20   08 09 56.8
      comp=Z,1µm,21.0s
MTE   Manteigas          86.20  14 eLR      LR        08 01 34.1
      comp=Z,1µm,18.0s
NGP   Nagpur             86.21 300 eP       P         07 29 34.8 -0.3
NGP                                eS       S         07 40 03.8 -5.3
SGRT  San Giovanni R     86.21 357  P       P         07 29 34.4 -0.5
SGRT                                IAmb    IAmb      07 29 37.5
      comp=Z,54nm,0.9s
SGRT                                IAMs_20 IAMs_20   08 13 25.4
      comp=Z,1µm,20.0s
VAY   Valandovo          86.22 352 i P      P         07 29 35.9 +1.1
ARMT  Armutlu            86.23 347 eP       P         07 29 33.6 -1.3
ADVT  Abdulvahap         86.24 346 eP       P         07 29 35.9 +1.0
COI   Coimbra            86.25  15  IAMs_20 IAMs_20   08 11 19.2
      comp=Z,1µm,18.0s
GZKV  Gazikoy-Tekird     86.26 348 eP       P         07 29 34.9 -0.1
KULM  Kulim              86.27 274  P       P         07 29 35.6 +0.2
ALN   Alexandroupoli     86.27 349 eP       P         07 29 33.8 -1.3
ALN   Alexandroupoli     86.27 349  P       P         07 29 33.2 -1.9
ALN                                 MLR     MLR
      comp=Z,800nm,22.0s
ALN   Alexandroupoli     86.27 349  P       P         07 29 33.2 -1.9
ALN                                 IAMs_20 IAMs_20   08 07 53.2
      comp=Z,828nm,22.0s
WSI   Waingapu           86.28 249  P       P         07 29 33.2 -2.1
      comp=Z,64µmcomp=Z,620nm,0.5s
BR131 Keskin Array S     86.29 343c iP      P         07 29 35.6 +0.2
BR131 Keskin Array S     86.29 343  P       P         07 29 35.7 +0.3
BR131                               IAmb    IAmb      07 29 37.9
      comp=Z,84nm,1.2s
BRTR  Keskin Array B     86.29 343  P       P         07 29 35.7 +0.3
      comp=Z,18nm,0.8s,baz=34,slow=1.2,SNR=36
BRTR  Keskin Array B     86.29 343  P       P         07 29 36.2 +0.8
BRTR  Keskin Array B     86.29 343  P       P         07 29 36.2 +0.8
ANTO  Ankara             86.30 344  P       P         07 29 36.0 +0.6
GEMT  Gemlik             86.31 346 eP       P         07 29 35.2 -0.1
KNT   Kendrikon          86.34 351 eP       P         07 29 36.2 +0.7
MRMT  Marmara Adasi      86.37 348 eP       P         07 29 35.4 -0.3
PCAS  Casmilo, Conde     86.39  15 eP       P         07 29 36.0 +0.3
      comp=Z,121nm,2.0s
TIR   Tirane             86.41 354 ⇓P       P         07 29 37.5 +1.8
TIR   Tirane             86.41 354  P       P         07 29 37.5 +1.8
MDNY  Mudanya-Bursa      86.42 347 eP       P         07 29 35.9 +0.1
ERIK  Erikli-Kesan       86.44 348 eP       P         07 29 34.0 -1.9
CAVI  Cavuskoy           86.45 346 eP       P         07 29 36.4 +0.4
ZARC  Zaragoza, Cauc     86.46  82 eP       P         07 29 34.2 -2.2
SRCK  Saricakaya, Es     86.48 345 eP       P         07 29 35.7 -0.5
OHR   Ohrid              86.57 353 i P      P         07 29 37.3 +0.6
EDC   Edincik            86.59 347 eP       P         07 29 35.9 -0.8
GRG   Griva              86.59 352 eP       P         07 29 38.2 +1.5
KCTX  Karacabey (Bur     86.60 347 eP       P         07 29 37.6 +0.9
BORA  Eskisehir          86.67 345 eP       P         07 29 37.9 +0.7
IPM   Ipoh               86.67 273  P       P         07 29 37.4 -0.1
IPM                                 IAmb    IAmb      07 29 55.8
      comp=Z,59nm,1.0s
IPM                                 IAMs_20 IAMs_20   08 10 02.6
      comp=Z,877nm,21.0s
MALT  Malatya            86.69 339  P       P         07 29 39.3 +2.0
AUBOZ BOZOYUK            86.70 346 eP       P         07 29 35.1 -2.2
PCBR  Castelo Branco     86.76  14 eP       P         07 29 39.1 +1.6
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      comp=Z,35nm,1.8s
OCAC  Ocana              86.81  81 eP       P         07 29 37.5 -0.8
FNA   Florina            86.85 352  P       P         07 29 39.0 +1.0
FNA   Florina            86.85 352  P       P         07 29 39.0 +1.0
SVRH  Sivrihisar-ESK     86.92 344 eP       P         07 29 37.1 -1.3
AUSIV SIVRIHISAR         86.93 344 eP       P         07 29 36.1 -2.4
PAOL  Paolisi            86.97 358  P       P         07 29 39.3 +0.7
PAOL                                IAmb    IAmb      07 29 41.1
      comp=Z,84nm,1.3s
CBOC  Ciudad Bolivar     87.03  84 eP       P         07 29 38.8 -0.6
MYKOM Kota Tinggi        87.05 269  IAMs_20 IAMs_20   08 08 21.5
      comp=Z,717nm,21.0s
PLAI  Plampang           87.06 252  P       P         07 29 36.8 -2.4
      comp=Z,47nm,1.6s
OUR   Ouranopolis        87.06 350 eP       P         07 29 37.6 -1.3
CIFT  Cifteler, Eski     87.08 345 eP       P         07 29 38.3 -0.9
MARD  Mardin             87.10 337  P       P         07 29 40.5 +1.1
WB0   Warramunga Arr     87.14 232  P       P         07 29 38.5 -1.0
WB0                                 IAMs_20 IAMs_20   08 04 56.9
      comp=Z,826nm,22.0s
WB9   Warramunga Arr     87.17 232  IAMs_20 IAMs_20   08 04 45.6
      comp=Z,847nm,22.0s
PMRV  Marv??o            87.17  14 eP       P         07 29 43.0 +3.4
PMRV  Marv??o            87.17  14 eLR      LR        08 01 49.8
      comp=Z,892nm,18.0s
WB8   Warramunga Arr     87.19 232  IAMs_20 IAMs_20   08 04 48.1
      comp=Z,884nm,22.0s
WB6   Warramunga Arr     87.23 232  IAMs_20 IAMs_20   08 04 37.2
      comp=Z,759nm,21.0s
WR0   Warramunga Arr     87.23 232  P       P         07 29 38.2 -1.7
TVSB  Tavsanli           87.24 346 eP       P         07 29 32.1 -7.9
WB5   Warramunga Arr     87.25 232  IAMs_20 IAMs_20   08 04 30.8
      comp=Z,2µm,19.0s
WRAB  Tennant Creek      87.30 232ceP       P         07 29 39.4 -0.8
WRAB                                pmax    pmax
      comp=Z,39nm,2.5s
WRAB  Tennant Creek      87.30 232  IAMs_20 IAMs_20   08 04 50.1
      comp=Z,738nm,22.0s
WB2   Warramunga Arr     87.31 232  P       P         07 29 39.3 -1.0
WB2                                 IAMs_20 IAMs_20   08 05 01.4
      comp=Z,795nm,22.0s
WRA   Warramunga Arr     87.31 232  P       P         07 29 39.0 -1.3
      comp=Z,7.0nm,0.8s,baz=37,slow=5.7,SNR=40
WRA                                 LR      LR        08 04 41.9
      comp=Z,445nm,21.7s,baz=30,slow=33
WRA   Warramunga Arr     87.31 232 i P      P         07 29 39.0 -1.3
WRA                                 pmax    pmax
      comp=Z,7.0nm,0.8s
WRA   Warramunga Arr     87.31 232  P       P         07 29 38.7 -1.6
WC4   Warramunga Arr     87.33 232  IAMs_20 IAMs_20   08 05 18.0
      comp=Z,804nm,19.0s
ESBB  Sonseca Array      87.41  12  P       P         07 29 41.1 +0.4
ESBB                                IAmb    IAmb      07 29 43.4
      comp=Z,21nm,0.8s
ES06  SONSECA Array      87.41  12  IAMs_20 IAMs_20   08 11 14.8
      comp=Z,2µm,20.0s
ESDC  Sonseca Array      87.41  12  P       P         07 29 41.1 +0.4
      comp=Z,18nm,0.7s,baz=346,slow=3.8,SNR=61
ESDC                                LR      LR        08 11 39.8
      comp=Z,1µm,18.8s,baz=355,slow=38
ESDC  Sonseca Array      87.41  12  P       P         07 29 42.5 +1.7
ESDC                                IAmb    IAmb      07 29 43.6
      comp=Z,33nm,0.8s
ES12  SONSECA Array      87.45  12  IAMs_20 IAMs_20   08 11 30.8
      comp=Z,2µm,19.0s
PTBC  PUERTO BERRIO,     87.45  83 eP       P         07 29 38.6 -2.6
BRRC  Barranca, Sant     87.46  82 eP       P         07 29 39.0 -2.2
PAB   San Pablo          87.49  12  P       P         07 29 42.8 +1.6
PAB                                 pmax    pmax
      comp=Z,21nm,1.2s
PAB   San Pablo          87.49  12  P       P         07 29 42.8 +1.6
PAB   San Pablo          87.49  12  IAMs_20 IAMs_20   08 15 31.9
      comp=Z,1µm,19.0s
PLMC  San Jos del P      87.62  85 eP       P         07 29 41.9 -0.2
MALC  Bahia Malaga       87.67  86 eP       P         07 29 55.2  +13
PAMC  Pamplona, Colo     87.89  81 eP       P         07 29 42.8 -1.1
SDV   Santo Domingo      87.92  78  P       P         07 29 44.5 +0.8
SDV                                 IAmb    IAmb      07 30 05.3
      comp=Z,19nm,0.9s
SDV   Santo Domingo      87.92  78  IAMs_20 IAMs_20   08 11 44.4
      comp=Z,950nm,20.0s
SDV   Santo Domingo      87.92  78 eP       P         07 29 44.2 +0.5
SDV   Santo Domingo      87.92  78 eP       P         07 29 44.5 +0.8
GUY2C Guyana, Caldas     87.93  84 eP       P         07 29 42.2 -1.9
SHUT  Suhut-Afyon        87.95 345 eP       P         07 29 45.5 +2.0
EVO   Evora              87.95  15 eP       P         07 29 45.1 +1.8
      comp=Z,37nm,2.3s
NORC  Norcasia           87.97  84 eP       P         07 29 42.4 -1.4
GAZ   Gaziantep          88.05 340  P       P         07 29 45.0 +1.1
GAZ                                 IAmb    IAmb      07 30 01.4
      comp=Z,43nm,1.2s
GAZ                                 IAMs_20 IAMs_20   08 17 07.5
      comp=Z,910nm,19.0s
BARC  Barichara          88.18  82 eP       P         07 29 44.2 -0.8
RREF  El Recreo          88.19  84 eP       P         07 29 57.0  +11
PNCL  Nicolau / Gran     88.28  16 eP       P         07 29 46.2 +1.4
      comp=Z,60nm,1.8s
YOTC  Yotoco, Valle      88.30  86 eP       P         07 29 44.0 -1.4
MANT  Manisa             88.31 347  P       P         07 29 46.0 +0.7
SPBC  San Pablo de B     88.38  83 eP       P         07 29 44.0 -1.7
PBAR  Barrancos          88.46  14 eP       P         07 29 46.7 +1.0
      comp=Z,48nm,1.2s
TOLC  Tolima             88.46  85 eP       P         07 29 45.4 -1.0
ANIL  Santa Ana          88.48  85 eP       P         07 29 47.2 +0.8
AGG   Agios Georgios     88.52 351  P       P         07 29 45.5 -0.5
AGG   Agios Georgios     88.52 351  P       P         07 29 45.5 -0.5
VSL   Villasalto         88.53   2  IAMs_20 IAMs_20   08 16 37.7
      comp=Z,828nm,18.0s
OUZ   Omahuta            88.55 194  IAMs_20 IAMs_20   08 15 19.7
      comp=Z,1µm,19.0s
MESJ  Messejana          88.60  15 eP       P         07 29 46.7 +0.4
ISP   Isparta            88.67 345 eP       P         07 29 45.7 -1.1
ISP   Isparta            88.67 345  IAMs_20 IAMs_20   08 17 18.3
      comp=Z,1µm,18.0s
TIP   Timpagrande        88.74 356  P       P         07 29 47.7 +0.6
TIP                                 IAMs_20 IAMs_20   08 16 30.4
      comp=Z,1µm,20.0s
RUSC  La Rusia           88.79  82 eP       P         07 29 48.1 -0.1
PCVE  Castro Verde       88.83  15 eP       P         07 29 49.5 +2.0
ROSC  El Rosal           88.87  84  P       P         07 29 47.7 -0.7
      comp=Z,4.2nm,0.5s,baz=135,slow=11,SNR=3.6
ROSC  El Rosal           88.87  84  IAMs_20 IAMs_20   08 15 07.5
      comp=Z,618nm,20.0s
AYDB  Zeytinkoy-Aydi     88.94 347 eP       P         07 29 44.3 -3.8
ORTC  Ortega, Tolima     89.03  85 eP       P         07 29 47.0 -1.8
MORF  Marmelete          89.05  16 eP       P         07 29 48.9 +0.3
PVAQ  Vaqueiros          89.11  15 eP       P         07 29 52.3 +3.6
      comp=Z,60nm,1.6s
PVAQ  Vaqueiros          89.11  15 eLR      LR        08 04 08.6
      comp=Z,1µm,18.0s
TAMC  Tame, Arauca       89.15  81 eP       P         07 29 50.3 +1.0
PFVI  Vila Bisbo         89.19  16  IAMs_20 IAMs_20   08 12 25.9
      comp=Z,2µm,20.0s
PFVI  Vila Bisbo         89.19  16 eP       P         07 29 51.6 +2.5
PSI   Prapat             89.28 274  P       P         07 29 49.3 -0.7
      comp=Z,44nm,0.9s,baz=360,slow=2.1,SNR=21
BBAC  Balboa, Cauca      89.29  88 eP       P         07 29 45.4 -4.7
CHIC  Chingaza           89.39  83 eP       P         07 29 50.3 -0.6
HYB   Hyderabad          89.54 298 i P      P         07 29 50.0 -1.1
HYB                                esP      pwP       07 30 01.0 +0.5
HYB   Hyderabad          89.54 298 eP       P         07 29 49.2 -1.8
HYB                                 IAmb    IAmb      07 29 53.7
      comp=Z,86nm,1.6s
RGRI  Rengat             89.66 269  P       P         07 29 52.5 +0.9
BKNI  Bangkinang         89.92 270  P       P         07 29 53.2 +0.4
      comp=Z,5µmcomp=Z,198nm,1.2s
OTAV  Otavalo            89.95  90  P       P         07 29 54.4 +0.8
OTAV                                pmax    pmax
      comp=Z,87nm,2.0s
OTAV  Otavalo            89.95  90  P       P         07 29 54.4 +0.8
OTAV                                IAmb    IAmb      07 30 16.2
      comp=Z,87nm,2.0s
OTAV  Otavalo            89.95  90 eP       P         07 29 52.3 -1.2
OTAV  Otavalo            89.95  90 eP       P         07 29 53.4 -0.2
PMBI  Palembang          90.18 265  IAMs_20 IAMs_20   08 12 36.2
      comp=Z,673nm,20.0s
FITZ  Fitzroy Crossi     90.20 240  LR      LR        08 08 05.9
      comp=Z,281nm,20.2s,baz=32,slow=34
GARC  Garzon, Huila      90.23  86 eP       P         07 29 54.9 +0.2
MNSI  Mandailing Nat     90.45 272  P       P         07 29 53.4 -1.9
      comp=Z,17nm,0.8s
GRGR  Grenville          90.62  69  IAMs_20 IAMs_20   08 13 44.0
      comp=Z,1µm,20.0s
SDSI  Sungai Dareh       90.67 269  P       P         07 29 55.5 -0.8
      comp=Z,807nmcomp=Z,28nm,1.0s
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AS31  Alice Springs      90.70 231  P       P         07 29 55.2 -0.9
ASAR  Alice Springs      90.70 231  P       P         07 29 54.3 -1.9
      comp=Z,14nm,0.8s,baz=34,slow=4.6,SNR=87
ASAR                                LR      LR        08 04 42.8
      comp=Z,498nm,21.5s,baz=30,slow=32
ASAR  Alice Springs      90.70 231  P       P         07 29 55.2 -1.0
ASAR  Alice Springs      90.70 231  P       P         07 29 55.2 -1.0
PTGC  Puerto Gaitan,     90.70  82 eP       P         07 29 55.1 -1.4
URZ   Urewera            91.06 191  IAMs_20 IAMs_20   08 08 17.2
      comp=Z,1µm,19.0s
POO   Poona              91.10 303 eP       P         07 29 58.0 -0.4
POO                                 IAmb    IAmb      07 30 05.0
      comp=Z,37nm,1.1s
POO   Poona              91.10 303⇑iP       P         07 29 56.0 -2.4
      comp=Z,60nm,1.0s
PDSI  Padang             91.25 270  P       P         07 29 57.3 -1.7
      comp=Z,4µmcomp=Z,19nm,1.5s
MACC  Macarena, Meta     91.27  85 eP       P         07 29 59.2  0.0
GSI   Gunungsitoli       91.28 274  P       P         07 29 59.9 +0.7
      comp=Z,9µmcomp=Z,37nm,0.9s
LEM   Lembang            91.52 261  LR      LR        08 08 29.1
      comp=Z,346nm,21.4s,baz=44,slow=34
KLSI                     91.59 264  P       P         07 30 00.0 -0.6
      comp=Z,10nm,1.7s
HIZ   Hauiti             91.60 193  IAMs_20 IAMs_20   08 07 28.5
      comp=Z,1µm,19.0s
PMOZ  Porto Moniz, M     91.61  24  A       A         08 15 13.5
      comp=Z,754nm,18.0s
LHSI  Lahat              91.65 266  P       P         07 29 59.2 -1.7
      comp=Z,50nm,1.3s
MDSI  Maura Dua          91.77 265  P       P         07 30 01.6 +0.2
      comp=Z,28nm,1.2s
BKZ   Black Stump Fm     92.03 191  IAMs_20 IAMs_20   08 06 37.8
      comp=Z,866nm,20.0s
KSI   Kapahiang          92.09 267  P       P         07 30 02.1 -0.9
LWLI  Liwa               92.26 265  P       P         07 30 04.3 +0.5
      comp=Z,38nm,0.5s
KEST  Kesra              92.29   2  P       P         07 30 03.1 -0.6
      comp=Z,6.6nm,0.6s,baz=304,slow=2.0,SNR=5.7
MIB   Mutribah           92.35 329 eP                 07 30 02.8
UMR   Umm Al-Rimmam      92.47 329 eP                 07 30 03.1
BANOM Banah              92.73 320  P       P         07 30 05.6 -0.2
RDF   Al-Radifah         93.10 329 eP                 07 30 06.5
MDH   Madha              93.29 320  P       P         07 30 07.8 -0.5
MDH                                 P       P         07 30 07.8 -0.5
UOSS  Minazif            93.65 320  IAMs_20 IAMs_20   08 17 33.4
      comp=Z,1µm,20.0s
HATD  Hatta, Dubai       93.78 320  P       P         07 30 09.5 -1.2
HATD                                P       P         07 30 09.5 -1.2
ASHO  Ashiyiah           93.94 320  P       P         07 30 11.4  0.0
ASHO                                P       P         07 30 11.4  0.0
WSAR  Wadi Sarin         94.19 317  P       P         07 30 11.8 -0.7
      comp=Z,18nm,1.0s,baz=58,slow=2.7,SNR=11
SOHO  SOHO               94.24 319  P       P         07 30 12.5 -0.2
SOHO                                P       P         07 30 12.5 -0.2
ASUD  Al Ashush, Dub     94.28 321  P       P         07 30 12.9  0.0
ASUD                                P       P         07 30 12.9  0.0
STKA  Stephens Creek     94.44 221  P       P         07 30 13.3  0.0
      baz=309,slow=8.2,SNR=4.4
NNZ   Nelson             94.46 193  IAMs_20 IAMs_20   08 12 40.2
      comp=Z,1µm,20.0s
SMDO  Samad              94.59 318  P       P         07 30 14.6 +0.1
SMDO                                P       P         07 30 14.6 +0.1
WBK   Wadi Bani Khal     94.60 317  P       P         07 30 15.3 +0.8
WBK                                 P       P         07 30 15.3 +0.8
ALNE  Al Ain             94.62 320  P       P         07 30 15.8 +1.3
      SNR=6.5
ALNE                                P       P         07 30 15.8 +1.3
      SNR=6.5
ARQ   Araqi              94.96 319  P       P         07 30 16.7 +0.6
      SNR=12
ARQ                                 P       P         07 30 16.7 +0.6
      SNR=12
JMDO  Jabal Madar        95.18 317  P       P         07 30 17.5 +0.4
JMDO                                P       P         07 30 17.5 +0.4
BSY   Bisya              95.22 318  P       P         07 30 17.2 -0.1
      SNR=7.1
BSY                                 P       P         07 30 17.2 -0.1
      SNR=7.1
EIL   Elat               95.77 339  P       P         07 30 19.6  0.0
      comp=Z,6.2nm,0.7s,baz=315,slow=0.9,SNR=6.8
PSAA3 Pilbara Seismi     96.15 243  IAMs_20 IAMs_20   08 10 31.1
      comp=Z,854nm,20.0s
PSAA1 Pilbara Seismi     96.16 243  IAMs_20 IAMs_20   08 09 25.4
      comp=Z,845nm,19.0s
MHTO  MHTO               96.46 317  P       P         07 30 23.1 +0.2
      SNR=10
MHTO                                P       P         07 30 23.1 +0.2
      SNR=10
PALK  Pallekele          96.61 291  IAMs_20 IAMs_20   08 17 24.9
      comp=Z,976nm,20.0s
RPZ   Rata Peaks         97.26 195  LR      LR        08 08 26.8
      comp=Z,525nm,20.7s,baz=6.5,slow=32
TOO   Toolangi           98.03 215  IAMs_20 IAMs_20   08 18 22.5
      comp=Z,745nm,20.0s
RAYN  Ar Rayn            98.78 329  P       P         07 30 32.9 -0.5
RAYN                                pmax    pmax
      comp=Z,22nm,0.9s
RAYN  Ar Rayn            98.78 329          P         07 30 32.9 -0.5
RAYN                                IAmb    IAmb      07 30 46.8
      comp=Z,22nm,0.9s
PTGA  Pitinga           101.94  75  IAMs_20 IAMs_20   08 18 35.0
      comp=Z,818nm,20.0s
TAM   Tamanrasset       105.03   6  IAMs_20 IAMs_20   08 25 39.5
      comp=Z,702nm,18.0s
SOCY  Socotra           106.00 316  IAMs_20 IAMs_20   08 24 39.9
      comp=Z,1µm,21.0s
SAML  Samuel            106.50  83  IAMs_20 IAMs_20   08 21 40.8
      comp=Z,689nm,20.0s
TOC7  Torodi Ar. Sit    114.25  10  IAMs_20 IAMs_20   08 26 50.6
      comp=Z,748nm,20.0s
TOB1  Torodi Ar. Sit    114.25  10  IAMs_20 IAMs_20   08 35 05.7
      comp=Z,870nm,18.0s
TOB5  Torodi Ar. Sit    114.25  10  IAMs_20 IAMs_20   08 26 50.9
      comp=Z,758nm,20.0s
TOC2  Torodi Ar. Sit    114.26  10  IAMs_20 IAMs_20   08 26 41.9
      comp=Z,769nm,20.0s
TOA0  Torodi Ar. Sit    114.26  10  IAMs_20 IAMs_20   08 26 52.1
      comp=Z,737nm,20.0s
TOA2  Torodi Ar. Sit    114.26  10  IAMs_20 IAMs_20   08 35 06.1
      comp=Z,910nm,18.0s
TORD  Torodi Ar. Bea    114.26  10  PKP     PKiKP     07 35 32.5 -0.7
      comp=Z,2.0nm,0.8s,baz=347,slow=3.4,SNR=7.0
TOA3  Torodi Ar. Sit    114.27  10  IAMs_20 IAMs_20   08 27 01.2
      comp=Z,713nm,20.0s
TOB4  Torodi Ar. Sit    114.27  10  IAMs_20 IAMs_20   08 27 00.3
      comp=Z,742nm,20.0s
TOB3  Torodi Ar. Sit    114.27  10  IAMs_20 IAMs_20   08 26 51.4
      comp=Z,736nm,20.0s
TOC3  Torodi Ar. Sit    114.28  10  IAMs_20 IAMs_20   08 26 41.4
      comp=Z,751nm,20.0s
TOC5  Torodi Ar. Sit    114.28  10  IAMs_20 IAMs_20   08 26 50.5
      comp=Z,909nm,20.0s
TOC4  Torodi Ar. Sit    114.29  10  IAMs_20 IAMs_20   08 26 51.8
      comp=Z,797nm,20.0s
FURI  Furi              114.66 330  IAMs_20 IAMs_20   08 31 59.9
      comp=Z,913nm,19.0s
TIC   Toumodi           119.62  19 ePKIKP   PKiKP     07 35 44.4 +0.7
VA03  San Esteban       119.89 106  IAMs_20 IAMs_20   08 33 39.2
      comp=Z,674nm,20.0s
KIC   Kosan Boka        119.95  19 ePKIKP   PKiKP     07 35 44.6 +0.3
      comp=Z,38nm,1.4s
LIC   Lamto             120.03  19 ePKIKP   PKiKP     07 35 44.8 +0.3
      comp=Z,31nm,1.1s
BDFB  Brasilia          120.87  75  IAMs_20 IAMs_20   08 30 58.7
      comp=Z,861nm,21.0s
CPUP  Villa Florida     123.28  91  PKP     PKPdf     07 35 49.1 -1.0
      comp=Z,1.5nm,0.8s,baz=213,slow=5.5,SNR=3.2
KMBO  Kilima Mbogo      124.56 328  PKP     PKPdf     07 35 52.8 -0.6
      comp=Z,8.4nm,0.9s,baz=8.5,slow=3.9,SNR=16
PLCA  Paso Flores       125.39 113  PKP     PKPdf     07 35 52.4 -1.5
      comp=Z,4.5nm,0.9s,baz=158,slow=1.1,SNR=10
PLCA  Paso Flores       125.39 113  PKIKP   PKiKP     07 35 54.3 +0.1
PLCA  Paso Flores       125.39 113          PKiKP     07 35 54.3 +0.1
SPB   Sao Paulo         127.32  80  IAMs_20 IAMs_20   08 31 56.6
      comp=Z,856nm,21.0s
LSZ   Lusaka            140.67 334  PKIKP   PKiKP     07 36 25.6 -0.4
LSZ   Lusaka            140.67 334  PKPdf   PKiKP     07 36 25.6 -0.4
BLWY  Bulawayo          145.17 331 i P      PKPdf     07 36 32.0 +0.8
BLWY  Bulawayo          145.17 331 i P      PKPdf     07 36 32.0 +0.8
MATP  Matopo            145.47 331 i P      PKPab     07 36 32.3 +0.3
MATP  Matopo            145.47 331 i P      PKPab     07 36 32.3 +0.3
TSUM  Tsumeb            146.58 349  PKPbc   PKPbc     07 36 35.0 -0.2
      comp=Z,18nm,0.8s,baz=353,slow=5.0,SNR=28
TSUM  Tsumeb            146.58 349          PKPdf     07 36 33.7 +0.1
BELA  Belgrano 2        149.53 163  PKPdf   PKPdf     07 36 38.4 +1.8
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LBTB	Lobatse	150.65	333	PKPbc	PKPbc	07 36 45.5	-0.1
	comp=Z,60nm,0.8s,baz=53,slow=2.0,SNR=11						
LBTB	Lobatse	150.65	333	PKIKP	PKPdf	07 36 39.3	-0.7
LBTB						07 36 47.1	
LBTB	Lobatse	150.65	333	PKPdf	PKPdf	07 36 39.3	-0.7
LBTB				PKPbc	sPKPdf	07 36 47.1	-0.2
LBTB	Lobatse	150.65	333	*i* P	PKiKP	07 36 46.3	0.0
LBTB	Lobatse	150.65	333	*i* P	PKiKP	07 36 46.3	0.0
MAW	Mawson	151.11	218	PKPbc	PKiKP	07 36 45.5	-0.1
	comp=Z,44nm,1.1s,baz=200,slow=1.6,SNR=4.0						
BOSA	Boshof	154.14	331	PKP	PKPdf	07 36 44.4	-0.8
	comp=Z,5.7nm,1.0s,baz=79,slow=6.1,SNR=5.9						
BOSA				PKPbc	PKiKP	07 36 53.7	+0.3
	comp=Z,10nm,0.8s,baz=42,slow=1.7,SNR=11						
BOSA				PKPab	PKPab	07 37 07.8	+0.8
	comp=Z,9.5nm,0.8s,baz=332,slow=1.6,SNR=8.1						
SYO	Syowa Base	158.63	208	⇑*e*pPKPdf	pPKPdf	07 36 53.2	-1.7
SYO	Syowa Base	158.63	208	⇑*e*PKPab	PKPab	07 37 25.8	+0.8
SYO	Syowa Base	158.63	208	⇑*e*pPKPab	pPKPab	07 37 30.9	+0.6
SYO	Syowa Base	158.63	208	⇓*e*X	PKPab	07 37 37.4	+12
VNA3	Neumayer Olymp	158.82	161	PKPab	PKPab	07 37 22.6	-3.2
VNA3	Neumayer Olymp	158.82	161	PKPdf	PKPdf	07 36 48.1	-1.6
VNA2	Neumayer--Watz	159.51	162	PKPab	PKPab	07 37 25.4	-3.4
VNA2	Neumayer--Watz	159.51	162	PKPdf	PKPdf	07 36 49.3	-1.3
VNA1	Neumayer--Stat	159.57	161	PKPdf	PKPdf	07 36 48.0	-2.6
SNAA	Sanae	159.59	167	PKPab	PKPab	07 37 27.4	-1.9
SNAA	Sanae	159.59	167	PKP2	PKPab	07 37 27.5	-1.8
SNAA	Sanae	159.59	167		PKPab	07 37 27.5	-1.8
NVL	N'lazarevskaya	161.50	181	*e*PKP2	PKPab	07 37 21.4	-16

IDC ***03*** *07:27:20.3±0.5, 52.29°N×168.71°W, h0^{km}, mb5.1/39, mb1 5.1/40, mb1mx5.1/54, mbtmp5.1/40, ML3.9/1, MS4.7/5, Ms1 4.7/5, ms1mx4.2/51 Error ellipse: s-maj=15.1km s-min=9.5km az=170.0*

NEIC ***03*** *07:27:22.2±2.5, 52.27°N±0.05°×168.61°W±0.05°, h10^{km}±1^{km}, mb5.3/432, ML4.7/51(AEIC), Error ellipse: s-maj=9.3km s-min=5.4km az=168.0*

MOS ***03*** *07:27:23.1±0.9, 52.34°N×168.76°W, h29^{km}, mb5.5/157, Error ellipse: s-maj=7.0km s-min=5.8km az=60.8*

AEIC ***03*** *07:27:24±2.6, 52.27°N±0.06°×168.55°W±0.06°, h21^{km}±4^{km}, Error ellipse: s-maj=8.4km s-min=4.8km az=167.0*

BJI ***03*** *07:27:24.1±0.0, 52.45°N×168.95°W, h31^{km}, mB5.5/44, mb5.4/69, Ms5.5/41, Ms7 5.3/38*

GCMT ***03*** *07:27:26.7±0.2, 52.14°N±0.01°×168.61°W±0.02°, h20^{km}, MW5.4/137, Moment Tensor Solution. s49,c57; s137,c244; Duration: 1^{s}2 Moment tensor: Scale 10^{17} Nm; M_{rr}1.09±.05; $M_{\theta\theta}$-1.03±.03; $M_{\phi\phi}$-0.06±.02; $M_{r\theta}$0.79±.05; $M_{\theta\phi}$-0.24±.01; $M_{\phi r}$0.19±.04; Best double couple: $M_0$1.35700×10^{17} NP1:ϕ_s257.00000°, δ27.00000°, λ91.00000°. NP2:ϕ_s77.00000°, δ63.00000°, λ90.00000°. Principal axes: T 1.3600, Plg72.0000°, Azm346.0000°; N -0.0070, Plg0.0000°, Azm77.0000°; P -1.3550, Plg18.0000°, Azm167.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

BGR ***03*** *07:27:33.0±0.0, 53.26°N×168.62°W, h33^{km}, mb5.4, Ms5.0*

ISC 03 07:27:25.3±0.6, **52.30°N**±0.05°×**168.66°W**±0.03°, **h32**^{km}±3^{km}, **h32**^{km}**:pP-P, n1380,** σ1^{s}**13**/1403, **mb5.3**/409, **MS5.1**/18, **24C-48D, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIKH	Nikolski High	0.68	350		Sn	07 27 49.5	+1.3
NIKH	Nikolski High	0.68	350		Pn	07 27 39.0	+0.3
OKSP	Okmok Steeple	0.98	13		Pn	07 27 42.4	-0.5
OKSO	Okmok South	1.10	16		Pn	07 27 43.5	-0.9
OKSO					Sb	07 28 00.5	+0.7
OKWR	Okmok West Rim	1.17	13		Pn	07 27 45.3	-0.2
OKFG	Magazine Ridge	1.20	22		Pn	07 27 44.9	-0.9
OKFG					Sb	07 28 02.1	-0.4
MAPS	Pakushin South	1.83	34		Pn	07 27 54.3	-0.2
MGOD	Makushin Gods	1.84	35		Pn	07 27 54.3	-0.4
MGOD					Sn	07 28 18.1	+1.2
MREP	Makushin Rep't	1.90	37		Pn	07 27 55.5	-0.1
MSW	Makushin Switc	1.97	34		Pn	07 27 56.8	+0.4
MNAT	Makushin Natee	1.98	36		Pn	07 27 56.7	+0.1
UNV	Unalaska Valle	2.02	39		Pn	07 27 56.9	-0.2
UNV					Sn	07 28 23.1	+1.9
AKMO	Akutan Morgan	2.40	41		Pn	07 28 02.8	+0.5
AKRB	Akutan Reef Bi	2.40	39		Pn	07 28 03.5	+1.1
ZRO	Akutan Zero	2.41	41		Pn	07 28 03.2	+0.7
AKBBA	Akutan Broad B	2.43	41		Pn	07 28 03.7	+0.9
AKLV	Akutan Long Va	2.47	40		Pn	07 28 04.2	+0.8
AKGG	Akutan Green G	2.48	39		Pn	07 28 04.6	+1.1
AKUT	Akutan	2.53	42		Pn	07 28 04.8	+0.8
AKSA	Akutan Strait	2.56	43		Pn	07 28 05.0	+0.5
KOFP	Korovin Flat P	3.34	272		Pn	07 28 16.5	+1.2
ATKA	Atka Island	3.40	270		Pn	07 28 16.5	+0.4
FALS	False Pass	4.04	49		Pn	07 28 25.0	+0.2
GSTR	Great Sitkin T	4.56	270		Pn	07 28 33.4	+1.4
GSMY	Great Sitkin M	4.56	270		Pn	07 28 32.8	+0.8
GSTD	Great Sitkin T	4.61	270		Pn	07 28 33.5	+0.7
DT1	Dutton Round H	4.72	51		Pn	07 28 33.8	-0.3
ADAG	Mount Adagdak	4.90	269		Pn	07 28 38.2	+1.5
ADK	Adak	4.97	268	P	Pn	07 28 38.1	+0.5
ADK	Adak	4.97	268		Pn	07 28 38.1	+0.5
SPIA	Saint Paul Isl	4.97	350		Pn	07 28 40.1	+2.5
PS4A	Pavlof South-4	5.05	50		Pn	07 28 39.5	+0.7
KIKV	Kanaga Island	5.26	269		Pn	07 28 42.8	+1.1
KICM	Kanaga Island	5.28	269		Pn	07 28 43.0	+1.2
KIMD	Kanaga Island	5.32	268		Pn	07 28 43.1	+0.6
SDPT	Sand Point	5.73	55		Pn	07 28 48.0	0.0
TAFP	Tanaga Falls P	5.76	270		Pn	07 28 50.3	+1.8
CNBA	Chernabura Isl	5.96	61		Pn	07 28 49.8	-1.4
CERAA	Semis' Rag'd T	7.19	271		Pn	07 29 09.4	+1.3
CEAP	Semis' Anvil P	7.25	272		Pn	07 29 09.4	+0.5
CESW	Semis' Southwe	7.27	271		Pn	07 29 09.6	+0.4
AMKA	Amchitka	7.52	268		Pn	07 29 13.4	+0.8
LSPA	Little Sitkin	7.87	273		Pn	07 29 17.5	+0.1
LSNW	Little Sitkin	7.90	273		Pn	07 29 17.9	0.0
LSSA	Little Sitkin	7.91	272		Pn	07 29 17.8	-0.1
SII	Sitkinak Islan	9.45	57	Pn	Pn	07 29 39.2	+0.2
OHAK	Old Harbor	10.15	55	Pn	Pn	07 29 47.8	-0.8
KDAK	Kodiak Island	10.72	53	Pn	Pn	07 29 55.2	-1.2
	5.2nm,0.3s,baz=188,slow=4.4,SNR=154						
KDAK				Sn	Sn	07 31 52.2	-3.0
	baz=12,slow=22,SNR=1.4						
KDAK	Kodiak Island	10.72	53	P	Pn	07 29 55.9	-0.5
KDAK	Kodiak Island	10.72	53		Pn	07 29 55.9	-0.5
SVW2	Sparrevohn	11.35	34		Pn	07 30 09.0	+4.0
GAMB	Gambell	11.62	353		Pn	07 30 12.0	+3.4
RSO	Redoubt South	11.99	41		Pn	07 30 15.3	+1.3
CNPM	China Poot	12.13	47	Pn	Pn	07 30 15.5	-0.2
BRLK	Bradley Lake	12.40	46	Pn	Pn	07 30 19.6	+0.1
ANM	Nome	12.41	7	P	Pn	07 30 22.3	+2.8
ANM	Nome	12.41	7	Pn	Pn	07 30 22.3	+2.8
TTA	Tatalina	12.59	27	P	Pn	07 30 25.1	+3.0
TTA	Tatalina	12.59	27	Pn	Pn	07 30 25.1	+3.0
CAPN	Captain Cook N	12.81	42	P	Pn	07 30 27.2	+2.2
	baz=236						
SEW	Seward	13.20	46	Pn	Pn	07 30 29.3	-0.9
O22K	Cooper Landing	13.26	44	P	Pn	07 30 30.4	-0.8
	baz=240						
O22K	Cooper Landing	13.26	44		Pn	07 30 31.2	+0.1
SUA	Susitna One	13.37	40	Pn	Pn	07 30 32.9	+0.1
SKT	Skwentna	13.38	37	Pn	Pn	07 30 34.4	+1.6
RC01	Rabbit Creek A	13.57	42	P	Pn	07 30 33.4	-2.0
	baz=238						
PPLA	Purkeypile	13.75	33	Pn	Pn	07 30 41.1	+3.1
PMR	Palmer	14.09	41	P	Pn	07 30 44.1	+1.8
PMR	Palmer	14.09	41	Pn	Pn	07 30 44.1	+1.8
GHO	Glory Hole Cre	14.27	41	Pn	Pn	07 30 43.9	-1.0
KNK	Knik Glacier	14.27	42	Pn	Pn	07 30 43.7	-1.2
SML	Sawmill	14.52	41	P	Pn	07 30 47.6	-0.8
SML	Sawmill	14.52	41	Pn	Pn	07 30 47.6	-0.8
GLI	Glacier Island	14.59	46	Pn	Pn	07 30 47.6	-1.7
KTH	Kantishna Hill	14.62	33	Pn	Pn	07 30 51.6	+1.8
HIN	Hinchinbrook I	14.65	48	Pn	Pn	07 30 47.7	-2.4
TRF	Thorofare Moun	14.77	34	Pn	Pn	07 30 53.2	+1.5
FID	Port Fidalgo	14.81	47		Pn	07 30 50.0	-2.2
SCM	Sheep Creek Mo	14.95	42	P	Pn	07 30 51.2	-2.9
SCM	Sheep Creek Mo	14.95	42	Pn	Pn	07 30 51.2	-2.9
BPAW	Bear Paw Mtn.	14.98	31	Pn	Pn	07 30 53.9	-0.5
EYAK	Cordova Ski Ar	15.05	48	Pn	Pn	07 30 53.0	-2.5
EYAK				IAmb	IAmb	07 31 30.2	
	comp=Z,49nm,0.8s						
RND	Reindeer	15.24	35	P	Pn	07 30 57.7	-0.3
RND				pmax	pmax		
	comp=Z,29nm,0.8s						
RND	Reindeer	15.24	35	Pn	Pn	07 30 57.6	-0.3
KLU	Klutina	15.38	44	Pn	Pn	07 30 57.3	-2.4
KLU				IAmb	IAmb	07 31 02.7	
	comp=Z,89nm,0.6s						
MCK	McKinley	15.41	34	P	Pn	07 31 00.4	+0.2
	baz=231,SNR=12						
KAIM	Kayak Island	15.45	51	P	Pn	07 31 00.8	+0.1
KAIM				IAmb	IAmb	07 31 24.5	
	comp=Z,215nm,1.1s						
M24K	Tolsona, Glenn	15.56	42	P	Pn	07 30 59.6	-2.5
	baz=241,SNR=31						
M24K	Tolsona, Glenn	15.56	42	Pn	Pn	07 31 00.4	-1.6
M24K				IAmb	IAmb	07 31 20.7	
	comp=Z,296nm,1.1s						
IMAR	Indian Mountai	15.64	23	P	P	07 31 05.3	-1.5
HMT	Hamilton	15.66	50		Pn	07 31 03.0	-0.4
HMT				IAmb	IAmb	07 31 32.5	
	comp=Z,150nm,1.1s						
MLY	Manley	15.71	29	P	Pn	07 31 04.7	+0.6
	baz=224,SNR=239						
SUCK	Suckling Hills	15.80	51	Pn	Pn	07 31 06.0	+0.8
SUCK				IAmb	IAmb	07 31 38.5	
	comp=Z,213nm,1.1s						
NEA2	Nenana	15.93	32	P	Pn	07 31 07.1	+0.3
	baz=229,SNR=24						
N25K	Chitina, Valde	16.00	45	P	Pn	07 31 04.4	-3.4
	baz=245,SNR=26						
N25K	Chitina, Valde	16.00	45	Pn	Pn	07 31 05.9	-1.9
WRH	Wood River Hil	16.17	33	Pn	Pn	07 31 08.7	-1.2
I23K	Minto, Yukon-K	16.21	30	P	Pn	07 31 10.2	-0.1
	baz=227,SNR=60						
I23K	Minto, Yukon-K	16.21	30		Pn	07 31 10.8	+0.4
I23K				IAmb	IAmb	07 31 28.4	
	comp=Z,200nm,1.1s						
PAX	Paxson	16.27	40	P	Pn	07 31 10.3	-0.9
PAX				pmax	pmax		
	comp=Z,34nm,0.8s						
PAX	Paxson	16.27	40	P	Pn	07 31 10.2	-0.9
GLB	Gilahina Butte	16.28	46	Pn	Pn	07 31 09.2	-2.1
VRDI	Verde Repeater	16.35	47	Pn	Pn	07 31 10.2	-2.2
CCB	Clear Creek Bu	16.38	33	Pn	Pn	07 31 10.9	-1.6
MDM	Murphy Dome	16.44	32	Pn	Pn	07 31 12.7	-0.6
TGL	Tana Glacier	16.47	49	Pn	Pn	07 31 12.4	-1.4
TGL				IAmb	IAmb	07 31 42.5	
	comp=Z,177nm,0.8s						
TCOL	CIGO, UAF Yank	16.50	32	P	Pn	07 31 12.8	-1.3
	baz=230,SNR=18						
TCOL	CIGO, UAF Yank	16.50	32		Pn	07 31 12.5	-1.6
TCOL				IAmb	IAmb	07 31 28.6	
	comp=Z,129nm,0.9s						
COLA	College	16.51	32	P	Pn	07 31 12.9	-1.2
COLA				pmax	pmax		
	comp=Z,129nm,1.0s						
COLA	College	16.51	32	P	Pn	07 31 12.9	-1.2
COLA				IAmb	IAmb	07 31 28.6	
	comp=Z,130nm,0.9s						
HDA	Harding Lake	16.52	34	P	Pn	07 31 11.9	-2.4
	baz=233,SNR=16						
HDA	Harding Lake	16.52	34	P	Pn	07 31 13.0	-1.3
MCARA	McCarthy VSAT	16.60	47	P	Pn	07 31 14.6	-0.8
MCARA				IAmb	IAmb	07 31 35.0	
	comp=Z,114nm,0.8s						
ISLE	Juniper Island	16.65	50		Pn	07 31 15.1	-1.0
ISLE				IAmb	IAmb	07 31 36.7	
	comp=Z,415nm,1.2s						
IL31		16.76	33	P	Pn	07 31 15.8	-1.5
ILAR	Eielson Array	16.76	33	Pn	Pn	07 31 14.5	-2.9
	comp=Z,0.4nm,0.3s,baz=232,slow=10,SNR=63						
ILAR				ScP	ScP	07 39 38.0	+1.8
	comp=Z,0.0nm,0.3s,baz=254,slow=4.0,SNR=6.8						
ILAR	Eielson Array	16.76	33	P	Pn	07 31 15.8	-1.6
ILAR	Eielson Array	16.76	33	P	Pn	07 31 15.8	-1.6
BALM	Baldy	16.79	48	P	Pn	07 31 17.6	-0.2
BALM				pmax	pmax		
	comp=Z,79nm,0.8s						
BALM	Baldy	16.79	48	P	Pn	07 31 17.6	-0.2
POKR	Poker Plat Res	16.80	32	P	Pn	07 31 15.8	-2.0
	baz=230,SNR=21						
POKR	Poker Plat Res	16.80	32	P	Pn	07 31 16.9	-1.0
YAH	Yahtse	16.86	51	P	Pn	07 31 18.6	-0.2
YAH				IAmb	IAmb	07 31 42.3	
	comp=Z,293nm,0.8s						
RIDG	Independent Ri	16.91	38	Pn	Pn	07 31 18.8	-0.4
RIDG				IAmb	IAmb	07 31 35.8	
	comp=Z,230nm,1.7s						
BARN	Barnard Glacie	17.11	49		Pn	07 31 20.9	-1.1
CTGM	Chitina Glacie	17.23	49	P	Pn	07 31 22.8	-0.6
CTGM				IAmb	IAmb	07 31 30.2	
	comp=Z,114nm,0.8s						
SCRK	Sand Creek	17.36	38	P	Pn	07 31 23.1	-1.8
	baz=239,SNR=26						
COLD	Coldfoot	17.49	24	P	P	07 31 27.2	-0.2
	baz=220,SNR=48						
COLD	Coldfoot	17.49	24	P	P	07 31 27.5	+0.1
PCA	Pinnacle	17.51	52	P	P	07 31 28.6	+0.9
PCA				IAmb	IAmb	07 31 47.1	
	comp=Z,105nm,0.7s						
PRP	Porcupine Dome	17.68	33	Pn	Pn	07 31 26.1	-2.8
BCAR	Beaver Creek A	17.80	42	P	Pn	07 31 27.3	-3.1
FYU	Fort Yukon	18.43	30	P	P	07 31 36.0	-1.6
TOLK	Toolik Lake Re	18.74	22	P	Pn	07 31 41.5	-0.2
	baz=219,SNR=22						
TOLK	Toolik Lake Re	18.74	22		Pn	07 31 42.6	+0.9
TOLK	Toolik Lake Re	18.74	22	P	Pn	07 31 41.8	+0.1
TOLK				IAmb	IAmb	07 32 03.7	
	comp=Z,49nm,1.0s						
EGAK	Eagle	18.82	38	P	P	07 31 40.9	-1.1
HYT	Haines Junctio	19.00	51		P	07 31 43.6	-0.6
HYT				IAmb	IAmb	07 32 05.8	
	comp=Z,160nm,0.8s						
SIT	Sitka	19.72	63	P	Pn	07 31 53.4	-0.1
SIT				pmax	pmax		
	comp=Z,79nm,1.0s						
SIT	Sitka	19.72	63	P	Pn	07 31 53.4	-0.1
PET	Petropavlovsk	19.75	285	*e*P	P	07 31 52.0	-0.2
PET				pmax	pmax		
	comp=Z,100nm,1.1s						
PET				MLR	MLR		
	comp=Z,4µm,18.0s						
PET	Petropavlovsk	19.75	285	P	P	07 31 51.8	-0.4
PET				IAmb	IAmb	07 31 54.1	
	comp=Z,135nm,1.1s						
A21K	Barrow	19.84	11	P	P	07 31 52.7	-0.3
	baz=202						
SKAG	Skagway	19.85	56	P	Pn	07 31 55.8	+0.8
BESE	Bessie Mountai	20.02	58	P	Pn	07 31 57.2	+0.2
BESE				IAmb	IAmb	07 32 09.3	
	comp=Z,131nm,1.1s						
WHY	Whitehorse	20.24	52	P	Pn	07 31 60.0	+0.3
WHY				IAmb	IAmb	07 32 33.1	
	comp=Z,163nm,1.1s						
JIS	Juneau Island	20.25	59	P	Pn	07 32 00.0	+0.4
PEA0B	Petropavlovsk-	20.30	286	P	P	07 31 58.2	0.0
PEA0B				pmax	pmax		
	comp=Z,109nm,0.8s						
PEA0B	Petropavlovsk-	20.30	286	P	P	07 31 58.2	0.0
PEA0B				IAmb	IAmb	07 32 13.9	
	comp=Z,109nm,0.8s						
PETK	Petropavlovsk-	20.30	286	P	P	07 31 58.3	+0.1
	comp=Z,84nm,0.5s,baz=88,slow=14,SNR=167						
PETK	Petropavlovsk-	20.30	286	P	P	07 31 57.9	-0.3
PETK	Petropavlovsk-	20.30	286	P	P	07 31 57.9	-0.3
CRAG	Craig	21.04	67	P	P	07 32 08.8	+2.7
CRAG				IAmb	IAmb	07 32 35.3	
	comp=Z,144nm,1.4s						
DIB	Dawson Inlet,	21.78	73	P	P	07 32 17.5	+3.5
DIB				IAmb	IAmb	07 32 39.3	
	comp=Z,159nm,1.4s						
DLBC	Dease Lake	22.55	59	P	P	07 32 23.0	+0.6
	comp=Z,14nm,0.7s,baz=275,slow=11,SNR=19						
DLBC	Dease Lake	22.55	59	P	P	07 32 22.8	+0.4
DLBC				IAmb	IAmb	07 32 40.8	
	comp=Z,192nm,1.8s						
SEY	Seymchan	23.03	313	P	P	07 32 27.1	-0.3
	comp=Z,40nm,0.8s,baz=107,slow=7.2,SNR=69						
SEY				PcP	PcP	07 36 15.7	+0.1
	comp=Z,7.6nm,0.8s,baz=166,slow=8.1,SNR=4.2						
SEY	Seymchan	23.03	313	*i* P	P	07 32 26.7	-0.6
INK	Inuvik	23.16	33	P	P	07 32 26.8	-1.7
	comp=Z,28nm,0.5s,baz=229,slow=11,SNR=62						
INK	Inuvik	23.16	33	P	P	07 32 27.1	-1.5
INK				pmax	pmax		
	comp=Z,45nm,0.9s						
INK	Inuvik	23.16	33	P	P	07 32 27.1	-1.5
INK				IAmb	IAmb	07 32 54.1	
	comp=Z,46nm,0.8s						
MA2	Magadan	23.54	304	P	P	07 32 31.6	-0.8
	comp=Z,22nm,0.7s,baz=88,slow=9.7,SNR=24						
MA2	Magadan	23.54	304	⇑*e*P	P	07 32 31.5	-0.9
MA2				pmax	pmax		
	comp=Z,85nm,2.5s						
MA2	Magadan	23.54	304	P	P	07 32 31.3	-1.1
C36M	Paulatuk	26.74	34	P	P	07 33 01.2	-0.3
	baz=253,SNR=28						
C36M	Paulatuk	26.74	34	P	P	07 33 00.7	-0.7
C36M				IAmb	IAmb	07 33 06.3	
	comp=Z,34nm,0.8s						
D03D	Eldon	29.34	81	P	P	07 33 23.1	-1.8
	baz=297						
E03A	Lebam	29.51	83	P	P	07 33 24.7	-1.6
E03A				IAmb	IAmb	07 33 32.5	
	comp=Z,59nm,1.0s						
B05A	Bryant	29.62	79	P	P	07 33 26.8	-0.5
	baz=296						
TYV	Tymovskoe	29.84	287	*e*P	P	07 33 29.1	-0.1
TYV				pmax	pmax		
	comp=Z,16nm,0.9s						
YKA	Yellowknife Ar	29.96	49	P	P	07 33 31.3	+1.1
	comp=Z,9.2nm,0.6s,baz=275,slow=7.2,SNR=57						
YKA				PcP	PcP	07 36 32.3	+0.5
	comp=Z,2.4nm,0.8s,baz=292,slow=1.5,SNR=5.1						
YKA				ScP	ScP	07 40 13.6	+2.3
	comp=Z,3.0nm,1.1s,baz=278,slow=2.5,SNR=8.0						
E04D	Cinebar	30.11	82	P	P	07 33 32.1	+0.4
	baz=298						
D05A	Enumclaw	30.16	81	P	P	07 33 34.2	+2.0
D05A				IAmb	IAmb	07 34 00.3	
	comp=Z,63nm,1.1s						
G03D	McMinnville, O	30.34	85	P	P	07 33 34.4	+0.7
	baz=300						
LON	Longmire	30.48	82	P	P	07 33 36.7	+1.7
LON				pmax	pmax		
	comp=Z,65nm,1.7s						
LON	Longmire	30.48	82	P	P	07 33 36.7	+1.7
LON				IAmb	IAmb	07 34 00.3	
	comp=Z,65nm,1.7s						
LTY	Liberty	30.93	80	P	P	07 33 39.5	+0.4
J01E	Myrtle Point	31.00	89	P	P	07 33 40.3	+0.8
	baz=303						
H04D	Lebanon	31.01	86	P	P	07 33 39.7	0.0
	baz=301						
I03D	Drain, OR	31.07	88	P	P	07 33 39.6	-0.6
	baz=302						
F05D	White Salmon	31.11	83	P	P	07 33 40.7	+0.2
	baz=299						
B08A	Colville Reser	31.24	77	P	P	07 33 42.3	+0.6
B08A				IAmb	IAmb	07 33 46.4	
	comp=Z,40nm,1.4s						
H04A	Detroit Lake	31.26	85	P	P	07 33 43.7	+1.8
H04A				IAmb	IAmb	07 34 07.2	
	comp=Z,31nm,1.0s						
K02D	Willamette Mer	31.42	90	P	P	07 33 43.3	-0.1
	baz=304						
YSS	Yuzh-Sakhalins	31.43	280	*e*P	P	07 33 43.2	-0.1
YSS				*e*S	S	07 38 46.9	-1.9
YSS				pmax	pmax		
	comp=Z,30nm,0.6s						
G05D	Wamic, OR	31.51	84	P	P	07 33 44.2	0.0
	baz=300						
I04A	Tendick Farm,	31.59	87	P	P	07 33 45.5	+0.6
	baz=302,SNR=7.2						
E07A	Sunnyside	31.75	81	P	P	07 33 48.1	+1.8
E07A				IAmb	IAmb	07 34 12.2	
	comp=Z,28nm,1.3s						
L02E	Cave Junction	31.76	90	P	P	07 33 46.9	+0.6
	baz=304						
HUMO	Hull Mountain	31.90	89	P	P	07 33 48.7	+1.1
I05D	Terrebonne, OR	31.96	85	P	P	07 33 47.8	-0.3
	baz=302						
HAWA	Hanford	32.03	81	P	P	07 33 49.2	+0.6
HAWA				IAmb	IAmb	07 33 53.6	
	comp=Z,22nm,0.8s						
F07A	Phinny Hill Vi	32.03	82	P	P	07 33 48.9	+0.3
J04D	Umpqua Nationa	32.07	88	P	P	07 33 49.8	+0.5
	baz=303						
D08A	Wollman Farm,	32.08	79	P	P	07 33 50.3	+1.2
D08A				IAmb	IAmb	07 34 14.6	
	comp=Z,42nm,1.3s						
C09A	Chrisman Ranch	32.13	78	P	P	07 33 50.8	+1.4
C09A				IAmb	IAmb	07 34 15.7	
	comp=Z,57nm,1.6s						
KHMM	Horse Mountain	32.42	93	P	P	07 33 52.6	+0.3
KHMM				IAmb	IAmb	07 34 10.6	
	comp=Z,50nm,1.1s						
PINE	Pine Mountain	32.49	86	P	P	07 33 53.5	+0.5
PINE				IAmb	IAmb	07 34 18.8	
	comp=Z,32nm,1.2s						
L04D	Klamath Falls	32.52	89	P	P	07 33 53.6	+0.5
	baz=304						
YBH	Yreka Blue Hor	32.55	90	P	P	07 33 53.7	+0.4
YBH				pmax	pmax		
	comp=Z,15nm,0.9s						
YBH	Yreka Blue Hor	32.55	90	P	P	07 33 53.7	+0.4
J05D	Fort Rock, OR	32.59	87	P	P	07 33 54.3	+0.6
	baz=303,SNR=7.5						
NEW	Newport	32.60	76	P	P	07 33 54.4	+0.7
	baz=297,SNR=15						
NEW	Newport	32.60	76	P	P	07 33 54.6	+0.9
NEW				pmax	pmax		
	comp=Z,15nm,0.7s						
NEW	Newport	32.60	76	P	P	07 33 54.5	+0.9
NEW				IAmb	IAmb	07 33 57.5	
	comp=Z,15nm,0.7s						
K04D	Chiloquin, OR	32.63	88	P	P	07 33 54.8	+0.7
	baz=304						
M02C	Callahan	32.65	91	P	P	07 33 55.7	+1.5
	baz=306						
E09A	Wood Farm, Sta	32.81	80	P	P	07 33 56.3	+0.9
E09A				IAmb	IAmb	07 34 00.6	
	comp=Z,52nm,1.4s						
KMRM	Mail Ridge	32.82	93	P	P	07 33 56.1	+0.5
KMRM				IAmb	IAmb	07 34 13.5	
	comp=Z,40nm,1.1s						
G08A	Pilot Rock	32.92	82	P	P	07 33 54.8	-1.8
G08A				IAmb	IAmb	07 34 22.0	
	comp=Z,38nm,1.6s						
JKA	Kamikawa-asahi	32.95	275	P	P	07 33 56.2	-0.4
ASAJ	Asahikawa	32.95	275	P	P	07 33 56.0	-0.7
	comp=Z,43nm,0.9s,baz=20,slow=5.8,SNR=15						
ASAJ	Asahikawa	32.95	275	P	P	07 33 56.2	-0.5
ASAJ				pmax	pmax		
	comp=Z,71nm,1.0s						
N02D	Trinity Center	32.99	92	P	P	07 33 58.3	+1.2
	baz=306,SNR=6.2						
TIXI	Tiksi	33.02	329	⇑*e*P	P	07 33 56.6	-0.4
TIXI	Tiksi	33.02	329	P	P	07 33 55.9	-1.1
TIXI				IAmb	IAmb	07 33 58.5	
	comp=Z,28nm,0.9s						
M04C	Macdoel	33.05	90	P	P	07 33 59.1	+1.3
	baz=305,SNR=5.5						
K05A	Summer Lake	33.10	87	P	P	07 33 58.1	-0.2
K05A				IAmb	IAmb	07 34 18.4	
	comp=Z,43nm,1.0s						
KCPM	Cahto Peak	33.22	94	P	P	07 33 60.0	+0.7
KCPM				IAmb	IAmb	07 34 23.8	
	comp=Z,49nm,1.0s						
I07A	Izee	33.22	84	P	P	07 33 59.9	+0.7
I07A				IAmb	IAmb	07 34 24.4	
	comp=Z,30nm,1.2s						
WDC	Whiskeytown Da	33.32	92	P	P	07 34 01.3	+1.3
WDC				pmax	pmax		
	comp=Z,30nm,1.2s						
WDC	Whiskeytown Da	33.32	92	P	P	07 34 01.3	+1.3
WDC				IAmb	IAmb	07 34 20.8	
	comp=Z,30nm,1.2s						
O02D	Mt. Diablo Mer	33.41	93	P	P	07 34 02.9	+2.1
	baz=307,SNR=13						
GRNR	Gornyy	33.51	290	⇑*i*P	P	07 34 00.9	-0.6
GRNR				*e*S	S	07 39 20.3	-0.7
GRNR				pmax	pmax		
	comp=E,7.0nm,1.0s						
GRNR				pmax	pmax		
	comp=Z,20nm,0.9s						
GRNR				smax	smax		
	comp=E,3.0nm,0.9s						
YAK	Yakutsk	33.54	311	P	P	07 34 00.3	-1.3
	comp=E,30nm,0.6s,baz=288,slow=1.1,SNR=18						
YAK	Yakutsk	33.54	311	*e*P	P	07 33 59.8	-1.8
YAK				*e**PP	pP	07 34 07.8	-2.2

YAK				e		07 36 40.5	
YAK				eS	S	07 39 18.9	-2.4
YAK				eSS	SS	07 41 43.8	-2.5
YAK				pmax	pmax		
	comp=Z,62nm,0.9s						
YAK				pmax	pmax		
	comp=E,21nm,1.1s						
YAK				pmax	pmax		
	comp=N,21nm,1.1s						
YAK				smax	smax		
	comp=N,606nm,9.8s						
YAK				smax	smax		
	comp=E,857nm,9.8s						
YAK				MLR	MLR		
	comp=Z,3µm,16.0s						
YAK				MLR	MLR		
	comp=N,3µm,19.0s						
YAK				MLR	MLR		
	comp=E,2µm,15.0s						
YAK	Yakutsk	33.54	311	P	P	07 33 59.4	-2.2
F10A	Beach Ranch, E	33.63	80	P	P	07 34 03.5	+0.8
ERM	Erimo	33.76	272	i P	P	07 34 03.5	-0.2
ERM				pmax	pmax		
	comp=Z,59nm,1.0s						
MOD	Modoc Plateau	33.93	88	P	P	07 34 07.0	+1.6
O03E	Paynes Creek	33.94	92	P	P	07 34 06.6	+1.1
	baz=307,SNR=13						
HOPS	Hopland Field	33.95	95	P	P	07 34 07.2	+1.7
HOPS				IAmb	IAmb	07 34 10.9	
	comp=Z,50nm,1.4s						
WALA	Waterton Lakes	34.15	73	P	P	07 34 07.1	-0.1
WALA				IAmb	IAmb	07 34 35.2	
	comp=Z,89nm,1.9s						
BMO	Blue Mountains	34.15	82	P	P	07 34 07.9	+0.6
BMO				pmax	pmax		
	comp=Z,37nm,1.5s						
BMO	Blue Mountains	34.15	82	P	P	07 34 07.9	+0.6
BMO				IAmb	IAmb	07 34 32.0	
	comp=Z,37nm,1.5s						
GDXM	Geysers	34.24	95	P	P	07 34 07.8	-0.3
GDXM				IAmb	IAmb	07 34 32.8	
	comp=Z,34nm,1.1s						
JTMT	Jette	34.53	75	P	P	07 34 10.4	-0.2
JTMT				IAmb	IAmb	07 34 14.8	
	comp=Z,57nm,1.6s						
ORV	Oroville	34.57	93	P	P	07 34 11.7	+0.8
ORV				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ORV	Oroville	34.57	93	P	P	07 34 11.7	+0.8
WVOR	Wild Horse Val	34.65	86	P	P	07 34 11.8	+0.2
WVOR				pmax	pmax		
	comp=Z,26nm,1.1s						
WVOR	Wild Horse Val	34.65	86	P	P	07 34 11.8	+0.2
WVOR				IAmb	IAmb	07 34 46.4	
	comp=Z,26nm,1.1s						
BEKR	Beckworth	35.08	91	P	P	07 34 16.6	+1.1
BEKR				IAmb	IAmb	07 34 52.9	
	comp=Z,41nm,1.7s						
MSO	Missoula	35.18	77	P	P	07 34 15.9	-0.3
	baz=300						
MSO	Missoula	35.18	77	P	P	07 34 16.2	0.0
MSO				IAmb	IAmb	07 34 41.9	
	comp=Z,46nm,1.4s						
AFDM	Forest Hills D	35.27	93	P	P	07 34 17.8	+0.9
PAHR	Pah Rah Range	35.78	91	P	P	07 34 21.9	+0.5
PAHR				IAmb	IAmb	07 34 42.4	
	comp=Z,31nm,1.0s						
MFID	Camas Ranch	35.82	83	P	P	07 34 22.2	+0.5
MFID				IAmb	IAmb	07 34 47.0	
	comp=Z,35nm,1.5s						
VCNR	Virginia City	35.87	91	P	P	07 34 22.9	+0.7
PNTR	Pine Nut	36.02	92	P	P	07 34 25.2	+1.6
PNTR				IAmb	IAmb	07 35 01.2	
	comp=Z,34nm,0.9s						
CMB	Columbia Colle	36.20	94	P	P	07 34 25.8	+0.9
CMB				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CMB	Columbia Colle	36.20	94	P	P	07 34 25.8	+0.9
RES	Resolute Bay	36.24	26	P	P	07 34 25.2	+0.4
RES				pmax	pmax		
	comp=Z,6.0nm,0.8s						
RES	Resolute Bay	36.24	26	P	P	07 34 25.2	+0.4
WAKR	Walker	36.48	92	P	P	07 34 29.1	+1.6
HRY	Holter Researc	36.50	76	P	P	07 34 27.7	+0.2
HLID	Hailey	36.60	82	P	P	07 34 29.0	+0.6
	baz=304,SNR=14						
HLID	Hailey	36.60	82	P	P	07 34 29.1	+0.6
DLMT	Dillon	36.73	78	P	P	07 34 30.2	+0.7
DLMT				IAmb	IAmb	07 35 05.0	
	comp=Z,89nm,2.0s						
BCYI	Bear Canyon	36.80	80	P	P	07 34 30.1	-0.1
MCMT	McKenzie Canyo	36.86	79	P	P	07 34 31.7	+0.9
KLR	Kul'dur	36.89	290	P	P	07 34 29.4	-1.2
	comp=Z,21nm,0.8s,baz=39,slow=8.7,SNR=46						
KLR	Kul'dur	36.89	290	⇑eP	P	07 34 29.2	-1.4
KLR				pmax	pmax		
	comp=Z,28nm,0.9s						
RYN	Ryan	36.97	91	P	P	07 34 33.3	+1.7
EGMT	Eagleton	37.07	72	P	P	07 34 32.2	-0.1
	baz=299,SNR=15						
EGMT	Eagleton	37.07	72	P	P	07 34 32.3	0.0
EGMT				IAmb	IAmb	07 34 52.0	
	comp=Z,51nm,0.9s						
BOZ	Bozeman (W)	37.19	77	P	P	07 34 33.6	+0.2
	baz=302,SNR=16						
BOZ	Bozeman (W)	37.19	77	P	P	07 34 33.3	-0.1
BOZ				pmax	pmax		
	comp=Z,27nm,1.3s						
BOZ	Bozeman (W)	37.19	77	P	P	07 34 33.2	-0.1
LHV	Little Huntoon	37.22	92	P	P	07 34 35.6	+2.2
NVAR	Mina Array Bea	37.23	91	P	P	07 34 34.1	+0.3
	comp=Z,2.6nm,0.8s,baz=297,slow=7.9,SNR=15						
NVAR				ScP	ScP	07 40 38.7	+1.2
	comp=Z,0.5nm,0.8s,baz=273,slow=2.5,SNR=3.5						
NVAR	Mina Array Bea	37.23	91	P	P	07 34 35.1	+1.3
MDPB	Devils Postpil	37.25	93	P	P	07 34 35.2	+1.0
OMMB	Old Mammoth Mi	37.31	93	P	P	07 34 35.1	+0.4
NV11	Mina Array Sit	37.32	91	P	P	07 34 35.9	+1.3
MLAC	Mammoth, Mammo	37.40	93	P	P	07 34 35.0	-0.4
	baz=310						
ZEA	Zeya	37.41	298	eP	P	07 34 34.2	-0.8
ZEA				pmax	pmax		
	comp=E,20nm,0.5s						
ZEA				pmax	pmax		
	comp=Z,30nm,0.8s						
EUNU	Eureka	37.66	16	P	P	07 34 36.7	-0.2
H11N2	WAKE ISLAND Hy	37.68	220	T	T	08 15 57.5	
	baz=24,slow=76,SNR=81						
H11N3	WAKE ISLAND Hy	37.68	220	T	T	08 15 39.2	
	baz=24,slow=76,SNR=82						
H11N1	WAKE ISLAND Hy	37.70	220	T	T	08 15 49.1	
	baz=24,slow=76,SNR=97						
ELK	Elko	37.70	86	P	P	07 34 38.2	+0.3
ELK				pmax	pmax		
	comp=Z,20nm,1.3s						
ELK	Elko	37.70	86	P	P	07 34 38.2	+0.3
QLMT	Earthquake Lak	37.72	78	P	P	07 34 37.7	-0.2
PAGB	Antelope Grade	37.77	96	P	P	07 34 40.1	+1.9
PAGB				IAmb	IAmb	07 34 57.8	
	comp=Z,42nm,1.3s						
YHL	Hebgen Lake	37.85	78	P	P	07 34 39.2	0.0
YHL				IAmb	IAmb	07 35 05.6	
	comp=Z,30nm,1.1s						
YHB	Horse Butte	37.90	78	P	P	07 34 40.0	+0.5
YMR	Madison River	38.08	78	P	P	07 34 41.4	+0.3
YMR				IAmb	IAmb	07 35 06.9	
	comp=Z,50nm,1.3s						
YHH	Holmes Hill	38.09	78	P	P	07 34 41.1	0.0
YHH				IAmb	IAmb	07 34 45.2	
	comp=Z,31nm,0.9s						
TPH	Tonopah	38.11	91	P	P	07 34 42.1	+0.8
TPH				pmax	pmax		
	comp=Z,75nm,1.1s						
TPH	Tonopah	38.11	91	P	P	07 34 42.1	+0.8
TPH				IAmb	IAmb	07 35 02.6	
	comp=Z,75nm,1.1s						
SMMC	Simmler	38.20	97	P	P	07 34 43.0	+1.2
	baz=312						
YNR	Norris Junctio	38.23	78	P	P	07 34 43.8	+1.5
YNR				IAmb	IAmb	07 35 06.2	
	comp=Z,47nm,1.1s						
FFC	Flin Flon	38.38	59	P	P	07 34 43.7	+0.6
FFC				pmax	pmax		
	comp=Z,31nm,1.3s						
FFC	Flin Flon	38.38	59	P	P	07 34 43.7	+0.6
VES	Vestal, Richgr	38.41	95	P	P	07 34 44.8	+1.2
	baz=311						
H17A	Grant Village	38.46	78	P	P	07 34 45.7	+1.4
	baz=303,SNR=12						
H17A	Grant Village	38.46	78	P	P	07 34 44.9	+0.6
YNE	Yellowstone No	38.47	77	P	P	07 34 44.3	0.0
LKWY	Lake	38.48	78	P	P	07 34 46.4	+2.0
LKWY				pmax	pmax		
	comp=Z,33nm,0.9s						
LKWY	Lake	38.48	78	P	P	07 34 46.4	+2.0
LKWY				IAmb	IAmb	07 34 49.7	
	comp=Z,33nm,0.9s						
FLWY	Flagg Ranch	38.56	79	P	P	07 34 45.6	+0.5
PKM	Mcpherson Peak	38.59	97	P	P	07 34 46.9	+1.5
	baz=312						
HVU	Hansel Valley	38.60	83	P	P	07 34 46.2	+0.8
HVU				pmax	pmax		
	comp=Z,21nm,0.8s						
HVU	Hansel Valley	38.60	83	P	P	07 34 46.2	+0.8
CWC	Cottonwood Cre	38.63	94	P	P	07 34 47.2	+1.5
	baz=311						
GRAC	Grapevine Rang	38.71	92	P	P	07 34 47.6	+1.4
	baz=310						
MOOW	Moose Ponds	38.72	79	P	P	07 34 47.2	+0.8
ECR	Eagle Creek	38.73	80	P	P	07 34 48.2	+1.7
RLMT	Red Lodge	38.85	76	P	P	07 34 48.0	+0.5
	baz=303,SNR=21						
RLMT	Red Lodge	38.85	76	P	P	07 34 47.4	-0.1
H11S1	WAKE ISLAND Hy	38.86	219	T	T	08 17 11.3	
	SNR=171						
REDW	Red Top Meadow	38.87	80	P	P	07 34 48.9	+1.3
SNOW	Snow King Moun	38.87	79	P	P	07 34 49.2	+1.5
H11S2	WAKE ISLAND Hy	38.88	219	T	T	08 16 37.1	
	baz=185,slow=74,SNR=169						
H11S3	WAKE ISLAND Hy	38.88	219	T	T	08 17 03.2	
	baz=24,slow=74,SNR=130						
LOHW	Long Hollow	38.88	79	P	P	07 34 48.5	+0.8
ISA	Isabella, Lake	38.90	95	P	P	07 34 48.2	+0.4
	baz=312,SNR=6.2						
ISA	Isabella, Lake	38.90	95	P	P	07 34 49.4	+1.6
ISA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
ISA	Isabella, Lake	38.90	95	P	P	07 34 49.4	+1.6
R11A	Troy Canyon, C	38.95	89	P	P	07 34 48.0	-0.3
	baz=309						
R11A	Troy Canyon, C	38.95	89	P	P	07 34 49.4	+1.1
BGU	Big Grassy Mou	38.95	84	P	P	07 34 49.6	+1.4
AHID	Auburn Hatcher	39.06	81	P	P	07 34 49.8	+0.6
SPUT	South Promonto	39.08	83	P	P	07 34 50.1	+0.7
JSD	Sado	39.14	270	P	P	07 34 49.0	-0.8
JSD				IAmb	IAmb	07 34 52.4	
	comp=Z,93nm,0.9s						
MPMC	Manual Prospec	39.24	94	P	P	07 34 51.9	+1.1
	baz=311						
SPR3	Spring Creek 3	39.31	88	P	P	07 34 53.5	+2.0
USA0B	Ussuriysk Arra	39.33	283	P	P	07 34 50.0	-1.2
USA0B				pmax	pmax		
	comp=Z,14nm,1.0s						
USA0B	Ussuriysk Arra	39.33	283	P	P	07 34 50.0	-1.2
USRK	Ussuriysk Ar.	39.33	283	P	P	07 34 49.8	-1.4
	comp=Z,7.1nm,0.6s,baz=49,slow=7.1,SNR=12						
USRK				PcP	PcP	07 36 59.6	+0.4
	comp=Z,8.6nm,0.9s,baz=66,slow=2.2,SNR=5.8						
USRK	Ussuriysk Ar.	39.33	283	P	P	07 34 49.0	-2.2
USRK	Ussuriysk Ar.	39.33	283	P	P	07 34 49.0	-2.2
FURC	Furnace Creek,	39.36	93	P	P	07 34 52.4	+0.9
	baz=311,SNR=10						
TPNV	Topopah Spring	39.42	92	P	P	07 34 53.4	+1.1
	baz=310,SNR=14						
TPNV	Topopah Spring	39.42	92	P	P	07 34 53.3	+1.0
TPNV				pmax	pmax		
	comp=Z,16nm,0.9s						
TPNV	Topopah Spring	39.42	92	P	P	07 34 53.3	+1.0
LRMC	Laurel Mtn Rad	39.50	95	P	P	07 34 52.8	-0.2
	baz=312						
DUG	Dugway, Tooele	39.52	85	P	P	07 34 53.8	+0.8
	baz=307,SNR=8.1						
DUG	Dugway, Tooele	39.52	85	P	P	07 34 54.2	+1.2
DUG				pmax	pmax		
	comp=Z,40nm,1.3s						
DUG	Dugway, Tooele	39.52	85	P	P	07 34 54.1	+1.2
EDW2	Edwards Air Fo	39.71	96	P	P	07 34 54.7	+0.2
	baz=312						
LAO	LASA Array	39.82	72	P	P	07 34 55.5	+0.2
	baz=302						
LAO	LASA Array	39.82	72	P	P	07 34 57.0	+1.7
TCUT	Toone Canyon	39.82	83	P	P	07 34 57.1	+1.4
CTU	Camp Tracy	39.87	84	P	P	07 34 56.5	+0.6
PRN	Pahroc Range	39.87	90	P	P	07 34 58.8	+2.8
PRN				IAmb	IAmb	07 35 17.4	
	comp=Z,35nm,1.0s						
PSUT	Pine Spring	39.89	88	P	P	07 34 58.3	+2.1
BW06	Boulder Array	39.99	80	P	P	07 34 57.2	+0.1
	baz=305,SNR=37						
BW06	Boulder Array	39.99	80	P	P	07 34 56.7	-0.3
PD31	Pinedale Array	39.99	80	P	P	07 34 57.5	+0.5
PDAR	Pinedale Array	39.99	80	P	P	07 34 57.4	+0.3
	comp=Z,28nm,0.8s,baz=304,slow=4.1,SNR=101						
PDAR	Pinedale Array	39.99	80	P	P	07 34 57.8	+0.8
DGMT	Dagmar	40.07	69	P	P	07 34 57.5	+0.2
	baz=301,SNR=6.9						
DGMT	Dagmar	40.07	69	P	P	07 34 57.1	-0.2
DGMT				IAmb	IAmb	07 35 12.3	
	comp=Z,73nm,1.5s						
SHOC	Shoshone, Teco	40.09	93	P	P	07 34 58.8	+1.2
	baz=311						
JLU	Jordanelle	40.10	84	P	P	07 34 58.8	+0.7
JLU				IAmb	IAmb	07 35 22.4	
	comp=Z,92nm,1.8s						
NLU	North Lily Min	40.11	85	P	P	07 34 59.1	+1.1
MAJO	Matsushiro	40.13	268	P	P	07 34 56.7	-1.3
MAJO				pmax	pmax		
	comp=Z,64nm,1.0s						
MAJO	Matsushiro	40.13	268	P	P	07 34 56.7	-1.3
MAJO				IAmb	IAmb	07 35 01.2	
	comp=Z,64nm,1.0s						
MAT	Matsushiro	40.13	268	P	P	07 34 57.6	-0.4
MJAR	Matsushiro Arr	40.13	268	P	P	07 34 57.4	-0.6
	comp=Z,11nm,0.8s,baz=54,slow=7.4,SNR=25						
MJAR				PcP	PcP	07 37 02.7	+0.8
	comp=Z,4.8nm,0.9s,baz=88,slow=4.0,SNR=4.2						
MJAR	Matsushiro Arr	40.13	268	P	P	07 34 57.3	-0.6
MJAR				pmax	pmax		
	comp=Z,17nm,1.0s						
MJAR	Matsushiro Arr	40.13	268	P	P	07 34 57.3	-0.6
GSC	Goldstone, Bar	40.16	94	P	P	07 34 59.4	+1.1
	baz=312,SNR=12						
GSC	Goldstone, Bar	40.16	94	P	P	07 34 59.1	+0.8
GSC				pmax	pmax		
	comp=Z,27nm,1.0s						
GSC	Goldstone, Bar	40.16	94	P	P	07 34 59.1	+0.8
BFSC	Mount Baldy Ra	40.34	96	P	P	07 35 01.0	+1.1
	baz=313,SNR=8.0						
MPU	Maple Canyon	40.35	84	P	P	07 35 00.9	+0.9
SHPR	Sheep Range	40.38	91	P	P	07 35 00.8	+0.6
MDJ	Mudanjiang	40.53	285	P	P	07 34 59.6	-1.6
MDJ				pP	sP	07 35 11.6	-1.4
MDJ				sP	pwP	07 35 17.1	+3.6
MDJ				PP	PP	07 36 33.6	-1.0
MDJ				S	S	07 41 05.6	-2.4
MDJ				pmax	pmax		
	comp=Z,29nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,310nm,4.0s						
MDJ				LR	LR		
	comp=Z,2µm,17.1s						
MDJ				LR	LR		
	comp=Z,2µm,18.5s						
MDJ				LR	LR		
	comp=Z,3µm,19.2s						
MDJ	Mudanjiang	40.53	285	P	P	07 34 59.3	-1.9
FCC	Fort Churchill	40.65	50	P	P	07 35 02.1	+0.2
FCC				pmax	pmax		
	comp=Z,52nm,0.9s						
FCC	Fort Churchill	40.65	50	P	P	07 35 02.1	+0.2
FCC				IAmb	IAmb	07 35 03.8	
	comp=Z,52nm,0.8s						
MSHR	Mys Shultsa	40.75	281	⇑eP	P	07 35 03.0	0.0
MSHR				pmax	pmax		
	comp=Z,90nm,1.0s						
HEC	Hector,Ludlow	40.76	94	P	P	07 35 04.2	+0.9
	baz=312,SNR=5.7						
BBRC	Big Bear Solar	40.78	95	P	P	07 35 04.3	+0.6
	baz=313						
CCUT	Cedar City	40.81	89	P	P	07 35 05.5	+1.6
MVU	Marysvale	40.92	87	P	P	07 35 04.8	0.0
MSU	Marysvale	40.94	87	P	P	07 35 06.6	+1.7
MSU	Marysvale	40.94	87	P	P	07 35 06.6	+1.7
SZCU	Shurtz Canyon	40.95	88	P	P	07 35 06.9	+1.9
TMUT	Trail Mountain	41.04	85	P	P	07 35 07.3	+1.5
TMUT				IAmb	IAmb	07 35 29.6	
	comp=Z,79nm,1.6s						
MURC	Murrieta	41.06	96	P	P	07 35 06.6	+0.9
	baz=313						
GMRC	Granite Mounta	41.20	94	P	P	07 35 07.8	+0.8
	baz=312						
P17A	Butcher Ranch,	41.22	84	P	P	07 35 08.6	+1.4
MTPU	Mount Pierson	41.23	87	P	P	07 35 07.0	-0.4
LCMT	Little Creek M	41.23	89	P	P	07 35 07.5	+0.3
JGF	Kuroka	41.26	268	P	P	07 35 07.7	+0.3
JGF				IAmb	IAmb	07 35 30.4	
	comp=Z,34nm,0.9s						
KNB	Kanab	41.48	89	P	P	07 35 10.2	+0.9
KNB				pmax	pmax		
	comp=Z,15nm,1.1s						
KNB	Kanab	41.48	89	P	P	07 35 10.2	+0.9
PFO	Pinyon Flats O	41.50	96	P	P	07 35 10.2	+0.8
	baz=313						
PFO	Pinyon Flats O	41.50	96	P	P	07 35 10.7	+1.3
PFO				pmax	pmax		
	comp=Z,17nm,1.1s						
PFO	Pinyon Flats O	41.50	96	P	P	07 35 10.7	+1.3
TPFO	Pinon Flats	41.51	96	P	P	07 35 10.4	+0.9
	baz=313						
SRU	San Rafael Swe	41.58	85	P	P	07 35 10.9	+0.8
SRU				pmax	pmax		
	comp=Z,32nm,0.9s						
SRU	San Rafael Swe	41.58	85	P	P	07 35 10.9	+0.8
SRU				IAmb	IAmb	07 35 15.2	
	comp=Z,32nm,0.9s						
109C	Camp Elliot, M	41.60	97	P	P	07 35 10.6	+0.5
	baz=314						
109C	Camp Elliot, M	41.60	97	P	P	07 35 11.0	+0.9
K22A	Casper	41.88	78	P	P	07 35 12.2	-0.3
	baz=306,SNR=5.3						
K22A	Casper	41.88	78	P	P	07 35 12.2	-0.3
IRM	Iron Mountain	41.94	94	P	P	07 35 13.8	+0.9
	baz=313						
BAR	Barrett	42.01	97	P	P	07 35 14.9	+1.4
MONP2	Monument Peak	42.02	96	P	P	07 35 14.7	+0.9
	baz=314						
TULEG	Thule	42.03	20	i P	P	07 35 12.4	-0.7
TULEG				IAmb	IAmb	07 35 14.5	
	comp=Z,13nm,0.7s						
W13A	Hualapai Mount	42.08	92	P	P	07 35 15.7	+1.4
BC3	Big Chuckawall	42.09	95	P	P	07 35 15.0	+0.8
	baz=313						
U15A	North Rim	42.19	89	P	P	07 35 15.4	+0.1
CBX	Cerro Bola	42.27	97	P	P	07 35 15.7	0.0
O20A	White River Ci	42.34	82	P	P	07 35 16.5	+0.2
	baz=308,SNR=38						
O20A	White River Ci	42.34	82	P	P	07 35 16.4	0.0
O20A				IAmb	IAmb	07 35 20.1	
	comp=Z,76nm,0.8s						
SWSC	Sam W. Stewart	42.36	96	P	P	07 35 17.1	+0.8
	baz=314						
BOD	Bodaibo	42.37	309	eP	P	07 35 14.8	-1.3
BOD				pmax	pmax		
	comp=Z,56nm,0.8s						
IKP	In-Ko-Pah, Jac	42.37	96	P	P	07 35 17.6	+1.1
	baz=314						
PDMCI	Parker Dam,Lak	42.45	93	P	P	07 35 18.0	+1.0
	baz=312						
RSSD	Black Hills	42.52	74	P	P	07 35 17.6	-0.2
	baz=305						
RSSD	Black Hills	42.52	74	P	P	07 35 18.1	+0.4
RSSD				pmax	pmax		
	comp=Z,68nm,2.0s						
RSSD	Black Hills	42.52	74	P	P	07 35 18.1	+0.4
RSSD				IAmb	IAmb	07 35 24.0	
	comp=Z,68nm,1.9s						
JWT	Wachi	42.67	269	P	P	07 35 19.0	+0.1
JWT				IAmb	IAmb	07 35 22.1	
	comp=Z,58nm,0.9s						
PV23	Carpenter Ridg	42.91	84	P	P	07 35 22.0	+0.9
PV23				IAmb	IAmb	07 35 48.0	
	comp=Z,31nm,1.0s						
ESJX	Sierra Juarez	42.92	97	P	P	07 35 22.5	+1.4
PV14	Lion Creek, Pa	42.95	84	P	P	07 35 22.6	+1.2
MDND	Maddock	43.01	67	P	P	07 35 21.8	+0.3
	baz=303,SNR=9.4						
MDND	Maddock	43.01	67	P	P	07 35 21.3	-0.2
E28A	Huff	43.09	69	P	P	07 35 22.6	+0.5
E28A				IAmb	IAmb	07 35 27.7	
	comp=Z,48nm,0.9s						
N23A	Red Feather La	43.27	79	P	P	07 35 24.2	+0.3
	baz=307						
WUAZ	Wupatki	43.35	89	P	P	07 35 25.0	+0.5
	baz=311						
WUAZ	Wupatki	43.35	89	P	P	07 35 25.1	+0.7
CN2	Changchun	43.45	286	eP	P	07 35 23.9	-1.1
CN2				pP	sP	07 35 35.8	-1.1
CN2				pmax	pmax		
	comp=Z,80nm,0.8s						
CN2				pmax	pmax		
	comp=Z,340nm,9.0s						
HIA	Hailar	43.67	296	P	P	07 35 26.2	-0.6
HIA				pmax	pmax		
	comp=Z,222nm,0.6s						
HIA	Hailar	43.67	296	P	P	07 35 26.1	-0.6
SMCO	Snowmass	43.70	82	P	P	07 35 27.9	+0.3
ULM	Lac du Bonnet	43.80	62	P	P	07 35 27.1	-0.6
	comp=Z,7.6nm,0.8s,baz=290,slow=8.2,SNR=11						
ULM	Lac du Bonnet	43.80	62	P	P	07 35 27.4	-0.3
ULM				pmax	pmax		
	comp=Z,16nm,0.9s						
ULM	Lac du Bonnet	43.80	62	P	P	07 35 27.4	-0.3
MVCO	Mesa Verde	44.01	85	P	P	07 35 30.7	+0.7
	baz=310						
MVCO	Mesa Verde	44.01	85	P	P	07 35 29.5	-0.4
X16A	Lo Mia Camp, P	44.03	91	P	P	07 35 31.7	+1.7
ISCO	Idaho Springs	44.14	80	P	P	07 35 31.5	+0.5
	baz=308						
ISCO	Idaho Springs	44.14	80	P	P	07 35 31.6	+0.6
ISCO				pmax	pmax		
	comp=Z,57nm,1.9s						
ISCO	Idaho Springs	44.14	80	P	P	07 35 31.6	+0.6
ISCO				IAmb	IAmb	07 35 55.2	
	comp=Z,57nm,1.9s						
JHS	Saijyo	44.27	271	P	P	07 35 32.2	+0.5
JHS				IAmb	IAmb	07 35 58.0	
	comp=Z,28nm,0.9s						
W18A	Petrified Fore	44.62	89	P	P	07 35 36.1	+1.4
	baz=312,SNR=5.7						
W18A	Petrified Fore	44.62	89	P	P	07 35 37.1	+2.4
S22A	4UR Ranch, Cre	44.69	84	P	P	07 35 36.4	+1.0
	baz=310						
214A	Organ Pipe Nat	44.87	94	P	P	07 35 37.1	+0.6
	baz=314						
214A	Organ Pipe Nat	44.87	94	P	P	07 35 37.0	+0.5
D32A	Dogwood Acres,	44.87	67	P	P	07 35 36.5	+0.2
D32A				IAmb	IAmb	07 35 38.8	
	comp=Z,17nm,0.6s						
Q24A	Divide	44.94	81	P	P	07 35 36.8	-0.6
	baz=309						
SUSD	Miller	45.31	71	P	P	07 35 39.2	-0.7
	baz=306,SNR=7.6						
SUSD	Miller	45.31	71	P	P	07 35 39.7	-0.2
SDCO	Great Sand Dun	45.50	83	P	P	07 35 41.8	-0.1
	baz=310,SNR=12						
SDCO	Great Sand Dun	45.50	83	P	P	07 35 42.5	+0.7
OGNE	Ogallala	45.59	77	P	P	07 35 41.8	-0.5
	baz=308						
OGNE	Ogallala	45.59	77	P	P	07 35 42.7	+0.4
KSRS	Korea Array	45.84	277	P	P	07 35 44.9	+0.8
	comp=Z,60nm,0.8s,baz=54,slow=7.6,SNR=162						
KS19	Wonju Array Si	45.85	277	P	P	07 35 44.3	+0.1
TUC	Tucson	45.87	92	P	P	07 35 45.1	+0.6
	baz=314						
TUC	Tucson	45.87	92	P	P	07 35 45.1	+0.6
TUC				pmax	pmax		
	comp=Z,10.0nm,1.0s						
TUC	Tucson	45.87	92	P	P	07 35 45.1	+0.6
B35A	Bob, Littlefor	46.01	64	P	P	07 35 44.3	-1.0
B35A				IAmb	IAmb	07 35 47.6	
	comp=Z,23nm,0.6s						
F33A	5 Mile Ranch,	46.02	68	P	P	07 35 44.0	-1.5
F33A				IAmb	IAmb	07 35 48.1	
	comp=Z,36nm,1.3s						
KSCO	Kaye Shedlock’	46.44	79	P	P	07 35 49.7	+0.7

	baz=309,SNR=8.1						
KSCO	Kaye Shedlock'	46.44	79	P	P	07 35 49.7	+0.7
KSCO				IAmb	IAmb	07 36 11.4	
	comp=Z,45nm,1.1s						
K31A	O'Neill	46.51	73	P	P	07 35 48.6	-0.7
K31A				IAmb	IAmb	07 36 17.1	
	comp=Z,38nm,1.0s						
T25A	Trinidad	46.55	82	P	P	07 35 50.6	+0.6
	baz=311,SNR=18						
INCN	Inchon	46.61	278	P	P	07 35 50.4	+0.2
INCN				pmax	pmax		
	comp=Z,112nm,0.8s						
INCN	Inchon	46.61	278	P	P	07 35 50.4	+0.2
NRIK	Noril'sk	46.69	332	P	P	07 35 49.6	-0.8
	comp=Z,14nm,0.8s,baz=74,slow=9.0,SNR=17						
NRIK	Noril'sk	46.69	332⇑	eP	P	07 35 50.1	-0.3
NRIK				pmax	pmax		
	comp=Z,20nm,0.9s						
NRIK	Noril'sk	46.69	332	P	P	07 35 49.9	-0.5
NRIK				IAmb	IAmb	07 35 52.8	
	comp=Z,22nm,0.9s						
ANMO	Albuquerque	46.74	86	LR	LR	07 54 36.5	
	comp=Z,1µm,18.4s,baz=324,slow=35						
ANMO	Albuquerque	46.74	86	P	P	07 35 52.0	+0.5
	baz=312						
ANMO	Albuquerque	46.74	86	P	P	07 35 52.4	+0.9
ANMO				pmax	pmax		
	comp=Z,16nm,1.3s						
ANMO	Albuquerque	46.74	86	P	P	07 35 52.4	+0.9
TJN	Taejon	46.88	277⇑	eP	P	07 35 52.5	+0.2
UPNV	Upernavik	46.89	22	i P	P	07 35 52.2	+0.3
UPNV				IAmb	IAmb	07 35 54.1	
	comp=Z,44nm,1.0s						
JNU	Nakatsue	46.90	271	P	P	07 35 52.4	-0.2
Y22D	IRIS PASSCAL I	47.04	87	P	P	07 35 54.3	+0.5
	baz=312						
ECSD	EROS Data Cent	47.08	70	P	P	07 35 53.1	-0.7
	baz=307,SNR=12						
ECSD	EROS Data Cent	47.08	70	P	P	07 35 53.5	-0.4
ECSD				IAmb	IAmb	07 35 56.2	
	comp=Z,49nm,1.4s						
BNM	Barren Site	47.17	87	P	P	07 35 55.8	+0.9
EYMN	Ely	47.47	63	P	P	07 35 56.1	-0.7
	baz=306						
EYMN	Ely	47.47	63	P	P	07 35 56.2	-0.6
EYMN				IAmb	IAmb	07 36 16.3	
	comp=Z,40nm,1.1s						
121A	Cookes Peak, D	47.55	90	P	P	07 35 57.6	-0.2
	baz=314						
F36A	Milaca	47.57	66	P	P	07 35 56.4	-1.2
F36A				IAmb	IAmb	07 35 59.1	
	comp=Z,12nm,0.8s						
BGNE	Belgrade	47.61	74	P	P	07 35 57.5	-0.5
	baz=308,SNR=8.4						
BGNE	Belgrade	47.61	74	P	P	07 35 58.6	+0.6
E38A	The Farm, Brul	48.23	64	P	P	07 36 01.4	-1.3
E38A				IAmb	IAmb	07 36 21.8	
	comp=Z,30nm,0.8s						
CBKS	Cedar Bluff	48.30	78	P	P	07 36 02.8	-0.6
	baz=310,SNR=10						
CBKS	Cedar Bluff	48.30	78	P	P	07 36 03.1	-0.3
CBKS				pmax	pmax		
	comp=Z,44nm,1.1s						
CBKS	Cedar Bluff	48.30	78	P	P	07 36 03.1	-0.3
CBKS				IAmb	IAmb	07 36 29.8	
	comp=Z,44nm,1.1s						
L34A	Svendsen Farm,	48.30	72	P	P	07 36 02.0	-1.3
SPMN	Marine on St.	48.36	66	P	P	07 36 02.7	-1.0
	baz=307,SNR=5.0						
SPMN	Marine on St.	48.36	66	P	P	07 36 04.1	+0.4
SPMN				IAmb	IAmb	07 36 07.2	
	comp=Z,19nm,0.5s						
NUUG	Nuugaatsiaq	48.39	23	i P	P	07 36 03.7	+0.2
NUUG				IAmb	IAmb	07 36 04.3	
	comp=Z,31nm,0.8s						
N33A	J Bar K, Exete	48.44	74	P	P	07 36 03.6	-0.8
DL2	Dalian	48.72	283	P	P	07 36 06.4	-0.1
DL2				pmax	pmax		
	comp=Z,60nm,0.7s						
I37A	Lemond, Waseca	48.76	68	P	P	07 36 06.0	-0.8
FRB	Frobisher Bay	48.78	36	P	P	07 36 06.5	-0.1
FRB				pmax	pmax		
	comp=Z,31nm,2.5s						
KBS	Kingsbay	49.03	360	eP	P	07 36 08.6	+0.2
KBS	Kingsbay	49.03	360	i P	P	07 36 09.9	+1.5
KBS				IAmb	IAmb	07 36 10.8	
	comp=Z,54nm,0.8s						
R32A	Long Quarter,	49.17	77	P	P	07 36 10.1	+0.1
R32A				IAmb	IAmb	07 36 13.2	
	comp=Z,36nm,1.0s						
N35A	Tabor	49.43	73	P	P	07 36 11.1	-0.8
MNTX	Cornudas Mount	49.60	89	P	P	07 36 14.5	+1.1
	baz=314,SNR=9.3						
MNTX	Cornudas Mount	49.60	89	P	P	07 36 14.6	+1.1
MSTX	Muleshoe	49.65	84	P	P	07 36 14.5	+0.6
	baz=313,SNR=7.3						
MSTX	Muleshoe	49.65	84	P	P	07 36 14.8	+0.9
AMTX	Amarillo	49.70	83	P	P	07 36 14.4	+0.2
	baz=312						
AMTX	Amarillo	49.70	83	P	P	07 36 14.6	+0.4
SPA0	Spitsbergen Ar	49.74	359	eP	P	07 36 13.9	0.0
SPITS	Spitsbergen Ar	49.74	359	LR	LR	07 58 50.1	
	comp=Z,826nm,18.4s,baz=30,slow=38						
DAG	Danmarks Havn	49.79	9	i P	P	07 36 13.3	-0.9
	comp=Z,28nm,0.9s						
DAG	Danmarks Havn	49.79	9	i P	P	07 36 13.3	-0.9
DAG				pmax	pmax		
	comp=Z,28nm,0.9s						
DAG	Danmarks Havn	49.79	9	i P	P	07 36 13.4	-0.9
DAG				IAmb	IAmb	07 36 15.3	
	comp=Z,28nm,0.9s						
G40A	Rib Lake	49.79	65	P	P	07 36 14.1	-0.6
G40A				IAmb	IAmb	07 36 38.2	
	comp=Z,14nm,0.8s						
COWI	Conover	49.87	63	P	P	07 36 14.9	-0.3
COWI				IAmb	IAmb	07 36 41.8	
	comp=Z,50nm,1.6s						
KSU1	Kansas State U	49.98	75	P	P	07 36 15.6	-0.6
	baz=310						
KSU1	Kansas State U	49.98	75	P	P	07 36 15.1	-1.1
KSU1				IAmb	IAmb	07 36 18.8	
	comp=Z,29nm,0.9s						
IRK	Irkutsk	50.08	307	eP	P	07 36 15.3	-1.4
IRK				e		07 37 37.8	
IRK				pmax	pmax		
	comp=Z,80nm,1.5s						
U32A	Winter Ranch,	50.33	79	P	P	07 36 19.0	+0.1
U32A				IAmb	IAmb	07 36 22.0	
	comp=Z,38nm,0.9s						
I40A	Norwalk	50.41	67	P	P	07 36 19.3	-0.1
ILULI	Ilulissat	50.52	24	i P	P	07 36 20.0	+0.3
	comp=Z,44nm,1.1s						
ILULI	Ilulissat	50.52	24	i P	P	07 36 20.0	+0.3
ILULI				pmax	pmax		
	comp=Z,44nm,1.1s						
ILULI	Ilulissat	50.52	24	i P	P	07 36 20.1	+0.3
ILULI				IAmb	IAmb	07 36 21.9	
	comp=Z,44nm,1.1s						
F42A	Maple Grove Fa	50.63	63	P	P	07 36 20.5	-0.4
F42A				IAmb	IAmb	07 36 31.3	
	comp=Z,28nm,0.7s						
SUMG	Summit	50.71	17⇑	iP	P	07 36 21.9	+0.2
	comp=Z,193nm,0.9s						
SUMG	Summit	50.71	17⇑	iP	P	07 36 21.9	+0.2
SUMG				pmax	pmax		
	comp=Z,190nm,0.9s						
SUMG	Summit	50.71	17	P	P	07 36 22.6	+0.8
SUMG	Summit	50.71	17⇑	iP	P	07 36 22.0	+0.2
SUMG				IAmb	IAmb	07 36 24.9	
	comp=Z,194nm,0.9s						
TLY	Talaya	50.73	307⇑	eP	P	07 36 21.6	-0.1
TLY				pmax	pmax		
	comp=Z,84nm,0.7s						
TLY	Talaya	50.73	307	P	P	07 36 21.4	-0.3
TLY				IAmb	IAmb	07 36 24.2	
	comp=Z,39nm,0.7s						
KAN13	South Haven SW	50.83	78	P	P	07 36 22.6	0.0
KAN13				IAmb	IAmb	07 36 44.4	
	comp=Z,37nm,0.9s						
CROK	Carrier	50.86	79	P	P	07 36 23.6	+0.7
E43A	Lone Tree Farm	50.87	62	P	P	07 36 22.5	-0.2
E43A				IAmb	IAmb	07 36 25.2	
	comp=Z,32nm,0.8s						
N38A	Joes South For	50.88	71	P	P	07 36 22.1	-0.8
BJI	Beijing	51.21	288	P	P	07 36 25.1	-0.3
BJI				pP	pP	07 36 34.3	+0.2
BJI				sP	pwP	07 36 40.6	+2.7
BJI				PcP	PcP	07 37 39.9	-0.4
BJI				pmax	pmax		
	comp=Z,6.0nm,0.7s						
BJI				pmax	pmax		
	comp=Z,280nm,3.5s						
BJI				LR	LR		
	comp=Z,1µm,15.3s						
BJI				LR	LR		
	comp=Z,970nm,14.7s						
BJI				LR	LR		
	comp=Z,1µm,18.9s						
L40A	Anamosa	51.23	69	P	P	07 36 25.7	+0.2
L40A				IAmb	IAmb	07 36 48.4	
	comp=Z,31nm,0.9s						
BJT	Baijiatuau	51.23	288	P	P	07 36 25.1	-0.5
BJT				pmax	pmax		
	comp=Z,29nm,0.9s						
BJT	Baijiatuau	51.23	288	P	P	07 36 25.1	-0.5
BJT				IAmb	IAmb	07 36 27.5	
	comp=Z,29nm,0.9s						
JFWS	Jewell Farm	51.24	67	P	P	07 36 24.6	-1.0
	baz=310						
JFWS	Jewell Farm	51.24	67	P	P	07 36 25.0	-0.6
JFWS				pmax	pmax		
	comp=Z,21nm,0.8s						
JFWS	Jewell Farm	51.24	67	P	P	07 36 25.0	-0.6
JFWS				IAmb	IAmb	07 36 26.7	
	comp=Z,21nm,0.8s						
ULN	Ulaanbaatar	51.34	301	P	P	07 36 25.8	-0.7
ULN				pmax	pmax		
	comp=Z,43nm,0.8s						
ULN	Ulaanbaatar	51.34	301	P	P	07 36 25.8	-0.7
ULN				IAmb	IAmb	07 36 28.6	
	comp=Z,43nm,0.8s						
I42A	Draeger Farm,	51.37	66	P	P	07 36 26.2	-0.3
I42A				IAmb	IAmb	07 36 50.6	
	comp=Z,55nm,1.3s						
P38A	Dawn	51.46	73	P	P	07 36 26.0	-1.3
P38A				IAmb	IAmb	07 36 29.4	
	comp=Z,37nm,0.8s						
T35A	Sooner Cattle	51.47	77	P	P	07 36 26.8	-0.6
T35A				IAmb	IAmb	07 36 50.0	
	comp=Z,37nm,1.2s						
WMOK	Wichita Mounta	51.56	81	P	P	07 36 27.7	-0.5
	baz=313,SNR=22						
WMOK	Wichita Mounta	51.56	81	P	P	07 36 27.5	-0.7
WMOK				pmax	pmax		
	comp=Z,23nm,0.8s						
WMOK	Wichita Mounta	51.56	81	P	P	07 36 27.5	-0.7
WMOK				IAmb	IAmb	07 36 31.4	
	comp=Z,23nm,0.8s						
H43A	Windswept, Lux	51.64	64	P	P	07 36 28.9	+0.3
H43A				IAmb	IAmb	07 37 26.0	
	comp=Z,45nm,0.9s						
BCOK	Bluff Creek, N	51.65	79	P	P	07 36 29.4	+0.6
OK029	Liberty Lake	51.65	79	P	P	07 36 28.7	-0.1
OK029				IAmb	IAmb	07 36 31.6	
	comp=Z,34nm,0.9s						
SONM	Songino Array	51.71	301	P	P	07 36 29.7	+0.5
	comp=Z,12nm,0.6s,baz=58,slow=6.9,SNR=44						
SONM				PcP	PcP	07 37 42.9	+0.6
	comp=Z,8.5nm,0.9s,baz=76,slow=2.8,SNR=4.6						
SONM				ScP	ScP	07 41 38.8	+2.4
	comp=Z,1.7nm,0.9s,baz=90,slow=3.0,SNR=4.4						
SONM	Songino Array	51.71	301	P	P	07 36 29.2	0.0
SONM				pmax	pmax		
	comp=Z,28nm,1.2s						
SONM	Songino Array	51.71	301	P	P	07 36 29.2	0.0
SONM				IAmb	IAmb	07 36 31.7	
	comp=Z,28nm,1.2s						
ZAK	Zakamensk	51.71	305	eP	P	07 36 28.3	-0.9
ZAK				e		07 37 43.1	
ZAK				pmax	pmax		
	comp=Z,15nm,1.6s						
ZAK				pmax	pmax		
	comp=Z,10.0nm,1.1s						
QUOK	Quay	51.85	78	P	P	07 36 30.0	-0.3
QUOK				IAmb	IAmb	07 36 32.4	
	comp=Z,23nm,0.8s						
DBG	Daneborg	51.90	10	i P	P	07 36 29.3	-0.8
DBG				IAmb	IAmb	07 36 31.0	
	comp=Z,38nm,0.9s						
OKCFA	Oklahoma City	51.91	79	P	P	07 36 30.6	-0.2
OKCFA				IAmb	IAmb	07 36 33.6	
	comp=Z,35nm,0.9s						
OK031	S. Brethren Rd	51.92	78	P	P	07 36 30.8	0.0
OK031				IAmb	IAmb	07 36 46.6	
	comp=Z,38nm,0.7s						
OK030	Cody Creek RV	51.97	78	P	P	07 36 30.0	-1.1
OK030				IAmb	IAmb	07 36 46.6	
	comp=Z,30nm,0.8s						
MOY	Mondy	52.03	308	eP	P	07 36 32.0	+0.4
MOY				pmax	pmax		
	comp=Z,32nm,1.1s						
FNO	Franklin	52.05	79	P	P	07 36 32.4	+0.6
FNO				IAmb	IAmb	07 36 35.2	
	comp=Z,36nm,0.8s						
L42A	Oliver, Polo	52.15	68	P	P	07 36 31.6	-0.8
L42A				IAmb	IAmb	07 36 36.2	
	comp=Z,28nm,1.1s						
X34A	Smith Ranch, M	52.23	80	P	P	07 36 34.7	+1.5
X34A				IAmb	IAmb	07 37 00.6	
	comp=Z,45nm,1.3s						
SFJD	Kangerlussuaq	52.24	26	i P	P	07 36 33.3	+0.6
	comp=Z,1.3nm,0.9s						
SFJD	Kangerlussuaq	52.24	26	P	P	07 36 33.9	+1.2
SFJD				pmax	pmax		
	comp=Z,37nm,1.1s						
SFJD	Kangerlussuaq	52.24	26	P	P	07 36 33.9	+1.2
SFJD				IAmb	IAmb	07 36 35.0	
	comp=Z,37nm,1.1s						
SFJD	Kangerlussuaq	52.24	26	i P	P	07 36 33.3	+0.6
SFJD				IAmb	IAmb	07 36 34.8	
	comp=Z,1.3nm,0.9s						
N41A	Harden Midland	52.31	70	P	P	07 36 32.6	-1.0
N41A				IAmb	IAmb	07 36 56.6	
	comp=Z,35nm,0.9s						
TX31	Lajitas Ar. Si	52.31	89	P	P	07 36 33.1	-0.8
TX32	Lajitas Array	52.31	89	P	P	07 36 33.6	-0.3
TX32				IAmb	IAmb	07 36 51.7	
	comp=Z,20nm,0.8s						
TXAR	Lajitas Array	52.31	89	P	P	07 36 33.7	-0.2
	comp=Z,2.6nm,0.5s,baz=299,slow=5.3,SNR=43						
TXAR	Lajitas Array	52.31	89	P	P	07 36 33.6	-0.3
E46A	Sault Ste Mari	52.32	61	P	P	07 36 33.8	+0.2
E46A				IAmb	IAmb	07 36 36.5	
	comp=Z,28nm,0.7s						
P40A	Paris	52.39	72	P	P	07 36 32.8	-1.4
W35A	Tecumseh	52.44	79	P	P	07 36 34.9	+0.3
ABTX	Abilene, Hawle	52.48	83	P	P	07 36 34.8	-0.2
	baz=314						
ABTX	Abilene, Hawle	52.48	83	P	P	07 36 35.2	+0.2
ABTX				IAmb	IAmb	07 36 57.7	
	comp=Z,68nm,1.4s						
TUL1	Leonard	52.58	78	P	P	07 36 34.7	-1.0
	baz=312						
TUL1	Leonard	52.58	78	P	P	07 36 35.1	-0.5
TUL1				IAmb	IAmb	07 36 38.3	
	comp=Z,20nm,0.8s						
S39A	Bolivar	52.85	74	P	P	07 36 35.9	-1.8
L44A	Lake County Fo	53.03	67	P	P	07 36 38.6	-0.3
	baz=311						
U38A	Gravette	53.06	76	P	P	07 36 37.9	-1.4
U38A				IAmb	IAmb	07 36 56.6	
	comp=Z,42nm,1.3s						
R40A	Maddies Statio	53.08	73	P	P	07 36 37.0	-2.3
R40A				IAmb	IAmb	07 36 40.4	
	comp=Z,28nm,0.7s						
GLMI	Grayling	53.14	62	P	P	07 36 37.9	-1.8
	baz=310						
TIA	Tai'an	53.18	284	P	P	07 36 40.1	0.0
TIA				pmax	pmax		
	comp=Z,30nm,0.8s						
ICESG	Greenland Ices	53.28	20	i P	P	07 36 40.3	-0.5
ICESG				IAmb	IAmb	07 36 41.7	
	comp=Z,42nm,0.8s						
HDIL	Hopedale	53.31	69	P	P	07 36 39.5	-1.5
	baz=311,SNR=8.5						
HDIL	Hopedale	53.31	69	P	P	07 36 39.9	-1.1
HDIL				IAmb	IAmb	07 36 45.1	
	comp=Z,49nm,1.0s						
HHC	Hu-ho-hao-te	53.35	291	eP	P	07 36 43.7	+2.3
HHC				pmax	pmax		
	comp=Z,26nm,1.3s						
HHC				pmax	pmax		
	comp=Z,610nm,7.4s						
HHAR	Hobbs	53.43	76	P	P	07 36 40.6	-1.4
HHAR				IAmb	IAmb	07 36 59.1	
	comp=Z,23nm,1.1s						
Z35A	Perchaven, San	53.45	81	P	P	07 36 42.4	+0.3
Z35A				IAmb	IAmb	07 36 45.1	
	comp=Z,22nm,0.9s						
M44A	Midewin, Midew	53.47	67	P	P	07 36 40.8	-1.4
M44A				IAmb	IAmb	07 36 46.4	
	comp=Z,33nm,0.9s						
MATQ	Matagami	53.58	54	P	P	07 36 42.0	-0.9
	baz=310						
X37A	Clayton	53.72	79	P	P	07 36 44.0	-0.1
X37A				IAmb	IAmb	07 36 49.2	
	comp=Z,36nm,0.8s						
P43A	Skaggs, Pawnee	53.78	70	P	P	07 36 43.9	-0.6
P43A				IAmb	IAmb	07 36 46.7	
	comp=Z,34nm,0.8s						
CCM	Cathedral Cave	53.84	73	P	P	07 36 43.3	-1.6
	baz=312						
CCM	Cathedral Cave	53.84	73	P	P	07 36 43.3	-1.6
CCM				pmax	pmax		
	comp=Z,20nm,0.9s						
CCM	Cathedral Cave	53.84	73	P	P	07 36 43.3	-1.6
CCM				IAmb	IAmb	07 36 58.1	
	comp=Z,20nm,0.9s						
MGMO	Mountain Grove	53.84	74	P	P	07 36 43.1	-1.9
MGMO				IAmb	IAmb	07 36 46.2	
	comp=Z,22nm,0.8s						
JCT	Junction City	53.88	85	P	P	07 36 44.0	-1.3
	baz=315						
JCT	Junction City	53.88	85	P	P	07 36 46.0	+0.7
JCT				pmax	pmax		
	comp=Z,76nm,1.7s						
JCT	Junction City	53.88	85	P	P	07 36 46.0	+0.7
JCT				IAmb	IAmb	07 37 08.1	
	comp=Z,76nm,1.6s						
U40A	Yellville	54.03	75	P	P	07 36 44.5	-1.8
	baz=313,SNR=11						
U40A	Yellville	54.03	75	P	P	07 36 44.4	-1.9
U40A				IAmb	IAmb	07 36 59.7	
	comp=Z,30nm,1.1s						
SLM	Saint Louis	54.04	71	P	P	07 36 45.5	-0.8
SLM				pmax	pmax		
	comp=Z,28nm,0.8s						
SLM	Saint Louis	54.04	71	P	P	07 36 45.5	-0.8
SLM				IAmb	IAmb	07 36 48.5	
	comp=Z,28nm,0.8s						
O44A	Mansfield	54.05	69	P	P	07 36 46.1	-0.3
O44A				IAmb	IAmb	07 36 48.3	
	comp=Z,18nm,0.7s						
SSE	Sheshan	54.23	276	P	P	07 36 48.4	+0.5
SSE				pmax	pmax		
	comp=Z,15nm,1.6s						
SSE	Sheshan	54.23	276	P	P	07 36 49.1	+1.3
W39A	Magazine	54.26	77	P	P	07 36 46.9	-1.1
	baz=313						
FVM	French Village	54.36	72	P	P	07 36 47.4	-1.3
FVM				pmax	pmax		
	comp=Z,22nm,0.8s						
FVM	French Village	54.36	72	P	P	07 36 47.4	-1.3
FVM				IAmb	IAmb	07 36 50.7	
	comp=Z,22nm,0.8s						
LSQQ	Lebel-sur-Quev	54.36	54	P	P	07 36 47.0	-1.6
	baz=311						
BTO	Baotou	54.39	292	eP	P	07 36 49.4	+0.4
T42A	Van Buren	54.61	73	P	P	07 36 49.0	-1.6
T42A				IAmb	IAmb	07 36 51.4	
	comp=Z,15nm,0.9s						
SFIN	Lafayette	54.68	68	P	P	07 36 49.9	-1.1
	baz=312						
SFIN	Lafayette	54.68	68	P	P	07 36 50.3	-0.7
SFIN				IAmb	IAmb	07 37 13.5	
	comp=Z,60nm,1.3s						
FCAR	Ozark Folk Cen	54.78	75	P	P	07 36 50.9	-0.9
FCAR				IAmb	IAmb	07 36 53.2	
	comp=Z,29nm,0.9s						
MIAR	Mount Ida	54.83	77	P	P	07 36 51.3	-0.8
	baz=314,SNR=8.1						
MIAR	Mount Ida	54.83	77	P	P	07 36 50.8	-1.4
MIAR				pmax	pmax		
	comp=Z,40nm,1.2s						
MIAR	Mount Ida	54.83	77	P	P	07 36 50.8	-1.4
MIAR				IAmb	IAmb	07 37 10.4	
	comp=Z,40nm,1.1s						
Z38A	Mt. Pleasant	54.87	79	P	P	07 36 52.3	-0.1
Z38A				IAmb	IAmb	07 36 55.5	
	comp=Z,27nm,0.8s						
NJ2	Nanjing	54.99	279	eP	P	07 36 53.4	+0.1
NJ2				pmax	pmax		
	comp=Z,47nm,0.9s						
NJ2				LR	LR		
	comp=Z,1µm,16.1s						
NJ2				LR	LR		
	comp=Z,1µm,17.5s						
NJ2				LR	LR		
	comp=Z,2µm,16.1s						
435B	Jarrell	55.02	84	P	P	07 36 52.5	-1.1
	baz=315						
435B	Jarrell	55.02	84	P	P	07 36 54.7	+1.2
435B				IAmb	IAmb	07 37 22.3	
	comp=Z,30nm,0.9s						
N47A	Urbana	55.14	67	P	P	07 36 53.3	-1.0
N47A				IAmb	IAmb	07 37 17.7	
	comp=Z,43nm,0.9s						
PBMO	Poplar Bluff	55.17	73	P	P	07 36 53.9	-0.8
SCO	Scoresbysund	55.19	13	i P	P	07 36 53.7	-0.5
SCO	Scoresbysund	55.19	13	i P	P	07 36 53.7	-0.5
SCO	Scoresbysund	55.19	13	P	P	07 36 54.6	+0.4
SCO				IAmb	IAmb	07 36 55.7	
	comp=Z,47nm,1.2s						
SCO	Scoresbysund	55.19	13	i P	P	07 36 53.7	-0.5
W41B	Gary Mavity, V	55.19	76	P	P	07 36 53.3	-1.4
	baz=314						
OLIL	Olney	55.21	70	P	P	07 36 53.7	-1.1
OLIL				IAmb	IAmb	07 36 56.1	
	comp=Z,41nm,0.9s						
LCAR	Lake Charles	55.23	74	P	P	07 36 53.7	-1.3
S44A	Carbondale	55.24	72	P	P	07 36 55.0	-0.1
S44A				IAmb	IAmb	07 36 56.5	
	comp=Z,22nm,0.8s						
237A	Washetta, Mont	55.24	81	P	P	07 36 55.6	+0.5
237A				IAmb	IAmb	07 36 58.5	
	comp=Z,22nm,0.8s						
SIUC	Southern Illin	55.25	72	P	P	07 36 54.5	-0.7
SIUC				IAmb	IAmb	07 36 56.5	
	comp=Z,26nm,0.8s						
X40A	Basin Creek Fa	55.31	77	P	P	07 36 54.9	-0.7
	baz=314						
X40A	Basin Creek Fa	55.31	77	P	P	07 36 56.2	+0.5
X40A				IAmb	IAmb	07 37 13.6	
	comp=Z,44nm,1.6s						
AAM	Ann Arbor	55.33	64	P	P	07 36 54.7	-1.0
	baz=312						
PARMO	Parma	55.65	73	P	P	07 36 56.2	-1.8
833A	Chaparral WMA,	55.66	87	P	P	07 36 57.9	-0.3
	baz=316						
WLAR	White Oak Lake	55.70	78	P	P	07 36 57.8	-0.6
I51A	Listowel	55.75	61	P	P	07 36 58.7	0.0
	baz=312						
HENM	Henderson Moun	55.78	73	P	P	07 36 58.5	-0.4
BLO	Bloomington	55.82	69	P	P	07 36 58.9	-0.3
BLO				pmax	pmax		
	comp=Z,39nm,1.2s						
BLO	Bloomington	55.82	69	P	P	07 36 58.9	-0.3
BLO				IAmb	IAmb	07 37 09.9	
	comp=Z,39nm,1.1s						
ALGO	Algonquin Park	55.88	57	P	P	07 36 59.0	-0.6
	baz=312						
N49A	Columbus Grove	55.96	66	P	P	07 36 58.9	-1.3
N49A				IAmb	IAmb	07 37 25.4	
	comp=Z,54nm,1.5s						
USIN	University of	55.98	70	P	P	07 36 59.3	-1.1
T45A	Paducah	56.06	72	P	P	07 36 58.9	-2.0
SADO	Sadowa	56.11	59	P	P	07 36 59.9	-1.3
NATX	Nacogdoches	56.11	81	P	P	07 37 01.0	-0.4
	baz=315						
NATX	Nacogdoches	56.11	81	P	P	07 37 01.1	-0.3
NATX				IAmb	IAmb	07 37 04.9	
	comp=Z,23nm,0.8s						
Z41A	Richland Creek	56.18	78	P	P	07 37 01.3	-0.6
	baz=314						
G54A	Lake Saint Pet	56.23	58	P	P	07 37 01.5	-0.6
	baz=312						
P48A	Milroy	56.25	68	P	P	07 37 01.4	-0.9

P48A				IAmb	IAmb	07 37 18.6	
	comp=Z,36nm,1.1s						
CCAR	**Cane Creek**	**56.34**	**77**	P	**P**	**07 37 04.1**	**+1.1**
O49A	**Covington**	**56.37**	**66**	P	**P**	**07 37 02.1**	**-1.0**
X43A	**Marvell**	**56.46**	**76**	P	**P**	**07 37 03.0**	**-0.9**
	baz=314						
D55A	**Sainte-Anne-du**	**56.48**	**55**	P	**P**	**07 37 02.7**	**-1.1**
	baz=313						
H53A	**Bobcaygeon**	**56.53**	**59**	P	**P**	**07 37 02.4**	**-1.9**
	baz=313						
E55A	**Montcerf-Lytto**	**56.57**	**56**	P	**P**	**07 37 03.2**	**-1.2**
	baz=313						
ANGG	**Ammassalik, Gr**	**56.58**	**22**	*e*P	**P**	**07 37 03.4**	**-0.8**
ANGG				IAmb	IAmb	07 37 04.7	
	comp=Z,60nm,1.1s						
WCI	**Wyandotte Cave**	**56.59**	**69**	P	**P**	**07 37 03.1**	**-1.7**
	baz=313						
P49A	**Miami Univ. Ec**	**56.60**	**67**	P	**P**	**07 37 03.0**	**-1.8**
	baz=313						
P49A	**Miami Univ. Ec**	**56.60**	**67**	P	**P**	**07 37 03.9**	**-0.9**
HKT	**Hockley**	**56.67**	**83**	*i* P	**P**	**07 37 05.2**	**-0.1**
HKT				pmax	pmax		
	comp=Z,6.0nm,1.2s						
HKT	**Hockley**	**56.67**	**83**	P	**P**	**07 37 05.7**	**+0.3**
HKT				IAmb	IAmb	07 37 29.3	
	comp=Z,83nm,1.8s						
D56A	**ZEC Mazanza, M**	**56.82**	**55**	P	**P**	**07 37 05.0**	**-1.2**
	baz=313						
N51A	**Ashland**	**56.97**	**64**	P	**P**	**07 37 06.3**	**-1.1**
N51A				IAmb	IAmb	07 37 30.7	
	comp=Z,32nm,1.1s						
T47A	**Sharon Grove**	**56.97**	**71**	P	**P**	**07 37 07.1**	**-0.4**
T47A				IAmb	IAmb	07 37 09.9	
	comp=Z,26nm,0.9s						
PLVO	**Plevna**	**57.01**	**58**	P	**P**	**07 37 07.2**	**-0.4**
PLVO				IAmb	IAmb	07 37 29.8	
	comp=Z,46nm,1.1s						
W45A	**Hickory Valley**	**57.02**	**74**	P	**P**	**07 37 08.4**	**+0.6**
E56A	**St. Veronique**	**57.02**	**55**	P	**P**	**07 37 06.5**	**-1.2**
	baz=313						
HAMF	**Hammerfest**	**57.04**	**355**	*e*P	**P**	**07 37 06.8**	**-0.6**
ACSO	**Alum Creek Sta**	**57.10**	**65**	P	**P**	**07 37 06.8**	**-1.5**
	baz=313						
ACSO	**Alum Creek Sta**	**57.10**	**65**	P	**P**	**07 37 07.3**	**-1.0**
ACSO				IAmb	IAmb	07 38 01.6	
	comp=Z,77nm,1.6s						
M52A	**Chesterland**	**57.10**	**63**	P	**P**	**07 37 07.7**	**-0.7**
M52A				IAmb	IAmb	07 37 56.1	
	comp=Z,24nm,1.0s						
WVT	**Waverly**	**57.14**	**72**	P	**P**	**07 37 07.9**	**-0.8**
	baz=314						
WVT	**Waverly**	**57.14**	**72**	P	**P**	**07 37 07.9**	**-0.8**
WVT				pmax	pmax		
	comp=Z,28nm,1.1s						
WVT	**Waverly**	**57.14**	**72**	P	**P**	**07 37 07.9**	**-0.8**
WVT				IAmb	IAmb	07 37 32.1	
	comp=Z,28nm,1.1s						
OXF	**Oxford**	**57.34**	**75**	P	**P**	**07 37 08.6**	**-1.4**
	baz=314						
OXF	**Oxford**	**57.34**	**75**	P	**P**	**07 37 09.5**	**-0.5**
OXF				pmax	pmax		
	comp=Z,120nm,1.1s						
OXF	**Oxford**	**57.34**	**75**	P	**P**	**07 37 09.5**	**-0.5**
143A	**Socs Landing,**	**57.41**	**77**	P	**P**	**07 37 12.2**	**+1.6**
L53A	**Girard**	**57.42**	**62**	P	**P**	**07 37 09.0**	**-1.6**
	baz=313						
ERPA	**Erie**	**57.45**	**62**	P	**P**	**07 37 09.1**	**-1.7**
	baz=313						
M53A	**WI Miller and**	**57.55**	**63**	P	**P**	**07 37 10.3**	**-1.1**
	baz=314						
M53A	**WI Miller and**	**57.55**	**63**	P	**P**	**07 37 10.4**	**-1.0**
M53A				IAmb	IAmb	07 37 34.7	
	comp=Z,43nm,1.1s						
E57A	**Chemin Saint G**	**57.56**	**55**	P	**P**	**07 37 10.4**	**-1.2**
	baz=314						
LATQ	**La Tuque**	**57.57**	**53**	P	**P**	**07 37 10.4**	**-1.1**
	baz=314						
R50A	**Paris**	**57.68**	**68**	P	**P**	**07 37 11.2**	**-1.2**
R50A				IAmb	IAmb	07 37 14.8	
	comp=Z,22nm,0.9s						
KEV	**Kevo**	**57.72**	**354**	P	**P**	**07 37 11.1**	**-1.1**
KEV				pmax	pmax		
	comp=Z,55nm,0.9s						
KEV	**Kevo**	**57.72**	**354**	P	**P**	**07 37 11.1**	**-1.1**
D58A	**Chemin du LacG**	**57.72**	**54**	P	**P**	**07 37 10.8**	**-1.8**
	baz=314						
Q51A	**Peebles**	**57.72**	**67**	P	**P**	**07 37 11.2**	**-1.5**
Q51A				IAmb	IAmb	07 37 37.4	
	comp=Z,48nm,1.0s						
ZAA0	**Zalesovo Array**	**57.76**	**318**	P	**P**	**07 37 12.4**	**-0.4**
ZALV	**Zalesovo Beam**	**57.76**	**318**	P	**P**	**07 37 12.6**	**-0.2**
	comp=Z,5.5nm,0.5s,baz=38,slow=7.5,SNR=22						
ZALV	**Zalesovo Beam**	**57.76**	**318**	*i* P	**P**	**07 37 12.6**	**-0.2**
ZALV				pmax	pmax		
	comp=Z,5.0nm,0.5s						
ZALV	**Zalesovo Beam**	**57.76**	**318**	P	**P**	**07 37 12.2**	**-0.6**
PLAL	**Pickwick Lake**	**57.80**	**73**	P	**P**	**07 37 12.3**	**-1.0**
PLAL				IAmb	IAmb	07 37 15.5	
	comp=Z,38nm,1.1s						
O52A	**Adamsville**	**57.82**	**65**	P	**P**	**07 37 12.6**	**-0.8**
WVNY	**West Valley, N**	**58.00**	**61**	P	**P**	**07 37 14.1**	**-0.6**
WVNY				IAmb	IAmb	07 37 17.7	
	comp=Z,36nm,1.0s						
E58A	**La Victoria**	**58.02**	**54**	P	**P**	**07 37 12.6**	**-2.1**
	baz=314						
ARA0	**ARCESS Array S**	**58.03**	**354**	*e*P	**P**	**07 37 14.1**	**-0.4**
ARCES	**ARCESS Array B**	**58.03**	**354**	P	**P**	**07 37 14.0**	**-0.5**
	comp=Z,29nm,0.8s,baz=3.7,slow=7.0,SNR=45						
ARCES	**ARCESS Array B**	**58.03**	**354**	P	**P**	**07 37 14.3**	**-0.2**
ARCES				pmax	pmax		
	comp=Z,26nm,0.9s						
ARCES	**ARCESS Array B**	**58.03**	**354**	P	**P**	**07 37 14.3**	**-0.2**
ARCES				IAmb	IAmb	07 37 15.5	
	comp=Z,26nm,0.8s						
G57A	**Newington**	**58.04**	**56**	P	**P**	**07 37 12.4**	**-2.4**
	baz=314						
CLTN	**Cedars of Leba**	**58.04**	**71**	P	**P**	**07 37 14.9**	**-0.1**
M54A	**Oil Creek Stat**	**58.05**	**62**	P	**P**	**07 37 13.3**	**-1.7**
	baz=314						
O53A	**New Philadelph**	**58.07**	**64**	P	**P**	**07 37 13.1**	**-2.0**
	baz=314						
U49A	**Red Boiling Sp**	**58.07**	**70**	P	**P**	**07 37 14.0**	**-1.2**
U49A				IAmb	IAmb	07 37 37.8	
	comp=Z,43nm,1.6s						
TRO	**Tromso**	**58.25**	**357**	*e*P	**P**	**07 37 16.2**	**+0.3**
N54A	**Moraine State**	**58.25**	**63**	P	**P**	**07 37 15.2**	**-1.2**
	baz=314						
N54A	**Moraine State**	**58.25**	**63**	P	**P**	**07 37 14.9**	**-1.5**
T50A	**Nancy**	**58.26**	**69**	P	**P**	**07 37 15.5**	**-1.0**
H57A	**Richville**	**58.27**	**57**	P	**P**	**07 37 15.3**	**-1.2**
	baz=314						
D59A	**Saint-Raymond**	**58.29**	**53**	P	**P**	**07 37 15.6**	**-1.0**
	baz=314						
G58A	**Ormstown**	**58.48**	**56**	P	**P**	**07 37 16.6**	**-1.3**
	baz=314						
K56A	**Middlesex**	**58.48**	**60**	P	**P**	**07 37 17.1**	**-1.0**
	baz=314						
I57A	**Carthage**	**58.50**	**58**	P	**P**	**07 37 16.9**	**-1.2**
	baz=314						
P53A	**Whipple**	**58.50**	**65**	P	**P**	**07 37 18.0**	**-0.1**
M55A	**Ridgway**	**58.56**	**62**	P	**P**	**07 37 18.4**	**-0.3**
O54A	**Avella**	**58.58**	**64**	P	**P**	**07 37 17.7**	**-1.0**
LONY	**Lake Ozonia**	**58.58**	**57**	P	**P**	**07 37 16.6**	**-2.0**
	baz=314						
F59A	**Saint Guilaume**	**58.63**	**55**	P	**P**	**07 37 17.8**	**-1.2**
	baz=314						
KTK1	**Kautokeino**	**58.68**	**355**	*e*P	**P**	**07 37 18.5**	**-0.5**
J57A	**Williamstown**	**58.69**	**58**	P	**P**	**07 37 17.8**	**-1.6**
	baz=314						
J57A	**Williamstown**	**58.69**	**58**	P	**P**	**07 37 18.9**	**-0.5**
L56A	**Greenwood**	**58.75**	**60**	P	**P**	**07 37 18.0**	**-1.9**
	baz=314						
L56A	**Greenwood**	**58.75**	**60**	P	**P**	**07 37 19.6**	**-0.3**
X48A	**Hartselle**	**58.77**	**73**	P	**P**	**07 37 18.9**	**-1.3**
X48A				IAmb	IAmb	07 37 36.8	
	comp=Z,36nm,1.3s						
WHN	**Wuhan**	**58.78**	**281**	⇑P	**P**	**07 37 20.3**	**+0.1**
WHN				sP	**pwP**	**07 37 32.9**	**-0.4**
WHN				S	S	07 45 14.1	-9.0
WHN				pmax	pmax		
	comp=Z,96nm,0.8s						
WHN				pmax	pmax		
	comp=Z,940nm,3.0s						
WHN				LR	LR		
	comp=Z,2μm,13.7s						
WHN				LR	LR		
	comp=Z,620nm,15.1s						
WHN				LR	LR		
	comp=Z,3μm,17.8s						
D60A	**Saint Jean D’O**	**58.80**	**53**	P	**P**	**07 37 19.0**	**-1.1**
	baz=315						
LVZ	**Lovozero**	**58.86**	**350**	⇑*e*P	**P**	**07 37 18.6**	**-1.7**
LVZ				pmax	pmax		
	comp=Z,134nm,1.0s						
LVZ	**Lovozero**	**58.86**	**350**	P	**P**	**07 37 19.6**	**-0.7**
146A	**Union**	**58.86**	**76**	P	**P**	**07 37 20.4**	**-0.3**
Q53A	**Leroy**	**58.86**	**66**	P	**P**	**07 37 19.7**	**-1.0**
	baz=314						
H58A	**Gabriels**	**58.93**	**57**	P	**P**	**07 37 20.0**	**-1.1**
	baz=314						
E60A	**Ste Agathe de**	**58.93**	**53**	P	**P**	**07 37 19.4**	**-1.7**
	baz=315						
D61A	**St Aubert, Com**	**58.96**	**52**	P	**P**	**07 37 19.6**	**-1.6**
	baz=315						
F60A	**Warwick**	**58.96**	**54**	P	**P**	**07 37 19.1**	**-2.1**
	baz=315						
G59A	**Clarenceville**	**58.97**	**55**	P	**P**	**07 37 19.8**	**-1.5**
	baz=315						
R53A	**Hurricane**	**58.99**	**66**	P	**P**	**07 37 22.3**	**+0.7**
H59A	**Cadyville**	**59.02**	**56**	P	**P**	**07 37 20.4**	**-1.3**
	baz=315						
I58A	**Old Forge**	**59.03**	**58**	P	**P**	**07 37 20.8**	**-1.0**
	baz=314						
Z47A	**Carrollton**	**59.05**	**75**	P	**P**	**07 37 21.8**	**-0.3**
Z47A				IAmb	IAmb	07 37 24.2	
	comp=Z,36nm,1.1s						
N56A	**West Decatur**	**59.20**	**62**	P	**P**	**07 37 22.1**	**-0.9**
	baz=314,SNR=6.1						
L57A	**Andrews Acres**	**59.22**	**60**	P	**P**	**07 37 21.8**	**-1.4**
	baz=314						
MCWV	**Mont Chateau**	**59.23**	**64**	P	**P**	**07 37 21.7**	**-1.6**
	baz=314						
MCWV	**Mont Chateau**	**59.23**	**64**	P	**P**	**07 37 23.2**	**-0.1**
MCWV				IAmb	IAmb	07 37 26.8	
	comp=Z,39nm,1.4s						
W50A	**Signal Mountai**	**59.26**	**71**	P	**P**	**07 37 23.2**	**-0.4**
W50A				IAmb	IAmb	07 37 53.4	
	comp=Z,26nm,1.1s						
K58A	**Earlville**	**59.32**	**59**	P	**P**	**07 37 23.5**	**-0.4**
	baz=315						
TZTN	**Tazewell**	**59.33**	**69**	P	**P**	**07 37 22.9**	**-1.1**
	baz=315						
J59A	**Piesco**	**59.43**	**58**	P	**P**	**07 37 23.9**	**-0.7**
	baz=315						
F61A	**St Evariste**	**59.43**	**53**	P	**P**	**07 37 23.6**	**-0.9**
	baz=315						
O56A	**Blue Knob Stat**	**59.51**	**63**	P	**P**	**07 37 24.7**	**-0.5**
	baz=315						
M57A	**Sunshine Farm,**	**59.54**	**61**	P	**P**	**07 37 24.6**	**-0.7**
	baz=315						
BINY	**Binghamton**	**59.54**	**59**	P	**P**	**07 37 24.7**	**-0.6**
	baz=315						
BINY	**Binghamton**	**59.54**	**59**	P	**P**	**07 37 25.8**	**+0.4**
FPAL	**Fort Paine**	**59.55**	**72**	P	**P**	**07 37 24.2**	**-1.3**
Y49A	**Blount Mountai**	**59.56**	**73**	P	**P**	**07 37 23.8**	**-1.8**
Y49A				IAmb	IAmb	07 37 49.9	
	comp=Z,28nm,1.1s						
H60A	**Morristown**	**59.58**	**56**	P	**P**	**07 37 25.4**	**-0.2**
	baz=315						
R54A	**Victor**	**59.63**	**66**	P	**P**	**07 37 24.9**	**-1.1**
	baz=315						
SSLB	**Suanglung**	**59.64**	**270**	P	**P**	**07 37 25.6**	**-0.7**
G61A	**St-Isidore-de-**	**59.66**	**54**	P	**P**	**07 37 24.4**	**-1.7**
	baz=315						
N2VI	**Vinje**	**59.67**	**359**	*e*P	**P**	**07 37 26.3**	**+0.5**
DGZ	**Jazzator, Alta**	**59.71**	**313**	*i* P	**P**	**07 37 26.8**	**+0.2**
DGZ				pmax	pmax		
	comp=Z,27nm,0.9s						
N57A	**Milroy**	**59.72**	**62**	P	**P**	**07 37 25.5**	**-1.1**
	baz=315						
S54A	**Dingess, Beckl**	**59.72**	**66**	P	**P**	**07 37 25.6**	**-1.1**
	baz=315						
S54A	**Dingess, Beckl**	**59.72**	**66**	P	**P**	**07 37 26.8**	**+0.1**
L58A	**Harry Jones Me**	**59.72**	**59**	P	**P**	**07 37 25.7**	**-1.0**
	baz=315						
YULB	**Yu-li**	**59.73**	**270**	P	**P**	**07 37 29.3**	**+2.4**
K59A	**Cooperstown**	**59.73**	**58**	P	**P**	**07 37 25.6**	**-1.1**
	baz=315						
LRAL	**Lakeview Retre**	**59.80**	**74**	P	**P**	**07 37 25.9**	**-1.3**
	baz=316						
M58A	**Price’s Panora**	**59.87**	**60**	P	**P**	**07 37 26.2**	**-1.4**
	baz=315						
LOF	**Lofoten**	**59.87**	**359**	*e*P	**P**	**07 37 27.1**	**-0.1**
P56A	**Dayton Farm, R**	**59.90**	**63**	P	**P**	**07 37 26.6**	**-1.2**
	baz=315						
H61A	**Lyndonville**	**59.99**	**55**	P	**P**	**07 37 27.0**	**-1.4**
	baz=315						
N2IH	**Innhavet**	**60.00**	**358**	*e*P	**P**	**07 37 27.9**	**-0.2**
Q56A	**Snyder Ridge,**	**60.03**	**64**	P	**P**	**07 37 26.9**	**-1.9**
	baz=315						
L59A	**Walton**	**60.05**	**59**	P	**P**	**07 37 28.5**	**-0.3**
	baz=315						
L59A	**Walton**	**60.05**	**59**	P	**P**	**07 37 28.1**	**-0.7**
O57A	**Amberson**	**60.06**	**62**	P	**P**	**07 37 27.0**	**-1.9**
	baz=315						
D63A	**Stockholm**	**60.08**	**51**	P	**P**	**07 37 27.0**	**-2.0**
	baz=316						
N58A	**Sunbury**	**60.11**	**61**	P	**P**	**07 37 27.1**	**-2.2**
	baz=315						
J60A	**Lant Hill Farm**	**60.14**	**57**	P	**P**	**07 37 28.5**	**-1.0**
	baz=315						
LBNH	**Lisbon**	**60.20**	**55**	P	**P**	**07 37 28.5**	**-1.4**
	baz=316						
M59A	**Waymart**	**60.30**	**60**	P	**P**	**07 37 29.3**	**-1.3**
	baz=315						
U54A	**Nelsons Funny**	**60.33**	**68**	P	**P**	**07 37 29.4**	**-1.6**
	baz=315						
K60A	**Five Rivers En**	**60.35**	**58**	P	**P**	**07 37 28.4**	**-2.4**
	baz=315						
H62A	**Milan**	**60.35**	**55**	P	**P**	**07 37 28.9**	**-1.9**
	baz=316						
P57A	**Homestead Farm**	**60.36**	**63**	P	**P**	**07 37 29.7**	**-1.3**
	baz=315						
E63A	**Oxbow**	**60.37**	**52**	P	**P**	**07 37 29.2**	**-1.7**
	baz=316						
Q57A	**Strasburg**	**60.46**	**64**	P	**P**	**07 37 30.5**	**-1.2**
	baz=315						
O58A	**Lewisberry**	**60.50**	**62**	P	**P**	**07 37 31.3**	**-0.7**
	baz=315						
J61A	**Chester**	**60.52**	**56**	P	**P**	**07 37 30.1**	**-1.9**
	baz=316						
F63A	**Nahmakanta, Br**	**60.55**	**53**	P	**P**	**07 37 30.2**	**-2.1**
	baz=316						
N59A	**State Game Lan**	**60.56**	**60**	P	**P**	**07 37 29.6**	**-2.8**
	baz=315						
FAUS	**Fauske**	**60.60**	**358**	*e*P	**P**	**07 37 31.6**	**-0.6**
L60A	**Shokan**	**60.62**	**59**	P	**P**	**07 37 30.5**	**-2.2**
	baz=316						
BLA	**Blacksburg**	**60.64**	**66**	P	**P**	**07 37 32.2**	**-0.8**
	baz=315,SNR=7.4						
BLA	**Blacksburg**	**60.64**	**66**	P	**P**	**07 37 32.7**	**-0.3**
BLA				pmax	pmax		
	comp=Z,61nm,1.0s						
BLA	**Blacksburg**	**60.64**	**66**	P	**P**	**07 37 32.7**	**-0.3**
E64A	**Bridgewater**	**60.65**	**51**	P	**P**	**07 37 31.3**	**-1.6**
	baz=316						
O59A	**Robesonia**	**60.77**	**61**	P	**P**	**07 37 32.3**	**-1.5**
	baz=316						
S56A	**Natural Bridge**	**60.78**	**65**	P	**P**	**07 37 33.3**	**-0.6**
	baz=315,SNR=12						
F64A	**Sherman**	**60.80**	**52**	P	**P**	**07 37 32.3**	**-1.6**
	baz=316						
L61A	**Hillsdale 1, H**	**60.82**	**58**	P	**P**	**07 37 33.6**	**-0.5**
	baz=316						
M60A	**Port Jervis**	**60.88**	**59**	P	**P**	**07 37 33.1**	**-1.4**
	baz=316						
GTA	**Gaotai**	**60.90**	**298**	⇑P	**P**	**07 37 34.5**	**-0.3**
GTA				pP	pwP	07 37 47.0	-0.7
GTA				sP	sP	07 37 51.9	+4.8
GTA				pmax	pmax		
	comp=Z,17nm,0.7s						
R57A	**Stanardsville**	**60.92**	**64**	P	**P**	**07 37 34.5**	**-0.4**
	baz=316,SNR=5.9						
Q58A	**Fox Den Farm,**	**60.93**	**63**	P	**P**	**07 37 32.9**	**-2.0**
	baz=316						
N60A	**Cedar Hill Far**	**60.95**	**60**	P	**P**	**07 37 32.9**	**-2.1**
	baz=316						
J62A	**Henniker**	**60.98**	**56**	P	**P**	**07 37 34.1**	**-1.1**
	baz=316						
T56A	**Rocky Mt**	**60.98**	**66**	P	**P**	**07 37 34.7**	**-0.6**
	baz=316						
LZH	**Lanzhou**	**61.02**	**292**	⇓P	**P**	**07 37 36.8**	**+1.1**
LZH				pP	pwP	07 37 48.4	0.0
LZH				pmax	pmax		
	comp=Z,26nm,1.1s						
S57A	**Dark Hollow, R**	**61.07**	**65**	P	**P**	**07 37 34.9**	**-1.0**
	baz=316						
S57A	**Dark Hollow, R**	**61.07**	**65**	P	**P**	**07 37 35.2**	**-0.7**
S57A				IAmb	IAmb	07 37 59.8	
	comp=Z,37nm,1.1s						
BRAL	**Brewton**	**61.10**	**76**	P	**P**	**07 37 35.3**	**-0.8**
	baz=316						
P59A	**Jarrettsville**	**61.13**	**62**	P	**P**	**07 37 33.9**	**-2.4**
	baz=316						
K62A	**Royalston**	**61.17**	**57**	P	**P**	**07 37 34.9**	**-1.5**
	baz=316						
O60A	**Telford**	**61.18**	**61**	P	**P**	**07 37 34.9**	**-1.7**
	baz=316						
R58A	**Rapidan**	**61.21**	**64**	P	**P**	**07 37 35.9**	**-0.8**
	baz=316						
H64A	**Troy**	**61.26**	**53**	P	**P**	**07 37 36.4**	**-0.7**
	baz=316						
U56A	**King**	**61.27**	**67**	P	**P**	**07 37 36.2**	**-1.0**
	baz=316						
J63A	**Strafford**	**61.31**	**56**	P	**P**	**07 37 36.8**	**-0.6**
	baz=316						
M61A	**Granite Spring**	**61.34**	**59**	P	**P**	**07 37 36.7**	**-0.9**
	baz=316						
152A	**Waverly Hall**	**61.40**	**73**	P	**P**	**07 37 37.8**	**-0.4**
152A				IAmb	IAmb	07 39 03.1	
	comp=Z,48nm,1.6s						
P60A	**Greenville**	**61.42**	**61**	P	**P**	**07 37 37.1**	**-1.1**
	baz=316						
T57A	**Hurt**	**61.44**	**66**	P	**P**	**07 37 37.0**	**-1.4**
	baz=316						
T57A	**Hurt**	**61.44**	**66**	P	**P**	**07 37 37.6**	**-0.8**
T57A				IAmb	IAmb	07 37 41.0	
	comp=Z,31nm,0.9s						
N61A	**South Mountain**	**61.46**	**60**	P	**P**	**07 37 37.0**	**-1.5**
	baz=316						
PAL	**Palisades**	**61.48**	**59**	P	**P**	**07 37 37.8**	**-0.8**
	baz=316						
R58B	**Mineral**	**61.52**	**64**	P	**P**	**07 37 38.0**	**-0.8**
	baz=316						
R58B	**Mineral**	**61.52**	**64**	P	**P**	**07 37 37.8**	**-1.0**
KMSC	**Kings Mountain**	**61.59**	**69**	P	**P**	**07 37 37.9**	**-1.6**
	baz=316						
V56A	**Mocksville**	**61.59**	**67**	P	**P**	**07 37 38.1**	**-1.4**
	baz=316						
GOGA	**Godfrey**	**61.60**	**71**	P	**P**	**07 37 37.4**	**-2.1**
	baz=316						
GOGA	**Godfrey**	**61.60**	**71**	P	**P**	**07 37 38.7**	**-0.8**
GOGA				pmax	pmax		
	comp=Z,21nm,0.9s						
GOGA	**Godfrey**	**61.60**	**71**	P	**P**	**07 37 38.7**	**-0.8**
GOGA				IAmb	IAmb	07 37 41.0	
	comp=Z,21nm,0.8s						
CBN	**Corbin Frederi**	**61.62**	**64**	P	**P**	**07 37 38.6**	**-0.9**
	baz=316						
S58A	**Poland Farm, P**	**61.67**	**64**	P	**P**	**07 37 39.6**	**-0.4**
	baz=316						
S58A	**Poland Farm, P**	**61.67**	**64**	P	**P**	**07 37 39.8**	**-0.2**
HODGE	**Hodges**	**61.71**	**70**	P	**P**	**07 37 39.9**	**-0.3**
R59A	**King George, V**	**61.77**	**63**	P	**P**	**07 37 40.3**	**-0.3**
	baz=316						
O61A	**Allentown**	**61.80**	**60**	P	**P**	**07 37 38.8**	**-1.9**
	baz=316						
U57A	**Blanch**	**61.80**	**66**	P	**P**	**07 37 40.0**	**-0.8**
	baz=316						
MOR8	**Moi Rana**	**61.83**	**359**	*e*P	**P**	**07 37 39.3**	**-1.3**
T58A	**Grand View Acr**	**61.88**	**65**	P	**P**	**07 37 40.4**	**-0.9**
	baz=316						
Q60A	**Greensboro**	**61.89**	**62**	P	**P**	**07 37 40.4**	**-1.0**
	baz=316						
ENH	**Enshi**	**61.89**	**284**	P	**P**	**07 37 41.0**	**-0.5**
V57A	**Coltrane Farms**	**61.94**	**67**	P	**P**	**07 37 41.2**	**-0.6**
	baz=316						
S59A	**Mechanicsville**	**61.98**	**64**	P	**P**	**07 37 41.4**	**-0.6**
	baz=316,SNR=6.9						
R60A	**Leonardtown, M**	**62.01**	**63**	P	**P**	**07 37 41.6**	**-0.6**
	baz=316						
TMCR	**Tamitsa**	**62.02**	**347**	*e*P	**P**	**07 37 41.2**	**-0.6**
TMCR				pmax	pmax		
	comp=Z,66nm,0.4s						
W56A	**Indian Trail**	**62.03**	**68**	P	**P**	**07 37 41.2**	**-1.1**
	baz=316						
352A	**Blakely**	**62.13**	**74**	P	**P**	**07 37 42.1**	**-1.0**
SEM	**Semipalatinsk**	**62.28**	**318**	*e*P	**P**	**07 37 42.7**	**-1.5**
	baz=318						
SEM				LR	LR	08 04 57.6	
	comp=Z,788nm,16.5s,baz=318						
SEM	**Semipalatinsk**	**62.28**	**318**	*e*P	**P**	**07 37 42.6**	**-1.5**
SEM				MLR	MLR		
	comp=Z,788nm,16.0s						
V58A	**Windy Hill, Pi**	**62.38**	**67**	P	**P**	**07 37 44.4**	**-0.3**
	baz=316						
OUL	**Oulu**	**62.41**	**353**	P	**P**	**07 37 44.3**	**-0.1**
OUL				pmax	pmax		
	comp=Z,77nm,0.9s						
T59A	**Double "B" Far**	**62.41**	**65**	P	**P**	**07 37 43.9**	**-0.9**
	baz=316,SNR=5.4						
T59A	**Double "B" Far**	**62.41**	**65**	P	**P**	**07 37 45.6**	**+0.7**
ZSN	**Zaisan**	**62.52**	**313**	*e*P	**P**	**07 37 45.0**	**-0.5**
	comp=Z,41nm,0.8s,baz=313						
ZSN	**Zaisan**	**62.52**	**313**	*e*P	**P**	**07 37 45.0**	**-0.5**
ZSN				pmax	pmax		
	comp=Z,41nm,0.8s						
KURK	**Kurchatov**	**62.71**	**319**	P	**P**	**07 37 47.2**	**+0.5**
KURK				pmax	pmax		
	comp=Z,41nm,0.9s						
KURK	**Kurchatov**	**62.71**	**319**	P	**P**	**07 37 47.2**	**+0.5**
T60A	**Surry**	**62.74**	**64**	P	**P**	**07 37 46.5**	**-0.6**
	baz=316						
X57A	**Johnson Farm,**	**62.79**	**68**	P	**P**	**07 37 46.1**	**-1.3**
	baz=316						
W58A	**Raeford**	**62.87**	**67**	P	**P**	**07 37 47.2**	**-0.8**
	baz=316						
V59A	**Middlesex**	**62.90**	**66**	P	**P**	**07 37 47.8**	**-0.3**
	baz=316						
U60A	**Pendleton**	**62.99**	**65**	P	**P**	**07 37 48.6**	**-0.1**
	baz=317						
DRLN	**Deer Lake**	**63.19**	**43**	P	**P**	**07 37 49.7**	**-0.2**
V60A	**Jim Taylor Roa**	**63.44**	**65**	P	**P**	**07 37 51.1**	**-0.7**
	baz=317						
U61A	**Possum Corner**	**63.48**	**64**	P	**P**	**07 37 51.4**	**-0.6**
	baz=317						
W60A	**Pink Hill**	**63.71**	**66**	P	**P**	**07 37 51.7**	**-1.8**
	baz=317						
NHSC	**New Hope**	**63.72**	**69**	P	**P**	**07 37 53.0**	**-0.6**
	baz=317						
X60A	**Albert Glenn T**	**63.91**	**67**	P	**P**	**07 37 53.4**	**-1.4**
	baz=317						
WMQ	**Urumqi**	**63.91**	**308**	P	**P**	**07 37 55.3**	**+0.5**
WMQ				pP	pwP	07 38 07.2	-0.6
WMQ				sP	sP	07 38 14.6	+7.5
WMQ				S	**S**	**07 46 30.7**	**+2.5**
WMQ				SS	**SS**	**07 50 38.5**	**+2.5**
WMQ				pmax	pmax		
	comp=Z,61nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,260nm,5.1s						
WMQ				LR	LR		
	comp=Z,3μm,16.1s						
WMQ				LR	LR		
	comp=Z,1μm,16.7s						
WMQ				LR	LR		
	comp=Z,1μm,17.9s						
WMQ	**Urumqi**	**63.91**	**308**	P	**P**	**07 37 55.6**	**+0.7**
WMQ				pmax	pmax		
	comp=Z,66nm,1.2s						
WMQ	**Urumqi**	**63.91**	**308**	P	**P**	**07 37 55.6**	**+0.7**
SVE	**Sverdlovsk**	**63.95**	**332**	*d i*P	**P**	**07 37 55.3**	**+0.5**
SVE				pmax	pmax		
	comp=Z,53nm,1.1s						
BRVK	**Borovoye**	**64.02**	**325**	P	**P**	**07 37 55.3**	**0.0**
BRVK				pmax	pmax		
	comp=Z,44nm,1.0s						
BRVK	**Borovoye**	**64.02**	**325**	P	**P**	**07 37 55.3**	**0.0**
JOF	**Joensuu**	**64.05**	**350**	P	**P**	**07 37 55.3**	**0.0**
JOF				pmax	pmax		
	comp=Z,69nm,0.9s						
MK31	**Makanchi Array**	**64.17**	**314**	P	**P**	**07 37 55.2**	**-1.2**
MK31				pmax	pmax		
	comp=Z,24nm,0.8s						
MK31	**Makanchi Array**	**64.17**	**314**	P	**P**	**07 37 55.2**	**-1.2**
MK31				IAmb	IAmb	07 37 57.4	
	comp=Z,24nm,0.8s						
MKAR	**Makanchi Array**	**64.17**	**314**	P	**P**	**07 37 55.6**	**-0.8**
	comp=Z,31nm,0.8s,baz=49,slow=6.2,SNR=146						
MKAR				S	**S**	**07 46 32.5**	**+1.3**

	comp=Z,0.3nm,0.7s,baz=59,slow=12,SNR=2.4						
MKAR	Makanchi Array	64.17	314	P	P	07 37 55.9	-0.5
MKAR	Makanchi Array	64.17	314	P	P	07 37 55.9	-0.5
MAKZ	Makanchi	64.29	314	P	P	07 37 56.4	-0.9
MAKZ				pmax	pmax		
	comp=Z,30nm,0.8s						
MAKZ	Makanchi	64.29	314	P	P	07 37 56.4	-0.9
VAF	Ylistaro	64.65	354	P	P	07 37 59.5	+0.3
VAF				pmax	pmax		
	comp=Z,86nm,0.8s						
SUF	Sumiainen	64.73	353	P	P	07 38 00.0	+0.3
SUF				pmax	pmax		
	comp=Z,69nm,1.1s						
CD2	Chengdu	64.80	288	eP	P	07 37 59.8	-1.0
ARU	Arti	64.88	333c	iP	P	07 38 00.7	-0.1
ARU						07 38 33.3	
ARU						07 40 19.1	
ARU				S	S	07 46 40.4	+0.9
ARU				SS	SS	07 50 49.8	-0.4
ARU				pmax	pmax		
	comp=Z,54nm,1.1s						
ARU	Arti	64.88	333	P	P	07 38 00.1	-0.7
KLMR	Klimovskoe	64.96	345	eP	P	07 37 59.7	-1.5
KLMR				pmax	pmax		
	comp=Z,38nm,1.0s						
KLMR	Klimovskoe	64.96	345	eP	P	07 37 59.8	-1.5
KLMR				AMP		07 38 03.2	
	comp=Z,38nm,1.0s						
KIRV	Kirov	65.22	339⇑	eP	P	07 38 01.6	-1.4
MOL	Molde	65.43	2	eP	P	07 38 03.4	-0.9
BRZS	Berezniki	65.63	322	eP	P	07 38 05.1	-0.8
	comp=Z,14nm,1.1s,baz=322						
BRZS	Berezniki	65.63	322	eP	P	07 38 05.0	-0.8
BRZS				pmax	pmax		
	comp=Z,15nm,1.1s						
TAOE	Nuku Hiva Isla	65.64	149	eLR	LR	07 57 09.9	
	comp=Z,811nm,27.2s						
TAOE	Nuku Hiva Isla	65.64	149	eT	T	08 49 58.9	
	comp=Z,20nm,0.2s						
AKN	Aaknes	65.81	2	eP	P	07 38 07.4	+0.6
DOMB	Dombas	65.98	1	eP	P	07 38 08.0	+0.1
FIA1	FINESS Array S	65.99	352	P	P	07 38 07.5	-0.4
FINES	FINESS Array B	65.99	352	P	P	07 38 07.7	-0.3
	comp=Z,47nm,0.7s,baz=12,slow=6.9,SNR=96						
FINES	FINESS Array B	65.99	352	P	P	07 38 07.3	-0.7
FINES	FINESS Array B	65.99	352	P	P	07 38 07.3	-0.7
GYA	Guiyang	66.37	283	⇑P	P	07 38 11.4	+0.3
GYA				pP	pwP	07 38 23.6	-0.6
GYA				pmax	pmax		
	comp=Z,28nm,0.9s						
GYA				pmax	pmax		
	comp=Z,310nm,3.5s						
NC204	NORSAR Array S	66.77	0	P	P	07 38 12.5	-0.5
NC303	NORSAR Array S	66.82	360	P	P	07 38 13.2	-0.1
NC405	NORSAR Array S	66.93	360	P	P	07 38 14.3	+0.3
NB201	NORSAR Array S	67.00	0	P	P	07 38 14.4	0.0
NB2	NORSAR Subarra	67.01	0	P	P	07 38 14.5	0.0
	comp=Z,15nm,0.8s,baz=359,slow=6.2						
NB2	NORSAR Subarra	67.01	0	P	P	07 38 14.5	0.0
	baz=359,slow=6.2						
NOA	NORSAR Array B	67.01	0	P	P	07 38 14.4	0.0
	comp=Z,19nm,0.7s,baz=0.2,slow=6.3,SNR=61						
NBO00	NORSAR Array S	67.01	0	P	P	07 38 14.4	-0.1
PUL	Pulkovo	67.23	350⇑	eP	P	07 38 15.7	-0.2
PUL				pmax	pmax		
	comp=Z,48nm,0.4s						
TDK	Taldyqorghan	67.26	315	eP	P	07 38 16.0	-0.4
	comp=Z,68nm,0.9s,baz=315						
TDK	Taldyqorghan	67.26	315	eP	P	07 38 16.0	-0.4
TDK				pmax	pmax		
	comp=Z,68nm,0.9s						
NC602	NORSAR Array S	67.31	360	P	P	07 38 16.2	-0.2
NORES	NORESS Array B	67.31	360	P	P	07 38 16.6	+0.2
NORES				pmax	pmax		
	comp=Z,21nm,0.9s						
SKAR	Skarslia	67.34	2	eP	P	07 38 17.0	+0.4
ASK	Askoy	67.46	3	eP	P	07 38 17.4	+0.2
BER	Bergen	67.56	3	eP	P	07 38 17.9	0.0
AAL	Aland	67.65	355	eP	P	07 38 17.6	-0.9
ODD1	Odda	68.07	3	eP	P	07 38 21.8	+0.5
UPP	Uppsala	68.08	357	eP	P	07 38 21.4	+0.3
PDGK	Podgornoye	68.11	313	iP	P	07 38 21.8	-0.1
PDGK				pmax	pmax		
	comp=Z,62nm,0.9s						
OSL	Oslo	68.11	0	eP	P	07 38 22.0	+0.6
SHLS	Shalkode	68.25	313	eP	P	07 38 21.4	-1.4
	comp=Z,64nm,0.9s,baz=313						
SHLS	Shalkode	68.25	313	eP	P	07 38 21.4	-1.4
SHLS				pmax	pmax		
	comp=Z,64nm,0.9s						
KPKS	Kokpek	68.36	314	eP	P	07 38 23.2	-0.2
	comp=Z,43nm,0.9s,baz=314						
KPKS	Kokpek	68.36	314	eP	P	07 38 23.2	-0.2
KPKS				pmax	pmax		
	comp=Z,43nm,0.9s						
KONO	Kongsberg	68.39	1	P	P	07 38 23.3	+0.1
KONO				pmax	pmax		
	comp=Z,34nm,0.9s						
KONO	Kongsberg	68.39	1	P	P	07 38 23.3	+0.1
CHKK	Chushkaly	68.79	315	eP	P	07 38 24.9	-1.2
	baz=315						
CHKK	Chushkaly	68.79	315	eP	P	07 38 24.8	-1.2
SATY	Saty	68.80	314	eP	P	07 38 25.9	-0.3
	comp=Z,14nm,1.1s,baz=314						
SATY	Saty	68.80	314	eP	P	07 38 25.9	-0.3
SATY				pmax	pmax		
	comp=Z,14nm,1.1s						
MTSE	Matsula	68.88	353	eP	P	07 38 26.4	+0.2
VSU	Vasula	68.88	351	eP	P	07 38 26.8	+0.5
VSU	Vasula	68.88	351	iP	P	07 38 25.3	-0.9
VSU				pmax	pmax		
	comp=Z,191nm,0.8s						
KUU	Kurty	69.04	315	eP	P	07 38 26.4	-1.2
	comp=Z,26nm,1.0s,baz=315						
KUU	Kurty	69.04	315	eP	P	07 38 26.3	-1.2
KUU				pmax	pmax		
	comp=Z,26nm,1.0s						
BTLS	Baital	69.08	318	eP	P	07 38 27.4	-0.4
	comp=Z,17nm,0.8s,baz=318						
BTLS	Baital	69.08	318	eP	P	07 38 27.3	-0.4
BTLS				pmax	pmax		
	comp=Z,17nm,0.8s						
JAY	Jayapura	69.23	236	LR	LR	08 04 47.8	
	comp=Z,492nm,20.8s,baz=7.0,slow=32						
MDOK	Medeo	69.32	315	eP	P	07 38 29.2	-0.3
	baz=314						
MDOK	Medeo	69.32	315	eP	P	07 38 29.2	-0.3
AAA	Alma-Ata	69.34	315	eP	P	07 38 29.4	-0.1
	comp=Z,57nm,1.1s,baz=315						
AAA	Alma-Ata	69.34	315	eP	P	07 38 29.4	-0.1
AAA				pmax	pmax		
	comp=Z,57nm,1.1s						
TNSS	Tian-Shan	69.46	315	eP	P	07 38 30.4	-0.3
	baz=314						
TNSS	Tian-Shan	69.46	315	eP	P	07 38 30.3	-0.3
MTBS	Maitube	69.62	315	eP	P	07 38 31.0	-0.2
	baz=315						
MTBS	Maitube	69.62	315	eP	P	07 38 31.0	-0.2
SNART	Snartemo	69.66	2	eP	P	07 38 31.4	+0.3
SNART	Snartemo	69.66	2	iP	P	07 38 30.0	-1.1
SNART				iP	pP	07 38 31.7	-8.3
KMI	Kunming	69.70	285	⇑P	P	07 38 32.9	+0.7
KMI				pP	sP	07 38 43.7	-0.7
KMI				sP	pwP	07 38 46.9	+1.5
KMI				S	S	07 47 34.0	-4.9
KMI				pmax	pmax		
	comp=Z,57nm,1.1s						
KMI				pmax	pmax		
	comp=Z,350nm,3.5s						
KMI				LR	LR		
	comp=Z,520nm,15.9s						
KMI				LR	LR		
	comp=Z,860nm,17.4s						
KMI				LR	LR		
	comp=Z,1µm,17.0s						
KMI	Kunming	69.70	285	P	P	07 38 33.4	+1.2
KMI				pmax	pmax		
	comp=Z,49nm,0.9s						
KMI	Kunming	69.70	285	P	P	07 38 33.4	+1.2
HOMB	Homborsund	69.76	2	eP	P	07 38 32.5	+0.9
HOMB	Homborsund	69.76	2	iP	P	07 38 32.3	+0.7
SLIT	Slitere, Latvi	70.06	354	eP	P	07 38 33.7	+0.1
SGDS	Sogindy	70.13	316	eP	P	07 38 34.0	-0.3
	comp=Z,10.0nm,1.0s,baz=316						
SGDS	Sogindy	70.13	316	eP	P	07 38 34.0	-0.3
SGDS				pmax	pmax		
	comp=Z,10.0nm,1.0s						
TKM2	Tokmak 2	70.14	315	P	P	07 38 35.1	+0.4
	SNR=16						
MOS	Moscow	70.15	345	eP	P	07 38 33.2	-0.9
MOS				e		07 38 42.3	
MOS				pmax	pmax		
	comp=Z,84nm,0.7s						
AKTO	Aktyubinsk	70.28	330	iP	P	07 38 35.1	0.0
AKTO				pmax	pmax		
	comp=Z,72nm,0.9s						
USP	Ospenovka	70.33	316	P	P	07 38 36.2	+0.7
	SNR=35						
ULHL	Ulahol	70.41	314	P	P	07 38 36.6	+0.3
	SNR=6.3						
CHMS	Chumysh	70.44	316	P	P	07 38 36.4	+0.2
	SNR=14						
KBK	Karagaybulak	70.64	316	P	P	07 38 38.3	+0.7
	SNR=31						
ABKAR	Akbulak array	70.72	329	P	P	07 38 38.5	+0.7
ABKAR	Akbulak array	70.72	329	P	P	07 38 38.3	+0.6
AAK	Ala-Archa	70.85	316	P	P	07 38 39.5	+0.6
	SNR=32						
AAK	Ala-Archa	70.85	316	P	P	07 38 38.6	-0.3
AAK				pmax	pmax		
	comp=Z,44nm,0.8s						
AAK	Ala-Archa	70.85	316	P	P	07 38 38.6	-0.3
OBN	Obninsk	70.92	345	P	P	07 38 38.4	-0.4
	comp=Z,19nm,0.7s,baz=340,slow=2.4,SNR=11						
OBN	Obninsk	70.92	345c	iP	P	07 38 38.3	-0.5
OBN				e*SP	pP	07 38 46.3	-1.4
OBN				e		07 38 49.7	
OBN				e		07 48 40.6	
OBN				pmax	pmax		
	comp=Z,83nm,0.9s						
OBN				MLR	MLR		
	comp=Z,1µm,17.0s						
OBN	Obninsk	70.92	345	P	P	07 38 37.9	-0.9
EKS2	Erkin-Say	71.14	316	P	P	07 38 41.2	+0.7
	SNR=27						
UCH	Uchtor	71.17	316	P	P	07 38 41.9	+0.7
	SNR=9.5						
BELG	Belogornoye	71.31	337	P	P	07 38 41.1	-0.1
PPT	Papeete	71.53	161	LR	LR	08 10 41.6	
	comp=Z,339nm,18.3s,baz=335,slow=36						
PPT2	Papeete2	71.55	161	eLR	LR	07 59 53.2	
	comp=Z,847nm,27.2s						
MUD	Monsted U'grnd	71.59	1	iP	P	07 38 43.8	+1.0
	comp=Z,17nm,0.8s						
MUD	Monsted U'grnd	71.59	1	iP	P	07 38 43.8	+1.0
MUD				pmax	pmax		
	comp=Z,17nm,0.8s						
MUD	Monsted U'grnd	71.59	1	iP	P	07 38 43.8	+1.0
MUD				IAmb	IAmb	07 38 44.4	
	comp=Z,17nm,0.8s						
AML	Almayashu	71.60	316	P	P	07 38 44.7	+0.9
	SNR=22						
PBUR	Paburge	71.68	354	eP	P	07 38 43.7	+0.3
ISAL	Salakas	71.80	351	eP	P	07 38 44.4	+0.3
ISAL				IAmb	IAmb	07 38 47.7	
	comp=Z,21nm,1.0s						
SLVN	Son La	71.88	281	P	P	07 38 45.1	-0.1
SLVN				IAmb	IAmb	07 39 00.4	
	comp=Z,36nm,1.0s						
DZA	Taraz	71.97	318	eP	P	07 38 45.4	-0.1
	comp=Z,10nm,0.9s,baz=318						
DZA	Taraz	71.97	318	eP	P	07 38 45.3	-0.1
DZA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
IDID	Didziasalis	71.99	351	eP	P	07 38 45.9	+0.7
IDID				IAmb	IAmb	07 38 48.3	
	comp=Z,28nm,1.1s						
PABE	Paberze	72.05	352	eP	P	07 38 45.8	+0.2
EKA	Eskdalemuir Ar	72.06	9	P	P	07 38 45.7	0.0
EKA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ESK	Eskdalemuir	72.07	9	P	P	07 38 46.0	+0.2
ESK				pmax	pmax		
	comp=Z,31nm,1.0s						
ESK	Eskdalemuir	72.07	9	P	P	07 38 46.0	+0.2
ESK				IAmb	IAmb	07 38 52.3	
	comp=Z,31nm,1.0s						
KK31	Karatay Array	72.13	319	P	P	07 38 46.1	-0.3
KK31				pmax	pmax		
	comp=Z,36nm,0.9s						
KK31	Karatay Array	72.13	319	P	P	07 38 46.1	-0.3
KK31				IAmb	IAmb	07 38 48.2	
	comp=Z,36nm,0.9s						
KKAR	Karatay Array	72.13	319	P	P	07 38 46.1	-0.3
KKAR				pmax	pmax		
	comp=Z,36nm,0.9s						
KKAR	Karatay Array	72.13	319	P	P	07 38 46.1	-0.3
KKAR	Karatay Array	72.13	319	P	P	07 38 46.1	-0.3
KKAR				IAmb	IAmb	07 38 48.3	
	comp=Z,36nm,0.9s						
NACGM	Naroch	72.39	351	iP	P	07 38 47.8	+0.1
NACGM				iP	P	07 38 47.8	+0.1
NACGM				iP	P	07 38 47.8	+0.1
NACGM				iPP	PP	07 41 28.2	+0.2
NACGM				iPPP	PPP	07 43 12.4	
NACGM				iS	S	07 48 09.0	+0.3
NACGM				iSS	SS	07 52 47.4	+1.4
NACGM				iSSS	SSS	07 56 07.7	
NACGM				iLQ	LQ	08 00 26.4	
NACGM				iLR	LR	08 01 56.6	
MNK	Minsk	72.67	350	eP	P	07 38 47.0	-2.4
MNK	Minsk	72.67	350	iP	P	07 38 50.1	+0.7
	comp=E,4.0nm,0.8s						
MNK				iP	P	07 38 50.1	+0.7
	comp=N,36nm,0.9s						
MNK				iP	P	07 38 50.1	+0.7
	comp=Z,87nm,0.8s						
MNK				iPP	PP	07 41 34.0	+3.5
MNK				iPPP	PPP	07 43 19.1	
MNK				iS	S	07 48 15.9	+4.0
MNK				iSS	SS	07 53 28.6	+38
MNK				iSSS	SSS	07 56 50.9	
MNK				iLQ	LQ	08 06 16.9	
MNK				iLR	LR	08 11 52.9	
MNK				iLRM	MLR	08 15 02.1	
	comp=Z,619nm,18.0s						
MNK				iLRM	MLR	08 15 48.5	
	comp=E,227nm,19.3s						
MNK				iLRM	MLR	08 15 52.4	
	comp=N,2µm,21.1s						
KSH	Kashi	72.74	313	P	P	07 38 53.7	+3.5
KSH				sP	PcP	07 39 05.6	-1.8
KSH				S	S	07 48 16.2	+2.7
KSH				SKS	SKSac	07 48 51.0	-2.0
KSH				pmax	pmax		
	comp=N,50nm,0.8s						
KSH				pmax	pmax		
	comp=N,440nm,5.7s						
KSH				LR	LR		
	comp=N,360nm,8.4s						
KSH				LR	LR		
	comp=N,2µm,17.3s						
KSH				LR	LR		
	comp=N,2µm,26.0s						
LSA	Lhasa	72.87	296	P	P	07 38 51.9	+0.3
LSA				pmax	pmax		
	comp=Z,35nm,0.8s						
LSA	Lhasa	72.87	296	P	P	07 38 51.9	+0.3
SIJI	Sorong	72.88	245	P	P	07 38 50.8	-0.3
	comp=Z,20nm,0.8s,baz=43,slow=7.0,SNR=3.6						
BSD	Bornholm Skovb	72.91	358	iP	P	07 38 51.4	+0.7
	comp=Z,23nm,1.0s						
BSD	Bornholm Skovb	72.91	358	eP	P	07 38 50.3	-0.4
BSD	Bornholm Skovb	72.91	358	eP	P	07 38 51.4	+0.7
BSD				pmax	pmax		
	comp=Z,23nm,1.0s						
BSD	Bornholm Skovb	72.91	358	eP	P	07 38 51.4	+0.7
BSD				IAmb	IAmb	07 38 53.5	
	comp=Z,23nm,1.0s						
LPSR	Galich'ya Gora	72.93	343	eP	P	07 38 50.4	-0.5
LPSR				pmax	pmax		
	comp=Z,30nm,1.0s						
IUG	Iuzhnay	73.12	318	eP	P	07 38 52.6	+0.1
	comp=Z,19nm,1.0s,baz=318						
IUG	Iuzhnay	73.12	318	eP	P	07 38 52.5	+0.1
IUG				pmax	pmax		
	comp=Z,19nm,1.0s						
SUW	Suwalki	73.59	353	eP	P	07 38 54.6	-0.2
SUW	Suwalki	73.59	353	eP	P	07 38 54.9	+0.1
SUW	Suwalki	73.59	353	P	P	07 38 54.7	-0.1
SUW				pmax	pmax		
	comp=Z,130nm,1.0s						
SUW	Suwalki	73.59	353	P	P	07 38 54.7	-0.1
VRH	Novokhopyorsk	73.72	341	eP	P	07 38 55.3	-0.3
VRH				pmax	pmax		
	comp=Z,30nm,0.5s						
BSEG	Bad Segeberg	74.13	1	P	P	07 38 59.0	+1.1
BSEG				pmax	pmax		
	comp=Z,55nm,0.9s						
BSEG	Bad Segeberg	74.13	1	eP	P	07 38 58.7	+0.8
	comp=Z,55nm,1.1s,baz=360,slow=5.6						
VSR	Storozhevoye	74.21	342	eP	P	07 38 58.1	-0.4
VSR				pmax	pmax		
	comp=Z,30nm,0.6s						
VORD	Divnogorie	74.43	342	eP	P	07 38 59.6	-0.1
VORD				pmax	pmax		
	comp=Z,30nm,0.7s						
GKP	Gorka Klasztor	74.68	356	eP	P	07 39 01.3	+0.2
GKP	Gorka Klasztor	74.68	356	eP	P	07 39 01.1	0.0
UBPT	Khong Chiam	75.56	276	P	P	07 39 06.7	-0.1
UBPT				IAmb	IAmb	07 39 57.4	
	comp=Z,42nm,1.2s						
SHL	Shillong	75.66	293	P	P	07 39 06.5	-1.0
SHL				pmax	pmax		
	comp=Z,206nm,1.9s						
SHL	Shillong	75.66	293	P	P	07 39 06.5	-1.0
IBBN	Ibbenburen	75.72	2	eP	P	07 39 08.4	+1.2
	comp=Z,66nm,1.0s,baz=360,slow=5.6						
FLTG	Flechtingen	75.74	0	eP	P	07 39 07.2	0.0
	comp=Z,29nm,1.2s,baz=360,slow=5.6						
BEL	Belsk	75.93	354	eP	P	07 39 01.4	-6.9
ASSE	Asse, Remlinge	75.94	0	eP	P	07 39 09.1	+0.8
	comp=Z,39nm,1.1s,baz=360,slow=5.6						
CLZ	Clausthal	76.22	1	eP	P	07 39 11.0	+0.9
	comp=Z,56nm,1.3s,baz=360,slow=5.6						
AKASG	Malin Array Be	76.26	348	P	P	07 39 09.6	-0.7
	comp=Z,35nm,0.8s,baz=16,slow=5.9,SNR=58						
AKASG	Malin Array Be	76.26	348	P	P	07 39 09.5	-0.7
AKASG				pmax	pmax		
	comp=Z,5.0nm,0.9s						
AKASG	Malin Array Be	76.26	348	P	P	07 39 09.5	-0.7
AKBB	Malin Array Si	76.26	348	P	P	07 39 09.0	-1.3
AKBB				pmax	pmax		
	comp=Z,31nm,0.9s						
AKBB	Malin Array Si	76.26	348	P	P	07 39 09.0	-1.3
AKBB				IAmb	IAmb	07 39 10.7	
	comp=Z,31nm,0.8s						
KIEV	Kiev	76.27	348	P	P	07 39 09.0	-1.3
GTTG	Gottingen	76.52	1	eP	P	07 39 12.7	+1.0
	comp=Z,76nm,1.2s,baz=360,slow=5.6						
BUG	Bochum--Univer	76.57	3	P	P	07 39 12.4	+0.4
BUG				pmax	pmax		
	comp=Z,33nm,1.7s						
BUG	Bochum--Univer	76.57	3	eP	P	07 39 12.2	+0.2
	comp=Z,34nm,1.1s,baz=360,slow=5.6						
TAPN	Taplejung	76.59	297	eP	P	07 39 13.4	+0.5
	comp=Z,156nm,1.1s						
CLL	Collm	76.75	359	iP	P	07 39 13.5	+0.5
CLL				i (PcP)	pwP	07 39 28.2	+1.8
CLL	Collm	76.75	359	iP	P	07 39 13.5	+0.5
CLL				i		07 39 28.2	
CLL	Collm	76.75	359	P	P	07 39 13.6	+0.5
CLL				IAmb	IAmb	07 39 15.4	
	comp=Z,24nm,1.0s						
CLL	Collm	76.75	359	eP	P	07 39 13.3	+0.2
	comp=Z,35nm,1.2s,baz=360,slow=5.6						
CHTO	Chiang Mai	76.78	284	P	P	07 39 13.7	0.0
CHTO				pmax	pmax		
	comp=Z,115nm,2.0s						
CHTO	Chiang Mai	76.78	284	P	P	07 39 13.7	0.0
KASTN	Kahler Asten	76.84	2	eP	P	07 39 13.8	+0.2
	comp=Z,30nm,1.1s,baz=360,slow=5.6						
NEUB	Neuenburg	76.86	360	eP	P	07 39 14.5	+0.8
	comp=Z,50nm,1.1s,baz=360,slow=5.6						
CM31	Chiang Mai Arr	77.06	283	P	P	07 39 15.4	+0.1
CM31				IAmb	IAmb	07 39 17.8	
	comp=Z,27nm,0.7s						
CMAR	Chiang Mai Arr	77.06	283	P	P	07 39 15.9	+0.6
	comp=Z,30nm,0.8s,baz=26,slow=6.5,SNR=72						
FBE	Freiberg	77.14	359	eP	P	07 39 16.3	+1.1
	comp=Z,58nm,1.4s,baz=360,slow=5.6						
GUN	Gumba	77.14	299	eP	P	07 39 16.3	+0.2
	comp=Z,108nm,0.8s						
KSP	Ksiaz	77.14	357	eP	P	07 39 16.1	+0.8
KSP	Ksiaz	77.14	357	P	P	07 39 16.1	+0.8
KSP				pmax	pmax		
	comp=Z,32nm,1.1s						
BRG	Berggiesshubel	77.17	358	P	P	07 39 16.2	+0.8
BRG				pmax	pmax		
	comp=Z,25nm,1.3s						
BRG	Berggiesshubel	77.17	358	eP	P	07 39 16.0	+0.5
BRG				Amp		07 39 18.8	
	comp=Z,43nm,1.4s						
BRG				ex	x	07 39 29.5	
BRG				Amp		07 39 29.9	
	comp=Z,13nm,0.9s						
BRG	Berggiesshubel	77.17	358	eP	P	07 39 16.0	+0.5
	comp=Z,43nm,1.4s,baz=360,slow=5.6						
DZM	Mont Dzumac	77.19	204	LR	LR	08 12 36.3	
	comp=Z,501nm,18.4s,baz=23,slow=35						
DZM	Mont Dzumac	77.19	204	eLR	LR	08 02 40.3	
	comp=Z,632nm,23.4s						
MEM	Membach	77.36	3	dP	P	07 39 14.8	-1.7
MEM	Membach	77.36	3	P	P	07 39 17.2	+0.7
MEM				pmax	pmax		
	comp=Z,35nm,1.1s						
BSTI	Sart Tilman	77.37	4	dP	P	07 39 17.3	+0.8
SNF	Seneffe	77.39	5	dP	P	07 39 18.4	+1.8
BTNL	Ternell	77.39	3	dP	P	07 39 17.3	+0.6
CHVC	Chvalec	77.41	357	eP	P	07 39 17.4	+0.6
OSTC	Ostas	77.43	357	eP	P	07 39 17.4	+0.5
AHRW	Bad Neuenahr-A	77.47	3	eP	P	07 39 17.5	+0.4
	comp=Z,35nm,1.0s,baz=360,slow=5.6						
UPC	Upice	77.49	357	eP	P	07 39 17.8	+0.6
UPC	Upice	77.49	357	eP	P	07 39 17.8	+0.6
PVCC	Panska Ves	77.51	358	eP	P	07 39 18.1	+0.8
PVCC	Panska Ves	77.51	358	eP	P	07 39 18.1	+0.8
BCLA	Clavier	77.52	4	dP	P	07 39 17.9	+0.5
BGES	Gesves	77.55	4	dP	P	07 39 17.4	-0.2
KKN	Kakani	77.55	299	eP	P	07 39 18.6	+0.4
	comp=Z,7.7nm,1.3s						
PLN	Plauen	77.58	359	eP	P	07 39 18.5	+0.7
	comp=Z,22nm,1.1s,baz=360,slow=5.6						
OJC	Ojcow	77.60	354	eP	P	07 39 18.6	+0.8
OJC	Ojcow	77.60	354	P	P	07 39 17.8	0.0
OJC				pmax	pmax		
	comp=Z,42nm,1.3s						
OJC	Ojcow	77.60	354	P	P	07 39 17.8	0.0
OJC				IAmb	IAmb	07 39 21.2	
	comp=Z,42nm,1.3s						
BMRD	Maredsous	77.62	4	dP	P	07 39 18.6	+0.7
	comp=Z,38nm,0.9s						
WERD	Werda	77.62	359	eP	P	07 39 18.6	+0.6
	comp=Z,26nm,1.3s,baz=360,slow=5.6						
DPC	Dobruska-Polom	77.63	357	eP	P	07 39 19.3	+1.2
DPC	Dobruska-Polom	77.63	357	eP	P	07 39 19.3	+1.2
TANN	Tannenbergstha	77.65	359	eP	P	07 39 18.9	+0.7
	comp=Z,30nm,1.3s,baz=360,slow=5.6						
PKI	Pulchoki	77.66	299	eP	P	07 39 18.6	-0.4
	comp=Z,60nm,0.9s						
PKIN	Phulchoki	77.66	299	eP	P	07 39 18.9	0.0
	comp=Z,55nm,0.8s						
LVV	L'vov	77.68	352	eP	P	07 39 18.2	-0.1
GKN	Gorkha	77.73	300	eP	P	07 39 19.3	+0.2
	comp=Z,63nm,0.7s						
WERN	Wernitzgruen	77.78	359	eP	P	07 39 19.7	+0.8
	comp=Z,25nm,1.1s,baz=360,slow=5.6						
DMN	Daman	77.79	299	eP	P	07 39 19.9	+0.3
	comp=Z,72nm,0.9s						
DOU	Dourbes	77.81	4	bP	P	07 39 19.1	0.0
DOU	Dourbes	77.81	4	P	P	07 39 20.3	+1.3
DOU				pmax	pmax		
	comp=Z,28nm,1.0s						
TNS	Taunus Mts	77.82	2	P	P	07 39 20.0	+0.9
TNS				pmax	pmax		
	comp=Z,34nm,1.0s						
TNS	Taunus Mts	77.82	2	eP	P	07 39 19.7	+0.6
	comp=Z,32nm,1.0s,baz=360,slow=5.6						
NKC	Novy Kostel	77.83	359	eP	P	07 39 19.6	+0.4
NKC	Novy Kostel	77.83	359	eP	P	07 39 19.6	+0.4
KRLC	Kraliky	77.89	356	eP	P	07 39 20.3	+0.8
KRLC	Kraliky	77.89	356	eP	P	07 39 20.3	+0.8
DANN	Dangsing	77.91	301	eP	P	07 39 20.7	+0.4
	comp=Z,177nm,0.7s						

KWP Kalwaria Pacla 77.98 352 eP P 07 39 20.5 +0.5
KWP Kalwaria Pacla 77.98 352 P P 07 39 20.3 +0.3
KWP pmax pmax
comp=Z,104nm,0.7s
KWP Kalwaria Pacla 77.98 352 P P 07 39 20.3 +0.3
HORU Horodok 78.05 350 P P 07 39 20.5 +0.1
PRU Pruhonice 78.05 358 eP P 07 39 21.0 +0.7
PRU Pruhonice 78.05 358 eP P 07 39 21.0 +0.7
MANZ Manzenberg 78.08 359 eP P 07 39 21.3 +0.7
comp=Z,24nm,1.3s,baz=360,slow=5.6
MORC Moravsky Berou 78.16 356 ⇓P P 07 39 22.2 +1.2
MORC Moravsky Berou 78.16 356 eP P 07 39 21.5 +0.5
MORC Moravsky Berou 78.16 356 P P 07 39 21.6 +0.5
MORC pmax pmax
comp=Z,47nm,1.3s
MORC Moravsky Berou 78.16 356 P P 07 39 21.6 +0.5
MORC IAmb IAmb 07 39 24.4
comp=Z,46nm,1.3s
ROTZ Rotzenmuhle 78.30 359 eP P 07 39 22.5 +0.7
comp=Z,47nm,1.5s,baz=360,slow=5.6
WLF Walferdange 78.31 3 dP P 07 39 22.8 +0.9
WLF Walferdange 78.31 3 P P 07 39 22.6 +0.8
WLF pmax pmax
comp=Z,57nm,1.3s
WLF Walferdange 78.31 3 P P 07 39 22.6 +0.8
WLF IAmb IAmb 07 39 25.6
comp=Z,57nm,1.3s
WLF Walferdange 78.31 3 eP P 07 39 22.7 +0.9
comp=Z,54nm,1.4s,baz=360,slow=5.6
PBCC Pribram 78.36 358 eP P 07 39 22.9 +0.8
NIE Niedzica 78.37 354 eP P 07 39 23.3 +1.1
NIE Niedzica 78.37 354 P P 07 39 23.3 +1.1
NIE pmax pmax
comp=Z,16nm,1.1s
MORS Morshin 78.38 352 P P 07 39 23.0 +0.8
GRA1 Grafenberg Arr 78.38 0 P P 07 39 22.7 +0.5
GRF Grafenberg Arr 78.38 0 P P 07 39 22.7 +0.5
GRF pmax pmax
comp=Z,70nm,1.3s
GRF Grafenberg Arr 78.38 0 eP P 07 39 23.2 +1.0
comp=Z,74nm,1.4s,baz=360,slow=5.6
GRF eL L 08 08 22.7
comp=Z,820nm,20.9s
GRFO Grafenberg 78.38 0 P P 07 39 23.2 +1.0
GRFO pmax pmax
comp=Z,70nm,1.3s
GRFO Grafenberg 78.38 0 P P 07 39 23.2 +1.0
KOLN Koldanda 78.46 301 eP P 07 39 23.2 -0.1
comp=Z,76nm,0.9s
VRAC Vranov 78.67 356 ⇓P P 07 39 24.9 +1.1
VRAC Vranov 78.67 356 eP P 07 39 24.5 +0.7
VRAC Vranov 78.67 356 P P 07 39 25.1 +1.3
VRAC pmax pmax
comp=Z,64nm,1.1s
LANS Liptovska Anna 78.69 355 eP P 07 39 25.6 +1.7
LANS pmax pmax
comp=Z,26nm,0.9s
LANS Liptovska Anna 78.69 355 eP P 07 39 25.6 +1.7
KMPD K-Podol'skiy 78.69 350 P P 07 39 23.0 -0.9
KOLS Kolonicke sedl 78.71 353 eP P 07 39 24.6 +0.6
KOLS pmax pmax
comp=Z,19nm,0.9s
KOLS Kolonicke sedl 78.71 353 eP P 07 39 24.6 +0.6
TREC Trest 78.72 357 eP P 07 39 24.8 +0.7
TREC Trest 78.72 357 eP P 07 39 24.8 +0.7
CRVS Cervenica-Dubn 78.80 353 eP P 07 39 25.4 +0.9
CRVS pmax pmax
comp=Z,149nm,2.1s
CRVS Cervenica-Dubn 78.80 353 eP P 07 39 25.4 +0.9
NIL Nilore 78.80 311 P P 07 39 25.0 +0.1
NIL pmax pmax
comp=Z,70nm,0.9s
NIL Nilore 78.80 311 P P 07 39 25.0 +0.1
SORM Soroca 78.89 348 ⇓P P 07 39 24.9 -0.1
SORM Soroca 78.89 348 P P 07 39 24.9 -0.1
KRUC Moravsky 78.92 357 eP P 07 39 25.7 +0.5
KRUC Moravsky 78.92 357 P P 07 39 26.2 +1.0
KRUC pmax pmax
comp=Z,36nm,1.9s
WET Wettzell 78.92 359 P P 07 39 26.9 +1.7
WET pmax pmax
comp=Z,20nm,1.2s
WET Wettzell 78.92 359 eP P 07 39 25.8 +0.5
comp=Z,24nm,1.2s,baz=360,slow=5.6
KHC Kasperske Hory 78.92 359 eP P 07 39 26.2 +1.0
KHC Kasperske Hory 78.92 359 eP P 07 39 26.2 +1.0
KHC ex x 07 39 51.0
KHC Kasperske Hory 78.92 359 P P 07 39 25.9 +0.7
KHC IAmb IAmb 07 39 29.2
comp=Z,47nm,1.2s
UZH Uzhgorod 79.01 353 eP P 07 39 26.3 +0.7
UZH e 07 39 38.9
JAVC Velka Javorina 79.07 356 eP P 07 39 27.8 +1.7
KSV Kosov 79.08 351 P P 07 39 26.4 +0.3
GEC2 GERESS Array S 79.21 358 P P 07 39 26.3 -0.6
GEC2 IAmb IAmb 07 39 30.3
comp=Z,28nm,1.2s
GEC2 GERESS Array S 79.21 358 eP P 07 39 27.3 +0.4
comp=Z,33nm,1.2s,baz=360,slow=5.6
GERES GERESS Array B 79.21 358 P P 07 39 27.7 +0.8
comp=Z,12nm,0.9s,baz=7.4,slow=4.2,SNR=52
GERES GERESS Array B 79.21 358 P P 07 39 26.5 -0.4
GERES GERESS Array B 79.21 358 P P 07 39 26.5 -0.4
CKRC Cesky Krumlov 79.22 358 eP P 07 39 27.1 +0.2
GOF Gofitskoye 79.25 338⇑iP P 07 39 28.1 +1.1
GOF pmax pmax
comp=Z,189nm,1.0s
KECS Kecovo 79.29 354 eP P 07 39 28.4 +1.2
KECS pmax pmax
comp=Z,19nm,1.1s
KECS Kecovo 79.29 354 eP P 07 39 28.4 +1.2
SMOL Smolenice 79.42 356 eP P 07 39 29.7 +1.8
SMOL pmax pmax
comp=Z,25nm,1.1s
SMOL Smolenice 79.42 356 eP P 07 39 29.7 +1.8
TRSU Trosnyk 79.49 352 P P 07 39 29.9 +1.7
MODS Modra-Piesok 79.57 356 eP P 07 39 29.2 +0.4
MODS pmax pmax
comp=Z,74nm,1.2s
MODS Modra-Piesok 79.57 356 eP P 07 39 29.2 +0.4
BFO Black Forest 79.71 2 P P 07 39 30.4 +0.9
BFO pmax pmax
comp=Z,22nm,1.0s
BFO Black Forest 79.71 2 P P 07 39 30.4 +0.9
BFO IAmb IAmb 07 39 32.3
comp=Z,22nm,1.0s
BFO Black Forest 79.71 2 eP P 07 39 30.0 +0.4
comp=Z,27nm,1.1s,baz=360,slow=5.6
BUR08 Bucovina Ar. S 79.73 351 P P 07 39 29.6 -0.1
CLF Chambon-Foret 79.75 6 P P 07 39 30.2 +0.5
BURAR Bucovina Array 79.75 351 ⇓P P 07 39 29.8 -0.1
BURAR Bucovina Array 79.75 351 P P 07 39 29.7 -0.1
BURAR Bucovina Array 79.75 351 P P 07 39 29.3 -0.6
ZST Bratislava 79.76 356 eP P 07 39 31.5 +1.8
ZST pmax pmax
comp=Z,157nm,1.2s
ZST Bratislava 79.76 356 eP P 07 39 31.5 +1.8
ECH Echery 79.79 3 P P 07 39 29.3 -0.7
ECH pmax pmax
comp=Z,38nm,0.9s
ECH Echery 79.79 3 P P 07 39 29.3 -0.7
ECH IAmb IAmb 07 39 32.7
comp=Z,38nm,0.9s
PSZ Piszkesteto 79.89 354 ⇓P P 07 39 30.7 +0.1
PSZ Piszkesteto 79.89 354 P P 07 39 31.3 +0.7
PSZ pmax pmax
comp=Z,54nm,1.2s
PSZ Piszkesteto 79.89 354 P P 07 39 31.3 +0.7
PSZ IAmb IAmb 07 39 34.5
comp=Z,54nm,1.2s
FUR Furstenfeldbru 79.91 0 eP P 07 39 31.3 +0.7
comp=Z,60nm,1.1s,baz=360,slow=5.6
KBL Kabul 79.94 315 P P 07 39 30.2 -1.1
KBL pmax pmax
comp=Z,83nm,1.4s
KBL Kabul 79.94 315 P P 07 39 30.2 -1.1
CONA Conrad Observa 80.07 357 i P P 07 39 32.8 +1.2
comp=Z,29nm,0.9s,SNR=18
MOA Molln 80.19 358 eP P 07 39 33.0 +0.8
comp=Z,21nm,1.2s
SLE Schleitheim 80.28 2 P P 07 39 33.5 +0.9
SLE pmax pmax
comp=Z,33nm,1.1s
SOP Sopron 80.29 356 P P 07 39 34.4 +1.8
SOP pmax pmax
comp=Z,37nm,1.3s
BIZ Bicaz 80.33 350 ⇓P P 07 39 33.7 +0.8
ARCR ARCALIA 80.36 351 ⇓P P 07 39 34.3 +1.2
BUD Budapest 80.37 355 P P 07 39 34.7 +1.6
BUD pmax pmax
comp=Z,32nm,1.0s
KIV Kislovodsk 80.38 338 ⇓P P 07 39 34.8 +1.5
KIV Kislovodsk 80.38 338 eP P 07 39 33.5 +0.2
KIV pmax pmax
comp=Z,144nm,1.0s
KIV Kislovodsk 80.38 338 P P 07 39 33.9 +0.6
KIV IAmb IAmb 07 39 36.8
comp=Z,51nm,1.0s
UBR Ueberruh 80.39 1 eP P 07 39 34.1 +0.8
comp=Z,33nm,1.1s,baz=360,slow=5.6
KBZ Khabaz 80.54 337 P P 07 39 35.2 +1.2
comp=Z,38nm,0.9s,baz=30,slow=1.9,SNR=39
RETA Reutte 80.58 0 i P P 07 39 35.3 +1.0
comp=Z,16nm,0.8s,SNR=8.3
LOR Lormes 80.60 5 P P 07 39 35.3 +1.0
LOR pmax pmax
comp=Z,34nm,1.3s
TESR Tescani 80.69 349 ⇓P P 07 39 35.0 +0.2
ANN Anapa 80.70 342 eP P 07 39 32.9 -1.9
ANN pmax pmax
comp=Z,145nm,1.6s
MOTA Moosalm 80.73 0 i P P 07 39 36.3 +1.1
comp=Z,34nm,0.9s,SNR=14
WATA Walderalm 80.74 360 i P P 07 39 36.3 +1.0
comp=Z,21nm,0.8s,SNR=9.0
ARSA Arzberg 80.76 357 i P P 07 39 36.7 +1.5
comp=Z,22nm,0.9s,SNR=12
DAVA Damuels 80.78 1 i P P 07 39 37.1 +1.6
comp=Z,26nm,1.0s,SNR=5.4
CJR Cluj-Napoca 80.80 351 ⇓P P 07 39 35.4 -0.1
DRGR 80.80 352 ⇓P P 07 39 36.2 +0.7
DRGR 80.80 352 P P 07 39 36.2 +0.7
DRGR pmax pmax
comp=Z,24nm,0.9s
WTTA Wattenberg 80.81 360 i P P 07 39 36.8 +1.1
comp=Z,29nm,0.8s,SNR=13
WTTA Wattenberg 80.81 360 P P 07 39 37.1 +1.4
WTTA pmax pmax
comp=Z,55nm,1.1s
SQTA Sankt Quirin 80.85 0 i P P 07 39 37.1 +1.3
comp=Z,47nm,0.8s,SNR=12
KBA Koelnbreinsper 80.98 359 i P P 07 39 38.2 +1.6
comp=Z,67nm,0.8s,SNR=30
KBA Koelnbreinsper 80.98 359 P P 07 39 38.4 +1.8
KBA pmax pmax
comp=Z,93nm,0.9s
FETA Feichten 81.05 0 i P P 07 39 37.9 +1.0
comp=Z,42nm,0.9s,SNR=19
ZEI Tsey 81.19 336 eP P 07 39 37.4 -0.4
ZEI pmax pmax
comp=Z,15nm,0.7s
VRI Vrincioaia 81.32 349 ⇓P P 07 39 38.3 +0.1
VRI Vrincioaia 81.32 349 P P 07 39 38.3 +0.1
ABTA Abfaltersbach 81.32 359 i P P 07 39 39.2 +0.9
comp=Z,61nm,1.1s,SNR=15
GEYT Alibeck 81.34 324 P P 07 39 39.1 +0.6
comp=Z,44nm,0.8s,baz=316,slow=4.1,SNR=47
GEYT Alibeck 81.34 324 P P 07 39 38.8 +0.4
GEYT IAmb IAmb 07 39 41.1
comp=Z,33nm,0.8s
GYA0B ALIBECK ARRAY 81.34 324 P P 07 39 39.4 +0.9
PLOR Plostina 81.34 349 ⇓P P 07 39 39.1 +0.8
PLOR Plostina 81.34 349 P P 07 39 39.1 +0.8
SOKA Soboth 81.34 357 i P P 07 39 39.6 +1.2
comp=Z,38nm,0.9s,SNR=16
DOPR Dopca 81.36 350 ⇓P P 07 39 39.7 +1.3
PERS Pernice 81.39 357 i P P 07 39 39.8 +1.2
SIRR Siria 81.41 353 ⇓P P 07 39 39.9 +1.2
MYKA Terra Mystica 81.42 358 eP P 07 39 40.4 +1.6
comp=Z,26nm,1.2s
LGD Lagodekhi 81.48 334 P P 07 39 40.3 +1.2
ONI Oni 81.48 337 P P 07 39 42.3 +3.1
ZOU Zoufplan 81.51 359 P P 07 39 40.5 +1.1
ZOU IAmb IAmb 07 40 05.0
comp=Z,25nm,1.0s
OBKA Obir 81.53 358 i P P 07 39 40.5 +1.1
comp=Z,30nm,0.8s,SNR=8.6
MORH Mrgy, Hungar 81.66 355 ⇓P P 07 39 40.1 +0.2
CHVG Ch'k'valeri 81.69 338 ⇓P P 07 39 41.6 +1.4
TLCR 81.73 348 ⇓P P 07 39 40.9 +0.5
TLCR 81.73 348 P P 07 39 40.8 +0.5
MLR Muntele Rosu 81.78 350 ⇑P P 07 39 41.8 +1.0
MLR Muntele Rosu 81.78 350 P P 07 39 42.7 +1.9
MLR pmax pmax
comp=Z,18nm,0.9s
CFR Carcaliu 81.83 348 ⇓P P 07 39 40.8 0.0
SEAG Tbilisi Sea 81.92 335 P P 07 39 45.9 +4.4
VOIR 81.92 350 ⇓P P 07 39 42.1 +0.6
VOIR 81.92 350 P P 07 39 42.0 +0.5
VOIR pmax pmax
comp=Z,13nm,1.1s
CTI Castel Tesino 82.03 360 P P 07 39 42.4 +0.3
CTI pmax pmax
comp=Z,27nm,0.9s
CTI Castel Tesino 82.03 360 P P 07 39 42.4 +0.3
CTI IAmb IAmb 07 39 58.0
comp=Z,27nm,0.9s
ARR Arges 82.04 351 ⇓P P 07 39 42.9 +0.9
BZS Buzias 82.06 353 ⇓P P 07 39 41.9 -0.2
BZS Buzias 82.06 353 P P 07 39 42.4 +0.3
BZS pmax pmax
comp=Z,24nm,1.3s
TPGR Topolog 82.11 348 ⇓P P 07 39 42.6 +0.2
GZR Gura Zlata 82.19 352 ⇓P P 07 39 43.6 +0.7
HARR Harsova 82.33 348 ⇓P P 07 39 44.2 +0.6
HARR Harsova 82.33 348 P P 07 39 44.1 +0.6
SALO Salr 82.45 1 P P 07 39 44.0 -0.2
TIRR Tirgusor 82.50 348 ⇓P P 07 39 45.1 +0.8
TIRR Tirgusor 82.50 348 P P 07 39 45.1 +0.8
BOJS Bojanci 82.51 357 i P P 07 39 44.8 +0.4
AKH Akhalkalaki 82.58 336 ⇓P P 07 39 46.6 +1.5
AKH Akhalkalaki 82.58 336 P P 07 39 45.8 +0.7
AKH pmax pmax
comp=Z,48nm,0.8s
AKH Akhalkalaki 82.58 336 P P 07 39 45.8 +0.7
SSB Saint Sauveur 82.62 5 P P 07 39 45.4 +0.4
SSB pmax pmax
comp=Z,27nm,1.0s
SSB Saint Sauveur 82.62 5 P P 07 39 45.4 +0.4
SSB IAmb IAmb 07 39 48.1
comp=Z,27nm,1.0s
FRGS Fruska Gora 82.64 354 ⇓P P 07 39 45.9 +0.7
TEOL Teolo 82.71 360 P P 07 39 46.4 +0.8
HERR Herculane 82.72 352 ⇓P P 07 39 46.0 +0.4
MDVR Moldovita 82.88 353 ⇓P P 07 39 46.9 +0.5
HRA Herat 82.91 320 P P 07 39 46.5 -0.4
HRA IAmb IAmb 07 39 49.0
comp=Z,20nm,0.9s
BNI Bardonecchia 82.94 3 P P 07 39 47.8 +1.0
BNI pmax pmax
comp=Z,30nm,0.8s
BNI Bardonecchia 82.94 3 P P 07 39 47.8 +1.0
ORIF Oris-en-Rattie 83.04 4 P P 07 39 49.0 +1.7
ORIF pmax pmax
comp=Z,20nm,0.9s
SJG San Juan 83.26 69 eP P 07 39 46.3 -2.4
GNI Garni 83.45 335 P P 07 39 51.6 +2.0
comp=Z,16nm,0.8s,baz=337,slow=2.3,SNR=3.3
GNI Garni 83.45 335 P P 07 39 48.2 -1.4
GNI pmax pmax
comp=Z,50nm,1.3s
GNI Garni 83.45 335 P P 07 39 48.2 -1.4
DIVS Divibare 83.69 354 P P 07 39 50.6 -0.1
DIVS IAmb IAmb 07 39 55.1
comp=Z,19nm,1.0s
ISO Isola 83.82 3 P P 07 39 53.1 +1.8
ISO pmax pmax
comp=Z,39nm,1.7s
KTUT Trabzon 83.86 339 ⇓P P 07 39 52.9 +1.5
SMRC Santa Marta, M 83.96 80 eP P 07 39 55.0 +2.7
PLVB Pleven 84.00 350 ⇓P P 07 39 53.3 +1.2
BOVS Bovan 84.02 352 ⇓P P 07 39 52.4 +0.2
DIKM Dikmen 84.15 342 ⇓P P 07 39 54.4 +1.4
KVT Kavak 84.55 341 P P 07 39 57.1 +2.1
OSSC Osservatorio P 84.55 0 P P 07 39 55.8 +0.8
MURB Monte Urbino 84.81 359 P P 07 39 56.6 +0.3
VTS Vitosha 84.90 351 ⇓P P 07 39 57.4 +0.5
PBRG Braganca 84.97 13 eP P 07 39 57.3 +0.2
comp=Z,60nm,1.8s
TOKA Tokat 85.20 341 P P 07 39 59.4 +1.1
TOKA IAmb IAmb 07 40 27.4
comp=Z,21nm,0.9s
POLO Lamas de Olo 85.23 14 eP P 07 40 00.1 +1.6
comp=Z,37nm,1.8s
PLD Plovdiv 85.26 350 P P 07 39 59.4 +0.9
PLD pmax pmax
comp=Z,2.0nm,0.9s
PDG Podgorica 85.39 354 ⇓P P 07 39 58.7 -0.5
UREC San Jos de Ur 85.84 83 eP P 07 40 01.5 -0.3
PVIS Viseu 85.86 15 eP P 07 40 01.7 +0.1
MDUB Mudurnu 86.00 345 P P 07 40 02.8 +0.4
INTR Introdacqua 86.03 358 P P 07 40 03.8 +1.3
ALN Alexandroupoli 86.30 349 P P 07 40 03.6 -0.1
ALN pmax pmax
comp=Z,40nm,1.1s
ALN Alexandroupoli 86.30 349 P P 07 40 03.6 -0.1
BR131 Keskin Array S 86.31 343 P P 07 40 04.9 +0.9
BR131 pmax pmax
comp=Z,39nm,1.0s
BR131 Keskin Array S 86.31 343 P P 07 40 04.8 +0.9
BRTR Keskin Array B 86.31 343 P P 07 40 04.2 +0.2
comp=Z,18nm,1.0s,baz=46,slow=2.5,SNR=25
BRTR Keskin Array B 86.31 343 P P 07 40 04.4 +0.4
BRTR Keskin Array B 86.31 343 P P 07 40 04.4 +0.4
SRS Serrai 86.35 351 P P 07 40 04.7 +0.7
SRS pmax pmax
comp=Z,25nm,1.0s
KNT Kendrikon 86.37 351 P P 07 40 05.2 +1.1
KNT pmax pmax
comp=Z,40nm,1.4s
ZARC Zaragoza, Cauc 86.45 82 eP P 07 40 03.8 -1.0
GRG Griva 86.62 352 P P 07 40 06.3 +1.0
GRG pmax pmax
comp=Z,45nm,1.4s
SOH Sokhos 86.67 351 P P 07 40 06.0 +0.4
SOH pmax pmax
comp=Z,15nm,1.6s
IPM Ipoh 86.68 273 P P 07 40 05.8 -0.1
IPM IAmb IAmb 07 40 22.1
comp=Z,34nm,1.1s
FNA Florina 86.88 352 P P 07 40 07.2 +0.6
FNA pmax pmax
comp=Z,25nm,1.2s
CBOC Ciudad Bolivar 87.03 84 eP P 07 40 03.4 -4.5
HELC Santa Helena 87.06 84 eP P 07 40 09.4 +1.2
MARD Mardin 87.13 337 P P 07 40 09.0 +1.0
WR0 Warramunga Arr 87.22 232 P P 07 40 06.4 -1.9
WR0 IAmb IAmb 07 40 28.5
comp=Z,11nm,1.1s
WB2 Warramunga Arr 87.30 232 P P 07 40 07.3 -1.4
WB2 IAmb IAmb 07 40 27.0
comp=Z,15nm,1.0s
WRA Warramunga Arr 87.31 232 P P 07 40 07.2 -1.6
comp=Z,4.3nm,0.9s,baz=38,slow=5.8,SNR=17
WRA Warramunga Arr 87.31 232 P P 07 40 08.1 -0.7
WRA Warramunga Arr 87.31 232 P P 07 40 08.1 -0.7
ESBB Sonseca Array 87.43 12 P P 07 40 09.8 +0.5
ESBB IAmb IAmb 07 40 11.4
comp=Z,18nm,0.8s
ESDC Sonseca Array 87.43 12 P P 07 40 09.4 +0.1
comp=Z,13nm,0.8s,baz=345,slow=4.6,SNR=50
ESDC Sonseca Array 87.43 12 P P 07 40 09.7 +0.4
PTBC PUERTO BERRIO, 87.44 83 eP P 07 40 06.6 -3.1
BRRC Barranca, Sant 87.45 82 eP P 07 40 13.6 +3.9
PLMC San Jos del P 87.61 85 eP P 07 40 10.6 0.0
PAMC Pamplona, Colo 87.88 81 eP P 07 40 11.4 -0.9
SDV Santo Domingo 87.91 78 eP P 07 40 13.7 +1.5
GUY2C Guyana, Caldas 87.92 84 eP P 07 40 12.3 -0.2
NORC Norcasia 87.96 84 eP P 07 40 09.4 -2.7
EVO Evora 87.98 15 eP P 07 40 12.1 +0.2
GAZ Gaziantep 88.08 340 P P 07 40 12.8 +0.3
GAZ IAmb IAmb 07 40 17.0
comp=Z,15nm,0.9s
BARC Barichara 88.18 82 eP P 07 40 11.1 -2.4
RREF El Recreo 88.19 84 eP P 07 40 04.0 -10
YOTC Yotoco, Valle 88.30 86 eP P 07 40 11.2 -2.6
MANT Manisa 88.34 347 P P 07 40 14.5 +0.6
PBAR Barrancos 88.48 14 eP P 07 40 14.8 +0.5
comp=Z,26nm,2.5s
RUSC La Rusia 88.79 82 eP P 07 40 16.4 -0.3
ORTC Ortega, Tolima 89.03 85 eP P 07 40 16.9 -0.3
PVAQ Vaqueiros 89.13 15 eP P 07 40 17.5 +0.2
BBAC Balboa, Cauca 89.28 88 eP P 07 40 22.5 +3.9
PSI Prapat 89.29 274 P P 07 40 18.9 +0.4
comp=Z,29nm,0.9s,baz=360,slow=3.4,SNR=14
HYB Hyderabad 89.56 298 i P P 07 40 18.0 -1.7
OTAV Otavalo 89.94 90 eP P 07 40 21.6 -0.4
OTAV Otavalo 89.94 90 eP P 07 40 24.4 +2.4
FITZ Fitzroy Crossi 90.19 240 P P 07 40 21.9 -0.5
comp=Z,2.5nm,0.8s,baz=31,slow=6.2,SNR=5.8
FITZ Fitzroy Crossi 90.19 240 P P 07 40 21.1 -1.2
FITZ IAmb IAmb 07 43 45.7
comp=Z,24nm,1.6s
AS31 Alice Springs 90.69 231 P P 07 40 22.9 -1.7
ASAR Alice Springs 90.69 231 P P 07 40 23.9 -0.7
comp=Z,7.8nm,0.9s,baz=33,slow=4.8,SNR=37
ASAR Alice Springs 90.69 231 P P 07 40 24.2 -0.4
ASAR Alice Springs 90.69 231 P P 07 40 24.2 -0.4
POO Poona 91.12 303 eP P 07 40 33.0 +6.0
MACC Macarena, Meta 91.27 85 eP P 07 40 21.4 -6.2
KEST Kesra 92.31 2 P P 07 40 31.7 -0.6
comp=Z,6.0nm,1.1s,baz=258,slow=9.1,SNR=1.8
MDT Midelt 94.10 13 P P 07 40 41.0 +0.5
comp=Z,7.0nm,0.9s,baz=334,slow=5.9,SNR=6.9
STKA Stephens Creek 94.43 221 P P 07 40 41.3 -0.3
baz=338,slow=15,SNR=3.4
TORD Torodi Ar. Bea 114.29 10 PKP PKiKP 07 46 00.7 -1.1
comp=Z,1.2nm,0.8s,baz=305,slow=2.6,SNR=4.2
TORD PKKPbc PKKPab 07 56 46.8 -3.8
comp=Z,0.9nm,0.6s,baz=156,slow=4.2,SNR=4.0
KMBO Kilima Mbogo 124.58 328 PKP PKiKP 07 46 22.0 -0.2
comp=Z,3.2nm,0.8s,baz=6.9,slow=3.5,SNR=8.4
PLCA Paso Flores 125.37 113 PKP PKiKP 07 46 23.0 +0.3
comp=Z,1.8nm,0.9s,baz=240,slow=3.7,SNR=5.1
QSPA South Pole Qui 142.07 180 PKiKP 07 46 55.6 +0.1
TSUM Tsumeb 146.60 349 PKPbc PKPbc 07 47 04.0 +0.4
comp=Z,12nm,0.9s,baz=11,slow=6.7,SNR=21
TSUM Tsumeb 146.60 349 PKPbc 07 47 03.5 -0.2
BELA Belgrano 2 149.50 163 PKPbc 07 47 08.8 -0.7
LBTB Lobatse 150.68 333 PKIKP PKiKP 07 47 14.6 -0.1
LBTB Lobatse 150.68 333 PKiKP 07 47 14.6 -0.1
BOSA Boshof 154.16 331 PKPbc PKPbc 07 47 20.6 -1.1
comp=Z,4.0nm,0.9s,baz=44,slow=3.6,SNR=6.3
SYO Syowa Base 158.62 208⇑ePKPdf PKPdf 07 47 19.3 +1.4
SYO Syowa Base 158.62 208⇓ePKPab PKPab 07 47 56.2 +2.8
VNA3 Neumayer Olymp 158.79 161 PKPdf PKPdf 07 47 22.6 +4.5
VNA2 Neumayer--Watz 159.49 162 PKPdf PKPdf 07 47 22.7 +3.8
VNA1 Neumayer--Stat 159.54 161 PKPdf PKPdf 07 47 21.5 +2.5
SNAA Sanae 159.57 167 PKPdf PKPdf 07 47 26.2 +7.1

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*NEIC **03** 07:39:40.3±1.5, 0.°02S±0.°10×123.°1E±0.°1, h135^{km}±9^{km}, mb4.3/9, Error ellipse: s-maj=22.8km s-min=9.0km az=58.0*
*IDC **03** 07:39:41.8±0.9, 0.°09S×123.°02E, h150^{km}±8^{km}, mb3.7/11, mb1 3.9/14, mb1mx3.6/55, mbtmp4.2/14, Error ellipse: s-maj=20.7km s-min=10.6km az=65.0*
*DJA **03** 07:39:42.3±0.3, 0°S±3°×12°3E±°, h119^{km}±6^{km}, M4.7/14, mb4.8/5, mB5.3/1, MLv4.6/14, Mw(mB)4.7/1*
ISC 03 07:39:41.3±0.5**, 0.°12S**±0.°05×**122.°93E**±0.°06**, h150**^{km}**, n58,** σ1.ˢ64/67**, mb4.2**/21**, 1C, Minahassa Peninsula, Sulawesi**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
GTOI Gorontalo 0.76 6 P Pn 07 40 03.9 -0.4
LUWI Luwuk 0.93 190 Pn Pn 07 40 04.1 -1.5
LUWI Luwuk 0.93 190 P Pn 07 40 03.9 -1.7
LUWI S Sn 07 40 20.2 -3.9
MRSI Marisa 1.15 301 P Pn 07 40 05.6 -1.9
KMSI Cibinong 1.26 57 P Pn 07 40 08.3 -0.2
APSI Ampana 1.50 239 P Pn 07 40 09.9 -1.0
TOLI2 Tolitoli 2.47 300 Pn Pn 07 40 20.8 -1.3
MPSI Mapaga 3.07 279 P Pn 07 40 29.4 -0.2
SANI Sanana 3.61 122 P Pn 07 40 34.1 -2.4
TTSI Tana Toraja 4.25 227 P Pn 07 40 45.2 +0.2
TNTI Ternate 4.52 79 P Pn 07 40 48.3 -0.2
BNSI Bone 5.10 214 P Pn 07 40 55.7 -0.5
0.2nm43nm,0.6s
NLAI Namlea 5.19 127 P Pn 07 40 57.0 -0.3
2.0nm4µm104nm,0.4s
KAPI Kappang 5.81 213 P Pn 07 41 06.0 +0.5

	2.7nm,0.3s,baz=264,slow=3.4,SNR=6.0						
KAPI	Kappang	5.81	213		Pn	07 41 07.1	+1.6
DDMP	Don Marcelino,	6.78	24	eP	Pn	07 41 19.4	+0.9
DDMP				eS	Sn	07 42 36.8	+2.2
SKMP	Bagumbayan, Su	6.79	14	eP	Pn	07 41 18.1	-0.6
SKMP				eS	Sn	07 42 31.5	-3.4
MYLDM	Lahad Datu	6.88	320	Pn	Pn	07 41 20.3	+0.5
KCP	Kidapawan	7.40	17	⇑eP	Pn	07 41 29.7	+2.8
PAGZ	Pagadian	7.93	3	eP	Pn	07 41 34.2	+0.4
PAGZ				eS	Sn	07 42 54.1	-8.2
BUKP	Musuan	8.23	15	eP	Pn	07 41 39.4	+1.5
SIJI	Sorong	8.37	95	P	Pn	07 41 40.2	+0.4
	7.7nm,0.3s,baz=282,slow=9.8,SNR=6.9						
KKM	Kota Kinabalu	9.08	313	Pn	Pn	07 41 49.8	+0.5
FAKI	Fak Fak	9.72	107	Pn	Pn	07 41 55.9	-1.9
MTN	Manton Dam	15.03	148	Pn	Pn	07 43 05.2	-1.0
FITZ	Fitzroy Crossi	18.06	172	P	P	07 43 42.8	+1.4
	1.0nm,0.3s,baz=6.9,slow=9.2,SNR=19						
FITZ	Fitzroy Crossi	18.06	172	P	P	07 43 41.9	+0.5
WB0	Warramunga Arr	22.52	151	P	P	07 44 29.6	+0.8
WB0				IAmb	IAmb	07 44 30.8	
	comp=Z,10nm,0.9s						
WRA	Warramunga Arr	22.65	151	P	P	07 44 30.0	0.0
	comp=Z,3.5nm,0.4s,baz=328,slow=11,SNR=56						
WRA				pP	pP	07 44 56.3	-1.4
	comp=Z,1.8nm,0.6s,baz=334,slow=12,SNR=2.3						
WRA	Warramunga Arr	22.65	151	P	P	07 44 29.2	-0.8
WB2	Warramunga Arr	22.66	151	P	P	07 44 30.3	+0.2
WB2				IAmb	IAmb	07 44 32.7	
	comp=Z,21nm,1.3s						
WC3	Warramunga Arr	22.68	151	P	P	07 44 30.9	+0.6
WC3				IAmb	IAmb	07 44 33.7	
	comp=Z,21nm,1.2s						
WR0	Warramunga Arr	22.76	151	P	P	07 44 32.0	+0.9
ASAR	Alice Springs	25.72	156	P	P	07 44 58.2	+0.3
	comp=Z,0.5nm,0.3s,baz=334,slow=8.9,SNR=11						
ASAR				pP	pP	07 45 29.4	+0.2
	comp=Z,2.1nm,0.7s,baz=319,slow=7.3,SNR=6.2						
ASAR				PcP	PcP	07 48 25.4	+1.1
	comp=Z,0.4nm,0.3s,baz=341,slow=2.1,SNR=5.5						
ASAR	Alice Springs	25.72	156	P	P	07 45 00.2	+2.3
CMAR	Chiang Mai Arr	29.94	309	P	P	07 45 37.8	+2.2
	comp=Z,2.3nm,0.5s,baz=135,slow=7.5,SNR=14						
STKA	Stephens Creek	36.18	153	P	P	07 46 31.0	+1.4
	baz=328,slow=8.6,SNR=8.7						
STKA	Stephens Creek	36.18	153	P	P	07 46 30.8	+1.2
MJAR	Matsushiro Arr	39.14	20	P	P	07 46 54.5	+0.1
	comp=Z,1.6nm,0.5s,baz=190,slow=10.0,SNR=4.5						
TAPN	Taplejung	43.47	312	eP	P	07 47 31.7	+1.4
	comp=Z,15nm,0.5s						
USRK	Ussuriysk Ar.	44.86	9	P	P	07 47 40.6	0.0
	comp=Z,1.1nm,0.5s,baz=204,slow=6.3,SNR=4.5						
GUN	Gumba	45.14	311	eP	P	07 47 45.0	+1.4
	comp=Z,19nm,0.4s						
PKI	Pulchoki	45.32	311	eP	P	07 47 45.8	+0.8
	comp=Z,7.1nm,0.5s						
PKIN	Phulchoki	45.34	311	eP	P	07 47 46.0	+1.0
GKN	Gorkha	46.13	311	eP	P	07 47 52.1	+1.0
	comp=Z,16nm,0.4s						
KOLN	Koldanda	46.81	310	eP	P	07 47 57.2	+0.7
	comp=Z,6.3nm,0.3s						
DANN	Dangsing	46.97	310	eP	P	07 47 57.6	-0.2
	comp=Z,13nm,0.2s						
MKAR	Makanchi Array	58.68	328	P	P	07 49 23.7	+0.6
	comp=Z,0.9nm,0.5s,baz=125,slow=8.6,SNR=16						
MKAR				pP	pP	07 49 59.6	+1.3
	comp=Z,0.4nm,0.6s,baz=121,slow=6.7,SNR=2.1						
MKAR				PcP	PcP	07 50 10.6	-0.9
	comp=Z,0.5nm,0.5s,baz=139,slow=4.1,SNR=3.8						
MKAR	Makanchi Array	58.68	328	P	P	07 49 22.6	-0.4
ZALV	Zalesovo Beam	62.39	336	P	P	07 49 48.3	+0.2
	comp=Z,0.5nm,0.3s,baz=122,slow=11,SNR=3.8						
KURBB	Kurchatov Arra	63.03	330	P	P	07 49 52.4	0.0
	comp=Z,3.0nm,0.2s,baz=133,slow=5.3,SNR=4.3						
KURK	Kurchatov	63.05	330	P	P	07 49 52.9	+0.4
KURK				IAmb	IAmb	07 49 53.6	
	comp=Z,3.1nm,0.8s						
MA2	Magadan	63.37	15	P	P	07 49 54.5	+0.1
	comp=Z,2.9nm,0.4s,baz=170,slow=4.6,SNR=4.1						
GEYT	Alibeck	70.41	311	P	P	07 50 39.5	+0.1
	comp=Z,0.8nm,0.3s,baz=111,slow=5.6,SNR=5.7						
ILAR	Eielson Array	90.19	25	P	P	07 52 22.7	-1.8
	comp=Z,0.4nm,0.6s,baz=244,slow=5.1,SNR=4.9						
ULM	Lac du Bonnet	120.12	28	PKP	PKPdf	07 58 13.8	-0.7
	comp=Z,2.0nm,0.7s,baz=301,slow=3.0,SNR=3.4						
TORD	Torodi Ar. Bea	120.37	285	PKP	PKPdf	07 58 15.4	-0.5
	comp=Z,1.8nm,0.7s,baz=70,slow=1.7,SNR=5.4						
TXAR	Lajitas Array	126.94	53	PKP	PKiKP	07 58 29.1	+0.3
	comp=Z,0.2nm,0.6s,baz=286,slow=3.4,SNR=2.5						

*IDC **03** 07:45:04.5±1.8, 52.°41N×168.°79W, h0^{km}, mb3.4/8, mb1 3.6/9, mb1mx3.4/65, mbtmp3.4/9, ML2.3/1, Error ellipse: s-maj=44.7km s-min=23.0km az=2.0*

*AEIC **03** 07:45:06±2.1, 52.°2N±0.°1×168.°7W±0.°1, h73^{km}±9^{km}, ML3.1, Error ellipse: s-maj=18.7km s-min=9.1km az=151.0*

*NEIC **03** 07:45:07.0±1.8, 52.°4N±0.°1×168.°9W±0.°1, h104^{km}±8^{km}, Error ellipse: s-maj=19.7km s-min=9.6km az=156.0*

ISC 03 07:45:08.5±1.0**, 52.°4N**±0.°1×**168.°81W**±0.°08**, h33**^{km}**, n48, σ2**^{s}**51**/47**, mb3.4**/7**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIKH	Nikolski High	0.58	357	Pn	Pn	07 45 22.4	+2.0
OKSP	Okmok Steeple	0.92	20		Pb	07 45 26.7	+0.6
OKSO	Okmok South	1.05	22		Pb	07 45 27.9	-0.2
OKTU	Okmok Mt. Tuli	1.10	25		Pb	07 45 29.4	+0.4
OKWE	Okmok W'ng Wal	1.14	17		Pb	07 45 30.4	+0.8
OKFG	Magazine Ridge	1.16	28		Pn	07 45 29.1	+0.7
MAPS	Pakushin South	1.81	38		Pn	07 45 38.4	+1.0
MGOD	Makushin Gods	1.83	39		Pn	07 45 38.5	+0.8
UNV	Unalaska Valle	2.01	43		Pn	07 45 40.9	+0.8
AKUT	Akutan	2.53	45	Pn	Pn	07 45 44.1	-3.0
ATKA	Atka Island	3.31	269	Pn	Pn	07 45 57.2	-0.7
SPIA	Saint Paul Isl	4.87	351	Pn	Pn	07 46 17.6	-1.7
ADK	Adak	4.88	267	Pn	Pn	07 46 17.8	-1.6
CNBA	Chernabura Isl	6.00	62	Pn	Pn	07 46 33.2	-1.7
CHGN	Chignik	7.23	53	Pn	Pn	07 46 49.3	-2.3
OHAK	Old Harbor	10.18	55	Pn	Pn	07 47 29.4	-2.7
KDAK	Kodiak Island	10.74	53	Pn	Pn	07 47 39.0	-0.8
	0.4nm,0.3s,baz=202,slow=4.5,SNR=15						
KDAK	Kodiak Island	10.74	53	Pn	Pn	07 47 38.2	-1.6
SVW2	Sparrevohn	11.33	34	Pn	Pn	07 47 44.3	-3.6
CNPM	China Poot	12.14	47	Pn	Pn	07 47 57.4	-1.5
BRLK	Bradley Lake	12.41	46	Pn	Pn	07 47 59.0	-3.6
SEW	Seward	13.21	47	Pn	Pn	07 48 11.6	-1.9
O22K	Cooper Landing	13.27	45	Pn	Pn	07 48 12.2	-2.0
SUA	Susitna One	13.37	40	Pn	Pn	07 48 12.2	-3.6
SKT	Skwentna	13.37	37	Pn	Pn	07 48 11.9	-3.9
PMR	Palmer	14.08	41	Pn	Pn	07 48 21.6	-3.8
GHO	Glory Hole Cre	14.26	41	Pn	Pn	07 48 24.6	-3.4
KNK	Knik Glacier	14.27	43	Pn	Pn	07 48 26.1	-1.8
HIN	Hinchinbrook I	14.66	48	Pn	Pn	07 48 30.3	-3.1
FID	Port Fidalgo	14.82	47	Pn	Pn	07 48 30.4	-5.0
SCM	Sheep Creek Mo	14.95	42	Pn	Pn	07 48 34.6	-2.6
BPAW	Bear Paw Mtn.	14.95	31	Pn	Pn	07 48 34.4	-2.8
KLU	Klutina	15.38	45	Pn	Pn	07 48 39.3	-3.6
M24K	Tolsona, Glenn	15.55	42	Pn	Pn	07 48 42.7	-2.4
N25K	Chitina, Valde	16.00	45	Pn	Pn	07 48 47.1	-3.8
I23K	Minto, Yukon-K	16.18	30		Pn	07 48 49.1	-4.0
GLB	Gilahina Butte	16.28	46	Pn	Pn	07 48 50.2	-4.3
CRQM	Cirque	16.34	49	Pn	Pn	07 48 51.5	-3.8
VRDI	Verde Repeater	16.36	47	Pn	Pn	07 48 51.5	-4.1
ILAR	Eielson Array	16.74	34	Pn	Pn	07 48 57.0	-3.2
	0.0nm,0.3s,baz=224,slow=8.8,SNR=1.5						
PETK	Petropavlovsk-	20.19	285	P	P	07 49 41.5	+1.5
	0.8nm,0.4s,baz=86,slow=15,SNR=5.8						
INK	Inuvik	23.14	33	P	P	07 50 12.3	+0.9
	0.6nm,0.4s,baz=248,slow=5.4,SNR=2.3						
YKA	Yellowknife Ar	29.97	49	P	P	07 51 14.9	+1.5
	0.2nm,0.6s,baz=275,slow=6.6,SNR=5.5						
PDAR	Pinedale Array	40.06	80	P	P	07 52 41.5	+0.8
	0.4nm,0.6s,baz=272,slow=4.8,SNR=5.2						
TXAR	Lajitas Array	52.40	89	P	P	07 54 17.8	+0.2
	0.2nm,0.7s,baz=302,slow=5.2,SNR=2.2						
MKAR	Makanchi Array	64.04	314	P	P	07 55 38.5	-0.2
	0.2nm,0.5s,baz=32,slow=5.6,SNR=2.4						
FINES	FINESS Array B	65.90	352	P	P	07 55 51.8	+1.4
	0.4nm,0.3s,baz=7.6,slow=5.8,SNR=5.0						
HFS	Hagfors	67.81	359	P	P	07 56 03.7	+1.1
	0.8nm,0.6s,baz=22,slow=4.7,SNR=1.4						

*IDC **03** 07:46:18.0±0.8, 52.°36N×168.°69W, h0^{km}, mb4.0/21, mb1 4.2/22, mb1mx3.9/67, mbtmp4.0/22, ML3.3/1, Error ellipse: s-maj=23.4km s-min=14.1km az=171.0*

*AEIC **03** 07:46:22.0±2.0, 52.°27N±0.°09×168.°7W±0.°1, h45^{km}±8^{km}, ML3.5, mb4.1/31(NEIC), Error ellipse: s-maj=13.2km s-min=8.3km az=153.0*

*NEIC **03** 07:46:23.1±2.5, 52.°40N±0.°09×168.°7W±0.°1, h43^{km}±14^{km}, Error ellipse: s-maj=14.8km s-min=8.5km az=152.0*

ISC 03 07:46:22.0±0.7**, 52.°34N**±0.°09×**168.°50W**±0.°06**, h29**^{km}**, n111, σ1**^{s}**12**/112**, mb4.0**/20**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIKH	Nikolski High	0.68	341	Pn	Pn	07 46 35.6	+0.1
OKSP	Okmok Steeple	0.93	8		Pn	07 46 40.1	+1.1
OKSO	Okmok South	1.04	11		Pb	07 46 41.4	-0.1
OKTU	Okmok Mt. Tuli	1.09	15		Pb	07 46 42.7	+0.5
OKFG	Magazine Ridge	1.14	18		Pb	07 46 42.3	-0.7
OKWE	Okmok W'ng Wal	1.15	8		Pb	07 46 43.4	+0.1
MAPS	Pakushin South	1.75	32		Pb	07 46 52.0	-1.4
MGOD	Makushin Gods	1.76	33		Pb	07 46 52.0	-1.6
MREP	Makushin Rep't	1.82	35		Pb	07 46 53.2	-1.3
MSW	Makushin Switc	1.89	32		Pb	07 46 54.5	-1.3
MNAT	Makushin Natee	1.90	34		Pb	07 46 54.2	-1.7
UNV	Unalaska Valle	1.93	38	Pn	Pb	07 46 54.2	-2.2
AKMO	Akutan Morgan	2.31	39		Pb	07 47 00.6	-2.3
ZRO	Akutan Zero	2.32	40		Pb	07 47 00.8	-2.3
AKBBA	Akutan Broad B	2.35	40		Pb	07 47 01.1	-2.4
AKGG	Akutan Green G	2.40	38		Pb	07 47 01.4	-3.0
AKUT	Akutan	2.44	41	Pn	Pn	07 46 60.0	+0.2
AKSA	Akutan Strait	2.47	42		Pb	07 47 02.8	-2.8
KOFP	Korovin Flat P	3.44	271		Pn	07 47 13.3	-0.2
ATKA	Atka Island	3.50	270	Pn	Pn	07 47 13.0	-1.4
GSMY	Great Sitkin M	4.66	269		Pn	07 47 30.4	+0.1
GSTD	Great Sitkin T	4.71	270		Pn	07 47 31.3	+0.2
SPIA	Saint Paul Isl	4.96	349	Pn	Pn	07 47 34.4	0.0
ADK	Adak	5.07	268		Pn	07 47 36.0	+0.1
SDPT	Sand Point	5.63	54		Pn	07 47 46.7	+3.1
CNBA	Chernabura Isl	5.86	61	Pn	Pn	07 47 48.4	+1.6
CHGN	Chignik	7.11	52	Pn	Pn	07 48 05.7	+1.8
AMKA	Amchitka	7.62	268	Pn	Pn	07 48 09.8	-1.1
SII	Sitkinak Islan	9.35	57	Pn	Pn	07 48 36.5	+2.0
OHAK	Old Harbor	10.05	55	Pn	Pn	07 48 45.8	+1.6
KDAK	Kodiak Island	10.62	53	Pn	Pn	07 48 52.6	+0.6
	1.6nm,0.3s,baz=243,slow=4.6,SNR=14						
KDAK				Sn	Sn	07 50 48.8	-1.0
	0.2nm,0.3s,baz=41,slow=6.6,SNR=2.4						
KDAK	Kodiak Island	10.62	53	Pn	Pn	07 48 51.9	-0.1
SVW2	Sparrevohn	11.27	34	Pn	Pn	07 49 02.5	+1.7
GAMB	Gambell	11.60	353	Pn	Pn	07 49 05.2	0.0
RSO	Redoubt South	11.90	41	Pn	Pn	07 49 09.7	0.0
CNPM	China Poot	12.04	46	Pn	Pn	07 49 12.5	+1.2
BRLK	Bradley Lake	12.31	46	Pn	Pn	07 49 15.6	+0.5
TTA	Tatalina	12.52	27	Pn	Pn	07 49 19.5	+1.5
SEW	Seward	13.11	46	Pn	Pn	07 49 26.6	+0.6
O22K	Cooper Landing	13.17	44	Pn	Pn	07 49 26.5	-0.3
SUA	Susitna One	13.29	40	Pn	Pn	07 49 29.3	+0.9
SKT	Skwentna	13.30	37	Pn	Pn	07 49 30.2	+1.6
PPLA	Purkeypile	13.68	33	Pn	Pn	07 49 33.9	+0.1
PMR	Palmer	14.00	41	Pn	Pn	07 49 38.9	+0.8
KNK	Knik Glacier	14.18	42	Pn	Pn	07 49 41.1	+0.6
GHO	Glory Hole Cre	14.18	41	Pn	Pn	07 49 40.6	-0.1
SML	Sawmill	14.44	41	Pn	Pn	07 49 44.4	+0.3
KTH	Kantishna Hill	14.54	33	Pn	Pn	07 49 46.7	+1.1
HIN	Hinchinbrook I	14.56	48	Pn	Pn	07 49 45.5	-0.3
TRF	Thorofare Moun	14.69	34	Pn	Pn	07 49 47.8	+0.2
FID	Port Fidalgo	14.72	46	Pn	Pn	07 49 46.5	-1.4
SCM	Sheep Creek Mo	14.86	42	Pn	Pn	07 49 50.1	+0.2
BPAW	Bear Paw Mtn.	14.90	31	Pn	Pn	07 49 50.7	+0.4
EYAK	Cordova Ski Ar	14.96	48	Pn	Pn	07 49 50.8	-0.3
RND	Reindeer	15.16	35	Pn	Pn	07 49 54.2	+0.4
RND				IAmb	IAmb	07 50 25.1	
	comp=Z,30nm,1.8s						
KLU	Klutina	15.28	44	Pn	Pn	07 49 55.3	-0.2
KLU				IAmb	IAmb	07 49 56.6	
	comp=Z,12nm,0.5s						
M24K	Tolsona, Glenn	15.47	42	Pn	Pn	07 49 57.3	-0.5
IMAR	Indian Mountai	15.57	23	Pn	Pn	07 49 59.6	+0.6
N25K	Chitina, Valde	15.90	45	Pn	Pn	07 50 03.3	-0.3
WRH	Wood River Hil	16.09	33	Pn	Pn	07 50 05.0	-0.8
I23K	Minto, Yukon-K	16.13	30	Pn	P	07 50 07.4	-1.9
I23K				IAmb	IAmb	07 50 11.4	
	comp=Z,15nm,1.2s						
PAX	Paxson	16.18	40	Pn	Pn	07 50 06.2	-0.9
GLB	Gilahina Butte	16.18	46	Pn	Pn	07 50 06.3	-0.7
GLB				IAmb	IAmb	07 50 17.8	
	comp=Z,42nm,1.9s						
CRQM	Cirque	16.23	49	Pn	Pn	07 50 09.2	+1.3
CRQM				IAmb	IAmb	07 50 28.1	
	comp=Z,23nm,1.0s						
VRDI	Verde Repeater	16.26	47	Pn	Pn	07 50 07.7	-0.5
CCB	Clear Creek Bu	16.30	33	Pn	Pn	07 50 08.7	+0.3
TGL	Tana Glacier	16.38	49	Pn	Pn	07 50 09.1	-0.5
TGL				IAmb	IAmb	07 50 31.1	
	comp=Z,16nm,0.9s						
HDA	Harding Lake	16.44	34	Pn	Pn	07 50 10.4	+0.1
HDA				IAmb	IAmb	07 50 31.5	
	comp=Z,23nm,2.0s						
MCARA	McCarthy VSAT	16.51	47	Pn	Pn	07 50 11.0	-0.2
MCARA				IAmb	IAmb	07 50 29.1	
	comp=Z,11nm,1.0s						
ISLE	Juniper Island	16.55	50	Pn	Pn	07 50 12.0	+0.2
ISLE				IAmb	IAmb	07 50 38.5	
	comp=Z,21nm,1.2s						
MESA	MESA	16.61	51	Pn	Pn	07 50 13.1	+0.5
IL31		16.68	33	Pn	Pn	07 50 13.4	+0.1
ILAR	Eielson Array	16.68	33	Pn	Pn	07 50 13.7	+0.4
	comp=Z,0.1nm,0.3s,baz=234,slow=12,SNR=6.8						
ILAR	Eielson Array	16.68	33	Pn	Pn	07 50 13.5	+0.2
BALM	Baldy	16.69	48	Pn	Pn	07 50 13.2	-0.4
BALM				IAmb	IAmb	07 50 32.1	
	comp=Z,29nm,1.6s						
YAH	Yahtse	16.76	51	Pn	Pn	07 50 14.8	+0.2
YAH				IAmb	IAmb	07 50 33.2	
	comp=Z,22nm,0.9s						
RIDG	Independent Ri	16.82	38	Pn	Pn	07 50 13.8	-1.4
RIDG				IAmb	IAmb	07 50 47.0	
	comp=Z,32nm,2.0s						
MENT	Mentasta	16.86	41	Pn	Pn	07 50 15.8	+0.2
MENT				IAmb	IAmb	07 50 43.7	
	comp=Z,26nm,2.0s						
BARN	Barnard Glacie	17.02	49	Pn	Pn	07 50 16.8	-0.9
BARN				IAmb	IAmb	07 50 44.0	
	comp=Z,17nm,1.5s						
CTGM	Chitina Glacie	17.14	49		P	07 50 20.2	-0.5
CTGM				IAmb	IAmb	07 50 38.2	
	comp=Z,45nm,1.8s						
COLD	Coldfoot	17.42	24		P	07 50 23.3	-0.3
BCAR	Beaver Creek A	17.71	42		Pn	07 50 25.3	-0.9
FYU	Fort Yukon	18.35	30	P	Pn	07 50 33.2	-0.6
FYU				IAmb	IAmb	07 51 05.1	
	comp=Z,19nm,1.4s						
HYT	Haines Junctio	18.91	51	P	P	07 50 40.4	+0.3
HYT				IAmb	IAmb	07 51 06.3	
	comp=Z,10nm,0.7s						
BMAR	Burnt Mountain	19.10	29	P	P	07 50 41.5	-0.6
WHY	Whitehorse	20.14	52		P	07 50 54.4	+0.9
PEA0B	Petropavlovsk-	20.39	286	P	P	07 50 53.2	-3.0
PETK	Petropavlovsk-	20.39	286	P	P	07 50 55.8	-0.4
	comp=Z,3.7nm,0.5s,baz=85,slow=14,SNR=23						
PETK	Petropavlovsk-	20.39	286	P	P	07 50 53.7	-2.5
INK	Inuvik	23.08	33	P	P	07 51 23.9	-0.9
	comp=Z,1.8nm,0.4s,baz=224,slow=10.0,SNR=11						
INK	Inuvik	23.08	33	P	P	07 51 23.4	-1.4
C36M	Paulatuk	26.66	34	P	P	07 51 57.5	-0.3
YKA	Yellowknife Ar	29.86	49	P	P	07 52 27.8	+1.4
	comp=Z,0.9nm,0.7s,baz=271,slow=7.1,SNR=21						
NEW	Newport	32.50	76	P	P	07 52 51.0	+1.2
	comp=Z,1.5nm,0.7s,baz=297,slow=9.0,SNR=2.6						
PDAR	Pinedale Array	39.88	80	P	P	07 53 54.9	+1.7
	comp=Z,2.6nm,0.6s,baz=300,slow=3.6,SNR=28						
KSRS	Korea Array	45.94	277	P	P	07 54 42.2	+0.3
	comp=Z,1.0nm,0.5s,baz=66,slow=8.6,SNR=5.0						
SPITS	Spitsbergen Ar	49.72	359	P	P	07 55 10.8	0.0
	comp=Z,7.4nm,0.8s,baz=27,slow=5.6,SNR=6.0						
SONM	Songino Array	51.77	301	P	P	07 55 27.3	+0.5
	comp=Z,0.8nm,0.6s,baz=66,slow=5.8,SNR=5.9						
TXAR	Lajitas Array	52.21	90	P	P	07 55 32.0	+1.8
	comp=Z,0.7nm,0.6s,baz=300,slow=5.6,SNR=12						
BVAR	Borovoye Array	64.04	325	P	P	07 56 52.7	+0.2
	comp=Z,0.6nm,0.5s,baz=53,slow=15,SNR=6.9						
MKAR	Makanchi Array	64.22	314	P	P	07 56 53.6	-0.2
	comp=Z,0.3nm,0.3s,baz=44,slow=7.0,SNR=6.9						
FINES	FINESS Array B	65.98	352	P	P	07 57 04.8	-0.1
	comp=Z,2.2nm,0.6s,baz=11,slow=8.4,SNR=12						
NOA	NORSAR Array B	66.97	0	P	P	07 57 11.6	+0.3
	comp=Z,0.4nm,0.6s,baz=18,slow=8.4,SNR=1.8						
HFS	Hagfors	67.87	359	P	P	07 57 17.3	+0.3
	comp=Z,1.7nm,0.4s,baz=25,slow=3.9,SNR=13						
AKTO	Aktyubinsk	70.31	330	P	P	07 57 32.5	+0.3
	comp=Z,0.8nm,0.6s,baz=59,slow=9.5,SNR=4.0						
AAK	Ala-Archa	70.90	316	P	P	07 57 36.6	+0.4
	comp=Z,0.9nm,0.5s,baz=153,slow=3.0,SNR=4.1						
AKASG	Malin Array Be	76.25	349	P	P	07 58 06.8	-0.5
	comp=Z,1.2nm,0.5s,baz=18,slow=6.4,SNR=4.2						
CMAR	Chiang Mai Arr	77.15	283	P	P	07 58 13.2	+0.3
	comp=Z,0.8nm,0.4s,baz=26,slow=6.0,SNR=4.1						
ESDC	Sonseca Array	87.38	12	P	P	07 59 05.5	-0.6
	comp=Z,0.5nm,0.5s,baz=340,slow=4.7,SNR=4.2						
WRA	Warramunga Arr	87.40	232	P	P	07 59 05.2	-1.1
	comp=Z,0.4nm,0.7s,baz=34,slow=5.9,SNR=2.4						
ASAR	Alice Springs	90.78	231	P	P	07 59 22.1	0.0
	comp=Z,0.7nm,0.7s,baz=31,slow=4.3,SNR=9.0						

*IDC **03** 07:52:55.8±1.2, 27.°76N×52.°59E, h0^{km}, mb4.0/14, mb1 4.1/19, mb1mx3.8/72, mbtmp4.0/19, ML3.7/5, Error ellipse: s-maj=25.0km s-min=17.8km az=1.0*

*TEH **03** 07:52:57.9, 27.°95N×52.°71E, h15^{km}, ML4.2*

*THR **03** 07:52:57.2±0.5, 27.°75N×52.°80E, h18^{km}±6^{km}, ML4.2*

*OMAN **03** 07:53:02.0±2.1, 27.°75N×52.°92E, h15^{km}±18^{km}, mb4.8/1, ml4.1/10, Error ellipse: s-maj=31.1km s-min=18.3km az=57.0*

ISC 03 07:52:58.8±0.6**, 27.°93N**±0.°04×**52.°77E**±0.°04**, h14**^{km}**, n77, σ1**^{s}**43**/91**, mb4.0**/15**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QIR1	Qir	0.60	24	e		07 53 27.0	
	comp=Z,99nm,0.5s						
QIR1				ePg	Pg	07 53 09.4	-1.2
LMD1	Lamerd	0.68	149	ePg	Pg	07 53 11.4	-0.6
LMD1				eSg	Sb	07 53 23.0	+1.3
LMD1				e		07 53 35.7	
	comp=Z,99nm,0.6s						
JHRM	Jahrom	0.92	51	ePg	Pg	07 53 15.9	-0.6
JHRM				e		07 53 35.5	
	comp=Z,99nm,0.4s						
LAR1	LAR	1.44	100	ePg	Pg	07 53 26.2	-0.3
SHI	Shiraz	1.73	353	ePg	Pn	07 53 30.0	+1.4
SHI				e		07 54 09.8	
	comp=Z,99nm,0.8s						
KAZ1	Kazerun	1.96	330	ePn	Pn	07 53 31.5	-0.2
KAZ1				e		07 54 12.7	
	comp=Z,99nm,0.6s						
JRN	Qarnain Island	2.97	179	ePn	Pn	07 53 48.0	+2.5
JRN	Qarnain Island	2.97	179	P	Pn	07 53 47.2	+1.7
JRN				S	Sn	07 54 22.2	+1.2
BNDS	Bandar-Abbas	3.06	99	ePn	Pn	07 53 46.4	-0.5
KLNJ	Kolanjah	3.24	342	ePn	Pn	07 53 49.1	-0.5
SHME	Shamm	3.54	121	ePn	Pn	07 53 54.2	+0.9
SHME	Shamm	3.54	121	P	Pn	07 53 54.0	+0.7
SHME				S	Sn	07 54 33.9	-1.1
BANOM	Banah	3.73	122	ePn	Pn	07 53 56.6	+0.6
BANOM	Banah	3.73	122	P	Pn	07 53 56.6	+0.6
	SNR=18						
IMEH	Mehriz	3.81	24	ePn	Pn	07 53 59.3	+2.1
NGRK	Negar Kerman	3.87	63	ePn	Pn	07 53 59.3	+1.0
NGRK				e		07 54 47.9	
	comp=Z,99nm,0.3s						
IRAM	Ramesheh	3.89	355	ePn	Pn	07 53 59.2	+0.9
NAZ	Nazwa, Dubai	3.91	138	P	Pn	07 53 59.8	+1.4
	SNR=13						
NAZ				S	Sn	07 54 43.7	-0.4
MASF	Masafi	3.96	129	P	Pn	07 54 00.3	+1.1
	SNR=6.7						
MASF				S	Sn	07 54 44.6	-0.8
SLWR	Sila	3.96	194	ePn	Pn	07 53 59.8	+0.7
SLWR	Sila	3.96	194	P	Pn	07 53 59.6	+0.5
SLWR				S	Sn	07 54 46.6	+1.3
MSFE	Esma-Masafi	3.96	129	ePn	Pn	07 54 00.3	+1.1
KRBR	Kerman	4.05	59	eSg	Sg	07 55 05.7	-3.3
FAQ	Al Faqa, Dubai	4.05	141	P	Pn	07 54 01.7	+1.3
FAQ				S	Sn	07 54 45.5	-2.2
ISAD	Sadrabad	4.05	11	ePn	Pn	07 54 02.4	+1.7
TVBK	TV Kerman	4.05	59	ePn	Pn	07 54 03.0	+2.3
TVBK				e		07 55 16.5	
	comp=Z,99nm,0.4s						
KHGB	Koh Gabri	4.06	52	ePn	Pn	07 54 02.4	+1.7
KHGB				e		07 55 16.4	
	comp=Z,99nm,0.9s						
MDH	Madha	4.10	129	P	Pn	07 54 01.8	+0.8
MDH				S	Sn	07 54 47.2	-1.6
MZWR	Madinat Zayed	4.26	166	P	Pn	07 54 04.5	+1.2
UOSS	Minazif	4.28	133	P	Pn	07 54 03.4	0.0
UOSS				S	Sn	07 54 50.4	-2.7
HATD	Hatta, Dubai	4.31	135	ePn	Pn	07 54 04.9	+0.9
ASHO	Ashiyiah	4.37	137	ePn	Pn	07 54 05.4	+0.6
ASHO	Ashiyiah	4.37	137	P	Pn	07 54 05.2	+0.4
ASHO				S	Sn	07 54 53.8	-1.8
IBAF	Bafgh	4.39	33	ePn	Pn	07 54 06.7	+1.6
ICHK	Chekchek	4.53	18	ePn	Pn	07 54 09.0	+1.8
CHMN	Cheshme madani	4.60	64	ePn	Pn	07 54 10.4	+2.1
KBD	Kabd	4.64	287	eP		07 54 07.7	
ALNE	Al Ain	4.69	144	P	Pn	07 54 08.5	-0.7
ALNE				S	Sn	07 55 02.6	-0.9
RDF	Al-Radifah	4.71	283	eP		07 54 08.7	
YZKH	Yazd	4.72	19	ePn	Pn	07 54 11.9	+2.2
UMR	Umm Al-Rimmam	4.73	291	eP		07 54 09.2	
AMIS	Naft Sefid	4.80	322	ePn	Pn	07 54 10.7	0.0
IZEF	Zefreh	4.97	356	ePn	Pn	07 54 13.3	+0.1
IPIR	Pirpir	5.01	342	ePn	Pn	07 54 14.4	+0.5
SOHO	SOHO	5.07	137	ePn	Pn	07 54 14.9	+0.5
SOHO	SOHO	5.07	137	P	Pn	07 54 14.5	+0.1
SOHO				S	Sn	07 55 12.7	-0.1
MIB	Mutribah	5.12	293	eP		07 54 15.3	
KBAM	BAM	5.14	75	ePn	Pn	07 54 17.1	+1.6
KBAM				e		07 55 23.1	
	comp=Z,99nm,0.4s						
RST	Umm Al-Ruwaisa	5.31	289	eP		07 54 18.2	
ANAR	Anarak	5.31	9	ePn	Pn	07 54 18.7	+0.9
IKLH	Kolahrood	5.47	349	ePn	Pn	07 54 20.2	0.0
UMZA	Um Al Zommool	5.62	157	ePn	Pn	07 54 22.7	+0.7
UMZA	Um Al Zommool	5.62	157	P	Pn	07 54 22.5	+0.6
UMZA				S	Sn	07 55 23.0	-3.3
ARQ	Araqi	5.69	143	P	Pn	07 54 23.0	+0.1
	SNR=16						
KRSH	Karshahi	6.05	355	ePn	Pn	07 54 27.6	-0.4
TPRV	Parvadeh(Tabas	6.11	33	ePn	Pn	07 54 29.5	+0.8
TKDS	Koohdasht(Taba	6.79	32	ePn	Pn	07 54 38.8	+0.6
TNSJ	Nastanj	6.86	28	ePn	Pn	07 54 39.5	+0.4
WSAR	Wadi Sarin	7.05	130	Pn	Pn	07 54 40.7	-1.0
	comp=Z,4.4nm,0.3s,baz=305,slow=13,SNR=23						
WSAR				Sn	Sn	07 55 57.4	-4.3
	comp=Z,3.5nm,0.3s,baz=83,slow=19,SNR=6.8						
IVRN	Varamin	7.11	353	ePn	Pn	07 54 42.1	-0.3
ZHSF	Zahedan	7.22	75	ePn	Pn	07 54 44.9	+0.8
IANJ	Anjilo	7.58	7	ePn	Pn	07 54 49.8	+0.7
IDHR	Dehrash	8.68	323	ePn	Pn	07 55 02.7	-1.5
GEYT	Alibeck	10.94	23	Pn	Pn	07 55 36.9	+2.0
	comp=Z,0.4nm,0.3s,baz=209,slow=24,SNR=5.1						
EIL	Elat	15.72	281	Pn	Pn	07 56 38.0	-1.9
	comp=Z,0.1nm,0.3s,baz=60,slow=14,SNR=1.6						
MMAI	Mount Meron Ar	15.81	293	Pn	Pn	07 56 39.7	-1.3
	comp=Z,1.1nm,0.3s,baz=115,slow=16,SNR=2.3						
BRTR	Keskin Array B	19.73	312	P	P	07 57 27.5	-0.7
	comp=Z,0.1nm,0.3s,baz=127,slow=11,SNR=3.6						
AKTO	Aktyubinsk	22.83	9	P	P	07 58 03.0	+1.7
	comp=Z,2.3nm,0.8s,baz=203,slow=13,SNR=5.0						
AAK	Ala-Archa	22.93	45	P	P	07 58 05.5	+2.9
	comp=Z,0.6nm,0.4s,baz=225,slow=10.0,SNR=1.9						
MLR	Muntele Rosu	27.56	317	P	P	07 58 46.2	+0.8
	comp=Z,1.2nm,0.4s,baz=117,slow=11,SNR=1.8						
MKAR	Makanchi Array	29.83	43	P	P	07 59 06.7	+1.3
	comp=Z,0.4nm,0.6s,baz=230,slow=10,SNR=3.7						
KURBB	Kurchatov Arra	29.92	34	P	P	07 59 06.5	+0.3
	comp=Z,0.7nm,0.3s,baz=232,slow=9.1,SNR=6.9						
ZALV	Zalesovo Beam	35.01	33	P	P	07 59 50.5	-0.1
	comp=Z,4.2nm,0.7s,baz=240,slow=9.1,SNR=7.5						
FINES	FINESS Array B	37.96	339	P	P	08 00 15.2	-0.5
	comp=Z,1.6nm,0.5s,baz=141,slow=9.0,SNR=9.8						
GTA	Gaotai	40.38	61	eP	P	08 00 39.0	+2.5
GTA				pP	sP	08 00 44.0	+1.2
GTA				sP	pP	08 00 46.6	+5.6
GTA				pmax	pmax		

	comp=Z,1.0nm,0.9s						
GTA				smax	smax		
	comp=N,3.0nm,1.0s						
GTA				smax	smax		
	comp=E,2.0nm,1.1s						
HFS	**Hagfors**	**41.66**	**332**	P	**P**	**08 00 45.8**	**-0.8**
	comp=E,1.5nm,0.5s,baz=120,slow=10,SNR=6.7						
NOA	**NORSAR Array B**	**43.18**	**332**	P	**P**	**08 00 57.7**	**-1.2**
	comp=E,6.9nm,0.9s,baz=119,slow=7.9,SNR=2.5						
ARCES	**ARCESS Array B**	**44.54**	**347**	P	**P**	**08 01 09.6**	**-0.1**
	comp=E,4.5nm,0.9s,baz=146,slow=8.8,SNR=9.8						
SONM	**Songino Array**	**45.75**	**49**	P	**P**	**08 01 22.4**	**+2.7**
	comp=E,0.5nm,0.3s,baz=243,slow=6.3,SNR=2.5						
TORD	**Torodi Ar. Bea**	**49.70**	**264**	P	**P**	**08 01 48.3**	**-2.4**
	comp=E,1.5nm,0.7s,baz=56,slow=8.2,SNR=6.5						
YKA	**Yellowknife Ar**	**89.33**	**354**	P	**P**	**08 05 54.5**	**+0.1**
	comp=E,0.6nm,0.7s,baz=13,slow=4.9,SNR=11						
ASAR	**Alice Springs**	**93.49**	**115**	P	**P**	**08 06 13.8**	**-0.6**
	comp=E,0.3nm,0.7s,baz=301,slow=4.4,SNR=2.1						

IDC 03 07:55:25.7±3.1**, 3°.36S×127°.35E, h0^{km}, mb3.1**/2**, mb1 3.3**/3**, mb1mx3.1**/44**, mbtmp3.1**/3**, ML2.7**/1**, Error ellipse: s-maj=339.3km s-min=30.1km az=66.0, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.84**	**158**	P	Pn	07 59 35.8	+0.3
	0.0nm,0.3s,baz=337,slow=10,SNR=2.2						
ASAR	**Alice Springs**	**21.16**	**163**	P	P	08 00 12.6	-0.1
	0.4nm,0.6s,baz=343,slow=10,SNR=6.1						
MKAR	**Makanchi Array**	**63.75**	**327**	P	P	08 05 59.5	0.0
	0.3nm,0.9s,baz=130,slow=6.4,SNR=2.0						

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*IDC **03** 07:59:02.3±1.0, 30°.20N×138°.71E, h426^{km}±14^{km}, mb2.7/8, mb1 3.0/12, mb1mx2.8/48, mbtmp3.6/12, Error ellipse: s-maj=19.2km s-min=15.3km az=52.0*

ISC 03 07:59:03.4±0.7**, 30°.2N**±0°.1×**138°.8E**±0°.1**, h450^{km}, n12, σ1^{s}.46**/13**, mb3.0**/8**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**4.25**	**135**	P	**P**	**08 00 19.6**	**-1.2**
	13nm,0.3s,baz=297,slow=18,SNR=1.5						
JCJ				S	**S**	**08 01 21.8**	**-2.0**
	73nm,0.3s,baz=291,slow=23,SNR=19						
MJAR	**Matsushiro Arr**	**6.40**	**356**	P	**P**	**08 00 39.4**	**-2.3**
	0.2nm,0.3s,baz=168,slow=11,SNR=4.9						
KSRS	**Korea Array**	**11.62**	**312**	P	**P**	**08 01 36.8**	**-1.1**
	0.3nm,0.3s,baz=121,slow=11,SNR=6.7						
KLR	**Kul'dur**	**19.80**	**346**	P	**P**	**08 03 03.2**	**+0.6**
	0.1nm,0.3s,baz=131,slow=5.7,SNR=4.1						
SONM	**Songino Array**	**30.46**	**315**	P	**P**	**08 04 37.9**	**+0.2**
	0.4nm,0.4s,baz=127,slow=9.2,SNR=2.7						
CMAR	**Chiang Mai Arr**	**37.97**	**261**	P	**P**	**08 05 41.1**	**-0.3**
	1.0nm,0.5s,baz=44,slow=7.7,SNR=4.3						
ZALV	**Zalesovo Beam**	**45.24**	**318**	P	**P**	**08 06 38.5**	**-0.3**
	0.3nm,0.4s,baz=79,slow=11,SNR=2.2						
MKAR	**Makanchi Array**	**46.26**	**308**	P	**P**	**08 06 45.8**	**-0.9**
	0.4nm,0.7s,baz=90,slow=7.8,SNR=4.4						
WRA	**Warramunga Arr**	**49.99**	**185**	P	**P**	**08 07 16.6**	**+1.6**
	0.3nm,0.7s,baz=3.1,slow=7.8,SNR=2.7						
ILAR	**Eielson Array**	**56.50**	**30**	P	**P**	**08 08 01.8**	**+0.7**
	0.3nm,0.6s,baz=249,slow=5.4,SNR=6.5						
YKA	**Yellowknife Ar**	**70.87**	**28**	P	**P**	**08 09 34.0**	**+0.7**
	0.1nm,0.6s,baz=293,slow=5.5,SNR=4.0						
NVAR	**Mina Array Bea**	**80.94**	**51**	P	**P**	**08 10 32.2**	**+2.1**
	0.2nm,0.5s,baz=303,slow=5.0,SNR=2.0						

NOU 03 08:22:11.2, 19°.74S×169°.31E, h0^{km}, MLv4.2, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**2.11**	**214**	P	Pn	08 22 47.5	-0.2
MARNC	**Mare, Loyalty**	**2.11**	**214**	P	Sn	08 23 12.1	-2.5
DVP	**Devils Point**	**2.27**	**332**	P	Pn	08 22 49.9	-0.1
YATNC	**Mamie plateau,**	**3.23**	**224**	P	Pn	08 23 02.0	-1.2
YATNC	**Mamie plateau,**	**3.23**	**224**	P	Pn	08 23 01.5	-1.7
PINNC	**Pines Island,**	**3.35**	**211**	P	Pn	08 23 04.8	0.0
PINNC	**Pines Island,**	**3.35**	**211**	P	Pn	08 23 04.8	0.0
OUENC	**Ouen Island, N**	**3.52**	**220**	P	Pn	08 23 07.5	+0.3
OUENC	**Ouen Island, N**	**3.52**	**220**	P	Pn	08 23 05.2	-2.0
DZM	**Mont Dzumac**	**3.54**	**229**	P	Pn	08 23 07.2	-0.4
DZM	**Mont Dzumac**	**3.54**	**229**	P	Pn	08 23 07.5	-0.1
NOUC	**Port Laguerre**	**3.66**	**230**	P	Pn	08 23 09.5	+0.3
NOUC	**Port Laguerre**	**3.66**	**230**	P	Pn	08 23 09.5	+0.3
ONTNC	**Ouen Toro**	**3.69**	**226**	P	Pn	08 23 09.7	+0.1
SANVU	**Saraoutou**	**4.72**	**334**	P	Pn	08 23 23.5	-0.2

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*ARE **03** 08:41:19±2.2, 14°.2S±0°.1×76°.1W±0°.2, h22^{km}±8^{km}, Error ellipse: s-maj=27.4km s-min=7.8km az=47.0*

NEIC 03 08:41:19.2±1.4**, 14°.2S**±0°.2×**76°.1W**±0°.2**, h24^{km}**±15^{km}**, ML4.2**(ARE)**, Error ellipse: s-maj=39.4km s-min=5.7km az=57.0, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**2.29**	**342**	Pn	Pn	08 41 55.5	0.0
PSGCX	**Pisagua**	**7.87**	**134**	Pn	Pn	08 43 11.9	-0.5
MNMC	**Minye Minye**	**7.96**	**129**	Pn	Pn	08 43 14.6	+0.9
PB08	**IPOC Station P**	**8.91**	**133**	Pn	Pn	08 43 26.7	-0.2
PB01	**IPOC Station P**	**9.30**	**138**	Pn	Pn	08 43 32.5	+0.5
LVC	**Limon Verde**	**10.82**	**142**	Pn	Pn	08 43 53.5	+0.5
SAML	**Samuel**	**13.70**	**69**	Pn	Pn	08 44 30.9	-1.1

INET 03 08:47:10.8, 11°.74N×87°.16W, h18^{km}, MW3.5, Near coast of Nicaragua

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*IDC **03** 08:49:46.4±4.5, 11°.60S×166°.25E, h63^{km}±35^{km}, mb3.7/5, mb1 3.9/7, mb1mx3.6/37, mbtmp4.1/7, ML4.0/2, MS2.9/1, Ms1 2.9/1, ms1mx2.6/32, Error ellipse: s-maj=47.8km s-min=26.3km az=77.0*

ISC 03 08:49:45.1±1.7**, 11°.6S**±0°.1×**166°.3E**±0°.2**, h50^{km}, n8, σ1^{s}.36**/9**, mb3.9**/5**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.59**	**288**	P	**Pn**	**08 51 20.0**	**+0.5**
	16nm,0.3s,baz=195,slow=12,SNR=1.7						
HNR				LR	LR	08 53 48.8	
	comp=Z,101nm,20.9s,baz=39,slow=37						
DZM	**Mont Dzumac**	**10.45**	**179**	P	**Pn**	**08 52 14.3**	**+1.9**
	0.2nm,0.3s,baz=317,slow=22,SNR=8.6						
DZM				S	**Sn**	**08 54 06.2**	**-2.0**
	0.2nm,0.3s,baz=140,slow=16,SNR=1.7						
STKA	**Stephens Creek**	**30.45**	**225**	P	**P**	**08 55 53.8**	**+0.7**
	baz=12,slow=7.9,SNR=3.3						
WRA	**Warramunga Arr**	**31.82**	**251**	P	**P**	**08 56 04.6**	**-0.7**
	1.2nm,0.9s,baz=81,slow=8.5,SNR=6.2						
ASAR	**Alice Springs**	**33.05**	**244**	P	**P**	**08 56 15.2**	**-1.0**
	1.4nm,0.8s,baz=69,slow=9.7,SNR=15						
CMAR	**Chiang Mai Arr**	**72.81**	**294**	P	**P**	**09 01 09.4**	**+0.4**
	0.7nm,0.3s,baz=107,slow=2.9,SNR=4.1						
SONM	**Songino Array**	**79.40**	**324**	P	**P**	**09 01 45.8**	**-0.2**
	0.2nm,0.3s,baz=133,slow=4.0,SNR=1.8						
MKAR	**Makanchi Array**	**94.27**	**317**	P	**P**	**09 02 58.0**	**-1.1**
	0.9nm,0.7s,baz=94,slow=6.6,SNR=8.2						

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*LDG **03** 08:55:05.9±0.0, 46°.19N×6°.94E, h5^{km}, Md2.4/2, Ml2.5/21, Error ellipse: s-maj=0.7km s-min=0.6km az=116.0*

*STR **03** 08:55:05.7±0.2, 46°N±1°×°±°, h13^{km}±2^{km}, MLv2.1/13, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/alpes_taup-2.11 preliminary*

*ZUR **03** 08:55:05.8, 46°.20N×6°.92E, h4^{km}±1^{km}, MLh2.1/59, Error ellipse: s-maj=2.1km s-min=0.4km az=139.0*

*IASPEI **03** 08:55:05.6±0.8, 46°.19N±0°.02×6°.92E±0°.02, h8^{km}±5^{km}, Error ellipse: s-maj=3.0km s-min=2.1km az=111.1, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*GEN **03** 08:55:05.7, 46°.19N×6°.91E, h6^{km}±1^{km}, Ml2.0*

*ROM **03** 08:55:06.5±0.3, 46°.119N±0°.010×7°.00E±0°.01, h6^{km}, ML1.8/9, Error ellipse: s-maj=1.3km s-min=0.1km az=140.0*

ISC 03 08:55:05.7±0.8**, 46°.19N**±0°.01×**6°.92E**±0°.01**, h10^{km}**±4^{km}**, n99, σ0^{s}.97**/171**, 21C-16D, Switzerland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SALAN	**Lac Salanfe**	**0.06**	**140**	⇓Pg	**Pg**	**08 55 07.6**	**-0.4**
SALAN				⇓Pg	**Pg**	**08 55 07.6**	**-0.4**
	1.6nm,SNR=32						
SALAN				Sg	**Sg**	**08 55 08.8**	**-0.8**
SMUK	**Muraz-Klaeranl**	**0.10**	**8**	Pg	**Pg**	**08 55 07.9**	**-0.4**
	3.2nm,SNR=2.1						
SMUK				Pg	**Pg**	**08 55 07.9**	**-0.4**
SEMOS	**Emosson Stauma**	**0.12**	**175**	⇑Pg	**Pg**	**08 55 08.6**	**-0.1**
	1.8nm,SNR=12						
SEMOS				⇑Pg	**Pg**	**08 55 08.6**	**-0.1**
SEMOS				Sg	**Sg**	**08 55 10.5**	**-0.4**
SAIG	**Aigle Rue de l**	**0.13**	**14**	⇑Pg	**Pg**	**08 55 08.4**	**-0.3**
	2.0nm,SNR=12						
SAIG				⇑Pg	**Pg**	**08 55 08.4**	**-0.3**
SMAO	**Martigny, Rue**	**0.14**	**130**	⇓Pg	**Pg**	**08 55 09.0**	**+0.2**
GRYON	**Gryon**	**0.15**	**64**	⇓Pg	**Pg**	**08 55 08.9**	**-0.2**
GRYON				⇓Pg	**Pg**	**08 55 08.9**	**-0.2**
	1.0nm,SNR=6.3						
GRYON				Sg	**Sg**	**08 55 11.0**	**-0.4**
AIGLE	**Aigle**	**0.16**	**8**	⇑Pg	**Pg**	**08 55 08.8**	**-0.4**
AIGLE				⇑Pg	**Pg**	**08 55 08.8**	**-0.4**
	0.6nm,SNR=8.5						
OGSI	**Sixt**	**0.17**	**224**	⇑Pg	**Pg**	**08 55 09.3**	**0.0**
OGSI				⇑Pg	**Pg**	**08 55 09.3**	**0.0**
	0.5nm,SNR=4.2						
OGSI				Sg	**Sg**	**08 55 11.8**	**0.0**
SIOV	**Sion-Valere**	**0.31**	**81**	⇓Pg	**Pg**	**08 55 12.0**	**+0.1**
	0.2nm,SNR=2.8						
SIOV				⇓Pg	**Pg**	**08 55 12.0**	**+0.1**
SENIN	**Lac Senin/Sane**	**0.32**	**56**	⇑Pg	**Pg**	**08 55 11.9**	**-0.2**
SENIN				⇑Pg	**Pg**	**08 55 11.9**	**-0.2**
	0.2nm,SNR=3.7						
SENIN				Sg	**Sg**	**08 55 16.4**	**+0.1**
DIX	**Grande Dixence**	**0.36**	**107**	⇓Pg	**Pg**	**08 55 13.1**	**+0.2**
	0.1nm,SNR=2.4						
DIX				⇓Pg	**Pg**	**08 55 13.1**	**+0.2**
DIX	**Grande Dixence**	**0.36**	**107**	⇓P	**Pg**	**08 55 13.0**	**+0.2**
DIX				S	**Sg**	**08 55 18.0**	**+0.4**
DIX				AML	AML		
	comp=N,146µm,0.4s						
DIX				AML	AML		
	comp=E,92µm,0.1s						
MRGE	**Morge**	**0.43**	**167**	⇑Pg	**Pg**	**08 55 14.3**	**+0.2**
MRGE				⇑Pg	**Pg**	**08 55 14.3**	**+0.2**
	comp=E,0.2nm,SNR=3.7						
MRGE				Sg	**Sg**	**08 55 20.2**	**+0.4**
MRGE	**Morge**	**0.43**	**167**	P	**Pg**	**08 55 14.3**	**+0.2**
MRGE				S	**Sg**	**08 55 20.3**	**+0.5**
MRGE				AML	AML		
	comp=E,365µm,0.2s						
MRGE				AML	AML		
	comp=N,350µm,0.5s						
MRGE				AML	AML		
	comp=N,350µm,0.5s						
MRGE				AML	AML		
	comp=E,366µm,0.2s						
VANNI	**Vissoie, Val d**	**0.47**	**87**	⇓Pg	**Pg**	**08 55 15.0**	**+0.1**
VANNI				⇓Pg	**Pg**	**08 55 15.0**	**+0.1**
	comp=E,0.1nm,SNR=1.4						
VANNI				Sg	**Sg**	**08 55 21.2**	**+0.1**
LKBD	**Leukerbad**	**0.53**	**68**	Sg	**Sg**	**08 55 23.1**	**+0.1**
RSL	**Roselend**	**0.54**	**203**	⇑Pg	**Pg**	**08 55 15.9**	**-0.3**
RSL				⇑Pg	**Pg**	**08 55 15.9**	**-0.3**
	comp=E,0.1nm,SNR=1.1						
RSL	**Roselend**	**0.54**	**203**	Pg	**Pg**	**08 55 15.9**	**-0.3**
RSL				Sg	**Sg**	**08 55 23.7**	**+0.4**
TORNY	**Torny/Romont**	**0.59**	**3**	Pg	**Pg**	**08 55 17.1**	**0.0**
TORNY	**Torny/Romont**	**0.59**	**3**	Sg	**Sg**	**08 55 25.0**	**+0.1**
TORNY	**Torny/Romont**	**0.59**	**3**	Pg	**Pg**	**08 55 17.1**	**0.0**
EMBD	**Embd, Matterta**	**0.63**	**87**	⇓Pg	**Pg**	**08 55 17.8**	**-0.2**
	comp=E,0.1nm,SNR=1.5						
EMBD				⇓Pg	**Pg**	**08 55 17.8**	**-0.2**
EMBD	**Embd, Matterta**	**0.63**	**87**	Sg	**Sg**	**08 55 25.8**	**-0.5**
EMBD	**Embd, Matterta**	**0.63**	**87**	Pg	**Pg**	**08 55 17.8**	**-0.2**
EMBD	**Embd, Matterta**	**0.63**	**87**	Sg	**Sg**	**08 55 25.8**	**-0.5**
WIMIS	**Wimmis**	**0.68**	**45**	Pg	**Pg**	**08 55 18.7**	**-0.2**
WIMIS				Pg	**Pg**	**08 55 18.7**	**-0.2**
	comp=E,0.1nm,SNR=1.3						
LPL	**La Plagne**	**0.68**	**191**	*e*Pg	**Pg**	**08 55 18.8**	**-0.1**
LPL				*e*Sg	**Sg**	**08 55 28.3**	**+0.4**
	comp=E,12nm,0.2s						
LPG	**La Plagne**	**0.70**	**190**	*e*Pg	**Pg**	**08 55 19.2**	**0.0**
LPG				*e*Sg	**Sg**	**08 55 28.8**	**+0.4**
	comp=E,25nm,0.2s						
SATI	**Passo dei Sala**	**0.73**	**115**	P	**Pg**	**08 55 19.4**	**-0.4**
SATI				S	**Sg**	**08 55 29.6**	**+0.2**
SATI	**Passo dei Sala**	**0.73**	**115**	⇑P	**Pg**	**08 55 19.5**	**-0.4**
SATI				S	**Sg**	**08 55 29.0**	**-0.4**
SATI				AML	AML		
	comp=E,66µm,1.3s						
SATI				AML	AML		
	comp=N,59µm,0.3s						
SATI				AML	AML		
	comp=E,66µm,1.3s						
MMK	**Mattmark**	**0.74**	**100**	⇑P	**Pg**	**08 55 19.6**	**-0.4**
MMK				S	**Sg**	**08 55 30.1**	**+0.5**
MMK				AML	AML		
	comp=N,43µm,0.9s						
MMK				AML	AML		
	comp=N,43µm,0.9s						
MMK				AML	AML		
	comp=E,30µm,1.6s						
CIRO	**Champorcher**	**0.74**	**142**	⇑P	**Pg**	**08 55 20.1**	**+0.2**
CIRO				S	**Sg**	**08 55 29.2**	**-0.5**
CIRO				AML	AML		
	comp=E,80µm,0.8s						
CIRO				AML	AML		
	comp=N,110µm,0.8s						
CIRO				AML	AML		
	comp=E,80µm,0.8s						
LSD	**Lago del Serru**	**0.74**	**168**	⇑Pn	**Pg**	**08 55 19.9**	**-0.1**
LSD				⇑Pn	**Pg**	**08 55 19.9**	**-0.1**
	comp=E,0.1nm,SNR=2.1						
LSD	**Lago del Serru**	**0.74**	**168**	P	**Pg**	**08 55 20.0**	**-0.1**
LSD				S	**Sg**	**08 55 29.4**	**-0.4**
LSD	**Lago del Serru**	**0.74**	**168**	⇑P	**Pg**	**08 55 19.9**	**-0.1**
LSD				S	**Sg**	**08 55 29.4**	**-0.4**
LSD				AML	AML		
	comp=E,111µm,0.2s						
LSD				AML	AML		
	comp=N,74µm,1.1s						
LSD				AML	AML		
	comp=E,110µm,0.2s						
LSD				AML	AML		
	comp=N,74µm,1.1s						
SIMPL	**Simplonpass**	**0.77**	**86**	⇓Pn	**Pg**	**08 55 20.2**	**-0.3**
SIMPL				⇓Pn	**Pg**	**08 55 20.2**	**-0.3**
	comp=N,0.1nm,SNR=1.2						
BRANT	**Les Verrieres**	**0.81**	**338**	Pg	**Pg**	**08 55 21.7**	**+0.3**
FIESA	**Fiescheralp**	**0.86**	**73**	Pn	**Pg**	**08 55 22.1**	**-0.2**
	comp=N,0.1nm,SNR=1.5						
TRAV	**Traversella**	**0.89**	**139**	⇑P	**Pg**	**08 55 22.6**	**-0.2**
TRAV				S	**Sg**	**08 55 33.8**	**-0.5**
TRAV				AML	AML		
	comp=E,106µm,0.2s						
TRAV				AML	AML		
	comp=E,106µm,0.2s						
TRAV				AML	AML		
	comp=N,124µm,0.5s						
OG35	**Corcelles**	**0.95**	**262**	Pg	**Pg**	**08 55 24.2**	**+0.3**
OG35				Pn	**Pn**	**08 55 25.6**	**+0.5**
OG35				Sg	**Sg**	**08 55 36.7**	**+0.4**
OGMO	**Fort Saint-Gob**	**0.99**	**190**	Pg	**Pg**	**08 55 24.6**	**-0.2**
OGSM	**Saint Maurice**	**1.03**	**236**	Pg	**Pg**	**08 55 25.5**	**0.0**
OGSM				Pn	**Pn**	**08 55 27.8**	**+1.5**
OGSM				Sg	**Sg**	**08 55 39.2**	**+0.3**
RSP	**Reno Superiore**	**1.07**	**167**	P	**Pg**	**08 55 26.0**	**-0.2**
RSP				S	**Sg**	**08 55 40.1**	**+0.1**
CHMF	**Charmoille**	**1.08**	**350**	Pn	**Pg**	**08 55 26.2**	**-0.2**
	comp=N,0.1nm,SNR=1.4						
CHMF				Pn	**Pg**	**08 55 26.2**	**-0.2**
CHMF	**Charmoille**	**1.08**	**350**	Pg	**Pg**	**08 55 26.2**	**-0.2**
CHMF				Sg	**Sg**	**08 55 40.2**	**-0.2**
GDM	**Grand'Maison**	**1.13**	**210**	Pg	**Pg**	**08 55 27.0**	**-0.5**
GDM				Sg	**Sb**	**08 55 43.6**	**+1.3**
BNI	**Bardonecchia**	**1.15**	**189**	P	**Pg**	**08 55 27.1**	**-0.6**
LOMF	**Lomont**	**1.17**	**357**	Pg	**Pg**	**08 55 28.0**	**-0.1**
BOURR	**Bourrignon**	**1.23**	**10**	Pn	**Pg**	**08 55 29.0**	**-0.3**
BOURR	**Bourrignon**	**1.23**	**10**	Sg	**Sn**	**08 55 46.3**	**+0.6**
BALST	**Balsthal**	**1.27**	**25**	Pn	**Pg**	**08 55 29.4**	**-0.6**
BALST				Pg	**Pn**	**08 55 30.0**	**+0.4**
BALST	**Balsthal**	**1.27**	**25**	Sg	**Sn**	**08 55 47.3**	**+0.7**
VARE	**Varese**	**1.33**	**103**	P	**Pn**	**08 55 30.5**	**0.0**
VARE				AML	AML		
	comp=E,50µm,1.6s						
VARE				AML	AML		
	comp=N,54µm,1.3s						
BHB	**Bricherasio**	**1.37**	**170**	P	**Pb**	**08 55 31.8**	**+0.4**
MBDF	**Montbardon**	**1.46**	**184**	*e*Pn	**Pn**	**08 55 32.7**	**+0.4**
MBDF				*e*Sg	**Sg**	**08 55 52.6**	**-0.2**
	comp=N,4.9nm,0.3s						
ORIF	**Oris-en-Rattie**	**1.47**	**210**	*e*Pn	**Pn**	**08 55 32.5**	**+0.2**
ORIF				*e*Sg	**Sg**	**08 55 53.3**	**+0.5**
	comp=N,21nm,0.3s						
ORIF	**Oris-en-Rattie**	**1.47**	**210**	Pn	**Pn**	**08 55 32.8**	**+0.5**
ORIF	**Oris-en-Rattie**	**1.47**	**210**	P	**Pn**	**08 55 32.9**	**+0.6**
MUGIO	**Muggio**	**1.50**	**99**	P	**Pb**	**08 55 33.8**	**+0.1**
MUGIO				AML	AML		
	comp=E,27µm,1.4s						
MUGIO				AML	AML		
	comp=N,24µm,1.6s						
SULZ	**Cheisacher**	**1.57**	**31**	Pn	**Pn**	**08 55 33.1**	**-0.6**
SULZ				Pg	**Pb**	**08 55 35.4**	**+0.6**
SULZ	**Cheisacher**	**1.57**	**31**	Sg	**Sg**	**08 55 56.4**	**+0.2**
HINF	**Hinteralfeld**	**1.63**	**358**	*e*Pg	**Pb**	**08 55 36.3**	**+0.4**
HINF				*e*Sn	**Sn**	**08 55 54.1**	**-1.5**
HINF				*e*Sg	**Sb**	**08 55 57.4**	**+0.8**
	comp=N,13nm,0.3s						
MOF	**Molkenrain**	**1.67**	**5**	Pg	**Pb**	**08 55 37.3**	**+0.7**
PZZ	**Stroppo**	**1.69**	**175**	P	**Pb**	**08 55 37.3**	**+0.4**
OGAG	**Argentiere**	**1.75**	**189**	Pn	**Pn**	**08 55 32.5**	**-3.8**
HAU	**Haudompre**	**1.86**	**348**	*e*Pg	**Pb**	**08 55 40.4**	**+0.6**
HAU				*e*Sg	**Sb**	**08 56 04.2**	**+1.0**
	comp=N,21nm,0.3s						
KIZ	**Kirchzarten**	**1.90**	**21**	Pg	**Pb**	**08 55 40.8**	**+0.3**
KIZ	**Kirchzarten**	**1.90**	**21**	Pn	**Pn**	**08 55 37.0**	**-1.2**
KIZ	**Kirchzarten**	**1.90**	**21**	Pg	**Pb**	**08 55 40.8**	**+0.3**
KIZ	**Kirchzarten**	**1.90**	**21**	Sg	**Sb**	**08 56 05.3**	**+1.1**
SLE	**Schleitheim**	**1.91**	**34**	Pn	**Pn**	**08 55 37.5**	**-0.8**
SLE	**Schleitheim**	**1.91**	**34**	Pg	**Pb**	**08 55 41.5**	**+0.9**
SLE	**Schleitheim**	**1.91**	**34**	Pn	**Pn**	**08 55 37.5**	**-0.8**
SLE	**Schleitheim**	**1.91**	**34**	Sg	**Sg**	**08 56 06.2**	**-0.8**
ECH	**Echery**	**2.04**	**4**	Pn	**Pn**	**08 55 39.4**	**-0.7**
ECH				Pg	**Pb**	**08 55 43.7**	**+0.9**
VIVF	**Saint-Julien-l**	**2.07**	**231**	*e*Pn	**Pn**	**08 55 40.1**	**-0.4**
VIVF	**Saint-Julien-l**	**2.07**	**231**	*e*Pg	**Pb**	**08 55 44.3**	**+1.0**
VIVF				*e*Sn	**Sn**	**08 56 04.7**	**-1.6**
VIVF				*e*Sg	**Sb**	**08 56 10.5**	**+1.4**
	comp=N,19nm,0.3s						
SMF	**Signal de Mont**	**2.18**	**283**	*e*Pg	**Pb**	**08 55 46.2**	**+1.0**
SMF				*e*Sg	**Sb**	**08 56 14.4**	**+2.1**
	comp=N,5.9nm,0.2s						
CDF	**Champ du Feu**	**2.24**	**6**	*e*Pn	**Pn**	**08 55 41.8**	**-1.1**
CDF	**Champ du Feu**	**2.24**	**6**	*e*Pg	**Pb**	**08 55 47.4**	**+1.1**
CDF				*e*Sg	**Sg**	**08 56 16.3**	**-1.3**
	comp=N,4.1nm,0.3s						
WLS	**Welschbruch**	**2.25**	**7**	Pn	**Pn**	**08 55 42.2**	**-0.8**
WLS				Pg	**Pb**	**08 55 47.6**	**+1.2**
SBF	**Sospel**	**2.35**	**171**	*e*Pn	**Pn**	**08 55 44.3**	**-0.2**
SBF				*e*Sn	**Sn**	**08 56 11.8**	**-1.7**
	comp=N,4.5nm,0.3s						
LEOD	**Capriano del C**	**2.35**	**107**	S	**Sg**	**08 56 22.0**	**+0.7**
LOR	**Lormes**	**2.37**	**298**	*e*Pn	**Pn**	**08 55 43.0**	**-1.6**
	baz=118						
LOR	**Lormes**	**2.37**	**298**	*e*Pg	**Pb**	**08 55 50.0**	**+1.6**
LOR				*e*Sn	**Sn**	**08 56 11.7**	**-2.1**
LOR				*e*Sg	**Sb**	**08 56 19.8**	**+2.1**
	comp=N,3.9nm,0.3s						
SFTF	**Sexfontaines**	**2.39**	**328**	*e*Pg	**Pg**	**08 55 51.6**	**+0.1**
	baz=148						
SFTF				*e*Sg	**Sb**	**08 56 20.9**	**+2.5**
	comp=N,4.7nm,0.3s						
SMRF	**Simiane la Rot**	**2.41**	**204**	*e*Pg	**Pg**	**08 55 50.9**	**-0.9**
SMRF				*e*Sn	**Sn**	**08 56 13.1**	**-1.7**
	comp=N,1.5nm,0.2s						
PAGF	**Fort de Pagny**	**2.50**	**342**	*e*Pg	**Pb**	**08 55 52.3**	**+1.5**
SSF	**Saint Saulge**	**2.51**	**292**	*e*P	**Pn**	**08 55 48.4**	**+1.8**
SSF	**Saint Saulge**	**2.51**	**292**	*e*Pg	**Pg**	**08 55 52.9**	**-0.9**
SSF				*e*Sn	**Sn**	**08 56 15.2**	**-2.1**
SSF				*e*Sg	**Sg**	**08 56 25.0**	**-1.3**
	comp=N,3.5nm,0.3s						
AVF	**Avril sur Loir**	**2.54**	**285**	*e*Pn	**Pn**	**08 55 46.8**	**-0.1**
AVF	**Avril sur Loir**	**2.54**	**285**	*e*Pg	**Pb**	**08 55 53.0**	**+1.7**
AVF				*e*Sg	**Sb**	**08 56 25.5**	**+2.9**
	comp=N,1.8nm,0.2s						
FRF	**La Foret Royal**	**2.63**	**184**	*e*Pg	**Pg**	**08 55 55.1**	**-1.0**
FRF				*e*Sn	**Sn**	**08 56 18.5**	**-1.8**
	comp=N,2.1nm,0.3s						
BGF	**Bois d'Agland**	**2.84**	**279**	*e*Pn	**Pn**	**08 55 50.9**	**-0.3**
BGF	**Bois d'Agland**	**2.84**	**279**	*e*Pg	**Pg**	**08 55 59.3**	**-0.9**
BGF				*e*Sg	**Sg**	**08 56 36.9**	**-0.1**
	comp=N,8.0nm,0.4s						
LASF	**Ste Croix**	**3.03**	**227**	*e*Pg	**Pg**	**08 56 02.1**	**-1.5**
LASF				*e*Sn	**Sn**	**08 56 27.7**	**-2.3**
LASF				*e*Sg	**Sb**	**08 56 39.5**	**+2.8**
	comp=N,4.8nm,0.3s						
TCF	**Toulx Ste Croi**	**3.27**	**273**	*e*Pn	**Pn**	**08 55 56.6**	**-0.5**
TCF	**Toulx Ste Croi**	**3.27**	**273**	*e*Pg	**Pg**	**08 56 06.6**	**-1.7**
TCF				*e*Sn	**Sn**	**08 56 33.5**	**-2.6**
TCF				*e*Sg	**Sg**	**08 56 49.2**	**-1.5**
	comp=N,2.5nm,0.3s						
CAF	**Calviac**	**3.64**	**251**	*e*P	**Pn**	**08 56 04.0**	**+1.9**
CAF				*e*Sg	**Sg**	**08 56 59.3**	**-3.1**
	comp=N,2.2nm,0.3s						

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*NNC **03** 09:16:59.7±0.6, 51°.71N×75°.38E, h0^{km}, mb3.5, mpv3.2, Error ellipse: s-maj=7.8km s-min=3.5km az=15.0, Suspected Mining explosion.*

*IDC **03** 09:17:02.2±1.1, 51°.76N×75°.60E, h0^{km}, mb1 2.7/3, mb1mx2.6/42, mbtmp2.7/3, ML2.5/3, Error ellipse: s-maj=22.1km s-min=8.3km az=30.0*

ISC 03 09:17:01.4±1.0**, 51°.74N**±0°.07×**75°.45E**±0°.05**, h0^{km}, n13, σ1^{s}.64**/16**, 6C-3D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**2.24**	**119**	Pg	**Pb**	**09 17 41.6**	**-1.1**
	0.5nm,0.3s,baz=305,slow=19,SNR=8.0						
KURBB				Lg	Lg	09 18 11.0	
	0.6nm,0.3s,baz=306,slow=32,SNR=8.5						
KURBB	**Kurchatov Arra**	**2.24**	**119**	⇓Pg	**Pb**	**09 17 41.4**	**-1.2**
	3.0nm,0.3s						
KURBB				⇑Lg	Lg	09 18 11.0	
	61nm,0.7s						
BRZS	**Berezniki**	**2.49**	**226**	Pg	**Pn**	**09 17 44.0**	**+0.8**
	3.6nm,0.3s						
BRZS				Lg	Lg	09 18 16.8	
	21nm,0.6s						
SEM	**Semipalatinsk**	**3.31**	**112**	Pg	**Pb**	**09 17 59.4**	**-1.7**
	5.8nm,0.1s						
SEM				Lg	Lg	09 18 43.5	
	17nm,0.3s						
BVAR	**Borovoye Array**	**3.36**	**294**	Pn	**Pn**	**09 17 56.3**	**+1.2**
	0.4nm,0.3s,baz=95,slow=18,SNR=4.4						
BVAR				Sn	**Sn**	**09 18 37.7**	**+2.0**
	0.6nm,0.3s,baz=108,slow=26,SNR=4.8						
BVAR				Lg	Lg	09 18 44.6	
	2.2nm,0.3s,baz=90,slow=26,SNR=8.3						
BRVK	**Borovoye**	**3.43**	**295**	⇑Pg	**Pb**	**09 18 01.8**	**-1.2**
	2.0nm,0.7s						
BRVK				⇓Lg	Lg	09 18 48.0	
	17nm,0.9s						
I46RU	**ZALESOVO INFRA**	**6.09**	**65**	*i*		09 55 00.0	
	baz=254,slow=328,SNR=3.1						
ZALV	**Zalesovo Beam**	**6.09**	**65**	Pn	**Pn**	**09 18 34.3**	**+1.7**
	0.6nm,0.3s,baz=249,slow=14,SNR=7.1						
ZALV				Sn	**Sn**	**09 19 42.8**	**-0.1**
	0.2nm,0.3s,baz=259,slow=24,SNR=3.1						
ZALV				Lg	Lg	09 20 11.1	
	0.3nm,0.3s,baz=249,slow=23,SNR=1.8						
MAKZ	**Makanchi**	**6.53**	**137**	⇑Sn	**Sn**	**09 19 53.7**	**0.0**
	3.3nm,0.7s						
MAKZ				⇑Lg	Lg	09 20 28.4	
	6.2nm,0.8s						
MK31	**Makanchi Array**	**6.67**	**135**	⇓Pn	**Pn**	**09 18 39.5**	**-1.2**
	0.1nm,0.2s						
MK31				⇑Sn	**Sn**	**09 19 57.5**	**+0.1**
	0.5nm,0.5s,baz=321,slow=19,SNR=5.5						
MK31				⇑Lg	Lg	09 20 32.9	
	3.9nm,0.7s,baz=320,slow=27,SNR=7.5						
MKAR	**Makanchi Array**	**6.67**	**135**	Pn	**Pn**	**09 18 40.5**	**-0.1**
	0.1nm,0.3s,baz=327,slow=10,SNR=3.1						

MKAR				Sn	**Sn**	**09 19 55.2**	**-2.1**
	0.3nm,0.3s,baz=323,slow=16,SNR=9.0						
MKAR				Lg	Lg	09 20 29.3	
	0.5nm,0.3s,baz=319,slow=27,SNR=10						
KAPS	**Kapalarasan**	**6.96**	**157**	Pg	**Pb**	**09 19 06.2**	**+3.0**
	0.6nm,0.6s						
KAPS				Lg	Lg	09 20 37.6	
	6.3nm,0.8s						
ZSN	**Zaisan**	**7.47**	**121**	Pg	**Pb**	**09 19 13.9**	**+2.0**
	2.7nm,0.2s						
ZSN				Lg	Lg	09 20 51.6	
	7.8nm,0.8s						

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*IDC **03** 09:28:00.7±1.9, 26°.08N×90°.80E, h0^{km}, mb3.6/5, mb1 3.7/5, mb1mx3.4/57, mbtmp3.6/5, Error ellipse: s-maj=80.8km s-min=21.1km az=67.0*
*NDI **03** 09:28:04.4±2.3, 26°.24N×90°.84E, h11^{km}±9^{km}, ML3.8*
ISC 03 09:28:02.1±2.0, **26°.22N**±0°.07×**90°.84E**±0°.05, **h4**^{km}±13^{km}, **n14**, σ1^{s}.**68**/22, **mb3.6**/5, **Northeastern India**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUWA	**GUWAHATI**	**0.77**	**92**	*e*P	**Pn**	**09 28 19.2**	**-0.5**
GUWA				*e*S	**Sb**	**09 28 30.1**	**+1.4**
GUWA				IAML		09 28 31.1	
	comp=N,2µm,0.2s						
GUWA				IAML		09 28 31.2	
	comp=E,1µm,0.1s						
SHL	**Shillong**	**1.14**	**125**	*e*P	**Pn**	**09 28 25.4**	**+0.3**
SHL				*i* x	x	09 28 30.1	
SHL				*e*S	**Sn**	**09 28 40.9**	**-0.5**
SHL				IAML		09 28 44.2	
	comp=N,1µm,0.2s						
SHL				IAML		09 28 44.4	
	comp=E,817nm,0.1s						
TEZP	**TEZPUR**	**1.80**	**77**	*e*P	**Pn**	**09 28 34.8**	**+0.9**
TEZP				*e*S	**Sb**	**09 28 59.9**	**+1.4**
TEZP				IAML		09 29 03.7	
	comp=N,1µm,0.2s						
TEZP				IAML		09 29 03.8	
	comp=E,1µm,0.2s						
GTK	**Tadong**	**2.28**	**299**	*e*P	**Pb**	**09 28 42.9**	**-1.0**
GTK				*i* x	x	09 28 44.1	
GTK				*e*S	**Sn**	**09 29 08.9**	**-0.4**
KOHI	**KOHIMA**	**2.98**	**99**	*e*P	**Pn**	**09 28 52.4**	**+2.1**
KOHI				*e*S	**Sn**	**09 29 25.2**	**-1.5**
KOHI				IAML		09 29 44.0	
	comp=E,757nm,0.6s						
KOHI				IAML		09 29 44.6	
	comp=N,288nm,0.8s						
KOHI				IAML		09 29 45.4	
	comp=N,501nm,1.0s						
ZIRO	**ZIRO**	**2.98**	**64**	*e*x	**Pg**	**09 28 59.9**	**+0.6**
ZIRO				IAML		09 29 04.7	
	comp=Z,166nm,0.3s						
ZIRO				*e*x	**Sg**	**09 29 38.0**	**-0.1**
ZIRO				IAML		09 29 45.0	
	comp=E,2µm,0.4s						
ZIRO				IAML		09 29 45.4	
	comp=N,2µm,0.3s						
IMP	**Imphal**	**3.13**	**116**	*e*P	**Pb**	**09 28 55.5**	**-2.9**
IMP				*e*x	**Sn**	**09 29 33.9**	**+3.7**
MOKO	**MOKOCHONG**	**3.30**	**88**	*e*P	**Pn**	**09 28 56.5**	**+1.7**
MOKO				*e*S	**Sn**	**09 29 33.6**	**-1.0**
MOKO				IAML		09 29 54.7	
	comp=N,522nm,0.3s						
MOKO				IAML		09 29 55.0	
	comp=E,399nm,0.1s						
SAIH	**SAIHA**	**4.20**	**152**	*e*P	**Pn**	**09 29 09.6**	**+2.5**
MKAR	**Makanchi Array**	**21.62**	**344**	P	**P**	**09 32 53.8**	**+0.5**
	comp=E,0.8nm,0.6s,baz=158,slow=10,SNR=13						
SONM	**Songino Array**	**24.80**	**26**	P	**P**	**09 33 26.0**	**+0.7**
	comp=E,1.7nm,0.6s,baz=210,slow=11,SNR=5.6						
KURBB	**Kurchatov Arra**	**26.13**	**342**	P	**P**	**09 33 37.3**	**+0.2**
	comp=E,0.4nm,0.4s,baz=161,slow=8.7,SNR=3.8						
WRA	**Warramunga Arr**	**62.36**	**133**	P	**P**	**09 38 24.4**	**-1.8**
	comp=E,0.3nm,0.7s,baz=325,slow=6.7,SNR=5.8						
ASAR	**Alice Springs**	**64.77**	**136**	P	**P**	**09 38 41.0**	**-1.1**
	comp=E,0.8nm,0.6s,baz=316,slow=6.7,SNR=15						

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*IDC **03** 09:36:00.8±1.0, 52°.35N×168°.75W, h0^{km}, mb4.1/24, mb1 4.2/25, mb1mx4.0/69, mbtmp4.1/25, ML3.2/1, Error ellipse: s-maj=26.2km s-min=13.9km az=171.0*
*NEIC **03** 09:36:03.6±2.3, 52°.25N±0°.05×168°.55W±0°.06, h16^{km}±5^{km}, Error ellipse: s-maj=7.8km s-min=4.4km az=151.0*
*AEIC **03** 09:36:03.8±2.4, 52°.22N±0°.06×168°.54W±0°.07, h20^{km}±1^{km}, ML3.5/34, mb4.0/30(NEIC), Error ellipse: s-maj=9.1km s-min=5.7km az=169.0*
ISC 03 09:36:05.0±0.6, **52°.27N**±0°.07×**168°.61W**±0°.05, **h29**^{km}, **n127**, σ1^{s}.**25**/125, **mb4.2**/27, **Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIKH	**Nikolski High**	**0.72**	**348**		**Pb**	**09 36 18.8**	**-0.1**
NIKH	**Nikolski High**	**0.72**	**348**		**Sn**	**09 36 31.3**	**+2.2**
OKSP	**Okmok Steeple**	**1.00**	**11**		**Pn**	**09 36 22.5**	**-0.6**
OKSO	**Okmok South**	**1.12**	**14**		**Pn**	**09 36 24.0**	**-0.7**
OKSO					**Sn**	**09 36 40.5**	**+1.3**
OKTU	**Okmok Mt. Tuli**	**1.17**	**17**		**Pn**	**09 36 25.3**	**-0.1**
OKFG	**Magazine Ridge**	**1.22**	**20**		**Pn**	**09 36 25.3**	**-0.7**
OKFG					**Sn**	**09 36 43.3**	**+1.8**
OKRE	**Okmok R'deer P**	**1.28**	**12**		**Pn**	**09 36 27.3**	**+0.4**
MAPS	**Pakushin South**	**1.84**	**33**		**Pn**	**09 36 35.0**	**+0.4**
MGOD	**Makushin Gods**	**1.85**	**34**		**Pn**	**09 36 35.3**	**+0.6**
MGOD					**Sn**	**09 36 59.6**	**+2.5**
MREP	**Makushin Rep't**	**1.91**	**35**		**Pn**	**09 36 35.8**	**+0.2**
MSW	**Makushin Switc**	**1.98**	**33**		**Pn**	**09 36 37.2**	**+0.7**
MSW					**Sn**	**09 37 02.8**	**+2.4**
MNAT	**Makushin Natee**	**1.99**	**35**		**Pn**	**09 36 37.2**	**+0.6**
UNV	**Unalaska Valle**	**2.02**	**38**	Pn	**Pn**	**09 36 37.5**	**+0.5**
UNV	**Unalaska Valle**	**2.02**	**38**		**Sn**	**09 37 02.2**	**+0.8**
AKMO	**Akutan Morgan**	**2.40**	**40**		**Pn**	**09 36 43.4**	**+1.1**
ZRO	**Akutan Zero**	**2.41**	**40**		**Pn**	**09 36 43.6**	**+1.1**
AKBBA	**Akutan Broad B**	**2.44**	**40**		**Pn**	**09 36 43.6**	**+0.8**
AKUT	**Akutan**	**2.53**	**41**	Pn	**Pn**	**09 36 44.7**	**+0.7**
KOFP	**Korovin Flat P**	**3.37**	**272**		**Pn**	**09 36 56.2**	**+0.5**
ATKA	**Atka Island**	**3.44**	**271**		**Pn**	**09 36 56.5**	**0.0**
ATKA	**Atka Island**	**3.44**	**271**		**Sn**	**09 37 37.3**	**+1.1**
GSTR	**Great Sitkin T**	**4.59**	**271**	Pn	**Pn**	**09 37 13.4**	**+1.1**
GSMY	**Great Sitkin M**	**4.59**	**270**		**Pn**	**09 37 12.8**	**+0.4**
GSTD	**Great Sitkin T**	**4.64**	**270**		**Pn**	**09 37 13.6**	**+0.4**
ADAG	**Mount Adagdak**	**4.93**	**270**		**Pn**	**09 37 17.6**	**+0.6**
ADK	**Adak**	**5.00**	**269**	Pn	**Pn**	**09 37 18.2**	**+0.3**
SPIA	**Saint Paul Isl**	**5.00**	**350**	Pn	Pn	09 37 14.2	-3.8
KIMD	**Kanaga Island**	**5.35**	**268**		**Pn**	**09 37 23.0**	**+0.2**
CNBA	**Chernabura Isl**	**5.95**	**61**	Pn	**Pn**	**09 37 32.7**	**+1.7**
CHGN	**Chignik**	**7.20**	**52**	Pn	**Pn**	**09 37 50.8**	**+2.6**
AMKA	**Amchitka**	**7.55**	**268**	Pn	**Pn**	**09 37 53.6**	**+0.6**
OHAK	**Old Harbor**	**10.14**	**55**	Pn	**Pn**	**09 38 28.3**	**-0.1**
KDAK	**Kodiak Island**	**10.71**	**53**	Pn	**Pn**	**09 38 35.6**	**-0.6**
	1.4nm,0.3s,baz=222,slow=5.3,SNR=25						
SVW2	**Sparrevohn**	**11.36**	**34**	Pn	**Pn**	**09 38 47.3**	**+2.2**
GAMB	**Gambell**	**11.65**	**353**	Pn	**Pn**	**09 38 46.2**	**-2.8**
RSO	**Redoubt South**	**11.99**	**41**	Pn	**Pn**	**09 38 56.4**	**+2.5**
CNPM	**China Poot**	**12.13**	**46**	Pn	**Pn**	**09 38 56.2**	**+0.5**
BRLK	**Bradley Lake**	**12.40**	**46**	Pn	**Pn**	**09 39 00.8**	**+1.5**
TTA	**Tatalina**	**12.61**	**27**	Pn	Pn	09 38 58.6	-3.6
SEW	**Seward**	**13.20**	**46**	Pn	**Pn**	**09 39 09.8**	**-0.4**
SUA	**Susitna One**	**13.38**	**40**	Pn	**Pn**	**09 39 13.5**	**+0.8**
SKT	**Skwentna**	**13.39**	**37**	Pn	**Pn**	**09 39 16.1**	**+3.2**
PPLA	**Purkeypile**	**13.76**	**33**	Pn	**Pn**	**09 39 20.3**	**+2.3**
PMR	**Palmer**	**14.09**	**41**	Pn	**Pn**	**09 39 24.5**	**+2.2**
KNK	**Knik Glacier**	**14.27**	**42**	Pn	**Pn**	**09 39 23.3**	**-1.5**
GHO	**Glory Hole Cre**	**14.27**	**41**	Pn	**Pn**	**09 39 23.4**	**-1.5**
SML	**Sawmill**	**14.53**	**41**	Pn	**Pn**	**09 39 27.7**	**-0.6**
HIN	**Hinchinbrook I**	**14.65**	**48**	Pn	**Pn**	**09 39 29.0**	**-1.0**
TRF	**Thorofare Moun**	**14.78**	**34**	Pn	**Pn**	**09 39 31.4**	**-0.4**
SCM	**Sheep Creek Mo**	**14.95**	**42**		**Pn**	**09 39 32.1**	**-2.0**
BPAW	**Bear Paw Mtn.**	**14.99**	**31**	Pn	**Pn**	**09 39 36.0**	**+1.5**
BPAW				IAmb	IAmb	09 39 50.2	
	comp=Z,5.2nm,0.8s						
EYAK	**Cordova Ski Ar**	**15.05**	**48**	Pn	**Pn**	**09 39 31.3**	**-4.1**
KLU	**Klutina**	**15.38**	**44**		**Pn**	**09 39 38.1**	**-1.6**
M24K	**Tolsona, Glenn**	**15.56**	**42**		**Pn**	**09 39 41.0**	**-1.1**
HMT	**Hamilton**	**15.66**	**49**	Pn	**Pn**	**09 39 42.4**	**-0.9**
N25K	**Chitina, Valde**	**16.00**	**45**		**Pn**	**09 39 46.0**	**-1.7**
N25K				IAmb	IAmb	09 39 58.4	
	comp=Z,4.7nm,0.6s						
WRH	**Wood River Hil**	**16.18**	**33**	Pn	**Pn**	**09 39 50.2**	**+0.2**
I23K	**Minto, Yukon-K**	**16.22**	**30**		**Pn**	**09 39 50.5**	**+0.1**
I23K				IAmb	IAmb	09 40 07.1	
	comp=Z,12nm,1.1s						
PAX	**Paxson**	**16.27**	**40**	Pn	**Pn**	**09 39 50.8**	**-0.4**
GLB	**Gilahina Butte**	**16.27**	**46**		**Pn**	**09 39 49.8**	**-1.4**
VRDI	**Verde Repeater**	**16.35**	**47**	Pn	**Pn**	**09 39 51.2**	**-1.2**
VRDI				IAmb	IAmb	09 40 06.1	
	comp=Z,12nm,1.2s						
CCB	**Clear Creek Bu**	**16.39**	**33**	Pn	**Pn**	**09 39 52.5**	**0.0**
MDM	**Murphy Dome**	**16.45**	**32**		**Pn**	**09 39 53.2**	**-0.1**
TGL	**Tana Glacier**	**16.47**	**49**		**Pn**	**09 39 53.4**	**-0.3**
TGL				IAmb	IAmb	09 40 10.0	
	comp=Z,19nm,1.1s						
MCARA	**McCarthy VSAT**	**16.60**	**47**	Pn	**Pn**	**09 39 53.6**	**-1.8**
MCARA				IAmb	IAmb	09 40 01.2	
	comp=Z,9.3nm,0.7s						
ISLE	**Juniper Island**	**16.65**	**50**	Pn	**Pn**	**09 39 55.6**	**-0.5**
ISLE				IAmb	IAmb	09 40 20.7	
	comp=Z,14nm,0.8s						
MESA	**MESA**	**16.70**	**51**	Pn	**Pn**	**09 39 55.5**	**-1.3**
ILAR	**Eielson Array**	**16.77**	**33**	Pn	**Pn**	**09 39 56.0**	**-1.4**
	comp=Z,0.1nm,0.3s,baz=234,slow=11,SNR=8.9						
ILAR	**Eielson Array**	**16.77**	**33**		**Pn**	**09 39 56.7**	**-0.7**
POKR	**Poker Plat Res**	**16.81**	**32**	Pn	**Pn**	**09 39 56.7**	**-1.2**
YAH	**Yahtse**	**16.86**	**51**	P	**P**	**09 40 01.5**	**+0.9**
YAH				IAmb	IAmb	09 40 24.5	
	comp=Z,26nm,1.0s						
BARN	**Barnard Glacie**	**17.11**	**49**	P	**Pn**	**09 40 02.9**	**+1.1**
BARN				IAmb	IAmb	09 40 15.5	
	comp=Z,7.6nm,0.7s						
CTGM	**Chitina Glacie**	**17.23**	**49**	P	**Pn**	**09 40 04.7**	**+1.3**
CTGM				IAmb	IAmb	09 40 09.3	
	comp=Z,8.5nm,0.8s						
BCAR	**Beaver Creek A**	**17.80**	**42**	P	**Pn**	**09 40 08.3**	**-2.1**
WHY	**Whitehorse**	**20.23**	**52**	P	Pn	09 40 41.7	+2.1
PETK	**Petropavlovsk-**	**20.34**	**286**	P	**P**	**09 40 38.1**	**-0.5**
	comp=Z,8.2nm,0.5s,baz=86,slow=14,SNR=59						
PETK	**Petropavlovsk-**	**20.34**	**286**	P	**P**	**09 40 37.8**	**-0.8**
SEY	**Seymchan**	**23.08**	**313**	P	**P**	**09 41 06.3**	**-1.4**
	comp=Z,1.2nm,0.5s,baz=103,slow=12,SNR=7.0						
INK	**Inuvik**	**23.17**	**33**	P	**P**	**09 41 07.1**	**-1.6**
	comp=Z,1.7nm,0.5s,baz=201,slow=7.1,SNR=10						
INK	**Inuvik**	**23.17**	**33**	P	**P**	**09 41 06.6**	**-2.1**
INK				IAmb	IAmb	09 41 18.9	
	comp=Z,3.3nm,0.7s						
YKA	**Yellowknife Ar**	**29.95**	**49**	P	**P**	**09 42 10.1**	**-0.1**
	comp=Z,0.5nm,0.6s,baz=272,slow=7.0,SNR=13						
MCMT	**McKenzie Canyo**	**36.84**	**79**	P	**P**	**09 43 12.1**	**+1.5**
KLR	**Kul'dur**	**36.93**	**290**	P	**P**	**09 43 09.2**	**-1.9**
	comp=Z,0.9nm,0.4s,baz=46,slow=8.7,SNR=5.0						
H11S1	**WAKE ISLAND Hy**	**38.86**	**219**	T	T	10 24 45.3	
	baz=23,slow=76,SNR=23						
H11S2	**WAKE ISLAND Hy**	**38.87**	**219**	T	T	10 24 43.5	
	baz=23,slow=76,SNR=19						
H11S3	**WAKE ISLAND Hy**	**38.88**	**219**	T	T	10 24 59.5	
	baz=23,slow=76,SNR=20						
BW06	**Boulder Array**	**39.96**	**80**	P	**P**	**09 43 38.5**	**+1.6**
BW06				IAmb	IAmb	09 43 49.0	
	comp=Z,2.3nm,1.1s						
PD31	**Pinedale Array**	**39.96**	**80**	P	**P**	**09 43 38.1**	**+1.2**
PDAR	**Pinedale Array**	**39.96**	**80**	P	**P**	**09 43 38.5**	**+1.6**
	comp=Z,0.8nm,0.5s,baz=287,slow=4.0,SNR=13						
PDAR	**Pinedale Array**	**39.96**	**80**	P	**P**	**09 43 37.8**	**+1.0**
PHWY	**Pilot Hill**	**43.30**	**79**	P	**P**	**09 44 02.7**	**-1.5**
KSRS	**Korea Array**	**45.88**	**277**	P	**P**	**09 44 24.9**	**+0.4**
	comp=Z,3.3nm,0.8s,baz=53,slow=8.0,SNR=16						
SONM	**Songino Array**	**51.75**	**301**	P	**P**	**09 45 09.7**	**+0.1**
	comp=Z,0.9nm,0.5s,baz=64,slow=3.4,SNR=3.6						
TXAR	**Lajitas Array**	**52.28**	**89**	P	**P**	**09 45 14.2**	**+0.5**
	comp=Z,0.4nm,0.7s,baz=295,slow=4.9,SNR=5.4						
TXAR	**Lajitas Array**	**52.28**	**89**	P	**P**	**09 45 14.0**	**+0.2**
ARCES	**ARCESS Array B**	**58.06**	**354**	P	**P**	**09 45 54.4**	**-0.4**
	comp=Z,2.1nm,0.8s,baz=16,slow=6.5,SNR=9.0						
ARCES	**ARCESS Array B**	**58.06**	**354**	P	**P**	**09 45 54.7**	**-0.1**
SEM	**Semipalatinsk**	**62.32**	**318**	*e*P	**P**	**09 46 22.5**	**-1.9**
	baz=317						
ZSN	**Zaisan**	**62.56**	**313**	*e*P	**P**	**09 46 25.4**	**-0.5**
	comp=Z,1.8nm,0.8s,baz=312						
KURK	**Kurchatov**	**62.75**	**319**	P	**P**	**09 46 26.6**	**-0.4**
KURBB	**Kurchatov Arra**	**62.86**	**319**	P	**P**	**09 46 27.3**	**-0.4**
	comp=Z,0.8nm,0.4s,baz=44,slow=7.5,SNR=15						
BVAR	**Borovoye Array**	**64.05**	**325**	P	**P**	**09 46 35.5**	**-0.1**
	comp=Z,0.9nm,0.5s,baz=65,slow=18,SNR=7.2						
MKAR	**Makanchi Array**	**64.21**	**314**	P	**P**	**09 46 35.9**	**-0.9**
	comp=Z,1.5nm,0.6s,baz=46,slow=6.7,SNR=16						
MKAR	**Makanchi Array**	**64.21**	**314**	P	**P**	**09 46 35.7**	**-1.1**
BRZS	**Berezniki**	**65.67**	**322**	*e*P	**P**	**09 46 45.9**	**-0.3**
	baz=321						
FINES	**FINESS Array B**	**66.03**	**352**	P	**P**	**09 46 47.8**	**-0.4**
	comp=Z,2.6nm,0.5s,baz=11,slow=7.3,SNR=17						
NB2	**NORSAR Subarra**	**67.04**	**0**	P	**P**	**09 46 54.8**	**0.0**
	comp=Z,0.8nm,0.6s,baz=359,slow=6.2						
NOA	**NORSAR Array B**	**67.04**	**0**	P	**P**	**09 46 54.7**	**-0.1**
	comp=Z,1.3nm,0.7s,baz=0.7,slow=6.3,SNR=4.8						
TDK	**Taldyqorghan**	**67.31**	**315**	*e*P	**P**	**09 46 56.5**	**-0.3**
	comp=Z,6.2nm,0.6s,baz=315						
HFS	**Hagfors**	**67.93**	**359**	P	**P**	**09 46 59.5**	**-0.9**
	comp=Z,2.3nm,0.5s,baz=29,slow=3.3,SNR=3.5						
SHLS	**Shalkode**	**68.30**	**313**	*e*P	**P**	**09 47 01.5**	**-1.7**
	baz=312						
KPKS	**Kokpek**	**68.40**	**314**	*e*P	**P**	**09 47 03.2**	**-0.6**
	comp=Z,1.5nm,0.6s,baz=313						
BTLS	**Baital**	**69.13**	**318**	*e*P	**P**	**09 47 07.4**	**-0.7**
	baz=317						
MDOK	**Medeo**	**69.36**	**315**	*e*P	**P**	**09 47 09.1**	**-0.7**
	baz=314						
AKTO	**Aktyubinsk**	**70.33**	**330**	P	**P**	**09 47 15.3**	**-0.1**
	comp=Z,2.2nm,0.6s,baz=3.2,slow=3.1,SNR=4.7						
AAK	**Ala-Archa**	**70.89**	**316**	P	**P**	**09 47 19.1**	**-0.1**
	comp=Z,2.4nm,0.7s,baz=158,slow=5.1,SNR=8.7						
AAK	**Ala-Archa**	**70.89**	**316**	P	**P**	**09 47 19.4**	**+0.2**
IUG	**Iuzhnay**	**73.16**	**318**	*e*P	**P**	**09 47 32.6**	**-0.1**
	baz=318						
AKASG	**Malin Array Be**	**76.30**	**348**	P	**P**	**09 47 49.9**	**-0.7**
	comp=Z,1.6nm,0.6s,baz=17,slow=5.3,SNR=4.2						
CLL	**Collm**	**76.78**	**359**	*e*P	**P**	**09 47 56.0**	**+2.7**
CMAR	**Chiang Mai Arr**	**77.09**	**283**	P	**P**	**09 47 55.4**	**-0.2**
	comp=Z,1.4nm,0.3s,baz=26,slow=6.9,SNR=9.2						
CMAR	**Chiang Mai Arr**	**77.09**	**283**	P	**P**	**09 47 56.4**	**+0.8**
GERES	**GERESS Array B**	**79.24**	**358**	P	**P**	**09 48 07.6**	**+0.5**
	comp=Z,0.4nm,0.6s,baz=212,slow=4.7,SNR=3.5						
KBZ	**Khabaz**	**80.58**	**337**	P	**P**	**09 48 15.5**	**+1.2**
	comp=Z,3.3nm,1.0s,baz=178,slow=8.4,SNR=3.9						
GEYT	**Alibeck**	**81.38**	**324**	P	**P**	**09 48 19.1**	**+0.3**
	comp=Z,3.2nm,0.8s,baz=258,slow=5.9,SNR=3.8						
GEYT	**Alibeck**	**81.38**	**324**	P	**P**	**09 48 18.8**	**0.0**
ASAR	**Alice Springs**	**90.69**	**231**	P	**P**	**09 49 04.2**	**-0.6**
	comp=Z,0.6nm,0.9s,baz=26,slow=5.2,SNR=5.4						

IDC 03 09:48:06.7±1.7, **2°.84S**×**129°.54E**, **h0**^{km}, **mb3.2**/2, **mb1 3.4**/4, **mb1mx3.2**/46, **mbtmp3.3**/4, **ML3.3**/2, **Error ellipse: s-maj=41.7km s-min=23.5km az=100.0**, **Seram**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**2.61**	**41**	Pn	Pn	09 48 50.7	+0.6
	5.4nm,0.3s,baz=85,slow=20,SNR=36						
SIJI				Sn	Sn	09 49 21.7	-0.9
	3.3nm,0.3s,baz=77,slow=22,SNR=6.9						
WRA	**Warramunga Arr**	**17.63**	**165**	P	Pn	09 52 13.1	-0.8
	0.1nm,0.3s,baz=347,slow=13,SNR=8.7						
ASAR	**Alice Springs**	**21.13**	**169**	P	P	09 52 53.7	+0.4
	0.6nm,0.5s,baz=345,slow=11,SNR=18						
MKAR	**Makanchi Array**	**64.53**	**326**	P	P	09 58 45.5	-0.1
	0.1nm,0.3s,baz=124,slow=7.2,SNR=1.8						

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*NEIC **03** 10:10:09.8±2.1, 24°.96N±0°.08×123°.31E±0°.07, h134^{km}±6^{km}, mb4.3/27, Error ellipse: s-maj=12.3km s-min=9.4km az=166.0*
*IDC **03** 10:10:09.4±2.5, 25°.13N×123°.17E, h123^{km}±23^{km}, mb3.6/18, mb1 3.7/22, mb1mx3.6/52, mbtmp4.0/22, MS3.0/1, Ms1 3.0/1, ms1mx2.4/39, Error ellipse: s-maj=16.3km s-min=14.0km az=62.0*
*TAP **03** 10:10:10.5, 24°.93N×123°.21E, h122^{km}, ML4.7, D*
*JMA **03** 10:10:10.5±0.2, 24°.91N×123°.24E, h125^{km}±3^{km}, M4.0*
ISC 03 10:10:09.5±0.6, **24°.92N**±0°.03×**123°.25E**±0°.02, **h131**^{km}±5^{km}, **n222**, σ1^{s}.**14**/343, **mb4.1**/31, **33C-5D**, **Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.50**	**206**	⇓*i*P	**Pn**	**10 10 29.2**	**+0.5**
	baz=206						
YOJ				*i* S	**Sn**	**10 10 42.8**	**-0.4**
	baz=206						
YOJ	**Yonaguni jima**	**0.50**	**206**	P	**Pn**	**10 10 29.2**	**+0.5**
YOJ				S	**Sn**	**10 10 43.2**	**0.0**
YOJ	**Yonaguni jima**	**0.50**	**206**	Pn	**Pn**	**10 10 29.2**	**+0.5**
JYNG	**Yonagunijimaku**	**0.54**	**211**	P	**Pn**	**10 10 29.3**	**+0.4**
JYNG				S	**Sn**	**10 10 43.6**	**0.0**
IRIF	**Iriomote-Funau**	**0.72**	**143**	P	**Pn**	**10 10 30.6**	**+0.5**
IRIF				S	**Sn**	**10 10 45.7**	**-0.1**
JKRS	**Kuro-shima**	**0.96**	**134**	P	**Pn**	**10 10 33.2**	**+1.1**
JKRS				S	**Sn**	**10 10 49.9**	**+0.6**
JIJ	**Ishigaki jima**	**0.98**	**124**	P	**Pn**	**10 10 32.8**	**+0.5**
JIJ				S	**Sn**	**10 10 48.8**	**-0.8**
HATJ	**Hateruma jima**	**0.99**	**149**	P	**Pn**	**10 10 33.4**	**+1.0**
HATJ				S	**Sn**	**10 10 50.3**	**+0.5**
JISG	**Ishigakijimahi**	**1.02**	**109**	P	**Pn**	**10 10 33.2**	**+0.6**
JISG				S	**Sn**	**10 10 50.3**	**+0.2**
TWB1	**Santiao Chiao**	**1.15**	**275**	⇑*i*P	**Pn**	**10 10 34.6**	**+0.7**
	baz=276						
TWB1				*i* S	**Sn**	**10 10 52.4**	**-0.1**
	baz=276						
PCYT	**Pengchaiyu**	**1.28**	**304**	*e*P	**Pn**	**10 10 36.3**	**+1.0**
	baz=303						
PCYT				*e*S	**Sn**	**10 10 54.2**	**-0.8**
	baz=303						
NTC	**Toucheng**	**1.29**	**268**	P	**Pn**	**10 10 36.0**	**+0.6**
	baz=259						
NTC				*e*S	**Sn**	**10 10 53.9**	**-1.2**
	baz=259						
TIPB	**Shuangxi**	**1.30**	**273**	⇑*i*P	**Pn**	**10 10 36.4**	**+1.0**
	baz=271						
TIPB				*e*S	**Sn**	**10 10 55.6**	**+0.4**
	baz=271						
TWC	**Suao**	**1.31**	**257**	⇑*i*P	**Pn**	**10 10 36.0**	**+0.4**
	baz=252						
TWC				S	**Sn**	**10 10 55.3**	**-0.1**
	baz=252						
JTJ	**Tarama**	**1.34**	**101**	P	**Pn**	**10 10 37.1**	**+1.2**
JTJ				S	**Sn**	**10 10 56.5**	**+0.5**
NWF	**Wu-fen Shan**	**1.34**	**277**	⇑*i*P	**Pn**	**10 10 36.9**	**+0.9**
	baz=282						
NWF				*e*S	**Sn**	**10 10 57.1**	**+0.9**
	baz=282						
WFSB	**Wu-fen Shan**	**1.34**	**277**	⇑*i*P	**Pn**	**10 10 36.9**	**+1.0**
	baz=282						
WFSB				S	**Sn**	**10 10 56.4**	**+0.3**
	baz=282						
TNOU	**National Taiwa**	**1.36**	**280**	*i* P	**Pn**	**10 10 37.0**	**+0.9**
	baz=285						
TNOU				*e*S	**Sn**	**10 10 56.2**	**-0.2**
	baz=285						
ILA	**Ilan**	**1.38**	**264**	*e*P	**Pn**	**10 10 37.3**	**+1.1**
	baz=257						
ILA				*e*S	**Sn**	**10 10 58.2**	**+1.6**
	baz=257						
TWE	**Neicheng**	**1.46**	**263**	*i* P	**Pn**	**10 10 38.1**	**+1.0**
	baz=258						
TWE				*e*S	**Sn**	**10 10 56.6**	**-1.6**
	baz=258						
ENA	**Nanau**	**1.46**	**251**	P	**Pn**	**10 10 37.9**	**+0.7**
	baz=243						
ENA				*e*S	**Sn**	**10 10 58.0**	**-0.3**
	baz=243						
TWA	**Mucha**	**1.52**	**273**	⇑*i*P	**Pn**	**10 10 39.0**	**+1.2**
	baz=265						
TWA				S	**Sn**	**10 11 00.1**	**+0.6**
	baz=265						
YM08	**YM08**	**1.53**	**280**	*e*P	**Pn**	**10 10 38.9**	**+0.8**
	baz=279						
TWY	**Chenhua**	**1.54**	**284**	⇑*i*P	**Pn**	**10 10 39.2**	**+1.1**
	baz=282						
TWY				*e*S	**Sn**	**10 10 58.4**	**-1.5**
	baz=282						
YM11	**YM11**	**1.54**	**280**	*e*P	**Pn**	**10 10 39.1**	**+0.9**
	baz=285						
YM11				*e*S	**Sn**	**10 11 00.9**	**+0.8**
	baz=285						
YM01	**YM01**	**1.54**	**279**	⇑*i*P	**Pn**	**10 10 38.2**	**+0.1**
	baz=284						
YM01				*e*S	**Sn**	**10 11 01.4**	**+1.4**
	baz=284						
YM05	**YM05**	**1.55**	**279**	P	**Pn**	**10 10 39.1**	**+0.8**
	baz=285						
YM05				*e*S	**Sn**	**10 11 00.0**	**-0.2**
	baz=285						
NSM	**Shimen**	**1.55**	**284**	*e*P	**Pn**	**10 10 39.5**	**+1.3**
	baz=283						
YM10	**YM10**	**1.55**	**279**	⇑*i*P	**Pn**	**10 10 39.3**	**+1.0**
	baz=284						
YM10				*e*S	**Sn**	**10 11 00.2**	**-0.1**
	baz=284						
ENTT	**Nioudou**	**1.56**	**260**	P	**Pn**	**10 10 39.4**	**+1.0**
	baz=258						
ENTT				*e*S	**Sn**	**10 10 58.8**	**-1.5**
	baz=258						
NHDH	**Xindian Distri**	**1.57**	**272**	*i* P	**Pn**	**10 10 39.6**	**+1.2**
	baz=266						
NHDH				*e*S	**Sn**	**10 11 01.3**	**+0.8**
	baz=266						
YM04	**YM04**	**1.57**	**279**	⇑*i*P	**Pn**	**10 10 39.5**	**+1.0**
	baz=285						
YM03	**YM03**	**1.58**	**280**	⇑*i*P	**Pn**	**10 10 39.4**	**+0.8**
	baz=286						
TAP	**Taipei**	**1.59**	**275**	P	**Pn**	**10 10 39.6**	**+1.0**
	baz=273						
TAP				*e*S	**Sn**	**10 11 00.2**	**-0.6**
	baz=273						
ANP	**Anpu**	**1.59**	**280**	*e*P	**Pn**	**10 10 39.7**	**+0.9**
	baz=279						
NWLT	**Wulai**	**1.60**	**265**	*i* P	**Pn**	**10 10 39.9**	**+1.1**
	baz=264						
NWLT				*e*S	**Sn**	**10 11 00.1**	**-1.0**
	baz=264						
TATO	**Taipei**	**1.60**	**272**	⇑*i*P	**Pn**	**10 10 39.6**	**+0.8**
	baz=263						
TATO	**Taipei**	**1.60**	**272**	Pn	**Pn**	**10 10 39.9**	**+1.1**
NDT	**Datong Townshi**	**1.61**	**259**	P	**Pn**	**10 10 40.3**	**+1.4**
	baz=259						
NDT				*e*S	**Sn**	**10 11 00.7**	**-0.7**
	baz=259						
BACT	**New Taipei Cit**	**1.65**	**273**	*e*P	**Pn**	**10 10 40.5**	**+1.2**
	baz=264						
NTST	**Danshui**	**1.66**	**279**	*i* P	**Pn**	**10 10 40.8**	**+1.5**
	baz=284						
TWS1	**Kuangyinshan**	**1.68**	**277**	*i* P	**Pn**	**10 10 41.1**	**+1.5**
	baz=280						
TWS1				*e*S	**Sn**	**10 11 04.3**	**+1.6**
	baz=280						
NACB	**Ninganchiao**	**1.68**	**244**	⇑*i*P	**Pn**	**10 10 39.5**	**-0.2**
	baz=236						
NACB				S	**Sn**	**10 11 01.0**	**-1.8**
	baz=236						
NACB	**Ninganchiao**	**1.68**	**244**		**Pn**	**10 10 39.6**	**-0.2**
YHNB	**Yeheng**	**1.72**	**262**	⇑*i*P	**Pn**	**10 10 41.2**	**+0.9**
	baz=260						
YHNB				*e*S	**Sn**	**10 11 04.2**	**+0.4**
	baz=260						
YHNB	**Yeheng**	**1.72**	**262**		**Pn**	**10 10 41.1**	**+0.9**
TWD	**Chiawan**	**1.73**	**241**	⇑*i*P	**Pn**	**10 10 40.1**	**-0.1**
	baz=233						
TWD				S	**Sn**	**10 11 02.0**	**-1.6**
	baz=233						
NSK	**Sanguang**	**1.74**	**262**	*i* P	**Pn**	**10 10 41.4**	**+1.0**
	baz=265						
NSK				*e*S	**Sn**	**10 11 03.8**	**-0.3**
	baz=265						
JIRB	**Irabujima**	**1.75**	**93**	P	**Pn**	**10 10 41.3**	**+0.9**
JIRB				S	**Sn**	**10 11 04.1**	**0.0**
ETLH	**Xiulin Townshi**	**1.76**	**247**	⇓*i*P	**Pn**	**10 10 41.0**	**+0.3**
	baz=245						
ETLH				*e*S	**Sn**	**10 11 03.9**	**-0.7**
	baz=245						
HWA	**Hwalien**	**1.77**	**238**	P	**Pn**	**10 10 41.0**	**+0.3**
	baz=237						
HWA				*e*S	**Sn**	**10 11 04.2**	**-0.4**
	baz=237						
NNSB	**Datong**	**1.77**	**254**	*e*P	**Pn**	**10 10 41.6**	**+0.8**
	baz=246						
NNSB				*e*S	**Sn**	**10 11 05.9**	**+1.0**
	baz=246						
NNSH	**Datong**	**1.77**	**254**	P	**Pn**	**10 10 41.7**	**+0.8**
	baz=246						
NNSH				*e*S	**Sn**	**10 11 05.2**	**+0.4**
	baz=246						
NNS	**Nan Shan**	**1.77**	**255**	P	**Pn**	**10 10 41.7**	**+0.8**
	baz=246						
NNS				*e*S	**Sn**	**10 11 02.6**	**-2.3**
	baz=246						

NTY	Taoyuan	1.78	273	eP	Pn	10 10 41.9	+1.1
	baz=266						
NTY				eS	Sn	10 11 05.4	+0.6
	baz=266						
JIKM	Ikemajima	1.81	89	P	Pn	10 10 42.7	+1.5
JIKM				S	Sn	10 11 06.0	+0.5
JMJ	Miyako jima 2	1.86	93	iP	Pn	10 10 43.6	+1.9
	baz=94						
JMJ				S	Sn	10 11 07.9	+1.5
	baz=94						
NCU	National Centr	1.88	272	eP	Pn	10 10 43.1	+1.1
	baz=270						
NCU				eS	Sn	10 11 07.3	+0.4
	baz=270						
NCUH	Zhongli	1.88	272	P	Pn	10 10 43.3	+1.3
	baz=270						
NCUH				eS	Sn	10 11 09.0	+2.1
	baz=270						
JMJ2	Miyako jima3	1.89	95	P	Pn	10 10 43.6	+1.4
JMJ2				S	Sn	10 11 08.0	+0.8
FUSS	Fushou	1.95	250	P	Pn	10 10 44.0	+0.8
	baz=243						
FUSS				eS	Sn	10 11 08.6	-0.2
	baz=243						
JOGS	Gusukube	1.96	94	P	Pn	10 10 44.6	+1.6
JOGS				S	Sn	10 11 09.8	+1.1
WHF	Hehuan Shan	1.97	247	⇑iP	Pn	10 10 43.9	+0.4
	baz=246						
WHF				eS	Sn	10 11 08.2	-1.3
	baz=246						
ESL	Shilin	1.99	237	P	Pn	10 10 43.2	-0.2
	baz=235						
ESL				eS	Sn	10 11 07.9	-1.4
	baz=235						
TWT	Tachien	2.00	251	eP	Pn	10 10 44.9	+1.2
	baz=245						
TWT				eS	Sn	10 11 09.9	0.0
	baz=245						
TDCB	Techi	2.02	251	⇑iP	Pn	10 10 45.0	+1.1
	baz=244						
TDCB				eS	Sn	10 11 09.7	-0.5
	baz=244						
HSN1	Hsinchu	2.04	267	iP	Pn	10 10 45.2	+1.2
	baz=256						
HSN1				eS	Sn	10 11 10.8	+0.6
	baz=256						
LIOB	Emei	2.05	263	iP	Pn	10 10 45.2	+1.0
	baz=254						
LIOB				eS	Sn	10 11 10.8	+0.1
	baz=254						
SBCB	Hsinchu	2.06	267	P	Pn	10 10 45.6	+1.3
	baz=256						
SBCB				eS	Sn	10 11 12.8	+1.9
	baz=256						
NSTT	Nanjuang	2.07	263	eP	Pn	10 10 45.2	+0.9
	baz=261						
NSTT				eS	Sn	10 11 11.0	0.0
	baz=261						
CHGB	Renai	2.08	246	⇑iP	Pn	10 10 45.5	+0.8
	baz=238						
CHGB				S	Sn	10 11 10.7	-0.9
	baz=238						
HSN	Hsinchu	2.08	267	eP	Pn	10 10 45.3	+0.9
	baz=271						
HSN				eS	Sn	10 11 10.8	-0.5
	baz=271						
EGFH	Guangfu	2.08	234	P	Pn	10 10 44.7	+0.2
	baz=232						
EGFH				eS	Sn	10 11 10.5	-0.7
	baz=232						
HGSD	Ruisui	2.19	230	⇑iP	Pn	10 10 46.0	+0.1
	baz=226						
HGSD				eS	Sn	10 11 12.2	-1.6
	baz=226						
WHP	Taichung City	2.19	254	⇑iP	Pn	10 10 47.6	+1.7
	baz=248						
WHP				eS	Sn	10 11 14.7	+0.8
	baz=248						
VWDT	VWDT	2.25	239	⇑iP	Pn	10 10 47.4	+0.8
	baz=233						
VWDT				S	Sn	10 11 14.4	-0.5
	baz=233						
EHY	Hungye	2.25	232	⇓iP	Pn	10 10 46.6	-0.1
	baz=230						
EHY				eS	Sn	10 11 13.5	-1.7
	baz=230						
NMLH	Miaoli	2.27	261	P	Pn	10 10 47.9	+1.1
	baz=259						
NMLH				eS	Sn	10 11 16.4	+0.9
	baz=259						
WPL	Puli Township	2.28	247	eP	Pn	10 10 48.0	+1.0
	baz=242						
WPL				eS	Sn	10 11 14.9	-0.8
	baz=242						
DPDB	Guoxing	2.30	248	P	Pn	10 10 48.6	+1.4
	baz=243						
DPDB				eS	Sn	10 11 17.4	+1.2
	baz=243						
NSY	Sanyi	2.32	258	⇑iP	Pn	10 10 48.7	+1.2
	baz=256						
NSY				eS	Sn	10 11 17.0	+0.4
	baz=256						
TWQ1	Liyutan	2.33	256	⇑iP	Pn	10 10 48.6	+1.0
	baz=254						
TWQ1				eS	Sn	10 11 16.2	-0.6
	baz=254						
YULB	Yu-li	2.34	230	⇑iP	Pn	10 10 47.8	0.0
	baz=236						
YULB				eS	Sn	10 11 15.5	-1.7
	baz=236						
YULB	Yu-li	2.34	230		Pn	10 10 47.3	-0.5
EYUL	Yuli	2.36	229	P	Pn	10 10 48.2	+0.2
	baz=225						
EYUL				eS	Sn	10 11 17.3	-0.2
	baz=225						
TWF1	Yuli	2.37	229	⇑iP	Pn	10 10 48.3	+0.2
	baz=225						
TWF1				eS	Sn	10 11 16.4	-1.4
	baz=225						
SMLT	Sun Moon Lake	2.38	245	P	Pn	10 10 49.4	+1.0
	baz=238						
SMLT				eS	Sn	10 11 18.4	+0.3
	baz=238						
SSLB	Suanglung	2.38	242	P	Pn	10 10 48.9	+0.7
	baz=237						
SSLB				eS	Sn	10 11 17.5	-0.5
	baz=237						
SSLB	Suanglung	2.38	242		Pn	10 10 48.9	+0.7
WDJ	Dajia District	2.44	257	iP	Pn	10 10 50.2	+1.2
	baz=255						
WDJ				eS	Sn	10 11 18.9	-0.5
	baz=255						
TCU	Taichung	2.47	252	eP	Pn	10 10 50.2	+0.9
	baz=250						
TCU				eS	Sn	10 11 20.1	+0.2
	baz=250						
FULB	Fuli	2.48	227	P	Pn	10 10 49.5	0.0
	baz=221						
FULB				eS	Sn	10 11 18.7	-1.5
	baz=221						
WWF	Wufeng	2.48	250	P	Pn	10 10 50.8	+1.3
	baz=257						
WWF				eS	Sn	10 11 21.3	+1.0
	baz=257						
WHYT	Xinyi Township	2.50	241	P	Pn	10 10 51.5	+1.7
	baz=238						
WHYT				eS	Sn	10 11 22.2	+1.4
	baz=238						
YUS	Yu-Shan	2.54	236	iP	Pn	10 10 51.5	+0.8
	baz=230						
YUS				eS	Sn	10 11 20.9	-1.3
	baz=230						
WJS	Zhushan	2.55	245	P	Pn	10 10 52.0	+1.6
	baz=238						
WJS				eS	Sn	10 11 23.5	+1.8
	baz=238						
WNT1	Nantou City	2.55	247	eP	Pn	10 10 51.9	+1.5
	baz=254						
WNT1				eS	Sn	10 11 23.3	+1.5
	baz=254						
WNT	Mingjian	2.56	247	P	Pn	10 10 52.0	+1.5
	baz=254						
WNT				eS	Sn	10 11 23.6	+1.5
	baz=254						
WCHH	Zhanghua	2.59	252	P	Pn	10 10 51.9	+1.0
	baz=250						
WCHH				eS	Sn	10 11 22.7	0.0
	baz=250						
EDH	Donghe	2.63	223	⇑P	Pn	10 10 51.2	-0.2
	baz=220						
EDH				S	Sn	10 11 21.3	-2.3
	baz=220						
ALS	Alishan	2.64	238	⇑iP	Pn	10 10 53.2	+1.4
	baz=232						
ALS				eS	Sn	10 11 24.2	0.0
	baz=232						
ELDTW	Lidau	2.67	230	⇑iP	Pn	10 10 52.2	+0.2
	baz=225						
ELDTW				eS	Sn	10 11 23.1	-1.7
	baz=225						
CHN5	Tsauling	2.69	241	⇑iP	Pn	10 10 53.8	+1.5
	baz=234						
CHN5				eS	Sn	10 11 27.6	+2.4
	baz=234						
WGK	Gukeng	2.74	244	P	Pn	10 10 54.4	+1.5
	baz=242						
WGK				eS	Sn	10 11 28.3	+2.1
	baz=242						
WDLH	Douliu	2.76	244	P	Pn	10 10 54.5	+1.4
	baz=253						
WDLH				eS	Sn	10 11 29.2	+2.6
	baz=253						
LDUT	Ludao	2.77	217	P	Pn	10 10 52.9	-0.3
	baz=214						
LDUT				eS	Sn	10 11 24.4	-2.4
	baz=214						
LONT	Longtian	2.79	225	P	Pn	10 10 53.4	0.0
	baz=230						
LONT				eS	Sn	10 11 26.1	-1.2
	baz=230						
RLNB	Erlin	2.83	249	eP	Pn	10 10 54.7	+0.8
	baz=254						
STYT	Tauyuan	2.87	233	⇑iP	Pn	10 10 56.0	+1.4
	baz=228						
STYT				eS	Sn	10 11 29.8	+0.5
	baz=228						
TWGBT	Beinan	2.89	224	⇑iP	Pn	10 10 54.4	-0.2
	baz=229						
TWGBT				S	Sn	10 11 27.0	-2.5
	baz=229						
WTK	Tuku	2.89	246	⇑eP	Pn	10 10 55.4	+0.7
	baz=243						
WTK				eS	Sn	10 11 30.0	+0.5
	baz=243						
TPUB	Ta-pu	2.89	237	P	Pn	10 10 55.9	+1.2
	baz=229						
TPUB				eS	Sn	10 11 30.8	+1.2
	baz=229						
TPUB	Ta-pu	2.89	237		Pn	10 10 55.9	+1.2
TWG	Pinlang	2.89	224	⇑iP	Pn	10 10 54.5	-0.3
	baz=229						
TWG				eS	Sn	10 11 28.1	-1.4
	baz=229						
TWG	Pinlang	2.89	224		Pn	10 10 54.5	-0.3
TTN	Taitung	2.89	222	eP	Pn	10 10 55.9	+1.2
	baz=219						
TTN				eS	Sn	10 11 29.9	+0.3
	baz=219						
WTP	Ta-pu	2.93	236	P	Pn	10 10 56.7	+1.4
	baz=228						
WTP				eS	Sn	10 11 32.9	+2.3
	baz=228						
CHY	Chiayi	2.94	242	⇓P	Pn	10 10 57.1	+1.7
	baz=250						
CHY				eS	Sn	10 11 32.0	+1.2
	baz=250						
TWK	Hsinying	3.01	238	eP	Pn	10 10 57.7	+1.3
	baz=236						
TWK				eS	Sn	10 11 33.8	+1.3
	baz=236						
CHN1	Nanshi	3.03	236	P	Pn	10 10 57.8	+1.2
	baz=234						
CHN1				eS	Sn	10 11 33.4	+0.5
	baz=234						
SNST	Tainan City	3.03	237	P	Pn	10 10 57.8	+1.2
	baz=235						
SNST				eS	Sn	10 11 33.9	+1.0
	baz=235						
WSF	Szhu	3.04	246	iP	Pn	10 10 57.5	+0.8
	baz=244						
WSF				eS	Sn	10 11 33.3	+0.1
	baz=244						
SGST	Jiashian	3.05	234	P	Pn	10 10 57.3	+0.5
	baz=232						
SGST				eS	Sn	10 11 33.8	+0.5
	baz=232						
WLGB	Puzi	3.05	243	eP	Pn	10 10 57.0	+0.1
	baz=249						
WLGB				eS	Sn	10 11 33.7	+0.3
	baz=249						
SLGT	Liugui	3.06	232	eP	Pn	10 10 58.8	+1.8
	baz=224						
SLGT				eS	Sn	10 11 35.4	+1.9
	baz=224						
ECL	Taimali	3.13	223	P	Pn	10 10 56.9	-0.9
	baz=227						
ECL				eS	Sn	10 11 33.7	-1.4
	baz=227						
ICHU	Yijhu	3.13	241	P	Pn	10 10 59.0	+1.2
	baz=231						
ICHU				eS	Sn	10 11 35.8	+0.8
	baz=231						
CHN8	Yiju	3.19	241	eP	Pn	10 10 59.6	+1.0
	baz=248						
CHN8				eS	Sn	10 11 37.6	+1.1
	baz=248						
PTTC	Pingtan	3.21	281	eP	Pn	10 10 59.0	+0.2
	baz=270						
CHN3	Shinhua	3.21	236	eP	Pn	10 11 00.8	+1.9
	baz=244						
SSD	Sandimen	3.23	229	P	Pn	10 11 00.8	+1.7
	baz=227						
SSD				eS	Sn	10 11 38.9	+1.4
	baz=227						
MATB	Ma-tsu	3.23	293	eP	Pn	10 10 59.2	+0.1
	baz=291						
SCST	Cishan	3.23	232	eP	Pn	10 11 01.1	+1.9
	baz=238						
SCST				eS	Sn	10 11 39.3	+1.7
	baz=238						
TSMG	Majia	3.25	228	eP	Pn	10 11 01.0	+1.6
	baz=227						
TSMG				eS	Sn	10 11 39.5	+1.5
	baz=227						
MSUT	Lienchiang	3.26	293	eP	Pn	10 10 59.5	+0.1
	baz=291						
LAY	Lan-yu	3.26	209	eP	Pn	10 10 59.1	-0.5
	baz=210						
LAY				eS	Sn	10 11 35.3	-3.0
	baz=210						
SCLT	Jiali	3.29	239	eP	Pn	10 11 01.2	+1.3
	baz=237						
SCLT				eS	Sn	10 11 39.8	+0.9
	baz=237						
MASBT	Mashibuluo	3.32	227	⇓iP	Pn	10 11 01.5	+1.2
	baz=223						
MASBT				eS	Sn	10 11 40.1	+0.5
	baz=223						
TWM1	Shoushan	3.33	232	eP	Pn	10 11 02.7	+2.3
	baz=240						
TWM1				eS	Sn	10 11 41.3	+1.5
	baz=240						
EAST	Anshuo	3.35	222	P	Pn	10 11 00.6	-0.2
	baz=224						
EAST				eS	Sn	10 11 38.6	-1.7
	baz=224						
XPSS	Dashiqiu	3.41	307	eP	Pn	10 11 01.4	0.0
	baz=305						
SNJT	Kaohsiung City	3.43	232	eP	Pn	10 11 03.8	+2.0
	baz=231						
SSPT	Xinbi	3.45	226	eP	Pn	10 11 04.0	+2.0
	baz=224						
SSPT				eS	Sn	10 11 45.0	+2.3
	baz=224						
VWUC	VWUC	3.45	272	eP	Pn	10 11 02.2	+0.1
	baz=270						
SCZT	Fangliau	3.50	224	eP	Pn	10 11 04.3	+1.6
	baz=219						
SCZT				eS	Sn	10 11 43.8	0.0
	baz=219						
SLIU	Shizi	3.51	220	eP	Pn	10 11 03.0	+0.2
	baz=223						
LYJJ	Jianjiangzhen	3.55	298	eP	Pn	10 11 03.9	+0.6
	baz=296						
PNG	Penghu	3.63	249	eP	Pn	10 11 04.0	-0.4
	baz=247						
PHUB	P'eng-hu	3.64	248	eP	Pn	10 11 04.3	-0.2
	baz=247						
WDGT	Dungji	3.67	244	eP	Pn	10 11 05.2	+0.2
	baz=243						
TSEB	Hengchuen, Pin	3.70	216	eP	Pn	10 11 08.4	+3.1
	baz=223						
TWKBT	Hengchun	3.71	218	eP	Pn	10 11 06.0	+0.5
	baz=217						
TWK1	Hengchun	3.72	218	eP	Pn	10 11 06.0	+0.4
	baz=217						
PTMZ	Houxiangcun	3.75	273	eP	Pn	10 11 06.1	+0.1
	baz=270						
VCHM	Qimei	3.89	245	eP	Pn	10 11 07.8	0.0
	baz=243						
MHZQ	Yeshan	3.99	288	eP	Pn	10 11 09.3	+0.2
	baz=285						
KNM	Kinmen	4.41	265	eP	Pn	10 11 16.1	+1.4
	baz=262						
KNMB	Chin-men Tao	4.45	265	eP	Pn	10 11 14.9	-0.3
	baz=263						
KNMB	Chin-men Tao	4.45	265	Pn	Pn	10 11 14.9	-0.3
AXDP	Jialang	4.80	271	eP	Pn	10 11 20.0	+0.2
	baz=268						
JOW	Kunigami	4.91	66	P	Pn	10 11 20.0	-1.4
	65nm,0.3s,baz=106,slow=29,SNR=1196						
JOW				S	Sn	10 12 13.8	-3.5
	baz=108,slow=19,SNR=1.7						
JOW	Kunigami	4.91	66		Pn	10 11 20.0	-1.4
SSE	Sheshan	6.42	344	Pn	Pn	10 11 41.8	+0.2
JMZ	Minamidaito 2	7.26	81	Pn	Pn	10 11 49.8	-3.2
JNU	Nakatsue	10.55	37	P	Pn	10 12 35.3	-1.8
	0.7nm,0.3s,baz=198,slow=3.9,SNR=8.2						
JNU	Nakatsue	10.55	37		Pn	10 12 35.1	-2.0
JMN	Monobe	12.76	44	Pn	Pn	10 13 01.3	-4.9
KSRS	Korea Array	13.12	17	P	P	10 13 10.1	-5.9
	0.1nm,0.3s,baz=196,slow=12,SNR=1.8						
KSRS				LR	LR	10 19 01.7	
	comp=Z,70nm,21.5s,baz=258,slow=41						
MJAR	Matsushiro Arr	17.28	44	P	Pn	10 14 03.1	+0.4
	0.0nm,0.3s,baz=229,slow=12,SNR=1.6						
CMAR	Chiang Mai Arr	23.47	259	P	P	10 15 08.8	+1.4
	0.7nm,0.4s,baz=58,slow=8.6,SNR=6.1						
KLR	Kul'dur	25.16	13	P	P	10 15 21.7	-0.7
	1.3nm,0.5s,baz=195,slow=9.1,SNR=4.4						
SONM	Songino Array	26.48	334	P	P	10 15 33.3	-1.2
	1.1nm,0.5s,baz=150,slow=9.5,SNR=8.9						
SONM	Songino Array	26.48	334	P	P	10 15 33.9	-0.6
MK31	Makanchi Array	39.15	314	P	P	10 17 23.8	-0.5
MK31				IAmb	IAmb	10 17 24.4	
	comp=Z,7.1nm,1.3s						
MKAR	Makanchi Array	39.15	314	P	P	10 17 23.8	-0.5
	comp=Z,2.9nm,0.4s,baz=99,slow=9.7,SNR=50						
MKAR				PcP	PcP	10 19 31.2	0.0
	comp=Z,0.6nm,0.6s,baz=82,slow=5.0,SNR=4.9						
ZALV	Zalesovo Beam	40.68	326	P	P	10 17 35.2	-1.6
	comp=Z,1.7nm,0.5s,baz=120,slow=8.1,SNR=7.4						
ZALV	Zalesovo Beam	40.68	326	P	P	10 17 35.0	-1.8
KURK	Kurchatov	42.76	319	P	P	10 17 52.0	-1.8
KURK				IAmb	IAmb	10 17 56.0	
	comp=Z,8.4nm,1.4s						
KURBB	Kurchatov Arra	42.78	319	P	P	10 17 52.3	-1.6
	comp=Z,1.9nm,0.7s,baz=112,slow=8.7,SNR=8.3						
AAK	Ala-Archa	43.58	306	P	P	10 18 00.5	-0.2
	comp=Z,1.3nm,0.5s,baz=104,slow=7.4,SNR=4.6						
AAK	Ala-Archa	43.58	306	P	P	10 18 00.5	-0.2
WRA	Warramunga Arr	45.88	165	P	P	10 18 20.8	+2.0
	comp=Z,0.4nm,0.7s,baz=347,slow=8.7,SNR=11						
WB2	Warramunga Arr	45.88	165	P	P	10 18 20.9	+2.1
WB2				IAmb	IAmb	10 18 35.6	
	comp=Z,9.9nm,1.4s						
WR0	Warramunga Arr	45.94	165	P	P	10 18 21.4	+2.0
WR0				IAmb	IAmb	10 18 33.6	
	comp=Z,6.5nm,1.3s						
KK31	Karatay Array	46.54	307	P	P	10 18 24.1	+0.2
KK31				IAmb	IAmb	10 18 24.9	
	comp=Z,2.7nm,0.5s						
KKAR	Karatay Array	46.54	307	P	P	10 18 24.0	+0.1
KKAR	Karatay Array	46.54	307	P	P	10 18 23.9	+0.1
KKAR				IAmb	IAmb	10 18 24.9	
	comp=Z,2.7nm,0.5s						
BRVK	Borovoye	48.39	320	P	P	10 18 37.8	-0.1
BRVK				IAmb	IAmb	10 18 38.2	
	comp=Z,2.5nm,0.5s						
AS31	Alice Springs	49.39	167	P	P	10 18 47.2	+1.2
ASAR	Alice Springs	49.39	167	P	P	10 18 48.5	+2.6
	comp=Z,0.3nm,0.6s,baz=354,slow=7.1,SNR=7.2						
ABKAR	Akbulak array	54.29	314	P	P	10 19 21.9	0.0
ABKAR				IAmb	IAmb	10 19 22.6	
	comp=Z,6.7nm,1.1s						
TTA	Tatalina	63.93	30	P	P	10 20 29.0	+0.7
TTA				IAmb	IAmb	10 20 43.5	
	comp=Z,5.2nm,1.3s						
IMAR	Indian Mountai	64.69	27	P	P	10 20 33.6	+0.5
PPLA	Purkeypile	65.68	30	P	P	10 20 40.3	+0.7
TOLK	Toolik Lake Re	66.03	24	P	P	10 20 42.4	+0.6
SOCY	Socotra	66.28	273	P	P	10 20 43.8	-0.5
RND	Reindeer	67.10	29	P	P	10 20 48.7	+0.1
RND				IAmb	IAmb	10 21 17.4	
	comp=Z,3.8nm,1.1s						
MDM	Murphy Dome	67.10	28	P	P	10 20 49.5	+1.0
WRH	Wood River Hil	67.24	28	P	P	10 20 50.5	+1.1
PMR	Palmer	67.29	31	P	P	10 20 48.2	-1.6
PMR				IAmb	IAmb	10 21 05.7	
	comp=Z,4.7nm,1.1s						
GHO	Glory Hole Cre	67.36	31	P	P	10 20 50.4	+0.1
ILAR	Eielson Array	67.70	28	P	P	10 20 50.9	-1.4
	comp=Z,0.4nm,0.6s,baz=290,slow=6.9,SNR=9.4						
ILAR	Eielson Array	67.70	28	P	P	10 20 51.2	-1.1
M24K	Tolsona, Glenn	68.56	30	P	P	10 20 58.8	+1.0
RIDG	Independent Ri	68.79	28	P	P	10 20 59.0	-0.2
RIDG				IAmb	IAmb	10 21 04.6	
	comp=Z,6.2nm,1.3s						
EYAK	Cordova Ski Ar	69.12	32	P	P	10 21 01.6	+0.4
BCAR	Beaver Creek A	70.29	29	P	P	10 21 09.7	+1.2
TGL	Tana Glacier	70.46	31	P	P	10 21 10.1	+0.5
BALM	Baldy	70.61	31	P	P	10 21 10.0	-0.4
BALM				IAmb	IAmb	10 21 37.8	
	comp=Z,6.9nm,1.1s						
FINES	FINESS Array B	71.76	330	P	P	10 21 16.0	-1.2
	comp=Z,2.1nm,0.9s,baz=40,slow=3.2,SNR=4.6						
FINES	FINESS Array B	71.76	330	P	P	10 21 16.8	-0.5
INK	Inuvik	71.84	22	P	P	10 21 17.7	+0.2
	comp=Z,0.8nm,0.5s,baz=277,slow=9.8,SNR=4.0						
INK	Inuvik	71.84	22	P	P	10 21 17.6	0.0
AKASG	Malin Array Be	73.57	319	P	P	10 21 27.0	-1.1
	comp=Z,0.3nm,0.4s,baz=66,slow=6.1,SNR=1.9						
BRTR	Keskin Array B	74.25	307	P	P	10 21 32.1	-0.4
	comp=Z,1.3nm,0.6s,baz=111,slow=3.6,SNR=4.2						
BRTR	Keskin Array B	74.25	307	P	P	10 21 32.7	+0.2
DLBC	Dease Lake	77.35	31	P	P	10 21 51.0	+1.3
	comp=Z,1.7nm,0.6s,baz=256,slow=3.9,SNR=6.5						
DLBC	Dease Lake	77.35	31	P	P	10 21 51.2	+1.6
DLBC				IAmb	IAmb	10 21 53.1	
	comp=Z,7.9nm,1.3s						
NOA	NORSAR Array B	78.45	333	P	P	10 21 54.1	-1.6
	comp=Z,0.3nm,0.3s,baz=57,slow=2.0,SNR=1.5						
YKA	Yellowknife Ar	81.56	23	P	P	10 22 12.4	+0.1
	comp=Z,2.2nm,0.6s,baz=315,slow=4.5,SNR=48						
NVAR	Mina Array Bea	94.61	44	P	P	10 23 17.6	+1.7
	comp=Z,0.6nm,0.8s,baz=299,slow=4.2,SNR=5.7						
NVAR	Mina Array Bea	94.61	44	P	P	10 23 17.2	+1.3

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*CNRM **03** 10:15:10.5, 29.45N×11.27W, h0km, ml4.2, Hypocentre not reviewed by the ISC*

*INMG **03** 10:15:33.2±0.7, 30.42N×9.76W, h30km±5km, ML2.7, Error ellipse: s-maj=10.1km s-min=4.3km az=89.0*

*IGIL **03** 10:15:34.5, 30.36N×9.74W, h43km*

MDD 03 10:15:29.9±5.5, 30.49N×9.52W, h0km, mb3.6/4, Error ellipse: s-maj=90.3km s-min=47.5km az=104.0, LEJANO SIN SOLUCIN, Morocco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CGR	Cap Guir	0.35	294	P		10 15 41.1	
EAH	EAH	1.16	357	P		10 15 54.0	
OUZM	OUZ	2.41	79	P		10 16 13.0	
ZGR	Zagora	3.39	95	P		10 16 26.0	
PFVI	Vila Bisbo	6.65	5	P	Pn	10 17 06.9	-1.9
	0.6nm,0.4s,SNR=7.9						
PFVI				S	Sn	10 18 19.0	-6.3
	0.4nm,0.2s,SNR=7.9						
PFVI	Vila Bisbo	6.65	5	eP	Pn	10 17 09.3	+0.5
MORF	Marmelete	6.84	6	eP	Pn	10 17 12.0	+0.5
MORF				eS	Sn	10 18 26.8	-3.2

MORF				A	A	10 18 27.2	
	4.0nm,0.2s						
PBDV	**Barranco-do-Ve**	**6.86**	**11**	*e*P	Pn	10 17 12.4	+0.6
PVAQ	**Vaqueiros**	**7.06**	**12**	*e*P	Pn	10 17 14.8	+0.4
PVAQ				*e*S	Sn	10 18 31.5	-3.8
PVAQ				A	A	10 18 41.6	
	2.8nm,0.4s						
PVAQ	**Vaqueiros**	**7.06**	**12**	P		10 17 14.8	
PTEO	**Sao Teotonio**	**7.07**	**5**	*e*P	Pn	10 17 15.2	+0.6
EGRO	**El Granado**	**7.23**	**13**	P	Pn	10 17 16.4	-0.4
	1.9nm,0.3s,SNR=7.9						
EGRO				S	Sn	10 18 33.2	-6.3
	0.5nm,0.6s,SNR=7.9						
PCVE	**Castro Verde**	**7.23**	**9**	*e*P	Pn	10 17 17.3	+0.5
PCVE				*e*S	Sn	10 18 35.4	-4.2
PCVE				A	A	10 18 41.0	
	3.4nm,0.5s						
MESJ	**Messejana**	**7.41**	**8**	*e*P	Pn	10 17 19.4	+0.2
MESJ	**Messejana**	**7.41**	**8**	*e*P	Pn	10 17 19.9	+0.6
EMIN	**Mina Concepcio**	**7.63**	**17**	P	Pn	10 17 21.1	-1.2
	0.1nm,0.3s,SNR=7.9						
EMIN				S	Sn	10 18 43.9	-5.6
	0.7nm,0.3s,SNR=7.9						
PNCL	**Nicolau / Gran**	**7.65**	**6**	*e*P	Pn	10 17 22.7	+0.2
PNCL				*e*S	Sn	10 18 44.7	-5.2
PNCL				A	A	10 18 48.4	
	3.2nm,0.8s						
PBAR	**Barrancos**	**7.94**	**14**	*e*P	Pn	10 17 26.4	-0.1
PBAR				*e*S	Sn	10 18 52.4	-4.6
PBAR				A	A	10 18 59.7	
	2.1nm,0.6s						
PMTG	**Montargil**	**8.62**	**7**	*e*P	Pn	10 17 35.8	-0.1
PMTG				*e*S	Sn	10 19 07.2	-6.7
EADA	**Adamuz**	**8.68**	**27**	P	Pn	10 17 35.3	-1.4
	0.6nm,0.3s,SNR=7.9						
EADA				S	Sn	10 19 06.3	-9.0
	0.9nm,0.5s,SNR=7.9						
PMRV	**Marv??o**	**9.09**	**10**	*e*P	Pn	10 17 41.8	-0.5

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*IDC **03** 10:17:15.9±1.4, 52°.45N×168°.69W, h0^{km}, mb3.2/2, mb1 3.6/4, mb1mx3.2/53, mbtmp3.5/4, ML3.2/1, Error ellipse: s-maj=33.7km s-min=12.0km az=166.0*

*NEIC **03** 10:17:25.7±2.5, 52°.8N±0°.2×168°.5W±0°.2, h74^{km}±14^{km}, Error ellipse: s-maj=35.3km s-min=9.8km az=151.0*

*AEIC **03** 10:17:26±2.6, 52°.7N±0°.1×168°.3W±0°.2, h57^{km}±8^{km}, mb3.8/11(NEIC), Error ellipse: s-maj=23.8km s-min=4.6km az=135.0*

ISC 03 10:17:22.1±1.6**, 52°.4N**±0°.2×**168°.6W**±0°.1**, h50^{km}, n30, σ1^{s}.33**/30**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIKH	**Nikolski High**	**0.57**	**343**		**Pn**	**10 17 35.1**	**+1.0**
MGOD	**Makushin Gods**	**1.71**	**36**		**Pn**	**10 17 50.9**	**+1.4**
UNV	**Unalaska Valle**	**1.89**	**41**	Pn	**Pn**	**10 17 52.2**	**+0.4**
OHAK	**Old Harbor**	**10.04**	**55**	Pn	**Pn**	**10 19 43.8**	**+0.4**
KDAK	**Kodiak Island**	**10.61**	**53**	Pn	**Pn**	**10 19 49.7**	**-1.5**
	0.2nm,0.3s,baz=179,slow=3.8,SNR=6.2						
KDAK	**Kodiak Island**	**10.61**	**53**	Pn	**Pn**	**10 19 50.9**	**-0.3**
SEW	**Seward**	**13.08**	**47**	Pn	**Pn**	**10 20 26.1**	**+1.3**
SUA	**Susitna One**	**13.24**	**40**	Pn	**Pn**	**10 20 27.6**	**+0.3**
GHO	**Glory Hole Cre**	**14.14**	**41**	Pn	**Pn**	**10 20 38.7**	**-0.7**
KNK	**Knik Glacier**	**14.14**	**43**	Pn	**Pn**	**10 20 37.5**	**-1.9**
SML	**Sawmill**	**14.40**	**41**	Pn	**Pn**	**10 20 40.9**	**-1.9**
TRF	**Thorofare Moun**	**14.64**	**34**	Pn	**Pn**	**10 20 45.8**	**-0.3**
FID	**Port Fidalgo**	**14.69**	**47**	Pn	**Pn**	**10 20 45.7**	**-0.8**
SCM	**Sheep Creek Mo**	**14.82**	**42**	Pn	**Pn**	**10 20 48.9**	**+0.5**
KLU	**Klutina**	**15.25**	**45**	Pn	**Pn**	**10 20 53.5**	**-0.5**
HMT	**Hamilton**	**15.55**	**50**	Pn	**Pn**	**10 20 56.5**	**-1.2**
N25K	**Chitina, Valde**	**15.88**	**45**	Pn	**Pn**	**10 21 02.6**	**+0.7**
N25K				IAmb	IAmb	10 21 14.2	
	comp=Z,10nm,1.4s						
GLB	**Gilahina Butte**	**16.16**	**46**	Pn	**Pn**	**10 21 04.3**	**-1.2**
GLB				IAmb	IAmb	10 21 21.8	
	comp=Z,2.7nm,0.8s						
CRQM	**Cirque**	**16.21**	**49**	Pn	**Pn**	**10 21 05.2**	**-1.1**
CRQM				IAmb	IAmb	10 21 11.5	
	comp=Z,10nm,1.2s						
VRDI	**Verde Repeater**	**16.23**	**47**	Pn	**Pn**	**10 21 07.0**	**+0.4**
VRDI				IAmb	IAmb	10 21 13.5	
	comp=Z,6.6nm,1.2s						
MCARA	**McCarthy VSAT**	**16.48**	**47**	Pn	**Pn**	**10 21 08.8**	**-0.8**
ILAR	**Eielson Array**	**16.63**	**34**	Pn	**Pn**	**10 21 09.9**	**-1.5**
	baz=257,slow=8.2,SNR=1.1						
BARN	**Barnard Glacie**	**16.99**	**49**	Pn	**Pn**	**10 21 13.7**	**-2.5**
BARN				IAmb	IAmb	10 21 26.4	
	comp=Z,13nm,1.4s						
DOT	**Dot Lake**	**17.03**	**39**	Pn	**Pn**	**10 21 14.9**	**-1.5**
CTGM	**Chitina Glacie**	**17.11**	**49**	Pn	**Pn**	**10 21 14.7**	**-2.9**
CTGM				IAmb	IAmb	10 21 16.0	
	comp=Z,11nm,1.4s						
COLD	**Coldfoot**	**17.36**	**24**	Pn	**Pn**	**10 21 18.3**	**-2.1**
EGAK	**Eagle**	**18.69**	**38**	P	**Pn**	**10 21 35.6**	**-1.0**
EGAK				IAmb	IAmb	10 21 49.8	
	comp=Z,12nm,1.4s						
PETK	**Petropavlovsk-**	**20.31**	**285**	P	**P**	**10 21 52.5**	**-1.1**
	comp=Z,6.2nm,1.1s,baz=82,slow=10,SNR=4.0						
PDAR	**Pinedale Array**	**39.92**	**80**	P	**P**	**10 24 51.7**	**+0.4**
TXAR	**Lajitas Array**	**52.27**	**90**	P	**P**	**10 26 29.1**	**+0.8**
	comp=Z,0.1nm,0.6s,baz=319,slow=6.3,SNR=1.7						

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*IDC **03** 10:17:27.3±1.1, 52°.29N×168°.79W, h0^{km}, mb3.8/15, mb1 4.0/16, mb1mx3.8/51, mbtmp3.8/16, ML3.1/1, Error ellipse: s-maj=29.0km s-min=15.8km az=168.0*

ISC 03 10:17:32.1±0.9**, 52°.3N**±0°.2×**168°.84W**±0°.09**, h33^{km}, n21, σ1^{s}.24**/18**, mb3.9**/14**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATKA	**Atka Island**	**3.29**	**270**	Pn	**Pn**	**10 18 18.7**	**-2.6**
KDAK	**Kodiak Island**	**10.79**	**53**	Pn	**Pn**	**10 20 03.2**	**-0.9**
	1.0nm,0.3s,baz=177,slow=3.5,SNR=10						
ILAR	**Eielson Array**	**16.80**	**34**	Pn	**Pn**	**10 21 22.3**	**-2.2**
	0.1nm,0.3s,baz=242,slow=9.8,SNR=6.1						
PETK	**Petropavlovsk-**	**20.18**	**286**	P	**P**	**10 22 05.2**	**+1.6**
	4.6nm,0.4s,baz=86,slow=14,SNR=34						
SEY	**Seymchan**	**22.93**	**313**	P	**P**	**10 22 32.4**	**-0.6**
	0.8nm,0.3s,baz=107,slow=8.8,SNR=4.5						
INK	**Inuvik**	**23.20**	**33**	P	**P**	**10 22 34.8**	**-0.9**
	2.1nm,0.5s,baz=241,slow=11,SNR=9.4						
YKA	**Yellowknife Ar**	**30.02**	**49**	P	**P**	**10 23 38.6**	**+1.2**
	0.4nm,0.5s,baz=274,slow=7.2,SNR=9.5						
H11S1	**WAKE ISLAND Hy**	**38.81**	**219**	T	T	11 06 34.7	
	baz=23,slow=76,SNR=14						
H11S2	**WAKE ISLAND Hy**	**38.83**	**219**	T	T	11 06 21.9	
	baz=23,slow=76,SNR=6.3						
H11S3	**WAKE ISLAND Hy**	**38.83**	**219**	T	T	11 06 40.0	
	baz=23,slow=76,SNR=4.4						
PDAR	**Pinedale Array**	**40.09**	**79**	P	**P**	**10 25 05.1**	**+0.6**
	0.4nm,0.5s,baz=266,slow=3.2,SNR=5.4						
KSRS	**Korea Array**	**45.73**	**277**	P	**P**	**10 25 50.8**	**+0.9**
	1.5nm,0.8s,baz=50,slow=7.3,SNR=6.6						
SONM	**Songino Array**	**51.60**	**301**	P	**P**	**10 26 35.8**	**+0.8**
	0.6nm,0.7s,baz=64,slow=5.9,SNR=3.9						
TXAR	**Lajitas Array**	**52.42**	**89**	P	**P**	**10 26 40.6**	**-0.8**
	0.1nm,0.5s,baz=298,slow=4.0,SNR=2.3						
ARCES	**ARCESS Array B**	**57.99**	**354**	P	**P**	**10 27 20.7**	**-0.1**
	2.4nm,0.8s,baz=14,slow=6.8,SNR=5.6						
MKAR	**Makanchi Array**	**64.07**	**314**	P	**P**	**10 28 03.1**	**+0.8**
	1.1nm,0.7s,baz=52,slow=6.3,SNR=12						
FINES	**FINESS Array B**	**65.95**	**352**	P	**P**	**10 28 15.1**	**+0.8**
	2.6nm,0.5s,baz=16,slow=7.4,SNR=15						
NOA	**NORSAR Array B**	**66.98**	**360**	P	**P**	**10 28 21.6**	**+0.6**
	1.2nm,0.8s,baz=359,slow=6.2,SNR=3.6						
AKASG	**Malin Array Be**	**76.21**	**348**	P	**P**	**10 29 16.5**	**-0.1**
	0.6nm,0.4s,baz=15,slow=5.8,SNR=3.8						
CMAR	**Chiang Mai Arr**	**76.94**	**283**	P	**P**	**10 29 22.1**	**+0.9**
	0.9nm,0.6s,baz=25,slow=6.8,SNR=6.2						
ASAR	**Alice Springs**	**90.62**	**230**	P	**P**	**10 30 30.1**	**-0.8**
	0.3nm,0.7s,baz=22,slow=6.3,SNR=4.6						

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*IDC **03** 10:25:31.2±3.4, 20°.34S×69°.46W, h0^{km}, mb3.6/3, mb1 4.0/3, mb1mx3.7/17, mbtmp3.6/3, Error ellipse: s-maj=146.7km s-min=30.2km az=27.0*

*NEIC **03** 10:25:45.7±1.7, 19°.97S±0°.02×69°.57W±0°.06, h87^{km}±6^{km}, Error ellipse: s-maj=8.2km s-min=2.5km az=86.0*

*GUC **03** 10:25:46.4±0.7, 19°.93S×69°.48W, h88^{km}±3^{km}, ML3.9*

ISC 03 10:25:45.0±0.8**, 19°.98S**±0°.04×**69°.58W**±0°.07**, h98^{km}**±6^{km}**, n36, σ1^{s}.08**/50**, mb3.6**/3**, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HMBC	**Humberstone**	**0.42**	**224**	*e*P	**Pn**	**10 26 00.5**	**+0.3**
HMBC				*i* S	**Sn**	**10 26 11.6**	**+0.1**
HMBC				IAML		10 26 12.2	
	comp=N,6μm,0.3s						
PB08	**IPOC Station P**	**0.43**	**112**	*e*P	**Pn**	**10 26 00.1**	**-0.6**
PB08				*i* S	**Sn**	**10 26 11.2**	**-1.0**
PB08				IAML		10 26 11.9	
	comp=N,7μm,0.2s						
PB08	**IPOC Station P**	**0.43**	**112**		**Pn**	**10 25 60.0**	**-0.6**
PB08				Sn	**Sn**	**10 26 11.3**	**-0.9**
TA02	**Huaiquique**	**0.59**	**241**	*e*P	**Pn**	**10 26 01.9**	**+0.6**
TA02				*i* S	**Sn**	**10 26 14.2**	**+0.7**
TA02				IAML		10 26 15.9	
	comp=E,12μm,0.1s						
PSGC	**Pisagua**	**0.64**	**306**	*e*P	**Pn**	**10 26 01.8**	**0.0**
PSGC				*i* S	**Sn**	**10 26 14.0**	**-0.3**
PSGCX	**Pisagua**	**0.64**	**306**		**Pn**	**10 26 01.7**	**-0.1**
PSGCX				Sn	**Sn**	**10 26 14.3**	**0.0**
MNMC	**Minye Minye**	**0.84**	**359**	*e*P	**Pn**	**10 26 04.0**	**0.0**
MNMC				*i* S	**Sn**	**10 26 18.0**	**-0.1**
MNMC	**Minye Minye**	**0.84**	**359**		**Pn**	**10 26 03.3**	**-0.6**
MNMC				Sn	**Sn**	**10 26 18.2**	**+0.1**
PB01	**IPOC Station P**	**1.06**	**175**	*e*P	**Pn**	**10 26 06.6**	**+0.5**
PB01				*i* S	**Sn**	**10 26 22.8**	**+0.8**
PB01				IAML		10 26 23.9	
	comp=E,8μm,0.2s						
PB01	**IPOC Station P**	**1.06**	**175**		**Pn**	**10 26 06.6**	**+0.5**
PB01				Sn	**Sn**	**10 26 23.0**	**+1.0**
AP01	**Chacalluta**	**1.75**	**336**	*e*P	**Pn**	**10 26 14.7**	**+0.3**
AP01	**Chacalluta**	**1.75**	**336**	Pn	**Pn**	**10 26 14.4**	**+0.1**
PB07	**IPOC Station P**	**1.76**	**189**	*e*P	**Pn**	**10 26 15.6**	**+0.9**
PB07				*i* S	**Sn**	**10 26 37.6**	**+0.4**
PB07				IAML		10 26 41.6	
PB07	**IPOC Station P**	**1.76**	**189**		**Pn**	**10 26 15.5**	**+0.8**
PB09	**IPOC Station P**	**1.84**	**170**	*e*P	**Pn**	**10 26 17.0**	**+1.4**
PB09				*i* S	**Sn**	**10 26 41.1**	**+2.2**
PB09	**IPOC Station P**	**1.84**	**170**		**Pn**	**10 26 17.0**	**+1.4**
PB04	**IPOC Station P**	**2.41**	**193**	*e*P	**Pn**	**10 26 23.2**	**+0.1**
PB04				IAML		10 26 58.5	
	comp=E,443nm,0.3s						
PB04	**IPOC Station P**	**2.41**	**193**		**Pn**	**10 26 23.1**	**+0.1**
LVC	**Limon Verde**	**2.69**	**167**		**Pn**	**10 26 28.8**	**+1.8**
PB06	**IPOC Station P**	**2.71**	**180**	*e*P	**Pn**	**10 26 27.6**	**+0.5**
PB06				*i* S	**Sn**	**10 26 58.7**	**-0.7**
PB06				IAML		10 27 07.8	
	comp=E,304nm,0.2s						
PB06	**IPOC Station P**	**2.71**	**180**		**Pn**	**10 26 27.6**	**+0.5**
PB05	**IPOC Station P**	**2.92**	**191**	*e*P	**Pn**	**10 26 29.4**	**-0.4**
PB15	**IPOC Station P**	**3.22**	**178**	*e*P	**Pn**	**10 26 34.5**	**+0.7**
PB15	**IPOC Station P**	**3.22**	**178**		**Pn**	**10 26 34.6**	**+0.7**
PB10	**IPOC Station P**	**3.63**	**194**	*e*P	**Pn**	**10 26 39.1**	**-0.2**
PB10				*i* S	**Sn**	**10 27 17.2**	**-4.0**
PB10	**IPOC Station P**	**3.63**	**194**	Pn	**Pn**	**10 26 39.6**	**+0.4**
PB14	**IPOC Station P**	**4.69**	**189**		**Pn**	**10 26 53.0**	**-0.8**
GO02	**Mina Guanaco**	**5.16**	**180**		**Pn**	**10 26 59.8**	**-0.4**
AC01	**Pan de Azucar**	**6.21**	**188**	Pn	**Pn**	**10 27 11.8**	**-2.5**
AC02	**Maricunga**	**6.84**	**177**	Pn	**Pn**	**10 27 23.5**	**+0.3**
AC05	**El Transito**	**8.84**	**184**	Pn	**Pn**	**10 27 48.4**	**-1.7**
LCO	**Las Campanas**	**9.05**	**186**	Pn	**Pn**	**10 27 51.3**	**-1.8**
TXAR	**Lajitas Array**	**59.03**	**325**	P	**P**	**10 35 35.7**	**+0.8**
	comp=E,0.2nm,0.7s,baz=149,slow=11,SNR=2.0						
TORD	**Torodi Ar. Bea**	**77.44**	**71**	P	**P**	**10 37 29.1**	**-1.1**
	comp=E,0.3nm,0.3s,baz=258,slow=5.1,SNR=1.8						
YKA	**Yellowknife Ar**	**89.55**	**341**	P	**P**	**10 38 31.8**	**+0.8**
	comp=E,0.8nm,0.7s,baz=132,slow=5.0,SNR=16						
MKAR	**Makanchi Array**	**144.75**	**34**	PKP	**PKPab**	**10 45 09.9**	**+0.4**
	comp=E,0.2nm,0.6s,baz=297,slow=3.2,SNR=2.6						

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*NEIC **03** 10:37:09±1.7, 34°.80N±0°.07×139°.9E±0°.1, h10^{km}±1^{km}, mb4.1/3, Error ellipse: s-maj=15.3km s-min=11.3km az=83.0*

*IDC **03** 10:37:12.0±1.1, 34°.48N×138°.32E, h0^{km}, mb3.7/4, mb1 3.8/5, mb1mx3.5/34, mbtmp3.7/5, ML2.9/1, MS2.5/1, Ms1 2.5/1, ms1mx2.1/50, Error ellipse: s-maj=37.9km s-min=16.1km az=66.0*

*JMA **03** 10:37:14.3±0.2, 35°.05N×140°.01E, h68^{km}±2^{km}, M3.1 Broadband fault plane solution: P waves. NP1: ϕ_s13.00000°, δ50.00000°, λ11.00000°. NP2: ϕ_s275.00000°, δ81.00000°, λ140.00000°. Principal axes: T Plg34.0000°, Azm226.0000°; N Plg49.0000°, Azm85.0000°; P Plg20.0000°, Azm330.0000°;*

JMA Felt I J1.

ISC 03 10:37:15.1±0.8**, 35°.04N**±0°.04×**140°.01E**±0°.04**, h63^{km}**±6^{km}**, n39, σ0^{s}.62**/43**, mb3.8**/7**, 4C-4D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TATJ	**Tateyama 2**	**0.10**	**263**	⇓P	**Pn**	**10 37 24.9**	**+0.4**
TATJ				S	**Sn**	**10 37 32.3**	**+1.0**
JKUC	**kamogawauchiur**	**0.20**	**54**	⇑P	**Pn**	**10 37 24.6**	**-0.3**
JKUC				S	**Sn**	**10 37 31.8**	**-0.2**
KTR	**Katsuura**	**0.28**	**68**	⇑P	**Pn**	**10 37 25.2**	**-0.2**
KTR				S	**Sn**	**10 37 32.5**	**-0.3**
BSO4	**Boso 4**	**0.28**	**101**	⇑P	**Pn**	**10 37 25.6**	**+0.3**
BSO4				X		10 37 33.9	
BSO3	**Boso 3**	**0.48**	**120**	⇓P	**Pn**	**10 37 26.9**	**+0.1**
BSO3				X		10 37 36.4	
JIM2	**Oshima 3**	**0.57**	**236**	P	**Pn**	**10 37 27.7**	**-0.5**
JIM2				S	**Sn**	**10 37 36.9**	**-0.8**
JOD2	**Odawara 2**	**0.78**	**287**	⇓P	**Pn**	**10 37 30.0**	**-0.6**
JOD2				S	**Sn**	**10 37 41.2**	**-0.8**
BSO1	**Boso 1**	**0.89**	**116**	P	**Pn**	**10 37 30.8**	**-0.5**
BSO1				X		10 37 42.7	
JIZS	**Izushimoda**	**0.98**	**251**	⇑P	**Pn**	**10 37 33.0**	**0.0**
JIZS				S	**Sn**	**10 37 46.0**	**-0.3**
JFNN	**Fujinakano**	**1.09**	**278**	P	**Pn**	**10 37 34.8**	**+0.3**
JFNN				S	**Sn**	**10 37 49.3**	**+0.4**
JYT	**Yasato**	**1.19**	**7**	Pn	**Pn**	**10 37 34.5**	**-1.3**
JMKN	**Mikurajimanish**	**1.20**	**197**	P	**Pn**	**10 37 35.8**	**-0.1**
JMKN				S	**Sn**	**10 37 51.3**	**0.0**
JYN	**Shimob**	**1.28**	**291**	⇓P	**Pn**	**10 37 36.9**	**-0.1**
JYN				S	**Sn**	**10 37 53.4**	**0.0**
JHJ	**Hachijo jima 2**	**1.93**	**186**	Pn	**Pn**	**10 37 46.1**	**+0.4**
	42nm,0.3s,baz=64,slow=7.7,SNR=6.3						
JHJ				Sn	**Sn**	**10 38 09.2**	**+0.4**
	58nm,0.3s,baz=237,slow=23,SNR=10.0						
MJAR	**Matsushiro Arr**	**2.09**	**316**	Pn	**Pn**	**10 37 47.6**	**-0.3**
	4.5nm,0.3s,baz=180,slow=6.3,SNR=191						
MJAR				Sn	**Sn**	**10 38 13.5**	**+0.6**
	2.8nm,0.3s,baz=33,slow=38,SNR=2.8						
MJAR	**Matsushiro Arr**	**2.09**	**316**	Pn	**Pn**	**10 37 47.4**	**-0.5**
MAT	**Matsushiro**	**2.09**	**316**	P	**Pn**	**10 37 48.3**	**+0.4**
MAT				S	**Sn**	**10 38 13.3**	**+0.4**
JMM	**Marumori**	**2.89**	**12**	Pn	**Pn**	**10 37 59.1**	**+0.4**
JSD	**Sado**	**3.30**	**335**	Pn	**Pn**	**10 38 03.6**	**-0.8**
JTM	**Tenmabayashi**	**5.79**	**8**	Pn	**Pn**	**10 38 38.7**	**+0.3**
ERM	**Erimo**	**7.39**	**19**	Pn	**Pn**	**10 39 00.5**	**+0.4**
JNU	**Nakatsue**	**7.81**	**258**	LR	LR	10 40 54.4	
	comp=Z,44nm,21.6s,baz=28,slow=35						
JEW	**Eniwo**	**7.87**	**8**	Pn	**Pn**	**10 39 06.8**	**+0.1**
JCJ	**Chichijima**	**8.14**	**166**	Pn	Pn	10 39 04.1	-6.5
H11N2	**WAKE ISLAND Hy**	**28.21**	**116**	T	T	11 12 22.7	
	baz=309,slow=75,SNR=25						
H11N1	**WAKE ISLAND Hy**	**28.22**	**116**	T	T	11 12 23.2	
	baz=309,slow=75,SNR=23						
H11N3	**WAKE ISLAND Hy**	**28.23**	**116**	T	T	11 12 29.7	
	baz=309,slow=75,SNR=23						
H11S3	**WAKE ISLAND Hy**	**28.84**	**118**	T	T	11 13 15.4	
	baz=311,slow=76,SNR=9.8						
H11S1	**WAKE ISLAND Hy**	**28.84**	**118**	T	T	11 13 12.7	
	baz=311,slow=76,SNR=10						
H11S2	**WAKE ISLAND Hy**	**28.85**	**118**	T	T	11 13 30.4	
	baz=311,slow=76,SNR=8.5						
ZALV	**Zalesovo Beam**	**42.44**	**314**	P	**P**	**10 45 02.7**	**-0.8**
	0.4nm,0.4s,baz=79,slow=7.9,SNR=3.5						
MKAR	**Makanchi Array**	**44.24**	**304**	P	**P**	**10 45 17.4**	**-0.7**
	0.5nm,0.6s,baz=90,slow=9.6,SNR=5.6						
MKAR	**Makanchi Array**	**44.24**	**304**	P	**P**	**10 45 18.6**	**+0.5**
KURK	**Kurchatov**	**46.29**	**309**	P	**P**	**10 45 35.1**	**+0.9**
KURK				IAmb	IAmb	10 45 52.6	
	comp=Z,1.4nm,0.9s						
WR0	**Warramunga Arr**	**54.95**	**186**	P	**P**	**10 46 38.7**	**-0.9**
WR0				IAmb	IAmb	10 47 01.5	
	comp=Z,7.1nm,1.3s						
WRA	**Warramunga Arr**	**54.95**	**187**	P	**P**	**10 46 38.3**	**-1.4**
	comp=Z,0.6nm,0.6s,baz=2.2,slow=7.4,SNR=9.1						
ABKAR	**Akbulak array**	**58.36**	**311**	P	**P**	**10 47 04.3**	**+0.7**
ABKAR				IAmb	IAmb	10 47 21.7	
	comp=Z,2.0nm,1.2s						
ASAR	**Alice Springs**	**58.67**	**187**	P	**P**	**10 47 07.2**	**+1.2**
	comp=Z,0.4nm,1.0s,baz=20,slow=12,SNR=4.3						
ASAR	**Alice Springs**	**58.67**	**187**	P	**P**	**10 47 05.7**	**-0.3**

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*JMA **03** 10:41:59.5±0.3, 36°.20N×141°.92E, h66^{km}, M3.5*

*NIED **03** 10:41:59.6, 36°.20N×141°.92E, h66^{km}, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$2.81; M$_{\theta\theta}$-1.41; M$_{\phi\phi}$-1.39; M$_{r\theta}$0.53; M$_{\theta\phi}$-1.54; M$_{\phi r}$1.47; Fault plane solution: M$_0$3.27000×10^{14} NP1: ϕ_s33.00000°, δ59.00000°, λ77.00000°. NP2: ϕ_s237.00000°, δ33.00000°, λ110.00000°.*

*IDC **03** 10:42:12.7±2.0, 35°.70N×140°.71E, h101^{km}±18^{km}, mb3.2/8, mb1 3.4/12, mb1mx3.2/38, mbtmp3.5/12, MS2.3/1, Ms1 2.3/1, ms1mx2.0/20 Error ellipse: s-maj=22.3km s-min=15.7km az=68.0*

ISC 03 10:42:02.0±1.2**, 36°.17N**±0°.05×**141°.81E**±0°.10**, h50^{km}, n24, σ1^{s}.65**/24**, mb3.5**/8**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHOJ	**Chosi**	**0.90**	**239**	P	**Pn**	**10 42 17.9**	**-0.5**
JHYU	**Hitachinakayam**	**1.00**	**280**	P	**Pn**	**10 42 19.2**	**-0.5**
JHYU				S	**Sn**	**10 42 34.3**	**+1.5**
JIHU	**Itakohorinouch**	**1.06**	**259**	P	**Pn**	**10 42 20.5**	**0.0**
JHO	**Hitachi**	**1.09**	**294**	P	**Pn**	**10 42 19.7**	**-1.2**
ONAJ	**Iwakimizuishiy**	**1.23**	**319**	P	**Pn**	**10 42 21.5**	**-1.4**
BSO3	**Boso 3**	**1.73**	**218**	P	**Pn**	**10 42 29.6**	**+0.2**
JFT	**Otama**	**1.79**	**319**	P	**Pn**	**10 42 30.4**	**0.0**
JMM	**Marumori**	**1.87**	**335**	P	**Pn**	**10 42 31.0**	**-0.6**
JAG	**Ashikaga**	**1.92**	**278**	P	**Pn**	**10 42 31.8**	**-0.4**
JRY	**Ryogami san**	**2.36**	**267**	P	**Pn**	**10 42 38.2**	**-0.1**
JOD2	**Odawara 2**	**2.39**	**248**	P	**Pn**	**10 42 39.2**	**+0.5**
MJAR	**Matsushiro Arr**	**2.93**	**278**	P	**Pn**	**10 42 45.9**	**-0.2**
	1.5nm,0.3s,baz=99,slow=9.2,SNR=50						
MJAR				S	**Sn**	**10 43 15.5**	**-4.5**
	0.9nm,0.3s,baz=117,slow=7.9,SNR=5.3						
MAT	**Matsushiro**	**2.93**	**278**	P	**Pn**	**10 42 47.0**	**+0.9**
MAT				S	**Sn**	**10 43 23.4**	**+3.3**
JHJ	**Hachijo jima 2**	**3.48**	**209**	P	**Pn**	**10 42 53.2**	**-0.4**
	25nm,0.3s,baz=285,slow=23,SNR=7.3						
JHJ				S	**Sn**	**10 43 30.8**	**-2.7**
	68nm,0.3s,baz=259,slow=22,SNR=10						
USRK	**Ussuriysk Ar.**	**10.98**	**320**	P	Pn	10 44 42.6	+6.3
	baz=141,slow=14,SNR=7.5						
KSRS	**Korea Array**	**11.21**	**281**	P	**Pn**	**10 44 39.6**	**+0.2**
	0.1nm,0.3s,baz=93,slow=15,SNR=2.7						
KSRS				LR	LR	10 47 34.9	
	comp=Z,14nm,19.6s,baz=90,slow=31						
SONM	**Songino Array**	**28.53**	**305**	P	**P**	**10 47 53.5**	**+0.6**
	0.7nm,0.5s,baz=106,slow=8.7,SNR=7.3						
CMAR	**Chiang Mai Arr**	**41.60**	**257**	P	**P**	**10 49 43.0**	**-2.2**
	0.4nm,0.4s,baz=80,slow=5.0,SNR=2.1						
MKAR	**Makanchi Array**	**44.85**	**303**	P	**P**	**10 50 11.9**	**+0.8**
	1.1nm,0.7s,baz=87,slow=9.9,SNR=10						
ILAR	**Eielson Array**	**50.05**	**32**	P	P	10 51 02.4	+11
	0.4nm,0.8s,baz=256,slow=7.3,SNR=4.1						
WRA	**Warramunga Arr**	**56.26**	**188**	P	**P**	**10 51 38.0**	**+0.7**
	0.2nm,0.4s,baz=6.2,slow=7.3,SNR=6.6						
ASAR	**Alice Springs**	**59.98**	**188**	P	**P**	**10 52 05.4**	**+2.0**
	0.2nm,0.7s,baz=19,slow=12,SNR=1.5						
NVAR	**Mina Array Bea**	**75.25**	**53**	P	P	10 53 52.0	+12
	0.2nm,0.6s,baz=308,slow=4.5,SNR=2.5						
PDAR	**Pinedale Array**	**78.04**	**46**	P	P	10 54 06.8	+11
	0.2nm,0.6s,baz=222,slow=2.0,SNR=3.5						

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*NEIC **03** 11:02:59.9±1.5, 13°.72N±0°.06×146°.48E±0°.08, h10^{km}±1^{km}, mb4.4/5, Error ellipse: s-maj=15.8km s-min=3.8km az=127.0*

*IDC **03** 11:03:06.0±0.7, 13°.69N×146°.29E, h48^{km}±5^{km}, mb3.5/11, mb1 3.7/11, mb1mx3.5/49, mbtmp3.8/11, MS3.2/3, Ms1 3.2/3, ms1mx2.7/32, Error ellipse: s-maj=19.3km s-min=15.8km az=113.0*

ISC 03 11:03:06.6±0.8**, 13°.77N**±0°.10×**146°.3E**±0°.1**, h50^{km}, n25, σ1^{s}.35**/28**, mb4.0**/14**, MS3.1**/3**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**1.36**	**263**	P	**Pn**	**11 03 28.1**	**-1.1**
	308nm,0.3s,baz=93,slow=1.6,SNR=94						
GUMO				S	Sn	11 03 52.9	+6.8
	135nm,0.3s,baz=79,slow=23,SNR=6.6						
GUMO	**Guam**	**1.36**	**263**		**Pn**	**11 03 28.0**	**-1.2**
ANA2	**Anatahan**	**2.62**	**348**	Pn	**Pn**	**11 03 43.9**	**-2.5**
PATS	**Pohnpei**	**13.71**	**119**	Pn	Pn	11 06 10.8	-7.7
JHJ	**Hachijo jima 2**	**20.15**	**344**	LR	LR	11 14 55.6	
	comp=Z,59nm,20.2s,baz=288,slow=35						
KSRS	**Korea Array**	**28.70**	**329**	P	**P**	**11 08 59.4**	**+0.4**
	1.1nm,0.6s,baz=147,slow=8.7,SNR=4.9						
KSRS				pP	**pP**	**11 09 12.2**	**+1.6**
	3.0nm,0.6s,baz=143,slow=9.3,SNR=8.3						
WB0	**Warramunga Arr**	**35.31**	**200**	P	**P**	**11 09 55.5**	**-1.7**
WB0				IAmb	IAmb	11 09 57.7	
	comp=Z,4.6nm,1.0s						
WR0	**Warramunga Arr**	**35.44**	**199**	P	**P**	**11 09 56.8**	**-1.5**
WR0				IAmb	IAmb	11 10 17.0	
	comp=Z,8.6nm,1.4s						
WRAB	**Tennant Creek**	**35.48**	**200**	P	**P**	**11 09 55.3**	**-3.2**
WRA	**Warramunga Arr**	**35.49**	**200**	P	**P**	**11 09 57.2**	**-1.5**
	comp=Z,1.1nm,0.7s,baz=15,slow=9.4,SNR=10						
WRA				pP	**pP**	**11 10 11.2**	**+1.7**
	comp=Z,0.6nm,0.6s,baz=23,slow=9.5,SNR=3.5						
ASAR	**Alice Springs**	**39.11**	**198**	P	**P**	**11 10 28.2**	**-1.1**
	comp=Z,0.4nm,0.5s,baz=16,slow=9.1,SNR=4.2						
CMAR	**Chiang Mai Arr**	**45.60**	**282**	P	**P**	**11 11 22.1**	**-0.1**
	comp=Z,0.5nm,0.4s,baz=90,slow=7.0,SNR=4.2						
CMAR				pP	**pP**	**11 11 35.0**	**+0.8**
	comp=Z,1.2nm,0.8s,baz=91,slow=5.2,SNR=2.1						
CMAR				LR	LR	11 28 51.7	
	comp=Z,28nm,19.0s,baz=192,slow=34						
SONM	**Songino Array**	**47.37**	**324**	P	**P**	**11 11 36.6**	**+0.7**
	comp=Z,0.6nm,0.7s,baz=138,slow=7.2,SNR=4.6						
SONM	**Songino Array**	**47.37**	**324**	P	**P**	**11 11 35.7**	**-0.2**
TLY	**Talaya**	**50.93**	**327**	LR	LR	11 35 16.7	
	comp=Z,17nm,18.0s,baz=292,slow=38						
MKAR	**Makanchi Array**	**62.30**	**316**	P	**P**	**11 13 24.4**	**+0.6**
	comp=Z,0.9nm,0.4s,baz=91,slow=8.8,SNR=23						
MKAR				pP	**pP**	**11 13 37.8**	**+1.6**
	comp=Z,0.8nm,0.4s,baz=92,slow=8.3,SNR=6.4						
MKAR	**Makanchi Array**	**62.30**	**316**	P	**P**	**11 13 24.2**	**+0.4**
ILAR	**Eielson Array**	**67.83**	**25**	P	**P**	**11 13 58.6**	**-0.7**
	comp=Z,0.2nm,0.5s,baz=251,slow=6.0,SNR=5.2						
ILAR				pP	**pP**	**11 14 12.1**	**+0.4**
	comp=Z,1.3nm,0.9s,baz=249,slow=5.6,SNR=6.9						
BVAR	**Borovoye Array**	**70.63**	**322**	P	**P**	**11 14 16.6**	**-0.2**
	comp=Z,0.7nm,0.5s,baz=98,slow=11,SNR=8.3						
BRVK	**Borovoye**	**70.69**	**322**	P	**P**	**11 14 18.0**	**+0.8**
ARU	**Arti**	**77.39**	**325**	pP	pP	11 15 09.1	0.0
	comp=Z,1.2nm,0.5s,baz=76,slow=2.5,SNR=2.4						
YKA	**Yellowknife Ar**	**82.08**	**28**	P	**P**	**11 15 21.8**	**+0.3**
	comp=Z,0.1nm,0.5s,baz=282,slow=4.4,SNR=2.6						
NVAR	**Mina Array Bea**	**85.76**	**52**	P	**P**	**11 15 41.6**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=278,slow=6.3,SNR=3.2						
NVAR				pP	**pP**	**11 15 55.8**	**+2.1**
	comp=Z,0.6nm,0.6s,baz=274,slow=5.1,SNR=5.4						
FINES	**FINESS Array B**	**91.57**	**335**	P	**P**	**11 16 06.6**	**-1.3**
	comp=Z,2.3nm,0.9s,baz=79,slow=4.1,SNR=3.3						
DBIC	**Dimbokro**	**144.86**	**304**	PKP	**PKPab**	**11 22 37.6**	**-0.6**
	comp=Z,2.8nm,0.7s,baz=135,slow=2.9,SNR=2.5						
DBIC				pPKP	**pPKPdf**	**11 22 52.5**	**+0.1**
	comp=Z,6.8nm,0.9s,baz=79,slow=2.1,SNR=3.2						

IDC 03 11:48:09.6±0.8**, 6°.71S×128°.47E, h0^{km}, mb3.7**/1**, mb1 3.8**/3**, mb1mx3.4**/32**, mbtmp3.6**/3**, ML3.9**/2**, Error ellipse: s-maj=31.2km s-min=7.9km az=62.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.34**	**157**	Pn	Pn	11 51 34.0	0.0
	0.6nm,0.3s,baz=346,slow=13,SNR=22						
WRA				Sn	Sn	11 54 00.8	-13
	0.7nm,0.3s,baz=338,slow=22,SNR=6.8						
ASAR	**Alice Springs**	**17.65**	**163**	P	Pn	11 52 17.1	0.0
	0.3nm,0.3s,baz=339,slow=10,SNR=26						
ASAR				S	Sn	11 55 25.1	-9.4
	0.2nm,0.3s,baz=347,slow=26,SNR=5.3						
MKAR	**Makanchi Array**	**67.16**	**327**	P	P	11 59 05.5	+0.1
	0.4nm,0.5s,baz=112,slow=6.4,SNR=6.5						

*IDC **03** 11:48:15.8±0.8, 31°.54S×177°.69W, h0^{km}, mb4.6/6, mb1 4.7/8, mb1mx4.2/30, mbtmp4.5/8, ML3.7/2, MS3.7/9, Ms1 3.7/9, ms1mx3.4/41, Error ellipse: s-maj=28.2km s-min=20.9km az=99.0*

*NEIC **03** 11:48:18.2±2.8, 31°.39S±0°.03×177°.7W±0°.2, h10^{km}±1^{km}, mb5.0/16, Error ellipse: s-maj=22.5km s-min=5.2km az=96.0*

ISC 03 11:48:19.6±0.6**, 31°.71S**±0°.06×**177°.7W**±0°.1**, h26**^{km}**, n87, σ1**^{s}**67**/81**, mb4.8**/13**, MS3.9**/8**, 1C-1D, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	2.44	355	P	Pn	11 48 54.7	-3.1
GLKZ				S	Sn	11 49 23.2	-3.6
RAO	Raoul Island	2.45	355	Pn	Pn	11 48 54.6	-3.3
	153nm,0.3s,baz=252,slow=19,SNR=6.2						
RAO				Sn	Sn	11 49 25.2	-1.8
	309nm,0.3s,baz=89,slow=18,SNR=7.4						
RAO				LR	LR	11 49 49.8	
	comp=Z,282nm,19.9s,baz=140,slow=41						
RAO	Raoul Island	2.45	355		Pn	11 48 54.2	-3.8
RIZ	Raoul Island	2.46	355	P	Pn	11 48 56.7	-1.3
MXZ	Matakaoa Point	6.71	208	P	Pn	11 49 54.1	-2.3
MXZ				S	Sn	11 51 11.8	-0.1
WMGZ	Waiomatatini S	6.89	207	P	Pn	11 49 57.0	-1.9
WMGZ				S	Sn	11 51 17.1	+0.7
PKGZ	Pakihiroa	7.08	208	P	Pn	11 49 58.8	-2.7
PKGZ				S	Sn	11 51 20.1	-1.2
HAZ	Te Kaha	7.09	210	P	Pn	11 49 59.9	-1.8
HAZ				S	Sn	11 51 22.4	+1.0
PUZ	Puketiti	7.17	207	P	Pn	11 50 00.1	-2.6
PUZ				S	Sn	11 51 22.0	-1.3
RUGZ	Raukumara Rang	7.31	210	P	Pn	11 50 02.4	-2.4
RUGZ				S	Sn	11 51 27.1	+0.1
TWGZ	Tauwhareparae	7.37	208	P	Pn	11 50 03.6	-1.9
TWGZ				S	Sn	11 51 27.8	-0.5
KUZ	Kuaotunu	7.42	226	P	Pn	11 50 11.1	+5.0
CNGZ	Carnagh Statio	7.55	205	P	Pn	11 50 04.9	-3.0
CNGZ				S	Sn	11 51 32.8	+0.2
TKGZ	Te Karaka	7.65	207	P	Pn	11 50 07.4	-1.9
TKGZ				S	Sn	11 51 32.9	-2.1
MWZ	Matawai	7.69	209	P	Pn	11 50 07.3	-2.5
MWZ				S	Sn	11 51 35.0	-1.1
URZ	Urewera	7.80	212	Pn	Pn	11 50 09.0	-2.4
	2.2nm,0.3s,baz=275,slow=3.6,SNR=14						
URZ				Sn	Sn	11 51 36.5	-2.4
	6.2nm,0.3s,baz=231,slow=4.2,SNR=10.0						
URZ	Urewera	7.80	212	Pn	Pn	11 50 16.6	+5.1
URZ	Urewera	7.80	212	P	Pn	11 50 09.0	-2.4
URZ				S	Sn	11 51 36.6	-2.4
RAGZ	Rawiri	7.87	209	P	Pn	11 50 10.2	-2.2
RAGZ				S	Sn	11 51 38.9	-1.8
RIGZ	Rimuhau	7.91	207	P	Pn	11 50 10.2	-2.8
PRGZ	Paritu Road	8.06	205	P	Pn	11 50 12.3	-2.6
PRGZ				S	Sn	11 51 42.8	-2.3
OUZ	Omahuta	8.08	242		Pn	11 50 19.9	+4.8
MUGZ	Murupara	8.14	212	P	Pn	11 50 13.7	-2.4
MUGZ				S	Sn	11 51 43.7	-3.4
RAHZ	Arahi	8.36	209	P	Pn	11 50 18.6	-0.5
RAHZ				S	Sn	11 51 50.9	-1.8
BKZ	Black Stump Fm	8.82	211	Pn	Pn	11 50 31.6	+6.1
HIZ	Hauiti	9.13	220	Pn	Pn	11 50 33.0	+3.4
RPZ	Rata Peaks	14.92	213	Pn	Pn	11 51 45.2	-3.4
	1.0nm,0.3s,baz=102,slow=19,SNR=1.3						
DZM	Mont Dzumac	17.08	300	Pn	Pn	11 52 17.0	+0.2
	0.0nm,0.3s,baz=219,slow=9.0,SNR=3.0						
DZM				LR	LR	11 57 57.5	
	comp=Z,718nm,18.2s,baz=148,slow=34						
DZM	Mont Dzumac	17.08	300	*e*LR	LR	11 55 26.6	
	comp=Z,462nm,22.3s						
MLZ	Mavora Lakes	17.55	215	Pn	P	11 52 22.6	-0.6
MLZ				IAmb	IAmb	11 52 31.6	
	comp=Z,58nm,1.5s						
WHZ	Wether Hill Ro	18.01	214	P	P	11 52 27.2	-1.1
RAR	Rarotonga	19.12	61	LR	LR	12 00 40.0	
	comp=Z,72nm,18.3s,baz=246,slow=39						
EIDS	Eidsvold	28.09	275	P	P	11 54 11.7	+2.4
EIDS				IAmb	IAmb	11 54 24.8	
	comp=Z,26nm,1.5s						
MCQ	Macquarie Isla	28.21	209	P	P	11 54 12.2	+2.2
PAE	Paea	29.01	68	*e*T	T	12 24 17.3	
	comp=Z,1.7nm,0.3s						
PPT2	Papeete2	29.06	68	*e*LR	LR	12 01 48.6	
	comp=Z,105nm,25.8s,baz=230						
PPT	Papeete	29.07	68	LR	LR	12 06 36.4	
	comp=Z,71nm,18.1s,baz=226,slow=38						
TOO	Toolangi	30.72	249	P	P	11 54 35.9	+3.4
TOO				IAmb	IAmb	11 54 54.4	
	comp=Z,18nm,1.3s						
VAH	Vaihoa	31.93	66	*e*T	T	12 27 30.4	
	comp=Z,5.0nm,0.3s						
CTAO	Charters Tower	34.29	281	P	P	11 55 06.0	+2.1
CTAO				IAmb	IAmb	11 55 19.7	
	comp=Z,27nm,1.0s						
STKA	Stephens Creek	34.46	259	P	P	11 55 05.2	-0.1
	baz=108,slow=13,SNR=11						
STKA	Stephens Creek	34.46	259	P	P	11 55 07.2	+2.0
TAOE	Nuku Hiva Isla	41.60	65	*e*LR	LR	12 06 59.5	
	comp=Z,266nm,29.0s						
AS31	Alice Springs	43.32	268	P	P	11 56 19.5	-0.1
ASAR	Alice Springs	43.32	268	P	P	11 56 19.2	-0.3
	comp=Z,5.3nm,0.8s,baz=113,slow=8.1,SNR=27						
ASAR	Alice Springs	43.32	268	P	P	11 56 19.7	+0.1
WR0	Warramunga Arr	44.24	273	P	P	11 56 27.3	+0.3
WR0				IAmb	IAmb	11 56 43.0	
	comp=Z,28nm,0.9s						
WB2	Warramunga Arr	44.41	273	P	P	11 56 28.7	+0.3
WRAB	Tennant Creek	44.42	273	P	P	11 56 28.6	+0.1
WRAB				IAmb	IAmb	11 56 44.2	
	comp=Z,36nm,0.8s						
WRA	Warramunga Arr	44.42	273	P	P	11 56 28.6	+0.1
	comp=Z,15nm,0.9s,baz=113,slow=7.7,SNR=23						
WRA	Warramunga Arr	44.42	273	P	P	11 56 28.7	+0.2
WB0	Warramunga Arr	44.45	274	P	P	11 56 28.5	-0.2
BATI	Baumata	58.09	278	LR	LR	12 23 32.9	
	comp=Z,283nm,18.7s,baz=150,slow=36						
QSPA	South Pole Qui	58.41	180	P	P	11 58 14.6	+1.8
	comp=Z,2.8nm,0.8s,baz=1.3,slow=1.2,SNR=16						
QSPA	South Pole Qui	58.41	180	P	P	11 58 14.5	+1.8
QSPA				IAmb	IAmb	11 58 35.6	
	comp=Z,18nm,0.9s						
KAPI	Kappang	64.10	281	LR	LR	12 27 00.8	
	comp=Z,70nm,18.8s,baz=74,slow=36						
LEM	Lembang	73.43	272	LR	LR	12 32 50.3	
	comp=Z,48nm,21.0s,baz=250,slow=36						
SYO	Syowa Base	75.91	193	⇓*e*P	P	12 00 03.2	-0.2
SYO	Syowa Base	75.91	193	⇑*e*PcP	PcP	12 00 16.0	+0.2
SNAA	Sanae	76.85	178	P	P	12 00 20.5	+12
SNAA	Sanae	76.85	178	P	P	12 00 13.6	+4.7
SNAA				IAmb	IAmb	12 00 30.5	
	comp=Z,9.4nm,1.1s						
VNA3	Neumayer Olymp	76.99	176	P	P	12 00 23.3	+14
VNA2	Neumayer--Watz	77.42	177	P	P	12 00 25.2	+13
	baz=182,slow=5.3						
VNA1	Neumayer--Stat	77.65	176	P	P	12 00 27.2	+14
PAGB	Antelope Grade	86.04	43	P	P	12 00 58.0	+0.2
PAGB				IAmb	IAmb	12 01 04.1	
	comp=Z,13nm,0.7s						
PETK	Petropavlovsk-	87.14	345	P	P	12 01 02.5	-0.3
	comp=Z,6.0nm,0.8s,baz=130,slow=6.7,SNR=6.0						
PETK	Petropavlovsk-	87.14	345	P	P	12 01 02.7	-0.1
KLR	Kul'dur	92.29	330	P	P	12 01 28.0	+0.9
	comp=Z,1.3nm,0.8s,baz=13,slow=3.0,SNR=4.6						
NEW	Newport	96.27	36	LR	LR	12 37 56.6	
	comp=Z,54nm,19.8s,baz=232,slow=31						
SEY	Seymchan	97.31	347	P	P	12 01 49.1	-0.5
	comp=Z,1.4nm,0.8s,baz=178,slow=2.3,SNR=4.5						
DLBC	Dease Lake	98.22	23	LR	LR	12 37 34.2	
	comp=Z,97nm,20.9s,baz=146,slow=30						
MKAR	Makanchi Array	118.81	309	PKP	PKPdf	12 07 04.3	-1.0
	comp=Z,0.3nm,0.6s,baz=71,slow=0.7,SNR=2.7						
KURBB	Kurchatov Arra	122.17	313	PKP	PKPdf	12 07 10.8	-0.7
	comp=Z,0.6nm,0.5s,baz=88,slow=2.0,SNR=4.8						
BVAR	Borovoye Array	127.52	315	PKP	PKiKP	12 07 22.1	-0.1
	comp=Z,0.6nm,0.7s,baz=217,slow=7.2,SNR=5.4						
ARCES	ARCESS Array B	139.92	348	PKP	PKPdf	12 07 44.6	+0.1
	comp=Z,1.8nm,0.9s,baz=38,slow=3.4,SNR=0.9						
KBZ	Khabaz	146.04	302	PKPbc	PKPbc	12 07 57.0	0.0
	comp=Z,7.3nm,1.0s,baz=161,slow=5.1,SNR=6.6						
FIA1	FINESS Array S	146.46	339	PKPdf	PKPbc	12 07 57.5	0.0
FINES	FINESS Array B	146.46	339	PKPbc	PKPbc	12 07 57.4	-0.2
	comp=Z,7.4nm,0.7s,baz=68,slow=3.6,SNR=24						
FINES	FINESS Array B	146.46	339	PKPdf	PKPbc	12 07 57.6	+0.1
NB2	NORSAR Subarra	150.08	351	PKP	PKPbc	12 08 07.1	-0.1
	comp=Z,7.9nm,1.2s,baz=16,slow=4.1						
NOA	NORSAR Array B	150.08	351	PKPbc	PKPbc	12 08 04.9	-2.3
	comp=Z,1.4nm,0.9s,baz=17,slow=4.2,SNR=3.5						
HFS	Hagfors	150.57	348	PKPbc	PKiKP	12 08 08.8	-0.3
	comp=Z,3.6nm,0.8s,baz=90,slow=4.9,SNR=4.5						
MMAI	Mount Meron Ar	152.08	282	PKPbc	PKiKP	12 08 14.2	+1.0
	comp=Z,3.3nm,0.4s,baz=46,slow=4.2,SNR=6.6						
AKASG	Malin Array Be	152.49	321	PKPbc	PKPbc	12 08 12.4	-0.7
	comp=Z,0.8nm,0.5s,baz=45,slow=2.9,SNR=4.5						
AKASG	Malin Array Be	152.49	321	PKPbc	PKPbc	12 08 12.8	-0.3
AKASG				PKPab	sPKPbc	12 08 22.0	-0.2
KWP	Kalwaria Pacla	156.46	325		PKPab	12 08 40.4	0.0
CLL	Collm	158.88	341	*e*PKPab	PKPab	12 08 51.0	+0.3

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*IDC **03** 12:03:49.0±3.0, 13°.19S×166°.74E, h45^{km}±25^{km}, mb4.2/15, mb1 4.4/17, mb1mx4.1/41, mbtmp4.5/17, ML4.7/2, MS3.4/12, Ms1 3.5/12, ms1mx3.3/36, Error ellipse: s-maj=22.1km s-min=17.6km az=100.0*

*NOU **03** 12:03:49.6, 12°.96S×166°.42E, h32^{km}, mb4.8, Santa Cruz Islands*

*NEIC **03** 12:03:51.9±1.7, 13°.18S±0°.09×166°.7E±0°.1, h63^{km}±6^{km}, mb4.9/40, Error ellipse: s-maj=19.4km s-min=12.5km az=69.0*

ISC 03 12:03:52.3±1.2**, 13°.14S**±0°.07×**166°.59E**±0°.08**, h67**^{km}±10^{km}**, n95, σ0**^{s}**97**/94**, mb4.8**/35**, 1D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	Saraoutou	2.37	166		Pn	12 04 25.7	-3.2
SANVU	Saraoutou	2.37	166	P	Pn	12 04 27.3	-1.6
DVP	Devils Point	4.81	162	P	Pn	12 05 04.3	+2.1
	380μm,0.6s						
HNR	Honiara	7.49	299	P	Pn	12 05 37.9	-1.0
	24nm,0.3s,baz=177,slow=5.0,SNR=9.3						
HNR				S	Sn	12 07 02.5	+0.1
	18nm,0.3s,baz=52,slow=18,SNR=3.7						
HNR				LR	LR	12 08 34.0	
	comp=Z,320nm,21.4s,baz=104,slow=37						
HNR	Honiara	7.49	299		Pn	12 05 39.1	+0.2
HNR	Honiara	7.49	299	P	Pn	12 05 32.7	-6.2
MARNC	Mare, Loyalty	8.41	171	P	Pn	12 05 52.1	+0.6
YATNC	Mamie plateau,	8.88	178	P	Pn	12 05 57.6	-0.3
DZM	Mont Dzumac	8.88	181	P	Pn	12 05 55.7	-2.4
	3.8nm,0.3s,baz=322,slow=15,SNR=43						
DZM				LR	LR	12 09 07.9	
	comp=Z,321nm,19.5s,baz=1.5,slow=36						
DZM	Mont Dzumac	8.88	181	*e*Pn	Pn	12 06 05.0	+6.9
	41nm,0.3s						
DZM				*e*Sn	Sn	12 07 35.2	-1.5
	99nm,1.2s						
DZM				*e*LR	LR	12 08 04.2	
	comp=Z,468nm,25.1s						
DZM	Mont Dzumac	8.88	181		Pn	12 05 59.4	+1.4
DZM	Mont Dzumac	8.88	181	P	Pn	12 05 57.3	-0.8
NOUC	Port Laguerre	8.92	182	P	Pn	12 05 58.7	+0.3
ONTNC	Ouen Toro	9.12	181	P	Pn	12 06 00.9	-0.3
OUENC	Ouen Island, N	9.23	179	P	Pn	12 06 03.4	+0.7
PINNC	Pines Island,	9.46	175	P	Pn	12 06 07.4	+1.6
MSVF	Nonsavu	11.95	114	P	Pn	12 06 41.7	+1.7
PMG	Port Moresby	19.41	279	LR	LR	12 14 38.2	
	comp=Z,97nm,18.5s,baz=354,slow=33						
LHI	Lord Howe Isla	19.56	200	P	Pn	12 08 17.6	+1.0
URZ	Urewera	26.71	161	LR	LR	12 18 43.0	
	comp=Z,100nm,20.1s,baz=31,slow=34						
STKA	Stephens Creek	29.56	227	P	P	12 09 49.8	-1.0
	baz=51,slow=7.1,SNR=6.9						
STKA				PcP	PcP	12 12 53.5	-1.0
	2.4nm,0.9s,baz=6.2,slow=5.2,SNR=5.7						
STKA	Stephens Creek	29.56	227	P	P	12 09 51.9	+1.1
STKA				PcP	PcP	12 12 54.7	+0.2
TOO	Toolangi	30.77	214	P	P	12 10 02.0	+0.6
TOO				IAmb	IAmb	12 10 12.8	
	comp=Z,58nm,1.9s						
WR0	Warramunga Arr	31.43	253	P	P	12 10 06.7	-0.7
WB0	Warramunga Arr	31.54	254	P	P	12 10 08.2	-0.3
WB0				IAmb	IAmb	12 10 08.8	
	comp=Z,10nm,0.7s						
WB2	Warramunga Arr	31.60	253	P	P	12 10 08.6	-0.4
WB2				IAmb	IAmb	12 10 49.6	
	comp=Z,38nm,1.9s						
WRAB	Tennant Creek	31.60	253	P	P	12 10 08.5	-0.5
WRA	Warramunga Arr	31.61	253	P	P	12 10 07.7	-1.4
	comp=Z,4.0nm,0.6s,baz=86,slow=9.3,SNR=55						
WRA				PcP	PcP	12 12 59.5	-0.6
	comp=Z,0.3nm,0.7s,baz=81,slow=3.1,SNR=4.8						
WRA	Warramunga Arr	31.61	253	P	P	12 10 08.7	-0.4
WRA					PcP	12 13 00.2	+0.1
AS31	Alice Springs	32.66	247	P	P	12 10 17.7	-0.5
ASAR	Alice Springs	32.66	247	P	P	12 10 17.5	-0.8
	comp=Z,6.2nm,0.6s,baz=74,slow=9.6,SNR=136						
ASAR				PcP	PcP	12 13 02.5	-0.4
	comp=Z,1.6nm,0.6s,baz=67,slow=2.4,SNR=11						
ASAR				LR	LR	12 23 24.9	
	comp=Z,260nm,18.2s,baz=65,slow=36						
BBOO	Buckleboo	34.07	230	P	P	12 10 30.7	+0.4
FORT	Forrest	39.57	237	P	P	12 11 17.3	+0.2
FITZ	Fitzroy Crossi	39.69	257	P	P	12 11 18.8	+0.5
PPT2	Papeete2	42.43	102	*e*LR	LR	12 23 53.4	
	comp=Z,187nm,28.5s						
PSA00	Pilbara Seismi	45.26	253	P	P	12 12 04.7	+1.2
PSA00				IAmb	IAmb	12 13 00.4	
	comp=Z,29nm,1.4s						
NWAO	Narrogin (SRO)	49.02	238	P	P	12 12 32.4	-0.1
NWAO				IAmb	IAmb	12 13 29.8	
	comp=Z,24nm,1.4s						
MORW	Morawa	49.38	243	P	P	12 12 35.9	+0.5
MORW				IAmb	IAmb	12 12 36.6	
	comp=Z,10nm,0.8s						
MJAR	Matsushiro Arr	56.20	333	P	P	12 13 24.1	-1.3
	comp=Z,1.5nm,0.7s,baz=170,slow=8.3,SNR=4.9						
MJAR				LR	LR	12 36 09.9	
	comp=Z,19nm,20.1s,baz=65,slow=34						
JNU	Nakatsue	57.25	324	P	P	12 13 33.6	+0.6
	comp=Z,11nm,0.7s,baz=98,slow=1.3,SNR=10						
JNU	Nakatsue	57.25	324	P	P	12 13 33.9	+0.9
JHS	Saijyo	57.44	328	P	P	12 13 35.1	+0.8
KSRS	Korea Array	62.06	326	P	P	12 14 06.3	+0.4
	comp=Z,2.0nm,0.8s,baz=143,slow=7.2,SNR=9.0						
KSAR	Wonju Array Be	62.08	326	P	P	12 14 06.9	+0.9
RPSI	Rantau Prapat	68.95	278	P	P	12 14 50.9	0.0
PSI	Prapat	68.98	278	P	P	12 14 50.9	-0.4
	comp=Z,7.9nm,0.9s,baz=179,slow=2.9,SNR=3.1						
ENH	Enshi	69.86	309	P	P	12 14 57.0	+0.8
ENH				IAmb	IAmb	12 14 57.5	
	comp=Z,18nm,0.9s						
GSI	Gunungsitoli	69.90	276	P	P	12 14 58.0	+1.1
CMAR	Chiang Mai Arr	73.71	294	P	P	12 15 21.5	+2.0
	comp=Z,5.7nm,0.8s,baz=126,slow=4.7,SNR=31						
CMAR				LR	LR	12 49 41.9	
	comp=Z,7.4nm,18.5s,baz=225,slow=37						
CMAR	Chiang Mai Arr	73.71	294	P	P	12 15 20.8	+1.2
CHTO	Chiang Mai	73.83	294	P	P	12 15 21.3	+1.1
SEY	Seymchan	76.63	353	P	P	12 15 35.1	-0.2
	comp=Z,1.3nm,0.5s,baz=162,slow=5.6,SNR=9.7						
QSPA	South Pole Qui	76.88	180	P	P	12 15 36.8	-0.3
SVW2	Sparrevohn	79.84	18	P	P	12 15 52.2	-1.0
SVW2				IAmb	IAmb	12 18 21.7	
	comp=Z,38nm,1.8s						
SONM	Songino Array	80.83	324	P	P	12 15 58.8	-0.1
	comp=Z,1.2nm,0.7s,baz=81,slow=3.3,SNR=9.2						
SONM	Songino Array	80.83	324	P	P	12 15 59.4	+0.4
TTA	Tatalina	81.18	16	P	P	12 16 01.6	+1.2
TTA				IAmb	IAmb	12 16 45.0	
	comp=Z,28nm,1.8s						
SUA	Susitna One	81.61	19		P	12 16 03.8	+1.1
KNK	Knik Glacier	82.32	20	P	P	12 16 07.2	+0.9
KNK				IAmb	IAmb	12 17 42.2	
	comp=Z,22nm,1.4s						
GHO	Glory Hole Cre	82.43	20	P	P	12 16 07.4	+0.4
GHO				IAmb	IAmb	12 17 08.5	
	comp=Z,20nm,1.4s						
SML	Sawmill	82.65	20	P	P	12 16 09.2	+1.1
SML				IAmb	IAmb	12 17 20.3	
	comp=Z,30nm,1.6s						
SCM	Sheep Creek Mo	83.00	20	P	P	12 16 10.7	+0.8
KTH	Kantishna Hill	83.12	18	P	P	12 16 11.2	+0.7
KTH				IAmb	IAmb	12 18 55.2	
	comp=Z,33nm,1.9s						
TRF	Thorofare Moun	83.23	18	P	P	12 16 10.6	-0.6
TRF				IAmb	IAmb	12 19 21.4	
	comp=Z,24nm,1.7s						
BPAW	Bear Paw Mtn.	83.52	17	P	P	12 16 12.1	-0.4
BPAW				IAmb	IAmb	12 18 43.1	
	comp=Z,21nm,1.9s						
N25K	Chitina, Valde	83.78	21	P	P	12 16 14.4	+0.5
N25K				IAmb	IAmb	12 17 36.0	
	comp=Z,26nm,1.8s						
IMAR	Indian Mountai	84.21	15	P	P	12 16 15.4	-0.5
BALM	Baldy	84.22	22	P	P	12 16 16.9	+0.7
TLY	Talaya	84.31	326	P	P	12 16 16.9	+0.1
	comp=Z,1.1nm,0.3s,baz=198,slow=5.9,SNR=3.6						
TLY	Talaya	84.31	326	P	P	12 16 17.4	+0.5
BARN	Barnard Glacie	84.49	23	P	P	12 16 17.0	-0.7
BARN				IAmb	IAmb	12 17 53.4	
	comp=Z,29nm,1.8s						
CTGM	Chitina Glacie	84.55	23	P	P	12 16 18.4	+0.5
YBH	Yreka Blue Hor	84.76	45	LR	LR	12 51 39.6	
	comp=Z,29nm,18.4s,baz=236,slow=34						
I23K	Minto, Yukon-K	84.77	17	P	P	12 16 19.6	+0.9
I23K				IAmb	IAmb	12 18 46.0	
	comp=Z,18nm,1.9s						
CCB	Clear Creek Bu	84.86	18	P	P	12 16 19.2	0.0
CCB				IAmb	IAmb	12 16 22.3	
	comp=Z,22nm,1.9s						
MDM	Murphy Dome	84.96	18	P	P	12 16 20.0	+0.3
IL31		85.23	18	P	P	12 16 20.8	-0.2
ILAR	Eielson Array	85.23	18	P	P	12 16 19.4	-1.7
	comp=Z,1.4nm,0.4s,baz=238,slow=4.6,SNR=46						
ILAR	Eielson Array	85.23	18	P	P	12 16 19.6	-1.4
NVAR	Mina Array Bea	86.74	49	P	P	12 16 28.9	-0.5
	comp=Z,0.9nm,0.8s,baz=236,slow=8.7,SNR=8.8						
LPIG	La Paz	89.12	65	LR	LR	12 45 46.5	
	comp=Z,14nm,20.0s,baz=155,slow=28						
SYO	Syowa Base	90.03	197	⇓*e*P	P	12 16 43.6	-0.6
PDAR	Pinedale Array	94.35	47	LR	LR	12 51 14.6	
	comp=Z,25nm,20.3s,baz=310,slow=30						
MK31	Makanchi Array	95.61	317	P	P	12 17 10.7	+0.4
MK31				IAmb	IAmb	12 17 11.4	
	comp=Z,2.3nm,0.8s						
MKAR	Makanchi Array	95.61	317	P	P	12 17 09.3	-1.0
	comp=Z,2.2nm,0.7s,baz=99,slow=6.4,SNR=24						
MKAR	Makanchi Array	95.61	317	P	P	12 17 10.5	+0.2
ZALV	Zalesovo Beam	95.73	324	P	P	12 17 09.9	-0.8
	comp=Z,1.6nm,0.6s,baz=114,slow=7.0,SNR=6.4						
ZALV				LR	LR	12 59 01.0	
	comp=Z,25nm,20.4s,baz=60,slow=35						
YKA	Yellowknife Ar	96.44	27	P	P	12 17 11.6	-2.1
	comp=Z,0.4nm,0.5s,baz=255,slow=3.7,SNR=14						
NRIK	Noril'sk	98.36	339	LR	LR	13 00 04.6	
	comp=Z,18nm,20.9s,baz=44,slow=34						
ARCES	ARCESS Array B	118.56	345	PKP	PKPdf	12 22 31.1	-0.8
	comp=Z,1.2nm,0.6s,baz=89,slow=2.8,SNR=8.4						
ARCES	ARCESS Array B	118.56	345		PKPdf	12 22 31.6	-0.3
ESDC	Sonseca Array	152.28	344	PKPbc	PKPbc	12 23 39.6	-1.3
	comp=Z,0.5nm,0.6s,baz=3.3,slow=2.9,SNR=1.7						
ESDC				PKPab	PKPab	12 23 51.1	+0.3
	comp=Z,1.1nm,0.7s,baz=16,slow=4.2,SNR=6.2						
ESDC	Sonseca Array	152.28	344		PKPab	12 23 50.6	-0.2
TORD	Torodi Ar. Bea	165.29	272	PKPab	PKPab	12 24 48.6	+0.6
	comp=Z,1.6nm,0.6s,baz=84,slow=5.1,SNR=4.4						
TORD				PKKPbc	PKKPbc	12 29 03.2	
	comp=Z,1.3nm,1.0s,baz=246,slow=2.9,SNR=3.8						
TORD	Torodi Ar. Bea	165.29	272		PKPab	12 24 48.0	0.0

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*ISK **03** 12:08:22.9, 40°.62N×35°.24E, h5^{km}, ML3.5/30*

*DDA **03** 12:08:23.8, 40°.61N×35°.21E, h10^{km}±2^{km}, ML3.3*

ISC 03 12:08:24.3±1.0**, 40°.62N**±0°.02×**35°.25E**±0°.02**, h8**^{km}±9^{km}**, n61, σ1**^{s}**09**/93**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTAK	Corum_Osmancik	0.35	275	*i* P	Pg	12 08 31.4	+0.2
CTAK				*i* S	Sg	12 08 37.0	+1.2
CTAK				IAML		12 08 38.0	
	comp=E,5μm,0.5s						
COAL	Corum-Alaca	0.41	209	*e*P	Pg	12 08 32.2	-0.1
COAL				IAML		12 08 38.0	
	comp=E,6μm,0.5s						
COAL				*i* S	Sg	12 08 38.1	+0.3
AMSY	Amasya-Merkez	0.45	87	*i* P	Pb	12 08 33.4	-1.0
AMSY				*i* S	Sb	12 08 40.8	-0.4
CKRK	Yozgat, Cekere	0.58	160	*i* P	Pg	12 08 34.9	-0.6
CKRK				*i* S	Sb	12 08 43.9	-1.1
CKRK				IAML		12 08 46.0	
	comp=N,1μm,0.3s						
HAVZ	Havza	0.58	38	*i* P	Pg	12 08 35.4	-0.1
HAVZ				*i* S	Sb	12 08 44.4	-0.6
HAVZ				IAML		12 08 45.0	
	comp=E,4μm,0.3s						
CORM	Corum	0.64	227	PG	Pg	12 08 35.9	-0.8
CORM				SG	Sg	12 08 45.8	+0.7
KUPE	Kupecik-Ladik(	0.66	67	PG	Pg	12 08 36.6	-0.5
KVT	Kavak	0.76	52	PG	Pg	12 08 38.6	-0.4
KAGI	orum-Kargı	0.78	312	*i* P	Pg	12 08 38.4	-0.9
KAGI				*i* S	Sg	12 08 49.7	+0.3
TOKA	Tokat	0.98	107	*i* P	Pb	12 08 42.9	-0.7
TOKA				*i* S	Sb	12 08 56.2	-0.5
TOKA				IAML		12 08 58.0	
	comp=Z,592nm,0.8s						
BOYA	Sinop/Boyabat-	1.01	335	*i* P	Pg	12 08 42.9	-0.8
BOYA				*i* S	Sb	12 08 56.9	-0.5
SAMS	Samsun-Alacam	1.03	43	*i* P	Pb	12 08 43.8	-0.5
SAMS				*i* S	Sn	12 08 58.5	-1.0
SAMS				IAML		12 08 59.0	
	comp=E,934nm,0.3s						
DIKM	Dikmen	1.03	0	PG	Pb	12 08 43.9	-0.4
DIKM				SG	Sn	12 08 58.7	-0.9
TOKT	Tokat	1.03	106	PG	Pb	12 08 43.8	-0.6
ERBA	Erbaa	1.15	86	*i* P	Pg	12 08 44.5	-1.8
ERBA				*i* S	Sn	12 09 03.5	+0.9
DELI	KIRIKKALE	1.19	239	*i* P	Pg	12 08 45.9	-1.2
DELI				*i* S	Sg	12 09 02.1	-0.4
DELI				IAML		12 09 06.0	
	comp=E,377nm,0.4s						
CDAG	Cicekdag	1.20	214	*i* P	Pg	12 08 46.3	-1.0
CDAG				*i* S	Sg	12 09 02.8	0.0
CDAG				IAML		12 09 05.0	
	comp=E,1μm,0.5s						
CANT	Cankiri	1.24	270	PN	Pn	12 08 47.4	-0.5
SIRC	Yozgat	1.28	183	*i* P	Pn	12 08 47.3	-1.2
SIRC				*i* S	Sb	12 09 04.7	-0.6
SIRC				IAML		12 09 09.0	
	comp=E,564nm,0.6s						
KMON	Kastamonu	1.34	305	PN	Pg	12 08 49.8	-0.2
SINO	SINOP_Merkez	1.40	359	*i* P	Pg	12 08 50.8	-0.3
SINO				*i* S	Sg	12 09 09.3	+0.1
SINO				IAML		12 09 12.0	
	comp=E,1μm,0.3s						
SNOP	Sinop	1.40	359	PN	Pg	12 08 50.7	-0.4
CUSAR	Sarkisla-SIVAS	1.42	147	*i* P	Pb	12 08 50.6	-0.5
CUSAR				*i* S	Sg	12 09 11.4	+1.4
CUSAR				IAML		12 09 14.0	
	comp=E,322nm,0.4s						
BRTR	Keskin Array B	1.52	235	PN	Pn	12 08 51.8	0.0
RSDY	Resadiye-TOKAT	1.60	97	PN	Pb	12 08 53.8	-0.3
PELI	Kastamonı-Ara	1.62	296	*i* P	Pb	12 08 53.7	-0.6
PELI				*i* S	Sb	12 09 15.2	+0.3
PELI				IAML		12 09 17.0	
	comp=N,498nm,0.5s						
SCER	sogukcermik	1.63	117	*i* P	Pg	12 08 55.0	-0.4
SCER				*i* S	Sg	12 09 16.6	0.0
BZK	Bozkurt	1.64	325	PN	Pb	12 08 54.1	-0.5
GUNE	Kayseri	1.74	170	*i* P	Pg	12 08 56.8	-0.8
GUNE				*i* S	Sg	12 09 22.7	+2.6
CUALT	Altinyayla-SIV	1.77	139	*i* P	Pb	12 08 57.1	0.0
CUALT				*i* S	Sg	12 09 23.1	+1.9
KIRS	Kırehir-Merke	1.80	215	*i* P	Pb	12 08 57.3	-0.2
KIRS				*i* S	Sb	12 09 20.2	0.0
BNN	Bunyan	1.82	165	PN	Pb	12 08 56.7	-1.2
AVNS	Nevsehir-Avano	1.83	190	*i* P	Pb	12 08 58.2	+0.2
AVNS				*i* S	Sg	12 09 22.2	-1.1
BBAL	Bala	1.95	237	*i* P	Pb	12 09 00.6	+0.5
BBAL				*i* S	Sg	12 09 27.0	+0.1
BBAL				IAML		12 09 30.0	
	comp=E,358nm,0.5s						
YAYX	Yaylak	2.01	214	PN	Pn	12 08 59.6	+1.1
LOD	Lodumlu	2.04	250	PN	Pn	12 08 59.8	+1.0
AFSR	Afar-Bala (An	2.04	236	PN	Pn	12 08 59.9	+1.0
KBUK	KARABUK-Merkez	2.08	288	*i* P	Pb	12 09 01.6	-0.6
KBUK				*i* S	Sg	12 09 30.1	-0.9
SERE	Sereflikochisa	2.11	218	PN	Pn	12 09 00.9	+0.9
CMDR	Camlidere-ANKA	2.12	268	*i* P	Pn	12 09 01.1	+1.1
CMDR				*e*S	Sg	12 09 31.3	-1.0
CUKAN	kangal_SIVAS	2.15	127	*i* P	Pb	12 09 02.5	-0.9

CUKAN				*i* S	**Sb**	**12 09 30.5**	**+0.3**
KURC	**Kurucasile-Bar**	**2.25**	**304**	PN	**Pn**	**12 09 02.8**	**+1.1**
AKSY	**AKSARAY - Alti**	**2.28**	**211**	*i* P	**Pb**	**12 09 03.9**	**-1.7**
AKSY				*i* S	**Sb**	**12 09 35.4**	**+1.5**
AKSY				IAML		12 09 42.0	
	comp=E,246nm,0.6s						
KKUL	**Konya-Kulu**	**2.30**	**232**	*i* P	**Pn**	**12 09 03.7**	**+1.2**
KKUL				*i* S	**Sg**	**12 09 37.0**	**-1.2**
KKUL				IAML		12 09 42.0	
	comp=N,189nm,0.7s						
SARI	**SarD1z-Kayseri**	**2.39**	**157**	PN	**Pn**	**12 09 04.8**	**+1.0**
KIBS	**BOLU**	**2.59**	**267**	*i* P	**Pn**	**12 09 07.5**	**+0.9**
KIBS				*i* S	**Sg**	**12 09 50.2**	**+2.6**
NIDE	**Nigde/Merkez-G**	**2.64**	**188**	*i* P	**Pb**	**12 09 11.4**	**-0.4**
NIDE				*i* S	**Sg**	**12 09 47.0**	**-2.0**
NIDE				IAML		12 09 52.0	
	comp=E,198nm,0.6s						
ESPY	**Espiye-Giresun**	**2.66**	**82**	PN	**Pn**	**12 09 08.9**	**+1.5**
DARE	**Darende-Malaty**	**2.68**	**139**	PN	**Pn**	**12 09 09.2**	**+1.5**
SAIM	**ADANA**	**2.72**	**166**	*e*P	**Pn**	**12 09 09.8**	**+1.5**
SAIM				*i* S	**Sg**	**12 09 49.9**	**-1.6**
YUVA	**Yuva-Kibriscik**	**2.72**	**266**	PN	**Pn**	**12 09 09.6**	**+1.3**
AUSIV	**SIVRIHISAR**	**3.08**	**249**	PN	**Pn**	**12 09 14.8**	**+1.6**
MDUB	**Mudurnu**	**3.09**	**269**	PN	**Pn**	**12 09 14.8**	**+1.4**
SVRH	**Sivrihisar-ESK**	**3.09**	**249**	PN	**Pn**	**12 09 14.9**	**+1.6**
KOZT	**Kozan**	**3.17**	**172**	PN	**Pn**	**12 09 16.2**	**+1.9**
LADK	**Ladik-KONYA**	**3.29**	**224**	PN	**Pn**	**12 09 17.7**	**+1.6**
KARA	**Karaisali**	**3.36**	**183**	PN	**Pn**	**12 09 18.7**	**+1.8**
KMRS	**Kahramanmaras**	**3.36**	**157**	PN	**Pn**	**12 09 18.9**	**+1.8**
MALT	**Malatya**	**3.37**	**132**	PN	**Pn**	**12 09 18.9**	**+1.7**
KONT	**Konya--Tatoy**	**3.48**	**221**	PN	**Pn**	**12 09 20.4**	**+1.7**
SRCK	**Saricakaya, Es**	**3.58**	**262**	PN	**Pn**	**12 09 21.5**	**+1.5**

IDC 03 12:15:35.6±1.7**, 8°.95N**×**125°.23E, h0**^{km}**, mb3.5**/3**,**
mb1 3.8/3**, mb1mx3.3**/45**, mbtmp3.5**/3**, Error ellipse:**
s-maj=191.2km s-min=27.7km az=73.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**30.08**	**163**	P	P	12 21 46.9	-0.1
	1.6nm,0.5s,baz=343,slow=10,SNR=14						
ASAR	**Alice Springs**	**33.51**	**165**	P	P	12 22 17.1	0.0
	0.3nm,0.4s,baz=338,slow=7.0,SNR=8.6						
SONM	**Songino Array**	**41.91**	**341**	P	P	12 23 27.9	-0.1
	0.1nm,0.4s,baz=165,slow=9.4,SNR=1.4						

IDC ***03*** *12:37:17.2±1.0, 36°.97N×98°.56W, h0^{km}, mb3.0/2,*
mb1 3.5/8, mb1mx3.4/55, mbtmp3.1/8, ML3.1/6, MS3.1/1,
Ms1 3.1/1, ms1mx2.6/14, Error ellipse: s-maj=13.5km
s-min=12.0km az=129.0

TUL ***03*** *12:37:17.4±1.0, 36°.81N±0°.02×98°.29W±0°.04, h6^{km}±7^{km},*
ML3.5, mb_Lg3.8/124(NEIC), Error ellipse: s-maj=5.4km
s-min=2.7km az=112.0

NEIC ***03*** *12:37:17.8±0.8, 36°.799N±0°.010×98°.28W±0°.03,*
h7^{km}±10^{km}, Error ellipse: s-maj=3.0km s-min=1.5km
az=105.0

ISC 03 12:37:17.8±0.9**, 36°.80N**±0°.03×**98°.26W**±0°.03**, h13**^{km}±8^{km}**,**
n103, σ1^{s}**14**/74**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAN14	**Manchester OK**	**0.28**	**57**		**Pg**	**12 37 23.7**	**0.0**
KAN14				Sg	**Sg**	**12 37 27.9**	**+0.2**
GC02	**Grant County #**	**0.32**	**81**	Pg	**Pg**	**12 37 24.5**	**+0.1**
KAN10	**Anthony SW Sta**	**0.34**	**22**		**Pg**	**12 37 24.6**	**-0.3**
KAN10				Sg	**Sg**	**12 37 29.7**	**+0.1**
CROK	**Carrier**	**0.37**	**144**		**Pg**	**12 37 25.2**	**-0.1**
KAN08	**Anthony NE Sta**	**0.48**	**28**		**Pg**	**12 37 27.1**	**-0.2**
KAN08				Sg	**Sg**	**12 37 33.9**	**+0.2**
KAN01	**Argonia South**	**0.53**	**49**		**Pg**	**12 37 28.2**	**0.0**
KAN01				Sg	**Sg**	**12 37 35.4**	**+0.1**
KAN12	**Harper NE Stat**	**0.53**	**23**		**Pg**	**12 37 28.1**	**-0.2**
KAN12				Sg	**Sg**	**12 37 35.4**	**-0.1**
KAN13	**South Haven SW**	**0.66**	**71**		**Pg**	**12 37 30.6**	**-0.1**
KS21	**Milan North St**	**0.68**	**44**		**Pg**	**12 37 30.9**	**-0.2**
KS21				Sg	**Sg**	**12 37 40.2**	**+0.2**
U32A	**Winter Ranch,**	**0.73**	**235**		**Pg**	**12 37 31.3**	**-0.8**
U32A				Sg	**Sg**	**12 37 41.4**	**-0.4**
U32A	**Winter Ranch,**	**0.73**	**235**	P		12 37 31.2	
	baz=55						
U32A				S		12 37 41.3	
	baz=55						
OK029	**Liberty Lake**	**1.20**	**147**		**Pg**	**12 37 40.0**	**-0.9**
BCOK	**Bluff Creek, N**	**1.26**	**155**		**Pn**	**12 37 40.9**	**-0.1**
BCOK				Sg	**Sb**	**12 37 58.6**	**+1.1**
QUOK	**Quay**	**1.40**	**116**		**Pn**	**12 37 43.8**	**+0.9**
T35A	**Sooner Cattle**	**1.40**	**85**		**Pn**	**12 37 43.7**	**+0.7**
T35B	**Sooner Cattle**	**1.40**	**85**	P		12 37 43.7	
	baz=265,SNR=539						
OK031	**S. Brethren Rd**	**1.42**	**126**		**Pn**	**12 37 43.8**	**+0.5**
OK025	**Westminster Rd**	**1.43**	**148**	Pn	**Pn**	**12 37 43.8**	**+0.4**
OK025				IAmb_Lg		12 38 03.6	
	comp=Z,388nm,1.0s						
OK030	**Cody Creek RV**	**1.48**	**126**	Pn	**Pn**	**12 37 44.7**	**+0.6**
OKCFA	**Oklahoma City**	**1.53**	**155**		**Pn**	**12 37 45.5**	**+0.7**
OKCSW	**OKLAHOMA CITY**	**1.54**	**154**		**Pn**	**12 37 45.8**	**+0.8**
R32A	**Long Quarter,**	**1.66**	**348**		**Pb**	**12 37 47.7**	**-0.5**
R32A	**Long Quarter,**	**1.66**	**348**	P		12 37 47.6	
	baz=168,SNR=218						
R32A				S		12 38 09.7	
	baz=168						
FNO	**Franklin**	**1.69**	**156**		**Pn**	**12 37 48.3**	**+1.3**
WMOK	**Wichita Mounta**	**2.10**	**192**		**Pn**	**12 37 52.9**	**+0.1**
WMOK	**Wichita Mounta**	**2.10**	**192**	P		12 37 53.7	
	baz=11,SNR=77						
TUL1	**Leonard**	**2.18**	**113**		**Pb**	**12 37 56.1**	**-0.9**
TUL1	**Leonard**	**2.18**	**113**	P		12 37 54.7	
	baz=294,SNR=55						
TUL1				S		12 38 26.0	
	baz=294						
CBKS	**Cedar Bluff**	**2.33**	**330**		**Pn**	**12 37 56.4**	**+0.6**
CBKS	**Cedar Bluff**	**2.33**	**330**	P		12 37 56.8	
	baz=150,SNR=90						
CBKS				S		12 38 26.8	
	baz=150						
KSU1	**Kansas State U**	**2.64**	**29**		**Pn**	**12 38 01.1**	**+1.1**
KSU1	**Kansas State U**	**2.64**	**29**	P		12 38 01.5	
	baz=210						
U38A	**Gravette**	**3.13**	**96**		**Pn**	**12 38 08.3**	**+1.5**
U38A	**Gravette**	**3.13**	**96**	P		12 38 08.4	
	baz=278,SNR=38						
X37A	**Clayton**	**3.22**	**132**		**Pn**	**12 38 09.1**	**+1.0**
X37A	**Clayton**	**3.22**	**132**	P		12 38 09.3	
	baz=314						
AMTX	**Amarillo**	**3.38**	**236**		**Pn**	**12 38 10.7**	**+0.4**
AMTX	**Amarillo**	**3.38**	**236**	P		12 38 12.1	
	baz=54,SNR=14						
HHAR	**Hobbs**	**3.51**	**97**		**Pn**	**12 38 13.6**	**+1.5**
HHAR	**Hobbs**	**3.51**	**97**	P		12 38 13.7	
	baz=280						
Z35A	**Perchaven, San**	**3.56**	**166**	Pn	**Pn**	**12 38 12.7**	**-0.1**
Z35A	**Perchaven, San**	**3.56**	**166**	P		12 38 14.2	
	baz=347,SNR=13						
W39A	**Magazine**	**3.96**	**113**	IAmb_Lg		12 39 26.5	
	comp=Z,143nm,0.8s						
W39A	**Magazine**	**3.96**	**113**	P		12 38 19.5	
	baz=295,SNR=6.4						
N33A	**J Bar K, Exete**	**3.98**	**9**	Pn	**Pn**	**12 38 18.1**	**-0.4**
S39A	**Bolivar**	**4.03**	**76**		**Pn**	**12 38 20.5**	**+1.3**
S39A	**Bolivar**	**4.03**	**76**	P		12 38 20.3	
	baz=259,SNR=32						
KSCO	**Kaye Shedlock'**	**4.10**	**304**		**Pn**	**12 38 21.2**	**+1.0**
KSCO	**Kaye Shedlock'**	**4.10**	**304**	P		12 38 21.0	
	baz=122						
ABTX	**Abilene, Hawle**	**4.32**	**196**	Pn	**Pn**	**12 38 25.1**	**+1.9**
U40A	**Yellville**	**4.37**	**94**		**Pn**	**12 38 25.0**	**+1.2**
U40A				IAmb_Lg		12 39 45.5	
	comp=Z,214nm,0.8s						
U40A	**Yellville**	**4.37**	**94**	P		12 38 24.9	
	baz=277,SNR=23						
U40A				P		12 38 24.9	
	baz=277,SNR=23						
MIAR	**Mount Ida**	**4.42**	**119**		**Pn**	**12 38 25.8**	**+1.2**
MIAR				IAmb_Lg		12 39 49.7	
	comp=Z,151nm,0.8s						
MIAR	**Mount Ida**	**4.42**	**119**	P		12 38 25.6	
	baz=302,SNR=19						
Z38A	**Mt. Pleasant**	**4.44**	**142**		**Pn**	**12 38 25.4**	**+0.6**
Z38A				IAmb_Lg		12 39 50.3	
	comp=Z,173nm,1.3s						
Z38A	**Mt. Pleasant**	**4.44**	**142**	P		12 38 25.8	
	baz=324						
N35A	**Tabor**	**4.54**	**26**		**Pn**	**12 38 27.1**	**+1.0**
N35A	**Tabor**	**4.54**	**26**	P		12 38 27.2	
	baz=208						
BGNE	**Belgrade**	**4.60**	**1**		**Pn**	**12 38 28.1**	**+1.0**
BGNE				IAmb_Lg		12 39 54.0	
	comp=Z,173nm,0.8s						
BGNE	**Belgrade**	**4.60**	**1**	P		12 38 27.9	
	baz=181,SNR=14						
MSTX	**Muleshoe**	**4.65**	**234**	Pn	**Pn**	**12 38 28.8**	**+1.0**
MSTX	**Muleshoe**	**4.65**	**234**	P		12 38 28.5	
	baz=51,SNR=8.5						
P38A	**Dawn**	**4.67**	**51**		**Pn**	**12 38 28.5**	**+0.7**
P38A	**Dawn**	**4.67**	**51**	P		12 38 29.1	
	baz=234,SNR=17						
MGMO	**Mountain Grove**	**4.81**	**84**		**Pn**	**12 38 31.5**	**+1.7**
MGMO				IAmb_Lg		12 40 00.2	
	comp=Z,116nm,0.7s						
WHTX	**Lake Whitney,**	**4.85**	**172**	Pn	**Pn**	**12 38 31.2**	**+0.8**
WHTX	**Lake Whitney,**	**4.85**	**172**	P		12 38 31.1	
	baz=352,SNR=6.9						
X40A	**Basin Creek Fa**	**4.98**	**116**		**Pn**	**12 38 34.1**	**+1.8**
X40A				IAmb_Lg		12 40 08.1	
	comp=Z,181nm,1.0s						
X40A	**Basin Creek Fa**	**4.98**	**116**	P		12 38 33.5	
	baz=299,SNR=16						
X40A				P		12 38 33.5	
	baz=299,SNR=16						
R40A	**Maddies Statio**	**4.98**	**71**		**Pn**	**12 38 32.4**	**+0.2**
R40A	**Maddies Statio**	**4.98**	**71**	P		12 38 33.0	
	baz=254,SNR=31						
FCAR	**Ozark Folk Cen**	**5.03**	**99**	Pn	**Pn**	**12 38 35.1**	**+2.2**
OGNE	**Ogallala**	**5.08**	**326**	Pn	**Pn**	**12 38 35.0**	**+1.3**
237A	**Washetta, Mont**	**5.20**	**156**	Pn	**Pn**	**12 38 35.7**	**+0.5**
237A	**Washetta, Mont**	**5.20**	**156**	P		12 38 35.9	
	baz=338,SNR=5.8						
WLAR	**White Oak Lake**	**5.23**	**125**	Pn	**Pn**	**12 38 36.4**	**+0.7**
WLAR				IAmb_Lg		12 40 14.3	
	comp=Z,128nm,0.9s						
N38A	**Joes South For**	**5.59**	**43**	IAmb_Lg		12 40 27.0	
	comp=Z,182nm,0.8s						
P40A	**Paris**	**5.60**	**59**	IAmb_Lg		12 40 28.8	
	comp=Z,219nm,0.9s						
CCM	**Cathedral Cave**	**5.72**	**75**	IAmb_Lg		12 40 33.4	
	comp=Z,110nm,0.8s						
T42A	**Van Buren**	**5.74**	**86**	IAmb_Lg		12 40 32.9	
	comp=Z,118nm,0.8s						
LCAR	**Lake Charles**	**5.77**	**95**	IAmb_Lg		12 40 36.7	
	comp=Z,173nm,1.0s						
K31A	**O'Neill**	**5.83**	**356**	Pn	**Pn**	**12 38 44.7**	**+0.9**
CCAR	**Cane Creek**	**6.03**	**117**	IAmb_Lg		12 40 43.7	
	comp=Z,151nm,0.9s						
435B	**Jarrell**	**6.03**	**174**	IAmb_Lg		12 40 45.4	
	comp=Z,142nm,0.8s						
PBMO	**Poplar Bluff**	**6.28**	**88**	IAmb_Lg		12 40 53.2	
	comp=Z,190nm,0.8s						
FVM	**French Village**	**6.34**	**77**	IAmb_Lg		12 40 48.8	
	comp=Z,122nm,0.9s						
LPAR	**Lepanto**	**6.54**	**98**	IAmb_Lg		12 41 02.2	
	comp=Z,190nm,0.8s						
SLM	**Saint Louis**	**6.62**	**72**	IAmb_Lg		12 41 01.3	
	comp=Z,104nm,0.7s						
ANMO	**Albuquerque**	**6.91**	**257**	Pn	**Pn**	**12 38 58.8**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=120,slow=20,SNR=1.9						
ANMO				Pg	**Pb**	**12 39 20.2**	**+2.4**
	comp=Z,0.7nm,0.3s,baz=82,slow=15,SNR=11						
ANMO				Lg	Lg	12 40 46.9	
	comp=Z,0.8nm,0.3s,baz=42,slow=9.8,SNR=3.6						
143A	**Socs Landing,**	**6.97**	**124**	IAmb_Lg		12 41 07.7	
	comp=Z,86nm,1.1s						
N41A	**Harden Midland**	**6.97**	**54**	IAmb_Lg		12 41 11.4	
	comp=Z,88nm,0.7s						
ECSD	**EROS Data Cent**	**7.04**	**10**	IAmb_Lg		12 41 11.4	
	comp=Z,90nm,1.0s						
P43A	**Skaggs, Pawnee**	**7.44**	**65**	IAmb_Lg		12 41 24.5	
	comp=Z,177nm,0.9s						
OXF	**Oxford**	**7.55**	**105**	IAmb_Lg		12 41 39.1	
	comp=Z,125nm,1.0s						
L40A	**Anamosa**	**7.56**	**44**	IAmb_Lg		12 41 33.0	
	comp=Z,147nm,0.8s						
Y45A	**Yeager Farm, C**	**7.70**	**110**	IAmb_Lg		12 41 43.1	
	comp=Z,118nm,0.9s						
MNTX	**Cornudas Mount**	**7.79**	**231**	Pn	**Pn**	**12 39 10.8**	**-0.1**
MNTX	**Cornudas Mount**	**7.79**	**231**	P		12 39 11.3	
	baz=47,SNR=10						
HDIL	**Hopedale**	**7.95**	**59**		**Pn**	**12 39 13.9**	**+1.0**
I37A	**Lemond, Waseca**	**8.10**	**26**	IAmb_Lg		12 41 56.8	
	comp=Z,69nm,0.8s						
O44A	**Mansfield**	**8.37**	**63**	IAmb_Lg		12 41 53.9	
	comp=Z,121nm,0.9s						
L42A	**Oliver, Polo**	**8.43**	**49**	IAmb_Lg		12 41 58.9	
	comp=Z,84nm,0.8s						
PLAL	**Pickwick Lake**	**8.46**	**99**	IAmb_Lg		12 42 02.4	
	comp=Z,56nm,0.8s						
RSSD	**Black Hills**	**8.53**	**331**		**Pn**	**12 39 21.6**	**+0.5**
JFWS	**Jewell Farm**	**8.67**	**43**	IAmb_Lg		12 42 09.5	
	comp=Z,121nm,0.7s						
TX31	**Lajitas Ar. Si**	**8.72**	**213**		**Pn**	**12 39 23.6**	**-0.2**
TX32	**Lajitas Array**	**8.72**	**213**	Pn	**Pn**	**12 39 23.4**	**-0.3**
TXAR	**Lajitas Array**	**8.72**	**213**	Pn	**Pn**	**12 39 24.0**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=30,slow=11,SNR=22						
TXAR				Lg	Lg	12 41 45.3	
	comp=Z,1.2nm,0.3s,baz=39,slow=14,SNR=1.9						
TXAR	**Lajitas Array**	**8.72**	**213**		**Pn**	**12 39 22.6**	**-1.1**
T47A	**Sharon Grove**	**8.94**	**85**	IAmb_Lg		12 42 22.8	
	comp=Z,105nm,0.9s						
Z47A	**Carrollton**	**9.10**	**110**	IAmb_Lg		12 42 26.5	
	comp=Z,65nm,1.1s						
P46A	**Rosedale**	**9.14**	**69**	IAmb_Lg		12 42 31.2	
	comp=Z,70nm,0.8s						
F33A	**5 Mile Ranch,**	**9.15**	**9**	IAmb_Lg		12 42 20.9	
	comp=Z,50nm,0.9s						
M44A	**Midewin, Midew**	**9.16**	**57**	IAmb_Lg		12 42 21.7	
	comp=Z,58nm,0.8s						
I40A	**Norwalk**	**9.17**	**37**	IAmb_Lg		12 42 23.2	
	comp=Z,94nm,1.1s						
V48A	**Smith Brothers**	**9.29**	**93**	IAmb_Lg		12 42 24.8	
	comp=Z,104nm,1.2s						
X48A	**Hartselle**	**9.42**	**101**	IAmb_Lg		12 42 40.4	
	comp=Z,94nm,1.2s						
SFIN	**Lafayette**	**9.44**	**64**	IAmb_Lg		12 42 26.3	
	comp=Z,82nm,0.9s						
BLO	**Bloomington**	**9.56**	**72**	IAmb_Lg		12 42 41.2	
	comp=Z,109nm,0.8s						
WCI	**Wyandotte Cave**	**9.61**	**78**	IAmb_Lg		12 42 40.9	
	comp=Z,68nm,0.7s						
CLTN	**Cedars of Leba**	**9.63**	**91**	IAmb_Lg		12 42 34.4	
	comp=Z,80nm,1.0s						
PDAR	**Pinedale Array**	**10.54**	**308**	Pn	**Pn**	**12 39 45.6**	**-3.1**
	comp=Z,0.1nm,0.3s,baz=124,slow=15,SNR=3.9						
PDAR				Lg	Lg	12 42 33.6	
	comp=Z,0.7nm,0.3s,baz=108,slow=35,SNR=2.2						
TCRU	**Three Creeks R**	**11.39**	**283**		**Pn**	**12 40 01.1**	**+0.7**
TKL	**Tuckaleechee C**	**11.75**	**91**	Pn	**Pn**	**12 40 06.7**	**+1.6**
	comp=Z,0.3nm,0.3s,baz=337,slow=8.3,SNR=1.9						
TKL				Lg	Lg	12 43 23.3	
	comp=Z,1.4nm,0.3s,baz=237,slow=10,SNR=4.4						
ULM	**Lac du Bonnet**	**13.55**	**7**	Pn	**Pn**	**12 40 25.5**	**-4.1**
	comp=Z,0.2nm,0.3s,baz=159,slow=19,SNR=1.9						
ELK	**Elko**	**13.82**	**292**	LR	LR	12 46 19.7	
	comp=Z,88nm,20.5s,baz=254,slow=40						
NVAR	**Mina Array Bea**	**15.97**	**282**	Pn	**Pn**	**12 40 59.3**	**-3.0**
	comp=Z,0.0nm,0.3s,baz=88,slow=9.4,SNR=1.8						
SADO	**Sadowa**	**16.49**	**55**	Lg	Lg	12 45 49.5	
	comp=Z,0.4nm,0.3s,baz=177,slow=8.5,SNR=3.1						
YKA	**Yellowknife Ar**	**27.64**	**344**	P	**P**	**12 43 05.6**	**+0.9**
	comp=Z,0.1nm,0.6s,baz=143,slow=9.6,SNR=2.3						
ILAR	**Eielson Array**	**39.98**	**330**	P	**P**	**12 44 52.0**	**+0.4**
	comp=Z,0.2nm,0.8s,baz=97,slow=9.0,SNR=1.7						

NEIC ***03*** *12:37:27.8±1.9, 36°.84N±0°.05×98°.40W±0°.04, h5^{km}±2^{km},*
mb_Lg3.8/124, Error ellipse: s-maj=8.5km s-min=5.6km
az=338.0

IDC ***03*** *12:37:29.0±0.9, 36°.90N×98°.53W, h0^{km}, mb3.3/2,*
mb1 3.8/8, mb1mx3.6/54, mbtmp3.5/8, ML3.5/6, Error
ellipse: s-maj=12.6km s-min=11.6km az=141.0

ISC 03 12:37:28.4±0.7**, 36°.84N**±0°.04×**98°.35W**±0°.04**, h10**^{km}**, n142,**
σ1^{s}**14**/95**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAN14	**Manchester OK**	**0.33**	**69**	Pg	**Pg**	**12 37 35.4**	**+0.4**
KAN14				Sg	**Sg**	**12 37 39.8**	**+0.3**
KAN10	**Anthony SW Sta**	**0.35**	**35**		**Pn**	**12 37 41.2**	**+1.6**
KAN10				Sg	**Sb**	**12 37 41.4**	**-1.0**
GC02	**Grant County #**	**0.39**	**88**	Pg	**Pg**	**12 37 36.3**	**+0.1**
GC02				Sg	**Sg**	**12 37 41.2**	**-0.1**
CROK	**Carrier**	**0.44**	**139**	Pg	**Pg**	**12 37 37.1**	**0.0**
KAN12	**Harper NE Stat**	**0.54**	**31**	Pg	**Pg**	**12 37 39.2**	**+0.3**
KAN01	**Argonia South**	**0.57**	**56**	Pg	**Pg**	**12 37 39.6**	**+0.2**
U32A	**Winter Ranch,**	**0.70**	**229**	Pg	**Pg**	**12 37 42.1**	**+0.2**
KS21	**Milan North St**	**0.71**	**50**	Pg	**Pg**	**12 37 42.1**	**0.0**
KAN13	**South Haven SW**	**0.72**	**76**	Pg	**Pg**	**12 37 42.4**	**+0.1**
OK029	**Liberty Lake**	**1.26**	**145**	Pn	**Pn**	**12 37 51.8**	**-0.4**
BCOK	**Bluff Creek, N**	**1.32**	**153**	Pn	**Pn**	**12 37 52.8**	**-0.2**
OK009	**Oakdale Elemen**	**1.46**	**149**		**Pn**	**12 37 54.8**	**-0.1**
T35A	**Sooner Cattle**	**1.47**	**86**	Pn	**Pb**	**12 37 55.6**	**-0.3**
QUOK	**Quay**	**1.48**	**116**	Pn	**Pn**	**12 37 55.2**	**+0.1**
OK025	**Westminster Rd**	**1.50**	**147**	Pn	**Pb**	**12 37 56.0**	**-0.3**
OK025				IAmb_Lg		12 38 19.6	
	comp=Z,884nm,0.7s						
OK031	**S. Brethren Rd**	**1.50**	**126**	Pn	**Pn**	**12 37 55.9**	**+0.4**
OK005	**Luther M Schoo**	**1.50**	**141**		**Pb**	**12 37 56.5**	**0.0**
OK030	**Cody Creek RV**	**1.55**	**125**	Pn	**Pn**	**12 37 56.6**	**+0.4**
OKCFA	**Oklahoma City**	**1.59**	**153**	IAmb_Lg		12 38 21.2	
	comp=Z,407nm,0.8s						
OKCSW	**OKLAHOMA CITY**	**1.61**	**152**	Pn	**Pn**	**12 37 57.4**	**+0.5**
FNO	**Franklin**	**1.75**	**154**	Pn	**Pb**	**12 37 59.9**	**-0.8**
WMOK	**Wichita Mounta**	**2.12**	**190**	IAmb_Lg		12 38 39.7	
	comp=Z,171nm,0.8s						
TUL1	**Leonard**	**2.26**	**113**	Pn	**Pb**	**12 38 07.8**	**-1.5**
X34A	**Smith Ranch, M**	**2.27**	**169**	Pn	**Pb**	**12 38 08.3**	**-1.2**
KSU1	**Kansas State U**	**2.64**	**31**	Pn	**Pn**	**12 38 10.1**	**-1.1**
KSU1				IAmb_Lg		12 38 57.6	
	comp=Z,432nm,0.7s						
U38A	**Gravette**	**3.21**	**96**	Pn	**Pn**	**12 38 17.2**	**-1.7**
X37A	**Clayton**	**3.30**	**132**	Pn	**Pn**	**12 38 18.0**	**-2.2**
X37A				IAmb_Lg		12 39 15.6	
	comp=Z,235nm,0.9s						
AMTX	**Amarillo**	**3.34**	**235**	Pn	**Pn**	**12 38 17.9**	**-2.9**
AMTX				IAmb_Lg		12 39 16.8	
	comp=Z,214nm,0.8s						
HHAR	**Hobbs**	**3.59**	**98**	Pn	**Pn**	**12 38 22.3**	**-1.9**
Z35A	**Perchaven, San**	**3.61**	**165**	Pn	**Pn**	**12 38 21.7**	**-2.7**
Z35A				IAmb_Lg		12 39 25.6	
	comp=Z,55nm,0.7s						
N33A	**J Bar K, Exete**	**3.96**	**10**	IAmb_Lg		12 39 37.3	
	comp=Z,217nm,0.8s						
KSCO	**Kaye Shedlock'**	**4.02**	**304**	Pn	**Pn**	**12 38 31.7**	**+1.5**
KSCO				IAmb_Lg		12 39 40.8	
	comp=Z,160nm,0.8s						
W39A	**Magazine**	**4.04**	**113**	Pn	**Pn**	**12 38 28.9**	**-1.5**
S39A	**Bolivar**	**4.10**	**76**	Pn	**Pn**	**12 38 30.3**	**-0.9**
S39A				IAmb_Lg		12 39 36.8	
	comp=Z,153nm,0.8s						
ABTX	**Abilene, Hawle**	**4.34**	**195**	Pn	**Pn**	**12 38 33.4**	**-1.1**
ABTX				IAmb_Lg		12 39 50.3	
	comp=Z,154nm,0.9s						
U40A	**Yellville**	**4.45**	**95**	Pn	**Pn**	**12 38 36.0**	**+0.1**
U40A				IAmb_Lg		12 39 50.6	
	comp=Z,274nm,0.8s						
MIAR	**Mount Ida**	**4.50**	**119**	Pn	**Pn**	**12 38 36.8**	**+0.1**
Z38A	**Mt. Pleasant**	**4.51**	**141**	Pn	**Pn**	**12 38 37.1**	**+0.3**
N35A	**Tabor**	**4.54**	**27**	Pn	**Pn**	**12 38 38.0**	**+0.8**
BGNE	**Belgrade**	**4.57**	**2**	IAmb_Lg		12 40 05.7	
	comp=Z,294nm,0.8s						
MSTX	**Muleshoe**	**4.61**	**233**	Pn	**Pn**	**12 38 39.0**	**+0.7**
P38A	**Dawn**	**4.70**	**52**	Pn	**Pn**	**12 38 39.5**	**+0.1**
P38A				IAmb_Lg		12 39 58.7	
	comp=Z,169nm,0.7s						
MGMO	**Mountain Grove**	**4.88**	**84**	Pn	**Pn**	**12 38 43.4**	**+1.5**
MGMO				IAmb_Lg		12 40 08.2	
	comp=Z,146nm,0.8s						
WHTX	**Lake Whitney,**	**4.89**	**171**	Pn	**Pn**	**12 38 42.9**	**+0.9**
OGNE	**Ogallala**	**5.01**	**326**	IAmb_Lg		12 40 07.7	
	comp=Z,115nm,0.8s						
R40A	**Maddies Statio**	**5.04**	**71**	Pn	**Pn**	**12 38 45.4**	**+1.3**
X40A	**Basin Creek Fa**	**5.06**	**116**	Pn	**Pn**	**12 38 46.0**	**+1.6**
X40A				IAmb_Lg		12 40 12.3	
	comp=Z,182nm,0.7s						
FCAR	**Ozark Folk Cen**	**5.11**	**99**	IAmb_Lg		12 40 22.7	
	comp=Z,112nm,0.7s						
WHAR	**Wooly Hollow**	**5.14**	**106**	Pn	**Pn**	**12 38 46.6**	**+1.1**
WHAR				IAmb_Lg		12 40 17.1	
	comp=Z,156nm,0.8s						
237A	**Washetta, Mont**	**5.26**	**156**	Pn	**Pn**	**12 38 47.3**	**+0.2**
237A				IAmb_Lg		12 40 26.0	
	comp=Z,117nm,0.8s						
WLAR	**White Oak Lake**	**5.31**	**125**	Pn	**Pn**	**12 38 48.7**	**+0.9**
WLAR				IAmb_Lg		12 40 26.1	
	comp=Z,232nm,0.9s						
N38A	**Joes South For**	**5.62**	**44**	Pn	**Pn**	**12 38 52.8**	**+0.9**
N38A				IAmb_Lg		12 40 31.6	
	comp=Z,225nm,0.9s						
P40A	**Paris**	**5.64**	**60**	Pn	**Pn**	**12 38 52.8**	**+0.5**
SDCO	**Great Sand Dun**	**5.78**	**281**	IAmb_Lg		12 40 41.8	
	comp=Z,57nm,0.9s						
CCM	**Cathedral Cave**	**5.78**	**76**	Pn	**Pn**	**12 38 56.1**	**+1.9**
CCM				IAmb_Lg		12 40 36.9	
	comp=Z,111nm,0.7s						
K31A	**O'Neill**	**5.79**	**357**	IAmb_Lg		12 40 44.9	
	comp=Z,232nm,0.8s						
T42A	**Van Buren**	**5.81**	**86**	Pn	**Pn**	**12 38 56.7**	**+2.0**
T42A				IAmb_Lg		12 40 35.6	
	comp=Z,148nm,0.8s						
LCAR	**Lake Charles**	**5.85**	**95**	Pn	**Pn**	**12 38 57.2**	**+2.1**
435B	**Jarrell**	**6.07**	**174**	Pn	**Pn**	**12 38 59.3**	**+1.0**
CCAR	**Cane Creek**	**6.11**	**117**	Pn	**Pn**	**12 38 58.9**	**+0.2**
HBAR	**Harrisburg**	**6.35**	**99**	Pn	**Pn**	**12 39 01.1**	**-1.0**
PBMO	**Poplar Bluff**	**6.35**	**88**	IAmb_Lg		12 41 02.1	
	comp=Z,214nm,0.8s						
FVM	**French Village**	**6.41**	**77**	Pn	**Pn**	**12 39 02.2**	**-0.6**
FVM				IAmb_Lg		12 41 00.2	
	comp=Z,148nm,0.8s						
ISCO	**Idaho Springs**	**6.43**	**300**	Pn	**Pn**	**12 39 02.6**	**-0.9**
JCT	**Junction City**	**6.46**	**191**	IAmb_Lg		12 40 56.0	
	comp=Z,547nm,1.1s						
GNAR	**Gosnell**	**6.77**	**95**	IAmb_Lg		12 41 03.9	
	comp=Z,307nm,0.8s						
ANMO	**Albuquerque**	**6.85**	**256**	Pn	**Pn**	**12 39 08.4**	**-0.7**
	comp=Z,0.4nm,0.3s,baz=79,slow=17,SNR=8.2						
ANMO				Lg	Lg	12 41 01.0	
	comp=Z,1.4nm,0.3s,baz=180,slow=21,SNR=2.2						
PEBM	**Pemiscott Bayo**	**6.87**	**94**	IAmb_Lg		12 41 16.3	
	comp=Z,413nm,0.9s						
PARMO	**Parma**	**6.90**	**89**	IAmb_Lg		12 41 07.2	
	comp=Z,321nm,0.9s						
N41A	**Harden Midland**	**7.01**	**54**	IAmb_Lg		12 41 27.5	
	comp=Z,119nm,0.8s						
ECSD	**EROS Data Cent**	**7.01**	**10**	IAmb_Lg		12 41 15.8	
	comp=Z,78nm,0.8s						
PENMO	**Penman**	**7.02**	**91**	IAmb_Lg		12 41 12.2	
	comp=Z,225nm,0.8s						
MET	**Memphis--Engin**	**7.03**	**102**	IAmb_Lg		12 41 20.6	
	comp=Z,234nm,0.8s						
143A	**Socs Landing,**	**7.04**	**124**	IAmb_Lg		12 41 32.8	
	comp=Z,104nm,0.8s						
PHWY	**Pilot Hill**	**7.10**	**311**	IAmb_Lg		12 41 17.9	
	comp=Z,105nm,0.9s						
HENM	**Henderson Moun**	**7.12**	**88**	IAmb_Lg		12 41 20.8	
	comp=Z,286nm,0.8s						
SMCO	**Snowmass**	**7.20**	**292**	IAmb_Lg		12 41 23.8	
	comp=Z,32nm,1.0s						
K38A	**Parkersburg**	**7.22**	**35**	IAmb_Lg		12 41 24.3	
	comp=Z,230nm,0.8s						
S44A	**Carbondale**	**7.30**	**81**	IAmb_Lg		12 41 24.5	
	comp=Z,207nm,0.9s						
GLAT	**Glass**	**7.31**	**92**	IAmb_Lg		12 41 30.1	
	comp=Z,312nm,0.9s						
SIUC	**Southern Illin**	**7.33**	**80**	IAmb_Lg		12 41 24.2	
	comp=Z,206nm,0.7s						
HICK	**Hickman**	**7.33**	**90**	IAmb_Lg		12 41 30.5	
	comp=Z,294nm,0.8s						
342A	**Flagon Creek P**	**7.39**	**136**	IAmb_Lg		12 41 23.1	
	comp=Z,30nm,0.9s						
Y22D	**IRIS PASSCAL I**	**7.52**	**251**	IAmb_Lg		12 41 37.3	
	comp=Z,69nm,0.8s						
SUSD	**Miller**	**7.61**	**357**	IAmb_Lg		12 41 46.0	
	comp=Z,162nm,1.2s						
W45A	**Hickory Valley**	**7.61**	**100**	IAmb_Lg		12 41 34.3	
	comp=Z,194nm,0.7s						
OXF	**Oxford**	**7.63**	**105**	Pn	**Pn**	**12 39 20.3**	**+0.6**
Q44A	**Meyer Farm, Va**	**7.66**	**72**	Pn	**Pn**	**12 39 19.0**	**-1.0**
Y45A	**Yeager Farm, C**	**7.78**	**110**	IAmb_Lg		12 41 41.5	
	comp=Z,134nm,0.9s						
735A	**Kenedy**	**7.97**	**177**	IAmb_Lg		12 42 01.5	
	comp=Z,91nm,0.8s						
I37A	**Lemond, Waseca**	**8.10**	**26**	IAmb_Lg		12 42 03.6	
	comp=Z,89nm,0.8s						
MVCO	**Mesa Verde**	**8.13**	**276**	IAmb_Lg		12 41 54.1	

	comp=Z,90nm,1.3s						
PV15	Paradox Valley	8.19	284	IAmb_Lg		12 42 01.1	
	comp=Z,20nm,0.7s						
PV07	Paradox Valley	8.33	284	IAmb_Lg		12 41 59.1	
	comp=Z,20nm,0.9s						
PV02	Paradox Valley	8.37	283	IAmb_Lg		12 42 09.9	
	comp=Z,28nm,1.1s						
O44A	Mansfield	8.42	64	IAmb_Lg		12 41 51.6	
	comp=Z,123nm,0.9s						
PV22	Blue Mesa, Par	8.45	285	IAmb_Lg		12 42 09.1	
	comp=Z,16nm,0.9s						
L42A	Oliver, Polo	8.47	50	Pn	Pn	12 39 30.8	-0.3
PV11	David Mesa, Pa	8.49	283	IAmb_Lg		12 42 09.5	
	comp=Z,60nm,0.9s						
WVT	Waverly	8.50	92	Pn	Pn	12 39 30.6	-1.0
WVT				IAmb_Lg		12 42 11.4	
	comp=Z,60nm,0.9s						
PV16	Nyswonger Mesa	8.52	283	IAmb_Lg		12 42 10.0	
	comp=Z,39nm,0.9s						
K22A	Casper	8.56	315	IAmb_Lg		12 42 21.3	
	comp=Z,143nm,1.3s						
PV19	Morning Glory	8.57	283	IAmb_Lg		12 42 13.5	
	comp=Z,27nm,1.0s						
USIN	University of	8.57	79	IAmb_Lg		12 42 01.9	
	comp=Z,176nm,1.1s						
JFWS	Jewell Farm	8.69	43	Pn	Pn	12 39 34.5	+0.3
TXAR	Lajitas Array	8.71	212	Pn	Pn	12 39 35.2	+0.7
	comp=Z,0.5nm,0.3s,baz=31,slow=11,SNR=8.9						
TXAR				Lg	Lg	12 41 58.5	
	comp=Z,3.2nm,0.3s,baz=34,slow=29,SNR=7.5						
TXAR	Lajitas Array	8.71	212	Pn	Pn	12 39 35.8	+1.2
146A	Union	8.72	116	Pn	Pn	12 39 35.1	+0.5
146A				IAmb_Lg		12 42 24.7	
	comp=Z,81nm,0.9s						
T47A	Sharon Grove	9.01	86	Pn	Pn	12 39 39.8	+1.3
F33A	5 Mile Ranch,	9.13	9	Pn	Pn	12 39 41.0	+0.8
Z47A	Carrollton	9.18	110	Pn	Pn	12 39 41.9	+1.1
Z47A				IAmb_Lg		12 42 31.2	
	comp=Z,58nm,0.9s						
I40A	Norwalk	9.19	38	Pn	Pn	12 39 39.3	-1.7
M44A	Midewin, Midew	9.21	57	Pn	Pn	12 39 39.9	-1.4
M44A				IAmb_Lg		12 42 42.4	
	comp=Z,115nm,1.2s						
SPMN	Marine on St.	9.36	25	IAmb_Lg		12 42 44.1	
	comp=Z,54nm,0.9s						
L44A	Lake County Fo	9.66	53	IAmb_Lg		12 42 35.2	
	comp=Z,149nm,1.0s						
WCI	Wyandotte Cave	9.67	78	Pn	Pn	12 39 48.3	+0.6
K43A	Burlington	9.68	50	Pn	Pn	12 39 47.1	-0.6
F36A	Milaca	9.71	20	IAmb_Lg		12 42 56.6	
	comp=Z,24nm,0.8s						
SRU	San Rafael Swe	9.88	287	IAmb_Lg		12 42 50.9	
	comp=Z,24nm,1.1s						
E28A	Huff	9.89	351	IAmb_Lg		12 42 58.5	
	comp=Z,52nm,0.8s						
U49A	Red Boiling Sp	10.10	88	Pn	Pn	12 39 54.9	+1.4
SWET	Sewanee	10.19	95	Pn	Pn	12 39 56.2	+1.5
BW06	Boulder Array	10.46	308	Pn	Pn	12 39 57.6	-1.1
PDAR	Pinedale Array	10.46	308	Pn	Pn	12 39 58.0	-0.7
	comp=Z,0.2nm,0.3s,baz=116,slow=15,SNR=9.2						
PDAR				Lg	Lg	12 42 53.1	
	comp=Z,0.9nm,0.3s,baz=117,slow=38,SNR=3.1						
P48A	Milroy	10.51	72	Pn	Pn	12 39 57.8	-1.3
H43A	Windswept, Lux	11.07	43	Pn	Pn	12 40 05.9	-0.8
V51A	Loudon	11.34	91	Pn	Pn	12 40 11.6	+1.1
S51A	Beattyville	11.79	82	Pn	Pn	12 40 18.1	+1.5
TKL	Tuckaleechee C	11.83	91	Pn	Pn	12 40 18.4	+1.2
	comp=Z,0.7nm,0.3s,baz=214,slow=9.3,SNR=6.0						
TKL				Lg	Lg	12 43 37.9	
	comp=Z,3.6nm,0.3s,baz=356,slow=23,SNR=8.7						
TKL	Tuckaleechee C	11.83	91	Pn	Pn	12 40 17.8	+0.6
L48A	N Adams	11.91	60	Pn	Pn	12 40 18.6	+0.3
B35A	Bob, Littlefor	12.01	15	Pn	Pn	12 40 18.3	-1.2
Q51A	Peebles	12.05	75	Pn	Pn	12 40 20.1	-0.1
DGMT	Dagmar	12.39	342	Pn	Pn	12 40 24.4	-0.5
ACSO	Alum Creek Sta	12.50	70	Pn	Pn	12 40 26.3	-0.1
U54A	Nelsons Funny	13.27	86	Pn	Pn	12 40 36.6	-0.3
ULM	Lac du Bonnet	13.53	7	Pn	Pn	12 40 38.1	-2.1
	comp=Z,0.5nm,0.3s,baz=179,slow=13,SNR=6.0						
ULM				Lg	Lg	12 44 21.5	
	comp=Z,0.8nm,0.3s,baz=261,slow=16,SNR=1.9						
ULM	Lac du Bonnet	13.53	7		Pn	12 40 38.7	-1.5
NVAR	Mina Array Bea	15.89	282	Pn	Pn	12 41 11.2	-1.2
	comp=Z,0.0nm,0.3s,baz=107,slow=12,SNR=2.0						
SADO	Sadowa	16.53	55	Lg	Lg	12 46 06.2	
	comp=Z,0.5nm,0.3s,baz=351,slow=22,SNR=3.2						
YKA	Yellowknife Ar	27.59	344	P	P	12 43 18.0	+2.5
	comp=Z,0.3nm,0.6s,baz=142,slow=9.7,SNR=5.5						
ILAR	Eielson Array	39.91	330	P	P	12 45 04.3	+2.1
	comp=Z,0.4nm,0.8s,baz=107,slow=7.3,SNR=6.6						

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*OMAN **03** 12:45:50.7±3.7, 26°.70N×53°.81E, h10km±12km, ml3.2/10, Error ellipse: s-maj=27.1km s-min=7.1km az=175.0*

*IDC **03** 12:45:59.9±46.0, 28°.30N×53°.90E, h0km, mb3.8/4, mb1 3.9/4, mb1mx3.3/61, mbtmp3.8/4, Error ellipse: s-maj=888.4km s-min=48.7km az=7.0*

ISC 03 12:45:51.8±1.1**, 26°.80N**±0°.08×**53°.80E**±0°.09**, h23**km**, n19, σ0s.73**/27**, mb3.9**/4**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHME	Shamm	2.23	109	P	Pn	12 46 26.8	-0.5
SHME				S	Sn	12 46 53.9	-0.3
BANOM	Banah	2.41	111	P	Pn	12 46 28.9	-0.9
MASF	Masafi	2.56	123	P	Pn	12 46 31.4	-0.5
MASF				S	Sn	12 47 01.7	-0.6
ASUD	Al Ashush, Dub	2.57	147	P	Pn	12 46 32.9	+0.8
	SNR=8.7						
ASUD				S	Sn	12 47 03.4	+0.8
MDH	Madha	2.70	123	P	Pn	12 46 33.6	-0.3
MDH				S	Sn	12 47 06.0	+0.2
UOSS	Minazif	2.85	130	P	Pn	12 46 35.3	-0.6
ASHO	Ashiyiah	2.93	135	P	Pn	12 46 36.7	-0.3
ASHO				S	Sn	12 47 12.2	+0.6
ARQ	Araqi	4.24	144	P	Pn	12 46 54.6	-0.5
	SNR=13						
UMZA	Um Al Zommool	4.25	163	P	Pn	12 46 55.5	+0.3
HOQ	Hoqain	4.51	134	P	Pn	12 46 58.6	-0.3
BSY	Bisya	5.08	142	P	Pn	12 47 06.3	-0.4
BSY				S	Sn	12 48 05.1	+0.4
SMDO	Samad	5.36	133	P	Pn	12 47 10.4	-0.1
SMDO				S	Sn	12 48 12.1	+0.4
WBK	Wadi Bani Khal	6.28	130	P	Pn	12 47 22.0	-1.1
WBK				S	Sn	12 48 33.9	-0.4
MHTO	MHTO	6.93	146	P	Pn	12 47 31.4	-0.7
	SNR=7.1						
WHFO	Wadi Hawf	8.84	180	P	Pn	12 47 56.4	-1.9
	SNR=8.8						
MKAR	Makanchi Array	30.05	41	P	P	12 52 00.2	+1.0
	0.1nm,0.6s,baz=243,slow=6.3,SNR=1.5						
ZALV	Zalesovo Beam	35.46	32	P	P	12 52 46.4	+0.1
	0.8nm,0.4s,baz=245,slow=8.4,SNR=6.5						
FINES	FINESS Array B	39.33	339	P	P	12 53 18.3	-0.7
	1.8nm,0.8s,baz=139,slow=13,SNR=3.6						
ARCES	ARCESS Array B	45.84	347	P	P	12 54 12.7	+0.9
	5.4nm,1.0s,baz=147,slow=8.5,SNR=4.5						

IDC 03 13:02:53.0±2.7**, 3°.28S×136°.15E, h0**km**, mb3.2**/2**, mb1 3.6**/4**, mb1mx3.3**/36**, mbtmp3.4**/4**, ML3.5**/2**, Error ellipse: s-maj=72.9km s-min=29.0km az=70.0, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	5.43	296	Pn	Pn	13 04 14.8	-0.6
	2.3nm,0.3s,baz=172,slow=22,SNR=26						
SIJI				Sn	Sn	13 05 11.9	-6.8
	0.8nm,0.3s,baz=119,slow=23,SNR=1.6						
WRA	Warramunga Arr	16.66	186	Pn	Pn	13 06 48.9	+0.8
	0.1nm,0.3s,baz=8.2,slow=12,SNR=9.1						
ASAR	Alice Springs	20.39	186	P	P	13 07 31.2	-0.4
	0.7nm,0.6s,baz=6.1,slow=11,SNR=11						
MKAR	Makanchi Array	68.70	323	P	P	13 13 58.8	+0.2
	0.2nm,0.5s,baz=111,slow=8.0,SNR=1.8						

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*DJA **03** 13:09:44.8±0.4, 8°S±5°×12°5E±°, h319km±6km, M4.2/13, mb4.0/9, mB4.8/3, MLv4.3/13, Mw(mB)4.0/3*

*NEIC **03** 13:09:45.8±1.8, 7°.47S±0°.08×124°.47E±0°.08, h319km±9km, mb4.3/20, Error ellipse: s-maj=12.8km s-min=10.3km az=224.0*

*IDC **03** 13:09:45.2±0.9, 7°.39S×124°.48E, h308km±12km, mb3.3/6, mb1 3.6/11, mb1mx3.4/42, mbtmp4.2/11, Error ellipse: s-maj=24.9km s-min=10.0km az=69.0*

ISC 03 13:09:44.4±0.5**, 7°.44S**±0°.05×**124°.50E**±0°.07**, h300**km**, n60, σ1s.55**/66**, mb3.6**/8**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	2.31	186		Pn	13 10 36.4	+2.5
SOEI	Soe	2.31	186	P	Pn	13 10 36.3	+2.4
SOEI				S	S	13 11 15.9	+2.5
MMRI	Maumere	2.54	242		Pn	13 10 37.8	+1.9
MMRI	Maumere	2.54	242	P	Pn	13 10 37.9	+2.1
MMRI				S	S	13 11 18.6	+1.8
BATI	Baumata	2.87	197	P	Pn	13 10 41.5	+2.5
	376nm,0.3s,baz=27,slow=1.4,SNR=347						
BATI				S	S	13 11 24.9	+2.4
	90nm,0.3s,baz=106,slow=17,SNR=6.5						
BATI	Baumata	2.87	197	P	Pn	13 10 41.3	+2.3
BATI				S	S	13 11 24.0	+1.5
EDFI	Ende, Flores	3.07	245	P	Pn	13 10 42.8	+1.7
BSSI	Bau Bau, Buton	4.19	288	P	Pn	13 10 54.8	+2.0
BASI	Baing, Sumba	4.76	234	P	Pn	13 10 59.5	+0.3
BKSI	Bulukumba	4.84	296	P	Pn	13 11 02.6	+2.5
KAPI	Kappang	5.30	297	P	Pn	13 11 07.7	+2.1
	2.8nm,0.3s,baz=124,slow=7.1,SNR=6.0						
BNSI	Bone	5.32	304	P	Pn	13 11 09.1	+3.4
	0.2nm69nm,0.9s						
SPSI	Sidrap Palu	5.84	306	P	Pn	13 11 13.8	+1.9
	0.1nm19nm,0.9s						
TTSI	Tana Toraja	6.39	313	P	Pn	13 11 21.8	+3.3
	0.1nm30nm,0.8s						
SAUI	Saumlaki	6.76	95	Pn	Pn	13 11 24.9	+2.0
SAUI	Saumlaki	6.76	95	P	Pn	13 11 23.5	+0.6
	0.8nm5µm180nm,0.6s						
PLAI	Plampang	6.80	258	P	Pn	13 11 22.5	-1.0
	0.4nm34nm,0.8s						
TWSI	Taliwang, Sumb	7.66	260	P	Pn	13 11 33.5	-0.4
	0.2nm8.6nm,0.8s						
MTN	Manton Dam	8.45	130		Pn	13 11 44.6	+1.0
FAKI	Fak Fak	8.93	60	Pn	Pn	13 11 49.5	+0.1
FAKI	Fak Fak	8.93	60	P	Pn	13 11 49.4	-0.1
	30nm,1.4s						
TOLI2	Tolitoli	9.27	336	Pn	P	13 11 57.1	-1.1
SIJI	Sorong	9.38	46	P	Pn	13 11 55.8	+0.7
	1.8nm,0.3s,baz=181,slow=23,SNR=9.6						
JAGI	Jajag, Banyuwa	10.30	264	Pn	Pn	13 12 04.6	-1.8
FITZ	Fitzroy Crossi	10.65	174	P	Pn	13 12 11.1	+0.5
	3.0nm,0.3s,baz=22,slow=9.7,SNR=24						
FITZ	Fitzroy Crossi	10.65	174	Pn	Pn	13 12 11.2	+0.6
UGM	Wanagama	13.86	267	P	P	13 12 49.4	+0.2
PSA00	Pilbara Seismi	14.75	197	P	P	13 12 59.5	+0.7
WB0	Warramunga Arr	15.56	143	P	P	13 13 08.0	+0.2
WB0				IAmb	IAmb	13 13 12.5	
	comp=Z,8.8nm,0.8s						
WRAB	Tennant Creek	15.66	143	P	P	13 13 09.8	+0.9
WRAB				IAmb	IAmb	13 13 12.1	
	comp=Z,15nm,0.9s						
WRA	Warramunga Arr	15.66	143	P	P	13 13 09.7	+0.8
	comp=Z,2.2nm,0.3s,baz=315,slow=13,SNR=56						
WRA				S	S	13 15 56.1	-2.5
	comp=Z,0.1nm,0.3s,baz=316,slow=23,SNR=6.1						
WRA	Warramunga Arr	15.66	143	P	P	13 13 09.5	+0.6
WB2	Warramunga Arr	15.67	143	P	P	13 13 09.7	+0.8
WB2				IAmb	IAmb	13 13 12.1	
	comp=Z,14nm,0.8s						
SBUM	Sibu	15.71	308	Pn	Pn	13 13 12.7	+1.3
SBUM				IAmb	IAmb	13 13 13.3	
	comp=Z,5.8nm,0.6s						
WR0	Warramunga Arr	15.80	143	P	P	13 13 10.6	+0.3
WR0				IAmb	IAmb	13 13 15.1	
	comp=Z,10nm,0.5s						
CISI	Cisompet, Garu	16.55	269	P	P	13 13 19.0	+0.4
AS31	Alice Springs	18.48	152	P	P	13 13 40.6	+1.2
AS31				IAmb	IAmb	13 13 42.3	
	comp=Z,5.5nm,0.5s						
ASAR	Alice Springs	18.48	152	P	P	13 13 41.1	+1.7
	comp=Z,3.2nm,0.3s,baz=343,slow=15,SNR=153						
ASAR				S	S	13 16 56.9	+2.4
	baz=339,slow=23,SNR=7.2						
ASAR	Alice Springs	18.48	152	P	P	13 13 41.3	+1.9
COEN	Coen	19.45	111	P	P	13 13 49.1	-0.6
COEN				IAmb	IAmb	13 13 49.1	
	comp=Z,13nm,1.4s						
NWAO	Narrogin (SRO)	26.24	194	P	P	13 14 50.3	-2.4
BBOO	Buckleboo	27.43	159	P	P	13 15 03.3	+0.1
BBOO				IAmb	IAmb	13 15 09.8	
	comp=Z,19nm,1.2s						
JMN	Monobe	41.90	12	P	P	13 17 07.0	+0.8
JMN				IAmb	IAmb	13 17 24.8	
	comp=Z,44nm,1.4s						
JHS	Saijyo	42.99	10	P	P	13 17 15.6	+0.7
JWT	Wachi	43.72	13	P	P	13 17 21.3	+0.7
KSRS	Korea Array	44.78	4	P	P	13 17 29.3	+0.4
	comp=Z,0.4nm,0.4s,baz=180,slow=9.5,SNR=4.0						
MJAR	Matsushiro Arr	45.60	15	P	P	13 17 34.5	-0.9
	comp=Z,1.9nm,0.7s,baz=193,slow=8.4,SNR=4.3						
USA0B	Ussuriysk Arra	51.84	7	P	P	13 18 21.4	-1.0
USRK	Ussuriysk Ar.	51.84	7	P	P	13 18 21.6	-0.9
	comp=Z,0.9nm,0.4s,baz=201,slow=7.6,SNR=6.8						
USRK	Ussuriysk Ar.	51.84	7	P	P	13 18 21.4	-1.1
LTZ	Lake Taylor	54.70	138	P	P	13 18 43.6	+0.2
SONM	Songino Array	57.32	346	P	P	13 19 01.7	+0.1
	comp=Z,0.8nm,0.6s,baz=165,slow=9.6,SNR=4.7						
SONM	Songino Array	57.32	346	P	P	13 19 00.7	-1.0
MK31	Makanchi Array	65.72	330	P	P	13 19 56.7	-0.8
MKAR	Makanchi Array	65.72	330	P	P	13 19 57.2	-0.2
	comp=Z,1.1nm,0.5s,baz=126,slow=7.3,SNR=27						
MKAR	Makanchi Array	65.72	330	P	P	13 19 56.9	-0.6
ZALV	Zalesovo Beam	69.68	336	P	P	13 20 20.0	-1.8
	comp=Z,1.0nm,0.6s,baz=121,slow=6.1,SNR=3.6						
ZALV	Zalesovo Beam	69.68	336	P	P	13 20 20.5	-1.3
TIXI	Tiksi	78.98	1	P	P	13 21 13.4	-1.4
ABKAR	Akbulak array	79.52	323	P	P	13 21 17.4	-0.8

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*IDC **03** 13:27:15.6±8.3, 31°.98S×179°.87E, h374km±96km, mb2.7/2, mb1 3.0/3, mb1mx2.8/27, mbtmp3.5/3, Error ellipse: s-maj=108.8km s-min=40.8km az=3.0*

*WEL **03** 13:27:17.1±0.7, 32°S±17°×17°9E±4°1, h328km±25km, M4.2/18, mB4.3/5, ML4.6/18, MLv4.6/18, Mw(mB)3.4/5, Error ellipse: s-maj=0.1km s-min=0.0km az=111.6*

ISC 03 13:27:14.5±1.2**, 31°.84S**±0°.09×**179°.7E**±0°.2**, h350**km**, n52, σ1s.80**/68**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.30	40	P	Pn	13 28 15.9	-0.8
MXZ	Matakaoa Point	5.82	191	P	Pn	13 28 45.7	+2.6
MXZ				S	S	13 29 55.0	0.0
PKGZ	Pakihiroa	6.18	192	P	Pn	13 28 49.0	+1.8
PKGZ				S	S	13 30 03.9	+1.4
PUZ	Puketiti	6.33	190	P	Pn	13 28 52.3	+3.3
PUZ				S	S	13 30 06.6	+1.0
PUZ	Puketiti	6.33	190	P	S	13 30 06.6	+1.0
RUGZ	Raukumara Rang	6.33	194	P	Pn	13 28 51.5	+2.4
RUGZ				S	S	13 30 06.0	+0.2
TWGZ	Tauwhareparae	6.47	192	P	S	13 30 10.1	+1.3
MARZ	Manawahe	6.61	201	P	Pn	13 29 01.6	+9.5
MWZ	Matawai	6.72	195	P	S	13 30 14.7	+0.8
CNGZ	Carnagh Statio	6.74	190	P	Pn	13 28 56.1	+2.4
CNGZ	Carnagh Statio	6.74	190	P	S	13 30 10.0	-4.3
URZ	Urewera	6.74	197	P	Pn	13 28 54.9	+1.3
	1.3nm,0.3s,baz=273,slow=4.0,SNR=24						
URZ				S	S	13 30 15.0	+0.7
	5.6nm,0.3s,baz=263,slow=24,SNR=15						
URZ	Urewera	6.74	197	P	Pn	13 28 55.0	+1.3
URZ				S	S	13 30 14.5	+0.1
TKGZ	Te Karaka	6.75	192	P	Pn	13 28 55.1	+1.3
TKGZ				S	S	13 30 15.4	+0.8
TKGZ	Te Karaka	6.75	192	P	S	13 30 15.6	+1.0
RAGZ	Rawiri	6.89	195	P	Pn	13 28 56.3	+0.8
RAGZ				S	S	13 30 20.1	+2.4
RIGZ	Rimuhau	7.03	192	P	Pn	13 28 58.4	+1.3
RIGZ				S	S	13 30 22.2	+1.7
RIGZ	Rimuhau	7.03	192	P	S	13 30 17.3	-3.3
MUGZ	Murupara	7.04	199	P	Pn	13 28 58.8	+1.7
MUGZ				S	S	13 30 23.1	+2.4
RTZ	Ruatahuna	7.11	197	P	S	13 30 23.6	+1.2
SNGZ	Shannon Statio	7.19	195	P	Pn	13 29 00.7	+1.8
SNGZ				S	S	13 30 24.3	+0.4
SNGZ	Shannon Statio	7.19	195	P	S	13 30 22.4	-1.5
PRGZ	Paritu Road	7.22	191	P	S	13 30 23.4	-1.2
MTHZ	Maungataniwha	7.37	197	P	Pn	13 29 03.1	+2.0
MTHZ				S	S	13 30 26.0	-1.9
MTHZ	Maungataniwha	7.37	197	P	S	13 30 25.5	-2.4
RAHZ	Arahi	7.37	196	P	Pn	13 29 04.1	+3.0
RAHZ	Arahi	7.37	196	P	S	13 30 28.8	+0.9
MHGZ	Mahia Peninsul	7.44	191	P	S	13 30 27.1	-2.2
WHTZ	Whakaora	7.46	203	P	S	13 30 38.6	+8.8
WHHZ	Waihua	7.49	195	P	S	13 30 30.3	-0.1
NMHZ	Naumai	7.61	197	P	Pn	13 29 06.1	+2.2
NMHZ				S	S	13 30 33.1	-0.1
NMHZ	Naumai	7.61	197	P	S	13 30 34.5	+1.3
ARHZ	Aropaoanui	7.72	196	P	S	13 30 34.6	-0.8
BKZ	Black Stump Fm	7.76	199	P	Pn	13 29 06.3	+0.7
BKZ				S	S	13 30 35.1	-1.2
MCHZ	McNeill Hill	7.97	197	P	Pn	13 29 10.3	+2.2
MCHZ				S	S	13 30 40.9	+0.2
MCHZ	McNeill Hill	7.97	197	P	S	13 30 42.4	+1.7
KWHZ	Kaweka Forest	8.02	198	P	P	13 29 11.2	-0.6
KWHZ	Kaweka Forest	8.02	198	P	S	13 30 42.5	+0.5
BHHZ	Black Hill Sta	8.18	200	P	P	13 29 11.9	-1.7
KRHZ	Kereru	8.24	198	P	P	13 29 12.7	-1.5
KRHZ				S	S	13 30 43.9	-2.8
KRHZ	Kereru	8.24	198	P	S	13 30 45.2	-1.5
KAHZ	Kahuranaki	8.26	195	P	P	13 29 13.8	-0.6
KAHZ	Kahuranaki	8.26	195	P	S	13 30 43.7	-3.5
PXZ	Pawanui	8.49	195	P	P	13 29 15.5	-1.5
PXZ				S	S	13 30 48.4	-3.6
PNHZ	Pukenui	8.54	198	P	P	13 29 16.1	-1.5
PNHZ				S	S	13 30 50.6	-2.6
TSZ	Takapari Road	8.74	199	P	S	13 30 55.5	-2.1
PRHZ	Porangahau	8.76	195	P	P	13 29 18.5	-1.5
BFZ	Birch Farm	9.25	196	P	P	13 29 24.5	-0.9
MRZ	Mangatainoka R	9.40	199	P	P	13 29 25.8	-1.3
ASAR	Alice Springs	41.07	270	P	P	13 34 26.0	+0.6
	0.3nm,0.5s,baz=111,slow=7.6,SNR=7.1						
WRA	Warramunga Arr	42.19	275	P	P	13 34 34.5	0.0
	0.3nm,0.4s,baz=112,slow=8.0,SNR=8.8						
FINES	FINESS Array B	145.76	338	PKPbc	PKPdf	13 46 10.2	-0.7
	2.3nm,0.6s,baz=51,slow=3.8,SNR=9.8						

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*NOU **03** 13:48:18.1, 21°.31S×169°.99E, h0km, MLv3.9, Southeast of Loyalty Islands*

*NEIC **03** 13:48:20.9±1.7, 21°.1S±0°.1×169°.84E±0°.09, h10km±1km, mb4.1/3, Error ellipse: s-maj=24.9km s-min=12.3km az=162.0*

*IDC **03** 13:48:23.8±9.2, 20°.55S×169°.44E, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.8/30, mbtmp3.9/4, ML2.9/1, MS3.4/7, Ms1 3.4/7, ms1mx3.0/28, Error ellipse: s-maj=245.6km s-min=44.0km az=134.0*

ISC 03 13:48:20.4±1.2**, 21°.20S**±0°.09×**169°.78E**±0°.09**, h10**km**, n26, σ1s.56**/20**, mb3.9**/4**, MS3.7**/3**, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	1.66	260	P	Pb	13 48 49.6	-1.4
PINNC	Pines Island,	2.58	237	P	Pn	13 49 01.8	-0.5
YATNC	Mamie plateau,	2.82	252	P	Pn	13 49 05.7	+0.1
OUENC	Ouen Island, N	2.99	245	P	Pn	13 49 08.1	+0.2
DZM	Mont Dzumac	3.22	254	Pn	Pn	13 49 13.1	+2.0
	1.2nm,0.3s,baz=109,slow=9.7,SNR=30						
DZM				LR	LR	13 49 51.6	
	comp=Z,82nm,19.4s,baz=188,slow=28						
DZM				Sn	Sb	13 49 54.0	-3.1
	6.0nm,0.3s,baz=266,slow=14,SNR=5.2						
DZM	Mont Dzumac	3.22	254	*e*P	Pn	13 49 12.5	+1.3
	11nm,0.2s						
DZM				*e*Sn	Sn	13 49 50.8	+1.1
	19nm,0.3s						
DZM	Mont Dzumac	3.22	254		Pn	13 49 12.4	+1.2
DZM	Mont Dzumac	3.22	254	P	Pn	13 49 12.8	+1.6
ONTNC	Ouen Toro	3.28	250	P	Pn	13 49 13.6	+1.7
NOUC	Port Laguerre	3.36	254	P	Pn	13 49 14.8	+1.9
DVP	Devils Point	3.77	336	P	Pn	13 49 18.8	+0.3
SANVU	Saraoutou	6.22	336	Pn	Pn	13 49 50.7	-1.6
SANVU	Saraoutou	6.22	336	P	Pn	13 49 54.5	+2.2
MSVF	Nonsavu	8.53	68	Pn	Pn	13 50 23.1	-1.0
RAO	Raoul Island	13.71	128	LR	LR	13 55 28.0	
	comp=Z,130nm,20.4s,baz=290,slow=30						
HNR	Honiara	15.05	320	LR	LR	13 56 48.9	
	comp=Z,137nm,20.4s,baz=98,slow=35						
URZ	Urewera	18.14	161	LR	LR	13 57 33.1	
	comp=Z,82nm,20.4s,baz=31,slow=29						
WRA	Warramunga Arr	33.16	266	P	P	13 54 58.6	+1.3
	1.0nm,0.8s,baz=94,slow=8.3,SNR=4.6						
AS31	Alice Springs	33.20	259	P	P	13 54 57.9	+0.2
ASAR	Alice Springs	33.20	259	P	P	13 55 02.3	+4.6
	1.1nm,0.6s,baz=84,slow=9.4,SNR=6.9						
ASAR				LR	LR	14 08 09.6	
	comp=Z,59nm,20.8s,baz=104,slow=36						
ASAR	Alice Springs	33.20	259	P	P	13 54 58.3	+0.6
FITZ	Fitzroy Crossi	41.59	266	P	P	13 56 12.8	+4.0
	3.3nm,1.0s,baz=111,slow=8.6,SNR=5.3						
FITZ	Fitzroy Crossi	41.59	266	IAmb	IAmb	13 56 41.4	
	comp=Z,7.5nm,1.2s						
PSI	Prapat	73.25	280	LR	LR	14 33 52.5	
	comp=Z,114nm,18.2s,baz=271,slow=38						
CMAR	Chiang Mai Arr	79.77	294	P	P	14 00 30.4	+1.2
	comp=Z,0.2nm,0.3s,baz=104,slow=3.8,SNR=1.6						
TXAR	Lajitas Array	97.25	61	LR	LR	14 36 38.2	
	comp=Z,24nm,21.0s,baz=0.0,slow=30						

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*DJA **03** 13:49:21.0±0.4, 1°S±2°×12°2E±°, h17km±3km, M4.4/18, mb4.5/7, mB4.9/2, MLv4.3/18, Mw(mB)4.2/2*

*NEIC **03** 13:49:21.2±1.7, 0°.81S±0°.07×122°.33E±0°.04, h3km±6km, mb4.0/8, Error ellipse: s-maj=11.9km s-min=3.2km az=209.0*

*IDC **03** 13:49:26.9±2.9, 0°.80S×122°.35E, h50km±34km, mb3.4/6, mb1 3.7/8, mb1mx3.5/36, mbtmp3.8/8, ML4.0/2, MS2.5/2, Ms1 2.5/2, ms1mx2.3/25, Error ellipse: s-maj=23.5km s-min=19.7km az=55.0*

ISC 03 13:49:21.6±1.3**, 0°.66S**±0°.04×**122°.46E**±0°.04**, h11**km±9km**, n40, σ1s.83**/46**, mb3.8**/9**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUWI	Luwuk	0.49	140		Pg	13 49 30.9	-0.4
LUWI				Sg	Sg	13 49 37.5	-0.3
LUWI	Luwuk	0.49	140	P	Pg	13 49 31.0	-0.4
LUWI				S	Sg	13 49 37.9	0.0
APSI	Ampana	0.84	253	P	Pg	13 49 37.4	-0.5
APSI				S	Sb	13 49 49.7	0.0
MRSI	Marisa	1.24	336	P	Pn	13 49 43.2	-1.8
MRSI				S	Sb	13 49 55.8	-5.4
GTOI	Gorontalo	1.40	23	P	Pn	13 49 46.5	-0.7
GTOI				S	Sn	13 50 03.3	-2.4
KMSI	Cibinong	1.96	51	P	Pn	13 49 53.8	-1.0
TOLI2	Tolitoli	2.43	316		Pn	13 50 01.7	+0.3
MPSI	Mapaga	2.74	291	P	Pn	13 50 04.2	-1.4
MPSI				S	Sn	13 50 40.0	+1.2
TTSI	Tana Toraja	3.54	228	P	Pn	13 50 17.0	+0.3
TTSI				S	Sn	13 50 55.1	-3.5
SANI	Sanana	3.79	111	P	Pn	13 50 18.9	-1.2
SANI				S	Sn	13 51 00.6	-4.2
SPSI	Sidrap Palu	4.24	219	P	Pn	13 50 25.4	-0.9
BNSI	Bone	4.39	212	P	Pn	13 50 27.9	-0.5
KAPI	Kappang	5.10	212	P	Pn	13 50 37.8	-0.3
	12nm,0.3s,baz=14,slow=4.8,SNR=26						
KAPI				S	Sn	13 51 35.0	-2.0
	8.0nm,0.3s,baz=68,slow=23,SNR=7.4						
KAPI				LR	LR	13 52 06.2	
	comp=Z,18nm,21.9s,baz=320,slow=32						
TNTI	Ternate	5.11	74	Pn	Pn	13 50 40.4	+2.1
TNTI	Ternate	5.11	74	P	Pn	13 50 36.5	-1.8
	0.2nm44nm,0.9s						
BKSI	Bulukumba	5.18	207	P	Pn	13 50 37.6	-1.6
	0.1nm34nm,0.7s						
NLAI	Namlea	5.30	119	P	Pn	13 50 40.8	-0.1
	0.2nm2µm30nm,0.5s						
BSSI	Bau Bau, Buton	5.79	200	P	Pn	13 50 48.1	+0.5
	0.2nm48nm,0.5s						
MYLDM	Lahad Datu	7.02	326	Pn	Pn	13 51 08.6	+4.2
EDFI	Ende, Flores	8.07	185	P	Pn	13 51 18.6	-0.5
	9.2nm,0.6s						
SIJI	Sorong	8.81	91	P	Pn	13 51 33.2	+4.1
	0.9nm,0.3s,baz=214,slow=15,SNR=1.9						
FAKI	Fak Fak	10.04	103	Pn	Pn	13 51 45.2	-0.8
MTN	Manton Dam	14.85	145	Pn	Pn	13 52 53.6	+1.9
PSA00	Pilbara Seismi	20.94	187	P	P	13 54 02.9	-1.8
WB0	Warramunga Arr	22.30	149	P	P	13 54 19.8	+0.4
WB0				IAmb	IAmb	13 54 41.1	

	comp=Z,4.8nm,0.9s						
WRA	Warramunga Arr	22.42	149	P	P	13 54 20.4	-0.2
	comp=Z,0.3nm,0.7s,baz=337,slow=9.6,SNR=6.4						
WRA	Warramunga Arr	22.42	149	IAmb	IAmb	13 54 20.7	
	comp=Z,0.2nm,0.6s						
WB2	Warramunga Arr	22.43	149	P	P	13 54 20.0	-0.7
WB2				IAmb	IAmb	13 54 33.5	
	comp=Z,9.5nm,1.3s						
WR0	Warramunga Arr	22.54	149	P	P	13 54 21.3	-0.6
WR0				IAmb	IAmb	13 54 35.1	
	comp=Z,7.1nm,1.1s						
AS31	Alice Springs	25.42	155	P	P	13 54 48.7	-1.0
AS31				IAmb	IAmb	13 54 58.9	
	comp=Z,1.0nm,0.6s						
ASAR	Alice Springs	25.43	155	P	P	13 54 49.6	0.0
	comp=Z,1.2nm,0.6s,baz=344,slow=14,SNR=20						
GUMO	Guam	26.34	57	LR	LR	14 03 29.5	
	comp=Z,27nm,21.4s,baz=104,slow=32						
CMAR	Chiang Mai Arr	29.92	311	P	P	13 55 30.2	+0.2
	comp=Z,0.5nm,0.3s,baz=139,slow=5.9,SNR=2.1						
CAN	Canberra	42.43	147	P	P	13 57 18.1	+1.4
SONM	Songino Array	50.29	346	P	P	13 58 20.4	+2.1
	comp=Z,1.1nm,0.8s,baz=166,slow=8.5,SNR=8.1						
SONM	Songino Array	50.29	346	IAmb	IAmb	13 58 25.9	
	comp=Z,1.0nm,0.8s						
MKAR	Makanchi Array	58.89	329	P	P	13 59 21.0	+0.3
	comp=Z,0.4nm,0.6s,baz=124,slow=8.1,SNR=6.8						
MKAR	Makanchi Array	58.89	329	P	P	13 59 20.2	-0.6
MSWZ	Moikau Station	62.46	138	P	P	13 59 45.8	+0.6
ZALV	Zalesovo Beam	62.69	336	P	P	13 59 45.9	-0.5
	comp=Z,0.4nm,0.6s,baz=126,slow=7.3,SNR=2.0						

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*IDC **03** 14:08:42.5±3.1, 36°.21N×142°.21E, h0km, mb3.2/2, mb1 3.3/3, mb1mx3.1/59, mbtmp3.1/3, ML2.4/1, Error ellipse: s-maj=71.5km s-min=34.0km az=41.0*
*JMA **03** 14:08:46.5±0.2, 36°.20N×141°.93E, h72km±5km, M2.8*
ISC 03 14:08:46.8±1.5**, 36°.20N**±0°.09×**141°.94E**±0°.10**, h23**km**, n12, σ1s.12**/16**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	1.00	241	P	Pb	14 09 05.2	-0.3
CHOJ				eS	Sn	14 09 19.7	+0.8
JHYU	Hitachinakayam	1.10	278	P	Pn	14 09 06.5	-0.3
JHYU				eS	Sn	14 09 21.7	+0.4
JHO	Hitachi	1.18	291	P	Pn	14 09 07.0	-0.9
JFK	Kawauchi	1.45	324	P	Pn	14 09 11.3	-0.3
JFT	Otama	1.84	316	P	Pn	14 09 17.6	+0.6
JMM	Marumori	1.90	332	P	Pn	14 09 17.6	-0.2
JAG	Ashikaga	2.02	277	P	Pn	14 09 19.4	0.0
JRY	Ryogami san	2.47	267	P	Pn	14 09 25.4	-0.2
MJAR	Matsushiro Arr	3.03	278	Pn	Pn	14 09 34.4	+1.1
	0.4nm,0.3s,baz=94,slow=9.7,SNR=19						
MJAR				Sn	Sb	14 10 14.2	-2.3
	0.2nm,0.3s,baz=207,slow=18,SNR=4.2						
MAT	Matsushiro	3.03	278	P	Pn	14 09 34.5	+1.2
MAT				S	Sn	14 10 11.3	+2.4
MKAR	Makanchi Array	44.92	303	P	P	14 17 00.2	+0.5
	0.2nm,0.5s,baz=79,slow=9.0,SNR=3.0						
WRA	Warramunga Arr	56.29	189	P	P	14 18 25.1	-0.5
	0.1nm,0.4s,baz=6.5,slow=7.3,SNR=1.0						

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*IDC **03** 14:17:21.7±1.2, 52°.14N×168°.75W, h0km, mb3.8/9, mb1 3.9/10, mb1mx3.6/63, mbtmp3.7/10, ML3.0/1, MS2.6/1, Ms1 2.6/1, ms1mx2.3/28, Error ellipse: s-maj=30.8km s-min=19.8km az=173.0*
*NEIC **03** 14:17:25.0±0.8, 52°.27N±0°.06×168°.69W±0°.08, h10km±2km, ML3.3(AEIC), Error ellipse: s-maj=10.6km s-min=7.2km az=155.0*
*AEIC **03** 14:17:26±0.8, 52°.3N±0°.1×168°.8W±0°.1, h65km±9km, Error ellipse: s-maj=18.5km s-min=7.7km az=160.0*
ISC 03 14:17:23.6±0.9**, 52°.20N**±0°.09×**168°.68W**±0°.08**, h10**km**, n39, σ0s.88**/38**, mb3.8**/8**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIKH	Nikolski High	0.78	352		Pn	14 17 41.2	+0.5
OKSP	Okmok Steeple	1.08	13		Pb	14 17 44.7	+0.3
OKSO	Okmok South	1.20	15		Pb	14 17 45.9	-0.6
OKTU	Okmok Mt. Tuli	1.25	18		Pg	14 17 47.8	+0.2
OKFG	Magazine Ridge	1.30	21		Pn	14 17 47.4	-0.4
OKWE	Okmok W'ng Wal	1.30	12		Pg	14 17 48.7	0.0
MAPS	Pakushin South	1.93	32		Pn	14 17 57.2	+0.8
MGOD	Makushin Gods	1.94	34		Pn	14 17 57.2	+0.6
MSW	Makushin Switc	2.07	33		Pn	14 17 59.2	+0.8
MNAT	Makushin Natee	2.08	35		Pn	14 17 59.0	+0.5
UNV	Unalaska Valle	2.11	38		Pn	14 17 59.0	+0.1
MTBL	Makushin Table	2.15	33		Pn	14 17 59.9	+0.4
ZRO	Akutan Zero	2.50	40		Pn	14 18 05.2	+0.9
AKBBA	Akutan Broad B	2.52	40		Pn	14 18 06.1	+1.5
AKUT	Akutan	2.61	41	Pn	Pn	14 18 06.6	+0.8
ATKA	Atka Island	3.39	272		Pn	14 18 17.6	+1.0
DT1	Dutton Round H	4.79	50		Pn	14 18 37.0	+1.2
ADK	Adak	4.95	270		Pn	14 18 39.2	+1.3
SPIA	Saint Paul Isl	5.07	350	Pn	Pn	14 18 39.6	+0.1
CNBA	Chernabura Isl	6.03	61	Pn	Pn	14 18 54.3	+1.7
CHGN	Chignik	7.28	52	Pn	Pn	14 19 10.8	+0.9
SII	Sitkinak Islan	9.52	57	Pn	Pn	14 19 40.9	+0.3
OHAK	Old Harbor	10.22	54	Pn	Pn	14 19 49.8	-0.4
KDAK	Kodiak Island	10.79	52	Pn	Pn	14 19 57.2	-0.8
	0.9nm,0.3s,baz=217,slow=4.1,SNR=27						
KDAK	Kodiak Island	10.79	52	Pn	Pn	14 19 57.5	-0.5
SEW	Seward	13.28	46	Pn	Pn	14 20 31.5	-0.5
SUA	Susitna One	13.46	39	Pn	Pn	14 20 34.8	+0.2
SKT	Skwentna	13.48	37	Pn	Pn	14 20 34.5	-0.2
ILAR	Eielson Array	16.86	33	Pn	Pn	14 21 17.6	-1.8
	0.1nm,0.3s,baz=237,slow=11,SNR=4.7						
PETK	Petropavlovsk-	20.31	286	P	P	14 21 59.1	-0.4
	2.6nm,0.6s,baz=87,slow=13,SNR=14						
INK	Inuvik	23.26	33	P	P	14 22 29.3	-1.4
	0.5nm,0.4s,baz=237,slow=7.5,SNR=7.1						
YKA	Yellowknife Ar	30.04	49	P	P	14 23 33.0	+0.8
	0.4nm,0.6s,baz=267,slow=6.9,SNR=8.4						
PDAR	Pinedale Array	40.02	79	P	P	14 24 59.6	+0.9
	1.2nm,0.5s,baz=303,slow=3.3,SNR=16						
KSRS	Korea Array	45.84	277	LR	LR	14 44 02.7	
	comp=Z,8.2nm,21.2s,baz=145,slow=35						
TXAR	Lajitas Array	52.33	89	P	P	14 26 35.1	-0.4
	0.4nm,0.5s,baz=302,slow=7.2,SNR=7.8						
ARCES	ARCESS Array B	58.13	354	P	P	14 27 17.9	+1.1
	4.7nm,1.1s,baz=19,slow=5.9,SNR=1.3						
MKAR	Makanchi Array	64.23	314	P	P	14 27 58.6	+0.2
	0.4nm,0.7s,baz=46,slow=5.2,SNR=4.7						
FINES	FINESS Array B	66.10	352	P	P	14 28 10.2	0.0
	1.2nm,0.6s,baz=15,slow=8.1,SNR=5.8						
ASAR	Alice Springs	90.61	231	P	P	14 30 24.4	-1.6
	0.5nm,0.8s,baz=27,slow=4.8,SNR=5.9						

DJA 03 14:21:11.6±0.6**, 3°S**±3°×**10°1E**±°**, h28**km±4km**, M3.8**/11**, mb4.0**/2**, MLv3.7**/11**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSI	Kapahiang	1.68	113	P	Pn	14 21 38.9	-0.4
KSI				S	Sn	14 21 58.2	-1.8
SDSI	Sungai Dareh	2.08	11	P	Pn	14 21 45.6	+0.9
SDSI				S	Sn	14 22 10.7	+1.0
PDSI	Padang	2.14	344	P	Pn	14 21 46.1	+0.5
PDSI				S	Sn	14 22 11.2	-0.1
MNAI	Manna	2.35	126	P	Pn	14 21 48.9	+0.6
MNAI				S	Sn	14 22 14.6	-1.7
LHSI	Lahat	2.62	109	P	Pn	14 21 53.4	+1.4
LHSI				S	Sn	14 22 24.6	+1.8
KLSI		4.05	115	P	Pn	14 22 12.0	+0.2
KLSI				S	Sn	14 23 00.5	+2.2
KASI	Kota Agung	4.27	126	P	Pn	14 22 14.9	+0.1
KASI				S	Sn	14 23 00.6	-3.1
GSI	Gunungsitoli	5.49	321	P	Pn	14 22 32.4	+0.8
	0.1nm15nm,0.6s						
TPTI		7.31	328	P	Pn	14 22 54.7	-1.9

IDC 03 14:25:08.5±2.0**, 1°.71N**×**124°.51E, h0**km**, mb3.2**/3**, mb1 3.4**/3**, mb1mx3.2**/34**, mbtmp3.2**/3**, Error ellipse: s-maj=188.4km s-min=27.9km az=64.0, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.58	156	P	P	14 30 20.5	-0.5
	0.3nm,0.5s,baz=334,slow=11,SNR=8.3						
ASAR	Alice Springs	26.83	161	P	P	14 30 51.5	+0.8
	0.2nm,0.5s,baz=342,slow=7.9,SNR=5.7						
MKAR	Makanchi Array	57.98	327	P	P	14 35 02.6	-0.4
	0.2nm,0.4s,baz=123,slow=5.3,SNR=2.6						

IDC 03 14:33:24.3±33.0**, 19°.23S**×**179°.38W, h650**km±390km**, mb2.9**/3**, mb1 3.2**/3**, mb1mx2.8**/22**, mbtmp3.9**/3**, Error ellipse: s-maj=286.6km s-min=112.5km az=127.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	43.50	261	P	P	14 40 33.1	-0.3
	0.5nm,0.3s,baz=97,slow=7.5,SNR=21						
ASAR	Alice Springs	43.56	256	P	P	14 40 34.1	+0.4
	1.6nm,0.5s,baz=90,slow=7.9,SNR=42						
ILAR	Eielson Array	87.37	13	P	P	14 45 04.0	+0.2
	0.5nm,0.9s,baz=214,slow=5.3,SNR=5.3						
AKASG	Malin Array Be	141.28	331	PKP	PKPdf	14 51 40.0	-2.6
	1.1nm,0.5s,baz=38,slow=4.4,SNR=5.6						

IDC 03 14:51:58.1±10.0**, 34°.78N**×**14°.97E, h0**km**, mb3.8**/2**, mb1 3.8**/3**, mb1mx3.4**/29**, mbtmp3.8**/3**, ML4.0**/1**, MS3.1**/1**, Ms1 3.1**/1**, ms1mx2.3**/41**, Error ellipse: s-maj=187.2km s-min=83.5km az=54.0, Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEST	Kesra	4.70	283	Sn	Sn	14 53 52.1	-14
	0.8nm,0.3s,baz=112,slow=22,SNR=5.9						
AKASG	Malin Array Be	18.99	29	P	P	14 56 20.9	-0.1
	0.5nm,0.3s,baz=222,slow=10,SNR=4.9						
TORD	Torodi Ar. Bea	24.66	212	LR	LR	15 08 09.5	
	comp=Z,40nm,19.7s,baz=145,slow=39						
FINES	FINESS Array B	27.61	12	P	P	14 57 46.9	0.0
	1.8nm,0.8s,baz=188,slow=8.4,SNR=3.3						
MKAR	Makanchi Array	50.90	55	P	P	15 01 00.8	-0.1
	0.4nm,0.6s,baz=269,slow=8.5,SNR=5.4						

WEL 03 14:58:13.3±0.3**, 43°S**±2°×**17°1E**±°**, h5**km**, M3.5**/17**, ML3.6**/17**, MLv3.5**/17**, Error ellipse: s-maj=0.0km s-min=0.0km az=134.4, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WVZ	Waitaha Valley	0.38	269	P	Pg	14 58 21.2	+0.6
WVZ				S	Sg	14 58 26.2	+0.7
MHCZ	Mount Hutt	0.52	153	P	Pg	14 58 23.7	+0.5
MHCZ				S	Sg	14 58 30.9	+1.0
RPZ	Rata Peaks	0.66	193	P	Pg	14 58 26.5	+0.6
RPZ				S	Sb	14 58 36.3	-0.4
GCSZ	Gaunt Creek Bo	0.72	250	P	Pg	14 58 27.3	+0.2
GCSZ				S	Sg	14 58 36.2	-0.1
LTZ	Lake Taylor	0.80	69	P	Pg	14 58 28.4	-0.2
LTZ				S	Sg	14 58 39.0	-0.1
ARCZ	Arundel	0.88	183	P	Pg	14 58 30.5	+0.4
ARCZ				S	Sb	14 58 42.3	-0.7
AMCZ	Amberley	1.03	96	P	Pb	14 58 33.6	0.0
FOZ	Fox Glacier	1.14	246	P	Pg	14 58 35.1	-0.1
FOZ				S	Sn	14 58 51.7	-0.3
MQZ	McQueen's Vall	1.20	122	P	Pg	14 58 35.4	-0.9
GVZ	Greta Valley S	1.31	86	P	Pn	14 58 37.5	-0.8
TMZ	Timaru	1.32	188	P	Pn	14 58 38.0	-0.5
TMZ				S	Sb	14 58 55.8	0.0
DSZ	Denniston Nort	1.39	17	P	Pn	14 58 38.5	-0.8
DSZ				S	Sb	14 58 57.1	-0.6
OKCZ	Okains Bay	1.47	117	P	Pn	14 58 39.7	-0.7
LBZ	Lake Benmore	1.52	210	P	Pn	14 58 41.1	-0.1
THZ	Tophouse	1.79	44	P	Pn	14 58 44.5	-0.4
KHZ	Kahutara	1.81	70	P	Pn	14 58 44.9	-0.1
ODZ	Otahua Downs	2.02	192	P	Pn	14 58 47.4	-0.6
ODZ				S	Sn	14 59 12.6	-1.0
JCZ	Jackson Bay	2.05	240	P	Pn	14 58 48.6	+0.1
BSWZ	Blackbirch Sta	2.37	56	P	Pb	14 58 56.5	+0.1
WKZ	Wanaka	2.38	222	P	Pn	14 58 52.3	-0.7
NNZ	Nelson	2.44	41	P	Pn	14 58 55.0	+1.3
NNZ				S	Sn	14 59 25.5	+1.6
QRZ	Quartz Range	2.44	23	P	Pn	14 58 53.3	-0.4
CMWZ	Cape Campbell	2.56	60	P	Pb	14 59 00.8	+1.2
EAZ	Earnscleugh	2.57	212	P	Pn	14 58 54.3	-1.3
TUWZ	Tuamarina	2.59	52	P	Pn	14 58 56.9	+1.2
MSZ	Milford Sound	2.89	235	P	Pn	14 58 59.9	0.0
TCW	Tory Channel	2.92	51	P	Pb	14 59 03.6	-2.1
DUWZ	D'Urville Isla	3.02	42	P	Pn	14 59 04.1	+2.3
TUZ	Tuapeka	3.11	201	P	Pn	14 59 02.7	-0.2
MLZ	Mavora Lakes	3.21	223	P	Pn	14 59 04.5	+0.1
KIW	Kapiti Island	3.51	52	P	Pn	14 59 09.7	+1.2
WHZ	Wether Hill Ro	3.68	219	P	Pn	14 59 09.3	-1.4
SYZ	Scrubby Hill	3.78	203	P	Pn	14 59 11.6	-0.5
MRZ	Mangatainoka R	4.03	55	P	Pn	14 59 15.0	-0.6
NMEZ	Namu Road	4.16	29	P	Pn	14 59 18.8	+1.5
NBEZ	Newall Road No	4.28	28	P	Pn	14 59 20.2	+1.1
KHEZ	Kahui Hut	4.31	30	P	Pn	14 59 20.7	+1.1
LREZ	Lake Rotokare	4.32	34	P	Pb	14 59 25.2	-4.4
PREZ	Palmer Road	4.32	31	P	Pn	14 59 21.0	+1.4
WAZ	Wanganui	4.34	42	P	Pn	14 59 24.2	+4.2
NEZ	North Egmont	4.36	30	P	Pn	14 59 22.0	+1.7
PKE	Pukeiti	4.39	29	P	Pn	14 59 21.9	+1.3
VRZ	Vera Road	4.75	35	P	Pn	14 59 26.7	+1.2
WNVZ	Wahianoa	4.97	43	P	Pn	14 59 32.3	+3.6
NGZ	Ngauruhoe	5.09	42	P	Pn	14 59 36.0	+5.6
OTVZ	Oturere	5.13	42	P	Pn	14 59 34.0	+3.1
WTVZ	West Tongariro	5.13	41	P	Pn	14 59 36.1	+5.2
ETVZ	East Tongariro	5.18	42	P	Pn	14 59 36.0	+4.5
TMVZ	Te Maari	5.19	42	P	Pb	14 59 38.4	-6.2
HIZ	Hauiti	5.31	32	P	Pn	14 59 33.3	+0.1
RATZ	Rangitukua	5.42	41	P	Pn	14 59 39.8	+5.1
BKZ	Black Stump Fm	5.56	47	P	Pn	14 59 42.2	+5.6
TLZ	Tolley Road	5.75	36	P	Pn	14 59 40.5	+1.2
TOZ	Tahuroa Road	6.24	33	P	Pn	14 59 46.4	+0.4
MKAZ	Moumakai	6.67	28	P	Pn	14 59 53.6	+1.7
WIAZ	Waiheke Island	6.94	27	P	Pn	14 59 57.7	+2.0
WCZ	Waipu Caves	7.51	20	P	Pn	15 00 04.4	+1.0
OUZ	Omahuta	8.05	14	P	Pn	15 00 11.7	+0.9

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*IDC **03** 15:05:06.6±1.6, 52°.51N×168°.74W, h0km, mb3.9/12, mb1 4.1/13, mb1mx3.8/59, mbtmp3.9/13, ML3.1/1, Error ellipse: s-maj=39.4km s-min=17.1km az=168.0*
*AEIC **03** 15:05:08.4±3.0, 52°.22N±0°.05×168°.49W±0°.07, h10km±4km, Error ellipse: s-maj=7.5km s-min=6.0km az=152.0, preliminary*
*NEIC **03** 15:05:11.9±2.1, 52°.38N±0°.08×168°.65W±0°.05, h40km±8km, mb4.3/10, ML3.1/28(AEIC), Error ellipse: s-maj=12.0km s-min=4.1km az=171.0, preliminary*
ISC 03 15:05:12.9±2.4**, 52°.4N**±0°.2×**168°.71W**±0°.08**, h52**km±16km**, n51, σ1s.54**/48**, mb3.9**/12**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIKH	Nikolski High	0.57	351		Pn	15 05 23.9	-1.2
NIKH					Sn	15 05 35.4	+1.4
OKSP	Okmok Steeple	0.89	16		Pn	15 05 28.1	-1.0
OKSP					Sn	15 05 43.8	+2.7
OKSO	Okmok South	1.01	19		Pn	15 05 29.1	-1.7
OKSO					Sn	15 05 46.0	+2.0
OKTU	Okmok Mt. Tuli	1.06	22		Pn	15 05 30.9	-0.6
OKTU					Sn	15 05 46.7	+1.5
OKWR	Okmok West Rim	1.08	16		Pn	15 05 31.1	-0.6
OKWE	Okmok W'ng Wal	1.11	15		Pn	15 05 31.8	-0.2
OKFG	Magazine Ridge	1.12	25		Pn	15 05 30.7	-1.5
OKFG					Sn	15 05 49.3	+2.8
OKRE	Okmok R'deer P	1.17	16		Pn	15 05 32.8	0.0
MAPS	Pakushin South	1.76	36		Pn	15 05 39.6	-1.3
MGOD	Makushin Gods	1.78	38		Pn	15 05 40.0	-1.2
MGOD					Sn	15 06 04.1	+1.4
MREP	Makushin Rep't	1.84	39		Pn	15 05 41.1	-0.9
MSW	Makushin Switc	1.91	37		Pn	15 05 42.2	-0.7
MNAT	Makushin Natee	1.92	39		Pn	15 05 42.3	-0.8
UNV	Unalaska Valle	1.96	42		Pn	15 05 42.5	-1.1
UNV					Sn	15 06 07.9	+0.9
AKMO	Akutan Morgan	2.34	43		Pn	15 05 48.3	-0.5
ZRO	Akutan Zero	2.35	43		Pn	15 05 48.5	-0.6
AKBBA	Akutan Broad B	2.38	43		Pn	15 05 48.9	-0.5
KDAK	Kodiak Island	10.68	53	Pn	Pn	15 07 40.2	-2.8
	1.0nm,0.3s,baz=236,slow=4.4,SNR=66						
SUA	Susitna One	13.31	40		Pn	15 08 18.5	-0.5
SCM	Sheep Creek Mo	14.89	42		Pn	15 08 37.9	-2.1
BPAW	Bear Paw Mtn.	14.91	31	P	P	15 08 43.7	-1.0
KLU	Klutina	15.32	45		Pn	15 08 42.7	-2.9
KLU				IAmb	IAmb	15 08 44.8	
	comp=Z,6.1nm,0.6s						
M24K	Tolsona, Glenn	15.50	42		Pn	15 08 46.2	-1.6
I23K	Minto, Yukon-K	16.14	30	P	P	15 08 57.2	-1.1
TGL	Tana Glacier	16.43	49		sP	15 09 14.7	-4.0
ILAR	Eielson Array	16.70	34	Pn	Pn	15 08 59.1	-3.8
	comp=Z,0.1nm,0.3s,baz=243,slow=10,SNR=4.6						
YAH	Yahtse	16.82	51	P	P	15 09 09.3	+3.1
YAH				IAmb	IAmb	15 09 09.7	
	comp=Z,15nm,0.6s						
CTGM	Chitina Glacie	17.19	49	P	P	15 09 11.0	+0.8
CTGM				IAmb	IAmb	15 09 12.5	
	comp=Z,47nm,1.9s						
HYT	Haines Junctio	18.96	51	P	Pn	15 09 33.0	+2.2
HYT				IAmb	IAmb	15 09 36.0	
	comp=Z,36nm,1.8s						
PETK	Petropavlovsk-	20.24	285	P	P	15 09 42.9	-0.6
	comp=Z,3.4nm,0.4s,baz=89,slow=14,SNR=24						
EPYK	Eagle Plains	21.13	36	P	P	15 09 51.6	-1.4
EPYK				IAmb	IAmb	15 09 53.3	
	comp=Z,12nm,0.7s						
SEY	Seymchan	22.94	313	P	P	15 10 11.4	-0.9
	comp=Z,0.5nm,0.3s,baz=72,slow=19,SNR=5.2						
INK	Inuvik	23.09	33	P	P	15 10 12.9	-0.8
	comp=Z,1.3nm,0.5s,baz=237,slow=8.0,SNR=5.2						
YKA	Yellowknife Ar	29.91	49	P	P	15 11 15.3	-0.1
	comp=Z,0.3nm,0.5s,baz=272,slow=6.9,SNR=12						
VCNR	Virginia City	35.90	92		pP	15 12 16.6	-3.8
PNTR	Pine Nut	36.06	92		pwP	15 12 23.0	-3.1
LRM	Limekiln Ridge	36.59	77		pP	15 12 24.0	-2.2
H11N2	WAKE ISLAND Hy	37.74	219	T	T	15 53 22.3	
	baz=23,slow=74,SNR=3.3						
H11N3	WAKE ISLAND Hy	37.74	219	T	T	15 53 10.3	
	baz=251,slow=74,SNR=7.1						
H11S1	WAKE ISLAND Hy	38.92	219	T	T	15 54 16.0	
	baz=23,slow=76,SNR=14						
H11S2	WAKE ISLAND Hy	38.94	219	T	T	15 54 37.2	
	baz=23,slow=76,SNR=9.2						
H11S3	WAKE ISLAND Hy	38.94	219	T	T	15 54 25.9	
	baz=23,slow=76,SNR=8.4						
PDAR	Pinedale Array	40.00	80	P	P	15 12 43.0	+0.4
	comp=Z,0.7nm,0.6s,baz=304,slow=4.0,SNR=9.1						
TKX	Tecate	42.17	97	P	P	15 13 03.1	+2.9
KSRS	Korea Array	45.80	277	P	P	15 13 30.3	+1.1
	comp=Z,1.7nm,0.9s,baz=60,slow=8.6,SNR=6.7						
SPITS	Spitsbergen Ar	49.64	359	P	P	15 13 58.5	0.0
	comp=Z,17nm,1.0s,baz=22,slow=7.2,SNR=8.2						
MKAR	Makanchi Array	64.07	314	P	P	15 15 41.0	-0.2
	comp=Z,1.0nm,0.7s,baz=49,slow=6.9,SNR=12						
FINES	FINESS Array B	65.89	352	P	P	15 15 53.1	+0.5
	comp=Z,2.1nm,0.5s,baz=17,slow=7.9,SNR=20						
NOA	NORSAR Array B	66.91	0	P	P	15 15 59.7	+0.5
	comp=Z,0.9nm,0.6s,baz=0.6,slow=6.2,SNR=3.7						
AKASG	Malin Array Be	76.16	348	P	P	15 16 54.8	-0.1
	comp=Z,0.6nm,0.5s,baz=6.9,slow=5.7,SNR=2.3						
CMAR	Chiang Mai Arr	77.00	283	P	P	15 17 01.1	+0.8
	comp=Z,0.7nm,0.6s,baz=30,slow=6.1,SNR=5.4						

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*IDC **03** 15:12:50.0±2.4, 13°.74N×124°.26E, h0km, mb3.3/4, mb1 3.5/4, mb1mx3.3/40, mbtmp3.3/4, Error ellipse: s-maj=99.3km s-min=24.7km az=54.0*
*MAN **03** 15:12:56.1, 13°.76N×124°.31E, h22km, mb4.5, ML3.3, MS3.1*
ISC 03 15:12:49.4±2.4**, 14°.06N**±0°.09×**124°.61E**±0°.09**, h5**km±13km**, n10, σ1s.27**/15**, mb3.3**/4**, 2D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCSP	San Jose Seism	1.13	249	eP	Pb	15 13 11.1	-0.3
SCSP				eS	Sn	15 13 28.1	+0.3
CNP	Catarman	1.54	178	eP	Pg	15 13 18.2	-0.8
CNP				eS	Sg	15 13 40.6	+1.6
JCNP	Jose Panganiba	1.86	277	eP	Pb	15 13 23.7	-0.3
JCNP				eS	Sn	15 13 44.6	-1.4
GQP	Guinayangan	2.10	266⇓	eP	Pb	15 13 27.1	-0.9
GQP				eS	Sg	15 13 56.5	-0.5
POLP	Polilio Island	2.67	285	eP	Pb	15 13 36.1	-1.5
POLP				eS	Sg	15 14 17.0	+1.8
LQP	Lukban	2.98	271⇓	eP	Pn	15 13 39.1	+1.6
LQP				eS	Sn	15 13 58.5	-15
CMAR	Chiang Mai Arr	25.01	284	P	P	15 18 13.9	-0.6
	0.3nm,0.3s,baz=103,slow=8.5,SNR=4.2						
WRA	Warramunga Arr	35.12	164	P	P	15 19 43.3	-0.8
	0.3nm,0.8s,baz=342,slow=9.3,SNR=1.4						
ASAR	Alice Springs	38.58	166	P	P	15 20 12.9	-0.6
	0.4nm,0.6s,baz=345,slow=7.4,SNR=19						
MKAR	Makanchi Array	48.05	322	P	P	15 21 31.1	+1.3
	0.1nm,0.4s,baz=119,slow=8.4,SNR=2.1						

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*IDC **03** 15:19:01.5±0.9, 56°.75S×150°.84W, h0km, mb4.1/4, mb1 4.4/4, mb1mx4.2/27, mbtmp4.1/4, MS3.7/6, Ms1 3.7/6, ms1mx3.3/18, Error ellipse: s-maj=42.0km s-min=24.7km az=17.0*
*NEIC **03** 15:19:02.3±1.2, 56°.8S±0°.1×150°.8W±0°.2, h10km±1km, mb4.6/16, Error ellipse: s-maj=22.9km s-min=19.4km az=37.0*
ISC 03 15:19:02.4±0.7**, 56°.7S**±0°.2×**150°.8W**±0°.1**, h10**km**, n59, σ0s.56**/33**, mb4.5**/10**, MS3.6**/7**, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	Vanda	26.43	201	LR	LR	15 32 21.5	
	comp=Z,86nm,18.0s,baz=124,slow=30						
PYZ	Puysegur Point	28.11	274	P	P	15 24 54.0	-0.1
URZ	Urewera	28.12	297	LR	LR	15 34 09.7	
	comp=Z,90nm,18.0s,baz=30,slow=32						
QSPA	South Pole Qui	33.43	180	P	P	15 25 41.3	+0.3
	2.9nm,0.9s,baz=66,slow=1.7,SNR=5.9						
QSPA	South Pole Qui	33.43	180	P	P	15 25 41.3	+0.3
QSPA				IAmb	IAmb	15 26 00.1	
	comp=Z,13nm,1.4s						
MEH	Mehetia	38.83	4	eT	T	16 07 40.1	
	comp=Z,8.1nm,0.2s						
TVO	Taravao	38.89	2	eT	T	16 07 43.9	
	comp=Z,0.7nm,0.3s						
PAE	Paea	39.00	2	eT	T	16 07 52.2	
	comp=Z,0.9nm,0.2s						
PPT2	Papeete2	39.07	2	eLR	LR	15 36 53.9	
	comp=Z,113nm,30.5s						
PPT2	Papeete2	39.07	2	eT	T	16 07 57.3	
	comp=Z,3.1nm,0.4s						
VAH	Vaihoa	41.47	5	eT	T	16 10 53.5	
	comp=Z,51nm,0.3s						
SNAA	Sanae	49.94	167	P	P	15 27 54.3	-1.4
SNAA				IAmb	IAmb	15 28 12.9	
	comp=Z,10nm,1.5s						
STKA	Stephens Creek	51.92	269	P	P	15 28 12.4	+1.3
	baz=139,slow=11,SNR=3.2						
STKA	Stephens Creek	51.92	269	IAmb	IAmb	15 28 14.3	
	comp=Z,1.3nm,1.1s						
SANVU	Saraoutou	52.00	305	P	P	15 28 11.0	-0.7
PLCA	Paso Flores	52.15	108	P	P	15 28 13.7	+1.0
	comp=Z,2.3nm,0.8s,baz=248,slow=6.1,SNR=7.7						
PLCA	Paso Flores	52.15	108	P	P	15 28 13.5	+0.7
H03S2	Juan Fernandez	52.73	96	T	T	16 25 17.7	
	baz=219,slow=74,SNR=70						
H03S1	Juan Fernandez	52.74	96	T	T	16 25 18.8	
	baz=219,slow=74,SNR=62						
H03S3	Juan Fernandez	52.75	96	T	T	16 25 18.2	
	baz=219,slow=74,SNR=82						
H03N3	Juan Fernandez	53.02	96	T	T	16 25 35.6	
	baz=222,slow=72,SNR=135						
H03N2	Juan Fernandez	53.03	96	T	T	16 25 38.7	
	baz=222,slow=72,SNR=250						
H03N1	Juan Fernandez	53.04	96	T	T	16 25 39.8	
	baz=222,slow=72,SNR=125						
MAW	Mawson	53.51	195	P	P	15 28 22.7	+0.4
MAW				IAmb	IAmb	15 28 49.2	
	comp=Z,15nm,1.4s						
FORT	Forrest	60.17	259	P	P	15 29 10.2	+0.1
AS31	Alice Springs	62.56	268	P	P	15 29 26.2	-0.1
ASAR	Alice Springs	62.56	268	P	P	15 29 26.5	+0.1
	comp=Z,2.3nm,0.6s,baz=138,slow=6.7,SNR=47						
ASAR	Alice Springs	62.56	268	P	P	15 29 25.5	-0.8
NWAO	Narrogin (SRO)	64.21	249	P	P	15 29 37.4	+0.2
H01W1	Cape Leeuwin H	64.23	245	T	T	16 39 44.2	
	baz=142,slow=76,SNR=8.5						
H01W2	Cape Leeuwin H	64.23	245	T	T	16 39 41.5	
	baz=142,slow=76,SNR=9.1						
H01W3	Cape Leeuwin H	64.24	245	T	T	16 39 45.5	

	baz=142,slow=76,SNR=8.8						
WB2	Warramunga Arr	65.29	271	P	P	15 29 44.4	+0.1
WB2				IAmb	IAmb	15 29 52.7	
	comp=Z,7.3nm,1.4s						
WRA	Warramunga Arr	65.30	271	P	P	15 29 44.4	0.0
	comp=Z,1.4nm,1.0s,baz=151,slow=5.6,SNR=7.4						
WRA	Warramunga Arr	65.30	271	IAmb	IAmb	15 29 48.0	
	comp=Z,0.1nm,0.9s						
WB0	Warramunga Arr	65.41	271	P	P	15 29 44.7	-0.5
WB0				IAmb	IAmb	15 29 53.6	
	comp=Z,3.7nm,0.9s						
LVC	Limon Verde	66.97	96	P	P	15 29 55.4	-0.1
LVC				IAmb	IAmb	15 29 57.3	
	comp=Z,4.2nm,0.8s						
MNMC	Minye Minye	69.39	94	P	P	15 30 10.7	0.0
PB16	IPOC Station P	70.09	93	P	P	15 30 14.7	-0.7
PB16				IAmb	IAmb	15 30 20.3	
	comp=Z,4.3nm,1.0s						
FITZ	Fitzroy Crossi	71.58	265	LR	LR	15 59 51.5	
	comp=Z,34nm,18.1s,baz=208,slow=34						
GUMO	Guam	87.88	299	LR	LR	16 10 15.9	
	comp=Z,107nm,18.3s,baz=88,slow=35						
BOSA	Boshof	94.94	176	LR	LR	16 12 24.9	
	comp=Z,34nm,18.2s,baz=174,slow=34						
NVAR	Mina Array Bea	98.68	25	LR	LR	16 07 01.4	
	comp=Z,24nm,19.1s,baz=269,slow=29						
H10N3	ASCENSION HYDR	106.35	134	T	T	17 32 36.3	
	baz=203,slow=75,SNR=15						
H10N1	ASCENSION HYDR	106.35	134	T	T	17 32 40.3	
	baz=203,slow=75,SNR=6.6						
H10N2	ASCENSION HYDR	106.37	134	T	T	17 32 39.1	
	baz=203,slow=75,SNR=20						
ILAR	Eielson Array	121.20	2	PKP	PKiKP	15 37 54.5	+0.6
	comp=Z,1.8nm,0.9s,baz=240,slow=2.1,SNR=15						
ILAR	Eielson Array	121.20	2		PKiKP	15 37 54.2	+0.3
RAYN	Ar Rayn	144.78	206		PKPab	15 38 37.5	-0.6
MK31	Makanchi Array	146.51	276		PKPab	15 38 43.4	-0.5
MKAR	Makanchi Array	146.51	276	PKPbc	PKPbc	15 38 43.3	+0.5
	comp=Z,6.8nm,0.8s,baz=117,slow=4.5,SNR=63						
MKAR	Makanchi Array	146.51	276	PKPdf	PKPbc	15 38 42.6	-0.3
ZAA0	Zalesovo Array	149.00	289		PKPbc	15 38 49.3	0.0
ZALV	Zalesovo Beam	149.00	289	PKPbc	PKPbc	15 38 49.1	-0.2
	comp=Z,2.9nm,0.7s,baz=128,slow=4.1,SNR=16						
ZALV	Zalesovo Beam	149.00	289		PKPbc	15 38 48.8	-0.5
KK31	Karatay Array	150.64	260		PKPbc	15 38 53.3	-0.4
KKAR	Karatay Array	150.64	260		PKPbc	15 38 53.4	-0.3
KURK	Kurchatov	150.72	279		PKPbc	15 38 53.7	+0.2
NRIK	Noril'sk	151.98	320	PKPbc	PKiKP	15 38 56.5	+0.2
	comp=Z,1.9nm,0.4s,baz=120,slow=5.9,SNR=4.6						

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*NEIC **03** 15:30:52.1±1.5, 56°.46N±0°.05×170°.0W±0°.1, h10km±2km, mb3.7/4, ML3.4(AEIC), Error ellipse: s-maj=13.0km s-min=8.0km az=244.0*

*AEIC **03** 15:30:54±2.4, 56°.43N±0°.06×170°.03W±0°.10, h31km±6km, Error ellipse: s-maj=8.2km s-min=8.0km az=203.0*

*IDC **03** 15:30:55.3±4.0, 56°.25N×169°.54W, h0km, mb3.4/3, mb1 3.6/5, mb1mx3.3/36, mbtmp3.4/5, ML2.7/2, MS2.9/1, Ms1 2.9/1, ms1mx2.3/34, Error ellipse: s-maj=93.7km s-min=24.1km az=165.0*

ISC 03 15:30:55.5±1.1, **56°.6N**±0°.1×**169°.53W**±0°.09, **h10**km, **n24**, σ1s.**36**/21, **Pribilof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPIA	Saint Paul Isl	0.73	328		Pb	15 31 09.9	-0.5
UNV	Unalaska Valle	3.22	146	Pn	Pn	15 31 45.0	-1.1
AKUT	Akutan	3.24	137	Pn	Pn	15 31 46.0	-0.3
ATKA	Atka Island	5.15	214	Pn	Pn	15 32 06.2	-6.3
CHGN	Chignik	6.17	88	Pn	Pn	15 32 25.6	-1.0
GAMB	Gambell	7.32	352	Pn	Pn	15 32 39.8	-2.5
SVW2	Sparrevohn	8.54	52	Pn	Pn	15 32 57.9	-1.2
OHAK	Old Harbor	8.92	79	Pn	Pn	15 33 04.9	+0.7
KDAK	Kodiak Island	9.29	75	Pn	Pn	15 33 09.2	-0.1
	0.4nm,0.3s,baz=272,slow=9.6,SNR=12						
KDAK				LR	LR	15 37 06.0	
	comp=Z,62nm,19.2s,baz=283,slow=40						
TTA	Tatalina	9.33	41	Pn	Pn	15 33 09.4	-0.5
BRLK	Bradley Lake	10.35	64	Pn	Pn	15 33 24.2	+0.3
SKT	Skwentna	10.67	52	Pn	Pn	15 33 28.0	-0.2
ILAR	Eielson Array	13.74	44	Pn	Pn	15 34 12.1	+2.0
	0.1nm,0.3s,baz=238,slow=12,SNR=5.2						
TOLK	Toolik Lake Re	15.09	29	Pn	Pn	15 34 29.0	+0.5
TOLK				IAmb	IAmb	15 34 38.7	
	comp=Z,3.7nm,0.9s						
BCAR	Beaver Creek A	15.31	53	Pn	Pn	15 34 30.9	-0.5
BMAR	Burnt Mountain	15.85	37	P	P	15 34 41.2	-1.0
DAWY	Dawson	16.57	51	Pn	Pn	15 34 47.4	-0.3
HYT	Haines Junctio	17.07	62	Pn	Pn	15 34 52.8	-1.3
PETK	Petropavlovsk-	19.08	273	P	Pn	15 35 19.9	+1.2
	comp=Z,0.1nm,0.3s,baz=57,slow=10,SNR=2.3						
PETK	Petropavlovsk-	19.08	273	P	P	15 35 11.6	-6.3
SEY	Seymchan	19.98	304	P	Pn	15 35 29.9	+0.6
	comp=Z,0.9nm,0.7s,baz=105,slow=12,SNR=3.7						
INK	Inuvik	20.02	40	P	Pn	15 35 30.2	+0.4
	comp=Z,0.9nm,0.5s,baz=234,slow=8.6,SNR=3.9						
INK	Inuvik	20.02	40	IAmb	IAmb	15 35 33.1	
	comp=Z,4.6nm,1.2s						
YKA	Yellowknife Ar	27.71	55	P	P	15 36 47.1	+3.6
	comp=Z,0.2nm,0.5s,baz=281,slow=8.6,SNR=5.2						

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*ISN **03** 15:36:36.2±1.3, 32°.30N×47°.60E, h14km±8km, ML2.8*

*TEH **03** 15:36:37.3, 32°.19N×47°.55E, h20km, ML3.0*

*THR **03** 15:36:39.5±0.5, 32°.52N×47°.69E, h14km±7km, ML3.1*

ISC 03 15:36:37.4±1.7, **32°.27N**±0°.04×**47°.57E**±0°.03, **h13**km±13km, **n28**, σ1s.**03**/34, **Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DHL1	Dehloran	0.48	329	ePg	Pn	15 36 48.6	-1.5
DHL1				eSg	Sn	15 36 57.0	-1.4
SHGR	Shooshtar-Gavs	1.05	98	ePg	Pn	15 36 58.5	+0.6
SHGR				eSg	Sn	15 37 12.7	+0.2
SHGR				IAML		15 37 17.1	
	comp=N,719nm,0.3s						
SHGR				IAML		15 37 17.3	
	comp=E,1µm,0.3s						
SHGR	Shooshtar-Gavs	1.05	98	ePg	Pn	15 36 58.5	+0.6
IKFM	Kafar-mosalman	1.28	10	ePg	Pg	15 37 02.4	+0.4
AHWZ	Ahwaz	1.31	135	ePg	Pn	15 37 00.7	-0.7
IKMR	Kamar-syah	1.42	28	e		15 37 29.8	
	comp=Z,99nm,0.3s						
IKMR				ePg	Pg	15 37 04.8	0.0
AMIS	Naft Sefid	1.58	112	ePg	Pb	15 37 06.2	-0.3
IDOB	Doab	1.60	18	ePn	Pg	15 37 07.8	-0.4
IBDR	Badra	1.62	302	ePg	Pn	15 37 05.0	-0.7
IBDR				eSg	Sb	15 37 28.0	+0.5
IBDR				AML	AML	15 37 33.1	
	comp=E,92nm,0.6s						
NSR	Nassriya	1.75	225	ePn	Pn	15 37 08.0	+0.6
NSR				eSn	Sn	15 37 30.0	+0.4
NSR				AML	AML	15 37 34.2	
	comp=E,246nm,0.2s						
NSR				AML	AML	15 37 34.8	
	comp=Z,128nm,0.4s						
KER	Kermanshah	2.15	350	ePn	Pn	15 37 13.8	+0.7
KHMZ	Khomeyn	2.49	53	ePn	Pn	15 37 18.6	+0.8
KHMZ	Khomeyn	2.49	53	ePn	Pn	15 37 18.6	+0.8
IDHR	Dehrash	2.62	338	ePn	Pn	15 37 20.8	+1.1
IDHR				e		15 38 06.9	
	comp=Z,99nm,0.6s						
IPIR	Pirpir	2.84	81	ePn	Pn	15 37 24.3	+1.6
BHD	Baghdad	2.87	291	ePn	Pn	15 37 24.0	+1.1
BHD				eSn	Sn	15 37 58.0	+0.7
ASAO	Ashtian	3.06	41	ePn	Pn	15 37 26.0	+0.2
ASAO				eSg	Sb	15 38 07.2	-2.2
ASAO				IAML		15 38 23.5	
	comp=E,13nm,0.5s						
ASAO	Ashtian	3.06	41	ePn	Pn	15 37 26.0	+0.2
IKLH	Kolahrood	3.54	72	ePn	Pn	15 37 33.1	+0.8
IKLH				e		15 37 36.1	
	comp=Z,99nm,0.2s						
QAM	Ghamsar	3.58	64	ePn	Pn	15 37 33.8	+1.0
KLNJ	Kolanjah	3.65	109	ePn	Pn	15 37 32.8	-1.2
IRAZ	Razeghan	3.69	31	ePn	Pn	15 37 37.0	+2.5
GHVR	GHOM	3.82	54	ePn	Pn	15 37 36.6	+0.6
GHVR	GHOM	3.82	54	ePn	Pn	15 37 36.6	+0.6
QABG	Abgarm-Qazvin	3.82	25	ePn	Pn	15 37 36.7	+0.5
IQOM	Qom	3.89	48	ePn	Pn	15 37 38.1	+0.9
IZEF	Zefreh	4.07	80	ePn	Pn	15 37 40.7	+1.1
KRSH	Karshahi	4.19	65	ePn	Pn	15 37 42.1	+0.9

IDC 03 16:00:04.3±410.0, **57°.78N**×**32°.67E**, **h0**km, **Error ellipse: s-maj=109.1km s-min=51.3km az=126.0**, **Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I43RU	DUBNA INFRASON	2.69	111	i		16 18 30.0	
	baz=293,slow=318,SNR=0.3						
I37NO	I37NO	12.91	337	i		17 15 00.0	
	baz=144,slow=330,SNR=0.6						
I31KZ	AKTYUBINSK INF	16.54	106	i		17 43 40.0	
	baz=311,slow=342,SNR=0.7						

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*JMA **03** 16:10:36.8, 40°.20N×142°.05E, h57km±1km, M3.7*
JMA Felt II J1.

*IDC **03** 16:10:39.0±1.9, 40°.23N×142°.03E, h96km±17km, mb3.3/8, mb1 3.3/12, mb1mx3.1/73, mbtmp3.6/12, MS2.7/2, Ms1 2.7/2, ms1mx2.4/27, Error ellipse: s-maj=22.9km s-min=14.0km az=99.0*

ISC 03 16:10:36.2±1.0, **40°.20N**±0°.04×**142°.07E**±0°.08, **h62**km±7km, **n29**, σ1s.**44**/35, **mb3.6**/8, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKEN	Kujiedanarisaw	0.27	272	P	Pn	16 10 46.3	0.0
JKEN				S	Sn	16 10 53.0	-0.6
JTH	Tanohata	0.30	211	P	Pn	16 10 46.9	+0.4
JTH				S	Sn	16 10 53.9	-0.1
JANG	Nango	0.46	293	P	Pn	16 10 48.0	+0.1
JANG				S	Sn	16 10 56.2	-0.2
JKZ	Kuzumaki	0.60	250	P	Pn	16 10 49.7	+0.2
JKZ				S	Sn	16 10 58.9	-0.3
JOM	Ohasama	0.94	220	P	Pn	16 10 53.9	+0.4
JOM				S	Sn	16 11 06.4	+0.2
JTM	Tenmabayashi	0.96	308	P	Pn	16 10 53.9	+0.1
JTM				S	Sn	16 11 06.6	-0.2
JARK	Aomorirokkasho	0.97	327	P	Pn	16 10 53.9	0.0
JARK				S	Sn	16 11 06.6	-0.3
JAH	Hinai	1.09	270	P	Pn	16 10 55.8	+0.3
JAH				S	Sn	16 11 10.4	+0.5
JRG	Rokugo	1.36	234	P	Pn	16 10 59.9	+0.9
JRG				eS	Sn	16 11 17.9	+1.7
JMK	Ichinoseki	1.41	208	P	Pn	16 11 00.2	+0.6
JMK				eS	Sn	16 11 17.5	+0.3
JOT	Ohata	1.41	327	P	Pn	16 11 00.0	+0.3
JOT				eS	Sn	16 11 17.4	0.0
ASAJ	Asahikawa	3.94	6	P	Pn	16 11 35.3	+1.3
	2.1nm,0.3s,baz=201,slow=15,SNR=26						
ASAJ				S	Sn	16 12 23.1	+4.1
	1.1nm,0.3s,baz=284,slow=31,SNR=1.8						
ASAJ				LR	LR	16 13 22.7	
	comp=Z,42nm,18.7s,baz=300,slow=42						
MJAR	Matsushiro Arr	4.74	221	P	Pn	16 11 48.0	+2.9
	0.2nm,0.3s,baz=342,slow=13,SNR=14						
USRK	Ussuriysk Ar.	8.48	301	P	Pn	16 12 38.2	+2.0
	baz=111,slow=13,SNR=9.5						
KSRS	Korea Array	11.37	261	P	Pn	16 13 19.5	+3.9
	0.1nm,0.3s,baz=75,slow=14,SNR=1.5						
YAK	Yakutsk	23.12	345	LR	LR	16 24 37.5	
	comp=Z,45nm,18.3s,baz=78,slow=36						
SONM	Songino Array	26.58	299	P	P	16 16 06.0	-2.5
	0.5nm,0.7s,baz=76,slow=8.3,SNR=1.6						
H11N2	WAKE ISLAND Hy	29.47	126	T	T	16 47 21.7	
	baz=318,slow=75,SNR=84						
H11N1	WAKE ISLAND Hy	29.48	127	T	T	16 47 21.3	
	baz=318,slow=75,SNR=61						
H11N3	WAKE ISLAND Hy	29.49	126	T	T	16 47 22.9	
	baz=318,slow=75,SNR=60						
H11S3	WAKE ISLAND Hy	30.29	128	T	T	16 48 31.5	
	baz=318,slow=74,SNR=7.2						
H11S2	WAKE ISLAND Hy	30.30	128	T	T	16 48 32.1	
	baz=250,slow=74,SNR=7.9						
ZALV	Zalesovo Beam	40.23	310	P	P	16 18 06.2	-0.3
	0.5nm,0.4s,baz=91,slow=7.4,SNR=2.8						
MKAR	Makanchi Array	42.94	299	P	P	16 18 27.6	-1.3
	0.3nm,0.4s,baz=86,slow=11,SNR=6.7						
KURBB	Kurchatov Arra	44.52	306	P	P	16 18 40.3	-1.0
	1.7nm,0.2s,baz=81,slow=8.6,SNR=5.9						
ILAR	Eielson Array	46.57	34	P	P	16 18 56.1	-1.3
	0.1nm,0.5s,baz=270,slow=6.0,SNR=1.8						
BVAR	Borovoye Array	48.87	310	P	P	16 19 14.6	-0.7
	0.2nm,0.3s,baz=78,slow=11,SNR=5.9						
WRA	Warramunga Arr	60.26	188	P	P	16 20 36.7	-1.4
	0.7nm,0.9s,baz=7.8,slow=7.7,SNR=7.0						
ASAR	Alice Springs	63.99	188	P	P	16 21 03.1	+0.1
	0.5nm,0.8s,baz=2.8,slow=6.9,SNR=10						

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*IDC **03** 16:18:13.0±1.8, 36°.08N×142°.31E, h0km, mb3.5/5, mb1 3.6/8, mb1mx3.3/73, mbtmp3.6/8, ML3.3/3, MS2.6/1, Ms1 2.6/1, ms1mx2.0/38, Error ellipse: s-maj=45.1km s-min=22.3km az=77.0*

*JMA **03** 16:18:18.8±0.2, 36°.21N×141°.86E, h62km±4km, M3.2*

ISC 03 16:18:16.4±1.1, **36°.18N**±0°.04×**142°.08E**±0°.08, **h23**km, **n25**, σ1s.**51**/31, **mb3.5**/5, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHOJ	Chosi	1.10	245	P	Pb	16 18 36.5	-0.3
CHOJ				eS	Sb	16 18 49.4	-1.3
JHYU	Hitachinakayam	1.22	278	P	Pb	16 18 37.8	-1.0
JIHU	Itakohorinouch	1.28	261	P	Pb	16 18 38.8	-1.0
JHO	Hitachi	1.30	290	P	Pn	16 18 38.3	-0.8
ONAJ	Iwakimizuishiy	1.39	312	P	Pb	16 18 39.9	-1.8
JFK	Kawauchi	1.53	321	P	Pb	16 18 42.6	-1.6
BSO1	Boso 1	1.77	211	P	Pb	16 18 46.5	-1.4
BSO1				eS	Sn	16 19 06.9	+0.2
BSO3	Boso 3	1.88	224	P	Pb	16 18 47.9	-2.0
BSO3				eS	Sn	16 19 10.4	+0.6
JFT	Otama	1.94	314	P	Pb	16 18 49.0	-2.1
JMM	Marumori	1.98	329	P	Pb	16 18 49.4	-2.3
JAG	Ashikaga	2.14	277	P	Pn	16 18 50.7	0.0
JFY	Yanaizu	2.27	303	P	Pb	16 18 53.6	-3.1
JKT	Katashina	2.36	285	P	Pn	16 18 54.2	+0.4
JRY	Ryogami san	2.58	267	P	Pn	16 18 56.8	-0.1
JOD2	Odawara 2	2.60	250	P	Pn	16 18 57.6	+0.5
JOD2				eS	Sn	16 19 26.3	-1.7
MJAR	Matsushiro Arr	3.15	278	Pn	Pn	16 19 05.7	+1.1
	1.0nm,0.3s,baz=94,slow=9.7,SNR=47						
MJAR				Sn	Sn	16 19 42.9	+1.3
	0.5nm,0.3s,baz=79,slow=19,SNR=4.8						
MAT	Matsushiro	3.15	278	P	Pn	16 19 05.9	+1.2
MAT				eS	Sn	16 19 42.2	+0.6
JHJ	Hachijo jima 2	3.59	213	Pn	Pn	16 19 10.7	-0.1
	14nm,0.3s,baz=147,slow=23,SNR=5.2						
JHJ				Sn	Sn	16 19 50.3	-2.1
	56nm,0.3s,baz=274,slow=22,SNR=6.4						
ASAJ	Asahikawa	7.94	3	Pn	Pn	16 20 10.7	+0.3
	0.4nm,0.3s,baz=214,slow=22,SNR=6.1						
KSRS	Korea Array	11.42	281	LR	LR	16 25 13.3	
	comp=Z,26nm,19.0s,baz=160,slow=36						
SONM	Songino Array	28.71	305	P	P	16 24 13.5	+1.5
	0.5nm,0.5s,baz=95,slow=7.8,SNR=5.1						
ZALV	Zalesovo Beam	42.89	313	P	P	16 26 15.2	+2.3
	0.4nm,0.4s,baz=81,slow=8.9,SNR=1.4						
MKAR	Makanchi Array	45.03	303	P	P	16 26 31.8	+1.5
	0.7nm,0.7s,baz=88,slow=9.6,SNR=6.6						
WRA	Warramunga Arr	56.29	189	P	P	16 27 53.4	-1.9
	0.5nm,1.0s,baz=5.7,slow=7.1,SNR=2.8						
ASAR	Alice Springs	60.02	189	P	P	16 28 22.4	+1.0
	0.2nm,0.8s,baz=13,slow=8.6,SNR=1.6						

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*IDC **03** 16:49:33.0±1.3, 31°.62S×69°.13W, h0km, mb4.1/1, mb1 3.9/2, mb1mx3.7/24, mbtmp3.8/2, ML3.8/1, Error ellipse: s-maj=157.9km s-min=46.5km az=150.0*

*NEIC **03** 16:49:47.5±2.0, 31°.56S±0°.07×68°.5W±0°.2, h104km±5km, Error ellipse: s-maj=18.7km s-min=10.5km az=95.0*

*GUC **03** 16:49:48.1±0.7, 31°.54S×68°.70W, h123km±18km, ML4.0*

ISC 03 16:49:47.6±0.9, **31°.59S**±0°.04×**68°.55W**±0°.07, **h109**km±8km, **n38**, σ1s.**01**/50, **3C-1D**, **San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZON	Zonda	0.12	291		Pn	16 50 03.1	+0.3
CO03	El Pedregal	1.98	292	eP	Pn	16 50 20.8	+0.4
CO03				i S	Sn	16 50 45.6	+0.3
CO03	El Pedregal	1.98	292	Pn	Pn	16 50 21.4	+1.0
VA03	San Esteban	2.06	235	i P	Pn	16 50 22.8	+1.4
VA03				eS	Sn	16 50 48.5	+1.2
VA03				IAML		16 50 53.6	
	comp=E,1µm,0.1s						
VA03	San Esteban	2.06	235		Pn	16 50 22.6	+1.2
CO01	Juntas del Tor	2.08	320	i P	Pn	16 50 23.1	+1.2
CO01				eS	Sn	16 50 49.2	+1.2
CO01				IAML		16 50 51.5	
	comp=E,905nm,0.2s						
CO01	Juntas del Tor	2.08	320		Pn	16 50 23.6	+1.7
CO02	Combarbal	2.13	280	⇑iP	Pn	16 50 22.8	+0.5
CO02				i S	Sn	16 50 48.7	-0.2
CO02	Combarbal	2.13	280		Pn	16 50 22.7	+0.4
PEL	Peldehue	2.38	229		Pn	16 50 25.5	+0.1
GO04	Tololo Observa	2.39	306	i P	Pn	16 50 25.9	0.0
GO04				eS	Sn	16 50 55.4	+0.3
GO04	Tololo Observa	2.39	306		Pn	16 50 26.1	+0.2
ROCH	El Roble	2.50	236	⇓iP	Pn	16 50 27.3	+0.1
ROCH				eS	Sn	16 50 57.1	-0.4
ROCH				IAML		16 51 02.2	
	comp=N,458nm,0.2s						
MT03	Universidad Ad	2.52	221	eP	Pn	16 50 29.0	+1.7
MT03				eS	Sn	16 50 59.1	+1.3
MT03				IAML		16 51 01.8	
	comp=N,420nm,0.3s						
MT05	Renca	2.58	225		Pn	16 50 27.8	-0.3
LMEL	Las Melosas	2.65	211	eP	Pn	16 50 31.1	+2.0
MT02	Curacav	2.75	232	eP	Pn	16 50 30.2	0.0
MT02				eS	Sn	16 51 01.8	-1.3
MT02	Curacav	2.75	232		Pn	16 50 30.1	-0.2
VCA	Vinchina	2.86	6	⇑iP	Pn	16 50 33.2	+1.3
VCA				i S	Sn	16 51 07.6	+1.7
VCA				IAML		16 51 15.6	
	comp=E,492nm,0.4s						
MT09	Talagante	3.00	223	i P	Pn	16 50 33.9	+0.3
MT09				eS	Sn	16 51 09.1	0.0
MT09				IAML		16 51 10.7	
	comp=N,324nm,0.4s						
AC05	El Transito	3.12	331	⇑iP	Pn	16 50 36.6	+1.3
AC05				eS	Sn	16 51 12.1	-0.1
AC05				IAML		16 51 16.3	
	comp=E,475nm,0.4s						
AC05	El Transito	3.12	331		Pn	16 50 36.6	+1.3
LCO	Las Campanas	3.17	324	Pn	Pn	16 50 36.1	0.0
BO02	Sierra Bellavi	3.70	210	Pn	Pn	16 50 43.6	+0.6
AC04	Llanos de Chal	4.02	326	Pn	Pn	16 50 46.6	-0.7
GO03	Copiap	4.24	339		Pn	16 50 50.1	-0.2
BI02	San Fabin de	5.54	203	Pn	Pn	16 51 07.0	-0.8
AC01	Pan de Azucar	5.71	341	Pn	Pn	16 51 09.3	-0.8
GO02	Mina Guanaco	6.47	352	Pn	Pn	16 51 19.9	-0.7
PB14	IPOC Station P	7.13	346	Pn	Pn	16 51 27.6	-2.0
LVC	Limon Verde	8.95	358	Pn	Pn	16 51 52.5	-1.8
CPUP	Villa Florida	11.13	65	Pn	Pn	16 52 21.4	-2.2
	comp=E,0.2nm,0.3s,baz=244,slow=12,SNR=1.5						
TORD	Torodi Ar. Bea	80.61	68	P	P	17 01 49.4	+0.9
	comp=E,1.1nm,0.7s,baz=227,slow=5.7,SNR=3.5						
WRA	Warramunga Arr	124.26	206	PKP	PKPdf	17 08 33.9	-0.2
	comp=E,0.4nm,0.3s,baz=157,slow=1.8,SNR=9.9						
AAK	Ala-Archa	148.76	59	PKPbc	PKiKP	17 09 23.4	-0.3
	comp=E,1.4nm,0.5s,baz=230,slow=4.7,SNR=5.1						
ZALV	Zalesovo Beam	150.62	33	PKPbc	PKiKP	17 09 27.2	+0.3
	comp=E,1.9nm,0.4s,baz=313,slow=3.2,SNR=9.5						
ZALV	Zalesovo Beam	150.62	33		PKiKP	17 09 26.6	-0.3
MKAR	Makanchi Array	152.97	47	PKPbc	PKiKP	17 09 32.3	+0.3
	comp=E,0.5nm,0.7s,baz=256,slow=0.6,SNR=2.4						
MKAR				PKPab	PKPab	17 09 44.5	+0.8
	comp=E,0.6nm,0.5s,baz=299,slow=3.6,SNR=4.8						

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*BJI **03** 16:50:17.3±0.0, 25°.52S×175°.78W, h5km, mB5.5/12, mb5.0/26, Ms5.1/7, Ms7 4.8/7*

*IDC **03** 16:50:18.1±0.6, 25°.71S×176°.13W, h0km, mb4.6/20, mb1 4.7/22, mb1mx4.6/42, mbtmp4.6/22, ML4.3/2, MS4.3/20, Ms1 4.3/20, ms1mx4.1/30, Error ellipse: s-maj=22.5km s-min=15.7km az=148.0*

*NEIC **03** 16:50:19.3±1.5, 25°.73S±0°.08×176°.1W±0°.1, h10km±1km, mb4.9/54, Error ellipse: s-maj=17.9km s-min=13.2km az=95.0*

*GCMT **03** 16:50:24.3±0.3, 25°.62S±0°.03×175°.67W±0°.02, h28km, MW5.0/74, Moment Tensor Solution. s46,c59; s74,c98; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.49±.17; $M_{\theta\theta}$0.73±.12; $M_{\phi\phi}$-3.22±.11; $M_{r\theta}$1.06±.21; $M_{\theta\phi}$-1.42±.08; $M_{\phi r}$0.86±.16; Best double couple: $M_0$3.44000×10^{16} NP1:ϕ_s175.00000°, δ39.00000°, λ55.00000°. NP2: ϕ_s37.00000°, δ59.00000°, λ115.00000°. Principal axes: T 2.9940, Plg66.0000°, Azm355.0000°; N 0.8930, Plg21.0000°, Azm204.0000°; P -3.8870, Plg10.0000°, Azm109.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 03 16:50:19.6±0.4, **25°.69S**±0°.06×**176°.07W**±0°.08, **h10**km, **n168**, σ1s.**42**/148, **mb4.8**/41, **MS4.3**/20, **3C**, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	3.91	204	Pn	Pn	16 51 20.1	+0.4
	153nm,0.3s,baz=54,slow=22,SNR=11						
RAO				Sn	Sn	16 52 07.3	+1.5
	256nm,0.3s,baz=270,slow=23,SNR=7.8						
RAO	Raoul Island	3.91	204	Pn	Pn	16 51 17.7	-2.1
NIUE	Niue	8.69	42		Pn	16 52 18.4	-7.0
MSVF	Nonsavu	9.62	324	Pn	Pn	16 52 37.5	-0.7
AFI	Afiamalu	12.39	20		Pn	16 53 10.0	-6.2
URZ	Urewera	13.80	203	Pn	Pn	16 53 38.4	+3.2
	0.4nm,0.3s,baz=239,slow=21,SNR=1.3						
URZ				Sn	Sn	16 55 59.3	-9.3
	1.9nm,0.3s,baz=29,slow=21,SNR=12						
BKZ	Black Stump Fm	14.83	203	Pn	Pn	16 53 44.9	-4.5
HIZ	Hauiti	14.91	209	P	P	16 53 56.0	-0.1
MCHZ	McNeill Hill	15.00	202	P	P	16 53 56.9	-0.3
TMVZ	Te Maari	15.07	205	P	P	16 53 58.9	+0.8
ETVZ	East Tongariro	15.09	205	P	Pn	16 53 55.2	+2.2
OTVZ	Oturere	15.13	205	P	Pn	16 53 54.2	+0.6
BHHZ	Black Hill Sta	15.27	204	P	Pn	16 53 53.5	-1.8
KRHZ	Kereru	15.29	203	P	P	16 53 58.3	-2.1
PXZ	Pawanui	15.48	201	P	P	16 54 00.8	-1.6
PNHZ	Pukenui	15.59	203	P	Pn	16 54 00.9	+1.4
RAR	Rarotonga	15.60	77	Pn	Pn	16 54 01.1	+1.5
	1.7nm,0.3s,baz=342,slow=1.4,SNR=6.4						
RAR				LR	LR	16 59 17.4	
	comp=Z,279nm,20.1s,baz=241,slow=34						
RAR	Rarotonga	15.60	77		Pn	16 53 54.2	-5.4
RAR				IAmb	IAmb	16 54 03.3	
	comp=Z,81nm,1.1s						
TSZ	Takapari Road	15.81	203	P	Pn	16 54 01.4	-0.8
BFZ	Birch Farm	16.27	201		P	16 54 10.2	-1.0
BFZ				IAmb	IAmb	16 54 27.2	
	comp=Z,102nm,1.5s						
BFZ	Birch Farm	16.27	201	P	Pn	16 54 09.5	+1.4
DZM	Mont Dzumac	16.39	279	Pn	P	16 54 12.9	+0.1
	comp=Z,0.1nm,0.3s,baz=276,slow=23,SNR=2.0						
DZM				LR	LR	16 59 27.9	
	comp=Z,2µm,20.2s,baz=104,slow=34						
DZM	Mont Dzumac	16.39	279	eLQ	LQ	16 57 14.2	
	comp=Z,910nm,27.1s						
DZM				eLR	LR	16 57 54.0	
	comp=Z,2µm,23.8s						
MRZ	Mangatainoka R	16.48	203	P	Pn	16 54 10.0	-0.8
HOWZ	Holdsworth Sta	16.71	203	P	Pn	16 54 11.6	-2.2
NNZ	Nelson	17.79	207	Pn	Pn	16 54 22.8	-4.5
NNZ				IAmb	IAmb	16 54 41.1	
	comp=Z,166nm,1.5s						
THZ	Tophouse	18.44	207	P	P	16 54 32.3	-3.0
SANVU	Saraoutou	18.66	300		Pn	16 54 38.5	+0.3
SANVU				IAmb	IAmb	16 54 52.5	
	comp=Z,83nm,0.9s						
KHZ	Kahutara	18.75	205	P	P	16 54 34.7	-3.8
RPZ	Rata Peaks	20.82	207	LR	LR	17 03 49.3	
	comp=Z,1µm,18.6s,baz=21,slow=39						
PAE	Paea	25.84	77	eT	T	17 22 14.0	
	comp=Z,4.1nm,0.3s						
PPT2	Papeete2	25.87	77	eLQ	LQ	17 01 01.7	
	comp=Z,1µm,23.0s						
PPT2				eLR	LR	17 02 06.0	
	comp=Z,686nm,29.0s						
PPT	Papeete	25.88	77	LR	LR	17 04 30.8	
	comp=Z,223nm,18.3s,baz=252,slow=33						
TVO	Taravao	26.09	78	eT	T	17 22 32.9	
	comp=Z,0.9nm,0.3s						
MEH	Mehetia	27.10	79	eT	T	17 23 49.1	
	comp=Z,8.9nm,0.3s						
HNR	Honiara	27.92	301	LR	LR	17 05 54.2	

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,837nm,18.4s,baz=188,slow=34						
STKA	Stephens Creek	37.44	250	P	P	16 57 33.4	+0.3
	baz=105,slow=9.6,SNR=3.9						
STKA	Stephens Creek	37.44	250	P	P	16 57 33.6	+0.5
PMG	Port Moresby	38.45	288	P	P	16 57 41.4	-0.5
	comp=Z,20nm,0.8s,baz=96,slow=4.8,SNR=7.1						
PMG				LR	LR	17 12 00.5	
	comp=Z,723nm,19.1s,baz=116,slow=34						
PMG	Port Moresby	38.45	288	P	P	16 57 41.2	-0.7
PMG				IAmb	IAmb	16 57 42.0	
	comp=Z,22nm,0.8s						
BBOO	Buckleboo	42.08	249	P	P	16 58 11.1	-0.7
BBOO				IAmb	IAmb	16 58 18.6	
	comp=Z,21nm,1.1s						
AS31	Alice Springs	45.29	261	P	P	16 58 36.7	-1.1
ASAR	Alice Springs	45.29	261	P	P	16 58 37.4	-0.4
	comp=Z,4.6nm,1.1s,baz=94,slow=7.9,SNR=32						
ASAR				PcP	PcP	17 00 17.2	-0.4
	comp=Z,1.0nm,0.7s,baz=97,slow=3.3,SNR=4.1						
ASAR				LR	LR	17 17 23.3	
	comp=Z,635nm,18.1s,baz=108,slow=36						
ASAR	Alice Springs	45.29	261	P	P	16 58 36.7	-1.1
WR0	Warramunga Arr	45.67	267	P	P	16 58 39.6	-1.3
WC3	Warramunga Arr	45.83	267	P	P	16 58 40.9	-1.2
WB2	Warramunga Arr	45.85	267	P	P	16 58 41.7	-0.5
WRAB	Tennant Creek	45.85	267	P	P	16 58 41.0	-1.2
WRA	Warramunga Arr	45.86	267	P	P	16 58 41.2	-1.1
	comp=Z,1.3nm,0.3s,baz=102,slow=7.8,SNR=29						
WRA				PcP	PcP	17 00 19.8	+0.1
	comp=Z,1.9nm,0.8s,baz=108,slow=3.4,SNR=7.0						
WRA	Warramunga Arr	45.86	267	P	P	16 58 40.4	-1.9
JAY	Jayapura	47.50	292	LR	LR	17 17 45.3	
	comp=Z,329nm,20.3s,baz=176,slow=35						
VNDA	Vanda	52.94	186	LR	LR	17 18 09.1	
	comp=Z,192nm,21.0s,baz=12,slow=32						
VNDA	Vanda	52.94	186	P	P	16 59 36.1	+0.5
VNDA				IAmb	IAmb	16 59 41.3	
	comp=Z,24nm,1.4s						
FITZ	Fitzroy Crossi	54.26	266	P	P	16 59 45.8	-0.3
	comp=Z,4.6nm,0.9s,baz=106,slow=5.6,SNR=6.0						
FITZ	Fitzroy Crossi	54.26	266	P	P	16 59 45.6	-0.5
SIJI	Sorong	56.38	287	P	P	16 59 59.8	-1.7
	comp=Z,16nm,0.8s,baz=106,slow=15,SNR=6.6						
QSPA	South Pole Qui	64.41	180	P	P	17 00 55.4	-0.3
	comp=Z,5.0nm,0.8s,baz=44,slow=3.6,SNR=11						
QSPA	South Pole Qui	64.41	180	P	P	17 00 57.0	+1.3
QSPA				IAmb	IAmb	17 01 17.6	
	comp=Z,8.5nm,1.0s						
LEM	Lembang	74.76	270	LR	LR	17 34 57.9	
	comp=Z,379nm,19.3s,baz=166,slow=36						
MJAR	Matsushiro Arr	75.42	323	P	P	17 02 03.5	-0.1
	comp=Z,5.9nm,0.9s,baz=161,slow=5.5,SNR=12						
MJAR				LR	LR	17 30 11.8	
	comp=Z,179nm,21.7s,baz=180,slow=32						
MJAR	Matsushiro Arr	75.42	323	P	P	17 02 03.4	-0.2
MAT	Matsushiro	75.42	323	P	P	17 02 03.4	-0.2
MAT				*e*S	S	17 11 42.4	-1.3
JHS	Saijyo	77.18	319	P	P	17 02 14.4	+0.7
MAW	Mawson	77.30	200	LR	LR	17 36 47.3	
	comp=Z,228nm,18.0s,baz=78,slow=36						
H03S2	Juan Fernandez	81.63	123	T	T	18 32 20.3	
	baz=243,slow=74,SNR=24						
H03S1	Juan Fernandez	81.64	123	T	T	18 32 21.2	
	baz=243,slow=74,SNR=22						
H03S3	Juan Fernandez	81.65	123	T	T	18 32 21.4	
	baz=243,slow=74,SNR=26						
PETK	Petropavlovsk-	81.72	344	P	P	17 02 38.0	+0.1
	comp=Z,6.6nm,0.8s,baz=132,slow=8.2,SNR=6.1						
PETK				LR	LR	17 33 24.7	
	comp=Z,138nm,19.2s,baz=154,slow=32						
H03N2	Juan Fernandez	81.79	123	T	T	18 32 25.1	
	baz=249,slow=73,SNR=24						
H03N3	Juan Fernandez	81.79	123	T	T	18 32 31.8	
	baz=249,slow=73,SNR=17						
H03N1	Juan Fernandez	81.81	123	T	T	18 32 27.8	
	baz=249,slow=73,SNR=16						
KSRS	Korea Array	81.93	318	P	P	17 02 40.7	+1.3
	comp=Z,4.3nm,0.9s,baz=137,slow=6.0,SNR=14						
KSRS				LR	LR	17 37 35.0	
	comp=Z,105nm,18.4s,baz=130,slow=35						
KSAR	Wonju Array Be	81.94	318	P	P	17 02 39.0	-0.5
SNAA	Sanae	82.79	178	P	P	17 02 44.9	+1.2
SNAA	Sanae	82.79	178	P	P	17 02 44.8	+1.2
SNAA				IAmb	IAmb	17 02 54.6	
	comp=Z,11nm,1.2s						
VNA3	Neumayer Olymp	82.87	176	P	P	17 02 47.2	+3.2
VNA2	Neumayer--Watz	83.32	176	P	P	17 02 47.8	+1.5
VNA1	Neumayer--Stat	83.54	176	P	P	17 02 45.7	-1.7
NVAR	Mina Array Bea	83.62	42	P	P	17 02 49.5	+1.0
	comp=Z,3.0nm,1.0s,baz=221,slow=8.8,SNR=14						
NVAR	Mina Array Bea	83.62	42	P	P	17 02 47.0	-1.5
NV11	Mina Array Sit	83.71	42	P	P	17 02 47.6	-1.3
USA0B	Ussuriysk Arra	84.23	325	P	P	17 02 51.4	+0.2
USRK	Ussuriysk Ar.	84.23	325	P	P	17 02 52.4	+1.2
	comp=Z,2.6nm,1.0s,baz=108,slow=4.2,SNR=11						
USRK				LR	LR	17 38 45.9	
	comp=Z,104nm,18.5s,baz=135,slow=34						
USRK	Ussuriysk Ar.	84.23	325	P	P	17 02 52.0	+0.8
PLCA	Paso Flores	84.45	133	LR	LR	17 35 02.1	
	comp=Z,63nm,19.1s,baz=185,slow=32						
NJ2	Nanjing	84.54	309	*e*P	P	17 02 54.6	+1.6
NJ2				pmax	pmax		
	comp=Z,12nm,0.7s						
PRN	Pahroc Range	84.99	44	P	P	17 02 55.2	-0.2
PRN				IAmb	IAmb	17 02 58.0	
	comp=Z,8.1nm,1.1s						
X16A	Lo Mia Camp, P	85.58	49	P	P	17 02 58.3	-0.1
U15A	North Rim	86.18	46	P	P	17 03 02.9	+1.4
U15A				IAmb	IAmb	17 03 11.7	
	comp=Z,7.6nm,1.3s						
PSI	Prapat	86.70	275	LR	LR	17 45 52.6	
	comp=Z,301nm,18.1s,baz=91,slow=38						
WHN	Wuhan	86.93	306	P	P	17 03 06.4	+1.5
GSI	Gunungsitoli	87.27	273	P	P	17 03 08.7	+1.6
CN2	Changchun	87.47	322	*e*P	P	17 03 05.1	-2.1
TIA	Tai'an	88.06	312	P	P	17 03 11.7	+1.4
TIA				pmax	pmax		
	comp=Z,11nm,1.0s						
TXAR	Lajitas Array	88.39	56	P	P	17 03 13.5	+1.4
	comp=Z,1.1nm,0.9s,baz=220,slow=7.6,SNR=7.3						
TXAR				LR	LR	17 36 11.6	
	comp=Z,109nm,19.4s,baz=0.0,slow=31						
TXAR	Lajitas Array	88.39	56	P	P	17 03 12.3	+0.2
TMUT	Trail Mountain	88.54	45	P	P	17 03 12.8	-0.1
D08A	Wollman Farm,	88.85	35	P	P	17 03 13.6	-0.1
D08A				IAmb	IAmb	17 03 15.6	
	comp=Z,4.9nm,0.9s						
F10A	Beach Ranch, E	89.05	37	P	P	17 03 14.3	-0.6
F10A				IAmb	IAmb	17 03 31.9	
	comp=Z,8.6nm,1.3s						
SUA	Susitna One	89.22	12	P	P	17 03 14.9	-0.4
SUA				IAmb	IAmb	17 03 16.4	
	comp=Z,7.9nm,0.9s						
MA2	Magadan	89.24	344	P	P	17 03 15.5	+0.3
	comp=Z,5.6nm,0.8s,baz=122,slow=4.4,SNR=5.4						
MA2	Magadan	89.24	344	IAmb	IAmb	17 03 16.3	
	comp=Z,8.5nm,0.9s						
KNK	Knik Glacier	89.62	13	P	P	17 03 17.6	+0.5
TTA	Tatalina	89.75	9	P	P	17 03 18.2	+0.5
TTA				IAmb	IAmb	17 03 19.5	
	comp=Z,7.0nm,1.0s						
GHO	Glory Hole Cre	89.86	13	P	P	17 03 18.2	0.0
SCM	Sheep Creek Mo	90.23	13	P	P	17 03 20.4	+0.5
TGL	Tana Glacier	90.28	16	P	P	17 03 20.4	+0.1
ENH	Enshi	90.39	304	P	P	17 03 22.4	+1.0
NEW	Newport	90.56	35	P	P	17 03 20.8	-1.0
	comp=Z,1.5nm,0.7s,baz=252,slow=20,SNR=1.8						
N25K	Chitina, Valde	90.62	14	P	P	17 03 22.7	+0.9
BALM	Baldy	90.65	16	P	P	17 03 22.9	+1.0
BALM				IAmb	IAmb	17 03 23.9	
	comp=Z,9.4nm,1.0s						
GYA	Guiyang	90.73	299	*e*P	P	17 03 24.7	+1.5
GYA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
MCARA	McCarthy VSAT	90.79	15	P	P	17 03 21.6	-0.8
BARN	Barnard Glacie	90.83	16	P	P	17 03 23.8	+0.9
TRF	Thorofare Moun	91.14	11	P	P	17 03 24.0	-0.2
TRF				IAmb	IAmb	17 03 26.8	
	comp=Z,7.5nm,0.9s						
RND	Reindeer	91.36	12	P	P	17 03 25.5	+0.3
PDAR	Pinedale Array	91.54	43	P	P	17 03 26.9	+0.2
	comp=Z,1.4nm,0.9s,baz=250,slow=4.7,SNR=3.7						
PDAR				LR	LR	17 45 25.8	
	comp=Z,88nm,18.4s,baz=270,slow=36						
PAX	Paxson	91.64	13	P	P	17 03 25.6	-0.9
PAX				IAmb	IAmb	17 03 27.1	
	comp=Z,6.9nm,1.2s						
UTTA	Uttaradit	91.80	289	P	P	17 03 31.3	+3.2
SEY	Seymchan	91.81	346	P	P	17 03 27.2	+0.1
	comp=Z,3.6nm,0.9s,baz=137,slow=5.0,SNR=9.3						
DLBC	Dease Lake	92.13	22	P	P	17 03 28.4	-0.5
	comp=Z,1.7nm,0.8s,baz=293,slow=11,SNR=4.2						
DLBC	Dease Lake	92.13	22	IAmb	IAmb	17 03 56.5	
	comp=Z,9.3nm,1.4s						
WRH	Wood River Hil	92.48	12	P	P	17 03 30.2	0.0
WRH				IAmb	IAmb	17 03 31.4	
	comp=Z,7.4nm,1.0s						
BCAR	Beaver Creek A	92.54	15	P	P	17 03 30.9	+0.3
HDA	Harding Lake	92.63	12	P	P	17 03 31.0	0.0
HDA				IAmb	IAmb	17 03 32.3	
	comp=Z,6.2nm,1.1s						
CCB	Clear Creek Bu	92.69	12	P	P	17 03 30.9	-0.3
CCB				IAmb	IAmb	17 03 31.6	
	comp=Z,6.5nm,1.2s						
MDM	Murphy Dome	92.89	11	P	P	17 03 32.0	-0.2
MDM				IAmb	IAmb	17 03 33.5	
	comp=Z,5.5nm,1.1s						
LAMP	Lampang	92.93	289	P	P	17 03 36.0	+2.6
IL31		92.97	12	P	P	17 03 32.3	-0.1
IL31				IAmb	IAmb	17 03 36.5	
	comp=Z,12nm,1.5s						
ILAR	Eielson Array	92.97	12	P	P	17 03 32.5	0.0
	comp=Z,1.9nm,1.0s,baz=217,slow=5.7,SNR=11						
ILAR	Eielson Array	92.97	12	P	P	17 03 32.2	-0.3
PAYA	Payao	93.09	290	P	P	17 03 36.8	+2.7
KMI	Kunming	93.25	296	⇑P	P	17 03 36.9	+1.9
KMI				pP	pwP	17 03 41.5	-0.3
KMI				sP	sP	17 03 43.3	+5.3
KMI				pmax	pmax		
	comp=Z,12nm,1.6s						
CM04	Chiang Mai Arr	93.43	289	P	P	17 03 38.4	+2.7
CM01	Chiang Mai Arr	93.46	289	P	P	17 03 38.6	+2.8
CM02	Chiang Mai Arr	93.48	289	P	P	17 03 38.6	+2.7
CMAR	Chiang Mai Arr	93.49	289	P	P	17 03 36.5	+0.5
	comp=Z,3.9nm,0.9s,baz=137,slow=3.1,SNR=28						
CMAR				LR	LR	17 47 26.1	
	comp=Z,46nm,18.5s,baz=192,slow=37						
CM13	Chiang Mai Arr	93.50	289	P	P	17 03 38.6	+2.5
CMMT	Chiang Mai	93.64	289	P	P	17 03 37.0	+0.3
CM33	Chiang Mai Arr	93.64	289	P	P	17 03 38.0	+1.3
CHTO	Chiang Mai	93.64	289	P	P	17 03 37.9	+1.2
HHC	Hu-ho-hao-te	94.22	314	*e*P	P	17 03 38.6	-0.4
HHC				pmax	pmax		
	comp=Z,6.0nm,1.2s						
HHC				pmax	pmax		
	comp=Z,44nm,6.8s						
HHC				LR	LR		
	comp=Z,150nm,13.4s						
HHC				LR	LR		
	comp=Z,120nm,19.7s						
HHC				LR	LR		
	comp=Z,150nm,18.4s						
BMAR	Burnt Mountain	95.78	12	P	P	17 03 44.8	-0.5
YAK	Yakutsk	97.56	337	P	Pdif	17 03 54.8	+1.2
	comp=Z,3.5nm,0.4s,baz=265,slow=0.3,SNR=5.0						
YAK	Yakutsk	97.56	337	IAmb	IAmb	17 03 56.6	
	comp=Z,10.0nm,1.0s						
YKA	Yellowknife Ar	100.47	25	P	Pdif	17 04 06.1	-0.4
	comp=Z,0.5nm,0.9s,baz=227,slow=4.4,SNR=6.4						
WMQ	Urumqi	111.62	309	*e*PKP	PKiKP	17 08 53.7	-0.7
MKAR	Makanchi Array	116.00	312	PKP	PKPdf	17 09 01.0	-1.7
	comp=Z,0.5nm,0.6s,baz=66,slow=3.0,SNR=5.3						
KSH	Kashi	119.24	303	PKPbc	PKiKP	17 09 20.0	+11
KKAR	Karatay Array	123.79	306		PKPdf	17 09 17.3	-0.5
FINES	FINESS Array B	141.23	343	PKP	PKiKP	17 09 51.8	-0.8
	comp=Z,1.4nm,0.8s,baz=48,slow=2.8,SNR=4.5						
NC303	NORSAR Array S	144.11	354		PKPab	17 09 52.7	+0.2
NB2	NORSAR Subarra	144.31	354	PKP	PKPab	17 09 53.2	-0.2
	comp=Z,2.0nm,0.8s,baz=11,slow=3.6						
NOA	NORSAR Array B	144.31	354	PKP	PKPab	17 09 53.5	+0.1
	comp=Z,5.4nm,0.9s,baz=11,slow=2.4,SNR=12						
GEVA	Gevas	144.76	301		PKPdf	17 09 56.8	-0.3
MARD	Mardin	146.71	299		PKPdf	17 09 59.9	-0.4
AKASG	Malin Array Be	148.37	329	PKPbc	PKPdf	17 10 04.2	+1.7
	comp=Z,2.6nm,0.5s,baz=44,slow=3.7,SNR=11						
AKASG	Malin Array Be	148.37	329		PKPbc	17 10 05.1	-0.9
AKBB	Malin Array Si	148.37	329		PKPbc	17 10 05.5	-0.5
BRTR	Keskin Array B	151.50	307	PKPbc	PKiKP	17 10 14.7	+0.1
	comp=Z,1.5nm,0.7s,baz=32,slow=17,SNR=5.1						
BRTR	Keskin Array B	151.50	307		PKPdf	17 10 08.1	+0.1
EIL	Elat	152.29	285	PKPbc	PKiKP	17 10 16.9	+0.5
	comp=Z,1.9nm,0.4s,baz=358,slow=2.9,SNR=2.5						
BURAR	Bucovina Array	152.41	328		PKiKP	17 10 17.1	+1.0
KOLS	Kolonicke sedl	152.73	333	*e*PKP	PKiKP	17 10 17.7	+1.0
CLL	Collm	153.49	347	*i* PKPbc	PKPbc	17 10 18.1	+0.1
CLL				⇑*i*PKPab	PKPab	17 10 30.6	+0.3
	comp=Z,9.0nm,1.0s						
CLL				LmV		18 26 00.0	
	comp=Z,100nm,18.3s						
CLL	Collm	153.49	347		PKiKP	17 10 18.9	+0.8
DPC	Dobruska-Polom	153.59	342	⇑*e*PKP	PKPbc	17 10 16.5	-1.9
DPC				*e*PKPAB	PKPab	17 10 31.3	+0.5
KHC	Kasperske Hory	155.41	345	*e*PKPDF	PKPdf	17 10 13.5	+0.3
KHC				*e*pPKP	sPKPab	17 10 43.0	+1.2

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*SOME **03** 17:21:07.0, 38°.68N×72°.67E, h5^{km}*

*NNC **03** 17:21:07.2±6.0, 38°.64N×72°.45E, h0^{km}, mb3.7, mpv3.6, Error ellipse: s-maj=41.2km s-min=26.6km az=174.0*

ISC 03 17:21:13.9±4.6**, 38°.1N**±0°.3×**72°.2E**±0°.1**, h10^{km}, n7, σ1^{s}.14**/12**, 1C, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IUG	Iuzhnay	4.38	338	*e*P	Pn	17 22 20.5	-0.1
	11nm,0.1s						
IUG				*e*S	Sn	17 23 13.5	+1.8
	12nm,0.2s						
IUG	Iuzhnay	4.38	338	Pg	Pn	17 22 20.5	-0.1
	11nm,0.1s						
IUG				Pg	Pn	17 22 20.5	-0.1
	8.7nm,0.1s						
IUG				Lg	Lg	17 23 13.4	
	12nm,0.3s						
IUG				Lg	Lg	17 23 13.5	
	12nm,0.2s						
MRKS	Merke	4.71	9	*e*P	Pn	17 22 23.8	-1.3
	2.4nm,0.2s						
MRKS				*e*S	Sn	17 23 18.9	-0.8
	3.1nm,0.3s						
MRKS	Merke	4.71	9	Pg	Pn	17 22 23.7	-1.3
	2.4nm,0.2s						
MRKS				Pg	Pn	17 22 24.0	-1.0
	2.3nm,0.3s						
MRKS				Lg	Lg	17 23 19.0	
	3.1nm,0.3s						
MRKS				Lg	Lg	17 23 21.9	
	2.9nm,0.3s						
KK31	Karatay Array	5.17	346	Pg	Pn	17 22 30.1	-1.2
	0.8nm,0.3s,baz=154,slow=11,SNR=16						
KK31				⇑Lg	Lg	17 23 32.7	
	2.2nm,0.4s,baz=165,slow=23,SNR=13						
KST	Kastek	5.70	29	*e*P	Pn	17 22 39.2	+0.4
	1.7nm,0.4s						
KST				*e*S	Sn	17 23 45.5	+1.1
	1.9nm,0.5s						
KST	Kastek	5.70	29	Pg	Pn	17 22 39.2	+0.4
	1.7nm,0.4s						
KST				Lg	Lg	17 23 45.5	
	1.9nm,0.5s						

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*NEIC **03** 17:41:14.1±1.8, 7°.13S±0°.08×146°.04E±0°.10, h158^{km}±6^{km}, mb4.6/49, Error ellipse: s-maj=14.3km s-min=11.5km az=97.0*

*IDC **03** 17:41:15.2±1.1, 7°.32S×146°.28E, h179^{km}±15^{km}, mb3.6/10, mb1 3.8/12, mb1mx3.7/33, mbtmp4.1/12, Error ellipse: s-maj=25.8km s-min=11.3km az=109.0*

ISC 03 17:41:15.1±0.4**, 7°.19S**±0°.05×**146°.11E**±0°.06**, h170^{km}, n75, σ1^{s}.11**/77**, mb4.5**/30**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	2.44	155	P	Pn	17 41 55.3	-1.3
	18nm,0.3s,baz=48,slow=4.7,SNR=56						
PMG				S	Sn	17 42 26.2	-2.6
	12nm,0.3s,baz=239,slow=23,SNR=22						
PMG	Port Moresby	2.44	155		Pn	17 41 55.2	-1.3
PMG	Port Moresby	2.44	155	P	Pn	17 41 55.2	-1.3
RABL	Rabaul	6.72	64	Pn	Pn	17 42 51.3	-0.4
RABL	Rabaul	6.72	64	P	Pn	17 42 52.7	+1.0
COEN	Coen	7.32	203	Pn	Pn	17 43 01.0	+1.5
HNR	Honiara	13.88	100	Pn	Pn	17 44 23.7	-1.1
SAUI	Saumlaki	14.70	266	P	Pn	17 44 35.9	+0.8
MTN	Manton Dam	15.78	248	P	Pn	17 44 45.5	-2.8
MTN				IAmb	IAmb	17 44 51.1	
	comp=Z,18nm,0.9s						
WB0	Warramunga Arr	16.90	221		P	17 45 00.8	-0.2
WR0	Warramunga Arr	16.94	220	P	P	17 45 00.5	-1.0
WRAB	Tennant Creek	17.05	221		Pn	17 45 02.9	-0.7
WB2	Warramunga Arr	17.05	221	P	P	17 45 02.5	-0.2
WRA	Warramunga Arr	17.06	221	P	P	17 45 02.8	0.0
	comp=Z,1.3nm,0.3s,baz=41,slow=11,SNR=48						
WRA	Warramunga Arr	17.06	221	P	P	17 45 02.4	-0.4
PATS	Pohnpei	18.50	41		P	17 45 19.0	+0.4
EIDS	Eidsvold	18.69	166	P	Pn	17 45 22.1	-0.9
EIDS				IAmb	IAmb	17 45 22.9	
	comp=Z,16nm,0.8s						
AS31	Alice Springs	20.14	214	P	P	17 45 36.6	+0.3
AS31				IAmb	IAmb	17 45 42.8	
	comp=Z,6.0nm,0.3s						
ASAR	Alice Springs	20.14	214	P	P	17 45 36.5	+0.2
	comp=Z,3.4nm,0.6s,baz=44,slow=8.5,SNR=56						
ASAR				S	S	17 49 11.9	-1.4
	comp=Z,0.9nm,0.9s,baz=36,slow=21,SNR=2.4						
ASAR	Alice Springs	20.14	214	P	P	17 45 36.2	0.0
ASAR					S	17 49 15.9	+2.6
TNTI	Ternate	20.30	292	P	P	17 45 36.8	-1.2
TNTI				IAmb	IAmb	17 45 49.3	
	comp=Z,30nm,1.2s						
FITZ	Fitzroy Crossi	22.69	240	P	P	17 46 01.7	-0.8
	comp=Z,4.8nm,0.5s,baz=53,slow=9.3,SNR=18						
FITZ	Fitzroy Crossi	22.69	240	P	P	17 46 01.6	-0.9
ARMA	Armidale	23.68	168	P	P	17 46 12.7	+1.2
ARMA				IAmb	IAmb	17 46 26.0	
	comp=Z,47nm,1.6s						
MMRI	Maumere	23.68	265	P	P	17 46 10.9	-0.6
MMRI				IAmb	IAmb	17 46 35.5	
	comp=Z,41nm,1.3s						
STKA	Stephens Creek	24.92	189	P	P	17 46 20.8	-1.8
	baz=356,slow=9.3,SNR=12						
STKA	Stephens Creek	24.92	189	P	P	17 46 22.7	+0.1
LHI	Lord Howe Isla	27.07	155	P	P	17 46 44.8	+3.0
BBOO	Buckleboo	27.15	199	P	P	17 46 42.7	+0.1
BBOO				IAmb	IAmb	17 46 48.8	
	comp=Z,56nm,1.7s						
CAN	Canberra	28.12	175	P	P	17 46 53.1	+1.8
CAN				IAmb	IAmb	17 47 13.4	
	comp=Z,27nm,1.4s						
FORT	Forrest	28.92	213	P	P	17 46 58.6	+0.3
FORT				IAmb	IAmb	17 47 25.2	
	comp=Z,26nm,1.0s						
PSA00	Pilbara Seismi	29.11	238	P	P	17 46 60.0	-0.2
PSA00				IAmb	IAmb	17 47 01.2	
	comp=Z,17nm,1.3s						
TOO	Toolangi	30.25	181	P	P	17 47 11.6	+1.6
TOO				IAmb	IAmb	17 47 30.7	
	comp=Z,22nm,1.4s						
TAU	Tasmania Unive	35.59	178	P	P	17 47 55.9	-0.4
MORW	Morawa	35.72	229	P	P	17 47 57.4	-0.2
MORW				IAmb	IAmb	17 47 59.6	
	comp=Z,12nm,1.3s						
NWAO	Narrogin (SRO)	37.06	222	P	P	17 48 08.7	-0.2
NWAO				IAmb	IAmb	17 48 16.8	
	comp=Z,12nm,1.0s						
YULB	Yu-li	38.88	322	P	P	17 48 22.6	-1.7
QRZ	Quartz Range	40.95	149	P	P	17 48 42.4	+1.3
JSU	Suzuyama	41.28	340	P	P	17 48 42.0	-1.9
NNZ	Nelson	41.67	149	P	P	17 48 47.9	+0.9
BKZ	Black Stump Fm	41.96	144	P	P	17 48 50.6	+1.2
BKZ				IAmb	IAmb	17 49 01.3	
	comp=Z,30nm,1.5s						
SNZO	South Karori	42.44	148	P	P	17 48 54.2	+1.1
MLZ	Mavora Lakes	42.55	157	P	P	17 48 55.0	+0.9
JWT	Wachi	43.43	347	P	P	17 49 01.4	+0.2
JWT				IAmb	IAmb	17 49 21.8	
	comp=Z,30nm,1.4s						
MJAR	Matsushiro Arr	44.13	351	P	P	17 49 05.4	-1.4
	comp=Z,2.0nm,0.8s,baz=185,slow=9.6,SNR=5.0						
MJAR	Matsushiro Arr	44.13	351	IAmb	IAmb	17 49 06.4	
	comp=Z,1.5nm,0.8s						
MAJO	Matsushiro	44.13	351	P	P	17 49 06.1	-0.6
MAJO				IAmb	IAmb	17 49 07.7	
	comp=Z,37nm,1.8s						
IPM	Ipoh	46.46	283	P	P	17 49 25.6	+0.1
KULM	Kulim	47.02	284	P	P	17 49 30.0	+0.1
KULM				IAmb	IAmb	17 49 43.5	
	comp=Z,30nm,1.4s						
KSRS	Korea Array	47.55	340	P	P	17 49 33.5	+0.1
	comp=Z,2.2nm,0.8s,baz=160,slow=8.4,SNR=7.0						
CMAR	Chiang Mai Arr	53.04	299	P	P	17 50 15.7	+0.6
	comp=Z,2.6nm,0.7s,baz=123,slow=5.8,SNR=24						
PEA0B	Petropavlovsk-	60.87	8	P	P	17 51 10.1	+0.6
PETK	Petropavlovsk-	60.87	8	P	P	17 51 09.9	+0.4
	comp=Z,2.7nm,0.8s,baz=153,slow=6.3,SNR=5.2						
PETK	Petropavlovsk-	60.87	8	P	P	17 51 10.2	+0.7
SONM	Songino Array	65.01	332	P	P	17 51 38.4	+1.2
	comp=Z,1.1nm,1.0s,baz=145,slow=5.4,SNR=6.2						
TLY	Talaya	68.99	333	P	P	17 52 02.8	+0.8
YAK	Yakutsk	70.18	352	P	P	17 52 09.1	+0.1
VNDA	Vanda	70.79	176	P	P	17 52 13.2	+0.7
VNDA				IAmb	IAmb	17 52 28.4	
	comp=Z,36nm,1.8s						
WMQ	Urumqi	73.12	320	*e*P	P	17 52 27.7	+0.6
MKAR	Makanchi Array	77.85	321	P	P	17 52 54.9	+1.0
	comp=Z,0.7nm,0.6s,baz=98,slow=7.5,SNR=8.3						
ZALV	Zalesovo Beam	79.54	328	P	P	17 53 02.6	-0.3
	comp=Z,0.5nm,0.4s,baz=108,slow=4.8,SNR=5.0						
NIL	Nilore	79.90	306	P	P	17 53 05.9	+0.6
SVW2	Sparrevohn	81.69	25	P	P	17 53 15.5	+1.3
SVW2				IAmb	IAmb	17 53 36.1	
	comp=Z,12nm,1.4s						
BRLK	Bradley Lake	83.07	27	P	P	17 53 22.3	+0.9
SUA	Susitna One	83.91	26	P	P	17 53 25.3	-0.5
SUA				IAmb	IAmb	17 53 28.0	
	comp=Z,12nm,1.3s						
PPLA	Purkeypile	83.98	24	P	P	17 53 26.1	-0.1
PPLA				IAmb	IAmb	17 53 27.7	
	comp=Z,17nm,1.6s						
KTH	Kantishna Hill	84.79	24	P	P	17 53 28.8	-1.4
KTH				IAmb	IAmb	17 53 30.1	
	comp=Z,6.8nm,1.0s						
GHO	Glory Hole Cre	84.82	26	P	P	17 53 29.9	-0.5
GHO				IAmb	IAmb	17 53 34.4	
	comp=Z,14nm,1.5s						
KNK	Knik Glacier	84.87	26	P	P	17 53 28.7	-1.9
KNK				IAmb	IAmb	17 53 31.9	
	comp=Z,6.4nm,0.9s						
TRF	Thorofare Moun	85.00	24	P	P	17 53 30.7	-0.6
TRF				IAmb	IAmb	17 53 40.9	
	comp=Z,15nm,1.8s						
BPAW	Bear Paw Mtn.	85.02	23	P	P	17 53 31.1	-0.1
ILAR	Eielson Array	86.92	23	P	P	17 53 39.0	-1.4
	comp=Z,2.7nm,0.8s,baz=257,slow=4.9,SNR=28						
TORD	Torodi Ar. Bea	144.50	283	PKP	PKPdf	18 00 31.9	-0.4
	comp=Z,4.7nm,0.8s,baz=65,slow=3.3,SNR=12						
TORD	Torodi Ar. Bea	144.50	283		PKPdf	18 00 31.8	-0.5
DBIC	Dimbokro	151.17	271	PKPbc	PKPbc	18 00 48.7	-0.6
	comp=Z,5.8nm,0.7s,baz=82,slow=3.6,SNR=8.9						

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*UPP **03** 18:01:41.3±0.1, 67°.07N×20°.90E, h0^{km}, ML2.1, Explosion*

*IDC **03** 18:01:42.7±1.1, 67°.06N×21°.05E, h0^{km}, mb1 3.1/4, mb1mx2.9/46, mbtmp3.1/4, ML1.9/4, Error ellipse: s-maj=12.6km s-min=4.3km az=152.0*

*NAO **03** 18:01:43.2±0.8, 67°.06N×21°.04E, ML2.6*

*BER **03** 18:01:45.2±2.9, 67°.01N×20°.95E, h0^{km}, ML1.7, ML2.6(NAO), Suspected explosion*

ISC 03 18:01:41.2±0.8**, 67°.09N**±0°.03×**20°.92E**±0°.03**, h0^{km}, n34, σ1^{s}.20**/44**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MASU	Masugnsbyn	0.56	48	P	Pg	18 01 52.1	+0.2
ERTU	Ertsjaerv	0.74	136	P	Pg	18 01 55.3	+0.1
PAJU	Pajala	0.86	93	P	Pg	18 01 57.4	-0.4
KUA	Kurravaara	0.90	346	P	Pg	18 01 58.5	+0.1
RATU	Laukkuluspa	0.90	326	P	Pg	18 01 58.3	-0.1
RATU				S	Sg	18 02 10.0	0.0
HARU	Harads	0.93	179	P	Pg	18 01 57.6	-1.4
SALU	Saltoluokta	0.98	288	P	Pg	18 01 59.9	-0.1
LANU	Lannavaara	1.05	23	P	Pg	18 02 00.9	-0.4
NIKU	Nikkaluokta	1.07	318	P	Pg	18 02 01.4	-0.3

KIF	Kilpisjarvi	1.93	359	Pn	Pb	18 02 17.4	+0.2
KIF				Sn	Sg	18 02 43.3	+0.3
KIF	Kilpisjarvi	1.93	359	Pn	Pb	18 02 17.4	+0.2
KIF				Sn	Sg	18 02 43.3	+0.3
KTK1	Kautokeino	2.12	23	Pn	Pg	18 02 21.1	-0.7
KTK1				Sn	Sg	18 02 48.3	-0.9
KTK1	Kautokeino	2.12	23	*e*P	Pb	18 02 19.9	-0.5
KTK1				*e*S	Sb	18 02 46.5	-0.8
KTK1				IAML		18 03 01.6	
	comp=Z,9.7nm,0.2s						
I37NO	I37NO	2.18	338	*i*		18 17 36.8	
	baz=154,slow=325,SNR=1.5						
STEI	Steigen	2.34	294	Pn	Pb	18 02 23.4	-0.8
STEI	Steigen	2.34	294	Pn	Pb	18 02 23.4	-0.8
JETT	Jettan, Norway	2.49	356	Pn	Pb	18 02 26.6	-0.1
JETT				Sn	Sg	18 02 59.6	-1.4
MOR8	Moi Rana	2.74	253	Pn	Pn	18 02 28.0	+1.6
MOR8				Sn	Sb	18 03 04.9	-0.2
OUL	Oulu	2.86	132	Pn	Pn	18 02 29.0	+1.1
OUL				Sn	Sn	18 03 02.5	-0.4
OUL	Oulu	2.86	132	Pn	Pn	18 02 29.0	+1.1
OUL				Sn	Sn	18 03 02.5	-0.4
ARA0	ARCESS Array S	2.99	33	Pn	Pn	18 02 31.6	+1.8
	baz=212,slow=14						
ARA0	ARCESS Array S	2.99	33	Pn	Pn	18 02 31.6	+1.8
	baz=212,slow=14						
ARCES	ARCESS Array B	2.99	33	Pn	Pn	18 02 30.6	+0.8
	baz=213,slow=13,SNR=7.2						
ARCES				Sn	Sb	18 03 09.9	-2.4
	baz=215,slow=25,SNR=6.2						
APA0	Apatity Array	4.70	78	Pn	Pn	18 02 55.6	+2.3
	baz=282,slow=11						
APA0	Apatity Array	4.70	78	Pn	Pn	18 02 55.6	+2.3
	baz=282,slow=11						
FIA0	FINESS Array S	6.09	156	Pn	Pn	18 03 14.4	+2.0
	baz=345,slow=14						
FIA0	FINESS Array S	6.09	156	Pn	Pn	18 03 14.4	+2.0
	baz=345,slow=14						
FINES	FINESS Array B	6.09	156	Pn	Pn	18 03 14.3	+1.9
	comp=Z,0.1nm,0.3s,baz=347,slow=13,SNR=6.7						
FINES				Sn	Sn	18 04 22.2	-0.5
	comp=Z,0.2nm,0.3s,baz=343,slow=23,SNR=1.9						
NOA	NORSAR Array B	7.40	220	Pn	Pn	18 03 30.3	-0.1
	comp=Z,0.0nm,0.3s,baz=43,slow=21,SNR=0.9						
NRA0	NORESS Array S	7.59	217	Pn	Pn	18 03 35.1	+2.2
	baz=30,slow=12						
NRA0	NORESS Array S	7.59	217	Pn	Pn	18 03 35.1	+2.2
	baz=30,slow=12						
HFS	Hagfors	7.68	208	Pn	Pn	18 03 34.0	-0.2
	comp=Z,0.1nm,0.3s,baz=21,slow=12,SNR=1.8						
HFS	Hagfors	7.68	208	Pn	Pn	18 03 34.4	+0.2
	baz=20,slow=12						
HFS	Hagfors	7.68	208	Pn	Pn	18 03 34.4	+0.2
	baz=20,slow=12						

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*IDC **03** 18:51:15.8±1.2, 28.°37N×130.°91E, h0^{km}, mb3.4/8, mb1 3.6/10, mb1mx3.5/36, mbtmp3.4/10, ML3.2/2, Error ellipse: s-maj=30.4km s-min=22.2km az=112.0*

*JMA **03** 18:51:19.1, 28.°39N×130.°75E, h62^{km}±1^{km}, M3.3*

ISC 03 18:51:19.7±1.9**, 28.°38N**±0.°03×**130.°76E**±0.°05**, h26**^{km}±14^{km}**, n30, σ1^{s}31**/47**, mb3.4**/8**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JZK	Kikaishima	0.69	265	P	Pb	18 51 33.5	+0.3
JAM	Amami Oshima	1.02	272	P	Pn	18 51 37.6	-0.7
JAM				S	Sn	18 51 51.3	-0.4
JAMN	Amaminishikomi	1.40	265	P	Pn	18 51 42.8	-0.8
JAMN				S	Sn	18 52 00.6	-0.7
JTAJ	Takarajima	1.57	300	P	Pn	18 51 44.9	-1.0
JTAJ				*e*S	Sn	18 52 04.1	-1.3
JNN	Nakanoshima	1.65	332	P	Pn	18 51 46.5	-0.6
JNN				*e*S	Sn	18 52 06.1	-1.3
JTK	Tokunoshima	1.70	250	P	Pn	18 51 47.4	-0.4
JTK				*e*S	Sn	18 52 08.3	-0.4
JYAK	Yakushimahirau	1.86	353	P	Pn	18 51 49.3	-0.7
JYAK				S	Sn	18 52 11.0	-1.7
JMTN	Minamitane	2.02	4	P	Pn	18 51 51.3	-0.8
JMTN				*e*S	Sn	18 52 15.4	-1.1
JKC	Kuchinoerabu	2.13	347	P	Pn	18 51 53.2	-0.5
JKC				*e*S	Sn	18 52 18.3	-1.0
JOKE	Okinoerabujima	2.19	243	P	Pn	18 51 53.9	-0.5
JTN	Tanegashima 3	2.28	5	P	Pb	18 51 54.9	-0.8
JTN				*e*S	Sn	18 52 21.3	-1.6
JYRO	Yoronjima	2.45	237	P	Pn	18 51 57.4	-0.6
JYRO				*e*S	Sn	18 52 25.1	-2.1
JKDJ	Kitadaitoujima	2.47	169	P	Pn	18 51 58.0	-0.3
JKDJ				*e*S	Sn	18 52 25.3	-2.3
JMZ	Minamidaito 2	2.58	171	P	Pn	18 51 59.6	-0.3
JOW	Kunigami	2.69	236	Pn	Pn	18 52 00.1	-1.2
	15nm,0.3s,baz=102,slow=22,SNR=86						
JOW				Sn	Sn	18 52 31.7	-1.4
	11nm,0.3s,baz=63,slow=30,SNR=11						
JOW	Kunigami	2.69	236	P	Pn	18 52 00.5	-0.8
JOW				*e*S	Sn	18 52 31.8	-1.3
JTSR	Tashiro 2	2.78	3	P	Pn	18 52 02.4	-0.3
JTSR				*e*S	Sn	18 52 33.7	-1.7
JIH	Iheya	2.81	242	P	Pn	18 52 02.2	-0.8
JIH				*e*S	Sn	18 52 33.3	-2.8
JNTH	Nagotoyohara	3.06	233	P	Pn	18 52 05.6	-0.8
JSU	Suzuyama	3.13	355	P	Pn	18 52 07.3	-0.1
JNAR	Kushima--Naru	3.17	8	P	Pn	18 52 08.0	+0.1
JNAR				*e*S	Sn	18 52 45.1	+0.2
JNU	Nakatsue	4.73	1	Pn	Pn	18 52 28.9	-0.5
	0.5nm,0.3s,baz=181,slow=18,SNR=2.3						
JNU				Sn	Sn	18 53 19.6	-3.8
	0.6nm,0.3s,baz=186,slow=18,SNR=1.1						
SONM	Songino Array	27.10	322	P	P	18 57 01.8	+1.3
	0.2nm,0.4s,baz=128,slow=8.6,SNR=1.8						
CMAR	Chiang Mai Arr	30.74	258	P	P	18 57 34.5	+1.5
	0.3nm,0.5s,baz=59,slow=7.0,SNR=4.5						
MKAR	Makanchi Array	41.84	310	P	P	18 59 06.5	-1.0
	0.2nm,0.5s,baz=99,slow=4.7,SNR=2.3						
KURBB	Kurchatov Arra	44.90	315	P	P	18 59 34.6	+2.6
	0.3nm,0.7s,baz=101,slow=4.9,SNR=1.6						
WRA	Warramunga Arr	48.16	175	P	P	18 59 58.4	+0.4
	0.5nm,0.8s,baz=350,slow=8.1,SNR=4.7						
ILAR	Eielson Array	61.48	29	P	P	19 01 33.1	-0.8
	0.2nm,0.7s,baz=274,slow=7.6,SNR=2.4						
FINES	FINESS Array B	72.10	331	P	P	19 02 42.4	+0.9
	3.1nm,1.1s,baz=47,slow=8.4,SNR=3.6						
YKA	Yellowknife Ar	75.63	26	P	P	19 03 01.6	-0.6
	0.2nm,0.6s,baz=303,slow=5.0,SNR=2.9						

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*TAP **03** 19:29:55.9, 25.°53N×122.°82E, h259^{km}±1^{km}, ML3.4, D*

*JMA **03** 19:29:57.7±0.2, 25.°56N×122.°50E, h245^{km}±3^{km}, M3.6*

ISC 03 19:29:56.5±2.0**, 25.°48N**±0.°09×**122.°51E**±0.°04**, h261**^{km}±11^{km}**, n65, σ0^{s}84**/112**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIPB	Shuangxi	0.80	231	P	Pn	19 30 31.7	-0.2
	baz=242						
TIPB				*e*S	S	19 31 01.9	+2.2
	baz=242						
TWA	Mucha	0.98	240	*e*P	Pn	19 30 34.4	+1.7
	baz=237						
TWA				*e*S	S	19 31 01.6	+0.4
	baz=237						
TWC	Suao	1.05	215	*e*P	Pn	19 30 33.2	0.0
	baz=222						
TATO	Taipei	1.05	242	*e*P	Pn	19 30 34.6	+1.5
	baz=238						
TWE	Neicheng	1.07	226	*e*P	Pn	19 30 34.4	+1.2
	baz=223						
TWE				*e*S	S	19 31 02.3	+0.2
	baz=223						
JYNG	Yonagunijimaku	1.09	159	P	Pn	19 30 33.4	0.0
JYNG				S	S	19 31 01.8	-0.6
YOJ	Yonaguni jima	1.10	156	*e*P	Pn	19 30 30.7	-2.8
	baz=163						
NWLT	Wulai	1.15	233	*e*P	Pn	19 30 34.1	+0.4
	baz=237						
NWLT				*e*S	S	19 31 02.2	-0.8
	baz=237						
ENTT	Nioudou	1.20	226	*e*P	Pn	19 30 34.8	+0.8
	baz=226						
ENTT				*e*S	S	19 31 03.3	-0.2
	baz=226						
ENA	Nanau	1.26	214	*e*P	Pn	19 30 34.8	+0.5
	baz=227						
ENA				*e*S	S	19 31 04.3	+0.2
	baz=227						
NDT	Datong Townshi	1.26	226	P	Pn	19 30 35.2	+0.9
	baz=224						
NDT				*e*S	S	19 31 04.2	0.0
	baz=224						
YHNB	Yeheng	1.31	232	*e*P	Pn	19 30 34.9	+0.1
	baz=228						
YHNB				*e*S	S	19 31 03.2	-1.6
	baz=228						
NSK	Sanguang	1.32	233	*e*P	Pn	19 30 35.4	+0.6
	baz=229						
NSK				*e*S	S	19 31 03.7	-1.3
	baz=229						
NNS	Nan Shan	1.46	225	P	Pn	19 30 36.6	+0.7
	baz=224						
NNS				*e*S	S	19 31 06.4	-0.5
	baz=224						
NNSB	Datong	1.46	225	P	Pn	19 30 36.5	+0.7
	baz=229						
NNSB				*e*S	S	19 31 06.1	-0.8
	baz=229						
NNSH	Datong	1.46	225	*e*P	Pn	19 30 36.4	+0.5
	baz=224						
NNSH				*e*S	S	19 31 06.7	-0.2
	baz=224						
NACB	Ninganchiao	1.54	213	P	Pn	19 30 36.3	0.0
	baz=226						
NACB				*e*S	S	19 31 06.2	-1.5
	baz=226						
ETLH	Xiulin Townshi	1.57	217	P	Pn	19 30 37.1	+0.5
	baz=226						
ETLH				*e*S	S	19 31 07.8	-0.5
	baz=226						
IRIF	Iriomote-Funau	1.58	136	P	Pn	19 30 36.7	+0.1
IRIF				*e*S	S	19 31 07.9	-0.3
LIOB	Emei	1.59	239	*e*P	Pn	19 30 37.2	+0.6
	baz=237						
LIOB				S	S	19 31 08.8	+0.4
	baz=237						
NSTT	Nanjuang	1.61	239	*e*P	Pn	19 30 38.4	+1.6
	baz=237						
NSTT				S	S	19 31 08.2	-0.3
	baz=237						
TWD	Chiawan	1.62	211	*e*P	Pn	19 30 37.1	+0.2
	baz=224						
FUSS	Fushou	1.68	224	*e*P	Pn	19 30 38.4	+0.7
	baz=227						
FUSS				S	S	19 31 09.9	-0.2
	baz=227						
TDCB	Techi	1.73	226	*e*P	Pn	19 30 39.1	+1.2
	baz=227						
TDCB				*e*S	S	19 31 10.1	-0.5
	baz=227						
WHF	Hehuan Shan	1.74	221	*e*P	Pn	19 30 39.1	+0.7
	baz=225						
WHF				*e*S	S	19 31 10.7	-0.7
	baz=225						
JKRS	Kuro-shima	1.83	132	P	Pn	19 30 39.3	+0.7
JKRS				S	S	19 31 11.4	-0.4
HATJ	Hateruma jima	1.84	140	P	Pn	19 30 39.5	+0.9
HATJ				*e*S	S	19 31 11.8	-0.1
JIJ	Ishigaki jima	1.85	126	P	Pn	19 30 38.9	+0.2
JIJ				S	S	19 31 10.4	-1.6
JISG	Ishigakijimahi	1.85	118	P	Pn	19 30 39.0	+0.3
JISG				S	S	19 31 11.1	-1.0
WHP	Taichung City	1.86	230	*e*P	Pn	19 30 39.8	+0.9
	baz=230						
WHP				*e*S	S	19 31 12.1	-0.2
	baz=230						
CHGB	Renai	1.86	221	*e*P	Pn	19 30 40.4	+1.3
	baz=221						
CHGB				*e*S	S	19 31 12.7	0.0
	baz=221						
ESL	Shilin	1.92	211	*e*P	Pn	19 30 39.1	-0.2
	baz=215						
ESL				*e*S	S	19 31 11.9	-1.4
	baz=215						
VWDT	VWDT	2.12	216	*e*P	Pn	19 30 42.3	+1.3
	baz=220						
JTJ	Tarama	2.15	112	P	Pn	19 30 42.3	+1.0
JTJ				S	S	19 31 16.3	-0.4
SMLT	Sun Moon Lake	2.16	223	*e*P	Pn	19 30 42.4	+0.8
	baz=226						
SMLT				*e*S	S	19 31 17.0	-0.2
	baz=226						
TYC	Yuchr	2.17	224	*e*P	Pn	19 30 42.6	+1.1
	baz=221						
TYC				*e*S	S	19 31 16.3	-0.8
	baz=221						
SSLB	Suanglung	2.20	221	P	Pn	19 30 42.2	+0.3
	baz=230						
SSLB				*e*S	S	19 31 17.1	-0.7
	baz=230						
HGSD	Ruisui	2.21	207	*e*P	Pn	19 30 42.6	+0.7
	baz=217						
HGSD				*e*S	S	19 31 17.4	-0.4
	baz=217						
EHY	Hungye	2.24	209	*e*P	Pn	19 30 43.3	+1.1
	baz=213						
YULB	Yu-li	2.35	208	*e*P	Pn	19 30 42.5	-0.8
	baz=215						
JIRB	Irabujima	2.49	104	P	Pn	19 30 45.1	+0.5
JIRB				S	S	19 31 21.2	-1.4
ALS	Alishan	2.50	219	*e*P	Pn	19 30 45.7	+0.7
	baz=229						
ALS				S	S	19 31 23.2	-0.1
	baz=229						
CHN5	Tsauling	2.51	222	*e*P	Pn	19 30 45.5	+0.7
	baz=225						
CHN5				*e*S	S	19 31 22.6	-0.6
	baz=225						
JIKM	Ikemajima	2.54	102	P	Pn	19 30 45.9	+0.9
JIKM				S	S	19 31 22.8	-0.5
JMJ	Miyako jima 2	2.60	104	*e*P	Pn	19 30 46.4	+0.8
	baz=108						
ELDTW	Lidau	2.65	211	*e*P	Pn	19 30 47.3	+0.9
	baz=211						
JMJ2	Miyako jima3	2.65	105	P	Pn	19 30 47.2	+1.0
JMJ2				S	S	19 31 25.2	-0.3
JOGS	Gusukube	2.72	105	P	Pn	19 30 47.7	+0.9
JOGS				S	S	19 31 26.2	-0.4
CHN4	Tsaushan	2.75	220	*e*P	Pn	19 30 47.7	+0.6
	baz=217						
CHN4				*e*S	S	19 31 27.1	-0.1
	baz=217						
TPUB	Ta-pu	2.76	219	*e*P	Pn	19 30 48.1	+0.8
	baz=221						
TPUB				S	S	19 31 26.3	-1.3
	baz=221						
STYT	Tauyuan	2.81	215	*e*P	Pn	19 30 48.7	+0.8
	baz=217						
WTP	Ta-pu	2.81	218	*e*P	Pn	19 30 48.4	+0.5
	baz=221						
WTP				S	S	19 31 27.5	-1.2
	baz=221						
TWK	Hsinying	2.87	220	*e*P	Pn	19 30 49.4	+0.9
	baz=218						
TWK				*e*S	S	19 31 29.7	0.0
	baz=218						
CHN1	Nanshi	2.91	219	*e*P	Pn	19 30 49.3	+0.4
	baz=221						
CHN1				S	S	19 31 29.9	-0.5
	baz=221						
SGST	Jiashian	2.96	217	*e*P	Pn	19 30 49.3	-0.1
	baz=225						
SGST				*e*S	S	19 31 31.1	-0.3
	baz=225						
SLGT	Liugui	3.00	215	*e*P	Pn	19 30 50.5	+0.6
	baz=217						
SLGT				S	S	19 31 32.5	+0.4
	baz=217						
PTMZ	Houxiangcun	3.10	263	*e*P	Pn	19 30 50.4	-0.4
	baz=262						
SSD	Sandimen	3.21	213	*e*P	Pn	19 30 53.3	+1.1
	baz=208						
TSMG	Majia	3.24	212	*e*P	Pn	19 30 53.1	+0.7
	baz=208						
MASBT	Mashibuluo	3.33	211	*e*P	Pn	19 30 54.3	+0.9
	baz=214						
MASBT				*e*S	S	19 31 38.4	-0.1
	baz=214						
EAST	Anshuo	3.44	207	*e*P	Pn	19 30 55.8	+1.2
	baz=215						
SCZT	Fangliau	3.54	210	*e*P	Pn	19 30 56.5	+0.8
	baz=205						
SLIU	Shizi	3.60	206	*e*P	Pn	19 30 56.8	+0.3
	baz=213						
KNMB	Chin-men Tao	3.88	256	*e*P	Pn	19 30 58.7	-0.8
	baz=256						
AXDP	Jialang	4.16	263	*e*P	Pn	19 31 02.1	-0.6
	baz=262						

IDC 03 19:49:53.8±7.1**, 2.°16N**×**128.°45E, h75**^{km}±82^{km}**, mb3.1**/3**, mb1 3.3**/4**, mb1mx3.0**/37**, mbtmp3.4**/4**, ML3.1**/1**, Error ellipse: s-maj=113.3km s-min=28.0km az=71.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	4.12	137	P	Pn	19 50 54.3	-0.2
	1.1nm,0.3s,baz=288,slow=19,SNR=9.0						
SIJI				S	Sn	19 51 42.1	+0.6
	0.9nm,0.3s,baz=52,slow=23,SNR=1.3						
WRA	Warramunga Arr	22.71	166	P	P	19 54 48.7	-1.0
	1.6nm,0.9s,baz=344,slow=10,SNR=11						
ASAR	Alice Springs	26.22	169	P	P	19 55 21.9	+0.1
	0.4nm,0.8s,baz=357,slow=9.6,SNR=2.9						
MKAR	Makanchi Array	59.81	325	P	P	19 59 52.2	+0.8
	0.2nm,0.6s,baz=122,slow=5.4,SNR=3.2						

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*NEIC **03** 20:45:28.5±1.8, 56.°60N±0.°05×169.°3W±0.°1, h20^{km}±3^{km}, ML3.5/19(AEIC), Error ellipse: s-maj=11.2km s-min=3.8km az=54.0*

AEIC 03 20:45:27±3.2**, 56.°43N**±0.°06×**169.°8W**±0.°2**, h34**^{km}±8^{km}**, Error ellipse: s-maj=14.5km s-min=5.8km az=65.0, Pribilof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPIA	Saint Paul Isl	0.79	342		Pb	20 45 43.2	+0.9
SPIA					Sb	20 45 55.8	+3.1
MCIR	Makushin Cirqu	2.99	145		Pn	20 46 14.8	+2.7
MCIR					Sn	20 46 48.8	+2.1
MTBL	Makushin Table	3.05	143		Pn	20 46 15.3	+2.5
MSW	Makushin Switc	3.06	144		Pn	20 46 15.5	+2.6
MSW					Sn	20 46 51.2	+2.9
MNAT	Makushin Natee	3.12	144		Pn	20 46 15.3	+1.6
MNAT					Sn	20 46 52.4	+2.7
MGOD	Makushin Gods	3.13	146		Pn	20 46 15.9	+1.9
AKRB	Akutan Reef Bi	3.14	136		Pn	20 46 16.6	+2.5
AKRB					Sn	20 46 54.3	+4.0
MREP	Makushin Rep't	3.16	145		Pn	20 46 16.2	+1.9
UNV	Unalaska Valle	3.21	142		Pn	20 46 17.2	+2.3
UNV					Sn	20 46 54.6	+2.7
AKUT	Akutan	3.26	133	Pn	Pn	20 46 17.0	+1.4
AKSA	Akutan Strait	3.29	133		Pn	20 46 18.5	+2.5
AKSA					Sn	20 46 58.6	+4.7
NIKH	Nikolski High	3.51	171		Pb	20 46 25.0	-3.3
FALS	False Pass	3.95	111		Pn	20 46 29.0	+4.0
ADK	Adak	6.09	224	Pn	Pn	20 47 02.3	+7.9
CHGN	Chignik	6.33	86	Pn	Pn	20 46 55.0	-2.8
GAMB	Gambell	7.43	353		Pn	20 47 13.6	+0.8
ANM	Nome	8.45	13	Pn	Pn	20 47 26.8	0.0
SVW2	Sparrevohn	8.74	52	Pn	Pn	20 47 27.1	-3.7
OHAK	Old Harbor	9.09	78	Pn	Pn	20 47 35.4	-0.2
KDAK	Kodiak Island	9.47	75	Pn	Pn	20 47 39.5	-1.3
TTA	Tatalina	9.53	41	Pn	Pn	20 47 39.4	-2.2
CNPM	China Poot	10.33	65	Pn	Pn	20 47 51.6	-1.0
BRLK	Bradley Lake	10.55	64	Pn	Pn	20 47 53.8	-1.8
SKT	Skwentna	10.87	52	Pn	Pn	20 47 55.4	-4.6

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*IDC **03** 21:06:07.5±1.4, 38.°10N×144.°77E, h0^{km}, mb3.6/5, mb1 3.8/9, mb1mx3.6/43, mbtmp3.8/9, ML3.6/3, MS2.4/2, Ms1 2.4/2, ms1mx2.1/41, Error ellipse: s-maj=30.4km s-min=24.7km az=86.0*

*NEIC **03** 21:06:08.4±1.4, 38.°15N±0.°08×144.°8E±0.°1, h10^{km}±2^{km}, mb4.2/4, Error ellipse: s-maj=20.6km s-min=12.1km az=116.0*

*JMA **03** 21:06:11.1±0.2, 38.°27N×144.°56E, h48^{km}, M3.9*

*NIED **03** 21:06:11.2, 38.°27N×144.°56E, h48^{km}, MW3.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.77; $M_{\theta\theta}$-0.51; $M_{\phi\phi}$1.28; $M_{r\theta}$-1.36; $M_{\theta\phi}$0.28; $M_{\phi r}$-0.71; Fault plane solution: $M_0$1.90000×10^{14} NP1:ϕ_s47.00000°, δ77.00000°, λ-59.00000°. NP2:ϕ_s158.00000°, δ33.00000°, λ-155.00000°.*

ISC 03 21:06:08.7±1.0**, 38.°25N**±0.°05×**144.°66E**±0.°08**, h10**^{km}**, n51, σ2^{s}14**/65**, mb3.8**/7**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	Ofunato	2.49	291	P	Pn	21 06 48.7	-0.5
OFUJ				*e*S	Sn	21 07 17.0	-2.6
JIKH	Ishinomakikobu	2.52	272	P	Pn	21 06 49.4	-0.2
JIKH				*e*S	Sn	21 07 17.7	-2.7
JKMT	Kesennumamotoy	2.56	284	P	Pn	21 06 50.2	-0.1
JKMT				*e*S	Sn	21 07 19.5	-2.0
MIYJ	Miyakonagasawa	2.59	302	P	Pn	21 06 50.5	-0.1
JIO	Ouri	2.61	276	P	Pn	21 06 50.9	-0.1
JIO				*e*S	Sn	21 07 20.2	-2.5
JMK	Ichinoseki	2.79	286	P	Pn	21 06 53.7	+0.3
JMK				*e*S	Sn	21 07 25.2	-1.9
JOM	Ohasama	2.90	296	P	Pn	21 06 55.3	+0.3
JOM				*e*S	Sn	21 07 28.6	-1.3
JMM	Marumori	3.08	264		Pn	21 06 57.4	0.0
JANG	Nango	3.24	312	P	Pn	21 06 59.3	-0.3
JANG				*e*S	Sn	21 07 35.7	-2.5
JYK	Kaneyama	3.44	283	P	Pn	21 07 03.2	+0.9
JYK				*e*S	Sn	21 07 42.0	-1.1
JFT	Otama	3.50	259	P	Pn	21 07 03.9	+0.7
JFT				*e*S	Sn	21 07 43.2	-1.4
JTM	Tenmabayashi	3.76	314	Pn	Pn	21 07 08.7	+1.9
ERM	Erimo	3.94	343	Pn	Pn	21 07 09.6	+0.4
JYT	Yasato	4.09	242	Pn	Pn	21 07 10.6	-0.7
JOT	Ohata	4.19	320	P	Pn	21 07 12.6	0.0
JOT				*e*S	Sn	21 07 58.4	-3.2
JCH	Churui	4.48	348	P	Pn	21 07 16.3	-0.3
JCH				*e*S	Sn	21 08 04.9	-3.8
JSD	Sado	5.05	270	Pn	Pn	21 07 24.9	+0.4
JRY	Ryogami san	5.11	246	P	Pn	21 07 25.5	+0.1
JRY				*e*S	Sn	21 08 19.8	-4.6
NEM2	Nemuro 2	5.18	9	P	Pn	21 07 24.2	-2.0
NEM2				*e*S	Sn	21 08 19.4	-6.6
JEW	Eniwo	5.20	333	Pn	Pn	21 07 28.1	+1.5
JOD2	Odawara 2	5.37	238	P	Pn	21 07 28.4	-0.6
JOD2				*e*S	Sn	21 08 26.6	-4.3
MJAR	Matsushiro Arr	5.41	254	Pn	Pn	21 07 30.6	+1.1
	0.8nm,0.3s,baz=80,slow=15,SNR=34						
MJAR				LR	LR	21 09 40.5	
	comp=Z,28nm,20.1s,baz=75,slow=39						
MJAR	Matsushiro Arr	5.41	254		Pn	21 07 29.9	+0.4
MAJO	Matsushiro	5.41	254		Pn	21 07 30.9	+1.4
MAT	Matsushiro	5.41	254	P	Pn	21 07 30.7	+1.2
MAT				*e*S	Sn	21 08 30.6	-1.3
JOSM	Okushiri--Mats	5.52	316	P	Pn	21 07 32.2	+1.3
JTKR	Abashiri--Toko	5.75	355	P	Pn	21 07 33.8	-0.2
JTKR				*e*S	Sn	21 08 34.4	-5.6
ASAJ	Asahikawa	6.07	346	Pn	Pn	21 07 38.8	+0.3
	1.5nm,0.3s,baz=208,slow=13,SNR=15						
ASAJ				Sn	Sn	21 08 44.8	-3.2
	1.9nm,0.3s,baz=59,slow=19,SNR=2.6						
JGF	Kuroka	6.42	248		Pn	21 07 45.2	+1.9
JHJ	Hachijo jima 2	6.47	219	Pn	Pn	21 07 42.4	-1.6
	7.7nm,0.3s,baz=102,slow=7.4,SNR=2.4						
JHJ				Sn	Sn	21 08 51.8	-6.2
	4.3nm,0.3s,baz=259,slow=13,SNR=1.9						
INU	Inuyama	6.78	247	Pn	Pn	21 07 49.4	+1.2
JWT	Wachi	8.00	251	Pn	Pn	21 08 06.1	+1.1
JMN	Monobe	9.83	246	Pn	Pn	21 08 30.2	+0.1
USA0B	Ussuriysk Arra	11.24	306	Pn	Pn	21 08 51.9	+2.5
USRK	Ussuriysk Ar.	11.24	306	Pn	Pn	21 08 51.5	+2.2
	baz=99,slow=14,SNR=4.4						
KSRS	Korea Array	13.26	272	LR	LR	21 14 03.2	
	comp=Z,20nm,18.5s,baz=70,slow=36						
H11N2	WAKE ISLAND Hy	26.69	127	T	T	21 39 22.1	
	baz=319,slow=74,SNR=4.9						
H11N1	WAKE ISLAND Hy	26.70	128	T	T	21 39 22.9	
	baz=319,slow=74,SNR=6.6						
H11N3	WAKE ISLAND Hy	26.71	127	T	T	21 39 23.7	
	baz=319,slow=74,SNR=5.0						
SONM	Songino Array	29.30	302	P	P	21 12 13.5	+2.1
	0.3nm,0.6s,baz=94,slow=9.8,SNR=2.9						
ZALV	Zalesovo Beam	43.03	311	P	P	21 14 09.4	+1.2
	0.4nm,0.4s,baz=98,slow=8.5,SNR=2.5						
MK31	Makanchi Array	45.67	302	P	P	21 14 30.2	+0.7
MKAR	Makanchi Array	45.67	302	P	P	21 14 31.1	+1.6
	0.8nm,0.7s,baz=84,slow=9.7,SNR=9.9						

MKAR	Makanchi Array	45.67	302	P	P	21 14 30.5	+1.0
KURK	Kurchatov	47.23	308	P	P	21 14 42.1	+0.6
KURK				IAmb	IAmb	21 14 45.3	
	comp=Z,2.6nm,1.1s						
WB0	Warramunga Arr	58.51	191	P	P	21 16 03.9	-1.2
WRA	Warramunga Arr	58.69	191	P	P	21 16 05.5	-0.9
	comp=Z,0.5nm,0.6s,baz=11,slow=7.4,SNR=4.7						
ABKAR	Akbulak array	59.12	311	P	P	21 16 09.5	+0.2
ABKAR				IAmb	IAmb	21 16 12.3	
	comp=Z,1.7nm,1.1s						
ABKAR	Akbulak array	59.12	311	P	P	21 16 09.8	+0.6
ASAR	Alice Springs	62.41	191	P	P	21 16 31.4	-0.4
PDAR	Pinedale Array	74.97	47	P	P	21 17 51.6	+1.2
	comp=Z,0.2nm,0.6s,baz=321,slow=2.3,SNR=2.7						

*NEIC **03** 21:06:51.4±0.9, 43°80N±0°05×105°28W±0°05, h0^{km}±2^{km}, ML3.4/55, Error ellipse: s-maj=9.5km s-min=4.7km az=332.0*

*IDC **03** 21:06:51.4±1.0, 44°11N×105°67W, h0^{km}, mb3.7/1, mb1 3.5/6, mb1mx3.4/40, mbtmp3.3/6, ML2.9/4, Error ellipse: s-maj=23.7km s-min=8.5km az=145.0*

ISC 03 21:06:50.6±0.9**, 43°80N**±0°05×**105°31W**±0°06**, h0**^{km}**, n45,** σ**1^{s}21**/45**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	0.97	70	Pg	Pg	21 07 09.6	+0.4
K22A	Casper	1.46	218	Pn	Pn	21 07 17.5	-0.9
K22A				IAML		21 07 40.9	
	comp=N,689nm,0.3s						
K22A				IAML		21 07 42.1	
	comp=E,560nm,0.3s						
PHWY	Pilot Hill	2.50	183		Pn	21 07 33.3	+0.4
RWWY	Rawlins	2.54	214		Pn	21 07 33.7	+0.4
RWWY				IAML		21 08 11.5	
	comp=E,130nm,0.4s						
RWWY				IAML		21 08 12.0	
	comp=E,216nm,0.8s						
LAO	LASA Array	2.96	348	Pn	Pn	21 07 39.7	+0.8
RLMT	Red Lodge	3.13	296	Pn	Pn	21 07 42.4	+1.1
RLMT				IAML		21 08 32.6	
	comp=E,100nm,0.3s						
RLMT				IAML		21 08 35.8	
	comp=E,94nm,0.6s						
BW06	Boulder Array	3.27	253		Pn	21 07 44.2	+0.8
BW06				IAML		21 08 37.0	
	comp=E,74nm,0.4s						
BW06				IAML		21 08 41.5	
	comp=E,59nm,0.7s						
PD31	Pinedale Array	3.27	253		Pn	21 07 44.1	+0.7
PDAR	Pinedale Array	3.27	253	Pn	Pn	21 07 44.5	+1.2
	comp=E,5.3nm,0.3s,baz=68,slow=16,SNR=91						
PDAR				Lg	Lg	21 08 29.1	
	comp=E,21nm,0.3s,baz=308,slow=8.3,SNR=9.7						
PDAR	Pinedale Array	3.27	253	Pn	Pn	21 07 44.0	+0.7
YNE	Yellowstone No	3.58	291		Pn	21 07 48.5	+0.9
YMP	Mirror Lake Pl	3.61	287		Pn	21 07 49.2	+1.2
GCMT	Greycliff	3.69	304		Pn	21 07 50.1	+1.2
LKWY	Lake	3.74	283		Pn	21 07 51.0	+1.1
LKWY				IAML		21 08 22.4	
	comp=E,53nm,0.6s						
OGNE	Ogallala	3.75	139	Pn	Pn	21 07 50.7	+1.0
LOHW	Long Hollow	3.85	269		Pn	21 07 52.6	+1.4
FLWY	Flagg Ranch	3.91	276		Pn	21 07 53.2	+1.2
FLWY				IAML		21 09 04.7	
	comp=E,55nm,2.9s						
FLWY				IAML		21 09 04.8	
	comp=E,62nm,1.9s						
YPP	Pitchstone Pla	3.99	279		Pn	21 07 55.0	+1.7
ISCO	Idaho Springs	4.01	183	Pn	Pn	21 07 54.5	+1.0
REDW	Red Top Meadow	4.05	266		Pn	21 07 55.4	+1.2
REDW				IAML		21 09 02.0	
	comp=E,39nm,1.4s						
YHH	Holmes Hill	4.10	286	Pn	Pn	21 07 55.6	+0.8
O20A	White River Ci	4.27	212	Pn	Pn	21 07 58.6	+1.6
E28A	Huff	4.28	48		Pn	21 07 57.8	+0.8
YHL	Hebgen Lake	4.34	286		Pn	21 07 58.8	+0.7
AHID	Auburn Hatcher	4.36	258		Pn	21 07 59.8	+1.6
AHID				IAML		21 09 25.2	
	comp=E,39nm,0.8s						
RDMU	Red Mountain	4.52	226		Pn	21 08 01.7	+1.1
DGMT	Dagmar	4.73	9		Pn	21 08 04.3	+1.1
SMCO	Snowmass	4.79	196		Pn	21 08 06.7	+2.4
SMCO				IAML		21 08 38.6	
	comp=E,22nm,4.9s						
SMCO				IAML		21 08 43.9	
	comp=E,25nm,4.5s						
BOZ	Bozeman (W)	4.85	294		Pn	21 08 05.9	+1.0
BOZ				IAML		21 09 51.6	
	comp=E,20nm,4.6s						
BOZ				IAML		21 10 31.5	
	comp=E,20nm,4.5s						
KSCO	Kaye Shedlock'	5.20	156		Pn	21 08 09.7	0.0
EGMT	Eagleton	5.24	325	Pn	Pn	21 08 10.6	+0.3
HRY	Holter Researc	5.45	305		Pn	21 08 13.0	-0.2
JLU	Jordanelle	5.57	237		Pn	21 08 15.0	+0.1
CTU	Camp Tracy	5.70	239	Pn	Pn	21 08 17.1	+0.4
SPUT	South Promonto	5.83	247		Pn	21 08 19.3	+0.8
HVU	Hansel Valley	5.86	252		Pn	21 08 20.1	+1.3
PV07	Paradox Valley	5.92	206		Pn	21 08 20.4	+0.6
P17A	Butcher Ranch,	5.94	225		Pn	21 08 20.8	+0.9
PV04	Paradox Valley	6.05	208		Pn	21 08 21.8	+0.3
ELK	Elko	7.97	251	Pn	Pn	21 08 45.0	-2.9
	comp=E,0.2nm,0.3s,baz=175,slow=14,SNR=2.3						
ULM	Lac du Bonnet	9.11	42	Pn	Pn	21 09 00.8	-2.4
	comp=E,0.8nm,0.3s,baz=231,slow=12,SNR=7.5						
ULM				Lg	Lg	21 11 30.4	
	comp=E,0.3nm,0.3s,baz=276,slow=21,SNR=1.9						
NVAR	Mina Array Bea	11.17	246	Pn	Pn	21 09 34.2	+2.4
	comp=E,0.1nm,0.3s,baz=48,slow=12,SNR=3.7						
TXAR	Lajitas Array	14.50	174	Pn	P	21 10 24.2	+0.1
	comp=E,0.0nm,0.3s,baz=346,slow=10,SNR=2.8						
TXAR				Pg	Pg	21 11 18.1	
	comp=E,0.0nm,0.3s,baz=353,slow=14,SNR=4.1						
TXAR				Lg	Lg	21 14 31.8	
	comp=E,0.0nm,0.3s,baz=4.0,slow=27,SNR=3.3						
YKA	Yellowknife Ar	19.50	347	P	P	21 11 17.8	-1.2
	comp=E,0.1nm,0.3s,baz=153,slow=13,SNR=3.3						
MKAR	Makanchi Array	89.54	355	P	P	21 19 49.5	-0.2
	comp=E,0.4nm,0.8s,baz=13,slow=5.7,SNR=4.3						

IDC 03 21:27:51.3±9.9**, 19°12S**×**178°16W, h580**^{km}±110^{km}**, mb2.7**/4**, mb1 3.1**/4**, mb1mx2.8**/32**, mbtmp3.6**/4**, Error ellipse: s-maj=116.1km s-min=42.4km az=150.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	44.66	261	P	P	21 35 13.4	-0.3
	0.2nm,0.3s,baz=97,slow=6.9,SNR=7.2						
ASAR	Alice Springs	44.70	255	P	P	21 35 13.9	-0.1
	1.3nm,0.8s,baz=89,slow=8.2,SNR=12						
ASAR				PcP	PcP	21 36 43.8	-0.1
	0.2nm,0.4s,baz=100,slow=4.8,SNR=1.6						
TXAR	Lajitas Array	86.44	57	P	P	21 39 33.5	-0.1
	0.2nm,0.6s,baz=215,slow=7.7,SNR=2.4						
ILAR	Eielson Array	87.01	13	P	P	21 39 35.3	0.0
	0.4nm,1.0s,baz=225,slow=6.2,SNR=2.0						
GERES	GERESS Array B	148.84	345	PKPbc	PKPbc	21 46 33.7	-0.6
	0.5nm,0.7s,baz=354,slow=1.0,SNR=4.4						

*IDC **03** 21:37:38.4±1.0, 13°79N×145°23E, h106^{km}±9^{km}, mb3.4/6, mb1 3.7/6, mb1mx3.2/50, mbtmp3.7/6, Error ellipse: s-maj=38.3km s-min=30.2km az=107.0*

ISC 03 21:37:37.8±1.0**, 13°8N**±0°2×**145°5E**±0°2**, h100**^{km}**, n7,** σ**1^{s}56**/8**, mb3.5**/6**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	0.65	254	P	Pn	21 37 56.1	+1.3
	2µm,0.3s,baz=163,slow=2.9,SNR=427						
GUMO				S	Sn	21 38 08.0	+0.4
	528nm,0.3s,baz=144,slow=23,SNR=32						
WRA	Warramunga Arr	35.26	198	P	P	21 44 21.8	-1.3
	0.7nm,1.1s,baz=18,slow=9.0,SNR=2.2						
KURBB	Kurchatov Arra	64.89	320	P	P	21 48 05.7	-0.8
	2.0nm,0.2s,baz=105,slow=6.3,SNR=4.7						
ILAR	Eielson Array	68.14	25	P	P	21 48 25.6	-1.3
	0.2nm,0.4s,baz=247,slow=5.9,SNR=4.8						
BVAR	Borovoye Array	70.17	322	P	P	21 48 38.6	-1.1
	0.2nm,0.4s,baz=98,slow=10,SNR=4.8						
YKA	Yellowknife Ar	82.41	27	P	P	21 49 48.8	+0.1
	0.2nm,0.4s,baz=286,slow=4.3,SNR=4.6						
NVAR	Mina Array Bea	86.32	51	P	P	21 50 11.6	+2.3
	0.5nm,0.6s,baz=275,slow=3.3,SNR=4.1						

*SNET **03** 21:37:44.8±1.1, 12°87N×88°83W, h32^{km}±2^{km}, ML4.3*

*SSS **03** 21:37:44.8, 12°87N×88°83W, h32^{km}, ML4.3*

*INET **03** 21:37:44.2, 12°81N×88°82W, h16^{km}, MW3.9*

*UCR **03** 21:37:45.8±1.6, 12°92N×88°82W, h33^{km}±4^{km}, ML4.5, mb4.2(NEIC)*

*NEIC **03** 21:37:45.7±2.4, 12°96N±0°05×88°77W±0°04, h35^{km}±2^{km}, Error ellipse: s-maj=9.5km s-min=5.3km az=212.0*

*IDC **03** 21:37:48.0±4.0, 13°02N×88°56W, h87^{km}±29^{km}, mb3.4/8, mb1 3.8/11, mb1mx3.6/36, mbtmp3.8/11, MS3.1/4, Ms1 3.1/4, ms1mx2.7/26, Error ellipse: s-maj=42.6km s-min=27.5km az=28.0*

*GCG **03** 21:38:06.2±0.5, 14°18N×89°85W, h42^{km}±25^{km}, MD4.1*

ISC 03 21:37:44.9±1.0**, 12°88N**±0°06×**88°82W**±0°04**, h56**^{km}±8^{km}**, n112,** σ**1^{s}07**/146**, mb4.1**/13**, 4C-20D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JUCU	Jucuar¡n	0.67	56	⇓iP	Pn	21 37 58.2	-0.4
JUCU				eS	Sn	21 38 08.3	-0.3
JUCU				eS	Sn	21 38 08.3	-0.3
JUCU	Jucuar¡n	0.67	56	⇓iP	Pn	21 37 58.2	-0.4
JUCU				eS	Sn	21 38 08.3	-0.3
JUCU				eS	Sn	21 38 08.3	-0.3
COEB	Comit de Eme	0.68	25	eP	Pn	21 37 58.8	0.0
COEB				eS	Sn	21 38 09.0	+0.2
COEB	Comit de Eme	0.68	25	eP	Pn	21 37 58.8	0.0
COEB				eS	Sn	21 38 09.0	+0.2
TECA	Tecapa	0.69	27	⇓iP	Pn	21 37 58.9	0.0
TECA	Tecapa	0.69	27	⇓iP	Pn	21 37 58.9	0.0
COEG	Centro de Oper	0.74	355	⇓iP	Pn	21 37 59.5	0.0
COEG				eS	Sn	21 38 10.2	+0.1
COEG				IAML		21 38 14.0	
	comp=Z,13µm,0.3s						
COEG	Centro de Oper	0.74	355	⇓iP	Pn	21 37 59.5	0.0
COEG				eS	Sn	21 38 10.2	+0.1
COEG				IAML		21 38 14.0	
	comp=Z,13µm,0.3s						
LCY	Lacayo	0.75	43	⇓eP	Pn	21 37 59.7	+0.1
LCY	Lacayo	0.75	43	⇓eP	Pn	21 37 59.7	+0.1
UESV	Universidad de	0.76	2	eP	Pn	21 37 59.9	+0.2
UESV				eS	Sn	21 38 11.2	+0.7
UESV				IAML		21 38 13.6	
	comp=Z,13µm,0.5s						
UESV	Universidad de	0.76	2	eP	Pn	21 37 59.9	+0.2
UESV				eS	Sn	21 38 11.2	+0.7
UESV				IAML		21 38 13.6	
	comp=Z,13µm,0.5s						
RANC	El Ranchito	0.76	43	⇑iP	Pn	21 37 59.6	-0.1
RANC				IAML		21 38 13.0	
	comp=Z,11µm,0.3s						
RANC	El Ranchito	0.76	43	⇑iP	Pn	21 37 59.6	-0.1
RANC				IAML		21 38 13.0	
	comp=Z,11µm,0.3s						
PACA	Pacayal	0.76	39	eP	Pn	21 38 00.0	+0.2
PACA	Pacayal	0.76	39	eP	Pn	21 38 00.0	+0.2
LFRS	El Faro	0.78	342	⇓iP	Pn	21 37 60.0	0.0
LFRS	El Faro	0.78	342	⇓iP	Pn	21 37 60.0	0.0
LALI	Alcalda de L	0.78	321	eP	Pn	21 37 59.9	0.0
LALI				eS	Sn	21 38 10.0	-0.9
LALI				IAML		21 38 10.7	
	comp=Z,3µm,0.4s						
LALI	Alcalda de L	0.78	321	eP	Pn	21 37 59.9	0.0
LALI				eS	Sn	21 38 10.0	-0.9
LALI				IAML		21 38 10.7	
	comp=Z,3µm,0.4s						
PQSS	Presa 15 de Se	0.78	19	eP	Pn	21 38 00.3	+0.3
PQSS				eS	Sn	21 38 12.1	+1.1
PQSS				IAML		21 38 13.0	
	comp=Z,8µm,0.2s						
PAVA	Las Pavas	0.84	352	⇓iP	Pn	21 38 01.1	+0.3
PAVA				eS	Sn	21 38 13.4	+0.9
PAVA				IAML		21 38 14.6	
	comp=Z,12µm,0.5s						
PAVA	Las Pavas	0.84	352	⇓iP	Pn	21 38 01.1	+0.3
PAVA				eS	Sn	21 38 13.4	+0.9
PAVA				IAML		21 38 14.6	
	comp=Z,12µm,0.5s						
CNRM	Centro Naciona	0.87	47	eP	Pn	21 38 01.2	+0.1
CNRM				eS	Sn	21 38 13.6	+0.6
CNRM				IAML		21 38 14.3	
	comp=Z,7652µm,0.1s						
CNRM	Centro Naciona	0.87	47	eP	Pn	21 38 01.2	+0.1
CNRM				eS	Sn	21 38 13.6	+0.6
CNRM				IAML		21 38 14.3	
	comp=Z,7652µm,0.1s						
LBRS	Las Brisas	0.88	346	eP	Pn	21 38 01.8	+0.4
LBRS	Las Brisas	0.88	346	eP	Pn	21 38 01.8	+0.4
IGN	Direccin Gen	0.90	338	eP	Pn	21 38 01.8	+0.3
IGN	Direccin Gen	0.90	338	eP	Pn	21 38 01.8	+0.3
SNET	Serv Nac Est T	0.90	334		Pn	21 38 01.4	-0.1
SNET				Sn	Sn	21 38 13.7	-0.1
LFU	La Fuente	0.91	342	eP	Pn	21 38 02.1	+0.4
LFU	La Fuente	0.91	342	eP	Pn	21 38 02.1	+0.4
PMON	Piamonte	0.96	330	⇑iP	Pn	21 38 02.4	0.0
PMON	Piamonte	0.96	330	⇑iP	Pn	21 38 02.4	0.0
BOQS	Boqueron	0.96	332	eP	Pn	21 38 03.1	+0.6
BOQS	Boqueron	0.96	332	eP	Pn	21 38 03.1	+0.6
JAYA	Jayaque - finc	0.98	322	eP	Pn	21 38 02.5	-0.2
JAYA				eS	Sn	21 38 15.9	+0.1
JAYA				IAML		21 38 16.6	
	comp=Z,5µm,0.2s						
JAYA				IAML		21 38 17.0	
	comp=N,15µm,0.3s						
JAYA	Jayaque - finc	0.98	322	eP	Pn	21 38 02.5	-0.2
JAYA				eS	Sn	21 38 15.9	+0.1
JAYA				IAML		21 38 16.6	
	comp=Z,5µm,0.2s						
JAYA				IAML		21 38 17.0	
	comp=N,15µm,0.3s						
LCND	La Caada	1.00	65	⇓iP	Pn	21 38 02.8	0.0
LCND				eS	Sn	21 38 16.6	+0.5
LCND				IAML		21 38 17.3	
	comp=Z,9µm,0.1s						
LCND	La Caada	1.00	65	⇓iP	Pn	21 38 02.8	0.0
LCND				eS	Sn	21 38 16.6	+0.5
LCND				IAML		21 38 17.3	
	comp=Z,9µm,0.1s						
CNCH	Conchagua	1.04	67	eP	Pn	21 38 03.3	-0.1
CNCH	Conchagua	1.04	67	eP	Pn	21 38 03.3	-0.1
FAGO	Alcalda de S	1.07	40	eP	Pn	21 38 03.8	+0.1
FAGO				eS	Sn	21 38 18.4	+0.7
FAGO	Alcalda de S	1.07	40	eP	Pn	21 38 03.8	+0.1
FAGO				eS	Sn	21 38 18.4	+0.7
TACO	Tacachico	1.20	335	⇓iP	Pn	21 38 05.9	+0.3
TACO				eS	Sn	21 38 21.7	+0.8
TACO				IAML		21 38 24.6	
TACO	Tacachico	1.20	335	⇓iP	Pn	21 38 05.9	+0.3
TACO				eS	Sn	21 38 21.7	+0.8
TACO				IAML		21 38 24.6	
CEVE	Cerro Verde	1.23	320	eP	Pn	21 38 06.6	+0.6
CEVE				eS	Sn	21 38 22.4	+0.6
CEVE				IAML		21 38 28.0	
	comp=Z,5µm,0.3s						
CEVE	Cerro Verde	1.23	320	eP	Pn	21 38 06.6	+0.6
CEVE				eS	Sn	21 38 22.4	+0.6
CEVE				IAML		21 38 28.0	
	comp=Z,5µm,0.3s						
SBLS	San Blas	1.23	321	eP	Pn	21 38 06.8	+0.6
SBLS	San Blas	1.23	321	eP	Pn	21 38 06.8	+0.6
LLGN	La Laguna	1.28	355	eP	Pn	21 38 07.2	+0.5
LLGN	La Laguna	1.28	355	eP	Pn	21 38 07.2	+0.5
MTO3	Montecristo	1.60	341	⇓iP	Pn	21 38 11.7	+0.6
MTO3	Montecristo	1.60	341	⇓iP	Pn	21 38 11.7	+0.6
MTO3	Montecristo	1.60	341	Pn	Pn	21 38 11.6	+0.6
MTO3				Sn	Sn	21 38 29.7	-1.1
CRIN	San Cristobal	1.74	96		Pn	21 38 12.8	0.0
CRIN				Sn	Sn	21 38 33.7	-0.2
ESQI	Esquipulas	1.75	343	eP	Pn	21 38 14.1	+1.1
ESQI	Esquipulas	1.75	343		Pn	21 38 13.8	+0.8
ESQI				Sn	Sn	21 38 33.2	-1.0
TGUH	Tegucigalpa,Un	1.91	52	⇓iP	Pn	21 38 15.7	+0.5
TGUH	Tegucigalpa,Un	1.91	52	⇓iP	Pn	21 38 15.7	+0.5
TGUH	Tegucigalpa,Un	1.91	52		Pn	21 38 15.6	+0.5
IXG	Ixpaco	2.04	309	eP	Pn	21 38 17.9	+0.9
IXG	Ixpaco	2.04	309	eP	Pn	21 38 17.9	+0.9
IXG	Ixpaco	2.04	309	eP	Pn	21 38 18.7	+1.7
CNGN	Cerro Negro	2.10	100	eP	Pn	21 38 17.4	-0.3
CNGN	Cerro Negro	2.10	100	eP	Pn	21 38 17.4	-0.3
CNGN				eP	Pn	21 38 17.4	-0.3
NBG	Las Nubes	2.26	319	eP	Pn	21 38 19.8	-0.3
PCG	Pacaya	2.30	311	eP	Pn	21 38 21.2	+0.6
MRL	Marmol	2.35	339	eP	Pn	21 38 23.4	+2.1
FUG	Fuego 3	2.51	309	eP	Pn	21 38 24.5	+1.1
RTAL	Retalhuleu	3.24	301	Pn	Pn	21 38 34.6	+1.4
ACON	Acoyapa	3.67	104		Pn	21 38 39.4	+0.2
PETF	Flores	4.14	346		Pn	21 38 47.2	+1.6
CUI	Cuipilapa	4.21	121	eP	Pn	21 38 49.6	+3.0
PLVR	Palo Verde	4.23	126	eP	Pn	21 38 48.4	+1.4
PLVR				eS	Sn	21 39 35.6	+0.4
ESPN	Las Esperanzas	4.47	98	Pn	Pn	21 38 51.0	+0.9
JTS	Las Juntas de	4.58	124	eP	Pn	21 38 55.4	+3.7
JTS	Las Juntas de	4.58	124		Pn	21 38 53.9	+2.2
CCIG	Comitan	4.67	317	Pn	Pn	21 38 53.6	+0.7
LAFE	Finca La Fe, P	4.90	128	eP	Pn	21 38 57.5	+1.4
JACO	JACO, Garabito	5.18	128	eP	Pn	21 39 03.2	+3.2
LCR2	La Lucha 2	5.66	123	eP	Pn	21 39 09.2	+2.6
RIMA	Rio Macho	5.76	122	eP	Pn	21 39 10.4	+2.4
CDM	Cerro de Muert	5.96	123	eP	Pn	21 39 14.0	+3.0
PIRO	Carate, Puerto	6.99	129	eP	Pn	21 39 28.3	+3.7
CMIG	Matias Romero	7.20	306	P	Pn	21 39 30.7	+3.1
	comp=Z,0.4nm,0.3s,baz=311,slow=16,SNR=1.8						
CMIG				S	Sn	21 40 48.2	+0.1
	comp=Z,0.2nm,0.3s,baz=326,slow=23,SNR=1.5						
CMIG				LR	LR	21 42 28.9	
	comp=Z,76nm,21.7s,baz=156,slow=38						
TEIG	Tepich	7.33	4	P	Pn	21 39 30.8	+1.5
TEIG				LR	LR	21 42 33.1	
	comp=Z,132nm,18.9s,slow=40						
TEIG	Tepich	7.33	4		Pn	21 39 30.1	+0.8
SDV	Santo Domingo	18.29	101	P	P	21 41 53.5	-1.1
	comp=Z,1.0nm,0.3s,baz=334,slow=4.8,SNR=3.9						
GOGA	Godfrey	21.02	13	P	P	21 42 24.1	+0.2
TX32	Lajitas Array	21.41	322	P	P	21 42 28.9	+0.7
TXAR	Lajitas Array	21.41	322	P	P	21 42 30.1	+1.9
	comp=Z,1.2nm,0.7s,baz=148,slow=11,SNR=12						
TXAR	Lajitas Array	21.41	322	P	P	21 42 29.5	+1.2
MIAR	Mount Ida	22.00	349	P	P	21 42 35.9	+1.5
MIAR				IAmb	IAmb	21 42 38.7	
	comp=Z,3.1nm,0.6s						
SJG	San Juan	22.45	74	LR	LR	21 52 15.0	
	comp=Z,64nm,18.1s,baz=106,slow=39						
TKL	Tuckaleechee C	23.14	11	P	P	21 42 45.3	-1.1
	comp=Z,2.6nm,0.7s,baz=169,slow=13,SNR=2.8						
TKL	Tuckaleechee C	23.14	11	P	P	21 42 45.8	-0.6
V53A	Saluda	23.33	12	P	P	21 42 49.8	+1.5
V53A				IAmb	IAmb	21 43 06.7	
	comp=Z,11nm,1.3s						
U40A	Yellville	23.66	352	P	P	21 42 52.1	+0.7
U40A				IAmb	IAmb	21 42 55.3	
	comp=Z,7.0nm,0.8s						
S39A	Bolivar	25.04	352	P	P	21 43 05.1	+1.2
S39A				IAmb	IAmb	21 43 07.0	
	comp=Z,5.2nm,0.7s						
CCM	Cathedral Cave	25.17	355	P	P	21 43 04.8	-0.2
CCM				IAmb	IAmb	21 43 05.8	
	comp=Z,5.7nm,0.8s						
PDAR	Pinedale Array	34.77	333	P	P	21 44 31.5	+1.2
	comp=Z,0.2nm,0.5s,baz=142,slow=9.1,SNR=2.2						
NVAR	Mina Array Bea	36.51	319	P	P	21 44 46.0	+0.8
	comp=Z,0.5nm,0.7s,baz=138,slow=6.8,SNR=2.7						
NVAR				PcP	PcP	21 47 07.9	-0.1
	comp=Z,0.2nm,0.4s,baz=131,slow=3.7,SNR=5.3						
ULM	Lac du Bonnet	37.71	353	P	P	21 44 53.2	-1.8
	comp=Z,2.0nm,0.6s,baz=165,slow=9.8,SNR=5.4						
MCMT	McKenzie Canyo	37.87	332	P	P	21 44 58.1	+1.3
YKA	Yellowknife Ar	52.86	345	P	P	21 46 53.9	-0.8
	comp=Z,1.1nm,0.3s,baz=141,slow=7.8,SNR=42						
YKA				PcP	PcP	21 48 01.3	-1.9
	comp=Z,0.2nm,0.7s,baz=133,slow=4.9,SNR=2.0						
INK	Inuvik	62.40	343	P	P	21 48 01.0	-0.6
	comp=Z,1.6nm,0.7s,baz=130,slow=9.6,SNR=6.9						
ILAR	Eielson Array	65.09	336	P	P	21 48 18.3	-1.2
	comp=Z,0.5nm,0.8s,baz=137,slow=3.2,SNR=5.9						
ARCES	ARCESS Array B	86.22	19	LR	LR	22 26 36.8	
	comp=Z,16nm,20.2s,baz=195,slow=34						
MKAR	Makanchi Array	120.07	7	PKP	PKPdf	21 56 27.3	-2.3
	comp=Z,0.4nm,0.9s,baz=338,slow=2.8,SNR=2.4						
WRA	Warramunga Arr	138.10	254	PKP	PKPdf	21 57 05.4	+0.9
	comp=Z,0.4nm,0.7s,baz=89,slow=2.1,SNR=6.7						
CMAR	Chiang Mai Arr	147.94	346	PKPbc	PKPdf	21 57 23.2	+1.4
	comp=Z,1.0nm,0.4s,baz=323,slow=1.6,SNR=2.2						

*ANF **03** 22:19:14.7±0.6, 37°09N×97°67W, h5^{km}, ML4.0/10, Error ellipse: s-maj=8.6km s-min=6.6km az=87.0*

*NEIC **03** 22:19:14.4±0.7, 37°09N±0°02×97°66W±0°02, h5^{km}±2^{km}, mb_Lg3.4/75, Error ellipse: s-maj=3.3km s-min=2.8km az=334.0*

*CERI **03** 22:19:14.0, 37°09N×97°66W, h5^{km}*

ISC 03 22:19:14.3±0.9**, 37°10N**±0°02×**97°67W**±0°02**, h7**^{km}±8^{km}**, n78,** σ**0^{s}66**/67**, Kansas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAN01	Argonia South	0.09	307		Pg	22 19 16.2	-0.2
KAN13	South Haven SW	0.17	119		Pg	22 19 18.0	+0.2
KAN13				Sg	Sg	22 19 20.8	+0.7
KS21	Milan North St	0.19	1		Pg	22 19 18.1	0.0
KS21				Sg	Sg	22 19 20.9	+0.3
KAN08	Anthony NE Sta	0.28	298		Pg	22 19 19.7	0.0
KAN08				Sg	Sg	22 19 23.6	+0.2
KAN14	Manchester OK	0.28	239		Pg	22 19 19.6	-0.1
GC02	Grant County #	0.29	212		Pg	22 19 20.0	0.0
GC02				Sg	Sg	22 19 24.2	+0.3
KAN12	Harper NE Stat	0.33	307		Pg	22 19 20.7	-0.1
KAN10	Anthony SW Sta	0.34	274		Pg	22 19 21.0	0.0
KAN10				Sg	Sg	22 19 25.8	+0.3
CROK	Carrier	0.65	203	Pg	Pg	22 19 26.6	-0.1
CROK				Sg	Sg	22 19 35.6	+0.5
T35A	Sooner Cattle	0.94	101		Pg	22 19 32.0	-0.3
T35A				Sg	Sg	22 19 44.7	+0.1
T35B	Sooner Cattle	0.94	101	P		22 19 32.0	
	baz=281,SNR=115						
T35B				S		22 19 44.6	
	baz=281						
QUOK	Quay	1.20	140		Pb	22 19 36.9	-0.6
U32A	Winter Ranch,	1.29	237		Pn	22 19 38.0	-0.8
U32A	Winter Ranch,	1.29	237	P		22 19 37.9	
	baz=56						
OK029	Liberty Lake	1.31	172		Pn	22 19 38.5	-0.5
OK031	S. Brethren Rd	1.32	150		Pn	22 19 38.9	-0.3
OK030	Cody Creek RV	1.37	148		Pn	22 19 39.4	-0.4
BCOK	Bluff Creek, N	1.44	178	Pn	Pb	22 19 41.0	-0.5
OK025	Westminster Rd	1.54	170	Pn	Pn	22 19 42.3	+0.2
R32A	Long Quarter,	1.56	328		Pn	22 19 42.6	+0.1
R32A	Long Quarter,	1.56	328	P		22 19 42.8	
	baz=148,SNR=46						
R32A				S		22 20 03.5	
	baz=148						
OKCFA	Oklahoma City	1.69	174		Pn	22 19 44.4	+0.1
FNO	Franklin	1.85	173		Pn	22 19 46.8	+0.3
TUL1	Leonard	1.92	128	P	Pn	22 19 48.1	+0.7
	baz=309						
TUL1				S	Sb	22 20 14.2	+0.4
	baz=309						
TUL1	Leonard	1.92	128	Pn	Pb	22 19 48.3	-1.3
TUL1				IAmb_Lg		22 20 16.1	
	comp=Z,214nm,0.8s						
TUL1	Leonard	1.92	128	P		22 19 48.7	
	baz=309,SNR=30						
TUL1				S		22 20 14.1	
	baz=309						
W35A	Tecumseh	2.04	161		Pn	22 19 50.0	+0.8
KSU1	Kansas State U	2.17	22	P	Pn	22 19 52.1	+1.2
	baz=203						
KSU1				S	Sb	22 20 19.4	-1.5
	baz=203						
KSU1	Kansas State U	2.17	22		Pn	22 19 51.2	+0.3
KSU1				IAmb_Lg		22 20 27.7	
	comp=Z,149nm,0.9s						
KSU1	Kansas State U	2.17	22	P		22 19 51.7	
	baz=203,SNR=21						
KSU1				S		22 20 21.0	
	baz=203						
CBKS	Cedar Bluff	2.37	317	P	Pn	22 19 54.2	+0.6
	baz=136						
CBKS				S	Sb	22 20 25.5	-1.3
	baz=136						

CBKS	**Cedar Bluff**	**2.37**	**317**		**Pn**	**22 19 54.1**	**+0.4**
CBKS	**Cedar Bluff**	**2.37**	**317**	P		22 19 54.6	
	baz=136,SNR=9.4						
CBKS				S		22 20 27.5	
	baz=136						
WMOK	**Wichita Mounta**	**2.52**	**201**	P	**Pn**	**22 19 56.1**	**+0.4**
	baz=21						
WMOK				S	**Sn**	**22 20 28.2**	**+1.5**
	baz=21						
WMOK	**Wichita Mounta**	**2.52**	**201**		**Pn**	**22 19 56.1**	**+0.4**
WMOK	**Wichita Mounta**	**2.52**	**201**	P		22 19 56.1	
	baz=21,SNR=8.0						
U38A	**Gravette**	**2.71**	**103**		**Pn**	**22 19 58.5**	**+0.1**
U38A				IAmb_Lg		22 20 39.6	
	comp=Z,90nm,0.8s						
HHAR	**Hobbs**	**3.10**	**104**		**Pn**	**22 20 03.4**	**-0.3**
X37A	**Clayton**	**3.12**	**143**		**Pn**	**22 20 04.4**	**+0.5**
X37A				IAmb_Lg		22 21 00.3	
	comp=Z,72nm,0.8s						
S39A	**Bolivar**	**3.51**	**79**		**Pn**	**22 20 09.6**	**+0.3**
S39A	**Bolivar**	**3.51**	**79**	P		22 20 09.4	
	baz=262,SNR=11						
N33B	**J Bar K, Exete**	**3.64**	**3**	S		22 20 54.5	
	baz=183						
W39A	**Magazine**	**3.67**	**120**	IAmb_Lg		22 21 13.6	
	comp=Z,72nm,0.8s						
Z35A	**Perchaven, San**	**3.77**	**175**	Pn	**Pn**	**22 20 13.8**	**+0.9**
Z35A	**Perchaven, San**	**3.77**	**175**	S		22 20 58.9	
	baz=355						
AMTX	**Amarillo**	**3.93**	**237**		**Pn**	**22 20 16.1**	**+0.9**
U40A	**Yellville**	**3.94**	**99**	P	**Pn**	**22 20 15.6**	**+0.4**
	baz=282						
U40A				S	**Sn**	**22 21 01.5**	**-0.1**
	baz=282						
U40A	**Yellville**	**3.94**	**99**	Pn	**Pn**	**22 20 15.9**	**+0.7**
U40A				IAmb_Lg		22 21 21.8	
	comp=Z,125nm,0.7s						
U40A	**Yellville**	**3.94**	**99**	P		22 20 15.9	
	baz=282,SNR=11						
U40A				P		22 20 15.9	
	baz=282,SNR=11						
N35A	**Tabor**	**4.08**	**22**		**Pn**	**22 20 19.3**	**+2.2**
P38A	**Dawn**	**4.11**	**51**	Pn	**Pn**	**22 20 17.7**	**+0.2**
P38A				IAmb_Lg		22 21 24.6	
	comp=Z,60nm,0.8s						
P38A	**Dawn**	**4.11**	**51**	P		22 20 18.2	
	baz=233,SNR=5.9						
MIAR	**Mount Ida**	**4.19**	**126**	P	**Pn**	**22 20 19.0**	**+0.4**
	baz=309						
MIAR				S	**Sn**	**22 21 07.7**	**0.0**
	baz=309						
MIAR	**Mount Ida**	**4.19**	**126**		**Pn**	**22 20 18.8**	**+0.2**
MIAR				IAmb_Lg		22 21 27.9	
	comp=Z,55nm,0.8s						
MIAR	**Mount Ida**	**4.19**	**126**	P		22 20 19.2	
	baz=309						
MGMO	**Mountain Grove**	**4.31**	**88**		**Pn**	**22 20 21.2**	**+0.9**
BGNE	**Belgrade**	**4.32**	**355**	P	**Pn**	**22 20 21.4**	**+0.9**
	baz=175						
BGNE	**Belgrade**	**4.32**	**355**	IAmb_Lg		22 21 38.6	
	comp=Z,81nm,0.7s						
KSCO	**Kaye Shedlock’**	**4.36**	**298**	P	**Pn**	**22 20 21.6**	**+0.5**
	baz=115						
KSCO	**Kaye Shedlock’**	**4.36**	**298**		**Pn**	**22 20 22.1**	**+1.0**
KSCO	**Kaye Shedlock’**	**4.36**	**298**	P		22 20 21.7	
	baz=115						
Z38A	**Mt. Pleasant**	**4.41**	**149**	IAmb_Lg		22 21 36.4	
	comp=Z,87nm,1.0s						
R40A	**Maddies Statio**	**4.44**	**73**		**Pn**	**22 20 22.8**	**+0.7**
FCAR	**Ozark Folk Cen**	**4.62**	**103**	IAmb_Lg		22 21 43.0	
	comp=Z,58nm,0.7s						
WHAR	**Wooly Hollow**	**4.71**	**111**	Pn	**Pn**	**22 20 25.4**	**-0.4**
WHAR				IAmb_Lg		22 21 45.9	
	comp=Z,63nm,0.8s						
X40A	**Basin Creek Fa**	**4.71**	**122**	P	**Pn**	**22 20 26.3**	**+0.5**
	baz=305						
X40A	**Basin Creek Fa**	**4.71**	**122**		**Pn**	**22 20 25.9**	**+0.1**
X40A				IAmb_Lg		22 21 44.7	
	comp=Z,42nm,0.9s						
X40A	**Basin Creek Fa**	**4.71**	**122**	P		22 20 27.1	
	baz=305						
X40A				P		22 20 27.1	
	baz=305						
ABTX	**Abilene, Hawle**	**4.75**	**201**	P	**Pn**	**22 20 26.8**	**+0.5**
	baz=20						
N38A	**Joes South For**	**5.05**	**42**	Pn	**Pn**	**22 20 31.0**	**+0.5**
N38A				IAmb_Lg		22 22 02.0	
	comp=Z,45nm,0.8s						
N38A	**Joes South For**	**5.05**	**42**	P		22 20 30.8	
	baz=224						
OGNE	**Ogallala**	**5.13**	**320**		**Pn**	**22 20 32.4**	**+0.7**
OGNE				IAmb_Lg		22 22 05.0	
	comp=Z,42nm,0.8s						
CCM	**Cathedral Cave**	**5.19**	**77**	Pn	**Pn**	**22 20 33.0**	**+0.6**
CCM				IAmb_Lg		22 22 04.4	
	comp=Z,54nm,0.9s						
T42A	**Van Buren**	**5.26**	**89**		**Pn**	**22 20 33.4**	**+0.1**
LCAR	**Lake Charles**	**5.34**	**99**	IAmb_Lg		22 22 04.7	
	comp=Z,64nm,1.1s						
K31A	**O'Neill**	**5.58**	**352**	IAmb_Lg		22 22 21.1	
	comp=Z,82nm,0.8s						
PBMO	**Poplar Bluff**	**5.80**	**91**	IAmb_Lg		22 22 25.2	
	comp=Z,61nm,0.7s						
FVM	**French Village**	**5.82**	**79**	IAmb_Lg		22 22 18.2	
	comp=Z,48nm,1.0s						
GNAR	**Gosnell**	**6.26**	**98**	IAmb_Lg		22 22 41.8	
	comp=Z,65nm,0.7s						
435B	**Jarrell**	**6.30**	**179**	IAmb_Lg		22 22 45.3	
	comp=Z,44nm,0.8s						
PARMO	**Parma**	**6.36**	**92**	IAmb_Lg		22 22 37.8	
	comp=Z,74nm,0.7s						
N41A	**Harden Midland**	**6.42**	**54**	IAmb_Lg		22 22 45.0	
	comp=Z,41nm,0.7s						
SIUC	**Southern Illin**	**6.75**	**82**	IAmb_Lg		22 22 54.5	
	comp=Z,51nm,0.7s						
JCT	**Junction City**	**6.84**	**196**	IAmb_Lg		22 22 59.5	
	comp=Z,31nm,0.9s						
W45A	**Hickory Valley**	**7.13**	**103**	IAmb_Lg		22 23 05.1	
	comp=Z,40nm,0.8s						
OXF	**Oxford**	**7.19**	**109**	IAmb_Lg		22 23 17.8	
	comp=Z,26nm,0.7s						
HDIL	**Hopedale**	**7.39**	**60**	IAmb_Lg		22 23 12.1	
	comp=Z,47nm,0.8s						
SUSD	**Miller**	**7.40**	**353**	IAmb_Lg		22 23 12.0	
	comp=Z,41nm,0.8s						
ANMO	**Albuquerque**	**7.44**	**256**	IAmb_Lg		22 23 15.4	
	comp=Z,7.9nm,0.8s						
O44A	**Mansfield**	**7.82**	**64**	IAmb_Lg		22 23 36.8	
	comp=Z,45nm,0.7s						
L42A	**Oliver, Polo**	**7.88**	**49**	IAmb_Lg		22 23 26.2	
	comp=Z,31nm,0.9s						
USIN	**University of**	**7.99**	**81**	IAmb_Lg		22 23 41.8	
	comp=Z,39nm,0.9s						
T47A	**Sharon Grove**	**8.45**	**88**	IAmb_Lg		22 23 51.6	
	comp=Z,48nm,1.1s						
SFIN	**Lafayette**	**8.88**	**65**	IAmb_Lg		22 23 55.9	
	comp=Z,43nm,0.8s						

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*SNET **03** 22:21:51.3±1.1, 13°.93N×91°.33W, h16^{km}±7^{km}, ML3.9*
*GCG **03** 22:21:51.6±0.8, 13°.75N×91°.36W, h41^{km}±4^{km}, MD4.1*
*UCR **03** 22:21:51.5±1.2, 13°.92N×91°.38W, h27^{km}±9^{km}, ML3.8*
ISC 03 22:21:50.5±2.1**, 13°.84N**±0°.10×**91°.44W**±0°.07**, h24**^{km}±16^{km}**,**
n24, σ0^{s}.82/32**, 6C-3D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTAL	**Retalhuleu**	**0.73**	**340**	⇓*i*P	**Pb**	**22 22 04.5**	**0.0**
RTAL				*e*S	**Sb**	**22 22 13.9**	**-0.2**
FUG	**Fuego 3**	**0.84**	**43**	*e*P	**Pn**	**22 22 07.2**	**+0.2**
PCG	**Pacaya**	**0.98**	**55**	*e*P	**Pn**	**22 22 09.9**	**+0.9**
IXG	**Ixpaco**	**1.02**	**71**	⇑*i*P	**Pn**	**22 22 08.7**	**-0.8**
IXG	**Ixpaco**	**1.02**	**71**	⇑*i*P	**Pn**	**22 22 08.7**	**-0.8**
IXG	**Ixpaco**	**1.02**	**71**	*e*P	**Pb**	**22 22 09.5**	**-0.1**
IXG				*e*S	**Sn**	**22 22 23.4**	**+0.3**
NBG	**Las Nubes**	**1.29**	**55**	*e*P	**Pb**	**22 22 14.9**	**+0.6**
NBG				*e*S	**Sb**	**22 22 33.1**	**+2.4**
HUEH	**Huehuetenango**	**1.47**	**358**	*e*P	**Pn**	**22 22 15.8**	**0.0**
RTR	**El Retiro**	**1.74**	**88**	*e*P	**Pn**	**22 22 20.2**	**+0.8**
RTR	**El Retiro**	**1.74**	**88**	*e*P	**Pn**	**22 22 20.2**	**+0.8**
CEVE	**Cerro Verde**	**1.76**	**90**	*e*P	**Pn**	**22 22 20.1**	**+0.3**
CEVE				*e*S	**Sb**	**22 22 43.6**	**-0.4**
CEVE				IAML		22 22 48.5	
	comp=Z,2μm,0.5s						
CEVE	**Cerro Verde**	**1.76**	**90**	*e*P	**Pn**	**22 22 20.1**	**+0.3**
CEVE				*e*S	**Sb**	**22 22 43.6**	**-0.4**
CEVE				IAML		22 22 48.5	
	comp=Z,2μm,0.5s						
SBLS	**San Blas**	**1.76**	**90**	*e*P	**Pn**	**22 22 20.0**	**+0.3**
SBLS	**San Blas**	**1.76**	**90**	*e*P	**Pn**	**22 22 20.0**	**+0.3**
JAYA	**Jayaque - finc**	**1.94**	**95**	⇑*e*P	**Pn**	**22 22 21.9**	**-0.2**
JAYA				*e*S	**Sn**	**22 22 45.6**	**-0.2**
JAYA				IAML		22 22 48.4	
	comp=Z,687nm,0.3s						
JAYA	**Jayaque - finc**	**1.94**	**95**	⇑*e*P	**Pn**	**22 22 21.9**	**-0.2**
JAYA				*e*S	**Sn**	**22 22 45.6**	**-0.2**
JAYA				IAML		22 22 48.4	
	comp=Z,687nm,0.3s						
MTO3	**Montecristo**	**2.09**	**74**	⇑*i*P	**Pn**	**22 22 23.8**	**-0.4**
MTO3	**Montecristo**	**2.09**	**74**	⇑*i*P	**Pn**	**22 22 23.8**	**-0.4**
MRL	**Marmol**	**2.10**	**54**	⇓*i*P	**Pn**	**22 22 24.2**	**-0.2**
MRL	**Marmol**	**2.10**	**54**	⇓*i*P	**Pn**	**22 22 24.2**	**-0.2**
MRL	**Marmol**	**2.10**	**54**	*e*P	**Pn**	**22 22 24.9**	**+0.6**
MRL				*e*S	**Sb**	**22 22 51.3**	**-2.5**
ESQI	**Esquipulas**	**2.16**	**70**	*e*P	**Pn**	**22 22 24.9**	**-0.1**
LFRS	**El Faro**	**2.32**	**95**	*e*P	**Pn**	**22 22 28.0**	**+0.7**
LFRS	**El Faro**	**2.32**	**95**	*e*P	**Pn**	**22 22 28.0**	**+0.7**

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*SOME **03** 22:26:20.5, 41°.08N×77°.90E, h0^{km}*
*NNC **03** 22:26:21.8±0.7, 41°.03N×77°.90E, h0^{km}, mb3.1, mpv2.7,*
Error ellipse: s-maj=4.8km s-min=3.8km az=2.0
*KRNET **03** 22:26:28.6±0.1, 41°.46N×76°.70E, h30^{km}, mb2.0*
ISC 03 22:26:21.3±3.2**, 40°.8N**±0°.1×**77°.88E**±0°.05**, h32**^{km}±18^{km}**,**
n37, σ1^{s}.40/53**, 9C-3D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDJ	**Kajisay**	**1.39**	**338**	⇑*i*P	**Pn**	**22 26 43.5**	**-1.1**
	baz=29						
KDJ				⇑*i*S	Sn	22 26 54.1	-7.9
	baz=29						
PRZ	**Przheval'sk**	**1.68**	**13**	⇑*e*P	Pb	22 26 57.5	+5.7
	baz=50						
PRZ				⇑*i*S	**Sb**	**22 27 18.7**	**+6.0**
	baz=50						
ANVS	**Anan'yevo**	**1.94**	**355**	⇑*i*P	**Pb**	**22 26 55.6**	**-0.6**
	baz=28						
ANVS				⇑*i*S	**Sn**	**22 27 15.4**	**-0.3**
	baz=28						
SATY	**Saty**	**2.25**	**10**	*e*P	**Pb**	**22 27 00.1**	**-1.2**
	2.5nm,0.4s						
SATY				*e*S	**Sb**	**22 27 28.5**	**-0.2**
	4.2nm,0.2s						
SATY	**Saty**	**2.25**	**10**	Pg	**Pb**	**22 27 00.1**	**-1.2**
	2.5nm,0.4s						
SATY				Lg	Lg	22 27 28.5	
	4.2nm,0.2s						
TNSS	**Tian-Shan**	**2.30**	**343**	*e*P	**Pb**	**22 27 01.0**	**-1.4**
	1.9nm,0.4s						
TNSS				*e*S	**Sb**	**22 27 30.3**	**-0.2**
	3.3nm,0.5s						
TNSS	**Tian-Shan**	**2.30**	**343**	Pg	**Pb**	**22 27 01.0**	**-1.4**
	1.9nm,0.4s						
TNSS				Lg	Lg	22 27 30.3	
	3.3nm,0.5s						
IZV	**Izvestkoviy**	**2.39**	**337**	*e*P	**Pb**	**22 27 02.5**	**-1.2**
	1.7nm,0.3s						
IZV				*e*S	**Sb**	**22 27 32.8**	**0.0**
IZV	**Izvestkoviy**	**2.39**	**337**	Pg	**Pb**	**22 27 02.5**	**-1.2**
	1.7nm,0.3s						
IZV				Lg	Lg	22 27 32.8	
MDOK	**Medeo**	**2.40**	**345**	*e*P	**Pb**	**22 27 02.2**	**-1.7**
	0.7nm,0.2s						
MDOK				*e*S	**Sb**	**22 27 32.5**	**-0.7**
	2.3nm,0.4s						
MDOK	**Medeo**	**2.40**	**345**	⇑Pn	**Pn**	**22 27 00.5**	**+2.0**
	1.6nm,0.5s						
MDOK				⇓Lg	Lg	22 27 33.6	
	3.6nm,0.6s						
MDOK	**Medeo**	**2.40**	**345**	Pg	**Pb**	**22 27 02.2**	**-1.7**
	0.7nm,0.2s						
MDOK				Lg	Lg	22 27 32.5	
	2.3nm,0.4s						
UZB	**Uzynbulak**	**2.45**	**20**	*e*P	**Pb**	**22 27 03.4**	**-1.4**
	4.2nm,0.3s						
UZB				*e*S	**Sb**	**22 27 34.4**	**-0.3**
	8.0nm,0.3s						
UZB	**Uzynbulak**	**2.45**	**20**	Pg	**Pb**	**22 27 03.4**	**-1.4**
	4.2nm,0.3s						
UZB				Lg	Lg	22 27 34.4	
	8.0nm,0.3s						
KOTS	**Kotyrbulak**	**2.46**	**347**	*e*P	**Pb**	**22 27 04.0**	**-0.9**
	2.6nm,0.3s						
KOTS				*e*S	**Sb**	**22 27 35.4**	**+0.6**
KOTS	**Kotyrbulak**	**2.46**	**347**	Pg	**Pb**	**22 27 04.0**	**-0.9**
	2.6nm,0.3s						
KOTS				Lg	Lg	22 27 35.4	
KST	**Kastek**	**2.62**	**328**	*e*P	**Pb**	**22 27 07.3**	**-0.4**
	2.7nm,0.6s						
KST				*e*S	**Sb**	**22 27 40.9**	**+1.3**
	3.6nm,0.4s						
KST	**Kastek**	**2.62**	**328**	Pg	**Pb**	**22 27 07.3**	**-0.4**
	2.7nm,0.6s						
KST				Lg	Lg	22 27 40.9	
	3.6nm,0.4s						
KURS	**Kuram**	**2.65**	**5**	*e*P	**Pb**	**22 27 06.8**	**-1.3**
	1.5nm,0.4s						
KURS				*e*S	**Sb**	**22 27 40.1**	**-0.2**
	4.3nm,0.5s						
KURS	**Kuram**	**2.65**	**5**	Pg	**Pb**	**22 27 06.8**	**-1.3**
	1.5nm,0.4s						
KURS				Lg	Lg	22 27 40.1	
	4.3nm,0.5s						
KPKS	**Kokpek**	**2.69**	**13**	*e*P	**Pb**	**22 27 07.5**	**-1.3**
	2.0nm,0.2s						
KPKS				*e*S	**Sb**	**22 27 41.4**	**+0.1**
	24nm,0.4s						
PDGK	**Podgornoye**	**2.75**	**25**	Pg	**Pb**	**22 27 08.2**	**-1.8**
	0.6nm,0.3s						
PDGK				Lg	Lg	22 27 42.4	
	3.5nm,0.3s						
PDGK	**Podgornoye**	**2.75**	**25**	⇓Pg	**Pb**	**22 27 08.5**	**-1.5**
	1.0nm,0.3s						
PDGK				⇓Lg	Lg	22 27 44.1	
	8.9nm,0.6s						
DGS	**Degeres**	**2.87**	**327**	*e*P	**Pb**	**22 27 11.3**	**-0.5**
	2.3nm,0.4s						
DGS				*e*S	**Sb**	**22 27 47.8**	**+1.3**
	2.3nm,0.4s						
DGS	**Degeres**	**2.87**	**327**	Pg	**Pb**	**22 27 11.3**	**-0.5**
	2.3nm,0.4s						
DGS				Lg	Lg	22 27 47.8	
	2.3nm,0.4s						
ARLS	**Aral**	**2.87**	**292**	⇑*i*P	Pn	22 26 59.8	-5.1
	baz=83						
ARLS				⇑*i*S	Sn	22 27 22.9	-15
	baz=83						
KTBS	**Karatobe**	**3.00**	**343**	*e*P	**Pb**	**22 27 12.8**	**-1.3**
	1.6nm,0.4s						
KTBS				*e*S	**Sb**	**22 27 50.2**	**-0.1**
	7.3nm,0.5s						
KTBS	**Karatobe**	**3.00**	**343**	Pg	**Pb**	**22 27 12.8**	**-1.3**
	1.6nm,0.4s						
KTBS				Lg	Lg	22 27 50.2	
	7.3nm,0.5s						
CHKK	**Chushkaly**	**3.08**	**348**	*e*P	**Pb**	**22 27 14.4**	**-1.0**
	0.9nm,0.1s						
CHKK				*e*S	**Sb**	**22 27 53.2**	**+0.7**
	4.1nm,0.2s						
CHKK	**Chushkaly**	**3.08**	**348**	Pg	**Pb**	**22 27 14.4**	**-1.0**
	0.9nm,0.1s						
CHKK				Lg	Lg	22 27 53.2	
	4.1nm,0.2s						
KTMS	**Ketmen**	**3.18**	**34**	*e*P	**Pb**	**22 27 16.9**	**-0.4**
	1.2nm,0.2s						
KTMS				*e*S	**Sb**	**22 27 57.5**	**+1.8**
	6.0nm,0.3s						
KUU	**Kurty**	**3.25**	**340**	*e*P	**Pb**	**22 27 17.8**	**-0.6**
	0.3nm,0.1s						
KUU				*e*S	**Sb**	**22 27 59.0**	**+1.4**
	2.6nm,0.8s						
KUU	**Kurty**	**3.25**	**340**	Pg	**Pb**	**22 27 17.8**	**-0.6**
	0.3nm,0.1s						
KUU				Lg	Lg	22 27 59.0	
	2.6nm,0.8s						
KRBS	**Karabastau**	**3.29**	**331**	*e*P	**Pb**	**22 27 18.3**	**-0.7**
	0.9nm,0.4s						
KRBS				*e*S	**Sb**	**22 27 59.7**	**+1.2**
	1.5nm,0.3s						
KRBS	**Karabastau**	**3.29**	**331**	Pg	**Pb**	**22 27 18.3**	**-0.7**
	0.9nm,0.4s						
KRBS				Lg	Lg	22 27 59.7	
	1.5nm,0.3s						
ARXS	**Arharly**	**3.37**	**359**	*e*P	**Pb**	**22 27 19.3**	**-1.0**
	2.9nm,0.5s						
ARXS				*e*S	**Sb**	**22 28 01.6**	**+0.8**
	4.6nm,0.4s						
ARXS	**Arharly**	**3.37**	**359**	Pg	**Pb**	**22 27 19.3**	**-1.0**
	2.9nm,0.5s						
ARXS				Lg	Lg	22 28 01.6	
	4.6nm,0.4s						

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*IDC **03** 22:26:39.9±1.3, 18°.69N×146°.43E, h0^{km}, mb4.0/5,*
mb1 4.2/5, mb1mx3.7/29, mbtmp4.0/5, MS2.8/3, Ms1 2.8/3,
ms1mx2.5/38, Error ellipse: s-maj=52.5km s-min=31.2km
az=112.0
ISC 03 22:26:48.3±1.2**, 18°.6N**±0°.2×**146°.4E**±0°.3**, h64**^{km}**, n9,**
σ1^{s}.03/6**, mb3.8**/6**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.22**	**196**	LR	LR	22 29 33.5	
	comp=Z,12nm,20.8s,baz=307,slow=33						
JNU	**Nakatsue**	**20.03**	**319**	LR	LR	22 36 40.2	
	comp=Z,34nm,21.4s,baz=56,slow=30						
WRA	**Warramunga Arr**	**40.12**	**198**	P	**P**	**22 34 18.0**	**0.0**
	0.5nm,0.8s,baz=19,slow=9.0,SNR=2.7						
MKAR	**Makanchi Array**	**58.98**	**314**	P	**P**	**22 36 40.9**	**-0.3**
	0.1nm,0.2s,baz=80,slow=7.9,SNR=1.3						
ILAR	**Eielson Array**	**63.41**	**26**	P	**P**	**22 37 10.3**	**-0.6**
	0.8nm,0.8s,baz=266,slow=6.2,SNR=8.4						
BBB	**Bella Bella**	**72.78**	**40**	LR	LR	23 02 25.4	
	comp=Z,36nm,20.3s,baz=273,slow=30						
YKA	**Yellowknife Ar**	**77.74**	**28**	P	**P**	**22 38 38.4**	**+0.3**
	0.7nm,0.7s,baz=290,slow=4.8,SNR=9.7						
ARCES	**ARCESS Array B**	**82.75**	**342**	P	**P**	**22 39 06.5**	**+1.5**
	7.2nm,0.9s,baz=44,slow=5.4,SNR=7.0						
FINES	**FINESS Array B**	**87.21**	**335**	P	**P**	**22 39 26.9**	**-0.5**
	0.9nm,0.7s,baz=83,slow=6.0,SNR=6.0						

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*SOME **03** 22:47:35.7, 49°.63N×87°.60E, h0^{km}, MS4.3*
*IDC **03** 22:47:36.8±0.5, 49°.77N×87°.82E, h0^{km}, mb4.3/22,*
mb1 4.5/28, mb1mx4.4/43, mbtmp4.4/28, ML4.6/7, MS3.6/19,
Ms1 3.6/19, ms1mx3.4/40, Error ellipse: s-maj=10.6km
s-min=7.8km az=174.0
*MOS **03** 22:47:37.9±1.2, 49°.75N×87°.59E, h17^{km}, mb4.7/22, Error*
ellipse: s-maj=4.9km s-min=4.6km az=147.6
*BJI **03** 22:47:39.0±0.0, 49°.80N×87°.77E, h20^{km}, mB4.7/34,*
mb4.3/43, ML4.9/7, Ms4.5/30, Ms7 4.1/25
*NEIC **03** 22:47:39.0±1.5, 49°.78N±0°.06×87°.6E±0°.1, h10^{km}±1^{km},*
mb4.6/64, Error ellipse: s-maj=11.5km s-min=10.8km
az=88.0
*ASRS **03** 22:47:40.1±0.2, 49°.9N±1°.0×87°.7E±0°.8, h10^{km}, MLh5.1/18,*
smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID
smi:org.gfz-potsdam.de/geofon/tab confirmed
*NNC **03** 22:47:40.5±1.0, 49°.83N×87°.30E, h1^{km}±5^{km}, mb5.2,*
mpv5.0, Error ellipse: s-maj=9.2km s-min=4.4km az=102.0
*BGR **03** 22:47:50.0±0.0, 49°.46N×85°.22E, h10^{km}, mb4.5, Ms3.5*
ISC 03 22:47:39.1±0.5**, 49°.83N**±0°.02×**87°.62E**±0°.02**, h11**^{km}±3^{km}**,**
n422, σ1^{s}.85/520**, mb4.5**/117**, MS3.6**/22**, 42C-29D,**
Kazakhstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DGZ	**Jazzator, Alta**	**0.18**	**223**	Pg	**Pg**	**22 47 41.3**	**-1.8**
DGZ				Sg	**Sg**	**22 47 44.2**	**-1.7**
DGZ	**Jazzator, Alta**	**0.18**	**223**	*c i*PG	**Pg**	**22 47 41.0**	**-2.1**
CHBI	**Chibit, Altay**	**0.49**	**351**	Pg	**Pg**	**22 47 47.2**	**-1.4**
CHBI				Sg	**Sg**	**22 47 54.2**	**-0.9**
CUR	**Chagan-Uzun**	**0.54**	**60**	Pg	**Pg**	**22 47 46.4**	**-3.2**
CUR				Sg	**Sg**	**22 47 53.3**	**-3.5**
ULGR	**Ulagan, Altay**	**0.82**	**15**	Pg	**Pg**	**22 47 52.5**	**-2.4**
ULGR				Sg	**Sg**	**22 48 03.3**	**-2.4**
TUNR	**Tungur**	**0.90**	**292**	Pg	**Pg**	**22 47 55.0**	**-1.4**
TUNR				Sg	**Sg**	**22 48 08.3**	**+0.3**
ARTR	**Artybash**	**1.98**	**354**	Pg	**Pn**	**22 48 14.0**	**+1.4**
ARTR				Sg	**Sb**	**22 48 41.1**	**+1.2**
TEL	**Teeli**	**2.03**	**53**	Pg	**Pn**	**22 48 14.1**	**+0.7**
TEL				Sg	**Sb**	**22 48 40.6**	**-0.8**
UKR	**Ust'-Kan**	**2.13**	**302**	Pg	**Pb**	**22 48 17.2**	**-0.6**
UKR				Sg	**Sg**	**22 48 47.7**	**+0.2**
GALT	**Gorno-Altaysk,**	**2.38**	**334**	Pg	**Pb**	**22 48 20.9**	**-1.0**
GALT				Sg	**Sg**	**22 48 55.1**	**-0.3**
TASR	**Tashtagol**	**2.94**	**3**	Pg	**Pb**	**22 48 30.7**	**-0.8**
TASR				Sg	**Sb**	**22 49 07.6**	**+0.2**
ZSN	**Zaisan**	**3.00**	**218**	*e*P	**Pb**	**22 48 32.6**	**-0.1**
	614nm,0.7s						
ZSN				*e*S	**Sb**	**22 49 12.0**	**+2.6**
	4μm,0.6s						
ZSN	**Zaisan**	**3.00**	**218**	*e*P	**Pn**	**22 48 26.6**	**-0.1**
	baz=217						
ZSN				*e*S	**Sn**	**22 49 03.0**	**+0.3**
	baz=217						
ZSN	**Zaisan**	**3.00**	**218**	Pg	**Pb**	**22 48 32.6**	**-0.1**
	614nm,0.7s						
ZSN				Lg	Lg	22 49 12.0	
	4μm,0.6s						
ZSN	**Zaisan**	**3.00**	**218**	*e*PN	**Pn**	**22 48 26.6**	**-0.1**
ZSN				*e*S	**Sn**	**22 49 03.0**	**+0.3**
ELT	**Eltsovka**	**3.54**	**346**	Pn	**Pn**	**22 48 36.6**	**+2.6**
ELT				Pg	**Pb**	**22 48 41.7**	**-0.1**
ELT				Sg	**Sg**	**22 49 29.5**	**-3.2**
TBTR	**Tabat**	**3.66**	**31**	Pn	**Pn**	**22 48 38.9**	**+3.3**
TBTR				Pg	**Pb**	**22 48 46.4**	**+2.7**
TBTR				Sg	**Sb**	**22 49 30.5**	**+2.4**
DJO	**Djoy, Khakassi**	**3.71**	**36**	Pn	**Pn**	**22 48 39.8**	**+3.3**
DJO				Pg	**Pb**	**22 48 45.9**	**+1.1**
DJO				Sg	**Sb**	**22 49 34.3**	**+4.6**
DJOS	**Djoyskaya Sosn**	**3.79**	**37**	Pn	**Pn**	**22 48 39.3**	**+1.7**
DJOS				Pg	**Pg**	**22 48 50.0**	**-1.8**
DJOS				Sg	**Sb**	**22 49 36.5**	**+4.4**
CERR	**Cheremushki**	**3.85**	**37**	Pn	**Pn**	**22 48 40.1**	**+1.9**
CERR				Pg	**Pb**	**22 48 48.4**	**+1.5**
CERR				Sg	**Sg**	**22 49 39.0**	**-3.5**
LUZB	**Luzhba, Kemero**	**3.91**	**11**	Pn	**Pn**	**22 48 41.4**	**+2.2**
LUZB				Pg	**Pb**	**22 48 48.1**	**-0.1**
LUZB				Sg	**Sb**	**22 49 39.6**	**+4.1**
BLRR	**Bol’shaya Rech**	**4.40**	**41**	Pn	**Pn**	**22 48 48.3**	**+2.5**
BLRR				Pg	**Pb**	**22 48 58.3**	**+2.0**
BLRR				Sg	**Sb**	**22 49 54.0**	**+4.6**
ZAA0	**Zalesovo Array**	**4.47**	**338**	⇓Pn	**Pn**	**22 48 47.9**	**+1.1**
	25nm,0.8s						
ZAA0				⇑Pg	**Pb**	**22 49 00.1**	**+2.5**
	35nm,0.7s						
ZAA0				⇑Sn	**Sn**	**22 49 41.7**	**+2.9**
	61nm,0.8s						
ZAA0				⇑Lg	Lg	22 50 00.2	
	256nm,0.8s						
ZAA0	**Zalesovo Array**	**4.47**	**338**	Pn	**Pn**	**22 48 48.1**	**+1.3**
ZALV	**Zalesovo Beam**	**4.47**	**338**	Pn	**Pn**	**22 48 48.0**	**+1.2**
	30nm,0.3s,baz=158,slow=14,SNR=304						
ZALV				Sn	**Sn**	**22 49 40.2**	**+1.4**
	42nm,0.3s,baz=161,slow=20,SNR=7.1						
ZALV				Lg	Lg	22 49 57.0	
	54nm,0.3s,baz=163,slow=21,SNR=4.5						
ZALV				LR	LR	22 50 31.4	
	comp=Z,336nm,18.5s,baz=100,slow=38						
BJR3	**Bachatsky-3 (S**	**4.49**	**349**	Pn	**Pn**	**22 48 50.0**	**+3.0**
BJR3				Sg	**Sg**	**22 50 01.7**	**-1.4**
ABNR	**Abakan**	**4.56**	**30**	Pn	**Pn**	**22 48 51.1**	**+3.1**
ABNR				Pg	**Pb**	**22 49 00.4**	**+1.3**
ABNR				Sg	**Sb**	**22 49 59.8**	**+5.8**
ARDR	**Aradan**	**4.57**	**51**	Pn	**Pn**	**22 48 51.0**	**+2.8**
ARDR				Pg	**Pb**	**22 48 59.9**	**+0.6**
ARDR				Sg	**Sb**	**22 49 59.2**	**+4.8**
POMOR	**Pomortsevo, Ku**	**4.63**	**352**	Pn	**Pn**	**22 48 52.3**	**+3.3**
POMOR				Pg	**Pb**	**22 49 02.9**	**+2.6**
POMOR				Sg	**Sg**	**22 50 06.4**	**-1.2**
MK31	**Makanchi Array**	**4.68**	**231**	⇑Pn	**Pn**	**22 48 51.5**	**+1.8**
	207nm,0.6s,baz=64,slow=12,SNR=3165						
MK31				Pg	**Pb**	**22 49 03.6**	**+2.4**
	255nm,0.5s,baz=52,slow=13,SNR=21						
MK31				⇑Lg	Lg	22 50 04.8	
	361nm,0.5s						
MK31	**Makanchi Array**	**4.68**	**231**	*ce*PN	**Pn**	**22 48 52.3**	**+2.6**
MK31	**Makanchi Array**	**4.68**	**231**		**Pn**	**22 48 52.6**	**+2.9**
MKAR	**Makanchi Array**	**4.68**	**231**	Pn	**Pn**	**22 48 52.6**	**+2.9**
	60nm,0.3s,baz=60,slow=13,SNR=2545						
MKAR				Pg	**Pg**	**22 49 05.5**	**-3.2**
	159nm,0.3s,baz=55,slow=17,SNR=39						
MKAR				Sn	**Sn**	**22 49 46.7**	**+2.7**

	29nm,0.3s,baz=6.6,slow=37,SNR=2.0						
MKAR				Lg	Lg	22 50 05.3	
	47nm,0.3s,baz=16,slow=22,SNR=3.6						
MKAR	**Makanchi Array**	4.68	231	Pn	Pn	22 48 53.0	+3.2
MKAR				Pg	Pg	22 49 05.9	-2.8
MKAR				Sg	Sg	22 50 08.3	-0.9
MKAR	**Makanchi Array**	4.68	231	*i* PN	Pn	22 48 52.5	+2.8
MKAR				pmax	pmax		
	comp=Z,183nm,0.5s						
MKAR	**Makanchi Array**	4.68	231	Pn	Pn	22 48 51.5	+1.8
KZLR	**Kyzyl**	4.72	64	Pn	Pn	22 48 51.0	+0.7
KZLR				Pg	Pb	22 49 01.6	-0.3
KZLR				Sg	Sb	22 50 04.4	+5.6
SALR	**Pechorkino, Sa**	4.74	346	Pn	Pn	22 48 53.6	+3.1
SALR				Pg	Pb	22 49 05.7	+3.5
SALR				Sg	Sg	22 50 08.0	-3.2
SEM	**Semipalatinsk**	4.78	280	*e*P	Pb	22 49 05.2	+2.2
	comp=Z,137nm,0.5s						
SEM				*e*S	Sg	22 50 08.5	-4.0
	comp=Z,1μm,0.6s						
SEM	**Semipalatinsk**	4.78	280	*e*P	Pn	22 48 50.9	-0.4
	comp=Z,84nm,0.7s,baz=280						
SEM	**Semipalatinsk**	4.78	280	Pg	Pb	22 49 05.2	+2.2
	comp=Z,137nm,0.5s						
SEM				Lg	Lg	22 50 08.5	
	comp=Z,1μm,0.6s						
SEM	**Semipalatinsk**	4.78	280	*e*PN	Pn	22 48 50.8	-0.4
SEM				pmax	pmax		
	comp=Z,84nm,0.7s						
MAKZ	**Makanchi**	4.83	233	Pn	Pn	22 48 54.9	+3.1
MAKZ				Sg	Sg	22 50 13.8	-0.3
MAKZ	**Makanchi**	4.83	233	⇑Pn	Pn	22 48 53.5	+1.7
	comp=Z,171nm,0.7s						
MAKZ				⇑Pg	Pb	22 49 06.0	+2.2
	comp=Z,318nm,0.7s						
MAKZ				⇑Lg	Lg	22 50 09.3	
	comp=Z,630nm,0.7s						
MAKZ	**Makanchi**	4.83	233	PN	Pn	22 48 54.4	+2.6
MAKZ	**Makanchi**	4.83	233	Pn	Pn	22 48 54.4	+2.6
SHRR	**Shira**	4.92	18	Pn	Pn	22 48 56.0	+3.0
SHRR				Sg	Sg	22 50 13.5	-3.5
KHAR	**Kharino, NSO,**	5.39	334	Pn	Pn	22 49 01.5	+2.1
KHAR				Pg	Pg	22 49 20.6	-1.6
KHAR				S	Sn	22 50 05.5	+4.1
KHAR				Sg	Sg	22 50 30.7	-1.3
KEM	**Kemerovo**	5.60	351	Pn	Pn	22 49 05.1	+2.8
KEM				Sg	Sg	22 50 33.2	-5.4
BSTK	**Bystrovka, Nov**	5.64	329	Pn	Pn	22 49 04.6	+1.8
BSTK				Pg	Pg	22 49 23.4	-3.6
BSTK				S	Sn	22 50 11.4	+3.9
BSTK				Sg	Sg	22 50 38.8	-1.1
NVSII	**Novosibirsk**	5.69	334	Pn	Pn	22 49 04.7	+1.2
NVSII				Pg	Pb	22 49 23.4	+5.0
NVSII				S	Sn	22 50 11.1	+2.3
NVSII				Sg	Sg	22 50 38.1	-3.5
NHES	**Novosibirsk, N**	5.78	332	Pg	Pb	22 49 24.6	+4.7
NHES				Sg	Sg	22 50 41.2	-3.2
BRCR	**Berchikul'**	5.83	4	Pn	Pn	22 49 09.0	+3.5
BRCR				Sg	Sg	22 50 41.8	-4.3
KURK	**Kurchatov**	5.84	282	Pn	Pn	22 49 07.3	+1.8
KURK				S	Sn	22 50 15.7	+3.3
KURK				Sg	Sg	22 50 41.0	-5.4
KURK	**Kurchatov**	5.84	282	⇑Pn	Pn	22 49 07.0	+1.4
	comp=Z,470nm,0.6s						
KURK				⇑Sn	Sn	22 50 12.1	-0.4
	comp=Z,490nm,0.6s						
KURK				⇓Lg	Lg	22 50 39.0	
	comp=Z,1μm,0.8s						
KURK	**Kurchatov**	5.84	282	PN	Pn	22 49 08.1	+2.5
KURK						22 50 16.7	
KURK	**Kurchatov**	5.84	282	Pn	Pn	22 49 07.1	+1.5
BALAH	**Balakhonka, Ku**	5.87	351	Pn	Pn	22 49 08.2	+2.2
BALAH				Sg	Sg	22 50 41.5	-5.9
KURBB	**Kurchatov Arra**	5.89	281	Pn	Pn	22 49 08.1	+1.8
	comp=Z,22nm,0.3s,baz=91,slow=15,SNR=4716						
KURBB				Pg	Pb	22 49 26.1	+4.4
	comp=Z,7.0nm,0.3s,baz=96,slow=18,SNR=6.6						
KURBB				Sn	Sn	22 50 16.6	+2.9
	comp=Z,14nm,0.3s,baz=89,slow=28,SNR=14						
KURBB				Lg	Lg	22 50 43.8	
	comp=Z,13nm,0.3s,baz=91,slow=35,SNR=5.0						
TDJR	**Todzha**	5.92	61	Pn	Pn	22 49 08.2	+1.4
TDJR				Pg	Pg	22 49 29.8	-2.7
TDJR				Sg	Sb	22 50 40.7	+7.4
ALXA	**Alekseevka, NS**	5.96	331	Pn	Pn	22 49 08.9	+1.6
ALXA				S	Sn	22 50 17.8	+2.3
ALXA				Sg	Sg	22 50 49.0	-1.4
WMQ	**Urumqi**	6.01	179	*e*Pn	Pn	22 49 09.7	+1.6
WMQ				Sn	Sn	22 50 19.8	+2.8
WMQ				smax	smax		
	comp=Z,730nm,0.9s						
WMQ				smax	smax		
	comp=Z,880nm,0.9s						
WMQ	**Urumqi**	6.01	179	PN	Pn	22 49 09.2	+1.1
WMQ	**Urumqi**	6.01	179		Pn	22 49 09.2	+1.1
ASR1	**Anjero-Sudjens**	6.32	352	Pn	Pn	22 49 14.6	+2.4
ASR1				S	Sn	22 50 22.9	-1.4
KNGR	**Kungurtug, Tuv**	6.40	79	Pn	Pn	22 49 12.7	-0.7
KNGR				Pg	Pb	22 49 32.5	+2.0
KNGR				S	Sn	22 50 27.1	+0.6
KNGR				Sg	Sg	22 50 58.3	-6.0
KAPS	**Kapalarasan**	7.21	234	Pg	Pb	22 49 48.6	+4.4
	comp=Z,68nm,0.5s						
KAPS				Lg	Lg	22 51 23.8	
	comp=Z,193nm,0.8s						
DJR	**Jarkent**	7.67	227	Pg	Pb	22 49 57.2	+5.0
	comp=Z,57nm,0.6s						
DJR				Lg	Lg	22 51 37.5	
	comp=Z,150nm,1.3s						
TDK	**Taldyqorghan**	7.90	236	*e*P	Pn	22 49 33.2	-0.7
	baz=235						
TDK				*e*S	Sn	22 51 03.3	0.0
	baz=235						
TDK	**Taldyqorghan**	7.90	236	Pg	Pb	22 50 03.0	+7.0
	comp=Z,148nm,0.6s						
TDK				Lg	Lg	22 51 47.4	
	comp=Z,831nm,1.1s						
TDK	**Taldyqorghan**	7.90	236	*e*P	Pn	22 49 33.2	-0.7
TDK				*e*S	Sn	22 51 03.3	0.0
KTMS	**Ketmen**	8.11	221	Pg	Pb	22 50 05.5	+5.8
	comp=Z,7.8nm,0.3s						
KTMS				Lg	Lg	22 51 51.2	
	comp=Z,131nm,0.8s						
PDGK	**Podgornoye**	8.58	224	Pg	Pg	22 50 14.0	-9.3
	comp=Z,36nm,0.9s						
PDGK				Lg	Lg	22 52 07.3	
	comp=Z,104nm,0.7s						
PDGK	**Podgornoye**	8.58	224	⇑Pn	Pn	22 49 43.3	0.0
	comp=Z,51nm,0.5s						
PDGK				⇑Sn	Sn	22 51 20.3	+0.1
	comp=Z,118nm,0.7s						
PDGK				⇓Lg	Lg	22 52 09.4	
	comp=Z,434nm,1.2s						
PDGK	**Podgornoye**	8.58	224	*i* P	Pn	22 49 43.3	0.0
PDGK				pmax	pmax		
	comp=Z,51nm,0.5s						
MOY	**Mondy**	8.68	73	*e*P	Pn	22 49 40.9	-3.7
MOY				*e*S	Sn	22 51 16.2	-6.3
ARXS	**Arharly**	8.73	234	Pg	Pg	22 50 15.9	-10
	comp=Z,121nm,0.7s						
ARXS				Lg	Lg	22 52 10.3	
	comp=Z,236nm,0.8s						
KPKS	**Kokpek**	8.85	227	*e*P	Pn	22 49 45.6	-1.4
	baz=227						
KPKS	**Kokpek**	8.85	227	*e*P	Pn	22 49 45.6	-1.4
UZB	**Uzynbulak**	8.94	225	Pg	Pg	22 50 20.5	-10
	comp=Z,38nm,0.8s						
UZB				Lg	Lg	22 52 17.2	
	comp=Z,138nm,0.9s						
KURS	**Kuram**	9.08	229	Pg	Pn	22 50 24.2	+34
	comp=Z,27nm,0.8s						
KURS				Lg	Lg	22 52 23.3	
	comp=Z,89nm,1.0s						
SATY	**Saty**	9.29	227	*e*P	Pn	22 49 52.6	-0.4
	comp=Z,4.5nm,0.7s,baz=226						
SATY	**Saty**	9.29	227	Pg	Pn	22 50 27.5	+34
	comp=Z,40nm,0.8s						
SATY				Lg	Lg	22 52 30.4	
	comp=Z,199nm,1.3s						
SATY	**Saty**	9.29	227	*e*P	Pn	22 49 52.6	-0.4
SATY				pmax	pmax		
	comp=Z,4.0nm,0.7s						
CHKK	**Chushkaly**	9.42	235	*e*P	Pn	22 49 54.3	-0.5
	baz=234						
CHKK	**Chushkaly**	9.42	235	*e*P	Pn	22 49 54.2	-0.5
BRZS	**Berezniki**	9.65	277	*e*P	Pn	22 49 56.6	-1.2
	comp=Z,4.1nm,0.6s,baz=276						
BRZS	**Berezniki**	9.65	277	*e*P	Pn	22 49 56.6	-1.2
BRZS				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KUU	**Kurty**	9.74	237	*e*P	Pn	22 49 58.3	-0.9
	baz=236						
KUU	**Kurty**	9.74	237	Pg	Pn	22 50 37.2	+38
	comp=Z,19nm,0.8s						
KUU				Lg	Lg	22 52 45.5	
	comp=Z,151nm,0.7s						
KUU	**Kurty**	9.74	237	*e*P	Pn	22 49 58.3	-0.9
KOTS	**Kotyrbulak**	9.79	232	Pg	Pn	22 50 38.5	+38
	comp=Z,48nm,0.7s						
KOTS				Lg	Lg	22 52 47.9	
	comp=Z,545nm,1.0s						
MDOK	**Medeo**	9.88	232	*e*P	Pn	22 50 00.7	-0.5
	baz=231						
MDOK	**Medeo**	9.88	232	⇑Pn	Pn	22 50 01.3	+0.2
	comp=Z,14nm,0.6s						
MDOK				⇓Sn	Sn	22 51 52.8	+0.8
	comp=Z,97nm,0.9s						
MDOK				⇑Lg	Lg	22 52 48.0	
	comp=Z,149nm,0.8s						
MDOK	**Medeo**	9.88	232	Pg	Pn	22 50 40.7	+40
	comp=Z,19nm,0.7s						
MDOK				Lg	Lg	22 52 51.3	
	comp=Z,117nm,0.8s						
MDOK	**Medeo**	9.88	232	*e*P	Pn	22 50 00.6	-0.5
KNDC	**Almaty**	9.88	232	⇓Pn	Pn	22 50 01.6	+0.5
	comp=Z,64nm,0.7s						
KNDC				⇑Lg	Lg	22 52 51.1	
	comp=Z,567nm,1.1s						
KNDC	**Almaty**	9.88	232	P	Pn	22 50 01.6	+0.5
AAA	**Alma-Ata**	9.91	232	*e*P	Pn	22 50 01.3	-0.3
	baz=232						
AAA	**Alma-Ata**	9.91	232	*e*P	Pn	22 50 01.2	-0.3
TNSS	**Tian-Shan**	10.02	231	*e*P	Pn	22 50 03.0	-0.3
	baz=231						
TNSS	**Tian-Shan**	10.02	231	Pg	Pn	22 50 41.9	+39
	comp=Z,18nm,0.5s						
TNSS				Lg	Lg	22 52 54.4	
	comp=Z,37nm,0.7s						
TNSS	**Tian-Shan**	10.02	231	*e*P	Pn	22 50 03.0	-0.3
MTBS	**Maitube**	10.22	233	Pg	Pn	22 50 45.7	+40
	comp=Z,26nm,0.8s						
MTBS				Lg	Lg	22 52 59.9	
	comp=Z,62nm,0.9s						
TLY	**Talaya**	10.32	74	*i* P	Pn	22 50 06.2	-0.9
SGDS	**Sogindy**	10.97	239	*e*P	Pn	22 50 14.6	-1.4
	comp=Z,5.5nm,0.7s,baz=239						
SGDS	**Sogindy**	10.97	239	*e*P	Pn	22 50 14.6	-1.4
SGDS				pmax	pmax		
	comp=Z,5.0nm,0.7s						
BVAR	**Borovoye Array**	11.22	293	Pn	Pn	22 50 19.1	-0.3
	comp=Z,8.8nm,0.3s,baz=88,slow=18,SNR=108						
BVAR				Sn	Sn	22 52 22.6	-2.0
	comp=Z,9.6nm,0.3s,baz=65,slow=31,SNR=7.6						
BRVK	**Borovoye**	11.29	293	⇓Pn	Pn	22 50 19.4	-0.8
	comp=Z,18nm,0.6s						
BRVK				⇓Sn	Sn	22 52 25.8	-0.6
	comp=Z,32nm,0.6s						
BRVK				⇑Lg	Lg	22 53 31.6	
	comp=Z,154nm,1.3s						
BRVK	**Borovoye**	11.29	293	*ce*P	Pn	22 50 20.0	-0.3
BRVK				pmax	pmax		
	comp=Z,27nm,0.8s						
BRVK	**Borovoye**	11.29	293	Pn	Pn	22 50 19.8	-0.5
AAK	**Ala-Archa**	11.58	237	Pn	Pn	22 50 24.2	-0.3
	comp=Z,2.3nm,0.3s,baz=88,slow=6.8,SNR=40						
AAK				Lg	Lg	22 53 43.2	
	comp=Z,0.2nm,0.3s,baz=162,slow=22,SNR=2.2						
AAK				LR	LR	22 55 08.0	
	comp=Z,399nm,19.9s,baz=58,slow=39						
AAK	**Ala-Archa**	11.58	237	*ce*P	Pn	22 50 23.9	-0.6
AAK				pmax	pmax		
	comp=Z,38nm,0.8s						
SONM	**Songino Array**	12.53	92	Pn	Pn	22 50 33.3	-4.1
	comp=Z,0.1nm,0.3s,baz=280,slow=14,SNR=16						
SONM				Lg	Lg	22 54 07.8	
	comp=Z,0.9nm,0.3s,baz=279,slow=28,SNR=10						
SONM				LR	LR	22 55 27.0	
	comp=Z,379nm,19.9s,baz=264,slow=38						
SONM	**Songino Array**	12.53	92	P	Pn	22 50 37.7	+0.3
SONM	**Songino Array**	12.53	92	Pn	Pn	22 50 37.7	+0.3
ULN	**Ulaanbaatar**	12.95	91	*ce*P	Pn	22 50 43.7	+0.6
ULN				pmax	pmax		
	comp=Z,7.0nm,1.7s						
ULN	**Ulaanbaatar**	12.95	91	Pn	Pn	22 50 42.8	-0.3
DZA	**Taraz**	13.21	244	*e*P	Pn	22 50 44.4	-2.2
	baz=244						
DZA	**Taraz**	13.21	244	*e*P	Pn	22 50 44.3	-2.2
KSH	**Kashi**	13.21	223	P	P	22 50 53.9	-2.9
KSH				S	Sn	22 53 25.2	+11
KSH				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KSH				pmax	pmax		
	comp=Z,130nm,3.7s						
KSH				LR	LR		
	comp=Z,1μm,9.4s						
KSH				LR	LR		
	comp=Z,1μm,10.3s						
KSH				LR	LR		
	comp=Z,860nm,17.3s						
GTA	**Gaotai**	13.54	136	*e*P	Pn	22 50 49.6	-1.7
GTA				pP	P	22 51 00.2	-0.3
GTA				sP		22 51 05.6	
GTA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,110nm,5.8s						
GTA				LR	LR		
	comp=Z,530nm,11.6s						
GTA				LR	LR		
	comp=Z,920nm,10.5s						
GTA				LR	LR		
	comp=Z,570nm,9.1s						
KK31	**Karatay Array**	13.56	247	Pn	Pn	22 50 48.9	-2.5
	comp=Z,14nm,0.6s,baz=52,slow=15,SNR=109						
KK31				⇑Sn	Sn	22 53 22.0	0.0
	comp=Z,9.3nm,0.6s						
KK31				⇓Lg	Lg	22 54 45.4	
	comp=Z,52nm,0.8s						
KK31	**Karatay Array**	13.56	247	P	Pn	22 50 49.1	-2.3
KK31	**Karatay Array**	13.56	247		Pn	22 50 49.1	-2.3
KKAR	**Karatay Array**	13.56	247	P	Pn	22 50 49.1	-2.3
KKAR	**Karatay Array**	13.56	247		Pn	22 50 49.1	-2.3
IUG	**Iuzhnay**	14.42	244	*e*P	Pn	22 51 01.5	-1.8
	baz=244						
IUG	**Iuzhnay**	14.42	244	*e*P	Pn	22 51 01.4	-1.8
SVE	**Sverdlovsk**	17.49	304	*e*P	Pn	22 51 40.4	-2.3
SVE				*e*S	Sn	22 54 46.1	-11
SVE				pmax	pmax		
	comp=Z,55nm,1.0s						
AB31	**Akbulak array**	17.94	279	Pn	Pn	22 51 47.2	-1.2
	comp=Z,14nm,0.7s,baz=78,slow=11,SNR=94						
AB31				⇑Sn	Sn	22 55 05.2	-2.9
	comp=Z,6.6nm,0.8s						
AB31				⇑Lg	Lg	22 57 02.6	
	comp=Z,23nm,0.9s						
AB31	**Akbulak array**	17.94	279	*i* P	Pn	22 51 46.6	-1.7
AB31				pmax	pmax		
	comp=Z,14nm,0.7s						
ABKAR	**Akbulak array**	17.94	279		Pn	22 51 46.5	-1.8
ABKAR	**Akbulak array**	17.94	279		Pn	22 51 46.6	-1.7
LZH	**Lanzhou**	18.10	133	⇑P	P	22 51 51.1	+0.1
LZH				pP	sP	22 52 00.6	+4.0
LZH				pmax	pmax		
	comp=Z,15nm,1.0s						
LZH				pmax	pmax		
	comp=Z,110nm,6.5s						
LZH				LR	LR		
	comp=Z,910nm,16.3s						
LZH				LR	LR		
	comp=Z,1μm,15.7s						
LZH				LR	LR		
	comp=Z,520nm,12.5s						
BTO	**Baotou**	18.22	112	*e*P	Pn	22 51 50.7	-1.3
ARU	**Arti**	18.55	302	*d i*P	P	22 51 54.9	-0.7
ARU				S	Sn	22 55 21.4	-1.4
ARU				pmax	pmax		
	comp=Z,16nm,0.8s						
ARU	**Arti**	18.55	302		P	22 51 54.3	-1.2
ARU				IAmb	IAmb	22 52 00.1	
	comp=Z,24nm,0.6s						
AKTO	**Aktyubinsk**	18.94	283	P	P	22 51 59.9	0.0
	comp=Z,3.4nm,0.3s,baz=87,slow=12,SNR=234						
AKTO				S	Sn	22 55 25.1	-7.3
	comp=Z,0.2nm,0.3s,baz=204,slow=15,SNR=2.6						
AKTO				Lg	Lg	22 57 31.0	
	comp=Z,0.2nm,0.3s,baz=159,slow=18,SNR=2.4						
AKTO				LR	LR	22 59 41.1	
	comp=Z,186nm,18.6s,baz=83,slow=38						
AKTO	**Aktyubinsk**	18.94	283	⇓Pn	P	22 51 59.9	0.0
	comp=Z,81nm,0.7s						
HHC	**Hu-ho-hao-te**	19.01	109	*e*P	Pn	22 52 04.6	+3.0
HHC				PP	PnPn	22 52 22.3	+8.4
HHC				S	Sn	22 55 32.3	-2.1
HHC				pmax	pmax		
	comp=Z,7.0nm,1.4s						
HHC				pmax	pmax		
	comp=Z,41nm,7.4s						
HHC				LR	LR		
	comp=Z,690nm,7.2s						
HHC				LR	LR		
	comp=Z,520nm,10.3s						
HHC				LR	LR		
	comp=Z,450nm,7.9s						
NIL	**Nilore**	19.35	219	P	P	22 52 04.0	-0.5
NIL				pmax	pmax		
	comp=Z,28nm,0.8s						
NIL	**Nilore**	19.35	219	P	P	22 52 04.0	-0.5
NIL				IAmb	IAmb	22 52 06.1	
	comp=Z,28nm,0.8s						
NRIK	**Noril'sk**	19.57	360	P	P	22 52 07.6	+0.9
	comp=Z,0.7nm,0.3s,baz=175,slow=11,SNR=11						
NRIK				LR	LR	23 00 07.6	
	comp=Z,311nm,18.1s,baz=195,slow=38						
NRIK	**Noril'sk**	19.57	360	P	P	22 52 07.0	+0.4
LSA	**Lhasa**	20.29	171	P	Pn	22 52 16.8	-0.4
LSA				pmax	pmax		
	comp=Z,27nm,0.8s						
LSA	**Lhasa**	20.29	171	P	P	22 52 15.7	+0.4
LSA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
LSA	**Lhasa**	20.29	171	P	P	22 52 15.7	+0.4
KBL	**Kabul**	20.48	229	P	P	22 52 15.8	-1.3
KBL				pmax	pmax		
	comp=Z,13nm,0.9s						
KBL	**Kabul**	20.48	229	P	P	22 52 15.8	-1.3
HIA	**Hailar**	20.77	79	*i* P	Pn	22 52 21.6	-0.7
HIA				pmax	pmax		
	comp=Z,11nm,1.1s						
HIA	**Hailar**	20.77	79	P	P	22 52 19.6	-0.3
DANN	**Dangsing**	21.66	189	*e*P	P	22 52 32.7	+2.8
	comp=Z,18nm,0.5s						
GUN	**Gumba**	21.93	184	*e*P	P	22 52 32.7	-0.2
	comp=Z,31nm,0.6s						
KKN	**Kakani**	22.09	186	*e*P	P	22 52 35.4	+1.0
	comp=Z,23nm,0.6s						
XAN	**Xi'an**	22.25	127	P	P	22 52 35.9	0.0
XAN				pP	sP	22 52 42.7	+1.2
XAN				pmax	pmax		
	comp=Z,7.0nm,0.7s						
XAN				pmax	pmax		
	comp=Z,92nm,6.3s						
XAN				LR	LR		
	comp=Z,530nm,15.5s						
XAN				LR	LR		
	comp=Z,870nm,14.4s						
XAN				LR	LR		
	comp=Z,620nm,9.9s						
DMN	**Daman**	22.28	186	*e*P	P	22 52 38.8	+2.3
PKIN	**Phulchoki**	22.29	185	*e*P	P	22 52 38.2	+1.5
	comp=Z,25nm,0.6s						
PKI	**Pulchoki**	22.30	185	*e*P	P	22 52 37.9	+1.1
BJI	**Beijing**	22.34	105	P	P	22 52 37.4	+0.6
BJI				pmax	pmax		
	comp=Z,6.0nm,0.5s						
BJI				pmax	pmax		
	comp=Z,100nm,4.7s						
BJI				LR	LR		
	comp=Z,920nm,11.8s						
BJI				LR	LR		
	comp=Z,630nm,13.7s						
BJT	**Baijiatuau**	22.34	105	P	P	22 52 36.8	-0.1
BJT				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BJT	**Baijiatuau**	22.34	105	P	P	22 52 36.8	-0.1
TAPN	**Taplejung**	22.45	180	*e*P	P	22 52 35.3	-3.1
CD2	**Chengdu**	22.46	141	*e*P	P	22 52 39.6	+1.4
KIRV	**Kirov**	23.70	306	LR	LR	23 02 46.0	
	comp=Z,169nm,18.9s,baz=93,slow=38						
HRA	**Herat**	24.18	240	P	P	22 52 55.6	-0.1
GEYT	**Alibeck**	24.20	252	P	P	22 52 55.8	+0.1
	comp=Z,3.3nm,0.7s,baz=31,slow=9.0,SNR=7.5						
GEYT				LR	LR	23 03 26.4	
	comp=Z,121nm,18.4s,baz=345,slow=39						
GEYT	**Alibeck**	24.20	252	P	P	22 52 55.5	-0.1
GYA0B	**ALIBECK ARRAY**	24.20	252	P	P	22 52 56.0	+0.4
GYA0B				IAmb	IAmb	22 53 10.6	
	comp=Z,9.5nm,0.7s						
SHL	**Shillong**	24.45	171	P	P	22 52 57.7	-0.4
SHL				pmax	pmax		
	comp=Z,7.0nm,0.9s						
SHL	**Shillong**	24.45	171	P	P	22 52 57.7	-0.4
ZEA	**Zeya**	24.59	66	*e*P	P	22 53 01.6	+2.6
BELG	**Belogornoye**	25.02	291	*i* P	P	22 53 02.2	-0.6
BELG				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ENH	**Enshi**	25.56	132	P	P	22 53 09.3	+1.3
ENH				IAmb	IAmb	22 53 13.3	
	comp=Z,10nm,1.0s						
YAK	**Yakutsk**	26.01	46	*e*P	P	22 53 12.4	+0.6
YAK				*e**PP	sP	22 53 22.8	+5.2
YAK				*e*S	S	22 57 41.6	-0.5
YAK				pmax	pmax		
	comp=Z,12nm,0.6s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.6s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.0s						
YAK				smax	smax		
	comp=E,42nm,3.8s						
YAK				smax	smax		
	comp=N,133nm,4.8s						
YAK	**Yakutsk**	26.01	46	P	P	22 53 12.1	+0.4
KMI	**Kunming**	27.32	149	⇑P	P	22 53 25.5	+1.3
KMI				pmax	pmax		
	comp=N,8.0nm,1.4s						
GYA	**Guiyang**	27.57	141	⇑P	P	22 53 27.7	+1.4
GYA				S	S	22 58 07.9	+0.3
GYA				pmax	pmax		
	comp=N,8.0nm,1.2s						
GYA				LR	LR		
	comp=N,220nm,12.6s						
GYA				LR	LR		
	comp=N,200nm,7.8s						
GYA				LR	LR		
	comp=N,300nm,11.5s						
KLR	**Kul'dur**	28.34	74	*i* P	P	22 53 34.3	+1.5
KLR				pmax	pmax		
	comp=Z,10.0nm,2.2s						
TIXI	**Tiksi**	28.71	26	*ce*P	P	22 53 37.0	+1.1
TIXI	**Tiksi**	28.71	26	P	P	22 53 36.8	+0.9
KLMR	**Klimovskoe**	28.82	311	*e*P	P	22 53 35.8	-1.1
KLMR				pmax	pmax		
	comp=Z,12nm,1.1s						
KLMR	**Klimovskoe**	28.82	311	*e*P	P	22 53 35.9	-1.0
KLMR				AMP		22 53 44.2	
	comp=Z,12nm,1.1s						
VRH	**Novokhopyorsk**	28.86	291	*e*P	P	22 53 36.7	-0.6
VRH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
NJ2	**Nanjing**	29.23	116	*e*P	P	22 53 41.1	+0.2
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
NJ2				LR	LR		
	comp=Z,470nm,14.7s						
NJ2				LR	LR		
	comp=Z,410nm,14.2s						
NJ2				LR	LR		
	comp=Z,440nm,14.7s						
LPSR	**Galich'ya Gora**	30.16	294	*e*P	P	22 53 48.7	-0.2
LPSR				pmax	pmax		
	comp=Z,30nm,0.8s						
MOS	**Moscow**	30.25	301	*e*P	P	22 53 49.0	-0.6
MOS				pmax	pmax		
	comp=Z,38nm,0.7s						
VORD	**Divnogorie**	30.39	291	*e*P	P	22 53 50.2	-0.8
VORD				pmax	pmax		
	comp=Z,10.0nm,1.0s						

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VSR    Storozhevoye      30.40 292 eP      P       22 53 50.1 -0.9
VSR                                 pmax    pmax
       comp=Z,20nm,1.1s
USA0B  Ussuriysk Arra    30.42  83  P       P       22 53 51.4 +0.1
USA0B                               pmax    pmax
       comp=Z,13nm,1.3s
USA0B  Ussuriysk Arra    30.42  83  P       P       22 53 51.4 +0.1
USA0B                               IAmb    IAmb    22 53 56.1
       comp=Z,12nm,1.3s
USRK   Ussuriysk Ar.     30.42  83  P       P       22 53 49.7 -1.6
       comp=Z,3.6nm,0.6s,baz=278,slow=7.6,SNR=15
USRK                                LR      LR      23 06 57.4
       comp=Z,166nm,20.6s,baz=274,slow=38
NCK    Nalchik           30.52 275 i P      P       22 53 52.1 -0.1
NCK                                 pmax    pmax
       comp=Z,5.0nm,0.6s
KBZ    Khabaz            30.86 276  P       P       22 53 55.1 -0.1
       comp=Z,2.0nm,1.0s,baz=0.0,slow=5.1,SNR=1.6
KBZ                                 LR      LR      23 07 58.4
       comp=Z,111nm,18.7s,baz=50,slow=39
KIV    Kislovodsk        30.89 277 eP      P       22 53 53.1 -2.5
KIV                                 pmax    pmax
       comp=Z,16nm,1.1s
KIV                                 MLR     MLR
       comp=Z,182nm,15.0s
OBN    Obninsk           30.95 300ceP      P       22 53 55.6 -0.3
OBN                                e*PP     pP      22 53 59.2 -0.7
OBN                                e*SP     sP      22 54 00.9 -0.6
OBN                                 SSS     SSS     23 01 03.0
OBN                                 pmax    pmax
       comp=Z,22nm,0.8s
OBN                                 MLR     MLR
       comp=Z,72nm,15.0s
OBN    Obninsk           30.95 300  P       P       22 53 55.8 -0.1
KSRS   Korea Array       31.30  98  P       P       22 53 57.6 -1.5
       comp=Z,1.8nm,0.8s,baz=297,slow=7.5,SNR=6.5
KSRS                                LR      LR      23 07 38.3
       comp=Z,165nm,18.4s,baz=304,slow=39
GNI    Garni             31.45 269ceP      P       22 54 01.7 +1.1
GNI                                 pmax    pmax
       comp=Z,19nm,1.7s
CMAR   Chiang Mai Arr    32.60 160  P       P       22 54 09.6 -1.1
       comp=Z,1.3nm,0.4s,baz=341,slow=11,SNR=8.6
CMAR                                LR      LR      23 08 37.4
       comp=Z,43nm,18.2s,baz=185,slow=39
GEVA   Gevas             33.55 267  P       P       22 54 20.3 +1.3
GEVA                                IAmb    IAmb    22 54 37.1
       comp=Z,3.7nm,0.7s
ARCES  ARCESS Array B    34.93 327  P       P       22 54 30.5 +0.1
       comp=Z,4.3nm,0.8s,baz=46,slow=4.9,SNR=5.1
ARCES                               PcP     PcP     22 57 03.3 +0.6
       comp=Z,1.7nm,0.6s,baz=88,slow=4.1,SNR=5.1
ARCES                               LR      LR      23 09 51.6
       comp=Z,38nm,19.6s,baz=155,slow=38
FIA1   FINESS Array S    35.26 313  P       P       22 54 33.6 +0.3
FIA1                                IAmb    IAmb    22 54 42.4
       comp=Z,12nm,1.2s
FINES  FINESS Array B    35.26 313  P       P       22 54 33.4  0.0
       comp=Z,3.2nm,0.7s,baz=65,slow=9.1,SNR=22
FINES                               PcP     PcP     22 57 04.9 +1.2
       comp=Z,1.2nm,0.5s,baz=77,slow=3.0,SNR=5.1
FINES                               LR      LR      23 10 29.3
       comp=Z,67nm,18.2s,baz=148,slow=39
QIZ    Qiongzhong        35.51 142  P       P       22 54 34.9 -1.0
QIZ                                 S       S       23 00 14.0 +2.8
QIZ                                 LR      LR
       comp=Z,150nm,13.7s
QIZ                                 LR      LR
       comp=Z,340nm,16.2s
QIZ                                 LR      LR
       comp=Z,250nm,14.2s
QIZ    Qiongzhong        35.51 142  P       P       22 54 34.8 -1.1
VSU    Vasula            35.52 308 eP      P       22 54 35.9 +0.2
VSU    Vasula            35.52 308 i P      P       22 54 35.3 -0.3
VSU                                 pmax    pmax
       comp=Z,34nm,0.9s
MARD   Mardin            35.60 268  P       P       22 54 37.4 +0.7
MARD                                IAmb    IAmb    22 54 38.8
       comp=Z,11nm,0.8s
MNK    Minsk             35.97 301 i P      P       22 54 40.0 +0.5
       comp=E,3.0nm,1.2s
MNK                                i P      P       22 54 40.0 +0.5
       comp=N,6.0nm,0.8s
MNK                                i P      P       22 54 40.0 +0.5
       comp=Z,20nm,0.8s
MNK                                i PP     PP      22 56 02.0 +0.9
MNK                                i PPP    PPP     22 56 16.3
MNK                                i PcP    PcP     22 57 04.5 -1.5
MNK                                i S      S       23 00 21.2 +3.5
MNK                                i SS     SS      23 02 50.1 -4.0
MNK                                i LQ     LQ      23 06 50.1
MNK                                i LR     LR      23 09 36.0
MNK                                i LRM    MLR     23 10 18.6
       comp=N,262nm,25.8s
MNK                                i LRM    MLR     23 10 44.4
       comp=E,13nm,29.6s
MNK                                i LRM    MLR     23 10 59.9
       comp=Z,55nm,25.8s
IDID   Didziasalis       36.35 303 eP      P       22 54 43.2 +0.4
MA2    Magadan           36.41  50 i P      P       22 54 44.0 +0.8
MA2                                 pmax    pmax
       comp=Z,14nm,1.9s
NACGM  Naroch            36.45 302 i P      P       22 54 42.8 -0.9
NACGM                              i P      P       22 54 42.8 -0.9
NACGM                              i P      P       22 54 42.8 -0.9
NACGM                              i PP     PnPn    22 55 48.3  -18
NACGM                              i PPP    PPP     22 56 07.0
NACGM                              i S      S       23 00 16.3 -8.8
NACGM                              i SS     SnSn    23 02 07.2  -46
NACGM                              i SSS    SSS     23 02 43.2
NACGM                              i LQ     LQ      23 06 28.7
NACGM                              i LR     LR      23 09 38.9
AKASG  Malin Array Be    36.50 294  P       P       22 54 43.9 -0.2
       comp=Z,4.4nm,0.4s,baz=58,slow=8.6,SNR=27
AKASG                               LR      LR      23 10 00.6
       comp=Z,94nm,19.2s,baz=50,slow=37
AKASG  Malin Array Be    36.50 294  P       P       22 54 44.2 +0.1
AKASG                               pmax    pmax
       comp=Z,3.0nm,0.5s
AKASG  Malin Array Be    36.50 294  P       P       22 54 44.2 +0.1
AKBB   Malin Array Si    36.50 294ceP      P       22 54 43.4 -0.7
AKBB   Malin Array Si    36.50 294  P       P       22 54 44.0 -0.1
AKBB                                IAmb    IAmb    22 54 44.8
       comp=Z,11nm,0.8s
KIEV   Kiev              36.51 294  P       P       22 54 43.0 -1.2
MALT   Malatya           36.55 271  P       P       22 54 46.8 +2.0
ISAL   Salakas           36.61 303 eP      P       22 54 45.7 +0.7
PABE   Paberze           37.80 304 eP      P       22 54 55.6 +0.5
SLIT   Slitere, Latvi    38.02 307 eP      P       22 54 56.4 -0.5
MJAR   Matsushiro Arr    38.48  91  LR      LR      23 11 21.8
       comp=Z,79nm,18.4s,baz=340,slow=37
SUW    Suwalki           38.73 302 eP      P       22 55 06.5 +3.5
SUW    Suwalki           38.73 302  P       P       22 55 02.7 -0.3
SUW                                 pmax    pmax
       comp=Z,36nm,1.4s
SUW    Suwalki           38.73 302  P       P       22 55 02.7 -0.3
HORU   Horodok           38.75 293  P       P       22 55 03.3 +0.1
BR131  Keskin Array S    38.85 276c iP      P       22 55 04.5 +0.2
BR131  Keskin Array S    38.85 276  P       P       22 55 04.8 +0.5
BR131                               IAmb    IAmb    22 55 09.2
       comp=Z,12nm,0.7s
BRTR   Keskin Array B    38.85 276  P       P       22 55 04.8 +0.5
       comp=Z,7.0nm,0.6s,baz=64,slow=4.8,SNR=30
BRTR                                LR      LR      23 12 48.6
       comp=Z,25nm,18.5s,baz=40,slow=39
BRTR   Keskin Array B    38.85 276  P       P       22 55 04.6 +0.2
KMPD   K-Podol'skiy      39.01 292  P       P       22 55 05.0 -0.3
VASR   Vaslui            39.06 289 ⇓P      P       22 55 06.4 +0.6
BR231  Keskin MP Arra    39.35 277  P       P       22 55 08.4  0.0
BR231                               IAmb    IAmb    22 55 13.4
       comp=Z,14nm,0.7s
VARL   Varlezi           39.37 288 ⇓P      P       22 55 08.9 +0.6
TPGR   Topolog           39.51 286 ⇓P      P       22 55 10.3 +0.6
CFR    Carcaliu          39.53 287 ⇑P      P       22 55 10.1 +0.3
CFR    Carcaliu          39.53 287  P       P       22 55 10.0 +0.3
CFR                                 pmax    pmax
       comp=Z,8.0nm,1.4s
TUDR                     39.62 288 ⇓P      P       22 55 08.7 -1.8
PRAR   RASCA             39.68 291 ⇑P      P       22 55 11.7 +0.7
TIRR   Tirgusor          39.71 286  P       P       22 55 11.2 -0.1
TIRR                                pmax    pmax
       comp=Z,21nm,1.1s
TIRR   Tirgusor          39.71 286  P       P       22 55 11.2 -0.1
TIRR                                IAmb    IAmb    22 55 14.9
       comp=Z,21nm,1.1s
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TESR   Tescani           39.82 289 ⇓P      P       22 55 12.8 +0.7
HARR   Harsova           39.90 286 ⇑P      P       22 55 13.3 +0.4
HARR   Harsova           39.90 286  P       P       22 55 13.2 +0.4
LVV    L'vov             39.90 295 eP      P       22 55 11.7 -1.1
KSV    Kosov             39.95 293  P       P       22 55 13.3 +0.1
BIZ    Bicaz             39.95 290 ⇓P      P       22 55 14.2 +0.9
VRI    Vrincioaia        40.07 288 ⇓P      P       22 55 15.0 +0.7
VRI    Vrincioaia        40.07 288  P       P       22 55 15.7 +1.4
VRI                                 pmax    pmax
       comp=Z,11nm,1.0s
PLOR   Plostina          40.13 289 ⇓P      P       22 55 15.9 +1.1
PLOR   Plostina          40.13 289  P       P       22 55 15.8 +1.1
BUR08  Bucovina Ar. S    40.17 292  P       P       22 55 15.7 +0.5
BUR08                               IAmb    IAmb    22 55 16.6
       comp=Z,7.8nm,0.8s
BURAR  Bucovina Array    40.17 292 ⇑P      P       22 55 15.8 +0.6
BURAR  Bucovina Array    40.17 292  P       P       22 55 15.8 +0.6
BURAR  Bucovina Array    40.17 292  P       P       22 55 15.4 +0.2
BISRR  Bisoca            40.24 288 ⇓P      P       22 55 17.6 +1.9
ICOR   Ion Corvin        40.26 286 ⇓P      P       22 55 16.8 +0.9
ISR    Istrita           40.55 288 ⇑P      P       22 55 20.2 +1.9
ISR    Istrita           40.55 288  P       P       22 55 20.5 +2.2
ISR                                 pmax    pmax
       comp=Z,44nm,0.8s
NEHR   Nehoiu            40.55 288 ⇑P      P       22 55 20.4 +2.2
MLR    Muntele Rosu      40.73 288 ⇓P      P       22 55 21.1 +1.2
MLR    Muntele Rosu      40.73 288  P       P       22 55 20.3 +0.4
MLR                                 pmax    pmax
       comp=Z,6.0nm,0.6s
MLR    Muntele Rosu      40.73 288  P       P       22 55 20.3 +0.4
MLR                                 IAmb    IAmb    22 55 25.1
       comp=Z,6.0nm,0.6s
KWP    Kalwaria Pacla    40.76 296 eP      P       22 55 21.4 +1.4
KWP    Kalwaria Pacla    40.76 296  P       P       22 55 20.5 +0.6
KWP                                 pmax    pmax
       comp=Z,18nm,0.7s
KWP    Kalwaria Pacla    40.76 296  P       P       22 55 20.5 +0.6
DOPR   Dopca             40.84 289 ⇑P      P       22 55 22.1 +1.4
ARCR   ARCALIA           40.94 291 ⇓P      P       22 55 23.3 +1.9
VOIR                     41.31 289 ⇓P      P       22 55 25.7 +1.1
VOIR                     41.31 289  P       P       22 55 25.7 +1.1
VOIR                                pmax    pmax
       comp=Z,4.0nm,0.9s
KOLS   Kolonicke sedl    41.33 295 eP      P       22 55 25.1 +0.5
KOLS                                pmax    pmax
       comp=Z,11nm,1.5s
KOLS   Kolonicke sedl    41.33 295 eP      P       22 55 25.0 +0.5
KOLS                               ePP      PP      22 57 00.7 +0.9
RAZG   Razgrad           41.35 286 ⇓P      P       22 55 25.8 +1.0
UZH    Uzhgorod          41.45 294 eP      P       22 55 25.0 -0.6
UZH                                e                22 55 33.4
CRVS   Cervenica-Dubn    41.82 295 eP      P       22 55 31.9 +3.3
CRVS   Cervenica-Dubn    41.82 295 eP      P       22 55 31.9 +3.3
CSS    Mathiatis         41.83 270  P       P       22 55 28.9  0.0
CSS                                 IAmb    IAmb    22 55 34.1
       comp=Z,28nm,1.3s
RAYN   Ar Rayn           41.99 247  P       P       22 55 30.3  0.0
RAYN                                pmax    pmax
       comp=Z,17nm,0.7s
RAYN   Ar Rayn           41.99 247  P       P       22 55 30.3  0.0
NC405  NORSAR Array S    42.03 315  P       P       22 55 30.4 +0.2
NC405                               IAmb    IAmb    22 55 35.9
       comp=Z,16nm,0.8s
DRGR                     42.07 292 ⇑P      P       22 55 31.5 +0.7
DRGR                     42.07 292  P       P       22 55 31.9 +1.1
DRGR                                pmax    pmax
       comp=Z,6.0nm,1.1s
OJC    Ojcow             42.18 298 eP      P       22 55 32.5 +1.0
OJC    Ojcow             42.18 298  P       P       22 55 32.1 +0.5
OJC                                 pmax    pmax
       comp=Z,14nm,0.8s
OJC    Ojcow             42.18 298  P       P       22 55 32.0 +0.5
OJC                                 IAmb    IAmb    22 55 32.9
       comp=Z,14nm,0.8s
PETK   Petropavlovsk-    42.18  58  P       P       22 55 33.0 +1.5
       comp=Z,4.6nm,0.8s,baz=274,slow=4.2,SNR=5.5
NORES  NORESS Array B    42.25 315  P       P       22 55 36.2 +4.2
NORES                               pmax    pmax
       comp=Z,1.0nm,0.3s
NIE    Niedzica          42.26 296 eP      P       22 55 34.0 +1.8
GKP    Gorka Klasztor    42.28 303 eP      P       22 55 33.5 +1.2
GKP    Gorka Klasztor    42.28 303 eP      P       22 55 33.3 +1.0
NB2    NORSAR Subarra    42.29 315  P       P       22 55 32.0 -0.3
       comp=Z,4.1nm,0.7s,baz=65,slow=7.9
NOA    NORSAR Array B    42.29 315  P       P       22 55 32.1 -0.3
       comp=Z,4.3nm,0.7s,baz=65,slow=7.8,SNR=19
NOA                                 LR      LR      23 12 27.2
       comp=Z,48nm,21.7s,baz=65,slow=35
GZR    Gura Zlata        42.72 290 ⇓P      P       22 55 36.3 +0.2
LANS   Liptovska Anna    42.86 296 eP      P       22 55 39.3 +2.1
LANS                                pmax    pmax
       comp=Z,5.0nm,0.9s
LANS   Liptovska Anna    42.86 296 eP      P       22 55 39.3 +2.1
HERR   Herculane         43.20 289 ⇓P      P       22 55 40.8 +1.0
BZS    Buzias            43.31 291 ⇓P      P       22 55 41.7 +0.9
BZS    Buzias            43.31 291  P       P       22 55 41.7 +0.9
BZS                                 pmax    pmax
       comp=Z,8.0nm,0.8s
MORC   Moravsky Berou    43.68 298 ⇓P      P       22 55 44.8 +1.0
MORC   Moravsky Berou    43.68 298 eP      P       22 55 43.7  0.0
MORC                               ePP      PP      22 57 23.2 -1.9
MORC   Moravsky Berou    43.68 298  P       P       22 55 44.2 +0.4
MORC                                pmax    pmax
       comp=Z,6.0nm,1.0s
MORC   Moravsky Berou    43.68 298  P       P       22 55 44.1 +0.4
KSP    Ksiaz             43.88 300 eP      P       22 55 46.3 +1.0
KSP    Ksiaz             43.88 300  P       P       22 55 46.3 +1.0
VTS    Vitosha           43.88 286 ⇑P      P       22 55 46.2 +0.6
KRLC   Kraliky           43.97 299 eP      P       22 55 45.9 -0.2
KRLC                               e                22 57 27.0
KRLC   Kraliky           43.97 299 eP      P       22 55 45.9 -0.2
KRLC                               ePP      PP      22 57 27.0 -1.2
JAVC   Velka Javorina    44.04 297 eP      P       22 55 47.8 +1.1
OSTC   Ostas             44.06 300 eP      P       22 55 47.8 +1.0
OSTC                               ePP      PP      22 57 29.9 +0.7
DPC    Dobruska-Polom    44.10 299 eP      P       22 55 47.9 +0.8
DPC                                e                22 57 29.0
DPC    Dobruska-Polom    44.10 299 eP      P       22 55 47.9 +0.8
DPC                                ePP      PP      22 57 29.0 -0.6
CHVC   Chvalec           44.14 300 eP      P       22 55 47.9 +0.5
UPC    Upice             44.20 300 eP      P       22 55 48.2 +0.3
UPC    Upice             44.20 300 eP      P       22 55 48.2 +0.3
SMOL   Smolenice         44.35 297 eP      P       22 55 50.5 +1.4
SMOL                                pmax    pmax
       comp=Z,3.0nm,1.2s
SMOL   Smolenice         44.35 297 eP      P       22 55 50.5 +1.4
VRAC   Vranov            44.45 298 eP      P       22 55 50.7 +0.8
RUE    Ruedersdorf       44.51 303 eP      P       22 55 51.7 +1.4
       comp=Z,16nm,0.7s,baz=60,slow=7.9
KRUC   Moravsky          44.68 298 eP      P       22 55 51.9 +0.2
MORH   Mrgy, Hungar      44.79 293 ⇓P      P       22 55 53.4 +0.8
PVCC   Panska Ves        45.00 300 eP      P       22 55 55.4 +1.2
PVCC   Panska Ves        45.00 300 eP      P       22 55 55.4 +1.2
TREC   Trest             45.08 298 eP      P       22 55 55.6 +0.6
TREC   Trest             45.08 298 eP      P       22 55 55.6 +0.6
DIVS   Divibare          45.09 290  P       P       22 55 54.9 -0.2
DIVS                                IAmb    IAmb    22 56 03.9
       comp=Z,4.0nm,0.7s
BRG    Berggiesshubel    45.18 301 eP      P       22 55 53.1 -2.5
BRG                                 Amp             22 55 57.7
       comp=Z,31nm,1.8s
BRG    Berggiesshubel    45.18 301 eP      P       22 55 56.4 +0.7
       comp=Z,2.6nm,0.7s,baz=60,slow=7.9
PRU    Pruhonice         45.28 300 eP      P       22 55 56.8 +0.3
PRU                                e                22 57 43.8
PRU    Pruhonice         45.28 300 eP      P       22 55 56.8 +0.3
PRU                                ePP      PP      22 57 43.8 +1.7
CLL    Collm             45.49 302 i P      P       22 55 58.5 +0.4
       comp=Z,12nm,0.9s
CLL                                i pP     pP      22 56 01.4 -0.8
CLL                                ePP      PP      22 57 44.0 -0.3
CLL                                eSS      SS      23 06 06.0 +3.5
CLL    Collm             45.49 302 i P      P       22 55 58.5 +0.4
CLL                                i                22 56 01.4
CLL                                 pmax    pmax
       comp=Z,12nm,0.9s
CLL    Collm             45.49 302  P       P       22 55 58.6 +0.4
CLL    Collm             45.49 302 eP      P       22 55 58.7 +0.6
       comp=Z,9.5nm,0.8s,baz=60,slow=7.9
CONA   Conrad Observa    45.55 297 eP      P       22 56 00.1 +1.3
       comp=Z,2.7nm,0.7s
BSEG   Bad Segeberg      45.68 306 eP      P       22 56 00.6 +1.1
       comp=Z,7.9nm,0.8s,baz=60,slow=7.9
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FLTG   Flechtingen       45.95 304 eP      P       22 56 01.9 +0.2
       comp=Z,5.9nm,0.8s,baz=60,slow=7.9
CKRC   Cesky Krumlov     45.99 298 eP      P       22 56 02.5 +0.3
TANN   Tannenbergstha    46.23 301 eP      P       22 56 05.0 +1.0
       comp=Z,3.2nm,0.8s,baz=60,slow=7.9
KHC    Kasperske Hory    46.25 299  P       P       22 56 04.3 +0.1
KHC                                 pmax    pmax
       comp=Z,3.0nm,0.8s
KHC    Kasperske Hory    46.25 299 eP      P       22 56 02.4 -1.8
KHC                                ex       x       22 57 44.5
KHC                                ePP      PP      22 57 53.6 +1.1
KHC    Kasperske Hory    46.25 299  P       P       22 56 04.3 +0.1
KHC                                 IAmb    IAmb    22 56 05.9
       comp=Z,3.2nm,0.8s
WERD   Werda             46.30 301 eP      P       22 56 05.1 +0.6
       comp=Z,2.9nm,0.9s,baz=60,slow=7.9
GEC2   GERESS Array S    46.33 299  P       P       22 56 05.3 +0.5
GEC2                                IAmb    IAmb    22 56 09.2
       comp=Z,6.2nm,1.1s
GEC2   GERESS Array S    46.33 299 eP      P       22 56 05.9 +1.0
       comp=Z,4.4nm,1.1s,baz=60,slow=7.9
GERES  GERESS Array B    46.33 299  P       P       22 56 05.0 +0.1
       comp=Z,1.3nm,0.7s,baz=69,slow=7.3,SNR=10
GERES                               PP      PP      22 57 55.6 +2.3
       comp=Z,1.6nm,0.8s,baz=57,slow=9.7,SNR=6.5
GERES  GERESS Array B    46.33 299  P       P       22 56 05.2 +0.3
GERES  GERESS Array B    46.33 299  P       P       22 56 05.2 +0.3
GUNZ   Gunzen            46.33 301 eP      P       22 56 06.0 +1.2
       comp=Z,4.2nm,0.8s,baz=60,slow=7.9
NKC    Novy Kostel       46.33 301 eP      P       22 56 05.5 +0.7
NKC    Novy Kostel       46.33 301 eP      P       22 56 05.5 +0.7
WERN   Wernitzgruen      46.34 301 eP      P       22 56 06.0 +1.1
       comp=Z,4.9nm,0.7s,baz=60,slow=7.9
MOA    Molln             46.51 297 eP      P       22 56 06.9 +0.6
       comp=Z,6.7nm,1.2s
WET    Wettzell          46.64 299 eP      P       22 56 06.9 -0.3
       comp=Z,2.5nm,0.8s,baz=60,slow=7.9
CLZ    Clausthal         46.66 304 eP      P       22 56 08.6 +1.2
       comp=Z,3.4nm,0.7s,baz=60,slow=7.9
SOKA   Soboth            46.68 295 eP      P       22 56 08.1 +0.4
       comp=Z,2.2nm,0.6s
ROTZ   Rotzenmuhle       46.70 300 eP      P       22 56 08.7 +1.0
       comp=Z,3.1nm,0.8s,baz=60,slow=7.9
GTTG   Gottingen         47.03 304 eP      P       22 56 11.7 +1.5
       comp=Z,14nm,0.8s,baz=60,slow=7.9
OBKA   Obir              47.05 295 eP      P       22 56 11.1 +0.5
       comp=Z,2.9nm,0.6s
GRF    Grafenberg Arr    47.28 301 eP      P       22 56 13.1 +0.9
       comp=Z,6.4nm,1.0s,baz=60,slow=7.9
GRF                                eL       L       23 14 39.9
       comp=Z,58nm,19.0s
KBA    Koelnbreinsper    47.45 297 eP      P       22 56 15.2 +1.4
       comp=Z,4.4nm,0.8s
IBBN   Ibbenburen        47.82 305 eP      P       22 56 17.3 +0.9
       comp=Z,6.6nm,0.7s,baz=60,slow=7.9
KASTN  Kahler Asten      48.04 304 eP      P       22 56 19.3 +1.1
       comp=Z,4.5nm,0.8s,baz=60,slow=7.9
ABTA   Abfaltersbach     48.11 297 eP      P       22 56 19.0 +0.2
       comp=Z,0.5nm,0.3s
WTTA   Wattenberg        48.34 298 eP      P       22 56 21.3 +0.6
       comp=Z,3.5nm,0.6s
MOTA   Moosalm           48.60 298 eP      P       22 56 23.4 +0.8
       comp=Z,1.4nm,0.5s
SQTA   Sankt Quirin      48.60 298 eP      P       22 56 23.3 +0.7
       comp=Z,1.9nm,0.4s
FETA   Feichten          48.99 298 eP      P       22 56 25.8 +0.1
       comp=Z,2.3nm,0.6s
GSI    Gunungsitoli      49.09 167  P       P       22 56 26.5  0.0
DAVA   Damuels           49.32 299 eP      P       22 56 29.0 +0.8
       comp=Z,3.6nm,0.6s
BFO    Black Forest      49.62 301  P       P       22 56 30.3  0.0
BFO                                 pmax    pmax
       comp=Z,9.0nm,1.4s
BFO    Black Forest      49.62 301  P       P       22 56 30.3  0.0
BFO                                 IAmb    IAmb    22 56 48.3
       comp=Z,9.4nm,1.4s
WLF    Walferdange       50.09 303 eP      P       22 56 35.4 +1.7
       comp=Z,12nm,1.1s,baz=60,slow=7.9
EKA    Eskdalemuir Ar    51.66 313  P       P       22 56 45.2 -0.3
IMAR   Indian Mountai    55.37  26  P       P       22 57 11.9 -0.7
COLD   Coldfoot          55.41  24  P       P       22 57 14.1 +1.2
KEST   Kesra             56.62 287  P       P       22 57 21.8 -0.4
       comp=Z,5.5nm,0.9s,baz=27,slow=6.8,SNR=2.2
I23K   Minto, Yukon-K    57.21  25  P       P       22 57 26.1 +0.4
BWN    Browne            57.93  26  P       P       22 57 32.0 +1.1
WRH    Wood River Hil    58.08  25  P       P       22 57 33.0 +1.1
ILAR   Eielson Array     58.17  24  P       P       22 57 32.7 +0.2
       comp=Z,1.6nm,0.6s,baz=318,slow=5.1,SNR=18
ILAR                                PP      PP      22 59 41.5 +0.7
       comp=Z,0.5nm,0.7s,baz=311,slow=6.8,SNR=4.4
ILAR   Eielson Array     58.17  24  P       P       22 57 33.1 +0.6
ILAR   Eielson Array     58.17  24  P       P       22 57 33.1 +0.6
INK    Inuvik            58.26  17  P       P       22 57 34.5 +1.5
INK                                 pmax    pmax
       comp=Z,6.0nm,0.9s
INK    Inuvik            58.26  17  P       P       22 57 34.5 +1.5
INK                                 IAmb    IAmb    22 57 36.3
       comp=Z,6.2nm,0.9s
C36M   Paulatuk          58.87  13  P       P       22 57 36.9 -0.3
SKT    Skwentna          59.01  28  P       P       22 57 38.9 +0.5
SCM    Sheep Creek Mo    60.37  27  P       P       22 57 48.9 +1.0
SCM                                 pmax    pmax
       comp=Z,10.0nm,0.8s
SCM    Sheep Creek Mo    60.37  27  P       P       22 57 48.9 +1.0
KNK    Knik Glacier      60.38  27  P       P       22 57 49.5 +1.6
BCAR   Beaver Creek A    60.88  23  P       P       22 57 52.9 +1.5
ESDC   Sonseca Array     61.92 299  P       P       22 57 58.9 +0.2
       comp=Z,5.8nm,0.7s,baz=46,slow=6.5,SNR=36
ESDC                                LR      LR      23 23 41.7
       comp=Z,46nm,18.8s,baz=195,slow=35
ESDC   Sonseca Array     61.92 299  P       P       22 57 58.5 -0.1
KMBO   Kilima Mbogo      66.54 237  P       P       22 58 28.9 -0.5
       comp=Z,0.6nm,0.3s,baz=59,slow=6.4,SNR=4.1
KMBO   Kilima Mbogo      66.54 237  P       P       22 58 29.0 -0.5
YKA    Yellowknife Ar    66.63  11  P       P       22 58 28.7 -0.4
       comp=Z,1.8nm,0.9s,baz=345,slow=6.6,SNR=22
YKA    Yellowknife Ar    66.63  11 i P      P       22 58 30.1 +1.0
YKA                                 pmax    pmax
       comp=Z,2.0nm,0.9s
DLBC   Dease Lake        67.76  20  LR      LR      23 29 25.9
       comp=Z,33nm,21.4s,baz=63,slow=37
TAM    Tamanrasset       67.93 279  P       P       22 58 37.8 -0.3
TAM                                 pmax    pmax
       comp=Z,3.0nm,1.0s
TAM    Tamanrasset       67.93 279  P       P       22 58 37.8 -0.3
TAM                                 IAmb    IAmb    22 58 43.0
       comp=Z,3.5nm,1.0s
FITZ   Fitzroy Crossi    75.53 143  P       P       22 59 22.1 -1.4
TOA0   Torodi Ar. Sit    77.47 276  P       P       22 59 33.9 -0.8
TOA0                                IAmb    IAmb    22 59 34.1
       comp=Z,3.3nm,0.8s
TORD   Torodi Ar. Bea    77.47 276  P       P       22 59 33.9 -0.8
       comp=Z,3.5nm,0.8s,baz=26,slow=5.0,SNR=15
TORD   Torodi Ar. Bea    77.47 276  P       P       22 59 33.8 -0.9
KOWA   Kowa              80.12 281  P       P       22 59 48.9 -0.5
KOWA                                IAmb    IAmb    22 59 53.4
       comp=Z,4.3nm,0.8s
WB0    Warramunga Arr    80.71 136  P       P       22 59 52.3  0.0
WB0                                 IAmb    IAmb    22 59 54.5
       comp=Z,4.4nm,0.9s
WRAB   Tennant Creek     80.83 136ceP      P       22 59 51.0 -1.9
WRAB                                pmax    pmax
       comp=Z,15nm,2.5s
WRA    Warramunga Arr    80.83 136  P       P       22 59 51.1 -1.8
       comp=Z,1.1nm,0.5s,baz=341,slow=5.8,SNR=17
WRA    Warramunga Arr    80.83 136  P       P       22 59 51.1 -1.8
WB2    Warramunga Arr    80.84 136  P       P       22 59 51.3 -1.7
WB2                                 IAmb    IAmb    22 59 58.3
       comp=Z,16nm,1.5s
F10A   Beach Ranch, E    82.16  17  P       P       23 00 01.1 +1.2
F10A                                IAmb    IAmb    23 00 03.3
       comp=Z,3.0nm,0.7s
LSZ    Lusaka            83.21 237  P       P       23 00 04.1 -1.5
LSZ                                 pmax    pmax
       comp=Z,5.0nm,1.3s
LSZ    Lusaka            83.21 237  P       P       23 00 04.0 -1.5
LSZ                                 IAmb    IAmb    23 00 05.5
       comp=Z,5.1nm,1.3s
ASAR   Alice Springs     83.91 138  P       P       23 00 07.2 -1.7
       comp=Z,1.4nm,0.7s,baz=332,slow=5.0,SNR=17
DBIC   Dimbokro          86.55 276  P       P       23 00 21.4 -1.0
       comp=Z,3.4nm,1.0s,baz=32,slow=4.3,SNR=3.5
DBIC   Dimbokro          86.55 276  P       P       23 00 21.3 -1.2
PDAR   Pinedale Array    86.56  13  P       P       23 00 22.1 -0.3
       comp=Z,0.3nm,0.5s,baz=75,slow=3.5,SNR=5.5
PDAR   Pinedale Array    86.56  13  P       P       23 00 22.4 -0.1
```

NVAR	Mina Array Bea	89.18	20	P	P	23 00 36.4	+1.3
	comp=Z,0.7nm,0.8s,baz=344,slow=2.8,SNR=3.8						
TCRU	Three Creeks R	90.17	16	P	P	23 00 41.2	+1.5
CPUP	Villa Florida	144.28	298	PKP	PKPab	23 07 12.4	-0.5
	comp=Z,4.1nm,0.8s,baz=28,slow=2.0,SNR=6.2						

IDC 03 22:50:07.0±4.9, 3°.58S×100°.08E, h0^{km}, mb3.5/3, mb1 3.8/3, mb1mx3.4/37, mbtmp3.6/3, Error ellipse: s-maj=173.4km s-min=31.6km az=57.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	21.93	357	P	P	22 55 02.1	-0.1
	0.9nm,0.3s,baz=188,slow=11,SNR=10						
WRA	Warramunga Arr	37.15	119	P	P	22 57 19.9	-0.1
	0.3nm,0.9s,baz=291,slow=8.2,SNR=1.8						
MKAR	Makanchi Array	52.56	345	P	P	22 59 22.3	0.0
	1.7nm,1.0s,baz=154,slow=9.0,SNR=1.9						

IDC 03 22:55:49.4±2.2, 31°.65S×178°.71W, h55^{km}±21^{km}, mb3.5/2, mb1 3.8/4, mb1mx3.6/28, mbtmp3.8/4, ML3.5/2, MS3.4/2, Ms1 3.4/2, ms1mx2.7/13, Error ellipse: s-maj=55.1km s-min=13.3km az=114.0

ISC 03 22:55:50.0±1.3, 31°.6S±0°.1×178°.7W±0°.3, h61^{km}, n17, σ2^s.31/17, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	2.46	15	P	Pn	22 56 27.7	-0.1
	18nm,0.3s,baz=93,slow=23,SNR=1.4						
RAO				S	Sn	22 56 57.3	+0.5
	46nm,0.3s,baz=79,slow=23,SNR=1.9						
URZ	Urewera	7.46	207	P	Pn	22 57 36.6	+0.4
	0.5nm,0.3s,baz=173,slow=14,SNR=1.6						
URZ				S	Sn	22 58 57.1	-2.3
	1.5nm,0.3s,baz=206,slow=1.3,SNR=1.9						
SNGZ	Shannon Statio	7.84	204	P	Sn	22 59 12.3	+3.5
RAHZ	Arahi	8.05	204	P	Sn	22 59 16.3	+2.4
MTHZ	Maungataniwha	8.08	206	P	Sn	22 59 16.4	+1.7
NMHZ	Naumai	8.31	205	P	Sn	22 59 22.6	+2.3
MCHZ	McNeill Hill	8.66	205	P	Sn	22 59 30.4	+1.7
KWHZ	Kaweka Forest	8.74	206	P	Sn	22 59 32.2	+1.4
KAHZ	Kahuranaki	8.91	203	P	Sn	22 59 30.1	-4.8
KRHZ	Kereru	8.95	206	P	Sn	22 59 34.2	-1.7
PXZ	Pawanui	9.13	202	P	Sn	22 59 36.7	-3.4
HNR	Honiara	29.72	313	LR	LR	23 11 19.5	
	comp=Z,55nm,19.2s,baz=170,slow=31						
ASAR	Alice Springs	42.50	269	P	P	23 03 39.5	-0.1
	0.4nm,0.4s,baz=103,slow=7.7,SNR=5.6						
WRA	Warramunga Arr	43.61	274	P	P	23 03 47.8	-0.8
	0.9nm,0.4s,baz=111,slow=8.0,SNR=17						
TXAR	Lajitas Array	93.52	58	LR	LR	23 41 45.9	
	comp=Z,22nm,21.9s,baz=0.0,slow=30						
FINES	FINESS Array B	146.11	339	PKPbc	PKPdf	23 15 21.5	0.0
	2.4nm,0.9s,baz=52,slow=4.5,SNR=7.2						
BRTR	Keskin Array B	152.67	296	PKPbc	PKiKP	23 15 40.1	-0.1
	0.2nm,0.5s,baz=157,slow=4.1,SNR=1.5						

ASRS 03 23:01:19.1±0.4, 50°N±2°×8°8E±°, h10^{km}, MLh3.3/14, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/iasp91 confirmed

SOME 03 23:01:20.1, 49°.62N×87°.58E, h0^{km}

NNC 03 23:01:22.9±1.2, 49°.84N×87°.63E, h0^{km}, mb3.8, mpv3.4, Error ellipse: s-maj=11.4km s-min=5.1km az=102.0

ISC 03 23:01:22.4±0.8, 49°.88N±0°.03×87°.81E±0°.03, h10^{km}, n40, σ2^s.30/75, 7C-6D, Kazakhstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DGZ	Jazzator, Alta	0.30	233	Pg	Pg	23 01 24.5	-4.1
DGZ				Sg	Sg	23 01 27.3	-5.3
CUR	Chagan-Uzun	0.41	58	Pg	Pg	23 01 29.6	-0.9
CUR				Sg	Sb	23 01 36.6	-1.6
CHBI	Chibit, Altay	0.47	336	Pg	Pg	23 01 30.2	-1.4
CHBI				Sg	Sg	23 01 37.6	-0.3
ULGR	Ulagan, Altay	0.75	8	Pg	Pg	23 01 35.3	-1.5
ULGR				Sg	Sb	23 01 46.7	-1.2
TEL	Teeli	1.91	52	Pg	Pg	23 01 57.2	-1.8
TEL				Sg	Sg	23 02 24.7	+1.1
ARTR	Artybash	1.94	350	Pg	Pb	23 01 57.4	-0.5
ARTR				Sg	Sg	23 02 25.6	+0.7
UKR	Ust'-Kan	2.21	300	Pg	Pn	23 02 00.9	+1.7
UKR				Sg	Sb	23 02 30.9	+1.0
GALT	Gorno-Altaysk,	2.39	331	Pg	Pb	23 02 05.4	0.0
GALT				Sg	Sg	23 02 38.2	-0.8
TASR	Tashtagol	2.88	1	Pg	Pb	23 02 14.1	+0.3
TASR				Sg	Sg	23 02 53.1	-1.7
ZSN	Zaisan	3.12	220	*e*P	Pb	23 02 16.4	-1.5
	14nm,0.2s						
ZSN				*e*S	Sb	23 02 56.5	+0.5
	76nm,0.5s						
ZSN	Zaisan	3.12	220	Pg	Pn	23 02 13.4	+1.8
	14nm,0.2s						
ZSN				Lg	Lg	23 02 52.1	
	76nm,0.5s						
ELT	Eltsovka	3.52	344	Pg	Pb	23 02 24.9	+0.1
ELT				Sg	Sg	23 03 15.5	+0.1
TBTR	Tabat	3.55	30	Pg	Pg	23 02 28.2	-2.2
TBTR				Sg	Sg	23 03 16.9	+0.5
DJO	Djoy, Khakassi	3.60	35	Pg	Pg	23 02 28.8	-2.6
DJO				Sg	Sg	23 03 18.6	+0.5
DJOS	Djoyskaya Sosn	3.68	36	Pg	Pg	23 02 30.3	-2.6
DJOS				Sg	Sg	23 03 19.9	-0.7
CERR	Cheremushki	3.73	36	Pg	Pg	23 02 30.9	-3.0
CERR				Sg	Sg	23 03 21.2	-1.0
LUZB	Luzhba, Kemero	3.84	10	Pg	Pg	23 02 32.9	-3.1
LUZB				Sg	Sg	23 03 22.7	-3.0
BLRR	Bol’shaya Rech	4.28	41	P	Pn	23 02 29.9	+2.4
BLRR				Pg	Pg	23 02 41.0	-3.3
BLRR				Sg	Sg	23 03 37.1	-2.6
ARDR	Aradan	4.45	50	Pg	Pb	23 02 42.8	+2.2
ARDR				Sg	Sg	23 03 44.8	-0.2
ABNR	Abakan	4.46	29	Sg	Sg	23 03 44.0	-1.3
ZAA0	Zalesovo Array	4.47	337	⇓Pn	Pn	23 02 31.1	+0.9
	0.4nm,0.6s						
ZAA0				⇑Pg	Pb	23 02 43.1	+2.2
	0.7nm,0.7s						
ZAA0				⇑Sn	Sn	23 03 26.0	+3.9
	0.4nm,0.2s						
ZAA0				⇑Lg	Lg	23 03 46.8	
	3.5nm,0.8s						
KZLR	Kyzyl	4.59	64	Pg	Pg	23 02 48.4	-1.9
KZLR				Sg	Sg	23 03 51.0	+1.2
SALR	Pechorkino, Sa	4.72	345	Pg	Pb	23 02 48.0	+2.8
SALR				Sg	Sg	23 03 51.8	-2.1
MK31	Makanchi Array	4.80	232	⇑Pn	Pn	23 02 35.7	+0.9
	0.9nm,0.2s,baz=60,slow=13,SNR=110						
MK31				⇓Pg	Pb	23 02 48.0	+1.3
	2.7nm,0.3s,baz=53,slow=18,SNR=12						
MK31				⇑Lg	Lg	23 03 51.3	
	6.0nm,0.5s,baz=51,slow=28,SNR=3.8						
MKAR	Makanchi Array	4.80	232	P	Pn	23 02 35.8	+1.0
MKAR				Pg	Pb	23 02 48.7	+2.1
MKAR				Sg	Sg	23 03 53.5	-3.1
SHRR	Shira	4.84	17	P	Pn	23 02 39.4	+4.2
SHRR				Pg	Pg	23 02 51.2	-3.7
SHRR				Sg	Sg	23 03 57.0	-0.6
SEM	Semipalatinsk	4.89	279	*e*P	Pb	23 02 49.8	+1.6
	3.5nm,0.2s						
SEM				*e*S	Sg	23 03 54.5	-4.7
	30nm,0.4s						
SEM	Semipalatinsk	4.89	279	Pg	Pb	23 02 49.8	+1.6
	3.5nm,0.2s						
SEM				Lg	Lg	23 03 54.5	
	30nm,0.4s						
MAKZ	Makanchi	4.96	234	P	Pn	23 02 37.8	+0.9
MAKZ				Pg	Pb	23 02 50.5	+1.3
MAKZ				Sg	Sb	23 03 56.3	+7.5
MAKZ	Makanchi	4.96	234	⇑Pn	Pn	23 02 37.6	+0.7
	3.8nm,0.8s						
MAKZ				⇓Pg	Pb	23 02 50.4	+1.2
	7.4nm,0.8s						
MAKZ				⇓Lg	Lg	23 03 56.6	
	11nm,0.9s						
BSTK	Bystrovka, Nov	5.66	328	Pg	Pb	23 03 05.5	+4.4
BSTK				Sg	Sg	23 04 23.0	-0.8
NVS	Novosibirsk	5.70	332	Sg	Sg	23 04 20.3	-4.9
NVSII	Novosibirsk	5.70	332	Sg	Sg	23 04 24.2	-1.0
BRCR	Berchikul'	5.77	3	Sg	Sg	23 04 23.9	-3.7
NHES	Novosibirsk, N	5.79	331	Sg	Sg	23 04 27.2	-0.9
TDJR	Todzha	5.79	61	Pg	Pg	23 03 10.7	-2.6
TDJR				Sg	Sg	23 04 28.1	-0.2
KURK	Kurchatov	5.95	282	P	Pn	23 02 50.1	-0.2
KURK				S	Sn	23 03 58.1	-0.4
KURK				Sg	Sg	23 04 30.3	-2.8
ALXA	Alekseevka, NS	5.98	330	Sg	Sg	23 04 32.5	-1.7
KURBB	Kurchatov Arra	6.00	281	⇓Pn	Pn	23 02 51.5	+0.4
	9.1nm,0.6s						
KURBB				⇓Sn	Sn	23 04 00.9	+1.1
	29nm,0.6s						
KURBB				⇑Lg	Lg	23 04 27.3	
	37nm,0.7s						
KAPS	Kapalarasan	7.33	234	Pg	Pb	23 03 26.6	-3.1
	1.3nm,0.3s						
KAPS				Lg	Lg	23 04 58.2	
	4.5nm,1.0s						

NEIC 03 23:11:40.8±1.5, 41°.25N±0°.05×117°.24W±0°.06, h0^{km}±2^{km}, ML2.5/46, ML2.6(REN), Error ellipse: s-maj=8.4km s-min=6.4km az=28.0

IDC 03 23:11:40.0±0.9, 41°.29N×117°.23W, h0^{km}, mb2.7/1, mb1 3.0/4, mb1mx3.0/43, mbtmp2.6/4, ML2.8/3, Error ellipse: s-maj=9.8km s-min=5.8km az=175.0

ISC 03 23:11:39.9±1.0, 41°.24N±0°.04×117°.22W±0°.04, h0^{km}, n32, σ1^s.26/34, Nevada

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ELK	Elko	1.58	108	Pg	Pn	23 12 09.0	-0.4
	2.5nm,0.3s,baz=293,slow=12,SNR=43						
ELK				Lg	Lg	23 12 30.8	
	10nm,0.3s,baz=204,slow=20,SNR=16						
ELK	Elko	1.58	108		Pn	23 12 08.8	-0.6
WVOR	Wild Horse Val	1.59	319		Pn	23 12 09.6	0.0
PAHR	Pah Rah Range	2.25	228	Pn	Pn	23 12 18.6	0.0
KVN	Kaiserville	2.29	197	Pn	Pn	23 12 19.2	+0.1
KVN				IAML		23 13 02.1	
	comp=E,28nm,1.2s						
WVA	Winnemucca Val	2.37	238		Pn	23 12 20.8	+0.5
MFID	Camas Ranch	2.40	25	Pn	Pn	23 12 21.1	+0.4
MFID				IAML		23 13 02.9	
	comp=E,38nm,1.0s						
MOD	Modoc Plateau	2.41	287	Pn	Pn	23 12 21.0	+0.2
MOD				IAML		23 13 02.2	
	comp=E,30nm,0.8s						
MOD				IAML		23 13 18.3	
	comp=N,27nm,0.8s						
BMRR	Black Mountain	2.60	245		Pn	23 12 24.1	+0.7
PEAR	Peavine Mounta	2.66	233		Pn	23 12 25.0	+0.7
BEKR	Beckworth	2.76	241	Pn	Pn	23 12 25.9	+0.2
BEKR				IAML		23 13 16.1	
	comp=N,15nm,0.6s						
BEKR				IAML		23 13 16.2	
	comp=E,17nm,0.6s						
LOY	Loyalton	2.79	237		Pn	23 12 26.7	+0.6
RYN	Ryan	2.80	201	Pn	Pn	23 12 25.9	-0.2
RYN				IAML		23 13 18.3	
	comp=N,28nm,0.8s						
RYN				IAML		23 13 18.7	
	comp=E,22nm,0.8s						
PNTR	Pine Nut	2.82	221	Pn	Pn	23 12 26.8	+0.3
PNTR				IAML		23 13 22.4	
	comp=N,30nm,1.0s						
NV11	Mina Array Sit	2.90	195	Pn	Pn	23 12 26.7	-0.7
NV11				IAML		23 13 39.7	
	comp=N,12nm,4.5s						
NVAR	Mina Array Bea	2.93	197	Pn	Pn	23 12 28.5	+0.5
	comp=N,0.9nm,0.3s,baz=16,slow=13,SNR=16						
NVAR				Pg	Pg	23 12 35.6	-0.5
	comp=N,2.3nm,0.3s,baz=15,slow=14,SNR=4.9						
NVAR				Lg	Lg	23 13 12.8	
	baz=36,slow=33,SNR=1.3						
HLID	Hailey	3.11	41	Pn	Pn	23 12 30.7	+0.3
HLID				IAML		23 13 22.4	
	comp=N,11nm,1.1s						
HLID				IAML		23 13 31.9	
	comp=N,11nm,3.3s						
LHV	Little Huntoon	3.15	199	Pn	Pn	23 12 31.7	+1.0
R11A	Troy Canyon, C	3.15	156	Pn	Pn	23 12 30.9	-0.1
BGU	Big Grassy Mou	3.18	94	Pn	Pn	23 12 31.4	0.0
WAKR	Walker	3.22	213	Pn	Pn	23 12 32.7	+0.7
WAKR				IAML		23 13 30.7	
	comp=E,10nm,1.1s						
WAKR				IAML		23 13 38.1	
	comp=N,15nm,4.7s						
I07A	Izee	3.30	330	Pn	Pn	23 12 35.2	+2.1
I07A				IAML		23 13 39.5	
	comp=N,17nm,2.7s						
I07A				IAML		23 13 43.8	
	comp=E,18nm,3.3s						
AFDM	Forest Hills D	3.68	233	Pn	Pn	23 12 40.1	+2.0
AFDM				IAML		23 13 06.2	
	comp=E,8.3nm,4.6s						
AFDM				IAML		23 13 36.4	
	comp=N,6.6nm,4.3s						
PSUT	Pine Spring	3.74	135	Pn	Pn	23 12 41.9	+2.8
CMB	Columbia Colle	4.03	218	Pn	Pn	23 12 44.3	+1.3
CMB				IAML		23 13 12.5	
	comp=N,8.0nm,4.3s						
CMB				IAML		23 15 08.7	
	comp=E,6.3nm,4.6s						
YBH	Yreka Blue Hor	4.16	279	Pn	Pn	23 12 45.4	+0.7
	comp=E,0.3nm,0.3s,baz=277,slow=4.4,SNR=2.3						
YBH				Lg	Lg	23 13 51.1	
	comp=E,0.1nm,0.3s,baz=342,slow=22,SNR=1.2						
YBH	Yreka Blue Hor	4.16	279	Pn	Pn	23 12 45.5	+0.8
PRN	Pahroc Range	4.18	156	Pn	Pn	23 12 46.4	+1.2
TPNV	Topopah Spring	4.35	170	Pn	Pn	23 12 48.8	+1.3
MSU	Marysvale	4.74	123	Pn	Pn	23 12 55.7	+2.8
PDAR	Pinedale Array	5.91	73	Pn	Pn	23 13 12.0	+3.1
	comp=E,0.1nm,0.3s,baz=215,slow=12,SNR=2.0						
PDAR				Pg	Pb	23 13 22.2	-1.8
	comp=E,0.0nm,0.3s,baz=257,slow=12,SNR=2.7						
PDAR				Lg	Lg	23 14 45.1	
	comp=E,0.0nm,0.3s,baz=220,slow=25,SNR=1.1						
YKA	Yellowknife Ar	21.34	3	P	P	23 16 28.9	+0.6
	comp=E,0.3nm,0.7s,baz=180,slow=10,SNR=7.6						

IDC 03 23:43:39.1±3.8, 27°.73N×86°.08E, h0^{km}, mb3.4/2, mb1 3.5/3, mb1mx3.2/34, mbtmp3.3/3, ML3.3/1, Error ellipse: s-maj=116.0km s-min=33.8km az=77.0, Nepal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	Makanchi Array	19.27	352	P	P	23 48 05.0	-0.2
	0.1nm,0.3s,baz=179,slow=11,SNR=3.6						
SONM	Songino Array	25.57	33	P	P	23 49 10.1	+0.2
	0.4nm,0.7s,baz=215,slow=7.8,SNR=4.3						
WRA	Warramunga Arr	66.53	130	P	P	23 54 31.0	-0.1
	0.5nm,0.9s,baz=323,slow=6.6,SNR=5.1						

IDC 04 00:06:48.5±1.5, 52°.39N×168°.79W, h0^{km}, mb3.8/13, mb1 4.0/14, mb1mx3.8/39, mbtmp3.8/14, ML3.0/1, Error ellipse: s-maj=39.1km s-min=17.6km az=3.0

AEIC 04 00:06:51±2.7, 52°.28N±0°.07×168°.56W±0°.08, h18^{km}±5^{km}, mb3.8/21(NEIC), Error ellipse: s-maj=10.5km s-min=6.7km az=157.0

NEIC 04 00:06:54.2±2.1, 52°.46N±0°.08×168°.62W±0°.07, h35^{km}±9^{km}, Error ellipse: s-maj=11.8km s-min=5.9km az=165.0

ISC 04 00:06:53.1±0.7, 52°.42N±0°.08×168°.56W±0°.06, h29^{km}, n74, σ1^s.12/68, mb3.8/14, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIKH	Nikolski High	0.58	342		Pn	00 07 05.8	+0.4
NIKH	Nikolski High	0.58	342		Sn	00 07 13.3	-0.7
OKSP	Okmok Steeple	0.85	11		Pb	00 07 10.3	+1.0
OKSO	Okmok South	0.97	14		Pb	00 07 11.0	-0.3
OKSO					Sn	00 07 21.5	-2.0
OKFG	Magazine Ridge	1.06	21		Pb	00 07 12.7	-0.2
OKFG					Sn	00 07 24.7	-1.2
MAPS	Pakushin South	1.69	34		Pb	00 07 21.7	-1.9
MSW	Makushin Switc	1.84	35		Pb	00 07 25.0	-1.0
MNAT	Makushin Natee	1.85	37		Pb	00 07 24.8	-1.4
UNV	Unalaska Valle	1.89	40	Pn	Pb	00 07 24.4	-2.4
AKUT	Akutan	2.40	43	Pn	Pb	00 07 32.7	-2.8
SPIA	Saint Paul Isl	4.86	349	Pn	Pn	00 08 07.8	+3.6
ADK	Adak	5.04	267	Pn	Pn	00 08 05.8	-0.8
CHGN	Chignik	7.08	53	Pn	Pn	00 08 38.5	+3.9
OHAK	Old Harbor	10.03	55	Pn	Pn	00 09 15.7	+0.7
KDAK	Kodiak Island	10.60	53	Pn	Pn	00 09 22.9	+0.1
	0.7nm,0.3s,baz=246,slow=4.6,SNR=49						
KDAK	Kodiak Island	10.60	53	Pn	Pn	00 09 23.3	+0.5
CNPM	China Poot	12.00	47	Pn	Pn	00 09 43.6	+1.6
BRLK	Bradley Lake	12.27	46	Pn	Pn	00 09 48.0	+2.2
SEW	Seward	13.07	46	Pn	Pn	00 09 57.2	+0.7
SUA	Susitna One	13.24	40	Pn	Pn	00 10 00.8	+1.8
SML	Sawmill	14.39	41	Pn	Pn	00 10 15.0	+0.3
HIN	Hinchinbrook I	14.53	48	Pn	Pn	00 10 15.0	-1.5
FID	Port Fidalgo	14.68	47	Pn	Pn	00 10 18.1	-0.4
SCM	Sheep Creek Mo	14.81	42	Pn	Pn	00 10 20.2	-0.2
BPAW	Bear Paw Mtn.	14.84	31	P	P	00 10 26.3	+0.1
KLU	Klutina	15.25	45	Pn	Pn	00 10 25.4	-0.8
KLU				IAmb	IAmb	00 10 26.0	
	comp=Z,6.0nm,0.9s						
M24K	Tolsona, Glenn	15.43	42	Pn	Pn	00 10 28.5	+0.1
HMT	Hamilton	15.54	50	Pn	Pn	00 10 30.0	+0.1
N25K	Chitina, Valde	15.87	45	Pn	Pn	00 10 33.4	-0.7
N25K				IAmb	IAmb	00 10 34.7	
	comp=Z,11nm,1.4s						
WRH	Wood River Hil	16.04	33	Pn	Pn	00 10 36.5	+0.3
I23K	Minto, Yukon-K	16.07	30	P	P	00 10 39.6	-0.2
GLB	Gilahina Butte	16.15	46	Pn	Pn	00 10 37.3	-0.5
GLB				IAmb	IAmb	00 10 43.6	
	comp=Z,9.5nm,1.4s						
VRDI	Verde Repeater	16.23	47	Pn	Pn	00 10 38.5	-0.3
VRDI				IAmb	IAmb	00 10 44.1	
	comp=Z,14nm,1.5s						
TGL	Tana Glacier	16.34	49	P	P	00 10 42.0	-1.0
TGL				IAmb	IAmb	00 10 47.3	
	comp=Z,10nm,1.0s						
MCARA	McCarthy VSAT	16.48	47	Pn	P	00 10 42.7	-1.6
MCARA				IAmb	IAmb	00 10 46.3	
	comp=Z,10nm,1.1s						
ISLE	Juniper Island	16.52	50	Pn	P	00 10 43.4	-1.6
ISLE				IAmb	IAmb	00 10 59.5	
	comp=Z,5.5nm,0.8s						
ILAR	Eielson Array	16.63	34	Pn	Pn	00 10 43.1	-0.6
	comp=Z,0.1nm,0.3s,baz=236,slow=11,SNR=5.0						
ILAR	Eielson Array	16.63	34	Pn	Pn	00 10 43.6	-0.1
YAH	Yahtse	16.73	51	Pn	Pn	00 10 45.1	-0.3
RIDG	Independent Ri	16.77	38	P	P	00 10 47.4	-0.2
DOT	Dot Lake	17.03	39	P	P	00 10 50.1	-0.3
HYT	Haines Junctio	18.88	51	P	Pn	00 11 13.4	+1.8
HYT				IAmb	IAmb	00 11 14.2	
	comp=Z,13nm,1.4s						
PETK	Petropavlovsk-	20.33	285	P	P	00 11 23.8	-2.8
	comp=Z,2.3nm,0.4s,baz=78,slow=14,SNR=6.1						
INK	Inuvik	23.03	33	P	P	00 11 54.0	-1.3
	comp=Z,1.2nm,0.6s,baz=221,slow=6.1,SNR=5.1						
INK	Inuvik	23.03	33	P	P	00 11 55.6	+0.3
YKA	Yellowknife Ar	29.83	49	P	P	00 12 58.6	+1.4
	comp=Z,0.5nm,0.5s,baz=269,slow=6.9,SNR=13						
YBH	Yreka Blue Hor	32.48	91	P	P	00 13 20.9	0.0
MCMT	McKenzie Canyo	36.78	79	P	P	00 13 59.6	+1.4
H11N2	WAKE ISLAND Hy	37.81	220	T	T	00 55 05.6	
	baz=26						
H11N3	WAKE ISLAND Hy	37.82	220	T	T	00 54 59.3	
	baz=26						
H11N1	WAKE ISLAND Hy	37.83	220	T	T	00 55 07.9	
	baz=26						
H11S1	WAKE ISLAND Hy	38.99	219	T	T	00 56 36.3	
	baz=23,slow=74						
H11S2	WAKE ISLAND Hy	39.01	219	T	T	00 56 20.3	
	baz=23,slow=74						
H11S3	WAKE ISLAND Hy	39.01	219	T	T	00 56 34.2	
	baz=23						
BW06	Boulder Array	39.90	80	P	P	00 14 26.1	+1.7
BW06				IAmb	IAmb	00 14 26.2	
	comp=Z,1.1nm,0.7s						
PD31	Pinedale Array	39.90	80	P	P	00 14 26.1	+1.7
PD31				IAmb	IAmb	00 14 26.3	
	comp=Z,1.0nm,0.6s						
PDAR	Pinedale Array	39.90	80	P	P	00 14 25.4	+0.9
	comp=Z,1.4nm,0.8s,baz=300,slow=4.0,SNR=13						
PDAR	Pinedale Array	39.90	80	P	P	00 14 25.3	+0.8
FCC	Fort Churchill	40.52	51	P	P	00 14 30.4	+1.3
FCC				IAmb	IAmb	00 14 31.1	
	comp=Z,1.9nm,0.6s						
ULM	Lac du Bonnet	43.68	63	P	P	00 14 56.4	+1.4
	comp=Z,0.7nm,0.6s,baz=274,slow=16,SNR=1.5						
SONM	Songino Array	51.70	301	P	P	00 15 57.5	+0.1
	comp=Z,0.3nm,0.4s,baz=68,slow=6.0,SNR=2.4						
TXAR	Lajitas Array	52.25	90	P	P	00 16 01.9	+0.3
	comp=Z,0.3nm,0.6s,baz=292,slow=4.6,SNR=5.7						
TXAR	Lajitas Array	52.25	90	P	P	00 16 02.1	+0.5
P40A	Paris	52.29	72	P	P	00 16 01.3	-0.4
ZALV	Zalesovo Beam	57.72	318	P	P	00 16 40.8	+0.1
	comp=Z,0.3nm,0.5s,baz=114,slow=7.1,SNR=2.9						
ARCES	ARCESS Array B	57.92	354	P	P	00 16 41.9	0.0
	comp=Z,4.8nm,1.0s,baz=15,slow=7.5,SNR=1.6						
MKAR	Makanchi Array	64.13	314	P	P	00 17 23.2	-1.2
	comp=Z,0.6nm,0.6s,baz=38,slow=6.1,SNR=8.0						
MKAR	Makanchi Array	64.13	314	P	P	00 17 23.6	-0.7
FINES	FINESS Array B	65.88	352	P	P	00 17 35.2	-0.2
	comp=Z,0.9nm,0.4s,baz=16,slow=6.3,SNR=16						
FINES	FINESS Array B	65.88	352	P	P	00 17 35.4	0.0
NC405	NORSAR Array S	66.81	360	P	P	00 17 42.1	+0.7
NOA	NORSAR Array B	66.89	0	P	P	00 17 41.9	0.0
	comp=Z,0.7nm,0.5s,baz=318,slow=25,SNR=1.7						
ABKAR	Akbulak array	70.65	329	P	P	00 18 06.1	+0.6
ESDC	Sonseca Array	87.30	12	P	P	00 19 37.1	+0.2
	comp=Z,0.6nm,0.8s,baz=326,slow=4.4,SNR=2.0						

ISC 04 00:18:18.5±1.1, 43°.87N±0°.04×16°.87E±0°.04, h15^{km}±10^{km}, n7, σ1^s.26/14, 1C, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIJV	Kijevo	0.36	292	*e*Pg	Pg	00 18 25.8	0.0
KIJV				Sg	Sg	00 18 31.4	+0.5
RICI	Ricice	0.42	153	*e*Pg	Pg	00 18 27.4	+0.3
RICI				Sg	Sg	00 18 33.5	+0.7
MGRS	Mrkonjic Grad	0.56	16	⇑*i*Pg	Pg	00 18 30.7	+1.0
MGRS				*e*Sg	Sg	00 18 36.5	-0.7
MAKA	Makarska	0.60	169	*i* Pg	Pg	00 18 30.7	+0.5
MAKA				Sg	Sb	00 18 40.1	+1.3
HVAR	Hvar	0.76	204	*e*Pg	Pg	00 18 33.0	-0.2
HVAR				Sg	Sb	00 18 45.1	+1.6
MORI	Morici	0.84	270	*i* Pg	Pg	00 18 35.0	+0.2
MORI				Sg	Sn	00 18 48.4	+0.6
STON	Ston	1.17	148	*e*Pn	Pb	00 18 38.0	-2.4
STON				Sn	Sb	00 18 57.0	+1.7

GCMT 04 00:21:03.0±0.3, 49°.93S±0°.03×115°.67W±0°.02, h23^{km}±1^{km}, MW4.9/72, Moment Tensor Solution. s22,c25; s72,c87; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.28±.17; $M_{\theta\theta}$0.62±.15; $M_{\phi\phi}$-0.90±.14; $M_{r\theta}$0.48±.20; $M_{\theta\phi}$2.61±.11; $M_{\phi r}$-0.88±.19; **Best double couple:** $M_0$2.86800×10^{16} **NP1:**ϕ_s277.00000°, δ76.00000°, λ-9.00000°. **NP2:**ϕ_s9.00000°, δ81.00000°, λ-166.00000°. **Principal axes:** T 2.5880, Plg4.0000°, Azm142.0000°; N 0.5590, Plg73.0000°, Azm40.0000°; P -3.1470, Plg16.0000°, Azm234.0000°; **nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TBI	Tubuai	37.41	303	*e*LQ	LQ	00 36 27.0	
	234nm,29.0s						
TBI				*e*LR	LR	00 38 02.7	
	comp=Z,444nm,26.2s,baz=146						
MEH	Mehetia	41.20	309	*e*T	T	01 12 09.0	
	21nm,0.3s						
TVO	Taravao	41.87	308	*e*T	T	01 12 59.0	
	1.5nm,0.3s						
PPT2	Papeete2	42.20	308	*e*LQ	LQ	00 38 28.9	
	355nm,27.0s						
PPT2				*e*LR	LR	00 40 17.5	
	comp=Z,740nm,26.2s,baz=145						
TAOE	Nuku Hiva Isla	45.74	325	*e*LR	LR	00 41 57.1	
	comp=Z,634nm,24.6s						
DZM	Mont Dzumac	65.74	264	*e*LR	LR	00 50 59.2	
	comp=Z,204nm,23.8s						

IDC 04 01:09:27.8±9.3, 13°.63S×166°.83E, h168^{km}±102^{km}, mb3.4/4, mb1 3.5/5, mb1mx3.2/33, mbtmp3.8/5 Error

ellipse: s-maj=88.1km s-min=50.9km az=140.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	8.40	182	P	Pn	01 11 27.2	+0.6
	0.7nm,0.3s,baz=20,slow=10,SNR=10						
DZM				S	Sn	01 12 59.7	-0.8
	0.3nm,0.3s,baz=326,slow=21,SNR=1.5						
STKA	Stephens Creek	29.40	228	P	P	01 15 15.7	+0.2
	1.0nm,0.4s,baz=64,slow=9.1,SNR=3.4						
WRA	Warramunga Arr	31.69	254	P	P	01 15 36.0	+0.1
	0.3nm,0.7s,baz=83,slow=8.5,SNR=4.7						
ASAR	Alice Springs	32.68	247	P	P	01 15 44.2	-0.3
	0.7nm,0.5s,baz=74,slow=9.1,SNR=12						
MKAR	Makanchi Array	96.11	317	P	P	01 22 36.2	-0.3
	0.6nm,0.6s,baz=101,slow=5.1,SNR=6.6						

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*DJA **04** 01:30:39.5±0.2, 8°S±2°×12°2E±°, h356^{km}±2^{km}, M4.4/22, mB5.1/7, mb4.3/21, MLv4.3/22, Mw(mB)4.4/7*

*NEIC **04** 01:30:39.9±1.4, 7°.38S±0°.08×121°.90E±0°.07, h373^{km}±6^{km}, mb4.2/24, Error ellipse: s-maj=13.8km s-min=6.8km az=212.0*

*IDC **04** 01:30:39.6±0.6, 7°.32S×121°.95E, h368^{km}±6^{km}, mb3.6/9, mb1 3.7/14, mb1mx3.4/48, mbtmp4.4/14, Error ellipse: s-maj=31.0km s-min=7.3km az=57.0*

ISC 04 01:30:38.5±0.4, **7°.45S**±0°.04×**121°.83E**±0°.05, **h350**^{km}, **n94**, σ**1^{s}72**/110, **mb4.2**/26, **1C, Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMRI	Maumere	1.25	161		Pn	01 31 29.0	+3.6
MMRI	Maumere	1.25	161	P	Pn	01 31 27.4	+2.1
MMRI				S	S	01 32 03.8	+0.9
EDFI	Ende, Flores	1.30	186	P	Pn	01 31 28.4	+2.7
EDFI				S	S	01 32 06.0	+2.4
BSSI	Bau Bau, Buton	1.86	314	P	Pn	01 31 32.3	+3.4
BSSI				S	S	01 32 11.5	+2.2
BKSI	Bulukumba	2.71	321	P	Pn	01 31 38.3	+2.9
BKSI				S	S	01 32 23.8	+2.7
BASI	Baing, Sumba	3.02	204	P	Pn	01 31 39.2	+1.2
BASI				S	S	01 32 26.9	+1.0
KAPI	Kappang	3.18	319	P	Pn	01 31 43.4	+3.9
	3.4nm,0.3s,baz=118,slow=10,SNR=11						
KAPI				S	S	01 32 33.0	+4.3
	0.9nm,0.3s,baz=148,slow=19,SNR=5.9						
BATI	Baumata	3.28	147	P	Pn	01 31 43.9	+3.4
	164nm,0.3s,baz=313,slow=1.3,SNR=4.0						
BATI				S	S	01 32 33.2	+2.8
	292nm,0.3s,baz=1.5,slow=22,SNR=17						
BATI	Baumata	3.28	147	P	Pn	01 31 43.6	+3.1
BATI				S	S	01 32 32.4	+2.0
SOEI	Soe	3.33	134	Pn	Pn	01 31 44.4	+3.3
SOEI				S	S	01 32 33.5	+2.2
SOEI	Soe	3.33	134	P	Pn	01 31 44.3	+3.3
SOEI				S	S	01 32 32.0	+0.7
BNSI	Bone	3.48	330	P	Pn	01 31 45.6	+3.2
BNSI				S	S	01 32 37.0	+3.2
SPSI	Sidrap Palu	4.03	329	P	Pn	01 31 47.9	+0.1
SPSI				S	S	01 32 45.8	+2.1
PLAI	Plampang	4.24	251	P	Pn	01 31 50.8	+0.8
PLAI				S	S	01 32 47.3	-0.4
TTSI	Tana Toraja	4.81	335	P	Pn	01 31 58.9	+2.8
TWSI	Taliwang, Sumb	5.06	255	P	Pn	01 32 00.6	+1.8
	0.3nm550nm20nm,0.7s						
TWSI				S	S	01 33 03.9	+0.1
	0.3nm550nm20nm,0.7s						
LUWI	Luwuk	6.43	8	Pn	Pn	01 32 16.2	+1.9
LUWI	Luwuk	6.43	8	P	Pn	01 32 15.5	+1.1
	0.3nm2µm83nm,1.4s						
APSI	Ampana	6.50	358	P	Pn	01 32 16.8	+1.7
	0.1nm30nm,0.9s						
SRBI	Singaraja	6.59	264	P	Pn	01 32 16.0	-0.1
	0.2nm24nm,0.8s						
NLAI	Namlea	6.71	52	P	Pn	01 32 20.3	+2.7
	0.5nm127nm,0.7s						
SANI	Sanana	6.78	38	P	Pn	01 32 19.5	+1.1
	0.2nm61nm,1.1s						
JAGI	Jajag, Banyuwa	7.67	262	Pn	Pn	01 32 29.8	+0.9
JAGI	Jajag, Banyuwa	7.67	262	P	Pn	01 32 30.2	+1.4
	0.3nm29nm,0.5s						
MRSI	Marisa	7.88	1	P	Pn	01 32 32.6	+1.3
	0.1nm27nm,0.8s						
BBKI	Banjar Baru	8.01	299	P	Pn	01 32 34.5	+1.7
	0.5nm5µm45nm,1.1s						
GTOI	Gorontalo	8.12	8	P	P	01 32 38.0	+0.9
	39nm,0.8s						
MSAI	Masohi	8.16	60	P	P	01 32 36.1	-1.4
	830nm9.6nm,0.5s						
KMSI	Cibinong	8.26	15	P	Pn	01 32 36.3	+0.5
BNDI	Bandanaira	8.54	71	P	P	01 32 41.0	-0.8
	144nm,0.7s						
TOLI2	Tolitoli	8.57	353		P	01 32 41.2	-0.9
MTKI	Muara Teweh, K	9.46	313	P	P	01 32 52.4	+0.3
	93nm,0.7s						
TNTI	Ternate	9.86	34		Pn	01 32 54.9	0.0
TNTI	Ternate	9.86	34	P	P	01 32 55.8	-0.7
	85nm,1.1s						
MTN	Manton Dam	10.61	121		P	01 33 04.7	-0.1
FITZ	Fitzroy Crossi	11.21	161	P	P	01 33 13.0	+1.5
	2.5nm,0.3s,baz=358,slow=8.2,SNR=56						
FITZ				S	S	01 35 18.8	+2.3
	0.4nm,0.3s,baz=339,slow=14,SNR=4.6						
FITZ	Fitzroy Crossi	11.21	161		P	01 33 13.0	+1.5
UGM	Wanagama	11.22	267	P	Pn	01 33 11.3	+0.2
	68nm,1.1s						
FAKI	Fak Fak	11.31	67		Pn	01 33 11.2	-0.9
FAKI	Fak Fak	11.31	67	P	Pn	01 33 11.3	-0.9
	94nm,0.6s						
SWI	Sorong	11.45	56	P	P	01 33 13.6	-0.6
	44nm,0.6s						
SIJI	Sorong	11.46	56	P	P	01 33 14.0	-0.2
	5.0nm,0.3s,baz=218,slow=10,SNR=6.2						
PSA00	Pilbara Seismi	14.17	188	P	P	01 33 45.3	+1.2
KKM	Kota Kinabalu	14.53	337	P	Pn	01 33 49.9	-0.3
XMIS	Christmas Isla	16.26	258	P	P	01 34 08.1	+1.1
GIRL	Giralia	16.78	205	P	P	01 34 14.1	+1.6
WB0	Warramunga Arr	17.27	136	P	P	01 34 17.8	0.0
WRA	Warramunga Arr	17.36	137	P	P	01 34 19.0	+0.2
	0.9nm,0.3s,baz=316,slow=12,SNR=40						
WRA				S	S	01 37 17.0	-4.3
	0.1nm,0.3s,baz=324,slow=17,SNR=2.9						
WRA	Warramunga Arr	17.36	137	P	P	01 34 18.2	-0.5
WB2	Warramunga Arr	17.37	137	P	P	01 34 19.0	+0.2
WR0	Warramunga Arr	17.51	137	P	P	01 34 20.6	+0.3
WR0				IAmb	IAmb	01 34 24.9	
	comp=Z,5.3nm,0.4s						
AS31	Alice Springs	19.86	146	P	P	01 34 45.5	+0.4
AS31				IAmb	IAmb	01 34 46.2	
	comp=Z,3.3nm,0.3s						
ASAR	Alice Springs	19.86	146	P	P	01 34 45.6	+0.4
	comp=Z,1.6nm,0.3s,baz=322,slow=8.4,SNR=76						
ASAR				S	S	01 38 04.6	-2.8
	comp=Z,0.1nm,0.3s,baz=313,slow=17,SNR=6.0						
ASAR	Alice Springs	19.86	146	P	P	01 34 46.1	+0.9
COEN	Coen	21.94	109	P	P	01 35 04.2	-0.2
COEN				IAmb	IAmb	01 35 10.9	
	comp=Z,12nm,1.4s						
MORW	Morawa	22.18	194	P	P	01 35 06.7	+0.2
MORW				IAmb	IAmb	01 35 08.8	
	comp=Z,14nm,0.7s						
FORT	Forrest	23.93	167	P	P	01 35 22.8	+0.6
NWAO	Narrogin (SRO)	25.71	189	P	P	01 35 38.3	+0.2
NWAO				IAmb	IAmb	01 35 41.7	
	comp=Z,8.8nm,0.9s						
BBOO	Buckleboo	28.48	154	P	P	01 36 02.9	+0.1
BBOO				IAmb	IAmb	01 36 03.5	
	comp=Z,16nm,1.1s						
STKA	Stephens Creek	30.50	145	P	P	01 36 21.1	+0.7
	comp=Z,6.4nm,0.5s,baz=316,slow=9.0,SNR=18						
STKA	Stephens Creek	30.50	145	P	P	01 36 21.1	+0.7
CMAR	Chiang Mai Arr	34.24	319	P	P	01 36 53.1	+0.3
	comp=Z,1.3nm,0.3s,baz=140,slow=6.6,SNR=8.1						
LZH	Lanzhou	46.49	340	⇑P	P	01 38 34.0	+1.9
LZH				pP	pwP	01 39 50.3	+5.5
LZH				sP	PP	01 40 31.4	+5.4
LZH				pmax	pmax		
	comp=Z,15nm,1.1s						
GUN	Gumba	49.42	317	eP	P	01 38 54.0	-0.8
	comp=Z,23nm,0.7s						
PKI	Pulchoki	49.53	316	eP	P	01 38 54.3	-1.2
	comp=Z,18nm,0.5s						
PKIN	Phulchoki	49.54	316	eP	P	01 38 54.4	-1.2
	comp=Z,19nm,0.4s						
DMN	Daman	49.76	316	eP	P	01 38 55.9	-1.3
	comp=Z,9.2nm,0.5s						
GKN	Gorkha	50.33	316	eP	P	01 39 00.4	-0.9
	comp=Z,13nm,0.4s						
DANN	Dangsing	51.15	316	eP	P	01 39 06.6	-0.9
	comp=Z,44nm,0.5s						
WHZ	Wether Hill Ro	55.09	142	P	P	01 39 34.8	-0.6
RPZ	Rata Peaks	56.06	139	P	P	01 39 41.7	-0.5
	comp=Z,26nm,1.1s,baz=329,slow=5.9,SNR=1.7						
RPZ	Rata Peaks	56.06	139	P	P	01 39 41.7	-0.5
SONM	Songino Array	56.71	348	P	P	01 39 45.5	-1.3
	comp=Z,2.2nm,0.6s,baz=164,slow=8.7,SNR=16						
SONM	Songino Array	56.71	348	P	P	01 39 45.9	-0.9
WMQ	Urumqi	59.65	332	eP	P	01 40 07.9	+0.9
NIL	Nilore	61.56	315	P	P	01 40 18.6	-1.4
NIL				IAmb	IAmb	01 40 19.0	
	comp=Z,6.2nm,0.6s						
KSH	Kashi	63.09	322	P	P	01 40 29.3	-0.7
KSH				pmax	pmax		
	comp=Z,3.0nm,0.5s						
KSH				pmax	pmax		
	comp=Z,190nm,5.1s						
MK31	Makanchi Array	64.42	331	P	P	01 40 37.5	-0.7
MKAR	Makanchi Array	64.42	331	P	P	01 40 37.5	-0.8
	comp=Z,2.8nm,0.5s,baz=138,slow=7.7,SNR=43						
KBL	Kabul	65.02	314	P	P	01 40 41.6	-1.0
KBL				IAmb	IAmb	01 40 42.0	
	comp=Z,5.6nm,0.7s						
AAK	Ala-Archa	65.86	324	P	P	01 40 47.4	-0.4
AAK				IAmb	IAmb	01 40 48.1	
	comp=Z,2.5nm,0.7s						
ZAA0	Zalesovo Array	68.64	338	P	P	01 41 02.8	-1.8
ZAA0				IAmb	IAmb	01 41 03.2	
	comp=Z,2.8nm,0.8s						
ZALV	Zalesovo Beam	68.64	338	P	P	01 41 02.5	-2.1
	comp=Z,2.2nm,0.4s,baz=137,slow=5.6,SNR=14						
KURBB	Kurchatov Arra	68.88	332	P	P	01 41 04.7	-1.3
	comp=Z,1.1nm,0.4s,baz=141,slow=5.3,SNR=15						
KURK	Kurchatov	68.90	332	P	P	01 41 05.1	-1.1
KURK				IAmb	IAmb	01 41 05.4	
	comp=Z,3.2nm,0.8s						
BVAR	Borovoye Array	74.29	331	P	P	01 41 35.7	-2.4
	comp=Z,0.5nm,0.5s,baz=99,slow=9.2,SNR=2.7						
ABKAR	Akbulak array	77.94	324	P	P	01 41 57.0	-1.5
AKTO	Aktyubinsk	79.58	324	P	P	01 42 05.3	-2.1
	comp=Z,1.3nm,0.6s,baz=114,slow=6.9,SNR=5.9						
QSPA	South Pole Qui	82.53	180	P	P	01 42 22.4	-0.3
USHA	Ushuaia	117.35	173	PKP	PKPdf	01 48 42.9	+0.2
	comp=Z,130nm,0.4s,baz=132,slow=0.2,SNR=19						
TORD	Torodi Ar. Bea	120.94	281	PKP	PKPdf	01 48 49.9	-0.8
	comp=Z,0.2nm,0.5s,baz=96,slow=1.4,SNR=1.3						
Q56A	Snyder Ridge,	143.29	28	PKPdf	PKPbc	01 49 30.1	0.0
CPUP	Villa Florida	146.41	181	PKPbc	PKPdf	01 49 38.2	+0.6
	comp=Z,4.0nm,0.8s,baz=206,slow=5.5,SNR=5.2						
CPUP	Villa Florida	146.41	181		PKPdf	01 49 38.1	+0.5

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*NEIC **04** 01:37:31.1±2.5, 20°.2S±0°.2×175°.90W±0°.03, h281^{km}±13^{km}, mb4.3/10, Error ellipse: s-maj=25.0km s-min=4.0km az=184.0*

*IDC **04** 01:37:41.0±8.2, 20°.32S×176°.29W, h367^{km}±93^{km}, mb3.2/4, mb1 3.5/6, mb1mx3.2/34, mbtmp4.1/6, Error ellipse: s-maj=48.9km s-min=28.3km az=170.0*

ISC 04 01:37:29.6±0.8, **20°.3S**±0°.1×**175°.98W**±0°.10, **h250**^{km}, **n19**, σ**1^{s}42**/20, **mb3.6**/5, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	5.83	79	Pn	Pn	01 38 56.0	+0.3
MSVF	Nonsavu	6.18	293	Pn	Pn	01 39 01.5	+1.2
DZM	Mont Dzumac	16.49	261	P	Pn	01 41 09.4	+1.7
	0.5nm,0.3s,baz=105,slow=16,SNR=6.7						
DZM	Mont Dzumac	16.49	261		Pn	01 41 09.6	+1.9
DZM				IAmb	IAmb	01 41 16.0	
	comp=Z,35nm,1.5s						
SANVU	Saraoutou	16.71	284	P	Pn	01 41 09.8	-0.3
SANVU				IAmb	IAmb	01 41 14.2	
	comp=Z,16nm,1.2s						
URZ	Urewera	18.89	197	P	Pn	01 41 34.4	-1.2
	comp=Z,1.8nm,0.3s,baz=306,slow=4.8,SNR=6.3						
URZ				S	S	01 44 52.2	-0.7
	comp=Z,0.3nm,0.3s,baz=46,slow=12,SNR=1.7						
URZ	Urewera	18.89	197	P	Pn	01 41 35.5	-0.1
URZ				IAmb	IAmb	01 41 42.0	
	comp=Z,13nm,0.9s						
BKZ	Black Stump Fm	19.91	197	P	P	01 41 44.0	+1.3
BKZ				IAmb	IAmb	01 41 58.8	
	comp=Z,20nm,1.5s						
EIDS	Eidsvold	30.73	254	P	P	01 43 21.9	+0.1
CTAO	Charters Tower	35.39	264	P	P	01 44 02.5	+0.3
WR0	Warramunga Arr	46.31	261	P	P	01 45 29.2	-1.9
WR0				IAmb	IAmb	01 45 42.6	
	comp=Z,11nm,1.4s						
ASAR	Alice Springs	46.41	256	P	P	01 45 30.5	-1.3
	comp=Z,1.9nm,0.6s,baz=98,slow=8.4,SNR=24						
ASAR	Alice Springs	46.41	256	P	P	01 45 31.0	-0.7
WB0	Warramunga Arr	46.48	262	P	P	01 45 30.6	-1.8
WB2	Warramunga Arr	46.49	261	P	P	01 45 30.7	-1.7
WRA	Warramunga Arr	46.50	261	P	P	01 45 30.6	-1.9
	comp=Z,0.5nm,0.3s,baz=95,slow=7.6,SNR=25						
WRA	Warramunga Arr	46.50	261	P	P	01 45 30.9	-1.6
PETK	Petropavlovsk-	76.56	344	P	P	01 48 50.4	-1.8
	comp=Z,1.8nm,0.6s,baz=123,slow=10,SNR=4.5						
NVAR	Mina Array Bea	79.58	42	P	P	01 49 10.5	+1.1
	comp=Z,0.4nm,0.6s,baz=221,slow=11,SNR=4.1						

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*GUC **04** 01:45:06.8±0.7, 29°.42S×70°.61W, h83^{km}±5^{km}, ML4.2*

*SJA **04** 01:45:06.2±0.7, 29°.33S×70°.71W, h87^{km}±5^{km}, ML4.0, MW3.9*

*NEIC **04** 01:45:06.7±1.8, 29°.381S±0°.010×70°.6W±0°.1, h94^{km}±6^{km}, ML4.1(GUC), Error ellipse: s-maj=12.9km s-min=1.4km az=90.0*

*IDC **04** 01:45:08.5±1.1, 29°.29S×70°.46W, h92^{km}±6^{km}, mb3.2/3, mb1 3.5/6, mb1mx3.4/27, mbtmp3.6/6, Error ellipse: s-maj=36.6km s-min=26.7km az=18.0*

ISC 04 01:45:07.3±0.6, **29°.35S**±0°.03×**70°.66W**±0°.04, **h91**^{km}±4^{km}, **n78**, σ**1^{s}58**/115, **mb3.4**/3, **5C-1D, Central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCO	Las Campanas	0.34	354		Pn	01 45 21.7	+0.2
LCO				Sn	Sn	01 45 32.3	+0.3
AC05	El Transito	0.62	33	eP	Pn	01 45 23.6	+0.2
AC05				iS	Sn	01 45 35.9	+0.6
AC05				IAML		01 45 36.6	
	comp=N,19µm,0.2s						
AC05	El Transito	0.62	33		Pn	01 45 23.6	+0.2
AC05				Sn	Sn	01 45 35.9	+0.6
CO01	Juntas del Tor	0.79	142	eP	Pn	01 45 24.6	-0.6
CO01				iS	Sn	01 45 37.5	-0.9
CO01	Juntas del Tor	0.79	142		Pn	01 45 24.6	-0.6
CO01				Sn	Sn	01 45 37.4	-1.1
GO04	Tololo Observa	0.83	188	eP	Pn	01 45 25.1	-0.5
GO04				iS	Sn	01 45 38.6	-0.5
GO04				IAML		01 45 44.5	
	comp=N,6µm,0.4s						
GO04	Tololo Observa	0.83	188		Pn	01 45 25.0	-0.5
GO04				Sn	Sn	01 45 38.5	-0.5
GO04	Tololo Observa	0.83	188	eP	Pn	01 45 25.3	-0.2
GO04				eS	Sn	01 45 39.0	0.0
AC04	Llanos de Chal	1.20	342	⇓iP	Pn	01 45 30.3	+0.9
AC04				iS	Sn	01 45 47.4	+1.2
AC04				IAML		01 45 48.9	
	comp=E,8µm,0.1s						
AC04	Llanos de Chal	1.20	342	Pn	Pn	01 45 30.2	+0.7
AC04				Sn	Sn	01 45 47.3	+1.2
AROD	Rodeo	1.31	128	eP	Pn	01 45 31.8	+0.7
AROD				eS	Sn	01 45 51.0	+2.0
CO03	El Pedregal	1.48	181	⇑iP	Pn	01 45 32.7	-0.3
CO03				iS	Sn	01 45 51.9	-0.5
CO03				IAML		01 45 52.7	
	comp=E,4µm,0.2s						
CO03	El Pedregal	1.48	181		Pn	01 45 32.5	-0.5
CO03				Sn	Sn	01 45 51.6	-0.7
ACDV	Cuesta del Vie	1.57	122	eP	Pn	01 45 35.2	+1.0
GO03	Copiap	1.79	12	⇑iP	Pn	01 45 37.6	+0.6
GO03				iS	Sn	01 46 00.2	+0.7
GO03				IAML		01 46 02.4	
	comp=E,3µm,0.2s						
GO03	Copiap	1.79	12	Pn	Pn	01 45 37.5	+0.6
GO03				Sn	Sn	01 46 00.0	+0.6
GO03	Copiap	1.79	12	eP	Pn	01 45 37.5	+0.6
GO03				eS	Sn	01 45 59.5	0.0
ACCO	Cerro Coronel	1.85	132	eP	Pn	01 45 39.1	+1.2
ACCO				eS	Sn	01 46 03.5	+2.3
ACCO				IAML		01 46 04.5	
	comp=Z,586nm,0.8s						
CO02	Combarbal	1.87	189	⇑iP	Pn	01 45 37.4	-0.6
CO02				iS	Sn	01 46 00.1	-1.1
CO02				IAML		01 46 08.4	
	comp=E,2µm,0.2s						
CO02	Combarbal	1.87	189		Pn	01 45 37.2	-0.7
CO02				Sn	Sn	01 45 59.8	-1.5
RTLL	Cerro Villicun	2.73	137	eP	Pn	01 45 49.9	+0.6
RTLL				eS	Sn	01 46 23.1	+1.6
RTLL				IAML		01 46 55.1	
	comp=Z,2µm,0.9s						
ZON	Zonda	2.78	142		Pn	01 45 50.2	+0.3
ZON	Zonda	2.78	142	eP	Pn	01 45 50.5	+0.6
ZON				eS	Sn	01 46 27.4	+4.7
AC02	Maricunga	2.85	29	⇑iP	Pn	01 45 52.2	+0.8
AC02	Maricunga	2.85	29	Pn	Pn	01 45 52.1	+0.8
AUSP	Uspallata	3.06	159	eP	Pn	01 45 55.8	+1.8
AUSP				eS	Sn	01 46 31.5	+1.6
AVFE	Valle Fertil	3.07	116	eP	Pn	01 45 54.0	+0.2
AVFE				eS	Sn	01 46 29.8	+0.1
AVFE				IAML		01 46 30.6	
	comp=Z,395nm,0.7s						
RTCV	Cerro Valdivia	3.10	144	eP	Pn	01 45 54.9	+0.6
AC01	Pan de Azucar	3.19	1	Pn	Pn	01 45 54.8	-0.7
ACLC	CERRO LA CRUZ	3.24	92	eP	Pn	01 45 56.3	+0.1
ACLC				eS	Sn	01 46 35.1	+1.1
ACLC				IAML		01 46 36.8	
	comp=Z,253nm,0.8s						
VA03	San Esteban	3.40	178	eP	Pn	01 45 58.3	-0.1
VA03				iS	Sn	01 46 37.3	-0.5
VA03				IAML		01 46 38.9	
	comp=E,676nm,0.5s						
VA03	San Esteban	3.40	178	Pn	Pn	01 45 58.1	-0.3
ASAL	Salagasta	3.59	155	eP	Pn	01 46 02.2	+1.3
ASAL				eS	Sn	01 46 44.4	+2.1
ASAL				IAML		01 47 20.6	
	comp=Z,167nm,0.9s						
ROC1	El Roble	3.62	185	Pn	Pn	01 46 00.5	-1.0
ROC1	El Roble	3.62	185	eP	Pn	01 46 00.5	-1.0
APLL	PUNTA DE LOS L	3.74	107	eP	Pn	01 46 02.8	0.0
PEL	Peldehue	3.78	180	eP	Pn	01 46 02.7	-0.7
PEL				iS	Sn	01 46 45.0	-1.9
PEL	Peldehue	3.78	180	Pn	Pn	01 46 02.5	-0.9
PEL	Peldehue	3.78	180	eP	Pn	01 46 03.5	+0.1
PEL				eS	Sn	01 46 46.4	-0.4
ARCO	CERRO ARCO	3.78	157	eP	Pn	01 46 05.0	+1.5
ARCO				eS	Sn	01 46 49.9	+2.9
ARCO				IAML		01 46 52.1	
	comp=Z,206nm,0.8s						
MT02	Curacav	3.92	186	⇑eP	Pn	01 46 03.6	-1.6
MT02	Curacav	3.92	186		Pn	01 46 03.7	-1.5
MT05	Renca	4.03	181		Pn	01 46 05.3	-1.5
AAGR	Agrelo	4.04	158	eP	Pn	01 46 08.3	+1.3
AAGR				IAML		01 47 08.2	
	comp=Z,140nm,0.6s						
GO02	Mina Guanaco	4.28	13	Pn	Pn	01 46 09.8	-0.7
CYA	Choya	4.36	79	eP	Pn	01 46 10.7	-0.5
CYA				eS	Sn	01 46 59.2	-1.7
CYA				IAML		01 47 01.7	
	comp=Z,103nm,0.3s						
PB14	IPOC Station P	4.71	3	Pn	Pn	01 46 14.8	-1.6
PB14	IPOC Station P	4.71	3	eP	Pn	01 46 14.8	-1.6
PB14				IAML		01 47 33.2	
	comp=Z,130nm,0.5s						
MRA	San Martin	5.23	127	eP	Pn	01 46 22.5	-0.7
MRA				eS	Sn	01 47 20.7	-1.6
MRA				IAML		01 48 02.1	
	comp=Z,54nm,0.7s						
FSA	Cafayete	5.26	53	eP	Pn	01 46 23.2	-0.5
AHML	Horco Molle	5.36	63	eP	Pn	01 46 24.2	-0.7
AHML				eS	Sn	01 47 18.3	-7.0
BO02	Sierra Bellavi	5.42	181	Pn	Pn	01 46 23.4	-2.3
TCA	Tanti	5.60	112	eP	Pn	01 46 26.9	-1.3
TCA				eS	Sn	01 47 27.3	-4.0
TCA				IAML		01 48 15.8	
	comp=Z,50nm,0.7s						
LAMA	Las Malvinas	5.70	168	eP	Pn	01 46 30.2	+0.7
RFA	San Rafael	5.71	162	eP	Pn	01 46 29.1	-0.6
RFA				eS	Sn	01 47 36.1	+2.2
RFA				IAML		01 48 16.8	
	comp=Z,41nm,0.6s						
PB15	IPOC Station P	6.21	10		Pn	01 46 35.7	-1.0
PB15	IPOC Station P	6.21	10	eP	Pn	01 46 36.1	-0.6
PB15				eP	Pn	01 46 37.6	+0.9
PB15				IAML		01 48 22.6	
	comp=Z,217nm,0.3s						
PB05	IPOC Station P	6.49	4	eP	Pn	01 46 37.6	-2.7
PB05				IAML		01 48 42.8	
	comp=Z,43nm,0.9s						
PB06	IPOC Station P	6.69	9	Pn	Pn	01 46 44.0	+0.8
PB06	IPOC Station P	6.69	9	eP	Pn	01 46 42.5	-0.6
PB06				IAML		01 48 47.3	
	comp=Z,56nm,0.5s						
LVC	Limon Verde	6.90	14	P	Pn	01 46 43.9	-2.2
	comp=Z,1.2nm,0.3s,baz=168,slow=9.3,SNR=20						
LVC				S	Sn	01 47 58.9	-4.5
	comp=Z,3.4nm,0.3s,baz=263,slow=2.7,SNR=3.9						
BI02	San Fabin de	7.31	184		Pn	01 46 48.6	-2.8
PB09	IPOC Station P	7.63	10	Pn	Pn	01 46 54.0	-1.9
H03N1	Juan Fernandez	8.14	238	T	T	01 55 02.2	
	baz=64,slow=72,SNR=164						
H03N2	Juan Fernandez	8.16	238	T	T	01 55 02.8	
	baz=64,slow=72,SNR=81						
H03N3	Juan Fernandez	8.16	238	T	T	01 55 01.3	
	baz=64,slow=72,SNR=109						
PB01	IPOC Station P	8.34	8	Pn	Pn	01 47 01.9	-3.7
MNMC	Minye Minye	10.22	6	Pn	Pn	01 47 34.3	+2.9
PLCA	Paso Flores	11.35	180	P	Pn	01 47 44.3	-2.1
	comp=Z,0.0nm,0.3s,baz=343,slow=18,SNR=1.9						
CPUP	Villa Florida	12.18	79	P	Pn	01 47 55.7	-1.8
	comp=Z,0.3nm,0.3s,baz=238,slow=12,SNR=4.2						
SIV	San Ignacio	15.96	36	P	Pn	01 48 46.7	+0.1
	comp=Z,0.1nm,0.3s,baz=236,slow=4.7,SNR=3.7						
TXAR	Lajitas Array	66.32	329	P	P	01 55 47.6	+1.4
	comp=Z,0.3nm,0.6s,baz=153,slow=8.4,SNR=5.1						
TXAR				pP	pP	01 56 12.2	+2.4
	comp=Z,0.2nm,0.8s,baz=160,slow=8.0,SNR=2.1						
TXAR				sP	sP	01 56 20.8	+0.9
	comp=Z,0.3nm,0.7s,baz=157,slow=8.1,SNR=3.3						
PDAR	Pinedale Array	80.19	332	P	P	01 57 09.1	+1.4
	comp=Z,0.2nm,0.6s,baz=121,slow=8.7,SNR=2.4						
TORD	Torodi Ar. Bea	81.52	70	P	P	01 57 16.1	+1.0
	comp=Z,0.5nm,0.7s,baz=216,slow=4.6,SNR=2.4						
TORD				pP	pP	01 57 39.2	-1.2
	comp=Z,1.6nm,0.8s,baz=264,slow=5.2,SNR=6.1						
ARCES	ARCESS Array B	119.31	24	PKP	PKiKP	02 03 45.8	+0.8
	comp=Z,7.3nm,1.0s,baz=287,slow=1.9,SNR=2.7						
WRA	Warramunga Arr	125.38	209	PKP	PKPdf	02 03 57.8	-0.5
	comp=Z,0.3nm,0.4s,baz=164,slow=1.7,SNR=1.4						
ZALV	Zalesovo Beam	149.64	29	PKPbc	PKiKP	02 04 46.6	-0.2
	comp=Z,2.5nm,0.5s,baz=306,slow=3.2,SNR=12						
ZALV				pPKPbc	pPKPbc	02 05 11.7	0.0
	comp=Z,1.5nm,0.5s,baz=311,slow=2.7,SNR=5.6						
MKAR	Makanchi Array	152.69	43	PKPbc	PKiKP	02 04 53.5	+0.1
	comp=Z,0.7nm,0.8s,baz=300,slow=2.8,SNR=4.9						

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*NEIC **04** 01:51:33.2±2.4, 21°.7S±0°.1×175°.7W±0°.1, h42^{km}±6^{km}, mb5.2/52, Error ellipse: s-maj=15.8km s-min=13.3km az=136.0*

*IDC **04** 01:51:40.0±0.7, 21°.88S×175°.98W, h99^{km}±5^{km}, mb4.3/15, mb1 4.6/16, mb1mx4.5/25, mbtmp4.7/16, MS3.5/12, Ms1 3.5/12, ms1mx3.3/26, Error ellipse: s-maj=21.0km s-min=13.2km az=138.0*

*NOU **04** 01:51:40.8, 21°.73S×175°.15W, h148^{km}, mb5.2, Tonga Islands*

*GCMT **04** 01:51:41.2±0.2, 22°.02S±0°.02×175°.45W±0°.01, h126^{km}±2^{km}, MW5.0/113, Moment Tensor Solution. s52,c65; s113,c154; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.28±.14; $M_{\theta\theta}$1.05±.16; $M_{\phi\phi}$-0.77±.16; $M_{r\theta}$-0.43±.10; $M_{\theta\phi}$1.44±.18; $M_{\phi r}$-3.76±.09; Best double couple: $M_0$4.13000×10^{16} NP1:ϕ_s279.00000°, δ24.00000°, λ-3.00000°. NP2:ϕ_s12.00000°, δ89.00000°, λ-114.00000°. Principal axes: T 3.8570, Plg39.0000°, Azm124.0000°; N 0.5450, Plg24.0000°, Azm12.0000°; P -4.4040, Plg41.0000°, Azm259.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

Triangular moment-rate function

*BJI **04** 01:51:45.4±0.0, 21°.96S×176°.09W, h155^{km}, mB5.3/11, mb4.7/16*

*BGR **04** 01:51:48.1±0.0, 21°.34S×175°.42W, h150^{km}*

ISC 04 01:51:40.2±0.5**, 22°.10S**±0°.05×**175°.67W**±0°.06**, h106^{km}**±4^{km}**, h106^{km}:pP-P, n332, σ2^{s}03**/333**, mb5.0**/41**, 35C-27D, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	6.17	62	P	Pn	01 53 02.4	-6.4
	baz=5.5,SNR=44						
NIUE				S	Sn	01 54 02.9	-15
	baz=5.5						
NIUE	Niue	6.17	62	Pn	Pn	01 53 02.2	-6.6
NIUE	Niue	6.17	62	P	Pn	01 53 02.4	-6.4
MSVF	Nonsavu	7.33	305	P	Pn	01 53 27.2	+2.5
RAO	Raoul Island	7.40	195	S	Sn	01 54 50.5	+2.5
	83nm,0.3s,baz=259,slow=23,SNR=14						
AFI	Afiamalu	8.95	25	Pn	Pn	01 53 38.0	-8.7
AFI	Afiamalu	8.95	25	P	Pn	01 53 39.1	-7.6
RAR	Rarotonga	14.81	90	P	Pn	01 55 01.9	-2.5
	4.6nm,0.3s,baz=240,slow=16,SNR=8.1						
RAR				S	Sn	01 57 32.1	-16
	4.7nm,0.3s,baz=357,slow=15,SNR=6.4						
RAR				LR	LR	02 00 35.9	
	comp=Z,126nm,18.1s,baz=267,slow=36						
RAR	Rarotonga	14.81	90	P	Pn	01 55 01.4	-3.0
RAR	Rarotonga	14.81	90	P	Pn	01 54 56.5	-7.8
MARNC	Mare, Loyalty	15.15	269	P	P	01 55 12.7	+1.4
PINNC	Pines Island,	15.63	265	P	P	01 55 19.5	+3.0
DVP	Devils Point	15.79	283	P	P	01 55 21.0	+2.7
OUZ	Omahuta	16.09	213		P	01 55 24.0	+2.4
YATNC	Mamie plateau,	16.16	267	P	P	01 55 25.5	+3.0
OUENC	Ouen Island, N	16.19	266	P	P	01 55 26.7	+3.9
DZM	Mont Dzumac	16.58	267	P	P	01 55 29.6	+2.4
	8.1nm,0.3s,baz=78,slow=19,SNR=86						
DZM				LR	LR	01 59 24.1	
	comp=Z,269nm,19.5s,baz=98,slow=28						
DZM	Mont Dzumac	16.58	267	*e*P	P	01 55 31.0	+3.8
	395nm,1.1s						
DZM				*e*LR	LR	01 59 34.7	
	comp=Z,749nm,29.1s						
DZM	Mont Dzumac	16.58	267	P	P	01 55 29.9	+2.7
DZM				IAmb	IAmb	01 55 32.5	
	comp=Z,142nm,0.8s						
DZM	Mont Dzumac	16.58	267	P	P	01 55 30.8	+3.6
NOUC	Port Laguerre	16.71	267	P	P	01 55 33.1	+4.6
URZ	Urewera	17.26	199	P	P	01 55 34.2	-0.2
	comp=Z,5.8nm,0.3s,baz=356,slow=6.8,SNR=8.1						
URZ				S	Sn	01 58 33.6	-13
	comp=Z,5.6nm,0.3s,baz=356,slow=19,SNR=6.2						
URZ	Urewera	17.26	199	P	Pn	01 55 35.0	+0.5
SANVU	Saraoutou	17.50	289	P	Pn	01 55 38.1	+0.4
SANVU	Saraoutou	17.50	289	P	Pn	01 55 40.0	+2.3
HIZ	Hauiti	18.27	204	P	Pn	01 55 47.4	+0.7
HIZ				IAmb	IAmb	01 55 50.5	
	comp=Z,84nm,0.7s						
BKZ	Black Stump Fm	18.28	200	P	P	01 55 44.8	-1.0
KAHZ	Kahuranaki	18.75	198	P	S	01 59 17.4	-1.2
DVHZ	Dannevirke	19.42	199	P	S	01 59 25.3	-6.7
POWZ	Post Office Ro	19.63	200	P	S	01 59 31.3	-4.8
PRWZ	Pori Road	19.71	199	P	S	01 59 32.4	-5.4
BFZ	Birch Farm	19.75	198	P	S	01 59 30.6	-7.8
MRZ	Mangatainoka R	19.93	200	P	S	01 59 35.6	-6.5
HOWZ	Holdsworth Sta	20.17	200	P	S	01 59 36.3	-10
TMWZ	Te Maipa	20.25	199	P	S	01 59 41.2	-7.2
KIW	Kapiti Island	20.33	201	P	S	01 59 43.4	-6.6
TRWZ	Traveller	20.57	199	P	S	01 59 48.1	-6.6
DUWZ	D'Urville Isla	20.62	203	P	S	01 59 50.5	-5.2
PAWZ	Paruwai Farm	20.64	199	P	S	01 59 49.0	-7.0
TCW	Tory Channel	20.86	202	P	S	01 59 53.1	-7.2
PLWZ	Palliser	20.86	199	P	S	01 59 55.7	-4.7
TUWZ	Tuamarina	21.16	202	P	S	02 00 00.3	-6.0
QRZ	Quartz Range	21.17	205	P	P	01 56 18.3	+1.4
QRZ				IAmb	IAmb	01 56 24.4	
	comp=Z,89nm,1.0s						
NNZ	Nelson	21.18	203	P	S	01 59 59.2	-7.4
TBI	Tubuai	24.20	98	*e*LQ	LQ	02 01 42.2	
	comp=Z,265nm,31.8s						
TBI				*e*LR	LR	02 02 36.0	
	comp=Z,693nm,35.2s						
TBI	Tubuai	24.20	98	*e*T	T	02 21 26.7	
	comp=Z,14nm,0.3s						
RPZ	Rata Peaks	24.20	204	P	P	01 56 47.3	+0.5
	comp=Z,32nm,0.6s,baz=310,slow=2.2,SNR=15						
RPZ				S	S	02 01 02.0	+4.4
	comp=Z,8.5nm,0.6s,baz=24,slow=20,SNR=1.6						
RPZ	Rata Peaks	24.20	204	P	P	01 56 48.1	+1.2
RPZ				IAmb	IAmb	01 56 58.9	
	comp=Z,75nm,0.9s						
LHI	Lord Howe Isla	24.38	242	P	P	01 56 51.2	+2.7
	baz=25,SNR=4.1						
LHI	Lord Howe Isla	24.38	242	P	P	01 56 50.9	+2.4
PAE	Paea	24.92	84	*e*T	T	02 22 09.0	
	comp=Z,26nm,0.3s						
PPT2	Papeete2	24.94	84	*e*LQ	LQ	02 02 05.5	
	comp=Z,556nm,26.0s						
PPT2				*e*LR	LR	02 03 06.7	
	comp=Z,871nm,30.2s						
PPT2	Papeete2	24.94	84	*e*T	T	02 22 10.6	
	comp=Z,16nm,0.3s						
PPT	Papeete	24.95	84	LR	LR	02 04 25.4	
	comp=Z,164nm,21.3s,baz=202,slow=30						
LBZ	Lake Benmore	25.10	204	P	P	01 56 56.6	+1.6
LBZ				IAmb	IAmb	01 57 09.5	
	comp=Z,85nm,1.3s						
TIAR	Tiarei	25.16	84	*e*T	T	02 22 29.0	
	comp=Z,4.0nm,0.3s						
TVO	Taravao	25.19	85	*e*T	T	02 22 32.1	
	comp=Z,3.9nm,0.3s						
MEH	Mehetia	26.27	86	*e*T	T	02 23 52.0	
	comp=Z,32nm,0.2s						
MLZ	Mavora Lakes	26.73	206	P	P	01 57 11.6	+1.8
MLZ				IAmb	IAmb	01 57 13.8	
	comp=Z,53nm,0.9s						
VAH	Vaihoa	27.40	80	*e*T	T	02 25 16.7	
	comp=Z,3.5nm,0.2s						
ARMA	Armidale	30.39	247	P	P	01 57 44.0	+1.4
	baz=31,SNR=14						
ARMA	Armidale	30.39	247	P	P	01 57 43.7	+1.2
ARMA				IAmb	IAmb	01 57 45.6	
	comp=Z,36nm,0.7s						
EIDS	Eidsvold	30.56	257	P	P	01 57 44.9	+0.9
	baz=31,SNR=7.1						
EIDS	Eidsvold	30.56	257	P	P	01 57 44.6	+0.6
MGCD	Mangrove Creek	31.31	242	P	P	01 57 52.0	+1.5
	baz=32,SNR=15						
RMQ	Roma	32.65	255	P	P	01 58 04.1	+1.8
	baz=33,SNR=6.1						
CNB	Canberra Magne	33.19	239	P	P	01 58 08.9	+1.8
	baz=34,SNR=6.3						
CAN	Canberra	33.48	239	P	P	01 58 10.8	+1.3
CAN				IAmb	IAmb	01 58 12.2	
	comp=Z,38nm,0.9s						
YNG	Young	33.75	241	P	P	01 58 12.9	+1.1
	baz=34,SNR=7.9						
CMSA	Cobar Meteorol	35.59	246	P	P	01 58 27.5	-0.1
	baz=36,SNR=41						
QLP	Quilpie	36.70	255	P	P	01 58 37.8	+0.7
	baz=37,SNR=4.7						
TOO	Toolangi	36.76	236	P	P	01 58 39.5	+1.9
	baz=37,SNR=7.7						
TOO	Toolangi	36.76	236	P	P	01 58 38.5	+0.9
TOO				IAmb	IAmb	01 58 40.1	
	comp=Z,23nm,0.8s						
TAU	Tasmania Unive	37.07	227	P	P	01 58 41.4	+1.3
RKT	Rikitea	37.50	100	*e*LR	LR	02 08 52.6	
	comp=Z,418nm,34.2s						
MTSU	Mount Surprise	37.70	269	P	P	01 58 45.6	-0.2
	baz=38,SNR=26						
STKA	Stephens Creek	39.09	246	P	P	01 58 57.2	0.0
	baz=40,SNR=26						
STKA	Stephens Creek	39.09	246	P	P	01 58 56.3	-1.0
	comp=Z,13nm,0.5s,baz=92,slow=11,SNR=40						
STKA				LR	LR	02 12 02.9	
	comp=Z,97nm,21.2s,baz=47,slow=31						
STKA	Stephens Creek	39.09	246	P	P	01 58 57.3	0.0
ARPS	Mount Arapiles	39.46	239	P	P	01 59 02.0	+1.8
	baz=40,SNR=12						
COEN	Coen	39.86	275	P	P	01 59 03.3	-0.5
	baz=40						
COEN	Coen	39.86	275	P	P	01 59 03.6	-0.2
COEN				IAmb	IAmb	01 59 04.4	
	comp=Z,30nm,1.0s						
HTT	Hallett	41.44	244	P	P	01 59 16.4	-0.2
	baz=42,SNR=17						
QIS	Mount Isa	41.58	264	P	P	01 59 17.7	-0.2
	baz=42,SNR=7.9						
BBOO	Buckleboo	43.81	245	P	P	01 59 35.1	-0.7
	baz=44,SNR=10						
BBOO	Buckleboo	43.81	245	P	P	01 59 35.0	-0.8
BBOO				IAmb	IAmb	01 59 37.6	
	comp=Z,53nm,1.1s						
AS31	Alice Springs	46.28	258	P	P	01 59 55.0	-0.6
AS31				IAmb	IAmb	01 59 57.2	
	comp=Z,22nm,0.8s						
ASAR	Alice Springs	46.29	258	P	P	01 59 54.3	-1.2
	comp=Z,96nm,0.8s,baz=94,slow=7.8,SNR=179						
ASAR				PcP	PcP	02 01 29.8	+0.4
	comp=Z,5.3nm,0.7s,baz=103,slow=3.7,SNR=5.0						
ASAR				ScP	ScP	02 05 15.2	+2.1
	comp=Z,1.5nm,0.9s,baz=116,slow=4.7,SNR=4.4						
ASAR				S	S	02 06 26.7	-8.1
	comp=Z,0.3nm,0.6s,baz=101,slow=14,SNR=2.4						
ASAR	Alice Springs	46.29	258	P	P	01 59 54.4	-1.1
ASPA	Alice Springs	46.29	258	P	P	01 59 55.0	-0.6
	baz=47						
WR0	Warramunga Arr	46.36	263	P	P	01 59 54.4	-1.7
WR0				IAmb	IAmb	01 59 56.6	
	comp=Z,30nm,0.8s						
WC3	Warramunga Arr	46.51	263	P	P	01 59 55.3	-2.0
	baz=47						
WB0	Warramunga Arr	46.53	263	P	P	01 59 55.6	-1.8
WB2	Warramunga Arr	46.53	263	P	P	01 59 55.8	-1.7
WRA	Warramunga Arr	46.55	263	P	P	01 59 55.4	-2.2
	comp=Z,66nm,0.9s,baz=98,slow=8.1,SNR=237						
WRA				ScP	ScP	02 05 15.4	+1.2
	comp=Z,2.4nm,1.0s,baz=95,slow=3.8,SNR=8.1						
WRA				LR	LR	02 18 02.2	
	comp=Z,34nm,18.6s,baz=140,slow=34						
WRA	Warramunga Arr	46.55	263	P	P	01 59 55.5	-2.1
KDU	Kakadu	50.16	272	P	P	02 00 23.7	-1.6
	baz=51,SNR=17						
FORT	Forrest	50.68	248	P	P	02 00 28.8	-0.3
	baz=51,SNR=12						
FORT	Forrest	50.68	248	P	P	02 00 28.1	-1.0
MTN	Manton Dam	51.35	271	P	P	02 00 32.7	-1.6
	baz=52,SNR=7.3						
MTN	Manton Dam	51.35	271	P	P	02 00 32.6	-1.7
MTN				IAmb	IAmb	02 00 38.5	
	comp=Z,28nm,0.9s						
FITZ	Fitzroy Crossi	54.98	263	P	P	02 01 00.0	-0.8
	baz=56,SNR=22						
FITZ	Fitzroy Crossi	54.98	263	P	P	02 01 00.2	-0.7
SOEI	Soe	58.72	272	P	P	02 01 26.9	-0.7
SOEI	Soe	58.72	272	P	P	02 01 26.2	-1.3
	comp=Z,104nm,0.8s						
KLBR	Kellerberrin	59.36	246	P	P	02 01 31.1	-0.5
	baz=60,SNR=16						
PSA00	Pilbara Seismi	59.43	257	P	P	02 01 31.8	-0.4
PSA00				IAmb	IAmb	02 01 34.6	
	comp=Z,23nm,0.8s						
MEEK	Meekatharra	59.45	251	P	P	02 01 32.9	+0.6
	baz=60,SNR=6.3						
NWAO	Narrogin (SRO)	59.60	244	P	P	02 01 35.2	+2.0
NWAO				IAmb	IAmb	02 01 36.5	
	comp=Z,21nm,1.2s						
BLDU	Ballidu	60.40	246	P	P	02 01 39.6	+1.0
	baz=61,SNR=6.3						
MUN	Mundaring	60.60	245	P	P	02 01 40.0	-0.1
	baz=61,SNR=3.5						
MORW	Morawa	61.24	248	P	P	02 01 44.7	+0.2
	baz=62,SNR=6.7						
MORW	Morawa	61.24	248	P	P	02 01 44.6	+0.2
MORW				IAmb	IAmb	02 01 48.0	
	comp=Z,33nm,1.4s						
LUWI	Luwuk	63.36	280	P	P	02 01 58.2	-0.5
CASY	Casey	63.46	206	P	P	02 02 00.6	+2.0
GIRL	Giralia	64.22	255	P	P	02 02 03.8	-0.5
	baz=65,SNR=5.9						
GIRL	Giralia	64.22	255	P	P	02 02 06.5	+2.2
TOLI2	Tolitoli	66.06	282	P	P	02 02 16.2	-0.1
QSPA	South Pole Qui	67.98	180	P	P	02 02 31.2	+3.5
QSPA				IAmb	IAmb	02 02 48.5	
	comp=Z,15nm,0.8s						
JAGI	Jajag, Banyuwa	68.54	269	P	P	02 02 29.5	-2.4
JAGI				IAmb	IAmb	02 02 33.8	
	comp=Z,18nm,0.7s						
UGM	Wanagama	72.10	269	P	P	02 02 52.4	-1.3
MJAR	Matsushiro Arr	72.79	323	P	P	02 02 54.9	-2.4
	comp=Z,3.6nm,0.9s,baz=163,slow=5.9,SNR=6.3						
MJAR	Matsushiro Arr	72.79	323	P	P	02 02 55.0	-2.2
PKM	Mcpherson Peak	77.59	44	P	P	02 03 26.5	+1.5
	baz=232						
PETK	Petropavlovsk-	78.38	344	P	P	02 03 25.9	-2.8
	comp=Z,8.5nm,1.0s,baz=122,slow=7.6,SNR=6.6						
PETK				pP	pP	02 03 53.5	-2.0
	comp=Z,6.8nm,0.8s,baz=133,slow=8.3,SNR=4.4						
PETK				LR	LR	02 32 39.5	
	comp=Z,45nm,21.4s,baz=162,slow=32						
VES	Vestal, Richgr	78.65	44	P	P	02 03 31.6	+1.0
	baz=232						
MONP2	Monument Peak	78.65	48	P	P	02 03 32.2	+1.2
	baz=235						
IKP	In-Ko-Pah, Jac	78.73	48	P	P	02 03 33.1	+1.8
	baz=235						
EDW2	Edwards Air Fo	78.77	45	P	P	02 03 32.8	+1.4
	baz=233						
ISA	Isabella, Lake	78.93	44	P	P	02 03 34.2	+1.9
	baz=233						
O02D	Mt. Diablo Mer	79.14	38	P	P	02 03 35.3	+1.9
	baz=229						
LRMC	Laurel Mtn Rad	79.33	45	P	P	02 03 35.9	+1.3
	baz=233						
KSRS	Korea Array	79.52	318	P	P	02 03 35.1	-0.2
	comp=Z,0.6nm,0.3s,baz=135,slow=6.0,SNR=5.0						
KSRS				pP	pP	02 04 00.8	-1.4
	comp=Z,1.2nm,0.7s,baz=151,slow=5.6,SNR=2.5						
KSRS				LR	LR	02 31 55.5	
	comp=Z,23nm,20.4s,baz=126,slow=30						
BELC	Belle Mtn. Jos	79.58	47	P	P	02 03 37.7	+1.8
	baz=235						
CWC	Cottonwood Cre	79.66	44	P	P	02 03 37.6	+1.3
	baz=233						
N02D	Trinity Center	79.71	38	P	P	02 03 38.6	+2.2
	baz=229						
BC3	Big Chuckawall	79.75	47	P	P	02 03 37.9	+1.1
	baz=235						
O03E	Paynes Creek	79.79	39	P	P	02 03 37.1	+0.3
	baz=230						
GSC	Goldstone, Bar	79.81	45	P	P	02 03 37.9	+0.9
	baz=234						
MPMC	Manual Prospec	79.81	44	P	P	02 03 37.7	+0.5
	baz=233						
GLA	Glamis	79.84	48	P	P	02 03 39.1	+1.9
	baz=236						
HEC	Hector,Ludlow	79.84	46	P	P	02 03 38.6	+1.4
	baz=234						
M02C	Callahan	79.90	38	P	P	02 03 39.2	+1.7
	baz=229						
L02E	Cave Junction	80.00	37	P	P	02 03 37.3	-0.5
	baz=228						
IRM	Iron Mountain	80.25	47	P	P	02 03 40.9	+1.4
	baz=235						
GMRC	Granite Mounta	80.27	46	P	P	02 03 40.5	+0.8
	baz=235						
GRAC	Grapevine Rang	80.45	44	P	P	02 03 42.4	+1.9
	baz=233						
SHOC	Shoshone, Teco	80.51	45	P	P	02 03 42.2	+1.5
	baz=234						
NVAR	Mina Array Bea	80.72	42	P	P	02 03 43.2	+1.2
	comp=Z,2.8nm,0.7s,baz=225,slow=8.9,SNR=13						
NVAR				pP	pP	02 04 08.8	-0.4
	comp=Z,2.8nm,0.8s,baz=224,slow=8.2,SNR=4.1						
NVAR				LR	LR	02 31 07.5	
	comp=Z,24nm,19.9s,baz=250,slow=29						
M04C	Macdoel	80.73	38	P	P	02 03 42.9	+1.0
	baz=230						
MAW	Mawson	80.79	199	P	P	02 03 42.5	+0.8
	comp=Z,26nm,0.9s,baz=159,slow=8.6,SNR=2.3						
MAW	Mawson	80.79	199	P	P	02 03 44.3	+2.6
MAW				IAmb	IAmb	02 03 55.7	
	comp=Z,26nm,1.5s						
PDMCI	Parker Dam,Lak	81.02	47	P	P	02 03 45.4	+2.0
	baz=236						
J04D	Umpqua Nationa	81.54	36	P	P	02 03 47.2	+0.9
	baz=229						
I04A	Tendick Farm,	81.74	36	P	P	02 03 47.5	+0.4
	baz=229						
H04D	Lebanon	82.04	35	P	P	02 03 50.1	+1.5
	baz=228						
J05D	Fort Rock, OR	82.05	37	P	P	02 03 49.9	+1.0
	baz=230						
NJ2	Nanjing	82.57	309	*e*P	P	02 03 51.4	-0.2
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
G05D	Wamic, OR	83.28	35	P	P	02 03 56.5	+1.4
	baz=230						
H03S2	Juan Fernandez	83.30	124	T	T	03 36 06.0	
	baz=246,slow=74,SNR=286						
H03S1	Juan Fernandez	83.31	124	T	T	03 36 07.1	
	baz=246,slow=74,SNR=352						
H03S3	Juan Fernandez	83.32	124	T	T	03 35 55.0	
	baz=246,slow=74,SNR=318						
E04D	Cinebar	83.48	34	P	P	02 03 57.3	+1.3
	baz=228						
D04E	Lakebay	83.80	33	P	P	02 04 00.0	+2.5
	baz=228						
W18A	Petrified Fore	84.50	49	P	P	02 04 04.0	+2.2
	baz=238						
121A	Cookes Peak, D	84.57	52	P	P	02 04 04.1	+2.0
	baz=240						
Q23K	Middleton Isla	84.73	15	P	P	02 04 04.0	+2.0
	baz=207						
B05A	Bryant	84.86	33	P	P	02 04 04.5	+1.6
	baz=229						
A04D	Lummi Island	84.86	32	P	P	02 04 03.5	+0.6
	baz=228						
RC01	Rabbit Creek A	85.51	12	P	P	02 04 05.5	-0.4
	baz=204						
SYO	Syowa Base	85.64	192	⇑*e*pP	P	02 04 18.2	+12
SUA	Susitna One	85.66	12	P	P	02 04 06.0	-0.8
SUA				IAmb	IAmb	02 04 06.9	
	comp=Z,13nm,0.7s						
TXAR	Lajitas Array	86.11	56	P	P	02 04 11.4	+1.7
	comp=Z,4.9nm,0.9s,baz=210,slow=7.2,SNR=40						
TXAR				pP	pP	02 04 36.8	-0.3
	comp=Z,4.4nm,1.1s,baz=222,slow=5.0,SNR=5.7						
TXAR				LR	LR	02 38 36.0	
	comp=Z,14nm,18.3s,baz=0.0,slow=33						
SNAA	Sanae	86.35	178	P	P	02 04 12.3	+2.1
SNAA	Sanae	86.35	178	P	P	02 04 13.0	+2.8
VNA3	Neumayer Olymp	86.40	176	P	P	02 04 12.8	+2.4
PLCA	Paso Flores	86.60	133	P	P	02 04 14.4	+2.4
	comp=Z,3.6nm,1.1s,baz=243,slow=10.0,SNR=3.5						
PLCA				LR	LR	02 35 24.9	
	comp=Z,28nm,21.5s,baz=222,slow=30						
PLCA	Paso Flores	86.60	133	P	P	02 04 14.2	+2.1
VNA2	Neumayer--Watz	86.86	176	P	P	02 04 14.8	+2.2
	baz=184,slow=3.0						
N25K	Chitina, Valde	87.07	14	P	P	02 04 13.6	0.0
	baz=209						
VNA1	Neumayer--Stat	87.08	176	P	P	02 04 17.3	+3.7
M24K	Tolsona, Glenn	87.16	13	P	P	02 04 14.3	+0.2
	baz=207						
KTH	Kantishna Hill	87.56	11	P	P	02 04 14.7	-1.3
TRF	Thorofare Moun	87.57	11	P	P	02 04 14.9	-1.2
TRF				IAmb	IAmb	02 04 16.1	
	comp=Z,17nm,0.8s						
RND	Reindeer	87.80	12	P	P	02 04 17.1	+0.1
RND				IAmb	IAmb	02 04 17.6	
	comp=Z,17nm,0.9s						
S22A	4UR Ranch, Cre	87.86	48	P	P	02 04 19.0	+0.7
	baz=240						
MCK	McKinley	88.08	12	P	P	02 04 17.7	-0.7
	baz=205						
PDAR	Pinedale Array	88.66	42	P	P	02 04 22.2	+0.4
	comp=Z,1.4nm,0.9s,baz=227,slow=4.0,SNR=12						
PDAR				pP	pP	02 04 48.8	-0.6
	comp=Z,1.0nm,0.8s,baz=206,slow=2.0,SNR=4.3						
PDAR				LR	LR	02 39 27.4	
	comp=Z,36nm,18.6s,baz=328,slow=32						
NEA2	Nenana	88.84	11	P	P	02 04 20.8	-1.1
	baz=205						
WRH	Wood River Hil	88.91	12	P	P	02 04 21.2	-0.9
WRH				IAmb	IAmb	02 04 22.6	
	comp=Z,24nm,1.4s						
MLY	Manley	88.95	10	P	P	02 04 21.5	-0.9
	baz=203						
HDA	Harding Lake	89.07	12	P	P	02 04 22.4	-0.5
	baz=207						
CCB	Clear Creek Bu	89.12	12	P	P	02 04 21.5	-1.6
CCB				IAmb	IAmb	02 04 22.8	
	comp=Z,5.4nm,0.6s						
SCRK	Sand Creek	89.29	13	P	P	02 04 24.2	+0.1
	baz=209						
I23K	Minto, Yukon-K	89.30	11	P	P	02 04 23.6	-0.3
	baz=204						
TCOL	CIGO, UAF Yank	89.31	11	P	P	02 04 23.7	-0.3
	baz=206						
MDM	Murphy Dome	89.32	11	P	P	02 04 22.6	-1.5
IMAR	Indian Mountai	89.38	9	P	P	02 04 24.2	-0.2
IL31		89.41	12	P	P	02 04 23.6	-0.9
ILAR	Eielson Array	89.41	12	P	P	02 04 23.6	-0.9
	comp=Z,1.9nm,0.9s,baz=222,slow=5.2,SNR=15						
ILAR	Eielson Array	89.41	12	P	P	02 04 22.9	-1.6
POKR	Poker Plat Res	89.61	12	P	P	02 04 24.9	-0.6
	baz=206						
COLD	Coldfoot	91.07	10	P	P	02 04 32.4	+0.2
	baz=204						
HHC	Hu-ho-hao-te	92.02	314	*e*P	P	02 04 38.2	+0.8
HHC				pmax	pmax		
	comp=Z,7.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,45nm,6.8s						
BMAR	Burnt Mountain	92.21	12	P	P	02 04 36.2	-1.3
TOLK	Toolik Lake Re	92.46	9	P	P	02 04 38.6	-0.1
	baz=204						
CMAR	Chiang Mai Arr	92.69	289	P	P	02 04 39.6	-1.2
	comp=Z,1.4nm,0.5s,baz=125,slow=2.5,SNR=8.1						
CMAR				LR	LR	02 47 01.8	
	comp=Z,16nm,18.3s,baz=90,slow=36						
INK	Inuvik	95.26	15	P	P	02 04 45.1	-6.4
LZH	Lanzhou	95.46	307	⇓P	P	02 04 53.6	+0.2
LZH				pP	sP	02 05 35.2	+3.5
LZH				pmax	pmax		
	comp=Z,16nm,1.0s						
YKA	Yellowknife Ar	97.06	24	P	P	02 04 59.0	-0.8
	comp=Z,0.8nm,0.8s,baz=232,slow=3.8,SNR=13						
YKA				pP	pP	02 05 25.4	-2.0
	comp=Z,0.8nm,0.8s,baz=233,slow=3.9,SNR=4.5						
SONM	Songino Array	98.38	318	P	P	02 05 05.3	-1.0
	comp=Z,0.1nm,0.4s,baz=46,slow=4.3,SNR=3.7						
SONM	Songino Array	98.38	318	P	P	02 05 04.6	-1.7
ZALV	Zalesovo Beam	113.10	321	PKiKP	PKiKP	02 10 03.4	-1.4
	comp=Z,0.9nm,0.6s,baz=167,slow=2.2,SNR=5.8						
MKAR	Makanchi Array	113.87	313	PKiKP	PKiKP	02 10 05.8	-0.8
	comp=Z,0.9nm,0.6s,baz=186,slow=0.6,SNR=14						
ARCES	ARCESS Array B	130.87	350	PKP	PKPdf	02 10 38.2	-0.2
	comp=Z,2.8nm,0.6s,baz=43,slow=0.5,SNR=11						
GEYT	Alibeck	131.47	302	PKP	PKPdf	02 10 40.8	+0.2
	comp=Z,1.5nm,0.8s,baz=99,slow=8.9,SNR=3.8						
GEYT	Alibeck	131.47	302		PKPdf	02 10 41.0	+0.4
KLMR	Klimovskoe	134.20	337	*e*PKPdf	PKPdf	02 10 38.5	-6.4
KLMR				AMP		02 10 45.7	
	comp=Z,15nm,1.2s						
FINES	FINESS Array B	137.90	345	PKhKP	PKPpre	02 10 48.2	
	comp=Z,2.8nm,0.9s,baz=325,slow=2.3,SNR=4.7						
FINES				PKP	PKPdf	02 10 52.7	+0.9
	comp=Z,2.9nm,0.9s,baz=52,slow=3.9,SNR=2.8						
KMBO	Kilima Mbogo	140.44	239	PKP	PKPdf	02 10 58.4	+0.1
	comp=Z,2.9nm,0.9s,baz=91,slow=2.5,SNR=5.8						
NOA	NORSAR Array B	140.79	355	PKhKP	PKPpre	02 10 48.5	
	comp=Z,0.5nm,0.7s,baz=16,slow=4.5,SNR=3.6						
NOA				PKP	PKPdf	02 10 57.1	-0.1
	comp=Z,0.8nm,0.8s,baz=32,slow=0.1,SNR=3.8						
SUW	Suwalki	145.08	341	*e*PKP	PKPbc	02 11 04.3	-0.2
AKASG	Malin Array Be	145.45	332	PKPbc	PKPdf	02 11 04.7	-0.9
	comp=Z,12nm,0.6s,baz=40,slow=4.5,SNR=31						
GKP	Gorka Klasztor	147.35	346	*e*PKP	PKPbc	02 11 11.7	+0.4
SORM	Soroca	147.69	329	⇑P	PKPbc	02 11 12.1	-0.2
BEL	Belsk	147.69	341	*e*PKP	PKPbc	02 11 13.1	+0.9
BSEG	Bad Segeberg	147.89	353	*e*PKPbc	PKPbc	02 11 13.3	+0.6
	baz=13,slow=2.4						
MILM	Milestii Mici	148.31	327	⇓P	PKPbc	02 11 13.8	-0.3
RUE	Ruedersdorf	148.81	349	*e*PKPbc	PKPbc	02 11 15.6	+0.5
	baz=13,slow=2.4						
KWP	Kalwaria Pacla	148.92	337	*e*PKP	PKPbc	02 11 15.8	+0.3
VASR	Vaslui	149.01	328	⇑P	PKPbc	02 11 15.7	-0.2
BIR	Birlad	149.35	327	⇓P	PKPdf	02 11 13.4	+1.2
FLTG	Flechtingen	149.35	352	*e*PKPbc	PKPbc	02 11 16.6	+0.1
	baz=13,slow=2.4						
OJC	Ojcow	149.41	340	*e*PKP	PKPbc	02 11 17.0	+0.3
VARL	Varlezi	149.49	327	⇑P	PKiKP	02 11 17.7	-0.4
BURAR	Bucovina Array	149.50	332	⇓P	PKiKP	02 11 18.9	+0.7
BRTR	Keskin Array B	149.52	312	PKPbc	PKPbc	02 11 17.2	-0.3
	comp=Z,4.7nm,0.7s,baz=116,slow=3.4,SNR=13						

BRTR	Keskin Array B	149.52	312		PKPbc	02 11 17.4	-0.1
BIZ	Bicaz	149.61	330	⇑P	PKiKP	02 11 18.3	0.0
KOLS	Kolonicke sedl	149.66	336	ePKP	PKPbc	02 11 17.4	0.0
TESR	Tescani	149.66	329	⇓P	PKPbc	02 11 15.9	-1.6
KSP	Ksiaz	149.82	345	ePKP	PKiKP	02 11 18.5	-0.1
CFR	Carcaliu	149.83	325	⇓P	PKPbc	02 11 17.6	-0.3
TPGR	Topolog	149.89	325	⇑P	PKiKP	02 11 18.6	-0.4
CLZ	Clausthal	149.94	353	ePKPbc	PKiKP	02 11 18.7	-0.2
	baz=13,slow=2.4						
NIE	Niedzica	149.94	339	ePKP	PKiKP	02 11 18.8	-0.2
CRVS	Cervenica-Dubn	149.98	337	ePKP	PKiKP	02 11 20.0	+0.9
CLL	Collm	150.07	349	i PKPbc	PKPbc	02 11 18.2	-0.1
	comp=Z,35nm,1.0s						
CLL				ePKPab	PKPab	02 11 22.0	-2.4
CLL				i		02 11 47.2	
CLL	Collm	150.07	349	ePKPbc	PKiKP	02 11 18.8	-0.3
	baz=13,slow=2.4						
VRI	Vrincioaia	150.08	328	⇑P	PKPbc	02 11 18.5	0.0
OSTC	Ostas	150.11	345	⇑ePKP	PKiKP	02 11 19.0	-0.3
OSTC				ePKPAB	PKPab	02 11 22.9	-1.7
CHVC	Chvalec	150.12	345	⇑ePKP	PKPbc	02 11 18.8	+0.3
CHVC				ePKPAB	PKPab	02 11 24.1	-0.6
PLOR	Plostina	150.13	328	⇑P	PKPbc	02 11 18.5	-0.2
UPC	Upice	150.20	345	⇑ePKP	PKiKP	02 11 19.3	-0.1
HARR	Harsova	150.27	325	⇑P	PKiKP	02 11 19.3	-0.4
DPC	Dobruska-Polom	150.27	344	⇑ePKP	PKPbc	02 11 18.6	-0.3
DPC				ePKPAB	PKPab	02 11 27.1	+1.7
GTTG	Gottingen	150.28	353	ePKPbc	PKiKP	02 11 19.6	0.0
	baz=13,slow=2.4						
BRG	Berggiesshubel	150.31	348	⇑iPKP	PKiKP	02 11 19.5	-0.2
BRG				Amp		02 11 20.5	
	comp=Z,22nm,1.0s						
BRG				pPKP	pPKPbc	02 11 46.8	-0.7
BRG				Amp		02 11 52.0	
	comp=Z,31nm,1.6s						
BRG	Berggiesshubel	150.31	348	ePKPbc	PKiKP	02 11 19.7	0.0
	baz=13,slow=2.4						
MFTR	Murfatlar	150.33	324	⇓P	PKiKP	02 11 20.1	+0.3
NEUB	Neuenburg	150.37	351	ePKPbc	PKiKP	02 11 19.8	+0.1
	baz=13,slow=2.4						
OZUR		150.37	329	⇑P	PKiKP	02 11 19.8	-0.2
KRLC	Kraliky	150.41	344	⇑ePKP	PKPbc	02 11 19.2	0.0
KRLC				ePKPAB	PKPab	02 11 23.0	-2.9
LANS	Liptovska Anna	150.45	340	ePKP	PKiKP	02 11 20.9	+0.8
MANR	Mangalia	150.47	323	⇓P	PKiKP	02 11 20.1	0.0
MORC	Moravsky Berou	150.47	342	⇑P	PKiKP	02 11 20.2	+0.1
MORC	Moravsky Berou	150.47	342	ePKP	PKiKP	02 11 19.9	-0.2
PVCC	Panska Ves	150.51	347	⇑ePKP	PKPbc	02 11 19.5	+0.1
NEHR	Nehoiu	150.60	328	⇑P	PKPbc	02 11 19.9	+0.1
BUG	Bochum--Univer	150.62	356	ePKPbc	PKiKP	02 11 20.4	+0.2
	baz=13,slow=2.4						
DOPR	Dopca	150.66	329	⇓P	PKiKP	02 11 20.9	+0.3
ISR	Istrita	150.70	327	⇑P	PKiKP	02 11 20.4	-0.4
MLR	Muntele Rosu	150.73	328	⇑P	PKPbc	02 11 20.2	-0.1
KASTN	Kahler Asten	150.78	355	ePKPbc	PKiKP	02 11 20.6	0.0
	baz=13,slow=2.4						
CJR	Cluj-Napoca	150.91	332	⇓P	PKiKP	02 11 20.8	-0.3
PRA	Prague	150.97	347	⇑ePKP	PKiKP	02 11 21.2	+0.2
UBBA	Unterbreizbach	150.99	353	ePKPbc	PKiKP	02 11 20.9	0.0
	baz=13,slow=2.4						
WERD	Werda	151.02	349	ePKPbc	PKiKP	02 11 20.9	-0.2
	baz=13,slow=2.4						
PRU	Pruhonice	151.03	346	⇑ePKP	PKPbc	02 11 20.5	-0.1
PRU				ePKPAB	PKiKP	02 11 24.7	+3.6
TANN	Tannenbergstha	151.03	349	ePKPbc	PKiKP	02 11 21.0	-0.2
	baz=13,slow=2.4						
LTVH	Ltavrtes, Hu	151.07	335	⇓P	PKiKP	02 11 21.8	+0.5
GUNZ	Gunzen	151.10	349	ePKPbc	PKiKP	02 11 21.6	+0.3
	baz=13,slow=2.4						
VRAC	Vranov	151.16	343	⇓P	PKiKP	02 11 21.4	-0.1
VRAC	Vranov	151.16	343	ePKP	PKiKP	02 11 21.4	-0.1
WERN	Wernitzgruen	151.16	349	ePKPbc	PKiKP	02 11 21.9	+0.5
	baz=13,slow=2.4						
NKC	Novy Kostel	151.21	349	⇑ePKP	PKPbc	02 11 21.1	0.0
VOIR		151.21	329	⇑P	PKiKP	02 11 21.5	-0.3
DRGR		151.22	333	⇓P	PKPbc	02 11 21.5	+0.2
JAVC	Velka Javorina	151.26	342	ePKP	PKiKP	02 11 23.0	+1.2
KOLL	Kolacno	151.29	340	ePKP	PKiKP	02 11 22.1	+0.4
KOLL				e		02 32 00.4	
PSZ	Piszkesteto	151.37	338	⇓P	PKiKP	02 11 22.7	+0.7
PBCC	Pribram	151.43	347	⇑ePKP	PKPbc	02 11 21.3	-0.3
KRUC	Moravsky	151.44	343	ePKP	PKiKP	02 11 21.9	-0.1
TREC	Trest	151.45	345	⇑ePKP	PKPbc	02 11 21.4	-0.3
TREC				ex	x	02 11 24.4	
ARR	Arges	151.46	329	⇑P	PKiKP	02 11 23.1	+0.8
MANZ	Manzenberg	151.50	349	ePKPbc	PKiKP	02 11 22.5	+0.3
	baz=13,slow=2.4						
MEM	Membach	151.52	358	dPKiKP	PKiKP	02 11 22.1	0.0
AHRW	Bad Neuenahr-A	151.53	356	ePKPbc	PKiKP	02 11 22.3	+0.2
	baz=13,slow=2.4						
BTNL	Ternell	151.53	358	dPKiKP	PKPbc	02 11 21.6	-0.2
BTNL				dPKPab	PKPab	02 11 30.5	0.0
BSTI	Sart Tilman	151.56	358	dPKiKP	PKiKP	02 11 22.7	+0.5
SNF	Seneffe	151.65	0	dPKiKP	PKiKP	02 11 22.5	+0.2
ROTZ	Rotzenmuhle	151.70	349	ePKPbc	PKiKP	02 11 22.7	+0.2
	baz=13,slow=2.4						
TNS	Taunus Mts	151.75	354	ePKPbc	PKiKP	02 11 23.0	+0.3
	baz=13,slow=2.4						
RAZG	Razgrad	151.78	325	⇑P	PKiKP	02 11 22.7	-0.2
MODS	Modra-Piesok	151.81	342	ePKP	PKPbc	02 11 22.5	0.0
MODS				e		02 11 30.4	
MODS				e		02 32 01.1	
BMRD	Maredsous	151.85	359	dPKiKP	PKiKP	02 11 23.1	+0.2
HUMR	Humele	151.90	328	⇑P	PKPbc	02 11 22.5	-0.3
GRF	Grafenberg Arr	151.93	350	ePKPbc	PKiKP	02 11 23.2	+0.2
	baz=13,slow=2.4						
KHC	Kasperske Hory	152.04	347	⇑ePKP	PKPbc	02 11 22.9	-0.1
KHC				ex	x	02 11 25.2	
DOU	Dourbes	152.06	360	dPKiKP	PKiKP	02 11 23.2	0.0
WET	Wettzell	152.17	348	ePKPbc	PKiKP	02 11 23.6	+0.1
	baz=13,slow=2.4						
CKRC	Cesky Krumlov	152.18	346	⇑ePKP	PKPbc	02 11 22.5	-0.8
CKRC				ePKPAB	PKPab	02 11 31.1	-2.2
GEC2	GERESS Array S	152.29	347	ePKPbc	PKiKP	02 11 24.0	+0.1
	baz=13,slow=2.4						
GERES	GERESS Array B	152.29	347	PKPbc	PKPbc	02 11 23.7	0.0
	comp=Z,2.8nm,0.8s,baz=48,slow=2.2,SNR=17						
GERES				PKPab	PKPab	02 11 32.0	-1.9
	comp=Z,2.5nm,0.7s,baz=29,slow=3.0,SNR=8.6						
GERES	GERESS Array B	152.29	347		PKPbc	02 11 23.3	-0.4
GZR	Gura Zlata	152.29	331	⇓P	PKPbc	02 11 23.7	-0.1
WLF	Walferdange	152.45	357	dPKiKP	PKiKP	02 11 24.6	+0.5
WLF				dpPKPdf	pPKPbc	02 11 54.4	+1.9
WLF	Walferdange	152.45	357	ePKPbc	PKiKP	02 11 25.0	+0.9
	baz=13,slow=2.4						
VLAD	Vladila	152.57	327	⇓P	PKiKP	02 11 25.4	+0.8
BZS	Buzias	152.62	333	⇑P	PKiKP	02 11 24.6	0.0
CONA	Conrad Observa	152.62	343	eP	PKiKP	02 11 24.9	+0.2
	comp=Z,3.1nm,0.6s						
HERR	Herculane	152.85	331	⇓P	PKPbc	02 11 24.9	0.0
PLVB	Pleven	152.90	326	⇑P	PKiKP	02 11 25.4	+0.2
MORH	Mrgy, Hungar	153.27	338	⇓P	PKiKP	02 11 25.8	-0.1
FUR	Furstenfeldbru	153.40	350	ePKPbc	PKiKP	02 11 26.6	+0.4
	baz=13,slow=2.4						
SOKA	Soboth	153.99	343	eP	PKiKP	02 11 27.8	+0.3
	comp=Z,2.1nm,0.7s						
VTS	Vitosha	154.16	327	⇑P	PKiKP	02 11 28.1	+0.1
WTTA	Wattenberg	154.21	349	eP	PKiKP	02 11 28.1	0.0
	comp=Z,4.1nm,0.7s						
SQTA	Sankt Quirin	154.33	349	eP	PKPbc	02 11 27.5	-0.7
	comp=Z,0.8nm,0.3s						
ABTA	Abfaltersbach	154.53	347	eP	PKPbc	02 11 28.0	-0.6
	comp=Z,1.9nm,0.5s						
FETA	Feichten	154.60	350	eP	PKiKP	02 11 29.0	+0.2
	comp=Z,1.7nm,0.6s						
ESDC	Sonseca Array	161.11	20	PKP	PKPdf	02 11 28.9	+0.5
	comp=Z,1.0nm,1.0s,baz=329,slow=7.0,SNR=3.0						
ESDC				PKPab	PKPab	02 12 11.5	-0.5
	comp=Z,1.7nm,1.0s,baz=336,slow=2.8,SNR=5.2						

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*NNC **04** 02:03:02.5±1.8, 49°.84N×87°.39E, h0km, mb3.0, mpv2.5, Error ellipse: s-maj=16.1km s-min=10.2km az=46.0*
ISC 04 02:03:05.2±3.3**, 49°.9N**±0°.2×**87°.3E**±0°.2**, h10km, n4, σ1s.28**/7**, 7C-1D, Kazakhstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MK31	Makanchi Array	4.57	229	⇑Pn	Pn	02 04 13.2	-1.1
	0.1nm,0.2s,baz=55,slow=13,SNR=7.5						
MK31				Pg	Pb	02 04 25.4	0.0
	0.3nm,0.3s,baz=53,slow=18,SNR=4.9						
MK31				⇑Lg	Lg	02 05 28.3	
	0.9nm,0.6s,baz=48,slow=28,SNR=4.4						
KURK	Kurchatov	5.65	282	⇑Pn	Pn	02 04 28.7	-0.5
	0.1nm,0.3s						
KURK				⇑Sn	Sn	02 05 35.2	+1.1
	0.5nm,0.5s						
KURK				⇓Lg	Lg	02 06 03.7	
	0.7nm,0.6s						
KURBB	Kurchatov Arra	5.70	281	⇑Pn	Pn	02 04 28.6	-1.3
	1.8nm,0.6s						
KURBB				⇑Sn	Sn	02 05 36.6	+1.3
	1.7nm,0.5s						
KURBB				⇑Lg	Lg	02 06 04.2	
	2.8nm,0.6s						
WMQ	Urumqi	6.06	178	eP	Pb	02 04 51.6	+0.7

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*GCG **04** 02:11:58.3±0.7, 16°.53N×91°.97W, h34km±999km, MD3.9*
*MEX **04** 02:11:58.1±1.1, 13°.97N×93°.22W, h8km±213km, MD3.9*
ISC 04 02:11:58.0±2.9**, 13°.9N**±0°.1×**93°.3W**±0°.1**, h37km, n7, σ1s.32**/11**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		1.76	4	iP	Pn	02 12 24.5	-1.4
PCIG				iS	Sn	02 12 45.3	-1.8
FUG	Fuego 3	2.47	78	eP	Pn	02 12 35.4	-0.5
FUG				eS	Sn	02 13 03.4	-1.6
CCIG	Comitan	2.60	26	eP	Pn	02 12 38.8	+1.1
CCIG				iS	Sn	02 13 09.5	+1.3
IXG	Ixpaco	2.82	85	eP	Pn	02 12 40.8	+0.1
IXG				eS	Sn	02 13 14.8	+1.3
TGIG		2.83	4	iP	Pn	02 12 41.8	+1.0
TGIG				iS	Sn	02 13 13.5	-0.2
NBG	Las Nubes	2.97	77	eP	Pn	02 12 37.5	-5.3
CMIG	Matias Romero	3.47	335	iP	Pn	02 12 50.1	+0.6

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*IDC **04** 02:12:22.3±2.2, 19°.65S×172°.20E, h0km, mb3.7/5, mb1 4.0/6, mb1mx3.8/27, mbtmp3.7/6, ML3.1/1, Error ellipse: s-maj=130.4km s-min=24.8km az=154.0*
ISC 04 02:12:27.4±1.5**, 19°.6S**±0°.5×**172°.2E**±0°.3**, h35km, n15, σ0s.82**/14**, mb3.7**/5**, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	5.88	245	Pn	Pn	02 13 52.5	+0.5
	0.5nm,0.3s,baz=107,slow=21,SNR=2.0						
DZM	Mont Dzumac	5.88	245	eLR	LR	02 15 13.9	
	comp=Z,242nm,26.4s						
WRA	Warramunga Arr	35.54	263	P	P	02 19 21.1	-0.4
	0.7nm,0.8s,baz=96,slow=7.8,SNR=3.0						
ASAR	Alice Springs	35.72	257	P	P	02 19 22.6	-0.3
	0.6nm,0.6s,baz=92,slow=8.3,SNR=6.3						
NVAR	Mina Array Bea	87.01	47	P	P	02 25 10.9	+1.4
	0.1nm,0.3s,baz=233,slow=7.5,SNR=3.0						
ILAR	Eielson Array	89.80	16	P	P	02 25 21.6	-0.3
	0.3nm,0.7s,baz=234,slow=5.4,SNR=4.9						
TXAR	Lajitas Array	94.54	61	P	P	02 25 44.1	-0.7
	0.4nm,0.8s,baz=234,slow=5.5,SNR=4.6						
OSTC	Ostas	143.73	334	ePKP	PKPdf	02 31 57.9	-0.7
CHVC	Chvalec	143.77	334	ePKP	PKPdf	02 31 57.8	-0.9
DPC	Dobruska-Polom	143.84	334	ePKP	PKPdf	02 31 58.2	-0.7
UPC	Upice	143.85	334	ePKP	PKPdf	02 31 58.6	-0.2
KRLC	Kraliky	143.85	333	ePKP	PKPdf	02 31 57.6	-1.3
CKRC	Cesky Krumlov	145.85	334	ePKP	PKPab	02 32 04.0	+0.6
KHC	Kasperske Hory	145.91	335	ePKP	PKPab	02 32 04.3	+0.7
GERES	GERESS Array B	146.09	334	PKPbc	PKPab	02 32 04.6	+0.2
	1.7nm,0.8s,baz=56,slow=3.4,SNR=15						

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*IDC **04** 02:22:09.3±3.2, 17°.48S×69°.56W, h146km±31km, mb3.4/4, mb1 3.6/7, mb1mx3.3/32, mbtmp4.0/7, Error ellipse: s-maj=40.6km s-min=21.0km az=111.0*
*GUC **04** 02:22:11.3±0.7, 17°.60S×69°.69W, h156km±4km, ML3.8*
ISC 04 02:22:10.1±0.9**, 17°.66S**±0°.07×**69°.7W**±0°.1**, h162km**±7km**, n21, σ1s.56**/34**, mb3.6**/4**, 1C, Peru-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB16	IPOC Station P	0.69	167	eP	Pn	02 22 35.3	+0.8
PB16				iS	Sn	02 22 54.1	+0.9
AP01	Chacalluta	0.95	222	eP	Pn	02 22 35.4	-0.1
AP01				iS	Sn	02 22 54.6	-0.6
AP01				IAML		02 22 56.2	
	comp=E,3μm,0.5s						
MNMC	Minye Minye	1.47	177	eP	Pn	02 22 41.5	+1.0
MNMC				iS	Sn	02 23 04.8	+0.8
MNMC				IAML		02 23 08.3	
	comp=E,1μm,0.3s						
PSGC	Pisagua	1.97	192	eP	Pn	02 22 46.2	+0.5
PSGC				iS	Sn	02 23 12.9	-0.5
PB08	IPOC Station P	2.52	169	eP	Pn	02 22 54.1	+1.8
PB08				iS	Sn	02 23 26.3	+1.2
PB08				IAML		02 23 30.1	
	comp=N,169nm,0.3s						
HMBC	Humberstone	2.61	184	eP	Pn	02 22 53.8	+0.6
HMBC				iS	Sn	02 23 26.7	-0.1
HMBC				IAML		02 23 30.2	
	comp=E,242nm,0.4s						
TA02	Huaiquique	2.63	189	⇑eP	Pn	02 22 53.6	+0.2
TA02				iS	Sn	02 23 25.3	-1.7
TA02				IAML		02 23 33.2	
	comp=N,346nm,0.2s						
TA01	Diego Aracena	2.93	189	eP	Pn	02 22 57.3	+0.3
TA01				iS	Sn	02 23 31.3	-2.3
TA01				IAML		02 23 34.0	
	comp=E,164nm,0.2s						
PATCX	Punta Patache	3.18	188	eP	Pn	02 23 01.5	+1.3
PATCX				IAML		02 23 43.4	
PB01	IPOC Station P	3.37	177	eP	Pn	02 23 03.6	+0.9
PB01				iS	Sn	02 23 42.0	-1.6
PB07	IPOC Station P	4.05	183	eP	Pn	02 23 12.4	+0.9
PB07				iS	Sn	02 23 59.6	+0.3
PB09	IPOC Station P	4.13	174	eP	Pn	02 23 14.2	+1.6
PB03	IPOC Station P	4.37	181	eP	Pn	02 23 16.5	+1.0
PB03				iS	Sn	02 24 03.5	-3.2
LVC	Limon Verde	4.98	172	P	Pn	02 23 25.2	+1.5
	comp=E,2.1nm,0.3s,baz=0.7,slow=11,SNR=72						
LVC				S	Sn	02 24 19.7	-1.6
	comp=E,4.4nm,0.3s,baz=314,slow=19,SNR=3.9						
PB06	IPOC Station P	5.02	179	eP	Pn	02 23 24.6	+0.5
PB06				iS	Sn	02 24 18.3	-3.8
SIV	San Ignacio	8.40	80	P	Pn	02 24 05.7	-3.2
	comp=E,6.2nm,0.3s,baz=280,slow=13,SNR=86						
PTGA	Pitinga	19.34	31	P	P	02 26 21.5	-1.7
	comp=E,1.1nm,0.3s,baz=262,slow=7.1,SNR=18						
PLCA	Paso Flores	23.01	182	P	P	02 27 02.7	+1.9
	comp=E,1.3nm,0.8s,baz=355,slow=7.7,SNR=4.4						
ULM	Lac du Bonnet	71.46	343	P	P	02 33 13.2	+0.5
	comp=E,0.8nm,0.5s,baz=168,slow=5.7,SNR=3.7						
TORD	Torodi Ar. Bea	76.78	71	P	P	02 33 44.8	+0.5
	comp=E,0.6nm,0.4s,baz=260,slow=5.8,SNR=4.9						
YKA	Yellowknife Ar	87.34	341	P	P	02 34 38.1	-0.1
	comp=E,0.2nm,0.5s,baz=129,slow=5.2,SNR=4.3						

IDC 04 02:26:49.8±12.0**, 49°.61S**×**139°.81E, h0km, mb3.6**/2**, mb1 3.8**/2**, mb1mx3.6**/20**, mbtmp3.6**/2**, Error ellipse: s-maj=545.2km s-min=60.5km az=100.0, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W1	Cape Leeuwin H	23.86	298	T	T	02 56 50.1	
	baz=136,slow=74,SNR=13						
H01W2	Cape Leeuwin H	23.87	298	T	T	02 56 50.6	
	baz=136,slow=74,SNR=14						
H01W3	Cape Leeuwin H	23.88	298	T	T	02 56 51.1	
	baz=136,slow=74,SNR=12						
ASAR	Alice Springs	26.31	348	P	P	02 32 26.8	-0.3
	0.5nm,0.8s,baz=166,slow=10.0,SNR=2.8						
WRA	Warramunga Arr	29.92	350	P	P	02 32 59.7	+0.3
	1.0nm,0.8s,baz=172,slow=8.0,SNR=7.4						
GERES	GERESS Array B	145.43	290	PKPbc	PKPdf	02 46 28.1	-0.9
	0.7nm,0.7s,baz=133,slow=4.2,SNR=4.8						

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*NSSP **04** 02:48:03.5, 38°.02N×42°.67E, h15km, Ms3.5*
*ISK **04** 02:48:04.4, 38°.03N×42°.73E, h3km, ML4.1/14*
*IDC **04** 02:48:04.8±1.0, 38°.00N×42°.64E, h0km, mb3.7/12, mb1 3.7/19, mb1mx3.6/47, mbtmp3.6/19, ML2.8/5, MS2.8/7, Ms1 2.9/7, ms1mx2.6/40, Error ellipse: s-maj=18.0km s-min=10.7km az=161.0*
*DDA **04** 02:48:04.8, 38°.04N×42°.72E, h6km±1km, MW4.1*
*TEH **04** 02:48:05.5, 38°.05N×42°.70E, h11km, ML4.1*
*NEIC **04** 02:48:06.4±3.5, 38°.01N±0°.06×42°.73E±0°.07, h10km±2km, Error ellipse: s-maj=11.2km s-min=4.0km az=135.0*
ISC 04 02:48:05.3±1.0**, 38°.02N**±0°.02×**42°.72E**±0°.01**, h3km**±7km**, n180, σ1s.57**/222**, mb3.9**/20**, MS2.9**/3**, 12C-5D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PERV	Siirt/Pervari-	0.15	243	⇑iP	Pg	02 48 08.8	+0.4
PERV				iS	Sg	02 48 12.1	+1.6
AKDM	Akdamar-Van	0.37	34	PG	Pg	02 48 12.1	-0.6
AKDM				SG	Sg	02 48 17.8	+0.3
AKDM	Akdamar-Van	0.37	34	ePg	Pg	02 48 12.0	-0.6
GEVA	Gevas	0.40	42	⇑iP	Pg	02 48 12.4	-0.7
GEVA				iS	Sg	02 48 18.2	-0.1
GEVA	Gevas	0.40	42	Pg	Pg	02 48 12.4	-0.7
GEVA				Sg	Sg	02 48 18.1	-0.2
SIRT	Sirnak	0.56	203	PG	Pg	02 48 16.7	+0.6
SIRT				SG	Sb	02 48 24.9	-1.3
SIRT	Sirnak	0.56	203	ePg	Pg	02 48 16.4	+0.3
SIRN	Sırnak	0.57	205	⇓iP	Pg	02 48 16.8	+0.5
SIRN				iS	Sb	02 48 25.9	-0.6
SIRN	Sırnak	0.57	205	ePg	Pg	02 48 16.8	+0.5
BLIS	Bitlis-Merkez	0.62	310	⇓iP	Pg	02 48 16.3	-0.9
BLIS				iS	Sg	02 48 25.6	+0.3
BLIS	Bitlis-Merkez	0.62	310	ePg	Pg	02 48 16.4	-0.9
SRTM	Siirt_Merkez	0.63	268	⇑iP	Pg	02 48 17.4	+0.1
SRTM				iS	Sb	02 48 27.8	-0.4
SRTM	Siirt_Merkez	0.63	268	ePg	Pg	02 48 17.5	+0.1
TVAN	Van	0.74	46	⇑iP	Pg	02 48 18.6	-1.0
TVAN				iS	Sb	02 48 30.6	-1.1
GURO	Guroymak-BITLI	0.76	315	PG	Pg	02 48 19.1	-0.8
GURO				SG	Sb	02 48 30.7	-1.3
GURO	Guroymak-BITLI	0.76	315	ePg	Pg	02 48 18.8	-1.1
VANB	Van	0.78	42	PG	Pg	02 48 18.8	-1.6
VANB				SG	Sg	02 48 29.5	-1.0
ADCV	BITLIS_Adilcev	0.79	0	⇓iP	Pg	02 48 20.0	-0.6
ADCV				iS	Sg	02 48 31.1	+0.3
ADCV	BITLIS_Adilcev	0.79	0	ePg	Pg	02 48 19.9	-0.6
HAKT	HAKKARI	0.91	120	iP	Pg	02 48 22.1	-0.6
HAKT				iS	Sb	02 48 36.3	-0.1
BASK	Baskale_VAN	1.02	88	iP	Pg	02 48 24.1	-0.8
BASK				iS	Sn	02 48 41.0	-0.5
CUKT	Cukurca	1.04	137	PG	Pg	02 48 24.1	-1.2
CUKT				SG	Sb	02 48 40.3	+0.1
CUKT	Cukurca	1.04	137	⇓iP	Pg	02 48 23.7	-1.6
CUKT				iS	Sn	02 48 41.8	-0.3
ERCV	ERCIS-VAN	1.11	26	PN	Pg	02 48 26.0	-0.7
ERCV				SN	Sb	02 48 41.8	-0.5
ERCV	ERCIS-VAN	1.11	26	ePg	Pb	02 48 26.9	-0.4
MLAZ	Malazgirt-MUS	1.13	353	ePg	Pb	02 48 27.2	-0.4
BTMN	Batman	1.15	264	⇑iP	Pg	02 48 27.5	+0.1
BTMN				iS	Sn	02 48 45.0	+0.4
BTMN	Batman	1.15	264	ePg	Pg	02 48 27.5	+0.1
VMUR	Van-Muradiye	1.18	34	⇑iP	Pg	02 48 27.3	-0.7
VMUR				iS	Sn	02 48 46.8	+1.3
VMUR	Van-Muradiye	1.18	34	ePg	Pg	02 48 27.3	-0.7
MUSM	Mu-Merkez	1.18	307	⇓iP	Pg	02 48 26.5	-1.5
MUSM				iS	Sg	02 48 42.6	-0.7
MUSM	Mu-Merkez	1.18	307	ePg	Pg	02 48 26.5	-1.5
OZAP	Van, Ozalp-Mer	1.19	57	iP	Pg	02 48 27.0	-1.2
SVAN	Silvan-Diyarba	1.21	277	PN	Pg	02 48 28.4	0.0
SVAN				SN	Sn	02 48 45.8	-0.1
SVAN	Silvan-Diyarba	1.21	277	⇑iP	Pg	02 48 28.3	-0.2
SVAN				iS	Sn	02 48 45.6	-0.3
SVAN	Silvan-Diyarba	1.21	277	ePg	Pg	02 48 28.3	-0.2
MIDY	Mardin/Midyat-	1.21	240	⇑iP	Pb	02 48 28.8	-0.1
MIDY				iS	Sn	02 48 46.5	+0.4
YOVA	Hakkari_Yksek	1.32	109	iP	Pg	02 48 29.9	-0.7
YOVA				iS	Sn	02 48 49.2	+0.3
YOVA	Hakkari_Yksek	1.32	109	ePg	Pb	02 48 31.5	+0.7
EKAR	Karacoban	1.34	338	iP	Pg	02 48 29.2	-1.8
EKAR				iS	Sn	02 48 50.5	+1.0
CLDR	Caldiran	1.47	40	PN	Pn	02 48 31.9	-1.0
CLDR	Caldiran	1.47	40	iP	Pn	02 48 31.1	-1.8
CLDR				iS	Sn	02 48 56.0	+3.4
CLDR	Caldiran	1.47	40	ePg	Pn	02 48 32.4	-0.5
VRTB	Varto-Mus	1.51	320	PN	Pn	02 48 32.9	-0.5
VRTB	Varto-Mus	1.51	320	iP	Pn	02 48 32.8	-0.6
VRTB	Varto-Mus	1.51	320	ePg	Pb	02 48 33.7	-0.4
AGRB	Hanur-Agry	1.57	8	PN	Pn	02 48 33.7	-0.6
AGRB	Hanur-Agry	1.57	8	ePn	Pn	02 48 34.4	+0.1
SLHN	Bingol, Solhan	1.63	306	⇑iP	Pn	02 48 34.9	-0.1
SLHN				iS	Sg	02 48 58.3	+0.7
MARD	Mardin	1.69	246	⇑iP	Pn	02 48 36.0	+0.2
MARD				iS	Sb	02 48 59.0	+0.1
MARD	Mardin	1.69	246	Pn	Pn	02 48 36.1	+0.2
DYDN	Diyadin	1.70	26	iP	Pb	02 48 36.8	-0.6
KOTA	Agri, Merkez-K	1.82	12	iP	Pn	02 48 37.6	-0.1
KOTA				iS	Sg	02 49 03.2	-0.7
KARO	Karliova-Bingo	1.83	315	PN	Pb	02 48 38.6	-1.0
EATA	Eleskirt	1.85	355	iP	Pn	02 48 38.5	+0.3
EATA				iS	Sg	02 49 05.6	+0.7
HANI	Diyarbakir_Han	1.87	283	⇑iP	Pn	02 48 37.5	-0.7
HANI				iS	Sb	02 49 03.6	-0.3
BNGB	Bingl	1.87	302	PN	Pn	02 48 38.9	+0.6
MAZI	Mazidag	1.88	254	PN	Pn	02 48 38.5	0.0
DYBB	Diyarbakir	2.04	269	PN	Pn	02 48 40.6	0.0
DIYA	Diyarbakir	2.05	268	⇑iP	Pn	02 48 40.6	-0.1
KOPR	Koprukoy-ERZUR	2.08	341	PN	Pn	02 48 41.7	+0.4
ECAT	Cat-ERZURUM	2.09	320	iP	Pb	02 48 42.8	-1.2
ECAT				iS	Sg	02 49 13.3	+0.8
HOMI	Horasan	2.12	343	iP	Pb	02 48 43.7	-0.9
HOMI				iS	Sg	02 49 13.7	+0.2
IGDI	IGDIR	2.13	29	iP	Pb	02 48 42.9	-1.7
VNNZ	Vanand	2.25	22	iP	Pb	02 48 46.7	-0.1
VNNZ				iS	Sg	02 49 18.2	+0.5
TASB	TASBURUN-IGDIR	2.29	31	PN	Pn	02 48 44.5	+0.4
AKDA	Akdag	2.33	334	iP	Pb	02 48 46.7	-1.5
METS	Metsamor	2.38	26	iP	Pg	02 48 51.0	+0.1
METS				iS	Sg	02 49 26.2	+4.4
KOVA	Elazig, Kovanc	2.38	288	iP	Pn	02 48 45.3	0.0
KOVA				iS	Sg	02 49 21.7	-0.3
IMRD	Marand	2.45	73	ePn	Pb	02 48 47.9	-2.2
IMRD				e		02 48 56.7	
	comp=Z,99nm,0.4s						
NRKZ	NAREK	2.49	37	iP	Pn	02 48 48.3	+1.5
NRKZ				iS	Sb	02 49 21.5	-0.4
SENK	Senkaya-Erzuru	2.56	354	PN	Pn	02 48 48.4	+0.6
KARS	Kars	2.62	6	PN	Pn	02 48 48.5	-0.2
KOPT	Kop Dagi	2.64	320	iP	Pb	02 48 53.4	-0.1
KOPT	Kop Dagi	2.64	320	Pn	Pn	02 48 49.5	+0.5
GNI	Garni	2.65	36	Pn	Pn	02 48 50.7	+1.7
	comp=Z,2.9nm,0.3s,baz=40,slow=2.8,SNR=14						
GNI				Lg	Lg	02 49 32.4	
	comp=Z,8.2nm,0.3s,baz=184,slow=23,SNR=2.1						
GNI				LR	LR	02 49 44.6	
	comp=Z,23nm,20.0s,baz=241,slow=37						
GNI	Garni	2.65	36	iP	Pb	02 48 51.2	-2.3
GNI				iS	Sb	02 49 27.4	+0.9
GNI	Garni	2.65	36	PN	Pn	02 48 48.9	-0.2
GNI	Garni	2.65	36	Pn	Pn	02 48 50.9	+1.8
GNI	Garni	2.65	36	P	Pb	02 48 51.5	-2.0
GNI				S	Sg	02 49 39.0	+8.5
MAHB	Mahabad	2.69	117	ePn	Pb	02 48 51.9	-2.2
MAHB				e		02 49 40.8	
	comp=Z,99nm,0.5s						
KRIK	Erzurum-spir	2.70	330	iP	Pn	02 48 51.8	+2.0
KRIK				iS	Sg	02 49 35.8	+3.7
ITBZ	Tabriz	2.71	84	ePn	Pn	02 48 51.0	+1.1
TNCL	Tunceli-Merkez	2.72	295	iP	Pn	02 48 49.3	-0.7
TNCL				iS	Sb	02 49 29.7	+1.3
EAK	Akyaka	2.75	14	iP	Pb	02 48 55.5	+0.3
EAK				iS	Sg	02 49 36.1	+2.3
KAPZ	Kaputan	2.77	33	iP	Pn	02 48 52.7	+2.0
KAPZ				iS	Sb	02 49 29.2	-0.7
BAYB	BAYBURT	2.94	320	iP	Pb	02 48 55.7	-2.9
BAYB				iS	Sg	02 49 40.7	+0.7
IHRS	Heris	3.42	84	ePn	Pn	02 49 01.3	+1.6
AKH	Akhalkalaki	3.44	10	P	Pb	02 49 06.0	-1.0
AKH	Akhalkalaki	3.44	10	Pn	Pn	02 49 01.2	+1.3
AHAR	Ahar	3.44	81	ePn	Pn	02 49 01.8	+1.8
DMNI	Dmanisi	3.50	19	P	Pb	02 49 04.1	-3.9
IHSH	Hashtrud	3.68	100	ePn	Pn	02 49 04.8	+1.5
BRNG	Burnasheti	3.70	13	P	Pb	02 49 08.6	-2.8
ABS	Abastumani	3.73	1	P	Pn	02 49 06.1	+2.1
BKRG	Bakuriani	3.79	9	P	Pn	02 49 08.0	+3.3
ISRB	Sarab	3.92	91	e		02 49 25.6	
	comp=Z,99nm,0.6s						
ISRB				ePn	Pn	02 49 08.9	+2.3

BTNK	**Botanikuri**	4.00	23	P	Pg	02 49 22.1	+0.2
DDFL	**Dedoflistskaro**	4.31	36	P	Pb	02 49 21.2	-0.6
TKB	**Tkibuli**	4.33	3	P	Pn	02 49 14.4	+2.3
IDHR	**Dehrash**	4.44	137	*e*Pn	Pn	02 49 15.2	+1.5
IDHR				*e*		02 49 36.2	
	comp=Z,99nm,0.6s						
GAZ	**Gaziantep**	4.45	261	Pn	Pn	02 49 12.7	-1.0
ONI	**Oni**	4.60	7	P	Pn	02 49 18.4	+2.6
LGD	**Lagodekhi**	4.68	34	P	Pn	02 49 20.7	+3.9
CHVG	**Ch'k'valeri**	4.72	354	P	Pg	02 49 35.4	-0.3
KER	**Kermanshah**	5.09	134	*e*Pn	Pn	02 49 24.3	+1.8
KBZ	**Khabaz**	5.71	1	Pn	Pn	02 49 34.2	+3.3
	comp=Z,0.1nm,0.3s,baz=78,slow=16,SNR=1.7						
QABG	**Abgarm-Qazvin**	5.97	111	*e*Pn	Pn	02 49 35.8	+1.1
IDOB	**Doab**	6.12	132	*e*Pn	Pn	02 49 38.6	+1.8
IKFM	**Kafar-mosalman**	6.12	136	*e*Pn	Pn	02 49 38.0	+1.4
IKMR	**Kamar-syah**	6.43	133	*e*Pn	Pn	02 49 42.8	+2.0
QALM	**Alamut, Qazvin**	6.52	102	*e*Pn	Pn	02 49 43.8	+1.4
BR131	**Keskin Array S**	7.29	286	Pn	Pn	02 49 54.5	+1.8
BRTR	**Keskin Array B**	7.29	286	Pn	Pn	02 49 51.8	-1.0
	comp=Z,0.1nm,0.3s,baz=306,slow=37,SNR=2.4						
BRTR				Lg	Lg	02 51 58.7	
	comp=Z,0.0nm,0.3s,baz=109,slow=22,SNR=1.0						
BRTR				LR	LR	02 53 15.0	
	comp=Z,99nm,21.2s,baz=109,slow=43						
MMAI	**Mount Meron Ar**	7.77	232	Pn	Pn	02 50 00.2	+0.8
	comp=Z,0.5nm,0.3s,baz=68,slow=14,SNR=2.0						
MMAI				Lg	Lg	02 52 17.7	
	comp=Z,1.6nm,0.3s,baz=37,slow=29,SNR=1.8						
AMIS	**Naft Sefid**	8.32	138	*e*Pn	Pn	02 50 07.7	+0.8
IPIR	**Pirpir**	8.54	126	*e*Pn	Pn	02 50 11.2	+1.1
IKLH	**Kolahrood**	8.60	120	*e*Pn	Pn	02 50 12.7	+1.8
IZEF	**Zefreh**	9.36	120	*e*Pn	Pn	02 50 23.2	+1.9
KLNJ	**Kolanjah**	10.12	131	*e*Pn	Pn	02 50 32.6	+0.8
EIL	**Elat**	10.53	220	Lg	Lg	02 53 45.9	
	comp=Z,0.3nm,0.3s,baz=41,slow=19,SNR=2.3						
EIL				LR	LR	02 54 37.0	
	comp=Z,36nm,18.8s,baz=300,slow=37						
GEYT	**Alibeck**	12.16	86	Pn	Pn	02 51 00.3	+0.9
	comp=Z,0.2nm,0.3s,baz=302,slow=14,SNR=4.2						
GEYT				LR	LR	02 57 28.2	
	comp=Z,64nm,18.1s,baz=230,slow=46						
GEYT	**Alibeck**	12.16	86	Pn	Pn	02 50 59.4	0.0
TIRR	**Tirgusor**	12.54	305	Pn	Pn	02 51 06.5	+2.1
RAYN	**Ar Rayn**	14.64	170	Pn	Pn	02 51 29.9	-3.5
JRN	**Qarnain Island**	15.62	144	P	Pn	02 51 42.7	-3.7
SLWR	**Sila**	15.87	149	P	Pn	02 51 47.2	-2.5
AKASG	**Malin Array Be**	15.90	327	Pn	Pn	02 51 50.1	+0.2
	comp=Z,0.8nm,0.3s,baz=136,slow=11,SNR=11						
AKASG	**Malin Array Be**	15.90	327	P	P	02 51 53.7	0.0
AKBB	**Malin Array Si**	15.90	327	P	P	02 51 53.7	+0.1
AKBB				IAmb	IAmb	02 52 00.1	
	comp=Z,19nm,1.1s						
BURAR	**Bucovina Array**	16.00	312	P	P	02 51 55.0	+0.1
SHME	**Shamm**	16.47	133	P	Pn	02 51 55.6	-1.7
SHME				S	Sn	02 54 46.4	-14
AKTO	**Aktyubinsk**	16.52	36	Pn	Pn	02 51 56.1	-1.7
	comp=Z,0.0nm,0.3s,baz=241,slow=12,SNR=3.7						
BANOM	**Banah**	16.66	132	P	Pn	02 51 57.1	-2.6
ABKAR	**Akbulak array**	16.74	42	P	Pn	02 52 00.2	-0.5
MASF	**Masafi**	17.00	134	P	Pn	02 52 01.5	-2.6
AJN	**Ajban**	17.00	139	P	Pn	02 52 01.9	-2.2
AJN				P	Pn	02 52 01.9	-2.2
NAZ	**Nazwa, Dubai**	17.02	136	P	Pn	02 52 02.1	-2.2
	SNR=6.4						
ASUD	**Al Ashush, Dub**	17.13	138	P	Pn	02 52 03.7	-2.0
MDH	**Madha**	17.13	134	P	Pn	02 52 04.4	-1.4
FAQ	**Al Faqa, Dubai**	17.18	137	P	Pn	02 52 03.9	-2.4
UOSS	**Minazif**	17.36	135	P	Pn	02 52 06.5	-2.0
UOSS				IAmb	IAmb	02 52 25.1	
	comp=Z,8.8nm,0.8s						
UOSS	**Minazif**	17.36	135	P	Pn	02 52 06.4	-2.1
UOSS				S	Sn	02 55 09.9	-12
HATD	**Hatta, Dubai**	17.41	135	P	Pn	02 52 07.4	-1.9
ASHO	**Ashiyiah**	17.48	136	P	Pn	02 52 06.9	-3.2
SOHO	**SOHO**	18.18	136	P	Pn	02 52 17.2	-1.5
KOLS	**Kolonicke sedl**	18.36	313	*e*P	P	02 52 21.9	+1.0
ARQ	**Araqi**	18.81	137	P	P	02 52 24.1	-1.9
WSAR	**Wadi Sarin**	20.07	133	P	P	02 52 40.0	+0.2
	comp=Z,5.7nm,0.8s,baz=317,slow=6.0,SNR=2.8						
TIP	**Timpagrande**	20.30	281	P	Pn	02 52 43.4	-0.9
ARU	**Arti**	21.24	25	P	P	02 52 54.7	+2.5
ARU				IAmb	IAmb	02 53 00.3	
	comp=Z,4.8nm,0.6s						
KK31	**Karatay Array**	21.67	68	P	P	02 53 00.3	+3.3
KKAR	**Karatay Array**	21.67	68	P	P	02 53 00.2	+3.2
KKAR				IAmb	IAmb	02 53 04.0	
	comp=Z,6.0nm,1.3s						
KKAR	**Karatay Array**	21.67	68	P	P	02 53 00.4	+3.4
VRAC	**Vranov**	21.90	309	LR	LR	03 02 04.7	
	comp=Z,27nm,18.6s,baz=112,slow=38						
GERES	**GERESS Array B**	23.55	307	P	P	02 53 17.5	+0.7
	comp=Z,0.3nm,0.5s,baz=121,slow=9.9,SNR=4.4						
GERES	**GERESS Array B**	23.55	307	P	P	02 53 17.4	+0.6
BVAR	**Borovoye Array**	24.31	43	P	P	02 53 23.4	-0.5
	comp=Z,0.2nm,0.3s,baz=305,slow=32,SNR=1.8						
CLL	**Collm**	24.77	312	*e*P	P	02 53 27.0	-1.0
CLL				*e*		02 53 34.0	
SQTA	**Sankt Quirin**	24.80	302	*e*P	P	02 53 29.2	+0.6
	comp=Z,2.2nm,0.6s						
MOTA	**Moosalm**	24.89	302	*e*P	P	02 53 30.1	+0.7
	comp=Z,2.1nm,0.5s						
FETA	**Feichten**	25.09	301	*e*P	P	02 53 31.3	+0.1
	comp=Z,1.0nm,0.4s						
DAVOX	**Davos/Dischmat**	25.63	301	P	P	02 53 35.8	-0.4
	comp=Z,1.8nm,0.5s,baz=150,slow=9.7,SNR=5.8						
FINES	**FINESS Array B**	25.64	341	P	P	02 53 34.8	-1.0
	comp=Z,1.6nm,0.7s,baz=153,slow=10,SNR=8.4						
FINES	**FINESS Array B**	25.64	341	P	P	02 53 36.0	+0.1
DAVA	**Damuels**	25.70	302	*e*P	P	02 53 36.2	-0.6
	comp=Z,1.5nm,0.4s						
KSH	**Kashi**	25.89	76	P	P	02 53 41.6	+3.1
KSH				PcP	PcP	02 57 06.7	-0.7
KSH				pmax	pmax		
	comp=Z,4.0nm,1.3s						
KURBB	**Kurchatov Arra**	28.26	52	P	P	02 54 01.0	+1.5
	comp=Z,0.8nm,0.5s,baz=263,slow=9.1,SNR=6.2						
HFS	**Hagfors**	28.76	330	P	P	02 54 03.7	-0.1
	comp=Z,1.8nm,0.7s,baz=113,slow=11,SNR=2.1						
MAKZ	**Makanchi**	30.02	60	P	P	02 54 16.1	+0.9
MAKZ				IAmb	IAmb	02 54 16.9	
	comp=Z,2.0nm,0.6s						
MK31	**Makanchi Array**	30.24	60	P	P	02 54 18.3	+1.2
MK31				IAmb	IAmb	02 54 18.7	
	comp=Z,2.0nm,0.8s						
MKAR	**Makanchi Array**	30.24	60	P	P	02 54 18.1	+0.9
	comp=Z,1.7nm,0.6s,baz=267,slow=6.8,SNR=24						
MKAR	**Makanchi Array**	30.24	60	P	P	02 54 18.3	+1.2
NOA	**NORSAR Array B**	30.28	330	P	P	02 54 16.7	-0.7
	comp=Z,1.2nm,1.1s,baz=71,slow=9.3,SNR=1.5						
NOA				LR	LR	03 07 42.8	
	comp=Z,28nm,18.8s,baz=310,slow=39						
WMQ	**Urumqi**	34.15	66	*e*P	P	02 54 53.3	+1.8
ESDC	**Sonseca Array**	36.08	288	P	P	02 55 06.7	-1.5
	comp=Z,0.3nm,0.6s,baz=72,slow=9.1,SNR=4.4						
TORD	**Torodi Ar. Bea**	44.02	247	P	P	02 56 15.2	+1.0
	comp=Z,0.6nm,0.9s,baz=46,slow=6.2,SNR=2.6						
KOWA	**Kowa**	47.40	253		P	02 56 40.6	-0.4
CMAR	**Chiang Mai Arr**	52.43	95	LR	LR	03 25 42.0	
	comp=Z,23nm,18.3s,baz=240,slow=43						
YKA	**Yellowknife Ar**	78.18	349	P	P	03 00 05.1	-0.5
	comp=Z,0.3nm,0.9s,baz=331,slow=6.3,SNR=3.0						

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*NEIC **04** 03:04:07.3±0.9, 30°.81N±0°.07×138°.7E±0°.1, h388^{km}±7^{km}, mb4.1/28, Error ellipse: s-maj=12.6km s-min=10.1km az=71.0*
*JMA **04** 03:04:07.8±0.4, 31°.09N×138°.89E, h406^{km}±4^{km}, M3.7*
*IDC **04** 03:04:07.5±0.6, 30°.86N×138°.65E, h378^{km}±6^{km}, mb3.5/20, mb1 3.6/26, mb1mx3.4/54, mbtmp4.2/26, Error ellipse: s-maj=14.7km s-min=8.1km az=73.0*
*BJI **04** 03:04:09.0±0.0, 30°.95N×138°.41E, h404^{km}, mB4.4/12, mb4.1/18*
ISC 04 03:04:07.7±0.6**, 30°.92N**±0°.05×**138°.74E**±0°.07**, h388**^{km}±5^{km}**, n102,** σ**1**^{s}**44**/124**, mb4.0**/35**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAOM	**Aogashimamukai**	1.77	29	P	Pn	03 05 02.3	+1.2
JAOM				*e*S	S	03 05 44.8	+0.5
JHCJ	**Hachijojimakas**	2.33	22	P	Pn	03 05 05.3	+0.6
JHCJ				S	S	03 05 50.8	0.0
JHJ	**Hachijo jima 2**	2.37	22	P	Pn	03 05 05.8	+0.8
	38nm,0.3s,baz=351,slow=22,SNR=39						
JHJ				S	S	03 05 51.3	0.0
	69nm,0.3s,baz=12,slow=23,SNR=7.5						
JHJ2	**Mitsune**	2.38	22	P	Pn	03 05 05.8	+0.8
JHJ2	**Mitsune**	2.38	22	Pn	Pn	03 05 05.4	+0.4
JHJ2				S	S	03 05 50.9	-0.4
JMKN	**Mikurajimanish**	3.06	13	P	Pn	03 05 10.8	+0.5
JKN2	**Miekihoku**	3.91	329	P	Pn	03 05 19.2	+1.1
JTNC	**Tanabenakahech**	3.92	318	P	Pn	03 05 18.9	+0.7
BSO3	**Boso 3**	4.15	21	P	Pn	03 05 19.8	-0.3
BSO3				S	S	03 06 16.6	-2.3
BSO1	**Boso 1**	4.18	26	P	Pn	03 05 20.0	-0.1
BSO1				*e*S	S	03 06 17.4	-1.5
BSO4	**Boso 4**	4.28	18	P	Pn	03 05 21.7	+0.1
BSO4				S	S	03 06 20.2	-1.3
JOD2	**Odawara 2**	4.35	4	P	Pn	03 05 22.4	0.0
JOD2				*e*S	S	03 06 21.3	-1.6
JNY	**Yasuok**	4.49	351	P	Pn	03 05 24.2	+0.3
JNY				*e*S	S	03 06 24.4	-1.3
INU	**Inuyama**	4.65	342	Pn	Pn	03 05 26.0	+0.6
JGF	**Kuroka**	4.81	346	Pn	Pn	03 05 27.7	+0.5
CBIJ	**Chichi jima**	4.86	141	P	Pn	03 05 25.4	-2.4
CBIJ				*e*S	S	03 06 27.3	-5.4
JCJ	**Chichijima**	4.86	141	P	Pn	03 05 25.6	-2.1
	39nm,0.3s,baz=8.2,slow=21,SNR=18						
JCJ				S	S	03 06 28.6	-4.0
	95nm,0.3s,baz=326,slow=22,SNR=25						
JCJ	**Chichijima**	4.86	141	Pn	Pn	03 05 25.7	-2.1
JCJ				S	S	03 06 29.1	-3.6
JHU	**Hanno**	4.94	5	P	Pn	03 05 27.9	-0.5
JHU				*e*S	S	03 06 29.4	-4.7
JMN	**Monobe**	4.98	306		Pn	03 05 28.6	-0.2
JWT	**Wachi**	5.18	328	Pn	Pn	03 05 31.2	+0.4
MJAR	**Matsushiro Arr**	5.63	356	P	Pn	03 05 36.4	+0.7
	0.2nm,0.3s,baz=169,slow=9.6,SNR=6.7						
MJAR				S	S	03 06 43.2	-4.2
	0.1nm,0.3s,baz=283,slow=34,SNR=1.9						
MJAR	**Matsushiro Arr**	5.63	356		Pn	03 05 36.5	+0.8
MJAR					S	03 06 49.0	+1.6
MAJO	**Matsushiro**	5.63	356	Pn	Pn	03 05 36.0	+0.2
MAT	**Matsushiro**	5.63	356	P	Pn	03 05 36.1	+0.3
MAT				S	S	03 06 44.4	-3.0
JHS	**Saijyo**	6.24	312	Pn	Pn	03 05 42.3	-0.1
JNU	**Nakatsue**	7.03	290	P	P	03 05 52.0	-0.2
	0.8nm,0.3s,baz=120,slow=8.2,SNR=5.3						
JSD	**Sado**	7.12	357	Pn	Pn	03 05 51.6	-0.6
JSU	**Suzuyama**	7.12	277		Pn	03 05 51.4	-1.0
JMM	**Marumori**	7.14	13	Pn	P	03 05 52.4	-0.9
JMM				S	S	03 07 12.8	-5.3
JTU	**Tsushima**	8.65	297		Pn	03 06 09.5	-0.4
JTM	**Tenmabayashi**	10.03	10		Pn	03 06 26.0	+0.1
KSRS	**Korea Array**	11.07	309	P	Pn	03 06 37.5	-0.5
	0.5nm,0.3s,baz=120,slow=10,SNR=7.5						
ERM	**Erimo**	11.63	17		Pn	03 06 45.2	+0.7
USRK	**Ussuriysk Ar.**	14.29	340	P	Pn	03 07 12.8	-2.3
	baz=155,slow=14,SNR=3.4						
MDJ	**Mudanjiang**	15.46	335	P	Pn	03 07 25.9	-2.6
MDJ				IAmb	IAmb	03 07 27.0	
	comp=Z,3.6nm,0.6s						
YHNB	**Yeheng**	16.57	252	P	P	03 07 36.2	-1.5
YULB	**Yu-li**	17.22	248	P	P	03 07 42.7	-1.9
SSLB	**Suanglung**	17.31	250	P	P	03 07 45.0	-0.5
TPUB	**Ta-pu**	17.80	249	P	P	03 07 49.6	-1.1
TPUB				IAmb	IAmb	03 08 07.7	
	comp=Z,16nm,1.0s						
ULN	**Ulaanbaatar**	29.49	314	P	P	03 09 37.5	-0.4
ULN				IAmb	IAmb	03 09 38.7	
	comp=Z,5.3nm,0.6s						
SONM	**Songino Array**	29.89	314	P	P	03 09 41.5	+0.2
	comp=Z,2.0nm,0.4s,baz=122,slow=8.5,SNR=27						
SONM				PcP	PcP	03 12 34.5	+1.5
	comp=Z,0.3nm,0.4s,baz=124,slow=2.8,SNR=4.3						
GTA	**Gaotai**	32.73	296	*e*P	P	03 10 05.3	-0.7
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
CMAR	**Chiang Mai Arr**	38.03	260	P	P	03 10 50.4	-0.3
	comp=Z,1.3nm,0.4s,baz=51,slow=7.4,SNR=4.6						
CMAR	**Chiang Mai Arr**	38.03	260	P	P	03 10 49.7	-1.1
ZSN	**Zaisan**	44.00	308	*e*P	P	03 11 38.6	+0.2
	baz=308						
MTN	**Manton Dam**	44.12	191	P	P	03 11 38.4	-1.1
MTN				IAmb	IAmb	03 11 40.4	
	comp=Z,12nm,1.1s						
ZALV	**Zalesovo Beam**	44.64	317	P	P	03 11 42.9	-0.3
	comp=Z,3.3nm,0.4s,baz=92,slow=8.2,SNR=16						
ZALV				PcP	PcP	03 13 18.6	+0.5
	comp=Z,3.3nm,0.6s,baz=104,slow=3.8,SNR=14						
MK31	**Makanchi Array**	45.75	307	P	P	03 11 52.0	0.0
MKAR	**Makanchi Array**	45.75	307	P	P	03 11 51.9	-0.1
	comp=Z,2.9nm,0.4s,baz=84,slow=10,SNR=73						
MKAR				PcP	PcP	03 13 23.1	+0.8
	comp=Z,0.6nm,0.5s,baz=74,slow=5.5,SNR=4.6						
MKAR				ScP	ScP	03 16 37.5	+0.1
	comp=Z,0.2nm,0.4s,baz=75,slow=4.6,SNR=4.8						
MAKZ	**Makanchi**	45.96	307	P	P	03 11 53.6	0.0
MAKZ				IAmb	IAmb	03 11 54.0	
	comp=Z,6.6nm,0.4s						
SEM	**Semipalatinsk**	47.13	312	*e*P	P	03 12 02.0	-0.8
	baz=312						
SHLS	**Shalkode**	47.95	302	*e*P	P	03 12 06.4	-2.7
	baz=302						
NRIK	**Noril'sk**	48.00	338	P	P	03 12 09.4	+0.6
	comp=Z,2.1nm,0.3s,baz=118,slow=11,SNR=4.1						
KURK	**Kurchatov**	48.17	312	P	P	03 12 10.1	-0.3
KURK				IAmb	IAmb	03 12 11.0	
	comp=Z,10nm,1.1s						
TDK	**Taldyqorghan**	48.54	305	*e*P	P	03 12 13.1	-0.2
	baz=305						
GSI	**Gunungsitoli**	48.82	241	P	P	03 12 14.6	-1.2
GSI				IAmb	IAmb	03 12 19.7	
	comp=Z,8.5nm,0.7s						
CHKK	**Chushkaly**	49.66	303	*e*P	P	03 12 21.0	-0.7
	baz=303						
MDOK	**Medeo**	49.70	302	*e*P	P	03 12 22.1	-0.1
	baz=302						
AAA	**Alma-Ata**	49.80	302	*e*P	P	03 12 22.8	0.0
	comp=Z,9.2nm,0.4s,baz=302						
KUU	**Kurty**	50.13	303	*e*P	P	03 12 24.4	-0.8
	baz=303						
MTBS	**Maitube**	50.16	302	*e*P	P	03 12 25.5	0.0
	baz=302						
FITZ	**Fitzroy Crossi**	50.33	196	P	P	03 12 25.8	-1.0
WB0	**Warramunga Arr**	50.56	185	P	P	03 12 27.5	-1.1
WB0				IAmb	IAmb	03 12 29.6	
	comp=Z,6.6nm,0.6s						
WB2	**Warramunga Arr**	50.74	185	P	P	03 12 28.8	-1.1
WB2				IAmb	IAmb	03 12 31.0	
	comp=Z,4.0nm,0.7s						
WRA	**Warramunga Arr**	50.74	185	P	P	03 12 30.3	+0.4
	comp=Z,3.7nm,0.4s,baz=1.1,slow=7.9,SNR=105						
WRA				PcP	PcP	03 13 42.2	+1.6
	comp=Z,0.5nm,0.4s,baz=358,slow=3.9,SNR=4.6						
WR0	**Warramunga Arr**	50.74	185	P	P	03 12 28.9	-1.0
WR0				IAmb	IAmb	03 12 30.9	
	comp=Z,5.7nm,0.5s						
KSH	**Kashi**	51.08	298	P	P	03 12 36.0	+3.6
KSH				PcP	PcP	03 13 42.1	+0.2
KSH				PP	sP	03 14 37.4	+4.8
KSH				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KSH				pmax	pmax		
	comp=Z,65nm,7.0s						
AAK	**Ala-Archa**	51.64	302	P	P	03 12 36.1	-0.4
SVW2	**Sparrevohn**	51.77	34	P	P	03 12 37.7	+0.7
BRZS	**Berezniki**	52.01	312	*e*P	P	03 12 38.1	-0.8
	baz=312						
A21K	**Barrow**	52.95	21	P	P	03 12 46.4	+1.1
KDAK	**Kodiak Island**	53.20	39	P	P	03 12 49.2	+1.9
	comp=Z,10nm,1.1s,baz=32,slow=9.9,SNR=1.5						
BRVK	**Borovoye**	53.26	316	P	P	03 12 48.1	+0.2
BRVK				IAmb	IAmb	03 12 48.9	
	comp=Z,8.3nm,0.7s						
KK31	**Karatay Array**	54.44	303	P	P	03 12 56.6	+0.1
KK31				IAmb	IAmb	03 12 57.3	
	comp=Z,7.0nm,0.8s						
KKAR	**Karatay Array**	54.44	303	P	P	03 12 56.6	+0.1
KKAR				IAmb	IAmb	03 12 57.3	
	comp=Z,7.0nm,0.8s						
AS31	**Alice Springs**	54.47	185	P	P	03 12 55.9	-0.9
ASAR	**Alice Springs**	54.47	185	P	P	03 12 57.5	+0.7
	comp=Z,1.4nm,0.4s,baz=17,slow=12,SNR=40						
IUG	**Iuzhnay**	54.98	302	*e*P	P	03 13 00.4	-0.1
	baz=302						
ILAR	**Eielson Array**	55.87	30	P	P	03 13 07.8	+1.6
	comp=Z,0.3nm,0.7s,baz=260,slow=5.3,SNR=5.3						
ILAR	**Eielson Array**	55.87	30	P	P	03 13 07.1	+0.9
ARU	**Arti**	59.56	321	P	P	03 13 32.1	+0.4
ABKAR	**Akbulak array**	60.29	312	P	P	03 13 36.9	+0.2
ABKAR				IAmb	IAmb	03 13 37.4	
	comp=Z,6.5nm,0.8s						
STKA	**Stephens Creek**	62.51	177	P	P	03 13 52.5	+1.0
	comp=Z,1.0nm,0.4s,baz=326,slow=16,SNR=4.0						
STKA	**Stephens Creek**	62.51	177	P	P	03 13 50.8	-0.7
GEYT	**Alibeck**	64.93	301	P	P	03 14 08.0	+0.7
	comp=Z,0.9nm,0.4s,baz=66,slow=12,SNR=3.9						
GEYT	**Alibeck**	64.93	301	P	P	03 14 06.9	-0.4
ARCES	**ARCESS Array B**	68.94	340	P	P	03 14 32.6	+0.9
	comp=Z,1.1nm,0.4s,baz=53,slow=7.0,SNR=19						
YKA	**Yellowknife Ar**	70.22	28	P	P	03 14 41.3	+1.9
	comp=Z,0.2nm,0.5s,baz=300,slow=5.7,SNR=3.3						
FINES	**FINESS Array B**	73.19	332	P	P	03 14 57.5	+0.5
	comp=Z,3.4nm,0.5s,baz=63,slow=5.8,SNR=48						
KBZ	**Khabaz**	73.22	311	P	P	03 14 58.2	+0.8
	comp=Z,6.7nm,0.8s,baz=76,slow=3.7,SNR=13						
AKASG	**Malin Array Be**	77.76	322	P	P	03 15 23.1	+0.2
	comp=Z,3.2nm,0.3s,baz=51,slow=5.3,SNR=25						
AKASG	**Malin Array Be**	77.76	322	P	P	03 15 23.1	+0.2
AFDM	**Forest Hills D**	78.44	52	P	P	03 15 25.4	-1.4
NOA	**NORSAR Array B**	78.94	337	P	P	03 15 29.8	+0.6
	comp=Z,0.3nm,0.5s,baz=56,slow=6.9,SNR=5.8						
RAYN	**Ar Rayn**	80.89	292	P	P	03 15 39.4	-0.7
BRTR	**Keskin Array B**	81.21	311	P	P	03 15 42.4	+0.7
	comp=Z,1.6nm,0.6s,baz=99,slow=3.2,SNR=6.1						
KOLS	**Kolonicke sedl**	82.43	323	*e*P	P	03 15 48.5	+0.9
FRB	**Frobisher Bay**	83.21	12	P	P	03 15 52.6	+1.4
	comp=Z,1.4nm,0.5s,baz=3.5,slow=5.0,SNR=9.1						
GERES	**GERESS Array B**	86.68	327	P	P	03 16 08.0	-0.8
	comp=Z,0.5nm,0.7s,baz=57,slow=4.9,SNR=4.4						
TORD	**Torodi Ar. Bea**	119.81	310	PKP	PKPdf	03 22 12.7	-0.5
	comp=Z,0.4nm,0.5s,baz=100,slow=1.1,SNR=5.5						
TORD	**Torodi Ar. Bea**	119.81	310		PKPdf	03 22 12.0	-1.2

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*ISK **04** 03:17:33.9, 40°.32N×26°.08E, h6^{km}, ML2.7/16*
*DDA **04** 03:17:34.2, 40°.31N×26°.12E, h19^{km}±3^{km}, ML2.7*
*THE **04** 03:17:34.6, 40°.34N×26°.03E, h11^{km}, ML2.6/8, Error ellipse: s-maj=0.9km s-min=0.5km az=253.0*
*ATH **04** 03:17:34.9, 40°.36N×26°.01E, h17^{km}±2^{km}, ML2.7/6, Error ellipse: s-maj=2.7km s-min=1.0km az=295.0*
ISC 04 03:17:33.3±0.9**, 40°.34N**±0°.01×**26°.11E**±0°.02**, h18**^{km}±5^{km}**, n67,** σ**1**^{s}**25**/114**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GADA	**Gvkgeada**	0.21	228	P	Pg	03 17 38.5	+0.2
GADA				S	Sg	03 17 41.9	0.0
	3μm,0.4s						
GADA	**Gvkgeada**	0.21	228	PG	Pg	03 17 38.6	+0.2
GADA				SG	Sg	03 17 41.8	-0.1
GELI	**Tayfur-Gelibol**	0.29	77	PG	Pb	03 17 40.8	+0.9
GELI				SG	Sb	03 17 45.3	+0.9
ECEA	**Canakkale, Ece**	0.30	170	*i* P	Pb	03 17 40.6	+0.5
ECEA				*i* S	Sg	03 17 43.7	-0.4
ECEA				IAML		03 17 48.0	
	comp=N,792nm,0.4s						
ECEA				IAML		03 17 49.0	
	comp=E,855nm,0.4s						
CAVK	**Edirne/Enez-Ca**	0.36	8	*i* P	Pb	03 17 42.0	+0.8
CAVK				*i* S	Sg	03 17 45.7	-0.2
CAVK				IAML		03 17 55.0	
	comp=E,549nm,0.7s						
ENEZ	**Enez**	0.40	5	P	Pb	03 17 42.6	+0.7
ENEZ	**Enez**	0.40	5	PG	Pb	03 17 42.7	+0.8
ENEZ				SG	Sb	03 17 48.7	+1.0
ERIK	**Erikli-Kesan**	0.46	43	PG	Pb	03 17 43.7	+0.9
ERIK				SG	Sb	03 17 50.7	+1.4
SMTH	**Samothraki Isl**	0.46	287	P	Pg	03 17 42.7	+0.1
SMTH				S	Sg	03 17 48.0	-0.9
SMTH				AML	AML	03 17 52.6	
	comp=N,2422μm,0.1s						
SMTH				AML	AML	03 17 54.1	
	comp=E,1539μm,0.1s						
SMTH	**Samothraki Isl**	0.46	287	P	Pg	03 17 42.7	+0.1
BOZC	**Bozcaada**	0.49	185	PG	Pb	03 17 43.8	+0.4
BOZC				SG	Sb	03 17 50.9	+0.5
BOZC	**Bozcaada**	0.49	185	*i* P	Pb	03 17 43.8	+0.4
BOZC				*i* S	Sg	03 17 48.9	-1.0
LPK	**Lapseki**	0.50	86	PG	Pb	03 17 44.1	+0.5
LPK				SG	Sn	03 17 52.2	-1.6
EZN	**Ezine**	0.54	162	P	Pb	03 17 44.5	+0.4
EZN	**Ezine**	0.54	162	PG	Pb	03 17 44.6	+0.4
EZN				SG	Sb	03 17 52.5	+1.0
BAYC	**CANAKKALE_Bayr**	0.68	150	*i* P	Pb	03 17 47.5	+0.8
BAYC				*i* S	Sg	03 17 52.1	-3.7
LIA	**Limnos Island**	0.83	239	P	Pb	03 17 49.5	+0.3
LIA				S	Sb	03 18 00.3	+0.2
LIA				AML	AML	03 18 03.2	
	comp=E,2084μm,0.5s						
LIA				AML	AML	03 18 03.3	
	comp=N,3334μm,0.3s						
LIA	**Limnos Island**	0.83	239	P	Pb	03 17 49.5	+0.3
LIA				S	Sb	03 18 00.7	+0.7
	comp=N,1μm,0.4s						
KOCA	**Canakkale, Ayv**	0.83	178	*i* P	Pg	03 17 49.8	+0.3
KOCA				*i* S	Sb	03 17 57.9	-2.2
RKY	**Sarkoy-Tekirda**	0.89	66	PG	Pn	03 17 51.8	+0.8
RKY				SG	Sn	03 18 05.1	+1.6
SART	**Tekirdag**	0.89	66	*i* P	Pg	03 17 50.5	-0.2
SART				*i* S	Sb	03 18 00.6	-1.2
KRBG	**Karabiga-Canak**	0.91	86	PG	Pn	03 17 51.9	+0.7
KRBG				SG	Sn	03 18 05.5	+1.6
RDO	**Rodhopi**	0.92	332	P	Pg	03 17 51.1	0.0
RDO				S	Sb	03 18 02.1	-0.5
RDO				AML	AML	03 18 08.2	
	comp=N,747μm,0.2s						
RDO				AML	AML	03 18 08.2	
	comp=E,645μm,0.3s						
RDO	**Rodhopi**	0.92	332	P	Pg	03 17 51.1	0.0
RDO	**Rodhopi**	0.92	332	P	Pg	03 17 51.1	0.0
RDO				S	Sn	03 18 04.4	+0.4
	comp=E,352nm,0.2s						
RDO	**Rodhopi**	0.92	332	PG	Pn	03 17 51.9	+0.6
RDO				SG	Sn	03 18 05.2	+1.2
GZKV	**Gazikoy-Tekird**	1.02	66	PG	Pg	03 17 54.2	+1.2
GZKV				SG	Sn	03 18 09.1	+2.6
KNL	**Balıkesir**	1.09	93	*i* P	Pg	03 17 55.2	+0.9
KNL				*i* S	Sb	03 18 06.0	-1.5
KNL				IAML		03 18 15.0	
	comp=N,180nm,0.8s						
KNL				IAML		03 18 22.0	
	comp=E,137nm,0.9s						
THAS	**Thassos island**	1.09	285	P	Pb	03 17 53.6	+0.1
THAS				S	Sb	03 18 07.6	0.0
THAS				AML	AML	03 18 09.4	
	comp=N,404μm,0.3s						
THAS				AML	AML	03 18 10.9	
	comp=E,502μm,0.3s						
THAS	**Thassos island**	1.09	285	P	Pb	03 17 53.7	+0.1
THAS				S	Sn	03 18 08.6	+0.3
	comp=E,230nm,0.3s						
PRK	**Paraskevi**	1.10	173	P	Pg	03 17 55.7	+1.2
PRK				S	Sg	03 18 10.7	+1.8
PRK				AML	AML	03 18 12.9	
	comp=E,1244μm,0.5s						
PRK				AML	AML	03 18 13.6	
	comp=N,1418μm,0.3s						
PRK	**Paraskevi**	1.10	173	P	Pg	03 17 55.7	+1.2
PRK				S	Sg	03 18 11.1	+2.3
	comp=N,665nm,0.4s						
BUHA	**Balikesir, Bur**	1.12	138	*i* P	Pg	03 17 55.8	+0.8
BUHA				*i* S	Sb	03 18 08.1	-0.3
BUHA				IAML		03 18 13.0	
	comp=N,268nm,0.4s						
BUHA				IAML		03 18 13.0	
	comp=E,142nm,0.4s						
AYVA	**Ayvalik**	1.12	156	*i* P	Pg	03 17 55.6	+0.6
AYVA				*i* S	Sb	03 18 07.1	-1.3
AYVA				IAML		03 18 13.0	
	comp=N,252nm,0.5s						
AYVA				IAML		03 18 13.0	
	comp=E,207nm,0.6s						
SIGR	**SIGRI**	1.14	190	P	Pb	03 17 55.1	+0.6
SIGR				S	Sg	03 18 10.3	+0.1
SIGR				AML	AML	03 18 11.9	
	comp=N,1414μm,0.9s						
SIGR				AML	AML	03 18 12.5	
	comp=E,726μm,0.6s						
SIGR	**SIGRI**	1.14	190	P	Pb	03 17 55.1	+0.6

SIGR				S	Sg	03 18 11.2	+1.0
	comp=E,535nm,0.5s						
SIGR	SIGRI	1.14	190	PN	Pg	03 17 55.7	+0.4
SIGR				SN	Sg	03 18 11.8	+1.6
MRMT	Marmara Adasi	1.17	76	PN	Pg	03 17 56.6	+0.7
MRMT				SN	Sg	03 18 13.7	+2.5
EFSA	Agios Efstrati	1.17	228	P	Pb	03 17 55.6	+0.6
EFSA				S	Sn	03 18 10.9	+0.6
TKR	Tekirdag	1.27	59	PN	Pg	03 17 58.8	+1.0
BALY	Balya	1.30	117	*i* P	Pg	03 17 58.6	+0.2
BALY				*i* S	Sb	03 18 11.3	-2.4
BALY				IAML		03 18 18.0	
	comp=N,172nm,0.5s						
BALY				IAML		03 18 18.0	
	comp=E,123nm,0.4s						
EDC	Edincik	1.34	89	PN	Pg	03 17 59.8	+0.6
KAVA	Kavala	1.38	299	P	Pn	03 17 58.2	+0.6
KAVA				S	Sn	03 18 15.3	-0.1
KAVA	Kavala	1.38	299	P	Pb	03 17 58.4	-0.1
KAVA				S	Sb	03 18 16.5	+0.7
	comp=E,155nm,0.4s						
DKL	Dikili	1.41	154	PN	Pg	03 18 00.4	0.0
KDZ	Kurdzhali	1.41	339	PN	Pg	03 18 00.6	+0.1
ZEDA	zmir-Bergama	1.56	151	*i* P	Pb	03 18 01.8	+0.2
ZEDA				*i* S	Sn	03 18 19.6	-0.3
ZEDA				IAML		03 18 26.0	
	comp=N,214nm,0.3s						
ZEDA				IAML		03 18 26.0	
	comp=E,136nm,0.4s						
EDRB	Edirne	1.58	18	P	Pb	03 18 02.1	+0.1
EDRB				S	Sg	03 18 23.5	-0.9
	comp=E,92nm,0.4s						
EDRB	Edirne	1.58	18	PN	Pg	03 18 03.3	-0.5
OUR	Ouranopolis	1.62	271	P	Pn	03 18 01.2	+0.2
OUR	Ouranopolis	1.62	271	P	Pn	03 18 01.2	+0.2
KIRK	Kırklareli	1.63	27	*i* P	Pb	03 18 01.9	-0.9
KIRK				*i* S	Sn	03 18 17.9	-3.6
KCTX	Karacabey (Bur	1.72	92	PN	Pb	03 18 05.1	+0.7
VIZE	Kirklareli, Vi	1.81	46	*i* P	Pb	03 18 05.3	-0.5
VIZE				*i* S	Sn	03 18 23.8	-2.2
ARMN	Kirklareli, Me	1.82	33	*i* P	Pb	03 18 06.1	-0.1
ARMN				*i* S	Sn	03 18 22.2	-4.3
SLVT	Silivri	1.83	60	PN	Pb	03 18 06.8	+0.6
DURS	Dursunbey	1.96	111	*i* P	Pb	03 18 09.0	+0.5
DURS				*i* S	Sn	03 18 27.9	-2.1
AKHS	Akhisar	1.96	137	*i* P	Pb	03 18 07.9	-0.7
AKHS				*i* S	Sn	03 18 28.1	-1.8
NVR	Nevrokopi	1.98	301	P	Pn	03 18 07.0	+1.0
URLA	Izmir	2.01	169	*i* P	Pn	03 18 06.9	+0.6
URLA				*i* S	Sn	03 18 27.1	-3.9
SRS	Serrai	2.06	293	P	Pn	03 18 07.8	+0.7
ZEYE	Izmir, Urla-Ze	2.12	171	*i* P	Pn	03 18 09.2	+1.5
ZEYE				*i* S	Sn	03 18 30.2	-3.4
ZEYE				IAML		03 18 46.0	
	comp=N,47nm,0.6s						
MDNY	Mudanya-Bursa	2.12	88	PN	Pb	03 18 10.9	-0.3
SOH	Sokhos	2.15	284	P	Pn	03 18 09.1	+0.8
ORLT	Orhaneli	2.16	97	PN	Pb	03 18 11.4	-0.4
VAY	Valandovo	2.86	291	*i* Pn	Pn	03 18 17.9	0.0
STIP	Stip	3.26	296	*i* Pn	Pn	03 18 23.3	-0.3

ATH 04 03:17:54.6, 37°.99N×20°.75E, h18^{km}±2^{km}, ML2.1/2, Error ellipse: s-maj=3.4km s-min=0.8km az=236.0, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSDA	Pessada-Kefalo	0.18	315	P	Pg	03 17 59.2	-0.1
PSDA				S	Sg	03 18 02.4	-0.2
VLS	Valsamata	0.23	327	P	Pg	03 18 00.0	0.0
VLS				S	Sb	03 18 03.4	-0.2
VLS				AML	AML	03 18 04.6	
	comp=N,1283μm,0.2s						
VLS				AML	AML	03 18 05.1	
	comp=E,1381μm,0.1s						
LTHK	Lithakia	0.28	166	P	Pg	03 18 00.8	-0.1
LTHK				S	Sg	03 18 05.0	-0.2
ARGA	Argostoli. Kep	0.29	312	P	Pg	03 18 00.2	-0.7
LXRA	Lixouri, Kepha	0.33	311	P	Pb	03 18 02.0	+0.1
LXRA				S	Sb	03 18 07.2	+0.4
KEF5	Kardakata, Kep	0.37	323	P	Pg	03 18 02.3	-0.1
KEF5				S	Sb	03 18 07.8	-0.2
KEF4	Livadi, Kephal	0.37	317	P	Pg	03 18 02.5	0.0
KEF4				S	Sb	03 18 08.2	-0.1
KEF3	Kipouria, Keph	0.38	305	P	Pg	03 18 02.5	-0.1
KEF3				S	Sb	03 18 08.3	-0.2
DMLN	Damoulianata-K	0.39	311	P	Pg	03 18 02.7	-0.1
DMLN				S	Sb	03 18 08.7	0.0
RLS	Riolos of Patr	0.57	82	P	Pb	03 18 05.2	-0.8
EVGI	Lefkada island	0.64	353	P	Pb	03 18 06.4	-0.8
EVGI				S	Sb	03 18 15.4	-0.3
PDO	Prodromos	0.70	29	P	Pb	03 18 07.8	-0.4
PDO				S	Sg	03 18 18.6	+0.8
PDO				AML	AML	03 18 22.6	
	comp=E,305μm,0.4s						
PDO				AML	AML	03 18 25.1	
	comp=N,349μm,0.3s						
NYDR	Nydri-Lefkada	0.73	357	P	Pb	03 18 07.7	-1.0
DRO	Drossia	0.76	92	P	Pb	03 18 08.9	-0.4
DRO				S	Sg	03 18 19.6	0.0
LKD2	Lefkada island	0.81	355	P	Pb	03 18 09.3	-0.8
LAKA	Lakka	1.00	75	P	Pb	03 18 12.8	-0.6
EFP	Efpalio	1.01	64	P	Pb	03 18 13.0	-0.5
KLV	Kalavryta, Ach	1.11	87	P	Pb	03 18 14.8	-0.4

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*IDC **04** 04:06:56.1±5.8, 6°.37S×147°.93E, h63^{km}±48^{km}, mb3.5/4, mb1 3.7/6, mb1mx3.4/35, mbtmp3.7/6, ML3.9/1, MS2.5/1, Ms1 2.5/1, ms1mx2.2/23, Error ellipse: s-maj=58.6km s-min=37.7km az=95.0*

ISC 04 04:06:55.2±2.3, **6°.3S**±0°.1×**147°.8E**±0°.4, **h51**^{km}**, n7, σ0^s.51**/8, **mb3.8**/4, **Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.19	191	P	Pn	04 07 42.9	0.0
	14nm,0.3s,baz=7.8,slow=15,SNR=14						
PMG				S	Sn	04 08 19.9	+0.3
	8.3nm,0.3s,baz=43,slow=22,SNR=5.5						
PMG				LR	LR	04 09 28.6	
	comp=Z,69nm,19.7s,baz=323,slow=49						
WRA	Warramunga Arr	18.85	223	P	P	04 11 10.4	-0.8
	0.3nm,0.3s,baz=52,slow=10,SNR=6.9						
ASAR	Alice Springs	21.85	216	P	P	04 11 43.5	-0.1
	2.0nm,0.4s,baz=51,slow=8.8,SNR=28						
FITZ	Fitzroy Crossi	24.58	239	P	P	04 12 11.2	+0.5
	1.1nm,0.4s,baz=50,slow=8.5,SNR=11						
STKA	Stephens Creek	26.13	192	P	P	04 12 24.2	-0.3
	1.1nm,0.3s,baz=14,slow=12,SNR=4.4						
MKAR	Makanchi Array	78.18	320	P	P	04 18 49.1	-0.1
	0.1nm,0.4s,baz=126,slow=7.3,SNR=1.8						
TORD	Torodi Ar. Bea	145.89	284	PKPbc	PKPbc	04 26 30.5	+0.4
	0.7nm,0.4s,baz=75,slow=4.2,SNR=8.0						

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*IDC **04** 04:09:45.7±2.0, 56°.22N×168°.92W, h0^{km}, mb3.5/4, mb1 3.7/6, mb1mx3.5/53, mbtmp3.5/6, ML3.0/2, MS2.9/2, Ms1 2.9/2, ms1mx2.5/28, Error ellipse: s-maj=47.4km s-min=25.8km az=173.0*

*AEIC **04** 04:09:46.9±3.3, 56°.50N±0°.05×169°.7W±0°.2, h43^{km}±8^{km}, Error ellipse: s-maj=14.2km s-min=5.7km az=66.0*

*NEIC **04** 04:09:47.3±1.9, 56°.66N±0°.05×169°.2W±0°.1, h18^{km}±4^{km}, mb3.4/3, ML3.7/8(AEIC), Error ellipse: s-maj=9.7km s-min=5.3km az=55.0*

ISC 04 04:09:50.2±0.8, **56°.66N**±0°.06×**169°.12W**±0°.07, **h35**^{km}**, n31, σ1^s.39**/32, **mb3.5**/5, **Pribilof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPIA	Saint Paul Isl	0.81	310		Sn	04 10 12.2	-3.5
SPIA	Saint Paul Isl	0.81	310		Pn	04 10 03.2	-1.8
AKGG	Akutan Green G	3.05	143		Pn	04 10 35.1	-0.7
AKGG					Sn	04 11 10.6	-0.3
MSW	Makushin Switc	3.06	153		Pn	04 10 34.2	-1.8
MSW					Sn	04 11 08.9	-2.5
AKBBA	Akutan Broad B	3.15	143		Pn	04 10 36.5	-0.7
AKUT	Akutan	3.17	142	Pn	Pn	04 10 35.6	-1.9
UNV	Unalaska Valle	3.20	151	Pn	Pn	04 10 36.2	-1.6
NIKH	Nikolski High	3.70	178	Pn	Pn	04 10 44.5	-0.2
ATKA	Atka Island	5.36	216	Pn	Pn	04 11 07.7	+0.2
ADK	Adak	6.52	226	Pn	Pn	04 11 23.3	-0.2
GAMB	Gambell	7.25	351	Pn	Pn	04 11 34.1	+0.7
ANM	Nome	8.14	11	Pn	Pn	04 11 45.6	0.0
SVW2	Sparrevohn	8.30	52	Pn	Pn	04 11 48.2	+0.4
OHAK	Old Harbor	8.68	80	Pn	Pn	04 11 51.4	-1.6
KDAK	Kodiak Island	9.04	76	Pn	Pn	04 11 57.6	-0.4
	0.6nm,0.3s,baz=276,slow=9.8,SNR=8.1						
KDAK	Kodiak Island	9.04	76		Pn	04 11 57.0	-1.0
TTA	Tatalina	9.10	41	Pn	Pn	04 11 58.2	-0.7
BRLK	Bradley Lake	10.10	65	Pn	Pn	04 12 12.2	-0.4
PPLA	Purkeypile	10.55	47	Pn	Pn	04 12 17.4	-1.4
BPAW	Bear Paw Mtn.	11.62	43	Pn	Pn	04 12 32.1	-1.2
SML	Sawmill	11.80	56	Pn	Pn	04 12 34.7	-1.0
ILAR	Eielson Array	13.51	44	Pn	Pn	04 13 01.0	+2.0
	0.0nm,0.3s,baz=241,slow=11,SNR=3.4						
TOLK	Toolik Lake Re	14.89	28	P	P	04 13 22.7	-0.4
INK	Inuvik	19.79	40	P	Pn	04 14 18.7	0.0
	1.1nm,0.5s,baz=241,slow=8.5,SNR=5.6						
INK				LR	LR	04 21 19.1	
	comp=Z,54nm,19.7s,baz=214,slow=34						
INK	Inuvik	19.79	40	P	P	04 14 16.9	-0.1
INK				IAmb	IAmb	04 14 32.5	
	comp=Z,1.0nm,0.8s						
YKA	Yellowknife Ar	27.47	55	P	P	04 15 33.7	+1.2
	comp=Z,0.5nm,0.8s,baz=281,slow=8.5,SNR=5.2						
DLMT	Dillon	36.29	83	P	P	04 16 49.8	-0.3
DLMT				IAmb	IAmb	04 16 59.2	
	comp=Z,1.3nm,0.9s						
HLID	Hailey	36.44	87	P	P	04 16 51.1	-0.4
HLID				IAmb	IAmb	04 17 06.4	
	comp=Z,0.4nm,0.7s						
MJAR	Matsushiro Arr	40.19	263	LR	LR	04 34 55.0	
	comp=Z,12nm,20.4s,baz=315,slow=38						
SONM	Songino Array	49.32	298	P	P	04 18 38.3	+2.8
	comp=Z,0.6nm,0.8s,baz=37,slow=7.7,SNR=4.0						
TXAR	Lajitas Array	52.65	92	P	P	04 19 01.7	+0.9
	comp=Z,0.4nm,0.7s,baz=306,slow=5.7,SNR=5.4						

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*IDC **04** 04:21:29.5±1.0, 27°.83N×52°.67E, h0^{km}, mb3.8/18, mb1 4.0/22, mb1mx3.9/40, mbtmp3.9/22, ML4.1/4, MS3.2/17, Ms1 3.2/17, ms1mx3.1/49, Error ellipse: s-maj=22.6km s-min=15.5km az=171.0*

*MOS **04** 04:21:29.5±1.6, 27°.85N×52°.69E, h22^{km}, mb4.4/11, Error ellipse: s-maj=9.8km s-min=5.9km az=92.4*

*TEH **04** 04:21:30.8, 27°.93N×52°.72E, h15^{km}, ML4.2*

*NEIC **04** 04:21:31.4±1.2, 27°.94N±0°.08×52°.66E±0°.06, h23^{km}±6^{km}, Error ellipse: s-maj=12.0km s-min=7.0km az=177.0*

*THR **04** 04:21:32.8±0.4, 28°.11N×52°.72E, h14^{km}±9^{km}, ML4.2*

*DSN **04** 04:21:34.8±1.9, 27°.64N×52°.82E, h15^{km}, ML4.6/11, Error ellipse: s-maj=28.7km s-min=7.5km az=3.0*

*OMAN **04** 04:21:35.6±1.0, 27°.72N×52°.86E, h15^{km}, mb5.7/8, ml4.3/11, Error ellipse: s-maj=28.2km s-min=17.8km az=301.0*

ISC 04 04:21:31.1±0.4, **27°.92N**±0°.04×**52°.73E**±0°.04, **h15**^{km}**, n186, σ1^s.62**/197, **mb4.0**/33, **MS3.2**/15, **3C, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QIR1	Qir	0.62	26	*e*Pg	Pg	04 21 42.1	-1.2
QIR1				*e*		04 22 04.5	
	comp=Z,99nm,0.5s						
LMD1	Lamerd	0.69	146	*e*Pg	Pg	04 21 44.8	+0.1
LMD1				*e*		04 22 04.4	
	comp=Z,99nm,0.3s						
JHRM	Jahrom	0.95	52	*e*Pg	Pb	04 21 49.4	+0.1
JHRM				*e*		04 22 08.2	
	comp=Z,99nm,0.4s						
LAR1	LAR	1.48	99	*e*Pg	Pb	04 21 59.1	+0.8
AHBU	AHRAM	1.58	307	*e*Pg	Pn	04 21 59.6	+1.1
SHI	Shiraz	1.73	354	P	Pn	04 22 02.6	+1.8
SHI	Shiraz	1.73	354	*e*Pg	Pn	04 22 02.6	+1.8
SHI				*e*		04 22 32.7	
	comp=Z,99nm,0.6s						
KAZ1	Kazerun	1.95	331	*e*Pn	Pn	04 22 05.6	+1.8
KAZ1				*e*		04 22 60.0	
	comp=Z,99nm,0.5s						
JRN	Qarnain Island	2.97	178	*e*Pn	Pn	04 22 20.1	+2.5
BNDS	Bandar-Abbas	3.10	99	*e*Pn	Pb	04 22 24.1	-1.8
BNDS				IAML		04 23 19.4	
	comp=E,481nm,0.5s						
BNDS	Bandar-Abbas	3.10	99	*e*Pn	Pb	04 22 24.1	-1.8
GENO	Geno	3.10	99	*e*Pn	Pn	04 22 20.0	+0.4
KLNJ	Kolanjah	3.23	342	*e*Pn	Pn	04 22 22.4	+0.7
SHME	Shamm	3.57	121	*i* P	Pn	04 22 26.4	+0.4
	SNR=7.9						
SHME				S	Sn	04 23 06.0	-1.9
SHME	Shamm	3.57	121	*e*Pn	Pn	04 22 27.0	+1.1
SHME	Shamm	3.57	121	P	Pn	04 22 27.5	+1.6
	SNR=7.9						
BANOM	Banah	3.76	121	*i* P	Pn	04 22 29.4	+0.8
	SNR=39						
BANOM				S	Sn	04 23 11.6	-0.9
BANOM	Banah	3.76	121	*e*Pn	Pn	04 22 29.5	+1.0
BANOM	Banah	3.76	121	P	Pn	04 22 29.8	+1.2
	SNR=39						
BANOM				S	Sn	04 23 11.9	-0.6
IMEH	Mehriz	3.83	25	*e*Pn	Pn	04 22 31.7	+2.0
IRAM	Ramesheh	3.89	356	*e*Pn	Pn	04 22 32.3	+1.8
NGRK	Negar Kerman	3.91	63	*e*Pn	Pn	04 22 32.4	+1.4
NGRK				*e*		04 23 44.3	
	comp=Z,99nm,0.7s						
AJN	Ajban	3.91	148	*e*Pn	Pn	04 22 32.6	+2.0
NAZ	Nazwa, Dubai	3.93	137	*i* P	Pn	04 22 32.4	+1.6
	SNR=20						
NAZ	Nazwa, Dubai	3.93	137	P	Pn	04 22 32.8	+1.9
	SNR=20						
NAZ				S	Sn	04 23 17.4	+0.7
SLWR	Sila	3.95	194	*e*Pn	Pn	04 22 32.9	+1.7
SLWR	Sila	3.95	194	P	Pn	04 22 32.8	+1.7
SLWR				S	Sn	04 23 19.2	+2.1
MASF	Masafi	3.98	129	P	Pn	04 22 32.9	+1.2
MASF				S	Sn	04 23 19.0	+0.8
MSFE	Esma-Masafi	3.99	129	*i* P	Pn	04 22 32.9	+1.2
	SNR=18						
MSFE	Esma-Masafi	3.99	129	*e*Pn	Pn	04 22 33.0	+1.2
ASUD	Al Ashush, Dub	4.03	144	*i* P	Pn	04 22 33.5	+1.3
	SNR=17						
ASUD	Al Ashush, Dub	4.03	144	*e*Pn	Pn	04 22 34.0	+1.8
ASUD	Al Ashush, Dub	4.03	144	P	Pn	04 22 34.5	+2.3
	SNR=17						
ASUD				S	Sn	04 23 20.5	+1.4
ISAD	Sadrabad	4.07	12	*e*Pn	Pn	04 22 35.2	+2.2
FAQ	Al Faqa, Dubai	4.07	140	*i* P	Pn	04 22 33.9	+1.0
	SNR=10						
FAQ	Al Faqa, Dubai	4.07	140	*e*Pn	Pn	04 22 34.5	+1.6
FAQ	Al Faqa, Dubai	4.07	140	P	Pn	04 22 34.5	+1.6
	SNR=10						
FAQ				S	Sn	04 23 20.7	+0.4
KRBR	Kerman	4.09	59	*e*Pn	Pn	04 22 35.8	+2.5
KRBR				Sn	Sn	04 23 22.3	+1.3
KRBR				IAML		04 23 50.9	
	comp=E,183nm,0.4s						
KRBR	Kerman	4.09	59	*e*Pn	Pn	04 22 35.8	+2.5
TVBK	TV Kerman	4.09	59	*e*Pn	Pn	04 22 35.9	+2.5
TVBK				*e*		04 22 51.4	
	comp=Z,99nm,0.5s						
KHGB	Koh Gabri	4.09	52	*e*Pn	Pn	04 22 35.2	+1.9
KHGB				*e*		04 23 54.4	
	comp=Z,99nm,0.6s						
MDH	Madha	4.12	128	P	Pn	04 22 34.6	+1.1
MDH	Madha	4.12	128	*e*Pn	Pn	04 22 34.8	+1.2
MDH	Madha	4.12	128	P	Pn	04 22 35.0	+1.4
MDH				S	Sn	04 23 22.8	+1.2
UOSS	Minazif	4.30	133	*i* P	Pn	04 22 36.6	+0.7
	SNR=44						
UOSS	Minazif	4.30	133		Pn	04 22 36.1	+0.1
UOSS				Sn	Sn	04 23 24.1	-1.8
UOSS	Minazif	4.30	133	*e*Pn	Pn	04 22 36.7	+0.7
UOSS	Minazif	4.30	133	P	Pn	04 22 36.7	+0.7
UOSS				S	Sn	04 23 24.3	-1.6
HATD	Hatta, Dubai	4.34	135	*i* P	Pn	04 22 37.8	+1.2
	SNR=20						
HATD	Hatta, Dubai	4.34	135	*e*Pn	Pn	04 22 37.7	+1.2
HATD	Hatta, Dubai	4.34	135	P	Pn	04 22 38.0	+1.5
	SNR=20						
HATD				S	Sn	04 23 26.3	-0.5
ASHO	Ashiyiah	4.39	136	*i* P	Pn	04 22 38.1	+0.8
	SNR=48						
ASHO	Ashiyiah	4.39	136	*e*Pn	Pn	04 22 38.4	+1.1
ASHO	Ashiyiah	4.39	136	P	Pn	04 22 38.5	+1.1
	SNR=15						
ASHO				S	Sn	04 23 27.8	-0.4
IBAF	Bafgh	4.41	33	*e*Pn	Pn	04 22 39.8	+2.1
ICHK	Chekchek	4.55	18	*e*Pn	Pn	04 22 41.9	+2.3
CHMN	Cheshme madani	4.64	64	*e*Pn	Pn	04 22 43.5	+2.5
CHMN				*e*		04 23 42.8	
	comp=Z,99nm,0.6s						
ALNE	Al Ain	4.71	144	*i* P	Pn	04 22 42.8	+1.1
	SNR=7.9						
ALNE	Al Ain	4.71	144	*e*Pn	Pn	04 22 43.1	+1.4
ALNE	Al Ain	4.71	144	P	Pn	04 22 43.7	+2.0
	SNR=8.0						
YZKH	Yazd	4.74	19	*e*Pn	Pn	04 22 43.6	+1.5
YZKH	Yazd	4.74	19	*e*Pn	Pn	04 22 43.6	+1.5
AMIS	Naft Sefid	4.78	322	*e*Pn	Pn	04 22 43.8	+1.1
NASN	Na'in	4.86	1	*e*Pn	Pn	04 22 45.4	+1.4
NASN	Na'in	4.86	1	*e*Pn	Pn	04 22 45.4	+1.4
IZEF	Zefreh	4.97	356	*e*Pn	Pn	04 22 46.5	+1.0
IPIR	Pirpir	5.01	342	*e*Pn	Pn	04 22 47.3	+1.3
SOHO	SOHO	5.09	137	*i* P	Pn	04 22 47.2	+0.3
	SNR=53						
SOHO	SOHO	5.09	137	*e*Pn	Pn	04 22 47.0	+0.1
SOHO	SOHO	5.09	137	P	Pn	04 22 47.5	+0.7
SOHO				S	Sn	04 23 45.3	-0.1
KBAM	BAM	5.18	75	*e*Pn	Pn	04 22 50.1	+2.0
ANAR	Anarak	5.32	9	*e*Pn	Pn	04 22 51.5	+1.3
SHGR	Shooshtar-Gavs	5.39	322	IAML		04 24 07.2	
	comp=E,109nm,0.5s						
IKLH	Kolahrood	5.47	350	*e*Pn	Pn	04 22 53.3	+1.0
UMZA	Um Al Zommool	5.63	156	*e*Pn	Pn	04 22 55.1	+0.8
ARQ	Araqi	5.70	142	P	Pn	04 22 56.1	+0.8
	SNR=39						
ARQ				S	Sn	04 24 00.0	-0.5
HOQ	Hoqain	5.97	135	P	Pn	04 22 59.2	+0.1
	SNR=23						
HOQ				S	Sn	04 24 04.9	-2.3
TPRV	Parvadeh(Tabas	6.13	33	*e*Pn	Pn	04 23 03.2	+2.0
KHMZ	Khomeyn	6.27	338	*e*Pn	Pn	04 23 04.7	+1.4
KHMZ	Khomeyn	6.27	338	*e*Pn	Pn	04 23 04.7	+1.4
BIDO	Bidbid	6.55	131	*e*Pn	Pn	04 23 06.6	-0.3
BSY	Bisya	6.55	141	P	Pn	04 23 07.7	+0.8
	SNR=68						
TKDS	Koohdasht(Taba	6.82	33	*e*Pn	Pn	04 23 11.8	+1.1
SMDO	Samad	6.82	134	P	Pn	04 23 11.2	+0.5
	SNR=27						
SMDO				S	Sn	04 24 26.5	-1.7
TNSJ	Nastanj	6.88	28	*e*Pn	Pn	04 23 12.9	+1.3
IKFM	Kafar-mosalman	6.99	324	*e*Pn	Pn	04 23 15.1	+2.2
IKOO	Kooshah	7.04	49	*e*Pn	Pn	04 23 16.3	+2.4
WSAR	Wadi Sarin	7.08	130	Pn	Pn	04 23 14.4	+0.2
	comp=E,7.5nm,0.3s,baz=311,slow=11,SNR=49						
WSAR				Sn	Sn	04 24 31.1	-3.3
	comp=E,5.4nm,0.3s,baz=236,slow=20,SNR=1.9						
WSAR				LR	LR	04 26 41.3	
	comp=E,58nm,21.5s,baz=316,slow=44						
NHDN	Nehbandan	7.25	60	*e*Pn	Pn	04 23 18.0	+1.4
JMDO	Jabal Madar	7.36	137	P	Pn	04 23 17.9	-0.2
	SNR=29						
IANJ	Anjilo	7.59	7	*e*Pn	Pn	04 23 22.6	+1.2
AFRZ	Afriz	7.71	43	*e*Pn	Pn	04 23 24.4	+1.5
WBK	Wadi Bani Khal	7.74	132	P	Pn	04 23 23.0	-0.2
	SNR=54						
WBK				S	Sn	04 24 48.8	-1.9
RAYN	Ar Rayn	7.85	238	*i* P	Pn	04 23 25.2	+0.3
	SNR=24						
RAYN	Ar Rayn	7.85	238	P	Pn	04 23 23.7	-1.1
RAYN	Ar Rayn	7.85	238	Pn	Pn	04 23 23.7	-1.1
IMON	Monand	7.96	47	*e*Pn	Pn	04 23 28.8	+2.3
QABG	Abgarm-Qazvin	8.21	342	*e*Pn	Pn	04 23 28.6	-1.4
JLN	Jalan Bani Buh	8.35	132	P	Pn	04 23 31.1	-0.5
	SNR=10						
MHTO	MHTO	8.39	144	P	Pn	04 23 32.3	+0.2
	SNR=26						
IGLO	Ghaloghah	8.61	6	*e*Pn	Pn	04 23 38.0	+2.7
SHRT	Shahrakht	8.65	47	*e*Pn	Pn	04 23 38.3	+2.5
SHRT	Shahrakht	8.65	47	*e*Pn	Pn	04 23 38.3	+2.5
QALM	Alamut, Qazvin	8.67	349	*e*Pn	Pn	04 23 35.7	-0.5
SHAO	Shalim	10.20	164	*i* P	Pn	04 23 55.7	-1.4
	SNR=15						
GEVA	Gevas	13.15	324	Pn	Pn	04 24 35.8	-1.6
GEVA					Sn	04 27 02.5	-1.0
GNI	Garni	13.87	334	LR	LR	04 29 55.2	
	comp=E,52nm,21.1s,baz=149,slow=36						
EIL	Elat	15.69	281	LR	LR	04 31 51.6	
	comp=E,68nm,19.0s,baz=104,slow=40						
MMAI	Mount Meron Ar	15.78	293	Pn	Pn	04 25 14.3	+1.5
	comp=E,3.1nm,0.3s,baz=119,slow=13,SNR=2.4						
GROC	Groznyy	16.25	342	*e*P	Pn	04 25 14.8	-3.9
GROC				pmax	pmax		
	comp=Z,5.0nm,0.5s						
ZEI	Tsey	16.47	337	*e*P	Pn	04 25 21.7	-0.1
ZEI				pmax	pmax		
	comp=Z,15nm,0.9s						
NEY	Neytrino	17.30	335	*i* P	Pn	04 25 30.4	-1.9
KBZ	Khabaz	17.65	336	P	P	04 25 38.5	+1.3
	comp=Z,0.2nm,0.3s,baz=147,slow=16,SNR=6.3						
KIV	Kislovodsk	17.93	336	*e*P	Pn	04 25 36.6	-3.3
KIV				pmax	pmax		
	comp=Z,21nm,1.0s						
NIL	Nilore	18.52	67	P	P	04 25 46.7	-0.3
NIL				pmax	pmax		
	comp=Z,27nm,0.9s						
NIL	Nilore	18.52	67	P	P	04 25 46.7	-0.3
NIL				IAmb	IAmb	04 25 52.8	
	comp=Z,27nm,0.8s						
SOC	Sochi	18.83	330	*e*P	P	04 25 45.4	-4.8
SOC				*e*		04 29 12.2	
SOC				MLR	MLR		
	comp=Z,71nm,16.0s						
BR131	Keskin Array S	19.71	312	P	P	04 25 58.5	-1.6
BR131				pmax	pmax		
	comp=Z,7.0nm,0.9s						
BR131	Keskin Array S	19.71	312	P	P	04 25 58.5	-1.6
BR131				IAmb	IAmb	04 26 10.7	
	comp=Z,6.7nm,0.9s						
BRTR	Keskin Array B	19.71	312	P	P	04 26 02.0	+1.9
	comp=Z,0.3nm,0.3s,baz=133,slow=14,SNR=8.5						
BRTR				LR	LR	04 35 21.5	
	comp=Z,48nm,20.2s,baz=136,slow=42						
BRTR	Keskin Array B	19.71	312	P	P	04 25 58.7	-1.4
KK31	Karatay Array	20.89	39	P	P	04 26 11.7	-1.1
KK31				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KK31	Karatay Array	20.89	39	P	P	04 26 11.7	-1.1
KK31				IAmb	IAmb	04 26 21.4	
	comp=Z,2.8nm,0.7s						
KKAR	Karatay Array	20.89	39	P	P	04 26 11.7	-1.1
KKAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KKAR	Karatay Array	20.89	39	P	P	04 26 11.7	-1.1
KKAR				IAmb	IAmb	04 26 21.4	
	comp=Z,2.8nm,0.7s						
ABKAR	Akbulak array	22.02	13	P	P	04 26 23.6	-1.2
ABKAR	Akbulak array	22.02	13	P	P	04 26 24.3	-0.5
ABKAR				IAmb	IAmb	04 26 36.6	
	comp=Z,2.7nm,0.8s						
KSH	Kashi	22.46	53	P	P	04 26 24.6	-5.2
KSH				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KSH				pmax	pmax		
	comp=Z,73nm,8.1s						
AKTO	Aktyubinsk	22.84	9	P	P	04 26 34.9	+1.3
	comp=Z,1.0nm,0.6s,baz=196,slow=8.7,SNR=4.4						
AKTO				LR	LR	04 36 18.9	
	comp=Z,36nm,18.6s,baz=169,slow=39						
AAK	Ala-Archa	22.96	45	P	P	04 26 37.9	+2.9
	comp=Z,0.4nm,0.4s,baz=204,slow=18,SNR=2.0						
AAK				LR	LR	04 36 20.0	
	comp=Z,41nm,21.8s,baz=252,slow=39						
AAK	Ala-Archa	22.96	45	*i* P	P	04 26 37.1	+2.0
AAK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
AAK	Ala-Archa	22.96	45	P	P	04 26 33.0	-2.0
AAK				IAmb	IAmb	04 26 48.8	
	comp=Z,2.8nm,0.8s						
VRH	Novokhopyorsk	24.70	343	*e*P	P	04 26 49.9	-1.5
VRH				pmax	pmax		
	comp=Z,20nm,0.8s						
BELG	Belogornoye	24.74	353	*i* P	P	04 26 49.7	-2.1
BELG				pmax	pmax		
	comp=Z,1.0nm,0.9s						
IDI	Anoyia	24.77	294	P	P	04 26 54.0	+1.7
	comp=Z,9.8nm,0.8s,baz=64,slow=7.7,SNR=4.5						
IDI				LR	LR	04 38 59.4	
	comp=Z,40nm,20.6s,baz=94,slow=42						
IDI	Anoyia	24.77	294	P	P	04 26 49.9	-2.4
VORD	Divnogorie	25.17	340	*e*P	P	04 26 55.6	-0.1
VORD				pmax	pmax		

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       comp=Z,9.0nm,0.9s
VSR    Storozhevoye      25.43 340  eP      P       04 26 57.5 -0.5
VSR                                 pmax    pmax
       comp=Z,10.0nm,1.1s
LPSR   Galich'ya Gora    26.71 341  eP      P       04 27 08.3 -1.4
LPSR                                pmax    pmax
       comp=Z,10.0nm,1.2s
MLR    Muntele Rosu      27.54 317  LR      LR      04 40 41.3
       comp=Z,63nm,18.4s,baz=107,slow=42
BRVK   Borovoye          28.28  23 i P      P       04 27 24.3 +0.6
BRVK                                pmax    pmax
       comp=Z,2.0nm,1.4s
BVAR   Borovoye Array    28.29  23  P       P       04 27 25.7 +1.9
       comp=Z,0.5nm,0.7s,baz=216,slow=12,SNR=2.9
AKASG  Malin Array Be    28.90 328  P       P       04 27 29.5 +0.3
       comp=Z,0.5nm,0.4s,baz=275,slow=10,SNR=2.1
BURAR  Bucovina Array    29.08 320  P       P       04 27 29.7 -1.3
BUR08  Bucovina Ar. S    29.10 320  P       P       04 27 29.6 -1.6
BUR08                               IAmb    IAmb    04 27 48.7
       comp=Z,3.4nm,1.1s
OBN    Obninsk           29.59 341⇑eP       P       04 27 32.3 -3.0
OBN                                 e               04 28 28.2
OBN                                 pmax    pmax
       comp=Z,9.0nm,1.8s
OBN                                 MLR     MLR
       comp=Z,33nm,16.0s
MK31   Makanchi Array    29.86  43 i P      P       04 27 38.4 +0.6
MKAR   Makanchi Array    29.86  43  P       P       04 27 39.4 +1.6
       comp=Z,0.5nm,0.5s,baz=226,slow=8.3,SNR=7.5
MKAR                                LR      LR      04 41 03.4
       comp=Z,39nm,18.8s,baz=238,slow=39
MKAR   Makanchi Array    29.86  43  P       P       04 27 37.5 -0.3
MKAR   Makanchi Array    29.86  43  P       P       04 27 37.5 -0.3
KURBB  Kurchatov Arra    29.94  34  P       P       04 27 40.9 +2.4
       comp=Z,1.2nm,0.9s,baz=233,slow=8.5,SNR=7.9
KURK   Kurchatov         30.05  34 i P      P       04 27 39.1 -0.3
KURK                                pmax    pmax
       comp=Z,4.0nm,1.5s
KURK   Kurchatov         30.05  34  P       P       04 27 39.0 -0.3
KURK                                IAmb    IAmb    04 27 54.4
       comp=Z,2.1nm,0.9s
KOLS   Kolonicke sedl    31.44 320  eP      P       04 27 54.4 +2.6
KOLS   Kolonicke sedl    31.44 320  eP      P       04 27 54.4 +2.6
LANS   Liptovska Anna    33.16 319  eP      P       04 28 09.2 +2.3
LANS   Liptovska Anna    33.16 319  eP      P       04 28 09.2 +2.3
KLMR   Klimovskoe        34.12 348  eP      P       04 28 08.4 -6.6
KLMR                                pmax    pmax
       comp=Z,11nm,1.1s
KLMR   Klimovskoe        34.12 348  eP      P       04 28 08.5 -6.5
KLMR                                AMP             04 28 26.9
       comp=Z,11nm,1.1s
DGZ    Jazzator, Alta    34.25  41 i P      P       04 28 17.2 +0.7
DGZ                                 pmax    pmax
       comp=Z,1.0nm,0.9s
ZALV   Zalesovo Beam     35.03  33  P       P       04 28 23.3 +0.3
       comp=Z,2.2nm,0.5s,baz=235,slow=10,SNR=9.2
ZALV                                LR      LR      04 42 41.6
       comp=Z,43nm,18.1s,baz=287,slow=36
GERES  GERESS Array B    36.51 316  P       P       04 28 36.3 +0.5
       comp=Z,0.2nm,0.5s,baz=111,slow=7.8,SNR=2.4
FINES  FINESS Array B    37.95 339  P       P       04 28 48.1 +0.3
       comp=Z,1.0nm,0.4s,baz=140,slow=9.6,SNR=11
FINES                               LR      LR      04 46 53.3
       comp=Z,39nm,20.2s,baz=150,slow=40
FINES  FINESS Array B    37.95 339  P       P       04 28 47.1 -0.7
FINES  FINESS Array B    37.95 339  P       P       04 28 47.0 -0.7
GTA    Gaotai            40.42  61 ⇑P       P       04 29 12.2 +3.3
GTA                                 pP      sP      04 29 18.3 +2.6
GTA                                 sP      pP      04 29 21.3 +7.5
GTA                                 pmax    pmax
       comp=Z,1.0nm,0.7s
GTA                                 pmax    pmax
       comp=Z,140nm,6.4s
GTA                                 LR      LR
       comp=N,74nm,14.9s
GTA                                 LR      LR
       comp=E,96nm,15.3s
GTA                                 LR      LR
       comp=Z,63nm,14.2s
LVZ    Lovozero          41.45 350  P       P       04 29 14.5 -2.5
LVZ    Lovozero          41.45 350  P       P       04 29 14.5 -2.5
NOA    NORSAR Array B    43.17 332  P       P       04 29 31.3 +0.3
       comp=Z,0.6nm,0.5s,baz=122,slow=8.3,SNR=5.1
NOA                                 LR      LR      04 49 52.0
       comp=Z,27nm,19.7s,baz=125,slow=39
CMAR   Chiang Mai Arr    43.30  92  LR      LR      04 50 06.7
       comp=Z,30nm,18.7s,baz=170,slow=40
ARCES  ARCESS Array B    44.54 347  P       P       04 29 42.4 +0.6
       comp=Z,2.8nm,1.0s,baz=151,slow=7.6,SNR=7.0
ARCES                               LR      LR      04 52 10.4
       comp=Z,18nm,18.7s,baz=285,slow=41
SONM   Songino Array     45.78  49  P       P       04 29 53.6 +1.4
       comp=Z,0.8nm,0.8s,baz=248,slow=7.6,SNR=3.1
ULN    Ulaanbaatar       46.22  49 i P      P       04 29 54.3 -1.4
ULN                                 pmax    pmax
       comp=Z,2.0nm,1.1s
ESDC   Sonseca Array     47.84 300  P       P       04 30 09.1 +0.8
       comp=Z,0.4nm,0.8s,baz=74,slow=6.2,SNR=1.8
TORD   Torodi Ar. Bea    49.66 264  P       P       04 30 22.3 -0.3
       comp=Z,2.4nm,0.7s,baz=57,slow=7.9,SNR=12
TORD   Torodi Ar. Bea    49.66 264  P       P       04 30 21.3 -1.2
HIA    Hailar            54.67  48 i P      P       04 30 57.9 -1.5
HIA                                 pmax    pmax
       comp=Z,2.0nm,0.8s
DBIC   Dimbokro          58.34 260  P       P       04 31 26.0  0.0
       comp=Z,4.6nm,1.1s,baz=40,slow=7.9,SNR=2.2
BOSA   Boshof            62.07 207  LR      LR      05 02 31.8
       comp=Z,67nm,18.9s,baz=173,slow=40
KLR    Kul'dur           62.47  47ceP       P       04 31 53.0 -0.7
KLR                                 pmax    pmax
       comp=Z,2.0nm,1.4s
KSRS   Korea Array       62.48  60  LR      LR      05 03 35.0
       comp=Z,21nm,18.9s,baz=180,slow=40
YKA    Yellowknife Ar    89.33 354  P       P       04 34 29.8 +3.2
       comp=Z,0.5nm,0.6s,baz=13,slow=4.8,SNR=10
KDAK   Kodiak Island     92.02  13  LR      LR      05 21 24.6
       comp=Z,80nm,18.8s,baz=248,slow=39
ASAR   Alice Springs     93.52 115  P       P       04 34 46.9 +0.2
       comp=Z,0.2nm,0.5s,baz=303,slow=4.3,SNR=1.9
ASAR   Alice Springs     93.52 115  P       P       04 34 46.2 -0.5
ASAR   Alice Springs     93.52 115  P       P       04 34 46.2 -0.5
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*IDC **04** 04:23:03.8±1.3, 29°.51S×176°.13W, h0^{km}, mb3.5/2, mb1 3.8/2, mb1mx3.6/22, mbtmp3.5/2, Error ellipse: s-maj=71.5km s-min=25.7km az=10.0*

ISC 04 04:23:05.7±1.3**, 30°.0S**±0°.1×**176°.4W**±0°.1**, h10^{km}, n8, σ1^{s}.23**/10**, Kermadec Islands region**

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Code   Station Name        Δ°  AZ°   Phase ID              Time     Res
                                    Op      ISC       h  m  s     ISC
RAO    Raoul Island       1.50 297  Pn      Pg      04 23 34.2 -0.3
       228nm,0.3s,baz=127,slow=4.0,SNR=13
RAO                                 Sn      Sg      04 23 54.1 +0.1
       477nm,0.3s,baz=15,slow=21,SNR=8.6
RAO                                 LR      LR      04 24 12.9
       comp=Z,180nm,19.6s,baz=142,slow=44
URZ    Urewera            9.88 211  Pn      Pn      04 25 28.5 +0.7
       0.4nm,0.3s,baz=25,slow=18,SNR=2.3
URZ                                 Sn      Sn      04 27 17.2 -1.5
       2.6nm,0.3s,baz=223,slow=23,SNR=13
ASAR   Alice Springs     44.53 266  P       P       04 31 18.1 +0.3
       0.2nm,0.6s,baz=100,slow=7.9,SNR=1.9
WRA    Warramunga Arr    45.48 271  P       P       04 31 27.1 +1.7
       0.9nm,0.6s,baz=109,slow=8.6,SNR=7.0
KURBB  Kurchatov Arra   121.78 314  PKP     PKPdf   04 41 58.8 -0.8
       0.2nm,0.6s,baz=82,slow=2.0,SNR=5.4
FINES  FINESS Array B   145.18 341  PKP     PKPbc   04 42 41.0 -1.4
       1.3nm,0.5s,baz=48,slow=2.8,SNR=9.8
AKASG  Malin Array Be   151.76 324  PKPbc   PKPbc   04 42 59.4 -0.8
       0.6nm,0.5s,baz=42,slow=2.4,SNR=4.2
TORD   Torodi Ar. Bea   163.19 174  PKPab   PKPab   04 44 00.3 +1.3
       1.2nm,0.9s,baz=174,slow=2.6,SNR=5.0
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*JMA **04** 04:41:16.4±0.2, 25°.01N×122°.79E, h9^{km}±3^{km}, M2.3*
*TAP **04** 04:41:20.6, 24°.57N×122°.86E, h41^{km}, ML2.7, D*

ISC 04 04:41:19.4±1.9**, 24°.8N**±0°.1×**122°.76E**±0°.05**, h14^{km}**±10^{km}**, n12, σ1^{s}.43**/23**, Taiwan region**

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Code   Station Name        Δ°  AZ°   Phase ID              Time     Res
                                    Op      ISC       h  m  s     ISC
JYNG   Yonagunijimaku     0.40 155  P       Pg      04 41 27.6 +0.1
JYNG                                eS      Sg      04 41 35.4 +2.4
YOJ    Yonaguni jima      0.42 147 i P      Pg      04 41 27.9  0.0
       baz=129
YOJ                                 eS      Sg      04 41 33.1 -0.4
       baz=129
YOJ    Yonaguni jima      0.42 147  P       Pg      04 41 27.7 -0.2
YOJ                                 S       Sg      04 41 35.7 +2.1
IRIF   Iriomote-Funau     1.00 118  P       Pg      04 41 36.7 -2.1
ENA    Nanau              1.01 248 i P      Pg      04 41 37.7 -1.2
       baz=270
ENA                                 eS      Sg      04 41 50.7 -1.4
       baz=270
ENTT   Nioudou            1.10 261  P       Pn      04 41 41.2 +0.7
       baz=281
ENTT                                eS      Sn      04 41 57.2 +1.8
       baz=281
NWLT   Wulai              1.15 268  eP      Pg      04 41 42.3 +0.7
       baz=279
NWLT                                eS      Sn      04 41 59.9 +3.4
       baz=279
NACB   Ninganchiao        1.24 239  P       Pn      04 41 41.8 -0.6
       baz=257
NACB                                eS      Sb      04 41 58.2 -0.3
       baz=257
NNSH   Datong             1.31 253  eP      Pg      04 41 44.7 -0.1
       baz=268
NNSH                                eS      Sg      04 42 01.8 -0.1
       baz=268
ETLH   Xiulin Townshi     1.32 243  P       Pb      04 41 43.5 -0.5
       baz=254
ETLH                                eS      Sn      04 41 59.5 -1.3
       baz=254
FUSS   Fushou             1.50 248  P       Pg      04 41 47.3 -1.0
       baz=257
FUSS                                eS      Sb      04 42 06.5 +0.5
       baz=257
WHF    Hehuan Shan        1.52 244  eP      Pb      04 41 46.5 -1.2
       baz=253
WHF                                 eS      Sn      04 42 06.7 +0.3
       baz=253
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IDC 04 04:46:28.4±2.0**, 0°.35N**×**126°.94E, h0^{km}, mb3.4**/3**, mb1 3.7**/3**, mb1mx3.4**/32**, mbtmp3.5**/3**, Error ellipse: s-maj=169.8km s-min=25.1km az=66.0, Northern Molucca Sea**

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Code   Station Name        Δ°  AZ°   Phase ID              Time     Res
                                    Op      ISC       h  m  s     ISC
WRA    Warramunga Arr    21.43 161  P       P       04 51 17.6 -0.7
       0.4nm,0.4s,baz=339,slow=11,SNR=9.1
ASAR   Alice Springs     24.81 165  P       P       04 51 52.9 +0.4
       0.8nm,0.6s,baz=342,slow=10,SNR=13
MKAR   Makanchi Array    60.45 326  P       P       04 56 39.9 -0.1
       0.2nm,0.3s,baz=121,slow=7.8,SNR=7.6
```

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*IDC **04** 04:55:49.7±3.1, 31°.66S×177°.84W, h0^{km}, mb3.8/2, mb1 4.0/4, mb1mx3.8/39, mbtmp3.8/4, ML3.6/2, MS3.2/1, Ms1 3.1/1, ms1mx2.5/35, Error ellipse: s-maj=73.9km s-min=31.3km az=116.0*
*NEIC **04** 04:55:50.3±0.5, 31°.66S±0°.08×177°.8W±0°.2, h11^{km}±7^{km}, mb4.4/7, Error ellipse: s-maj=26.8km s-min=9.1km az=104.0*

ISC 04 04:55:53.1±1.2**, 31°.66S**±0°.08×**177°.8W**±0°.2**, h35^{km}, n14, σ1^{s}.23**/16**, mb4.2**/5**, Kermadec Islands region**

```
Code   Station Name        Δ°  AZ°   Phase ID              Time     Res
                                    Op      ISC       h  m  s     ISC
RAO    Raoul Island       2.41 358  Pn      Pn      04 56 30.2 +0.2
       20nm,0.3s,baz=77,slow=21,SNR=1.8
RAO                                 Sn      Sn      04 56 56.3 -1.9
       117nm,0.3s,baz=249,slow=22,SNR=4.1
RAO    Raoul Island       2.41 358          Pn      04 56 29.8 -0.2
RAO                                         Sn      04 56 59.4 +1.1
URZ    Urewera            7.78 211  Pn      Pn      04 57 43.2 -0.5
       0.5nm,0.3s,baz=13,slow=18,SNR=1.7
URZ                                 Sn      Sn      04 59 09.0 -1.6
       2.4nm,0.3s,baz=190,slow=18,SNR=11
BKZ    Black Stump Fm     8.80 210  Pn      Pn      04 57 58.0 +0.2
LHI    Lord Howe Isla    19.68 264  P       Pn      05 00 20.1 -0.8
LHI                                 IAmb    IAmb    05 00 37.9
       comp=Z,87nm,1.0s
KNTN   Kanton            29.31  13  P       P       05 01 51.2 -1.2
STKA   Stephens Creek    34.36 259  LR      LR      05 15 05.0
       comp=Z,41nm,21.9s,baz=197,slow=34
ASAR   Alice Springs     43.20 268  P       P       05 03 52.5 +1.6
       comp=Z,0.6nm,0.6s,baz=102,slow=7.6,SNR=7.6
WR0    Warramunga Arr    44.13 273  P       P       05 03 59.1 +0.7
WR0                                 IAmb    IAmb    05 04 01.1
       comp=Z,4.5nm,1.1s
WB2    Warramunga Arr    44.29 273  P       P       05 04 01.0 +1.3
WB2                                 IAmb    IAmb    05 04 09.7
       comp=Z,5.6nm,1.1s
WRA    Warramunga Arr    44.30 273  P       P       05 04 01.6 +1.7
       comp=Z,0.6nm,0.3s,baz=111,slow=8.1,SNR=7.7
WB0    Warramunga Arr    44.33 274  P       P       05 04 01.1 +1.1
QSPA   South Pole Qui    58.45 180  P       P       05 05 45.9 +0.7
QSPA                                IAmb    IAmb    05 05 59.8
       comp=Z,1.9nm,0.7s
FINES  FINESS Array B   146.38 339  PKPbc   PKPab   05 15 31.1 +0.7
       comp=Z,2.0nm,0.7s,baz=34,slow=4.4,SNR=6.0
```

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*IDC **04** 05:11:36.4±1.1, 52°.29N×168°.74W, h0^{km}, mb3.9/14, mb1 4.1/15, mb1mx3.9/47, mbtmp3.9/15, ML3.3/1, Error ellipse: s-maj=30.5km s-min=17.1km az=170.0*
*AEIC **04** 05:11:39±2.9, 52°.19N±0°.07×168°.47W±0°.07, h26^{km}±3^{km}, ML3.2, Error ellipse: s-maj=10.6km s-min=5.9km az=171.0*
*NEIC **04** 05:11:41.4±1.9, 52°.31N±0°.08×168°.64W±0°.06, h33^{km}±6^{km}, Error ellipse: s-maj=12.1km s-min=4.7km az=168.0*

ISC 04 05:11:41.0±0.7**, 52°.31N**±0°.07×**168°.57W**±0°.06**, h29^{km}, n51, σ1^{s}.31**/49**, mb4.1**/14**, Fox Islands**

```
Code   Station Name        Δ°  AZ°   Phase ID              Time     Res
                                    Op      ISC       h  m  s     ISC
NIKH   Nikolski High      0.69 345          Pb      05 11 55.3 +0.8
NIKH                                        Sb      05 12 04.1 +0.4
OKSO   Okmok South        1.08  13          Pn      05 11 59.9 -0.2
OKSO                                        Sn      05 12 11.7 -2.4
OKFG   Magazine Ridge     1.17  19          Pn      05 12 01.4  0.0
OKFG                                        Sn      05 12 14.7 -1.7
MAPS   Pakushin South     1.79  32          Pn      05 12 11.1 +1.1
MREP   Makushin Rep't     1.86  35          Pn      05 12 11.8 +0.9
MSW    Makushin Switc     1.94  33          Pn      05 12 13.0 +1.1
MNAT   Makushin Natee     1.94  35          Pn      05 12 12.2 +0.2
UNV    Unalaska Valle     1.98  38          Pn      05 12 13.2 +0.7
AKUT   Akutan             2.48  41  Pn      Pn      05 12 20.3 +0.9
ATKA   Atka Island        3.46 270  Pn      Pn      05 12 31.6 -1.2
SPIA   Saint Paul Isl     4.98 349  Pn      Pn      05 12 55.2 +1.6
ADK    Adak               5.02 268  Pn      Pn      05 12 53.6 -0.7
CHGN   Chignik            7.16  52  Pn      Pn      05 13 26.3 +2.7
OHAK   Old Harbor        10.10  55  Pn      Pn      05 14 03.1 -0.7
KDAK   Kodiak Island     10.67  53  Pn      Pn      05 14 11.4 -0.3
       1.4nm,0.3s,baz=209,slow=4.1,SNR=23
KDAK                                Sn      Sn      05 16 05.4 -4.6
       0.1nm,0.3s,baz=146,slow=19,SNR=1.6
BRLK   Bradley Lake      12.36  46  Pn      Pn      05 14 35.7 +0.9
SEW    Seward            13.16  46  Pn      Pn      05 14 45.1 -0.5
SUA    Susitna One       13.33  40  Pn      Pn      05 14 48.6 +0.5
SKT    Skwentna          13.35  37  Pn      Pn      05 14 49.0 +0.7
BPAW   Bear Paw Mtn.     14.94  31  Pn      Pn      05 15 10.1 +0.1
IMAR   Indian Mountai    15.61  23          Pn      05 15 20.3 +1.7
N25K   Chitina, Valde    15.95  45  Pn      Pn      05 15 22.8 -0.3
WRH    Wood River Hil    16.14  33  Pn      Pn      05 15 24.2 -1.2
CCB    Clear Creek Bu    16.34  33  Pn      Pn      05 15 27.3 -0.7
ILAR   Eielson Array     16.73  33  Pn      Pn      05 15 32.4 -0.5
       0.1nm,0.3s,baz=231,slow=11,SNR=9.0
RIDG   Independent Ri    16.87  38          Pn      05 15 34.4 -0.3
HYT    Haines Junctio    18.95  51  Pn      P       05 16 01.1 +1.5
WHY    Whitehorse        20.19  52  Pn      Pn      05 16 16.3 +1.3
PEA0B  Petropavlovsk-    20.35 286  P       P       05 16 14.2 -0.5
PETK   Petropavlovsk-    20.35 286  P       P       05 16 14.1 -0.7
       5.1nm,0.5s,baz=87,slow=14,SNR=26
INK    Inuvik            23.13  33  P       P       05 16 43.5 -0.7
       1.6nm,0.5s,baz=220,slow=6.5,SNR=9.3
YKA    Yellowknife Ar    29.91  49  P       P       05 17 46.9 +1.1
       0.5nm,0.5s,baz=275,slow=7.6,SNR=8.8
H11N2  WAKE ISLAND Hy    37.72 220  T       T       06 00 06.1
       baz=25
H11N3  WAKE ISLAND Hy    37.72 220  T       T       06 00 13.7
       baz=25
H11N1  WAKE ISLAND Hy    37.73 220  T       T       06 00 07.6
       baz=25
H11S1  WAKE ISLAND Hy    38.90 219  T       T       06 01 02.2
       baz=23,slow=76,SNR=19
H11S2  WAKE ISLAND Hy    38.91 219  T       T       06 01 02.2
       baz=23,slow=76,SNR=14
H11S3  WAKE ISLAND Hy    38.92 219  T       T       06 01 00.5
       baz=23,slow=76,SNR=10
PDAR   Pinedale Array    39.93  80  P       P       05 19 13.3 +0.7
       0.4nm,0.5s,baz=311,slow=2.4,SNR=9.4
SONM   Songino Array     51.75 301  P       P       05 20 45.4 -0.2
       0.9nm,0.8s,baz=71,slow=5.1,SNR=5.3
TXAR   Lajitas Array     52.26  90  P       P       05 20 50.1 +0.5
       0.1nm,0.5s,baz=281,slow=7.2,SNR=1.8
ARCES  ARCESS Array B    58.03 354  P       P       05 21 30.2 -0.3
       1.4nm,0.6s,baz=24,slow=9.4,SNR=7.1
MKAR   Makanchi Array    64.20 314  P       P       05 22 11.8 -0.9
       1.4nm,0.7s,baz=48,slow=6.8,SNR=16
MKAR   Makanchi Array    64.20 314  P       P       05 22 11.7 -1.0
FINES  FINESS Array B    66.00 352  P       P       05 22 23.9 -0.2
       2.4nm,0.5s,baz=19,slow=7.2,SNR=21
NOA    NORSAR Array B    67.00   0  P       P       05 22 30.5 -0.1
       1.0nm,0.6s,baz=328,slow=4.8,SNR=4.9
KSH    Kashi             72.78 313  P       P       05 23 10.1 +3.6
KSH                                 PcP     PcP     05 23 23.8 +0.1
KSH                                 pmax    pmax
       comp=Z,10.0nm,0.9s
KSH                                 pmax    pmax
       comp=Z,100nm,5.1s
AKASG  Malin Array Be    76.27 348  P       P       05 23 25.7 -0.7
       comp=Z,0.9nm,0.5s,baz=13,slow=6.0,SNR=3.9
CMAR   Chiang Mai Arr    77.11 283  P       P       05 23 31.9 +0.2
       comp=Z,0.9nm,0.3s,baz=28,slow=6.3,SNR=5.4
ESDC   Sonseca Array     87.42  12  P       P       05 24 26.4 +1.1
       comp=Z,1.1nm,1.0s,baz=352,slow=6.8,SNR=2.6
ASAR   Alice Springs     90.73 231  P       P       05 24 39.6 -1.3
       comp=Z,0.3nm,0.7s,baz=46,slow=5.3,SNR=2.5
```

IDC 04 05:59:34.5±2.9**, 54°.56N**×**86°.31E, h0^{km}, mb1 2.9**/2**, mb1mx2.8**/40**, mbtmp2.9**/2**, ML2.6**/2**, Error ellipse: s-maj=22.6km s-min=13.8km az=49.0, Southwestern Siberia**

```
Code   Station Name        Δ°  AZ°   Phase ID              Time     Res
                                    Op      ISC       h  m  s     ISC
I46RU  ZALESOVO INFRA     1.07 236 i                06 05 53.2
       baz=53,slow=341,SNR=4.4
ZALV   Zalesovo Beam      1.07 235  Pg      Pg      05 59 53.8 -1.1
       1.0nm,0.3s,baz=55,slow=17,SNR=14
ZALV                                Lg      Lg      06 00 10.5
       2.9nm,0.3s,baz=56,slow=28,SNR=11
KURBB  Kurchatov Arra     6.16 233  Pn      Pn      06 01 07.4 +0.7
       0.1nm,0.3s,baz=50,slow=14,SNR=10
KURBB                               Lg      Lg      06 02 49.0
       0.0nm,0.3s,baz=53,slow=32,SNR=4.0
MKAR   Makanchi Array     8.18 200  Pn      Pn      06 01 35.3 +0.8
       0.1nm,0.3s,baz=21,slow=12,SNR=8.8
MKAR                                Sn      Sn      06 03 06.7 -0.9
       0.1nm,0.3s,baz=26,slow=24,SNR=7.6
MKAR                                Lg      Lg      06 03 55.5
       0.1nm,0.3s,baz=15,slow=33,SNR=5.2
```

IDC 04 06:05:29.7±7.0**, 55°.73N**×**86°.03E, h0^{km}, mb1 2.8**/2**, mb1mx2.8**/40**, mbtmp2.8**/2**, ML2.1**/2**, Error ellipse: s-maj=72.4km s-min=29.0km az=25.0, Southwestern Siberia**

```
Code   Station Name        Δ°  AZ°   Phase ID              Time     Res
                                    Op      ISC       h  m  s     ISC
I46RU  ZALESOVO INFRA     1.92 202 i                06 16 30.0
       baz=19,slow=345,SNR=12
ZALV   Zalesovo Beam      1.92 202  Pn      Pn      06 06 03.2 -0.3
       2.7nm,0.3s,baz=23,slow=16,SNR=25
ZALV                                Sn      Sg      06 06 30.7 -0.5
       2.1nm,0.3s,baz=21,slow=25,SNR=3.8
KURBB  Kurchatov Arra     6.82 224  Pn      Pn      06 07 11.2 +0.4
       0.1nm,0.3s,baz=42,slow=14,SNR=4.6
MKAR   Makanchi Array     9.25 196  Pn      Pn      06 07 43.3 -0.9
       0.0nm,0.3s,baz=18,slow=13,SNR=1.6
```

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*SNET **04** 06:05:38.4±1.1, 12°.94N×88°.87W, h39^{km}±39^{km}, ML3.7*
*UCR **04** 06:05:38.6±0.9, 12°.95N×88°.87W, h36^{km}±100^{km}, ML3.7*
*INET **04** 06:05:41.7, 13°.10N×88°.48W, h5^{km}, MW2.8*

ISC 04 06:05:38.0±1.9**, 12°.90N**±0°.09×**88°.88W**±0°.03**, h30^{km}**±11^{km}**, n57, σ0^{s}.42**/96**, 2C-4D, Off coast of central America**

```
Code   Station Name        Δ°  AZ°   Phase ID              Time     Res
                                    Op      ISC       h  m  s     ISC
COEB   Comit de Eme       0.68  30⇓iP       Pb      06 05 51.3 -0.2
COEB                                eS      Sb      06 06 01.4 +0.6
COEB                                 IAML           06 06 05.5
       comp=Z,2µm,0.2s
COEB   Comit de Eme       0.68  30⇓iP       Pb      06 05 51.3 -0.2
COEB                                eS      Sb      06 06 01.4 +0.6
COEB                                 IAML           06 06 05.5
       comp=Z,2µm,0.2s
TECA   Tecapa             0.69  32 i P      Pb      06 05 51.6 -0.1
TECA   Tecapa             0.69  32 i P      Pb      06 05 51.6 -0.1
COEG   Centro de Oper     0.71 360⇓iP       Pb      06 05 51.6 -0.4
COEG                                eS      Sb      06 06 01.8 +0.3
COEG                                 IAML           06 06 05.2
       comp=Z,3µm,0.5s
COEG   Centro de Oper     0.71 360⇓iP       Pb      06 05 51.6 -0.4
COEG                                eS      Sb      06 06 01.8 +0.3
COEG                                 IAML           06 06 05.2
       comp=Z,3µm,0.5s
LALI   Alcalda de L       0.73 323  eP      Pb      06 05 52.0 -0.2
LALI                                eS      Sb      06 06 01.8  0.0
LALI   Alcalda de L       0.73 323  eP      Pb      06 05 52.0 -0.2
LALI                                eS      Sb      06 06 01.8  0.0
UESV   Universidad de     0.73   7⇑iP       Pb      06 05 52.1 -0.3
UESV                                eS      Sb      06 06 02.8 +0.7
UESV                                 IAML           06 06 03.8
       comp=Z,5µm,0.1s
UESV   Universidad de     0.73   7⇑iP       Pb      06 05 52.1 -0.3
UESV                                eS      Sb      06 06 02.8 +0.7
UESV                                 IAML           06 06 03.8
       comp=Z,5µm,0.1s
LFRS   El Faro            0.74 346  eP      Pb      06 05 52.1 -0.4
LFRS   El Faro            0.74 346  eP      Pb      06 05 52.1 -0.4
LCY    Lacayo             0.77  48  eP      Pn      06 05 52.6 -0.3
LCY    Lacayo             0.77  48  eP      Pn      06 05 52.6 -0.3
PACA   Pacayal            0.78  44  eP      Pn      06 05 53.0 -0.1
PACA                                eS      Sb      06 06 04.1 +0.6
PACA   Pacayal            0.78  44  eP      Pn      06 05 53.0 -0.1
PACA                                eS      Sb      06 06 04.1 +0.6
PQSS   Presa 15 de Se     0.78  23  eP      Pn      06 05 52.8 -0.2
PQSS                                eS      Sn      06 06 04.2 +0.5
PQSS                                 IAML           06 06 05.7
       comp=Z,4µm,0.2s
VSM    San Miguel         0.79  48  eP      Pn      06 05 53.0 -0.3
VSM    San Miguel         0.79  48  eP      Pn      06 05 53.0 -0.3
PAVA   Las Pavas          0.81 356  eP      Pn      06 05 53.1 -0.4
PAVA                                eS      Sb      06 06 04.7 +0.4
PAVA                                 IAML           06 06 06.0
       comp=Z,3µm,0.2s
PAVA   Las Pavas          0.81 356  eP      Pn      06 05 53.1 -0.4
PAVA                                eS      Sb      06 06 04.7 +0.4
PAVA                                 IAML           06 06 06.0
       comp=Z,3µm,0.2s
AEIL   Aeropuerto Ilo     0.82 344  eP      Pn      06 05 53.6  0.0
AEIL                                eS      Sn      06 06 05.6 +0.7
AEIL                                 IAML           06 06 07.3
       comp=Z,3µm,0.3s
AEIL   Aeropuerto Ilo     0.82 344  eP      Pn      06 05 53.6  0.0
AEIL                                eS      Sn      06 06 05.6 +0.7
AEIL                                 IAML           06 06 07.3
       comp=Z,3µm,0.3s
LBRS   Las Brisas         0.85 349  eP      Pn      06 05 53.9 -0.1
LBRS   Las Brisas         0.85 349  eP      Pn      06 05 53.9 -0.1
UDBS   Universidad Do     0.85 341  eP      Pn      06 05 53.7 -0.3
UDBS                                eS      Sb      06 06 05.6 +0.2
UDBS                                 IAML           06 06 06.6
       comp=Z,3µm,0.3s
UDBS   Universidad Do     0.85 341  eP      Pn      06 05 53.7 -0.3
UDBS                                eS      Sb      06 06 05.6 +0.2
UDBS                                 IAML           06 06 06.6
       comp=Z,3µm,0.3s
SNET   Serv Nac Est T     0.85 336  eP      Pn      06 05 53.7 -0.3
SNET                                eS      Sb      06 06 04.9 -0.6
SNET                                 IAML           06 06 06.9
       comp=Z,2µm,0.1s
SNET   Serv Nac Est T     0.85 336  eP      Pn      06 05 53.7 -0.3
SNET                                eS      Sb      06 06 04.9 -0.6
SNET                                 IAML           06 06 06.9
       comp=Z,2µm,0.1s
IGN    Direccin Gen       0.85 341  eP      Pn      06 05 53.9 -0.2
```

IGN				*e*S	**Sb**	**06 06 05.3**	**-0.2**
IGN				*e*S		06 06 05.7	
IGN				IAML		06 06 08.0	
	comp=Z,5090µm,0.1s						
IGN	**Direccin Gen**	**0.85**	**341**	*e*P	**Pn**	**06 05 53.9**	**-0.2**
IGN				*e*S	**Sb**	**06 06 05.3**	**-0.2**
IGN				*e*S		06 06 05.7	
IGN				IAML		06 06 08.0	
	comp=Z,5090µm,0.1s						
OPAM	**Oficina de Pla**	**0.86**	**339**	*e*P	**Pn**	**06 05 53.4**	**-0.8**
OPAM				*e*S	**Sn**	**06 06 06.1**	**+0.2**
OPAM				IAML		06 06 10.4	
	comp=Z,1µm,0.3s						
OPAM	**Oficina de Pla**	**0.86**	**339**	*e*P	**Pn**	**06 05 53.4**	**-0.8**
OPAM				*e*S	**Sn**	**06 06 06.1**	**+0.2**
OPAM				IAML		06 06 10.4	
	comp=Z,1µm,0.3s						
LFU	**La Fuente**	**0.87**	**345**	*e*P	**Pn**	**06 05 54.2**	**-0.2**
LFU	**La Fuente**	**0.87**	**345**	*e*P	**Pn**	**06 05 54.2**	**-0.2**
UESS	**Universidad de**	**0.87**	**339**	*e*P	**Pn**	**06 05 54.1**	**-0.2**
UESS				*e*S	**Sn**	**06 06 06.2**	**+0.2**
UESS	**Universidad de**	**0.87**	**339**	*e*P	**Pn**	**06 05 54.1**	**-0.2**
UESS				*e*S	**Sn**	**06 06 06.2**	**+0.2**
UEES	**Universidad Ev**	**0.88**	**336**	*e*P	**Pn**	**06 05 54.1**	**-0.4**
UEES				*e*S	**Sn**	**06 06 06.1**	**-0.3**
UEES				IAML		06 06 09.2	
	comp=Z,2µm,0.1s						
UEES	**Universidad Ev**	**0.88**	**336**	*e*P	**Pn**	**06 05 54.1**	**-0.4**
UEES				*e*S	**Sn**	**06 06 06.1**	**-0.3**
UEES				IAML		06 06 09.2	
	comp=Z,2µm,0.1s						
PMON	**Piamonte**	**0.91**	**332**	*e*P	**Pn**	**06 05 54.5**	**-0.4**
PMON	**Piamonte**	**0.91**	**332**	*e*P	**Pn**	**06 05 54.5**	**-0.4**
BOQS	**Boqueron**	**0.92**	**335**	*e*P	**Pn**	**06 05 54.9**	**-0.1**
BOQS				*e*S	**Sn**	**06 06 06.9**	**-0.4**
BOQS	**Boqueron**	**0.92**	**335**	*e*P	**Pn**	**06 05 54.9**	**-0.1**
BOQS				*e*S	**Sn**	**06 06 06.9**	**-0.4**
JAYA	**Jayaque - finc**	**0.93**	**323**	*e*P	**Pn**	**06 05 55.1**	**-0.1**
JAYA				*e*S	**Sn**	**06 06 07.8**	**+0.1**
JAYA				IAML		06 06 10.3	
	comp=Z,2µm,0.2s						
JAYA	**Jayaque - finc**	**0.93**	**323**	*e*P	**Pn**	**06 05 55.1**	**-0.1**
JAYA				*e*S	**Sn**	**06 06 07.8**	**+0.1**
JAYA				IAML		06 06 10.3	
	comp=Z,2µm,0.2s						
CEDA	**San Andres**	**1.03**	**331**	*e*P	**Pn**	**06 05 56.5**	**+0.1**
CEDA				*e*S	**Sn**	**06 06 09.9**	**0.0**
CEDA				IAML		06 06 13.4	
	comp=Z,1µm,0.3s						
CEDA	**San Andres**	**1.03**	**331**	*e*P	**Pn**	**06 05 56.5**	**+0.1**
CEDA				*e*S	**Sn**	**06 06 09.9**	**0.0**
CEDA				IAML		06 06 13.4	
	comp=Z,1µm,0.3s						
LCND	**La Caada**	**1.04**	**67**	*e*P	**Pn**	**06 05 56.2**	**-0.4**
LCND				*e*S	**Sn**	**06 06 10.1**	**0.0**
LCND				IAML		06 06 14.1	
	comp=Z,1µm,0.3s						
LCND	**La Caada**	**1.04**	**67**	*e*P	**Pn**	**06 05 56.2**	**-0.4**
LCND				*e*S	**Sn**	**06 06 10.1**	**0.0**
LCND				IAML		06 06 14.1	
	comp=Z,1µm,0.3s						
CNCH	**Conchagua**	**1.08**	**70**	*e*P	**Pn**	**06 05 57.0**	**-0.3**
CNCH	**Conchagua**	**1.08**	**70**	*e*P	**Pn**	**06 05 57.0**	**-0.3**
CEVE	**Cerro Verde**	**1.17**	**322**	*e*P	**Pn**	**06 05 59.2**	**+0.6**
CEVE				*e*S	**Sn**	**06 06 15.0**	**+1.2**
CEVE				IAML		06 06 21.1	
	comp=Z,1000nm,0.3s						
CEVE	**Cerro Verde**	**1.17**	**322**	*e*P	**Pn**	**06 05 59.2**	**+0.6**
CEVE				*e*S	**Sn**	**06 06 15.0**	**+1.2**
CEVE				IAML		06 06 21.1	
	comp=Z,1000nm,0.3s						
SBLS	**San Blas**	**1.18**	**322**	*e*P	**Pn**	**06 05 59.3**	**+0.6**
SBLS	**San Blas**	**1.18**	**322**	*e*P	**Pn**	**06 05 59.3**	**+0.6**
LLGN	**La Laguna**	**1.25**	**357**	*e*P	**Pn**	**06 05 59.0**	**-0.7**
LLGN				*e*S	**Sn**	**06 06 15.6**	**+0.1**
LLGN				IAML		06 06 21.5	
	comp=Z,229nm,0.4s						
LLGN	**La Laguna**	**1.25**	**357**	*e*P	**Pn**	**06 05 59.0**	**-0.7**
LLGN				*e*S	**Sn**	**06 06 15.6**	**+0.1**
LLGN				IAML		06 06 21.5	
	comp=Z,229nm,0.4s						

IDC ***04*** *06:11:48.7±4.5, 15°.39N×93°.39W, h0^{km}, mb3.5/3, mb1 4.0/5, mb1mx3.6/33, mbtmp3.6/5, ML3.7/2, MS3.0/3, Ms1 3.1/3, ms1mx2.7/23, Error ellipse: s-maj=133.2km s-min=46.4km az=36.0*

MEX ***04*** *06:11:52.0±0.7, 14°.85N×93°.82W, h15^{km}, MD4.4*

GCG ***04*** *06:11:54.0±0.6, 15°.07N×93°.50W, h0^{km}±209^{km}, MD4.5*

ISC 04 06:11:47.9±3.3**, 14°.96N**±0°.06×**93°.95W**±0°.04**, h7**^{km}±21^{km}**, n19, σ1^{s}.92**/30**, mb3.6**/3**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		**1.02**	**44**	*i* P	**Pb**	**06 12 07.6**	**-0.3**
PCIG				*i* S	**Sn**	**06 12 21.9**	**-1.3**
PCIG		**1.02**	**44**	*e*P	**Pb**	**06 12 07.6**	**-0.3**
PCIG				*i* S	**Sb**	**06 12 21.1**	**-0.4**
THIG		**1.63**	**92**	*e*P	**Pn**	**06 12 15.1**	**-1.9**
THIG				*i* S	**Sn**	**06 12 31.6**	**-6.6**
TGIG		**1.97**	**24**	*i* P	**Pb**	**06 12 23.0**	**-1.2**
TGIG				*e*S	**Sn**	**06 12 46.4**	**-0.5**
TGIG		**1.97**	**24**	*e*P	**Pb**	**06 12 23.0**	**-1.2**
TGIG				*e*S	**Sn**	**06 12 46.4**	**-0.5**
TGBT	**Tuxtla Gutierr**	**1.98**	**25**	*i* P	**Pb**	**06 12 23.5**	**-0.9**
TGBT				*i* S	**Sb**	**06 12 47.5**	**-1.8**
CCIG	**Comitan**	**2.18**	**53**	*i* P	**Pb**	**06 12 26.6**	**-1.2**
CCIG				*i* S	**Sn**	**06 12 52.2**	**0.0**
HUIG	**Huatulco**	**2.23**	**291**	*i* P	**Pn**	**06 12 24.8**	**-0.5**
HUIG				*i* S	**Sn**	**06 12 49.4**	**-3.7**
CMIG	**Matias Romero**	**2.30**	**337**	Pn	**Pn**	**06 12 26.7**	**+0.5**
	21nm,0.3s,baz=144,slow=12,SNR=44						
CMIG				Sn	**Sn**	**06 12 54.7**	**-0.1**
	172nm,0.3s,baz=114,slow=14,SNR=21						
CMIG				LR	LR	06 13 23.8	
	comp=Z,128nm,19.4s,baz=142,slow=43						
CMIG	**Matias Romero**	**2.30**	**337**	*i* P	**Pn**	**06 12 26.8**	**+0.5**
CMIG				*i* S	**Sn**	**06 12 54.2**	**-0.6**
FUG	**Fuego 3**	**3.05**	**99**	*e*P	**Pn**	**06 12 38.1**	**+1.3**
FUG				*e*S	**Sn**	**06 13 13.2**	**-0.4**
PCG	**Pacaya**	**3.28**	**100**	*e*P	**Pn**	**06 12 42.0**	**+2.0**
IXG	**Ixpaco**	**3.49**	**103**	*e*P	**Pn**	**06 12 45.1**	**+2.3**
IXG				*e*S	**Sn**	**06 13 24.2**	**-0.2**
MRL	**Marmol**	**4.12**	**88**	*e*P	**Pn**	**06 12 53.2**	**+1.6**
TXAR	**Lajitas Array**	**16.88**	**330**	Pn	**P**	**06 15 48.5**	**+1.5**
	0.1nm,0.3s,baz=156,slow=14,SNR=13						
LPIG	**La Paz**	**17.88**	**303**	LR	LR	06 22 01.6	
	comp=Z,44nm,18.6s,baz=96,slow=34						
NVAR	**Mina Array Bea**	**31.75**	**322**	P	**P**	**06 18 15.4**	**+2.4**
	0.7nm,0.7s,baz=145,slow=9.6,SNR=7.5						
NVAR				LR	LR	06 32 29.5	
	comp=Z,72nm,18.4s,baz=258,slow=39						
YKA	**Yellowknife Ar**	**49.67**	**348**	P	**P**	**06 20 39.8**	**-0.4**
	0.4nm,0.6s,baz=148,slow=7.9,SNR=8.3						
ILAR	**Eielson Array**	**61.22**	**337**	P	**P**	**06 22 03.4**	**+0.2**
	0.4nm,0.8s,baz=140,slow=4.4,SNR=5.9						

MEX 04 06:25:40.1±0.6**, 16°.10N×98°.32W, h13**^{km}±7^{km}**, MD3.8, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.34**	**32**	*i* P	Pg	06 25 43.6	-3.4
PNIG				*i* S	Sg	06 25 48.5	-3.3
PNIG	**Pinotepa**	**0.34**	**32**	*i* P	Pg	06 25 43.6	-3.4
PNIG				*i* S	Sg	06 25 48.5	-3.3
CRIG	**Cruz Grande**	**1.00**	**309**	*i* P	Pb	06 25 55.7	-3.7
CRIG				*i* S	Sb	06 26 09.1	-3.5
CRIG	**Cruz Grande**	**1.00**	**309**	*e*P	Pb	06 25 55.6	-3.8
CRIG				*e*S	Sb	06 26 08.7	-3.8
YOIG	**Yosondua**	**1.05**	**44**	*e*P	Pb	06 25 56.8	-3.6
YOIG				*e*S	Sb	06 26 10.1	-4.1
YOIG	**Yosondua**	**1.05**	**44**	*e*P	Pb	06 25 56.8	-3.5
YOIG				*e*S	Sb	06 26 10.2	-4.0
PEIG	**Puerto Escondi**	**1.13**	**95**	*i* P	Pb	06 25 58.3	-3.2
PEIG				*i* S	Sb	06 26 13.3	-2.8
PEIG	**Puerto Escondi**	**1.13**	**95**	*e*P	Pb	06 25 58.3	-3.2
PEIG				*e*S	Sb	06 26 11.3	-4.8
TXIG	**Tlaxiaco**	**1.26**	**25**	*i* P	Pn	06 26 00.1	-3.6
TXIG				*i* S	Sb	06 26 14.5	-5.6
TXIG	**Tlaxiaco**	**1.26**	**25**	*e*P	Pn	06 26 00.0	-3.7
TXIG				*e*S	Sb	06 26 15.4	-4.8
TLIG	**Tlapa**	**1.47**	**351**	*i* P	Pn	06 26 03.3	-3.2
TLIG				*i* S	Sn	06 26 20.2	-5.5
TLIG	**Tlapa**	**1.47**	**351**	*e*P	Pn	06 26 03.3	-3.2
TLIG				*i* S	Sn	06 26 20.5	-5.2

IDC 04 06:28:12.8±3.3**, 53°.50N×87°.41E, h0**^{km}**, mb1 2.6**/2**, mb1mx2.6**/31**, mbtmp2.6**/2**, ML2.2**/2**, Error ellipse: s-maj=28.9km s-min=16.9km az=62.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.60**	**287**	*i*		06 37 00.0	
	baz=104,slow=334,SNR=4.6						
ZALV	**Zalesovo Beam**	**1.60**	**287**	Pg	Pn	06 28 42.4	0.0
	0.8nm,0.3s,baz=104,slow=14,SNR=8.9						
ZALV				Lg	Lg	06 29 02.5	
	0.4nm,0.3s,baz=117,slow=28,SNR=3.1						
KURBB	**Kurchatov Arra**	**6.19**	**246**	Pn	Pn	06 29 46.8	+1.6
	0.1nm,0.3s,baz=63,slow=14,SNR=2.6						
KURBB				Lg	Lg	06 31 28.5	
	0.0nm,0.3s,baz=64,slow=31,SNR=2.9						
MKAR	**Makanchi Array**	**7.47**	**208**	Pn	Pn	06 30 03.3	+0.4
	0.1nm,0.3s,baz=30,slow=16,SNR=2.4						
MKAR				Lg	Lg	06 32 10.1	
	0.0nm,0.3s,baz=24,slow=28,SNR=3.5						

IDC 04 06:32:48.9±2.6**, 54°.19N×86°.33E, h0**^{km}**, mb1 2.7**/2**, mb1mx2.7**/31**, mbtmp2.7**/2**, ML2.4**/2**, Error ellipse: s-maj=19.9km s-min=11.9km az=60.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.92**	**255**	*i*		06 38 15.9	
	baz=72,slow=338,SNR=5.0						
ZALV	**Zalesovo Beam**	**0.92**	**255**	Pg	Pg	06 33 05.2	-1.3
	2.1nm,0.3s,baz=75,slow=17,SNR=25						
ZALV				Lg	Lg	06 33 20.1	
	4.0nm,0.3s,baz=77,slow=30,SNR=27						
ZALV				Rg	Rg	06 33 26.0	
	12nm,0.9s,baz=74,slow=27,SNR=20						
KURBB	**Kurchatov Arra**	**5.96**	**236**	Pn	Pn	06 34 19.1	+0.8
	0.1nm,0.3s,baz=52,slow=13,SNR=4.3						
KURBB				Lg	Lg	06 35 59.3	
	0.0nm,0.3s,baz=47,slow=32,SNR=2.7						
MKAR	**Makanchi Array**	**7.84**	**201**	Pn	Pn	06 34 45.5	+1.3
	0.1nm,0.3s,baz=24,slow=13,SNR=5.3						

IDC ***04*** *06:46:15.7±1.4, 27°.83N×52°.62E, h0^{km}, mb3.8/8, mb1 4.0/11, mb1mx3.7/34, mbtmp3.8/11, ML3.7/3, MS2.9/6, Ms1 2.9/6, ms1mx2.6/44, Error ellipse: s-maj=29.4km s-min=24.3km az=7.0*

TEH ***04*** *06:46:17.7, 27°.93N×52°.72E, h17^{km}, ML4.0*

SGS ***04*** *06:46:18.9, 28°.13N×52°.84E, h7^{km}, Ml3.7*

OMAN ***04*** *06:46:19.5±1.4, 27°.71N×52°.61E, h17^{km}, ml3.8/5, ms2.5/2, Error ellipse: s-maj=12.1km s-min=5.7km az=17.0*

THR ***04*** *06:46:19.6±0.6, 28°.09N×52°.77E, h16^{km}±6^{km}, ML3.8*

NEIC ***04*** *06:46:21.3±1.4, 27°.9N±0°.1×52°.7E±0°.1, h35^{km}±6^{km}, Error ellipse: s-maj=15.5km s-min=12.7km az=197.0*

ISC 04 06:46:18.4±0.5**, 27°.89N**±0°.04×**52°.71E**±0°.04**, h15**^{km}**, n107, σ1^{s}.19**/111**, mb4.0**/13**, MS2.9**/3**, 1C, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QIR1	**Qir**	**0.65**	**27**	*e*Pg	**Pg**	**06 46 29.4**	**-1.9**
QIR1				*e*		06 46 45.7	
	comp=Z,99nm,0.4s						
LMD1	**Lamerd**	**0.69**	**143**	*e*Pg	**Pg**	**06 46 31.3**	**-0.6**
JHRM	**Jahrom**	**0.98**	**51**	*e*Pg	**Pb**	**06 46 35.9**	**-1.3**
JHRM				*e*		06 47 02.3	
	comp=Z,99nm,0.5s						
LAR1	**LAR**	**1.50**	**98**	*e*Pg	**Pb**	**06 46 46.4**	**+0.4**
AHBU	**AHRAM**	**1.57**	**308**	*e*Pg	**Pb**	**06 46 47.3**	**0.0**
SHI	**Shiraz**	**1.75**	**355**	*e*Pg	**Pn**	**06 46 49.6**	**+1.2**
SHI				*e*		06 47 24.3	
	comp=Z,99nm,0.6s						
KAZ1	**Kazerun**	**1.96**	**332**	*e*Pn	**Pn**	**06 46 51.5**	**+0.2**
KAZ1				*e*		06 47 39.5	
	comp=Z,99nm,0.4s						
JRN	**Qarnain Island**	**2.94**	**177**	*e*Pn	**Pn**	**06 47 06.8**	**+2.1**
BNDS	**Bandar-Abbas**	**3.11**	**98**	*e*Pn	**Pn**	**06 47 10.1**	**+2.9**
BNDS				*e*Sg	**Sg**	**06 47 56.2**	**-2.4**
BNDS	**Bandar-Abbas**	**3.11**	**98**	*e*Pn	**Pn**	**06 47 10.1**	**+2.9**
GENO	**Geno**	**3.11**	**98**	*e*Pn	**Pn**	**06 47 08.7**	**+1.5**
GENO				*e*		06 48 23.4	
	comp=Z,99nm,0.8s						
KLNJ	**Kolanjah**	**3.25**	**343**	*e*Pn	**Pn**	**06 47 09.4**	**+0.1**
SHME	**Shamm**	**3.57**	**120**	*e*Pn	**Pn**	**06 47 12.9**	**-0.5**
BANOM	**Banah**	**3.76**	**121**	*e*Pn	**Pn**	**06 47 16.3**	**+0.3**
BANOM	**Banah**	**3.76**	**121**	P	**Pn**	**06 47 16.5**	**+0.5**
	SNR=16						
BANOM				S	**Sn**	**06 48 00.9**	**+0.9**
IMEH	**Mehriz**	**3.86**	**25**	*e*Pn	**Pn**	**06 47 19.4**	**+1.9**
IRAM	**Ramesheh**	**3.91**	**356**	*e*Pn	**Pn**	**06 47 18.8**	**+0.6**
NAZ	**Nazwa, Dubai**	**3.92**	**137**	*e*Pn	**Pn**	**06 47 19.4**	**+1.2**
NAZ	**Nazwa, Dubai**	**3.92**	**137**	P	**Pn**	**06 47 19.7**	**+1.5**
	SNR=5.5						
NAZ				S	**Sn**	**06 48 05.1**	**+1.2**
NGRK	**Negar Kerman**	**3.94**	**63**	*e*Pn	**Pn**	**06 47 19.2**	**+0.5**
NGRK				*e*		06 48 30.6	
	comp=Z,99nm,0.8s						
MASF	**Masafi**	**3.98**	**128**	P	**Pn**	**06 47 19.9**	**+0.9**
MASF				S	**Sn**	**06 48 06.7**	**+1.2**
KRBR	**Kerman**	**4.12**	**59**	*e*Pn	**Pn**	**06 47 22.3**	**+1.2**
KRBR				IAML		06 48 32.7	
	comp=E,106nm,0.5s						
KRBR				IAML		06 48 33.0	
	comp=N,98nm,0.6s						
KRBR	**Kerman**	**4.12**	**59**	*e*Pn	**Pn**	**06 47 22.3**	**+1.2**
TVBK	**TV Kerman**	**4.12**	**59**	*e*Pn	**Pn**	**06 47 21.6**	**+0.4**
TVBK				*e*		06 47 37.6	
	comp=Z,99nm,0.4s						
KHGB	**Koh Gabri**	**4.12**	**52**	*e*Pn	**Pn**	**06 47 22.1**	**+1.0**
KHGB				*e*		06 47 41.3	
	comp=Z,99nm,0.6s						
UOSS	**Minazif**	**4.30**	**132**		**Pn**	**06 47 23.5**	**+0.2**
UOSS	**Minazif**	**4.30**	**132**	*e*Pn	**Pn**	**06 47 23.6**	**+0.2**
HATD	**Hatta, Dubai**	**4.33**	**134**	*e*Pn	**Pn**	**06 47 25.0**	**+1.2**
ASHO	**Ashiyiah**	**4.39**	**136**	*e*Pn	**Pn**	**06 47 25.3**	**+0.6**
ASHO	**Ashiyiah**	**4.39**	**136**	P	**Pn**	**06 47 25.2**	**+0.6**
	SNR=7.5						
ASHO				S	**Sn**	**06 48 14.6**	**-1.0**
IBAF	**Bafgh**	**4.45**	**33**	*e*Pn	**Pn**	**06 47 26.8**	**+1.3**
IGAR	**Gharneh**	**4.53**	**353**	*e*Pn	**Pn**	**06 47 27.1**	**+0.4**
ICHK	**Chekchek**	**4.58**	**18**	*e*Pn	**Pn**	**06 47 28.8**	**+1.4**
CHMN	**Cheshme madani**	**4.67**	**64**	*e*Pn	**Pn**	**06 47 30.0**	**+1.2**
CHMN				*e*		06 48 27.7	
	comp=Z,99nm,0.4s						
YZKH	**Yazd**	**4.77**	**20**	*e*Pn	**Pn**	**06 47 30.4**	**+0.5**
YZKH	**Yazd**	**4.77**	**20**	*e*Pn	**Pn**	**06 47 30.4**	**+0.5**
AMIS	**Naft Sefid**	**4.79**	**322**	*e*Pn	**Pn**	**06 47 30.9**	**+0.8**
NASN	**Na'in**	**4.89**	**1**	*e*P	**Pn**	**06 47 32.8**	**+1.0**
NASN	**Na'in**	**4.89**	**1**	*e*Pn	**Pn**	**06 47 32.8**	**+1.0**
IZEF	**Zefreh**	**5.00**	**356**	*e*Pn	**Pn**	**06 47 33.4**	**+0.2**
SOHO	**SOHO**	**5.09**	**137**	*e*Pn	**Pn**	**06 47 34.7**	**+0.5**
SOHO	**SOHO**	**5.09**	**137**	P	**Pn**	**06 47 34.5**	**+0.4**
KBAM	**BAM**	**5.21**	**75**	*e*Pn	**Pn**	**06 47 37.0**	**+1.1**
ANAR	**Anarak**	**5.35**	**9**	*e*Pn	**Pn**	**06 47 38.9**	**+1.0**
IKLH	**Kolahrood**	**5.49**	**350**	*e*Pn	**Pn**	**06 47 40.3**	**+0.3**
UMZA	**Um Al Zommool**	**5.62**	**156**	*e*Pn	**Pn**	**06 47 41.5**	**+0.1**
ARQ	**Araqi**	**5.70**	**142**	P	**Pn**	**06 47 43.0**	**+0.4**
	SNR=11						
ARQ				S	**Sn**	**06 48 45.8**	**-1.9**
HOQ	**Hoqain**	**5.97**	**135**	P	**Pn**	**06 47 47.0**	**+0.6**
HOQ				S	**Sn**	**06 48 53.0**	**-1.5**
RQBS	**RQBS**	**6.01**	**266**	S	**Sn**	**06 48 54.6**	**-0.9**
RQBS				P	**Pn**	**06 47 48.2**	**+1.3**
KRSH	**Karshahi**	**6.08**	**356**	*e*Pn	**Pn**	**06 47 47.9**	**0.0**
TPRV	**Parvadeh(Tabas**	**6.16**	**33**	*e*Pn	**Pn**	**06 47 48.9**	**-0.1**
BSY	**Bisya**	**6.54**	**141**	P	**Pn**	**06 47 54.6**	**+0.4**
	SNR=11						
SMDO	**Samad**	**6.82**	**134**	P	**Pn**	**06 47 58.1**	**+0.1**
	SNR=9.5						
TKDS	**Koohdasht(Taba**	**6.85**	**33**	*e*Pn	**Pn**	**06 47 59.1**	**+0.6**
TABS	**Tabas**	**6.88**	**32**	*e*Pn	**Pn**	**06 47 59.5**	**+0.6**
TABS	**Tabas**	**6.88**	**32**	*e*Pn	**Pn**	**06 47 59.5**	**+0.6**
ASAO	**Ashtian**	**7.02**	**342**	*e*Pn	**Pn**	**06 48 01.3**	**+0.4**
ASAO	**Ashtian**	**7.02**	**342**	*e*Pn	**Pn**	**06 48 01.3**	**+0.4**
IQOM	**Qom**	**7.07**	**349**	*e*Pn	**Pn**	**06 48 01.2**	**-0.4**
WSAR	**Wadi Sarin**	**7.08**	**130**	Pn	**Pn**	**06 48 01.2**	**-0.4**
	comp=Z,1.7nm,0.3s,baz=312,slow=10,SNR=15						
WSAR				Sn	**Sn**	**06 49 16.7**	**-5.1**
	baz=158,slow=18,SNR=1.9						
IVRN	**Varamin**	**7.13**	**354**	*e*Pn	**Pn**	**06 48 02.3**	**0.0**
ZHSF	**Zahedan**	**7.29**	**75**	*e*Pn	**Pn**	**06 48 06.2**	**+1.7**
ZHSF	**Zahedan**	**7.29**	**75**	*e*Pn	**Pn**	**06 48 06.2**	**+1.7**
JMDO	**Jabal Madar**	**7.36**	**137**	P	**Pn**	**06 48 06.3**	**+0.9**
IANJ	**Anjilo**	**7.62**	**7**	*e*Pn	**Pn**	**06 48 10.4**	**+1.2**
WBK	**Wadi Bani Khal**	**7.73**	**131**	P	**Pn**	**06 48 10.0**	**-0.6**
	SNR=11						
RAYN	**Ar Rayn**	**7.82**	**238**		**Pn**	**06 48 12.0**	**+0.2**
JLN	**Jalan Bani Buh**	**8.35**	**132**	P	**Pn**	**06 48 17.8**	**-1.2**
MHTO	**MHTO**	**8.38**	**144**	P	**Pn**	**06 48 19.5**	**+0.1**
	SNR=16						
IDHR	**Dehrash**	**8.67**	**323**	*e*Pn	**Pn**	**06 48 23.4**	**-0.2**
DOK	**Doka**	**9.32**	**172**	P	**Pn**	**06 48 31.3**	**-1.0**
	SNR=7.1						
WHFO	**Wadi Hawf**	**9.98**	**174**	P	**Pn**	**06 48 40.2**	**-1.2**
	SNR=11						
DMTO	**DMTO**	**10.34**	**168**	P	**Pn**	**06 48 44.4**	**-1.9**
ABTO	**Aybut**	**10.50**	**177**	P	**Pn**	**06 48 47.6**	**-1.0**
GEVA	**Gevas**	**13.16**	**325**	Pn	**Pn**	**06 49 23.6**	**-1.4**
GNI	**Garni**	**13.88**	**334**	LR	LR	06 56 17.0	
	comp=Z,36nm,19.1s,baz=128,slow=43						
MMAI	**Mount Meron Ar**	**15.77**	**293**	LR	LR	06 56 22.6	
	comp=Z,34nm,19.8s,baz=45,slow=39						
KBZ	**Khabaz**	**17.67**	**336**	P	**P**	**06 50 25.0**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=156,slow=10.0,SNR=2.4						
NIL	**Nilore**	**18.55**	**67**	P	**P**	**06 50 35.1**	**+0.4**
NIL				IAmb	IAmb	06 50 39.4	
	comp=Z,18nm,0.9s						
BR131	**Keskin Array S**	**19.71**	**312**	P	**P**	**06 50 47.2**	**-0.2**
BR131				IAmb	IAmb	06 50 49.9	
	comp=Z,5.2nm,0.9s						
BRTR	**Keskin Array B**	**19.71**	**312**	P	**P**	**06 50 47.6**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=130,slow=13,SNR=11						
BRTR				LR	LR	06 59 35.4	
	comp=Z,18nm,19.5s,baz=124,slow=41						
BRTR	**Keskin Array B**	**19.71**	**312**	P	**P**	**06 50 47.8**	**+0.3**
KK31	**Karatay Array**	**20.92**	**39**	P	**P**	**06 51 00.4**	**0.0**
KKAR	**Karatay Array**	**20.92**	**39**	P	**P**	**06 51 01.0**	**+0.6**
KKAR	**Karatay Array**	**20.92**	**39**	P	**P**	**06 51 00.7**	**+0.2**
KKAR				IAmb	IAmb	06 51 20.0	
	comp=Z,2.2nm,0.7s						
ELL	**Elmali**	**21.15**	**300**	P	**P**	**06 51 03.8**	**+0.6**
ELL				IAmb	IAmb	06 51 19.9	
	comp=Z,29nm,1.0s						
AKAS	**Kas**	**21.23**	**299**	P	**P**	**06 51 03.4**	**-0.6**
AKAS				IAmb	IAmb	06 51 08.9	
	comp=Z,40nm,1.3s						
ABKAR	**Akbulak array**	**22.05**	**13**	P	**P**	**06 51 13.1**	**+0.6**
ABKAR	**Akbulak array**	**22.05**	**13**	P	**P**	**06 51 13.3**	**+0.8**
ABKAR				IAmb	IAmb	06 51 35.0	
	comp=Z,3.6nm,1.4s						
AKTO	**Aktyubinsk**	**22.87**	**9**	P	**P**	**06 51 21.7**	**+0.4**
	comp=Z,0.6nm,0.3s,baz=186,slow=8.1,SNR=5.1						
MLR	**Muntele Rosu**	**27.54**	**317**	LR	LR	07 04 04.5	
	comp=Z,30nm,18.9s,baz=310,slow=39						
BURAR	**Bucovina Array**	**29.08**	**320**	P	**P**	**06 52 19.3**	**+0.9**
BUR08	**Bucovina Ar. S**	**29.11**	**320**	P	**P**	**06 52 19.1**	**+0.5**
BUR08				IAmb	IAmb	06 52 24.6	
	comp=Z,5.3nm,1.4s						
MKAR	**Makanchi Array**	**29.89**	**43**	P	**P**	**06 52 26.5**	**+1.0**
	comp=Z,0.3nm,0.4s,baz=232,slow=6.0,SNR=5.8						
MKAR	**Makanchi Array**	**29.89**	**43**	P	**P**	**06 52 25.4**	**-0.1**
ZALV	**Zalesovo Beam**	**35.06**	**33**	P	**P**	**06 53 10.7**	**+0.1**
	comp=Z,1.6nm,0.4s,baz=244,slow=9.7,SNR=7.9						
FIA1	**FINESS Array S**	**37.97**	**340**	P	**P**	**06 53 34.8**	**-0.5**
FINES	**FINESS Array B**	**37.97**	**340**	P	**P**	**06 53 35.1**	**-0.2**
	comp=Z,1.4nm,0.5s,baz=141,slow=11,SNR=10						
GTA	**Gaotai**	**40.45**	**61**	⇑P	**P**	**06 54 01.2**	**+4.6**
GTA				pP	sP	06 54 15.4	+12
GTA				sP	pP	06 54 22.5	+21
GTA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
NC405	**NORSAR Array S**	**43.01**	**332**	P	**P**	**06 54 17.2**	**+0.1**
NOA	**NORSAR Array B**	**43.18**	**332**	P	**P**	**06 54 17.2**	**-1.2**
	comp=Z,1.0nm,0.7s,baz=121,slow=8.1,SNR=4.2						
NOA				LR	LR	07 14 50.8	
	comp=Z,11nm,21.6s,baz=340,slow=40						
ARCES	**ARCESS Array B**	**44.56**	**347**	P	**P**	**06 54 29.0**	**-0.4**
	comp=Z,1.5nm,0.7s,baz=142,slow=8.5,SNR=9.4						
TOA0	**Torodi Ar. Sit**	**49.63**	**264**	P	**P**	**06 55 10.7**	**+0.9**
TOA0				IAmb	IAmb	06 55 15.2	
	comp=Z,2.1nm,1.0s						
TORD	**Torodi Ar. Bea**	**49.63**	**264**	P	**P**	**06 55 08.9**	**-0.8**
	comp=Z,1.1nm,0.6s,baz=61,slow=7.8,SNR=5.8						
TORD	**Torodi Ar. Bea**	**49.63**	**264**	IAmb	IAmb	06 55 10.9	
	comp=Z,1.1nm,0.8s						
DAV	**Davao City (W)**	**71.60**	**92**	LR	LR	07 33 12.1	
	comp=Z,33nm,19.6s,baz=40,slow=39						
YKA	**Yellowknife Ar**	**89.36**	**354**	P	**P**	**06 59 13.4**	**-0.7**
	comp=Z,0.2nm,0.7s,baz=13,slow=5.3,SNR=5.0						

MAN 04 07:04:41.8, 16°.14N×120°.66E, h18^{km}**, mb4.5, ML3.4, MS3.3, 1C, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPP	**San Manuel, Pa**	**0.02**	**63**	*e*P	Pg	07 04 44.4	-0.6
SMPP				*e*S	Sg	07 04 45.7	-1.5
BCP	**Baguio City**	**0.28**	**350**	⇑*i*P	Pb	07 04 49.4	+1.0
BCP				*i* S	Sg	07 04 51.6	-0.9
BALP	**Baler**	**0.96**	**114**	*e*P	Pb	07 04 59.6	-0.5
BALP				*e*S	Sn	07 05 14.3	+0.6

IDC ***04*** *07:05:45.6±0.8, 36°.08N×141°.14E, h0^{km}, mb3.7/12, mb1 3.9/15, mb1mx3.8/34, mbtmp3.7/15, ML3.5/3, Error ellipse: s-maj=19.7km s-min=16.8km az=96.0*

NEIC ***04*** *07:05:46.1±2.0, 36°.08N±0°.05×141°.24E±0°.06, h5^{km}±4^{km}, mb4.3/9, Error ellipse: s-maj=8.0km s-min=6.9km az=200.0*

JMA ***04*** *07:05:47.5±0.2, 36°.07N×141°.18E, h36^{km}±2^{km}, M3.7*

JMA Felt I J1.

NIED ***04*** *07:05:47.5, 36°.07N×141°.19E, h36^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$-1.81; M$_{\theta\theta}$0.14; M$_{\phi\phi}$1.66; M$_{r\theta}$-0.75; M$_{\theta\phi}$2.56; M$_{\phi r}$-2.71; Fault plane solution: M$_0$4.04000×10^{14} NP1:ϕ_s12.00000°, δ72.00000°, λ-118.00000°. NP2:ϕ_s252.00000°, δ32.00000°, λ-34.00000°.*

ISC 04 07:05:47.2±1.4**, 36°.13N**±0°.04×**141°.23E**±0°.05**, h12**^{km}±9^{km}**, n55, σ1^{s}.08**/53**, mb3.9**/16**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.53**	**215**	P	**Pg**	**07 05 57.4**	**-0.1**
CHOJ				*e*S	**Sg**	**07 06 04.6**	**+0.1**
JHYU	**Hitachinakayam**	**0.56**	**292**	P	**Pg**	**07 05 59.0**	**+0.8**
JHYU				S	**Sb**	**07 06 07.4**	**+0.5**
JIHU	**Itakohorinouch**	**0.59**	**254**	P	**Pg**	**07 05 59.3**	**+0.5**
JHO	**Hitachi**	**0.71**	**312**	P	**Pg**	**07 06 01.2**	**+0.1**
JHO				*e*S	**Sb**	**07 06 11.4**	**0.0**
JYT	**Yasato**	**0.84**	**277**	P	**Pb**	**07 06 02.6**	**-1.2**
JYT	**Yasato**	**0.84**	**277**	Pg	**Pb**	**07 06 02.7**	**-1.2**
JFK	**Kawauchi**	**1.26**	**347**	P	**Pn**	**07 06 09.1**	**-1.6**
JFK				*e*S	**Sb**	**07 06 25.1**	**-2.1**
BSO3	**Boso 3**	**1.45**	**204**	P	**Pn**	**07 06 12.2**	**-0.9**
JMM	**Marumori**	**1.76**	**349**		**Pn**	**07 06 16.8**	**-0.8**
MJAR	**Matsushiro Arr**	**2.47**	**280**	Pn	**Pn**	**07 06 26.7**	**-0.6**
	3.2nm,0.3s,baz=95,slow=8.7,SNR=107						
MJAR				Sn	**Sn**	**07 06 58.1**	**+0.6**
	1.1nm,0.3s,baz=85,slow=19,SNR=3.0						
MJAR	**Matsushiro Arr**	**2.47**	**280**		**Pn**	**07 06 25.9**	**-1.4**
MAJO	**Matsushiro**	**2.47**	**280**	Pn	**Pn**	**07 06 27.2**	**-0.2**
MAT	**Matsushiro**	**2.47**	**280**	P	**Pn**	**07 06 27.0**	**-0.4**
MAT				*e*S	**Sn**	**07 06 56.8**	**-0.7**
MJB9	**Matsu-Tunnel**	**2.48**	**280**		**Pn**	**07 06 27.5**	**0.0**
JSD	**Sado**	**3.04**	**310**	Pn	**Pn**	**07 06 35.8**	**+0.6**
JGF	**Kuroka**	**3.19**	**262**	Pn	**Pn**	**07 06 38.2**	**+1.0**
JHJ	**Hachijo jima 2**	**3.24**	**202**	Pn	**Pn**	**07 06 38.1**	**+0.3**
	12nm,0.3s,baz=78,slow=19,SNR=1.9						
JHJ				Sn	**Sn**	**07 07 16.1**	**-0.2**
	61nm,0.3s,baz=56,slow=23,SNR=7.2						
INU	**Inuyama**	**3.52**	**258**	Pn	**Pn**	**07 06 43.1**	**+1.5**
JTM	**Tenmabayashi**	**4.65**	**358**	Pn	**Pn**	**07 06 58.6**	**+1.4**
JWT	**Wachi**	**4.82**	**262**		**Pn**	**07 07 00.1**	**+0.5**
ERM	**Erimo**	**6.06**	**14**	Pn	**Pn**	**07 07 18.1**	**+1.5**
JHS	**Saijyo**	**6.71**	**263**	Pn	**Pn**	**07 07 24.8**	**-0.8**

ASAJ	**Asahikawa**	**8.04**	**7**	Pn	**Pn**	**07 07 44.0**	**+0.1**
	1.1nm,0.3s,baz=198,slow=20,SNR=2.7						
ASAJ				Sn	**Sn**	**07 09 11.7**	**-3.0**
	0.4nm,0.3s,baz=330,slow=20,SNR=2.0						
JKA	**Kamikawa-asahi**	**8.04**	**7**		**Pn**	**07 07 44.0**	**+0.1**
H11N2	**WAKE ISLAND Hy**	**27.83**	**119**	T	T	07 40 39.9	
	baz=311,slow=75,SNR=187						
H11N1	**WAKE ISLAND Hy**	**27.84**	**119**	T	T	07 40 39.7	
	baz=311,slow=75,SNR=136						
H11N3	**WAKE ISLAND Hy**	**27.85**	**119**	T	T	07 40 40.5	
	baz=311,slow=75,SNR=137						
SONM	**Songino Array**	**28.17**	**305**	P	**P**	**07 11 39.1**	**-0.5**
	0.7nm,0.4s,baz=108,slow=9.7,SNR=5.7						
H11S1	**WAKE ISLAND Hy**	**28.51**	**121**	T	T	07 41 30.3	
	baz=314,slow=75,SNR=499						
H11S3	**WAKE ISLAND Hy**	**28.51**	**121**	T	T	07 41 30.3	
	baz=314,slow=75,SNR=273						
H11S2	**WAKE ISLAND Hy**	**28.52**	**121**	T	T	07 41 32.4	
	baz=314,slow=75,SNR=222						
ZALV	**Zalesovo Beam**	**42.41**	**313**	P	**P**	**07 13 41.3**	**-0.1**
	1.5nm,0.5s,baz=94,slow=7.7,SNR=8.7						
MK31	**Makanchi Array**	**44.48**	**303**	P	**P**	**07 13 59.1**	**+0.8**
MKAR	**Makanchi Array**	**44.48**	**303**	P	**P**	**07 13 58.6**	**+0.3**
	1.2nm,0.7s,baz=89,slow=9.5,SNR=15						
MKAR	**Makanchi Array**	**44.48**	**303**	P	**P**	**07 13 57.8**	**-0.5**
KURK	**Kurchatov**	**46.37**	**309**	P	**P**	**07 14 12.7**	**-0.5**
KURK				IAmb	IAmb	07 14 13.7	
	comp=Z,3.4nm,0.8s						
ILAR	**Eielson Array**	**50.33**	**32**	P	**P**	**07 14 44.5**	**+1.0**
	comp=Z,0.4nm,0.8s,baz=263,slow=5.9,SNR=1.8						
KKAR	**Karatay Array**	**53.45**	**301**	P	**P**	**07 15 07.0**	**-0.1**
KKAR	**Karatay Array**	**53.45**	**301**	IAmb	IAmb	07 15 08.0	
	comp=Z,2.5nm,1.0s						
WB0	**Warramunga Arr**	**55.97**	**188**	P	**P**	**07 15 25.0**	**-0.5**
WR0	**Warramunga Arr**	**56.15**	**188**	P	**P**	**07 15 25.0**	**-1.7**
WB2	**Warramunga Arr**	**56.15**	**188**	P	**P**	**07 15 25.3**	**-1.4**
WB2				IAmb	IAmb	07 15 50.5	
	comp=Z,4.4nm,1.1s						
WRA	**Warramunga Arr**	**56.15**	**188**	P	**P**	**07 15 25.9**	**-0.9**
	comp=Z,0.5nm,0.5s,baz=5.4,slow=7.3,SNR=6.5						
ABKAR	**Akbulak array**	**58.41**	**311**	P	**P**	**07 15 42.6**	**+0.1**
ABKAR				IAmb	IAmb	07 15 42.9	
	comp=Z,1.8nm,0.8s						
ASAR	**Alice Springs**	**59.88**	**188**	P	**P**	**07 15 52.6**	**-0.3**
	comp=Z,0.4nm,0.7s,baz=15,slow=12,SNR=6.1						
YKA	**Yellowknife Ar**	**64.66**	**30**	P	**P**	**07 16 24.7**	**+0.2**
	comp=Z,0.1nm,0.5s,baz=309,slow=7.0,SNR=3.0						
FINES	**FINESS Array B**	**69.54**	**332**	P	**P**	**07 16 56.8**	**+1.3**
	comp=Z,2.6nm,0.9s,baz=64,slow=3.5,SNR=2.8						
AKASG	**Malin Array Be**	**74.92**	**322**	P	**P**	**07 17 27.5**	**-0.4**
	comp=Z,0.9nm,0.5s,baz=46,slow=5.8,SNR=4.7						
NOA	**NORSAR Array B**	**74.96**	**337**	P	**P**	**07 17 27.8**	**-0.2**
	comp=Z,1.0nm,0.9s,baz=39,slow=5.8,SNR=3.7						
NVAR	**Mina Array Bea**	**75.65**	**53**	P	**P**	**07 17 35.0**	**+2.4**
	comp=Z,0.2nm,0.7s,baz=294,slow=6.8,SNR=2.0						
NVAR	**Mina Array Bea**	**75.65**	**53**	P	**P**	**07 17 35.0**	**+2.4**
PDAR	**Pinedale Array**	**78.40**	**45**	P	**P**	**07 17 49.3**	**+1.3**
	comp=Z,0.2nm,0.6s,baz=282,slow=4.3,SNR=2.6						
H03N2	**Juan Fernandez**	**147.07**	**97**	T	T	10 09 45.6	
	baz=289,slow=76,SNR=7.7						
H03N3	**Juan Fernandez**	**147.08**	**97**	T	T	10 09 47.5	
	baz=289,slow=76,SNR=6.9						
H03N1	**Juan Fernandez**	**147.08**	**97**	T	T	10 09 47.0	
	baz=289,slow=76,SNR=7.2						

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*ANF **04** 07:09:32.8±0.3, 48°.19N×121°.65W, h15^{km}±2^{km}, ML2.2/6, Error ellipse: s-maj=2.4km s-min=1.7km az=27.0*
*SEA **04** 07:09:33.6±2.0, 48°.234N±0°.007×121°.64W±0°.02, h6^{km}±6^{km}, ML2.4/38, ML2.3/34(NEIC), Error ellipse: s-maj=2.0km s-min=0.7km az=114.0*
*NEIC **04** 07:09:33.0±1.8, 48°.20N±0°.01×121°.67W±0°.02, h1^{km}±8^{km}, Error ellipse: s-maj=2.5km s-min=1.7km az=54.0*
ISC 04 07:09:33.0±0.9**, 48°.20N**±0°.02×**121°.66W**±0°.02**, h15**^{km}±8^{km}**, n85, σ0.^{s}99**/93**, Washington**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCW	**Jim Creek**	**0.18**	**270**		**Pb**	**07 09 37.6**	**-0.5**
RPW	**Rockport**	**0.27**	**21**		**Pg**	**07 09 38.3**	**-0.6**
B05A	**Bryant**	**0.30**	**284**	P	**Pg**	**07 09 39.3**	**+0.1**
	baz=95,SNR=163						
B05A				S	**Sg**	**07 09 43.9**	**+0.4**
	baz=95						
B05A	**Bryant**	**0.30**	**284**		**Pg**	**07 09 39.4**	**+0.1**
B05A					**Sg**	**07 09 44.0**	**+0.5**
MBPA	**Monroe Substat**	**0.33**	**207**		**Sb**	**07 09 46.0**	**+0.2**
B06A	**Marblemount**	**0.34**	**20**		**Pg**	**07 09 39.3**	**-0.7**
B06A	**Marblemount**	**0.34**	**20**	IAML		07 09 44.0	
	comp=E,662nm,0.4s						
B06A				IAML		07 09 44.1	
	comp=N,443nm,0.2s						
GPW	**Glacier Peak**	**0.36**	**102**		**Pg**	**07 09 40.5**	**0.0**
CMW	**Cultus Mountai**	**0.38**	**307**		**Pg**	**07 09 40.5**	**-0.2**
BLH	**Bald Hill**	**0.44**	**215**		**Pb**	**07 09 42.7**	**+0.3**
C05A	**Tolt Reservoir**	**0.50**	**182**		**Pb**	**07 09 43.2**	**-0.3**
EARN	**East Ridge Ele**	**0.52**	**209**		**Pn**	**07 09 44.9**	**-1.0**
C06D	**Leavenworth**	**0.58**	**118**	P	**Pg**	**07 09 44.1**	**-0.3**
	baz=302,SNR=10						
C06D				S	**Sg**	**07 09 51.9**	**-0.3**
	baz=302						
C06D	**Leavenworth**	**0.58**	**118**		**Pg**	**07 09 44.3**	**-0.1**
MBW	**Mount Baker**	**0.61**	**345**		**Pg**	**07 09 44.0**	**-1.1**
WRW	**Wenatchee Ridg**	**0.62**	**123**		**Pg**	**07 09 45.1**	**-0.2**
SHUK	**Shuksan-Mt. Ba**	**0.66**	**359**		**Pg**	**07 09 44.6**	**-1.3**
ELW	**Echo Lake**	**0.71**	**191**		**Pn**	**07 09 47.7**	**-0.8**
ELW					**Sn**	**07 09 58.0**	**-1.2**
SP2	**Seward Park 2**	**0.75**	**212**		**Pn**	**07 09 49.1**	**0.0**
CDMR	**Cedar Moraine**	**0.78**	**185**		**Pb**	**07 09 48.3**	**+0.1**
RATT	**Rattlesnake La**	**0.78**	**187**		**Pb**	**07 09 48.2**	**0.0**
A05A	**Maple Falls**	**0.85**	**341**	Pg	**Pb**	**07 09 48.7**	**-0.8**
A05A				IAML		07 10 01.6	
	comp=E,77nm,0.6s						
A04D	**Lummi Island**	**0.87**	**307**	P	**Pb**	**07 09 49.5**	**-0.3**
	baz=124						
A04D				S	**Sg**	**07 10 01.6**	**+0.3**
	baz=124						
A04D	**Lummi Island**	**0.87**	**307**		**Pg**	**07 09 50.0**	**+0.1**
SLFW	**Sugar Loaf**	**0.88**	**119**		**Pb**	**07 09 49.7**	**-0.4**
NLW	**Nelson Butte**	**0.90**	**97**		**Pb**	**07 09 49.9**	**-0.4**
BLN	**Blyn Mountain**	**0.90**	**258**		**Pg**	**07 09 50.2**	**-0.2**
MCW	**Mount Constitu**	**0.92**	**302**		**Pg**	**07 09 50.8**	**+0.1**
B013	**Quilcene**	**0.92**	**246**		**Pb**	**07 09 50.5**	**-0.2**
B013					**Sg**	**07 10 03.1**	**+0.3**
B013	**Quilcene**	**0.92**	**246**		**Pb**	**07 09 50.5**	**-0.2**
SQM	**Sequim**	**0.94**	**263**		**Pb**	**07 09 50.5**	**-0.3**
GMW	**Gold Mountain**	**1.00**	**230**		**Pb**	**07 09 51.7**	**-0.2**
GSM	**Grass Mountain**	**1.00**	**185**		**Pn**	**07 09 52.2**	**-0.3**
C04A	**Brinnon**	**1.00**	**242**		**Pb**	**07 09 51.7**	**-0.3**
GNW	**Green Mountain**	**1.01**	**232**		**Pb**	**07 09 51.9**	**-0.2**
D05A	**Enumclaw**	**1.03**	**192**		**Pg**	**07 09 53.3**	**+0.4**
ETW	**Entiat**	**1.07**	**123**		**Pn**	**07 09 53.2**	**-0.4**
HDW	**Hoodsport**	**1.08**	**240**		**Pb**	**07 09 53.1**	**-0.4**
VGZ	**Gonzales**	**1.13**	**282**		**Pn**	**07 09 54.3**	**0.0**
LTY	**Liberty**	**1.15**	**144**		**Pb**	**07 09 54.1**	**-0.5**
CBSW	**Chelan Butte S**	**1.16**	**109**		**Pn**	**07 09 54.7**	**-0.1**
D03D	**Eldon**	**1.17**	**236**	P	**Pn**	**07 09 54.2**	**-0.6**
	baz=54,SNR=19						
D03D				S	**Sn**	**07 10 09.9**	**-0.5**
	baz=54						
D03D	**Eldon**	**1.17**	**236**		**Pg**	**07 09 55.1**	**-0.4**
B04A	**Port Angeles**	**1.24**	**264**		**Pn**	**07 09 55.6**	**-0.1**
B04A	**Port Angeles**	**1.24**	**264**		**Pn**	**07 09 55.7**	**-0.1**
TBM	**Table Mountain**	**1.25**	**145**		**Pg**	**07 09 56.9**	**-0.2**
D04E	**Lakebay**	**1.26**	**217**	Pb	**Pg**	**07 09 56.8**	**-0.5**
	baz=35,SNR=11						
D04E				Sg	**Sg**	**07 10 15.5**	**+1.8**
	baz=35						
FMW	**Mount Fremont**	**1.26**	**180**		**Pb**	**07 09 56.5**	**-0.2**
B941	**Kapowsin**	**1.27**	**198**		**Pb**	**07 09 56.5**	**0.0**
PGC	**Sidney**	**1.27**	**292**		**Pb**	**07 09 56.7**	**0.0**
PGC				IAML		07 10 14.6	
	comp=N,40nm,0.2s						
OBSR	**Observation Ro**	**1.30**	**185**		**Pn**	**07 09 56.4**	**-0.4**
RCS	**Mount Rainier-**	**1.33**	**182**		**Pg**	**07 09 57.9**	**-0.6**
PANH	**Panhandle Gap,**	**1.34**	**179**		**Pn**	**07 09 57.0**	**-0.3**
RCM	**Mount Rainier-**	**1.36**	**182**		**Pb**	**07 09 58.2**	**-0.2**
REMR	**Mount Rainier-**	**1.38**	**185**		**Pb**	**07 09 58.5**	**-0.1**
LON	**Longmire**	**1.45**	**184**		**Pb**	**07 09 59.6**	**-0.1**
LON				IAML		07 10 19.3	
	comp=N,31nm,0.2s						
LON				IAML		07 10 20.2	
	comp=E,30nm,0.3s						
LON	**Longmire**	**1.45**	**184**		**Pb**	**07 09 59.6**	**-0.1**
EBG	**Ellensburg**	**1.48**	**150**		**Pg**	**07 10 01.1**	**-0.4**
WPW	**White Pass**	**1.50**	**177**		**Pb**	**07 10 00.5**	**-0.1**
B08A	**Colville Reser**	**1.56**	**83**		**Pb**	**07 10 01.6**	**-0.1**
B08A				IAML		07 10 21.9	
	comp=N,27nm,0.3s						
NAC	**Naches**	**1.57**	**158**		**Pg**	**07 10 02.5**	**-0.7**
OBC	**Olympics--Boni**	**1.63**	**265**		**Pb**	**07 10 03.0**	**+0.3**
LCW	**Lucas Creek**	**1.68**	**205**		**Pb**	**07 10 03.5**	**-0.1**
NLWA	**Neilton Lookou**	**1.69**	**242**	Pn	**Pb**	**07 10 03.7**	**-0.1**
NLWA				IAML		07 10 42.5	
	comp=N,27nm,4.6s						
E04D	**Cinebar**	**1.75**	**201**	Pb	**Pb**	**07 10 04.5**	**-0.3**
	baz=20,SNR=15						
E04D				Sb	**Sg**	**07 10 27.9**	**-1.5**
	baz=20						
E04D	**Cinebar**	**1.75**	**201**		**Pb**	**07 10 05.0**	**+0.2**
PNT	**Penticton**	**1.76**	**50**		**Pb**	**07 10 05.0**	**0.0**
MXC	**Moxie City**	**1.87**	**150**		**Pg**	**07 10 08.0**	**-0.8**
ERK	**Elk Rock**	**1.95**	**194**		**Pb**	**07 10 08.0**	**-0.2**
E07A	**Sunnyside**	**2.05**	**142**	Pn	**Pb**	**07 10 09.6**	**-0.3**
E07A				IAML		07 10 41.9	
	comp=N,27nm,0.5s						
FL2	**Flat Top 2**	**2.05**	**193**		**Pb**	**07 10 09.8**	**-0.3**
JLK	**June Lake**	**2.08**	**189**		**Pb**	**07 10 10.6**	**+0.2**
E03A	**Lebam**	**2.10**	**219**	Pn	**Pb**	**07 10 09.6**	**-1.0**
E03A				IAML		07 10 53.9	
	comp=N,28nm,4.7s						
GBB	**Gable Butte**	**2.10**	**138**		**Pg**	**07 10 12.2**	**-1.1**
LOCW	**Locke Island**	**2.12**	**134**		**Pg**	**07 10 12.5**	**-1.1**
D08A	**Wollman Farm,**	**2.18**	**121**	Pn	**Pb**	**07 10 10.2**	**-1.9**
D08A				IAML		07 11 08.9	
	comp=E,16nm,4.5s						
D08A				IAML		07 11 11.5	
	comp=N,16nm,4.5s						
C09A	**Chrisman Ranch**	**2.31**	**99**		**Pg**	**07 10 18.7**	**+1.4**
C09A				IAML		07 10 52.3	
	comp=N,27nm,0.3s						
HAWA	**Hanford**	**2.31**	**140**		**Pb**	**07 10 13.2**	**-1.2**
HAWA				IAML		07 10 45.9	
	comp=N,13nm,3.2s						
HAWA				IAML		07 10 47.2	
	comp=N,17nm,0.3s						
NEW	**Newport**	**3.04**	**87**	Sb	**Sb**	**07 11 06.2**	**+2.6**
	baz=271						
NEW	**Newport**	**3.04**	**87**	Pn	**Pb**	**07 10 23.9**	**-2.9**
NEW				IAML		07 10 54.0	
	comp=N,11nm,4.7s						
CROR	**Criterion Ridg**	**3.25**	**172**		**Pb**	**07 10 26.7**	**-3.6**
G08A	**Pilot Rock**	**3.45**	**146**	Pn	**Pn**	**07 10 29.0**	**+2.7**
G08A				IAML		07 11 30.9	
	comp=N,7.8nm,4.5s						
G08A				IAML		07 11 37.4	
	comp=E,9.7nm,4.7s						
F10A	**Beach Ranch, E**	**3.76**	**125**	Pn	**Pn**	**07 10 34.1**	**+3.7**
I07A	**Izee**	**4.38**	**159**	Pn	**Pn**	**07 10 42.0**	**+3.0**
I04A	**Tendick Farm,**	**4.43**	**187**		**Pn**	**07 10 39.6**	**-0.1**

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*IDC **04** 07:17:07.1±1.4, 52°.39N×168°.65W, h0^{km}, mb4.0/15, mb1 4.1/16, mb1mx3.9/59, mbtmp4.0/16, ML3.5/1, MS2.9/1, Ms1 2.9/1, ms1mx2.4/38, Error ellipse: s-maj=35.8km s-min=16.7km az=175.0*
*AEIC **04** 07:17:08±2.4, 52°.14N±0°.09×168°.47W±0°.09, h18^{km}±7^{km}, ML3.2/15, Error ellipse: s-maj=12.6km s-min=8.2km az=185.0*
*NEIC **04** 07:17:10.2±2.1, 52°.20N±0°.06×168°.6W±0°.1, h29^{km}±10^{km}, Error ellipse: s-maj=10.5km s-min=7.9km az=137.0*
ISC 04 07:17:10.4±0.8**, 52°.23N**±0°.08×**168°.50W**±0°.07**, h26**^{km}**, n57, σ1.^{s}38**/54**, mb4.2**/14**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIKH	**Nikolski High**	**0.77**	**344**	Pg	**Pb**	**07 17 25.3**	**+0.1**
NIKH	**Nikolski High**	**0.77**	**344**		**Sn**	**07 17 37.8**	**+1.4**
OKSP	**Okmok Steeple**	**1.03**	**7**		**Pn**	**07 17 29.2**	**+0.1**
OKSO	**Okmok South**	**1.14**	**10**		**Pn**	**07 17 30.0**	**-0.7**
OKSO					**Sn**	**07 17 46.0**	**+0.5**
OKFG	**Magazine Ridge**	**1.23**	**17**		**Pn**	**07 17 31.4**	**-0.5**
OKFG					**Sb**	**07 17 49.7**	**+1.3**
MAPS	**Pakushin South**	**1.83**	**30**		**Pn**	**07 17 40.7**	**+0.5**
MAPS					**Sn**	**07 18 02.9**	**+0.3**
MREP	**Makushin Rep't**	**1.90**	**33**		**Pn**	**07 17 41.7**	**+0.6**
MSW	**Makushin Switc**	**1.98**	**31**		**Pn**	**07 17 42.9**	**+0.7**
MNAT	**Makushin Natee**	**1.98**	**33**		**Pn**	**07 17 43.1**	**+0.9**
UNV	**Unalaska Valle**	**2.01**	**36**	Pn	**Pn**	**07 17 43.1**	**+0.5**
AKUT	**Akutan**	**2.51**	**40**	Pn	**Pn**	**07 17 50.4**	**+0.9**
CHGN	**Chignik**	**7.17**	**51**	Pn	**Pn**	**07 18 56.2**	**+2.8**
KDAK	**Kodiak Island**	**10.68**	**52**	Pn	**Pn**	**07 19 41.1**	**-0.4**
	1.2nm,0.3s,baz=222,slow=6.6,SNR=22						
KDAK				Sn	**Sn**	**07 21 35.7**	**-4.4**
	0.1nm,0.3s,baz=342,slow=20,SNR=1.9						
SEW	**Seward**	**13.18**	**46**	Pn	**Pn**	**07 20 15.8**	**+0.2**
SKT	**Skwentna**	**13.38**	**37**	Pn	**Pn**	**07 20 21.1**	**+2.7**
PPLA	**Purkeypile**	**13.76**	**33**	Pn	**Pn**	**07 20 27.1**	**+3.4**
KTH	**Kantishna Hill**	**14.63**	**32**	Pn	**Pn**	**07 20 36.9**	**+1.5**
TRF	**Thorofare Moun**	**14.77**	**33**	Pn	**Pn**	**07 20 38.6**	**+1.1**
FID	**Port Fidalgo**	**14.79**	**46**	Pn	**Pn**	**07 20 36.0**	**-1.5**
BPAW	**Bear Paw Mtn.**	**14.98**	**31**	Pn	**Pn**	**07 20 41.5**	**+1.3**
PAX	**Paxson**	**16.26**	**40**	Pn	**Pn**	**07 20 56.0**	**-0.8**
VRDI	**Verde Repeater**	**16.33**	**47**	Pn	**Pn**	**07 20 56.2**	**-1.5**
CCB	**Clear Creek Bu**	**16.38**	**33**	Pn	**Pn**	**07 20 57.6**	**-0.6**
TGL	**Tana Glacier**	**16.44**	**49**		**Pn**	**07 20 59.7**	**+0.5**
MDM	**Murphy Dome**	**16.45**	**31**	Pn	**Pn**	**07 20 58.8**	**-0.3**
BALM	**Baldy**	**16.76**	**48**		**Pn**	**07 21 03.4**	**+0.2**
ILAR	**Eielson Array**	**16.77**	**33**	Pn	**Pn**	**07 21 00.7**	**-2.4**
	0.2nm,0.3s,baz=236,slow=11,SNR=12						
BARN	**Barnard Glacie**	**17.08**	**48**	P	**Pn**	**07 21 07.5**	**+0.2**
DOT	**Dot Lake**	**17.15**	**39**		**Pn**	**07 21 08.3**	**+0.3**
CTGM	**Chitina Glacie**	**17.20**	**49**	P	**Pn**	**07 21 09.3**	**+0.6**
PCA	**Pinnacle**	**17.47**	**52**	P	**Pn**	**07 21 13.0**	**+1.0**
COLD	**Coldfoot**	**17.52**	**24**	P	**Pn**	**07 21 08.9**	**-3.6**
EGAK	**Eagle**	**18.82**	**38**	P	**P**	**07 21 27.2**	**-0.5**
HYT	**Haines Junctio**	**18.97**	**51**		**Pn**	**07 21 32.4**	**+2.1**
PETK	**Petropavlovsk-**	**20.41**	**286**	P	**P**	**07 21 44.1**	**-1.2**
	7.5nm,0.5s,baz=85,slow=14,SNR=27						
INK	**Inuvik**	**23.17**	**33**	P	**P**	**07 22 13.4**	**-1.0**
	2.6nm,0.6s,baz=234,slow=7.6,SNR=14						
YKA	**Yellowknife Ar**	**29.93**	**49**	P	**P**	**07 23 16.5**	**+0.7**
	0.3nm,0.6s,baz=275,slow=7.1,SNR=10						
H11N2	**WAKE ISLAND Hy**	**37.69**	**220**	T	T	08 05 27.7	
	baz=24						
H11N3	**WAKE ISLAND Hy**	**37.70**	**220**	T	T	08 05 27.2	
	baz=24						
H11N1	**WAKE ISLAND Hy**	**37.71**	**220**	T	T	08 05 24.7	
	baz=24						
H11S1	**WAKE ISLAND Hy**	**38.87**	**219**	T	T	08 06 47.5	
	baz=22,slow=74						
H11S2	**WAKE ISLAND Hy**	**38.89**	**219**	T	T	08 06 26.8	
	baz=22,SNR=15						
H11S3	**WAKE ISLAND Hy**	**38.89**	**219**	T	T	08 06 31.5	
	baz=22,slow=74,SNR=12						
PDAR	**Pinedale Array**	**39.90**	**80**	P	**P**	**07 24 43.2**	**+1.1**
	0.4nm,0.5s,baz=305,slow=2.9,SNR=5.9						
MJAR	**Matsushiro Arr**	**40.23**	**269**	LR	LR	07 41 49.9	
	comp=Z,15nm,20.2s,baz=70,slow=37						
SONM	**Songino Array**	**51.83**	**301**	P	**P**	**07 26 15.5**	**-0.5**
	0.5nm,0.4s,baz=54,slow=7.8,SNR=5.3						
TXAR	**Lajitas Array**	**52.21**	**89**	P	**P**	**07 26 19.9**	**+0.9**
	0.2nm,0.5s,baz=316,slow=5.2,SNR=3.9						
ARCES	**ARCESS Array B**	**58.11**	**354**	P	**P**	**07 27 00.2**	**-0.8**
	2.8nm,0.8s,baz=8.8,slow=6.5,SNR=6.7						
KURK	**Kurchatov**	**62.83**	**319**	P	**P**	**07 27 33.8**	**+0.4**
KURBB	**Kurchatov Arra**	**62.94**	**319**	P	**P**	**07 27 33.8**	**-0.3**
	2.1nm,0.9s,baz=49,slow=7.2,SNR=4.2						
BVAR	**Borovoye Array**	**64.12**	**325**	P	**P**	**07 27 41.4**	**-0.5**
	2.2nm,0.8s,baz=50,slow=7.9,SNR=7.0						
MKAR	**Makanchi Array**	**64.29**	**314**	P	**P**	**07 27 42.2**	**-0.9**
	1.6nm,0.7s,baz=52,slow=7.9,SNR=5.1						
FINES	**FINESS Array B**	**66.08**	**352**	P	**P**	**07 27 54.1**	**-0.3**
	2.0nm,0.5s,baz=14,slow=8.5,SNR=15						
NOA	**NORSAR Array B**	**67.08**	**0**	P	**P**	**07 28 00.8**	**0.0**
	0.9nm,0.6s,baz=359,slow=6.2,SNR=4.1						
AKTO	**Aktyubinsk**	**70.39**	**330**	P	**P**	**07 28 21.5**	**-0.1**
	3.2nm,0.7s,baz=44,slow=5.6,SNR=7.9						
CMAR	**Chiang Mai Arr**	**77.17**	**283**	P	**P**	**07 29 02.1**	**+0.2**
	1.2nm,0.3s,baz=20,slow=7.3,SNR=5.0						
ESDC	**Sonseca Array**	**87.48**	**12**	P	**P**	**07 29 56.3**	**+0.8**
	0.3nm,0.3s,baz=331,slow=5.0,SNR=2.1						

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*JMA **04** 07:22:53.8±0.2, 28°.38N×139°.24E, h550^{km}, M3.9*
*IDC **04** 07:22:54.5±0.6, 28°.26N×138°.85E, h516^{km}±8^{km}, mb3.2/14, mb1 3.3/20, mb1mx3.2/50, mbtmp4.2/20, Error ellipse: s-maj=17.3km s-min=8.4km az=79.0*
*NEIC **04** 07:22:54.5±1.1, 28°.27N±0°.10×138°.8E±0°.2, h516^{km}±7^{km}, mb4.0/22, Error ellipse: s-maj=21.3km s-min=14.5km az=91.0*
ISC 04 07:22:55.0±0.5**, 28°.34N**±0°.06×**138°.94E**±0°.09**, h524**^{km}**, n63, σ1.^{s}45**/69**, mb3.9**/24**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**3.13**	**113**	P	**P**	**07 24 08.8**	**+0.1**
CBIJ				S	**S**	**07 25 07.3**	**-1.4**
JCJ	**Chichijima**	**3.13**	**113**	P	**P**	**07 24 08.7**	**0.0**
	7.8nm,0.3s,baz=294,slow=19,SNR=6.4						
JCJ				S	**S**	**07 25 07.1**	**-1.7**
	70nm,0.3s,baz=308,slow=23,SNR=19						
JHH2	**Haha-jima-NKT2**	**3.34**	**120**	S	**S**	**07 25 10.4**	**-0.9**
JHJ2	**Mitsune**	**4.82**	**9**	P	**P**	**07 24 23.1**	**+1.6**
JHJ2	**Mitsune**	**4.82**	**9**	P	**P**	**07 24 23.5**	**+1.9**
JHJ	**Hachijo jima 2**	**4.82**	**8**	P	**P**	**07 24 23.2**	**+1.6**
	17nm,0.3s,baz=343,slow=19,SNR=18						
JHJ				S	**S**	**07 25 33.0**	**+0.6**
	8.7nm,0.3s,baz=114,slow=19,SNR=1.6						
JTNC	**Tanabenakahech**	**6.17**	**333**	P	**P**	**07 24 35.9**	**+2.1**
BSO1	**Boso 1**	**6.53**	**15**	P	**P**	**07 24 38.1**	**+1.5**
JMN	**Monobe**	**6.91**	**322**	P	**P**	**07 24 43.0**	**+2.0**
JTO	**Tosashimizu**	**6.95**	**312**	P	**P**	**07 24 42.7**	**+1.3**
JHU	**Hanno**	**7.50**	**2**	S	**S**	**07 26 13.4**	**-5.1**
JRY	**Ryogami san**	**7.66**	**360**	P	**P**	**07 24 48.9**	**+0.5**
JRY				S	**S**	**07 26 19.2**	**-2.2**
JAG	**Ashikaga**	**8.08**	**3**	P	**P**	**07 24 51.7**	**-0.8**
JAG				S	**S**	**07 26 23.9**	**-5.2**
MJAR	**Matsushiro Arr**	**8.20**	**356**	P	**P**	**07 24 53.9**	**0.0**
	0.1nm,0.3s,baz=174,slow=11,SNR=4.8						
JHS	**Saijyo**	**8.29**	**325**	P	**P**	**07 24 56.5**	**+1.7**
JHS	**Saijyo**	**8.29**	**325**	P	**P**	**07 24 56.2**	**+1.5**
JHO	**Hitachi**	**8.36**	**9**	P	**P**	**07 24 56.1**	**+0.6**
JNU	**Nakatsue**	**8.42**	**306**	P	**P**	**07 24 57.2**	**+1.0**
	0.7nm,0.3s,baz=124,slow=9.7,SNR=9.7						
JNU	**Nakatsue**	**8.42**	**306**	P	**P**	**07 24 56.6**	**+0.5**
JMM	**Marumori**	**9.63**	**9**	P	**P**	**07 25 07.4**	**-1.1**
JMM					**S**	**07 26 56.8**	**-1.5**
JSD	**Sado**	**9.69**	**357**	P	**P**	**07 25 08.8**	**-0.3**
KSRS	**Korea Array**	**12.97**	**317**	P	**P**	**07 25 43.2**	**-0.2**
	0.4nm,0.3s,baz=134,slow=11,SNR=5.2						
USRK	**Ussuriysk Ar.**	**16.78**	**342**	P	**P**	**07 26 23.5**	**+0.9**
	baz=176,slow=11,SNR=27						
SIJI	**Sorong**	**29.96**	**196**	P	**P**	**07 28 19.8**	**-0.9**
	9.9nm,0.6s,baz=221,slow=19,SNR=2.3						
SONM	**Songino Array**	**31.84**	**317**	P	**P**	**07 28 36.1**	**-0.5**
	0.8nm,0.5s,baz=125,slow=8.3,SNR=7.6						
SONM	**Songino Array**	**31.84**	**317**	P	**P**	**07 28 35.7**	**-0.9**
COEN	**Coen**	**42.24**	**174**	P	**P**	**07 30 02.6**	**+0.4**
COEN				IAmb	IAmb	07 30 04.2	
	comp=Z,4.1nm,1.1s						
ZALV	**Zalesovo Beam**	**46.67**	**319**	P	**P**	**07 30 35.4**	**-0.4**
	comp=Z,0.6nm,0.4s,baz=96,slow=9.0,SNR=1.7						
MK31	**Makanchi Array**	**47.47**	**309**	P	**P**	**07 30 41.2**	**-0.9**
MKAR	**Makanchi Array**	**47.47**	**309**	P	**P**	**07 30 41.7**	**-0.4**
	comp=Z,1.3nm,0.8s,baz=91,slow=9.0,SNR=7.7						
MKAR	**Makanchi Array**	**47.47**	**309**	P	**P**	**07 30 41.5**	**-0.6**
FITZ	**Fitzroy Crossi**	**47.92**	**197**	P	**P**	**07 30 45.3**	**-0.4**
	comp=Z,3.6nm,0.6s,baz=8.4,slow=7.6,SNR=15						
FITZ	**Fitzroy Crossi**	**47.92**	**197**	P	**P**	**07 30 45.1**	**-0.6**
FITZ				IAmb	IAmb	07 30 46.0	
	comp=Z,3.9nm,0.6s						
WB0	**Warramunga Arr**	**48.02**	**186**	P	**P**	**07 30 45.9**	**-0.6**
WB0				IAmb	IAmb	07 30 46.9	
	comp=Z,6.0nm,0.9s						
WB2	**Warramunga Arr**	**48.20**	**186**	P	**P**	**07 30 47.0**	**-0.8**
WB2				IAmb	IAmb	07 30 48.3	
	comp=Z,5.0nm,0.9s						
WR0	**Warramunga Arr**	**48.20**	**186**	P	**P**	**07 30 46.7**	**-1.1**
WRA	**Warramunga Arr**	**48.20**	**186**	P	**P**	**07 30 47.0**	**-0.8**
	comp=Z,4.0nm,0.4s,baz=1.0,slow=7.6,SNR=50						
WRA				PcP	**PcP**	**07 32 04.9**	**-0.1**
	comp=Z,0.4nm,0.6s,baz=355,slow=4.2,SNR=2.6						
WRA	**Warramunga Arr**	**48.20**	**186**	P	**P**	**07 30 46.0**	**-1.8**
KURK	**Kurchatov**	**50.06**	**314**	P	**P**	**07 31 00.7**	**-0.5**
KURK				IAmb	IAmb	07 31 01.3	
	comp=Z,8.7nm,1.4s						
NRIK	**Noril'sk**	**50.45**	**339**	P	**P**	**07 31 03.8**	**+0.1**
	comp=Z,2.8nm,0.6s,baz=122,slow=13,SNR=4.9						
AS31	**Alice Springs**	**51.93**	**186**	P	**P**	**07 31 14.4**	**-0.7**
ASAR	**Alice Springs**	**51.93**	**186**	P	**P**	**07 31 14.3**	**-0.8**
	comp=Z,1.0nm,0.4s,baz=2.6,slow=7.2,SNR=24						
ASAR				PcP	**PcP**	**07 32 19.1**	**+0.2**
	comp=Z,0.8nm,0.7s,baz=16,slow=3.2,SNR=5.5						
PSA00	**Pilbara Seismi**	**52.94**	**202**	P	**P**	**07 31 21.6**	**-0.7**
BRVK	**Borovoye**	**55.24**	**317**	P	**P**	**07 31 38.0**	**-0.2**
BRVK				IAmb	IAmb	07 31 38.8	
	comp=Z,5.2nm,0.7s						
IMAR	**Indian Mountai**	**55.25**	**27**	P	**P**	**07 31 40.2**	**+2.2**
KK31	**Karatay Array**	**56.02**	**305**	IAmb	IAmb	07 31 44.1	
	comp=Z,2.3nm,0.6s						
KKAR	**Karatay Array**	**56.02**	**305**	P	**P**	**07 31 43.3**	**-0.6**
KKAR	**Karatay Array**	**56.02**	**305**	IAmb	IAmb	07 31 44.1	
	comp=Z,2.3nm,0.6s						
MDM	**Murphy Dome**	**57.45**	**29**	P	**P**	**07 31 55.4**	**+2.1**
ILAR	**Eielson Array**	**58.02**	**29**	P	**P**	**07 31 58.1**	**+1.1**
	comp=Z,0.2nm,0.4s,baz=245,slow=5.9,SNR=5.7						
STKA	**Stephens Creek**	**59.94**	**177**	P	**P**	**07 32 10.2**	**-0.1**
	comp=Z,1.2nm,0.5s,baz=360,slow=8.1,SNR=4.7						
STKA	**Stephens Creek**	**59.94**	**177**	P	**P**	**07 32 10.1**	**-0.2**
BCPM	**Bancas Point**	**61.69**	**34**	P	**P**	**07 32 20.5**	**-1.1**
ABKAR	**Akbulak array**	**62.16**	**313**	P	**P**	**07 32 24.3**	**-0.6**
ABKAR				IAmb	IAmb	07 32 24.9	
	comp=Z,2.2nm,0.5s						
ARCES	**ARCESS Array B**	**71.41**	**340**	P	**P**	**07 33 21.9**	**+0.3**
	comp=Z,3.9nm,0.9s,baz=54,slow=6.2,SNR=9.4						
ARCES	**ARCESS Array B**	**71.41**	**340**	P	**P**	**07 33 22.2**	**+0.5**
YKA	**Yellowknife Ar**	**72.40**	**28**	P	**P**	**07 33 28.4**	**+1.0**
	comp=Z,0.2nm,0.4s,baz=300,slow=5.3,SNR=4.8						
FIA1	**FINESS Array S**	**75.55**	**333**	P	**P**	**07 33 45.0**	**-0.2**
FIA1				IAmb	IAmb	07 33 50.8	
	comp=Z,16nm,1.3s						
FINES	**FINESS Array B**	**75.55**	**333**	P	**P**	**07 33 45.0**	**-0.3**
	comp=Z,1.8nm,0.3s,baz=62,slow=4.9,SNR=22						
NVAR	**Mina Array Bea**	**81.98**	**51**	P	**P**	**07 34 22.2**	**+1.8**
	comp=Z,0.2nm,0.4s,baz=292,slow=5.2,SNR=4.1						
LAO	**LASA Array**	**84.97**	**39**	P	**P**	**07 34 38.5**	**+3.6**
LAO				IAmb	IAmb	07 34 40.1	
	comp=Z,3.6nm,0.7s						
CBKS	**Cedar Bluff**	**93.62**	**42**	P	**P**	**07 35 15.6**	**+0.2**
PLCA	**Paso Flores**	**152.87**	**125**	PKPbc	**PKPbc**	**07 41 53.1**	**+0.4**
	comp=Z,0.8nm,0.8s,baz=186,slow=1.4,SNR=3.3						

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*IDC **04** 07:23:42.0±3.4, 49°.99N×78°.23E, h0^{km}, mb1 2.9/2, mb1mx2.8/49, mbtmp2.9/2, ML2.3/2, Error ellipse: s-maj=49.6km s-min=7.1km az=84.0*
*NNC **04** 07:23:42.8±0.3, 50°.00N×78°.67E, h0^{km}, mb3.1, mpv2.8, Error ellipse: s-maj=3.3km s-min=1.7km az=65.0, Suspected Mining explosion.*
ISC 04 07:23:42.3±0.9**, 50°.04N**±0°.03×**78°.50E**±0°.05**, h0**^{km}**, n20, σ0.^{s}98**/33**, 17C-6D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR07	**Kurchatov Arra**	**0.55**	**1**	⇑P	**Pb**	**07 23 54.6**	**-0.1**
KUR07				⇑S	**Sb**	**07 24 03.3**	**+0.1**
KUR06	**Kurchatov Arra**	**0.57**	**2**	⇓P	**Pb**	**07 23 55.0**	**-0.1**
KUR06				⇓S	**Sb**	**07 24 03.8**	**+0.1**
KUR14	**Kurchatov Arra**	**0.58**	**6**	⇑P	**Pb**	**07 23 54.8**	**-0.5**
KUR14				⇑S	**Sb**	**07 24 03.6**	**-0.5**
KUR15	**Kurchatov Arra**	**0.58**	**4**	⇑P	**Pb**	**07 23 55.0**	**-0.4**
KUR15				⇓S	**Sb**	**07 24 04.0**	**-0.2**
KURBB	**Kurchatov Arra**	**0.59**	**2**	Pg	**Pb**	**07 23 55.2**	**-0.2**
	1.4nm,0.3s,baz=166,slow=18,SNR=98						
KURBB				Lg	Lg	07 24 04.3	
	1.2nm,0.3s,baz=160,slow=34,SNR=25						
KURBB	**Kurchatov Arra**	**0.59**	**2**	⇑P	**Pb**	**07 23 55.3**	**-0.2**
	10nm,0.3s						
KURBB				⇑S	**Sb**	**07 24 04.2**	**-0.1**
	66nm,0.6s						
KUR16	**Kurchatov Arra**	**0.59**	**360**	⇓P	**Pb**	**07 23 55.4**	**-0.1**
KUR16				⇑S	**Sb**	**07 24 04.5**	**+0.1**
KUR17	**Kurchatov Arra**	**0.60**	**358**	⇑P	**Pb**	**07 23 55.8**	**+0.2**
KUR17				⇓S	**Sb**	**07 24 05.3**	**+0.7**
KUR05	**Kurchatov Arra**	**0.61**	**2**	⇑P	**Pb**	**07 23 55.5**	**-0.3**
KUR05				⇑S	**Sb**	**07 24 04.5**	**-0.4**
KUR04	**Kurchatov Arra**	**0.63**	**3**	⇑P	**Pb**	**07 23 56.0**	**-0.1**
KUR04				⇑S	**Sb**	**07 24 05.2**	**-0.2**
KURK	**Kurchatov**	**0.68**	**6**	⇑P	**Pb**	**07 23 56.5**	**-0.5**
	4.9nm,0.4s						

KURK	8.3nm,0.4s			⇑S	Sb	07 24 06.4	-0.7
SEM	**Semipalatinsk** 4.3nm,0.1s	1.18	71	P	Pg	07 24 03.7	-1.3
SEM	15nm,0.1s			S	Sg	07 24 19.5	-0.8
BRZS	**Berezniki** 2.4nm,0.5s	3.76	271	Pg	Pg	07 24 53.7	-0.5
BRZS	2.5nm,0.1s			Lg	Lg	07 25 45.2	
MAKZ	**Makanchi** 0.5nm,0.5s	3.98	143	⇑Pg	Pb	07 24 53.0	-0.1
MAKZ	4.3nm,0.6s			⇑Lg	Lg	07 25 43.6	
MK31	**Makanchi Array** 0.1nm,0.1s,baz=322,slow=10,SNR=7.5	4.11	141	⇓Pn	Pn	07 24 47.4	+1.0
MK31	0.3nm,0.2s,baz=327,slow=16,SNR=12			Pg	Pb	07 24 56.4	+0.9
MK31	2.4nm,0.5s,baz=337,slow=24,SNR=18			Lg	Lg	07 25 48.2	
MKAR	**Makanchi Array** 0.2nm,0.3s,baz=321,slow=10,SNR=13	4.11	141	Pn	Pn	07 24 47.3	+0.9
MKAR	0.4nm,0.3s,baz=323,slow=14,SNR=17			Pg	Pb	07 24 55.0	-0.5
MKAR	0.2nm,0.3s,baz=311,slow=21,SNR=1.7			Sn	Sn	07 25 36.8	+1.6
MKAR	1.0nm,0.3s,baz=332,slow=25,SNR=21			Lg	Lg	07 25 48.6	
KAPS	**Kapalarasan** 0.7nm,0.3s	4.79	173	Pg	Pb	07 25 08.7	+1.6
KAPS	4.7nm,0.6s			Lg	Lg	07 26 11.4	
I46RU	**ZALESOVO INFRA** baz=226,slow=326,SNR=2.1	5.53	42	i		07 57 20.0	
ZALV	**Zalesovo Beam** 0.4nm,0.3s,baz=229,slow=15,SNR=6.0	5.53	42	Pn	Pn	07 25 07.9	+2.1
KTBS	**Karatobe** 0.5nm,0.2s	6.45	192	Pg	Pg	07 25 42.4	-3.4
KTBS	3.7nm,0.4s			Lg	Lg	07 27 08.7	

IDC 04 07:25:23.1±2.7**, 53°.74N×86°.79E, h0^{km}, mb1 3.1**/2**, mb1mx2.9**/51**, mbtmp3.1**/2**, ML2.7**/2**, Error ellipse: s-maj=23.2km s-min=12.6km az=73.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA** baz=98,slow=335,SNR=1.5	1.18	281	i		07 32 14.5	
ZALV	**Zalesovo Beam** 2.0nm,0.3s,baz=104,slow=18,SNR=15	1.18	281	Pg	Pg	07 25 44.8	-1.0
ZALV	2.3nm,0.3s,baz=102,slow=26,SNR=15			Lg	Lg	07 26 02.3	
KURBB	**Kurchatov Arra** 0.1nm,0.3s,baz=57,slow=13,SNR=8.1	5.96	242	Pn	Pn	07 26 53.3	+0.7
KURBB	0.0nm,0.3s,baz=58,slow=32,SNR=2.8			Lg	Lg	07 28 31.4	
MKAR	**Makanchi Array** 0.2nm,0.3s,baz=22,slow=12,SNR=2.6	7.53	204	Pn	Pn	07 27 14.9	+0.8
MKAR	0.1nm,0.3s,baz=30,slow=26,SNR=2.4			Sn	Sn	07 28 41.4	+1.4
MKAR	baz=24,slow=22,SNR=2.2			Lg	Lg	07 29 19.6	

NNC ***04*** *07:46:52.6±4.6, 53°.82N×90°.58E, h0^{km}, mb3.5, mpv3.2, Error ellipse: s-maj=42.0km s-min=31.1km az=179.0, Suspected Mining explosion.*

IDC ***04*** *07:46:54.9±4.2, 53°.61N×90°.72E, h0^{km}, mb1 3.0/3, mb1mx2.9/33, mbtmp3.0/3, ML2.5/3, Error ellipse: s-maj=42.3km s-min=25.4km az=32.0*

ISC 04 07:46:53.8±4.2**, 53°.8N**±0°.2×**90°.5E**±0°.2**, h0^{km}, n8, σ2^{s}.36**/11**, 4C-5D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA** baz=89,slow=328,SNR=3.0	3.36	276	i		08 13 40.7	
ZALV	**Zalesovo Beam** 0.7nm,0.3s,baz=92,slow=11,SNR=11	3.36	276	Pn	Pb	07 47 52.4	-1.8
ZALV	1.4nm,0.3s,baz=90,slow=29,SNR=8.9			Lg	Lg	07 48 46.3	
KURK	**Kurchatov** 1.7nm,0.9s	7.89	252	⇑Pn	Pn	07 48 49.5	-0.1
KURK	5.6nm,1.2s			⇓Sn	Sn	07 50 22.1	+2.5
KURK	13nm,1.3s			⇓Lg	Lg	07 51 08.5	
KURBB	**Kurchatov Arra** 0.1nm,0.3s,baz=66,slow=15,SNR=3.9	7.99	252	Pn	Pn	07 48 53.4	+2.5
KURBB	0.0nm,0.3s,baz=66,slow=25,SNR=8.8			Sn	Sn	07 50 23.1	+1.2
KURBB	0.0nm,0.3s,baz=60,slow=33,SNR=1.4			Lg	Lg	07 51 07.0	
KURBB	**Kurchatov Arra** 0.6nm,0.3s	7.99	252	⇑Pn	Pn	07 48 50.7	-0.3
KURBB	11nm,0.9s			⇓Sn	Sn	07 50 22.0	+0.1
KURBB	36nm,1.1s			⇑Lg	Lg	07 51 14.1	
MK31	**Makanchi Array** 0.1nm,0.2s,baz=37,slow=16,SNR=6.3	8.71	220	⇓Pn	Pn	07 49 03.0	+1.9
MK31	0.1nm,0.1s,baz=33,slow=23,SNR=4.7			⇑Sn	Sn	07 50 40.8	+0.8
MK31	0.1nm,0.2s,baz=27,slow=30,SNR=5.8			⇓Lg	Lg	07 51 33.5	
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=40,slow=14,SNR=6.9	8.71	220	Pn	Pn	07 49 02.5	+1.5
MKAR	baz=43,slow=24,SNR=2.0			Sn	Sn	07 50 35.4	-4.5
MKAR	0.0nm,0.3s,baz=35,slow=32,SNR=1.1			Lg	Lg	07 51 24.6	
SONM	**Songino Array** baz=295,slow=28,SNR=11	11.67	114	Lg	Lg	07 52 49.4	

JMA ***04*** *08:14:46.2±0.1, 24°.55N×121°.53E, h61^{km}±1^{km}, M3.8*

ASIES ***04*** *08:14:47.8, 24°.63N×121°.65E, h46^{km}, MW3.9*

IASPEI ***04*** *08:14:47.8±1.3, 24°.60N±0°.02×121°.63E±0°.03, h52^{km}±5^{km}, mb3.9/11, Error ellipse: s-maj=3.8km s-min=3.0km az=113.7, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

NEIC ***04*** *08:14:47.0±1.5, 24°.54N±0°.04×121°.59E±0°.04, h59^{km}±5^{km}, mb4.4/8, ML4.5(TAP), Error ellipse: s-maj=6.1km s-min=4.5km az=208.0*

TAP ***04*** *08:14:47.5, 24°.59N×121°.61E, h53^{km}, ML4.7, B*

IDC ***04*** *08:14:58.0±5.8, 24°.53N×121°.62E, h162^{km}±56^{km}, mb3.3/7, mb1 3.5/8, mb1mx3.2/42, mbtmp3.8/8, MS2.8/1, Ms1 2.8/1, ms1mx2.5/27, Error ellipse: s-maj=35.7km s-min=15.3km az=73.0*

ISC 04 08:14:47.3±0.6**, 24°.62N**±0°.02×**121°.61E**±0°.02**, h59^{km}**±3^{km}**, n168, σ1^{s}.12**/302**, mb3.9**/11**, 20C-39D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ENTT	**Nioudou** baz=328	0.05	297	⇓iP	Pn	08 14 56.0	-0.1
ENTT	baz=328			i S	Sn	08 15 01.9	-0.7
NDT	**Datong Townshi** baz=290	0.09	259	⇑iP	Pn	08 14 56.1	-0.2
NDT	baz=290			i S	Sn	08 15 01.7	-1.0
TWE	**Neicheng** baz=29	0.11	27	⇓iP	Pn	08 14 56.4	+0.1
TWE	baz=29			i S	Sn	08 15 02.5	-0.2
NWLT	**Wulai** baz=344	0.18	328	⇓iP	Pn	08 14 56.5	-0.2
NWLT	baz=344			eS	Sn	08 15 02.6	-0.8
ILA	**Ilan** baz=39	0.19	41	⇓iP	Pn	08 14 57.0	+0.4
ILA	baz=39			i S	Sn	08 15 03.8	+0.4
TWC	**Suao** baz=85	0.22	93	⇓iP	Pn	08 14 56.6	-0.1
TWC	baz=85			i S	Sn	08 15 02.8	-0.8
YHNB	**Yeheng** baz=301	0.22	283	⇓iP	Pn	08 14 56.5	-0.4
YHNB	baz=301			eS	Sn	08 15 02.9	-0.9
YHNB	**Yeheng**	0.22	283		Pn	08 14 56.8	-0.1
ENA	**Nanau** baz=147	0.22	148	⇑iP	Pn	08 14 56.2	-0.6
ENA	baz=147			i S	Sn	08 15 02.9	-0.8
NSK	**Sanguang** baz=301	0.24	284	⇓iP	Pn	08 14 56.6	-0.4
NSK	baz=301			S	Sn	08 15 03.1	-0.8
NNS	**Nan Shan** baz=234	0.28	231	⇑iP	Pn	08 14 57.2	-0.2
NNS	baz=234			eS	Sn	08 15 03.6	-0.9
NNSB	**Datong** baz=232	0.28	228	⇑iP	Pn	08 14 57.2	-0.2
NNSB	baz=232			i S	Sn	08 15 03.6	-1.0
NNSH	**Datong** baz=233	0.28	228	⇑iP	Pn	08 14 57.2	-0.2
NNSH	baz=233			i S	Sn	08 15 03.6	-1.0
NTC	**Toucheng** baz=38	0.31	40	⇓iP	Pn	08 14 57.7	+0.3
NTC	baz=38			eS	Sn	08 15 04.6	0.0
NHDH	**Xindian Distri** baz=349	0.35	347	⇓iP	Pn	08 14 57.6	-0.1
NHDH	baz=349			S	Sn	08 15 04.7	-0.6
TWA	**Mucha** baz=351	0.36	356	⇓iP	Pn	08 14 57.9	0.0
TWA	baz=351			i S	Sn	08 15 05.1	-0.4
TATO	**Taipei** baz=353	0.37	343	⇓P	Pn	08 14 57.8	-0.1
TATO	baz=353			eS	Sn	08 15 05.0	-0.7
TATO	**Taipei**	0.37	343		Pn	08 14 57.9	0.0
TIPB	**Shuangxi** baz=18	0.40	29	⇓iP	Pn	08 14 58.5	+0.3
TIPB	baz=18			S	Sn	08 15 05.9	-0.3
BACT	**New Taipei Cit** baz=348	0.41	338	eP	Pn	08 14 58.3	+0.1
BACT	baz=348			eS	Sn	08 15 06.0	-0.2
TAP1	**Taipei** baz=350	0.42	349	P	Pn	08 14 58.4	0.0
TAP1	baz=350			eS	Sn	08 15 06.2	-0.3
ETLH	**Xiulin Townshi** baz=190	0.43	196	⇑iP	Pn	08 14 58.2	-0.4
ETLH	baz=190			i S	Sn	08 15 07.0	+0.3
TAP	**Taipei** baz=350	0.43	347	⇓iP	Pn	08 14 58.5	0.0
TAP	baz=350			eS	Sn	08 15 06.4	-0.2
NACB	**Ninganchiao** baz=175	0.44	182	⇑iP	Pn	08 14 57.5	-1.2
NACB	baz=175			i S	Sn	08 15 05.3	-1.5
NACB	**Ninganchiao**	0.44	182		Pn	08 14 57.7	-1.0
NTY	**Taoyuan** baz=326	0.47	323	⇓iP	Pn	08 14 59.2	+0.3
NTY	baz=326			S	Sn	08 15 07.9	+0.5
NWF	**Wu-fen Shan** baz=9.0	0.47	19	⇓iP	Pn	08 14 59.3	+0.3
NWF	baz=9.0			S	Sn	08 15 07.5	0.0
WFSB	**Wu-fen Shan** baz=9.0	0.47	19	⇓iP	Pn	08 14 59.3	+0.4
WFSB	baz=9.0			eS	Sn	08 15 07.3	-0.1
FUSS	**Fushou** baz=224	0.50	222	⇑iP	Pn	08 14 59.8	+0.3
FUSS	baz=224			S	Sn	08 15 08.4	+0.1
TWS1	**Kuangyinshan** baz=343	0.51	340	⇓iP	Pn	08 14 59.6	+0.3
TWS1	baz=343			S	Sn	08 15 08.6	+0.5
TWB1	**Santiao Chiao** baz=32	0.52	41	⇓iP	Pn	08 14 59.8	+0.4
TWB1	baz=32			eS	Sn	08 15 07.9	-0.2
NCU	**National Centr** baz=316	0.52	312	⇓iP	Pn	08 14 59.7	+0.2
NCU	baz=316			eS	Sn	08 15 08.6	+0.3
NCUH	**Zhongli** baz=315	0.52	312	⇓P	Pn	08 14 59.7	+0.3
NCUH	baz=315			eS	Sn	08 15 08.2	0.0
YM01	**YM01** baz=349	0.53	356	⇓P	Pn	08 14 58.5	-1.0
YM01	baz=349			eS	Sn	08 15 06.7	-1.8
YM04	**YM04** baz=354	0.54	353	⇓eP	Pn	08 14 59.6	0.0
YM04	baz=354			eS	Sn	08 15 07.9	-0.7
YM10	**YM10** baz=356	0.54	355	⇓iP	Pn	08 14 59.7	0.0
YM10	baz=356			eS	Sn	08 15 08.0	-0.7
TWD	**Chiawan** baz=172	0.54	181	⇑iP	Pn	08 14 58.4	-1.2
TWD	baz=172			eS	Sn	08 15 06.6	-1.9
TWT	**Tachien** baz=230	0.54	227	⇑P	Pn	08 15 00.4	+0.6
TWT	baz=230			eS	Sn	08 15 09.2	+0.3
LIOB	**Emei** baz=276	0.54	273	⇓iP	Pn	08 14 59.9	+0.2
LIOB	baz=276			eS	Sn	08 15 08.8	+0.1
YM11	**YM11** baz=351	0.55	356	eP	Pn	08 14 59.8	0.0
YM11	baz=351			eS	Sn	08 15 08.2	-0.6
TNOU	**National Taiwa** baz=7.0	0.55	16	⇓iP	Pn	08 14 59.9	+0.1
TNOU	baz=7.0			eS	Sn	08 15 08.3	-0.5
TDCB	**Techi** baz=230	0.55	229	⇑iP	Pn	08 15 00.4	+0.5
TDCB	baz=230			S	Sn	08 15 09.0	-0.1
NSTT	**Nanjuang** baz=274	0.56	271	⇓P	Pn	08 14 59.9	+0.1
NSTT	baz=274			eS	Sn	08 15 08.7	-0.2
YM03	**YM03** baz=355	0.56	353	⇓P	Pn	08 14 59.9	-0.1
YM03	baz=355			eS	Sn	08 15 08.1	-1.1
HSN1	**Hsinchu** baz=300	0.56	286	eP	Pn	08 14 59.8	-0.1
HSN1	baz=300			eS	Sn	08 15 09.3	+0.3
NTST	**Danshui** baz=355	0.56	345	⇓P	Pn	08 15 00.3	+0.4
NTST	baz=355			eS	Sn	08 15 09.2	+0.2
YM08	**YM08** baz=352	0.57	358	⇓P	Pn	08 14 59.7	-0.2
YM08	baz=352			eS	Sn	08 15 08.1	-1.1
WHF	**Hehuan Shan** baz=207	0.57	214	⇑iP	Pn	08 15 00.5	+0.1
WHF	baz=207			S	Sn	08 15 09.7	-0.2
ANP	**Anpu** baz=354	0.57	352	⇓P	Pn	08 14 59.9	-0.2
ANP	baz=354			eS	Sn	08 15 08.5	-0.9
SBCB	**Hsinchu** baz=301	0.59	287	eP	Pn	08 15 00.5	+0.2
SBCB	baz=301			eS	Sn	08 15 10.0	+0.3
HSN	**Hsinchu** baz=294	0.61	287	P	Pn	08 15 00.3	-0.1
HSN	baz=294			eS	Sn	08 15 09.8	-0.2
HWA	**Hwalien** baz=178	0.64	180	⇑iP	Pn	08 14 60.0	-0.8
HWA	baz=178			eS	Sn	08 15 09.8	-0.8
TWY	**Chenhua** baz=353	0.65	359	P	Pn	08 15 01.5	+0.5
TWY	baz=353			eS	Sn	08 15 11.3	+0.4
CHGB	**Renai** baz=216	0.69	216	⇑iP	Pn	08 15 02.0	+0.5
CHGB	baz=216			S	Sn	08 15 12.2	+0.2
WHP	**Taichung City** baz=252	0.69	241	⇓iP	Pn	08 15 02.5	+0.9
WHP	baz=252			eS	Sn	08 15 12.5	+0.5
NMLH	**Miaoli** baz=266	0.75	264	⇓P	Pn	08 15 02.4	+0.3
NMLH	baz=266			eS	Sn	08 15 13.3	+0.3
NSY	**Sanyi** baz=257	0.80	256	⇓P	Pn	08 15 03.4	+0.6
NSY	baz=257			eS	Sn	08 15 14.9	+0.8
TWQ1	**Liyutan** baz=252	0.81	251	eP	Pn	08 15 03.2	+0.3
TWQ1	baz=252			eS	Sn	08 15 14.8	+0.5
ESL	**Shilin** baz=180	0.82	191	⇑iP	Pn	08 15 01.4	-1.6
ESL	baz=180			eS	Sn	08 15 13.3	-1.2
WPL	**Puli Township** baz=235	0.85	225	eP	Pn	08 15 04.6	+1.3
WPL	baz=235			eS	Sn	08 15 15.9	+0.7
DPDB	**Guoxing** baz=237	0.85	227	P	Pn	08 15 04.9	+1.4
DPDB	baz=237			eS	Sn	08 15 16.4	+0.9
WDJ	**Dajia District** baz=255	0.93	253	⇓eP	Pn	08 15 04.8	+0.5
WDJ	baz=255			eS	Sn	08 15 17.1	+0.2
EGFH	**Guangfu** baz=181	0.96	190	eP	Pn	08 15 03.0	-1.8
EGFH	baz=181			eS	Sn	08 15 15.4	-2.3
VWDT	**VWDT** baz=198	0.96	207	⇑iP	Pn	08 15 05.3	+0.5
VWDT	baz=198			eS	Sn	08 15 18.2	+0.5
TCU	**Taichung** baz=253	0.97	241	eP	Pn	08 15 05.5	+0.5
TCU	baz=253			eS	Sn	08 15 18.5	+0.5
SMLT	**Sun Moon Lake** baz=230	0.98	222	eP	Pn	08 15 05.9	+0.7
SMLT	baz=230			eS	Sn	08 15 20.1	+1.7
TYC	**Yuchr** baz=232	0.99	224	eP	Pn	08 15 05.9	+0.8
TYC	baz=232			eS	Sn	08 15 20.2	+1.8
WWF	**Wufeng** baz=246	1.01	236	eP	Pn	08 15 06.0	+0.5
WWF	baz=246			eS	Sn	08 15 19.5	+0.6
SSLB	**Suanglung** baz=210	1.02	216	⇑eP	Pn	08 15 06.2	+0.6
SSLB	baz=210			eS	Sn	08 15 20.0	+0.8
SSLB	**Suanglung**	1.02	216		Pn	08 15 05.7	+0.1
PCYT	**Pengchaiyu** baz=24	1.09	22	eP	Pn	08 15 07.1	+0.6
PCYT	baz=24			eS	Sn	08 15 20.6	-0.1
WCHH	**Zhanghua** baz=241	1.10	241	eP	Pn	08 15 06.9	+0.3
WCHH	baz=241			eS	Sn	08 15 20.9	-0.1
WNT1	**Nantou City** baz=241	1.11	230	eP	Pn	08 15 07.5	+0.8
WNT1	baz=241			eS	Sn	08 15 21.8	+0.6
WNT	**Mingjian** baz=240	1.12	229	eP	Pn	08 15 07.4	+0.5
WNT	baz=240			eS	Sn	08 15 22.4	+0.9
WJS	**Zhushan** baz=238	1.13	226	eP	Pn	08 15 07.4	+0.4
WJS	baz=238			eS	Sn	08 15 22.7	+1.0
HGSD	**Ruisui** baz=187	1.14	189	eP	Pn	08 15 05.8	-1.3
HGSD	baz=187			eS	Sn	08 15 22.1	+0.3
EHY	**Hungye** baz=181	1.14	193	eP	Pn	08 15 06.2	-1.0
EHY	baz=181			eS	Sn	08 15 21.4	-0.6
WHYT	**Xinyi Township** baz=216	1.15	217	eP	Pn	08 15 08.3	+1.0
WHYT	baz=216			eS	Sn	08 15 24.6	+2.4
JYNG	**Yonagunijimaku**	1.23	98	P	Pn	08 15 08.9	+0.6
JYNG				eS	Sn	08 15 24.6	+0.6
YULB	**Yu-li** baz=183	1.25	193	eP	Pn	08 15 06.7	-2.0
YULB	baz=183			eS	Sn	08 15 23.3	-1.4
YULB	**Yu-li**	1.25	193		Pn	08 15 07.0	-1.7
YOJ	**Yonaguni jima** baz=85	1.28	97	⇓eP	Pn	08 15 09.5	+0.5
YOJ	baz=85			eS	Sn	08 15 25.9	+0.6
YOJ	**Yonaguni jima**	1.28	97	P	Pn	08 15 09.5	+0.5
YOJ	**Yonaguni jima**	1.28	97		Pn	08 15 09.6	+0.5
TWF1	**Yuli** baz=182	1.29	193	eP	Pn	08 15 07.5	-1.7
TWF1	baz=182			eS	Sn	08 15 24.8	-0.8
ALS	**Alishan** baz=222	1.33	214	eP	Pn	08 15 10.8	+0.9
ALS	baz=222			eS	Sn	08 15 28.8	+2.0
CHN5	**Tsauling** baz=219	1.33	220	eP	Pn	08 15 10.3	+0.6
CHN5	baz=219			eS	Sn	08 15 28.0	+1.5
WGK	**Gukeng** baz=237	1.33	226	eP	Pn	08 15 10.2	+0.4
WGK	baz=237			eS	Sn	08 15 28.0	+1.5
WDLH	**Douliu** baz=238	1.35	227	eP	Pn	08 15 10.6	+0.6
WDLH	baz=238			eS	Sn	08 15 27.6	+0.7
RLNB	**Erlin** baz=237	1.35	238	eP	Pn	08 15 10.1	+0.1
FULB	**Fuli** baz=182	1.44	192	eP	Pn	08 15 10.4	-0.8
FULB	baz=182			eS	Sn	08 15 29.7	+0.5
WTK	**Tuku** baz=230	1.45	231	eP	Pn	08 15 11.8	+0.5
WTK	baz=230			eS	Sn	08 15 29.8	+0.5
CHN2	**Minshiung** baz=233	1.50	224	eP	Pn	08 15 12.8	+0.8
ELDTW	**Lidau** baz=191	1.52	201	eP	Pn	08 15 11.4	-1.0
ELDTW	baz=191			eS	Sn	08 15 30.6	-0.7
CHKT	**Chengkung** baz=186	1.53	188	eP	Pn	08 15 11.8	-0.6
CHKT	baz=186			eS	Sn	08 15 29.7	-1.6
CHY	**Chiayi** baz=235	1.56	224	eP	Pn	08 15 13.1	+0.3
CHY	baz=235			eS	Sn	08 15 32.7	+0.8
CHN4	**Tsaushan** baz=215	1.57	217	eP	Pn	08 15 13.9	+0.9
CHN4	baz=215			eS	Sn	08 15 35.1	+2.9

TPUB	**Ta-pu**	**1.59**	**215**	*e*P	**Pn**	**08 15 13.9**	**+0.7**
	baz=213						
TPUB				*e*S	**Sn**	**08 15 34.3**	**+1.5**
	baz=213						
TPUB	**Ta-pu**	**1.59**	**215**		**Pn**	**08 15 13.9**	**+0.7**
WSF	**Szhu**	**1.60**	**233**	*e*P	**Pn**	**08 15 13.4**	**+0.1**
	baz=242						
WSF				*e*S	**Sn**	**08 15 33.4**	**+0.4**
	baz=242						
WTP	**Ta-pu**	**1.64**	**214**	*e*P	**Pn**	**08 15 14.3**	**+0.4**
	baz=213						
WTP				*e*S	**Sn**	**08 15 35.2**	**+1.1**
	baz=213						
STYT	**Tauyuan**	**1.65**	**208**	*e*P	**Pn**	**08 15 14.7**	**+0.7**
	baz=217						
STYT				*e*S	**Sn**	**08 15 35.9**	**+1.6**
	baz=217						
WLGB	**Puzi**	**1.65**	**227**	*e*P	**Pn**	**08 15 14.2**	**+0.2**
	baz=236						
WLGB				*e*S	**Sn**	**08 15 34.3**	**+0.1**
	baz=236						
EDH	**Donghe**	**1.66**	**190**	*e*P	**Pn**	**08 15 12.9**	**-1.3**
	baz=188						
EDH				*e*S	**Sn**	**08 15 33.2**	**-1.3**
	baz=188						
TWK	**Hsinying**	**1.69**	**218**	*e*P	**Pn**	**08 15 15.2**	**+0.6**
	baz=215						
TWK				*e*S	**Sn**	**08 15 38.3**	**+2.9**
	baz=215						
SNST	**Tainan City**	**1.73**	**216**	*e*P	**Pn**	**08 15 16.2**	**+1.2**
	baz=215						
SNST				*e*S	**Sn**	**08 15 39.7**	**+3.7**
	baz=215						
CHN1	**Nanshi**	**1.74**	**215**	*e*P	**Pn**	**08 15 16.1**	**+0.9**
	baz=213						
CHN1				*e*S	**Sn**	**08 15 37.4**	**+1.0**
	baz=213						
ICHU	**Yijhu**	**1.75**	**224**	*e*P	**Pn**	**08 15 15.9**	**+0.6**
	baz=235						
ICHU				*e*S	**Sn**	**08 15 36.9**	**+0.3**
	baz=235						
LONT	**Longtian**	**1.76**	**195**	*e*P	**Pn**	**08 15 13.7**	**-1.9**
	baz=183						
LONT				*e*S	**Sn**	**08 15 34.3**	**-2.6**
	baz=183						
SGST	**Jiashian**	**1.80**	**212**	*e*P	**Pn**	**08 15 16.0**	**0.0**
	baz=210						
SGST				*e*S	**Sn**	**08 15 38.1**	**+0.3**
	baz=210						
CHN8	**Yiju**	**1.80**	**226**	*e*P	**Pn**	**08 15 16.6**	**+0.6**
	baz=234						
CHN8				*e*S	**Sn**	**08 15 38.5**	**+0.7**
	baz=234						
SLGT	**Liugui**	**1.84**	**209**	*e*P	**Pn**	**08 15 17.4**	**+0.7**
	baz=219						
SLGT				*e*S	**Sn**	**08 15 40.8**	**+1.9**
	baz=219						
TWG	**Pinlang**	**1.86**	**196**	*e*P	**Pn**	**08 15 14.9**	**-1.9**
	baz=184						
TWG				*e*S	**Sn**	**08 15 36.9**	**-2.4**
	baz=184						
TWG	**Pinlang**	**1.86**	**196**		**Pn**	**08 15 15.3**	**-1.5**
TWGBT	**Beinan**	**1.86**	**195**	*e*P	**Pn**	**08 15 14.8**	**-2.0**
	baz=184						
TWGBT				*e*S	**Sn**	**08 15 36.3**	**-3.0**
	baz=184						
PTTC	**Pingtan**	**1.89**	**298**	*e*P	**Pn**	**08 15 16.7**	**-0.5**
	baz=299						
PTTC				*e*S	**Sn**	**08 15 38.0**	**-1.9**
	baz=299						
LDUT	**Ludao**	**1.94**	**184**	*e*P	**Pn**	**08 15 16.0**	**-2.0**
	baz=182						
LDUT				*e*S	**Sn**	**08 15 38.4**	**-2.8**
	baz=182						
IRIF	**Iriomote-Funau**	**1.95**	**98**	P	**Pn**	**08 15 18.2**	**+0.1**
IRIF				S	**Sn**	**08 15 40.9**	**-0.6**
VWUC	**VWUC**	**2.00**	**281**	⇓*e*P	**Pn**	**08 15 18.3**	**-0.4**
	baz=282						
VWUC				*e*S	**Sn**	**08 15 40.3**	**-2.3**
	baz=282						
SCST	**Cishan**	**2.01**	**211**	*e*P	**Pn**	**08 15 18.6**	**-0.2**
	baz=222						
SCST				*e*S	**Sn**	**08 15 44.9**	**+2.1**
	baz=222						
HATJ	**Hateruma jima**	**2.08**	**105**	P	**Pn**	**08 15 20.4**	**+0.6**
TWM1	**Shoushan**	**2.09**	**212**	*e*P	**Pn**	**08 15 21.8**	**+1.7**
	baz=208						
ECL	**Taimali**	**2.10**	**197**	*e*P	**Pn**	**08 15 19.9**	**-0.3**
	baz=184						
TSMG	**Majia**	**2.10**	**205**	*e*P	**Pn**	**08 15 21.7**	**+1.5**
	baz=216						
TSMG				*e*S	**Sn**	**08 15 46.9**	**+1.7**
	baz=216						
MATB	**Ma-tsu**	**2.14**	**316**	⇑*e*P	**Pn**	**08 15 20.1**	**-0.6**
	baz=317						
MATB				*e*S	**Sn**	**08 15 44.1**	**-2.0**
	baz=317						
PNG	**Penghu**	**2.15**	**241**	*e*P	**Pn**	**08 15 20.0**	**-0.8**
	baz=240						
PNG				*e*S	**Sn**	**08 15 43.9**	**-2.5**
	baz=240						
PHUB	**P'eng-hu**	**2.17**	**240**	*e*P	**Pn**	**08 15 20.2**	**-0.8**
	baz=238						
PHUB				*e*S	**Sn**	**08 15 44.0**	**-2.7**
	baz=238						
MASBT	**Mashibuluo**	**2.19**	**204**	*e*P	**Pn**	**08 15 22.2**	**+0.9**
	baz=216						
MASBT				*e*S	**Sn**	**08 15 48.2**	**+0.8**
	baz=216						
JKRS	**Kuro-shima**	**2.22**	**99**	P	**Pn**	**08 15 22.4**	**+0.7**
JKRS				*e*S	**Sn**	**08 15 48.9**	**+0.9**
WDGT	**Dungji**	**2.24**	**233**	*e*P	**Pn**	**08 15 21.6**	**-0.5**
	baz=231						
WDGT				*e*S	**Sn**	**08 15 46.9**	**-1.7**
	baz=231						
PTMZ	**Houxiangcun**	**2.30**	**281**	*e*P	**Pn**	**08 15 22.5**	**-0.3**
	baz=282						
PTMZ				*e*S	**Sn**	**08 15 48.0**	**-2.0**
	baz=282						
JIJ	**Ishigaki jima**	**2.32**	**96**	P	**Pn**	**08 15 23.3**	**+0.2**
JIJ				*e*S	**Sn**	**08 15 50.0**	**-0.5**
EAST	**Anshuo**	**2.33**	**198**	*e*P	**Pn**	**08 15 24.5**	**+1.2**
	baz=185						
EAST				*e*S	**Sn**	**08 15 52.2**	**+1.3**
	baz=185						
SCZT	**Fangliau**	**2.42**	**202**	*e*P	**Pn**	**08 15 25.6**	**+1.2**
	baz=199						
SCZT				*e*S	**Sn**	**08 15 53.5**	**+0.7**
	baz=199						
VCHM	**Qimei**	**2.44**	**235**	*e*P	**Pn**	**08 15 24.2**	**-0.6**
	baz=233						
VCHM				*e*S	**Sn**	**08 15 51.8**	**-1.7**
	baz=233						
JISG	**Ishigakijimahi**	**2.46**	**90**	P	**Pn**	**08 15 25.5**	**+0.5**
JISG				*e*S	**Sn**	**08 15 54.1**	**+0.2**
SLIU	**Shizi**	**2.51**	**197**	*e*P	**Pn**	**08 15 27.4**	**+1.7**
	baz=185						
SLIU				*e*S	**Sn**	**08 15 50.8**	**-4.3**
	baz=185						
LYJJ	**Jianjiangzhen**	**2.55**	**319**	*e*P	**Pn**	**08 15 25.6**	**-0.6**
	baz=320						
LYJJ				*e*S	**Sn**	**08 15 54.5**	**-1.6**
	baz=320						
LAY	**Lan-yu**	**2.57**	**181**	*e*P	**Pn**	**08 15 25.2**	**-1.4**
	baz=173						
LAY				*e*S	**Sn**	**08 15 53.9**	**-2.7**
	baz=173						
XPSS	**Dashiqiu**	**2.63**	**331**	⇑*e*P	**Pn**	**08 15 27.0**	**-0.4**
	baz=333						
XPSS				*e*S	**Sn**	**08 15 56.5**	**-1.7**
	baz=333						
MHZQ	**Yeshan**	**2.76**	**303**	*e*P	**Pn**	**08 15 28.5**	**-0.6**
	baz=304						
MHZQ				*e*S	**Sn**	**08 15 59.4**	**-1.9**
	baz=304						
QZH	**Quanzhou**	**2.76**	**277**	⇓*i*Pn	**Pn**	**08 15 28.6**	**-0.6**
QZH				Sn	**Sn**	**08 15 58.2**	**-3.1**
QZH				smax	smax		
	comp=N,180nm,0.5s						
QZH				smax	smax		
	comp=E,110nm,0.3s						
TWK1	**Hengchun**	**2.77**	**196**	*e*P	**Pn**	**08 15 30.4**	**+1.2**
	baz=183						
TWK1				*e*S	**Sn**	**08 16 00.9**	**-0.5**
	baz=183						
TWKBT	**Hengchun**	**2.77**	**196**	*e*P	**Pn**	**08 15 30.5**	**+1.3**
	baz=183						
TWKBT				*e*S	**Sn**	**08 16 00.6**	**-0.9**
	baz=183						
JTJ	**Tarama**	**2.81**	**89**	P	**Pn**	**08 15 31.0**	**+1.2**
KNM	**Kinmen**	**2.90**	**267**	*e*P	**Pn**	**08 15 32.2**	**+1.2**
	baz=266						
KNM				*e*S	**Sn**	**08 16 04.4**	**-0.3**
	baz=266						
KNMB	**Chin-men Tao**	**2.94**	**268**	⇓*e*P	**Pn**	**08 15 30.9**	**-0.7**
	baz=267						
KNMB				*e*S	**Sn**	**08 16 02.5**	**-3.2**
	baz=267						
KNMB	**Chin-men Tao**	**2.94**	**268**		**Pn**	**08 15 31.0**	**-0.6**
AXDP	**Jialang**	**3.32**	**276**	⇓*e*P	**Pn**	**08 15 36.7**	**-0.1**
	baz=276						
AXDP				*e*S	**Sn**	**08 16 12.4**	**-2.6**
	baz=276						
SSE	**Sheshan**	**6.46**	**357**	Pn	**Pn**	**08 16 19.2**	**-0.6**
SSE				Sn	**Sn**	**08 17 30.4**	**-1.8**
SSE				smax	smax		
	comp=N,24nm,1.1s						
SSE				smax	smax		
	comp=E,32nm,0.9s						
SSE	**Sheshan**	**6.46**	**357**		**Pn**	**08 16 19.2**	**-0.6**
SSE					**Sn**	**08 17 31.1**	**-1.1**
KSRS	**Korea Array**	**13.88**	**21**	P	**P**	**08 18 09.2**	**+1.7**
	comp=E,0.4nm,0.3s,baz=196,slow=11,SNR=12						
KSRS				LR	LR	08 23 27.7	
	comp=E,40nm,20.1s,baz=226,slow=37						
GTA	**Gaotai**	**23.56**	**314**	⇑P	**P**	**08 19 54.7**	**+2.1**
GTA				pP	pP	08 20 05.2	-1.3
GTA				sP	sP	08 20 09.6	-4.2
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SBUM	**Sibu**	**23.83**	**204**	P	**P**	**08 19 54.9**	**-0.3**
SONM	**Songino Array**	**26.12**	**336**	P	**P**	**08 20 17.3**	**+1.4**
	comp=Z,0.8nm,0.7s,baz=149,slow=9.8,SNR=5.6						
WMQ	**Urumqi**	**33.64**	**313**	*e*P	P	08 21 27.4	+5.1
MKAR	**Makanchi Array**	**38.30**	**315**	P	**P**	**08 22 03.2**	**+1.1**
	comp=Z,0.9nm,0.7s,baz=113,slow=10,SNR=5.6						
KURK	**Kurchatov**	**42.01**	**320**	P	**P**	**08 22 32.4**	**-0.3**
KURK				IAmb	IAmb	08 22 44.9	
	comp=Z,6.2nm,0.8s						
WB0	**Warramunga Arr**	**45.84**	**163**	P	**P**	**08 23 02.5**	**-1.2**
WB0				IAmb	IAmb	08 23 27.3	
	comp=Z,8.6nm,1.5s						
PSA00	**Pilbara Seismi**	**45.95**	**182**	P	**P**	**08 23 02.2**	**-2.3**
WRA	**Warramunga Arr**	**45.99**	**163**	P	**P**	**08 23 04.2**	**-0.7**
	comp=Z,0.8nm,0.5s,baz=344,slow=8.6,SNR=7.4						
WB2	**Warramunga Arr**	**46.00**	**163**	P	**P**	**08 23 03.9**	**-1.0**
WR0	**Warramunga Arr**	**46.06**	**163**	P	**P**	**08 23 04.1**	**-1.3**
WR0				IAmb	IAmb	08 23 21.9	
	comp=Z,7.6nm,1.4s						
ASAR	**Alice Springs**	**49.46**	**165**	P	**P**	**08 23 31.1**	**-0.6**
	comp=Z,1.0nm,0.7s,baz=345,slow=6.6,SNR=10						
ABKAR	**Akbulak array**	**53.42**	**314**	P	**P**	**08 24 02.4**	**+1.3**
ILAR	**Eielson Array**	**68.65**	**27**	P	**P**	**08 25 43.5**	**-0.5**
	comp=Z,0.3nm,0.6s,baz=293,slow=6.4,SNR=5.2						
FINES	**FINESS Array B**	**71.27**	**330**	P	**P**	**08 26 00.3**	**+0.2**
	comp=Z,1.4nm,0.5s,baz=64,slow=5.4,SNR=7.8						
YKA	**Yellowknife Ar**	**82.42**	**23**	P	**P**	**08 27 02.3**	**-0.5**
	comp=Z,0.2nm,0.5s,baz=317,slow=4.6,SNR=5.6						

IDC ***04*** *08:19:15.4±2.3, 54°.07N×87°.21E, h0^{km}, mb1 3.3/3, mb1mx3.1/39, mbtmp3.3/3, ML3.3/3, Error ellipse: s-maj=21.0km s-min=14.3km az=66.0*

NNC ***04*** *08:19:17.1±5.3, 54°.08N×86°.91E, h0^{km}, mb3.5, mpv3.1, Error ellipse: s-maj=52.6km s-min=34.7km az=166.0, Suspected Mining explosion.*

ISC 04 08:19:17.4±4.2, **54°.1N**±0°.2×**86°.9E**±0°.2, **h0**^{km}**, n8,** σ**0^{s}.92**/12, **7C-1D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.23**	**265**	*i*		08 27 07.2	
	baz=80,slow=339,SNR=2.9						
ZALV	**Zalesovo Beam**	**1.23**	**265**	Pg	**Pg**	**08 19 40.0**	**-0.9**
	9.6nm,0.3s,baz=83,slow=16,SNR=50						
ZALV				Lg	Lg	08 20 00.3	
	9.2nm,0.3s,baz=78,slow=27,SNR=18						
KURK	**Kurchatov**	**6.08**	**240**	⇑Pn	**Pn**	**08 20 49.0**	**+0.6**
	0.6nm,0.4s						
KURK				⇑Sn	**Sn**	**08 21 59.0**	**+0.4**
	1.1nm,0.4s						
KURK				⇑Lg	Lg	08 22 35.4	
	4.3nm,0.7s						
KURBB	**Kurchatov Arra**	**6.18**	**239**	Pn	**Pn**	**08 20 50.4**	**+0.6**
	0.3nm,0.3s,baz=54,slow=13,SNR=22						
KURBB				Sn	**Sn**	**08 22 02.6**	**+1.5**
	0.2nm,0.3s,baz=56,slow=22,SNR=8.5						
KURBB				Lg	Lg	08 22 35.8	
	0.1nm,0.3s,baz=58,slow=34,SNR=5.3						
KURBB	**Kurchatov Arra**	**6.18**	**239**	⇑Pn	**Pn**	**08 20 49.9**	**+0.1**
	1.9nm,0.3s						
KURBB				⇑Sn	**Sn**	**08 22 00.3**	**-0.8**
	5.8nm,0.5s						
KURBB				⇓Lg	Lg	08 22 40.3	
	8.8nm,0.7s						
MK31	**Makanchi Array**	**7.86**	**204**	⇑Pn	**Pn**	**08 21 13.1**	**+0.2**
	0.1nm,0.2s,baz=28,slow=14,SNR=16						
MK31				Sn	**Sn**	**08 22 43.5**	**+1.0**
	0.5nm,0.4s,baz=32,slow=27,SNR=5.2						
MK31				⇑Lg	Lg	08 23 28.5	
	1.8nm,0.6s,baz=29,slow=30,SNR=3.9						
MKAR	**Makanchi Array**	**7.86**	**204**	Pn	**Pn**	**08 21 13.0**	**+0.1**
	0.3nm,0.3s,baz=21,slow=14,SNR=14						
MKAR				Sn	**Sn**	**08 22 41.2**	**-1.3**
	0.4nm,0.3s,baz=32,slow=29,SNR=7.3						
MKAR				Lg	Lg	08 23 26.5	
	0.1nm,0.3s,baz=28,slow=31,SNR=2.2						
BVAR	**Borovoye Array**	**9.88**	**271**	Pn	**Pn**	**08 21 41.1**	**+0.5**
	0.6nm,0.3s,baz=66,slow=17,SNR=6.8						

IDC ***04*** *08:20:42.0±0.4, 25°.55S×176°.13W, h0^{km}, mb5.1/24, mb1 5.2/25, mb1mx5.1/39, mbtmp5.0/25, ML5.7/1, MS5.3/25, Ms1 5.3/25, ms1mx5.1/30, Error ellipse: s-maj=14.9km s-min=13.4km az=125.0*

NEIC ***04*** *08:20:43.6±2.5, 25°.74S±0°.07×175°.88W±0°.10, h19^{km}±1^{km}, mb5.4/251, Ms_20 5.5/641, Mwb5.5/80, Mwc5.6(GCMT), Error ellipse: s-maj=15.1km s-min=11.4km az=104.0*

BJI ***04*** *08:20:43.3±0.0, 25°.46S×175°.56W, h31^{km}, mB5.8/52, mb5.4/59, Ms5.5/67, Ms7 5.2/64*

NEIC ***04*** *08:20:44.7, 25°.87S×175°.96W, h16^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.93; $M_{\theta\theta}$0.49; $M_{\phi\phi}$-2.42; $M_{r\theta}$0.30; $M_{\theta\phi}$-1.01; $M_{\phi r}$0.54; Fault plane solution: $M_0$2.51000×10^{17} NP1:ϕ_s191.14000°, δ38.09000°, λ80.89000°. NP2:ϕ_s22.66000°, δ52.47000°, λ97.08000°. Principal axes: T 2.0190, Plg81.0000°, Azm326.0000°; N 0.7957, Plg6.0000°, Azm198.0000°; P -2.8147, Plg7.0000°, Azm108.0000°;*

NOU ***04*** *08:20:45.9, 25°.66S×175°.45W, h48^{km}, mb5.2, South of Tonga Islands*

MOS ***04*** *08:20:45.8±1.0, 25°.64S×176°.14W, h36^{km}, mb5.5/38, MS5.4/13, Error ellipse: s-maj=10.2km s-min=7.7km az=104.1*

BGR ***04*** *08:20:47.2±0.0, 25°.41S×176°.08W, h33^{km}*

GCMT ***04*** *08:20:47.6±0.1, 25°.60S±0°.01×175°.67W±0°.01, h19^{km}, MW5.6/147, Moment Tensor Solution. s137, c246; s147, c291; Duration: 1^{s}.6 Moment tensor: Scale 10^{17} Nm; M_{rr}2.86±.04; $M_{\theta\theta}$0.12±.03; $M_{\phi\phi}$-2.99±.03; $M_{r\theta}$0.70±.07; $M_{\theta\phi}$-0.22±.02; $M_{\phi r}$1.63±.06; Best double couple: $M_0$3.42900×10^{17} NP1:ϕ_s174.00000°, δ31.00000°, λ73.00000°. NP2:ϕ_s14.00000°, δ61.00000°, λ100.00000°. Principal axes: T 3.4020, Plg72.0000°, Azm308.0000°; N 0.0480, Plg9.0000°, Azm189.0000°; P -3.4560, Plg15.0000°, Azm96.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***04*** *08:20:47, 25°.60S×175°.64W, h19^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}2.81; $M_{\theta\theta}$0.25; $M_{\phi\phi}$-3.06; $M_{r\theta}$0.79; $M_{\theta\phi}$-0.26; $M_{\phi r}$2.06; Fault plane solution: $M_0$3.69000×10^{17} NP1:ϕ_s173.00000°, δ28.00000°, λ71.00000°. NP2:ϕ_s15.00000°, δ64.00000°, λ100.00000°. Principal axes: T 3.5987, Plg70.0000°, Azm305.0000°; N 0.1700, Plg9.0000°, Azm190.0000°; P -3.7687, Plg18.0000°, Azm97.0000°;*

ISC 04 08:20:45.0±0.4, **25°.77S**±0°.04×**175°.90W**±0°.04, **h27**^{km}±2^{km}, **h27**^{km}**:pP-P, n1044,** σ**1^{s}.77**/770, **mb5.3**/188, **MS5.5**/379, **53C-25D, Fault plane solution: NP1:**ϕ_s164.09135°, δ58.62242°, λ46.03374°. **NP2:**ϕ_s45.73068°, δ52.08522°, λ138.70160°. **Principal axes:** T Plg53.3870°, Azm18.6957°; N Plg36.3493°, Azm190.7580°; P Plg3.8036°, Azm283.5623°; **South of Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RIZ	**Raoul Island**	**3.90**	**207**	P	**Pn**	**08 21 46.1**	**+2.9**
RIZ				S	**Sn**	**08 22 32.3**	**+4.2**
RAO	**Raoul Island**	**3.90**	**207**	Pn	**Pn**	**08 21 45.1**	**+1.9**
	523nm,0.3s,baz=72,slow=20,SNR=17						
RAO				Sn	**Sn**	**08 22 32.7**	**+4.6**
	1µm,0.3s,baz=68,slow=24,SNR=13						
RAO	**Raoul Island**	**3.90**	**207**	P	**Pn**	**08 21 44.6**	**+1.4**
RAO	**Raoul Island**	**3.90**	**207**	Pn	**Pn**	**08 21 44.6**	**+1.4**
RAO	**Raoul Island**	**3.90**	**207**	P	**Pn**	**08 21 45.4**	**+2.2**
GLKZ	**Green Lake**	**3.91**	**207**	P	**Pn**	**08 21 45.5**	**+2.2**
GLKZ				S	**Sn**	**08 22 32.3**	**+3.9**
MSVF	**Nonsavu**	**9.77**	**324**	⇓*e*P	**Pn**	**08 23 04.4**	**+0.4**
MSVF	**Nonsavu**	**9.77**	**324**		**Pn**	**08 23 04.1**	**+0.2**
MSVF	**Nonsavu**	**9.77**	**324**	P	**Pn**	**08 23 04.9**	**+0.9**
AFI	**Afiamalu**	**12.42**	**19**	P	Pn	08 23 33.5	-6.7
AFI	**Afiamalu**	**12.42**	**19**	Pn	Pn	08 23 33.5	-6.7
AFI	**Afiamalu**	**12.42**	**19**	P	Pn	08 23 35.0	-5.2
OUZ	**Omahuta**	**13.05**	**221**	P	**P**	**08 23 57.5**	**-1.2**
CNGZ	**Carnagh Statio**	**13.62**	**200**	P	**P**	**08 24 08.6**	**+3.6**
CNGZ				S	**Sn**	**08 26 19.8**	**-7.0**
URZ	**Urewera**	**13.78**	**204**	Pn	**Pn**	**08 23 56.9**	**-1.7**
PRGZ	**Paritu Road**	**14.12**	**200**	P	**P**	**08 24 11.4**	**+0.8**
PRGZ				S	Sn	08 26 28.0	-11
WHHZ	**Waihua**	**14.47**	**202**	P	**P**	**08 24 17.4**	**+3.0**
WHHZ				S	Sn	08 26 37.2	-10
MRHZ	**Matea Rd**	**14.54**	**205**	P	**Pn**	**08 24 10.2**	**+1.1**
MRHZ				S	**Sn**	**08 26 41.4**	**-8.1**
NMHZ	**Naumai**	**14.63**	**203**	P	**P**	**08 24 16.1**	**-0.3**
NMHZ				S	Sn	08 26 41.3	-10
BKZ	**Black Stump Fm**	**14.81**	**204**	Pn	**Pn**	**08 24 11.0**	**-1.7**
HIZ	**Hauiti**	**14.91**	**209**	Pn	**Pn**	**08 24 12.4**	**-1.6**
HIZ	**Hauiti**	**14.91**	**209**	P	**Pn**	**08 24 13.5**	**-0.5**
HIZ				P	**Pn**	**08 24 13.5**	**-0.5**
MCHZ	**McNeill Hill**	**14.98**	**203**	P	**P**	**08 24 19.9**	**-0.2**
CKHZ	**Cape Kidnapper**	**15.05**	**201**	P	**P**	**08 24 21.0**	**+0.1**
TMVZ	**Te Maari**	**15.06**	**206**	P	**Pn**	**08 24 18.8**	**+2.6**
ETVZ	**East Tongariro**	**15.08**	**206**	P	**Pn**	**08 24 17.2**	**+0.9**
FWVZ	**Far West T-bar**	**15.24**	**206**	P	**Pn**	**08 24 21.0**	**+2.4**
MARNC	**Mare, Loyalty**	**15.33**	**283**	P	**P**	**08 24 24.4**	**+0.3**
PXZ	**Pawanui**	**15.45**	**201**	P	**Pn**	**08 24 22.6**	**+1.5**
RAR	**Rarotonga**	**15.47**	**76**	Pn	**Pn**	**08 24 15.7**	**-5.8**
	5.0nm,0.3s,baz=254,slow=12,SNR=15						
RAR				Sn	Sn	08 26 51.6	-21
	5.0nm,0.3s,baz=77,slow=18,SNR=4.0						
RAR				LR	LR	08 30 18.2	
	comp=Z,4µm,19.0s,baz=238,slow=37						
RAR	**Rarotonga**	**15.47**	**76**	P	**Pn**	**08 24 16.2**	**-5.3**
RAR				pmax	pmax		
	comp=Z,177nm,0.9s						
RAR	**Rarotonga**	**15.47**	**76**	Pn	**Pn**	**08 24 16.2**	**-5.3**
RAR				IAmb	IAmb	08 24 21.7	
	comp=Z,177nm,0.8s						
RAR	**Rarotonga**	**15.47**	**76**	P	**Pn**	**08 24 16.4**	**-5.1**
PINNC	**Pines Island,**	**15.52**	**278**	P	**P**	**08 24 27.3**	**+1.1**
TSZ	**Takapari Road**	**15.79**	**204**	P	**Pn**	**08 24 21.8**	**-3.7**
OUENC	**Ouen Island, N**	**16.11**	**278**	P	**P**	**08 24 36.0**	**+3.3**
YATNC	**Mamie plateau,**	**16.16**	**280**	P	**P**	**08 24 34.9**	**+1.5**
BFZ	**Birch Farm**	**16.24**	**202**	P	**P**	**08 24 34.3**	**+0.1**
ONTNC	**Ouen Toro**	**16.48**	**278**	P	**P**	**08 24 39.8**	**+2.9**
DZM	**Mont Dzumac**	**16.55**	**279**	Pn	**P**	**08 24 39.8**	**+2.0**
	comp=Z,1.7nm,0.3s,baz=82,slow=17,SNR=23						
DZM				LR	LR	08 29 51.1	
	comp=Z,16µm,20.1s,baz=100,slow=34						
DZM	**Mont Dzumac**	**16.55**	**279**	*e*Pn	**P**	**08 24 41.0**	**+3.2**
	comp=Z,1.6nm,0.2s						
DZM	**Mont Dzumac**	**16.55**	**279**	Pn	**Pn**	**08 24 35.0**	**-0.4**
DZM				IAmb	IAmb	08 24 56.1	
	comp=Z,350nm,1.4s						
DZM	**Mont Dzumac**	**16.55**	**279**	P	**P**	**08 24 40.2**	**+2.4**
NOUC	**Port Laguerre**	**16.67**	**279**	P	**P**	**08 24 41.5**	**+2.5**
DVP	**Devils Point**	**16.80**	**295**	P	**P**	**08 24 42.2**	**+1.8**
MSWZ	**Moikau Station**	**17.24**	**203**	Pn	**Pn**	**08 24 41.7**	**-2.2**
SNZO	**South Karori**	**17.34**	**204**	Pn	**Pn**	**08 24 42.9**	**-2.3**
BHW	**Baring Head**	**17.37**	**204**	Pn	**Pn**	**08 24 43.1**	**-2.4**
PLWZ	**Palliser**	**17.37**	**203**	Pn	**Pn**	**08 24 43.2**	**-2.4**
TUWZ	**Tuamarina**	**17.74**	**206**	P	**Pn**	**08 24 43.3**	**-6.7**
TUWZ				S	Sn	08 27 50.3	-17
NNZ	**Nelson**	**17.79**	**207**	Pn	**Pn**	**08 24 48.8**	**-1.8**
NNZ	**Nelson**	**17.79**	**207**	P	**Pn**	**08 24 45.8**	**-4.8**
NNZ				S	Sn	08 27 51.0	-17
BSWZ	**Blackbirch Sta**	**18.01**	**205**	Pn	**Pn**	**08 24 50.5**	**-2.9**
THZ	**Tophouse**	**18.44**	**207**		**P**	**08 24 55.6**	**-2.9**
THZ	**Tophouse**	**18.44**	**207**	P	**P**	**08 24 52.6**	**-5.9**
KHZ	**Kahutara**	**18.74**	**205**	P	**P**	**08 24 56.1**	**-5.5**
KHZ				IAmb	IAmb	08 24 58.8	
	comp=Z,458nm,1.7s						
KHZ	**Kahutara**	**18.74**	**205**	P	**P**	**08 24 55.1**	**-6.5**
KHZ				S	Sn	08 28 12.5	-19
SANVU	**Saraoutou**	**18.84**	**300**	P	**P**	**08 25 02.0**	**-0.9**
SANVU	**Saraoutou**	**18.84**	**300**	P	**Pn**	**08 25 04.4**	**+0.8**
DSZ	**Denniston Nort**	**18.89**	**209**	P	**P**	**08 25 00.2**	**-3.3**
DSZ				S	Sn	08 28 19.8	-15
KOUNC	**Koumac, New Ca**	**18.94**	**282**	P	**Pn**	**08 25 07.8**	**+3.0**
GVZ	**Greta Valley S**	**19.40**	**205**	P	**P**	**08 25 06.8**	**-2.2**
LTZ	**Lake Taylor**	**19.55**	**207**	P	**P**	**08 25 06.4**	**-4.2**
LTZ	**Lake Taylor**	**19.55**	**207**	P	**P**	**08 25 05.7**	**-4.9**
LTZ				S	S	08 28 29.4	-20
AMCZ	**Amberley**	**19.73**	**205**	P	**P**	**08 25 10.5**	**-2.0**
INZ	**Inchbonnie**	**19.84**	**208**	P	**P**	**08 25 09.2**	**-4.6**
INZ				S	S	08 28 37.2	-19
OKCZ	**Okains Bay**	**20.04**	**204**	P	**P**	**08 25 13.4**	**-2.6**
OXZ	**Oxford**	**20.09**	**206**	P	**P**	**08 25 13.5**	**-3.0**
OXZ	**Oxford**	**20.09**	**206**	P	**P**	**08 25 13.9**	**-2.6**
OXZ				S	S	08 28 39.9	-21
MQZ	**McQueen's Vall**	**20.18**	**205**	P	**P**	**08 25 14.0**	**-3.4**
MQZ				IAmb	IAmb	08 25 56.5	
	comp=Z,244nm,1.5s						
MQZ	**McQueen's Vall**	**20.18**	**205**	P	**P**	**08 25 13.5**	**-3.9**
MQZ				S	S	08 28 42.7	-20
RACZ	**Rakaia**	**20.39**	**206**	P	**P**	**08 25 17.3**	**-2.4**
RPZ	**Rata Peaks**	**20.82**	**207**	P	**P**	**08 25 21.3**	**-3.0**
RPZ				IAmb	IAmb	08 26 12.7	
	comp=Z,268nm,1.8s						
RPZ	**Rata Peaks**	**20.82**	**207**	P	**P**	**08 25 24.1**	**-0.3**
ARCZ	**Arundel**	**20.96**	**207**	P	**P**	**08 25 23.8**	**-2.1**
TMZ	**Timaru**	**21.39**	**206**	P	**P**	**08 25 29.1**	**-1.4**
LBZ	**Lake Benmore**	**21.73**	**208**	P	**P**	**08 25 33.8**	**-0.4**
LBZ				IAmb	IAmb	08 25 57.6	
	comp=Z,260nm,2.0s						
ODZ	**Otahua Downs**	**22.08**	**206**	P	**P**	**08 25 36.6**	**-1.3**
ODZ	**Otahua Downs**	**22.08**	**206**	P	**P**	**08 25 38.2**	**+0.3**
WKZ	**Wanaka**	**22.58**	**209**	P	**P**	**08 25 42.5**	**-0.8**
WKZ				IAmb	IAmb	08 26 00.4	
	comp=Z,294nm,1.6s						
LHI	**Lord Howe Isla**	**22.68**	**250**	IAMs_20	IAMs_20	08 33 28.2	
	comp=Z,21µm,18.0s						
KNTN	**Kanton**	**23.22**	**11**	P	**P**	**08 25 47.3**	**-2.7**
KNTN				IAmb	IAmb	08 26 19.0	
	comp=Z,226nm,1.3s						
DCZ	**Deep Cove**	**23.91**	**210**	IAMs_20	IAMs_20	08 36 07.6	
	comp=Z,12µm,18.0s						
TBI	**Tubuai**	**24.16**	**90**	*e*S	**S**	**08 30 13.3**	**-2.3**
	comp=Z,2µm,23.2s						
TBI				*e*LQ	LQ	08 30 44.9	
	comp=Z,5µm,25.2s						
TBI				*e*LR	LR	08 31 28.5	
	comp=Z,6µm,34.0s						
TBI	**Tubuai**	**24.16**	**90**	*e*T	T	08 50 38.5	
	comp=Z,74nm,0.3s						
PAE	**Paea**	**25.72**	**77**	*e*P	**P**	**08 26 16.2**	**+3.0**
	comp=Z,20nm,1.2s						
PAE	**Paea**	**25.72**	**77**	*e*T	T	08 52 25.4	
	comp=Z,8.5nm,0.3s						
PPT2	**Papeete2**	**25.75**	**77**	*e*P	**P**	**08 26 17.0**	**+3.4**
	comp=Z,54nm,1.4s						
PPT2				*e*S	**S**	**08 30 39.3**	**-1.9**
	comp=Z,2µm,29.5s						
PPT2				*e*LQ	LQ	08 31 22.7	
	comp=Z,10µm,22.8s						
PPT2				*e*LR	LR	08 32 24.0	
	comp=Z,9µm,35.0s						
PPT2	**Papeete2**	**25.75**	**77**	*e*T	T	08 52 35.0	
	comp=Z,9.3nm,0.3s						
PPT	**Papeete**	**25.76**	**77**	LR	LR	08 35 04.0	
	comp=Z,3µm,18.1s,baz=249,slow=33						

TVO	**Taravao**	**25.96**	**78**	*e*P	**P**	**08 26 18.6**	**+3.1**
	comp=Z,12nm,0.8s						
TVO	**Taravao**	**25.96**	**78**	*e*T	T	08 52 50.2	
	comp=Z,3.6nm,0.3s						
TIAR	**Tiarei**	**25.96**	**77**	*e*T	T	08 52 50.0	
	comp=Z,2.3nm,0.3s						
MEH	**Mehetia**	**26.97**	**79**	*e*P	**P**	**08 26 28.0**	**+3.4**
	comp=Z,26nm,1.1s						
MEH	**Mehetia**	**26.97**	**79**	*e*T	T	08 54 06.9	
	comp=Z,24nm,0.3s						
HNR	**Honiara**	**28.09**	**301**	LR	LR	08 36 17.1	
	comp=Z,9µm,18.5s,baz=159,slow=34						
VAH	**Vaihoa**	**28.42**	**74**	*e*T	T	08 55 52.2	
	comp=Z,12nm,0.2s						
ARMA	**Armidale**	**28.96**	**253**	P	**P**	**08 26 43.0**	**+0.6**
	baz=29						
ARMA	**Armidale**	**28.96**	**253**	P	**P**	**08 26 41.5**	**-0.9**
ARMA				IAMs_20	IAMs_20	08 36 57.3	
	comp=Z,15µm,19.0s						
EIDS	**Eidsvold**	**29.74**	**263**	P	**P**	**08 26 49.5**	**+0.2**
	baz=30,SNR=8.9						
EIDS	**Eidsvold**	**29.74**	**263**	P	**P**	**08 26 48.7**	**-0.6**
EIDS				IAMs_20	IAMs_20	08 36 51.4	
	comp=Z,8µm,18.0s						
CAN	**Canberra**	**31.55**	**244**	IAMs_20	IAMs_20	08 38 38.1	
	comp=Z,12µm,18.0s						
RMQ	**Roma**	**31.68**	**261**	P	**P**	**08 27 07.6**	**+1.2**
	baz=32,SNR=33						
CMSA	**Cobar Meteorol**	**34.07**	**251**	P	**P**	**08 27 27.1**	**-0.1**
	baz=34,SNR=4.8						
TAU	**Tasmania Unive**	**34.52**	**231**	IAMs_20	IAMs_20	08 39 34.5	
	comp=Z,7µm,20.0s						
TOO	**Toolangi**	**34.67**	**241**	P	**P**	**08 27 32.4**	**0.0**
TOO				pmax	pmax		
	comp=Z,61nm,1.7s						
TOO				MLR	MLR		
	comp=Z,7µm,18.0s						
TOO	**Toolangi**	**34.67**	**241**	P	**P**	**08 27 32.4**	**0.0**
TOO				IAmb	IAmb	08 28 09.6	
	comp=Z,61nm,1.6s						
TOO				IAMs_20	IAMs_20	08 40 32.7	
	comp=Z,7µm,18.0s						
CTAO	**Charters Tower**	**35.23**	**271**	P	**P**	**08 27 36.7**	**-0.7**
CTAO				pmax	pmax		
	comp=Z,19nm,0.9s						
CTAO	**Charters Tower**	**35.23**	**271**	P	**P**	**08 27 36.6**	**-0.7**
CTAO	**Charters Tower**	**35.23**	**271**	IAMs_20	IAMs_20	08 40 14.4	
	comp=Z,9µm,19.0s						
RKT	**Rikitea**	**37.25**	**95**	*e*LQ	LQ	08 36 28.7	
	comp=Z,1µm,26.8s						
RKT				*e*LR	LR	08 37 38.5	
	comp=Z,3µm,35.2s						
RABL	**Rabaul**	**37.38**	**300**	IAMs_20	IAMs_20	08 41 06.7	
	comp=Z,7µm,21.0s						
STKA	**Stephens Creek**	**37.55**	**251**	P	**P**	**08 27 57.1**	**0.0**
	baz=38,SNR=6.7						
STKA	**Stephens Creek**	**37.55**	**251**	P	**P**	**08 27 57.3**	**+0.2**
	comp=Z,4.0nm,0.5s,baz=95,slow=12,SNR=20						
STKA				LR	LR	08 42 25.7	
	comp=Z,15µm,18.1s,baz=84,slow=35						
STKA	**Stephens Creek**	**37.55**	**251**	P	**P**	**08 27 56.7**	**-0.4**
STKA				pmax	pmax		
	comp=Z,9.0nm,1.6s						
STKA				MLR	MLR		
	comp=Z,3µm,18.0s						
STKA	**Stephens Creek**	**37.55**	**251**	P	**P**	**08 27 56.7**	**-0.4**
MTSU	**Mount Surprise**	**37.56**	**273**	P	**P**	**08 27 57.5**	**+0.2**
	baz=38,SNR=13						
PMG	**Port Moresby**	**38.62**	**288**	P	**P**	**08 28 04.5**	**-1.7**
	comp=Z,74nm,0.8s,baz=120,slow=7.4,SNR=14						
PMG				LR	LR	08 41 34.2	
	comp=Z,5µm,20.0s,baz=125,slow=33						
PMG	**Port Moresby**	**38.62**	**288**	*de*P	**P**	**08 28 03.6**	**-2.6**
PMG				pmax	pmax		
	comp=Z,90nm,0.8s						
PMG	**Port Moresby**	**38.62**	**288**	P	**P**	**08 28 04.7**	**-1.5**
PMG				IAmb	IAmb	08 28 06.1	
	comp=Z,108nm,1.0s						
PMG	**Port Moresby**	**38.62**	**288**	P	**P**	**08 28 06.5**	**+0.3**
HTT	**Hallett**	**39.77**	**248**	P	**P**	**08 28 16.3**	**+0.6**
	baz=40,SNR=12						
COEN	**Coen**	**40.09**	**279**	P	**P**	**08 28 18.6**	**+0.1**
	baz=40						
COEN	**Coen**	**40.09**	**279**	P	**P**	**08 28 17.6**	**-0.9**
COEN				IAMs_20	IAMs_20	08 43 35.0	
	comp=Z,9µm,19.0s						
PATS	**Pohnpei**	**40.97**	**319**	IAMs_20	IAMs_20	08 41 48.8	
	comp=Z,6µm,19.0s						
QIS	**Mount Isa**	**41.09**	**268**	P	**P**	**08 28 25.0**	**-1.7**
	baz=41,SNR=5.3						
BBOO	**Buckleboo**	**42.19**	**249**	P	**P**	**08 28 34.1**	**-1.6**
	baz=42,SNR=6.0						
BBOO	**Buckleboo**	**42.19**	**249**	P	**P**	**08 28 34.1**	**-1.6**
BBOO				IAmb	IAmb	08 28 37.4	
	comp=Z,74nm,1.6s						
AS31	**Alice Springs**	**45.42**	**261**	P	**P**	**08 28 59.6**	**-2.2**
ASAR	**Alice Springs**	**45.42**	**261**	P	**P**	**08 29 00.7**	**-1.2**
	comp=Z,9.0nm,0.9s,baz=106,slow=7.8,SNR=54						
ASAR				PcP	**PcP**	**08 30 41.0**	**+0.2**
	comp=Z,5.8nm,0.9s,baz=115,slow=4.4,SNR=5.3						
ASAR				S	**S**	**08 35 35.5**	**-6.2**
	comp=Z,1.0nm,1.0s,baz=97,slow=15,SNR=4.0						
ASAR				LR	LR	08 47 46.4	
	comp=Z,8µm,18.0s,baz=107,slow=36						
ASAR	**Alice Springs**	**45.42**	**261**	P	**P**	**08 29 00.4**	**-1.4**
WR0	**Warramunga Arr**	**45.82**	**267**	P	**P**	**08 29 02.9**	**-2.1**
WR0				IAMs_20	IAMs_20	08 47 07.1	
	comp=Z,7µm,20.0s						
WR9	**Warramunga Arr**	**45.84**	**267**	IAMs_20	IAMs_20	08 47 07.8	
	comp=Z,7µm,20.0s						
WR8	**Warramunga Arr**	**45.86**	**267**	IAMs_20	IAMs_20	08 47 27.1	
	comp=Z,7µm,19.0s						
WR7	**Warramunga Arr**	**45.88**	**267**	IAMs_20	IAMs_20	08 47 08.7	
	comp=Z,7µm,20.0s						
WR6	**Warramunga Arr**	**45.90**	**267**	IAMs_20	IAMs_20	08 47 18.3	
	comp=Z,7µm,20.0s						
WR4	**Warramunga Arr**	**45.94**	**267**	IAMs_20	IAMs_20	08 47 29.4	
	comp=Z,7µm,19.0s						
WR3	**Warramunga Arr**	**45.96**	**267**	IAMs_20	IAMs_20	08 47 20.9	
	comp=Z,7µm,20.0s						
WC3	**Warramunga Arr**	**45.97**	**267**	P	**P**	**08 29 04.2**	**-2.0**
	baz=46						
WC3	**Warramunga Arr**	**45.97**	**267**	IAMs_20	IAMs_20	08 47 40.2	
	comp=Z,7µm,19.0s						
WC2	**Warramunga Arr**	**45.98**	**267**	IAMs_20	IAMs_20	08 47 21.6	
	comp=Z,7µm,20.0s						
WB1	**Warramunga Ar.**	**45.99**	**267**	IAMs_20	IAMs_20	08 47 21.8	
	comp=Z,7µm,20.0s						
WB2	**Warramunga Arr**	**45.99**	**267**	IAMs_20	IAMs_20	08 47 21.8	
	comp=Z,7µm,20.0s						
WB3	**Warramunga Arr**	**45.99**	**267**	IAMs_20	IAMs_20	08 47 21.8	
	comp=Z,7µm,20.0s						
WB7	**Warramunga Arr**	**46.00**	**267**	IAMs_20	IAMs_20	08 47 31.7	
	comp=Z,7µm,19.0s						
WRAB	**Tennant Creek**	**46.00**	**267**	*ce*P	**P**	**08 29 03.4**	**-2.9**
WRAB				pmax	pmax		
	comp=Z,32nm,1.7s						
WRAB	**Tennant Creek**	**46.00**	**267**	IAMs_20	IAMs_20	08 47 21.7	
	comp=Z,7µm,20.0s						
WC4	**Warramunga Arr**	**46.00**	**267**	IAMs_20	IAMs_20	08 47 21.9	
	comp=Z,7µm,20.0s						
WR1	**Warramunga Arr**	**46.00**	**267**	IAMs_20	IAMs_20	08 47 41.1	
	comp=Z,6µm,19.0s						
WRA	**Warramunga Arr**	**46.00**	**267**	P	**P**	**08 29 04.9**	**-1.5**
	comp=Z,9.7nm,0.9s,baz=102,slow=7.6,SNR=20						
WRA				PcP	**PcP**	**08 30 43.6**	**+0.8**
	comp=Z,7.6nm,0.9s,baz=104,slow=3.9,SNR=5.4						
WRA				S	**S**	**08 35 46.2**	**-3.9**
	comp=Z,1.9nm,0.6s,baz=99,slow=12,SNR=3.2						
WRA				LR	LR	08 48 01.4	
	comp=Z,7µm,18.3s,baz=105,slow=36						
WRA	**Warramunga Arr**	**46.00**	**267**	P	**P**	**08 29 04.3**	**-2.1**
WB0	**Warramunga Arr**	**46.01**	**267**	P	**P**	**08 29 04.6**	**-1.8**
WC1	**Warramunga Arr**	**46.01**	**267**	IAMs_20	IAMs_20	08 47 31.2	
	comp=Z,7µm,20.0s						
JAY	**Jayapura**	**47.67**	**292**	P	**P**	**08 29 18.1**	**-1.4**
	comp=Z,17nm,0.7s,baz=199,slow=1.0,SNR=4.8						
JAY				LR	LR	08 48 08.3	
	comp=Z,4µm,20.8s,baz=171,slow=35						
FORT	**Forrest**	**49.18**	**251**	P	**P**	**08 29 29.3**	**-1.6**
	baz=49,SNR=7.1						
FORT	**Forrest**	**49.18**	**251**	P	**P**	**08 29 29.1**	**-1.8**
FORT				IAmb	IAmb	08 29 50.3	
	comp=Z,45nm,0.8s						
KDU	**Kakadu**	**50.16**	**275**	P	**P**	**08 29 37.5**	**-1.1**
	baz=50,SNR=4.0						
MTN	**Manton Dam**	**51.30**	**274**	P	**P**	**08 29 46.2**	**-1.0**
	baz=52,SNR=4.3						
VNDA	**Vanda**	**52.87**	**186**	P	**P**	**08 30 01.4**	**+3.4**
	comp=Z,7.6nm,1.1s,baz=32,slow=9.5,SNR=3.3						
VNDA				LR	LR	08 48 32.2	
	comp=Z,2µm,20.9s,baz=20,slow=32						
VNDA	**Vanda**	**52.87**	**186**	P	**P**	**08 29 58.4**	**+0.4**
VNDA				pmax	pmax		
	comp=Z,17nm,0.9s						
VNDA	**Vanda**	**52.87**	**186**	P	**P**	**08 29 58.4**	**+0.4**
SAUI	**Saumlaki**	**53.16**	**280**	IAMs_20	IAMs_20	08 52 36.5	
	comp=Z,3µm,19.0s						
FITZ	**Fitzroy Crossi**	**54.40**	**266**	P	**P**	**08 30 08.9**	**-1.1**
	baz=55,SNR=6.1						
FITZ	**Fitzroy Crossi**	**54.40**	**266**	LR	LR	08 52 21.1	
	comp=Z,5µm,19.6s,baz=108,slow=35						
FITZ	**Fitzroy Crossi**	**54.40**	**266**	P	**P**	**08 30 08.8**	**-1.3**
GUMO	**Guam**	**54.67**	**311**	LR	LR	08 50 32.9	
	comp=Z,3µm,21.8s,baz=126,slow=33						
SIJI	**Sorong**	**56.55**	**287**	LR	LR	08 53 10.7	
	comp=Z,4µm,20.9s,baz=110,slow=35						
SWI	**Sorong**	**56.56**	**287**	P	**P**	**08 30 24.0**	**-1.6**
	comp=Z,44nm,0.8s						
KLBR	**Kellerberrin**	**57.71**	**248**	P	**P**	**08 30 33.5**	**-0.1**
	baz=58,SNR=6.9						
NWAO	**Narrogin (SRO)**	**57.87**	**246**	IAMs_20	IAMs_20	08 55 01.6	
	comp=Z,4µm,18.0s						
MEEK	**Meekatharra**	**58.15**	**253**	P	**P**	**08 30 35.7**	**-1.0**
	baz=58,SNR=6.4						
PSA00	**Pilbara Seismi**	**58.49**	**260**	P	**P**	**08 30 37.4**	**-1.8**
SOEI	**Soe**	**58.70**	**274**	P	**P**	**08 30 37.9**	**-3.0**
	comp=Z,2µmcomp=Z,69nm,1.3s						
BLDU	**Ballidu**	**58.80**	**248**	P	**P**	**08 30 40.3**	**-1.0**
	baz=59,SNR=8.4						
BATI	**Baumata**	**59.06**	**273**	LR	LR	08 56 59.3	
	comp=Z,5µm,18.9s,baz=148,slow=37						
MORW	**Morawa**	**59.74**	**250**	P	**P**	**08 30 46.9**	**-0.8**
	baz=60,SNR=8.4						
MORW	**Morawa**	**59.74**	**250**	P	**P**	**08 30 46.9**	**-0.8**
CASY	**Casey**	**60.09**	**207**	P	**P**	**08 30 49.4**	**-0.1**
SANI	**Sanana**	**60.57**	**283**	P	**P**	**08 30 51.8**	**-1.8**
	comp=Z,20nm,0.7s						
EDFI	**Ende, Flores**	**61.43**	**274**	P	**P**	**08 30 57.9**	**-1.7**
	comp=Z,1µmcomp=Z,356nmcomp=Z,15nm,0.7s						
GIRL	**Giralia**	**63.11**	**257**	P	**P**	**08 31 10.4**	**-0.1**
QSPA	**South Pole Qui**	**64.32**	**180**	P	**P**	**08 31 20.7**	**+2.6**
	comp=Z,43nm,1.0s,baz=38,slow=4.7,SNR=51						
QSPA	**South Pole Qui**	**64.32**	**180**	P	**P**	**08 31 19.5**	**+1.5**
QSPA	**South Pole Qui**	**64.32**	**180**	IAMs_20	IAMs_20	08 56 57.5	
	comp=Z,4µm,20.0s						
KAPI	**Kappang**	**64.76**	**277**	IAMs_20	IAMs_20	08 58 30.0	
	comp=Z,2µm,20.0s						
PLAI	**Plampang**	**64.92**	**272**	P	**P**	**08 31 21.6**	**-1.0**
	comp=Z,1µmcomp=Z,682nmcomp=Z,61nm,1.0s						
TWSI	**Taliwang, Sumb**	**65.77**	**272**	P	**P**	**08 31 26.0**	**-2.1**
	comp=Z,1µmcomp=Z,19nm,1.1s						
MPSI	**Mapaga**	**67.05**	**282**	P	**P**	**08 31 34.3**	**-2.0**
	comp=Z,16nm,0.9s						
JAGI	**Jajag, Banyuwa**	**68.34**	**271**	P	**P**	**08 31 42.9**	**-1.5**
	comp=Z,37nm,1.0s						
KMMI	**Kalianget**	**69.09**	**272**	P	**P**	**08 31 48.6**	**-0.5**
	comp=Z,45nm,1.1s						
JYT	**Yasato**	**74.28**	**324**	IAMs_20	IAMs_20	08 59 53.5	
	comp=Z,2µm,21.0s						
CISI	**Cisompet, Garu**	**74.43**	**269**	IAMs_20	IAMs_20	09 07 10.2	
	comp=Z,3µm,19.0s						
LEM	**Lembang**	**74.91**	**270**	LR	LR	09 03 08.9	
	comp=Z,106nm,21.3s,baz=134,slow=34						
JMM	**Marumori**	**75.23**	**326**	IAMs_20	IAMs_20	09 01 13.3	
	comp=Z,2µm,20.0s						
JGF	**Kuroka**	**75.35**	**322**	IAmb	IAmb	08 32 27.0	
	comp=Z,30nm,1.1s						
MJAR	**Matsushiro Arr**	**75.58**	**323**	P	**P**	**08 32 26.4**	**-0.9**
	comp=Z,19nm,0.8s,baz=157,slow=5.9,SNR=36						
MJAR				LR	LR	09 00 35.0	
	comp=Z,2µm,21.8s,baz=145,slow=32						
MJAR	**Matsushiro Arr**	**75.58**	**323**	P	**P**	**08 32 26.7**	**-0.6**
MAJO	**Matsushiro**	**75.58**	**323**	*c i*P	**P**	**08 32 25.9**	**-1.4**
MAJO				pmax	pmax		
	comp=Z,86nm,2.0s						
MAJO	**Matsushiro**	**75.58**	**323**	P	**P**	**08 32 26.2**	**-1.2**
MAJO				IAmb	IAmb	08 32 30.1	
	comp=Z,32nm,1.0s						
MAT	**Matsushiro**	**75.58**	**323**	P	**P**	**08 32 25.6**	**-1.7**
MAT				S	**S**	**08 42 07.2**	**+0.7**
JWT	**Wachi**	**76.22**	**321**	IAmb	IAmb	08 32 32.5	
	comp=Z,38nm,0.9s						
JSD	**Sado**	**76.66**	**324**	P	**P**	**08 32 34.3**	**+0.9**
MAW	**Mawson**	**77.28**	**200**	P	**P**	**08 32 39.3**	**+2.8**
	comp=Z,37nm,1.0s,baz=141,slow=6.5,SNR=3.5						
MAW				LR	LR	09 03 51.6	
	comp=Z,2µm,22.0s,baz=115,slow=34						
ADK	**Adak**	**77.32**	**360**	P	**P**	**08 32 36.8**	**0.0**
ADK				pmax	pmax		
	comp=Z,428nm,2.0s						
ADK	**Adak**	**77.32**	**360**	P	**P**	**08 32 36.8**	**0.0**
ERM	**Erimo**	**77.34**	**330**	IAMs_20	IAMs_20	09 02 20.9	
	comp=Z,2µm,18.0s						
JEM	**Erimo**	**77.34**	**330**	IAMs_20	IAMs_20	09 02 22.7	
	comp=Z,2µm,21.0s						
JHS	**Saijyo**	**77.34**	**319**	P	**P**	**08 32 37.6**	**+0.3**
JTM	**Tenmabayashi**	**77.34**	**328**	P	**P**	**08 32 37.8**	**+0.6**
JTM				IAMs_20	IAMs_20	09 01 50.2	
	comp=Z,2µm,20.0s						
JNU	**Nakatsue**	**77.41**	**316**	P	**P**	**08 32 38.2**	**+0.4**
	comp=Z,29nm,0.8s,baz=108,slow=8.9,SNR=9.2						
YUK	**Yuzh-Kuril'sk**	**77.80**	**333**	*e*P	**P**	**08 32 38.0**	**-1.6**
YUK				*e*S	**S**	**08 42 33.3**	**+2.9**
TWG	**Pinlang**	**77.84**	**303**	IAMs_20	IAMs_20	09 00 22.9	
	comp=Z,2µm,22.0s						
TPUB	**Ta-pu**	**78.45**	**303**	P	**P**	**08 32 42.5**	**-1.3**
TPUB				IAmb	IAmb	08 32 44.2	
	comp=Z,34nm,0.8s						
TPUB				IAMs_20	IAMs_20	09 01 14.1	
	comp=Z,2µm,20.0s						
SSLB	**Suanglung**	**78.48**	**303**	P	**P**	**08 32 42.5**	**-1.5**
SSLB				IAmb	IAmb	08 32 44.5	
	comp=Z,26nm,0.8s						
SSLB				IAMs_20	IAMs_20	09 01 15.0	
	comp=Z,3µm,22.0s						
SMY	**Shemya**	**78.65**	**354**	IAMs_20	IAMs_20	09 03 29.4	
	comp=Z,2µm,20.0s						
YHNB	**Yeheng**	**78.67**	**304**	IAMs_20	IAMs_20	09 01 11.0	
	comp=Z,3µm,22.0s						
TATO	**Taipei**	**78.76**	**305**	IAMs_20	IAMs_20	09 05 09.3	
	comp=Z,2µm,19.0s						
JEW	**Eniwo**	**78.76**	**329**	IAMs_20	IAMs_20	09 02 23.7	
	comp=Z,2µm,21.0s						
ASAJ	**Asahikawa**	**79.25**	**331**	P	**P**	**08 32 49.2**	**+1.6**
	comp=Z,36nm,0.9s,baz=204,slow=6.3,SNR=26						
SNCC	**San Nicolas Is**	**79.49**	**45**	IAMs_20	IAMs_20	09 14 13.8	
	comp=Z,2µm,18.0s						
UNV	**Unalaska Valle**	**79.70**	**6**	P	**P**	**08 32 49.4**	**-0.4**
SCZ2	**Santa Cruz Isl**	**79.90**	**45**	P	**P**	**08 32 52.3**	**+0.8**
	baz=229						
SKR	**Severo-Kuril's**	**80.04**	**342**	*e*P	**P**	**08 32 48.6**	**-3.2**
SKR				pmax	pmax		
	comp=Z,79nm,1.4s						
SKR				pmax	pmax		
	comp=Z,300nm,7.6s						
SKR				MLR	MLR		
	comp=Z,900nm,15.0s						
SBC	**Santa Barbara**	**80.14**	**44**	P	**P**	**08 32 54.0**	**+1.2**
	baz=229						
PKM	**Mcpherson Peak**	**80.37**	**44**	P	**P**	**08 32 55.3**	**+1.1**
	baz=229						
SMMC	**Simmler**	**80.53**	**43**	P	**P**	**08 32 56.2**	**+1.3**
	baz=229						
SLBS	**Sierra La Lagu**	**80.56**	**58**	IAMs_20	IAMs_20	09 01 31.4	
	comp=Z,2µm,20.0s						
FMP	**Fort Macarthur**	**80.58**	**46**	P	**P**	**08 32 55.7**	**+0.6**
	baz=230						
TJX	**Tijuana**	**80.63**	**47**	IAMs_20	IAMs_20	09 02 30.0	
	comp=Z,2µm,20.0s						
PMPB	**Monarch Peak**	**80.63**	**42**	IAmb	IAmb	08 33 10.3	
	comp=Z,47nm,1.4s						
PAGB	**Antelope Grade**	**80.65**	**43**	P	**P**	**08 32 57.7**	**+2.2**
PAGB				IAmb	IAmb	08 33 09.9	
	comp=Z,38nm,1.5s						
PAGB				IAMs_20	IAMs_20	09 08 36.4	
	comp=Z,2µm,18.0s						
SPX	**San Pedro Mart**	**80.79**	**49**	IAMs_20	IAMs_20	09 09 18.5	
	comp=Z,2µm,18.0s						
109C	**Camp Elliot, M**	**80.83**	**47**	IAMs_20	IAMs_20	09 02 55.4	
	comp=Z,2µm,19.0s						
OSI	**Osito Audit: C**	**80.88**	**45**	P	**P**	**08 32 57.4**	**+0.6**
	baz=230						
SRIG	**Santa Rosalia**	**80.88**	**54**	IAMs_20	IAMs_20	09 04 04.8	
	comp=Z,3µm,18.0s						
QZH	**Quanzhou**	**80.91**	**303**	P	**P**	**08 32 58.2**	**+1.1**
QZH				S	**S**	**08 43 10.9**	**+6.7**
QZH				pmax	pmax		
	comp=Z,530nm,11.0s						
QZH				LR	LR		
	comp=Z,660nm,16.8s						
QZH				LR	LR		
	comp=Z,870nm,18.2s						
QZH				LR	LR		
	comp=Z,980nm,17.3s						
PASC	**Pasadena Art C**	**80.94**	**45**	IAMs_20	IAMs_20	09 03 48.1	
	comp=Z,2µm,19.0s						
BAR	**Barrett**	**80.99**	**47**	IAMs_20	IAMs_20	09 02 40.5	
	comp=Z,2µm,19.0s						
MWC	**Mount Wilson**	**81.05**	**45**	IAMs_20	IAMs_20	09 04 09.1	
	comp=Z,2µm,18.0s						
ESJX	**Sierra Juarez**	**81.06**	**48**	IAMs_20	IAMs_20	09 02 53.3	
	comp=Z,2µm,18.0s						
GO07	**Milladeo Hill,**	**81.11**	**134**	IAMs_20	IAMs_20	09 02 19.8	
	comp=Z,3µm,19.0s						
ARVC	**Arvin**	**81.14**	**44**	P	**P**	**08 32 58.5**	**+0.4**
	baz=230						
HOPS	**Hopland Field**	**81.17**	**39**	IAMs_20	IAMs_20	09 10 03.1	
	comp=Z,2µm,19.0s						
GDXM	**Geysers**	**81.20**	**39**	IAMs_20	IAMs_20	09 06 45.9	
	comp=Z,2µm,18.0s						
SFX	**San Felipe**	**81.21**	**49**	IAMs_20	IAMs_20	09 09 36.5	
	comp=Z,2µm,18.0s						
MURC	**Murrieta**	**81.22**	**46**	P	**P**	**08 32 59.4**	**+0.8**
	baz=231						
MONP2	**Monument Peak**	**81.28**	**47**	P	**P**	**08 32 59.1**	**-0.1**
	baz=232,SNR=7.1						
BFSC	**Mount Baldy Ra**	**81.32**	**45**	P	**P**	**08 32 59.7**	**+0.5**
	baz=231						
IKP	**In-Ko-Pah, Jac**	**81.34**	**48**	P	**P**	**08 32 59.8**	**+0.5**
	baz=232,SNR=5.1						
VES	**Vestal, Richgr**	**81.44**	**43**	P	**P**	**08 32 60.0**	**+0.3**
	baz=230,SNR=8.3						
YSS	**Yuzh-Sakhalins**	**81.45**	**333**	*ce*P	**P**	**08 33 00.1**	**+0.7**
YSS				*e**SP	**pwP**	**08 33 12.2**	**+0.8**
YSS				*e*S	**S**	**08 43 12.9**	**+4.0**
YSS				*e*PPS	PPS	08 44 00.1	
YSS				pmax	pmax		
	comp=Z,60nm,1.2s						
YSS				pmax	pmax		
	comp=Z,700nm,5.7s						
YSS	**Yuzh-Sakhalins**	**81.45**	**333**	P	**P**	**08 32 59.9**	**+0.5**
YSS				IAMs_20	IAMs_20	09 06 23.5	
	comp=Z,2µm,19.0s						
H03S2	**Juan Fernandez**	**81.46**	**123**	T	T	10 02 41.0	
	baz=243,slow=74,SNR=43						
H03S1	**Juan Fernandez**	**81.47**	**123**	T	T	10 02 45.9	
	baz=243,slow=74,SNR=44						
H03S3	**Juan Fernandez**	**81.48**	**123**	T	T	10 02 44.2	
	baz=243,slow=74,SNR=44						
EDW2	**Edwards Air Fo**	**81.51**	**45**	P	**P**	**08 33 00.5**	**+0.4**
	baz=230,SNR=11						
PET	**Petropavlovsk**	**81.53**	**345**	⇓*i*P	**P**	**08 32 59.9**	**+0.2**
PET				*e*		08 36 10.4	
PET				*e*S	**S**	**08 43 09.8**	**+0.3**
PET				*e*PS	**PnS**	**08 44 06.2**	**+6.3**
PET				*e*PPS	PPS	08 44 20.5	
PET				pmax	pmax		
	comp=Z,73nm,1.4s						
PET				pmax	pmax		
	comp=Z,600nm,16.0s						
VOG	**Valley Oaks Go**	**81.56**	**43**	P	**P**	**08 33 00.7**	**+0.4**
	baz=229						
ISA	**Isabella, Lake**	**81.70**	**44**	P	**P**	**08 33 02.3**	**+1.1**
	baz=230,SNR=13						
TPFO	**Pinon Flats**	**81.70**	**47**	P	**P**	**08 33 01.7**	**+0.4**
	baz=232,SNR=5.7						
PFO	**Pinyon Flats O**	**81.70**	**47**	P	**P**	**08 33 02.6**	**+1.3**
	comp=Z,4.2nm,0.8s,baz=237,slow=4.4,SNR=15						
PFO	**Pinyon Flats O**	**81.70**	**47**	P	**P**	**08 33 02.1**	**+0.8**
	baz=232						
PFO	**Pinyon Flats O**	**81.70**	**47**	⇑*i*P	**P**	**08 33 01.5**	**+0.2**
PFO				pmax	pmax		
	comp=Z,35nm,2.3s						
PFO	**Pinyon Flats O**	**81.70**	**47**	P	**P**	**08 33 01.5**	**+0.2**
PFO				IAmb	IAmb	08 33 19.1	
	comp=Z,45nm,2.0s						
PFO	**Pinyon Flats O**	**81.70**	**47**	IAMs_20	IAMs_20	09 03 40.5	
	comp=Z,2µm,19.0s						
XPFO	**Pion Flat**	**81.70**	**47**	IAMs_20	IAMs_20	09 03 40.5	
	comp=Z,2µm,18.0s						
SWSC	**Sam W. Stewart**	**81.73**	**47**	P	**P**	**08 33 01.5**	**+0.2**
	baz=232						
TJN	**Taejon**	**81.73**	**317**	*de*P	**P**	**08 33 02.6**	**+1.4**
PETK	**Petropavlovsk-**	**81.84**	**344**	P	**P**	**08 33 01.2**	**-0.2**
	comp=Z,21nm,0.8s,baz=132,slow=6.9,SNR=23						
PETK				LR	LR	09 05 34.8	
	comp=Z,1µm,19.5s,baz=159,slow=33						
JCC	**Jacoby Creek,**	**81.90**	**37**	IAMs_20	IAMs_20	09 03 25.3	
	comp=Z,2µm,18.0s						
SYO	**Syowa Base**	**82.02**	**192**	⇓*e*P	**P**	**08 33 01.8**	**-0.5**
SYO	**Syowa Base**	**82.02**	**192**	⇑*e*PcP	**PcP**	**08 33 06.6**	**-1.1**
CMB	**Columbia Colle**	**82.08**	**41**	P	**P**	**08 33 03.2**	**+0.1**
CMB				MLR	MLR		
	comp=Z,2µm,18.0s						
CMB	**Columbia Colle**	**82.08**	**41**	P	**P**	**08 33 03.2**	**+0.1**
CMB				IAMs_20	IAMs_20	09 10 13.3	
	comp=Z,2µm,18.0s						
LRMC	**Laurel Mtn Rad**	**82.08**	**44**	P	**P**	**08 33 03.9**	**+0.6**
	baz=230,SNR=11						
KSRS	**Korea Array**	**82.09**	**318**	P	**P**	**08 33 02.8**	**-0.3**
	comp=Z,18nm,1.0s,baz=136,slow=5.9,SNR=30						
KSRS				LR	LR	09 08 06.3	
	comp=Z,1µm,18.5s,baz=132,slow=35						
KHMM	**Horse Mountain**	**82.10**	**37**	IAMs_20	IAMs_20	09 08 36.7	
	comp=Z,2µm,19.0s						
KSAR	**Wonju Array Be**	**82.11**	**318**	P	**P**	**08 33 02.6**	**-0.5**
KSAR	**Wonju Array Be**	**82.11**	**318**	P	**P**	**08 33 02.6**	**-0.5**
O02D	**Mt. Diablo Mer**	**82.14**	**38**	P	**P**	**08 33 04.7**	**+1.3**
	baz=227						
RRX	**Edison Barstow**	**82.14**	**45**	P	**P**	**08 33 04.2**	**+0.7**
	baz=231						
KS19	**Wonju Array Si**	**82.16**	**318**	P	**P**	**08 33 03.6**	**+0.2**
AFDM	**Forest Hills D**	**82.34**	**40**	P	**P**	**08 33 03.6**	**-0.8**
AFDM				IAMs_20	IAMs_20	09 10 22.2	
	comp=Z,2µm,18.0s						
BC3	**Big Chuckawall**	**82.39**	**47**	P	**P**	**08 33 05.7**	**+0.8**
	baz=232						
GLA	**Glamis**	**82.44**	**48**	IAMs_20	IAMs_20	09 03 46.0	
	comp=Z,2µm,19.0s						
ORV	**Oroville**	**82.44**	**39**	P	**P**	**08 33 05.2**	**+0.3**
ORV				pmax	pmax		
	comp=Z,37nm,1.7s						
ORV	**Oroville**	**82.44**	**39**	P	**P**	**08 33 05.2**	**+0.3**
ORV				IAmb	IAmb	08 33 12.2	
	comp=Z,37nm,1.6s						
CWC	**Cottonwood Cre**	**82.44**	**44**	P	**P**	**08 33 06.0**	**+0.9**
	baz=230						
KRMB	**Red Mountain**	**82.45**	**37**	IAMs_20	IAMs_20	09 15 31.1	
	comp=Z,2µm,19.0s						
PIX	**Pinacate**	**82.48**	**50**	P	**P**	**08 33 04.3**	**-0.9**
GSC	**Goldstone, Bar**	**82.53**	**45**	P	**P**	**08 33 06.0**	**+0.4**
	baz=231,SNR=8.5						
GSC	**Goldstone, Bar**	**82.53**	**45**	P	**P**	**08 33 05.8**	**+0.3**
GSC				pmax	pmax		
	comp=Z,19nm,1.2s						
GSC				MLR	MLR		
	comp=Z,2µm,18.0s						
GSC	**Goldstone, Bar**	**82.53**	**45**	P	**P**	**08 33 05.8**	**+0.3**
GSC				IAMs_20	IAMs_20	09 08 53.3	
	comp=Z,2µm,18.0s						
SSE	**Sheshan**	**82.53**	**310**	P	**P**	**08 33 06.3**	**+0.8**
SSE				S	**S**	**08 43 20.8**	**+0.1**
SSE				pmax	pmax		
	comp=Z,13nm,0.9s						
SSE				pmax	pmax		
	comp=Z,230nm,10.7s						
SSE				LR	LR		
	comp=Z,340nm,17.9s						
SSE				LR	LR		
	comp=Z,300nm,18.5s						
HEC	**Hector,Ludlow**	**82.54**	**46**	P	**P**	**08 33 05.3**	**-0.3**
	baz=232,SNR=8.0						
WDC	**Whiskeytown Da**	**82.55**	**38**	P	**P**	**08 33 06.2**	**+0.8**
WDC				pmax	pmax		
	comp=Z,55nm,1.8s						
WDC	**Whiskeytown Da**	**82.55**	**38**	P	**P**	**08 33 06.2**	**+0.8**
WDC				IAmb	IAmb	08 33 23.3	
	comp=Z,55nm,1.8s						
WDC				IAMs_20	IAMs_20	09 08 29.7	
	comp=Z,2µm,18.0s						

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MPMC  Manual Prospec  82.57  44   P        P        08 33 06.2 +0.3
      baz=231,SNR=16
MDPB  Devils Postpil  82.60  42   P        P        08 33 06.0  0.0
MDPB                              IAMs_20  IAMs_20  09 10 47.0
      comp=Z,2µm,18.0s
OMMB  Old Mammoth Mi  82.63  42   P        P        08 33 06.8 +0.4
TEY   Ternei          82.70 328⇑eP        P        08 33 05.9 -0.1
TEY                               pmax     pmax
      comp=Z,200nm,3.9s
SNAA  Sanae           82.70 178   P        P        08 33 07.6 +1.7
SNAA  Sanae           82.70 178c iP        P        08 33 07.1 +1.2
SNAA                              pmax     pmax
      comp=Z,43nm,1.3s
SNAA  Sanae           82.70 178   P        P        08 33 06.3 +0.3
SNAA                              IAmb     IAmb     08 33 10.0
      comp=Z,37nm,1.1s
N02D  Trinity Center  82.73  38   P        P        08 33 08.0 +1.6
      baz=227,SNR=7.0
MLAC  Mammoth, Mammo82.74  42   P        P        08 33 07.7 +0.9
      baz=230
TIN   Tinemaha, Big   82.74  43   P        P        08 33 07.6 +0.9
      baz=230
O03E  Paynes Creek    82.77  39   P        P        08 33 07.3 +0.6
      baz=227,SNR=11
VNA3  Neumayer Olymp  82.77 176   P        P        08 33 07.8 +1.5
HSIG                  82.78  53   IAMs_20  IAMs_20  09 04 54.2
      comp=Z,2µm,18.0s
RUBR  Rubicon Trail   82.89  40   IAMs_20  IAMs_20  09 10 14.6
      comp=Z,2µm,18.0s
INCN  Inchon          82.89 317   P        P        08 33 08.6 +1.3
INCN                              pmax     pmax
      comp=Z,96nm,1.1s
INCN  Inchon          82.89 317   P        P        08 33 08.6 +1.3
IRM   Iron Mountain   82.90  47   P        P        08 33 08.5 +1.1
      baz=232,SNR=16
M02C  Callahan        82.94  37   P        P        08 33 08.5 +1.0
      baz=226,SNR=9.6
GMRC  Granite Mounta  82.95  46   P        P        08 33 08.4 +0.7
      baz=232,SNR=7.2
WAKR  Walker          82.95  41   P        P        08 33 07.4 -0.4
WAKR                              IAmb     IAmb     08 33 10.6
      comp=Z,33nm,1.3s
WAKR                              IAMs_20  IAMs_20  09 10 59.3
      comp=Z,2µm,18.0s
L02E  Cave Junction   83.06  36   P        P        08 33 10.5 +2.5
      baz=226
214A  Organ Pipe Nat  83.16  50   P        P        08 33 09.9 +1.1
      baz=234
214A  Organ Pipe Nat  83.16  50   P        P        08 33 06.6 -2.3
214A                              IAmb     IAmb     08 33 24.7
      comp=Z,30nm,1.6s
214A                              IAMs_20  IAMs_20  09 07 03.1
      comp=Z,2µm,18.0s
FURC  Furnace Creek,  83.22  44   P        P        08 33 09.4 +0.5
      baz=231,SNR=10
VNA2  Neumayer--Watz  83.23 176   P        P        08 33 10.6 +2.0
      baz=179,slow=4.5
PNTR  Pine Nut        83.24  41   P        P        08 33 09.2 -0.1
PNTR                              IAmb     IAmb     08 33 12.7
      comp=Z,22nm,0.8s
PNTR                              IAMs_20  IAMs_20  09 10 18.9
      comp=Z,2µm,18.0s
SHOC  Shoshone, Teco  83.24  45   P        P        08 33 09.7 +0.6
      baz=231,SNR=16
GRAC  Grapevine Rang  83.24  43   P        P        08 33 10.0 +0.9
      baz=231,SNR=19
YBH   Yreka Blue Hor  83.25  37   P        P        08 33 09.5 +0.4
YBH                               pmax     pmax
      comp=Z,21nm,1.1s
YBH   Yreka Blue Hor  83.25  37   P        P        08 33 09.5 +0.4
YBH                               IAmb     IAmb     08 33 16.6
      comp=Z,21nm,1.1s
BEKR  Beckworth       83.31  40   P        P        08 33 09.3 -0.3
BEKR                              IAmb     IAmb     08 33 11.0
      comp=Z,52nm,1.9s
VCNR  Virginia City   83.34  41   P        P        08 33 10.7 +0.9
VCNR                              IAMs_20  IAMs_20  09 11 29.7
      comp=Z,2µm,18.0s
LHV   Little Huntoon  83.34  42   IAmb     IAmb     08 33 22.1
      comp=Z,56nm,1.6s
K02D  Willamette Mer  83.40  36   P        P        08 33 11.7 +1.8
      baz=226
VNA1  Neumayer--Stat  83.45 176   P        P        08 33 11.4 +1.7
NVL   N'lazarevskaya  83.58 183  eP        P        08 33 11.9 +1.6
NVL                              eS        S        08 43 34.1 +3.8
NVL                               pmax     pmax
      comp=Z,18nm,1.0s
RYN   Ryan            83.58  42   IAmb     IAmb     08 33 25.6
      comp=Z,21nm,1.3s
RYN                               IAMs_20  IAMs_20  09 11 21.9
      comp=Z,1µm,18.0s
NVAR  Mina Array Bea  83.58  42   P        P        08 33 12.4 +1.3
      comp=Z,9.6nm,0.8s,baz=217,slow=7.6,SNR=69
NVAR                              LR       LR       09 06 15.2
      comp=Z,2µm,18.2s,baz=225,slow=33
NVAR  Mina Array Bea  83.58  42   P        P        08 33 11.7 +0.6
J01E  Myrtle Point    83.58  35   P        P        08 33 11.8 +1.2
      baz=226
NEE2  Needles Airpor  83.62  47   P        P        08 33 11.8 +0.8
      baz=233
PDMCI Parker Dam,Lak  83.65  47   P        P        08 33 12.3 +1.1
      baz=233
NV11  Mina Array Sit  83.67  42   IAmb     IAmb     08 33 13.9
      comp=Z,33nm,1.5s
NV11                              IAMs_20  IAMs_20  09 12 14.4
      comp=Z,2µm,18.0s
MSHR  Mys Shultsa     83.69 324c iP        P        08 33 11.5 +0.3
MSHR                              pmax     pmax
      comp=Z,54nm,1.5s
HUMO  Hull Mountain   83.72  36   IAmb     IAmb     08 33 21.6
      comp=Z,20nm,1.1s
M04C  Macdoel         83.76  38   P        P        08 33 12.6 +0.8
      baz=227,SNR=6.7
PAHR  Pah Rah Range   83.77  40   IAmb     IAmb     08 33 26.3
      comp=Z,61nm,2.0s
PAHR                              IAMs_20  IAMs_20  09 12 35.9
      comp=Z,2µm,18.0s
L04D  Klamath Falls   83.80  37   P        P        08 33 12.9 +0.9
      baz=227,SNR=6.4
TPNV  Topopah Spring  83.91  44   P        P        08 33 13.3 +0.6
      baz=231,SNR=15
TPNV  Topopah Spring  83.91  44   IAmb     IAmb     08 33 27.5
      comp=Z,27nm,1.2s
TPNV                              IAMs_20  IAMs_20  09 14 27.7
      comp=Z,2µm,18.0s
GZH   Guangzhou       83.97 299   P        P        08 33 14.3 +1.2
GZH                               S        S        08 43 40.6 +5.0
GZH                               pmax     pmax
      comp=Z,730nm,6.2s
SII   Sitkinak Islan  84.05  12   IAMs_20  IAMs_20  09 11 00.7
      comp=Z,2µm,18.0s
KVN   Kaiserville     84.10  41   IAmb     IAmb     08 33 16.8
      comp=Z,13nm,0.8s
KVN                               IAMs_20  IAMs_20  09 12 12.7
      comp=Z,2µm,18.0s
I03D  Drain, OR       84.26  35   P        P        08 33 15.3 +1.2
      baz=226
PLCA  Paso Flores     84.28 133   P        P        08 33 17.5 +2.9
      comp=Z,1.9nm,0.8s,baz=252,slow=4.9,SNR=7.8
PLCA                              LR       LR       09 05 54.8
      comp=Z,760nm,18.2s,baz=247,slow=32
PLCA  Paso Flores     84.28 133   P        P        08 33 15.3 +0.6
PLCA                              pmax     pmax
      comp=Z,33nm,1.7s
PLCA  Paso Flores     84.28 133   P        P        08 33 15.3 +0.6
PLCA                              IAmb     IAmb     08 33 27.7
      comp=Z,33nm,1.7s
I02D  Swisshome       84.29  35   P        P        08 33 16.4 +2.2
      baz=226
W13A  Hualapai Mount  84.30  47   IAMs_20  IAMs_20  09 04 45.1
      comp=Z,2µm,19.0s
SHPR  Sheep Range     84.32  45   P        P        08 33 15.3 +0.5
SHPR                              IAmb     IAmb     08 33 29.9
      comp=Z,20nm,1.2s
K04D  Chiloquin, OR   84.38  37   P        P        08 33 15.5 +0.6
      baz=227,SNR=5.1
USRK  Ussuriysk Ar.   84.38 325   P        P        08 33 14.2 -0.5
      comp=Z,14nm,0.8s,baz=122,slow=5.6,SNR=6.8
USRK                              LR       LR       09 08 49.4
      comp=Z,1µm,18.9s,baz=135,slow=34
BI03  Tigo            84.44 128   IAMs_20  IAMs_20  09 06 30.4
      comp=Z,2µm,18.0s
J04D  Umpqua Nationa  84.60  36   P        P        08 33 17.2 +1.0
      baz=227
TYV   Tymovskoe       84.61 335  eP        P        08 33 15.6 -0.1
TYV                              e                  08 43 36.4
TYV                               pmax     pmax
      comp=Z,15nm,0.8s
TYV                               pmax     pmax
      comp=Z,500nm,2.6s
MOD   Modoc Plateau   84.69  38   IAmb     IAmb     08 33 19.2
      comp=Z,13nm,0.8s
NJ2   Nanjing         84.71 309⇑iP        P        08 33 16.7 +0.1
NJ2                               pP       sP       08 33 26.0 -1.0
NJ2                               sP       pwP      08 33 33.1 +4.3
NJ2                               S        S        08 43 48.5 +5.8
NJ2                               sS       ScS      08 44 00.2 +6.4
NJ2                               pmax     pmax
      comp=Z,12nm,0.5s
NJ2                               pmax     pmax
      comp=Z,630nm,3.5s
NJ2                               LR       LR
      comp=Z,590nm,11.8s
NJ2                               LR       LR
      comp=Z,680nm,15.1s
NJ2                               LR       LR
      comp=Z,350nm,11.8s
QIZ   Qiongzhong      84.76 294   P        P        08 33 17.2  0.0
QIZ                               sP       sP       08 33 26.8 -0.8
QIZ                               PP       PP       08 36 33.7 -0.1
QIZ                               S        S        08 43 44.9 +1.1
QIZ                               sS       ScS      08 43 56.2 +1.4
QIZ                               pmax     pmax
      comp=Z,27nm,1.6s
QIZ                               pmax     pmax
      comp=Z,330nm,5.3s
QIZ                               LR       LR
      comp=Z,440nm,7.7s
QIZ                               LR       LR
      comp=Z,490nm,8.4s
QIZ                               LR       LR
      comp=Z,590nm,16.5s
TUC   Tucson          84.77  50   P        P        08 33 18.1 +1.0
      baz=235
TUC   Tucson          84.77  50   P        P        08 33 18.9 +1.8
TUC                               pmax     pmax
      comp=Z,17nm,1.2s
TUC   Tucson          84.77  50   P        P        08 33 18.9 +1.8
TUC                               IAmb     IAmb     08 33 39.6
      comp=Z,17nm,1.1s
TUC   Tucson          84.77  50   IAMs_20  IAMs_20  09 08 19.6
      comp=Z,2µm,18.0s
I04A  Tendick Farm,   84.82  36   P        P        08 33 17.4 +0.4
      baz=227,SNR=8.5
OHAK  Old Harbor      84.84  12   IAMs_20  IAMs_20  09 13 22.7
      comp=Z,2µm,18.0s
PRN   Pahroc Range    84.94  44   P        P        08 33 19.1 +1.2
PRN                               IAmb     IAmb     08 33 22.0
      comp=Z,22nm,0.9s
J05D  Fort Rock, OR   85.10  37   P        P        08 33 19.1 +0.5
      baz=227,SNR=24
H04D  Lebanon         85.15  35   P        P        08 33 19.4 +0.8
      baz=226
R11A  Troy Canyon, C  85.19  43   P        P        08 33 19.9 +0.8
      baz=232
R11A  Troy Canyon, C  85.19  43   IAMs_20  IAMs_20  09 08 28.6
      comp=Z,1µm,18.0s
319A  Douglas         85.30  52   IAmb     IAmb     08 33 32.3
      comp=Z,16nm,1.0s
319A                              IAMs_20  IAMs_20  09 06 59.7
      comp=Z,2µm,18.0s
G03D  McMinnville, O  85.36  34   P        P        08 33 20.8 +1.2
      baz=226
X16A  Lo Mia Camp, P  85.52  48   IAmb     IAmb     08 33 24.9
      comp=Z,14nm,0.9s
X16A                              IAMs_20  IAMs_20  09 05 21.6
      comp=Z,2µm,20.0s
H04A  Detroit Lake    85.55  35   IAmb     IAmb     08 33 37.5
      comp=Z,40nm,1.5s
H04A                              IAMs_20  IAMs_20  09 14 11.9
      comp=Z,2µm,18.0s
HPIG                  85.56  57   IAMs_20  IAMs_20  09 04 47.0
      comp=Z,3µm,20.0s
PINE  Pine Mountain   85.60  36   IAmb     IAmb     08 33 38.9
      comp=Z,49nm,1.4s
PINE                              IAMs_20  IAMs_20  09 17 34.4
      comp=Z,2µm,18.0s
EFI   East Falkland   85.63 146⇓eP        P        08 33 23.6 +2.5
EFI                               pmax     pmax
      comp=Z,48nm,1.3s
EFI   East Falkland   85.63 146   IAMs_20  IAMs_20  09 06 24.7
      comp=Z,2µm,19.0s
IPM   Ipoh            85.70 277   IAMs_20  IAMs_20  09 15 40.1
      comp=Z,2µm,19.0s
IPM   Ipoh            85.70 277   P        P        08 33 22.0 -0.1
BI02  San Fabin de    85.76 129   P        P        08 33 23.7 +1.5
I05D  Terrebonne, OR  85.76  36   P        P        08 33 22.4 +0.6
      baz=227,SNR=5.8
PAYG  Puerto Ayora    85.76  89   IAMs_20  IAMs_20  09 14 25.2
      comp=Z,1µm,18.0s
ZAIG  Zacatecas       85.86  62   IAMs_20  IAMs_20  09 07 02.8
      comp=Z,1µm,18.0s
MDJ   Mudanjiang      85.92 324   P        P        08 33 22.8 +0.4
MDJ                               pmax     pmax
      comp=Z,30nm,2.2s
MDJ                               pmax     pmax
      comp=Z,1µm,4.3s
MDJ                               LR       LR
      comp=Z,3µm,14.0s
MDJ                               LR       LR
      comp=Z,2µm,14.0s
MDJ                               LR       LR
      comp=Z,2µm,19.3s
MDJ   Mudanjiang      85.92 324   IAMs_20  IAMs_20  09 09 21.2
      comp=Z,2µm,20.0s
WVOR  Wild Horse Val  85.97  39   IAmb     IAmb     08 33 37.1
      comp=Z,31nm,1.4s
WVOR                              IAMs_20  IAMs_20  09 12 53.2
      comp=Z,2µm,18.0s
F04D  Rainier, OR     86.09  34   P        P        08 33 24.4 +1.2
      baz=226
E03A  Lebam           86.14  33   P        P        08 33 23.9 +0.5
WUAZ  Wupatki         86.20  48   P        P        08 33 25.1 +0.8
      baz=234
WUAZ  Wupatki         86.20  48   P        P        08 33 25.6 +1.4
WUAZ                              IAmb     IAmb     08 33 56.9
      comp=Z,24nm,1.1s
WUAZ                              IAMs_20  IAMs_20  09 06 03.6
      comp=Z,2µm,19.0s
SPR3  Spring Creek 3  86.36  43   IAmb     IAmb     08 33 39.1
      comp=Z,22nm,1.5s
SPR3                              IAMs_20  IAMs_20  09 07 41.7
      comp=Z,1µm,18.0s
G05D  Wamic, OR       86.38  35   P        P        08 33 25.4 +0.7
      baz=227
KULM  Kulim           86.40 278   P        P        08 33 28.0 +2.5
NLWA  Neilton Lookou  86.58  32   IAmb     IAmb     08 33 29.2
      comp=Z,19nm,1.0s
NLWA                              IAMs_20  IAMs_20  09 09 31.2
      comp=Z,2µm,20.0s
X18A  Snowflake       86.60  49   IAmb     IAmb     08 33 30.1
      comp=Z,17nm,0.9s
X18A                              IAMs_20  IAMs_20  09 06 04.1
      comp=Z,2µm,19.0s
E04D  Cinebar         86.64  34   P        P        08 33 27.0 +1.1
      baz=226
PKCU  Pink Cliffs     86.71  46   P        P        08 33 28.7 +1.8
F05D  White Salmon    86.74  35   P        P        08 33 27.3 +0.8
      baz=227
RPSI  Rantau Prapat   86.81 275   P        P        08 33 28.4 +0.8
PSI   Prapat          86.86 275   P        P        08 33 28.4 +0.4
      comp=Z,13nm,0.9s,baz=180,slow=5.5,SNR=6.6
DL2   Dalian          86.86 316   P        P        08 33 24.0 -3.2
DL2                               S        S        08 44 01.5 -2.0
DL2                               pmax     pmax
      comp=Z,59nm,0.9s
DL2                               pmax     pmax
      comp=Z,460nm,5.5s
DL2                               LR       LR
      comp=Z,740nm,17.9s
DL2                               LR       LR
      comp=Z,700nm,20.2s
DL2                               LR       LR
      comp=Z,950nm,22.7s
ELK   Elko            86.88  42   IAMs_20  IAMs_20  09 13 45.2
      comp=Z,2µm,18.0s
UNM   Universidad Na  86.95  67   IAMs_20  IAMs_20  09 05 47.8
      comp=Z,2µm,19.0s
D04E  Lakebay         86.97  33   P        P        08 33 29.3 +1.9
      baz=226
121A  Cookes Peak, D  86.99  52   P        P        08 33 29.6 +1.4
      baz=237
121A  Cookes Peak, D  86.99  52   IAmb     IAmb     08 33 43.4
      comp=Z,38nm,1.4s
121A                              IAMs_20  IAMs_20  09 07 39.7
      comp=Z,2µm,18.0s
BO02  Sierra Bellavi  87.02 127   IAMs_20  IAMs_20  09 08 25.9
      comp=Z,2µm,18.0s
GRNR  Gornyy          87.05 332⇓iP        P        08 33 26.3 -1.5
GRNR                              pmax     pmax
      comp=Z,8.0nm,0.8s
D03D  Eldon           87.06  33   P        P        08 33 28.6 +0.7
      baz=226
W18A  Petrified Fore  87.07  49   P        P        08 33 29.2 +0.6
      baz=236
W18A  Petrified Fore  87.07  49   IAMs_20  IAMs_20  09 06 37.7
      comp=Z,2µm,19.0s
WHN   Wuhan           87.10 306 ⇑P        P        08 33 27.8 -0.7
WHN                               S        S        08 43 55.3  -11
WHN                               pmax     pmax
      comp=Z,96nm,1.0s
WHN                               LR       LR
      comp=Z,3µm,20.8s
WHN                               LR       LR
      comp=Z,3µm,23.7s
WHN                               LR       LR
      comp=Z,2µm,18.8s
NKL   Nikolayevsk     87.17 336  eP        P        08 33 26.4 -1.9
NKL                               pmax     pmax
      comp=N,6.0nm,0.7s
NKL                               pmax     pmax
      comp=E,34nm,1.0s
NKL                               pmax     pmax
      comp=Z,25nm,1.0s
CNPM  China Poot      87.39  12   IAMs_20  IAMs_20  09 10 02.9
      comp=Z,2µm,20.0s
GSI   Gunungsitoli    87.43 273   P        P        08 33 31.7 +1.1
GSI   Gunungsitoli    87.43 273   P        P        08 33 31.4 +0.8
      comp=Z,13µmcomp=Z,44nm,0.8s
SNY   Shenyang        87.46 319   P        P        08 33 30.2 +0.2
SNY                               S        S        08 43 58.9  -10
SNY                               pmax     pmax
      comp=Z,500nm,6.5s
SNY                               LR       LR
      comp=Z,570nm,18.8s
SNY                               LR       LR
      comp=Z,360nm,18.1s
SNY                               LR       LR
      comp=Z,810nm,20.6s
EPT   El Paso         87.50  53   IAMs_20  IAMs_20  09 09 23.0
      comp=Z,2µm,18.0s
MT02  Curacav         87.51 126   IAMs_20  IAMs_20  09 10 00.1
      comp=Z,2µm,18.0s
CN2   Changchun       87.63 322  eP        P        08 33 30.5 -0.3
CN2                               sP       pwP      08 33 49.1 +6.2
CN2                               S        S        08 44 01.4 -9.3
CN2                               pmax     pmax
      comp=Z,50nm,1.5s
CN2                               pmax     pmax
      comp=Z,770nm,3.0s
CN2                               LR       LR
      comp=Z,460nm,19.0s
CN2                               LR       LR
      comp=Z,530nm,19.0s
CN2                               LR       LR
      comp=Z,650nm,19.0s
G08A  Pilot Rock      87.66  36   P        P        08 33 31.2 +0.1
PGC   Sidney          87.66  32   IAmb     IAmb     08 33 34.0
      comp=Z,14nm,0.8s
MT05  Renca           87.73 126   IAMs_20  IAMs_20  09 10 17.1
      comp=Z,2µm,19.0s
PEL   Peldehue        87.89 126   IAMs_20  IAMs_20  09 07 57.5
      comp=Z,2µm,19.0s
DUG   Dugway, Tooele  88.02  43   P        P        08 33 33.5 +0.6
      baz=233
DUG   Dugway, Tooele  88.02  43   IAMs_20  IAMs_20  09 13 50.5
      comp=Z,2µm,18.0s
E07A  Sunnyside       88.02  35   IAmb     IAmb     08 33 50.1
      comp=Z,23nm,1.2s
KLR   Kul'dur         88.02 329c iP        P        08 33 32.9 +0.4
KLR                               pmax     pmax
      comp=Z,77nm,3.0s
B05A  Bryant          88.05  33   P        P        08 33 33.3 +0.7
      baz=227,SNR=11
A04D  Lummi Island    88.07  32   P        P        08 33 33.4 +0.7
      baz=226,SNR=15
SVW2  Sparrevohn      88.12  10   IAmb     IAmb     08 33 52.9
      comp=Z,15nm,1.2s
SVW2                              IAMs_20  IAMs_20  09 16 29.4
      comp=Z,1µm,19.0s
MFID  Camas Ranch     88.19  39   P        P        08 33 32.9 -0.7
TIA   Tai'an          88.23 312   P        P        08 33 33.8  0.0
TIA                               S        S        08 44 05.3  -12
TIA                               pmax     pmax
      comp=Z,45nm,2.2s
TIA                               pmax     pmax
      comp=Z,620nm,6.7s
TIA                               LR       LR
      comp=Z,450nm,16.1s
TIA                               LR       LR
      comp=Z,460nm,18.6s
TIA                               LR       LR
      comp=Z,440nm,19.0s
BMO   Blue Mountains  88.27  37   IAmb     IAmb     08 34 00.8
      comp=Z,21nm,1.8s
MNTX  Cornudas Mount  88.27  54   P        P        08 33 34.8 +0.6
      baz=238,SNR=9.5
MNTX  Cornudas Mount  88.27  54   IAmb     IAmb     08 33 48.7
      comp=Z,24nm,1.5s
MNTX                              IAMs_20  IAMs_20  09 08 28.5
      comp=Z,2µm,18.0s
SEW   Seward          88.27  13   IAMs_20  IAMs_20  09 15 41.3
      comp=Z,2µm,19.0s
TX32  Lajitas Array   88.31  56   IAmb     IAmb     08 33 49.2
      comp=Z,32nm,1.6s
TXAR  Lajitas Array   88.31  56   P        P        08 33 36.1 +1.5
      comp=Z,4.5nm,0.8s,baz=214,slow=6.0,SNR=47
TXAR                              LR       LR       09 06 35.5
      comp=Z,2µm,19.4s,baz=0.0,slow=31
Q23K  Middleton Isla  88.32  15   IAMs_20  IAMs_20  09 14 23.7
      comp=Z,2µm,18.0s
MID   Middleton Isla  88.32  15   IAMs_20  IAMs_20  09 14 23.7
      comp=Z,2µm,18.0s
E08A  Dider Farm, El  88.39  35   IAmb     IAmb     08 33 52.4
      comp=Z,37nm,1.8s
E08A                              IAMs_20  IAMs_20  09 16 10.1
      comp=Z,2µm,18.0s
Y22D  IRIS PASSCAL I  88.44  51   P        P        08 33 36.0 +0.9
      baz=237
Y22D  IRIS PASSCAL I  88.44  51   IAMs_20  IAMs_20  09 09 02.8
      comp=Z,2µm,18.0s
B06A  Marblemount     88.52  33   P        P        08 33 36.1 +1.3
B06A                              IAmb     IAmb     08 33 37.6
      comp=Z,16nm,0.9s
CAPN  Captain Cook N  88.56  12   P        P        08 33 36.0 +1.3
      baz=202
TPTI                  88.62 274   P        P        08 33 35.8 -0.5
      comp=Z,18nm,1.2s
D08A  Wollman Farm,   88.83  35   IAMs_20  IAMs_20  09 14 48.8
      comp=Z,2µm,18.0s
E09A  Wood Farm, Sta  88.88  36   IAMs_20  IAMs_20  09 15 27.2
      comp=Z,1µm,19.0s
HVU   Hansel Valley   88.98  42   P        P        08 33 37.5  0.0
HVU                               pmax     pmax
      comp=Z,10.0nm,1.0s
HVU   Hansel Valley   88.98  42   P        P        08 33 37.5  0.0
CO03  El Pedregal     89.02 124   IAMs_20  IAMs_20  09 09 34.6
      comp=Z,2µm,19.0s
F10A  Beach Ranch, E  89.02  37   IAmb     IAmb     08 33 54.0
      comp=Z,23nm,1.2s
MVCO  Mesa Verde      89.07  47   P        P        08 33 38.7 +0.6
      baz=236
MVCO  Mesa Verde      89.07  47   IAmb     IAmb     08 33 55.9
      comp=Z,29nm,1.6s
MVCO                              IAMs_20  IAMs_20  09 07 44.5
      comp=Z,2µm,19.0s
HLID  Hailey          89.09  40   P        P        08 33 38.7 +0.8
      baz=232
RC01  Rabbit Creek A  89.12  12   P        P        08 33 37.5 +0.1
      baz=203
PV05  Paradox Valley  89.16  47   P        P        08 33 39.8 +1.4
PV05                              IAmb     IAmb     08 33 46.6
      comp=Z,19nm,1.3s
PV05                              IAMs_20  IAMs_20  09 08 50.1
      comp=Z,2µm,20.0s
HIN   Hinchinbrook I  89.16  14   IAMs_20  IAMs_20  09 15 11.8
      comp=Z,2µm,19.0s
KAIM  Kayak Island    89.22  15   IAMs_20  IAMs_20  09 20 35.3
      comp=Z,2µm,18.0s
ANMO  Albuquerque     89.23  50   P        P        08 33 40.1 +1.3
      comp=Z,14nm,0.9s,baz=208,slow=5.5,SNR=49
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ANMO	Albuquerque	89.23	50	P	P	08 33 39.6	+0.8
	baz=237						
ANMO	Albuquerque	89.23	50	⇑eP	P	08 33 39.5	+0.7
ANMO				pmax	pmax		
	comp=Z,43nm,2.5s						
ANMO	Albuquerque	89.23	50	P	P	08 33 40.2	+1.4
ANMO				IAmb	IAmb	08 33 42.3	
	comp=Z,14nm,0.8s						
ANMO	Albuquerque	89.23	50	IAMs_20	IAMs_20	09 07 51.7	
	comp=Z,2µm,19.0s						
GO04	Tololo Observa	89.27	123	IAMs_20	IAMs_20	09 09 47.0	
	comp=Z,2µm,18.0s						
SUA	Susitna One	89.28	12	IAMs_20	IAMs_20	09 11 07.9	
	comp=Z,2µm,19.0s						
GAMB	Gambell	89.31	2	IAmb	IAmb	08 33 41.1	
	comp=Z,20nm,1.0s						
MA2	Magadan	89.36	344	c iP	P	08 33 37.5	-1.1
MA2				pmax	pmax		
	comp=Z,68nm,2.2s						
MA2	Magadan	89.36	344	P	P	08 33 37.9	-0.6
MA2				IAmb	IAmb	08 33 40.3	
	comp=Z,27nm,0.9s						
MA2				IAMs_20	IAMs_20	09 09 49.0	
	comp=Z,2µm,20.0s						
PV17	East Wray Mesa	89.36	46	IAmb	IAmb	08 33 54.4	
	comp=Z,37nm,1.7s						
PV14	Lion Creek, Pa	89.37	46	IAmb	IAmb	08 33 48.4	
	comp=Z,50nm,1.9s						
PV18	Skein Mesa, Pa	89.38	46	IAMs_20	IAMs_20	09 08 25.5	
	comp=Z,1µm,19.0s						
PV13	Radium Mtn., P	89.39	47	IAmb	IAmb	08 33 50.4	
	comp=Z,30nm,1.8s						
PV13				IAMs_20	IAMs_20	09 08 54.8	
	comp=Z,2µm,19.0s						
PV16	Nyswonger Mesa	89.41	46	IAmb	IAmb	08 33 41.7	
	comp=Z,29nm,1.6s						
PV03	Paradox Valley	89.42	46	IAmb	IAmb	08 34 09.8	
	comp=Z,31nm,1.8s						
PV03				IAMs_20	IAMs_20	09 08 07.7	
	comp=Z,2µm,20.0s						
PV11	David Mesa, Pa	89.43	46	P	P	08 33 40.4	+0.7
PV11				IAmb	IAmb	08 33 46.8	
	comp=Z,25nm,1.5s						
PV04	Paradox Valley	89.46	46	IAmb	IAmb	08 33 49.0	
	comp=Z,49nm,2.0s						
PV04				IAMs_20	IAMs_20	09 07 32.8	
	comp=Z,2µm,20.0s						
EYAK	Cordova Ski Ar	89.46	14	IAmb	IAmb	08 33 41.7	
	comp=Z,28nm,0.8s						
EYAK				IAMs_20	IAMs_20	09 15 29.8	
	comp=Z,2µm,18.0s						
GLI	Glacier Island	89.47	14	IAMs_20	IAMs_20	09 15 53.9	
	comp=Z,2µm,19.0s						
PV02	Paradox Valley	89.47	47	IAMs_20	IAMs_20	09 11 39.0	
	comp=Z,2µm,21.0s						
B08A	Colville Reser	89.48	34	IAmb	IAmb	08 33 41.5	
	comp=Z,12nm,0.8s						
PV12	Saucer Basin,	89.48	46	IAmb	IAmb	08 33 49.0	
	comp=Z,24nm,1.4s						
PV12				IAMs_20	IAMs_20	09 11 57.4	
	comp=Z,2µm,21.0s						
SUCK	Suckling Hills	89.50	15	IAMs_20	IAMs_20	09 11 57.7	
	comp=Z,2µm,18.0s						
PV01	Paradox Valley	89.53	47	P	P	08 33 40.5	+0.2
HMT	Hamilton	89.61	15	IAMs_20	IAMs_20	09 13 44.8	
	comp=Z,2µm,19.0s						
SKT	Skwentna	89.61	11	IAMs_20	IAMs_20	09 14 42.9	
	comp=Z,2µm,19.0s						
C09A	Chrisman Ranch	89.65	35	IAMs_20	IAMs_20	09 16 05.4	
	comp=Z,2µm,18.0s						
PMR	Palmer	89.70	12	IAmb	IAmb	08 33 43.2	
	comp=Z,30nm,1.0s						
PV15	Paradox Valley	89.71	47	IAMs_20	IAMs_20	09 10 33.4	
	comp=Z,2µm,20.0s						
TTA	Tatalina	89.81	9	IAmb	IAmb	08 33 44.1	
	comp=Z,19nm,1.1s						
CO01	Juntas del Tor	89.89	123	IAMs_20	IAMs_20	09 08 35.6	
	comp=Z,2µm,18.0s						
NONG	Nongkai	89.91	290	P	P	08 33 43.0	+0.9
	comp=Z,4µmcomp=Z,109nm,1.2s						
MESA	MESA	90.04	16	IAMs_20	IAMs_20	09 13 00.1	
	comp=Z,2µm,19.0s						
SML	Sawmill	90.05	13	P	P	08 33 42.0	+0.2
SML				IAmb	IAmb	08 34 08.4	
	comp=Z,26nm,1.0s						
CUT	Chulitna	90.23	12	P	P	08 33 42.5	-0.1
	baz=203						
CRQM	Cirque	90.25	15	IAMs_20	IAMs_20	09 13 55.9	
	comp=Z,2µm,18.0s						
YAH	Yahtse	90.25	16	IAMs_20	IAMs_20	09 13 34.5	
	comp=Z,2µm,18.0s						
SCM	Sheep Creek Mo	90.28	13	IAMs_20	IAMs_20	09 16 32.4	
	comp=Z,1µm,19.0s						
ISLE	Juniper Island	90.31	16	IAMs_20	IAMs_20	09 13 55.2	
	comp=Z,2µm,19.0s						
TGL	Tana Glacier	90.33	16	IAmb	IAmb	08 33 46.8	
	comp=Z,36nm,1.0s						
TGL				IAMs_20	IAMs_20	09 13 57.6	
	comp=Z,2µm,19.0s						
PPLA	Purkeypile	90.36	11	IAMs_20	IAMs_20	09 14 44.5	
	comp=Z,2µm,20.0s						
PCA	Pinnacle	90.41	17	IAMs_20	IAMs_20	09 13 46.8	
	comp=Z,2µm,19.0s						
BCPM	Bancas Point	90.45	17	IAMs_20	IAMs_20	09 18 03.9	
	comp=Z,2µm,19.0s						
S22A	4UR Ranch, Cre	90.47	48	P	P	08 33 45.0	+0.3
	baz=237,SNR=20						
NEW	Newport	90.54	35	P	P	08 33 44.8	+0.3
	baz=230,SNR=6.5						
AHID	Auburn Hatcher	90.56	42	P	P	08 33 45.0	+0.1
AHID				IAmb	IAmb	08 33 59.0	
	comp=Z,21nm,1.2s						
AHID				IAMs_20	IAMs_20	09 15 20.9	
	comp=Z,2µm,18.0s						
VRDI	Verde Repeater	90.59	15	IAMs_20	IAMs_20	09 14 26.6	
	comp=Z,1µm,19.0s						
N25K	Chitina, Valde	90.66	14	P	P	08 33 45.3	+0.6
	baz=208						
BALM	Baldy	90.69	16	IAmb	IAmb	08 33 47.9	
	comp=Z,26nm,0.9s						
BALM				IAMs_20	IAMs_20	09 13 51.2	
	comp=Z,2µm,19.0s						
M24K	Tolsona, Glenn	90.77	13	P	P	08 33 45.7	+0.5
	baz=206						
O20A	White River Ci	90.85	45	P	P	08 33 46.3	-0.1
	baz=236						
O20A	White River Ci	90.85	45	IAmb	IAmb	08 33 49.9	
	comp=Z,52nm,1.9s						
CTGM	Chitina Glacie	90.87	16	IAmb	IAmb	08 33 48.7	
	comp=Z,25nm,0.8s						
BARN	Barnard Glacie	90.88	16	P	P	08 33 46.3	+0.4
GYA	Guiyang	90.90	299	⇓P	P	08 33 47.6	+0.8
GYA				pP	pwP	08 33 57.3	-1.7
GYA				sP	sP	08 34 00.4	+3.2
GYA				S	S	08 44 43.9	+1.5
GYA				pmax	pmax		
	comp=Z,24nm,1.9s						
GYA				pmax	pmax		
	comp=Z,380nm,4.3s						
GYA				LR	LR		
	comp=Z,580nm,23.3s						
GYA				LR	LR		
	comp=Z,680nm,21.9s						
GYA				LR	LR		
	comp=Z,1µm,21.7s						
BJT	Baijiatuau	90.96	315	P	P	08 33 46.5	0.0
BJT				pmax	pmax		
	comp=Z,86nm,1.7s						
BJT				MLR	MLR		
	comp=Z,900nm,19.0s						
BJT	Baijiatuau	90.96	315	P	P	08 33 46.5	0.0
BJI	Beijing	90.97	315	P	P	08 33 47.0	+0.5
BJI				SKS	SKSac	08 44 16.5	-0.1
BJI				S	ScS	08 44 45.9	+0.6
BJI				sS	sS	08 44 58.2	+3.4
BJI				pmax	pmax		
	comp=Z,31nm,2.2s						
BJI				LR	LR		
	comp=Z,520nm,20.4s						
BJI				LR	LR		
	comp=Z,510nm,18.2s						
BJI				LR	LR		
	comp=Z,670nm,25.5s						
REDW	Red Top Meadow	91.06	41	IAmb	IAmb	08 33 49.5	
	comp=Z,31nm,1.4s						
REDW				IAMs_20	IAMs_20	09 13 46.9	
	comp=Z,2µm,18.0s						
833A	Chaparral WMA,	91.07	59	P	P	08 33 46.5	-0.8
	baz=241						
SMCO	Snowmass	91.15	47	IAmb	IAmb	08 33 55.6	
	comp=Z,22nm,1.4s						
SMCO				IAMs_20	IAMs_20	09 08 46.6	
	comp=Z,1µm,20.0s						
SNOW	Snow King Moun	91.17	41	IAmb	IAmb	08 33 51.5	
	comp=Z,18nm,1.0s						
SNOW				IAMs_20	IAMs_20	09 14 57.9	
	comp=Z,2µm,18.0s						
KTH	Kantishna Hill	91.18	11	IAmb	IAmb	08 33 49.1	
	comp=Z,18nm,1.0s						
KTH				IAMs_20	IAMs_20	09 18 09.3	
	comp=Z,2µm,19.0s						
DLMT	Dillon	91.21	39	IAmb	IAmb	08 33 58.7	
	comp=Z,29nm,1.3s						
MSTX	Muleshoe	91.32	53	P	P	08 33 48.6	+0.1
	baz=240						
MSTX	Muleshoe	91.32	53	IAmb	IAmb	08 34 03.6	
	comp=Z,50nm,1.8s						
MSTX				IAMs_20	IAMs_20	09 08 07.2	
	comp=Z,2µm,20.0s						
MSO	Missoula	91.34	37	P	P	08 33 49.1	+0.8
	baz=233,SNR=9.7						
MSO	Missoula	91.34	37	P	P	08 33 47.6	-0.7
MSO				IAmb	IAmb	08 33 49.5	
	comp=Z,38nm,1.8s						
MOOW	Moose Ponds	91.34	41	IAmb	IAmb	08 33 58.9	
	comp=Z,16nm,1.4s						
MOOW				IAMs_20	IAMs_20	09 11 45.4	
	comp=Z,2µm,18.0s						
LOHW	Long Hollow	91.35	41	IAmb	IAmb	08 33 50.8	
	comp=Z,17nm,1.3s						
LOHW				IAMs_20	IAMs_20	09 15 37.6	
	comp=Z,2µm,18.0s						
SDCO	Great Sand Dun	91.37	48	P	P	08 33 48.7	-0.2
	baz=238,SNR=13						
RND	Reindeer	91.42	12	P	P	08 33 47.8	-0.4
RND				pmax	pmax		
	comp=Z,45nm,1.1s						
RND	Reindeer	91.42	12	IAMs_20	IAMs_20	09 12 23.4	
	comp=Z,2µm,20.0s						
BW06	Boulder Array	91.50	42	P	P	08 33 48.8	-0.5
	baz=236,SNR=13						
BW06	Boulder Array	91.50	42	IAMs_20	IAMs_20	09 17 35.6	
	comp=Z,2µm,18.0s						
PDAR	Pinedale Array	91.50	42	P	P	08 33 50.3	+1.0
	comp=Z,6.2nm,0.8s,baz=201,slow=2.9,SNR=46						
PDAR				LR	LR	09 12 22.9	
	comp=Z,913nm,18.1s,baz=255,slow=34						
PDAR	Pinedale Array	91.50	42	P	P	08 33 49.0	-0.3
FLWY	Flagg Ranch	91.56	41	IAmb	IAmb	08 33 53.1	
	comp=Z,21nm,0.8s						
YPP	Pitchstone Pla	91.61	41	P	P	08 33 50.1	+0.3
BPAW	Bear Paw Mtn.	91.68	11	IAMs_20	IAMs_20	09 18 43.5	
	comp=Z,2µm,18.0s						
MCK	McKinley	91.70	12	P	P	08 33 49.3	-0.1
	baz=204						
JTMT	Jette	91.71	36	IAMs_20	IAMs_20	09 15 28.0	
	comp=Z,1µm,18.0s						
HYT	Haines Junctio	91.76	18	IAMs_20	IAMs_20	09 18 38.6	
	comp=Z,2µm,19.0s						
T25A	Trinidad	91.79	49	P	P	08 33 50.9	+0.2
	baz=239						
JCT	Junction City	91.79	57	P	P	08 33 50.9	+0.2
	baz=241						
JCT	Junction City	91.79	57	IAmb	IAmb	08 34 04.3	
	comp=Z,17nm,1.3s						
JCT				IAMs_20	IAMs_20	09 08 16.9	
	comp=Z,2µm,20.0s						
H17A	Grant Village	91.81	41	P	P	08 33 52.2	+1.5
	baz=235,SNR=14						
H17A	Grant Village	91.81	41	IAmb	IAmb	08 33 55.1	
	comp=Z,11nm,0.8s						
H17A				IAMs_20	IAMs_20	09 18 56.9	
	comp=Z,2µm,18.0s						
PHIT	Phitsanulok	91.84	288	P	P	08 33 53.4	+2.2
KVTX	Kingsville	91.87	60	IAMs_20	IAMs_20	09 14 55.0	
	comp=Z,1µm,18.0s						
BOZ	Bozeman (W)	91.90	39	P	P	08 33 51.4	+0.5
	baz=234,SNR=33						
BOZ	Bozeman (W)	91.90	39	P	P	08 33 52.0	+1.1
BOZ				pmax	pmax		
	comp=Z,22nm,0.8s						
BOZ	Bozeman (W)	91.90	39	P	P	08 33 52.0	+1.1
SEY	Seymchan	91.93	346	⇑iP	P	08 33 50.3	-0.1
YNR	Norris Junctio	91.94	40	P	P	08 33 50.2	-1.0
UTTA	Uttaradit	91.97	289	P	P	08 33 53.9	+2.2
LKWY	Lake	92.01	41	P	P	08 33 53.4	+1.7
LKWY				pmax	pmax		
	comp=Z,10.0nm,0.8s						
LKWY				MLR	MLR		
	comp=Z,2µm,18.0s						
LKWY	Lake	92.01	41	P	P	08 33 53.4	+1.7
LKWY				IAmb	IAmb	08 33 56.1	
	comp=Z,9.6nm,0.8s						
LKWY				IAMs_20	IAMs_20	09 16 53.2	
	comp=Z,2µm,18.0s						
MENT	Mentasta	92.03	14	IAmb	IAmb	08 33 53.9	
	comp=Z,14nm,0.8s						
TIY	Taiyuan	92.20	311	eP	P	08 33 53.0	+0.5
TIY				SKS	SKSac	08 44 23.3	-0.6
TIY				SS	SS	08 51 08.0	+3.5
TIY				pmax	pmax		
	comp=Z,400nm,3.0s						
TIY				LR	LR		
	comp=Z,130nm,7.3s						
TIY				LR	LR		
	comp=Z,340nm,14.0s						
TIY				LR	LR		
	comp=Z,680nm,14.9s						
Q24A	Divide	92.24	47	P	P	08 33 53.2	+0.3
	baz=238						
YMP	Mirror Lake Pl	92.26	41	P	P	08 33 54.8	+1.9
ISCO	Idaho Springs	92.37	47	P	P	08 33 53.9	+0.4
	baz=238						
ISCO	Idaho Springs	92.37	47	P	P	08 33 53.9	+0.4
ISCO				pmax	pmax		
	comp=Z,9.0nm,1.3s						
ISCO	Idaho Springs	92.37	47	P	P	08 33 53.9	+0.4
ISCO				IAMs_20	IAMs_20	09 10 23.9	
	comp=Z,2µm,20.0s						
NEA2	Nenana	92.46	11	P	P	08 33 53.8	+0.9
	baz=204						
RIDG	Independent Ri	92.50	13	IAmb	IAmb	08 33 54.8	
	comp=Z,30nm,1.6s						
WRH	Wood River Hil	92.53	12	IAmb	IAmb	08 33 55.3	
	comp=Z,19nm,0.8s						
735A	Kenedy	92.55	59	IAMs_20	IAMs_20	09 23 38.0	
	comp=Z,1µm,18.0s						
AMTX	Amarillo	92.56	52	P	P	08 33 54.5	+0.3
	baz=240						
AMTX	Amarillo	92.56	52	IAMs_20	IAMs_20	09 11 43.0	
	comp=Z,2µm,20.0s						
BCAR	Beaver Creek A	92.58	15	P	P	08 33 53.6	+0.1
DOT	Dot Lake	92.59	14	IAmb	IAmb	08 33 56.1	
	comp=Z,13nm,0.8s						
MLY	Manley	92.59	10	P	P	08 33 53.1	-0.4
	baz=203						
HDA	Harding Lake	92.69	12	P	P	08 33 54.3	+0.3
	baz=206						
HDA	Harding Lake	92.69	12	P	P	08 33 53.4	-0.5
HDA				IAmb	IAmb	08 33 55.9	
	comp=Z,19nm,1.0s						
WALA	Waterton Lakes	92.70	36	IAmb	IAmb	08 34 04.9	
	comp=Z,28nm,1.6s						
WALA				IAMs_20	IAMs_20	09 18 01.2	
	comp=Z,2µm,19.0s						
N23A	Red Feather La	92.74	45	P	P	08 33 55.6	+0.5
	baz=238						
CCB	Clear Creek Bu	92.74	12	IAmb	IAmb	08 33 56.7	
	comp=Z,37nm,1.5s						
XAN	Xi'an	92.83	307	P	P	08 33 56.6	+1.2
XAN				pP	pwP	08 34 06.4	-1.2
XAN				pmax	pmax		
	comp=Z,20nm,2.2s						
XAN				pmax	pmax		
	comp=Z,400nm,7.7s						
XAN				LR	LR		
	comp=Z,530nm,19.9s						
XAN				LR	LR		
	comp=Z,600nm,21.2s						
XAN				LR	LR		
	comp=Z,720nm,23.0s						
NNA	Nana	92.85	105	IAMs_20	IAMs_20	09 20 33.9	
	comp=Z,1µm,18.0s						
SCRK	Sand Creek	92.89	14	P	P	08 33 55.8	+0.7
	baz=208						
I23K	Minto, Yukon-K	92.92	11	P	P	08 33 56.1	+1.1
	baz=204						
TCOL	CIGO, UAF Yank	92.94	12	P	P	08 33 55.3	+0.3
	baz=205						
TCOL	CIGO, UAF Yank	92.94	12	P	P	08 33 54.4	-0.6
TCOL				IAmb	IAmb	08 33 57.0	
	comp=Z,15nm,0.8s						
TCOL				IAMs_20	IAMs_20	09 13 12.7	
	comp=Z,2µm,20.0s						
ABTX	Abilene, Hawle	92.94	55	P	P	08 33 55.9	-0.1
	baz=241						
ABTX	Abilene, Hawle	92.94	55	P	P	08 33 56.0	0.0
COLA	College	92.94	12	⇑eP	P	08 33 54.3	-0.7
COLA				pmax	pmax		
	comp=Z,15nm,0.8s						
COLA	College	92.94	12	IAMs_20	IAMs_20	09 13 13.7	
	comp=Z,1µm,20.0s						
MDM	Murphy Dome	92.95	11	IAMs_20	IAMs_20	09 16 36.0	
	comp=Z,2µm,19.0s						
RLMT	Red Lodge	92.99	41	P	P	08 33 56.9	+0.8
	baz=236,SNR=8.8						
RLMT	Red Lodge	92.99	41	IAMs_20	IAMs_20	09 18 16.1	
	comp=Z,1µm,19.0s						
IMAR	Indian Mountai	93.02	9	P	P	08 33 54.8	-0.7
IL31		93.02	12	IAmb	IAmb	08 34 19.2	
	comp=Z,16nm,1.2s						
ILAR	Eielson Array	93.02	12	P	P	08 33 55.7	+0.2
	comp=Z,6.4nm,0.8s,baz=220,slow=4.8,SNR=68						
ILAR				LR	LR	09 08 37.6	
	comp=Z,442nm,21.9s,baz=216,slow=31						
LAMP	Lampang	93.10	289	P	P	08 33 59.0	+2.1
	comp=Z,84nm,1.0s						
GCMT	Greycliff	93.14	40	P	P	08 33 56.9	+0.2
ZEA	Zeya	93.15	330	eP	P	08 33 57.5	+1.2
ZEA				e		08 44 30.3	
ZEA				ePS	PS	08 46 15.4	-1.9
ZEA				eSS	SS	08 51 29.2	+12
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,100nm,5.9s						
ZEA				pmax	pmax		
	comp=E,100nm,6.7s						
ZEA				pmax	pmax		
	comp=Z,100nm,5.5s						
ZEA				smax	smax		
	comp=N,300nm,5.6s						
POKR	Poker Plat Res	93.23	12	P	P	08 33 56.2	-0.2
	baz=206						
POKR	Poker Plat Res	93.23	12	IAMs_20	IAMs_20	09 13 40.6	
	comp=Z,1µm,20.0s						
PAYA	Payao	93.26	290	P	P	08 33 59.0	+1.3
	comp=Z,12µmcomp=Z,323nm,1.1s						
K22A	Casper	93.30	44	P	P	08 33 57.4	-0.1
	baz=238						
K22A	Casper	93.30	44	IAMs_20	IAMs_20	09 11 24.4	
	comp=Z,2µm,19.0s						
KMI	Kunming	93.42	296	eP	P	08 33 59.8	+1.2
KMI				pP	pwP	08 34 12.3	+1.4
KMI				sP	sP	08 34 17.1	+8.0
KMI				S	S	08 45 04.9	-0.4
KMI				pmax	pmax		
	comp=Z,32nm,1.3s						
KMI				pmax	pmax		
	comp=Z,240nm,6.4s						
KMI				LR	LR		
	comp=Z,340nm,20.6s						
KMI				LR	LR		
	comp=Z,650nm,20.2s						
KMI				LR	LR		
	comp=Z,700nm,22.0s						
CM36	Chiang Mai Arr	93.55	289	P	P	08 34 00.0	+1.0
CM35	Chiang Mai Arr	93.57	289	P	P	08 34 00.0	+0.9
CM04	Chiang Mai Arr	93.60	289	P	P	08 34 01.5	+2.2
	comp=Z,196nmcomp=Z,19nm,1.0s						
CM09	Chiang Mai Arr	93.61	289	P	P	08 34 01.8	+2.4
	comp=Z,200nmcomp=Z,21nm,0.9s						
CM01	Chiang Mai Arr	93.63	289	P	P	08 34 01.9	+2.5
	comp=Z,18nm,0.9s						
CM05	Chiang Mai Arr	93.63	289	P	P	08 34 01.5	+2.1
	comp=Z,147nmcomp=Z,14nm,1.0s						
CM02	Chiang Mai Arr	93.64	289	P	P	08 34 01.7	+2.2
	comp=Z,161nmcomp=Z,18nm,1.1s						
CM34	Chiang Mai Arr	93.65	289	P	P	08 34 01.0	+1.5
CM31	Chiang Mai Arr	93.66	289	P	P	08 34 02.4	+2.8
	comp=Z,412nm,1.2s						
CMAR	Chiang Mai Arr	93.66	289	P	P	08 34 00.9	+1.4
	comp=Z,15nm,0.9s,baz=139,slow=3.1,SNR=48						
CMAR				LR	LR	09 17 38.2	
	comp=Z,312nm,19.3s,baz=206,slow=37						
CM15	Chiang Mai Arr	93.67	289	P	P	08 34 02.2	+2.7
CM13	Chiang Mai Arr	93.67	289	P	P	08 34 01.7	+2.1
	comp=Z,164nmcomp=Z,17nm,0.9s						
CMMT	Chiang Mai	93.81	289	P	P	08 34 00.7	+0.5
	comp=Z,382nmcomp=Z,17nm,1.2s						
CM33	Chiang Mai Arr	93.81	289	P	P	08 34 01.0	+0.8
CHTO	Chiang Mai	93.81	289	P	P	08 34 00.3	+0.1
CHTO				pmax	pmax		
	comp=Z,5.0nm,1.3s						
CM32	Chiang Mai Arr	93.82	289	P	P	08 34 03.0	+2.7
PRP	Porcupine Dome	93.95	12	IAmb	IAmb	08 34 02.2	
	comp=Z,13nm,1.0s						
EGAK	Eagle	94.20	14	IAMs_20	IAMs_20	09 16 26.1	
	comp=Z,1µm,19.0s						
HHC	Hu-ho-hao-te	94.38	313	eP	P	08 34 01.6	-0.9
HHC				PP	PP	08 37 51.9	+1.5
HHC				S	S	08 45 08.2	-4.6
HHC				SS	SS	08 51 34.9	-0.8
HHC				pmax	pmax		
	comp=Z,8.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,380nm,6.7s						
HHC				LR	LR		
	comp=Z,800nm,19.7s						
HHC				LR	LR		
	comp=Z,480nm,17.6s						
HHC				LR	LR		
	comp=Z,780nm,19.4s						
WMOK	Wichita Mounta	94.58	54	P	P	08 34 03.8	+0.4
	baz=242						
HKT	Hockley	94.58	59	IAMs_20	IAMs_20	09 10 46.8	
	comp=Z,1µm,20.0s						
COLD	Coldfoot	94.70	10	P	P	08 34 03.9	+0.8
	baz=203						
U32A	Winter Ranch,	95.19	52	IAMs_20	IAMs_20	09 12 41.7	
	comp=Z,2µm,20.0s						
CD2	Chengdu	95.22	302	P	P	08 34 07.6	+1.1
CD2				pP	pwP	08 34 18.5	-0.2
CD2				PP	PP	08 37 53.3	-3.7
CD2				sS	sS	08 45 35.1	+2.0
CD2				SS	SS	08 51 50.9	+3.0
CD2				pmax	pmax		
	comp=Z,30nm,0.9s						
CD2				pmax	pmax		
	comp=Z,400nm,5.5s						
CD2				LR	LR		
	comp=Z,1µm,19.1s						
CD2				LR	LR		
	comp=Z,2µm,22.1s						
CD2				LR	LR		
	comp=Z,2µm,22.1s						
BTO	Baotou	95.28	313	eP	P	08 34 07.2	+0.6
OGNE	Ogallala	95.31	47	IAMs_20	IAMs_20	09 12 01.6	
	comp=Z,2µm,19.0s						
237A	Washetta, Mont	95.52	57	IAMs_20	IAMs_20	09 10 20.7	
	comp=Z,2µm,20.0s						
RSSD	Black Hills	95.62	43	P	P	08 34 08.9	+0.7
	baz=239						
RSSD	Black Hills	95.62	43	P	P	08 34 07.3	-0.9
RSSD				pmax	pmax		
	comp=Z,17nm,0.9s						
RSSD	Black Hills	95.62	43	P	P	08 34 07.3	-0.9
RSSD				IAmb	IAmb	08 34 10.7	
	comp=Z,17nm,0.9s						
RSSD	Black Hills	95.62	43	IAMs_20	IAMs_20	09 14 01.6	
	comp=Z,2µm,19.0s						
LAO	LASA Array	95.63	40	P	P	08 34 09.1	+1.1
	baz=238						
CBKS	Cedar Bluff	95.83	50	P	P	08 34 09.8	+0.8
	baz=242						
CBKS	Cedar Bluff	95.83	50	IAMs_20	IAMs_20	09 11 44.4	
	comp=Z,2µm,20.0s						
OKCFA	Oklahoma City	95.86	54	IAMs_20	IAMs_20	09 25 14.4	
	comp=Z,1µm,18.0s						
OK029	Liberty Lake	96.03	53	IAMs_20	IAMs_20	09 15 25.9	
	comp=Z,1µm,18.0s						

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TOLK  Toolik Lake Re   96.10   9   P        P        08 34 10.7 +1.1
      baz=204
NATX  Nacogdoches      96.29  58   IAMs_20  IAMs_20  09 12 23.0
      comp=Z,2µm,19.0s
R32A  Long Quarter,    96.35  50   P        P        08 34 12.2 +0.7
R32A                               IAmb     IAmb     08 34 14.6
      comp=Z,18nm,1.2s
R32A                               IAMs_20  IAMs_20  09 11 59.3
      comp=Z,1µm,20.0s
OK031 S. Brethren Rd   96.54  53   IAMs_20  IAMs_20  09 23 03.6
      comp=Z,1µm,18.0s
EPYK  Eagle Plains     96.55  15   IAmb     IAmb     08 34 27.9
      comp=Z,16nm,1.4s
KS21  Milan North St   96.56  52   IAMs_20  IAMs_20  09 13 34.0
      comp=Z,2µm,20.0s
OK030 Cody Creek RV    96.57  53   IAMs_20  IAMs_20  09 15 51.3
      comp=Z,1µm,19.0s
T35A  Sooner Cattle    97.21  53   IAMs_20  IAMs_20  09 11 44.3
      comp=Z,2µm,20.0s
TUL1  Leonard          97.28  54   IAMs_20  IAMs_20  09 14 09.2
      comp=Z,2µm,19.0s
LZH   Lanzhou          97.47 306 ⇓P        Pdif     08 34 18.6 +1.8
LZH                                pP       pwP      08 34 29.3 +0.3
LZH                                sP       sP       08 34 34.9 +7.8
LZH                                SKS      SKSac    08 44 55.0 +2.5
LZH                                S        S        08 45 37.2 -2.6
LZH                                sS       sS       08 45 57.2 +4.6
LZH                                pmax     pmax
      comp=Z,17nm,1.0s
LZH                                pmax     pmax
      comp=Z,200nm,8.1s
LZH                                LR       LR
      comp=Z,400nm,20.6s
LZH                                LR       LR
      comp=Z,990nm,20.0s
LZH                                LR       LR
      comp=Z,660nm,20.0s
YAK   Yakutsk          97.70 337ceP        Pdif     08 34 17.2 +0.3
YAK                                pmax     pmax
      comp=Z,22nm,0.7s
DGMT  Dagmar           97.72  40   P        Pdif     08 34 18.5 +1.0
      baz=240
DGMT  Dagmar           97.72  40   IAmb     IAmb     08 34 21.4
      comp=Z,8.9nm,0.9s
K31A  O'Neill          98.26  47   P        Pdif     08 34 21.1 +1.1
MIAR  Mount Ida        98.32  56   IAMs_20  IAMs_20  09 14 42.7
      comp=Z,2µm,19.0s
U38A  Gravette         98.54  54   IAMs_20  IAMs_20  09 13 20.4
      comp=Z,2µm,21.0s
INK   Inuvik           98.84  15   P        Pdif     08 34 22.6 +0.7
      comp=Z,4.0nm,0.9s,baz=192,slow=4.4,SNR=7.7
INK   Inuvik           98.84  15   IAMs_20  IAMs_20  09 21 25.9
      comp=Z,2µm,18.0s
X40A  Basin Creek Fa   98.85  56   IAMs_20  IAMs_20  09 12 49.7
      comp=Z,2µm,21.0s
E28A  Huff             98.87  42   IAMs_20  IAMs_20  09 21 54.8
      comp=Z,1µm,18.0s
143A  Socs Landing,    99.19  58   IAMs_20  IAMs_20  09 12 39.7
      comp=Z,1µm,20.0s
L34A  Svendsen Farm,   99.55  48   IAMs_20  IAMs_20  09 14 15.8
      comp=Z,1µm,18.0s
N35A  Tabor            99.56  49   IAMs_20  IAMs_20  09 14 00.3
      comp=Z,2µm,18.0s
U40A  Yellville        99.62  54   IAMs_20  IAMs_20  09 14 10.1
      comp=Z,1µm,20.0s
S39A  Bolivar          99.84  53   IAMs_20  IAMs_20  09 20 13.8
      comp=Z,1µm,18.0s
MDND  Maddock         100.12  42   IAMs_20  IAMs_20  09 16 07.8
      comp=Z,2µm,20.0s
ECSD  EROS Data Cent  100.16  46   P        Pdif     08 34 29.1 +0.8
      baz=244
ECSD  EROS Data Cent  100.16  46   IAMs_20  IAMs_20  09 14 55.0
      comp=Z,2µm,19.0s
YKA   Yellowknife Ar  100.48  24   P        Pdif     08 34 29.9 +0.6
      comp=Z,1.4nm,0.8s,baz=233,slow=3.9,SNR=25
YKA                                PP       PP       08 38 36.5 -0.1
      comp=Z,0.3nm,0.9s,baz=227,slow=8.3,SNR=6.0
YKA                                PKiKP    PKiKP    08 38 56.6 +0.8
      comp=Z,0.4nm,0.8s,baz=228,slow=1.2,SNR=4.1
YKA                                PKKPbc   PKKPbc   08 50 45.4 -1.5
      comp=Z,0.4nm,0.8s,baz=47,slow=3.2,SNR=6.3
P38A  Dawn            100.50  51   IAMs_20  IAMs_20  09 20 50.2
      comp=Z,2µm,18.0s
ULN   Ulaanbaatar     100.58 318⇓eP        Pdif     08 34 29.7 -0.6
ULN                                pmax     pmax
      comp=Z,8.0nm,2.2s
R40A  Maddies Statio  100.85  53   IAMs_20  IAMs_20  09 20 35.4
      comp=Z,2µm,18.0s
SONM  Songino Array   100.96 318   P        Pdif     08 34 32.0  0.0
      comp=Z,0.2nm,0.4s,baz=137,slow=5.1,SNR=2.7
SONM                               PKKPbc   PKKPbc   08 50 46.5 +1.3
      comp=Z,0.8nm,0.9s,baz=278,slow=3.1,SNR=4.0
146A  Union           100.97  59   IAMs_20  IAMs_20  09 15 15.9
      comp=Z,1µm,19.0s
F33A  5 Mile Ranch,   101.28  45   IAMs_20  IAMs_20  09 19 07.4
      comp=Z,2µm,18.0s
MET   Memphis--Engin  101.28  56   IAMs_20  IAMs_20  09 25 38.3
      comp=Z,1µm,19.0s
D32A  Dogwood Acres,  101.38  43   IAMs_20  IAMs_20  09 17 48.1
      comp=Z,2µm,20.0s
CCM   Cathedral Cave  101.49  53   IAMs_20  IAMs_20  09 14 40.5
      comp=Z,2µm,20.0s
PBMO  Poplar Bluff    101.57  55   IAMs_20  IAMs_20  09 15 03.8
      comp=Z,2µm,20.0s
GTA   Gaotai          101.76 308  eP        Pdif     08 34 35.8  0.0
GTA                                pP       sPdif    08 34 44.0 -2.1
GTA                                pmax     pmax
      comp=Z,2.0nm,1.2s
GTA                                pmax     pmax
      comp=Z,110nm,7.8s
GTA                                LR       LR
      comp=Z,370nm,16.7s
GTA                                LR       LR
      comp=Z,580nm,19.6s
GTA                                LR       LR
      comp=Z,780nm,19.6s
W45A  Hickory Valley  101.86  57   IAMs_20  IAMs_20  09 14 50.5
      comp=Z,1µm,19.0s
C36M  Paulatuk        101.92  17   P        Pdif     08 34 36.1 +0.6
      baz=226
C36M  Paulatuk        101.92  17   IAMs_20  IAMs_20  09 19 19.2
      comp=Z,1µm,19.0s
Z47A  Carrollton      101.95  59   IAMs_20  IAMs_20  09 14 58.0
      comp=Z,2µm,20.0s
FFC   Flin Flon       101.97  35   IAMs_20  IAMs_20  09 24 55.3
      comp=Z,1µm,19.0s
FVM   French Village  102.05  54   IAMs_20  IAMs_20  09 17 04.4
      comp=Z,2µm,18.0s
SLM   Saint Louis     102.45  53   IAMs_20  IAMs_20  09 17 37.8
      comp=Z,2µm,19.0s
AGMN  Agassiz Nation  102.58  42   IAMs_20  IAMs_20  09 22 26.7
      comp=Z,1µm,19.0s
PLAL  Pickwick Lake   102.63  57   IAMs_20  IAMs_20  09 15 41.0
      comp=Z,2µm,20.0s
LRAL  Lakeview Retre  102.72  59   IAMs_20  IAMs_20  09 15 44.3
      comp=Z,2µm,20.0s
S44A  Carbondale      102.79  54   IAMs_20  IAMs_20  09 15 12.1
      comp=Z,1µm,20.0s
SIUC  Southern Illin  102.83  54   IAMs_20  IAMs_20  09 15 42.5
      comp=Z,1µm,19.0s
X48A  Hartselle       103.22  58   IAMs_20  IAMs_20  09 15 46.5
      comp=Z,1µm,20.0s
SPMN  Marine on St.   103.26  46   IAMs_20  IAMs_20  09 18 21.0
      comp=Z,2µm,18.0s
P43A  Skaggs, Pawnee  103.35  52   IAMs_20  IAMs_20  09 26 17.6
      comp=Z,2µm,18.0s
ULM   Lac du Bonnet   103.37  41   IAMs_20  IAMs_20  09 21 16.7
      comp=Z,2µm,19.0s
Q44A  Meyer Farm, Va  103.43  53   IAMs_20  IAMs_20  09 18 07.8
      comp=Z,2µm,19.0s
HDIL  Hopedale        103.85  52   IAMs_20  IAMs_20  09 15 50.0
      comp=Z,2µm,20.0s
V48A  Smith Brothers  103.87  57   IAMs_20  IAMs_20  09 24 35.6
      comp=Z,1µm,18.0s
USIN  University of   104.06  55   IAMs_20  IAMs_20  09 16 12.7
      comp=Z,2µm,20.0s
JFWS  Jewell Farm     104.07  49   IAMs_20  IAMs_20  09 23 02.7
      comp=Z,1µm,18.0s
Z51A  Franklin        104.24  60   IAMs_20  IAMs_20  09 17 09.6
      comp=Z,2µm,20.0s
FPAL  Fort Paine      104.35  58   IAMs_20  IAMs_20  09 16 32.5
      comp=Z,1µm,20.0s
SWET  Sewanee         104.35  58   IAMs_20  IAMs_20  09 16 08.5
      comp=Z,1µm,19.0s
CLTN  Cedars of Leba  104.37  57   IAMs_20  IAMs_20  09 18 28.9
      comp=Z,2µm,19.0s
W50A  Signal Mountai  104.82  58   IAMs_20  IAMs_20  09 16 43.8
      comp=Z,2µm,20.0s
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U49A  Red Boiling Sp  104.94  56   IAMs_20  IAMs_20  09 17 26.9
      comp=Z,2µm,20.0s
X51A  Calhoun         104.94  59   IAMs_20  IAMs_20  09 17 22.1
      comp=Z,1µm,20.0s
G40A  Rib Lake        104.98  47   IAMs_20  IAMs_20  09 18 01.5
      comp=Z,1µm,20.0s
EYMN  Ely             105.13  44   IAMs_20  IAMs_20  09 22 40.4
      comp=Z,2µm,18.0s
PALK  Pallekele       105.17 271   IAMs_20  IAMs_20  09 19 45.0
      comp=Z,1µm,21.0s
Y52A  Lilburn         105.30  60   IAMs_20  IAMs_20  09 18 00.8
      comp=Z,1µm,19.0s
K43A  Burlington      105.31  50   IAMs_20  IAMs_20  09 17 48.4
      comp=Z,2µm,20.0s
CPCT  Cooper Cave     105.51  58   IAMs_20  IAMs_20  09 17 14.2
      comp=Z,1µm,20.0s
GOGA  Godfrey         105.61  60   IAMs_20  IAMs_20  09 18 33.9
      comp=Z,2µm,19.0s
V51A  Loudon          105.77  58   IAMs_20  IAMs_20  09 17 11.9
      comp=Z,1µm,19.0s
W52A  Murphy          105.84  58   IAMs_20  IAMs_20  09 17 46.9
      comp=Z,2µm,21.0s
TKL   Tuckaleechee C  106.16  58   IAMs_20  IAMs_20  09 17 24.2
      comp=Z,1µm,19.0s
H43A  Windswept, Lux  106.31  48   IAMs_20  IAMs_20  09 18 34.8
      comp=Z,1µm,20.0s
V52A  Sevierville     106.35  58   IAMs_20  IAMs_20  09 17 39.5
      comp=Z,1µm,20.0s
BG3   Lake Jocassee   106.57  59   IAMs_20  IAMs_20  09 17 43.3
      comp=Z,1µm,18.0s
P49A  Miami Univ. Ec  106.77  54   IAMs_20  IAMs_20  09 17 57.4
      comp=Z,2µm,21.0s
V53A  Saluda          106.89  58   IAMs_20  IAMs_20  09 18 09.8
      comp=Z,2µm,19.0s
Z56A  Williston       107.22  61   IAMs_20  IAMs_20  09 19 07.7
      comp=Z,1µm,20.0s
PAULI Pauline         107.38  59   IAMs_20  IAMs_20  09 19 26.7
      comp=Z,1µm,19.0s
N49A  Columbus Grove  107.62  53   IAMs_20  IAMs_20  09 21 38.7
      comp=Z,1µm,19.0s
KMSC  Kings Mountain  107.86  59   IAMs_20  IAMs_20  09 18 42.4
      comp=Z,1µm,20.0s
NHSC  New Hope        108.09  61   IAMs_20  IAMs_20  09 20 15.7
      comp=Z,2µm,19.0s
V55A  Taylorsville    108.18  58   IAMs_20  IAMs_20  09 18 31.9
      comp=Z,1µm,20.0s
ACSO  Alum Creek Sta  108.26  54   IAMs_20  IAMs_20  09 29 36.8
      comp=Z,2µm,18.0s
M50A  Fremont         108.59  52   IAMs_20  IAMs_20  09 21 44.3
      comp=Z,2µm,18.0s
N51A  Ashland         108.92  53   IAMs_20  IAMs_20  09 32 53.1
      comp=Z,1µm,18.0s
O52A  Adamsville      109.06  54   IAMs_20  IAMs_20  09 19 14.9
      comp=Z,2µm,20.0s
BLA   Blacksburg      109.22  57   IAMs_20  IAMs_20  09 28 02.3
      comp=Z,1µm,18.0s
O53A  New Philadelph  109.56  54   IAMs_20  IAMs_20  09 20 10.0
      comp=Z,2µm,20.0s
V58A  Windy Hill, Pi  109.78  59   IAMs_20  IAMs_20  09 19 32.3
      comp=Z,1µm,20.0s
N53A  Lisbon          109.99  54   IAMs_20  IAMs_20  09 21 35.6
      comp=Z,2µm,19.0s
SPB   Sao Paulo       110.03 130   IAMs_20  IAMs_20  09 21 58.0
      comp=Z,1µm,18.0s
T57A  Hurt            110.04  58   IAMs_20  IAMs_20  09 24 16.1
      comp=Z,1µm,18.0s
M53A  Wl Miller and   110.30  53   IAMs_20  IAMs_20  09 26 11.6
      comp=Z,955nm,19.0s
MCWV  Mont Chateau    110.38  55   IAMs_20  IAMs_20  09 20 09.0
      comp=Z,1µm,20.0s
S57A  Dark Hollow, R  110.50  57   IAMs_20  IAMs_20  09 22 20.1
      comp=Z,1µm,20.0s
CNNC  Cliffs of the   110.56  60   IAMs_20  IAMs_20  09 21 51.1
      comp=Z,1µm,20.0s
ERPA  Erie            110.98  52   IAMs_20  IAMs_20  09 24 19.7
      comp=Z,2µm,19.0s
M54A  Oil Creek Stat  111.04  53   IAMs_20  IAMs_20  09 24 14.4
      comp=Z,1µm,20.0s
V60A  Jim Taylor Roa  111.21  60   IAMs_20  IAMs_20  09 20 46.1
      comp=Z,1µm,21.0s
T59A  Double "B" Far  111.33  58   IAMs_20  IAMs_20  09 29 35.4
      comp=Z,1µm,19.0s
WMQ   Urumqi          111.78 309  ePKP      PKiKP    08 39 17.1 -0.3
WMQ                                LR       LR
      comp=Z,340nm,20.1s
WMQ                                LR       LR
      comp=Z,570nm,20.1s
WMQ                                LR       LR
      comp=Z,260nm,21.3s
U61A  Possum Corner   112.00  59   IAMs_20  IAMs_20  09 27 36.2
      comp=Z,1µm,18.0s
T60A  Surry           112.01  58   IAMs_20  IAMs_20  09 27 08.2
      comp=Z,1µm,18.0s
WVNY  West Valley, N  112.05  52   IAMs_20  IAMs_20  09 33 30.9
      comp=Z,1µm,18.0s
SDMD  Soldier's Deli  112.55  56   IAMs_20  IAMs_20  09 23 23.4
      comp=Z,1µm,18.0s
DGZ   Jazzator, Alta  113.38 315⇑iPKIKP    PKiKP    08 39 19.2 -1.2
PECO  Prince Edward   113.57  51   IAMs_20  IAMs_20  09 22 48.1
      comp=Z,2µm,19.0s
WUPA  West Chester U  113.60  56   IAMs_20  IAMs_20  09 22 07.3
      comp=Z,1µm,20.0s
BINY  Binghamton      113.88  53   IAMs_20  IAMs_20  09 33 00.4
      comp=Z,1µm,18.0s
P61A  Hammonton       114.15  56   IAMs_20  IAMs_20  09 22 34.7
      comp=Z,2µm,20.0s
BDFB  Brasilia        114.69 123   IAMs_20  IAMs_20  09 25 08.4
      comp=Z,1µm,19.0s
NCB   Newcomb         115.53  52   IAMs_20  IAMs_20  09 25 20.0
      comp=Z,2µm,18.0s
TRY   Troy            115.67  53   IAMs_20  IAMs_20  09 33 56.8
      comp=Z,1µm,18.0s
ZALV  Zalesovo Beam   115.77 320   PKP      PKPdf    08 39 24.5  0.0
      comp=Z,1.7nm,0.6s,baz=130,slow=1.0,SNR=7.1
NRIK  Noril'sk        116.15 337   PKP      PKiKP    08 39 25.2 +0.4
      comp=Z,1.8nm,0.6s,baz=152,slow=1.6,SNR=5.3
MK31  Makanchi Array  116.16 311d iPKIKP    PKPdf    08 39 24.8 -0.8
MKAR  Makanchi Array  116.16 311   PKP      PKPdf    08 39 25.2 -0.4
      comp=Z,2.1nm,0.6s,baz=87,slow=1.1,SNR=25
MKAR                               PKKPbc   PKKPbc   08 49 57.5 +1.1
      comp=Z,0.4nm,0.8s,baz=318,slow=3.4,SNR=3.6
MKAR  Makanchi Array  116.16 311   PKIKP    PKPdf    08 39 24.9 -0.7
MKAR  Makanchi Array  116.16 311            PKPdf    08 39 24.9 -0.7
I62A  Tamworth        117.56  52   IAMs_20  IAMs_20  09 33 18.7
      comp=Z,1µm,18.0s
SEM   Semipalatinsk   118.06 315  ePKP      PKPdf    08 39 28.3 -1.2
      baz=315
SEM   Semipalatinsk   118.06 315  ePKIKP    PKPdf    08 39 28.2 -1.2
KPKS  Kokpek          118.09 307  ePKP      PKPdf    08 39 28.3 -1.2
      baz=307
KPKS  Kokpek          118.09 307  ePKIKP    PKPdf    08 39 28.3 -1.2
SATY  Saty            118.22 307  ePKP      PKPdf    08 39 28.5 -1.4
      baz=307
SATY  Saty            118.22 307  ePKIKP    PKPdf    08 39 28.4 -1.4
TULEG Thule           118.84  15   IAMs_20  IAMs_20  09 31 19.2
      comp=Z,1µm,21.0s
D61A  St Aubert, Com  118.87  49   P        PKiKP    08 39 31.5 +0.7
      baz=262
KURK  Kurchatov       119.13 315d iPKIKP    PKPdf    08 39 30.6 -0.5
KURK  Kurchatov       119.13 315   IAMs_20  IAMs_20  09 29 28.1
      comp=Z,927nm,20.0s
KURBB Kurchatov Arra  119.17 315   PKP      PKPdf    08 39 31.0 -0.3
      comp=Z,3.1nm,0.8s,baz=101,slow=1.8,SNR=12
H64A  Troy            119.18  52   P        PKiKP    08 39 32.2 +0.7
      baz=262
MDOK  Medeo           119.22 307  ePKP      PKPdf    08 39 30.1 -1.7
      baz=307
MDOK  Medeo           119.22 307  ePKIKP    PKPdf    08 39 30.1 -1.7
PKME  Peaks-Kenny Pk  119.22  51   P        PKiKP    08 39 32.2 +0.7
      baz=262
AAA   Alma-Ata        119.32 307  ePKP      PKPdf    08 39 31.1 -0.8
      baz=307
AAA   Alma-Ata        119.32 307  ePKIKP    PKPdf    08 39 31.1 -0.8
CHKK  Chushkaly       119.37 307  i PKP     PKPdf    08 39 30.4 -1.6
      baz=308
CHKK  Chushkaly       119.37 307  i PKIKP   PKPdf    08 39 30.3 -1.6
KSH   Kashi           119.41 302   PKP      PKiKP    08 39 34.7 +2.4
KUU   Kurty           119.84 307  ePKP      PKPdf    08 39 31.2 -1.6
      baz=308
KUU   Kurty           119.84 307  ePKIKP    PKPdf    08 39 31.1 -1.7
AAK   Ala-Archa       121.00 306⇑iPKIKP    PKPdf    08 39 35.5 +0.2
AAK                                pmax     pmax
      comp=Z,21nm,2.5s
BTLS  Baital          121.61 309  ePKP      PKPdf    08 39 35.2 -1.0
      baz=309
BTLS  Baital          121.61 309  ePKIKP    PKPdf    08 39 35.1 -1.0
BOSA  Boshof          122.23 202   PKP      PKiKP    08 39 39.6 +1.3
      comp=Z,8.1nm,0.9s,baz=158,slow=2.9,SNR=12
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BRZS  Berezniki       122.88 314  ePKP      PKPdf    08 39 36.8 -1.6
      baz=314
BRZS  Berezniki       122.88 314  ePKIKP    PKPdf    08 39 36.8 -1.6
KKAR  Karatay Array   123.96 306   PKIKP    PKPdf    08 39 40.1 -0.6
KKAR  Karatay Array   123.96 306   PKPdf    PKPdf    08 39 40.1 -0.6
KBL   Kabul           124.00 296   PKIKP    PKPdf    08 39 40.5 -0.8
KBL   Kabul           124.00 296   PKPdf    PKPdf    08 39 40.5 -0.8
KBL                                IAMs_20  IAMs_20  09 41 18.9
      comp=Z,798nm,19.0s
IUG   Iuzhnay         124.23 305  ePKP      PKPdf    08 39 40.4 -1.0
      baz=305
IUG   Iuzhnay         124.23 305  ePKIKP    PKPdf    08 39 40.4 -1.0
BVAR  Borovoye Array  124.31 318   PKP      PKPdf    08 39 40.7 -0.4
      comp=Z,3.5nm,0.8s,baz=70,slow=5.0,SNR=15
BRVK  Borovoye        124.37 318   PKIKP    PKPdf    08 39 40.1 -1.1
BRVK                               MLR      MLR
      comp=Z,800nm,20.0s
BRVK  Borovoye        124.37 318   PKPdf    PKPdf    08 39 40.0 -1.1
SPA0  Spitsbergen Ar  127.21 357  ePKPdf    PKPdf    08 39 44.6 -1.4
SPITS Spitsbergen Ar  127.21 357   PKP      PKiKP    08 39 46.7 +0.2
      comp=Z,26nm,0.9s,baz=349,slow=13,SNR=4.1
DAG   Danmarks Havn   127.75   6  i P       PKPdf    08 39 46.0 -1.0
DAG   Danmarks Havn   127.75   6  i PKIKP   PKPdf    08 39 46.0 -1.0
DAG   Danmarks Havn   127.75   6  i P       PKPdf    08 39 46.0 -1.0
SUMG  Summit          127.77  15  i P       PKiKP    08 39 49.5 +1.3
      comp=Z,67nm,1.3s
SUMG  Summit          127.77  15  i PKIKP   PKiKP    08 39 49.5 +1.3
SUMG                               pmax     pmax
      comp=Z,67nm,1.3s
SUMG  Summit          127.77  15   IAMs_20  IAMs_20  09 35 21.0
      comp=Z,1µm,20.0s
SUMG  Summit          127.77  15  i P       PKiKP    08 39 49.6 +1.3
SUMG                               IAmb     IAmb     08 39 51.2
      comp=Z,67nm,1.3s
ICESG Greenland Ices  129.60  19  i P       PKiKP    08 39 51.8 -0.1
ARU   Arti            130.59 323  i PKIKP   PKiKP    08 39 53.6 -0.2
ARU                                                  08 42 05.6
ARU   Arti            130.59 323   PKPdf    PKiKP    08 39 53.6 -0.2
ABKAR Akbulak array   131.17 314   PKPdf    PKPdf    08 39 53.9 -0.4
AKTO  Aktyubinsk      132.22 316   PKP      PKiKP    08 39 57.0 -0.3
      comp=Z,3.1nm,0.7s,baz=55,slow=1.5,SNR=8.2
AKTO  Aktyubinsk      132.22 316   PKIKP    PKiKP    08 39 57.0 -0.3
GEYT  Alibeck         133.12 299   PKP      PKPdf    08 39 59.0 +0.6
      comp=Z,2.9nm,0.7s,baz=229,slow=3.2,SNR=5.0
GEYT  Alibeck         133.12 299            PKPdf    08 39 57.6 -0.8
GYA0B ALIBECK ARRAY   133.12 299   IAMs_20  IAMs_20  09 46 28.8
      comp=Z,939nm,19.0s
ARCES ARCESS Array B  134.43 350   PKP      PKPdf    08 40 00.4 +0.6
      comp=Z,5.2nm,0.6s,baz=343,slow=2.5,SNR=16
TRO   Tromso          135.25 353  ePKPdf    PKPdf    08 40 00.6 -0.7
KTK1  Kautokeino      135.26 350  ePKPdf    PKPdf    08 40 00.4 -0.9
TMCR  Tamitsa         135.76 339  ePKIKP    PKPdf    08 40 02.2 -0.2
TMCR                               pmax     pmax
      comp=Z,14nm,1.3s
LOF   Lofoten         137.24 355  ePKPdf    PKPdf    08 40 04.3 -0.7
STEI  Steigen         137.28 354  ePKPdf    PKPdf    08 40 04.7 -0.4
KLMR  Klimovskoe      137.46 335  ePKIKP    PKPdf    08 40 01.4 -4.2
KLMR                               pmax     pmax
      comp=Z,9.0nm,0.9s
KLMR  Klimovskoe      137.46 335  ePKPdf    PKPdf    08 40 01.4 -4.2
KLMR                               AMP               08 40 08.1
      comp=Z,9.0nm,0.9s
KLMR                              ePP       PP       08 42 45.5 -5.9
KLMR                               LQ       LQ       09 28 38.0
KLMR                               LQ       LQ       09 28 38.0
KLMR                               LR       LR       09 41 06.2
BELG  Belogornoye     137.93 321⇓iPKIKP    PKiKP    08 40 08.2 -0.6
MOR8  Moi Rana        139.07 354  ePKPdf    PKPdf    08 40 07.1 -1.4
MAK   Makhachkala     140.76 307  eP        Pdif     08 37 17.0  -12
MAK                               i                  08 40 11.8
MAK                               e                  08 43 09.1
MAK                               ePPP      PPP      08 46 16.0
MAK                               e                  08 47 22.9
MAK                               eSS       SS       09 01 26.3  -11
MAK                                pmax     pmax
      comp=Z,243nm,1.3s
FINES FINESS Array B  141.35 343   PKhKP    PKPpre   08 40 06.1
      comp=Z,3.3nm,0.7s,baz=50,slow=3.4,SNR=9.0
VRH   Novokhopyorsk   141.76 322  ePKIKP    PKPdf    08 40 12.2 -1.6
VRH                                pmax     pmax
      comp=Z,7.0nm,0.5s
OBN   Obninsk         142.28 330⇑ePKIKP    PKPdf    08 40 14.6 +0.1
OBN                               e                  08 43 17.3
OBN                                pmax     pmax
      comp=Z,9.0nm,0.4s
LPSR  Galich'ya Gora  142.57 325  ePKIKP    PKPdf    08 40 14.4 -0.8
LPSR                               pmax     pmax
      comp=Z,10.0nm,0.8s
FURI  Furi            143.13 249   IAMs_20  IAMs_20  09 43 36.0
      comp=Z,1µm,19.0s
VSR   Storozhevoye    143.16 323  ePKIKP    PKPab    08 40 12.5 +0.6
VSR                                pmax     pmax
      comp=Z,9.0nm,0.9s
VORD  Divnogorie      143.22 323  ePKHKP    PKPpre   08 40 12.0
VORD                               pmax     pmax
      comp=Z,5.0nm,0.6s
GOF   Gofitskoye      143.33 312⇑ePKHKP    PKPpre   08 40 03.9
NCK   Nalchik         143.41 309⇓ePKIKP    PKPdf    08 40 16.5 -0.5
DOMB  Dombas          143.58 356  ePKPdf    PKPbc    08 40 14.3 +0.2
VSU   Vasula          143.64 340  eP        PKPbc    08 40 14.1 -0.2
VSU   Vasula          143.64 340  i PKIKP   PKPdf    08 40 17.4 +0.5
KBZ   Khabaz          143.83 310   PKP      PKPbc    08 40 16.3 +0.9
      comp=Z,3.6nm,0.9s,baz=185,slow=5.5,SNR=5.1
KIV   Kislovodsk      143.91 310  i PKIKP   PKPbc    08 40 15.9 +0.1
KIV                                pmax     pmax
      comp=Z,28nm,1.1s
AKH   Akhalkalaki     144.00 306 ⇓P        PKPab    08 40 15.8 +0.1
AKH   Akhalkalaki     144.00 306   PKIKP    PKPbc    08 40 16.4 +0.1
AKH   Akhalkalaki     144.00 306   PKPdf    PKPbc    08 40 16.4 +0.1
NEY   Neytrino        144.09 309dePKIKP    PKPbc    08 40 16.9 +0.4
MTSE  Matsula         144.27 342  eP        PKPab    08 40 15.8  0.0
NB201 NORSAR Array S  144.39 354            PKPab    08 40 15.8 -0.5
NB2   NORSAR Subarra  144.41 354   PKP      PKPab    08 40 16.0 -0.4
      comp=Z,54nm,1.7s,baz=10,slow=3.2
NB2   NORSAR Subarra  144.41 354   PKPab    PKPab    08 40 16.0 -0.4
      baz=10,slow=3.2
NOA   NORSAR Array B  144.41 354   PKP      PKPab    08 40 16.3 -0.2
      comp=Z,18nm,0.9s,baz=12,slow=2.3,SNR=44
NAO01 NORSAR Array S  144.63 354   PKPdf    PKPab    08 40 16.4 -0.8
UPP   Uppsala         144.66 348  eP        PKPab    08 40 16.4 -0.9
NC602 NORSAR Array S  144.68 354  ePKPbc    PKPab    08 40 16.1 -1.3
NORES NORESS Array B  144.68 354   PKIKP    PKPab    08 40 16.9 -0.5
NORES                              pmax     pmax
      comp=Z,23nm,0.8s
SUE   Sulen           144.72 359  ePKPdf    PKPab    08 40 17.6 +0.1
SKAR  Skarslia        144.99 356  ePKPdf    PKPab    08 40 18.3 -0.3
HFS   Hagfors         145.02 352   PKP      PKPbc    08 40 18.3 -0.3
      comp=Z,46nm,0.8s,baz=66,slow=3.6,SNR=44
BER   Bergen          145.39 359  ePKPab    PKPbc    08 40 18.8 -1.0
SLIT  Slitere, Latvi  145.62 343  eP        PKPdf    08 40 19.2 -1.1
KONO  Kongsberg       145.92 355   PKP2     PKPdf    08 40 20.8  0.0
KONO  Kongsberg       145.92 355   PKPdf    PKPdf    08 40 20.8  0.0
KONO  Kongsberg       145.92 355  e         PKPab    08 40 22.5 +0.5
SOC   Sochi           146.07 311  ePKIKP    PKPdf    08 40 19.7 -1.9
SOC                               e                  08 43 42.6
SOC                               ePPP      PPP      08 47 01.3
SOC                               eSSS      SSS      09 08 00.9
SOC                                pmax     pmax
      comp=Z,25nm,0.6s
IDID  Didziasalis     146.15 337  eP        PKPbc    08 40 22.6 +0.3
IIGN  Ignalina        146.31 337  eP        PKPbc    08 40 23.1 +0.3
BLS5  Blasjo          146.33 358  ePKPdf    PKPdf    08 40 20.4 -1.1
MNK   Minsk           146.35 335  ePKP2     PKPbc    08 40 23.0  0.0
MNK                               e                  08 43 43.0
MNK                                pmax     pmax
      comp=Z,930nm,2.0s
MNK   Minsk           146.35 335  i PKP     PKPdf    08 40 21.9 +0.2
      comp=E,5.0nm,1.0s
MNK                               i PKP     PKPdf    08 40 21.9 +0.2
      comp=N,27nm,1.0s
MNK                               i PKP     PKPdf    08 40 21.9 +0.2
      comp=Z,91nm,1.0s
MNK                               i PP      PP       08 43 46.3 +0.9
MNK                               i SKP              08 43 53.3
MNK                               i PKS     PKSdf    08 43 57.3 +0.5
MNK                               i PPP     PPP      08 47 01.3
MNK                               i SKS     SKSdf    08 47 28.2 -0.4
MNK                               i SKKS    SKKSdf   08 56 33.2 -2.1
MNK                               i SS      SS       09 02 42.0 +1.8
MNK                               i SSS     SSS      09 08 12.2
MNK                               i LQ      LQ       09 38 14.5
MNK                               i LR      LR       09 45 14.3
MNK                               i LRM     MLR      09 50 00.1
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        comp=E,34nm,17.7s
MNK                                  i LRM     MLR      09 50 04.0
        comp=N,502nm,18.1s
MNK                                  i LRM     MLR      09 50 06.2
        comp=Z,564nm,19.3s
NACGM  Naroch            146.46 336 i PKP     PKPdf    08 40 22.5 +0.6
NACGM                                i PKP     PKPdf    08 40 22.5 +0.6
NACGM                                i PKP     PKPdf    08 40 22.5 +0.6
NACGM                                i PP      PP       08 43 36.0  -10
NACGM                                i SKP              08 44 46.4
NACGM                                i PKS              08 44 57.5
NACGM                                i PPP     PPP      08 46 56.5
NACGM                                i SKS     SKSdf    08 47 48.5  +20
NACGM                                i SKKS    SKKSac   08 49 52.4  -44
NACGM                                i SKKP             08 52 59.0
NACGM                                i SSS     SSS      09 04 52.2
NACGM                                i LQ      LQ       09 36 38.4
NACGM                                i LR      LR       09 44 48.0
PABE   Paberze           146.94 339 eP        PKPbc    08 40 24.2 -0.4
PBUR   Paburge           147.11 342 eP        PKPbc    08 40 25.2 +0.1
ANN    Anapa             147.14 314 i PKP2    PKPbc    08 40 24.7 -0.8
ANN                                  e                  08 43 47.4
ANN                                    pmax    pmax
        comp=Z,124nm,1.0s
HOMB   Homborsund        147.37 356 ePKPdf    PKPdf    08 40 22.1 -1.1
HOMB   Homborsund        147.37 356 i P       PKPbc    08 40 26.2 +0.5
SNART  Snartemo          147.38 357 ePKPab    PKPbc    08 40 26.1 +0.4
SNART  Snartemo          147.38 357 i P       PKPbc    08 40 26.2 +0.4
SUW    Suwalki           148.43 338 ePKP      PKPbc    08 40 29.0 +0.3
SUW    Suwalki           148.43 338 eP        PKPbc    08 40 28.7  0.0
SUW    Suwalki           148.43 338   IAMs_20 IAMs_20  09 48 11.7
        comp=Z,804nm,20.0s
AKASG  Malin Array Be    148.52 329   PKPbc   PKPbc    08 40 28.9 -0.1
        comp=Z,14nm,0.6s,baz=43,slow=3.7,SNR=35
GOET   G??ttrup          148.54 355 i P       PKPab    08 40 34.8 +2.5
MUD    Monsted U'grnd    149.12 355 i P       PKPbc    08 40 31.1 +0.7
MUD    Monsted U'grnd    149.12 355 i PKP2    PKPbc    08 40 31.1 +0.7
MUD    Monsted U'grnd    149.12 355 i P       PKPbc    08 40 31.1 +0.7
COP    Copenhagen        149.50 351 eP        PKPab    08 40 35.1 -1.1
BSD    Bornholm Skovb    149.63 348 i P       PKiKP    08 40 33.1 +0.4
BSD    Bornholm Skovb    149.63 348 ePKP2     PKiKP    08 40 33.1 +0.4
BSD    Bornholm Skovb    149.63 348 eP        PKiKP    08 40 33.1 +0.4
GAZ    Gaziantep         149.70 300           PKiKP    08 40 33.8 +0.2
EKA    Eskdalemuir Ar    149.99   8   PKPbc   PKiKP    08 40 33.6 +0.1
        comp=Z,5.7nm,0.8s,baz=316,slow=3.5,SNR=6.2
RGN    Rugen             150.46 349   IAMs_20 IAMs_20  09 50 43.3
        comp=Z,1µm,20.0s
SORM   Soroca            150.66 326 ⇓P        PKPbc    08 40 33.6 -0.8
SORM   Soroca            150.66 326 ⇓PKIKP    PKPbc    08 40 33.6 -0.8
GKP    Gorka Klasztor    150.82 344 ePKP      PKiKP    08 40 35.3 +0.1
HORU   Horodok           150.86 329   PKIKP   PKPbc    08 40 32.7 -2.2
BEL    Belsk             151.05 338 ePKP      PKiKP    08 40 36.9 +1.1
LVV    L'vov             151.46 332 ePKIKP    PKPbc    08 40 36.1 -0.1
BSEG   Bad Segeberg      151.49 352 ePKPbc    PKiKP    08 40 37.0 +0.4
        baz=15,slow=2.5
BR131  Keskin Array S    151.67 307   PKIKP   PKPbc    08 40 36.6 -0.6
BR131  Keskin Array S    151.67 307           PKPbc    08 40 36.6 -0.6
BRTR   Keskin Array B    151.67 307   PKPbc   PKPbc    08 40 37.4 +0.1
        comp=Z,9.3nm,0.9s,baz=124,slow=2.2,SNR=21
BRTR                                  PKPab   PKPab    08 40 46.7 +0.6
        comp=Z,16nm,0.9s,baz=94,slow=3.4,SNR=11
BRTR   Keskin Array B    151.67 307   PKIKP   PKPdf    08 40 31.1 +0.1
BRTR   Keskin Array B    151.67 307   PKPdf   PKPdf    08 40 31.1 +0.1
MMAI   Mount Meron Ar    151.86 292   PKPbc   PKiKP    08 40 38.9 +0.7
        comp=Z,11nm,0.6s,baz=83,slow=7.0,SNR=9.9
MMAI                                  PKPab   sPKPbc   08 40 46.6 -1.8
        comp=Z,6.7nm,0.5s,baz=69,slow=4.7,SNR=7.7
KWP    Kalwaria Pacla    152.15 334 ePKP      PKiKP    08 40 38.2 +0.1
ANTO   Ankara            152.23 308   IAMs_20 IAMs_20  10 00 05.4
        comp=Z,664nm,21.0s
RUE    Ruedersdorf       152.34 347 ePKPbc    PKiKP    08 40 38.8 +0.5
        baz=15,slow=2.5
EIL    Elat              152.45 285   PKPbc   PKiKP    08 40 40.1 +0.7
        comp=Z,2.8nm,0.5s,baz=212,slow=4.4,SNR=5.3
EIL                                   PKPab   PKPab    08 40 49.9 +0.4
        comp=Z,23nm,1.0s,baz=28,slow=2.9,SNR=9.1
BUR08  Bucovina Ar. S    152.55 328           PKiKP    08 40 39.2 +0.1
BURAR  Bucovina Array    152.56 328 ⇑P        PKiKP    08 40 41.0 +1.8
BURAR  Bucovina Array    152.56 328 ⇑PKIKP    PKiKP    08 40 41.0 +1.8
BURAR  Bucovina Array    152.56 328   PKPdf   PKPdf    08 40 34.7 +2.7
BIZ    Bicaz             152.59 326 ⇑P        PKiKP    08 40 39.3 +0.1
TESR   Tescani           152.60 325 ⇑P        PKPbc    08 40 38.6 -0.3
CFR    Carcaliu          152.64 321 ⇑P        PKPbc    08 40 38.5 -0.5
CFR    Carcaliu          152.64 321 ⇑PKIKP    PKPbc    08 40 38.5 -0.5
TPGR   Topolog           152.67 320 ⇑P        PKiKP    08 40 40.0 +0.7
OJC    Ojcow             152.75 338 ePKP      PKiKP    08 40 39.6 +0.3
OJC    Ojcow             152.75 338   PKIKP   PKPdf    08 40 31.8 -0.2
OJC    Ojcow             152.75 338   PKPdf   PKPdf    08 40 31.8 -0.2
KOLS   Kolonicke sedl    152.87 333 e         PKPab    08 40 50.6  0.0
KOLS   Kolonicke sedl    152.87 333 ePKP      PKiKP    08 40 41.8 +2.1
TIRR   Tirgusor          152.90 320 ⇑P        PKPab    08 40 47.9 -2.9
FLTG   Flechtingen       152.93 350 ePKPbc    PKPbc    08 40 39.6 +0.2
        baz=15,slow=2.5
VRI    Vrincioaia        152.98 324 ⇑P        PKiKP    08 40 40.1 +0.1
PLOR   Plostina          153.03 324 ⇑P        PKiKP    08 40 40.7 +0.6
HARR   Harsova           153.05 321 ⇑P        PKPbc    08 40 40.0 +0.1
UZH    Uzhgorod          153.10 333 ePKIKP    PKPdf    08 40 33.7 +1.1
UZH                                  i                  08 40 43.1
MDUB   Mudurnu           153.12 310           PKPbc    08 40 39.2 -1.2
ASSE   Asse, Remlinge    153.21 351 ePKPbc    PKiKP    08 40 40.4 +0.3
        baz=15,slow=2.5
CRVS   Cervenica-Dubn    153.22 334 ePKP      PKiKP    08 40 42.5 +2.1
CRVS                                 e                  08 40 53.0
NIE    Niedzica          153.24 336 ePKP      PKiKP    08 40 42.4 +2.0
KSP    Ksiaz             153.27 343 ePKP      PKiKP    08 40 41.1 +0.7
ARCR   ARCALIA           153.35 328 ⇑P        PKPab    08 40 50.3 -2.4
CLZ    Clausthal         153.53 351 ePKPbc    PKiKP    08 40 41.5 +0.5
        baz=15,slow=2.5
CLZ                                  ePKPab   PKPab    08 40 52.4 -0.8
        baz=15,slow=2.5
OSTC   Ostas             153.55 343⇑ePKP      PKiKP    08 40 41.6 +0.6
OSTC                                 ex        x        08 40 52.2
OSTC                                 ePP       PP       08 44 28.1 +1.2
OSTC                                   AMS     AMS      09 55 30.0
        comp=Z,700nm,19.6s
ISR    Istrita           153.56 323 ⇑P        PKPab    08 40 54.5 +0.9
ISR    Istrita           153.56 323 ⇑PKP2     PKPab    08 40 54.5 +0.9
CHVC   Chvalec           153.57 343⇑ePKP      PKiKP    08 40 41.4 +0.3
CHVC                                 ex        x        08 40 52.8
CHVC                                 ePP       PP       08 44 18.9 -8.0
CHVC                                   AMS     AMS      09 55 40.0
        comp=Z,800nm,15.3s
CLL    Collm             153.61 347 ePKPdf    PKPdf    08 40 35.0 +1.8
CLL                                  ePKPbc   PKPbc    08 40 41.0  0.0
        comp=Z,19nm,0.9s
CLL                                  i pPKPbc pPKPbc   08 40 47.1 -1.6
CLL                                  i PKPab  PKPab    08 40 52.2 -1.3
CLL                                  esPKPab  sPKPab   08 41 03.0 -0.7
CLL                                  ePP       PP       08 44 25.0 -2.0
CLL                                  ePPP      PPP      08 47 56.0
CLL                                  ePPPP              08 50 00.0
CLL                                  eSKKSac  SKKSac   08 51 12.0 -3.7
CLL                                  ePPPrev            08 53 54.0
CLL                                  ePSKS              08 54 48.0
CLL                                  ePPS      PPS      08 57 30.0
CLL                                  e                  08 59 30.0
CLL                                  eSS       SS       09 03 59.0 -1.5
CLL                                  ePSS      PSS      09 05 00.0
CLL                                  eSSS      SSS      09 09 42.0
CLL                                  eSSSS              09 13 59.0
CLL                                  e                  09 17 54.0
CLL                                    Lm      MLR      09 56 00.0
        comp=N,500nm,18.8s
CLL                                    Lm      MLR      09 56 00.0
        comp=E,300nm,19.8s
CLL                                    Lm      MLR      09 56 00.0
        comp=Z,1µm,19.2s
DOPR   Dopca             153.62 325 ⇑P        PKiKP    08 40 42.3 +1.0
OKC    Ostrava-Krasne    153.62 339 ePKIKP    PKPbc    08 40 41.0 -0.1
OKC                                    MLR     MLR
        comp=Z,600nm,16.1s
OKC    Ostrava-Krasne    153.62 339⇑ePKP      PKPbc    08 40 41.0 -0.1
OKC                                  ex        x        08 44 13.7
OKC                                    AMS     AMS      10 00 20.0
        comp=Z,600nm,16.1s
MLR    Muntele Rosu      153.64 324   PKPbc   PKiKP    08 40 42.0 +0.5
        comp=Z,5.7nm,1.0s,baz=190,slow=5.4,SNR=4.0
MLR    Muntele Rosu      153.64 324 ⇑P        PKPbc    08 40 40.5 -0.9
MLR    Muntele Rosu      153.64 324 ⇑PKIKP    PKPbc    08 40 40.5 -0.9
MLR    Muntele Rosu      153.64 324   IAMs_20 IAMs_20  09 48 09.5
        comp=Z,954nm,21.0s
UPC    Upice             153.65 343 ePKIKP    PKPdf    08 40 32.8 -0.5
UPC                                    MLR     MLR
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        comp=Z,1µm,20.8s
UPC    Upice             153.65 343 ePKPDF    PKPdf    08 40 32.8 -0.5
UPC                                  ex        x        08 44 15.0
UPC                                    AMS     AMS      09 55 50.0
        comp=Z,1µm,20.8s
DPC    Dobruska-Polom    153.71 342⇑ePKP      PKiKP    08 40 42.2 +0.8
DPC                                  ePKPAB   PKPab    08 40 53.5 -0.6
DPC                                  ePP       PP       08 44 20.9 -6.9
DPC                                    AMS     AMS      10 00 00.0
        comp=Z,600nm,19.9s
BRG    Berggiesshubel    153.82 346 ePKP      PKiKP    08 40 41.7 +0.2
BRG                                    Amp              08 40 43.2
        comp=Z,26nm,1.2s
BRG                                  ex        x        08 40 54.5
BRG                                    Amp              08 40 55.7
        comp=Z,13nm,0.7s
BRG    Berggiesshubel    153.82 346   PP      PP       08 44 27.0 -1.3
BRG    Berggiesshubel    153.82 346 ePKPbc    PKiKP    08 40 42.0 +0.5
        baz=15,slow=2.5
BRG                                  ePKPab   PKPab    08 40 54.5 +0.1
        baz=15,slow=2.5
KRLC   Kraliky           153.83 341 ePKIKP    PKiKP    08 40 41.8 +0.1
KRLC                                 e                  08 40 52.5
KRLC                                 e                  08 44 26.1
KRLC                                   MLR     MLR
        comp=Z,800nm,19.3s
KRLC   Kraliky           153.83 341⇑ePKP      PKiKP    08 40 41.8 +0.1
KRLC                                 ePKPAB   PKPab    08 40 52.5 -2.1
KRLC                                 ePP       PP       08 44 26.1 -2.4
KRLC                                   AMS     AMS      09 54 00.0
        comp=Z,800nm,19.3s
MORC   Moravsky Berou    153.87 340 ⇑P        PKPab    08 40 54.0 -0.8
MORC   Moravsky Berou    153.87 340 ⇑PKP2     PKPab    08 40 54.0 -0.8
MORC   Moravsky Berou    153.87 340   IAMs_20 IAMs_20  09 47 08.3
        comp=Z,655nm,21.0s
GTTG   Gottingen         153.88 352 ePKPbc    PKiKP    08 40 43.2 +1.6
        baz=15,slow=2.5
GTTG                                 ePKPab   PKPab    08 40 54.4 -0.2
        baz=15,slow=2.5
FBE    Freiberg          153.90 347 ePKPbc    PKiKP    08 40 43.5 +1.8
        baz=15,slow=2.5
FBE                                  ePKPab   PKPab    08 40 55.0 +0.3
        baz=15,slow=2.5
NEUB   Neuenburg         153.93 349 ePKPbc    PKiKP    08 40 43.5 +1.8
        baz=15,slow=2.5
NEUB                                 ePKPab   PKPab    08 40 55.5 +0.6
        baz=15,slow=2.5
PVCC   Panska Ves        154.00 345   AMS     AMS      09 53 00.0
        comp=Z,800nm,24.0s
VOIR                     154.15 325 ⇑P        PKiKP    08 40 43.2 +0.7
DRGR                     154.33 330 ⇑P        PKiKP    08 40 43.3 +0.4
KASTN  Kahler Asten      154.39 354 ePKPbc    PKiKP    08 40 43.7 +1.0
        baz=15,slow=2.5
KASTN                                ePKPab   PKPab    08 40 57.6 +0.7
        baz=15,slow=2.5
ARR    Arges             154.41 325 ⇑P        PKiKP    08 40 43.5 +0.4
PRA    Prague            154.46 344   AMS     AMS      09 58 50.0
        comp=Z,400nm,19.1s
PRU    Pruhonice         154.51 344 ePKP2     PKPab    08 40 57.3 -0.1
PRU                                  e                  08 44 28.2
PRU                                    MLR     MLR
        comp=Z,700nm,16.4s
PRU    Pruhonice         154.51 344 ePKPAB    PKPab    08 40 57.3 -0.1
PRU                                  ePP       PP       08 44 28.2 -3.9
PRU                                    AMS     AMS      09 58 00.0
        comp=Z,700nm,16.4s
WERD   Werda             154.56 348 ePKPbc    PKiKP    08 40 43.8 +0.7
        baz=15,slow=2.5
WERD                                 ePKPab   PKPab    08 40 57.5 -0.2
        baz=15,slow=2.5
TANN   Tannenbergstha    154.56 347 ePKPab    PKPab    08 40 58.4 +0.7
        baz=15,slow=2.5
VRAC   Vranov            154.57 341   PKPab   PKPab    08 40 57.5 -0.2
        comp=Z,7.7nm,0.7s,baz=116,slow=5.1,SNR=4.0
VRAC   Vranov            154.57 341 ⇑P        PKPab    08 40 54.8 -2.9
VRAC   Vranov            154.57 341 ⇑PKP2     PKPab    08 40 54.8 -2.9
ISP    Isparta           154.62 305   IAMs_20 IAMs_20  09 54 22.7
        comp=Z,718nm,20.0s
PSZ    Piszkesteto       154.63 335 ⇑P        PKPab    08 40 58.7 +0.5
PSZ    Piszkesteto       154.63 335   PKIKP   PKPdf    08 40 33.8 -1.1
PSZ    Piszkesteto       154.63 335   PKPdf   PKPdf    08 40 33.8 -1.1
PSZ                                    IAMs_20 IAMs_20  09 46 10.3
        comp=Z,878nm,22.0s
GUNZ   Gunzen            154.64 348 ePKPab    PKPab    08 40 58.0  0.0
        baz=15,slow=2.5
WERN   Wernitzgruen      154.70 348 ePKPab    PKPab    08 40 57.4 -0.8
        baz=15,slow=2.5
NKC    Novy Kostel       154.74 347   AMS     AMS      10 02 20.0
        comp=Z,800nm,19.8s
TREC   Trest             154.90 342 ePKIKP    PKPdf    08 40 33.2 -1.9
TREC                                   MLR     MLR
        comp=Z,800nm,16.9s
TREC   Trest             154.90 342 ePKPDF    PKPdf    08 40 33.2 -1.9
TREC                                 ePP       PP       08 44 27.2 -7.2
TREC                                   AMS     AMS      10 00 00.0
        comp=Z,800nm,16.9s
SMOL   Smolenice         155.01 339 ePKP2     PKPab    08 41 01.2 +1.6
MEM    Membach           155.16 357 dPKPab    PKPab    08 40 59.6 -0.5
BTNL   Ternell           155.17 357 dPKPab    PKPab    08 41 00.7 +0.4
MODS   Modra-Piesok      155.18 339 ePKP2     PKPab    08 41 00.0 -0.3
ROTZ   Rotzenmuhle       155.23 347 ePKPab    PKPab    08 41 00.9 +0.4
        baz=15,slow=2.5
SNF    Seneffe           155.30 360 dPKPab    PKPab    08 40 59.5 -1.2
TNS    Taunus Mts        155.36 353 ePKPab    PKPab    08 41 02.2 +1.1
        baz=15,slow=2.5
BCLA   Clavier           155.37 358 dPKPab    PKPab    08 41 01.3 +0.2
BGES   Gesves            155.41 358 dPKPab    PKPab    08 41 00.8 -0.5
GRF    Grafenberg Arr    155.49 349 ePKPab    PKPab    08 41 02.9 +1.4
        baz=15,slow=2.5
BMRD   Maredsous         155.50 359 dPKPab    PKPab    08 41 01.4 -0.2
KHC    Kasperske Hory    155.54 345 epPKP     pPKPdf   08 40 46.1 +2.2
KHC                                  ePKPAB   PKPab    08 41 02.4 +0.5
KHC                                  ePP       PP       08 44 32.0 -5.9
KHC                                    AMS     AMS      10 01 00.0
        comp=Z,900nm,19.2s
KHC    Kasperske Hory    155.54 345   IAMs_20 IAMs_20  09 55 37.0
        comp=Z,840nm,20.0s
CKRC   Cesky Krumlov     155.65 343 ePP       PP       08 44 29.1 -9.5
WET    Wettzell          155.68 346 ePKPab    PKPab    08 41 02.9 +0.4
        baz=15,slow=2.5
DOU    Dourbes           155.71 359 dPKPab    PKPab    08 41 01.5 -1.0
GEC2   GERESS Array S    155.77 344   IAMs_20 IAMs_20  09 55 54.4
        comp=Z,934nm,19.0s
GERES  GERESS Array B    155.77 344   PKP     PKPdf    08 40 36.9 +0.5
        comp=Z,0.7nm,0.8s,baz=197,slow=2.8,SNR=4.2
GERES                                 PKPbc   sPKPdf   08 40 46.6 -0.4
        comp=Z,1.2nm,0.7s,baz=73,slow=1.8,SNR=6.8
GERES                                 PKPab   PKPab    08 41 02.5 -0.5
        comp=Z,1.4nm,0.7s,baz=49,slow=3.0,SNR=4.1
HERR   Herculane         155.87 327 ⇑P        PKPdf    08 40 46.4  +10
CONA   Conrad Observa    156.02 340 eP        PKPab    08 41 05.5 +1.5
        comp=Z,10nm,0.8s
MOA    Molln             156.55 343 eP        PKPab    08 41 08.0 +1.8
        comp=Z,10nm,1.3s
STU    Stuttgart         156.69 351   IAMs_20 IAMs_20  09 58 09.2
        comp=Z,992nm,20.0s
VTS    Vitosha           157.00 322 ⇑P        PKPab    08 41 09.0 +0.4
VTS    Vitosha           157.00 322 ⇑PKP2     PKPab    08 41 09.0 +0.4
VTS    Vitosha           157.00 322   IAMs_20 IAMs_20  09 57 48.8
        comp=Z,910nm,21.0s
BFO    Black Forest      157.24 353 ePKPab    PKPab    08 41 08.1 -1.0
        baz=15,slow=2.5
SOKA   Soboth            157.39 340 eP        PKPab    08 41 10.0 +0.1
        comp=Z,12nm,1.0s
KBA    Koelnbreinsper    157.50 343 eP        PKPab    08 41 11.2 +0.7
        comp=Z,4.2nm,0.6s
OBKA   Obir              157.69 341 eP        PKPab    08 41 11.7 +0.4
        comp=Z,3.3nm,0.6s
WTTA   Wattenberg        157.73 346 eP        PKPab    08 41 12.3 +0.8
        comp=Z,7.8nm,0.6s
MOTA   Moosalm           157.76 347 eP        PKPab    08 41 11.5 -0.1
        comp=Z,2.5nm,0.4s
MYKA   Terra Mystica     157.84 342 i P       PKPab    08 41 12.0 +0.2
        comp=Z,5.6nm,0.5s
ABTA   Abfaltersbach     158.02 344 eP        PKPab    08 41 13.0 +0.4
        comp=Z,6.8nm,0.7s
DAVA   Damuels           158.04 349 eP        PKPab    08 41 14.0 +1.2
        comp=Z,0.8nm,0.2s
FETA   Feichten          158.15 348 eP        PKPab    08 41 15.5 +2.2
        comp=Z,5.6nm,0.8s
DAVOX  Davos/Dischmat    158.53 349   PKPab   PKPab    08 41 14.8 -0.2
        comp=Z,5.4nm,0.6s,baz=292,slow=5.4,SNR=5.7
CTI    Castel Tesino     158.88 345   IAMs_20 IAMs_20  09 59 47.5
        comp=Z,848nm,19.0s
LIS    Lisbon            162.93  38 ePKPdf    PKPdf    08 40 43.7 -1.2
LIS                                    AMS     AMS      10 14 31.0
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        comp=E,2µm,22.3s
LIS    Lisbon            162.93  38 ePKIKP    PKPdf    08 40 43.6 -1.2
MESJ   Messejana         164.07  38 ePKPdf    PKPdf    08 40 44.7 -1.3
MESJ                                 ePP       PP       08 45 24.9 +0.1
MESJ                                   AMS     AMS      09 55 58.6
        comp=Z,965nm,16.2s
MESJ   Messejana         164.07  38 ePKIKP    PKPdf    08 40 44.6 -1.3
MESJ                                 e                  08 45 24.8
MORF   Marmelete         164.20  40 ePKPdf    PKPdf    08 40 44.8 -1.4
MORF                                 ePP       PP       08 45 25.5 -0.1
MORF                                   AMS     AMS      10 06 13.2
        comp=Z,786nm,21.0s
MORF   Marmelete         164.20  40 ePKIKP    PKPdf    08 40 44.8 -1.4
MORF                                 e                  08 45 25.4
ESDC   Sonseca Array     164.58  24   PKPab   PKPab    08 41 41.9 +0.5
        comp=Z,2.3nm,1.0s,baz=324,slow=3.3,SNR=8.1
KOWA   Kowa              166.45 144   PKP     PKPdf    08 40 49.6 +1.0
        comp=Z,5.6nm,1.0s,baz=177,slow=2.1,SNR=6.6
KOWA                                  PKPab   PKPab    08 41 53.0 +2.8
        comp=Z,3.6nm,0.8s,baz=201,slow=4.4,SNR=5.2
TORD   Torodi Ar. Bea    167.24 169   PKP     PKPdf    08 40 49.9 +0.7
        comp=Z,6.6nm,1.1s,baze=328,slow=1.8,SNR=12
TORD                                  PKPab   PKPab    08 41 55.7 +2.1
        comp=Z,15nm,1.0s,baz=185,slow=2.8,SNR=17
TORD   Torodi Ar. Bea    167.24 169           PKPdf    08 40 49.2  0.0
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UCR ***04*** *08:24:53.8±2.5, 7°.11N×82°.57W, h0km±16km, MW4.1*
IDC ***04*** *08:24:56.8±8.9, 8°.05N×81°.45W, h0km, mb3.7/5, mb1 4.0/6, mb1mx3.7/42, mbtmp3.7/6, ML3.7/1, MS3.0/1, Ms1 3.0/1, ms1mx2.6/26, Error ellipse: s-maj=196.6km s-min=72.9km az=4.0*
UPA ***04*** *08:24:56.1±1.8, 7°.17N×82°.37W, h28km±20km, MW4.3*
ISC 04 08:24:52.0±2.2, **7°.11N**±0°.07×**82°.37W**±0°.04, **h3**km±13km, **n89**, σ**1s.69**/106, **mb3.9**/5, **15C-4D, South of Panama**

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Code   Station Name        Δ°  AZ°   Phase ID         Time     Res
                                    Op       ISC      h  m  s  ISC
PEDE3  Pedregal, Chir     1.27 357 eP        Pb       08 25 16.3 -0.2
PEDE3                              eS        Sn       08 25 33.9 -0.2
CHIR3  Chiriqui UPA,      1.28   2 eP        Pb       08 25 16.5 -0.2
CHIR3                              eS        Sb       08 25 30.5 -3.0
NANC3  Nancito, Chiri     1.29  29 eP        Pg       08 25 16.6 -0.1
LOCO3  Loma Colorada,     1.29 358 eP        Pb       08 25 16.7 -0.3
GMAL   Guarumal, Vera     1.30  60 eP        Pb       08 25 15.8 -1.2
GMAL                               eS        Sn       08 25 33.4 -1.4
SBAR3  San Bartolo, C     1.31 337 eP        Pn       08 25 16.8 -0.3
LOMA3  Las Lomas, Chi     1.31 359 eP        Pb       08 25 15.8 -1.4
LESP3  La Esperanza,      1.36 342 eP        Pn       08 25 17.2 -0.6
BAGA3  Bagala, Chiriq     1.36 353 eP        Pb       08 25 18.1  0.0
BAGA3                              eS        Sb       08 25 33.8 -2.0
CCOL   Caracol de Cor     1.43 335⇑i P       Pn       08 25 18.6 -0.2
MARI3  Mariato, Verag     1.47  68 eP        Pn       08 25 18.7 -0.6
MARI3                              eS        Sb       08 25 36.1 -2.8
RSUS3  Rio de Jesus,      1.48  54 eP        Pn       08 25 19.6 +0.2
CACAO  El Cacao, Vera     1.51  81 eP        Pn       08 25 18.7 -1.2
CACAO                              eS        Sn       08 25 35.0 -5.1
CDITO  Canoas             1.54 341⇑eP        Pn       08 25 20.1 -0.2
CDITO                              eS        Sn       08 25 37.3 -3.6
CDITO  Canoas             1.54 341⇑i P       Pn       08 25 20.1 -0.2
MESA3  La Mesa, Verag     1.56  48 eP        Pn       08 25 20.8 +0.2
PSOM3  Paja de Sombre     1.57   2 eP        Pb       08 25 21.2 -0.4
PONU3  Ponuga, Veragu     1.58  61 eP        Pn       08 25 21.4 +0.6
PTAR3  Potrerillos Ar     1.58 355 eP        Pn       08 25 21.0  0.0
PTAR3                              eS        Sn       08 25 39.3 -2.7
BCO2   Palmira            1.61 354 i P       Pn       08 25 21.5 +0.1
BCO2                               eS        Sb       08 25 41.5 -1.6
PIRO   Carate, Puerto     1.61 323 eP        Pn       08 25 19.5 -1.7
PIRO   Carate, Puerto     1.61 323⇑i P       Pn       08 25 20.4 -0.8
LNBQ3  Los Naranjos,      1.67 357 eP        Pn       08 25 22.2 -0.1
LNBQ3                              eS        Sn       08 25 41.6 -2.8
CNAZ3  Canazas, Verag     1.68  43⇓eP        Pn       08 25 21.8 -0.5
STIA3  Santiago, Vera     1.69  54 eP        Pn       08 25 22.9 +0.5
BRU2   Volcan             1.71 349 i P       Pn       08 25 22.6 -0.1
BRU2                               eS        Sn       08 25 43.5 -1.6
BC3P   Paso Ancho         1.71 352 eP        Pn       08 25 22.7 -0.2
BC3P                               eS        Sn       08 25 44.0 -1.4
MLIR3  Monte Lirio, C     1.73 345 eP        Pn       08 25 23.8 +0.7
OCU3   Ocu, Herrera       1.78  62 eP        Pn       08 25 24.2 +0.6
SFRA3  San Francisco,     1.79  51 eP        Pn       08 25 24.4 +0.7
SFRA3                              eS        Sn       08 25 45.0 -1.9
EDSV   San Vito           1.80 341⇑i P       Pn       08 25 24.6 +0.5
EDSV                               eS        Sb       08 25 47.6 -1.2
CALO3  Calobre, Verag     1.93  51 eP        Pn       08 25 16.0  -10
RIOS   Rincon, Osa        1.95 324 i P       Pn       08 25 25.3 -0.6
RIOS   Rincon, Osa        1.95 324⇑i P       Pn       08 25 25.3 -0.6
POTG   Potrero Grande     2.07 339⇑i P       Pn       08 25 28.6 +0.9
EDPN   Palmar Norte       2.14 330 i P       Pn       08 25 28.8 +0.2
AZU    Azuero             2.18  72 i P       Pn       08 25 29.3 +0.1
AZU                                eS        Sn       08 25 54.2 -2.5
AZU    Azuero             2.18  72⇓i P       Pn       08 25 29.4 +0.3
AZU                                eS        Sn       08 25 54.1 -2.5
AZU                                i                  08 26 01.7
        comp=Z,546nm,0.4s
EDBA   Buenos Aires       2.23 336⇑i P       Pn       08 25 31.1 +1.2
PCRI3  Pocri, Los San     2.29  76 eP        Pn       08 25 31.3 +0.6
CNI2   El Empalme, Bo     2.30 357 eS        Sn       08 25 58.3 -1.4
DRK0   Durika             2.31 338 i P       Pn       08 25 31.5 +0.4
DRK0                               eS        Sn       08 25 56.6 -3.5
DRK0   Durika             2.31 338 eP        Pn       08 25 31.6 +0.5
PNME   Penonome           2.44  56 eP        Pn       08 25 34.1 +1.4
PNME   Penonome           2.44  56 eP        Pn       08 25 33.9 +1.2
PNME                               i                  08 26 08.7
        comp=Z,163nm,0.5s
EDLM   Las Mercedes       2.47 331 eP        Pn       08 25 34.0 +0.7
EDDO   Dominical          2.60 325⇑i P       Pn       08 25 35.3 +0.4
PEZE   Perez Zeledon,     2.61 330⇑i P       Pn       08 25 35.7 +0.6
VTON   El Valle, Cocl     2.68  56 eP        Pn       08 25 37.6 +1.4
CDM    Cerro de Muert     2.80 330⇑i P       Pn       08 25 38.7 +0.7
RIMA   Rio Macho          3.03 331⇑i P       Pn       08 25 41.7 +0.7
LCR2   La Lucha 2         3.08 328⇑i P       Pn       08 25 42.6 +0.9
ZANG   Zanguenga, Cho     3.08  53 eP        Pn       08 25 43.0 +1.5
CHOR3  La Chorrera        3.13  55 eP        Pn       08 25 42.9 +0.7
CHOR3                              eS        Sn       08 26 20.2 +0.1
BATAN  Batan              3.13 341 eP        Pn       08 25 44.4 +2.2
BATAN  Batan              3.13 341 eP        Pn       08 25 44.8 +2.6
BCIP   Isla Barro Col     3.23  51 eP        Pn       08 25 44.7 +1.1
BCIP                               i                  08 25 51.0
        comp=Z,60nm,0.3s
ARRA3  Arraijan, Pana     3.25  55 eP        Pn       08 25 45.1 +1.2
SJS    Escuela Geolog     3.27 329 eP        Pn       08 25 45.6 +1.3
HDC    Heredia            3.35 329 eP        Pn       08 25 46.9 +1.4
HDC                                eS        Sn       08 26 19.4 -6.5
HDC    Heredia            3.35 329⇑i P       Pn       08 25 47.0 +1.6
UPA    Univ. de Panam     3.36  56 eP        Pn       08 25 46.5 +1.0
UPA    Univ. de Panam     3.36  56 eP        Pn       08 25 46.7 +1.3
UPA                                i                  08 25 55.5
        comp=Z,41nm,0.7s
JACO   JACO, Garabito     3.41 318⇑i P       Pn       08 25 45.8 -0.2
LAFE   Finca La Fe, P     3.68 317 i P       Pn       08 25 49.7  0.0
CHPO   Chepo, Panama      3.81  57⇓eP        Pn       08 25 52.4 +0.8
CHPO                               eS        Sn       08 26 31.7 -5.2
ARE1   Arenal 1           4.06 325 eP        Pn       08 25 58.0 +2.9
JTS    Las Juntas de      4.07 321 eP        Pn       08 25 55.6 +0.5
JTS    Las Juntas de      4.07 321 eP        Pn       08 25 55.6 +0.5
JTS    Las Juntas de      4.07 321 eP        Pn       08 25 55.5 +0.5
PLVR   Palo Verde         4.37 318⇓eP        Pn       08 25 59.3 -0.1
CUI    Cuipilapa          4.48 322 eP        Pn       08 26 01.8 +1.0
UPD2   Meteti             4.54  71 eP        Pn       08 26 03.0 +1.4
UPD2                               i                  08 26 12.8
        comp=Z,48nm,0.4s
SOLC   Bahia Solano       5.00 100 eP        Pn       08 26 06.9 -1.1
DBBC   Dabeiba            6.11  90 eP        Pn       08 26 24.2 +0.9
DBBC                               eS        Sn       08 27 21.5  -12
CBOC   Ciudad Bolivar     6.43 101 eP        Pn       08 26 28.0 +0.2
CBOC                               eS        Sn       08 27 27.9  -14
PLMC   San Jos del P      6.43 110 eP        Pn       08 26 27.1 -0.6
YOTC   Yotoco, Valle      6.75 117 eP        Pn       08 26 32.2 +0.1
MOTC   Monteria, Cord     6.84  76 eP        Pn       08 26 35.4 +2.2
HELC   Santa Helena       6.85  97 eP        Pn       08 26 35.6 +1.9
RREF   El Recreo          7.32 107 eP        Pn       08 26 43.0 +2.6
ORTC   Ortega, Tolima     7.76 114 eP        Pn       08 26 48.6 +2.6
SDV    Santo Domingo     11.75  81   LR      LR       08 32 33.5
        comp=Z,75nm,20.6s,baz=204,slow=42
CMIG   Matias Romero     15.75 310   Pn      P        08 28 39.8 +0.9
        comp=Z,0.3nm,0.3s,baz=97,slow=12,SNR=5.0
TXAR   Lajitas Array     29.86 320   P       P        08 31 05.9 +5.0
        comp=Z,0.2nm,0.7s,baz=130,slow=9.5,SNR=2.7
ANMO   Albuquerque       35.48 325   P       P        08 31 53.7 +3.6
        comp=Z,1.3nm,0.8s,baz=122,slow=8.9,SNR=8.7
ULM    Lac du Bonnet     44.46 348   P       P        08 33 04.0 -0.3
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	comp=Z,1.9nm,0.8s,baz=135,slow=8.6,SNR=4.2						
YKA	Yellowknife Ar	60.09	343	P	P	08 35 01.1	+0.9
	comp=Z,0.6nm,0.7s,baz=136,slow=6.9,SNR=12						
ILAR	Eielson Array	72.90	336	P	P	08 36 24.4	+2.3
	comp=Z,0.3nm,0.6s,baz=115,slow=5.2,SNR=5.3						

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*IDC **04** 08:33:14.0±0.8, 14°.77N×119°.25E, h0^{km}, mb4.0/8, mb1 4.2/8, mb1mx3.7/64, mbtmp4.0/8, MS3.8/2, Ms1 3.9/2, ms1mx3.3/40, Error ellipse: s-maj=40.4km s-min=16.4km az=49.0*

*MAN **04** 08:33:17.3, 15°.02N×119°.72E, h1^{km}, mb4.8, ML3.7, MS3.7*

ISC 04 08:33:16.7±1.5**, 14°.99N**±0°.04×**119°.63E**±0°.07**, h13**^{km}±9^{km}**, n22,** $\sigma 2^{s}.$**38**/30**, mb4.1**/8**, 1C-1D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MACP	Maragondon, Ca	1.28	124	eP	Pg	08 33 39.2	-2.1
MACP				eS	Sg	08 33 56.5	-1.5
QVP	Quezon City--P	1.38	105	eP	Pn	08 33 42.8	+1.0
QVP				eS	Sg	08 34 01.9	+0.6
LUBP	Lubang	1.39	154	eP	Pg	08 33 41.2	-2.2
LUBP				eS	Sn	08 34 06.4	+6.3
BOLP	Bolinao	1.41	11	eP	Pn	08 33 43.2	+1.0
BOLP				eS	Sg	08 34 08.1	+6.0
SMPP	San Manuel, Pa	1.54	41	eP	Pn	08 33 42.8	-1.2
SMPP				eS	Sn	08 34 02.0	-1.8
TGY	Tagaytay City	1.55	125	Pn	Pb	08 33 46.1	+0.8
	264nm,0.3s,baz=230,slow=7.9,SNR=11						
TGY				Sn	Sg	08 34 10.1	+3.5
	404nm,0.3s,baz=142,slow=22,SNR=6.2						
PGP	Puerto Galera	1.96	139	⇑eP	Pn	08 33 51.6	+1.8
PGP				i S	Sg	08 34 19.1	-0.7
BALP	Baler	2.02	68	eP	Pn	08 33 51.5	+1.0
BALP				eS	Sn	08 34 17.0	+1.2
LQP	Lukban	2.05	115	⇓eP	Pn	08 33 53.0	+1.8
LQP				eS	Sn	08 34 18.9	+2.2
POLP	Polilio Island	2.25	96	eP	Pn	08 33 55.0	+1.2
POLP				eS	Sn	08 34 20.9	-0.5
CAUP	Cauayan	2.87	47	eP	Pn	08 34 05.3	+3.1
CAUP				eS	Sg	08 35 03.0	+14
SJMP	San Jose	2.90	150	eP	Pn	08 34 05.0	+2.3
JNU	Nakatsue	20.74	28	LR	LR	08 45 57.8	
	comp=Z,160nm,18.6s,baz=35,slow=36						
WRA	Warramunga Arr	37.61	157	P	P	08 40 29.7	-1.8
	1.7nm,0.4s,baz=330,slow=10.0,SNR=7.1						
ASAR	Alice Springs	40.88	160	P	P	08 40 57.5	-1.4
	1.3nm,0.4s,baz=335,slow=6.6,SNR=20						
KURBB	Kurchatov Arra	48.54	326	P	P	08 41 58.8	-0.8
	0.3nm,0.8s,baz=118,slow=8.4,SNR=1.5						
ARCES	ARCESS Array B	77.51	339	P	P	08 45 11.4	-0.5
	6.9nm,1.0s,baz=60,slow=7.3,SNR=4.0						
BRTR	Keskin Array B	77.54	308	P	P	08 45 11.2	-1.6
	1.5nm,0.7s,baz=90,slow=1.9,SNR=3.6						
FINES	FINESS Array B	78.66	331	P	P	08 45 17.8	-0.6
	1.1nm,0.8s,baz=77,slow=7.4,SNR=5.1						
HFS	Hagfors	84.85	331	P	P	08 45 51.4	+0.3
	1.1nm,0.6s,baz=90,slow=6.3,SNR=1.3						
YKA	Yellowknife Ar	91.98	22	P	P	08 46 25.6	+0.5
	0.3nm,0.7s,baz=317,slow=3.7,SNR=7.3						
VNDA	Vanda	95.47	172	LR	LR	09 29 48.4	
	comp=Z,69nm,19.4s,baz=345,slow=36						

VIE 04 08:38:38.6±1.2**, 46°.47N**×**13°.54E, h0**^{km}**, ml0.9**/3**, Error ellipse: s-maj=7.9km s-min=6.2km az=53.0 15 km N of Bovec Suspected Mining explosion., Austria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MYKA	Terra Mystica	0.18	24	i Pg	Pg	08 38 42.8	+0.8
	1.0nm,0.2s						
MYKA				eSg	Sg	08 38 44.5	+0.2
	3.0nm,0.1s						
KBA	Koelnbreinsper	0.62	348	ePg	Pg	08 38 50.3	-0.3
	0.1nm,0.1s						
KBA				Sg	Sg	08 38 58.2	-0.5
	0.7nm,0.2s						
OBKA	Obir	0.70	86	ePg	Pg	08 38 51.4	-0.6
	0.6nm,0.2s						
OBKA				Sg	Sg	08 39 00.9	-0.2
	0.7nm,0.1s						

IDC 04 09:10:52.7±2.9**, 53°.78N**×**87°.03E, h0**^{km}**, mb1 2.5**/2**, mb1mx2.5**/32**, mbtmp2.5**/2**, ML2.2**/2**, Error ellipse: s-maj=27.4km s-min=16.2km az=71.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.32	278	i		09 17 56.9	
	baz=99,slow=338,SNR=2.8						
ZALV	Zalesovo Beam	1.32	278	Pg	Pg	09 11 16.8	-1.2
	0.5nm,0.3s,baz=97,slow=16,SNR=7.8						
ZALV				Lg	Lg	09 11 35.5	
	0.6nm,0.3s,baz=95,slow=29,SNR=5.4						
KURBB	Kurchatov Arra	6.11	242	Pn	Pn	09 12 25.1	+0.9
	0.0nm,0.3s,baz=58,slow=13,SNR=2.8						
MKAR	Makanchi Array	7.62	205	Pn	Pn	09 12 46.2	+1.2
	0.1nm,0.3s,baz=22,slow=13,SNR=4.1						

IDC 04 09:31:23.2±2.4**, 4°.98N**×**123°.94E, h0**^{km}**, mb3.9**/3**, mb1 4.1**/3**, mb1mx3.5**/44**, mbtmp3.9**/3**, Error ellipse: s-maj=304.3km s-min=23.9km az=64.0, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	26.80	158	P	P	09 37 05.5	+0.3
	0.8nm,0.3s,baz=338,slow=9.9,SNR=12						
ASAR	Alice Springs	30.09	162	P	P	09 37 34.2	-0.3
	0.4nm,0.3s,baz=341,slow=7.0,SNR=12						
MKAR	Makanchi Array	54.96	326	P	P	09 40 56.0	-0.1
	0.5nm,0.3s,baz=123,slow=7.6,SNR=14						

MAN 04 09:32:24.3, 6°.48N×**121°.72E, h1**^{km}**, mb4.6, ML3.5, MS3.4, 1C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZCP	Zamboanga City	0.57	38	i S	Sg	09 32 44.0	+1.5
ZCP	Zamboanga City	0.57	38	⇑iP	Pn	09 32 38.3	-1.2
PAGZ	Pagadian	2.13	50	eS	Sn	09 33 29.5	+1.2
PAGZ	Pagadian	2.13	50	eP	Pn	09 33 01.1	+0.1
SKMP	Bagumbayan, Su	2.80	89	eS	Sn	09 33 45.8	+1.0
SKMP	Bagumbayan, Su	2.80	89	eP	Pn	09 33 11.5	+1.2

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*IDC **04** 09:32:24.7±1.4, 53°.47N×62°.94E, h0^{km}, mb3.2/1, mb1 3.1/3, mb1mx2.9/36, mbtmp3.0/3, ML2.6/2, Error ellipse: s-maj=27.4km s-min=8.9km az=160.0*

*NNC **04** 09:32:30.2±3.1, 52°.86N×63°.26E, h0^{km}, mb3.3, mpv2.9, Error ellipse: s-maj=46.3km s-min=14.1km az=157.0, Suspected Mining explosion.*

ISC 04 09:32:25.3±1.2**, 53°.5N**±0°.1×**62°.94E**±0°.06**, h0**^{km}**, n9,** $\sigma 1^{s}.$**12**/10**, 5C-3D, Western Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKTO	Aktyubinsk	4.28	227	Pn	Pn	09 33 32.5	+0.7
	0.1nm,0.3s,baz=30,slow=8.1,SNR=1.8						
AKTO				Pg	Pb	09 33 42.4	+0.9
	0.4nm,0.3s,baz=41,slow=18,SNR=5.5						
AKTO				Sn	Sn	09 34 23.4	+1.0
	0.6nm,0.3s,baz=350,slow=16,SNR=5.7						
AKTO				Lg	Lg	09 34 38.6	
	1.3nm,0.3s,baz=334,slow=23,SNR=8.6						
AKTO	Aktyubinsk	4.28	227	⇑Pg	Pg	09 33 46.3	-1.1
	1.4nm,0.6s						
AKTO				⇑Lg	Lg	09 34 38.0	
	15nm,0.9s						
I31KZ	AKTYUBINSK INF	4.30	227	i		10 07 50.0	
	baz=44,slow=320,SNR=1.1						
BRVK	Borovoye	4.43	92	⇑Pg	Pb	09 33 45.6	+1.6
	0.8nm,0.4s						
BRVK				⇓Lg	Lg	09 34 44.5	
	9.0nm,0.7s						
BVA3	Borovoye Array	4.49	92	⇓Pg	Pg	09 33 50.4	-0.9
	1.8nm,0.4s						
BVA3				⇑Lg	Lg	09 34 47.0	
	10nm,0.7s						
BVAR	Borovoye Array	4.50	92	Pn	Pn	09 33 34.9	+0.2
	1.0nm,0.3s,baz=283,slow=12,SNR=13						
BVAR				Sn	Sn	09 34 26.6	-1.0
	0.5nm,0.3s,baz=354,slow=25,SNR=1.3						
BVAR				Lg	Lg	09 34 48.0	
	1.1nm,0.3s,baz=289,slow=27,SNR=6.1						
AB31	Akbulak array	4.60	205	⇑Pg	Pb	09 33 46.7	-0.1
	0.8nm,0.4s,baz=23,slow=13,SNR=12						
AB31				⇓Lg	Lg	09 34 38.0	
	14nm,0.6s,baz=28,slow=27,SNR=22						
I46RU	ZALESOVO INFRA	12.97	79	i		10 48 40.0	
	baz=282,slow=320,SNR=0.8						
FINES	FINESS Array B	21.13	307	P	P	09 37 10.5	-0.9
	0.6nm,0.5s,baz=104,slow=12,SNR=6.1						

IDC 04 09:47:17.6±3.3**, 54°.23N**×**87°.39E, h0**^{km}**, mb1 3.2**/2**, mb1mx2.9**/46**, mbtmp3.2**/2**, ML2.7**/2**, Error ellipse: s-maj=28.0km s-min=16.9km az=59.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.54	261	i		09 54 53.4	
	baz=78,slow=337,SNR=11						
ZALV	Zalesovo Beam	1.54	261	Pg	Pn	09 47 43.9	-2.4
	0.7nm,0.3s,baz=80,slow=16,SNR=12						
ZALV				Lg	Lg	09 48 07.9	
	0.9nm,0.3s,baz=78,slow=25,SNR=5.6						
KURBB	Kurchatov Arra	6.51	240	Pn	Pn	09 48 55.1	+0.6
	0.2nm,0.3s,baz=58,slow=12,SNR=1.6						
MKAR	Makanchi Array	8.12	206	Pn	Pn	09 49 18.6	+1.9
	0.1nm,0.3s,baz=24,slow=13,SNR=6.0						
MKAR				Sn	Sn	09 50 47.3	-1.8
	0.1nm,0.3s,baz=24,slow=27,SNR=8.5						
MKAR				Lg	Lg	09 51 36.2	
	0.0nm,0.3s,baz=21,slow=30,SNR=3.2						

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*IDC **04** 09:48:38.8±1.9, 2°.63S×101°.70E, h0^{km}, mb3.8/5, mb1 3.9/5, mb1mx3.6/41, mbtmp3.8/5, Error ellipse: s-maj=91.4km s-min=20.2km az=56.0*

*DJA **04** 09:48:45.9±0.5, 3°S±3°×10°1E±°, h30^{km}±4^{km}, M4.7/9, mb6.7/1, mB6.6/1, MLv3.7/9, Mw(mB)6.4/1, MwMwp6.3/1, Mwp6.3/1*

*NEIC **04** 09:48:45.3±1.1, 2°.72S±0°.09×101°.4E±0°.2, h63^{km}±10^{km}, mb4.2/6, Error ellipse: s-maj=27.2km s-min=7.8km az=64.0*

ISC 04 09:48:43.4±1.0**, 3°.0S**±0°.1×**101°.0E**±0°.1**, h46**^{km}**, n28,** $\sigma 1^{s}.$**68**/31**, mb4.0**/9**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSI	Kapahiang	1.68	112	P	Pn	09 49 09.4	-1.0
SDSI	Sungai Dareh	2.10	11	P	Pn	09 49 17.2	+1.1
PDSI	Padang	2.16	345	P	Pn	09 49 18.6	+1.7
PDSI				S	Sn	09 49 44.0	+1.5
MNAI	Manna	2.34	125	Pn	Pn	09 49 20.9	+1.5
MNAI	Manna	2.34	125	P	Pn	09 49 21.8	+2.4
MNAI				S	Sn	09 49 45.5	-1.5
LHSI	Lahat	2.62	108	P	Pn	09 49 26.4	+3.2
LHSI				S	Sn	09 49 56.6	+2.9
BKNI	Bangkinang	3.31	0	Pn	Pn	09 49 31.3	-1.4
KLSI		4.05	115	P	Pn	09 49 44.0	+1.1
KASI	Kota Agung	4.26	126	P	Pn	09 49 48.9	+3.1
GSI	Gunungsitoli	5.50	321	Pn	Pn	09 50 04.4	+1.6
DBJI	Dramaga	6.70	122	P	Pn	09 50 16.4	-2.9
WB0	Warramunga Arr	36.58	120	P	P	09 55 43.8	-1.4
WB0				IAmb	IAmb	09 55 59.5	
	comp=Z,5.4nm,1.4s						
WRA	Warramunga Arr	36.60	120	P	P	09 55 42.9	-2.5
	comp=Z,0.2nm,0.3s,baz=297,slow=12,SNR=7.2						
WB2	Warramunga Arr	36.61	120	P	P	09 55 43.8	-1.7
WR0	Warramunga Arr	36.78	120	P	P	09 55 45.7	-1.3
WR0				IAmb	IAmb	09 56 02.3	
	comp=Z,3.6nm,1.1s						
AS31	Alice Springs	37.83	126	P	P	09 55 55.2	-0.7
ASAR	Alice Springs	37.83	126	P	P	09 55 55.1	-0.7
	comp=Z,0.5nm,0.5s,baz=300,slow=8.0,SNR=14						
SONM	Songino Array	50.85	5	P	P	09 57 39.6	0.0
	comp=Z,0.7nm,0.5s,baz=186,slow=10.0,SNR=8.0						
MK31	Makanchi Array	52.27	344	P	P	09 57 49.7	-0.5
MK31				IAmb	IAmb	09 57 50.6	
	comp=Z,1.1nm,0.8s						
MKAR	Makanchi Array	52.27	344	P	P	09 57 50.1	-0.1
	comp=Z,1.0nm,0.5s,baz=144,slow=8.1,SNR=20						
MKAR	Makanchi Array	52.27	344	P	P	09 57 50.0	-0.2
ZALV	Zalesovo Beam	58.34	349	P	P	09 58 33.3	-0.4
	comp=Z,1.7nm,0.4s,baz=172,slow=5.6,SNR=12						
ZALV	Zalesovo Beam	58.34	349	P	P	09 58 33.5	-0.2
BRVK	Borovoye	61.54	339	P	P	09 58 54.3	-1.3
BRVK				IAmb	IAmb	09 58 58.1	
	comp=Z,3.3nm,1.4s						
ABKAR	Akbulak array	63.01	331	P	P	09 59 05.5	-0.1
CPUP	Villa Florida	144.10	214	PKP	PKiKP	10 08 19.9	+1.4
	comp=Z,0.7nm,0.4s,baz=115,slow=5.3,SNR=4.1						
TXAR	Lajitas Array	144.84	39	PKP	PKPab	10 08 15.1	-0.2
	comp=Z,0.3nm,0.4s,baz=195,slow=1.0,SNR=12						
TXAR	Lajitas Array	144.84	39		PKPab	10 08 15.3	0.0

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*IDC **04** 09:58:35.7±0.8, 25°.86S×176°.11W, h0^{km}, mb4.1/12, mb1 4.3/12, mb1mx4.3/20, mbtmp4.0/12, MS4.0/7, Ms1 4.0/7, ms1mx3.8/19, Error ellipse: s-maj=34.4km s-min=21.9km az=164.0*

*NEIC **04** 09:58:46.5±1.1, 25°.74S±0°.03×176°.3W±0°.2, h78^{km}±7^{km}, mb4.5/22, Error ellipse: s-maj=21.0km s-min=4.5km az=95.0*

ISC 04 09:58:39.5±0.6**, 25°.96S**±0°.09×**176°.1W**±0°.1**, h23**^{km}**, n53,** $\sigma 1^{s}.$**24**/48**, mb4.4**/23**, MS3.9**/7**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	3.67	206	Pn	Pb	09 59 42.6	-1.1
MSVF	Nonsavu	9.84	325		Pn	10 01 01.2	+1.5
RAR	Rarotonga	15.65	76	LR	LR	10 08 10.4	
	comp=Z,188nm,18.5s,baz=225,slow=37						
DZM	Mont Dzumac	16.45	280	LR	LR	10 07 55.4	
	comp=Z,572nm,19.0s,baz=96,slow=34						
DZM	Mont Dzumac	16.45	280	eP	P	10 02 36.0	+4.5
	65nm,1.1s						
DZM				eLR	LR	10 06 26.9	
	comp=Z,613nm,23.4s						
SANVU	Saraoutou	18.81	301	P	Pn	10 02 59.3	+1.2
TBI	Tubuai	24.30	90	eLQ	LQ	10 08 14.6	
TBI				eLR	LR	10 09 22.5	
	comp=Z,255nm,30.0s						
PPT2	Papeete2	25.93	77	eLQ	LQ	10 08 58.2	
	364nm,23.0s						
PPT2				eLR	LR	10 10 02.6	
	comp=Z,375nm,30.0s						
PPT	Papeete	25.93	77	LR	LR	10 12 17.5	
	comp=Z,65nm,18.3s,baz=254,slow=32						
HNR	Honiara	28.07	301	LR	LR	10 14 11.8	
	comp=Z,258nm,18.2s,baz=133,slow=33						
CTAO	Charters Tower	35.09	272	P	P	10 05 30.7	-0.5
STKA	Stephens Creek	37.36	251	P	P	10 05 48.1	-2.3
	0.8nm,0.6s,baz=355,slow=22,SNR=1.2						
STKA				LR	LR	10 20 02.5	
	comp=Z,430nm,18.5s,baz=59,slow=34						
STKA	Stephens Creek	37.36	251	P	P	10 05 48.7	-1.8
PMG	Port Moresby	38.54	289	P	P	10 05 59.4	-1.2
AS31	Alice Springs	45.26	262	P	P	10 06 54.9	-0.6
ASAR	Alice Springs	45.26	262	P	P	10 06 55.8	+0.3
	1.4nm,0.9s,baz=90,slow=8.0,SNR=8.1						
ASAR				LR	LR	10 25 14.2	
	comp=Z,299nm,18.1s,baz=102,slow=35						
ASAR	Alice Springs	45.26	262	P	P	10 06 55.2	-0.3
WR0	Warramunga Arr	45.67	267	P	P	10 06 58.5	-0.2
WB2	Warramunga Arr	45.84	267	P	P	10 06 58.8	-1.3
WB2				IAmb	IAmb	10 07 22.6	
	comp=Z,6.2nm,1.2s						
WRA	Warramunga Arr	45.85	267	P	P	10 06 59.8	-0.5
	comp=Z,0.6nm,0.4s,baz=104,slow=8.0,SNR=1.9						
WRA				LR	LR	10 25 18.2	
	comp=Z,261nm,20.1s,baz=115,slow=35						
WB0	Warramunga Arr	45.86	267	P	P	10 06 59.3	-0.9
WB0				IAmb	IAmb	10 07 17.4	
	comp=Z,6.8nm,1.2s						
QSPA	South Pole Qui	64.14	180	P	P	10 09 13.8	+2.0
QSPA				IAmb	IAmb	10 09 16.7	
	comp=Z,12nm,1.1s						
MJAR	Matsushiro Arr	75.64	323	P	P	10 10 21.1	-1.6
	comp=Z,2.2nm,1.0s,baz=155,slow=6.0,SNR=4.1						
KSRS	Korea Array	82.14	318	P	P	10 10 58.4	+0.1
	comp=Z,1.3nm,0.6s,baz=156,slow=5.9,SNR=5.3						
SNAA	Sanae	82.53	178	P	P	10 11 02.3	+2.2
SNAA				IAmb	IAmb	10 11 03.4	
	comp=Z,5.7nm,1.1s						
MDPB	Devils Postpil	82.83	42	P	P	10 11 02.2	-0.1
WAKR	Walker	83.18	41	P	P	10 11 04.3	+0.3
WAKR				IAmb	IAmb	10 11 05.6	
	comp=Z,8.4nm,1.3s						
RYN	Ryan	83.81	42	P	P	10 11 07.5	+0.3
RYN				IAmb	IAmb	10 11 15.5	
	comp=Z,5.1nm,1.5s						
NVAR	Mina Array Bea	83.81	42	P	P	10 11 07.5	+0.2
	comp=Z,2.8nm,1.0s,baz=222,slow=7.4,SNR=14						
NVAR	Mina Array Bea	83.81	42	P	P	10 11 06.5	-0.8
NV11	Mina Array Sit	83.90	42	P	P	10 11 07.7	+0.1
NV11				IAmb	IAmb	10 11 08.9	
	comp=Z,3.9nm,1.2s						
PLCA	Paso Flores	84.26	133	P	P	10 11 11.6	+2.0
	comp=Z,1.0nm,1.0s,baz=116,slow=6.9,SNR=1.8						
USRK	Ussuriysk Ar.	84.45	325	P	P	10 11 10.7	+0.6
	comp=Z,0.5nm,0.6s,baz=251,slow=4.4,SNR=1.4						
USRK	Ussuriysk Ar.	84.45	325	P	P	10 11 10.0	-0.1
PRN	Pahroc Range	85.17	44	P	P	10 11 14.9	+0.8
PRN				IAmb	IAmb	10 11 16.1	
	comp=Z,10.0nm,1.3s						
X16A	Lo Mia Camp, P	85.75	48	P	P	10 11 16.1	-1.0
X16A				IAmb	IAmb	10 11 19.6	
	comp=Z,4.0nm,1.2s						
U15A	North Rim	86.36	46	P	P	10 11 19.6	-0.6
TXAR	Lajitas Array	88.53	56	P	P	10 11 30.5	-0.1
	comp=Z,0.8nm,0.9s,baz=260,slow=5.2,SNR=6.4						
TMUT	Trail Mountain	88.72	45	P	P	10 11 31.1	-0.5
ANMO	Albuquerque	89.45	50	P	P	10 11 34.7	-0.2
ANMO				IAmb	IAmb	10 11 41.5	
	comp=Z,3.3nm,1.1s						
PDAR	Pinedale Array	91.73	43	P	P	10 11 44.8	-0.5
	comp=Z,1.2nm,1.0s,baz=232,slow=3.6,SNR=6.1						
YNE	Yellowstone No	92.73	40	P	P	10 11 50.4	+0.4
CCB	Clear Creek Bu	92.95	12	P	P	10 11 49.5	-0.7
CCB				IAmb	IAmb	10 11 50.3	
	comp=Z,3.3nm,1.1s						
ILAR	Eielson Array	93.23	12	P	P	10 11 50.0	-1.4
	comp=Z,1.3nm,1.0s,baz=209,slow=5.8,SNR=5.7						
CMAR	Chiang Mai Arr	93.58	289	P	P	10 11 55.6	+1.4
	comp=Z,0.9nm,0.3s,baz=139,slow=2.7,SNR=10.0						
RSSD	Black Hills	95.85	44	P	P	10 12 03.9	-0.4
MKAR	Makanchi Array	116.18	311	PKP	PKPdf	10 17 19.9	-0.8
	comp=Z,0.2nm,0.6s,baz=128,slow=0.4,SNR=2.7						
NB2	NORSAR Subarra	144.58	354	PKP	PKPab	10 18 11.5	-0.6
	comp=Z,5.8nm,1.2s,baz=17,slow=2.6						
NOA	NORSAR Array B	144.58	354	PKP	PKPab	10 18 11.2	-0.9
	comp=Z,2.6nm,0.9s,baz=13,slow=2.5,SNR=4.4						
AKASG	Malin Array Be	148.61	329	PKPbc	PKPbc	10 18 23.0	-1.3
	comp=Z,0.4nm,0.3s,baz=51,slow=2.7,SNR=5.4						
AKASG	Malin Array Be	148.61	329		PKPdf	10 18 19.1	-1.5
AKASG				PKPbc	PKPbc	10 18 23.6	-0.7
BRTR	Keskin Array B	151.67	306	PKPbc	PKPbc	10 18 31.9	-0.4
	comp=Z,1.0nm,0.8s,baz=162,slow=4.7,SNR=5.1						
TORD	Torodi Ar. Bea	167.08	170	PKPab	PKPab	10 19 47.1	-0.9
	comp=Z,1.9nm,1.0s,baz=191,slow=4.5,SNR=4.5						

IDC 04 10:00:48.6±1.2**, 25°.48S**×**176°.26W, h0**^{km}**, mb3.8**/6**, mb1 4.1**/6**, mb1mx3.9**/19**, mbtmp3.7**/6**, Error ellipse: s-maj=68.0km s-min=28.5km az=161.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	45.15	261	P	P	10 09 07.0	-0.3
	0.4nm,0.4s,baz=89,slow=9.0,SNR=5.4						
WRA	Warramunga Arr	45.70	266	P	P	10 09 11.2	-0.6
	0.3nm,0.4s,baz=104,slow=7.8,SNR=2.2						
NVAR	Mina Array Bea	83.58	42	P	P	10 13 19.1	0.0
	0.7nm,1.0s,baz=231,slow=5.7,SNR=2.6						
TXAR	Lajitas Array	88.42	56	P	P	10 13 42.8	-0.2
	0.4nm,1.0s,baz=209,slow=5.2,SNR=2.5						
PDAR	Pinedale Array	91.50	43	P	P	10 13 56.9	-0.4
	0.3nm,0.8s,baz=224,slow=5.0,SNR=2.5						
CMAR	Chiang Mai Arr	93.26	289	P	P	10 14 06.6	+0.8
	0.6nm,0.4s,baz=94,slow=2.8,SNR=1.0						
BRTR	Keskin Array B	151.24	307	PKPbc	PKPbc	10 20 44.4	0.0
	0.6nm,0.8s,baz=90,slow=4.3,SNR=2.6						
TORD	Torodi Ar. Bea	167.58	171	PKPab	PKPab	10 22 02.9	-0.2
	0.5nm,0.5s,baz=193,slow=6.9,SNR=2.4						

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*SLM **04** 10:19:14.3±1.5, 35°.928N±0°.010×90°.71W±0°.01, h1^{km}±7^{km}, Md2.5/8, ML2.1/24(NEIC), Error ellipse: s-maj=1.7km s-min=1.3km az=54.0*

NEIC 04 10:19:14.7±0.7**, 35°.949N**±0°.010×**90°.70W**±0°.02**, h11**^{km}±6^{km}**, Error ellipse: s-maj=2.4km s-min=1.2km az=63.0, Arkansas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
V43A	Jonesboro	0.21	141		Pg	10 19 18.6	-0.5
V43A					Sg	10 19 21.7	-0.4
LCAR	Lake Charles	0.38	288		Pg	10 19 22.4	+0.1
LCAR					Sg	10 19 27.9	+0.5
HBAR	Harrisburg	0.40	174		Pg	10 19 22.4	-0.2
LPAR	Lepanto	0.48	136		Pg	10 19 23.9	-0.2
LPAR				IAML		10 19 35.3	
	comp=E,122nm,1.1s						
LPAR				IAML		10 19 37.3	
	comp=N,149nm,0.3s						
MSAR	Manila South	0.48	110		Pg	10 19 24.3	+0.1
GNAR	Gosnell	0.56	88		Pg	10 19 25.9	+0.3
GNAR				IAML		10 19 31.5	
	comp=N,56nm,2.2s						
GNAR				IAML		10 19 34.3	
	comp=E,112nm,4.2s						
DLAR	Dell	0.58	104		Pg	10 19 26.1	0.0
TWAR	Twist	0.60	169		Pg	10 19 26.1	-0.2
CHNM	Channel	0.64	81		Pb	10 19 27.5	-0.3
WADM	Wardell	0.84	60		Pg	10 19 31.0	0.0
PBMO	Poplar Bluff	0.86	15	Pg	Pg	10 19 31.0	-0.3
PBMO				IAML		10 19 43.4	
	comp=E,56nm,0.2s						
PBMO				IAML		10 19 43.7	
	comp=N,36nm,0.2s						
ARPT	Arp	0.86	103		Pg	10 19 30.9	-0.4
TOPM	Tallapoosa	0.88	49		Pg	10 19 31.5	-0.1
LNXT	Lenox	0.99	81		Pg	10 19 33.8	-0.1
PARMO	Parma	1.05	47		Pb	10 19 34.6	-0.3
PARMO				IAML		10 19 52.1	
	comp=N,59nm,0.4s						
PARMO				IAML		10 19 54.0	
	comp=E,50nm,0.2s						
HALT	Halls	1.11	92		Pb	10 19 35.3	-0.6
HALT				IAML		10 19 55.0	
	comp=N,69nm,2.0s						
HALT				IAML		10 20 07.8	
	comp=E,60nm,4.1s						
T42A	Van Buren	1.12	344		Pb	10 19 36.1	0.0
FCAR	Ozark Folk Cen	1.15	267		Pb	10 19 36.1	-0.6
FCAR				IAML		10 19 56.2	
	comp=E,48nm,0.1s						
FCAR				IAML		10 19 58.1	
	comp=N,36nm,0.1s						
GLAT	Glass	1.19	74		Pb	10 19 37.0	-0.3
GLST	Glass	1.19	74		Pb	10 19 37.0	-0.3
HICK	Hickman	1.33	63		Pn	10 19 39.4	+0.1
WHAR	Wooly Hollow	1.45	243		Pn	10 19 41.2	+0.3
OXF	Oxford	1.78	143	Pn	Pn	10 19 45.6	+0.2
U40A	Yellville	1.79	284	Pn	Pn	10 19 45.7	+0.2
FVM	French Village	2.04	6	Pn	Pb	10 19 51.0	-0.9
CCM	Cathedral Cave	2.15	349	Pn	Pb	10 19 52.6	-1.0
PLAL	Pickwick Lake	2.35	113	Pn	Pn	10 19 54.1	+0.8
PWLA	Pickwick Lake	2.36	113		Pb	10 19 57.6	+0.3

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*IDC **04** 10:44:15.5±0.4, 32°.94N×83°.46E, h0^{km}, mb4.6/34, mb1 4.8/37, mb1mx4.8/41, mbtmp4.7/37, ML3.9/3, MS4.7/31, Ms1 4.7/31, ms1mx4.6/34, Error ellipse: s-maj=12.1km s-min=10.4km az=26.0*

*BJI **04** 10:44:16.4±0.0, 33°.04N×83°.55E, h10^{km}, mB5.2/58, mb4.9/68, Ms5.3/80, Ms7 5.1/74*

*NEIC **04** 10:44:16.7±1.5, 32°.87N±0°.07×83°.43E±0°.08, h10^{km}±1^{km}, mb5.1/124, Error ellipse: s-maj=13.1km s-min=10.9km az=32.0*

*MOS **04** 10:44:17.3±1.2, 33°.11N×83°.36E, h18^{km}, mb5.2/63, MS4.9/24, Error ellipse: s-maj=5.8km s-min=3.2km az=114.4*

NDI ***04*** *10:44:17.3±4.0, 32°.97N×83°.47E, h10^{km}, mb5.1, mb5.1(NEIC)*

GCMT ***04*** *10:44:20.7±0.1, 32°.96N±0°.01×83°.58E±0°.01, h27^{km}, MW5.4/148, Moment Tensor Solution. s104,c150; s148,c274; Duration: 1^{s}2 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-0.04±.03; M$_{\theta\theta}$-1.50±.02; M$_{\phi\phi}$1.53±.03; M$_{r\theta}$0.11±.05; M$_{\theta\phi}$-0.57±.02; M$_{\phi r}$-0.15±.05; Best double couple: M$_0$1.62900×10^{17} NP1:ϕ_s215.00000°, δ84.00000°, λ2.00000°. NP2:ϕ_s125.00000°, δ88.00000°, λ174.00000°. Principal axes: T 1.6500, Plg6.0000°, Azm80.0000°; N -0.0490, Plg84.0000°, Azm287.0000°; P -1.6080, Plg3.0000°, Azm170.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 04 10:44:16.8±0.5, **32°.89N**±0°.03×**83°.35E**±0°.03, **h10^{km}**±2^{km}, **h10^{km}:pP-P, n595,** σ**2^{s}00**/663, **mb5.0**/174, **MS5.0**/81, **34C-30D, Fault plane solution: NP1:**ϕ_s208.72063°, δ76.64812°, λ-16.86069°. **NP2:**ϕ_s302.72418°, δ73.60810°, λ-166.07126°. **Principal axes:** T Plg2.0778°, Azm256.0989°; N Plg68.6140°, Azm351.4146°; P Plg21.2749°, Azm165.2894°; **Xizang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DANN	**Dangsing**	4.54	175	*e*Pn	Pn	10 45 29.1	+3.1
DANN				*e*Sn	Sn	10 46 25.8	+6.8
	2µm,0.8s						
GKN	**Gorkha**	5.00	167	*e*Pn	Pn	10 45 35.3	+3.2
DDI	**Dehra Dun**	5.19	242	*e*P	Pn	10 45 39.1	+4.3
DDI				*i* x	x	10 45 58.4	
DDI				*e*x	x	10 47 08.2	
DDI				*e*x	x	10 47 12.9	
DDI				*e*x	x	10 47 52.3	
KKN	**Kakani**	5.35	161	*e*Pn	Pn	10 45 39.7	+2.7
KKN				*e*Sn	Sn	10 46 43.1	+4.3
	2µm,0.9s						
GUN	**Gumba**	5.42	156	*e*Pn	Pn	10 45 40.6	+2.5
DMN	**Daman**	5.48	163	*e*Pn	Pn	10 45 41.6	+2.8
DMN				*e*Sn	Sn	10 46 47.5	+5.4
	3µm,1.0s						
SMLA	**Simla**	5.54	253	*e*P	Pn	10 45 41.9	+2.4
SMLA				*e*P	Pn	10 45 42.3	+2.9
SMLA				*i* x	x	10 46 03.7	
SMLA				*e*x	x	10 47 17.9	
SMLA				*e*x	x	10 47 20.6	
PKIN	**Phulchoki**	5.58	161	*e*Pn	Pn	10 45 43.0	+2.7
PKIN				*e*Sn	Sn	10 46 48.9	+4.2
	3µm,1.1s						
PKI	**Pulchoki**	5.59	161	*e*Pn	Pn	10 45 43.0	+2.5
PKI				*e*Sn	Sn	10 46 49.3	+4.3
	4µm,1.2s						
DHRM	**DHARAMSHALA**	5.99	266	*e*P	Pn	10 45 47.5	+1.6
DHRM				*e*P	Pb	10 45 47.6	-14
DHRM				*e*x	x	10 47 31.8	
TAPN	**Taplejung**	6.69	145	*e*Pn	Pn	10 45 57.7	+2.2
TAPN				*e*Sn	Sn	10 47 15.6	+3.7
GTK	**Tadong**	7.17	139	*e*P	Pn	10 46 03.5	+1.5
GTK				*e*x	x	10 48 08.4	
LSA	**Lhasa**	7.39	113	P	Pn	10 46 09.0	+3.8
LSA				S	Sn	10 47 26.2	-3.3
LSA				pmax	pmax		
	comp=Z,180nm,1.3s						
LSA				LR	LR		
	comp=N,34µm,7.0s						
LSA				LR	LR		
	comp=E,45µm,9.7s						
LSA				LR	LR		
	comp=Z,73µm,8.8s						
LSA	**Lhasa**	7.39	113	P	Pn	10 46 09.1	+3.8
LSA	**Lhasa**	7.39	113	Pn	Pn	10 46 09.1	+3.8
LSA	**Lhasa**	7.39	113	P	Pn	10 46 09.7	+4.4
NIL	**Nilore**	8.49	278	P	Pn	10 46 21.9	+1.9
NIL	**Nilore**	8.49	278		Pn	10 46 21.9	+1.9
NIL	**Nilore**	8.49	278	P	Pn	10 46 22.4	+2.4
KSH	**Kashi**	8.90	320	P	Pn	10 46 26.8	+1.1
KSH				S	Sn	10 48 07.1	+1.0
KSH				pmax	pmax		
	comp=Z,16nm,1.6s						
KSH				pmax	pmax		
	comp=Z,170nm,3.6s						
KSH				LR	LR		
	comp=Z,12µm,8.1s						
KSH				LR	LR		
	comp=Z,34µm,10.2s						
KSH				LR	LR		
	comp=Z,19µm,9.0s						
BOK	**Bokaro**	9.33	166	*e*P	Pn	10 46 31.6	+0.1
BOK				*e*S	Sn	10 48 10.3	-6.3
CEP	**Cherat**	9.62	279	P	Pn	10 46 37.0	+1.5
CEP				S	Sn	10 48 25.0	+1.2
GUWA	**GUWAHATI**	9.86	130	*e*P	Pn	10 46 38.9	+0.2
TEZP	**TEZPUR**	10.31	125	*e*P	Pn	10 46 43.7	-1.2
TEZP				*e*x	Sn	10 48 36.8	-3.9
SHL	**Shillong**	10.43	132	P	Pn	10 46 45.2	-1.5
SHL	**Shillong**	10.43	132	*e*P	Pn	10 46 44.0	-2.6
SHL				*e*P	Pn	10 46 44.8	-1.9
SHL				*e*x	x	10 48 42.0	
SHL				IAMs_20	IAMs_20	10 50 58.2	
	comp=Z,11µm,9.1s						
SHL	**Shillong**	10.43	132	Pn	Pn	10 46 45.2	-1.5
ZIRO	**ZIRO**	10.53	118	*e*S	Sn	10 48 44.9	-1.4
SHLS	**Shalkode**	10.70	344	*e*P	Pn	10 46 47.1	-3.2
	baz=346						
SHLS	**Shalkode**	10.70	344	*e*P	Pn	10 46 47.0	-3.2
PDGK	**Podgornoye**	10.86	345	*i* P	Pn	10 46 52.8	+0.4
PDGK				pmax	pmax		
	comp=Z,193nm,1.3s						
SATY	**Saty**	10.87	340	*e*P	Pn	10 46 51.5	-1.2
	baz=340						
SATY	**Saty**	10.87	340	*e*P	Pn	10 46 51.4	-1.2
ULHL	**Ulahol**	10.91	331	P	Pn	10 46 56.3	+3.1
	SNR=28						
BHPL	**Bhopal**	10.94	210	*e*P	Pn	10 46 53.3	-0.3
BHPL				*e*S	Sn	10 48 51.8	-4.4
BHPL				*e*x	x	10 50 02.8	
KPKS	**Kokpek**	11.18	342	*e*P	Pn	10 46 55.0	-1.9
	baz=342						
KPKS	**Kokpek**	11.18	342	*e*P	Pn	10 46 54.9	-1.9
DIBR	**DIBRUGARH**	11.36	115	*e*x	Sn	10 49 11.4	+4.9
MDOK	**Medeo**	11.39	336	*e*P	Pn	10 46 57.8	-2.1
	baz=335						
MDOK				LR	LR	10 51 10.2	
	comp=Z,2µm,12.0s,baz=335						
MDOK	**Medeo**	11.39	336	*e*P	Pn	10 46 57.7	-2.1
MDOK				MLR	MLR		
	comp=Z,2µm,12.0s						
WMQ	**Urumqi**	11.43	16	*e*P	Pn	10 47 01.2	+1.0
WMQ				pP		10 47 06.5	
WMQ				S	Sn	10 49 13.2	+5.2
WMQ				pmax	pmax		
	comp=Z,65nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,490nm,4.1s						
WMQ				LR	LR		
	comp=Z,6µm,13.9s						
WMQ				LR	LR		
	comp=Z,17µm,17.3s						
WMQ				LR	LR		
	comp=Z,7µm,10.7s						
WMQ	**Urumqi**	11.43	16	P	Pn	10 46 59.9	-0.3
WMQ	**Urumqi**	11.43	16		Pn	10 46 59.9	-0.3
AAA	**Alma-Ata**	11.48	336	*e*P	Pn	10 46 59.8	-1.1
	baz=335						
AAA				LR	LR	10 51 22.2	
	comp=Z,2µm,12.1s,baz=335						
AAA	**Alma-Ata**	11.48	336	*e*P	Pn	10 47 02.6	+1.7
UCH	**Uchtor**	11.66	326	P	Pn	10 47 05.0	+1.3
	SNR=43						
MOKO	**MOKOCHONG**	11.71	121	*e*P	Pn	10 47 02.6	-1.6
MOKO				*e*x	x	10 49 13.7	
TKM2	**Tokmak 2**	11.73	331	P	Pn	10 47 06.7	+2.2
	SNR=48						
TKM2	**Tokmak 2**	11.73	331	*i* P	Pn	10 47 05.5	+1.0
TKM2				pmax	pmax		
	comp=Z,161nm,1.3s						
KOHI	**KOHIMA**	11.79	125	*e*x	Pn	10 47 04.2	-1.1
KOHI				*e*x	x	10 49 14.9	
KBK	**Karagaybulak**	11.79	328	P	Pn	10 47 08.1	+2.7
	SNR=23						
BELO	**BELONIA**	11.97	141	*e*P	Pn	10 47 09.1	+1.5
BELO				*e*x	x	10 49 25.0	
AAK	**Ala-Archa**	11.98	327	Pn	Pn	10 47 10.8	+2.9
	comp=Z,0.6nm,0.3s,baz=130,slow=18,SNR=26						
AAK				Lg	Lg	10 50 30.4	
	comp=Z,0.3nm,0.3s,baz=131,slow=6.0,SNR=7.4						
AAK	**Ala-Archa**	11.98	327	P	Pn	10 47 10.2	+2.3
	SNR=18						
AAK	**Ala-Archa**	11.98	327	⇓*e*P	Pn	10 47 09.1	+1.2
AAK				pmax	pmax		
	comp=Z,87nm,1.3s						
AAK	**Ala-Archa**	11.98	327	Pn	Pn	10 47 08.5	+0.6
AAK	**Ala-Archa**	11.98	327	P	Pn	10 47 10.3	+2.4
AAK				P	Pn	10 47 10.3	+2.4
CHKK	**Chushkaly**	12.03	337	*e*P	Pn	10 47 07.1	-1.2
	baz=337						
CHKK	**Chushkaly**	12.03	337	*e*P	Pn	10 47 07.1	-1.2
KBL	**Kabul**	12.03	282	P	Pn	10 47 08.5	-0.1
KBL	**Kabul**	12.03	282	Pn	Pn	10 47 08.5	-0.1
KBL	**Kabul**	12.03	282	P	Pn	10 47 10.2	+1.6
	SNR=83						
KBL				P	Pn	10 47 10.2	+1.6
	SNR=83						
KBL				S	Sn	10 49 21.3	-1.7
KBL				S	Sn	10 49 21.3	-1.7
LKP	**Lekhapani**	12.15	114	*e*x	x	10 49 40.7	
CHMS	**Chumysh**	12.15	329	P	Pn	10 47 13.4	+3.3
	SNR=9.3						
IMP	**Imphal**	12.27	128	*e*P	Pn	10 47 11.3	-0.5
IMP				*e*x	x	10 49 40.6	
KUU	**Kurty**	12.28	335	*e*P	Pn	10 47 10.0	-1.9
	comp=Z,13nm,1.3s,baz=335						
KUU				LR	LR	10 52 00.6	
	comp=Z,1µm,9.2s,baz=335						
KUU	**Kurty**	12.28	335	*e*P	Pn	10 47 09.9	-1.9
KUU				pmax	pmax		
	comp=Z,13nm,1.3s						
KUU				MLR	MLR		
	comp=Z,1µm,9.0s						
NGP	**Nagpur**	12.30	199	*e*P	Pn	10 47 09.7	-2.5
EKS2	**Erkin-Say**	12.34	325	P	Pn	10 47 17.5	+4.8
	SNR=35						
USP	**Ospenovka**	12.48	329	P	Pn	10 47 15.0	+0.4
	SNR=8.9						
SGDS	**Sogindy**	12.57	330	*e*P	Pn	10 47 14.4	-1.5
	comp=Z,6.2nm,1.8s,baz=329						
SGDS				LR	LR	10 52 24.6	
	comp=Z,618nm,9.3s,baz=329						
SGDS	**Sogindy**	12.57	330	*e*P	Pn	10 47 14.3	-1.5
SGDS				pmax	pmax		
	comp=Z,6.0nm,1.8s						
SGDS				MLR	MLR		
	comp=Z,618nm,9.0s						
TDK	**Taldyqorghan**	12.69	344	*e*P	Pn	10 47 16.4	-1.0
	comp=Z,24nm,1.1s,baz=343						
TDK				LR	LR	10 53 00.9	
	comp=Z,2µm,11.2s,baz=343						
TDK	**Taldyqorghan**	12.69	344	*e*P	Pn	10 47 16.3	-1.0
TDK				pmax	pmax		
	comp=Z,24nm,1.1s						
TDK				MLR	MLR		
	comp=Z,2µm,11.0s						
SAIH	**SAIHA**	13.41	138	*e*P	Pn	10 47 25.2	-2.3
SAIH				*e*x	x	10 49 50.2	
DZA	**Taraz**	13.76	320	*e*P	Pn	10 47 30.3	-1.8
	baz=319						
DZA				LR	LR	10 53 10.8	
	comp=Z,440nm,8.2s,baz=319						
DZA	**Taraz**	13.76	320	⇑*e*P	Pn	10 47 30.2	-1.8
DZA				MLR	MLR		
	comp=Z,440nm,8.0s						
MK31	**Makanchi Array**	13.91	357	*i* P	Pn	10 47 32.4	-1.7
MK31				pmax	pmax		
	comp=Z,63nm,0.7s						
MK31	**Makanchi Array**	13.91	357		Pn	10 47 32.2	-1.8
MKAR	**Makanchi Array**	13.91	357	Pn	Pn	10 47 33.2	-0.8
	comp=Z,1.2nm,0.3s,baz=181,slow=12,SNR=93						
MKAR				PcP	PcP	10 52 56.6	+0.6
	comp=Z,0.2nm,0.3s,baz=183,slow=1.8,SNR=5.1						
MKAR				LR	LR	10 54 11.5	
	comp=Z,3µm,19.6s,baz=177,slow=43						
MKAR				ScP	ScP	10 56 29.4	-0.2
	comp=Z,0.0nm,0.3s,baz=5.7,slow=1.4,SNR=4.4						
MKAR	**Makanchi Array**	13.91	357		Pn	10 47 32.0	-2.1
MAKZ	**Makanchi**	13.94	356	P	Pn	10 47 33.9	-0.6
MAKZ	**Makanchi**	13.94	356	Pn	Pn	10 47 33.9	-0.6
TAS	**Tashkent**	14.01	311	P	Pn	10 47 35.1	-0.4
TAS	**Tashkent**	14.01	311	Pn	Pn	10 47 35.1	-0.4
IUG	**Iuzhnay**	14.03	315	*e*P	Pn	10 47 34.2	-1.6
	comp=Z,21nm,1.3s,baz=314						
IUG				LR	LR	10 52 24.6	
	comp=Z,700nm,8.6s,baz=314						
IUG	**Iuzhnay**	14.03	315	*e*P	Pn	10 47 34.1	-1.6
IUG				pmax	pmax		
	comp=Z,21nm,1.3s						
IUG				MLR	MLR		
	comp=Z,700nm,9.0s						
BTLS	**Baital**	14.12	332	*e*P	Pn	10 47 34.7	-2.2
	baz=332						
BTLS	**Baital**	14.12	332	*e*P	Pn	10 47 34.6	-2.2
KK31	**Karatay Array**	14.35	319	P	Pn	10 47 38.4	-1.7
KK31	**Karatay Array**	14.35	319		Pn	10 47 38.4	-1.7
KKAR	**Karatay Array**	14.35	319	P	Pn	10 47 38.4	-1.7
KKAR	**Karatay Array**	14.35	319		Pn	10 47 38.4	-1.7
KKAR	**Karatay Array**	14.35	319	Pn	Pn	10 47 38.1	-2.0
ZSN	**Zaisan**	14.59	4	*e*P	Pn	10 47 40.6	-2.8
	baz=4.0						
ZSN	**Zaisan**	14.59	4	*e*P	Pn	10 47 40.5	-2.8
GTA	**Gaotai**	14.80	59	⇑P	Pn	10 47 44.2	-2.1
GTA				pP	P	10 47 48.5	-3.8
GTA				sP		10 47 51.6	
GTA				S	Sn	10 50 22.8	-7.6
GTA				pmax	pmax		
	comp=Z,8.0nm,1.4s						
GTA				pmax	pmax		
	comp=Z,230nm,7.3s						
GTA				LR	LR		
	comp=Z,20µm,16.0s						
GTA				LR	LR		
	comp=Z,7µm,15.6s						
GTA				LR	LR		
	comp=Z,6µm,14.2s						
BHUJ	**Bhuj**	15.43	235	*e*x	x	10 51 30.1	
HYB	**Hyderabad**	16.00	197	*i* P	Pn	10 47 57.0	-5.2
HYB	**Hyderabad**	16.00	197	*e*x	x	10 47 56.8	
HYB				*e*x	x	10 47 57.5	
HYB				IAmb	IAmb	10 48 01.3	
	comp=Z,82nm,0.6s						
POO	**Poona**	16.65	213	⇑*i*x	Pn	10 48 07.0	-3.5
	comp=Z,160nm,1.2s						
POO				*e*x	Pn	10 48 07.9	-2.7
POO				IAmb	IAmb	10 48 09.3	
	comp=Z,47nm,0.8s						
POO				*i* PP	sP	10 48 20.0	+1.3
POO				*i* x	x	10 51 06.0	
POO				*i* x	x	10 51 20.0	
DGZ	**Jazzator, Alta**	17.07	9	*de*P	Pn	10 48 13.9	-1.8
DGZ				pmax	pmax		
	comp=Z,66nm,1.5s						
LZH	**Lanzhou**	17.19	74	*e*P	Pn	10 48 16.0	-1.3
LZH				pP	pP	10 48 21.3	-1.8
LZH				sP	sP	10 48 23.5	-1.4
LZH				S	Sn	10 51 28.3	-0.3
LZH				sS	S	10 51 35.1	-2.9
LZH				SS	SnSn	10 51 46.5	+4.6
LZH				pmax	pmax		
	comp=Z,110nm,1.2s						
LZH				pmax	pmax		
	comp=Z,990nm,4.9s						
LZH				LR	LR		
	comp=Z,10µm,12.5s						
LZH				LR	LR		
	comp=Z,5µm,13.0s						
LZH				LR	LR		
	comp=Z,4µm,12.5s						
CD2	**Chengdu**	17.44	91	P	Pn	10 48 20.1	-0.3
CD2				sP	pP	10 48 25.2	-0.5
CD2				S	Sn	10 51 37.9	+3.3
CD2				pmax	pmax		
	comp=Z,50nm,0.8s						
CD2				pmax	pmax		
	comp=Z,370nm,3.8s						
CD2				LR	LR		
	comp=Z,10µm,10.0s						
CD2				LR	LR		
	comp=Z,8µm,9.4s						
CD2				LR	LR		
	comp=Z,10µm,9.2s						
HRA	**Herat**	17.64	281		Pn	10 48 23.2	+0.2
SEM	**Semipalatinsk**	17.65	353	*e*P	Pn	10 48 19.7	-3.3
	baz=353						
SEM	**Semipalatinsk**	17.65	353	*e*P	Pn	10 48 19.7	-3.3
KURBB	**Kurchatov Arra**	18.07	350	P	Pn	10 48 26.4	-1.6
	comp=Z,0.3nm,0.3s,baz=166,slow=11,SNR=44						
KURBB				ScP	ScP	10 56 38.2	+0.7
	baz=190,slow=2.4,SNR=5.3						
KURK	**Kurchatov**	18.15	350	*d i*P	Pn	10 48 26.6	-2.3
KURK				pmax	pmax		
	comp=Z,80nm,1.7s						
KURK	**Kurchatov**	18.15	350	P	Pn	10 48 26.9	-2.0
KURK	**Kurchatov**	18.15	350	P	Pn	10 48 27.2	-1.7
KURK				P	Pn	10 48 27.2	-1.7
KMI	**Kunming**	18.62	110	⇓P	Pn	10 48 36.1	+1.0
KMI				pP	pP	10 48 38.7	-0.3
KMI				sP	sP	10 48 40.7	-0.1
KMI				S	Sn	10 51 59.0	-4.5
KMI				sS	S	10 52 08.1	+0.7
KMI				pmax	pmax		
	comp=Z,110nm,1.0s						
KMI				pmax	pmax		
	comp=Z,850nm,3.8s						
KMI				LR	LR		
	comp=Z,4µm,9.1s						
KMI				LR	LR		
	comp=Z,3µm,10.9s						
KMI				LR	LR		
	comp=Z,3µm,10.6s						
KMI	**Kunming**	18.62	110	P	P	10 48 33.2	-1.7
KMI				pmax	pmax		
	comp=Z,138nm,1.1s						
KMI	**Kunming**	18.62	110		P	10 48 33.2	-1.7
KMI				IAmb	IAmb	10 48 42.7	
	comp=Z,138nm,1.1s						
BRZS	**Berezniki**	18.82	338	*e*P	P	10 48 34.9	-1.9
	baz=338						
BRZS				LR	LR	10 55 54.0	
	comp=Z,998nm,11.8s,baz=338						
BRZS	**Berezniki**	18.82	338	*e*P	P	10 48 34.8	-1.9
BRZS				MLR	MLR		
	comp=Z,999nm,12.0s						
GOA	**Goa**	19.36	209	*e*P	P	10 48 42.3	-0.4
GOA				*e*P	Pn	10 48 42.9	-1.0
GOA				IAmb	IAmb	10 48 46.6	
	comp=Z,88nm,0.9s						
GOA				IAmb	IAmb	10 48 46.8	
	comp=Z,230nm,1.4s						
MHMT	**Maesarieng**	19.66	135	P	P	10 48 45.0	-1.0
	comp=Z,2µmcomp=Z,172nm,1.2s						
CM33	**Chiang Mai Arr**	19.80	131	P	P	10 48 47.0	-0.5
CHTO	**Chiang Mai**	19.80	131	P	P	10 48 46.7	-0.8
CHTO				pmax	pmax		
	comp=Z,39nm,0.7s						
CHTO	**Chiang Mai**	19.80	131		P	10 48 46.7	-0.8
CMMT	**Chiang Mai**	19.80	131	P	P	10 48 46.2	-1.4
	comp=Z,700nmcomp=Z,36nm,0.6s						
CM32	**Chiang Mai Arr**	19.86	132	P	P	10 48 48.0	-0.2
CM34	**Chiang Mai Arr**	19.90	131	P	P	10 48 48.0	-0.7
MDRS	**Chennai**	19.93	189	*e*P	P	10 48 50.3	+1.3
MDRS				IAmb	IAmb	10 48 51.1	
	comp=Z,46nm,1.2s						
PAYA	**Payao**	20.00	128	P	P	10 48 50.8	+1.0
	comp=Z,11µmcomp=Z,1µm,1.0s						
CM35	**Chiang Mai Arr**	20.03	131	P	P	10 48 49.0	-1.1
CM15	**Chiang Mai Arr**	20.05	132	P	P	10 48 50.0	-0.4
	comp=Z,945nmcomp=Z,131nm,0.9s						
CM31	**Chiang Mai Arr**	20.06	132	P	P	10 48 51.4	+1.0
	comp=Z,22µmcomp=Z,3µm,0.9s						
CM31	**Chiang Mai Arr**	20.06	132	P	P	10 48 50.5	0.0
CMAR	**Chiang Mai Arr**	20.06	132	P	P	10 48 50.3	-0.1
	comp=Z,46nm,1.0s,baz=315,slow=10,SNR=132						
CMAR				ScP	ScP	10 56 41.4	-1.1
	comp=Z,3.8nm,1.0s,baz=296,slow=3.2,SNR=15						
CMAR				LR	LR	10 56 59.7	
	comp=Z,3µm,19.8s,baz=360,slow=38						
CMAR	**Chiang Mai Arr**	20.06	132	P	P	10 48 50.0	-0.4
CM13	**Chiang Mai Arr**	20.07	132	P	P	10 48 51.0	+0.5
	comp=Z,916nmcomp=Z,103nm,0.8s						
CM02	**Chiang Mai Arr**	20.08	132	P	P	10 48 51.0	+0.4
	comp=Z,871nmcomp=Z,125nm,0.9s						
CM01	**Chiang Mai Arr**	20.10	132	P	P	10 48 51.4	+0.6
	comp=Z,801nmcomp=Z,123nm,0.8s						
CM09	**Chiang Mai Arr**	20.10	132	P	P	10 48 51.4	+0.5
	comp=Z,802nmcomp=Z,96nm,1.0s						
CM05	**Chiang Mai Arr**	20.11	132	P	P	10 48 51.0	+0.1
	comp=Z,713nmcomp=Z,85nm,1.0s						
CM36	**Chiang Mai Arr**	20.11	132	P	P	10 48 51.0	0.0
CM04	**Chiang Mai Arr**	20.13	132	P	P	10 48 51.5	+0.4
	comp=Z,882nmcomp=Z,101nm,0.8s						
LAMP	**Lampang**	20.45	130	P	P	10 48 55.5	+0.9
	comp=Z,107nm,0.8s						
NANT	**Nan**	20.95	128	P	Pn	10 49 03.0	+0.4
	comp=Z,22µmcomp=Z,809nm,0.8s						
ZAA0	**Zalesovo Array**	21.07	2	P	P	10 49 00.3	-0.8
ZAA0				IAmb	IAmb	10 49 04.1	
	comp=Z,95nm,1.4s						
ZALV	**Zalesovo Beam**	21.07	2	P	P	10 49 00.9	-0.2
	comp=Z,20nm,0.8s,baz=202,slow=9.3,SNR=36						
ZALV				LR	LR	10 58 07.9	
	comp=Z,1µm,21.6s,baz=187,slow=40						
ZALV	**Zalesovo Beam**	21.07	2	P	P	10 48 59.9	-1.2
GEYT	**Alibeck**	21.15	291	P	P	10 49 03.4	+1.3
	comp=Z,17nm,0.8s,baz=130,slow=8.3,SNR=24						
GEYT				LR	LR	10 57 51.8	
	comp=Z,2µm,19.1s,baz=65,slow=38						
GEYT	**Alibeck**	21.15	291	P	P	10 49 02.7	+0.6
GYA0B	**ALIBECK ARRAY**	21.15	291	P	P	10 49 02.1	0.0
GYA0B				IAmb	IAmb	10 49 12.0	
	comp=Z,65nm,0.9s						
GYA	**Guiyang**	21.22	101	⇑P	P	10 49 02.8	-0.3
GYA				pP	pP	10 49 06.8	-0.4
GYA				sP	sP	10 49 11.0	+1.9
GYA				S	S	10 52 55.9	-3.3
GYA				sS	sS	10 53 02.6	-3.1
GYA				pmax	pmax		
	comp=Z,36nm,1.0s						
GYA				pmax	pmax		
	comp=Z,850nm,4.0s						
GYA				LR	LR		
	comp=Z,2µm,16.6s						
GYA				LR	LR		
	comp=Z,2µm,16.6s						
GYA				LR	LR		
	comp=Z,3µm,25.7s						
XAN	**Xi'an**	21.35	80	P	P	10 49 02.6	-1.7
XAN				pP	pP	10 49 05.6	-2.9
XAN				PP	PnPn	10 49 29.9	+5.9
XAN				pmax	pmax		
	comp=Z,18nm,1.3s						
XAN				pmax	pmax		
	comp=Z,260nm,3.5s						
XAN				LR	LR		
	comp=Z,6µm,18.3s						
XAN				LR	LR		
	comp=Z,2µm,17.6s						
XAN				LR	LR		
	comp=Z,6µm,22.1s						
DGPR	**DIGLIPUR**	21.49	154	*e*x	P	10 49 00.1	-5.7
DGPR				*e*x	P	10 49 01.6	-4.2
DGPR				*i* x	P	10 49 11.0	+5.2
DGPR				IAmb	IAmb	10 49 17.6	
	comp=Z,372nm,0.3s						
DGPR				*e*x	S	10 52 57.8	-6.4
SLVN	**Son La**	21.57	117	P	P	10 49 07.6	+0.8
SLVN				IAmb	IAmb	10 49 19.0	
	comp=Z,134nm,1.2s						
UTTA	**Uttaradit**	21.61	130	P	P	10 49 07.7	+0.5
	comp=Z,2µmcomp=Z,232nm,1.1s						
PHIT	**Phitsanulok**	21.94	131	P	P	10 49 11.5	+0.8
	comp=Z,5µmcomp=Z,641nm,0.9s						
BVAR	**Borovoye Array**	22.18	339	P	P	10 49 12.1	-0.9
	comp=Z,1.2nm,0.5s,baz=80,slow=17,SNR=3.9						
BRVK	**Borovoye**	22.24	339	*d i*P	P	10 49 12.6	-1.1
BRVK				pmax	pmax		
	comp=Z,68nm,1.7s						
BRVK	**Borovoye**	22.24	339	P	P	10 49 13.5	-0.2
BRVK				IAmb	IAmb	10 49 24.7	
	comp=Z,121nm,1.5s						
BRVK	**Borovoye**	22.24	339	P	P	10 49 12.8	-0.9
BRVK				P	P	10 49 12.8	-0.9
ENH	**Enshi**	22.40	90	P	P	10 49 14.6	-1.0
ENH				IAmb	IAmb	10 49 37.7	
	comp=Z,108nm,1.0s						
UTHA	**Uthaitani**	22.60	136	P	P	10 49 18.0	+0.2
	comp=Z,2µmcomp=Z,309nm,0.9s						

BTO	**Baotou**	**22.66**	**63**	*e*P	**P**	**10 49 16.6**	**-1.7**
MOY	**Mondy**	**22.75**	**29**	*e*P	**P**	**10 49 18.4**	**-0.8**
MOY				pmax	pmax		
	comp=Z,93nm,2.8s						
PBA	**Port Blair**	**22.83**	**156**	*e*P	P	10 49 22.2	+2.1
PBA				IAmb	IAmb	10 49 27.9	
	comp=Z,621nm,1.7s						
ZAK	**Zakamensk**	**22.84**	**34**	*e*P	**P**	**10 49 20.4**	**+0.2**
ZAK				pmax	pmax		
	comp=Z,14nm,1.2s						
SONM	**Songino Array**	**22.92**	**43**	P	**P**	**10 49 21.9**	**+0.8**
	comp=Z,25nm,1.1s,baz=235,slow=7.3,SNR=76						
SONM				PcP	**PcP**	**10 53 13.5**	**+2.1**
	comp=Z,2.1nm,0.8s,baz=215,slow=2.2,SNR=4.2						
SONM				ScP	**ScP**	**10 56 48.7**	**-0.6**
	comp=Z,2.6nm,1.1s,baz=218,slow=2.9,SNR=6.9						
SONM				LR	LR	10 58 23.7	
	comp=Z,1µm,21.3s,baz=233,slow=37						
SONM	**Songino Array**	**22.92**	**43**	P	**P**	**10 49 21.8**	**+0.7**
SONM				pmax	pmax		
	comp=Z,42nm,1.2s						
SONM	**Songino Array**	**22.92**	**43**	P	**P**	**10 49 21.8**	**+0.7**
NONG	**Nongkai**	**23.12**	**125**	P	**P**	**10 49 25.8**	**+2.6**
	comp=Z,128nm,1.3s						
ULN	**Ulaanbaatar**	**23.32**	**43**⇓	*e*P	**P**	**10 49 25.7**	**+0.5**
ULN				pmax	pmax		
	comp=Z,70nm,1.7s						
ULN	**Ulaanbaatar**	**23.32**	**43**	P	**P**	**10 49 25.1**	**0.0**
ULN				IAmb	IAmb	10 49 32.0	
	comp=Z,47nm,1.1s						
ULN	**Ulaanbaatar**	**23.32**	**43**	P	**P**	**10 49 26.2**	**+1.1**
JLN	**Jalan Bani Buh**	**23.72**	**249**	P	**P**	**10 49 31.2**	**+1.9**
	SNR=13						
WSAR	**Wadi Sarin**	**23.79**	**252**	P	**P**	**10 49 32.9**	**+3.0**
	comp=Z,6.0nm,0.6s,baz=108,slow=11,SNR=6.8						
WSAR				LR	LR	10 59 43.3	
	comp=Z,1µm,21.2s,baz=100,slow=39						
WBK	**Wadi Bani Khal**	**23.83**	**251**	P	**P**	**10 49 32.7**	**+2.4**
WBK				P	**P**	**10 49 32.7**	**+2.4**
HHC	**Hu-ho-hao-te**	**23.85**	**62**	*e*P	**P**	**10 49 29.2**	**-1.3**
HHC				PP	**PnPn**	**10 50 02.5**	**+4.2**
HHC				S	**S**	**10 53 41.6**	**-4.9**
HHC				pmax	pmax		
	comp=Z,13nm,1.0s						
HHC				pmax	pmax		
	comp=Z,610nm,6.6s						
HHC				LR	LR		
	comp=Z,23µm,15.8s						
HHC				LR	LR		
	comp=Z,4µm,16.9s						
HHC				LR	LR		
	comp=Z,4µm,16.1s						
CHAI	**Chaiyaphum**	**23.89**	**131**	P	**P**	**10 49 31.0**	**+0.1**
	comp=Z,2µmcomp=Z,150nm,1.2s						
TLY	**Talaya**	**23.90**	**32***c*	*i*P	**P**	**10 49 32.0**	**+1.3**
TLY				*e*S	**S**	**10 53 48.5**	**+1.6**
TLY				*e*SS	**SnSn**	**10 54 23.9**	**-2.2**
TLY				pmax	pmax		
	comp=Z,25nm,1.5s						
TLY				MLR	MLR		
	comp=Z,4µm,15.0s						
TLY	**Talaya**	**23.90**	**32**	P	**P**	**10 49 30.5**	**-0.2**
ABKAR	**Akbulak array**	**23.91**	**320**	P	**P**	**10 49 30.5**	**-0.3**
ABKAR				IAmb	IAmb	10 49 38.9	
	comp=Z,33nm,0.8s						
ABKAR	**Akbulak array**	**23.91**	**320**	P	**P**	**10 49 30.8**	**0.0**
TIY	**Taiyuan**	**24.17**	**70**	*e*P	**P**	**10 49 32.8**	**-0.6**
TIY				PP	**PnPn**	**10 50 09.1**	**+6.5**
TIY				S	**S**	**10 53 53.4**	**+1.9**
TIY				SS	**SnSn**	**10 54 35.6**	**+2.7**
TIY				pmax	pmax		
	comp=Z,230nm,4.7s						
TIY				LR	LR		
	comp=Z,2µm,7.7s						
TIY				LR	LR		
	comp=Z,2µm,10.9s						
SMDO	**Samad**	**24.35**	**253**	P	**P**	**10 49 37.2**	**+2.0**
	SNR=6.4						
SMDO				P	**P**	**10 49 37.2**	**+2.0**
	SNR=6.4						
BANOM	**Banah**	**24.53**	**261**	P	**P**	**10 49 40.1**	**+3.3**
IRK	**Irkutsk**	**24.57**	**32**	*e*P	**P**	**10 49 35.6**	**-1.3**
IRK				pmax	pmax		
	comp=Z,61nm,2.5s						
SHME	**Shamm**	**24.61**	**261**	P	**P**	**10 49 40.0**	**+2.5**
SHME				P	**P**	**10 49 40.0**	**+2.5**
JMDO	**Jabal Madar**	**24.64**	**251**	P	**P**	**10 49 41.8**	**+4.0**
	SNR=6.7						
JMDO				P	**P**	**10 49 41.8**	**+4.0**
	SNR=6.7						
HOQ	**Hoqain**	**24.69**	**255**	P	**P**	**10 49 41.7**	**+3.5**
HOQ				P	**P**	**10 49 41.7**	**+3.5**
MDH	**Madha**	**24.78**	**259**	P	**P**	**10 49 40.7**	**+1.7**
PHET	**Kaeng Krachan**	**24.84**	**139**	P	**P**	**10 49 42.7**	**+3.1**
	comp=Z,978nmcomp=Z,91nm,0.7s						
MASF	**Masafi**	**24.86**	**260**	P	**P**	**10 49 43.8**	**+4.1**
MASF				P	**P**	**10 49 43.8**	**+4.1**
MASF				P	**P**	**10 49 43.8**	**+4.1**
UOSS	**Minazif**	**25.00**	**259**	P	**P**	**10 49 42.5**	**+1.6**
UOSS				P	**P**	**10 49 42.5**	**+1.6**
SOHO	**SOHO**	**25.08**	**257**	P	**P**	**10 49 44.0**	**+2.3**
SOHO				P	**P**	**10 49 44.0**	**+2.3**
HATD	**Hatta, Dubai**	**25.11**	**258**	P	**P**	**10 49 43.9**	**+1.9**
HATD				P	**P**	**10 49 43.9**	**+1.9**
BSY	**Bisya**	**25.18**	**253**	P	**P**	**10 49 44.3**	**+1.6**
	SNR=5.1						
BSY				P	**P**	**10 49 44.3**	**+1.6**
	SNR=5.1						
ASHO	**Ashiyiah**	**25.23**	**258**	P	**P**	**10 49 46.7**	**+3.6**
	SNR=6.4						
SRAK	**Srakaew**	**25.36**	**133**	P	**P**	**10 49 50.7**	**+6.5**
	comp=Z,5µmcomp=Z,795nm,0.8s						
ARQ	**Araqi**	**25.45**	**255**	P	**P**	**10 49 47.4**	**+2.3**
	SNR=7.3						
ARQ				P	**P**	**10 49 47.4**	**+2.3**
	SNR=7.3						
MHTO	**MHTO**	**25.48**	**249**	P	**P**	**10 49 47.3**	**+2.0**
	SNR=17						
MHTO				P	**P**	**10 49 47.3**	**+2.0**
	SNR=17						
PATY	**Pattaya**	**25.52**	**137**	P	**P**	**10 49 52.9**	**+7.2**
	comp=Z,225nm,1.0s						
FAQ	**Al Faqa, Dubai**	**25.59**	**259**	P	**P**	**10 49 48.9**	**+2.6**
FAQ				P	**P**	**10 49 48.9**	**+2.6**
AKTO	**Aktyubinsk**	**25.60**	**321**	P	**P**	**10 49 46.2**	**0.0**
	comp=Z,15nm,0.8s,baz=121,slow=7.2,SNR=30						
AKTO				LR	LR	11 00 44.5	
	comp=Z,4µm,18.7s,baz=131,slow=39						
PALK	**Pallekele**	**25.61**	**186**	P	**P**	**10 49 49.0**	**+2.5**
	comp=Z,39nm,1.2s,baz=158,slow=7.9,SNR=3.5						
PALK				LR	LR	10 59 06.4	
	comp=Z,2µm,19.9s,baz=105,slow=35						
PALK	**Pallekele**	**25.61**	**186**	P	**P**	**10 49 46.2**	**-0.4**
PALK				pmax	pmax		
	comp=Z,68nm,1.3s						
PALK	**Pallekele**	**25.61**	**186**	P	**P**	**10 49 46.1**	**-0.4**
PALK				IAmb	IAmb	10 49 55.5	
	comp=Z,68nm,1.2s						
ALNE	**Al Ain**	**25.75**	**257**	P	**P**	**10 49 50.7**	**+2.9**
	SNR=21						
ASUD	**Al Ashush, Dub**	**25.85**	**259**	P	**P**	**10 49 51.7**	**+2.9**
ASUD				P	**P**	**10 49 51.7**	**+2.9**
WHN	**Wuhan**	**26.43**	**87** ⇑	P	**P**	**10 49 54.3**	**+0.4**
WHN				pmax	pmax		
	comp=Z,90nm,1.3s						
WHN				LR	LR		
	comp=Z,12µm,14.3s						
WHN				LR	LR		
	comp=Z,5µm,13.0s						
WHN				LR	LR		
	comp=Z,6µm,19.4s						
BJT	**Baijiatuau**	**27.23**	**65**	P	**P**	**10 50 00.6**	**-0.4**
BJT				pmax	pmax		
	comp=Z,22nm,1.2s						
BJT	**Baijiatuau**	**27.23**	**65**	P	**P**	**10 50 00.6**	**-0.4**
QIZ	**Qiongzhong**	**27.43**	**114**	P	**P**	**10 50 01.9**	**-1.1**
QIZ				S	**S**	**10 54 43.8**	**+0.2**
QIZ				LR	LR		
	comp=Z,4µm,19.1s						
QIZ				LR	LR		
	comp=Z,4µm,17.7s						
QIZ				LR	LR		
	comp=Z,2µm,10.0s						
PKDT	**Phuket**	**28.49**	**148**	P	P	10 50 19.0	+6.6
SVE	**Sverdlovsk**	**28.58**	**334**	*e*P	**P**	**10 50 13.0**	**+0.1**
SVE				pmax	pmax		
	comp=Z,28nm,1.4s						
SVE				MLR	MLR		
	comp=Z,3µm,13.0s						
SHAO	**Shalim**	**28.97**	**246**	P	**P**	**10 50 18.3**	**+1.5**
SHAO				P	**P**	**10 50 18.3**	**+1.5**
ARU	**Arti**	**29.11**	**331***d*	*i*P	**P**	**10 50 17.3**	**-0.3**
ARU						10 51 09.3	
ARU						10 53 23.2	
ARU				S	**S**	**10 55 09.4**	**+0.2**
ARU				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ARU				MLR	MLR		
	comp=Z,2µm,15.0s						
ARU	**Arti**	**29.11**	**331**	P	**P**	**10 50 17.7**	**+0.2**
MAK	**Makhachkala**	**29.81**	**300**	*e*P	**P**	**10 50 24.7**	**+0.7**
MAK				*e*PPP	PPP	10 51 23.9	
MAK				*e*S	**S**	**10 55 20.3**	**-0.3**
MAK				*e*SSS	SSS	10 57 07.1	
MAK				pmax	pmax		
	comp=Z,160nm,1.2s						
MAK				MLR	MLR		
	comp=Z,2µm,13.0s						
NJ2	**Nanjing**	**29.88**	**82**	*e*P	**P**	**10 50 23.6**	**-1.1**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
NJ2				LR	LR		
	comp=Z,4µm,13.7s						
NJ2				LR	LR		
	comp=Z,3µm,13.7s						
NJ2				LR	LR		
	comp=Z,4µm,14.7s						
RBK	**Rabkut**	**30.37**	**247**	P	**P**	**10 50 30.0**	**+0.8**
RBK				P	**P**	**10 50 30.0**	**+0.8**
WHFO	**Wadi Hawf**	**30.47**	**248**	P	**P**	**10 50 31.0**	**+0.9**
GROC	**Groznyy**	**31.09**	**300**	*e*P	**P**	**10 50 33.3**	**-1.9**
GROC				*e*		10 51 32.3	
GROC				pmax	pmax		
	comp=Z,32nm,0.5s						
ABTO	**Aybut**	**31.16**	**248**	P	**P**	**10 50 37.5**	**+1.3**
ABTO				P	**P**	**10 50 37.5**	**+1.3**
DL2	**Dalian**	**31.42**	**68**	*e*P	**P**	**10 50 41.6**	**+3.4**
DL2				pmax	pmax		
	comp=Z,54nm,0.9s						
DL2				LR	LR		
	comp=Z,4µm,17.1s						
DL2				LR	LR		
	comp=Z,2µm,17.7s						
DL2				LR	LR		
	comp=Z,3µm,14.1s						
GNI	**Garni**	**31.68**	**294**⇑	*e*P	**P**	**10 50 44.2**	**+3.5**
GNI				pmax	pmax		
	comp=Z,42nm,1.7s						
KULM	**Kulim**	**31.85**	**146**	P	**P**	**10 50 41.0**	**-1.1**
KULM				IAmb	IAmb	10 51 00.1	
	comp=Z,28nm,1.0s						
KZRT	**Kazreti**	**31.97**	**297**	P	P	10 50 48.8	+5.6
GUDG	**Gudauri**	**31.98**	**299**	P	P	10 50 48.8	+5.4
SSE	**Sheshan**	**32.03**	**83**	P	**P**	**10 50 42.6**	**-1.0**
SSE				S	**S**	**10 55 56.6**	**+1.1**
SSE				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SSE				pmax	pmax		
	comp=Z,100nm,6.5s						
SSE				LR	LR		
	comp=Z,1µm,17.6s						
SSE				LR	LR		
	comp=Z,470nm,17.7s						
BELG	**Belogornoye**	**32.26**	**318**⇑	*e*P	**P**	**10 50 45.5**	**+0.1**
BELG				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ZEI	**Tsey**	**32.43**	**299**	*e*P	P	10 50 54.2	+6.9
ZEI				pmax	pmax		
	comp=Z,13nm,1.2s						
AKH	**Akhalkalaki**	**32.66**	**297**	P	**P**	**10 50 50.4**	**+1.1**
AKH				pmax	pmax		
	comp=Z,64nm,0.9s						
AKH	**Akhalkalaki**	**32.66**	**297**	P	**P**	**10 50 50.4**	**+1.1**
NCK	**Nalchik**	**32.71**	**301**⇑	*e*P	**P**	**10 50 49.9**	**+0.3**
NCK				pmax	pmax		
	comp=Z,8.0nm,0.2s						
ONI	**Oni**	**32.74**	**299**	P	P	10 50 55.3	+5.4
KBZ	**Khabaz**	**33.24**	**301**	P	**P**	**10 50 56.2**	**+2.1**
	comp=Z,4.5nm,0.9s,baz=162,slow=5.5,SNR=6.3						
KBZ				LR	LR	11 05 29.2	
	comp=Z,2µm,20.7s,baz=88,slow=38						
KBZ	**Khabaz**	**33.24**	**301**⇓	*e*P	**P**	**10 50 55.5**	**+1.4**
KBZ				pmax	pmax		
	comp=Z,6.0nm,1.0s						
GOF	**Gofitskoye**	**33.28**	**303**⇑	*e*P	**P**	**10 50 59.0**	**+4.5**
GOF				pmax	pmax		
	comp=Z,55nm,1.1s						
KIV	**Kislovodsk**	**33.41**	**301**	*e*P	**P**	**10 50 57.2**	**+1.4**
KIV				pmax	pmax		
	comp=Z,20nm,1.0s						
KIV				MLR	MLR		
	comp=Z,3µm,15.0s						
SOCY	**Socotra**	**33.87**	**239**	P	**P**	**10 50 57.5**	**-2.5**
SOCY				IAmb	IAmb	10 51 00.4	
	comp=Z,33nm,1.2s						
GSI	**Gunungsitoli**	**34.15**	**154**	P	**P**	**10 51 01.5**	**-0.8**
GSI	**Gunungsitoli**	**34.15**	**154**	P	P	10 51 08.6	+6.3
	comp=Z,3µmcomp=Z,71nm,0.8s						
KIRV	**Kirov**	**34.31**	**329***d*	*i*P	**P**	**10 51 03.1**	**-0.1**
CN2	**Changchun**	**34.43**	**59**	*e*P	**P**	**10 51 07.4**	**+2.9**
CN2				sP	sP	10 51 14.4	+3.7
CN2				S	**S**	**10 56 32.5**	**-0.1**
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
CN2				LR	LR		
	comp=Z,7µm,16.0s						
CN2				LR	LR		
	comp=Z,2µm,16.0s						
CN2				LR	LR		
	comp=Z,2µm,15.0s						
RAYN	**Ar Rayn**	**34.48**	**264**	P	**P**	**10 51 06.1**	**+0.9**
RAYN				pmax	pmax		
	comp=Z,17nm,1.3s						
RAYN	**Ar Rayn**	**34.48**	**264**	P	**P**	**10 51 06.1**	**+0.9**
MARD	**Mardin**	**34.89**	**289**	P	**P**	**10 51 10.7**	**+1.9**
MARD				IAmb	IAmb	10 51 15.4	
	comp=Z,21nm,1.1s						
KOPT	**Kop Dagi**	**34.93**	**294**	P	**P**	**10 51 09.8**	**+0.5**
VRH	**Novokhopyorsk**	**35.34**	**314**	*e*P	**P**	**10 51 12.5**	**+0.3**
VRH				pmax	pmax		
	comp=Z,30nm,1.0s						
VRH				MLR	MLR		
	comp=Z,4µm,18.0s						
INCN	**Inchon**	**35.44**	**70**	P	**P**	**10 51 12.6**	**-0.7**
INCN				pmax	pmax		
	comp=Z,86nm,1.0s						
INCN	**Inchon**	**35.44**	**70**	P	**P**	**10 51 12.6**	**-0.7**
SOC	**Sochi**	**35.53**	**300**	*e*P	**P**	**10 51 14.0**	**0.0**
SOC				*e*PPP	PPP	10 52 47.3	
SOC				*e*S	**S**	**10 56 51.6**	**+2.0**
SOC				*e*SS	**SnSn**	**10 58 58.3**	**-11**
SOC				*e*SSS	SSS	10 59 34.8	
SOC				MLR	MLR		
	comp=Z,2µm,18.0s						
TJN	**Taejon**	**36.15**	**72**⇑	*e*P	**P**	**10 51 18.6**	**-0.8**
KS19	**Wonju Array Si**	**36.41**	**70**	P	**P**	**10 51 20.4**	**-1.3**
KS19				IAmb	IAmb	10 51 26.3	
	comp=Z,58nm,1.3s						
BKNI	**Bangkinang**	**36.42**	**149**	P	**P**	**10 51 19.9**	**-2.0**
KSAR	**Wonju Array Be**	**36.43**	**70**	P	**P**	**10 51 20.5**	**-1.3**
KSAR	**Wonju Array Be**	**36.43**	**70**	P	**P**	**10 51 20.5**	**-1.3**
KSRS	**Korea Array**	**36.46**	**70**	P	**P**	**10 51 21.4**	**-0.6**
	comp=Z,18nm,0.9s,baz=268,slow=8.2,SNR=25						
KSRS				LR	LR	11 07 12.6	
	comp=Z,803nm,19.8s,baz=288,slow=38						
NRIK	**Noril'sk**	**36.57**	**3**	P	**P**	**10 51 22.2**	**-0.4**
	comp=Z,13nm,1.0s,baz=169,slow=7.5,SNR=12						
NRIK				LR	LR	11 07 57.5	
	comp=Z,2µm,18.5s,baz=178,slow=39						
NRIK	**Noril'sk**	**36.57**	**3**	*i* P	**P**	**10 51 22.2**	**-0.4**
NRIK				pmax	pmax		
	comp=Z,27nm,1.1s						
NRIK	**Noril'sk**	**36.57**	**3**	P	**P**	**10 51 22.4**	**-0.2**
MALT	**Malatya**	**36.65**	**291**	P	**P**	**10 51 27.5**	**+3.7**
VORD	**Divnogorie**	**36.77**	**313**	*e*P	**P**	**10 51 26.7**	**+2.2**
VORD				pmax	pmax		
	comp=Z,20nm,0.9s						
VORD				MLR	MLR		
	comp=Z,1µm,13.0s						
VSR	**Storozhevoye**	**36.90**	**313**	*e*P	**P**	**10 51 26.5**	**+0.9**
VSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
VSR				MLR	MLR		
	comp=Z,2µm,16.0s						
ANN	**Anapa**	**37.23**	**302**	*e*P	P	10 51 17.6	-11
ANN				*e**PP	pP	10 51 21.0	-12
ANN				pmax	pmax		
	comp=Z,84nm,1.1s						
ANN				MLR	MLR		
	comp=N,1µm,12.0s						
ANN				MLR	MLR		
	comp=E,2µm,18.0s						
ANN				MLR	MLR		
	comp=Z,2µm,16.0s						
ZEA	**Zeya**	**37.35**	**43**	*e*P	P	10 51 33.8	+4.4
ZEA				*e*S	**S**	**10 57 19.4**	**+2.3**
ZEA				pmax	pmax		
	comp=Z,20nm,1.2s						
ZEA				smax	smax		
	comp=N,100nm,6.2s						
ZEA				MLR	MLR		
	comp=E,2µm,13.0s						
ZEA				MLR	MLR		
	comp=Z,2µm,13.0s						
LPSR	**Galich'ya Gora**	**37.37**	**315**	*e*P	**P**	**10 51 32.0**	**+2.5**
LPSR				pmax	pmax		
	comp=Z,30nm,0.9s						
LPSR				MLR	MLR		
	comp=Z,2µm,16.0s						
MDJ	**Mudanjiang**	**37.45**	**58**	P	**P**	**10 51 30.2**	**-0.1**
MDJ				pmax	pmax		
	comp=Z,9.0nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,94nm,3.7s						
MDJ				LR	LR		
	comp=Z,7µm,17.0s						
MDJ				LR	LR		
	comp=Z,1µm,17.4s						
MDJ				LR	LR		
	comp=Z,3µm,14.7s						
MDJ	**Mudanjiang**	**37.45**	**58**	P	**P**	**10 51 30.2**	**-0.1**
GAZ	**Gaziantep**	**37.74**	**290**	P	**P**	**10 51 33.7**	**+0.7**
GAZ				IAmb	IAmb	10 51 39.7	
	comp=Z,38nm,1.4s						
MSHR	**Mys Shultsa**	**38.58**	**61**⇓	*e*P	**P**	**10 51 41.5**	**+1.6**
MSHR				pmax	pmax		
	comp=Z,25nm,1.2s						
MOS	**Moscow**	**38.93**	**320**	*e*P	**P**	**10 51 41.2**	**-1.5**
MOS				*e*S	**S**	**10 57 38.6**	**-2.3**
MOS				pmax	pmax		
	comp=Z,62nm,0.8s						
MOS				MLR	MLR		
	comp=E,2µm,16.0s						
MOS				MLR	MLR		
	comp=Z,1µm,16.0s						
USA0B	**Ussuriysk Arra**	**39.16**	**59**⇑	*e*P	**P**	**10 51 44.4**	**-0.4**
USA0B	**Ussuriysk Arra**	**39.16**	**59**	P	**P**	**10 51 44.2**	**-0.6**
USRK	**Ussuriysk Ar.**	**39.16**	**59**	P	**P**	**10 51 44.6**	**-0.1**
	comp=Z,13nm,1.0s,baz=248,slow=7.4,SNR=5.4						
USRK				LR	LR	11 08 40.4	
	comp=Z,1µm,18.4s,baz=269,slow=38						
KLR	**Kul'dur**	**39.25**	**51***c*	*e*P	**P**	**10 51 45.2**	**-0.3**
KLR				pmax	pmax		
	comp=Z,31nm,1.0s						
OBN	**Obninsk**	**39.34**	**319**⇑	*i*P	**P**	**10 51 46.4**	**+0.3**
OBN				*e*		10 53 18.5	
OBN				*e*PPP	PPP	10 53 38.9	
OBN				*i* S	**S**	**10 57 49.2**	**+2.1**
OBN				*i* SS	SnSn	11 01 00.3	+19
OBN				pmax	pmax		
	comp=Z,52nm,1.1s						
OBN				MLR	MLR		
	comp=Z,785nm,18.0s						
OBN	**Obninsk**	**39.34**	**319**	P	**P**	**10 51 46.5**	**+0.4**
OBN				IAmb	IAmb	10 51 50.6	
	comp=Z,48nm,1.1s						
KLMR	**Klimovskoe**	**39.79**	**328**	*e*P	**P**	**10 51 47.9**	**-1.9**
KLMR				*e*		10 53 18.9	
KLMR				pmax	pmax		
	comp=Z,37nm,1.4s						
KLMR				MLR	MLR		
	comp=Z,2µm,14.0s						
KLMR	**Klimovskoe**	**39.79**	**328**	*e*P	**P**	**10 51 47.9**	**-1.9**
KLMR				AMP		10 51 56.3	
	comp=Z,37nm,1.4s						
KLMR				*e*PP	**PP**	**10 53 18.9**	**-2.1**
KLMR				*e*SS	**SS**	**11 00 47.4**	**-2.0**
KLMR				*e*SS	**SS**	**11 00 47.4**	**-2.0**
KLMR				LQ	LQ	11 05 07.9	
KLMR				LQ	LQ	11 05 07.9	
KLMR				LR	LR	11 07 31.8	
KLMR				AMP		11 09 07.7	
	comp=Z,2µm,13.5s						
BR131	**Keskin Array S**	**40.22**	**294**	P	**P**	**10 51 55.4**	**+1.6**
BR131				pmax	pmax		
	comp=Z,11nm,1.1s						
BR131	**Keskin Array S**	**40.22**	**294**	P	**P**	**10 51 55.4**	**+1.6**
BRTR	**Keskin Array B**	**40.22**	**294**	P	**P**	**10 51 55.4**	**+1.6**
	comp=Z,2.8nm,0.9s,baz=89,slow=6.7,SNR=11						
BRTR				LR	LR	11 11 23.5	
	comp=Z,381nm,20.2s,baz=69,slow=40						
BRTR	**Keskin Array B**	**40.22**	**294**	P	**P**	**10 51 54.8**	**+1.0**
BRTR	**Keskin Array B**	**40.22**	**294**	P	**P**	**10 51 54.8**	**+1.0**
SBUM	**Sibu**	**40.62**	**132**	P	**P**	**10 51 58.0**	**+0.8**
KSI	**Kapahiang**	**40.66**	**150**	P	**P**	**10 52 00.3**	**+2.8**
KSI				pmax	pmax		
	comp=Z,110nm,0.9s						
YAK	**Yakutsk**	**41.36**	**31**	*e*P	**P**	**10 52 04.9**	**+2.1**
YAK				pmax	pmax		
	comp=Z,16nm,0.8s						
YAK				MLR	MLR		
	comp=Z,903nm,14.0s						
YAK				MLR	MLR		
	comp=N,607nm,15.0s						
YAK				MLR	MLR		
	comp=E,523nm,12.0s						
YAK	**Yakutsk**	**41.36**	**31**	P	**P**	**10 52 03.3**	**+0.6**
TMCR	**Tamitsa**	**41.84**	**332**	*e*P	**P**	**10 52 05.9**	**-0.7**
TMCR				pmax	pmax		
	comp=Z,30nm,1.0s						
JMN	**Monobe**	**41.89**	**74**	P	**P**	**10 52 06.3**	**-1.2**
JMN				IAmb	IAmb	10 52 17.7	
	comp=Z,44nm,1.1s						
MDUB	**Mudurnu**	**41.99**	**296**	P	**P**	**10 52 08.2**	**-0.2**
GRNR	**Gornyy**	**42.39**	**49**⇓	*i*P	**P**	**10 52 15.4**	**+4.0**
GRNR				MLR	MLR		
	comp=E,2µm,14.0s						
GRNR				MLR	MLR		
	comp=Z,2µm,14.0s						
GRNR				MLR	MLR		
	comp=N,840nm,12.0s						
JWT	**Wachi**	**42.77**	**72**	P	**P**	**10 52 13.9**	**-0.7**
JWT				IAmb	IAmb	10 52 18.7	
	comp=Z,37nm,0.9s						
AKASG	**Malin Array Be**	**43.06**	**311**	P	**P**	**10 52 16.4**	**-0.4**
	comp=Z,12nm,0.7s,baz=80,slow=8.3,SNR=12						
AKASG				PP	**PP**	**10 53 56.5**	**-0.1**
	comp=Z,0.6nm,0.3s,baz=81,slow=9.7,SNR=3.0						
AKASG				LR	LR	11 12 52.3	
	comp=Z,2µm,19.9s,baz=85,slow=40						
AKASG	**Malin Array Be**	**43.06**	**311**	*i* P	**P**	**10 52 19.3**	**+2.5**
AKASG				pmax	pmax		
	comp=Z,12nm,0.7s						
AKASG	**Malin Array Be**	**43.06**	**311**	P	**P**	**10 52 19.8**	**+3.0**
AKBB	**Malin Array Si**	**43.06**	**311**	P	**P**	**10 52 16.7**	**-0.1**
AKBB				pmax	pmax		
	comp=Z,11nm,0.7s						
AKBB	**Malin Array Si**	**43.06**	**311**	P	**P**	**10 52 16.7**	**-0.1**
KIS	**Kishinev**	**43.27**	**306**	*e*P	P	10 52 26.0	+7.5
KIS				*e*LQ	LQ	11 04 51.0	
	comp=Z,800nm,17.0s						
KIS				*e*LR	LR	11 12 04.0	
	comp=Z,600nm,16.0s						
KIS	**Kishinev**	**43.27**	**306**	*e*P	P	10 52 26.0	+7.5
KIS				MLR	MLR		
	comp=Z,600nm,16.0s						
SORM	**Soroca**	**43.57**	**307** ⇑	P	**P**	**10 52 21.6**	**+0.7**
SORM	**Soroca**	**43.57**	**307**	P	**P**	**10 52 21.6**	**+0.7**
ELL	**Elmali**	**43.58**	**291**	P	**P**	**10 52 23.0**	**+1.7**
ELL				pmax	pmax		
	comp=Z,210nm,0.9s						
ELL	**Elmali**	**43.58**	**291**	P	**P**	**10 52 23.0**	**+1.7**
TPGR	**Topolog**	**43.64**	**302** ⇑	P	**P**	**10 52 23.7**	**+2.2**
VALR	**Valaam**	**43.90**	**327**⇑	*e*P	**P**	**10 52 23.6**	**+0.2**
VALR				pmax	pmax		

	comp=Z,50nm,0.9s						
AKAS	**Kas**	**43.92**	**290**	P	**P**	**10 52 23.9**	**-0.2**
AKAS				IAmb	IAmb	10 52 26.4	
	comp=Z,28nm,1.2s						
INU	**Inuyama**	**44.04**	**71**	P	**P**	**10 52 23.7**	**-1.2**
INU				IAmb	IAmb	10 52 29.2	
	comp=Z,26nm,0.9s						
MNK	**Minsk**	**44.18**	**316**	eP	**P**	**10 52 21.0**	**-4.7**
MNK				MLR	MLR		
	comp=Z,3µm,14.0s						
MNK	**Minsk**	**44.18**	**316**	i P	**P**	**10 52 23.7**	**-2.0**
	comp=E,4.0nm,1.4s						
MNK				i P	**P**	**10 52 23.7**	**-2.0**
	comp=N,11nm,1.4s						
MNK				i P	**P**	**10 52 23.7**	**-2.0**
	comp=Z,10.0nm,1.0s						
MNK				i PP	**PP**	**10 54 06.5**	**-2.0**
MNK				i PcP	**PcP**	**10 54 08.8**	**-1.6**
MNK				i PPP	PPP	10 54 41.6	
MNK				i ScP	**ScP**	**10 58 00.7**	**-1.8**
MNK				i S	**S**	**10 58 56.7**	**-2.0**
MNK				i SS	**SS**	**11 02 15.7**	**-0.5**
MNK				i ScS	**ScS**	**11 02 22.6**	**-1.6**
MNK				i SSS	SSS	11 02 55.2	
MNK				i LQ	LQ	11 07 35.9	
MNK				i LR	LR	11 10 57.3	
MNK				i LRM	MLR	11 14 17.0	
	comp=N,2µm,13.8s						
MNK				i LRM	MLR	11 14 19.9	
	comp=Z,1µm,13.5s						
MNK				i LRM	MLR	11 14 24.1	
	comp=E,116nm,10.3s						
JGF	**Kuroka**	**44.26**	**71**	P	**P**	**10 52 26.3**	**-0.4**
MAJO	**Matsushiro**	**44.73**	**69**	⇓iP	**P**	**10 52 29.2**	**-1.2**
MAJO				pmax	pmax		
	comp=Z,36nm,0.9s						
MAJO	**Matsushiro**	**44.73**	**69**	P	**P**	**10 52 29.4**	**-1.1**
MAJO				IAmb	IAmb	10 52 35.5	
	comp=Z,33nm,0.9s						
MAT	**Matsushiro**	**44.73**	**69**	P	**P**	**10 52 29.3**	**-1.1**
MAT				S	**S**	**10 59 06.2**	**-1.1**
MJAR	**Matsushiro Arr**	**44.73**	**69**	P	**P**	**10 52 29.6**	**-0.8**
	comp=Z,30nm,0.9s,baz=286,slow=9.2,SNR=23						
MJAR				LR	LR	11 13 45.1	
	comp=Z,393nm,18.6s,baz=305,slow=40						
MJAR	**Matsushiro Arr**	**44.73**	**69**	P	**P**	**10 52 29.0**	**-1.4**
LVZ	**Lovozero**	**44.73**	**336**	⇑eP	**P**	**10 52 31.9**	**+1.9**
LVZ				pmax	pmax		
	comp=Z,53nm,1.1s						
VRI	**Vrincioaia**	**44.76**	**304**	⇑P	**P**	**10 52 32.0**	**+1.5**
VRI	**Vrincioaia**	**44.76**	**304**	P	**P**	**10 52 32.0**	**+1.5**
TESR	**Tescani**	**44.78**	**305**	⇑P	**P**	**10 52 32.7**	**+2.1**
PLOR	**Plostina**	**44.82**	**304**	⇑P	**P**	**10 52 32.8**	**+1.8**
PLOR	**Plostina**	**44.82**	**304**	P	**P**	**10 52 32.8**	**+1.8**
KMPD	**K-Podol'skiy**	**44.83**	**308**	P	**P**	**10 52 31.0**	**0.0**
NACGM	**Naroch**	**44.85**	**317**	i P	**P**	**10 52 31.3**	**+0.2**
NACGM				i P	**P**	**10 52 31.3**	**+0.2**
NACGM				i Pb	**sP**	**10 52 36.2**	**-1.1**
	comp=Z,41nm,1.1s						
NACGM				i PcP	**PcP**	**10 54 08.4**	**-4.3**
NACGM				i PP	**PP**	**10 54 18.8**	**+3.1**
NACGM				i PPP	PPP	10 54 58.9	
NACGM				i S	**S**	**10 59 16.8**	**+8.2**
NACGM				i SS	**ScS**	**11 02 21.1**	**-7.4**
NACGM				i SSS	SSS	11 03 16.2	
NACGM				i LQ	LQ	11 07 59.2	
NACGM				i LR	LR	11 11 54.7	
ISR	**Istrita**	**44.95**	**303**	⇑P	**P**	**10 52 33.3**	**+1.2**
ISR	**Istrita**	**44.95**	**303**	P	**P**	**10 52 33.3**	**+1.2**
NEHR	**Nehoiu**	**45.10**	**303**	⇓P	**P**	**10 52 35.4**	**+2.1**
BIZ	**Bicaz**	**45.13**	**306**	⇓P	**P**	**10 52 35.0**	**+1.6**
VSU	**Vasula**	**45.32**	**322**	eP	**P**	**10 52 35.5**	**+0.7**
VSU	**Vasula**	**45.32**	**322**	⇑eP	**P**	**10 52 34.9**	**+0.1**
VSU				pmax	pmax		
	comp=Z,93nm,1.3s						
MLR	**Muntele Rosu**	**45.34**	**304**	⇑P	**P**	**10 52 37.4**	**+2.1**
MLR	**Muntele Rosu**	**45.34**	**304**	P	**P**	**10 52 37.3**	**+2.1**
MLR				pmax	pmax		
	comp=Z,42nm,1.0s						
MLR	**Muntele Rosu**	**45.34**	**304**	P	**P**	**10 52 37.3**	**+2.1**
TIXI	**Tiksi**	**45.62**	**18**	⇓eP	**P**	**10 52 37.5**	**+0.5**
TIXI				pmax	pmax		
	comp=Z,111nm,1.7s						
TIXI	**Tiksi**	**45.62**	**18**	P	**P**	**10 52 37.6**	**+0.6**
BURAR	**Bucovina Array**	**45.69**	**307**	⇑P	**P**	**10 52 39.4**	**+1.4**
BURAR	**Bucovina Array**	**45.69**	**307**	P	**P**	**10 52 39.4**	**+1.4**
BURAR	**Bucovina Array**	**45.69**	**307**	P	**P**	**10 52 38.6**	**+0.6**
BUR08	**Bucovina Ar. S**	**45.70**	**307**	P	**P**	**10 52 39.8**	**+1.6**
VOIR		**45.97**	**304**	⇓P	**P**	**10 52 41.9**	**+1.7**
VOIR		**45.97**	**304**	P	**P**	**10 52 41.9**	**+1.7**
JTM	**Tenmabayashi**	**46.14**	**63**	P	**P**	**10 52 41.1**	**-0.4**
FIA1	**FINESS Array S**	**46.17**	**326**	P	**P**	**10 52 41.8**	**+0.3**
FIA1				IAmb	IAmb	10 52 48.1	
	comp=Z,22nm,0.8s						
FINES	**FINESS Array B**	**46.17**	**326**	P	**P**	**10 52 41.6**	**+0.2**
	comp=Z,14nm,0.7s,baz=105,slow=8.2,SNR=23						
FINES				LR	LR	11 12 41.5	
	comp=Z,2µm,20.1s,baz=104,slow=37						
FINES	**FINESS Array B**	**46.17**	**326**	P	**P**	**10 52 41.2**	**-0.2**
ARR	**Arges**	**46.27**	**304**	⇓P	**P**	**10 52 44.1**	**+1.6**
TYV	**Tymovskoe**	**46.35**	**49**	eP	P	10 52 47.7	+4.7
TYV				pmax	pmax		
	comp=Z,100nm,2.8s						
TYV				pmax	pmax		
	comp=Z,16nm,1.3s						
TYV				MLR	MLR		
	comp=N,3µm,11.0s						
TYV				MLR	MLR		
	comp=Z,3µm,14.0s						
JYT	**Yasato**	**46.36**	**69**	P	**P**	**10 52 42.2**	**-1.1**
LVV	**L'vov**	**46.38**	**310**	eP	**P**	**10 52 42.8**	**-0.5**
LVV				eS	**S**	**10 59 32.5**	**+1.7**
LVV				MLR	MLR		
	comp=N,600nm,20.0s						
LVV				MLR	MLR		
	comp=E,2µm,20.0s						
LVV				MLR	MLR		
	comp=Z,2µm,19.0s						
JMM	**Marumori**	**46.47**	**67**	P	**P**	**10 52 42.5**	**-1.6**
PABE	**Paberze**	**46.51**	**318**	eP	**P**	**10 52 45.2**	**+1.0**
YSS	**Yuzh-Sakhalins**	**46.60**	**54**	eP	**P**	**10 52 48.5**	**+3.5**
YSS				eS	**S**	**10 59 37.8**	**+3.9**
YSS				pmax	pmax		
	comp=Z,20nm,0.8s						
YSS				MLR	MLR		
	comp=Z,2µm,13.0s						
YSS				MLR	MLR		
	comp=N,1µm,12.0s						
MTSE	**Matsula**	**46.87**	**322**	eP	**P**	**10 52 45.9**	**-1.1**
SUW	**Suwalki**	**46.90**	**315**	P	**P**	**10 52 47.4**	**+0.1**
SUW				pmax	pmax		
	comp=Z,22nm,0.5s						
SUW	**Suwalki**	**46.90**	**315**	P	**P**	**10 52 47.4**	**+0.1**
APE	**Apeiranthos**	**46.94**	**292**	⇓P	**P**	**10 52 47.0**	**-1.0**
APE	**Apeiranthos**	**46.94**	**292**	P	**P**	**10 52 46.9**	**-1.0**
KWP	**Kalwaria Pacla**	**47.25**	**309**	eP	**P**	**10 52 51.8**	**+1.7**
KWP	**Kalwaria Pacla**	**47.25**	**309**	P	**P**	**10 52 51.2**	**+1.1**
KWP				pmax	pmax		
	comp=Z,13nm,0.8s						
KWP	**Kalwaria Pacla**	**47.25**	**309**	P	**P**	**10 52 51.2**	**+1.1**
KWP				IAmb	IAmb	10 53 16.3	
	comp=Z,13nm,0.8s						
TOLI2	**Tolitoli**	**47.28**	**124**	P	**P**	**10 52 50.4**	**-0.3**
DRGR		**47.46**	**306**	⇓P	**P**	**10 52 52.8**	**+0.9**
DRGR		**47.46**	**306**	P	**P**	**10 52 52.7**	**+0.9**
GZR	**Gura Zlata**	**47.56**	**304**	⇑P	**P**	**10 52 54.5**	**+1.8**
KOLS	**Kolonicke sedl**	**47.58**	**309**	eP	**P**	**10 52 54.0**	**+1.3**
KOLS	**Kolonicke sedl**	**47.58**	**309**	eP	**P**	**10 52 54.0**	**+1.3**
UZH	**Uzhgorod**	**47.59**	**308**	eP	**P**	**10 52 50.8**	**-1.9**
UZH				e		10 52 55.0	
UZH				e		10 53 00.2	
UZH				e		10 54 50.7	
UZH				eS	**S**	**10 59 41.8**	**-6.1**
UZH				eSS	SS	11 03 01.7	-14
UZH				MLR	MLR		
	comp=Z,150nm,13.0s						
SIRR	**Siria**	**48.24**	**305**	⇑P	**P**	**10 52 59.3**	**+1.5**
BZS	**Buzias**	**48.35**	**304**	P	**P**	**10 53 02.9**	**+4.2**
ARA0	**ARCESS Array S**	**48.44**	**337**	eP	**P**	**10 52 59.9**	**+0.9**
ARCES	**ARCESS Array B**	**48.44**	**337**	P	**P**	**10 52 59.4**	**+0.4**
	comp=Z,10nm,0.8s,baz=93,slow=7.7,SNR=25						
ARCES				LR	LR	11 14 50.5	
	comp=Z,1µm,18.4s,baz=125,slow=38						
ARCES	**ARCESS Array B**	**48.44**	**337**	P	**P**	**10 52 59.3**	**+0.2**
NIE	**Niedzica**	**48.83**	**309**	eP	**P**	**10 53 04.4**	**+2.0**
NIE	**Niedzica**	**48.83**	**309**	P	**P**	**10 53 05.7**	**+3.3**
KTK1	**Kautokeino**	**49.06**	**336**	eP	**P**	**10 53 04.3**	**+0.5**
PSZ	**Piszkesteto**	**49.25**	**307**	P	**P**	**10 53 06.2**	**+0.6**
PSZ				pmax	pmax		
	comp=Z,7.0nm,0.9s						
PSZ	**Piszkesteto**	**49.25**	**307**	P	**P**	**10 53 06.2**	**+0.6**
HAMF	**Hammerfest**	**49.37**	**338**	eP	**P**	**10 53 06.4**	**+0.3**
DIVS	**Divibare**	**49.72**	**302**	P	**P**	**10 53 10.0**	**+0.7**
DIVS				IAmb	IAmb	10 53 28.3	
	comp=Z,22nm,1.2s						
UPP	**Uppsala**	**50.12**	**323**	eP	**P**	**10 53 12.5**	**+0.5**
OKC	**Ostrava-Krasne**	**50.18**	**310**	AMS	AMS	11 14 20.0	
	comp=Z,1µm,20.6s						
MORC	**Moravsky Berou**	**50.58**	**310**	⇑P	**P**	**10 53 17.3**	**+1.6**
MORC	**Moravsky Berou**	**50.58**	**310**	eP	**P**	**10 53 16.1**	**+0.4**
MORC	**Moravsky Berou**	**50.58**	**310**	P	**P**	**10 53 15.4**	**-0.3**
MORC				pmax	pmax		
	comp=Z,18nm,1.4s						
MORC	**Moravsky Berou**	**50.58**	**310**	P	**P**	**10 53 15.4**	**-0.3**
JAVC	**Velka Javorina**	**50.61**	**309**	eP	**P**	**10 53 17.5**	**+1.6**
MA2	**Magadan**	**50.97**	**37**	⇑eP	**P**	**10 53 21.1**	**+2.6**
MA2				pmax	pmax		
	comp=Z,46nm,1.7s						
MA2	**Magadan**	**50.97**	**37**	IAmb	IAmb	10 53 26.2	
	comp=Z,31nm,1.2s						
KRLC	**Kraliky**	**51.03**	**311**	eP	**P**	**10 53 19.4**	**+0.3**
KRLC				MLR	MLR		
	comp=Z,1µm,20.4s						
KRLC	**Kraliky**	**51.03**	**311**	eP	**P**	**10 53 19.4**	**+0.3**
KRLC				AMS	AMS	11 14 50.0	
	comp=Z,1µm,20.4s						
VRAC	**Vranov**	**51.25**	**310**	⇑P	**P**	**10 53 20.5**	**-0.3**
VRAC	**Vranov**	**51.25**	**310**	P	**P**	**10 53 20.4**	**-0.3**
KSP	**Ksiaz**	**51.25**	**312**	P	**P**	**10 53 24.4**	**+3.7**
DPC	**Dobruska-Polom**	**51.29**	**311**	eP	**P**	**10 53 22.2**	**+1.1**
DPC				MLR	MLR		
	comp=Z,2µm,17.6s						
DPC	**Dobruska-Polom**	**51.29**	**311**	eP	**P**	**10 53 22.2**	**+1.1**
DPC				AMS	AMS	11 16 50.0	
	comp=Z,2µm,17.6s						
OSTC	**Ostas**	**51.34**	**311**	eP	**P**	**10 53 23.3**	**+1.9**
OSTC				AMS	AMS	11 16 50.0	
	comp=Z,2µm,19.0s						
CHVC	**Chvalec**	**51.43**	**311**	eP	**P**	**10 53 21.8**	**-0.3**
CHVC				AMS	AMS	11 16 50.0	
	comp=Z,2µm,20.1s						
UPC	**Upice**	**51.47**	**311**	eP	**P**	**10 53 22.9**	**+0.5**
UPC				MLR	MLR		
	comp=Z,2µm,16.2s						
UPC	**Upice**	**51.47**	**311**	eP	**P**	**10 53 22.9**	**+0.5**
UPC				AMS	AMS	11 16 50.0	
	comp=Z,2µm,16.2s						
SEY	**Seymchan**	**51.80**	**33**	⇑eP	**P**	**10 53 24.9**	**+0.3**
MOR8	**Moi Rana**	**51.91**	**331**	eP	**P**	**10 53 24.3**	**-1.2**
CONA	**Conrad Observa**	**51.93**	**308**	eP	**P**	**10 53 26.5**	**+0.6**
	comp=Z,11nm,1.2s						
TREC	**Trest**	**51.97**	**310**	AMS	AMS	11 15 20.0	
	comp=Z,2µm,21.3s						
PVCC	**Panska Ves**	**52.38**	**311**	AMS	AMS	11 17 20.0	
	comp=Z,2µm,18.1s						
GROS	**Grobnik**	**52.42**	**306**	eP	**P**	**10 53 29.6**	**0.0**
PRU	**Pruhonice**	**52.48**	**311**	AMS	AMS	11 17 30.0	
	comp=Z,2µm,16.0s						
PRA	**Prague**	**52.53**	**311**	AMS	AMS	11 17 40.0	
	comp=Z,900nm,17.9s						
SOKA	**Soboth**	**52.70**	**306**	eP	**P**	**10 53 33.4**	**+1.8**
	comp=Z,23nm,1.4s						
BRG	**Berggiesshubel**	**52.73**	**312**	eP	**P**	**10 53 31.9**	**+0.2**
BRG				Amp		10 53 35.2	
	comp=Z,12nm,1.2s						
MOA	**Molln**	**53.00**	**308**	eP	**P**	**10 53 34.9**	**+1.1**
	comp=Z,11nm,0.9s						
NC405	**NORSAR Array S**	**53.05**	**325**	P	**P**	**10 53 33.3**	**-0.6**
NC602	**NORSAR Array S**	**53.15**	**324**	P	**P**	**10 53 34.7**	**+0.1**
NC602	**NORSAR Array S**	**53.15**	**324**	eP	**P**	**10 53 35.5**	**+0.9**
NORES	**NORESS Array B**	**53.15**	**324**	P	**P**	**10 53 38.3**	**+3.7**
NORES				pmax	pmax		
	comp=Z,21nm,1.0s						
GEC2	**GERESS Array S**	**53.20**	**309**	P	**P**	**10 53 35.6**	**+0.3**
GERES	**GERESS Array B**	**53.20**	**309**	P	**P**	**10 53 35.9**	**+0.5**
	comp=Z,3.7nm,0.9s,baz=65,slow=6.3,SNR=11						
GERES				LR	LR	11 18 02.8	
	comp=Z,932nm,18.2s,baz=82,slow=38						
GERES	**GERESS Array B**	**53.20**	**309**	P	**P**	**10 53 36.0**	**+0.7**
GERES	**GERESS Array B**	**53.20**	**309**	P	**P**	**10 53 36.0**	**+0.7**
NC303	**NORSAR Array S**	**53.21**	**325**	P	**P**	**10 53 35.9**	**+0.8**
KHC	**Kasperske Hory**	**53.23**	**310**	deP	**P**	**10 53 36.8**	**+1.3**
KHC				pmax	pmax		
	comp=Z,21nm,1.2s						
KHC	**Kasperske Hory**	**53.23**	**310**	eP	**P**	**10 53 36.2**	**+0.7**
KHC				ex	x	10 53 43.0	
KHC				AMS	AMS	11 16 10.0	
	comp=Z,2µm,21.3s						
KHC	**Kasperske Hory**	**53.23**	**310**	P	**P**	**10 53 36.1**	**+0.7**
CLL	**Collm**	**53.25**	**312**	eP	**P**	**10 53 36.0**	**+0.5**
CLL				eS	**S**	**11 01 05.0**	**-1.7**
CLL				eSS	**SS**	**11 04 42.0**	**-3.9**
CLL				e		11 05 54.0	
CLL				eSSS	SSS	11 06 42.0	
CLL				LmV		11 18 00.0	
	comp=Z,2µm,20.0s						
CLL	**Collm**	**53.25**	**312**	eP	**P**	**10 53 36.0**	**+0.5**
CLL				eS	**S**	**11 01 05.0**	**-1.7**
CLL				MLR	MLR		
	comp=Z,2µm,20.0s						
NB2	**NORSAR Subarra**	**53.29**	**325**	P	**P**	**10 53 35.0**	**-0.7**
	comp=Z,27nm,1.1s,baz=86,slow=7.4						
NB2	**NORSAR Subarra**	**53.29**	**325**	P	**P**	**10 53 35.0**	**-0.7**
	baz=86,slow=7.4						
NOA	**NORSAR Array B**	**53.29**	**325**	P	**P**	**10 53 35.4**	**-0.4**
	comp=Z,15nm,0.9s,baz=87,slow=7.2,SNR=21						
NOA				LR	LR	11 17 12.6	
	comp=Z,1µm,19.4s,baz=95,slow=37						
KNDS	**Knezji Dol**	**53.37**	**305**	eP	P	10 53 43.7	+7.1
NAO01	**NORSAR Array S**	**53.46**	**324**	P	**P**	**10 53 37.0**	**+0.1**
NAO01				IAmb	IAmb	10 53 40.9	
	comp=Z,28nm,0.8s						
NC204	**NORSAR Array S**	**53.50**	**325**	P	**P**	**10 53 37.2**	**-0.1**
NBO00	**NORSAR Array S**	**53.51**	**325**	P	**P**	**10 53 37.5**	**+0.2**
NBO00				IAmb	IAmb	10 53 53.1	
	comp=Z,37nm,1.2s						
KBA	**Koelnbreinsper**	**53.76**	**307**	eP	**P**	**10 53 40.3**	**+0.7**
	comp=Z,13nm,1.8s						
NKC	**Novy Kostel**	**53.77**	**311**	AMS	AMS	11 18 10.0	
	comp=Z,3µm,19.2s						
KONO	**Kongsberg**	**54.19**	**323**	⇓eP	**P**	**10 53 42.1**	**-0.2**
KONO				pmax	pmax		
	comp=Z,32nm,1.4s						
KONO	**Kongsberg**	**54.19**	**323**	eP	**P**	**10 53 42.3**	**+0.1**
DOMB	**Dombas**	**54.26**	**326**	eP	**P**	**10 53 43.0**	**+0.2**
SKAR	**Skarslia**	**54.74**	**324**	eP	**P**	**10 53 47.0**	**+0.6**
WTTA	**Wattenberg**	**54.87**	**308**	eP	**P**	**10 53 47.4**	**-0.2**
	comp=Z,10nm,1.2s						
WATA	**Walderalm**	**54.89**	**308**	eP	**P**	**10 53 48.3**	**+0.6**
	comp=Z,3.9nm,0.6s						
HOMB	**Homborsund**	**54.90**	**321**	eP	**P**	**10 53 48.5**	**+1.1**
MOL	**Molde**	**54.93**	**327**	eP	**P**	**10 53 49.1**	**+1.5**
KMBO	**Kilima Mbogo**	**55.06**	**242**	P	**P**	**10 53 50.6**	**+1.1**
	comp=Z,3.5nm,0.7s,baz=38,slow=9.9,SNR=6.0						
KMBO				LR	LR	11 16 37.0	
	comp=Z,568nm,19.1s,baz=76,slow=35						
SQTA	**Sankt Quirin**	**55.16**	**308**	eP	**P**	**10 53 51.0**	**+1.3**
	comp=Z,5.2nm,0.6s						
MOTA	**Moosalm**	**55.20**	**308**	eP	**P**	**10 53 49.6**	**-0.4**
	comp=Z,13nm,1.4s						
PEA0B	**Petropavlovsk-**	**55.38**	**45**	P	**P**	**10 53 51.0**	**-0.1**
PEA0B				pmax	pmax		
	comp=Z,58nm,1.5s						
PEA0B	**Petropavlovsk-**	**55.38**	**45**	P	**P**	**10 53 51.0**	**-0.1**
PETK	**Petropavlovsk-**	**55.38**	**45**	P	**P**	**10 53 50.9**	**-0.2**
	comp=Z,1.9nm,0.6s,baz=247,slow=5.8,SNR=2.7						
PETK				LR	LR	11 21 56.9	
	comp=Z,436nm,18.3s,baz=283,slow=41						
PETK	**Petropavlovsk-**	**55.38**	**45**	P	**P**	**10 53 51.1**	**0.0**
PETK	**Petropavlovsk-**	**55.38**	**45**	P	**P**	**10 53 51.1**	**0.0**
RETA	**Reutte**	**55.40**	**308**	eP	**P**	**10 53 52.3**	**+1.0**
	comp=Z,6.0nm,0.7s						
FETA	**Feichten**	**55.52**	**308**	eP	**P**	**10 53 52.9**	**+0.6**
	comp=Z,6.9nm,1.0s						
SNART	**Snartemo**	**55.57**	**322**	eP	**P**	**10 53 53.5**	**+1.3**
ODD1	**Odda**	**55.65**	**324**	eP	**P**	**10 53 50.8**	**-2.1**
DAVA	**Damuels**	**56.03**	**308**	eP	**P**	**10 53 55.6**	**-0.4**
	comp=Z,16nm,1.1s						
SOEI	**Soe**	**57.60**	**130**	P	**P**	**10 54 07.8**	**+0.4**
SENIN	**Lac Senin/Sane**	**57.97**	**308**	P	**P**	**10 54 11.4**	**+1.6**
SENIN				IAmb	IAmb	10 54 18.8	
	comp=Z,13nm,0.8s						
BNI	**Bardonecchia**	**58.76**	**306**	P	**P**	**10 54 14.3**	**-0.9**
BNI				pmax	pmax		
	comp=Z,19nm,1.2s						
BNI	**Bardonecchia**	**58.76**	**306**	P	**P**	**10 54 14.3**	**-0.9**
BNI				IAmb	IAmb	10 54 33.5	
	comp=Z,19nm,1.2s						
MBAR	**Mbarara**	**59.66**	**247**	P	**P**	**10 54 22.3**	**+0.4**
MBAR				pmax	pmax		
	comp=Z,9.0nm,1.1s						
MBAR	**Mbarara**	**59.66**	**247**	P	**P**	**10 54 22.3**	**+0.4**
KEST	**Kesra**	**59.81**	**295**	P	**P**	**10 54 24.3**	**+1.7**
	comp=Z,8.9nm,0.8s,baz=102,slow=0.6,SNR=5.2						
KEST				LR	LR	11 23 49.2	
	comp=Z,551nm,19.5s,baz=2.5,slow=40						
KEST	**Kesra**	**59.81**	**295**	P	**P**	**10 54 22.6**	**0.0**
KEST				IAmb	IAmb	10 54 40.7	
	comp=Z,35nm,1.4s						
EKA	**Eskdalemuir Ar**	**61.78**	**320**	P	**P**	**10 54 36.5**	**+0.9**
MTN	**Manton Dam**	**64.40**	**127**	P	**P**	**10 54 53.2**	**-0.2**
MTN				IAmb	IAmb	10 55 00.3	
	comp=Z,13nm,0.8s						
PSA00	**Pilbara Seismi**	**64.40**	**142**	P	**P**	**10 54 53.3**	**0.0**
PSA00				IAmb	IAmb	10 54 57.1	
	comp=Z,17nm,1.1s						
FITZ	**Fitzroy Crossi**	**64.84**	**135**	P	**P**	**10 54 55.6**	**-0.7**
FITZ				IAmb	IAmb	10 55 24.1	
	comp=Z,17nm,1.4s						
EUNU	**Eureka**	**67.15**	**358**	P	**P**	**10 55 10.3**	**-0.1**
EUNU				IAmb	IAmb	10 55 26.5	
	comp=Z,12nm,1.1s						
SUMG	**Summit**	**67.56**	**344**	i P	**P**	**10 55 14.3**	**+0.8**
	comp=Z,24nm,0.9s						
SUMG				i		10 55 38.0	
SUMG	**Summit**	**67.56**	**344**	eP	**P**	**10 55 14.3**	**+0.8**
SUMG				i		10 55 38.0	
SUMG				pmax	pmax		
	comp=Z,24nm,0.9s						
SUMG	**Summit**	**67.56**	**344**	eP	**P**	**10 55 14.4**	**+0.8**
SUMG				IAmb	IAmb	10 55 18.0	
	comp=Z,24nm,0.9s						
SUMG				i		10 55 38.1	
A21K	**Barrow**	**67.92**	**18**	P	**P**	**10 55 15.3**	**+0.1**
	baz=308						
A21K	**Barrow**	**67.92**	**18**	P	**P**	**10 55 14.9**	**-0.3**
A21K				IAmb	IAmb	10 55 38.6	
	comp=Z,26nm,1.4s						
ESDC	**Sonseca Array**	**68.03**	**304**	P	**P**	**10 55 16.6**	**-0.1**
	comp=Z,7.7nm,1.0s,baz=55,slow=6.6,SNR=13						
ESDC				LR	LR	11 29 47.5	
	comp=Z,546nm,18.2s,baz=15,slow=40						
ESDC	**Sonseca Array**	**68.03**	**304**	P	**P**	**10 55 16.2**	**-0.5**
MORW	**Morawa**	**68.98**	**150**	P	**P**	**10 55 21.6**	**-0.9**
MORW				pP	**pP**	**10 55 25.1**	**-2.0**
MORW				IAmb	IAmb	10 55 28.8	
	comp=Z,15nm,1.0s						
ANM	**Nome**	**69.17**	**26**	P	**P**	**10 55 24.5**	**+1.3**
ANM				pP	**pP**	**10 55 27.3**	**-0.7**
TULEG	**Thule**	**69.45**	**353**	P	**P**	**10 55 24.0**	**-0.7**
TULEG				IAmb	IAmb	10 55 51.2	
	comp=Z,15nm,1.0s						
MVO	**Moncorvo**	**69.50**	**306**	eLQ	LQ	11 12 43.6	
MVO				eLR	LR	11 16 51.7	
	comp=Z,554nm,22.0s						
ICESG	**Greenland Ices**	**70.13**	**341**	i P	**P**	**10 55 33.0**	**+3.5**
ICESG				i		10 56 06.8	
MTE	**Manteigas**	**70.19**	**306**	A	A	11 27 41.0	
	comp=Z,647nm,20.0s						
PMRV	**Marv??o**	**70.52**	**305**	A	A	11 30 10.6	
	comp=Z,496nm,18.0s						
LSZ	**Lusaka**	**71.20**	**237**	P	**P**	**10 55 36.0**	**-0.4**
LSZ				pmax	pmax		
	comp=Z,6.0nm,1.0s						
LSZ	**Lusaka**	**71.20**	**237**	P	**P**	**10 55 36.0**	**-0.4**
TOLK	**Toolik Lake Re**	**71.51**	**18**	P	**P**	**10 55 36.9**	**-0.7**
	baz=315						
TOLK	**Toolik Lake Re**	**71.51**	**18**	P	**P**	**10 55 37.5**	**0.0**
TOLK	**Toolik Lake Re**	**71.51**	**18**		**P**	**10 55 37.9**	**+0.4**
WB0	**Warramunga Arr**	**71.55**	**129**	P	**P**	**10 55 37.5**	**-0.9**
WRA	**Warramunga Arr**	**71.64**	**130**	P	**P**	**10 55 38.3**	**-0.7**
	comp=Z,12nm,0.7s,baz=325,slow=6.1,SNR=22						
WRA				LR	LR	11 32 04.2	
	comp=Z,162nm,18.8s,baz=295,slow=40						
WRA	**Warramunga Arr**	**71.64**	**130**	i P	**P**	**10 55 40.5**	**+1.6**
WRA				pmax	pmax		
	comp=Z,17nm,0.7s						
WRA	**Warramunga Arr**	**71.64**	**130**	P	**P**	**10 55 38.2**	**-0.7**
WRAB	**Tennant Creek**	**71.64**	**130**	⇓eP	**P**	**10 55 38.4**	**-0.5**
WRAB				pmax	pmax		
	comp=Z,9.0nm,1.2s						
WRAB	**Tennant Creek**	**71.64**	**130**	P	**P**	**10 55 38.4**	**-0.5**
WRAB				pP	**pP**	**10 55 42.5**	**-1.1**
WB2	**Warramunga Arr**	**71.65**	**130**	P	**P**	**10 55 38.8**	**-0.2**
PVAQ	**Vaqueiros**	**71.68**	**303**	eLQ	LQ	11 13 12.5	
PVAQ				A	A	11 31 27.8	
	comp=Z,480nm,18.0s						
WR0	**Warramunga Arr**	**71.78**	**129**	P	**P**	**10 55 39.3**	**-0.4**
WR0				IAmb	IAmb	10 55 47.0	
	comp=Z,17nm,1.0s						
PNCL	**Nicolau / Gran**	**71.92**	**304**	eLR	LR	11 17 02.9	
IMAR	**Indian Mountai**	**72.18**	**21**	P	**P**	**10 55 42.2**	**+0.6**
COLD	**Coldfoot**	**72.35**	**19**	P	**P**	**10 55 42.1**	**-0.4**
	baz=315						
COLD	**Coldfoot**	**72.35**	**19**	P	**P**	**10 55 42.8**	**+0.3**
COLD				IAmb	IAmb	10 55 50.0	
	comp=Z,15nm,1.0s						
RES	**Resolute Bay**	**72.69**	**360**	P	**P**	**10 55 42.8**	**-1.6**
	comp=Z,1.1nm,0.9s,baz=314,slow=4.1,SNR=2.1						
TTA	**Tatalina**	**73.47**	**24**	P	**P**	**10 55 49.6**	**+0.2**
TTA				pmax	pmax		
	comp=Z,18nm,1.5s						
TTA	**Tatalina**	**73.47**	**24**	P	**P**	**10 55 49.6**	**+0.2**
TTA				IAmb	IAmb	10 55 53.8	
	comp=Z,18nm,1.5s						
BMAR	**Burnt Mountain**	**73.68**	**17**	P	**P**	**10 55 50.6**	**+0.1**
MLY	**Manley**	**73.75**	**21**	P	**P**	**10 55 50.4**	**-0.5**
	baz=315						
AS31	**Alice Springs**	**74.07**	**133**	P	**P**	**10 55 52.9**	**-0.4**
ASAR	**Alice Springs**	**74.07**	**133**	P	**P**	**10 55 52.7**	**-0.6**
	comp=Z,11nm,0.7s,baz=318,slow=5.7,SNR=32						
ASAR				LR	LR	11 31 23.0	
	comp=Z,124nm,21.2s,baz=294,slow=38						
ASAR	**Alice Springs**	**74.07**	**133**	P	**P**	**10 55 52.4**	**-0.9**
I23K	**Minto, Yukon-K**	**74.07**	**20**	P	**P**	**10 55 52.8**	**+0.1**
	baz=316						
FYU	**Fort Yukon**	**74.17**	**18**	P	**P**	**10 55 53.7**	**+0.4**
FYU				IAmb	IAmb	10 56 01.5	
	comp=Z,18nm,1.0s						
BPAW	**Bear Paw Mtn.**	**74.33**	**22**	P	**P**	**10 55 54.3**	**0.0**
MDM	**Murphy Dome**	**74.54**	**20**	P	**P**	**10 55 55.8**	**+0.3**
MDM				IAmb	IAmb	10 56 02.8	
	comp=Z,24nm,1.1s						
NEA2	**Nenana**	**74.56**	**21**	P	**P**	**10 55 55.8**	**+0.2**
	baz=316						
POKR	**Poker Plat Res**	**74.65**	**20**	P	**P**	**10 55 55.8**	**-0.3**
	baz=317						
POKR	**Poker Plat Res**	**74.65**	**20**	P	**P**	**10 55 56.2**	**+0.1**
TCOL	**CIGO, UAF Yank**	**74.71**	**20**	P	**P**	**10 55 55.9**	**-0.6**
	baz=317						
TCOL	**CIGO, UAF Yank**	**74.71**	**20**	P	**P**	**10 55 56.9**	**+0.4**
COLA	**College**	**74.71**	**20**	⇓eP	**P**	**10 55 55.7**	**-0.7**
COLA				pmax	pmax		
	comp=Z,25nm,1.1s						
COLA	**College**	**74.71**	**20**	P	**P**	**10 55 56.8**	**+0.4**
KTH	**Kantishna Hill**	**74.73**	**22**	P	**P**	**10 55 56.4**	**-0.3**
KTH				IAmb	IAmb	10 56 04.6	
	comp=Z,21nm,1.0s						
IL31		**75.07**	**20**	P	**P**	**10 55 57.8**	**-0.7**
IL31				IAmb	IAmb	10 56 05.6	
	comp=Z,19nm,1.0s						
ILAR	**Eielson Array**	**75.07**	**20**	P	**P**	**10 55 58.0**	**-0.5**
	comp=Z,6.8nm,0.8s,baz=310,slow=4.9,SNR=19						
ILAR				PP	**PP**	**10 58 39.9**	**-6.0**
	comp=Z,0.9nm,1.1s,baz=274,slow=3.5,SNR=2.4						
ILAR				LR	LR	11 31 28.7	
	comp=Z,691nm,19.7s,baz=340,slow=38						
ILAR	**Eielson Array**	**75.07**	**20**	P	**P**	**10 55 57.8**	**-0.7**
MCK	**McKinley**	**75.23**	**21**	P	**P**	**10 55 59.0**	**-0.5**
	baz=316						
HDA	**Harding Lake**	**75.32**	**20**	P	**P**	**10 55 59.7**	**-0.3**
	baz=318						
INK	**Inuvik**	**75.43**	**13**	P	**P**	**10 56 00.2**	**-0.3**

	comp=Z,2.9nm,0.8s,baz=0.0,slow=5.1,SNR=5.6						
INK	Inuvik	75.43	13	P	P	10 56 00.5	-0.1
INK				pmax	pmax		
	comp=Z,22nm,1.5s						
INK	Inuvik	75.43	13	P	P	10 56 00.5	-0.1
INK				IAmb	IAmb	10 56 12.8	
	comp=Z,22nm,1.5s						
SKT	Skwentna	75.65	23	P	P	10 56 02.0	+0.1
TOA0	Torodi Ar. Sit	76.05	277	P	P	10 56 05.0	0.0
TOA0				IAmb	IAmb	10 56 12.6	
	comp=Z,19nm,1.2s						
TORD	Torodi Ar. Bea	76.05	277	P	P	10 56 04.7	-0.3
	comp=Z,4.2nm,0.6s,baz=46,slow=5.3,SNR=16						
TORD				LR	LR	11 35 36.7	
	comp=Z,326nm,18.7s,baz=290,slow=40						
TORD	Torodi Ar. Bea	76.05	277	P	P	10 56 04.3	-0.7
C36M	Paulatuk	76.09	10	P	P	10 56 02.7	-1.6
	baz=336						
C36M	Paulatuk	76.09	10	P	P	10 56 03.5	-0.8
C36M				IAmb	IAmb	10 56 11.8	
	comp=Z,17nm,1.0s						
SUA	Susitna One	76.28	24	P	P	10 56 05.9	+0.2
SUA				IAmb	IAmb	10 56 12.8	
	comp=Z,19nm,1.1s						
EPYK	Eagle Plains	76.40	15	P	P	10 56 04.4	-1.8
	baz=326						
EPYK	Eagle Plains	76.40	15	P	P	10 56 06.0	-0.2
EPYK				IAmb	IAmb	10 56 13.5	
	comp=Z,10nm,0.8s						
RIDG	Independent Ri	76.43	20	P	P	10 56 06.1	-0.3
RIDG				IAmb	IAmb	10 56 13.6	
	comp=Z,21nm,0.8s						
SCRK	Sand Creek	76.50	19	P	P	10 56 06.1	-0.8
	baz=320						
EGAK	Eagle	76.63	18	P	P	10 56 07.2	-0.2
EGAK				IAmb	IAmb	10 56 14.8	
	comp=Z,17nm,1.1s						
PMR	Palmer	76.72	23	P	P	10 56 08.2	+0.2
PMR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PMR	Palmer	76.72	23	P	P	10 56 08.2	+0.2
PMR				IAmb	IAmb	10 56 15.5	
	comp=Z,10.0nm,0.8s						
DOT	Dot Lake	76.73	20	P	P	10 56 08.3	+0.2
DOT				IAmb	IAmb	10 56 15.4	
	comp=Z,12nm,1.0s						
SML	Sawmill	76.83	23	P	P	10 56 09.0	+0.3
SML				pmax	pmax		
	comp=Z,44nm,1.1s						
SML	Sawmill	76.83	23	P	P	10 56 09.0	+0.3
RC01	Rabbit Creek A	76.89	24	P	P	10 56 08.3	-0.7
	baz=316						
KNK	Knik Glacier	77.08	23	P	P	10 56 10.5	+0.4
KNK				IAmb	IAmb	10 56 18.1	
	comp=Z,16nm,0.8s						
SCM	Sheep Creek Mo	77.13	22	P	P	10 56 10.5	+0.1
SCM				pmax	pmax		
	comp=Z,21nm,1.0s						
SCM	Sheep Creek Mo	77.13	22	P	P	10 56 10.5	+0.1
SCM				IAmb	IAmb	10 56 18.1	
	comp=Z,21nm,1.0s						
M24K	Tolsona, Glenn	77.28	22	P	P	10 56 13.2	+2.0
	baz=319						
SEW	Seward	77.70	24	P	P	10 56 13.7	+0.2
BCAR	Beaver Creek A	77.83	19	P	P	10 56 14.6	+0.3
N25K	Chitina, Valde	78.15	21	P	P	10 56 15.3	-0.8
	baz=320						
KDAK	Kodiak Island	78.23	27	P	P	10 56 16.6	+0.1
	comp=Z,7.2nm,0.6s,baz=280,slow=5.2,SNR=4.0						
GLB	Gilahina Butte	78.52	21	P	P	10 56 18.1	-0.1
BALM	Baldy	79.28	21	P	P	10 56 25.2	+2.8
BALM				pmax	pmax		
	comp=Z,23nm,1.0s						
BARN	Barnard Glacie	79.46	20	P	P	10 56 23.9	+0.5
BARN				IAmb	IAmb	10 56 32.1	
	comp=Z,28nm,1.0s						
LBTB	Lobatse	79.63	231	P	P	10 56 25.1	+0.4
LBTB				pmax	pmax		
	comp=Z,14nm,1.0s						
LBTB	Lobatse	79.63	231	P	P	10 56 25.1	+0.4
YAH	Yahtse	79.99	21	P	P	10 56 27.2	+0.8
YAH				IAmb	IAmb	10 56 34.5	
	comp=Z,28nm,0.9s						
PMOZ	Porto Moniz, M	80.69	303	A	A	11 34 35.1	
	comp=Z,280nm,22.0s						
HYT	Haines Junctio	80.83	19	P	P	10 56 30.5	-0.3
HYT				IAmb	IAmb	10 56 39.2	
	comp=Z,17nm,0.8s						
BOSA	Boshof	82.33	229	P	P	10 56 39.2	+0.1
	comp=Z,8.5nm,0.7s,baz=46,slow=4.9,SNR=9.3						
BOSA				LR	LR	11 29 26.9	
	comp=Z,304nm,21.5s,baz=56,slow=33						
BOSA	Boshof	82.33	229	P	P	10 56 38.6	-0.5
BOSA				IAmb	IAmb	10 56 40.0	
	comp=Z,14nm,0.9s						
YKA	Yellowknife Ar	83.85	8	P	P	10 56 45.5	-0.9
	comp=Z,7.0nm,0.8s,baz=346,slow=4.6,SNR=31						
STKA	Stephens Creek	84.68	133	P	P	10 56 52.0	+1.0
	comp=Z,5.7nm,1.0s,baz=315,slow=7.3,SNR=10.0						
STKA				LR	LR	11 39 30.2	
	comp=Z,195nm,18.8s,baz=296,slow=39						
STKA	Stephens Creek	84.68	133	P	P	10 56 52.0	+1.0
DLBC	Dease Lake	84.83	17	P	P	10 56 51.9	+0.4
	comp=Z,3.5nm,1.1s,baz=136,slow=27,SNR=4.2						
DBIC	Dimbokro	84.92	275	P	P	10 56 52.6	-0.1
	comp=Z,6.3nm,0.8s,baz=197,slow=3.9,SNR=4.4						
DBIC				LR	LR	11 38 31.1	
	comp=Z,665nm,18.5s,baz=35,slow=38						
KIC	Kosan Boka	84.99	274	*e*P	P	10 56 56.9	+3.9
	comp=Z,16nm,0.8s						
TIC	Toumodi	85.08	275	*e*P	P	10 56 57.1	+3.6
LIC	Lamto	85.31	274	*e*P	P	10 56 58.3	+3.7
	comp=Z,26nm,0.7s						
ULM	Lac du Bonnet	97.22	360	LR	LR	11 45 01.9	
	comp=Z,525nm,20.5s,baz=348,slow=38						
PDAR	Pinedale Array	103.78	10	PKiKP	PKiKP	11 02 38.9	+1.5
	comp=Z,0.8nm,0.7s,baz=79,slow=2.3,SNR=2.8						
NVAR	Mina Array Bea	106.24	18	PKiKP	PKiKP	11 02 43.0	+0.9
	comp=Z,0.7nm,0.7s,baz=276,slow=2.0,SNR=6.7						
SYO	Syowa Base	106.57	195⇓	*e*PKiKP	PKiKP	11 02 41.0	-0.2
TXAR	Lajitas Array	117.76	7	PKP	PKPdf	11 03 04.0	0.0
	comp=Z,0.6nm,0.9s,baz=164,slow=0.8,SNR=8.0						
TXAR	Lajitas Array	117.76	7	PKIKP	PKPdf	11 03 03.8	-0.2
TXAR	Lajitas Array	117.76	7	PKPdf	PKPdf	11 03 03.8	-0.2
SNAA	Sanae	119.67	201	PKiKP	PKPdf	11 03 05.6	-0.6
VNA2	Neumayer--Watz	120.93	203	PKiKP	PKPdf	11 03 08.6	0.0
VNA1	Neumayer--Stat	121.16	203	PKiKP	PKiKP	11 03 09.7	+0.7
VNA3	Neumayer Olymp	121.72	202	PKiKP	PKPdf	11 03 09.9	-0.2
QSPA	South Pole Qui	122.68	180	PKPdf	PKPdf	11 03 11.0	-1.1
PPT2	Papeete2	130.25	86	*e*LR	LR	11 44 27.0	
	comp=Z,268nm,23.8s						
TBI	Tubuai	132.87	92	*e*LR	LR	11 45 44.0	
	comp=Z,238nm,26.5s						
TAOE	Nuku Hiva Isla	133.30	69	*e*LR	LR	11 46 02.0	
	comp=Z,342nm,22.7s						
SIV	San Ignacio	143.72	289	PKP	PKPbc	11 03 50.9	+0.5
	comp=Z,2.1nm,0.9s,baz=36,slow=6.0,SNR=5.6						
CPUP	Villa Florida	145.34	270	PKPbc	PKPbc	11 03 55.1	-0.1
	comp=Z,11nm,0.9s,baz=80,slow=3.9,SNR=20						
CPUP	Villa Florida	145.34	270	PKIKP	PKPbc	11 03 54.8	-0.4
CPUP	Villa Florida	145.34	270		PKPbc	11 03 54.8	-0.4
EFI	East Falkland	146.35	224	PKP2	PKPab	11 03 58.6	+0.3
EFI	East Falkland	146.35	224		PKPab	11 03 58.6	+0.3
ATAH	Atahualpa	149.27	323	PKPbc	PKPbc	11 04 07.7	+0.6
	comp=Z,4.3nm,0.7s,baz=4.9,slow=4.5,SNR=5.2						
MNMC	Minye Minye	152.19	293		PKiKP	11 04 15.0	+1.0
PB08	IPOC Station P	152.41	291		PKPbc	11 04 13.9	-0.3
PB09	IPOC Station P	153.34	288		PKiKP	11 04 16.5	+0.4
PLCA	Paso Flores	157.74	242	PKPab	PKPab	11 04 45.5	-0.8
	comp=Z,2.9nm,1.1s,baz=17,slow=6.1,SNR=3.3						

VAO ***04*** *10:59:19.7±0.3, 10.°82N×62.°69W, h10^{km}, mb4.9*

MOS ***04*** *10:59:27.6±0.8, 10.°75N×62.°91W, h111^{km}, mb5.1/95, Error ellipse: s-maj=5.3km s-min=4.2km az=94.8*

BJI ***04*** *10:59:27.0±0.0, 10.°70N×62.°90W, h100^{km}, mB5.4/3*

BGR ***04*** *10:59:28.6±0.0, 10.°00N×61.°90W, h100^{km}, mb4.9*

NEIC ***04*** *10:59:28.8±1.3, 10.°68N±0.°06×62.°84W±0.°05, h111^{km}±5^{km}, mb5.1/491, Md5.0(TRN), Error ellipse: s-maj=9.9km s-min=6.7km az=146.0*

CAR ***04*** *10:59:29.9±1.0, 10.°65N±0.°07×62.°75W±0.°06, h96^{km}±5^{km}, Error ellipse: s-maj=11.1km s-min=6.8km az=149.0*

FUNV ***04*** *10:59:29.9, 10.°66N×62.°75W, h96^{km}, MW3.9*

IDC ***04*** *10:59:30.1±0.9, 10.°76N×62.°97W, h121^{km}±7^{km}, mb4.6/27, mb1 4.7/29, mb1mx4.6/34, mbtmp4.9/29, MS3.6/5, Ms1 3.5/5, ms1mx3.3/32, Error ellipse: s-maj=9.8km s-min=9.0km az=73.0*

TRN ***04*** *10:59:30.7, 10.°81N×62.°80W, h54^{km}, MD5.0*

TRN Felt in Trinidad. MMI II, III.

GCMT ***04*** *10:59:32.8±0.3, 10.°78N±0.°02×62.°69W±0.°03, h114^{km}±6^{km}, MW4.9/92, Moment Tensor Solution. s8,c9; s92,c123; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.63±.12; M$_{\theta\theta}$-0.66±.16; M$_{\phi\phi}$0.03±.14; M$_{r\theta}$2.05±.08; M$_{\theta\phi}$-1.34±.18; M$_{\phi r}$-0.12±.07; Best double couple: M$_0$2.53500×10^{16} NP1:ϕ_s193.00000°, δ33.00000°, λ16.00000°. NP2: ϕ_s90.00000°, δ81.00000°, λ122.00000°. Principal axes: T 2.4880, Plg44.0000°, Azm31.0000°; N 0.0940, Plg31.0000°, Azm264.0000°; P -2.5820, Plg29.0000°, Azm154.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 04 10:59:27.6±0.4**, 10.°72N**±0.°03×**62.°84W**±0.°03**, h100^{km}**±3^{km}**, h101^{km}:pP-P, n1360, σ1.^{s}18**/1415**, mb5.1**/362**, 14C-65D, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRUV	Carupano	0.39	264⇑	*i*P	Pn	10 59 43.6	+0.9
CRUV				*e*S	Sn	10 59 54.8	+0.7
TRN	Trinidad (W)	1.41	93	*e*P	Pn	10 59 53.5	+0.6
TRN				*e*S	Sn	11 00 10.6	-1.4
TRN	Trinidad (W)	1.41	93	*e*P	Pn	10 59 53.5	+0.6
TRN				*e*S	Sn	11 00 10.6	-1.4
TPP	Pointe-a-Pierr	1.42	106	*e*P	Pn	10 59 54.6	+1.6
TBH	Brigand Hill	1.76	97	*e*P	Pn	10 59 58.3	+1.2
TBH				*e*S	Sn	11 00 20.0	+0.4
PLCV	Puerto La Cruz	1.81	252		Pn	10 59 59.3	+1.5
PLCV					Sn	11 00 22.6	+1.8
GRGR	Grenville	1.82	40	*e*P	Pn	10 59 59.1	+1.1
GRGR				*e*S	Sn	11 00 18.9	-2.2
GRGR	Grenville	1.82	40		Pn	10 59 58.7	+0.7
GRGR				Sn	Sn	11 00 22.7	+1.6
GRGR	Grenville	1.82	40⇓	*e*P	Pn	10 59 58.7	+0.7
GRGR				*e*S	Sn	11 00 22.0	+0.9
PCRV	Puerto La Cruz	1.85	253	P	Pn	10 59 59.3	+1.0
	47nm,0.3s,baz=38,slow=5.3,SNR=280						
PCRV				S	Sn	11 00 22.6	+0.9
	306nm,0.3s,baz=251,slow=18,SNR=14						
PCRV	Puerto La Cruz	1.85	253⇑	*e*P	Pn	10 59 59.3	+1.0
PCRV				*e*S	Sn	11 00 22.7	+1.0
TPR	Prospect	2.08	77	*e*P	Pn	11 00 02.2	+1.0
TPR				*e*S	Sn	11 00 26.8	-0.2
BOT	Bacolet	2.13	78	*e*P	Pn	11 00 03.6	+1.7
BOT				*e*S	Sn	11 00 27.6	-0.6
GCMP	Grenada, Carri	2.24	38	*e*P	Pn	11 00 04.3	+1.0
GCMP				*e*S	Sn	11 00 29.4	-1.3
TOSP	Speyside	2.33	76	*e*P	Pn	11 00 05.6	+1.0
TOSP				*e*S	Sn	11 00 32.7	-0.2
TOSP	Speyside	2.33	76		Pn	11 00 05.5	+1.0
TOSP	Speyside	2.33	76	*e*P	Pn	11 00 05.5	+1.0
TOSP				*e*S	Sn	11 00 31.3	-1.6
RIOV	Rio Grande	2.82	159	*e*P	Pn	11 00 11.2	+0.1
RIOV				*e*S	Sn	11 00 42.8	-1.6
SVOC	Richmond Hill,	2.89	33	*e*P	Pn	11 00 13.7	+1.8
SVOC				*e*S	Sn	11 00 44.9	-1.2
SVB	Belmont	2.98	31	*e*P	Pn	11 00 14.9	+1.8
SVB				*e*S	Sn	11 00 47.2	-0.9
SVB	Belmont	2.98	31	Pn	Pn	11 00 13.5	+0.4
SVV	Soufriere Volc	3.03	31	*e*	Pn	11 00 09.9	-4.0
SVV	Soufriere Volc	3.03	31	*e*P	Pn	11 00 15.2	+1.4
SVV				*e*S	Sn	11 00 48.3	-1.2
BIRV	Birongo	3.38	266	*e*P	Pn	11 00 21.2	+2.7
BIRV				*e*S	Sn	11 00 59.4	+1.6
MCLT	Moule a Chique	3.50	32	*e*P	Pn	11 00 21.7	+1.5
MCLT				*e*S	Sn	11 00 59.6	-1.2
MCLT	Moule a Chique	3.50	32		Pn	11 00 21.1	+0.9
SLDE	Delcer	3.52	29	*e*P	Pn	11 00 22.0	+1.5
SLDE				*e*S	Sn	11 00 59.8	-1.5
SLB	Belfond	3.56	29	*e*P	Pn	11 00 22.8	+1.9
SLB				*e*S	Sn	11 01 01.6	-0.5
SLPA	Patience	3.64	31	*e*P	Pn	11 00 24.1	+2.1
SLPA				*e*S	Sn	11 01 03.6	-0.5
SLCP	Castries, St.	3.74	29	*e*P	Pn	11 00 26.0	+2.7
SLCP				*e*S	Sn	11 01 06.4	0.0
SLBI	Saint Lucia, B	3.76	29	*e*P	Pn	11 00 24.8	+1.3
SLBI				*e*S	Sn	11 01 05.1	-1.7
SLW	Petit Monier	3.77	29	*e*P	Pn	11 00 26.4	+2.6
SLW				*e*S	Sn	11 01 06.8	-0.5
FUNV	FUNVISIS	3.91	267	*e*P	Pn	11 00 28.4	+2.6
FUNV				*e*S	Sn	11 01 11.3	+0.5
BBGH	Gun Hill	4.01	53	*e*P	Pn	11 00 29.5	+2.5
BBGH	Gun Hill	4.01	53	Pn	Pn	11 00 28.6	+1.6
BBGH	Gun Hill	4.01	53	*e*P	Pn	11 00 28.3	+1.2
CARV	Caracas	4.03	267	*e*P	Pn	11 00 29.7	+2.4
CARV				*e*S	Sn	11 01 14.4	+0.9
BIM	Bigot	4.15	24	*e*P	Pn	11 00 29.9	+0.9
TACV	Tcata	4.16	262	*e*P	Pn	11 00 30.8	+1.8
H05S1	Guadeloupe/Mar	4.17	28	P	Pn	11 00 31.2	+2.1
H05S1				S	Sn	11 01 20.9	+4.0
TRMF	Trois Ilets	4.18	25	*e*P	Pn	11 00 30.2	+1.0
MPOM	Morne Pois Mar	4.18	27	*e*P	Pn	11 00 31.0	+1.8
MPOM				*e*S	Sn	11 01 14.7	-2.3
ZAM	Aeronautique	4.22	25	*e*P	Pn	11 00 31.0	+1.2
LPMF	Morne Lapointe	4.25	25	*e*P	Pn	11 00 31.4	+1.2
MVM	Montagne Vaucl	4.26	26	*e*P	Pn	11 00 31.7	+1.3
FDF	Fort de France	4.32	22	*e*P	Pn	11 00 32.3	+1.2
FDF	Fort de France	4.32	22	*e*S	Sn	11 01 18.0	-2.5
FDF	Fort de France	4.32	22	P	Pn	11 00 32.4	+1.2
FDF	Fort de France	4.32	22	Pn	Pn	11 00 32.4	+1.2
FDF	Fort de France	4.32	22⇓	*e*P	Pn	11 00 32.1	+0.9
PML	Morne Lenard	4.35	22	*e*P	Pn	11 00 33.1	+1.5
GBMF	Grand Be	4.37	22	*e*P	Pn	11 00 33.2	+1.3
PCM	Pelee Case Pet	4.37	21	*e*P	Pn	11 00 33.1	+1.2
PCM	Pelee Case Pet	4.37	21	*e*P	Pn	11 00 33.4	+1.5
CXM	Morne La Croix	4.38	22	*e*P	Pn	11 00 33.5	+1.4
BAMF	Morne Balai	4.39	22	*e*P	Pn	11 00 33.7	+1.5
SVN	Savane Anatole	4.41	22	*e*P	Pn	11 00 33.7	+1.2
ILAM	Ilet Lapin Mar	4.46	25	*e*P	Pn	11 00 36.3	+3.1
ILAM	Ilet Lapin Mar	4.46	25	*e*S	Sn	11 01 21.5	-2.5
DLPL	La Plaine	4.84	19	*e*P	Pn	11 00 42.7	+4.5
DLPL	La Plaine	4.84	19	Pn	Pn	11 00 40.7	+2.4
DSLB	Salisbury	4.89	16	*e*P	Pn	11 00 41.1	+2.2
TDBA	Terre de Bas,	5.23	13	*e*P	Pn	11 00 46.3	+2.8
TDBA	Terre de Bas,	5.23	13	*e*S	Sn	11 01 40.9	-1.8
TBG	Guadaloupe-3	5.23	13	*e*P	Pn	11 00 45.9	+2.3
MAGL	Barre de l’ile	5.42	16	*e*P	Pn	11 00 48.9	+2.9
MAGL	Barre de l’ile	5.42	16	*e*S	Sn	11 01 43.5	-3.6
BAUV	El Baul	5.42	251	*e*P	Pn	11 00 46.5	+0.4
BAUV				*e*S	Sn	11 01 44.8	-2.5
CBE	Ff, Capester	5.45	13	*e*P	Pn	11 00 49.4	+2.8
CBE	Ff, Capester	5.45	13	*e*S	Sn	11 01 45.7	-2.3
MAPV	Macapo	5.60	261	*e*P	Pn	11 00 49.5	+1.0
H05N1	Guadeloupe/Mar	5.83	17	P	Pn	11 00 54.5	+2.9
H05N1				S	Sn	11 01 54.7	-2.4
ABD	La Joyeuse, An	5.87	13	*e*P	Pn	11 00 54.6	+2.4
ABD	La Joyeuse, An	5.87	13	*e*S	Sn	11 01 56.5	-1.6
JACV	Jacura	5.89	274	*e*P	Pn	11 00 54.3	+1.7
MLYT	Lee's Yard	6.00	6	*e*P	Pn	11 00 56.1	+2.1
MLYT	Lee's Yard	6.00	6	*e*S	Sn	11 01 58.9	-2.4
ANBD	Bethesda, Anti	6.38	9	*e*P	Pn	11 01 00.9	+1.9
ANBD	Bethesda, Anti	6.38	9	*e*S	Sn	11 02 08.3	-2.2
SKOC	St. Kitts, UWI	6.54	1	*e*P	Pn	11 01 05.1	+3.8
SKOC	St. Kitts, UWI	6.54	1	*e*S	Sn	11 02 12.4	-2.0
SKI	Saint Kitts	6.58	1	*e*P	Pn	11 01 04.9	+3.1
SKI	Saint Kitts	6.58	1	*e*S	Sn	11 02 14.1	-1.3
SKI	Saint Kitts	6.58	1	P	Pn	11 01 04.0	+2.2
SKI	Saint Kitts	6.58	1	Pn	Pn	11 01 04.0	+2.2
SEUS	St. Eustatius	6.74	359	*e*P	Pn	11 01 07.3	+3.4
SEUS	St. Eustatius	6.74	359		Pn	11 01 04.5	+0.6
SIQV	Siquisique	6.85	270	*e*P	Pn	11 01 06.4	+0.9
SABA	Saba	6.87	357	*e*P	Pn	11 01 08.4	+2.6
SABA	Saba	6.87	357	Pn	Pn	11 01 07.6	+1.8
ANWB	Willy Bob	6.98	8	*e*P	Pn	11 01 10.9	+3.6
ANWB	Willy Bob	6.98	8	*e*S	Sn	11 02 21.3	-3.9
ANWB	Willy Bob	6.98	8		Pn	11 01 08.9	+1.6
CURV	Curarigua	7.04	265	*e*P	Pn	11 01 09.4	+1.2
MONV	Montecano	7.10	281	*e*P	Pn	11 01 10.6	+1.6
CDVI	St. Croix	7.24	345	Pn	Pn	11 01 11.3	+0.5
ELOV	Elorza	7.53	241	*e*P	Pn	11 01 14.6	-0.2
DABV	Dabajuro	7.66	272	*e*P	Pn	11 01 16.9	+0.3
MTP	Monte Pirata	7.79	341	Pn	Pn	11 01 18.7	+0.4
PDPR	Patillas Dam,	7.88	337		Pn	11 01 20.0	+0.4
SDV	Santo Domingo	7.89	257	P	Pn	11 01 19.5	-0.4
	2.7nm,0.3s,baz=64,slow=11,SNR=12						
SDV				S	Sn	11 02 44.4	-3.3
	11nm,0.3s,baz=51,slow=20,SNR=10.0						
SDV				LR	LR	11 05 19.8	
	comp=Z,223nm,19.3s,baz=58,slow=45						
SDV	Santo Domingo	7.89	257	Pn	Pn	11 01 20.1	+0.1
SDV	Santo Domingo	7.89	257	*e*P	Pn	11 01 18.9	-1.0
SDV	Santo Domingo	7.89	257	*e*P	Pn	11 01 17.2	-2.7
SDV	Santo Domingo	7.89	257	*e*P	Pn	11 01 19.9	0.0
CUPR	Culebra, Puert	7.91	343	Pn	Pn	11 01 20.5	+0.7
HUMP	Col San Antoni	7.93	339	Pn	Pn	11 01 21.5	+1.2
ICMP	Isla Caja de M	7.97	334	Pn	Pn	11 01 21.7	+1.0
SJG	San Juan	8.02	337	P	Pn	11 01 21.8	+0.4
	5.8nm,0.3s,baz=298,slow=21,SNR=2.2						
SJG	San Juan	8.02	337	P	Pn	11 01 22.6	+1.2
SJG	San Juan	8.02	337		Pn	11 01 22.6	+1.2
CBYP	Canovanas	8.06	339		Pn	11 01 22.9	+0.9
OBIP	Obispado Ponce	8.14	334	Pn	Pn	11 01 24.9	+1.8
GCPR	Guaynabo City	8.17	338		Pn	11 01 24.9	+1.3
SOCV	Socops	8.27	254	*e*P	Pn	11 01 24.3	-0.6
MLPR	Magueyes Islan	8.28	331	Pn	Pn	11 01 26.7	+1.8
CRPR	Cabo Rojo, PR	8.34	331		Pn	11 01 28.0	+2.2
AOPR	Arecibo Observ	8.48	334	*e*P	Pn	11 01 30.5	+2.8
AOPR	Arecibo Observ	8.48	334		Pn	11 01 29.3	+1.6
MPR	Mayaguez	8.53	331		Pn	11 01 30.3	+1.9
AGPR	Aguadilla, PR	8.74	332	Pn	Pn	11 01 31.8	+0.5
TAMC	Tame, Arauca	9.82	245	*e*P	Pn	11 01 46.8	+0.7
BARC	Barichara	11.02	249	*e*P	Pn	11 02 03.3	+0.9
SMLC	San Martn de	11.23	261	*e*P	Pn	11 02 04.4	-0.7
MDP	Montagnes des	11.54	118	P	Pn	11 02 06.3	-2.9
	7.0nm,0.3s,baz=306,slow=15,SNR=29						
MDP				S	Sn	11 04 05.1	-11
	31nm,0.3s,baz=35,slow=16,SNR=18						
SDDR	Presa de Saban	11.58	316	Pn	Pn	11 02 11.6	+1.8
PTGA	Pitinga	11.73	166	P	Pn	11 02 09.5	-2.2
	28nm,0.3s,baz=358,slow=16,SNR=143						
PTGA				S	Sn	11 04 14.4	-6.4
	16nm,0.3s,baz=89,slow=21,SNR=12						
PTGA	Pitinga	11.73	166	Pn	Pn	11 02 09.9	-1.9
PTGA	Pitinga	11.73	166	*e*P	Pn	11 02 09.6	-2.2
SPBC	San Pablo de B	12.20	247	*e*P	Pn	11 02 16.9	-1.3
PTBC	PUERTO BERRIO,	12.21	251	*e*P	Pn	11 02 15.1	-3.2
ZARC	Zaragoza, Cauc	12.29	256	*e*P	Pn	11 02 17.9	-1.4
CHIC	Chingaza	12.37	242	*e*P	Pn	11 02 18.5	-2.2
ROSC	El Rosal	12.78	244	LR	LR	11 08 02.6	
	comp=Z,306nm,21.9s,baz=92,slow=40						
MOTC	Monteria, Cord	12.79	262	*e*P	Pn	11 02 22.5	-3.3
UREC	San Jos de Ur	12.87	258	*e*P	Pn	11 02 22.4	-4.5
GUY2C	Guyana, Caldas	13.55	247	*e*P	Pn	11 02 35.2	-1.1
RREF	El Recreo	13.67	246	*e*P	Pn	11 02 37.9	-0.1
TOLC	Tolima	13.78	245	*e*P	Pn	11 02 39.5	+0.3
MACC	Macarena, Meta	13.86	233	*e*P	Pn	11 02 38.6	-1.2
ANIL	Santa Ana	13.90	245	*e*P	P	11 02 45.4	-0.2
MACA	Manacapuru-AM	13.96	171	*e*P	Pn	11 02 39.2	-1.9
ORTC	Ortega, Tolima	14.04	242	*e*P	Pn	11 02 44.1	+1.9
PLMC	San Jos del P	14.51	248	*e*P	P	11 02 51.3	-0.8
GTBY	Guantanamo Bay	14.95	309	Pn	Pn	11 02 53.9	+0.1
YOTC	Yotoco, Valle	14.97	244	*e*P	Pn	11 02 55.9	+1.7
MALB	Monte Alegre	15.13	145	*e*P	Pn	11 02 53.7	-2.3
MCPB	Macapa, AP	15.37	135	*e*P	Pn	11 02 56.7	-2.4
BBAC	Balboa, Cauca	16.71	240	*e*P	P	11 03 18.7	+2.0
BCIP	Isla Barro Col	16.81	266	P	Pn	11 03 15.9	-1.2
BCIP				pmax	pmax		
	comp=Z,86nm,1.5s						
BCIP	Isla Barro Col	16.81	266	Pn	Pn	11 03 15.9	-1.2
OTAV	Otavalo	18.69	237	P	P	11 03 38.8	+0.1
OTAV				pmax	pmax		
	comp=Z,23nm,1.4s						
OTAV	Otavalo	18.69	237		P	11 03 38.8	+0.1
OTAV	Otavalo	18.69	237	*e*P	Pn	11 03 41.3	+1.2
NPGB	Novo Progresso	19.16	157	*e*P	P	11 03 43.9	+0.7
SAML	Samuel	19.54	181	P	P	11 03 48.2	+0.7
SAML				pmax	pmax		
	comp=Z,126nm,1.1s						
SAML	Samuel	19.54	181	P	P	11 03 48.2	+0.7
SAML				IAmb	IAmb	11 03 51.7	
	comp=Z,126nm,1.1s						
CZSB	Cruzeiro do Su	20.79	209	*e*P	P	11 04 02.4	+1.5
PRPB	Parauapebas	21.21	142	*e*P	P	11 04 06.4	+0.9
JTS	Las Juntas de	21.75	271	P	P	11 04 11.6	+0.4
JTS				pmax	pmax		
	comp=Z,14nm,1.1s						
JTS	Las Juntas de	21.75	271	P	P	11 04 11.6	+0.4
ROSB	Rosrio	23.02	125	*e*P	P	11 04 24.4	+0.1
ATAH	Atahualpa	23.55	222	P	P	11 04 31.5	+1.9
	comp=Z,30nm,0.9s,baz=29,slow=6.0,SNR=10						
VILB	Vilhena	23.66	174	*e*P	P	11 04 31.6	+1.4
TGUH	Tegucigalpa,Un	24.09	280	P	P	11 04 34.5	+0.3
DWPF	Disney Wildern	24.57	317	P	P	11 04 39.5	+1.2
	baz=131						
SMTB	Santa Maria do	24.67	141	*e*P	P	11 04 40.6	+1.3
ESQI	Esquipulas	26.13	281	P	P	11 04 52.5	-0.2
TEIG	Tepich	26.24	294	P	P	11 04 54.6	+1.1
	comp=Z,23nm,1.1s						
TEIG	Tepich	26.24	294	P	P	11 04 54.1	+0.6
NNA	Nana	26.50	212	P	P	11 04 57.0	+1.1
	comp=Z,9.0nm,0.6s,baz=19,slow=14,SNR=3.5						
NNA	Nana	26.50	212⇑	*e*P	P	11 04 57.6	+1.7
NNA				pmax	pmax		
	comp=Z,13nm,0.6s						
SIV	San Ignacio	26.60	176	P	P	11 04 58.0	+1.3
	comp=Z,24nm,0.5s,baz=17,slow=8.2,SNR=46						
NBMO	Morrinhos-CE	26.63	120	*e*P	P	11 04 58.5	+1.4
PEXB	Peixe	26.89	147	*e*P	P	11 05 00.6	+1.2
PETF	Flores	26.94	286	P	P	11 04 59.7	-0.1
Z59A	Georgetown, SC	27.03	329	P	P	11 05 02.0	+1.5
	baz=142						
NHSC	New Hope	27.40	327	P	P	11 05 04.7	+1.0
	baz=141						
V62A	Hyde County Ai	27.45	336	P	P	11 05 06.4	+2.2
	baz=151						
X60A	Albert Glenn T	27.48	332	P	P	11 05 05.6	+1.2
	baz=146						
W61A	Ground Anchor	27.55	334	P	P	11 05 06.5	+1.5
	baz=149						
W60A	Pink Hill	27.76	333	P	P	11 05 08.3	+1.4
	baz=147						
X59A	McDuffie Farm,	27.77	331	P	P	11 05 08.2	+1.2
	baz=145						
CNNC	Cliffs of the	27.99	333	P	P	11 05 10.4	+1.4
	baz=147						
V60A	Jim Taylor Roa	28.16	335	P	P	11 05 12.0	+1.5
	baz=149						
V60A	Jim Taylor Roa	28.16	335	P	P	11 05 11.0	+0.5
W59A	Clinton	28.18	332	P	P	11 05 12.0	+1.4
	baz=146						
Z56A	Williston	28.21	326	P	P	11 05 11.4	+0.4
Z56A				IAmb	IAmb	11 05 14.0	
	comp=Z,116nm,1.5s						
U61A	Possum Corner	28.32	336	P	P	11 05 14.3	+2.4
	baz=151						
X57A	Johnson Farm,	28.41	329	P	P	11 05 14.2	+1.5
	baz=142						
W58A	Raeford	28.43	331	P	P	11 05 14.4	+1.5
	baz=145,SNR=8.2						
ARAG	Araguaiana, MT	28.43	157	*e*P	P	11 05 15.0	+1.9
V59A	Middlesex	28.59	333	P	P	11 05 15.5	+1.3
	baz=147						
U60A	Pendleton	28.73	335	P	P	11 05 16.7	+1.2
	baz=150						
BIRD	Birdtown, Kers	28.74	329	P	P	11 05 16.8	+1.1
CCIG	Comitan	29.00	284	P	P	11 05 18.2	-0.2
V58A	Windy Hill, Pi	29.01	332	P	P	11 05 19.1	+1.1
	baz=146,SNR=6.1						
V58A	Windy Hill, Pi	29.01	332	P	P	11 05 18.5	+0.5
SDBA	SAO DESIDERIO	29.07	142	*e*P	P	11 05 20.0	+1.1
T60A	Surry	29.14	337	P	P	11 05 20.5	+1.4
	baz=151						
T60A	Surry	29.14	337	P	P	11 05 20.0	+0.9
W56A	Indian Trail	29.18	329	P	P	11 05 20.8	+1.2
	baz=142						
PP1B	Ponte de Pedra	29.22	164	*e*P	P	11 05 23.2	+3.1
U58A	Oxford	29.25	333	P	P	11 05 21.3	+1.1
	baz=147,SNR=6.2						
T59A	Double "B" Far	29.32	335	P	P	11 05 21.8	+1.0
	baz=150,SNR=6.4						
T59A	Double "B" Far	29.32	335	P	P	11 05 21.6	+0.9
T59A				IAmb	IAmb	11 05 23.8	
	comp=Z,36nm,1.2s						
HODGE	Hodges	29.38	326	P	P	11 05 22.6	+1.3
V57A	Coltrane Farms	29.39	331	P	P	11 05 22.5	+1.1
	baz=144						

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GOGA  Godfrey            29.47 323  P     P      11 05 22.8 +0.7
      baz=136
GOGA  Godfrey            29.47 323  P     P      11 05 23.0 +0.8
GOGA                                pmax  pmax
      comp=Z,18nm,1.3s
GOGA  Godfrey            29.47 323  P     P      11 05 23.0 +0.8
KMSC  Kings Mountain     29.57 328  P     P      11 05 23.2 +0.2
      baz=141
KMSC  Kings Mountain     29.57 328  P     P      11 05 22.5  -0.5
KMSC                                IAmb  IAmb   11 05 25.4
      comp=Z,39nm,1.4s
PAULI Pauline            29.58 327  P     P      11 05 23.8 +0.7
S60A  Water View         29.60 337  P     P      11 05 24.2 +1.0
      baz=152,SNR=5.3
U57A  Blanch             29.63 332  P     P      11 05 24.8 +1.2
      baz=146
V56A  Mocksville         29.68 330  P     P      11 05 24.9 +0.9
      baz=143
T58A  Grand View Acr     29.70 334  P     P      11 05 25.2 +1.1
      baz=148,SNR=9.6
152A  Waverly Hall       29.72 321  P     P      11 05 25.4 +1.1
S59A  Mechanicsville     29.90 337  P     P      11 05 27.8 +1.9
      baz=151
BDFB  Brasilia           30.02 150  P     P      11 05 29.1 +1.7
      comp=Z,14nm,0.8s,baz=321,slow=8.7,SNR=15
BDFB                                LR    LR     11 17 43.7
      comp=Z,212nm,20.4s,baz=352,slow=36
BDFB  Brasilia           30.02 150  P     P      11 05 27.4 +0.1
U56A  King               30.05 331  P     P      11 05 28.3 +1.0
      baz=144
U56A  King               30.05 331  P     P      11 05 28.5 +1.2
U56A                                IAmb  IAmb   11 05 29.9
      comp=Z,39nm,1.4s
T57A  Hurt               30.06 333  P     P      11 05 28.7 +1.4
      baz=146,SNR=12
T57A  Hurt               30.06 333  P     P      11 05 28.5 +1.1
T57A                                IAmb  IAmb   11 05 30.8
      comp=Z,31nm,0.9s
V55A  Taylorsville       30.07 329  P     P      11 05 27.8 +0.4
S58A  Poland Farm, P     30.07 335  P     P      11 05 28.2 +0.8
      baz=149
S58A  Poland Farm, P     30.07 335  P     P      11 05 28.0 +0.6
S58A                                IAmb  IAmb   11 05 29.9
      comp=Z,18nm,0.8s
Y52A  Lilburn            30.14 323  P     P      11 05 28.9 +0.8
R59A  King George, V     30.21 337  P     P      11 05 30.1 +1.5
      baz=151
250A  Grady              30.26 318  P     P      11 05 29.9 +0.7
250A                                IAmb  IAmb   11 05 32.6
      comp=Z,46nm,0.8s
R58B  Mineral            30.30 336  P     P      11 05 30.9 +1.4
      baz=150,SNR=6.6
R58B  Mineral            30.30 336  P     P      11 05 29.9 +0.5
CBN   Corbin Frederi     30.31 337  P     P      11 05 30.8 +1.2
      baz=151
CBN   Corbin Frederi     30.31 337  P     P      11 05 30.0 +0.5
CBN                                 IAmb  IAmb   11 05 32.2
      comp=Z,34nm,0.7s
NBPA  Parau_RN           30.39 121 eP     P      11 05 32.4 +1.9
MNMC  Minye Minye        30.40 193  P     P      11 05 30.4  -0.4
Z51A  Franklin           30.43 321  P     P      11 05 31.1 +0.4
T56A  Rocky Mt           30.44 332  P     P      11 05 32.3 +1.6
      baz=145,SNR=11
S57A  Dark Hollow, R     30.57 334  P     P      11 05 32.9 +1.0
      baz=148,SNR=6.3
S57A  Dark Hollow, R     30.57 334  P     P      11 05 32.8 +1.0
R58A  Rapidan            30.64 336  P     P      11 05 33.5 +1.1
      baz=150,SNR=13
V53A  Saluda             30.75 327  P     P      11 05 34.3 +0.8
V53A                                IAmb  IAmb   11 05 36.5
      comp=Z,34nm,1.2s
S56A  Natural Bridge     30.77 333  P     P      11 05 35.2 +1.6
      baz=147,SNR=6.2
BLA   Blacksburg         30.77 332  P     P      11 05 35.4 +1.8
      baz=145,SNR=6.4
BLA   Blacksburg         30.77 332  P     P      11 05 34.4 +0.8
BLA                                 pmax  pmax
      comp=Z,24nm,0.9s
BLA   Blacksburg         30.77 332  P     P      11 05 34.4 +0.8
BLA                                 IAmb  IAmb   11 05 37.4
      comp=Z,24nm,0.8s
R57A  Stanardsville      30.85 335  P     P      11 05 35.9 +1.7
      baz=149,SNR=19
U54A  Nelsons Funny      30.89 329  P     P      11 05 36.1 +1.3
      baz=142
U54A  Nelsons Funny      30.89 329  P     P      11 05 36.1 +1.3
W52A  Murphy             30.94 325  P     P      11 05 35.6 +0.4
Q58A  Fox Den Farm,      31.07 337  P     P      11 05 37.7 +1.5
      baz=151,SNR=7.2
P60A  Greenville         31.12 341  P     P      11 05 37.5 +0.8
      baz=155
P60A  Greenville         31.12 341  P     P      11 05 35.6  -1.0
PSUB  Penn St. - Bra     31.17 341  P     P      11 05 36.7  -0.3
P59A  Jarrettsville      31.21 339  P     P      11 05 38.9 +1.5
      baz=154,SNR=5.9
TKL   Tuckaleechee C     31.27 326  P     P      11 05 39.0 +1.0
TKL                                 pmax  pmax
      comp=Z,9.0nm,1.1s
TKL   Tuckaleechee C     31.27 326  P     P      11 05 39.0 +1.0
PB08  IPOC Station P     31.29 191  P     P      11 05 38.6  -0.1
LRAL  Lakeview Retre     31.41 319  P     P      11 05 40.5 +1.2
      baz=130,SNR=11
LRAL  Lakeview Retre     31.41 319  P     P      11 05 40.2 +1.0
P58A  Pank, Wackersv     31.41 338  P     P      11 05 40.4 +1.3
      baz=152
NBLI  Livramento-PB      31.41 124 eP     P      11 05 40.6 +1.0
Q57A  Strasburg          31.44 336  P     P      11 05 41.1 +1.7
      baz=150,SNR=6.4
JANB  Januaria           31.51 144 eP     P      11 05 41.4 +1.0
O60A  Telford            31.51 341  P     P      11 05 42.5 +2.4
      baz=156
MVL   Millersville       31.53 340  P     P      11 05 41.3 +1.0
MVL                                 IAmb  IAmb   11 05 43.1
      comp=Z,28nm,0.9s
FPAL  Fort Paine         31.53 322  P     P      11 05 41.3 +0.9
Y49A  Blount Mountai     31.56 321  P     P      11 05 41.5 +0.8
N61A  South Mountain     31.58 343  P     P      11 05 42.2 +1.5
      baz=158
M64A  Tiverton           31.58 348  P     P      11 05 42.2 +1.6
      baz=164
M63A  Gales Ferry        31.62 347  P     P      11 05 41.9 +0.9
      baz=163
S54A  Dingess, Beckl     31.66 331  P     P      11 05 43.0 +1.5
      baz=144,SNR=7.7
S54A  Dingess, Beckl     31.66 331  P     P      11 05 42.1 +0.7
S54A                                IAmb  IAmb   11 05 45.5
      comp=Z,22nm,0.6s
P57A  Homestead Farm     31.67 337  P     P      11 05 43.1 +1.6
      baz=151,SNR=7.8
P57A  Homestead Farm     31.67 337  P     P      11 05 41.9 +0.5
P57A                                IAmb  IAmb   11 05 44.7
      comp=Z,25nm,1.0s
V51A  Loudon             31.69 325  P     P      11 05 42.9 +1.1
V51A                                IAmb  IAmb   11 05 44.4
      comp=Z,49nm,1.4s
PAL   Palisades          31.71 344  P     P      11 05 42.8 +1.0
      baz=159
PAL   Palisades          31.71 344  P     P      11 05 43.2 +1.4
PAL                                 pmax  pmax
      comp=Z,28nm,1.2s
PAL   Palisades          31.71 344  P     P      11 05 43.2 +1.4
PAL                                 IAmb  IAmb   11 05 45.1
      comp=Z,28nm,1.2s
WSPT  Westport, CT       31.71 345  P     P      11 05 42.3 +0.5
WSPT                                IAmb  IAmb   11 05 44.0
      comp=Z,22nm,0.9s
Q56A  Snyder Ridge,      31.75 335  P     P      11 05 43.8 +1.5
      baz=148
Q56A  Snyder Ridge,      31.75 335  P     P      11 05 43.4 +1.1
Q56A                                IAmb  IAmb   11 05 46.2
      comp=Z,62nm,1.1s
LUPA  Lehigh Univers     31.76 342  P     P      11 05 42.7 +0.5
LUPA                                IAmb  IAmb   11 05 46.0
      comp=Z,82nm,1.4s
AQDB  Aquidauana         31.79 167 eP     P      11 05 44.6 +2.0
TZTN  Tazewell           31.80 327  P     P      11 05 43.7 +1.0
      baz=139,SNR=6.6
TZTN  Tazewell           31.80 327  P     P      11 05 43.5 +0.8
TZTN                                IAmb  IAmb   11 05 45.5
      comp=Z,43nm,1.3s
W50A  Signal Mountai     31.81 324  P     P      11 05 43.9 +1.0
R54A  Victor             31.82 332  P     P      11 05 44.2 +1.4
      baz=145
O58A  Lewisberry         31.84 339  P     P      11 05 44.4 +1.4
      baz=153,SNR=6.1
M62A  Hamden             31.86 346  P     P      11 05 44.2 +1.2
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      baz=161
N60A  Cedar Hill Far     31.92 342  P     P      11 05 45.2 +1.5
      baz=157,SNR=6.2
TRNY  Table Rock, Ra     31.93 344  P     P      11 05 44.8 +1.1
TRNY                                IAmb  IAmb   11 05 46.5
      comp=Z,45nm,1.0s
M61A  Granite Spring     31.95 344  P     P      11 05 44.7 +0.7
      baz=160
IPMB  Ipameri, GO        31.97 153 eP     P      11 05 46.4 +2.0
ODNJ  Ogdensburg         31.98 343  P     P      11 05 45.0 +0.9
ODNJ                                IAmb  IAmb   11 05 46.6
      comp=Z,36nm,0.9s
P56A  Dayton Farm, R     32.01 336  P     P      11 05 46.3 +1.8
      baz=149,SNR=12
O57A  Amberson           32.17 338  P     P      11 05 47.6 +1.8
      baz=152,SNR=15
N59A  State Game Lan     32.17 341  P     P      11 05 47.0 +1.1
SWET  Sewanee            32.19 323  P     P      11 05 47.6 +1.5
M60A  Port Jervis        32.20 343  P     P      11 05 47.2 +1.1
      baz=158,SNR=6.3
Z47A  Carrollton         32.21 318  P     P      11 05 46.0  -0.3
Z47A                                IAmb  IAmb   11 05 49.5
      comp=Z,59nm,1.1s
PB01  IPOC Station P     32.23 192  P     P      11 05 46.1  -0.6
KSCT  Kent School, K     32.27 345  P     P      11 05 47.2 +0.5
KSCT                                IAmb  IAmb   11 05 49.1
      comp=Z,21nm,0.8s
X48A  Hartselle          32.35 321  P     P      11 05 47.5   0.0
R53A  Hurricane          32.39 331  P     P      11 05 48.2 +0.4
R53A                                IAmb  IAmb   11 05 51.6
      comp=Z,18nm,0.7s
Q54A  Coxs Mills         32.41 333  P     P      11 05 49.1 +1.1
N58A  Sunbury            32.41 340  P     P      11 05 49.2 +1.3
      baz=154,SNR=6.7
N58A  Sunbury            32.41 340  P     P      11 05 49.3 +1.4
N58A                                IAmb  IAmb   11 05 50.6
      comp=Z,23nm,1.1s
MCWV  Mont Chateau       32.55 335  P     P      11 05 51.4 +2.2
      baz=148,SNR=7.5
MCWV  Mont Chateau       32.55 335  P     P      11 05 50.4 +1.3
MCWV                                IAmb  IAmb   11 05 53.2
      comp=Z,29nm,1.1s
O56A  Blue Knob Stat     32.56 337  P     P      11 05 51.1 +1.7
      baz=150,SNR=15
O56A  Blue Knob Stat     32.56 337  P     P      11 05 51.5 +2.2
O56A                                IAmb  IAmb   11 05 52.7
      comp=Z,50nm,0.9s
HRV   Adam Dziewonsk     32.57 348  P     P      11 05 50.4 +1.0
      baz=164
Q53A  Leroy              32.61 332  P     P      11 05 51.2 +1.5
      baz=144,SNR=5.9
N57A  Milroy             32.62 339  P     P      11 05 51.1 +1.3
      baz=153,SNR=6.7
SSPA  Standing Stone     32.63 339  P     P      11 05 51.8 +1.9
      baz=152
SSPA  Standing Stone     32.63 339  P     P      11 05 51.0 +1.1
SSPA                                IAmb  IAmb   11 05 53.1
      comp=Z,43nm,0.9s
M59A  Waymart            32.64 342  P     P      11 05 51.4 +1.4
      baz=157,SNR=13
S51A  Beattyville        32.66 329  P     P      11 05 51.0 +0.8
L60A  Shokan             32.71 344  P     P      11 05 52.1 +1.5
      baz=159,SNR=5.8
L61A  Hillsdale 1, H     32.73 345  P     P      11 05 52.1 +1.4
      baz=160,SNR=10
K63A  Dunstable          32.74 348  P     P      11 05 52.9 +2.1
      baz=164
KSPA  Keystone Colle     32.75 342  P     P      11 05 52.2 +1.3
L61B  Northampton        32.76 346  P     P      11 05 52.0 +1.0
      baz=162
M58A  Price's Panora     32.80 341  P     P      11 05 53.0 +1.6
      baz=155,SNR=8.8
T50A  Nancy              32.85 326  P     P      11 05 52.3 +0.4
T50A                                IAmb  IAmb   11 05 54.8
      comp=Z,30nm,1.2s
K62A  Royalston          32.87 347  P     P      11 05 53.0 +1.1
      baz=163
PB07  IPOC Station P     32.98 192  P     P      11 05 53.1  -0.1
PB07                                IAmb  IAmb   11 05 54.3
      comp=Z,22nm,1.0s
M57A  Sunshine Farm,     32.99 340  P     P      11 05 54.7 +1.7
      baz=154,SNR=9.5
M57A  Sunshine Farm,     32.99 340  P     P      11 05 53.9 +0.9
M57A                                IAmb  IAmb   11 05 56.2
      comp=Z,46nm,0.8s
U49A  Red Boiling Sp     33.01 325  P     P      11 05 53.4 +0.1
U49A                                IAmb  IAmb   11 05 56.4
      comp=Z,33nm,1.4s
CLTN  Cedars of Leba     33.03 324  P     P      11 05 54.5 +1.1
CLTN                                IAmb  IAmb   11 05 56.9
      comp=Z,40nm,1.3s
N56A  West Decatur       33.03 338  P     P      11 05 55.1 +1.7
      baz=151,SNR=6.5
Q52A  Bidwell            33.04 332  P     P      11 05 54.6 +1.1
Q52A                                IAmb  IAmb   11 05 56.4
      comp=Z,66nm,1.4s
344A  Westbrook Farm     33.04 313  P     P      11 05 55.3 +1.8
P53A  Whipple            33.06 333  P     P      11 05 55.1 +1.4
P53A                                IAmb  IAmb   11 05 56.8
      comp=Z,21nm,1.0s
V48A  Smith Brothers     33.08 323  P     P      11 05 55.1 +1.2
K61A  Williamstown       33.11 346  P     P      11 05 55.4 +1.3
      baz=161,SNR=10
L59A  Walton             33.12 343  P     P      11 05 55.7 +1.5
      baz=158
O54A  Avella             33.21 335  P     P      11 05 56.3 +1.4
J63A  Strafford          33.22 349  P     P      11 05 56.3 +1.3
      baz=165
L58A  Harry Jones Me     33.22 342  P     P      11 05 56.9 +1.8
      baz=156
VBMS  Vicksburg          33.30 314  P     P      11 05 57.4 +1.5
      baz=124,SNR=6.9
VBMS  Vicksburg          33.30 314  P     P      11 05 56.5 +0.7
J62A  Henniker           33.31 348  P     P      11 05 57.3 +1.6
      baz=164
PLAL  Pickwick Lake      33.34 320  P     P      11 05 57.2 +1.1
PLAL                                IAmb  IAmb   11 05 58.5
      comp=Z,64nm,1.4s
PLAL                                      PcP    11 08 34.2  -1.7
BINY  Binghamton         33.41 342  P     P      11 05 57.9 +1.2
      baz=156,SNR=8.3
BINY  Binghamton         33.41 342  P     P      11 05 58.2 +1.5
BINY                                IAmb  IAmb   11 05 59.6
      comp=Z,40nm,0.8s
L57A  Andrews Acres      33.49 341  P     P      11 05 59.1 +1.7
      baz=155,SNR=6.5
P52A  Corning            33.52 332  P     P      11 05 58.8 +1.1
      baz=144
P52A  Corning            33.52 332  P     P      11 05 58.8 +1.1
P52A                                IAmb  IAmb   11 06 00.4
      comp=Z,44nm,1.3s
R50A  Paris              33.52 329  P     P      11 05 58.5 +0.8
R50A                                IAmb  IAmb   11 06 01.1
      comp=Z,40nm,1.2s
J61A  Chester            33.59 347  P     P      11 05 59.3 +1.1
      baz=163
Y45A  Yeager Farm, C     33.59 317  P     P      11 05 59.1 +0.8
I64A  Boothbay           33.60 351  P     P      11 06 00.2 +2.0
      baz=168
Q51A  Peebles            33.60 330  P     P      11 05 59.5 +1.1
Q51A                                IAmb  IAmb   11 06 02.3
      comp=Z,21nm,0.8s
K59A  Cooperstown        33.61 344  P     P      11 05 59.7 +1.3
      baz=158
O53A  New Philadelph     33.62 334  P     P      11 05 59.5 +1.1
      baz=146
O53A  New Philadelph     33.62 334  P     P      11 05 59.9 +1.4
O53A                                IAmb  IAmb   11 06 01.4
      comp=Z,19nm,0.8s
M55A  Ridgway            33.68 338  P     P      11 06 00.2 +1.1
J60A  Lant Hill Farm     33.69 346  P     P      11 06 00.3 +1.2
      baz=161
N54A  Moraine State      33.71 336  P     P      11 06 01.1 +1.8
      baz=149,SNR=12
N54A  Moraine State      33.71 336  P     P      11 06 01.2 +1.9
N54A                                IAmb  IAmb   11 06 02.5
      comp=Z,42nm,0.9s
O52A  Adamsville         33.78 333  P     P      11 06 01.1 +1.3
O52A                                IAmb  IAmb   11 06 02.8
      comp=Z,28nm,0.8s
K58A  Earlville          33.82 343  P     P      11 06 01.6 +1.4
      baz=157,SNR=6.1
K58A  Earlville          33.82 343  P     P      11 06 01.7 +1.4
K58A                                IAmb  IAmb   11 06 03.0
      comp=Z,22nm,0.8s
P51A  Williamsport       33.83 331  P     P      11 06 01.8 +1.5
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P51A                                IAmb  IAmb   11 06 03.8
      comp=Z,22nm,0.6s
I62A  Tamworth           33.84 349  P     P      11 06 01.7 +1.3
      baz=165
L56A  Greenwood          33.85 340  P     P      11 06 01.8 +1.2
      baz=154,SNR=14
L56A  Greenwood          33.85 340  P     P      11 06 01.6 +1.1
I63A  Otisfield          33.88 350  P     P      11 06 02.4 +1.7
      baz=166
OXF   Oxford             33.89 319  P     P      11 06 01.5 +0.6
      baz=128,SNR=18
OXF   Oxford             33.89 319  P     P      11 06 01.4 +0.4
OXF                                 pmax  pmax
      comp=Z,145nm,1.2s
OXF   Oxford             33.89 319  P     P      11 06 01.4 +0.4
N53A  Lisbon             33.92 335  P     P      11 06 02.9 +1.8
WVT   Waverly            33.94 322  P     P      11 06 02.0 +0.7
      baz=132
WVT   Waverly            33.94 322  P     P      11 06 01.5 +0.2
WVT                                 pmax  pmax
      comp=Z,32nm,1.3s
WVT   Waverly            33.94 322  P     P      11 06 01.5 +0.2
WVT                                 IAmb  IAmb   11 06 03.3
      comp=Z,32nm,1.2s
M54A  Oil Creek Stat     34.05 337  P     P      11 06 03.5 +1.3
      baz=150,SNR=12
M54A  Oil Creek Stat     34.05 337  P     P      11 06 03.0 +0.7
M54A                                IAmb  IAmb   11 06 05.0
      comp=Z,33nm,0.6s
K57A  Scipio Center      34.05 342  P     P      11 06 03.6 +1.4
      baz=156
PCMB  Pacaembu           34.08 161 eP     P      11 06 04.8 +2.2
W45A  Hickory Valley     34.15 320  P     P      11 06 03.3 +0.1
342A  Flagon Creek P     34.16 311  P     P      11 06 04.5 +1.2
J59A  Piesco             34.16 345  P     P      11 06 04.1 +0.9
      baz=159
143A  Socs Landing,      34.20 314  P     P      11 06 04.8 +1.2
I60A  Shoreham           34.22 347  P     P      11 06 05.2 +1.6
      baz=162,SNR=12
H64A  Troy               34.24 352  P     P      11 06 04.9 +1.1
      baz=169
K56A  Middlesex          34.28 341  P     P      11 06 05.5 +1.3
      baz=154
LBNH  Lisbon             34.31 348  P     P      11 06 05.7 +1.3
      baz=164
ALLY  Alegheny Colle     34.36 337  P     P      11 06 06.4 +1.5
H63A  New Sharon         34.38 351  P     P      11 06 06.5 +1.5
      baz=168
ACSO  Alum Creek Sta     34.39 332  P     P      11 06 06.8 +1.7
      baz=143,SNR=10
ACSO  Alum Creek Sta     34.39 332  P     P      11 06 05.2   0.0
ACSO                                IAmb  IAmb   11 06 08.7
      comp=Z,42nm,1.0s
M53A  WI Miller and      34.39 336  P     P      11 06 06.1 +1.0
      baz=148,SNR=22
M53A  WI Miller and      34.39 336  P     P      11 06 06.7 +1.5
WVNY  West Valley, N     34.45 339  P     P      11 06 07.5 +1.8
WVNY                                IAmb  IAmb   11 06 08.3
      comp=Z,23nm,0.7s
H62A  Milan              34.49 349  P     P      11 06 07.2 +1.3
      baz=166
I58A  Old Forge          34.49 344  P     P      11 06 07.3 +1.3
      baz=159,SNR=5.5
J57A  Williamstown       34.52 343  P     P      11 06 07.8 +1.6
      baz=157
WCI   Wyandotte Cave     34.52 326  P     P      11 06 07.4 +1.1
      baz=137
WCI   Wyandotte Cave     34.52 326  P     P      11 06 06.8 +0.5
WCI                                 pmax  pmax
      comp=Z,32nm,1.1s
WCI   Wyandotte Cave     34.52 326  P     P      11 06 06.8 +0.5
WCI                                 IAmb  IAmb   11 06 09.1
      comp=Z,32nm,1.1s
NCB   Newcomb            34.57 345  P     P      11 06 07.5 +0.9
BB19B Bebedouro          34.58 156 eP     P      11 06 09.8 +2.8
H61A  Lyndonville        34.59 349  P     P      11 06 07.9 +1.0
      baz=164
J56A  Wolcott            34.65 342  P     P      11 06 08.9 +1.6
      baz=155
L53A  Girard             34.66 337  P     P      11 06 08.7 +1.2
      baz=149,SNR=8.4
N51A  Ashland            34.67 334  P     P      11 06 09.0 +1.4
N51A                                IAmb  IAmb   11 06 10.7
      comp=Z,39nm,0.8s
P49A  Miami Univ. Ec     34.67 330  P     P      11 06 08.8 +1.2
      baz=140,SNR=14
P49A  Miami Univ. Ec     34.67 330  P     P      11 06 08.7 +1.1
UTMT  University of      34.71 322  P     P      11 06 08.6 +0.6
HALT  Halls              34.72 321  P     P      11 06 08.7 +0.6
M52A  Chesterland        34.75 335  P     P      11 06 08.7 +0.4
G63A  Kingsbury          34.77 352  P     P      11 06 09.8 +1.4
      baz=168
H60A  Morristown         34.78 348  P     P      11 06 09.7 +1.2
      baz=163
TRCB  Terra Rica         34.78 163 eP     P      11 06 10.6 +1.9
G64A  Maxfield           34.78 353  P     P      11 06 09.7 +1.2
      baz=170
X43A  Marvell            34.87 317  P     P      11 06 10.4 +1.1
      baz=126
I57A  Carthage           34.91 344  P     P      11 06 10.6 +1.0
      baz=158
GLAT  Glass              34.92 321  P     P      11 06 10.2 +0.4
LNXT  Lenox              34.94 321  P     P      11 06 10.9 +1.0
J55A  Hilton             34.94 341  P     P      11 06 10.4 +0.5
P48A  Milroy             34.97 329  P     P      11 06 10.9 +0.8
H58A  Gabriels           34.98 346  P     P      11 06 11.1 +0.9
      baz=160
O49A  Covington          34.99 331  P     P      11 06 10.9 +0.6
G62A  West of Eustis     35.01 351  P     P      11 06 11.7 +1.3
      baz=167,SNR=7.8
G62A  West of Eustis     35.01 351  P     P      11 06 11.8 +1.4
T45A  Paducah            35.02 323  P     P      11 06 11.3 +0.7
MEDO  Medina             35.06 340  P     P      11 06 12.7 +1.8
H59A  Cadyville          35.08 346  P     P      11 06 11.8 +0.8
      baz=161
USIN  University of      35.10 325  P     P      11 06 12.0 +0.7
USIN                                IAmb  IAmb   11 06 13.4
      comp=Z,23nm,0.9s
CCAR  Cane Creek         35.13 316  P     P      11 06 12.7 +1.1
PEBM  Pemiscott Bayo     35.18 320  P     P      11 06 12.4 +0.4
GNAR  Gosnell            35.19 320  P     P      11 06 12.6 +0.5
G60A  Masonville         35.22 348  P     P      11 06 13.6 +1.4
      baz=164,SNR=5.5
G61A  St-Isidore-de-     35.24 349  P     P      11 06 14.0 +1.5
      baz=165,SNR=5.0
TLIG  Tlapa              35.26 285  P     P      11 06 12.7  -0.4
TLIG                                IAmb  IAmb   11 06 15.6
      comp=Z,24nm,1.1s
LONY  Lake Ozonia        35.26 345  P     P      11 06 13.6 +1.0
      baz=160,SNR=5.2
LONY  Lake Ozonia        35.26 345  P     P      11 06 14.0 +1.3
LONY                                IAmb  IAmb   11 06 14.7
      comp=Z,17nm,0.9s
HENM  Henderson Moun     35.32 321  P     P      11 06 13.8 +0.6
H57A  Richville          35.32 344  P     P      11 06 14.2 +1.1
      baz=158,SNR=9.3
BLO   Bloomington        35.33 327  P     P      11 06 14.5 +1.2
BLO                                 pmax  pmax
      comp=Z,58nm,1.3s
BLO   Bloomington        35.33 327  P     P      11 06 14.5 +1.2
BLO                                 IAmb  IAmb   11 06 16.1
      comp=Z,58nm,1.3s
M50A  Fremont            35.36 333  P     P      11 06 15.0 +1.6
G59A  Clarenceville      35.38 347  P     P      11 06 14.8 +1.3
      baz=162
MOQ   Mont Orford        35.41 349  P     P      11 06 14.7 +0.8
PARMO Parma              35.46 321  P     P      11 06 15.4 +1.0
PARMO                               IAmb  IAmb   11 06 16.1
      comp=Z,28nm,0.7s
Z41A  Richland Creek     35.48 314  P     P      11 06 16.5 +1.9
      baz=122
N49A  Columbus Grove     35.49 332  P     P      11 06 15.1 +0.5
N49A                                IAmb  IAmb   11 06 17.8
      comp=Z,29nm,1.3s
G58A  Ormstown           35.63 346  P     P      11 06 16.6 +0.9
      baz=161
G57A  Newington          35.82 345  P     P      11 06 18.3 +1.0
      baz=159,SNR=5.8
SIUC  Southern Illin     35.83 323  P     P      11 06 18.8 +1.3
E64A  Bridgewater        35.83 354  P     P      11 06 18.4 +0.9
      baz=172
S44A  Carbondale         35.83 323  P     P      11 06 18.8 +1.2
OLIL  Olney              35.88 325  P     P      11 06 19.2 +1.3
E63A  Oxbow              35.90 353  P     P      11 06 18.7 +0.7
      baz=171
WLAR  White Oak Lake     35.93 314  P     P      11 06 19.3 +0.8
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PBMO	Poplar Bluff	35.95	321	P	P	11 06 19.3	+0.7
PBMO				IAmb	IAmb	11 06 20.6	
	comp=Z,39nm,0.9s						
LCAR	Lake Charles	35.97	319	P	P	11 06 19.4	+0.5
LCAR				IAmb	IAmb	11 06 20.6	
	comp=Z,33nm,1.5s						
F60A	Warwick	35.98	349	P	P	11 06 19.8	+1.1
	baz=165						
UALR	University of	36.00	316	P	P	11 06 19.4	+0.4
UALR				IAmb	IAmb	11 06 20.9	
	comp=Z,20nm,0.8s						
DELO	Deloro Mine	36.01	342	P	P	11 06 19.6	+0.6
DELO				IAmb	IAmb	11 06 21.1	
	comp=Z,32nm,0.8s						
P46A	Rosedale	36.02	327	P	P	11 06 20.9	+1.7
NATX	Nacogdoches	36.09	310	P	P	11 06 20.2	+0.4
	baz=119,SNR=7.3						
NATX	Nacogdoches	36.09	310	P	P	11 06 20.3	+0.4
W41B	Gary Mavity, V	36.16	317	P	P	11 06 21.1	+0.6
	baz=125,SNR=11						
X40A	Basin Creek Fa	36.17	316	P	P	11 06 20.9	+0.3
	baz=124,SNR=5.1						
X40A	Basin Creek Fa	36.17	316	P	P	11 06 21.1	+0.5
BSCB	Bom Sucesso	36.18	151	*e*P	P	11 06 22.1	+1.3
HKT	Hockley	36.18	307	⇑*i*P	P	11 06 20.9	+0.3
HKT				pmax	pmax		
	comp=Z,26nm,1.2s						
HKT	Hockley	36.18	307	P	P	11 06 21.2	+0.6
HKT				IAmb	IAmb	11 06 22.8	
	comp=Z,30nm,1.3s						
N47A	Urbana	36.18	330	P	P	11 06 21.5	+1.0
N47A				IAmb	IAmb	11 06 22.9	
	comp=Z,33nm,1.0s						
E61A	Lac Etchemin	36.18	351	P	P	11 06 21.6	+1.1
	baz=167,SNR=8.1						
SJMB	Sao Joao De Ma	36.21	144	*e*P	P	11 06 22.4	+1.4
WHAR	Wooly Hollow	36.26	317	P	P	11 06 21.6	+0.4
WHAR				IAmb	IAmb	11 06 22.9	
	comp=Z,26nm,1.0s						
FRTB	Fartura	36.26	159	*e*P	P	11 06 23.5	+2.1
GO02	Mina Guanaco	36.27	190	P	P	11 06 21.9	+0.1
GO02				IAmb	IAmb	11 06 22.2	
	comp=Z,19nm,1.1s						
K50A	Casco	36.30	335	P	P	11 06 22.8	+1.3
AAM	Ann Arbor	36.35	334	P	P	11 06 23.8	+1.8
	baz=144						
AAM	Ann Arbor	36.35	334	P	P	11 06 23.4	+1.4
AAM				pmax	pmax		
	comp=Z,71nm,0.8s						
AAM	Ann Arbor	36.35	334	P	P	11 06 23.4	+1.4
H53A	Bobcaygeon	36.36	341	P	P	11 06 22.8	+0.8
	baz=153,SNR=8.1						
F57A	Harrington	36.41	346	P	P	11 06 23.3	+1.0
	baz=160						
L48A	N Adams	36.41	332	P	P	11 06 23.6	+1.1
D63A	Stockholm	36.47	354	P	P	11 06 24.2	+1.3
	baz=171						
FCAR	Ozark Folk Cen	36.50	318	P	P	11 06 23.7	+0.4
FCAR				IAmb	IAmb	11 06 25.1	
	comp=Z,34nm,0.8s						
BSFB	Barra de Sao F	36.51	143	*e*P	P	11 06 25.5	+2.0
Q44A	Meyer Farm, Va	36.51	325	P	P	11 06 24.2	+0.8
SFIN	Lafayette	36.51	328	P	P	11 06 24.7	+1.4
	baz=138						
SFIN	Lafayette	36.51	328	P	P	11 06 25.1	+1.7
SFIN				IAmb	IAmb	11 06 25.8	
	comp=Z,35nm,1.2s						
T42A	Van Buren	36.53	320	P	P	11 06 23.7	+0.2
T42A				IAmb	IAmb	11 06 24.8	
	comp=Z,21nm,1.1s						
I51A	Listowel	36.53	338	P	P	11 06 24.4	+0.9
	baz=149,SNR=5.3						
E58A	La Victoria	36.63	348	P	P	11 06 25.2	+1.0
	baz=163						
SADO	Sadowa	36.72	340	P	P	11 06 25.6	+0.6
	comp=Z,13nm,0.7s,baz=175,slow=6.9,SNR=14						
SADO	Sadowa	36.72	340	P	P	11 06 26.1	+1.1
SADO				IAmb	IAmb	11 06 27.2	
	comp=Z,45nm,1.4s						
MIAR	Mount Ida	36.72	315	P	P	11 06 25.5	+0.3
	baz=123,SNR=9.2						
MIAR	Mount Ida	36.72	315	P	P	11 06 25.6	+0.4
MIAR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MIAR	Mount Ida	36.72	315	P	P	11 06 25.6	+0.4
D60A	Saint Jean D’O	36.72	351	P	P	11 06 25.9	+0.9
	baz=167						
FVM	French Village	36.72	322	P	P	11 06 26.1	+0.9
FVM				pmax	pmax		
	comp=Z,34nm,1.1s						
FVM	French Village	36.72	322	P	P	11 06 26.1	+0.9
FVM				IAmb	IAmb	11 06 27.7	
	comp=Z,34nm,1.1s						
PTGB	Pitanga	36.76	163	*e*P	P	11 06 27.3	+1.7
TRQ	Mont Tremblant	36.76	346	P	P	11 06 26.5	+1.0
D61A	St Aubert, Com	36.89	352	P	P	11 06 27.6	+1.2
	baz=168,SNR=5.6						
VAO	Valinhos	36.94	155	*e*P	P	11 06 29.4	+2.2
G54A	Lake Saint Pet	36.95	342	P	P	11 06 27.8	+0.8
	baz=155,SNR=5.9						
D59A	Saint-Raymond	36.96	350	P	P	11 06 28.2	+1.1
	baz=165						
Z38A	Mt. Pleasant	37.05	312	P	P	11 06 28.5	+0.5
237A	Washetta, Mont	37.06	310	P	P	11 06 29.3	+1.2
RIB01	Linhares ES	37.15	143	*e*P	P	11 06 30.4	+1.5
E56A	St. Veronique	37.18	346	P	P	11 06 30.1	+1.2
	baz=160						
CPUP	Villa Florida	37.22	172	P	P	11 06 29.6	+0.2
	comp=Z,11nm,0.9s,baz=352,slow=8.0,SNR=11						
CPUP				PcP	PcP	11 08 47.7	+0.4
	comp=Z,2.8nm,0.9s,baz=349,slow=5.3,SNR=3.4						
CPUP				LR	LR	11 22 09.6	
	comp=Z,53nm,19.0s,baz=7.0,slow=36						
CPUP	Villa Florida	37.22	172	P	P	11 06 29.4	0.0
CPUP	Villa Florida	37.22	172	*e*P	P	11 06 29.9	+0.5
W39A	Magazine	37.22	316	P	P	11 06 29.9	+0.5
	baz=124,SNR=20						
W39A	Magazine	37.22	316	P	P	11 06 30.8	+1.4
D58A	Chemin du LacG	37.24	349	P	P	11 06 30.4	+1.0
	baz=164						
U40A	Yellville	37.25	318	P	P	11 06 29.8	+0.1
	baz=126,SNR=18						
U40A	Yellville	37.25	318	P	P	11 06 30.3	+0.6
U40A				IAmb	IAmb	11 06 31.1	
	comp=Z,26nm,0.8s						
CCM	Cathedral Cave	37.26	322	P	P	11 06 30.2	+0.5
	baz=130						
CCM	Cathedral Cave	37.26	322	P	P	11 06 30.3	+0.5
CCM				pmax	pmax		
	comp=Z,21nm,0.9s						
CCM	Cathedral Cave	37.26	322	P	P	11 06 30.3	+0.5
CCM				IAmb	IAmb	11 06 31.1	
	comp=Z,21nm,0.9s						
SPB	Sao Paulo	37.28	156	*e*P	P	11 06 32.3	+2.3
P43A	Skaggs, Pawnee	37.30	325	P	P	11 06 31.2	+1.2
MGMO	Mountain Grove	37.34	320	P	P	11 06 31.2	+0.7
MGMO				IAmb	IAmb	11 06 32.0	
	comp=Z,30nm,1.1s						
ALGO	Algonquin Park	37.44	342	P	P	11 06 31.7	+0.6
	baz=155,SNR=8.1						
LATQ	La Tuque	37.50	349	P	P	11 06 32.6	+1.0
	baz=164,SNR=5.3						
LATQ	La Tuque	37.50	349	P	P	11 06 32.3	+0.8
D56A	ZEC Mazanza, M	37.59	347	P	P	11 06 33.2	+0.8
	baz=161						
J47A	Sunmer	37.61	333	P	P	11 06 33.4	+0.7
M44A	Midewin, Midew	37.74	328	P	P	11 06 33.9	+0.2
HDIL	Hopedale	37.81	326	P	P	11 06 35.0	+0.7
	baz=135,SNR=5.7						
HDIL	Hopedale	37.81	326	P	P	11 06 34.7	+0.4
HDIL				IAmb	IAmb	11 06 36.1	
	comp=Z,34nm,0.9s						
435B	Jarrell	37.90	307	P	P	11 06 35.7	+0.5
	baz=114,SNR=9.2						
435B	Jarrell	37.90	307	P	P	11 06 36.2	+1.0
VAS01	Vassouras-RJ	37.91	150	*e*P	P	11 06 36.9	+1.6
HHAR	Hobbs	37.92	317	P	P	11 06 35.4	+0.1
HHAR				IAmb	IAmb	11 06 36.5	
	comp=Z,35nm,0.9s						
X37A	Clayton	38.00	314	P	P	11 06 35.7	-0.3
R40A	Maddies Statio	38.04	321	P	P	11 06 35.6	-0.7
ESAR	Angra dos Reis	38.07	152	*e*P	P	11 06 39.3	+2.7
MAN01	Angra dos Reis	38.16	151	*e*P	P	11 06 39.4	+2.0
L44A	Lake County Fo	38.25	329	P	P	11 06 38.9	+0.9
	baz=138						
L44A	Lake County Fo	38.25	329	P	P	11 06 38.6	+0.6
WHTX	Lake Whitney,	38.31	309	P	P	11 06 39.0	+0.4
	baz=116,SNR=8.3						
WHTX	Lake Whitney,	38.31	309	P	P	11 06 39.1	+0.4
U38A	Gravette	38.31	317	P	P	11 06 38.4	-0.2
S39A	Bolivar	38.34	320	P	P	11 06 39.0	+0.1
833A	Chaparral WMA,	38.44	302	P	P	11 06 40.2	+0.4
	baz=110,SNR=9.8						
P40A	Paris	38.69	323	P	P	11 06 42.1	+0.4
Z35A	Perchaven, San	38.75	311	P	P	11 06 42.8	+0.5
N41A	Harden Midland	38.77	325	P	P	11 06 42.8	+0.3
N41A				IAmb	IAmb	11 06 43.5	
	comp=Z,30nm,0.9s						
GLMI	Grayling	38.80	335	P	P	11 06 43.8	+1.2
	baz=145,SNR=11						
GLMI	Grayling	38.80	335	P	P	11 06 44.0	+1.4
K43A	Burlington	38.85	330	P	P	11 06 43.2	+0.2
K43A				IAmb	IAmb	11 06 44.8	
	comp=Z,42nm,0.9s						
TUL1	Leonard	38.98	315	P	P	11 06 44.0	-0.2
	baz=122,SNR=22						
TUL1	Leonard	38.98	315	P	P	11 06 44.0	-0.2
L42A	Oliver, Polo	39.03	328	P	P	11 06 44.5	0.0
L42A				IAmb	IAmb	11 06 46.2	
	comp=Z,48nm,0.9s						
VLDQ	Val d'Or	39.24	344	P	P	11 06 47.7	+1.5
VLDQ				IAmb	IAmb	11 06 48.8	
	comp=Z,22nm,0.9s						
G45A	Suttons Bay	39.41	334	P	P	11 06 48.3	+0.6
JCT	Junction City	39.54	305	P	P	11 06 49.3	+0.3
	baz=112,SNR=21						
JCT	Junction City	39.54	305	P	P	11 06 49.3	+0.3
JCT				pmax	pmax		
	comp=Z,67nm,1.4s						
JCT	Junction City	39.54	305	P	P	11 06 49.3	+0.3
JCT				IAmb	IAmb	11 06 50.3	
	comp=Z,67nm,1.4s						
P38A	Dawn	39.64	322	P	P	11 06 49.9	+0.3
P38A				IAmb	IAmb	11 06 50.6	
	comp=Z,36nm,1.1s						
OK030	Cody Creek RV	39.68	315	P	P	11 06 50.0	0.0
OK030				IAmb	IAmb	11 06 50.7	
	comp=Z,28nm,0.8s						
OK031	S. Brethren Rd	39.73	315	P	P	11 06 50.5	+0.1
OK031				IAmb	IAmb	11 06 51.1	
	comp=Z,37nm,0.7s						
QUOK	Quay	39.75	315	P	P	11 06 50.7	+0.1
QUOK				IAmb	IAmb	11 06 51.2	
	comp=Z,34nm,0.9s						
ZAIG	Zacatecas	39.76	293	P	P	11 06 52.7	+1.5
ZAIG				IAmb	IAmb	11 06 54.0	
	comp=Z,26nm,1.0s						
OKCFA	Oklahoma City	39.89	314	P	P	11 06 51.6	-0.2
OKCFA				IAmb	IAmb	11 06 52.8	
	comp=Z,38nm,0.7s						
OK025	Westminster Rd	39.89	314	P	P	11 06 51.4	-0.4
H43A	Windswept, Lux	39.91	332	P	P	11 06 52.4	+0.6
E46A	Sault Ste Mari	39.95	337	P	P	11 06 52.9	+0.9
JFWS	Jewell Farm	39.98	328	P	P	11 06 52.7	+0.4
	baz=135,SNR=7.2						
JFWS	Jewell Farm	39.98	328	P	P	11 06 52.6	+0.2
JFWS				pmax	pmax		
	comp=Z,44nm,1.1s						
JFWS	Jewell Farm	39.98	328	P	P	11 06 52.6	+0.2
JFWS				IAmb	IAmb	11 06 53.9	
	comp=Z,44nm,1.1s						
LSQQ	Lebel-sur-Quev	40.00	346	P	P	11 06 53.5	+1.0
	baz=158						
T35A	Sooner Cattle	40.00	316	P	P	11 06 52.3	-0.4
I42A	Draeger Farm,	40.01	330	P	P	11 06 53.2	+0.6
I42A				IAmb	IAmb	11 06 54.4	
	comp=Z,24nm,0.8s						
OK029	Liberty Lake	40.08	314	P	P	11 06 52.9	-0.5
OK029				IAmb	IAmb	11 06 54.1	
	comp=Z,34nm,0.9s						
BCOK	Bluff Creek, N	40.12	314	P	P	11 06 53.3	-0.4
ABTX	Abilene, Hawle	40.25	309	P	P	11 06 55.0	+0.1
	baz=114,SNR=15						
ABTX	Abilene, Hawle	40.25	309	P	P	11 06 54.6	-0.3
ABTX				IAmb	IAmb	11 06 56.8	
	comp=Z,43nm,0.9s						
WMOK	Wichita Mounta	40.53	312	P	P	11 06 56.1	-1.0
	baz=118,SNR=16						
WMOK	Wichita Mounta	40.53	312	P	P	11 06 56.3	-0.8
WMOK				pmax	pmax		
	comp=Z,21nm,1.0s						
WMOK	Wichita Mounta	40.53	312	P	P	11 06 56.3	-0.8
WMOK				IAmb	IAmb	11 06 58.0	
	comp=Z,21nm,0.9s						
KAN13	South Haven SW	40.71	316	P	P	11 06 58.3	-0.2
CROK	Carrier	40.80	315	P	P	11 06 59.6	+0.3
MATQ	Matagami	40.81	345	P	P	11 06 59.5	+0.4
	baz=158,SNR=15						
I40A	Norwalk	40.86	329	P	P	11 07 00.3	+0.7
I40A				IAmb	IAmb	11 07 01.1	
	comp=Z,47nm,0.8s						
GC02	Grant County #	40.89	315	P	P	11 07 00.5	+0.4
KAN01	Argonia South	40.98	316	P	P	11 07 00.6	-0.1
KAN14	Manchester OK	41.02	315	P	P	11 07 01.0	-0.1
E43A	Lone Tree Farm	41.05	334	P	P	11 07 02.0	+0.9
F42A	Maple Grove Fa	41.06	333	P	P	11 07 02.8	+1.5
K38A	Parkersburg	41.14	326	P	P	11 07 02.3	+0.4
KAN08	Anthony NE Sta	41.16	316	P	P	11 07 02.3	0.0
KAN10	Anthony SW Sta	41.19	316	P	P	11 07 02.4	-0.1
KAN12	Harper NE Stat	41.22	316	P	P	11 07 03.2	+0.6
KSU1	Kansas State U	41.26	319	P	P	11 07 01.8	-1.2
	baz=124,SNR=20						
KSU1	Kansas State U	41.26	319	P	P	11 07 02.5	-0.5
U32A	Winter Ranch,	41.46	314	P	P	11 07 05.0	+0.3
G40A	Rib Lake	41.65	331	P	P	11 07 06.7	+0.6
G40A				IAmb	IAmb	11 07 07.8	
	comp=Z,42nm,1.2s						
N35A	Tabor	41.67	322	P	P	11 07 05.6	-0.7
COWI	Conover	41.77	332	P	P	11 07 07.7	+0.6
COWI				IAmb	IAmb	11 07 09.1	
	comp=Z,34nm,1.1s						
D41A	Chassel	42.26	334	P	P	11 07 11.8	+0.9
R32A	Long Quarter,	42.28	317	P	P	11 07 10.8	-0.5
R32A				IAmb	IAmb	11 07 11.9	
	comp=Z,26nm,0.8s						
TX32	Lajitas Array	42.32	302	P	P	11 07 12.9	+1.0
TXAR	Lajitas Array	42.32	302	P	P	11 07 12.8	+0.9
	comp=Z,2.3nm,0.6s,baz=124,slow=7.3,SNR=31						
TXAR				PcP	PcP	11 09 03.1	-0.7
	comp=Z,2.4nm,0.8s,baz=115,slow=6.1,SNR=6.8						
TXAR				ScP	ScP	11 12 42.6	-3.0
	comp=Z,0.9nm,0.9s,baz=120,slow=5.3,SNR=4.5						
TXAR	Lajitas Array	42.32	302	P	P	11 07 12.4	+0.5
TX31	Lajitas Ar. Si	42.32	302	P	P	11 07 12.9	+1.0
I37A	Lemond, Waseca	42.39	327	P	P	11 07 11.9	-0.3
AMTX	Amarillo	42.73	311	P	P	11 07 14.9	-0.3
	baz=115						
AMTX	Amarillo	42.73	311	P	P	11 07 15.2	0.0
AMTX				IAmb	IAmb	11 07 16.7	
	comp=Z,30nm,1.1s						
L34A	Svendsen Farm,	42.77	323	P	P	11 07 14.6	-0.7
L34A				IAmb	IAmb	11 07 16.3	
	comp=Z,60nm,1.1s						
SPMN	Marine on St.	42.91	329	P	P	11 07 16.0	-0.3
	baz=134,SNR=7.8						
SPMN	Marine on St.	42.91	329	P	P	11 07 16.0	-0.3
SPMN				IAmb	IAmb	11 07 17.4	
	comp=Z,58nm,1.4s						
CBKS	Cedar Bluff	43.17	317	P	P	11 07 18.0	-0.6
	baz=121,SNR=14						
CBKS	Cedar Bluff	43.17	317	P	P	11 07 18.5	-0.1
CBKS				pmax	pmax		
	comp=Z,71nm,0.7s						
CBKS	Cedar Bluff	43.17	317	P	P	11 07 18.4	-0.1
MSTX	Muleshoe	43.19	309	P	P	11 07 19.1	+0.1
	baz=113,SNR=24						
MSTX	Muleshoe	43.19	309	P	P	11 07 19.4	+0.5
E38A	The Farm, Brul	43.27	331	P	P	11 07 19.2	0.0
E38A				IAmb	IAmb	11 07 19.8	
	comp=Z,27nm,1.1s						
HPIG		43.39	298	P	P	11 07 20.3	-0.4
BGNE	Belgrade	43.53	321	P	P	11 07 20.9	-0.5
	baz=125						
BGNE	Belgrade	43.53	321	P	P	11 07 20.9	-0.5
F36A	Milaca	43.71	329	P	P	11 07 22.8	0.0
F36A				IAmb	IAmb	11 07 23.5	
	comp=Z,24nm,0.9s						
GDL2	Guadalupe Moun	43.80	306	P	P	11 07 24.1	+0.3
ECSD	EROS Data Cent	43.99	325	P	P	11 07 24.6	-0.5
	baz=128,SNR=11						
ECSD	EROS Data Cent	43.99	325	P	P	11 07 24.6	-0.5
EYMN	Ely	44.23	332	P	P	11 07 26.6	-0.3
	baz=138,SNR=18						
EYMN	Ely	44.23	332	P	P	11 07 26.9	+0.1
EYMN				IAmb	IAmb	11 07 28.9	
	comp=Z,38nm,1.1s						
MNTX	Cornudas Mount	44.45	305	P	P	11 07 29.4	+0.4
	baz=109,SNR=24						
MNTX	Cornudas Mount	44.45	305	P	P	11 07 29.4	+0.4
K31A	O'Neill	44.59	322	P	P	11 07 29.4	-0.4
F33A	5 Mile Ranch,	45.14	327	P	P	11 07 34.3	+0.1
F33A				IAmb	IAmb	11 07 35.1	
	comp=Z,28nm,1.1s						
KSCO	Kaye Shedlock’	45.23	315	P	P	11 07 34.5	-0.7
	baz=118,SNR=10						
KSCO	Kaye Shedlock’	45.23	315	P	P	11 07 34.9	-0.3
KSCO				IAmb	IAmb	11 07 36.5	
	comp=Z,24nm,0.8s						
B35A	Bob, Littlefor	45.56	331	P	P	11 07 37.5	+0.1
T25A	Trinidad	45.68	312	P	P	11 07 39.3	+0.5
	baz=114,SNR=26						
SUSD	Miller	45.76	324	P	P	11 07 38.4	-0.8
	baz=126,SNR=6.1						
SUSD	Miller	45.76	324	P	P	11 07 38.9	-0.2
OGNE	Ogallala	45.76	318	P	P	11 07 38.2	-1.1
	baz=120,SNR=15						
OGNE	Ogallala	45.76	318	P	P	11 07 38.9	-0.3
BO02	Sierra Bellavi	45.88	189	P	P	11 07 39.3	-0.9
BO02				IAmb	IAmb	11 07 42.3	
	comp=Z,26nm,1.0s						
BNM	Barren Site	46.24	307	P	P	11 07 44.5	+1.2
ANMO	Albuquerque	46.38	308	P	P	11 07 45.7	+1.4
	baz=111						
ANMO	Albuquerque	46.38	308	*ce*P	P	11 07 45.5	+1.2
ANMO				pmax	pmax		
	comp=Z,25nm,0.9s						
ANMO	Albuquerque	46.38	308	P	P	11 07 45.2	+0.9
ANMO				IAmb	IAmb	11 07 46.4	
	comp=Z,20nm,0.8s						
Y22D	IRIS PASSCAL I	46.44	307	P	P	11 07 45.7	+1.0
	baz=110						
AGMN	Agassiz Nation	46.54	330	P	P	11 07 44.3	-0.8
SLBS	Sierra La Lagu	46.60	292	P	P	11 07 46.7	+0.6
SLBS				IAmb	IAmb	11 07 48.5	
	comp=Z,38nm,0.8s						
121A	Cookes Peak, D	46.65	305	P	P	11 07 47.0	+0.6
	baz=108,SNR=11						
121A	Cookes Peak, D	46.65	305	P	P	11 07 47.1	+0.6
121A				IAmb	IAmb	11 07 48.8	
	comp=Z,22nm,0.8s						
SDCO	Great Sand Dun	46.72	312	P	P	11 07 47.3	+0.3
	baz=114,SNR=37						
SDCO	Great Sand Dun	46.72	312	P	P	11 07 47.1	+0.1
SDCO				IAmb	IAmb	11 07 48.3	
	comp=Z,23nm,0.7s						
Q24A	Divide	46.97	314	P	P	11 07 48.6	-0.5
	baz=115						
PMOZ	Porto Moniz, M	47.30	55	*e*P	P	11 07 53.9	+2.5
319A	Douglas	47.55	303	P	P	11 07 54.6	+1.3
ISCO	Idaho Springs	47.66	315	P	P	11 07 54.0	-0.3
	baz=116,SNR=34						
ISCO	Idaho Springs	47.66	315	P	P	11 07 54.3	0.0
ISCO				pmax	pmax		
	comp=Z,24nm,0.8s						
ISCO	Idaho Springs	47.66	315	P	P	11 07 54.2	0.0
ISCO				IAmb	IAmb	11 07 55.5	
	comp=Z,24nm,0.8s						
S22A	4UR Ranch, Cre	47.69	312	P	P	11 07 54.9	+0.3
	baz=113,SNR=20						
ULM	Lac du Bonnet	47.89	332	P	P	11 07 54.5	-1.0
	comp=Z,58nm,0.7s,baz=129,slow=8.2,SNR=115						
ULM	Lac du Bonnet	47.89	332	⇓*i*P	P	11 07 55.2	-0.3
ULM	Lac du Bonnet	47.89	332	P	P	11 07 54.5	-1.0
E28A	Huff	48.00	325	P	P	11 07 56.7	+0.2
E28A				IAmb	IAmb	11 07 57.1	
	comp=Z,29nm,0.7s						
MDND	Maddock	48.17	327	P	P	11 07 57.9	+0.1
	baz=128,SNR=18						
MDND	Maddock	48.17	327	P	P	11 07 58.0	+0.1
PHWY	Pilot Hill	48.21	317	P	P	11 07 58.2	-0.4
PHWY				IAmb	IAmb	11 07 59.0	
	comp=Z,15nm,0.7s						
SMCO	Snowmass	48.35	314	P	P	11 07 59.8	0.0
SMCO				IAmb	IAmb	11 08 01.0	
	comp=Z,15nm,0.8s						
N23A	Red Feather La	48.36	316	P	P	11 07 59.4	-0.3
	baz=116,SNR=8.1						
RSSD	Black Hills	48.64	321	P	P	11 08 01.4	-0.3
	baz=121						
RSSD	Black Hills	48.64	321	P	P	11 08 01.3	-0.4
RSSD				pmax	pmax		
	comp=Z,9.0nm,0.7s						
RSSD	Black Hills	48.64	321	P	P	11 08 01.3	-0.4
MVCO	Mesa Verde	48.73	311	P	P	11 08 02.7	+0.2
	baz=111,SNR=10						
MVCO	Mesa Verde	48.73	311	P	P	11 08 03.1	+0.7
X18A	Snowflake	48.97	307	P	P	11 08 05.8	+1.5
X18A				IAmb	IAmb	11 08 06.7	
	comp=Z,20nm,1.0s						
W18A	Petrified Fore	48.98	308	P	P	11 08 04.6	+0.2
	baz=108						
TUC	Tucson	49.02	304	P	P	11 08 05.1	+0.4
TUC				pmax	pmax		
	comp=Z,10.0nm,1.0s						
TUC	Tucson	49.02	304	P	P	11 08 05.1	+0.4
PV01	Paradox Valley	49.11	312	P	P	11 08 06.9	+1.5
PV01				IAmb	IAmb	11 08 07.5	
	comp=Z,37nm,0.8s						
PV15	Paradox Valley	49.12	312	P	P	11 08 06.8	+1.3
SRIG	Santa Rosalia	49.20	297	P	P	11 08 06.5	+0.5
SRIG				IAmb	IAmb	11 08 07.7	
	comp=Z,24nm,0.8s						
PV02	Paradox Valley	49.26	312	P	P	11 08 07.9	+1.4
PV07	Paradox Valley	49.28	312	P	P	11 08 07.2	+0.6
PV07				IAmb	IAmb	11 08 08.3	
	comp=Z,25nm,0.8s						
PV13	Radium Mtn., P	49.30	312	P	P	11 08 07.5	+0.7
PV12	Saucer Basin,	49.35	312	P	P	11 08 07.7	+0.5
PV12				IAmb	IAmb	11 08 09.1	
	comp=Z,41nm,1.0s						
PV03	Paradox Valley	49.36	312	P	P	11 08 08.3	+1.1
PV03				IAmb	IAmb	11 08 09.1	
	comp=Z,26nm,1.0s						
PV11	David Mesa, Pa	49.39	312	P	P	11 08 08.0	+0.4
PV18	Skein Mesa, Pa	49.40	312	P	P	11 08 07.5	-0.1
PV18				IAmb	IAmb	11 08 09.5	
	comp=Z,40nm,1.4s						
PV22	Blue Mesa, Par	49.42	312	P	P	11 08 08.0	+0.3
PV22				IAmb	IAmb	11 08 09.2	
	comp=Z,20nm,1.1s						
PV16	Nyswonger Mesa	49.43	312	P	P	11 08 08.9	+1.1
PV16				IAmb	IAmb	11 08 09.5	
	comp=Z,43nm,1.4s						
PV17	East Wray Mesa	49.45	312	P	P	11 08 08.2	+0.3
PV04	Paradox Valley	49.45	312	P	P	11 08 08.4	+0.4
PV04				IAmb	IAmb	11 08 09.6	
	comp=Z,27nm,1.1s						
PV20	West Nyswonger	49.48	312	P	P	11 08 08.6	+0.4
PV20				IAmb	IAmb	11 08 09.6	
	comp=Z,16nm,0.7s						
PV19	Morning Glory	49.48	312	P	P	11 08 08.4	+0.3
K22A	Casper	49.53	318	P	P	11 08 07.9	-0.5
	baz=117,SNR=24						
K22A	Casper	49.53	318	P	P	11 08 08.2	-0.3
PV14	Lion Creek, Pa	49.53	312	P	P	11 08 09.0	+0.4
PV14				IAmb	IAmb	11 08 10.0	
	comp=Z,20nm,0.7s						
PV23	Carpenter Ridg	49.55	312	P	P	11 08 09.0	+0.2
PV23				IAmb	IAmb	11 08 10.2	
	comp=Z,20nm,0.8s						
O20A	White River Ci	49.63	314	P	P	11 08 09.3	-0.1
	baz=114,SNR=7.1						
O20A	White River Ci	49.63	314	P	P	11 08 09.2	-0.1
O20A				IAmb	IAmb	11 08 10.8	
	comp=Z,11nm,0.7s						
LC01	Cunco	50.07	189	P	P	11 08 12.8	+0.4
LC01				IAmb	IAmb	11 08 13.3	
	comp=Z,15nm,1.0s						
X16A	Lo Mia Camp, P	50.12	306	P	P	11 08 13.8	+0.7
WUAZ	Wupatki	50.38	307	P	P	11 08 16.0	+1.0
	baz=107,SNR=14						
WUAZ	Wupatki	50.38	307	P	P	11 08 15.8	+0.8
WUAZ				IAmb	IAmb	11 08 17.1	
	comp=Z,19nm,0.8s						
214A	Organ Pipe Nat	50.61	303	P	P	11 08 16.8	+0.2

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       baz=103,SNR=7.4
214A   Organ Pipe Nat   50.61 303 P      P      11 08 17.2 +0.6
SRU    San Rafael Swe   50.89 312 P      P      11 08 18.9 +0.1
SRU                               pmax   pmax
       comp=Z,18nm,0.8s
SRU    San Rafael Swe   50.89 312 P      P      11 08 18.9 +0.1
DGMT   Dagmar           51.03 326 P      P      11 08 20.3 +0.8
       baz=124,SNR=32
DGMT   Dagmar           51.03 326 P      P      11 08 20.6 +1.1
P17A   Butcher Ranch,   51.17 313 P      P      11 08 21.8 +0.9
LAO    LASA Array       51.26 323 P      P      11 08 21.2 -0.1
       baz=120,SNR=18
LAO    LASA Array       51.26 323 P      P      11 08 21.4 +0.1
LAO                               IAmb   IAmb   11 08 22.1
       comp=Z,20nm,0.7s
U15A   North Rim        51.35 308 P      P      11 08 23.4 +1.0
TMUT   Trail Mountain   51.45 312 P      P      11 08 23.4 +0.3
BW06   Boulder Array    51.60 317 P      P      11 08 23.3 -0.8
       baz=114,SNR=58
BW06   Boulder Array    51.60 317 P      P      11 08 23.7 -0.4
PD31   Pinedale Array   51.60 317 P      P      11 08 24.0 -0.1
PDAR   Pinedale Array   51.60 317 P      P      11 08 23.7 -0.4
       comp=Z,28nm,0.6s,baz=114,slow=9.6,SNR=349
PDAR                              ScP    ScP    11 13 19.2 -5.1
       comp=Z,0.4nm,0.6s,baz=116,slow=6.3,SNR=3.8
PDAR   Pinedale Array   51.60 317 P      P      11 08 23.2 -0.9
PLCA   Paso Flores      51.69 187 P      P      11 08 24.9 +0.4
       comp=Z,17nm,0.9s,baz=2.1,slow=7.9,SNR=36
PLCA                              LR     LR     11 32 15.3
       comp=Z,57nm,19.2s,baz=14,slow=38
PLCA   Paso Flores      51.69 187 P      P      11 08 25.2 +0.7
PLCA                              pmax   pmax
       comp=Z,23nm,0.9s
PLCA   Paso Flores      51.69 187 P      P      11 08 25.2 +0.7
PLCA                              IAmb   IAmb   11 08 26.5
       comp=Z,23nm,0.9s
PLCA   Paso Flores      51.69 187 eP     P      11 08 25.5 +1.0
MTPU   Mount Pierson    51.76 310 P      P      11 08 25.9 +0.3
MSU    Marysvale        51.90 311 P      P      11 08 27.4 +0.9
MSU    Marysvale        51.90 311 P      P      11 08 27.4 +0.9
MVU    Marysvale        51.93 311 P      P      11 08 27.0 +0.4
KNB    Kanab            51.93 309 P      P      11 08 27.3 +0.7
KNB                               pmax   pmax
       comp=Z,16nm,0.8s
KNB    Kanab            51.93 309 P      P      11 08 27.3 +0.7
MPU    Maple Canyon     52.01 313 P      P      11 08 27.4 +0.3
JLU    Jordanelle       52.08 314 P      P      11 08 27.7  0.0
TCRU   Three Creeks R   52.14 311 P      P      11 08 28.4 +0.2
TCUT   Toone Canyon     52.24 314 P      P      11 08 28.4 -0.4
W13A   Hualapai Mount   52.24 306 P      P      11 08 29.7 +0.7
PDMCI  Parker Dam,Lak   52.24 305 P      P      11 08 29.1 +0.4
       baz=104,SNR=5.0
LCMT   Little Creek M   52.25 309 P      P      11 08 28.9 -0.1
NLU    North Lily Min   52.30 313 P      P      11 08 29.4  0.0
SZCU   Shurtz Canyon    52.30 309 P      P      11 08 29.4  0.0
CTU    Camp Tracy       52.33 314 P      P      11 08 29.5 +0.1
RLMT   Red Lodge        52.40 320 P      P      11 08 29.7 -0.3
       baz=116,SNR=29
RLMT   Red Lodge        52.40 320 P      P      11 08 29.7 -0.3
RLMT                              IAmb   IAmb   11 08 31.4
       comp=Z,25nm,0.8s
CCUT   Cedar City       52.50 309 P      P      11 08 31.1 +0.2
AHID   Auburn Hatcher   52.64 316 P      P      11 08 31.0 -0.7
AHID                              IAmb   IAmb   11 08 32.2
       comp=Z,27nm,0.8s
LOHW   Long Hollow      52.64 317 P      P      11 08 31.1 -0.6
LOHW                              IAmb   IAmb   11 08 32.4
       comp=Z,15nm,0.8s
SNOW   Snow King Moun   52.68 317 P      P      11 08 32.0 -0.1
SNOW                              IAmb   IAmb   11 08 33.7
       comp=Z,25nm,0.7s
REDW   Red Top Meadow   52.70 317 P      P      11 08 31.9 -0.4
REDW                              IAmb   IAmb   11 08 33.8
       comp=Z,23nm,0.8s
MOOW   Moose Ponds      52.79 318 P      P      11 08 31.8 -1.0
YMP    Mirror Lake Pl   52.81 319 P      P      11 08 32.9 -0.2
YNE    Yellowstone No   52.83 319 P      P      11 08 33.5 +0.3
FLWY   Flagg Ranch      52.89 318 P      P      11 08 33.7 +0.1
LKWY   Lake             52.90 319 P      P      11 08 34.4 +0.7
LKWY                              pmax   pmax
       comp=Z,16nm,1.1s
LKWY   Lake             52.90 319 P      P      11 08 34.4 +0.7
LKWY                              IAmb   IAmb   11 08 36.4
       comp=Z,16nm,1.1s
DUG    Dugway, Tooele   52.92 313 P      P      11 08 34.0 +0.2
       baz=110,SNR=28
DUG    Dugway, Tooele   52.92 313 P      P      11 08 34.4 +0.6
DUG                               pmax   pmax
       comp=Z,21nm,0.8s
DUG    Dugway, Tooele   52.92 313 P      P      11 08 34.4 +0.6
DUG                               IAmb   IAmb   11 08 35.0
       comp=Z,21nm,0.8s
ECR    Eagle Creek      52.93 317 P      P      11 08 32.8 -1.2
H17A   Grant Village    52.94 318 P      P      11 08 34.6 +0.6
       baz=114
H17A   Grant Village    52.94 318 P      P      11 08 33.4 -0.6
GCMT   Greycliff        52.95 320 P      P      11 08 34.3 +0.3
IRM    Iron Mountain    53.02 305 P      P      11 08 35.1 +0.7
       baz=103,SNR=15
YPP    Pitchstone Pla   53.04 318 P      P      11 08 34.4 -0.4
YNR    Norris Junctio   53.14 319 P      P      11 08 35.5 +0.1
BC3    Big Chuckawall   53.15 304 P      P      11 08 35.8 +0.2
       baz=103,SNR=8.3
PSUT   Pine Spring      53.16 310 P      P      11 08 36.6 +0.9
YHH    Holmes Hill      53.28 319 P      P      11 08 36.6  0.0
SWSC   Sam W. Stewart   53.29 303 P      P      11 08 36.3 -0.1
       baz=102
YMR    Madison River    53.30 318 P      P      11 08 36.6 -0.1
HVU    Hansel Valley    53.43 315 P      P      11 08 37.0 -0.6
HVU                               pmax   pmax
       comp=Z,16nm,0.7s
HVU    Hansel Valley    53.43 315 P      P      11 08 37.0 -0.6
FCC    Fort Churchill   53.45 340 P      P      11 08 36.6 -0.5
FCC                               pmax   pmax
       comp=Z,54nm,0.7s
FCC    Fort Churchill   53.45 340 P      P      11 08 36.6 -0.5
YHB    Horse Butte      53.49 319 P      P      11 08 38.9 +0.9
YHL    Hebgen Lake      53.52 319 P      P      11 08 39.2 +0.9
GMRC   Granite Mounta   53.57 305 P      P      11 08 38.9 +0.2
       baz=103,SNR=9.2
SHPR   Sheep Range      53.60 308 P      P      11 08 40.0 +1.1
FFC    Flin Flon        53.65 333 P      P      11 08 38.1 -0.6
FFC                               pmax   pmax
       comp=Z,27nm,0.8s
FFC    Flin Flon        53.65 333 P      P      11 08 38.1 -0.6
FFC                               IAmb   IAmb   11 08 38.8
       comp=Z,27nm,0.8s
SPR3   Spring Creek 3   53.66 311 P      P      11 08 39.7 +0.3
SPR3                              IAmb   IAmb   11 08 41.7
       comp=Z,18nm,0.9s
QLMT   Earthquake Lak   53.67 319 P      P      11 08 40.5 +1.1
PRN    Pahroc Range     53.75 309 P      P      11 08 40.8 +0.9
MONP2  Monument Peak    53.79 303 P      P      11 08 41.0 +0.6
       baz=102,SNR=13
CBX    Cerro Bola       53.88 302 P      P      11 08 41.4 +0.5
TPFO   Pinon Flats      53.96 304 P      P      11 08 41.7 +0.2
       baz=102,SNR=5.1
PFO    Pinyon Flats O   53.97 304 P      P      11 08 41.9 +0.4
       baz=102
PFO    Pinyon Flats O   53.97 304 P      P      11 08 42.3 +0.7
PFO                               pmax   pmax
       comp=Z,6.0nm,1.1s
PFO    Pinyon Flats O   53.97 304 P      P      11 08 42.3 +0.7
EGMT   Eagleton         54.01 323 P      P      11 08 41.5 -0.1
       baz=118,SNR=15
EGMT   Eagleton         54.01 323 P      P      11 08 41.5 -0.1
EGMT                              IAmb   IAmb   11 08 42.6
       comp=Z,23nm,0.8s
BOZ    Bozeman (W)      54.11 319 P      P      11 08 42.3 -0.1
       baz=114,SNR=19
BOZ    Bozeman (W)      54.11 319 P      P      11 08 42.2 -0.2
BOZ                               pmax   pmax
       comp=Z,15nm,0.8s
BOZ    Bozeman (W)      54.11 319 P      P      11 08 42.2 -0.2
BOZ                               IAmb   IAmb   11 08 43.4
       comp=Z,15nm,0.8s
HEC    Hector,Ludlow    54.12 305 P      P      11 08 43.2 +0.6
       baz=103,SNR=7.6
SHOC   Shoshone, Teco   54.32 307 P      P      11 08 44.3 +0.4
       baz=104,SNR=9.4
109C   Camp Elliot, M   54.35 303 P      P      11 08 44.9 +0.7
       baz=101
R11A   Troy Canyon, C   54.41 310 P      P      11 08 45.4 +0.6
       baz=106,SNR=6.4
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R11A   Troy Canyon, C   54.41 310 P      P      11 08 45.8 +1.0
BBRC   Big Bear Solar   54.48 304 P      P      11 08 46.3 +0.9
       baz=102,SNR=5.0
TPNV   Topopah Spring   54.56 308 P      P      11 08 46.7 +0.9
       baz=104,SNR=26
TPNV   Topopah Spring   54.56 308 P      P      11 08 46.7 +0.9
TPNV                              pmax   pmax
       comp=Z,17nm,0.9s
TPNV   Topopah Spring   54.56 308 P      P      11 08 46.7 +0.9
TPNV                              IAmb   IAmb   11 08 47.9
       comp=Z,17nm,0.8s
MURC   Murrieta         54.56 304 P      P      11 08 45.7  0.0
       baz=102
MCMT   McKenzie Canyo   54.60 318 P      P      11 08 46.5 +0.4
GSC    Goldstone, Bar   54.61 306 P      P      11 08 46.8 +0.7
       baz=103,SNR=5.1
GSC    Goldstone, Bar   54.61 306 P      P      11 08 47.1 +1.0
GSC                               pmax   pmax
       comp=Z,5.0nm,1.0s
GSC    Goldstone, Bar   54.61 306 P      P      11 08 47.1 +1.0
DLMT   Dillon           54.64 319 P      P      11 08 46.3  0.0
BCYI   Bear Canyon      54.77 317 P      P      11 08 48.1 +0.8
ELK    Elko             54.85 313 P      P      11 08 48.1 +0.1
ELK                               pmax   pmax
       comp=Z,7.0nm,0.9s
ELK    Elko             54.85 313 P      P      11 08 48.1 +0.1
FURC   Furnace Creek,   54.92 307 P      P      11 08 48.9 +0.7
       baz=104,SNR=10
BFSC   Mount Baldy Ra   55.07 304 P      P      11 08 49.4 -0.1
       baz=102
HLID   Hailey           55.19 316 P      P      11 08 50.4 +0.2
       baz=110,SNR=36
HLID   Hailey           55.19 316 P      P      11 08 50.0 -0.3
HLID                              IAmb   IAmb   11 08 51.8
       comp=Z,19nm,0.9s
MPMC   Manual Prospec   55.32 307 P      P      11 08 51.5 +0.1
       baz=103,SNR=6.2
LRMC   Laurel Mtn Rad   55.34 306 P      P      11 08 51.8 +0.3
       baz=102,SNR=5.9
GRAC   Grapevine Rang   55.44 308 P      P      11 08 52.7 +0.7
       baz=104
EDW2   Edwards Air Fo   55.47 305 P      P      11 08 52.7 +0.4
       baz=102,SNR=5.5
SCI2   San Clemente I   55.56 303 P      P      11 08 53.4 +0.5
       baz=100
TPH    Tonopah          55.59 309 P      P      11 08 52.8 -0.5
TPH    Tonopah          55.59 309 P      P      11 08 52.8 -0.5
CWC    Cottonwood Cre   55.87 307 P      P      11 08 55.9 +0.7
       baz=103
PVAQ   Vaqueiros        55.99  52 eLR    LR     11 24 18.0
       comp=Z,480nm,18.0s
ISA    Isabella, Lake   56.01 306 P      P      11 08 56.8 +0.6
       baz=102
ISA    Isabella, Lake   56.01 306 P      P      11 08 56.7 +0.5
ISA                               pmax   pmax
       comp=Z,3.0nm,0.7s
ISA    Isabella, Lake   56.01 306 P      P      11 08 56.7 +0.5
PMTG   Montargil        56.01  50 eP     P      11 08 58.3 +2.3
PCAS   Casmilo, Conde   56.07  49 eP     P      11 08 58.7 +2.3
MSO    Missoula         56.08 320 P      P      11 08 56.3 -0.2
       baz=113
MSO    Missoula         56.08 320 P      P      11 08 56.3 -0.2
MFID   Camas Ranch      56.11 315 P      P      11 08 56.3 -0.4
TIN    Tinemaha, Big    56.12 308 P      P      11 08 57.8 +0.8
       baz=103
ARVC   Arvin            56.19 305 P      P      11 08 58.2 +0.8
       baz=102
NV11   Mina Array Sit   56.38 309 P      P      11 08 59.0 +0.2
KVN    Kaiserville      56.49 310 P      P      11 08 59.3 -0.4
KVN                               pmax   pmax
       comp=Z,7.0nm,1.0s
KVN    Kaiserville      56.49 310 P      P      11 08 59.3 -0.4
NVAR   Mina Array Bea   56.50 309 P      P      11 09 00.3 +0.5
       comp=Z,5.0nm,0.6s,baz=107,slow=6.2,SNR=26
NVAR                              ScP    ScP    11 13 41.7 -4.2
       comp=Z,0.7nm,1.0s,baz=109,slow=4.9,SNR=2.5
NVAR   Mina Array Bea   56.50 309 P      P      11 08 59.9 +0.1
VES    Vestal, Richgr   56.54 306 P      P      11 09 00.3 +0.5
       baz=102,SNR=6.2
LHV    Little Huntoon   56.61 309 P      P      11 09 00.9 +0.7
SCZ2   Santa Cruz Isl   56.63 304 P      P      11 09 01.2 +0.6
       baz=100
JTMT   Jette            56.65 321 P      P      11 09 00.6  0.0
RYN    Ryan             56.71 309 P      P      11 09 01.5 +0.3
PMRV   Marv??o          56.73  50 eP     P      11 09 02.7 +1.6
PMRV   Marv??o          56.73  50 eLR    LR     11 23 12.8
       comp=Z,496nm,18.0s
SBC    Santa Barbara    56.78 304 P      P      11 09 02.2 +0.7
       baz=100
OMMB   Old Mammoth Mi   56.84 308 P      P      11 09 02.7 +0.3
OMMB                              IAmb   IAmb   11 09 03.9
       comp=Z,9.8nm,0.8s
MTE    Manteigas        56.87  49 eLR    LR     11 24 14.9
       comp=Z,647nm,20.0s
MDPB   Devils Postpil   56.91 308 P      P      11 09 03.0 +0.3
PKM    Mcpherson Peak   56.94 305 P      P      11 09 03.2 +0.3
       baz=101
WALA   Waterton Lakes   56.95 322 P      P      11 09 01.7 -1.0
PVRL   Vila Real        56.98  48 eP     P      11 09 05.0 +2.1
SMMC   Simmler          57.16 305 P      P      11 09 04.7 +0.4
       baz=101
TIC    Toumodi          57.24  89 eP     P      11 09 06.1 +1.0
LIC    Lamto            57.29  89 eP     P      11 09 06.7 +1.2
       comp=Z,24nm,0.5s
WAKR   Walker           57.38 309 P      P      11 09 07.1 +1.1
DBIC   Dimbokro         57.39  89 P      P      11 09 07.7 +1.5
       comp=Z,12nm,0.8s,baz=266,slow=7.1,SNR=9.6
DBIC   Dimbokro         57.39  89 P      P      11 09 07.2 +1.0
DBIC                              IAmb   IAmb   11 09 08.2
       comp=Z,13nm,0.8s
KOWA   Kowa             57.40  80 P      P      11 09 07.2 +0.9
KOWA                              IAmb   IAmb   11 09 08.8
       comp=Z,22nm,0.8s
MVO    Moncorvo         57.44  48 eP     P      11 09 08.8 +2.6
MVO    Moncorvo         57.44  48 eLR    LR     11 23 31.9
       comp=Z,554nm,22.0s
KIC    Kosan Boka       57.55  89 eP     P      11 09 08.1 +0.8
       comp=Z,28nm,0.8s
BMO    Blue Mountains   57.58 317 P      P      11 09 06.5 -0.6
BMO                               pmax   pmax
       comp=Z,14nm,1.2s
BMO    Blue Mountains   57.58 317 P      P      11 09 06.5 -0.6
PNTR   Pine Nut         57.64 310 P      P      11 09 08.3 +0.5
PNTR                              IAmb   IAmb   11 09 09.5
       comp=Z,12nm,0.8s
VCNR   Virginia City    57.72 310 P      P      11 09 09.0 +0.6
WVOR   Wild Horse Val   57.78 314 P      P      11 09 08.5 -0.1
WVOR                              pmax   pmax
       comp=Z,10.0nm,1.1s
WVOR   Wild Horse Val   57.78 314 P      P      11 09 08.4 -0.1
F10A   Beach Ranch, E   57.89 318 P      P      11 09 08.5 -0.8
CMB    Columbia Colle   58.01 308 P      P      11 09 10.0 -0.2
CMB                               pmax   pmax
       comp=Z,3.0nm,0.8s
CMB    Columbia Colle   58.01 308 P      P      11 09 10.0 -0.2
BEKR   Beckworth        58.39 310 P      P      11 09 12.3 -0.7
NEW    Newport          58.61 321 P      P      11 09 13.4 -0.8
       comp=Z,17nm,0.8s,baz=121,slow=6.9,SNR=45
NEW    Newport          58.61 321 P      P      11 09 13.3 -0.9
       baz=111,SNR=19
NEW    Newport          58.61 321 P      P      11 09 12.9 -1.3
NEW                               IAmb   IAmb   11 09 14.2
       comp=Z,15nm,0.7s
E09A   Wood Farm, Sta   58.67 318 P      P      11 09 14.0 -0.5
G08A   Pilot Rock       58.83 317 P      P      11 09 15.5 -0.4
G08A                              IAmb   IAmb   11 09 16.1
       comp=Z,15nm,1.4s
MOD    Modoc Plateau    58.83 313 P      P      11 09 15.5 -0.5
I07A   Izee             58.85 315 P      P      11 09 15.8 -0.2
ILULI  Ilulissat        58.93   5 P      P      11 09 15.6 -0.3
ILULI                             pmax   pmax
       comp=Z,41nm,1.1s
ILULI  Ilulissat        58.93   5 P      P      11 09 15.6 -0.3
C09A   Chrisman Ranch   59.18 320 P      P      11 09 17.4 -0.7
C09A                              IAmb   IAmb   11 09 18.4
       comp=Z,14nm,1.0s
ORV    Oroville         59.18 310 P      P      11 09 18.2  0.0
ORV                               pmax   pmax
       comp=Z,5.0nm,0.9s
ORV    Oroville         59.18 310 P      P      11 09 18.2  0.0
E08A   Dider Farm, El   59.26 318 P      P      11 09 17.9 -0.7
E08A                              IAmb   IAmb   11 09 43.4
       comp=Z,23nm,1.5s
ESDC   Sonseca Array    59.37  50 P      P      11 09 21.1 +1.5
       comp=Z,12nm,0.9s,baz=261,slow=7.1,SNR=29
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ESDC   Sonseca Array    59.37  50 P      P      11 09 20.9 +1.3
ESBB   Sonseca Array    59.37  50 P      P      11 09 20.6 +1.0
ESBB                              IAmb   IAmb   11 09 22.5
       comp=Z,17nm,1.0s
K05A   Summer Lake      59.46 313 P      P      11 09 20.4  0.0
K05A                              IAmb   IAmb   11 09 22.3
       comp=Z,25nm,0.9s
HAWA   Hanford          59.54 318 P      P      11 09 19.6 -1.0
HAWA                              IAmb   IAmb   11 09 20.8
       comp=Z,8.5nm,0.8s
O03E   Paynes Creek     59.56 311 P      P      11 09 20.5 -0.5
       baz=102
PINE   Pine Mountain    59.77 315 P      P      11 09 22.1 -0.4
PINE                              IAmb   IAmb   11 09 24.4
       comp=Z,10nm,0.8s
J05D   Fort Rock, OR    59.84 314 P      P      11 09 22.8 -0.1
       baz=105,SNR=11
M04C   Macdoel          59.92 312 P      P      11 09 23.3 -0.1
       baz=103,SNR=13
K04D   Chiloquin, OR    60.05 313 P      P      11 09 24.4 +0.1
       baz=104
WDC    Whiskeytown Da   60.17 311 P      P      11 09 23.2 -1.8
WDC                               pmax   pmax
       comp=Z,3.0nm,0.8s
WDC    Whiskeytown Da   60.17 311 P      P      11 09 23.2 -1.8
I05D   Terrebonne, OR   60.19 315 P      P      11 09 24.8 -0.3
       baz=105
ICESG  Greenland Ices   60.21   9 i P    P      11 09 24.7 -0.5
ICESG                             IAmb   IAmb   11 09 25.9
       comp=Z,67nm,1.0s
O02D   Mt. Diablo Mer   60.27 310 P      P      11 09 24.6 -1.3
       baz=102
L04D   Klamath Falls    60.35 313 P      P      11 09 25.9 -0.6
       baz=103,SNR=9.0
N02D   Trinity Center   60.38 311 P      P      11 09 25.0 -1.5
       baz=102
G05D   Wamic, OR        60.41 316 P      P      11 09 26.9 +0.3
       baz=106
J04D   Umpqua Nationa   60.45 314 P      P      11 09 27.2  0.0
       baz=104
YBH    Yreka Blue Hor   60.54 312 P      P      11 09 26.5 -1.2
YBH                               pmax   pmax
       comp=Z,6.0nm,0.8s
YBH    Yreka Blue Hor   60.54 312 P      P      11 09 26.5 -1.2
LTY    Liberty          60.55 319 P      P      11 09 27.3 -0.2
LTY                               IAmb   IAmb   11 09 28.0
       comp=Z,17nm,0.8s
M02C   Callahan         60.58 312 P      P      11 09 26.6 -1.2
       baz=102
F05D   White Salmon     60.68 317 P      P      11 09 28.1 -0.3
       baz=106,SNR=5.5
KCPM   Cahto Peak       60.78 310 P      P      11 09 29.7 +0.3
KCPM                              IAmb   IAmb   11 09 31.1
       comp=Z,14nm,0.9s
I04A   Tendick Farm,    60.80 314 P      P      11 09 28.6 -0.7
       baz=104
H04A   Detroit Lake     60.86 315 P      P      11 09 29.3 -0.4
H04A                              IAmb   IAmb   11 09 30.1
       comp=Z,11nm,0.7s
C06D   Leavenworth      60.89 319 P      P      11 09 29.3 -0.5
       baz=108
HUMO   Hull Mountain    60.91 313 P      P      11 09 28.9 -1.2
KMRM   Mail Ridge       60.98 310 P      P      11 09 31.1 +0.5
LON    Longmire         61.15 318 P      P      11 09 30.4 -1.2
LON                               pmax   pmax
       comp=Z,6.0nm,0.8s
LON    Longmire         61.15 318 P      P      11 09 30.4 -1.2
H04D   Lebanon          61.20 315 P      P      11 09 31.3 -0.6
       baz=104
L02E   Cave Junction    61.28 312 P      P      11 09 32.0 -0.6
       baz=102
D05A   Enumclaw         61.39 318 P      P      11 09 33.1  0.0
D05A                              IAmb   IAmb   11 09 35.5
       comp=Z,18nm,1.1s
I03D   Drain, OR        61.44 314 P      P      11 09 33.4 -0.1
       baz=103
K02D   Willamette Mer   61.44 313 P      P      11 09 33.0 -0.7
       baz=102
G03D   McMinnville, O   61.73 316 P      P      11 09 35.3 -0.2
       baz=104
J01E   Myrtle Point     61.73 313 P      P      11 09 36.1 +0.5
       baz=102
B05A   Bryant           61.76 319 P      P      11 09 34.1 -1.5
       baz=107,SNR=7.3
I02D   Swisshome        61.88 314 P      P      11 09 36.9 +0.4
       baz=103
QUIF   Quistinic        61.93  41 eP     P      11 09 37.5 +0.8
QUIF                              pmax   pmax
       comp=Z,31nm,0.9s
ROSF   Rostrenen        61.98  41 eP     P      11 09 37.8 +0.7
ROSF                              pmax   pmax
       comp=Z,40nm,0.7s
RSBS   Rosebush, Pemb   62.19  36 eP     P      11 09 38.6 +0.2
RSBS                              IAmb   IAmb   11 09 41.0
       comp=Z,38nm,0.6s
D03D   Eldon            62.20 318 P      P      11 09 37.8 -0.8
       baz=105
E03A   Lebam            62.26 317 P      P      11 09 39.0  0.0
E03A                              IAmb   IAmb   11 09 39.5
       comp=Z,28nm,0.8s
EFI    East Falkland    62.27 177⇑eP     P      11 09 39.2 +0.4
EFI                               pmax   pmax
       comp=Z,41nm,1.7s
SGMF   Saint Gilles     62.42  41 eP     P      11 09 40.8 +0.8
SGMF                              pmax   pmax
       comp=Z,34nm,1.1s
ETSF   Etsaut           62.53  47 eP     P      11 09 42.3 +1.3
ETSF                              pmax   pmax
       comp=Z,60nm,1.5s
NLWA   Neilton Lookou   62.68 318 P      P      11 09 41.7 -0.1
NLWA                              IAmb   IAmb   11 09 42.9
       comp=Z,34nm,1.2s
PGC    Sidney           62.73 319 P      P      11 09 41.7 -0.4
PGC                               IAmb   IAmb   11 09 42.4
       comp=Z,18nm,0.8s
WLF1   Llynfaes         62.84  35 eP     P      11 09 43.7 +1.1
WLF1                              IAmb   IAmb   11 09 45.1
       comp=Z,58nm,0.7s
WIM    Isle of Man      62.98  34 eP     P      11 09 44.6 +1.0
TOA0   Torodi Ar. Sit   63.04  81 P      P      11 09 45.6 +0.9
TORD   Torodi Ar. Bea   63.04  81 P      P      11 09 46.0 +1.2
       comp=Z,9.3nm,0.7s,baz=284,slow=5.9,SNR=24
TORD   Torodi Ar. Bea   63.04  81 P      P      11 09 45.3 +0.6
LLW    Llanuwychllyn    63.11  36 eP     P      11 09 44.8 +0.4
EPF    Esparros         63.21  47 eP     P      11 09 46.8 +1.4
EPF                               pmax   pmax
       comp=Z,31nm,0.7s
GAL1   Galloway         63.21  33 eP     P      11 09 45.5 +0.4
GAL1                              IAmb   IAmb   11 09 46.9
       comp=Z,78nm,1.2s
MCH1   Michaelchurch    63.22  37 eP     P      11 09 45.9 +0.6
MCH1                              IAmb   IAmb   11 09 47.8
       comp=Z,130nm,1.7s
LEWI   Lewis, Hebride   63.36  29 eP     P      11 09 46.5 +0.4
FOEL   Foel Wylfa       63.38  36 eP     P      11 09 46.3 -0.1
FOEL                              IAmb   IAmb   11 09 46.6
       comp=Z,41nm,0.7s
YKA    Yellowknife Ar   63.51 336 P      P      11 09 45.9 -1.0
       comp=Z,49nm,0.8s,baz=110,slow=8.0,SNR=545
YKA    Yellowknife Ar   63.51 336 i P    P      11 09 45.5 -1.4
YKA                               pmax   pmax
       comp=Z,50nm,0.6s
SUMG   Summit           63.52   8 i P    P      11 09 47.3 -0.1
       comp=Z,120nm,0.9s
SUMG   Summit           63.52   8 i P    P      11 09 47.3 -0.1
SUMG                              pmax   pmax
       comp=Z,120nm,0.9s
SUMG   Summit           63.52   8 P      P      11 09 47.0 -0.4
SUMG   Summit           63.52   8 i P    P      11 09 47.3 -0.1
SUMG                              IAmb   IAmb   11 09 48.2
       comp=Z,120nm,0.9s
GRR    Gorron           63.55  41 eP     P      11 09 48.0 +0.5
GRR                               pmax   pmax
       comp=Z,35nm,0.7s
NEWG   New Galloway     63.56  33 eP     P      11 09 47.8 +0.4
NEWG                              IAmb   IAmb   11 09 48.3
       comp=Z,306nm,2.0s
MFF    Saint Martin d   63.60  43 eP     P      11 09 48.6 +0.8
MFF                               pmax   pmax
       comp=Z,14nm,0.8s
FLN    La Foliniere     63.88  41 eP     P      11 09 50.3 +0.6
FLN                               pmax   pmax
       comp=Z,51nm,0.7s
KESW   Keswick, Cumbr   63.99  34 eP     P      11 09 51.0 +0.8
LDF    La Druitiere     64.07  41 eP     P      11 09 51.4 +0.5
LDF                               pmax   pmax
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      comp=Z,54nm,1.2s
INVG  Invergeldie, C    64.12  32 eP     P      11 09 51.1  0.0
LBWR  Ladybower, Pea    64.39  36 eP     P      11 09 54.2 +1.3
LBWR                               IAmb   IAmb   11 09 55.2
      comp=Z,71nm,1.0s
EBL   Broad Law         64.42  33 eP     P      11 09 53.1 +0.1
HPK   Haverah Park      64.61  35 eP     P      11 09 54.9 +0.5
EDMD  Edmundbyers       64.69  34 eP     P      11 09 55.4 +0.5
CAF   Calviac           64.78  45 eP     P      11 09 56.2 +0.5
CAF                                pmax   pmax
      comp=Z,28nm,0.9s
TCF   Toulx Ste Croi    65.13  44 eP     P      11 09 58.3 +0.4
TCF                                pmax   pmax
      comp=Z,25nm,1.0s
TULEG Thule             65.88 358 i P    P      11 10 00.8 -1.3
TULEG                              IAmb   IAmb   11 10 01.8
      comp=Z,13nm,0.8s
AVF   Avril sur Loir    65.99  43 eP     P      11 10 03.4  0.0
AVF                                pmax   pmax
      comp=Z,36nm,1.4s
TAM   Tamanrasset       66.07  70  P     P      11 10 07.0 +2.4
SSF   Saint Saulge      66.14  43 eP     P      11 10 03.6 -0.8
SSF                                pmax   pmax
      comp=Z,18nm,1.2s
LOR   Lormes            66.42  43 eP     P      11 10 06.1 -0.1
LOR                                pmax   pmax
      comp=Z,16nm,0.8s
RES   Resolute Bay      66.45 351  P     P      11 10 05.0 -0.9
      comp=Z,4.0nm,0.8s,baz=181,slow=12,SNR=13
RES   Resolute Bay      66.45 351  P     P      11 10 05.1 -0.7
RES                                pmax   pmax
      comp=Z,8.0nm,1.0s
RES   Resolute Bay      66.45 351  P     P      11 10 05.1 -0.7
BBB   Bella Bella       66.50 322  P     P      11 10 07.3 +0.8
      comp=Z,34nm,1.1s,baz=112,slow=7.5,SNR=4.8
VIVF  Saint-Julien-l    66.59  46 eP     P      11 10 08.5 +1.2
VIVF                               pmax   pmax
      comp=Z,37nm,1.1s
BAIF  Baives            67.15  40 eP     P      11 10 11.6 +0.9
BAIF                               pmax   pmax
      comp=Z,25nm,1.4s
GIVF  Givet             67.55  40 eP     P      11 10 13.3 +0.1
GIVF                               pmax   pmax
      comp=Z,20nm,0.8s
BMRD  Maredsous         67.55  40 κP     P      11 10 13.8 +0.6
BGES  Gesves            67.77  40 dP     P      11 10 14.7 +0.1
FRF   La Foret Royal    67.84  47 eP     P      11 10 15.6 +0.4
FRF                                pmax   pmax
      comp=Z,14nm,0.7s
DBG   Daneborg          68.00  11  IAmb  IAmb   11 10 16.0
      comp=Z,24nm,0.9s
DBG                               i P    P      11 10 16.0 +0.4
LPL   La Plagne         68.13  45 eP     P      11 10 18.3 +1.1
LPL                                pmax   pmax
      comp=Z,33nm,0.9s
LPG   La Plagne         68.14  45 eP     P      11 10 18.5 +1.1
LPG                                pmax   pmax
      comp=Z,23nm,0.9s
HAU   Haudompre         68.20  43 eP     P      11 10 17.2 -0.2
HAU                                pmax   pmax
      comp=Z,11nm,0.8s
WLF   Walferdange       68.32  41 dP     P      11 10 18.4 +0.4
WLF   Walferdange       68.32  41  P     P      11 10 18.2 +0.1
WLF                                pmax   pmax
      comp=Z,25nm,0.9s
WLF   Walferdange       68.32  41  P     P      11 10 18.2 +0.1
WLF                                IAmb   IAmb   11 10 19.8
      comp=Z,25nm,0.9s
WLF   Walferdange       68.32  41 eP     P      11 10 18.8 +0.8
      comp=Z,17nm,0.8s,baz=264,slow=6.0
MEM   Membach           68.38  40 dP     P      11 10 17.0 -1.4
BTNL  Ternell           68.46  40 dP     P      11 10 20.2 +1.2
HINF  Hinteralfeld      68.51  43 eP     P      11 10 18.9 -0.4
HINF                               pmax   pmax
      comp=Z,16nm,0.9s
SENIN Lac Senin/Sane    68.62  44  P     P      11 10 20.3  0.0
ECH   Echery            68.76  42  P     P      11 10 21.1 +0.2
ECH                                pmax   pmax
      comp=Z,25nm,1.0s
ECH   Echery            68.76  42  P     P      11 10 21.1 +0.2
ECH                                IAmb   IAmb   11 10 22.4
      comp=Z,25nm,1.0s
AHRW  Bad Neuenahr-A    69.05  40 eP     P      11 10 24.0 +1.4
      comp=Z,7.9nm,0.8s,baz=264,slow=6.0
DLBC  Dease Lake        69.05 329  P     P      11 10 22.9 +0.3
DLBC                               IAmb   IAmb   11 10 24.8
      comp=Z,44nm,0.9s
BUG   Bochum--Univer    69.31  39 eP     P      11 10 25.0 +0.9
      comp=Z,16nm,1.0s,baz=264,slow=6.0
KEST  Kesra             69.39  56  P     P      11 10 26.8 +1.7
      comp=Z,16nm,1.0s,baz=280,slow=2.5,SNR=8.5
KEST  Kesra             69.39  56  P     P      11 10 25.4 +0.4
KEST                               IAmb   IAmb   11 10 28.9
      comp=Z,18nm,0.9s
BFO   Black Forest      69.56  42 eP     P      11 10 25.3 -0.5
      comp=Z,4.2nm,0.8s,baz=264,slow=6.0
KMY   Karmoy            69.69  31 eP     P      11 10 26.7 +0.4
IBBN  Ibbenburen        69.74  38 eP     P      11 10 27.5 +0.8
      comp=Z,21nm,0.6s,baz=264,slow=6.0
TNS   Taunus Mts        69.87  40 eP     P      11 10 28.5 +0.8
      comp=Z,16nm,0.7s,baz=264,slow=6.0
KASTN Kahler Asten      69.98  39 eP     P      11 10 28.6 +0.2
      comp=Z,5.9nm,0.9s,baz=264,slow=6.0
DAG   Danmarks Havn     69.99  10 i P    P      11 10 27.0 -0.9
DAG   Danmarks Havn     69.99  10 i P    P      11 10 27.0 -0.9
DAG   Danmarks Havn     69.99  10 i P    P      11 10 27.1 -0.9
BER   Bergen            70.01  29 eP     P      11 10 28.8 +0.6
BLS5  Blasjo            70.34  31 eP     P      11 10 31.1 +0.8
DAVA  Damuels           70.48  44 eP     P      11 10 32.7 +1.0
      comp=Z,26nm,0.8s,SNR=6.5
SNART Snartemo          70.50  32 eP     P      11 10 32.1 +0.8
ODD1  Odda              70.53  30 eP     P      11 10 32.2 +0.7
HYA   Hoyanger          70.60  29 eP     P      11 10 33.1 +1.3
GTTG  Gottingen         70.99  39 eP     P      11 10 34.8 +0.4
      comp=Z,7.7nm,0.7s,baz=264,slow=6.0
FETA  Feichten          71.04  44 eP     P      11 10 35.4 +0.4
      comp=Z,26nm,0.8s,SNR=8.5
RETA  Reutte            71.10  43 eP     P      11 10 35.9 +0.7
      comp=Z,11nm,0.8s
HOMB  Homborsund        71.16  32 eP     P      11 10 36.0 +0.8
OSSC  Osservatorio P    71.17  48  P     P      11 10 35.1 -0.6
OSSC                               IAmb   IAmb   11 10 38.0
      comp=Z,26nm,0.9s
MUD   Monsted U'grnd    71.20  34 i P    P      11 10 36.1 +0.5
      comp=Z,44nm,1.1s
MUD   Monsted U'grnd    71.20  34 i P    P      11 10 36.1 +0.5
MUD                                pmax   pmax
      comp=Z,44nm,1.1s
MUD   Monsted U'grnd    71.20  34 i P    P      11 10 36.1 +0.5
MUD                                IAmb   IAmb   11 10 37.2
      comp=Z,44nm,1.1s
AKN   Aaknes            71.21  28 eP     P      11 10 36.4 +0.9
JIS   Juneau Island     71.26 328  P     P      11 10 36.1 +0.2
JIS                                IAmb   IAmb   11 10 37.6
      comp=Z,21nm,1.0s
CLZ   Clausthal         71.28  39 eP     P      11 10 37.0 +0.8
      comp=Z,7.6nm,0.8s,baz=264,slow=6.0
MOTA  Moosalm           71.32  44 eP     P      11 10 37.0 +0.3
      comp=Z,23nm,0.9s,SNR=6.4
SQTA  Sankt Quirin      71.38  44 eP     P      11 10 37.6 +0.6
      comp=Z,34nm,0.9s,SNR=9.2
ASSE  Asse, Remlinge    71.49  39 eP     P      11 10 38.5 +1.2
      comp=Z,14nm,1.0s,baz=264,slow=6.0
BSEG  Bad Segeberg      71.49  37 eP     P      11 10 38.0 +0.6
      comp=Z,18nm,1.1s,baz=264,slow=6.0
SKAR  Skarslia          71.51  29 eP     P      11 10 38.2 +0.8
BESE  Bessie Mountai    71.56 328  P     P      11 10 38.0 +0.2
BESE                               IAmb   IAmb   11 10 39.6
      comp=Z,25nm,0.9s
SIT   Sitka             71.56 327  P     P      11 10 38.3 +0.6
SIT                                pmax   pmax
      comp=Z,33nm,1.1s
SIT   Sitka             71.56 327  P     P      11 10 38.3 +0.6
SIT                                IAmb   IAmb   11 10 39.7
      comp=Z,33nm,1.1s
TEOL  Teolo             71.57  46  P     P      11 10 37.9 -0.1
TEOL                               IAmb   IAmb   11 10 39.2
      comp=Z,33nm,0.9s
CTI   Castel Tesino     71.60  45  P     P      11 10 38.2 -0.2
CTI                                pmax   pmax
      comp=Z,17nm,0.7s
CTI   Castel Tesino     71.60  45  P     P      11 10 38.2 -0.2
CTI                                IAmb   IAmb   11 10 39.4
      comp=Z,16nm,0.7s
WATA  Walderalm         71.64  44 eP     P      11 10 39.1 +0.5
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      comp=Z,17nm,1.1s
WTTA  Wattenberg        71.67  44 eP     P      11 10 39.4 +0.5
      comp=Z,21nm,0.9s
FLTG  Flechtingen       71.86  38 eP     P      11 10 40.2 +0.6
      comp=Z,6.7nm,0.7s,baz=264,slow=6.0
WHY   Whitehorse        71.94 330  P     P      11 10 39.9 -0.2
SKAG  Skagway           71.95 329  P     P      11 10 40.5 +0.5
SKAG                               IAmb   IAmb   11 10 41.7
      comp=Z,19nm,0.9s
KONO  Kongsberg         71.95  31⇓eP     P      11 10 40.6 +0.6
KONO                               pmax   pmax
      comp=Z,22nm,1.6s
MANZ  Manzenberg        72.19  41 eP     P      11 10 42.6 +0.9
      comp=Z,9.0nm,0.8s,baz=264,slow=6.0
ROTZ  Rotzenmuhle       72.24  41 eP     P      11 10 42.7 +0.7
      comp=Z,3.8nm,1.0s,baz=264,slow=6.0
ABTA  Abfaltersbach     72.24  44 i P    P      11 10 42.2 +0.1
      comp=Z,24nm,1.0s,SNR=5.5
WERD  Werda             72.35  40 eP     P      11 10 43.2 +0.5
      comp=Z,5.7nm,0.8s,baz=264,slow=6.0
GUNZ  Gunzen            72.36  41 eP     P      11 10 43.2 +0.5
      comp=Z,4.5nm,0.7s,baz=264,slow=6.0
WERN  Wernitzgruen      72.38  41 eP     P      11 10 43.5 +0.7
      comp=Z,7.7nm,0.9s,baz=264,slow=6.0
NKC   Novy Kostel       72.43  41 eP     P      11 10 44.0 +0.9
NKC   Novy Kostel       72.43  41 eP     P      11 10 44.0 +0.9
TANN  Tannenbergstha    72.45  40 eP     P      11 10 43.6 +0.3
      comp=Z,5.9nm,0.8s,baz=264,slow=6.0
ZOU   Zoufplan          72.55  45  P     P      11 10 44.1  0.0
ZOU                                IAmb   IAmb   11 10 46.6
      comp=Z,29nm,1.1s
WET   Wettzell          72.63  42 eP     P      11 10 44.7 +0.4
      comp=Z,6.0nm,0.8s,baz=264,slow=6.0
NAO01 NORSAR Array S    72.78  29  P     P      11 10 45.0  0.0
NAO01                              IAmb   IAmb   11 10 47.3
      comp=Z,49nm,1.1s
NC204 NORSAR Array S    72.79  29  P     P      11 10 47.2 +2.1
NC204                              IAmb   IAmb   11 10 48.7
      comp=Z,73nm,1.4s
KBA   Koelnbreinsper    72.83  44 eP     P      11 10 46.1 +0.3
      comp=Z,30nm,1.0s,SNR=9.8
KBA   Koelnbreinsper    72.83  44  P     P      11 10 46.1 +0.3
CLL   Collm             72.86  40⇑iP     P      11 10 46.0 +0.4
      comp=Z,74nm,2.1s
CLL   Collm             72.86  40⇑iP     P      11 10 46.0 +0.4
CLL                                pmax   pmax
      comp=Z,74nm,2.1s
CLL   Collm             72.86  40  P     P      11 10 45.9 +0.3
CLL   Collm             72.86  40 eP     P      11 10 46.0 +0.4
      comp=Z,5.9nm,0.8s,baz=264,slow=6.0
NB2   NORSAR Subarra    72.97  29  P     P      11 10 46.8 +0.7
      comp=Z,3.3nm,0.7s,baz=260,slow=6.2
NB2   NORSAR Subarra    72.97  29  P     P      11 10 46.8 +0.7
      baz=260,slow=6.2
NOA   NORSAR Array B    72.97  29  P     P      11 10 47.1 +1.0
      comp=Z,12nm,1.0s,baz=262,slow=5.9,SNR=19
INK   Inuvik            73.00 338  P     P      11 10 45.1 -1.0
INK                                pmax   pmax
      comp=Z,46nm,0.9s
INK   Inuvik            73.00 338  P     P      11 10 45.1 -1.0
INK                                IAmb   IAmb   11 10 45.9
      comp=Z,46nm,0.8s
MYKA  Terra Mystica     73.01  44 eP     P      11 10 47.1 +0.4
      comp=Z,21nm,0.9s,SNR=5.6
NB201 NORSAR Array S    73.01  29  P     P      11 10 48.6 +2.3
NB201                              IAmb   IAmb   11 10 49.6
      comp=Z,48nm,1.2s
NC303 NORSAR Array S    73.08  29  P     P      11 10 48.0 +1.3
NC303                              IAmb   IAmb   11 10 49.5
      comp=Z,58nm,1.2s
NC602 NORSAR Array S    73.08  30  P     P      11 10 48.3 +1.6
NC602 NORSAR Array S    73.08  30 eP     P      11 10 47.7 +0.9
NORES NORESS Array B    73.08  30  P     P      11 10 48.4 +1.7
NORES                              pmax   pmax
      comp=Z,25nm,0.9s
KHC   Kasperske Hory    73.09  42d iP    P      11 10 47.8 +0.7
KHC                                pmax   pmax
      comp=Z,49nm,1.4s
KHC   Kasperske Hory    73.09  42 eP     P      11 10 47.2 +0.1
KHC   Kasperske Hory    73.09  42  P     P      11 10 47.7 +0.6
KHC                                IAmb   IAmb   11 10 48.9
      comp=Z,34nm,1.5s
GEC2  GERESS Array S    73.15  42  P     P      11 10 47.4 -0.1
GEC2                               IAmb   IAmb   11 10 48.9
      comp=Z,22nm,0.8s
GEC2  GERESS Array S    73.15  42 eP     P      11 10 47.8 +0.3
      comp=Z,15nm,0.8s,baz=264,slow=6.0
GERES GERESS Array B    73.15  42  P     P      11 10 48.2 +0.6
      comp=Z,12nm,0.7s,baz=266,slow=4.8,SNR=79
NC405 NORSAR Array S    73.22  29  P     P      11 10 47.7 +0.1
HYT   Haines Junctio    73.23 330  P     P      11 10 48.9 +1.1
HYT                                IAmb   IAmb   11 10 50.2
      comp=Z,36nm,0.9s
BRG   Berggiesshubel    73.42  40 eP     P      11 10 48.7 -0.2
BRG                                Amp           11 10 52.2
      comp=Z,13nm,0.9s
BRG                                Amp           11 14 46.0
      comp=N,0.6nm,23.3s
BRG                                Amp           11 15 04.0
      comp=E,1.5nm,23.3s
BRG                                Amp           11 17 53.0
      comp=Z,2.7nm,16.4s
BRG   Berggiesshubel    73.42  40 eP     P      11 10 49.1 +0.2
      comp=Z,7.8nm,0.8s,baz=264,slow=6.0
MOA   Molln             73.48  43 eP     P      11 10 49.3 -0.1
      comp=Z,15nm,0.8s,SNR=5.3
CEY   Cerknica          73.52  45 eP     P      11 10 50.3 +0.6
LJU   Ljubljana         73.60  45⇓iP     P      11 10 51.2 +1.1
OBKA  Obir              73.63  45 eP     P      11 10 50.9 +0.5
      comp=Z,13nm,0.7s
PRU   Pruhonice         73.76  41 eP     P      11 10 51.5 +0.6
PRU   Pruhonice         73.76  41 eP     P      11 10 51.5 +0.6
EPYK  Eagle Plains      73.79 336  P     P      11 10 50.5 -0.3
EPYK                               IAmb   IAmb   11 10 51.4
      comp=Z,54nm,1.1s
SOKA  Soboth            73.97  44 eP     P      11 10 52.2 -0.1
      comp=Z,6.9nm,0.9s
BCPM  Bancas Point      74.18 329  P     P      11 10 54.0 +0.9
CRES  Cresnjev          74.25  45 eP     P      11 10 54.3 +0.4
ARSA  Arzberg           74.32  44 eP     P      11 10 54.0 -0.2
      comp=Z,13nm,0.8s
PCA   Pinnacle          74.50 330  P     P      11 10 55.5 +0.3
PCA                                IAmb   IAmb   11 10 57.0
      comp=Z,29nm,0.9s
CONA  Conrad Observa    74.56  43 eP     P      11 10 55.6 -0.1
      comp=Z,12nm,0.9s
UPC   Upice             74.72  40 eP     P      11 10 57.3 +0.8
UPC   Upice             74.72  40 eP     P      11 10 57.3 +0.8
CHVC  Chvalec           74.75  40 eP     P      11 10 57.4 +0.7
OSTC  Ostas             74.85  40 eP     P      11 10 57.8 +0.5
KSP   Ksiaz             74.91  40 eP     P      11 10 58.6 +1.0
DPC   Dobruska-Polom    74.91  41 eP     P      11 10 58.3 +0.6
DPC   Dobruska-Polom    74.91  41 eP     P      11 10 58.3 +0.6
KRUC  Moravsky          74.93  42 eP     P      11 10 58.4 +0.6
LOF   Lofoten           75.05  22 eP     P      11 10 59.5 +1.5
VRAC  Vranov            75.07  42 ⇓P     P      11 10 59.7 +1.2
VRAC  Vranov            75.07  42 eP     P      11 10 59.3 +0.7
VRAC  Vranov            75.07  42 ⇓P     P      11 10 59.7 +1.2
CTGM  Chitina Glacie    75.11 330  P     P      11 10 60.0 +1.2
CTGM                               IAmb   IAmb   11 11 00.7
      comp=Z,37nm,0.8s
BEHE  Becsehely         75.17  45⇓iP     P      11 11 02.0 +2.8
KRLC  Kraliky           75.20  41 eP     P      11 11 00.2 +0.8
KRLC  Kraliky           75.20  41 eP     P      11 11 00.2 +0.8
YAH   Yahtse            75.27 330  P     P      11 11 01.2 +1.5
YAH                                IAmb   IAmb   11 11 01.8
      comp=Z,19nm,0.8s
BARN  Barnard Glacie    75.28 330  P     P      11 11 00.9 +1.2
BARN                               IAmb   IAmb   11 11 04.9
      comp=Z,19nm,0.8s
EGAK  Eagle             75.39 334  P     P      11 10 59.7 -0.4
ZST   Bratislava        75.39  43 eP     P      11 11 01.1 +0.7
ZST                                pmax   pmax
      comp=Z,82nm,1.1s
ZST   Bratislava        75.39  43 eP     P      11 11 01.1 +0.7
MGRS  Mrkonjic Grad     75.40  47⇓iP     P      11 11 01.7 +1.1
BLY   Banja Luka        75.47  46⇓iP     P      11 11 01.9 +1.0
BCAR  Beaver Creek A    75.50 333  P     P      11 11 01.2 +0.4
MODS  Modra-Piesok      75.51  43 eP     P      11 11 01.1  0.0
MODS                               pmax   pmax
      comp=Z,45nm,0.9s
MODS  Modra-Piesok      75.51  43 eP     P      11 11 01.1  0.0
GKP   Gorka Klasztor    75.55  38 eP     P      11 11 02.7 +1.5
ISLE  Juniper Island    75.58 330  P     P      11 11 01.8 +0.4
ISLE                               IAmb   IAmb   11 11 02.9
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      comp=Z,21nm,0.9s
FAUS  Fauske            75.61  23 eP     P      11 11 02.3 +1.1
BALM  Baldy             75.61 330  P     P      11 11 01.7 +0.2
SMOL  Smolenice         75.61  43 eP     P      11 11 02.6 +0.9
SMOL                               pmax   pmax
      comp=Z,6.0nm,0.7s
SMOL  Smolenice         75.61  43 eP     P      11 11 02.6 +0.9
STEI  Steigen           75.65  22 eP     P      11 11 02.3 +0.8
MORC  Moravsky Berou    75.69  41 ⇓P     P      11 11 03.7 +1.5
MORC  Moravsky Berou    75.69  41 eP     P      11 11 02.7 +0.5
MORC  Moravsky Berou    75.69  41 ⇓P     P      11 11 03.7 +1.5
MORC  Moravsky Berou    75.69  41  P     P      11 11 02.4 +0.3
JAVC  Velka Javorina    75.77  42 eP     P      11 11 04.2 +1.5
TGL   Tana Glacier      75.83 330  P     P      11 11 03.2 +0.4
TGL                                IAmb   IAmb   11 11 04.3
      comp=Z,24nm,0.8s
STON  Ston              75.88  48⇓iP     P      11 11 03.0 -0.2
MCARA McCarthy VSAT     75.96 331  P     P      11 11 04.2 +0.9
CRQM  Cirque            75.98 330  P     P      11 11 03.7 -0.1
VRDI  Verde Repeater    76.16 331  P     P      11 11 04.7 -0.1
VRDI                               IAmb   IAmb   11 11 06.2
      comp=Z,32nm,1.0s
GLB   Gilahina Butte    76.34 331  P     P      11 11 06.1 +0.5
GLB                                IAmb   IAmb   11 11 08.0
      comp=Z,30nm,0.9s
MENT  Mentasta          76.37 332  P     P      11 11 06.2 +0.4
MORH  Mrgy, Hungar      76.47  45 ⇓P     P      11 11 08.0 +1.5
MORH  Mrgy, Hungar      76.47  45⇓iP     P      11 11 07.3 +0.8
HMT   Hamilton          76.51 330  P     P      11 11 07.7 +1.1
HMT                                IAmb   IAmb   11 11 08.9
      comp=Z,28nm,0.8s
SCRK  Sand Creek        76.55 333  P     P      11 11 06.5 -0.3
      baz=93,SNR=70
DOT   Dot Lake          76.57 333  P     P      11 11 06.5 -0.3
DOT                                IAmb   IAmb   11 11 08.3
      comp=Z,28nm,0.9s
RAGM  Ragged Mountai    76.72 330  P     P      11 11 08.2 +0.4
RAGM                               IAmb   IAmb   11 11 09.7
      comp=Z,28nm,0.8s
N25K  Chitina, Valde    76.72 331  P     P      11 11 08.3 +0.5
      baz=92,SNR=13
HAPS  Han Pijesak,Bl    76.75  47⇓iP     P      11 11 09.2 +0.9
RIDG  Independent Ri    76.92 333  P     P      11 11 08.5 -0.3
RIDG                               IAmb   IAmb   11 11 09.6
      comp=Z,40nm,1.1s
LANS  Liptovska Anna    76.95  42 eP     P      11 11 11.2 +1.9
LANS  Liptovska Anna    76.95  42 eP     P      11 11 11.2 +1.9
PDG   Podgorica         77.04  49 eP     P      11 11 02.6 -7.2
BBLS  Lazi&#263;i       77.08  47⇓iP     P      11 11 11.0 +0.8
OJC   Ojcow             77.14  41 eP     P      11 11 11.5 +1.2
OJC   Ojcow             77.14  41  P     P      11 11 10.6 +0.3
OJC                                pmax   pmax
      comp=Z,20nm,0.9s
OJC   Ojcow             77.14  41  P     P      11 11 10.6 +0.3
OJC                                IAmb   IAmb   11 11 12.4
      comp=Z,20nm,0.9s
TEKS  Tekeris           77.14  47⇓iP     P      11 11 12.3 +1.9
TRO   Tromso            77.15  21 eP     P      11 11 10.4 +0.5
PAX   Paxson            77.17 332  P     P      11 11 10.1 -0.2
PAX                                pmax   pmax
      comp=Z,29nm,1.0s
PAX   Paxson            77.17 332  P     P      11 11 10.1 -0.2
PAX                                IAmb   IAmb   11 11 11.4
      comp=Z,29nm,1.0s
FYU   Fort Yukon        77.21 336  P     P      11 11 10.1 -0.2
EYAK  Cordova Ski Ar    77.26 330  P     P      11 11 12.1 +1.5
PSZ   Piszkesteto       77.27  43  P     P      11 11 11.6 +0.4
PSZ                                pmax   pmax
      comp=Z,17nm,1.2s
PSZ   Piszkesteto       77.27  43  P     P      11 11 11.6 +0.4
PRP   Porcupine Dome    77.28 335  P     P      11 11 10.7 -0.2
FRGS  Fruska Gora       77.32  46 eP     P      11 11 12.8 +1.4
KLU   Klutina           77.35 331  P     P      11 11 11.0 -0.3
KLU                                IAmb   IAmb   11 11 12.9
      comp=Z,31nm,1.0s
SPA0  Spitsbergen Ar    77.36  12 eP     P      11 11 11.2 +0.2
SPITS Spitsbergen Ar    77.36  12  P     P      11 11 10.6 -0.4
SPITS                              pmax   pmax
      comp=Z,6.0nm,0.3s
M24K  Tolsona, Glenn    77.48 331  P     P      11 11 12.0  0.0
      baz=91,SNR=6.5
M24K  Tolsona, Glenn    77.48 331  P     P      11 11 11.9 -0.2
M24K                               IAmb   IAmb   11 11 14.2
      comp=Z,39nm,0.9s
NIE   Niedzica          77.49  42 eP     P      11 11 14.0 +1.7
DIVS  Divibare          77.50  47⇓iP     P      11 11 13.8 +1.3
DIVS  Divibare          77.50  47  P     P      11 11 13.0 +0.5
DIVS                               IAmb   IAmb   11 11 14.9
      comp=Z,21nm,0.9s
FID   Port Fidalgo      77.62 330  P     P      11 11 12.8 +0.1
FID                                IAmb   IAmb   11 11 15.4
      comp=Z,71nm,1.5s
KECS  Kecovo            77.65  43 eP     P      11 11 14.1 +1.0
KECS                               pmax   pmax
      comp=Z,7.0nm,0.8s
KECS  Kecovo            77.65  43 eP     P      11 11 14.1 +1.0
ILAR  Eielson Array     77.84 334  P     P      11 11 12.5 -1.4
      comp=Z,32nm,0.6s,baz=97,slow=4.5,SNR=234
ILAR                               PP     PP     11 14 12.9 +2.3
      comp=Z,3.0nm,1.1s,baz=93,slow=6.0,SNR=7.5
HDA   Harding Lake      77.86 334  P     P      11 11 13.0 -1.0
      baz=91,SNR=25
HDA   Harding Lake      77.86 334  P     P      11 11 13.2 -0.9
HDA                                IAmb   IAmb   11 11 14.0
      comp=Z,44nm,1.3s
GLI   Glacier Island    77.92 330  P     P      11 11 14.2 -0.2
GLI                                IAmb   IAmb   11 11 15.3
      comp=Z,47nm,1.2s
SCM   Sheep Creek Mo    78.03 331  P     P      11 11 15.4 +0.3
SCM                                pmax   pmax
      comp=Z,62nm,0.9s
SCM   Sheep Creek Mo    78.03 331  P     P      11 11 15.4 +0.3
POKR  Poker Plat Res    78.08 335  P     P      11 11 15.0 -0.2
      baz=90,SNR=40
POKR  Poker Plat Res    78.08 335  P     P      11 11 14.6 -0.6
CCB   Clear Creek Bu    78.23 334  P     P      11 11 14.9 -1.1
CCB                                IAmb   IAmb   11 11 16.6
      comp=Z,19nm,0.8s
COLA  College           78.25 334c iP    P      11 11 15.6 -0.5
COLA                               pmax   pmax
      comp=Z,32nm,0.8s
COLA  College           78.25 334  P     P      11 11 15.6 -0.5
COLA                               IAmb   IAmb   11 11 16.4
      comp=Z,36nm,0.7s
TCOL  CIGO, UAF Yank    78.26 334  P     P      11 11 15.4 -0.8
      baz=90,SNR=11
TCOL  CIGO, UAF Yank    78.26 334  P     P      11 11 15.6 -0.5
TCOL                               IAmb   IAmb   11 11 16.5
      comp=Z,36nm,0.7s
CRVS  Cervenica-Dubn    78.27  42 eP     P      11 11 18.3 +1.7
CRVS                               pmax   pmax
      comp=Z,23nm,0.8s
CRVS  Cervenica-Dubn    78.27  42 eP     P      11 11 18.3 +1.7
WRH   Wood River Hil    78.36 334  P     P      11 11 16.4 -0.3
MDM   Murphy Dome       78.41 334  P     P      11 11 16.9 -0.2
SML   Sawmill           78.50 331  P     P      11 11 17.9 +0.2
SML                                pmax   pmax
      comp=Z,25nm,0.8s
SML   Sawmill           78.50 331  P     P      11 11 17.4 -0.3
SML                                IAmb   IAmb   11 11 18.6
      comp=Z,25nm,0.8s
BZS   Buzias            78.56  45 ⇓P     P      11 11 19.9 +1.7
BZS   Buzias            78.56  45 ⇓P     P      11 11 19.9 +1.7
KNK   Knik Glacier      78.57 331  P     P      11 11 17.9 -0.1
KNK                                IAmb   IAmb   11 11 19.2
      comp=Z,22nm,0.9s
KTK1  Kautokeino        78.66  22 eP     P      11 11 18.7 +0.3
RND   Reindeer          78.71 333  P     P      11 11 18.8  0.0
RND                                pmax   pmax
      comp=Z,33nm,0.8s
RND   Reindeer          78.71 333  P     P      11 11 18.8  0.0
RND                                IAmb   IAmb   11 11 19.9
      comp=Z,33nm,0.8s
FNA   Florina           78.73  50  P     P      11 11 20.0 +0.6
FNA                                pmax   pmax
      comp=Z,30nm,0.8s
FNA   Florina           78.73  50  P     P      11 11 19.9 +0.6
FNA                                IAmb   IAmb   11 11 21.7
      comp=Z,30nm,0.8s
MCK   McKinley          78.74 333  P     P      11 11 18.4 -0.5
      baz=89,SNR=10
NEA2  Nenana            78.78 334  P     P      11 11 18.5 -0.5
      baz=89,SNR=63
GHO   Glory Hole Cre    78.79 331  P     P      11 11 18.5 -0.7
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KOLS	Kolonicke sedl	78.81	42	eP	P	11 11 21.0	+1.5
KOLS				pmax	pmax		
	comp=Z,12nm,1.3s						
KOLS	Kolonicke sedl	78.81	42	eP	P	11 11 21.0	+1.5
UZH	Uzhgorod	78.84	42	⇑iP	P	11 11 20.9	+1.2
UZH				e		11 11 26.6	
PMR	Palmer	78.89	331	P	P	11 11 19.5	-0.2
PMR				pmax	pmax		
	comp=Z,21nm,1.0s						
PMR	Palmer	78.89	331	P	P	11 11 19.5	-0.2
PMR				IAmb	IAmb	11 11 20.6	
	comp=Z,21nm,1.0s						
I23K	Minto, Yukon-K	78.89	335	P	P	11 11 19.3	-0.3
	baz=89,SNR=28						
TOLK	Toolik Lake Re	78.90	338	P	P	11 11 19.2	-0.6
	baz=89,SNR=26						
TOLK	Toolik Lake Re	78.90	338	P	P	11 11 18.9	-0.8
BWN	Browne	78.96	334	P	P	11 11 19.4	-0.7
KWP	Kalwaria Pacla	79.05	41	eP	P	11 11 22.5	+1.6
KWP	Kalwaria Pacla	79.05	41	P	P	11 11 21.5	+0.7
KWP				pmax	pmax		
	comp=Z,51nm,0.8s						
KWP	Kalwaria Pacla	79.05	41	P	P	11 11 21.5	+0.7
SUW	Suwalki	79.08	37	eP	P	11 11 22.3	+1.4
SEW	Seward	79.10	329	P	P	11 11 21.3	+0.5
SEW				IAmb	IAmb	11 11 22.0	
	comp=Z,49nm,1.0s						
COLD	Coldfoot	79.17	337	P	P	11 11 20.9	-0.3
	baz=88,SNR=15						
COLD	Coldfoot	79.17	337	P	P	11 11 21.2	0.0
HERR	Herculane	79.18	46	⇓P	P	11 11 22.4	+0.7
RC01	Rabbit Creek A	79.20	330	P	P	11 11 21.5	+0.1
	baz=88,SNR=7.9						
DRGR		79.24	44	⇓P	P	11 11 23.3	+1.2
DRGR		79.24	44	⇓P	P	11 11 23.3	+1.2
TRSU	Trosnyk	79.31	43	P	P	11 11 22.9	+0.6
TRF	Thorofare Moun	79.35	333	P	P	11 11 22.6	+0.2
CUT	Chulitna	79.39	332	P	P	11 11 22.2	-0.2
	baz=87,SNR=9.7						
GZR	Gura Zlata	79.39	46	⇓P	P	11 11 24.3	+1.4
GZR	Gura Zlata	79.39	46	⇓P	P	11 11 24.3	+1.4
ARCES	ARCESS Array B	79.46	21	P	P	11 11 22.4	-0.3
	comp=Z,13nm,0.8s,baz=275,slow=4.3,SNR=26						
ARCES	ARCESS Array B	79.46	21	P	P	11 11 22.5	-0.2
ARCES				pmax	pmax		
	comp=Z,16nm,0.9s						
ARCES	ARCESS Array B	79.46	21	P	P	11 11 22.5	-0.2
ITM	Ithomi	79.47	54	P	P	11 11 23.1	-0.3
MLY	Manley	79.48	334	P	P	11 11 22.3	-0.7
	baz=87,SNR=22						
AGG	Agios Georgios	79.61	52	P	P	11 11 26.5	+2.4
AGG				pmax	pmax		
	comp=Z,46nm,1.1s						
AGG	Agios Georgios	79.61	52	P	P	11 11 26.5	+2.4
AGG				IAmb	IAmb	11 11 27.4	
	comp=Z,46nm,1.1s						
KTH	Kantishna Hill	79.63	333	P	P	11 11 23.9	+0.1
SUA	Susitna One	79.67	331	P	P	11 11 23.6	-0.5
SUA				IAmb	IAmb	11 11 25.4	
	comp=Z,26nm,0.8s						
BRLK	Bradley Lake	79.84	329	P	P	11 11 24.9	-0.1
BRLK				IAmb	IAmb	11 11 26.4	
	comp=Z,57nm,1.0s						
MORS	Morshin	79.86	42	P	P	11 11 26.4	+1.2
VTS	Vitosha	79.96	48	⇓P	P	11 11 27.7	+1.6
VTS	Vitosha	79.96	48	⇓P	P	11 11 27.7	+1.6
SKT	Skwentna	80.01	331	P	P	11 11 26.0	+0.2
SKT				IAmb	IAmb	11 11 26.7	
	comp=Z,37nm,0.8s						
CNPM	China Poot	80.04	329	P	P	11 11 26.5	+0.5
CNPM				IAmb	IAmb	11 11 27.5	
	comp=Z,53nm,1.0s						
FINES	FINESS Array B	80.16	29	P	P	11 11 26.3	-0.2
	comp=Z,3.3nm,0.5s,baz=266,slow=3.6,SNR=32						
PPLA	Purkeypile	80.25	332	P	P	11 11 27.3	0.0
PPLA				IAmb	IAmb	11 11 28.0	
	comp=Z,32nm,1.0s						
ARCR	ARCALIA	80.34	44	⇑P	P	11 11 28.8	+0.9
IMAR	Indian Mountai	80.66	335	P	P	11 11 29.1	-0.1
ARR	Arges	80.70	46	⇓P	P	11 11 30.9	+1.0
KSV	Kosov	80.70	43	P	P	11 11 30.0	+0.2
RSO	Redoubt South	80.72	330	P	P	11 11 30.4	+0.5
VSU	Vasula	80.73	32	⇑eP	P	11 11 29.3	-0.4
VSU				pmax	pmax		
	comp=Z,86nm,1.0s						
BUR08	Bucovina Ar. S	80.86	43	P	P	11 11 32.2	+1.5
BUR08				IAmb	IAmb	11 11 33.5	
	comp=Z,27nm,0.9s						
BURAR	Bucovina Array	80.87	43	⇓P	P	11 11 32.7	+1.9
BURAR	Bucovina Array	80.87	43	⇓P	P	11 11 32.7	+1.9
BURAR	Bucovina Array	80.87	43	P	P	11 11 32.0	+1.2
KDAK	Kodiak Island	80.89	327	⇓eP	P	11 11 30.7	+0.2
KDAK				pmax	pmax		
	comp=Z,32nm,1.0s						
VOIR		80.98	45	⇓P	P	11 11 32.5	+1.1
VOIR		80.98	45	⇓P	P	11 11 32.5	+1.1
HUMR	Humele	81.03	46	⇓P	P	11 11 32.9	+1.3
NACGM	Naroch	81.11	36	iP	P	11 11 31.8	+0.1
NACGM				iP	P	11 11 31.8	+0.1
NACGM				iP	P	11 11 31.8	+0.1
NACGM				ipP	pP	11 11 58.9	+1.1
NACGM				isP	sP	11 12 09.5	+1.0
NACGM				iPP	PP	11 14 33.7	-4.2
NACGM				iPPP	PPP	11 16 23.0	
NACGM				iS	S	11 21 26.4	-6.7
NACGM				ipS	pS	11 21 58.7	-6.8
NACGM				isS	sS	11 22 11.9	-5.9
NACGM				iSS	SS	11 26 38.0	-12
NACGM				iSSS	SSS	11 30 06.2	
A21K	Barrow	81.14	341	P	P	11 11 31.9	+0.3
	baz=83,SNR=20						
A21K	Barrow	81.14	341	P	P	11 11 32.0	+0.4
OZUR		81.42	45	⇓P	P	11 11 34.6	+0.9
HORU	Horodok	81.50	42	P	P	11 11 34.1	+0.1
BIZ	Bicaz	81.55	44	⇓P	P	11 11 36.1	+1.8
KMPD	K-Podol'skiy	81.60	42	P	P	11 11 34.0	-0.5
MLR	Muntele Rosu	81.61	45	⇓P	P	11 11 36.1	+1.3
MLR	Muntele Rosu	81.61	45	⇓P	P	11 11 36.1	+1.3
MLR	Muntele Rosu	81.61	45	P	P	11 11 35.5	+0.7
MLR				IAmb	IAmb	11 11 37.0	
	comp=Z,44nm,0.9s						
MNK	Minsk	81.79	36	eP	P	11 11 36.0	+0.6
MNK	Minsk	81.79	36	iP	P	11 11 35.4	0.0
	comp=E,4.0nm,1.8s						
MNK				iP	P	11 11 35.4	0.0
	comp=N,19nm,1.1s						
MNK				iP	P	11 11 35.4	0.0
	comp=Z,24nm,1.2s						
MNK				ipP	pP	11 12 01.3	-0.1
MNK				iPP	PP	11 14 43.5	+0.1
MNK				iPPP	PPP	11 16 34.4	
MNK				iS	S	11 21 41.6	+1.4
MNK				iSS	SS	11 27 02.0	+2.1
MNK				iSSS	SSS	11 30 30.1	
MNK				iLQ	LQ	11 42 47.4	
MNK				iLR	LR	11 49 01.2	
MNK				iLRM	MLR	11 49 53.2	
	comp=E,8.0nm,21.0s						
MNK				iLRM	MLR	11 49 53.2	
	comp=N,66nm,13.8s						
MNK				iLRM	MLR	11 49 53.2	
	comp=Z,107nm,15.1s						
TESR	Tescani	81.97	44	⇓P	P	11 11 37.0	+0.5
TTA	Tatalina	81.98	333	P	P	11 11 35.4	-1.0
TTA				pmax	pmax		
	comp=Z,16nm,0.9s						
TTA	Tatalina	81.98	333	P	P	11 11 35.4	-1.0
SVW2	Sparrevohn	82.03	331	P	P	11 11 36.0	-0.6
PLOR	Plostina	82.05	45	⇓P	P	11 11 38.4	+1.4
PLOR	Plostina	82.05	45	⇓P	P	11 11 38.4	+1.4
IDI	Anoyia	82.06	56	⇓P	P	11 11 39.3	+2.0
IDI	Anoyia	82.06	56	P	P	11 11 37.6	+0.3
IDI				IAmb	IAmb	11 11 40.0	
	comp=Z,43nm,0.9s						
VRI	Vrincioaia	82.10	45	⇓P	P	11 11 37.6	+0.4
VRI	Vrincioaia	82.10	45	⇓P	P	11 11 37.6	+0.4
BISRR	Bisoca	82.13	45	⇓P	P	11 11 38.2	+0.8
PUL	Pulkovo	82.42	31	⇓eP	P	11 11 39.2	+0.7
PUL				pmax	pmax		
	comp=Z,59nm,0.8s						
VALR	Valaam	82.46	29	⇓eP	P	11 11 39.1	+0.4
VALR				pmax	pmax		
	comp=Z,27nm,1.0s						
SORM	Soroca	82.91	42	⇓P	P	11 11 41.5	+0.2
SORM	Soroca	82.91	42	⇓P	P	11 11 41.5	+0.2
AKASG	Malin Array Be	83.10	40	P	P	11 11 42.0	-0.3
	comp=Z,2.4nm,0.7s,baz=267,slow=4.5,SNR=9.6						
AKASG	Malin Array Be	83.10	40	iP	P	11 11 42.5	+0.2
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.7s						
TPGR	Topolog	83.42	46	⇓P	P	11 11 43.8	-0.3
RDOG	Red Dog Mine	83.88	338	P	P	11 11 45.9	-0.1
RDOG				IAmb	IAmb	11 11 46.8	
	comp=Z,34nm,0.8s						
TMCR	Tamitsa	85.13	26	eP	P	11 11 51.7	-0.6
TMCR				pmax	pmax		
	comp=Z,40nm,1.2s						
ANM	Nome	85.72	335	P	P	11 11 54.9	-0.3
ANM				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ANM	Nome	85.72	335	P	P	11 11 54.9	-0.3
OBN	Obninsk	86.62	35	⇓eP	P	11 11 59.9	+0.1
OBN				e*PP	pP	11 12 29.5	+3.4
OBN				e		11 15 29.9	
OBN				pmax	pmax		
	comp=Z,46nm,1.3s						
OBN	Obninsk	86.62	35	P	P	11 11 59.9	+0.1
KLMR	Klimovskoe	86.67	29	eP	P	11 11 56.8	-3.1
KLMR				pmax	pmax		
	comp=Z,39nm,1.3s						
KLMR	Klimovskoe	86.67	29	eP	P	11 11 56.8	-3.1
KLMR				AMP		11 12 01.0	
	comp=Z,39nm,1.3s						
BR131	Keskin Array S	88.16	50	P	P	11 12 08.4	+0.6
BR131				pmax	pmax		
	comp=Z,15nm,0.9s						
BR131	Keskin Array S	88.16	50	P	P	11 12 08.4	+0.6
BR131				IAmb	IAmb	11 12 09.2	
	comp=Z,15nm,0.9s						
BRTR	Keskin Array B	88.16	50	P	P	11 12 08.3	+0.6
	comp=Z,8.0nm,0.9s,baz=262,slow=3.7,SNR=26						
BRTR	Keskin Array B	88.16	50	P	P	11 12 07.7	0.0
GAMB	Gambell	88.60	335	P	P	11 12 09.6	+0.5
GAMB				IAmb	IAmb	11 12 10.9	
	comp=Z,14nm,1.0s						
SNAA	Sanae	91.14	164	⇓eP	P	11 12 22.5	+1.7
SNAA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
SNAA	Sanae	91.14	164	P	P	11 12 21.3	+0.6
KIRV	Kirov	92.15	29	⇓eP	P	11 12 26.6	+0.9
BELG	Belogornoye	93.70	35	⇓iP	P	11 12 32.6	-0.4
BELG				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KBZ	Khabaz	93.78	44	⇑eP	P	11 12 33.9	+0.3
KBZ				pmax	pmax		
	comp=Z,5.0nm,1.5s						
NCK	Nalchik	94.34	44	⇓eP	P	11 12 35.6	-0.6
TIXI	Tiksi	97.44	356	⇓eP	P	11 12 48.0	-1.6
SEY	Seymchan	101.71	344	⇓eP	Pdif	11 13 09.6	+0.7
KSH	Kashi	117.06	35	PKP	PKPdf	11 18 00.6	-0.9
KSH				sPKP		11 18 38.3	
KSH				PKS	PKSdf	11 21 38.6	+0.3
KSH				SKS	SKSdf	11 25 00.6	-4.2
KSH				AMB	AMB		
	comp=Z,240nm,7.2s						
WMQ	Urumqi	119.46	24	ePKP	PKPdf	11 18 05.8	-0.1
SONM	Songino Array	120.93	8	PKP	PKPdf	11 18 07.3	-1.4
	comp=Z,0.6nm,0.5s,baz=263,slow=0.9,SNR=5.9						
GTA	Gaotai	127.58	17	⇑PKP	PKPdf	11 18 20.4	-1.3
GTA				sPKP		11 18 57.5	
HHC	Hu-ho-hao-te	128.43	5	ePKP	PKiKP	11 18 23.7	-0.1
MJAR	Matsushiro Arr	128.98	338	PKP	PKPdf	11 18 22.5	-1.7
	comp=Z,2.4nm,0.8s,baz=86,slow=1.0,SNR=6.5						
KSRS	Korea Array	131.03	349	PKP	PKPdf	11 18 26.7	-1.3
	comp=Z,1.7nm,0.9s,baz=48,slow=1.9,SNR=5.3						
KSRS				SKPbc	SKPbc	11 21 40.6	-2.9
	comp=Z,2.5nm,0.8s,baz=358,slow=4.7,SNR=6.7						
LZH	Lanzhou	131.78	14	PKP	PKiKP	11 18 31.5	+0.7
LZH				sPKP		11 19 06.4	
JMN	Monobe	133.02	341	PKPdf	PKiKP	11 18 34.0	+0.8
CD2	Chengdu	136.66	17	PKP	PKPdf	11 18 38.0	-0.9
NJ2	Nanjing	137.44	358	ePKP	PKPdf	11 18 39.3	-0.9
MHMT	Maesarieng	145.58	34	P	PKPdf	11 18 54.7	-0.4
SLVN	Son La	145.59	22	PKPdf	PKPdf	11 18 54.5	-0.7
CM33	Chiang Mai Arr	145.59	32	P	PKPdf	11 18 54.0	-1.1
CHTO	Chiang Mai	145.59	32	PKIKP	PKPdf	11 18 54.0	-1.1
CHTO	Chiang Mai	145.59	32	PKPdf	PKPdf	11 18 54.0	-1.1
CMMT	Chiang Mai	145.59	32	P	PKPdf	11 18 54.2	-0.9
PAYA	Payao	145.59	30	P	PKPdf	11 18 54.5	-0.6
CM34	Chiang Mai Arr	145.67	31	P	PKPab	11 18 57.0	+0.9
CM32	Chiang Mai Arr	145.68	32	P	PKPab	11 18 56.7	+0.6
CM35	Chiang Mai Arr	145.81	31	P	PKPdf	11 18 55.0	-0.5
CM15	Chiang Mai Arr	145.88	32	P	PKPdf	11 18 56.0	+0.3
CM31	Chiang Mai Arr	145.89	32	P	PKPbc	11 18 56.3	-0.1
CM31	Chiang Mai Arr	145.89	32		PKPdf	11 18 55.9	+0.2
CMAR	Chiang Mai Arr	145.89	32	PKPbc	PKPdf	11 18 55.3	-0.4
	comp=Z,5.8nm,0.7s,baz=310,slow=4.8,SNR=30						
CMAR	Chiang Mai Arr	145.89	32	PKP2	PKPdf	11 18 55.9	+0.2
CMAR	Chiang Mai Arr	145.89	32		PKPdf	11 18 54.0	-1.7
CMAR				PKPbc	PKPdf	11 18 55.9	+0.2
CM13	Chiang Mai Arr	145.90	32	P	PKPdf	11 18 55.8	+0.1
CM02	Chiang Mai Arr	145.91	32	P	PKPdf	11 18 55.0	-0.7
CM36	Chiang Mai Arr	145.92	32	P	PKPdf	11 18 55.0	-0.7
CM09	Chiang Mai Arr	145.92	32	P	PKPdf	11 18 56.0	+0.3
CM01	Chiang Mai Arr	145.93	32	P	PKPbc	11 18 56.3	-0.2
CM05	Chiang Mai Arr	145.94	32	P	PKPdf	11 18 55.9	+0.2
CM04	Chiang Mai Arr	145.96	32	P	PKPdf	11 18 55.0	-0.8
UTTA	Uttaradit	147.31	30	P	PKPbc	11 19 01.1	+0.7
PHIT	Phitsanulok	147.71	31	P	PKPbc	11 19 01.0	-0.6
NONG	Nongkai	148.23	26	P	PKPbc	11 19 03.1	+0.2
STKA	Stephens Creek	149.13	223	PKPbc	PKPbc	11 19 03.6	-1.3
	comp=Z,2.3nm,0.4s,baz=198,slow=4.2,SNR=5.2						
ASAR	Alice Springs	159.50	229	PKP	PKPdf	11 19 14.0	-1.3
	comp=Z,0.8nm,0.8s,baz=120,slow=1.3,SNR=11						
ASAR				PKPab	PKPab	11 19 51.8	-1.9
	comp=Z,0.5nm,0.7s,baz=131,slow=4.4,SNR=6.7						
WRA	Warramunga Arr	161.08	239	PKP	PKPdf	11 19 15.8	-1.4
	comp=Z,3.1nm,0.9s,baz=103,slow=0.9,SNR=14						
WRA				PKPab	sPKPdf	11 19 58.7	+3.3
	comp=Z,1.5nm,0.9s,baz=111,slow=4.2,SNR=5.1						
WRA	Warramunga Arr	161.08	239	PKIKP	PKPdf	11 19 16.0	-1.2
WRA	Warramunga Arr	161.08	239		PKPdf	11 19 16.0	-1.2

IDC 04 11:01:00.7±450.0**,57°.54N×32°.35E,h0^{km},Error ellipse: s-maj=142.3km s-min=72.2km az=112.0,Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I43RU	DUBNA INFRASON	2.77	105	i		11 21 20.0	
	baz=285,slow=306,SNR=0.9						
I37NO	I37NO	13.07	338	i		12 13 37.2	
	baz=144,slow=330,SNR=1.0						
I31KZ	AKTYUBINSK INF	16.64	104	i		12 41 19.3	
	baz=308,slow=344,SNR=0.6						

IDC ***04*** *11:46:44.7±2.1,22°.57S×173°.04E,h0^{km},mb3.9/5, mb1 4.2/6,mb1mx3.8/34,mbtmp3.9/6,ML3.8/1,MS3.6/6, Ms1 3.6/6,ms1mx3.4/27,Error ellipse: s-maj=99.3km s-min=27.4km az=157.0*

NEIC ***04*** *11:46:51.5±1.8,22°.7S±0°.1×172°.92E±0°.05,h49^{km}±9^{km}, mb4.5/15,Error ellipse: s-maj=17.1km s-min=4.7km az=165.0*

ISC 04 11:46:51.7±0.6**,22°.88S**±0°.09×**172°.88E**±0°.07**,h49^{km},n39,** σ**1^{s}.42**/36**,mb4.3**/10**,MS3.9**/3**,Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PINNC	Pines Island,	5.02	272	P	Pn	11 48 06.0	+1.5
OUENC	Ouen Island, N	5.59	274	P	Pn	11 48 13.1	+0.8
YATNC	Mamie plateau,	5.60	277	P	Pn	11 48 13.3	+0.9
ONTNC	Ouen Toro	5.96	274	P	Pn	11 48 17.8	+0.4
DZM	Mont Dzumac	6.00	276	Pn	Pn	11 48 18.5	+0.5
	2.2nm,0.3s,baz=127,slow=10,SNR=58						
DZM				Sn	Sn	11 49 25.5	-0.1
	0.8nm,0.3s,baz=235,slow=21,SNR=1.4						
DZM				LR	LR	11 50 23.1	
	comp=Z,210nm,21.3s,baz=12,slow=36						
DZM	Mont Dzumac	6.00	276	Pn	Pn	11 48 18.5	+0.5
DZM					Sn	11 49 22.1	-3.4
DZM	Mont Dzumac	6.00	276	P	Pn	11 48 19.8	+1.7
NOUC	Port Laguerre	6.13	276	P	Pn	11 48 21.4	+1.7
MSVF	Nonsavu	7.05	44		Pn	11 48 33.5	+1.0
SANVU	Saraoutou	9.13	323	Pn	Pn	11 49 04.5	+3.6
RAO	Raoul Island	10.43	129	LR	LR	11 52 22.5	
	comp=Z,528nm,19.8s,baz=298,slow=32						
HNR	Honiara	18.23	315	LR	LR	11 57 16.4	
	comp=Z,197nm,19.2s,baz=214,slow=35						
LTZ	Lake Taylor	19.85	181	P	Pn	11 51 20.3	-0.2
EIDS	Eidsvold	20.05	259	P	P	11 51 20.8	0.0
EIDS				IAmb	IAmb	11 51 32.1	
	comp=Z,43nm,1.4s						
OXZ	Oxford	20.40	182	P	P	11 51 24.6	+0.1
OXZ				IAmb	IAmb	11 51 29.2	
	comp=Z,22nm,0.7s						
STKA	Stephens Creek	29.11	245	P	P	11 52 49.7	+1.8
	comp=Z,1.0nm,0.7s,baz=99,slow=13,SNR=1.5						
AS31	Alice Springs	35.73	261	P	P	11 53 45.8	-0.2
ASAR	Alice Springs	35.74	261	P	P	11 53 47.1	+1.1
	comp=Z,4.8nm,0.9s,baz=91,slow=9.1,SNR=29						
ASAR	Alice Springs	35.74	261	P	P	11 53 45.6	-0.5
WR0	Warramunga Arr	35.74	267	P	P	11 53 44.9	-1.2
WR0				IAmb	IAmb	11 53 52.1	
	comp=Z,3.4nm,0.8s						
WB0	Warramunga Arr	35.92	268	P	P	11 53 47.1	-0.5
WB2	Warramunga Arr	35.92	267	P	P	11 53 47.7	+0.1
WB2				IAmb	IAmb	11 53 49.3	
	comp=Z,8.5nm,1.4s						
WRAB	Tennant Creek	35.92	267	P	P	11 53 46.1	-1.5
WRAB				IAmb	IAmb	11 54 10.6	
	comp=Z,10nm,1.5s						
WRA	Warramunga Arr	35.93	267	P	P	11 53 47.4	-0.3
	comp=Z,0.6nm,0.5s,baz=97,slow=8.3,SNR=5.0						
WRA	Warramunga Arr	35.93	267	P	P	11 53 47.8	+0.1
XMAS	Kiritimati	38.09	53	P	P	11 54 05.0	-1.0
FORT	Forrest	40.55	249	P	P	11 54 27.7	+1.4
MTN	Manton Dam	40.84	277	P	P	11 54 29.2	+0.2
MTN				IAmb	IAmb	11 54 48.3	
	comp=Z,7.4nm,1.1s						
FITZ	Fitzroy Crossi	44.36	267	P	P	11 54 58.4	+0.9
NWAO	Narrogin (SRO)	49.69	246	P	P	11 55 39.9	+0.9
VNDA	Vanda	54.95	183	LR	LR	12 17 25.1	
	comp=Z,107nm,18.9s,baz=328,slow=33						
QSPA	South Pole Qui	67.19	180	P	P	11 57 41.6	+1.0
QSPA				IAmb	IAmb	11 57 42.4	
	comp=Z,9.9nm,1.2s						
KSRS	Korea Array	73.42	324	LR	LR	12 30 22.0	
	comp=Z,22nm,18.2s,baz=320,slow=36						
PETK	Petropavlovsk-	76.81	351	LR	LR	12 25 10.0	
	comp=Z,59nm,21.1s,baz=173,slow=30						
PETK	Petropavlovsk-	76.81	351	P	P	11 58 36.9	-1.0
ENH	Enshi	80.59	308	P	P	11 58 55.9	-3.4
CMAR	Chiang Mai Arr	83.07	293	P	P	11 59 12.8	+0.2
NVAR	Mina Array Bea	88.72	47	P	P	11 59 39.5	-0.8
	comp=Z,0.5nm,0.9s,baz=232,slow=6.6,SNR=2.6						
ILAR	Eielson Array	92.73	16	P	P	11 59 56.4	-1.7
	comp=Z,0.3nm,0.7s,baz=211,slow=5.1,SNR=3.1						

ANF ***04*** *11:50:52.8±0.6,32°.41N×115°.24W,h24^{km}±3^{km},ML3.4/14, Error ellipse: s-maj=5.4km s-min=2.3km az=168.0*

NEIC ***04*** *11:50:52.4±1.6,32°.36N±0°.03×115°.25W±0°.03,h17^{km}±5^{km}, Error ellipse: s-maj=3.7km s-min=3.1km az=152.0*

PAS ***04*** *11:50:53.5±2.5,32°.40N±0°.02×115°.26W±0°.02,h7^{km}±5^{km}, Error ellipse: s-maj=2.5km s-min=1.9km az=184.0*

SCEDC ***04*** *11:50:53.5,32°.40N×115°.26W,h7^{km}*

ECX ***04*** *11:50:53.7±0.9,32°.37N×115°.26W,h2^{km}±4^{km},MD3.4, ML3.6,Fault plane solution: NP1:ϕ_s44.00000°, δ77.00000°,λ-24.00000°.*

ISC 04 11:50:51.8±0.8**,32°.35N**±0°.02×**115°.27W**±0°.02**,h15^{km}**±5^{km}**, n90,**σ**0^{s}.74**/121**,6C-6D,California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CPBX	Cerro Prieto	0.07	333		Pg	11 50 54.9	+0.1
CPBX				IAML		11 50 55.5	
	comp=E,19μm,0.7s						
CPBX				IAML		11 50 55.7	
	comp=N,19μm,0.2s						
CPBX	Cerro Prieto	0.07	333	⇑iP	Pg	11 50 54.9	+0.1
CPBX				⇑e		11 50 59.1	
CPBX				IAML		11 50 59.1	
	comp=E,307μm,0.6s						
CPBX				⇓e		11 51 01.8	
CPBX				IAML		11 51 01.8	
	comp=N,282μm,0.8s						
MBIG	Mexicali	0.08	47	⇑iP	Pg	11 50 54.5	-0.4
MBIG				eS	Sg	11 50 56.7	-0.2
SALX	Saltillo	0.13	59	eP	Pb	11 51 10.6	+14
CTLX	Tlaxcala, TLX	0.16	40	eP	Pb	11 50 56.7	+0.2
CTLX				eS	Sb	11 51 00.5	+0.9
GUVIX	Guadalupe Vict	0.17	107		Pb	11 50 57.3	+0.7
GUVIX					Sb	11 50 59.5	-0.4
GUVIX	Guadalupe Vict	0.17	107	eP	Pb	11 50 57.4	+0.7
GUVIX				eS	Sb	11 51 01.7	+1.8
POT2	Potabilizadora	0.29	340	eP	Pb	11 50 59.4	+0.6
UABX	UABC, Campus M	0.32	332		Pb	11 50 59.6	+0.4
UABX	UABC, Campus M	0.32	332	eP	Pb	11 50 59.6	+0.4
UABX				eS	Sb	11 51 05.0	+0.9
EMSC	East Mesa	0.45	32		Pb	11 51 01.9	+0.4
EMSC	East Mesa	0.45	32	eP	Pb	11 51 01.9	+0.4
EMSC				eS	Sb	11 51 09.1	+1.0
DREC	Desert Rsrch C	0.48	341		Pb	11 51 02.7	+0.8
DREC	Desert Rsrch C	0.48	341	eP	Pb	11 51 02.7	+0.8
DREC				eS	Sn	11 51 11.1	-1.2
SGL	Mount Signal	0.49	307		Pb	11 51 02.4	+0.2
SGL					Sb	11 51 09.1	0.0
COA	Coachella	0.52	13		Pb	11 51 03.1	+0.4
SNR	Schaffner Ranc	0.53	344		Pb	11 51 03.5	+0.6
WESC	Westside Schoo	0.56	316		Pb	11 51 03.9	+0.4
WESC	Westside Schoo	0.56	316	⇓eP	Pb	11 51 04.2	+0.8
WESC				eS	Sn	11 51 13.9	-0.6
YUH	Yuha Desert	0.63	298		Pb	11 51 04.9	+0.3
YUH					Sb	11 51 13.3	+0.2
COK2	Cook Ranch 2	0.63	322		Pb	11 51 04.8	+0.2
COK2					Sb	11 51 14.7	+1.4
YMD	Yuma Desert	0.64	72		Pb	11 51 04.9	+0.2
RUN	Ruthven	0.66	21		Pg	11 51 04.9	0.0
RUN					Sg	11 51 14.0	+0.4
ESJX	Sierra Juarez	0.68	239		Pb	11 51 06.2	+0.7
ESJX					Pn	11 51 06.9	-0.2
RMX	La Rumorosa	0.73	290		Pg	11 51 05.9	-0.3
RMX				IAML		11 51 16.4	
	comp=N,1μm,0.8s						
RMX	La Rumorosa	0.73	290	eP	Pg	11 51 06.0	-0.2
RMX				eS	Sg	11 51 15.4	-0.4
WEMD	Westmorland, C	0.73	339	⇑eP	Pb	11 51 06.6	+0.3
WEMD				eS	Sn	11 51 17.9	-0.7
SWSC	Sam W. Stewart	0.74	323	P	Pg	11 51 06.2	-0.1
	baz=140,SNR=199						
SWSC				S	Sb	11 51 16.5	0.0
	baz=140						
SWSC	Sam W. Stewart	0.74	323		Pg	11 51 06.3	-0.1
SWSC					Sg	11 51 16.0	-0.2
SWSC	Sam W. Stewart	0.74	323	⇓eP	Pg	11 51 06.2	-0.1
SWSC				eS	Sb	11 51 16.8	+0.3
SUP	Superstition M	0.76	322		Sb	11 51 17.4	+0.3
IKP	In-Ko-Pah, Jac	0.77	293	P	Pb	11 51 07.6	+0.5
	baz=109,SNR=373						
IKP				S	Sb	11 51 18.2	+0.8
	baz=109						
IKP	In-Ko-Pah, Jac	0.77	293		Pb	11 51 07.7	+0.6
IKP					Sb	11 51 18.3	+0.8
IKP	In-Ko-Pah, Jac	0.77	293	⇑eP	Pb	11 51 07.6	+0.6
IKP				eS	Sb	11 51 18.5	+1.0
GLA	Glamis	0.79	28	P	Pg	11 51 06.8	-0.4
	baz=209,SNR=284						
GLA				S	Sg	11 51 17.3	-0.3
	baz=209						
GLA	Glamis	0.79	28		Pg	11 51 06.8	-0.4
GLA	Glamis	0.79	28		Sg	11 51 17.6	+0.1
GLA	Glamis	0.79	28	⇓eP	Pg	11 51 06.8	-0.4
GLA				eS	Sg	11 51 17.7	+0.1
CRR	Carrizo Plain	0.80	312		Pg	11 51 07.5	+0.1
CRR					Sg	11 51 17.8	-0.1
SJX	San Joaquin	0.83	225	eP	Pg	11 51 06.7	-1.3
SJX				eS	Sg	11 51 16.3	-2.6
SJX				IAML		11 51 20.0	
	comp=N,1μm,0.5s						
SJX				⇑e		11 51 20.0	
ERRC	Elmore Ranch	0.89	328		Pb	11 51 09.1	0.0
ERRC					Sn	11 51 22.5	-0.1
ECBX	El Chinero	0.90	168	eP	Pb	11 51 08.7	-0.4
ECBX				eS	Sg	11 51 21.3	+0.4

VTX	Valle De La Tr	1.06	205	⇓eP	Pn	11 51 13.1	+0.9
FRK	Frink	1.09	343		Pb	11 51 11.0	-1.4
SALN	Salton City	1.10	327		Pb	11 51 10.6	-2.1
SALN					Sb	11 51 27.0	+0.1
MONP2	Monument Peak	1.11	299	P	Pb	11 51 12.7	-0.2
	baz=116,SNR=247						
MONP2				S	Sg	11 51 27.9	-0.1
	baz=116						
MONP2	Monument Peak	1.11	299		Pb	11 51 12.8	-0.2
MONP2	Monument Peak	1.11	299	eP	Pb	11 51 12.8	-0.2
TKX	Tecate	1.16	281		Pg	11 51 14.7	+0.5
TKX				IAML		11 51 30.5	
	comp=N,559nm,0.6s						
TKX				IAML		11 51 30.5	
	comp=E,436nm,0.6s						
SLH	Sleepy Hollow	1.18	315		Pn	11 51 12.8	-1.1
CBX	Cerro Bola	1.18	268		Pg	11 51 15.2	+0.5
CBX				IAML		11 51 37.8	
	comp=E,686nm,0.7s						
CBX				IAML		11 51 39.2	
	comp=N,594nm,0.8s						
CBX	Cerro Bola	1.18	268	eP	Pg	11 51 14.9	+0.2
BAR	Barrett	1.23	286		Sg	11 51 32.4	+0.7
BAR	Barrett	1.23	286		Pn	11 51 14.8	+0.1
BAR				IAML		11 51 21.1	
	comp=E,321nm,0.8s						
BAR	Barrett	1.23	286	IAML		11 51 38.2	
	comp=N,461nm,0.8s						
CCX	Cicese	1.28	248		Pg	11 51 16.8	+0.2
CCX				IAML		11 51 35.6	
	comp=N,366nm,0.7s						
CCX				IAML		11 51 36.6	
	comp=E,834nm,0.8s						
BC3	Big Chuckawall	1.31	353	P	Pn	11 51 14.6	-1.1
	baz=172,SNR=153						
SPX	San Pedro Mart	1.32	187		Pb	11 51 16.7	+0.1
SPX	San Pedro Mart	1.32	187	eP	Pb	11 51 16.9	+0.2
SFX	San Felipe	1.36	165		Pn	11 51 16.4	+0.1
SFX				IAML		11 51 51.8	
	comp=E,245nm,0.9s						
SFX	San Felipe	1.36	165	eP	Pn	11 51 16.2	-0.1
OLP	Otay Lakes Par	1.43	281	eP	Pg	11 51 19.4	0.0
MATG	Mataguay Scout	1.44	306		Pn	11 51 17.2	-0.3
SDRC	San Diego Road	1.47	286		Pg	11 51 19.9	-0.2
SDRC					Sg	11 51 39.6	+0.5
SDRC	San Diego Road	1.47	286	eP	Pn	11 51 18.2	+0.4
SDRC				IAML		11 51 45.8	
	comp=N,213nm,0.8s						
SDRC				⇓e		11 51 45.8	
TJX	Tijuana	1.52	276		Pn	11 51 19.0	+0.4
BLYC	Blythe	1.53	24		Pg	11 51 20.8	-0.4
DPP	Dos Picos Cty	1.55	295		Sg	11 51 41.4	-0.5
XPFO	Pion Flat	1.60	322	Pn	Pn	11 51 18.8	-1.1
PFO	Pinyon Flats O	1.61	322	P	Pn	11 51 18.8	-1.1
	baz=140,SNR=52						
PFO				S	Sn	11 51 39.4	-1.1
	baz=140						
PFO	Pinyon Flats O	1.61	322	Pn	Pn	11 51 18.7	-1.1
109C	Camp Elliot, M	1.64	289	P	Pn	11 51 20.7	+0.5
	baz=107,SNR=70						
109C				Sb	Sg	11 51 44.4	-0.3
	baz=107						
109C	Camp Elliot, M	1.64	289		Pn	11 51 20.9	+0.7
109C				IAML		11 51 46.5	
	comp=N,341nm,0.5s						
109C				IAML		11 51 55.3	
	comp=E,283nm,1.0s						
PLM	Palomar	1.67	307		Pn	11 51 20.7	-0.2
PIX	Pinacate	1.73	117		Pn	11 51 21.6	+0.2
PIX				IAML		11 52 21.2	
	comp=N,260nm,1.2s						
PIX				IAML		11 52 24.8	
	comp=E,197nm,1.1s						
IRM	Iron Mountain	1.80	3	P	Pn	11 51 21.7	-0.7
	baz=183,SNR=54						
IRM	Iron Mountain	1.80	3		Pg	11 51 26.0	-0.5
MURC	Murrieta	2.04	308	P	Pn	11 51 25.8	0.0
	baz=126,SNR=10.0						
MURC				S	Sn	11 51 51.1	0.0
	baz=126						
214A	Organ Pipe Nat	2.12	100	P	Pn	11 51 26.2	-0.6
	baz=283,SNR=14						
214A	Organ Pipe Nat	2.12	100	Pn	Pn	11 51 26.4	-0.4
214A				IAML		11 52 16.9	
	comp=E,292nm,1.1s						
214A				IAML		11 52 36.9	
	comp=N,263nm,1.4s						
PDMCI	Parker Dam,Lak	2.16	26	Sb	Sb	11 51 58.3	+1.0
	baz=206						
GMRC	Granite Mounta	2.45	352	P	Pn	11 51 30.8	-0.7
	baz=172,SNR=14						
BFSC	Mount Baldy Ra	2.75	314	P	Pn	11 51 35.6	0.0
	baz=132						
FMP	Fort Macarthur	2.88	299	Sb	Sb	11 52 19.4	+1.3
	baz=116						
X16A	Lo Mia Camp, P	3.80	56		Pn	11 51 51.5	+1.3
X16A				IAML		11 53 15.2	
	comp=E,81nm,0.8s						
X16A				IAML		11 53 43.0	
	comp=N,77nm,0.9s						
U15A	North Rim	4.75	30	Pn	Pn	11 52 05.4	+2.2
U15A				IAML		11 53 57.6	
	comp=N,58nm,0.9s						
X18A	Snowflake	4.95	63		Pn	11 52 04.9	-0.9
X18A				IAML		11 54 12.4	
	comp=E,35nm,1.0s						
KNB	Kanab	5.07	23	Pn	Pn	11 52 09.5	+2.0
319A	Douglas	5.18	99		Pn	11 52 08.8	-0.3
121A	Cookes Peak, D	6.33	86	Pn	Pn	11 52 23.6	-1.2

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*IDC **04** 11:53:14.2±0.6, 34°.71N×98°.98E, h0^{km}, mb4.2/18, mb1 4.3/21, mb1mx4.2/44, mbtmp4.2/21, ML3.9/3, MS3.6/7, Ms1 3.6/7, ms1mx3.2/43, Error ellipse: s-maj=19.5km s-min=12.8km az=54.0*

*BJI **04** 11:53:15.0±0.0, 34°.71N×99°.06E, h9^{km}, mB4.9/13, mb4.4/23, ML4.2/15, Ms4.0/21, Ms7 3.8/18*

*NEIC **04** 11:53:17.0±1.3, 34°.77N±0°.09×98°.98E±0°.09, h15^{km}±4^{km}, mb4.7/60, Error ellipse: s-maj=12.3km s-min=10.5km az=184.0*

*MOS **04** 11:53:17.9±0.8, 34°.71N×98°.99E, h37^{km}, mb4.6/30, Error ellipse: s-maj=7.2km s-min=4.5km az=116.3*

ISC 04 11:53:16.2±0.4, **34°.75N**±0°.04×**99°.07E**±0°.04, **h10**^{km}, **n214**, σ**1^{s}31**/223, **mb4.6**/64, **MS3.9**/5, **10C-12D**, **Qinghai**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LZH	Lanzhou	4.12	70	Pn	Pn	11 54 22.8	+3.4
LZH				Sn	Sb	11 55 14.7	-4.1
LZH				Sg	Sg	11 55 28.8	+0.3
LZH				smax	smax		
	comp=N,1µm,0.8s						
LZH				smax	smax		
	comp=E,1µm,0.9s						
LZH				LR	LR		
	comp=N,2µm,6.5s						
LZH				LR	LR		
	comp=Z,1µm,6.8s						
GTA	Gaotai	4.69	7	⇑Pn	Pn	11 54 29.6	+2.4
GTA				Pg	Pg	11 54 43.2	-2.9
GTA				Sn	Sn	11 55 27.1	+5.3
GTA				Sg	Sg	11 55 48.6	+1.7
GTA				smax	smax		
	comp=N,110nm,1.0s						
GTA				smax	smax		
	comp=E,140nm,1.4s						
GTA				LR	LR		
	comp=N,2µm,7.6s						
GTA				LR	LR		
	comp=Z,1µm,9.8s						
XAN	Xi'an	8.17	92	P	Pn	11 55 15.7	+0.8
XAN				smax	smax		
	comp=N,49nm,1.2s						
XAN				smax	smax		
	comp=E,59nm,1.2s						
XAN				LR	LR		
	comp=E,610nm,8.3s						
XAN				LR	LR		
	comp=Z,480nm,12.0s						
LSA	Lhasa	8.39	235	P	Pn	11 55 18.2	-0.1
LSA	Lhasa	8.39	235	P	Pn	11 55 19.3	+1.1
LSA	Lhasa	8.39	235	Pn	Pn	11 55 19.3	+1.1
ENH	Enshi	9.86	114	Pn	Pn	11 55 40.1	+2.0
BTO	Baotou	10.46	53	eP	Pn	11 55 47.2	+0.9
BTO				S	Sn	11 57 40.6	-3.0
GYA	Guiyang	10.53	140	⇓P	Pn	11 55 48.7	+1.3
GYA				pP		11 55 53.6	
GYA				S	Sn	11 57 45.9	+0.4
GYA				pmax	pmax		
	comp=Z,18nm,0.9s						
GYA				pmax	pmax		
	comp=Z,130nm,3.5s						
GYA				LR	LR		
	comp=N,200nm,8.7s						
GYA				LR	LR		
	comp=E,220nm,7.5s						
GYA				LR	LR		
	comp=Z,260nm,10.0s						
SHL	Shillong	11.06	216	P	Pn	11 55 55.0	+0.4
SHL	Shillong	11.06	216	Pn	Pn	11 55 55.0	+0.4
WMQ	Urumqi	12.63	319	eP	Pn	11 56 17.8	+1.8
WMQ				pP		11 56 19.7	
WMQ				sP		11 56 22.3	
WMQ				PP	PnPn	11 56 25.8	+2.0
WMQ				S	Sn	11 58 38.4	+1.7
WMQ				sS		11 58 42.6	
WMQ				pmax	pmax		
	comp=Z,18nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,240nm,4.9s						
WMQ				LR	LR		
	comp=N,350nm,13.3s						
WMQ				LR	LR		
	comp=Z,260nm,9.5s						
WMQ	Urumqi	12.63	319	P	Pn	11 56 14.2	-1.7
WMQ	Urumqi	12.63	319		Pn	11 56 14.2	-1.7
WHN	Wuhan	13.54	104	⇑P	P	11 56 37.9	+0.4
WHN				LR	LR		
	comp=N,2µm,7.6s						
WHN				LR	LR		
	comp=E,2µm,9.1s						
WHN				LR	LR		
	comp=Z,1µm,10.3s						
SONM	Songino Array	14.18	21	Pn	Pn	11 56 38.6	+1.5
	comp=Z,0.4nm,0.3s,baz=202,slow=14,SNR=24						
SONM				Lg	Lg	12 00 48.5	
	comp=Z,0.1nm,0.3s,baz=202,slow=30,SNR=6.6						
SONM				LR	LR	12 02 23.5	
	comp=Z,267nm,18.7s,baz=218,slow=39						
SONM	Songino Array	14.18	21	Pn	Pn	11 56 38.9	+1.7
ULN	Ulaanbaatar	14.40	22	P	Pn	11 56 40.6	+0.4
ULN	Ulaanbaatar	14.40	22	Pn	Pn	11 56 40.5	+0.4
CM34	Chiang Mai Arr	15.83	180	P	P	11 57 03.0	-0.1
CM33	Chiang Mai Arr	15.87	180	P	P	11 57 04.0	+0.5
CHTO	Chiang Mai	15.87	180	P	Pn	11 56 59.9	+0.2
CHTO				pmax	pmax		
	comp=Z,12nm,1.0s						
CHTO	Chiang Mai	15.87	180		Pn	11 56 59.9	+0.2
ZAK	Zakamensk	15.93	10	eP	Pn	11 57 01.1	+0.7
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
CM35	Chiang Mai Arr	16.00	180	P	P	11 57 05.0	0.0
CM32	Chiang Mai Arr	16.03	181	P	P	11 57 06.0	+0.7
CM36	Chiang Mai Arr	16.16	180	P	P	11 57 06.0	-0.8
LAMP	Lampang	16.17	178	P	P	11 57 10.2	+3.4
	comp=Z,16nm,1.0s						
CM31	Chiang Mai Arr	16.22	180	Pn	Pn	11 57 04.7	+0.4
CMAR	Chiang Mai Arr	16.22	180	Pn	Pn	11 57 05.2	+0.9
	comp=Z,0.4nm,0.3s,baz=352,slow=10.0,SNR=21						
CMAR				LR	LR	12 03 54.8	
	comp=Z,103nm,18.8s,baz=29,slow=40						
CMAR	Chiang Mai Arr	16.22	180	ceP	P	11 57 07.1	-0.3
CMAR				pmax	pmax		
	comp=Z,12nm,1.1s						
CMAR	Chiang Mai Arr	16.22	180		Pn	11 57 04.8	+0.5
CM15	Chiang Mai Arr	16.23	181	P	P	11 57 11.0	+3.5
	comp=Z,11nm,1.1s						
CM09	Chiang Mai Arr	16.24	180	P	P	11 57 08.4	+0.8
	comp=Z,12nm,1.0s						
CM02	Chiang Mai Arr	16.25	180	P	P	11 57 08.8	+1.2
	comp=Z,77nmcomp=Z,11nm,1.0s						
CM01	Chiang Mai Arr	16.26	180	P	P	11 57 08.0	+0.2
	comp=Z,10nm,1.1s						
CM13	Chiang Mai Arr	16.26	181	P	P	11 57 09.1	+1.2
	comp=Z,57nmcomp=Z,6.9nm,1.1s						
CM05	Chiang Mai Arr	16.28	180	P	P	11 57 08.0	-0.1
	comp=Z,48nmcomp=Z,6.6nm,1.1s						
CM04	Chiang Mai Arr	16.28	180	P	P	11 57 08.3	+0.3
	comp=Z,77nmcomp=Z,11nm,1.0s						
ZSN	Zaisan	16.57	324	eP	Pn	11 57 09.3	+0.7
	baz=324						
ZSN				eS	Sn	12 00 12.7	+0.2
	baz=324						
ZSN	Zaisan	16.57	324	eP	Pn	11 57 09.3	+0.7
ZSN				eS	Sn	12 00 12.7	+0.2
MOY	Mondy	16.97	4	eP	P	11 57 15.3	-0.3
NONG	Nongkai	17.01	167	P	P	11 57 19.3	+3.2
	comp=Z,6µmcomp=Z,17nm,1.5s						
DGZ	Jazzator, Alta	17.22	334	⇓eP	P	11 57 19.7	+1.2
DGZ				pmax	pmax		
	comp=Z,6.0nm,1.1s						
TLY	Talaya	17.25	10	eP	P	11 57 19.3	+0.7
TLY				pmax	pmax		
	comp=Z,5.0nm,0.6s						
TLY				MLR	MLR		
	comp=Z,392nm,9.0s						
SHLS	Shalkode	17.39	305	eP	Pn	11 57 15.8	-3.2
	comp=Z,6.4nm,1.0s,baz=305						
SHLS	Shalkode	17.39	305	eP	Pn	11 57 15.7	-3.2
SHLS				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MK31	Makanchi Array	17.46	319	deP	P	11 57 21.6	+0.6
MK31	Makanchi Array	17.46	319	P	Pn	11 57 18.2	-1.6
MKAR	Makanchi Array	17.46	319	P	Pn	11 57 18.3	-1.5
	comp=Z,0.2nm,0.3s,baz=119,slow=14,SNR=13						
MKAR	Makanchi Array	17.46	319	i P	P	11 57 21.5	+0.5
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MKAR	Makanchi Array	17.46	319	P	Pn	11 57 17.7	-2.1
MAKZ	Makanchi	17.64	318	P	Pn	11 57 21.4	-0.6
MAKZ				pmax	pmax		
	comp=Z,9.0nm,1.4s						
MAKZ	Makanchi	17.64	318	P	Pn	11 57 21.4	-0.6
UZB	Uzynbulak	17.68	304	eP	P	11 57 22.8	-0.8
	baz=304						
UZB	Uzynbulak	17.68	304	eP	P	11 57 22.8	-0.8
KPKS	Kokpek	18.03	305	eP	P	11 57 26.8	-0.6
	baz=305						
KPKS	Kokpek	18.03	305	eP	P	11 57 26.7	-0.6
SATY	Saty	18.07	303	eP	P	11 57 27.5	-0.4
	baz=303						
SATY	Saty	18.07	303	eP	P	11 57 27.5	-0.4
TDK	Taldyqorghan	18.83	309	eP	Pn	11 57 36.4	-0.2
	baz=309						
TDK	Taldyqorghan	18.83	309	eP	Pn	11 57 36.3	-0.3
KSH	Kashi	19.01	291	P	Pn	11 57 43.7	+4.8
KSH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KSH				pmax	pmax		
	comp=Z,100nm,3.2s						
MDOK	Medeo	19.04	303	eP	Pn	11 57 39.2	-0.1
	baz=303						
MDOK	Medeo	19.04	303	eP	Pn	11 57 39.1	-0.2
AAA	Alma-Ata	19.15	303	eP	Pn	11 57 40.0	-0.6
	baz=303						
AAA	Alma-Ata	19.15	303	eP	Pn	11 57 39.9	-0.6
CHKK	Chushkaly	19.32	305	eP	P	11 57 41.2	-0.3
	baz=304						
CHKK	Chushkaly	19.32	305	eP	P	11 57 41.1	-0.3
KUU	Kurty	19.77	304	eP	P	11 57 46.0	-0.5
	comp=Z,8.5nm,1.3s,baz=304						
KUU	Kurty	19.77	304	eP	P	11 57 45.9	-0.5
KUU				pmax	pmax		
	comp=Z,9.0nm,1.3s						
AAK	Ala-Archa	20.69	300	P	P	11 57 56.0	-0.6
	comp=Z,5.0nm,0.8s,baz=80,slow=3.7,SNR=5.7						
AAK	Ala-Archa	20.69	300	c iP	Pn	11 57 57.5	-1.4
AAK				pmax	pmax		
	comp=Z,29nm,1.3s						
AAK	Ala-Archa	20.69	300	P	P	11 57 56.3	-0.3
SGDS	Sogindy	20.81	302	eP	P	11 57 57.7	-0.1
	baz=302						
SGDS	Sogindy	20.81	302	eP	P	11 57 57.6	-0.2
SEM	Semipalatinsk	20.82	324	eP	P	11 57 57.0	-1.0
	baz=324						
SEM	Semipalatinsk	20.82	324	eP	P	11 57 56.9	-1.0
SRAK	Srakaew	20.82	172	P	Pn	11 58 00.8	+0.5
HIA	Hailar	21.03	40	P	P	11 58 00.5	+0.5
HIA				pmax	pmax		
	comp=Z,5.0nm,0.6s						
HIA	Hailar	21.03	40	P	P	11 58 00.5	+0.5
NIL	Nilore	21.37	274	P	P	11 58 01.7	-2.1
NIL				pmax	pmax		
	comp=Z,15nm,0.8s						
NIL	Nilore	21.37	274	P	P	11 58 01.7	-2.1
NIL				IAmb	IAmb	11 58 08.4	
	comp=Z,15nm,0.8s						
ZAA0	Zalesovo Array	21.66	337		P	11 58 05.7	-1.0
ZAA0				IAmb	IAmb	11 58 12.3	
	comp=Z,13nm,0.9s						
ZALV	Zalesovo Beam	21.66	337	P	P	11 58 05.7	-1.0
	comp=Z,8.0nm,0.6s,baz=136,slow=11,SNR=23						
ZALV	Zalesovo Beam	21.66	337	P	P	11 58 05.5	-1.2
BTLS	Baital	21.70	306	eP	P	11 58 06.4	-0.9
	comp=Z,3.6nm,0.9s,baz=306						
BTLS	Baital	21.70	306	eP	P	11 58 06.3	-0.9
BTLS				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KURBB	Kurchatov Arra	21.79	323	P	P	11 58 07.7	-0.5
	comp=Z,3.9nm,0.9s,baz=128,slow=11,SNR=17						
KURK	Kurchatov	21.81	323	i P	P	11 58 07.7	-0.6
KURK				pmax	pmax		
	comp=Z,8.0nm,1.2s						
KURK	Kurchatov	21.81	323		P	11 58 07.7	-0.6
KURK	Kurchatov	21.81	323		P	11 58 07.8	-0.6
DZA	Taraz	23.02	299	eP	P	11 58 20.5	-0.9
	baz=299						
DZA	Taraz	23.02	299	eP	P	11 58 20.4	-0.9
KSAR	Wonju Array Be	23.40	75	P	P	11 58 25.3	+0.1
KSAR	Wonju Array Be	23.40	75	P	P	11 58 25.3	+0.1
KSRS	Korea Array	23.43	75	P	P	11 58 26.4	+0.9
	comp=Z,4.2nm,0.8s,baz=269,slow=9.0,SNR=11						
KSRS				LR	LR	12 07 05.0	
	comp=Z,36nm,22.0s,baz=290,slow=35						
KK31	Karatay Array	23.65	299	P	P	11 58 27.1	-0.6
KK31				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KK31	Karatay Array	23.65	299	P	P	11 58 27.1	-0.6
KKAR	Karatay Array	23.65	299	P	P	11 58 27.2	-0.5
KKAR				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KKAR	Karatay Array	23.65	299	P	P	11 58 27.2	-0.5
KKAR	Karatay Array	23.65	299	P	P	11 58 27.1	-0.5
KKAR				IAmb	IAmb	11 58 30.0	
	comp=Z,5.8nm,1.1s						
IUG	Iuzhnay	23.84	297	eP	P	11 58 29.0	-0.6
	comp=Z,2.8nm,0.7s,baz=297						
IUG	Iuzhnay	23.84	297	eP	P	11 58 29.0	-0.6
IUG				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BRZS	Berezniki	24.57	316	eP	P	11 58 35.9	-0.3
	baz=316						
BRZS	Berezniki	24.57	316	eP	P	11 58 35.9	-0.3
KBL	Kabul	24.67	278	P	P	11 58 37.1	-0.4
KBL				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KBL	Kabul	24.67	278	P	P	11 58 37.1	-0.4
KBL				IAmb	IAmb	11 58 41.4	
	comp=Z,6.4nm,0.7s						
BVAR	Borovoye Array	27.31	321	P	P	11 59 01.5	+0.6
	comp=Z,0.4nm,0.6s,baz=165,slow=12,SNR=4.7						
BRVK	Borovoye	27.38	321	⇓eP	P	11 59 01.8	+0.2
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.3s						
ZEA	Zeya	27.43	38	eP	P	11 59 03.9	+2.0
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KLR	Kul'dur	28.01	49	⇑iP	P	11 59 07.7	+0.5
KLR				pmax	pmax		
	comp=Z,4.0nm,1.3s						
MJAR	Matsushiro Arr	31.71	75	LR	LR	12 13 39.8	
	comp=Z,49nm,18.6s,baz=230,slow=38						
ABKAR	Akbulak array	32.10	309	P	P	11 59 43.1	-0.3
ABKAR				IAmb	IAmb	11 59 44.5	
	comp=Z,2.8nm,0.8s						
ABKAR	Akbulak array	32.10	309	P	P	11 59 42.8	-0.6
GEYT	Alibeck	32.96	288	P	P	11 59 50.9	-0.2
YAK	Yakutsk	33.44	26	⇑eP	P	11 59 54.9	0.0
YAK				pmax	pmax		
	comp=Z,4.0nm,0.4s						
YSS	Yuzh-Sakhalins	34.79	56	P	P	12 00 06.5	-0.3
ARU	Arti	34.96	321	d iP	P	12 00 07.2	-1.0
ARU						12 01 21.0	
ARU				S	S	12 05 36.9	-2.8
ARU				SS	SnSn	12 07 59.4	+5.0
ARU				pmax	pmax		
	comp=Z,11nm,1.1s						
ARU	Arti	34.96	321	P	P	12 00 07.9	-0.3
ARU				IAmb	IAmb	12 00 09.4	
	comp=Z,16nm,1.3s						
NRIK	Noril'sk	35.23	353	P	P	12 00 10.3	-0.1
	comp=Z,6.8nm,0.7s,baz=157,slow=7.0,SNR=11						
NRIK	Noril'sk	35.23	353	c iP	P	12 00 10.5	+0.1
NRIK				pmax	pmax		
	comp=Z,17nm,1.3s						
NRIK	Noril'sk	35.23	353	P	P	12 00 10.6	+0.1
NRIK				IAmb	IAmb	12 00 11.7	
	comp=Z,12nm,0.9s						
TIXI	Tiksi	40.14	14	⇓eP	P	12 00 53.0	+1.2
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.4s						
BELG	Belogornoye	40.29	312	⇓eP	P	12 00 53.3	0.0
BELG				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KIRV	Kirov	40.31	322	⇓eP	P	12 00 55.1	+1.7
MA2	Magadan	41.57	37	⇓eP	P	12 01 04.6	+0.8
MA2				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KIV	Kislovodsk	43.81	300	eP	P	12 01 20.3	-2.0
KIV				pmax	pmax		
	comp=Z,11nm,0.9s						
KLMR	Klimovskoe	45.65	324	eP	P	12 01 35.5	-1.1
KLMR				pmax	pmax		
	comp=Z,20nm,1.2s						
KLMR	Klimovskoe	45.65	324	eP	P	12 01 35.6	-1.1
KLMR				AMP		12 01 37.6	
	comp=Z,20nm,1.2s						
OBN	Obninsk	46.94	316	⇑eP	P	12 01 45.3	-1.5
OBN				e		12 03 21.3	
OBN				e		12 03 41.4	
OBN				eS	S	12 08 52.0	+14
OBN				pmax	pmax		
	comp=Z,8.0nm,0.4s						
ANN	Anapa	47.40	302	eP	P	12 01 45.9	-4.7
ANN				e*PP	sP	12 02 02.1	+5.1
ANN				eS	S	12 08 33.8	-11
ANN				pmax	pmax		
	comp=Z,60nm,1.2s						
BR131	Keskin Array S	51.30	296	P	P	12 02 19.7	-1.0
BR131				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BR131	Keskin Array S	51.30	296	P	P	12 02 19.7	-1.0
BR131				IAmb	IAmb	12 02 20.9	
	comp=Z,2.8nm,0.7s						
BRTR	Keskin Array B	51.30	296	P	P	12 02 20.2	-0.5
	comp=Z,1.3nm,0.6s,baz=103,slow=6.3,SNR=7.0						
AKASG	Malin Array Be	51.81	311	P	P	12 02 23.1	-1.1
	comp=Z,1.3nm,0.4s,baz=67,slow=7.1,SNR=6.0						
AKBB	Malin Array Si	51.81	311	⇓eP	P	12 02 23.2	-0.9
VSU	Vasula	52.12	321	⇓eP	P	12 02 26.6	+0.3
VSU				pmax	pmax		
	comp=Z,90nm,2.5s						
FINES	FINESS Array B	52.17	324	P	P	12 02 26.3	-0.3
FINES	FINESS Array B	52.17	324	P	P	12 02 26.3	-0.3
ARCES	ARCESS Array B	52.19	335	P	P	12 02 26.5	-0.3
	comp=Z,7.6nm,1.1s,baz=89,slow=9.1,SNR=2.2						
KWP	Kalwaria Pacla	56.13	310	P	P	12 02 55.6	-0.2
KWP				pmax	pmax		
	comp=Z,13nm,1.0s						
KWP	Kalwaria Pacla	56.13	310	P	P	12 02 55.6	-0.2
NC405	NORSAR Array S	59.04	326	P	P	12 03 15.7	-0.4
NB2	NORSAR Subarra	59.30	326	P	P	12 03 16.8	-1.1
	comp=Z,3.9nm,0.7s,baz=72,slow=6.9						
NOA	NORSAR Array B	59.30	326	P	P	12 03 16.8	-1.1
	comp=Z,2.3nm,0.7s,baz=73,slow=7.0,SNR=9.5						
ANM	Nome	61.49	29	P	P	12 03 32.8	+0.1
ANM				pmax	pmax		
	comp=Z,10.0nm,1.4s						
ANM	Nome	61.49	29	P	P	12 03 32.8	+0.1
ANM				IAmb	IAmb	12 03 34.1	
	comp=Z,9.8nm,1.4s						
CLL	Collm	61.51	315	eP	P	12 03 32.0	-1.1
CLL	Collm	61.51	315	eP	P	12 03 30.0	-3.1
A21K	Barrow	61.87	21	P	P	12 03 35.1	0.0

A21K				IAmb	IAmb	12 03 36.6	
	comp=Z,7.0nm,1.2s						
GERES	GERESS Array B	61.98	312	P	P	12 03 35.8	-0.7
	comp=Z,0.3nm,0.3s,baz=71,slow=7.4,SNR=4.8						
WB0	Warramunga Arr	63.77	143	P	P	12 03 48.1	-0.3
WB0				IAmb	IAmb	12 03 48.7	
	comp=Z,7.4nm,0.8s						
WRAB	Tennant Creek	63.88	143	⇓iP	P	12 03 49.0	-0.2
WRAB				pmax	pmax		
	comp=Z,12nm,1.3s						
WRAB	Tennant Creek	63.88	143	P	P	12 03 49.1	-0.1
WRA	Warramunga Arr	63.89	143	P	P	12 03 48.8	-0.5
	comp=Z,4.2nm,0.8s,baz=338,slow=7.2,SNR=24						
WRA	Warramunga Arr	63.89	143	iP	P	12 03 48.7	-0.5
WRA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
WRA	Warramunga Arr	63.89	143	P	P	12 03 48.8	-0.5
WB2	Warramunga Arr	63.89	143	P	P	12 03 49.1	-0.1
IMAR	Indian Mountai	65.28	25	P	P	12 03 57.8	0.0
TOLK	Toolik Lake Re	65.29	22	P	P	12 03 57.9	0.0
COLD	Coldfoot	65.85	24	P	P	12 04 00.9	-0.6
COLD				IAmb	IAmb	12 04 02.9	
	comp=Z,7.3nm,1.0s						
TTA	Tatalina	65.95	29	P	P	12 04 02.5	+0.2
TTA				pmax	pmax		
	comp=Z,7.0nm,1.2s						
TTA	Tatalina	65.95	29	P	P	12 04 02.5	+0.2
TTA				IAmb	IAmb	12 04 03.5	
	comp=Z,6.7nm,1.2s						
AS31	Alice Springs	66.84	145	P	P	12 04 08.2	-0.2
ASAR	Alice Springs	66.84	145	P	P	12 04 08.0	-0.4
	comp=Z,2.3nm,0.7s,baz=330,slow=6.5,SNR=38						
ASAR	Alice Springs	66.84	145	P	P	12 04 08.2	-0.2
BPAW	Bear Paw Mtn.	67.27	27	P	P	12 04 11.0	+0.3
I23K	Minto, Yukon-K	67.28	25	P	P	12 04 11.1	+0.5
I23K				IAmb	IAmb	12 04 35.1	
	comp=Z,6.8nm,1.4s						
PPLA	Purkeypile	67.47	28	P	P	12 04 12.7	+0.7
BMAR	Burnt Mountain	67.52	22	P	P	12 04 12.1	-0.1
KTH	Kantishna Hill	67.59	27	P	P	12 04 13.0	+0.2
MDM	Murphy Dome	67.78	25	P	P	12 04 14.4	+0.6
MDM				IAmb	IAmb	12 04 15.9	
	comp=Z,4.1nm,0.8s						
KMBO	Kilima Mbogo	67.81	252	P	P	12 04 14.4	-0.6
	comp=Z,1.2nm,0.3s,baz=41,slow=8.5,SNR=4.7						
KMBO	Kilima Mbogo	67.81	252	iP	P	12 04 15.3	+0.3
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
TRF	Thorofare Moun	67.89	27	P	P	12 04 14.8	+0.1
TRF				IAmb	IAmb	12 04 21.7	
	comp=Z,6.4nm,1.0s						
TCOL	CIGO, UAF Yank	67.96	25	P	P	12 04 14.2	-0.7
COLA	College	67.96	25c	iP	P	12 04 14.7	-0.2
COLA				pmax	pmax		
	comp=Z,15nm,0.9s						
COLA	College	67.96	25	P	P	12 04 14.2	-0.7
WRH	Wood River Hil	68.11	25	P	P	12 04 16.1	+0.2
WRH				IAmb	IAmb	12 04 18.3	
	comp=Z,4.3nm,0.9s						
IL31		68.36	25	P	P	12 04 17.1	-0.3
IL31				IAmb	IAmb	12 04 17.6	
	comp=Z,5.3nm,0.8s						
ILAR	Eielson Array	68.36	25	P	P	12 04 16.9	-0.5
	comp=Z,3.9nm,0.8s,baz=292,slow=5.5,SNR=53						
ILAR				LR	LR	12 36 54.9	
	comp=Z,93nm,18.1s,baz=240,slow=38						
RND	Reindeer	68.45	27	P	P	12 04 17.8	-0.3
RND				pmax	pmax		
	comp=Z,5.0nm,0.9s						
RND	Reindeer	68.45	27	P	P	12 04 17.8	-0.3
RND				IAmb	IAmb	12 04 19.3	
	comp=Z,4.8nm,0.9s						
SUA	Susitna One	68.82	29	P	P	12 04 20.7	+0.2
PMR	Palmer	69.39	28	P	P	12 04 23.9	0.0
PMR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
PMR	Palmer	69.39	28	P	P	12 04 23.9	0.0
PMR				IAmb	IAmb	12 04 24.1	
	comp=Z,7.2nm,0.8s						
SML	Sawmill	69.57	28	P	P	12 04 25.6	+0.5
RIDG	Independent Ri	69.69	25	P	P	12 04 25.4	-0.4
SCM	Sheep Creek Mo	69.94	28	P	P	12 04 28.0	+0.6
SCM				pmax	pmax		
	comp=Z,14nm,0.9s						
SCM	Sheep Creek Mo	69.94	28	P	P	12 04 28.0	+0.6
PAX	Paxson	69.94	26	P	P	12 04 27.4	0.0
PAX				pmax	pmax		
	comp=Z,4.0nm,0.7s						
PAX	Paxson	69.94	26	P	P	12 04 27.4	0.0
PAX				IAmb	IAmb	12 04 28.0	
	comp=Z,3.7nm,0.7s						
DOT	Dot Lake	70.02	25	P	P	12 04 28.0	+0.1
DOT				IAmb	IAmb	12 04 28.5	
	comp=Z,2.1nm,0.6s						
INK	Inuvik	70.08	18	P	P	12 04 28.3	+0.3
INK				pmax	pmax		
	comp=Z,7.0nm,1.2s						
INK	Inuvik	70.08	18	P	P	12 04 28.3	+0.3
INK				IAmb	IAmb	12 04 29.4	
	comp=Z,7.0nm,1.1s						
M24K	Tolsona, Glenn	70.21	27	P	P	12 04 29.9	+0.9
KLU	Klutina	70.68	27	P	P	12 04 32.5	+0.5
N25K	Chitina, Valde	71.11	27	P	P	12 04 35.2	+0.7
N25K				IAmb	IAmb	12 04 36.1	
	comp=Z,7.5nm,0.8s						
BCAR	Beaver Creek A	71.19	25	P	P	12 04 35.7	+0.8
C36M	Paulatuk	71.50	15	P	P	12 04 36.5	-0.1
C36M				IAmb	IAmb	12 04 37.1	
	comp=Z,8.6nm,0.9s						
MCARA	McCarthy VSAT	71.83	27	P	P	12 04 39.6	+0.8
OPO	Ambohidratompo	72.39	232	LR	LR	12 32 06.5	
	comp=Z,126nm,20.6s,baz=358,slow=32						
BARN	Barnard Glacie	72.55	26	P	P	12 04 44.5	+1.2
MBAR	Mbarara	72.66	257c	eP	P	12 04 44.5	-0.2
MBAR				pmax	pmax		
	comp=Z,3.0nm,1.0s						
CTGM	Chitina Glacie	72.73	26	P	P	12 04 45.6	+1.2
CTGM				IAmb	IAmb	12 04 46.2	
	comp=Z,8.5nm,0.8s						
HYT	Haines Junctio	74.20	25	P	P	12 04 54.0	+1.1
HYT				IAmb	IAmb	12 04 55.1	
	comp=Z,11nm,1.1s						
STKA	Stephens Creek	77.40	144	P	P	12 05 11.1	-0.3
	comp=Z,2.8nm,0.8s,baz=332,slow=10,SNR=5.2						
YKA	Yellowknife Ar	79.38	15	P	P	12 05 21.5	-0.5
	comp=Z,2.0nm,0.9s,baz=334,slow=4.5,SNR=20						
TORD	Torodi Ar. Bea	88.56	285	P	P	12 06 07.9	-1.8
	comp=Z,0.5nm,0.5s,baz=51,slow=3.9,SNR=1.5						
FFC	Flin Flon	89.06	12	P	P	12 06 10.4	-0.9
FFC				pmax	pmax		
	comp=Z,4.0nm,0.8s						
FFC	Flin Flon	89.06	12	P	P	12 06 10.4	-0.9
FFC				IAmb	IAmb	12 06 11.5	
	comp=Z,3.7nm,0.8s						
KOWA	Kowa	92.27	289	LR	LR	12 54 49.8	
	comp=Z,40nm,18.1s,baz=32,slow=40						
BDFB	Brasilia	144.89	294	PKP	PKPab	12 12 52.0	-1.3
	comp=Z,2.4nm,0.5s,baz=66,slow=3.6,SNR=5.1						

JMA ***04*** *11:53:36.7±0.2,23°.17N×121°.59E,h6km±4km,M3.3*
TAP ***04*** *11:53:38.9,23°.23N×121°.40E,h21km,ML3.4,C*
ISC 04 11:53:38.6±0.8**,23°.20N**±0°.02×**121°.48E**±0°.02**,h20**km**,n117,**
σ$0^{s}.97$/204**,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHKT	Chengkung	0.15	227	P	Pb	11 53 43.8	+0.7
	baz=182						
CHKT				iS	Sb	11 53 47.3	+1.1
	baz=182						
FULB	Fuli	0.17	269	iP	Pb	11 53 43.5	0.0
	baz=256						
FULB				S	Sb	11 53 48.7	+1.9
	baz=256						
EYUL	Yuli	0.21	314	P	Pb	11 53 44.5	+0.6
	baz=326						
TWF1	Yuli	0.23	311	iP	Pb	11 53 44.3	+0.1
	baz=312						
TWF1				iS	Sb	11 53 47.9	-0.1
	baz=312						
YULB	Yu-li	0.26	318	eP	Pb	11 53 44.5	-0.1
	baz=316						
YULB				S	Sb	11 53 48.6	-0.1
	baz=316						
EDH	Donghe	0.28	216	iP	Pb	11 53 45.6	+0.6
	baz=198						
EDH				S	Sb	11 53 50.2	+0.9
	baz=198						
HGSD	Ruisui	0.29	349	P	Pb	11 53 45.5	+0.3
	baz=13						
EHY	Hungye	0.34	334	P	Pb	11 53 45.7	-0.2
	baz=333						
EHY				S	Sb	11 53 51.0	+0.1
	baz=333						
ELDTW	Lidau	0.43	268	iP	Pb	11 53 46.5	-1.1
	baz=264						
ELDTW				iS	Sb	11 53 51.7	-2.0
	baz=264						
LONT	Longtian	0.44	228	P	Pb	11 53 47.3	-0.3
	baz=230						
LONT				S	Sb	11 53 54.7	+0.9
	baz=230						
EGFH	Guangfu	0.47	354	eP	Pb	11 53 48.7	+0.5
	baz=348						
LDUT	Ludao	0.53	182	P	Pb	11 53 49.2	+0.1
	baz=173						
LDUT				S	Sb	11 53 57.4	+1.1
	baz=173						
TWGBT	Beinan	0.53	224	P	Pb	11 53 48.5	-0.8
	baz=229						
TWGBT				eS	Sb	11 53 55.5	-1.1
	baz=229						
TWG	Pinlang	0.54	225	iP	Pb	11 53 48.4	-1.0
	baz=226						
TTN	Taitung	0.54	215	P	Pb	11 53 50.0	+0.5
	baz=209						
TTN				eS	Sn	11 53 59.3	-0.4
	baz=209						
YUS	Yu-Shan	0.57	300	iP	Pb	11 53 49.2	-0.9
	baz=295						
YUS				S	Sb	11 53 56.6	-1.4
	baz=295						
ESL	Shilin	0.61	356	eP	Pn	11 53 52.1	-0.1
	baz=353						
VWDT	VWDT	0.63	330	P	Pb	11 53 50.6	-0.4
	baz=335						
VWDT				S	Sb	11 53 58.0	-1.5
	baz=335						
STYT	Tauyuan	0.67	267	iP	Pb	11 53 50.6	-1.1
	baz=260						
STYT				S	Sb	11 53 59.5	-1.1
	baz=260						
ALS	Alishan	0.70	296	P	Pb	11 53 51.6	-0.7
	baz=291						
ALS				S	Sb	11 54 01.8	+0.2
	baz=291						
SSLB	Suanglung	0.76	320	P	Pb	11 53 52.0	-1.2
	baz=323						
WHYT	Xinyi Township	0.76	310	P	Pb	11 53 53.0	-0.2
	baz=319						
WHYT				S	Sb	11 54 03.1	0.0
	baz=319						
ECL	Taimali	0.78	219	P	Pb	11 53 51.9	-1.5
	baz=215						
ECL				eS	Sb	11 54 02.8	-0.7
	baz=215						
HWA	Hwalien	0.78	8	eP	Pn	11 53 53.9	-0.6
	baz=358						
TPUB	Ta-pu	0.79	277	P	Pb	11 53 53.4	-0.3
	baz=277						
TPUB				eS	Sb	11 54 04.2	+0.1
	baz=277						
SLGT	Liugui	0.80	255	eP	Pb	11 53 53.4	-0.4
	baz=255						
SLGT				eS	Sb	11 54 04.0	-0.2
	baz=255						
SGST	Jiashian	0.84	262	P	Pb	11 53 53.4	-1.1
	baz=258						
SGST				S	Sn	11 54 06.8	-0.3
	baz=258						
CHN5	Tsauling	0.84	298	iP	Pb	11 53 54.5	0.0
	baz=299						
CHN5				eS	Sn	11 54 07.3	+0.1
	baz=299						
SMLT	Sun Moon Lake	0.86	322	eP	Pb	11 53 54.3	-0.8
	baz=330						
SMLT				eS	Sb	11 54 06.8	+0.5
	baz=330						
CHN1	Nanshi	0.88	269	iP	Pb	11 53 55.0	-0.2
	baz=268						
CHN1				S	Sb	11 54 06.8	+0.3
	baz=268						
TWD	Chiawan	0.88	7	P	Pb	11 53 54.8	-0.4
	baz=359						
TWD				eS	Sn	11 54 08.4	+0.3
	baz=359						
CHGB	Renai	0.90	342	eP	Pb	11 53 55.1	-0.6
	baz=336						
CHGB				eS	Sb	11 54 06.6	-0.8
	baz=336						
TYC	Yuchr	0.91	321	iP	Pb	11 53 55.2	-0.4
	baz=328						
SSD	Sandimen	0.91	240	P	Pb	11 53 54.6	-1.0
	baz=234						
SNST	Tainan City	0.91	271	P	Pb	11 53 55.5	-0.1
	baz=270						
SNST				eS	Sb	11 54 07.4	+0.1
	baz=270						
TSMG	Majia	0.92	238	P	Pb	11 53 55.4	-0.5
	baz=234						
TSMG				eS	Sn	11 54 09.1	+0.1
	baz=234						
TWK	Hsinying	0.92	274	P	Pb	11 53 55.5	-0.4
	baz=273						
TWK				eS	Sn	11 54 08.7	-0.4
	baz=273						
WJS	Zhushan	0.93	312	iP	Pn	11 53 56.7	+0.1
	baz=322						
WJS				eS	Sn	11 54 09.3	0.0
	baz=322						
WPL	Puli Township	0.94	329	eP	Pn	11 53 56.8	+0.1
	baz=338						
WPL				eS	Sb	11 54 07.6	-0.7
	baz=338						
WHF	Hehuan Shan	0.96	348	P	Pb	11 53 56.2	-0.6
	baz=360						
SCST	Cishan	0.96	251	eP	Pb	11 53 56.6	-0.1
	baz=250						
SCST				eS	Sn	11 54 10.4	+0.3
	baz=250						
DPDB	Guoxing	0.97	328	eP	Pb	11 53 56.3	-0.6
	baz=337						
DPDB				eS	Sb	11 54 09.3	0.0
	baz=337						
NACB	Ninganchiao	0.97	6	P	Pb	11 53 55.4	-1.4
	baz=357						
NACB				S	Sb	11 54 09.4	+0.2
	baz=357						
WGK	Gukeng	0.97	300	P	Pb	11 53 56.8	0.0
	baz=301						
WGK				eS	Sn	11 54 11.0	+0.6
	baz=301						
MASBT	Mashibuluo	0.98	233	eP	Pb	11 53 55.7	-1.2
	baz=224						
CHN2	Minshiung	0.98	290	eS	Sn	11 54 12.3	+1.7
	baz=290						
WDLH	Douliu	0.99	299	eP	Pn	11 53 57.6	+0.2
	baz=300						
WDLH				eS	Sn	11 54 12.5	+1.6
	baz=300						
WNT	Mingjian	1.00	313	iP	Pn	11 53 57.6	+0.1
	baz=314						
WNT				iS	Sn	11 54 11.3	+0.4
	baz=314						
ETLH	Xiulin Townshi	1.00	360	P	Pb	11 53 56.2	-1.1
	baz=2.0						
TAW	Tawu	1.00	213	P	Pb	11 53 56.0	-1.3
	baz=210						
TAW				S	Sb	11 54 07.8	-2.2
	baz=210						
EAST	Anshuo	1.00	216	P	Pb	11 53 55.7	-1.7
	baz=199						
CHY	Chiayi	1.02	287	eP	Pb	11 53 57.6	+0.1
	baz=287						
CHY				eS	Sn	11 54 12.4	+0.9
	baz=287						
WNT1	Nantou City	1.02	314	P	Pn	11 53 58.0	+0.2
	baz=315						
WNT1				eS	Sn	11 54 12.0	+0.5
	baz=315						
CHN3	Shinhua	1.04	263	P	Pn	11 53 59.2	+1.2
	baz=262						
CHN3				eS	Sn	11 54 15.4	+3.5
	baz=262						
TWM1	Shoushan	1.05	249	eP	Pn	11 54 00.3	+2.1
	baz=248						
TWM1				eS	Sn	11 54 15.8	+3.6
	baz=248						
FUSS	Fushou	1.06	348	P	Pb	11 53 57.8	-0.7
FUSS				eS	Sb	11 54 10.5	-1.6
TDCB	Techi	1.09	344	eP	Pb	11 53 57.9	-1.0
	baz=346						
WWF	Wufeng	1.10	319	eP	Pb	11 53 59.0	0.0
	baz=320						
WWF				eS	Sn	11 54 14.4	+0.8
	baz=320						
SSPT	Xinbi	1.11	230	eP	Pn	11 53 57.9	-1.1
	baz=223						
WTK	Tuku	1.12	296	P	Pb	11 53 59.7	+0.5
	baz=311						
WTK				eS	Sb	11 54 13.6	+0.3
	baz=311						
ICHU	Yijhu	1.12	278	P	Pb	11 53 59.2	0.0
	baz=278						
ICHU				eS	Sn	11 54 14.4	+0.4
	baz=278						
WLGB	Puzi	1.12	284	eS	Sn	11 54 14.0	-0.1
	baz=284						
SCZT	Fangliau	1.15	224	eP	Pn	11 53 58.9	-0.6
	baz=220						
SCZT				eS	Sn	11 54 15.8	+1.1
	baz=220						
SNJT	Kaohsiung City	1.15	247	eP	Pb	11 54 01.3	+1.6
	baz=247						
SNJT				eS	Sn	11 54 18.2	+3.5
	baz=247						
LAY	Lan-yu	1.16	177	iP	Pn	11 53 58.0	-1.7
	baz=160						
LAY				eS	Sb	11 54 14.1	-0.5
	baz=160						
SLIU	Shizi	1.17	213	eP	Pn	11 53 58.1	-1.7
	baz=197						
WHP	Taichung City	1.18	335	eP	Pb	11 54 00.7	+0.3
	baz=341						
WHP				eS	Sn	11 54 16.9	+1.3
	baz=341						
CHN8	Yiju	1.18	277	eP	Pn	11 53 59.5	-0.5
	baz=277						
CHN8				eS	Sn	11 54 16.5	+1.1
	baz=277						
TCU	Taichung	1.20	322	eP	Pb	11 54 02.2	+1.5
	baz=323						
TCU				eS	Sn	11 54 17.5	+1.6
	baz=323						
WCHH	Zhanghua	1.22	316	eP	Pn	11 53 59.9	-0.6
	baz=316						
WCHH				eS	Sn	11 54 17.8	+1.4
	baz=316						
NNSB	Datong	1.23	356	P	Pn	11 54 00.1	-0.7
	baz=7.0						
NNSB				eS	Sb	11 54 15.8	-0.8
	baz=7.0						
NNSH	Datong	1.23	356	eP	Pn	11 53 59.7	-1.0
	baz=7.0						
NNSH				eS	Sn	11 54 16.5	-0.2
	baz=7.0						
NNS	Nan Shan	1.24	355	eP	Pb	11 54 03.0	+1.6
	baz=11						
WSF	Szhu	1.24	291	eP	Pb	11 54 01.1	-0.2
	baz=291						
WSF				eS	Sn	11 54 17.4	+0.5
	baz=291						
ENA	Nanau	1.24	11	eP	Pb	11 54 01.0	-0.4
	baz=359						
ENA				eS	Sn	11 54 16.9	-0.1
	baz=359						
NSY	Sanyi	1.38	331	eP	Pb	11 54 04.6	+0.9
	baz=332						
NSY				eS	Sb	11 54 22.9	+2.0
	baz=332						
WDJ	Dajia District	1.38	326	eP	Pb	11 54 03.9	+0.2
	baz=326						
WDJ				eS	Sb	11 54 23.4	+2.5
	baz=326						
NDT	Datong Townshi	1.40	1	eP	Pb	11 54 04.8	+0.8
	baz=19						
TWKBT	Hengchun	1.40	206	eP	Pn	11 54 02.8	-0.2
	baz=192						
TWK1	Hengchun	1.40	207	eP	Pn	11 54 03.4	+0.4
	baz=192						
ENTT	Nioudou	1.43	3	eP	Pn	11 54 03.3	-0.2
	baz=3.0						
TWC	Suao	1.44	13	eP	Pb	11 54 05.5	+0.8
	baz=2.0						
TWC				eS	Sb	11 54 23.7	+1.0
	baz=2.0						
YHNB	Yeheng	1.47	356	P	Pn	11 54 04.3	+0.3
	baz=356						
YHNB				eS	Sn	11 54 21.7	-0.9
	baz=356						
NSK	Sanguang	1.47	356	eP	Pn	11 54 04.1	0.0
	baz=356						
NSK				eS	Sn	11 54 21.3	-1.5
	baz=356						
NMLH	Miaoli	1.47	335	iP	Pb	11 54 05.8	+0.4
	baz=349						
NMLH				S	Sb	11 54 24.2	+0.6
	baz=349						
NSTT	Nanjuang	1.49	343	P	Pb	11 54 05.8	+0.1
	baz=343						
NSTT				eS	Sb	11 54 23.7	-0.5
	baz=343						
LIOB	Emei	1.50	343	eP	Pb	11 54 06.1	+0.3
	baz=343						
LIOB				eS	Sb	11 54 24.0	-0.4
	baz=343						
TWE	Neicheng	1.52	6	eP	Pb	11 54 06.8	+0.7
	baz=7.0						
NWLT	Wulai	1.57	1	eP	Pn	11 54 05.4	0.0
	baz=12						
NWLT				eS	Sn	11 54 24.9	-0.2
	baz=12						
NTC	Toucheng	1.68	11	eP	Pb	11 54 09.6	+0.8
	baz=358						
NTC				eS	Sn	11 54 27.1	-0.6
	baz=358						
NHDH	Xindian Distri	1.75	1	eP	Pb	11 54 09.6	-0.5
	baz=12						
NHDH				eS	Sn	11 54 29.7	+0.1
	baz=12						
TATO	Taipei	1.77	0	eP	Pb	11 54 11.3	+1.0
	baz=11						
TATO				eS	Sb	11 54 30.9	-1.1
	baz=11						
PHUB	P'eng-hu	1.79	280	eP	Pn	11 54 08.2	-0.1
	baz=280						
PHUB				eS	Sn	11 54 28.8	-1.6
	baz=280						
TIPB	Shuangxi	1.79	10	eP	Pb	11 54 10.1	-0.6
	baz=8.0						
TIPB				eS	Sb	11 54 32.8	0.0
	baz=8.0						
PNG	Penghu	1.81	282	eP	Pn	11 54 08.7	0.0
	baz=281						
PNG				eS	Sn	11 54 30.2	-0.8
	baz=281						
NWF	Wu-fen Shan	1.88	8	eP	Pb	11 54 11.2	-1.1
	baz=7.0						
NWF				eS	Sn	11 54 32.2	-0.6
	baz=7.0						
WFSB	Wu-fen Shan	1.88	8	eP	Pn	11 54 10.3	+0.7
	baz=7.0						
WFSB				eS	Sn	11 54 31.9	-0.9
	baz=7.0						
YM01	YM01	1.94	2	eP	Pb	11 54 13.1	-0.2
YM01				eS	Sn	11 54 34.5	+0.2
YM04	YM04	1.94	1	eP	Pn	11 54 11.2	+0.7
	baz=14						
YM04				eS	Sb	11 54 37.2	0.0
	baz=14						
YM10	YM10	1.95	2	eP	Pb	11 54 13.4	0.0
	baz=360						
YM10				eS	Sn	11 54 33.0	-1.5
	baz=360						
YM05	YM05	1.96	2	eP	Pb	11 54 12.9	-0.7
	baz=360						
YM05				eS	Sb	11 54 36.1	-1.5
	baz=360						
YM11	YM11	1.96	2	eP	Pb	11 54 12.5	-1.1
YM11				eS	Sb	11 54 37.4	-0.3

HATJ	Hateruma jima	2.29	68	eS	Sn	11 54 42.7	-0.2
IRIF	Iriomote-Funau	2.35	61	P	Pn	11 54 17.1	+1.1
IRIF				eS	Sn	11 54 45.0	+0.8
JKRS	Kuro-shima	2.53	65	P	Pn	11 54 19.5	+0.9
JKRS				eS	Sn	11 54 50.0	+1.1
VWUC	VWUC	2.58	314	eP	Pn	11 54 18.5	-0.6
	baz=300						
JIJ	Ishigaki jima	2.70	64	P	Pn	11 54 21.4	+0.6
JIJ				eS	Sn	11 54 53.9	+1.0
PTMZ	Houxiangcun	2.83	311	eP	Pn	11 54 22.4	-0.3
	baz=309						
JISG	Ishigakijimahi	2.93	61	P	Pn	11 54 24.3	+0.2
JISG				eS	Sn	11 54 57.9	-0.8
KNMB	Chin-men Tao	3.10	295	eP	Pn	11 54 25.5	-0.9
	baz=294						
MATB	Ma-tsu	3.25	335	eP	Pn	11 54 28.4	-0.1
	baz=334						
JTJ	Tarama	3.27	63	P	Pn	11 54 29.6	+0.8
JTJ				eS	Sn	11 55 07.2	0.0
AXDP	Jialang	3.63	298	eP	Pn	11 54 33.7	0.0
	baz=297						
AXDP				eS	Sn	11 55 13.7	-2.2
	baz=297						
MHZQ	Yeshan	3.65	323	eP	Pn	11 54 35.7	+1.8
	baz=321						
MHZQ				eS	Sn	11 55 15.9	-0.5
	baz=321						
LYJJ	Jianjiangzhen	3.68	335	eP	Pn	11 54 35.4	+1.0
	baz=342						
LYJJ				eS	Sn	11 55 15.8	-1.5
	baz=342						
JMJ2	Miyako jima3	3.83	66	P	Pn	11 54 37.4	+0.9
JMJ2				eS	Sn	11 55 21.9	+0.9
XPSS	Dashiqiu	3.89	343	eS	Sn	11 55 21.3	-1.2
	baz=340						

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*IDC **04** 12:18:09.5±1.5, 32°.54N×82°.58E, h0^{km}, mb3.4/7, mb1 3.6/9, mb1mx3.4/43, mbtmp3.4/9, ML2.9/2, MS3.6/2, Ms1 3.6/2, ms1mx2.7/42, Error ellipse: s-maj=50.9km s-min=20.8km az=64.0*

ISC 04 12:18:14.8±1.5, **32°.7N**±0°.2×**82°.7E**±0°.3, **h35**^{km}, **n11, σ1^{s}08**/9, **mb3.5**/6, **Xizang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	Makanchi Array	14.12	359	Pn	Pn	12 21 30.6	-1.6
	0.1nm,0.3s,baz=186,slow=12,SNR=3.0						
KURBB	Kurchatov Arra	18.21	352	P	P	12 22 24.9	+0.3
	0.0nm,0.3s,baz=173,slow=11,SNR=2.3						
CMAR	Chiang Mai Arr	20.34	130	P	P	12 22 47.2	-1.0
	0.9nm,0.6s,baz=310,slow=10,SNR=2.3						
ZALV	Zalesovo Beam	21.34	3	P	P	12 22 59.6	+1.0
	0.5nm,0.4s,baz=170,slow=8.8,SNR=2.0						
SONM	Songino Array	23.48	43	P	P	12 23 22.8	+1.4
	0.5nm,0.9s,baz=224,slow=8.1,SNR=3.7						
AKTO	Aktyubinsk	25.43	322	P	P	12 23 39.7	+0.6
	0.5nm,0.5s,baz=116,slow=6.4,SNR=2.0						
USRK	Ussuriysk Ar.	39.77	59	LR	LR	12 42 01.8	
	comp=Z,42nm,18.6s,baz=240,slow=36						
GERES	GERESS Array B	52.91	309	LR	LR	12 54 07.7	
	comp=Z,79nm,18.3s,baz=336,slow=41						
WRA	Warramunga Arr	71.93	129	P	P	12 29 34.9	+0.1
	0.6nm,0.6s,baz=328,slow=6.0,SNR=2.2						
ASAR	Alice Springs	74.34	132	P	P	12 29 49.1	+0.2
	0.6nm,0.8s,baz=304,slow=5.8,SNR=4.3						
YKA	Yellowknife Ar	84.16	8	P	P	12 30 42.0	0.0
	0.3nm,0.6s,baz=345,slow=4.7,SNR=6.4						

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*VAO **04** 12:19:40.3±1.9, 23°.72S×70°.03W, h10^{km}, mb4.4*

*SJA **04** 12:20:23.1±0.7, 24°.08S×66°.90W, h207^{km}±4^{km}, ML3.9, MW4.0*

*NEIC **04** 12:20:23.5±2.5, 24°.07S±0°.08×66°.84W±0°.04, h191^{km}±9^{km}, Error ellipse: s-maj=11.1km s-min=5.2km az=185.0*

*IDC **04** 12:20:23.5±1.3, 24°.04S×66°.75W, h186^{km}±9^{km}, mb3.4/6, mb1 3.7/11, mb1mx3.6/27, mbtmp4.0/11, MS2.4/1, Ms1 2.4/1, ms1mx2.4/16, Error ellipse: s-maj=23.2km s-min=13.6km az=18.0*

*GUC **04** 12:20:25.7±0.8, 24°.05S×67°.08W, h213^{km}±12^{km}, ML4.4*

ISC 04 12:20:23.8±0.6, **24°.13S**±0°.04×**66°.94W**±0°.04, **h197**^{km}±6^{km}, **n100, σ1^{s}28**/128, **mb3.8**/7, **14C, Salta Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SLA	San Lorenzo	1.44	115	eP	Pn	12 20 57.9	+1.0
SLA				eS	Sn	12 21 23.3	+0.9
AZAP	Zapla	1.72	94	eP	Pn	12 20 59.8	+0.3
AZAP				eS	Sn	12 21 27.1	-0.1
AZAP				IAML		12 21 31.1	
	comp=Z,281nm,1.1s						
FSA	Cafayete	2.16	156	eP	Pn	12 21 05.1	+1.2
FSA				eS	Sn	12 21 35.7	+0.4
ASTB	Santa Barbara	2.28	86	eP	Pn	12 21 05.4	+0.1
YJA	Yavi	2.34	34	eP	Pn	12 21 06.8	+0.5
YJA				eS	Sn	12 21 39.0	-0.2
LVC	Limon Verde	2.36	309	P	Pn	12 21 07.1	+0.8
	comp=Z,66nm,0.3s,baz=130,slow=5.5,SNR=454						
LVC				S	Sn	12 21 39.5	+0.2
	comp=Z,79nm,0.3s,baz=90,slow=20,SNR=35						
LVC				LR	LR	12 21 54.7	
	comp=Z,80nm,19.1s,baz=162,slow=37						
LVC	Limon Verde	2.36	309	eP	Pn	12 21 07.3	+1.0
LVC				eS	Sn	12 21 39.7	+0.4
LVC	Limon Verde	2.36	309		Pn	12 21 07.3	+1.0
LVC	Limon Verde	2.36	309	eP	Pn	12 21 07.3	+1.0
LVC				eS	Sn	12 21 40.8	+1.5
LVC				IAML		12 21 43.3	
	comp=Z,230nm,1.0s						
PB15	IPOC Station P	2.49	291	⇑iP	Pn	12 21 08.8	+1.1
PB15				i S	Sn	12 21 41.0	-0.7
PB15	IPOC Station P	2.49	291		Pn	12 21 08.8	+1.1
GO02	Mina Guanaco	2.62	246	⇑iP	Pn	12 21 10.6	+1.4
GO02				eS	Sn	12 21 45.7	+1.2
GO02	Mina Guanaco	2.62	246		Pn	12 21 10.5	+1.4
ALOL	LOMAS DE OLMED	2.73	84	eP	Pn	12 21 06.8	-3.3
PB06	IPOC Station P	2.80	300	⇑iP	Pn	12 21 12.0	+0.8
PB06				i S	Sn	12 21 47.3	-0.7
PB06				IAML		12 21 48.8	
	comp=N,977nm,0.4s						
PB06	IPOC Station P	2.80	300		Pn	12 21 11.9	+0.8
PB06	IPOC Station P	2.80	300	eP	Pn	12 21 11.9	+0.8
PB06				eS	Sn	12 21 47.5	-0.5
PB06				IAML		12 21 50.2	
	comp=Z,618nm,0.1s						
AHML	Horco Molle	3.02	152	eP	Pn	12 21 14.2	+0.7
AHML				eS	Sn	12 21 52.2	-0.3
PB09	IPOC Station P	3.14	317	⇑iP	Pn	12 21 16.1	+0.9
PB09				i S	Sn	12 21 54.7	-0.6
PB09				IAML		12 21 59.7	
	comp=E,331nm,0.6s						
PB09	IPOC Station P	3.14	317		Pn	12 21 16.1	+0.9
PB09	IPOC Station P	3.14	317	eP	Pn	12 21 05.6	-10
PB14	IPOC Station P	3.20	260	⇑iP	Pn	12 21 16.6	+0.7
PB14				i S	Sn	12 21 55.1	-1.5
PB14				IAML		12 21 56.2	
	comp=E,510nm,0.4s						
PB14	IPOC Station P	3.20	260		Pn	12 21 16.6	+0.7
PB14	IPOC Station P	3.20	260	eP	Pn	12 21 16.6	+0.7
PB14				eS	Sn	12 21 56.1	-0.5
PB05	IPOC Station P	3.25	292	⇑iP	Pn	12 21 16.8	+0.4
PB05				i S	Sn	12 21 55.1	-2.4
PB05				IAML		12 22 08.0	
	comp=E,336nm,0.3s						
PB05	IPOC Station P	3.25	292	eP	Pn	12 21 17.1	+0.7
PB05				eS	Sn	12 21 56.4	-1.1
PB05				IAML		12 22 01.4	
	comp=Z,180nm,0.2s						
PB03	IPOC Station P	3.31	308	⇑iP	Pn	12 21 17.5	+0.3
PB03				i S	Sn	12 21 57.1	-1.9
PB03				IAML		12 21 59.9	
	comp=E,641nm,0.3s						
PB03	IPOC Station P	3.31	308	eP	Pn	12 21 17.4	+0.2
AC02	Maricunga	3.34	216		Pn	12 21 19.4	+1.6
PB10	IPOC Station P	3.36	280	⇑iP	Pn	12 21 18.5	+0.9
PB10				i S	Sn	12 21 58.0	-1.7
PB10				IAML		12 22 02.2	
	comp=N,431nm,0.3s						
PB10	IPOC Station P	3.36	280		Pn	12 21 18.5	+0.9
PB10	IPOC Station P	3.36	280	eP	Pn	12 21 18.5	+0.9
PB10				eS	Sn	12 21 59.4	-0.4
PB10				IAML		12 22 00.9	
	comp=Z,266nm,0.4s						
PB04	IPOC Station P	3.45	301	⇑iP	Pn	12 21 19.1	+0.3
PB04				i S	Sn	12 22 00.0	-1.9
PB04	IPOC Station P	3.45	301		Pn	12 21 19.2	+0.3
PB04	IPOC Station P	3.45	301	eP	Pn	12 21 19.2	+0.3
PB07	IPOC Station P	3.62	311	⇑iP	Pn	12 21 21.0	+0.1
PB07				i S	Sn	12 22 03.3	-2.3
PB07	IPOC Station P	3.62	311	Pn	Pn	12 21 20.8	-0.1
PB01	IPOC Station P	3.87	322	⇑iP	Pn	12 21 23.6	-0.3
PB01				i S	Sn	12 22 08.1	-3.0
PB01	IPOC Station P	3.87	322		Pn	12 21 23.6	-0.3
AC01	Pan de Azucar	3.88	238	⇑iP	Pn	12 21 23.9	-0.1
AC01				i S	Sn	12 22 09.4	-1.8
AC01	Pan de Azucar	3.88	238		Pn	12 21 23.8	-0.1
CYA	Choya	4.42	167	eP	Pn	12 21 32.2	+1.5
CYA				eS	Sn	12 22 21.7	-1.7
PATCX	Punta Patache	4.43	317	⇑iP	Pn	12 21 29.9	-1.1
PATCX				eS	Sn	12 22 20.2	-3.7
PATCX	Punta Patache	4.43	317		Pn	12 21 29.9	-1.1
PB08	IPOC Station P	4.47	332	⇑iP	Pn	12 21 32.0	+0.3
PB08				i S	Sn	12 22 23.2	-1.9
PB08	IPOC Station P	4.47	332		Pn	12 21 32.0	+0.3
GO03	Copiap	4.55	220		Pn	12 21 32.4	-0.1
TA01	Diego Aracena	4.64	319		Pn	12 21 32.9	-0.7
ACLC	CERRO LA CRUZ	5.28	180	eP	Pn	12 21 42.4	+0.6
ACLC				eS	Sn	12 22 43.1	-0.3
ACLC				IAML		12 22 44.2	
	comp=Z,39nm,0.4s						
PSGCX	Pisagua	5.39	326		Pn	12 21 40.8	-2.5
AC04	Llanos de Chal	5.50	222		Pn	12 21 43.7	-0.8
MNMC	Minye Minye	5.55	333	Pn	Pn	12 21 44.7	-0.9
AC05	El Transito	5.56	212		Pn	12 21 45.6	+0.2
LCO	Las Campanas	5.91	214	Pn	Pn	12 21 49.8	-0.4
PB16	IPOC Station P	6.24	337		Pn	12 21 53.4	-1.4
AROD	Rodeo	6.42	200	eP	Pn	12 21 58.6	+1.8
GO04	Tololo Observa	6.93	209	Pn	Pn	12 22 02.1	-1.3
CO03	El Pedregal	7.47	206	Pn	Pn	12 22 09.8	-0.3
TCA	Tanti	7.48	164	eP	Pn	12 22 10.4	+0.1
TCA				eS	Sn	12 23 30.5	-4.4
TCA				IAML		12 23 34.8	
	comp=Z,9.6nm,1.0s						
CO02	Combarbal	7.91	206	Pn	Pn	12 22 15.2	-0.8
CPUP	Villa Florida	8.98	106	P	Pn	12 22 28.1	-1.7
	comp=Z,0.3nm,0.3s,baz=293,slow=11,SNR=6.7						
CPUP	Villa Florida	8.98	106		Pn	12 22 28.3	-1.4
SIV	San Ignacio	9.79	35	P	Pn	12 22 37.9	-2.6
	comp=Z,0.7nm,0.3s,baz=226,slow=13,SNR=16						
SIV				S	Sn	12 24 16.0	-14
	comp=Z,0.2nm,0.3s,baz=224,slow=19,SNR=1.2						
MT02	Curacav	9.81	201	Pn	Pn	12 22 40.5	-0.1
AQDB	Aquidauana	11.02	73	eP	Pn	12 22 54.7	-1.6
TRCB	Terra Rica	13.20	87	eP	Pn	12 23 24.7	+0.7
CPSB	Cacapava Do Su	13.53	120	eP	Pn	12 23 28.8	+0.7
PTGB	Pitanga	13.57	96	eP	P	12 23 31.9	+0.8
ITAB	Concordia	13.71	106	eP	P	12 23 33.3	+0.7
PLTB	Pedras Altas	14.02	126	eP	Pn	12 23 33.5	-0.6
PCMB	Pacaembu	14.67	83	eP	P	12 23 43.7	+0.4
CNLB	Canela	15.27	113	eP	P	12 23 49.9	-0.1
ITRB	Iturama	16.00	77	eP	Pn	12 23 59.3	+0.9
ARAG	Araguaiana, MT	16.50	62	eP	P	12 24 01.7	-1.8
PLCA	Paso Flores	16.83	190	P	Pn	12 24 08.6	+0.3
	comp=Z,0.3nm,0.3s,baz=345,slow=11,SNR=9.0						
PLCA	Paso Flores	16.83	190	Pn	Pn	12 24 09.0	+0.8
PLCA				IAmb	IAmb	12 24 16.2	
	comp=Z,3.8nm,0.6s						
BB19B	Bebedouro	17.27	83	eP	P	12 24 12.4	+0.4
SPB	Sao Paulo	17.86	92	eP	Pn	12 24 20.3	0.0
IPMB	Ipameri, GO	18.51	74	eP	P	12 24 25.2	-0.3
BDFB	Brasilia	19.68	68	P	P	12 24 37.1	-1.2
	comp=Z,1.3nm,0.3s,baz=236,slow=12,SNR=17						
BDFB	Brasilia	19.68	68	P	P	12 24 37.7	-0.6
PEXB	Peixe	21.34	59	eP	P	12 24 52.3	-3.6
VAS01	Vassouras-RJ	21.67	90	eP	P	12 24 59.4	+0.2
JANB	Januaria	23.12	71	eP	P	12 25 11.3	-1.4
SDBA	SAO DESIDERIO	23.91	65	eP	P	12 25 16.9	-3.1
SNAA	Sanae	59.21	161	P	P	12 30 05.2	+1.3
SNAA				IAmb	IAmb	12 30 26.2	
	comp=Z,8.5nm,1.4s						
TXAR	Lajitas Array	63.81	324	P	P	12 30 36.5	+1.2
	comp=Z,0.4nm,0.7s,baz=152,slow=7.6,SNR=6.7						
MNTX	Cornudas Mount	66.58	325	P	P	12 30 54.0	+1.0
TORD	Torodi Ar. Bea	76.56	69	P	P	12 31 52.1	-0.8
	comp=Z,1.0nm,0.5s,baz=264,slow=5.5,SNR=8.1						
PDAR	Pinedale Array	77.28	329	P	P	12 31 58.0	+1.3
	comp=Z,0.3nm,0.5s,baz=133,slow=5.1,SNR=6.0						
ULM	Lac du Bonnet	78.36	342	P	P	12 32 02.5	+0.4
	comp=Z,2.5nm,0.6s,baz=150,slow=5.2,SNR=8.5						
NVAR	Mina Array Bea	78.67	321	P	P	12 32 06.3	+1.9
	comp=Z,0.3nm,0.7s,baz=149,slow=6.0,SNR=3.1						
YKA	Yellowknife Ar	94.26	340	P	P	12 33 20.8	+0.7
	comp=Z,0.7nm,0.5s,baz=130,slow=5.2,SNR=20						
ASAR	Alice Springs	128.36	205	PKP	PKiKP	12 39 08.4	+0.1
	comp=Z,0.6nm,0.5s,baz=126,slow=1.8,SNR=10.0						
WRA	Warramunga Arr	131.54	207	PKP	PKiKP	12 39 14.9	+0.1
	comp=Z,0.6nm,0.4s,baz=156,slow=1.8,SNR=20						
KURBB	Kurchatov Arra	142.45	36	PKP	PKPdf	12 39 34.1	+1.3
	comp=Z,0.1nm,0.3s,baz=306,slow=2.6,SNR=4.7						
ZALV	Zalesovo Beam	143.48	28	PKP	PKPdf	12 39 33.3	-1.2
	comp=Z,1.6nm,0.6s,baz=296,slow=4.4,SNR=7.4						
MKAR	Makanchi Array	146.59	40	PKPbc	PKPbc	12 39 41.6	-0.5
	comp=Z,2.2nm,0.6s,baz=323,slow=2.7,SNR=24						
MKAR	Makanchi Array	146.59	40		PKPbc	12 39 41.9	-0.2
SONM	Songino Array	155.75	11	PKPab	PKPab	12 40 22.3	+0.7
	comp=Z,0.3nm,0.5s,baz=358,slow=4.3,SNR=2.3						

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*IDC **04** 12:21:19.6±2.6, 8°.69S×119°.09E, h0^{km}, mb3.3/4, mb1 3.6/5, mb1mx3.3/44, mbtmp3.5/5, ML3.9/1, Error ellipse: s-maj=180.5km s-min=26.0km az=53.0*

*DJA **04** 12:21:38.1±1.0, 9°S±8°×12°0E±°, h19^{km}±9^{km}, M3.3/7, MLv3.3/7*

ISC 04 12:21:36.2±1.0, **7°.9S**±0°.1×**119°.55E**±0°.05, **h100**^{km}, **n10, σ0^{s}78**/11, **mb3.5**/3, **Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLAI	Plampang	2.00	241	P	Pn	12 22 08.9	+0.1
PLAI				S	Sn	12 22 33.3	-0.3
EDFI	Ende, Flores	2.29	113	P	Pn	12 22 13.3	+0.6
EDFI				S	Sn	12 22 40.4	-0.3
BASI	Baing, Sumba	2.55	157	P	Pn	12 22 05.0	-11
MMRI	Maumere	2.77	106	P	Pn	12 22 19.7	+0.8
MMRI				S	Sn	12 22 50.8	-1.0
TWSI	Taliwang, Sumb	2.78	252	P	Pn	12 22 19.7	+0.7
TWSI				S	Sn	12 22 51.9	-0.1
WRA	Warramunga Arr	18.69	131	P	P	12 25 37.9	-8.9
	0.4nm,0.3s,baz=308,slow=11,SNR=2.5						
WRA				S	S	12 28 50.4	-24
	0.5nm,0.3s,baz=296,slow=25,SNR=10						
ASAR	Alice Springs	20.89	140	P	P	12 25 59.7	-11
	0.2nm,0.4s,baz=318,slow=12,SNR=1.9						
SONM	Songino Array	56.67	349	P	P	12 31 10.0	+0.7
	0.2nm,0.4s,baz=167,slow=7.2,SNR=2.3						
MKAR	Makanchi Array	63.71	332	P	P	12 31 56.8	-0.4
	0.3nm,0.4s,baz=144,slow=8.3,SNR=3.5						
KURBB	Kurchatov Arra	68.20	333	P	P	12 32 24.6	-1.3
	0.2nm,0.4s,baz=123,slow=6.7,SNR=1.8						

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*IDC **04** 12:53:03.3±0.6, 10°.79N×62°.75W, h0^{km}, mb4.0/15, mb1 4.2/16, mb1mx4.0/50, mbtmp4.0/16, ML4.0/1, MS3.3/5, Ms1 3.3/5, ms1mx3.0/52, Error ellipse: s-maj=18.8km s-min=15.0km az=81.0*

*TRN **04** 12:53:04.9, 10°.62N×62°.97W, h3^{km}, MD4.1*

TRN Felt in Trinidad, MMI III, IV, St. Vincent and Grendad MMI IV.

*FUNV **04** 12:53:05.5, 10°.58N×62°.89W, h1^{km}, MW3.7*

*CAR **04** 12:53:06.5±2.4, 10°.64N±0°.06×62°.89W±0°.05, h5^{km}±4^{km}, mb4.4/21(NEIC), Md4.2(TRN), Error ellipse: s-maj=9.4km s-min=6.7km az=155.0*

*NEIC **04** 12:53:10.2±3.2, 10°.58N±0°.07×62°.86W±0°.06, h45^{km}±9^{km}, Error ellipse: s-maj=10.1km s-min=8.0km az=151.0*

ISC 04 12:53:05.8±1.0, **10°.57N**±0°.03×**62°.97W**±0°.02, **h14**^{km}±6^{km}, **n99, σ1^{s}64**/121, **mb4.3**/23, **1C-1D, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRUV	Carupano	0.28	292	⇓iP	Pg	12 53 10.8	-1.0
CRUV				eS	Sg	12 53 15.3	-0.5
TPP	Pointe-a-Pierr	1.51	99	eP	Pb	12 53 33.9	+0.2
TRN	Trinidad (W)	1.54	87	eP	Pn	12 53 33.5	+0.6
TRN				eS	Sb	12 53 54.7	+1.2
TRN	Trinidad (W)	1.54	87	eP	Pn	12 53 32.4	-0.5
TRN				eS	Sn	12 53 53.3	+0.6
ORIV	Oritupano	1.55	196	⇑iP	Pb	12 53 33.8	-0.5
ORIV				eS	Sg	12 53 55.6	-0.1
PLCV	Puerto La Cruz	1.65	256		Pg	12 53 37.7	+0.3
PCRV	Puerto La Cruz	1.69	257	Pn	Pg	12 53 37.7	-0.5
	73nm,0.3s,baz=82,slow=8.1,SNR=59						
PCRV				Sn	Sg	12 53 59.2	-1.0
	23nm,0.3s,baz=166,slow=9.2,SNR=6.1						
PCRV	Puerto La Cruz	1.69	257	eP	Pb	12 53 35.9	-0.7
PCRV				eS	Sb	12 53 57.9	+0.2
TBH	Brigand Hill	1.87	92	e	Pg	12 53 41.1	-0.6
GRGR	Grenville	2.02	40	eP	Pn	12 53 40.1	+0.6
GRGR				eS	Sn	12 54 06.2	+1.6
GRGR				eS	Sb	12 54 07.4	0.0
GRGR	Grenville	2.02	40		Pn	12 53 39.1	-0.4
GRGR	Grenville	2.02	40	eP	Pn	12 53 39.3	-0.2
GRGR				eS	Sn	12 54 04.2	-0.4
TPR	Prospect	2.24	74	eP	Pn	12 53 43.6	+1.1
BOT	Bacolet	2.29	75	e	Pn	12 53 45.0	+1.9
GCMP	Grenada, Carri	2.43	38	eP	Pn	12 53 45.1	-0.1
GCMP				eS	Sn	12 54 14.9	+0.2
TOSP	Speyside	2.50	73	eP	Pn	12 53 47.1	+1.1
TOSP				eS	Sn	12 54 17.1	+0.8
TOSP	Speyside	2.50	73	Pn	Pn	12 53 46.7	+0.7
RIOV	Rio Grande	2.73	155	eP	Pn	12 53 49.7	+0.4
RIOV				eS	Sn	12 54 21.7	-0.5
SVOC	Richmond Hill,	3.09	33	eP	Pn	12 53 55.4	+1.2
SVB	Belmont	3.17	32	eP	Pn	12 53 55.7	+0.3
SVB				eS	Sn	12 54 34.1	+1.1
SVV	Soufriere Volc	3.23	32	eP	Pn	12 53 55.9	-0.2
MERV	Las Mercedes	3.53	249	eP	Pn	12 54 02.0	+1.8
MERV				eS	Sn	12 54 42.3	+0.5
MCLT	Moule a Chique	3.70	32	eP	Pn	12 54 02.7	+0.1
MCLT				eS	Sn	12 54 45.5	-0.5
SLBI	Saint Lucia, B	3.95	29	eP	Pn	12 54 06.3	+0.3
TACV	Tcata	4.02	264	eP	Pn	12 54 08.4	+1.4
TACV				eS	Sn	12 54 54.6	+0.7
BIM	Bigot	4.34	25	eP	Pn	12 54 11.9	+0.4
BIM	Bigot	4.34	25	eS	Sn	12 55 01.5	-0.4
H05S1	Guadeloupe/Mar	4.36	28	Pn	Pn	12 54 11.6	-0.1
	SNR=37						
H05S1				Sn	Sn	12 54 59.1	-3.2
FDF	Fort de France	4.51	23	eP	Pn	12 54 13.8	+0.1
FDF	Fort de France	4.51	23	eS	Sn	12 55 04.8	-1.1
FDF	Fort de France	4.51	23	Pn	Pn	12 54 14.3	+0.6
LUEV	Luepa	4.92	162	eS	Sn	12 55 13.6	-2.9
DSLB	Salisbury	5.07	17	eP	Pn	12 54 22.0	+0.5
BAUV	El Baul	5.25	253	eP	Pn	12 54 24.2	+0.3
BAUV				eS	Sn	12 55 22.8	-1.6
TBG	Guadaloupe-3	5.41	14	eP	Pn	12 54 27.1	+1.1
TDBA	Terre de Bas,	5.41	14	eP	Pn	12 54 26.0	-0.1
MAPV	Macapo	5.45	263	eP	Pn	12 54 27.3	+0.6
MAPV				eS	Sn	12 55 27.6	-1.7
MAGL	Barre de l’ile	5.60	17	eP	Pn	12 54 30.2	+1.5
CBE	Ff, Capester	5.63	13	eP	Pn	12 54 30.8	+1.7
CBE	Ff, Capester	5.63	13	eS	Sn	12 55 32.0	-1.7
H05N1	Guadeloupe/Mar	6.01	18	Pn	Pn	12 54 34.1	-0.2
H05N1				Sn	Sn	12 55 38.7	-4.4
ABD	La Joyeuse, An	6.05	14	eP	Pn	12 54 35.6	+0.8
ANBD	Bethesda, Anti	6.55	10	eP	Pn	12 54 42.1	+0.4
SKI	Saint Kitts	6.73	2	eP	Pn	12 54 45.4	+1.2
SEUS	St. Eustatius	6.88	360	Pn	Pn	12 54 46.8	+0.5
PAYV	Puerto Ayacuch	6.91	223	eP	Pn	12 54 46.3	-0.3
PAYV				eS	Sn	12 56 01.9	-3.2
MONV	Montecano	7.01	282	eP	Pn	12 54 48.1	+0.1
MONV				eS	Sn	12 56 04.0	-3.6
SABA	Saba	7.02	358	Pn	Pn	12 54 48.7	+0.5
ANWB	Willy Bob	7.15	9	eP	Pn	12 54 51.0	+1.0
ANWB	Willy Bob	7.15	9	Pn	Pn	12 54 50.5	+0.5
SDV	Santo Domingo	7.74	258	Pn	Pn	12 54 58.0	-0.2
	1.2nm,0.3s,baz=351,slow=8.5,SNR=4.5						
SDV				Sn	Sn	12 56 22.6	-3.3
	0.7nm,0.3s,baz=356,slow=18,SNR=3.0						
SDV				LR	LR	12 58 14.1	
	comp=Z,84nm,20.3s,baz=67,slow=39						
SDV	Santo Domingo	7.74	258	Pn	Pn	12 55 00.4	+2.1
DR12	Loma Pena Alta	10.26	324	Pn	Pn	12 55 37.3	+4.5
BANI	BANI	10.57	318		Pn	12 55 39.1	+2.1
MDP	Montagnes des	11.58	117	Pn	Pn	12 55 50.6	-0.2
	1.1nm,0.3s,baz=299,slow=16,SNR=1.3						
MDP				Sn	Sn	12 57 48.5	-12
	1.1nm,0.3s,baz=38,slow=18,SNR=1.8						
MDP				LR	LR	13 01 10.8	
	comp=Z,104nm,18.4s,baz=324,slow=42						
PTGA	Pitinga	11.61	165	Pn	Pn	12 55 48.9	-2.4
	3.6nm,0.3s,baz=346,slow=18,SNR=21						
PTGA				Sn	Sn	12 57 54.4	-6.5
	1.1nm,0.3s,baz=315,slow=20,SNR=2.1						
PTGA				Lg	Lg	12 59 02.3	
	3.1nm,0.3s,baz=250,slow=21,SNR=5.0						
PTGA	Pitinga	11.61	165	Pn	Pn	12 55 50.3	-1.0
ROSC	El Rosal	12.60	244	LR	LR	13 01 16.1	
	comp=Z,380nm,19.9s,baz=298,slow=38						
CBCY	The Bluff, Cay	18.58	301	P	P	12 57 21.9	-0.6
SAML	Samuel	19.39	181	P	P	12 57 30.9	-0.5
ATAH	Atahualpa	23.35	222	P	P	12 58 18.2	+3.8
	6.4nm,0.7s,baz=90,slow=4.6,SNR=6.1						
ATAH				LR	LR	13 09 50.7	
	comp=Z,82nm,19.4s,baz=34,slow=43						
SIV	San Ignacio	26.45	176	P	P	12 58 42.4	-0.2
	5.5nm,0.7s,baz=27,slow=10.0,SNR=23						
U56A	King	30.12	331	P	P	12 59 16.5	+1.3
U56A				IAmb	IAmb	12 59 40.1	
	comp=Z,7.9nm,1.1s						
MNMC	Minye Minye	30.22	193	P	P	12 59 18.4	+1.9
PSGCX	Pisagua	30.79	193	P	P	12 59 22.6	+1.3
RCBR	Riachuelo	31.49	120	P	P	12 59 27.8	+0.2
PB01	IPOC Station P	32.06	192	P	P	12 59 35.2	+2.8
PB01				IAmb	IAmb	12 59 37.3	
	comp=Z,4.8nm,0.7s						
LVC	Limon Verde	33.48	190	LR	LR	13 16 51.9	
	comp=Z,62nm,19.9s,baz=322,slow=42						
PBMO	Poplar Bluff	35.99	321	P	P	13 00 07.9	+1.5
PBMO				IAmb	IAmb	13 00 08.3	
	comp=Z,5.1nm,1.0s						
CPUP	Villa Florida	37.08	172	P	P	13 00 17.1	+1.3
	comp=Z,2.2nm,0.7s,baz=347,slow=2.7,SNR=5.5						
CPUP	Villa Florida	37.08	172	P	P	13 00 16.4	+0.7
CPUP				IAmb	IAmb	13 00 18.2	
	comp=Z,6.9nm,1.3s						
WHTX	Lake Whitney,	38.31	309	P	P	13 00 28.7	+2.5
S39A	Bolivar	38.37	320	P	P	13 00 28.9	+2.3
S39A				IAmb	IAmb	13 00 32.7	
	comp=Z,6.6nm,0.6s						
P40A	Paris	38.73	323	P	P	13 00 31.5	+1.9
P40A				IAmb	IAmb	13 00 33.3	
	comp=Z,12nm,1.4s						
TXAR	Lajitas Array	42.29	302	P	P	13 00 59.7	+0.3
	comp=Z,0.7nm,0.6s,baz=112,slow=7.2,SNR=3.5						
TXAR	Lajitas Array	42.29	302	P	P	13 01 00.3	+1.0
SDCO	Great Sand Dun	46.73	313	P	P	13 01 36.7	+1.7
SDCO				IAmb	IAmb	13 01 40.6	
	comp=Z,2.1nm,0.8s						
ULM	Lac du Bonnet	47.96	332	P	P	13 01 44.8	+0.8
	comp=Z,2.0nm,0.5s,baz=145,slow=10,SNR=2.3						
ULM	Lac du Bonnet	47.96	332	P	P	13 01 45.1	+1.2
TMUT	Trail Mountain	51.46	312	P	P	13 02 11.5	+0.3
PLCA	Paso Flores	51.52	187	P	P	13 02 13.6	+2.4
	comp=Z,1.5nm,0.9s,baz=324,slow=9.8,SNR=4.0						
PLCA	Paso Flores	51.52	187	P	P	13 02 11.3	+0.1
PLCA				IAmb	IAmb	13 02 25.9	
	comp=Z,6.3nm,1.4s						
BW06	Boulder Array	51.62	317	P	P	13 02 14.1	+1.9
PD31	Pinedale Array	51.62	317	P	P	13 02 14.6	+2.3
PDAR	Pinedale Array	51.62	317	P	P	13 02 12.8	+0.5
	comp=Z,2.2nm,0.7s,baz=116,slow=9.9,SNR=24						
PDAR	Pinedale Array	51.62	317	P	P	13 02 14.8	+2.5
NVAR	Mina Array Bea	56.49	309	P	P	13 02 48.2	+0.3
	comp=Z,0.5nm,0.5s,baz=116,slow=6.8,SNR=2.8						
TORD	Torodi Ar. Bea	63.19	81	P	P	13 03 32.9	-1.2
	comp=Z,1.4nm,0.8s,baz=294,slow=6.6,SNR=6.1						
TORD	Torodi Ar. Bea	63.19	81	P	P	13 03 33.7	-0.4
YKA	Yellowknife Ar	63.60	336	P	P	13 03 33.7	-2.2
	comp=Z,0.2nm,0.5s,baz=110,slow=8.1,SNR=8.8						
INK	Inuvik	73.09	339	P	P	13 04 34.5	-0.8
	comp=Z,1.6nm,0.7s,baz=101,slow=5.3,SNR=4.0						
GERES	GERESS Array B	73.35	42	P	P	13 04 35.5	-1.9
	comp=Z,0.5nm,0.5s,baz=282,slow=4.9,SNR=4.7						
EGAK	Eagle	75.47	334	P	P	13 04 52.8	+3.6
EGAK				IAmb	IAmb	13 04 54.3	
	comp=Z,5.3nm,1.0s						

IL31		77.92	334	P	P	13 05 01.4	-1.6
IL31				IAmb	IAmb	13 05 08.7	
	comp=Z,6.3nm,1.4s						
ILAR	**Eielson Array**	77.92	334	P	P	13 05 00.8	-2.3
	comp=Z,1.0nm,0.6s,baz=93,slow=3.8,SNR=12						
ARCES	**ARCESS Array B**	79.64	21	P	P	13 05 10.6	-1.9
	comp=Z,3.9nm,1.0s,baz=280,slow=5.4,SNR=1.5						
FINES	**FINESS Array B**	80.35	29	P	P	13 05 14.4	-2.0
	comp=Z,1.0nm,0.8s,baz=244,slow=5.5,SNR=1.4						
CMAR	**Chiang Mai Arr**	146.08	32	PKPbc	PKPdf	13 12 45.6	+0.1
	comp=Z,0.3nm,0.5s,baz=322,slow=2.8,SNR=1.8						
WRA	**Warramunga Arr**	160.89	239	PKPab	PKPab	13 13 48.9	-0.1
	comp=Z,0.1nm,0.3s,baz=103,slow=4.2,SNR=1.6						

*IDC **04** 12:56:50.5±0.6, 6.°10S×113.°00E, h579^{km}±7^{km}, mb3.9/29, mb1 4.0/34, mb1mx3.9/47, mbtmp4.9/34, Error ellipse: s-maj=10.5km s-min=6.8km az=59.0*

*BJI **04** 12:56:50.0±0.0, 6.°20S×113.°00E, h587^{km}, mB4.6/29, mb4.4/44*

*DJA **04** 12:56:50.1±0.2, 6°S±3°×11°3E±°, h591^{km}±3^{km}, M4.5/34, mB5.0/25, mb4.7/34, MLv5.1/25, Mw(mB)4.3/25*

*KLM **04** 12:56:51, 6.°25S×112.°97E, h589^{km}, mb4.9*

*NEIC **04** 12:56:51.1±1.2, 6.°14S±0.°09×112.°99E±0.°10, h586^{km}±6^{km}, mb4.6/68, Error ellipse: s-maj=14.7km s-min=12.5km az=61.0*

ISC 04 12:56:50.6±0.4**, 6.°16S**±0.°05×**113.°01E**±0.°05**, h586**^{km}±4^{km}**, h587**^{km}**:pP-P, n595,** σ1.^{s}**06**/591**, mb4.5**/78**, 3C-1D, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMMI	**Kalianget**	1.30	133	P	P	12 58 02.3	+1.2
KMMI				S	S	12 58 58.7	+0.2
JAGI	**Jajag, Banyuwa**	2.56	154	P	P	12 58 05.6	-0.6
JAGI	**Jajag, Banyuwa**	2.56	154	P	P	12 58 05.0	-1.2
SMRI	**Semarang**	2.70	251	P	P	12 58 07.3	+0.4
SMRI	**Semarang**	2.70	251	P	P	12 58 07.5	+0.6
SRBI	**Singaraja**	2.90	131	P	P	12 58 08.1	+0.1
UGM	**Wanagama**	3.02	235	P	P	12 58 08.3	-0.4
UGM	**Wanagama**	3.02	235	P	P	12 58 08.3	-0.4
BBKI	**Banjar Baru**	3.25	34	P	P	12 58 10.5	+0.4
DNP	**Denpasar**	3.32	139	P	P	12 58 10.1	-0.4
PBKI	**Pangkalan Bun**	3.69	339	P	P	12 58 12.9	0.0
TWSI	**Taliwang, Sumb**	4.61	124	P	P	12 58 18.0	-1.6
JCJI	**Jatiwangi**	4.72	266	P	P	12 58 20.9	+0.5
CISI	**Cisompet, Garu**	5.34	255	P	P	12 58 24.3	-1.2
CISI	**Cisompet, Garu**	5.34	255	P	P	12 58 24.5	-1.0
	8.7nm31μm2μm,0.7s						
LEM	**Lembang**	5.40	263	P	P	12 58 25.6	-0.5
	28nm,0.3s,baz=35,slow=8.2,SNR=63						
LEM				S	S	12 59 42.8	-1.2
	14nm,0.3s,baz=143,slow=20,SNR=7.0						
LEM	**Lembang**	5.40	263	P	P	12 58 26.2	+0.1
	0.8nm2μm281nm,0.8s						
PLAI	**Plampang**	5.42	120	P	P	12 58 24.1	-1.9
MTKI	**Muara Teweh, K**	5.52	20	P	P	12 58 28.2	+1.3
	1.9nm7μm392nm,0.8s						
CBJI	**Citeko**	6.13	267	P	P	12 58 30.7	-1.4
	3.2nm352nm,0.5s						
BKB	**Balikpapan**	6.23	39	P	P	12 58 34.4	+1.3
BKB	**Balikpapan**	6.23	39	P	P	12 58 36.4	+3.4
	2.5nm9μm481nm,0.5s						
DBJI	**Dramaga**	6.23	266	P	P	12 58 32.3	-0.8
	1.2nm229nm,0.9s						
TPI	**Tanjungpandan**	6.32	302	P	P	12 58 33.5	-0.4
	1.0nm3μm348nm,0.9s						
STKI	**Sintang**	6.38	346	P	P	12 58 36.2	+1.8
	1.4nm31μm208nm,0.5s						
KAPI	**Kappang**	6.81	81	P	P	12 58 38.3	+0.1
	6.5nm,0.3s,baz=251,slow=5.3,SNR=2.8						
KAPI				S	S	13 00 03.8	-2.5
	2.5nm,0.3s,baz=290,slow=18,SNR=1.5						
BKSI	**Bulukumba**	7.13	84	P	P	12 58 42.0	+0.8
	0.2nm580nm65nm,1.0s						
BNSI	**Bone**	7.28	76	P	P	12 58 43.7	+1.0
	0.2nm691nm74nm,1.0s						
BSSI	**Bau Bau, Buton**	7.44	90	P	P	12 58 43.9	-0.3
	0.5nm1μm107nm,0.7s						
TTSI	**Tana Toraja**	7.46	66	P	P	12 58 45.3	+0.9
	0.2nm1μm28nm,0.8s						
PPBI	**Pangkal Pinang**	7.92	300	P	P	12 58 49.8	+1.0
	0.5nm7μm38nm,1.0s						
KSM	**Kuching**	8.05	340	P	P	12 58 51.2	+1.2
KSM	**Kuching**	8.05	340	P	P	12 58 52.0	+2.0
KLSI		8.37	280	P	P	12 58 50.9	-2.2
	266nm9.2nm,0.6s						
XMIS	**Christmas Isla**	8.45	239	P	P	12 58 53.0	-0.8
XMIS	**Christmas Isla**	8.45	239	P	P	12 58 53.3	-0.5
	166nm,0.8s						
KASI	**Kota Agung**	8.49	274	P	P	12 58 52.4	-1.8
	1.0nm4μm275nm,0.9s						
SBUM	**Sibu**	8.59	355	P	P	12 58 57.2	+1.9
SBUM	**Sibu**	8.59	355	P	P	12 58 57.0	+1.7
PMBI	**Palembang**	8.82	291	P	P	12 58 58.5	+1.0
PMBI	**Palembang**	8.82	291	P	P	12 58 59.2	+1.8
	1.8nm26μm252nm,0.4s						
EDFI	**Ende, Flores**	8.98	107	P	P	12 58 56.3	-2.9
	355nm18nm,0.4s						
MPSI	**Mapaga**	9.43	47	P	P	12 59 04.8	+1.3
	3μm242nm,0.7s						
MMRI	**Maumere**	9.47	106	P	P	12 59 02.5	-1.5
LHSI	**Lahat**	9.73	283	P	P	12 59 07.3	+0.8
	76nm,1.0s						
APSI	**Ampana**	10.08	59	P	P	12 59 09.9	0.0
	442nm33nm,1.0s						
MNAI	**Manna**	10.17	280	P	P	12 59 10.2	-0.7
TOLI2	**Tolitoli**	10.60	47	P	P	12 59 15.8	+0.6
LUWI	**Luwuk**	10.99	63	P	P	12 59 20.1	+0.9
LUWI	**Luwuk**	10.99	63	P	P	12 59 18.4	-0.7
	1μm57nm,1.2s						
MRSI	**Marisa**	11.09	54	P	P	12 59 19.8	-0.3
	970nm58nm,0.5s						
BATI	**Baumata**	11.28	112	P	P	12 59 20.0	-2.1
	12nm,0.3s,baz=326,slow=2.0,SNR=15						
BATI				S	S	13 01 21.2	-5.4
	9.8nm,0.3s,baz=331,slow=19,SNR=3.8						
BATI	**Baumata**	11.28	112	P	P	12 59 20.4	-1.7
	880nm26nm,0.5s						
SPMM	**Sapulut**	11.34	18	P	P	12 59 24.0	+1.3
SOEI	**Soe**	11.71	108	P	P	12 59 24.3	-2.2
	1μm61nm,0.6s						
GTOI	**Gorontalo**	12.05	56	P	P	12 59 28.3	-1.6
	2μm94nm,0.9s						
MYKOM	**Kota Tinggi**	12.09	311	P	P	12 59 31.1	+0.9
MYKOM	**Kota Tinggi**	12.09	311	P	P	12 59 31.0	+0.7
MYLDM	**Lahad Datu**	12.53	26	P	P	12 59 37.8	+3.0
KKM	**Kota Kinabalu**	12.54	15	P	P	12 59 34.4	-0.6
SDSI	**Sungai Dareh**	12.67	294	P	P	12 59 35.4	-0.8
	14nm,1.1s						
BKNI	**Bangkinang**	13.58	298	P	P	12 59 46.6	+1.1
NLAI	**Namlea**	14.34	79	P	P	12 59 51.4	-1.7
	79nm,0.8s						
TNTI	**Ternate**	15.90	65	P	P	13 00 09.4	+1.5
TNTI	**Ternate**	15.90	65	P	P	13 00 09.3	+1.5
	122nm,1.0s						
IPM	**Ipoh**	15.97	311	P	P	13 00 09.9	+1.5
IPM				IAmb	IAmb	13 00 10.6	
	comp=Z,27nm,0.7s						
IPM	**Ipoh**	15.97	311	P	P	13 00 10.0	+1.5
GIRL	**Giralia**	16.43	176	P	P	13 00 14.0	+1.6
	baz=16,SNR=9.4						
GIRL	**Giralia**	16.43	176	P	P	13 00 13.9	+1.4
RPSI	**Rantau Prapat**	16.59	302	P	P	13 00 15.2	+1.1
PSI	**Prapat**	16.65	302	P	P	13 00 15.2	+0.4
	comp=Z,5.2nm,0.3s,baz=179,slow=2.7,SNR=14						
PSI				S	S	13 02 57.5	-3.5
	comp=Z,0.4nm,0.3s,baz=180,slow=20,SNR=1.5						
PSA00	**Pilbara Seismi**	16.69	157	P	P	13 00 15.0	+0.1
PSA00	**Pilbara Seismi**	16.69	157	P	P	13 00 16.2	+1.3
PSA00				IAmb	IAmb	13 00 17.5	
	comp=Z,85nm,0.8s						
KULM	**Kulim**	16.78	312	P	P	13 00 17.0	+1.1
FITZ	**Fitzroy Crossi**	17.11	135	P	P	13 00 19.4	+0.7
	baz=17,SNR=52						
FITZ	**Fitzroy Crossi**	17.11	135	P	P	13 00 19.1	+0.4
	comp=Z,2.7nm,0.3s,baz=311,slow=5.4,SNR=97						
FITZ				S	S	13 03 07.1	-1.0
	comp=Z,0.2nm,0.3s,baz=232,slow=17,SNR=2.4						
FITZ	**Fitzroy Crossi**	17.11	135	P	P	13 00 19.6	+0.9
SAUI	**Saumlaki**	18.24	97	P	P	13 00 29.7	+0.6
SWI	**Sorong**	18.96	75	P	P	13 00 35.8	+0.1
	comp=Z,55nm,0.8s						
SIJI	**Sorong**	18.96	75	P	P	13 00 36.2	+0.5
	comp=Z,4.1nm,0.3s,baz=265,slow=5.7,SNR=21						
MTN	**Manton Dam**	19.06	112	P	P	13 00 36.5	0.0
	baz=19,SNR=74						
MTN	**Manton Dam**	19.06	112	P	P	13 00 36.6	0.0
FAKI	**Fak Fak**	19.45	81	P	P	13 00 40.6	+0.5
FAKI	**Fak Fak**	19.45	81	P	P	13 00 40.5	+0.4
KDU	**Kakadu**	20.25	110	P	P	13 00 47.1	-0.3
	baz=20,SNR=56						
MEEK	**Meekatharra**	21.05	166	P	P	13 00 55.0	+0.5
	baz=21,SNR=31						
MORW	**Morawa**	22.96	173	P	P	13 01 12.4	+1.0
	baz=23,SNR=28						
MORW	**Morawa**	22.96	173	P	P	13 01 12.5	+1.0
BLDU	**Ballidu**	24.57	172	P	P	13 01 26.3	+0.6
	baz=25,SNR=23						
WB0	**Warramunga Arr**	24.79	125	P	P	13 01 28.1	+0.3
WB0				IAmb	IAmb	13 01 28.5	
	comp=Z,8.8nm,0.7s						
WRA	**Warramunga Arr**	24.84	125	P	P	13 01 28.4	+0.1
	comp=Z,8.3nm,0.4s,baz=308,slow=9.2,SNR=98						
WRA				PcP	PcP	13 04 44.0	+0.1
	comp=Z,3.2nm,0.6s,baz=299,slow=1.9,SNR=10						
WRA				S	S	13 05 04.8	-6.2
	comp=Z,7.2nm,0.9s,baz=294,slow=15,SNR=12						
WRA				ScP	ScP	13 07 27.6	-0.5
	comp=Z,3.0nm,0.5s,baz=312,slow=2.3,SNR=12						
WRA				PKiKP	PKiKP	13 12 23.2	-1.4
	comp=Z,0.7nm,1.0s,baz=303,slow=1.5,SNR=2.4						
WRA	**Warramunga Arr**	24.84	125	P	P	13 01 28.1	-0.1
WRAB	**Tennant Creek**	24.84	125	P	P	13 01 29.0	+0.8
WRAB				IAmb	IAmb	13 01 29.5	
	comp=Z,19nm,1.1s						
WB2	**Warramunga Arr**	24.85	125	P	P	13 01 28.7	+0.4
WC3	**Warramunga Arr**	24.87	125	P	P	13 01 29.1	+0.5
	baz=25						
WR0	**Warramunga Arr**	25.01	125	P	P	13 01 30.3	+0.6
KLBR	**Kellerberrin**	25.68	171	P	P	13 01 36.1	+0.7
	baz=26,SNR=41						
MUN	**Mundaring**	25.86	174	P	P	13 01 37.8	+0.8
	baz=26,SNR=14						
KMBL	**Kambalda**	26.41	163	P	P	13 01 42.6	+0.7
	baz=26,SNR=8.3						
AS31	**Alice Springs**	26.58	133	P	P	13 01 44.3	+0.7
ASAR	**Alice Springs**	26.58	133	P	P	13 01 44.1	+0.5
	comp=Z,8.4nm,0.5s,baz=313,slow=8.6,SNR=299						
ASAR				PcP	PcP	13 04 48.4	+0.5
	comp=Z,5.1nm,0.4s,baz=327,slow=2.2,SNR=21						
ASAR				S	S	13 05 33.5	-4.7
	comp=Z,4.5nm,0.6s,baz=311,slow=15,SNR=8.8						
ASAR				ScP	ScP	13 07 33.0	-0.2
	comp=Z,2.9nm,0.8s,baz=324,slow=3.0,SNR=9.3						
ASAR				PKiKP	PKiKP	13 12 24.4	-1.2
	comp=Z,0.2nm,0.3s,baz=333,slow=1.0,SNR=5.7						
ASAR	**Alice Springs**	26.58	133	P	P	13 01 44.0	+0.4
NWAO	**Narrogin (SRO)**	26.92	172	P	P	13 01 47.2	+0.9
	baz=27,SNR=24						
NWAO	**Narrogin (SRO)**	26.92	172	P	P	13 01 47.0	+0.7
	comp=Z,26nm,0.8s,baz=356,slow=8.2,SNR=33						
NWAO	**Narrogin (SRO)**	26.92	172	P	P	13 01 47.4	+1.1
NWAO	**Narrogin (SRO)**	26.92	172	P	P	13 01 47.2	+0.9
NWAO				IAmb	IAmb	13 01 48.0	
	comp=Z,52nm,1.2s						
CM04	**Chiang Mai Arr**	28.06	331	P	P	13 01 58.0	+1.5
CM05	**Chiang Mai Arr**	28.08	331	P	P	13 01 58.7	+2.1
CM01	**Chiang Mai Arr**	28.09	331	P	P	13 01 58.0	+1.3
CM09	**Chiang Mai Arr**	28.09	331	P	P	13 01 59.1	+2.4
CM36	**Chiang Mai Arr**	28.10	331	P	P	13 01 58.0	+1.2
CM02	**Chiang Mai Arr**	28.11	331	P	P	13 01 59.0	+2.2
CM13	**Chiang Mai Arr**	28.11	331	P	P	13 01 58.0	+1.1
CM31	**Chiang Mai Arr**	28.13	331	P	P	13 02 00.4	+3.4
CM31	**Chiang Mai Arr**	28.13	331	P	P	13 01 58.8	+1.8
CM31				IAmb	IAmb	13 02 00.1	
	comp=Z,15nm,1.2s						
CMAR	**Chiang Mai Arr**	28.13	331	P	P	13 01 58.5	+1.4
	comp=Z,10.0nm,1.1s,baz=160,slow=7.6,SNR=37						
CMAR				PcP	PcP	13 04 52.7	+0.9
	comp=Z,2.9nm,0.7s,baz=197,slow=2.7,SNR=7.1						
CMAR				ScP	ScP	13 07 38.9	+0.9
	comp=Z,1.3nm,0.9s,baz=171,slow=3.2,SNR=6.2						
CMAR	**Chiang Mai Arr**	28.13	331	P	P	13 01 58.1	+1.1
CM15	**Chiang Mai Arr**	28.13	331	P	P	13 01 59.1	+2.1
CM35	**Chiang Mai Arr**	28.21	331	P	P	13 01 59.0	+1.2
FORT	**Forrest**	28.27	152	P	P	13 01 59.5	+1.4
	baz=28,SNR=50						
FORT	**Forrest**	28.27	152	P	P	13 01 59.5	+1.4
CM32	**Chiang Mai Arr**	28.34	331	P	P	13 02 01.4	+2.6
CM34	**Chiang Mai Arr**	28.36	331	P	P	13 02 00.0	+0.9
MHMT	**Maesarieng**	28.40	329	P	P	13 02 02.0	+2.6
CHTO	**Chiang Mai**	28.43	331	P	P	13 01 59.7	0.0
CM33	**Chiang Mai Arr**	28.43	331	P	P	13 02 00.0	+0.3
QIS	**Mount Isa**	29.50	122	P	P	13 02 09.6	+0.7
	baz=30,SNR=16						
COEN	**Coen**	30.67	107	P	P	13 02 19.3	+0.3
COEN				IAmb	IAmb	13 02 19.9	
	comp=Z,15nm,0.8s						
KMI	**Kunming**	32.66	343	⇑P	P	13 02 39.5	+3.4
KMI				pmax	pmax		
	comp=Z,23nm,0.9s						
MTSU	**Mount Surprise**	32.77	114	P	P	13 02 37.9	+1.1
	baz=33,SNR=56						
GYA	**Guiyang**	33.01	350	⇑P	P	13 02 40.2	+1.4
GYA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PMG	**Port Moresby**	33.98	98	P	P	13 02 47.8	+0.8
PMG	**Port Moresby**	33.98	98	P	P	13 02 47.8	+0.8
BBOO	**Buckleboo**	34.11	144	P	P	13 02 48.4	+0.6
	baz=34,SNR=11						
BBOO	**Buckleboo**	34.11	144	P	P	13 02 48.1	+0.2
BBOO				IAmb	IAmb	13 03 10.2	
	comp=Z,12nm,0.9s						
CTAO	**Charters Tower**	35.11	116	P	P	13 02 57.8	+1.4
CTAO				IAmb	IAmb	13 02 58.5	
	comp=Z,23nm,1.1s						
QLP	**Quilpie**	36.01	128	P	P	13 03 05.2	+1.4
	baz=36,SNR=18						
HTT	**Hallett**	36.26	142	P	P	13 03 06.8	+1.1
	baz=36,SNR=20						
STKA	**Stephens Creek**	36.98	137	P	P	13 03 12.6	+1.0
	baz=37,SNR=39						
STKA	**Stephens Creek**	36.98	137	P	P	13 03 12.3	+0.7
	comp=Z,4.8nm,0.3s,baz=320,slow=7.2,SNR=46						
STKA				pP	pwP	13 04 52.9	-0.5
	comp=Z,3.0nm,0.7s,baz=299,slow=8.8,SNR=1.8						
STKA				PcP	PcP	13 05 16.8	+0.1
	comp=Z,3.6nm,0.5s,baz=26,slow=4.4,SNR=4.3						
STKA				S	S	13 08 14.6	-1.7
	comp=Z,5.8nm,0.8s,baz=246,slow=20,SNR=10						
STKA	**Stephens Creek**	36.98	137	P	P	13 03 12.6	+1.0
SHL	**Shillong**	37.64	328	P	P	13 03 18.1	+0.9
SHL				IAmb	IAmb	13 03 19.0	
	comp=Z,16nm,1.1s						
NJ2	**Nanjing**	38.41	8	*e*P	P	13 03 25.4	+2.3
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
CMSA	**Cobar Meteorol**	39.64	134	P	P	13 03 34.3	+1.2
	baz=40,SNR=33						
XAN	**Xi'an**	40.17	355	P	P	13 03 37.6	+0.3
XAN				pmax	pmax		
	comp=Z,12nm,0.9s						
ARPS	**Mount Arapiles**	40.27	143	P	P	13 03 39.1	+1.1
	baz=40,SNR=17						
EIDS	**Eidsvold**	41.10	122	P	P	13 03 46.0	+1.2
	baz=41,SNR=5.3						
EIDS	**Eidsvold**	41.10	122	P	P	13 03 45.9	+1.1
EIDS				IAmb	IAmb	13 03 57.3	
	comp=Z,21nm,1.2s						
TAPN	**Taplejung**	41.34	325	*e*P	P	13 03 47.9	+0.9
	comp=Z,13nm,0.6s						
TAPN	**Taplejung**	41.34	325	*e*P	P	13 03 47.9	+0.9
	comp=Z,34nm,0.9s						
LSA	**Lhasa**	41.38	331	P	P	13 03 49.0	+1.5
JNU	**Nakatsue**	42.60	22	P	P	13 03 56.0	-0.4
JNU				IAmb	IAmb	13 04 22.2	
	comp=Z,43nm,1.4s						
GUN	**Gumba**	42.82	324	*e*P	P	13 03 59.2	+0.5
	comp=Z,61nm,0.6s						
GUN	**Gumba**	42.82	324	*e*P	P	13 03 59.2	+0.5
	comp=Z,61nm,0.6s						
PKI	**Pulchoki**	42.85	323	*e*P	P	13 03 58.9	+0.1
	comp=Z,25nm,0.7s						
PKI	**Pulchoki**	42.85	323	*e*P	P	13 03 59.0	+0.1
	comp=Z,25nm,0.7s						
PKIN	**Phulchoki**	42.87	323	*e*P	P	13 03 58.9	0.0
	comp=Z,28nm,0.6s						
PKIN	**Phulchoki**	42.87	323	*e*P	P	13 03 58.9	0.0
	comp=Z,28nm,0.6s						
LZH	**Lanzhou**	42.90	349	⇓P	P	13 04 00.7	+1.8
LZH				pP	pP	13 05 44.1	+2.3
LZH				sP	sP	13 06 51.7	+4.3
LZH				pmax	pmax		
	comp=Z,14nm,1.0s						
TOO	**Toolangi**	43.01	141	P	P	13 04 01.9	+2.2
	baz=43,SNR=8.2						
TOO	**Toolangi**	43.01	141	P	P	13 04 01.9	+2.2
TOO				IAmb	IAmb	13 04 09.7	
	comp=Z,23nm,1.4s						
YNG	**Young**	43.04	135	P	P	13 04 01.3	+1.4
	baz=43,SNR=17						
DMN	**Daman**	43.06	323	*e*P	P	13 04 00.7	+0.3
	comp=Z,50nm,0.6s						
DMN	**Daman**	43.06	323	*e*P	P	13 04 00.7	+0.3
	comp=Z,50nm,0.6s						
KKN	**Kakani**	43.09	323	*e*P	P	13 04 00.8	+0.2
	comp=Z,17nm,0.6s						
KKN	**Kakani**	43.09	323	*e*P	P	13 04 00.8	+0.2
	comp=Z,17nm,0.6s						
ARMA	**Armidale**	43.55	129	P	P	13 04 06.4	+2.4
	baz=44,SNR=15						
CAN	**Canberra**	44.01	136	P	P	13 04 08.8	+1.4
CAN				IAmb	IAmb	13 04 15.1	
	comp=Z,32nm,1.3s						
DANN	**Dangsing**	44.42	322	*e*P	P	13 04 11.0	+0.1
	comp=Z,94nm,0.6s						
DANN	**Dangsing**	44.42	322	*e*P	P	13 04 11.0	+0.1
	comp=Z,94nm,0.6s						
MGCD	**Mangrove Creek**	44.43	132	P	P	13 04 12.9	+2.3
	baz=44,SNR=13						
KSAR	**Wonju Array Be**	45.55	17	P	P	13 04 20.7	+1.7
KSRS	**Korea Array**	45.57	17	P	P	13 04 19.8	+0.6
	comp=Z,4.9nm,0.9s,baz=200,slow=8.3,SNR=9.0						
KSRS				PcP	PcP	13 05 45.7	+0.6
	comp=Z,2.1nm,0.7s,baz=210,slow=2.4,SNR=5.1						
HHC	**Hu-ho-hao-te**	46.80	358	*e*P	P	13 04 28.3	-0.3
HHC				pmax	pmax		
	comp=Z,9.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,57nm,6.6s						
GTA	**Gaotai**	46.96	346	⇑P	P	13 04 31.7	+1.9
GTA				PcP	PcP	13 05 51.0	+0.7
GTA				pP	pP	13 06 19.9	+4.4
GTA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MAT	**Matsushiro**	48.60	27	P	P	13 04 41.0	-1.0
MJAR	**Matsushiro Arr**	48.60	27	P	P	13 04 40.8	-1.2
	comp=Z,7.1nm,0.8s,baz=197,slow=8.0,SNR=14						
MJAR				PcP	PcP	13 05 56.7	+0.5
	comp=Z,4.0nm,1.0s,baz=198,slow=4.8,SNR=4.8						
JMM	**Marumori**	50.88	28	P	P	13 04 58.1	-0.4
JMM				IAmb	IAmb	13 04 58.9	
	comp=Z,18nm,0.8s						
MDJ	**Mudanjiang**	52.71	15	P	P	13 05 11.6	+0.1
USA0B	**Ussuriysk Arra**	52.98	17	P	P	13 05 13.5	+0.1
USA0B				IAmb	IAmb	13 05 14.3	
	comp=Z,13nm,0.8s						
USRK	**Ussuriysk Ar.**	52.98	17	P	P	13 05 13.4	-0.1
	comp=Z,11nm,0.7s,baz=198,slow=5.0,SNR=20						
USRK	**Ussuriysk Ar.**	52.98	17	P	P	13 05 13.7	+0.3
ULN	**Ulaanbaatar**	54.05	355	P	P	13 05 21.4	+0.2
SONM	**Songino Array**	54.08	355	P	P	13 05 21.3	-0.1
	comp=Z,4.2nm,0.3s,baz=174,slow=9.0,SNR=41						
SONM				PcP	PcP	13 06 16.8	0.0
	comp=Z,3.2nm,0.8s,baz=169,slow=4.9,SNR=6.9						
SONM				ScP	ScP	13 09 19.6	+0.2
	comp=Z,1.1nm,1.0s,baz=166,slow=5.2,SNR=2.8						
SONM	**Songino Array**	54.08	355	P	P	13 05 21.7	+0.3
NIL	**Nilore**	54.64	319	P	P	13 05 24.1	-1.3
NIL				IAmb	IAmb	13 05 25.0	
	comp=Z,14nm,0.6s						
WMQ	**Urumqi**	54.76	338	*e*P	P	13 05 27.2	+1.1
WMQ				pmax	pmax		
	comp=Z,26nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,160nm,4.5s						
KSH	**Kashi**	56.88	326	P	P	13 05 40.5	-0.4
KSH				PcP	PcP	13 06 29.2	+1.2
KSH				S	S	13 12 46.0	-5.1
KSH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KSH				pmax	pmax		
	comp=Z,96nm,5.0s						
SHLS	**Shalkode**	57.74	331	*e*P	P	13 05 45.8	-0.9
	comp=Z,14nm,0.7s,baz=331						
SHLS				*e*S	S	13 12 58.6	-3.3
	baz=331						
UZB	**Uzynbulak**	57.95	331	*e*P	P	13 05 48.1	0.0
	baz=331						
UZB				*e*S	S	13 13 03.6	-0.9
	baz=331						
KBL	**Kabul**	57.96	317	P	P	13 05 47.4	-1.0
SATY	**Saty**	58.18	331	*e*P	P	13 05 49.8	+0.1
	baz=330						
SATY				*e*S	S	13 13 06.5	-0.9
	baz=330						
KPKS	**Kokpek**	58.35	331	*e*P	P	13 05 50.5	-0.2
	comp=Z,11nm,0.9s,baz=331						
KPKS				*e*S	S	13 13 08.4	-1.1
	baz=331						
TNSS	**Tian-Shan**	58.88	330	*e*P	P	13 05 54.5	-0.3
	baz=329						
ZSN	**Zaisan**	58.89	338	*e*P	P	13 05 54.3	+0.1
	baz=338						
MDOK	**Medeo**	58.92	330	*e*P	P	13 05 54.6	-0.1
	baz=330						
MDOK				*e*S	S	13 13 15.8	-1.0
	baz=330						
AAA	**Alma-Ata**	59.02	330	*e*P	P	13 05 55.4	+0.2
	baz=330						
YSS	**Yuzh-Sakhalins**	59.09	23	P	P	13 05 55.5	0.0
YSS				IAmb	IAmb	13 05 56.1	
	comp=Z,23nm,0.5s						
MTBS	**Maitube**	59.21	329	*e*P	P	13 05 56.3	-0.2
	baz=329						
MK31	**Makanchi Array**	59.35	336	P	P	13 05 57.3	+0.1
MKAR	**Makanchi Array**	59.35	336	P	P	13 05 57.5	+0.2
	comp=Z,6.5nm,0.5s,baz=149,slow=7.4,SNR=109						
MKAR				PcP	PcP	13 06 37.8	+0.2
	comp=Z,2.6nm,0.7s,baz=138,slow=5.8,SNR=5.6						
MKAR				pP	pP	13 07 52.0	+1.3
	comp=Z,1.6nm,0.8s,baz=134,slow=6.9,SNR=4.6						
MKAR				S	S	13 13 22.0	+0.2
	comp=Z,0.8nm,0.9s,baz=159,slow=12,SNR=6.6						
MKAR	**Makanchi Array**	59.35	336	P	P	13 05 57.2	-0.1
CHKK	**Chushkaly**	59.46	330	*e*P	P	13 05 57.3	-0.8
	baz=330						
TKM2	**Tokmak 2**	59.49	329	P	P	13 05 58.6	+0.1
	SNR=17						
MAKZ	**Makanchi**	59.49	336	P	P	13 05 57.9	-0.3
UCH	**Uchtor**	59.57	328	P	P	13 05 59.7	+0.4
	SNR=5.8						
KBK	**Karagaybulak**	59.64	328	P	P	13 05 59.8	+0.4
	SNR=14						
TDK	**Taldyqorghan**	59.64	332	*e*P	P	13 05 59.1	-0.1
	comp=Z,26nm,0.6s,baz=332						
TDK				*e*S	S	13 13 24.7	-0.8
	baz=332						
KUU	**Kurty**	59.81	330	*e*P	P	13 05 59.9	-0.5
	comp=Z,9.9nm,0.5s,baz=330						
AAK	**Ala-Archa**	59.86	328	P	P	13 06 01.6	+0.7
	SNR=12						
AAK	**Ala-Archa**	59.86	328	P	P	13 06 00.9	0.0
EKS2	**Erkin-Say**	60.26	328	P	P	13 06 04.3	+0.7
	SNR=19						
USP	**Ospenovka**	60.30	328	P	P	13 06 03.8	+0.1
	SNR=7.9						
SGDS	**Sogindy**	60.36	329	*e*P	P	13 06 03.6	-0.5
	baz=328						
WSAR	**Wadi Sarin**	60.60	301	P	P	13 06 05.4	-0.6
	comp=Z,11nm,0.7s,baz=132,slow=5.1,SNR=8.1						
SOCY	**Socotra**	61.44	287	P	P	13 06 10.8	-1.0
SOCY				IAmb	IAmb	13 06 12.1	
	comp=Z,23nm,0.9s						
DZA	**Taraz**	61.74	326	*e*P	P	13 06 12.6	-0.5
	baz=326						
IUG	**Iuzhnay**	61.99	325	*e*P	P	13 06 14.8	0.0
	baz=325						
KK31	**Karatay Array**	62.34	326	P	P	13 06 16.3	-0.6
KKAR	**Karatay Array**	62.34	326	P	P	13 06 16.3	-0.6
KKAR	**Karatay Array**	62.34	326	P	P	13 06 16.4	-0.5
KKAR				IAmb	IAmb	13 06 18.2	
	comp=Z,3.3nm,0.7s						
SEM	**Semipalatinsk**	63.06	337	*e*P	P	13 06 20.8	-0.8
	comp=Z,6.4nm,0.7s,baz=337						
SEM				*e*S	S	13 14 05.5	-2.2
	baz=337						

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KURBB Kurchatov Arra    63.91 336  pP      pP      13 08 23.4 +0.7
      comp=Z,2.6nm,0.8s,baz=150,slow=5.9,SNR=9.0
KURK  Kurchatov         63.94 336  P       P       13 06 26.7 -0.3
ZAA0  Zalesovo Array    64.41 342  P       P       13 06 29.3 -0.5
ZALV  Zalesovo Beam     64.41 342  P       P       13 06 29.2 -0.6
      comp=Z,5.0nm,0.3s,baz=146,slow=4.4,SNR=36
ZALV                               pP      pP      13 08 27.1 +1.0
      comp=Z,6.8nm,0.7s,baz=153,slow=4.7,SNR=17
ZALV                               S       S       13 14 20.7 -2.6
      comp=Z,1.7nm,0.7s,baz=150,slow=12,SNR=6.9
BKZ   Black Stump Fm    65.66 130  P       P       13 06 38.7 +0.5
BKZ                                IAmb    IAmb    13 06 39.0
      comp=Z,44nm,1.1s
BRZS  Berezniki         65.93 333  eP      P       13 06 39.1 -0.4
      baz=333
GEYT  Alibeck           67.24 315  P       P       13 06 48.1 +0.3
      comp=Z,16nm,0.7s,baz=145,slow=6.2,SNR=22
GYA0B ALIBECK ARRAY     67.24 315  P       P       13 06 48.0 +0.2
GYA0B                              IAmb    IAmb    13 06 49.4
      comp=Z,22nm,0.8s
BRVK  Borovoye          69.16 334  P       P       13 06 58.8 -0.3
YAK   Yakutsk           69.21   8  P       P       13 06 58.9 -0.2
PETK  Petropavlovsk-    70.06  27  P       P       13 07 04.9 +0.5
      comp=Z,6.5nm,0.4s,baz=156,slow=1.2,SNR=79
ABKAR Akbulak array     71.89 327  P       P       13 07 15.1 -0.1
ABKAR Akbulak array     71.89 327  P       P       13 07 15.2  0.0
ABKAR                              IAmb    IAmb    13 07 16.0
      comp=Z,25nm,0.8s
MA2   Magadan           72.05  19  P       P       13 07 16.3 +0.4
MA2                                IAmb    IAmb    13 07 17.3
      comp=Z,16nm,0.8s
RAYN  Ar Rayn           72.13 297  P       P       13 07 16.7 -0.6
RAYN                               IAmb    IAmb    13 07 17.6
      comp=Z,9.6nm,0.8s
AKTO  Aktyubinsk        73.58 327  P       P       13 07 24.9  0.0
      comp=Z,8.4nm,0.6s,baz=121,slow=7.4,SNR=25
KMBO  Kilima Mbogo      75.72 270  P       P       13 07 38.7 +0.8
      comp=Z,4.5nm,0.5s,baz=61,slow=11,SNR=10
VNDA  Vanda             75.73 170  P       P       13 07 37.3 +0.8
      comp=Z,2.6nm,0.4s,baz=311,slow=5.6,SNR=17
ARU   Arti              76.56 332  P       P       13 07 39.7 -1.6
ARU                                IAmb    IAmb    13 07 42.7
      comp=Z,24nm,1.2s
NRIK  Noril'sk          77.36 351  P       P       13 07 44.9 -0.5
      comp=Z,4.6nm,0.5s,baz=157,slow=5.6,SNR=8.9
NRIK  Noril'sk          77.36 351  P       P       13 07 44.9 -0.5
NRIK                               IAmb    IAmb    13 07 46.9
      comp=Z,16nm,1.2s
TIXI  Tiksi             78.36   5  P       P       13 07 50.0 -0.7
TIXI                               IAmb    IAmb    13 07 50.9
      comp=Z,21nm,0.8s
MARD  Mardin            79.77 310  P       P       13 07 59.3 +0.2
MARD                               IAmb    IAmb    13 08 00.4
      comp=Z,12nm,0.6s
KBZ   Khabaz            80.11 316  P       P       13 08 00.6  0.0
      comp=Z,7.1nm,0.8s,baz=186,slow=12,SNR=12
KBZ                                pP      pP      13 10 03.6 -0.4
      comp=Z,2.4nm,0.9s,baz=141,slow=6.5,SNR=3.2
BELG  Belogornoye       80.24 326  P       P       13 08 00.6 -0.4
      comp=Z,33nm,0.9s,baz=135,slow=2.9,SNR=14
KOPT  Kop Dagi          80.73 312  P       P       13 08 05.5 +1.3
KOPT                               IAmb    IAmb    13 08 07.5
      comp=Z,12nm,0.9s
KIRV  Kirov             81.91 332  P       P       13 08 09.5 +0.1
      comp=Z,21nm,0.7s,baz=129,slow=0.9,SNR=8.8
MBAR  Mbarara           82.25 270  P       P       13 08 13.0 +0.6
      comp=Z,9.9nm,0.6s,baz=79,slow=7.9,SNR=17
MBAR  Mbarara           82.25 270  P       P       13 08 13.2 +0.8
MBAR                               IAmb    IAmb    13 08 14.0
      comp=Z,12nm,0.7s
EIL   Elat              82.73 301  P       P       13 08 15.0 +0.7
      comp=Z,9.2nm,0.9s,baz=46,slow=3.8,SNR=5.0
MMAI  Mount Meron Ar    83.02 304  P       P       13 08 16.4 +0.6
      comp=Z,6.5nm,0.8s,baz=116,slow=7.5,SNR=4.9
LSZ   Lusaka            83.42 255  P       P       13 08 18.5 +0.3
LSZ                                IAmb    IAmb    13 08 19.6
      comp=Z,18nm,0.8s
QSPA  South Pole Qui    83.81 180  P       P       13 08 19.5 +0.4
QSPA                               IAmb    IAmb    13 08 20.0
      comp=Z,6.4nm,0.8s
BOSA  Boshof            85.12 242  P       P       13 08 26.9 +0.6
      comp=Z,6.0nm,0.7s,baz=83,slow=4.0,SNR=1.9
BOSA  Boshof            85.12 242  IAmb    IAmb    13 08 28.2
      comp=Z,7.0nm,0.8s
BR131 Keskin Array S    85.78 311  P       P       13 08 28.8 -0.3
BR131                              IAmb    IAmb    13 08 29.9
      comp=Z,17nm,0.8s
BRTR  Keskin Array B    85.78 311  P       P       13 08 28.9 -0.3
      comp=Z,9.0nm,0.8s,baz=131,slow=6.2,SNR=40
BRTR                               pP      pP      13 10 33.9 -1.1
      comp=Z,1.4nm,0.8s,baz=157,slow=4.7,SNR=5.7
BRTR  Keskin Array B    85.78 311  P       P       13 08 29.1 -0.1
KLMR  Klimovskoe        87.40 332  eP      P       13 08 34.4 -1.7
KLMR                               AMP             13 08 36.1
      comp=Z,7.0nm,0.6s
KLMR                               epP     pP      13 10 41.3 -1.2
GAMB  Gambell           89.05  25  P       P       13 08 43.8 +0.1
GAMB                               IAmb    IAmb    13 08 45.6
      comp=Z,8.6nm,1.1s
AKASG Malin Array Be    90.80 321  P       P       13 08 51.0 -1.1
      comp=Z,2.9nm,0.7s,baz=84,slow=4.6,SNR=13
AKASG                              pP      pP      13 10 57.8 -1.6
      comp=Z,0.4nm,0.4s,baz=95,slow=4.8,SNR=2.4
AKASG Malin Array Be    90.80 321  P       P       13 08 50.9 -1.1
SNAA  Sanae             92.06 197  P       P       13 08 58.9 +1.2
FINES FINESS Array B    93.90 331  P       P       13 09 05.2 -0.8
      comp=Z,5.1nm,0.7s,baz=92,slow=5.7,SNR=13
FINES                              PKiKP   PKiKP   13 13 45.9 -0.6
      comp=Z,1.7nm,0.9s,baz=90,slow=1.5,SNR=3.7
ARCES ARCESS Array B    94.85 339  P       P       13 09 09.0 -1.3
      comp=Z,4.8nm,1.1s,baz=90,slow=3.6,SNR=5.3
ARCES                              PKiKP   PKiKP   13 13 47.9 -0.2
      comp=Z,5.4nm,1.1s,baz=64,slow=2.1,SNR=1.4
SPITS Spitsbergen Ar    97.36 348  P       Pdif    13 09 20.7 -0.7
      comp=Z,25nm,1.0s,baz=69,slow=7.9,SNR=5.0
MLY   Manley            98.19  25  P       P       13 09 25.9 +0.4
      baz=273
CAPN  Captain Cook N    98.20  30  P       P       13 09 26.0 +0.6
      baz=272
COLD  Coldfoot          98.28  23  P       P       13 09 26.4 +0.7
      baz=274
TOLK  Toolik Lake Re    98.41  22  P       P       13 09 26.9 +0.6
      baz=275
I23K  Minto, Yukon-K    98.77  25  P       P       13 09 28.9 +1.0
      baz=274
ILAR  Eielson Array     99.85  25  P       Pdif    13 09 31.2 -1.5
      comp=Z,0.2nm,0.8s,baz=269,slow=3.6,SNR=2.1
ILAR                               PKKPbc  PKKPbc  13 25 50.2 -2.5
      comp=Z,0.5nm,0.7s,baz=69,slow=1.5,SNR=5.9
N25K  Chitina, Valde   101.28  28  P       Pdif    13 09 39.9 +0.6
      baz=278
TORD  Torodi Ar. Bea   112.10 282  PKiKP   PKiKP   13 14 20.8 -0.5
      comp=Z,2.3nm,0.6s,baz=98,slow=1.1,SNR=10
YKA   Yellowknife Ar   113.93  22  PKiKP   PKiKP   13 14 22.9 -0.4
      comp=Z,1.8nm,0.7s,baz=326,slow=1.2,SNR=34
YKA                                PKKPbc  PKKPbc  13 25 06.5 -2.9
      comp=Z,0.5nm,0.8s,baz=118,slow=2.9,SNR=6.1
ESDC  Sonseca Array    114.58 311  PKP     PKiKP   13 14 25.4  0.0
      comp=Z,0.9nm,0.6s,baz=26,slow=3.4,SNR=3.2
D03D  Eldon            117.02  39  P       PKiKP   13 14 30.1 +0.3
      baz=292
B05A  Bryant           117.35  38  P       PKiKP   13 14 30.8 +0.4
      baz=293
KIC   Kosan Boka       118.16 274  ePKIKP  PKPdf   13 14 32.2 -0.7
      comp=Z,7.8nm,0.8s
DBIC  Dimbokro         118.29 274  PKP     PKPdf   13 14 32.8 -0.4
      comp=Z,4.6nm,0.6s,baz=143,slow=1.0,SNR=6.1
LIC   Lamto            118.43 274  ePKIKP  PKPdf   13 14 32.5 -0.9
      comp=Z,22nm,0.5s
TIC   Toumodi          118.45 274  ePKIKP  PKPdf   13 14 32.7 -0.8
I04A  Tendick Farm,    118.83  43  P       PKiKP   13 14 33.9 +0.4
      baz=291
J04D  Umpqua Nationa   119.23  43  P       PKiKP   13 14 35.0 +0.4
      baz=291
YBH   Yreka Blue Hor   119.33  45  PKP     PKiKP   13 14 36.2 +1.6
      comp=Z,0.7nm,0.5s,baz=225,slow=2.9,SNR=2.2
M02C  Callahan         119.35  46  P       PKiKP   13 14 35.4 +0.8
      baz=289
I05D  Terrebonne, OR   119.35  42  P       PKiKP   13 14 35.2 +0.7
      baz=292
L04D  Klamath Falls    119.45  45  P       PKiKP   13 14 35.2 +0.3
      baz=290
N02D  Trinity Center   119.59  46  P       PKiKP   13 14 35.9 +0.8
      baz=289
O02D  Mt. Diablo Mer   119.79  47  P       PKiKP   13 14 36.5 +0.9
      baz=289
J05D  Fort Rock, OR    119.81  43  P       PKiKP   13 14 36.3 +0.7
      baz=292
PINE  Pine Mountain    119.82  42          PKiKP   13 14 36.4 +0.8
M04C  Macdoel          119.93  45  P       PKiKP   13 14 36.8 +0.9
      baz=290
NEW   Newport          120.35  36  PKP     PKiKP   13 14 37.6 +1.3
      comp=Z,1.7nm,0.7s,baz=328,slow=6.5,SNR=4.1
NEW   Newport          120.35  36  P       PKiKP   13 14 37.6 +1.3
      baz=298
O03E  Paynes Creek     120.46  46  P       PKPdf   13 14 36.8 +0.1
      baz=290
MOD   Modoc Plateau    120.96  44          PKiKP   13 14 38.9 +1.0
F10A  Beach Ranch, E   121.33  39          PKiKP   13 14 39.1 +0.7
BEKR  Beckworth        121.65  47          PKiKP   13 14 40.1 +0.7
WVOR  Wild Horse Val   121.90  43          PKiKP   13 14 40.8 +1.1
PAHR  Pah Rah Range    122.41  46          PKiKP   13 14 41.8 +1.0
PNTR  Pine Nut         122.47  47          PKiKP   13 14 42.5 +1.4
MSO   Missoula         122.93  37  P       PKiKP   13 14 41.5 -0.1
      baz=300
MSO   Missoula         122.93  37  PKPdf   PKiKP   13 14 41.8 +0.2
MFID  Camas Ranch      123.36  41  PKPdf   PKiKP   13 14 43.8 +1.2
LHV   Little Huntoon   123.57  48          PKiKP   13 14 44.3 +1.4
KVN   Kaiserville      123.57  47          PKiKP   13 14 44.2 +1.0
NVAR  Mina Array Bea   123.65  47  PKP     PKiKP   13 14 44.5 +1.1
      comp=Z,1.8nm,0.7s,baz=298,slow=1.9,SNR=18
NVAR                               PKKPbc  PKKPab  13 24 34.3  0.0
      comp=Z,0.5nm,0.7s,baz=136,slow=5.1,SNR=5.5
NVAR  Mina Array Bea   123.65  47  PKPdf   PKiKP   13 14 44.7 +1.3
VES   Vestal, Richgr   123.95  51  P       PKiKP   13 14 44.0 +0.2
      baz=289
FFC   Flin Flon        124.02  24  PKPdf   PKiKP   13 14 43.6 +0.3
HLID  Hailey           124.21  40  P       PKiKP   13 14 45.1 +0.8
      baz=298
HLID  Hailey           124.21  40  PKPdf   PKiKP   13 14 45.5 +1.2
SNCC  San Nicolas Is   124.41  54  P       PKiKP   13 14 45.6 +0.8
      baz=287
DLMT  Dillon           124.48  38  PKPdf   PKiKP   13 14 44.6 -0.1
ISA   Isabella, Lake   124.48  51  P       PKiKP   13 14 45.5 +0.5
      baz=289
CWC   Cottonwood Cre   124.52  50  P       PKiKP   13 14 45.7 +0.6
      baz=290
EGMT  Eagleton         124.69  34  P       PKiKP   13 14 45.4 +0.4
      baz=305
EGMT  Eagleton         124.69  34  PKPdf   PKiKP   13 14 45.6 +0.6
ELK   Elko             124.92  44  PKP     PKiKP   13 14 46.6 +0.7
      comp=Z,2.6nm,0.3s,baz=308,slow=2.5,SNR=16
ELK   Elko             124.92  44  PKPdf   PKiKP   13 14 47.0 +1.1
BOZ   Bozeman (W)      124.94  37  P       PKiKP   13 14 46.1 +0.5
      baz=302
BOZ   Bozeman (W)      124.94  37          PKiKP   13 14 46.4 +0.7
MPMC  Manual Prospec   125.10  50  P       PKiKP   13 14 47.6 +1.3
      baz=290,SNR=5.7
EDW2  Edwards Air Fo   125.11  51  P       PKiKP   13 14 47.3 +1.0
      baz=289
LRMC  Laurel Mtn Rad   125.15  51  P       PKiKP   13 14 47.2 +0.8
      baz=290
FURC  Furnace Creek,   125.43  49  P       PKiKP   13 14 48.1 +1.4
      baz=291
BFSC  Mount Baldy Ra   125.58  52  P       PKiKP   13 14 47.9 +0.7
      baz=289
YHL   Hebgen Lake      125.60  38          PKiKP   13 14 48.9 +1.7
YHB   Horse Butte      125.64  38          PKiKP   13 14 48.2 +1.1
TPNV  Topopah Spring   125.71  48  P       PKiKP   13 14 48.2 +0.7
      baz=292
YMR   Madison River    125.83  38          PKiKP   13 14 49.6 +2.0
YHH   Holmes Hill      125.83  37  PKPdf   PKiKP   13 14 48.8 +1.1
GSC   Goldstone, Bar   125.88  50  P       PKiKP   13 14 49.0 +1.2
      baz=290
SHOC  Shoshone, Teco   126.08  50  P       PKiKP   13 14 49.1 +1.0
      baz=291
HVU   Hansel Valley    126.11  42  PKPdf   PKiKP   13 14 49.1 +1.0
PRN   Pahroc Range     126.42  47          PKiKP   13 14 50.4 +1.6
REDW  Red Top Meadow   126.57  39          PKiKP   13 14 50.0 +0.9
RLMT  Red Lodge        126.60  36  P       PKiKP   13 14 50.1 +1.1
      baz=304
LOHW  Long Hollow      126.60  39          PKiKP   13 14 49.1  0.0
PFO   Pinyon Flats O   126.73  52  PKP     PKiKP   13 14 50.4 +0.8
      comp=Z,2.8nm,0.9s,baz=193,slow=2.3,SNR=6.6
PFO   Pinyon Flats O   126.73  52  P       PKiKP   13 14 50.5 +0.9
      baz=290
TPFO  Pinon Flats      126.73  52  P       PKiKP   13 14 50.4 +0.8
      baz=290
DUG   Dugway, Tooele   126.82  43  P       PKiKP   13 14 50.7 +1.1
      baz=297
GMRC  Granite Mounta   126.94  51  P       PKiKP   13 14 51.6 +1.7
      baz=291,SNR=5.9
MONP2 Monument Peak    126.99  53  P       PKiKP   13 14 51.0 +0.8
      baz=289
IKP   In-Ko-Pah, Jac   127.32  53  P       PKiKP   13 14 51.7 +1.0
      baz=289
DGMT  Dagmar           127.35  30  P       PKiKP   13 14 51.1 +0.9
      baz=311
LAO   LASA Array       127.41  33  P       PKiKP   13 14 51.5 +1.1
      baz=308
LAO   LASA Array       127.41  33  PKPdf   PKiKP   13 14 50.7 +0.2
BW06  Boulder Array    127.69  39  P       PKiKP   13 14 51.6 +0.2
      baz=302
BW06  Boulder Array    127.69  39          PKiKP   13 14 51.6 +0.2
PDAR  Pinedale Array   127.69  39  PKP     PKiKP   13 14 51.4  0.0
      comp=Z,0.6nm,0.5s,baz=132,slow=0.9,SNR=14
U15A  North Rim        128.84  47  PKPdf   PKiKP   13 14 55.3 +1.4
SRU   San Rafael Swe   128.89  44          PKiKP   13 14 54.7 +0.8
K22A  Casper           129.62  38  P       PKiKP   13 14 55.6 +0.4
      baz=305
ULM   Lac du Bonnet    129.84  24  PKP     PKPdf   13 14 53.9 -0.4
      comp=Z,2.5nm,0.6s,baz=29,slow=2.0,SNR=8.5
ULM                                SKPbc   SKPbc   13 17 21.6 -1.1
      comp=Z,5.3nm,0.8s,baz=316,slow=4.2,SNR=11
ULM   Lac du Bonnet    129.84  24          PKiKP   13 14 54.7 -0.4
O20A  White River Ci   129.91  41  P       PKiKP   13 14 56.4 +0.5
      baz=301
RSSD  Black Hills      130.21  35  P       PKiKP   13 14 56.1 -0.3
      baz=308
RSSD  Black Hills      130.21  35          PKiKP   13 14 56.7 +0.3
PV14  Lion Creek, Pa   130.27  44          PKiKP   13 14 57.2 +0.5
PV02  Paradox Valley   130.55  44          PKiKP   13 14 58.6 +1.3
PV01  Paradox Valley   130.70  44          PKiKP   13 14 57.5 -0.1
W18A  Petrified Fore   131.28  48  P       PKiKP   13 14 58.6 -0.2
      baz=296
F33A  5 Mile Ranch,    133.03  28          PKiKP   13 15 02.3 +0.5
PLCA  Paso Flores      133.22 176  PKP     PKPdf   13 15 01.5 +0.4
      comp=Z,0.9nm,0.7s,baz=252,slow=6.4,SNR=3.4
EYMN  Ely              133.41  23  P       PKiKP   13 15 01.8 -0.6
      baz=326
ANMO  Albuquerque      133.74  46  PKP     PKiKP   13 15 03.5 -0.2
      comp=Z,2.2nm,0.9s,baz=210,slow=5.4,SNR=7.5
121A  Cookes Peak, D   133.86  50  P       PKPdf   13 15 03.2 +0.6
      baz=296
T25A  Trinidad         134.04  42  P       PKiKP   13 15 03.7 -0.6
      baz=303
ECSD  EROS Data Cent   134.43  30  P       PKiKP   13 15 04.3 -0.4
      baz=317
GDL2  Guadalupe Moun   136.59  48          PKPdf   13 15 07.8 +0.2
CLNB  Carlsbad         136.92  48          PKPdf   13 15 07.8 -0.4
JFWS  Jewell Farm      138.03  26  P       PKiKP   13 15 11.6 -0.4
      baz=324
TXAR  Lajitas Array    138.44  52  PKhKP   PKPpre  13 15 02.4
      comp=Z,0.9nm,0.6s,baz=250,slow=1.8,SNR=9.9
TXAR                               PKP     PKiKP   13 15 12.9 -0.5
      comp=Z,0.8nm,0.6s,baz=315,slow=1.5,SNR=6.4
D56A  ZEC Mazanza, M   138.72   8  P       PKiKP   13 15 13.3  0.0
      baz=348
D61A  St Aubert, Com   139.02   3  P       PKiKP   13 15 13.9  0.0
      baz=355
WMOK  Wichita Mounta   139.16  42  P       PKiKP   13 15 14.5 -0.1
      baz=307
E56A  St. Veronique    139.18   8  P       PKiKP   13 15 13.6 -0.6
      baz=348
ALGO  Algonquin Park   139.22  12  P       PKiKP   13 15 13.9 -0.4
      baz=343
ERPA  Erie             142.38  16  P       PKPdf   13 15 15.4 -2.2
      baz=339
L53A  Girard           142.46  16  P       PKPdf   13 15 15.6 -2.2
      baz=338
MIAR  Mount Ida        142.58  37  P       PKPdf   13 15 15.9 -2.3
      baz=313,SNR=9.8
J60A  Lant Hill Farm   142.64   8  P       PKPdf   13 15 16.0 -2.1
      baz=350
J61A  Chester          142.65   7  P       PKPdf   13 15 16.4 -1.7
      baz=351
K58A  Earlville        142.75  11  P       PKPdf   13 15 16.1 -2.2
      baz=346
K58A  Earlville        142.75  11          PKPdf   13 15 17.4 -0.9
M53A  WI Miller and    142.81  17  P       PKPdf   13 15 16.1 -2.4
      baz=337,SNR=8.4
J62A  Henniker         142.84   6  P       PKPdf   13 15 16.7 -1.7
      baz=352
J63A  Strafford        142.86   5  P       PKPdf   13 15 16.4 -2.0
      baz=353
W41B  Gary Mavity, V   142.93  35  P       PKPdf   13 15 16.2 -2.6
      baz=315
L56A  Greenwood        142.97  13  P       PKPdf   13 15 16.7 -2.0
      baz=342
L56A  Greenwood        142.97  13  PKPdf   PKPdf   13 15 16.8 -1.9
M54A  Oil Creek Stat   143.04  16  P       PKPab   13 15 16.6 +0.1
      baz=339,SNR=6.5
M54A  Oil Creek Stat   143.04  16          PKPbc   13 15 17.3 +0.3
CO03  El Pedregal      143.04 175          PKPbc   13 15 18.2 +0.8
X40A  Basin Creek Fa   143.06  37  P       PKPab   13 15 16.7 -0.1
      baz=314
P49A  Miami Univ. Ec   143.13  23  P       PKPab   13 15 17.0  0.0
      baz=330
P49A  Miami Univ. Ec   143.13  23          PKPbc   13 15 17.4  0.0
ACSO  Alum Creek Sta   143.17  21  P       PKPbc   13 15 17.3 -0.1
      baz=333
ACSO  Alum Creek Sta   143.17  21          PKPbc   13 15 17.7 +0.3
PARMO Parma            143.19  31          PKPbc   13 15 18.0 +0.4
K61A  Williamstown     143.22   8  P       PKPbc   13 15 17.7 +0.1
      baz=350
BINY  Binghamton       143.24  11  P       PKPbc   13 15 17.6  0.0
      baz=345
L57A  Andrews Acres    143.25  12  P       PKPab   13 15 17.5 +0.1
      baz=344,SNR=6.1
M55A  Ridgway          143.31  15          PKPbc   13 15 18.1 +0.2
N53A  Lisbon           143.35  18          PKPbc   13 15 18.0  0.0
K62A  Royalston        143.35   6  P       PKPbc   13 15 18.2 +0.3
      baz=351,SNR=5.6
K62A  Royalston        143.35   6          PKPbc   13 15 18.6 +0.6
K63A  Dunstable        143.41   6  P       PKPbc   13 15 18.3 +0.2
      baz=352
L58A  Harry Jones Me   143.41  11  P       PKPbc   13 15 18.2 +0.1
      baz=345,SNR=7.2
L59A  Walton           143.42  10  P       PKPbc   13 15 18.1 -0.1
      baz=347,SNR=8.7
L59A  Walton           143.42  10          PKPbc   13 15 18.7 +0.4
N54A  Moraine State    143.45  17  P       PKPbc   13 15 18.4 +0.1
      baz=338,SNR=9.4
N54A  Moraine State    143.45  17          PKPbc   13 15 18.3 -0.1
L61B  Northampton      143.51   7  P       PKPbc   13 15 18.4  0.0
      baz=350
HICK  Hickman          143.55  31          PKPdf   13 15 19.6 -0.2
HRV   Adam Dziewonsk   143.58   6  P       PKPbc   13 15 18.9 +0.2
      baz=352
HRV   Adam Dziewonsk   143.58   6          PKPbc   13 15 18.7 +0.1
WCI   Wyandotte Cave   143.59  26  P       PKPbc   13 15 19.0 +0.2
      baz=326
WCI   Wyandotte Cave   143.59  26          PKPbc   13 15 19.1 +0.3
L61A  Hillsdale 1, H   143.65   8  P       PKPdf   13 15 19.4 -0.5
      baz=349,SNR=8.8
O52A  Adamsville       143.66  19          PKPab   13 15 18.9  0.0
NATX  Nacogdoches      143.71  42  P       PKPdf   13 15 20.3  0.0
      baz=309
QUA2  Belchertown      143.72   7          PKPdf   13 15 19.8 -0.2
O53A  New Philadelph   143.74  19  P       PKPbc   13 15 19.0 -0.2
      baz=336,SNR=7.3
O53A  New Philadelph   143.74  19          PKPab   13 15 19.4 +0.2
L60A  Shokan           143.75   9  P       PKPab   13 15 19.4 +0.2
      baz=348
P51A  Williamsport     143.80  21          PKPab   13 15 19.7 +0.2
M57A  Sunshine Farm,   143.83  13  P       PKPab   13 15 19.7 +0.2
      baz=343,SNR=13
M57A  Sunshine Farm,   143.83  13          PKPdf   13 15 19.9 -0.3
KSPA  Keystone Colle   143.90  11          PKPab   13 15 19.8  0.0
Z41A  Richland Creek   143.92  38  P       PKPab   13 15 20.3 +0.2
      baz=313
L62A  Suffield         143.93   7  P       PKPdf   13 15 20.2 -0.1
      baz=350
M58A  Price's Panora   143.94  12  P       PKPab   13 15 19.9  0.0
      baz=344,SNR=15
CO01  Juntas del Tor   143.94 175          PKPdf   13 15 21.6 +0.5
N56A  West Decatur     143.95  15  P       PKPbc   13 15 19.9  0.0
      baz=341,SNR=5.8
M59A  Waymart          143.98  11  P       PKPab   13 15 20.2  0.0
      baz=346,SNR=15
P52A  Corning          143.99  20  P       PKPbc   13 15 19.7 -0.4
      baz=334,SNR=9.8
P52A  Corning          143.99  20          PKPbc   13 15 20.0  0.0
R49A  Shelbyville      144.01  25          PKPdf   13 15 20.7  0.0
O54A  Avella           144.06  18          PKPdf   13 15 20.8 +0.1
CCAR  Cane Creek       144.09  36          PKPdf   13 15 21.8 +0.9
Q51A  Peebles          144.10  22          PKPdf   13 15 20.9 +0.2
KSCT  Kent School, K   144.12   8          PKPdf   13 15 20.7  0.0
X43A  Marvell          144.18  35  P       PKPdf   13 15 21.0  0.0
      baz=317
L63A  North Scituate   144.22   6  P       PKPbc   13 15 20.5 -0.1
      baz=352
L64A  Middleborough    144.22   5  P       PKPab   13 15 21.1 +0.2
      baz=354
T47A  Sharon Grove     144.24  28          PKPab   13 15 21.4 +0.1
N57A  Milroy           144.28  14  P       PKPbc   13 15 20.9 +0.1
      baz=342,SNR=16
SSPA  Standing Stone   144.31  14  P       PKPab   13 15 21.3 -0.1
      baz=341
SSPA  Standing Stone   144.31  14          PKPab   13 15 21.4  0.0
M60A  Port Jervis      144.33  10  P       PKPdf   13 15 21.1  0.0
      baz=347,SNR=12
R50A  Paris            144.37  24          PKPdf   13 15 21.4 +0.2
P53A  Whipple          144.37  19  PKPdf   PKPab   13 15 21.6 -0.1
N58A  Sunbury          144.39  13  P       PKPbc   13 15 21.3 +0.1
      baz=343,SNR=11
N58A  Sunbury          144.39  13  PKPdf   PKPab   13 15 21.6 -0.1
M62A  Hamden           144.48   8  P       PKPdf   13 15 21.3  0.0
      baz=350
M61A  Granite Spring   144.48   9  P       PKPbc   13 15 21.6 +0.1
      baz=348,SNR=5.1
O56A  Blue Knob Stat   144.49  15  P       PKPdf   13 15 21.4 -0.1
      baz=340,SNR=8.2
O56A  Blue Knob Stat   144.49  15          PKPab   13 15 21.9 -0.2
N59A  State Game Lan   144.52  11  P       PKPab   13 15 22.0 -0.2
      baz=345,SNR=16
N59A  State Game Lan   144.52  11  PKPdf   PKPab   13 15 22.2  0.0
Q52A  Bidwell          144.55  21  PKPdf   PKPbc   13 15 21.8  0.0
M64A  Tiverton         144.56   5  P       PKPbc   13 15 21.7  0.0
      baz=353
ODNJ  Ogdensburg       144.57  10          PKPbc   13 15 21.9 +0.2
TRNY  Table Rock, Ra   144.57   9          PKPab   13 15 22.5 +0.1
WVT   Waverly          144.58  30  P       PKPbc   13 15 22.0 +0.1
      baz=322
WVT   Waverly          144.58  30  PKPdf   PKPab   13 15 22.4 -0.2
W45A  Hickory Valley   144.64  32  PKPdf   PKPab   13 15 22.7 -0.1
N60A  Cedar Hill Far   144.69  11  P       PKPbc   13 15 22.2 +0.1
      baz=346,SNR=5.5
MCWV  Mont Chateau     144.70  17  P       PKPab   13 15 22.6 -0.3
      baz=338
MCWV  Mont Chateau     144.70  17          PKPab   13 15 22.7 -0.2
PAL   Palisades        144.76   9  P       PKPbc   13 15 22.6 +0.3
      baz=348,SNR=6.1
PAL   Palisades        144.76   9          PKPab   13 15 22.8 -0.2
O57A  Amberson         144.78  14  P       PKPbc   13 15 22.5 +0.1
      baz=342,SNR=5.2
LCO   Las Campanas     144.85 174  PKPdf   PKPab   13 15 24.3 +0.2
Q53A  Leroy            144.90  20  P       PKPbc   13 15 22.8  0.0
      baz=334,SNR=8.3
LUPA  Lehigh Univers   144.90  11          PKPab   13 15 23.3 -0.4
N61A  South Mountain   144.94  10  P       PKPbc   13 15 23.3 +0.4
      baz=347
BRNJ  Basking Ridge    144.97  10          PKPab   13 15 23.6 -0.3
OXF   Oxford           145.00  33  P       PKPbc   13 15 23.0 -0.3
      baz=319,SNR=13
OXF   Oxford           145.00  33          PKPbc   13 15 23.5 +0.3
Q54A  Coxs Mills       145.01  19          PKPbc   13 15 23.6 +0.5
O58A  Lewisberry       145.03  13  P       PKPbc   13 15 23.0 -0.1
      baz=343,SNR=6.7
AC05  El Transito      145.06 175          PKPab   13 15 24.8  0.0
P56A  Dayton Farm, R   145.13  16  P       PKPbc   13 15 23.7 +0.2
      baz=339,SNR=13
O60A  Telford          145.17  11  P       PKPbc   13 15 23.6  0.0
      baz=345
S51A  Beattyville      145.21  23          PKPbc   13 15 23.9 +0.1
R53A  Hurricane        145.22  21          PKPab   13 15 24.4 -0.6
T50A  Nancy            145.23  25  PKPdf   PKPbc   13 15 23.9  0.0
U49A  Red Boiling Sp   145.24  27  PKPdf   PKPbc   13 15 23.9  0.0
MVL   Millersville     145.28  13          PKPdf   13 15 23.1 +0.4
MVL                                PKPbc   PKPab   13 15 24.5 -0.6
CLTN  Cedars of Leba   145.33  28          PKPbc   13 15 24.6 +0.4
PLAL  Pickwick Lake    145.35  31          PKPbc   13 15 24.2  0.0
P57A  Homestead Farm   145.37  15  P       PKPbc   13 15 24.0 -0.1
      baz=341,SNR=12
P57A  Homestead Farm   145.37  15          PKPbc   13 15 24.6 +0.5
V48A  Smith Brothers   145.38  29          PKPbc   13 15 24.6 +0.2
Y45A  Yeager Farm, C   145.41  34          PKPab   13 15 25.7 -0.1
Q56A  Snyder Ridge,    145.46  17          PKPbc   13 15 25.1 +0.6
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P58A	Pank, Wackersv	145.54	14	P	PKPbc	13 15 24.8	+0.2
	baz=342,SNR=8.6						
P60A	Greenville	145.61	12	P	PKPbc	13 15 24.6	-0.2
	baz=345						
P60A	Greenville	145.61	12	PKPbc	PKPbc	13 15 25.3	+0.5
P59A	Jarrettsville	145.63	13	P	PKPbc	13 15 25.0	+0.1
	baz=343,SNR=6.8						
Q57A	Strasburg	145.69	16	P	PKPbc	13 15 25.1	0.0
	baz=340,SNR=5.3						
R54A	Victor	145.69	20	P	PKPbc	13 15 25.0	-0.2
	baz=335,SNR=5.8						
SDMD	Soldier's Deli	145.73	14		PKPbc	13 15 25.6	+0.4
S54A	Dingess, Beckl	145.92	20	P	PKPbc	13 15 25.7	-0.2
	baz=334,SNR=5.8						
S54A	Dingess, Beckl	145.92	20	PKPdf	PKPdf	13 15 23.9	0.0
S54A					PKPbc	13 15 26.4	+0.5
Q58A	Fox Den Farm,	145.97	15	P	PKPbc	13 15 25.8	0.0
	baz=341,SNR=7.4						
VBMS	Vicksburg	146.03	37	P	PKPbc	13 15 26.9	+0.6
	baz=315						
VBMS	Vicksburg	146.03	37		PKPbc	13 15 27.0	+0.8
TZTN	Tazewell	146.18	24	P	PKPbc	13 15 26.6	+0.1
	baz=330,SNR=8.5						
TZTN	Tazewell	146.18	24		PKPbc	13 15 26.9	+0.4
SWET	Sewanee	146.23	29		PKPbc	13 15 26.5	-0.3
X48A	Hartselle	146.29	31		PKPbc	13 15 26.5	-0.5
R57A	Stanardsville	146.34	16	P	PKPbc	13 15 27.4	+0.5
	baz=339,SNR=7.6						
CPUP	Villa Florida	146.37	196	PKPbc	PKPbc	13 15 28.0	+0.7
	comp=Z,14nm,0.6s,baz=136,slow=2.1,SNR=17						
V51A	Loudon	146.47	26		PKPbc	13 15 27.7	+0.4
R58A	Rapidan	146.49	16	P	PKPbc	13 15 27.4	+0.1
	baz=340,SNR=10						
W50A	Signal Mountai	146.53	28	PKPdf	PKPdf	13 15 24.6	-0.5
W50A				PKPbc	PKPbc	13 15 28.0	+0.4
S56A	Natural Bridge	146.61	18	P	PKPbc	13 15 27.4	-0.3
	baz=337						
CPCT	Cooper Cave	146.69	27		PKPbc	13 15 28.3	+0.3
S57A	Dark Hollow, R	146.72	17	P	PKPbc	13 15 27.9	-0.1
	baz=338						
BLA	Blacksburg	146.75	20	P	PKPbc	13 15 27.8	-0.4
	baz=335						
V52A	Sevierville	146.76	25		PKPbc	13 15 28.8	+0.6
R59A	King George, V	146.81	15	P	PKPbc	13 15 28.4	+0.2
	baz=342						
R58B	Mineral	146.83	16	P	PKPbc	13 15 28.4	+0.2
	baz=340,SNR=5.3						
R58B	Mineral	146.83	16		PKPbc	13 15 28.6	+0.3
TKL	Tuckaleechee C	146.84	25		PKPbc	13 15 28.8	+0.4
U54A	Nelsons Funny	146.88	22	P	PKPbc	13 15 28.4	-0.1
	baz=332						
U54A	Nelsons Funny	146.88	22		PKPbc	13 15 28.8	+0.3
FPAL	Fort Paine	146.93	29		PKPbc	13 15 28.6	-0.2
T56A	Rocky Mt	147.05	19	P	PKPbc	13 15 29.0	+0.1
	baz=336,SNR=9.9						
Y49A	Blount Mountai	147.09	31		PKPbc	13 15 29.2	+0.1
JSRW	J. Sargeant Re	147.09	16		PKPbc	13 15 29.2	+0.2
S58A	Poland Farm, P	147.12	16	P	PKPbc	13 15 29.0	0.0
	baz=340,SNR=6.3						
S58A	Poland Farm, P	147.12	16		PKPbc	13 15 29.3	+0.3
AC02	Maricunga	147.13	176		PKiKP	13 15 31.2	-0.6
S59A	Mechanicsville	147.18	15	P	PKPbc	13 15 29.5	+0.3
	baz=341						
V53A	Saluda	147.23	24		PKPbc	13 15 29.9	+0.4
W52A	Murphy	147.25	26		PKPbc	13 15 30.1	+0.6
X51A	Calhoun	147.27	28		PKPbc	13 15 29.7	+0.2
T57A	Hurt	147.33	18	P	PKPbc	13 15 29.5	-0.1
	baz=337,SNR=5.8						
T57A	Hurt	147.33	18		PKPbc	13 15 29.6	-0.1
S60A	Water View	147.39	14	P	PKPbc	13 15 30.3	+0.5
	baz=342						
LRAL	Lakeview Retre	147.43	32	P	PKPbc	13 15 30.0	0.0
	baz=321,SNR=8.9						
LRAL	Lakeview Retre	147.43	32		PKPbc	13 15 30.1	+0.1
U56A	King	147.55	20	P	PKPbc	13 15 30.0	-0.2
	baz=335						
U56A	King	147.55	20		PKPbc	13 15 30.5	+0.3
T58A	Grand View Acr	147.60	17	P	PKPbc	13 15 30.2	-0.1
	baz=338,SNR=7.6						
V55A	Taylorsville	147.69	22		PKPbc	13 15 30.7	+0.1
BG3	Lake Jocassee	147.76	25		PKiKP	13 15 31.8	-0.4
U57A	Blanch	147.82	19	P	PKPbc	13 15 30.9	0.0
	baz=337,SNR=7.4						
T59A	Double "B" Far	147.85	16	P	PKPbc	13 15 31.4	+0.5
	baz=340,SNR=15						
T59A	Double "B" Far	147.85	16		PKPbc	13 15 31.5	+0.6
T60A	Surry	147.91	15	P	PKPbc	13 15 31.5	+0.5
	baz=342						
V56A	Mocksville	147.99	21	P	PKPbc	13 15 31.6	+0.2
	baz=334,SNR=8.9						
U58A	Oxford	148.10	18	P	PKPbc	13 15 31.6	0.0
	baz=338,SNR=7.9						
V57A	Coltrane Farms	148.17	20	P	PKPbc	13 15 31.5	-0.3
	baz=336,SNR=7.2						
Y52A	Lilburn	148.22	28		PKiKP	13 15 32.8	-0.4
KMSC	Kings Mountain	148.28	23	P	PKPbc	13 15 32.0	-0.1
	baz=332,SNR=8.2						
KMSC	Kings Mountain	148.28	23		PKPbc	13 15 32.3	+0.2
PAULI	Pauline	148.37	24		PKPbc	13 15 32.8	+0.5
U60A	Pendleton	148.43	16	P	PKPbc	13 15 32.8	+0.4
	baz=340						
V58A	Windy Hill, Pi	148.48	19	P	PKPbc	13 15 32.6	+0.1
	baz=337						
V58A	Windy Hill, Pi	148.48	19		PKPbc	13 15 32.8	+0.3
W56A	Indian Trail	148.56	22	P	PKPbc	13 15 32.7	-0.1
	baz=334						
250A	Grady	148.63	33		PKiKP	13 15 33.9	-0.2
HODGE	Hodges	148.70	25		PKiKP	13 15 33.9	-0.3
U61A	Possum Corner	148.75	15	P	PKPbc	13 15 33.0	-0.2
	baz=342						
GO02	Mina Guanaco	148.76	175		PKiKP	13 15 35.0	+0.1
V59A	Middlesex	148.78	18	P	PKPbc	13 15 33.2	0.0
	baz=338						
BRAL	Brewton	148.82	35	P	PKiKP	13 15 34.3	-0.2
	baz=319						
BRAL	Brewton	148.82	35		PKiKP	13 15 35.1	+0.6
GOGA	Godfrey	148.87	27	P	PKiKP	13 15 34.2	-0.3
	baz=327,SNR=7.2						
GOGA	Godfrey	148.87	27		PKiKP	13 15 34.2	-0.3
152A	Waverly Hall	148.88	30		PKiKP	13 15 34.2	-0.4
BIRD	Birdtown, Kers	149.05	22		PKiKP	13 15 34.6	-0.3
JSC	Jenkinsville	149.06	23		PKiKP	13 15 34.7	-0.2
V60A	Jim Taylor Roa	149.06	16	P	PKPbc	13 15 34.3	+0.3
	baz=340						
W58A	Raeford	149.14	20	P	PKPbc	13 15 34.1	-0.1
	baz=336						
W60A	Pink Hill	149.60	18	P	PKPbc	13 15 35.2	0.0
	baz=339						
X59A	McDuffie Farm,	149.76	19	P	PKPbc	13 15 35.6	-0.1
	baz=337						
X60A	Albert Glenn T	149.96	18	P	PKPbc	13 15 36.3	+0.2
	baz=338						
CMIG	Matias Romero	150.65	66	PKP	PKPdf	13 15 32.6	+0.5
	comp=Z,9.5nm,0.7s,baz=281,slow=5.2,SNR=3.7						
CMIG				PKPbc	PKPbc	13 15 38.3	+0.1
	comp=Z,9.5nm,0.7s,baz=288,slow=3.3,SNR=14						
PB15	IPOC Station P	150.71	175		PKiKP	13 15 39.5	+0.6
PB06	IPOC Station P	151.20	175		PKiKP	13 15 40.5	+0.7
BDFB	Brasilia	151.32	221	PKPbc	PKiKP	13 15 40.3	+0.1
	comp=Z,16nm,0.4s,baz=152,slow=3.7,SNR=18						
BDFB	Brasilia	151.32	221		PKiKP	13 15 40.6	+0.5
LVC	Limon Verde	151.34	176	PKPbc	PKiKP	13 15 41.5	+1.1
	comp=Z,8.1nm,0.6s,baz=196,slow=2.9,SNR=5.0						
SIV	San Ignacio	157.22	195	PKP	PKPdf	13 15 41.9	+0.7
	comp=Z,2.2nm,0.8s,baz=204,slow=1.7,SNR=6.4						
SIV				PKPab	PKPab	13 16 16.7	+0.9
	comp=Z,2.1nm,0.9s,baz=195,slow=7.1,SNR=5.8						

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*IDC **04** 13:09:04.6±3.1, 29°.42S×70°.92W, h60^{km}±26^{km}, mb3.5/3, mb1 3.7/6, mb1mx3.4/36, mbtmp3.7/6, ML3.8/3, Error ellipse: s-maj=36.8km s-min=27.3km az=108.0*

*GUC **04** 13:09:05.8±0.8, 29°.38S×71°.01W, h79^{km}±6^{km}, ML4.3*

*NEIC **04** 13:09:05.2±2.3, 29°.34S±0°.05×71°.1W±0°.1, h95^{km}±7^{km}, ML4.3(GUC), Error ellipse: s-maj=15.4km s-min=7.0km az=94.0*

ISC 04 13:09:05.4±0.7**, 29°.35S**±0°.04×**71°.13W**±0°.07**, h82**^{km}±7^{km}**, n61,** σ**1^{s}.44**/76**, mb3.5**/4**, 6C-2D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCO	Las Campanas	0.50	48		Pn	13 09 21.0	+1.3
GO04	Tololo Observa	0.87	161	⇑iP	Pn	13 09 24.5	+1.2
GO04				iS	Sn	13 09 38.0	+1.4
GO04				IAML		13 09 39.3	
	comp=E,20µm,0.2s						
GO04	Tololo Observa	0.87	161		Pn	13 09 24.6	+1.2
AC05	El Transito	0.91	56	⇑iP	Pn	13 09 25.1	+1.5
AC05				iS	Sn	13 09 38.5	+1.4
AC05				IAML		13 09 38.9	
	comp=N,14µm,0.3s						
AC05	El Transito	0.91	56		Pn	13 09 25.0	+1.5
CO01	Juntas del Tor	1.09	125	⇓iP	Pn	13 09 26.9	+0.9
CO01				iS	Sn	13 09 41.7	+0.4
CO01	Juntas del Tor	1.09	125		Pn	13 09 26.9	+0.9
CO01				Sn	Sn	13 09 41.9	+0.5
AC04	Llanos de Chal	1.14	2	eP	Pn	13 09 28.4	+2.1
AC04				iS	Sn	13 09 44.2	+2.3
AC04				IAML		13 09 46.7	
	comp=E,6µm,0.1s						
AC04	Llanos de Chal	1.14	2		Pn	13 09 28.4	+2.1
CO03	El Pedregal	1.53	166	⇑iP	Pn	13 09 32.5	+1.2
CO03				iS	Sn	13 09 51.8	+0.9
CO03				IAML		13 09 54.2	
	comp=E,3µm,0.3s						
CO03	El Pedregal	1.53	166	Pn	Pn	13 09 32.5	+1.2
CO02	Combarbal	1.85	177		Pn	13 09 36.5	+1.0
GO03	Copiap	1.92	24	⇑iP	Pn	13 09 37.6	+1.2
GO03				iS	Sn	13 10 01.8	+1.9
GO03				IAML		13 10 03.9	
	comp=E,3µm,0.1s						
GO03	Copiap	1.92	24		Pn	13 09 37.5	+1.2
ZON	Zonda	3.04	137		Pn	13 09 52.1	+0.7
AC02	Maricunga	3.06	36	Pn	Pn	13 09 53.5	+1.4
AC01	Pan de Azucar	3.22	8	Pn	Pn	13 09 53.8	-0.1
VA03	San Esteban	3.44	172	eP	Pn	13 09 58.4	+1.6
VA03				iS	Sn	13 10 38.4	+1.8
VA03				IAML		13 10 48.0	
	comp=N,564nm,0.3s						
VA03	San Esteban	3.44	172		Pn	13 09 58.4	+1.6
ROCH	El Roble	3.61	178	eP	Pn	13 09 59.9	+0.6
ROCH				eS	Sn	13 10 40.8	-0.2
ROCH				IAML		13 10 55.8	
	comp=N,271nm,0.4s						
ROC1	El Roble	3.62	179		Pn	13 09 59.8	+0.4
PEL	Peldehue	3.80	174	⇑iP	Pn	13 10 03.0	+1.3
PEL				iS	Sn	13 10 46.3	+1.0
PEL				IAML		13 10 50.3	
	comp=N,215nm,0.4s						
PEL	Peldehue	3.80	174	Pn	Pn	13 10 03.0	+1.3
MT02	Curacav	3.90	180		Pn	13 10 03.2	+0.3
MT05	Renca	4.04	175	⇑iP	Pn	13 10 06.1	+1.0
MT05				iS	Sn	13 10 52.7	+1.5
MT05	Renca	4.04	175		Pn	13 10 06.0	+1.0
GO02	Mina Guanaco	4.39	19	Pn	Pn	13 10 09.9	0.0
MT09	Talagante	4.42	179	⇓iP	Pn	13 10 10.8	+0.7
MT09				iS	Sn	13 10 58.0	-2.4
MT09				IAML		13 11 00.8	
	comp=E,243nm,0.3s						
PB14	IPOC Station P	4.75	8	Pn	Pn	13 10 13.8	-1.1
BO02	Sierra Bellavi	5.43	177	Pn	Pn	13 10 24.5	+0.5
PB15	IPOC Station P	6.29	14		Pn	13 10 34.8	-1.0
PB06	IPOC Station P	6.76	12	Pn	Pn	13 10 40.0	-2.2
LVC	Limon Verde	7.00	17	P	Pn	13 10 44.1	-1.6
	comp=E,2.4nm,0.3s,baz=170,slow=10,SNR=26						
LVC				S	Sn	13 12 00.7	-3.2
	comp=E,4.2nm,0.3s,baz=337,slow=23,SNR=4.0						
LVC	Limon Verde	7.00	17	Pn	Pn	13 10 43.8	-1.9
BI02	San Fabin de	7.29	181	Pn	Pn	13 10 49.0	-0.4
BI03	Tigo	7.64	192	Pn	Pn	13 10 52.8	-1.2
PB07	IPOC Station P	7.67	9	Pn	Pn	13 10 51.9	-2.7
PB09	IPOC Station P	7.71	13	Pn	Pn	13 10 54.1	-1.1
H03N1	Juan Fernandez	7.80	237	P	Pn	13 10 57.0	+1.1
H03N1				S	Sn	13 12 16.6	-6.0
H03N1				T	T	13 18 48.5	
	baz=64,slow=72,SNR=85						
H03N2	Juan Fernandez	7.82	237	P	Pn	13 10 57.0	+0.9
H03N2				S	Sn	13 12 16.6	-6.3
H03N2				T	T	13 18 46.1	
	baz=64,slow=72,SNR=86						
H03N3	Juan Fernandez	7.82	236	P	Pn	13 10 57.1	+0.9
H03N3				S	Sn	13 12 16.5	-6.5
H03N3				T	T	13 18 44.8	
	baz=64,slow=72,SNR=98						
VA04	Juan Fernndez	7.85	235	Pn	Pn	13 10 57.1	+0.3
H03S3	Juan Fernandez	8.00	234	P	Pn	13 10 58.5	-0.1
H03S3				S	Sn	13 12 21.0	-6.4
H03S1	Juan Fernandez	8.01	234	P	Pn	13 10 58.7	0.0
H03S1				S	Sn	13 12 21.0	-6.5
H03S2	Juan Fernandez	8.02	234	P	Pn	13 10 58.7	-0.2
H03S2				S	Sn	13 12 21.0	-6.8
PB01	IPOC Station P	8.40	11		Pn	13 11 01.6	-2.9
PB08	IPOC Station P	9.34	11	Pn	Pn	13 11 14.9	-2.7
LC01	Cunco	9.54	184	Pn	Pn	13 11 18.4	-1.6
PSGCX	Pisagua	9.75	6	Pn	Pn	13 11 20.2	-2.8
PLCA	Paso Flores	11.37	178	P	Pn	13 11 43.9	-1.0
	comp=E,0.1nm,0.3s,baz=340,slow=13,SNR=5.5						
CPUP	Villa Florida	12.57	79	P	Pn	13 11 59.2	-1.9
	comp=E,0.2nm,0.3s,baz=255,slow=15,SNR=3.8						
BDFB	Brasilia	25.27	62	P	P	13 14 24.2	-0.2
	comp=E,2.5nm,0.6s,baz=243,slow=9.0,SNR=3.7						
TXAR	Lajitas Array	66.11	329	P	P	13 19 47.0	+3.0
	comp=E,0.4nm,0.9s,baz=149,slow=7.9,SNR=2.9						
PDAR	Pinedale Array	80.00	332	pP	pP	13 21 31.0	+3.2
	comp=E,0.2nm,0.6s,baz=136,slow=6.2,SNR=1.9						
TORD	Torodi Ar. Bea	81.90	70	P	P	13 21 16.9	+0.6
	comp=E,0.4nm,0.5s,baz=248,slow=5.5,SNR=2.5						
TORD				pP	pP	13 21 39.0	+0.4
	comp=E,0.5nm,0.5s,baz=252,slow=4.5,SNR=2.9						
ASAR	Alice Springs	122.05	207	PKP	PKiKP	13 27 51.8	+0.5
	comp=E,0.2nm,0.8s,baz=124,slow=1.7,SNR=1.2						
WRA	Warramunga Arr	125.18	210	PKP	PKiKP	13 27 58.0	+0.5
	comp=E,0.3nm,0.8s,baz=158,slow=1.7,SNR=1.7						
KURBB	Kurchatov Arra	148.85	38	PKPbc	PKiKP	13 28 45.1	+0.5
	comp=E,0.5nm,0.5s,baz=307,slow=3.0,SNR=8.4						
KURBB				pPKPbc	pPKPbc	13 29 07.5	+1.2
	comp=E,0.4nm,0.5s,baz=301,slow=3.0,SNR=4.1						
KURK	Kurchatov	148.85	38		PKiKP	13 28 45.1	+0.5
ZALV	Zalesovo Beam	149.83	29	PKPbc	PKiKP	13 28 47.6	+1.2
	comp=E,1.9nm,0.5s,baz=317,slow=4.1,SNR=11						
ZALV				pPKPbc	pPKPbc	13 29 09.7	+0.8
	comp=E,1.3nm,0.6s,baz=302,slow=3.8,SNR=3.8						
MKAR	Makanchi Array	152.97	43	PKPbc	PKiKP	13 28 54.6	+1.4
	comp=E,0.2nm,0.4s,baz=300,slow=3.2,SNR=2.4						

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*IDC **04** 13:14:54.5±3.3, 0°.02N×122°.88E, h190^{km}±31^{km}, mb3.1/5, mb1 3.3/6, mb1mx3.0/47, mbtmp3.7/6, Error ellipse: s-maj=97.0km s-min=16.8km az=68.0*

*DJA **04** 13:14:55.2±0.6, 0°S±7°×12°3E±°, h176^{km}±7^{km}, M3.8/9, mb4.1/1, MLv3.6/9*

ISC 04 13:14:54.9±0.8**, 0°.02S**±0°.09×**122°.92E**±0°.07**, h200**^{km}**, n14,** σ**1^{s}.62**/16**, mb3.3**/5**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GTOI	Gorontalo	0.65	8	P	Pn	13 15 21.5	-1.2
GTOI				S	Sn	13 15 41.7	-2.6
LUWI	Luwuk	1.03	189	P	Pn	13 15 23.0	-1.9
MRSI	Marisa	1.10	296	P	Pn	13 15 23.0	-2.4
KMSI	Cibinong	1.21	61	P	Pn	13 15 26.4	+0.2
APSI	Ampana	1.56	235	P	Pn	13 15 27.9	-1.2
MPSI	Mapaga	3.05	277	P	Pn	13 15 45.1	0.0
SANI	Sanana	3.67	123	P	Pn	13 15 50.2	-2.4
TNTI	Ternate	4.51	80	P	Pn	13 16 02.3	-0.8
FITZ	Fitzroy Crossi	18.17	172	P	P	13 18 53.8	+1.2
	0.9nm,0.3s,baz=5.9,slow=8.8,SNR=20						
WRA	Warramunga Arr	22.74	151	P	P	13 19 40.1	0.0
	0.9nm,0.5s,baz=328,slow=11,SNR=18						
ASAR	Alice Springs	25.81	156	P	P	13 20 09.2	+1.2
	0.3nm,0.4s,baz=345,slow=15,SNR=14						
ASAR				ScP	ScP	13 26 54.3	+1.5
	0.3nm,0.9s,baz=333,slow=3.3,SNR=1.6						
STKA	Stephens Creek	36.28	153	P	P	13 21 40.6	+1.3
	1.2nm,0.4s,baz=330,slow=12,SNR=4.6						
SONM	Songino Array	49.78	345	P	P	13 23 28.3	+0.9
	0.3nm,0.6s,baz=167,slow=8.5,SNR=4.1						
KURBB	Kurchatov Arra	62.94	330	P	P	13 24 59.3	-0.8
	0.3nm,0.8s,baz=124,slow=5.9,SNR=2.3						

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*IDC **04** 13:15:16.0±0.7, 25°.62S×176°.20W, h0^{km}, mb4.5/15, mb1 4.7/16, mb1mx4.4/45, mbtmp4.5/16, ML4.9/1, MS4.1/18, Ms1 4.1/18, ms1mx4.1/23, Error ellipse: s-maj=25.8km s-min=16.5km az=144.0*

*GCMT **04** 13:15:20.5±0.4, 25°.62S±0°.04×175°.61W±0°.03, h26^{km}, MW4.9/69, Moment Tensor Solution. s32,c36; s69,c87; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.97±.19; $M_{\theta\theta}$-0.77±.13; $M_{\phi\phi}$-2.20±.11; $M_{r\theta}$0.53±.31; $M_{\theta\phi}$-0.85±.08; $M_{\phi r}$1.42±.20; Best double couple: $M_0$3.16900×10^{16} NP1:ϕ_s207.00000°, δ31.00000°, λ93.00000°. NP2: ϕ_s23.00000°, δ59.00000°, λ88.00000°. Principal axes: T 3.3570, Plg76.0000°, Azm288.0000°; N -0.3750, Plg2.0000°, Azm24.0000°; P -2.9810, Plg14.0000°, Azm114.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BJI **04** 13:15:21.5±0.0, 25°.91S×176°.49W, h51^{km}, mB5.5/8, mb5.1/13, Ms5.3/1*

*NEIC **04** 13:15:22.5±1.4, 25°.76S±0°.08×176°.4W±0°.1, h49^{km}±3^{km}, mb4.9/37, Error ellipse: s-maj=17.8km s-min=12.3km az=96.0*

ISC 04 13:15:20.7±0.5**, 25°.70S**±0°.07×**176°.2W**±0°.1**, h31**^{km}**, n110,** σ**1^{s}.30**/95**, mb4.8**/34**, MS4.2**/20**, 1D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	3.87	204	Pn	Pn	13 16 16.9	-1.2
	91nm,0.3s,baz=90,slow=19,SNR=7.3						
RAO				Sn	Sn	13 17 04.6	+2.0
	150nm,0.3s,baz=90,slow=20,SNR=9.3						
RAO	Raoul Island	3.87	204	Pn	Pn	13 16 17.4	-0.7
MSVF	Nonsavu	9.58	325	Pn	Pn	13 17 38.8	+2.1
RAR	Rarotonga	15.68	77	Pn	Pn	13 18 49.2	-10
	3.0nm,0.3s,baz=246,slow=7.1,SNR=8.5						
RAR				Sn	Sn	13 21 25.5	-27
	2.0nm,0.3s,baz=101,slow=19,SNR=3.8						
RAR				LR	LR	13 24 51.3	
	comp=Z,228nm,18.6s,baz=254,slow=37						
DZM	Mont Dzumac	16.32	279	LR	LR	13 24 15.5	
	comp=Z,1µm,21.2s,baz=130,slow=33						
DZM	Mont Dzumac	16.32	279	ePn	P	13 19 15.6	+5.1
	62nm,1.1s						
DZM				eLR	LR	13 23 06.8	
	comp=Z,2µm,23.8s						
DZM	Mont Dzumac	16.32	279		Pn	13 19 04.2	-3.6
SANVU	Saraoutou	18.61	300		Pn	13 19 35.3	-0.8
SANVU				IAmb	IAmb	13 19 50.4	
	comp=Z,106nm,1.1s						
TBI	Tubuai	24.38	90	eS	S	13 24 42.6	-11
	comp=Z,90nm,24.2s						
TBI				eLQ	LQ	13 25 22.2	
	comp=Z,523nm,26.0s						
TBI				eLR	LR	13 26 23.1	
	comp=Z,362nm,30.0s,baz=260						
TBI	Tubuai	24.38	90	eT	T	13 45 04.4	
	comp=Z,15nm,0.3s						
PAE	Paea	25.92	77	eT	T	13 46 45.7	
	comp=Z,1.7nm,0.3s						
PPT2	Papeete2	25.95	77	eS	S	13 25 06.5	-13
	comp=Z,66nm,25.0s						
PPT2				eLQ	LQ	13 25 58.7	
	comp=Z,878nm,22.8s						
PPT2				eLR	LR	13 27 03.5	
	comp=Z,582nm,28.5s,baz=259						
PPT2	Papeete2	25.95	77	eT	T	13 46 48.8	
	comp=Z,1.9nm,0.3s						
PPT	Papeete	25.96	77	LR	LR	13 29 28.3	
	comp=Z,181nm,18.4s,baz=250,slow=33						
TVO	Taravao	26.16	78	eT	T	13 47 04.8	
	comp=Z,2.2nm,0.4s						
HNR	Honiara	27.86	301	LR	LR	13 30 23.7	
	comp=Z,674nm,20.4s,baz=155,slow=33						
STKA	Stephens Creek	37.36	251	P	P	13 22 31.8	+1.1
	comp=Z,2.8nm,0.5s,baz=100,slow=11,SNR=7.5						
STKA				LR	LR	13 37 00.5	
	comp=Z,896nm,18.0s,baz=77,slow=35						
TAOE	Nuku Hiva Isla	38.07	70	eLR	LR	13 32 18.4	
	comp=Z,243nm,27.5s						
PMG	Port Moresby	38.38	288	P	P	13 22 38.7	-0.7
	comp=Z,19nm,0.7s,baz=124,slow=5.2,SNR=6.3						
PMG				LR	LR	13 36 48.6	
	comp=Z,497nm,19.5s,baz=94,slow=34						
PMG	Port Moresby	38.38	288	IAmb	IAmb	13 22 39.8	
	comp=Z,20nm,0.8s						
AS31	Alice Springs	45.21	261	P	P	13 23 32.2	-3.1
ASAR	Alice Springs	45.21	261	P	P	13 23 34.3	-1.0
	comp=Z,2.6nm,0.8s,baz=96,slow=7.1,SNR=33						
ASAR				PcP	PcP	13 25 15.6	+0.4
	comp=Z,1.6nm,0.7s,baz=102,slow=4.0,SNR=6.1						
ASAR				LR	LR	13 42 21.2	
	comp=Z,501nm,18.2s,baz=107,slow=36						
ASAR	Alice Springs	45.21	261	P	P	13 23 33.6	-1.7
WB2	Warramunga Arr	45.77	267	P	P	13 23 37.7	-2.1
WRA	Warramunga Arr	45.78	267	P	P	13 23 38.2	-1.6
	comp=Z,1.8nm,0.5s,baz=104,slow=7.7,SNR=15						
WRA				PcP	PcP	13 25 17.8	+0.6
	comp=Z,2.5nm,0.8s,baz=110,slow=3.4,SNR=5.2						
WRA				LR	LR	13 42 27.1	
	comp=Z,466nm,18.8s,baz=105,slow=36						
WRA	Warramunga Arr	45.78	267	P	P	13 23 37.7	-2.2
WB0	Warramunga Arr	45.79	267	P	P	13 23 37.6	-2.3
JAY	Jayapura	47.43	292	LR	LR	13 42 43.3	
	comp=Z,322nm,20.2s,baz=16,slow=35						
VNDA	Vanda	52.92	186	LR	LR	13 43 06.3	
	comp=Z,146nm,21.0s,baz=20,slow=32						
FITZ	Fitzroy Crossi	54.18	266	P	P	13 24 43.6	0.0
	comp=Z,2.7nm,0.7s,baz=110,slow=8.4,SNR=6.5						
SIJI	Sorong	56.31	287	P	P	13 24 57.6	-1.4
	comp=Z,9.4nm,0.6s,baz=105,slow=8.3,SNR=5.6						
RPN	Rapa Nui	59.19	107	LR	LR	13 48 13.2	
	comp=Z,84nm,18.4s,baz=264,slow=33						
QSPA	South Pole Qui	64.39	180	P	P	13 25 55.0	+1.4
QSPA				IAmb	IAmb	13 26 04.0	
	comp=Z,12nm,1.0s						
MJAR	Matsushiro Arr	75.38	323	P	P	13 26 59.8	-1.6
	comp=Z,4.9nm,0.7s,baz=161,slow=5.7,SNR=16						
MJAR				LR	LR	13 55 09.8	
	comp=Z,129nm,21.9s,baz=165,slow=32						
MJAR	Matsushiro Arr	75.38	323	P	P	13 26 58.7	-2.7
MAJO	Matsushiro	75.39	323	P	P	13 26 59.3	-2.1
MAJO				IAmb	IAmb	13 27 01.7	
	comp=Z,8.8nm,0.8s						
JHS	Saijyo	77.14	319	P	P	13 27 11.2	-0.2
MAW	Mawson	77.27	200	LR	LR	14 01 34.4	
	comp=Z,161nm,18.3s,baz=78,slow=36						
H03S2	Juan Fernandez	81.69	123	T	T	14 57 20.2	
	baz=243,slow=74,SNR=18						
H03S1	Juan Fernandez	81.70	123	T	T	14 57 18.0	
	baz=243,slow=74,SNR=17						
H03S3	Juan Fernandez	81.70	123	T	T	14 57 16.9	
	baz=243,slow=74,SNR=19						
PETK	Petropavlovsk-	81.71	344	P	P	13 27 35.3	-0.5
	comp=Z,5.3nm,0.8s,baz=114,slow=3.7,SNR=7.2						
KSRS	Korea Array	81.89	318	P	P	13 27 37.2	+0.1
	comp=Z,4.0nm,0.8s,baz=133,slow=6.0,SNR=9.9						
KSRS				LR	LR	13 58 56.8	
	comp=Z,85nm,19.2s,baz=112,slow=32						
KSAR	Wonju Array Be	81.90	318	P	P	13 27 37.1	-0.1
SNAA	Sanae	82.78	178	P	P	13 27 42.2	+0.7
SNAA	Sanae	82.78	178	P	P	13 27 41.9	+0.4
SNAA				IAmb	IAmb	13 27 52.3	
	comp=Z,8.4nm,1.0s						
VNA3	Neumayer Olymp	82.86	176	P	P	13 27 42.0	+0.1
VNA2	Neumayer--Watz	83.32	176	P	P	13 27 43.4	-0.8
YBH	Yreka Blue Hor	83.33	37	P	P	13 27 45.0	+0.4
	comp=Z,2.3nm,0.9s,baz=193,slow=2.7,SNR=6.1						
PNTR	Pine Nut	83.33	41	P	P	13 27 45.4	+0.5
NVAR	Mina Array Bea	83.68	42	P	P	13 27 46.9	+0.2
	comp=Z,1.5nm,0.8s,baz=223,slow=8.6,SNR=12						
NVAR				LR	LR	14 01 17.1	
	comp=Z,91nm,18.1s,baz=3.5,slow=33						
TPNV	Topopah Spring	84.01	44	P	P	13 27 48.9	+0.5
TPNV				IAmb	IAmb	13 27 59.5	
	comp=Z,9.6nm,1.4s						
USRK	Ussuriysk Ar.	84.19	325	P	P	13 27 50.0	+1.1
	comp=Z,2.3nm,0.7s,baz=78,slow=6.6,SNR=7.9						
USRK				LR	LR	13 59 35.7	
	comp=Z,78nm,19.5s,baz=122,slow=32						
KVN	Kaiserville	84.20	42	P	P	13 27 48.0	-1.3
PLCA	Paso Flores	84.49	133	LR	LR	14 00 27.5	
	comp=Z,47nm,18.1s,baz=229,slow=32						
WHN	Wuhan	86.87	306	⇓P	P	13 28 04.0	+1.4
WHN				pmax	pmax		
	comp=Z,200nm,1.9s						
D08A	Wollman Farm,	88.90	35	P	P	13 28 12.5	+0.6
D08A				IAmb	IAmb	13 28 13.0	
	comp=Z,4.9nm,0.8s						
MA2	Magadan	89.23	344	P	P	13 28 12.8	-0.3
MA2				IAmb	IAmb	13 28 16.5	

	comp=Z,15nm,1.3s						
GAMB	Gambell	89.24	2	P	P	13 28 12.8	-0.2
GAMB				IAmb	IAmb	13 28 14.9	
	comp=Z,7.3nm,1.1s						
TTA	Tatalina	89.77	9	P	P	13 28 16.0	+0.4
TTA				IAmb	IAmb	13 28 17.3	
	comp=Z,4.9nm,1.0s						
GHO	Glory Hole Cre	89.89	13	P	P	13 28 15.7	-0.5
ENH	Enshi	90.34	304	P	P	13 28 19.9	+0.9
VRDI	Verde Repeater	90.58	15	P	P	13 28 20.3	+0.7
N25K	Chitina, Valde	90.65	14	P	P	13 28 20.1	+0.3
N25K				IAmb	IAmb	13 28 21.0	
	comp=Z,7.3nm,0.8s						
BALM	Baldy	90.68	16	P	P	13 28 20.4	+0.5
BALM				IAmb	IAmb	13 28 21.7	
	comp=Z,9.1nm,1.1s						
GLB	Gilahina Butte	90.68	15	P	P	13 28 20.4	+0.5
GLB				IAmb	IAmb	13 28 20.9	
	comp=Z,4.8nm,0.8s						
MCARA	McCarthy VSAT	90.82	15	P	P	13 28 20.2	-0.3
BARN	Barnard Glacie	90.87	16	P	P	13 28 20.6	-0.3
BARN				IAmb	IAmb	13 28 22.7	
	comp=Z,9.2nm,1.0s						
TRF	Thorofare Moun	91.17	11	P	P	13 28 21.8	-0.5
RND	Reindeer	91.39	12		P	13 28 23.4	+0.1
PDAR	Pinedale Array	91.60	43	P	P	13 28 25.3	+0.4
	comp=Z,1.7nm,0.9s,baz=216,slow=4.5,SNR=4.0						
WRH	Wood River Hil	92.50	12		P	13 28 28.0	-0.2
WRH				IAmb	IAmb	13 28 29.1	
	comp=Z,4.9nm,0.9s						
BCAR	Beaver Creek A	92.57	15	P	P	13 28 28.8	+0.1
HDA	Harding Lake	92.66	12	P	P	13 28 29.0	0.0
HDA				IAmb	IAmb	13 28 29.7	
	comp=Z,3.7nm,0.8s						
CCB	Clear Creek Bu	92.72	12	P	P	13 28 28.7	-0.5
CCB				IAmb	IAmb	13 28 29.8	
	comp=Z,3.4nm,1.0s						
IL31		93.00	12	P	P	13 28 29.7	-0.7
IL31				IAmb	IAmb	13 28 30.6	
	comp=Z,2.8nm,1.1s						
ILAR	Eielson Array	93.00	12	P	P	13 28 30.1	-0.5
	comp=Z,1.3nm,0.8s,baz=225,slow=5.0,SNR=13						
ILAR	Eielson Array	93.00	12		P	13 28 30.0	-0.5
CMAR	Chiang Mai Arr	93.42	289	P	P	13 28 35.4	+1.8
	comp=Z,3.7nm,0.8s,baz=128,slow=3.4,SNR=26						
CMAR				LR	LR	14 12 31.1	
	comp=Z,33nm,18.2s,baz=184,slow=37						
CHTO	Chiang Mai	93.57	289	P	P	13 28 35.5	+1.2
PRP	Porcupine Dome	93.93	12	P	P	13 28 35.2	+0.2
PRP				IAmb	IAmb	13 28 36.0	
	comp=Z,2.3nm,0.8s						
CD2	Chengdu	94.99	302	*e*P	P	13 28 39.0	-1.6
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
YKA	Yellowknife Ar	100.51	25	P	Pdif	13 29 03.8	-0.7
	comp=Z,0.3nm,0.9s,baz=235,slow=4.2,SNR=4.0						
WMQ	Urumqi	111.57	309	*e*PKP	PKiKP	13 33 51.1	-1.0
WMQ				LR	LR		
	comp=Z,570nm,29.1s						
MK31	Makanchi Array	115.95	312		PKPdf	13 33 59.5	-0.9
MKAR	Makanchi Array	115.95	312	PKP	PKPdf	13 33 59.2	-1.1
	comp=Z,0.6nm,0.5s,baz=130,slow=0.9,SNR=9.4						
MKAR	Makanchi Array	115.95	312		PKPdf	13 33 59.4	-0.9
KURK	Kurchatov	118.92	316		PKPdf	13 34 05.0	-0.9
KURBB	Kurchatov Arra	118.97	315	PKP	PKPdf	13 34 05.0	-1.0
	comp=Z,0.8nm,0.7s,baz=96,slow=2.0,SNR=9.4						
KKAR	Karatay Array	123.74	306	PKPdf	PKPdf	13 34 15.1	-0.3
BVAR	Borovoye Array	124.10	318	PKP	PKPdf	13 34 14.6	-1.2
	comp=Z,0.7nm,0.6s,baz=103,slow=4.6,SNR=6.1						
BRVK	Borovoye	124.16	318		PKPdf	13 34 15.4	-0.5
ARCES	ARCESS Array B	134.32	350	PKP	PKiKP	13 34 35.7	-0.4
	comp=Z,1.7nm,0.7s,baz=29,slow=2.8,SNR=5.8						
FINES	FINESS Array B	141.22	343	PKhKP	PKPpre	13 34 40.4	
	comp=Z,3.3nm,1.0s,baz=81,slow=1.8,SNR=2.4						
NC303	NORSAR Array S	144.12	354		PKPab	13 34 50.2	-0.2
NB2	NORSAR Subarra	144.31	354	PKP	PKPab	13 34 51.2	0.0
	comp=Z,2.0nm,0.7s,baz=7.8,slow=3.4						
NOA	NORSAR Array B	144.31	354	PKP	PKPab	13 34 51.1	-0.1
	comp=Z,5.9nm,0.9s,baz=8.2,slow=2.3,SNR=10						
AKASG	Malin Array Be	148.34	329	PKPbc	PKPbc	13 35 02.3	-1.4
	comp=Z,3.6nm,0.6s,baz=42,slow=3.5,SNR=13						
AKASG	Malin Array Be	148.34	329		PKPbc	13 35 02.6	-1.1
AKBB	Malin Array Si	148.34	329		PKPbc	13 35 02.5	-1.2
EKA	Eskdalemuir Ar	149.95	8	PKPbc	PKiKP	13 35 09.0	+0.5
	comp=Z,1.0nm,0.6s,baz=327,slow=3.7,SNR=2.3						
BRTR	Keskin Array B	151.45	307	PKPbc	PKPbc	13 35 11.4	-0.4
	comp=Z,3.3nm,1.0s,baz=158,slow=1.3,SNR=8.5						
BRTR				PKPab	PKPab	13 35 20.1	-0.1
	comp=Z,3.3nm,0.7s,baz=92,slow=3.5,SNR=9.6						
BRTR	Keskin Array B	151.45	307		PKPbc	13 35 10.5	-1.4
BUR08	Bucovina Ar. S	152.37	328		PKiKP	13 35 14.6	+0.7
BURAR	Bucovina Array	152.38	328		PKPbc	13 35 13.3	-0.3
MLR	Muntele Rosu	153.45	324	PKPab	PKPab	13 35 27.9	-0.5
	comp=Z,1.9nm,0.5s,baz=111,slow=4.3,SNR=2.4						
CLL	Collm	153.49	347	*i* PKPbc	PKPbc	13 35 15.9	+0.1
	comp=Z,6.0nm,0.8s						
CLL				*i* PKPab	PKPab	13 35 27.6	-0.5
	comp=Z,9.0nm,1.1s						
DPC	Dobruska-Polom	153.57	342	*e*PKP	PKPab	13 35 29.4	+0.8
KHC	Kasperske Hory	155.41	345	*e*PKP	PKPab	13 35 40.7	+4.3
TORD	Torodi Ar. Bea	167.35	170	PKP	PKPdf	13 35 24.1	-0.4
	comp=Z,1.4nm,1.0s,baz=253,slow=1.0,SNR=5.4						
TORD				PKPab	PKPab	13 36 29.5	+0.2
	comp=Z,3.2nm,1.1s,baz=183,slow=3.1,SNR=6.9						

IDC 04 13:20:13.6±2.0, 32°.71N×95°.99E, h0^{km}, mb3.1/2, mb1 3.2/4, mb1mx3.0/68, mbtmp3.1/4, ML2.8/2, Error ellipse: s-maj=78.8km s-min=29.8km az=61.0, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	Songino Array	17.04	25	P	Pn	13 24 13.4	-0.1
	0.0nm,0.3s,baz=211,slow=12,SNR=2.5						
MKAR	Makanchi Array	17.53	327	P	P	13 24 20.6	0.0
	0.0nm,0.3s,baz=139,slow=12,SNR=3.4						
KURBB	Kurchatov Arra	22.05	329	P	P	13 25 09.2	-0.6
	0.3nm,0.6s,baz=137,slow=11,SNR=3.7						
ASAR	Alice Springs	66.72	142	P	P	13 31 06.8	+0.1
	0.4nm,0.9s,baz=323,slow=6.5,SNR=2.6						

IDC ***04*** *13:20:30.8±1.0, 37°.35N×97°.98W, h0^{km}, mb1 3.9/4, mb1mx3.4/56, mbtmp3.6/4, ML4.1/3, Error ellipse: s-maj=14.3km s-min=11.7km az=113.0*

ANF ***04*** *13:20:32.0±0.4, 37°.19N×97°.91W, h5^{km}, ML4.5/12, Error ellipse: s-maj=5.9km s-min=4.6km az=50.0*

NEIC ***04*** *13:20:31.9±0.7, 37°.19N±0°.02×97°.90W±0°.03, h5^{km}±1^{km}, mb_Lg3.6/138, Mwr3.4/5(SLM), Error ellipse: s-maj=4.6km s-min=2.6km az=61.0*

NEIC ***04*** *13:20:31.9, 37°.20N×97°.90W, h10^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-0.84; $M_{\theta\theta}$1.62; $M_{\phi\phi}$-0.77; $M_{r\theta}$0.15; $M_{\theta\phi}$0.45; $M_{\phi r}$-0.84; Fault plane solution: $M_0$1.70000×10^{14} NP1:ϕ_s295.00000°, δ60.00000°, λ-35.00000°. NP2:ϕ_s44.00000°, δ60.00000°, λ-145.00000°. Principal axes: T 1.7009, Plg0.0000°, Azm170.0000°; N -0.0016, Plg45.0000°, Azm79.0000°; P -1.6993, Plg45.0000°, Azm260.0000°;*

ISC 04 13:20:31.7±0.8, 37°.20N±0°.03×97°.89W±0°.03, h9^{km}±5^{km}, n126, σ0^s.56/112, Kansas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAN08	Anthony NE Sta	0.07	292		Pg	13 20 33.7	-0.1
KAN08				Sg	Sg	13 20 35.0	-0.2
KAN01	Argonia South	0.12	114		Pg	13 20 34.5	+0.1
KAN01				Sg	Sg	13 20 36.4	+0.1
KAN12	Harper NE Stat	0.13	318		Pg	13 20 34.6	-0.1
KAN12				Sg	Sg	13 20 36.8	+0.1
KAN10	Anthony SW Sta	0.18	245		Pg	13 20 35.5	0.0
KS21	Milan North St	0.20	65		Pg	13 20 35.9	+0.1
KAN14	Manchester OK	0.25	194		Pg	13 20 36.8	+0.1
KAN14				Sg	Sg	13 20 40.5	+0.4
GC02	Grant County #	0.35	176		Pg	13 20 38.6	0.0
GC02				Sg	Sg	13 20 43.6	+0.4
KAN13	South Haven SW	0.38	119		Pg	13 20 39.2	+0.1
CROK	Carrier	0.70	186	Pg	Pg	13 20 44.9	-0.3
T35A	Sooner Cattle	1.14	104	Pg	Pg	13 20 52.9	-0.6
T35B	Sooner Cattle	1.14	104	P		13 20 52.9	
	baz=284,SNR=299						
T35B				S		13 21 08.0	
	baz=284						
U32A	Winter Ranch,	1.21	228	Pg	Pg	13 20 54.1	-0.9
U32A	Winter Ranch,	1.21	228	P		13 20 54.1	
	baz=47						
R32A	Long Quarter,	1.38	332		Pn	13 20 57.2	-0.1
R32A	Long Quarter,	1.38	332	P		13 20 57.1	
	baz=153,SNR=79						
QUOK	Quay	1.40	137		Pn	13 20 57.3	-0.2
OK029	Liberty Lake	1.44	166		Pn	13 20 58.0	-0.1
OK031	S. Brethren Rd	1.50	145		Pn	13 20 59.0	+0.1
OK030	Cody Creek RV	1.55	145		Pn	13 20 59.7	+0.1
BCOK	Bluff Creek, N	1.56	172	Pn	Pn	13 20 59.8	+0.2
BCOK				IAmb_Lg		13 21 23.1	
	comp=Z,502nm,0.7s						
OK025	Westminster Rd	1.68	164	Pn	Pn	13 21 01.8	+0.5
OKCFA	Oklahoma City	1.82	169		Pn	13 21 03.5	+0.2
OKCSW	OKLAHOMA CITY	1.83	168		Pn	13 21 03.9	+0.5
FNO	Franklin	1.98	168		Pn	13 21 06.2	+0.7
TUL1	Leonard	2.12	127	P	Pn	13 21 08.4	+1.0
	baz=308						
TUL1	Leonard	2.12	127	Pn	Pn	13 21 08.2	+0.7
TUL1				IAmb_Lg		13 21 38.6	
	comp=Z,183nm,0.8s						
TUL1	Leonard	2.12	127	P		13 21 08.3	
	baz=308,SNR=44						
TUL1				S		13 21 37.2	
	baz=308						
KSU1	Kansas State U	2.15	28	P	Pn	13 21 08.6	+0.8
	baz=208						
KSU1	Kansas State U	2.15	28	Pn	Pn	13 21 08.6	+0.8
KSU1				IAmb_Lg		13 21 43.4	
	comp=Z,364nm,0.8s						
KSU1	Kansas State U	2.15	28	P		13 21 08.6	
	baz=208,SNR=34						
KSU1				S		13 21 38.2	
	baz=208						
CBKS	Cedar Bluff	2.17	318	P	Pn	13 21 08.9	+0.8
	baz=138						
CBKS				S	Sn	13 21 37.0	+1.7
	baz=138						
CBKS	Cedar Bluff	2.17	318	Pn	Pn	13 21 08.8	+0.6
CBKS				IAmb_Lg		13 21 42.2	
	comp=Z,232nm,1.0s						
CBKS	Cedar Bluff	2.17	318	P		13 21 08.7	
	baz=138,SNR=47						
CBKS				S		13 21 39.2	
	baz=138						
W35A	Tecumseh	2.20	158		Pn	13 21 08.9	+0.3
WMOK	Wichita Mounta	2.56	197	P	Pn	13 21 14.0	+0.5
	baz=16						
WMOK				S	Sn	13 21 46.3	+1.5
	baz=16						
WMOK	Wichita Mounta	2.56	197		Pn	13 21 13.6	+0.2
WMOK	Wichita Mounta	2.56	197	P		13 21 13.9	
	baz=16,SNR=28						
U38A	Gravette	2.91	104		Pn	13 21 18.9	+0.7
U38A				IAmb_Lg		13 22 10.8	
	comp=Z,165nm,0.8s						
U38A	Gravette	2.91	104	P		13 21 19.5	
	baz=286,SNR=46						
HHAR	Hobbs	3.30	105		Pn	13 21 24.3	+0.7
X37A	Clayton	3.31	141		Pn	13 21 24.1	+0.3
X37A				IAmb_Lg		13 22 22.3	
	comp=Z,199nm,0.9s						
X37A	Clayton	3.31	141	P		13 21 24.3	
	baz=322						
X37A				S		13 22 04.9	
	baz=322						
N33B	J Bar K, Exete	3.55	5	P		13 21 27.2	
	baz=186,SNR=13						
N33B				S		13 22 09.0	
	baz=186						
N33A	J Bar K, Exete	3.55	5		Pn	13 21 27.1	+0.1
N33A				IAmb_Lg		13 22 32.4	
	comp=Z,102nm,0.8s						
S39A	Bolivar	3.67	81		Pn	13 21 28.9	+0.2
S39A	Bolivar	3.67	81	P		13 21 29.0	
	baz=264,SNR=60						
AMTX	Amarillo	3.84	234	P	Pn	13 21 32.1	+0.9
	baz=52						
AMTX				S	Sn	13 22 16.4	-0.2
	baz=52						
AMTX	Amarillo	3.84	234	Pn	Pn	13 21 31.6	+0.4
AMTX				IAmb_Lg		13 22 35.7	
	comp=Z,141nm,0.7s						
AMTX	Amarillo	3.84	234	P		13 21 32.4	
	baz=52						
W39A	Magazine	3.88	120	P	Pn	13 21 32.8	+1.3
	baz=302						
W39A				S	Sn	13 22 18.3	+1.1
	baz=302						
W39A	Magazine	3.88	120		Pn	13 21 32.6	+1.1
Z35A	Perchaven, San	3.90	172	Pn	Pn	13 21 32.3	+0.5
Z35A				IAmb_Lg		13 22 40.3	
	comp=Z,96nm,1.1s						
N35A	Tabor	4.05	25	Pn	Pn	13 21 34.4	+0.5
N35A	Tabor	4.05	25	S		13 22 23.4	
	baz=206						
U40A	Yellville	4.13	100	P	Pn	13 21 35.6	+0.6
	baz=283						
U40A				S	Sn	13 22 22.7	-0.8
	baz=283						
U40A	Yellville	4.13	100	Pn	Pn	13 21 35.3	+0.3
U40A	Yellville	4.13	100	P		13 21 35.5	
	baz=283,SNR=46						
U40A				P		13 21 35.5	
	baz=283,SNR=46						
KSCO	Kaye Shedlock'	4.15	297	P	Pn	13 21 36.2	+0.8
	baz=115						
KSCO				S	Sn	13 22 23.9	-0.3
	baz=115						
KSCO	Kaye Shedlock'	4.15	297	Pn	Pn	13 21 35.9	+0.4
KSCO				IAmb_Lg		13 22 45.5	
	comp=Z,121nm,0.8s						
P38A	Dawn	4.19	53	Pn	Pn	13 21 36.2	+0.3
P38A				IAmb_Lg		13 22 43.4	
	comp=Z,97nm,0.8s						
P38A	Dawn	4.19	53	P		13 21 36.2	
	baz=236,SNR=14						
BGNE	Belgrade	4.21	357	P	Pn	13 21 36.5	+0.4
	baz=177						
BGNE				S	Sn	13 22 27.6	+2.2
	baz=177						
BGNE	Belgrade	4.21	357	Pn	Pn	13 21 36.2	+0.1
BGNE	Belgrade	4.21	357	P		13 21 36.5	
	baz=177						
MIAR	Mount Ida	4.39	126	P	Pn	13 21 39.1	+0.5
	baz=308						
MIAR				S	Sn	13 22 29.7	-0.2
	baz=308						
MIAR	Mount Ida	4.39	126		Pn	13 21 39.0	+0.4
MIAR				IAmb_Lg		13 23 01.0	
	comp=Z,90nm,0.8s						
MGMO	Mountain Grove	4.49	89		Pn	13 21 40.8	+0.8
MGMO				IAmb_Lg		13 22 55.2	
	comp=Z,161nm,0.8s						
R40A	Maddies Statio	4.59	75	Pn	Pn	13 21 41.6	+0.4
R40A				IAmb_Lg		13 23 06.3	
	comp=Z,80nm,0.9s						
R40A	Maddies Statio	4.59	75	P		13 21 41.7	
	baz=258,SNR=44						
Z38A	Mt. Pleasant	4.59	148		Pn	13 21 41.9	+0.5
Z38A	Mt. Pleasant	4.59	148	P		13 21 41.8	
	baz=330						
ABTX	Abilene, Hawle	4.79	198	P	Pn	13 21 44.5	+0.4
	baz=17						
FCAR	Ozark Folk Cen	4.82	104		Pn	13 21 44.5	0.0
FCAR				IAmb_Lg		13 23 13.3	
	comp=Z,71nm,0.8s						
L34A	Svendsen Farm,	4.90	13	Pn	Pn	13 21 45.4	-0.2
WHAR	Wooly Hollow	4.91	111	Pn	Pn	13 21 46.1	+0.4
WHAR				IAmb_Lg		13 23 17.1	
	comp=Z,118nm,1.0s						
X40A	Basin Creek Fa	4.92	122	P	Pn	13 21 46.5	+0.7
	baz=305						
X40A				S	Sn	13 22 43.1	+0.2
	baz=305						
X40A	Basin Creek Fa	4.92	122		Pn	13 21 46.2	+0.4
X40A				IAmb_Lg		13 23 04.8	
	comp=Z,86nm,0.7s						
X40A	Basin Creek Fa	4.92	122	P		13 21 46.8	
	baz=305,SNR=14						
X40A				P		13 21 46.8	
	baz=305,SNR=14						
OGNE	Ogallala	4.94	321	Pn	Pn	13 21 46.6	+0.5
OGNE				IAmb_Lg		13 23 14.3	
	comp=Z,70nm,0.8s						
W41B	Gary Mavity, V	4.99	112	P		13 21 47.3	
	baz=295						
N38A	Joes South For	5.10	44		Pn	13 21 48.4	+0.1
N38A	Joes South For	5.10	44	P		13 21 48.5	
	baz=227,SNR=11						
P40A	Paris	5.15	61		Pn	13 21 49.1	+0.1
WHTX	Lake Whitney,	5.21	176	Pn	Pn	13 21 50.0	+0.1
WHTX	Lake Whitney,	5.21	176	P		13 21 50.0	
	baz=356,SNR=8.5						
WLAR	White Oak Lake	5.24	131	Pn	Pn	13 21 50.4	+0.1
WLAR				IAmb_Lg		13 23 31.7	
	comp=Z,68nm,0.8s						
CCM	Cathedral Cave	5.34	79	Pn	Pn	13 21 51.5	-0.2
CCM	Cathedral Cave	5.34	79	P		13 21 51.6	
	baz=263,SNR=11						
T42A	Van Buren	5.43	90	Pn	Pn	13 21 52.9	-0.1
T42A				IAmb_Lg		13 23 28.6	
	comp=Z,87nm,0.8s						
T42A	Van Buren	5.43	90	P		13 21 53.0	
	baz=274,SNR=14						
K31A	O'Neill	5.46	353	Pn	Pn	13 21 53.5	+0.2
K31A	O'Neill	5.46	353	P		13 21 53.7	
	baz=173						
237A	Washetta, Mont	5.46	161	Pn	Pn	13 21 52.6	-0.8
237A	Washetta, Mont	5.46	161	P		13 21 52.7	
	baz=342,SNR=7.3						
LCAR	Lake Charles	5.53	100	Pn	Pn	13 21 54.7	+0.4
LCAR				IAmb_Lg		13 23 29.6	
	comp=Z,86nm,0.8s						
CCAR	Cane Creek	5.97	121	IAmb_Lg		13 23 54.5	
	comp=Z,77nm,0.8s						
FVM	French Village	5.98	80		Pn	13 22 00.0	-0.4
PBMO	Poplar Bluff	5.99	92	Pn	Pn	13 22 00.6	0.0
SLM	Saint Louis	6.22	74	IAmb_Lg		13 23 46.2	
	comp=Z,71nm,0.8s						
435B	Jarrell	6.41	178	IAmb_Lg		13 24 10.1	
	comp=Z,90nm,0.8s						
GNAR	Gosnell	6.45	99	Pn	Pn	13 22 06.9	0.0
N41A	Harden Midland	6.50	55	Pn	Pn	13 22 07.8	+0.1
N41A				IAmb_Lg		13 23 59.1	
	comp=Z,113nm,0.9s						
ISCO	Idaho Springs	6.59	296	Pn	Pn	13 22 09.2	+0.1
ECSD	EROS Data Cent	6.60	8	Pn	Pn	13 22 08.2	-0.7
K38A	Parkersburg	6.71	34	IAmb_Lg		13 24 14.4	
	comp=Z,103nm,0.8s						
S44A	Carbondale	6.89	83	Pn	Pn	13 22 13.0	+0.1
S44A				IAmb_Lg		13 24 14.4	
	comp=Z,107nm,0.8s						
JCT	Junction City	6.89	194	IAmb_Lg		13 24 14.1	
	comp=Z,72nm,1.0s						
SIUC	Southern Illin	6.92	83		Pn	13 22 13.4	+0.1
P43A	Skaggs, Pawnee	7.01	67	Pn	Pn	13 22 14.2	-0.3
P43A				IAmb_Lg		13 24 20.0	
	comp=Z,73nm,0.8s						
P43A	Skaggs, Pawnee	7.01	67	P		13 22 14.3	
	baz=252,SNR=6.5						
PHWY	Pilot Hill	7.16	307	Pn	Pn	13 22 16.9	0.0
Q44A	Meyer Farm, Va	7.21	74	IAmb_Lg		13 24 28.8	
	comp=Z,89nm,0.8s						
SUSD	Miller	7.28	354	IAmb_Lg		13 24 39.0	
	comp=Z,52nm,0.7s						
ANMO	Albuquerque	7.29	255	Lg	Lg	13 24 17.1	
	comp=Z,1.7nm,0.3s,baz=128,slow=9.3,SNR=3.0						
ANMO	Albuquerque	7.29	255	IAmb_Lg		13 24 33.7	
	comp=Z,16nm,0.9s						
OXF	Oxford	7.39	109	IAmb_Lg		13 24 33.5	
	comp=Z,96nm,0.9s						
HDIL	Hopedale	7.50	61		Pn	13 22 21.6	+0.4
HDIL				IAmb_Lg		13 24 32.8	
	comp=Z,54nm,0.8s						
441A	DeRidder	7.52	147	Pn	Pn	13 22 22.3	+0.7
Y45A	Yeager Farm, C	7.57	114	IAmb_Lg		13 24 41.5	
	comp=Z,79nm,0.8s						
I37A	Lemond, Waseca	7.61	25	IAmb_Lg		13 24 52.1	
	comp=Z,78nm,0.8s						
OLIL	Olney	7.88	76	IAmb_Lg		13 24 55.9	
	comp=Z,64nm,0.9s						
O44A	Mansfield	7.94	65	IAmb_Lg		13 24 53.8	
	comp=Z,61nm,0.8s						
L42A	Oliver, Polo	7.96	50		Pn	13 22 27.2	-0.3
Y22D	IRIS PASSCAL I	7.99	250	IAmb_Lg		13 25 03.0	
	comp=Z,72nm,0.8s						
WVT	Waverly	8.15	95	Pn	Pn	13 22 30.1	-0.2
WVT				IAmb_Lg		13 24 48.9	
	comp=Z,44nm,0.7s						
JFWS	Jewell Farm	8.18	43	Pn	Pn	13 22 30.0	-0.6
JFWS				IAmb_Lg		13 24 50.8	
	comp=Z,54nm,0.8s						
PLAL	Pickwick Lake	8.25	103	Pn	Pn	13 22 31.7	+0.2
PLAL				IAmb_Lg		13 24 53.0	
	comp=Z,42nm,1.0s						
MNTX	Cornudas Mount	8.27	231	Pn	Pn	13 22 31.7	-0.2
RSSD	Black Hills	8.34	328	IAmb_Lg		13 25 01.2	
	comp=Z,17nm,0.9s						
RWWY	Rawlins	8.49	305	Pn	Pn	13 22 35.2	+0.1
146A	Union	8.56	120	IAmb_Lg		13 25 14.4	
	comp=Z,51nm,0.8s						
K22A	Casper	8.58	312	Pn	Pn	13 22 36.2	0.0
T47A	Sharon Grove	8.62	88	Pn	Pn	13 22 36.9	+0.3
T47A				IAmb_Lg		13 25 21.4	
	comp=Z,69nm,1.0s						
M44A	Midewin, Midew	8.70	58	Pn	Pn	13 22 37.6	-0.2
M44A				IAmb_Lg		13 25 11.2	
	comp=Z,70nm,1.3s						
P46A	Rosedale	8.73	71	IAmb_Lg		13 25 07.2	
	comp=Z,58nm,0.9s						
Z47A	Carrollton	8.97	114	IAmb_Lg		13 25 23.6	
	comp=Z,32nm,0.7s						
SFIN	Lafayette	9.01	66	IAmb_Lg		13 25 17.4	
	comp=Z,36nm,0.8s						
V48A	Smith Brothers	9.03	96	IAmb_Lg		13 25 23.5	
	comp=Z,44nm,1.0s						
BLO	Bloomington	9.16	74	IAmb_Lg		13 25 24.1	
	comp=Z,60nm,0.8s						
TX31	Lajitas Ar. Si	9.21	213		Pn	13 22 44.8	-0.2
TX32	Lajitas Array	9.21	213	Pn	Pn	13 22 44.8	-0.1
TXAR	Lajitas Array	9.21	213	Pn	Pn	13 22 44.7	-0.2
	comp=Z,0.3nm,0.3s,baz=38,slow=12,SNR=16						
TXAR				Lg	Lg	13 25 17.9	
	comp=Z,1.1nm,0.3s,baz=32,slow=31,SNR=3.0						
TXAR	Lajitas Array	9.21	213		Pn	13 22 44.6	-0.3
CLTN	Cedars of Leba	9.36	93	IAmb_Lg		13 25 31.1	
	comp=Z,50nm,1.2s						
E28A	Huff	9.60	348	IAmb_Lg		13 25 43.5	
	comp=Z,39nm,1.0s						
SWET	Sewanee	9.86	98	IAmb_Lg		13 25 49.0	
	comp=Z,47nm,1.1s						
Y49A	Blount Mountai	9.93	106	IAmb_Lg		13 25 46.3	
	comp=Z,32nm,0.7s						
D32A	Dogwood Acres,	9.95	3	IAmb_Lg		13 25 55.9	
	comp=Z,29nm,0.9s						
PD31	Pinedale Array	10.53	305		Pn	13 23 02.9	-0.2
PDAR	Pinedale Array	10.53	305	Pn	Pn	13 23 01.8	-1.3
	comp=Z,0.4nm,0.3s,baz=118,slow=14,SNR=15						
BW06	Boulder Array	10.54	305		Pn	13 23 02.9	-0.2
TKL	Tuckaleechee C	11.48	93	Pn	Pn	13 23 15.5	-0.3
	comp=Z,0.4nm,0.3s,baz=304,slow=15,SNR=2.2						
TKL				Sn	Sn	13 25 15.1	-9.0
	comp=Z,0.4nm,0.3s,baz=270,slow=19,SNR=2.3						
TKL				Lg	Lg	13 26 26.1	
	comp=Z,0.7nm,0.3s,baz=339,slow=17,SNR=3.8						
ULM	Lac du Bonnet	13.12	6	Pn	Pn	13 23 33.2	-5.1
	comp=Z,0.2nm,0.3s,baz=185,slow=12,SNR=3.5						
ULM				Sn	Sn	13 25 50.4	-14
	comp=Z,0.6nm,0.3s,baz=104,slow=21,SNR=3.7						
ULM				Lg	Lg	13 27 16.8	
	comp=Z,0.6nm,0.3s,baz=142,slow=18,SNR=5.3						

IDC 04 13:21:29.7±390.0, 67°.56N×40°.87E, h0^{km}, Error ellipse: s-maj=155.0km s-min=64.8km az=110.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I37NO	I37NO	8.36	291	*i*		14 14 20.0	
	baz=90,slow=329,SNR=0.8						
I31KZ	AKTYUBINSK INF	19.21	145	*i*		15 21 50.0	
	baz=339,slow=346,SNR=0.8						
I46RU	ZALESOVO INFRA	24.75	101	*i*		15 53 20.0	
	baz=320,slow=347,SNR=1.4						

JMA 04 13:26:02.8, 34°.96N×136°.10E, h371^{km}, M2.3, Western Honshu

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

```
JWT    Wachi              0.66 300   P       Pn      13 26 49.8 +0.1
JKN2   Miekihoku          0.73 169   P       Pn      13 26 50.0  0.0
JIE    Ise                0.76 138   P       Pn      13 26 50.2 +0.1
JWY    Kouya              0.85 210   P       Pn      13 26 50.6 +0.1
JKY    Yasaka             1.05 310   P       Pn      13 26 51.3 +0.4
JTNC   Tanabenakahech     1.21 200   P       Pn      13 26 51.7 -0.1
MAT    Matsushiro         2.33  47   P       Pn      13 27 00.8 +2.5
MAT    Matsushiro         2.33  47   P       Pn      13 27 00.6 +2.3
JRY    Ryogami san        2.52  64   P       Pn      13 26 57.1 -2.7
JHU    Hanno              2.75  70   P       Pn      13 27 02.3 +0.7
JAG    Ashikaga           3.10  61   P       Pn      13 27 04.8 +0.3
JAG                                 eS       S       13 27 51.1 -3.3
JHO    Hitachi            3.99  64   P       Pn      13 27 13.0 +0.1
```

UPP 04 13:29:43.3±0.1, 59°.52N×17°.72E, h0km, ML1.9, Explosion, Sweden

```
Code   Station Name        Δ°   AZ°    Phase ID          Time     Res
                                     Op      ISC      h  m  s     ISC
UPP    Uppsala            0.34 352   P       Pg      13 29 50.0 +0.1
BACU   Backbrunna         0.46 318   P       Pg      13 29 51.9 -0.2
BACU   Backbrunna         0.46 318   P       Pg      13 29 51.9 -0.2
NRTU   Norrtaelje         0.49  71   P       Pg      13 29 52.7  0.0
NRTU                                 S       Sg      13 29 59.4 +0.3
NRTU   Norrtaelje         0.49  71   P       Pg      13 29 52.7  0.0
NRTU                                 S       Sg      13 29 59.4 +0.3
FLYU   Flymyra            0.62   8   P       Pg      13 29 54.9 -0.3
FLYU   Flymyra            0.62   8   P       Pg      13 29 54.9 -0.3
ESKU   Eskilstuna         0.74 248   P       Pg      13 29 57.2 -0.2
ESKU                                 S       Sg      13 30 06.7 -0.2
ESKU   Eskilstuna         0.74 248   P       Pg      13 29 57.2 -0.2
ESKU                                 S       Sg      13 30 06.7 -0.2
OSTU   Oestervaala        0.77 338   P       Pg      13 29 58.1  0.0
OSTU   Oestervaala        0.77 338   P       Pg      13 29 58.1  0.0
GRAU   Graesoe            0.92  26   P       Pg      13 30 00.6 -0.3
GRAU   Graesoe            0.92  26   P       Pg      13 30 00.6 -0.3
AAL    Aland              1.33  59   P       Pg      13 30 07.5 -1.2
NRAU   Nora               1.36 273   P       Pg      13 30 08.7 -0.7
NRAU   Nora               1.36 273   P       Pg      13 30 08.7 -0.7
```

DNK 04 13:30:14.9±6.3, 56°.33N×15°.76E, h15km±558km, ML1.6, Explosion, Sweden

```
Code   Station Name        Δ°   AZ°    Phase ID          Time     Res
                                     Op      ISC      h  m  s     ISC
BSD    Bornholm Skovb     1.31 202  i P      Pb      13 30 39.3 +0.2
BSD                                 eS       Sb      13 30 54.1 -1.5
BSD    Bornholm Skovb     1.31 202  e        Pb      13 30 39.0 -0.1
       baz=46,slow=12
BSD                                 i P      Pg      13 30 39.3 -0.7
BSD                                 eS       Sb      13 30 54.1 -1.5
BSD                                  IAML            13 31 01.3
       comp=Z,3.1nm,0.4s
```

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*VAO **04** 13:37:49.2±1.1, 20°.97S×69°.51W, h10km, mb4.2*
*SJA **04** 13:37:54.1±0.6, 21°.20S×69°.48W, h77km±2km, ML4.1, MW4.1*
*NEIC **04** 13:37:54.4±2.0, 21°.20S±0°.04×69°.45W±0°.08, h79km±5km, Error ellipse: s-maj=11.9km s-min=4.7km az=73.0*
*IDC **04** 13:37:55.6±0.5, 21°.13S×69°.35W, h80km±4km, mb3.5/7, mb1 3.8/10, mb1mx3.7/30, mbtmp3.9/10, MS2.8/2, Ms1 2.8/2, ms1mx2.7/15, Error ellipse: s-maj=20.3km s-min=6.3km az=77.0*
*GUC **04** 13:37:55.6±0.6, 21°.21S×69°.40W, h75km±2km, ML4.2*
ISC 04 13:37:54.6±0.5, 21°.19S±0°.03×69°.52W±0°.04, h77km±4km, n104, σ1ˢ.57/129, mb4.0/10, 5C-7D, Northern Chile

```
Code   Station Name        Δ°   AZ°    Phase ID          Time     Res
                                     Op      ISC      h  m  s     ISC
PB01   IPOC Station P     0.15  12⇓iP      Pn      13 38 06.2 +0.2
PB01                                i S      Sn      13 38 14.6 +0.3
PB01                                 IAML            13 38 15.3
       comp=E,38µm,0.3s
PB01   IPOC Station P     0.15  12           Pn      13 38 05.9  0.0
PB01   IPOC Station P     0.15  12  eP       Pn      13 38 06.0  0.0
PB01                                eS       Sn      13 38 15.0 +0.6
PB01                                 IAML            13 38 17.4
       comp=Z,8µm,0.6s
PB02   IPOC Station P     0.37 250⇑iP      Pn      13 38 08.1 +0.9
PB02                                i S      Sn      13 38 17.9 +1.5
PB02   IPOC Station P     0.37 250  eP       Pn      13 38 07.9 +0.7
PB02                                eS       Sn      13 38 17.7 +1.3
PB07   IPOC Station P     0.63 212⇑iP      Pn      13 38 10.2 +0.6
PB07                                i S      Sn      13 38 21.3 +0.7
PB07                                 IAML            13 38 22.4
       comp=E,31µm,0.3s
PB07   IPOC Station P     0.63 212           Pn      13 38 09.9 +0.3
PB07   IPOC Station P     0.63 212  eP       Pn      13 38 09.9 +0.3
PB07                                eS       Sn      13 38 21.7 +1.1
PB07                                 IAML            13 38 23.4
       comp=Z,11µm,0.4s
PB09   IPOC Station P     0.66 157⇓iP      Pn      13 38 10.2 +0.4
PB09                                i S      Sn      13 38 20.9 -0.1
PB09                                 IAML            13 38 22.8
       comp=N,10µm,0.5s
PB09   IPOC Station P     0.66 157           Pn      13 38 10.1 +0.3
PB09   IPOC Station P     0.66 157  eP       Pn      13 38 10.1 +0.3
PB09                                eS       Sn      13 38 21.8 +0.8
PB09                                 IAML            13 38 27.1
       comp=Z,6µm,0.5s
PATCX  Punta Patache      0.69 302⇑iP      Pn      13 38 11.4 +1.4
PATCX                               i S      Sn      13 38 23.9 +2.4
PATCX                                IAML            13 38 25.0
       comp=N,19µm,0.2s
PATCX  Punta Patache      0.69 302           Pn      13 38 11.4 +1.4
PATCX  Punta Patache      0.69 302  eP       Pn      13 38 11.5 +1.4
TA01   Diego Aracena      0.88 315  i P      Pn      13 38 13.2 +1.3
TA01                                i S      Sn      13 38 27.0 +2.1
TA01                                 IAML            13 38 28.4
       comp=N,10µm,0.3s
TA01   Diego Aracena      0.88 315           Pn      13 38 13.3 +1.4
PB03   IPOC Station P     0.88 194⇑iP      Pn      13 38 12.7 +0.5
PB03                                i S      Sn      13 38 26.0 +0.6
PB03                                 IAML            13 38 28.0
       comp=E,8µm,0.6s
PB03   IPOC Station P     0.88 194  eP       Pn      13 38 12.8 +0.5
PB03                                eS       Sn      13 38 26.4 +1.1
PB03                                 IAML            13 38 29.5
       comp=Z,4µm,0.8s
HMBC   Humberstone        0.97 339⇓iP      Pn      13 38 14.0 +0.8
HMBC                                i S      Sn      13 38 28.5 +1.4
HMBC                                 IAML            13 38 36.1
       comp=E,7µm,0.3s
PB08   IPOC Station P     1.10  18⇓iP      Pn      13 38 15.8 +0.7
PB08                                i S      Sn      13 38 31.5 +1.2
PB08   IPOC Station P     1.10  18           Pn      13 38 15.7 +0.6
PB08   IPOC Station P     1.10  18  eP       Pn      13 38 15.8 +0.7
PB08                                eS       Sn      13 38 31.8 +1.4
PB08                                 IAML            13 38 35.8
       comp=Z,2µm,0.4s
PB04   IPOC Station P     1.28 207⇑iP      Pn      13 38 17.9 +0.7
PB04                                i S      Sn      13 38 35.6 +1.5
PB04                                 IAML            13 38 40.1
       comp=E,5µm,0.8s
PB04   IPOC Station P     1.28 207           Pn      13 38 17.8 +0.7
PB04   IPOC Station P     1.28 207  eP       Pn      13 38 17.9 +0.7
PB04                                eS       Sn      13 38 35.7 +1.6
PB04                                 IAML            13 38 40.5
       comp=Z,3µm,0.1s
PB06   IPOC Station P     1.51 182⇓iP      Pn      13 38 20.6 +0.5
PB06                                i S      Sn      13 38 40.1 +0.8
PB06                                 IAML            13 38 42.1
       comp=E,6µm,0.6s
PB06   IPOC Station P     1.51 182           Pn      13 38 20.3 +0.2
PB06   IPOC Station P     1.51 182  eP       Pn      13 38 21.0 +0.9
PB06                                eS       Sn      13 38 40.8 +1.5
PB06                                 IAML            13 38 42.0
       comp=Z,3µm,0.6s
LVC    Limon Verde        1.52 158   P       Pn      13 38 21.9 +1.5
       comp=Z,229nm,0.3s,baz=5.6,slow=7.6,SNR=1344
LVC                                  S       Sn      13 38 41.2 +1.3
       comp=Z,219nm,0.3s,baz=0.8,slow=13,SNR=118
LVC                                  LR      LR      13 39 13.6
       comp=Z,104nm,21.4s,baz=341,slow=51
LVC    Limon Verde        1.52 158           Pn      13 38 21.6 +1.2
LVC    Limon Verde        1.52 158  eP       Pn      13 38 21.9 +1.5
LVC                                 eS       Sn      13 38 42.5 +2.6
LVC                                  IAML            13 38 43.1
       comp=Z,1µm,0.7s
PSGC   Pisagua            1.68 340⇓iP      Pn      13 38 22.8 +0.5
PSGC                                i S      Sn      13 38 44.0 +0.7
PSGC                                 IAML            13 38 47.6
       comp=N,2µm,0.3s
PSGCX  Pisagua            1.68 340   Pn      Pn      13 38 22.7 +0.4
PSGCX  Pisagua            1.68 340  eP       Pn      13 38 22.9 +0.6
PB15   IPOC Station P     2.01 179⇓iP      Pn      13 38 27.5 +0.8
PB15                                i S      Sn      13 38 53.3 +2.1
PB15   IPOC Station P     2.01 179           Pn      13 38 27.5 +0.8
PB15   IPOC Station P     2.01 179  eP       Pn      13 38 27.6 +0.8
PB15                                eS       Sn      13 38 52.0 +0.8
PB15                                 IAML            13 38 59.7
       comp=Z,3µm,0.3s
MNMC   Minye Minye        2.05 358  eP       Pn      13 38 28.3 +1.0
MNMC   Minye Minye        2.05 358           Pn      13 38 28.4 +1.0
MNMCX  Minye Minye        2.05 358  eP       Pn      13 38 24.2 -3.2
MNMCX                               eP       Pn      13 38 28.6 +1.3
PB10   IPOC Station P     2.50 202           Pn      13 38 32.8 -0.4
PB10   IPOC Station P     2.50 202  eP       Pn      13 38 33.0 -0.2
PB10                                eS       Sn      13 39 05.0 +2.3
PB10                                 IAML            13 39 15.0
       comp=Z,598nm,0.5s
PB16   IPOC Station P     2.84   0   Pn      Pn      13 38 40.2 +1.9
PB14   IPOC Station P     3.52 193   Pn      Pn      13 38 45.7 -1.5
PB14   IPOC Station P     3.52 193  eP       Pn      13 38 45.9 -1.2
PB14                                 IAML            13 39 49.1
       comp=Z,341nm,0.4s
YJA    Yavi               3.85 105  eP       Pn      13 38 54.7 +2.8
YJA                                 eS       Sn      13 39 40.8 +4.5
GO02   Mina Guanaco       3.95 181   Pn      Pn      13 38 52.6 -0.6
HJA    Humahuaca          4.31 119  eP       Pn      13 39 01.1 +3.0
AC01   Pan de Azucar      5.03 191   Pn      Pn      13 39 04.9 -2.7
AZAP   Zapla              5.10 127  eP       Pn      13 39 11.2 +2.4
ASTB   Santa Barbara      5.43 121  eP       Pn      13 39 14.1 +1.0
AC02   Maricunga          5.63 176   Pn      Pn      13 39 15.8 -0.4
GO03   Copiap             6.41 186   Pn      Pn      13 39 24.0 -2.4
AC04   Llanos de Chal     7.12 191   Pn      Pn      13 39 31.9 -4.2
AC05   El Transito        7.64 185   Pn      Pn      13 39 40.0 -3.4
LCO    Las Campanas       7.86 188   Pn      Pn      13 39 42.2 -4.2
CO01   Juntas del Tor     8.77 183   Pn      Pn      13 39 54.5 -4.3
GO04   Tololo Observa     9.02 187   Pn      Pn      13 39 57.5 -4.7
SIV    San Ignacio        9.53  59   P       Pn      13 40 07.6 -1.6
       comp=Z,11nm,0.3s,baz=254,slow=9.6,SNR=129
SIV                                  LR      LR      13 43 23.4
       comp=Z,52nm,18.2s,baz=246,slow=35
ETMB   Extrema           11.75  16  eP       Pn      13 40 35.1 -4.2
MT02   Curacav           12.11 186   Pn      Pn      13 40 43.6 -0.5
CPUP   Villa Florida     12.28 117   P       Pn      13 40 44.6 -1.8
       comp=Z,0.1nm,0.3s,baz=320,slow=11,SNR=4.3
CPUP                                 LR      LR      13 45 10.2
       comp=Z,46nm,19.5s,baz=1.5,slow=36
CPUP   Villa Florida     12.28 117  eP       Pn      13 40 45.1 -1.3
AQDB   Aquidauana        12.95  89  eP       Pn      13 40 54.3 -1.2
SAML   Samuel            13.62  28   Pn      Pn      13 41 03.3 -1.2
PP1B   Ponte de Pedra    14.27  78  eP       Pn      13 41 10.6 -2.4
TRCB   Terra Rica        15.75  99  eP       Pn      13 41 32.0 +0.1
ARAG   Araguaiana, MT    17.66  75  eP       P       13 41 54.3 -1.2
FRTB   Fartura           18.60 100  eP       P       13 42 06.2 +0.4
PLCA   Paso Flores       19.50 182   P       Pn      13 42 18.4 +0.9
       comp=Z,0.2nm,0.3s,baz=355,slow=12,SNR=7.8
PLCA   Paso Flores       19.50 182   P       P       13 42 15.5 -0.1
NPGB   Novo Progresso    19.63  46  eP       P       13 42 16.1 -1.0
SNDB   Serra Nova Dou    19.71  65  eP       P       13 42 17.4 -0.6
PET01  Itanhaem-SP       20.75 103  eP       P       13 42 30.4 +1.3
BDFB   Brasilia          21.13  78   P       P       13 42 33.2 -0.2
       comp=Z,2.1nm,0.4s,baz=323,slow=2.0,SNR=3.6
BDFB   Brasilia          21.13  78   P       P       13 42 32.0 -1.5
BDFB                                 IAmb    IAmb    13 42 45.4
       comp=Z,6.3nm,1.1s
ITTB   Itaituba          21.43  41  eP       P       13 42 34.5 -1.9
PTGA   Pitinga           22.37  26   P       P       13 42 46.7 +0.1
       comp=Z,1.5nm,0.3s,baz=209,slow=19,SNR=1.1
PTGA   Pitinga           22.37  26   IAmb    IAmb    13 43 04.6
       comp=Z,5.7nm,0.9s
BSCB   Bom Sucesso       23.09  94  eP       P       13 42 55.3 +1.3
TXAR   Lajitas Array     60.05 326   P       P       13 47 53.7 -0.1
       comp=Z,0.2nm,0.3s,baz=152,slow=8.2,SNR=2.0
S39A   Bolivar           62.71 339   P       P       13 48 11.2 -0.2
S39A                                 IAmb    IAmb    13 48 11.7
       comp=Z,3.3nm,0.7s
M55A   Ridgway           62.93 352   P       P       13 48 12.9 +0.2
QSPA   South Pole Qui    69.00 180   P       P       13 48 52.6 +1.0
QSPA                                 IAmb    IAmb    13 48 53.6
       comp=Z,7.5nm,1.4s
PDAR   Pinedale Array    73.56 330   P       P       13 49 20.8 +1.3
       comp=Z,0.2nm,0.6s,baz=138,slow=8.6,SNR=2.6
PDAR                                 pP      pP      13 49 41.8 +1.5
       comp=Z,0.1nm,0.5s,baz=145,slow=6.6,SNR=1.8
PDAR                                 sP      sP      13 49 50.6 +1.8
       comp=Z,0.3nm,0.7s,baz=123,slow=5.5,SNR=3.1
NVAR   Mina Array Bea    74.90 322   P       P       13 49 29.3 +2.0
       comp=Z,0.5nm,0.9s,baz=144,slow=6.7,SNR=3.0
NVAR                                 pP      pP      13 49 49.7 +1.5
       comp=Z,0.1nm,0.5s,baz=140,slow=9.0,SNR=1.5
TOA0   Torodi Ar. Sit    77.79  71   P       P       13 49 42.7 -1.2
TOA0                                 IAmb    IAmb    13 49 50.8
       comp=Z,4.3nm,0.9s
TORD   Torodi Ar. Bea    77.79  71   P       P       13 49 43.0 -1.0
       comp=Z,1.5nm,0.7s,baz=260,slow=4.1,SNR=3.1
TORD                                 pP      pP      13 50 04.3 -0.8
       comp=Z,1.5nm,0.6s,baz=257,slow=5.5,SNR=4.6
TORD   Torodi Ar. Bea    77.79  71   P       P       13 49 42.8 -1.2
YKA    Yellowknife Ar    90.71 341   P       P       13 50 48.7 +0.4
       comp=Z,0.9nm,0.7s,baz=132,slow=5.1,SNR=19
YKA                                  pP      pP      13 51 09.3 -0.4
       comp=Z,0.6nm,0.7s,baz=131,slow=5.1,SNR=6.5
H11S2  WAKE ISLAND Hy127.27 278      T       T       16 16 36.9
       baz=102,slow=74,SNR=65
H11S1  WAKE ISLAND Hy127.28 278      T       T       16 16 48.8
       baz=102,slow=74,SNR=46
H11S3  WAKE ISLAND Hy127.29 278      T       T       16 16 38.2
       baz=102,slow=74,SNR=47
H11N3  WAKE ISLAND Hy127.35 279      T       T       16 16 38.6
       baz=103,slow=75,SNR=19
H11N2  WAKE ISLAND Hy127.36 279      T       T       16 17 05.9
       baz=103,slow=75,SNR=20
H11N1  WAKE ISLAND Hy127.36 279      T       T       16 16 41.1
       baz=103,slow=75,SNR=10
ASAR   Alice Springs    129.92 208   PKP     PKPdf   13 56 56.1 +0.1
       comp=Z,12nm,0.4s,baz=119,slow=1.8,SNR=6.4
PETK   Petropavlovsk-   131.98 323   PKP     PKiKP   13 56 59.9  0.0
       comp=Z,1.9nm,0.9s,baz=25,slow=4.2,SNR=1.8
WRA    Warramunga Arr   132.93 211   PKP     PKPdf   13 57 01.9 +0.1
       comp=Z,0.6nm,0.6s,baz=153,slow=1.7,SNR=13
ZALV   Zalesovo Beam    141.91  25   PKP     PKPdf   13 57 17.8 +0.6
       comp=Z,0.5nm,0.6s,baz=288,slow=1.4,SNR=2.4
MKAR   Makanchi Array   145.71  35   PKPbc   PKPbc   13 57 24.7  0.0
       comp=Z,0.8nm,0.7s,baz=313,slow=3.8,SNR=9.7
MKAR                                 pPKPbc  pPKPab  13 57 46.9  0.0
       comp=Z,2.6nm,0.8s,baz=332,slow=4.1,SNR=16
MKAR   Makanchi Array   145.71  35           PKPbc   13 57 24.5 -0.2
USRK   Ussuriysk Ar.    150.94 327   PKPbc   PKiKP   13 57 39.1 +0.1
       comp=Z,2.1nm,0.7s,baz=141,slow=2.6,SNR=5.0
MJAR   Matsushiro Arr   151.43 308   PKPbc   PKPbc   13 57 39.5 -0.4
       comp=Z,1.0nm,0.5s,baz=137,slow=1.0,SNR=2.6
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*ISU **04** 13:39:11, 40°.50N×73°.40E, h5km, Hypocentre not reviewed by the ISC*
*KRNET **04** 13:39:11.6±0.1, 40°.46N×73°.44E, h19km, mb3.6*
*SOME **04** 13:39:12.6, 40°.53N×73°.52E, h15km*
*NNC **04** 13:39:13.7±0.9, 40°.60N×73°.53E, h0km, mb4.2, mpv3.9, Error ellipse: s-maj=7.3km s-min=3.4km az=174.0*
ISC 04 13:39:12.7±0.9, 40°.48N±0°.04×73°.27E±0°.03, h10km, n80, σ1ˢ.51/120, 25C-20D, Kyrgyzstan

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Code   Station Name        Δ°   AZ°    Phase ID          Time     Res
                                     Op      ISC      h  m  s     ISC
OHH    Osh                0.38 277⇑iP      Pb      13 39 21.5  0.0
       baz=78
OHH                               ⇑iS      Sb      13 39 28.8 +1.4
       baz=78
OHH    Osh                0.38 277  eP               13 39 21.0
OHH                                 eS               13 39 29.0
ANR    Andizhan           0.75 292  i P              13 39 28.0
ANR                                 i S              13 39 43.0
ARSB   Arslanbob          0.87 345⇑eP      Pg      13 39 29.0 -0.5
       baz=38
ARSB                              ⇑iS      Sb      13 39 41.7 -0.2
       baz=38
ARSB   Arslanbob          0.87 345  eP               13 39 29.0
ARSB                                eS               13 39 48.0
FRG    Fergana            1.16 283  i P              13 39 37.0
FRG                                 i S              13 39 54.0
SHAK   Shakhimardan       1.29 247  i P              13 39 38.0
SHAK                                i S              13 39 57.0
NAM    Namangan           1.33 293  i P              13 39 40.0
NAM                                 i S              13 40 02.0
DRK    Karamyk            1.51 229⇑iP      Pb      13 39 40.6 -0.3
       baz=33
DRK                               ⇑iS      Sg      13 40 02.0 +0.8
       baz=33
ARLS   Aral               1.59  29⇑iP      Pn      13 39 39.9 -1.2
       baz=25
ARLS                              ⇑iS      Sn      13 40 00.8 -1.0
       baz=25
BTK    Batken             1.93 258⇑iP      Pb      13 39 47.9  0.0
       baz=60
BTK                               ⇑iS      Sg      13 40 14.5 -0.1
       baz=60
TRKS   Terek-Say          1.93 304⇓iP      Pb      13 39 47.2 -0.8
       baz=1.0
TRKS                              ⇓iS      Sg      13 40 13.0 -1.6
       baz=1.0
UCH    Uchtor             1.98  28⇑iP      Pn      13 39 46.9 +0.2
       baz=24
UCH                               ⇑iS      Sn      13 40 12.3 +0.5
       baz=24
UCH    Uchtor             1.98  28   P       Pn      13 39 47.1 +0.4
       SNR=89
MNAS   Manas              2.09 344⇑iP      Pb      13 39 49.4 -1.4
       baz=41
MNAS                              ⇑iS      Sb      13 40 17.0 +0.2
       baz=41
EKS2   Erkin-Say          2.21  10⇓eP      Pn      13 39 50.2 +0.6
       baz=6.0
EKS2                              ⇓iS      Sn      13 40 18.4 +1.3
       baz=6.0
EKS2   Erkin-Say          2.21  10   P       Pb      13 39 51.9 -1.0
       SNR=33
MRKS   Merke              2.27 359  eP       Pb      13 39 54.0 +0.2
       79nm,0.3s
MRKS                                eS       Sb      13 40 23.3 +1.5
       199nm,0.3s
MRKS   Merke              2.27 359   Pg      Pb      13 39 53.9 +0.2
       79nm,0.3s
MRKS                                 Lg      Lg      13 40 23.5
       199nm,0.3s
AAK    Ala-Archa          2.34  23⇓iP      Pn      13 39 51.6 +0.2
       baz=20
AAK                               ⇓iS      Sn      13 40 20.9 +0.5
       baz=20
AAK    Ala-Archa          2.34  23   P       Pb      13 39 53.4 -1.7
       SNR=105
AAK    Ala-Archa          2.34  23  ⇓Pg      Pb      13 39 54.2 -0.9
       19nm,0.2s
AAK                                 ⇓Lg      Lg      13 40 24.5
       136nm,0.6s
KBK    Karagaybulak       2.51  29⇓iP      Pn      13 39 53.6 -0.2
       baz=27
KBK                               ⇓iS      Sn      13 40 24.5  0.0
       baz=27
KBK    Karagaybulak       2.51  29   P       Pb      13 39 57.1 -0.9
       SNR=33
FRU1   Bishkek            2.54  23⇑iP      Pn      13 39 54.3 +0.2
       baz=20
FRU1                              ⇑iS      Sn      13 40 25.3 +0.2
       baz=20
CHMG   Chimgan            2.69 295  eP               13 40 05.0
CHMG                                eS               13 40 40.0
CHMS   Chumysh            2.75  23⇓iP      Pn      13 39 57.4 +0.5
       baz=21
CHMS                              ⇓iS      Sn      13 40 30.5 +0.3
       baz=21
CHMS   Chumysh            2.75  23   P       Pn      13 39 59.1 +2.2
       SNR=11
DZA    Taraz              2.82 330  eP       Pg      13 40 06.0 -0.7
       51nm,0.1s
DZA                                 eS       Sg      13 40 43.4 +0.3
       213nm,0.4s
DZA    Taraz              2.82 330   Pg      Pg      13 40 05.9 -0.7
       51nm,0.1s
DZA                                  Lg      Lg      13 40 43.4
       213nm,0.4s
ULHL   Ulahol             2.85  51⇑iP      Pn      13 39 57.8 -0.6
       baz=49
ULHL                              ⇑iS      Sn      13 40 31.5 -1.3
       baz=49
ULHL   Ulahol             2.85  51   P       Pb      13 40 01.8 -1.9
       SNR=44
USP    Ospenovka          2.93  18⇑eP      Pn      13 39 59.9 +0.5
       baz=15
USP                               ⇑iS      Sn      13 40 35.2 +0.5
       baz=15
USP    Ospenovka          2.93  18   P       Pb      13 40 02.4 -2.7
       SNR=16
IUG    Iuzhnay            2.96 305  eP       Pg      13 40 08.7 -0.6
       22nm,0.2s
IUG                                 eS       Sg      13 40 48.6 +0.9
       145nm,0.3s
IUG    Iuzhnay            2.96 305   Pg      Pg      13 40 08.7 -0.6
       22nm,0.2s
IUG                                  Lg      Lg      13 40 48.6
       145nm,0.3s
TKM2   Tokmak 2           3.00  35⇑iP      Pn      13 40 00.6 +0.2
       baz=33
TKM2                              ⇑iS      Sn      13 40 36.1 -0.4
       baz=33
TKM2   Tokmak 2           3.00  35   P       Pb      13 40 05.1 -1.2
       SNR=86
TKM2   Tokmak 2           3.00  35  ⇓Pg      Pb      13 40 04.7 -1.5
       15nm,0.3s
TKM2                                ⇓Lg      Lg      13 40 41.7
       42nm,0.5s
SGDS   Sogindy            3.14  18   Pg      Pb      13 40 08.7 +0.1
       18nm,0.4s
SGDS                                 Lg      Lg      13 40 49.2
       21nm,0.3s
KST    Kastek             3.26  37  eP       Pb      13 40 09.7 -0.9
       19nm,0.2s
KST                                 eS       Sb      13 40 50.1 -0.3
       47nm,0.7s
KST    Kastek             3.26  37   Pg      Pb      13 40 09.7 -0.9
       19nm,0.2s
KST                                  Lg      Lg      13 40 51.2
       47nm,0.7s
DGS    Degeres            3.33  33  eP       Pb      13 40 10.9 -1.1
       30nm,0.5s
DGS                                 eS       Sb      13 40 52.4 -0.2
       69nm,0.7s
DGS    Degeres            3.33  33   Pg      Pb      13 40 10.9 -1.1
       30nm,0.5s
DGS                                  Lg      Lg      13 40 52.4
       69nm,0.7s
KK31   Karatay Array      3.34 323   Pg      Pg      13 40 14.5 -2.1
       1.9nm,0.3s,baz=136,slow=18,SNR=41
KK31                                 Lg      Lg      13 41 00.6
       7.8nm,0.3s,baz=142,slow=30,SNR=6.4
KDJ    Kajisay            3.37  59⇓iP      Pn      13 40 04.8 -0.8
       baz=58
KDJ                               ⇓iS      Sn      13 40 43.8 -2.0
       baz=58
MTBS   Maitube            3.55  41  eP       Pb      13 40 12.6 -3.0
       13nm,0.5s
MTBS                                eS       Sb      13 40 54.9 -3.8
       31nm,0.4s
MTBS   Maitube            3.55  41   Pg      Pb      13 40 12.6 -3.0
       13nm,0.5s
MTBS                                 Lg      Lg      13 40 54.9
       31nm,0.4s
IZV    Izvestkoviy        3.57  43  eP       Pb      13 40 14.8 -1.3
       36nm,0.6s
IZV                                 eS       Sb      13 40 58.9 -0.6
       51nm,0.4s
IZV    Izvestkoviy        3.57  43   Pg      Pb      13 40 14.8 -1.3
       36nm,0.6s
IZV                                  Lg      Lg      13 40 58.9
       51nm,0.4s
BRLS   Borolday           3.62 316  eP       Pg      13 40 19.9 -2.2
       31nm,0.2s
BRLS                                eS       Sg      13 41 07.6 -1.3
       46nm,0.4s
BRLS   Borolday           3.62 316   Pg      Pg      13 40 19.8 -2.2
       31nm,0.2s
BRLS                                 Lg      Lg      13 41 08.1
       46nm,0.4s
KRBS   Karabastau         3.68  28  eP       Pb      13 40 17.3 -0.5
       24nm,0.3s
KRBS                                eS       Sb      13 41 03.3 +0.8
       28nm,0.5s
KRBS   Karabastau         3.68  28   Pg      Pb      13 40 17.3 -0.5
       24nm,0.3s
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KRBS	28nm,0.5s			Lg	Lg	13 41 04.2	
TNSS	**Tian-Shan** 29nm,0.3s	**3.75**	**46**	*e*P	**Pb**	**13 40 18.2**	**-1.0**
TNSS	20nm,0.6s			*e*S	**Sb**	**13 41 04.5**	**-0.4**
TNSS	**Tian-Shan** 29nm,0.3s	**3.75**	**46**	Pg	**Pb**	**13 40 18.2**	**-1.0**
TNSS	20nm,0.6s			Lg	Lg	13 41 04.5	
KNDC	**Almaty** 24nm,0.4s	**3.88**	**44**	⇑Pg	**Pb**	**13 40 21.7**	**+0.4**
KNDC	59nm,0.5s			⇑Lg	Lg	13 41 12.3	
MDOK	**Medeo** 25nm,0.5s	**3.89**	**45**	*e*P	**Pb**	**13 40 20.7**	**-0.8**
MDOK	38nm,0.6s			*e*S	**Sb**	**13 41 09.1**	**+0.3**
MDOK	**Medeo** 14nm,0.4s	**3.89**	**45**	⇓Pg	**Pb**	**13 40 20.2**	**-1.3**
MDOK	20nm,0.6s			Lg	Lg	13 41 11.2	
MDOK	**Medeo** 25nm,0.5s	**3.89**	**45**	Pg	**Pb**	**13 40 20.7**	**-0.8**
MDOK	38nm,0.6s			Lg	Lg	13 41 09.7	
KOTS	**Kotyrbulak** 74nm,0.5s	**3.98**	**45**	*e*P	**Pb**	**13 40 21.7**	**-1.2**
KOTS	184nm,0.5s			*e*S	**Sb**	**13 41 10.8**	**-0.3**
KOTS	**Kotyrbulak** 74nm,0.5s	**3.98**	**45**	Pg	**Pb**	**13 40 21.7**	**-1.2**
KOTS	184nm,0.5s			Lg	Lg	13 41 10.8	
ANVS	**Anan'yevo** baz=52	**4.02**	**54**	⇓*i*P	**Pn**	**13 40 14.4**	**0.0**
ANVS	baz=52			⇓*e*S	**Sn**	**13 40 59.5**	**-2.2**
KUU	**Kurty** 14nm,0.4s	**4.10**	**33**	*e*P	**Pb**	**13 40 24.7**	**-0.3**
KUU	31nm,0.7s			*e*S	**Sb**	**13 41 15.8**	**+1.2**
KUU	**Kurty** 14nm,0.4s	**4.10**	**33**	Pg	**Pb**	**13 40 24.7**	**-0.3**
KUU	31nm,0.7s			Lg	Lg	13 41 15.8	
KTBS	**Karatobe** 8.0nm,0.3s	**4.11**	**37**	*e*P	**Pb**	**13 40 24.3**	**-0.8**
KTBS	53nm,0.8s			*e*S	**Sb**	**13 41 15.1**	**+0.2**
KTBS	**Karatobe** 8.0nm,0.3s	**4.11**	**37**	Pg	**Pb**	**13 40 24.3**	**-0.8**
KTBS	53nm,0.8s			Lg	Lg	13 41 15.0	
CHKK	**Chushkaly** 5.8nm,0.4s	**4.36**	**38**	*e*P	**Pb**	**13 40 30.2**	**+0.9**
CHKK	31nm,0.3s			*e*S	**Sb**	**13 41 25.4**	**+3.4**
CHKK	**Chushkaly** 5.8nm,0.4s	**4.36**	**38**	Pg	**Pb**	**13 40 30.2**	**+0.9**
CHKK	31nm,0.3s			Lg	Lg	13 41 25.4	
BTLS	**Baital** 7.2nm,0.6s	**4.60**	**7**	*e*P	**Pb**	**13 40 35.3**	**+1.9**
BTLS	16nm,0.5s			*e*S	**Sb**	**13 41 34.1**	**+5.3**
BTLS	**Baital** 7.2nm,0.6s	**4.60**	**7**	Pg	**Pb**	**13 40 35.3**	**+1.9**
BTLS	16nm,0.5s			Lg	Lg	13 41 34.1	
SATY	**Saty** 6.8nm,0.5s	**4.62**	**54**	*e*P	**Pb**	**13 40 34.3**	**+0.3**
SATY	28nm,0.9s			*e*S	**Sb**	**13 41 32.1**	**+2.3**
SATY	**Saty** 6.8nm,0.5s	**4.62**	**54**	Pg	**Pb**	**13 40 34.3**	**+0.3**
SATY	28nm,0.9s			Lg	Lg	13 41 32.1	
KURS	**Kuram** 7.6nm,0.6s	**4.73**	**49**	*e*P	**Pb**	**13 40 36.9**	**+1.2**
KURS	12nm,1.2s			*e*S	**Sb**	**13 41 36.6**	**+3.9**
KURS	**Kuram** 7.6nm,0.6s	**4.73**	**49**	Pg	**Pb**	**13 40 36.9**	**+1.2**
KURS	12nm,1.2s			Lg	Lg	13 41 36.6	
KPKS	**Kokpek** 14nm,0.5s	**5.02**	**52**	*e*P	**Pb**	**13 40 42.3**	**+1.7**
KPKS	21nm,0.6s			*e*S	**Sb**	**13 41 46.2**	**+5.2**
ARXS	**Arharly** 14nm,0.5s	**5.03**	**41**	*e*P	**Pb**	**13 40 41.8**	**+1.0**
ARXS	20nm,0.5s			*e*S	**Sb**	**13 41 45.3**	**+3.9**
ARXS	**Arharly** 14nm,0.5s	**5.03**	**41**	Pg	**Pb**	**13 40 41.8**	**+1.0**
ARXS	20nm,0.5s			Lg	Lg	13 41 45.3	
UZB	**Uzynbulak** 10nm,0.5s	**5.06**	**56**	*e*P	**Pb**	**13 40 41.3**	**0.0**
UZB	16nm,0.5s			*e*S	**Sb**	**13 41 44.0**	**+1.9**
UZB	**Uzynbulak** 10nm,0.5s	**5.06**	**56**	Pg	**Pb**	**13 40 41.3**	**0.0**
UZB	16nm,0.5s			Lg	Lg	13 41 44.0	
MNBS	**Baschi** 4.0nm,0.3s	**5.24**	**45**	*e*P	**Pb**	**13 40 43.8**	**-0.5**
MNBS	20nm,0.5s			*e*S	**Sb**	**13 41 48.4**	**+1.1**
MNBS	**Baschi** 4.0nm,0.3s	**5.24**	**45**	Pg	**Pb**	**13 40 43.8**	**-0.5**
MNBS	20nm,0.5s			Lg	Lg	13 41 48.4	
PDGK	**Podgornoye** 2.0nm,0.5s	**5.44**	**56**	Pg	**Pb**	**13 40 50.1**	**+2.2**
PDGK	**Podgornoye** 2.3nm,0.5s	**5.44**	**56**	⇑Pg	**Pb**	**13 40 47.8**	**-0.1**
PDGK	9.9nm,0.6s			⇓Lg	Lg	13 41 59.9	
KTMS	**Ketmen** 1.6nm,0.2s	**6.05**	**58**	Pg	**Pb**	**13 41 01.2**	**+2.9**
KTMS	9.6nm,0.7s			Lg	Lg	13 42 18.3	
DJR	**Jarkent** 1.9nm,0.6s	**6.17**	**49**	Pg	**Pb**	**13 41 02.1**	**+1.8**
DJR	7.4nm,0.5s			Lg	Lg	13 42 20.0	
KAPS	**Kapalarasan** 2.1nm,0.4s	**6.56**	**41**	Pg	**Pb**	**13 41 08.6**	**+1.8**
KAPS	3.1nm,0.5s			Lg	Lg	13 42 31.3	

IDC 04 14:04:13.7±7.4**,17°.84S**×**173°.90W,h0**^{km}**,mb3.5**/3**,mb1 3.9**/3**,mb1mx3.6**/21**,mbtmp3.5**/3**,Error ellipse: s-maj=322.5km s-min=39.5km az=141.0,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr** 0.1nm,0.3s,baz=98,slow=7.5,SNR=5.2	**48.86**	**259**	P	P	14 13 00.9	-0.7
ASAR	**Alice Springs** 1.2nm,0.5s,baz=88,slow=8.8,SNR=24	**48.94**	**254**	P	P	14 13 02.5	+0.3
ILAR	**Eielson Array** 0.3nm,0.9s,baz=213,slow=5.0,SNR=4.4	**84.92**	**11**	P	P	14 16 50.0	-0.1

NNC ***04*** *14:09:12.2±1.0,41°.65N×73°.10E,h0^{km},mb3.7,mpv3.5,Error ellipse: s-maj=9.0km s-min=4.4km az=176.0*

KRNET ***04*** *14:09:13.3±0.1,41°.66N×73°.24E,h14^{km},mb3.0*

KNET ***04*** *14:09:14.5±0.2,41°.70N×73°.31E,h5^{km}±1^{km},ml2.3,Error ellipse: s-maj=1.6km s-min=1.3km az=108.0*

SOME ***04*** *14:09:14.0,41°.75N×73°.25E,h10^{km}*

ISC 04 14:09:13.3±1.1**,41°.68N**±0°.02×**73°.26E**±0°.02**,h6**^{km}±10^{km}**,n72,**σ**1ˢ.65**/121**,33C-16D,Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARSB	**Arslanbob** baz=10.0	**0.41**	**211**	⇓*e*P	**Pg**	**14 09 20.9**	**-0.4**
ARSB	baz=10.0			⇓*i*S	**Sg**	**14 09 26.1**	**-0.6**
ARLS	**Aral** baz=76	**0.81**	**76**	⇑*i*P	**Pg**	**14 09 29.5**	**+0.5**
ARLS	baz=76			⇑*i*S	**Sg**	**14 09 40.7**	**+1.1**
MNAS	**Manas** baz=27	**0.99**	**325**	⇑*i*P	**Pg**	**14 09 32.4**	**+0.1**
MNAS	baz=27			⇑*i*S	**Sb**	**14 09 45.9**	**-0.4**
EKS2	**Erkin-Say** baz=22	**1.06**	**21**	⇓*i*P	**Pg**	**14 09 33.5**	**-0.1**
EKS2	baz=22			⇓*i*S	**Sn**	**14 09 48.7**	**-1.2**
EKS2	**Erkin-Say** 9.3nm,0.1s,SNR=31	**1.06**	**21**	⇑P	**Pg**	**14 09 33.9**	**+0.2**
EKS2	11nm,0.1s			⇓S	**Sn**	**14 09 49.6**	**-0.3**
MRKS	**Merke** 17nm,0.1s	**1.07**	**359**	*e*P	**Pg**	**14 09 34.2**	**+0.2**
MRKS	61nm,0.3s			*e*S	**Sn**	**14 09 49.1**	**-1.1**
MRKS	**Merke** 17nm,0.1s	**1.07**	**359**	P	**Pg**	**14 09 34.1**	**+0.2**
MRKS	61nm,0.3s			S	**Sn**	**14 09 49.1**	**-1.1**
UCH	**Uchtor** baz=59	**1.08**	**59**	⇑*i*P	**Pg**	**14 09 34.2**	**0.0**
UCH	baz=59			⇑*i*S	**Sb**	**14 09 49.6**	**+0.3**
UCH	**Uchtor** 16nm,0.1s,SNR=17	**1.08**	**59**	⇓P	**Pg**	**14 09 34.5**	**+0.4**
UCH	30nm,0.2s			⇑S	**Sn**	**14 09 50.6**	**-0.4**
OHH	**Osh** baz=97	**1.21**	**198**	⇑*i*P	**Pn**	**14 09 35.7**	**-1.1**
OHH	baz=97			⇑*i*S	**Sb**	**14 09 52.5**	**+0.1**
AAK	**Ala-Archa** baz=43	**1.33**	**43**	⇑*i*P	**Pb**	**14 09 38.8**	**+0.1**
AAK	baz=43			⇑*i*S	**Sg**	**14 09 57.3**	**+1.3**
AAK	**Ala-Archa** 13nm,0.1s,SNR=68	**1.33**	**43**	⇑P	**Pb**	**14 09 38.8**	**+0.1**
AAK	21nm,0.2s			⇑S	**Sg**	**14 09 58.0**	**+2.0**
AAK	**Ala-Archa** 5.8nm,0.3s	**1.33**	**43**	⇑P	**Pb**	**14 09 38.9**	**+0.2**
AAK	7.0nm,0.3s			⇑S	**Sg**	**14 09 57.9**	**+1.9**
KBK	**Karagaybulak** baz=51	**1.59**	**51**	⇑*i*P	**Pb**	**14 09 43.5**	**+0.3**
KBK	baz=51			⇑*i*S	**Sg**	**14 10 05.4**	**+0.9**
KBK	**Karagaybulak** 24nm,0.1s,SNR=20	**1.59**	**51**	⇑P	**Pb**	**14 09 43.8**	**+0.6**
KBK	24nm,0.2s			⇓S	**Sg**	**14 10 06.6**	**+2.1**
TRKS	**Terek-Say** baz=63	**1.60**	**266**	⇑*i*P	**Pn**	**14 09 42.4**	**+0.1**
TRKS	baz=63			⇑*i*S	**Sn**	**14 10 03.4**	**+0.1**
CHMS	**Chumysh** baz=39	**1.72**	**39**	⇑*e*P	**Pb**	**14 09 45.8**	**+0.4**
CHMS	baz=39			⇑*i*S	**Sg**	**14 10 09.1**	**+0.4**
CHMS	**Chumysh** 16nm,0.1s,SNR=42	**1.72**	**39**	⇓P	**Pb**	**14 09 46.1**	**+0.7**
CHMS	11nm,0.1s			⇑S	**Sg**	**14 10 10.2**	**+1.5**
USP	**Ospenovka** baz=30	**1.83**	**29**	⇓*i*P	**Pb**	**14 09 47.6**	**+0.3**
USP	baz=30			⇓*i*S	**Sg**	**14 10 12.7**	**+0.4**
USP	**Ospenovka** 62nm,0.3s,SNR=131	**1.83**	**29**	P	**Pb**	**14 09 48.1**	**+0.8**
USP	21nm,0.2s			⇓S	**Sg**	**14 10 13.8**	**+1.5**
DZA	**Taraz** 62nm,0.1s	**1.88**	**311**	*e*P	**Pb**	**14 09 47.9**	**-0.2**
DZA	53nm,0.3s			*e*S	**Sb**	**14 10 11.8**	**0.0**
DZA	**Taraz** 54nm,0.1s	**1.88**	**311**	P	**Pb**	**14 09 47.9**	**-0.2**
DZA	133nm,0.3s			S	**Sb**	**14 10 11.9**	**0.0**
SGDS	**Sogindy** 21nm,0.2s	**2.04**	**29**	Pg	**Pg**	**14 09 52.6**	**+0.1**
SGDS	35nm,0.3s			Lg	Lg	14 10 19.7	
TKM2	**Tokmak 2** baz=53	**2.13**	**53**	⇑*e*P	**Pb**	**14 09 52.2**	**-0.3**
TKM2	baz=53			⇑*i*S	**Sb**	**14 10 20.4**	**+1.2**
TKM2	**Tokmak 2** 15nm,0.1s,SNR=87	**2.13**	**53**	⇑P	**Pb**	**14 09 53.4**	**+0.9**
TKM2	**Tokmak 2** 7.4nm,0.3s	**2.13**	**53**	⇓Pg	**Pb**	**14 09 53.7**	**+1.2**
TKM2	14nm,0.5s			⇑Lg	Lg	14 10 23.5	
ULHL	**Ulahol** baz=74	**2.29**	**75**	⇑*i*P	**Pb**	**14 09 54.1**	**-1.1**
ULHL	baz=74			⇑*i*S	**Sb**	**14 10 24.0**	**+0.1**
KST	**Kastek** 23nm,0.3s	**2.42**	**55**	*e*P	**Pb**	**14 09 58.9**	**+1.6**
KST	23nm,0.4s			*e*S	**Sg**	**14 10 31.5**	**+0.4**
KST	**Kastek** 23nm,0.3s	**2.42**	**55**	Pg	**Pb**	**14 09 58.9**	**+1.6**
KST	23nm,0.4s			Lg	Lg	14 10 32.1	
DGS	**Degeres** 8.6nm,0.4s	**2.43**	**49**	*e*P	**Pb**	**14 09 58.5**	**+1.1**
DGS	12nm,0.4s			*e*S	**Sg**	**14 10 30.4**	**-0.9**
DGS	**Degeres** 16nm,0.3s	**2.43**	**49**	Pg	**Pg**	**14 09 59.4**	**-0.5**
DGS	14nm,0.5s			Lg	Lg	14 10 32.5	
IUG	**Iuzhnay** 3.0nm,0.2s	**2.46**	**282**	*e*P	**Pg**	**14 09 59.5**	**-0.9**
IUG	28nm,0.6s			*e*S	**Sg**	**14 10 32.3**	**0.0**
BTK	**Batken** baz=30	**2.46**	**230**	⇑*i*P	**Pn**	**14 09 56.4**	**+2.4**
BTK	baz=30			⇑*i*S	**Sb**	**14 10 27.0**	**-1.5**
DRK	**Karamyk** baz=7.0	**2.46**	**207**	⇓*i*P	**Pn**	**14 09 55.6**	**+1.4**
DRK	baz=7.0			⇓*i*S	**Sn**	**14 10 26.8**	**+2.1**
KK31	**Karatay Array** 1.8nm,0.2s,baz=128,slow=16,SNR=35	**2.49**	**306**	Pg	**Pb**	**14 09 59.1**	**+0.7**
KK31	4.5nm,0.2s,baz=112,slow=27,SNR=5.8			⇑Lg	Lg	14 10 32.6	
KRBS	**Karabastau** 8.5nm,0.2s	**2.69**	**41**	*e*P	**Pg**	**14 10 03.8**	**-1.1**
KRBS	16nm,0.3s			*e*S	**Sg**	**14 10 39.3**	**-0.4**
KRBS	**Karabastau** 8.5nm,0.2s	**2.69**	**41**	Pg	**Pg**	**14 10 03.8**	**-1.1**
KRBS	16nm,0.3s			Lg	Lg	14 10 39.3	
MTBS	**Maitube** 6.7nm,0.3s	**2.76**	**57**	*e*P	**Pb**	**14 10 05.0**	**+1.9**
MTBS	22nm,0.5s			*e*S	**Sg**	**14 10 41.7**	**-0.2**
MTBS	**Maitube** 6.7nm,0.3s	**2.76**	**57**	Pg	**Pb**	**14 10 05.0**	**+1.9**
MTBS	22nm,0.5s			Lg	Lg	14 10 41.7	
IZV	**Izvestkoviy** 7.9nm,0.1s	**2.83**	**60**	*e*P	**Pg**	**14 10 07.0**	**-0.6**
IZV	14nm,0.4s			*e*S	**Sg**	**14 10 45.2**	**+1.0**
IZV	**Izvestkoviy** 7.9nm,0.1s	**2.83**	**60**	Pg	**Pg**	**14 10 07.0**	**-0.6**
IZV	14nm,0.4s			Lg	Lg	14 10 45.2	
KDJ	**Kajisay** baz=80	**2.96**	**80**	⇓*i*P	**Pn**	**14 10 03.6**	**+2.6**
KDJ	baz=80			⇓*i*S	**Sb**	**14 10 40.2**	**-2.8**
TNSS	**Tian-Shan** 7.7nm,0.3s	**3.05**	**62**	*e*P	**Pg**	**14 10 10.6**	**-1.2**
TNSS	6.5nm,0.4s			*e*S	**Sg**	**14 10 51.0**	**-0.3**
TNSS	**Tian-Shan** 7.7nm,0.3s	**3.05**	**62**	Pg	**Pg**	**14 10 10.6**	**-1.2**
TNSS	6.5nm,0.4s			Lg	Lg	14 10 51.0	
KUU	**Kurty** 5.5nm,0.3s	**3.17**	**45**	*e*P	**Pg**	**14 10 12.6**	**-1.4**
KUU	12nm,0.6s			*e*S	**Sg**	**14 10 54.3**	**-0.8**
KUU	**Kurty** 5.5nm,0.3s	**3.17**	**45**	Pg	**Pg**	**14 10 12.6**	**-1.4**
KUU	12nm,0.6s			Lg	Lg	14 10 54.3	
MDOK	**Medeo** 3.6nm,0.3s	**3.17**	**61**	*e*P	**Pg**	**14 10 12.8**	**-1.3**
MDOK	12nm,0.6s			*e*S	**Sg**	**14 10 54.6**	**-0.6**
MDOK	**Medeo** 6.2nm,0.3s	**3.17**	**61**	Pg	**Pg**	**14 10 12.8**	**-1.3**
MDOK	10nm,0.6s			Lg	Lg	14 10 55.2	
KTBS	**Karatobe** 3.0nm,0.2s	**3.24**	**50**	*e*P	**Pb**	**14 10 13.5**	**+2.2**
KTBS	47nm,0.5s			*e*S	**Sg**	**14 10 56.3**	**-1.0**
KTBS	**Karatobe** 3.0nm,0.2s	**3.24**	**50**	Pg	**Pb**	**14 10 13.5**	**+2.2**
KTBS	47nm,0.5s			Lg	Lg	14 10 56.3	
KOTS	**Kotyrbulak** 14nm,0.4s	**3.25**	**60**	*e*P	**Pb**	**14 10 13.3**	**+1.9**
KOTS	18nm,0.5s			*e*S	**Sg**	**14 10 56.0**	**-1.6**
KOTS	**Kotyrbulak** 14nm,0.4s	**3.25**	**60**	Pg	**Pb**	**14 10 13.3**	**+1.9**
KOTS	18nm,0.5s			Lg	Lg	14 10 56.0	
BTLS	**Baital** 0.6nm,0.2s	**3.41**	**9**	*e*P	**Pb**	**14 10 16.0**	**+1.9**
BTLS	7.3nm,0.2s			*e*S	**Sg**	**14 11 00.2**	**-2.7**
CHKK	**Chushkaly** 1.5nm,0.1s	**3.50**	**50**	*e*P	**Pg**	**14 10 19.1**	**-1.3**
CHKK	13nm,0.3s			*e*S	**Sg**	**14 11 05.3**	**-0.5**
KURS	**Kuram** 1.1nm,0.3s	**4.05**	**62**	*e*P	**Pg**	**14 10 29.6**	**-1.3**
KURS	3.8nm,0.7s			*e*S	**Sg**	**14 11 23.4**	**0.0**
KURS	**Kuram** 2.6nm,0.5s	**4.05**	**62**	Pg	**Pg**	**14 10 29.6**	**-1.3**
KURS	2.8nm,0.7s			Lg	Lg	14 11 23.5	
SATY	**Saty** 1.4nm,0.3s	**4.05**	**68**	*e*P	**Pg**	**14 10 29.1**	**-1.8**
SATY	6.9nm,0.5s			*e*S	**Sg**	**14 11 22.9**	**-0.6**
SATY	**Saty** 3.8nm,0.6s	**4.05**	**68**	Pg	**Pg**	**14 10 29.3**	**-1.7**
SATY	6.9nm,0.4s			Lg	Lg	14 11 23.8	
ARXS	**Arharly** 6.8nm,0.5s	**4.20**	**51**	*e*P	**Pg**	**14 10 31.2**	**-2.6**
ARXS	7.6nm,0.6s			*e*S	**Sg**	**14 11 26.0**	**-2.2**
ARXS	**Arharly** 6.8nm,0.5s	**4.20**	**51**	Pg	**Pg**	**14 10 31.2**	**-2.6**
ARXS	7.6nm,0.6s			Lg	Lg	14 11 26.0	
KPKS	**Kokpek** 2.3nm,0.3s	**4.38**	**64**	*e*P	**Pg**	**14 10 34.8**	**-2.5**
KPKS	16nm,0.4s			*e*S	**Sg**	**14 11 33.2**	**-0.9**
MNBS	**Baschi** 2.8nm,0.3s	**4.47**	**56**	*e*P	**Pg**	**14 10 36.4**	**-2.6**
MNBS	6.6nm,0.3s			*e*S	**Sg**	**14 11 35.3**	**-1.7**
MNBS	**Baschi** 2.8nm,0.3s	**4.47**	**56**	Pg	**Pg**	**14 10 36.4**	**-2.6**
MNBS	6.6nm,0.3s			Lg	Lg	14 11 35.3	
UZB	**Uzynbulak** 3.5nm,0.2s	**4.51**	**69**	*e*P	**Pb**	**14 10 36.5**	**+3.5**
UZB	7.6nm,0.5s			*e*S	**Sg**	**14 11 35.0**	**-3.1**
UZB	**Uzynbulak** 1.5nm,0.3s	**4.51**	**69**	Pg	**Pb**	**14 10 36.3**	**+3.4**
UZB	6.9nm,0.4s			Lg	Lg	14 11 35.0	
PDGK	**Podgornoye** 0.5nm,0.3s	**4.89**	**68**	Pg	**Pb**	**14 10 43.2**	**+3.7**
PDGK	1.9nm,0.7s			Lg	Lg	14 11 46.7	
DJR	**Jarkent** 0.5nm,0.1s	**5.47**	**59**	*e*P	**Pg**	**14 10 56.0**	**-2.1**
DJR	2.0nm,0.5s			*e*S	**Sg**	**14 12 08.8**	**-0.2**
DJR	**Jarkent** 0.8nm,0.5s	**5.47**	**59**	Pg	**Pg**	**14 10 56.0**	**-2.1**
DJR	2.5nm,0.5s			Lg	Lg	14 12 08.8	
KTMS	**Ketmen** 0.5nm,0.2s	**5.53**	**69**	*e*P	**Pg**	**14 10 55.4**	**-3.8**
KTMS	2.1nm,0.6s			*e*S	**Sg**	**14 12 07.7**	**-3.1**
KTMS	**Ketmen** 0.6nm,0.2s	**5.53**	**69**	Pg	**Pg**	**14 10 55.4**	**-3.8**
KTMS	3.2nm,0.6s			Lg	Lg	14 12 07.7	
KAPS	**Kapalarasan** 0.7nm,0.5s	**5.71**	**49**	*e*P	**Pg**	**14 10 58.8**	**-4.0**
KAPS	3.4nm,0.5s			*e*S	**Sg**	**14 12 13.3**	**-3.5**
KAPS	**Kapalarasan** 0.7nm,0.5s	**5.71**	**49**	Pg	**Pg**	**14 10 58.8**	**-4.0**
KAPS	3.4nm,0.5s			Lg	Lg	14 12 13.3	

NEIC ***04*** *14:20:28.3±1.5,51°.8N±0°.1×178°.47E±0°.04,h105^{km}±6^{km},mb4.2/134,ML3.9(AEIC),Error ellipse: s-maj=16.1km s-min=3.0km az=174.0*

IDC ***04*** *14:20:29.9±0.9,51°.98N×178°.52E,h116^{km}±7^{km},mb3.7/24,mb1 3.8/25,mb1mx3.7/45,mbtmp4.0/25,Error ellipse: s-maj=15.9km s-min=10.1km az=166.0*

AEIC ***04*** *14:20:29±1.7,51°.82N±0°.10×178°.47E±0°.10,h100^{km}±5^{km},Error ellipse: s-maj=13.8km s-min=8.7km az=176.0*

ISC 04 14:20:28.1±0.6**,51°.96N**±0°.08×**178°.54E**±0°.04**,h99**^{km}±4^{km}**,h99**^{km}**:pP-P,n216,**σ**1ˢ.36**/218**,mb4.2**/85**,Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LSNW	**Little Sitkin**	**0.02**	**302**		**Pn**	**14 20 42.7**	**+0.9**
LSSA	**Little Sitkin**	**0.02**	**232**		**Pn**	**14 20 42.8**	**+1.0**
LSPA	**Little Sitkin**	**0.02**	**104**		**Pn**	**14 20 42.8**	**+1.0**
CETU	**Semis' Tuman**	**0.59**	**89**		**Pn**	**14 20 45.6**	**+1.2**
CESW	**Semis' Southwe**	**0.64**	**95**		**Pn**	**14 20 45.6**	**+0.8**
CEAP	**Semis' Anvil P**	**0.64**	**86**		**Pn**	**14 20 46.2**	**+1.4**
CERAA	**Semis' Rag'd T**	**0.71**	**94**		**Pn**	**14 20 46.5**	**+1.0**
AMKA	**Amchitka**	**0.75**	**141**		**Pn**	**14 20 45.8**	**0.0**
SMY	**Shemya**	**2.83**	**288**		**Pn**	**14 21 11.4**	**0.0**
ADK	**Adak**	**2.96**	**90**		**Pn**	**14 21 13.6**	**+0.5**
ATKA	**Atka Island**	**4.49**	**84**		**Pn**	**14 21 35.1**	**+1.4**
NIKH	**Nikolski High**	**7.77**	**78**	Pn	**Pn**	**14 22 20.5**	**+2.3**
SPIA	**Saint Paul Isl**	**8.35**	**47**	Pn	**Pn**	**14 22 29.6**	**+3.5**
UNV	**Unalaska Valle**	**9.24**	**72**	Pn	**Pn**	**14 22 40.1**	**+1.9**
AKUT	**Akutan**	**9.70**	**71**	Pn	**Pn**	**14 22 46.8**	**+2.4**
FALS	**False Pass**	**11.15**	**68**	Pn	**Pn**	**14 23 06.6**	**+2.5**
PETK	**Petropavlovsk-** 0.3nm,0.3s,baz=97,slow=18,SNR=1.5	**12.74**	**283**	P	**Pn**	**14 23 26.8**	**+1.4**
PETK	0.3nm,0.3s,baz=76,slow=25,SNR=5.8			S	**Sn**	**14 25 41.0**	**-4.2**
SDPT	**Sand Point**	**12.89**	**66**	Pn	**Pn**	**14 23 26.9**	**-0.3**
CNBA	**Chernabura Isl**	**13.35**	**69**	Pn	**Pn**	**14 23 32.1**	**-1.2**
CHGN	**Chignik**	**14.16**	**63**	Pn	**Pn**	**14 23 44.6**	**+0.7**
SVW2	**Sparrevohn**	**16.84**	**47**		**P**	**14 24 18.3**	**+0.3**
OHAK	**Old Harbor**	**17.08**	**61**		**Pn**	**14 24 18.6**	**-1.8**
MA2	**Magadan** 0.2nm,0.3s,baz=56,slow=15,SNR=2.4	**17.28**	**307**	P	**P**	**14 24 24.4**	**+1.6**
TTA	**Tatalina**	**17.41**	**41**	P	**P**	**14 24 23.9**	**-0.4**
KDAK	**Kodiak Island** 2.0nm,0.3s,baz=290,slow=3.1,SNR=68	**17.52**	**59**	P	**P**	**14 24 23.5**	**-1.9**
KDAK	0.1nm,0.3s,baz=260,slow=17,SNR=2.3			S	**Sn**	**14 27 32.0**	**-8.5**
KDAK	**Kodiak Island**	**17.52**	**59**	P	**P**	**14 24 25.4**	**0.0**
RSO	**Redoubt South**	**17.96**	**51**	P	**Pn**	**14 24 32.9**	**+1.7**
RDOG	**Red Dog Mine**	**18.47**	**22**	Pn	**Pn**	**14 24 39.2**	**+2.1**
RDOG	comp=Z,9.0nm,0.8s			IAmb	IAmb	14 24 44.4	
CNPM	**China Poot**	**18.49**	**54**	P	**P**	**14 24 36.6**	**+0.6**
BRLK	**Bradley Lake**	**18.71**	**53**	P	**P**	**14 24 39.1**	**+0.6**
SKT	**Skwentna**	**18.97**	**46**	P	**Pn**	**14 24 43.4**	**+0.3**
SKT	comp=Z,22nm,1.3s			IAmb	IAmb	14 24 48.8	
PPLA	**Purkeypile**	**18.99**	**43**	P	**Pn**	**14 24 43.8**	**+0.4**

PPLA				IAmb	IAmb	14 24 58.8	
	comp=Z,5.9nm,0.8s						
SUA	**Susitna One**	**19.17**	**48**	P	**Pn**	**14 24 45.5**	**0.0**
SLKM	**Skilak Lake**	**19.19**	**51**	P	**P**	**14 24 45.1**	**+1.4**
O22K	**Cooper Landing**	**19.42**	**52**	P	**P**	**14 24 46.0**	**-0.1**
SEW	**Seward**	**19.48**	**53**	P	**P**	**14 24 46.6**	**-0.2**
SEW				IAmb	IAmb	14 24 49.2	
	comp=Z,13nm,1.0s						
IMAR	**Indian Mountai**	**19.78**	**34**	P	**Pn**	**14 24 52.1**	**-0.4**
BPAW	**Bear Paw Mtn.**	**19.95**	**41**	P	**Pn**	**14 24 53.9**	**-0.6**
PMR	**Palmer**	**19.95**	**49**	P	**P**	**14 24 53.2**	**+1.3**
TRF	**Thorofare Moun**	**20.00**	**43**	P	Pn	14 24 56.7	+1.5
GHO	**Glory Hole Cre**	**20.09**	**48**	P	**P**	**14 24 55.0**	**+1.5**
GHO				IAmb	IAmb	14 24 56.3	
	comp=Z,11nm,1.2s						
PWL	**Port Wells**	**20.17**	**51**	P	**P**	**14 24 54.9**	**+0.6**
KNK	**Knik Glacier**	**20.23**	**49**	P	**P**	**14 24 56.0**	**+1.1**
KNK				IAmb	IAmb	14 24 57.2	
	comp=Z,6.8nm,0.9s						
SML	**Sawmill**	**20.38**	**48**	P	**P**	**14 24 57.6**	**+1.0**
SML				IAmb	IAmb	14 25 12.5	
	comp=Z,12nm,1.1s						
WAT2	**Susitna Watana**	**20.57**	**45**	P	Pn	14 25 01.5	-0.3
RND	**Reindeer**	**20.59**	**44**	P	**P**	**14 25 00.8**	**+2.0**
BWN	**Browne**	**20.60**	**41**	P	Pn	14 25 01.2	-0.7
BWN				IAmb	IAmb	14 25 27.6	
	comp=Z,13nm,1.1s						
GLI	**Glacier Island**	**20.77**	**51**	P	**P**	**14 25 01.1**	**+0.4**
GLI				IAmb	IAmb	14 25 02.1	
	comp=Z,21nm,1.1s						
WAT6	**Susitna Watana**	**20.84**	**46**	P	Pn	14 25 03.9	-1.1
SCM	**Sheep Creek Mo**	**20.85**	**48**	P	**P**	**14 25 01.8**	**+0.2**
SCM				IAmb	IAmb	14 25 25.8	
	comp=Z,27nm,1.5s						
HIN	**Hinchinbrook I**	**20.98**	**53**	P	**P**	**14 25 03.7**	**+0.7**
I23K	**Minto, Yukon-K**	**21.01**	**39**	P	**P**	**14 25 02.0**	**-1.2**
FID	**Port Fidalgo**	**21.05**	**52**	P	**P**	**14 25 03.7**	**0.0**
FID				IAmb	IAmb	14 25 06.7	
	comp=Z,12nm,0.9s						
WRH	**Wood River Hil**	**21.27**	**41**	P	**P**	**14 25 07.8**	**+1.8**
EYAK	**Cordova Ski Ar**	**21.37**	**52**	P	**P**	**14 25 08.6**	**+1.5**
EYAK				IAmb	IAmb	14 25 10.4	
	comp=Z,12nm,1.0s						
MDM	**Murphy Dome**	**21.38**	**40**	P	**P**	**14 25 08.7**	**+1.5**
KLU	**Klutina**	**21.43**	**50**	P	**P**	**14 25 08.8**	**+0.9**
KLU				IAmb	IAmb	14 25 16.3	
	comp=Z,9.7nm,1.0s						
M24K	**Tolsona, Glenn**	**21.44**	**48**	P	**P**	**14 25 09.5**	**+1.6**
M24K				IAmb	IAmb	14 25 11.8	
	comp=Z,28nm,1.5s						
CCB	**Clear Creek Bu**	**21.44**	**41**	P	**P**	**14 25 07.6**	**-0.2**
HDA	**Harding Lake**	**21.71**	**42**	P	**P**	**14 25 12.5**	**+1.8**
ILAR	**Eielson Array**	**21.86**	**41**	P	**P**	**14 25 11.4**	**-0.8**
	comp=Z,0.8nm,0.6s,baz=254,slow=10,SNR=12						
ILAR				PcP	**PcP**	**14 29 06.2**	**-1.5**
	comp=Z,0.3nm,0.7s,baz=259,slow=3.8,SNR=4.7						
ILAR				ScP	**ScP**	**14 32 32.2**	**-3.4**
	comp=Z,0.1nm,0.6s,baz=292,slow=3.5,SNR=4.2						
ILAR	**Eielson Array**	**21.86**	**41**	P	**P**	**14 25 15.1**	**+2.9**
RAGM	**Ragged Mountai**	**21.88**	**53**	P	**P**	**14 25 14.4**	**+1.7**
PAX	**Paxson**	**21.95**	**46**	P	**P**	**14 25 15.1**	**+1.8**
KAIM	**Kayak Island**	**21.96**	**54**	P	**P**	**14 25 15.6**	**+2.2**
HMT	**Hamilton**	**22.08**	**53**	P	**P**	**14 25 15.9**	**+1.2**
N25K	**Chitina, Valde**	**22.08**	**50**	P	**P**	**14 25 15.8**	**+1.1**
SUCK	**Suckling Hills**	**22.30**	**54**	P	**P**	**14 25 18.4**	**+1.4**
A21K	**Barrow**	**22.39**	**21**	P	**P**	**14 25 19.0**	**+1.2**
RIDG	**Independent Ri**	**22.41**	**44**	P	**P**	**14 25 19.2**	**+1.1**
GLB	**Gilahina Butte**	**22.43**	**50**	P	**P**	**14 25 18.8**	**+0.4**
GLB				IAmb	IAmb	14 25 22.0	
	comp=Z,5.3nm,0.8s						
TOLK	**Toolik Lake Re**	**22.57**	**30**	P	**P**	**14 25 20.9**	**+1.2**
TOLK				IAmb	IAmb	14 25 23.5	
	comp=Z,4.9nm,0.7s						
VRDI	**Verde Repeater**	**22.57**	**51**	P	**P**	**14 25 20.3**	**+0.3**
VRDI				IAmb	IAmb	14 25 22.7	
	comp=Z,8.2nm,0.9s						
PRP	**Porcupine Dome**	**22.65**	**39**	P	**P**	**14 25 22.2**	**+1.5**
CRQM	**Cirque**	**22.67**	**52**	P	**P**	**14 25 22.1**	**+1.1**
CRQM				IAmb	IAmb	14 25 26.4	
	comp=Z,13nm,0.9s						
MENT	**Mentasta**	**22.72**	**46**	P	**P**	**14 25 23.5**	**+2.2**
DOT	**Dot Lake**	**22.72**	**45**	P	**P**	**14 25 21.7**	**+0.4**
MCARA	**McCarthy VSAT**	**22.80**	**51**	P	**P**	**14 25 23.0**	**+0.9**
MCARA				IAmb	IAmb	14 25 24.9	
	comp=Z,8.5nm,0.8s						
TGL	**Tana Glacier**	**22.82**	**52**	P	**P**	**14 25 22.8**	**+0.3**
TGL				IAmb	IAmb	14 25 39.9	
	comp=Z,16nm,1.2s						
ISLE	**Juniper Island**	**23.05**	**53**	P	**P**	**14 25 24.8**	**+0.1**
ISLE				IAmb	IAmb	14 25 32.4	
	comp=Z,8.2nm,0.8s						
BALM	**Baldy**	**23.09**	**52**	P	**P**	**14 25 24.4**	**-0.6**
BALM				IAmb	IAmb	14 25 28.5	
	comp=Z,9.6nm,1.3s						
FYU	**Fort Yukon**	**23.13**	**37**	P	**P**	**14 25 26.7**	**+1.6**
MESA	**MESA**	**23.22**	**54**	P	**P**	**14 25 26.8**	**+0.4**
MESA				IAmb	IAmb	14 25 28.6	
	comp=Z,11nm,0.7s						
YAH	**Yahtse**	**23.33**	**53**	P	**P**	**14 25 28.2**	**+0.8**
YAH				IAmb	IAmb	14 25 56.8	
	comp=Z,12nm,1.2s						
BARN	**Barnard Glacie**	**23.42**	**52**	P	**P**	**14 25 28.6**	**+0.4**
CTGM	**Chitina Glacie**	**23.57**	**52**	P	**P**	**14 25 30.1**	**+0.6**
CTGM				IAmb	IAmb	14 25 32.4	
	comp=Z,9.0nm,0.6s						
BCAR	**Beaver Creek A**	**23.61**	**47**	P	**P**	**14 25 30.6**	**+0.9**
BMAR	**Burnt Mountain**	**23.69**	**35**	P	**P**	**14 25 28.8**	**-1.6**
LOGN	**Logan Glacier**	**23.72**	**52**	P	**P**	**14 25 32.6**	**+1.7**
YUK2	**White River**	**23.88**	**50**	P	**P**	**14 25 34.1**	**+1.9**
YUK3	**Moose Creek**	**24.06**	**50**	P	**P**	**14 25 35.3**	**+1.3**
PCA	**Pinnacle**	**24.06**	**54**	P	**P**	**14 25 33.5**	**-0.3**
PCA				IAmb	IAmb	14 25 35.8	
	comp=Z,12nm,0.9s						
EGAK	**Eagle**	**24.21**	**43**	P	**P**	**14 25 35.5**	**+0.5**
EGAK				IAmb	IAmb	14 26 02.2	
	comp=Z,7.3nm,1.1s						
BCPM	**Bancas Point**	**24.37**	**54**	P	**P**	**14 25 37.2**	**+0.6**
DAWY	**Dawson**	**24.83**	**45**	P	**P**	**14 25 41.3**	**+0.5**
YUK4	**Talbot Arm**	**24.89**	**51**	P	**P**	**14 25 45.4**	**+3.8**
ASAJ	**Asahikawa**	**25.07**	**266**	P	**P**	**14 25 44.5**	**+1.4**
	comp=Z,3.4nm,0.8s,baz=43,slow=1.8,SNR=2.0						
HYT	**Haines Junctio**	**25.44**	**52**	P	**P**	**14 25 47.7**	**+1.3**
HYT				IAmb	IAmb	14 25 52.6	
	comp=Z,5.9nm,0.7s						
INK	**Inuvik**	**27.95**	**36**	P	**P**	**14 26 09.1**	**+0.5**
	comp=Z,0.8nm,0.8s,baz=276,slow=8.6,SNR=4.8						
INK	**Inuvik**	**27.95**	**36**	P	**P**	**14 26 09.1**	**+0.5**
DLBC	**Dease Lake**	**29.42**	**57**	P	**P**	**14 26 23.5**	**+1.6**
	comp=Z,1.1nm,0.6s,baz=265,slow=8.9,SNR=6.4						
DLBC	**Dease Lake**	**29.42**	**57**	IAmb	IAmb	14 26 27.9	
	comp=Z,0.5nm,0.8s						
KLR	**Kul'dur**	**29.43**	**283**	P	**P**	**14 26 21.8**	**-0.2**
	comp=Z,4.3nm,0.6s,baz=65,slow=9.2,SNR=16						
H11N2	**WAKE ISLAND Hy**	**33.43**	**200**	T	T	15 02 18.5	
	baz=11,slow=76,SNR=9.3						
H11N3	**WAKE ISLAND Hy**	**33.44**	**200**	T	T	15 02 18.2	
	baz=11,slow=76,SNR=6.7						
H11N1	**WAKE ISLAND Hy**	**33.45**	**200**	T	T	15 02 26.8	
	baz=11,slow=76,SNR=7.1						
H11S1	**WAKE ISLAND Hy**	**34.66**	**200**	T	T	15 04 01.5	
	baz=10.0						
H11S3	**WAKE ISLAND Hy**	**34.68**	**200**	T	T	15 04 09.0	
	baz=10.0						
H11S2	**WAKE ISLAND Hy**	**34.68**	**200**	T	T	15 04 09.6	
	baz=10.0						
YKA	**Yellowknife Ar**	**36.03**	**47**	P	**P**	**14 27 20.2**	**+0.9**
	comp=Z,0.4nm,0.5s,baz=285,slow=7.2,SNR=7.4						
YKA				pP	**sP**	**14 27 46.4**	**-6.4**
	comp=Z,0.3nm,0.5s,baz=280,slow=7.3,SNR=3.1						
YKA				ScP	**ScP**	**14 33 16.8**	**-3.4**
	comp=Z,0.2nm,0.7s,baz=288,slow=2.4,SNR=4.7						
LTY	**Liberty**	**38.66**	**72**	P	**P**	**14 27 40.5**	**-1.3**
LTY				IAmb	IAmb	14 27 43.7	
	comp=Z,7.8nm,1.4s						
EUNU	**Eureka**	**40.17**	**16**	P	**P**	**14 27 54.7**	**+0.8**
EUNU				IAmb	IAmb	14 27 56.9	
	comp=Z,5.3nm,1.2s						
NEW	**Newport**	**40.23**	**69**	P	**P**	**14 27 54.1**	**-0.6**
YBH	**Yreka Blue Hor**	**40.43**	**81**	P	**P**	**14 27 58.2**	**+1.7**
YBH				IAmb	IAmb	14 27 59.6	
	comp=Z,5.9nm,1.3s						
K05A	**Summer Lake**	**40.96**	**78**	P	**P**	**14 28 01.1**	**0.0**
K05A				IAmb	IAmb	14 28 07.8	
	comp=Z,3.9nm,1.3s						
I07A	**Izee**	**41.04**	**76**	P	**P**	**14 28 01.5**	**0.0**
I07A				IAmb	IAmb	14 28 30.9	
	comp=Z,5.7nm,1.4s						
WDC	**Whiskeytown Da**	**41.21**	**82**	P	**P**	**14 28 04.0**	**+1.2**
WDC				IAmb	IAmb	14 28 04.8	
	comp=Z,8.4nm,1.4s						
MOD	**Modoc Plateau**	**41.80**	**79**	P	**P**	**14 28 08.4**	**+0.6**
MOD				IAmb	IAmb	14 28 35.2	
	comp=Z,5.8nm,1.5s						
BMO	**Blue Mountains**	**41.92**	**73**	P	**P**	**14 28 08.6**	**-0.1**
ORV	**Oroville**	**42.46**	**82**	P	**P**	**14 28 13.2**	**+0.2**
ORV				IAmb	IAmb	14 28 21.1	
	comp=Z,3.8nm,1.5s						
WVOR	**Wild Horse Val**	**42.49**	**77**	P	**P**	**14 28 13.7**	**+0.3**
WVOR				IAmb	IAmb	14 28 19.6	
	comp=Z,4.1nm,1.4s						
MSO	**Missoula**	**42.81**	**69**	P	**P**	**14 28 15.1**	**-0.8**
MSO				IAmb	IAmb	14 28 16.0	
	comp=Z,3.2nm,1.1s						
BEKR	**Beckworth**	**42.97**	**81**	P	**P**	**14 28 17.9**	**+0.5**
BEKR				IAmb	IAmb	14 28 18.6	
	comp=Z,1.5nm,0.6s						
PAHR	**Pah Rah Range**	**43.66**	**81**	P	**P**	**14 28 23.4**	**+0.5**
PAHR				IAmb	IAmb	14 28 50.2	
	comp=Z,2.9nm,1.2s						
PNTR	**Pine Nut**	**43.91**	**82**	P	**P**	**14 28 26.1**	**+1.2**
PNTR				IAmb	IAmb	14 28 26.7	
	comp=Z,3.6nm,0.7s						
WAKR	**Walker**	**44.37**	**82**	P	**P**	**14 28 29.8**	**+1.2**
ULN	**Ulaanbaatar**	**44.51**	**294**	P	**P**	**14 28 29.8**	**+0.2**
ULN				IAmb	IAmb	14 28 30.3	
	comp=Z,1.8nm,0.6s						
BCYI	**Bear Canyon**	**44.53**	**72**	P	**P**	**14 28 29.4**	**-0.4**
EGMT	**Eagleton**	**44.55**	**65**	P	**P**	**14 28 30.3**	**+0.5**
EGMT				IAmb	IAmb	14 28 32.9	
	comp=Z,7.5nm,1.2s						
MCMT	**McKenzie Canyo**	**44.56**	**71**	P	**P**	**14 28 29.5**	**-0.6**
BOZ	**Bozeman (W)**	**44.83**	**69**	P	**P**	**14 28 31.3**	**-0.8**
BOZ				IAmb	IAmb	14 28 33.8	
	comp=Z,3.8nm,1.2s						
KVN	**Kaiserville**	**44.85**	**81**	P	**P**	**14 28 32.8**	**+0.4**
RYN	**Ryan**	**44.85**	**81**	P	**P**	**14 28 33.0**	**+0.6**
RYN				IAmb	IAmb	14 28 34.2	
	comp=Z,3.9nm,1.2s						
SONM	**Songino Array**	**44.90**	**295**	P	**P**	**14 28 33.2**	**+0.5**
	comp=Z,2.0nm,0.5s,baz=66,slow=7.5,SNR=21						
SONM				PcP	**PcP**	**14 30 12.4**	**0.0**
	comp=Z,0.9nm,0.6s,baz=76,slow=2.1,SNR=6.7						
SONM	**Songino Array**	**44.90**	**295**	P	**P**	**14 28 32.7**	**+0.1**
TULEG	**Thule**	**44.93**	**18**	P	**P**	**14 28 33.0**	**+0.7**
NVAR	**Mina Array Bea**	**45.11**	**82**	P	**P**	**14 28 35.5**	**+1.0**
	comp=Z,1.0nm,0.5s,baz=299,slow=7.6,SNR=11						
NVAR				pP	**pP**	**14 29 01.2**	**+3.5**
	comp=Z,0.6nm,0.5s,baz=300,slow=6.7,SNR=4.1						
NVAR				ScP	**ScP**	**14 33 55.1**	**-1.5**
	comp=Z,0.2nm,0.3s,baz=332,slow=5.2,SNR=3.8						
MDPB	**Devils Postpil**	**45.14**	**83**	P	**P**	**14 28 35.9**	**+1.1**
MDPB				IAmb	IAmb	14 29 02.0	
	comp=Z,2.7nm,0.8s						
NV11	**Mina Array Sit**	**45.20**	**81**	P	**P**	**14 28 35.8**	**+0.6**
NV11				IAmb	IAmb	14 28 42.8	
	comp=Z,4.6nm,1.4s						
ELK	**Elko**	**45.55**	**77**	P	**P**	**14 28 38.4**	**+0.4**
ELK				IAmb	IAmb	14 29 06.2	
	comp=Z,2.1nm,1.1s						
YHH	**Holmes Hill**	**45.75**	**70**	P	**P**	**14 28 39.0**	**-0.6**
HVU	**Hansel Valley**	**46.40**	**74**	P	**P**	**14 28 44.9**	**+0.4**
REDW	**Red Top Meadow**	**46.58**	**71**	P	**P**	**14 28 45.7**	**-0.3**
REDW				IAmb	IAmb	14 29 08.4	
	comp=Z,6.2nm,1.4s						
R11A	**Troy Canyon, C**	**46.82**	**80**	P	**P**	**14 28 48.2**	**+0.3**
R11A				IAmb	IAmb	14 29 04.2	
	comp=Z,3.1nm,1.2s						
SPR3	**Spring Creek 3**	**47.18**	**78**	P	**P**	**14 28 51.5**	**+0.7**
TPNV	**Topopah Spring**	**47.31**	**82**	P	**P**	**14 28 52.3**	**+0.6**
TPNV				IAmb	IAmb	14 29 18.9	
	comp=Z,3.0nm,0.7s						
DUG	**Dugway, Tooele**	**47.34**	**76**	P	**P**	**14 28 52.1**	**+0.2**
DUG				IAmb	IAmb	14 29 19.8	
	comp=Z,5.4nm,1.2s						
BW06	**Boulder Array**	**47.70**	**71**	P	**P**	**14 28 54.2**	**-0.6**
PDAR	**Pinedale Array**	**47.70**	**71**	P	**P**	**14 28 53.8**	**-0.9**
	comp=Z,0.4nm,0.5s,baz=330,slow=4.0,SNR=7.1						
PDAR				pP	**pP**	**14 29 20.4**	**+2.3**
	comp=Z,1.0nm,0.7s,baz=312,slow=2.0,SNR=7.7						
PDAR	**Pinedale Array**	**47.70**	**71**	P	**P**	**14 28 53.9**	**-0.9**
PDAR				pP	**pP**	**14 29 19.3**	**+1.2**
PRN	**Pahroc Range**	**47.75**	**80**	P	**P**	**14 28 56.1**	**+1.0**
PRN				IAmb	IAmb	14 28 58.9	
	comp=Z,5.9nm,1.4s						
PSUT	**Pine Spring**	**47.76**	**78**	P	**P**	**14 28 55.5**	**+0.3**
MSU	**Marysvale**	**48.79**	**77**	P	**P**	**14 29 03.7**	**+0.6**
SPA0	**Spitsbergen Ar**	**49.66**	**355**	P	**P**	**14 29 08.9**	**-0.1**
W13A	**Hualapai Mount**	**49.97**	**82**	P	**P**	**14 29 11.5**	**-0.6**
U15A	**North Rim**	**50.06**	**79**	P	**P**	**14 29 13.5**	**+0.6**
U15A				IAmb	IAmb	14 29 40.6	
	comp=Z,5.4nm,1.2s						
ESJX	**Sierra Juarez**	**50.78**	**86**	P	**P**	**14 29 19.1**	**+0.8**
PV17	**East Wray Mesa**	**50.87**	**75**	P	**P**	**14 29 18.6**	**-0.3**
PV16	**Nyswonger Mesa**	**50.88**	**75**	P	**P**	**14 29 18.8**	**-0.1**
PV16				IAmb	IAmb	14 29 46.1	
	comp=Z,2.5nm,0.9s						
PV11	**David Mesa, Pa**	**50.91**	**75**	P	**P**	**14 29 18.0**	**-1.1**
PV05	**Paradox Valley**	**50.92**	**76**	P	**P**	**14 29 19.3**	**+0.1**
PV05				IAmb	IAmb	14 29 43.0	
	comp=Z,3.2nm,1.2s						
PV12	**Saucer Basin,**	**50.94**	**75**	P	**P**	**14 29 19.6**	**+0.2**
PV12				IAmb	IAmb	14 29 27.3	
	comp=Z,2.6nm,1.0s						
PV13	**Radium Mtn., P**	**51.03**	**75**	P	**P**	**14 29 20.0**	**-0.2**
ZALV	**Zalesovo Beam**	**52.42**	**312**	P	**P**	**14 29 29.2**	**-0.7**
	comp=Z,0.4nm,0.3s,baz=60,slow=6.9,SNR=2.9						
ZALV				PcP	**PcP**	**14 30 38.3**	**-1.0**
	comp=Z,1.9nm,0.7s,baz=45,slow=0.6,SNR=7.3						
SUMG	**Summit**	**53.12**	**13**	*i* P	**P**	**14 29 35.0**	**-0.2**
	comp=Z,12nm,0.7s						
SUMG	**Summit**	**53.12**	**13**	P	**P**	**14 29 35.8**	**+0.6**
SUMG	**Summit**	**53.12**	**13**	*i* P	**P**	**14 29 35.0**	**-0.2**
SUMG				IAmb	IAmb	14 29 36.6	
	comp=Z,12nm,0.7s						
ARCES	**ARCESS Array B**	**57.22**	**349**	P	**P**	**14 30 04.2**	**-0.1**
	comp=Z,3.6nm,1.0s,baz=18,slow=10,SNR=11						
ARCES	**ARCESS Array B**	**57.22**	**349**	P	**P**	**14 30 05.7**	**+1.4**
MK31	**Makanchi Array**	**58.36**	**307**	P	**P**	**14 30 11.8**	**-0.9**
MK31				IAmb	IAmb	14 30 12.7	
	comp=Z,1.7nm,0.6s						
MKAR	**Makanchi Array**	**58.36**	**307**	P	**P**	**14 30 12.1**	**-0.6**
	comp=Z,1.9nm,0.5s,baz=50,slow=5.8,SNR=33						
MKAR	**Makanchi Array**	**58.36**	**307**	P	**P**	**14 30 11.9**	**-0.8**
MAKZ	**Makanchi**	**58.51**	**307**	P	**P**	**14 30 13.2**	**-0.4**
BRVK	**Borovoye**	**59.38**	**318**	P	**P**	**14 30 19.9**	**+0.4**
TX31	**Lajitas Ar. Si**	**60.19**	**80**	P	**P**	**14 30 26.1**	**+0.6**
TX32	**Lajitas Array**	**60.19**	**80**	P	**P**	**14 30 26.0**	**+0.5**
TX32				IAmb	IAmb	14 30 50.1	
	comp=Z,2.5nm,1.2s						
TXAR	**Lajitas Array**	**60.19**	**80**	P	**P**	**14 30 25.6**	**0.0**
	comp=Z,0.4nm,0.4s,baz=310,slow=5.1,SNR=6.1						
TXAR				pP	**pP**	**14 30 51.1**	**+1.2**
	comp=Z,0.7nm,0.6s,baz=285,slow=3.5,SNR=4.8						
ARU	**Arti**	**61.22**	**327**	P	**P**	**14 30 32.7**	**+0.7**
FIA1	**FINESS Array S**	**64.83**	**346**	P	**P**	**14 30 55.4**	**-0.4**
FINES	**FINESS Array B**	**64.83**	**346**	P	**P**	**14 30 55.3**	**-0.4**
	comp=Z,0.4nm,0.4s,baz=12,slow=7.5,SNR=8.4						
AAK	**Ala-Archa**	**65.20**	**308**	P	**P**	**14 30 59.2**	**+0.5**
AAK				IAmb	IAmb	14 31 01.8	
	comp=Z,2.8nm,0.6s						
342A	**Flagon Creek P**	**65.48**	**70**	P	**P**	**14 31 00.1**	**-0.3**
SIJI	**Sorong**	**65.92**	**234**	P	**P**	**14 31 03.5**	**0.0**
	comp=Z,7.0nm,0.8s,baz=305,slow=19,SNR=4.1						
ABKAR	**Akbulak array**	**66.46**	**321**	P	**P**	**14 31 07.0**	**+0.6**
NC204	**NORSAR Array S**	**66.69**	**354**	P	**P**	**14 31 07.7**	**-0.1**
KK31	**Karatay Array**	**66.76**	**311**	P	**P**	**14 31 08.6**	**+0.1**
KKAR	**Karatay Array**	**66.76**	**311**	P	**P**	**14 31 08.6**	**+0.1**
BATG	**Bathurst New B**	**66.76**	**42**	P	**P**	**14 31 07.9**	**-0.5**
BATG				IAmb	IAmb	14 31 08.3	
	comp=Z,1.8nm,0.5s						
NC405	**NORSAR Array S**	**66.78**	**353**	P	**P**	**14 31 07.7**	**-0.7**
NB201	**NORSAR Array S**	**66.88**	**353**	P	**P**	**14 31 08.7**	**-0.3**
NOA	**NORSAR Array B**	**66.89**	**353**	P	**P**	**14 31 08.4**	**-0.7**
	comp=Z,0.3nm,0.5s,baz=2.4,slow=5.4,SNR=4.7						
BRAL	**Brewton**	**68.67**	**67**	P	**P**	**14 31 21.0**	**+0.4**
CMAR	**Chiang Mai Arr**	**69.31**	**274**	P	**P**	**14 31 24.7**	**-0.1**
	comp=Z,1.0nm,0.6s,baz=22,slow=7.4,SNR=6.3						
GUN	**Gumba**	**70.10**	**290**	*e*P	**P**	**14 31 30.5**	**+0.6**
	comp=Z,28nm,0.4s						
KKN	**Kakani**	**70.54**	**290**	*e*P	**P**	**14 31 33.1**	**+0.6**
	comp=Z,19nm,0.6s						
PKI	**Pulchoki**	**70.63**	**290**	*e*P	**P**	**14 31 33.5**	**+0.3**
	comp=Z,15nm,0.5s						
PKIN	**Phulchoki**	**70.63**	**290**	*e*P	**P**	**14 31 33.4**	**+0.3**
	comp=Z,16nm,0.5s						
DMN	**Daman**	**70.78**	**290**	*e*P	**P**	**14 31 34.0**	**0.0**
	comp=Z,6.1nm,0.4s						
DANN	**Dangsing**	**70.99**	**292**	*e*P	**P**	**14 31 35.8**	**+0.5**
	comp=Z,19nm,0.6s						
NIL	**Nilore**	**72.71**	**303**	P	**P**	**14 31 45.8**	**+0.6**
KBL	**Kabul**	**74.16**	**306**	P	**P**	**14 31 53.3**	**-0.6**
AKASG	**Malin Array Be**	**74.46**	**340**	P	**P**	**14 31 54.4**	**-0.6**
	comp=Z,0.7nm,0.3s,baz=21,slow=6.3,SNR=4.4						
GEYT	**Alibeck**	**76.52**	**315**	P	**P**	**14 32 07.6**	**+0.5**
	comp=Z,1.1nm,0.5s,baz=319,slow=5.9,SNR=3.8						
GEYT	**Alibeck**	**76.52**	**315**	P	**P**	**14 32 07.6**	**+0.5**
GYA0B	**ALIBECK ARRAY**	**76.52**	**315**	P	**P**	**14 32 07.4**	**+0.3**
GYA0B				IAmb	IAmb	14 32 09.0	
	comp=Z,5.0nm,1.0s						
HRA	**Herat**	**77.59**	**311**	P	**P**	**14 32 14.1**	**+0.7**
HRA				IAmb	IAmb	14 32 14.7	
	comp=Z,2.6nm,0.7s						
BUR08	**Bucovina Ar. S**	**78.18**	**342**	P	**P**	**14 32 17.7**	**+1.4**
BUR08				IAmb	IAmb	14 32 18.6	
	comp=Z,1.7nm,0.7s						
BURAR	**Bucovina Array**	**78.20**	**342**	P	**P**	**14 32 16.5**	**0.0**
WRA	**Warramunga Arr**	**81.32**	**222**	P	**P**	**14 32 32.6**	**-0.7**
	comp=Z,1.4nm,0.7s,baz=30,slow=6.0,SNR=11						
WRA	**Warramunga Arr**	**81.32**	**222**	P	**P**	**14 32 32.3**	**-1.0**
FITZ	**Fitzroy Crossi**	**83.54**	**230**	P	**P**	**14 32 44.7**	**-0.2**
	comp=Z,1.8nm,0.7s,baz=44,slow=6.5,SNR=2.3						
BRTR	**Keskin Array B**	**83.70**	**334**	P	**P**	**14 32 46.2**	**+0.3**
	comp=Z,0.6nm,0.5s,baz=39,slow=3.7,SNR=3.0						
ASAR	**Alice Springs**	**84.83**	**220**	P	**P**	**14 32 51.2**	**-0.1**
	comp=Z,0.8nm,0.7s,baz=24,slow=5.6,SNR=13						
STKA	**Stephens Creek**	**89.55**	**211**	P	**P**	**14 33 14.6**	**+0.7**
	comp=Z,2.4nm,0.7s,baz=310,slow=6.5,SNR=4.7						
TORD	**Torodi Ar. Bea**	**115.10**	**357**	PKP	**PKiKP**	**14 38 56.4**	**-1.4**
	comp=Z,0.4nm,0.5s,baz=345,slow=4.1,SNR=2.5						
BOSA	**Boshof**	**149.34**	**309**	PKPbc	**PKPbc**	**14 40 05.0**	**-0.1**
	comp=Z,3.1nm,0.6s,baz=20,slow=2.5,SNR=14						

ANF ***04*** *15:20:54.9±0.6, 36°.31N×98°.16W, h5^{km}, ML3.7/8, Error ellipse: s-maj=7.8km s-min=7.3km az=72.0*
NEIC ***04*** *15:20:55.4±1.6, 36°.31N±0°.01×98°.14W±0°.02, h10^{km}±2^{km}, Error ellipse: s-maj=3.1km s-min=1.8km az=64.0*
TUL ***04*** *15:20:55.1±1.2, 36°.31N±0°.01×98°.16W±0°.01, h7^{km}±7^{km}, ML3.1, mb_Lg3.1/41(NEIC), Error ellipse: s-maj=2.0km s-min=1.4km az=145.0*
ISC 04 15:20:55.2±1.1**, 36°.31N**±0°.02×**98°.15W**±0°.03**, h6**^{km}±9^{km}**, n67, σ0^{s}.70**/71**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CROK	**Carrier**	**0.24**	**34**	Pg	**Pg**	**15 21 00.4**	**+0.4**
CROK				Sg	**Sg**	**15 21 04.0**	**+0.8**
GC02	**Grant County #**	**0.59**	**23**	Pg	**Pg**	**15 21 06.5**	**-0.1**
GC02				Sg	**Sg**	**15 21 14.8**	**+0.4**
KAN14	**Manchester OK**	**0.67**	**13**	Pg	**Pg**	**15 21 07.8**	**-0.2**
KAN14				Sg	**Sg**	**15 21 16.9**	**+0.2**
U32A	**Winter Ranch,**	**0.69**	**276**	Pg	**Pg**	**15 21 08.0**	**-0.5**
U32A				Sg	**Sg**	**15 21 17.7**	**+0.2**
U32A	**Winter Ranch,**	**0.69**	**276**	P		15 21 08.0	
	baz=96						
U32A				S		15 21 17.8	
	baz=96						
OK029	**Liberty Lake**	**0.76**	**132**	Pg	**Pg**	**15 21 09.7**	**-0.2**
OK029				Sg	**Sg**	**15 21 20.2**	**+0.5**
BCOK	**Bluff Creek, N**	**0.78**	**146**	Pg	**Pg**	**15 21 10.0**	**-0.3**
BCOK				Sg	**Sg**	**15 21 20.8**	**+0.4**
KAN10	**Anthony SW Sta**	**0.82**	**3**	Pg	**Pg**	**15 21 10.4**	**-0.5**
KAN10				Sg	**Sg**	**15 21 21.3**	**-0.2**
KAN13	**South Haven SW**	**0.89**	**37**	Pg	**Pg**	**15 21 11.8**	**-0.5**
KAN01	**Argonia South**	**0.90**	**20**	Pg	**Pg**	**15 21 12.1**	**-0.5**
KAN08	**Anthony NE Sta**	**0.93**	**9**	Pg	**Pg**	**15 21 12.6**	**-0.6**
OK025	**Westminster Rd**	**0.98**	**137**	Pg	**Pg**	**15 21 13.4**	**-0.6**
OK025				Sg	**Sg**	**15 21 27.1**	**+0.4**
KAN12	**Harper NE Stat**	**1.00**	**7**	Pg	**Pg**	**15 21 13.8**	**-0.6**
KAN12				Sg	**Sg**	**15 21 27.1**	**-0.3**
OKCFA	**Oklahoma City**	**1.05**	**147**	Pg	**Pg**	**15 21 14.9**	**-0.5**
OKCFA				Sg	**Sg**	**15 21 29.0**	**-0.1**
OK031	**S. Brethren Rd**	**1.12**	**108**		**Pg**	**15 21 16.1**	**-0.6**
OK031				Sg	**Sg**	**15 21 31.2**	**0.0**
OK030	**Cody Creek RV**	**1.17**	**108**		**Pg**	**15 21 17.0**	**-0.7**
OK030				Sg	**Sb**	**15 21 33.4**	**+0.2**
QUOK	**Quay**	**1.17**	**96**		**Pg**	**15 21 17.2**	**-0.5**
FNO	**Franklin**	**1.21**	**150**		**Pb**	**15 21 18.3**	**-0.3**
T35A	**Sooner Cattle**	**1.45**	**65**	Pn	**Pn**	**15 21 22.0**	**0.0**
T35B	**Sooner Cattle**	**1.45**	**65**	P		15 21 21.8	
	baz=246						
T35B				S		15 21 41.4	
	baz=246						
WMOK	**Wichita Mounta**	**1.65**	**198**	P	**Pn**	**15 21 24.4**	**-0.3**
	baz=18						
WMOK				S	**Sb**	**15 21 46.6**	**-0.4**
	baz=18						
WMOK	**Wichita Mounta**	**1.65**	**198**	Pn	**Pn**	**15 21 24.4**	**-0.3**
WMOK	**Wichita Mounta**	**1.65**	**198**	P		15 21 24.2	
	baz=18						
TUL1	**Leonard**	**1.95**	**101**	P	**Pn**	**15 21 28.8**	**0.0**
	baz=282						
TUL1				S	**Sb**	**15 21 54.8**	**-0.9**
	baz=282						
TUL1	**Leonard**	**1.95**	**101**	Pn	**Pn**	**15 21 29.3**	**+0.4**
TUL1				IAmb_Lg		15 22 00.8	
	comp=Z,103nm,1.0s						
TUL1	**Leonard**	**1.95**	**101**	P		15 21 28.7	
	baz=282						
TUL1				Sb		15 21 56.7	
	baz=282						
R32A	**Long Quarter,**	**2.16**	**348**	Sb		15 22 02.8	
	baz=168						
CBKS	**Cedar Bluff**	**2.80**	**334**	P	**Pn**	**15 21 40.5**	**-0.1**
	baz=153						
CBKS				S	**Sn**	**15 22 15.4**	**+0.6**
	baz=153						
CBKS	**Cedar Bluff**	**2.80**	**334**	S		15 22 15.6	
	baz=153						
X37A	**Clayton**	**2.84**	**126**	Pn	**Pn**	**15 21 41.6**	**+0.5**
X37A	**Clayton**	**2.84**	**126**	P		15 21 41.4	
	baz=308						
KSU1	**Kansas State U**	**3.05**	**23**	P	**Pn**	**15 21 43.6**	**-0.3**
	baz=204						
KSU1				S	**Sn**	**15 22 20.1**	**-0.6**
	baz=204						
KSU1	**Kansas State U**	**3.05**	**23**	Pn	**Pn**	**15 21 44.3**	**+0.3**
KSU1				IAmb_Lg		15 22 36.9	
	comp=Z,53nm,0.9s						
KSU1	**Kansas State U**	**3.05**	**23**	S		15 22 20.0	
	baz=204						
AMTX	**Amarillo**	**3.21**	**245**	P	**Pn**	**15 21 46.7**	**+0.5**
	baz=62						
AMTX	**Amarillo**	**3.21**	**245**	Pn	**Pn**	**15 21 46.8**	**+0.6**
AMTX	**Amarillo**	**3.21**	**245**	S		15 22 34.3	
	baz=62						
HHAR	**Hobbs**	**3.40**	**89**	Pn	**Pn**	**15 21 48.6**	**-0.2**
W39A	**Magazine**	**3.72**	**106**	P	**Pn**	**15 21 53.1**	**-0.1**
	baz=289						
W39A				S	**Sn**	**15 22 38.5**	**+1.2**
	baz=289						
W39A	**Magazine**	**3.72**	**106**	IAmb_Lg		15 23 00.6	
	comp=Z,35nm,0.9s						
ABTX	**Abilene, Hawle**	**3.88**	**199**	P	**Pn**	**15 21 55.2**	**-0.2**
	baz=18						
ABTX	**Abilene, Hawle**	**3.88**	**199**	Pn	**Pn**	**15 21 55.0**	**-0.3**
ABTX	**Abilene, Hawle**	**3.88**	**199**	P		15 21 55.1	
	baz=18						
Z38A	**Mt. Pleasant**	**4.00**	**138**	IAmb_Lg		15 23 05.8	
	comp=Z,31nm,0.8s						
S39A	**Bolivar**	**4.10**	**69**	Pn	**Pn**	**15 21 58.8**	**+0.3**
S39A				IAmb_Lg		15 23 06.2	
	comp=Z,34nm,0.8s						
S39A	**Bolivar**	**4.10**	**69**	P		15 21 58.6	
	baz=252						
MIAR	**Mount Ida**	**4.13**	**114**	P	**Pn**	**15 21 59.0**	**+0.2**
	baz=297						
MIAR				S	**Sn**	**15 22 47.5**	**+0.1**
	baz=297						
MIAR	**Mount Ida**	**4.13**	**114**		**Pn**	**15 22 00.1**	**+1.3**
MIAR	**Mount Ida**	**4.13**	**114**	P		15 21 59.0	
	baz=297						
MIAR				S		15 22 48.0	
	baz=297						

U40A	Yellville	4.28	88	Pn	Pn	15 22 01.3	+0.4
U40A				IAmb_Lg		15 23 11.3	
	comp=Z,51nm,0.9s						
KSCO	Kaye Shedlock'	4.46	309	IAmb_Lg		15 23 20.4	
	comp=Z,35nm,0.7s						
X40A	Basin Creek Fa	4.71	111	Pn	Pn	15 22 06.9	+0.1
MGMO	Mountain Grove	4.80	78		Pn	15 22 08.4	+0.4
MGMO				IAmb_Lg		15 23 27.5	
	comp=Z,24nm,0.9s						
WHAR	Wooly Hollow	4.87	100	Pn	Pn	15 22 07.4	-1.6
FCAR	Ozark Folk Cen	4.90	93	Pn	Pn	15 22 10.1	+0.7
P38A	Dawn	4.93	46	Pn	Pn	15 22 10.7	+0.9
P38A				IAmb_Lg		15 23 41.1	
	comp=Z,40nm,0.9s						
R40A	Maddies Statio	5.09	65	Pn	Pn	15 22 12.1	0.0
435B	Jarrell	5.53	175	IAmb_Lg		15 24 00.8	
	comp=Z,21nm,0.8s						
LCAR	Lake Charles	5.66	90	Pn	Pn	15 22 21.5	+1.6
CCM	Cathedral Cave	5.78	70	Pn	Pn	15 22 21.9	+0.4
P40A	Paris	5.80	54	Pn	Pn	15 22 22.7	+0.9
P40A				IAmb_Lg		15 23 58.1	
	comp=Z,22nm,0.7s						
L34A	Svendsen Farm,	5.82	13	IAmb_Lg		15 24 06.0	
	comp=Z,30nm,0.9s						
N38A	Joes South For	5.91	39	Pn	Pn	15 22 23.1	-0.1
SDCO	Great Sand Dun	6.05	286	Pn	Pn	15 22 28.3	+2.8
PBMO	Poplar Bluff	6.23	83	IAmb_Lg		15 24 19.3	
	comp=Z,32nm,0.7s						
FVM	French Village	6.39	73	Pn	Pn	15 22 30.6	+0.6
SLM	Saint Louis	6.71	67	IAmb_Lg		15 24 31.7	
	comp=Z,19nm,0.8s						
ISCO	Idaho Springs	6.84	303	Pn	Pn	15 22 38.5	+2.1
N41A	Harden Midland	7.21	50	IAmb_Lg		15 24 55.1	
	comp=Z,23nm,0.8s						
S44A	Carbondale	7.25	76	IAmb_Lg		15 24 47.7	
	comp=Z,29nm,0.8s						
ECSD	EROS Data Cent	7.51	9	Pn	Pn	15 22 44.6	-0.7
MNTX	Cornudas Mount	7.56	235	Pn	Pn	15 22 46.2	+0.2
P43A	Skaggs, Pawnee	7.58	61	Pn	Pn	15 22 45.6	-0.6
HDIL	Hopedale	8.14	56	Pn	Pn	15 22 53.3	-0.6
L42A	Oliver, Polo	8.70	47	IAmb_Lg		15 25 32.7	
	comp=Z,22nm,1.0s						
T47A	Sharon Grove	8.90	82	IAmb_Lg		15 25 49.8	
	comp=Z,24nm,1.1s						
JFWS	Jewell Farm	8.98	40	IAmb_Lg		15 25 42.7	
	comp=Z,17nm,0.7s						
RSSD	Black Hills	9.01	332	IAmb_Lg		15 25 47.5	
	comp=Z,9.7nm,0.9s						
K22A	Casper	9.05	317	IAmb_Lg		15 26 05.3	
	comp=Z,13nm,0.9s						

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*MAN **04** 15:26:16.3, 9°.94N×124°.19E, h6^{km}, mb4.8, ML3.8, MS3.7*
MAN INTENSITY II - TAGBILARAN CITY; INTENSITY I - CEBU CITY.
*IDC **04** 15:26:25.9±3.6, 9°.85N×124°.38E, h94^{km}±36^{km}, mb3.2/9, mb1 3.3/10, mb1mx3.2/51, mbtmp3.6/10, MS2.7/1, Ms1 2.7/1, ms1mx2.3/29, Error ellipse: s-maj=48.5km s-min=17.7km az=62.0*
ISC 04 15:26:16.1±1.1**, 9°.84N**±0°.03×**124°.22E**±0°.03**, h10^{km}**±8^{km}**,**
n26, σ1^{s}91/38**, mb3.6**/9**, 3C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LLP	Lapu-Lapu	0.54	332	⇓*i*P	Pg	15 26 25.7	-0.9
LLP				*i* S	Sg	15 26 32.8	-0.9
MSLP	Maasin	0.69	65	*e*P	Pg	15 26 29.4	-0.2
MSLP				*e*S	Sb	15 26 39.8	0.0
OCLP	Ormoc	1.26	17	*e*P	Pn	15 26 38.3	-1.5
OCLP				*e*S	Sb	15 26 55.9	-0.3
CGP	Cagayan de Oro	1.46	161	⇑*i*P	Pb	15 26 43.2	-0.2
CGP				*e*S	Sg	15 27 03.7	+0.7
CNOP	Candoni, Negro	1.56	270	*e*P	Pn	15 26 43.4	-0.6
CNOP				*e*S	Sn	15 27 03.0	-1.2
BUTP	Butuan	1.63	122	*e*P	Pb	15 26 46.6	+0.3
BUTP				*e*S	Sg	15 27 09.6	+1.0
GUIM	Jordan	1.79	296	*e*P	Pn	15 26 46.2	-0.9
GUIM				*e*S	Sn	15 27 10.3	+0.5
GLSP	General Luna,	1.88	92	*e*P	Pn	15 26 47.5	-0.7
GLSP				*e*S	Sn	15 27 09.9	-2.1
BUKP	Musuan	2.12	157	*e*P	Pb	15 26 53.9	-0.8
BUKP				*e*S	Sg	15 27 23.1	-1.3
PAGZ	Pagadian	2.15	203	*e*P	Pn	15 26 52.2	+0.2
PAGZ				*e*S	Sb	15 27 23.0	+1.1
CNP	Catarman	2.69	9	*e*P	Pb	15 27 05.3	+1.0
KCP	Kidapawan	2.94	163	⇑*i*P	Pb	15 27 07.2	-1.5
KCP				*i* S	Sn	15 27 30.2	-8.2
DAV	Davao City (W)	3.06	154	P	Pb	15 27 11.6	+0.8
	37nm,0.3s,baz=301,slow=12,SNR=1.8						
DAV				S	Sg	15 27 57.4	+2.7
	50nm,0.3s,baz=83,slow=20,SNR=1.8						
SKMP	Bagumbayan, Su	3.32	175	*e*P	Pn	15 27 08.3	+0.1
MATI	Mati	3.51	145	*e*P	Pn	15 27 12.1	+1.2
MATI				*e*S	Sn	15 27 56.2	+3.8
LQP	Lukban	4.99	329	⇑*e*P	Pn	15 27 33.1	+1.8
KAPI	Kappang	15.42	197	LR	LR	15 36 18.0	
	comp=Z,30nm,19.2s,baz=122,slow=38						
CMAR	Chiang Mai Arr	25.94	292	P	P	15 31 51.5	+2.6
	0.3nm,0.5s,baz=91,slow=7.7,SNR=1.7						
WRA	Warramunga Arr	31.23	161	P	P	15 32 35.7	-0.4
	0.4nm,0.7s,baz=343,slow=9.1,SNR=2.4						
ASAR	Alice Springs	34.62	164	P	P	15 33 06.0	+0.3
	0.5nm,0.6s,baz=341,slow=6.9,SNR=28						
SONM	Songino Array	40.75	342	P	P	15 33 57.7	+0.3
	0.3nm,0.7s,baz=156,slow=11,SNR=2.8						
MKAR	Makanchi Array	51.16	324	P	P	15 35 19.9	+0.4
	1.1nm,0.8s,baz=122,slow=7.7,SNR=8.2						
KURBB	Kurchatov Arra	55.29	326	P	P	15 35 50.3	+0.6
	0.8nm,0.6s,baz=128,slow=6.7,SNR=8.5						
BVAR	Borovoye Array	60.88	326	P	P	15 36 28.2	-0.8
	0.3nm,0.6s,baz=139,slow=9.0,SNR=3.3						
ARU	Arti	68.48	327	P	P	15 37 18.2	-0.2
	0.7nm,0.6s,baz=95,slow=2.5,SNR=3.3						
ILAR	Eielson Array	80.70	26	P	P	15 38 28.6	-0.6
	0.2nm,0.7s,baz=243,slow=4.0,SNR=1.7						

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*IDC **04** 15:28:49.9±12.0, 36°.28N×71°.50E, h158^{km}±76^{km}, mb3.0/1, mb1 2.9/5, mb1mx2.6/58, mbtmp3.5/5, MS3.1/1, Ms1 3.3/1, ms1mx2.5/28, Error ellipse: s-maj=229.3km s-min=46.4km az=142.0*
*NNC **04** 15:28:59.0±6.3, 37°.13N×71°.60E, h210^{km}±85^{km}, mb2.5, mpv3.6, Error ellipse: s-maj=63.5km s-min=36.8km az=0.0*
ISC 04 15:28:52.0±1.9**, 36°.7N**±0°.1×**71°.3E**±0°.1**, h150^{km}, n11,**
σ1^{s}69/14**, 2C-6D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	Ala-Archa	6.43	22	P	Pn	15 30 26.6	+2.2
	baz=181,slow=6.2						
AAK				S	Sn	15 31 34.7	-2.1
	0.8nm,0.3s,baz=149,slow=21,SNR=10						
AAK	Ala-Archa	6.43	22	⇓P	Pn	15 30 26.2	+1.7
	1.7nm,0.3s						
AAK				⇑S	Sn	15 31 35.5	-1.4
	6.1nm,0.6s						
KK31	Karatay Array	6.43	355	⇓P	Pn	15 30 26.4	+2.1
	2.6nm,0.2s,baz=172,slow=12,SNR=151						
KK31				⇓S	Sn	15 31 34.4	-2.3
	1.9nm,0.3s,baz=169,slow=25,SNR=9.4						
TKM2	Tokmak 2	7.04	27	⇑P	Pn	15 30 32.2	-0.6
	2.8nm,0.7s						
TKM2				⇓S	Sn	15 31 50.3	-1.5
	3.2nm,0.8s						
MKAR	Makanchi Array	12.99	36	P	Pn	15 31 51.7	+0.7
	0.1nm,0.3s,baz=227,slow=13,SNR=1.6						
KURBB	Kurchatov Arra	14.86	18	P	P	15 32 17.3	+0.8
	0.1nm,0.3s,baz=208,slow=10,SNR=7.4						
AB31	Akbulak array	15.03	330	⇓P	P	15 32 18.6	+0.3
	0.4nm,0.4s,baz=148,slow=13,SNR=18						
AKTO	Aktyubinsk	16.73	329	⇓P	Pn	15 32 37.4	0.0
	0.5nm,0.4s						
ZALV	Zalesovo Beam	19.64	24	P	P	15 33 09.2	+0.5
	0.4nm,0.3s,baz=210,slow=10,SNR=7.5						
CMAR	Chiang Mai Arr	30.34	119	LR	LR	15 49 12.9	
	comp=Z,33nm,18.6s,baz=35,slow=41						
TORD	Torodi Ar. Bea	65.96	269	P	P	15 39 20.5	-1.8
	0.2nm,0.4s,baz=48,slow=6.3,SNR=1.4						

IDC 04 15:35:14.7±15.0**, 20°.61N**×**143°.57E, h0^{km}, mb3.3**/3**,**
mb1 3.5/3**, mb1mx3.1**/72**, mbtmp3.3**/3**, Error ellipse:**
s-maj=631.3km s-min=33.0km az=77.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SONM	Songino Array	40.40	321	P	P	15 42 54.5	-0.1
	0.3nm,0.9s,baz=114,slow=8.8,SNR=2.0						
WRA	Warramunga Arr	41.31	193	P	P	15 43 03.2	+1.0
	0.4nm,0.9s,baz=16,slow=9.5,SNR=1.9						
ASAR	Alice Springs	45.01	193	P	P	15 43 31.1	-1.1
	0.2nm,0.7s,baz=15,slow=13,SNR=4.2						

IDC 04 16:03:15.7±7.3**, 7°.17N**×**105°.34W, h0^{km}, mb3.5**/4**,**
mb1 4.0/4**, mb1mx3.7**/24**, mbtmp3.5**/4**, MS3.4**/2**, Ms1 3.4**/2**,**
ms1mx3.0/22**, Error ellipse: s-maj=292.0km**
s-min=59.2km az=109.0, Northern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMIG	Matias Romero	14.20	45	LR	LR	16 10 35.5	
	comp=Z,154nm,19.5s,baz=196,slow=31						
TXAR	Lajitas Array	22.10	4	P	P	16 08 13.7	+0.9
	0.9nm,0.8s,baz=184,slow=11,SNR=8.5						
PDAR	Pinedale Array	35.65	355	P	P	16 10 15.4	-0.3
	0.8nm,0.9s,baz=182,slow=7.2,SNR=6.6						
H03N2	Juan Fernandez	47.54	150	T	T	17 01 46.5	
	baz=327						
H03N1	Juan Fernandez	47.55	150	T	T	17 01 47.8	
	baz=327						
H03N3	Juan Fernandez	47.56	150	T	T	17 01 49.5	
	baz=327						
PPT	Papeete	50.13	240	LR	LR	16 28 09.8	
	comp=Z,39nm,19.8s,baz=321,slow=30						
YKA	Yellowknife Ar	55.63	355	P	P	16 12 52.5	-0.7
	0.3nm,0.8s,baz=165,slow=6.3,SNR=4.9						
ILAR	Eielson Array	64.51	342	P	P	16 13 53.9	-0.2
	1.3nm,1.0s,baz=149,slow=4.4,SNR=7.7						
CMAR	Chiang Mai Arr	145.03	317	PKPbc	PKPbc	16 22 55.1	-0.2
	0.5nm,0.4s,baz=44,slow=2.7,SNR=6.2						

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*DJA **04** 16:14:08.2±0.5, 6°S±4°×14°7E±°, h48^{km}±7^{km}, M4.8/14, mB5.4/3, mb4.6/14, MLv4.9/2, Mw(mB)4.8/3*
*IDC **04** 16:14:09.6±2.1, 6°.21S×146°.86E, h66^{km}±20^{km}, mb3.9/15, mb1 4.1/19, mb1mx4.0/36, mbtmp4.2/19, MS3.6/14, Ms1 3.6/14, ms1mx3.4/41, Error ellipse: s-maj=23.2km s-min=12.3km az=82.0*
*NEIC **04** 16:14:10.1±1.9, 6°.30S±0°.08×146°.79E±0°.08, h70^{km}±6^{km}, mb4.5/37, Error ellipse: s-maj=12.2km s-min=11.2km az=77.0*
ISC 04 16:14:08.6±0.5**, 6°.22S**±0°.06×**146°.79E**±0°.07**, h50^{km}, n91,**
σ1^{s}16/79**, mb4.5**/31**, MS3.6**/8**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	3.19	174	P	Pn	16 14 56.5	+0.3
	17nm,0.3s,baz=1.7,slow=6.3,SNR=79						
PMG				S	Sn	16 15 35.7	+2.7
	53nm,0.3s,baz=341,slow=6.3,SNR=3.7						
PMG				LR	LR	16 16 39.0	
	comp=Z,2µm,19.0s,baz=335,slow=47						
PMG	Port Moresby	3.19	174	P	Pn	16 14 56.7	+0.5
RABL	Rabaul	5.71	70	Pn	Pn	16 15 32.2	+1.2
RABL	Rabaul	5.71	70	P	Pn	16 15 32.9	+1.9
JAY	Jayapura	7.10	301	P	Pn	16 15 53.0	+3.0
	1.6nm,0.3s,baz=188,slow=10,SNR=4.0						
JAY				LR	LR	16 18 55.3	
	comp=Z,424nm,19.6s,baz=34,slow=40						
COEN	Coen	8.47	205	Pn	Pn	16 16 08.8	0.0
HNR	Honiara	13.41	105	LR	LR	16 21 58.5	
	comp=Z,116nm,19.0s,baz=266,slow=35						
CTAO	Charters Tower	13.79	182	Pn	Pn	16 17 23.6	+2.1
FAKI	Fak Fak	14.86	282	P	P	16 17 41.3	+0.8
SIJI	Sorong	16.38	288	P	Pn	16 17 55.0	-0.3
	1.9nm,0.3s,baz=85,slow=16,SNR=8.2						
SIJI				LR	LR	16 24 52.5	
	comp=Z,205nm,21.1s,baz=68,slow=39						
SWI	Sorong	16.39	288	P	Pn	16 17 53.3	-2.1
	59nm,1.0s						
MTN	Manton Dam	16.78	246	Pn	Pn	16 17 59.9	-0.4
MTN				IAmb	IAmb	16 18 11.7	
	comp=Z,14nm,0.7s						
WB0	Warramunga Arr	18.07	221		P	16 18 15.5	-0.6
WB0				IAmb	IAmb	16 18 26.8	
	comp=Z,23nm,1.1s						
WR0	Warramunga Arr	18.12	220	P	P	16 18 15.6	-1.0
WRAB	Tennant Creek	18.22	220	P	P	16 18 16.5	-1.3
WRAB				IAmb	IAmb	16 18 28.4	
	comp=Z,22nm,1.1s						
WB2	Warramunga Arr	18.23	220	P	P	16 18 17.0	-0.8
WB2				IAmb	IAmb	16 18 28.6	
	comp=Z,25nm,1.1s						
WRA	Warramunga Arr	18.23	220	P	P	16 18 17.1	-0.8
	comp=Z,0.6nm,0.3s,baz=33,slow=10,SNR=31						
WRA				LR	LR	16 26 19.0	
	comp=Z,309nm,21.1s,baz=35,slow=40						
WRA	Warramunga Arr	18.23	220	P	P	16 18 17.0	-0.8
EIDS	Eidsvold	19.48	168	P	P	16 18 30.0	-1.4
GUMO	Guam	19.77	354	LR	LR	16 25 46.0	
	comp=Z,87nm,20.6s,baz=116,slow=35						
AS31	Alice Springs	21.32	214	P	P	16 18 51.8	+0.3
ASAR	Alice Springs	21.32	214	P	P	16 18 51.1	-0.4
	comp=Z,2.0nm,0.5s,baz=50,slow=8.9,SNR=57						
ASAR				LR	LR	16 27 54.0	
	comp=Z,152nm,21.2s,baz=32,slow=39						
ASAR	Alice Springs	21.32	214	P	P	16 18 51.3	-0.2
SANVU	Saraoutou	22.02	116	P	P	16 18 59.0	0.0
SANVU				IAmb	IAmb	16 19 12.6	
	comp=Z,17nm,0.8s						
SOEI	Soe	22.58	260	P	P	16 19 06.7	+1.5
SOEI				IAmb	IAmb	16 19 21.6	
	comp=Z,20nm,0.9s						
BATI	Baumata	23.23	259	LR	LR	16 29 51.5	
	comp=Z,189nm,18.9s,baz=60,slow=40						
FITZ	Fitzroy Crossi	23.78	238	P	P	16 19 16.0	-0.8
	comp=Z,5.2nm,0.4s,baz=53,slow=11,SNR=26						
FITZ				LR	LR	16 30 00.5	
	comp=Z,193nm,18.8s,baz=59,slow=40						
FITZ	Fitzroy Crossi	23.78	238	P	P	16 19 15.8	-1.0
ARMA	Armidale	24.50	170	P	P	16 19 23.9	+0.6
LUWI	Luwuk	24.51	281	P	P	16 19 25.5	+1.9
LUWI	Luwuk	24.51	281	P	P	16 19 24.3	+0.7
	comp=Z,2µmcomp=Z,56nm,0.8s						
STKA	Stephens Creek	25.98	190	P	P	16 19 36.4	-0.4
	comp=Z,2.2nm,0.4s,baz=359,slow=8.2,SNR=13						
STKA				LR	LR	16 30 40.2	
	comp=Z,320nm,19.1s,baz=21,slow=38						
STKA	Stephens Creek	25.98	190	P	P	16 19 36.2	-0.5
KAPI	Kappang	26.94	271	LR	LR	16 32 55.3	
	comp=Z,55nm,18.1s,baz=88,slow=42						
BBOO	Buckleboo	28.28	199	P	P	16 19 55.7	-1.7
BBOO				IAmb	IAmb	16 19 57.7	
	comp=Z,20nm,1.2s						
H11S3	WAKE ISLAND Hy	31.43	38	T	T	16 53 05.6	
	baz=220,slow=76,SNR=10						
H11S2	WAKE ISLAND Hy	31.44	38	T	T	16 53 05.9	
	baz=220,slow=76,SNR=7.4						
H11S1	WAKE ISLAND Hy	31.45	38	T	T	16 53 07.2	
	baz=220,slow=76,SNR=11						
H11N1	WAKE ISLAND Hy	32.49	37	T	T	16 54 23.7	
	baz=218,slow=76,SNR=13						
H11N3	WAKE ISLAND Hy	32.50	37	T	T	16 54 24.8	
	baz=218,slow=76,SNR=10						
H11N2	WAKE ISLAND Hy	32.50	37	T	T	16 54 23.0	
	baz=218,slow=76,SNR=20						
JCJ	Chichijima	33.42	353	LR	LR	16 32 16.1	
	comp=Z,50nm,21.6s,baz=110,slow=32						
MORW	Morawa	36.87	228	P	P	16 21 12.2	-0.3
MORW				IAmb	IAmb	16 21 24.7	
	comp=Z,15nm,1.2s						
TPUB	Ta-pu	38.92	320	P	P	16 21 28.6	-1.1
JMN	Monobe	41.57	344	P	P	16 21 52.0	+0.4
JNU	Nakatsue	41.95	340	P	P	16 21 56.2	+1.5
JWT	Wachi	42.65	346	P	P	16 21 60.0	-0.3
JWT				IAmb	IAmb	16 22 07.9	
	comp=Z,17nm,1.3s						
JHS	Saijyo	42.98	343	P	P	16 22 03.1	0.0
MJAR	Matsushiro Arr	43.29	350	P	P	16 22 04.0	-1.5
	comp=Z,0.8nm,0.4s,baz=163,slow=5.4,SNR=4.4						
KSRS	Korea Array	46.88	339	P	P	16 22 34.0	0.0
	comp=Z,2.4nm,0.6s,baz=154,slow=9.1,SNR=8.6						
KS19	Wonju Array Si	46.95	339	P	P	16 22 34.1	-0.4
KS19				IAmb	IAmb	16 22 34.9	
	comp=Z,12nm,1.1s						
JTM	Tenmabayashi	47.07	354	P	P	16 22 35.6	+0.2
KULM	Kulim	47.46	283	P	P	16 22 39.2	+0.3
KULM				IAmb	IAmb	16 22 45.6	
	comp=Z,19nm,1.3s						
USA0B	Ussuriysk Arra	51.94	346	P	P	16 23 13.1	+0.7
USA0B				IAmb	IAmb	16 23 14.3	
	comp=Z,2.9nm,0.7s						
USRK	Ussuriysk Ar.	51.94	346	P	P	16 23 12.7	+0.3
	comp=Z,1.5nm,0.5s,baz=168,slow=8.2,SNR=9.2						
USRK	Ussuriysk Ar.	51.94	346	P	P	16 23 13.1	+0.8
CMAR	Chiang Mai Arr	53.17	298	P	P	16 23 22.9	+0.9
	comp=Z,1.1nm,0.4s,baz=123,slow=6.1,SNR=8.9						
CMAR	Chiang Mai Arr	53.17	298	P	P	16 23 23.2	+1.1
PEA0B	Petropavlovsk-	59.82	8	P	P	16 24 08.9	+0.2
PETK	Petropavlovsk-	59.82	8	P	P	16 24 08.7	0.0
	comp=Z,2.8nm,0.5s,baz=153,slow=6.2,SNR=22						
PETK				LR	LR	16 45 58.0	
	comp=Z,72nm,21.1s,baz=295,slow=32						
PETK	Petropavlovsk-	59.82	8	P	P	16 24 08.8	+0.1
ULN	Ulaanbaatar	64.20	331	P	P	16 24 38.5	+0.1
ULN				IAmb	IAmb	16 24 40.8	
	comp=Z,2.5nm,0.5s						
SONM	Songino Array	64.50	331	P	P	16 24 39.7	-0.6
	comp=Z,0.8nm,0.6s,baz=116,slow=8.0,SNR=6.1						
SONM	Songino Array	64.50	331	P	P	16 24 41.2	+0.9
WMQ	Urumqi	72.83	319	*e*P	P	16 25 32.9	+0.7
MK31	Makanchi Array	77.54	321	P	P	16 25 58.1	-1.1
MKAR	Makanchi Array	77.54	321	P	P	16 25 58.0	-1.2
	comp=Z,0.4nm,0.5s,baz=98,slow=8.5,SNR=9.5						
MKAR	Makanchi Array	77.54	321	P	P	16 25 58.1	-1.1
ZAA0	Zalesovo Array	79.09	328	P	P	16 26 06.2	-1.3
ZALV	Zalesovo Beam	79.09	328	P	P	16 26 05.3	-2.2
	comp=Z,1.2nm,0.5s,baz=112,slow=6.4,SNR=6.7						
ZALV	Zalesovo Beam	79.09	328	P	P	16 26 06.1	-1.4
KSH	Kashi	79.37	312	P	P	16 26 16.4	+6.8
KSH				sP	sP	16 26 42.4	+12
KSH				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KSH				pmax	pmax		
	comp=Z,220nm,4.5s						
SUA	Susitna One	82.74	25	P	P	16 26 25.6	-1.5
SUA				IAmb	IAmb	16 26 38.9	
	comp=Z,9.6nm,1.4s						
PPLA	Purkeypile	82.82	24	P	P	16 26 26.1	-1.3
PPLA				IAmb	IAmb	16 26 40.7	
	comp=Z,9.9nm,1.5s						
KTH	Kantishna Hill	83.64	24	P	P	16 26 29.9	-1.7
KTH				IAmb	IAmb	16 26 33.1	
	comp=Z,3.9nm,1.0s						
QSPA	South Pole Qui	83.75	180	P	P	16 26 32.1	-0.1
	comp=Z,5.1nm,0.6s,baz=209,slow=0.4,SNR=16						
TRF	Thorofare Moun	83.84	24	P	P	16 26 32.7	-0.1
TRF				IAmb	IAmb	16 26 49.2	
	comp=Z,3.9nm,1.3s						
SML	Sawmill	83.93	26	P	P	16 26 31.5	-1.6
SML				IAmb	IAmb	16 26 49.0	
	comp=Z,12nm,1.3s						
RND	Reindeer	84.40	24	P	P	16 26 33.2	-2.3
RND				IAmb	IAmb	16 26 35.5	
	comp=Z,8.8nm,1.4s						
NRIK	Noril'sk	85.42	342	P	P	16 26 38.9	-1.5
	comp=Z,0.6nm,0.3s,baz=116,slow=7.8,SNR=4.3						
NRIK	Noril'sk	85.42	342	P	P	16 26 39.4	-0.9
ILAR	Eielson Array	85.76	23	P	P	16 26 39.3	-2.9
	comp=Z,2.2nm,0.6s,baz=252,slow=5.0,SNR=50						
NVAR	Mina Array Bea	97.66	52	LR	LR	17 05 38.0	
	comp=Z,46nm,18.8s,baz=342,slow=32						
YKA	Yellowknife Ar	99.46	28	P	Pdif	16 27 44.8	-0.9
	comp=Z,0.1nm,0.3s,baz=282,slow=2.0,SNR=2.3						
CPUP	Villa Florida	140.07	145	PKP	PKPdf	16 33 31.5	-0.9
	comp=Z,1.3nm,0.8s,baz=105,slow=6.9,SNR=3.0						
TORD	Torodi Ar. Bea	144.95	284	PKPbc	PKPdf	16 33 40.8	-0.5
	comp=Z,5.8nm,0.5s,baz=68,slow=3.2,SNR=28						
KIC	Kosan Boka	151.71	272	*e*PKP1	PKPbc	16 33 58.6	-0.1
	comp=Z,5.1nm,0.6s						
DBIC	Dimbokro	151.83	273	PKPbc	PKPbc	16 33 59.0	0.0
	comp=Z,3.7nm,0.6s,baz=33,slow=1.4,SNR=7.5						
DBIC	Dimbokro	151.83	273	PKPbc	PKiKP	16 33 59.4	0.0
LIC	Lamto	151.99	272	*e*PKP1	PKiKP	16 33 59.5	-0.2
	comp=Z,18nm,0.7s						
TIC	Toumodi	151.99	272	*e*PKP1	PKPbc	16 33 59.3	-0.1

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*NOU **04** 16:15:41.8, 23°.59S×179°.45W, h549^{km}, mb4.5, South of Fiji Islands*
*NEIC **04** 16:15:41.1±2.4, 23°.7S±0°.1×179°.7W±0°.1, h507^{km}±3^{km}, mb4.6/50, Error ellipse: s-maj=17.4km s-min=14.9km az=117.0*
*IDC **04** 16:15:42.8±1.4, 23°.60S×179°.93W, h512^{km}±13^{km}, mb3.8/15, mb1 4.0/16, mb1mx3.7/37, mbtmp4.7/16, Error ellipse: s-maj=16.6km s-min=12.7km az=4.0*
ISC 04 16:15:41.1±0.4**, 23°.75S**±0°.06×**179°.73W**±0°.07**, h500^{km},**
n139, σ1^{s}75/162**, mb4.6**/36**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	5.73	164	P	P	16 17 19.8	+5.1
GLKZ				S	S	16 18 32.4	+1.2
MSVF	Nonsavu	6.33	340		P	16 17 22.9	+2.0
MSVF	Nonsavu	6.33	340	P	P	16 17 22.9	+2.0
MARNC	Mare, Loyalty	11.53	279	P	P	16 18 16.3	+1.6
PINNC	Pines Island,	11.85	273	P	P	16 18 20.8	+2.7
AFI	Afiamalu	12.34	39	P	P	16 18 21.2	-2.3
AFI	Afiamalu	12.34	39	P	P	16 18 21.5	-2.0
YATNC	Mamie plateau,	12.44	275	P	P	16 18 27.5	+3.1
DVP	Devils Point	12.79	296	P	P	16 18 30.6	+2.5
	73µm,1.0s						
OUZ	Omahuta	12.82	205	P	P	16 18 31.6	+3.5
OUZ	Omahuta	12.82	205	P	P	16 18 31.9	+3.8
DZM	Mont Dzumac	12.85	275	P	P	16 18 29.1	+0.3
	0.7nm,0.3s,baz=244,slow=20,SNR=11						
DZM	Mont Dzumac	12.85	275	P	P	16 18 31.6	+2.9
DZM	Mont Dzumac	12.85	275	P	P	16 18 31.7	+2.9
NOUC	Port Laguerre	12.97	275	P	P	16 18 33.7	+3.7
	23nm,0.9s						
MXZ	Matakaoa Point	13.87	187	P	P	16 18 40.4	+1.1
MXZ	Matakaoa Point	13.87	187	P	P	16 18 40.3	+1.1
MXZ				S	S	16 21 03.2	-3.0
OMRZ	Omania	14.70	192	P	P	16 18 51.9	+3.9
URZ	Urewera	14.71	190	P	P	16 18 46.3	-1.8
RIGZ	Rimuhau	15.06	188	P	P	16 18 54.1	+2.3
RIGZ				S	S	16 21 30.0	+0.9
SNGZ	Shannon Statio	15.19	189	P	P	16 18 54.5	+1.3
SNGZ				S	S	16 21 31.8	+0.2
KNZ	Kokohu	15.39	188	P	P	16 18 55.7	+0.7
KNZ				S	S	16 21 35.0	-0.2
HIZ	Hauiti	15.43	196	P	P	16 18 59.4	+3.9
BKZ	Black Stump Fm	15.70	191	P	P	16 18 57.0	-1.4
TMVZ	Te Maari	15.80	193	P	P	16 19 01.2	+1.5
OTVZ	Oturere	15.86	193	P	P	16 19 00.6	+0.4
TUVZ	Tukino	15.96	193	P	P	16 19 01.9	+0.6
VRZ	Vera Road	16.03	196	P	P	16 19 05.2	+3.4
WNVZ	Wahianoa	16.03	193	P	P	16 19 02.6	+0.5
PKVZ	Pokaka	16.05	194	P	P	16 19 03.6	+1.5
BHHZ	Black Hill Sta	16.09	192	P	P	16 19 01.1	-1.5
KHEZ	Kahui Hut	16.38	197	P	P	16 19 09.5	+3.8
NBEZ	Newall Road No	16.40	198	P	P	16 19 11.2	+5.5
LREZ	Lake Rotokare	16.43	196	P	P	16 19 09.5	+3.4
PNHZ	Pukenui	16.48	191	P	P	16 19 06.6	0.0
PXZ	Pawanui	16.49	189	P	P	16 19 06.4	-0.2
PXZ				S	S	16 21 53.3	-2.3
NMEZ	Namu Road	16.53	198	P	P	16 19 11.2	+4.1
WAZ	Wanganui	16.57	194	P	P	16 19 08.6	+1.0
TSZ	Takapari Road	16.66	192	P	P	16 19 09.2	+0.7
TSZ				S	S	16 21 57.3	-1.5
DVHZ	Dannevirke	16.86	191	P	P	16 19 10.1	-0.4
BFZ	Birch Farm	17.22	190	P	P	16 19 13.1	-0.9
BFZ				S	S	16 22 06.8	-1.4
BFZ	Birch Farm	17.22	190	P	S	16 22 06.4	-1.8
MRZ	Mangatainoka R	17.32	192	P	P	16 19 13.2	-1.7
MRZ				S	S	16 22 08.2	-1.7
OGWZ	Otaki Gorge	17.55	193	P	P	16 19 15.7	-1.4
OGWZ				S	S	16 22 11.6	-2.0
HOWZ	Holdsworth Sta	17.56	192	P	P	16 19 15.7	-1.6
HOWZ				S	S	16 22 11.6	-2.2
KIW	Kapiti Island	17.65	194	P	P	16 19 17.1	-0.9
TMWZ	Te Maipa	17.69	191	P	P	16 19 17.3	-1.2
TMWZ				S	S	16 22 16.0	0.0
MTW	Mount Morrison	17.82	192	P	P	16 19 18.2	-1.4
CAW	Cannon Point	17.85	193	P	P	16 19 19.1	-0.8
CAW				S	S	16 22 17.2	-1.3
TRWZ	Traveller	18.01	191	P	P	16 19 20.5	-0.9
PAWZ	Paruwai Farm	18.05	192	P	P	16 19 20.5	-1.2
PAWZ				S	S	16 22 20.8	-0.9

MSWZ	**Moikau Station**	**18.11**	**192**	P	**P**	**16 19 21.6**	**-0.7**
BHW	**Baring Head**	**18.18**	**193**	P	**P**	**16 19 22.5**	**-0.3**
BHW	**Baring Head**	**18.18**	**193**	P	**P**	**16 19 22.8**	**0.0**
PLWZ	**Palliser**	**18.26**	**192**	P	**P**	**16 19 23.1**	**-0.5**
PLWZ	**Palliser**	**18.26**	**192**	P	**P**	**16 19 22.4**	**-1.3**
TUWZ	**Tuamarina**	**18.41**	**195**	P	**P**	**16 19 24.3**	**-0.7**
THZ	**Tophouse**	**18.99**	**197**	P	**P**	**16 19 30.8**	**+0.5**
KHZ	**Kahutara**	**19.44**	**195**	P	**P**	**16 19 33.7**	**-0.7**
OXZ	**Oxford**	**20.68**	**197**	P	**P**	**16 19 44.9**	**-0.7**
FOZ	**Fox Glacier**	**21.53**	**201**	P	**P**	**16 19 53.0**	**-0.4**
FOZ				PcP	**PcP**	**16 23 33.1**	**-2.0**
MLZ	**Mavora Lakes**	**23.72**	**202**	P	**P**	**16 20 13.3**	**+0.3**
HNR	**Honiara**	**24.07**	**303**	ScP	**ScP**	**16 26 29.7**	**-2.4**
	106nm,0.6s,baz=163,slow=5.9,SNR=5.1						
DCZ	**Deep Cove**	**24.14**	**203**	P	**P**	**16 20 17.6**	**+0.9**
WHZ	**Wether Hill Ro**	**24.24**	**201**	P	**P**	**16 20 19.2**	**+1.6**
ARMA	**Armidale**	**26.30**	**249**	P	**P**	**16 20 38.0**	**+1.7**
ARMA				IAmb	IAmb	16 20 38.4	
	comp=Z,12nm,0.7s						
EIDS	**Eidsvold**	**26.57**	**260**	P	**P**	**16 20 38.7**	**+0.2**
EIDS				IAmb	IAmb	16 20 39.7	
	comp=Z,12nm,0.6s						
CAN	**Canberra**	**29.43**	**240**	P	**P**	**16 21 04.3**	**+0.8**
CAN				IAmb	IAmb	16 21 05.4	
	comp=Z,19nm,0.6s						
TOO	**Toolangi**	**32.74**	**237**	P	**P**	**16 21 32.6**	**+0.8**
TOO				IAmb	IAmb	16 21 33.0	
	comp=Z,18nm,0.6s						
TAU	**Tasmania Unive**	**33.22**	**227**	P	**P**	**16 21 36.6**	**+0.8**
PMG	**Port Moresby**	**34.68**	**289**	P	**P**	**16 21 47.5**	**-1.0**
	comp=Z,18nm,0.8s,baz=8.5,slow=3.1,SNR=5.3						
PMG	**Port Moresby**	**34.68**	**289**	P	**P**	**16 21 48.2**	**-0.2**
PMG				IAmb	IAmb	16 21 48.9	
	comp=Z,18nm,0.8s						
STKA	**Stephens Creek**	**35.01**	**248**	P	**P**	**16 21 51.4**	**+0.4**
	comp=Z,5.6nm,0.4s,baz=94,slow=10,SNR=8.6						
STKA	**Stephens Creek**	**35.01**	**248**	P	**P**	**16 21 51.3**	**+0.2**
COEN	**Coen**	**36.33**	**279**	P	**P**	**16 22 02.1**	**-0.2**
BBOO	**Buckleboo**	**39.73**	**247**	P	**P**	**16 22 29.3**	**-0.6**
BBOO				IAmb	IAmb	16 22 29.5	
	comp=Z,12nm,0.6s						
AS31	**Alice Springs**	**42.30**	**260**	P	**P**	**16 22 50.2**	**-0.3**
AS31				IAmb	IAmb	16 22 51.1	
	comp=Z,5.8nm,0.5s						
ASAR	**Alice Springs**	**42.30**	**260**	P	**P**	**16 22 50.0**	**-0.6**
	comp=Z,18nm,0.8s,baz=95,slow=7.2,SNR=74						
ASAR				ScP	**ScP**	**16 27 35.6**	**-0.1**
	comp=Z,3.2nm,0.8s,baz=101,slow=4.2,SNR=16						
ASAR				S	**S**	**16 28 31.6**	**-3.3**
	comp=Z,1.3nm,1.0s,baz=194,slow=26,SNR=4.9						
ASAR	**Alice Springs**	**42.30**	**260**	P	**P**	**16 22 49.6**	**-0.9**
WR0	**Warramunga Arr**	**42.47**	**266**	P	**P**	**16 22 50.9**	**-1.0**
WR0				IAmb	IAmb	16 22 51.1	
	comp=Z,11nm,0.6s						
WB2	**Warramunga Arr**	**42.65**	**266**	P	**P**	**16 22 52.4**	**-0.9**
WB2				IAmb	IAmb	16 22 52.9	
	comp=Z,20nm,0.7s						
WRAB	**Tennant Creek**	**42.65**	**266**	P	**P**	**16 22 52.2**	**-1.1**
WRAB				IAmb	IAmb	16 22 52.9	
	comp=Z,20nm,0.9s						
WB0	**Warramunga Arr**	**42.65**	**266**	P	**P**	**16 22 52.3**	**-1.0**
WB0				IAmb	IAmb	16 22 52.9	
	comp=Z,26nm,0.7s						
WRA	**Warramunga Arr**	**42.66**	**266**	P	**P**	**16 22 52.2**	**-1.1**
	comp=Z,16nm,0.5s,baz=94,slow=8.5,SNR=107						
WRA				ScP	**ScP**	**16 27 37.8**	**+0.6**
	comp=Z,2.5nm,0.8s,baz=98,slow=3.9,SNR=11						
WRA				S	**S**	**16 28 34.3**	**-5.7**
	comp=Z,0.6nm,0.8s,baz=97,slow=15,SNR=5.5						
WRA	**Warramunga Arr**	**42.66**	**266**	P	**P**	**16 22 51.5**	**-1.8**
JAY	**Jayapura**	**43.68**	**293**	P	**P**	**16 23 00.4**	**-1.0**
	comp=Z,27nm,1.1s,baz=162,slow=9.6,SNR=1.9						
FORT	**Forrest**	**46.59**	**249**	P	**P**	**16 23 22.6**	**-0.9**
MTN	**Manton Dam**	**47.69**	**274**	P	**P**	**16 23 30.7**	**-1.3**
MTN				IAmb	IAmb	16 23 31.0	
	comp=Z,9.3nm,0.7s						
FITZ	**Fitzroy Crossi**	**51.08**	**265**	P	**P**	**16 23 56.5**	**-0.6**
	comp=Z,7.8nm,0.5s,baz=123,slow=5.2,SNR=19						
FITZ	**Fitzroy Crossi**	**51.08**	**265**	P	**P**	**16 23 57.0**	**-0.1**
FITZ				IAmb	IAmb	16 23 57.6	
	comp=Z,9.6nm,0.7s						
SIJI	**Sorong**	**52.62**	**288**	P	**P**	**16 24 07.3**	**-1.0**
	comp=Z,40nm,0.8s,baz=129,slow=6.0,SNR=14						
VNDA	**Vanda**	**54.55**	**185**	P	**P**	**16 24 23.1**	**+2.1**
	comp=Z,4.6nm,0.8s,baz=48,slow=7.0,SNR=6.6						
VNDA	**Vanda**	**54.55**	**185**	P	**P**	**16 24 23.1**	**+2.1**
SOEI	**Soe**	**55.08**	**275**	P	**P**	**16 24 26.5**	**+0.7**
SOEI				IAmb	IAmb	16 24 36.2	
	comp=Z,34nm,1.0s						
PSA00	**Pilbara Seismi**	**55.43**	**259**	P	**P**	**16 24 27.1**	**-1.0**
BATI	**Baumata**	**55.46**	**274**	P	**P**	**16 24 28.2**	**-0.2**
	comp=Z,17nm,0.5s,baz=167,slow=3.6,SNR=8.4						
NWAO	**Narrogin (SRO)**	**55.52**	**245**	P	**P**	**16 24 27.8**	**-0.7**
MORW	**Morawa**	**57.16**	**250**	P	**P**	**16 24 39.2**	**-0.7**
MORW				IAmb	IAmb	16 24 39.5	
	comp=Z,16nm,0.6s						
MMRI	**Maumere**	**57.35**	**275**	P	**P**	**16 24 40.7**	**-0.8**
MMRI				IAmb	IAmb	16 24 43.2	
	comp=Z,22nm,0.8s						
TOLI2	**Tolitoli**	**62.78**	**284**	P	**P**	**16 25 17.8**	**+0.3**
TOLI2				IAmb	IAmb	16 25 18.2	
	comp=Z,12nm,0.7s						
JAGI	**Jajag, Banyuwa**	**64.81**	**272**	P	**P**	**16 25 28.5**	**-2.0**
JAGI				IAmb	IAmb	16 25 28.9	
	comp=Z,8.0nm,0.5s						
QSPA	**South Pole Qui**	**66.33**	**180**	P	**P**	**16 25 40.8**	**+1.4**
	comp=Z,12nm,0.7s,baz=346,slow=0.6,SNR=87						
QSPA	**South Pole Qui**	**66.33**	**180**	P	**P**	**16 25 41.0**	**+1.6**
QSPA				IAmb	IAmb	16 25 41.7	
	comp=Z,12nm,0.8s						
KKM	**Kota Kinabalu**	**69.09**	**287**	P	**P**	**16 25 56.2**	**-0.9**
KKM				IAmb	IAmb	16 26 13.6	
	comp=Z,35nm,1.2s						
KSM	**Kuching**	**72.32**	**280**	P	**P**	**16 26 15.3**	**-0.8**
KSM				IAmb	IAmb	16 26 28.2	
	comp=Z,21nm,1.2s						
BELA	**Belgrano 2**	**76.56**	**173**	P	**P**	**16 26 39.2**	**+0.3**
IPM	**Ipoh**	**81.98**	**278**	P	**P**	**16 27 08.3**	**-0.6**
SLBS	**Sierra La Lagu**	**82.52**	**60**	P	**P**	**16 27 12.7**	**+1.3**
KRMB	**Red Mountain**	**82.99**	**39**	P	**P**	**16 27 14.9**	**+1.5**
KRMB				IAmb	IAmb	16 27 17.7	
	comp=Z,35nm,1.4s						
GSI	**Gunungsitoli**	**83.83**	**274**	P	**P**	**16 27 18.4**	**+0.2**
GSI				IAmb	IAmb	16 27 36.7	
	comp=Z,19nm,1.1s						
NVAR	**Mina Array Bea**	**84.47**	**44**	P	**P**	**16 27 21.3**	**+0.3**
	comp=Z,0.9nm,0.7s,baz=226,slow=8.3,SNR=6.5						
SNAA	**Sanae**	**84.81**	**179**	P	**P**	**16 27 21.5**	**-0.5**
U15A	**North Rim**	**87.32**	**48**	P	**P**	**16 27 36.6**	**+1.9**
TMUT	**Trail Mountain**	**89.56**	**46**	P	**P**	**16 27 46.5**	**+1.3**
CMAR	**Chiang Mai Arr**	**89.70**	**290**	P	**P**	**16 27 47.0**	**+1.1**
	comp=Z,1.8nm,0.9s,baz=127,slow=2.9,SNR=11						
HLID	**Hailey**	**89.82**	**41**	P	**P**	**16 27 47.3**	**+1.2**
SRU	**San Rafael Swe**	**89.92**	**47**	P	**P**	**16 27 48.0**	**+1.3**
TX31	**Lajitas Ar. Si**	**90.14**	**58**	P	**P**	**16 27 49.5**	**+1.7**
TX31				IAmb	IAmb	16 27 50.0	
	comp=Z,5.5nm,0.8s						
TX32	**Lajitas Array**	**90.14**	**58**	P	**P**	**16 27 49.5**	**+1.6**
TXAR	**Lajitas Array**	**90.14**	**58**	P	**P**	**16 27 49.1**	**+1.3**
	comp=Z,1.8nm,0.7s,baz=209,slow=6.3,SNR=25						
TXAR	**Lajitas Array**	**90.14**	**58**	P	**P**	**16 27 48.4**	**+0.6**
ILAR	**Eielson Array**	**91.83**	**13**	P	**P**	**16 27 54.8**	**+0.2**
	comp=Z,0.4nm,0.6s,baz=228,slow=6.1,SNR=1.4						
ILAR	**Eielson Array**	**91.83**	**13**	P	**P**	**16 27 55.1**	**+0.5**
PDAR	**Pinedale Array**	**92.41**	**44**	P	**P**	**16 27 58.1**	**-0.1**
	comp=Z,0.5nm,0.6s,baz=219,slow=4.3,SNR=5.3						
PDAR	**Pinedale Array**	**92.41**	**44**	P	**P**	**16 27 58.2**	**+0.1**
KSH	**Kashi**	**115.39**	**304**	PKP	**PKPdf**	**16 33 25.7**	**-0.2**
KSH				PP	**PP**	**16 34 42.5**	**+5.9**
KSH				AMB	AMB		
	comp=Z,140nm,6.1s						
FINES	**FINESS Array B**	**138.38**	**342**	PKP	**PKPdf**	**16 34 08.8**	**+0.1**
	comp=Z,3.3nm,1.1s,baz=52,slow=16,SNR=2.2						
FINES				SKPbc	**SKPbc**	**16 36 53.4**	**-2.4**
	comp=Z,3.0nm,0.6s,baz=35,slow=4.7,SNR=8.0						
NB2	**NORSAR Subarra**	**141.97**	**351**	PKP	**SKPbc**	**16 37 02.7**	**-2.6**
	comp=Z,0.5nm,0.6s,baz=13,slow=2.6						
NOA	**NORSAR Array B**	**141.97**	**351**	SKPbc	**SKPbc**	**16 37 03.2**	**-2.1**
	comp=Z,0.7nm,0.6s,baz=14,slow=4.2,SNR=5.0						
AKASG	**Malin Array Be**	**144.97**	**328**	PKP	**PKPdf**	**16 34 19.8**	**-0.9**
	comp=Z,1.7nm,0.5s,baz=42,slow=4.4,SNR=11						
AKASG				SKPbc	**SKPbc**	**16 37 10.6**	**-2.1**
	comp=Z,1.4nm,0.6s,baz=48,slow=2.6,SNR=6.4						
AKASG	**Malin Array Be**	**144.97**	**328**		**PKPdf**	**16 34 19.9**	**-0.7**
TOKA	**Tokat**	**145.42**	**307**	PKPdf	**PKPdf**	**16 34 21.2**	**-0.7**
BR131	**Keskin Array S**	**147.68**	**307**	PKPbc	**PKPbc**	**16 34 29.2**	**-0.2**
BR131				PKPab	**PKPab**	**16 34 33.6**	**+0.2**
BRTR	**Keskin Array B**	**147.68**	**307**	PKPbc	**PKPdf**	**16 34 27.4**	**+1.6**
	comp=Z,0.7nm,0.4s,baz=140,slow=4.1,SNR=5.5						
BRTR	**Keskin Array B**	**147.68**	**307**	PKPbc	**PKPbc**	**16 34 28.1**	**-1.3**
BRTR				PKPab	**PKPab**	**16 34 33.2**	**-0.2**
ANTO	**Ankara**	**148.24**	**308**	PKPbc	**PKPdf**	**16 34 28.7**	**+2.1**
BURAR	**Bucovina Array**	**148.98**	**326**		**PKiKP**	**16 34 33.1**	**-0.1**
CSS	**Mathiatis**	**149.22**	**299**	PKPbc	**PKPbc**	**16 34 32.2**	**-1.0**
TORD	**Torodi Ar. Bea**	**169.37**	**188**	PKPab	**PKPab**	**16 36 06.8**	**-0.5**
	comp=Z,1.0nm,0.6s,baz=176,slow=4.1,SNR=4.2						

*IDC **04** 16:25:51.5±2.9, 29°.60N×143°.14E, h0^{km}, mb3.3/5, mb1 3.5/8, mb1mx3.4/38, mbtmp3.5/8, ML3.4/3, MS3.6/2, Ms1 3.6/2, ms1mx2.8/34, Error ellipse: s-maj=99.0km s-min=18.2km az=77.0*

*JMA **04** 16:25:54.3±0.3, 29°.77N×142°.70E, h53^{km}, M4.2*

ISC 04 16:25:55.5±1.3, 29°.79N±0°.06×143°.0E±0°.2, h30^{km}, n21, $\sigma 2^{s}.89$/27, mb3.3/5, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**2.77**	**195**	P	**Pn**	**16 26 36.7**	**-1.3**
CBIJ				*e*S	**Sn**	**16 27 07.4**	**-3.1**
JCJ	**Chichijima**	**2.77**	**195**	Pn	**Pn**	**16 26 37.0**	**-1.0**
	6.7nm,0.3s,baz=274,slow=23,SNR=8.5						
JCJ				Sn	**Sn**	**16 27 05.7**	**-4.8**
	30nm,0.3s,baz=190,slow=23,SNR=7.6						
JHH2	**Haha-jima-NKT2**	**3.23**	**193**	*e*S	**Sn**	**16 27 19.0**	**-2.5**
JHCJ	**Hachijojimakas**	**4.27**	**321**	*e*S	**Sn**	**16 27 44.2**	**-3.1**
JHJ2	**Mitsune**	**4.29**	**321**	*e*S	**Sn**	**16 27 45.0**	**-2.8**
JHJ	**Hachijo jima 2**	**4.31**	**321**	Pn	**Pn**	**16 26 59.2**	**+0.1**
	8.5nm,0.3s,baz=76,slow=22,SNR=5.6						
JHJ				Sn	**Sn**	**16 27 45.4**	**-3.0**
	23nm,0.3s,baz=16,slow=21,SNR=5.3						
JMKN	**Mikurajimanish**	**5.02**	**326**	*e*S	**Sn**	**16 28 03.4**	**-2.3**
BSO1	**Boso 1**	**5.15**	**341**	P	**Pn**	**16 27 08.7**	**-1.3**
BSO1				*e*S	**Sn**	**16 28 05.8**	**-2.4**
BSO4	**Boso 4**	**5.66**	**337**	P	**Pn**	**16 27 17.3**	**-0.1**
JOD2	**Odawara 2**	**6.38**	**330**	P	**Pn**	**16 27 26.7**	**-0.8**
JOD2				*e*S	**Sn**	**16 28 36.0**	**-3.4**
JHU	**Hanno**	**6.81**	**334**	P	**Pn**	**16 27 32.6**	**-0.8**
JHU				*e*S	**Sn**	**16 28 45.8**	**-4.1**
JHO	**Hitachi**	**7.11**	**344**	P	**Pn**	**16 27 35.5**	**-1.9**
JHO				*e*S	**Sn**	**16 28 50.4**	**-6.7**
MJAR	**Matsushiro Arr**	**7.84**	**330**	Pn	**Pn**	**16 27 47.6**	**0.0**
	0.3nm,0.3s,baz=212,slow=17,SNR=16						
MJAR				Sn	**Sn**	**16 29 15.3**	**-0.1**
	0.1nm,0.3s,baz=346,slow=13,SNR=5.3						
MAT	**Matsushiro**	**7.84**	**330**	P	**Pn**	**16 27 47.7**	**+0.1**
KLR	**Kul'dur**	**21.23**	**339**	P	**P**	**16 30 43.1**	**+4.2**
	0.4nm,0.4s,baz=117,slow=4.5,SNR=2.9						
SONM	**Songino Array**	**33.34**	**313**	P	**P**	**16 32 35.2**	**+4.2**
	0.4nm,0.5s,baz=101,slow=7.5,SNR=2.5						
TLY	**Talaya**	**36.37**	**318**	LR	LR	16 48 42.5	
	comp=Z,93nm,18.4s,baz=348,slow=38						
MKAR	**Makanchi Array**	**49.36**	**308**	P	**P**	**16 34 43.6**	**+1.4**
	0.1nm,0.4s,baz=103,slow=9.3,SNR=1.8						
WRA	**Warramunga Arr**	**50.14**	**191**	P	**P**	**16 34 47.1**	**-1.2**
	0.2nm,0.3s,baz=7.5,slow=7.6,SNR=6.6						
ASAR	**Alice Springs**	**53.86**	**190**	P	**P**	**16 35 14.6**	**-1.4**
	0.2nm,0.6s,baz=8.7,slow=6.6,SNR=7.2						
ARCES	**ARCESS Array B**	**71.25**	**341**	LR	LR	17 15 02.7	
	comp=Z,36nm,18.7s,baz=290,slow=41						

*SKHL **04** 16:31:24.1±0.4, 45°.60N×152°.90E, h33^{km}±1^{km}, mb4.5/2*

*IDC **04** 16:31:29.8±1.5, 47°.99N×147°.48E, h420^{km}±19^{km}, mb2.8/10, mb1 3.0/17, mb1mx2.9/45, mbtmp3.6/17, Error ellipse: s-maj=25.5km s-min=11.4km az=137.0*

ISC 04 16:31:28.0±0.6, 47°.80N±0°.08×147°.48E±0°.10, h400^{km}, n34, $\sigma 2^{s}.41$/42, mb3.1/10, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**2.58**	**174**	*e*P	Pn	16 32 17.8	-10
KUR				AMB	AMB	16 32 19.9	
	90nm,0.9s						
YUK	**Yuzh-Kuril'sk**	**3.93**	**197**	*e*P	**Pn**	**16 32 41.0**	**+1.5**
YUK				AMB	AMB	16 32 45.9	
	50nm,0.5s						
YUK				*e*S	**S**	**16 33 39.0**	**+1.6**
YUK				A	A	16 33 44.0	
	180nm,0.8s						
YUK				A	A	16 33 44.0	
	170nm,0.8s						
GRPR	**Tuman**	**3.99**	**198**	*e*P	**Pn**	**16 32 43.0**	**+2.9**
GRPR				*e*S	**S**	**16 33 42.3**	**+3.9**
GRPR				A	A	16 33 47.0	
	56nm,0.5s						
GRPR				A	A	16 33 47.0	
	93nm,0.5s						
GLVR	**Golovnino**	**4.29**	**199**	*e*P	**Pn**	**16 32 45.9**	**+3.0**
GLVR				*e*S	**S**	**16 33 47.0**	**+3.4**
GLVR				A	A	16 33 53.0	
	100nm,0.4s						
GLVR				A	A	16 33 53.0	
	39nm,0.4s						
JSE	**Soyaes**	**4.42**	**232**	P	**Pn**	**16 32 48.1**	**+3.9**
JTKR	**Abashiri--Toko**	**4.57**	**214**	P	**Pn**	**16 32 48.7**	**+3.0**
JWK2	**Keihoku**	**4.58**	**239**	P	**Pn**	**16 32 50.2**	**+4.4**
NMR	**Nemuro--Hokkai**	**4.60**	**196**	*e*P	**Pn**	**16 32 45.9**	**-0.1**
NMR				*e*S	**S**	**16 33 47.0**	**-2.2**
NEM2	**Nemuro 2**	**4.60**	**196**	P	**Pn**	**16 32 46.3**	**+0.3**
NEM2				*e*S	**S**	**16 33 48.4**	**-0.9**
ASAJ	**Asahikawa**	**5.02**	**225**	P	**Pn**	**16 32 54.1**	**+3.8**
	0.8nm,0.3s,baz=42,slow=4.7,SNR=8.7						
JKK2	**Kamakawa 2**	**5.13**	**222**	P	**Pn**	**16 32 54.5**	**+3.0**
JAK	**Akkeshi**	**5.19**	**203**	P	**Pn**	**16 32 52.4**	**+0.4**
JAK				*e*S	**S**	**16 33 58.5**	**-1.8**
JAR	**Ashorobuto**	**5.20**	**211**	P	**Pn**	**16 32 54.1**	**+1.9**
JCH	**Churui**	**5.95**	**211**	P	**Pn**	**16 33 00.5**	**+0.4**
JCH				*e*S	**S**	**16 34 12.7**	**-2.3**
JNBK	**Urakawa-nobuka**	**6.46**	**213**	P	**Pn**	**16 33 05.9**	**+0.2**
JKB	**Kayabe**	**7.48**	**220**	P	**P**	**16 33 17.4**	**-0.2**
JKB				*e*S	**S**	**16 34 43.9**	**-2.3**
JOT	**Ohata**	**7.89**	**218**	P	**Pn**	**16 33 21.3**	**-0.4**
JOT				*e*S	**S**	**16 34 48.7**	**-6.1**
PETK	**Petropavlovsk-**	**8.41**	**47**	P	**P**	**16 33 27.7**	**0.0**
	0.1nm,0.3s,baz=226,slow=7.7,SNR=1.2						
JANG	**Nango**	**8.57**	**212**	*e*S	**S**	**16 35 03.8**	**-5.5**
KLR	**Kul'dur**	**10.54**	**284**	P	**Pn**	**16 33 53.6**	**+1.5**
	0.4nm,0.3s,baz=82,slow=11,SNR=6.4						
USRK	**Ussuriysk Ar.**	**11.36**	**257**	P	**Pn**	**16 34 02.1**	**+0.3**
	baz=66,slow=8.4,SNR=4.5						
MJAR	**Matsushiro Arr**	**13.17**	**215**	P	**Pn**	**16 34 23.8**	**+1.0**
	0.1nm,0.3s,baz=347,slow=16,SNR=3.6						
SEY	**Seymchan**	**15.41**	**8**	P	**P**	**16 34 45.0**	**+0.4**
	0.3nm,0.3s,baz=149,slow=12,SNR=4.5						
KSRS	**Korea Array**	**17.67**	**241**	P	**P**	**16 35 11.2**	**+2.2**
	0.2nm,0.3s,baz=47,slow=10,SNR=5.9						
ILAR	**Eielson Array**	**38.14**	**39**	P	**P**	**16 38 09.2**	**-1.2**
	1.6nm,0.7s,baz=273,slow=8.9,SNR=24						
INK	**Inuvik**	**42.82**	**32**	P	**P**	**16 38 46.7**	**-1.3**
	1.8nm,0.5s,baz=284,slow=6.0,SNR=11						
MKAR	**Makanchi Array**	**43.03**	**294**	P	**P**	**16 38 49.2**	**-0.8**
	0.4nm,0.7s,baz=60,slow=7.4,SNR=4.3						
CMAR	**Chiang Mai Arr**	**49.00**	**250**	P	**P**	**16 39 36.7**	**+0.5**
	0.2nm,0.4s,baz=36,slow=8.0,SNR=2.7						
YKA	**Yellowknife Ar**	**52.34**	**36**	P	**P**	**16 39 58.6**	**-1.6**
	0.2nm,0.5s,baz=303,slow=7.1,SNR=5.3						
NVAR	**Mina Array Bea**	**65.28**	**60**	P	**P**	**16 41 28.4**	**-0.4**
	0.2nm,0.4s,baz=322,slow=6.9,SNR=2.9						
PDAR	**Pinedale Array**	**67.15**	**51**	P	**P**	**16 41 39.8**	**-0.6**
	0.4nm,0.5s,baz=254,slow=0.7,SNR=6.6						
WRA	**Warramunga Arr**	**68.45**	**193**	P	**P**	**16 41 49.4**	**+1.1**
	0.3nm,0.8s,baz=6.3,slow=6.1,SNR=1.9						
ASAR	**Alice Springs**	**72.17**	**193**	P	**P**	**16 42 11.8**	**+1.3**
	0.2nm,0.8s,baz=21,slow=6.0,SNR=1.6						
TXAR	**Lajitas Array**	**80.23**	**57**	P	**P**	**16 42 55.3**	**-0.2**
	0.3nm,0.5s,baz=287,slow=3.7,SNR=1.8						

*IDC **04** 16:38:07.4±1.9, 12°.39N×124°.69E, h0^{km}, mb3.3/5, mb1 3.5/5, mb1mx3.2/50, mbtmp3.3/5, MS3.1/1, Ms1 3.1/1, ms1mx2.4/25, Error ellipse: s-maj=89.3km s-min=22.9km az=60.0*

*MAN **04** 16:38:08.1, 12°.36N×124°.85E, h1^{km}, mb4.8, ML3.8, MS3.7 MAN INTENSITY II - CATARMAN.*

ISC 04 16:38:05.2±2.7, 12°.32N±0°.05×125°.2E±0°.1, h3^{km}±18^{km}, n18, $\sigma 1^{s}.76$/18, mb3.3/5, 3C-1D, Samar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OCLP	**Ormoc**	**1.37**	**203**	*e*P	**Pb**	**16 38 33.2**	**+1.5**
OCLP				*e*S	**Sn**	**16 38 51.7**	**+1.6**
PVCP	**Virac**	**1.61**	**322**	*e*P	**Pn**	**16 38 33.4**	**-1.2**
PVCP				*e*S	**Sn**	**16 38 56.1**	**+0.2**
SCSP	**San Jose Seism**	**2.08**	**310**	*e*P	**Pn**	**16 38 40.3**	**-0.8**
SCSP				*e*S	**Sn**	**16 39 05.5**	**-2.1**
MSLP	**Maasin**	**2.19**	**188**	*e*P	**Pb**	**16 38 46.5**	**+0.9**
MSLP				*e*S	**Sg**	**16 39 15.8**	**0.0**
LLP	**Lapu-Lapu**	**2.31**	**211**	⇑*e*P	**Pn**	**16 38 40.5**	**-3.8**
LLP				*e*S	**Sn**	**16 39 12.3**	**-1.0**
JAP	**San Jose, Anti**	**3.52**	**244**	⇑*e*P	**Pn**	**16 39 01.1**	**+0.1**
CGP	**Cagayan de Oro**	**3.87**	**187**	⇓*e*P	**Pb**	**16 39 13.1**	**-1.1**
LQP	**Lukban**	**3.96**	**297**	⇑*e*P	**Pn**	**16 39 09.0**	**+1.9**
SMPP	**San Manuel, Pa**	**5.78**	**312**	*e*P	**Pn**	**16 39 30.6**	**-1.4**
KAPI	**Kappang**	**18.04**	**198**	LR	LR	16 51 00.7	
	comp=Z,50nm,18.1s,baz=46,slow=43						
CMAR	**Chiang Mai Arr**	**25.99**	**287**	P	**P**	**16 43 38.0**	**-1.6**
	0.2nm,0.3s,baz=102,slow=8.4,SNR=1.8						
WRA	**Warramunga Arr**	**33.31**	**164**	P	P	16 44 50.5	+6.0
	0.2nm,0.5s,baz=345,slow=9.5,SNR=1.7						
ASAR	**Alice Springs**	**36.77**	**167**	P	**P**	**16 45 17.0**	**+2.6**
	0.3nm,0.8s,baz=346,slow=6.9,SNR=4.8						
H11N1	**WAKE ISLAND Hy**	**40.69**	**74**	T	T	17 29 54.6	
	baz=268,slow=74						
H11N2	**WAKE ISLAND Hy**	**40.70**	**74**	T	T	17 29 54.8	
	baz=268						
H11N3	**WAKE ISLAND Hy**	**40.71**	**74**	T	T	17 29 57.7	
	baz=268,slow=74						
MKAR	**Makanchi Array**	**49.75**	**322**	P	**P**	**16 46 59.0**	**-0.1**
	0.1nm,0.5s,baz=112,slow=9.5,SNR=1.8						
KURBB	**Kurchatov Arra**	**53.78**	**325**	P	**P**	**16 47 29.1**	**0.0**
	0.3nm,0.3s,baz=121,slow=7.2,SNR=4.8						

IDC 04 16:42:42.1±3.9, 10°.71S×162°.32E, h62^{km}±29^{km}, mb3.1/3, mb1 3.4/5, mb1mx3.2/49, mbtmp3.6/5, ML3.8/2, Error ellipse: s-maj=57.1km s-min=32.3km az=59.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**2.66**	**298**	P	Pn	16 43 22.6	+0.1
	66nm,0.3s,baz=176,slow=8.5,SNR=12						
HNR				S	Sn	16 43 58.8	+5.2
	43nm,0.3s,baz=182,slow=19,SNR=2.1						
DZM	**Mont Dzumac**	**11.97**	**161**	P	Pn	16 45 29.9	-0.2
	0.2nm,0.3s,baz=265,slow=17,SNR=1.3						
WRA	**Warramunga Arr**	**28.46**	**248**	P	P	16 48 31.9	+0.4
	0.3nm,0.7s,baz=81,slow=11,SNR=5.1						
H11S2	**WAKE ISLAND Hy**	**29.34**	**9**	T	T	17 19 32.1	
	baz=188,slow=76,SNR=15						
H11S3	**WAKE ISLAND Hy**	**29.34**	**8**	T	T	17 19 32.1	
	baz=188,slow=76,SNR=15						
H11S1	**WAKE ISLAND Hy**	**29.36**	**9**	T	T	17 19 32.2	
	baz=188,slow=76,SNR=14						
ASAR	**Alice Springs**	**29.97**	**241**	P	P	16 48 44.3	-0.5
	0.3nm,0.9s,baz=63,slow=10.0,SNR=2.5						
H11N1	**WAKE ISLAND Hy**	**30.57**	**8**	T	T	17 21 03.2	
	baz=188,slow=76,SNR=6.5						
H11N3	**WAKE ISLAND Hy**	**30.57**	**9**	T	T	17 21 03.5	
	baz=188,slow=76,SNR=7.6						
H11N2	**WAKE ISLAND Hy**	**30.59**	**9**	T	T	17 21 04.8	
	baz=188,slow=76,SNR=5.1						
MKAR	**Makanchi Array**	**90.99**	**317**	P	P	16 55 39.4	-0.1
	0.2nm,0.7s,baz=120,slow=5.2,SNR=2.6						

*IDC **04** 16:48:17.7±1.5, 27°.13N×143°.48E, h0^{km}, mb3.5/5, mb1 3.7/6, mb1mx3.4/51, mbtmp3.6/6, ML3.1/1, Error ellipse: s-maj=28.0km s-min=22.6km az=71.0*

ISC 04 16:48:22.5±1.4, 27°.2N±0°.1×143°.5E±0°.1, h35^{km}, n7, $\sigma 0^{s}.84$/8, mb3.4/5, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**1.16**	**266**	Pn	**Pn**	**16 48 41.9**	**-0.4**
	22nm,0.3s,baz=20,slow=15,SNR=26						
JCJ				Sn	**Sn**	**16 48 57.2**	**+0.4**
	75nm,0.3s,baz=268,slow=22,SNR=20						
MJAR	**Matsushiro Arr**	**10.35**	**336**	Pn	**Pn**	**16 50 47.6**	**-0.9**
	0.1nm,0.3s,baz=162,slow=12,SNR=7.4						
KLR	**Kul'dur**	**23.81**	**341**	P	**P**	**16 53 33.3**	**+1.3**
	0.8nm,0.7s,baz=113,slow=9.9,SNR=3.5						
WRA	**Warramunga Arr**	**47.67**	**192**	P	**P**	**16 56 55.0**	**-0.7**
	0.7nm,0.8s,baz=13,slow=8.5,SNR=3.9						
MKAR	**Makanchi Array**	**51.31**	**310**	P	**P**	**16 57 23.7**	**+0.4**
	0.1nm,0.3s,baz=82,slow=11,SNR=4.3						
ASAR	**Alice Springs**	**51.39**	**191**	P	**P**	**16 57 24.4**	**+0.4**
	0.3nm,0.8s,baz=16,slow=12,SNR=1.9						
KURBB	**Kurchatov Arra**	**53.81**	**314**	P	**P**	**16 57 41.7**	**+0.1**
	1.3nm,0.6s,baz=91,slow=8.3,SNR=18						

NNC 04 16:54:29.8±7.8, 38°.60N×70°.64E, h0^{km}, mb3.5, mpv3.1, 3C-3D, Error ellipse: s-maj=74.4km s-min=40.2km az=166.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**4.50**	**359**	⇓Pn	Pn	16 55 38.4	-0.8
	1.1nm,0.3s,baz=183,slow=13,SNR=42						
KK31				⇓Lg	Lg	16 56 50.5	
	0.9nm,0.2s,baz=176,slow=31,SNR=6.0						
AAK	**Ala-Archa**	**4.99**	**35**	⇑Pn	Pn	16 55 44.9	-1.2
	1.3nm,0.6s						
AAK				⇑Sn	Sn	16 56 44.9	+0.4
	3.1nm,0.6s						
TKM2	**Tokmak 2**	**5.73**	**40**	⇓Pn	Pn	16 55 57.4	+1.1
	1.1nm,0.3s						
TKM2				⇑Sn	Sn	16 57 06.3	+3.5

*ISK **04** 17:21:01.4, 38°.70N×44°.15E, h3^{km}, ML2.6/8*

*DDA **04** 17:21:01.4, 38°.66N×44°.16E, h16^{km}±2^{km}, ML2.4*

ISC 04 17:21:01.9±1.1, 38°.66N±0°.02×44°.17E±0°.04, h13^{km}±7^{km}, n25, $\sigma 0^{s}.64$/39, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.14**	**269**	*i* P	**Pg**	**17 21 05.8**	**+0.3**
OZAP				*i* S	**Sg**	**17 21 08.3**	**+0.1**
OZAP				IAML		17 21 09.0	
	comp=E,1µm,0.6s						
OZAP				IAML		17 21 10.0	
	comp=N,745nm,0.2s						
CLDR	**Caldiran**	**0.52**	**337**	PG	**Pg**	**17 21 11.6**	**-0.5**
CLDR				SG	**Sg**	**17 21 19.2**	**+0.1**
CLDR	**Caldiran**	**0.52**	**337**	*i* P	**Pg**	**17 21 11.0**	**-1.1**
CLDR				*i* S	**Sg**	**17 21 18.7**	**-0.4**
CLDR				IAML		17 21 21.0	
	comp=E,167nm,0.2s						
CLDR				IAML		17 21 21.0	
	comp=N,192nm,0.3s						
VMUR	**Van-Muradiye**	**0.57**	**305**	*i* P	**Pb**	**17 21 13.4**	**-0.4**
VMUR				*i* S	**Sb**	**17 21 22.0**	**0.0**
VMUR				IAML		17 21 24.0	
	comp=E,141nm,0.3s						
VMUR				IAML		17 21 24.0	
	comp=N,154nm,0.4s						
TVAN	**Van**	**0.61**	**258**	*i* P	**Pg**	**17 21 13.2**	**-0.8**
TVAN				IAML		17 21 26.0	
	comp=N,127nm,0.6s						
VANB	**Van**	**0.62**	**264**	PG	**Pg**	**17 21 13.5**	**-0.5**
VANB				SG	**Sb**	**17 21 23.3**	**0.0**
BASK	**Baskale_VAN**	**0.62**	**192**	*i* P	**Pg**	**17 21 13.6**	**-0.5**
BASK				*i* S	**Sb**	**17 21 24.0**	**+0.4**
BASK				IAML		17 21 28.0	
	comp=N,153nm,0.3s						
BASK				IAML		17 21 30.0	
	comp=E,200nm,0.2s						
GEVA	**Gevas**	**0.94**	**248**	*i* P	**Pg**	**17 21 18.6**	**-1.5**
GEVA				*i* S	**Sg**	**17 21 32.3**	**-0.1**
GEVA				IAML		17 21 34.0	
	comp=E,115nm,0.3s						
GEVA				IAML		17 21 34.0	
	comp=N,132nm,0.3s						
DYDN	**Diyadin**	**0.95**	**337**	*i* P	**Pb**	**17 21 20.4**	**-0.1**
AKDM	**Akdamar-Van**	**0.99**	**251**	PG	**Pg**	**17 21 21.1**	**0.0**
AKDM				SG	**Sn**	**17 21 35.6**	**-0.1**
YOVA	**Hakkari_Yksek**	**1.08**	**175**	*i* P	**Pb**	**17 21 22.4**	**-0.2**
YOVA				*i* S	**Sn**	**17 21 37.7**	**-0.1**
ADCV	**BITLIS_Adilcev**	**1.14**	**278**	*i* P	**Pb**	**17 21 23.2**	**-0.4**
HAKT	**HAKKARI**	**1.16**	**199**	*i* P	**Pb**	**17 21 23.1**	**-0.9**

HAKT				*i* S	Sn	17 21 40.7	+0.7
AGRB	Hanur-Agry	1.29	315	PN	Pb	17 21 26.2	0.0
AGRB				SN	Sg	17 21 43.9	+0.3
TASB	TASBURUN-IGDIR	1.32	2	PN	Pg	17 21 26.8	-0.4
MLAZ	Malazgirt-MUS	1.35	291	PN	Pg	17 21 27.5	-0.4
PERV	Siirt/Pervari-	1.47	241	*i* P	Pg	17 21 30.1	0.0
PERV				IAML		17 21 53.0	
	comp=E,75nm,0.4s						
PERV				IAML		17 21 54.0	
	comp=N,117nm,0.4s						
CUKT	Cukurca	1.48	198	PN	Pg	17 21 30.0	-0.4
CUKT				SN	Sg	17 21 51.0	+1.3
CUKT	Cukurca	1.48	198	*i* P	Pn	17 21 28.1	-0.4
CUKT				IAML		17 21 55.0	
	comp=E,73nm,0.6s						
CUKT				IAML		17 21 55.0	
	comp=N,47nm,0.7s						
GNI	Garni	1.55	16	PN	Pb	17 21 30.4	-0.1
GURO	Guroymak-BITLI	1.68	267	PN	Pb	17 21 32.5	-0.3
SIRT	Sirnak	1.79	230	PN	Pb	17 21 34.2	-0.5
SIRN	Sırnak	1.81	231	*i* P	Pg	17 21 36.4	-0.3
SIRN				*i* S	Sg	17 22 00.5	+0.3
SIRN				IAML		17 22 04.0	
	comp=N,42nm,0.6s						
SIRN				IAML		17 22 05.0	
	comp=E,53nm,0.4s						
SRTM	Siirt_Merkez	1.89	250	*i* P	Pb	17 21 36.1	-0.3
SRTM				*i* S	Sg	17 22 01.6	-1.2
SRTM				IAML		17 22 07.0	
	comp=E,26nm,0.7s						
BNGB	Bingl	2.75	278	PN	Pn	17 21 47.5	+1.7

PRU 04 17:24:51.5±0.0**,50°.12N×19°.11E,h0^{km},Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OJC	Ojcow	0.45	77	*e*Pg	Pg	17 24 59.1	-1.1
OJC				*e*Sg	Sg	17 25 04.8	-1.3
OKC	Ostrava-Krasne	0.68	246	*e*SG	Sg	17 25 14.1	+0.7
	comp=Z,30nm,0.6s						
LANS	Liptovska Anna	1.00	166	*e*PG	Pg	17 25 10.0	-0.6
LANS				*e*SG	Sg	17 25 23.8	+0.3
LANS				*e*LG	Lg	17 25 25.8	
NIE	Niedzica	1.04	132	*e*Pg	Pg	17 25 11.9	+0.4
NIE				*e*Sg	Sb	17 25 27.0	+0.3
MORC	Moravsky Berou	1.07	252	*e*PG	Pg	17 25 11.5	-0.5
MORC				*e*SG	Sg	17 25 26.3	+0.5
KRLC	Kraliky	1.50	269	*e*PG	Pn	17 25 18.6	-1.1
KRLC				*e*SG	Sg	17 25 39.4	-0.3
	comp=Z,13nm,0.4s						
JAVC	Velka Javorina	1.57	217	*e*PN	Pb	17 25 21.5	0.0
VYHS	Vyhne	1.64	186	*e*PN	Pn	17 25 20.1	-1.5
VYHS				*e*SN	Sn	17 25 41.8	-1.5
DPC	Dobruska-Polom	1.81	278	*e*PG	Pn	17 25 24.4	+0.5
DPC				*e*SG	Sg	17 25 49.6	+0.1
	comp=Z,11nm,0.4s						
VRAC	Vranov	1.82	245	*e*SG	Sb	17 25 49.2	+0.1
KECS	Kecovo	1.87	151	*e*SN	Sn	17 25 48.7	-0.3
KECS				*e*LG	Lg	17 25 56.0	
OSTC	Ostas	1.91	284	*e*PG	Pb	17 25 26.9	-0.2
OSTC				*e*SG	Sg	17 25 53.9	+1.2
	comp=Z,10nm,0.6s						
KSP	Ksiaz	1.94	293	*e*Pg	Pg	17 25 28.5	-0.1
KSP				*e*Sg	Sg	17 25 54.0	+0.2
CRVS	Cervenica-Dubn	1.96	128	*e*PN	Pb	17 25 27.0	-1.0
CHVC	Chvalec	2.01	285	*e*PG	Pb	17 25 28.5	-0.5
CHVC				*e*SG	Sg	17 25 56.3	+0.2
	comp=Z,4.3nm,0.4s						
UPC	Upice	2.02	282	*e*SG	Sg	17 25 56.4	-0.1
	comp=Z,5.5nm,0.5s						
KRUC	Moravsky	2.06	240	*e*SG	Sb	17 25 56.0	+0.1
MODS	Modra-Piesok	2.12	215	*e*SN	Sn	17 25 56.2	+0.9
KOLS	Kolonicke sedl	2.38	119	*e*PG	Pg	17 25 36.3	-0.8
KOLS				*e*SN	Sb	17 26 05.0	-0.1
PRU	Pruhonice	2.95	269	*e*SG	Sg	17 26 25.0	-1.1
	comp=Z,3.5nm,0.5s						
CKRC	Cesky Krumlov	3.39	249	*e*SG	Sg	17 26 39.1	-1.3
KHC	Kasperske Hory	3.73	257	*e*PG	Pb	17 26 00.0	+1.8
KHC				*e*SG	Sg	17 26 49.9	-1.4

*JMA **04** 17:27:14.0,39°.06N×140°.86E,h7^{km}±1^{km},M3.3*
JMA Felt I J1.
*IDC **04** 17:27:19.0±2.1,39°.05N×140°.71E,h45^{km}±20^{km},mb3.3/9, mb1 3.5/12,mb1mx3.3/45,mbtmp3.5/12,ML3.0/3,Error ellipse: s-maj=25.6km s-min=13.8km az=112.0*
ISC 04 17:27:13.8±1.1**,39°.07N**±0°.04×**140°.87E**±0°.03**,h5**^{km}±8^{km}**, n27,**σ**1^s.15**/31**,mb3.5**/9**,8D,Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JMK	Ichinoseki	0.30	113	⇓P	Pg	17 27 19.8	+0.2
JMK				S	Sg	17 27 24.0	+0.4
JRG	Rokugo	0.37	331	⇓P	Pb	17 27 21.6	-1.3
JRG				*e*S	Sb	17 27 27.5	-1.4
JYK	Kaneyama	0.42	249	⇓P	Pg	17 27 22.2	+0.2
JYK				*e*S	Sg	17 27 27.8	+0.3
JOM	Ohasama	0.52	39	⇓P	Pb	17 27 24.2	-1.2
JOM				*e*S	Sb	17 27 31.8	-1.4
JKMT	Kesennumamotoy	0.54	119	⇓P	Pg	17 27 24.2	0.0
JKMT				*e*S	Sg	17 27 31.8	+0.6
OFUJ	Ofunato	0.62	89	⇓P	Pb	17 27 26.0	-1.2
JIO	Ouri	0.72	148	⇓P	Pg	17 27 27.4	-0.2
JIO				S	Sg	17 27 37.0	0.0
JOU	Okura	0.72	193	⇓P	Pg	17 27 27.7	+0.1
JOU				S	Sg	17 27 37.0	0.0
MJAR	Matsushiro Arr	3.29	221	P	Pn	17 28 07.4	+1.5
	0.2nm,0.3s,baz=26,slow=15,SNR=12						
MJAR				S	Sn	17 28 47.1	+1.7
	0.1nm,0.3s,baz=18,slow=24,SNR=2.6						
MAT	Matsushiro	3.29	221	P	Pn	17 28 07.2	+1.3
MAT				*e*S	Sn	17 28 46.3	+0.9
ASAJ	Asahikawa	5.21	14	P	Pn	17 28 34.0	+1.8
	0.6nm,0.3s,baz=250,slow=13,SNR=7.3						
ASAJ				S	Sn	17 29 34.5	+1.9
	baz=88,slow=11,SNR=1.2						
KSRS	Korea Array	10.31	265	P	Pn	17 29 43.8	+1.5
	0.3nm,0.3s,baz=75,slow=13,SNR=5.0						
SEY	Seymchan	24.89	13	P	P	17 32 36.8	-0.3
	0.7nm,0.7s,baz=163,slow=24,SNR=3.1						
SONM	Songino Array	26.33	301	P	P	17 32 50.5	0.0
	0.2nm,0.4s,baz=111,slow=7.9,SNR=2.0						
H11N2	WAKE ISLAND Hy	29.59	123	T	T	18 03 55.7	
	baz=317,slow=75,SNR=191						
H11N1	WAKE ISLAND Hy	29.60	123	T	T	18 03 51.2	
	baz=317,slow=75,SNR=133						
H11N3	WAKE ISLAND Hy	29.61	123	T	T	18 03 51.8	
	baz=317,slow=75,SNR=116						
H11S1	WAKE ISLAND Hy	30.36	125	T	T	18 04 42.5	
	baz=318,slow=76,SNR=26						
H11S3	WAKE ISLAND Hy	30.36	125	T	T	18 04 50.9	
	baz=318,slow=76,SNR=34						
H11S2	WAKE ISLAND Hy	30.37	125	T	T	18 04 52.0	
	baz=318,slow=76,SNR=19						
MKAR	Makanchi Array	42.70	300	P	P	17 35 09.4	-2.0
	0.5nm,0.8s,baz=88,slow=9.3,SNR=6.1						
ILAR	Eielson Array	48.02	33	P	P	17 35 54.8	+1.4
	0.3nm,0.8s,baz=282,slow=6.4,SNR=4.4						
WRA	Warramunga Arr	59.02	187	P	P	17 37 13.3	-1.3
	0.6nm,0.5s,baz=4.7,slow=7.2,SNR=6.8						
ASAR	Alice Springs	62.75	187	P	P	17 37 39.0	-0.9
	0.4nm,0.7s,baz=356,slow=6.3,SNR=5.4						
FINES	FINESS Array B	66.82	332	P	P	17 38 05.2	-0.7
	3.4nm,1.1s,baz=12,slow=7.1,SNR=2.4						
AKASG	Malin Array Be	72.43	322	P	P	17 38 40.7	-0.1
	0.7nm,0.6s,baz=48,slow=6.3,SNR=3.2						
NVAR	Mina Array Bea	74.12	53	P	P	17 38 52.2	+0.8
	0.1nm,0.3s,baz=144,slow=46,SNR=1.0						

*IDC **04** 17:31:43.0±2.2,4°.87S×154°.46E,h489^{km}±27^{km},mb2.9/8, mb1 3.1/9,mb1mx3.0/32,mbtmp3.8/9,Error ellipse: s-maj=20.0km s-min=14.7km az=120.0*
ISC 04 17:31:43.8±1.0**,4°.9S**±0°.1×**154°.5E**±0°.2**,h500**^{km}**,n10,** σ**1^s.03**/11**,mb3.2**/7**,Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	8.52	238	P	P	17 33 44.4	-1.3
	1.9nm,0.3s,baz=43,slow=5.2,SNR=7.1						
DZM	Mont Dzumac	20.62	147	P	P	17 35 49.1	+0.9
	3.7nm,0.5s,baz=260,slow=6.8,SNR=14						
WRA	Warramunga Arr	24.65	231	P	P	17 36 24.0	-0.3
	0.5nm,0.5s,baz=57,slow=9.1,SNR=5.6						
ASAR	Alice Springs	27.22	225	P	P	17 36 46.5	-0.5
	0.2nm,0.3s,baz=54,slow=8.9,SNR=12						
ASAR				S	S	17 40 52.1	+1.6
	0.3nm,0.5s,baz=54,slow=14,SNR=7.4						
CMAR	Chiang Mai Arr	59.44	295	P	P	17 40 59.0	+0.7
	0.3nm,0.3s,baz=110,slow=5.0,SNR=1.6						
SONM	Songino Array	67.31	327	P	P	17 41 49.4	+0.9
	0.2nm,0.4s,baz=146,slow=4.4,SNR=4.1						
MKAR	Makanchi Array	81.51	319	P	P	17 43 09.1	+0.5
	0.7nm,0.6s,baz=94,slow=7.8,SNR=14						
ILAR	Eielson Array	81.64	22	P	P	17 43 07.7	-1.1
	0.3nm,0.4s,baz=246,slow=5.1,SNR=9.3						
ZALV	Zalesovo Beam	82.17	326	P	P	17 43 11.8	+0.1
	0.6nm,0.4s,baz=83,slow=6.6,SNR=3.7						
TORD	Torodi Ar. Bea	151.93	289	PKPbc	PKPbc	17 50 42.4	-0.5
	0.4nm,0.6s,baz=48,slow=2.1,SNR=1.5						

*IDC **04** 17:41:37.6±0.4,0°.16S×124°.83E,h0^{km},mb5.0/38, mb1 5.0/40,mb1mx5.0/45,mbtmp5.0/40,ML4.5/2,MS4.3/24, Ms1 4.3/24,ms1mx4.1/42,Error ellipse: s-maj=14.7km s-min=9.9km az=80.0*
*BJI **04** 17:41:39.4±0.0,0°.43S×125°.14E,h50^{km},mB5.2/51, mb5.2/75,Ms4.7/69,Ms7 4.4/65*
*MOS **04** 17:41:42.8±1.1,0°.08S×124°.88E,h47^{km},mb5.5/49,Error ellipse: s-maj=7.3km s-min=4.2km az=116.2*
*NEIC **04** 17:41:44.6±2.0,0°.13S±0°.07×124°.99E±0°.06,h54^{km}, mb5.2/134,Error ellipse: s-maj=10.5km s-min=8.6km az=152.0*
*GCMT **04** 17:41:44.6±0.1,0°.31S±0°.01×125°.10E±0°.01,h38^{km}, MW5.3/119,Moment Tensor Solution. s110,c181; s119,c186; Duration: 1^s.1 Moment tensor: Scale 10^{17} Nm; M_{rr}1.05±.02; $M_{\theta\theta}$-0.46±.01; $M_{\phi\phi}$-0.58±.02; $M_{r\theta}$0.08±.02; $M_{\theta\phi}$-0.60±.01; $M_{\phi r}$0.59±.02; Best double couple: $M_0$1.24500×10^{17} NP1:ϕ_s237.00000°,δ35.00000°, λ116.00000°. NP2:ϕ_s26.00000°,δ59.00000°,λ73.00000°. Principal axes: T 1.2510, Plg70.0000°, Azm258.0000°; N -0.0100, Plg15.0000°, Azm35.0000°; P -1.2400, Plg13.0000°, Azm129.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*DJA **04** 17:41:45.7±0.2,0°S±2°×12°5E±°,h55^{km}±2^{km},M5.1/62, mb5.3/62,mB5.6/47,MLv5.5/24,Mw(mB)5.1/47, MwMwp5.0/21,Mwp5.3/21*
*KLM **04** 17:41:47,0°.20S×125°.21E,h68^{km},mb5.3*
ISC 04 17:41:44.5±0.4**,0°.16S**±0°.03×**124°.97E**±0°.04**,h51**^{km}±3^{km}**, h51**^{km}**:pP-P,n685,**σ**1^s.41**/701**,mb5.2**/211**,MS4.4**/42**, 36C-29D,Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMSI	Cibinong	1.22	306	P	Pn	17 42 05.1	-0.2
MNI	Manado	1.59	355	P	Pn	17 42 11.5	+1.2
SANI	Sanana	2.14	151	P	Pn	17 42 14.9	-2.9
LUWI	Luwuk	2.36	248	Pn	Pn	17 42 20.9	+0.1
LUWI	Luwuk	2.36	248	P	Pn	17 42 22.6	+1.8
TNTI	Ternate	2.57	69	Pn	Pn	17 42 23.0	-0.7
TNTI	Ternate	2.57	69	P	Pn	17 42 23.6	-0.1
MRSI	Marisa	3.09	282	P	Pn	17 42 30.3	-0.5
APSI	Ampana	3.40	257	P	Pn	17 42 37.6	+2.5
NLAI	Namlea	3.73	145	P	Pn	17 42 37.8	-1.8
SGSI	Sangihe	3.86	8	P	Pn	17 42 50.8	+9.4
TOLI2	Tolitoli	4.37	287	Pn	Pn	17 42 49.1	+0.8
KDI	Kendari	4.44	212	P	Pn	17 42 51.8	+2.4
MSAI	Masohi	5.07	129	P	Pn	17 42 57.8	-0.2
	1.3nm4μm419nm,1.2s						
MPSI	Mapaga	5.09	276	P	Pn	17 42 59.2	+0.9
	8.7nm14μm14μm1μm,0.7s						
TTSI	Tana Toraja	5.89	241	P	Pn	17 43 11.4	+2.1
	8.1nm7μm18μm723nm,0.6s						
SWI	Sorong	6.33	96	P	Pn	17 43 15.6	+0.3
SWI				pmax	pmax		
	comp=Z,101nm,0.8s						
SWI	Sorong	6.33	96	P	Pn	17 43 16.4	+1.1
	comp=Z,0.5nmcomp=Z,8μmcomp=Z,2μmcomp=Z,100nm,0.7s						
SIJI	Sorong	6.34	96	Pn	Pn	17 43 14.1	-1.4
	comp=Z,4.9nm,0.3s,baz=250,slow=23,SNR=21						
SIJI				Sn	Sn	17 44 32.0	+5.4
	comp=Z,1.6nm,0.3s,baz=204,slow=20,SNR=1.1						
SPSI	Sidrap Palu	6.42	234	P	Pn	17 43 18.8	+2.2
	comp=Z,2.8nmcomp=Z,7μmcomp=Z,12μmcomp=Z,693nm,0.8s						
BNSI	Bone	6.43	229	P	Pn	17 43 18.4	+1.7
	comp=Z,3.0nmcomp=Z,7μmcomp=Z,683nm,0.7s						
BKSI	Bulukumba	7.05	223	P	Pn	17 43 27.2	+2.0
	comp=Z,2.2nmcomp=Z,5μmcomp=Z,4μmcomp=Z,252nm,0.8s						
KAPI	Kappang	7.10	227	Pn	Pn	17 43 27.9	+2.0
	comp=Z,46nm,0.3s,baz=48,slow=1.7,SNR=77						
KAPI				Sn	Sn	17 44 45.8	+0.6
	comp=Z,30nm,0.3s,baz=106,slow=23,SNR=6.3						
KAPI				LR	LR	17 46 49.1	
	comp=Z,8μm,21.6s,baz=66,slow=44						
KAPI	Kappang	7.10	227	P	Pn	17 43 27.1	+1.3
KAPI	Kappang	7.10	227	Pn	Pn	17 43 27.1	+1.3
KCP	Kidapawan	7.12	1	⇓*i*P	Pn	17 43 29.5	+3.3
DAV	Davao City (W)	7.21	5	Pn	Pn	17 43 33.6	+6.3
	comp=Z,46nm,0.3s,baz=145,slow=3.8,SNR=8.9						
DAV				Sn	Sn	17 44 51.0	+3.1
	comp=Z,43nm,0.3s,baz=229,slow=19,SNR=1.8						
DAV				LR	LR	17 46 28.7	
	comp=Z,9μm,19.4s,baz=200,slow=40						
DAV	Davao City (W)	7.21	5		Pn	17 43 26.7	-0.6
SGKI	Sangatta, Kali	7.37	267	P	Pn	17 43 37.8	+8.2
BSSI	Bau Bau, Buton	7.44	217	P	Pn	17 43 33.1	+2.6
	comp=Z,1.0nmcomp=Z,2μmcomp=Z,3μmcomp=Z,205nm,0.6s						
ZCP	Zamboanga City	7.61	338	⇓*e*P	Pn	17 43 35.1	+2.3
FAKI	Fak Fak	7.78	111	Pn	Pn	17 43 31.5	-3.7
BKB	Balikpapan	8.14	262	Pn	Pn	17 43 38.0	-2.1
BKB	Balikpapan	8.14	262	P	Pn	17 43 45.2	+5.0
	comp=Z,2.0nmcomp=Z,8μmcomp=Z,6μmcomp=Z,639nm,0.8s						
MYLDM	Lahad Datu	8.35	309	Pn	Pn	17 43 45.0	+2.0
CGP	Cagayan de Oro	8.56	358	⇓*e*P	Pn	17 43 52.0	+6.1
MMRI	Maumere	8.85	198	P	Pn	17 44 06.5	+17
EDFI	Ende, Flores	9.14	201	P	Pn	17 43 58.9	+5.0
	comp=Z,2μmcomp=Z,732nmcomp=Z,74nm,1.1s						
SOEI	Soe	9.56	184	Pn	Pn	17 44 01.7	+2.0
SOEI	Soe	9.56	184	P	Pn	17 44 04.1	+4.4
	comp=Z,5μmcomp=Z,4μmcomp=Z,324nm,0.9s						
SPMM	Sapulut	9.77	300	P	Pn	17 44 14.0	+11
BATI	Baumata	10.07	187	Pn	Pn	17 44 11.2	+4.7
	comp=Z,5.9nm,0.3s,baz=224,slow=1.5,SNR=15						
BATI				LR	LR	17 49 25.4	
	comp=Z,1μm,18.1s,baz=359,slow=47						
BATI	Baumata	10.07	187	P	Pn	17 44 12.1	+5.5
	comp=Z,2μmcomp=Z,1μmcomp=Z,93nm,0.8s						
MTKI	Muara Teweh, K	10.10	266	P	Pn	17 44 11.7	+4.7
	comp=Z,2μmcomp=Z,145nm,0.7s						
BBKI	Banjar Baru	10.64	252	P	Pn	17 44 20.6	+6.3
	comp=Z,2μmcomp=Z,188nm,0.9s						
KKM	Kota Kinabalu	10.69	305	Pn	Pn	17 44 13.2	-1.9
OCLP	Ormoc	11.14	358	*e*P	Pn	17 44 25.2	+4.0
PLAI	Plampang	11.20	220	P	Pn	17 44 26.1	+4.0
	comp=Z,2μmcomp=Z,1μmcomp=Z,71nm,0.8s						
TWSI	Taliwang, Sumb	11.73	223	P	Pn	17 44 32.4	+3.2
	comp=Z,671nmcomp=Z,52nm,1.4s						
SRBI	Singaraja	12.51	231	P	Pn	17 44 43.1	+3.2
	comp=Z,3μmcomp=Z,1μmcomp=Z,124nm,1.3s						
ENPP	El Nido	12.56	334	*e*P	Pn	17 44 41.3	+0.7
DNP	Denpasar	12.89	229	P	P	17 44 58.8	+4.4
KMMI	Kalianget	12.93	238	P	P	17 45 00.1	+5.2
BUSP	Coron	12.97	339	*e*P	P	17 44 58.9	+3.5
SBUM	Sibu	13.00	282	Pn	Pn	17 44 45.9	-0.8
SBUM	Sibu	13.00	282	P	Pn	17 44 51.0	+4.3
SJMP	San Jose	13.10	343	*e*P	P	17 44 57.4	+0.6
ABJI	Asem Bagus	13.12	234	P	P	17 45 01.0	+4.0
STKI	Sintang	13.49	271	P	P	17 45 03.1	+1.9
JAGI	Jajag, Banyuwa	13.57	232		Pn	17 44 55.9	+1.4
JAGI	Jajag, Banyuwa	13.57	232	P	Pn	17 44 58.2	+3.7
	comp=Z,2μmcomp=Z,2μmcomp=Z,156nm,0.8s						
MTN	Manton Dam	14.01	154	P	Pn	17 44 59.6	-0.7
	baz=14,SNR=23						
MTN	Manton Dam	14.01	154	Pn	Pn	17 44 58.1	-2.2
PGP	Puerto Galera	14.14	344	*e*S	Pn	17 44 57.0	-5.2
KDU	Kakadu	14.51	149	P	Pn	17 45 04.4	-2.6
	baz=14,SNR=69						
LQP	Lukban	14.58	347	⇑*e*P	P	17 45 12.6	-0.9
TGY	Tagaytay City	14.72	344	LR	LR	17 51 41.2	
	comp=Z,1μm,20.7s,baz=140,slow=41						
KSM	Kuching	14.74	276	P	P	17 45 14.0	-1.2
KSM	Kuching	14.74	276	P	P	17 45 18.0	+2.9
SMRI	Semarang	16.02	244	P	Pn	17 45 25.7	-1.0
SMRI	Semarang	16.02	244	P	P	17 45 33.2	+3.9
	comp=Z,9μmcomp=Z,433nm,2.0s						
UGM	Wanagama	16.33	241	P	P	17 45 33.5	+0.8
UGM	Wanagama	16.33	241	P	P	17 45 47.7	+15
SMPP	San Manuel, Pa	16.75	346	*e*P	P	17 45 36.6	-0.7
TPI	Tanjungpandan	17.50	261	P	P	17 45 48.6	+2.9
	comp=Z,1μmcomp=Z,67nm,1.4s						
JCJI	Jatiwangi	17.81	249	P	P	17 45 53.9	+4.8
	comp=Z,12μmcomp=Z,394nm,0.8s						
FITZ	Fitzroy Crossi	17.84	178	P	P	17 45 49.3	-0.1
	baz=18,SNR=30						
FITZ	Fitzroy Crossi	17.84	178	P	P	17 45 49.3	-0.1
	comp=Z,1.7nm,0.3s,baz=11,slow=8.5,SNR=50						
FITZ				LR	LR	17 53 24.0	
	comp=Z,798nm,21.7s,baz=359,slow=40						
FITZ	Fitzroy Crossi	17.84	178		Pn	17 45 49.1	-0.2
CVP	Callao Caves	18.02	350	⇓*e*P	Pn	17 45 52.4	+1.1
SZP	Santa	18.15	346		P	17 45 52.8	+0.1
SZP				IAmb	IAmb	17 45 59.7	
	comp=Z,160nm,0.8s						
LEM	Lembang	18.53	249	P	Pn	17 45 59.7	+1.9
	comp=Z,9.4nm,0.3s,baz=46,slow=11,SNR=24						
LEM				LR	LR	17 53 38.6	
	comp=Z,5μm,21.5s,baz=54,slow=39						
CISI	Cisompet, Garu	18.61	246	P	P	17 45 57.8	-0.2
CISI	Cisompet, Garu	18.61	246	P	Pn	17 45 59.6	+0.9
	comp=Z,3μmcomp=Z,7μmcomp=Z,324nm,0.6s						
PPBI	Pangkal Pinang	18.93	264	P	Pn	17 46 02.9	+0.4
	comp=Z,3μmcomp=Z,4μmcomp=Z,67nm,1.6s						
CBJI	Citeko	19.12	251	P	Pn	17 46 05.5	+0.8
	comp=Z,4μmcomp=Z,6μmcomp=Z,629nm,0.9s						
DBJI	Dramaga	19.25	250	P	Pn	17 46 06.7	+0.3
	comp=Z,3μmcomp=Z,131nm,1.4s						
DLV	T Lat	20.30	307	P	P	17 46 16.5	-0.1
DLV				IAmb	IAmb	17 46 27.1	
	comp=Z,134nm,1.1s						
BLSI	Bandar Lampung	20.36	255	P	Pn	17 46 24.3	+4.8
PMBI	Palembang	20.37	262	P	Pn	17 46 19.6	0.0
	comp=Z,2μmcomp=Z,6μmcomp=Z,233nm,0.8s						
KLSI		20.71	257	P	Pn	17 46 22.9	-0.7
	comp=Z,414nmcomp=Z,37nm,0.8s						
KASI	Kota Agung	21.12	255	P	P	17 46 27.7	+2.5
	comp=Z,2μmcomp=Z,232nm,1.4s						
MYKOM	Kota Tinggi	21.20	275	P	P	17 46 28.4	+2.3
MYKOM				IAmb	IAmb	17 46 34.2	
	comp=Z,62nm,0.7s						
MYKOM	Kota Tinggi	21.20	275	P	P	17 46 29.0	+2.9
JMBI	JAMBI	21.37	266	P	P	17 46 30.8	+2.9
	comp=Z,134nm,1.2s						
LWLI	Liwa	21.43	257	P	P	17 46 36.5	+7.8
WRAB	Tennant Creek	21.70	155	*d i*P	P	17 46 28.9	-2.5
WRAB				pmax	pmax		
	comp=Z,29nm,0.6s						
WRAB	Tennant Creek	21.70	155	P	P	17 46 29.2	-2.2
WRAB				IAmb	IAmb	17 46 51.9	
	comp=Z,71nm,0.8s						
WRA	Warramunga Arr	21.70	156	P	P	17 46 30.1	-1.3
	comp=Z,14nm,0.5s,baz=335,slow=11,SNR=87						
WRA	Warramunga Arr	21.70	156	P	P	17 46 28.9	-2.5
WB2	Warramunga Arr	21.71	155	P	P	17 46 29.4	-2.1
WB2				IAmb	IAmb	17 46 52.0	
	comp=Z,78nm,0.8s						
XMI	Christmas Isla	21.73	241	P	P	17 46 31.8	+0.1
	comp=Z,2μm,0.9s						
LHSI	Lahat	21.73	260	P	P	17 46 36.5	+4.7
	comp=Z,66nm,0.8s						
XMIS	Christmas Isla	21.77	241	P	P	17 46 31.6	-0.6
XMIS	Christmas Isla	21.77	241	P	P	17 46 32.3	+0.1
	comp=Z,1μm,1.1s						
WR0	Warramunga Arr	21.80	155	P	P	17 46 30.5	-1.9
PSA00	Pilbara Seismi	21.86	193	P	P	17 46 33.5	+0.3
PSA00	Pilbara Seismi	21.86	193	P	P	17 46 31.9	-1.2
PSA00				IAmb	IAmb	17 46 48.4	
	comp=Z,15nm,0.9s						
KSI	Kapahiang	22.62	261	P	P	17 46 42.0	+0.5
KSI				pmax	pmax		
	comp=Z,75nm,0.8s						
KSI	Kapahiang	22.62	261	P	P	17 46 43.4	+1.9
	comp=Z,3μmcomp=Z,76nm,0.8s						
COEN	Coen	22.65	128	P	P	17 46 39.5	-2.2
COEN				IAmb	IAmb	17 46 48.1	
	comp=Z,122nm,1.4s						
TWG	Pinlang	23.15	351	P	P	17 46 44.5	-2.1
SDSI	Sungai Dareh	23.55	268	P	P	17 46 51.9	+1.3
	comp=Z,101nm,1.2s						
YULB	Yu-li	23.68	352	P	P	17 46 49.0	-2.7
TPUB	Ta-pu	23.69	350	P	P	17 46 50.0	-1.8
TPUB				IAmb	IAmb	17 46 56.0	
	comp=Z,111nm,0.8s						
PMG	Port Moresby	23.93	113	P	P	17 46 54.1	+0.1
	comp=Z,14nm,0.9s,baz=324,slow=15,SNR=3.7						
PMG	Port Moresby	23.93	113	⇓*e*P	P	17 46 54.4	+0.3
PMG				pmax	pmax		
	comp=Z,38nm,1.1s						
PMG	Port Moresby	23.93	113	IAmb	IAmb	17 47 18.2	
	comp=Z,131nm,1.4s						
BKNI	Bangkinang	23.93	271	P	P	17 46 51.8	-2.4
BKNI				IAmb	IAmb	17 47 18.1	
	comp=Z,66nm,0.5s						
SSLB	Suanglung	24.12	351	P	P	17 46 54.4	-1.4
SSLB				IAmb	IAmb	17 47 02.2	
	comp=Z,38nm,0.7s						
QIZ	Qiongzhong	24.16	323	P	P	17 46 56.9	+0.7
QIZ				pP	pP	17 47 07.2	-0.8
QIZ				sS	sS	17 51 31.4	+0.3
QIZ				pmax	pmax		
	comp=Z,53nm,1.6s						
QIZ				pmax	pmax		
	comp=Z,320nm,3.5s						
QIZ				LR	LR		
	comp=Z,600nm,13.9s						
QIZ				LR	LR		
	comp=Z,500nm,10.0s						
QIZ				LR	LR		
	comp=Z,810nm,15.1s						
IPM	Ipoh	24.36	281	P	P	17 46 57.8	-0.2
IPM	Ipoh	24.36	281	P	P	17 46 58.0	-0.1
PDSI	Padang	24.51	268	P	P	17 47 00.3	+0.8
	comp=Z,969nmcomp=Z,80nm,1.5s						
UBPT	Khong Chiam	24.63	309	P	P	17 47 02.0	+1.6
	comp=Z,15nm,1.0s						
UBPT	Khong Chiam	24.63	309	P	P	17 47 01.0	+0.6
GIRL	Giralia	24.67	204	P	P	17 47 02.6	+1.9
	baz=25,SNR=5.3						
GIRL	Giralia	24.67	204	P	P	17 47 01.0	+0.2
QIS	Mount Isa	24.82	146	P	P	17 47 01.8	-0.4
	baz=25,SNR=86						
KULM	Kulim	24.88	283	P	P	17 47 02.0	-0.8
KULM	Kulim	24.88	283	P	P	17 47 03.0	+0.2
YHNB	Yeheng	24.92	352	P	P	17 47 02.8	-0.3
AS31	Alice Springs	24.93	160	P	P	17 47 02.1	-1.1
ASAR	Alice Springs	24.93	160	P	P	17 47 03.1	-0.1
	comp=Z,24nm,1.0s,baz=339,slow=7.0,SNR=204						
ASAR				LR	LR	17 58 36.8	
	comp=Z,468nm,21.3s,baz=330,slow=41						
ASAR	Alice Springs	24.93	160	P	P	17 47 02.6	-0.6
MNSI	Mandailing Nat	25.40	272	P	P	17 47 10.4	+2.9
	comp=Z,906nmcomp=Z,49nm,0.7s						
QZH	Quanzhou	25.70	347	P	P	17 47 10.3	+0.2
QZH				S	S	17 51 33.8	-1.6
QZH				LR	LR		
	comp=Z,630nm,17.1s						
QZH				LR	LR		
	comp=Z,530nm,18.8s						
QZH				LR	LR		
	comp=Z,610nm,20.8s						
MTSU	Mount Surprise	26.10	134	P	P	17 47 13.4	-0.4
	baz=26,SNR=24						
RPSI	Rantau Prapat	26.19	276	P	P	17 47 14.2	-0.5
PSI	Prapat	26.20	277	P	P	17 47 14.2	-0.7
	comp=Z,7.8nm,0.8s,baz=179,slow=2.1,SNR=17						
PSI				LR	LR	17 59 11.6	
	comp=Z,728nm,20.3s,baz=90,slow=40						
TRTT	Trang	26.42	288	P	P	17 47 16.4	-0.3
	comp=Z,35nm,1.6s						
SRAK	Srakaew	26.71	303	P	P	17 47 17.0	-2.3
	comp=Z,2μmcomp=Z,278nm,0.8s						
JOW	Kunigami	27.02	7	P	P	17 47 23.3	+1.3
	comp=Z,96nm,0.8s,baz=196,slow=8.2,SNR=12						
JOW				LR	LR	17 57 49.2	
	comp=Z,711nm,21.4s,baz=231,slow=36						
JOW	Kunigami	27.02	7	IAmb	IAmb	17 47 26.4	
	comp=Z,1.9nm,0.7s						
MEEK	Meekatharra	27.03	193	P	P	17 47 21.2	-0.9
	baz=27,SNR=27						
CHAI	Chaiyaphum	27.73	306	P	P	17 47 29.0	+0.5

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      comp=Z,437nmcomp=Z,48nm,0.8s
NONG  Nongkai           28.08 311   P      P      17 47 33.6 +2.0
      comp=Z,9µmcomp=Z,31nm,0.8s
PHET  Kaeng Krachan     28.28 298   P      P      17 47 35.4 +2.0
UTHA  Uthaitani         29.65 303   P      P      17 47 46.3 +0.7
      comp=Z,333nmcomp=Z,35nm,0.7s
SLVN  Son La            29.65 317   P      P      17 47 45.5 -0.1
PHIT  Phitsanulok       29.69 307   P      P      17 47 48.1 +2.2
      comp=Z,624nmcomp=Z,62nm,0.8s
MORW  Morawa            29.99 196   P      P      17 47 48.2 -0.2
      baz=30,SNR=5.4
MORW  Morawa            29.99 196   P      P      17 47 47.8 -0.6
NANT  Nan               30.38 310   P      P      17 47 54.0 +2.1
      comp=Z,19µmcomp=Z,520nm,0.7s
SUKH  Sukhothai         30.48 306   P      P      17 47 54.2 +1.3
      comp=Z,34nm,0.8s
FORT  Forrest           30.60 175   P      P      17 47 53.5 -0.2
      baz=31,SNR=18
FORT  Forrest           30.60 175   P      P      17 47 53.0 -0.8
FORT                                IAmb   IAmb   17 47 55.0
      comp=Z,41nm,0.6s
LAMP  Lampang           31.05 308   P      P      17 47 59.8 +1.9
      comp=Z,25nm,0.7s
SSE   Sheshan           31.29 354   P      P      17 48 00.6 +0.8
SSE                                 S      S      17 53 07.2 +4.1
SSE                                 pmax   pmax
      comp=Z,7.0nm,0.8s
SSE                                 pmax   pmax
      comp=Z,68nm,3.6s
SSE                                 LR     LR
      comp=Z,300nm,22.6s
SSE                                 LR     LR
      comp=Z,140nm,24.8s
BLDU  Ballidu           31.29 194   P      P      17 47 59.3 -0.6
      baz=31,SNR=30
PAYA  Payao             31.34 310   P      P      17 48 01.4 +1.0
      comp=Z,2µmcomp=Z,151nm,0.8s
CM36  Chiang Mai Arr    31.47 308   P      P      17 48 02.0 +0.4
CM04  Chiang Mai Arr    31.50 307   P      P      17 48 03.0 +1.1
      comp=Z,107nmcomp=Z,14nm,1.1s
CM35  Chiang Mai Arr    31.51 308   P      P      17 48 02.0  0.0
CM09  Chiang Mai Arr    31.51 307   P      P      17 48 03.4 +1.4
      comp=Z,109nmcomp=Z,7.7nm,1.1s
CM01  Chiang Mai Arr    31.53 307   P      P      17 48 03.2 +1.1
      comp=Z,124nmcomp=Z,12nm,1.5s
CM05  Chiang Mai Arr    31.53 307   P      P      17 48 03.0 +0.9
      comp=Z,79nmcomp=Z,9.1nm,1.0s
CM02  Chiang Mai Arr    31.54 307   P      P      17 48 03.4 +1.1
      comp=Z,106nmcomp=Z,10nm,1.6s
CM31  Chiang Mai Arr    31.56 307   P      P      17 48 03.9 +1.5
      comp=Z,3µmcomp=Z,268nm,1.3s
CM31  Chiang Mai Arr    31.56 307   P      P      17 48 03.1 +0.7
CM31                                IAmb   IAmb   17 48 04.4
      comp=Z,45nm,1.4s
CMAR  Chiang Mai Arr    31.56 307   P      P      17 48 02.8 +0.4
      comp=Z,3.0nm,0.7s,baz=132,slow=6.9,SNR=42
CMAR                                PcP    PcP    17 50 56.2 +2.0
      comp=Z,5.7nm,0.8s,baz=174,slow=1.7,SNR=13
CMAR                                LR     LR     18 01 22.6
      comp=Z,398nm,21.4s,baz=186,slow=38
CMAR  Chiang Mai Arr    31.56 307 i P      P      17 48 03.2 +0.8
CMAR                                pmax   pmax
      comp=Z,4.0nm,0.7s
CMAR  Chiang Mai Arr    31.56 307   P      P      17 48 02.6 +0.2
CM13  Chiang Mai Arr    31.57 307   P      P      17 48 03.0 +0.5
      comp=Z,98nmcomp=Z,11nm,1.0s
CM15  Chiang Mai Arr    31.57 307   P      P      17 48 03.6 +1.1
      comp=Z,112nmcomp=Z,10nm,1.1s
CM34  Chiang Mai Arr    31.61 308   P      P      17 48 03.0 +0.1
CM32  Chiang Mai Arr    31.74 307   P      P      17 48 05.0 +1.0
CHTO  Chiang Mai        31.75 308   P      P      17 48 03.8 -0.3
CHTO                                pmax   pmax
      comp=Z,30nm,1.1s
CHTO  Chiang Mai        31.75 308   P      P      17 48 03.8 -0.3
CHTO                                IAmb   IAmb   17 48 05.8
      comp=Z,30nm,1.1s
CM33  Chiang Mai Arr    31.75 308   P      P      17 48 04.0 -0.1
JCJ   Chichijima        31.76  30   P      P      17 48 03.3 -0.7
      comp=Z,41nm,0.4s,baz=209,slow=10,SNR=2.8
JCJ                                 LR     LR     18 01 25.3
      comp=Z,132nm,18.2s,baz=248,slow=37
GYA   Guiyang           31.80 328 ⇓P      P      17 48 05.5 +0.9
GYA                                 pP     sP     17 48 22.8 +0.9
GYA                                 PcP    PcP    17 50 56.1 +1.2
GYA                                 S      S      17 53 17.1 +5.5
GYA                                 pmax   pmax
      comp=Z,16nm,1.0s
GYA                                 pmax   pmax
      comp=Z,220nm,4.2s
GYA                                 LR     LR
      comp=Z,330nm,20.7s
GYA                                 LR     LR
      comp=Z,320nm,20.8s
GYA                                 LR     LR
      comp=Z,400nm,16.1s
KLBR  Kellerberrin      32.00 192   P      P      17 48 05.7 -0.4
      baz=32,SNR=8.5
WHN   Wuhan             32.16 343 ⇑P      P      17 48 09.5 +2.0
WHN                                 pmax   pmax
      comp=Z,50nm,0.8s
WHN                                 LR     LR
      comp=Z,2µm,20.4s
WHN                                 LR     LR
      comp=Z,540nm,10.6s
WHN                                 LR     LR
      comp=Z,2µm,29.2s
MHMT  Maesarieng        32.22 306   P      P      17 48 08.1 -0.1
NJ2   Nanjing           32.55 350 eP      P      17 48 13.0 +2.1
NJ2                                 pmax   pmax
      comp=Z,12nm,0.5s
MUN   Mundaring         32.72 194   P      P      17 48 12.0 -0.3
      baz=33,SNR=12
KMI   Kunming           33.07 321 ⇑P      P      17 48 16.9 +1.1
KMI                                 pP     pP     17 48 27.0 -0.8
KMI                                 sP     pwP    17 48 31.2 -1.6
KMI                                 S      S      17 53 33.7 +2.1
KMI                                 sS     sS     17 53 56.8 +4.7
KMI                                 pmax   pmax
      comp=Z,19nm,1.9s
KMI                                 pmax   pmax
      comp=Z,170nm,5.1s
KMI                                 LR     LR
      comp=Z,310nm,19.3s
KMI                                 LR     LR
      comp=Z,500nm,17.5s
KMI                                 LR     LR
      comp=Z,570nm,18.3s
NWAO  Narrogin (SRO)    33.40 192   P      P      17 48 18.1 -0.2
      baz=34,SNR=13
NWAO  Narrogin (SRO)    33.40 192   P      P      17 48 17.6 -0.7
      comp=Z,8.4nm,0.4s,baz=24,slow=8.8,SNR=23
NWAO  Narrogin (SRO)    33.40 192   P      P      17 48 17.3 -1.0
JNU   Nakatsue          33.57   9   P      P      17 48 20.2 +0.4
      comp=Z,20nm,0.7s,baz=200,slow=1.0,SNR=16
JNU   Nakatsue          33.57   9   P      P      17 48 19.8 -0.1
JNU                                 IAmb   IAmb   17 48 21.2
      comp=Z,35nm,0.9s
ENH   Enshi             33.66 335   P      P      17 48 21.2 +0.6
ENH                                 IAmb   IAmb   17 48 24.0
      comp=Z,44nm,1.0s
BBOO  Buckleboo         34.12 163   P      P      17 48 24.3 -0.3
      baz=34,SNR=7.1
JMN   Monobe            34.73  13   P      P      17 48 31.1 +1.2
RMQ   Roma              34.79 141   P      P      17 48 30.5  0.0
      baz=35,SNR=4.2
STKA  Stephens Creek    35.25 155   P      P      17 48 34.7 +0.3
      baz=35,SNR=30
STKA  Stephens Creek    35.25 155   P      P      17 48 34.7 +0.3
      comp=Z,17nm,0.5s,baz=327,slow=9.0,SNR=67
STKA  Stephens Creek    35.25 155⇑eP      P      17 48 34.5 +0.1
STKA  Stephens Creek    35.25 155   P      P      17 48 34.2 -0.2
HTT   Hallett           35.60 160   P      P      17 48 37.9 +0.5
      baz=36,SNR=6.3
JHS   Saijyo            35.79  11   P      P      17 48 40.6 +1.6
JHS                                 IAmb   IAmb   17 48 54.8
      comp=Z,32nm,0.8s
TJN   Taejon            36.42   3⇓iP      P      17 48 45.9 +1.6
JWT   Wachi             36.58  14   P      P      17 48 46.2 +0.5
JWT                                 IAmb   IAmb   17 48 50.1
      comp=Z,26nm,0.8s
CMSA  Cobar Meteorol    36.87 150   P      P      17 48 48.9 +0.7
      baz=37,SNR=38
CD2   Chengdu           36.88 329 ⇑P      P      17 48 49.7 +1.3
CD2                                 S      S      17 54 32.7 +3.0
CD2                                 pmax   pmax
      comp=Z,40nm,0.6s
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CD2                                 LR     LR
      comp=Z,930nm,20.6s
CD2                                 LR     LR
      comp=Z,1µm,18.6s
CD2                                 LR     LR
      comp=Z,710nm,20.6s
TIA   Tai'an            36.91 349   P      P      17 48 49.3 +0.8
TIA                                 pmax   pmax
      comp=Z,18nm,1.3s
TIA                                 LR     LR
      comp=Z,440nm,29.4s
TIA                                 LR     LR
      comp=Z,260nm,23.5s
TIA                                 LR     LR
      comp=Z,520nm,31.4s
INU   Inuyama           37.07  16   P      P      17 48 48.9 -1.0
INU                                 IAmb   IAmb   17 48 57.6
      comp=Z,43nm,1.2s
XAN   Xi'an             37.20 338   P      P      17 48 51.3 +0.3
XAN                                 pmax   pmax
      comp=Z,32nm,1.2s
XAN                                 pmax   pmax
      comp=Z,65nm,3.5s
XAN                                 LR     LR
      comp=Z,710nm,16.9s
XAN                                 LR     LR
      comp=Z,450nm,16.8s
XAN                                 LR     LR
      comp=Z,1µm,17.8s
JGF   Kuroka            37.40  17   P      P      17 48 51.9 -0.9
JGF                                 IAmb   IAmb   17 49 03.8
      comp=Z,17nm,0.8s
KSAR  Wonju Array Be    37.51   4   P      P      17 48 54.0 +0.5
KSAR  Wonju Array Be    37.51   4   P      P      17 48 54.0 +0.5
KSRS  Korea Array       37.52   4   P      P      17 48 54.9 +1.3
      comp=Z,19nm,0.9s,baz=179,slow=9.4,SNR=32
KSRS                                LR     LR     18 04 10.5
      comp=Z,508nm,21.2s,baz=194,slow=36
KS19  Wonju Array Si    37.57   4   P      P      17 48 53.5 -0.6
KS19                                IAmb   IAmb   17 48 57.2
      comp=Z,35nm,1.1s
SAIH  SAIHA             38.42 308 eP      P      17 49 00.7 -1.0
SAIH                                IAmb   IAmb   17 49 04.1
      comp=Z,28nm,0.4s
MAJO  Matsushiro        38.53  17c iP     P      17 49 01.5 -0.7
MAJO                                pmax   pmax
      comp=Z,29nm,1.1s
MAJO  Matsushiro        38.53  17   P      P      17 49 00.9 -1.2
MAJO                                IAmb   IAmb   17 49 26.1
      comp=Z,26nm,0.8s
MAT   Matsushiro        38.53  17   P      P      17 49 00.5 -1.7
MAT                                 S      S      17 54 55.6 +1.1
MJAR  Matsushiro Arr    38.53  17   P      P      17 49 01.6 -0.6
      comp=Z,9.7nm,0.7s,baz=188,slow=9.3,SNR=20
MJAR  Matsushiro Arr    38.53  17   P      P      17 49 00.9 -1.3
DL2   Dalian            38.99 356   P      P      17 49 07.9 +1.9
DL2                                 sP     sP     17 49 23.5 -0.4
DL2                                 S      S      17 55 03.2 +1.9
DL2                                 pmax   pmax
      comp=Z,81nm,0.8s
DL2                                 LR     LR
      comp=Z,620nm,22.6s
DL2                                 LR     LR
      comp=Z,320nm,21.5s
DL2                                 LR     LR
      comp=Z,770nm,22.1s
ARMA  Armidale          39.35 142   P      P      17 49 09.5 +0.3
      baz=39,SNR=6.5
KOHI  KOHIMA            39.36 313 eP      P      17 49 08.5 -0.9
KOHI                                IAmb   IAmb   17 49 10.7
      comp=Z,21nm,0.8s
MOKO  MOKOCHONG         39.42 314 eP      P      17 49 09.7 -0.3
MOKO                                IAmb   IAmb   17 49 12.1
      comp=Z,20nm,0.6s
ARPS  Mount Arapiles    39.65 159   P      P      17 49 12.2 +0.7
      baz=40,SNR=11
YNG   Young             40.44 150   P      P      17 49 18.5 +0.4
      baz=40,SNR=7.4
JMM   Marumori          40.56  19   P      P      17 49 18.6 -0.4
JMM                                 IAmb   IAmb   17 49 21.9
      comp=Z,54nm,1.0s
ZIRO  ZIRO              40.62 315 eP      P      17 49 19.6 -0.4
ZIRO                                IAmb   IAmb   17 49 23.1
      comp=Z,13nm,0.6s
BJT   Baijiatuau        40.78 350   P      P      17 49 20.2 -0.6
BJT                                 pmax   pmax
      comp=Z,16nm,0.8s
BJT   Baijiatuau        40.78 350   P      P      17 49 20.2 -0.6
BJI   Beijing           40.80 350   P      P      17 49 20.2 -0.8
BJI                                 pmax   pmax
      comp=Z,6.0nm,1.0s
BJI                                 LR     LR
      comp=Z,380nm,31.4s
BJI                                 LR     LR
      comp=Z,150nm,15.7s
BJI                                 LR     LR
      comp=Z,700nm,29.9s
TEZP  TEZPUR            40.84 313 eP      P      17 49 20.6 -0.9
TEZP                                IAmb   IAmb   17 49 22.8
      comp=Z,16nm,1.0s
SHL   Shillong          40.92 311   P      P      17 49 21.9 -0.5
SHL                                 pmax   pmax
      comp=Z,29nm,1.0s
SHL   Shillong          40.92 311 eP      P      17 49 21.5 -1.0
SHL                                 IAmb   IAmb   17 49 23.6
      comp=Z,34nm,1.2s
SHL   Shillong          40.92 311   P      P      17 49 21.9 -0.5
LZH   Lanzhou           41.06 334 ⇑P      P      17 49 25.4 +2.0
LZH                                 pP     pP     17 49 35.1 -0.7
LZH                                 sP     pwP    17 49 40.6 +0.4
LZH                                 S      S      17 55 38.2 +5.4
LZH                                 sS     sS     17 55 59.1 +5.5
LZH                                 pmax   pmax
      comp=Z,59nm,1.0s
LZH                                 pmax   pmax
      comp=Z,150nm,7.3s
LZH                                 LR     LR
      comp=Z,500nm,16.8s
LZH                                 LR     LR
      comp=Z,780nm,17.3s
LZH                                 LR     LR
      comp=Z,640nm,17.9s
TOO   Toolangi          41.77 155   P      P      17 49 27.9 -1.2
      baz=42,SNR=8.2
HHC   Hu-ho-hao-te      42.59 345 eP      P      17 49 36.4 +0.6
HHC                                 PP     PP     17 51 18.5 +3.1
HHC                                 S      S      17 55 55.7 +0.6
HHC                                 pmax   pmax
      comp=Z,14nm,1.5s
HHC                                 pmax   pmax
      comp=Z,130nm,7.4s
HHC                                 LR     LR
      comp=Z,220nm,19.6s
HHC                                 LR     LR
      comp=Z,170nm,13.7s
HHC                                 LR     LR
      comp=Z,400nm,17.2s
BTO   Baotou            42.79 343 eP      P      17 49 39.9 +2.5
MSHR  Mys Shultsa       42.91   7d iP     P      17 49 40.3 +2.2
MSHR                                pmax   pmax
      comp=Z,125nm,2.3s
JTM   Tenmabayashi      43.30  18   P      P      17 49 40.2 -1.1
JTM                                 IAmb   IAmb   17 49 43.5
      comp=Z,90nm,1.3s
CN2   Changchun         43.77   1 eP      P      17 49 44.7 -0.4
CN2                                 LR     LR
      comp=Z,230nm,21.0s
CN2                                 LR     LR
      comp=Z,260nm,21.0s
CN2                                 LR     LR
      comp=Z,340nm,19.0s
LSA   Lhasa             43.82 316   P      P      17 49 45.7 -0.6
LSA                                 LR     LR
      comp=Z,1µm,21.7s
LSA                                 LR     LR
      comp=Z,1µm,31.3s
LSA                                 LR     LR
      comp=Z,2µm,31.7s
LSA   Lhasa             43.82 316   P      P      17 49 46.2 -0.1
LSA                                 pmax   pmax
      comp=Z,21nm,0.7s
LSA   Lhasa             43.82 316   P      P      17 49 46.2 -0.1
SANVU Saraoutou         44.38 112   P      P      17 49 50.3 -0.2
SANVU                               IAmb   IAmb   17 50 09.7
      comp=Z,50nm,0.9s
USA0B Ussuriysk Arra    44.60   7deP      P      17 49 51.0 -0.8
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USA0B Ussuriysk Arra    44.60   7   P      P      17 49 51.7  0.0
USRK  Ussuriysk Ar.     44.60   7   P      P      17 49 52.2 +0.5
      comp=Z,13nm,0.5s,baz=185,slow=6.4,SNR=37
USRK                                LR     LR     18 06 55.3
      comp=Z,259nm,21.0s,baz=165,slow=34
USRK  Ussuriysk Ar.     44.60   7   P      P      17 49 51.3 -0.4
MDJ   Mudanjiang        44.77   5   P      P      17 49 53.8 +0.7
MDJ                                 pmax   pmax
      comp=Z,40nm,1.3s
MDJ                                 pmax   pmax
      comp=Z,220nm,3.9s
MDJ   Mudanjiang        44.77   5   P      P      17 49 52.5 -0.6
MDJ                                 IAmb   IAmb   17 50 05.1
      comp=Z,45nm,0.7s
TAPN  Taplejung         45.03 310 eP      P      17 49 55.6 -0.2
      comp=Z,48nm,0.7s
GTA   Gaotai            45.61 333 ⇑P      P      17 49 59.6 -0.4
GTA                                 pP     pP     17 50 12.2 -0.3
GTA                                 sP     pwP    17 50 17.0 +0.1
GTA                                 PcP    PcP    17 51 38.8 +1.0
GTA                                 ScP    ScP    17 55 27.1 +0.5
GTA                                 PcS    PcS    17 55 29.6 -2.4
GTA                                 sS     sS     17 56 58.9 -1.4
GTA                                 ScS    ScS    17 59 51.0 -1.1
GTA                                 pmax   pmax
      comp=Z,11nm,1.2s
GTA                                 pmax   pmax
      comp=Z,160nm,7.3s
GTA                                 LR     LR
      comp=Z,400nm,18.9s
GTA                                 LR     LR
      comp=Z,410nm,18.9s
GTA                                 LR     LR
      comp=Z,720nm,20.0s
TEY   Ternei            46.17  11⇓eP      P      17 49 54.9 -9.2
TEY                                e             17 50 04.6
TEY                                 pmax   pmax
      comp=N,20nm,0.9s
TEY                                 pmax   pmax
      comp=Z,20nm,0.8s
GUN   Gumba             46.71 310 eP      P      17 50 08.5 -0.7
      comp=Z,132nm,0.6s
ASAJ  Asahikawa         46.80  17   P      P      17 50 10.0 +0.9
      comp=Z,9.5nm,0.7s,baz=237,slow=7.9,SNR=24
JKA   Kamikawa-asahi    46.80  17   P      P      17 50 09.7 +0.6
JKA                                 IAmb   IAmb   17 50 26.8
      comp=Z,29nm,1.0s
PKI   Pulchoki          46.91 309 eP      P      17 50 09.6 -1.1
      comp=Z,39nm,0.6s
PKIN  Phulchoki         46.92 309 eP      P      17 50 09.6 -1.1
      comp=Z,42nm,0.7s
KKN   Kakani            47.12 309 eP      P      17 50 11.3 -0.8
      comp=Z,53nm,0.7s
DMN   Daman             47.16 309 eP      P      17 50 11.8 -0.8
      comp=Z,53nm,0.7s
DANN  Dangsing          48.56 309 eP      P      17 50 22.6 -0.8
      comp=Z,216nm,0.6s
HYB   Hyderabad         48.90 293 i P     P      17 50 24.0 -1.8
HYB   Hyderabad         48.90 293 eP      P      17 50 23.5 -2.4
HYB                                 IAmb   IAmb   17 50 27.8
      comp=Z,20nm,0.7s
YSS   Yuzh-Sakhalins    49.44  16 eP      P      17 50 29.8 +0.4
YSS                                e             17 50 44.5
YSS                                 pmax   pmax
      comp=Z,10.0nm,0.9s
YSS                                 MLR    MLR
      comp=Z,400nm,15.0s
HIA   Hailar            49.44 355   P      P      17 50 29.6 +0.1
HIA                                 pmax   pmax
      comp=Z,37nm,0.8s
HIA   Hailar            49.44 355   P      P      17 50 29.6 +0.1
KLR   Kul'dur           49.54   6   P      P      17 50 30.0 -0.2
      comp=Z,14nm,0.8s,baz=218,slow=4.4,SNR=39
KLR   Kul'dur           49.54   6c iP     P      17 50 29.9 -0.2
KLR                                 pmax   pmax
      comp=Z,23nm,0.9s
NGP   Nagpur            49.58 298 eP      P      17 50 29.8 -1.1
NGP                                 IAmb   IAmb   17 50 33.5
      comp=Z,12nm,0.6s
ULN   Ulaanbaatar       50.30 344deP      P      17 50 36.0 -0.2
ULN                                 pmax   pmax
      comp=Z,70nm,1.7s
ULN   Ulaanbaatar       50.30 344   P      P      17 50 35.5 -0.7
ULN                                 IAmb   IAmb   17 50 39.1
      comp=Z,33nm,0.9s
SONM  Songino Array     50.46 344   P      P      17 50 36.9 -0.4
      comp=Z,21nm,0.7s,baz=157,slow=9.0,SNR=68
SONM                                LR     LR     18 13 02.8
      comp=Z,357nm,19.6s,baz=147,slow=37
SONM  Songino Array     50.46 344   P      P      17 50 36.5 -0.8
GRNR  Gornyy            51.67   9⇓iP      P      17 50 47.5 +1.3
GRNR                                pmax   pmax
      comp=E,1.0nm,0.8s
GRNR                                pmax   pmax
      comp=N,5.0nm,0.9s
GRNR                                pmax   pmax
      comp=Z,8.0nm,0.9s
BHPL  Bhopal            51.69 300 eP      P      17 50 44.5 -2.5
BHPL                                IAmb   IAmb   17 50 48.1
      comp=Z,17nm,0.6s
CIT   Chita             52.87 351 eP      P      17 50 54.9 -0.3
CIT                                e             17 51 07.8
CIT                                e             17 52 05.3
CIT                                 pmax   pmax
      comp=Z,40nm,1.2s
TYV   Tymovskoe         53.01  14 eP      P      17 50 56.0 -0.1
TYV                                 pmax   pmax
      comp=Z,9.0nm,0.9s
TYV                                 pmax   pmax
      comp=Z,200nm,2.6s
ZAK   Zakamensk         53.64 343 eP      P      17 51 00.4 -0.5
ZAK                                 pmax   pmax
      comp=Z,14nm,1.0s
ZEA   Zeya              53.74   2 eP      P      17 51 02.0 +0.5
ZEA                                e             17 51 12.3
ZEA                                 pmax   pmax
      comp=Z,20nm,1.1s
TLY   Talaya            54.70 344   P      P      17 51 08.8 +0.3
      comp=Z,22nm,0.7s,baz=229,slow=5.0,SNR=14
TLY   Talaya            54.70 344 eP      P      17 51 09.3 +0.8
TLY                                 pmax   pmax
      comp=Z,47nm,0.6s
TLY                                 MLR    MLR
      comp=Z,1µm,24.0s
TLY   Talaya            54.70 344   P      P      17 51 07.9 -0.6
TLY                                 IAmb   IAmb   17 51 12.0
      comp=Z,23nm,0.8s
SMLA  Simla             54.93 309 eP      P      17 51 09.7 -0.8
SMLA                               i sP    PcP    17 52 03.5 -8.5
SMLA                               ex      x      17 54 43.8
WMQ   Urumqi            54.96 328   P      P      17 51 12.4 +1.8
WMQ                                 pP     pwP    17 51 26.0 -1.8
WMQ                                 sP     sP     17 51 32.7 +3.9
WMQ                                 pmax   pmax
      comp=Z,56nm,1.3s
WMQ                                 pmax   pmax
      comp=Z,290nm,5.7s
WMQ                                 LR     LR
      comp=Z,600nm,20.5s
WMQ                                 LR     LR
      comp=Z,460nm,23.5s
WMQ                                 LR     LR
      comp=Z,490nm,26.5s
WMQ   Urumqi            54.96 328   P      P      17 51 11.3 +0.7
WMQ                                 pmax   pmax
      comp=Z,56nm,1.2s
WMQ   Urumqi            54.96 328   P      P      17 51 11.3 +0.7
IRK   Irkutsk           55.04 345 eP      P      17 51 10.7 -0.2
IRK                                 pmax   pmax
      comp=Z,32nm,2.3s
MOY   Mondy             55.46 342 eP      P      17 51 13.9 -0.2
MOY                                 pmax   pmax
      comp=Z,30nm,1.7s
DHRM  DHARAMSHALA       56.07 310 eP      P      17 51 16.3 -2.7
DHRM                                IAmb   IAmb   17 51 18.9
      comp=Z,82nm,0.6s
ZSN   Zaisan            58.86 329 eP      P      17 51 37.1 -1.0
      comp=Z,5.3nm,0.8s,baz=329
ZSN   Zaisan            58.86 329 eP      P      17 51 37.1 -1.0
ZSN                                 pmax   pmax
      comp=Z,5.0nm,0.8s
NIL   Nilore            58.98 310   P      P      17 51 37.8 -1.4
NIL                                 pmax   pmax
      comp=Z,27nm,0.8s
NIL   Nilore            58.98 310   P      P      17 51 37.8 -1.4
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NIL                                  IAmb    IAmb    17 51 40.2
      comp=Z,26nm,0.8s
DGZ   Jazzator, Alta    59.15 333⇓eP     P       17 51 39.8 -0.4
DGZ                                  pmax    pmax
      comp=Z,28nm,0.8s
SHLS  Shalkode          59.27 323  eP    P       17 51 38.9 -2.3
      comp=Z,15nm,0.8s,baz=323
SHLS                               eS    S       17 59 41.6 -4.2
      baz=323
SHLS  Shalkode          59.27 323  eP    P       17 51 38.8 -2.3
SHLS                               eS    S       17 59 41.6 -4.2
SHLS                                 pmax    pmax
      comp=Z,15nm,0.8s
PDGK  Podgornoye        59.35 323  i P   P       17 51 40.6 -1.1
PDGK                                 pmax    pmax
      comp=Z,38nm,0.9s
UZB   Uzynbulak         59.53 322  eP    P       17 51 42.1 -0.9
      comp=Z,6.3nm,0.7s,baz=322
UZB                                eS    S       17 59 48.7 -0.6
      baz=322
UZB   Uzynbulak         59.53 322  eP    P       17 51 42.1 -0.9
UZB                                eS    S       17 59 48.6 -0.6
UZB                                  pmax    pmax
      comp=Z,6.0nm,0.7s
KSH   Kashi             59.61 317    P   P       17 51 43.6  0.0
KSH                                  pP      pP      17 51 54.2 -2.1
KSH                                  S       S       17 59 45.5 -4.9
KSH                                  ScS     ScS     18 01 29.2 -0.7
KSH                                  pmax    pmax
      comp=Z,9.0nm,1.5s
KSH                                  LR      LR
      comp=Z,130nm,9.4s
KSH                                  LR      LR
      comp=Z,120nm,6.7s
KSH                                  LR      LR
      comp=Z,690nm,20.2s
PEA0B Petropavlovsk-    59.67  22⇓eP     P       17 51 44.8 +1.2
PETK  Petropavlovsk-    59.67  22    P   P       17 51 44.8 +1.2
      comp=Z,14nm,0.8s,baz=197,slow=4.6,SNR=17
PETK  Petropavlovsk-    59.67  22    P   P       17 51 42.9 -0.6
MK31  Makanchi Array    59.79 327  i P   P       17 51 43.7 -0.9
MK31                                 pmax    pmax
      comp=Z,43nm,0.7s
MK31  Makanchi Array    59.79 327    P   P       17 51 43.4 -1.2
MKAR  Makanchi Array    59.79 327    P   P       17 51 43.7 -0.9
      comp=Z,41nm,0.6s,baz=120,slow=8.5,SNR=149
MKAR                                 PcP     PcP     17 52 30.2 -0.7
      comp=Z,11nm,0.7s,baz=117,slow=5.1,SNR=6.1
MKAR                                 LR      LR      18 19 13.8
      comp=Z,561nm,18.9s,baz=120,slow=38
MKAR                                 P4KPbc          18 28 48.4
      comp=Z,0.9nm,0.7s,baz=124,slow=4.7,SNR=11
MKAR  Makanchi Array    59.79 327  i P   P       17 51 43.5 -1.1
MKAR                                 pmax    pmax
      comp=Z,41nm,0.6s
MKAR  Makanchi Array    59.79 327    P   P       17 51 43.2 -1.3
SATY  Saty              59.86 322  eP    P       17 51 44.7 -0.5
      comp=Z,18nm,0.7s,baz=322
SATY  Saty              59.86 322  eP    P       17 51 44.7 -0.5
SATY                                 pmax    pmax
      comp=Z,17nm,0.7s
KPKS  Kokpek            59.91 323  eP    P       17 51 44.7 -0.8
      comp=Z,21nm,0.7s,baz=322
KPKS  Kokpek            59.91 323  eP    P       17 51 44.7 -0.8
KPKS                                 pmax    pmax
      comp=Z,21nm,0.7s
MAKZ  Makanchi          59.97 327    P   P       17 51 44.8 -1.0
MAKZ                                 pmax    pmax
      comp=Z,33nm,0.7s
MAKZ  Makanchi          59.97 327    P   P       17 51 44.8 -1.0
TNSS  Tian-Shan         60.75 321  eP    P       17 51 51.4 -0.3
      baz=321
TNSS  Tian-Shan         60.75 321  eP    P       17 51 51.4 -0.3
MDOK  Medeo             60.76 322  eP    P       17 51 50.7 -0.8
      baz=321
MDOK  Medeo             60.76 322  eP    P       17 51 50.6 -0.8
AAA   Alma-Ata          60.86 321  eP    P       17 51 51.5 -0.6
      comp=Z,18nm,0.8s,baz=321
AAA   Alma-Ata          60.86 321  eP    P       17 51 51.4 -0.6
AAA                                  pmax    pmax
      comp=Z,18nm,0.8s
TDK   Taldyqorghan      60.93 324  eP    P       17 51 51.6 -0.8
      comp=Z,35nm,0.7s,baz=324
TDK                                eS    S       18 00 06.0 -0.9
      baz=324
TDK   Taldyqorghan      60.93 324  eP    P       17 51 51.5 -0.8
TDK                                eS    S       18 00 05.9 -0.9
TDK                                  pmax    pmax
      comp=Z,35nm,0.7s
MTBS  Maitube           61.12 321  eP    P       17 51 52.1 -1.7
      baz=321
MTBS  Maitube           61.12 321  eP    P       17 51 52.9 -0.9
CHKK  Chushkaly         61.16 322  eP    P       17 51 52.7 -1.2
      baz=322
CHKK  Chushkaly         61.16 322  eP    P       17 51 52.7 -1.2
TKM2  Tokmak 2          61.54 321    P   P       17 51 58.3 +1.5
      SNR=6.0
TKM2  Tokmak 2          61.54 321  i P   P       17 51 56.0 -0.8
TKM2                                 pmax    pmax
      comp=Z,27nm,0.6s
KUU   Kurty             61.58 322  eP    P       17 51 55.5 -1.3
      comp=Z,53nm,0.7s,baz=322
KUU                                eS    S       18 00 13.8 -1.3
      baz=322
KUU   Kurty             61.58 322  eP    P       17 51 55.5 -1.3
KUU                                eS    S       18 00 13.8 -1.3
KUU                                  pmax    pmax
      comp=Z,53nm,0.7s
KBK   Karagaybulak      61.83 320    P   P       17 52 01.1 +2.4
      SNR=15
UCH   Uchtor            61.90 320    P   P       17 52 01.3 +1.8
      SNR=44
AAK   Ala-Archa         62.11 320    P   P       17 52 00.3 -0.3
      comp=Z,15nm,0.7s,baz=127,slow=6.2,SNR=35
AAK   Ala-Archa         62.11 320    P   P       17 52 00.6  0.0
      SNR=28
AAK   Ala-Archa         62.11 320ceP     P       17 52 01.6 +1.1
AAK                                  pmax    pmax
      comp=Z,152nm,1.7s
AAK   Ala-Archa         62.11 320    P   P       17 51 60.0 -0.6
AAK                                  IAmb    IAmb    17 52 04.8
      comp=Z,23nm,0.9s
CHMS  Chumysh           62.12 320    P   P       17 52 01.4 +0.9
      SNR=12
YAK   Yakutsk           62.13   3    P   P       17 52 00.3 +0.2
      comp=Z,51nm,0.7s,baz=316,slow=0.3,SNR=98
YAK   Yakutsk           62.13   3c iP    P       17 52 00.3 +0.2
YAK                                e*PP  pwP     17 52 17.0 -0.2
YAK                                e             17 52 41.7
YAK                                e             17 54 19.4
YAK                                eS    S       18 00 21.3  0.0
YAK                                e*SS  pS      18 00 31.9 -5.3
YAK                                e             18 01 47.2
YAK                                  pmax    pmax
      comp=Z,82nm,0.9s
YAK                                  pmax    pmax
      comp=N,26nm,1.1s
YAK                                  pmax    pmax
      comp=E,9.0nm,1.4s
YAK                                  pmax    pmax
      comp=Z,20nm,1.4s
YAK                                  smax    smax
      comp=N,77nm,1.5s
YAK                                  smax    smax
      comp=E,95nm,2.2s
YAK   Yakutsk           62.13   3    P   P       17 51 59.9 -0.2
USP   Ospenovka         62.41 321    P   P       17 52 03.7 +1.3
      SNR=44
SGDS  Sogindy           62.42 321  eP    P       17 52 01.4 -1.1
      comp=E,4.3nm,0.7s,baz=321
SGDS  Sogindy           62.42 321  eP    P       17 52 01.4 -1.1
SGDS                                 pmax    pmax
      comp=Z,4.0nm,0.7s
KBL   Kabul             62.55 310    P   P       17 52 02.9 -0.8
KBL                                  pmax    pmax
      comp=Z,38nm,0.9s
KBL   Kabul             62.55 310    P   P       17 52 02.9 -0.8
EKS2  Erkin-Say         62.58 320    P   P       17 52 03.8 +0.1
      SNR=53
MA2   Magadan           62.88  14    P   P       17 52 06.3 +1.2
      comp=Z,23nm,0.8s,baz=186,slow=8.8,SNR=32
MA2   Magadan           62.88  14c iP    P       17 52 06.5 +1.4
MA2                                  pmax    pmax
      comp=Z,32nm,0.8s
MA2   Magadan           62.88  14    P   P       17 52 05.8 +0.6
SEM   Semipalatinsk     63.09 330  eP    P       17 52 05.6 -1.4

      baz=330
SEM   Semipalatinsk     63.09 330  eP    P       17 52 05.6 -1.4
ZAA0  Zalesovo Array    63.28 335    P   P       17 52 06.2 -1.7
ZAA0                                 IAmb    IAmb    17 52 09.6
      comp=Z,17nm,0.8s
ZALV  Zalesovo Beam     63.28 335    P   P       17 52 06.2 -1.7
      comp=Z,17nm,0.6s,baz=125,slow=5.2,SNR=57
ZALV                                 LR      LR      18 20 21.6
      comp=Z,325nm,19.2s,baz=130,slow=37
ZALV  Zalesovo Beam     63.28 335    P   P       17 52 06.0 -1.9
BTLS  Baital            63.58 322  eP    P       17 52 08.8 -1.3
      comp=Z,4.2nm,0.6s,baz=322
BTLS  Baital            63.58 322  eP    P       17 52 08.7 -1.3
BTLS                                 pmax    pmax
      comp=Z,4.0nm,0.6s
KURBB Kurchatov Arra    64.09 329    P   P       17 52 12.2 -1.1
      comp=Z,42nm,0.7s,baz=130,slow=6.2,SNR=123
KURK  Kurchatov         64.10 329d iP    P       17 52 12.0 -1.4
KURK                                 pmax    pmax
      comp=Z,107nm,0.8s
KURK  Kurchatov         64.10 329    P   P       17 52 11.9 -1.5
DZA   Taraz             64.28 319  eP    P       17 52 13.5 -1.3
      comp=Z,9.5nm,0.7s,baz=319
DZA   Taraz             64.28 319  eP    P       17 52 13.5 -1.3
DZA                                  pmax    pmax
      comp=Z,9.0nm,0.7s
IUG   Iuzhnay           64.82 318  eP    P       17 52 17.1 -1.3
      comp=Z,15nm,0.7s,baz=318
IUG   Iuzhnay           64.82 318  eP    P       17 52 17.1 -1.3
IUG                                  pmax    pmax
      comp=Z,15nm,0.7s
KK31  Karatay Array     64.92 319    P   P       17 52 18.0 -0.9
KK31                                 pmax    pmax
      comp=Z,24nm,0.9s
KK31  Karatay Array     64.92 319    P   P       17 52 18.0 -0.9
KK31                                 IAmb    IAmb    17 52 21.2
      comp=Z,24nm,0.8s
KKAR  Karatay Array     64.92 319    P   P       17 52 17.9 -1.0
KKAR  Karatay Array     64.92 319    P   P       17 52 17.9 -1.0
KKAR  Karatay Array     64.92 319    P   P       17 52 17.9 -1.0
KKAR                                 IAmb    IAmb    17 52 21.2
      comp=Z,24nm,0.8s
BRLS  Borolday          65.33 319  eP    P       17 52 20.9 -0.8
      comp=Z,17nm,0.7s,baz=318
BRLS  Borolday          65.33 319  eP    P       17 52 20.8 -0.8
BRLS                                 pmax    pmax
      comp=Z,17nm,0.7s
SEY   Seymchan          66.19  13    P   P       17 52 28.1 +1.5
      comp=Z,11nm,1.0s,baz=217,slow=5.8,SNR=38
SEY   Seymchan          66.19  13⇓iP     P       17 52 28.6 +1.9
BRZS  Berezniki         66.87 326  eP    P       17 52 29.8 -1.6
      comp=Z,10nm,0.7s,baz=326
BRZS  Berezniki         66.87 326  eP    P       17 52 29.7 -1.6
BRZS                                 pmax    pmax
      comp=Z,10.0nm,0.7s
HRA   Herat             67.82 307    P   P       17 52 36.4 -1.5
BVAR  Borovoye Array    69.64 328    P   P       17 52 47.6 -0.9
      comp=Z,11nm,0.7s,baz=122,slow=8.6,SNR=80
BRVK  Borovoye          69.71 328⇑eP     P       17 52 48.1 -0.9
BRVK                                 pmax    pmax
      comp=Z,25nm,0.8s
BRVK  Borovoye          69.71 328    P   P       17 52 47.6 -1.4
BRVK                                 IAmb    IAmb    17 52 51.0
      comp=Z,22nm,0.8s
SOCY  Socotra           71.45 283    P   P       17 52 58.7 -1.8
SOCY                                 IAmb    IAmb    17 53 01.5
      comp=Z,39nm,0.9s
TIXI  Tiksi             71.73   1c iP    P       17 53 00.2 -0.7
TIXI                                 pmax    pmax
      comp=Z,175nm,1.7s
TIXI  Tiksi             71.73   1    P   P       17 52 59.8 -1.1
TIXI                                 IAmb    IAmb    17 53 01.6
      comp=Z,30nm,1.1s
GEYT  Alibeck           71.99 310    P   P       17 53 02.8 -0.4
      comp=Z,8.0nm,0.7s,baz=112,slow=3.5,SNR=8.9
GEYT                                 LR      LR      18 28 27.2
      comp=Z,147nm,19.4s,baz=30,slow=39
GEYT  Alibeck           71.99 310    P   P       17 53 02.5 -0.7
GYA0B ALIBECK ARRAY     71.99 310    P   P       17 53 02.4 -0.8
NRIK  Noril'sk          73.78 347    P   P       17 53 13.4 +0.3
      comp=Z,51nm,0.6s,baz=125,slow=5.5,SNR=129
NRIK                                 LR      LR      18 28 16.8
      comp=Z,218nm,21.5s,baz=145,slow=38
NRIK  Noril'sk          73.78 347ceP     P       17 53 12.9 -0.2
NRIK                                 pmax    pmax
      comp=Z,61nm,0.8s
NRIK  Noril'sk          73.78 347    P   P       17 53 13.0 -0.1
ABKAR Akbulak array     74.06 322    P   P       17 53 14.0 -1.1
ABKAR                                IAmb    IAmb    17 53 17.7
      comp=Z,29nm,0.7s
ABKAR Akbulak array     74.06 322    P   P       17 53 13.9 -1.3
SVE   Sverdlovsk        76.36 329deP     P       17 53 27.5 -0.7
SVE                                  pmax    pmax
      comp=Z,50nm,0.7s
ARU   Arti              77.28 329c iP    P       17 53 32.0 -1.4
ARU                                  *PP     pP      17 53 46.7  0.0
ARU                                  S       S       18 03 20.5 +1.0
ARU                                  SS      SS      18 08 14.3 -4.2
ARU                                  pmax    pmax
      comp=Z,38nm,0.8s
ARU   Arti              77.28 329    P   P       17 53 32.4 -1.1
ARU                                  IAmb    IAmb    17 53 35.9
      comp=Z,35nm,0.8s
ABPO  Ambohimpanom      78.36 251    P   P       17 53 40.5 +0.1
ABPO                                 pmax    pmax
      comp=Z,17nm,1.1s
ABPO  Ambohimpanom      78.36 251    P   P       17 53 40.5 +0.1
GAMB  Gambell           78.64  24    P   P       17 53 41.2 +0.4
GAMB                                 IAmb    IAmb    17 54 00.4
      comp=Z,36nm,1.3s
RDF   Al-Radifah        79.07 299  eP                17 53 42.4
LKRN  Lenkeran, Azer    79.33 309    P   P       17 53 46.3 +1.2
MIB   Mutribah          79.34 300  eP                17 53 43.5
MAW   Mawson            79.52 200    LR  LR          18 23 46.6
      comp=Z,247nm,21.7s,baz=58,slow=32
RST   Umm Al-Ruwaisa    79.61 300  eP                17 53 44.6
VNDA  Vanda             79.83 172    P   P       17 53 47.5 +0.4
      comp=Z,6.5nm,1.0s,baz=276,slow=10,SNR=2.9
VNDA                                 LR      LR      18 31 38.5
      comp=Z,119nm,18.0s,baz=330,slow=38
RAYN  Ar Rayn           80.40 294    P   P       17 53 49.6 -1.7
RAYN                                 pmax    pmax
      comp=Z,8.0nm,0.9s
RAYN  Ar Rayn           80.40 294    P   P       17 53 49.6 -1.7
SEKA  Sheki             80.91 312    P   P       17 53 53.9 +0.2
MNGR  Mingechevir, A    80.93 311    P   P       17 53 54.6 +0.9
ZKTA  Zakatala          81.39 312    P   P       17 53 57.0 +0.8
GANJ  Ganja             81.48 311    P   P       17 53 57.5 +0.8
ANM   Nome              81.51  24    P   P       17 53 56.7 +0.4
ANM                                  pmax    pmax
      comp=Z,13nm,1.2s
ANM   Nome              81.51  24    P   P       17 53 56.6 +0.4
NAX   Nakhchivan        81.93 309    P   P       17 54 00.0 +0.8
GROC  Groznyy           82.21 314  eP    P       17 54 01.0 +0.6
GROC                               e             17 57 11.8
GROC                                 pmax    pmax
      comp=Z,43nm,1.1s
BELG  Belogornoye       82.41 323ceP     P       17 54 00.3 -0.9
BELG                                 pmax    pmax
      comp=Z,23nm,0.9s
GNI   Garni             82.62 310⇓iP     P       17 54 04.1 +1.2
GNI                                  pmax    pmax
      comp=Z,26nm,1.6s
GNI   Garni             82.62 310    P   P       17 54 01.8 -1.1
GNI                                  IAmb    IAmb    17 54 17.6
      comp=Z,14nm,0.7s
KIRV  Kirov             82.62 329deP     P       17 54 02.1 -0.1
RDOG  Red Dog Mine      83.52  21    P   P       17 54 08.0 +1.3
ZEI   Tsey              83.54 313  eP    P       17 54 07.3 -0.3
ZEI                                  pmax    pmax
      comp=Z,38nm,1.4s
AKH   Akhalkalaki       83.70 312  ⇑P    P       17 54 09.9 +1.4
AKH   Akhalkalaki       83.70 312    P   P       17 54 09.0 +0.6
AKH                                  pmax    pmax
      comp=Z,106nm,0.9s
AKH   Akhalkalaki       83.70 312    P   P       17 54 09.0 +0.6
GEVA  Gevas             83.74 308    P   P       17 54 08.5 -0.2
NCK   Nalchik           83.84 314⇓eP     P       17 54 09.8 +0.9
NCK                                  pmax    pmax
      comp=Z,30nm,0.8s
KBZ   Khabaz            84.37 314    P   P       17 54 11.3 -0.1
      comp=Z,12nm,0.8s,baz=114,slow=2.6,SNR=24
KBZ                                  LR      LR      18 36 56.8
      comp=Z,94nm,18.5s,baz=64,slow=39
KBZ   Khabaz            84.37 314c iP    P       17 54 11.7 +0.2

KBZ                                  pmax    pmax
      comp=Z,25nm,1.0s
GOF   Gofitskoye        84.39 315⇑eP     P       17 54 13.0 +1.4
GOF                                  pmax    pmax
      comp=Z,50nm,0.8s
NEY   Neytrino          84.45 313⇑eP     P       17 54 14.3 +2.1
NEY                                  pmax    pmax
      comp=Z,8.0nm,0.9s
KIV   Kislovodsk        84.54 314  eP    P       17 54 13.0 +0.5
KIV                                  pmax    pmax
      comp=Z,49nm,1.0s
KIV                                  MLR     MLR
      comp=Z,335nm,20.0s
KIV   Kislovodsk        84.54 314    P   P       17 54 11.7 -0.8
KIV                                  IAmb    IAmb    17 54 15.0
      comp=Z,19nm,1.0s
TTA   Tatalina          85.14  27    P   P       17 54 15.0 -0.1
TTA   Tatalina          85.14  27    P   P       17 54 15.0 -0.1
MARD  Mardin            85.46 307    P   P       17 54 17.0 -0.4
MARD                                 IAmb    IAmb    17 54 19.1
      comp=Z,21nm,0.8s
PPT2  Papeete2          85.62 108  eS    S       18 04 48.0 +0.7
      comp=Z,222nm,27.0s
PPT2  Papeete2          85.62 108  eLR   LR          18 21 23.6
      comp=Z,334nm,26.0s
OHAK  Old Harbor        85.65  33    P   P       17 54 18.1 +0.5
OHAK                                 IAmb    IAmb    17 54 21.9
      comp=Z,25nm,0.9s
KOPT  Kop Dagi          85.86 310    P   P       17 54 19.5  0.0
TBI   Tubuai            85.87 113  eS    S       18 04 50.4 +1.0
      comp=Z,180nm,26.5s
TBI   Tubuai            85.87 113  eLR   LR          18 21 30.2
      comp=Z,219nm,28.5s
VRH   Novokhopyorsk     85.88 321  eP    P       17 54 18.4 -0.5
VRH                                  pmax    pmax
      comp=Z,170nm,1.6s
A21K  Barrow            86.44  18    P   P       17 54 22.2 +1.0
      baz=259
A21K  Barrow            86.44  18    P   P       17 54 21.5 +0.3
HOM   Homer             86.78  30    P   P       17 54 23.2 +0.1
      baz=264
VORD  Divnogorie        87.39 321  eP    P       17 54 26.2 -0.1
VORD                                 pmax    pmax
      comp=Z,50nm,0.8s
SUA   Susitna One       87.40  29    P   P       17 54 26.4 +0.1
SUA                                  IAmb    IAmb    17 54 27.0
      comp=Z,15nm,0.9s
VSR   Storozhevoye      87.48 321  eP    P       17 54 25.7 -1.0
VSR                                  pmax    pmax
      comp=Z,50nm,0.9s
LPSR  Galich'ya Gora    87.71 322  eP    P       17 54 27.1 -0.7
LPSR                                 pmax    pmax
      comp=Z,80nm,0.8s
KMBO  Kilima Mbogo      87.71 269    P   P       17 54 30.0 +1.0
      comp=Z,22nm,0.9s,baz=64,slow=6.6,SNR=38
KMBO                                 LR      LR      18 32 44.6
      comp=Z,328nm,19.4s,baz=92,slow=35
MLY   Manley            87.72  25    P   P       17 54 27.9 +0.2
      baz=265,SNR=8.7
TRF   Thorofare Moun    87.78  27    P   P       17 54 28.1 -0.1
TRF                                  IAmb    IAmb    17 54 29.1
      comp=Z,19nm,1.4s
RC01  Rabbit Creek A    87.85  29    P   P       17 54 27.8 -0.5
      baz=266
KLMR  Klimovskoe        87.91 331  eP    P       17 54 25.5 -3.0
KLMR                               e             17 57 51.3
KLMR                                 pmax    pmax
      comp=Z,53nm,1.3s
KLMR  Klimovskoe        87.91 331  eP    P       17 54 25.6 -3.0
KLMR                                 AMP             17 54 32.6
      comp=Z,53nm,1.3s
KLMR                               ePP   PP      17 57 51.3 -3.8
COLD  Coldfoot          88.13  23    P   P       17 54 30.1 +0.5
      baz=265,SNR=13
COLD  Coldfoot          88.13  23    P   P       17 54 30.5 +0.9
COLD                                 IAmb    IAmb    17 54 31.9
      comp=Z,11nm,0.9s
SYO   Syowa Base        88.19 201⇑eP     P       17 54 30.2 +0.5
SYO   Syowa Base        88.19 201⇓ePcP   PcP     17 54 33.2 +1.8
SYO   Syowa Base        88.19 201⇑epP    pP      17 54 45.6 +2.4
GHO   Glory Hole Cre    88.29  28    P   P       17 54 27.9 -2.5
GHO                                  IAmb    IAmb    17 54 48.2
      comp=Z,7.0nm,0.7s
GAZ   Gaziantep         88.30 307    P   P       17 54 31.2 +0.1
I23K  Minto, Yukon-K    88.31  25    P   P       17 54 30.8 +0.4
      baz=266,SNR=13
I23K  Minto, Yukon-K    88.31  25    P   P       17 54 30.9 +0.5
I23K                                 IAmb    IAmb    17 54 32.3
      comp=Z,32nm,1.4s
ANN   Anapa             88.35 315  eP    P       17 54 27.5 -3.5
ANN                                e*PP  pP      17 54 41.2 -3.4
ANN                                e             17 57 56.3
ANN                                eS    S       18 04 51.1  -21
ANN                                eSSS  SSS     18 14 29.3
ANN                                  pmax    pmax
      comp=Z,49nm,0.7s
NEA2  Nenana            88.40  25    P   P       17 54 31.3 +0.5
      baz=266
MCK   McKinley          88.41  26    P   P       17 54 30.3 -0.6
      baz=266,SNR=6.3
RND   Reindeer          88.42  27    P   P       17 54 30.8 -0.3
RND                                  pmax    pmax
      comp=Z,11nm,1.0s
RND   Reindeer          88.42  27    P   P       17 54 30.8 -0.3
RND                                  IAmb    IAmb    17 54 31.7
      comp=Z,11nm,1.0s
TOLK  Toolik Lake Re    88.48  21    P   P       17 54 31.7 +0.5
      baz=266,SNR=8.2
TOLK  Toolik Lake Re    88.48  21    P   P       17 54 32.2 +1.0
KNK   Knik Glacier      88.49  29    P   P       17 54 31.0 -0.4
KNK                                  IAmb    IAmb    17 54 32.9
      comp=Z,12nm,0.8s
MOS   Moscow            88.62 326  eP    P       17 54 29.7 -2.3
MOS                                e             17 54 43.4
MOS                                e             18 05 07.8
MOS                                  pmax    pmax
      comp=Z,62nm,1.0s
TMCR  Tamitsa           88.80 334  eP    P       17 54 31.3 -1.4
TMCR                                 pmax    pmax
      comp=Z,31nm,0.9s
WRH   Wood River Hil    88.82  26    P   P       17 54 32.6 -0.2
WRH                                  IAmb    IAmb    17 54 33.6
      comp=Z,16nm,1.2s
TOKA  Tokat             88.94 310    P   P       17 54 34.0  0.0
CCB   Clear Creek Bu    88.95  25    P   P       17 54 32.8 -0.6
CCB                                  IAmb    IAmb    17 54 33.9
      comp=Z,9.4nm,1.0s
OBN   Obninsk           89.21 325c iP    P       17 54 33.9 -0.9
OBN                                e             17 58 05.7
OBN                                eS    S       18 05 21.3 +1.2
OBN                                  pmax    pmax
      comp=Z,63nm,0.9s
OBN   Obninsk           89.21 325    P   P       17 54 34.3 -0.4
HDA   Harding Lake      89.31  26    P   P       17 54 34.7 -0.5
      baz=268
HDA   Harding Lake      89.31  26    P   P       17 54 34.5 -0.6
IL31                    89.35  25    P   P       17 54 34.1 -1.1
ILAR  Eielson Array     89.35  25    P   P       17 54 34.5 -0.8
      comp=Z,1.2nm,0.6s,baz=249,slow=4.9,SNR=17
ILAR                                 PKKPbc  PKKPbc  18 12 12.2 -1.6
      comp=Z,0.5nm,1.0s,baz=96,slow=0.9,SNR=4.6
ILAR  Eielson Array     89.35  25    P   P       17 54 33.9 -1.4
M24K  Tolsona, Glenn    89.60  28    P   P       17 54 37.4 +0.7
      baz=269
M24K  Tolsona, Glenn    89.60  28    P   P       17 54 36.8 +0.2
PAX   Paxson            89.94  27    P   P       17 54 38.8 +0.6
PAX                                  pmax    pmax
      comp=Z,22nm,1.4s
PAX   Paxson            89.94  27    P   P       17 54 38.8 +0.6
PAX                                  IAmb    IAmb    17 54 39.9
      comp=Z,22nm,1.4s
FYU   Fort Yukon        90.06  24    P   P       17 54 39.1 +0.5
FYU                                  IAmb    IAmb    17 54 41.1
      comp=Z,19nm,1.4s
RIDG  Independent Ri    90.22  26    P   P       17 54 39.4 -0.1
RIDG                                 IAmb    IAmb    17 54 40.7
      comp=Z,21nm,1.1s
N25K  Chitina, Valde    90.34  29    P   P       17 54 40.2 +0.1
      baz=270
N25K  Chitina, Valde    90.34  29    P   P       17 54 40.4 +0.3
DOT   Dot Lake          90.57  27    P   P       17 54 40.9 -0.2
SCRK  Sand Creek        90.60  26    P   P       17 54 41.8 +0.4
      baz=271
GLB   Gilahina Butte    90.72  29    P   P       17 54 42.5 +0.6
GLB                                  IAmb    IAmb    17 55 02.4
```

	comp=Z,8.8nm,1.0s						
MENT	Mentasta	90.74	27	P	P	17 54 42.7	+0.8
MENT				IAmb	IAmb	17 54 43.5	
	comp=Z,6.2nm,0.7s						
BR131	Keskin Array S	91.12	310	P	P	17 54 43.7	-0.6
BR131				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BR131	Keskin Array S	91.12	310	P	P	17 54 43.7	-0.6
BRTR	Keskin Array B	91.12	310	P	P	17 54 43.3	-1.0
	comp=Z,2.5nm,0.7s,baz=136,slow=6.2,SNR=16						
BRTR				LR	LR	18 42 57.7	
	comp=Z,33nm,19.3s,baz=102,slow=40						
BRTR	Keskin Array B	91.12	310	P	P	17 54 43.0	-1.3
BALM	Baldy	91.44	29	P	P	17 54 45.5	+0.2
BALM				pmax	pmax		
	comp=Z,8.0nm,1.0s						
BALM	Baldy	91.44	29	P	P	17 54 45.5	+0.2
BALM				IAmb	IAmb	17 55 01.6	
	comp=Z,8.1nm,1.0s						
YAH	Yahtse	91.77	30	P	P	17 54 47.1	+0.2
BARN	Barnard Glacie	91.78	29	P	P	17 54 48.2	+1.3
EGAK	Eagle	91.80	25	P	P	17 54 46.0	-0.7
CTGM	Chitina Glacie	91.94	29	P	P	17 54 47.7	0.0
ARCES	ARCESS Array B	93.46	340	P	P	17 54 53.0	-1.3
	comp=Z,4.5nm,0.7s,baz=86,slow=5.5,SNR=9.8						
ARCES	ARCESS Array B	93.46	340	P	P	17 54 53.0	-1.3
EPYK	Eagle Plains	93.48	24	P	P	17 54 54.9	+0.4
	baz=278						
EPYK	Eagle Plains	93.48	24	P	P	17 54 55.1	+0.6
AKASG	Malin Array Be	93.77	321	P	P	17 54 55.2	-0.8
	comp=Z,2.9nm,0.6s,baz=72,slow=4.5,SNR=22						
AKASG	Malin Array Be	93.77	321	P	P	17 54 54.8	-1.3
AKBB	Malin Array Si	93.77	321	P	P	17 54 55.2	-0.9
AKBB				pmax	pmax		
	comp=Z,10.0nm,1.1s						
AKBB	Malin Array Si	93.77	321	P	P	17 54 55.2	-0.9
AKBB				IAmb	IAmb	17 54 56.0	
	comp=Z,9.7nm,1.1s						
KIEV	Kiev	93.78	321	P	P	17 54 54.0	-2.1
HYT	Haines Junctio	93.82	29	P	P	17 54 56.8	+0.5
HYT				IAmb	IAmb	17 54 58.6	
	comp=Z,16nm,1.3s						
MNK	Minsk	94.25	325	*e*P	P	17 54 54.0	-4.2
MNK	Minsk	94.25	325	*i* P	P	17 54 57.0	-1.2
	comp=E,4.0nm,0.9s						
MNK				*i* P	P	17 54 57.0	-1.2
	comp=N,4.0nm,0.9s						
MNK				*i* P	P	17 54 57.0	-1.2
	comp=Z,55nm,0.9s						
MNK				*i* PP	PP	17 58 44.1	-1.3
MNK				*i* PPP	PPP	18 00 45.3	
MNK				*i* S	SKSac	18 05 27.3	-1.7
MNK				*i* SS	SS	18 12 30.2	+2.8
MNK				*i* SSS	SSS	18 16 09.4	
MNK				*i* LQ	LQ	18 31 37.7	
MNK				*i* LR	LR	18 37 10.8	
MNK				*i* LRM	MLR	18 38 38.6	
	comp=Z,82nm,17.1s						
MNK				*i* LRM	MLR	18 39 04.2	
	comp=N,186nm,17.7s						
MNK				*i* LRM	MLR	18 39 29.1	
	comp=E,11nm,19.0s						
FINES	FINESS Array B	94.39	332	P	P	17 54 57.1	-1.6
	comp=E,3.7nm,0.7s,baz=94,slow=7.6,SNR=13						
FINES	FINESS Array B	94.39	332	*i* P	P	17 54 57.4	-1.3
FINES				pmax	pmax		
	comp=Z,4.0nm,0.7s						
INK	Inuvik	94.40	21	P	P	17 54 58.7	+0.1
	comp=Z,5.7nm,1.0s,baz=277,slow=5.2,SNR=5.6						
INK	Inuvik	94.40	21	P	P	17 54 58.7	+0.1
INK				IAmb	IAmb	17 54 60.0	
	comp=Z,19nm,1.3s						
VSU	Vasula	94.45	329	*e*P	P	17 54 58.6	-0.4
SORM	Soroca	94.54	318	⇑P	P	17 54 58.8	-0.9
SORM	Soroca	94.54	318	⇑P	P	17 54 58.8	-0.9
NACGM	Naroch	94.84	325	*i* P	P	17 54 59.3	-1.6
NACGM				*i* P	P	17 54 59.3	-1.6
NACGM				*i* P	P	17 54 59.3	-1.6
NACGM				*i* PP	PP	17 58 35.0	-15
NACGM				*i* PPP	PPP	18 00 49.6	
NACGM				*i* SKS	SKSac	18 05 29.2	-3.0
NACGM				*i* SKKS	SKKSac	18 05 53.7	-0.8
NACGM				*i* S	S	18 06 09.8	-1.1
NACGM				*i* PS	PS	18 06 59.5	-34
NACGM				*i* SS	SS	18 12 15.8	-20
NACGM				*i* SSS	SSS	18 15 54.5	
NACGM				*i* LQ	LQ	18 26 59.3	
NACGM				*i* LR	LR	18 32 11.4	
WHY	Whitehorse	95.12	29	P	P	17 55 02.4	+0.1
WHY				IAmb	IAmb	17 55 04.7	
	comp=Z,9.3nm,0.9s						
HORU	Horodok	95.71	319	P	P	17 55 03.7	-1.3
KMPD	K-Podol'skiy	95.75	319	P	P	17 55 04.0	-1.2
TESR	Tescani	95.85	317	⇑P	P	17 55 05.7	-0.1
VRI	Vrincioaia	95.86	316	⇓P	P	17 55 06.0	+0.2
VRI	Vrincioaia	95.86	316	⇓P	P	17 55 06.0	+0.2
PLOR	Plostina	95.91	316	⇓P	P	17 55 06.2	+0.1
PLOR	Plostina	95.91	316	⇓P	P	17 55 06.2	+0.1
BIZ	Bicaz	96.17	317	⇓P	P	17 55 10.0	+2.8
PABE	Paberze	96.36	326	*e*P	P	17 55 07.5	-0.3
MLR	Muntele Rosu	96.44	316	⇑P	P	17 55 08.9	+0.3
MLR	Muntele Rosu	96.44	316	⇑P	P	17 55 08.9	+0.3
MLR	Muntele Rosu	96.44	316	P	P	17 55 08.7	+0.1
MLR				IAmb	IAmb	17 55 09.2	
	comp=Z,12nm,1.0s						
LSZ	Lusaka	96.50	255	P	P	17 55 07.7	-1.8
LSZ				pmax	pmax		
	comp=Z,9.0nm,0.8s						
LSZ	Lusaka	96.50	255	P	P	17 55 07.7	-1.8
LSZ				IAmb	IAmb	17 55 10.6	
	comp=Z,9.1nm,0.8s						
SGRR	Singureni	96.56	314	⇑P	P	17 55 18.4	+9.5
BURAR	Bucovina Array	96.69	318	⇑P	P	17 55 09.9	+0.2
BURAR	Bucovina Array	96.69	318	⇑P	P	17 55 09.9	+0.2
BURAR	Bucovina Array	96.69	318	P	P	17 55 09.5	-0.2
BUR08	Bucovina Ar. S	96.70	318	P	P	17 55 09.5	-0.2
BUR08				IAmb	IAmb	17 55 13.9	
	comp=Z,14nm,0.9s						
KSV	Kosov	96.71	319	P	P	17 55 08.4	-1.2
SUW	Suwalki	97.05	324	*e*P	P	17 55 10.3	-0.6
SUW	Suwalki	97.05	324	*e*P	P	17 55 10.4	-0.6
SUW	Suwalki	97.05	324	P	P	17 55 10.8	-0.2
SUW				pmax	pmax		
	comp=Z,52nm,1.1s						
SUW	Suwalki	97.05	324	P	P	17 55 10.8	-0.2
MORS	Morshin	97.36	319	P	P	17 55 12.4	-0.1
C36M	Paulatuk	97.44	20	P	Pdif	17 55 12.7	+0.3
	baz=290						
LOT	Lotru	97.97	316	⇓P	Pdif	17 55 15.6	+0.1
KWP	Kalwaria Pacla	98.06	320	*e*P	Pdif	17 55 16.0	+0.3
KWP	Kalwaria Pacla	98.06	320	P	Pdif	17 55 15.9	+0.2
KWP				pmax	pmax		
	comp=Z,54nm,0.6s						
KWP	Kalwaria Pacla	98.06	320	P	Pdif	17 55 15.9	+0.2
KOLS	Kolonicke sedl	98.45	319	*e*P	Pdif	17 55 17.6	+0.1
KOLS	Kolonicke sedl	98.45	319	*e*PDIFF	Pdif	17 55 17.6	+0.1
BOSA	Boshof	98.45	241	P	P	17 55 17.9	-0.2
	comp=Z,2.3nm,1.0s,baz=114,slow=12,SNR=3.1						
BOSA				LR	LR	18 35 58.8	
	comp=Z,392nm,20.0s,baz=92,slow=33						
UZH	Uzhgorod	98.49	319	⇑*i*P	Pdif	17 55 17.8	+0.2
UZH				*e*		17 55 30.1	
DRGR		98.50	317	⇑P	P	17 55 17.6	-0.2
DRGR		98.50	317	⇑P	P	17 55 17.6	-0.2
CRVS	Cervenica-Dubn	98.98	319	*e*P	Pdif	17 55 20.2	+0.4
CRVS	Cervenica-Dubn	98.98	319	*e*PDIFF	Pdif	17 55 20.2	+0.4
HERR	Herculane	99.00	315	⇓P	Pdif	17 55 20.1	+0.2
SIRR	Siria	99.30	317	⇑P	Pdif	17 55 21.5	+0.2
NIE	Niedzica	99.64	320	*e*P	Pdif	17 55 23.6	+0.8
OJC	Ojcow	99.80	321	*e*P	Pdif	17 55 23.6	+0.2
PSZ	Piszkesteto	100.19	319	P	Pdif	17 55 25.4	+0.1
NB2	NORSAR Subarra	101.44	333	P	Pdif	17 55 28.9	-1.6
	comp=Z,12nm,1.4s,baz=72,slow=4.4						
NB2	NORSAR Subarra	101.44	333	P	Pdif	17 55 28.9	-1.6
	baz=72,slow=4.4						
NOA	NORSAR Array B	101.44	333	P	Pdif	17 55 28.9	-1.6
	comp=Z,1.9nm,0.9s,baz=70,slow=4.5,SNR=5.6						
KSP	Ksiaz	101.83	322	*e*P	Pdif	17 55 33.1	+0.7
BRG	Berggiesshubel	103.26	323	*e*P	Pdif	17 55 39.9	+1.1
BRG				Amp		17 55 40.2	
	comp=Z,4.3nm,0.9s						
YKA	Yellowknife Ar	103.74	24	Pdiff	Pdif	17 55 41.6	+1.0
	comp=Z,0.2nm,0.5s,baz=303,slow=4.0,SNR=4.4						
YKA				PKiKP	PKiKP	17 59 58.9	+0.4
	comp=Z,0.5nm,0.8s,baz=324,slow=2.4,SNR=5.3						
YKA				PKKPbc	PKKPbc	18 11 33.0	-1.5
	comp=Z,0.3nm,0.7s,baz=107,slow=3.3,SNR=2.1						
YKA				PKKP	PKKPdf	18 11 41.1	-1.6
	comp=Z,0.2nm,0.6s,baz=115,slow=3.2,SNR=3.7						
GERES	GERESS Array B	103.98	321	Pdiff	Pdif	17 55 42.7	+0.5
	comp=Z,0.9nm,0.8s,baz=108,slow=4.3,SNR=5.4						
GERES				PP	PP	18 00 00.1	+0.3
	comp=Z,0.6nm,0.8s,baz=101,slow=6.9,SNR=2.1						
E04D	Cinebar	105.41	41	P	PKiKP	18 00 01.7	-0.3
	baz=287						
NVAR	Mina Array Bea	110.79	49	PKiKP	PKiKP	18 00 14.8	+2.2
	comp=Z,0.1nm,0.3s,baz=301,slow=0.5,SNR=2.4						
HLID	Hailey	111.85	42	P	PKiKP	18 00 14.5	+0.1
	baz=292						
MPMC	Manual Prospec	112.11	51	P	PKiKP	18 00 15.7	+0.6
	baz=287						
EGMT	Eagleton	112.94	37	P	PKiKP	18 00 16.7	+0.5
	baz=298						
IKP	In-Ko-Pah, Jac	114.17	54	P	PKPdf	18 00 18.7	-0.4
	baz=286						
BC3	Big Chuckawall	114.41	53	P	PKPdf	18 00 19.2	-0.3
	baz=287						
PDAR	Pinedale Array	115.42	42	PKP	PKPdf	18 00 22.0	+0.6
	comp=Z,0.5nm,0.8s,baz=122,slow=1.9,SNR=3.8						
PDAR				PKKPbc	PKKPbc	18 10 55.0	-1.6
	comp=Z,0.3nm,0.6s,baz=63,slow=2.4,SNR=2.6						
PDAR				PKKPab	PKKPab	18 11 01.9	+0.7
	comp=Z,0.2nm,0.4s,baz=107,slow=5.0,SNR=3.7						
PDAR				PKKP	PKKPdf	18 11 20.2	-0.6
	comp=Z,0.3nm,0.5s,baz=114,slow=3.6,SNR=3.7						
K22A	Casper	117.46	41	P	PKiKP	18 00 25.4	+0.1
	baz=298						
K22A	Casper	117.46	41	PKPdf	PKPdf	18 00 24.3	-0.9
PV03	Paradox Valley	117.81	46		PKPdf	18 00 24.7	-1.4
N23A	Red Feather La	118.67	42	P	PKiKP	18 00 27.8	0.0
	baz=298						
ISCO	Idaho Springs	119.40	43	P	PKPdf	18 00 29.1	-0.2
	baz=298						
SDCO	Great Sand Dun	120.41	45	P	PKPdf	18 00 30.4	-0.8
	baz=297						
TOA0	Torodi Ar. Sit	122.34	285		PKPdf	18 00 34.8	-0.3
TORD	Torodi Ar. Bea	122.34	285	PKP	PKiKP	18 00 35.5	+0.2
	comp=Z,2.9nm,0.7s,baz=68,slow=1.5,SNR=12						
TORD				PKKPbc	PKKPab	18 10 32.2	+1.3
	comp=Z,0.6nm,0.8s,baz=292,slow=4.0,SNR=1.9						
TORD	Torodi Ar. Bea	122.34	285		PKPdf	18 00 34.6	-0.5
ECSD	EROS Data Cent	122.96	35	P	PKiKP	18 00 35.8	+0.1
	baz=308						
ECSD	EROS Data Cent	122.96	35	PKPdf	PKiKP	18 00 36.0	+0.2
MNTX	Cornudas Mount	123.05	52	P	PKiKP	18 00 36.9	+0.5
	baz=293,SNR=6.5						
MNTX	Cornudas Mount	123.05	52	PKPdf	PKiKP	18 00 36.8	+0.5
F36A	Milaca	123.29	31	PKPdf	PKiKP	18 00 36.4	+0.1
I37A	Lemond, Waseca	124.58	33		PKPdf	18 00 38.4	-0.2
TXAR	Lajitas Array	125.34	53	PKP	PKiKP	18 00 41.9	+0.9
	comp=Z,1.1nm,0.8s,baz=299,slow=1.3,SNR=10						
TXAR	Lajitas Array	125.34	53	PKPdf	PKPdf	18 00 40.0	-0.6
KSU1	Kansas State U	125.72	39	P	PKiKP	18 00 41.4	+0.1
	baz=305						
WMOK	Wichita Mounta	126.62	45	P	PKPdf	18 00 42.7	-0.1
	baz=301						
MATQ	Matagami	126.93	18	P	PKPdf	18 00 42.4	-0.5
	baz=331						
JFWS	Jewell Farm	127.02	32	P	PKPdf	18 00 43.5	+0.2
	baz=314						
LSQQ	Lebel-sur-Quev	127.75	18	P	PKiKP	18 00 44.9	-0.2
	baz=332						
JCT	Junction City	127.90	50	P	PKiKP	18 00 45.7	-0.3
	baz=297						
JCT	Junction City	127.90	50	PKIKP	PKPdf	18 00 43.8	-1.6
JCT	Junction City	127.90	50	PKPdf	PKPdf	18 00 43.8	-1.6
S39A	Bolivar	128.63	39		PKPdf	18 00 45.9	-0.7
R40A	Maddies Statio	128.91	38	PKPdf	PKPdf	18 00 45.9	-1.2
DBIC	Dimbokro	129.53	278	PKP	PKiKP	18 00 50.5	+0.8
	comp=Z,2.0nm,0.4s,baz=249,slow=6.0,SNR=3.1						
CCM	Cathedral Cave	129.69	37	P	PKPdf	18 00 48.8	+0.3
	baz=310						
CCM	Cathedral Cave	129.69	37	PKIKP	PKPdf	18 00 48.1	-0.5
CCM	Cathedral Cave	129.69	37	PKPdf	PKPdf	18 00 48.0	-0.5
U40A	Yellville	129.74	40	PKPdf	PKPdf	18 00 48.1	-0.6
ALGO	Algonquin Park	130.09	21	P	PKiKP	18 00 49.9	0.0
	baz=329						
MIAR	Mount Ida	130.33	42	P	PKiKP	18 00 50.9	+0.2
	baz=305						
T42A	Van Buren	130.43	38	PKPdf	PKPdf	18 00 49.7	-0.3
SFIN	Lafayette	130.48	32	P	PKPdf	18 00 50.0	+0.1
	baz=316						
E56A	St. Veronique	130.58	18	P	PKPdf	18 00 50.1	+0.1
	baz=333						
I51A	Listowel	130.75	25	P	PKPdf	18 00 50.8	+0.3
	baz=325						
X40A	Basin Creek Fa	130.86	42	P	PKiKP	18 00 51.4	-0.4
	baz=306						
LCAR	Lake Charles	131.00	39	PKPdf	PKPdf	18 00 51.5	+0.4
D61A	St Aubert, Com	131.31	14	P	PKPdf	18 00 51.7	+0.4
	baz=340						
F60A	Warwick	132.01	16	P	PKiKP	18 00 53.3	-0.4
	baz=337						
LONY	Lake Ozonia	132.44	19	P	PKPdf	18 00 53.8	+0.2
	baz=333						
WCI	Wyandotte Cave	132.45	34	PKHKP	PKPpre	18 00 41.5	
WCI	Wyandotte Cave	132.45	34		PKPpre	18 00 41.5	
T47A	Sharon Grove	132.85	35	PKPdf	PKPdf	18 00 53.8	-0.8
R49A	Shelbyville	133.01	33		PKPdf	18 00 52.3	-2.6
I60A	Shoreham	133.55	18	P	PKiKP	18 00 56.4	-0.5
	baz=334						
M55A	Ridgway	133.61	25		PKiKP	18 00 57.4	+0.2
PLAL	Pickwick Lake	133.62	38		PKPdf	18 00 55.9	-0.2
K58A	Earlville	133.72	21	P	PKPdf	18 00 56.7	+0.6
	baz=331						
CMLA	Cha da Macela	133.74	327	PKHKP	PKPpre	18 00 45.1	
CMLA	Cha da Macela	133.74	327		PKPpre	18 00 45.1	
L57A	Andrews Acres	133.93	23	P	PKiKP	18 00 57.8	0.0
	baz=329						
U49A	Red Boiling Sp	133.95	35		PKPpre	18 00 46.1	
H64A	Troy	133.95	14	P	PKiKP	18 00 57.4	-0.3
	baz=340						
BINY	Binghamton	134.09	22	P	PKiKP	18 00 57.6	-0.6
	baz=330						
T50A	Nancy	134.12	34		PKPpre	18 00 49.0	
H65A	Eastbrook	134.12	13	P	PKiKP	18 00 57.7	-0.3
	baz=342						
O56A	Blue Knob Stat	134.69	25	P	PKiKP	18 00 59.2	-0.3
	baz=326						
N58A	Sunbury	134.97	23	P	PKiKP	18 00 59.7	-0.2
	baz=329						
L61B	Northampton	135.00	18	P	PKiKP	18 00 59.7	-0.2
	baz=335						
P56A	Dayton Farm, R	135.20	26	P	PKiKP	18 00 59.9	-0.6
	baz=325						
M60A	Port Jervis	135.34	21	P	PKiKP	18 01 00.5	-0.2
	baz=332						
S54A	Dingess, Beckl	135.39	30	P	PKPdf	18 01 00.0	+0.6
	baz=321						
PAGS	Pennsylvania G	135.49	24		PKPdf	18 00 58.3	-1.1
N60A	Cedar Hill Far	135.57	22	P	PKiKP	18 01 00.9	-0.2
	baz=331						
LRAL	Lakeview Retre	135.57	39	P	PKPdf	18 01 00.5	+0.7
	baz=311						
L64A	Middleborough	136.03	17	P	PKiKP	18 01 01.5	-0.5
	baz=337						
P59A	Jarrettsville	136.13	24	P	PKiKP	18 01 01.7	-0.6
	baz=328						
M64A	Tiverton	136.27	18	P	PKiKP	18 01 01.9	-0.6
	baz=336						
M66A	Nantucket	136.86	17	P	PKiKP	18 01 03.1	-0.6
	baz=338						
PLCA	Paso Flores	136.93	163	PKP	PKPdf	18 01 01.6	-0.6
	comp=Z,3.9nm,1.0s,baz=224,slow=2.9,SNR=4.6						
PLCA	Paso Flores	136.93	163	PKIKP	PKiKP	18 01 03.5	-0.5
PLCA	Paso Flores	136.93	163	PKPdf	PKiKP	18 01 03.5	-0.5
PLCA	Paso Flores	136.93	163	*e*P	PKiKP	18 01 06.2	+2.2
T57A	Hurt	137.03	29	P	PKiKP	18 01 03.4	-0.9
	baz=323						
S58A	Poland Farm, P	137.10	27	P	PKPdf	18 01 03.3	+0.8
	baz=325						
Q61A	Milford	137.20	23	P	PKiKP	18 01 03.6	-0.9
	baz=329						
KMSC	Kings Mountain	137.41	32	P	PKiKP	18 01 04.5	-0.5
	baz=319						
U57A	Blanch	137.44	29	P	PKiKP	18 01 04.9	-0.2
	baz=323						
S60A	Water View	137.65	26	P	PKiKP	18 01 05.3	-0.1
	baz=327						
V57A	Coltrane Farms	137.65	30	P	PKiKP	18 01 05.1	-0.4
	baz=322						
W56A	Indian Trail	137.82	32	P	PKiKP	18 01 05.6	-0.3
	baz=320						
T60A	Surry	138.08	26	P	PKiKP	18 01 05.7	-0.6
	baz=326						
CO02	Combarbal	145.33	156		PKPdf	18 01 18.3	+0.7
CO03	El Pedregal	145.77	156		PKPab	18 01 19.0	-0.2
CO01	Juntas del Tor	146.77	156		PKPdf	18 01 20.1	-0.1
LCO	Las Campanas	147.36	154	PKIKP	PKPdf	18 01 20.9	-0.4
LCO	Las Campanas	147.36	154		PKPdf	18 01 20.9	-0.4
PLTB	Pedras Altas	148.22	182	*e*P	PKiKP	18 01 27.3	-0.1
JTS	Las Juntas de	148.59	70	PKIKP	PKPdf	18 01 24.0	+0.6
JTS	Las Juntas de	148.59	70		PKPdf	18 01 24.0	+0.6
ITQB	Itaqui	150.30	177	*e*P	PKiKP	18 01 31.8	+0.1
PB14	IPOC Station P	151.21	150		PKiKP	18 01 34.1	0.0
ITAB	Concordia	152.62	186	*e*P	PKPbc	18 01 35.3	-1.0
CPUP	Villa Florida	153.57	175	PKPbc	PKiKP	18 01 39.9	+1.4
	comp=Z,2.8nm,0.5s,baz=96,slow=2.1,SNR=7.3						
CPUP	Villa Florida	153.57	175	PKIKP	PKiKP	18 01 39.0	+0.5
CPUP	Villa Florida	153.57	175		PKiKP	18 01 39.0	+0.5
CPUP	Villa Florida	153.57	175	*e*P	PKPbc	18 01 35.4	-3.0
PB07	IPOC Station P	153.86	147		PKiKP	18 01 40.7	+1.2
RCBR	Riachuelo	160.00	252	*e*P	PKPdf	18 01 44.5	+5.2
SAML	Samuel	167.85	138	PKIKP	PKPdf	18 01 46.0	-0.4
SAML	Samuel	167.85	138		PKPdf	18 01 46.0	-0.4

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*IDC **04** 17:45:09.7±0.5, 0°.20S×124°.95E, h0^{km}, mb4.4/29, mb1 4.4/32, mb1mx4.4/48, mbtmp4.4/32, ML3.9/2, MS3.9/3, Ms1 4.0/3, ms1mx3.5/41, Error ellipse: s-maj=20.8km s-min=12.6km az=81.0*

*NEIC **04** 17:45:15.0±2.3, 0°.31S±0°.08×124°.95E±0°.06, h43^{km}±3^{km}, mb4.7/21, Error ellipse: s-maj=11.9km s-min=8.5km az=171.0*

ISC 04 17:45:12.5±4.3**, 0°.18S**±0°.06×**124°.92E**±0°.06**, h17**^{km}±27^{km}**, n84, σ1^{s}.42**/82**, mb4.6**/41**, MS4.0**/3**, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUWI	Luwuk	2.32	248	Pn	Pn	17 45 48.9	-0.9
TNTI	Ternate	2.62	69	Pn	Pn	17 45 55.1	+1.1
TOLI2	Tolitoli	4.33	287	Pn	Pn	17 46 20.2	+2.6
SIJI	Sorong	6.38	96	Pn	Pn	17 46 46.8	+1.0
	2.4nm,0.3s,baz=302,slow=15,SNR=1.6						
SIJI				Sn	Sn	17 48 04.4	+6.1
	baz=233,slow=23,SNR=0.8						
KAPI	Kappang	7.05	227	Pn	Pn	17 46 55.7	+0.7
	baz=85,slow=19,SNR=0.8						
KAPI				Sn	Sn	17 48 19.3	+4.4
	11nm,0.3s,baz=121,slow=21,SNR=3.1						
KAPI	Kappang	7.05	227		Pn	17 46 55.4	+0.4
FAKI	Fak Fak	7.81	110	Pn	Pn	17 47 04.5	-0.9
FITZ	Fitzroy Crossi	17.82	178	P	P	17 49 20.3	-0.2
	0.3nm,0.3s,baz=26,slow=11,SNR=2.6						
WRA	Warramunga Arr	21.70	155	P	P	17 50 00.8	-2.0
	3.1nm,0.7s,baz=334,slow=11,SNR=1.4						
WRA				PcP	PcP	17 54 03.2	-0.6
	2.3nm,0.9s,baz=331,slow=2.9,SNR=4.6						
WRA	Warramunga Arr	21.70	155	P	P	17 50 00.2	-2.6
XMIS	Christmas Isla	21.72	241	P	P	17 50 02.5	-0.6
COEN	Coen	22.67	128	P	P	17 50 14.5	+1.2
TPUB	Ta-pu	23.71	350	P	P	17 50 25.0	+1.4
TPUB				IAmb	IAmb	17 50 40.0	
	comp=Z,56nm,1.1s						
GUMO	Guam	24.03	55	LR	LR	17 59 32.1	
	comp=Z,520nm,19.2s,baz=227,slow=36						
ASAR	Alice Springs	24.93	160	P	P	17 50 34.7	-0.3
	comp=Z,1.4nm,0.6s,baz=340,slow=8.9,SNR=1.5						
ASAR				PcP	PcP	17 54 10.6	0.0
	comp=Z,1.1nm,0.5s,baz=355,slow=2.4,SNR=5.1						
ASAR	Alice Springs	24.93	160	P	P	17 50 35.1	+0.2
ASAR					PcP	17 54 10.0	-0.5
CMAR	Chiang Mai Arr	31.54	307	P	P	17 51 35.0	+0.9
	comp=Z,1.2nm,0.7s,baz=134,slow=6.4,SNR=1.3						
CMAR				PcP	PcP	17 54 28.5	+1.7
	comp=Z,0.5nm,0.6s,baz=142,slow=1.1,SNR=4.7						
NWAO	Narrogin (SRO)	33.37	192	P	P	17 51 48.4	-1.5
	comp=Z,6.9nm,0.8s,baz=37,slow=5.1,SNR=2.2						
JNU	Nakatsue	33.59	9	P	P	17 51 52.4	+0.5
	comp=Z,12nm,0.9s,baz=222,slow=12,SNR=2.9						
STKA	Stephens Creek	35.25	155	P	P	17 52 07.2	+0.9
	comp=Z,3.6nm,0.7s,baz=331,slow=12,SNR=2.2						
STKA	Stephens Creek	35.25	155	P	P	17 52 06.8	+0.5
KSRS	Korea Array	37.55	4	P	P	17 52 27.1	+1.3
	comp=Z,3.1nm,0.8s,baz=178,slow=10,SNR=5.0						
MJAR	Matsushiro Arr	38.56	17	P	P	17 52 33.5	-0.9
	comp=Z,2.5nm,0.7s,baz=191,slow=7.7,SNR=3.6						
KWAJ	Kwajalein Atol	43.45	77	P	P	17 53 14.2	-0.8
LSA	Lhasa	43.80	316	P	P	17 53 17.7	-0.5
USRK	Ussuriysk Ar.	44.63	7	P	P	17 53 23.6	-0.3
	comp=Z,5.2nm,0.8s,baz=190,slow=5.5,SNR=4.9						
USRK	Ussuriysk Ar.	44.63	7	P	P	17 53 24.8	+0.8
MDJ	Mudanjiang	44.79	5	P	P	17 53 24.4	-0.9
MDJ				IAmb	IAmb	17 53 40.4	
	comp=Z,8.0nm,0.8s						
MDJ					PcP	17 55 07.3	+0.1
DZM	Mont Dzumac	45.92	121	LR	LR	18 14 27.0	
	comp=Z,180nm,19.5s,baz=298,slow=38						
GUN	Gumba	46.69	310	*e*P	P	17 53 42.0	+0.9
	comp=Z,18nm,0.5s						
PKI	Pulchoki	46.89	309	*e*P	P	17 53 41.8	-0.8
	comp=Z,12nm,0.8s						
PKIN	Phulchoki	46.90	309	*e*P	P	17 53 42.6	0.0
	comp=Z,7.3nm,0.6s						
KKN	Kakani	47.09	309	*e*P	P	17 53 44.4	+0.4
DMN	Daman	47.14	309	*e*P	P	17 53 43.9	-0.6
	comp=Z,13nm,0.7s						
DANN	Dangsing	48.54	309	*e*P	P	17 53 56.2	+0.9
	comp=Z,28nm,0.6s						
KLR	Kul'dur	49.57	6	P	P	17 54 02.8	+0.3
	comp=Z,3.8nm,0.7s,baz=233,slow=3.5,SNR=4.6						
SONM	Songino Array	50.46	344	P	P	17 54 10.5	+1.0
	comp=Z,4.5nm,0.8s,baz=158,slow=8.9,SNR=7.6						
SONM	Songino Array	50.46	344	P	P	17 54 10.3	+0.8
PETK	Petropavlovsk-	59.70	22	P	P	17 55 16.1	+0.1
	comp=Z,3.0nm,0.8s,baz=191,slow=6.9,SNR=3.0						
MK31	Makanchi Array	59.78	327	P	P	17 55 15.4	-1.3
MK31				IAmb	IAmb	17 55 18.7	
	comp=Z,4.7nm,0.9s						
MKAR	Makanchi Array	59.78	327	P	P	17 55 16.1	-0.6
	comp=Z,7.0nm,0.3s,baz=125,slow=8.1,SNR=34						
MKAR	Makanchi Array	59.78	327	P	P	17 55 15.9	-0.8
MAKZ	Makanchi	59.96	327	P	P	17 55 17.7	-0.2
AAK	Ala-Archa	62.09	320	P	P	17 55 34.8	+2.1
	comp=Z,1.9nm,0.3s,baz=107,slow=3.4,SNR=4.7						
AAK	Ala-Archa	62.09	320	P	P	17 55 32.3	-0.4
AAK				IAmb	IAmb	17 55 36.0	
	comp=Z,3.7nm,0.8s						
YAK	Yakutsk	62.15	3	P	P	17 55 32.1	-0.2
	comp=Z,11nm,0.7s,baz=232,slow=1.4,SNR=5.0						
YAK	Yakutsk	62.15	3	P	P	17 55 32.2	-0.2
MA2	Magadan	62.91	14	P	P	17 55 37.9	+0.3
	comp=Z,4.3nm,0.5s,baz=196,slow=11,SNR=5.4						
MA2	Magadan	62.91	14	P	P	17 55 37.8	+0.3
MA2				IAmb	IAmb	17 55 55.4	
	comp=Z,11nm,1.0s						
ZAA0	Zalesovo Array	63.28	335	P	P	17 55 39.2	-0.9
ZAA0				IAmb	IAmb	17 55 48.3	
	comp=Z,3.8nm,0.9s						
ZALV	Zalesovo Beam	63.28	335	P	P	17 55 39.9	-0.2
	comp=Z,1.6nm,0.3s,baz=143,slow=7.1,SNR=7.2						
ZALV	Zalesovo Beam	63.28	335	P	P	17 55 38.4	-1.7
KURBB	Kurchatov Arra	64.09	329	P	P	17 55 44.6	-0.9
	comp=Z,4.0nm,0.5s,baz=116,slow=6.4,SNR=32						
KURK	Kurchatov	64.10	329	P	P	17 55 44.8	-0.8
KKAR	Karatay Array	64.90	319	P	P	17 55 50.2	-0.8
SEY	Seymchan	66.22	13	P	P	17 56 00.8	+1.6
	comp=Z,2.4nm,0.9s,baz=194,slow=4.2,SNR=3.0						
BVAR	Borovoye Array	69.63	328	P	P	17 56 21.3	+0.5
	comp=Z,1.0nm,0.3s,baz=119,slow=10,SNR=8.1						
BRVK	Borovoye	69.70	328	P	P	17 56 19.6	-1.7
BRVK				IAmb	IAmb	17 56 22.7	
	comp=Z,4.6nm,0.8s						
GEYT	Alibeck	71.97	310	P	P	17 56 35.8	+0.4
	comp=Z,1.4nm,0.6s,baz=72,slow=4.7,SNR=2.3						
NRIK	Noril'sk	73.79	347	P	P	17 56 45.5	0.0
	comp=Z,9.0nm,0.5s,baz=115,slow=5.2,SNR=8.9						
NRIK	Noril'sk	73.79	347	P	P	17 56 45.4	0.0
ABKAR	Akbulak array	74.05	322	P	P	17 56 46.3	-1.1
ABKAR	Akbulak array	74.05	322	P	P	17 56 45.9	-1.5
ABKAR				IAmb	IAmb	17 56 49.7	
	comp=Z,4.3nm,0.7s						
AKH	Akhalkalaki	83.68	312	P	P	17 57 39.4	-1.4
GEVA	Gevas	83.72	308	P	P	17 57 40.9	-0.1

GEVA				IAmb	IAmb	17 57 42.8	
	comp=Z,12nm,0.9s						
KMBO	**Kilima Mbogo**	**87.67**	**269**	P	**P**	**17 58 02.8**	**+1.5**
	comp=Z,3.8nm,0.9s,baz=44,slow=8.8,SNR=4.3						
ILAR	**Eielson Array**	**89.38**	**25**	P	**P**	**17 58 06.6**	**-1.3**
	comp=Z,0.4nm,0.6s,baz=248,slow=5.7,SNR=2.7						
ILAR				LR	LR	18 34 59.3	
	comp=Z,32nm,20.1s,baz=298,slow=33						
BRTR	**Keskin Array B**	**91.10**	**310**	P	**P**	**17 58 15.9**	**-0.8**
	comp=Z,0.6nm,0.6s,baz=111,slow=4.1,SNR=3.1						
BCAR	**Beaver Creek A**	**91.66**	**27**	P	**P**	**17 58 18.4**	**-0.2**
ARCES	**ARCESS Array B**	**93.46**	**340**	P	**P**	**17 58 25.3**	**-1.5**
	comp=Z,3.9nm,0.9s,baz=74,slow=6.7,SNR=1.6						
AKASG	**Malin Array Be**	**93.76**	**321**	P	**P**	**17 58 27.2**	**-1.2**
	comp=Z,0.2nm,0.3s,baz=70,slow=4.8,SNR=4.0						
FINES	**FINESS Array B**	**94.39**	**332**	P	**P**	**17 58 30.9**	**-0.2**
	comp=Z,0.7nm,0.5s,baz=98,slow=6.2,SNR=1.5						
INK	**Inuvik**	**94.43**	**21**	P	**P**	**17 58 29.8**	**-1.5**
	comp=Z,1.3nm,0.8s,baz=274,slow=10,SNR=2.6						
TORD	**Torodi Ar. Bea**	**122.31**	**285**	PKP	**PKPdf**	**18 04 07.4**	**-0.3**
	comp=Z,0.7nm,0.5s,baz=52,slow=2.8,SNR=3.2						
MIAR	**Mount Ida**	**130.37**	**42**		PKPpre	18 04 08.9	
T42A	**Van Buren**	**130.48**	**38**		PKPpre	18 04 08.4	
N47A	**Urbana**	**130.88**	**31**		PKPpre	18 04 10.0	
P46A	**Rosedale**	**131.00**	**33**		PKPpre	18 04 11.2	
LCAR	**Lake Charles**	**131.04**	**39**		PKPpre	18 04 12.9	
TKL	**Tuckaleechee C**	**135.73**	**34**	PKhKP	PKPpre	18 04 26.8	
	comp=Z,6.1nm,0.7s,baz=52,slow=1.9,SNR=6.6						
TKL	**Tuckaleechee C**	**135.73**	**34**		PKPpre	18 04 18.7	
BG3	**Lake Jocassee**	**136.69**	**34**		**PKPdf**	**18 04 30.8**	**-3.7**
PLCA	**Paso Flores**	**136.92**	**163**	PKP	**PKPdf**	**18 04 32.9**	**-1.9**
	comp=Z,3.7nm,1.1s,baz=194,slow=4.2,SNR=3.3						
PLCA	**Paso Flores**	**136.92**	**163**		**PKPdf**	**18 04 33.0**	**-1.9**

IDC 04 17:51:24.2±14.0, 7°.71S×128°.54E, h152^{km}±156^{km}, mb2.9/1, mb1 3.2/4, mb1mx2.8/43, mbtmp3.6/4, ML3.5/3, Error ellipse: s-maj=101.7km s-min=57.6km az=24.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**10.71**	**195**	P	Pn	17 53 54.0	+0.4
	0.4nm,0.3s,baz=26,slow=9.9,SNR=19						
FITZ				S	Sn	17 55 51.9	-0.2
	0.3nm,0.3s,baz=120,slow=23,SNR=1.8						
WRA	**Warramunga Arr**	**13.40**	**156**	P	Pn	17 54 27.4	-1.1
	0.4nm,0.3s,baz=333,slow=13,SNR=6.5						
WRA				S	Sn	17 56 48.0	-8.9
	0.4nm,0.3s,baz=332,slow=24,SNR=5.6						
ASAR	**Alice Springs**	**16.68**	**163**	P	Pn	17 55 10.1	+0.9
	0.1nm,0.3s,baz=339,slow=10,SNR=1.8						
ASAR				S	S	17 58 08.7	-6.0
	0.1nm,0.3s,baz=354,slow=27,SNR=2.1						
MKAR	**Makanchi Array**	**68.04**	**328**	P	P	18 02 07.2	0.0
	0.1nm,0.3s,baz=116,slow=6.6,SNR=4.1						

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*SKHL **04** 17:52:25.7±0.3, 46°.50N×146°.50E, h350^{km}±4^{km}, mb4.5/15, msha4.9/5*

*IDC **04** 17:52:28.1±1.5, 46°.69N×146°.17E, h336^{km}±17^{km}, mb2.9/10, mb1 3.1/14, mb1mx2.9/51, mbtmp3.6/14, Error ellipse: s-maj=19.8km s-min=12.8km az=138.0*

*JMA **04** 17:52:28.5±0.5, 46°.16N×146°.35E, h359^{km}, M3.3*

ISC 04 17:52:27.5±0.6, 46°.45N±0°.07×146°.39E±0°.07, h337^{km}±7^{km}, n43, σ1^{s}.49/49, mb3.0/11, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**1.59**	**139**	*e*P	**Pn**	**17 53 13.5**	**-1.3**
KUR				AMB	AMB	17 53 16.9	
	90nm,0.7s						
KUR				*e*S	**S**	**17 53 52.0**	**-0.7**
KUR				A	A	17 53 57.7	
	80nm,0.8s						
KUR				A	A	17 53 57.7	
	50nm,0.8s						
YUK	**Yuzh-Kuril'sk**	**2.44**	**189**	*e*P	**Pn**	**17 53 21.5**	**+0.5**
YUK				AMB	AMB	17 53 25.9	
	170nm,0.7s						
YUK				*e*S	**S**	**17 54 05.6**	**+1.8**
YUK				A	A	17 54 06.9	
	130nm,0.8s						
YUK				A	A	17 54 06.9	
	270nm,0.8s						
GRPR	**Tuman**	**2.49**	**190**	*e*P	**Pn**	**17 53 21.6**	**+0.2**
GRPR				AMB	AMB	17 53 23.0	
	67nm,0.3s						
GRPR				*e*S	**S**	**17 54 05.0**	**+0.4**
GRPR				A	A	17 54 12.0	
	189nm,0.5s						
GRPR				A	A	17 54 12.0	
	298nm,0.5s						
YSS	**Yuzh-Sakhalins**	**2.55**	**283**	*e*P	**Pn**	**17 53 22.3**	**+0.5**
YSS				AMB	AMB	17 53 24.1	
	30nm,0.4s						
YSS				*e*S	**S**	**17 54 04.5**	**-0.9**
YSS				A	A	17 54 05.5	
	20nm,0.6s						
JRA	**Rausu**	**2.66**	**200**	P	**Pn**	**17 53 23.8**	**+1.0**
GLVR	**Golovnino**	**2.77**	**193**	*e*P	**Pn**	**17 53 25.4**	**+1.6**
GLVR				AMB	AMB	17 53 26.0	
	117nm,0.5s						
GLVR				*e*S	**S**	**17 54 12.4**	**+3.4**
GLVR				A	A	17 54 17.0	
	420nm,0.5s						
GLVR				A	A	17 54 17.0	
	217nm,0.5s						
JTKR	**Abashiri--Toko**	**3.03**	**216**	P	**Pn**	**17 53 27.3**	**+1.2**
JSE	**Soyaes**	**3.05**	**242**	P	**Pn**	**17 53 27.3**	**+1.0**
NMR	**Nemuro--Hokkai**	**3.11**	**189**	*i* P	**Pn**	**17 53 26.0**	**-0.9**
NMR				*i* S	**S**	**17 54 13.5**	**-1.1**
NEM2	**Nemuro 2**	**3.11**	**189**	P	**Pn**	**17 53 26.5**	**-0.4**
NEM2				*e*S	**S**	**17 54 12.3**	**-2.4**
JWK2	**Keihoku**	**3.33**	**252**	P	**Pn**	**17 53 30.4**	**+1.5**
ASAJ	**Asahikawa**	**3.55**	**230**	P	**Pn**	**17 53 32.5**	**+1.4**
	2.9nm,0.3s,baz=39,slow=5.2,SNR=22						
JKK2	**Kamakawa 2**	**3.64**	**226**	P	**Pn**	**17 53 33.2**	**+1.2**
JAK	**Akkeshi**	**3.65**	**200**	P	**Pn**	**17 53 31.7**	**-0.5**
JAK				*e*S	**S**	**17 54 21.7**	**-2.5**
JAR	**Ashorobuto**	**3.66**	**212**	P	**Pn**	**17 53 33.1**	**+0.9**
JCH	**Churui**	**4.40**	**211**	P	**Pn**	**17 53 39.2**	**-0.7**
JCH				*e*S	**S**	**17 54 34.7**	**-3.6**
JNBK	**Urakawa-nobuka**	**4.91**	**213**	P	**Pn**	**17 53 44.5**	**-1.0**
JEW	**Eniwo**	**5.04**	**226**	P	**Pn**	**17 53 47.9**	**+1.0**
TYV	**Tymovskoe**	**5.07**	**332**	*e*P	Pn	17 53 46.0	-1.0
TYV				AMB	AMB	17 53 48.2	
	34nm,0.8s						
JKB	**Kayabe**	**5.96**	**222**	P	**Pn**	**17 53 56.6**	**-0.8**
JOT	**Ohata**	**6.36**	**219**	P	**Pn**	**17 54 00.5**	**-1.5**
JANG	**Nango**	**7.03**	**212**	P	**Pn**	**17 54 08.4**	**-1.5**
NKL	**Nikolayevsk**	**7.66**	**333**	*e*P	**Pn**	**17 54 17.1**	**0.0**
NKL				AMB	AMB	17 54 19.6	
	13nm,0.4s						
SKR	**Severo-Kuril's**	**7.72**	**53**	*e*P	**Pn**	**17 54 16.8**	**-1.1**
SKR				AMB	AMB	17 54 18.9	
	60nm,0.8s						
JOM	**Ohasama**	**7.91**	**210**	P	**Pn**	**17 54 19.7**	**-0.6**
PAU	**Pauzhetka**	**8.50**	**50**	*e*P	Pn	17 54 24.1	-3.1
PAU				AMB	AMB	17 54 24.9	
	16nm,0.8s						
PETK	**Petropavlovsk-**	**9.89**	**43**	P	**Pn**	**17 54 42.9**	**-1.0**
	0.0nm,0.3s,baz=254,slow=10.0,SNR=1.6						
USRK	**Ussuriysk Ar.**	**10.39**	**263**	P	**Pn**	**17 54 49.4**	**-0.6**
	baz=60,slow=13,SNR=17						
EKMR	**Ekimchan**	**10.92**	**312**	*e*P	**Pn**	**17 54 55.0**	**-1.3**
EKMR				AMB	AMB	17 54 57.0	
	15nm,1.0s						
BMKR	**Bomnak**	**13.85**	**313**	*e*P	**P**	**17 55 30.2**	**+0.3**
BMKR				AMB	AMB	17 55 31.0	
	5.0nm,0.7s						
KROS	**Kirovskiy**	**14.69**	**310**	*e*rx	rx	17 55 43.5	
KSRS	**Korea Array**	**16.38**	**243**	P	**P**	**17 55 57.9**	**+0.3**
	0.1nm,0.3s,baz=55,slow=12,SNR=2.2						
SONM	**Songino Array**	**27.03**	**288**	P	**P**	**17 57 39.3**	**-0.4**
	0.2nm,0.3s,baz=90,slow=9.0,SNR=6.8						
ILAR	**Eielson Array**	**39.66**	**38**	P	**P**	**17 59 26.4**	**-0.9**
	0.7nm,0.8s,baz=254,slow=5.8,SNR=8.1						
MKAR	**Makanchi Array**	**42.91**	**295**	P	**P**	**17 59 52.0**	**-1.8**
	0.3nm,0.6s,baz=75,slow=6.4,SNR=4.1						
KURBB	**Kurchatov Arra**	**43.70**	**301**	P	**P**	**17 59 57.9**	**-2.1**
	0.3nm,0.5s,baz=72,slow=8.7,SNR=3.2						
INK	**Inuvik**	**44.37**	**32**	P	**P**	**18 00 04.2**	**-0.7**
	0.7nm,0.4s,baz=225,slow=4.8,SNR=1.9						
CMAR	**Chiang Mai Arr**	**47.84**	**251**	P	**P**	**18 00 35.6**	**+3.2**
	0.1nm,0.3s,baz=39,slow=4.6,SNR=1.6						
YKA	**Yellowknife Ar**	**53.88**	**35**	P	**P**	**18 01 16.0**	**-0.3**
	0.2nm,0.6s,baz=303,slow=6.7,SNR=2.6						
NVAR	**Mina Array Bea**	**66.61**	**58**	P	**P**	**18 02 44.6**	**+1.9**
	0.3nm,0.5s,baz=305,slow=8.6,SNR=2.0						
WRA	**Warramunga Arr**	**66.97**	**192**	P	**P**	**18 02 45.5**	**+0.8**
	0.6nm,0.5s,baz=8.3,slow=6.5,SNR=1.8						
PDAR	**Pinedale Array**	**68.59**	**50**	P	**P**	**18 02 56.0**	**+1.2**
	0.5nm,0.5s,baz=23,slow=0.8,SNR=4.8						
ASAR	**Alice Springs**	**70.69**	**192**	P	**P**	**18 03 09.4**	**+2.0**
	0.3nm,0.3s,baz=8.2,slow=6.0,SNR=18						

IDC 04 18:01:17.9±63.0, 21°.13S×178°.21W, h0^{km}, mb3.9/3, mb1 4.1/3, mb1mx3.7/44, mbtmp3.9/3, Error ellipse: s-maj=1156.0km s-min=171.6km az=84.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**37.34**	**245**	P	P	18 08 30.9	-1.4
	2.6nm,0.9s,baz=57,slow=6.2,SNR=4.4						
ASAR	**Alice Springs**	**44.19**	**257**	P	P	18 09 29.1	+0.1
	0.5nm,0.6s,baz=91,slow=7.4,SNR=16						
WRA	**Warramunga Arr**	**44.32**	**263**	P	P	18 09 30.7	+0.7
	1.1nm,0.6s,baz=94,slow=8.2,SNR=5.5						

IDC 04 18:04:05.4±1.9, 9°.14S×129°.06E, h0^{km}, mb3.1/1, mb1 3.4/4, mb1mx3.3/33, mbtmp3.2/4, ML3.0/3, Error ellipse: s-maj=61.9km s-min=23.7km az=77.0, Timor Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**9.50**	**200**	Pn	Pn	18 06 22.9	-0.7
	0.1nm,0.3s,baz=10,slow=11,SNR=2.5						
FITZ				Sn	Sn	18 08 14.5	+3.3
	0.1nm,0.3s,baz=339,slow=17,SNR=3.9						
WRA	**Warramunga Arr**	**11.89**	**155**	Pn	Pn	18 06 56.2	-0.1
	0.2nm,0.3s,baz=329,slow=13,SNR=5.7						
WRA				Sn	Sn	18 09 12.1	+2.3
	0.1nm,0.3s,baz=335,slow=21,SNR=3.6						
ASAR	**Alice Springs**	**15.17**	**163**	Pn	Pn	18 07 40.5	-0.5
	0.0nm,0.3s,baz=340,slow=9.6,SNR=7.7						
MKAR	**Makanchi Array**	**69.52**	**328**	P	P	18 15 16.0	+0.1
	0.1nm,0.4s,baz=115,slow=6.5,SNR=2.3						

IDC 04 18:20:44.0±2.4, 6°.63S×129°.17E, h0^{km}, mb3.3/1, mb1 3.7/3, mb1mx3.3/29, mbtmp3.5/3, ML3.7/2, Error ellipse: s-maj=199.3km s-min=30.9km az=68.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.15**	**160**	Pn	Pn	18 24 05.9	0.0
	0.4nm,0.3s,baz=334,slow=15,SNR=11						
WRA				Sn	Sn	18 26 27.0	-17
	1.0nm,0.3s,baz=329,slow=22,SNR=9.8						
ASAR	**Alice Springs**	**17.54**	**165**	P	Pn	18 24 50.0	-0.1
	0.3nm,0.3s,baz=336,slow=11,SNR=32						
ASAR				S	Sn	18 27 51.2	-15
	0.3nm,0.3s,baz=348,slow=25,SNR=5.7						
MKAR	**Makanchi Array**	**67.47**	**327**	P	P	18 31 41.8	0.0
	0.3nm,0.8s,baz=124,slow=6.3,SNR=3.0						

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*IDC **04** 18:28:19.2±1.2, 1°.29N×99°.71E, h208^{km}±6^{km}, mb3.4/9, mb1 3.5/9, mb1mx3.2/42, mbtmp3.9/9, Error ellipse: s-maj=50.2km s-min=12.7km az=51.0*

*DJA **04** 18:28:20.4±0.5, 1°N±3°×10°0E±°, h189^{km}±4^{km}, M3.4/12, MLv3.4/12*

ISC 04 18:28:19.1±0.7, 1°.38N±0°.07×99°.87E±0°.09, h206^{km}±6^{km}, n17, σ0^{s}.94/25, mb3.6/9, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MNSI	**Mandailing Nat**	**0.65**	**207**	P	**Pn**	**18 28 47.8**	**+0.2**
MNSI				S	**Sn**	**18 29 09.3**	**-0.5**
BKNI	**Bangkinang**	**1.57**	**132**	P	**Pn**	**18 28 54.4**	**+0.4**
BKNI				S	**Sn**	**18 29 20.4**	**-0.8**
PSI	**Prapat**	**1.70**	**326**	P	**Pn**	**18 28 54.9**	**-0.5**
	5.5nm,0.3s,baz=180,slow=7.6,SNR=19						
PSI				S	**Sn**	**18 29 22.3**	**-1.3**
	2.6nm,0.3s,baz=360,slow=16,SNR=10						
GSI	**Gunungsitoli**	**2.30**	**268**	P	**Pn**	**18 29 01.9**	**+0.7**
GSI				S	**Sn**	**18 29 33.4**	**-0.6**
PDSI	**Padang**	**2.35**	**165**	P	**Pn**	**18 29 01.9**	**0.0**
PDSI				S	**Sn**	**18 29 34.8**	**-0.6**
TSI	**Tuntungan**	**2.48**	**328**	P	**Pn**	**18 29 03.6**	**+0.4**
TSI				S	**Sn**	**18 29 37.5**	**-0.2**
SDSI	**Sungai Dareh**	**2.78**	**146**	P	**Pn**	**18 29 06.4**	**-0.1**
SDSI				S	**Sn**	**18 29 44.0**	**+0.3**
TPTI		**3.27**	**305**	P	**Pn**	**18 29 12.6**	**+0.3**
WRA	**Warramunga Arr**	**39.89**	**124**	P	**P**	**18 35 33.7**	**+0.4**
	1.6nm,0.4s,baz=302,slow=9.1,SNR=22						
ASAR	**Alice Springs**	**41.40**	**129**	P	**P**	**18 35 46.4**	**+0.7**
	0.3nm,0.4s,baz=300,slow=7.2,SNR=9.8						
ASAR				ScP	**ScP**	**18 41 06.8**	**-3.4**
	0.2nm,0.7s,baz=311,slow=5.1,SNR=4.3						
SONM	**Songino Array**	**46.62**	**6**	P	**P**	**18 36 27.6**	**+0.9**
	0.3nm,0.3s,baz=196,slow=9.0,SNR=3.6						
MKAR	**Makanchi Array**	**47.76**	**344**	P	**P**	**18 36 35.8**	**+0.3**
	1.0nm,0.3s,baz=159,slow=8.2,SNR=29						
ZALV	**Zalesovo Beam**	**53.84**	**349**	P	**P**	**18 37 20.8**	**+0.1**
	1.3nm,0.5s,baz=167,slow=7.3,SNR=9.3						
BRTR	**Keskin Array B**	**70.97**	**312**	P	**P**	**18 39 14.2**	**-0.5**
	0.9nm,0.7s,baz=133,slow=6.6,SNR=5.4						
FINES	**FINESS Array B**	**81.08**	**332**	P	**P**	**18 40 11.1**	**+0.1**
	0.4nm,0.3s,baz=110,slow=10,SNR=4.6						
ARCES	**ARCESS Array B**	**83.27**	**340**	P	**P**	**18 40 22.0**	**-0.3**
	3.3nm,0.8s,baz=101,slow=5.1,SNR=7.1						
GERES	**GERESS Array B**	**86.44**	**319**	P	**P**	**18 40 39.1**	**+0.5**
	0.2nm,0.5s,baz=56,slow=7.3,SNR=2.0						

IDC 04 18:37:26.5±2.2, 12°.42S×167°.06E, h0^{km}, mb3.5/3, mb1 3.8/4, mb1mx3.5/23, mbtmp3.7/4, ML4.2/1, Error ellipse: s-maj=70.7km s-min=32.1km az=144.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**7.59**	**292**	Pn	Pn	18 39 17.7	-0.7
	3.2nm,0.3s,baz=191,slow=16,SNR=2.4						
WRA	**Warramunga Arr**	**32.26**	**252**	P	P	18 43 57.7	+0.5
	0.2nm,0.4s,baz=84,slow=9.4,SNR=3.7						
ASAR	**Alice Springs**	**33.37**	**246**	P	P	18 44 06.5	-0.3
	0.4nm,0.5s,baz=77,slow=9.0,SNR=14						
ILAR	**Eielson Array**	**84.40**	**18**	P	P	18 50 00.5	0.0
	0.2nm,0.5s,baz=206,slow=7.7,SNR=7.0						

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*IDC **04** 19:02:28.7±1.9, 0°.52N×126°.34E, h0^{km}, mb3.3/3, mb1 3.5/3, mb1mx3.2/35, mbtmp3.3/3, Error ellipse: s-maj=177.7km s-min=24.6km az=65.0*

*DJA **04** 19:02:35.7±0.3, 0°S±3°×12°5E±°, h10^{km}, M3.7/12, mb3.9/2, MLv3.6/12*

ISC 04 19:02:36.2±1.3, 0°.0S±0°.1×125°.27E±0°.10, h49^{km}, n13, σ1^{s}.49/12, mb3.2/3, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMSI	**Cibinong**	**1.42**	**295**	P	**Pn**	**19 02 58.8**	**-0.8**
SANI	**Sanana**	**2.13**	**160**	P	**Pn**	**19 03 08.2**	**-1.1**
TNTI	**Ternate**	**2.25**	**69**	P	Pn	19 03 17.1	+6.2
GTOI	**Gorontalo**	**2.35**	**286**	P	**Pn**	**19 03 14.9**	**+2.5**
LUWI	**Luwuk**	**2.69**	**248**	P	**Pn**	**19 03 18.5**	**+1.5**
MRSI	**Marisa**	**3.36**	**279**	P	**Pn**	**19 03 23.6**	**-2.7**
NLAI	**Namlea**	**3.67**	**150**	P	**Pn**	**19 03 31.5**	**+1.0**
APSI	**Ampana**	**3.72**	**256**	P	**Pn**	**19 03 30.9**	**-0.3**
BNSI	**Bone**	**6.74**	**230**	P	**Pn**	**19 04 12.3**	**-0.3**
	0.1nm9.2nm,1.2s						
SPSI	**Sidrap Palu**	**6.74**	**235**	P	**Pn**	**19 04 12.2**	**-0.4**
WRA	**Warramunga Arr**	**21.69**	**156**	P	**P**	**19 07 22.4**	**-0.7**
	0.2nm,0.3s,baz=338,slow=11,SNR=3.7						
ASAR	**Alice Springs**	**24.95**	**161**	P	**P**	**19 07 55.7**	**+0.6**
	0.8nm,1.1s,baz=343,slow=7.4,SNR=5.0						
MKAR	**Makanchi Array**	**59.85**	**327**	P	**P**	**19 12 37.0**	**+0.2**
	0.4nm,0.4s,baz=127,slow=8.1,SNR=12						

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*IDC **04** 19:06:50.0±2.8, 43°.28N×105°.19W, h0^{km}, mb2.5/1, mb1 3.4/3, mb1mx3.2/43, mbtmp3.2/3, ML3.3/2, Error ellipse: s-maj=53.4km s-min=8.4km az=153.0*

*NEIC **04** 19:06:53.6±1.5, 43°.65N±0°.06×105°.26W±0°.05, h0^{km}±2^{km}, ML3.0/48, Error ellipse: s-maj=10.9km s-min=4.9km az=157.0*

ISC 04 19:06:52.2±0.9, 43°.66N±0°.05×105°.24W±0°.06, h0^{km}, n45, σ1^{s}.46/46, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	**Black Hills**	**0.98**	**62**	Pg	**Pb**	**19 07 12.3**	**+0.1**
K22A	**Casper**	**1.38**	**223**	Pg	**Pg**	**19 07 17.6**	**-1.0**
K22A				IAML		19 07 40.2	
	comp=E,273nm,1.0s						
K22A				IAML		19 07 43.6	
	comp=N,220nm,0.3s						
PHWY	**Pilot Hill**	**2.37**	**184**	Pn	**Pn**	**19 07 34.0**	**+1.5**
RWWY	**Rawlins**	**2.45**	**217**		**Pn**	**19 07 34.5**	**+0.9**
RLMT	**Red Lodge**	**3.23**	**298**	Pn	**Pn**	**19 07 45.2**	**+0.9**
RLMT				IAML		19 09 22.9	
	comp=N,30nm,1.8s						
RLMT				IAML		19 09 39.1	
	comp=N,28nm,4.2s						
PD31	**Pinedale Array**	**3.28**	**256**		**Pn**	**19 07 45.6**	**+0.6**
PDAR	**Pinedale Array**	**3.28**	**256**	Pn	**Pn**	**19 07 45.6**	**+0.6**
	comp=N,3.6nm,0.3s,baz=76,slow=16,SNR=47						
PDAR				Lg	Lg	19 08 31.2	
	comp=N,9.3nm,0.3s,baz=64,slow=32,SNR=18						
PDAR	**Pinedale Array**	**3.28**	**256**	Pn	**Pn**	**19 07 46.2**	**+1.2**
BW06	**Boulder Array**	**3.28**	**256**		**Pn**	**19 07 46.0**	**+0.9**
BW06				IAML		19 08 37.1	
	comp=N,28nm,0.8s						
YNE	**Yellowstone No**	**3.67**	**293**		**Pn**	**19 07 51.2**	**+0.7**
YNE				IAML		19 08 51.2	
	comp=E,27nm,0.7s						
YNE				IAML		19 08 55.5	
	comp=N,30nm,0.8s						
YMP	**Mirror Lake Pl**	**3.69**	**289**		**Pn**	**19 07 52.4**	**+1.6**
GCMT	**Greycliff**	**3.81**	**306**	Pn	**Pn**	**19 07 53.9**	**+1.7**
ISCO	**Idaho Springs**	**3.87**	**184**	Pn	**Pn**	**19 07 55.4**	**+2.1**
ISCO				IAML		19 08 57.7	
	comp=N,19nm,2.1s						
LOHW	**Long Hollow**	**3.89**	**271**		**Pn**	**19 07 55.0**	**+1.5**
LOHW				IAML		19 08 52.1	
	comp=N,18nm,4.9s						
H17A	**Grant Village**	**3.92**	**283**		**Pn**	**19 07 56.3**	**+2.5**
H17A				IAML		19 08 57.1	
	comp=E,16nm,0.6s						
FLWY	**Flagg Ranch**	**3.97**	**278**		**Pn**	**19 07 57.1**	**+2.6**
FLWY				IAML		19 08 30.3	
	comp=E,29nm,4.8s						
FLWY				IAML		19 09 20.8	
	comp=E,25nm,4.4s						
MOOW	**Moose Ponds**	**3.99**	**273**		**Pn**	**19 07 56.3**	**+1.5**
YPP	**Pitchstone Pla**	**4.06**	**281**		**Pn**	**19 07 57.5**	**+1.6**
YPP				IAML		19 09 17.8	
	comp=N,17nm,3.8s						
REDW	**Red Top Meadow**	**4.09**	**268**	Pn	**Pn**	**19 07 57.8**	**+1.6**
REDW				IAML		19 09 11.1	
	comp=N,31nm,1.3s						
O20A	**White River Ci**	**4.18**	**213**	Pn	**Pn**	**19 07 58.4**	**+1.0**
O20A				IAML		19 09 13.2	
	comp=E,30nm,0.9s						
YHH	**Holmes Hill**	**4.19**	**288**	Pn	**Pn**	**19 07 58.0**	**+0.5**
AHID	**Auburn Hatcher**	**4.38**	**260**		**Pn**	**19 07 59.4**	**-0.6**
YHB	**Horse Butte**	**4.42**	**286**		**Pn**	**19 08 01.8**	**+1.1**
YHB				IAML		19 09 54.0	
	comp=N,21nm,5.0s						
YHB				IAML		19 10 20.4	
	comp=E,14nm,4.3s						
YHL	**Hebgen Lake**	**4.43**	**288**		**Pn**	**19 08 01.9**	**+1.0**
YHL				IAML		19 09 24.0	
	comp=E,17nm,0.9s						
YHL				IAML		19 09 39.7	
	comp=N,17nm,1.7s						
RDMU	**Red Mountain**	**4.46**	**228**		**Pn**	**19 07 59.7**	**-1.6**
RDMU				IAML		19 09 28.4	
	comp=E,22nm,0.9s						
RDMU				IAML		19 09 59.1	
	comp=N,19nm,4.4s						
ECR	**Eagle Creek**	**4.51**	**264**		**Pn**	**19 08 03.8**	**+1.9**
SMCO	**Snowmass**	**4.67**	**197**		**Pn**	**19 08 06.4**	**+2.2**
SMCO				IAML		19 09 51.5	
	comp=N,20nm,4.8s						
BOZ	**Bozeman (W)**	**4.95**	**295**		**Pn**	**19 08 09.0**	**+1.0**
BOZ				IAML		19 09 32.4	
	comp=N,12nm,4.7s						
BOZ				IAML		19 09 42.4	
	comp=N,14nm,4.2s						
TCUT	**Toone Canyon**	**5.23**	**243**		**Pn**	**19 08 11.7**	**-0.1**
EGMT	**Eagleton**	**5.38**	**326**	Pn	**Pn**	**19 08 15.6**	**+1.9**
PV07	**Paradox Valley**	**5.82**	**207**	Pn	**Pn**	**19 08 21.6**	**+1.6**
SPUT	**South Promonto**	**5.83**	**249**		**Pn**	**19 08 20.8**	**+0.8**
PV23	**Carpenter Ridg**	**5.94**	**210**		**Pn**	**19 08 21.3**	**-0.3**
PV04	**Paradox Valley**	**5.95**	**209**		**Pn**	**19 08 20.5**	**-1.1**
PV20	**West Nyswonger**	**6.02**	**209**		**Pn**	**19 08 23.9**	**+1.3**
PV11	**David Mesa, Pa**	**6.02**	**208**		**Pn**	**19 08 24.4**	**+1.7**
PV16	**Nyswonger Mesa**	**6.03**	**209**		**Pn**	**19 08 24.6**	**+1.8**
SRU	**San Rafael Swe**	**6.04**	**223**		**Pn**	**19 08 23.4**	**+0.5**
PV03	**Paradox Valley**	**6.05**	**208**		**Pn**	**19 08 24.8**	**+1.7**
PV02	**Paradox Valley**	**6.06**	**207**	Pn	**Pn**	**19 08 25.7**	**+2.5**
PV17	**East Wray Mesa**	**6.07**	**209**		**Pn**	**19 08 24.9**	**+1.5**
TMUT	**Trail Mountain**	**6.25**	**228**		**Pn**	**19 08 25.6**	**-0.3**
Q16A	**Castle Valley**	**6.51**	**225**	Pn	**Pn**	**19 08 30.3**	**+0.9**
ULM	**Lac du Bonnet**	**9.18**	**41**	Pn	**Pn**	**19 09 05.0**	**-0.8**
	comp=N,0.5nm,0.3s,baz=230,slow=14,SNR=5.0						
ULM				Sn	**Sn**	**19 10 47.8**	**-2.0**
	comp=N,0.2nm,0.3s,baz=229,slow=1.4,SNR=7.1						
ULM				Lg	Lg	19 11 40.4	
	comp=N,0.2nm,0.3s,baz=145,slow=19,SNR=2.9						
YKA	**Yellowknife Ar**	**19.64**	**347**	P	**Pn**	**19 11 24.4**	**+1.0**
	comp=N,0.2nm,0.5s,baz=151,slow=9.3,SNR=4.6						

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*JMA **04** 19:07:11.2±0.2, 43°.28N×146°.78E, h64^{km}±2^{km}, M3.8*

*SKHL **04** 19:07:11.6±0.2, 43°.30N×146°.90E, h42^{km}, mb4.5/3*

ISC 04 19:07:10.2±2.7, 43°.29N±0°.08×146°.90E±0°.08, h32^{km}±17^{km}, n17, σ0^{s}.66/32, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**0.85**	**275**	P	**Pn**	**19 07 26.5**	**+0.6**
NEM2				*e*S	**Sb**	**19 07 37.7**	**+0.3**
NMR	**Nemuro--Hokkai**	**0.86**	**275**	*i* P	**Pn**	**19 07 26.0**	**0.0**
NMR				*i* S	**Sb**	**19 07 37.0**	**-0.8**
YUK	**Yuzh-Kuril'sk**	**1.05**	**315**	*i* P	**Pn**	**19 07 28.8**	**+0.1**
YUK				AMB	AMB	19 07 29.0	
	220nm,0.4s						
YUK				*i* S	**Sn**	**19 07 41.9**	**-0.4**
YUK				A	A	19 07 45.0	
	897nm,0.4s						
YUK				A	A	19 07 45.0	
	2µm,0.4s						
GRPR	**Tuman**	**1.07**	**311**	*i* P	**Pn**	**19 07 29.0**	**0.0**
GRPR				AMB	AMB	19 07 29.0	
	250nm,0.4s						
GRPR				*i* S	**Sn**	**19 07 42.0**	**-0.8**
GRPR				A	A	19 07 44.0	
	2µm,0.4s						
GRPR				A	A	19 07 44.0	
	2µm,0.4s						
JKHN	**Kushirohamanak**	**1.29**	**261**	P	**Pn**	**19 07 32.6**	**+0.7**
JKHN				*e*S	**Sn**	**19 07 48.2**	**+0.1**
JRA	**Rausu**	**1.44**	**297**	P	**Pn**	**19 07 34.6**	**+0.6**
JRA				*e*S	**Sn**	**19 07 51.9**	**0.0**
JNSB	**Nemuroshibetsu**	**1.46**	**290**	P	**Pn**	**19 07 34.7**	**+0.4**
JNSB				*e*S	**Sn**	**19 07 52.2**	**-0.1**
JNK	**Nakash**	**1.61**	**281**	P	**Pn**	**19 07 36.3**	**-0.1**
JNK				*e*S	**Sn**	**19 07 55.1**	**-1.0**
JAK	**Akkeshi**	**1.64**	**260**	P	**Pn**	**19 07 36.8**	**0.0**
JAK				*e*S	**Sn**	**19 07 56.0**	**-0.7**
KUR	**Kuril'sk**	**2.06**	**19**	*i* P	**Pn**	**19 07 43.0**	**+0.5**
KUR				AMB	AMB	19 07 43.0	
	60nm,0.4s						
KUR				*i* S	**Sn**	**19 08 06.5**	**-0.6**
KUR				A	A	19 08 09.0	
	298nm,0.4s						
KUR				A	A	19 08 09.0	
	357nm,0.4s						
JTKR	**Abashiri--Toko**	**2.27**	**288**	P	**Pn**	**19 07 46.2**	**+0.7**
JTKR				*e*S	**Sn**	**19 08 12.5**	**+0.1**
JOB	**Onbets**	**2.28**	**261**	P	**Pn**	**19 07 45.8**	**+0.3**
JOB				*e*S	**Sn**	**19 08 11.4**	**-1.1**
JAR	**Ashorobuto**	**2.28**	**271**	P	**Pn**	**19 07 46.1**	**+0.4**

JAR				*e*S	Sn	19 08 12.3	-0.4
JMP	Maruseppu	2.67	287	P	Pn	19 07 51.8	+0.9
JCH	Churui	2.68	257	P	Pn	19 07 51.3	+0.2
JCH				*e*S	Sn	19 08 21.6	-0.9
HRK	Horoka	2.75	275	*e*P	Pn	19 07 53.4	+1.2
HRK				*e*S	Sn	19 08 25.0	+0.7
JKK2	Kamakawa 2	3.07	282	P	Pn	19 07 57.6	+1.1

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*SOF **04** 19:18:09.3, 42°.57N×26°.97E, h15^{km}, MD2.5*
*ISK **04** 19:18:10.7, 42°.48N×26°.97E, h5^{km}, ML2.4/10*
*DDA **04** 19:18:11.5, 42°.40N×27°.08E, h5^{km}±2^{km}, ML1.8*
ISC 04 19:18:09.6±1.0, **42°.49N**±0°.02×**27°.00E**±0°.03, **h14**^{km}±9^{km}, **n31**, σ**1^{s}41**/49, **6C-7D, Bulgaria**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JMB	Yambol	0.31	266	PG	Pb	19 18 16.9	-0.1
JMB	Yambol	0.31	266	*i* Pg	Pb	19 18 16.7	-0.3
ROIA	ROIAK	0.66	24	*i* P	Pg	19 18 21.7	-0.9
EDRB	Edirne	0.67	197	PG	Pn	19 18 23.6	-1.1
EDRB				SG	Sn	19 18 33.5	-1.5
ARMN	Kirklareli, Me	0.70	153	*i* P	Pb	19 18 23.7	+0.1
ARMN				*i* S	Sg	19 18 32.4	-0.1
KIRK	Kırklareli	0.71	174	*i* P	Pn	19 18 24.2	-1.0
KIRK				IAML		19 18 39.0	
	comp=E,38nm,0.2s						
KIRK				IAML		19 18 39.0	
	comp=N,29nm,0.5s						
PRD	Provadia	0.77	22	*i* P	Pg	19 18 22.9	-1.6
PHSR	Pinarhisar	0.94	156	PG	Pn	19 18 29.3	+0.9
PHSR				SG	Sn	19 18 41.9	+0.2
VIZE	Kirklareli, Vi	1.10	145	*i* P	Pg	19 18 30.7	-0.1
VIZE				*i* S	Sn	19 18 45.4	-0.3
VIZE				IAML		19 18 49.0	
	comp=E,24nm,0.4s						
VIZE				IAML		19 18 49.0	
	comp=N,22nm,0.4s						
SZH	Strazhica	1.11	315	*i* P	Pb	19 18 29.0	-1.5
RAZG	Razgrad	1.14	341	⇓S	Sb	19 18 43.6	-2.1
CTYL	Yalikoy Yolu	1.39	136	PN	Pg	19 18 37.5	+1.1
CTYL				SN	Sg	19 18 57.1	+2.6
KDZ	Kurdzhali	1.45	235	PN	Pg	19 18 39.0	+1.6
KDZ				SN	Sg	19 18 58.9	+2.6
PSN	Preselentsi	1.47	36	*i* P	Pn	19 18 34.9	-0.8
SLVT	Silivri	1.55	144	PN	Pg	19 18 39.8	+0.5
SLVT				SN	Sg	19 19 00.7	+1.3
KESN	Edirne-Kesan	1.68	188	*i* P	Pg	19 18 43.8	+1.9
KESN				*i* S	Sb	19 19 00.6	-1.0
KESN				IAML		19 19 06.0	
	comp=E,17nm,0.6s						
KESN				IAML		19 19 09.0	
	comp=N,16nm,0.2s						
CTKS	Kestanelik-??a	1.68	138	PN	Pg	19 18 41.6	-0.2
CTKS				SN	Sg	19 19 04.4	+0.7
MAR4	Marsite Statio	1.71	172	PN	Pg	19 18 41.8	-0.7
MAR4				SN	Sg	19 19 04.6	-0.1
RDO	Rodhopi	1.73	220	PN	Pg	19 18 42.2	-0.6
RDO				SN	Sg	19 19 05.0	-0.3
GZKV	Gazikoy-Tekird	1.76	172	PN	Pg	19 18 42.7	-0.6
GZKV				SN	Sg	19 19 05.8	-0.3
ERIK	Erikli-Kesan	1.85	192	PN	Pg	19 18 43.9	-1.2
ENEZ	Enez	1.86	200	PN	Pg	19 18 43.9	-1.4
SGRR	Singureni	1.89	337	⇓P	Pb	19 18 44.2	+0.3
SGRR				⇓S	Sn	19 19 05.8	+0.7
KLYT	Kilyos	1.96	128	PN	Pb	19 18 45.7	+0.7
PLVB	Pleven	1.97	298	⇓P	Pg	19 18 49.2	+1.8
PLVB				⇓S	Sg	19 19 14.1	+1.2
ISK	Istanbul-Kandi	2.09	132	PN	Pb	19 18 47.5	+0.2
TIRR	Tirgusor	2.22	27	⇑P	Pb	19 18 50.0	+0.5
TIRR				⇑S	Sn	19 19 15.0	+1.8
ARMT	Armutlu	2.37	143	PN	Pb	19 18 51.6	-0.5
TPGR	Topolog	2.58	23	⇑P	Pb	19 18 55.0	-0.6
TPGR				⇑S	Sn	19 19 24.4	+2.2
CFR	Carcaliu	2.81	17	⇓P	Pb	19 18 58.0	-1.6
CFR				⇑S	Sn	19 19 30.5	+2.7
MLR	Muntele Rosu	3.10	346	⇓P	Pb	19 19 01.8	-2.7
MLR				⇑S	Sn	19 19 38.5	+3.4

IDC 04 19:29:33.8±53.0, **16°.38S**×**175°.63W**, **h0**^{km}, **mb4.1**/3, **mb1 4.3**/3, **mb1mx3.6**/48, **mbtmp4.1**/3, **Error ellipse: s-maj=999.5km s-min=177.8km az=78.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	41.69	240	P	P	19 37 24.6	+0.1
	2.1nm,0.8s,baz=98,slow=14,SNR=3.7						
WRA	Warramunga Arr	47.53	258	P	P	19 38 11.6	+0.2
	2.3nm,0.6s,baz=94,slow=7.1,SNR=3.0						
ASAR	Alice Springs	47.77	253	P	P	19 38 12.7	-0.6
	1.8nm,0.6s,baz=86,slow=8.6,SNR=17						

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*MOS **04** 19:31:55.7±1.6, 52°.58N×160°.80E, h16^{km}, mb4.9/33, MS3.6/5, Error ellipse: s-maj=5.9km s-min=3.3km az=107.2*
*KRSC **04** 19:31:57.6±1.7, 52°.67N×160°.77E, h24^{km}±20^{km}, ML4.9*
*BJI **04** 19:31:59.7±0.0, 53°.09N×160°.42E, h38^{km}, mB4.9/28, mb4.4/39, Ms4.5/12, Ms7 4.1/11*
*NEIC **04** 19:32:01.5±2.8, 52°.8N±0°.1×160°.62E±0°.10, h41^{km}±8^{km}, mb4.7/60, Error ellipse: s-maj=16.0km s-min=8.9km az=178.0*
*IDC **04** 19:32:03.6±2.1, 52°.93N×160°.42E, h48^{km}±19^{km}, mb4.0/28, mb1 4.1/32, mb1mx4.0/65, mbtmp4.2/32, ML4.3/3, MS3.8/21, Ms1 3.8/21, ms1mx3.6/47, Error ellipse: s-maj=15.3km s-min=10.6km az=145.0*
ISC 04 19:31:59.2±0.9, **52°.78N**±0°.03×**160°.69E**±0°.03, **h24**^{km}±5^{km}, **n387**, σ**1^{s}55**/418, **mb4.7**/117, **MS3.9**/23, **20C-24D, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPN	Mys Shipunski	0.51	309	PN	Pn	19 32 10.3	-0.8
SPN				S	Sn	19 32 17.5	-1.6
SPN	Mys Shipunski	0.51	309	*e*P	Pn	19 32 10.3	-0.8
SPN				*e*S	Sn	19 32 17.5	-1.6
NLC	Nalytchevo	0.90	296	PN	Pn	19 32 16.1	-0.3
NLC				S	Sn	19 32 28.1	-0.5
NLC	Nalytchevo	0.90	296	*e*P	Pn	19 32 16.1	-0.3
NLC				*e*S	Sn	19 32 28.1	-0.5
DALK	Dalny	1.20	283	PN	Pb	19 32 20.8	-0.4
DALK				S	Sb	19 32 37.1	+0.9
DALK	Dalny	1.20	283	*e*P	Pb	19 32 20.8	-0.4
DALK				*e*S	Sb	19 32 37.1	+0.9
UGLR	Uglovaya	1.20	292	PN	Pb	19 32 21.4	0.0
UGLR	Uglovaya	1.20	292	*e*P	Pb	19 32 21.4	0.0
SMAR	Somma	1.24	294	PN	Pb	19 32 21.6	-0.4
SMAR	Somma	1.24	294	*e*P	Pb	19 32 21.6	-0.4
PET	Petropavlovsk	1.25	282	*d i*PN	Pb	19 32 21.6	-0.6
PET				pmax	pmax		
	comp=Z,4μm,0.6s						
PET	Petropavlovsk	1.25	282	*e*P	Pb	19 32 21.7	-0.5
PET	Petropavlovsk	1.25	282		Pb	19 32 21.5	-0.7
AVH	Avacha	1.27	293	PN	Pb	19 32 22.5	-0.1
AVH	Avacha	1.27	293	*e*P	Pb	19 32 22.5	-0.1
KRER	Koryakskii	1.28	295	PN	Pb	19 32 22.7	-0.1
KRER	Koryakskii	1.28	295	*e*P	Pb	19 32 22.7	-0.1
KOK	Koryaka	1.34	293	PN	Pb	19 32 23.4	-0.3
KOK	Koryaka	1.34	293	*e*P	Pb	19 32 23.4	-0.3
KRX	Arik	1.36	296	PN	Pb	19 32 23.5	-0.6
KRX				S	Sb	19 32 41.3	+0.3
KRX	Arik	1.36	296	*e*P	Pb	19 32 23.5	-0.6
KRX				*e*S	Sb	19 32 41.3	+0.3
RUS	Russkaya	1.37	256	PN	Pb	19 32 23.4	-0.7
RUS				S	Sb	19 32 41.0	-0.2
RUS	Russkaya	1.37	256	*e*P	Pb	19 32 23.4	-0.7
RUS				*e*S	Sb	19 32 41.0	-0.2
KRMR	Karymshinskiy	1.55	273	PN	Pb	19 32 26.9	-0.4
KRMR				S	Sb	19 32 46.8	+0.4
KRMR	Karymshinskiy	1.55	273	*e*P	Pb	19 32 26.9	-0.4
KRMR				*e*S	Sb	19 32 46.8	+0.4
MTVR	Mutnovka	1.55	260	PN	Pb	19 32 26.3	-1.1
MTVR	Mutnovka	1.55	260	*e*P	Pb	19 32 26.3	-1.1
GRL	Gorelyy	1.61	263	PN	Pb	19 32 27.5	-0.8
GRL	Gorelyy	1.61	263	*e*P	Pb	19 32 27.5	-0.8
PEA0B	Petropavlovsk-	1.84	281	*d i*PN	Pb	19 32 30.7	-1.4
PEA0B	Petropavlovsk-	1.84	281	Pn	Pb	19 32 30.6	-1.5
PETK	Petropavlovsk-	1.84	281	P	Pb	19 32 30.6	-1.6
	comp=Z,314nm,0.3s,baz=268,slow=32,SNR=975						
PETK				S	Sb	19 32 53.1	-1.6
	comp=Z,123nm,0.3s,baz=89,slow=20,SNR=6.2						
PETK	Petropavlovsk-	1.84	281	Pn	Pn	19 32 30.3	+1.0
KDTR	Khodutka, Kamc	1.88	240	PN	Pb	19 32 30.9	-1.8
KDTR				S	Sb	19 32 53.7	-2.0
KDTR	Khodutka, Kamc	1.88	240	*e*P	Pb	19 32 30.9	-1.8
KDTR				*e*S	Sb	19 32 53.7	-2.0
GNL	Ganaly	1.89	300	PN	Pb	19 32 32.4	-0.6
GNL	Ganaly	1.89	300	*e*P	Pb	19 32 32.4	-0.6
APC	Apacha	2.14	275	PN	Pb	19 32 35.8	-1.5
APC				S	Sb	19 33 04.7	+1.3
APC	Apacha	2.14	275	*e*P	Pb	19 32 35.8	-1.5
APC				*e*S	Sb	19 33 04.7	+1.3
KZV	Kizimen	2.35	355	PN	Pn	19 32 38.7	+2.2
KZV				S	Sb	19 33 09.5	0.0
KZV	Kizimen	2.35	355	*e*P	Pn	19 32 38.7	+2.2
KZV				*e*S	Sb	19 33 09.5	0.0
TUMD	Tumrok D	2.43	356	*e*P	Pn	19 32 39.4	+1.9
TUMD				*e*S	Sn	19 33 09.1	+2.6
TUMR	Tumrok	2.53	353	PN	Pn	19 32 39.4	+0.5
TUMR	Tumrok	2.53	353	*e*P	Pb	19 32 41.6	-2.3
TUMR				*e*S	Sb	19 33 12.9	-1.7
PAU	Pauzhetka	2.73	243	PN	Pb	19 32 44.0	-3.3
PAU	Pauzhetka	2.73	243	*e*P	Pb	19 32 44.0	-3.3
KMNR	Kamenistaya	2.99	355	PN	Pb	19 32 49.3	-2.6
KMNR	Kamenistaya	2.99	355	*e*P	Pb	19 32 49.3	-2.6
BZMR	Bezymyannaya	3.16	358	PN	Pb	19 32 51.7	-3.1
BZMR	Bezymyannaya	3.16	358	*e*P	Pb	19 32 51.7	-3.1
KIRR	Kirishev	3.19	357	PN	Pb	19 32 52.2	-3.0
KIRR	Kirishev	3.19	357	P	Pb	19 32 52.2	-3.0
BZWR	Bezymyannyi-We	3.19	358	PN	Pb	19 32 52.8	-2.5
BZWR	Bezymyannyi-We	3.19	358	P	Pb	19 32 52.8	-2.5
KOZ	Kozyrevsk	3.32	352	PN	Pn	19 32 53.2	+3.5
KOZ	Kozyrevsk	3.32	352	*e*P	Pn	19 32 53.2	+3.5
ESO	Esso	3.36	341	PN	Pn	19 32 53.5	+3.3
ESO	Esso	3.36	341	*e*P	Pn	19 32 53.5	+3.3
KRSR	Krestovskiy	3.44	359	PN	Pb	19 32 56.1	-3.4
KRSR	Krestovskiy	3.44	359	*e*P	Pb	19 32 56.1	-3.4
SKR	Severo-Kuril’s	3.53	235	*e*PN	Pn	19 32 53.8	+1.2
SKR				*e*S	Sn	19 33 33.4	-0.1
SKR				smax	smax		
	comp=E,384nm,0.8s						
SKR				smax	smax		
	comp=N,381nm,0.8s						
SKR				MLR	MLR		
	comp=Z,400nm,10.0s						
SKR	Severo-Kuril’s	3.53	235	*e*P	Pn	19 32 53.8	+1.2
SKR				*e*S	Sn	19 33 33.5	-0.1
KLY	Klyuchi	3.54	360	PN	Pb	19 32 57.2	-3.9
KLY	Klyuchi	3.54	360	*e*P	Pb	19 32 57.2	-3.9
SRDR	Sredinnyy	3.59	351	PN	Pn	19 32 57.1	+3.7
SRDR	Sredinnyy	3.59	351	*e*P	Pn	19 32 57.1	+3.7
KBG	Krutoberegovo	3.67	18	PN	Pb	19 32 59.3	-4.1
KBG	Krutoberegovo	3.67	18	*e*P	Pb	19 32 59.3	-4.1
BDR	Baidarnaya	3.81	4	PN	Pn	19 33 00.4	+4.0
BDR	Baidarnaya	3.81	4	*e*P	Pn	19 33 00.4	+4.0
SMKR	Semkarok	3.84	6	PN	Pn	19 33 00.8	+4.0
SMKR	Semkarok	3.84	6	*e*P	Pn	19 33 00.8	+4.0
SRKR	Sorokina	3.89	4	PN	Pn	19 33 01.5	+3.9
SRKR	Sorokina	3.89	4	*e*P	Pn	19 33 01.5	+3.9
BKI	Bering	3.95	50	PN	Pn	19 32 58.8	+0.5
BKI	Bering	3.95	50	*e*P	Pn	19 32 58.8	+0.5
SMY	Shemya	8.14	85	PN	Pn	19 33 57.0	+1.2
SMY	Shemya	8.14	85	Pn	Pn	19 33 57.0	+1.2
MA2	Magadan	8.76	325	LR	LR	19 37 34.2	
	comp=Z,1μm,22.0s,baz=181,slow=39						
MA2	Magadan	8.76	325	⇓*e*PN	Pn	19 34 05.6	+1.2
MA2				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MA2	Magadan	8.76	325	Pn	Pn	19 34 04.8	+0.4
SEY	Seymchan	11.09	340	P	Pn	19 34 38.4	+2.4
	comp=Z,0.1nm,0.3s,baz=180,slow=20,SNR=2.6						
JKA	Kamikawa-asahi	14.77	241	Pn	Pn	19 35 27.0	+0.5
ASAJ	Asahikawa	14.77	241	P	Pn	19 35 27.1	+0.6
	comp=Z,1.2nm,0.3s,baz=70,slow=9.7,SNR=16						
GRNR	Gornyy	15.14	272	⇓*i*P	P	19 35 38.3	+2.0
GRNR				pmax	pmax		
	comp=E,10.0nm,0.6s						
GRNR				pmax	pmax		
	comp=N,4.0nm,0.8s						
GRNR				pmax	pmax		
	comp=Z,6.0nm,1.2s						
GRNR				MLR	MLR		
	comp=N,130nm,14.0s						
GRNR				MLR	MLR		
	comp=Z,180nm,15.0s						
ERM	Erimo	15.98	235	⇑*e*P	Pn	19 35 38.1	-4.2
ERM	Erimo	15.98	235	Pn	Pn	19 35 39.5	-2.8
ERM				IAmb	IAmb	19 35 55.8	
	comp=Z,67nm,1.1s						
KLR	Kul'dur	18.49	271	P	Pn	19 36 14.5	+0.8
	comp=Z,0.3nm,0.3s,baz=72,slow=9.3,SNR=14						
KLR				LR	LR	19 44 05.2	
	comp=Z,225nm,18.3s,baz=70,slow=39						
YAK	Yakutsk	18.91	311	P	P	19 36 17.1	-0.8
	comp=Z,0.1nm,0.3s,baz=288,slow=6.6,SNR=23						
YAK				LR	LR	19 44 31.8	
	comp=Z,276nm,18.0s,baz=86,slow=40						
YAK	Yakutsk	18.91	311	*e*P	P	19 36 17.2	-0.7
YAK				pmax	pmax		
	comp=Z,30nm,0.9s						
YAK				pmax	pmax		
	comp=E,9.0nm,1.0s						
YAK				pmax	pmax		
	comp=N,4.0nm,1.0s						
YAK				MLR	MLR		
	comp=Z,312nm,15.0s						
YAK				MLR	MLR		
	comp=E,144nm,13.0s						
YAK				MLR	MLR		
	comp=N,74nm,14.0s						
YAK	Yakutsk	18.91	311	P	P	19 36 15.4	-2.5
YAK				IAmb	IAmb	19 36 24.0	
	comp=Z,47nm,0.7s						
ZEA	Zeya	19.93	286	*e*P	P	19 36 28.7	-0.3
ZEA				pmax	pmax		
	comp=E,10.0nm,1.1s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.5s						
ZEA				MLR	MLR		
	comp=Z,100nm,14.0s						
USRK	Ussuriysk Ar.	20.75	257	P	P	19 36 37.6	-0.5
	comp=Z,6.4nm,0.7s,baz=54,slow=11,SNR=9.3						
USRK				LR	LR	19 45 15.2	
	comp=Z,262nm,18.5s,baz=62,slow=38						
USRK	Ussuriysk Ar.	20.75	257	P	P	19 36 36.7	-1.4
ANM	Nome	20.92	42	P	Pn	19 36 41.6	-0.7
ANM				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ANM	Nome	20.92	42		Pn	19 36 41.6	-0.7
MDJ	Mudanjiang	21.95	261	P	P	19 36 49.7	-1.3
MAJO	Matsushiro	22.64	233	P	P	19 36 58.7	+0.3
MAJO				pmax	pmax		
	comp=Z,20nm,0.8s						
MAJO	Matsushiro	22.64	233	P	P	19 36 58.7	+0.3
MAJO				IAmb	IAmb	19 37 05.0	
	comp=Z,20nm,0.8s						
MAT	Matsushiro	22.64	233	P	P	19 36 58.8	+0.4
MAT				*e*S	S	19 41 04.8	-0.1
MJAR	Matsushiro Arr	22.64	233	P	P	19 36 59.2	+0.8
	comp=Z,5.3nm,0.7s,baz=18,slow=11,SNR=15						
MJAR				LR	LR	19 46 17.6	
	comp=Z,127nm,21.4s,baz=55,slow=38						
MJAR	Matsushiro Arr	22.64	233	P	P	19 36 59.6	+1.2
RDOG	Red Dog Mine	23.09	35	P	P	19 37 04.4	+1.6
TIXI	Tiksi	23.52	335	⇓*e*P	P	19 37 05.2	-1.8
TIXI	Tiksi	23.52	335	P	P	19 37 04.9	-2.1
INU	Inuyama	24.17	233	P	P	19 37 13.7	+0.2
INU				IAmb	IAmb	19 37 24.1	
	comp=Z,14nm,0.9s						
TTA	Tatalina	24.69	49	P	P	19 37 19.9	+1.8
TTA				pmax	pmax		
	comp=Z,10.0nm,1.3s						
TTA	Tatalina	24.69	49	P	P	19 37 19.9	+1.8
JWT	Wachi	25.02	236	P	P	19 37 21.7	+0.4
JWT				IAmb	IAmb	19 37 38.7	
	comp=Z,17nm,1.2s						
HIA	Hailar	25.74	279	P	P	19 37 26.0	-1.7
HIA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
HIA	Hailar	25.74	279	P	P	19 37 26.0	-1.7
HIA				IAmb	IAmb	19 37 33.4	
	comp=Z,10nm,0.7s						
IMAR	Indian Mountai	25.99	42	P	P	19 37 30.8	+1.0
KDAK	Kodiak Island	26.64	60	LR	LR	19 48 33.5	
	comp=Z,88nm,18.1s,baz=250,slow=37						
KSRS	Korea Array	27.43	249	P	P	19 37 45.8	+2.8
	comp=Z,3.9nm,0.7s,baz=46,slow=9.8,SNR=8.0						
KSRS				LR	LR	19 49 43.8	
	comp=Z,101nm,18.7s,baz=52,slow=39						
TOLK	Toolik Lake Re	28.00	37	P	P	19 37 49.3	+1.5
KNK	Knik Glacier	28.25	52	P	P	19 37 49.0	-1.1
ILAR	Eielson Array	28.78	45	P	P	19 37 55.2	+0.4
	comp=Z,0.4nm,0.6s,baz=264,slow=7.2,SNR=10						
PRP	Porcupine Dome	29.35	43		P	19 38 00.5	+0.5
BMAR	Burnt Mountain	29.75	39	P	P	19 38 03.1	-0.3
H11N2	WAKE ISLAND Hy	33.34	169	T	T	20 13 54.3	
	baz=352,slow=74,SNR=270						
H11N3	WAKE ISLAND Hy	33.35	169	T	T	20 13 57.7	
	baz=352,slow=74,SNR=107						
H11N1	WAKE ISLAND Hy	33.35	169	T	T	20 13 53.2	
	baz=352						
INK	Inuvik	33.90	37	P	P	19 38 40.4	+0.7
	comp=Z,0.8nm,0.5s,baz=295,slow=5.1,SNR=1.7						
ULN	Ulaanbaatar	33.92	284	⇓*e*P	P	19 38 39.6	-0.7
ULN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ULN	Ulaanbaatar	33.92	284	P	P	19 38 38.2	-2.1
TLY	Talaya	34.17	292	⇑*e*P	P	19 38 43.9	+1.6
TLY				pmax	pmax		
	comp=Z,6.0nm,1.0s						
TLY				MLR	MLR		
	comp=Z,111nm,16.0s						
SONM	Songino Array	34.32	284	P	P	19 38 43.4	-0.4
	comp=Z,1.1nm,0.6s,baz=60,slow=7.8,SNR=12						
SONM				PcP	PcP	19 41 20.8	+1.4
	comp=Z,1.3nm,0.7s,baz=66,slow=1.7,SNR=8.4						
SONM				LR	LR	19 53 52.9	
	comp=Z,194nm,19.0s,baz=34,slow=38						
SONM	Songino Array	34.32	284	P	P	19 38 42.9	-0.9
H11S1	WAKE ISLAND Hy	34.52	170	T	T	20 15 21.9	
	baz=351,slow=76,SNR=31						
H11S3	WAKE ISLAND Hy	34.54	170	T	T	20 15 22.5	
	baz=351,slow=76,SNR=46						
H11S2	WAKE ISLAND Hy	34.54	170	T	T	20 15 24.7	
	baz=351,slow=76,SNR=22						
ZAK	Zakamensk	34.94	290	*e*P	P	19 38 43.7	-5.4
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.3s						
HHC	Hu-ho-hao-te	35.00	270	*e*P	P	19 38 51.2	+1.5
HHC				pmax	pmax		
	comp=Z,11nm,1.1s						
HHC				pmax	pmax		
	comp=Z,98nm,6.6s						
NRIK	Noril'sk	36.37	325	LR	LR	19 55 07.5	
	comp=Z,441nm,18.5s,baz=68,slow=38						
NJ2	Nanjing	36.50	252	*e*P	P	19 39 01.8	-0.7
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
EUNU	Eureka	42.17	14	P	P	19 39 50.8	+1.5
LZH	Lanzhou	42.70	270	*e*P	P	19 39 53.6	-0.7
LZH				pP	sP	19 40 04.6	+0.3
LZH				sP	pP	19 40 12.0	+11
LZH				pmax	pmax		
	comp=Z,18nm,1.6s						
GTA	Gaotai	43.00	277	⇑P	P	19 39 57.0	+0.4
GTA				pP	sP	19 40 08.6	+1.9
GTA				sP	pP	19 40 13.3	+9.5
GTA				PcP	PcP	19 41 47.8	+1.2
GTA				pmax	pmax		
	comp=Z,5.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,63nm,5.3s						
GTA				LR	LR		
	comp=Z,120nm,15.6s						
GTA				LR	LR		
	comp=Z,110nm,17.8s						
GTA				LR	LR		
	comp=Z,160nm,15.6s						
YKA	Yellowknife Ar	43.15	43	P	P	19 39 58.7	+1.3
	comp=Z,0.5nm,0.6s,baz=301,slow=7.4,SNR=6.9						
YKA	Yellowknife Ar	43.15	43	*i* P	P	19 39 57.7	+0.3
ZAA0	Zalesovo Array	43.25	303	P	P	19 39 56.4	-1.8
ZALV	Zalesovo Beam	43.25	303	P	P	19 39 56.2	-2.1
	comp=Z,1.3nm,0.6s,baz=64,slow=6.8,SNR=8.4						
ZALV				PcP	PcP	19 41 47.6	+0.6
	comp=Z,1.6nm,0.8s,baz=29,slow=3.6,SNR=4.3						
ZALV				LR	LR	19 59 17.6	
	comp=Z,195nm,18.2s,baz=64,slow=38						
ZALV	Zalesovo Beam	43.25	303	*i* P	P	19 39 56.5	-1.8
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ZALV	Zalesovo Beam	43.25	303	P	P	19 39 55.7	-2.5
RES	Resolute Bay	43.48	22	P	P	19 40 01.4	+1.6
	comp=Z,2.0nm,0.7s,baz=316,slow=14,SNR=8.2						
RES	Resolute Bay	43.48	22	P	P	19 39 59.4	-0.5
RES				pmax	pmax		
	comp=Z,3.0nm,1.0s						
RES	Resolute Bay	43.48	22	P	P	19 39 59.4	-0.5
DGZ	Jazzator, Alta	44.13	297	*de*P	P	19 40 05.3	-0.3
DGZ				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ZSN	Zaisan	46.81	296	*e*P	P	19 40 25.1	-1.6
	baz=295						
ZSN				*e*S	S	19 47 13.8	-1.6
	baz=295						
ZSN	Zaisan	46.81	296	*e*P	P	19 40 25.1	-1.6
ZSN				*e*S	S	19 47 13.8	-1.6
WMQ	Urumqi	47.41	290	*e*P	P	19 40 31.8	+0.3
WMQ				sP	sP	19 40 48.9	+7.3
WMQ				pmax	pmax		
	comp=Z,13nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,180nm,4.1s						
SPITS	Spitsbergen Ar	47.50	351	P	P	19 40 32.5	+0.7
	comp=Z,11nm,0.7s,baz=57,slow=8.3,SNR=12						
SPITS				LR	LR	20 00 15.0	
	comp=Z,89nm,18.5s,baz=240,slow=36						
SEM	Semipalatinsk	47.54	301	*e*P	P	19 40 29.9	-2.7
	baz=301						
SEM	Semipalatinsk	47.54	301	*e*P	P	19 40 29.9	-2.7
KURK	Kurchatov	48.20	302	*ce*P	P	19 40 35.8	-1.6
KURK				pmax	pmax		
	comp=Z,17nm,1.3s						
KURK	Kurchatov	48.20	302	P	P	19 40 35.6	-1.8
KURK				IAmb	IAmb	19 40 37.6	
	comp=Z,9.1nm,0.8s						
MK31	Makanchi Array	48.61	296	*c i*P	P	19 40 39.0	-1.7
MK31	Makanchi Array	48.61	296	P	P	19 40 38.7	-2.0
MK31				IAmb	IAmb	19 40 44.8	
	comp=Z,3.7nm,1.0s						
MKAR	Makanchi Array	48.61	296	P	P	19 40 39.1	-1.6
	comp=Z,2.4nm,0.5s,baz=57,slow=7.2,SNR=58						
MKAR	Makanchi Array	48.61	296	P	P	19 40 38.6	-2.1
MAKZ	Makanchi	48.77	296	P	P	19 40 40.8	-1.2
MAKZ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MAKZ	Makanchi	48.77	296	P	P	19 40 40.8	-1.2
MAKZ				IAmb	IAmb	19 40 46.0	
	comp=Z,5.1nm,0.8s						
DAG	Danmarks Havn	50.72	360	*i* P	P	19 40 57.0	+0.7
	comp=Z,5.8nm,0.7s						
DAG	Danmarks Havn	50.72	360	*i* P	P	19 40 57.0	+0.7
DAG				pmax	pmax		
	comp=Z,6.0nm,0.7s						
DAG	Danmarks Havn	50.72	360	*i* P	P	19 40 57.0	+0.7
DAG				IAmb	IAmb	19 40 58.6	
	comp=Z,5.8nm,0.7s						
BRVK	Borovoye	50.89	309	*d i*P	P	19 40 57.2	-0.7
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.5s						
BRVK	Borovoye	50.89	309	P	P	19 40 55.5	-2.4
BRVK				IAmb	IAmb	19 41 02.3	
	comp=Z,5.0nm,0.7s						
BRZS	Berezniki	51.66	305	*e*P	P	19 41 02.7	-1.1
	baz=305						
BRZS	Berezniki	51.66	305	*e*P	P	19 41 02.6	-1.1
TDK	Taldyqorghan	51.85	297	*e*P	P	19 41 04.2	-1.1
	comp=Z,8.6nm,0.9s,baz=297						
TDK	Taldyqorghan	51.85	297	*e*P	P	19 41 04.1	-1.1
TDK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
SHLS	Shalkode	52.47	294	*e*P	P	19 41 07.2	-2.8
	baz=294						
SHLS	Shalkode	52.47	294	*e*P	P	19 41 07.2	-2.8
KPKS	Kokpek	52.69	295	*e*P	P	19 41 09.9	-1.7
	baz=295						
KPKS	Kokpek	52.69	295	*e*P	P	19 41 09.9	-1.7
SATY	Saty	53.11	295	*e*P	P	19 41 13.2	-1.6
	baz=295						

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SATY  Saty              53.11 295  eP     P      19 41 13.1  -1.6
CHKK  Chushkaly         53.37 296  eP     P      19 41 14.3  -2.3
      baz=296
CHKK  Chushkaly         53.37 296  eP     P      19 41 14.2  -2.3
ARCES ARCESS Array B    53.70 342   P     P      19 41 17.7  -0.8
      comp=Z,1.9nm,0.5s,baz=42,slow=7.2,SNR=18
ARCES                               LR    LR     20 09 02.8
      comp=Z,79nm,18.8s,baz=300,slow=42
ARCES ARCESS Array B    53.70 342   P     P      19 41 17.4  -1.1
KUU   Kurty             53.70 297  eP     P      19 41 16.5  -2.4
      comp=Z,5.6nm,0.7s,baz=297
KUU   Kurty             53.70 297  eP     P      19 41 16.5  -2.4
KUU                                 pmax  pmax
      comp=Z,6.0nm,0.7s
MDOK  Medeo             53.79 296  eP     P      19 41 17.6  -2.2
      baz=296
MDOK                               eS     S      19 48 51.0  -1.9
      baz=296
MDOK  Medeo             53.79 296  eP     P      19 41 17.6  -2.2
MDOK                               eS     S      19 48 51.0  -1.9
AAA   Alma-Ata          53.83 296  eP     P      19 41 18.9  -1.2
      baz=296
AAA   Alma-Ata          53.83 296  eP     P      19 41 18.8  -1.2
ARU   Arti              53.87 318   LR    LR     20 06 23.0
      comp=Z,106nm,18.9s,baz=58,slow=38
ARU   Arti              53.87 318c iP     P      19 41 19.5  -0.4
ARU                                 S     S      19 48 54.1  +0.9
ARU                                 SS    SS     19 52 32.8  -0.8
ARU                                 pmax  pmax
      comp=Z,10.0nm,0.8s
ARU   Arti              53.87 318   P     P      19 41 18.7  -1.3
MTBS  Maitube           54.15 296  eP     P      19 41 20.8  -1.6
      baz=296
MTBS  Maitube           54.15 296  eP     P      19 41 20.7  -1.6
BTLS  Baital            54.16 299  eP     P      19 41 21.0  -1.3
      baz=299
BTLS  Baital            54.16 299  eP     P      19 41 20.9  -1.3
SUMG  Summit            54.23   7  i P    P      19 41 24.0  +1.2
SUMG  Summit            54.23   7  i P    P      19 41 24.0  +1.2
SUMG  Summit            54.23   7   P     P      19 41 23.6  +0.8
SUMG  Summit            54.23   7  i P    P      19 41 24.0  +1.2
TMCR  Tamitsa           55.22 333  eP     P      19 41 29.3  -0.3
TMCR                                pmax  pmax
      comp=Z,19nm,0.9s
NVAR  Mina Array Bea    55.51  70   P     P      19 41 35.2  +2.8
      comp=Z,0.6nm,0.7s,baz=298,slow=3.2,SNR=5.2
AAK   Ala-Archa         55.54 297⇓iP     P      19 41 31.7  -0.8
AAK                                 pmax  pmax
      comp=Z,36nm,1.0s
AAK   Ala-Archa         55.54 297   P     P      19 41 31.7  -0.8
AAK                                 IAmb  IAmb   19 41 37.5
      comp=Z,9.2nm,0.8s
ELK   Elko              55.66  66   P     P      19 41 35.3  +1.8
      comp=Z,1.3nm,0.8s,baz=304,slow=6.0,SNR=4.1
ELK   Elko              55.66  66   P     P      19 41 34.0  +0.5
ELK                                 pmax  pmax
      comp=Z,2.0nm,0.8s
ELK   Elko              55.66  66   P     P      19 41 34.0  +0.5
KIRV  Kirov             55.86 324deP     P      19 41 34.4  +0.2
MSF   Maaselka          56.03 338   P     P      19 41 36.6  +1.1
MSF                                 pmax  pmax
      comp=Z,20nm,0.9s
KSH   Kashi             56.86 293   P     P      19 41 45.1  +3.2
KSH                                 pP    sP     19 41 57.6  +5.6
KSH                                 PcP   PcP    19 42 42.3  +5.0
KSH                                 pmax  pmax
      comp=Z,5.0nm,1.4s
KSH                                 pmax  pmax
      comp=Z,94nm,6.0s
KSH                                 LR    LR
      comp=Z,360nm,4.1s
KSH                                 LR    LR
      comp=Z,980nm,9.0s
DZA   Taraz             57.06 299  eP     P      19 41 41.3  -1.8
      baz=299
DZA   Taraz             57.06 299  eP     P      19 41 41.3  -1.8
KK31  Karatay Array     57.35 300   P     P      19 41 43.0  -2.2
KK31                                pmax  pmax
      comp=Z,6.0nm,0.9s
KK31  Karatay Array     57.35 300   P     P      19 41 43.0  -2.2
KK31                                IAmb  IAmb   19 41 49.7
      comp=Z,5.9nm,0.8s
KKAR  Karatay Array     57.35 300   P     P      19 41 43.2  -2.0
KKAR                                pmax  pmax
      comp=Z,6.0nm,0.9s
KKAR  Karatay Array     57.35 300   P     P      19 41 43.2  -2.0
KKAR  Karatay Array     57.35 300   P     P      19 41 43.0  -2.2
KKAR                                IAmb  IAmb   19 41 49.7
      comp=Z,5.9nm,0.8s
PD31  Pinedale Array    57.36  61   P     P      19 41 44.9  -0.6
PDAR  Pinedale Array    57.36  61   P     P      19 41 47.6  +2.1
      comp=Z,1.2nm,0.9s,baz=274,slow=1.5,SNR=6.8
PDAR  Pinedale Array    57.36  61   P     P      19 41 45.4  -0.2
KLMR  Klimovskoe        57.40 330  eP     P      19 41 44.8  -0.4
KLMR                                pmax  pmax
      comp=Z,10.0nm,0.7s
KLMR  Klimovskoe        57.40 330  eP     P      19 41 44.9  -0.3
KLMR                                AMP          19 41 46.6
      comp=Z,10.0nm,0.7s
JOF   Joensuu           58.00 335   P     P      19 41 50.0  +0.6
CHTO  Chiang Mai        58.19 259   P     P      19 41 51.4   0.0
CHTO                                pmax  pmax
      comp=Z,12nm,1.4s
CHTO  Chiang Mai        58.19 259   P     P      19 41 51.4   0.0
CHTO                                IAmb  IAmb   19 41 53.8
      comp=Z,12nm,1.4s
ABKAR Akbulak array     58.27 311   P     P      19 41 49.6  -1.9
ABKAR Akbulak array     58.27 311   P     P      19 41 50.1  -1.4
ABKAR                               IAmb  IAmb   19 41 52.4
      comp=Z,2.8nm,1.0s
IUG   Iuzhnay           58.27 299  eP     P      19 41 50.1  -1.6
      comp=Z,3.3nm,0.7s,baz=299
IUG   Iuzhnay           58.27 299  eP     P      19 41 50.1  -1.6
IUG                                 pmax  pmax
      comp=Z,3.0nm,0.7s
CM31  Chiang Mai Arr    58.47 259   P     P      19 41 53.0  -0.3
CM31                                IAmb  IAmb   19 41 58.2
      comp=Z,5.4nm,1.1s
CMAR  Chiang Mai Arr    58.47 259   P     P      19 41 55.0  +1.7
      comp=Z,3.1nm,1.0s,baz=25,slow=6.7,SNR=20
CMAR  Chiang Mai Arr    58.47 259  i P    P      19 41 54.7  +1.4
CMAR                                pmax  pmax
      comp=Z,3.0nm,1.0s
CMAR  Chiang Mai Arr    58.47 259   P     P      19 41 53.6  +0.3
GUN   Gumba             59.28 277  eP     P      19 41 58.8  -0.5
      comp=Z,8.7nm,0.4s
VALR  Valaam            59.42 335  i P    P      19 41 59.5  +0.2
VALR                                pmax  pmax
      comp=Z,32nm,0.9s
SUF   Sumiainen         59.42 338   P     P      19 42 00.3  +1.0
SUF                                 pmax  pmax
      comp=Z,42nm,0.7s
KKN   Kakani            59.73 277  eP     P      19 42 02.0  -0.2
      comp=Z,9.2nm,0.4s
PKI   Pulchoki          59.82 277  eP     P      19 42 02.7  -0.2
      comp=Z,6.0nm,0.4s
PKIN  Phulchoki         59.82 277  eP     P      19 42 02.6  -0.3
      comp=Z,8.6nm,0.4s
DMN   Daman             59.97 277  eP     P      19 42 03.9   0.0
      comp=Z,10nm,0.6s
DANN  Dangsing          60.24 279  eP     P      19 42 05.7  -0.1
      comp=Z,14nm,0.7s
FIA1  FINESS Array S    60.55 337   P     P      19 42 07.2  +0.2
FINES FINESS Array B    60.55 337   P     P      19 42 07.2  +0.2
      comp=Z,11nm,0.6s,baz=37,slow=8.4,SNR=92
FINES                               LR    LR     20 11 22.8
      comp=Z,95nm,18.1s,baz=10,slow=39
FINES FINESS Array B    60.55 337  i P    P      19 42 07.1  +0.1
FINES                               pmax  pmax
      comp=Z,11nm,0.6s
FINES FINESS Array B    60.55 337   P     P      19 42 06.8  -0.2
PV05  Paradox Valley    60.92  65   P     P      19 42 10.1  -0.1
PV05                                IAmb  IAmb   19 42 13.0
      comp=Z,3.0nm,0.8s
PV13  Radium Mtn., P    61.01  64   P     P      19 42 09.8  -1.1
PV13                                IAmb  IAmb   19 42 37.6
      comp=Z,3.3nm,0.8s
BELG  Belogornoye       61.19 320d iP     P      19 42 11.9  +0.4
BELG                                pmax  pmax
      comp=Z,5.0nm,1.1s
EYMN  Ely               62.41  46   P     P      19 42 18.0  -1.8
EYMN                                IAmb  IAmb   19 42 22.6
      comp=Z,9.2nm,1.2s
NIL   Nilore            62.56 290   P     P      19 42 20.3  -0.8
NIL                                 pmax  pmax
      comp=Z,18nm,1.1s
NIL   Nilore            62.56 290   P     P      19 42 20.3  -0.8
OBN   Obninsk           62.97 328⇓eP     P      19 42 23.6  +0.2
OBN                                e             19 42 59.6
OBN                                e             19 44 46.5
OBN                                eS     S      19 51 10.9  +19
OBN                                 pmax  pmax
      comp=Z,39nm,2.5s
OBN                                 MLR   MLR
      comp=Z,105nm,18.0s
VSU   Vasula            62.99 335  eP     P      19 42 23.7  +0.2
VSU   Vasula            62.99 335deP     P      19 42 23.9  +0.4
VSU                                 pmax  pmax
      comp=Z,54nm,0.7s
MTSE  Matsula           63.49 337  eP     P      19 42 22.8  -4.0
NB201 NORSAR Array S    63.92 344   P     P      19 42 29.4  -0.3
NB2   NORSAR Subarra    63.94 344   P     P      19 42 30.0  +0.2
      comp=Z,2.1nm,0.5s,baz=29,slow=6.5
NOA   NORSAR Array B    63.94 344   P     P      19 42 29.6  -0.2
      comp=Z,0.5nm,0.7s,baz=14,slow=5.5,SNR=14
NOA                                 LR    LR     20 12 48.3
      comp=Z,25nm,18.8s,baz=300,slow=38
NORES NORESS Array B    64.17 344   P     P      19 42 31.8  +0.5
NORES                               pmax  pmax
      comp=Z,1.0nm,0.4s
LPSR  Galich'ya Gora    64.25 325  eP     P      19 42 31.6  -0.3
LPSR                                pmax  pmax
      comp=Z,20nm,0.7s
KBL   Kabul             64.28 294   P     P      19 42 29.3  -3.4
KBL                                 pmax  pmax
      comp=Z,5.0nm,0.8s
KBL   Kabul             64.28 294   P     P      19 42 29.3  -3.4
KBL                                 IAmb  IAmb   19 42 37.1
      comp=Z,5.1nm,0.8s
VRH   Novokhopyorsk     64.38 322  eP     P      19 42 31.8  -1.0
VRH                                 pmax  pmax
      comp=Z,20nm,0.6s
SLIT  Slitere, Latvi    64.83 337  eP     P      19 42 36.1  +0.5
VSR   Storozhevoye      65.30 324  eP     P      19 42 38.4  -0.4
VSR                                 pmax  pmax
      comp=Z,10.0nm,0.8s
VORD  Divnogorie        65.46 324  eP     P      19 42 39.2  -0.6
VORD                                pmax  pmax
      comp=Z,7.0nm,0.5s
NACGM Naroch            66.09 333  i P    P      19 42 44.2  +0.4
NACGM                              i P    P      19 42 44.2  +0.4
NACGM                              i P    P      19 42 44.2  +0.4
NACGM                              i PcP  sP     19 43 02.2  +8.2
NACGM                              i PP   PP     19 45 08.5  -0.3
NACGM                              i PPP  PPP    19 46 34.1
NACGM                              i S    S      19 51 19.9   -10
NACGM                              i SS   SS     19 55 30.7   -14
NACGM                              i SSS  SSS    19 58 31.9
NACGM                              i LQ   LQ     20 06 12.3
NACGM                              i LR   LR     20 11 05.6
MNK   Minsk             66.14 332  i P    P      19 42 43.2  -0.9
      comp=E,3.0nm,1.2s
MNK                                i P    P      19 42 43.2  -0.9
      comp=N,20nm,1.0s
MNK                                i P    P      19 42 43.2  -0.9
      comp=Z,29nm,1.0s
MNK                                i PcP  PcP    19 43 13.2  -1.1
MNK                                i PP   PP     19 45 08.7  -0.4
MNK                                i PPP  PPP    19 46 43.4
MNK                                i S    S      19 51 30.6  -0.2
MNK                                i ScS  SKSac  19 52 36.7  -1.6
MNK                                i SS   SS     19 55 46.7  +1.1
MNK                                i SSS  SSS    19 58 55.5
MNK                                i LQ   LQ     20 06 58.9
MNK                                i LR   LR     20 12 00.7
MNK                                i LRM  MLR    20 14 20.1
      comp=E,8.0nm,14.8s
MNK                                i LRM  MLR    20 14 34.5
      comp=N,113nm,13.8s
MNK                                i LRM  MLR    20 15 09.9
      comp=Z,70nm,13.4s
PABE  Paberze           66.31 335  eP     P      19 42 45.5  +0.3
PBUR  Paburge           66.36 336  eP     P      19 42 45.4  -0.1
KAN12 Harper NE Stat    67.40  58   P     P      19 42 52.3  -0.2
GEYT  Alibeck           67.56 303   P     P      19 42 52.0  -1.6
      comp=Z,2.0nm,0.6s,baz=19,slow=6.4,SNR=4.9
GEYT                                LR    LR     20 14 40.2
      comp=Z,129nm,18.4s,baz=290,slow=38
GEYT  Alibeck           67.56 303   P     P      19 42 51.9  -1.6
SUW   Suwalki           67.86 335  eP     P      19 42 54.5  -0.5
GOF   Gofitskoye        68.86 318⇑eP     P      19 43 02.0  +0.5
GOF                                 pmax  pmax
      comp=Z,64nm,1.4s
AKASG Malin Array Be    69.06 329   P     P      19 43 02.5  -0.1
      comp=Z,7.3nm,0.5s,baz=30,slow=6.8,SNR=30
AKASG                               LR    LR     20 16 54.4
      comp=Z,119nm,18.3s,baz=285,slow=39
AKASG Malin Array Be    69.06 329   P     P      19 43 02.4  -0.3
AKASG                               pmax  pmax
      comp=Z,2.0nm,0.7s
AKASG Malin Array Be    69.06 329   P     P      19 43 02.4  -0.3
AKBB  Malin Array Si    69.06 329c iP     P      19 43 02.4  -0.2
AKBB                                pmax  pmax
      comp=Z,14nm,1.0s
AKBB  Malin Array Si    69.06 329   P     P      19 43 02.3  -0.4
KIEV  Kiev              69.08 329   P     P      19 43 02.0  -0.7
NCK   Nalchik           69.91 316⇑eP     P      19 43 08.5  +0.5
NCK                                 pmax  pmax
      comp=Z,27nm,1.4s
KIV   Kislovodsk        69.91 317  eP     P      19 43 08.9  +0.8
KIV                                 pmax  pmax
      comp=Z,15nm,0.8s
KIV                                 MLR   MLR
      comp=Z,251nm,17.0s
KIV   Kislovodsk        69.91 317   P     P      19 43 08.4  +0.3
KBZ   Khabaz            70.01 317   P     P      19 43 09.6  +1.0
      comp=Z,12nm,1.0s,baz=120,slow=3.2,SNR=27
KBZ                                 LR    LR     20 18 51.9
      comp=Z,83nm,19.1s,baz=54,slow=40
KBZ   Khabaz            70.01 317c iP     P      19 43 09.1  +0.5
KBZ                                 pmax  pmax
      comp=Z,20nm,1.3s
LGD   Lagodekhi         70.12 314   P     P      19 43 09.7  +0.3
ZEI   Tsey              70.36 316  eP     P      19 43 10.4  -0.6
ZEI                                 pmax  pmax
      comp=Z,6.0nm,1.0s
TXAR  Lajitas Array     70.43  67   P     P      19 43 13.2  +1.7
      comp=Z,1.2nm,0.9s,baz=292,slow=3.7,SNR=8.3
TXAR  Lajitas Array     70.43  67   P     P      19 43 13.0  +1.5
TXAR  Lajitas Array     70.43  67   P     P      19 43 13.0  +1.5
NEY   Neytrino          70.47 317⇓eP     P      19 43 14.4  +2.7
NEY                                 pmax  pmax
      comp=Z,2.0nm,1.1s
ONI   Oni               70.71 316   P     P      19 43 14.6  +1.6
EKA   Eskdalemuir Ar    71.42 350   P     P      19 43 18.2  +1.2
SORM  Soroca            71.59 329 ⇓P     P      19 43 18.5  +0.4
SORM  Soroca            71.59 329   P     P      19 43 18.5  +0.4
AKH   Akhalkalaki       71.66 315 ⇓P     P      19 43 20.5  +1.5
AKH   Akhalkalaki       71.66 315   P     P      19 43 19.5  +0.6
AKH                                 pmax  pmax
      comp=Z,36nm,1.0s
AKH   Akhalkalaki       71.66 315   P     P      19 43 19.5  +0.6
KMPD  K-Podol'skiy      71.80 330   P     P      19 43 20.0  +0.6
KWP   Kalwaria Pacla    71.94 333   P     P      19 43 20.7  +0.5
KWP                                 pmax  pmax
      comp=Z,28nm,1.0s
KWP   Kalwaria Pacla    71.94 333   P     P      19 43 20.7  +0.5
GNI   Garni             72.15 314⇓iP     P      19 43 23.5  +1.6
GNI                                 pmax  pmax
      comp=Z,17nm,1.3s
GNI   Garni             72.15 314   P     P      19 43 23.2  +1.3
GNI                                 IAmb  IAmb   19 43 37.9
      comp=Z,12nm,0.9s
KSP   Ksiaz             72.47 337   P     P      19 43 24.7  +1.3
KSP                                 pmax  pmax
      comp=Z,6.0nm,1.1s
KOLS  Kolonicke sedl    72.69 333  eP     P      19 43 25.7  +1.0
KOLS                                pmax  pmax
      comp=Z,10.0nm,1.4s
KOLS  Kolonicke sedl    72.69 333  eP     P      19 43 25.7  +1.0
CLL   Collm             72.77 339  i P    P      19 43 25.7  +0.6
      comp=Z,11nm,1.2s
CLL   Collm             72.77 339  i P    P      19 43 25.7  +0.6
CLL                                i             19 43 33.6
CLL                                 pmax  pmax
      comp=Z,11nm,1.2s
CLL   Collm             72.77 339   P     P      19 43 25.5  +0.3
DPC   Dobruska-Polom    72.92 337  eP     P      19 43 26.9  +0.8
DPC                                e             19 43 34.6
DPC   Dobruska-Polom    72.92 337  eP     P      19 43 26.9  +0.8
DPC                                epP    pP     19 43 34.6  +1.2
BUR08 Bucovina Ar. S    73.00 330   P     P      19 43 27.1  +0.3
BUR08                               IAmb  IAmb   19 43 28.2
      comp=Z,9.0nm,0.9s
BURAR Bucovina Array    73.02 330 ⇓P     P      19 43 27.2  +0.4
BURAR Bucovina Array    73.02 330   P     P      19 43 27.2  +0.4
BURAR Bucovina Array    73.02 330   P     P      19 43 26.9  +0.1
KRLC  Kraliky           73.07 337  eP     P      19 43 28.3  +1.3
KRLC  Kraliky           73.07 337  eP     P      19 43 28.3  +1.3
MORC  Moravsky Berou    73.16 336 ⇑P     P      19 43 27.3  -0.3
MORC  Moravsky Berou    73.16 336  eP     P      19 43 28.9  +1.4
MORC  Moravsky Berou    73.16 336   P     P      19 43 28.1  +0.6
MORC                                pmax  pmax
      comp=Z,10.0nm,1.2s
MORC  Moravsky Berou    73.16 336   P     P      19 43 28.1  +0.6
MORC                                IAmb  IAmb   19 43 30.7
      comp=Z,10nm,1.2s
LANS  Liptovska Anna    73.25 335  eP     P      19 43 30.2  +2.1
LANS                                pmax  pmax
      comp=Z,8.0nm,1.0s
LANS  Liptovska Anna    73.25 335  eP     P      19 43 30.2  +2.1
BIZ   Bicaz             73.36 329 ⇓P     P      19 43 29.5  +0.8
TESR  Tescani           73.57 329 ⇓P     P      19 43 30.5  +0.5
VRAC  Vranov            73.83 336  eP     P      19 43 32.9  +1.5
VRAC  Vranov            73.83 336   P     P      19 43 33.2  +1.8
VRAC                                pmax  pmax
      comp=Z,7.0nm,1.1s
JAVC  Velka Javorina    73.97 336  eP     P      19 43 34.6  +2.2
VYHS  Vyhne             74.02 335  eP     P      19 43 34.3  +1.7
VYHS                                pmax  pmax
      comp=Z,11nm,1.4s
VYHS  Vyhne             74.02 335  eP     P      19 43 34.2  +1.7
KOPT  Kop Dagi          74.08 316   P     P      19 43 35.3  +1.9
KOPT                                IAmb  IAmb   19 43 36.8
      comp=Z,13nm,1.0s
KRUC  Moravsky          74.10 336  eP     P      19 43 34.3  +1.3
VRI   Vrincioaia        74.12 328 ⇑P     P      19 43 33.6  +0.4
VRI   Vrincioaia        74.12 328   P     P      19 43 33.6  +0.4
PLOR  Plostina          74.16 329 ⇑P     P      19 43 34.4  +0.9
PLOR  Plostina          74.16 329   P     P      19 43 34.4  +0.9
DOPR  Dopca             74.45 329 ⇑P     P      19 43 35.9  +0.8
DRGR                    74.51 331 ⇑P     P      19 43 35.6   0.0
DRGR                    74.51 331   P     P      19 43 35.5   0.0
MODS  Modra-Piesok      74.52 336  eP     P      19 43 36.8  +1.3
MODS                                pmax  pmax
      comp=Z,7.0nm,1.0s
MODS  Modra-Piesok      74.52 336  eP     P      19 43 36.8  +1.3
KHC   Kasperske Hory    74.69 338  eP     P      19 43 37.8  +1.3
KHC   Kasperske Hory    74.69 338  eP     P      19 43 37.8  +1.3
KHC   Kasperske Hory    74.69 338   P     P      19 43 38.9  +2.4
KHC                                 IAmb  IAmb   19 43 39.7
      comp=Z,7.8nm,1.3s
MLR   Muntele Rosu      74.70 329 ⇑P     P      19 43 37.2  +0.4
MLR   Muntele Rosu      74.70 329   P     P      19 43 37.6  +0.8
MLR                                 pmax  pmax
      comp=Z,7.0nm,0.7s
MLR   Muntele Rosu      74.70 329   P     P      19 43 37.6  +0.8
MLR                                 IAmb  IAmb   19 43 47.6
      comp=Z,7.5nm,0.7s
GERES GERESS Array B    74.94 338   P     P      19 43 39.0  +1.0
      comp=Z,0.9nm,0.5s,baz=34,slow=5.9,SNR=7.9
GERES GERESS Array B    74.94 338   P     P      19 43 39.0  +1.0
VOIR                    75.03 329 ⇑P     P      19 43 39.4  +0.8
VOIR                    75.03 329   P     P      19 43 39.3  +0.8
SIRR  Siria             75.29 332 ⇓P     P      19 43 41.0  +1.1
CONA  Conrad Observa    75.29 336  eP     P      19 43 36.8  -3.3
      comp=Z,7.0nm,1.5s
TOKA  Tokat             75.47 319   P     P      19 43 42.8  +1.7
MOA   Molln             75.74 337  eP     P      19 43 42.9  +0.3
      comp=Z,8.8nm,1.4s
GZR   Gura Zlata        75.76 331 ⇑P     P      19 43 42.9  +0.2
BZS   Buzias            75.89 332 ⇓P     P      19 43 44.0  +0.6
BZS   Buzias            75.89 332   P     P      19 43 44.3  +0.9
BZS                                 pmax  pmax
      comp=Z,8.0nm,1.1s
WRA   Warramunga Arr    75.95 205   P     P      19 43 44.7  +0.8
      comp=Z,11nm,0.7s,baz=22,slow=6.3,SNR=8.1
ARSA  Arzberg           76.00 336  eP     P      19 43 41.7  -2.4
      comp=Z,5.9nm,1.2s
MORH  Mrgy, Hungar      76.17 334 ⇓P     P      19 43 45.1  +0.2
MARD  Mardin            76.23 315   P     P      19 43 46.5  +0.8
MALT  Malatya           76.39 317   P     P      19 43 48.6  +2.1
SOKA  Soboth            76.66 336  eP     P      19 43 49.1  +1.3
      comp=Z,12nm,1.5s
KBA   Koelnbreinsper    76.68 338  eP     P      19 43 48.6  +0.5
      comp=Z,20nm,1.3s
WATA  Walderalm         76.83 339  eP     P      19 43 48.2  -0.7
      comp=Z,5.4nm,0.7s
RETA  Reutte            76.86 340  eP     P      19 43 48.5  -0.5
      comp=Z,5.1nm,0.8s
WTTA  Wattenberg        76.89 339  eP     P      19 43 48.0  -1.3
      comp=Z,3.6nm,0.7s
MOTA  Moosalm           76.93 339  eP     P      19 43 48.4  -1.0
      comp=Z,8.3nm,1.0s
OBKA  Obir              76.93 337  eP     P      19 43 50.5  +1.0
      comp=Z,17nm,1.4s
PLVB  Pleven            77.01 329 ⇓P     P      19 43 49.2  -0.6
SQTA  Sankt Quirin      77.02 339  eP     P      19 43 48.7  -1.2
      comp=Z,9.1nm,1.3s
BR131 Keskin Array S    77.09 321   P     P      19 43 50.2  -0.3
BR131                               pmax  pmax
      comp=Z,16nm,1.5s
BR131 Keskin Array S    77.09 321   P     P      19 43 50.2  -0.3
BRTR  Keskin Array B    77.09 321   P     P      19 43 50.6  +0.1
      comp=Z,2.2nm,1.1s,baz=38,slow=2.2,SNR=8.4
BRTR                                LR    LR     20 22 39.0
      comp=Z,28nm,19.4s,baz=14,slow=40
BRTR  Keskin Array B    77.09 321  i P    P      19 43 51.0  +0.5
BRTR                                pmax  pmax
      comp=Z,2.0nm,1.0s
BRTR  Keskin Array B    77.09 321   P     P      19 43 50.4  -0.1
ABTA  Abfaltersbach     77.18 338  eP     P      19 43 51.2  +0.3
      comp=Z,5.6nm,0.8s
DAVA  Damuels           77.24 340  eP     P      19 43 51.3  +0.1
      comp=Z,16nm,1.2s
FETA  Feichten          77.31 339  eP     P      19 43 51.2  -0.4
      comp=Z,8.1nm,1.2s
DIVS  Divibare          77.75 332   P     P      19 43 54.4  +0.4
DIVS                                IAmb  IAmb   19 44 04.2
      comp=Z,10nm,1.0s
VTS   Vitosha           78.14 329 ⇑P     P      19 43 56.2  -0.1
VTS   Vitosha           78.14 329   P     P      19 43 56.2  -0.1
MIB   Mutribah          79.42 306  eP            19 44 02.7
UMR   Umm Al-Rimmam     79.44 305  eP            19 44 01.9
PDG   Podgorica         79.49 332 ⇑P     P      19 44 03.6  +0.1
ASAR  Alice Springs     79.62 205   P     P      19 44 06.0  +1.7
      comp=Z,0.9nm,0.5s,baz=21,slow=5.3,SNR=10
RST   Umm Al-Ruwaisa    79.84 306  eP            19 44 04.6
RDF   Al-Radifah        80.04 305  eP            19 44 05.1
PPT   Papeete           82.17 133   LR    LR     20 15 54.6
      comp=Z,68nm,19.0s,baz=355,slow=32
STKA  Stephens Creek    85.94 196   P     P      19 44 38.5  +1.7
      comp=Z,2.2nm,1.0s,baz=327,slow=17,SNR=3.6
STKA                                LR    LR     20 19 59.9
      comp=Z,25nm,19.7s,baz=24,slow=33
ESDC  Sonseca Array     86.96 348   P     P      19 44 42.2   0.0
      comp=Z,2.2nm,0.9s,baz=352,slow=7.4,SNR=5.9
```

DJA 04 19:32:50.0±1.7,**10˚S**±7˚×**11˚7E**±˚,**h15**^{km}±16^{km},**M4.2**/11, **mb4.3**/1,**mB4.4**/1,**MLv4.1**/11,**Mw(mB)3.6**/1,**Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWSI	**Taliwang, Sumb**	**1.23**	**354**	P	Pn	19 33 11.9	-0.8
PLAI	**Plampang**	**1.36**	**33**	P	Pn	19 33 13.5	-1.0
DNP	**Denpasar**	**2.20**	**306**	P	Pn	19 33 26.8	+0.8
SRBI	**Singaraja**	**2.59**	**316**	P	Pn	19 33 31.2	-0.2
JAGI	**Jajag, Banyuwa**	**3.20**	**298**	P	Pn	19 33 39.0	-0.8
WSI	**Waingapu**	**3.24**	**85**	P	Pn	19 33 39.5	-0.9
ABJI	**Asem Bagus**	**3.50**	**308**	P	Pn	19 33 44.9	+1.0
EDFI	**Ende, Flores**	**4.77**	**76**	P	Pn	19 34 01.0	-0.4
BKSI	**Bulukumba**	**5.55**	**34**	P	Pn	19 34 13.3	+1.2

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*IDC **04** 19:35:21.4±1.6, 9.˚85S×116.˚98E, h0^{km}, mb3.9/4, mb1 4.3/7, mb1mx3.8/36, mbtmp4.1/7, ML4.2/3, MS3.3/6, Ms1 3.3/6, ms1mx3.0/28, Error ellipse: s-maj=69.5km s-min=19.4km az=51.0*

*DJA **04** 19:35:26.1±1.7, 10˚S±5˚×11˚7E±˚, h20^{km}±16^{km}, M4.5/18, mb4.6/7, mB5.0/4, MLv4.5/18, Mw(mB)4.3/4*

ISC 04 19:35:24.2±0.9**,10°.15S**±0°.07×**117°.05E**±0°.06**,h10^{km},n27,**
σ**2^s.04**/27**,mb4.0**/4**,MS3.1**/4**,South of Sumbawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWSI	Taliwang, Sumb	1.41	353	P	Pn	19 35 49.7	-0.3
TWSI				S	Sn	19 36 04.9	-3.8
PLAI	Plampang	1.50	29	P	Pn	19 35 51.7	+0.5
DNP	Denpasar	2.33	309	P	Pn	19 36 04.3	+1.7
SRBI	Singaraja	2.74	318	P	Pn	19 36 10.1	+1.9
WSI	Waingapu	3.24	82	P	Pn	19 36 16.9	+1.8
JAGI	Jajag, Banyuwa	3.31	300	P	Pn	19 36 16.0	-0.1
BASI	Baing, Sumba	3.48	91	P	Pn	19 36 18.9	+0.5
ABJI	Asem Bagus	3.63	310	P	Pn	19 36 22.7	+2.2
KMMI	Kalianget	4.33	315	P	Pn	19 36 32.9	+2.7
EDFI	Ende, Flores	4.79	73	P	Pn	19 36 37.5	+1.0
BSSI	Bau Bau, Buton	5.24	41	P	Pn	19 36 45.4	+2.7
	0.6nm1μm60nm,0.6s						
MMRI	Maumere	5.34	74	P	Pn	19 36 45.6	+1.6
	0.6nm2μm145nm,0.7s						
BKSI	Bulukumba	5.68	33	P	Pn	19 36 51.6	+2.9
	0.5nm789nm58nm,0.7s						
KAPI	Kappang	5.76	28	Pn	Pn	19 36 52.6	+2.7
	4.0nm,0.3s,baz=186,slow=6.3,SNR=8.7						
KAPI				Sn	Sn	19 37 55.6	-0.5
	11nm,0.3s,baz=80,slow=22,SNR=11						
KAPI				LR	LR	19 39 17.6	
	comp=Z,169nm,20.9s,baz=216,slow=43						
BNSI	Bone	6.47	28	P	Pn	19 37 02.5	+3.0
	0.2nm28nm,1.0s						
BATI	Baumata	6.51	91	Pn	Pn	19 37 01.1	+1.0
	10nm,0.3s,baz=82,slow=0.8,SNR=20						
BATI				Sn	Sn	19 38 14.4	-0.2
	6.5nm,0.3s,baz=0.0,slow=20,SNR=1.6						
BATI	Baumata	6.51	91	P	Pn	19 37 00.9	+0.7
	0.1nm22nm,0.8s						
UGM	Wanagama	6.82	289	P	Pn	19 37 04.5	+0.1
	0.6nm102nm,1.1s						
FITZ	Fitzroy Crossi	11.48	134	Pn	Pn	19 38 08.6	+0.3
	2.2nm,0.3s,baz=340,slow=7.9,SNR=18						
FITZ				Sn	Sn	19 40 08.1	-8.6
	0.4nm,0.3s,baz=191,slow=15,SNR=4.1						
FITZ				LR	LR	19 42 43.6	
	comp=Z,93nm,19.1s,baz=326,slow=38						
WRA	Warramunga Arr	19.31	122	P	P	19 39 50.6	+0.9
	0.4nm,0.3s,baz=298,slow=13,SNR=5.2						
ASAR	Alice Springs	20.96	132	P	P	19 40 09.2	+1.5
	5.9nm,0.5s,baz=324,slow=13,SNR=47						
ASAR				S	S	19 43 57.4	-3.9
	0.7nm,0.8s,baz=310,slow=27,SNR=5.1						
ASAR				LR	LR	19 48 37.7	
	comp=Z,64nm,18.2s,baz=314,slow=38						
NWAO	Narrogin (SRO)	22.67	180	P	P	19 40 34.1	+8.3
	2.6nm,0.3s,baz=355,slow=12,SNR=1.7						
NWAO				S	S	19 44 22.3	-12
	4.7nm,0.6s,baz=119,slow=19,SNR=3.0						
STKA	Stephens Creek	31.36	137	P	P	19 41 46.4	+1.2
	4.0nm,0.8s,baz=324,slow=9.5,SNR=6.7						
STKA				LR	LR	19 55 31.7	
	comp=Z,29nm,18.1s,baz=17,slow=38						
CMAR	Chiang Mai Arr	33.58	328	LR	LR	19 57 10.8	
	comp=Z,33nm,18.2s,baz=310,slow=39						
SONM	Songino Array	58.50	352	P	P	19 45 16.4	-4.3
	0.4nm,0.6s,baz=172,slow=9.2,SNR=4.8						
MKAR	Makanchi Array	64.63	334	P	P	19 45 59.6	-2.4
	0.2nm,0.3s,baz=153,slow=6.9,SNR=5.9						
ARCES	ARCESS Array B	99.98	339	LR	LR	20 41 45.3	
	comp=Z,56nm,18.4s,baz=125,slow=40						

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*NDI **04** 19:52:56.3±1.8, 33°.00N×84°.24E, h10^{km}, ML3.4*
*IDC **04** 19:53:02.0±0.9, 32°.78N×83°.23E, h0^{km}, mb3.6/10, mb1 3.8/12, mb1mx3.6/61, mbtmp3.7/12, ML3.2/2, MS3.4/6, Ms1 3.5/6, ms1mx3.1/39, Error ellipse: s-maj=26.6km s-min=18.0km az=55.0*
*BJI **04** 19:53:06.9±0.0, 33°.05N×83°.48E, h8^{km}, mb3.9/11, ML3.8/1, Ms3.6/4, Ms7 3.6/4*
ISC 04 19:53:06.1±0.5**,33°.01N**±0°.07×**83°.37E**±0°.05**,h10^{km},n45,**
σ**2^s.33**/36**,mb3.7**/10**,MS3.2**/5**,1C,Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDI	Dehra Dun	5.26	241	eS	Pg	19 54 46.1	-0.7
SMLA	Simla	5.59	252	ePN	Pn	19 54 30.0	+0.7
SMLA				i PG	Pg	19 54 56.3	+3.2
SMLA				eS	Sn	19 55 36.6	+3.1
SMLA				IAML		19 55 38.3	
	comp=Z,16nm,1.0s						
SMLA				IAML		19 55 40.8	
	comp=E,41nm,0.4s						
SMLA				IAML		19 55 42.7	
	comp=N,23nm,0.4s						
DHRM	DHARAMSHALA	6.01	265	eP	Pn	19 54 34.7	-0.6
DHRM				i x	x	19 54 59.9	
DHRM				eS	Sn	19 55 47.1	+2.8
DHRM				IAML		19 55 48.1	
	comp=E,48nm,1.0s						
LSA	Lhasa	7.42	114	Pn	Pn	19 54 54.8	-0.1
LSA				Sn	Sn	19 56 23.4	+4.0
LSA				LR	LR		
	comp=E,880nm,6.4s						
KUDL	Kundal	7.66	233	eP	Pn	19 54 56.6	-1.1
KUDL				eS	Sn	19 56 22.4	-2.1
CEP	Cherat	9.62	278	P	Pn	19 55 24.7	0.0
CEP				S	Sn	19 57 17.0	+4.1
THW	Thamme Wali	9.78	272	P	Pn	19 55 25.9	-0.9
BHPL	Bhopal	11.05	210	eP	Pn	19 55 37.3	-7.0
BHPL				ex	x	19 55 37.8	
BHPL				eS	Sn	19 57 37.3	-11
BHPL				IAML		19 57 46.6	
	comp=E,12nm,1.1s						
BHPL				IAML		19 57 48.2	
	comp=N,17nm,1.9s						
WMQ	Urumqi	11.32	16	eP	Pn	19 56 02.7	+15
WMQ				smax	smax		
	comp=N,9.0nm,0.9s						
WMQ				smax	smax		
	comp=E,10.0nm,0.7s						
AAK	Ala-Archa	11.90	326	Pn	Pn	19 55 59.4	+3.5
	comp=E,0.1nm,0.3s,baz=152,slow=4.7,SNR=3.1						
AAK				LR	LR	20 00 43.6	
	comp=E,159nm,22.0s,baz=146,slow=38						
MKAR	Makanchi Array	13.80	357	Pn	Pn	19 56 21.2	-0.5
	comp=E,0.1nm,0.3s,baz=168,slow=12,SNR=7.7						
GTA	Gaotai	14.72	60	⇑P	P	19 56 41.2	+0.5
GTA				pP	Pn	19 56 46.3	+12
GTA				sP		19 56 49.4	
GTA				pmax	pmax		
	comp=E,2.0nm,1.2s						
GTA				LR	LR		
	comp=E,190nm,14.5s						
GTA				LR	LR		
	comp=E,220nm,13.5s						
KURBB	Kurchatov Arra	17.96	350	P	Pn	19 57 15.1	-0.7
	comp=E,0.1nm,0.3s,baz=169,slow=10,SNR=6.4						
MHMT	Maesarieng	19.73	135	P	Pn	19 57 40.4	+3.1
	comp=E,11nm,0.9s						
CM33	Chiang Mai Arr	19.86	132	P	P	19 57 37.0	-0.4
CM34	Chiang Mai Arr	19.96	131	P	Pn	19 57 42.0	+1.8
PAYA	Payao	20.06	129	P	Pn	19 57 47.3	+5.9
CM35	Chiang Mai Arr	20.10	131	P	P	19 57 38.0	-1.9
CM15	Chiang Mai Arr	20.12	132	P	Pn	19 57 41.8	-0.3
CM31	Chiang Mai Arr	20.13	132	P	Pn	19 57 42.7	+0.5
	comp=E,90nm,0.6s						
CMAR	Chiang Mai Arr	20.13	132	P	P	19 57 37.6	-2.7
	comp=E,2.0nm,0.9s,baz=312,slow=11,SNR=12						
CM13	Chiang Mai Arr	20.13	132	P	P	19 57 39.7	-0.7
	comp=E,54nmcomp=E,4.9nm,1.1s						
CM02	Chiang Mai Arr	20.15	132	P	P	19 57 41.6	+1.1
	comp=E,4.5nm,0.9s						
CM01	Chiang Mai Arr	20.17	132	P	Pn	19 57 45.0	+2.4
	comp=E,3.8nm,0.8s						
CM09	Chiang Mai Arr	20.17	132	P	Pn	19 57 45.8	+3.2
CM05	Chiang Mai Arr	20.17	132	P	Pn	19 57 42.4	-0.3
	comp=E,3.4nm,1.0s						
CM36	Chiang Mai Arr	20.18	132	P	Pn	19 57 48.0	+5.3
CM04	Chiang Mai Arr	20.19	132	P	Pn	19 57 42.6	-0.3
	comp=E,4.3nm,0.9s						
ZALV	Zalesovo Beam	20.96	2	P	P	19 57 48.9	-0.1
	comp=E,1.4nm,0.9s,baz=179,slow=8.2,SNR=6.2						
GEYT	Alibeck	21.12	291	P	P	19 57 47.7	-3.3
	comp=E,1.4nm,0.6s,baz=117,slow=12,SNR=4.4						
GYA	Guiyang	21.23	102	eP	P	19 57 56.6	+4.2
GYA				pmax	pmax		
	comp=E,14nm,1.8s						
XAN	Xi'an	21.32	80	P	P	19 57 56.4	+3.3
XAN				pP	sP	19 58 01.2	+2.0
XAN				pmax	pmax		
	comp=E,7.0nm,1.1s						
UTHA	Uthaitani	22.67	136	P	P	19 58 07.3	-0.3
SONM	Songino Array	22.83	43	P	P	19 58 10.4	+1.1
	comp=E,2.7nm,1.1s,baz=226,slow=9.9,SNR=3.7						
TLY	Talaya	23.79	32	LR	LR	20 08 48.2	
	comp=E,66nm,18.0s,baz=228,slow=39						
WSAR	Wadi Sarin	23.84	252	LR	LR	20 08 50.8	
	comp=E,50nm,18.4s,baz=142,slow=40						
KSRS	Korea Array	36.41	70	LR	LR	20 16 54.9	
	comp=E,35nm,18.0s,baz=352,slow=39						
FINES	FINESS Array B	46.08	326	P	P	20 01 28.8	-1.1
	comp=E,1.4nm,0.8s,baz=120,slow=12,SNR=3.8						
NOA	NORSAR Array B	53.21	325	LR	LR	20 25 39.7	
	comp=E,38nm,18.8s,baz=315,slow=37						
WRA	Warramunga Arr	71.70	130	P	P	20 04 25.3	-3.2
	comp=E,0.4nm,0.4s,baz=320,slow=6.4,SNR=2.8						
ASAR	Alice Springs	74.14	133	P	P	20 04 40.0	-2.8
	comp=E,0.3nm,0.5s,baz=316,slow=5.7,SNR=6.2						
SFJD	Kangerlussuaq	74.39	343	LR	LR	20 41 10.9	
	comp=E,122nm,18.3s,baz=184,slow=39						
ILAR	Eielson Array	74.95	20	P	P	20 04 45.4	-1.7
	comp=E,0.8nm,1.0s,baz=301,slow=4.4,SNR=6.1						
TORD	Torodi Ar. Bea	76.05	277	P	P	20 04 51.8	-2.4
	comp=E,0.5nm,0.7s,baz=50,slow=5.2,SNR=2.3						
YKA	Yellowknife Ar	83.74	8	P	P	20 05 33.1	-1.9
	comp=E,0.4nm,0.8s,baz=353,slow=4.5,SNR=5.2						

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*NNC **04** 19:55:25.9±2.1, 40°.14N×77°.66E, h0^{km}, mb3.5, mpv3.2, Error ellipse: s-maj=13.7km s-min=12.3km az=2.0*
*KRNET **04** 19:55:25.7±0.1, 40°.05N×77°.93E, mb3.0*
*SOME **04** 19:55:26.0, 40°.15N×77°.67E, h5^{km}*
ISC 04 19:55:28.0±2.6**,40°.0N**±0°.1×**77°.74E**±0°.06**,h10^{km},n47,**
σ**1^s.46**/71**,17C-7D,Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSH	Kashi	1.46	250	Pg	Pg	19 56 02.7	+6.8
KSH				Sg	Sg	19 56 29.1	+14
KSH				smax	smax		
	comp=N,46nm,0.6s						
KSH				smax	smax		
	comp=E,41nm,0.5s						
KDJ	Kajisay	2.13	349	⇑iP	Pn	19 56 03.6	-0.3
	baz=45						
KDJ				⇑iS	Sn	19 56 31.2	+0.7
	baz=45						
ULHL	Ulahol	2.48	333	⇓iP	Pn	19 56 08.8	+0.2
	baz=30						
ULHL				⇓iS	Sn	19 56 40.5	+1.4
	baz=30						
PRZ	Przheval'sk	2.49	11	⇑iP	Pn	19 56 08.0	-0.8
	baz=8.0						
PRZ				⇑iS	Sn	19 56 39.1	-0.3
	baz=8.0						
ANVS	Anan'yevo	2.74	359	⇑iP	Pn	19 56 11.6	-0.7
	baz=56						
ANVS				⇑iS	Sn	19 56 44.7	-0.9
	baz=56						
TNSS	Tian-Shan	3.06	349	eP	Pb	19 56 20.3	-2.4
	comp=E,12nm,0.5s						
TNSS				eS	Sb	19 56 59.4	-0.8
	comp=E,12nm,0.7s						
TNSS	Tian-Shan	3.06	349	Pg	Pb	19 56 20.3	-2.4
	comp=E,12nm,0.5s						
TNSS				Lg	Lg	19 56 59.7	
	comp=E,12nm,0.7s						
SATY	Saty	3.06	9	eP	Pb	19 56 21.1	-1.5
	comp=E,6.2nm,0.5s						
SATY				eS	Sb	19 57 00.6	+0.6
	comp=E,5.5nm,0.5s						
SATY	Saty	3.06	9	Pg	Pb	19 56 19.8	-2.8
	comp=E,4.0nm,0.8s						
SATY				Lg	Lg	19 56 59.3	
	comp=E,11nm,0.5s						
IZV	Izvestkoviy	3.11	345	eP	Pb	19 56 21.8	-1.8
	comp=E,5.4nm,0.6s						
IZV				eS	Sb	19 57 01.9	+0.2
	comp=E,26nm,0.5s						
IZV	Izvestkoviy	3.11	345	Pg	Pb	19 56 21.8	-1.8
	comp=E,5.4nm,0.6s						
IZV				Lg	Lg	19 57 01.8	
	comp=E,26nm,0.5s						
ARLS	Aral	3.16	306	⇑iP	Pn	19 56 18.6	+0.6
	baz=5.0						
ARLS				⇑iS	Sn	19 56 57.8	+1.9
	baz=5.0						
MDOK	Medeo	3.17	351	eP	Pb	19 56 22.4	-2.0
	comp=E,6.7nm,0.4s						
MDOK				eS	Sb	19 57 03.2	+0.1
	comp=E,13nm,0.8s						
MDOK	Medeo	3.17	351	Pg	Pb	19 56 22.2	-2.2
	comp=E,4.2nm,0.5s						
MDOK				Lg	Lg	19 57 03.0	
	comp=E,12nm,0.6s						
MDOK	Medeo	3.17	351	Pg	Pb	19 56 22.7	-1.8
	comp=E,5.9nm,0.5s						
MDOK				Lg	Lg	19 57 03.5	
	comp=E,23nm,0.4s						
AAA	Alma-Ata	3.23	349	eP	Pb	19 56 24.2	-1.2
	comp=E,7.4nm,0.1s						
AAA				eS	Sb	19 57 06.2	+1.4
	comp=E,16nm,0.1s						
AAA	Alma-Ata	3.23	349	Pg	Pb	19 56 24.2	-1.2
	comp=E,10nm,0.2s						
AAA				Lg	Lg	19 57 06.2	
	comp=E,28nm,0.4s						
KOTS	Kotyrbulak	3.23	352	eP	Pb	19 56 23.9	-1.6
	comp=E,10nm,0.5s						
KOTS				eS	Sb	19 57 05.7	+0.7
	comp=E,63nm,0.5s						
KOTS	Kotyrbulak	3.23	352	Pg	Pb	19 56 23.9	-1.6
	comp=E,10nm,0.5s						
KOTS				Lg	Lg	19 57 06.0	
	comp=E,63nm,0.5s						
MTBS	Maitube	3.24	343	eP	Pb	19 56 23.9	-1.8
	comp=E,3.3nm,0.2s						
MTBS				eS	Sb	19 57 05.5	+0.3
	comp=E,9.1nm,0.5s						
UCH	Uchtor	3.27	313	⇑iP	Pn	19 56 20.4	+0.6
	baz=11						
UCH				⇑iS	Sn	19 57 00.3	+1.3
	baz=11						
KST	Kastek	3.28	337	eP	Pb	19 56 24.4	-2.0
	comp=E,4.2nm,0.5s						
KST				eS	Sb	19 57 06.4	-0.2
	comp=E,14nm,0.4s						
KST	Kastek	3.28	337	Pg	Pb	19 56 24.4	-2.0
	comp=E,4.2nm,0.5s						
KST				Lg	Lg	19 57 06.4	
	comp=E,14nm,0.4s						
TKM2	Tokmak 2	3.30	332	⇑iP	Pn	19 56 20.4	+0.5
	baz=29						
TKM2				⇑iS	Sn	19 57 00.3	+1.0
	baz=29						
TKM2	Tokmak 2	3.30	332	⇑Pg	Pb	19 56 24.7	-2.0
	comp=E,2.2nm,0.5s						
TKM2				⇓Lg	Lg	19 57 08.1	
	comp=E,4.5nm,0.5s						
KURS	Kuram	3.46	5	eP	Pb	19 56 27.7	-1.7
	comp=E,2.5nm,0.6s						
KURS				eS	Sb	19 57 11.9	+0.3
	comp=E,6.1nm,0.5s						
KURS	Kuram	3.46	5	Pg	Pb	19 56 27.7	-1.7
	comp=E,1.9nm,0.4s						
KURS				Lg	Lg	19 57 12.6	
	comp=E,6.5nm,0.7s						
DGS	Degeres	3.52	336	eP	Pb	19 56 28.8	-1.7
	comp=E,3.8nm,0.5s						
DGS				eS	Sb	19 57 13.8	+0.4
	comp=E,16nm,0.6s						
DGS	Degeres	3.52	336	Pg	Pb	19 56 28.8	-1.7
	comp=E,3.8nm,0.5s						
DGS				Lg	Lg	19 57 13.8	
	comp=E,16nm,0.6s						
PDGK	Podgornoye	3.54	21	⇓Pg	Pn	19 56 23.7	+0.5
	comp=E,2.3nm,0.5s						
PDGK				⇓Lg	Lg	19 57 12.0	
	comp=E,5.6nm,0.7s						
AAK	Ala-Archa	3.56	318	⇑iP	Pn	19 56 24.1	+0.6
	baz=16						
AAK				⇑iS	Sn	19 57 07.0	+1.2
	baz=16						
AAK	Ala-Archa	3.56	318	⇑Pg	Pn	19 56 23.4	-0.1
	comp=E,2.0nm,0.6s						
AAK				⇑Lg	Lg	19 57 15.4	
	comp=E,9.2nm,0.6s						
KTBS	Karatobe	3.75	348	eP	Pb	19 56 32.4	-2.0
	comp=E,3.3nm,0.5s						
KTBS				eS	Sb	19 57 20.1	+0.2
	comp=E,15nm,0.4s						
KTBS	Karatobe	3.75	348	Pg	Pb	19 56 32.4	-2.0
	comp=E,3.3nm,0.5s						
KTBS				Lg	Lg	19 57 20.1	
	comp=E,15nm,0.4s						
CHKK	Chushkaly	3.85	352	eP	Pb	19 56 34.9	-1.2
	comp=E,3.1nm,0.6s						
CHKK				eS	Sb	19 57 24.2	+1.4
	comp=E,10nm,0.3s						
CHKK	Chushkaly	3.85	352	Pg	Pb	19 56 34.9	-1.2
	comp=E,3.1nm,0.6s						
CHKK				Lg	Lg	19 57 24.0	
	comp=E,10nm,0.3s						
KTMS	Ketmen	3.93	29	Pg	Pb	19 56 36.8	-0.6
	comp=E,1.5nm,0.2s						
KTMS				Lg	Lg	19 57 27.6	
	comp=E,3.9nm,0.5s						
KRBS	Karabastau	3.97	338	eP	Pb	19 56 36.1	-1.9
	comp=E,1.5nm,0.3s						
KRBS				eS	Sb	19 57 26.4	+0.3
	comp=E,7.6nm,0.3s						
KRBS	Karabastau	3.97	338	Pg	Pb	19 56 36.2	-1.8
	comp=E,1.5nm,0.3s						
KRBS				Lg	Lg	19 57 27.0	
	comp=E,7.6nm,0.3s						
KUU	Kurty	3.99	345	eP	Pb	19 56 36.8	-1.6
	comp=E,1.5nm,0.4s						
KUU				eS	Sb	19 57 27.5	+0.8
	comp=E,12nm,0.7s						
KUU	Kurty	3.99	345	Pg	Pb	19 56 36.4	-2.0
	comp=E,1.1nm,0.6s						
KUU				Lg	Lg	19 57 27.6	
	comp=E,12nm,0.6s						
USP	Ospenovka	4.04	324	⇓iP	Pn	19 56 30.3	+0.4
	baz=22						
USP				⇓iS	Sn	19 57 17.9	+0.7
	baz=22						
MNBS	Baschi	4.07	7	eP	Pb	19 56 39.9	+0.1
	comp=E,2.3nm,0.3s						
MNBS				eS	Sb	19 57 32.9	+3.9
	comp=E,5.6nm,0.4s						
MNBS	Baschi	4.07	7	Pg	Pb	19 56 39.9	+0.1
	comp=E,2.3nm,0.3s						
MNBS				Lg	Lg	19 57 33.2	
	comp=E,5.6nm,0.4s						
SGDS	Sogindy	4.13	327	Pg	Pb	19 56 39.2	-1.6
	comp=E,2.6nm,0.5s						
SGDS				Lg	Lg	19 57 32.0	
	comp=E,4.9nm,0.7s						
ARXS	Arharly	4.17	1	eP	Pb	19 56 40.9	-0.7
	comp=E,2.4nm,0.4s						
ARXS				eS	Sb	19 57 34.5	+2.5
	comp=E,6.0nm,0.7s						
ARXS	Arharly	4.17	1	Pg	Pb	19 56 40.9	-0.7
	comp=E,2.4nm,0.4s						
ARXS				Lg	Lg	19 57 34.5	
	comp=E,6.0nm,0.7s						

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*IDC **04** 20:25:01.1±5.0, 13°.15S×72°.03W, h33^{km}±38^{km}, mb3.4/3, mb1 3.9/7, mb1mx3.6/46, mbtmp3.9/7, ML3.9/4, MS3.2/3, Ms1 3.1/3, ms1mx2.8/27, Error ellipse: s-maj=66.0km s-min=23.6km az=17.0*
ISC 04 20:25:02.0±1.0**,13°.1S**±0°.2×**72°.01W**±0°.09**,h35^{km},n11,**
σ**1^s.98**/10**,mb3.6**/3**,Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	Nana	4.84	282	Pn	Pn	20 26 10.8	-1.6
	10nm,0.3s,baz=144,slow=11,SNR=5.4						
NNA				Sn	Sn	20 27 10.5	+3.2
	2.7nm,0.3s,baz=0.0,slow=11,SNR=2.8						
ATAH	Atahualpa	8.61	312	Pn	Pn	20 27 05.5	+1.0
	1.2nm,0.3s,baz=111,slow=4.4,SNR=4.2						
LVC	Limon Verde	9.95	163	LR	LR	20 31 39.0	
	comp=Z,127nm,20.6s,baz=0.0,slow=40						
SIV	San Ignacio	10.99	107	Pn	Pn	20 27 36.5	-0.4
	0.3nm,0.3s,baz=297,slow=12,SNR=6.6						
SIV				Sn	Sn	20 29 41.8	+3.2
	0.3nm,0.3s,baz=285,slow=2.1,SNR=4.0						
PTGA	Pitinga	17.09	45	P	P	20 28 59.1	-0.7
	1.0nm,0.3s,baz=223,slow=16,SNR=7.7						
ROSC	El Rosal	17.92	352	LR	LR	20 35 47.7	
	comp=Z,69nm,18.6s,baz=350,slow=36						
BDFB	Brasilia	23.39	99	LR	LR	20 39 54.1	
	comp=Z,48nm,18.1s,baz=36,slow=38						
TXAR	Lajitas Array	52.05	324	P	P	20 34 08.0	-0.7
	0.4nm,0.6s,baz=154,slow=7.0,SNR=2.3						
TORD	Torodi Ar. Bea	77.55	73	P	P	20 36 53.7	-1.3
	1.4nm,0.9s,baz=271,slow=3.9,SNR=4.7						
YKA	Yellowknife Ar	82.28	342	P	P	20 37 19.1	-0.5
	0.2nm,0.6s,baz=130,slow=6.7,SNR=3.1						
SONM	Songino Array	145.30	2	PKPbc	PKPdf	20 44 36.8	+0.4
	0.7nm,0.9s,baz=339,slow=3.9,SNR=5.5						

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*NEIC **04** 20:27:49.5±2.0, 24°.18S±0°.07×66°.88W±0°.04, h172^{km}±10^{km}, mb4.4/6, Error ellipse: s-maj=11.2km s-min=5.2km az=162.0*
*SJA **04** 20:27:50.1±0.7, 24°.03S×67°.10W, h207^{km}±5^{km}, ML4.2, MW4.1*
*IDC **04** 20:27:51.0±1.3, 24°.01S×66°.93W, h173^{km}±9^{km}, mb3.4/6, mb1 3.8/11, mb1mx3.6/44, mbtmp4.1/11, Error ellipse: s-maj=24.4km s-min=12.9km az=17.0*
*GUC **04** 20:27:52.8±0.6, 23°.99S×67°.52W, h212^{km}±8^{km}, ML4.7*
*VAO **04** 20:27:54.4±0.8, 23°.98S×66°.85W, h208^{km}±7^{km}, mb4.4*
ISC 04 20:27:51.0±0.6**,24°.05S**±0°.03×**67°.10W**±0°.04**,h190^{km}**±6^{km}**,**
n121,σ**1^s.34**/150**,mb3.9**/8**,9C,Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLA	San Lorenzo	1.60	115	eP	Pn	20 28 26.4	+1.5
SLA				eS	Sn	20 28 53.0	+1.7
HJA	Humahuaca	1.77	62	eP	Pn	20 28 27.9	+1.1
AZAP	Zapla	1.87	96	eP	Pn	20 28 28.7	+1.1
LVC	Limon Verde	2.19	310	P	Pn	20 28 32.6	+1.3
	62nm,0.3s,baz=111,slow=8.6,SNR=141						
LVC				S	Sn	20 29 02.2	-0.3
	157nm,0.3s,baz=15,slow=23,SNR=63						
LVC	Limon Verde	2.19	310	eP	Pn	20 28 32.7	+1.3
LVC				i S	Sn	20 29 03.0	+0.4
LVC	Limon Verde	2.19	310	eP	Pn	20 28 32.1	+0.8
LVC				eS	Sn	20 29 03.4	+0.9
LVC				IAML		20 29 04.7	
	comp=Z,459nm,0.8s						
FSA	Cafayete	2.29	154	eP	Pn	20 28 33.2	+1.1
PB15	IPOC Station P	2.33	291	⇑iP	Pn	20 28 34.0	+1.4
PB15				i S	Sn	20 29 04.3	-0.6
PB15	IPOC Station P	2.33	291		Pn	20 28 33.6	+1.0
PB15				Sn	Sn	20 29 04.1	-0.8
PB15	IPOC Station P	2.33	291	eP	Pn	20 28 34.0	+1.4
PB15				eS	Sn	20 29 05.1	+0.2
YJA	Yavi	2.37	38	eP	Pn	20 28 34.5	+1.2
YJA				eS	Sn	20 29 07.2	+1.1
ASTB	Santa Barbara	2.42	88	eP	Pn	20 28 34.3	+0.7
GO02	Mina Guanaco	2.52	243	⇑iP	Pn	20 28 36.1	+1.3
GO02				eS	Sn	20 29 09.8	+0.8
GO02				IAML		20 29 10.2	
	comp=N,2μm,0.2s						
GO02	Mina Guanaco	2.52	243		Pn	20 28 36.0	+1.1
PB06	IPOC Station P	2.63	300	⇑iP	Pn	20 28 37.2	+1.2
PB06				i S	Sn	20 29 10.4	-0.6
PB06				IAML		20 29 12.1	
	comp=N,4μm,0.4s						
PB06	IPOC Station P	2.63	300		Pn	20 28 37.1	+1.2
PB06	IPOC Station P	2.63	300	eP	Pn	20 28 37.2	+1.2
PB06				eS	Sn	20 29 10.5	-0.5
PB09	IPOC Station P	2.99	318	⇑iP	Pn	20 28 41.6	+1.4
PB09				i S	Sn	20 29 19.1	+0.5
PB09				IAML		20 29 19.9	
	comp=N,1μm,0.5s						
PB09	IPOC Station P	2.99	318		Pn	20 28 41.5	+1.3
PB09	IPOC Station P	2.99	318	eP	Pn	20 28 41.6	+1.4
PB09				eS	Sn	20 29 18.6	0.0
PB09				IAML		20 29 19.9	
	comp=Z,958nm,0.4s						
PB14	IPOC Station P	3.06	259	⇑iP	Pn	20 28 41.8	+0.6
PB14				i S	Sn	20 29 19.4	-0.9
PB14	IPOC Station P	3.06	259		Pn	20 28 41.8	+0.6

PB14	IPOC Station P	3.06	259	*e*S	Sn	20 29 20.4	0.0
PB14				IAML		20 29 22.3	
	comp=Z,287nm,0.3s						
PB05	IPOC Station P	3.09	292	⇑*i*P	Pn	20 28 41.9	+0.5
PB05				*i* S	Sn	20 29 18.6	-1.9
PB05				IAML		20 29 21.3	
	comp=E,859nm,0.6s						
PB05	IPOC Station P	3.09	292	*e*P	Pn	20 28 41.8	+0.5
PB05				*e*S	Sn	20 29 19.9	-0.7
PB05				IAML		20 29 25.1	
	comp=Z,563nm,0.6s						
PB03	IPOC Station P	3.15	309	⇑*i*P	Pn	20 28 43.0	+0.8
PB03				*i* S	Sn	20 29 20.2	-1.8
PB03				IAML		20 29 22.5	
	comp=Z,2µm,0.3s						
PB03	IPOC Station P	3.15	309	*e*P	Pn	20 28 42.8	+0.6
PB03				*e*S	Sn	20 29 20.7	-1.4
AHML	Horco Molle	3.16	150	*e*P	Pn	20 28 43.2	+1.1
AHML				*e*S	Sn	20 29 22.7	+0.6
PB10	IPOC Station P	3.21	279	*e*P	Pn	20 28 43.0	+0.3
PB10				*i* S	Sn	20 29 21.2	-1.8
PB10				IAML		20 29 26.8	
	comp=E,682nm,0.5s						
PB10	IPOC Station P	3.21	279	Pn	Pn	20 28 43.4	+0.8
PB10	IPOC Station P	3.21	279	*e*P	Pn	20 28 42.9	+0.3
PB10				*e*S	Sn	20 29 22.4	-0.5
PB10				IAML		20 29 26.6	
	comp=Z,309nm,0.1s						
PB04	IPOC Station P	3.28	301	⇑*i*P	Pn	20 28 44.3	+0.6
PB04				*i* S	Sn	20 29 23.1	-1.8
PB04	IPOC Station P	3.28	301		Pn	20 28 44.2	+0.4
PB04	IPOC Station P	3.28	301	*e*P	Pn	20 28 44.4	+0.6
PB04				*e*S	Sn	20 29 23.5	-1.5
AC02	Maricunga	3.32	213	Pn	Pn	20 28 40.7	-3.8
PB07	IPOC Station P	3.46	311	⇑*i*P	Pn	20 28 46.4	+0.4
PB07				*e*S	Sn	20 29 26.7	-2.0
PB07	IPOC Station P	3.46	311		Pn	20 28 46.3	+0.4
PB07	IPOC Station P	3.46	311	*e*S	Sn	20 29 26.7	-2.0
PB07				IAML		20 29 35.6	
	comp=Z,897nm,0.3s						
PB01	IPOC Station P	3.72	323		Pn	20 28 49.1	+0.1
AC01	Pan de Azucar	3.80	236	Pn	Pn	20 28 49.5	-0.4
PATCX	Punta Patache	4.28	318		Pn	20 28 56.4	+0.4
PB08	IPOC Station P	4.33	334	*e*P	Pn	20 28 57.9	+0.8
PB08				*i* S	Sn	20 29 47.8	-1.0
PB08				IAML		20 29 50.3	
	comp=E,287nm,0.2s						
PB08	IPOC Station P	4.33	334		Pn	20 28 57.6	+0.6
TA01	Diego Aracena	4.49	320	Pn	Pn	20 28 58.5	-0.2
GO03	Copiap	4.52	218		Pn	20 28 58.3	-0.7
GO03	Copiap	4.52	218	*e*P	Pn	20 28 58.6	-0.4
GO03				*e*S	Sn	20 29 50.6	-2.0
CYA	Choya	4.53	165	*e*P	Pn	20 28 59.5	+0.3
CYA				*e*S	Sn	20 29 53.9	+1.1
PSGCX	Pisagua	5.25	327	Pn	Pn	20 29 07.3	-1.2
ACLC	CERRO LA CRUZ	5.36	179	*e*P	Pn	20 29 10.6	+0.7
ACLC				*e*S	Sn	20 30 11.2	-0.9
MNMC	Minye Minye	5.42	334	Pn	Pn	20 29 10.4	-0.5
AC04	Llanos de Chal	5.46	220	Pn	Pn	20 29 09.7	-1.4
AC05	El Transito	5.55	210		Pn	20 29 11.4	-1.0
AGUA	GUANDACOL	5.55	193	*e*P	Pn	20 29 13.7	+1.3
AGUA				*e*S	Sn	20 30 17.2	+0.5
AGUA				IAML		20 30 19.9	
	comp=Z,56nm,0.5s						
LCO	Las Campanas	5.90	212	Pn	Pn	20 29 15.5	-1.5
PB16	IPOC Station P	6.11	338	Pn	Pn	20 29 20.0	-0.2
AROD	Rodeo	6.45	199	*e*P	Pn	20 29 26.7	+2.5
AROD				*e*S	Sn	20 30 39.7	+1.8
CO01	Juntas del Tor	6.48	204		Pn	20 29 23.1	-1.5
ACCO	Cerro Coronel	6.74	195	*e*P	Pn	20 29 28.5	+0.5
ACCO				*e*S	Sn	20 30 42.3	-2.6
ACCO				IAML		20 30 51.2	
	comp=Z,30nm,0.5s						
GO04	Tololo Observa	6.93	208		Pn	20 29 28.7	-1.8
CO03	El Pedregal	7.47	204	Pn	Pn	20 29 35.6	-1.8
CO02	Combarbal	7.92	205	Pn	Pn	20 29 42.4	-0.9
CPUP	Villa Florida	9.14	106	P	Pn	20 29 58.8	-0.3
	comp=Z,0.1nm,0.3s,baz=294,slow=11,SNR=5.2						
CPUP	Villa Florida	9.14	106	Pn	Pn	20 29 55.8	-3.4
CPUP	Villa Florida	9.14	106	*e*P	Pn	20 29 58.9	-0.2
SIV	San Ignacio	9.82	36	P	Pn	20 30 06.0	-2.2
	comp=Z,2.1nm,0.3s,baz=228,slow=7.4,SNR=14						
MT02	Curacav	9.83	200	Pn	Pn	20 30 04.9	-3.3
ITQB	Itaqui	10.90	123	*e*P	Pn	20 30 22.4	+0.4
AQDB	Aquidauana	11.14	74	*e*P	P	20 30 27.0	-4.8
BO02	Sierra Bellavi	11.17	196	Pn	Pn	20 30 22.3	-3.3
VILB	Vilhena	12.83	32	*e*P	Pn	20 30 46.8	0.0
BI02	San Fabin de	13.07	195	Pn	Pn	20 30 47.5	-2.2
PP1B	Ponte de Pedra	13.10	63	*e*P	Pn	20 30 48.9	-1.3
TRCB	Terra Rica	13.34	88	*e*P	Pn	20 30 52.5	-0.7
CPSB	Cacapava Do Su	13.70	120	*e*P	Pn	20 30 57.8	+0.3
PTGB	Pitanga	13.72	96	*e*P	P	20 30 58.7	-1.8
ITAB	Concordia	13.87	106	*e*P	Pn	20 30 59.5	-0.3
PCMB	Pacaembu	14.81	84	*e*P	P	20 31 10.9	-1.6
FRTB	Fartura	16.08	91	*e*P	P	20 31 27.3	+0.7
ITRB	Iturama	16.13	78	*e*P	P	20 31 27.0	-0.1
ARAG	Araguaiana, MT	16.59	63	*e*P	Pn	20 31 32.6	-0.5
PLCA	Paso Flores	16.89	189	P	P	20 31 36.9	+1.6
	comp=Z,0.3nm,0.3s,baz=16,slow=14,SNR=8.6						
PLCA	Paso Flores	16.89	189		P	20 31 33.2	-2.1
PLCA	Paso Flores	16.89	189	*e*P	Pn	20 31 38.6	+2.3
CZSB	Cruzeiro do Su	17.09	341	*e*P	Pn	20 31 41.1	+2.1
BB19B	Bebedouro	17.41	84	*e*P	Pn	20 31 41.6	-1.2
SPB	Sao Paulo	18.00	93	P	Pn	20 31 47.4	-2.3
SPB				IAmb	IAmb	20 31 54.4	
	comp=Z,16nm,0.8s						
SPB	Sao Paulo	18.00	93	*e*P	Pn	20 31 48.2	-1.5
PET01	Itanhaem-SP	18.09	95	*e*P	Pn	20 31 48.6	-2.1
VAO	Valinhos	18.50	91	*e*P	P	20 31 52.8	-0.3
IPMB	Ipameri, GO	18.63	75	*e*P	Pn	20 31 54.7	-2.5
SNDB	Serra Nova Dou	19.22	54	*e*P	P	20 32 00.2	-0.6
PARB	Paraibuna	19.68	92	*e*P	P	20 32 06.2	+0.3
BDFB	Brasilia	19.79	69	P	P	20 32 07.3	+0.2
	comp=Z,4.3nm,0.3s,baz=245,slow=11,SNR=72						
BDFB	Brasilia	19.79	69	P	P	20 32 06.8	-0.3
BSCB	Bom Sucesso	20.84	86	*e*P	P	20 32 18.6	+0.3
PEXB	Peixe	21.43	60	*e*P	P	20 32 23.6	-0.9
VAS01	Vassouras-RJ	21.82	90	*e*P	P	20 32 28.6	+0.2
DIAM	Diamantina, MG	22.57	80	*e*P	P	20 32 35.3	-0.4
DUB01	Friburgo-RJ	22.83	90	*e*P	P	20 32 38.2	+0.4
JANB	Januaria	23.24	72	*e*P	P	20 32 40.6	-1.0
SMTB	Santa Maria do	24.00	54	*e*P	P	20 32 48.5	+0.1
SDBA	SAO DESIDERIO	24.01	65	*e*P	P	20 32 47.9	-0.8
PRPB	Parauapebas	24.33	46	*e*P	P	20 32 50.1	-1.4
GDU01	Guandu, BA	27.95	73	*e*P	P	20 33 22.4	-1.5
NBPS	Pedro II - PI	31.51	56	*e*P	P	20 33 53.9	-1.6
NBPA	Parau_RN	34.09	63	*e*P	P	20 34 17.4	-0.3
NBRF	Rio Formoso -	34.16	69	*e*P	P	20 34 16.9	-1.4
RCBR	Riachuelo	35.03	64	*e*P	P	20 34 25.7	-0.2
LPIG	La Paz	63.62	316	P	P	20 38 04.4	+2.5
	comp=Z,28nm,0.3s,baz=229,slow=7.4,SNR=4.0						
TXAR	Lajitas Array	63.66	325	P	P	20 38 04.4	+2.2
	comp=Z,0.3nm,0.7s,baz=161,slow=8.6,SNR=3.0						
DBIC	Dimbokro	67.91	72	P	P	20 38 30.0	+0.5
	comp=Z,2.2nm,0.5s,baz=227,slow=9.1,SNR=3.6						
DBIC	Dimbokro	67.91	72	P	P	20 38 28.9	-0.6
DBIC				IAmb	IAmb	20 38 34.5	
	comp=Z,18nm,1.5s						
TOA0	Torodi Ar. Sit	76.67	69	P	P	20 39 20.6	-0.8
TOA0				IAmb	IAmb	20 39 24.7	
	comp=Z,3.2nm,0.7s						
TORD	Torodi Ar. Bea	76.67	69	P	P	20 39 21.6	+0.1
	comp=Z,2.3nm,0.6s,baz=262,slow=5.2,SNR=11						
TORD	Torodi Ar. Bea	76.67	69	P	P	20 39 21.1	-0.4
PDAR	Pinedale Array	77.14	329	P	P	20 39 25.9	+2.1
	comp=Z,0.4nm,0.8s,baz=144,slow=6.3,SNR=3.4						
NVAR	Mina Array Bea	78.52	321	P	P	20 39 34.7	+3.3
	comp=Z,0.3nm,0.5s,baz=134,slow=7.6,SNR=3.7						
YKA	Yellowknife Ar	94.14	340	P	P	20 40 49.3	+1.8
	comp=Z,0.3nm,0.5s,baz=128,slow=4.7,SNR=8.1						
ASAR	Alice Springs	128.37	205	PKP	PKPdf	20 46 37.0	+1.3
	comp=Z,1.0nm,0.7s,baz=132,slow=1.8,SNR=11						
WRA	Warramunga Arr	131.54	207	PKP	PKPdf	20 46 43.4	+1.6
	comp=Z,1.5nm,0.4s,baz=178,slow=1.5,SNR=5.1						
MKAR	Makanchi Array	146.62	39	PKPbc	PKPbc	20 47 10.3	+0.2
	comp=Z,0.3nm,0.6s,baz=328,slow=1.7,SNR=3.7						

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*NOU **04** 20:32:56.9, 38°.30S×175°.92E, h199^{km}, MLv3.7, North Island, New Zealand*

WEL 04 20:33:01.7, 38°S±2°×**17°6E**±°, **h158**^{km}±3^{km}, **M2.7**/33, **MLv2.7**/33, **Error ellipse: s-maj=0.0km s-min=0.0km az=118.9, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRHZ	Matea Rd	0.57	141	P	Pn	20 33 24.3	+0.1
MRHZ				S	Sn	20 33 40.5	-1.1
MUGZ	Murupara	0.64	98	P	Pn	20 33 24.8	+0.1
MUGZ				S	Sn	20 33 40.4	-1.7
TMVZ	Te Maari	0.75	195	P	Pn	20 33 25.8	+0.3
ETVZ	East Tongariro	0.77	194	P	Pn	20 33 26.0	+0.4
WTVZ	West Tongariro	0.78	202	P	Pn	20 33 25.9	+0.3
TWVZ	Taurewa	0.79	211	P	Pn	20 33 25.9	+0.2
MTHZ	Maungataniwha	0.83	124	P	Pn	20 33 26.2	+0.3
MTHZ				S	Sn	20 33 43.9	-0.6
RTZ	Ruatahuna	0.83	106	P	Pn	20 33 25.9	0.0
RTZ				S	Sn	20 33 44.1	-0.5
HIZ	Hauiti	0.87	262	P	Pn	20 33 26.4	+0.3
BKZ	Black Stump Fm	0.88	152	P	Pn	20 33 26.4	+0.1
BKZ				S	Sn	20 33 44.1	-1.1
TUVZ	Tukino	0.91	195	P	Pn	20 33 26.9	+0.3
TUVZ				S	Sn	20 33 45.4	-0.4
URZ	Urewera	0.92	82	P	Pn	20 33 26.0	-0.4
URZ				S	Sn	20 33 44.1	-1.3
WHVZ	Whangaehu Hut	0.94	198	P	Pn	20 33 27.3	+0.4
NMHZ	Naumai	0.97	137	P	Pn	20 33 28.1	+1.2
NMHZ				S	Sn	20 33 47.4	+1.0
WNVZ	Wahianoa	0.98	197	P	Pn	20 33 27.3	+0.2
WNVZ				S	Sn	20 33 46.6	-0.1
PKVZ	Pokaka	1.02	208	P	Pn	20 33 27.5	+0.2
MOVZ	Moawhango	1.03	189	P	Pn	20 33 27.3	-0.1
MOVZ				S	Sn	20 33 45.9	-1.5
RAHZ	Arahi	1.03	121	P	Pn	20 33 28.1	+0.8
RAHZ				S	Sn	20 33 47.6	+0.5
MTVZ	Mangateitei	1.06	201	P	Pn	20 33 27.9	+0.2
BHHZ	Black Hill Sta	1.10	176	P	Pn	20 33 27.9	-0.1
BHHZ				S	Sn	20 33 46.8	-1.6
RAGZ	Rawiri	1.15	96	P	Pn	20 33 28.6	+0.1
RAGZ				S	Sn	20 33 48.8	-0.3
SNGZ	Shannon Statio	1.15	110	P	Pn	20 33 29.0	+0.5
SNGZ				S	Sn	20 33 48.8	-0.2
VRZ	Vera Road	1.19	232	P	Pn	20 33 29.1	+0.4
MWZ	Matawai	1.24	88	P	Pn	20 33 29.0	-0.2
MWZ				S	Sn	20 33 49.3	-1.1
KRHZ	Kereru	1.29	166	P	Pn	20 33 30.0	+0.3
KRHZ				S	Sn	20 33 50.3	-1.1
RUGZ	Raukumara Rang	1.42	73	P	Pn	20 33 30.0	-1.1
RIGZ	Rimuhau	1.45	103	P	Pn	20 33 31.5	+0.2
KNZ	Kokohu	1.48	116	P	Pn	20 33 31.6	0.0
KNZ				S	Sn	20 33 53.5	-1.0
TKGZ	Te Karaka	1.49	92	P	Pn	20 33 32.1	+0.5
TKGZ				S	Sn	20 33 54.6	0.0
PNHZ	Pukenui	1.53	173	P	Pn	20 33 32.0	-0.1
PNHZ				S	Sn	20 33 54.1	-1.6
CKHZ	Cape Kidnapper	1.54	146	P	Pn	20 33 32.7	+0.5
CKHZ				S	Sn	20 33 55.0	-0.7
WAZ	Wanganui	1.56	209	P	Pn	20 33 32.4	+0.1
KAHZ	Kahuranaki	1.57	153	P	Pn	20 33 33.1	+0.5
HAZ	Te Kaha	1.57	67	P	Pn	20 33 31.5	-1.0
HAZ				S	Sn	20 33 53.5	-2.7
PRGZ	Paritu Road	1.60	110	P	Pn	20 33 32.9	0.0
TWGZ	Tauwhareparae	1.61	83	P	Pn	20 33 33.3	+0.3
TWGZ				S	Sn	20 33 57.1	+0.2
LREZ	Lake Rotokare	1.62	228	P	Pn	20 33 33.5	+0.6
TSZ	Takapari Road	1.67	180	P	Pn	20 33 33.2	-0.3
TSZ				S	Sn	20 33 56.2	-2.0
NEZ	North Egmont	1.70	238	P	Pn	20 33 34.6	+0.7
PKGZ	Pakihiroa	1.75	74	P	Pn	20 33 34.1	-0.3
CNGZ	Carnagh Statio	1.77	94	P	Pn	20 33 35.0	+0.4
PXZ	Pawanui	1.78	157	P	Pn	20 33 34.9	+0.1
PXZ				S	Sn	20 33 58.9	-1.4
DVHZ	Dannevirke	1.91	175	P	Pn	20 33 35.5	-0.7
POWZ	Post Office Ro	2.00	184	P	Pn	20 33 36.5	-0.8
WMGZ	Waiomatatini S	2.02	74	P	Pn	20 33 37.0	-0.5
MXZ	Matakaoa Point	2.03	67	P	Pn	20 33 37.4	-0.2
PRWZ	Pori Road	2.16	180	P	Pn	20 33 38.4	-0.7
MRZ	Mangatainoka R	2.29	187	P	Pn	20 33 39.3	-1.2
BFZ	Birch Farm	2.30	175	P	Pn	20 33 39.7	-1.0
TIWZ	Tintock	2.38	181	P	Pn	20 33 40.7	-1.0
OGWZ	Otaki Gorge	2.50	194	P	Pn	20 33 41.8	-1.3
CPWZ	Castlepoint	2.52	176	P	Pn	20 33 42.7	-0.7
HOWZ	Holdsworth Sta	2.53	188	P	Pn	20 33 41.9	-1.5
KIW	Kapiti Island	2.60	198	P	Pn	20 33 42.5	-1.8
TMWZ	Te Maipa	2.71	181	P	Pn	20 33 44.1	-1.6
MTW	Mount Morrison	2.79	187	P	Pn	20 33 44.6	-2.0
CAW	Cannon Point	2.80	194	P	Pn	20 33 45.0	-1.7
DUWZ	D'Urville Isla	2.88	213	P	Pn	20 33 45.7	-2.0
TRWZ	Traveller	3.01	184	P	Pn	20 33 47.4	-2.0
PAWZ	Paruwai Farm	3.02	188	P	Pn	20 33 47.2	-2.3
WEL	Wellington	3.03	197	P	Pn	20 33 47.5	-2.1
MSWZ	Moikau Station	3.07	190	P	Pn	20 33 47.8	-2.4
TCW	Tory Channel	3.10	204	P	Pn	20 33 48.3	-2.1
BHW	Baring Head	3.13	195	P	Pn	20 33 48.4	-2.4
PLWZ	Palliser	3.22	189	P	Pn	20 33 49.5	-2.5
TUWZ	Tuamarina	3.41	206	P	Pn	20 33 52.1	-2.3
NNZ	Nelson	3.45	214	P	Pn	20 33 52.4	-2.6
QRZ	Quartz Range	3.59	226	P	Pn	20 33 53.8	-3.1
BSWZ	Blackbirch Sta	3.68	205	P	Pn	20 33 55.7	-2.3
THZ	Tophouse	4.10	214	P	Pn	20 34 00.3	-3.1
KHZ	Kahutara	4.42	204	P	Pn	20 34 04.6	-2.9
GVZ	Greta Valley S	5.08	205	P	Pn	20 34 12.7	-3.5
LTZ	Lake Taylor	5.21	211	P	Pn	20 34 13.7	-4.1
INZ	Inchbonnie	5.53	217	P	Pn	20 34 17.6	-4.5
OXZ	Oxford	5.75	210	P	Pn	20 34 20.6	-4.5
MQZ	McQueen's Vall	5.87	204	P	Pn	20 34 21.6	-4.9
RACZ	Rakaia	6.06	207	P	Pn	20 34 24.3	-4.8
ARCZ	Arundel	6.62	211	P	Pn	20 34 32.2	-4.3
TMZ	Timaru	7.05	210	P	Pn	20 34 37.9	-4.4

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*IDC **04** 21:40:11.8±2.6, 39°.33N×143°.96E, h0^{km}, mb3.4/3, mb1 3.4/5, mb1mx3.2/45, mbtmp3.4/5, ML2.9/2, MS3.6/4, Ms1 3.6/4, ms1mx2.8/46, Error ellipse: s-maj=59.3km s-min=28.6km az=83.0*

*JMA **04** 21:40:14.8±0.1, 39°.38N×143°.73E, h38^{km}, M3.3*

ISC 04 21:40:16.2±1.4, **39°.43N**±0°.06×**143°.64E**±0°.10, **h21**^{km}±20^{km}, **n23**, σ**1^{s}02**/29, **mb3.4**/4, **MS3.7**/4, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MIYJ	Miyakonagasawa	1.42	277	P	Pn	21 40 40.0	-0.8
MIYJ				*e*S	Sn	21 40 59.0	+0.2
JTH	Tanohata	1.47	291	P	Pn	21 40 40.6	-0.8
JTH				*e*S	Sn	21 40 59.5	-0.5
OFUJ	Ofunato	1.57	258	P	Pn	21 40 42.0	-0.9
OFUJ				*e*S	Sn	21 41 02.0	-0.6
JOM	Ohasama	1.82	272	P	Pn	21 40 46.0	-0.3
JOM				*e*S	Sn	21 41 08.5	-0.3
JANG	Nango	1.89	301	P	Pn	21 40 46.7	-0.6
JMK	Ichinoseki	1.94	257	P	Pn	21 40 47.5	-0.5
JMK				*e*S	Sn	21 41 11.3	-0.4
JIO	Ouri	2.04	242	P	Pn	21 40 48.0	-1.3
JYK	Kaneyama	2.60	260	P	Pn	21 40 57.0	-0.1
JNBK	Urakawa-nobuka	2.93	347	P	Pn	21 41 02.5	+0.9
JNBK				*e*S	Sn	21 41 37.2	+1.1
JCH	Churui	3.19	356	P	Pn	21 41 04.9	-0.3
JCH				*e*S	Sn	21 41 41.5	-1.1
JFT	Otama	3.22	235	P	Pn	21 41 05.1	-0.5
JFT				*e*S	Sn	21 41 42.9	-0.4
JAK	Akkeshi	3.65	12	P	Pn	21 41 11.0	-0.5
ASAJ	Asahikawa	4.75	351	Pn	Pn	21 41 27.9	+1.3
	0.5nm,0.3s,baz=237,slow=9.6,SNR=3.1						
ASAJ				Sn	Sn	21 42 19.4	-1.6
	0.5nm,0.3s,baz=128,slow=19,SNR=2.8						
MJAR	Matsushiro Arr	5.17	238	Pn	Pn	21 41 33.4	+1.0
	0.2nm,0.3s,baz=36,slow=12,SNR=13						
MAT	Matsushiro	5.17	238	P	Pn	21 41 33.5	+1.1
MAT				*e*S	Sn	21 42 33.9	+2.5
SONM	Songino Array	28.02	300	P	P	21 46 06.7	+0.9
	0.2nm,0.4s,baz=103,slow=9.4,SNR=2.1						
TLY	Talaya	30.19	307	LR	LR	21 58 10.1	
	comp=Z,59nm,18.1s,baz=332,slow=35						
ZALV	Zalesovo Beam	41.65	310	P	P	21 48 03.0	+0.1
	0.5nm,0.4s,baz=97,slow=9.0,SNR=2.8						
MKAR	Makanchi Array	44.38	300	P	P	21 48 26.0	+0.9
	0.2nm,0.5s,baz=88,slow=8.6,SNR=3.6						
WRA	Warramunga Arr	59.70	190	P	P	21 50 17.7	-1.5
	2.3nm,0.4s,baz=7.6,slow=6.8,SNR=1.6						
PDAR	Pinedale Array	74.75	47	LR	LR	22 26 53.7	
	comp=Z,50nm,18.0s,baz=32,slow=38						
RAO	Raoul Island	77.14	146	LR	LR	22 20 20.7	
	comp=Z,43nm,21.6s,baz=352,slow=31						
RAR	Rarotonga	80.19	128	LR	LR	22 26 12.7	
	comp=Z,31nm,18.9s,baz=268,slow=34						

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*IDC **04** 21:43:04.6±1.4, 13°.13N×51°.14E, h0^{km}, mb3.4/4, mb1 3.7/5, mb1mx3.4/43, mbtmp3.6/5, ML4.2/1, MS3.2/3, Ms1 3.2/3, ms1mx2.7/48, Error ellipse: s-maj=53.7km s-min=24.4km az=165.0*

ISC 04 21:43:06.9±1.1, **13°.1N**±0°.3×**51°.1E**±0°.1, **h16**^{km}, **n8**, σ**0^{s}60**/6, **mb3.4**/5, **Eastern Gulf of Aden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATD	Arta Tunnel	8.22	260	Pn	Pn	21 45 05.2	-0.4
	3.2nm,0.3s,baz=334,slow=3.1,SNR=18						
ATD				LR	LR	21 47 41.3	
	comp=Z,131nm,20.7s,baz=41,slow=34						
WSAR	Wadi Sarin	12.35	34	LR	LR	21 50 25.5	
	comp=Z,113nm,19.9s,baz=242,slow=36						
KBZ	Khabaz	31.32	349	LR	LR	22 04 16.3	
	comp=Z,55nm,18.7s,baz=113,slow=41						
MKAR	Makanchi Array	42.57	32	P	P	21 51 02.3	+0.2
	0.2nm,0.5s,baz=222,slow=9.0,SNR=5.4						
CMAR	Chiang Mai Arr	46.24	77	P	P	21 51 32.0	+0.2
	0.8nm,0.5s,baz=276,slow=9.1,SNR=7.8						
TORD	Torodi Ar. Bea	48.06	276	P	P	21 51 46.7	+0.7
	0.3nm,0.7s,baz=94,slow=8.7,SNR=1.5						
SONM	Songino Array	57.30	41	P	P	21 52 53.5	-0.6
	0.1nm,0.5s,baz=256,slow=4.3,SNR=2.3						
WRA	Warramunga Arr	88.19	111	P	P	21 55 57.8	0.0
	3.5nm,0.3s,baz=305,slow=3.7,SNR=3.6						

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*IDC **04** 22:09:44.5±2.2, 13°.57N×144°.28E, h98^{km}±54^{km}, mb3.1/3, mb1 3.2/3, mb1mx2.9/52, mbtmp3.5/3, Error ellipse: s-maj=138.5km s-min=28.6km az=78.0*

*NEIC **04** 22:09:45.5±0.6, 13°.6N±0°.1×145°.1E±0°.2, h123^{km}±6^{km}, mb4.1/4, ML4.0/6, Error ellipse: s-maj=33.1km s-min=11.1km az=115.0*

ISC 04 22:09:44.3±1.0, **13°.8N**±0°.1×**144°.2E**±0°.1, **h100**^{km}, **n13**, σ**1^{s}34**/14, **mb4.0**/6, **Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	0.68	105	P	Pn	22 10 02.4	+0.9
	341nm,0.3s,baz=104,slow=3.6,SNR=106						
GUMO				S	Sn	22 10 14.1	-0.3
	377nm,0.3s,baz=170,slow=23,SNR=11						
GUMO	Guam	0.68	105		Pn	22 10 02.6	+1.1
GUMO				Sn	Sn	22 10 14.9	+0.5
GUMO				IAML		22 10 15.4	
	4µm,0.4s						
ANA2	Anatahan	2.95	30	Pn	Pn	22 10 28.8	-0.6
PATS	Pohnpei	15.49	115	P	Pn	22 13 10.3	-7.0
WB0	Warramunga Arr	34.69	196	P	P	22 16 24.4	-0.2
WB0				IAmb	IAmb	22 16 32.8	
	comp=Z,3.1nm,1.1s						
WR0	Warramunga Arr	34.83	196	P	P	22 16 26.1	+0.3
WRA	Warramunga Arr	34.87	196	P	P	22 16 25.7	-0.5
	comp=Z,55nm,0.3s,baz=16,slow=8.5,SNR=6.0						
FITZ	Fitzroy Crossi	36.57	211	P	P	22 16 42.7	+2.1
FITZ				IAmb	IAmb	22 16 50.7	
	comp=Z,3.3nm,1.1s						
ASAR	Alice Springs	38.54	195	P	P	22 16 56.0	-1.3
	comp=Z,0.4nm,0.5s,baz=27,slow=13,SNR=5.4						
ASAR	Alice Springs	38.54	195	P	P	22 16 55.9	-1.4
STKA	Stephens Creek	45.45	183	P	P	22 17 51.4	-1.9
	comp=Z,0.8nm,0.3s,baz=10,slow=11,SNR=3.4						
STKA	Stephens Creek	45.45	183	P	P	22 17 51.7	-1.6
MKAR	Makanchi Array	60.91	316	P	P	22 19 48.2	+1.6
	comp=Z,0.1nm,0.4s,baz=82,slow=6.5,SNR=1.6						

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*IDC **04** 22:10:01.1±1.8, 15°.81S×173°.83W, h0^{km}, mb3.9/6, mb1 4.3/6, mb1mx3.9/48, mbtmp3.9/6, MS2.8/1, Ms1 2.8/1, ms1mx2.5/39, Error ellipse: s-maj=94.9km s-min=21.6km az=154.0*

ISC 04 22:10:15.3±1.9, **15°.9S**±0°.6×**173°.9W**±0°.3, **h115**^{km}, **n10**, σ**0^{s}66**/9, **mb3.4**/7, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PPT	Papeete	23.36	98	LR	LR	22 21 33.7	
	comp=Z,26nm,21.1s,baz=184,slow=30						
WRA	Warramunga Arr	49.26	257	P	P	22 18 52.3	-0.4
	6.0nm,0.7s,baz=93,slow=7.7,SNR=16						
ASAR	Alice Springs	49.50	252	P	P	22 18 54.2	-0.3
	9.2nm,0.6s,baz=85,slow=8.6,SNR=79						
SIJI	Sorong	56.06	280	P	P	22 19 43.4	+0.5
	24nm,0.6s,baz=105,slow=9.3,SNR=9.2						
NVAR	Mina Array Bea	75.02	42	P	P	22 21 45.3	+0.6
	0.3nm,0.6s,baz=232,slow=7.4,SNR=3.1						
TXAR	Lajitas Array	81.29	56	P	P	22 22 19.4	+0.1
	0.5nm,0.9s,baz=216,slow=12,SNR=4.0						
PDAR	Pinedale Array	82.95	42	P	P	22 22 27.5	-0.4
	0.1nm,0.6s,baz=22,slow=36,SNR=2.0						
ILAR	Eielson Array	83.02	11	P	P	22 22 26.4	-0.9
	0.3nm,0.5s,baz=237,slow=6.4,SNR=5.8						
BRTR	Keskin Array B	146.23	320	PKPbc	PKPbc	22 29 43.3	+0.4
	1.9nm,0.7s,baz=87,slow=2.5,SNR=12						
GERES	GERESS Array B	146.55	351	PKPbc	PKPbc	22 29 44.1	+0.6
	0.2nm,0.3s,baz=46,slow=3.0,SNR=2.3						

IDC 04 22:12:38.8±1.7, **4°.06S**×**128°.25E**, **h0**^{km}, **mb4.1**/2, **mb1 4.6**/4, **mb1mx3.7**/44, **mbtmp4.4**/4, **ML4.2**/2, **Error ellipse: s-maj=42.0km s-min=27.7km az=71.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	4.38	44	Pn	Pn	22 13 46.5	-0.1
	23nm,0.3s,baz=56,slow=15,SNR=125						
SIJI				Sn	Sn	22 14 28.2	-10
	12nm,0.3s,baz=111,slow=22,SNR=14						
WRA	Warramunga Arr	16.86	160	Pn	Pn	22 16 37.1	+0.7
	0.7nm,0.3s,baz=341,slow=12,SNR=25						
ASAR	Alice Springs	20.24	165	P	P	22 17 15.4	-0.3
	8.9nm,0.7s,baz=352,slow=12,SNR=74						
CMAR	Chiang Mai Arr	36.54	309	P	P	22 19 46.5	0.0
	0.6nm,0.3s,baz=116,slow=5.2,SNR=4.2						

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*IDC **04** 22:18:44.4±0.8, 36°.93N×106°.04E, h0^{km}, mb3.8/11, mb1 4.0/13, mb1mx3.7/46, mbtmp3.8/13, ML3.8/1, MS2.8/3, Ms1 2.9/3, ms1mx2.6/46, Error ellipse: s-maj=27.0km s-min=14.8km az=62.0*

*BJI **04** 22:18:44.5±0.0, 36°.69N×106°.08E, h8^{km}, mB4.5/2, mb4.4/9, ML4.1/21, Ms3.8/12, Ms7 3.5/5*

ISC 04 22:18:46.1±0.6, **36°.68N**±0°.04×**106°.16E**±0°.04, **h10**^{km}, **n27**, σ**2^{s}28**/34, **mb3.9**/10, **1C, Western Nei Mongol**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LZH	Lanzhou	1.96	253	Pg	Pn	22 19 20.2	+0.7
LZH				Sg	Sn	22 19 44.8	+0.5
LZH				S	Sb	22 19 48.3	+1.8
LZH				smax	smax		
	comp=N,7µm,0.9s						
LZH				smax	smax		
	comp=E,6µm,1.1s						
XAN	Xi'an	3.47	139	Pn	Pn	22 19 40.1	-0.1
XAN				Pg	Pb	22 19 47.8	+0.2
XAN				Sn	Sn	22 20 21.3	0.0
XAN				Sg	Sb	22 20 33.0	+3.1
XAN				smax	smax		
	comp=N,330nm,0.7s						
XAN				smax	smax		
	comp=E,260nm,1.0s						
XAN				LR	LR		
	comp=N,580nm,7.4s						
XAN				LR	LR		
	comp=E,620nm,6.9s						
XAN				LR	LR		
	comp=Z,560nm,8.4s						
BTO	Baotou	4.95	36	*e*Pn	Pn	22 20 00.3	-0.3
BTO				*e*Pg	Pb	22 20 17.1	+4.2
BTO				Sg	Sb	22 21 15.4	+2.9
GTA	Gaotai	5.70	300	Pn	Pn	22 20 10.0	-0.9
GTA				Pg	Pb	22 20 27.6	+1.9
GTA				Sn	Sn	22 21 14.8	-1.7
GTA				Sg	Sb	22 21 41.5	+7.3

GTA				smax	smax		
	comp=N,210nm,0.8s						
GTA				smax	smax		
	comp=E,210nm,0.7s						
GTA				LR	LR		
	comp=N,690nm,9.5s						
GTA				LR	LR		
	comp=E,430nm,10.9s						
BJI	**Beijing**	**8.55**	**64**	P	Pg	22 21 20.5	-9.3
BJI				pmax	pmax		
	comp=Z,5.0nm,0.4s						
BJI				LR	LR		
	comp=N,48nm,0.7s						
BJI				LR	LR		
	comp=E,40nm,0.7s						
TIA	**Tai'an**	**8.85**	**90**	Pg	Pg	22 21 21.6	-14
TIA				Sg	Sg	22 23 17.2	-13
TIA				smax	smax		
	comp=N,55nm,0.9s						
TIA				smax	smax		
	comp=E,32nm,1.0s						
WHN	**Wuhan**	**9.17**	**130**	⇑P	Pn	22 21 11.0	+13
WHN				S	Sn	22 22 56.4	+15
WHN				LR	LR		
	comp=N,750nm,12.9s						
WHN				LR	LR		
	comp=E,720nm,8.2s						
WHN				LR	LR		
	comp=Z,680nm,5.0s						
SONM	**Songino Array**	**11.15**	**1**	Pn	**Pn**	**22 21 23.4**	**-2.2**
	comp=Z,0.6nm,0.3s,baz=181,slow=12,SNR=34						
SONM				Sn	**Sn**	**22 23 30.6**	**+0.2**
	comp=Z,0.6nm,0.3s,baz=195,slow=23,SNR=6.0						
SONM				Lg	Lg	22 24 34.5	
	comp=Z,0.3nm,0.3s,baz=144,slow=18,SNR=2.9						
SONM				LR	LR	22 26 05.5	
	comp=Z,68nm,19.3s,baz=112,slow=40						
TLY	**Talaya**	**15.11**	**354**	LR	LR	22 28 35.7	
	comp=Z,42nm,20.3s,baz=23,slow=40						
WMQ	**Urumqi**	**15.78**	**303**	*e*P	**Pn**	**22 22 28.2**	**-0.2**
WMQ				pmax	pmax		
	comp=Z,22nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,150nm,4.3s						
GUN	**Gumba**	**19.22**	**249**	*e*P	**P**	**22 23 10.2**	**-0.5**
	comp=Z,17nm,0.8s						
CMAR	**Chiang Mai Arr**	**19.23**	**201**	P	**P**	**22 23 12.0**	**+1.5**
	baz=5.9,slow=10,SNR=9.3						
CMAR				LR	LR	22 31 55.1	
	comp=Z,21nm,19.1s,baz=200,slow=41						
KKN	**Kakani**	**19.73**	**249**	*e*P	**P**	**22 23 16.3**	**+0.1**
	comp=Z,7.8nm,0.6s						
PKI	**Pulchoki**	**19.75**	**249**	*e*P	**P**	**22 23 16.6**	**+0.1**
	comp=Z,11nm,0.7s						
PKIN	**Phulchoki**	**19.76**	**249**	*e*P	**P**	**22 23 16.8**	**+0.3**
	comp=Z,12nm,0.6s						
MKAR	**Makanchi Array**	**20.41**	**307**	P	**P**	**22 23 20.4**	**-2.7**
	comp=Z,2.1nm,0.8s,baz=108,slow=13,SNR=22						
DANN	**Dangsing**	**20.60**	**253**	*e*P	**P**	**22 23 25.7**	**0.0**
	comp=Z,7.0nm,0.4s						
ZALV	**Zalesovo Beam**	**22.73**	**326**	P	**P**	**22 23 45.4**	**-2.7**
	comp=Z,2.9nm,0.7s,baz=120,slow=10,SNR=11						
KURBB	**Kurchatov Arra**	**24.19**	**314**	P	**P**	**22 24 00.0**	**-2.6**
	comp=Z,4.2nm,0.8s,baz=115,slow=10.0,SNR=22						
AAK	**Ala-Archa**	**25.00**	**294**	P	**P**	**22 24 08.8**	**-1.4**
	comp=Z,1.9nm,0.7s,baz=154,slow=7.8,SNR=6.1						
BVAR	**Borovoye Array**	**29.77**	**315**	P	**P**	**22 24 50.5**	**-2.3**
	comp=Z,0.8nm,0.4s,baz=87,slow=12,SNR=5.3						
FINES	**FINESS Array B**	**53.98**	**324**	P	**P**	**22 28 07.7**	**-2.1**
	comp=Z,0.7nm,0.7s,baz=87,slow=7.8,SNR=6.1						
AKASG	**Malin Array Be**	**54.93**	**311**	P	**P**	**22 28 14.8**	**-2.1**
	comp=Z,0.7nm,0.5s,baz=62,slow=6.3,SNR=4.0						
WRA	**Warramunga Arr**	**62.29**	**150**	P	**P**	**22 29 10.1**	**+1.6**
	comp=Z,1.0nm,0.7s,baz=345,slow=7.1,SNR=7.5						
ILAR	**Eielson Array**	**64.09**	**27**	P	**P**	**22 29 17.9**	**-2.1**
	comp=Z,0.2nm,0.5s,baz=299,slow=5.0,SNR=2.2						
ASAR	**Alice Springs**	**65.48**	**152**	P	**P**	**22 29 31.9**	**+2.4**
	comp=Z,0.9nm,0.6s,baz=336,slow=6.8,SNR=13						
YKA	**Yellowknife Ar**	**75.87**	**18**	P	**P**	**22 30 30.6**	**-1.7**
	comp=Z,0.4nm,0.6s,baz=334,slow=4.7,SNR=6.8						

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*IDC **04** 22:20:11.4±1.7, 2°.79N×79°.51W, h0^{km}, mb3.8/8, mb1 4.0/10, mb1mx3.8/32, mbtmp3.8/10, ML3.1/2, MS3.3/7, Ms1 3.3/7, ms1mx3.0/37, Error ellipse: s-maj=50.5km s-min=21.0km az=13.0*

*RSNC **04** 22:20:14.4±0.6, 2°.47N×79°.75W, h16^{km}±14^{km}, ML3.1*

ISC 04 22:20:13.6±0.7**, 2°.54N**±0°.05×**79°.80W**±0°.06**, h21^{km}, n35, σ1^s.75**/50**, mb3.9**/7**, MS3.3**/4**, 2C, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TUMC	**Tumaco**	**1.29**	**123**	⇑*e*P	**Pn**	**22 20 35.6**	**-0.8**
TUMC				*e*S	**Sb**	**22 20 52.0**	**-1.3**
TUMC				*i*		22 20 53.0	
	comp=Z,270nm,0.3s						
BBAC	**Balboa, Cauca**	**2.60**	**101**	⇑*e*P	**Pn**	**22 20 54.0**	**-0.7**
BBAC				*e*S	**Sn**	**22 21 24.6**	**-1.2**
BBAC				*i*		22 21 28.6	
	comp=Z,163nm,0.6s						
OTAV	**Otavalo**	**2.66**	**149**	*e*P	**Pn**	**22 20 54.6**	**-1.1**
OTAV				*e*S	**Sn**	**22 21 26.5**	**-0.9**
OTAV				*i*		22 21 34.5	
	comp=Z,43nm,0.8s						
GCUF	**Volcan Galeras**	**2.78**	**118**	*e*P	**Pn**	**22 20 57.8**	**+0.4**
GCUF				*e*S	**Sn**	**22 21 29.4**	**-1.2**
GCUF				*i*		22 21 35.5	
	comp=Z,77nm,0.2s						
MALC	**Bahia Malaga**	**2.87**	**59**	*e*P	**Pn**	**22 20 57.8**	**-0.3**
MALC				*e*S	**Sn**	**22 21 32.9**	**+0.9**
MALC				*i*		22 21 35.9	
	comp=Z,64nm,0.2s						
CRUC	**La Cruz**	**3.01**	**109**	*e*P	**Pn**	**22 21 01.2**	**+0.8**
CRUC				*e*S	**Sn**	**22 21 35.0**	**-1.0**
CRUC				*i*		22 21 44.3	
	comp=Z,90nm,0.4s						
SOTA	**Rioblanco**	**3.22**	**97**	*e*P	**Pn**	**22 21 05.0**	**+1.6**
SOTA				*e*S	**Sn**	**22 21 42.8**	**+1.4**
PCON	**Cinco Dias**	**3.41**	**93**	*e*P	**Pn**	**22 21 08.0**	**+1.8**
PCON				*e*S	**Sn**	**22 21 49.2**	**+3.0**
PCON				*i*		22 21 50.8	
	comp=Z,117nm,0.7s						
YOTC	**Yotoco, Valle**	**3.74**	**67**	*e*P	**Pn**	**22 21 09.2**	**-1.0**
YOTC				*e*S	**Sn**	**22 21 50.3**	**-3.5**
YOTC				*i*		22 21 51.9	
	comp=Z,33nm,0.3s						
MARP	**Paez Belalcaza**	**3.85**	**85**	*e*P	**Pn**	**22 21 14.2**	**+2.2**
MARP				*e*S	**Sn**	**22 21 58.7**	**+1.9**
MARP				*i*		22 22 04.6	
	comp=Z,12nm,0.4s						
PLMC	**San Jos del P**	**4.23**	**56**	*e*P	**Pn**	**22 21 15.5**	**-1.4**
PLMC				*e*S	**Sn**	**22 22 04.2**	**-1.5**
PLMC				*i*		22 22 12.1	
	comp=Z,40nm,0.2s						
FLOC	**Florencia**	**4.25**	**103**	*e*P	**Pn**	**22 21 19.0**	**+1.7**
FLOC				*e*S	**Sn**	**22 22 07.4**	**+1.0**
FLOC				*i*		22 22 13.5	
	comp=Z,18nm,0.6s						
GARC	**Garzon, Huila**	**4.32**	**95**	*e*P	**Pn**	**22 21 19.9**	**+1.6**
GARC				*e*S	**Sn**	**22 22 08.4**	**+0.1**
GARC				*i*		22 22 12.4	
	comp=Z,40nm,0.3s						
BETC	**Betania**	**4.36**	**88**	*e*P	**Pn**	**22 21 21.4**	**+2.6**
BETC				*e*S	**Sn**	**22 22 10.6**	**+1.6**
ORTC	**Ortega, Tolima**	**4.75**	**73**	*e*P	**Pn**	**22 21 26.3**	**+2.2**
ORTC				*e*S	**Sn**	**22 22 19.3**	**+0.7**
ORTC				*i*		22 22 24.8	
	comp=Z,30nm,0.6s						
ANIL	**Santa Ana**	**4.80**	**66**	*e*P	**Pn**	**22 21 26.8**	**+1.7**
ANIL				*e*S	**Sn**	**22 22 20.1**	**-0.1**
ANIL				*i*		22 22 28.3	
	comp=Z,6.2nm,0.3s						
TOLC	**Tolima**	**4.91**	**65**	*e*P	**Pn**	**22 21 27.4**	**+0.8**
TOLC				*e*S	**Sn**	**22 22 22.7**	**-0.4**
RREF	**El Recreo**	**5.03**	**62**	*e*P	**Pn**	**22 21 29.1**	**+0.6**
RREF				*e*S	**Sn**	**22 22 27.0**	**+0.7**
RREF				*i*		22 22 32.9	
	comp=Z,9.5nm,0.2s						
GUY2C	**Guyana, Caldas**	**5.17**	**59**	*e*P	**Pn**	**22 21 29.5**	**-0.7**
GUY2C				*e*S	**Sn**	**22 22 30.5**	**+0.9**
GUY2C				*i*		22 22 40.0	
	comp=Z,15nm,0.6s						
ROSC	**El Rosal**	**5.93**	**67**	Pn	Pn	22 21 34.2	-6.4
	comp=Z,3.6nm,0.3s,baz=211,slow=24,SNR=2.2						
ROSC				Sn	**Sn**	**22 22 41.2**	**-7.0**
	comp=Z,2.0nm,0.3s,baz=203,slow=22,SNR=1.5						
ROSC				LR	LR	22 24 15.9	
	comp=Z,224nm,20.6s,baz=244,slow=44						
ATAH	**Atahualpa**	**9.71**	**172**	LR	LR	22 26 26.0	
	comp=Z,87nm,19.9s,baz=4.6,slow=38						
SDV	**Santo Domingo**	**11.09**	**55**	LR	LR	22 27 22.5	
	comp=Z,142nm,20.6s,baz=244,slow=40						
PTGA	**Pitinga**	**20.09**	**99**	P	**P**	**22 24 45.3**	**-0.9**
	comp=Z,0.2nm,0.3s,baz=322,slow=19,SNR=1.6						
PTGA				LR	LR	22 32 43.0	
	comp=Z,120nm,18.1s,baz=265,slow=38						
SJG	**San Juan**	**20.46**	**40**	P	**P**	**22 24 48.7**	**-1.4**
	comp=Z,4.5nm,0.3s,baz=170,slow=11,SNR=1.5						
SIV	**San Ignacio**	**26.11**	**135**	LR	LR	22 36 38.5	
	comp=Z,112nm,18.1s,baz=66,slow=38						
MDP	**Montagnes des**	**27.22**	**84**	LR	LR	22 36 55.9	
	comp=Z,77nm,18.7s,baz=60,slow=37						
TXAR	**Lajitas Array**	**35.00**	**322**	P	**P**	**22 27 07.0**	**+2.2**
	comp=Z,0.3nm,0.7s,baz=120,slow=7.4,SNR=4.1						
TXAR				PcP	**PcP**	**22 29 38.5**	**+1.5**
	comp=Z,0.5nm,0.8s,baz=139,slow=5.9,SNR=5.7						
CPUP	**Villa Florida**	**35.99**	**144**	LR	LR	22 45 06.3	
	comp=Z,52nm,19.2s,baz=340,slow=42						
PDAR	**Pinedale Array**	**48.05**	**331**	P	**P**	**22 28 52.6**	**+0.8**
	comp=Z,1.1nm,0.5s,baz=67,slow=19,SNR=19						
NVAR	**Mina Array Bea**	**50.11**	**320**	P	**P**	**22 29 08.5**	**+0.8**
	comp=Z,0.7nm,0.8s,baz=125,slow=7.1,SNR=5.6						
NVAR				PcP	**PcP**	**22 30 27.5**	**+0.4**
	comp=Z,0.9nm,0.7s,baz=126,slow=4.4,SNR=8.1						
YKA	**Yellowknife Ar**	**65.18**	**343**	P	**P**	**22 30 52.5**	**-0.5**
	comp=Z,0.9nm,0.8s,baz=137,slow=6.4,SNR=15						
ILAR	**Eielson Array**	**78.08**	**336**	P	**P**	**22 32 10.7**	**-0.1**
	comp=Z,0.5nm,0.8s,baz=124,slow=5.3,SNR=5.5						
TORD	**Torodi Ar. Bea**	**81.15**	**77**	P	**P**	**22 32 28.3**	**0.0**
	comp=Z,1.5nm,1.1s,baz=222,slow=3.9,SNR=3.6						
NOA	**NORSAR Array B**	**88.29**	**29**	P	**P**	**22 33 01.8**	**-1.7**
	comp=Z,0.8nm,0.7s,baz=268,slow=4.6,SNR=3.1						
WRA	**Warramunga Arr**	**142.45**	**240**	PKhKP	PKPpre	22 39 41.0	
	comp=Z,0.5nm,0.8s,baz=110,slow=2.8,SNR=5.2						

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*JMA **04** 22:37:50.7±0.1, 39°.39N×143°.92E, h16^{km}, M4.0*

*NIED **04** 22:37:50.8, 39°.40N×143°.92E, h16^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}4.08; $M_{\theta\theta}$0.18; $M_{\phi\phi}$-4.26; $M_{r\theta}$0.41; $M_{\theta\phi}$-0.56; $M_{\phi r}$1.40; Fault plane solution: $M_0$4.45000×10^{14} NP1:ϕ_s10.00000°, δ55.00000°, λ94.00000°. NP2:ϕ_s184.00000°, δ36.00000°, λ85.00000°.*

*IDC **04** 22:37:57.4±3.2, 39°.33N×143°.71E, h43^{km}±29^{km}, mb3.4/8, mb1 3.6/11, mb1mx3.4/49, mbtmp3.6/11, ML3.2/2, MS2.6/1, Ms1 2.6/1, ms1mx2.2/29 Error ellipse: s-maj=30.5km s-min=20.1km az=126.0*

ISC 04 22:37:52.9±0.9**, 39°.40N**±0°.06×**143°.74E**±0°.08**, h11^{km}, n29, σ1^s.50**/32**, mb3.8**/12**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MIYJ	**Miyakonagasawa**	**1.50**	**277**	P	**Pn**	**22 38 19.3**	**-0.4**
MIYJ				*e*S	**Sn**	**22 38 39.6**	**+0.3**
JTH	**Tanohata**	**1.55**	**291**	P	**Pn**	**22 38 20.0**	**-0.4**
OFUJ	**Ofunato**	**1.64**	**260**	P	**Pn**	**22 38 21.4**	**-0.3**
JOM	**Ohasama**	**1.90**	**273**	P	**Pn**	**22 38 25.5**	**+0.3**
JOM				*e*S	**Sn**	**22 38 50.6**	**+1.4**
JANG	**Nango**	**1.97**	**300**	P	**Pn**	**22 38 25.6**	**-0.7**
JMK	**Ichinoseki**	**2.01**	**258**	P	**Pn**	**22 38 26.9**	**+0.1**
JYK	**Kaneyama**	**2.67**	**261**	P	**Pn**	**22 38 36.5**	**+0.6**
JNBK	**Urakawa-nobuka**	**2.98**	**346**	P	**Pn**	**22 38 41.7**	**+1.7**
JNBK				*e*S	**Sn**	**22 39 17.0**	**+1.3**
JCH	**Churui**	**3.23**	**355**	*e*S	**Sn**	**22 39 20.8**	**-1.1**
JFT	**Otama**	**3.27**	**236**	P	**Pn**	**22 38 44.5**	**+0.4**
JAK	**Akkeshi**	**3.67**	**11**	*e*S	**Sn**	**22 39 32.2**	**-0.5**
JAR	**Ashorobuto**	**3.90**	**0**	*e*S	**Sn**	**22 39 35.5**	**-2.9**
ASAJ	**Asahikawa**	**4.79**	**350**	P	Pn	22 39 08.8	+3.9
	1.2nm,0.3s,baz=214,slow=11,SNR=2.5						
ASAJ				S	**Sn**	**22 39 56.9**	**-3.6**
	1.7nm,0.3s,baz=295,slow=27,SNR=2.2						
MJAR	**Matsushiro Arr**	**5.22**	**239**	P	**Pn**	**22 39 11.8**	**+0.9**
	0.4nm,0.3s,baz=38,slow=12,SNR=37						
MAT	**Matsushiro**	**5.22**	**239**	P	**Pn**	**22 39 12.4**	**+1.5**
MAT				*e*S	**Sn**	**22 40 08.8**	**-2.3**
USRK	**Ussuriysk Ar.**	**10.00**	**302**	P	**Pn**	**22 40 17.5**	**+1.1**
	baz=174,slow=29,SNR=4.7						
KSRS	**Korea Array**	**12.56**	**266**	LR	LR	22 45 11.3	
	comp=Z,27nm,19.7s,baz=55,slow=34						
SEY	**Seymchan**	**24.14**	**10**	P	**P**	**22 43 09.9**	**+1.3**
	0.5nm,0.2s,baz=66,slow=20,SNR=4.2						
SONM	**Songino Array**	**28.10**	**300**	P	**P**	**22 43 45.4**	**+0.8**
	0.6nm,0.7s,baz=93,slow=9.1,SNR=5.9						
ZALV	**Zalesovo Beam**	**41.73**	**310**	P	**P**	**22 45 42.4**	**+0.8**
	1.3nm,0.5s,baz=95,slow=7.3,SNR=6.1						
CMAR	**Chiang Mai Arr**	**43.88**	**255**	P	**P**	**22 45 59.3**	**-0.2**
	1.5nm,0.3s,baz=306,slow=26,SNR=4.0						
MKAR	**Makanchi Array**	**44.46**	**300**	P	**P**	**22 46 03.4**	**-0.5**
	0.7nm,0.7s,baz=80,slow=10,SNR=7.9						
ILAR	**Eielson Array**	**46.52**	**34**	P	**P**	**22 46 18.9**	**-1.0**
	0.3nm,0.7s,baz=269,slow=6.2,SNR=2.8						
GUN	**Gumba**	**48.77**	**275**	*e*P	**P**	**22 46 37.6**	**-0.7**
	5.0nm,0.6s						
KKN	**Kakani**	**49.29**	**275**	*e*P	**P**	**22 46 41.2**	**-1.0**
	8.1nm,0.5s						
PKI	**Pulchoki**	**49.30**	**275**	*e*P	**P**	**22 46 38.5**	**-3.8**
	5.0nm,0.6s						
DANN	**Dangsing**	**50.19**	**277**	*e*P	**P**	**22 46 50.7**	**+1.6**
	28nm,0.9s						
WRA	**Warramunga Arr**	**59.68**	**190**	P	**P**	**22 47 57.0**	**-0.3**
	0.3nm,0.8s,baz=14,slow=7.6,SNR=2.1						
YKA	**Yellowknife Ar**	**60.84**	**31**	P	**P**	**22 48 06.1**	**+1.3**
	0.2nm,0.6s,baz=301,slow=5.7,SNR=2.9						

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*IDC **04** 22:47:01.4±1.1, 41°.41N×117°.26W, h0^{km}, mb2.4/1, mb1 2.8/4, mb1mx2.8/42, mbtmp2.5/4, ML2.8/3, Error ellipse: s-maj=10.7km s-min=6.5km az=170.0*

*NEIC **04** 22:47:03.2±1.3, 41°.18N±0°.05×117°.15W±0°.06, h0^{km}±2^{km}, ML2.3/34, Error ellipse: s-maj=8.3km s-min=6.5km az=34.0*

ISC 04 22:47:02.6±1.0**, 41°.19N**±0°.04×**117°.19W**±0°.04**, h0^{km}, n22, σ0^s.93**/24**, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELK	**Elko**	**1.54**	**106**	Pg	**Pn**	**22 47 31.9**	**+0.3**
	3.5nm,0.3s,baz=295,slow=18,SNR=34						
ELK				Lg	Lg	22 47 54.3	
	6.5nm,0.3s,baz=159,slow=14,SNR=16						
ELK	**Elko**	**1.54**	**106**	Pn	**Pn**	**22 47 31.3**	**-0.3**
WVOR	**Wild Horse Val**	**1.65**	**319**		**Pn**	**22 47 33.4**	**+0.4**
PAHR	**Pah Rah Range**	**2.24**	**229**		**Pn**	**22 47 41.6**	**+0.5**
PAHR				IAML		22 48 27.5	
	comp=E,16nm,1.3s						
KVN	**Kaiserville**	**2.25**	**198**		**Pn**	**22 47 42.2**	**+0.9**
KVN				IAML		22 48 25.4	
	comp=E,13nm,1.1s						
MFID	**Camas Ranch**	**2.44**	**24**	Pn	**Pn**	**22 47 44.1**	**+0.2**
MFID				IAML		22 48 23.4	
	comp=E,23nm,0.3s						
MFID				IAML		22 48 28.5	
	comp=E,22nm,0.5s						
MOD	**Modoc Plateau**	**2.44**	**288**	Pn	**Pn**	**22 47 44.2**	**+0.3**
MOD				IAML		22 48 26.4	
	comp=E,18nm,2.0s						
MOD				IAML		22 48 29.7	
	comp=N,16nm,0.8s						
BEKR	**Beckworth**	**2.76**	**242**		**Pn**	**22 47 48.9**	**+0.6**
BEKR				IAML		22 48 27.1	
	comp=N,7.8nm,4.8s						
BEKR				IAML		22 48 38.5	
	comp=E,10nm,0.6s						
RYN	**Ryan**	**2.76**	**202**		**Pn**	**22 47 49.7**	**+1.4**
RYN				IAML		22 48 36.6	
	comp=N,18nm,0.5s						
NV11	**Mina Array Sit**	**2.85**	**195**		**Pn**	**22 47 48.5**	**-1.1**
NV11				IAML		22 48 42.7	
	comp=N,8.5nm,2.8s						
NV11				IAML		22 49 22.1	
	comp=E,10nm,4.4s						
NVAR	**Mina Array Bea**	**2.89**	**198**	Pn	**Pn**	**22 47 51.6**	**+1.5**
	comp=E,0.8nm,0.3s,baz=12,slow=13,SNR=10						
NVAR				Pg	**Pg**	**22 47 57.9**	**-0.2**
	comp=E,2.5nm,0.3s,baz=12,slow=15,SNR=18						
NVAR				Lg	Lg	22 48 37.8	
	baz=316,slow=39,SNR=1.3						
NVAR	**Mina Array Bea**	**2.89**	**198**		**Pn**	**22 47 48.9**	**-1.3**
R11A	**Troy Canyon, C**	**3.10**	**156**		**Pn**	**22 47 53.8**	**+0.9**
R11A				IAML		22 48 39.9	
	comp=E,6.8nm,5.0s						
LHV	**Little Huntoon**	**3.11**	**200**		**Pn**	**22 47 53.9**	**+1.0**
HLID	**Hailey**	**3.14**	**40**	Pn	**Pn**	**22 47 53.9**	**+0.4**
HLID				IAML		22 48 48.6	
	comp=E,10nm,0.8s						
HLID				IAML		22 49 00.7	
	comp=E,12nm,4.8s						
BGU	**Big Grassy Mou**	**3.15**	**93**		**Pn**	**22 47 54.2**	**+0.5**
WAKR	**Walker**	**3.19**	**214**		**Pn**	**22 47 54.4**	**+0.1**
WAKR				IAML		22 48 47.2	
	comp=N,7.2nm,4.8s						
WAKR				IAML		22 49 52.4	
	comp=E,11nm,4.5s						
I07A	**Izee**	**3.36**	**330**		**Pn**	**22 47 58.0**	**+1.5**
HVU	**Hansel Valley**	**3.37**	**78**	Pn	**Pn**	**22 47 57.4**	**+0.7**
YBH	**Yreka Blue Hor**	**4.19**	**279**	Pn	**Pn**	**22 48 07.2**	**-0.7**
	comp=E,0.4nm,0.3s,baz=304,slow=11,SNR=2.3						
PDAR	**Pinedale Array**	**5.90**	**72**	Pn	**Pn**	**22 48 31.5**	**-0.1**
	comp=E,0.0nm,0.3s,baz=251,slow=14,SNR=2.5						
PDAR				Pg	**Pb**	**22 48 47.1**	**+0.6**
	comp=E,0.1nm,0.3s,baz=258,slow=11,SNR=3.1						
PDAR				Lg	Lg	22 50 08.4	
	comp=E,0.0nm,0.3s,baz=258,slow=33,SNR=1.2						
YKA	**Yellowknife Ar**	**21.39**	**3**	P	**P**	**22 51 49.7**	**-1.9**
	comp=E,0.0nm,0.3s,baz=182,slow=12,SNR=2.1						

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*IDC **04** 22:55:53.4±2.6, 58°.67S×26°.18W, h0^{km}, mb4.1/3, mb1 4.1/3, mb1mx3.9/15, mbtmp4.1/3, Error ellipse: s-maj=114.9km s-min=32.5km az=172.0*

ISC 04 22:56:07.4±0.9**, 58°.7S**±0°.1×**26°.2W**±0°.2**, h107^{km}, n9, σ3^s.18**/12**, mb4.0**/3**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**14.19**	**155**	P	**P**	**22 59 29.5**	**+2.3**
VNA1				S	**Sn**	**23 01 58.1**	**-1.0**
VNA3	**Neumayer Olymp**	**14.36**	**158**	P	**P**	**22 59 31.2**	**+2.1**
VNA3				S	**Sn**	**23 01 58.4**	**-4.9**
VNA2	**Neumayer--Watz**	**14.58**	**155**	P	**P**	**22 59 34.1**	**+2.5**
	baz=314,slow=15						
SNAA	**Sanae**	**16.15**	**153**	P	**P**	**22 59 55.9**	**+6.9**
SNAA				S	**Sn**	**23 02 45.9**	**-0.7**
PLCA	**Paso Flores**	**33.04**	**283**	P	**P**	**23 02 32.1**	**-0.3**
	1.5nm,0.8s,baz=154,slow=10.0,SNR=3.1						
BOSA	**Boshof**	**46.19**	**72**	P	**P**	**23 04 20.8**	**-0.6**
	1.7nm,0.7s,baz=226,slow=7.7,SNR=4.2						
TORD	**Torodi Ar. Bea**	**75.10**	**28**	P	**P**	**23 07 36.6**	**-0.8**
	1.2nm,0.4s,baz=198,slow=6.2,SNR=11						
YKA	**Yellowknife Ar**	**138.43**	**316**	PKP	**PKPdf**	**23 15 18.7**	**+0.1**
	0.1nm,0.4s,baz=119,slow=3.0,SNR=3.7						
ILAR	**Eielson Array**	**152.19**	**308**	PKPbc	**PKPbc**	**23 15 47.6**	**-1.1**
	0.3nm,0.6s,baz=151,slow=5.9,SNR=5.9						

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*IDC **04** 22:58:54.0±1.7, 41°.53N×81°.18E, h0^{km}, mb3.6/4, mb1 3.6/9, mb1mx3.5/46, mbtmp3.5/9, ML3.0/5, MS3.3/1, Ms1 3.3/1, ms1mx2.3/41, Error ellipse: s-maj=24.1km s-min=16.8km az=148.0*

*SOME **04** 22:58:56.9, 41°.67N×81°.13E, h10^{km}*

*NNC **04** 22:58:58.4±1.3, 41°.62N×81°.03E, h0^{km}, mb4.4, mpv4.0, Error ellipse: s-maj=9.0km s-min=8.2km az=144.0*

ISC 04 22:58:58.2±2.2**, 41°.67N**±0°.05×**81°.14E**±0°.04**, h4**^{km}±14^{km}**, n64, σ2^s.00**/85**, mb3.7**/4**, 12C-7D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**1.87**	**342**	*e*P	**Pn**	**22 59 32.9**	**+1.7**
	277nm,0.2s						
KTMS				*e*S	**Sb**	**22 59 58.3**	**+1.4**
	497nm,0.4s						
KTMS	**Ketmen**	**1.87**	**342**	Pg	**Pn**	**22 59 32.9**	**+1.7**
	277nm,0.2s						
KTMS				Lg	Lg	22 59 58.3	
	497nm,0.4s						
SHLS	**Shalkode**	**1.94**	**321**	*e*P	**Pn**	**22 59 31.4**	**-0.7**
	281nm,0.3s						
SHLS				*e*S	**Sn**	**22 59 56.4**	**-0.7**
	1µm,0.5s						
SHLS	**Shalkode**	**1.94**	**321**	P	**Pn**	**22 59 31.4**	**-0.7**
	281nm,0.3s						
SHLS				S	**Sn**	**22 59 56.4**	**-0.7**
	1µm,0.5s						
PDGK	**Podgornoye**	**2.06**	**324**	Pg	**Pn**	**22 59 35.8**	**+2.0**
	46nm,0.4s						
PDGK				Lg	Lg	23 00 04.3	
	199nm,0.4s						
PDGK	**Podgornoye**	**2.06**	**324**	⇑Pn	**Pn**	**22 59 35.1**	**+1.3**
	95nm,0.2s						
PDGK				⇑Lg	Lg	23 00 04.4	
	363nm,0.3s						
UZB	**Uzynbulak**	**2.16**	**314**	*e*P	**Pb**	**22 59 37.6**	**-0.3**
	205nm,0.5s						
UZB				*e*S	**Sg**	**23 00 07.4**	**-0.1**
	526nm,0.3s						
UZB	**Uzynbulak**	**2.16**	**314**	Pg	**Pb**	**22 59 37.6**	**-0.3**
	205nm,0.5s						
UZB				Lg	Lg	23 00 07.4	
	526nm,0.3s						
SATY	**Saty**	**2.46**	**305**	*e*P	**Pb**	**22 59 43.8**	**+0.7**
	166nm,0.4s						
SATY				*e*S	**Sg**	**23 00 17.9**	**+0.7**
	325nm,0.5s						
SATY	**Saty**	**2.46**	**305**	Pg	**Pb**	**22 59 43.8**	**+0.7**
	166nm,0.4s						
SATY				Lg	Lg	23 00 17.9	
	325nm,0.5s						
KPKS	**Kokpek**	**2.55**	**316**	*e*P	**Pb**	**22 59 45.8**	**+1.0**
	116nm,0.2s						
KPKS				*e*S	**Sg**	**23 00 20.7**	**+0.5**
	985nm,0.6s						
DJR	**Jarkent**	**2.84**	**340**	*e*P	**Pb**	**22 59 50.6**	**+1.0**
	30nm,0.3s						
DJR				*e*S	**Sg**	**23 00 29.0**	**-0.6**
	183nm,0.5s						
DJR	**Jarkent**	**2.84**	**340**	Pg	**Pb**	**22 59 50.6**	**+1.0**
	30nm,0.3s						
DJR				Lg	Lg	23 00 29.0	
	183nm,0.5s						
KURS	**Kuram**	**2.85**	**311**	*e*P	**Pb**	**22 59 49.2**	**-0.5**
	18nm,0.4s						
KURS				*e*S	**Sb**	**23 00 26.8**	**+1.8**
	114nm,0.8s						
KURS	**Kuram**	**2.85**	**311**	Pg	**Pb**	**22 59 49.2**	**-0.5**
	18nm,0.4s						
KURS				Lg	Lg	23 00 26.8	
	114nm,0.8s						
MNBS	**Baschi**	**3.14**	**321**	*e*P	**Pb**	**22 59 54.0**	**-0.7**
	35nm,0.3s						
MNBS				*e*S	**Sb**	**23 00 35.0**	**+1.5**
	367nm,0.6s						
MNBS	**Baschi**	**3.14**	**321**	Pg	**Pb**	**22 59 54.0**	**-0.7**
	35nm,0.3s						
MNBS				Lg	Lg	23 00 35.0	
	367nm,0.6s						
KOTS	**Kotyrbulak**	**3.37**	**299**	*e*P	**Pb**	**22 59 59.8**	**+1.3**
	47nm,0.3s						
KOTS				*e*S	**Sg**	**23 00 44.9**	**-1.5**
	249nm,0.6s						
KOTS	**Kotyrbulak**	**3.37**	**299**	Pg	**Pb**	**22 59 59.8**	**+1.3**
	47nm,0.3s						
KOTS				Lg	Lg	23 00 44.9	
	249nm,0.6s						
MDOK	**Medeo**	**3.38**	**298**	⇓Pn	**Pn**	**22 59 53.0**	**+1.1**
	6.3nm,0.5s						
MDOK				⇓Pg	**Pb**	**22 59 59.4**	**+0.6**
	26nm,0.7s						
MDOK				⇑Lg	Lg	23 00 42.0	
	131nm,0.9s						
TNSS	**Tian-Shan**	**3.40**	**295**	*e*P	**Pb**	**22 59 58.2**	**-1.0**
	9.9nm,0.5s						
TNSS				*e*S	**Sb**	**23 00 42.2**	**+1.2**
	70nm,0.5s						
TNSS	**Tian-Shan**	**3.40**	**295**	Pg	**Pb**	**22 59 58.2**	**-1.0**
	9.9nm,0.5s						
TNSS				Lg	Lg	23 00 42.2	
	70nm,0.5s						
KNDC	**Almaty**	**3.46**	**298**	⇑Pg	**Pn**	**22 59 54.6**	**+1.7**
	54nm,0.8s						
KNDC				⇑Lg	Lg	23 00 45.5	
	160nm,0.7s						
ARXS	**Arharly**	**3.52**	**317**	*e*P	**Pb**	**23 00 01.5**	**+0.4**
	31nm,0.3s						
ARXS				*e*S	**Sb**	**23 00 47.7**	**+3.4**
	135nm,0.5s						

ARXS	Arharly 31nm,0.3s	3.52	317	Pg	Pb	23 00 01.5	+0.4
ARXS	135nm,0.5s			Lg	Lg	23 00 47.7	
IZV	Izvestkoviy 16nm,0.3s	3.62	294	*e*P	Pb	23 00 03.0	+0.1
IZV	167nm,0.6s			*e*S	Sb	23 00 50.5	+3.2
IZV	Izvestkoviy 16nm,0.3s	3.62	294	Pg	Pb	23 00 03.0	+0.1
IZV	167nm,0.6s			Lg	Lg	23 00 50.5	
MTBS	Maitube 10nm,0.3s	3.78	294	*e*P	Pb	23 00 05.9	+0.3
MTBS	45nm,0.4s			*e*S	Sb	23 00 56.2	+4.3
MTBS	Maitube 10nm,0.3s	3.78	294	Pg	Pb	23 00 05.9	+0.3
MTBS	45nm,0.4s			Lg	Lg	23 00 56.2	
KAPS	Kapalarasan 24nm,0.5s	3.84	341	*e*P	Pb	23 00 06.7	+0.1
KAPS	48nm,0.6s			*e*S	Sb	23 00 57.4	+3.8
KAPS	Kapalarasan 24nm,0.5s	3.84	341	Pg	Pb	23 00 06.7	+0.1
KAPS	48nm,0.6s			Lg	Lg	23 00 57.4	
KTBS	Karatobe 14nm,0.4s	3.87	303	*e*P	Pb	23 00 08.6	+1.5
KTBS	105nm,0.7s			*e*S	Sg	23 00 60.0	-2.5
KTBS	Karatobe 14nm,0.4s	3.87	303	Pg	Pb	23 00 08.6	+1.5
KTBS	105nm,0.7s			Lg	Lg	23 00 60.0	
TDK	Taldyqorghan 48nm,0.6s	3.88	330	*e*P	Pb	23 00 07.7	+0.4
TDK	130nm,0.7s			*e*S	Sb	23 00 59.1	+4.4
TDK	Taldyqorghan 48nm,0.6s	3.88	330	Pg	Pb	23 00 07.7	+0.4
TDK	130nm,0.7s			Lg	Lg	23 00 59.1	
KST	Kastek 18nm,0.7s	4.08	291	*e*P	Pb	23 00 10.7	+0.1
KST	71nm,0.7s			*e*S	Sb	23 01 04.4	+4.1
KST	Kastek 18nm,0.7s	4.08	291	Pg	Pb	23 00 10.7	+0.1
KST	71nm,0.7s			Lg	Lg	23 01 04.4	
DGS	Degeres 24nm,0.8s	4.27	293	*e*P	Pb	23 00 17.3	+3.3
DGS	57nm,0.7s			*e*S	Sg	23 01 14.5	-0.9
DGS	Degeres 24nm,0.8s	4.27	293	Pg	Pb	23 00 17.3	+3.3
DGS	57nm,0.7s			Lg	Lg	23 01 14.5	
TKM2	Tokmak 2 9.7nm,0.3s	4.30	289	⇑Pn	Pn	23 00 05.6	+0.9
TKM2	30nm,0.5s			⇑Lg	Lg	23 01 11.9	
KRBS	Karabastau 8.4nm,0.4s	4.51	299	*e*P	Pb	23 00 20.4	+2.4
KRBS	28nm,0.3s			*e*S	Sg	23 01 20.1	-2.9
KRBS	Karabastau 8.4nm,0.4s	4.51	299	Pg	Pb	23 00 20.4	+2.4
KRBS	28nm,0.3s			Lg	Lg	23 01 20.1	
AAK	Ala-Archa 0.7nm,0.3s,baz=119,slow=8.3,SNR=12	5.03	283	Pn	Pn	23 00 15.2	+0.5
AAK	0.6nm,0.3s,baz=90,slow=4.4,SNR=5.9			Pg	Pb	23 00 27.9	+0.9
AAK	1.5nm,0.3s,baz=286,slow=18,SNR=1.9			Lg	Lg	23 01 33.5	
AAK	Ala-Archa 1.9nm,0.8s	5.03	283	⇑Pn	Pn	23 00 15.8	+1.1
AAK	13nm,0.8s			⇓Pg	Pb	23 00 28.4	+1.4
AAK	20nm,0.6s			⇑Lg	Lg	23 01 34.2	
SGDS	Sogindy 3.6nm,0.5s	5.13	293	Pg	Pb	23 00 30.2	+1.6
SGDS	27nm,0.7s			Lg	Lg	23 01 37.3	
MAKZ	Makanchi 5.1nm,0.2s	5.18	6	⇑Pn	Pn	23 00 17.5	+0.9
MAKZ	20nm,0.7s			⇓Lg	Lg	23 01 39.6	
MK31	Makanchi Array 1.5nm,0.2s,baz=186,slow=12,SNR=176	5.19	9	Pn	Pn	23 00 17.4	+0.6
MK31	12nm,0.5s			⇓Lg	Lg	23 01 40.3	
MKAR	Makanchi Array 2.5nm,0.3s,baz=192,slow=14,SNR=91	5.19	9	Pn	Pn	23 00 17.6	+0.9
MKAR	1.9nm,0.3s,baz=186,slow=26,SNR=3.6			Sn	Sn	23 01 19.1	+1.9
MKAR	3.3nm,0.3s,baz=189,slow=29,SNR=4.8			Lg	Lg	23 01 40.7	
WMQ	Urumqi	5.29	64	*e*Pn	Pn	23 00 22.3	+4.2
WMQ				Sn	Sn	23 01 23.8	+4.3
WMQ	comp=N,51nm,1.1s			smax	smax		
WMQ	comp=E,53nm,0.9s			smax	smax		
MRKS	Merke comp=E,5.1nm,0.7s	5.97	283	*e*P	Pb	23 00 47.4	+4.4
MRKS	comp=E,9.3nm,0.4s			*e*S	Sg	23 02 06.5	-3.5
MRKS	Merke comp=E,5.1nm,0.7s	5.97	283	Pg	Pb	23 00 47.4	+4.4
MRKS	comp=E,9.3nm,0.4s			Lg	Lg	23 02 06.5	
KK31	Karatay Array comp=E,0.7nm,0.4s,baz=94,slow=17,SNR=6.2	8.00	284	⇑Pg	Pb	23 01 25.1	+7.7
KK31	comp=E,2.9nm,0.6s,baz=98,slow=28,SNR=3.8			⇑Lg	Lg	23 03 09.3	
KURBB	Kurchatov Arra comp=E,0.0nm,0.3s,baz=247,slow=18,SNR=1.8	9.14	349	Pn	Pn	23 01 10.5	-0.4
KURBB	comp=E,0.1nm,0.3s,baz=184,slow=28,SNR=5.5			Lg	Lg	23 03 48.0	
KURBB	Kurchatov Arra comp=E,19nm,0.7s	9.14	349	⇓Lg	Lg	23 03 39.4	
CEP	Cherat	10.70	226	P	Pn	23 01 35.2	+2.7
CEP				S	Sn	23 03 24.0	-8.8
THW	Thamme Wali	11.59	223	P	Pn	23 01 42.5	-2.0
ZALV	Zalesovo Beam comp=E,0.2nm,0.3s,baz=186,slow=12,SNR=9.1	12.53	10	Pn	Pn	23 01 55.4	-1.8
LZH	Lanzhou	18.52	100	⇓P	P	23 03 14.3	-1.4
LZH				pP	pP	23 03 17.7	+0.5
LZH				sP	sP	23 03 20.9	+3.0
LZH	comp=Z,16nm,1.0s			pmax	pmax		
SONM	Songino Array comp=Z,0.0nm,0.3s,baz=263,slow=9.5,SNR=4.5	18.92	62	P	P	23 03 16.9	-3.2
ARCES	ARCESS Array B comp=Z,3.9nm,1.1s,baz=103,slow=7.9,SNR=1.6	39.76	333	P	P	23 06 29.8	-1.9
ASAJ	Asahikawa comp=Z,40nm,20.1s,baz=352,slow=37	44.17	65	LR	LR	23 26 02.4	
NOA	NORSAR Array B comp=Z,0.3nm,0.4s,baz=82,slow=7.6,SNR=3.8	45.27	320	P	P	23 07 13.9	-2.8
ILAR	Eielson Array comp=Z,0.2nm,0.7s,baz=309,slow=4.5,SNR=2.1	67.44	20	P	P	23 09 50.3	-4.3
TORD	Torodi Ar. Bea comp=Z,0.5nm,0.6s,baz=45,slow=8.4,SNR=2.0	73.54	273	P	P	23 10 29.0	-3.6

SOME ***04*** *23:05:56.0, 41.°57N×81.°20E, h20km*
NNC ***04*** *23:05:58.3±1.2, 41.°62N×81.°04E, h0km, mb4.1, mpv3.8,*
Error ellipse: s-maj=8.8km s-min=7.6km az=163.0
ISC 04 23:06:00.7±2.1**, 41.°79N**±0.°08×**80.°93E**±0.°07**, h10km, n53,**
σ**1.ˢ88**/76**, 11C-4D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	Ketmen 150nm,0.2s	1.71	346	*e*P	Pg	23 06 32.5	-0.9
KTMS	285nm,0.4s			*e*S	Sg	23 06 59.2	+3.7
KTMS	Ketmen 150nm,0.2s	1.71	346	Pg	Pg	23 06 32.6	-0.8
KTMS	285nm,0.4s			Lg	Lg	23 06 59.5	
SHLS	Shalkode 120nm,0.2s	1.74	322	*e*P	Pn	23 06 31.2	0.0
SHLS	457nm,0.5s			*e*S	Sg	23 06 56.6	-0.1
SHLS	Shalkode 120nm,0.2s	1.74	322	P	Pn	23 06 31.2	0.0
SHLS	457nm,0.5s			S	Sg	23 06 56.6	-0.1
PDGK	Podgornoye 19nm,0.4s	1.87	326	Pg	Pg	23 06 35.2	-1.3
PDGK	89nm,0.6s			Lg	Lg	23 07 04.0	
PDGK	Podgornoye 42nm,0.4s	1.87	326	⇑Pn	Pb	23 06 34.8	-0.2
PDGK	142nm,0.6s			⇑Lg	Lg	23 07 03.6	
UZB	Uzynbulak 32nm,0.4s	1.95	314	*e*P	Pb	23 06 36.5	0.0
UZB	185nm,0.4s			*e*S	Sg	23 07 06.0	+2.5
UZB	Uzynbulak 32nm,0.4s	1.95	314	Pg	Pb	23 06 36.5	0.0
UZB	185nm,0.4s			Lg	Lg	23 07 06.0	
SATY	Saty 87nm,0.5s	2.25	305	*e*P	Pg	23 06 43.5	-0.4
SATY	186nm,0.4s			*e*S	Sg	23 07 18.3	+5.2
SATY	Saty 87nm,0.5s	2.25	305	Pg	Pg	23 06 43.5	-0.4
SATY	186nm,0.4s			Lg	Lg	23 07 18.3	
KPKS	Kokpek 57nm,0.2s	2.35	316	*e*P	Pg	23 06 44.4	-1.4
KPKS	388nm,0.6s			*e*S	Sg	23 07 19.6	+3.3
KURS	Kuram 13nm,0.4s	2.65	311	*e*P	Pg	23 06 49.5	-2.0
KURS	39nm,0.7s			*e*S	Sg	23 07 27.7	+2.0
KURS	Kuram 13nm,0.4s	2.65	311	Pg	Pg	23 06 49.5	-2.0
KURS	39nm,0.7s			Lg	Lg	23 07 27.7	
DJR	Jarkent 4.4nm,0.3s	2.67	342	*e*P	Pg	23 06 49.5	-2.4
DJR	82nm,0.5s			*e*S	Sg	23 07 27.7	+1.2
DJR	Jarkent 4.4nm,0.3s	2.67	342	Pg	Pg	23 06 49.5	-2.4
DJR	82nm,0.5s			Lg	Lg	23 07 27.7	
MNBS	Baschi 17nm,0.3s	2.94	322	*e*P	Pb	23 06 53.7	+0.4
MNBS	162nm,0.5s			*e*S	Sg	23 07 35.0	-0.2
MNBS	Baschi 17nm,0.3s	2.94	322	Pg	Pb	23 06 53.7	+0.4
MNBS	162nm,0.5s			Lg	Lg	23 07 35.0	
KOTS	Kotyrbulak 31nm,0.2s	3.17	298	*e*P	Pg	23 06 59.5	-1.8
KOTS	145nm,0.6s			*e*S	Sg	23 07 45.7	+3.2
KOTS	Kotyrbulak 31nm,0.2s	3.17	298	Pg	Pg	23 06 59.5	-1.8
KOTS	145nm,0.6s			Lg	Lg	23 07 45.7	
MDOK	Medeo 12nm,0.6s	3.18	297	*e*P	Pb	23 06 56.8	-0.5
MDOK	63nm,0.6s			*e*S	Sg	23 07 40.7	-2.1
MDOK	Medeo 4.5nm,0.6s	3.18	297	⇑Pn	Pn	23 06 52.7	+1.8
MDOK	14nm,0.6s			⇑Pg	Pb	23 06 57.8	+0.4
MDOK	68nm,0.7s			⇓Lg	Lg	23 07 41.6	
MDOK	Medeo 12nm,0.6s	3.18	297	Pg	Pb	23 06 56.8	-0.5
MDOK	63nm,0.6s			Lg	Lg	23 07 40.7	
TNSS	Tian-Shan 8.4nm,0.3s	3.20	294	*e*P	Pb	23 06 58.4	+0.6
TNSS	29nm,0.6s			*e*S	Sg	23 07 43.1	-0.4
TNSS	Tian-Shan 8.4nm,0.3s	3.20	294	Pg	Pb	23 06 58.4	+0.6
TNSS	29nm,0.6s			Lg	Lg	23 07 43.1	
ARXS	Arharly 18nm,0.3s	3.32	318	*e*P	Pb	23 06 58.9	-0.8
ARXS	49nm,0.8s			*e*S	Sg	23 07 43.7	-3.6
ARXS	Arharly 18nm,0.3s	3.32	318	Pg	Pb	23 06 58.9	-0.8
ARXS	49nm,0.8s			Lg	Lg	23 07 43.7	
IZV	Izvestkoviy 8.6nm,0.3s	3.43	293	*e*P	Pb	23 07 02.3	+0.7
IZV	85nm,0.5s			*e*S	Sg	23 07 50.2	-0.6
IZV	Izvestkoviy 8.6nm,0.3s	3.43	293	Pg	Pb	23 07 02.3	+0.7
IZV	85nm,0.5s			Lg	Lg	23 07 50.2	
CHKK	Chushkaly 6.0nm,0.3s	3.56	307	*e*P	Pg	23 07 06.4	-2.4
CHKK	41nm,0.4s			*e*S	Sg	23 07 56.8	+2.0
CHKK	Chushkaly 6.0nm,0.3s	3.56	307	Pg	Pg	23 07 06.4	-2.4
CHKK	41nm,0.4s			Lg	Lg	23 07 56.8	
MTBS	Maitube 10.0nm,0.5s	3.59	293	*e*P	Pb	23 07 05.6	+1.3
MTBS	22nm,0.4s			*e*S	Sg	23 07 55.5	-0.4
MTBS	Maitube 10.0nm,0.5s	3.59	293	Pg	Pb	23 07 05.6	+1.3
MTBS	22nm,0.4s			Lg	Lg	23 07 55.5	
KTBS	Karatobe 4.9nm,0.5s	3.67	303	*e*P	Pb	23 07 06.1	+0.5
KTBS	55nm,0.7s			*e*S	Sg	23 07 56.6	-1.9
KTBS	Karatobe 4.9nm,0.5s	3.67	303	Pg	Pb	23 07 06.1	+0.5
KTBS	55nm,0.7s			Lg	Lg	23 07 56.6	
KAPS	Kapalarasan 12nm,0.5s	3.67	342	*e*P	Pb	23 07 06.5	+0.8
KAPS	26nm,0.5s			*e*S	Sg	23 07 56.9	-1.7
KAPS	Kapalarasan 12nm,0.5s	3.67	342	Pg	Pb	23 07 06.5	+0.8
KAPS	26nm,0.5s			Lg	Lg	23 07 56.9	
KST	Kastek 11nm,0.5s	3.88	290	*e*P	Pb	23 07 09.3	-0.1
KST	41nm,0.7s			*e*S	Sg	23 08 02.2	-3.1
KST	Kastek 11nm,0.5s	3.88	290	Pg	Pb	23 07 09.3	-0.1
KST	41nm,0.7s			Lg	Lg	23 08 02.2	
KUU	Kurty 13nm,0.6s	3.97	303	*e*P	Pg	23 07 14.3	-2.5
KUU	31nm,0.6s			*e*S	Sg	23 08 10.9	+2.6
KUU	Kurty 13nm,0.6s	3.97	303	Pg	Pg	23 07 14.3	-2.5
KUU	31nm,0.6s			Lg	Lg	23 08 10.9	
DGS	Degeres 8.5nm,0.5s	4.08	293	*e*P	Pg	23 07 15.7	-3.1
DGS	24nm,0.8s			*e*S	Sg	23 08 12.3	+0.8
DGS	Degeres 8.5nm,0.5s	4.08	293	Pg	Pg	23 07 15.7	-3.1
DGS	24nm,0.8s			Lg	Lg	23 08 12.3	
TKM2	Tokmak 2 5.0nm,0.3s	4.11	288	⇑Pn	Pn	23 07 05.2	+1.5
TKM2	17nm,0.6s			⇓Lg	Lg	23 08 11.3	
KRBS	Karabastau 4.3nm,0.3s	4.31	298	*e*P	Pb	23 07 19.2	+2.6
KRBS	22nm,0.3s			*e*S	Sg	23 08 19.3	+0.2
KRBS	Karabastau 4.3nm,0.3s	4.31	298	Pg	Pb	23 07 19.2	+2.6
KRBS	22nm,0.3s			Lg	Lg	23 08 19.3	
AAK	Ala-Archa 6.3nm,0.8s	4.85	282	⇑Pg	Pg	23 07 33.1	-0.6
AAK	13nm,0.7s			⇓Lg	Lg	23 08 35.5	
SGDS	Sogindy 3.3nm,0.5s	4.93	292	Pg	Pg	23 07 31.8	-3.4
SGDS	12nm,0.5s			Lg	Lg	23 08 40.1	
MAKZ	Makanchi 2.7nm,0.2s	5.07	8	⇑Pn	Pn	23 07 17.3	+0.6
MAKZ	9.2nm,0.8s			⇓Lg	Lg	23 08 39.6	
MK31	Makanchi Array 0.9nm,0.3s,baz=184,slow=14,SNR=80	5.09	11	⇑Pn	Pn	23 07 17.5	+0.4
MK31	5.4nm,0.5s,baz=190,slow=26			⇑Lg	Lg	23 08 40.7	
MRKS	Merke 3.4nm,0.6s	5.79	282	*e*P	Pg	23 07 48.5	-3.1
MRKS	5.1nm,0.5s			*e*S	Sg	23 09 08.7	+2.1
MRKS	Merke 3.4nm,0.6s	5.79	282	Pg	Pg	23 07 48.6	-3.1
MRKS	5.1nm,0.5s			Lg	Lg	23 09 08.7	
ZSN	Zaisan 3.3nm,0.6s	6.32	25	Pg	Pb	23 07 54.9	+4.2
ZSN	13nm,0.9s			Lg	Lg	23 09 21.1	
KK31	Karatay Array 0.4nm,0.4s,baz=93,slow=17,SNR=5.0	7.81	283	⇑Pg	Pg	23 08 29.9	-0.3
KK31	4.0nm,0.9s,baz=106,slow=25,SNR=5.9			⇑Lg	Lg	23 10 12.3	

IDC 04 23:06:48.0±4.7**, 2.°80S×129.°20E, h0km, mb3.7**/2**,**
mb1 3.7/4**, mb1mx3.3**/31**, mbtmp3.5**/4**, ML3.2**/2**, Error**
ellipse: s-maj=98.6km s-min=24.8km az=113.0, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong 1.8nm,0.3s,baz=223,slow=22,SNR=16	2.82	47	Pn	Pn	23 07 33.6	-0.8
SIJI	0.9nm,0.3s,baz=203,slow=23,SNR=1.5			Sn	Sn	23 08 10.1	+1.0
WRA	Warramunga Arr 0.1nm,0.3s,baz=344,slow=13,SNR=4.9	17.77	164	P	Pn	23 10 57.1	+0.2
ASAR	Alice Springs 0.9nm,0.7s,baz=348,slow=11,SNR=8.0	21.24	168	P	P	23 11 34.2	-1.6
STKA	Stephens Creek 4.2nm,0.9s,baz=306,slow=15,SNR=4.1	31.19	159	P	P	23 13 10.6	+1.5

SOME ***04*** *23:20:50.7, 41.°62N×81.°12E, h10km*
NNC ***04*** *23:20:52.9±1.5, 41.°62N×81.°03E, h0km, mb3.6, mpv3.2,*
Error ellipse: s-maj=9.9km s-min=8.4km az=156.0
ISC 04 23:20:56.7±2.1**, 41.°80N**±0.°08×**80.°92E**±0.°07**, h10km, n43,**
σ**1.ˢ42**/64**, 8C-2D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	Ketmen 29nm,0.2s	1.70	346	*e*P	Pb	23 21 26.9	-1.3
KTMS	67nm,0.4s			*e*S	Sg	23 21 53.2	+1.7
KTMS	Ketmen 29nm,0.2s	1.70	346	Pg	Pb	23 21 26.9	-1.3
KTMS	67nm,0.4s			Lg	Lg	23 21 53.2	
SHLS	Shalkode 24nm,0.2s	1.74	322	*e*P	Pn	23 21 25.5	-1.6
SHLS	115nm,0.4s			*e*S	Sb	23 21 50.7	-0.1
SHLS	Shalkode 24nm,0.2s	1.74	322	P	Pn	23 21 25.5	-1.6
SHLS	115nm,0.4s			S	Sb	23 21 50.7	-0.1
PDGK	Podgornoye 4.0nm,0.4s	1.86	326	Pg	Pb	23 21 29.8	-1.1
PDGK	16nm,0.6s			Lg	Lg	23 21 58.3	
PDGK	Podgornoye 6.2nm,0.3s	1.86	326	⇓Pn	Pn	23 21 29.4	+0.6
PDGK	26nm,0.6s			⇑Lg	Lg	23 21 58.2	
UZB	Uzynbulak 8.0nm,0.2s	1.95	314	*e*P	Pb	23 21 32.1	-0.4
UZB	45nm,0.4s			*e*S	Sg	23 22 01.9	+2.5
UZB	Uzynbulak 8.0nm,0.2s	1.95	314	Pg	Pb	23 21 32.1	-0.4
UZB	45nm,0.4s			Lg	Lg	23 22 01.9	
SATY	Saty 18nm,0.5s	2.25	305	*e*P	Pg	23 21 39.0	-0.9
SATY	32nm,0.3s			*e*S	Sg	23 22 13.6	+4.5
SATY	Saty 18nm,0.5s	2.25	305	Pg	Pg	23 21 39.0	-0.9
SATY	32nm,0.3s			Lg	Lg	23 22 13.6	
KPKS	Kokpek 5.2nm,0.2s	2.35	316	*e*P	Pn	23 21 36.4	+0.9
KPKS	46nm,0.4s			*e*S	Sb	23 22 09.2	+0.9
KURS	Kuram 2.6nm,0.4s	2.64	311	*e*P	Pb	23 21 43.5	-0.7
KURS	9.0nm,0.6s			*e*S	Sg	23 22 21.5	-0.1
KURS	Kuram 2.6nm,0.4s	2.64	311	Pg	Pb	23 21 43.5	-0.7
KURS	9.0nm,0.6s			Lg	Lg	23 22 21.8	
DJR	Jarkent 1.2nm,0.2s	2.67	342	*e*P	Pb	23 21 44.5	-0.1
DJR	17nm,0.5s			*e*S	Sg	23 22 22.9	+0.5
DJR	Jarkent 1.2nm,0.2s	2.67	342	Pg	Pb	23 21 44.5	-0.1
DJR	17nm,0.5s			Lg	Lg	23 22 22.9	
MNBS	Baschi 2.3nm,0.2s	2.94	322	*e*P	Pb	23 21 48.1	-1.1
MNBS	32nm,0.5s			*e*S	Sg	23 22 29.1	-2.0
MNBS	Baschi 2.3nm,0.2s	2.94	322	Pg	Pb	23 21 48.1	-1.1
MNBS	32nm,0.5s			Lg	Lg	23 22 29.1	
KOTS	Kotyrbulak 7.4nm,0.2s	3.16	298	*e*P	Pb	23 21 53.9	+0.8
KOTS	36nm,0.5s			*e*S	Sg	23 22 39.1	+0.8
KOTS	Kotyrbulak 7.4nm,0.2s	3.16	298	Pg	Pb	23 21 53.9	+0.8
KOTS	36nm,0.5s			Lg	Lg	23 22 39.6	
MDOK	Medeo 4.2nm,0.5s	3.18	297	*e*P	Pb	23 21 52.7	-0.6
MDOK	12nm,0.5s			*e*S	Sg	23 22 36.9	-1.8
MDOK	Medeo 3.4nm,0.6s	3.18	297	Pg	Pb	23 21 53.3	0.0
MDOK	7.8nm,0.8s			⇑Lg	Lg	23 22 36.4	
MDOK	Medeo 4.2nm,0.5s	3.18	297	Pg	Pb	23 21 52.7	-0.6
MDOK	12nm,0.5s			Lg	Lg	23 22 36.9	
TNSS	Tian-Shan 1.4nm,0.3s	3.19	294	*e*P	Pb	23 21 53.4	-0.4
TNSS	5.6nm,0.6s			*e*S	Sg	23 22 38.2	-1.2
TNSS	Tian-Shan 1.4nm,0.3s	3.19	294	Pg	Pb	23 21 53.4	-0.4
TNSS	5.6nm,0.6s			Lg	Lg	23 22 38.2	
ARXS	Arharly 4.9nm,0.3s	3.32	318	*e*P	Pb	23 21 56.0	+0.3
ARXS	11nm,0.5s			*e*S	Sg	23 22 43.0	-0.2
ARXS	Arharly 4.9nm,0.3s	3.32	318	Pg	Pb	23 21 56.0	+0.3
ARXS	11nm,0.5s			Lg	Lg	23 22 43.0	

IZV	Izvestkoviy 1.5nm,0.2s	3.42	293	eP	Pb	23 21 57.4	-0.1
IZV	12nm,0.5s			eS	Sg	23 22 44.8	-1.9
IZV	Izvestkoviy 1.5nm,0.2s	3.42	293	Pg	Pb	23 21 57.4	-0.1
IZV	12nm,0.5s			Lg	Lg	23 22 44.8	
CHKK	Chushkaly 1.0nm,0.1s	3.55	307	eP	Pb	23 22 00.8	+1.1
CHKK	7.5nm,0.4s			eS	Sg	23 22 50.6	-0.1
CHKK	Chushkaly 1.0nm,0.1s	3.55	307	Pg	Pb	23 22 00.8	+1.1
CHKK	7.5nm,0.4s			Lg	Lg	23 22 50.6	
KTBS	Karatobe 1.2nm,0.4s	3.66	303	eP	Pb	23 22 02.0	+0.5
KTBS	8.8nm,0.6s			eS	Sg	23 22 52.8	-1.5
KTBS	Karatobe 1.2nm,0.4s	3.66	303	Pg	Pb	23 22 02.0	+0.5
KTBS	8.8nm,0.6s			Lg	Lg	23 22 52.8	
KAPS	Kapalarasan 1.3nm,0.3s	3.67	342	eP	Pb	23 22 01.2	-0.5
KAPS	3.7nm,0.4s			eS	Sg	23 22 51.4	-3.2
KAPS	Kapalarasan 1.3nm,0.3s	3.67	342	Pg	Pb	23 22 01.2	-0.5
KAPS	3.7nm,0.4s			Lg	Lg	23 22 51.4	
KST	Kastek 3.5nm,0.3s	3.88	290	eP	Pb	23 22 05.6	+0.3
KST	8.2nm,0.7s			eS	Sg	23 22 59.2	-2.0
KST	Kastek 3.5nm,0.3s	3.88	290	Pg	Pb	23 22 05.6	+0.3
KST	8.2nm,0.7s			Lg	Lg	23 22 59.2	
DGS	Degeres 3.9nm,0.6s	4.07	293	eP	Pb	23 22 10.1	+1.5
DGS	6.4nm,0.6s			eS	Sg	23 23 07.0	-0.5
DGS	Degeres 3.9nm,0.6s	4.07	293	Pg	Pb	23 22 10.1	+1.5
DGS	6.4nm,0.6s			Lg	Lg	23 23 07.0	
TKM2	Tokmak 2 1.3nm,0.3s	4.11	288	⇑Pn	Pn	23 22 00.1	+0.4
TKM2	3.5nm,0.7s			⇑Lg	Lg	23 23 05.9	
KRBS	Karabastau 0.9nm,0.4s	4.31	298	eP	Pb	23 22 12.6	+0.1
KRBS	3.1nm,0.4s			eS	Sg	23 23 11.0	-4.0
KRBS	Karabastau 0.9nm,0.4s	4.31	298	Pg	Pb	23 22 12.6	+0.1
KRBS	3.1nm,0.4s			Lg	Lg	23 23 11.0	
AAK	Ala-Archa 0.9nm,0.4s	4.85	282	⇑Pg	Pg	23 22 29.0	-0.5
AAK	2.5nm,0.7s			⇑Lg	Lg	23 23 30.6	
MK31	Makanchi Array 0.1nm,0.2s,baz=188,slow=13,SNR=29	5.09	11	⇑Pn	Pn	23 22 12.2	-0.9
MK31	0.5nm,0.4s,baz=188,slow=25			⇑Sn	Sn	23 23 16.4	+4.4
MK31	1.0nm,0.5s,baz=188,slow=26			⇓Lg	Lg	23 23 35.1	

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*SOME **04** 23:47:07.6,41.°57N×81.°12E,h10km*
*NNC **04** 23:47:09.8±1.4,41.°64N×81.°12E,h0km,mb3.7,mpv3.4,*
Error ellipse: s-maj=9.6km s-min=7.7km az=157.0
ISC 04 23:47:12.3±2.1,**41.°77N**±0.°08×**80.°98E**±0.°07,**h10**km,**n37,**
σ**1ˢ97**/56,**6C-6D,Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	Ketmen 52nm,0.2s	1.74	345	eP	Pb	23 47 44.1	-0.4
KTMS	114nm,0.5s			eS	Sg	23 48 10.6	+2.3
KTMS	Ketmen 52nm,0.2s	1.74	345	Pg	Pb	23 47 44.1	-0.4
KTMS	114nm,0.5s			Lg	Lg	23 48 10.6	
SHLS	Shalkode 34nm,0.2s	1.79	322	eP	Pn	23 47 42.6	-0.8
SHLS	181nm,0.5s			eS	Sb	23 48 07.9	+0.2
SHLS	Shalkode 34nm,0.2s	1.79	322	P	Pn	23 47 42.6	-0.8
SHLS	181nm,0.5s			S	Sb	23 48 07.9	+0.2
PDGK	Podgornoye 5.9nm,0.4s	1.91	325	Pg	Pb	23 47 46.9	-0.5
PDGK	24nm,0.7s			Lg	Lg	23 48 15.3	
PDGK	Podgornoye 9.8nm,0.3s	1.91	325	⇓Pn	Pb	23 47 46.4	-1.0
PDGK	39nm,0.6s			⇓Lg	Lg	23 48 14.7	
UZB	Uzynbulak 14nm,0.3s	2.00	314	eP	Pg	23 47 49.3	-1.4
UZB	68nm,0.4s			eS	Sg	23 48 19.5	+2.9
UZB	Uzynbulak 14nm,0.3s	2.00	314	Pg	Pg	23 47 49.3	-1.4
UZB	68nm,0.4s			Lg	Lg	23 48 19.5	
SATY	Saty 27nm,0.4s	2.30	305	eP	Pg	23 47 55.0	-1.4
SATY	41nm,0.5s			eS	Sg	23 48 29.4	+3.1
SATY	Saty 27nm,0.4s	2.30	305	Pg	Pg	23 47 55.0	-1.4
SATY	41nm,0.5s			Lg	Lg	23 48 29.4	
KPKS	Kokpek 14nm,0.2s	2.40	316	eP	Pb	23 47 55.1	-0.6
KPKS	74nm,0.3s			eS	Sg	23 48 29.6	+0.2
KURS	Kuram 7.8nm,0.5s	2.70	311	eP	Pb	23 48 00.8	+0.1
KURS	13nm,0.8s			eS	Sg	23 48 39.1	+0.2
KURS	Kuram 7.8nm,0.5s	2.70	311	Pg	Pb	23 48 00.8	+0.1
KURS	13nm,0.8s			Lg	Lg	23 48 39.1	
DJR	Jarkent 1.0nm,0.1s	2.71	342	eP	Pb	23 48 00.9	0.0
DJR	22nm,0.5s			eS	Sg	23 48 39.0	-0.4
DJR	Jarkent 1.0nm,0.1s	2.71	342	Pg	Pb	23 48 00.9	0.0
DJR	22nm,0.5s			Lg	Lg	23 48 39.0	
MNBS	Baschi 5.1nm,0.2s	2.99	322	eP	Pb	23 48 05.2	-0.5
MNBS	44nm,0.4s			eS	Sg	23 48 46.8	-1.5
MNBS	Baschi 5.1nm,0.2s	2.99	322	Pg	Pb	23 48 05.2	-0.5
MNBS	44nm,0.4s			Lg	Lg	23 48 46.8	
MDOK	Medeo 2.2nm,0.3s	3.23	297	eP	Pb	23 48 09.8	0.0
MDOK	18nm,0.6s			eS	Sg	23 48 54.2	-1.8
MDOK	Medeo 5.4nm,0.7s	3.23	297	Pg	Pg	23 48 11.6	-2.5
MDOK	17nm,0.6s			⇓Lg	Lg	23 48 53.0	
MDOK	Medeo 2.2nm,0.3s	3.23	297	Pg	Pb	23 48 09.8	0.0
MDOK	18nm,0.6s			Lg	Lg	23 48 54.2	
TNSS	Tian-Shan 2.2nm,0.3s	3.25	294	eP	Pg	23 48 11.4	-3.1
TNSS	7.6nm,0.5s			eS	Sg	23 48 57.0	+0.4
TNSS	Tian-Shan 2.2nm,0.3s	3.25	294	Pg	Pg	23 48 11.4	-3.1
TNSS	7.6nm,0.5s			Lg	Lg	23 48 57.0	
CHKK	Chushkaly 1.0nm,0.1s	3.60	307	eP	Pb	23 48 17.5	+1.4
CHKK	10nm,0.4s			eS	Sg	23 49 07.7	-0.3
CHKK	Chushkaly 1.0nm,0.1s	3.60	307	Pg	Pb	23 48 17.5	+1.4
CHKK	10nm,0.4s			Lg	Lg	23 49 07.7	
KAPS	Kapalarasan 2.1nm,0.3s	3.71	342	eP	Pg	23 48 19.8	-3.5
KAPS	8.3nm,0.5s			eS	Sg	23 49 11.8	+0.4
KAPS	Kapalarasan 2.1nm,0.3s	3.71	342	Pg	Pg	23 48 19.8	-3.5
KAPS	8.3nm,0.5s			Lg	Lg	23 49 11.8	
TDK	Taldyqorghan 12nm,0.4s	3.74	331	eP	Pg	23 48 21.6	-2.4
TDK	24nm,0.6s			eS	Sg	23 49 14.4	+2.1
TDK	Taldyqorghan 12nm,0.4s	3.74	331	Pg	Pg	23 48 21.6	-2.4
TDK	24nm,0.6s			Lg	Lg	23 49 14.5	
KST	Kastek 4.1nm,0.3s	3.93	291	eP	Pg	23 48 23.7	-3.9
KST	11nm,0.6s			eS	Sg	23 49 18.7	+0.2
KST	Kastek 4.1nm,0.3s	3.93	291	Pg	Pg	23 48 23.7	-3.9
KST	11nm,0.6s			Lg	Lg	23 49 18.7	
KUU	Kurty 3.5nm,0.5s	4.02	303	eP	Pg	23 48 25.8	-3.5
KUU	6.9nm,0.5s			eS	Sg	23 49 22.3	+0.9
KUU	Kurty 3.5nm,0.5s	4.02	303	Pg	Pg	23 48 25.8	-3.5
KUU	6.9nm,0.5s			Lg	Lg	23 49 22.3	
TKM2	Tokmak 2 1.6nm,0.3s	4.16	288	⇑Pn	Pn	23 48 18.2	+2.2
TKM2	5.6nm,0.7s			⇓Lg	Lg	23 49 25.3	
KRBS	Karabastau 1.7nm,0.5s	4.36	298	eP	Pb	23 48 30.4	+1.5
KRBS	3.7nm,0.4s			eS	Sg	23 49 30.2	-2.0
AAK	Ala-Archa 0.9nm,0.4s	4.90	282	⇓Pg	Pg	23 48 45.9	-0.2
AAK	2.8nm,0.6s			⇑Lg	Lg	23 49 47.2	
MAKZ	Makanchi 0.7nm,0.2s	5.09	8	⇑Pn	Pn	23 48 28.4	-0.2
MAKZ	1.2nm,0.5s			⇑Sn	Sn	23 49 30.7	+3.2
MK31	Makanchi Array 0.2nm,0.2s,baz=188,slow=12,SNR=43	5.11	10	⇑Pn	Pn	23 48 28.7	-0.3
MK31	0.6nm,0.3s,baz=185,slow=25			⇑Sn	Sn	23 49 32.4	+4.4
MK31	1.1nm,0.4s,baz=191,slow=28			⇓Lg	Lg	23 49 52.0	

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*IDC **05** 00:27:53.7±1.0,11.°39S×66.°40E,h0km,mb4.0/8,*
mb1 4.2/8,mb1mx3.8/44,mbtmp4.0/8,MS3.7/12,
Ms1 3.7/12,ms1mx3.4/41,Error ellipse: s-maj=30.0km
s-min=24.0km az=32.0
*NEIC **05** 00:27:55.5±1.0,11.°40S±0.°08×66.°3E±0.°1,h10km±1km,*
mb4.5/15,Error ellipse: s-maj=18.1km s-min=12.9km
az=244.0
ISC 05 00:27:55.9±0.8,**11.°4S**±0.°1×**66.°4E**±0.°1,**h13**km,**n44,**
σ**0ˢ58**/31,**mb4.3**/14,**MS3.8**/12,**Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	Diego Carcia H baz=238,slow=76,SNR=5.0	7.10	59	T	T	00 36 53.0	
H08S2	Diego Garcia H baz=238,slow=76,SNR=7.5	7.12	59	T	T	00 36 51.6	
H08S3	Diego Garcia H baz=238,slow=76,SNR=14	7.12	59	T	T	00 36 57.2	
DGAR	Diego Garcia	7.21	57	Pn	Pn	00 29 41.3	+0.3
KMBO	Kilima Mbogo comp=Z,104nm,18.2s,baz=92,slow=33	30.65	287	LR	LR	00 44 55.6	
LSZ	Lusaka 3.3nm,0.9s,baz=85,slow=14,SNR=4.0	37.31	260	P	P	00 35 08.3	0.0
LSZ	Lusaka	37.31	260	P	P	00 35 07.9	-0.4
LBTB	Lobatse	40.84	245	P	P	00 35 38.5	+0.6
LBTB	comp=Z,21nm,1.6s			IAmb	IAmb	00 35 43.7	
BOSA	Boshof comp=Z,179nm,18.8s,baz=73,slow=33	41.99	240	LR	LR	00 51 15.2	
CMAR	Chiang Mai Arr comp=Z,1.0nm,0.3s,baz=243,slow=9.0,SNR=1.1	43.76	48	P	P	00 36 01.7	+0.2
CMAR	comp=Z,60nm,18.3s,baz=210,slow=34			LR	LR	00 52 21.2	
NIL	Nilore	45.30	8	P	P	00 36 13.7	+0.2
NIL	comp=Z,4.7nm,0.9s			IAmb	IAmb	00 36 19.0	
KBL	Kabul	45.78	3	P	P	00 36 18.8	+1.3
KBL	comp=Z,4.9nm,1.2s			IAmb	IAmb	00 36 20.7	
JAGI	Jajag, Banyuwa	47.12	91	P	P	00 36 28.4	+0.2
LSA	Lhasa	47.35	30	P	P	00 36 30.1	-0.2
LSA	comp=Z,3.7nm,1.0s			IAmb	IAmb	00 36 44.8	
H01W3	Cape Leeuwin H baz=287,slow=75,SNR=19	49.18	126	T	T	01 29 14.9	
H01W2	Cape Leeuwin H baz=287,slow=75,SNR=17	49.18	126	T	T	01 29 18.0	
H01W1	Cape Leeuwin H baz=287,slow=75,SNR=16	49.20	126	T	T	01 29 17.9	
AAK	Ala-Archa	54.30	7	P	P	00 37 22.4	+0.3
KKAR	Karatay Array	54.39	4	P	P	00 37 22.8	+0.3
GNI	Garni comp=Z,30nm,19.2s,baz=128,slow=34	55.09	340	LR	LR	00 59 16.4	
MAW	Mawson comp=Z,83nm,18.1s,baz=46,slow=30	56.17	182	LR	LR	00 56 28.9	
MK31	Makanchi Array	59.68	13	P	P	00 37 59.0	-1.0
MKAR	Makanchi Array comp=Z,0.9nm,0.7s,baz=202,slow=8.0,SNR=12	59.68	13	P	P	00 37 59.1	-0.8
MKAR	comp=Z,37nm,19.5s,baz=202,slow=34			LR	LR	01 02 02.2	
ABKAR	Akbulak array	60.67	355	P	P	00 38 06.1	-0.6
ABKAR	Akbulak array	60.67	355	P	P	00 38 06.3	-0.4
ABKAR	comp=Z,4.6nm,0.9s			IAmb	IAmb	00 38 08.3	
KURK	Kurchatov	62.79	9	P	P	00 38 20.7	-0.2
KURK	comp=Z,3.0nm,0.8s			IAmb	IAmb	00 38 22.3	
ASAR	Alice Springs comp=Z,1.2nm,0.8s,baz=277,slow=6.0,SNR=9.0	65.05	111	P	P	00 38 35.7	-0.8
ASAR	Alice Springs	65.05	111	P	P	00 38 36.8	+0.3
WRA	Warramunga Arr comp=Z,2.1nm,0.8s,baz=271,slow=5.7,SNR=15	65.64	107	P	P	00 38 40.2	-0.1
WRA	comp=Z,58nm,21.4s,baz=315,slow=32			LR	LR	01 03 07.6	
WRA	Warramunga Arr	65.64	107	P	P	00 38 39.4	-0.9
WB2	Warramunga Arr	65.65	107	P	P	00 38 40.9	+0.5
ZAA0	Zalesovo Array	66.98	12	P	P	00 38 48.7	+0.6
ZAA0	comp=Z,5.3nm,1.4s			IAmb	IAmb	00 38 51.9	
ZALV	Zalesovo Beam comp=Z,0.9nm,0.5s,baz=210,slow=5.7,SNR=6.5	66.98	12	P	P	00 38 47.3	-0.8
ZALV	comp=Z,65nm,18.4s,baz=200,slow=35			LR	LR	01 06 47.5	
ZALV	Zalesovo Beam	66.98	12	P	P	00 38 47.8	-0.3
SONM	Songino Array comp=Z,1.5nm,0.7s,baz=213,slow=6.5,SNR=15	68.87	28	P	P	00 39 00.1	-0.3
SONM	comp=Z,82nm,21.1s,baz=16,slow=35			LR	LR	01 08 26.3	
SONM	Songino Array	68.87	28	P	P	00 39 00.8	+0.4
AKASG	Malin Array Be comp=Z,0.6nm,0.6s,baz=138,slow=5.6,SNR=4.3	69.80	336	P	P	00 39 05.8	-0.1
DBIC	Dimbokro comp=Z,78nm,18.6s,baz=101,slow=35	73.09	281	LR	LR	01 10 21.7	
KSRS	Korea Array comp=Z,72nm,19.5s,baz=180,slow=36	75.38	46	LR	LR	01 12 30.2	
CLL	Collm	77.63	329	eP	P	00 39 52.0	+0.1
MJAR	Matsushiro Arr comp=Z,32nm,18.4s,baz=55,slow=36	82.57	51	LR	LR	01 17 43.4	
PDAR	Pinedale Array comp=Z,0.7nm,0.8s,baz=90,slow=1.8,SNR=7.7	148.57	354	PKPbc	PKPbc	00 47 43.0	-0.2
PDAR	Pinedale Array	148.57	354		PKiKP	00 47 43.5	-1.2
NVAR	Mina Array Bea comp=Z,0.5nm,0.7s,baz=271,slow=1.7,SNR=4.8	152.78	8	PKPbc	PKiKP	00 47 53.9	+0.4

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*IDC **05** 00:31:22.7±2.0,34.°84S×178.°91W,h0km,mb3.9/2,*
mb1 4.2/3,mb1mx3.9/27,mbtmp4.0/3,ML4.3/1,Error
ellipse: s-maj=67.3km s-min=38.1km az=147.0
*WEL **05** 00:31:29.7±0.9,35°S±10°×17°9W±1°4,h205km±10km,*
M4.3/15,MLv4.3/15,Error ellipse: s-maj=0.0km
s-min=0.0km az=122.1
ISC 05 00:31:26.4±1.4,**35.°4S**±0.°1×**178.°5W**±0.°1,**h35**km,**n36,**
σ**2ˢ53**/51,**East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	3.35	229	P	Pn	00 32 17.2	+1.0
MXZ				S	Sn	00 32 56.2	+1.4
WMGZ	Waiomatatini S	3.46	225	P	Pn	00 32 20.0	+2.3
PKGZ	Pakihiroa	3.70	227	P	Pn	00 32 22.1	+1.0
PKGZ				S	Sn	00 33 06.5	+3.0
PUZ	Puketiti	3.72	223	P	Pn	00 32 23.6	+2.2
PUZ				S	Sn	00 33 06.6	+2.7
HAZ	Te Kaha	3.80	231	P	Pn	00 32 24.7	+2.4
HAZ				S	Sn	00 33 08.8	+3.0
TWGZ	Tauwhareparae	3.95	224	P	Pn	00 32 26.4	+1.9
TWGZ				S	Sn	00 33 12.8	+3.1
RUGZ	Raukumara Rang	3.99	229	P	Pn	00 32 27.0	+1.9
RUGZ				S	Sn	00 33 13.9	+3.1
CNGZ	Carnagh Statio	4.05	219	P	Pn	00 32 29.1	+3.3
TKGZ	Te Karaka	4.21	223	P	Pn	00 32 29.5	+1.6
TKGZ				S	Sn	00 33 18.4	+2.5
MWZ	Matawai	4.32	226	P	Pn	00 32 30.8	+1.2
MWZ				S	Sn	00 33 20.6	+1.8
RIGZ	Rimuhau	4.45	221	P	Pn	00 32 33.1	+1.8
RIGZ				S	Sn	00 33 24.2	+2.3
RAGZ	Rawiri	4.49	225	P	Pn	00 32 34.1	+2.1
RAGZ				S	Sn	00 33 25.0	+1.9
URZ	Urewera 13nm,0.3s,baz=41,slow=19,SNR=37	4.53	230	Pn	Pn	00 32 33.5	+1.2
URZ	14nm,0.3s,baz=166,slow=19,SNR=15			Sn	Sn	00 33 24.4	+0.6
URZ	Urewera	4.53	230	P	Pn	00 32 33.8	+1.4
URZ				S	Sn	00 33 24.3	+0.6
PRGZ	Paritu Road	4.54	218	P	Pn	00 32 35.3	+2.6
OPRZ	Ohinepanea	4.66	237	P	Pn	00 32 35.4	+1.3
SNGZ	Shannon Statio	4.73	223	P	Pn	00 32 38.2	+2.9
SNGZ				S	Sn	00 33 30.9	+2.0
KUZ	Kuaotunu	4.86	252	P	Pn	00 32 37.4	+0.5
CPWZ	Castlepoint	6.90	216	P	Sn	00 34 22.5	+0.3
MRZ	Mangatainoka R	7.02	220	P	Pn	00 33 07.0	+0.3
MRZ				P	Sn	00 34 22.8	-2.4
TMWZ	Te Maipa	7.20	216	P	Pn	00 33 09.2	+0.1
TMWZ				P	Sn	00 34 26.2	-3.4
HOWZ	Holdsworth Sta	7.23	219	P	Sn	00 34 27.8	-2.6
MTW	Mount Morrison	7.43	218	P	Sn	00 34 32.0	-3.2
KIW	Kapiti Island	7.52	222	P	Sn	00 34 34.4	-3.1
TRWZ	Traveller	7.52	215	P	Sn	00 34 35.3	-2.3
PAWZ	Paruwai Farm	7.64	217	P	Sn	00 34 38.6	-1.8
MSWZ	Moikau Station	7.75	217	P	Sn	00 34 40.5	-2.6
PLWZ	Palliser	7.86	217	P	Sn	00 34 41.2	-4.7
TCW	Tory Channel	8.11	222	P	Sn	00 34 48.1	-3.8
TUWZ	Tuamarina	8.44	222	P	Sn	00 34 55.0	-5.2
QRZ	Quartz Range	8.90	230	P	Sn	00 35 05.0	-6.4
ASAR	Alice Springs 1.9nm,0.8s,baz=112,slow=7.5,SNR=13	42.66	273	P	P	00 39 18.5	-1.3
WRA	Warramunga Arr 0.7nm,0.4s,baz=117,slow=7.6,SNR=12	44.09	278	P	P	00 39 29.5	-1.8
MKAR	Makanchi Array 0.2nm,0.7s,baz=90,slow=1.4,SNR=2.0	120.58	308	PKP	PKiKP	00 50 14.6	+0.5
KURBB	Kurchatov Arra 0.3nm,0.3s,baz=80,slow=1.2,SNR=4.9	124.14	311	PKP	PKPdf	00 50 21.3	+0.7
FINES	FINESS Array B 1.2nm,0.5s,baz=33,slow=3.3,SNR=11	149.62	337	PKPbc	PKPbc	00 51 11.3	0.0

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*IDC **05** 00:47:01.9±0.7,34.°14N×74.°18E,h0km,mb3.9/17,*
mb1 4.0/22,mb1mx3.9/47,mbtmp3.9/22,ML3.5/5,MS3.4/1,
Ms1 3.4/1,ms1mx2.5/55,Error ellipse: s-maj=17.7km
s-min=13.6km az=52.0
*NDI **05** 00:47:03.0±3.5,34.°38N×73.°66E,h42km±999km,ML4.0*
*NNC **05** 00:47:10.5±6.7,34.°40N×73.°47E,h29km±66km,mb3.9,*
mpv4.0,Error ellipse: s-maj=44.1km s-min=37.4km
az=168.0
ISC 05 00:47:05.8±0.5,**34.°19N**±0.°04×**74.°25E**±0.°06,**h26**km,**n55,**
σ**2ˢ66**/78,**mb4.0**/17,**10C-6D,Southwestern Kashmir**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THN	Thein Dam	2.14	144	eP	Pb	00 47 44.0	+0.1
THN				eS	Sb	00 48 15.0	+5.0
DHRM	DHARAMSHALA	2.59	138	i P	Pn	00 47 48.6	+2.4
DHRM				eS	Sb	00 48 22.1	-1.1
BHK	Bhakra	3.31	146	eP	Pb	00 48 04.5	+0.6
BHK				eS	Sb	00 48 47.5	+3.7
SMLA	Simla	3.92	140	i P	Pn	00 48 07.5	+3.2
SMLA				i S	Sn	00 48 52.1	+2.6
SMLA				eS	Sn	00 48 53.1	+3.6
SMLA	comp=E,786nm,0.9s			IAML		00 49 10.8	
SMLA	comp=N,366nm,1.5s			IAML		00 49 11.6	
DDI	Dehra Dun	5.03	139	eP	Pn	00 48 22.5	+2.9
DDI				i x	x	00 49 12.1	
DDI				eS	Sn	00 49 18.3	+1.4
DDI	comp=N,338nm,1.2s			IAML		00 49 19.1	
DDI	comp=E,506nm,0.9s			IAML		00 49 23.4	
NDI	New Delhi	6.05	154	ePN	Pn	00 48 34.5	+0.9
NDI				eSN	Sn	00 49 44.0	+2.0
AYAN	Aya Nagar	6.20	156	eP	Pn	00 48 33.9	-1.8
KHET	Khetri	6.24	167	eP	Pn	00 48 33.8	-2.5
KHET				eS	Sn	00 49 42.6	-4.1
KHET				eS	Sn	00 49 43.5	-3.3
KUDL	Kundal	6.32	162	eP	Pn	00 48 37.4	0.0
KUDL				i x	x	00 49 02.1	
KUDL				eS	Sn	00 49 49.6	+0.9
SONA	Sohna	6.40	157	eP	Pn	00 48 39.9	+1.5
SONA				eS	Sn	00 49 52.6	+2.0
AAK	Ala-Archa comp=E,0.5nm,0.3s,baz=182,slow=13,SNR=9.8	8.44	1	Pn	Pn	00 49 09.6	+3.1
AAK	comp=E,1.0nm,0.3s,baz=223,slow=8.2,SNR=1.7			Sn	Sn	00 50 43.6	+2.6
AAK	Ala-Archa comp=E,2.0nm,0.5s	8.44	1	⇑P	Pn	00 49 11.0	+4.4
AAK	comp=E,12nm,0.8s			⇓S	Sn	00 50 45.1	+4.1
TKM2	Tokmak 2 comp=E,5.0nm,0.5s	8.78	7	⇓P	Pn	00 49 14.3	+3.0
TKM2	comp=E,20nm,0.8s			⇑S	Sn	00 50 50.8	+1.3
KK31	Karatay Array comp=E,2.5nm,0.3s,baz=164,slow=12,SNR=68	9.37	343	⇑P	Pn	00 49 19.8	+0.7
KK31	comp=E,20nm,0.8s,baz=157,slow=23,SNR=10			⇓S	Sn	00 51 00.1	-3.5
DANN	Dangsing	10.00	123	ePn	Pn	00 49 27.5	-0.7
DANN	comp=E,43nm,0.5s			eSn	Sn	00 51 14.8	-4.9
BHPL	Bhopal	11.26	165	eP	Pn	00 49 44.9	-0.2
BHPL				eS	Sn	00 51 44.0	-6.2
BHPL	comp=E,16nm,0.8s			IAML		00 51 48.2	
BHPL	comp=N,18nm,0.5s			IAML		00 51 49.2	
DMN	Daman	11.40	122	ePn	Pn	00 49 45.7	-1.5
DMN	comp=N,19nm,0.4s			eSn	Sn	00 51 48.3	-5.5
KKN	Kakani	11.41	121	ePn	Pn	00 49 46.8	-0.6
KKN	comp=N,34nm,0.5s			eSn	Sn	00 51 48.9	-5.2
PKIN	Phulchoki	11.62	122	ePn	Pn	00 49 48.4	-1.9
PKIN	comp=N,24nm,0.5s			eSn	Sn	00 51 53.3	-6.0
PKI	Pulchoki	11.63	122	ePn	Pn	00 49 49.3	-1.2
PKI	comp=N,26nm,0.4s			eSn	Sn	00 51 53.7	-6.0
GUN	Gumba	11.77	119	ePn	Pn	00 49 51.4	-1.0
GUN	comp=N,24nm,0.5s			eSn	Sn	00 51 57.5	-5.6
TAPN	Taplejung	13.43	117	ePn	Pn	00 50 12.9	-2.1
TAPN	comp=N,30nm,0.8s			eSn	Sn	00 52 37.3	-6.2
GEYT	Alibeck	13.57	291	Pn	Pn	00 50 15.8	-0.9

	comp=N,0.2nm,0.3s,baz=115,slow=13,SNR=2.1						
MAKZ	Makanchi	13.90	23	⇑P	P	00 50 26.8	-2.2
	comp=N,3.1nm,1.4s						
MK31	Makanchi Array	13.99	23	⇓P	P	00 50 27.7	-2.3
	comp=N,2.6nm,0.7s,baz=204,slow=13,SNR=19						
MKAR	Makanchi Array	13.99	23	Pn	Pn	00 50 21.8	-0.5
	comp=N,0.1nm,0.3s,baz=202,slow=11,SNR=3.9						
MKAR				Sn	Sn	00 52 55.5	-1.2
	comp=N,0.0nm,0.3s,baz=196,slow=26,SNR=2.1						
KURBB	Kurchatov Arra	16.72	10	Pn	Pn	00 50 56.0	-2.1
	comp=N,0.1nm,0.3s,baz=197,slow=11,SNR=7.5						
KURBB	Kurchatov Arra	16.72	10	⇓P	P	00 51 01.5	+1.3
	comp=N,4.0nm,0.7s						
KURK	Kurchatov	16.82	10	⇑P	P	00 51 02.4	+1.0
	comp=N,7.2nm,1.0s						
WSAR	Wadi Sarin	17.49	235	Sn	Sn	00 54 11.3	-11
	comp=N,0.1nm,0.3s,baz=87,slow=12,SNR=1.2						
AB31	Akbulak array	18.41	329	⇑P	P	00 51 19.0	+0.1
	comp=N,1.5nm,0.6s,baz=141,slow=12,SNR=36						
AB31				⇑S	Sn	00 54 33.1	-11
	comp=N,1.4nm,0.7s,baz=147,slow=22,SNR=4.8						
BVAR	Borovoye Array	19.03	353	P	P	00 51 26.2	+0.4
	comp=N,1.0nm,0.3s,baz=134,slow=7.9,SNR=28						
BRVK	Borovoye	19.07	353	⇑P	P	00 51 25.4	-0.8
	comp=N,6.8nm,1.0s						
AKTO	Aktyubinsk	20.12	329	P	P	00 51 38.3	+0.7
	comp=N,5.2nm,0.5s,baz=118,slow=8.1,SNR=19						
AKTO	Aktyubinsk	20.12	329	⇑P	P	00 51 38.2	+0.6
	comp=N,6.0nm,0.6s						
AKTO				⇑S	S	00 55 18.3	-3.9
	comp=N,2.6nm,1.1s						
ZAA0	Zalesovo Array	21.12	18	⇓P	P	00 51 49.8	+1.5
	comp=N,0.6nm,0.6s						
ZALV	Zalesovo Beam	21.12	18	P	P	00 51 48.1	-0.3
	comp=N,2.8nm,0.4s,baz=207,slow=9.9,SNR=17						
ARU	Arti	24.71	339	P	P	00 52 24.6	-0.1
	comp=N,0.3nm,0.3s,baz=166,slow=12,SNR=2.3						
KVAR	Kislovodsk Arr	26.23	301	P	P	00 52 38.1	-0.6
	comp=N,1.7nm,0.7s,baz=68,slow=11,SNR=1.4						
CMAR	Chiang Mai Arr	27.02	119	P	P	00 52 46.2	+0.4
	comp=N,1.2nm,0.4s,baz=300,slow=9.5,SNR=11						
SONM	Songino Array	27.60	51	P	P	00 52 52.1	+1.0
	comp=N,0.6nm,0.6s,baz=258,slow=9.3,SNR=5.9						
BRTR	Keskin Array B	32.71	292	P	P	00 53 36.3	-0.1
	comp=N,0.3nm,0.6s,baz=112,slow=9.4,SNR=2.1						
NRIK	Noril'sk	35.98	8	P	P	00 54 05.0	+0.9
	comp=N,0.9nm,0.3s,baz=156,slow=11,SNR=3.7						
AKASG	Malin Array Be	36.46	311	P	P	00 54 08.1	-0.4
	comp=N,1.2nm,0.4s,baz=81,slow=7.2,SNR=6.2						
FINES	FINESS Array B	40.87	327	P	P	00 54 45.2	-0.1
	comp=N,1.7nm,0.6s,baz=121,slow=11,SNR=12						
ARCES	ARCESS Array B	44.29	338	P	P	00 55 13.5	+0.6
	comp=N,4.4nm,0.9s,baz=112,slow=7.3,SNR=11						
NB2	NORSAR Subarra	47.81	324	P	P	00 55 40.3	-0.6
	comp=Z,0.8nm,0.5s,baz=97,slow=7.9						
NOA	NORSAR Array B	47.81	324	P	P	00 55 40.3	-0.6
	comp=Z,1.0nm,0.6s,baz=96,slow=7.6,SNR=3.8						
KMBO	Kilima Mbogo	49.38	232	LR	LR	01 17 59.2	
	comp=Z,36nm,18.2s,baz=96,slow=38						
TORD	Torodi Ar. Bea	68.38	271	P	P	00 58 04.8	-0.7
	comp=Z,2.6nm,0.6s,baz=46,slow=5.8,SNR=16						
ILAR	Eielson Array	76.25	17	P	P	00 58 51.5	-0.1
	comp=Z,0.3nm,0.5s,baz=292,slow=4.9,SNR=6.4						
WRA	Warramunga Arr	78.51	124	P	P	00 59 05.3	+0.3
	comp=Z,1.2nm,0.8s,baz=321,slow=5.3,SNR=13						
ASAR	Alice Springs	80.75	127	P	P	00 59 17.5	+0.4
	comp=Z,1.1nm,0.7s,baz=315,slow=6.3,SNR=12						
YKA	Yellowknife Ar	83.39	4	P	P	00 59 30.6	+0.2
	comp=Z,0.4nm,0.5s,baz=352,slow=4.8,SNR=4.8						
PLCA	Paso Flores	151.44	246	PKPbc	PKPbc	01 06 57.8	+0.5
	comp=Z,0.9nm,0.6s,baz=45,slow=1.4,SNR=3.4						

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*TAP **05** 00:52:48.1, 24°.93N×122°.29E, h143^{km}±1^{km}, ML2.9, D*
*JMA **05** 00:52:48.3±0.2, 24°.85N×122°.27E, h141^{km}±2^{km}, M2.4*
ISC 05 00:52:48.1±2.3**, 24°.87N**±0°.09×**122°.28E**±0°.04**,**
h144^{km}±14^{km}**, n42, σ0^{s}.64**/73**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.30	297	*e*P	Pn	00 53 08.6	+0.7
	baz=285						
NTC	Toucheng	0.41	267	*e*P	Pn	00 53 10.7	+2.3
	baz=259						
TIPB	Shuangxi	0.43	283	*e*P	Pn	00 53 08.2	-0.2
	baz=275						
TIPB				*e*S	Sn	00 53 22.7	-1.2
	baz=275						
TWC	Suao	0.47	236	P	Pn	00 53 09.1	+0.5
	baz=230						
TWC				S	Sn	00 53 23.5	-0.7
	baz=230						
TWE	Neicheng	0.58	255	*e*P	Pn	00 53 08.6	-0.6
	baz=248						
ENA	Nanau	0.66	228	P	Pn	00 53 10.0	+0.2
	baz=224						
ENA				*e*S	Sn	00 53 26.7	+0.6
	baz=224						
ENTT	Nioudou	0.69	250	P	Pn	00 53 10.4	+0.5
	baz=245						
ENTT				S	Sn	00 53 26.9	+0.4
	baz=245						
NWLT	Wulai	0.71	262	*e*P	Pn	00 53 09.8	-0.3
	baz=257						
NWLT				*e*S	Sn	00 53 26.8	0.0
	baz=257						
TWY	Chenhua	0.74	303	*e*P	Pn	00 53 09.9	-0.3
	baz=298						
NDT	Datong Townshi	0.75	249	*e*P	Pn	00 53 10.4	+0.1
	baz=245						
ANP	Anpu	0.76	294	*e*P	Pn	00 53 11.3	+0.9
	baz=289						
YOJ	Yonaguni jima	0.78	122	*e*P	Pn	00 53 10.8	+0.2
	baz=125						
YHNB	Yeheng	0.85	256	P	Pn	00 53 10.9	-0.2
	baz=252						
YHNB				*e*S	Sn	00 53 27.2	-1.4
	baz=252						
NSK	Sanguang	0.86	257	P	Pn	00 53 11.0	-0.3
	baz=252						
NSK				*e*S	Sn	00 53 28.1	-0.8
	baz=252						
NNSB	Datong	0.93	242	*e*P	Pn	00 53 11.8	-0.1
	baz=238						
NNSB				*e*S	Sn	00 53 30.0	+0.1
	baz=238						
NNSH	Datong	0.93	242	*e*P	Pn	00 53 12.1	+0.3
	baz=238						
NNSH				*e*S	Sn	00 53 29.4	-0.6
	baz=238						
NNS	Nan Shan	0.93	243	*e*P	Pn	00 53 12.3	+0.4
	baz=239						
NNS				*e*S	Sn	00 53 30.4	+0.4
	baz=239						
NACB	Ninganchiao	0.94	222	*e*P	Pn	00 53 11.3	-0.4
	baz=219						
NACB				S	Sn	00 53 29.3	-0.5
	baz=219						
ETLH	Xiulin Townshi	0.99	228	P	Pn	00 53 12.5	+0.2
	baz=225						
ETLH				S	Sn	00 53 30.6	-0.1
	baz=225						
TWD	Chiawan	1.01	218	*e*P	Pn	00 53 12.8	+0.4
	baz=216						
TWD				*e*S	Sn	00 53 30.4	-0.5
	baz=216						
FUSS	Fushou	1.13	237	*e*P	Pn	00 53 14.0	+0.2
	baz=234						
FUSS				S	Sn	00 53 33.2	-0.1
	baz=234						
LIOB	Emei	1.17	259	*e*P	Pn	00 53 13.9	0.0
	baz=256						
LIOB				*e*S	Sn	00 53 33.1	-0.5
	baz=256						
WHF	Hehuan Shan	1.18	232	*e*P	Pn	00 53 15.3	+0.8
	baz=229						
WHF				S	Sn	00 53 34.6	+0.2
	baz=229						
TWT	Tachien	1.18	239	*e*P	Pn	00 53 15.0	+0.8
	baz=236						
TWT				*e*S	Sn	00 53 34.8	+0.8
	baz=236						
NSTT	Nanjuang	1.19	259	*e*P	Pn	00 53 14.6	+0.6
	baz=255						
NSTT				*e*S	Sn	00 53 32.9	-0.9
	baz=255						
TDCB	Techi	1.20	239	*e*P	Pn	00 53 14.7	+0.4
	baz=236						
TDCB				*e*S	Sn	00 53 34.3	+0.1
	baz=236						
CHGB	Renai	1.29	231	*e*P	Pn	00 53 16.6	+1.2
	baz=229						
CHGB				*e*S	Sn	00 53 36.2	+0.1
	baz=229						
WHP	Taichung City	1.35	244	*e*P	Pn	00 53 16.0	+0.2
	baz=241						
WHP				*e*S	Sn	00 53 36.9	0.0
	baz=241						
IRIF	Iriomote-Funau	1.42	112	P	Pn	00 53 16.6	+0.2
IRIF				S	Sn	00 53 37.6	-0.4
VWDT	VWDT	1.53	223	*e*P	Pn	00 53 18.1	+0.7
	baz=221						
VWDT				*e*S	Sn	00 53 40.2	+0.3
	baz=221						
HGSD	Ruisui	1.58	210	*e*P	Pn	00 53 17.6	-0.6
	baz=208						
HGSD				*e*S	Sn	00 53 41.0	-0.1
	baz=208						
SMLT	Sun Moon Lake	1.60	232	*e*P	Pn	00 53 19.1	+0.7
	baz=230						
HATJ	Hateruma jima	1.61	120	S	Sn	00 53 42.0	+0.5
SSLB	Suanglung	1.62	229	*e*P	Pn	00 53 18.6	-0.1
	baz=226						
SSLB				*e*S	Sn	00 53 41.6	-0.3
	baz=226						
JKRS	Kuro-shima	1.69	112	P	Pn	00 53 19.9	+0.6
JKRS				S	Sn	00 53 43.4	+0.2
YULB	Yu-li	1.73	212	*e*P	Pn	00 53 19.2	-0.6
	baz=210						
YULB				*e*S	Sn	00 53 42.1	-1.9
	baz=210						
JIJ	Ishigaki jima	1.77	106	P	Pn	00 53 20.5	+0.3
JIJ				S	Sn	00 53 44.1	-0.6
JISG	Ishigakijimahi	1.87	98	P	Pn	00 53 21.2	-0.1
JISG				S	Sn	00 53 46.2	-0.5
ALS	Alishan	1.91	225	*e*P	Pn	00 53 22.2	+0.1
	baz=223						
ALS				*e*S	Sn	00 53 48.2	-0.1
	baz=223						
CHN5	Tsauling	1.94	229	*e*P	Pn	00 53 22.6	+0.3
	baz=227						
CHN5				*e*S	Sn	00 53 47.9	-0.6
	baz=227						
TPUB	Ta-pu	2.18	224	*e*P	Pn	00 53 26.0	+1.0
	baz=223						
JTJ	Tarama	2.21	96	S	Sn	00 53 53.6	-0.4

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*PRE **05** 00:56:21.2±0.8, 27°.05S×26°.87E, h2^{km}, ML2.8*
*BUL **05** 00:56:25.3±0.5, 24°.92S×23°.11E, h2^{km}±8^{km}, MD4.2*
*EAF **05** 00:56:25.3±0.5, 24°.92S×23°.11E, h2^{km}±8^{km}, MD3.9*
ISC 05 00:56:21.8±1.2**, 27°.04S**±0°.04×**26°.86E**±0°.04**, h16**^{km}±9^{km}**,**
n22, σ1^{s}.78/42**, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRYS	Parys	0.46	76	*e*P	Pg	00 56 30.0	-1.2
PRYS				*e*S	Sg	00 56 36.8	-0.7
PRYS				AML	AML	00 56 41.2	
	comp=Z,317nm,0.3s						
WDLM	Western Deep L	0.79	40	*e*P	Pg	00 56 36.8	-0.6
WDLM				*e*S	Sg	00 56 47.2	-0.6
WDLM				AML	AML	00 56 55.6	
	comp=Z,337nm,0.4s						
KLOF	Kloof	0.96	45	*e*P	Pg	00 56 39.7	-0.8
KLOF				*e*S	Sg	00 56 52.4	-0.7
KLOF				AML	AML	00 57 00.7	
	comp=Z,669nm,0.2s						
KSR	Koster	1.18	2	*e*P	Pb	00 56 44.0	0.0
KSR				*e*S	Sn	00 57 00.4	+0.7
KSR				AML	AML	00 57 05.8	
	comp=Z,532nm,0.1s						
ERPM	east rand prop	1.42	61	*e*P	Pg	00 56 48.8	-0.4
ERPM				*e*S	Sg	00 57 09.3	+1.6
ERPM				AML	AML	00 57 12.8	
	comp=Z,71nm,0.6s						
BOSA	Boshof	2.12	222	*e*P	Pn	00 56 58.1	+1.4
BOSA				*e*S	Sb	00 57 25.0	-1.0
BOSA				AML	AML	00 57 29.4	
	comp=Z,55nm,0.3s						
LBTB	Lobatse	2.31	330	*e*P	Pn	00 57 01.2	+1.9
LBTB				*e*S	Sb	00 57 30.4	-1.1
LBTB				AML	AML	00 57 32.9	
	comp=Z,114nm,0.5s						
LBTB	Lobatse	2.31	330	*i* P	Pb	00 57 03.3	+0.1
LBTB				*i* Sg	Sg	00 57 35.4	-0.7
LBTB	Lobatse	2.31	330	*i* P	Pb	00 57 03.3	+0.1
LBTB				*i* Sg	Sg	00 57 35.4	-0.7
POGA	Pongola	4.33	95	*e*P	Pn	00 57 28.6	+1.5
POGA				*e*S	Sn	00 58 17.6	+0.3
POGA				AML	AML	00 58 40.9	
	comp=Z,26nm,0.4s						
UPI	Upington	5.14	254	*e*P	Pn	00 57 40.3	+2.1
UPI				*e*S	Sn	00 58 37.5	+0.3
UPI				AML	AML	00 59 07.8	
	comp=Z,6.1nm,0.7s						
MOPA	Mopani	5.40	51	*e*P	Pn	00 57 43.9	+2.2
MOPA				*e*S	Sn	00 58 43.5	-0.2
MOPA				AML	AML	00 59 15.8	
	comp=Z,12nm,0.4s						
MSNA	Messina	5.49	32	*e*P	Pn	00 57 44.3	+1.3
MSNA				*e*S	Sn	00 58 43.3	-2.6
MSNA				AML	AML	00 59 18.4	
	comp=Z,15nm,0.4s						
SOE	Somerset East	5.77	191	*e*P	Pn	00 57 48.7	+1.9
SOE				*e*S	Sn	00 58 52.0	-0.7
SOE				AML	AML	00 58 57.2	
	comp=Z,7.0nm,0.3s						
GRAN	Grantham	6.64	217	*e*P	Pn	00 58 00.8	+2.0
GRAN				*e*S	Sn	00 59 13.4	-1.0
GRAN				AML	AML	00 59 29.1	
	comp=Z,3.6nm,0.2s						
MATP	Matopo	6.75	13	*i* S	Sn	00 59 15.7	-1.4
MATP	Matopo	6.75	13	*i* P	Pn	00 58 03.4	+3.0
MATP				*i* S	Sn	00 59 15.7	-1.4
MATP	Matopo	6.75	13	*i* P	Pn	00 58 03.4	+3.0
BLWY	Bulawayo	7.05	14	*i* P	Pn	00 58 07.6	+3.0
BLWY				*i* S	Sn	00 59 21.5	-3.0
BLWY	Bulawayo	7.05	14	*i* P	Pn	00 58 07.6	+3.0
BLWY				*i* S	Sn	00 59 21.5	-3.0
ROSN	Rosenhof	7.32	195	*e*P	Pn	00 58 10.4	+2.3
ROSN				*e*S	Sn	00 59 29.0	-1.9
ROSN				AML	AML	00 59 31.4	
	comp=Z,33nm,1.0s						
KROM	Kromhout	7.34	195	*e*P	Pn	00 58 10.7	+2.3
KROM				*e*S	Sn	00 59 29.4	-1.9
KROM				AML	AML	00 59 35.6	
	comp=Z,29nm,0.6s						

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*IDC **05** 01:03:46.5±2.0, 33°.25S×178°.30W, h0^{km}, mb4.1/2, mb1 4.4/3, mb1mx3.9/24, mbtmp4.1/3, ML3.8/1, Error ellipse: s-maj=59.1km s-min=32.8km az=131.0*
ISC 05 01:03:51.7±2.1**, 33°.3S**±0°.2×**178°.3W**±0°.4**, h35**^{km}**, n6,**
σ0^{s}.19/7**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	6.21	216	Pn	Pn	01 05 20.6	-0.2
	2.2nm,0.3s,baz=36,slow=17,SNR=16						
URZ				Sn	Sn	01 06 30.7	+0.2
	5.2nm,0.3s,baz=225,slow=21,SNR=9.3						
ASAR	Alice Springs	42.77	270	P	P	01 11 46.2	+0.1
	2.6nm,0.6s,baz=109,slow=7.6,SNR=23						
WRA	Warramunga Arr	44.02	275	P	P	01 11 56.0	-0.2
	1.4nm,0.7s,baz=116,slow=7.5,SNR=13						
MKAR	Makanchi Array	119.40	309	PKP	PKiKP	01 22 37.3	+0.2
	0.1nm,0.4s,baz=120,slow=0.7,SNR=4.6						
FINES	FINESS Array B	147.74	338	PKPbc	PKPbc	01 23 31.8	0.0
	1.0nm,0.6s,baz=52,slow=3.8,SNR=10						
BRTR	Keskin Array B	153.62	293	PKPbc	PKPbc	01 23 46.9	+0.1
	0.6nm,0.5s,baz=89,slow=3.0,SNR=5.5						

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*HEL **05** 01:05:55.9, 67°.81N×20°.21E, h0^{km}, ML1.9, Explosion*
UPP 05 01:05:55.5±0.0**, 67°.83N×20°.20E, h0**^{km}**, ML2.2,**
Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	Kurravaara	0.14	22	P	Pg	01 05 58.4	+0.2
KUA				S	Sg	01 06 00.4	+0.5
KUA	Kurravaara	0.14	22	*i* P	Pg	01 05 58.4	+0.2
KUA				*i* S	Sg	01 06 00.4	+0.5
RATU	Laukkuluspa	0.23	270	P	Pg	01 06 00.1	+0.2
RATU	Laukkuluspa	0.23	270	*i* P	Pg	01 06 00.1	+0.2
KOVU	Salmi	0.40	358	P	Pg	01 06 03.2	0.0
KOVU	Salmi	0.40	358	*i* P	Pg	01 06 03.2	0.0
NIKU	Nikkaluokta	0.45	276	P	Pg	01 06 04.0	0.0
NIKU	Nikkaluokta	0.45	276	*i* P	Pg	01 06 04.0	0.0
LANU	Lannavaara	0.71	71	P	Pg	01 06 08.9	-0.2
LANU	Lannavaara	0.71	71	*e*P	Pg	01 06 08.8	-0.3
LANU				*e*S	Sg	01 06 18.3	+0.1
DUNU	Dundret	0.72	169	P	Pg	01 06 09.0	-0.3
DUNU	Dundret	0.72	169	*i* P	Pg	01 06 09.0	-0.3
MASU	Masugnsbyn	0.78	118	P	Pg	01 06 10.2	-0.2
MASU	Masugnsbyn	0.78	118	*i* P	Pg	01 06 10.2	-0.2
SALU	Saltoluokta	0.79	236	P	Pg	01 06 10.4	-0.2
SALU	Saltoluokta	0.79	236	*i* P	Pg	01 06 10.4	-0.2
KIF	Kilpisjarvi	1.21	10	*e*P	Pg	01 06 17.7	-0.8
KIF	Kilpisjarvi	1.21	10	*e*PB	Pg	01 06 18.8	+0.2
KIF				MSG		01 06 34.0	
	comp=Z,11nm,0.2s						
KIF				*e*SB	Sb	01 06 34.9	-0.3
PAJU	Pajala	1.38	124	P	Pg	01 06 20.7	-1.2
PAJU	Pajala	1.38	124	*e*P	Pg	01 06 20.7	-1.2
	baz=307						
ERTU	Ertsjaerv	1.49	148	P	Pn	01 06 22.7	-0.9
ERTU	Ertsjaerv	1.49	148	*e*P	Pn	01 06 22.7	-0.9
TOF	Tornio	2.39	135	MSG		01 07 06.1	
	comp=Z,5.7nm,0.2s						
TOF				*e*SG	Sb	01 07 09.1	-0.1
SGF	Sodankyl	2.45	96	*e*PG	Pb	01 06 39.5	-0.9
	baz=282						
RNF	Rovaniemi	2.57	116	*e*PB	Pn	01 06 40.2	+1.9
RNF				*e*SG	Sb	01 07 14.3	-0.2
ARA0	ARCESS Array S	2.59	46	*e*P	Pn	01 06 38.9	+0.3
	baz=227						
MSF	Maaselka	3.98	115	*e*P	Pn	01 06 58.9	+1.2
KU6	Riekki	4.22	111	*e*PG	Pb	01 07 11.3	+0.8
	baz=297						

UPP 05 01:06:12.3±0.4**, 67°.81N×20°.22E, h0**^{km}±2^{km}**, ML2.3,**
Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	Kurravaara	0.15	18	P	Pg	01 06 15.4	+0.3
KUA				S	Sg	01 06 17.6	+0.5
RATU	Laukkuluspa	0.24	273	P	Pg	01 06 17.1	+0.3
KOVU	Salmi	0.41	357	P	Pg	01 06 20.2	0.0
KOVU				S	Sg	01 06 26.1	+0.6
PAJU	Pajala	1.37	124	P	Pg	01 06 37.7	-0.8

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*IDC **05** 01:16:57.5±3.0, 57°.92S×25°.33W, h30^{km}±20^{km}, mb4.2/10, mb1 4.3/12, mb1mx4.2/21, mbtmp4.4/12, ML4.2/2, MS3.8/12, Ms1 3.7/12, ms1mx3.6/21, Error ellipse: s-maj=21.4km s-min=17.4km az=24.0*
*NEIC **05** 01:17:00.1±1.3, 58°.0S±0°.1×25°.3W±0°.2, h54^{km}±6^{km}, mb4.5/32, Error ellipse: s-maj=16.9km s-min=11.5km az=211.0*
ISC 05 01:16:58.4±0.4**, 58°.13S**±0°.07×**25°.21W**±0°.08**, h40**^{km}**, n113,**
σ1^{s}.27/105**, mb4.4**/17**, MS3.9**/10**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	7.38	297	Pn	Pn	01 18 44.1	+0.7
VNA1	Neumayer--Stat	14.46	157	P	Pn	01 20 21.2	+1.2
VNA3	Neumayer Olymp	14.66	160	P	Pn	01 20 23.4	+0.6
VNA2	Neumayer--Watz	14.85	157	P	Pn	01 20 26.0	+0.8
	baz=329,slow=15						
SNAA	Sanae	16.40	155	P	P	01 20 47.3	-0.4
SNAA	Sanae	16.40	155	Pn	P	01 20 47.2	-0.4
	1.4nm,0.3s,baz=318,slow=14,SNR=62						
SNAA				Sn	Sn	01 23 37.6	-8.2
	0.1nm,0.3s,baz=55,slow=19,SNR=0.7						
SNAA				LR	LR	01 25 59.7	
	comp=Z,123nm,20.3s,baz=300,slow=33						
SNAA	Sanae	16.40	155	Pn	P	01 20 47.2	-0.4
PMSA	Palmer Station	19.45	234	P	Pn	01 21 23.0	+0.4
	0.5nm,0.3s,baz=86,slow=13,SNR=1.7						
PMSA				LR	LR	01 27 24.2	
	comp=Z,368nm,18.1s,baz=121,slow=32						
PMSA	Palmer Station	19.45	234	P	Pn	01 21 22.7	+0.2
PMSA				IAmb	IAmb	01 21 34.9	
	comp=Z,46nm,1.1s						
EFI	East Falkland	19.82	275	Pn	Pn	01 21 27.1	0.0
EFI				IAmb	IAmb	01 21 38.0	
	comp=Z,35nm,1.1s						
BELA	Belgrano 2	20.10	186	P	Pn	01 21 30.2	+0.1
GO10	Punta Arenas	25.94	261	P	P	01 22 26.5	-0.1
GO09	Cerro Castillo	27.59	264	P	P	01 22 41.3	-0.2
GO09				IAmb	IAmb	01 22 49.0	
	comp=Z,9.5nm,1.1s						
QSPA	South Pole Qui	32.12	180	P	P	01 23 22.7	+1.1
QSPA				IAmb	IAmb	01 23 27.7	
	comp=Z,8.6nm,1.1s						
PLTB	Pedras Altas	32.69	311	*e*P	P	01 23 26.3	-0.4
PLCA	Paso Flores	33.45	281	P	P	01 23 31.9	-1.5
	comp=Z,12nm,1.3s,baz=162,slow=13,SNR=5.7						
PLCA				LR	LR	01 37 40.7	
	comp=Z,78nm,18.2s,baz=133,slow=37						
PLCA	Paso Flores	33.45	281	P	P	01 23 33.8	+0.4
PLCA				IAmb	IAmb	01 23 34.2	
	comp=Z,5.9nm,1.1s						
PLCA	Paso Flores	33.45	281	*e*P	P	01 23 33.5	+0.1
CPSB	Cacapava Do Su	33.83	313	*e*P	P	01 23 36.6	0.0
CNLB	Canela	33.84	317	*e*P	P	01 23 37.3	+0.5
LC01	Cunco	35.49	282	P	P	01 23 49.3	-1.6
LC01				IAmb	IAmb	01 24 08.9	
	comp=Z,4.7nm,0.8s						
ITQB	Itaqui	35.75	309	*e*P	P	01 23 52.1	-1.1
ITAB	Concordia	36.19	317	*e*P	P	01 23 58.5	+1.6
PET01	Itanhaem-SP	37.30	326	*e*P	P	01 24 07.5	+1.1
MAW	Mawson	37.84	141	P	P	01 24 12.1	+1.6
	comp=Z,14nm,0.9s,baz=254,slow=15,SNR=1.5						
MAW	Mawson	37.84	141	P	P	01 24 12.1	+1.6
MAW				IAmb	IAmb	01 24 21.9	
	comp=Z,10nm,1.1s						
SPB	Sao Paulo	38.01	326	P	P	01 24 11.4	-0.9
SPB	Sao Paulo	38.01	326	*e*P	P	01 24 12.6	+0.2
BO02	Sierra Bellavi	38.08	288	P	P	01 24 14.0	+0.9
BO02				IAmb	IAmb	01 24 33.1	
	comp=Z,4.0nm,0.9s						
VAO	Valinhos	38.43	327	*e*P	P	01 24 17.5	+1.4
PTGB	Pitanga	38.47	319	*e*P	P	01 24 16.2	-0.1
FRTB	Fartura	38.90	323	*e*P	P	01 24 21.0	+1.1
CPUP	Villa Florida	38.99	311	P	P	01 24 18.6	-2.1
	comp=Z,1.7nm,0.7s,baz=163,slow=7.6,SNR=3.8						
CPUP				LR	LR	01 39 48.8	
	comp=Z,39nm,20.4s,baz=82,slow=35						
CPUP	Villa Florida	38.99	311	*e*P	P	01 24 20.9	+0.2
MT02	Curacav	39.48	289	P	P	01 24 24.2	-0.4
BSCB	Bom Sucesso	39.73	331	*e*P	P	01 24 27.6	+0.7
RIB01	Linhares ES	40.34	338	*e*P	P	01 24 32.5	+0.7
TRCB	Terra Rica	40.44	319	*e*P	P	01 24 32.5	-0.2
BB19B	Bebedouro	40.72	325	*e*P	P	01 24 35.7	+0.7
CO02	Combarbal	41.06	291	P	P	01 24 37.7	-0.2
PCMB	Pacaembu	41.07	322	*e*P	P	01 24 37.8	-0.1
CO01	Juntas del Tor	41.62	293	P	P	01 24 43.1	+0.5
ITRB	Iturama	42.56	324	*e*P	P	01 24 50.5	+0.4
AC05	El Transito	42.65	294	P	P	01 24 50.4	-0.6
IPMB	Ipameri, GO	43.54	327	*e*P	P	01 24 58.7	+0.6
AQDB	Aquidauana	43.66	316	*e*P	P	01 24 57.8	-1.2
VNDA	Vanda	44.54	182	P	P	01 25 08.5	+3.1
	comp=Z,2.4nm,0.7s,baz=187,slow=7.1,SNR=1.4						
VNDA				LR	LR	01 42 14.9	
	comp=Z,57nm,20.9s,baz=196,slow=34						
VNDA	Vanda	44.54	182	P	P	01 25 08.1	+2.7
VNDA				IAmb	IAmb	01 25 26.9	
	comp=Z,15nm,1.1s						
JANB	Januaria	45.31	334	*e*P	P	01 25 12.3	+0.1
GO02	Mina Guanaco	45.41	297	P	P	01 25 12.1	-1.1
GO02				IAmb	IAmb	01 25 24.0	
	comp=Z,5.6nm,1.0s						
BOSA	Boshof	45.51	72	P	P	01 25 13.4	-0.4
	comp=Z,3.0nm,0.8s,baz=214,slow=9.1,SNR=7.1						
BOSA				LR	LR	01 40 19.7	
	comp=Z,97nm,18.8s,baz=214,slow=31						
BOSA	Boshof	45.51	72	P	P	01 25 13.6	-0.3
BOSA				IAmb	IAmb	01 25 20.4	
	comp=Z,7.4nm,1.1s						
GDU01	Guandu, BA	45.63	340	*e*P	P	01 25 15.4	+0.7

BDFB	**Brasilia**	**45.71**	**329**	P	**P**	**01 25 15.1**	**-0.3**
	comp=Z,3.4nm,0.7s,baz=116,slow=1.9,SNR=4.3						
BDFB	**Brasilia**	**45.71**	**329**	P	**P**	**01 25 14.7**	**-0.7**
BDFB				IAmb	IAmb	01 25 17.1	
	comp=Z,6.2nm,1.1s						
PP1B	**Ponte de Pedra**	**46.02**	**319**	*e*P	**P**	**01 25 17.6**	**-0.1**
ARAG	**Araguaiana, MT**	**46.77**	**324**	*e*P	**P**	**01 25 24.3**	**+0.6**
LVC	**Limon Verde**	**47.28**	**300**	P	**P**	**01 25 26.0**	**-2.0**
	comp=Z,2.4nm,0.4s,baz=147,slow=2.3,SNR=2.1						
LVC	**Limon Verde**	**47.28**	**300**	P	**P**	**01 25 28.6**	**+0.6**
LVC				IAmb	IAmb	01 25 42.4	
	comp=Z,6.9nm,1.1s						
LVC	**Limon Verde**	**47.28**	**300**	*e*P	**P**	**01 25 27.6**	**-0.4**
SDBA	**SAO DESIDERIO**	**48.01**	**334**	*e*P	**P**	**01 25 33.6**	**+0.2**
PB07	**IPOC Station P**	**48.49**	**299**	P	**P**	**01 25 35.7**	**-1.5**
PB07				IAmb	IAmb	01 25 44.4	
	comp=Z,5.7nm,0.8s						
LBTB	**Lobatse**	**48.65**	**69**	P	**P**	**01 25 37.9**	**-0.4**
	comp=Z,3.4nm,0.8s,baz=202,slow=4.4,SNR=4.6						
LBTB	**Lobatse**	**48.65**	**69**	P	**P**	**01 25 38.0**	**-0.3**
LBTB				IAmb	IAmb	01 25 38.8	
	comp=Z,5.1nm,0.9s						
PB01	**IPOC Station P**	**48.90**	**300**	P	**P**	**01 25 39.3**	**-0.9**
PEXB	**Peixe**	**49.16**	**330**	*e*P	**P**	**01 25 42.3**	**+0.1**
PB08	**IPOC Station P**	**49.53**	**301**	P	**P**	**01 25 44.9**	**-0.5**
PB08				IAmb	IAmb	01 25 45.8	
	comp=Z,5.2nm,1.1s						
H10S2	**ASCENSION HYDR**	**49.72**	**14**	T	T	02 19 27.7	
	baz=32,slow=74,SNR=4.5						
H10S3	**ASCENSION HYDR**	**49.73**	**14**	T	T	02 19 29.1	
	baz=188,slow=74,SNR=11						
SNDB	**Serra Nova Dou**	**50.13**	**326**	*e*P	**P**	**01 25 50.3**	**+0.7**
MNMC	**Minye Minye**	**50.61**	**301**	P	**P**	**01 25 52.0**	**-1.5**
H10N1	**ASCENSION HYDR**	**50.84**	**14**	T	T	02 20 48.9	
	baz=196						
H10N3	**ASCENSION HYDR**	**50.84**	**14**	T	T	02 20 49.6	
	baz=196,slow=74						
H10N2	**ASCENSION HYDR**	**50.86**	**14**	T	T	02 20 51.4	
	baz=196,slow=74						
PB16	**IPOC Station P**	**51.27**	**302**	P	**P**	**01 25 57.6**	**-1.2**
SMTB	**Santa Maria do**	**52.08**	**332**	*e*P	**P**	**01 26 04.8**	**+0.6**
VILB	**Vilhena**	**52.23**	**315**	*e*P	**P**	**01 26 04.8**	**-0.5**
RCBR	**Riachuelo**	**52.83**	**347**	*e*P	**P**	**01 26 09.9**	**+0.2**
PRPB	**Parauapebas**	**55.24**	**330**	*e*P	**P**	**01 26 27.8**	**+0.5**
NPGB	**Novo Progresso**	**56.04**	**323**	*e*P	**P**	**01 26 33.1**	**0.0**
SAML	**Samuel**	**57.03**	**314**	P	**P**	**01 26 38.7**	**-1.4**
SAML	**Samuel**	**57.03**	**314**	*e*P	**P**	**01 26 39.3**	**-0.7**
ETMB	**Extrema**	**57.44**	**310**	*e*P	**P**	**01 26 42.1**	**-0.9**
TMAB	**Tom-Au,PA,Br**	**58.45**	**333**	*e*P	**P**	**01 26 50.8**	**+0.8**
ITTB	**Itaituba**	**58.68**	**324**	*e*P	**P**	**01 26 51.8**	**+0.2**
MALB	**Monte Alegre**	**60.61**	**326**	*e*P	**P**	**01 27 05.2**	**+0.4**
MCPB	**Macapa, AP**	**61.40**	**329**	*e*P	**P**	**01 27 11.2**	**+0.9**
MACA	**Manacapuru-AM**	**61.45**	**319**	*e*P	**P**	**01 27 09.5**	**-1.1**
CZSB	**Cruzeiro do Su**	**62.06**	**304**	*e*P	**P**	**01 27 14.4**	**-0.4**
PTGA	**Pitinga**	**63.47**	**320**	P	**P**	**01 27 23.6**	**-0.5**
PTGA	**Pitinga**	**63.47**	**320**	*e*P	**P**	**01 27 23.5**	**-0.7**
DBIC	**Dimbokro**	**66.65**	**22**	LR	LR	01 48 38.3	
	comp=Z,50nm,20.1s,baz=160,slow=29						
TOA0	**Torodi Ar. Sit**	**74.37**	**27**	P	**P**	**01 28 31.9**	**+0.2**
TORD	**Torodi Ar. Bea**	**74.37**	**27**	P	**P**	**01 28 32.1**	**+0.4**
	comp=Z,1.6nm,0.5s,baz=201,slow=6.3,SNR=20						
TORD				LR	LR	01 54 00.7	
	comp=Z,72nm,21.8s,baz=280,slow=30						
TORD	**Torodi Ar. Bea**	**74.37**	**27**	P	**P**	**01 28 31.7**	**0.0**
KMBO	**Kilima Mbogo**	**74.82**	**67**	LR	LR	01 59 11.5	
	comp=Z,60nm,18.3s,baz=62,slow=34						
GRGR	**Grenville**	**76.09**	**323**	P	**P**	**01 28 41.4**	**-0.2**
SDV	**Santo Domingo**	**76.24**	**314**	*e*P	**P**	**01 28 42.7**	**0.0**
PPT	**Papeete**	**91.80**	**232**	LR	LR	02 03 25.9	
	comp=Z,47nm,18.5s,baz=180,slow=30						
RAR	**Rarotonga**	**92.44**	**222**	LR	LR	02 02 17.9	
	comp=Z,219nm,19.7s,baz=172,slow=29						
ASAR	**Alice Springs**	**96.67**	**161**	P	**P**	**01 30 24.8**	**+0.5**
	comp=Z,0.9nm,0.9s,baz=189,slow=4.7,SNR=4.5						
KEST	**Kesra**	**97.89**	**28**	LR	LR	02 11 23.5	
	comp=Z,90nm,18.4s,baz=290,slow=33						
PDAR	**Pinedale Array**	**122.34**	**300**	PKP	**PKPdf**	**01 35 47.6**	**-0.8**
	comp=Z,0.2nm,0.4s,baz=113,slow=4.0,SNR=4.9						
NVAR	**Mina Array Bea**	**123.17**	**290**	PKP	**PKPdf**	**01 35 50.0**	**-0.1**
	comp=Z,1.5nm,1.2s,baz=123,slow=2.7,SNR=2.5						
CMAR	**Chiang Mai Arr**	**123.33**	**110**	PKP	**PKiKP**	**01 35 51.1**	**+0.1**
	comp=Z,0.6nm,0.3s,baz=237,slow=3.5,SNR=5.8						
FINES	**FINESS Array B**	**125.72**	**28**	PKP	**PKPdf**	**01 35 53.7**	**-0.2**
	comp=Z,0.8nm,0.5s,baz=143,slow=2.1,SNR=16						
ARCES	**ARCESS Array B**	**132.48**	**22**	PKP	**PKPdf**	**01 36 06.3**	**-0.3**
	comp=Z,2.7nm,0.9s,baz=222,slow=1.2,SNR=4.1						
MKAR	**Makanchi Array**	**136.51**	**72**	PKP	**PKiKP**	**01 36 16.3**	**-0.3**
	comp=Z,0.3nm,0.6s,baz=211,slow=3.3,SNR=3.6						
YKA	**Yellowknife Ar**	**138.43**	**316**	PKP	**PKPdf**	**01 36 17.9**	**+0.1**
	comp=Z,2.6nm,1.0s,baz=124,slow=2.8,SNR=15						
YKA				PP	**PP**	**01 39 04.7**	**-4.6**
	comp=Z,0.2nm,0.7s,baz=120,slow=7.7,SNR=4.0						
YKA				SKPbc	**SKPbc**	**01 39 48.7**	**0.0**
	comp=Z,1.3nm,0.9s,baz=122,slow=3.5,SNR=11						
SONM	**Songino Array**	**149.74**	**89**	PKPbc	**PKPbc**	**01 36 43.1**	**+0.2**
	comp=Z,3.6nm,0.9s,baz=227,slow=2.9,SNR=18						
SONM	**Songino Array**	**149.74**	**89**		**PKPbc**	**01 36 43.3**	**+0.4**
NRIK	**Noril'sk**	**149.92**	**41**	PKPbc	**PKPbc**	**01 36 42.9**	**+0.4**
	comp=Z,1.2nm,0.5s,baz=141,slow=1.8,SNR=4.1						
ILAR	**Eielson Array**	**152.28**	**308**	PKPbc	**PKPbc**	**01 36 48.2**	**+0.1**
	comp=Z,1.7nm,0.4s,baz=140,slow=2.7,SNR=35						

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*IDC **05** 01:23:18.9±1.5, 2°.72N×128°.71E, h243km±14km, mb3.8/10, mb1 3.9/14, mb1mx3.5/49, mbtmp4.4/14, Error ellipse: s-maj=24.3km s-min=11.6km az=64.0*

*NEIC **05** 01:23:18.5±1.1, 2°.7N±0°.1×128°.6E±0°.1, h243km±8km, mb4.3/16, Error ellipse: s-maj=18.6km s-min=13.8km az=219.0*

*DJA **05** 01:23:20.4±0.5, 3°N±5°×12°9E±°, h218km±3km, M4.5/18, mB5.1/7, mb4.6/18, MLv4.6/12, Mw(mB)4.4/7*

ISC 05 01:23:19.7±0.6**, 2°.63N**±0°.08×**128°.53E**±0°.07**, h250**km**, n70, σ0**^{s}**.98**/72**, mb4.1**/17**, 1D, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	**Ternate**	**2.18**	**212**		**Pn**	**01 24 02.9**	**-1.0**
TNTI				S	**S**	**01 24 37.1**	**-1.8**
TNTI	**Ternate**	**2.18**	**212**	P	**Pn**	**01 24 03.5**	**-0.4**
SGSI	**Sangihe**	**3.17**	**289**	P	**Pn**	**01 24 12.9**	**-1.2**
SWI	**Sorong**	**4.42**	**142**	P	**Pn**	**01 24 28.8**	**+0.3**
SIJI	**Sorong**	**4.43**	**142**	P	**Pn**	**01 24 28.3**	**-0.4**
	9.0nm,0.3s,baz=333,slow=13,SNR=15						
KMSI	**Cibinong**	**4.98**	**246**	P	**Pn**	**01 24 36.2**	**+0.8**
SANI	**Sanana**	**5.30**	**209**	P	**Pn**	**01 24 37.3**	**-2.0**
	3.0nm11μm524nm,0.5s						
KCP	**Kidapawan**	**5.53**	**322**	⇓*e*P	**Pn**	**01 24 41.6**	**-0.7**
GTOI	**Gorontalo**	**5.86**	**250**	P	**Pn**	**01 24 47.1**	**+0.9**
	0.3nm880nm62nm,0.7s						
FAKI	**Fak Fak**	**6.65**	**146**	Pn	**Pn**	**01 24 56.4**	**+0.3**
LUWI	**Luwuk**	**6.81**	**238**	Pn	**Pn**	**01 24 58.4**	**+0.2**
LUWI	**Luwuk**	**6.81**	**238**	P	**Pn**	**01 24 58.2**	**0.0**
	0.7nm7μm157nm,0.9s						
MRSI	**Marisa**	**6.92**	**252**	P	**Pn**	**01 25 00.5**	**+1.0**
	0.2nm52nm,0.4s						
APSI	**Ampana**	**7.73**	**243**	P	**Pn**	**01 25 09.6**	**-0.1**
	0.4nm1μm118nm,0.5s						
TOLI2	**Tolitoli**	**7.89**	**259**		**Pn**	**01 25 11.0**	**-0.8**
MPSI	**Mapaga**	**8.92**	**255**	P	**Pn**	**01 25 25.6**	**+0.8**
	12nm,0.8s						
TTSI	**Tana Toraja**	**10.37**	**237**	P	**Pn**	**01 25 44.5**	**+1.4**
	48nm,0.8s						
SPSI	**Sidrap Palu**	**10.94**	**233**	P	**Pn**	**01 25 50.1**	**-0.1**
	36nm,0.6s						
BNSI	**Bone**	**10.94**	**230**	P	P	01 25 59.8	+5.2
BKSI	**Bulukumba**	**11.53**	**227**	P	**Pn**	**01 25 58.8**	**+1.2**
	745nm72nm,0.6s						
KAPI	**Kappang**	**11.60**	**229**	P	**P**	**01 26 00.8**	**-1.2**
	1.5nm,0.3s,baz=21,slow=8.6,SNR=2.4						
KAPI	**Kappang**	**11.60**	**229**	Pn	**Pn**	**01 25 56.0**	**-2.5**
GENI	**Genyem**	**12.74**	**114**	P	**P**	**01 26 15.8**	**+1.1**
	156nm,0.9s						
JAY	**Jayapura**	**13.20**	**113**	P	**Pn**	**01 26 17.9**	**-0.4**
	2.5nm,0.3s,baz=261,slow=8.3,SNR=4.9						
EDFI	**Ende, Flores**	**13.20**	**211**	P	P	01 26 26.8	+6.9
BATI	**Baumata**	**13.64**	**201**	P	**P**	**01 26 24.4**	**-0.3**
	4.6nm,0.3s,baz=291,slow=17,SNR=2.2						
PLAI	**Plampang**	**15.64**	**223**	P	**Pn**	**01 26 48.3**	**+0.6**
	641nm56nm,0.8s						
KDU	**Kakadu**	**15.72**	**166**	P	**P**	**01 26 47.9**	**+0.3**
	baz=15						
TWSI	**Taliwang, Sumb**	**16.20**	**226**	P	**Pn**	**01 26 56.6**	**+2.3**
	15nm,0.6s						
SBUM	**Sibu**	**16.29**	**270**		**Pn**	**01 26 54.8**	**-0.6**
SBUM				IAmb	IAmb	01 26 59.8	
	comp=Z,24nm,0.7s						
SRBI	**Singaraja**	**17.02**	**231**	P	**Pn**	**01 27 05.3**	**+1.3**
	comp=Z,67nm,0.9s						
JAGI	**Jajag, Banyuwa**	**18.09**	**232**	P	**Pn**	**01 27 15.5**	**-1.0**
	comp=Z,31nm,0.7s						
KNRA	**Kununurra**	**18.19**	**179**	P	**P**	**01 27 15.8**	**+1.2**
	baz=18,SNR=13						
KNRA	**Kununurra**	**18.19**	**179**	P	**P**	**01 27 15.2**	**+0.7**
FITZ	**Fitzroy Crossi**	**20.80**	**188**	P	**P**	**01 27 42.7**	**+0.4**
	baz=20,SNR=4.3						
FITZ	**Fitzroy Crossi**	**20.80**	**188**	P	**P**	**01 27 42.4**	**+0.1**
	comp=Z,2.6nm,0.5s,baz=22,slow=9.1,SNR=8.9						
FITZ	**Fitzroy Crossi**	**20.80**	**188**	P	**P**	**01 27 41.1**	**-1.3**
COEN	**Coen**	**21.97**	**139**	P	**P**	**01 27 52.3**	**-1.3**
COEN				IAmb	IAmb	01 28 04.1	
	comp=Z,4.8nm,1.1s						
LEM	**Lembang**	**22.89**	**246**	P	**P**	**01 28 04.1**	**+1.8**
	comp=Z,30nm,0.4s,baz=45,slow=12,SNR=2.9						
WB0	**Warramunga Arr**	**22.99**	**166**	P	**P**	**01 28 02.3**	**-0.6**
WB0				IAmb	IAmb	01 28 05.6	
	comp=Z,8.5nm,0.4s						
WRA	**Warramunga Arr**	**23.15**	**166**	P	**P**	**01 28 04.2**	**-0.1**
	comp=Z,3.1nm,0.5s,baz=345,slow=11,SNR=48						
WRA				ScP	**ScP**	**01 35 00.3**	**+1.1**
	comp=Z,0.1nm,0.6s,baz=343,slow=3.0,SNR=7.3						
WRA	**Warramunga Arr**	**23.15**	**166**	P	**P**	**01 28 03.2**	**-1.2**
WB2	**Warramunga Arr**	**23.15**	**166**	P	**P**	**01 28 05.0**	**+0.6**
	baz=22						
WB2	**Warramunga Arr**	**23.15**	**166**	P	**P**	**01 28 03.9**	**-0.5**
WB2				IAmb	IAmb	01 28 08.4	
	comp=Z,4.5nm,0.6s						
WR0	**Warramunga Arr**	**23.21**	**166**	P	**P**	**01 28 04.4**	**-0.6**
WR0				IAmb	IAmb	01 28 07.8	
	comp=Z,3.4nm,0.6s						
QIS	**Mount Isa**	**25.48**	**155**	P	**P**	**01 28 25.3**	**-0.2**
	baz=25,SNR=5.7						
MTSU	**Mount Surprise**	**25.84**	**144**	P	**P**	**01 28 29.0**	**+0.2**
	baz=25						
AS31	**Alice Springs**	**26.66**	**169**	P	**P**	**01 28 35.5**	**-0.5**
AS31				IAmb	IAmb	01 28 36.7	
	comp=Z,1.8nm,0.4s						
ASAR	**Alice Springs**	**26.66**	**169**	P	**P**	**01 28 36.1**	**+0.1**
	comp=Z,2.2nm,0.4s,baz=354,slow=7.5,SNR=34						
ASAR				ScP	**ScP**	**01 35 09.9**	**+0.7**
	comp=Z,0.8nm,0.5s,baz=344,slow=2.9,SNR=8.2						
ASAR	**Alice Springs**	**26.66**	**169**	P	**P**	**01 28 35.0**	**-1.0**
ASPA	**Alice Springs**	**26.66**	**169**	P	**P**	**01 28 36.3**	**+0.3**
	baz=26						
MEEK	**Meekatharra**	**30.64**	**198**	P	**P**	**01 29 11.6**	**+0.5**
	baz=30,SNR=3.7						
CMAR	**Chiang Mai Arr**	**32.97**	**301**	P	**P**	**01 29 33.2**	**+1.7**
	comp=Z,0.5nm,0.4s,baz=129,slow=7.1,SNR=4.2						
CMAR				ScP	**ScP**	**01 35 32.0**	**+2.3**
	comp=Z,0.5nm,0.3s,baz=123,slow=1.5,SNR=4.1						
CMAR	**Chiang Mai Arr**	**32.97**	**301**	P	**P**	**01 29 31.1**	**-0.5**
FORT	**Forrest**	**33.23**	**181**	P	**P**	**01 29 33.5**	**0.0**
BLDU	**Ballidu**	**34.93**	**198**	P	**P**	**01 29 49.0**	**+0.8**
	baz=34,SNR=5.8						
BBOO	**Buckleboo**	**35.97**	**169**	P	**P**	**01 29 56.5**	**-0.5**
BBOO				IAmb	IAmb	01 30 01.0	
	comp=Z,7.6nm,0.9s						
STKA	**Stephens Creek**	**36.50**	**161**	P	**P**	**01 30 02.1**	**+0.7**
	baz=36,SNR=4.5						
STKA	**Stephens Creek**	**36.50**	**161**	P	**P**	**01 30 01.1**	**-0.4**
	comp=Z,2.2nm,0.4s,baz=7.1,slow=9.2,SNR=6.7						
STKA	**Stephens Creek**	**36.50**	**161**	P	**P**	**01 30 00.9**	**-0.5**
ARPS	**Mount Arapiles**	**41.12**	**164**	P	**P**	**01 30 40.6**	**+1.0**
	baz=40						
MK31	**Makanchi Array**	**59.48**	**325**	P	**P**	**01 32 56.9**	**+0.2**
MKAR	**Makanchi Array**	**59.48**	**325**	P	**P**	**01 32 56.6**	**0.0**
	comp=Z,0.5nm,0.3s,baz=116,slow=8.0,SNR=9.8						
MKAR	**Makanchi Array**	**59.48**	**325**	P	**P**	**01 32 56.4**	**-0.3**
LBZ	**Lake Benmore**	**59.78**	**147**	P	**P**	**01 32 59.3**	**+0.5**
BKZ	**Black Stump Fm**	**60.58**	**138**	P	**P**	**01 33 03.4**	**-0.9**
BKZ				IAmb	IAmb	01 33 05.6	
	comp=Z,11nm,0.9s						
ZALV	**Zalesovo Beam**	**62.38**	**333**	P	**P**	**01 33 14.6**	**-1.3**
	comp=Z,0.3nm,0.3s,baz=141,slow=9.0,SNR=2.7						
KURBB	**Kurchatov Arra**	**63.63**	**327**	P	**P**	**01 33 24.0**	**-0.2**
	comp=Z,3.5nm,0.2s,baz=118,slow=5.1,SNR=4.2						
KURK	**Kurchatov**	**63.63**	**327**	P	**P**	**01 33 23.6**	**-0.6**
KURK				IAmb	IAmb	01 33 24.7	
	comp=Z,2.2nm,0.3s						
ARCES	**ARCESS Array B**	**92.09**	**340**	P	**P**	**01 35 59.2**	**-1.1**
	comp=Z,6.0nm,1.0s,baz=76,slow=4.7,SNR=2.3						

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*JMA **05** 01:26:21.8±0.2, 38°.76N×144°.18E, h44km, M3.5*

*IDC **05** 01:26:22.0±2.6, 37°.93N×144°.46E, h0km, mb3.7/2, mb1 3.9/4, mb1mx3.4/55, mbtmp3.8/4, ML3.4/2, MS2.6/2, Ms1 2.6/2, ms1mx2.2/44, Error ellipse: s-maj=51.2km s-min=32.8km az=89.0*

ISC 05 01:26:21.5±1.6**, 38°.72N**±0°.05×**144°.2E**±0°.1**, h35**km**, n22, σ2**^{s}**.00**/32**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**2.04**	**281**	P	**Pn**	**01 26 54.1**	**+0.8**
MIYJ	**Miyakonagasawa**	**2.07**	**295**	P	**Pn**	**01 26 54.2**	**+0.5**
MIYJ				*e*S	**Sn**	**01 27 17.8**	**-0.4**
JKMT	**Kesennumamotoy**	**2.16**	**273**	P	**Pn**	**01 26 55.9**	**+0.9**
JKMT				S	**Sn**	**01 27 21.4**	**+0.8**
JMK	**Ichinoseki**	**2.37**	**277**	P	**Pn**	**01 26 59.6**	**+1.8**
JOM	**Ohasama**	**2.41**	**289**	P	**Pn**	**01 26 59.7**	**+1.3**
JOM				S	**Sn**	**01 27 27.6**	**+0.8**
JANG	**Nango**	**2.68**	**309**	P	**Pn**	**01 27 02.4**	**+0.3**
JANG				*e*S	**Sn**	**01 27 33.3**	**0.0**
JYK	**Kaneyama**	**3.04**	**275**	P	**Pn**	**01 27 08.9**	**+1.9**
JYK				*e*S	**Sn**	**01 27 44.2**	**+2.0**
JFT	**Otama**	**3.30**	**250**	P	**Pn**	**01 27 12.3**	**+1.6**
JFT				S	**Sn**	**01 27 50.0**	**+1.3**
JOT	**Ohata**	**3.62**	**318**	P	**Pn**	**01 27 15.4**	**+0.5**
JNBK	**Urakawa-nobuka**	**3.73**	**343**	P	**Pn**	**01 27 17.1**	**+0.5**
JNBK				*e*S	**Sn**	**01 27 58.9**	**-0.4**
JCH	**Churui**	**3.95**	**351**	P	**Pn**	**01 27 19.4**	**-0.1**
JCH				*e*S	**Sn**	**01 28 02.4**	**-2.2**
NEM2	**Nemuro 2**	**4.78**	**13**	P	**Pn**	**01 27 29.1**	**-1.8**
BSO1	**Boso 1**	**4.83**	**214**	P	**Pn**	**01 27 30.8**	**-0.4**
JRY	**Ryogami san**	**5.04**	**239**	P	**Pn**	**01 27 35.4**	**+0.9**
JRY				S	**Sn**	**01 28 30.5**	**-1.0**
JTKR	**Abashiri--Toko**	**5.25**	**357**	P	**Pn**	**01 27 36.7**	**-0.7**
JTKR				*e*S	**Sn**	**01 28 32.8**	**-3.9**
MJAR	**Matsushiro Arr**	**5.26**	**247**	Pn	**Pn**	**01 27 39.9**	**+2.3**
	0.5nm,0.3s,baz=74,slow=17,SNR=9.2						
MJAR				LR	LR	01 29 24.8	
	comp=Z,20nm,21.3s,baz=250,slow=36						
MAT	**Matsushiro**	**5.26**	**247**	P	**Pn**	**01 27 39.9**	**+2.3**
MAT				*e*S	**Sn**	**01 28 36.4**	**-0.6**
JOD2	**Odawara 2**	**5.38**	**232**	S	**Sn**	**01 28 36.5**	**-3.4**
JHJ	**Hachijo jima 2**	**6.66**	**214**	Pn	**Pn**	**01 27 55.5**	**-1.3**
	5.8nm,0.3s,baz=41,slow=19,SNR=0.9						
JHJ				Sn	**Sn**	**01 29 04.6**	**-6.7**
	9.8nm,0.3s,baz=47,slow=13,SNR=2.1						
ZALV	**Zalesovo Beam**	**42.46**	**311**	P	P	01 34 23.7	+11
	0.6nm,0.5s,baz=78,slow=8.7,SNR=4.3						
WRA	**Warramunga Arr**	**59.09**	**191**	P	**P**	**01 36 18.6**	**+0.4**
	0.5nm,0.7s,baz=5.2,slow=7.2,SNR=4.0						
BRTR	**Keskin Array B**	**79.38**	**313**	LR	LR	02 17 32.5	
	comp=Z,12nm,18.4s,baz=278,slow=38						

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*TUL **05** 01:36:01.2±0.6, 36°.89N±0°.04×97°.89W±0°.07, h5km±7km, ML3.2, mb_Lg3.2/88(NEIC), Error ellipse: s-maj=7.7km s-min=5.8km az=65.0*

*NEIC **05** 01:36:01.3±0.6, 36°.88N±0°.04×97°.89W±0°.06, h6km±7km, Error ellipse: s-maj=7.6km s-min=5.8km az=69.0*

*ANF **05** 01:36:01.5±0.7, 36°.89N×97°.87W, h5km, ML4.1/8, Error ellipse: s-maj=7.9km s-min=6.6km az=36.0*

ISC 05 01:36:01.4±0.9**, 36°.88N**±0°.02×**97°.88W**±0°.03**, h7**km±5km**, n100, σ0**^{s}**.46**/86**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	**Grant County #**	**0.03**	**148**		**Pg**	**01 36 02.8**	**0.0**
GC02				Sg	**Sg**	**01 36 03.8**	**+0.1**
KAN14	**Manchester OK**	**0.10**	**320**		**Pg**	**01 36 03.5**	**-0.1**
KAN14				Sg	**Sg**	**01 36 05.1**	**-0.2**
KAN01	**Argonia South**	**0.29**	**20**		**Pg**	**01 36 07.2**	**+0.1**
KAN01				Sg	**Sg**	**01 36 11.2**	**+0.2**
KAN10	**Anthony SW Sta**	**0.30**	**325**		**Pg**	**01 36 07.2**	**0.0**
KAN13	**South Haven SW**	**0.35**	**67**		**Pg**	**01 36 08.5**	**+0.3**
KAN08	**Anthony NE Sta**	**0.35**	**348**	Pg	**Pg**	**01 36 08.3**	**0.0**
KAN08				Sg	**Sg**	**01 36 13.4**	**+0.4**
CROK	**Carrier**	**0.38**	**192**	Pg	**Pg**	**01 36 09.2**	**+0.3**
CROK				Sg	**Sg**	**01 36 14.8**	**+0.9**
KAN12	**Harper NE Stat**	**0.43**	**347**	Pg	**Pg**	**01 36 09.7**	**0.0**
U32A	**Winter Ranch,**	**1.03**	**241**	Pg	**Pg**	**01 36 20.7**	**-0.5**
U32A	**Winter Ranch,**	**1.03**	**241**	P		01 36 20.7	
	baz=60						
T35A	**Sooner Cattle**	**1.10**	**88**	Pg	**Pg**	**01 36 22.1**	**-0.3**
T35B	**Sooner Cattle**	**1.10**	**88**	P		01 36 22.1	
	baz=269,SNR=194						
T35B				S		01 36 36.6	
	baz=269						
OK029	**Liberty Lake**	**1.13**	**162**	Pg	**Pg**	**01 36 22.7**	**-0.4**
QUOK	**Quay**	**1.18**	**126**		**Pg**	**01 36 23.7**	**-0.3**
BCOK	**Bluff Creek, N**	**1.24**	**170**	Pg	**Pg**	**01 36 24.4**	**-0.7**
OK031	**S. Brethren Rd**	**1.25**	**137**	Pg	**Pg**	**01 36 24.9**	**-0.5**
OK030	**Cody Creek RV**	**1.30**	**137**		**Pn**	**01 36 25.8**	**-0.2**
OK025	**Westminster Rd**	**1.37**	**161**	Pn	**Pn**	**01 36 27.0**	**+0.1**
OKCFA	**Oklahoma City**	**1.50**	**166**		**Pn**	**01 36 29.2**	**+0.4**
OKCSW	**OKLAHOMA CITY**	**1.51**	**166**		**Pn**	**01 36 28.9**	**0.0**
FNO	**Franklin**	**1.67**	**166**		**Pn**	**01 36 31.3**	**+0.3**
R32A	**Long Quarter,**	**1.68**	**337**		**Pn**	**01 36 31.1**	**-0.2**
R32A				IAmb_Lg		01 36 56.4	
	comp=Z,136nm,0.8s						
R32A	**Long Quarter,**	**1.68**	**337**	P		01 36 31.8	
	baz=157,SNR=97						
R32A				S		01 36 54.0	
	baz=157						
W35A	**Tecumseh**	**1.91**	**154**		**Pn**	**01 36 34.5**	**+0.1**
TUL1	**Leonard**	**1.94**	**119**	P	**Pn**	**01 36 35.5**	**+0.7**
	baz=301						
TUL1				S	**Sb**	**01 37 01.3**	**-0.2**
	baz=301						
TUL1	**Leonard**	**1.94**	**119**	Pn	**Pn**	**01 36 34.9**	**0.0**
TUL1	**Leonard**	**1.94**	**119**	P		01 36 35.7	
	baz=301,SNR=52						
TUL1				Sb		01 37 02.7	
	baz=301						
WMOK	**Wichita Mounta**	**2.26**	**199**	P	**Pn**	**01 36 39.8**	**+0.6**
	baz=18						
WMOK				S	**Sn**	**01 37 08.4**	**+1.0**
	baz=18						
WMOK	**Wichita Mounta**	**2.26**	**199**		**Pn**	**01 36 39.2**	**0.0**
WMOK				IAmb_Lg		01 37 12.3	
	comp=Z,74nm,1.2s						
WMOK	**Wichita Mounta**	**2.26**	**199**	P		01 36 40.1	
	baz=18,SNR=11						
CBKS	**Cedar Bluff**	**2.43**	**323**	P	**Pn**	**01 36 42.5**	**+0.9**
	baz=142						
CBKS				S	**Sn**	**01 37 12.6**	**+1.1**
	baz=142						
CBKS	**Cedar Bluff**	**2.43**	**323**	Pn	**Pn**	**01 36 41.1**	**-0.5**
CBKS	**Cedar Bluff**	**2.43**	**323**	P		01 36 42.8	
	baz=142,SNR=17						
CBKS				S		01 37 15.5	
	baz=142						
KSU1	**Kansas State U**	**2.44**	**24**	P	**Pn**	**01 36 42.3**	**+0.6**
	baz=205						
KSU1				S	**Sn**	**01 37 12.3**	**+0.6**
	baz=205						
KSU1	**Kansas State U**	**2.44**	**24**	Pn	**Pn**	**01 36 42.4**	**+0.8**
KSU1				IAmb_Lg		01 37 21.0	
	comp=Z,116nm,0.7s						
KSU1	**Kansas State U**	**2.44**	**24**	P		01 36 42.4	
	baz=205,SNR=13						
KSU1				S		01 37 15.8	
	baz=205						
U38A	**Gravette**	**2.84**	**98**		**Pn**	**01 36 47.2**	**0.0**
U38A	**Gravette**	**2.84**	**98**	P		01 36 48.3	
	baz=280,SNR=12						
X37A	**Clayton**	**3.06**	**137**	Pn	**Pn**	**01 36 51.2**	**+0.9**
X37A	**Clayton**	**3.06**	**137**	P		01 36 51.4	
	baz=319						
HHAR	**Hobbs**	**3.23**	**99**		**Pn**	**01 36 53.4**	**+0.9**
HHAR	**Hobbs**	**3.23**	**99**	P		01 36 53.6	
	baz=282						
Z35A	**Perchaven, San**	**3.58**	**172**	Pn	**Pn**	**01 36 57.5**	**+0.1**
Z35A	**Perchaven, San**	**3.58**	**172**	P		01 36 58.5	
	baz=352						
Z35A				S		01 37 41.2	
	baz=352						
AMTX	**Amarillo**	**3.67**	**238**	P	**Pn**	**01 36 58.8**	**0.0**
	baz=56						
AMTX	**Amarillo**	**3.67**	**238**	IAmb_Lg		01 38 02.9	
	comp=Z,57nm,1.0s						
W39A	**Magazine**	**3.72**	**116**	P	**Pn**	**01 36 59.6**	**+0.4**
	baz=298						
W39A				S	**Sn**	**01 37 44.4**	**+1.0**
	baz=298						
W39A	**Magazine**	**3.72**	**116**	Pn	**Pn**	**01 36 59.3**	**0.0**
S39A	**Bolivar**	**3.72**	**76**		**Pn**	**01 36 59.3**	**0.0**
S39A	**Bolivar**	**3.72**	**76**	P		01 36 59.8	
	baz=259,SNR=22						
S39A				S		01 37 44.5	
	baz=259						
N33A	**J Bar K, Exete**	**3.87**	**5**	Pn	**Pn**	**01 37 01.0**	**-0.4**
U40A	**Yellville**	**4.08**	**96**	P	**Pn**	**01 37 04.5**	**+0.3**
	baz=279						
U40A				S	**Sn**	**01 37 52.4**	**+0.1**
	baz=279						
U40A	**Yellville**	**4.08**	**96**		**Pn**	**01 37 04.1**	**-0.1**
U40A	**Yellville**	**4.08**	**96**	P		01 37 04.7	
	baz=279,SNR=23						
U40A				P		01 37 04.7	
	baz=279,SNR=23						
U40A				S		01 37 52.2	
	baz=279						
U40A				S		01 37 52.2	
	baz=279						
MIAR	**Mount Ida**	**4.21**	**122**	P	**Pn**	**01 37 07.4**	**+1.5**
	baz=305						
MIAR				S	**Sn**	**01 37 55.0**	**-0.3**
	baz=305						
MIAR	**Mount Ida**	**4.21**	**122**	Pn	**Pn**	**01 37 06.0**	**+0.1**
MIAR				IAmb_Lg		01 38 24.5	
	comp=Z,52nm,0.9s						
KSCO	**Kaye Shedlock’**	**4.31**	**301**	Pn	**Pn**	**01 37 07.2**	**-0.4**
KSCO				IAmb_Lg		01 38 29.0	
	comp=Z,52nm,0.8s						
Z38A	**Mt. Pleasant**	**4.32**	**146**	Pn	**Pn**	**01 37 07.6**	**+0.1**
Z38A				IAmb_Lg		01 38 22.0	
	comp=Z,71nm,0.9s						
N35A	**Tabor**	**4.34**	**23**	Pn	**Pn**	**01 37 07.6**	**-0.2**
P38A	**Dawn**	**4.38**	**50**	Pn	**Pn**	**01 37 08.2**	**-0.2**
P38A				IAmb_Lg		01 38 23.4	
	comp=Z,45nm,0.8s						
P38A	**Dawn**	**4.38**	**50**	P		01 37 09.3	
	baz=233,SNR=11						
MGMO	**Mountain Grove**	**4.50**	**85**	Pn	**Pn**	**01 37 10.0**	**0.0**
MGMO				IAmb_Lg		01 38 26.4	
	comp=Z,43nm,0.7s						
BGNE	**Belgrade**	**4.53**	**357**	Pn	**Pn**	**01 37 10.2**	**-0.2**
BGNE	**Belgrade**	**4.53**	**357**	P		01 37 11.7	
	baz=177,SNR=6.0						
R40A	**Maddies Statio**	**4.67**	**71**		**Pn**	**01 37 12.4**	**0.0**
R40A	**Maddies Statio**	**4.67**	**71**	P		01 37 12.9	
	baz=254,SNR=20						
FCAR	**Ozark Folk Cen**	**4.75**	**100**	Pn	**Pn**	**01 37 14.2**	**+0.8**
FCAR				IAmb_Lg		01 38 36.3	
	comp=Z,56nm,0.7s						
X40A	**Basin Creek Fa**	**4.75**	**119**	IAmb_Lg		01 38 41.6	
	comp=Z,38nm,0.7s						
WHAR	**Wooly Hollow**	**4.80**	**108**	Pn	**Pn**	**01 37 14.1**	**0.0**
WHTX	**Lake Whitney,**	**4.89**	**176**	Pn	**Pn**	**01 37 15.6**	**+0.2**
WHTX	**Lake Whitney,**	**4.89**	**176**	P		01 37 15.3	
	baz=356						
WLAR	**White Oak Lake**	**5.04**	**128**	IAmb_Lg		01 38 52.1	
	comp=Z,43nm,0.8s						
237A	**Washetta, Mont**	**5.16**	**160**	Pn	**Pn**	**01 37 18.9**	**-0.1**
P40A	**Paris**	**5.30**	**58**	Pn	**Pn**	**01 37 20.7**	**-0.3**
P40A				IAmb_Lg		01 38 51.7	
	comp=Z,53nm,0.8s						
N38A	**Joes South For**	**5.33**	**41**	Pn	**Pn**	**01 37 21.4**	**0.0**
N38A				IAmb_Lg		01 39 01.8	
	comp=Z,47nm,0.7s						
N38A	**Joes South For**	**5.33**	**41**	P		01 37 21.6	
	baz=224						
T42A	**Van Buren**	**5.44**	**86**	Pn	**Pn**	**01 37 23.3**	**+0.4**
LCAR	**Lake Charles**	**5.48**	**96**	Pn	**Pn**	**01 37 23.6**	**+0.2**
LCAR				IAmb_Lg		01 38 57.7	
	comp=Z,42nm,1.0s						
K31A	**O'Neill**	**5.78**	**354**	IAmb_Lg		01 39 14.2	
	comp=Z,51nm,0.7s						
CCAR	**Cane Creek**	**5.80**	**119**	IAmb_Lg		01 39 14.7	
	comp=Z,44nm,0.9s						
PBMO	**Poplar Bluff**	**5.98**	**89**	IAmb_Lg		01 39 17.4	

	comp=Z,38nm,0.8s						
FVM	French Village	6.03	77	IAmb_Lg		01 39 12.9	
	comp=Z,35nm,0.9s						
435B	Jarrell	6.09	178	IAmb_Lg		01 39 24.6	
	comp=Z,36nm,0.8s						
SDCO	Great Sand Dun	6.13	280	Pn	Pn	01 37 32.2	-0.5
SLM	Saint Louis	6.31	72	IAmb_Lg		01 39 21.6	
	comp=Z,24nm,0.7s						
JCT	Junction City	6.58	195	IAmb_Lg		01 39 44.0	
	comp=Z,37nm,0.9s						
N41A	Harden Midland	6.69	53	Pn	Pn	01 37 39.8	-0.2
ISCO	Idaho Springs	6.74	298	Pn	Pn	01 37 40.5	-0.6
143A	Socs Landing,	6.76	126	IAmb_Lg		01 39 48.2	
	comp=Z,30nm,0.7s						
ECSD	EROS Data Cent	6.92	8	Pn	Pn	01 37 43.0	-0.2
ECSD				IAmb_Lg		01 39 42.4	
	comp=Z,20nm,0.8s						
S44A	Carbondale	6.92	81	Pn	Pn	01 37 43.3	0.0
S44A				IAmb_Lg		01 39 45.5	
	comp=Z,34nm,0.8s						
SIUC	Southern Illin	6.96	81	Pn	Pn	01 37 43.3	-0.4
SIUC				IAmb_Lg		01 39 55.6	
	comp=Z,40nm,0.8s						
OXF	Oxford	7.29	106	Pn	Pn	01 37 48.3	+0.1
OXF				IAmb_Lg		01 40 08.7	
	comp=Z,28nm,0.8s						
Q44A	Meyer Farm, Va	7.29	71	IAmb_Lg		01 40 12.7	
	comp=Z,32nm,1.0s						
PHWY	Pilot Hill	7.36	309	IAmb_Lg		01 40 08.0	
	comp=Z,18nm,0.8s						
SUSD	Miller	7.60	354	IAmb_Lg		01 40 06.7	
	comp=Z,25nm,0.8s						
HDIL	Hopedale	7.65	59	Pn	Pn	01 37 53.2	0.0
LENM	Lemitar	7.89	253	Pn	Pn	01 37 55.8	-1.0
I37A	Lemond, Waseca	7.90	24	IAmb_Lg		01 40 20.7	
	comp=Z,31nm,0.9s						
O44A	Mansfield	8.07	63	IAmb_Lg		01 40 21.7	
	comp=Z,25nm,0.8s						
MNTX	Cornudas Mount	8.07	232	Pn	Pn	01 37 58.9	-0.2
WVT	Waverly	8.13	92	Pn	Pn	01 37 59.5	-0.3
L42A	Oliver, Polo	8.16	49	Pn	Pn	01 38 00.1	-0.1
PLAL	Pickwick Lake	8.18	100	IAmb_Lg		01 40 18.7	
	comp=Z,15nm,0.7s						
USIN	University of	8.20	79	IAmb_Lg		01 40 33.1	
	comp=Z,24nm,0.9s						
JFWS	Jewell Farm	8.41	42	Pn	Pn	01 38 03.2	-0.5
JFWS				IAmb_Lg		01 40 29.0	
	comp=Z,24nm,0.8s						
T47A	Sharon Grove	8.63	86	Pn	Pn	01 38 06.5	-0.2
T47A				IAmb_Lg		01 40 41.9	
	comp=Z,21nm,0.8s						
K22A	Casper	8.80	314	IAmb_Lg		01 40 50.9	
	comp=Z,26nm,1.1s						
I40A	Norwalk	8.93	36	IAmb_Lg		01 40 59.8	
	comp=Z,13nm,0.7s						
TX31	Lajitas Ar. Si	8.95	214	Pn	Pn	01 38 11.0	-0.3
TX32	Lajitas Array	8.95	214	Pn	Pn	01 38 11.0	-0.2
TXAR	Lajitas Array	8.95	214	Pn	Pn	01 38 10.9	-0.4
F33A	5 Mile Ranch,	9.03	7	IAmb_Lg		01 40 45.9	
	comp=Z,15nm,1.1s						
X48A	Hartselle	9.14	102	IAmb_Lg		01 40 50.7	
	comp=Z,21nm,1.0s						
SPMN	Marine on St.	9.18	23	IAmb_Lg		01 41 03.6	
	comp=Z,13nm,0.8s						
BLO	Bloomington	9.25	72	IAmb_Lg		01 41 02.8	
	comp=Z,24nm,0.8s						
I42A	Draeger Farm,	9.79	42	IAmb_Lg		01 41 23.5	
	comp=Z,21nm,1.0s						
E28A	Huff	9.91	349	IAmb_Lg		01 41 23.1	
	comp=Z,18nm,1.0s						

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*IDC **05** 01:48:59.9±0.8, 38°.43N×106°.41E, h0^{km}, mb3.7/10, mb1 3.8/12, mb1mx3.6/50, mbtmp3.7/12, ML3.3/2, MS3.2/6, Ms1 3.2/6, ms1mx2.8/42, Error ellipse: s-maj=26.4km s-min=15.2km az=68.0*

*BJI **05** 01:49:02.2±0.0, 38°.36N×106°.27E, h6^{km}, mB4.5/2, mb3.8/4, ML4.1/21, Ms3.6/9, Ms7 3.3/4*

ISC 05 01:49:01.9±0.5**, 38°.42N**±0°.04×**106°.43E**±0°.05**, h10^{km}, n30, σ1^{s}.69**/34**, mb3.8**/10**, MS3.0**/5**, Western Nei Mongol**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LZH	Lanzhou	3.11	222	*e*Pg	Pb	01 49 56.7	-0.7
LZH				Sg	Sb	01 50 35.7	+0.2
LZH				smax	smax		
	comp=N,990nm,0.9s						
LZH				smax	smax		
	comp=E,770nm,0.9s						
BTO	Baotou	3.53	51	*e*Pn	Pn	01 49 58.6	+1.7
BTO				*e*Pg	Pg	01 50 06.8	-2.8
BTO				Sg	Sg	01 50 54.3	-1.1
XAN	Xi'an	4.81	155	Pn	Pn	01 50 16.5	+2.0
XAN				Pg	Pb	01 50 30.5	+4.2
XAN				Sn	Sn	01 51 11.1	+0.8
XAN				Sg	Sg	01 51 32.5	-3.9
XAN				smax	smax		
	comp=N,260nm,0.5s						
XAN				smax	smax		
	comp=E,140nm,0.9s						
XAN				LR	LR		
	comp=N,540nm,9.0s						
XAN				LR	LR		
	comp=E,330nm,10.6s						
XAN				LR	LR		
	comp=Z,530nm,9.6s						
GTA	Gaotai	5.26	283	Pn	Pn	01 50 19.5	-1.2
GTA				Pg	Pb	01 50 34.1	+0.1
GTA				Sn	Sn	01 51 20.0	-1.4
GTA				Sg	Sb	01 51 41.5	+4.3
GTA				smax	smax		
	comp=N,280nm,0.6s						
GTA				smax	smax		
	comp=E,180nm,0.5s						
GTA				LR	LR		
	comp=N,580nm,9.1s						
GTA				LR	LR		
	comp=E,270nm,7.6s						
BJI	Beijing	7.73	75	P	Pg	01 51 23.8	-6.2
BJI				pmax	pmax		
	comp=Z,24nm,0.6s						
BJI				smax	smax		
	comp=N,56nm,0.8s						
BJI				smax	smax		
	comp=E,34nm,0.8s						
TIA	Tai'an	8.80	101	Pg	Pg	01 51 45.1	-5.2
TIA				Sg	Sg	01 53 33.1	-11
TIA				smax	smax		
	comp=N,27nm,0.7s						
TIA				smax	smax		
	comp=E,18nm,0.6s						
SONM	Songino Array	9.41	360	Pn	Pn	01 51 18.6	+1.0
	comp=E,0.3nm,0.3s,baz=184,slow=14,SNR=9.4						
SONM				Sn	Sn	01 53 04.1	+0.6
	comp=E,0.6nm,0.3s,baz=180,slow=28,SNR=1.9						
SONM				Lg	Lg	01 53 56.1	
	comp=E,1.8nm,0.3s,baz=188,slow=30,SNR=5.0						
TLY	Talaya	13.41	352	Lg	Lg	01 56 01.0	
	comp=E,0.0nm,0.3s,baz=261,slow=14,SNR=3.2						
TLY				LR	LR	01 57 20.3	
	comp=E,54nm,18.6s,baz=152,slow=37						
WMQ	Urumqi	15.11	297	*e*P	Pn	01 52 36.8	+1.4
MKAR	Makanchi Array	19.59	303	P	P	01 53 29.2	-0.9
	comp=E,0.1nm,0.3s,baz=128,slow=9.3,SNR=5.9						
GUN	Gumba	20.10	245	*e*P	P	01 53 36.5	+0.3
	comp=E,13nm,0.6s						
PKI	Pulchoki	20.64	245	*e*P	P	01 53 41.5	-0.5
	comp=E,4.7nm,0.4s						
PKIN	Phulchoki	20.64	245	*e*P	P	01 53 41.7	-0.3
DMN	Daman	20.83	245	*e*P	P	01 53 42.9	-1.1
CMAR	Chiang Mai Arr	20.93	200	P	P	01 53 45.7	+0.8
	comp=E,0.8nm,0.3s,baz=11,slow=12,SNR=1.9						
GKN	Gorkha	20.94	247	*e*P	P	01 53 44.7	-0.4
DANN	Dangsing	21.38	249	*e*P	P	01 53 49.5	-0.5
	comp=E,29nm,0.8s						
ZALV	Zalesovo Beam	21.44	323	P	P	01 53 49.3	-0.7
	comp=E,2.7nm,0.6s,baz=128,slow=10,SNR=17						
ZALV				LR	LR	02 02 23.2	
	comp=E,51nm,18.2s,baz=74,slow=38						
JOW	Kunigami	21.67	116	LR	LR	02 02 05.1	
	comp=E,172nm,18.8s,baz=291,slow=36						
KOLN	Koldanda	21.82	248	*e*P	P	01 53 53.0	-1.6
KURBB	Kurchatov Arra	23.18	311	P	P	01 54 07.0	-1.6
	comp=E,1.2nm,0.7s,baz=109,slow=10,SNR=5.6						
AAK	Ala-Archa	24.56	290	P	P	01 54 20.9	-1.1
	comp=E,0.6nm,0.4s,baz=150,slow=8.1,SNR=2.2						
AAK				LR	LR	02 04 44.2	
	comp=E,41nm,18.7s,baz=85,slow=38						
JHJ	Hachijo jima 2	27.48	91	LR	LR	02 06 43.2	
	comp=E,33nm,19.3s,baz=36,slow=39						
BVAR	Borovoye Array	28.74	312	P	P	01 54 58.6	-0.8
	comp=E,0.6nm,0.6s,baz=88,slow=10,SNR=2.5						
FINES	FINESS Array B	52.70	323	P	P	01 58 15.8	-0.4
	comp=E,1.6nm,0.8s,baz=40,slow=7.3,SNR=1.9						
NOA	NORSAR Array B	59.61	326	LR	LR	02 26 50.5	
	comp=E,20nm,18.9s,baz=210,slow=38						
ILAR	Eielson Array	62.45	28	P	P	01 59 23.7	-1.2
	comp=E,0.5nm,0.9s,baz=295,slow=7.5,SNR=5.4						
WRA	Warramunga Arr	63.69	151	P	P	01 59 32.6	-1.0
	comp=E,1.1nm,0.8s,baz=344,slow=7.2,SNR=8.0						
ASAR	Alice Springs	66.92	153	P	P	01 59 54.2	-0.3
	comp=E,0.4nm,0.3s,baz=328,slow=5.4,SNR=7.3						
YKA	Yellowknife Ar	74.16	18	P	P	02 00 38.8	+0.6
	comp=E,0.3nm,0.6s,baz=335,slow=4.6,SNR=5.7						

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*IDC **05** 03:10:47.1±1.9, 9°.81S×161°.46E, h0^{km}, mb3.6/4, mb1 3.8/5, mb1mx3.6/48, mbtmp3.7/5, ML3.4/1, Error ellipse: s-maj=37.0km s-min=29.0km az=37.0*

ISC 05 03:10:52.2±1.4**, 9°.9S**±0°.2×**161°.4E**±0°.2**, h35^{km}, n6, σ0^{s}.41**/7**, mb3.5**/4**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	1.53	286	Pn	Pn	03 11 17.0	0.0
	115nm,0.3s,baz=15,slow=2.0,SNR=8.7						
HNR				Sn	Sn	03 11 35.6	-0.1
	253nm,0.3s,baz=60,slow=22,SNR=29						
DZM	Mont Dzumac	13.06	159	Pn	Pn	03 13 55.4	0.0
	0.2nm,0.3s,baz=299,slow=22,SNR=2.2						
WRA	Warramunga Arr	28.00	246	P	P	03 16 40.4	+0.4
	0.6nm,0.6s,baz=75,slow=9.3,SNR=6.7						
ASAR	Alice Springs	29.64	239	P	P	03 16 54.6	-0.1
	0.5nm,0.4s,baz=62,slow=10,SNR=10						
SONM	Songino Array	75.24	325	P	P	03 22 32.1	+0.5
	0.2nm,0.4s,baz=129,slow=3.9,SNR=2.4						
MKAR	Makanchi Array	89.78	318	P	P	03 23 46.7	-0.6
	0.2nm,0.6s,baz=104,slow=5.2,SNR=2.2						

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*IDC **05** 03:13:12.3±0.8, 64°.50N×17°.72W, h0^{km}, mb3.5/9, mb1 3.8/10, mb1mx3.5/58, mbtmp3.5/10, ML3.9/1, Error ellipse: s-maj=28.9km s-min=11.4km az=15.0*

*REY **05** 03:13:12.3, 64°.67N×17°.47W, h8^{km}*

*NEIC **05** 03:13:13.5±1.3, 64°.54N±0°.08×17°.8W±0°.1, h8^{km}±4^{km}, mb4.6/15, Error ellipse: s-maj=12.3km s-min=8.6km az=184.0*

ISC 05 03:13:13.3±0.5**, 64°.68N**±0°.02×**17°.49W**±0°.03**, h10^{km}, n78, σ1^{s}.84**/86**, mb3.8**/15**, Iceland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IVON	Vonarskard	0.11	268	P	Pg	03 13 15.1	-1.0
	baz=270						
IDYN	Dyngjuhals	0.12	25	P	Pg	03 13 15.3	-1.1
	baz=20						
IURH	Urdarhals	0.20	46	P	Pg	03 13 16.6	-1.1
	baz=43						
IDJK	Dyngjujokull	0.21	148	P	Pg	03 13 16.3	-1.3
	baz=150						
IGRF	Grimsfjall	0.29	160	P	Pg	03 13 17.8	-1.4
	baz=162						
IHUS	Husbondi	0.39	191	P	Pg	03 13 19.9	-1.1
	baz=192						
IHUS				S	Sg	03 13 25.3	-0.9
	baz=192						
ISKR	Skrokkalda	0.40	253	P	Pg	03 13 20.0	-1.2
	baz=254						
IVOT	Vottur	0.43	162	P	Pg	03 13 20.3	-1.5
	baz=163						
THOR	Thorvaldshraun	0.43	53	P	Pg	03 13 20.3	-1.5
	baz=52						
IJOK	Jokulheimar	0.48	221	P	Pg	03 13 20.5	-2.2
	baz=223						
IKRE	Kreppuhraun	0.49	77	P	Pg	03 13 21.0	-1.8
	baz=76						
IKRE				S	Sg	03 13 27.9	-1.3
	baz=76						
IASK	Askja	0.52	43	P	Pg	03 13 21.7	-1.7
	baz=42						
IASK				S	Sg	03 13 29.0	-1.2
	baz=42						
IMKO	Mokollar	0.58	58	P	Pg	03 13 22.7	-1.8
	baz=57						
IIEY	Innrieyrar	0.65	205	P	Pg	03 13 24.0	-1.8
	baz=206						
ISVA	Svartarkot	0.67	8	P	Pg	03 13 24.4	-1.8
	baz=7.6						
ISVA				S	Sg	03 13 33.8	-1.2
	baz=7.6						
IKSK	Karasker	0.68	139	P	Pg	03 13 23.8	-2.7
	baz=140						
IKAL	Kalfafell	0.74	187	P	Pg	03 13 25.5	-2.0
	baz=188						
IKAL				S	Sg	03 13 35.5	-1.6
	baz=188						
IVSH	V-Sauoahnukur	0.77	79	P	Pg	03 13 25.6	-2.5
	baz=79						
IVSH				S	Sg	03 13 36.0	-2.1
	baz=79						
IFAG	Fagurholsmyri	0.89	155	P	Pg	03 13 27.8	-2.5
	baz=156						
IADA	Aoalbol	0.89	66	P	Pg	03 13 27.6	-2.8
	baz=66						
IHVE	Hveravellir	0.91	283	P	Pg	03 13 28.2	-2.6
	baz=283						
IMEL	Melhnausar	0.96	21	P	Pg	03 13 29.2	-2.6
	baz=20						
IREN	Reynihlio	1.00	14	P	Pg	03 13 30.0	-2.6
	baz=13						
ISNB	Snabyli	1.07	208	P	Pg	03 13 31.1	-2.7
	baz=209						
IKVO	Krokottuvotn	1.07	14	P	Pg	03 13 31.1	-2.8
	baz=13						
IGRS	Grimsstaoir	1.12	30	P	Pb	03 13 31.9	-2.9
	baz=30						
IFED	Fedgar	1.16	237	P	Pb	03 13 33.1	-2.3
	baz=237						
IRJU	Rjupnafell	1.18	206	P	Pb	03 13 33.1	-2.6
	baz=207						
ISKI	Skildingahlsh	1.21	9	P	Pn	03 13 33.4	-2.9
	baz=8.5						
IGHA	Grjothals	1.22	16	P	Pn	03 13 33.4	-3.0
	baz=16						
IGRA	Granastaoir	1.25	358	P	Pn	03 13 33.8	-2.9
	baz=358						
IGYG	Gygjarholskot	1.25	253	P	Pn	03 13 34.0	-2.7
	baz=253						
IHAU	Haukadalur	1.29	238	P	Pn	03 13 35.4	-1.9
	baz=238						
IHVO	Lagu-Hvolar	1.30	208	P	Pn	03 13 35.2	-2.3
	baz=208						
IDIM	Dimmadalss	1.31	10	P	Pn	03 13 34.9	-2.7
	baz=9.6						
IHLA	Hella	1.33	344	P	Pn	03 13 35.4	-2.4
	baz=344						
IHLA				S	Sb	03 13 53.6	-1.7
	baz=344						
IALF	Alftagrof	1.41	213	P	Pn	03 13 36.8	-2.1
	baz=213						
IHED	Heoinshofoi	1.41	3	P	Pn	03 13 36.3	-2.6
	baz=2.6						
BORG	Borgarnes	1.65	274	Pg	Pn	03 13 40.2	-2.1
	14nm,0.3s,baz=111,slow=8.8,SNR=27						
BORG				Lg	Lg	03 14 03.4	
	7.6nm,0.3s,baz=33,slow=21,SNR=9.1						
SCO	Scoresbysund	6.08	346	*e*	Pn	03 14 35.3	-7.6
	baz=155,slow=9.3						
SCO				*i* P	Pn	03 14 42.4	-0.6
SCO				*i* S	Sn	03 15 54.4	+2.0
SCO				IAML		03 16 13.5	
	comp=Z,0.6nm,0.5s						
EKB9	Eskdalemuir Ar	11.74	136	Pn	Pn	03 16 02.1	+1.5
EKA	Eskdalemuir Ar	11.77	136	Pn	Pn	03 16 01.2	+0.3
	baz=319,slow=13,SNR=6.4						
CLL	Collm	20.71	116	*e*P	Pn	03 17 54.0	-1.7
KHC	Kasperske Hory	22.68	118	*e*P	P	03 18 17.6	+3.0
DPC	Dobruska-Polom	22.76	113	*e*P	P	03 18 17.5	+2.0
GERES	GERESS Array B	22.96	119	P	P	03 18 18.6	+1.0
	comp=Z,0.2nm,0.5s,baz=322,slow=7.4,SNR=3.5						
GERES	GERESS Array B	22.96	119	P	P	03 18 16.9	-0.7
KRLC	Kraliky	23.16	113	*e*P	P	03 18 18.0	-1.6
TREC	Trest	23.27	116	*e*P	P	03 18 22.9	+2.2
SALO	Salr	24.55	128	P	P	03 18 31.1	-1.8
BRTR	Keskin Array B	38.48	105	P	P	03 20 37.8	+2.5
	comp=Z,0.7nm,0.9s,baz=338,slow=6.8,SNR=3.0						
BRTR	Keskin Array B	38.48	105	P	P	03 20 36.1	+0.8
YKA	Yellowknife Ar	39.21	313	P	P	03 20 40.9	-0.1
	comp=Z,1.0nm,1.1s,baz=48,slow=8.4,SNR=7.2						
YKA				PcP	PcP	03 22 49.5	-0.3
	comp=Z,0.3nm,0.9s,baz=59,slow=3.7,SNR=3.1						
ABKAR	Akbulak array	41.98	73	P	P	03 21 05.9	+1.9
TIXI	Tiksi	42.02	15	P	P	03 21 06.2	+2.2
TIXI				IAmb	IAmb	03 21 08.5	
	comp=Z,3.4nm,0.9s						
TOLK	Toolik Lake Re	42.74	336	P	P	03 21 11.8	+1.7
ILAR	Eielson Array	45.68	332	P	P	03 21 35.9	+2.3
	comp=Z,1.1nm,1.1s,baz=21,slow=6.9,SNR=8.7						
ILAR	Eielson Array	45.68	332	P	P	03 21 34.0	+0.5
WVT	Waverly	49.68	270	P	P	03 22 05.0	+0.1
WVT				IAmb	IAmb	03 22 09.3	
	comp=Z,10nm,1.0s						
MKAR	Makanchi Array	52.72	58	P	P	03 22 28.9	+1.2
	comp=Z,0.7nm,1.0s,baz=323,slow=5.2,SNR=4.8						
MKAR	Makanchi Array	52.72	58	P	P	03 22 29.3	+1.7
KAN13	South Haven SW	53.06	280	P	P	03 22 30.4	+0.2
TORD	Torodi Ar. Bea	53.15	156	P	P	03 22 29.5	-1.6
	comp=Z,1.0nm,1.0s,baz=339,slow=7.7,SNR=2.4						
TORD	Torodi Ar. Bea	53.15	156	P	P	03 22 30.5	-0.5
PD31	Pinedale Array	53.17	293	P	P	03 22 31.3	-0.1
PDAR	Pinedale Array	53.17	293	P	P	03 22 32.4	+1.1
	comp=Z,0.9nm,0.9s,baz=54,slow=7.5,SNR=7.1						
PDAR	Pinedale Array	53.17	293	P	P	03 22 31.6	+0.2
BW06	Boulder Array	53.18	293	P	P	03 22 31.8	+0.4
AAK	Ala-Archa	53.25	67	P	P	03 22 33.7	+1.9
AAK				IAmb	IAmb	03 22 52.0	
	comp=Z,2.6nm,0.5s						
RDMU	Red Mountain	55.04	292	P	P	03 22 44.8	-0.1
TCUT	Toone Canyon	55.30	294	P	P	03 22 45.6	-1.3
PV23	Carpenter Ridg	56.62	290	P	P	03 22 56.7	+0.3
PV23				IAmb	IAmb	03 22 59.8	
	comp=Z,4.7nm,0.7s						
PV14	Lion Creek, Pa	56.70	290	P	P	03 22 57.2	+0.3
PV20	West Nyswonger	56.70	290	P	P	03 22 57.0	+0.2
PV20				IAmb	IAmb	03 22 59.0	
	comp=Z,4.3nm,0.6s						
PV19	Morning Glory	56.73	290	P	P	03 22 57.8	+0.7
PV19				IAmb	IAmb	03 22 59.6	
	comp=Z,5.1nm,0.6s						
SONM	Songino Array	59.63	40	P	P	03 23 18.7	+1.6
	comp=Z,0.6nm,1.0s,baz=344,slow=9.7,SNR=3.2						
TXAR	Lajitas Array	62.29	280	P	P	03 23 35.2	-0.1
	comp=Z,0.9nm,1.1s,baz=96,slow=4.0,SNR=4.5						
TXAR	Lajitas Array	62.29	280	P	P	03 23 35.4	+0.1

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*SNET **05** 03:21:52.9±1.2, 13°.21N×89°.91W, h15^{km}±13^{km}, ML2.8*

*GCG **05** 03:21:53.8±0.6, 14°.11N×89°.38W, h45^{km}±61^{km}, MD3.6*

ISC 05 03:21:51.2±2.4**, 13°.2N**±0°.1×**89°.95W**±0°.06**, h15^{km}**±13^{km}**, n15, σ0^{s}.62**/24**, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAYA	Jayaque - finc	0.70	45	*e*P	Pb	03 22 05.6	+0.4
JAYA				*e*S	Sb	03 22 14.4	-0.2
JAYA				IAML		03 22 17.8	
	comp=Z,1μm,0.2s						
CEVE	Cerro Verde	0.74	26	*e*P	Pb	03 22 06.5	+0.6
CEVE				*e*S	Sb	03 22 16.6	+0.6
CEVE				IAML		03 22 18.9	
	comp=Z,1μm,0.4s						
SBLS	San Blas	0.75	25	*e*P	Pb	03 22 06.6	+0.5
SBLS				*e*S	Sb	03 22 16.7	+0.4
RTR	El Retiro	0.80	22	*e*P	Pb	03 22 07.4	+0.5
RTR				*e*S	Sb	03 22 17.6	+0.1
PMON	Piamonte	0.83	48	*e*P	Pg	03 22 07.7	+0.2
PMON				*e*S	Sb	03 22 19.1	+0.6
LFRS	El Faro	0.99	62	*e*P	Pb	03 22 09.6	-0.4
LFRS				*e*S	Sb	03 22 22.6	-0.2
TACO	Tacachico	1.00	36	*e*P	Pb	03 22 09.9	-0.3
LBRS	Las Brisas	1.06	57	*e*P	Pb	03 22 10.3	-1.0
LBRS				*e*S	Sg	03 22 25.0	-0.6
IXG	Ixpaco	1.12	335	*e*P	Pb	03 22 12.1	-0.2
IXG				*i* S	Sb	03 22 27.1	+0.4
PAVA	Las Pavas	1.14	60	*e*P	Pb	03 22 11.6	-0.9
PAVA				*e*S	Sg	03 22 27.5	-0.4
PAVA				IAML		03 22 32.1	
	comp=Z,134nm,0.4s						
MTO3	Montecristo	1.37	25	*e*P	Pn	03 22 15.7	-0.2
NBG	Las Nubes	1.48	345	*e*P	Pn	03 22 13.0	-4.4
FUG	Fuego 3	1.55	326	*e*P	Pn	03 22 18.6	+0.2
FUG				*e*S	Sn	03 22 37.2	-1.1
PACA	Pacayal	1.62	79	*e*P	Pn	03 22 20.4	+1.2
PACA				IAML		03 22 47.9	
	comp=Z,27nm,0.3s						
LCND	La Caada	2.02	85	*e*P	Pn	03 22 25.2	+0.6

WEL 05 03:35:32.9, 43°S±1°×**17°1E**±°**, h5^{km}**±1^{km}**, M2.9**/14**, mB5.0**/1**, ML2.9**/13**, MLv2.9**/14**, Mw(mB)4.4**/1**, Error ellipse: s-maj=0.0km s-min=0.0km az=145.3, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
INZ	Inchbonnie	0.35	20	P	Pb	03 35 41.0	-0.6
WVZ	Waitaha Valley	0.40	267	P	Pb	03 35 42.4	-0.1
MHCZ	Mount Hutt	0.52	156	P	Pb	03 35 45.3	+0.6
OXZ	Oxford	0.62	116	P	Pb	03 35 46.6	+0.4
RPZ	Rata Peaks	0.68	194	P	Pb	03 35 47.8	+0.5
GCSZ	Gaunt Creek Bo	0.75	249	P	Pb	03 35 48.6	+0.2
LTZ	Lake Taylor	0.78	70	P	Pb	03 35 49.6	+0.6
ARCZ	Arundel	0.90	185	P	Pn	03 35 51.8	-0.5
RACZ	Rakaia	0.92	137	P	Pn	03 35 52.6	+0.1
WACZ	Wakanui South	0.98	156	P	Pn	03 35 53.7	+0.4
FOZ	Fox Glacier	1.17	245	P	Pn	03 35 56.5	+0.6
MQZ	McQueen's Vall	1.20	124	P	Pn	03 35 56.6	+0.4
GVZ	Greta Valley S	1.29	87	P	Pb	03 35 59.2	+1.6
TMZ	Timaru	1.34	188	P	Pg	03 35 59.4	+0.7
DSZ	Denniston Nort	1.36	17	P	Pg	03 35 59.2	+0.2
OKCZ	Okains Bay	1.46	118	P	Pg	03 36 00.9	0.0
LBZ	Lake Benmore	1.55	210	P	Pg	03 36 02.6	0.0
THZ	Tophouse	1.76	44	P	Pb	03 36 05.7	0.0
KHZ	Kahutara	1.78	70	P	Pb	03 36 06.0	0.0
ODZ	Otahua Downs	2.04	193	P	Pn	03 36 08.7	+0.8
JCZ	Jackson Bay	2.08	240	P	Pb	03 36 10.5	-0.7
QRZ	Quartz Range	2.41	23	P	Pn	03 36 14.3	+1.3
WKZ	Wanaka	2.41	222	P	Pb	03 36 16.2	-0.6
EAZ	Earnscleugh	2.60	212	P	Pg	03 36 23.1	+0.3
KRVZ	Karewarewa	5.15	41	P	Pn	03 36 50.5	-0.2

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*IDC **05** 03:36:03.9±1.1, 40°.63N×51°.72E, h0^{km}, mb3.8/12, mb1 4.0/23, mb1mx3.8/55, mbtmp4.0/23, ML3.7/8, MS3.0/5, Ms1 3.0/5, ms1mx2.5/66, Error ellipse: s-maj=20.7km s-min=8.8km az=170.0*

*AZER **05** 03:36:08.3±0.1, 40°.42N×51°.84E, h52^{km}±10^{km}, ml3.9/33, Error ellipse: s-maj=2.9km s-min=1.8km az=235.0*

*MOS **05** 03:36:08.6±1.1, 40°.93N×51°.70E, h41^{km}, mb4.4/7, Error ellipse: s-maj=7.4km s-min=6.1km az=110.2*

*NNC **05** 03:36:17.2±4.6, 41°.09N×52°.80E, h36^{km}±37^{km}, mb3.7, Error ellipse: s-maj=37.2km s-min=14.0km az=72.0*

ISC 05 03:36:07.1±0.7**, 40°.60N**±0°.04×**51°.99E**±0°.04**, h35^{km}**±7^{km}**, n114, σ2^{s}.37**/163**, mb3.9**/21**, 19C-15D, Caspian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GALA	Gala	1.41	263	P	Pn	03 36 31.7	+1.3
GALA				S	Sn	03 36 47.0	-0.8
NDR	Nardaran	1.53	270	Pn	Pn	03 36 33.8	+1.9
NDR				Sn	Sn	03 36 51.6	+1.0
GOBA	Gobu	1.73	264	Pg	Pn	03 36 37.6	+2.8
GOBA				Sg	Sn	03 37 02.7	+7.1
ATGJ	Altiaghaj	2.33	277	Pn	Pn	03 36 45.2	+2.1
	SNR=2.8						
ATGJ				Sn	Sn	03 37 14.3	+3.6
ALIB	Äli-Bayra	2.37	255	Pn	Pn	03 36 46.3	+2.7
ALIB				Sn	Sn	03 37 12.2	+0.8
SIZA	Siyzn	2.39	282	Pn	Pn	03 36 46.7	+2.8
	SNR=4.9						
SIZA				Sn	Sn	03 37 15.8	+3.7
PQL	Pirkuli	2.59	275	Pn	Pn	03 36 48.4	+1.7
	SNR=3.1						
PQL				Sn	Sn	03 37 19.6	+2.6

QUBA	Quba, Azerbaij	2.75	287	Pn	Pn	03 36 51.4	+2.5
	SNR=5.5						
QUBA				Sn	Sn	03 37 23.4	+2.5
IML	Ismayilli	2.90	275	Pn	Pn	03 36 52.2	+1.3
	SNR=5.3						
IML				Sn	Sn	03 37 25.9	+1.3
KDMR	Kurdemir	2.91	267	Pn	Pn	03 36 51.9	+1.0
KDMR				Sn	Sn	03 37 25.7	+1.0
QSAR	Qusar	2.96	289	Pn	Pn	03 36 54.2	+2.5
	SNR=50						
QSAR				Sn	Sn	03 37 27.6	+1.5
XNQ	Khinaliq	2.98	282	Pn	Pn	03 36 53.7	+1.6
	SNR=54						
XNQ				Sn	Sn	03 37 28.1	+1.5
GLBA	Clilabad	3.08	245	Pn	Pn	03 36 54.0	+0.7
	SNR=32						
GLBA				Sn	Sn	03 37 27.9	-1.0
LKRN	Lenkeran, Azer	3.12	234	P	Pn	03 36 54.4	+0.6
LKRN	Lenkeran, Azer	3.12	234	Pn	Pn	03 36 53.8	0.0
	SNR=5.4						
LKRN				Sn	Sn	03 37 27.5	-2.3
QBL	Gabala	3.17	278	Pn	Pn	03 36 55.5	+0.9
	SNR=12						
QBL				Sn	Sn	03 37 31.7	+0.4
ASTR	Astara	3.21	232	Pn	Pn	03 36 54.8	-0.2
	SNR=9.2						
ASTR				Sn	Sn	03 37 28.9	-3.1
ZRD	Zardab	3.30	266	Pn	Pn	03 36 57.7	+1.4
	SNR=5.8						
ZRD				Sn	Sn	03 37 35.3	+0.9
YRD	Yardimli	3.35	241	Pn	Pn	03 36 56.7	-0.4
	SNR=29						
YRD				Sn	Sn	03 37 32.5	-3.2
LRK	Lerik	3.43	236	Pn	Pn	03 36 58.0	-0.3
	SNR=30						
LRK				Sn	Sn	03 37 34.8	-3.1
BLQ	Beylaqan	3.51	257	Pn	Pn	03 36 59.4	+0.2
BLQ				Sn	Sn	03 37 38.1	-1.4
SEKA	Sheki	3.68	281	Pn	Pn	03 37 03.1	+1.4
	SNR=11						
SEKA				Sn	Sn	03 37 42.4	-1.5
BRDA	Brd	3.69	266	Pn	Pn	03 37 01.5	-0.1
BRDA				Sn	Sn	03 37 43.8	0.0
MNGR	Mingechevir, A	3.73	274	P	Pn	03 37 03.6	+1.4
MNGR	Mingechevir, A	3.73	274	Pn	Pn	03 37 03.7	+1.4
MNGR				Sn	Sn	03 37 45.1	+0.1
QRD	Qoradiz	3.76	254	Pn	Pn	03 37 03.2	+0.5
QRD				Sn	Sn	03 37 43.2	-2.6
AGDM	Agdam	3.76	264	Pn	Pn	03 37 02.8	+0.1
	SNR=7.3						
AGDM				Sn	Sn	03 37 44.3	-1.5
MAK	Makhachkala	4.10	307	*c i*P	Pn	03 37 09.9	+2.6
MAK				*e*S	Sn	03 37 56.1	+2.1
MAK				pmax	pmax		
	comp=Z,17nm,0.3s						
MAK				MLR	MLR		
	comp=Z,76nm,3.0s						
ZKTA	Zakatala	4.19	286	P	Pn	03 37 09.9	+1.4
ZKTA	Zakatala	4.19	286	Pn	Pn	03 37 10.0	+1.4
	SNR=3.5						
ZKTA				Sn	Sn	03 37 57.5	+1.3
GANJ	Ganja	4.32	272	P	Pn	03 37 09.9	-0.4
GANJ	Ganja	4.32	272	Pn	Pn	03 37 09.9	-0.4
	SNR=3.3						
GANJ				Sn	Sn	03 37 56.8	-2.6
GDB	GEDABAY	4.75	273	Pn	Pn	03 37 15.9	-0.4
	SNR=30						
GDB				Sn	Sn	03 38 07.4	-2.8
ORD	Ordubad	4.92	252	Pn	Pn	03 37 19.1	+0.5
	SNR=14						
ORD				Sn	Sn	03 38 12.0	-2.3
QZX	Qazax, Azerbai	5.04	277	Pn	Pn	03 37 20.2	0.0
	SNR=14						
QZX				Sn	Sn	03 38 15.8	-1.5
SBZ	Shahbuz	5.09	258	Pn	Pn	03 37 22.7	+1.7
SBZ				Sn	Sn	03 38 18.4	-0.2
NAX	Nakhchivan	5.20	256	P	Pn	03 37 23.2	+0.8
NAX	Nakhchivan	5.20	256	Pn	Pn	03 37 23.3	+0.8
	SNR=3.5						
NAX				Sn	Sn	03 38 20.6	-0.6
GROC	Groznyy	5.30	301	P	Pn	03 37 23.4	-0.4
GROC				*e*		03 38 26.1	
GROC				pmax	pmax		
	comp=Z,12nm,0.2s						
GROC				smax	smax		
	comp=N,41nm,0.4s						
GROC				smax	smax		
	comp=N,40nm,0.4s						
GEYT	Alibeck	5.45	117	Pn	Pn	03 37 29.4	+3.5
	comp=N,1.3nm,0.3s,baz=316,slow=10,SNR=7.1						
GEYT				Sn	Sn	03 38 29.6	+2.2
	comp=N,2.0nm,0.3s,baz=297,slow=16,SNR=1.6						
GYA0B	ALIBECK ARRAY	5.45	117	⇑Pn	Pn	03 37 32.6	+6.6
GYA0B				⇓Sn	Sn	03 38 31.1	+3.7
HYR	Heyderabad	5.54	263	Pn	Pn	03 37 27.8	+0.6
HYR				Sn	Sn	03 38 29.1	-0.6
GNI	Garni	5.56	268	Pn	Pn	03 37 28.8	+1.4
	comp=N,1.3nm,0.3s,baz=100,slow=11,SNR=5.3						
GNI				Sn	Sn	03 38 29.5	-0.6
	comp=N,1.0nm,0.3s,baz=188,slow=5.2,SNR=3.5						
KBZ	Khabaz	7.44	298	Pn	Pn	03 37 53.0	-0.2
	comp=N,0.4nm,0.3s,baz=104,slow=6.3,SNR=26						
KBZ				Sn	Sn	03 39 09.5	-6.8
	comp=N,1.7nm,0.3s,baz=128,slow=19,SNR=4.9						
KVAR	Kislovodsk Arr	7.66	299	Pn	Pn	03 37 56.6	+0.3
	baz=138,slow=19,SNR=2.1						
KVAR				Sn	Sn	03 39 16.1	-5.8
	baz=75,slow=18,SNR=5.0						
KIV	Kislovodsk	7.67	299	*e*P	Pn	03 37 56.2	-0.2
KIV				*e*S	Sn	03 39 18.1	-3.9
KIV				pmax	pmax		
	comp=Z,17nm,0.9s						
AB31	Akbulak array	10.32	30	Pn	Pn	03 38 32.1	-0.4
	comp=Z,0.6nm,0.3s,baz=210,slow=14,SNR=48						
AB31				⇑Sn	Sn	03 40 20.2	-6.7
	comp=Z,6.9nm,0.3s,baz=208,slow=22,SNR=4.2						
AKTO	Aktyubinsk	10.70	21	Pn	Pn	03 38 37.5	-0.2
	comp=Z,1.6nm,0.3s,baz=203,slow=14,SNR=22						
AKTO				Sn	Sn	03 40 29.6	-6.6
	comp=Z,4.0nm,0.3s,baz=231,slow=22,SNR=18						
AKTO				LR	LR	03 43 54.4	
	comp=Z,54nm,19.0s,baz=210,slow=44						
AKTO	Aktyubinsk	10.70	21	⇑Pn	Pn	03 38 36.8	-1.0
	comp=Z,3.3nm,0.7s						
AKTO				⇓Sn	Sn	03 40 30.4	-5.8
	comp=Z,40nm,0.8s						
BELG	Belogornoye	12.17	347	Pn	Pn	03 38 57.4	-0.4
	comp=Z,2.6nm,0.3s,baz=343,slow=16,SNR=17						
BELG				Sn	Sn	03 40 58.9	-13
	comp=Z,1.6nm,0.3s,baz=189,slow=15,SNR=2.6						
BELG				LR	LR	03 45 10.9	
	comp=Z,60nm,18.9s,baz=94,slow=45						
BELG	Belogornoye	12.17	347	⇑*e*P	Pn	03 38 57.0	-0.8
BELG				pmax	pmax		
	comp=Z,3.0nm,1.0s						
VRH	Novokhopyorsk	12.77	330	*e*P	Pn	03 39 04.1	-2.0
VRH				*e*S	Sn	03 41 16.6	-10
VRH				pmax	pmax		
	comp=Z,9.0nm,0.7s						
VRH				smax	smax		
	comp=N,80nm,1.6s						
VSR	Storozhevoye	13.85	324	*e*P	Pn	03 39 17.2	-3.5
VSR				*e*S	Sn	03 41 42.9	-10
VSR				pmax	pmax		
	comp=Z,6.0nm,0.6s						
VSR				smax	smax		
	comp=N,20nm,0.9s						
KK31	Karatay Array	14.03	74	P	Pn	03 39 23.4	+0.1
	comp=N,0.7nm,0.4s,baz=270,slow=15,SNR=10						
KK31				⇑S	Sn	03 41 53.1	-4.6
	comp=N,1.4nm,0.5s,baz=270,slow=24,SNR=5.0						
BRTR	Keskin Array B	14.07	272	Pn	P	03 39 30.9	-0.4
	comp=N,0.1nm,0.3s,baz=72,slow=9.7,SNR=5.1						
LPSR	Galich'ya Gora	14.96	328	*e*P	Pn	03 39 32.4	-3.4
LPSR				*e*S	Sn	03 42 11.0	-9.1
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
LPSR				smax	smax		
	comp=N,40nm,1.7s						
ARU	Arti	16.41	13	Pn	Pn	03 39 51.2	-3.3
	comp=N,0.0nm,0.3s,baz=116,slow=2.4,SNR=11						
ARU				Sn	Sn	03 42 40.7	-15
	comp=N,0.0nm,0.3s,baz=115,slow=22,SNR=9.8						
ARU				LR	LR	03 47 56.5	
	comp=N,36nm,19.5s,baz=204,slow=43						
ARU	Arti	16.41	13	P	Pn	03 39 53.5	-1.0
ARU				S	Sn	03 42 50.9	-4.5
AAK	Ala-Archa	16.94	76	Pn	Pn	03 40 02.3	+0.7
	comp=N,0.4nm,0.3s,baz=272,slow=6.0,SNR=5.0						
AAK	Ala-Archa	16.94	76	⇓*e*P	P	03 40 06.3	+3.1
AAK				pmax	pmax		
	comp=Z,20nm,1.8s						
BRVK	Borovoye	17.59	39	⇓P	Pn	03 40 09.0	-0.3
	comp=Z,3.0nm,0.6s						
BRVK				⇓S	Sn	03 43 15.3	-8.8
	comp=Z,2.9nm,0.6s						
BRVK	Borovoye	17.59	39	*ce*P	Pn	03 40 09.4	+0.1
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BVAR	Borovoye Array	17.62	39	Pn	Pn	03 40 09.8	0.0
	comp=Z,1.0nm,0.3s,baz=206,slow=12,SNR=19						
BVAR				Sn	Sn	03 43 08.7	-16
	comp=Z,0.2nm,0.3s,baz=253,slow=20,SNR=4.0						
KIRV	Kirov	18.07	356	P	Pn	03 40 15.2	0.0
	comp=Z,2.8nm,0.3s,baz=167,slow=5.0,SNR=5.7						
KIRV				LR	LR	03 48 12.9	
	comp=Z,46nm,21.1s,baz=146,slow=40						
KIRV	Kirov	18.07	356	⇓*e*P	Pn	03 40 12.8	-2.4
AKASG	Malin Array Be	18.78	310	P	P	03 40 21.6	-1.6
	comp=Z,5.4nm,0.3s,baz=152,slow=6.4,SNR=18						
AKASG	Malin Array Be	18.78	310	*ce*P	P	03 40 22.5	-0.6
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.3s						
AKBB	Malin Array Si	18.78	310	⇓*i*P	P	03 40 21.8	-1.3
AKBB				pmax	pmax		
	comp=Z,6.0nm,0.5s						
VOIR		20.24	293	⇑P	P	03 40 39.5	+0.2
VOIR		20.24	293	⇑P	P	03 40 39.5	+0.2
BURAR	Bucovina Array	20.40	299	⇓P	P	03 40 39.9	-1.1
BURAR	Bucovina Array	20.40	299	⇓P	P	03 40 39.9	-1.1
ARR	Arges	20.53	292	⇑P	P	03 40 41.8	-0.6
KURBB	Kurchatov Arra	20.99	53	P	P	03 40 48.6	+1.4
	comp=Z,3.4nm,0.6s,baz=254,slow=11,SNR=10						
KURBB	Kurchatov Arra	20.99	53	⇑P	P	03 40 49.4	+2.2
	comp=Z,5.0nm,0.9s						
KURK	Kurchatov	21.07	52	⇑P	P	03 40 50.0	+1.9
	comp=Z,6.3nm,0.7s						
KURK	Kurchatov	21.07	52	*de*P	P	03 40 50.4	+2.3
KURK				pmax	pmax		
	comp=Z,7.0nm,0.7s						
MNK	Minsk	21.26	319	*i* P	P	03 40 47.2	-2.9
	comp=E,4.0nm,0.9s						
MNK				*i* P	P	03 40 47.2	-2.9
	comp=N,12nm,0.9s						
MNK				*i* P	P	03 40 47.2	-2.9
	comp=Z,16nm,0.9s						
MNK				*i* PP	sP	03 41 05.6	+1.9
MNK				*i* S	S	03 44 37.6	-6.7
MNK				*i* SS	Sn	03 44 59.3	+6.9
MNK				*i* SSS	SSS	03 45 13.2	
MNK				*i* LQ	LQ	03 46 54.6	
MNK				*i* LR	LR	03 48 05.5	
MNK				*i* LRM	MLR	03 50 02.3	
	comp=E,5.0nm,18.1s						
MNK				*i* LRM	MLR	03 50 02.3	
	comp=N,175nm,23.1s						
MNK				*i* LRM	MLR	03 50 02.3	
	comp=Z,51nm,18.8s						
MNK				*i* ScS	ScS	03 52 02.1	-9.3
KLMR	Klimovskoe	21.68	343	*e*P	P	03 40 55.6	+1.0
KLMR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KLMR	Klimovskoe	21.68	343	*e*P	P	03 40 55.7	+1.1
KLMR				AMP		03 41 10.3	
	comp=Z,8.0nm,0.8s						
DRGR		21.98	296	⇓P	P	03 40 56.0	-1.9
DRGR		21.98	296	⇓P	P	03 40 56.0	-1.9
IDI	Anoyia	21.98	265	P	P	03 40 57.8	-0.3
	comp=Z,2.9nm,0.3s,baz=2.1,slow=10,SNR=2.0						
NACGM	Naroch	22.01	319	*i* P	P	03 40 55.6	-2.6
NACGM				*i* P	P	03 40 55.6	-2.6
NACGM				*i* P	P	03 40 55.6	-2.6
NACGM				*i* PP	PnPn	03 41 21.6	+1.1
NACGM				*i* S	S	03 45 03.7	+4.8
NACGM				*i* SS	SnSn	03 45 46.6	+21
NACGM				*i* SSS	SSS	03 46 03.4	
NACGM				*i* LQ	LQ	03 48 19.0	
NACGM				*i* LR	LR	03 49 00.1	
MAKZ	Makanchi	22.46	64	⇑P	P	03 41 06.0	+3.0
	comp=Z,2.5nm,1.0s						
MK31	Makanchi Array	22.67	64	⇑P	P	03 41 07.7	+2.4
	comp=Z,1.9nm,0.7s,baz=213,slow=6.2,SNR=12						
MK31	Makanchi Array	22.67	64	⇑*e*P	P	03 41 08.8	+3.4
MKAR	Makanchi Array	22.67	64	P	P	03 41 07.9	+2.6
	comp=Z,1.4nm,0.8s,baz=257,slow=9.9,SNR=14						
MKAR	Makanchi Array	22.67	64	*ce*P	P	03 41 08.0	+2.6
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
PABE	Paberze	23.72	318	*e*P	P	03 41 16.1	+0.4
VSU	Vasula	24.01	327	*e*P	P	03 41 17.9	-0.4
VSU	Vasula	24.01	327	⇓*e*P	P	03 41 18.8	+0.5
VSU				pmax	pmax		
	comp=Z,69nm,2.2s						
PBUR	Paburge	24.98	318	*e*P	P	03 41 26.9	-0.3
MTSE	Matsula	25.41	325	*e*P	P	03 41 32.0	+1.0
SLIT	Slitere, Latvi	25.54	322	*e*P	P	03 41 32.1	-0.2
ZAA0	Zalesovo Array	25.70	48	⇓P	P	03 41 35.0	+1.2
	comp=Z,0.9nm,1.1s						
ZALV	Zalesovo Beam	25.70	48	P	P	03 41 35.7	+2.0
	comp=Z,1.7nm,0.4s,baz=265,slow=10,SNR=8.3						
FINES	FINESS Array B	26.15	332	P	P	03 41 37.4	-0.3
	comp=Z,2.1nm,0.3s,baz=136,slow=9.4,SNR=35						
FINES	FINESS Array B	26.15	332	*i* P	P	03 41 37.2	-0.6
FINES				pmax	pmax		
	comp=Z,2.0nm,0.3s						
AAL	Aland	27.84	325	*e*P	P	03 41 51.8	-1.2
GERES	GERESS Array B	28.18	300	P	P	03 41 56.0	-0.3
	comp=Z,0.2nm,0.4s,baz=90,slow=12,SNR=2.2						
GERES	GERESS Array B	28.18	300	P	P	03 41 56.0	-0.3
HFS	Hagfors	30.65	323	P	P	03 42 17.3	-0.5
	comp=Z,0.7nm,0.3s,baz=102,slow=9.7,SNR=18						
NOA	NORSAR Array B	32.12	323	P	P	03 42 30.0	-0.9
	comp=Z,1.2nm,1.0s,baz=124,slow=6.1,SNR=4.9						
NOA	NORSAR Array B	32.12	323	P	P	03 42 30.0	-0.9
ARCES	ARCESS Array B	32.16	343	P	P	03 42 31.8	+0.7
	comp=Z,2.8nm,0.9s,baz=148,slow=7.1,SNR=5.6						
NRIK	Noril'sk	34.32	21	⇑*e*P	P	03 42 52.2	+2.3
NRIK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
TLY	Talaya	36.73	55	LR	LR	03 58 04.3	
	comp=Z,37nm,18.6s,baz=355,slow=36						
ULN	Ulaanbaatar	39.38	60	⇓*e*P	P	03 43 35.8	+2.4
ULN				pmax	pmax		
	comp=Z,5.0nm,2.5s						
SEY	Seymchan	59.09	32	P	P	03 46 05.8	+2.3
	comp=Z,0.3nm,0.3s,baz=87,slow=23,SNR=4.1						
MJAR	Matsushiro Arr	64.86	63	P	P	03 46 47.4	+4.6
	comp=Z,0.7nm,0.5s,baz=289,slow=7.3,SNR=2.2						
COCO	West Island	66.93	131	*ce*P	P	03 47 05.1	+9.0
ILAR	Eielson Array	73.92	8	P	P	03 47 39.5	+1.3
	comp=Z,0.1nm,0.6s,baz=331,slow=5.2,SNR=5.1						
YKA	Yellowknife Ar	76.69	354	P	P	03 47 53.2	-0.9
	comp=Z,0.2nm,0.8s,baz=31,slow=6.9,SNR=3.0						

NEIC ***05*** *03:41:11.9±0.8, 27°.9N±0°.1×139°.5E±0°.1, h505^{km}±8^{km}, mb4.1/20, Error ellipse: s-maj=18.9km s-min=17.7km az=98.0*

IDC ***05*** *03:41:11.7±0.6, 27°.88N×139°.56E, h498^{km}±6^{km}, mb3.4/28, mb1 3.5/34, mb1mx3.4/59, mbtmp4.3/34, Error ellipse: s-maj=11.8km s-min=9.2km az=63.0*

JMA ***05*** *03:41:13.2±0.2, 28°.21N×140°.26E, h515^{km}, M3.8*

ISC 05 03:41:12.0±0.6**, 27°.96N**±0°.07×**139°.62E**±0°.08**, h503**^{km}±6^{km}**, n91, σ1^{s}29**/109**, mb3.9**/42**, 1D, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	Chichi jima	2.43	110	P	P	03 42 20.1	+0.5
CBIJ				*e*S	S	03 43 12.7	-1.9
JCJ	Chichijima	2.43	110	P	P	03 42 19.9	+0.3
	40nm,0.3s,baz=264,slow=23,SNR=25						
JCJ				S	S	03 43 12.9	-1.7
	44nm,0.3s,baz=284,slow=23,SNR=9.0						
JCJ	Chichijima	2.43	110	P	P	03 42 20.3	+0.7
JCJ				S	S	03 43 15.2	+0.6
JHH2	Haha-jima-NKT2	2.63	120	P	P	03 42 22.1	+1.3
JHH2				*e*S	S	03 43 16.3	-0.4
JHJ	Hachijo jima 2	5.14	1	P	P	03 42 42.2	+2.0
	6.1nm,0.3s,baz=71,slow=14,SNR=2.7						
JHJ				S	S	03 43 53.9	+1.4
	9.4nm,0.3s,baz=72,slow=21,SNR=1.3						
JIE	Ise	6.88	339	P	P	03 43 00.5	+3.6
JNY	Yasuok	7.53	349	P	P	03 43 05.2	+1.7
JTO	Tosashimizu	7.65	311	P	P	03 43 07.5	+2.8
JEG	Eigenji	7.66	340	P	P	03 43 08.1	+3.2
INU	Inuyama	7.69	344		P	03 43 07.2	+2.1
JHU	Hanno	7.87	358	*e*S	S	03 44 38.0	-3.4
JRY	Ryogami san	8.05	356	P	P	03 43 09.8	+0.9
JRY				*e*S	S	03 44 43.0	-1.9
JWT	Wachi	8.14	335	P	P	03 43 11.5	+1.8
JAD	Aida	8.37	328	P	P	03 43 14.8	+2.7
JAG	Ashikaga	8.44	359	P	P	03 43 12.7	-0.1
JAG				*e*S	S	03 44 46.7	-5.4
MJAR	Matsushiro Arr	8.64	352	P	P	03 43 15.3	+0.4
	0.2nm,0.3s,baz=185,slow=9.4,SNR=14						
MAJO	Matsushiro	8.64	352	P	P	03 43 16.0	+1.1
MAT	Matsushiro	8.64	352	P	P	03 43 15.4	+0.5
MAT				*e*S	S	03 44 52.0	-4.0
JNU	Nakatsue	9.12	306	P	P	03 43 21.1	+1.0
	0.9nm,0.3s,baz=76,slow=4.6,SNR=6.9						
JNU	Nakatsue	9.12	306	P	P	03 43 20.0	-0.1
JMM	Marumori	9.93	5	P	P	03 43 27.9	-0.5
KSRS	Korea Array	13.65	317	P	P	03 44 06.5	-1.2
	0.6nm,0.3s,baz=134,slow=12,SNR=8.7						
USRK	Ussuriysk Ar.	17.32	341	P	P	03 44 46.4	+0.7
	baz=176,slow=9.7,SNR=26						
USRK	Ussuriysk Ar.	17.32	341	P	P	03 44 46.1	+0.3
KLR	Kul'dur	22.09	346	P	P	03 45 29.9	+0.8
	1.2nm,0.4s,baz=147,slow=6.5,SNR=9.9						
KLR	Kul'dur	22.09	346	⇓*i*P	P	03 45 30.1	+1.0
KLR	Kul'dur	22.09	346	pmax	pmax		
	comp=Z,14nm,2.8s						
ULN	Ulaanbaatar	32.14	317	P	P	03 46 57.4	-0.1
ULN				IAmb	IAmb	03 46 59.0	
	comp=Z,5.3nm,0.8s						
SONM	Songino Array	32.52	317	P	P	03 47 01.1	+0.3
	comp=Z,2.0nm,0.6s,baz=131,slow=9.5,SNR=19						
SONM				ScP	ScP	03 52 27.8	-0.9
	comp=Z,0.6nm,0.7s,baz=152,slow=3.4,SNR=5.9						
SONM	Songino Array	32.52	317	P	P	03 47 00.7	0.0
SONM				ScP	ScP	03 52 27.5	-1.1
TLY	Talaya	35.84	321	P	P	03 47 29.2	+0.8
	comp=Z,2.4nm,0.6s,baz=113,slow=9.4,SNR=2.8						
SEY	Seymchan	35.96	10	P	P	03 47 31.1	+1.9
	comp=Z,0.5nm,0.2s,baz=111,slow=4.5,SNR=1.5						
CMAR	Chiang Mai Arr	38.42	265	P	P	03 47 48.4	-1.7
	comp=Z,1.0nm,0.4s,baz=76,slow=5.7,SNR=4.5						
TAPN	Taplejung	45.69	282	*e*P	P	03 48 48.1	+0.3
GUN	Gumba	47.15	283	*e*P	P	03 48 59.7	+0.8
	comp=Z,20nm,0.5s						
ZAA0	Zalesovo Array	47.34	319	P	P	03 48 59.7	+0.2
ZAA0				IAmb	IAmb	03 49 00.2	
	comp=Z,3.5nm,0.8s						
ZALV	Zalesovo Beam	47.34	319	P	P	03 48 59.6	0.0
	comp=Z,4.0nm,0.7s,baz=102,slow=7.3,SNR=14						
ZALV				PcP	PcP	03 50 19.6	-0.9
	comp=Z,0.7nm,0.5s,baz=129,slow=4.6,SNR=2.5						
ZALV				ScP	ScP	03 53 24.8	-1.5
	comp=Z,0.6nm,0.5s,baz=106,slow=4.7,SNR=2.2						
ZALV	Zalesovo Beam	47.34	319	P	P	03 48 59.5	0.0
ZALV					PcP	03 50 20.2	-0.3
PKI	Pulchoki	47.63	283	*e*P	P	03 49 02.7	+0.2
	comp=Z,7.3nm,0.6s						
PKIN	Phulchoki	47.64	283	*e*P	P	03 49 02.3	-0.2
	comp=Z,5.5nm,0.5s						
KKN	Kakani	47.69	283	*e*P	P	03 49 03.4	+0.6
DMN	Daman	47.88	283	*e*P	P	03 49 04.8	+0.5
	comp=Z,11nm,0.5s						
WRA	Warramunga Arr	47.90	187	P	P	03 49 04.1	0.0
	comp=Z,0.4nm,0.5s,baz=2.6,slow=7.9,SNR=9.3						
WRA				PcP	PcP	03 50 24.0	+1.0
	comp=Z,0.4nm,0.8s,baz=0.1,slow=3.4,SNR=2.2						
WRA				ScP	ScP	03 53 28.0	-1.1
	comp=Z,0.7nm,0.9s,baz=4.3,slow=5.0,SNR=5.3						
MK31	Makanchi Array	48.17	309	P	P	03 49 06.0	+0.2
MK31				IAmb	IAmb	03 49 07.2	
	comp=Z,5.4nm,1.1s						
MKAR	Makanchi Array	48.17	309	P	P	03 49 06.3	+0.4
	comp=Z,4.8nm,0.8s,baz=87,slow=10.0,SNR=39						
MKAR				PcP	PcP	03 50 23.9	+0.2
	comp=Z,0.7nm,0.8s,baz=82,slow=4.4,SNR=3.0						
MKAR				ScP	ScP	03 53 27.9	-2.2
	comp=Z,0.3nm,0.6s,baz=84,slow=5.9,SNR=4.3						
MKAR	Makanchi Array	48.17	309	P	P	03 49 06.0	+0.1
MKAR					ScP	03 53 29.3	-0.8
GKN	Gorkha	48.19	284	*e*P	P	03 49 07.8	+1.3
MAKZ	Makanchi	48.38	309	P	P	03 49 07.3	-0.2
MAKZ				IAmb	IAmb	03 49 09.5	
	comp=Z,4.6nm,1.0s						
DANN	Dangsing	48.86	284	*e*P	P	03 49 12.6	+0.9
	comp=Z,32nm,0.8s						
KURK	Kurchatov	50.76	314	P	P	03 49 25.0	+0.1
KURBB	Kurchatov Arra	50.81	314	P	P	03 49 25.4	+0.2
	comp=Z,13nm,0.6s,baz=91,slow=8.1,SNR=102						
KURBB				PcP	PcP	03 50 33.0	-0.4
	comp=Z,0.5nm,0.6s,baz=104,slow=3.8,SNR=1.4						
NRIK	Noril'sk	51.02	339	P	P	03 49 27.1	+0.5
	comp=Z,5.9nm,0.6s,baz=127,slow=8.7,SNR=7.2						
NRIK	Noril'sk	51.02	339	P	P	03 49 27.0	+0.5
NRIK				IAmb	IAmb	03 49 27.8	
	comp=Z,6.7nm,0.8s						
ASAR	Alice Springs	51.62	187	P	P	03 49 31.2	-0.3
	comp=Z,0.4nm,0.6s,baz=15,slow=12,SNR=4.2						
ASAR	Alice Springs	51.62	187	P	P	03 49 30.5	-1.0
AAK	Ala-Archa	53.89	304	P	P	03 49 48.2	+0.4
	comp=Z,2.6nm,0.5s,baz=126,slow=4.7,SNR=9.4						
AAK	Ala-Archa	53.89	304	P	P	03 49 47.5	-0.3
KDAK	Kodiak Island	55.04	37	P	P	03 49 56.4	+1.0
	comp=Z,12nm,1.0s,baz=341,slow=4.1,SNR=6.5						
KDAK	Kodiak Island	55.04	37	P	P	03 49 56.1	+0.7
KDAK				IAmb	IAmb	03 49 59.9	
	comp=Z,12nm,1.1s						
BVAR	Borovoye Array	55.86	317	P	P	03 50 01.3	0.0
	comp=Z,6.4nm,0.5s,baz=49,slow=16,SNR=66						
BRVK	Borovoye	55.93	317	P	P	03 50 02.0	+0.4
BRVK				IAmb	IAmb	03 50 03.0	
	comp=Z,11nm,0.8s						
NIL	Nilore	56.43	293	P	P	03 50 05.0	-0.6
NIL				IAmb	IAmb	03 50 08.0	
	comp=Z,6.6nm,0.7s						
KK31	Karatay Array	56.73	305	P	P	03 50 07.2	-0.2
KK31				IAmb	IAmb	03 50 08.9	
	comp=Z,9.9nm,0.8s						
KKAR	Karatay Array	56.73	305	P	P	03 50 07.5	0.0
KKAR	Karatay Array	56.73	305	P	P	03 50 07.4	0.0
RND	Reindeer	57.13	31	P	P	03 50 10.6	+0.7
RND				IAmb	IAmb	03 50 11.7	
	comp=Z,5.1nm,0.8s						
IL31		58.05	29	P	P	03 50 17.0	+1.0
ILAR	Eielson Array	58.05	29	P	P	03 50 16.6	+0.6
	comp=Z,0.7nm,0.5s,baz=247,slow=5.7,SNR=22						
ILAR	Eielson Array	58.05	29	P	P	03 50 16.8	+0.7
STKA	Stephens Creek	59.54	178	P	P	03 50 26.9	+0.4
	comp=Z,1.1nm,0.9s,baz=292,slow=19,SNR=2.8						
BCAR	Beaver Creek A	60.34	31	P	P	03 50 32.3	+0.8
ABKAR	Akbulak array	62.86	314	P	P	03 50 48.3	+0.1
ABKAR	Akbulak array	62.86	314	P	P	03 50 48.0	-0.1
INK	Inuvik	63.19	25	P	P	03 50 50.5	+0.6
	comp=Z,1.0nm,0.7s,baz=260,slow=12,SNR=3.7						
INK	Inuvik	63.19	25	P	P	03 50 50.0	+0.2
KIRV	Kirov	66.69	325	P	P	03 51 12.3	+0.2
	comp=Z,7.1nm,0.5s,baz=3.5,slow=1.2,SNR=2.8						
ARCES	ARCESS Array B	71.97	340	P	P	03 51 44.1	+0.4
	comp=Z,3.8nm,0.8s,baz=64,slow=8.2,SNR=13						
YKA	Yellowknife Ar	72.45	28	P	P	03 51 47.4	+0.8
	comp=Z,0.9nm,0.6s,baz=299,slow=5.3,SNR=22						
KBZ	Khabaz	75.75	312	P	P	03 52 06.0	+0.4
	comp=Z,2.9nm,0.8s,baz=130,slow=5.7,SNR=6.5						
FINES	FINESS Array B	76.16	333	P	P	03 52 07.6	0.0
	comp=Z,4.1nm,0.4s,baz=70,slow=5.3,SNR=58						
FINES	FINESS Array B	76.16	333	P	P	03 52 07.8	+0.3
AKASG	Malin Array Be	80.57	323	P	P	03 52 30.0	-1.4
	comp=Z,1.4nm,0.7s,baz=46,slow=6.0,SNR=5.6						
HFS	Hagfors	81.72	336	P	P	03 52 36.5	-0.7
	comp=Z,1.3nm,0.5s,baz=63,slow=4.4,SNR=9.5						
NVAR	Mina Array Bea	81.75	51	P	P	03 52 39.1	+0.9
	comp=Z,0.8nm,0.6s,baz=301,slow=5.6,SNR=9.2						
NVAR	Mina Array Bea	81.75	51	P	P	03 52 37.7	-0.5
NB2	NORSAR Subarra	81.95	337	P	P	03 52 37.8	-0.7
	comp=Z,1.3nm,0.6s,baz=48,slow=4.8						
NOA	NORSAR Array B	81.95	337	P	P	03 52 38.0	-0.5
	comp=Z,1.7nm,0.6s,baz=47,slow=4.9,SNR=9.0						
RAYN	Ar Rayn	82.72	293	P	P	03 52 42.0	-1.1
H17A	Grant Village	83.66	43	P	P	03 52 47.2	-0.5

H17A				IAmb	IAmb	03 52 53.4	
	comp=Z,3.4nm,0.7s						
BRTR	Keskin Array B	83.74	312	P	P	03 52 47.6	-0.4
	comp=Z,0.7nm,0.7s,baz=92,slow=3.7,SNR=5.5						
TXAR	Lajitas Array	96.88	52	P	P	03 53 51.3	+2.0
	comp=Z,0.2nm,0.7s,baz=325,slow=2.5,SNR=2.7						

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*ISN **05** 04:00:44.4±1.2, 32°.77N×47°.56E, h15^{km}±6^{km}, ML3.0*
*TEH **05** 04:00:44.1, 32°.78N×47°.53E, h8^{km}, ML3.3*
*THR **05** 04:00:45.2±0.5, 32°.84N×47°.48E, h14^{km}±6^{km}, ML3.2*
ISC 05 04:00:44.8±1.2**, 32°.79N**±0°.03×**47°.47E**±0°.03**, h7**^{km}±11^{km}**, n35, σ0^{s}.90**/41**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DHL1	Dehloran	0.19	236	*e*Pg	Pg	04 00 49.0	+0.3
IKFM	Kafar-mosalman	0.80	23	*e*Pg	Pg	04 00 59.3	-0.9
IKFM				*e*Sg	Sg	04 01 11.6	+1.0
IKMR	Kamar-syah	1.06	46	*e*		04 01 25.2	
	comp=Z,99nm,0.4s						
IKMR				*e*Pg	Pg	04 01 03.6	-1.5
IDOB	Doab	1.16	31	*e*Pg	Pg	04 01 06.2	-0.9
SHGR	Shooshtar-Gavs	1.31	121	*e*Pg	Pn	04 01 09.7	+0.1
SHGR				*e*Sg	Sg	04 01 27.9	+0.8
SHGR				IAML		04 01 34.9	
	comp=E,358nm,0.6s						
SHGR				IAML		04 01 43.3	
	comp=N,414nm,0.7s						
SHGR	Shooshtar-Gavs	1.31	121	*e*Pn	Pn	04 01 09.7	+0.1
IBDR	Badra	1.33	284	*e*Pg	Pn	04 01 10.0	+0.1
IBDR				*e*Sg	Sn	04 01 29.0	+1.1
IBDR				AML	AML	04 01 35.8	
	comp=N,332nm,0.7s						
IBDR				AML	AML	04 01 38.2	
	comp=E,256nm,0.7s						
KCHF	Cheshme Sefid,	1.53	347	*e*Pg	Pg	04 01 14.1	0.0
KCHF				*e*		04 01 40.0	
	comp=Z,99nm,0.3s						
KER	Kermanshah	1.62	350	*e*Pg	Pg	04 01 15.7	-0.2
IBZA	Bozab	1.71	11	*e*Pg	Pb	04 01 16.8	0.0
IGHG	Ghaleghazi	1.71	334	*e*Pg	Pg	04 01 17.4	-0.3
IGHG				*e*		04 01 56.4	
	comp=Z,99nm,0.6s						
AMIS	Naft Sefid	1.90	126	*e*Pg	Pn	04 01 18.7	+0.9
AMIS				*e*		04 01 57.5	
	comp=Z,99nm,0.5s						
NSR	Nassriya	2.10	213	*e*Pn	Pn	04 01 21.0	+0.5
NSR				*e*Sn	Sn	04 01 46.5	-0.4
IDHR	Dehrash	2.11	335	*e*Pn	Pb	04 01 22.3	-1.3
IDHR				*e*		04 02 02.1	
	comp=Z,99nm,0.3s						
ILIN	Lien	2.17	349	*e*Pn	Pb	04 01 23.6	-1.0
ILIN				*e*		04 02 00.7	
	comp=Z,99nm,0.5s						
KHMZ	Khomeyn	2.29	65	*e*Pn	Pn	04 01 24.5	+1.2
KHMZ	Khomeyn	2.29	65	*e*Pn	Pn	04 01 24.5	+1.2
BHD	Baghdad	2.64	281	*e*Pn	Pn	04 01 29.0	+1.2
BHD				*e*Sn	Sb	04 02 03.0	-2.1
ASAO	Ashtian	2.76	50	*e*Pn	Pn	04 01 30.9	+1.2
ASAO				*e*Sg	Sb	04 02 10.5	+1.7
ASAO	Ashtian	2.76	50	*e*Pn	Pn	04 01 31.0	+1.2
SHK1	Shahrekord	2.92	98	*e*Pn	Pn	04 01 32.2	+0.2
IRAZ	Razeghan	3.31	37	*e*Pn	Pn	04 01 38.0	+0.7
QABG	Abgarm-Qazvin	3.40	30	*e*Pn	Pn	04 01 38.7	+0.2
QAM	Ghamsar	3.46	73	*e*Pn	Pn	04 01 38.4	-1.0
IKLH	Kolahrood	3.49	80	*e*Pn	Pn	04 01 40.6	+0.8
IKLH				*e*		04 02 40.5	
	comp=Z,99nm,0.5s						
GHVR	GHOM	3.61	61	*e*Pn	Pn	04 01 41.7	+0.4
GHVR	GHOM	3.61	61	*e*Pn	Pn	04 01 41.7	+0.4
IQOM	Qom	3.63	55	*e*Pn	Pn	04 01 42.6	+0.8
IGAR	Gharneh	3.88	94	*e*Pn	Pn	04 01 45.0	-0.1
KLNJ	Kolanjah	3.93	116	*e*Pn	Pn	04 01 45.9	0.0
KRSH	Karshahi	4.08	72	*e*Pn	Pn	04 01 48.3	+0.5
IZEF	Zefreh	4.09	87	*e*Pn	Pn	04 01 48.9	+0.8
IRAM	Ramesheh	4.27	102	*e*Pn	Pn	04 01 50.6	0.0
IFIR	Firoozkooh	5.22	56	*e*Pn	Pn	04 02 03.6	0.0
ISHM	Shahmirzad	5.68	56	*e*Pn	Pn	04 02 11.0	+1.0

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*IDC **05** 04:02:27.8±0.8, 7°.16N×126°.33E, h0^{km}, mb3.9/8, mb1 4.0/8, mb1mx3.8/44, mbtmp3.8/8, MS3.5/3, Ms1 3.6/3, ms1mx2.9/52, Error ellipse: s-maj=18.2km s-min=10.1km az=179.0*
*NEIC **05** 04:02:31.3±1.4, 7°.09N±0°.08×126°.12E±0°.08, h23^{km}±5^{km}, mb4.2/13, Error ellipse: s-maj=11.9km s-min=11.1km az=220.0*
*MAN **05** 04:02:34.4, 7°.17N×125°.93E, h25^{km}, mb4.4, ML3.2, MS3.0*
ISC 05 04:02:32.6±1.7**, 7°.15N**±0°.05×**126°.04E**±0°.06**, h31**^{km}±12^{km}**, n34, σ1^{s}.39**/44**, mb3.9**/14**, MS3.0**/3**, 2C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	Davao City (W)	0.46	260	Pg	Pn	04 02 43.4	+0.2
	872nm,0.3s,baz=69,slow=2.4,SNR=49						
DAV				Lg	Lg	04 02 52.4	
	1µm,0.3s,baz=260,slow=22,SNR=9.8						
DAV	Davao City (W)	0.46	260	Pn	Pn	04 02 43.1	0.0
DAV					Sn	04 02 51.9	+1.5
KCP	Kidapawan	0.95	262	⇑*i*P	Pn	04 02 50.5	+0.6
KCP				*i* S	Sn	04 03 04.1	+1.6
DDMP	Don Marcelino,	1.09	197	*e*P	Pn	04 02 51.9	+0.1
DDMP				*e*S	Sn	04 03 09.4	+3.7
BUKP	Musuan	1.21	307	*e*P	Pn	04 02 53.4	-0.1
BUKP				*e*S	Sn	04 03 09.5	+0.6
SKMP	Bagumbayan, Su	1.61	247	*e*P	Pn	04 02 58.4	-0.6
SKMP				*e*S	Sn	04 03 19.2	+0.4
BUTP	Butuan	1.86	347	*e*P	Pb	04 03 05.4	-0.5
BUTP				*e*S	Sb	04 03 30.4	+1.7
CGP	Cagayan de Oro	1.86	314	⇑*i*P	Pn	04 03 03.2	+0.8
CGP				*i* S	Sb	04 03 29.1	+0.2
PAGZ	Pagadian	2.73	285	*e*P	Pn	04 03 15.3	+1.0
PAGZ				*e*S	Sn	04 03 41.2	-5.0
TOLI2	Tolitoli	7.96	221	Pn	Pn	04 04 26.3	-0.1
GUMO	Guam	19.59	69	P	P	04 06 57.5	-0.9
KNRA	Kununurra	22.84	173	P	P	04 07 31.9	-1.5
KNRA				IAmb	IAmb	04 07 37.8	
	comp=Z,8.3nm,0.8s						
FITZ	Fitzroy Crossi	25.09	181	P	P	04 07 53.8	-0.9
	comp=Z,2.9nm,1.0s,baz=6.3,slow=9.2,SNR=2.4						
FITZ	Fitzroy Crossi	25.09	181	P	P	04 07 53.6	-1.1
FITZ				IAmb	IAmb	04 08 09.7	
	comp=Z,2.8nm,0.7s						
COEN	Coen	27.00	141	P	P	04 08 10.4	-1.6
COEN				IAmb	IAmb	04 08 17.0	
	comp=Z,3.8nm,1.1s						
WB0	Warramunga Arr	27.98	163	P	P	04 08 20.7	-0.2
WB0				IAmb	IAmb	04 08 29.7	
	comp=Z,4.9nm,1.0s						
WRA	Warramunga Arr	28.13	163	P	P	04 08 21.6	-0.6
	comp=Z,0.2nm,0.4s,baz=344,slow=10,SNR=7.8						
WRA				PcP	PcP	04 11 36.9	+0.8
	comp=Z,0.2nm,0.4s,baz=332,slow=2.5,SNR=1.7						
WRA				LR	LR	04 20 49.6	
	comp=Z,36nm,18.3s,baz=275,slow=39						
WRA	Warramunga Arr	28.13	163	P	P	04 08 21.4	-0.8
WB2	Warramunga Arr	28.14	163	P	P	04 08 22.5	+0.3
WB2				IAmb	IAmb	04 08 34.0	
	comp=Z,3.8nm,1.1s						
WR0	Warramunga Arr	28.21	163	P	P	04 08 20.9	-1.9
CMAR	Chiang Mai Arr	28.67	296	P	P	04 08 27.9	+0.9
	comp=Z,0.7nm,0.3s,baz=126,slow=7.6,SNR=4.9						
CMAR				LR	LR	04 19 53.2	
	comp=Z,38nm,19.5s,baz=105,slow=36						
CMAR	Chiang Mai Arr	28.67	296	P	P	04 08 27.1	+0.1
PSAA2	Pilbara Seismi	29.17	192	P	P	04 08 29.8	-1.6
PSAA2				IAmb	IAmb	04 08 39.0	
	comp=Z,7.4nm,0.9s						
ASAR	Alice Springs	31.57	166	P	P	04 08 50.9	-1.8
	comp=Z,0.4nm,0.4s,baz=341,slow=6.8,SNR=14						
ASAR				PcP	PcP	04 11 46.0	+1.1
	comp=Z,0.3nm,0.4s,baz=355,slow=2.8,SNR=3.0						
ASAR	Alice Springs	31.57	166	P	P	04 08 51.6	-1.0
MDJ	Mudanjiang	37.45	4	P	P	04 09 43.2	0.0
MDJ				IAmb	IAmb	04 09 50.1	
	comp=Z,4.2nm,0.6s						
BBOO	Buckleboo	40.87	167	P	P	04 10 13.2	+1.3
SONM	Songino Array	43.86	341	P	P	04 10 37.4	+1.1
	comp=Z,1.2nm,0.9s,baz=162,slow=7.7,SNR=5.2						
SONM				PcP	PcP	04 12 22.4	+0.2
	comp=Z,0.2nm,0.4s,baz=159,slow=5.7,SNR=2.0						
SONM	Songino Array	43.86	341	P	P	04 10 36.8	+0.5
MK31	Makanchi Array	54.38	324	P	P	04 11 58.4	+1.7
MKAR	Makanchi Array	54.38	324	P	P	04 11 56.7	-0.1
	comp=Z,0.6nm,0.5s,baz=115,slow=7.1,SNR=6.4						
SEY	Seymchan	58.89	14	LR	LR	04 37 26.8	
	comp=Z,234nm,20.3s,baz=330,slow=36						
FINES	FINESS Array B	88.52	332	P	P	04 15 21.4	-0.6
	comp=Z,1.6nm,0.9s,baz=46,slow=6.0,SNR=1.7						
YKA	Yellowknife Ar	96.68	24	P	P	04 16 00.1	+0.3
	comp=Z,0.3nm,0.8s,baz=300,slow=4.2,SNR=5.6						

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*BJI **05** 04:21:47.0±0.0, 8°.27N×72°.64W, h10^{km}, mB5.5/18, Ms5.5/25, Ms7 5.2/27*
*MOS **05** 04:21:48.4±1.0, 8°.32N×72°.08W, h15^{km}, mb5.8/93, MS4.8/13, Error ellipse: s-maj=6.2km s-min=4.1km az=65.2*
*VAO **05** 04:21:49.5±0.2, 8°.23N×72°.18W, h10^{km}, mb5.4*
*NEIC **05** 04:21:49.6±1.7, 8°.22N±0°.06×72°.05W±0°.05, h13^{km}±2^{km}, Error ellipse: s-maj=8.8km s-min=6.3km az=148.0*
*IDC **05** 04:21:49.4±0.5, 8°.23N×72°.09W, h15^{km}±3^{km}, mb5.2/30, mb1 5.3/35, mb1mx5.2/41, mbtmp5.3/35, ML4.9/4, MS4.6/15, Ms1 4.6/15, ms1mx4.4/40, Error ellipse: s-maj=10.4km s-min=9.3km az=27.0*
*NEIC **05** 04:21:49, 8°.22N×72°.06W, h5^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}8.13; $M_{\theta\theta}$0.04; $M_{\phi\phi}$-8.18; $M_{r\theta}$-0.22; $M_{\theta\phi}$-1.02; $M_{\phi r}$0.19; Fault plane solution: $M_0$8.22000×10^{16} NP1:ϕ_s5.22000°, δ45.58000°, λ87.58000°. NP2:ϕ_s188.67000°, δ44.48000°, λ92.46000°. Principal axes: T 8.1433, Plg88.0000°, Azm205.0000°; N 0.1575, Plg2.0000°, Azm7.0000°; P -8.3008, Plg1.0000°, Azm97.0000°;*
*CAR **05** 04:21:50.9±2.2, 8°.24N±0°.06×72°.14W±0°.05, h5^{km}±3^{km}, Mwr5.2, mb5.5/659(NEIC), Ms_20 4.9/156(NEIC), Mwb5.2/34(NEIC), Mwc5.3(GCMT), Mwr5.4(RSNC), Mww5.3(NEIC) Error ellipse: s-maj=8.4km s-min=6.1km az=148.0*
*GCMT **05** 04:21:51.9±0.1, 8°.28N±0°.01×72°.13W±0°.01, h15^{km}, MW5.3/116, Moment Tensor Solution. s86,c126; s116,c197; Duration: 1^{s}.1 Moment tensor: Scale 10^{17} Nm; M_{rr}0.68±.02; $M_{\theta\theta}$0.26±.02; $M_{\phi\phi}$-0.94±.02; $M_{r\theta}$0.28±.04; $M_{\theta\phi}$-0.56±.02; $M_{\phi r}$-0.18±.03; Best double couple: $M_0$1.04300×10^{17} NP1:ϕ_s53.00000°, δ53.00000°, λ138.00000°. NP2:ϕ_s171.00000°, δ57.00000°, λ45.00000°. Principal axes: T 0.9220, Plg53.0000°, Azm24.0000°; N 0.2420, Plg37.0000°, Azm199.0000°; P -1.1640, Plg2.0000°, Azm291.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*RSNC **05** 04:21:51.6±1.4, 8°.36N×72°.13W, h4^{km}±7^{km}, ML5.1, Mw5.4, Fault plane solution: NP1:ϕ_s0.00000°, δ41.00000°, λ38.00000°.*
*FUNV **05** 04:21:51.2, 8°.30N×72°.11W, h5^{km}, MW5.2*
*BGR **05** 04:21:53.1±0.0, 8°.27N×71°.27W, h17^{km}, mb5.6, Ms5.1*
*NEIC **05** 04:21:53, 8°.36N×72°.13W, h14^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.68; $M_{\theta\theta}$0.29; $M_{\phi\phi}$-0.97; $M_{r\theta}$0.31; $M_{\theta\phi}$-0.57; $M_{\phi r}$-0.22; Fault plane solution: $M_0$1.10000×10^{17} NP1:ϕ_s53.00000°, δ54.00000°, λ140.00000°. NP2:ϕ_s170.00000°, δ59.00000°, λ44.00000°. Principal axes: T 0.9751, Plg52.0000°, Azm24.0000°; N 0.2168, Plg38.0000°, Azm198.0000°; P -1.1919, Plg3.0000°, Azm290.0000°;*
*NEIC **05** 04:21:56, 8°.41N×71°.84W, h12^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.03; $M_{\theta\theta}$-0.13; $M_{\phi\phi}$-0.90; $M_{r\theta}$0.12; $M_{\theta\phi}$-0.44; $M_{\phi r}$-0.32; Fault plane solution: $M_0$1.12000×10^{17} NP1:ϕ_s37.00000°, δ40.00000°, λ110.00000°. NP2:ϕ_s191.00000°, δ53.00000°, λ74.00000°. Principal axes: T 1.1127, Plg75.0000°, Azm50.0000°; N 0.0097, Plg13.0000°, Azm201.0000°; P -1.1224, Plg7.0000°, Azm293.0000°;*
ISC 05 04:21:50.4±0.3**, 8°.32N**±0°.02×**72°.07W**±0°.02**, h22**^{km}±2^{km}**, h22**^{km}**:pP-P, n1653, σ1^{s}.41**/1499**, mb5.6**/494**, MS4.8**/99**, 210C-242D, Fault plane solution: NP1:**ϕ_s168.81514°**,** δ77.18208°**,** λ15.69690°. **NP2:**ϕ_s75.24752°**,** δ74.70396°**,** λ166.70287°. **Principal axes:** T Plg20.0850°**,** Azm32.3616°**;** N Plg69.8370°**,** Azm207.1039°**;** P Plg1.6999°**,** Azm301.7398°**; Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PAMC	Pamplona, Colo	1.16	213	*e*P	Pn	04 22 10.7	-1.0
PAMC				*e*Pg	Pb	04 22 12.2	+0.2
PAMC				*e*S	Sn	04 22 27.4	+0.3
PAMC				*i*		04 22 33.2	
	comp=Z,25µm,0.3s						
SOCV	Socops	1.20	92	*e*P	Pb	04 22 13.3	+0.8
SOCV				*e*S	Sn	04 22 30.3	+2.7
OCAC	Ocana	1.24	266	⇓*e*P	Pn	04 22 11.5	-1.1
OCAC				*e*S	Sb	04 22 28.4	-0.4
OCAC				*i*		04 22 34.4	
	comp=Z,36µm,0.4s						
SDV	Santo Domingo	1.53	68	Pn	Pb	04 22 19.2	+0.9
	comp=Z,2µm,0.3s,baz=210,slow=8.9,SNR=1945						
SDV				Lg	Lg	04 22 39.0	
	comp=Z,2µm,0.3s,baz=219,slow=10,SNR=3.1						
SDV				LR	LR	04 23 01.9	
	comp=Z,55µm,19.6s,baz=88,slow=46						
SDV	Santo Domingo	1.53	68		Pb	04 22 18.8	+0.5
SDV				Sn	Sb	04 22 40.6	+3.3
SDV	Santo Domingo	1.53	68	⇓*e*P	Pb	04 22 18.9	+0.7
SDV				*e*S	Sb	04 22 40.1	+2.8
SDV				*e*S	Sn	04 22 41.1	+5.1
SDV	Santo Domingo	1.53	68	*e*P	Pb	04 22 18.7	+0.5
SDV				*e*S	Sb	04 22 39.5	+2.2
SDV	Santo Domingo	1.53	68	*e*P	Pb	04 22 19.7	+1.5
MCQV	Machiques	1.78	345	*e*P	Pb	04 22 21.6	-0.8
MCQV				*e*S	Sb	04 22 45.4	+1.1
TAMC	Tame, Arauca	1.89	172	*e*P	Pb	04 22 23.5	-0.8
TAMC				*e*S	Sb	04 22 49.8	+2.3
TAMC				*i*		04 22 55.7	
	comp=Z,23µm,0.4s						
BRRC	Barranca, Sant	2.02	234	⇑*e*P	Pb	04 22 25.4	-1.1
BRRC				*e*S	Sb	04 22 51.0	-0.3
BRRC				*i*		04 23 00.4	
	comp=Z,7µm,0.5s						
SMLC	San Martn de	2.04	284	⇓*e*P	Pn	04 22 24.0	+0.5
SMLC				*e*S	Sb	04 22 51.9	+0.2
BARC	Barichara	2.04	213	*e*P	Pb	04 22 25.9	-1.0
BARC				*e*S	Sb	04 22 52.9	+0.9
BARC				*i*		04 22 57.4	
	comp=Z,11µm,0.3s						
TORV	Torococo	2.20	56	*e*P	Pn	04 22 27.4	+1.5
CVALL	Valledupar, Ce	2.47	332	*e*P	Pn	04 22 30.2	+0.7
RUSC	La Rusia	2.61	203	⇑*e*P	Pn	04 22 33.4	+1.6
RUSC				*i*		04 23 17.9	
	comp=Z,5µm,0.5s						
ARGC	Ariguani, Magd	2.64	306	*e*P	Pn	04 22 32.8	+1.1
CURV	Curarigua	2.68	51	*e*P	Pn	04 22 34.3	+1.9
CURV				*e*S	Sb	04 23 07.4	-2.9
SANV	Sanarito	2.77	65	*e*P	Pb	04 22 36.6	-2.7
SANV				*e*S	Sn	04 23 09.4	+3.0
ELOV	Elorza	2.88	117	*e*P	Pb	04 22 38.0	-3.2
ZARC	Zaragoza, Cauc	2.88	254	⇑*e*P	Pn	04 22 35.7	+0.6
ZARC				*e*S	Sb	04 23 17.5	+1.5
ZARC				*i*		04 23 27.7	
	comp=Z,11µm,0.7s						
DABV	Dabajuro	2.95	29	*e*P	Pn	04 22 37.5	+1.5
PTBC	PUERTO BERRIO,	2.95	233	⇑*e*P	Pn	04 22 36.5	+0.4
PTBC				*e*S	Sn	04 23 12.2	+1.3
PTBC				*i*		04 23 23.6	
	comp=Z,5µm,0.5s						
SPBC	San Pablo de B	3.31	217	⇑*e*P	Pn	04 22 43.0	+1.9
SPBC				*i*		04 23 46.5	
	comp=Z,4µm,0.5s						
URIC	Uribia, Colomb	3.36	1	*e*P	Pn	04 22 41.0	-0.7
UREC	San Jos de Ur	3.47	261	⇓*i*P	Pn	04 22 45.1	+1.8
UREC				*i*		04 23 40.9	
	comp=Z,3µm,0.7s						
SMRC	Santa Marta, M	3.54	323	*e*P	Pn	04 22 43.4	-0.7
SMRC				*e*S	Sn	04 23 22.0	-3.2
SMRC				*i*		04 23 43.4	
	comp=Z,5µm,0.6s						
MOTC	Monteria, Cord	3.58	278	*e*P	Pn	04 22 46.6	+1.9
MAPV	Macapo	3.87	67	*e*P	Pn	04 22 50.4	+1.6
NORC	Norcasia	3.90	226	*e*P	Pn	04 22 50.1	+0.9
NORC				*e*S	Sb	04 23 39.8	-5.6
CHIC	Chingaza	4.02	204	*e*P	Pn	04 22 53.2	+2.1
HELC	Santa Helena	4.03	239	*e*P	Pn	04 22 52.8	+1.5
HELC				*e*S	Sn	04 23 41.9	+4.0
HELC				*i*		04 23 56.1	
	comp=Z,2µm,0.6s						
BAUV	El Baul	4.03	81	*e*P	Pn	04 22 53.1	+2.2
BAUV				*e*S	Sn	04 23 38.9	+1.3
PTGC	Puerto Gaitan,	4.09	181	*e*P	Pn	04 22 52.4	+0.6
PTGC				*e*S	Sn	04 23 40.2	+1.1
PTGC				*i*		04 23 44.5	
	comp=Z,3µm,0.3s						
ROSC	El Rosal	4.12	213	Pn	Pn	04 22 55.2	+2.8
	comp=Z,86nm,0.3s,baz=175,slow=22,SNR=79						
ROSC				Lg	Lg	04 24 00.4	
	comp=Z,319nm,0.3s,baz=296,slow=14,SNR=5.7						
ROSC	El Rosal	4.12	213	P	Pn	04 22 52.8	+0.4
ROSC						04 23 41.1	
ROSC	El Rosal	4.12	213	Pn	Pn	04 22 52.8	+0.4
ROSC				Sn	Sn	04 23 41.1	+1.0
ROSC	El Rosal	4.12	213	*e*P	Pn	04 22 55.4	+2.9
MONV	Montecano	4.16	30	⇑*i*P	Pn	04 22 53.9	+1.2
MONV				*e*S	Sn	04 23 42.3	+1.5
JACV	Jacura	4.22	49	*e*P	Pn	04 22 55.9	+2.4
GUY2C	Guyana, Caldas	4.49	227	*e*P	Pn	04 22 59.6	+1.9
CBOC	Ciudad Bolivar	4.61	238	*e*P	Pn	04 23 01.8	+2.8
TURV	Turiamo	4.68	63	*e*P	Pn	04 23 01.9	+2.0
TURV				*e*S	Sn	04 23 54.3	+0.8
RREF	El Recreo	4.70	224	*e*P	Pn	04 23 02.6	+1.9
TOLC	Tolima	4.92	221	*e*P	Pn	04 23 05.5	+2.1
TOLC				*e*S	Sn	04 24 03.4	+3.6
TOLC				*i*		04 24 31.5	
	comp=Z,3µm,0.7s						
CIBA1	Ibague, SGC	4.97	219	*e*P	Pn	04 23 06.3	+2.4
ANIL	Santa Ana	5.04	221	*e*P	Pn	04 23 07.7	+2.6
CAPC	Capurgana	5.23	274	*e*P	Pn	04 23 07.2	-0.3
PAYV	Puerto Ayacuch	5.24	123	*e*P	Pn	04 23 08.9	+1.3
TACV	Tcata	5.30	70	*e*P	Pn	04 23 10.2	+1.8
TACV				*e*S	Sn	04 24 07.6	-1.3
PLMC	San Jos del P	5.38	231	*e*P	Pn	04 23 11.9	+2.3
ORTC	Ortega, Tolima	5.40	216	⇑*e*P	Pn	04 23 11.1	+1.3
ORTC				*i*		04 24 55.8	
	comp=Z,970nm,0.6s						
CARV	Caracas	5.52	66	*e*P	Pn	04 23 13.8	+2.3
FUNV	FUNVISIS	5.61	67	*e*P	Pn	04 23 14.0	+1.2
SOLC	Bahia Solano	5.69	249	*e*P	Pn	04 23 16.2	+2.5
GUVC	San Jose del G	5.76	186	*e*P	Pn	04 23 14.9	+0.2
PTAC	Punta Ardita,	5.80	259	*e*P	Pn	04 23 16.7	+1.4
YOTC	Yotoco, Valle	6.05	225	*e*P	Pn	04 23 20.5	+1.7
BIRV	Birongo	6.11	69	*e*P	Pn	04 23 20.7	+1.1
BIRV				*e*S	Sn	04 24 26.9	-2.0
PIZC	Pizarro, Choco	6.22	238	*e*P	Pn	04 23 25.1	+4.1
MACC	Macarena, Meta	6.38	196	*e*P	Pn	04 23 22.9	-0.4
BETC	Betania	6.53	211	*e*P	Pn	04 23 25.5	+0.2
MARP	Paez Belalcaza	6.67	216	*e*P	Pn	04 23 28.0	+0.6
MALC	Bahia Malaga	6.76	231	*e*P	Pn	04 23 30.5	+2.1
GARC	Garzon, Huila	6.98	209	*e*P	Pn	04 23 31.8	+0.1
PCON	Cinco Dias	7.34	216	*e*P	Pn	04 23 39.3	+2.3
PCRV	Puerto La Cruz	7.57	75	Pn	Pn	04 23 40.1	+0.5
	comp=Z,27nm,0.3s,baz=225,slow=7.3,SNR=103						
PCRV				Sn	Sn	04 25 07.8	+3.0
	comp=Z,180nm,0.3s,baz=312,slow=21,SNR=18						
PCRV				LR	LR	04 27 07.7	
	comp=Z,5µm,21.0s,slow=42						
PCRV	Puerto La Cruz	7.57	75	*e*P	Pn	04 23 40.8	+1.2
FLOC	Florencia	7.58	208	*e*P	Pn	04 23 40.0	+0.3
PLCV	Puerto La Cruz	7.61	75		Pn	04 23 40.1	-0.1
BCIP	Isla Barro Col	7.72	277	P	Pn	04 23 42.5	+0.8
BCIP						04 25 08.5	
BCIP	Isla Barro Col	7.72	277	Pn	Pn	04 23 42.5	+0.8
BCIP				Sn	Sn	04 25 08.5	0.0
BCIP	Isla Barro Col	7.72	277	*e*P	Pn	04 23 41.9	+0.3
BBAC	Balboa, Cauca	8.10	220	*e*P	Pn	04 23 48.6	+1.5
PTLC	Puerto Leguiza	8.54	199	*e*P	Pn	04 23 56.6	+3.7
ORIV	Oritupano	8.60	84	*e*P	Pn	04 23 53.5	-0.2
GCUF	Volcan Galeras	8.79	217	*e*P	Pn	04 23 59.1	+2.3
JAKH	Jacmel	9.87	358	Pn	Pn	04 24 12.1	+1.0
LGNH	Logne	10.15	357	Pn	Pn	04 24 14.8	-0.1
RIOV	Rio Grande	10.16	91	*e*P	Pn	04 24 15.9	+0.8
OTAV	Otavalo	10.24	219	P	Pn	04 24 17.2	+0.6
OTAV	Otavalo	10.24	219	Pn	Pn	04 24 17.2	+0.6
OTAV	Otavalo	10.24	219	*e*P	Pn	04 24 17.9	+1.3
OTAV	Otavalo	10.24	219	*e*P	Pn	04 24 15.7	-0.9
PRVC	Isla de Provid	10.42	300	*e*P	Pn	04 24 17.0	-1.6
SDDR	Presa de Saban	10.63	4	Pn	Pn	04 24 22.8	+1.2
HOJ	Hope	10.65	335	*i* P	Pn	04 24 22.8	+1.0
TPP	Pointe-a-Pierr	10.67	78	*e*P	Pn	04 24 23.1	+1.0
STH	Stony Hill	10.74	335	*i* P	Pn	04 24 24.5	+1.5
STH				*i* S	Sn	04 26 26.8	+4.1
TRN	Trinidad (W)	10.78	77	*e*P	Pn	04 24 24.9	+1.3
GRGR	Grenville	10.93	69	*e*P	Pn	04 24 25.4	-0.2
GRGR	Grenville	10.93	69	Pn	Pn	04 24 25.8	+0.1
MPR	Mayaguez	10.94	25		Pn	04 24 23.7	-2.0
POTG	Potrero Grande	10.95	275	*e*P	Pn	04 24 29.1	+3.1
MCJ	Malvern	11.00	331	*i* P	Pn	04 24 25.8	-0.9
MCJ				*i* S	Sn	04 26 24.4	-4.9
OBIP	Obispado Ponce	11.03	28	Pn	Pn	04 24 25.3	-1.8
SC01	Santiago de lo	11.12	7	Pn	Pn	04 24 30.3	+2.0
AGPR	Aguadilla, PR	11.18	25	Pn	Pn	04 24 29.0	-0.1
MTDJ	Mount Denham	11.19	332	Pn	Pn	04 24 29.1	-0.2
BBJ	Bamboo Saint A	11.21	334	⇓*i*P	Pn	04 24 30.5	+1.0
GCMP	Grenada, Carri	11.26	68	*e*P	Pn	04 24 32.9	+2.8
PDPR	Patillas Dam,	11.29	31	Pn	Pn	04 24 28.4	-2.2
SJG	San Juan	11.31	30	Pn	Pn	04 24 28.9	-1.9
	comp=Z,6.0nm,0.3s,baz=217,slow=11,SNR=42						
SJG				Sn	Sn	04 26 28.4	-8.2
	comp=Z,7.8nm,0.3s,baz=230,slow=17,SNR=1.1						
SJG				LR	LR	04 29 41.1	
	comp=Z,8µm,19.2s,baz=182,slow=41						
SJG	San Juan	11.31	30	P	Pn	04 24 29.0	-1.9
SJG	San Juan	11.31	30	*e*P	Pn	04 24 29.0	-1.9
RIOS	Rincon, Osa	11.32	273	*e*P	Pn	04 24 34.9	+3.8
HUMP	Col San Antoni	11.49	31	Pn	Pn	04 24 31.0	-2.3
PEZE	Perez Zeledon,	11.52	276	*e*P	Pn	04 24 36.1	+2.3
CBYP	Canovanas	11.59	31		Pn	04 24 33.1	-1.7
MTP	Monte Pirata	11.61	32	Pn	Pn	04 24 33.3	-1.6
CDM	Cerro de Muert	11.62	277	*e*P	Pn	04 24 36.4	+1.0
SVB	Belmont	11.71	64	*e*P	Pn	04 24 36.5	+0.2
SVB	Belmont	11.71	64	*e*P	Pn	04 24 36.6	+0.2
SVB	Belmont	11.71	64	Pn	Pn	04 24 36.2	-0.2
RIMA	Rio Macho	11.74	278	*e*P	Pn	04 24 37.0	+0.1
CDVI	St. Croix	11.77	36	Pn	Pn	04 24 36.6	-0.5
LCR2	La Lucha 2	11.87	278	*e*P	Pn	04 24 39.0	+0.3
GTBY	Guantanamo Bay	11.91	346	Pn	Pn	04 24 39.4	+0.4
SLDE	Delcer	12.10	62	*e*P	Pn	04 24 41.7	0.0
SLB	Belfond	12.13	62	*e*P	Pn	04 24 41.7	-0.4
SLCP	Castries, St.	12.25	62	*e*P	P	04 24 59.8	+3.9
SLBI	Saint Lucia, B	12.27	62	*e*P	Pn	04 24 43.3	-0.7
BIM	Bigot	12.41	59	*e*P	Pn	04 24 45.6	-0.4
FDF	Fort de France	12.45	58	P	Pn	04 24 44.5	-2.0
FDF	Fort de France	12.45	58	Pn	Pn	04 24 44.5	-2.0
JACO	JACO, Garabito	12.51	277	*e*P	Pn	04 24 49.0	+1.8
MPOM	Morne Pois Mar	12.56	60	*e*P	P	04 25 00.4	+1.0
DSLB	Salisbury	12.59	55	*e*P	Pn	04 24 47.6	-0.8
ESPN	Las Esperanzas	12.63	289	Pn	Pn	04 24 48.3	-0.7
TDBA	Terre de Bas,	12.65	53	*e*P	P	04 24 57.6	-2.8
ARE1	Arenal 1	12.66	281	*e*P	Pn	04 24 54.6	+5.3
ILAM	Ilet Lapin Mar	12.71	59	*e*P	P	04 25 02.7	+1.7
MLYT	Lee's Yard	12.75	48	*e*P	Pn	04 24 52.5	+1.9
SKI	Saint Kitts	12.77	45	*e*	Pn	04 24 47.7	-3.0
SKI	Saint Kitts	12.77	45	P	Pn	04 24 51.4	+0.6
SKI	Saint Kitts	12.77	45	Pn	Pn	04 24 51.4	+0.6
LAFE	Finca La Fe, P	12.77	278	*e*P	Pn	04 24 44.1	-6.7
CBE	Ff, Capester	12.80	52	*e*P	P	04 25 02.6	+0.5
JTS	Las Juntas de	12.86	280	*de*P	Pn	04 24 54.7	+2.5
JTS	Las Juntas de	12.86	280	*e*P	Pn	04 24 53.1	+1.0
JTS	Las Juntas de	12.86	280	Pn	Pn	04 24 52.3	+0.1
MAGL	Barre de l'ile	12.99	53	*e*P	P	04 24 59.4	-4.7
CUI	Cuipilapa	13.12	281	*e*P	Pn	04 24 57.6	+1.9
GRTK	Grand Turk	13.15	4		Pn	04 24 58.5	+2.5
BBGH	Gun Hill	13.19	68	*e*P	Pn	04 24 59.9	+3.3
BPA	Boggy Peak	13.21	48	*e*P	Pn	04 24 58.4	+1.5
PLVR	Palo Verde	13.26	280	*e*P	Pn	04 24 58.8	+1.0
BBSP	Saint Philip	13.27	68	*e*P	P	04 25 03.5	-3.8
ANBD	Bethesda, Anti	13.28	48	*e*P	Pn	04 24 57.7	0.0
BUEV	Buena Vista	13.38	282	*e*P	Pn	04 25 03.3	+4.1
CBCY	The Bluff, Cay	13.58	328	Pn	Pn	04 25 02.4	+0.6
ANWB	Willy Bob	13.66	46	*e*P	Pn	04 25 03.1	+0.1
ANWB	Willy Bob	13.66	46	Pn	Pn	04 25 03.8	+0.8
FSCY	Frank Sound, G	14.05	322	Pn	Pn	04 25 06.1	-2.2
PTGA	Pitinga	15.05	126	Pn	Pn	04 25 20.1	-1.8
	comp=Z,17nm,0.3s,baz=304,slow=14,SNR=173						

PTGA				Sn	Sn	04 28 01.8	-6.3
	comp=Z,11nm,0.3s,baz=31,slow=21,SNR=6.8						
PTGA				Lg	Lg	04 29 40.5	
	comp=Z,27nm,0.3s,baz=29,slow=21,SNR=5.0						
PTGA				LR	LR	04 31 40.0	
	comp=Z,5µm,20.9s,baz=306,slow=39						
PTGA	Pitinga	15.05	126	Pn	Pn	04 25 20.1	-1.8
PTGA				IAmb	IAmb	04 25 24.9	
	comp=Z,236nm,1.0s						
CRIN	San Cristobal	15.36	288	Pn	Pn	04 25 27.5	+1.5
CRIN				IAmb	IAmb	04 25 43.0	
	comp=Z,352nm,1.0s						
CZSB	Cruzeiro do Su	15.95	182	eP	Pn	04 25 31.0	-2.8
TGUH	Tegucigalpa,Un	15.96	292		Pn	04 25 35.1	+1.2
TGUH				IAmb	IAmb	04 25 52.5	
	comp=Z,275nm,0.9s						
ATAH	Atahualpa	16.59	203	Pn	Pn	04 25 42.5	+0.2
	comp=Z,0.9nm,0.3s,baz=101,slow=7.0,SNR=12						
ATAH				LR	LR	04 33 06.6	
	comp=Z,7µm,18.5s,baz=338,slow=41						
SNET	Serv Nac Est T	17.66	289	Pn	P	04 25 56.4	+0.1
MTO3	Montecristo	17.99	291	P	P	04 26 00.1	+0.2
MTO3				IAmb	IAmb	04 26 17.1	
	comp=Z,355nm,1.2s						
ESQI	Esquipulas	18.02	292	Pn	P	04 26 01.1	+0.9
ESQI				IAmb	IAmb	04 26 15.4	
	comp=Z,511nm,1.2s						
ETMB	Extrema	18.94	162	eP	P	04 26 09.3	-0.8
SAML	Samuel	19.30	152	P	P	04 26 13.5	-0.6
SAML				pmax	pmax		
	comp=Z,115nm,1.0s						
SAML	Samuel	19.30	152	P	P	04 26 13.5	-0.6
PETF	Flores	19.34	298	P	Pn	04 26 16.3	+0.6
061Z	Ochoppi	19.37	335		Pn	04 26 17.4	+1.4
061Z				IAmb	IAmb	04 26 18.6	
	comp=Z,279nm,0.9s						
MDP	Montagnes des	19.56	98	P	P	04 26 17.0	0.0
	comp=Z,2.4nm,0.3s,baz=275,slow=11,SNR=17						
MDP				S	S	04 29 51.6	-5.2
	comp=Z,1.8nm,0.3s,baz=218,slow=19,SNR=3.4						
MDP				Lg	Lg	04 31 59.9	
	comp=Z,1.5nm,0.3s,baz=344,slow=15,SNR=2.1						
MDP				LR	LR	04 34 39.1	
	comp=Z,1µm,19.4s,baz=308,slow=39						
TEIG	Tepich	19.64	309	P	Pn	04 26 19.4	+0.1
TEIG				LR	LR	04 35 19.7	
	comp=Z,1µm,19.4s,slow=41						
TEIG	Tepich	19.64	309	P	Pn	04 26 20.0	+0.7
060A	Indiantown	20.21	338	IAmb	IAmb	04 26 48.4	
	comp=Z,167nm,0.9s						
PAYG	Puerto Ayora	20.23	245	P	P	04 26 25.2	+0.8
HUEH	Huehuetenango	20.24	292	P	P	04 26 25.4	+0.8
MALB	Monte Alegre	20.43	119	eP	Pn	04 26 27.7	-0.9
ITTB	Itaituba	20.60	127	eP	Pn	04 26 29.7	-0.9
NNA	Nana	20.72	193	P	P	04 26 29.8	+0.1
	comp=Z,26nm,0.7s,baz=358,slow=8.3,SNR=7.5						
NNA	Nana	20.72	193	d iP	Pn	04 26 33.1	+1.0
NNA				pmax	pmax		
	comp=Z,112nm,1.3s						
NNA				MLR	MLR		
	comp=Z,7µm,15.0s						
NNA	Nana	20.72	193	P	P	04 26 29.4	-0.2
NNA	Nana	20.72	193	IAMs_20	IAMs_20	04 35 40.7	
	comp=Z,5µm,20.0s						
CCIG	Comitan	21.13	294	P	P	04 26 35.3	+1.1
CCIG				IAmb	IAmb	04 26 46.6	
	comp=Z,370nm,1.0s						
DWPF	Disney Wildern	21.58	337	P	P	04 26 39.5	+0.8
	baz=154						
DWPF	Disney Wildern	21.58	337	P	P	04 26 39.8	+1.1
DWPF				IAmb	IAmb	04 26 41.2	
	comp=Z,313nm,0.9s						
MCPB	Macapa, AP	21.73	112	eP	P	04 26 41.8	+1.3
NPGB	Novo Progresso	22.60	132	eP	P	04 26 51.0	+1.2
656A	Willston	23.14	336	P	P	04 26 57.8	+2.6
656A				IAmb	IAmb	04 26 58.5	
	comp=Z,167nm,1.1s						
CMIG	Matias Romero	23.88	294	P	P	04 27 02.3	-0.4
	comp=Z,19nm,1.0s,baz=99,slow=9.6,SNR=11						
CMIG				LR	LR	04 37 30.2	
	comp=Z,2µm,21.5s,baz=75,slow=39						
456A	Hilliard	24.16	339	P	P	04 27 07.0	+1.9
VILB	Vilhena	24.20	151	eP	P	04 27 07.2	+1.6
BBSR	BB Station	24.89	15	P	P	04 27 13.0	+1.2
BBSR				IAmb	IAmb	04 27 20.2	
	comp=Z,97nm,0.8s						
TIGA	Tifton	25.39	337	P	P	04 27 17.4	+1.1
	baz=153						
TIGA	Tifton	25.39	337	P	P	04 27 19.1	+2.8
TIGA				IAmb	IAmb	04 27 19.7	
	comp=Z,121nm,0.8s						
255A	Hazlehurst	25.41	339	P	P	04 27 19.0	+2.6
RGRS	Roger Stewart	25.60	344	P	P	04 27 19.3	+1.1
CSU	Charleston Sou	25.64	344	P	P	04 27 21.4	+2.8
Z59A	Georgetown, SC	25.68	346	P	P	04 27 19.9	+1.0
	baz=163						
NHSC	New Hope	25.78	344	P	P	04 27 21.5	+1.6
	baz=161,SNR=9.0						
NHSC	New Hope	25.78	344	P	P	04 27 22.1	+2.2
352A	Blakely	25.97	334	P	P	04 27 24.1	+2.5
TMAB	Tom-Au,PA,Br	26.16	113	eP	P	04 27 25.7	+2.2
154A	Montrose	26.25	339	P	P	04 27 26.9	+2.8
Z56A	Williston	26.33	342	P	P	04 27 26.8	+2.0
PRPB	Parauapebas	26.45	122	eP	P	04 27 28.0	+1.9
SIV	San Ignacio	26.50	156	P	P	04 27 27.2	+0.7
	comp=Z,69nm,0.9s,baz=357,slow=9.0,SNR=203						
SIV				Lg	Lg	04 35 41.9	
	comp=Z,90nm,0.9s,baz=60,slow=20,SNR=3.0						
PB16	IPOC Station P	26.60	175	P	P	04 27 27.2	-0.9
PB16				IAMs_20	IAMs_20	04 37 22.1	
	comp=Z,2µm,19.0s						
BRAL	Brewton	26.69	330	P	P	04 27 28.9	+0.9
	baz=146						
BRAL	Brewton	26.69	330	P	P	04 27 30.6	+2.6
X60A	Albert Glenn T	26.69	349	P	P	04 27 29.3	+1.2
	baz=167						
X59A	McDuffie Farm,	26.81	348	P	P	04 27 30.3	+1.2
	baz=166						
152A	Waverly Hall	26.92	336	P	P	04 27 32.2	+2.0
152A				IAmb	IAmb	04 27 37.0	
	comp=Z,84nm,0.8s						
250A	Grady	26.99	333	P	P	04 27 33.2	+2.4
250A				IAmb	IAmb	04 27 34.0	
	comp=Z,125nm,1.1s						
X57A	Johnson Farm,	27.05	345	P	P	04 27 32.5	+1.2
	baz=162						
GOGA	Godfrey	27.10	339	P	P	04 27 33.2	+1.4
	baz=155,SNR=31						
GOGA	Godfrey	27.10	339	P	P	04 27 33.8	+2.0
GOGA				pmax	pmax		
	comp=Z,134nm,1.1s						
GOGA				MLR	MLR		
	comp=Z,2µm,20.0s						
GOGA	Godfrey	27.10	339	P	P	04 27 33.8	+2.0
GOGA				IAmb	IAmb	04 27 38.7	
	comp=Z,134nm,1.1s						
W60A	Pink Hill	27.11	350	P	P	04 27 32.9	+1.1
	baz=168,SNR=11						
W61A	Ground Anchor	27.11	351	P	P	04 27 33.1	+1.3
	baz=169						
JSC	Jenkinsville	27.19	343	P	P	04 27 33.5	+1.0
JSC				pmax	pmax		
	comp=Z,59nm,1.2s						
JSC	Jenkinsville	27.19	343	P	P	04 27 33.5	+1.0
BIRD	Birdtown, Kers	27.31	345	P	P	04 27 35.0	+1.3
CNNC	Cliffs of the	27.32	350	P	P	04 27 34.5	+0.8
	baz=167						
CNNC	Cliffs of the	27.32	350	P	P	04 27 35.2	+1.5
CNNC				IAmb	IAmb	04 27 44.9	
	comp=Z,139nm,1.1s						
V62A	Hyde County Ai	27.35	353	P	P	04 27 35.1	+1.1
	baz=172						
W59A	Clinton	27.35	349	P	P	04 27 34.7	+0.7
	baz=166						
TLIG	Tlapa	27.38	292	P	P	04 27 36.2	+1.6
W58A	Raeford	27.38	347	P	P	04 27 34.9	+0.6
	baz=164,SNR=11						
MNMC	Minye Minye	27.38	175	P	P	04 27 33.5	-1.2
HODGE	Hodges	27.44	341	P	P	04 27 36.7	+1.8
HODGE				IAmb	IAmb	04 27 42.6	
	comp=Z,122nm,0.8s						
Z51A	Franklin	27.67	336	P	P	04 27 38.9	+1.9
Z51A				IAmb	IAmb	04 27 40.1	
	comp=Z,100nm,0.9s						
Y52A	Lilburn	27.73	338	P	P	04 27 38.9	+1.5
Y52A				IAmb	IAmb	04 27 45.2	
	comp=Z,105nm,1.0s						
V60A	Jim Taylor Roa	27.73	351	P	P	04 27 38.3	+1.0
	baz=169,SNR=11						
V60A	Jim Taylor Roa	27.73	351	P	P	04 27 38.9	+1.5
V60A				IAmb	IAmb	04 27 44.6	
	comp=Z,82nm,0.6s						
PSGCX	Pisagua	27.80	176	P	P	04 27 36.8	-1.5
PSGCX				IAmb	IAmb	04 27 45.5	
	comp=Z,64nm,0.9s						
PSGCX				IAMs_20	IAMs_20	04 37 34.9	
	comp=Z,2µm,20.0s						
W56A	Indian Trail	27.81	345	P	P	04 27 38.6	+0.5
	baz=162,SNR=9.4						
PAULI	Pauline	27.85	343	P	P	04 27 40.7	+2.2
V59A	Middlesex	27.90	349	P	P	04 27 39.5	+0.7
	baz=167,SNR=11						
KMSC	Kings Mountain	28.02	344	P	P	04 27 40.7	+0.7
	baz=160,SNR=6.6						
KMSC	Kings Mountain	28.02	344	P	P	04 27 42.0	+2.0
V58A	Windy Hill, Pi	28.10	348	P	P	04 27 41.3	+0.6
	baz=165						
V58A	Windy Hill, Pi	28.10	348	P	P	04 27 42.1	+1.4
346A	Big Creek Wild	28.10	327	P	P	04 27 43.3	+2.6
346A				IAmb	IAmb	04 27 44.1	
	comp=Z,124nm,1.0s						
U61A	Possum Corner	28.17	353	P	P	04 27 42.0	+0.7
	baz=171,SNR=15						
U61A	Possum Corner	28.17	353	P	P	04 27 42.1	+0.8
LRAL	Lakeview Retre	28.21	333	P	P	04 27 42.9	+1.2
	baz=148,SNR=16						
LRAL	Lakeview Retre	28.21	333	P	P	04 27 44.1	+2.4
V57A	Coltrane Farms	28.33	347	P	P	04 27 43.2	+0.4
	baz=164,SNR=14						
BG3	Lake Jocassee	28.36	341	P	P	04 27 44.3	+1.3
U60A	Pendleton	28.41	351	P	P	04 27 44.0	+0.7
	baz=169,SNR=12						
PB08	IPOC Station P	28.43	174	P	P	04 27 43.7	-0.5
PB08				IAmb	IAmb	04 27 52.3	
	comp=Z,98nm,1.0s						
PB08				IAMs_20	IAMs_20	04 38 03.4	
	comp=Z,3µm,22.0s						
V56A	Mocksville	28.43	346	P	P	04 27 44.1	+0.5
	baz=162,SNR=14						
U58A	Oxford	28.57	349	P	P	04 27 45.3	+0.5
	baz=167,SNR=21						
X51A	Calhoun	28.65	338	P	P	04 27 47.7	+2.1
V55A	Taylorsville	28.65	344	P	P	04 27 47.4	+1.8
Y49A	Blount Mountai	28.65	335	P	P	04 27 47.5	+1.8
Y49A				IAmb	IAmb	04 27 53.2	
	comp=Z,57nm,0.8s						
U57A	Blanch	28.76	348	P	P	04 27 46.7	+0.1
	baz=165,SNR=11						
TA01	Diego Aracena	28.76	176	P	P	04 27 45.7	-1.0
TA01				IAmb	IAmb	04 27 51.2	
	comp=Z,81nm,1.0s						
W52A	Murphy	28.78	340	P	P	04 27 49.0	+2.2
W52A				IAmb	IAmb	04 27 50.2	
	comp=Z,107nm,1.0s						
Z47A	Carrollton	28.84	331	P	P	04 27 49.2	+1.8
Z47A				IAmb	IAmb	04 27 55.1	
	comp=Z,99nm,0.8s						
344A	Westbrook Farm	28.85	325	P	P	04 27 49.9	+2.5
SNDB	Serra Nova Dou	28.86	134	eP	P	04 27 49.3	+1.6
146A	Union	28.87	329	P	P	04 27 50.3	+2.7
146A				IAmb	IAmb	04 27 55.6	
	comp=Z,81nm,0.8s						
U56A	King	28.91	346	P	P	04 27 49.0	+1.0
	baz=163,SNR=8.2						
U56A	King	28.91	346	P	P	04 27 49.6	+1.6
FPAL	Fort Paine	28.91	336	P	P	04 27 49.9	+1.9
V53A	Saluda	28.94	342	P	P	04 27 50.7	+2.4
T60A	Surry	29.00	352	P	P	04 27 49.5	+0.8
	baz=170,SNR=7.4						
T60A	Surry	29.00	352	P	P	04 27 50.5	+1.8
T60A				IAmb	IAmb	04 27 51.6	
	comp=Z,129nm,0.9s						
PATCX	Punta Patache	29.02	176	P	P	04 27 48.8	-0.2
PATCX				IAmb	IAmb	04 27 58.2	
	comp=Z,115nm,0.9s						
PATCX				IAMs_20	IAMs_20	04 38 32.0	
	comp=Z,2µm,20.0s						
T58A	Grand View Acr	29.10	349	P	P	04 27 50.3	+0.8
	baz=167,SNR=24						
TKL	Tuckaleechee C	29.24	340	P	P	04 27 51.1	+0.2
	comp=Z,26nm,1.0s,baz=158,slow=11,SNR=13						
TKL	Tuckaleechee C	29.24	340	P	P	04 27 53.3	+2.4
TKL				pmax	pmax		
	comp=Z,43nm,1.1s						
TKL	Tuckaleechee C	29.24	340	P	P	04 27 53.3	+2.4
T57A	Hurt	29.29	348	P	P	04 27 52.0	+0.7
	baz=165,SNR=22						
T57A	Hurt	29.29	348	P	P	04 27 52.6	+1.4
T57A				IAmb	IAmb	04 27 53.6	
	comp=Z,88nm,1.1s						
PB01	IPOC Station P	29.29	175	P	P	04 27 50.7	-0.8
PB01				IAMs_20	IAMs_20	04 38 40.2	
	comp=Z,2µm,18.0s						
VBMS	Vicksburg	29.31	327	P	P	04 27 52.7	+1.2
	baz=140,SNR=5.6						
VBMS	Vicksburg	29.31	327	P	P	04 27 52.9	+1.4
VBMS				IAmb	IAmb	04 27 59.3	
	comp=Z,81nm,0.7s						
CPCT	Cooper Cave	29.31	339	P	P	04 27 53.8	+2.2
CPCT				IAmb	IAmb	04 27 59.5	
	comp=Z,58nm,0.8s						
V52A	Sevierville	29.35	341	P	P	04 27 54.0	+2.1
W50A	Signal Mountai	29.38	338	P	P	04 27 54.1	+2.0
W50A				IAmb	IAmb	04 28 00.1	
	comp=Z,69nm,0.8s						
S61A	Accomac	29.41	354	P	P	04 27 53.2	+0.9
	baz=173						
X48A	Hartselle	29.43	334	P	P	04 27 54.2	+1.7
X48A				IAmb	IAmb	04 27 55.4	
	comp=Z,52nm,0.8s						
U54A	Nelsons Funny	29.45	344	P	P	04 27 53.9	+1.1
	baz=160,SNR=14						
U54A	Nelsons Funny	29.45	344	P	P	04 27 54.7	+2.0
U54A				IAmb	IAmb	04 27 56.4	
	comp=Z,78nm,0.9s						
T56A	Rocky Mt	29.48	347	P	P	04 27 54.0	+1.0
	baz=164,SNR=10						
S60A	Water View	29.55	353	P	P	04 27 54.8	+1.3
	baz=171,SNR=12						
V51A	Loudon	29.57	339	P	P	04 27 55.9	+2.1
V51A				IAmb	IAmb	04 27 57.1	
	comp=Z,108nm,0.9s						
SWET	Sewanee	29.63	337	P	P	04 27 56.0	+1.6
S58A	Poland Farm, P	29.66	350	P	P	04 27 55.3	+0.7
	baz=168,SNR=9.6						
S58A	Poland Farm, P	29.66	350	P	P	04 27 56.5	+2.0
S59A	Mechanicsville	29.69	352	P	P	04 27 55.9	+1.1
	baz=170,SNR=17						
342A	Flagon Creek P	29.71	323	P	P	04 27 57.0	+2.0
342A				IAmb	IAmb	04 27 58.2	
	comp=Z,84nm,1.1s						
BLA	Blacksburg	29.75	346	P	P	04 27 56.7	+1.3
	baz=163,SNR=9.4						
BLA	Blacksburg	29.75	346	P	P	04 27 57.3	+1.9
BLA				pmax	pmax		
	comp=Z,64nm,1.0s						
BLA	Blacksburg	29.75	346	P	P	04 27 57.3	+1.9
BLA				IAmb	IAmb	04 27 58.3	
	comp=Z,64nm,0.9s						
SMTB	Santa Maria do	29.77	124	eP	P	04 27 57.6	+1.8
441A	DeRidder	29.79	321	P	P	04 27 58.2	+2.5
PB07	IPOC Station P	29.93	176	P	P	04 27 57.2	-0.1
PB07				IAmb	IAmb	04 28 07.8	
	comp=Z,71nm,0.9s						
PB07				IAMs_20	IAMs_20	04 38 51.3	
	comp=Z,2µm,22.0s						
S57A	Dark Hollow, R	29.97	349	P	P	04 27 58.2	+0.9
	baz=166,SNR=16						
S57A	Dark Hollow, R	29.97	349	P	P	04 27 58.7	+1.4
S57A				IAmb	IAmb	04 28 04.5	
	comp=Z,54nm,0.8s						
R58B	Mineral	29.98	351	P	P	04 27 58.1	+0.8
	baz=168						
R58B	Mineral	29.98	351	P	P	04 27 59.2	+1.9
TZTN	Tazewell	29.98	341	P	P	04 27 58.8	+1.4
	baz=157,SNR=11						
TZTN	Tazewell	29.98	341	P	P	04 27 59.6	+2.2
TZTN				IAMs_20	IAMs_20	04 42 02.4	
	comp=Z,2µm,19.0s						
S56A	Natural Bridge	30.01	348	P	P	04 27 58.3	+0.7
	baz=165						
ROSB	Rosrio	30.01	111	eP	P	04 27 59.3	+1.3
R61A	Willards	30.02	355	P	P	04 27 58.6	+0.8
	baz=174						
PB09	IPOC Station P	30.06	175	P	P	04 27 58.7	+0.3
PB09				IAMs_20	IAMs_20	04 39 02.5	
	comp=Z,2µm,20.0s						
R60A	Leonardtown, M	30.09	353	P	P	04 27 59.9	+1.5
	baz=171						
R59A	King George, V	30.10	352	P	P	04 27 59.7	+1.3
	baz=170,SNR=17						
Y45A	Yeager Farm, C	30.10	330	P	P	04 28 01.2	+2.7
Y45A				IAmb	IAmb	04 28 20.5	
	comp=Z,89nm,1.1s						
CBN	Corbin Frederi	30.14	352	P	P	04 27 59.8	+1.1
	baz=170,SNR=13						
CBN	Corbin Frederi	30.14	352	P	P	04 28 00.4	+1.6
143A	Socs Landing,	30.16	326	P	P	04 28 00.8	+1.8
143A				IAmb	IAmb	04 28 01.6	
	comp=Z,63nm,1.1s						
R58A	Rapidan	30.32	351	P	P	04 28 01.6	+1.1
	baz=168,SNR=13						
PLAL	Pickwick Lake	30.33	333	P	P	04 28 02.1	+1.6
PLAL				IAmb	IAmb	04 28 08.0	
	comp=Z,85nm,0.8s						
PLAL				IAMs_20	IAMs_20	04 41 58.4	
	comp=Z,2µm,19.0s						
R57A	Stanardsville	30.41	350	P	P	04 28 02.6	+1.4
	baz=167,SNR=9.8						
V48A	Smith Brothers	30.44	336	P	P	04 28 03.2	+1.6
V48A				IAmb	IAmb	04 28 04.6	
	comp=Z,117nm,0.9s						
S54A	Dingess, Beckl	30.52	345	P	P	04 28 03.5	+1.3
	baz=162,SNR=8.2						
S54A	Dingess, Beckl	30.52	345	P	P	04 28 03.8	+1.6
S54A				IAmb	IAmb	04 28 09.9	
	comp=Z,49nm,0.8s						
PB04	IPOC Station P	30.52	176	P	P	04 28 03.2	+0.7
PB04				IAmb	IAmb	04 28 07.3	
	comp=Z,87nm,1.1s						
PB04				IAMs_20	IAMs_20	04 39 20.8	
	comp=Z,2µm,20.0s						
CLTN	Cedars of Leba	30.55	337	P	P	04 28 04.4	+1.9
CLTN				IAmb	IAmb	04 28 05.5	
	comp=Z,52nm,1.0s						
OXF	Oxford	30.56	331	P	P	04 28 03.2	+0.7
	baz=145,SNR=9.4						
OXF	Oxford	30.56	331	P	P	04 28 03.2	+0.7
OXF				pmax	pmax		
	comp=Z,48nm,0.9s						
OXF	Oxford	30.56	331	P	P	04 28 03.2	+0.7
OXF				IAmb	IAmb	04 28 09.3	
	comp=Z,48nm,0.8s						
Q61A	Milford	30.57	355	P	P	04 28 03.9	+1.3
	baz=174						
Q59A	Harwood	30.69	353	P	P	04 28 04.9	+1.3
	baz=171						
U49A	Red Boiling Sp	30.72	338	P	P	04 28 05.7	+1.7
U49A				IAmb	IAmb	04 28 06.8	
	comp=Z,52nm,1.1s						
Q60A	Greensboro	30.74	354	P	P	04 28 05.7	+1.6
	baz=173,SNR=10						
Q60A	Greensboro	30.74	354	P	P	04 28 06.1	+2.0
R54A	Victor	30.80	346	P	P	04 28 06.1	+1.4
	baz=163,SNR=16						
T50A	Nancy	30.84	340	P	P	04 28 07.7	+2.7
T50A				IAmb	IAmb	04 28 08.2	
	comp=Z,77nm,0.9s						
PP1B	Ponte de Pedra	30.85	147	eP	P	04 28 06.7	+1.4
LVC	Limon Verde	30.89	174	P	P	04 28 05.2	-0.8
	comp=Z,25nm,0.7s,baz=6.1,slow=4.8,SNR=35						
LVC	Limon Verde	30.89	174	P	P	04 28 05.8	-0.2
LVC				IAmb	IAmb	04 28 12.0	
	comp=Z,36nm,0.7s						
LVC	Limon Verde	30.89	174	IAMs_20	IAMs_20	04 39 54.8	
	comp=Z,2µm,19.0s						
LVC	Limon Verde	30.89	174	eP	P	04 28 05.4	-0.6
Q58A	Fox Den Farm,	30.91	351	P	P	04 28 06.6	+1.0
	baz=169,SNR=16						
PB06	IPOC Station P	30.93	176	P	P	04 28 07.6	+1.5
PB06				IAmb	IAmb	04 28 17.2	
	comp=Z,66nm,1.1s						
HKT	Hockley	30.97	317	c iP	P	04 28 07.2	+1.1
HKT				pmax	pmax		
	comp=Z,110nm,1.7s						
HKT	Hockley	30.97	317	P	P	04 28 07.0	+0.8
HKT				IAmb	IAmb	04 28 09.0	
	comp=Z,57nm,1.1s						
W45A	Hickory Valley	30.98	332	P	P	04 28 07.4	+1.2
YJA	Yavi	30.98	168	eP	P	04 28 04.6	-2.2
S51A	Beattyville	31.00	342	P	P	04 28 08.1	+1.7
S51A				IAmb	IAmb	04 28 09.4	
	comp=Z,48nm,0.9s						
KVTX	Kingsville	31.01	311	P	P	04 28 08.4	+1.8
KVTX				IAmb	IAmb	04 28 13.9	
	comp=Z,87nm,0.8s						
KVTX				IAMs_20	IAMs_20	04 40 07.6	
	comp=Z,2µm,19.0s						
Q57A	Strasburg	31.11	350	P	P	04 28 08.5	+1.2
	baz=168						
PEXB	Peixe	31.15	130	eP	P	04 28 09.0	+1.0
R53A	Hurricane	31.18	345	P	P	04 28 10.4	+2.4
R53A				IAmb	IAmb	04 28 15.5	
	comp=Z,43nm,0.7s						
ARAG	Araguaiana, MT	31.18	140	eP	P	04 28 08.7	+0.5
WVT	Waverly	31.19	335	P	P	04 28 08.9	+0.8
	baz=149						
WVT	Waverly	31.19	335	P	P	04 28 08.6	+0.5
WVT				pmax	pmax		
	comp=Z,103nm,1.1s						
WVT				MLR	MLR		
	comp=Z,2µm,21.0s						
WVT	Waverly	31.19	335	P	P	04 28 08.6	+0.5
WVT				IAmb	IAmb	04 28 11.1	
	comp=Z,103nm,1.1s						
WVT	Waverly	31.19	335	IAMs_20	IAMs_20	04 41 37.4	
	comp=Z,2µm,21.0s						
Q56A	Snyder Ridge,	31.25	349	P	P	04 28 10.5	+1.8
	baz=166,SNR=10						
Q56A	Snyder Ridge,	31.25	349	P	P	04 28 10.9	+2.3
Q56A				IAmb	IAmb	04 28 12.1	
	comp=Z,65nm,1.1s						
SDMD	Soldier’s Deli	31.25	353	P	P	04 28 10.1	+1.5
CCAR	Cane Creek	31.29	327	P	P	04 28 10.9	+1.9
X43A	Marvell	31.29	329	P	P	04 28 10.3	+1.3
	baz=142						
P61A	Hammonton	31.32	356	P	P	04 28 10.2	+1.1
	baz=175						
Z41A	Richland Creek	31.36	325	P	P	04 28 10.4	+0.8
	baz=138,SNR=15						
P58A	Pank, Wackersv	31.39	352	P	P	04 28 10.6	+0.8
	baz=170,SNR=7.1						
NATX	Nacogdoches	31.39	321	P	P	04 28 10.8	+0.8
	baz=133,SNR=7.8						
NATX	Nacogdoches	31.39	321	P	P	04 28 11.4	+1.4
NATX				IAmb	IAmb	04 28 19.8	
	comp=Z,80nm,1.1s						
P59A	Jarrettsville	31.40	354	P	P	04 28 11.0	+1.1
	baz=172						
PB15	IPOC Station P	31.44	175	IAMs_20	IAMs_20	04 39 46.1	
	comp=Z,2µm,21.0s						
P57A	Homestead Farm	31.49	351	P	P	04 28 12.3	+1.7
	baz=169,SNR=15						
P57A	Homestead Farm	31.49	351	P	P	04 28 13.0	+2.4
P57A				IAmb	IAmb	04 28 14.2	
	comp=Z,83nm,1.1s						
P60A	Greenville	31.52	355	P	P	04 28 12.0	+1.1
	baz=173,SNR=11						
P60A	Greenville	31.52	355	P	P	04 28 12.9	+2.0
P60A				IAmb	IAmb	04 28 14.1	
	comp=Z,74nm,1.1s						
Q54A	Coxs Mills	31.53	347	P	P	04 28 13.3	+2.3
Q54A				IAmb	IAmb	04 28 19.0	
	comp=Z,63nm,0.8s						
Q53A	Leroy	31.57	346	P	P	04 28 13.0	+1.5
	baz=162,SNR=25						
PSUB	Penn St. - Bra	31.62	355	P	P	04 28 13.8	+1.9
PSUB				IAmb	IAmb	04 28 14.4	
	comp=Z,48nm,0.9s						
WUPA	West Chester U	31.64	355	P	P	04 28 14.0	+2.1
P56A	Dayton Farm, R	31.64	350	P	P	04 28 13.9	+1.9
	baz=167,SNR=34						
T47A	Sharon Grove	31.64	337	P	P	04 28 13.2	+1.1
PB10	IPOC Station P	31.67	177	IAMs_20	IAMs_20	04 41 10.2	
	comp=Z,2µm,20.0s						
O61A	Allentown	31.72	356	P	P	04 28 14.0	+1.3
	baz=175,SNR=7.5						

MVL	**Millersville**	**31.78**	**354**	P	**P**	**04 28 15.3**	**+2.2**
MVL				IAmb	IAmb	04 28 20.9	
	comp=Z,68nm,0.7s						
R50A	**Paris**	**31.82**	**342**	P	**P**	**04 28 15.7**	**+2.1**
UTMT	**University of**	**31.82**	**334**	P	**P**	**04 28 15.7**	**+2.1**
WLAR	**White Oak Lake**	**31.85**	**325**	P	**P**	**04 28 15.8**	**+1.9**
Q52A	**Bidwell**	**31.86**	**345**	P	**P**	**04 28 15.9**	**+1.9**
Q52A				IAmb	IAmb	04 28 21.7	
	comp=Z,86nm,0.8s						
O58A	**Lewisberry**	**31.97**	**353**	P	**P**	**04 28 16.4**	**+1.5**
	baz=171,SNR=28						
MCWV	**Mont Chateau**	**31.97**	**349**	P	**P**	**04 28 16.4**	**+1.5**
	baz=165,SNR=14						
MCWV	**Mont Chateau**	**31.97**	**349**	P	**P**	**04 28 17.4**	**+2.5**
HBAR	**Harrisburg**	**32.00**	**331**	P	**P**	**04 28 16.8**	**+1.6**
HJA	**Humahuaca**	**32.00**	**168**	*e*P	**P**	**04 28 14.3**	**-1.5**
O60A	**Telford**	**32.00**	**355**	P	**P**	**04 28 16.5**	**+1.3**
	baz=174						
GNAR	**Gosnell**	**32.03**	**332**	P	**P**	**04 28 17.5**	**+2.0**
PAGS	**Pennsylvania G**	**32.05**	**353**	P	**P**	**04 28 18.0**	**+2.4**
PAGS				IAmb	IAmb	04 28 18.5	
	comp=Z,86nm,1.1s						
O59A	**Robesonia**	**32.07**	**354**	P	**P**	**04 28 17.3**	**+1.5**
	baz=172,SNR=11						
R49A	**Shelbyville**	**32.10**	**340**	P	**P**	**04 28 17.8**	**+1.7**
R49A				IAmb	IAmb	04 28 23.6	
	comp=Z,58nm,0.8s						
P53A	**Whipple**	**32.14**	**346**	P	**P**	**04 28 18.4**	**+1.9**
P53A				IAmb	IAmb	04 28 19.5	
	comp=Z,80nm,0.9s						
O57A	**Amberson**	**32.14**	**352**	P	**P**	**04 28 17.9**	**+1.4**
	baz=170,SNR=23						
Q51A	**Peebles**	**32.21**	**343**	P	**P**	**04 28 19.6**	**+2.5**
Q51A				IAmb	IAmb	04 28 20.3	
	comp=Z,64nm,0.9s						
237A	**Washetta, Mont**	**32.28**	**320**	P	**P**	**04 28 19.0**	**+1.3**
LUPA	**Lehigh Univers**	**32.28**	**355**	P	**P**	**04 28 19.8**	**+2.2**
X40A	**Basin Creek Fa**	**32.29**	**327**	P	**P**	**04 28 18.9**	**+1.2**
	baz=139,SNR=14						
X40A	**Basin Creek Fa**	**32.29**	**327**	P	**P**	**04 28 19.0**	**+1.2**
T45A	**Paducah**	**32.30**	**335**	P	**P**	**04 28 19.2**	**+1.4**
BRNJ	**Basking Ridge**	**32.31**	**356**	P	**P**	**04 28 19.9**	**+2.1**
O56A	**Blue Knob Stat**	**32.34**	**351**	P	**P**	**04 28 20.0**	**+1.8**
	baz=168,SNR=26						
O56A	**Blue Knob Stat**	**32.34**	**351**	P	**P**	**04 28 20.6**	**+2.4**
N61A	**South Mountain**	**32.36**	**357**	P	**P**	**04 28 19.6**	**+1.3**
	baz=176,SNR=9.6						
CPNY	**Central Park**	**32.38**	**357**	IAmb	IAmb	04 28 21.0	
	comp=Z,58nm,1.1s						
HENM	**Henderson Moun**	**32.40**	**333**	P	**P**	**04 28 21.0**	**+2.3**
WCI	**Wyandotte Cave**	**32.43**	**339**	P	**P**	**04 28 20.0**	**+1.0**
	baz=153						
WCI	**Wyandotte Cave**	**32.43**	**339**	P	**P**	**04 28 20.9**	**+1.9**
WCI				pmax	pmax		
	comp=Z,72nm,1.0s						
WCI				MLR	MLR		
	comp=Z,2µm,20.0s						
WCI	**Wyandotte Cave**	**32.43**	**339**	P	**P**	**04 28 20.9**	**+1.9**
WCI				IAmb	IAmb	04 28 21.7	
	comp=Z,72nm,0.9s						
WCI				IAMs_20	IAMs_20	04 42 40.2	
	comp=Z,2µm,20.0s						
P52A	**Corning**	**32.46**	**345**	P	**P**	**04 28 20.7**	**+1.4**
	baz=161,SNR=22						
P52A	**Corning**	**32.46**	**345**	P	**P**	**04 28 20.8**	**+1.6**
W41B	**Gary Mavity, V**	**32.50**	**328**	P	**P**	**04 28 20.2**	**+0.6**
	baz=141,SNR=28						
N60A	**Cedar Hill Far**	**32.53**	**356**	P	**P**	**04 28 21.2**	**+1.4**
	baz=174,SNR=12						
833A	**Chaparral WMA,**	**32.55**	**311**	P	**P**	**04 28 19.7**	**-0.5**
	baz=123,SNR=13						
P51A	**Williamsport**	**32.56**	**344**	P	**P**	**04 28 21.6**	**+1.5**
O54A	**Avella**	**32.59**	**348**	P	**P**	**04 28 22.3**	**+2.0**
O54A				IAmb	IAmb	04 28 23.3	
	comp=Z,45nm,0.8s						
PAL	**Palisades**	**32.59**	**357**	P	**P**	**04 28 21.3**	**+1.0**
	baz=177,SNR=8.0						
PAL	**Palisades**	**32.59**	**357**	IAmb	IAmb	04 28 22.8	
	comp=Z,67nm,0.9s						
SSPA	**Standing Stone**	**32.60**	**352**	P	**P**	**04 28 22.0**	**+1.6**
	baz=169						
SSPA	**Standing Stone**	**32.60**	**352**	P	**P**	**04 28 22.8**	**+2.4**
ZAIG	**Zacatecas**	**32.61**	**300**	P	**P**	**04 28 22.6**	**+1.5**
ZAIG				IAmb	IAmb	04 28 28.7	
	comp=Z,55nm,0.9s						
WHAR	**Wooly Hollow**	**32.61**	**328**	P	**P**	**04 28 21.7**	**+1.1**
WHAR				IAmb	IAmb	04 28 22.9	
	comp=Z,105nm,1.0s						
Z38A	**Mt. Pleasant**	**32.63**	**323**	P	**P**	**04 28 22.5**	**+1.7**
Z38A				IAmb	IAmb	04 28 23.3	
	comp=Z,93nm,0.9s						
N59A	**State Game Lan**	**32.63**	**355**	P	**P**	**04 28 22.3**	**+1.5**
	baz=173,SNR=24						
N59A	**State Game Lan**	**32.63**	**355**	P	**P**	**04 28 22.7**	**+2.0**
N58A	**Sunbury**	**32.65**	**353**	P	**P**	**04 28 22.1**	**+1.3**
	baz=172,SNR=19						
N58A	**Sunbury**	**32.65**	**353**	P	**P**	**04 28 22.6**	**+1.7**
N58A				IAmb	IAmb	04 28 23.9	
	comp=Z,84nm,0.9s						
LCAR	**Lake Charles**	**32.65**	**331**	P	**P**	**04 28 22.3**	**+1.3**
LCAR				IAmb	IAmb	04 28 28.0	
	comp=Z,87nm,1.0s						
435B	**Jarrell**	**32.67**	**317**	P	**P**	**04 28 21.8**	**+0.6**
	baz=128,SNR=12						
435B	**Jarrell**	**32.67**	**317**	P	**P**	**04 28 21.9**	**+0.8**
N57A	**Milroy**	**32.67**	**352**	P	**P**	**04 28 22.3**	**+1.2**
	baz=170,SNR=25						
ODNJ	**Ogdensburg**	**32.71**	**356**	P	**P**	**04 28 23.7**	**+2.3**
ODNJ				IAmb	IAmb	04 28 24.2	
	comp=Z,57nm,0.9s						
USIN	**University of**	**32.71**	**337**	P	**P**	**04 28 23.0**	**+1.6**
WSPT	**Westport, CT**	**32.73**	**358**	P	**P**	**04 28 23.6**	**+2.0**
WSPT				IAmb	IAmb	04 28 24.1	
	comp=Z,53nm,0.9s						
WSPT				IAMs_20	IAMs_20	04 40 04.0	
	comp=Z,2µm,22.0s						
MIAR	**Mount Ida**	**32.74**	**326**	P	**P**	**04 28 22.0**	**+0.2**
	baz=138,SNR=18						
MIAR	**Mount Ida**	**32.74**	**326**	P	**P**	**04 28 22.6**	**+0.9**
MIAR				pmax	pmax		
	comp=Z,39nm,1.0s						
MIAR	**Mount Ida**	**32.74**	**326**	P	**P**	**04 28 22.6**	**+0.9**
TRNY	**Table Rock, Ra**	**32.75**	**357**	P	**P**	**04 28 23.0**	**+1.3**
O53A	**New Philadelph**	**32.83**	**347**	P	**P**	**04 28 23.9**	**+1.5**
	baz=163,SNR=17						
O53A	**New Philadelph**	**32.83**	**347**	P	**P**	**04 28 24.4**	**+2.0**
AQDB	**Aquidauana**	**32.83**	**151**	*e*P	**P**	**04 28 24.0**	**+1.3**
O52A	**Adamsville**	**32.84**	**346**	P	**P**	**04 28 23.8**	**+1.2**
PBMO	**Poplar Bluff**	**32.88**	**332**	P	**P**	**04 28 23.9**	**+1.0**
PBMO				IAmb	IAmb	04 28 25.3	
	comp=Z,97nm,1.1s						
M61A	**Granite Spring**	**32.89**	**358**	P	**P**	**04 28 23.9**	**+1.0**
	baz=177,SNR=9.1						
ASTB	**Santa Barbara**	**32.92**	**167**	*e*P	**P**	**04 28 21.1**	**-2.5**
N56A	**West Decatur**	**32.93**	**351**	P	**P**	**04 28 24.8**	**+1.5**
	baz=169,SNR=20						
M63A	**Gales Ferry**	**32.95**	**0**	P	**P**	**04 28 25.0**	**+1.6**
	baz=180,SNR=6.7						
M63A	**Gales Ferry**	**32.95**	**0**	IAmb	IAmb	04 28 26.4	
	comp=Z,80nm,0.9s						
M63A				IAMs_20	IAMs_20	04 41 51.7	
	comp=Z,1µm,19.0s						
M60A	**Port Jervis**	**32.95**	**356**	P	**P**	**04 28 24.7**	**+1.2**
	baz=175,SNR=8.9						
FCAR	**Ozark Folk Cen**	**32.99**	**329**	P	**P**	**04 28 24.4**	**+0.5**
FCAR				IAmb	IAmb	04 28 25.8	
	comp=Z,99nm,1.0s						
M62A	**Hamden**	**33.00**	**359**	P	**P**	**04 28 25.0**	**+1.1**
	baz=178						
AZAP	**Zapla**	**33.06**	**168**	*e*P	**P**	**04 28 22.5**	**-2.4**
P49A	**Miami Univ. Ec**	**33.09**	**342**	P	**P**	**04 28 25.4**	**+0.7**
	baz=157,SNR=15						
P49A	**Miami Univ. Ec**	**33.09**	**342**	P	**P**	**04 28 26.1**	**+1.4**
P49A				IAmb	IAmb	04 28 28.0	
	comp=Z,89nm,1.1s						
P49A				IAMs_20	IAMs_20	04 43 31.7	
	comp=Z,2µm,19.0s						
M64A	**Tiverton**	**33.11**	**1**	P	**P**	**04 28 26.2**	**+1.4**
	baz=182,SNR=5.4						
S44A	**Carbondale**	**33.12**	**335**	P	**P**	**04 28 26.0**	**+1.0**
M58A	**Price's Panora**	**33.15**	**354**	P	**P**	**04 28 26.7**	**+1.5**
	baz=172,SNR=32						
M57A	**Sunshine Farm,**	**33.19**	**353**	P	**P**	**04 28 27.2**	**+1.6**
	baz=171,SNR=25						
M57A	**Sunshine Farm,**	**33.19**	**353**	P	**P**	**04 28 27.6**	**+2.1**
M59A	**Waymart**	**33.22**	**355**	P	**P**	**04 28 27.2**	**+1.3**
	baz=174,SNR=28						
ACSO	**Alum Creek Sta**	**33.24**	**345**	P	**P**	**04 28 27.2**	**+1.2**
	baz=160,SNR=18						
ACSO	**Alum Creek Sta**	**33.24**	**345**	P	**P**	**04 28 28.0**	**+2.0**
ACSO				IAmb	IAmb	04 28 29.1	
	comp=Z,85nm,1.0s						
P48A	**Milroy**	**33.24**	**341**	IAmb	IAmb	04 28 32.8	
	comp=Z,37nm,0.8s						
N54A	**Moraine State**	**33.26**	**349**	P	**P**	**04 28 27.9**	**+1.6**
	baz=166,SNR=22						
N54A	**Moraine State**	**33.26**	**349**	P	**P**	**04 28 28.5**	**+2.3**
N54A				IAMs_20	IAMs_20	04 43 22.6	
	comp=Z,1µm,19.0s						
KSPA	**Keystone Colle**	**33.27**	**355**	P	**P**	**04 28 28.3**	**+2.1**
N53A	**Lisbon**	**33.28**	**348**	P	**P**	**04 28 28.1**	**+1.7**
N53A				IAmb	IAmb	04 28 29.4	
	comp=Z,53nm,1.0s						
KSCT	**Kent School, K**	**33.30**	**358**	P	**P**	**04 28 28.0**	**+1.5**
KSCT				IAmb	IAmb	04 28 29.2	
	comp=Z,70nm,1.1s						
WHTX	**Lake Whitney,**	**33.33**	**318**	P	**P**	**04 28 27.6**	**+0.6**
	baz=130,SNR=6.3						
WHTX	**Lake Whitney,**	**33.33**	**318**	IAmb	IAmb	04 28 34.0	
	comp=Z,78nm,1.1s						
W39A	**Magazine**	**33.34**	**327**	P	**P**	**04 28 27.6**	**+0.7**
	baz=138,SNR=40						
W39A	**Magazine**	**33.34**	**327**	P	**P**	**04 28 28.0**	**+1.1**
W39A				IAmb	IAmb	04 28 29.5	
	comp=Z,96nm,1.1s						
BLO	**Bloomington**	**33.35**	**339**	P	**P**	**04 28 28.8**	**+1.8**
BLO				pmax	pmax		
	comp=Z,81nm,0.9s						
BLO	**Bloomington**	**33.35**	**339**	P	**P**	**04 28 28.8**	**+1.8**
BLO				IAmb	IAmb	04 28 35.3	
	comp=Z,81nm,0.9s						
T42A	**Van Buren**	**33.40**	**332**	P	**P**	**04 28 28.2**	**+0.7**
T42A				IAmb	IAmb	04 28 29.6	
	comp=Z,86nm,1.1s						
L63A	**North Scituate**	**33.41**	**1**	P	**P**	**04 28 28.3**	**+0.8**
	baz=181						
L64A	**Middleborough**	**33.50**	**2**	P	**P**	**04 28 28.9**	**+0.7**
	baz=182						
M55A	**Ridgway**	**33.54**	**351**	P	**P**	**04 28 30.3**	**+1.6**
OLIL	**Olney**	**33.54**	**337**	P	**P**	**04 28 29.9**	**+1.2**
O49A	**Covington**	**33.57**	**343**	P	**P**	**04 28 30.6**	**+1.7**
L62A	**Suffield**	**33.58**	**359**	P	**P**	**04 28 30.0**	**+1.0**
	baz=179						
L60A	**Shokan**	**33.59**	**357**	P	**P**	**04 28 30.6**	**+1.6**
	baz=176,SNR=11						
BDFB	**Brasilia**	**33.68**	**135**	P	**P**	**04 28 31.3**	**+1.0**
	comp=Z,46nm,0.9s,baz=304,slow=12,SNR=32						
BDFB				LR	LR	04 43 10.7	
	comp=Z,2µm,21.9s,baz=304,slow=38						
BDFB	**Brasilia**	**33.68**	**135**	P	**P**	**04 28 31.2**	**+1.0**
BDFB				IAmb	IAmb	04 28 37.4	
	comp=Z,68nm,1.0s						
U40A	**Yellville**	**33.73**	**329**	P	**P**	**04 28 31.1**	**+0.8**
	baz=141,SNR=114						
U40A	**Yellville**	**33.73**	**329**	P	**P**	**04 28 31.1**	**+0.8**
M54A	**Oil Creek Stat**	**33.73**	**350**	P	**P**	**04 28 31.8**	**+1.5**
	baz=166,SNR=29						
N51A	**Ashland**	**33.73**	**346**	P	**P**	**04 28 32.0**	**+1.7**
N51A				IAmb	IAmb	04 28 37.8	
	comp=Z,77nm,0.8s						
L58A	**Harry Jones Me**	**33.76**	**355**	P	**P**	**04 28 32.0**	**+1.5**
	baz=173,SNR=26						
L61A	**Hillsdale 1, H**	**33.76**	**358**	P	**P**	**04 28 31.9**	**+1.4**
	baz=177,SNR=10						
X37A	**Clayton**	**33.79**	**324**	IAmb	IAmb	04 28 33.6	
	comp=Z,51nm,0.9s						
L57A	**Andrews Acres**	**33.81**	**354**	P	**P**	**04 28 32.5**	**+1.5**
	baz=172,SNR=33						
L59A	**Walton**	**33.84**	**356**	P	**P**	**04 28 32.7**	**+1.5**
	baz=175,SNR=10						
L59A	**Walton**	**33.84**	**356**	IAmb	IAmb	04 28 34.2	
	comp=Z,56nm,0.8s						
M53A	**WI Miller and**	**33.86**	**348**	P	**P**	**04 28 32.7**	**+1.3**
	baz=165,SNR=5.7						
BCX	**Boston College**	**33.89**	**1**	IAmb	IAmb	04 28 34.5	
	comp=Z,86nm,1.0s						
BINY	**Binghamton**	**33.92**	**355**	P	**P**	**04 28 33.4**	**+1.4**
	baz=173,SNR=22						
SDBA	**SAO DESIDERIO**	**33.96**	**127**	*e*P	**P**	**04 28 33.7**	**+1.1**
NBMO	**Morrinhos-CE**	**33.97**	**109**	*e*P	**P**	**04 28 34.2**	**+1.5**
L61B	**Northampton**	**34.00**	**359**	P	**P**	**04 28 33.7**	**+1.0**
	baz=179,SNR=5.7						
L56A	**Greenwood**	**34.03**	**353**	P	**P**	**04 28 34.1**	**+1.2**
	baz=170,SNR=43						
JCT	**Junction City**	**34.03**	**314**	P	**P**	**04 28 33.7**	**+0.6**
	baz=125,SNR=11						
HRV	**Adam Dziewonsk**	**34.05**	**1**	P	**P**	**04 28 34.5**	**+1.4**
	baz=181						
HRV	**Adam Dziewonsk**	**34.05**	**1**	P	**P**	**04 28 34.4**	**+1.4**
HRV				pmax	pmax		
	comp=Z,81nm,0.9s						
HRV	**Adam Dziewonsk**	**34.05**	**1**	P	**P**	**04 28 34.4**	**+1.4**
HRV				IAmb	IAmb	04 28 36.3	
	comp=Z,81nm,0.9s						
MGMO	**Mountain Grove**	**34.06**	**330**	IAmb	IAmb	04 28 36.0	
	comp=Z,84nm,1.1s						
Z35A	**Perchaven, San**	**34.07**	**321**	IAmb	IAmb	04 28 35.7	
	comp=Z,113nm,1.1s						
M52A	**Chesterland**	**34.09**	**348**	IAmb	IAmb	04 28 36.4	
	comp=Z,85nm,1.1s						
K60A	**Five Rivers En**	**34.20**	**358**	P	**P**	**04 28 35.5**	**+1.2**
	baz=177,SNR=6.4						
K62A	**Royalston**	**34.21**	**360**	P	**P**	**04 28 35.6**	**+1.2**
	baz=180,SNR=7.9						
K62A	**Royalston**	**34.21**	**360**	IAmb	IAmb	04 28 37.4	
	comp=Z,62nm,0.9s						
K61A	**Williamstown**	**34.23**	**358**	P	**P**	**04 28 35.8**	**+1.2**
	baz=178						
K63A	**Dunstable**	**34.24**	**1**	P	**P**	**04 28 36.1**	**+1.5**
	baz=181,SNR=9.8						
K63A	**Dunstable**	**34.24**	**1**	IAmb	IAmb	04 28 37.8	
	comp=Z,85nm,0.9s						
L53A	**Girard**	**34.27**	**349**	P	**P**	**04 28 36.2**	**+1.2**
	baz=166,SNR=17						
CCM	**Cathedral Cave**	**34.30**	**333**	P	**P**	**04 28 35.7**	**+0.4**
	baz=145						
CCM	**Cathedral Cave**	**34.30**	**333**	P	**P**	**04 28 35.9**	**+0.6**
CCM				pmax	pmax		
	comp=Z,104nm,1.0s						
CCM				MLR	MLR		
	comp=Z,1µm,18.0s						
CCM	**Cathedral Cave**	**34.30**	**333**	P	**P**	**04 28 35.9**	**+0.6**
CCM				IAmb	IAmb	04 28 37.8	
	comp=Z,104nm,0.9s						
CCM	**Cathedral Cave**	**34.30**	**333**	IAMs_20	IAMs_20	04 44 36.5	
	comp=Z,1µm,18.0s						
SLM	**Saint Louis**	**34.33**	**334**	IAmb	IAmb	04 28 38.1	
	comp=Z,107nm,1.1s						
ERPA	**Erie**	**34.38**	**350**	P	**P**	**04 28 37.1**	**+1.1**
	baz=166,SNR=10						
K59A	**Cooperstown**	**34.41**	**356**	P	**P**	**04 28 37.2**	**+1.0**
	baz=175,SNR=12						
K58A	**Earlville**	**34.45**	**355**	P	**P**	**04 28 37.8**	**+1.3**
	baz=174,SNR=17						
K58A	**Earlville**	**34.45**	**355**	IAmb	IAmb	04 28 39.5	
	comp=Z,95nm,1.0s						
K57A	**Scipio Center**	**34.50**	**354**	P	**P**	**04 28 38.2**	**+1.3**
	baz=172,SNR=20						
K56A	**Middlesex**	**34.55**	**353**	P	**P**	**04 28 38.6**	**+1.1**
	baz=171,SNR=16						
SFIN	**Lafayette**	**34.62**	**340**	P	**P**	**04 28 39.1**	**+1.1**
	baz=153,SNR=27						
FSA	**Cafayete**	**34.73**	**170**	*e*P	**P**	**04 28 36.8**	**-2.6**
J62A	**Henniker**	**34.77**	**0**	P	**P**	**04 28 40.5**	**+1.2**
	baz=180,SNR=5.9						
J60A	**Lant Hill Farm**	**34.81**	**358**	P	**P**	**04 28 41.3**	**+1.7**
	baz=178,SNR=19						
J63A	**Strafford**	**34.84**	**1**	P	**P**	**04 28 41.0**	**+1.2**
	baz=182,SNR=5.9						
J61A	**Chester**	**34.89**	**359**	P	**P**	**04 28 41.8**	**+1.5**
	baz=179,SNR=9.7						
O44A	**Mansfield**	**34.92**	**338**	IAmb	IAmb	04 28 47.2	
	comp=Z,48nm,0.8s						
ACCN	**Adirondack Com**	**34.96**	**358**	IAmb	IAmb	04 28 44.0	
	comp=Z,66nm,1.1s						
R40A	**Maddies Statio**	**34.96**	**332**	IAmb	IAmb	04 28 42.9	
	comp=Z,75nm,0.9s						
TUL1	**Leonard**	**34.97**	**325**	P	**P**	**04 28 40.8**	**-0.3**
	baz=136,SNR=23						
TUL1	**Leonard**	**34.97**	**325**	IAmb	IAmb	04 28 47.3	
	comp=Z,82nm,0.9s						
S39A	**Bolivar**	**35.00**	**330**	IAmb	IAmb	04 28 43.2	
	comp=Z,60nm,0.8s						
FFD	**Franklin Falls**	**35.02**	**1**	IAmb	IAmb	04 28 44.4	
	comp=Z,64nm,1.0s						
FFD				IAMs_20	IAMs_20	04 43 00.4	
	comp=Z,1µm,18.0s						
W35A	**Tecumseh**	**35.06**	**323**	IAmb	IAmb	04 28 44.0	
	comp=Z,119nm,1.0s						
J56A	**Wolcott**	**35.07**	**354**	P	**P**	**04 28 42.9**	**+1.0**
	baz=172,SNR=8.8						
J59A	**Piesco**	**35.07**	**357**	P	**P**	**04 28 43.0**	**+1.0**
	baz=176,SNR=9.5						
ITRB	**Iturama**	**35.11**	**143**	*e*P	**P**	**04 28 43.9**	**+1.4**
J57A	**Williamstown**	**35.12**	**355**	P	**P**	**04 28 43.2**	**+0.9**
	baz=173,SNR=23						
J57A	**Williamstown**	**35.12**	**355**	P	**P**	**04 28 43.4**	**+1.1**
ABTX	**Abilene, Hawle**	**35.18**	**317**	P	**P**	**04 28 43.2**	**+0.2**
	baz=128,SNR=26						
ABTX	**Abilene, Hawle**	**35.18**	**317**	IAmb	IAmb	04 28 49.8	
	comp=Z,89nm,0.9s						
IPMB	**Ipameri, GO**	**35.19**	**138**	*e*P	**P**	**04 28 44.3**	**+1.1**
L48A	**N Adams**	**35.23**	**344**	IAmb	IAmb	04 28 45.8	
	comp=Z,104nm,0.9s						
J54A	**Appleton**	**35.29**	**352**	IAmb	IAmb	04 28 51.2	
	comp=Z,64nm,0.8s						
I58A	**Old Forge**	**35.33**	**356**	P	**P**	**04 28 45.3**	**+1.1**
	baz=175,SNR=26						
AAM	**Ann Arbor**	**35.36**	**345**	P	**P**	**04 28 45.3**	**+1.0**
	baz=160						
AAM	**Ann Arbor**	**35.36**	**345**	IAmb	IAmb	04 28 53.0	
	comp=Z,74nm,0.6s						
I60A	**Shoreham**	**35.41**	**358**	P	**P**	**04 28 46.0**	**+1.3**
	baz=178						
I62A	**Tamworth**	**35.42**	**1**	P	**P**	**04 28 46.2**	**+1.3**
	baz=181						
I61A	**Oroboro, Fairl**	**35.48**	**360**	P	**P**	**04 28 46.4**	**+1.0**
	baz=180						
AHML	**Horco Molle**	**35.50**	**170**	*e*P	**P**	**04 28 43.1**	**-2.7**
I64A	**Boothbay**	**35.53**	**3**	P	**P**	**04 28 46.9**	**+1.2**
	baz=184,SNR=5.6						
HDIL	**Hopedale**	**35.58**	**337**	P	**P**	**04 28 46.2**	**-0.1**
	baz=150,SNR=7.7						
HDIL	**Hopedale**	**35.58**	**337**	IAmb	IAmb	04 28 52.5	
	comp=Z,78nm,0.8s						
HDIL				IAMs_20	IAMs_20	04 43 49.6	
	comp=Z,2µm,22.0s						
OK031	**S. Brethren Rd**	**35.60**	**324**	P	**P**	**04 28 46.5**	**-0.1**
I63A	**Otisfield**	**35.62**	**2**	P	**P**	**04 28 47.9**	**+1.3**
	baz=182						
I63A	**Otisfield**	**35.62**	**2**	IAmb	IAmb	04 28 49.6	
	comp=Z,62nm,1.1s						
I57A	**Carthage**	**35.62**	**356**	P	**P**	**04 28 47.8**	**+1.2**
	baz=174,SNR=7.7						
QUOK	**Quay**	**35.68**	**325**	IAmb	IAmb	04 28 53.4	
	comp=Z,91nm,0.8s						
GO03	**Copiap**	**35.74**	**177**	P	**P**	**04 28 47.5**	**-0.3**
LBNH	**Lisbon**	**35.78**	**0**	P	**P**	**04 28 49.5**	**+1.4**
	baz=180,SNR=15						
LBNH	**Lisbon**	**35.78**	**0**	P	**P**	**04 28 49.4**	**+1.4**
LBNH				pmax	pmax		
	comp=Z,84nm,1.0s						
LBNH	**Lisbon**	**35.78**	**0**	P	**P**	**04 28 49.4**	**+1.4**
LBNH				IAmb	IAmb	04 28 51.6	
	comp=Z,84nm,0.9s						
L46A	**Eue Claire**	**35.83**	**342**	IAmb	IAmb	04 28 50.8	
	comp=Z,118nm,0.9s						
BCOK	**Bluff Creek, N**	**35.85**	**323**	IAmb	IAmb	04 28 50.7	
	comp=Z,106nm,0.9s						
P40A	**Paris**	**35.86**	**333**	IAmb	IAmb	04 28 54.9	
	comp=Z,73nm,0.9s						
VT1	**Waterbury**	**35.88**	**359**	IAmb	IAmb	04 28 51.8	
	comp=Z,68nm,1.2s						
WMOK	**Wichita Mounta**	**35.95**	**321**	P	**P**	**04 28 49.0**	**-0.6**
	baz=131,SNR=8.0						
H58A	**Gabriels**	**36.01**	**357**	P	**P**	**04 28 50.5**	**+0.6**
	baz=176,SNR=6.4						
JANB	**Januaria**	**36.01**	**130**	*e*P	**P**	**04 28 51.0**	**+0.6**
PCMB	**Pacaembu**	**36.08**	**146**	*e*P	**P**	**04 28 51.9**	**+1.1**
H61A	**Lyndonville**	**36.08**	**0**	P	**P**	**04 28 51.3**	**+0.7**
	baz=180,SNR=9.8						
H60A	**Morristown**	**36.11**	**359**	P	**P**	**04 28 52.1**	**+1.3**
	baz=179,SNR=17						
H57A	**Richville**	**36.12**	**356**	P	**P**	**04 28 52.0**	**+1.1**
	baz=174,SNR=13						
H62A	**Milan**	**36.13**	**1**	P	**P**	**04 28 52.5**	**+1.5**
	baz=182,SNR=8.1						
HQIL	**Hanson Quary C**	**36.15**	**340**	IAMs_20	IAMs_20	04 46 04.7	
	comp=Z,3µm,18.0s						
I51A	**Listowel**	**36.20**	**349**	P	**P**	**04 28 52.8**	**+1.2**
	baz=165,SNR=12						
H59A	**Cadyville**	**36.22**	**358**	P	**P**	**04 28 52.7**	**+1.0**
	baz=177,SNR=11						
LONY	**Lake Ozonia**	**36.23**	**357**	P	**P**	**04 28 53.4**	**+1.5**
	baz=176,SNR=8.7						
H63A	**New Sharon**	**36.25**	**2**	P	**P**	**04 28 53.7**	**+1.8**
	baz=183						
H64A	**Troy**	**36.27**	**3**	P	**P**	**04 28 53.8**	**+1.6**
	baz=185						
TXAR	**Lajitas Array**	**36.29**	**309**	P	**P**	**04 28 53.0**	**+0.4**
	comp=Z,20nm,0.7s,baz=128,slow=8.4,SNR=204						
TXAR				PcP	**PcP**	**04 31 18.7**	**+1.2**
	comp=Z,12nm,0.7s,baz=131,slow=6.1,SNR=12						
TXAR				pPcP		04 31 24.1	
	comp=Z,11nm,0.6s,baz=139,slow=5.7,SNR=14						
TXAR				P3KPbc		04 59 28.9	
	comp=Z,0.5nm,0.9s,baz=253,slow=1.3,SNR=4.4						
TXAR	**Lajitas Array**	**36.29**	**309**	P	**P**	**04 28 52.0**	**-0.6**
TX31	**Lajitas Ar. Si**	**36.29**	**309**	IAmb	IAmb	04 28 54.5	
	comp=Z,86nm,0.8s						
TRCB	**Terra Rica**	**36.31**	**149**	*e*P	**P**	**04 28 53.1**	**+0.3**
DELO	**Deloro Mine**	**36.38**	**353**	IAmb	IAmb	04 28 56.1	
	comp=Z,55nm,0.8s						
FRNY	**Flat Rock**	**36.40**	**358**	IAmb	IAmb	04 28 56.1	
	comp=Z,70nm,1.0s						
EMMW	**East Machias**	**36.48**	**6**	IAmb	IAmb	04 29 01.4	
	comp=Z,55nm,0.7s						
L44A	**Lake County Fo**	**36.51**	**340**	P	**P**	**04 28 54.3**	**+0.1**
	baz=153						
L44A	**Lake County Fo**	**36.51**	**340**	IAMs_20	IAMs_20	04 46 15.2	
	comp=Z,2µm,18.0s						
H53A	**Bobcaygeon**	**36.56**	**352**	P	**P**	**04 28 55.4**	**+0.8**
	baz=169,SNR=14						
H66A	**Whiting**	**36.56**	**6**	P	**P**	**04 28 55.6**	**+1.0**
	baz=188						
P38A	**Dawn**	**36.62**	**332**	IAmb	IAmb	04 29 01.5	
	comp=Z,91nm,0.9s						
G60A	**Masonville**	**36.64**	**360**	P	**P**	**04 28 56.6**	**+1.3**
	baz=180,SNR=11						
G63A	**Kingsbury**	**36.72**	**3**	P	**P**	**04 28 57.3**	**+1.3**
	baz=184,SNR=5.9						
G58A	**Ormstown**	**36.73**	**358**	P	**P**	**04 28 57.2**	**+1.1**
	baz=177,SNR=11						
G57A	**Newington**	**36.73**	**357**	P	**P**	**04 28 57.1**	**+1.1**
	baz=175,SNR=20						
G62A	**West of Eustis**	**36.79**	**2**	P	**P**	**04 28 58.0**	**+1.4**
	baz=182,SNR=17						
G62A	**West of Eustis**	**36.79**	**2**	IAmb	IAmb	04 28 59.8	
	comp=Z,116nm,1.1s						
HPIG		**36.81**	**304**	IAmb	IAmb	04 29 03.6	
	comp=Z,55nm,0.8s						
SADO	**Sadowa**	**36.83**	**352**	IAmb	IAmb	04 29 04.0	
	comp=Z,100nm,0.7s						
G61A	**St-Isidore-de-**	**36.83**	**1**	P	**P**	**04 28 58.5**	**+1.5**
	baz=181,SNR=9.6						
PLVO	**Plevna**	**36.84**	**354**	IAmb	IAmb	04 29 04.3	
	comp=Z,62nm,0.8s						
PKME	**Peaks-Kenny Pk**	**36.89**	**3**	P	**P**	**04 28 58.6**	**+1.2**
	baz=184						
G64A	**Maxfield**	**36.91**	**4**	P	**P**	**04 28 58.9**	**+1.3**
	baz=185						
GGN	**Saint George**	**36.94**	**6**	IAmb	IAmb	04 29 05.6	
	comp=Z,79nm,0.7s						
G65A	**Princeton**	**36.95**	**5**	P	**P**	**04 28 59.3**	**+1.4**
	baz=187,SNR=5.8						
G65A	**Princeton**	**36.95**	**5**	IAmb	IAmb	04 29 01.1	
	comp=Z,78nm,1.1s						
G65A				IAMs_20	IAMs_20	04 45 33.8	
	comp=Z,1µm,19.0s						
L42A	**Oliver, Polo**	**36.98**	**338**	IAmb	IAmb	04 29 04.2	
	comp=Z,89nm,0.8s						
AC05	**El Transito**	**36.98**	**177**	IAmb	IAmb	04 29 05.0	
	comp=Z,74nm,0.8s						
VCA	**Vinchina**	**37.03**	**174**	*e*P	**P**	**04 28 56.1**	**-2.9**
CYA	**Choya**	**37.04**	**171**	*e*P	**P**	**04 28 56.2**	**-2.7**
LCO	**Las Campanas**	**37.13**	**178**	P	**P**	**04 28 58.8**	**-1.2**
LCO				pmax	pmax		
	comp=Z,54nm,1.2s						
LCO				MLR	MLR		
	comp=Z,2µm,19.0s						
LCO	**Las Campanas**	**37.13**	**178**	P	**P**	**04 28 58.8**	**-1.2**

LCO	Las Campanas	37.13	178	IAMs_20	IAMs_20	04 44 21.9	
	comp=Z,2µm,19.0s						
U32A	Winter Ranch,	37.17	323	IAmb	IAmb	04 29 01.3	
	comp=Z,127nm,1.1s						
BB19B	Bebedouro	37.25	142	eP	P	04 29 01.7	+0.8
CPUP	Villa Florida	37.30	158	P	P	04 28 59.1	-2.0
	comp=Z,10nm,0.8s,baz=341,slow=7.9,SNR=26						
CPUP				LR	LR	04 43 41.2	
	comp=Z,1µm,18.4s,baz=338,slow=35						
CPUP	Villa Florida	37.30	158	P	P	04 28 59.1	-2.0
CPUP				pmax	pmax		
	comp=Z,12nm,0.9s						
CPUP	Villa Florida	37.30	158	P	P	04 28 59.1	-2.0
G54A	Lake Saint Pet	37.31	353	P	P	04 29 01.8	+0.8
	baz=170,SNR=28						
F63A	Nahmakanta, Br	37.34	3	P	P	04 29 02.0	+0.8
	baz=185						
F59A	Saint Guilaume	37.40	359	P	P	04 29 02.9	+1.2
	baz=179,SNR=5.4						
N38A	Joes South For	37.42	333	IAmb	IAmb	04 29 03.5	
	comp=Z,96nm,1.1s						
F57A	Harrington	37.42	357	P	P	04 29 02.8	+0.9
	baz=176						
F60A	Warwick	37.51	0	P	P	04 29 03.5	+0.8
	baz=180,SNR=13						
F61A	St Evariste	37.53	1	P	P	04 29 04.1	+1.2
	baz=182,SNR=5.6						
F64A	Sherman	37.55	4	P	P	04 29 04.0	+1.1
	baz=186,SNR=5.2						
NBPA	Parau_RN	37.56	111	eP	P	04 29 05.3	+1.8
KSU1	Kansas State U	37.74	328	P	P	04 29 04.0	-0.8
	baz=138,SNR=26						
KSU1	Kansas State U	37.74	328	IAmb	IAmb	04 29 10.4	
	comp=Z,95nm,0.9s						
ACLC	CERRO LA CRUZ	37.85	173	eP	P	04 29 03.4	-2.5
ALGO	Algonquin Park	37.85	353	P	P	04 29 06.3	+0.7
	baz=170,SNR=45						
AMTX	Amarillo	37.89	319	P	P	04 29 06.2	-0.1
	baz=128						
AMTX	Amarillo	37.89	319	IAmb	IAmb	04 29 08.9	
	comp=Z,99nm,0.9s						
LMN	Caledonia Moun	37.92	8	IAmb	IAmb	04 29 08.7	
	comp=Z,81nm,0.9s						
E58A	La Victoria	37.93	359	P	P	04 29 07.3	+1.1
	baz=178,SNR=16						
GLMI	Grayling	37.96	345	P	P	04 29 07.3	+0.7
	baz=160,SNR=7.0						
GLMI	Grayling	37.96	345	IAmb	IAmb	04 29 16.4	
	comp=Z,106nm,0.7s						
JFWS	Jewell Farm	37.98	338	P	P	04 29 06.9	+0.2
	baz=150,SNR=36						
JFWS	Jewell Farm	37.98	338	IAMs_20	IAMs_20	04 46 39.0	
	comp=Z,2µm,18.0s						
E57A	Chemin Saint G	38.00	358	P	P	04 29 08.0	+1.1
	baz=177						
E61A	Lac Etchemin	38.00	2	P	P	04 29 07.9	+1.1
	baz=182,SNR=7.8						
E59A	St. Maurice	38.03	360	P	P	04 29 08.0	+1.0
	baz=179						
MSTX	Muleshoe	38.09	317	P	P	04 29 07.7	-0.2
	baz=125,SNR=55						
MSTX	Muleshoe	38.09	317	IAmb	IAmb	04 29 14.2	
	comp=Z,117nm,1.1s						
E63A	Oxbow	38.10	4	P	P	04 29 09.1	+1.4
	baz=186,SNR=7.4						
E64A	Bridgewater	38.14	5	P	P	04 29 09.1	+1.1
	baz=187,SNR=9.5						
E55A	Montcerf-Lytto	38.15	356	P	P	04 29 09.0	+0.9
	baz=174,SNR=25						
E56A	St. Veronique	38.17	357	P	P	04 29 09.2	+1.0
	baz=175,SNR=7.9						
PTGB	Pitanga	38.19	150	eP	P	04 29 09.0	+0.2
SCIA	State Center	38.31	334	P	P	04 29 09.6	0.0
	baz=145,SNR=12						
SCIA	State Center	38.31	334	IAMs_20	IAMs_20	04 45 57.8	
	comp=Z,1µm,20.0s						
AROD	Rodeo	38.34	176	eP	P	04 29 07.8	-2.5
PQI	Presque Isle	38.37	4	IAMs_20	IAMs_20	04 46 45.4	
	comp=Z,1µm,18.0s						
R32A	Long Quarter,	38.40	325	IAmb	IAmb	04 29 11.6	
	comp=Z,76nm,1.0s						
FRTB	Fartura	38.40	146	eP	P	04 29 11.6	+1.1
G45A	Suttons Bay	38.43	344	IAmb	IAmb	04 29 17.6	
	comp=Z,106nm,0.7s						
D60A	Saint Jean D'O	38.47	1	P	P	04 29 11.9	+1.2
	baz=182,SNR=16						
H43A	Windswept, Lux	38.52	342	IAmb	IAmb	04 29 17.9	
	comp=Z,117nm,0.8s						
D59A	Saint-Raymond	38.55	0	P	P	04 29 12.5	+1.0
	baz=180,SNR=11						
D58A	Chemin du LacG	38.65	359	P	P	04 29 13.3	+1.0
	baz=179,SNR=13						
D56A	ZEC Mazanza, M	38.66	357	P	P	04 29 13.3	+0.9
	baz=176						
D55A	Sainte-Anne-du	38.67	356	P	P	04 29 13.5	+1.0
	baz=175						
RCBR	Riachuelo	38.71	110	P	P	04 29 15.2	+1.9
RCBR				pmax	pmax		
	comp=Z,57nm,0.9s						
RCBR				MLR	MLR		
	comp=Z,3µm,20.0s						
RCBR	Riachuelo	38.71	110	P	P	04 29 15.2	+1.9
RCBR	Riachuelo	38.71	110	IAMs_20	IAMs_20	04 45 31.9	
	comp=Z,3µm,20.0s						
RCBR	Riachuelo	38.71	110	eP	P	04 29 15.4	+2.1
D62A	Allapoint, All	38.71	3	P	P	04 29 14.0	+1.2
	baz=185,SNR=15						
D63A	Stockholm	38.73	4	P	P	04 29 14.2	+1.3
	baz=186,SNR=9.1						
MNTX	Cornudas Mount	38.73	312	P	P	04 29 13.6	+0.3
	baz=120,SNR=109						
MNTX	Cornudas Mount	38.73	312	IAmb	IAmb	04 29 16.0	
	comp=Z,89nm,1.0s						
K38A	Parkersburg	38.74	335	IAmb	IAmb	04 29 14.4	
	comp=Z,106nm,1.0s						
D61A	St Aubert, Com	38.78	2	P	P	04 29 15.0	+1.6
	baz=183,SNR=48						
ACCO	Cerro Coronel	38.79	176	i P	P	04 29 12.7	-1.3
APLL	PUNTA DE LOS L	38.86	172	eP	P	04 29 11.8	-2.5
LATQ	La Tuque	38.93	359	P	P	04 29 15.6	+0.9
	baz=179,SNR=12						
GDU01	Guandu, BA	38.99	124	eP	P	04 29 16.3	+0.8
CBKS	Cedar Bluff	39.24	325	P	P	04 29 16.9	-0.5
	baz=134,SNR=21						
CBKS	Cedar Bluff	39.24	325	IAmb	IAmb	04 29 18.8	
	comp=Z,81nm,0.9s						
SLBS	Sierra La Lagu	39.33	297	P	P	04 29 20.3	+1.9
SLBS				IAmb	IAmb	04 29 26.4	
	comp=Z,107nm,1.1s						
N33A	J Bar K, Exete	39.39	329	IAmb	IAmb	04 29 24.3	
	comp=Z,92nm,0.8s						
ACHE	Chepes	39.59	173	eP	P	04 29 17.9	-2.7
BSCB	Bom Sucesso	39.60	138	eP	P	04 29 21.7	+1.1
VAO	Valinhos	39.66	142	eP	P	04 29 22.3	+1.2
LPIG	La Paz	39.76	298	LR	LR	04 49 35.8	
	comp=Z,337nm,18.4s,baz=124,slow=42						
SPB	Sao Paulo	39.82	143	P	P	04 29 21.5	-0.9
SPB	Sao Paulo	39.82	143	eP	P	04 29 23.4	+1.0
VLDQ	Val d'Or	39.92	354	IAmb	IAmb	04 29 26.6	
	comp=Z,109nm,1.1s						
G40A	Rib Lake	40.01	340	IAmb	IAmb	04 29 25.9	
	comp=Z,98nm,1.0s						
E43A	Lone Tree Farm	40.03	344	P	P	04 29 24.2	+0.4
E43A				IAmb	IAmb	04 29 30.3	
	comp=Z,67nm,0.7s						
TCA	Tanti	40.07	170	eP	P	04 29 22.1	-2.4
BGNE	Belgrade	40.24	329	P	P	04 29 25.1	-0.7
	baz=138,SNR=14						
BGNE	Belgrade	40.24	329	P	P	04 29 25.2	-0.6
BGNE				IAmb	IAmb	04 29 27.2	
	comp=Z,187nm,1.1s						
ITAB	Concordia	40.28	152	eP	P	04 29 26.5	+0.4
AUSP	Uspallata	40.40	176	eP	P	04 29 25.2	-2.2
COWI	Conover	40.40	342	P	P	04 29 27.4	+0.5
COWI				IAmb	IAmb	04 29 29.1	
	comp=Z,97nm,0.9s						
COWI				IAMs_20	IAMs_20	04 48 23.4	
	comp=Z,1µm,19.0s						
PET01	Itanhaem-SP	40.45	144	eP	P	04 29 28.6	+1.1
NBRF	Rio Formoso -	40.50	114	eP	P	04 29 29.3	+1.2
ITQB	Itaqui	40.59	159	eP	P	04 29 27.5	-1.1
SJMB	Sao Joao De Ma	40.61	132	eP	P	04 29 30.1	+1.1
PARB	Paraibuna	40.73	141	eP	P	04 29 31.1	+1.1
LSQQ	Lebel-sur-Quev	40.81	355	P	P	04 29 30.9	+0.7
	baz=173						
NAN01	Guarapari, ES	40.88	130	eP	P	04 29 32.3	+1.1
SPMN	Marine on St.	40.91	338	P	P	04 29 30.5	-0.6
	baz=148,SNR=18						
121A	Cookes Peak, D	40.92	311	P	P	04 29 33.0	+1.3
	baz=118,SNR=16						
121A	Cookes Peak, D	40.92	311	IAmb	IAmb	04 29 34.8	
	comp=Z,85nm,1.1s						
BSFB	Barra de Sao F	40.94	131	eP	P	04 29 32.5	+0.8
MRA	San Martin	40.96	172	eP	P	04 29 29.7	-2.1
T25A	Trinidad	41.01	319	P	P	04 29 33.9	+1.5
	baz=126,SNR=52						
Y22D	IRIS PASSCAL I	41.04	314	P	P	04 29 33.2	+0.6
	baz=121						
Y22D	IRIS PASSCAL I	41.04	314	IAmb	IAmb	04 29 41.0	
	comp=Z,62nm,0.8s						
KSCO	Kaye Shedlock'	41.06	323	P	P	04 29 32.5	-0.1
	baz=130						
D41A	Chassel	41.09	343	IAmb	IAmb	04 29 34.7	
	comp=Z,106nm,0.9s						
ANMO	Albuquerque	41.16	315	P	P	04 29 33.8	+0.2
	baz=122						
ANMO	Albuquerque	41.16	315	c iP	P	04 29 34.0	+0.4
ANMO				pmax	pmax		
	comp=Z,45nm,1.7s						
ANMO	Albuquerque	41.16	315	P	P	04 29 34.1	+0.4
PEL	Peldehue	41.25	178	IAMs_20	IAMs_20	04 46 55.0	
	comp=Z,1µm,20.0s						
ECSD	EROS Data Cent	41.28	333	P	P	04 29 33.1	-1.1
	baz=142,SNR=32						
VAS01	Vassouras-RJ	41.38	138	eP	P	04 29 36.3	+1.0
MT05	Renca	41.50	178	P	P	04 29 35.6	-0.6
319A	Douglas	41.53	309	IAmb	IAmb	04 29 55.5	
	comp=Z,100nm,0.9s						
MATQ	Matagami	41.57	355	P	P	04 29 37.1	+0.7
	baz=172,SNR=47						
RIB01	Linhares ES	41.57	132	eP	P	04 29 37.2	+0.3
E38A	The Farm, Brul	41.64	340	IAmb	IAmb	04 29 44.3	
	comp=Z,70nm,0.7s						
DUB01	Friburgo-RJ	41.96	137	eP	P	04 29 41.0	+1.0
SDCO	Great Sand Dun	42.07	319	P	P	04 29 42.3	+1.1
	baz=126,SNR=74						
ALF01	Guarapari-ES	42.15	133	eP	P	04 29 42.8	+1.3
SRIG	Santa Rosalia	42.40	302	IAmb	IAmb	04 29 51.0	
	comp=Z,112nm,1.0s						
Q24A	Divide	42.57	321	P	P	04 29 45.6	+0.4
	baz=127,SNR=12						
DRLN	Deer Lake	42.60	14	P	P	04 29 44.3	-0.6
EYMN	Ely	42.79	341	P	P	04 29 46.4	-0.1
	baz=151,SNR=66						
EYMN	Ely	42.79	341	IAMs_20	IAMs_20	04 48 47.5	
	comp=Z,1µm,20.0s						
BO02	Sierra Bellavi	42.89	178	P	P	04 29 46.7	-0.8
BO02				IAmb	IAmb	04 29 53.5	
	comp=Z,62nm,0.8s						
SUSD	Miller	42.90	332	P	P	04 29 47.0	-0.5
	baz=139,SNR=29						
S22A	4UR Ranch, Cre	42.94	318	P	P	04 29 49.3	+1.1
	baz=124,SNR=52						
TUC	Tucson	43.09	309	P	P	04 29 49.8	+0.5
	baz=115						
TUC	Tucson	43.09	309	P	P	04 29 49.3	+0.1
TUC				pmax	pmax		
	comp=Z,52nm,1.2s						
TUC	Tucson	43.09	309	P	P	04 29 49.3	+0.1
ISCO	Idaho Springs	43.36	322	P	P	04 29 52.6	+1.0
	baz=127,SNR=34						
X18A	Snowflake	43.45	313	IAmb	IAmb	04 30 00.2	
	comp=Z,79nm,1.1s						
W18A	Petrified Fore	43.57	313	P	P	04 29 54.2	+1.0
	baz=119,SNR=20						
W18A	Petrified Fore	43.57	313	IAmb	IAmb	04 29 56.8	
	comp=Z,149nm,1.1s						
PLTB	Pedras Altas	43.59	157	eP	P	04 29 51.8	-1.4
MVCO	Mesa Verde	43.76	317	P	P	04 29 55.5	+0.7
	baz=122,SNR=27						
MVCO	Mesa Verde	43.76	317	P	P	04 29 56.3	+1.5
MVCO				IAMs_20	IAMs_20	04 50 18.3	
	comp=Z,1µm,19.0s						
SMCO	Snowmass	43.84	320	IAMs_20	IAMs_20	04 48 49.6	
	comp=Z,1µm,22.0s						
B35A	Bob, Littlefor	43.90	339	IAmb	IAmb	04 30 01.6	
	comp=Z,89nm,0.7s						
D32A	Dogwood Acres,	44.14	336	IAmb	IAmb	04 30 03.4	
	comp=Z,72nm,0.6s						
N23A	Red Feather La	44.23	323	P	P	04 29 59.2	+0.7
	baz=128,SNR=21						
PV01	Paradox Valley	44.30	318	IAmb	IAmb	04 30 02.3	
	comp=Z,69nm,0.9s						
PV02	Paradox Valley	44.45	318	IAmb	IAmb	04 30 03.3	
	comp=Z,98nm,1.1s						
PV13	Radium Mtn., P	44.48	318	IAmb	IAmb	04 30 03.4	
	comp=Z,102nm,0.9s						
PV07	Paradox Valley	44.51	318	IAmb	IAmb	04 30 03.7	
	comp=Z,83nm,1.1s						
214A	Organ Pipe Nat	44.52	308	P	P	04 30 01.4	+0.7
	baz=113,SNR=35						
214A	Organ Pipe Nat	44.52	308	IAmb	IAmb	04 30 03.1	
	comp=Z,46nm,0.9s						
PV03	Paradox Valley	44.55	318	IAmb	IAmb	04 30 08.1	
	comp=Z,49nm,0.9s						
PV12	Saucer Basin,	44.55	318	IAmb	IAmb	04 30 04.8	
	comp=Z,87nm,1.0s						
PV18	Skein Mesa, Pa	44.58	318	IAmb	IAmb	04 30 04.0	
	comp=Z,61nm,1.0s						
PV11	David Mesa, Pa	44.59	318	IAmb	IAmb	04 30 08.4	
	comp=Z,70nm,0.8s						
PV05	Paradox Valley	44.62	317	P	P	04 30 01.7	0.0
PV05				IAmb	IAmb	04 30 03.8	
	comp=Z,70nm,0.8s						
PV16	Nyswonger Mesa	44.62	318	IAmb	IAmb	04 30 13.3	
	comp=Z,45nm,0.9s						
AGMN	Agassiz Nation	44.63	337	IAMs_20	IAMs_20	04 49 40.0	
	comp=Z,2µm,20.0s						
PV22	Blue Mesa, Par	44.66	318	IAmb	IAmb	04 30 09.3	
	comp=Z,50nm,0.9s						
PV10	Paradox Valley	44.74	318	IAmb	IAmb	04 30 17.7	
	comp=Z,40nm,0.8s						
PV23	Carpenter Ridg	44.76	318	IAmb	IAmb	04 30 10.0	
	comp=Z,50nm,0.8s						
WUAZ	Wupatki	44.94	313	P	P	04 30 05.3	+1.2
	baz=118,SNR=80						
WUAZ	Wupatki	44.94	313	IAmb	IAmb	04 30 07.5	
	comp=Z,92nm,0.9s						
O20A	White River Ci	45.19	320	P	P	04 30 07.1	+1.0
	baz=125,SNR=16						
RSSD	Black Hills	45.22	328	P	P	04 30 06.5	+0.1
	baz=133						
RSSD	Black Hills	45.22	328	P	P	04 30 06.3	0.0
RSSD				pmax	pmax		
	comp=Z,38nm,0.9s						
RSSD	Black Hills	45.22	328	P	P	04 30 06.3	0.0
RWWY	Rawlins	45.46	323	IAmb	IAmb	04 30 10.1	
	comp=Z,83nm,0.9s						
K22A	Casper	45.65	324	P	P	04 30 09.9	+0.2
	baz=129,SNR=25						
K22A	Casper	45.65	324	IAmb	IAmb	04 30 11.8	
	comp=Z,63nm,1.1s						
MDND	Maddock	45.79	334	P	P	04 30 10.5	0.0
	baz=140,SNR=31						
U15A	North Rim	46.02	314	IAmb	IAmb	04 30 20.6	
	comp=Z,80nm,1.0s						
ULM	Lac du Bonnet	46.25	339	P	P	04 30 13.7	-0.4
	comp=Z,122nm,0.8s,baz=147,slow=8.1,SNR=163						
ULM	Lac du Bonnet	46.25	339	c iP	P	04 30 13.8	-0.3
PDMCI	Parker Dam,Lak	46.47	310	P	P	04 30 16.4	+0.4
	baz=114,SNR=17						
GLA	Glamis	46.51	308	P	P	04 30 16.9	+0.4
	baz=112,SNR=16						
GLA	Glamis	46.51	308	IAmb	IAmb	04 30 23.5	
	comp=Z,59nm,0.8s						
W13A	Hualapai Mount	46.60	311	IAmb	IAmb	04 30 24.9	
	comp=Z,44nm,1.1s						
CPBX	Cerro Prieto	46.65	307	IAmb	IAmb	04 30 36.8	
	comp=Z,49nm,1.1s						
KNB	Kanab	46.67	314	P	P	04 30 18.9	+1.1
KNB				pmax	pmax		
	comp=Z,81nm,0.9s						
KNB	Kanab	46.67	314	P	P	04 30 18.9	+1.1
LC01	Cunco	46.97	180	IAmb	IAmb	04 30 36.8	
	comp=Z,36nm,0.9s						
ESJX	Sierra Juarez	47.01	306	IAmb	IAmb	04 30 27.8	
	comp=Z,45nm,1.2s						
IRM	Iron Mountain	47.17	309	P	P	04 30 22.2	+0.6
	baz=113,SNR=31						
BC3	Big Chuckawall	47.22	309	P	P	04 30 22.5	+0.4
	baz=112,SNR=22						
SWSC	Sam W. Stewart	47.23	308	P	P	04 30 22.5	+0.5
	baz=112,SNR=17						
RMX	La Rumorosa	47.32	307	IAmb	IAmb	04 30 29.5	
	comp=Z,31nm,1.0s						
IKP	In-Ko-Pah, Jac	47.37	307	P	P	04 30 23.8	+0.6
	baz=111,SNR=12						
BW06	Boulder Array	47.51	323	P	P	04 30 24.5	+0.2
	baz=125,SNR=73						
BW06	Boulder Array	47.51	323	IAmb	IAmb	04 30 26.4	
	comp=Z,77nm,1.1s						
PD31	Pinedale Array	47.51	323	IAmb	IAmb	04 30 26.4	
	comp=Z,70nm,1.1s						
PDAR	Pinedale Array	47.51	323	P	P	04 30 24.9	+0.5
	comp=Z,31nm,0.9s,baz=124,slow=9.3,SNR=171						
PDAR				PcP	PcP	04 31 54.4	0.0
	comp=Z,9.6nm,0.9s,baz=120,slow=5.3,SNR=2.5						
CCX	Cicese	47.54	306	IAmb	IAmb	04 30 27.3	
	comp=Z,55nm,0.9s						
MONP2	Monument Peak	47.70	307	P	P	04 30 26.4	+0.4
	baz=111,SNR=14						
BELC	Belle Mtn. Jos	47.77	309	P	P	04 30 26.5	+0.1
	baz=112,SNR=24						
GMRC	Granite Mounta	47.81	310	P	P	04 30 27.1	+0.4
	baz=113,SNR=18						
TPFO	Pinon Flats	47.98	308	P	P	04 30 28.2	+0.2
	baz=112,SNR=12						
PFO	Pinyon Flats O	47.98	308	P	P	04 30 28.3	+0.3
	baz=112,SNR=12						
PFO	Pinyon Flats O	47.98	308	⇓iP	P	04 30 29.3	+1.2
PFO				pmax	pmax		
	comp=Z,50nm,1.5s						
PFO	Pinyon Flats O	47.98	308	P	P	04 30 29.2	+1.2
LAO	LASA Array	48.09	329	P	P	04 30 28.7	+0.1
	baz=132,SNR=12						
LAO	LASA Array	48.09	329	IAmb	IAmb	04 30 30.1	
	comp=Z,35nm,1.0s						
SHPR	Sheep Range	48.13	312	IAmb	IAmb	04 30 36.6	
	comp=Z,36nm,1.0s						
DUG	Dugway, Tooele	48.19	318	P	P	04 30 30.4	+0.8
	baz=120,SNR=27						
DUG	Dugway, Tooele	48.19	318	IAmb	IAmb	04 30 32.2	
	comp=Z,39nm,1.1s						
109C	Camp Elliot, M	48.23	307	P	P	04 30 30.3	+0.5
	baz=110,SNR=5.3						
109C	Camp Elliot, M	48.23	307	IAmb	IAmb	04 30 36.5	
	comp=Z,41nm,1.1s						
DGMT	Dagmar	48.31	332	P	P	04 30 31.1	+0.9
	baz=135,SNR=46						
DGMT	Dagmar	48.31	332	IAMs_20	IAMs_20	04 51 57.3	
	comp=Z,1µm,20.0s						
HEC	Hector,Ludlow	48.34	310	P	P	04 30 31.3	+0.6
	baz=113,SNR=56						
AHID	Auburn Hatcher	48.44	322	IAmb	IAmb	04 30 33.6	
	comp=Z,45nm,0.9s						
SPUT	South Promonto	48.51	319	P	P	04 30 31.9	-0.1
MURC	Murrieta	48.55	308	P	P	04 30 32.8	+0.5
	baz=111,SNR=10.0						
BBRC	Big Bear Solar	48.58	309	P	P	04 30 33.4	+0.6
	baz=112,SNR=12						
LOHW	Long Hollow	48.62	323	IAmb	IAmb	04 30 35.3	
	comp=Z,55nm,0.8s						
SNOW	Snow King Moun	48.62	323	IAmb	IAmb	04 30 36.2	
	comp=Z,57nm,1.1s						
SHOC	Shoshone, Teco	48.71	311	P	P	04 30 34.1	+0.6
	baz=114,SNR=35						
RLMT	Red Lodge	48.73	325	P	P	04 30 34.2	+0.4
	baz=127,SNR=59						
RLMT	Red Lodge	48.73	325	IAmb	IAmb	04 30 40.6	
	comp=Z,53nm,0.7s						
PLCA	Paso Flores	48.83	178	P	P	04 30 33.1	-1.2
	comp=Z,16nm,0.8s,baz=358,slow=8.4,SNR=54						
PLCA	Paso Flores	48.83	178	P	P	04 30 33.3	-1.0
PLCA	Paso Flores	48.83	178	eP	P	04 30 33.0	-1.3
RRX	Edison Barstow	48.86	310	P	P	04 30 35.0	+0.3
	baz=112						
GSC	Goldstone, Bar	48.88	310	P	P	04 30 35.4	+0.5
	baz=113,SNR=61						
GSC	Goldstone, Bar	48.88	310	IAmb	IAmb	04 30 37.2	
	comp=Z,58nm,0.8s						
FLWY	Flagg Ranch	48.95	323	IAmb	IAmb	04 30 39.0	
	comp=Z,32nm,0.9s						
H17A	Grant Village	49.05	324	P	P	04 30 37.6	+1.3
	baz=126,SNR=18						
TPNV	Topopah Spring	49.11	312	P	P	04 30 37.7	+0.9
	baz=114,SNR=55						
TPNV	Topopah Spring	49.11	312	IAmb	IAmb	04 30 39.6	
	comp=Z,50nm,0.9s						
BFSC	Mount Baldy Ra	49.14	309	P	P	04 30 36.9	0.0
	baz=111,SNR=7.1						
R11A	Troy Canyon, C	49.23	314	P	P	04 30 38.5	+0.9
	baz=116,SNR=24						
R11A	Troy Canyon, C	49.23	314	P	P	04 30 38.2	+0.6
FURC	Furnace Creek,	49.37	312	P	P	04 30 39.4	+1.0
	baz=113,SNR=37						
SCI2	San Clemente I	49.41	307	P	P	04 30 39.3	+0.4
	baz=109						
FMP	Fort Macarthur	49.45	308	P	P	04 30 39.1	-0.1
	baz=110						
LRMC	Laurel Mtn Rad	49.61	310	P	P	04 30 40.8	+0.3
	baz=112,SNR=32						
EDW2	Edwards Air Fo	49.63	309	P	P	04 30 40.8	+0.2
	baz=111,SNR=57						
DECC	Green Verdugo	49.67	308	P	P	04 30 41.0	+0.1
	baz=110						
MPMC	Manual Prospec	49.68	311	P	P	04 30 41.3	+0.1
	baz=113,SNR=30						
GRAC	Grapevine Rang	49.95	312	P	P	04 30 43.6	+0.6
	baz=113,SNR=16						
CWC	Cottonwood Cre	50.26	311	P	P	04 30 46.0	+0.5
	baz=112						
SNCC	San Nicolas Is	50.27	307	P	P	04 30 45.8	+0.3
	baz=109						
ISA	Isabella, Lake	50.27	310	P	P	04 30 45.9	+0.4
	baz=111,SNR=16						
ARVC	Arvin	50.35	309	P	P	04 30 46.7	+0.7
	baz=111,SNR=14						
BOZ	Bozeman (W)	50.36	325	P	P	04 30 46.9	+0.8
	baz=125,SNR=58						
BOZ	Bozeman (W)	50.36	325	IAmb	IAmb	04 30 48.5	
	comp=Z,58nm,1.1s						
RPN	Rapa Nui	50.45	224	LR	LR	04 49 12.3	
	comp=Z,259nm,19.1s,baz=35,slow=33						
SCZ2	Santa Cruz Isl	50.60	307	P	P	04 30 48.1	+0.2
	baz=109,SNR=8.3						
TIN	Tinemaha, Big	50.61	312	P	P	04 30 49.0	+0.9
	baz=113,SNR=12						
EGMT	Eagleton	50.78	328	P	P	04 30 49.7	+0.5
	baz=129,SNR=78						
EGMT	Eagleton	50.78	328	P	P	04 30 49.4	+0.2
DLMT	Dillon	50.78	324	IAmb	IAmb	04 30 56.7	
	comp=Z,57nm,1.0s						
VES	Vestal, Richgr	50.80	310	P	P	04 30 49.9	+0.5
	baz=111,SNR=47						
SBC	Santa Barbara	50.80	308	P	P	04 30 49.3	-0.1
	baz=110						
HLID	Hailey	50.92	321	P	P	04 30 50.9	+0.5
	baz=121,SNR=82						
PKM	Mcpherson Peak	51.03	309	P	P	04 30 51.8	+0.4
	baz=110,SNR=15						
NVAR	Mina Array Bea	51.20	313	P	P	04 30 53.5	+0.8
	comp=Z,17nm,0.7s,baz=120,slow=7.2,SNR=72						
NVAR				PcP	PcP	04 32 08.7	+0.8
	comp=Z,11nm,0.7s,baz=148,slow=4.1,SNR=6.8						
NVAR	Mina Array Bea	51.20	313	P	P	04 30 52.6	0.0
NVAR					PcP	04 32 09.0	+1.2
MLAC	Mammoth, Mammo	51.27	312	P	P	04 30 53.9	+0.7
	baz=113						
SMMC	Simmler	51.31	309	P	P	04 30 54.0	+0.6
	baz=110,SNR=19						
MDPB	Devils Postpil	51.45	312	IAmb	IAmb	04 31 01.8	
	comp=Z,56nm,1.1s						
PAGB	Antelope Grade	51.65	309	IAmb	IAmb	04 30 57.8	
	comp=Z,60nm,0.9s						
MFID	Camas Ranch	51.74	320	IAmb	IAmb	04 30 60.0	
	comp=Z,52nm,0.9s						
MFID				IAMs_20	IAMs_20	04 57 12.5	
	comp=Z,740nm,18.0s						
FFC	Flin Flon	52.07	338	P	P	04 30 58.1	-0.5
FFC				pmax	pmax		
	comp=Z,40nm,0.7s						
FFC				MLR	MLR		
	comp=Z,1µm,20.0s						
FFC	Flin Flon	52.07	338	P	P	04 30 58.1	-0.5
FFC				IAmb	IAmb	04 31 04.6	
	comp=Z,40nm,0.7s						
FFC	Flin Flon	52.07	338	IAMs_20	IAMs_20	04 54 29.9	
	comp=Z,1µm,20.0s						
PMPB	Monarch Peak	52.24	310	IAmb	IAmb	04 31 08.1	
	comp=Z,54nm,1.1s						
MSO	Missoula	52.38	325	P	P	04 31 01.5	+0.4
	baz=124,SNR=22						

MSO	Missoula	52.38	325	IAMs_20	IAMs_20	04 57 10.6	
	comp=Z,1µm,18.0s						
PNTR	Pine Nut	52.39	314	IAmb	IAmb	04 31 05.4	
	comp=Z,54nm,0.8s						
VCNR	Virginia City	52.51	314	IAmb	IAmb	04 31 04.8	
	comp=Z,64nm,0.9s						
CMB	Columbia Colle	52.56	312	IAMs_20	IAMs_20	04 56 48.3	
	comp=Z,662nm,18.0s						
SAO	San Andreas Ge	52.91	310	IAmb	IAmb	04 31 13.4	
	comp=Z,40nm,0.8s						
FCC	Fort Churchill	53.07	346	P	P	04 31 05.0	-0.9
FCC				pmax	pmax		
	comp=Z,25nm,0.8s						
FCC	Fort Churchill	53.07	346	P	P	04 31 05.0	-0.9
WVOR	Wild Horse Val	53.11	318	IAmb	IAmb	04 31 10.2	
	comp=Z,45nm,0.9s						
WVOR				IAMs_20	IAMs_20	04 53 11.8	
	comp=Z,790nm,22.0s						
WALA	Waterton Lakes	53.61	327	IAmb	IAmb	04 31 12.5	
	comp=Z,45nm,1.1s						
F10A	Beach Ranch, E	53.87	322	IAmb	IAmb	04 31 20.3	
	comp=Z,39nm,0.8s						
ORV	Oroville	53.93	313	IAmb	IAmb	04 31 14.8	
	comp=Z,34nm,0.9s						
ORV				IAMs_20	IAMs_20	04 57 07.5	
	comp=Z,823nm,20.0s						
I07A	Izee	54.40	319	IAmb	IAmb	04 31 18.7	
	comp=Z,36nm,0.9s						
O03E	Paynes Creek	54.42	314	P	P	04 31 15.8	-0.4
	baz=112,SNR=22						
G08A	Pilot Rock	54.60	321	IAmb	IAmb	04 31 24.2	
	comp=Z,55nm,0.8s						
E09A	Wood Farm, Sta	54.69	322	IAmb	IAmb	04 31 20.4	
	comp=Z,70nm,1.0s						
NEW	Newport	54.97	325	P	P	04 31 19.9	-0.1
	baz=121,SNR=50						
NEW	Newport	54.97	325	P	P	04 31 20.0	0.0
NEW				pmax	pmax		
	comp=Z,47nm,1.0s						
NEW	Newport	54.97	325	P	P	04 31 20.0	0.0
NEW				IAmb	IAmb	04 31 22.3	
	comp=Z,47nm,1.0s						
M04C	Macdoel	55.01	316	P	P	04 31 20.5	-0.1
	baz=113,SNR=15						
O02D	Mt. Diablo Mer	55.08	314	P	P	04 31 19.7	-1.3
	baz=111,SNR=10						
J05D	Fort Rock, OR	55.20	318	P	P	04 31 22.3	+0.4
	baz=114,SNR=34						
K04D	Chiloquin, OR	55.28	317	P	P	04 31 23.0	+0.5
	baz=114,SNR=12						
N02D	Trinity Center	55.31	315	P	P	04 31 20.9	-1.7
	baz=112,SNR=5.4						
KCPM	Cahto Peak	55.48	313	IAmb	IAmb	04 31 26.6	
	comp=Z,68nm,1.0s						
L04D	Klamath Falls	55.50	316	P	P	04 31 23.7	-0.4
	baz=113,SNR=22						
M02C	Callahan	55.57	315	P	P	04 31 23.4	-1.1
	baz=112						
I05D	Terrebonne, OR	55.70	319	P	P	04 31 26.1	+0.7
	baz=115,SNR=12						
MACI	Morro de la Ar	55.85	62	P	P	04 31 28.4	+1.5
KHMM	Horse Mountain	56.00	314	IAmb	IAmb	04 31 34.9	
	comp=Z,57nm,0.8s						
G05D	Wamic, OR	56.07	320	P	P	04 31 29.0	+0.9
	baz=116,SNR=9.1						
PMOZ	Porto Moniz, M	56.15	56	P	P	04 31 30.2	+1.3
PMOZ	Porto Moniz, M	56.15	56	*e*P	P	04 31 29.9	+1.0
	comp=Z,254nm,1.1s						
I04A	Tendick Farm,	56.19	318	P	P	04 31 28.5	-0.4
	baz=114,SNR=15						
L02E	Cave Junction	56.37	316	P	P	04 31 29.8	-0.3
	baz=112						
F05D	White Salmon	56.44	320	P	P	04 31 31.3	+0.7
	baz=116,SNR=9.5						
LTY	Liberty	56.56	322	IAmb	IAmb	04 31 33.8	
	comp=Z,76nm,1.1s						
K02D	Willamette Mer	56.61	316	P	P	04 31 32.4	+0.5
	baz=112						
H04D	Lebanon	56.69	319	P	P	04 31 32.5	+0.1
	baz=114,SNR=6.2						
I03D	Drain, OR	56.77	317	P	P	04 31 33.4	+0.5
	baz=113,SNR=10						
PMPST	Porto Santo, M	56.92	56	*e*P	P	04 31 35.7	+1.5
	comp=Z,399nm,1.2s						
J01E	Myrtle Point	56.96	317	P	P	04 31 35.0	+0.7
	baz=112,SNR=8.3						
C06D	Leavenworth	57.00	323	P	P	04 31 34.8	+0.3
	baz=118						
COR	Corvallis	57.09	318	P	P	04 31 36.6	+1.4
COR				pmax	pmax		
	comp=Z,81nm,1.1s						
COR	Corvallis	57.09	318	P	P	04 31 36.6	+1.4
COR				IAmb	IAmb	04 31 38.1	
	comp=Z,81nm,1.1s						
I02D	Swisshome	57.26	318	P	P	04 31 37.3	+0.8
	baz=113,SNR=8.2						
G03D	McMinnville, O	57.31	319	P	P	04 31 36.6	-0.2
	baz=114,SNR=7.2						
E04D	Cinebar	57.42	321	P	P	04 31 37.4	-0.1
	baz=115						
D04E	Lakebay	57.81	321	P	P	04 31 40.3	+0.1
	baz=115,SNR=6.0						
B05A	Bryant	57.88	323	P	P	04 31 39.9	-0.8
	baz=116,SNR=7.9						
E03A	Lebam	58.04	320	IAmb	IAmb	04 31 44.0	
	comp=Z,70nm,0.9s						
D03D	Eldon	58.16	322	P	P	04 31 42.6	0.0
	baz=115,SNR=17						
A04D	Lummi Island	58.44	323	P	P	04 31 44.2	-0.3
	baz=116						
NLWA	Neilton Lookou	58.58	321	IAmb	IAmb	04 31 49.0	
	comp=Z,73nm,1.0s						
ASCN	Ascension	59.74	104	P	P	04 31 54.6	+0.5
SFJD	Kangerlussuaq	60.39	10	LR	LR	04 57 25.0	
	comp=Z,647nm,19.8s,baz=206,slow=35						
SFJD	Kangerlussuaq	60.39	10	*i* P	P	04 31 57.9	+0.2
SFJD	Kangerlussuaq	60.39	10	*i* P	P	04 31 57.9	+0.2
SFJD	Kangerlussuaq	60.39	10	*i* P	P	04 31 57.9	+0.2
EFI	East Falkland	60.96	170	IAMs_20	IAMs_20	04 56 40.8	
	comp=Z,1µm,20.0s						
YKA	Yellowknife Ar	62.23	339	P	P	04 32 10.4	+0.1
	comp=Z,72nm,0.7s,baz=127,slow=7.6,SNR=744						
YKA				pP	pP	04 32 15.5	-1.8
	comp=Z,77nm,0.6s,baz=124,slow=7.7,SNR=38						
ILULI	Ilulissat	62.34	8	*i* P	P	04 32 11.0	+0.1
	comp=Z,82nm,1.1s						
ILULI	Ilulissat	62.34	8	*i* P	P	04 32 11.0	+0.1
ILULI				pmax	pmax		
	comp=Z,82nm,1.1s						
ILULI	Ilulissat	62.34	8	P	P	04 32 11.0	+0.1
ILULI	Ilulissat	62.34	8	*i* P	P	04 32 11.0	+0.1
ILULI				IAmb	IAmb	04 32 11.9	
	comp=Z,82nm,1.1s						
PMAFR	Mafra	63.72	51	*e*P	P	04 32 21.6	+1.0
PFVI	Vila Bisbo	63.74	53	*e*P	P	04 32 22.9	+2.1
LIS	Lisbon	63.77	51	*e*P	P	04 32 23.3	+2.3
	comp=Z,286nm,1.2s						
PTEO	Sao Teotonio	63.89	52	*e*P	P	04 32 23.2	+1.4
	comp=Z,113nm,1.0s						
MORF	Marmelete	63.91	53	*e*P	P	04 32 22.0	0.0
MORF				AMb	AMB	04 32 29.4	
	comp=Z,198nm,0.9s						
MORF	Marmelete	63.91	53	*e*P	P	04 32 22.0	0.0
MORF	Marmelete	63.91	53	*e*P	P	04 32 23.7	+1.7
	comp=Z,200nm,1.1s						
PNCL	Nicolau / Gran	64.14	52	*e*P	P	04 32 24.8	+1.4
	comp=Z,136nm,1.1s						
PSBE	So Bento	64.19	50	*e*P	P	04 32 25.0	+1.2
	comp=Z,100nm,1.9s						
ICESG	Greenland Ices	64.28	12	*i* P	P	04 32 23.9	-0.2
ICESG				IAmb	IAmb	04 32 25.4	
	comp=Z,104nm,1.1s						
MESJ	Messejana	64.34	52	*e*P	P	04 32 24.8	0.0
MESJ				AMb	AMB	04 32 32.4	
	comp=Z,102nm,1.0s						
MESJ	Messejana	64.34	52	*e*P	P	04 32 24.7	0.0
MESJ	Messejana	64.34	52	*e*P	P	04 32 24.7	0.0
PCVE	Castro Verde	64.44	52	*e*P	P	04 32 27.0	+1.6
	comp=Z,75nm,1.5s						
PBDV	Barranco-do-Ve	64.46	53	*e*P	P	04 32 27.5	+1.9
PCAS	Casmilo, Conde	64.52	50	*e*P	P	04 32 27.0	+1.1
	comp=Z,162nm,1.2s						
PMTG	Montargil	64.55	51	*e*P	P	04 32 27.2	+1.1
	comp=Z,86nm,1.5s						
COI	Coimbra	64.61	49	*e*P	P	04 32 27.7	+1.2
	comp=Z,290nm,1.1s						
PBEJ	Beja	64.64	52	*e*P	P	04 32 28.0	+1.3
	comp=Z,27nm,0.9s						
PVAQ	Vaqueiros	64.66	53	IAmb	IAmb	04 32 34.7	
	comp=Z,47nm,1.1s						
PVAQ	Vaqueiros	64.66	53	*e*P	P	04 32 28.5	+1.7
	comp=Z,84nm,1.3s						
PESTR	Estremoz	65.00	51	IAmb	IAmb	04 32 36.2	
	comp=Z,34nm,0.9s						
PVIS	Viseu	65.10	49	*e*P	P	04 32 30.3	+0.6
	comp=Z,105nm,1.7s						
PMRV	Marv??o	65.25	50	*e*P	P	04 32 31.3	+0.6
	comp=Z,69nm,1.4s						
PCBR	Castelo Branco	65.25	50	*e*P	P	04 32 31.6	+0.9
	comp=Z,83nm,1.5s						
POLO	Lamas de Olo	65.30	48	*e*P	P	04 32 31.7	+0.6
	comp=Z,99nm,1.2s						
MTE	Manteigas	65.30	49	IAmb	IAmb	04 32 37.3	
	comp=Z,50nm,1.0s						
MTE	Manteigas	65.30	49	*e*P	P	04 32 31.9	+0.8
	comp=Z,96nm,1.3s						
PBAR	Barrancos	65.31	52	*e*P	P	04 32 32.1	+1.0
	comp=Z,60nm,1.7s						
MVO	Moncorvo	65.83	49	*e*P	P	04 32 34.8	+0.4
	comp=Z,112nm,0.9s						
TIC	Toumodi	66.43	86	*e*P	P	04 32 38.1	-0.6
LIC	Lamto	66.47	87	*e*P	P	04 32 38.4	-0.6
	comp=Z,93nm,1.0s						
BORG	Borgarnes	66.52	21	LR	LR	04 56 44.2	
	comp=Z,286nm,21.6s,baz=233,slow=32						
DLBC	Dease Lake	66.52	331	IAmb	IAmb	04 32 41.1	
	comp=Z,47nm,0.8s						
DBIC	Dimbokro	66.59	86	P	P	04 32 38.9	-0.9
	comp=Z,23nm,0.8s,baz=253,slow=6.8,SNR=25						
DBIC	Dimbokro	66.59	86	P	P	04 32 39.5	-0.2
DBIC				IAmb	IAmb	04 32 40.4	
	comp=Z,35nm,0.9s						
MDT	Midelt	66.61	58	LR	LR	05 00 22.0	
	comp=Z,228nm,18.6s,baz=298,slow=35						
KIC	Kosan Boka	66.74	87	*e*P	P	04 32 40.3	-0.4
	comp=Z,78nm,0.8s						
KOWA	Kowa	66.80	78	P	P	04 32 41.0	-0.1
WRAK	Wrangell Islan	66.91	328	IAmb	IAmb	04 32 44.6	
	comp=Z,25nm,0.8s						
WRAK	Wrangell Islan	66.91	328	IAMs_20	IAMs_20	05 05 55.1	
	comp=Z,1µm,20.0s						
IGLA	Glengowla, Co	67.24	35	*e*P	P	04 32 43.4	+0.3
IGLA				IAmb	IAmb	04 32 45.0	
	comp=Z,62nm,0.9s						
SUMG	Summit	67.34	10	*i* P	P	04 32 44.0	+0.1
	comp=Z,249nm,1.0s						
SUMG	Summit	67.34	10	*i* P	P	04 32 44.0	+0.1
SUMG				pmax	pmax		
	comp=Z,250nm,1.0s						
SUMG	Summit	67.34	10	*i* P	P	04 32 44.0	+0.1
SUMG				IAmb	IAmb	04 32 45.6	
	comp=Z,249nm,1.0s						
PAB	San Pablo	67.59	51	P	P	04 32 45.9	+0.1
PAB				pmax	pmax		
	comp=Z,49nm,1.1s						
PAB	San Pablo	67.59	51	P	P	04 32 45.9	+0.1
PAB				IAmb	IAmb	04 32 52.7	
	comp=Z,49nm,1.1s						
ESDC	Sonseca Array	67.90	51	P	P	04 32 47.8	+0.1
	comp=Z,23nm,1.1s,baz=265,slow=6.4,SNR=38						
ESDC	Sonseca Array	67.90	51	P	P	04 32 47.8	+0.1
ESBB	Sonseca Array	67.91	51	IAmb	IAmb	04 32 49.5	
	comp=Z,29nm,1.1s						
TULEG	Thule	68.21	1	*i* P	P	04 32 49.0	+0.2
TULEG				IAmb	IAmb	04 32 50.1	
	comp=Z,57nm,1.0s						
TULEG				*i*		04 32 54.5	
IWEX	Carrickbyrne,	68.46	37	*e*P	P	04 32 51.0	+0.1
IWEX				IAmb	IAmb	04 32 52.6	
	comp=Z,44nm,0.9s						
JIS	Juneau Island	68.59	330	IAmb	IAmb	04 32 58.6	
	comp=Z,31nm,0.7s						
JIS				IAMs_20	IAMs_20	05 06 03.6	
	comp=Z,1µm,20.0s						
SIT	Sitka	68.67	328	P	P	04 32 53.8	+1.8
SIT				pmax	pmax		
	comp=Z,50nm,0.9s						
SIT	Sitka	68.67	328	P	P	04 32 53.8	+1.8
SIT				IAmb	IAmb	04 32 59.5	
	comp=Z,50nm,0.9s						
ILTH	Belurgan, Co L	69.15	35	*e*P	P	04 32 55.2	+0.2
SKAG	Skagway	69.45	331	IAmb	IAmb	04 32 59.4	
	comp=Z,30nm,0.9s						
C36M	Paulatuk	69.48	343	P	P	04 32 55.7	-1.1
	baz=124,SNR=8.3						
HTL	Hartland	69.52	39	*e*P	P	04 32 58.5	+1.0
HTL				IAmb	IAmb	04 32 59.4	
	comp=Z,130nm,1.0s						
RSBS	Rosebush, Pemb	69.58	38	*e*P	P	04 32 57.9	+0.1
RSBS				IAmb	IAmb	04 32 59.6	
	comp=Z,41nm,0.8s						
SCO	Scoresbysund	69.60	16	*i* P	P	04 32 59.0	+1.5
SCO	Scoresbysund	69.60	16	*i* P	P	04 32 59.0	+1.5
SCO	Scoresbysund	69.60	16	*i* P	P	04 32 59.0	+1.5
QUIF	Quistinic	69.76	42	*e*P	P	04 32 59.3	+0.3
QUIF				pmax	pmax		
	comp=Z,81nm,1.0s						
ROSF	Rostrenen	69.77	42	*e*P	P	04 32 59.3	+0.3
ROSF				pmax	pmax		
	comp=Z,100nm,1.0s						
TAOE	Nuku Hiva Isla	69.93	257	*e*LR	LR	04 54 19.5	
	comp=Z,662nm,22.8s						
YRC	Rhoscolyn	69.97	36	*e*P	P	04 33 00.5	+0.4
LEWI	Lewis, Hebride	70.00	31	*e*P	P	04 32 59.9	-0.4
LEWI				IAmb	IAmb	04 33 01.7	
	comp=Z,66nm,1.0s						
WIM	Isle of Man	70.12	35	*e*P	P	04 33 02.3	+1.2
YLL	Llanberis	70.18	36	*e*P	P	04 33 02.5	+1.0
SGMF	Saint Gilles	70.22	42	*e*P	P	04 33 02.0	+0.2
SGMF				pmax	pmax		
	comp=Z,67nm,1.1s						
LAWE	Loch Awe, Argy	70.25	33	*e*P	P	04 33 02.3	+0.5
GAL1	Galloway	70.28	35	*e*P	P	04 33 02.2	+0.2
GAL1				IAmb	IAmb	04 33 03.7	
	comp=Z,115nm,0.9s						
KPL	Plockton	70.40	32	*e*P	P	04 33 02.9	+0.2
KPL				IAmb	IAmb	04 33 03.4	
	comp=Z,41nm,1.0s						
LLW	Llanuwychllyn	70.42	37	*e*P	P	04 33 02.6	-0.3
NEWG	New Galloway	70.61	34	*e*P	P	04 33 04.4	+0.4
NEWG				IAmb	IAmb	04 33 05.7	
	comp=Z,110nm,0.9s						
KAC	Achnashellach	70.63	32	*e*P	P	04 33 04.3	+0.2
PGBU	Glenifferbraes	70.63	34	*e*P	P	04 33 04.6	+0.4
PGBU				IAmb	IAmb	04 33 06.2	
	comp=Z,114nm,1.0s						
MCH1	Michaelchurch	70.64	38	*e*P	P	04 33 04.3	0.0
MCH1				IAmb	IAmb	04 33 05.7	
	comp=Z,85nm,1.0s						
FOEL	Foel Wylfa	70.70	37	*e*P	P	04 33 04.0	-0.6
FOEL				IAmb	IAmb	04 33 05.0	
	comp=Z,42nm,0.9s						
EAB	Aberfoyle	70.80	33	*e*P	P	04 33 05.5	+0.3
ETSF	Etsaut	70.85	48	*e*P	P	04 33 06.2	+0.3
ETSF				pmax	pmax		
	comp=Z,42nm,1.3s						
HYT	Haines Junctio	70.92	332	IAmb	IAmb	04 33 13.9	
	comp=Z,33nm,0.9s						
STRD	Stroud	71.11	38	*e*P	P	04 33 07.7	+0.6
STRD				IAmb	IAmb	04 33 08.5	
	comp=Z,155nm,1.1s						
KESW	Keswick, Cumbr	71.12	35	*e*P	P	04 33 07.8	+0.6
KESW				IAmb	IAmb	04 33 08.8	
	comp=Z,97nm,1.1s						
ESK	Eskdalemuir	71.22	34	*e*P	P	04 33 08.0	+0.3
ESK				IAmb	IAmb	04 33 09.7	
	comp=Z,65nm,0.9s						
ESK	Eskdalemuir	71.22	34	P	P	04 33 08.7	+0.9
ESK				pmax	pmax		
	comp=Z,74nm,1.0s						
ESK	Eskdalemuir	71.22	34	P	P	04 33 08.7	+0.9
GRR	Gorron	71.36	42	*e*P	P	04 33 08.9	+0.1
GRR				pmax	pmax		
	comp=Z,101nm,1.0s						
EDI	Edinburgh	71.37	34	*e*P	P	04 33 08.9	+0.3
EBL	Broad Law	71.41	34	*e*P	P	04 33 09.5	+0.5
EPF	Esparros	71.52	47	*e*P	P	04 33 10.4	+0.5
EPF				pmax	pmax		
	comp=Z,82nm,0.8s						
MFF	Saint Martin d	71.59	44	*e*P	P	04 33 10.5	+0.3
MFF				pmax	pmax		
	comp=Z,152nm,1.0s						
FLN	La Foliniere	71.67	41	*e*P	P	04 33 10.9	+0.3
FLN				pmax	pmax		
	comp=Z,88nm,0.8s						
LBWR	Ladybower, Pea	71.67	36	*e*P	P	04 33 11.1	+0.5
LBWR				IAmb	IAmb	04 33 12.9	
	comp=Z,206nm,1.0s						
ESY	Stoneypath	71.68	34	*e*P	P	04 33 10.1	-0.4
BCPM	Bancas Point	71.68	331	IAmb	IAmb	04 33 13.6	
	comp=Z,62nm,0.9s						
CWF	Charnwood Fore	71.80	37	*e*P	P	04 33 10.4	-0.9
CWF				IAmb	IAmb	04 33 11.8	
	comp=Z,87nm,1.1s						
HPK	Haverah Park	71.84	36	*e*P	P	04 33 12.2	+0.6
HPK				IAmb	IAmb	04 33 13.2	
	comp=Z,90nm,1.1s						
LDF	La Druitiere	71.88	42	*e*P	P	04 33 12.0	+0.1
LDF				pmax	pmax		
	comp=Z,65nm,1.0s						
INK	Inuvik	71.99	340	P	P	04 33 12.4	+0.3
	comp=Z,42nm,0.7s,baz=100,slow=6.2,SNR=160						
PCA	Pinnacle	72.02	331	IAmb	IAmb	04 33 16.0	
	comp=Z,55nm,0.9s						
DBG	Daneborg	72.26	13	*i* P	P	04 33 15.0	+1.4
DBG				IAmb	IAmb	04 33 15.7	
	comp=Z,27nm,1.0s						
GDLE	Glaisdale, N Y	72.39	35	*e*P	P	04 33 16.0	+1.2
GDLE				IAmb	IAmb	04 33 16.6	
	comp=Z,230nm,1.0s						
EPYK	Eagle Plains	72.40	338	P	P	04 33 15.2	+0.4
	baz=110,SNR=62						
TOA0	Torodi Ar. Sit	72.42	79	IAmb	IAmb	04 33 20.9	
	comp=Z,38nm,0.9s						
TORD	Torodi Ar. Bea	72.42	79	P	P	04 33 15.0	-0.8
	comp=Z,19nm,0.9s,baz=279,slow=5.0,SNR=58						
TORD	Torodi Ar. Bea	72.42	79	P	P	04 33 14.9	-0.8
RJF	Les Rejaudoux	72.59	45	*e*P	P	04 33 16.2	0.0
RJF				pmax	pmax		
	comp=Z,73nm,1.0s						
CTGM	Chitina Glacie	72.76	331	IAmb	IAmb	04 33 20.3	
	comp=Z,58nm,0.9s						
CTGM				IAMs_20	IAMs_20	05 08 15.8	
	comp=Z,769nm,20.0s						
YAH	Yahtse	72.81	331	IAmb	IAmb	04 33 21.5	
	comp=Z,57nm,0.9s						
MESA	MESA	72.86	331	IAmb	IAmb	04 33 21.6	
	comp=Z,67nm,1.0s						
MTLF	Montolieu	72.91	47	*e*P	P	04 33 18.0	-0.2
MTLF				pmax	pmax		
	comp=Z,110nm,1.2s						
BARN	Barnard Glacie	72.94	332	IAmb	IAmb	04 33 27.0	
	comp=Z,36nm,0.7s						
BARN				IAMs_20	IAMs_20	05 08 24.4	
	comp=Z,746nm,20.0s						
WACR	West Acre	72.96	37	*e*P	P	04 33 19.2	+1.0
WACR				IAmb	IAmb	04 33 19.5	
	comp=Z,224nm,1.0s						
ISLE	Juniper Island	73.15	331	P	P	04 33 20.5	+1.1
ISLE				IAmb	IAmb	04 33 22.2	
	comp=Z,55nm,1.0s						
BALM	Baldy	73.25	331	IAmb	IAmb	04 33 22.9	
	comp=Z,47nm,0.8s						
BALM				IAMs_20	IAMs_20	05 06 52.8	
	comp=Z,887nm,20.0s						
BCAR	Beaver Creek A	73.49	334	P	P	04 33 22.5	+1.2
CRQM	Cirque	73.57	331	IAmb	IAmb	04 33 29.3	
	comp=Z,58nm,0.9s						
CRQM				IAMs_20	IAMs_20	05 06 19.5	
	comp=Z,1µm,21.0s						
EGAK	Eagle	73.67	335	IAmb	IAmb	04 33 29.8	
	comp=Z,56nm,1.0s						
EGAK				IAMs_20	IAMs_20	05 07 12.8	
	comp=Z,966nm,20.0s						
SUCK	Suckling Hills	73.73	330	IAmb	IAmb	04 33 26.1	
	comp=Z,65nm,1.0s						
VRDI	Verde Repeater	73.82	331	IAmb	IAmb	04 33 26.3	
	comp=Z,48nm,0.9s						
VRDI				IAMs_20	IAMs_20	05 08 13.8	
	comp=Z,954nm,20.0s						
DAG	Danmarks Havn	74.00	11	P	P	04 33 23.9	0.0
DAG				pmax	pmax		
	comp=Z,39nm,1.0s						
AVF	Avril sur Loir	74.00	44	*e*P	P	04 33 24.2	-0.3
AVF				pmax	pmax		
	comp=Z,82nm,1.2s						
HMT	Hamilton	74.02	330	IAmb	IAmb	04 33 27.4	
	comp=Z,76nm,0.9s						
GLB	Gilahina Butte	74.03	332	IAmb	IAmb	04 33 28.0	
	comp=Z,67nm,1.1s						
MENT	Mentasta	74.32	333	IAmb	IAmb	04 33 29.4	
	comp=Z,40nm,0.9s						
SMF	Signal de Mont	74.33	44	*e*P	P	04 33 26.2	-0.2
SMF				pmax	pmax		
	comp=Z,110nm,1.2s						
LOR	Lormes	74.39	43	*e*P	P	04 33 26.5	-0.3
LOR				pmax	pmax		
	comp=Z,93nm,1.0s						
N25K	Chitina, Valde	74.44	332	P	P	04 33 27.8	+1.0
	baz=102,SNR=36						
N25K	Chitina, Valde	74.44	332	P	P	04 33 28.4	+1.5
N25K				IAmb	IAmb	04 33 29.8	
	comp=Z,55nm,0.9s						
SCRK	Sand Creek	74.66	334	P	P	04 33 29.0	+0.8
	baz=103,SNR=122						
SSB	Saint Sauveur	74.72	45	IAmb	IAmb	04 33 36.3	
	comp=Z,52nm,0.9s						
VIVF	Saint-Julien-l	74.79	46	*e*P	P	04 33 29.9	+0.7
VIVF				pmax	pmax		
	comp=Z,143nm,1.3s						
EYAK	Cordova Ski Ar	74.79	331	IAmb	IAmb	04 33 36.1	
	comp=Z,42nm,0.7s						
BAIF	Baives	74.86	40	*e*P	P	04 33 29.3	-0.1
BAIF				pmax	pmax		
	comp=Z,36nm,1.1s						
SNF	Seneffe	74.95	40	*d*P	P	04 33 29.8	-0.1
	comp=Z,39nm,1.3s						
SNF				*d*x	x	04 33 35.4	
UCC	Uccle	75.02	40	*d*P	P	04 33 30.6	+0.3
UCC				*d*x	x	04 33 35.8	
UCC	Uccle	75.02	40	IAmb	IAmb	04 33 31.8	
	comp=Z,61nm,1.1s						
KLU	Klutina	75.04	332	IAmb	IAmb	04 33 37.5	
	comp=Z,37nm,0.8s						
PAX	Paxson	75.11	333	IAmb	IAmb	04 33 33.5	
	comp=Z,71nm,1.0s						
DOU	Dourbes	75.11	40	*d*P	P	04 33 31.3	+0.4
DOU				*d*x	x	04 33 36.4	
DOU				*d*PcP	PcP	04 33 45.6	+1.2
HIN	Hinchinbrook I	75.13	330	IAmb	IAmb	04 33 41.5	
	comp=Z,38nm,1.1s						
FID	Port Fidalgo	75.18	331	P	P	04 33 32.1	+1.1
FID				IAmb	IAmb	04 33 33.5	
	comp=Z,41nm,1.0s						
BMRD	Maredsous	75.24	40	*d*P	P	04 33 31.4	-0.2
	comp=Z,44nm,0.9s						
BMRD				*d*x	x	04 33 37.2	
GIVF	Givet	75.26	40	*e*P	P	04 33 31.8	+0.1
GIVF				pmax	pmax		
	comp=Z,104nm,1.0s						
M24K	Tolsona, Glenn	75.27	332	P	P	04 33 32.5	+0.9
	baz=100,SNR=45						
TAM	Tamanrasset	75.43	69	P	P	04 33 34.7	+1.2
TAM				pmax	pmax		
	comp=Z,46nm,1.1s						
TAM	Tamanrasset	75.43	69	IAmb	IAmb	04 33 40.5	
	comp=Z,32nm,0.8s						
BGES	Gesves	75.45	40	*d*P	P	04 33 33.6	+0.8
BGES				*d*x	x	04 33 38.4	
GLI	Glacier Island	75.50	331	IAmb	IAmb	04 33 39.6	
	comp=Z,28nm,0.7s						
BCLA	Clavier	75.59	40	*d*P	P	04 33 33.4	-0.2
BCLA				*d*PcP	PcP	04 33 46.1	-0.4
BMAR	Burnt Mountain	75.68	338	P	P	04 33 34.5	+0.6
FYU	Fort Yukon	75.74	337	IAmb	IAmb	04 33 36.2	
	comp=Z,65nm,1.1s						
BSTI	Sart Tilman	75.77	40	*d*P	P	04 33 34.2	-0.5
BSTI				*d*x	x	04 33 39.4	
BEBN	Eben Emael	75.86	40	*d*P	P	04 33 35.9	+0.8
BEBN				*d*PcP	PcP	04 33 47.1	-0.5
HDA	Harding Lake	76.02	334	P	P	04 33 35.7	-0.1
	baz=100,SNR=57						
HDA	Harding Lake	76.02	334	IAmb	IAmb	04 33 42.3	
	comp=Z,52nm,0.8s						
BHOU	Houvegnez	76.03	40	*d*P	P	04 33 37.6	+1.4
	comp=Z,79nm,1.2s						
BHOU				*d*x	x	04 33 42.4	
MEM	Membach	76.05	40	*d*P	P	04 33 36.4	+0.1
	comp=Z,38nm,1.2s						

MEM				*d*x	x	04 33 41.9	
IL31		76.06	335	IAmb	IAmb	04 33 37.6	
	comp=Z,37nm,1.1s						
ILAR	**Eielson Array**	76.06	335	P	P	04 33 36.1	+0.1
	comp=Z,18nm,0.8s,baz=108,slow=4.2,SNR=242						
ILAR				pP	pP	04 33 41.4	-1.8
	comp=Z,19nm,0.6s,baz=106,slow=4.5,SNR=61						
ILAR				PP	PP	04 36 25.1	-1.6
	comp=Z,4.1nm,1.0s,baz=96,slow=7.5,SNR=6.1						
ILAR	**Eielson Array**	76.06	335	P	P	04 33 36.2	+0.2
WLF	**Walferdange**	76.08	41	*d*P	P	04 33 37.2	+0.7
	comp=Z,82nm,1.3s						
WLF				*d*x	x	04 33 42.7	
WLF	**Walferdange**	76.08	41	*e*P	P	04 33 37.6	+1.1
	comp=Z,131nm,1.3s,baz=269,slow=5.5						
HAU	**Haudompre**	76.12	43	*e*P	P	04 33 36.5	-0.2
HAU				pmax	pmax		
	comp=Z,76nm,1.4s						
BTNL	**Ternell**	76.13	40	*d*P	P	04 33 37.3	+0.5
	comp=Z,38nm,1.3s						
BTNL				*d*x	x	04 33 42.0	
FRF	**La Foret Royal**	76.15	47	*e*P	P	04 33 36.9	-0.1
FRF				pmax	pmax		
	comp=Z,521nm,2.5s						
LPL	**La Plagne**	76.27	45	*e*P	P	04 33 38.6	+0.7
LPL				pmax	pmax		
	comp=Z,89nm,1.1s						
LPG	**La Plagne**	76.28	45	*e*P	P	04 33 38.9	+0.8
LPG				pmax	pmax		
	comp=Z,70nm,1.0s						
POKR	**Poker Plat Res**	76.35	335	P	P	04 33 38.1	+0.4
	baz=100,SNR=36						
POKR	**Poker Plat Res**	76.35	335	IAmb	IAmb	04 33 39.8	
	comp=Z,56nm,1.1s						
KMY	**Karmoy**	76.41	31	*e*P	P	04 33 38.3	+0.3
HINF	**Hinteralfeld**	76.45	43	*e*P	P	04 33 38.2	-0.4
HINF				pmax	pmax		
	comp=Z,42nm,1.0s						
COLA	**College**	76.48	335	*c i*P	P	04 33 38.9	+0.5
COLA				pmax	pmax		
	comp=Z,28nm,1.0s						
COLA				MLR	MLR		
	comp=Z,894nm,20.0s						
COLA	**College**	76.48	335	P	P	04 33 38.6	+0.3
COLA				IAmb	IAmb	04 33 46.8	
	comp=Z,24nm,0.7s						
TCOL	**CIGO, UAF Yank**	76.49	335	P	P	04 33 38.5	+0.1
	baz=99,SNR=6.3						
TCOL	**CIGO, UAF Yank**	76.49	335	IAmb	IAmb	04 33 46.8	
	comp=Z,24nm,0.7s						
GHO	**Glory Hole Cre**	76.50	332	P	P	04 33 39.3	+0.6
WRH	**Wood River Hil**	76.52	334	P	P	04 33 38.9	+0.3
WRH				IAmb	IAmb	04 33 41.3	
	comp=Z,25nm,0.8s						
WRH				IAMs_20	IAMs_20	05 09 21.1	
	comp=Z,832nm,19.0s						
ASK	**Askoy**	76.53	30	*e*P	P	04 33 39.0	+0.2
SEW	**Seward**	76.55	330	IAmb	IAmb	04 33 41.1	
	comp=Z,59nm,1.0s						
PMR	**Palmer**	76.57	331	IAmb	IAmb	04 33 41.0	
	comp=Z,39nm,0.8s						
BER	**Bergen**	76.59	30	*e*P	P	04 33 40.0	+0.9
FOO	**Floro**	76.60	29	*e*P	P	04 33 40.4	+1.3
MDM	**Murphy Dome**	76.66	335	IAmb	IAmb	04 33 41.4	
	comp=Z,54nm,1.0s						
RND	**Reindeer**	76.69	333	P	P	04 33 41.0	+1.2
RND				pmax	pmax		
	comp=Z,148nm,0.8s						
RND				MLR	MLR		
	comp=Z,1µm,20.0s						
RND	**Reindeer**	76.69	333	P	P	04 33 41.0	+1.2
AHRW	**Bad Neuenahr-A**	76.73	40	*e*P	P	04 33 41.7	+1.6
	comp=Z,115nm,1.2s,baz=269,slow=5.5						
MCK	**McKinley**	76.78	334	P	P	04 33 40.4	+0.2
	baz=98,SNR=33						
RC01	**Rabbit Creek A**	76.80	331	P	P	04 33 40.6	+0.3
	baz=97,SNR=18						
BUG	**Bochum--Univer**	76.90	39	*e*P	P	04 33 42.3	+1.3
	comp=Z,85nm,1.1s,baz=269,slow=5.5						
BUG				*e*pP	pP	04 33 46.9	-1.3
NEA2	**Nenana**	76.96	334	P	P	04 33 41.3	+0.2
	baz=98,SNR=69						
BLS5	**Blasjo**	77.05	31	*e*P	P	04 33 43.4	+1.7
BWN	**Browne**	77.07	334	IAMs_20	IAMs_20	05 07 26.7	
	comp=Z,664nm,20.0s						
HYA	**Hoyanger**	77.09	29	*e*P	P	04 33 42.7	+0.8
I23K	**Minto, Yukon-K**	77.16	335	P	P	04 33 42.7	+0.5
	baz=98,SNR=41						
ODD1	**Odda**	77.18	30	*e*P	P	04 33 43.7	+1.2
CUT	**Chulitna**	77.21	332	P	P	04 33 42.8	+0.3
	baz=97,SNR=25						
IBBN	**Ibbenburen**	77.25	38	*e*P	P	04 33 44.3	+1.4
	comp=Z,124nm,1.1s,baz=269,slow=5.5						
SNART	**Snartemo**	77.34	32	*e*P	P	04 33 43.0	-0.4
SNART	**Snartemo**	77.34	32	*e*P	P	04 33 44.1	+0.7
CNPM	**China Poot**	77.38	329	IAmb	IAmb	04 33 45.4	
	comp=Z,72nm,1.0s						
CNPM				IAMs_20	IAMs_20	05 09 10.0	
	comp=Z,599nm,20.0s						
BFO	**Black Forest**	77.46	42	P	P	04 33 43.8	-0.5
BFO				pmax	pmax		
	comp=Z,38nm,1.0s						
BFO	**Black Forest**	77.46	42	P	P	04 33 43.8	-0.5
BFO				IAmb	IAmb	04 33 51.0	
	comp=Z,38nm,1.0s						
BFO	**Black Forest**	77.46	42	*e*P	P	04 33 44.9	+0.6
	comp=Z,53nm,1.1s,baz=269,slow=5.5						
AKN	**Aaknes**	77.59	28	*e*P	P	04 33 46.2	+1.5
TNS	**Taunus Mts**	77.59	40	*e*P	P	04 33 46.4	+1.4
	comp=Z,98nm,1.1s,baz=269,slow=5.5						
KASTN	**Kahler Asten**	77.61	39	*e*P	P	04 33 46.1	+1.0
	comp=Z,38nm,1.1s,baz=269,slow=5.5						
KTH	**Kantishna Hill**	77.63	333	IAmb	IAmb	04 33 47.1	
	comp=Z,72nm,1.1s						
BPAW	**Bear Paw Mtn.**	77.72	334	IAMs_20	IAMs_20	05 09 38.9	
	comp=Z,583nm,18.0s						
MLY	**Manley**	77.72	335	P	P	04 33 45.6	+0.1
	baz=97,SNR=71						
TOLK	**Toolik Lake Re**	77.75	339	P	P	04 33 45.6	+0.1
	baz=99,SNR=21						
TOLK	**Toolik Lake Re**	77.75	339	IAMs_20	IAMs_20	05 12 07.7	
	comp=Z,697nm,18.0s						
SKT	**Skwentna**	77.75	332	P	P	04 33 46.1	+0.5
SKT				IAmb	IAmb	04 33 47.7	
	comp=Z,48nm,1.0s						
COLD	**Coldfoot**	77.78	337	P	P	04 33 46.6	+0.9
	baz=98,SNR=42						
COLD	**Coldfoot**	77.78	337	IAmb	IAmb	04 33 48.4	
	comp=Z,43nm,1.0s						
MOL	**Molde**	77.88	28	*e*P	P	04 33 47.3	+1.0
HOMB	**Homborsund**	78.02	32	*e*P	P	04 33 48.4	+1.3
HOMB	**Homborsund**	78.02	32	*i* P	P	04 33 48.4	+1.3
STU	**Stuttgart**	78.04	42	P	P	04 33 48.8	+1.3
STU				pmax	pmax		
	comp=Z,117nm,1.0s						
STU	**Stuttgart**	78.04	42	*e*P	P	04 33 48.4	+0.9
	comp=Z,104nm,1.0s,baz=269,slow=5.5						
STU				*e*pP	pP	04 33 53.3	-1.5
SKAR	**Skarslia**	78.08	30	*e*P	P	04 33 48.6	+1.1
KEST	**Kesra**	78.25	55	P	P	04 33 49.8	+0.8
	comp=Z,58nm,0.9s,baz=247,slow=3.6,SNR=25						
MUD	**Monsted U'grnd**	78.28	34	*i* P	P	04 33 49.7	+1.1
	comp=Z,130nm,0.9s						
MUD	**Monsted U'grnd**	78.28	34	*i* P	P	04 33 49.7	+1.1
MUD				pmax	pmax		
	comp=Z,130nm,0.9s						
MUD	**Monsted U'grnd**	78.28	34	*i* P	P	04 33 49.8	+1.1
MUD				IAmb	IAmb	04 33 51.0	
	comp=Z,131nm,0.9s						
OHAK	**Old Harbor**	78.30	327	IAmb	IAmb	04 33 50.1	
	comp=Z,50nm,1.1s						
GOET	**G??ttrup**	78.33	33	*i* P	P	04 33 50.6	+1.7
	comp=Z,72nm,0.9s						
GOET	**G??ttrup**	78.33	33	*i* P	P	04 33 50.6	+1.7
GOET				*i* P	P	04 33 51.1	+2.2
GOET				IAmb	IAmb	04 33 51.8	
	comp=Z,72nm,0.9s						
SKMB	**Sankelmark Bun**	78.36	36	*e*P	P	04 33 51.2	+2.1
	comp=Z,309nm,1.3s,baz=269,slow=5.5						
DAVOX	**Davos/Dischmat**	78.48	44	P	P	04 33 51.3	+1.1
	comp=Z,65nm,0.8s,baz=309,slow=6.5						
DAVA	**Damuels**	78.49	43	*i* P	P	04 33 51.1	+0.9
	comp=Z,129nm,1.0s,SNR=22						
DOMB	**Dombas**	78.54	28	*e*P	P	04 33 51.0	+0.9
GTTG	**Gottingen**	78.59	39	*e*P	P	04 33 51.9	+1.5
	comp=Z,78nm,1.1s,baz=269,slow=5.5						
UBBA	**Unterbreizbach**	78.60	40	*e*P	P	04 33 51.5	+1.1
	comp=Z,82nm,1.7s,baz=269,slow=5.5						
UBR	**Ueberruh**	78.64	43	*e*P	P	04 33 52.2	+1.2
	comp=Z,46nm,1.0s,baz=269,slow=5.5						
KONO	**Kongsberg**	78.66	31	P	P	04 33 52.0	+1.3
KONO				pmax	pmax		
	comp=Z,20nm,1.2s						
KONO	**Kongsberg**	78.66	31	P	P	04 33 52.0	+1.3
KONO	**Kongsberg**	78.66	31	*e*P	P	04 33 51.1	+0.5
CLZ	**Clausthal**	78.84	39	*e*P	P	04 33 53.4	+1.5
	comp=Z,66nm,1.0s,baz=269,slow=5.5						
CLZ				*e*pP	pP	04 33 58.3	-0.9
BSEG	**Bad Segeberg**	78.85	37	*e*P	P	04 33 53.3	+1.5
	comp=Z,80nm,1.0s,baz=269,slow=5.5						
ASSE	**Asse, Remlinge**	79.03	39	*e*P	P	04 33 54.6	+1.8
	comp=Z,77nm,1.1s,baz=269,slow=5.5						
IMAR	**Indian Mountai**	79.06	336	P	P	04 33 53.1	+0.3
FETA	**Feichten**	79.07	44	*i* P	P	04 33 54.3	+0.9
	comp=Z,129nm,1.1s,SNR=38						
RETA	**Reutte**	79.08	43	*i* P	P	04 33 54.0	+0.6
	comp=Z,58nm,1.1s,SNR=17						
TBLU	**Trondheim**	79.17	27	*e*P	P	04 33 53.4	0.0
OSL	**Oslo**	79.24	31	*e*P	P	04 33 55.8	+1.9
ZCCA	**Zocca**	79.28	46	IAmb	IAmb	04 34 02.5	
	comp=Z,69nm,0.9s						
MOTA	**Moosalm**	79.32	43	*i* P	P	04 33 55.1	+0.3
	comp=Z,59nm,1.1s,SNR=13						
GRFO	**Grafenberg**	79.38	41	P	P	04 33 55.9	+1.1
GRFO				pmax	pmax		
	comp=Z,40nm,1.0s						
GRFO	**Grafenberg**	79.38	41	P	P	04 33 55.9	+1.1
GRF	**Grafenberg Arr**	79.38	41	*e*P	P	04 33 56.0	+1.2
	comp=Z,60nm,1.3s,baz=269,slow=5.5						
GRF				*e*L	L	05 26 59.4	
	comp=Z,1µm,21.9s						
FLTG	**Flechtingen**	79.38	38	*e*P	P	04 33 55.8	+1.1
	comp=Z,88nm,1.1s,baz=269,slow=5.5						
FLTG				*e*pP	pP	04 34 00.7	-1.3
SQTA	**Sankt Quirin**	79.39	44	*i* P	P	04 33 55.7	+0.6
	comp=Z,77nm,1.2s,SNR=13						
FUR	**Furstenfeldbru**	79.42	43	*e*P	P	04 33 56.2	+1.1
	comp=Z,281nm,2.0s,baz=269,slow=5.5						
OSSC	**Osservatorio P**	79.49	47	IAmb	IAmb	04 34 02.1	
	comp=Z,56nm,1.1s						
NB2	**NORSAR Subarra**	79.52	29	P	P	04 33 56.5	+1.0
	comp=Z,95nm,1.0s,baz=270,slow=5.6						
NB2	**NORSAR Subarra**	79.52	29	P	P	04 33 56.4	+1.0
NB2				pmax	pmax		
	comp=Z,173nm,1.0s						
NB2	**NORSAR Subarra**	79.52	29	P	P	04 33 56.5	+1.0
	baz=270,slow=5.6						
NOA	**NORSAR Array B**	79.52	29	P	P	04 33 56.6	+1.2
	comp=Z,42nm,0.8s,baz=266,slow=5.4,SNR=136						
NB201	**NORSAR Array S**	79.56	29	IAmb	IAmb	04 34 07.2	
	comp=Z,100nm,1.1s						
NC303	**NORSAR Array S**	79.60	29	P	P	04 33 57.3	+1.5
SVW2	**Sparrevohn**	79.63	331	IAmb	IAmb	04 34 01.8	
	comp=Z,47nm,0.6s						
WATA	**Walderalm**	79.64	43	*i* P	P	04 33 57.0	+0.5
	comp=Z,33nm,1.0s,SNR=9.6						
NC602	**NORSAR Array S**	79.67	30	*e*P	P	04 33 57.8	+1.6
NORES	**NORESS Array B**	79.67	30	P	P	04 33 57.8	+1.6
NORES				pmax	pmax		
	comp=Z,60nm,0.8s						
WTTA	**Wattenberg**	79.68	43	*i* P	P	04 33 57.3	+0.5
	comp=Z,31nm,0.8s,SNR=13						
WTTA	**Wattenberg**	79.68	43	P	P	04 33 57.9	+1.1
CTI	**Castel Tesino**	79.72	45	IAmb	IAmb	04 33 58.3	
	comp=Z,62nm,1.1s						
NEUB	**Neuenburg**	79.72	39	*e*P	P	04 33 58.1	+1.4
	comp=Z,104nm,1.3s,baz=269,slow=5.5						
NEUB				*e*pP	pP	04 34 02.9	-1.0
TEOL	**Teolo**	79.75	45	IAmb	IAmb	04 34 03.5	
	comp=Z,77nm,0.8s						
LATE	**Laterza**	79.93	48	P	P	04 33 59.3	+1.3
MANZ	**Manzenberg**	79.95	41	*e*P	P	04 33 59.5	+1.5
	comp=Z,96nm,1.2s,baz=269,slow=5.5						
LLD	**Lille Linde**	79.97	35	*i* P	P	04 33 58.4	+0.6
LLD	**Lille Linde**	79.97	35	*i* P	P	04 33 58.4	+0.6
LLD	**Lille Linde**	79.97	35	*i* P	P	04 33 58.4	+0.6
PLN	**Plauen**	79.97	40	*e*P	P	04 33 59.3	+1.2
	comp=Z,64nm,1.1s,baz=269,slow=5.5						
PLN				*e*pP	pP	04 34 04.1	-1.1
NSS	**Namsos**	79.98	26	*e*P	P	04 33 58.9	+1.1
ROTZ	**Rotzenmuhle**	80.02	41	*e*P	P	04 33 59.6	+1.3
	comp=Z,69nm,1.5s,baz=269,slow=5.5						
WERD	**Werda**	80.07	40	*e*P	P	04 33 59.9	+1.3
	comp=Z,64nm,1.2s,baz=269,slow=5.5						
GUNZ	**Gunzen**	80.08	40	*e*P	P	04 34 00.0	+1.3
	comp=Z,54nm,1.3s,baz=269,slow=5.5						
COP	**Copenhagen**	80.09	35	*i* P	P	04 34 00.2	+1.7
	comp=Z,45nm,0.8s						
COP	**Copenhagen**	80.09	35	*i* P	P	04 34 00.2	+1.7
COP				pmax	pmax		
	comp=Z,45nm,0.8s						
COP	**Copenhagen**	80.09	35	*i* P	P	04 34 00.2	+1.7
COP				*i* P	P	04 34 00.2	+1.7
COP				IAmb	IAmb	04 34 00.8	
	comp=Z,45nm,0.8s						
WERN	**Wernitzgruen**	80.11	40	*e*P	P	04 34 00.4	+1.5
	comp=Z,62nm,1.1s,baz=269,slow=5.5						
WERN				*e*pP	pP	04 34 05.0	-1.1
NKC	**Novy Kostel**	80.16	40	*e*P	P	04 33 59.6	+0.5
NKC				*e*		04 34 05.0	
NKC	**Novy Kostel**	80.16	40	*e*P	P	04 33 59.6	+0.5
NKC				*e*x	x	04 34 05.0	
TANN	**Tannenbergstha**	80.17	40	*e*P	P	04 34 00.6	+1.4
	comp=Z,85nm,1.1s,baz=269,slow=5.5						
ABTA	**Abfaltersbach**	80.29	44	*i* P	P	04 34 00.3	+0.3
	comp=Z,38nm,0.8s,SNR=17						
A21K	**Barrow**	80.42	341	P	P	04 34 00.6	+0.6
	baz=92,SNR=41						
A21K	**Barrow**	80.42	341	IAmb	IAmb	04 34 02.9	
	comp=Z,55nm,0.9s						
A21K				IAMs_20	IAMs_20	05 15 02.4	
	comp=Z,577nm,19.0s						
WET	**Wettzell**	80.47	42	P	P	04 34 01.8	+1.0
WET	**Wettzell**	80.47	42	*e*P	P	04 34 02.0	+1.3
	comp=Z,54nm,1.4s,baz=269,slow=5.5						
CLL	**Collm**	80.49	39	*i* P	P	04 34 01.8	+1.0
	comp=Z,55nm,1.1s						
CLL				*i* pP	pP	04 34 06.3	-1.7
	comp=Z,57nm,1.0s						
CLL				*e*PS	PnS	04 44 54.0	+0.9
CLL	**Collm**	80.49	39	*i* P	P	04 34 01.8	+1.0
CLL				*i*		04 34 06.3	
CLL				pmax	pmax		
	comp=Z,55nm,1.1s						
CLL	**Collm**	80.49	39	IAmb	IAmb	04 34 07.6	
	comp=Z,48nm,1.0s						
CLL	**Collm**	80.49	39	*e*P	P	04 34 02.1	+1.3
	comp=Z,55nm,1.1s,baz=269,slow=5.5						
KONS	**Konsvik**	80.51	24	*e*P	P	04 34 02.0	+1.5
ZOU	**Zoufplan**	80.62	44	IAmb	IAmb	04 34 08.2	
	comp=Z,65nm,1.1s						
PPT2	**Papeete2**	80.73	251	*e*P	P	04 34 00.2	-2.6
	comp=Z,48nm,1.3s						
PPT2	**Papeete2**	80.73	251	*e*LQ	LQ	04 55 51.5	
	comp=Z,1µm,30.5s						
PPT2				*e*LR	LR	04 59 10.3	
	comp=Z,1µm,24.5s						
HFS	**Hagfors**	80.73	30	P	P	04 34 02.4	+0.4
	comp=Z,22nm,0.7s,baz=270,slow=1.5,SNR=37						
KBS	**Kingsbay**	80.74	11	*ce*P	P	04 34 04.4	+2.8
KBS				pmax	pmax		
	comp=Z,93nm,1.1s						
KBS	**Kingsbay**	80.74	11	*e*P	P	04 34 02.6	+1.0
PAE	**Paea**	80.75	251	*e*P	P	04 34 00.1	-2.7
	comp=Z,21nm,1.3s						
KBA	**Koelnbreinsper**	80.85	44	*i* P	P	04 34 03.7	+0.6
	comp=Z,52nm,1.1s,SNR=18						
KBA	**Koelnbreinsper**	80.85	44	P	P	04 34 04.0	+0.9
KHC	**Kasperske Hory**	80.93	42	*c i*P	P	04 34 03.4	+0.1
KHC				pmax	pmax		
	comp=Z,147nm,1.3s						
KHC	**Kasperske Hory**	80.93	42	*e*P	P	04 34 03.6	+0.3
KHC				*e*pP	PcP	04 34 08.9	-0.9
KHC	**Kasperske Hory**	80.93	42	IAmb	IAmb	04 34 10.2	
	comp=Z,50nm,1.0s						
RUE	**Ruedersdorf**	80.94	38	*e*P	P	04 34 04.4	+1.3
	comp=Z,62nm,0.9s,baz=269,slow=5.5						
RUE				*e*pP	PcP	04 34 09.4	-0.3
GEC2	**GERESS Array S**	81.02	42	IAmb	IAmb	04 34 10.4	
	comp=Z,52nm,1.0s						
GEC2	**GERESS Array S**	81.02	42	*e*P	P	04 34 04.8	+1.0
	comp=Z,61nm,1.1s,baz=269,slow=5.5						
GEC2				*e*pP	PcP	04 34 09.6	-0.6
GERES	**GERESS Array B**	81.02	42	P	P	04 34 04.0	+0.2
	comp=Z,23nm,0.9s,baz=262,slow=4.0,SNR=64						
GERES				pP	PcP	04 34 09.4	-0.9
	comp=Z,21nm,0.8s,baz=271,slow=4.6,SNR=34						
GERES	**GERESS Array B**	81.02	42	P	P	04 34 03.9	+0.1
GERES	**GERESS Array B**	81.02	42	P	P	04 34 03.9	+0.1
MOR8	**Moi Rana**	81.04	24	*e*P	P	04 34 05.5	+2.0
MYKA	**Terra Mystica**	81.08	44	*i* P	P	04 34 04.6	+0.5
	comp=Z,39nm,0.7s,SNR=10						
BRG	**Berggiesshubel**	81.10	40	P	P	04 34 05.0	+0.9
BRG	**Berggiesshubel**	81.10	40	*e*P	P	04 34 04.6	+0.5
BRG				Amp		04 34 06.3	
	comp=Z,44nm,1.0s						
BRG				*i* pP	PcP	04 34 10.3	-0.1
BRG				Amp		04 34 11.1	
	comp=Z,34nm,1.0s						
BRG	**Berggiesshubel**	81.10	40	*e*P	P	04 34 05.5	+1.4
	comp=Z,44nm,1.0s,baz=269,slow=5.5						
AQU	**L'Aquila**	81.12	48	P	P	04 34 08.7	+4.2
AQU				pmax	pmax		
	comp=Z,84nm,0.9s						
AQU	**L'Aquila**	81.12	48	⇑*i*P	P	04 34 04.8	+0.3
AQU	**L'Aquila**	81.12	48	IAmb	IAmb	04 34 15.0	
	comp=Z,50nm,0.8s						
CADS	**Cadrg**	81.16	44	*i* P	P	04 34 05.3	+0.7
PBCC	**Pribram**	81.18	41	*e*P	P	04 34 05.7	+1.1
PBCC				*e*pP	PcP	04 34 10.0	-0.8
STEI	**Steigen**	81.34	22	*e*P	P	04 34 05.5	+0.5
FAUS	**Fauske**	81.36	23	*e*P	P	04 34 06.8	+1.7
HSPB	**Hornsund (broa**	81.41	13	*e*P	P	04 34 07.5	+2.3
CKRC	**Cesky Krumlov**	81.42	42	*e*P	P	04 34 06.1	+0.2
CKRC				*e*x	x	04 34 10.2	
MOA	**Molln**	81.44	43	*i* P	P	04 34 06.4	+0.4
	comp=Z,47nm,1.2s,SNR=17						
PRA	**Prague**	81.44	41	*e*P	P	04 34 06.6	+0.7
PRA				*e*		04 34 12.3	
PRA	**Prague**	81.44	41	*e*P	P	04 34 06.6	+0.7
PRA				*e*pP	PcP	04 34 12.3	+0.4
N2ST	**Straumen**	81.48	23	*e*P	P	04 34 06.7	+0.9
PVCC	**Panska Ves**	81.51	40	*e*P	P	04 34 07.0	+0.7
PVCC				*e*		04 34 11.3	
PVCC	**Panska Ves**	81.51	40	*e*P	P	04 34 07.0	+0.7
PVCC				*e*pP	PcP	04 34 11.3	-0.9
INTR	**Introdacqua**	81.51	49	IAmb	IAmb	04 34 12.5	
	comp=Z,33nm,0.9s						
BSD	**Bornholm Skovb**	81.52	35	*i* P	P	04 34 06.7	+0.5
	comp=Z,46nm,0.9s						
BSD	**Bornholm Skovb**	81.52	35	*e*P	P	04 34 07.0	+0.9
BSD	**Bornholm Skovb**	81.52	35	*i* P	P	04 34 06.7	+0.5
BSD				pmax	pmax		
	comp=Z,46nm,0.9s						
BSD	**Bornholm Skovb**	81.52	35	*i* P	P	04 34 06.7	+0.5
BSD				*i* P	P	04 34 07.0	+0.9
BSD				IAmb	IAmb	04 34 08.0	
	comp=Z,46nm,0.9s						
PRU	**Pruhonice**	81.52	41	*e*P	P	04 34 06.7	+0.4
PRU				*e*		04 34 12.2	
PRU	**Pruhonice**	81.52	41	*e*P	P	04 34 06.7	+0.4
PRU				*e*pP	PcP	04 34 12.2	-0.1
SPA0	**Spitsbergen Ar**	81.59	12	*e*P	P	04 34 07.2	+1.0
SPITS	**Spitsbergen Ar**	81.59	12	P	P	04 34 07.2	+1.0
	comp=Z,38nm,0.8s,baz=143,slow=2.9,SNR=10.0						
N2IH	**Innhavet**	81.60	22	*e*P	P	04 34 07.6	+1.3
CEY	**Cerknica**	81.67	45	⇑*i*P	P	04 34 08.2	+0.9
OBKA	**Obir**	81.71	44	*e*P	P	04 34 08.2	+0.7
	comp=Z,31nm,0.8s						
LJU	**Ljubljana**	81.72	45	*i* P	P	04 34 08.6	+1.1
LJU				*i*		04 34 13.7	
LJU	**Ljubljana**	81.72	45	*e*P	P	04 34 08.2	+0.7
TBI	**Tubuai**	81.84	245	*e*LQ	LQ	04 56 18.0	
	comp=Z,763nm,35.2s						
TBI				*e*LR	LR	04 59 49.5	
	comp=Z,459nm,29.8s						
GBRS	**Gornja Briga**	81.95	45	*i* P	P	04 34 09.8	+1.1
GBRS				*i*		04 34 15.0	
SOKA	**Soboth**	82.03	44	*e*P	P	04 34 08.8	-0.4
	comp=Z,13nm,0.9s						
NVLJ	**Novalja**	82.05	46	*i* P	P	04 34 08.7	-0.6
TREC	**Trest**	82.17	41	*e*P	P	04 34 10.8	+1.0
TREC				*e*		04 34 15.7	
TREC	**Trest**	82.17	41	*e*P	P	04 34 10.8	+1.0
TREC				*e*pP	PcP	04 34 15.7	+0.5
DUGI	**Dugi Otok**	82.23	47	*i* P	P	04 34 10.6	+0.4
ARSA	**Arzberg**	82.33	43	*i* P	P	04 34 11.0	+0.3
	comp=Z,28nm,0.9s,SNR=13						
CRES	**Cresnjev**	82.38	45	⇑*i*P	P	04 34 12.0	+1.0
OZLJ	**Ozalj**	82.40	45	*i* P	P	04 34 12.1	+1.1
UPC	**Upice**	82.43	40	*e*P	P	04 34 12.2	+1.1
UPC				*e*		04 34 17.1	
UPC	**Upice**	82.43	40	*e*P	P	04 34 12.2	+1.1
UPC				*e*pP	PcP	04 34 17.1	+0.8
CHVC	**Chvalec**	82.45	40	*e*P	P	04 34 11.5	+0.2
CHVC				*e*x	x	04 34 16.8	
CONA	**Conrad Observa**	82.51	43	*i* P	P	04 34 12.5	+0.8
	comp=Z,71nm,1.2s,SNR=23						
OSTC	**Ostas**	82.56	40	*e*P	P	04 34 12.5	+0.7
OSTC				*e*pP	pP	04 34 18.1	-1.0
KSP	**Ksiaz**	82.58	40	*e*P	P	04 34 13.7	+1.7
KSP	**Ksiaz**	82.58	40	P	P	04 34 13.2	+1.3
KSP				pmax	pmax		
	comp=Z,36nm,1.0s						
TRO	**Tromso**	82.61	21	*e*P	P	04 34 12.7	+1.1
DPC	**Dobruska-Polom**	82.64	40	*e*P	P	04 34 13.1	+0.8
DPC				*e*		04 34 18.0	
DPC	**Dobruska-Polom**	82.64	40	*e*P	P	04 34 13.1	+0.8
DPC				*e*pP	PcP	04 34 18.0	+0.8
RDOG	**Red Dog Mine**	82.66	338	P	P	04 34 12.6	+0.7
RDOG				IAmb	IAmb	04 34 14.3	
	comp=Z,49nm,1.2s						
ZIRJ	**Zirje**	82.67	47	*i* P	P	04 34 12.8	+0.3
UDBI	**Udbina**	82.69	46	*i* P	P	04 34 13.3	+0.6
MORI	**Morici**	82.70	47	*i* P	P	04 34 12.3	-0.4
UPP	**Uppsala**	82.72	31	*e*P	P	04 34 12.8	+0.5
UPP	**Uppsala**	82.72	31	*e*P	P	04 34 12.8	+0.5
PTJ	**Puntijarka**	82.73	45	P	P	04 34 12.8	-0.1
KRUC	**Moravsky**	82.78	42	*e*P	P	04 34 13.3	+0.3
KRUC	**Moravsky**	82.78	42	P	P	04 34 13.9	+0.9
KRUC				pmax	pmax		
	comp=Z,41nm,1.0s						
VRAC	**Vranov**	82.89	41	P	P	04 34 14.2	+0.7
	comp=Z,20nm,0.9s,baz=275,slow=6.5,SNR=23						
VRAC	**Vranov**	82.89	41	⇑P	P	04 34 14.3	+0.7
VRAC	**Vranov**	82.89	41	*e*P	P	04 34 13.9	+0.3
KRLC	**Kraliky**	82.95	40	*e*P	P	04 34 14.8	+0.9
KRLC				*e*		04 34 20.6	
KRLC	**Kraliky**	82.95	40	*e*P	P	04 34 14.8	+0.9
KRLC				*e*pP	pP	04 34 20.6	-0.6
GKP	**Gorka Klasztor**	82.99	37	*e*P	P	04 34 15.4	+1.5
GKP	**Gorka Klasztor**	82.99	37	*e*P	P	04 34 14.5	+0.6
GKP	**Gorka Klasztor**	82.99	37	P	P	04 34 15.9	+2.0
GKP				pmax	pmax		
	comp=Z,179nm,0.9s						
SOP	**Sopron**	83.00	43	P	P	04 34 15.2	+1.1
SOP				pmax	pmax		
	comp=Z,48nm,1.3s						
KALN	**Kalnik**	83.05	44	*i* P	P	04 34 14.8	+0.3
KIJV	**Kijevo**	83.19	47	*i* P	P	04 34 16.0	+0.7
BEHE	**Becsehely**	83.24	44	⇑*i*P	P	04 34 19.1	+3.7
HVAR	**Hvar**	83.30	47	*i* P	P	04 34 16.6	+0.8
MOSL	**Moslavina**	83.30	45	*i* P	P	04 34 14.8	-1.0
ZST	**Bratislava**	83.32	42	*e*P	P	04 34 16.5	+0.7
ZST				*e*		04 34 21.8	
ZST				pmax	pmax		
	comp=Z,258nm,1.6s						
ZST	**Bratislava**	83.32	42	*e*P	P	04 34 16.5	+0.7
ZST				*e*		04 34 21.8	
MODS	**Modra-Piesok**	83.42	42	*e*P	P	04 34 16.6	+0.3
MODS				*e*		04 34 21.6	
MODS				pmax	pmax		
	comp=Z,86nm,1.3s						
MODS	**Modra-Piesok**	83.42	42	*e*P	P	04 34 16.6	+0.3
MODS				*e*		04 34 21.6	
MORC	**Moravsky Berou**	83.47	41	⇓P	P	04 34 17.8	+1.2
MORC	**Moravsky Berou**	83.47	41	*e*P	P	04 34 17.3	+0.7
MORC	**Moravsky Berou**	83.47	41	⇓P	P	04 34 17.8	+1.2
MORC	**Moravsky Berou**	83.47	41	IAmb	IAmb	04 34 19.1	
	comp=Z,46nm,1.1s						
SMOL	**Smolenice**	83.51	42	*e*P	P	04 34 18.0	+1.3
SMOL				*e*		04 34 23.3	
SMOL				pmax	pmax		
	comp=Z,12nm,1.1s						

SMOL	Smolenice	83.51	42	eP	P	04 34 18.0	+1.3
SMOL				e		04 34 23.3	
JAVC	Velka Javorina	83.64	42	eP	P	04 34 19.1	+1.6
MGRS	Mrkonjic Grad	83.64	46	eP	P	04 34 18.2	+0.6
BLY	Banja Luka	83.68	46	⇑iP	P	04 34 20.1	+2.4
MAKA	Makarska	83.70	47	i P	P	04 34 18.2	+0.4
MATE	Matera	83.72	50	⇑P	P	04 34 17.9	0.0
RICI	Ricice	83.77	47	P	P	04 34 18.1	-0.1
AAL	Aland	83.88	30	eP	P	04 34 18.4	+0.1
AAL	Aland	83.88	30	eP	P	04 34 18.4	+0.1
HAMF	Hammerfest	84.12	19	eP	P	04 34 19.0	-0.4
SRO	Srobarova	84.16	43	eP	P	04 34 21.3	+1.2
SRO	Srobarova	84.16	43	eP	P	04 34 21.3	+1.2
KTK1	Kautokeino	84.20	21	eP	P	04 34 20.3	+0.4
STON	Ston	84.24	48	i P	P	04 34 20.2	-0.4
STON	Ston	84.24	48	⇓iP	P	04 34 20.2	-0.4
VYHS	Vyhne	84.44	42	eP	P	04 34 22.7	+1.2
VYHS				e		04 34 27.7	
VYHS				pmax	pmax		
	comp=Z,37nm,1.1s						
VYHS	Vyhne	84.44	42	eP	P	04 34 22.7	+1.2
VYHS				e		04 34 27.7	
MORH	Mrgy, Hungar	84.56	44	⇓P	P	04 34 23.3	+1.2
MORH	Mrgy, Hungar	84.56	44	⇑iP	P	04 34 22.8	+0.7
BUD	Budapest	84.68	43	P	P	04 34 23.9	+1.2
BUD				pmax	pmax		
	comp=Z,51nm,1.1s						
TREB	Trebinje	84.73	48	eP	P	04 34 23.3	+0.2
LANS	Liptovska Anna	84.78	41	eP	P	04 34 25.8	+2.5
LANS				e		04 34 31.2	
LANS				pmax	pmax		
	comp=Z,28nm,1.2s						
LANS	Liptovska Anna	84.78	41	eP	P	04 34 25.8	+2.5
LANS				e		04 34 31.2	
OJC	Ojcow	84.87	40	eP	P	04 34 25.4	+1.7
OJC	Ojcow	84.87	40	IAmb	IAmb	04 34 26.2	
	comp=Z,54nm,1.0s						
ARA0	ARCESS Array S	84.91	20	eP	P	04 34 24.2	+0.7
ARCES	ARCESS Array B	84.91	20	P	P	04 34 23.8	+0.3
	comp=Z,18nm,0.8s,baz=275,slow=5.2,SNR=18						
ARCES	ARCESS Array B	84.91	20	P	P	04 34 24.1	+0.6
HAPS	Han Pijesak,BI	85.01	46	⇓iP	P	04 34 24.1	-0.5
UPM	Unac-Piva	85.08	47	eP	P	04 34 25.8	+0.7
PSZ	Piszkesteto	85.21	42	⇑P	P	04 34 26.7	+1.2
PSZ	Piszkesteto	85.21	42	⇑P	P	04 34 26.7	+1.2
PSZ	Piszkesteto	85.21	42	IAmb	IAmb	04 34 32.7	
	comp=Z,49nm,1.1s						
NIE	Niedzica	85.29	41	eP	P	04 34 28.8	+3.0
NIE	Niedzica	85.29	41	P	P	04 34 28.1	+2.3
NIE				pmax	pmax		
	comp=Z,22nm,1.5s						
BEL	Belsk	85.29	38	eP	P	04 34 28.1	+2.4
BEL	Belsk	85.29	38	P	P	04 34 28.5	+2.8
BEL				pmax	pmax		
	comp=Z,252nm,1.1s						
BBLS	Lazići	85.36	47	⇑iP	P	04 34 27.6	+1.2
TEKS	Tekeris	85.37	46	⇓iP	P	04 34 27.4	+1.1
SLIT	Slitere, Latvi	85.37	33	eP	P	04 34 25.9	0.0
SLIT	Slitere, Latvi	85.37	33	eP	P	04 34 25.9	0.0
PBUR	Paburge	85.40	34	eP	P	04 34 26.8	+0.6
PBUR	Paburge	85.40	34	eP	P	04 34 26.8	+0.6
PDG	Podgorica	85.43	48	⇓P	P	04 34 28.1	+1.5
PDG	Podgorica	85.43	48	⇑iP	P	04 34 27.4	+0.8
FRGS	Fruska Gora	85.49	45	⇓P	P	04 34 27.9	+1.0
FRGS	Fruska Gora	85.49	45	⇑iP	P	04 34 27.6	+0.7
KECS	Kecovo	85.53	42	eP	P	04 34 28.7	+1.7
KECS	Kecovo	85.53	42	eP	P	04 34 28.7	+1.7
DIVS	Divibare	85.76	46	⇑iP	P	04 34 28.6	+0.3
AMBH	Ambrzfalva	85.97	44	⇓P	P	04 34 30.9	+1.8
MTSE	Matsula	86.01	31	eP	P	04 34 29.9	+0.8
TIR	Tirane	86.02	49	⇑P	P	04 34 31.2	+1.6
TIR	Tirane	86.02	49	⇑P	P	04 34 31.2	+1.6
CRVS	Cervenica-Dubn	86.11	41	eP	P	04 34 31.9	+2.0
CRVS				e		04 34 36.8	
CRVS				pmax	pmax		
	comp=Z,86nm,1.1s						
CRVS	Cervenica-Dubn	86.11	41	eP	P	04 34 31.9	+2.0
CRVS				e		04 34 36.8	
BANR	Banloc	86.39	45	⇑P	P	04 34 33.1	+1.8
PHP	Peshkopia	86.40	49	P	P	04 34 33.1	+1.6
SUW	Suwalki	86.41	36	eP	P	04 34 32.2	+1.0
SUW	Suwalki	86.41	36	eP	P	04 34 32.2	+1.0
SUW	Suwalki	86.41	36	P	P	04 34 32.6	+1.4
SUW				pmax	pmax		
	comp=Z,107nm,0.9s						
IGT	Igoumenitsa	86.62	51	P	P	04 34 35.6	+3.0
IGT				pmax	pmax		
	comp=Z,80nm,1.2s						
PABE	Paberze	86.62	35	eP	P	04 34 33.1	+1.0
SIRR	Siria	86.63	44	⇓P	P	04 34 33.4	+0.9
FINES	FINESS Array B	86.64	28	P	P	04 34 32.9	+0.8
	comp=Z,37nm,0.9s,baz=288,slow=1.8,SNR=62						
KOLS	Kolonicke sedl	86.64	41	eP	P	04 34 34.4	+1.9
KOLS				pmax	pmax		
	comp=Z,29nm,1.3s						
KOLS	Kolonicke sedl	86.64	41	eP	P	04 34 34.4	+1.9
BZS	Buzias	86.69	45	⇑P	P	04 34 33.9	+1.1
BZS	Buzias	86.69	45	⇑P	P	04 34 33.9	+1.1
UZH	Uzhgorod	86.70	41	⇓iP	P	04 34 33.2	+0.5
UZH				e		04 34 37.6	
OHR	Ohrid	86.75	49	P	P	04 34 35.3	+2.1
OHR				pmax	pmax		
	comp=Z,94nm,1.2s						
OHR	Ohrid	86.75	49	i P	P	04 34 35.1	+1.9
KBN	Korca	86.81	50	P	P	04 34 35.5	+1.9
KWP	Kalwaria Pacla	86.81	40	eP	P	04 34 35.4	+2.1
KWP	Kalwaria Pacla	86.81	40	P	P	04 34 35.4	+2.1
KWP				pmax	pmax		
	comp=Z,88nm,1.1s						
MDVR	Moldovita	86.88	45	⇓P	P	04 34 34.3	+0.5
BOVS	Bovan	87.05	47	⇑P	P	04 34 35.0	+0.5
SKO	Skopje	87.10	48	i P	P	04 34 36.1	+1.2
TRSU	Trosnyk	87.22	42	P	P	04 34 37.1	+1.8
FNA	Florina	87.23	49	P	P	04 34 36.4	+0.8
FNA	Florina	87.23	49	P	P	04 34 35.9	+0.3
FNA				pmax	pmax		
	comp=Z,92nm,0.9s						
FNA	Florina	87.23	49	P	P	04 34 36.3	+0.7
DRGR		87.26	43	⇓P	P	04 34 36.5	+0.8
DRGR		87.26	43	⇓P	P	04 34 36.5	+0.8
KPRO	Kipourio	87.34	50	P	P	04 34 37.0	+0.8
HERR	Herculane	87.36	45	⇑P	P	04 34 37.0	+1.0
PDO	Prodromos	87.41	52	P	P	04 34 37.4	+1.0
GZR	Gura Zlata	87.53	45	⇓P	P	04 34 37.9	+0.9
VSU	Vasula	87.56	31	eP	P	04 34 37.4	+0.7
VSU	Vasula	87.56	31	c iP	P	04 34 37.2	+0.6
VSU				pmax	pmax		
	comp=Z,508nm,0.8s						
KZN	Kozani	87.60	50	P	P	04 34 38.3	+0.9
LVV	L'vov	87.63	40	eP	P	04 34 38.4	+1.2
LVV				e		04 38 06.1	
LVV				ePPP	PPP	04 40 01.5	
LVV				e		04 45 01.8	
LVV				eS	S	04 45 15.8	-2.1
LVV				ePS	PnS	04 46 22.3	+1.9
LVV				eSS	SS	04 50 59.6	-4.1
LVV				eSSS	SSS	04 54 41.3	
LVV				pmax	pmax		
	comp=Z,100nm,1.3s						
BMR	Baia Mare	87.65	42	⇓P	P	04 34 39.1	+1.7
BMR	Baia Mare	87.65	42	P	P	04 34 39.4	+2.0
BMR				pmax	pmax		
	comp=Z,156nm,1.1s						
MORS	Morshin	87.66	41	P	P	04 34 38.6	+1.2
STIP	Stip	87.69	48	i P	P	04 34 39.4	+1.7
ISAL	Salakas	87.81	34	eP	P	04 34 38.6	+0.6
ISAL	Salakas	87.81	34	eP	P	04 34 38.6	+0.6
EVR	Evrytania	87.84	51	P	P	04 34 40.3	+1.7
CJR	Cluj-Napoca	87.88	43	⇓P	P	04 34 39.8	+1.2
CJR	Cluj-Napoca	87.88	43	⇓P	P	04 34 39.8	+1.2
THL	Klokotos Trika	87.90	50	P	P	04 34 38.7	0.0
GRG	Griva	87.97	49	P	P	04 34 40.2	+1.1
APA	Apatity	88.20	22	⇑iP	P	04 34 26.7	-13
APA				pmax	pmax		
	comp=Z,29nm,0.6s						
LOT	Lotru	88.21	44	⇓P	P	04 34 40.3	0.0
AGG	Agios Georgios	88.23	51	P	P	04 34 40.6	+0.2
VTS	Vitosha	88.31	47	⇑P	P	04 34 42.4	+1.5
VTS	Vitosha	88.31	47	⇑P	P	04 34 42.4	+1.5
VTS	Vitosha	88.31	47	IAmb	IAmb	04 34 47.8	
	comp=Z,39nm,1.1s						
NACGM	Naroch	88.32	35	i P	P	04 34 41.4	+1.0
NACGM				i P	P	04 34 41.4	+1.0
NACGM				i P	P	04 34 41.4	+1.0
NACGM				i PP	PP	04 38 07.8	+0.2
NACGM				i PPP	PPP	04 40 18.7	
NACGM				i SKS	SKiKP	04 43 38.8	+24
NACGM				i S	ScS	04 45 29.5	-0.6
NACGM				i SS	SS	04 51 48.1	+35
NACGM				i SSS	SSS	04 55 45.3	
NACGM				i LQ	LQ	05 08 24.4	
NACGM				i LR	LR	05 14 12.2	
ARCR	ARCALIA	88.32	43	⇓P	P	04 34 41.7	+1.1
AXAR	Agios Charalam	88.52	51	P	P	04 34 41.8	+0.1
KSV	Kosov	88.57	41	P	P	04 34 43.0	+1.2
SOH	Sokhos	88.71	49	P	P	04 34 43.3	+0.7
BUR08	Bucovina Ar. S	88.79	42	IAmb	IAmb	04 34 50.4	
	comp=Z,28nm,1.0s						
BURAR	Bucovina Array	88.80	42	⇓P	P	04 34 45.0	+2.0
BURAR	Bucovina Array	88.80	42	⇓P	P	04 34 45.0	+2.0
BURAR	Bucovina Array	88.80	42	P	P	04 34 44.2	+1.2
ARR	Arges	88.83	44	⇑P	P	04 34 44.1	+1.0
XOR	Xorichti	88.83	51	P	P	04 34 43.5	+0.3
SRS	Serrai	88.83	49	P	P	04 34 42.2	-1.0
VALR	Valaam	88.91	28	i P	P	04 34 44.0	+1.0
VALR				pmax	pmax		
	comp=Z,139nm,1.0s						
NVR	Nevrokopi	88.99	49	P	P	04 34 43.9	0.0
MNK	Minsk	89.03	35	eP	P	04 34 44.0	+0.3
MNK				pmax	pmax		
	comp=Z,530nm,1.0s						
MNK	Minsk	89.03	35	i P	P	04 34 42.4	-1.3
	comp=E,12nm,1.0s						
MNK				i P	P	04 34 42.4	-1.3
	comp=N,47nm,0.9s						
MNK				i P	P	04 34 42.4	-1.3
	comp=Z,206nm,0.9s						
MNK				i PP	PP	04 38 11.2	-2.2
MNK				i PPP	PPP	04 40 07.6	
MNK				i S	SKSac	04 45 11.4	-0.8
MNK				i PS	PnS	04 46 35.1	-1.6
MNK				i SS	SS	04 51 15.0	-8.7
MNK				i SSS	SSS	04 54 59.1	
MNK				i LQ	LQ	05 08 52.6	
MNK				i LR	LR	05 09 03.9	
MNK				i LRM	MLR	05 14 54.1	
	comp=Z,147nm,18.8s						
MNK				i LRM	MLR	05 15 39.6	
	comp=E,32nm,26.1s						
MNK				i LRM	MLR	05 15 39.6	
	comp=N,293nm,23.1s						
PUL	Pulkovo	89.05	30	⇑iP	P	04 34 45.6	+1.9
PUL				pmax	pmax		
	comp=Z,66nm,1.1s						
VOIR		89.10	44	⇑P	P	04 34 45.9	+1.5
VOIR		89.10	44	⇑P	P	04 34 45.9	+1.5
MTUR	Matau	89.15	45	⇓P	P	04 34 45.9	+1.2
MTUR	Matau	89.15	45	⇓P	P	04 34 45.9	+1.2
PLVB	Pleven	89.18	46	⇓P	P	04 34 46.2	+1.5
DOPR	Dopca	89.23	44	⇑P	P	04 34 46.2	+1.2
HORU	Horodok	89.28	40	P	P	04 34 45.9	+0.9
VNA3	Neumayer Olymp	89.29	163	P	P	04 34 44.5	-0.1
VNA1	Neumayer--Stat	89.42	163	P	P	04 34 46.2	+1.1
KMPD	K-Podol'skiy	89.43	41	P	P	04 34 45.0	-0.7
PLD	Plovdiv	89.48	48	P	P	04 34 48.1	+2.0
PLD				pmax	pmax		
	comp=Z,113nm,1.2s						
OZUR		89.48	44	⇓P	P	04 34 50.0	+3.9
ATHU	Athens Univers	89.53	52	P	P	04 34 45.5	-1.0
BIZ	Bicaz	89.53	43	⇓P	P	04 34 47.9	+1.6
MLR	Muntele Rosu	89.71	44	P	P	04 34 48.4	+1.1
	comp=Z,68nm,0.9s,baz=213,slow=1.8,SNR=77						
MLR	Muntele Rosu	89.71	44	⇓P	P	04 34 48.3	+1.0
VNA2	Neumayer--Watz	89.80	163	P	P	04 34 46.7	-0.2
	baz=328,slow=5.7						
NEHR	Nehoiu	89.96	44	⇑P	P	04 34 48.8	+0.4
TESR	Tescani	89.98	43	⇑P	P	04 34 48.8	+0.4
SULR		90.09	45	⇑P	P	04 34 48.8	-0.1
PLOR	Plostina	90.12	44	⇓P	P	04 34 51.0	+1.8
PLOR	Plostina	90.12	44	P	P	04 34 50.9	+1.8
VRI	Vrincioaia	90.17	44	⇓P	P	04 34 48.7	-0.6
VRI	Vrincioaia	90.17	44	⇓P	P	04 34 48.7	-0.6
RDO	Rodhopi	90.27	48	P	P	04 34 49.7	-0.1
RAZG	Razgrad	90.49	46	⇑P	P	04 34 51.0	+0.1
GHRR		90.59	43	⇓P	P	04 34 52.4	+1.1
KIEV	Kiev	90.70	39	P	P	04 34 51.0	-0.6
AKASG	Malin Array Be	90.71	39	P	P	04 34 52.0	+0.4
	comp=Z,19nm,0.9s,baz=278,slow=3.6,SNR=46						
AKASG				pP	pP	04 34 57.1	-1.9
	comp=Z,12nm,0.8s,baz=295,slow=4.3,SNR=14						
AKASG	Malin Array Be	90.71	39	i P	P	04 34 52.2	+0.5
AKASG				pmax	pmax		
	comp=Z,19nm,0.9s						
AKBB	Malin Array Si	90.71	39	c iP	P	04 34 51.7	0.0
AKBB				pmax	pmax		
	comp=Z,26nm,0.9s						
SORM	Soroca	90.76	41	⇓P	P	04 34 52.2	+0.3
SORM	Soroca	90.76	41	⇓P	P	04 34 52.2	+0.3
IDI	Anoyia	90.89	54	P	P	04 34 53.5	+0.6
EZN	Ezine	91.12	50	P	P	04 34 54.3	+0.5
EZN	Ezine	91.12	50	P	P	04 34 55.2	+1.4
TMCR	Tamitsa	91.14	24	eP	P	04 34 53.0	-0.3
HARR	Harsova	91.25	45	⇓P	P	04 34 53.2	-1.1
HARR	Harsova	91.25	45	⇓P	P	04 34 53.2	-1.1
CFR	Carcaliu	91.29	44	⇑P	P	04 34 51.5	-2.9
CFR	Carcaliu	91.29	44	⇑P	P	04 34 51.5	-2.9
ICOR	Ion Corvin	91.29	45	⇓P	P	04 34 55.8	+1.3
MILM	Milestii Mici	91.34	42	⇑P	P	04 34 54.5	-0.2
TLBR	Topalu	91.37	45	⇑P	P	04 34 56.5	+1.6
SNAA	Sanae	91.45	163	P	P	04 34 54.5	-0.2
SNAA	Sanae	91.45	163	PP	PP	04 38 31.0	-1.6
SNAA	Sanae	91.45	163	⇓iP	P	04 34 54.7	0.0
SNAA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
SNAA	Sanae	91.45	163	P	P	04 34 54.5	-0.2
TPGR	Topolog	91.55	44	⇓P	P	04 34 55.9	+0.1
TIRR	Tirgusor	91.64	45	⇑P	P	04 34 50.0	-6.1
TIRR	Tirgusor	91.64	45	⇑P	P	04 34 50.0	-6.1
TIRR	Tirgusor	91.64	45	⇑P	P	04 34 50.0	-6.1
TLCR		91.75	44	⇑P	P	04 34 55.9	-0.7
TLCR		91.75	44	⇑P	P	04 34 55.9	-0.7
STIA	Sitia Lasithi	91.87	54	P	P	04 34 57.3	-0.1
KLMR	Klimovskoe	93.03	27	eP	P	04 35 01.4	-0.8
KLMR				pmax	pmax		
	comp=Z,79nm,1.4s						
KLMR	Klimovskoe	93.03	27	eP	P	04 35 01.5	-0.8
KLMR				AMP		04 35 04.5	
	comp=Z,79nm,1.4s						
OBN	Obninsk	93.67	33	P	P	04 35 05.7	+0.5
	comp=Z,5.0nm,0.5s,baz=223,slow=4.0,SNR=8.2						
OBN				LR	LR	05 14 01.9	
	comp=Z,62nm,19.7s,baz=343,slow=33						
OBN	Obninsk	93.67	33	c iP	P	04 35 05.8	+0.5
OBN				e*PP	PcP	04 35 08.8	+3.0
OBN				e		04 38 54.6	
OBN				ePPP	PPP	04 40 56.3	
OBN				pmax	pmax		
	comp=Z,60nm,1.0s						
OBN				MLR	MLR		
	comp=Z,136nm,18.0s						
MOS	Moscow	94.02	32	eP	P	04 35 04.2	-2.6
MOS				e		04 40 57.8	
MOS				pmax	pmax		
	comp=Z,41nm,0.9s						
ELL	Elmali	94.55	52	P	P	04 35 11.6	+1.7
LPSR	Galich'ya Gora	95.88	35	eP	P	04 35 14.4	-1.0
LPSR				pmax	pmax		
	comp=Z,20nm,0.9s						
VSR	Storozhevoye	96.53	36	eP	P	04 35 16.6	-1.8
VSR				pmax	pmax		
	comp=Z,20nm,1.5s						
BR131	Keskin Array S	96.61	48	d iP	P	04 35 19.2	-0.1
BR131	Keskin Array S	96.61	48	IAmb	IAmb	04 35 25.4	
	comp=Z,16nm,0.8s						
BRTR	Keskin Array B	96.61	48	P	P	04 35 19.5	+0.2
	comp=Z,6.6nm,0.8s,baz=251,slow=2.8,SNR=31						
BRTR				pP	pP	04 35 24.3	-2.3
	comp=Z,8.7nm,0.8s,baz=273,slow=5.3,SNR=18						
BRTR	Keskin Array B	96.61	48	P	P	04 35 18.9	-0.4
BRTR	Keskin Array B	96.61	48	P	P	04 35 18.9	-0.4
VRH	Novokhopyorsk	98.02	36	eP	Pdif	04 35 25.5	+0.3
VRH				pmax	pmax		
	comp=Z,8.0nm,0.6s						
TIXI	Tiksi	99.00	353	⇓eP	Pdif	04 35 28.7	-0.4
TIXI				pmax	pmax		
	comp=Z,24nm,1.3s						
TIXI	Tiksi	99.00	353	P	Pdif	04 35 27.2	-1.9
TIXI				IAMs_20	IAMs_20	05 22 23.7	
	comp=Z,376nm,20.0s						
SOC	Sochi	99.68	43	eP	Pdif	04 35 30.9	-1.9
SOC				e		04 39 33.8	
SOC				ePPP	PPP	04 41 42.6	
SOC				e		04 46 10.0	
SOC				eSS	SS	04 53 59.8	+3.8
SOC				eSSS	SSS	04 57 46.9	
BELG	Belogornoye	100.77	33	P	Pdif	04 35 38.0	+0.7
	comp=Z,15nm,0.9s,baz=214,slow=2.0,SNR=6.8						
NRIK	Noril'sk	101.24	7	P	Pdif	04 35 40.2	+1.1
	comp=Z,1.6nm,0.4s,baz=79,slow=3.5,SNR=2.2						
NRIK	Noril'sk	101.24	7	⇓iP	Pdif	04 35 40.3	+1.1
NRIK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
SEY	Seymchan	101.27	341	P	Pdif	04 35 40.4	+1.0
	comp=Z,0.7nm,0.2s,baz=47,slow=4.5,SNR=5.9						
MBAR	Mbarara	102.76	89	IAMs_20	IAMs_20	05 18 20.3	
	comp=Z,413nm,22.0s						
MA2	Magadan	104.22	339	IAMs_20	IAMs_20	05 26 52.2	
	comp=Z,523nm,20.0s						
PETK	Petropavlovsk-	105.70	331	PP	PP	04 40 24.3	+3.0
	comp=Z,6.2nm,1.0s,baz=50,slow=7.9,SNR=3.8						
AKTO	Aktyubinsk	107.28	31	PP	PP	04 40 35.2	+2.2
	comp=Z,1.2nm,0.5s,baz=307,slow=9.9,SNR=3.7						
AKTO				PKKP	PKKPdf	04 51 44.2	-1.2
	comp=Z,2.1nm,0.7s,baz=118,slow=4.2,SNR=6.5						
YAK	Yakutsk	107.85	349	IAMs_20	IAMs_20	05 32 27.3	
	comp=Z,401nm,22.0s						
FURI	Furi	108.93	78	IAMs_20	IAMs_20	05 22 54.8	
	comp=Z,263nm,21.0s						
BRVK	Borovoye	111.00	23	IAMs_20	IAMs_20	05 22 26.1	
	comp=Z,300nm,20.0s						
RAYN	Ar Rayn	111.31	61	IAMs_20	IAMs_20	05 28 40.0	
	comp=Z,294nm,20.0s						
BRZS	Berezniki	114.33	24	ePKP	PKPdf	04 40 29.1	+0.5
	baz=24						
BRZS	Berezniki	114.33	24	ePKIKP	PKPdf	04 40 29.1	+0.5
GEYT	Alibeck	114.65	42	PKP	PKiKP	04 40 29.4	-0.2
	comp=Z,2.7nm,0.4s,baz=296,slow=4.8,SNR=4.2						
ZALV	Zalesovo Beam	114.97	15	PKP	PKiKP	04 40 29.4	-0.3
	comp=Z,2.2nm,0.7s,baz=280,slow=2.7,SNR=9.0						
KURK	Kurchatov	115.95	20	⇑iPKIKP	PKPdf	04 40 32.0	+0.3
KURK				pmax	pmax		
	comp=Z,4.0nm,1.7s						
KURK	Kurchatov	115.95	20		PKPdf	04 40 32.4	+0.7
KURK				IAMs_20	IAMs_20	05 41 20.8	
	comp=Z,295nm,19.0s						
KURBB	Kurchatov Arra	116.00	20	PKP	PKiKP	04 40 31.5	-0.3
	comp=Z,1.8nm,0.8s,baz=317,slow=2.4,SNR=12						
KURBB				PP	PP	04 41 42.1	+6.9
	comp=Z,0.5nm,0.4s,baz=322,slow=7.6,SNR=2.5						
DGZ	Jazzator, Alta	119.51	15	⇑iPKIKP	PKPdf	04 40 37.9	-0.9
DGZ				MLR	MLR		
	comp=Z,198nm,21.0s						
UOSS	Minazif	119.75	55	IAMs_20	IAMs_20	05 38 23.0	
	comp=Z,276nm,22.0s						
MAKZ	Makanchi	120.45	20	IAMs_20	IAMs_20	05 30 57.7	
	comp=Z,332nm,21.0s						
MK31	Makanchi Array	120.57	20	PKIKP	PKPdf	04 40 39.7	-1.1
MK31	Makanchi Array	120.57	20	PKPdf	PKPdf	04 40 39.7	-1.1
MKAR	Makanchi Array	120.57	20	PKP	PKPdf	04 40 39.7	-1.1
	comp=Z,2.3nm,0.9s,baz=327,slow=1.8,SNR=15						
MKAR				PP	PP	04 42 07.9	+1.0
	comp=Z,1.4nm,0.9s,baz=345,slow=3.8,SNR=4.0						
KUU	Kurty	120.67	26	ePKP	PKPdf	04 40 40.5	-0.5
	baz=26						
KUU	Kurty	120.67	26	ePKIKP	PKPdf	04 40 40.5	-0.5
AAK	Ala-Archa	120.83	28	⇓iPKIKP	PKiKP	04 40 42.5	+0.8
AAK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
AAK	Ala-Archa	120.83	28	PKPdf	PKiKP	04 40 43.3	+1.6
AAK	Ala-Archa	120.83	28	IAMs_20	IAMs_20	05 29 00.5	
	comp=Z,451nm,22.0s						
CHKK	Chushkaly	120.98	26	ePKP	PKPdf	04 40 41.7	0.0
	baz=26						
CHKK	Chushkaly	120.98	26	ePKIKP	PKPdf	04 40 41.6	0.0
TNSS	Tian-Shan	121.62	26	ePKP	PKPdf	04 40 42.9	-0.6
	baz=26						
TNSS	Tian-Shan	121.62	26	ePKIKP	PKPdf	04 40 42.8	-0.6
KPKS	Kokpek	122.02	25	ePKP	PKPdf	04 40 43.6	-0.2
	baz=25						
KPKS	Kokpek	122.02	25	ePKIKP	PKPdf	04 40 43.5	-0.2
DZM	Mont Dzumac	122.22	249	eLR	LR	05 18 33.3	
	comp=Z,364nm,35.2s						
SHLS	Shalkode	122.59	24	ePKP	PKiKP	04 40 45.2	+0.1
	baz=24						
SHLS	Shalkode	122.59	24	ePKIKP	PKiKP	04 40 45.2	+0.1
USRK	Ussuriysk Ar.	123.37	339	PKP	PKPdf	04 40 45.9	-0.2
	comp=Z,2.4nm,0.8s,baz=60,slow=1.6,SNR=3.6						
USRK				PP	PP	04 42 24.9	-1.0
	comp=Z,6.4nm,1.0s,baz=11,slow=4.9,SNR=5.4						
USRK	Ussuriysk Ar.	123.37	339		PKPdf	04 40 46.2	0.0
KBL	Kabul	123.69	39	PKIKP	PKiKP	04 40 48.0	+0.4
KBL	Kabul	123.69	39	PKPdf	PKiKP	04 40 48.0	+0.4
MDJ	Mudanjiang	123.80	342	IAMs_20	IAMs_20	05 33 36.0	
	comp=Z,319nm,20.0s						
ULN	Ulaanbaatar	124.06	1	⇑iPKIKP	PKPdf	04 40 47.5	-0.1
ULN				pmax	pmax		
	comp=Z,2.0nm,1.0s						
SONM	Songino Array	124.08	1	PKP	PKPdf	04 40 47.1	-0.5
	comp=Z,1.6nm,0.8s,baz=324,slow=0.8,SNR=9.5						
SONM				PP	PP	04 42 26.7	-3.9
	comp=Z,0.2nm,0.3s,baz=5.0,slow=2.4,SNR=2.5						
SONM	Songino Array	124.08	1	PKPdf	PKPdf	04 40 47.5	-0.1
WMQ	Urumqi	124.95	18	ePKP	PKPdf	04 40 49.1	-0.2
WMQ				LR	LR		
	comp=Z,470nm,20.1s						
WMQ				LR	LR		
	comp=Z,310nm,18.5s						
WMQ				LR	LR		
	comp=Z,590nm,25.1s						
WMQ	Urumqi	124.95	18	IAMs_20	IAMs_20	05 43 26.0	
	comp=Z,279nm,20.0s						
NIL	Nilore	126.84	36	PKIKP	PKiKP	04 40 53.5	-0.2
NIL	Nilore	126.84	36		PKiKP	04 40 53.5	-0.2
MAJO	Matsushiro	127.09	329	⇑iPKIKP	PKiKP	04 40 54.0	-0.1
KSRS	Korea Array	130.77	339	PKP	PKPdf	04 41 00.6	+0.1
	comp=Z,2.3nm,0.8s,baz=26,slow=1.7,SNR=3.8						
KSAR	Wonju Array Be	130.80	339	PKIKP	PKiKP	04 41 01.2	-0.2
KSAR	Wonju Array Be	130.80	339		PKiKP	04 41 01.2	-0.2
HHC	Hu-ho-hao-te	130.96	356	ePKP	PKiKP	04 41 01.6	-0.2
HHC				PP	PP	04 43 25.2	+9.2
HHC				AMB	AMB		
	comp=Z,99nm,10.4s						
HHC				LR	LR		
	comp=Z,340nm,19.0s						
HHC				LR	LR		
	comp=Z,380nm,20.6s						
HHC				LR	LR		
	comp=Z,330nm,20.4s						
BTO	Baotou	131.28	358	ePKP	PKPdf	04 41 01.4	-0.1
BJT	Baijiatuau	131.31	352	IAMs_20	IAMs_20	05 50 19.6	
	comp=Z,324nm,20.0s						
GTA	Gaotai	131.92	8	⇓PKP	PKiKP	04 41 03.5	-0.3
GTA				LR	LR		
	comp=Z,270nm,20.0s						
GTA				LR	LR		
	comp=Z,350nm,22.5s						
GTA				LR	LR		
	comp=Z,380nm,20.7s						
TOO	Toolangi	135.28	224	PKIKP	PKPdf	04 41 09.7	+0.7
TOO	Toolangi	135.28	224	PKPdf	PKPdf	04 41 09.7	+0.7
LZH	Lanzhou	135.67	5	ePKP	PKPdf	04 41 03.3	-6.7
LZH				sPKP		04 41 17.9	
DMN	Daman	138.00	31	eP	PKPdf	04 41 13.1	-1.6
	comp=Z,18nm,0.8s						
PKIN	Phulchoki	138.18	31	eP	PKPdf	04 41 14.8	-0.2
	comp=Z,18nm,0.7s						
PKI	Pulchoki	138.19	31	eP	PKPdf	04 41 14.2	-0.9
	comp=Z,23nm,0.9s						
NJ2	Nanjing	138.52	346	ePKP	PKPdf	04 41 15.0	-0.1
LSA	Lhasa	138.90	22	IAMs_20	IAMs_20	05 39 37.0	
	comp=Z,186nm,21.0s						
CD2	Chengdu	140.79	6	PKP	PKPdf	04 41 17.5	-1.9
CD2				PP	PP	04 44 17.1	-0.7
CD2				AMB	AMB		
	comp=Z,240nm,5.9s						
CD2				LR	LR		
	comp=Z,720nm,16.7s						
CD2				LR	LR		
	comp=Z,1µm,20.1s						
WHN	Wuhan	140.87	351	PKP	PKPdf	04 41 19.0	-0.4

STKA	**Stephens Creek**	**140.92**	**228**	PKP	**PKPdf**	**04 41 19.6**	**+0.1**
	comp=Z,18nm,0.8s,baz=82,slow=1.5,SNR=25						
STKA	**Stephens Creek**	**140.92**	**228**	PKPdf	**PKPdf**	**04 41 19.9**	**+0.4**
ENH	**Enshi**	**141.60**	**358**	IAMs_20	IAMs_20	05 50 21.2	
	comp=Z,326nm,20.0s						
BBOO	**Buckleboo**	**144.34**	**223**	PKPdf	**PKPab**	**04 41 23.4**	**-0.1**
COEN	**Coen**	**144.99**	**258**	PKPdf	**PKPab**	**04 41 26.6**	**+0.2**
GYA	**Guiyang**	**145.41**	**2**	⇓PKPbc	**PKPab**	**04 41 28.2**	**+0.5**
SSLB	**Suanglung**	**145.65**	**339**	PKPdf	**PKPdf**	**04 41 28.1**	**+0.1**
KMI	**Kunming**	**146.38**	**9**	⇑PKPbc	**PKPdf**	**04 41 29.6**	**0.0**
KMI				pPKP	PKPab	04 41 32.1	+0.6
KMI				PP	**PP**	**04 44 53.4**	**+1.8**
KMI				PKS	**PKSdf**	**04 45 01.6**	**-3.7**
KMI				SKS	**SKSdf**	**04 48 34.4**	**-3.5**
KMI				SKKS	**SKKSac**	**04 51 39.5**	**-5.1**
KMI				SS	**SS**	**05 03 47.5**	**+0.6**
KMI				AMB	AMB		
	comp=Z,110nm,12.7s						
KMI				LR	LR		
	comp=Z,240nm,17.3s						
KMI				LR	LR		
	comp=Z,210nm,16.2s						
KMI				LR	LR		
	comp=Z,190nm,21.4s						
KMI	**Kunming**	**146.38**	**9**	IAMs_20	IAMs_20	05 59 48.2	
	comp=Z,331nm,22.0s						
PALK	**Pallekele**	**148.75**	**61**	PKP2	**PKiKP**	**04 41 38.8**	**0.0**
PALK	**Pallekele**	**148.75**	**61**	PKPbc	**PKiKP**	**04 41 38.8**	**0.0**
FORT	**Forrest**	**150.79**	**217**	PKPdf	**PKPdf**	**04 41 36.0**	**-0.2**
AS31	**Alice Springs**	**150.82**	**235**	PKPdf	**PKPdf**	**04 41 37.0**	**+0.5**
ASAR	**Alice Springs**	**150.82**	**235**	PKP	**PKPdf**	**04 41 36.6**	**+0.1**
	comp=Z,14nm,0.8s,baz=110,slow=1.7,SNR=45						
ASAR				PKPbc	**PKPbc**	**04 41 41.2**	**-0.9**
	comp=Z,11nm,0.7s,baz=117,slow=2.8,SNR=16						
ASAR				PKPab	**sPKPdf**	**04 41 46.6**	**0.0**
	comp=Z,27nm,1.0s,baz=120,slow=3.0,SNR=13						
ASAR	**Alice Springs**	**150.82**	**235**	PKIKP	**PKPdf**	**04 41 36.2**	**-0.4**
ASAR	**Alice Springs**	**150.82**	**235**	PKPdf	**PKPdf**	**04 41 36.2**	**-0.4**
PAYA	**Payao**	**151.37**	**16**	P	**PKPbc**	**04 41 43.3**	**-0.2**
CHTO	**Chiang Mai**	**151.62**	**18**	PKIKP	**PKPdf**	**04 41 39.0**	**+1.1**
CHTO	**Chiang Mai**	**151.62**	**18**	PKPdf	**PKPdf**	**04 41 39.0**	**+1.1**
CHTO				IAMs_20	IAMs_20	06 01 39.9	
	comp=Z,231nm,20.0s						
CMMT	**Chiang Mai**	**151.62**	**18**	P	**PKPbc**	**04 41 42.0**	**-2.1**
WR0	**Warramunga Arr**	**151.77**	**243**	PKPdf	**PKPdf**	**04 41 38.1**	**0.0**
WR0					**PKPbc**	**04 41 43.2**	**-1.2**
MHMT	**Maesarieng**	**151.88**	**21**	P	**PKPbc**	**04 41 44.1**	**-0.6**
WRA	**Warramunga Arr**	**151.95**	**243**	PKP	**PKPdf**	**04 41 38.5**	**+0.2**
	comp=Z,6.9nm,0.6s,baz=107,slow=2.0,SNR=21						
WRA				PKPbc	**PKPbc**	**04 41 43.9**	**-0.9**
	comp=Z,47nm,0.8s,baz=109,slow=2.1,SNR=70						
CM15	**Chiang Mai Arr**	**151.96**	**18**	P	**PKPbc**	**04 41 41.8**	**-3.1**
CMAR	**Chiang Mai Arr**	**151.96**	**18**	PKP	**PKPdf**	**04 41 39.5**	**+1.1**
	comp=Z,6.1nm,0.8s,baz=315,slow=2.4,SNR=29						
CMAR				PKPbc	**PKPbc**	**04 41 44.9**	**+0.1**
	comp=Z,12nm,0.9s,baz=316,slow=2.8,SNR=8.5						
CMAR	**Chiang Mai Arr**	**151.96**	**18**	PKIKP	**PKPdf**	**04 41 39.3**	**+0.9**
CMAR	**Chiang Mai Arr**	**151.96**	**18**		**PKPdf**	**04 41 39.3**	**+0.9**
WB0	**Warramunga Arr**	**151.97**	**243**		**PKPdf**	**04 41 38.5**	**+0.2**
CM13	**Chiang Mai Arr**	**151.98**	**18**	P	**PKPdf**	**04 41 40.1**	**+1.7**
CM09	**Chiang Mai Arr**	**151.98**	**18**	P	**PKPdf**	**04 41 40.3**	**+1.9**
CM01	**Chiang Mai Arr**	**152.00**	**18**	P	**PKPdf**	**04 41 40.0**	**+1.6**
CM05	**Chiang Mai Arr**	**152.01**	**18**	P	**PKPdf**	**04 41 39.0**	**+0.5**
LAMP	**Lampang**	**152.10**	**17**	P	**PKPdf**	**04 41 40.4**	**+1.8**
SUKH	**Sukhothai**	**153.09**	**18**	P	**PKPdf**	**04 41 41.9**	**+1.8**
UTTA	**Uttaradit**	**153.10**	**16**	P	**PKPdf**	**04 41 41.7**	**+1.6**
PHIT	**Phitsanulok**	**153.59**	**16**	P	**PKPdf**	**04 41 43.4**	**+2.6**
UTHA	**Uthaitani**	**154.83**	**20**	P	**PKiKP**	**04 41 52.4**	**+1.3**
CHAI	**Chaiyaphum**	**155.23**	**14**	P	**PKPab**	**04 42 08.3**	**+0.6**
FITZ	**Fitzroy Crossi**	**160.22**	**239**		**PKPdf**	**04 41 49.9**	**+0.7**
PSA00	**Pilbara Seismi**	**162.52**	**220**		**PKPab**	**04 42 38.0**	**-1.3**

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*IDC **05** 04:30:00.4±0.6, 33°.35S×178°.24W, h0^{km}, mb4.5/7, mb1 4.7/10, mb1mx4.4/30, mbtmp4.5/10, ML4.3/3, MS4.4/15, Ms1 4.4/15, ms1mx4.2/39 Error ellipse: s-maj=25.8km s-min=20.4km az=148.0*

*WEL **05** 04:30:01.7±0.8, 33°S±6°×17°8W±1°5, h33^{km}, M4.9/29, mB5.3/17, ML5.6/28, MLv5.3/29, Mw(mB)4.8/17, Error ellipse: s-maj=0.0km s-min=0.0km az=111.0*

*NEIC **05** 04:30:13.1±0.8, 33°.65S±0°.07×178°.9W±0°.1, h85^{km}±6^{km}, mb4.7/14, Error ellipse: s-maj=14.8km s-min=9.8km az=112.0*

ISC 05 04:30:06.0±0.5**, 33°.26S**±0°.06×**178°.34W**±0°.09**, h35**^{km}**, n128, σ1^{s}88**/128**, mb4.8**/13**, MS4.2**/17**, 2C, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**4.00**	**5**	P	Pn	04 31 00.6	-4.2
GLKZ				S	**Sn**	**04 31 45.0**	**-5.5**
RAO	**Raoul Island**	**4.01**	**5**	Sn	**Sn**	**04 31 44.7**	**-6.1**
	170nm,0.3s,baz=102,slow=22,SNR=2.8						
RAO	**Raoul Island**	**4.01**	**5**	Pn	Pn	04 31 18.3	+13
MXZ	**Matakaoa Point**	**5.09**	**212**	Pn	**Pn**	**04 31 19.0**	**-0.7**
MXZ				Sn	**Sn**	**04 32 12.6**	**-4.6**
MXZ	**Matakaoa Point**	**5.09**	**212**	P	**Pn**	**04 31 18.9**	**-0.7**
MXZ				S	**Sn**	**04 32 18.0**	**+0.8**
WMGZ	**Waiomatatini S**	**5.26**	**209**	P	**Pn**	**04 31 21.4**	**-0.7**
WMGZ				S	**Sn**	**04 32 22.7**	**+1.3**
PKGZ	**Pakihiroa**	**5.46**	**211**	P	**Pn**	**04 31 22.9**	**-2.0**
PKGZ				S	**Sn**	**04 32 26.4**	**0.0**
HAZ	**Te Kaha**	**5.49**	**214**	P	**Pn**	**04 31 24.3**	**-0.9**
HAZ				S	**Sn**	**04 32 29.8**	**+2.8**
PUZ	**Puketiti**	**5.54**	**209**	P	**Pn**	**04 31 23.6**	**-2.3**
PUZ				S	**Sn**	**04 32 28.1**	**-0.3**
RUGZ	**Raukumara Rang**	**5.70**	**214**	P	**Pn**	**04 31 27.3**	**-0.9**
TWGZ	**Tauwhareparae**	**5.74**	**210**	P	**Pn**	**04 31 28.1**	**-0.6**
TWGZ				S	**Sn**	**04 32 34.7**	**+1.2**
CNGZ	**Carnagh Statio**	**5.92**	**207**	P	**Pn**	**04 31 29.1**	**-1.9**
TKGZ	**Te Karaka**	**6.02**	**210**	P	**Pn**	**04 31 32.0**	**-0.5**
TKGZ				S	**Sn**	**04 32 39.9**	**-0.2**
MWZ	**Matawai**	**6.07**	**212**	P	**Pn**	**04 31 31.4**	**-1.8**
MWZ				S	**Sn**	**04 32 41.5**	**0.0**
OPRZ	**Ohinepanea**	**6.18**	**221**	P	**Pn**	**04 31 34.6**	**-0.1**
URZ	**Urewera**	**6.21**	**215**	Pn	**Pn**	**04 31 33.2**	**-1.8**
	16nm,0.3s,baz=259,slow=2.5,SNR=61						
URZ				Sn	**Sn**	**04 32 44.0**	**-0.7**
	52nm,0.3s,baz=160,slow=20,SNR=12						
URZ	**Urewera**	**6.21**	**215**	Pn	**Pn**	**04 31 34.2**	**-0.8**
URZ	**Urewera**	**6.21**	**215**	P	**Pn**	**04 31 34.2**	**-0.8**
URZ				S	**Sn**	**04 32 45.5**	**+0.7**
RAGZ	**Rawiri**	**6.25**	**212**	P	**Pn**	**04 31 35.1**	**-0.7**
RIGZ	**Rimuhau**	**6.28**	**209**	P	**Pn**	**04 31 34.2**	**-1.9**
PRGZ	**Paritu Road**	**6.42**	**207**	P	**Pn**	**04 31 35.7**	**-2.3**
MKAZ	**Moumakai**	**6.56**	**232**	P	Pn	04 31 49.6	+10
KNZ	**Kokohu**	**6.59**	**208**	P	**Pn**	**04 31 37.4**	**-2.9**
KNZ				S	**Sn**	**04 32 52.6**	**-1.5**
MHGZ	**Mahia Peninsul**	**6.61**	**206**	P	**Pn**	**04 31 37.8**	**-2.8**
RAHZ	**Arahi**	**6.75**	**212**	P	**Pn**	**04 31 42.9**	**+0.4**
RAHZ				S	**Sn**	**04 32 56.5**	**-1.6**
MTHZ	**Maungataniwha**	**6.81**	**214**	P	**Pn**	**04 31 38.8**	**-4.6**
WHHZ	**Waihua**	**6.82**	**210**	P	**Pn**	**04 31 43.9**	**+0.5**
WHHZ				S	**Sn**	**04 32 59.8**	**+0.1**
OUZ	**Omahuta**	**6.96**	**251**	Pn	**Pn**	**04 31 46.6**	**+1.2**
NMHZ	**Naumai**	**7.02**	**213**	P	**Pn**	**04 31 45.9**	**-0.4**
NMHZ				S	**Sn**	**04 33 05.2**	**+0.3**
ARHZ	**Aropaoanui**	**7.07**	**211**	P	**Pn**	**04 31 44.4**	**-2.6**
BKZ	**Black Stump Fm**	**7.22**	**214**	Pn	**Pn**	**04 31 47.2**	**-1.8**
BKZ	**Black Stump Fm**	**7.22**	**214**	P	**Pn**	**04 31 48.3**	**-0.7**
CKHZ	**Cape Kidnapper**	**7.37**	**209**	P	**Pn**	**04 31 48.3**	**-2.7**
CKHZ				S	**Sn**	**04 33 10.0**	**-3.4**
RITZ	**Rihia Road**	**7.38**	**218**	P	**Pn**	**04 31 50.7**	**-0.5**
TMVZ	**Te Maari**	**7.57**	**218**	P	**Pn**	**04 31 54.3**	**+0.4**
KAHZ	**Kahuranaki**	**7.57**	**209**	P	**Pn**	**04 31 52.1**	**-1.7**
HIZ	**Hauiti**	**7.61**	**225**	P	**Pn**	**04 31 55.6**	**+1.3**
NGZ	**Ngauruhoe**	**7.67**	**218**	P	**Pn**	**04 31 55.4**	**+0.2**
BHHZ	**Black Hill Sta**	**7.68**	**214**	P	**Pn**	**04 31 54.3**	**-1.0**
FWVZ	**Far West T-bar**	**7.75**	**218**	P	**Pn**	**04 31 53.0**	**-3.4**
MOVZ	**Moawhango**	**7.76**	**216**	P	**Pn**	**04 31 55.4**	**-1.1**
PXZ	**Pawanui**	**7.78**	**208**	P	**Pn**	**04 31 54.3**	**-2.3**
WNVZ	**Wahianoa**	**7.78**	**217**	P	**Pn**	**04 31 55.7**	**-1.1**
BFZ	**Birch Farm**	**8.58**	**209**	P	**Pn**	**04 32 04.3**	**-3.3**
THZ	**Tophouse**	**10.96**	**217**	Pn	**Pn**	**04 32 39.3**	**-1.0**
THZ					**Sn**	**04 34 34.4**	**-7.3**
THZ	**Tophouse**	**10.96**	**217**	P	**Pn**	**04 32 37.6**	**-2.7**
RPZ	**Rata Peaks**	**13.32**	**215**	Pn	**Pn**	**04 33 09.0**	**-3.5**
	1.1nm,0.3s,baz=79,slow=7.5,SNR=2.1						
RPZ				Sn	Sn	04 35 26.3	-13
	2.4nm,0.3s,baz=2.0,slow=22,SNR=7.8						
RPZ	**Rata Peaks**	**13.32**	**215**		**Pn**	**04 33 09.8**	**-2.7**
RPZ					Sn	04 35 29.9	-9.4
RPZ	**Rata Peaks**	**13.32**	**215**	P	**Pn**	**04 33 09.8**	**-2.7**
ARCZ	**Arundel**	**13.44**	**214**	P	**Pn**	**04 33 10.8**	**-3.4**
ODZ	**Otahua Downs**	**14.52**	**213**	P	**Pn**	**04 33 25.3**	**-3.6**
MLZ	**Mavora Lakes**	**15.97**	**217**	P	**Pn**	**04 33 46.5**	**-1.4**
APZ	**The Paps**	**17.09**	**214**	P	**P**	**04 34 05.2**	**+1.7**
DZM	**Mont Dzumac**	**17.47**	**306**	P	**P**	**04 34 08.8**	**+0.9**
	0.6nm,0.3s,baz=111,slow=15,SNR=11						
DZM				LR	LR	04 39 54.0	
	comp=Z,3µm,18.5s,baz=128,slow=34						
DZM	**Mont Dzumac**	**17.47**	**306**	*e*Pn	**P**	**04 34 06.8**	**-1.1**
	114nm,1.2s						
DZM				*e*LR	LR	04 38 12.8	
	comp=Z,3µm,24.6s						
DZM	**Mont Dzumac**	**17.47**	**306**		**P**	**04 34 09.7**	**+1.9**
RAR	**Rarotonga**	**20.37**	**59**	LR	LR	04 42 26.3	
	comp=Z,528nm,19.5s,baz=210,slow=37						
TBI	**Tubuai**	**27.20**	**76**	*e*LQ	LQ	04 41 01.2	
	748nm,26.0s						
TBI				*e*LR	LR	04 42 30.2	
	comp=Z,706nm,32.0s,baz=230						
PPT2	**Papeete2**	**30.17**	**66**	*e*LQ	LQ	04 42 20.3	
	547nm,22.5s						
PPT2				*e*LR	LR	04 43 50.5	
	comp=Z,512nm,21.2s,baz=228						
PPT	**Papeete**	**30.19**	**66**	LR	LR	04 48 03.8	
	comp=Z,540nm,18.7s,baz=247,slow=36						
STKA	**Stephens Creek**	**33.65**	**261**	P	**P**	**04 36 44.6**	**+1.2**
	1.5nm,0.6s,baz=99,slow=10,SNR=4.4						
STKA				LR	LR	04 50 02.6	
	comp=Z,1µm,18.1s,baz=83,slow=36						
STKA	**Stephens Creek**	**33.65**	**261**	P	**P**	**04 36 41.8**	**-1.6**
RKT	**Rikitea**	**39.30**	**87**	*e*LR	LR	04 48 01.5	
	comp=Z,744nm,30.8s						
COEN	**Coen**	**39.86**	**290**	P	**P**	**04 37 36.6**	**+0.2**
COEN				IAmb	IAmb	04 37 39.9	
	comp=Z,6.8nm,0.8s						
AS31	**Alice Springs**	**42.74**	**270**	P	**P**	**04 37 58.8**	**-1.3**
AS31				IAmb	IAmb	04 38 01.3	
	comp=Z,7.8nm,0.7s						
ASAR	**Alice Springs**	**42.75**	**270**	P	**P**	**04 37 59.6**	**-0.4**
	comp=Z,18nm,0.6s,baz=111,slow=7.5,SNR=155						
ASAR				PcP	**PcP**	**04 39 51.4**	**+0.1**
	comp=Z,3.2nm,0.9s,baz=113,slow=3.9,SNR=4.7						
ASAR				LR	LR	04 55 10.7	
	comp=Z,273nm,18.0s,baz=124,slow=35						
ASAR	**Alice Springs**	**42.75**	**270**	P	**P**	**04 37 58.5**	**-1.6**
WR0	**Warramunga Arr**	**43.82**	**275**	P	**P**	**04 38 07.4**	**-1.3**
WR0				IAmb	IAmb	04 38 09.6	
	comp=Z,15nm,0.9s						
WB2	**Warramunga Arr**	**43.98**	**275**	P	**P**	**04 38 08.9**	**-1.2**
WRA	**Warramunga Arr**	**43.99**	**275**	P	**P**	**04 38 09.6**	**-0.6**
	comp=Z,12nm,0.7s,baz=116,slow=7.6,SNR=69						
WRA				LR	LR	04 55 00.7	
	comp=Z,307nm,21.3s,baz=120,slow=34						
WRA	**Warramunga Arr**	**43.99**	**275**	P	**P**	**04 38 09.0**	**-1.2**
WB0	**Warramunga Arr**	**44.03**	**276**	P	**P**	**04 38 09.5**	**-1.0**
VNDA	**Vanda**	**45.23**	**186**	LR	LR	04 54 30.4	
	comp=Z,345nm,18.1s,baz=20,slow=33						
FITZ	**Fitzroy Crossi**	**52.12**	**272**	P	**P**	**04 39 12.0**	**-1.0**
FITZ				IAmb	IAmb	04 39 13.7	
	comp=Z,12nm,0.9s						
QSPA	**South Pole Qui**	**56.86**	**180**	P	**P**	**04 39 47.0**	**+0.1**
SIJI	**Sorong**	**57.16**	**294**	LR	LR	05 05 09.6	
	comp=Z,306nm,18.2s,baz=86,slow=37						
BATI	**Baumata**	**57.78**	**279**	LR	LR	05 05 09.3	
	comp=Z,257nm,18.9s,baz=138,slow=36						
KAPI	**Kappang**	**63.87**	**282**	LR	LR	05 08 33.3	
	comp=Z,165nm,18.6s,baz=119,slow=36						
DAV	**Davao City (W)**	**66.59**	**296**	LR	LR	05 07 28.1	
	comp=Z,123nm,20.0s,baz=292,slow=34						
BELA	**Belgrano 2**	**67.00**	**172**	P	**P**	**04 40 55.2**	**+0.5**
JCJ	**Chichijima**	**70.78**	**323**	LR	LR	05 06 54.7	
	comp=Z,226nm,21.1s,baz=84,slow=31						
LEM	**Lembang**	**72.95**	**273**	LR	LR	05 15 40.0	
	comp=Z,308nm,18.9s,baz=342,slow=38						
SYO	**Syowa Base**	**74.27**	**193**	⇑*e*P	**P**	**04 41 39.3**	**+0.3**
SYO	**Syowa Base**	**74.27**	**193**	⇑*e*X	P	04 41 47.8	+8.8
SNAA	**Sanae**	**75.31**	**179**	P	**P**	**04 41 45.9**	**+0.8**
SNAA	**Sanae**	**75.31**	**179**	P	**P**	**04 41 45.1**	**-0.1**
SNAA				IAmb	IAmb	04 41 58.3	
	comp=Z,17nm,1.1s						
VNA3	**Neumayer Olymp**	**75.48**	**176**	P	**P**	**04 41 47.4**	**+1.4**
VNA2	**Neumayer--Watz**	**75.91**	**177**	P	**P**	**04 41 50.2**	**+1.8**
	baz=178,slow=3.5						
VNA1	**Neumayer--Stat**	**76.14**	**177**	P	**P**	**04 41 54.2**	**+4.5**
PLCA	**Paso Flores**	**80.78**	**133**	P	**P**	**04 42 15.4**	**-0.6**
	comp=Z,2.5nm,1.0s,baz=226,slow=8.3,SNR=5.4						
PLCA	**Paso Flores**	**80.78**	**133**	P	**P**	**04 42 17.7**	**+1.7**
PSI	**Prapat**	**85.45**	**276**	LR	LR	05 20 01.9	
	comp=Z,94nm,21.8s,baz=90,slow=35						
KSRS	**Korea Array**	**86.34**	**320**	P	**P**	**04 42 45.1**	**+0.9**
	comp=Z,1.0nm,0.5s,baz=132,slow=5.5,SNR=1.9						
PETK	**Petropavlovsk-**	**88.51**	**346**	P	**P**	**04 42 55.1**	**+0.9**
	comp=Z,6.1nm,0.9s,baz=135,slow=6.8,SNR=6.6						
NVAR	**Mina Array Bea**	**90.53**	**43**	P	**P**	**04 43 03.8**	**-0.6**
	comp=Z,0.4nm,0.7s,baz=226,slow=6.1,SNR=3.9						
X16A	**Lo Mia Camp, P**	**92.03**	**50**	P	**P**	**04 43 15.4**	**+4.0**
X16A				IAmb	IAmb	04 43 25.7	
	comp=Z,4.1nm,1.1s						
ATAH	**Atahualpa**	**94.37**	**101**	LR	LR	05 15 21.9	
	comp=Z,426nm,20.9s,baz=314,slow=29						
ILAR	**Eielson Array**	**100.77**	**13**	P	**Pdif**	**04 43 48.2**	**-1.9**
	comp=Z,0.4nm,1.1s,baz=191,slow=4.3,SNR=2.1						
MKAR	**Makanchi Array**	**119.36**	**309**	PKP	**PKPdf**	**04 48 50.7**	**-0.6**
	comp=Z,0.3nm,0.4s,baz=194,slow=1.6,SNR=7.2						
MKAR	**Makanchi Array**	**119.36**	**309**		**PKiKP**	**04 48 51.5**	**+0.1**
RES	**Resolute Bay**	**120.06**	**18**	PKP	**PKPdf**	**04 48 51.2**	**-0.5**
	comp=Z,1.1nm,0.7s,baz=290,slow=9.5,SNR=4.0						
NRIK	**Noril'sk**	**122.12**	**335**	PKP	**PKPdf**	**04 48 55.5**	**-0.3**
	comp=Z,2.3nm,0.3s,baz=34,slow=2.1,SNR=2.8						
KURK	**Kurchatov**	**122.79**	**313**	PKPdf	**PKiKP**	**04 48 58.1**	**+0.3**
KURBB	**Kurchatov Arra**	**122.82**	**312**	PKP	**PKPdf**	**04 48 57.5**	**-0.2**
	comp=Z,1.3nm,0.5s,baz=108,slow=1.6,SNR=8.9						
AAK	**Ala-Archa**	**123.43**	**302**	PKP	**PKiKP**	**04 49 00.7**	**+1.1**
	comp=Z,1.1nm,0.6s,baz=218,slow=14,SNR=2.4						
KKAR	**Karatay Array**	**126.38**	**302**	PKPdf	**PKiKP**	**04 49 05.6**	**+0.3**
BVAR	**Borovoye Array**	**128.22**	**314**	PKP	**PKPdf**	**04 49 07.7**	**-0.3**
	comp=Z,0.5nm,0.3s,baz=76,slow=4.9,SNR=4.5						
ARU	**Arti**	**135.08**	**319**	PKP	**PKiKP**	**04 49 22.0**	**-0.4**
	comp=Z,3.1nm,0.2s,baz=66,slow=20,SNR=4.9						
AKTO	**Aktyubinsk**	**135.77**	**310**	PKP	**PKPdf**	**04 49 23.1**	**+0.8**
	comp=Z,1.7nm,0.5s,baz=146,slow=3.2,SNR=4.8						
ARCES	**ARCESS Array B**	**141.31**	**347**	PKhKP	PKPpre	04 49 27.2	
	comp=Z,4.0nm,0.9s,baz=74,slow=3.2,SNR=1.6						
KBZ	**Khabaz**	**146.38**	**300**	PKPbc	**PKPbc**	**04 49 42.4**	**-0.5**
	comp=Z,5.5nm,0.9s,baz=110,slow=3.8,SNR=8.4						
FIA1	**FINESS Array S**	**147.71**	**338**		**PKPbc**	**04 49 45.5**	**-0.5**
FINES	**FINESS Array B**	**147.71**	**338**	PKPbc	**PKPbc**	**04 49 45.6**	**-0.4**
	comp=Z,10.0nm,0.6s,baz=59,slow=4.3,SNR=18						
FINES	**FINESS Array B**	**147.71**	**338**		**PKPbc**	**04 49 45.4**	**-0.7**
MARD	**Mardin**	**147.97**	**288**	PKPbc	**PKPbc**	**04 49 47.7**	**0.0**
EIL	**Elat**	**151.45**	**272**	PKPbc	**PKiKP**	**04 49 56.9**	**0.0**
	comp=Z,13nm,0.8s,baz=33,slow=17,SNR=8.3						
NB2	**NORSAR Subarra**	**151.52**	**350**	PKP	**PKPbc**	**04 49 55.5**	**-0.1**
	comp=Z,44nm,1.7s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**151.52**	**350**	PKPbc	**PKiKP**	**04 49 57.5**	**+1.5**
	comp=Z,1.0nm,0.7s,baz=18,slow=2.9,SNR=2.2						
MMAI	**Mount Meron Ar**	**151.81**	**279**	PKPbc	**PKiKP**	**04 49 57.6**	**0.0**
	comp=Z,20nm,0.8s,baz=60,slow=3.3,SNR=16						
HFS	**Hagfors**	**151.97**	**347**	PKPbc	**PKPbc**	**04 49 56.4**	**-0.1**
	comp=Z,2.4nm,0.7s,baz=342,slow=1.3,SNR=2.2						
AKASG	**Malin Array Be**	**153.33**	**319**	PKPbc	**PKiKP**	**04 50 00.2**	**+0.2**
	comp=Z,2.4nm,0.7s,baz=66,slow=2.2,SNR=5.1						
AKASG	**Malin Array Be**	**153.33**	**319**		**PKiKP**	**04 50 01.0**	**+1.0**
BRTR	**Keskin Array B**	**153.59**	**293**	PKPbc	**PKiKP**	**04 50 01.4**	**+0.2**
	comp=Z,4.2nm,0.7s,baz=141,slow=3.4,SNR=24						
BRTR	**Keskin Array B**	**153.59**	**293**		**PKPbc**	**04 50 01.0**	**0.0**
TORD	**Torodi Ar. Bea**	**159.98**	**180**	PKPab	**PKPab**	**04 50 41.6**	**+0.2**
	comp=Z,1.9nm,0.9s,baz=212,slow=1.4,SNR=4.4						
TORD	**Torodi Ar. Bea**	**159.98**	**180**	PKPdf	**PKPdf**	**04 50 01.5**	**-0.5**
CLL	**Collm**	**160.15**	**339**	*e*PKPab	**PKPab**	**04 50 42.0**	**+0.8**
	comp=Z,48nm,2.1s						
GERES	**GERESS Array B**	**162.01**	**333**	PKPab	**PKPab**	**04 50 49.2**	**-0.4**
	comp=Z,0.4nm,0.3s,baz=28,slow=6.0,SNR=4.0						

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*NEIC **05** 04:40:51.5±0.8, 5°.22N±0°.06×82°.62W±0°.06, h4^{km}±3^{km}, mb5.3/551, Ms_20 5.1/493, Mww5.7, Mwc5.7(GCMT), Error ellipse: s-maj=9.5km s-min=8.1km az=50.0*

*IDC **05** 04:40:52.2±0.5, 5°.32N×82°.51W, h0^{km}, mb4.9/27, mb1 5.1/32, mb1mx5.0/47, mbtmp5.0/32, ML4.4/4, MS5.1/24, Ms1 5.1/24, ms1mx5.0/30, Error ellipse: s-maj=17.8km s-min=10.0km az=56.0*

*BJI **05** 04:40:52.0±0.0, 5°.30N×82°.70W, h5^{km}, mB5.5/21, Ms5.6/27, Ms7 5.4/27*

*MOS **05** 04:40:52.0±1.2, 5°.35N×82°.59W, h10^{km}, mb5.5/46, MS5.0/18, Error ellipse: s-maj=9.0km s-min=5.5km az=98.6*

*UCR **05** 04:40:54.4±1.6, 5°.50N×82°.66W, h10^{km}, MW5.3, mb5.7(NEIC)*

*SNET **05** 04:40:54.0±7.6, 5°.22N×82°.65W, h10^{km}, MW5.7(NEIC)*

*UPA **05** 04:40:57.7±2.1, 5°.74N×82°.62W, h10^{km}±24^{km}, MW5.6*

*GCMT **05** 04:40:57.5±0.1, 5°.24N×82°.65W, h17^{km}, MW5.7/160, Moment Tensor Solution. s125,c232; s160,c329; Duration: 1^{s}7 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.09±.04; M$_{\theta\theta}$0.31±.04; M$_{\phi\phi}$-0.22±.04; M$_{r\theta}$0.30±.10; M$_{\theta\phi}$3.96±.04; M$_{\phi r}$0.24±.10; Best double couple: M$_0$3.98700×10^{17} NP1:φ$_s$2.00000°, δ86.00000°, λ177.00000°. NP2:φ$_s$92.00000°, δ87.00000°, λ4.00000°. Principal axes: T 4.0480, Plg5.0000°, Azm317.0000°; N -0.1210, Plg85.0000°, Azm132.0000°; P -3.9260, Plg0.0000°, Azm227.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **05** 04:40:58, 5°.30N×82°.71W, h16^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.24; M$_{\theta\theta}$0.67; M$_{\phi\phi}$-0.91; M$_{r\theta}$-1.47; M$_{\theta\phi}$3.44; M$_{\phi r}$-0.90; Fault plane solution: M$_0$3.93000×10^{17} NP1:φ$_s$184.00000°, δ71.00000°, λ165.00000°. NP2:φ$_s$279.00000°, δ76.00000°, λ20.00000°. Principal axes: T 4.1543, Plg24.0000°, Azm142.0000°; N -0.4915, Plg66.0000°, Azm313.0000°; P -3.6627, Plg3.0000°, Azm51.0000°;*

*NEIC **05** 04:40:58, 5°.21N×82°.64W, h17^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.14; M$_{\theta\theta}$0.35; M$_{\phi\phi}$-0.20; M$_{r\theta}$-0.12; M$_{\theta\phi}$4.11; M$_{\phi r}$-0.32; Fault plane solution: M$_0$4.14000×10^{17} NP1:φ$_s$272.00000°, δ86.00000°, λ1.00000°. NP2:φ$_s$182.00000°, δ89.00000°, λ176.00000°. Principal axes: T 4.2137, Plg4.0000°, Azm137.0000°; N -0.1607, Plg85.0000°, Azm346.0000°; P -4.0530, Plg2.0000°, Azm227.0000°;*

*BGR **05** 04:40:59.1±0.0, 6°.76N×82°.60W, h10^{km}, mb4.9*

ISC 05 04:40:53.2±0.2**, 5°.25N**±0°.04×**82°.59W**±0°.04**, h10**^{km}**, n1478, σ2^{s}01**/1264**, mb5.3**/354**, MS5.2**/290**, 31C-28D, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CACAO	**El Cacao, Vera**	**2.70**	**39**	⇓*i*P	**Pn**	**04 41 34.6**	**-2.1**
CACAO				*i* S	**Sn**	**04 42 03.4**	**-6.0**
GMAL	**Guarumal, Vera**	**2.84**	**28**	⇓*i*P	**Pn**	**04 41 36.5**	**-2.1**
GMAL				*i* S	**Sn**	**04 42 07.6**	**-5.3**
MARI3	**Mariato, Verag**	**2.87**	**34**	⇓*i*P	**Pn**	**04 41 37.1**	**-1.8**
PVID3	**Puerto Vidal,**	**2.95**	**19**	⇓*e*P	**Pn**	**04 41 37.7**	**-2.3**
SBAR3	**San Bartolo, C**	**3.06**	**355**	⇑*e*P	**Pn**	**04 41 38.8**	**-2.9**
RSUS3	**Rio de Jesus,**	**3.07**	**28**	⇓*e*P	**Pn**	**04 41 40.0**	**-1.7**
PONU3	**Ponuga, Veragu**	**3.07**	**31**	⇓*i*P	**Pn**	**04 41 40.1**	**-1.7**
NANC3	**Nancito, Chiri**	**3.09**	**16**	⇓*e*P	**Pn**	**04 41 40.2**	**-1.9**
PEDE3	**Pedregal, Chir**	**3.12**	**3**	⇑*i*P	**Pn**	**04 41 40.0**	**-2.4**
CHIR3	**Chiriqui UPA,**	**3.14**	**5**	⇑*i*P	**Pn**	**04 41 40.4**	**-2.3**
LESP3	**La Esperanza,**	**3.14**	**356**	⇓*e*P	**Pn**	**04 41 39.8**	**-2.9**
LOCO3	**Loma Colorada,**	**3.15**	**3**	⇑*i*P	**Pn**	**04 41 40.5**	**-2.3**
LOCO3				*i* S	**Sn**	**04 42 12.0**	**-8.4**
LOMA3	**Las Lomas, Chi**	**3.17**	**4**	*e*P	**Pn**	**04 41 41.2**	**-1.9**
BAGA3	**Bagala, Chiriq**	**3.20**	**1**	⇑*e*P	**Pn**	**04 41 41.4**	**-2.1**
MESA3	**La Mesa, Verag**	**3.20**	**26**	⇓*e*P	**Pn**	**04 41 41.8**	**-1.8**
PIRO	**Carate, Puerto**	**3.22**	**347**	⇑*i*P	**Pn**	**04 41 40.1**	**-3.7**
PIRO	**Carate, Puerto**	**3.22**	**347**	*e*P	**Pn**	**04 41 39.9**	**-3.9**
PIRO				*e*S	**Sn**	**04 42 18.1**	**-4.2**
OCU3	**Ocu, Herrera**	**3.23**	**34**	⇓*e*P	**Pn**	**04 41 42.4**	**-1.5**
STIA3	**Santiago, Vera**	**3.26**	**30**	*e*P	**Pn**	**04 41 42.5**	**-1.8**
CDITO	**Canoas**	**3.31**	**355**	⇑*i*P	**Pn**	**04 41 42.0**	**-3.1**
CDITO				*i* S	**Sn**	**04 42 19.2**	**-5.5**
PTJ1	**Puerto Jimnez**	**3.34**	**348**	⇓*e*P	**Pn**	**04 41 43.0**	**-2.5**
PTJ1	**Puerto Jimnez**	**3.34**	**348**	*e*P	**Pn**	**04 41 42.8**	**-2.7**
PTJ1				*e*S	**Sn**	**04 42 24.2**	**-1.0**
CNAZ3	**Canazas, Verag**	**3.37**	**24**	⇓*e*P	**Pn**	**04 41 43.9**	**-2.0**
CNAZ3				*e*S	**Sn**	**04 42 17.9**	**-8.2**
SFRA3	**San Francisco,**	**3.39**	**28**	⇓*e*P	**Pn**	**04 41 44.4**	**-1.7**
AZU	**Azuero**	**3.42**	**42**	⇓*i*P	**Pn**	**04 41 45.1**	**-1.4**
	baz=218,slow=14						
AZU				*i* S	**Sn**	**04 42 20.1**	**-7.0**
PTAR3	**Potrerillos Ar**	**3.42**	**2**	⇑*i*P	**Pn**	**04 41 44.5**	**-2.2**
PSOM3	**Paja de Sombre**	**3.42**	**4**	⇑*i*P	**Pn**	**04 41 44.4**	**-2.3**
PCRI3	**Pocri, Los San**	**3.43**	**46**	*e*P	**Pn**	**04 41 46.7**	**0.0**
BCO2	**Palmira**	**3.45**	**1**	⇑*i*P	**Pn**	**04 41 44.9**	**-2.3**
LNBQ3	**Los Naranjos,**	**3.52**	**2**	⇑*i*P	**Pn**	**04 41 45.6**	**-2.5**
LNBQ3				*i* S	**Sn**	**04 42 22.4**	**-7.6**
BRU2	**Volcan**	**3.52**	**358**	⇑*i*P	**Pn**	**04 41 45.7**	**-2.5**
BRU2				*i* S	**Sn**	**04 42 21.2**	**-8.7**
BRU2	**Volcan**	**3.52**	**358**	*e*P	**Pn**	**04 41 45.6**	**-2.5**
MLIR3	**Monte Lirio, C**	**3.53**	**356**	⇓*e*P	**Pn**	**04 41 46.6**	**-1.5**
BC3P	**Paso Ancho**	**3.54**	**360**	⇑*e*P	**Pn**	**04 41 45.7**	**-2.7**
EDSV	**San Vito**	**3.57**	**354**	*e*P	**Pn**	**04 41 46.3**	**-2.4**
CHGR2	**Aguacate**	**3.69**	**7**	*e*P	**Pn**	**04 41 46.1**	**-4.3**
EDPN	**Palmar Norte**	**3.79**	**347**	*e*P	**Pn**	**04 41 48.9**	**-2.7**
POTG	**Potrero Grande**	**3.81**	**352**	*e*P	**Pn**	**04 41 49.7**	**-2.4**
PNME	**Penonome**	**3.92**	**35**	⇓*i*P	**Pn**	**04 41 52.9**	**-0.7**
PNME				*e*S	**Sn**	**04 42 36.1**	**-3.5**
EDBA	**Buenos Aires**	**3.95**	**350**	*e*P	**Pn**	**04 41 51.6**	**-2.3**
EDLM	**Las Mercedes**	**4.12**	**346**	*e*P	**Pn**	**04 41 54.1**	**-2.2**
VTON	**El Valle, Cocl**	**4.15**	**36**	*e*P	**Pn**	**04 41 57.0**	**+0.3**
VTON				*e*S	**Sn**	**04 42 43.0**	**-2.3**
CNI2	**El Empalme, Bo**	**4.15**	**2**	*e*P	**Pn**	**04 41 53.7**	**-2.9**
EDDO	**Dominical**	**4.17**	**342**	*e*P	**Pn**	**04 41 53.9**	**-3.0**
PEZE	**Perez Zeledon,**	**4.25**	**345**	*e*P	**Pn**	**04 41 55.8**	**-2.3**
RGM0	**Gandoca**	**4.31**	**360**	*e*P	**Pn**	**04 41 58.9**	**0.0**
CDM	**Cerro de Muert**	**4.43**	**345**	*e*P	**Pn**	**04 41 58.6**	**-2.3**
ZANG	**Zanguenga, Cho**	**4.57**	**36**	*e*P	**Pn**	**04 42 02.6**	**+0.2**
ZANG				*i* S	**Sn**	**04 42 51.7**	**-3.9**
CHOR3	**La Chorrera**	**4.58**	**38**	*e*P	**Pn**	**04 42 03.2**	**+0.6**
TABO3	**Taboga, Panama**	**4.64**	**40**	*e*P	**Pn**	**04 42 03.8**	**+0.5**
RIMA	**Rio Macho**	**4.66**	**344**	*e*P	**Pn**	**04 42 01.5**	**-2.4**
LCR2	**La Lucha 2**	**4.68**	**343**	*e*P	**Pn**	**04 42 01.7**	**-2.4**
ARRA3	**Arraijan, Pana**	**4.70**	**38**	⇓*e*P	**Pn**	**04 42 05.3**	**+1.1**
BCIP	**Isla Barro Col**	**4.75**	**35**	Pn	**Pn**	**04 42 05.6**	**+0.6**
BCIP				Sn	**Sn**	**04 43 01.2**	**+1.1**
BCIP	**Isla Barro Col**	**4.75**	**35**	*e*P	**Pn**	**04 42 04.6**	**-0.3**
UPA	**Univ. de Panam**	**4.79**	**39**	⇓*i*P	**Pn**	**04 42 05.0**	**-0.4**
UPA				*i* S	**Sn**	**04 42 58.2**	**-2.8**
JACO	**JACO, Garabito**	**4.84**	**335**	*e*P	**Pn**	**04 42 02.8**	**-3.3**
BATAN	**Batan**	**4.88**	**351**	⇑*e*P	**Pn**	**04 42 05.7**	**-1.0**
CVTR	**Volcan Turrial**	**4.88**	**346**	*e*P	**Pn**	**04 42 05.3**	**-1.8**
SJS	**Escuela Geolog**	**4.88**	**343**	*e*P	**Pn**	**04 42 04.7**	**-2.1**
HDC	**Heredia**	**4.96**	**342**	⇑*i*P	**Pn**	**04 42 06.1**	**-1.8**
HDC				*i* S	**Sn**	**04 42 57.1**	**-8.2**
HDC	**Heredia**	**4.96**	**342**	*e*P	**Pn**	**04 42 06.0**	**-1.8**
HDC	**Heredia**	**4.96**	**342**		**Pn**	**04 42 05.8**	**-2.0**
HDC				Sn	**Sn**	**04 43 04.2**	**-1.1**
LAFE	**Finca La Fe, P**	**5.08**	**333**	*e*P	**Pn**	**04 42 06.5**	**-2.9**
PTAC	**Punta Ardita,**	**5.12**	**68**	*e*P	**Pn**	**04 42 10.9**	**+1.0**
TUMC	**Tumaco**	**5.14**	**131**	*e*P	**Pn**	**04 42 09.5**	**-0.8**
SRA1	**San Ramn**	**5.16**	**339**	*e*P	**Pn**	**04 42 07.9**	**-2.7**
CHPO	**Chepo, Panama**	**5.20**	**41**	*e*P	**Pn**	**04 42 10.6**	**-0.5**
SOLC	**Bahia Solano**	**5.25**	**79**	*e*P	**Pn**	**04 42 11.9**	**+0.1**
MALC	**Bahia Malaga**	**5.38**	**103**	*e*P	**Pn**	**04 42 14.2**	**+0.7**
TRT1	**Tortuguero**	**5.42**	**348**	*e*P	**Pn**	**04 42 15.9**	**+1.8**
JTS	**Las Juntas de**	**5.53**	**335**	⇑*i*P	**Pn**	**04 42 12.9**	**-2.7**
JTS	**Las Juntas de**	**5.53**	**335**	*c i*P	**Pn**	**04 42 12.9**	**-2.7**
JTS	**Las Juntas de**	**5.53**	**335**	*e*P	**Pn**	**04 42 12.9**	**-2.7**
JTS	**Las Juntas de**	**5.53**	**335**	Pn	**Pn**	**04 42 12.8**	**-2.7**
JTS				Sn	**Sn**	**04 43 18.1**	**-1.2**
ARE1	**Arenal 1**	**5.59**	**338**	*e*P	**Pn**	**04 42 15.0**	**-1.4**
UPD2	**Meteti**	**5.60**	**54**	⇓*i*P	**Pn**	**04 42 18.9**	**+2.3**
UPD2				*e*S	**Sn**	**04 43 16.2**	**-4.8**
CEDE	**Laguna Cedeo**	**5.61**	**338**	*e*P	**Pn**	**04 42 14.1**	**-2.7**
PLVR	**Palo Verde**	**5.76**	**332**	*e*P	**Pn**	**04 42 14.9**	**-4.0**
CUI	**Cuipilapa**	**5.95**	**335**	*e*P	**Pn**	**04 42 18.6**	**-2.8**
GPS2	**Hotel Rincn d**	**6.11**	**334**	*e*P	**Pn**	**04 42 21.5**	**-2.2**
GB1A	**Borinquen Arri**	**6.19**	**334**	*e*P	**Pn**	**04 42 23.9**	**-0.9**
CAP2	**Capurgana**	**6.20**	**57**	⇓*i*P	**Pn**	**04 42 26.5**	**+1.7**
CAPC	**Capurgana**	**6.20**	**57**	*e*P	**Pn**	**04 42 26.2**	**+1.5**
BBAC	**Balboa, Cauca**	**6.22**	**121**	*e*P	**Pn**	**04 42 23.8**	**-1.6**
PLMC	**San Jos del P**	**6.29**	**93**	*e*P	**Pn**	**04 42 26.5**	**+0.3**
YOTC	**Yotoco, Valle**	**6.35**	**101**	*e*P	**Pn**	**04 42 27.1**	**0.0**
OTAV	**Otavalo**	**6.47**	**140**	*e*P	**Pn**	**04 42 28.4**	**-0.6**
OTAV	**Otavalo**	**6.47**	**140**	P	**Pn**	**04 42 27.9**	**-1.1**
OTAV	**Otavalo**	**6.47**	**140**	Pn	**Pn**	**04 42 27.9**	**-1.1**
OTAV	**Otavalo**	**6.47**	**140**	*e*P	**Pn**	**04 42 28.2**	**-0.7**
OTAV	**Otavalo**	**6.47**	**140**	*e*P	**Pn**	**04 42 28.4**	**-0.6**
CBOC	**Ciudad Bolivar**	**6.58**	**84**	*e*P	**Pn**	**04 42 31.3**	**+1.1**

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DBBC  Dabeiba             6.58  74 eP       Pn       04 42 31.8 +1.6
CCUFI Cufio, Nario        6.59 127 eP       Pn       04 42 32.2 +1.6
GCUF  Volcan Galeras      6.59 127 eP       Pn       04 42 31.6 +1.0
CPAS1 Pasto               6.63 127 eP       Pn       04 42 33.1 +2.0
CPAS2 Pasto               6.67 127 eP       Pn       04 42 33.8 +2.2
CRUC  La Cruz             6.71 123 eP       Pn       04 42 32.8 +0.6
SOTA  Rioblanco           6.72 117 eP       Pn       04 42 34.8 +2.3
PCON  Cinco Dias          6.83 115 eP       Pn       04 42 36.0 +2.0
MARP  Paez Belalcaza      7.04 110 eP       Pn       04 42 38.8 +2.1
HELC  Santa Helena        7.09  82⇓eP       Pn       04 42 39.5 +2.1
HELC  Santa Helena        7.09  82 eP       Pn       04 42 40.2 +2.8
ESPN  Las Esperanzas      7.11 346          Pn       04 42 35.1 -2.1
ESPN                                Sn      Sn       04 43 58.5 +0.4
ACON  Acoyapa             7.15 339          Pn       04 42 36.0 -1.8
GUY2C Guyana, Caldas      7.20  90 eP       Pn       04 42 40.3 +1.3
ANIL  Santa Ana           7.20  96 eP       Pn       04 42 40.2 +1.3
RREF  El Recreo           7.22  92 eP       Pn       04 42 41.7 +2.2
TOLC  Tolima              7.28  95 eP       Pn       04 42 42.0 +2.1
CIBA1 Ibague, SGC         7.37  96 eP       Pn       04 42 43.8 +2.7
UREC  San Jos de Ur       7.44  70 eP       Pn       04 42 44.5 +2.6
ORTC  Ortega, Tolima      7.44 100 eP       Pn       04 42 43.5 +1.6
BETC  Betania             7.58 109 eP       Pn       04 42 45.9 +2.1
NORC  Norcasia            7.70  87 eP       Pn       04 42 48.9 +3.4
GARC  Garzon, Huila       7.71 113 eP       Pn       04 42 47.0 +1.2
MOTC  Monteria, Cord      7.72  63 eP       Pn       04 42 48.1 +2.4
FLOC  Florencia           7.83 117 eP       Pn       04 42 47.6 +0.4
PTBC  PUERTO BERRIO,      8.19  81 eP       Pn       04 42 56.4 +4.1
ROSC  El Rosal            8.25  92  Pn      Pn       04 42 56.7 +3.3
      39nm,0.3s,baz=320,slow=7.3,SNR=35
ROSC                                Sn      Sn       04 44 29.8 +2.8
      baz=215,slow=20,SNR=0.9
ROSC                                LR      LR       04 44 57.9
      comp=Z,2µm,21.9s,baz=92,slow=30
ROSC  El Rosal            8.25  92  P       Pn       04 42 52.5 -0.8
ROSC                                                 04 44 25.7
ROSC  El Rosal            8.25  92  Pn      Pn       04 42 52.5 -0.8
ROSC                                Sn      Sn       04 44 25.7 -1.2
ROSC  El Rosal            8.25  92 eP       Pn       04 42 58.5 +5.1
SPBC  San Pablo de B      8.49  87 eP       Pn       04 42 59.8 +3.4
CRIN  San Cristobal       8.61 330          Pn       04 42 57.5 -0.5
CHIC  Chingaza            8.85  94 eP       Pn       04 43 04.7 +3.1
BRRC  Barranca, Sant      9.02  78 eP       Pn       04 43 07.6 +4.0
MACC  Macarena, Meta      9.25 109 eP       Pn       04 43 07.8 +1.0
PTLC  Puerto Leguiza      9.28 123 eP       Pn       04 43 12.5 +5.4
ARGC  Ariguani, Magd      9.46  61 eP       Pn       04 43 13.0 +3.4
RUSC  La Rusia            9.49  86 eP       Pn       04 43 16.1 +5.7
CNCH  Conchagua           9.51 327 eP       Pn       04 43 11.5 +1.2
CNCH  Conchagua           9.51 327 eP       Pn       04 43 11.5 +1.2
LCND  La Caada            9.56 327 eP       Pn       04 43 11.9 +0.9
LCND                               eS       Sn       04 44 53.2 -5.4
LCND  La Caada            9.56 327 eP       Pn       04 43 11.9 +0.9
LCND                               eS       Sn       04 44 53.2 -5.4
PAYG  Puerto Ayora        9.68 233⇓iP       Pn       04 43 15.0 +2.3
PAYG  Puerto Ayora        9.68 233  Pn      Pn       04 43 12.2 -0.4
LCY   Lacayo              9.88 326 eP       Pn       04 43 17.8 +2.4
LCY   Lacayo              9.88 326 eP       Pn       04 43 17.8 +2.4
TGUH  Tegucigalpa,Un      9.89 333  Pn      Pn       04 43 14.8 -0.8
PACA  Pacayal             9.93 326 eP       Pn       04 43 18.6 +2.5
PACA  Pacayal             9.93 326 eP       Pn       04 43 18.6 +2.5
FAGO  Alcalda de S       10.00 327 eP       Pn       04 43 18.6 +1.6
FAGO  Alcalda de S       10.00 327 eP       Pn       04 43 18.6 +1.6
TECA  Tecapa             10.05 325 eP       Pn       04 43 19.8 +1.8
TECA  Tecapa             10.05 325 eP       Pn       04 43 19.8 +1.8
COEB  Comit de Eme       10.07 325 eP       Pn       04 43 20.1 +1.9
COEB  Comit de Eme       10.07 325 eP       Pn       04 43 20.1 +1.9
SMRC  Santa Marta, M     10.15  54 eP       Pn       04 43 19.4 +0.3
PQSS  Presa 15 de Se     10.19 325 eP       Pn       04 43 21.5 +1.9
PQSS                               eS       Sn       04 45 08.9 -5.1
GUVC  San Jose del G     10.30 105 eP       Pn       04 43 22.3 +1.2
PAVA  Las Pavas          10.48 324 eP       Pn       04 43 26.2 +2.5
PAVA                               eS       Sn       04 45 17.0 -4.4
PAVA  Las Pavas          10.48 324 eP       Pn       04 43 26.2 +2.5
PAVA                               eS       Sn       04 45 17.0 -4.4
LFRS  El Faro            10.48 323 eP       Pn       04 43 25.5 +1.7
LFRS  El Faro            10.48 323 eP       Pn       04 43 25.5 +1.7
LBRS  Las Brisas         10.56 323 eP       Pn       04 43 27.6 +2.8
LBRS  Las Brisas         10.56 323 eP       Pn       04 43 27.6 +2.8
OPAM  Oficina de Pla     10.63 323 eP       Pn       04 43 28.5 +2.7
OPAM  Oficina de Pla     10.63 323 eP       Pn       04 43 28.5 +2.7
SNET  Serv Nac Est T     10.64 322          Pn       04 43 25.2 -0.6
UEES  Universidad Ev     10.66 323 eP       Pn       04 43 29.0 +2.8
UEES  Universidad Ev     10.66 323 eP       Pn       04 43 29.0 +2.8
PMON  Piamonte           10.71 322 eP       Pn       04 43 29.4 +2.6
PMON  Piamonte           10.71 322 eP       Pn       04 43 29.4 +2.6
JAYA  Jayaque - finc     10.74 321 eP       Pn       04 43 29.7 +2.4
JAYA                               eS       Sn       04 45 22.4 -5.5
JAYA  Jayaque - finc     10.74 321 eP       Pn       04 43 29.7 +2.4
JAYA                               eS       Sn       04 45 22.4 -5.5
CEDA  San Andres         10.82 322 eP       Pn       04 43 30.1 +1.8
CEDA  San Andres         10.82 322 eP       Pn       04 43 30.1 +1.8
TACO  Tacachico          10.93 323 eP       Pn       04 43 31.6 +1.8
TACO  Tacachico          10.93 323 eP       Pn       04 43 31.6 +1.8
CEVE  Cerro Verde        10.98 321 eP       Pn       04 43 33.1 +2.4
CEVE                               eS       Sn       04 45 29.9 -4.0
CEVE  Cerro Verde        10.98 321 eP       Pn       04 43 33.1 +2.4
CEVE                               eS       Sn       04 45 29.9 -4.0
SBLS  San Blas           10.99 321 eP       Pn       04 43 34.0 +3.1
SBLS  San Blas           10.99 321 eP       Pn       04 43 34.0 +3.1
RTR   El Retiro          11.05 322 eP       Pn       04 43 34.8 +3.2
RTR   El Retiro          11.05 322 eP       Pn       04 43 34.8 +3.2
MTO3  Montecristo        11.27 324 eP       Pn       04 43 36.3 +1.6
MTO3  Montecristo        11.27 324 eP       Pn       04 43 36.3 +1.6
MTO3  Montecristo        11.27 324          Pn       04 43 33.9 -0.8
IXG   Ixpaco             11.76 319 eP       Pn       04 43 45.6 +4.3
MRL   Marmol             12.00 325 eP       Pn       04 43 48.8 +4.1
NBG   Las Nubes          12.01 321 eP       Pn       04 43 48.8 +4.0
FUG   Fuego 3            12.23 319 eP       Pn       04 43 52.0 +4.3
SDV   Santo Domingo      12.40  72  Pn      Pn       04 43 52.5 +2.4
      2.5nm,0.3s,baz=245,slow=7.7,SNR=39
SDV                                 LR      LR       04 48 30.2
      comp=Z,10µm,20.6s,baz=254,slow=37
SDV   Santo Domingo      12.40  72  Pn      Pn       04 43 49.5 -0.7
SDV   Santo Domingo      12.40  72 eP       Pn       04 43 52.3 +2.2
ATAH  Atahualpa          13.00 161  Pn      Pn       04 44 00.8 +2.4
      3.7nm,0.3s,baz=355,slow=5.6,SNR=36
ATAH                                LR      LR       04 48 26.1
      comp=Z,30µm,21.6s,baz=338,slow=35
HUEH  Huehuetenango      13.30 319          Pn       04 44 01.5 -0.8
PETF  Flores             13.61 329          Pn       04 44 05.7 -0.7
FSCY  Frank Sound, G     14.05   5  Pn      Pn       04 44 10.7 -1.6
CCIG  Comitan            14.42 320          Pn       04 44 15.8 -1.8
LCCY  Blossom Villag     14.54   9  Pn      Pn       04 44 18.1 -1.0
CBCY  The Bluff, Cay     14.66  11          Pn       04 44 19.2 -1.6
TEIG  Tepich             15.88 340  Pn      Pn       04 44 38.1 +1.2
TEIG                                LR      LR       04 50 23.9
      comp=Z,15µm,19.1s,slow=36
JAKH  Jacmel             16.23  36          Pn       04 44 39.6 -1.8
JAKH                                IAmb    IAmb     04 44 52.4
      comp=Z,227nm,1.1s
CZSB  Cruzeiro do Su     16.23 143 eP       Pn       04 44 40.8 -0.8
GTBY  Guantanamo Bay     16.30  26  Pn      Pn       04 44 41.1 -1.2
GTBY                                IAmb    IAmb     04 44 55.4
      comp=Z,141nm,1.1s
LGNH  Logne              16.39  36  Pn      Pn       04 44 42.6 -0.9
CMIG  Matias Romero      16.84 315  Pn      Pn       04 44 48.6 -0.5
      comp=Z,0.3nm,0.3s,baz=122,slow=10,SNR=12
CMIG                                LR      LR       04 50 08.7
      comp=Z,14µm,21.8s,baz=123,slow=33
SDDR  Presa de Saban     17.55  38  Pn      Pn       04 44 57.0 -1.1
SDDR                                IAmb    IAmb     04 45 12.3
      comp=Z,298nm,1.1s
SDD   Santo Domingo      18.04  42  Pn      Pn       04 45 02.4 -1.7
SDD                                 IAmb    IAmb     04 45 22.3
      comp=Z,125nm,0.9s
NNA   Nana               18.05 162  P       P        04 45 05.2 +0.4
      comp=Z,2.4nm,0.3s,baz=346,slow=10,SNR=44
NNA                                 LR      LR       04 51 28.7
      comp=Z,4µm,20.5s,baz=326,slow=35
NNA   Nana               18.05 162          Pn       04 45 03.6 -0.8
NNA                                 IAmb    IAmb     04 45 07.9
      comp=Z,200nm,0.9s
SC01  Santiago de lo     18.23  38          Pn       04 45 05.6 -0.8
PCRV  Puerto La Cruz     18.45  74  P       Pn       04 45 09.7 +0.4
      comp=Z,1.1nm,0.3s,baz=243,slow=4.1,SNR=12
PCRV                                LR      LR       04 53 52.1
      comp=Z,9µm,19.7s,slow=42
GRTK  Grand Turk         19.61  33  P       P        04 45 21.0 -0.9
GRTK                                IAmb    IAmb     04 45 25.1
      comp=Z,230nm,1.1s
MLPR  Magueyes Islan     19.77  49  P       P        04 45 22.8 -0.8
MPR   Mayaguez           19.85  48  P       P        04 45 23.7 -0.7
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MPR                                 IAmb    IAmb     04 45 37.5
      comp=Z,256nm,1.1s
TLIG  Tlapa              19.85 309  P       P        04 45 23.6 -1.0
AGPR  Aguadilla, PR      20.03  48  P       P        04 45 25.7 -0.7
ICMP  Isla Caja de M     20.11  50          P        04 45 26.6 -0.7
OBIP  Obispado Ponce     20.14  50  P       P        04 45 26.8 -0.8
AOPR  Arecibo Observ     20.22  49  P       P        04 45 26.8 -1.7
EMPR  Esperanza - Ma     20.46  49  P       P        04 45 30.3 -0.9
SJG   San Juan           20.53  50  P       Pn       04 45 33.0 -1.1
      comp=Z,233nm,0.8s,baz=238,slow=8.4,SNR=45
SJG   San Juan           20.53  50  P       P        04 45 31.4 -0.5
SJG                                 pmax    pmax
      comp=Z,512nm,1.2s
SJG                                 MLR     MLR
      comp=Z,5µm,22.0s
SJG   San Juan           20.53  50  P       P        04 45 31.4 -0.5
061Z  Ochoppi            20.56   4  P       P        04 45 31.6 -0.6
PDPR  Patillas Dam,      20.57  51  P       P        04 45 31.8 -0.6
PDPR                                IAmb    IAmb     04 45 38.2
      comp=Z,171nm,0.9s
GCPR  Guaynabo City      20.70  50  P       P        04 45 34.4 +0.7
HUMP  Col San Antoni     20.78  51  P       P        04 45 35.1 +0.6
CBYP  Canovanas          20.85  50  P       P        04 45 36.0 +0.6
MTP   Monte Pirata       20.98  51  P       P        04 45 37.4 +0.6
CUPR  Culebra, Puert     21.31  51  P       P        04 45 41.0 +0.7
CDVI  St. Croix          21.41  53  P       P        04 45 42.4 +1.1
ETMB  Extrema            22.14 132 eP       P        04 45 49.0 -0.3
SVOC  Richmond Hill,     22.49  68 e        P        04 45 53.5 +0.4
SVB   Belmont            22.50  68 e        P        04 45 54.0 +0.8
SVB   Belmont            22.50  68 eS       S        04 50 06.5 +6.2
SVB   Belmont            22.50  68  P       P        04 45 53.6 +0.4
SABA  Saba               22.57  55 e        P        04 46 04.5  +11
SABA  Saba               22.57  55  IAMs_20 IAMs_20  04 54 11.0
      comp=Z,6µm,20.0s
SEUS  St. Eustatius      22.72  56 e        P        04 45 40.6  -15
SEUS  St. Eustatius      22.72  56  IAMs_20 IAMs_20  04 54 17.0
      comp=Z,5µm,20.0s
DWPF  Disney Wildern     22.76   3  P       P        04 45 54.4 -1.3
      baz=183
DWPF  Disney Wildern     22.76   3  P       P        04 45 55.9 +0.1
SKI   Saint Kitts        22.84  57 e        P        04 45 55.5 -1.2
MCLT  Moule a Chique     22.93  67 e        P        04 45 49.5 -8.2
SLBI  Saint Lucia, B     23.01  66 e        P        04 45 57.7 -0.7
SLBI  Saint Lucia, B     23.01  66 eS       S        04 50 14.1 +4.8
MLYT  Lee's Yard         23.01  59 e        P        04 45 43.5  -15
BIM   Bigot              23.09  65 e        P        04 45 55.5 -3.9
FDF   Fort de France     23.10  64 e        P        04 45 55.5 -4.0
FDF   Fort de France     23.10  64  P       P        04 46 00.1 +0.6
FDF                                 pmax    pmax
      comp=Z,131nm,0.9s
FDF                                 MLR     MLR
      comp=Z,3µm,21.0s
FDF   Fort de France     23.10  64  P       P        04 46 00.1 +0.6
FDF                                 IAmb    IAmb     04 46 16.7
      comp=Z,131nm,0.9s
TDBA  Terre de Bas,      23.11  61 e        P        04 46 04.5 +5.0
TDBA  Terre de Bas,      23.11  61 eS       S        04 50 15.7 +4.6
DSLB  Salisbury          23.13  62 e        P        04 45 53.5 -6.3
CBE   Ff, Capester       23.23  61 e        P        04 46 03.2 +2.5
MPOM  Morne Pois Mar     23.26  65 e        P        04 45 52.5 -8.5
MPOM  Morne Pois Mar     23.26  65 eS       S        04 50 21.6 +8.1
ILAM  Ilet Lapin Mar     23.36  65 e        P        04 45 56.5 -5.6
PTGA  Pitinga            23.36 104  P       P        04 46 03.2 +1.0
      comp=Z,26nm,0.7s,baz=287,slow=15,SNR=15
PTGA                                LR      LR       04 55 15.5
      comp=Z,6µm,19.0s,baz=285,slow=37
PTGA  Pitinga            23.36 104  P       P        04 46 02.7 +0.6
PTGA                                IAmb    IAmb     04 46 05.5
      comp=Z,49nm,0.9s
PTGA                                IAMs_20 IAMs_20  04 55 13.3
      comp=Z,6µm,18.0s
PTGA  Pitinga            23.36 104 eP       P        04 46 02.8 +0.6
MACA  Manacapuru-AM      23.43 110 eP       P        04 46 03.0 +0.3
BPA   Boggy Peak         23.45  58 e        P        04 46 00.7 -2.3
ANBD  Bethesda, Anti     23.52  58 e        P        04 46 02.4 -1.2
ANWB  Willy Bob          23.80  57 e        P        04 45 51.8  -15
ANWB  Willy Bob          23.80  57  P       P        04 46 06.0 -0.4
SAML  Samuel             23.94 126  P       P        04 46 07.9 +0.1
SAML                                pmax    pmax
      comp=Z,397nm,1.0s
SAML                                MLR     MLR
      comp=Z,9µm,20.0s
SAML  Samuel             23.94 126  P       P        04 46 07.9 +0.1
SAML  Samuel             23.94 126  IAMs_20 IAMs_20  04 55 29.2
      comp=Z,9µm,20.0s
SAML  Samuel             23.94 126 eP       P        04 46 07.2 -0.6
545A  Edgard             25.77 344  IAMs_20 IAMs_20  04 54 15.4
      comp=Z,6µm,18.0s
ZAIG  Zacatecas          25.99 314  P       P        04 46 25.8 -0.9
ZAIG                                IAMs_20 IAMs_20  04 55 56.2
      comp=Z,6µm,18.0s
TIGA  Tifton             26.07 358  P       P        04 46 26.4 -0.6
      baz=178
BRAL  Brewton            26.12 351  P       P        04 46 28.3 +0.8
      baz=170
BRAL  Brewton            26.12 351  P       P        04 46 27.5 +0.1
352A  Blakely            26.18 355  P       P        04 46 28.1 +0.1
KVTX  Kingsville         26.53 328  IAMs_20 IAMs_20  04 57 46.4
      comp=Z,6µm,22.0s
255A  Hazlehurst         26.54   0  P       P        04 46 31.4 +0.2
255A                                IAmb    IAmb     04 46 37.9
      comp=Z,81nm,1.0s
PB16  IPOC Station P     26.75 151  P       P        04 46 33.1 -0.8
PB16                                IAmb    IAmb     04 46 38.3
      comp=Z,90nm,1.0s
250A  Grady              26.81 353  P       P        04 46 33.7  0.0
250A                                IAmb    IAmb     04 46 45.2
      comp=Z,87nm,1.1s
344A  Westbrook Farm     27.16 345  P       P        04 46 36.9 +0.1
344A                                IAmb    IAmb     04 46 38.3
      comp=Z,78nm,0.9s
154A  Montrose           27.23 359  P       P        04 46 37.5 +0.1
441A  DeRidder           27.26 340  P       P        04 46 37.6 -0.1
441A                                IAmb    IAmb     04 46 50.2
      comp=Z,69nm,1.1s
152A  Waverly Hall       27.35 356  P       P        04 46 38.6 +0.1
152A                                IAmb    IAmb     04 46 41.8
      comp=Z,88nm,1.1s
MNMC  Minye Minye        27.40 152  P       P        04 46 38.9 -0.5
MNMC                                IAmb    IAmb     04 46 42.5
      comp=Z,67nm,1.0s
MNMC                                IAMs_20 IAMs_20  04 58 25.4
      comp=Z,4µm,21.0s
342A  Flagon Creek P     27.55 342  P       P        04 46 40.2 -0.1
HKT   Hockley            27.57 335c iP      P        04 46 40.1 -0.3
HKT                                 pmax    pmax
      comp=Z,86nm,2.0s
HKT   Hockley            27.57 335  P       P        04 46 40.4  0.0
PSGCX Pisagua            27.57 154  P       P        04 46 40.5 -0.2
PSGCX                               IAmb    IAmb     04 46 52.7
      comp=Z,33nm,1.0s
PSGCX                               IAMs_20 IAMs_20  04 58 01.9
      comp=Z,4µm,19.0s
NHSC  New Hope           27.81   4  P       P        04 46 42.8 +0.2
      baz=185,SNR=6.4
NHSC  New Hope           27.81   4  P       P        04 46 42.9 +0.2
VBMS  Vicksburg          27.84 346  P       P        04 46 42.9  0.0
      baz=163
VBMS  Vicksburg          27.84 346  P       P        04 46 42.8  0.0
VBMS                                IAmb    IAmb     04 46 43.6
      comp=Z,54nm,1.0s
146A  Union              27.91 348  P       P        04 46 43.4 -0.1
833A  Chaparral WMA,     27.95 327  P       P        04 46 44.2 +0.3
      baz=142
LRAL  Lakeview Retre     27.95 352  P       P        04 46 44.0 +0.1
      baz=171,SNR=28
LRAL  Lakeview Retre     27.95 352  P       P        04 46 44.0 +0.1
LRAL                                IAmb    IAmb     04 46 47.8
      comp=Z,70nm,0.9s
Z56A  Williston          27.96   2  P       P        04 46 44.1 +0.2
Z59A  Georgetown, SC     28.02   6  P       P        04 46 44.8 +0.4
      baz=187
Z51A  Franklin           28.03 355  P       P        04 46 44.7 +0.1
Z51A                                IAmb    IAmb     04 46 48.0
      comp=Z,70nm,1.1s
GOGA  Godfrey            28.03 358  P       P        04 46 44.8 +0.2
      baz=178,SNR=13
GOGA  Godfrey            28.03 358  P       P        04 46 44.7 +0.1
GOGA                                pmax    pmax
      comp=Z,62nm,1.0s
GOGA  Godfrey            28.03 358  P       P        04 46 44.7 +0.1
GOGA                                IAmb    IAmb     04 46 48.0
      comp=Z,62nm,1.0s
Z47A  Carrollton         28.27 350  P       P        04 46 46.7  0.0
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TA01  Diego Aracena      28.40 155  P       P        04 46 47.9 -0.2
TA01                                IAmb    IAmb     04 46 54.1
      comp=Z,31nm,0.9s
ITTB  Itaituba           28.48 109 eP       P        04 46 49.0 +0.2
PB08  IPOC Station P     28.48 153  P       P        04 46 48.6 -0.6
Y52A  Lilburn            28.50 357  P       P        04 46 48.9 +0.1
Y52A                                IAmb    IAmb     04 46 52.8
      comp=Z,60nm,1.1s
PATCX Punta Patache      28.64 155  P       P        04 46 49.7 -0.6
PATCX                               IAmb    IAmb     04 47 08.8
      comp=Z,54nm,1.1s
VILB  Vilhena            28.67 129 eP       P        04 46 51.2 +0.7
Y49A  Blount Mountai     28.69 353  P       P        04 46 50.2 -0.3
Y49A                                IAmb    IAmb     04 46 53.3
      comp=Z,34nm,0.8s
NATX  Nacogdoches        28.70 338  P       P        04 46 50.6  0.0
      baz=154
NATX  Nacogdoches        28.70 338  P       P        04 46 50.0 -0.5
NATX                                IAmb    IAmb     04 46 56.3
      comp=Z,38nm,1.0s
HODGE Hodges             28.84   1  P       P        04 46 51.7 -0.1
HODGE                               IAmb    IAmb     04 46 55.2
      comp=Z,70nm,0.9s
JSC   Jenkinsville       28.91   2  P       P        04 46 52.2 -0.2
JSC                                 pmax    pmax
      comp=Z,26nm,0.9s
JSC   Jenkinsville       28.91   2  P       P        04 46 52.2 -0.2
JSC                                 IAmb    IAmb     04 46 56.1
      comp=Z,26nm,0.9s
435B  Jarrell            29.05 333  P       P        04 46 54.0 +0.2
      baz=148
435B  Jarrell            29.05 333  P       P        04 46 53.3 -0.5
435B                                IAmb    IAmb     04 47 00.1
      comp=Z,38nm,0.9s
PB01  IPOC Station P     29.12 154  P       P        04 46 54.0 -0.6
PB01                                IAMs_20 IAMs_20  04 58 36.0
      comp=Z,3µm,20.0s
X57A  Johnson Farm,      29.16   4  P       P        04 46 55.2 +0.5
      baz=185
MALB  Monte Alegre       29.16 103 eP       P        04 46 54.6 -0.3
Y45A  Yeager Farm, C     29.20 348  P       P        04 46 54.7 -0.3
X51A  Calhoun            29.25 356  P       P        04 46 55.2 -0.2
X51A                                IAmb    IAmb     04 46 58.5
      comp=Z,61nm,1.1s
FPAL  Fort Paine         29.28 355  P       P        04 46 55.5 -0.3
FPAL                                IAmb    IAmb     04 46 59.2
      comp=Z,49nm,1.0s
BIRD  Birdtown, Kers     29.32   4  P       P        04 46 55.9 -0.1
BIRD                                IAmb    IAmb     04 46 59.9
      comp=Z,51nm,1.0s
X48A  Hartselle          29.35 352  P       P        04 46 56.0 -0.3
X48A                                IAmb    IAmb     04 46 59.5
      comp=Z,36nm,0.8s
237A  Washetta, Mont     29.35 337  P       P        04 46 55.9 -0.4
237A                                IAmb    IAmb     04 47 06.3
      comp=Z,35nm,0.9s
X59A  McDuffie Farm,     29.41   7  P       P        04 46 57.4 +0.6
      baz=188
PAULI Pauline            29.43   1  P       P        04 46 56.9 -0.1
PAULI                               IAmb    IAmb     04 47 01.3
      comp=Z,66nm,1.1s
Z41A  Richland Creek     29.45 342  P       P        04 46 56.5 -0.7
      baz=159
X60A  Albert Glenn T     29.50   8  P       P        04 46 56.2 -1.4
      baz=189
PB07  IPOC Station P     29.56 156  P       P        04 46 57.8 -0.7
BG3   Lake Jocassee      29.60 359  P       P        04 46 58.4 -0.2
BG3                                 IAmb    IAmb     04 47 02.8
      comp=Z,55nm,0.9s
W52A  Murphy             29.72 358  P       P        04 46 59.5 -0.2
W52A                                IAmb    IAmb     04 47 03.1
      comp=Z,48nm,0.9s
KMSC  Kings Mountain     29.77   2  P       P        04 47 00.4 +0.4
      baz=183,SNR=20
KMSC  Kings Mountain     29.77   2  P       P        04 46 59.9 -0.2
CCAR  Cane Creek         29.77 345  P       P        04 46 59.6 -0.4
CCAR                                IAmb    IAmb     04 47 00.5
      comp=Z,52nm,1.2s
W58A  Raeford            29.79   6  P       P        04 46 59.6 -0.6
      baz=187
OXF   Oxford             29.80 349  P       P        04 46 59.3 -0.9
      baz=166,SNR=10
OXF   Oxford             29.80 349  P       P        04 46 59.8 -0.4
OXF                                 pmax    pmax
      comp=Z,108nm,1.2s
OXF   Oxford             29.80 349  P       P        04 46 59.8 -0.4
NPGB  Novo Progresso     29.80 114 eP       P        04 47 00.2 -0.3
W56A  Indian Trail       29.80   3  P       P        04 47 00.3 +0.1
      baz=184,SNR=12
JCT   Junction City      29.88 329  P       P        04 47 01.5 +0.4
      baz=144,SNR=7.3
JCT   Junction City      29.88 329  P       P        04 47 00.6 -0.5
JCT                                 pmax    pmax
      comp=Z,22nm,1.1s
JCT                                 MLR     MLR
      comp=Z,2µm,22.0s
JCT   Junction City      29.88 329  P       P        04 47 00.6 -0.5
PB09  IPOC Station P     29.89 154  P       P        04 47 00.7 -0.8
PB09                                IAMs_20 IAMs_20  05 01 13.4
      comp=Z,6µm,18.0s
W50A  Signal Mountai     29.91 356  P       P        04 47 01.0 -0.3
W50A                                IAmb    IAmb     04 47 02.5
      comp=Z,57nm,1.1s
WLAR  White Oak Lake     29.94 342  P       P        04 47 01.1 -0.5
WLAR                                IAmb    IAmb     04 47 02.2
      comp=Z,34nm,1.1s
SWET  Sewanee            29.98 355  P       P        04 47 01.6 -0.3
SWET                                IAmb    IAmb     04 47 02.9
      comp=Z,64nm,1.1s
SWET                                IAMs_20 IAMs_20  05 00 57.8
      comp=Z,3µm,18.0s
SIV   San Ignacio        29.98 135  P       P        04 47 02.4 +0.2
      comp=Z,20nm,0.9s,baz=302,slow=6.3,SNR=11
SIV                                 LR      LR       04 59 13.3
      comp=Z,18µm,19.8s,baz=316,slow=37
W59A  Clinton            30.02   7  P       P        04 47 02.3 +0.1
      baz=188
PLAL  Pickwick Lake      30.02 351  P       P        04 47 01.9 -0.3
PLAL                                IAmb    IAmb     04 47 05.2
      comp=Z,53nm,1.1s
WHTX  Lake Whitney,      30.02 334  P       P        04 47 02.4  0.0
      baz=150
WHTX  Lake Whitney,      30.02 334  P       P        04 47 01.9 -0.5
WHTX                                IAmb    IAmb     04 47 16.6
      comp=Z,48nm,1.1s
CPCT  Cooper Cave        30.11 357  P       P        04 47 02.8 -0.2
CPCT                                IAmb    IAmb     04 47 04.8
      comp=Z,64nm,1.2s
X43A  Marvell            30.12 346  P       P        04 47 02.8 -0.3
      baz=164
CNNC  Cliffs of the      30.16   8  P       P        04 47 03.5  0.0
      baz=189
CNNC  Cliffs of the      30.16   8  P       P        04 47 03.3 -0.1
CNNC                                IAmb    IAmb     04 47 07.4
      comp=Z,39nm,0.9s
CNNC                                IAMs_20 IAMs_20  04 58 46.2
      comp=Z,3µm,21.0s
Z38A  Mt. Pleasant       30.17 339  P       P        04 47 03.3 -0.3
Z38A                                IAmb    IAmb     04 47 04.2
      comp=Z,38nm,0.9s
W61A  Ground Anchor      30.23   9  P       P        04 47 04.0 -0.1
      baz=191
V53A  Saluda             30.27 360  P       P        04 47 04.3 -0.3
V53A                                IAmb    IAmb     04 47 08.1
      comp=Z,26nm,0.8s
TKL   Tuckaleechee C     30.28 358  P       P        04 47 04.7 +0.2
      comp=Z,23nm,0.9s,baz=164,slow=9.9,SNR=14
TKL   Tuckaleechee C     30.28 358  P       P        04 47 04.3 -0.3
TKL                                 pmax    pmax
      comp=Z,51nm,1.2s
TKL                                 MLR     MLR
      comp=Z,2µm,19.0s
TKL   Tuckaleechee C     30.28 358  P       P        04 47 04.3 -0.3
TKL                                 IAmb    IAmb     04 47 15.4
      comp=Z,50nm,1.1s
W45A  Hickory Valley     30.38 349  P       P        04 47 05.2 -0.3
V51A  Loudon             30.45 357  P       P        04 47 05.8 -0.3
V51A                                IAmb    IAmb     04 47 10.0
      comp=Z,68nm,1.1s
V52A  Sevierville        30.46 358  P       P        04 47 05.9 -0.3
V52A                                IAmb    IAmb     04 47 09.5
      comp=Z,49nm,0.9s
V56A  Mocksville         30.47   3  P       P        04 47 06.7 +0.5
      baz=184,SNR=9.9
V55A  Taylorsville       30.48   2  P       P        04 47 06.2 -0.1
V55A                                IAmb    IAmb     04 47 10.0
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	comp=Z,45nm,1.0s						
PB06	IPOC Station P	30.56	156	P	P	04 47 06.7	-0.7
V58A	Windy Hill, Pi	30.57	6	P	P	04 47 07.2	+0.2
	baz=187,SNR=19						
V58A	Windy Hill, Pi	30.57	6	P	P	04 47 06.8	-0.2
V58A				IAMs_20	IAMs_20	05 00 04.0	
	comp=Z,3µm,18.0s						
V48A	Smith Brothers	30.59	353	P	P	04 47 07.1	-0.2
V57A	Coltrane Farms	30.60	4	P	P	04 47 07.9	+0.5
	baz=186,SNR=18						
X40A	Basin Creek Fa	30.60	343	P	P	04 47 06.5	-0.9
	baz=160						
V59A	Middlesex	30.63	7	P	P	04 47 08.0	+0.4
	baz=188						
H06E1	SOCORRO T-PHAS	30.73	298	T	T	05 19 19.0	
	SNR=214						
LVC	Limon Verde	30.75	155	P	P	04 47 10.7	+1.4
	comp=Z,8.6nm,0.9s,baz=343,slow=5.5,SNR=9.0						
LVC	Limon Verde	30.75	155	P	P	04 47 08.3	-1.0
LVC	Limon Verde	30.75	155	*e*P	P	04 47 08.9	-0.4
V60A	Jim Taylor Roa	30.76	8	P	P	04 47 09.6	+0.8
	baz=190						
V60A	Jim Taylor Roa	30.76	8	P	P	04 47 08.7	-0.1
V62A	Hyde County Ai	30.78	11	P	P	04 47 09.3	+0.4
	baz=193						
V62A	Hyde County Ai	30.78	11	IAMs_20	IAMs_20	04 57 47.3	
	comp=Z,3µm,20.0s						
HPIG		30.81	317	P	P	04 47 08.6	-1.0
MIAR	Mount Ida	30.88	342	P	P	04 47 09.2	-0.6
	baz=158,SNR=10						
MIAR	Mount Ida	30.88	342	P	P	04 47 09.2	-0.6
MIAR				pmax	pmax		
	comp=Z,21nm,1.1s						
MIAR				MLR	MLR		
	comp=Z,1µm,21.0s						
MIAR	Mount Ida	30.88	342	P	P	04 47 09.2	-0.6
CLTN	Cedars of Leba	30.89	354	P	P	04 47 09.7	-0.2
MCPB	Macapa, AP	31.00	99	*e*P	P	04 47 11.7	+0.5
U56A	King	31.02	3	P	P	04 47 11.7	+0.6
	baz=184,SNR=8.0						
U56A	King	31.02	3	P	P	04 47 10.9	-0.1
PB15	IPOC Station P	31.05	156	P	P	04 47 11.0	-0.8
W41B	Gary Mavity, V	31.09	345	P	P	04 47 11.0	-0.6
	baz=161,SNR=10.0						
Z35A	Perchaven, San	31.10	336	P	P	04 47 11.4	-0.4
Z35A				IAmb	IAmb	04 47 15.6	
	comp=Z,45nm,1.1s						
Z35A				IAMs_20	IAMs_20	05 01 12.5	
	comp=Z,5µm,22.0s						
WVT	Waverly	31.11	352	P	P	04 47 10.8	-1.0
	baz=170						
WVT	Waverly	31.11	352	P	P	04 47 11.0	-0.8
WVT				pmax	pmax		
	comp=Z,56nm,0.9s						
WVT	Waverly	31.11	352	P	P	04 47 11.0	-0.8
U54A	Nelsons Funny	31.13	1	P	P	04 47 12.5	+0.4
	baz=182,SNR=9.2						
U54A	Nelsons Funny	31.13	1	P	P	04 47 11.9	-0.2
TZTN	Tazewell	31.16	359	P	P	04 47 12.4	+0.1
	baz=178,SNR=17						
TZTN	Tazewell	31.16	359	P	P	04 47 12.0	-0.4
TXAR	Lajitas Array	31.16	323	P	P	04 47 13.3	+0.7
	comp=Z,5.1nm,1.1s,baz=143,slow=8.6,SNR=21						
TXAR				PcP	PcP	04 50 09.4	+1.7
	comp=Z,3.2nm,0.9s,baz=139,slow=5.8,SNR=4.8						
TXAR				LR	LR	04 59 48.4	
	comp=Z,2µm,20.1s,baz=0.0,slow=36						
TXAR	Lajitas Array	31.16	323	P	P	04 47 11.9	-0.7
TXAR	Lajitas Array	31.16	323	P	P	04 47 11.9	-0.7
TX31	Lajitas Ar. Si	31.16	323	P	P	04 47 11.9	-0.7
TX32	Lajitas Array	31.16	323	P	P	04 47 11.7	-0.9
U57A	Blanch	31.18	5	P	P	04 47 12.8	+0.4
	baz=186,SNR=17						
WHAR	Wooly Hollow	31.21	345	P	P	04 47 12.1	-0.6
WHAR				IAmb	IAmb	04 47 13.2	
	comp=Z,68nm,1.2s						
U58A	Oxford	31.22	6	P	P	04 47 13.1	+0.2
	baz=188,SNR=5.7						
U49A	Red Boiling Sp	31.25	355	P	P	04 47 12.8	-0.3
U59A	Littleton	31.27	7	IAMs_20	IAMs_20	04 59 20.2	
	comp=Z,4µm,19.0s						
GNAR	Gosnell	31.32	348	P	P	04 47 13.4	-0.3
U61A	Possum Corner	31.45	10	P	P	04 47 14.4	-0.4
	baz=192						
U61A	Possum Corner	31.45	10	P	P	04 47 14.7	-0.1
U61A				IAMs_20	IAMs_20	05 00 25.0	
	comp=Z,3µm,18.0s						
U60A	Pendleton	31.47	8	P	P	04 47 14.4	-0.6
	baz=190						
UTMT	University of	31.48	350	P	P	04 47 14.4	-0.7
X37A	Clayton	31.50	340	P	P	04 47 15.0	-0.4
W39A	Magazine	31.54	342	P	P	04 47 15.3	-0.3
	baz=158,SNR=9.6						
W39A	Magazine	31.54	342	P	P	04 47 15.4	-0.3
W39A				IAmb	IAmb	04 47 16.1	
	comp=Z,28nm,1.1s						
ABTX	Abilene, Hawle	31.55	332	P	P	04 47 15.3	-0.6
	baz=146						
ABTX	Abilene, Hawle	31.55	332	P	P	04 47 15.2	-0.6
LCAR	Lake Charles	31.67	347	P	P	04 47 16.1	-0.7
T50A	Nancy	31.69	357	P	P	04 47 16.7	-0.2
T50A				IAmb	IAmb	04 47 20.4	
	comp=Z,64nm,1.1s						
T56A	Rocky Mt	31.72	4	P	P	04 47 18.1	+0.9
	baz=185,SNR=13						
FCAR	Ozark Folk Cen	31.73	345	P	P	04 47 16.8	-0.5
FCAR				IAmb	IAmb	04 47 17.5	
	comp=Z,52nm,1.2s						
T57A	Hurt	31.75	5	P	P	04 47 17.9	+0.5
	baz=186,SNR=15						
T57A	Hurt	31.75	5	P	P	04 47 17.4	0.0
T57A				IAMs_20	IAMs_20	05 00 49.9	
	comp=Z,3µm,18.0s						
BBSR	BB Station	31.75	30	IAMs_20	IAMs_20	04 58 15.4	
	comp=Z,4µm,22.0s						
T58A	Grand View Acr	31.76	6	P	P	04 47 17.8	+0.2
	baz=188,SNR=10						
T47A	Sharon Grove	31.86	353	P	P	04 47 18.2	-0.2
BLA	Blacksburg	31.87	3	P	P	04 47 19.3	+0.6
	baz=184,SNR=18						
BLA	Blacksburg	31.87	3	P	P	04 47 18.4	-0.3
BLA				pmax	pmax		
	comp=Z,95nm,1.0s						
BLA				MLR	MLR		
	comp=Z,2µm,20.0s						
BLA	Blacksburg	31.87	3	P	P	04 47 18.4	-0.3
PB14	IPOC Station P	31.98	159	P	P	04 47 19.1	-0.9
SLBS	Sierra La Lagu	32.09	308	P	P	04 47 19.7	-1.1
SLBS				IAmb	IAmb	04 47 23.1	
	comp=Z,36nm,1.1s						
SLBS	Sierra La Lagu	32.09	308	IAMs_20	IAMs_20	04 57 06.8	
	comp=Z,4µm,19.0s						
T45A	Paducah	32.10	351	P	P	04 47 20.2	-0.3
T60A	Surry	32.19	9	P	P	04 47 22.0	+0.7
	baz=191						
PBMO	Poplar Bluff	32.19	348	P	P	04 47 20.5	-0.9
PBMO				IAmb	IAmb	04 47 21.9	
	comp=Z,42nm,1.1s						
S51A	Beattyville	32.25	359	P	P	04 47 21.6	-0.3
U40A	Yellville	32.36	344	P	P	04 47 22.1	-0.7
	baz=161,SNR=10.0						
U40A	Yellville	32.36	344	P	P	04 47 22.2	-0.7
S56A	Natural Bridge	32.39	4	P	P	04 47 23.7	+0.5
	baz=186,SNR=11						
S54A	Dingess, Beckl	32.42	2	P	P	04 47 23.8	+0.4
	baz=182,SNR=10.0						
S54A	Dingess, Beckl	32.42	2	P	P	04 47 23.3	-0.1
S54A				IAmb	IAmb	04 47 26.8	
	comp=Z,64nm,1.1s						
S58A	Poland Farm, P	32.48	7	P	P	04 47 24.0	+0.2
	baz=188						
S58A	Poland Farm, P	32.48	7	P	P	04 47 23.7	-0.1
S58A				IAmb	IAmb	04 47 28.6	
	comp=Z,60nm,1.1s						
S58A				IAMs_20	IAMs_20	04 59 56.3	
	comp=Z,4µm,20.0s						
S57A	Dark Hollow, R	32.53	5	P	P	04 47 24.4	+0.1
	baz=187,SNR=9.8						
S57A	Dark Hollow, R	32.53	5	P	P	04 47 24.1	-0.3
S57A				IAmb	IAmb	04 47 27.6	
	comp=Z,33nm,0.9s						
W35A	Tecumseh	32.55	338	P	P	04 47 23.9	-0.6
W35A				IAMs_20	IAMs_20	05 02 25.0	
	comp=Z,5µm,22.0s						
T42A	Van Buren	32.58	347	P	P	04 47 23.4	-1.3
T42A				IAmb	IAmb	04 47 32.3	
	comp=Z,39nm,0.9s						
HHAR	Hobbs	32.60	343	P	P	04 47 24.1	-0.9
S59A	Mechanicsville	32.72	8	P	P	04 47 26.7	+0.8
	baz=190						
S60A	Water View	32.76	9	P	P	04 47 25.8	-0.5
	baz=191						
GO02	Mina Guanaco	32.77	158	P	P	04 47 26.0	-0.9
GO02				IAmb	IAmb	04 47 30.9	
	comp=Z,66nm,1.1s						
R54A	Victor	32.81	2	P	P	04 47 27.1	+0.2
	baz=183,SNR=19						
FNO	Franklin	32.84	337	P	P	04 47 26.6	-0.6
FNO				IAmb	IAmb	04 47 30.6	
	comp=Z,46nm,1.1s						
TUL1	Leonard	32.84	340	P	P	04 47 26.2	-1.0
	baz=155,SNR=7.5						
TUL1	Leonard	32.84	340	P	P	04 47 26.4	-0.7
TUL1				IAmb	IAmb	04 47 45.0	
	comp=Z,20nm,0.9s						
R58B	Mineral	32.84	7	P	P	04 47 27.8	+0.7
	baz=189,SNR=13						
R58B	Mineral	32.84	7	P	P	04 47 26.9	-0.1
R58B				IAmb	IAmb	04 47 32.0	
	comp=Z,32nm,0.8s						
R58B				IAMs_20	IAMs_20	05 00 17.0	
	comp=Z,4µm,18.0s						
S44A	Carbondale	32.86	350	P	P	04 47 26.9	-0.3
SIUC	Southern Illin	32.88	350	P	P	04 47 26.9	-0.5
U38A	Gravette	32.88	342	P	P	04 47 26.9	-0.5
USIN	University of	32.89	353	P	P	04 47 27.3	-0.2
S61A	Accomac	32.89	10	P	P	04 47 26.9	-0.6
	baz=193						
S61A	Accomac	32.89	10	IAMs_20	IAMs_20	04 59 11.3	
	comp=Z,3µm,21.0s						
R50A	Paris	32.92	357	P	P	04 47 27.6	-0.2
R53A	Hurricane	32.93	1	P	P	04 47 27.6	-0.3
WMOK	Wichita Mounta	32.95	335	P	P	04 47 27.5	-0.6
	baz=150						
MGMO	Mountain Grove	32.97	346	P	P	04 47 27.8	-0.4
MGMO				IAmb	IAmb	04 47 28.2	
	comp=Z,43nm,0.9s						
R49A	Shelbyville	32.97	356	P	P	04 47 27.9	-0.3
R49A				IAMs_20	IAMs_20	05 02 33.4	
	comp=Z,2µm,18.0s						
WCI	Wyandotte Cave	33.00	355	P	P	04 47 27.9	-0.5
	baz=173						
WCI	Wyandotte Cave	33.00	355	P	P	04 47 28.0	-0.5
WCI				pmax	pmax		
	comp=Z,132nm,1.2s						
WCI	Wyandotte Cave	33.00	355	P	P	04 47 28.0	-0.5
R57A	Stanardsville	33.10	6	P	P	04 47 30.0	+0.6
	baz=187,SNR=9.7						
OK025	Westminster Rd	33.10	338	P	P	04 47 28.6	-0.9
CBN	Corbin Frederi	33.15	8	P	P	04 47 30.0	+0.3
	baz=190						
CBN	Corbin Frederi	33.15	8	P	P	04 47 29.6	-0.1
CBN				IAmb	IAmb	04 47 34.1	
	comp=Z,64nm,1.1s						
CBN				IAMs_20	IAMs_20	05 00 06.0	
	comp=Z,3µm,20.0s						
R58A	Rapidan	33.16	7	P	P	04 47 30.7	+0.8
	baz=188,SNR=20						
R59A	King George, V	33.17	8	P	P	04 47 30.4	+0.4
	baz=190						
OK030	Cody Creek RV	33.21	339	P	P	04 47 29.3	-1.1
OK030				IAmb	IAmb	04 47 30.3	
	comp=Z,48nm,1.1s						
BCOK	Bluff Creek, N	33.27	337	P	P	04 47 30.0	-0.9
BCOK				IAmb	IAmb	04 47 30.4	
	comp=Z,61nm,1.2s						
BCOK				IAMs_20	IAMs_20	05 02 57.2	
	comp=Z,6µm,21.0s						
R60A	Leonardtown, M	33.32	9	P	P	04 47 31.0	-0.2
	baz=191						
OK029	Liberty Lake	33.34	338	P	P	04 47 30.6	-0.9
OK029				IAmb	IAmb	04 47 30.8	
	comp=Z,30nm,1.2s						
FVM	French Village	33.36	349	P	P	04 47 30.7	-0.9
FVM				pmax	pmax		
	comp=Z,91nm,1.2s						
FVM	French Village	33.36	349	P	P	04 47 30.7	-0.9
QUOK	Quay	33.40	339	P	P	04 47 31.0	-1.0
QUOK				IAmb	IAmb	04 47 32.1	
	comp=Z,41nm,1.2s						
Q53A	Leroy	33.47	2	P	P	04 47 32.9	+0.4
	baz=182,SNR=33						
Q52A	Bidwell	33.56	0	P	P	04 47 32.9	-0.4
R61A	Willards	33.58	10	P	P	04 47 34.4	+0.9
	baz=193						
CCM	Cathedral Cave	33.59	348	P	P	04 47 32.5	-1.2
	baz=164						
CCM	Cathedral Cave	33.59	348	P	P	04 47 32.7	-0.9
CCM				pmax	pmax		
	comp=Z,89nm,1.1s						
CCM	Cathedral Cave	33.59	348	P	P	04 47 32.7	-0.9
Q54A	Coxs Mills	33.62	2	P	P	04 47 33.4	-0.4
Q51A	Peebles	33.63	359	P	P	04 47 33.4	-0.5
GDL2	Guadalupe Moun	33.67	325	P	P	04 47 33.4	-1.1
OLIL	Olney	33.70	352	P	P	04 47 34.1	-0.5
S39A	Bolivar	33.74	345	P	P	04 47 34.1	-0.9
S39A				IAmb	IAmb	04 47 35.2	
	comp=Z,64nm,1.1s						
Q56A	Snyder Ridge,	33.78	5	P	P	04 47 36.5	+1.2
	baz=186,SNR=15						
Q56A	Snyder Ridge,	33.78	5	P	P	04 47 34.9	-0.4
Q58A	Fox Den Farm,	33.83	7	P	P	04 47 36.5	+0.8
	baz=189,SNR=8.8						
Q57A	Strasburg	33.84	6	P	P	04 47 36.5	+0.6
	baz=188,SNR=13						
MNTX	Cornudas Mount	33.89	324	P	P	04 47 36.8	+0.5
	baz=136,SNR=26						
MNTX	Cornudas Mount	33.89	324	P	P	04 47 35.2	-1.1
MNTX				IAMs_20	IAMs_20	05 01 25.9	
	comp=Z,3µm,21.0s						
Q59A	Harwood	33.89	8	P	P	04 47 37.0	+0.8
	baz=191						
SLM	Saint Louis	33.95	349	P	P	04 47 36.0	-0.7
SLM				pmax	pmax		
	comp=Z,115nm,1.0s						
SLM	Saint Louis	33.95	349	P	P	04 47 36.0	-0.7
BLO	Bloomington	33.96	355	P	P	04 47 36.2	-0.6
BLO				pmax	pmax		
	comp=Z,88nm,1.1s						
BLO	Bloomington	33.96	355	P	P	04 47 36.2	-0.6
T35A	Sooner Cattle	34.00	340	P	P	04 47 36.5	-0.7
T35A				IAmb	IAmb	04 47 42.0	
	comp=Z,39nm,1.1s						
Q44A	Meyer Farm, Va	34.00	351	P	P	04 47 36.2	-1.0
P51A	Williamsport	34.08	359	P	P	04 47 37.4	-0.4
P51A				IAmb	IAmb	04 47 40.5	
	comp=Z,50nm,0.9s						
P53A	Whipple	34.10	2	P	P	04 47 37.6	-0.4
P53A				IAMs_20	IAMs_20	05 02 31.3	
	comp=Z,2µm,19.0s						
Q61A	Milford	34.12	10	P	P	04 47 38.3	+0.1
	baz=193						
Q60A	Greensboro	34.15	9	P	P	04 47 38.2	-0.2
P48A	Milroy	34.15	356	P	P	04 47 38.0	-0.5
CROK	Carrier	34.16	338	IAMs_20	IAMs_20	05 04 08.8	
	comp=Z,4µm,22.0s						
MSTX	Muleshoe	34.17	329	P	P	04 47 38.7	-0.2
	baz=142,SNR=7.0						
MSTX	Muleshoe	34.17	329	P	P	04 47 37.7	-1.2
MSTX				IAMs_20	IAMs_20	05 02 52.6	
	comp=Z,3µm,21.0s						
P49A	Miami Univ. Ec	34.19	357	P	P	04 47 37.6	-1.1
	baz=176,SNR=15						
P49A	Miami Univ. Ec	34.19	357	P	P	04 47 38.2	-0.5
P49A				IAMs_20	IAMs_20	05 02 58.5	
	comp=Z,2µm,18.0s						
P52A	Corning	34.23	1	P	P	04 47 39.0	-0.2
	baz=181,SNR=9.6						
P52A	Corning	34.23	1	P	P	04 47 38.6	-0.5
P52A				IAMs_20	IAMs_20	05 01 57.7	
	comp=Z,2µm,20.0s						
P56A	Dayton Farm, R	34.27	5	P	P	04 47 40.6	+1.1
	baz=187,SNR=22						
P57A	Homestead Farm	34.33	6	P	P	04 47 40.6	+0.5
	baz=188,SNR=20						
P57A	Homestead Farm	34.33	6	P	P	04 47 39.5	-0.5
P57A				IAmb	IAmb	04 47 45.0	
	comp=Z,65nm,1.1s						
MCWV	Mont Chateau	34.34	4	P	P	04 47 40.7	+0.6
	baz=185,SNR=7.4						
MCWV	Mont Chateau	34.34	4	P	P	04 47 39.6	-0.5
AMTX	Amarillo	34.37	332	P	P	04 47 40.5	0.0
	baz=145						
AMTX	Amarillo	34.37	332	P	P	04 47 39.8	-0.7
AMTX				IAMs_20	IAMs_20	05 02 45.9	
	comp=Z,4µm,22.0s						
SDMD	Soldier's Deli	34.40	8	P	P	04 47 40.2	-0.5
SDMD				IAmb	IAmb	04 47 44.8	
	comp=Z,26nm,0.9s						
P58A	Pank, Wackersv	34.42	7	P	P	04 47 41.7	+0.9
	baz=189,SNR=15						
U32A	Winter Ranch,	34.45	336	P	P	04 47 40.5	-0.7
U32A				IAMs_20	IAMs_20	05 02 34.4	
	comp=Z,4µm,22.0s						
AC02	Maricunga	34.46	158	P	P	04 47 40.6	-1.3
AC02				IAmb	IAmb	04 47 45.6	
	comp=Z,50nm,0.9s						
P46A	Rosedale	34.47	354	P	P	04 47 40.7	-0.5
P46A				IAMs_20	IAMs_20	05 03 37.8	
	comp=Z,3µm,18.0s						
KAN14	Manchester OK	34.55	338	P	P	04 47 41.3	-0.7
EPT	El Paso	34.61	323	IAMs_20	IAMs_20	05 01 50.1	
	comp=Z,5µm,20.0s						
PRPB	Parauapebas	34.63	109	*e*P	P	04 47 42.8	-0.2
KAN01	Argonia South	34.65	338	P	P	04 47 42.2	-0.7
KAN01				IAmb	IAmb	04 47 43.3	
	comp=Z,32nm,1.0s						
P59A	Jarrettsville	34.66	8	P	P	04 47 43.8	+0.9
	baz=191,SNR=14						
O52A	Adamsville	34.72	1	P	P	04 47 42.8	-0.5
O52A				IAMs_20	IAMs_20	05 02 53.6	
	comp=Z,3µm,20.0s						
GO03	Copiap	34.77	161	P	P	04 47 43.3	-0.7
P43A	Skaggs, Pawnee	34.80	351	P	P	04 47 43.5	-0.6
O49A	Covington	34.82	358	P	P	04 47 43.7	-0.5
O49A				IAmb	IAmb	04 47 46.4	
	comp=Z,71nm,1.1s						
O49A				IAMs_20	IAMs_20	05 02 47.3	
	comp=Z,3µm,19.0s						
ACSO	Alum Creek Sta	34.83	359	P	P	04 47 43.9	-0.5
	baz=179,SNR=27						
ACSO	Alum Creek Sta	34.83	359	P	P	04 47 43.9	-0.5
O54A	Avella	34.84	3	P	P	04 47 43.9	-0.5
O53A	New Philadelph	34.87	2	P	P	04 47 44.3	-0.4
	baz=182,SNR=12						
O53A	New Philadelph	34.87	2	P	P	04 47 44.2	-0.4
P60A	Greenville	34.98	9	P	P	04 47 45.4	-0.1
	baz=192,SNR=12						
P60A	Greenville	34.98	9	P	P	04 47 45.1	-0.5
P60A				IAmb	IAmb	04 47 49.8	
	comp=Z,53nm,1.0s						
P60A				IAMs_20	IAMs_20	05 01 48.4	
	comp=Z,2µm,19.0s						
P61A	Hammonton	34.99	11	P	P	04 47 44.9	-0.8
	baz=194						
MVL	Millersville	35.05	8	P	P	04 47 45.7	-0.5
MVL				IAmb	IAmb	04 47 50.9	
	comp=Z,77nm,1.1s						
O56A	Blue Knob Stat	35.05	5	P	P	04 47 47.0	+0.7
	baz=187,SNR=19						
O56A	Blue Knob Stat	35.05	5	P	P	04 47 45.6	-0.7
O56A				IAMs_20	IAMs_20	05 01 48.4	
	comp=Z,3µm,19.0s						
O57A	Amberson	35.09	7	P	P	04 47 47.5	+0.9
	baz=189,SNR=15						
O58A	Lewisberry	35.09	8	P	P	04 47 47.5	+0.8
	baz=190,SNR=15						
WUPA	West Chester U	35.10	9	P	P	04 47 46.2	-0.4
PSUB	Penn St. - Bra	35.12	10	P	P	04 47 46.4	-0.5
O44A	Mansfield	35.15	352	P	P	04 47 46.4	-0.7
P40A	Paris	35.18	347	P	P	04 47 46.3	-1.1
P40A				IAmb	IAmb	04 47 50.0	
	comp=Z,80nm,1.1s						
SFIN	Lafayette	35.21	354	P	P	04 47 46.1	-1.5
	baz=172,SNR=9.7						
SFIN	Lafayette	35.21	354	P	P	04 47 46.6	-1.0
PAGS	Pennsylvania G	35.22	8	P	P	04 47 47.2	-0.5
TMAB	Tom-Au,PA,Br	35.28	102	*e*P	P	04 47 50.0	+1.4
O59A	Robesonia	35.38	8	P	P	04 47 50.1	+1.0
	baz=191,SNR=22						
N53A	Lisbon	35.44	2	P	P	04 47 49.1	-0.5
N53A				IAmb	IAmb	04 47 52.3	
	comp=Z,36nm,1.1s						
O61A	Allentown	35.44	11	P	P	04 47 48.8	-0.8
	baz=194						
SSPA	Standing Stone	35.48	6	P	P	04 47 50.0	0.0
	baz=188						
SSPA	Standing Stone	35.48	6	P	P	04 47 49.4	-0.5
SSPA				IAmb	IAmb	04 47 54.8	
	comp=Z,77nm,1.1s						
O60A	Telford	35.51	9	P	P	04 47 51.1	+0.9
	baz=192,SNR=13						
N51A	Ashland	35.51	0	P	P	04 47 49.7	-0.5
SNDB	Serra Nova Dou	35.52	119	*e*P	P	04 47 51.4	+0.7
N49A	Columbus Grove	35.55	358	P	P	04 47 50.0	-0.5
N49A				IAmb	IAmb	04 47 52.7	
	comp=Z,59nm,0.9s						
N49A				IAMs_20	IAMs_20	05 03 58.5	
	comp=Z,3µm,20.0s						
PP1B	Ponte de Pedra	35.55	130	*e*P	P	04 47 51.3	+0.4
N47A	Urbana	35.58	356	P	P	04 47 49.7	-1.1
N47A				IAmb	IAmb	04 47 53.0	
	comp=Z,83nm,1.1s						
N47A				IAMs_20	IAMs_20	05 03 43.7	
	comp=Z,2µm,19.0s						
P38A	Dawn	35.62	345	P	P	04 47 50.4	-0.8
P38A				IAmb	IAmb	04 47 59.3	
	comp=Z,33nm,1.1s						
N54A	Moraine State	35.63	3	P	P	04 47 51.1	-0.2
	baz=184,SNR=8.3						
N54A	Moraine State	35.63	3	P	P	04 47 50.7	-0.6
N54A				IAmb	IAmb	04 47 55.0	
	comp=Z,70nm,1.1s						
N54A				IAMs_20	IAMs_20	05 03 13.8	
	comp=Z,2µm,18.0s						
N57A	Milroy	35.64	7	P	P	04 47 51.7	+0.4
	baz=189,SNR=8.3						
HDIL	Hopedale	35.66	351	P	P	04 47 50.3	-1.2
	baz=169,SNR=19						
HDIL	Hopedale	35.66	351	P	P	04 47 50.7	-0.8
N56A	West Decatur	35.72	6	P	P	04 47 52.3	+0.2
	baz=187,SNR=13						
SRIG	Santa Rosalia	35.76	311	P	P	04 47 51.9	-0.6
SRIG				IAmb	IAmb	04 47 54.5	
	comp=Z,34nm,1.0s						
SRIG				IAMs_20	IAMs_20	04 59 20.9	
	comp=Z,3µm,19.0s						
LUPA	Lehigh Univers	35.79	9	P	P	04 47 52.1	-0.5
LUPA				IAmb	IAmb	04 47 58.1	
	comp=Z,86nm,1.2s						
N58A	Sunbury	35.83	8	P	P	04 47 51.9	-1.0
	baz=190,SNR=16						
N58A	Sunbury	35.83	8	P	P	04 47 52.4	-0.5
AC05	El Transito	35.90	161	P	P	04 47 53.1	-0.8
AC05				IAmb	IAmb	04 47 56.9	
	comp=Z,50nm,1.0s						
121A	Cookes Peak, D	35.92	322	P	P	04 47 56.4	+2.3
	baz=134,SNR=25						
121A	Cookes Peak, D	35.92	322	P	P	04 47 53.2	-0.8
121A				IAmb	IAmb	04 48 08.0	
	comp=Z,52nm,1.1s						
LCO	Las Campanas	35.93	162	P	P	04 47 53.3	-1.0
LCO				pmax	pmax		
	comp=Z,34nm,1.1s						
LCO	Las Campanas	35.93	162	P	P	04 47 53.3	-1.0
LCO				IAmb	IAmb	04 47 57.0	
	comp=Z,34nm,1.1s						
M50A	Fremont	36.00	359	P	P	04 47 53.9	-0.5
M50A				IAmb	IAmb	04 47 56.7	
	comp=Z,46nm,0.9s						
M50A				IAMs_20	IAMs_20	05 03 49.5	
	comp=Z,2µm,18.0s						
BRNJ	Basking Ridge	36.01	10	P	P	04 47 54.0	-0.4
BRNJ				IAmb	IAmb	04 48 08.4	
	comp=Z,57nm,1.0s						
BRNJ				IAMs_20	IAMs_20	05 01 17.7	
	comp=Z,3µm,21.0s						
KSU1	Kansas State U	36.01	341	P	P	04 47 53.6	-0.9
	baz=156,SNR=7.7						
KSU1	Kansas State U	36.01	341	P	P	04 47 53.9	-0.6
KSU1				IAmb	IAmb	04 47 57.8	
	comp=Z,39nm,1.1s						
N59A	State Game Lan	36.03	9	P	P	04 47 54.2	-0.6
	baz=192,SNR=12						
N59A	State Game Lan	36.03	9	P	P	04 47 54.2	-0.6
N59A				IAmb	IAmb	04 47 59.3	
	comp=Z,64nm,1.1s						
M53A	WI Miller and	36.08	2	P	P	04 47 54.7	-0.3

	baz=183						
M53A	WI Miller and	36.08	2	P	P	04 47 54.5	-0.6
M53A				IAmb	IAmb	04 47 57.8	
	comp=Z,47nm,1.0s						
N41A	Harden Midland	36.08	349	P	P	04 47 53.9	-1.2
319A	Douglas	36.09	319	P	P	04 47 54.7	-0.8
319A				IAmb	IAmb	04 48 06.7	
	comp=Z,33nm,1.1s						
N60A	Cedar Hill Far	36.10	10	P	P	04 47 54.9	-0.3
	baz=193,SNR=5.4						
N61A	South Mountain	36.12	11	P	P	04 47 55.8	+0.4
	baz=194						
R32A	Long Quarter,	36.13	338	P	P	04 47 54.9	-0.7
R32A				IAmb	IAmb	04 47 60.0	
	comp=Z,80nm,1.1s						
M52A	Chesterland	36.15	2	P	P	04 47 55.2	-0.5
M52A				IAmb	IAmb	04 47 58.2	
	comp=Z,43nm,0.9s						
M54A	Oil Creek Stat	36.20	4	P	P	04 47 56.1	0.0
	baz=185						
M54A	Oil Creek Stat	36.20	4	P	P	04 47 55.5	-0.6
M54A				IAmb	IAmb	04 48 00.5	
	comp=Z,39nm,1.1s						
M54A				IAMs_20	IAMs_20	05 03 46.7	
	comp=Z,3µm,19.0s						
CPNY	Central Park	36.23	11	P	P	04 47 56.0	-0.3
M55A	Ridgway	36.23	5	P	P	04 47 56.0	-0.4
M55A				IAmb	IAmb	04 48 00.9	
	comp=Z,80nm,1.1s						
M55A				IAMs_20	IAMs_20	05 02 26.5	
	comp=Z,3µm,18.0s						
M57A	Sunshine Farm,	36.26	7	P	P	04 47 57.4	+0.8
	baz=189,SNR=25						
M57A	Sunshine Farm,	36.26	7	P	P	04 47 56.2	-0.5
M57A				IAMs_20	IAMs_20	05 02 28.5	
	comp=Z,2µm,19.0s						
ALLY	Alegheny Colle	36.31	3	P	P	04 47 56.6	-0.4
ALLY				IAmb	IAmb	04 48 00.4	
	comp=Z,44nm,1.0s						
M44A	Midewin, Midew	36.31	353	P	P	04 47 56.2	-0.9
M44A				IAmb	IAmb	04 47 57.0	
	comp=Z,67nm,1.1s						
M58A	Price’s Panora	36.38	8	P	P	04 47 58.6	+0.9
	baz=190,SNR=11						
BNM	Barren Site	36.38	325	P	P	04 47 57.2	-0.8
ODNJ	Ogdensburg	36.39	10	P	P	04 47 57.3	-0.4
PAL	Palisades	36.44	11	P	P	04 47 57.5	-0.6
	baz=195						
PAL	Palisades	36.44	11	P	P	04 47 57.6	-0.6
PAL				pmax	pmax		
	comp=Z,41nm,1.2s						
PAL				MLR	MLR		
	comp=Z,2µm,20.0s						
PAL	Palisades	36.44	11	P	P	04 47 57.6	-0.6
PAL				IAmb	IAmb	04 48 11.0	
	comp=Z,41nm,1.1s						
N62A	Caumsett State	36.46	12	P	P	04 47 57.9	-0.4
	baz=195						
Y22D	IRIS PASSCAL I	36.50	325	P	P	04 48 01.2	+2.2
	baz=137						
Y22D	IRIS PASSCAL I	36.50	325	P	P	04 47 58.1	-0.9
Y22D				IAMs_20	IAMs_20	05 03 40.0	
	comp=Z,3µm,18.0s						
TRNY	Table Rock, Ra	36.52	11	P	P	04 47 58.3	-0.6
TRNY				IAmb	IAmb	04 48 07.2	
	comp=Z,32nm,1.1s						
TRNY				IAMs_20	IAMs_20	05 01 31.2	
	comp=Z,3µm,21.0s						
L48A	N Adams	36.58	358	P	P	04 47 58.6	-0.7
L48A				IAmb	IAmb	04 48 01.1	
	comp=Z,56nm,1.0s						
L48A				IAMs_20	IAMs_20	05 03 58.7	
	comp=Z,3µm,18.0s						
LENM	Lemitar	36.59	325	P	P	04 47 59.0	-0.8
L53A	Girard	36.61	3	P	P	04 47 59.3	-0.3
	baz=184,SNR=9.0						
M60A	Port Jervis	36.62	10	P	P	04 48 00.3	+0.6
	baz=193,SNR=14						
N38A	Joes South For	36.66	346	P	P	04 47 59.2	-0.8
KSPA	Keystone Colle	36.66	9	P	P	04 47 59.5	-0.5
HQIL	Hanson Quary C	36.70	353	P	P	04 47 59.4	-0.9
M59A	Waymart	36.70	9	P	P	04 48 00.3	-0.1
	baz=192,SNR=15						
WSPT	Westport, CT	36.72	12	P	P	04 47 59.9	-0.6
WSPT				IAmb	IAmb	04 48 04.6	
	comp=Z,70nm,1.1s						
L46A	Eue Claire	36.76	355	P	P	04 47 59.9	-0.9
L46A				IAmb	IAmb	04 48 00.6	
	comp=Z,47nm,1.0s						
AQDB	Aquidauana	36.76	135	*e*P	P	04 48 01.0	-0.2
M61A	Granite Spring	36.76	11	P	P	04 48 01.3	+0.4
	baz=195						
ERPA	Erie	36.78	3	P	P	04 48 01.5	+0.4
	baz=184						
ERPA	Erie	36.78	3	P	P	04 48 00.5	-0.6
ERPA				IAmb	IAmb	04 48 03.7	
	comp=Z,48nm,1.1s						
ERPA				IAMs_20	IAMs_20	05 04 07.3	
	comp=Z,3µm,18.0s						
CBKS	Cedar Bluff	36.85	337	P	P	04 48 01.8	0.0
	baz=151,SNR=17						
CBKS	Cedar Bluff	36.85	337	P	P	04 48 01.1	-0.7
CBKS				pmax	pmax		
	comp=Z,50nm,1.1s						
CBKS				MLR	MLR		
	comp=Z,2µm,22.0s						
CBKS	Cedar Bluff	36.85	337	P	P	04 48 01.1	-0.7
CBKS				IAmb	IAmb	04 48 02.6	
	comp=Z,50nm,1.1s						
ANMO	Albuquerque	36.87	326	P	P	04 48 02.0	-0.2
	baz=138						
ANMO	Albuquerque	36.87	326	P	P	04 48 01.5	-0.7
ANMO	Albuquerque	36.87	326	IAMs_20	IAMs_20	05 04 11.0	
	comp=Z,4µm,19.0s						
AAM	Ann Arbor	36.91	359	P	P	04 48 02.2	0.0
	baz=178						
AAM	Ann Arbor	36.91	359	P	P	04 48 01.5	-0.6
AAM				pmax	pmax		
	comp=Z,46nm,1.2s						
AAM				MLR	MLR		
	comp=Z,2µm,21.0s						
AAM	Ann Arbor	36.91	359	P	P	04 48 01.5	-0.6
AAM				IAmb	IAmb	04 48 06.0	
	comp=Z,46nm,1.1s						
AAM				IAMs_20	IAMs_20	05 03 27.5	
	comp=Z,3µm,21.0s						
ARAG	Araguaiana, MT	36.91	125	*e*P	P	04 48 01.5	-1.0
YLE	Yale	36.94	12	P	P	04 48 01.9	-0.5
YLE				IAmb	IAmb	04 48 06.4	
	comp=Z,77nm,1.1s						
YLE				IAMs_20	IAMs_20	05 02 06.3	
	comp=Z,2µm,21.0s						
L57A	Andrews Acres	36.95	7	P	P	04 48 03.1	+0.5
	baz=190,SNR=24						
GO04	Tololo Observa	36.99	163	P	P	04 48 02.5	-0.8
GO04				IAmb	IAmb	04 48 08.1	
	comp=Z,90nm,1.1s						
L56A	Greenwood	37.00	6	P	P	04 48 03.4	+0.4
	baz=188,SNR=7.7						
L56A	Greenwood	37.00	6	P	P	04 48 02.3	-0.7
L56A				IAmb	IAmb	04 48 06.8	
	comp=Z,71nm,1.1s						
L56A				IAMs_20	IAMs_20	05 02 15.1	
	comp=Z,3µm,19.0s						
CO01	Juntas del Tor	37.02	162	P	P	04 48 02.5	-1.0
M62A	Hamden	37.07	12	P	P	04 48 02.9	-0.6
	baz=196						
L44A	Lake County Fo	37.08	353	P	P	04 48 02.8	-0.8
	baz=171						
L58A	Harry Jones Me	37.13	8	P	P	04 48 04.8	+0.8
	baz=191,SNR=17						
L42A	Oliver, Polo	37.14	351	P	P	04 48 03.0	-1.1
WVNY	West Valley, N	37.17	5	IAmb	IAmb	04 48 19.0	
	comp=Z,85nm,1.1s						
WVNY				IAMs_20	IAMs_20	05 03 04.5	
	comp=Z,3µm,18.0s						
M63A	Gales Ferry	37.21	13	P	P	04 48 03.9	-0.8
	baz=198						
M63A	Gales Ferry	37.21	13	IAmb	IAmb	04 48 09.6	
	comp=Z,66nm,1.1s						
M63A				IAMs_20	IAMs_20	05 01 01.7	
	comp=Z,3µm,22.0s						
BINY	Binghamton	37.26	8	P	P	04 48 05.9	+0.8
	baz=191,SNR=16						
L60A	Shokan	37.34	10	P	P	04 48 06.9	+1.1
	baz=194,SNR=10.0						
N35A	Tabor	37.34	344	IAmb	IAmb	04 48 16.6	
	comp=Z,35nm,1.0s						
L59A	Walton	37.39	9	P	P	04 48 07.1	+0.7
	baz=192,SNR=9.1						
L59A	Walton	37.39	9	IAmb	IAmb	04 48 10.2	
	comp=Z,34nm,0.9s						
T25A	Trinidad	37.49	331	P	P	04 48 08.9	+1.5
	baz=143,SNR=30						
UCCT	U. Connecticut	37.55	13	IAMs_20	IAMs_20	05 01 13.5	
	comp=Z,3µm,21.0s						
K56A	Middlesex	37.58	6	P	P	04 48 08.9	+1.0
	baz=189,SNR=8.0						
SMTB	Santa Maria do	37.61	112	*e*P	P	04 48 08.5	0.0
CO03	El Pedregal	37.65	163	IAmb	IAmb	04 48 12.0	
	comp=Z,53nm,1.0s						
L61A	Hillsdale 1, H	37.66	11	P	P	04 48 09.6	+1.1
	baz=195,SNR=18						
TUC	Tucson	37.67	319	P	P	04 48 10.3	+1.4
	baz=130						
TUC	Tucson	37.67	319	P	P	04 48 07.7	-1.2
TUC				pmax	pmax		
	comp=Z,13nm,1.1s						
TUC				MLR	MLR		
	comp=Z,10µm,20.0s						
TUC	Tucson	37.67	319	P	P	04 48 07.7	-1.2
L62A	Suffield	37.68	12	IAMs_20	IAMs_20	05 02 30.0	
	comp=Z,2µm,21.0s						
M65A	Busby, Falmout	37.70	15	P	P	04 48 09.3	+0.5
	baz=200						
SCIA	State Center	37.71	347	P	P	04 48 07.7	-1.3
	baz=163,SNR=5.8						
SCIA	State Center	37.71	347	IAmb	IAmb	04 48 11.6	
	comp=Z,96nm,1.1s						
K57A	Scipio Center	37.71	7	P	P	04 48 09.2	+0.2
	baz=190,SNR=9.3						
L63A	North Scituate	37.75	13	P	P	04 48 08.8	-0.5
	baz=198						
L63A	North Scituate	37.75	13	IAMs_20	IAMs_20	05 01 16.9	
	comp=Z,2µm,22.0s						
BRYW	Bryant College	37.82	13	IAmb	IAmb	04 48 14.4	
	comp=Z,60nm,1.1s						
K58A	Earlville	37.86	8	P	P	04 48 10.6	+0.4
	baz=191,SNR=12						
K58A	Earlville	37.86	8	IAmb	IAmb	04 48 14.2	
	comp=Z,72nm,1.1s						
J47A	Sunmer	37.88	357	IAmb	IAmb	04 48 12.7	
	comp=Z,59nm,1.1s						
J47A				IAMs_20	IAMs_20	05 05 21.4	
	comp=Z,3µm,18.0s						
MEDO	Medina	37.94	5	IAmb	IAmb	04 48 14.2	
	comp=Z,59nm,1.0s						
QUA2	Belchertown	37.98	12	IAMs_20	IAMs_20	05 02 49.0	
	comp=Z,2µm,20.0s						
K59A	Cooperstown	37.99	9	P	P	04 48 11.9	+0.5
	baz=193,SNR=12						
K60A	Five Rivers En	38.01	10	P	P	04 48 11.3	-0.1
	baz=194,SNR=8.1						
J54A	Appleton	38.03	5	IAMs_20	IAMs_20	05 03 31.2	
	comp=Z,3µm,19.0s						
L61B	Northampton	38.08	12	P	P	04 48 12.6	+0.5
	baz=196						
J55A	Hilton	38.09	6	IAMs_20	IAMs_20	05 02 39.9	
	comp=Z,2µm,20.0s						
JFWS	Jewell Farm	38.12	351	P	P	04 48 10.9	-1.5
	baz=168,SNR=11						
JFWS	Jewell Farm	38.12	351	IAmb	IAmb	04 48 14.0	
	comp=Z,64nm,0.9s						
TRY	Troy	38.16	11	IAmb	IAmb	04 48 17.5	
	comp=Z,101nm,1.2s						
TRY				IAMs_20	IAMs_20	05 03 09.6	
	comp=Z,2µm,20.0s						
K61A	Williamstown	38.17	11	P	P	04 48 13.5	+0.6
	baz=195						
KSCO	Kaye Shedlock’	38.20	334	P	P	04 48 14.0	+0.7
	baz=147,SNR=6.4						
KSCO	Kaye Shedlock’	38.20	334	IAmb	IAmb	04 48 18.0	
	comp=Z,59nm,1.1s						
KSCO				IAMs_20	IAMs_20	05 05 28.4	
	comp=Z,3µm,21.0s						
J56A	Wolcott	38.21	7	P	P	04 48 13.6	+0.4
	baz=189,SNR=6.4						
J56A	Wolcott	38.21	7	IAMs_20	IAMs_20	05 03 01.0	
	comp=Z,2µm,19.0s						
PEXB	Peixe	38.21	117	*e*P	P	04 48 13.4	-0.2
K38A	Parkersburg	38.32	348	IAmb	IAmb	04 48 15.7	
	comp=Z,75nm,0.9s						
HRV	Adam Dziewonsk	38.37	13	P	P	04 48 15.1	+0.6
	baz=198						
HRV	Adam Dziewonsk	38.37	13	P	P	04 48 13.9	-0.6
HRV				pmax	pmax		
	comp=Z,42nm,1.1s						
HRV	Adam Dziewonsk	38.37	13	P	P	04 48 13.9	-0.6
HRV				IAmb	IAmb	04 48 19.7	
	comp=Z,42nm,1.1s						
K62A	Royalston	38.38	12	P	P	04 48 14.3	-0.2
	baz=197						
K62A	Royalston	38.38	12	IAmb	IAmb	04 48 18.9	
	comp=Z,44nm,1.1s						
K62A				IAMs_20	IAMs_20	05 02 50.5	
	comp=Z,2µm,19.0s						
I51A	Listowel	38.42	2	P	P	04 48 14.1	-0.9
	baz=183						
J57A	Williamstown	38.45	8	P	P	04 48 14.8	-0.4
	baz=191						
J57A	Williamstown	38.45	8	IAmb	IAmb	04 48 20.4	
	comp=Z,55nm,1.1s						
SDCO	Great Sand Dun	38.50	330	P	P	04 48 17.7	+1.6
	baz=142,SNR=62						
SDCO	Great Sand Dun	38.50	330	IAmb	IAmb	04 48 27.8	
	comp=Z,40nm,1.0s						
K63A	Dunstable	38.55	13	P	P	04 48 16.9	+0.8
	baz=198						
BGNE	Belgrade	38.60	341	P	P	04 48 15.7	-0.8
	baz=155						
BGNE	Belgrade	38.60	341	IAmb	IAmb	04 48 19.2	
	comp=Z,68nm,1.1s						
H03N2	Juan Fernandez	38.63	175	T	T	05 29 10.7	
	baz=354,slow=76,SNR=33						
H03N1	Juan Fernandez	38.64	175	T	T	05 29 11.9	
	baz=354,slow=76,SNR=34						
H03N3	Juan Fernandez	38.65	175	T	T	05 29 10.4	
	baz=354,slow=76,SNR=38						
J60A	Lant Hill Farm	38.70	11	P	P	04 48 18.6	+1.3
	baz=195,SNR=17						
J59A	Piesco	38.72	9	P	P	04 48 17.9	+0.4
	baz=193,SNR=12						
J59A	Piesco	38.72	9	IAmb	IAmb	04 48 21.4	
	comp=Z,78nm,1.1s						
J59A				IAMs_20	IAMs_20	05 03 00.6	
	comp=Z,2µm,20.0s						
ACCN	Adirondack Com	38.79	10	IAmb	IAmb	04 48 22.4	
	comp=Z,70nm,1.1s						
214A	Organ Pipe Nat	38.80	317	P	P	04 48 19.8	+1.4
	baz=127,SNR=30						
214A	Organ Pipe Nat	38.80	317	IAmb	IAmb	04 48 20.7	
	comp=Z,47nm,1.1s						
I58A	Old Forge	38.87	9	P	P	04 48 18.8	+0.1
	baz=192						
W18A	Petrified Fore	38.88	323	P	P	04 48 21.1	+2.0
	baz=134,SNR=35						
W18A	Petrified Fore	38.88	323	IAmb	IAmb	04 48 40.9	
	comp=Z,44nm,0.9s						
I42A	Draeger Farm,	38.88	353	IAmb	IAmb	04 48 21.0	
	comp=Z,111nm,1.1s						
I42A				IAMs_20	IAMs_20	05 06 08.7	
	comp=Z,2µm,18.0s						
J61A	Chester	38.96	12	P	P	04 48 19.7	+0.2
	baz=196,SNR=14						
J62A	Henniker	39.00	13	P	P	04 48 21.2	+1.4
	baz=197						
PIX	Pinacate	39.01	316	IAMs_20	IAMs_20	05 03 35.3	
	comp=Z,3µm,19.0s						
I57A	Carthage	39.01	8	P	P	04 48 20.1	+0.2
	baz=191,SNR=15						
I40A	Norwalk	39.13	351	IAmb	IAmb	04 48 22.9	
	comp=Z,73nm,1.1s						
S22A	4UR Ranch, Cre	39.17	329	P	P	04 48 23.2	+1.5
	baz=140,SNR=31						
J63A	Strafford	39.22	13	P	P	04 48 22.4	+0.8
	baz=198						
ROSB	Rosrio	39.27	101	*e*P	P	04 48 23.0	+0.6
FFD	Franklin Falls	39.27	13	IAMs_20	IAMs_20	05 02 15.1	
	comp=Z,2µm,21.0s						
Q24A	Divide	39.30	332	P	P	04 48 23.9	+1.2
	baz=143,SNR=11						
I60A	Shoreham	39.30	11	P	P	04 48 23.2	+0.9
	baz=195,SNR=24						
H53A	Bobcaygeon	39.32	5	P	P	04 48 22.0	-0.5
	baz=186						
H43A	Windswept, Lux	39.33	354	IAMs_20	IAMs_20	05 06 30.6	
	comp=Z,2µm,18.0s						
DELO	Deloro Mine	39.35	6	IAmb	IAmb	04 48 26.4	
	comp=Z,62nm,1.2s						
DELO				IAMs_20	IAMs_20	05 03 17.3	
	comp=Z,3µm,21.0s						
HNH	Hanover	39.36	12	IAmb	IAmb	04 48 27.5	
	comp=Z,62nm,1.0s						
HNH				IAMs_20	IAMs_20	05 03 20.5	
	comp=Z,2µm,20.0s						
GLMI	Grayling	39.46	358	P	P	04 48 22.3	-1.3
	baz=177,SNR=5.7						
GLMI	Grayling	39.46	358	IAmb	IAmb	04 48 25.4	
	comp=Z,103nm,0.9s						
GLMI				IAMs_20	IAMs_20	05 05 40.2	
	comp=Z,3µm,19.0s						
SADO	Sadowa	39.48	4	P	P	04 48 23.3	-0.5
	comp=Z,15nm,0.8s,baz=209,slow=6.1,SNR=9.0						
SADO				LR	LR	05 04 28.1	
	comp=Z,2µm,18.8s,baz=194,slow=36						
SADO	Sadowa	39.48	4	IAMs_20	IAMs_20	05 04 26.6	
	comp=Z,3µm,18.0s						
VA03	San Esteban	39.50	164	IAmb	IAmb	04 48 26.9	
	comp=Z,68nm,0.9s						
H57A	Richville	39.56	8	P	P	04 48 24.6	+0.1
	baz=191,SNR=19						
I61A	Oroboro, Fairl	39.60	12	P	P	04 48 25.0	+0.2
	baz=196						
MVCO	Mesa Verde	39.66	327	P	P	04 48 27.1	+1.4
	baz=137,SNR=47						
MVCO	Mesa Verde	39.66	327	IAmb	IAmb	04 48 36.2	
	comp=Z,70nm,1.1s						
MVCO				IAMs_20	IAMs_20	05 05 59.7	
	comp=Z,3µm,18.0s						
H58A	Gabriels	39.70	9	P	P	04 48 26.5	+0.8
	baz=193,SNR=11						
G45A	Suttons Bay	39.72	357	IAMs_20	IAMs_20	05 06 28.1	
	comp=Z,3µm,18.0s						
I62A	Tamworth	39.73	13	P	P	04 48 25.2	-0.6
	baz=198						
I62A	Tamworth	39.73	13	IAMs_20	IAMs_20	05 03 59.2	
	comp=Z,2µm,19.0s						
CPUP	Villa Florida	39.81	143	P	P	04 48 26.0	-0.9
	comp=Z,12nm,0.9s,baz=314,slow=9.6,SNR=8.4						
CPUP				LR	LR	05 05 50.7	
	comp=Z,4µm,19.9s,baz=322,slow=38						
CPUP	Villa Florida	39.81	143	P	P	04 48 25.9	-0.9
CPUP				pmax	pmax		
	comp=Z,21nm,1.1s						
CPUP	Villa Florida	39.81	143	P	P	04 48 25.9	-0.9
CPUP	Villa Florida	39.81	143	*e*P	P	04 48 26.1	-0.7
PEL	Peldehue	39.82	164	P	P	04 48 28.4	+1.6
PEL	Peldehue	39.82	164	IAmb	IAmb	04 48 29.8	
	comp=Z,37nm,0.9s						
LONY	Lake Ozonia	39.84	9	P	P	04 48 26.8	0.0
	baz=192,SNR=12						
LONY	Lake Ozonia	39.84	9	IAMs_20	IAMs_20	05 03 34.1	
	comp=Z,2µm,18.0s						
VT1	Waterbury	39.87	11	IAMs_20	IAMs_20	05 04 09.8	
	comp=Z,3µm,21.0s						
K31A	O'Neill	39.89	341	IAmb	IAmb	04 48 36.2	
	comp=Z,86nm,0.9s						
PLVO	Plevna	39.92	6	IAmb	IAmb	04 48 30.6	
	comp=Z,72nm,0.9s						
LBNH	Lisbon	39.95	12	P	P	04 48 28.7	+1.0
	baz=197,SNR=9.7						
LBNH	Lisbon	39.95	12	IAmb	IAmb	04 48 36.4	
	comp=Z,48nm,1.1s						
LBNH				IAMs_20	IAMs_20	05 04 31.5	
	comp=Z,2µm,19.0s						
H59A	Cadyville	40.01	10	P	P	04 48 28.8	+0.7
	baz=194,SNR=12						
BDFB	Brasilia	40.04	122	P	P	04 48 28.4	-0.5
	comp=Z,25nm,1.0s,baz=300,slow=6.4,SNR=6.2						
BDFB				LR	LR	05 05 00.2	
	comp=Z,5µm,20.9s,baz=302,slow=36						
BDFB	Brasilia	40.04	122	P	P	04 48 27.8	-1.2
BDFB				pmax	pmax		
	comp=Z,53nm,1.2s						
BDFB				MLR	MLR		
	comp=Z,5µm,20.0s						
BDFB	Brasilia	40.04	122	P	P	04 48 27.8	-1.2
BDFB				IAmb	IAmb	04 48 30.4	
	comp=Z,53nm,1.2s						
MT05	Renca	40.04	165	P	P	04 48 27.6	-1.0
MT05				IAmb	IAmb	04 48 31.1	
	comp=Z,72nm,0.9s						
I63A	Otisfield	40.06	13	P	P	04 48 30.0	+1.3
	baz=199						
I63A	Otisfield	40.06	13	IAmb	IAmb	04 48 37.4	
	comp=Z,58nm,1.1s						
H60A	Morristown	40.10	11	P	P	04 48 30.9	+1.9
	baz=195,SNR=12						
WUAZ	Wupatki	40.13	322	P	P	04 48 31.4	+1.8
	baz=132,SNR=16						
WUAZ	Wupatki	40.13	322	P	P	04 48 28.3	-1.3
SPX	San Pedro Mart	40.13	314	P	P	04 48 28.4	-1.5
SPX				IAMs_20	IAMs_20	05 03 49.0	
	comp=Z,2µm,20.0s						
I64A	Boothbay	40.17	15	P	P	04 48 31.0	+1.5
	baz=200						
ISCO	Idaho Springs	40.18	332	P	P	04 48 31.3	+1.2
	baz=143,SNR=12						
ISCO	Idaho Springs	40.18	332	P	P	04 48 28.7	-1.3
ISCO				pmax	pmax		
	comp=Z,26nm,1.2s						
ISCO				MLR	MLR		
	comp=Z,3µm,22.0s						
ISCO	Idaho Springs	40.18	332	P	P	04 48 28.7	-1.3
ISCO				IAMs_20	IAMs_20	05 06 21.7	
	comp=Z,3µm,22.0s						
G54A	Lake Saint Pet	40.18	5	P	P	04 48 28.9	-0.7
	baz=187,SNR=6.2						
FRNY	Flat Rock	40.21	10	P	P	04 48 30.0	+0.1
FRNY				IAmb	IAmb	04 48 34.4	
	comp=Z,43nm,1.1s						
H61A	Lyndonville	40.23	12	P	P	04 48 30.3	+0.2
	baz=197,SNR=6.8						
G57A	Newington	40.25	8	P	P	04 48 30.2	0.0
	baz=192,SNR=19						
ITRB	Iturama	40.25	129	*e*P	P	04 48 30.8	+0.2
ECSD	EROS Data Cent	40.27	344	P	P	04 48 28.8	-1.6
	baz=158,SNR=22						
ECSD	EROS Data Cent	40.27	344	P	P	04 48 29.0	-1.5
SMCO	Snowmass	40.34	330	IAmb	IAmb	04 48 42.4	
	comp=Z,38nm,1.0s						
SMCO				IAMs_20	IAMs_20	05 06 56.1	
	comp=Z,2µm,19.0s						
G40A	Rib Lake	40.41	352	IAmb	IAmb	04 48 33.7	
	comp=Z,65nm,1.1s						
TRCB	Terra Rica	40.43	135	*e*P	P	04 48 31.6	-0.5
H62A	Milan	40.43	13	P	P	04 48 31.9	+0.2
	baz=198						
H62A				S	S	04 54 42.8	+2.6
	baz=198						
H62A	Milan	40.43	13	IAMs_20	IAMs_20	05 04 18.8	
	comp=Z,2µm,20.0s						
G58A	Ormstown	40.44	9	P	P	04 48 32.7	+1.0
	baz=193,SNR=9.1						
PV15	Paradox Valley	40.48	328	IAmb	IAmb	04 48 43.7	
	comp=Z,46nm,0.9s						
PV15				IAMs_20	IAMs_20	05 06 42.5	
	comp=Z,4µm,20.0s						
PV02	Paradox Valley	40.52	328	IAmb	IAmb	04 48 38.2	
	comp=Z,46nm,1.0s						
PV02				IAMs_20	IAMs_20	05 05 05.5	
	comp=Z,4µm,22.0s						
PV13	Radium Mtn., P	40.52	328	IAMs_20	IAMs_20	05 06 00.7	
	comp=Z,3µm,18.0s						
PV03	Paradox Valley	40.61	328	IAMs_20	IAMs_20	05 06 04.0	
	comp=Z,4µm,20.0s						
PV05	Paradox Valley	40.61	327	IAMs_20	IAMs_20	05 06 08.6	
	comp=Z,3µm,18.0s						
PV12	Saucer Basin,	40.63	328	IAMs_20	IAMs_20	05 06 05.6	
	comp=Z,4µm,18.0s						
PV18	Skein Mesa, Pa	40.63	328	IAMs_20	IAMs_20	05 06 03.7	
	comp=Z,4µm,19.0s						
PV07	Paradox Valley	40.64	328	IAMs_20	IAMs_20	05 06 47.8	
	comp=Z,3µm,18.0s						
F42A	Maple Grove Fa	40.64	354	IAmb	IAmb	04 48 35.5	
	comp=Z,49nm,1.1s						
PV11	David Mesa, Pa	40.65	328	IAMs_20	IAMs_20	05 06 06.2	
	comp=Z,4µm,19.0s						
PCMB	Pacaembu	40.68	132	*e*P	P	04 48 33.3	-0.8
PV16	Nyswonger Mesa	40.69	328	IAMs_20	IAMs_20	05 06 05.1	
	comp=Z,3µm,19.0s						
G60A	Masonville	40.69	11	P	P	04 48 34.6	+0.8

	baz=196,SNR=15						
PV19	Morning Glory	40.72	328	IAMs_20	IAMs_20	05 06 06.0	
	comp=Z,4µm,19.0s						
PV20	West Nyswonger	40.74	328	IAMs_20	IAMs_20	05 06 15.4	
	comp=Z,3µm,19.0s						
ALGO	Algonquin Park	40.74	5	P	P	04 48 33.4	-0.8
	baz=187,SNR=12						
ALGO				S	S	04 54 46.0	+1.3
	baz=187						
PV04	Paradox Valley	40.74	328	IAMs_20	IAMs_20	05 06 07.4	
	comp=Z,4µm,20.0s						
H63A	New Sharon	40.77	14	P	P	04 48 36.1	+1.7
	baz=199,SNR=8.8						
H63A				S	S	04 54 46.3	+1.1
	baz=199						
WVL	Waterville	40.77	14	P	P	04 48 33.9	-0.6
WVL				IAmb	IAmb	04 48 41.0	
	comp=Z,42nm,1.1s						
WVL				IAMs_20	IAMs_20	05 06 13.7	
	comp=Z,2µm,18.0s						
PV10	Paradox Valley	40.80	328	IAMs_20	IAMs_20	05 06 05.4	
	comp=Z,4µm,18.0s						
SPMN	Marine on St.	40.80	349	P	P	04 48 32.9	-1.8
	baz=164,SNR=22						
SPMN	Marine on St.	40.80	349	IAmb	IAmb	04 48 36.5	
	comp=Z,65nm,0.9s						
GLA	Glamis	40.82	317	P	P	04 48 34.7	-0.5
	baz=126,SNR=10.0						
GLA				S	S	04 54 50.5	+4.1
	baz=126						
GLA	Glamis	40.82	317	IAMs_20	IAMs_20	05 04 40.1	
	comp=Z,4µm,19.0s						
PV23	Carpenter Ridg	40.84	328	IAMs_20	IAMs_20	05 07 19.1	
	comp=Z,3µm,18.0s						
H64A	Troy	40.95	15	P	P	04 48 34.9	-1.0
	baz=200						
F57A	Harrington	40.99	8	P	P	04 48 36.0	-0.3
	baz=192						
E46A	Sault Ste Mari	40.99	358	IAMs_20	IAMs_20	05 06 42.5	
	comp=Z,3µm,18.0s						
UABX	UABC, Campus M	41.00	316	IAMs_20	IAMs_20	05 03 14.0	
	comp=Z,4µm,22.0s						
ESJX	Sierra Juarez	41.01	315	IAMs_20	IAMs_20	05 03 38.1	
	comp=Z,2µm,22.0s						
G61A	St-Isidore-de-	41.03	12	P	P	04 48 38.2	+1.6
	baz=197,SNR=12						
G61A				S	S	04 54 55.7	+6.7
	baz=197						
IPMB	Ipameri, GO	41.03	125	*e*P	P	04 48 37.2	+0.1
COWI	Conover	41.09	353	IAmb	IAmb	04 48 38.7	
	comp=Z,35nm,1.1s						
PDMCI	Parker Dam,Lak	41.10	319	P	P	04 48 38.7	+1.3
	baz=128,SNR=15						
PDMCI				S	S	04 54 55.3	+4.9
	baz=128						
E43A	Lone Tree Farm	41.15	355	IAmb	IAmb	04 48 40.0	
	comp=Z,64nm,0.9s						
E43A				IAMs_20	IAMs_20	05 06 22.7	
	comp=Z,2µm,20.0s						
F58A	St-Lin Laurent	41.17	9	P	P	04 48 39.0	+1.2
	baz=193						
G62A	West of Eustis	41.18	13	P	P	04 48 39.0	+1.1
	baz=198,SNR=16						
G62A	West of Eustis	41.18	13	IAMs_20	IAMs_20	05 03 32.7	
	comp=Z,2µm,19.0s						
N23A	Red Feather La	41.20	333	P	P	04 48 39.6	+1.1
	baz=143,SNR=12						
N23A				S	S	04 54 57.7	+5.3
	baz=143						
H65A	Eastbrook	41.25	16	P	P	04 48 40.2	+1.7
	baz=202						
RPN	Rapa Nui	41.29	217	IAMs_20	IAMs_20	05 01 15.6	
	comp=Z,4µm,19.0s						
G63A	Kingsbury	41.30	14	P	P	04 48 38.2	-0.6
	baz=200						
F59A	Saint Guilaume	41.34	10	P	P	04 48 38.7	-0.3
	baz=195						
BO02	Sierra Bellavi	41.35	165	IAmb	IAmb	04 48 48.8	
	comp=Z,41nm,0.9s						
SDBA	SAO DESIDERIO	41.37	115	*e*P	P	04 48 40.6	+0.7
SWSC	Sam W. Stewart	41.43	316	P	P	04 48 41.4	+1.3
	baz=125,SNR=14						
SWSC				S	S	04 55 01.7	+6.4
	baz=125						
RMX	La Rumorosa	41.43	315	P	P	04 48 38.5	-1.8
RMX				IAMs_20	IAMs_20	05 04 35.6	
	comp=Z,4µm,19.0s						
E55A	Montcerf-Lytto	41.44	7	P	P	04 48 40.5	+0.5
	baz=190						
CCX	Cicese	41.44	314	IAMs_20	IAMs_20	05 04 25.6	
	comp=Z,2µm,19.0s						
IKP	In-Ko-Pah, Jac	41.48	315	P	P	04 48 42.1	+1.5
	baz=124,SNR=12						
PKME	Peaks-Kenny Pk	41.52	14	P	P	04 48 42.1	+1.5
	baz=200						
PKME	Peaks-Kenny Pk	41.52	14	P	P	04 48 39.8	-0.8
PKME				IAmb	IAmb	04 48 45.6	
	comp=Z,91nm,1.1s						
F36A	Milaca	41.56	348	IAmb	IAmb	04 48 42.7	
	comp=Z,35nm,1.0s						
H66A	Whiting	41.59	16	P	P	04 48 40.7	-0.5
	baz=203						
BC3	Big Chuckawall	41.59	317	P	P	04 48 43.1	+1.5
	baz=126,SNR=18						
BC3				S	S	04 55 07.1	+9.1
	baz=126						
SUSD	Miller	41.59	342	P	P	04 48 39.8	-1.5
	baz=155						
SUSD	Miller	41.59	342	IAmb	IAmb	04 48 41.3	
	comp=Z,76nm,1.1s						
F60A	Warwick	41.60	11	P	P	04 48 41.4	+0.1
	baz=196,SNR=7.7						
G64A	Maxfield	41.64	15	P	P	04 48 41.6	0.0
	baz=201						
G64A				S	S	04 55 05.1	+7.1
	baz=201						
E57A	Chemin Saint G	41.65	9	P	P	04 48 41.5	-0.3
	baz=193						
E56A	St. Veronique	41.65	8	P	P	04 48 41.6	-0.1
	baz=191,SNR=14						
IRM	Iron Mountain	41.68	318	P	P	04 48 43.7	+1.5
	baz=126,SNR=24						
IRM				S	S	04 55 07.0	+7.9
	baz=126						
NEE2	Needles Airpor	41.70	319	P	P	04 48 43.9	+1.6
	baz=128						
NEE2				S	S	04 55 06.4	+7.1
	baz=128						
O20A	White River Ci	41.70	330	P	P	04 48 44.1	+1.6
	baz=140,SNR=14						
O20A				S	S	04 55 08.4	+8.8
	baz=140						
E58A	La Victoria	41.75	10	P	P	04 48 42.9	+0.4
	baz=194,SNR=21						
F61A	St Evariste	41.80	12	P	P	04 48 42.7	-0.3
	baz=198						
MONP2	Monument Peak	41.83	315	P	P	04 48 45.0	+1.4
	baz=124,SNR=12						
MONP2				S	S	04 55 09.8	+8.1
	baz=124						
BAR	Barrett	41.89	315	P	P	04 48 42.8	-1.1
BAR				IAMs_20	IAMs_20	05 05 11.4	
	comp=Z,4µm,18.0s						
G65A	Princeton	41.90	16	P	P	04 48 44.0	+0.3
	baz=203						
E38A	The Farm, Brul	41.92	351	IAmb	IAmb	04 48 45.5	
	comp=Z,31nm,0.9s						
D41A	Chassel	41.97	354	IAmb	IAmb	04 48 47.0	
	comp=Z,78nm,1.0s						
F63A	Nahmakanta, Br	41.97	14	P	P	04 48 44.4	0.0
	baz=200						
PKCU	Pink Cliffs	41.98	324	IAmb	IAmb	04 49 03.1	
	comp=Z,75nm,1.2s						
E59A	St. Maurice	41.99	10	P	P	04 48 44.0	-0.4
	baz=195						
KNB	Kanab	42.00	323	IAmb	IAmb	04 48 50.2	
	comp=Z,49nm,1.2s						
D55A	Sainte-Anne-du	42.06	7	P	P	04 48 45.0	0.0
	baz=191						
TJX	Tijuana	42.07	314	IAMs_20	IAMs_20	05 04 56.1	
	comp=Z,3µm,19.0s						
PTGB	Pitanga	42.07	136	*e*P	P	04 48 44.8	-0.8
E60A	Ste Agathe de	42.09	12	P	P	04 48 45.8	+0.5
	baz=197,SNR=17						
E60A				S	S	04 55 08.4	+3.8
	baz=197						
SRU	San Rafael Swe	42.13	327	IAmb	IAmb	04 48 50.5	
	comp=Z,46nm,1.1s						
F33A	5 Mile Ranch,	42.15	346	IAmb	IAmb	04 48 47.3	
	comp=Z,35nm,0.9s						
BELC	Belle Mtn. Jos	42.16	317	P	P	04 48 47.7	+1.4
	baz=125,SNR=36						
BELC				S	S	04 55 13.6	+7.1
	baz=125						
D56A	ZEC Mazanza, M	42.19	8	P	P	04 48 45.5	-0.6
	baz=192						
NBPS	Pedro II - PI	42.20	102	*e*P	P	04 48 48.3	+1.6
TPFO	Pinon Flats	42.25	316	P	P	04 48 48.6	+1.6
	baz=125,SNR=19						
TPFO				S	S	04 55 13.6	+5.8
	baz=125						
PFO	Pinyon Flats O	42.26	316	P	P	04 48 48.4	+1.4
	comp=Z,15nm,1.1s,baz=114,slow=6.8,SNR=24						
PFO	Pinyon Flats O	42.26	316	P	P	04 48 48.5	+1.4
	baz=125,SNR=20						
PFO				S	S	04 55 13.6	+5.8
	baz=125						
PFO	Pinyon Flats O	42.26	316	P	P	04 48 45.7	-1.3
109C	Camp Elliot, M	42.31	315	P	P	04 48 48.5	+1.2
	baz=123,SNR=5.8						
109C				S	S	04 55 14.4	+6.1
	baz=123						
109C	Camp Elliot, M	42.31	315	IAMs_20	IAMs_20	05 05 14.5	
	comp=Z,4µm,18.0s						
F64A	Sherman	42.31	15	P	P	04 48 48.1	+1.0
	baz=201						
F64A	Sherman	42.31	15	IAmb	IAmb	04 48 51.8	
	comp=Z,52nm,1.0s						
E61A	Lac Etchemin	42.34	12	P	P	04 48 47.8	+0.4
	baz=198						
GMRC	Granite Mounta	42.39	318	P	P	04 48 49.5	+1.3
	baz=126,SNR=16						
GMRC				S	S	04 55 16.9	+7.0
	baz=126						
BB19B	Bebedouro	42.44	129	*e*P	P	04 48 48.8	+0.3
D58A	Chemin du LacG	42.52	10	P	P	04 48 49.1	+0.3
	baz=194,SNR=16						
D59A	Saint-Raymond	42.62	11	P	P	04 48 51.1	+1.5
	baz=196,SNR=5.0						
MVU	Marysvale	42.64	325	IAmb	IAmb	04 48 55.4	
	comp=Z,52nm,1.0s						
D60A	Saint Jean D'O	42.71	12	P	P	04 48 51.1	+0.8
	baz=197,SNR=22						
ITQB	Itaqui	42.74	146	*e*P	P	04 48 50.9	+0.1
MURC	Murrieta	42.76	316	P	P	04 48 52.4	+1.4
	baz=124,SNR=9.6						
MURC				S	S	04 55 19.6	+4.5
	baz=124						
E63A	Oxbow	42.81	14	P	P	04 48 52.4	+1.2
	baz=201,SNR=10						
E63A				S	S	04 55 17.7	+2.3
	baz=201						
E63A	Oxbow	42.81	14	IAmb	IAmb	04 48 56.0	
	comp=Z,78nm,1.1s						
LATQ	La Tuque	42.82	10	S	S	04 55 17.3	+1.9
	baz=194						
LATQ	La Tuque	42.82	10	IAmb	IAmb	04 48 54.9	
	comp=Z,45nm,1.1s						
BI03	Tigo	42.82	169	P	P	04 48 50.5	-0.9
BI03				IAmb	IAmb	04 48 53.0	
	comp=Z,63nm,0.8s						
HEC	Hector,Ludlow	42.87	318	P	P	04 48 53.4	+1.4
	baz=126,SNR=9.8						
HEC				S	S	04 55 22.6	+5.8
	baz=126						
K22A	Casper	42.87	334	P	P	04 48 52.9	+1.0
	baz=144,SNR=18						
K22A				S	S	04 55 21.9	+5.2
	baz=144						
K22A	Casper	42.87	334	IAMs_20	IAMs_20	05 08 49.1	
	comp=Z,3µm,19.0s						
VLDQ	Val d'Or	42.93	5	IAmb	IAmb	04 48 55.0	
	comp=Z,39nm,1.1s						
VLDQ				IAMs_20	IAMs_20	05 06 30.3	
	comp=Z,3µm,18.0s						
BBRC	Big Bear Solar	42.94	317	P	P	04 48 54.3	+1.6
	baz=125,SNR=6.5						
BBRC				S	S	04 55 22.8	+4.7
	baz=125						
E64A	Bridgewater	42.96	15	P	P	04 48 52.3	-0.1
	baz=202						
E64A				S	S	04 55 23.6	+6.1
	baz=202						
JANB	Januaria	42.97	119	*e*P	P	04 48 52.7	-0.2
BI02	San Fabin de	43.02	167	IAmb	IAmb	04 49 05.5	
	comp=Z,65nm,1.0s						
RSSD	Black Hills	43.06	337	P	P	04 48 54.8	+1.2
	baz=148						
RSSD				S	S	04 55 24.8	+5.3
	baz=148						
RSSD	Black Hills	43.06	337	P	P	04 48 52.4	-1.1
RSSD				pmax	pmax		
	comp=Z,45nm,1.1s						
RSSD				MLR	MLR		
	comp=Z,2µm,22.0s						
RSSD	Black Hills	43.06	337	P	P	04 48 52.4	-1.1
RSSD				IAmb	IAmb	04 48 55.5	
	comp=Z,45nm,1.1s						
RSSD	Black Hills	43.06	337	IAMs_20	IAMs_20	05 08 08.3	
	comp=Z,2µm,22.0s						
SHPR	Sheep Range	43.11	321	IAMs_20	IAMs_20	05 06 17.9	
	comp=Z,4µm,20.0s						
D61A	St Aubert, Com	43.14	12	P	P	04 48 54.2	+0.4
	baz=198,SNR=56						
PQI	Presque Isle	43.15	15	IAMs_20	IAMs_20	05 06 02.7	
	comp=Z,2µm,20.0s						
EYMN	Ely	43.22	351	P	P	04 48 52.7	-1.8
	baz=167,SNR=9.0						
EYMN	Ely	43.22	351	IAmb	IAmb	04 48 55.8	
	comp=Z,22nm,0.8s						
D62A	Allapoint, All	43.28	13	P	P	04 48 55.7	+0.7
	baz=200,SNR=13						
D62A				S	S	04 55 24.7	+2.5
	baz=200						
D62A	Allapoint, All	43.28	13	IAmb	IAmb	04 48 59.6	
	comp=Z,51nm,0.9s						
D62A				IAMs_20	IAMs_20	05 03 58.2	
	comp=Z,2µm,21.0s						
LMN	Caledonia Moun	43.30	18	IAmb	IAmb	04 49 06.3	
	comp=Z,36nm,0.9s						
RRX	Edison Barstow	43.34	317	P	P	04 48 57.0	+1.3
	baz=125						
RRX				S	S	04 55 28.2	+4.7
	baz=125						
SCI2	San Clemente I	43.38	314	P	P	04 48 56.0	0.0
	baz=122						
BFSC	Mount Baldy Ra	43.43	316	P	P	04 48 57.7	+1.1
	baz=124,SNR=12						
BFSC				S	S	04 55 29.4	+4.2
	baz=124						
GSC	Goldstone, Bar	43.46	318	P	P	04 48 58.0	+1.2
	baz=126,SNR=22						
GSC				S	S	04 55 30.3	+4.8
	baz=126						
SHOC	Shoshone, Teco	43.46	319	P	P	04 48 58.0	+1.4
	baz=127,SNR=23						
D63A	Stockholm	43.47	14	P	P	04 48 56.5	0.0
	baz=201,SNR=12						
FMP	Fort Macarthur	43.59	315	P	P	04 48 58.5	+0.8
	baz=123						
FMP				S	S	04 55 32.9	+5.7
	baz=123						
ITAB	Concordia	43.70	139	*e*P	P	04 48 58.3	-0.4
MWC	Mount Wilson	43.70	316	IAMs_20	IAMs_20	05 06 09.5	
	comp=Z,3µm,20.0s						
PASC	Pasadena Art C	43.76	316	IAMs_20	IAMs_20	05 06 10.1	
	comp=Z,3µm,18.0s						
DECC	Green Verdugo	43.91	316	P	P	04 49 01.0	+0.7
	baz=123						
DECC				S	S	04 55 35.4	+3.5
	baz=123						
LSQQ	Lebel-sur-Quev	43.91	5	P	P	04 48 59.4	-0.7
	baz=188						
B35A	Bob, Littlefor	44.00	349	P	P	04 48 59.5	-1.2
B35A				PcP	PcP	04 50 45.6	-0.8
EDW2	Edwards Air Fo	44.02	317	P	P	04 49 02.2	+1.0
	baz=124,SNR=23						
EDW2				S	S	04 55 41.0	+7.4
	baz=124						
E28A	Huff	44.05	342	IAmb	IAmb	04 49 04.6	
	comp=Z,76nm,1.1s						
TCUT	Toone Canyon	44.05	328	IAmb	IAmb	04 49 17.1	
	comp=Z,48nm,1.2s						
TPNV	Topopah Spring	44.07	320	P	P	04 49 03.5	+1.8
	baz=128,SNR=13						
TPNV				S	S	04 55 38.4	+3.9
	baz=128						
DUG	Dugway, Tooele	44.15	326	P	P	04 49 03.6	+1.4
	baz=134,SNR=10.0						
DUG				S	S	04 55 40.7	+5.3
	baz=134						
LRMC	Laurel Mtn Rad	44.15	318	P	P	04 49 03.6	+1.3
	baz=125,SNR=21						
LRMC				S	S	04 55 42.0	+6.5
	baz=125						
FURC	Furnace Creek,	44.18	319	P	P	04 49 04.0	+1.6
	baz=127,SNR=24						
FURC				S	S	04 55 42.6	+7.0
	baz=127						
SNCC	San Nicolas Is	44.22	314	P	P	04 49 03.2	+0.4
	baz=121						
SNCC	San Nicolas Is	44.22	314	IAMs_20	IAMs_20	05 04 08.1	
	comp=Z,3µm,22.0s						
PDAR	Pinedale Array	44.35	331	P	P	04 49 04.2	+0.3
	comp=Z,12nm,1.1s,baz=134,slow=8.5,SNR=45						
PDAR				PcP	PcP	04 50 49.4	+1.3
	comp=Z,7.8nm,1.0s,baz=134,slow=4.3,SNR=5.5						
PDAR				LR	LR	05 09 55.7	
	comp=Z,3µm,18.4s,baz=151,slow=39						
PDAR	Pinedale Array	44.35	331	P	P	04 49 02.7	-1.2
BW06	Boulder Array	44.35	331	P	P	04 49 04.4	+0.5
	baz=140,SNR=20						
BW06				S	S	04 55 40.4	+1.9
	baz=140						
MPMC	Manual Prospec	44.35	318	P	P	04 49 05.1	+1.1
	baz=126,SNR=20						
MPMC				S	S	04 55 45.8	+7.2
	baz=126						
OSI	Osito Audit: C	44.38	316	S	S	04 55 43.9	+5.2
	baz=123						
OSI	Osito Audit: C	44.38	316	IAMs_20	IAMs_20	05 06 47.3	
	comp=Z,3µm,19.0s						
R11A	Troy Canyon, C	44.53	322	P	P	04 49 07.0	+1.6
	baz=130,SNR=12						
R11A				S	S	04 55 47.5	+6.4
	baz=130						
MATQ	Matagami	44.55	5	P	P	04 49 03.9	-1.2
	baz=187,SNR=18						
SCZ2	Santa Cruz Isl	44.69	315	P	P	04 49 06.5	0.0
	baz=122						
SPB	Sao Paulo	44.70	131	*e*P	P	04 49 06.0	-0.7
VAO	Valinhos	44.72	130	*e*P	P	04 49 07.1	+0.1
ARVC	Arvin	44.73	316	P	P	04 49 08.2	+1.4
	baz=123,SNR=12						
ARVC				S	S	04 55 49.3	+5.5
	baz=123						
SPUT	South Promonto	44.73	328	IAmb	IAmb	04 49 15.6	
	comp=Z,33nm,1.2s						
BGU	Big Grassy Mou	44.77	327	IAmb	IAmb	04 49 09.0	
	comp=Z,31nm,1.2s						
ISA	Isabella, Lake	44.78	317	P	P	04 49 08.8	+1.5
	baz=124,SNR=14						
ISA				S	S	04 55 49.7	+5.0
	baz=124						
ISA	Isabella, Lake	44.78	317	IAMs_20	IAMs_20	05 06 48.1	
	comp=Z,2µm,20.0s						
GRAC	Grapevine Rang	44.82	320	P	P	04 49 09.4	+1.9
	baz=126,SNR=21						
GRAC				S	S	04 55 53.2	+8.1
	baz=126						
MDND	Maddock	44.88	344	P	P	04 49 07.3	-0.5
	baz=156						
DIAM	Diamantina, MG	44.95	122	*e*P	P	04 49 08.7	-0.3
CWC	Cottonwood Cre	44.96	319	P	P	04 49 09.5	+0.7
	baz=125						
CWC				S	S	04 55 54.0	+6.6
	baz=125						
SBC	Santa Barbara	44.97	315	P	P	04 49 09.8	+1.1
	baz=122						
LC01	Cunco	45.03	168	P	P	04 49 08.2	-0.9
AHID	Auburn Hatcher	45.10	330	IAmb	IAmb	04 49 14.3	
	comp=Z,24nm,1.1s						
CPSB	Cacapava Do Su	45.12	144	*e*P	P	04 49 09.5	-0.5
PET01	Itanhaem-SP	45.23	132	*e*P	P	04 49 11.0	+0.1
PKM	Mcpherson Peak	45.28	316	P	P	04 49 12.5	+1.1
	baz=122,SNR=22						
PKM				S	S	04 55 57.3	+5.2
	baz=122						
VES	Vestal, Richgr	45.29	317	P	P	04 49 12.7	+1.4
	baz=124,SNR=25						
VES				S	S	04 55 58.5	+6.6
	baz=124						
BSCB	Bom Sucesso	45.36	126	*e*P	P	04 49 11.6	-0.5
TIN	Tinemaha, Big	45.41	319	P	P	04 49 13.9	+1.5
	baz=126,SNR=6.7						
REDW	Red Top Meadow	45.42	331	IAmb	IAmb	04 49 23.9	
	comp=Z,33nm,1.1s						
SNOW	Snow King Moun	45.45	331	IAmb	IAmb	04 49 28.7	
	comp=Z,43nm,1.1s						
SMMC	Simmler	45.63	316	P	P	04 49 15.5	+1.4
	baz=122,SNR=13						
SMMC				S	S	04 56 03.8	+6.9
	baz=122						
VOG	Valley Oaks Go	45.76	318	P	P	04 49 15.1	+0.1
	baz=124						
ELK	Elko	45.88	325	IAMs_20	IAMs_20	05 07 54.4	
	comp=Z,4µm,22.0s						
FLWY	Flagg Ranch	45.89	332	IAmb	IAmb	04 49 18.5	
	comp=Z,40nm,1.1s						
FLWY				IAMs_20	IAMs_20	05 10 24.0	
	comp=Z,3µm,18.0s						
PARB	Paraibuna	45.93	130	*e*P	P	04 49 17.2	+0.6
PLTB	Pedras Altas	46.02	145	*e*P	P	04 49 16.7	-0.4
PAGB	Antelope Grade	46.03	316	IAmb	IAmb	04 49 19.8	
	comp=Z,48nm,1.2s						
RLMT	Red Lodge	46.04	334	P	P	04 49 17.7	+0.4
	baz=142,SNR=20						
RLMT				S	S	04 56 06.6	+3.8
	baz=142						
RLMT	Red Lodge	46.04	334	IAmb	IAmb	04 49 21.7	
	comp=Z,26nm,1.1s						
RLMT				IAMs_20	IAMs_20	05 10 31.9	
	comp=Z,2µm,19.0s						
LAO	LASA Array	46.05	337	P	P	04 49 17.7	+0.5
	baz=146,SNR=25						
LAO				S	S	04 56 06.7	+4.0
	baz=146						
LAO	LASA Array	46.05	337	IAmb	IAmb	04 49 28.4	
	comp=Z,53nm,1.1s						
LAO				IAMs_20	IAMs_20	05 12 02.5	
	comp=Z,2µm,18.0s						
H17A	Grant Village	46.07	332	P	P	04 49 18.9	+1.3
	baz=140,SNR=11						
H17A				S	S	04 56 09.8	+6.4
	baz=140						
H17A	Grant Village	46.07	332	IAmb	IAmb	04 49 36.7	
	comp=Z,25nm,1.1s						
LKWY	Lake	46.12	332	IAmb	IAmb	04 49 37.7	
	comp=Z,27nm,1.1s						
MLAC	Mammoth, Mammo	46.14	319	P	P	04 49 18.9	+0.7
	baz=125						
NV11	Mina Array Sit	46.17	321	IAmb	IAmb	04 49 20.6	
	comp=Z,37nm,1.1s						
ULM	Lac du Bonnet	46.22	348	P	P	04 49 17.0	-1.4
	comp=Z,14nm,0.9s,baz=164,slow=7.2,SNR=19						
ULM				PcP	PcP	04 50 54.0	0.0
	comp=Z,14nm,1.0s,baz=122,slow=2.2,SNR=4.0						
ULM	Lac du Bonnet	46.22	348	*c i*P	P	04 49 16.6	-1.8
ULM	Lac du Bonnet	46.22	348	IAmb	IAmb	04 49 25.3	
	comp=Z,23nm,0.8s						
OMMB	Old Mammoth Mi	46.23	319	IAmb	IAmb	04 49 23.5	
	comp=Z,44nm,1.2s						
NVAR	Mina Array Bea	46.26	321	P	P	04 49 20.4	+1.2
	comp=Z,15nm,0.8s,baz=135,slow=6.8,SNR=88						
NVAR				PcP	PcP	04 50 56.1	+1.4
	comp=Z,4.4nm,1.0s,baz=142,slow=4.6,SNR=1.9						
NVAR				LR	LR	05 08 56.8	
	comp=Z,5µm,18.7s,baz=130,slow=36						
NVAR	Mina Array Bea	46.26	321	P	P	04 49 18.0	-1.2
YNE	Yellowstone No	46.28	333	IAmb	IAmb	04 49 23.8	
	comp=Z,23nm,1.0s						
YNR	Norris Junctio	46.36	332	IAmb	IAmb	04 49 25.2	
	comp=Z,18nm,1.1s						
YMR	Madison River	46.46	332	IAmb	IAmb	04 49 32.5	
	comp=Z,39nm,1.1s						
YHH	Holmes Hill	46.49	332	IAmb	IAmb	04 49 32.1	
	comp=Z,36nm,1.2s						
KVN	Kaiserville	46.51	321	IAmb	IAmb	04 49 22.7	
	comp=Z,17nm,1.1s						
RYN	Ryan	46.52	321	IAmb	IAmb	04 49 30.0	
	comp=Z,24nm,1.1s						
YHB	Horse Butte	46.63	332	IAmb	IAmb	04 49 33.3	
	comp=Z,17nm,1.0s						
PMPB	Monarch Peak	46.66	317	IAmb	IAmb	04 49 30.6	

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      comp=Z,25nm,1.0s
DGMT  Dagmar           46.84 340  P        P        04 49 24.0 +0.7
      baz=150,SNR=14
DGMT                              S        S        04 56 17.6 +3.7
      baz=150
DGMT  Dagmar           46.84 340  IAMs_20  IAMs_20  05 11 08.4
      comp=Z,2µm,21.0s
WAKR  Walker           47.03 320  IAmb     IAmb     04 49 27.4
      comp=Z,29nm,1.0s
PLCA  Paso Flores      47.07 167  P        P        04 49 25.2 -0.1
      comp=Z,35nm,1.1s,baz=334,slow=9.4,SNR=53
PLCA  Paso Flores      47.07 167  P        P        04 49 24.4 -0.9
PLCA                              pmax     pmax
      comp=Z,53nm,1.2s
PLCA  Paso Flores      47.07 167  P        P        04 49 24.4 -0.9
PLCA  Paso Flores      47.07 167 eP        P        04 49 25.4 +0.1
HLID  Hailey           47.35 329  P        P        04 49 28.4 +0.8
      baz=135,SNR=16
HLID                              S        S        04 56 25.4 +3.8
      baz=135
CMB   Columbia Colle   47.38 319  IAMs_20  IAMs_20  05 09 02.9
      comp=Z,3µm,20.0s
BOZ   Bozeman (W)      47.47 332  P        P        04 49 29.3 +0.9
      baz=139,SNR=64
BOZ                               S        S        04 56 27.0 +3.8
      baz=139
BOZ   Bozeman (W)      47.47 332  IAMs_20  IAMs_20  05 11 06.7
      comp=Z,3µm,20.0s
PNTR  Pine Nut         47.47 321  IAmb     IAmb     04 49 37.5
      comp=Z,18nm,0.9s
PNTR                              IAMs_20  IAMs_20  05 08 35.4
      comp=Z,2µm,20.0s
VCNR  Virginia City    47.62 321  IAMs_20  IAMs_20  05 08 41.4
      comp=Z,2µm,20.0s
PAHR  Pah Rah Range    47.70 321  IAMs_20  IAMs_20  05 09 46.5
      comp=Z,3µm,18.0s
DLMT  Dillon           47.74 332  IAmb     IAmb     04 49 36.9
      comp=Z,18nm,1.1s
DLMT                              IAMs_20  IAMs_20  05 10 37.0
      comp=Z,3µm,20.0s
RCBR  Riachuelo        47.90 103  IAMs_20  IAMs_20  05 08 18.5
      comp=Z,2µm,21.0s
MFID  Camas Ranch      47.99 327  IAmb     IAmb     04 49 43.0
      comp=Z,14nm,1.1s
RIB01 Linhares ES      48.17 122 eP        P        04 49 34.8 +0.7
BEKR  Beckworth        48.40 321  IAMs_20  IAMs_20  05 08 56.3
      comp=Z,3µm,21.0s
EGMT  Eagleton         48.54 336  P        P        04 49 37.3 +0.7
      baz=143,SNR=20
EGMT                              S        S        04 56 39.2 +1.1
      baz=143
EGMT  Eagleton         48.54 336  IAmb     IAmb     04 49 41.9
      comp=Z,27nm,1.1s
EGMT                              IAMs_20  IAMs_20  05 12 18.1
      comp=Z,2µm,21.0s
DRLN  Deer Lake        48.73  22  IAmb     IAmb     04 49 42.5
      comp=Z,48nm,1.1s
GO07  Milladeo Hill,   48.81 171  P        P        04 49 38.5 -0.1
WVOR  Wild Horse Val   48.91 325  IAmb     IAmb     04 49 49.8
      comp=Z,53nm,1.1s
ORV   Oroville         48.95 320  IAmb     IAmb     04 49 48.8
      comp=Z,34nm,1.1s
ORV                               IAMs_20  IAMs_20  05 09 48.5
      comp=Z,3µm,20.0s
MCCM  Marconi Confer   49.09 318  IAMs_20  IAMs_20  05 08 08.2
      comp=Z,3µm,22.0s
MSO   Missoula         49.46 332  P        P        04 49 43.9 +0.2
      baz=137,SNR=22
MSO                               S        S        04 56 51.5 +0.3
      baz=137
MSO   Missoula         49.46 332  IAmb     IAmb     04 49 53.5
      comp=Z,22nm,1.1s
O03E  Paynes Creek     49.55 321  P        P        04 49 44.4 -0.1
      baz=124,SNR=8.7
HOPS  Hopland Field    49.67 318  IAMs_20  IAMs_20  05 10 22.4
      comp=Z,3µm,21.0s
BMO   Blue Mountains   49.75 328  IAMs_20  IAMs_20  05 10 15.9
      comp=Z,3µm,22.0s
O02D  Mt. Diablo Mer   50.12 320  P        P        04 49 48.0 -0.8
      baz=123
WDC   Whiskeytown Da   50.18 320  IAMs_20  IAMs_20  05 10 39.1
      comp=Z,2µm,21.0s
KCPM  Cahto Peak       50.37 319  IAMs_20  IAMs_20  05 11 07.1
      comp=Z,3µm,19.0s
M04C  Macdoel          50.42 322  P        P        04 49 50.6 -0.5
      baz=125
N02D  Trinity Center   50.50 321  P        P        04 49 50.9 -0.8
      baz=124
N02D                              S        S        04 57 05.5 -0.4
      baz=124
KMRM  Mail Ridge       50.73 319  IAmb     IAmb     04 50 01.9
      comp=Z,35nm,1.1s
M02C  Callahan         50.83 321  P        P        04 49 52.9 -1.2
      baz=124
K04D  Chiloquin, OR    50.86 323  P        P        04 49 54.3 -0.2
      baz=126
G08A  Pilot Rock       50.92 327  IAMs_20  IAMs_20  05 12 54.9
      comp=Z,2µm,20.0s
J05D  Fort Rock, OR    50.94 324  P        P        04 49 55.4 +0.3
      baz=127,SNR=6.1
L04D  Klamath Falls    50.96 322  P        P        04 49 54.6 -0.6
      baz=125
WALA  Waterton Lakes   51.09 334  IAmb     IAmb     04 49 59.9
      comp=Z,24nm,1.1s
KHMM  Horse Mountain   51.10 320  IAmb     IAmb     04 50 12.3
      comp=Z,40nm,1.2s
KHMM                              IAMs_20  IAMs_20  05 12 12.5
      comp=Z,2µm,19.0s
E09A  Wood Farm, Sta   51.30 329  IAmb     IAmb     04 50 06.7
      comp=Z,30nm,1.1s
KRMB  Red Mountain     51.56 321  IAmb     IAmb     04 50 17.3
      comp=Z,55nm,1.2s
KRMB                              IAMs_20  IAMs_20  05 14 19.8
      comp=Z,3µm,18.0s
I05D  Terrebonne, OR   51.64 325  P        P        04 50 00.6 +0.5
      baz=128,SNR=7.1
L02E  Cave Junction    51.72 322  P        P        04 50 00.8  0.0
      baz=124
E08A  Dider Farm, El   51.76 328  IAMs_20  IAMs_20  05 14 11.1
      comp=Z,2µm,18.0s
FFC   Flin Flon        51.76 346  P        P        04 50 00.1 -0.7
FFC   Flin Flon        51.76 346  P        P        04 50 00.1 -0.7
FFC                               IAmb     IAmb     04 50 02.1
      comp=Z,26nm,1.1s
FFC   Flin Flon        51.76 346  IAMs_20  IAMs_20  05 14 16.4
      comp=Z,2µm,18.0s
I04A  Tendick Farm,    51.93 324  P        P        04 50 02.3  0.0
      baz=126
HAWA  Hanford          51.94 328  IAMs_20  IAMs_20  05 13 04.9
      comp=Z,2µm,21.0s
NEW   Newport          51.99 331  LR       LR       05 13 25.6
      comp=Z,2µm,18.4s,baz=132,slow=38
NEW   Newport          51.99 331  P        P        04 50 02.8 +0.1
      baz=134,SNR=8.9
NEW                               S        S        04 57 28.9 +2.8
      baz=134
NEW   Newport          51.99 331  IAMs_20  IAMs_20  05 12 26.4
      comp=Z,3µm,20.0s
K02D  Willamette Mer   52.06 322  P        P        04 50 02.6 -0.7
      baz=124
D08A  Wollman Farm,    52.06 329  IAMs_20  IAMs_20  05 13 41.2
      comp=Z,2µm,18.0s
KBO   Bosley Butte     52.14 321  IAMs_20  IAMs_20  05 09 31.0
      comp=Z,3µm,21.0s
G05D  Wamic, OR        52.18 326  P        P        04 50 05.6 +1.5
      baz=128,SNR=15
E07A  Sunnyside        52.22 328  IAMs_20  IAMs_20  05 13 13.3
      comp=Z,2µm,19.0s
I03D  Drain, OR        52.43 323  P        P        04 50 06.0 +0.1
      baz=125
J01E  Myrtle Point     52.48 322  P        P        04 50 06.3  0.0
      baz=124
H04D  Lebanon          52.55 324  P        P        04 50 06.6 -0.3
      baz=126
F05D  White Salmon     52.65 327  P        P        04 50 08.8 +1.2
      baz=128,SNR=7.8
F05D                              S        S        04 57 39.0 +3.8
      baz=128
COR   Corvallis        52.92 324  IAMs_20  IAMs_20  05 12 37.7
      comp=Z,2µm,20.0s
I02D  Swisshome        52.96 323  P        P        04 50 09.8  0.0
      baz=125
LTY   Liberty          53.09 328  IAMs_20  IAMs_20  05 13 40.4
      comp=Z,3µm,21.0s
G03D  McMinnville, O   53.26 325  P        P        04 50 12.4 +0.3
      baz=126
F04D  Rainier, OR      53.63 326  P        P        04 50 14.1 -0.7
      baz=127
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C06D  Leavenworth      53.64 329  P        P        04 50 15.3 +0.4
      baz=130
E04D  Cinebar          53.67 327  P        P        04 50 14.3 -0.7
      baz=128
D05A  Enumclaw         53.75 328  IAmb     IAmb     04 50 25.2
      comp=Z,44nm,1.0s
FCC   Fort Churchill   54.12 353  IAMs_20  IAMs_20  05 17 01.7
      comp=Z,1µm,19.0s
D04E  Lakebay          54.16 327  P        P        04 50 19.1 +0.4
      baz=128
E03A  Lebam            54.22 326  IAmb     IAmb     04 50 23.9
      comp=Z,39nm,1.2s
E03A                              IAMs_20  IAMs_20  05 13 53.1
      comp=Z,2µm,19.0s
B06A  Marblemount      54.32 329  IAmb     IAmb     04 50 27.1
      comp=Z,29nm,1.2s
B06A                              IAMs_20  IAMs_20  05 14 49.6
      comp=Z,2µm,18.0s
B05A  Bryant           54.48 329  P        P        04 50 20.4 -0.5
      baz=129
D03D  Eldon            54.55 327  P        P        04 50 21.9 +0.4
      baz=128,SNR=5.3
D03D                              S        S        04 58 03.5 +2.7
      baz=128
NLWA  Neilton Lookou   54.89 327  IAmb     IAmb     04 50 34.1
      comp=Z,25nm,1.1s
A04D  Lummi Island     55.08 329  P        P        04 50 25.4 +0.1
      baz=129
PGC   Sidney           55.42 328  IAMs_20  IAMs_20  05 14 04.1
      comp=Z,2µm,21.0s
RKT   Rikitea          58.39 239 eLQ       LQ       05 05 26.6
      comp=Z,1µm,30.2s
RKT                              eLR       LR       05 07 56.3
      comp=Z,6µm,26.2s
TAOE  Nuku Hiva Isla   59.06 256 eLQ       LQ       05 05 44.0
      comp=Z,3µm,26.6s
TAOE                             eLR       LR       05 08 13.2
      comp=Z,3µm,25.2s,baz=78
BBB   Bella Bella      59.92 329  IAMs_20  IAMs_20  05 16 46.1
      comp=Z,2µm,21.0s
YKA   Yellowknife Ar   61.80 344  P        P        04 51 11.8 -0.2
      comp=Z,42nm,0.9s,baz=136,slow=7.1,SNR=150
YKA                               LR       LR       05 19 45.8
      comp=Z,862nm,18.6s,baz=0.0,slow=38
SFJD  Kangerlussuaq    65.44  13  P        P        04 51 34.7 -1.3
      comp=Z,20nm,1.0s,baz=220,slow=6.2,SNR=7.3
SFJD  Kangerlussuaq    65.44  13  P        P        04 51 35.6 -0.3
SFJD                              pmax     pmax
      comp=Z,37nm,1.1s
SFJD  Kangerlussuaq    65.44  13  P        P        04 51 35.6 -0.3
JIS   Juneau Island    66.26 333  IAMs_20  IAMs_20  05 22 03.8
      comp=Z,2µm,22.0s
MACI  Morro de la Ar   66.49  62  P        P        04 51 42.5 -1.2
PMOZ  Porto Moniz, M   66.54  57  A        A        05 16 07.9
      comp=Z,508nm,20.0s
BESE  Bessie Mountai   66.63 333  IAMs_20  IAMs_20  05 22 26.5
      comp=Z,2µm,22.0s
ILULI Ilulissat        67.17  12  P        P        04 51 46.6 -0.3
ILULI                             pmax     pmax
      comp=Z,15nm,0.8s
ILULI Ilulissat        67.17  12  P        P        04 51 46.6 -0.3
ILULI                             IAmb     IAmb     04 52 04.3
      comp=Z,15nm,0.8s
SKAG  Skagway          67.29 334  IAMs_20  IAMs_20  05 21 04.1
      comp=Z,2µm,22.0s
WHY   Whitehorse       67.72 335  IAMs_20  IAMs_20  05 23 44.5
      comp=Z,1µm,18.0s
HYT   Haines Junctio   68.92 335  IAmb     IAmb     04 52 19.2
      comp=Z,13nm,1.2s
C36M  Paulatuk         69.53 345  P        P        04 52 01.4 -0.3
      baz=135
RES   Resolute Bay     69.75 357  P        P        04 52 02.9 -0.1
      comp=Z,26nm,0.9s,baz=177,slow=9.5,SNR=28
RES   Resolute Bay     69.75 357  IAMs_20  IAMs_20  05 22 52.0
      comp=Z,2µm,19.0s
PPT   Papeete          69.87 249  LR       LR       05 14 58.8
      comp=Z,2µm,21.1s,baz=77,slow=29
PPT2  Papeete2         69.87 249 eLQ       LQ       05 10 19.0
      comp=Z,1µm,25.8s
PPT2                             eLR       LR       05 13 16.8
      comp=Z,3µm,24.0s,baz=70
YAH   Yahtse           70.57 333  IAmb     IAmb     04 52 13.7
      comp=Z,32nm,1.1s
CTGM  Chitina Glacie   70.64 334  IAmb     IAmb     04 52 23.3
      comp=Z,19nm,1.1s
BARN  Barnard Glacie   70.83 334  IAmb     IAmb     04 52 14.8
      comp=Z,17nm,1.0s
ISLE  Juniper Island   70.94 333  IAmb     IAmb     04 52 17.3
      comp=Z,31nm,1.2s
ISLE                              IAMs_20  IAMs_20  05 25 13.5
      comp=Z,2µm,22.0s
TBI   Tubuai           71.11 243 eLQ       LQ       05 10 50.3
      comp=Z,2µm,32.0s
TBI                              eLR       LR       05 13 50.7
      comp=Z,6µm,28.0s,baz=71
BALM  Baldy            71.12 334  IAmb     IAmb     04 52 16.3
      comp=Z,22nm,1.0s
TGL   Tana Glacier     71.22 333  IAMs_20  IAMs_20  05 24 58.9
      comp=Z,2µm,22.0s
CRQM  Cirque           71.36 333  IAmb     IAmb     04 52 18.1
      comp=Z,32nm,1.0s
CRQM                              IAMs_20  IAMs_20  05 25 02.0
      comp=Z,2µm,21.0s
EPYK  Eagle Plains     71.43 340  P        P        04 52 14.4 +0.9
      baz=122,SNR=13
EPYK                              S        S        05 01 32.5 +0.7
      baz=122
EPYK  Eagle Plains     71.43 340  IAmb     IAmb     04 52 19.5
      comp=Z,21nm,1.1s
INK   Inuvik           71.47 342  IAmb     IAmb     04 52 29.7
      comp=Z,30nm,1.1s
TULEG Thule            71.64   3  IAmb     IAmb     04 52 32.7
      comp=Z,36nm,1.1s
VRDI  Verde Repeater   71.69 334  IAmb     IAmb     04 52 19.7
      comp=Z,30nm,1.0s
BCAR  Beaver Creek A   71.75 336  P        P        04 52 14.9 -0.7
GLB   Gilahina Butte   71.93 334  IAmb     IAmb     04 52 21.1
      comp=Z,31nm,1.1s
GLB                               IAMs_20  IAMs_20  05 26 55.8
      comp=Z,2µm,21.0s
EGAK  Eagle            72.26 337  IAmb     IAmb     04 52 22.4
      comp=Z,27nm,0.9s
EGAK                              IAMs_20  IAMs_20  05 27 26.4
      comp=Z,1µm,18.0s
N25K  Chitina, Valde   72.35 334  P        P        04 52 20.4 +1.2
      baz=113,SNR=9.2
N25K  Chitina, Valde   72.35 334  IAmb     IAmb     04 52 23.7
      comp=Z,23nm,1.1s
N25K                              IAMs_20  IAMs_20  05 26 58.7
      comp=Z,2µm,21.0s
SUMG  Summit           72.42  13  P        P        04 52 18.9 -0.9
SUMG                              pmax     pmax
      comp=Z,111nm,1.0s
SUMG  Summit           72.42  13  P        P        04 52 18.9 -0.9
EYAK  Cordova Ski Ar   72.47 332  P        P        04 52 19.2 -0.6
EYAK                              IAmb     IAmb     04 52 24.4
      comp=Z,37nm,1.1s
MENT  Mentasta         72.50 335  IAmb     IAmb     04 52 24.1
      comp=Z,26nm,1.2s
HIN   Hinchinbrook I   72.76 332  P        P        04 52 20.9 -0.7
FID   Port Fidalgo     72.88 333  IAMs_20  IAMs_20  05 27 08.9
      comp=Z,2µm,20.0s
KLU   Klutina          72.89 333  IAmb     IAmb     04 52 26.5
      comp=Z,37nm,1.0s
KLU                               IAMs_20  IAMs_20  05 26 40.1
      comp=Z,2µm,21.0s
DOT   Dot Lake         72.93 336  IAmb     IAmb     04 52 26.7
      comp=Z,30nm,0.9s
DOT                               IAMs_20  IAMs_20  05 26 48.1
      comp=Z,1µm,18.0s
SCRK  Sand Creek       73.03 336  P        P        04 52 24.2 +1.0
      baz=114,SNR=23
SCRK                              S        SKiKP    05 01 55.2 -1.0
      baz=114
GLI   Glacier Island   73.20 333  IAMs_20  IAMs_20  05 28 56.9
      comp=Z,1µm,19.0s
M24K  Tolsona, Glenn   73.23 334  P        P        04 52 25.4 +1.0
      baz=111,SNR=12
SCM   Sheep Creek Mo   73.64 333  IAMs_20  IAMs_20  05 27 13.9
      comp=Z,1µm,19.0s
KNK   Knik Glacier     74.01 333  IAMs_20  IAMs_20  05 26 34.6
      comp=Z,2µm,21.0s
PTEO  Sao Teotonio     74.03  53 eP        P        04 52 30.6 +1.1
      comp=Z,112nm,2.2s
SEW   Seward           74.06 331  P        P        04 52 29.5 +0.4
SEW                               IAmb     IAmb     04 52 32.6
      comp=Z,30nm,0.9s
SEW                               IAMs_20  IAMs_20  05 23 54.9
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      comp=Z,2µm,21.0s
MORF  Marmelete        74.07  53 eP        P        04 52 30.5 +0.7
MORF                               AMb     AMB      04 52 36.1
      comp=Z,119nm,2.3s
MORF  Marmelete        74.07  53 eP        P        04 52 30.4 +0.7
MORF  Marmelete        74.07  53 eP        P        04 52 31.2 +1.4
      comp=Z,121nm,2.4s
SML   Sawmill          74.08 333  IAMs_20  IAMs_20  05 28 15.5
      comp=Z,1µm,20.0s
PSBE  So Bento         74.18  51 eP        P        04 52 31.1 +0.7
      comp=Z,76nm,2.3s
PNCL  Nicolau / Gran   74.24  52 eP        P        04 52 32.0 +1.3
      comp=Z,60nm,2.2s
PRP   Porcupine Dome   74.25 337  IAmb     IAmb     04 52 34.9
      comp=Z,24nm,1.0s
GHO   Glory Hole Cre   74.33 333  IAMs_20  IAMs_20  05 27 34.3
      comp=Z,1µm,21.0s
PMR   Palmer           74.37 333  IAMs_20  IAMs_20  05 27 46.2
      comp=Z,1µm,21.0s
HDA   Harding Lake     74.39 336  P        P        04 52 31.4 +0.4
      baz=111,SNR=41
HDA   Harding Lake     74.39 336  IAmb     IAmb     04 52 34.6
      comp=Z,43nm,1.0s
MESJ  Messejana        74.46  52 eP        P        04 52 32.6 +0.6
MESJ                               AMb     AMB      04 52 41.8
      comp=Z,52nm,2.0s
MESJ  Messejana        74.46  52 eP        P        04 52 32.6 +0.6
MESJ  Messejana        74.46  52 eP        P        04 52 33.0 +1.0
      comp=Z,60nm,2.2s
PCAS  Casmilo, Conde   74.47  50 eP        P        04 52 33.0 +1.0
      comp=Z,82nm,1.2s
RC01  Rabbit Creek A   74.49 332  P        P        04 52 32.2 +0.5
      baz=108,SNR=10
IL31                   74.50 336  IAmb     IAmb     04 52 35.2
      comp=Z,27nm,1.1s
ILAR  Eielson Array    74.50 336  P        P        04 52 31.9 +0.2
      comp=Z,15nm,0.9s,baz=122,slow=3.6,SNR=81
ILAR                              LR       LR       05 28 18.6
      comp=Z,2µm,19.6s,baz=121,slow=38
ILAR  Eielson Array    74.50 336  P        P        04 52 31.1 -0.6
ILAR  Eielson Array    74.50 336  P        P        04 52 31.1 -0.6
COI   Coimbra          74.55  50  P        P        04 52 31.6 -0.9
COI                               pmax     pmax
      comp=Z,81nm,1.0s
COI   Coimbra          74.55  50  P        P        04 52 31.6 -0.9
COI   Coimbra          74.55  50 eP        P        04 52 33.6 +1.1
      comp=Z,113nm,1.1s
FYU   Fort Yukon       74.55 338  IAmb     IAmb     04 52 36.8
      comp=Z,47nm,1.2s
PMTG  Montargil        74.58  51 eP        P        04 52 33.3 +0.7
      comp=Z,39nm,0.9s
PCVE  Castro Verde     74.58  53 eP        P        04 52 33.5 +0.8
      comp=Z,66nm,1.9s
PBDV  Barranco-do-Ve   74.63  53 eP        P        04 52 34.2 +1.1
BRLK  Bradley Lake     74.65 331  IAmb     IAmb     04 52 35.8
      comp=Z,34nm,1.0s
BMAR  Burnt Mountain   74.67 339  P        P        04 52 32.1 -0.6
CNPM  China Poot       74.75 331  IAmb     IAmb     04 52 36.5
      comp=Z,27nm,0.9s
PBEJ  Beja             74.75  52 eP        P        04 52 33.8 +0.1
      comp=Z,13nm,1.9s
EUNU  Eureka           74.80 359  IAmb     IAmb     04 52 37.0
      comp=Z,36nm,1.1s
PVAQ  Vaqueiros        74.82  53 eP        P        04 52 34.4 +0.3
      comp=Z,54nm,1.5s
PVAQ  Vaqueiros        74.82  53 eLR       LR       05 16 05.1
POKR  Poker Plat Res   74.84 337  P        P        04 52 34.2 +0.5
      baz=111,SNR=22
POKR  Poker Plat Res   74.84 337  IAmb     IAmb     04 52 37.4
      comp=Z,20nm,0.9s
POKR                              IAMs_20  IAMs_20  05 28 49.7
      comp=Z,1µm,20.0s
COLA  College          74.92 336⇓iP        P        04 52 34.4 +0.3
COLA                              pmax     pmax
      comp=Z,22nm,1.2s
TCOL  CIGO, UAF Yank   74.93 336  P        P        04 52 34.5 +0.4
      baz=110
KDAK  Kodiak Island    74.97 329  IAMs_20  IAMs_20  05 26 21.0
      comp=Z,962nm,19.0s
MCK   McKinley         74.98 335  P        P        04 52 35.0 +0.5
      baz=109,SNR=30
PVIS  Viseu            75.00  49 eP        P        04 52 35.8 +0.7
      comp=Z,52nm,1.7s
PESTR Estremoz         75.05  51  IAmb     IAmb     04 52 45.4
      comp=Z,28nm,1.0s
CAPN  Captain Cook N   75.06 332  P        P        04 52 33.9 -1.0
      baz=106
SUA   Susitna One      75.07 333  IAmb     IAmb     04 52 38.5
      comp=Z,32nm,0.9s
SUA                               IAMs_20  IAMs_20  05 25 55.7
      comp=Z,1µm,22.0s
MDM   Murphy Dome      75.10 336  IAmb     IAmb     04 52 38.8
      comp=Z,23nm,1.0s
CUT   Chulitna         75.13 334  P        P        04 52 35.6 +0.2
      baz=108,SNR=14
POLO  Lamas de Olo     75.14  49 eP        P        04 52 36.8 +0.8
      comp=Z,18nm,1.3s
OHAK  Old Harbor       75.21 328  IAmb     IAmb     04 52 39.3
      comp=Z,33nm,1.0s
PCBR  Castelo Branco   75.23  50 eP        P        04 52 38.3 +1.9
      comp=Z,37nm,2.6s
MTE   Manteigas        75.23  50 eP        P        04 52 36.7 +0.2
MTE   Manteigas        75.23  50 eLR       LR       05 16 21.4
      comp=Z,1µm,22.0s
PMRV  Marv??o          75.25  51 eP        P        04 52 36.8 +0.2
      comp=Z,36nm,1.4s
PMRV  Marv??o          75.25  51 eLR       LR       05 15 48.0
      comp=Z,674nm,22.0s
NEA2  Nenana           75.32 336  P        P        04 52 36.6 +0.2
      baz=109,SNR=27
NEA2                              S        S        05 02 21.0 +5.2
      baz=109
BWN   Browne           75.34 335  IAMs_20  IAMs_20  05 27 51.1
      comp=Z,1µm,20.0s
PBAR  Barrancos        75.42  52 eP        P        04 52 38.3 +0.8
TRF   Thorofare Moun   75.46 335  IAmb     IAmb     04 52 41.0
      comp=Z,25nm,0.9s
SKT   Skwentna         75.58 333  IAMs_20  IAMs_20  05 27 14.7
      comp=Z,1µm,20.0s
I23K  Minto, Yukon-K   75.62 336  P        P        04 52 38.8 +0.7
      baz=109,SNR=22
I23K  Minto, Yukon-K   75.62 336  IAmb     IAmb     04 52 53.3
      comp=Z,21nm,1.0s
MVO   Moncorvo         75.70  49 eP        P        04 52 39.6 +0.4
      comp=Z,34nm,1.4s
MVO   Moncorvo         75.70  49 eLR       LR       05 16 30.0
      comp=Z,908nm,22.0s
KTH   Kantishna Hill   75.76 335  IAmb     IAmb     04 52 42.4
      comp=Z,38nm,0.9s
BPAW  Bear Paw Mtn.    75.95 335  IAMs_20  IAMs_20  05 28 20.1
      comp=Z,2µm,21.0s
PBRG  Braganca         75.97  48 eP        P        04 52 41.0 +0.3
PPLA  Purkeypile       76.12 334  IAmb     IAmb     04 52 44.6
      comp=Z,43nm,1.1s
MLY   Manley           76.14 336  P        P        04 52 41.4 +0.3
      baz=108,SNR=16
COLD  Coldfoot         76.62 338  P        P        04 52 45.2 +1.4
      baz=109,SNR=24
COLD  Coldfoot         76.62 338  IAmb     IAmb     04 52 48.6
      comp=Z,26nm,1.0s
TOLK  Toolik Lake Re   76.87 340  P        P        04 52 45.8 +0.6
      baz=110,SNR=13
MDT   Midelt           77.08  58  P        P        04 52 47.5 +0.2
      comp=Z,12nm,0.8s,baz=289,slow=4.7,SNR=8.4
TIC   Toumodi          77.09  84 eP        P        04 52 47.7 +0.2
LIC   Lamto            77.11  85 eP        P        04 52 47.9 +0.3
      comp=Z,98nm,1.0s
DBIC  Dimbokro         77.25  84  P        P        04 52 48.8 +0.4
      comp=Z,20nm,0.9s,baz=255,slow=6.9,SNR=9.8
DBIC                              LR       LR       05 24 58.8
      comp=Z,335nm,21.1s,baz=252,slow=34
DBIC  Dimbokro         77.25  84  P        P        04 52 47.0 -1.4
DBIC                              pmax     pmax
      comp=Z,32nm,1.1s
DBIC  Dimbokro         77.25  84  P        P        04 52 47.0 -1.4
DBIC                              IAmb     IAmb     04 52 53.1
      comp=Z,32nm,1.1s
KIC   Kosan Boka       77.39  85 eP        P        04 52 49.5 +0.3
      comp=Z,36nm,0.9s
IMAR  Indian Mountai   77.61 337  P        P        04 52 48.9 -0.5
KOWA  Kowa             77.66  76  P        P        04 52 49.4 -1.3
KOWA                              IAmb     IAmb     04 52 52.6
      comp=Z,20nm,0.8s
ESDC  Sonseca Array    77.92  51  P        P        04 52 52.4 +0.7
      comp=Z,11nm,0.9s,baz=275,slow=5.6,SNR=36
ESBB  Sonseca Array    77.92  51  IAmb     IAmb     04 53 01.4
      comp=Z,19nm,1.1s
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ES02	**SONSECA Array**	**77.94**	**51**	IAMs_20	IAMs_20	05 20 56.2	
	comp=Z,1µm,20.0s						
QUIF	**Quistinic**	**79.04**	**42**	*e*P	**P**	**04 52 57.3**	**-0.3**
QUIF				pmax	pmax		
	comp=Z,226nm,2.2s						
EKA	**Eskdalemuir Ar**	**79.69**	**35**	P	**P**	**04 53 00.9**	**-0.2**
	comp=Z,9.5nm,0.9s,baz=260,slow=4.8,SNR=13						
A21K	**Barrow**	**79.96**	**342**	P	**P**	**04 53 02.8**	**+0.7**
	baz=104,SNR=16						
A21K	**Barrow**	**79.96**	**342**	IAmb	IAmb	04 53 06.1	
	comp=Z,37nm,1.1s						
FALS	**False Pass**	**80.45**	**325**	IAMs_20	IAMs_20	05 22 54.0	
	comp=Z,991nm,20.0s						
GRR	**Gorron**	**80.61**	**42**	*e*P	**P**	**04 53 06.5**	**+0.4**
GRR				pmax	pmax		
	comp=Z,183nm,2.0s						
MFF	**Saint Martin d**	**81.02**	**44**	*e*P	**P**	**04 53 08.0**	**-0.4**
MFF				pmax	pmax		
	comp=Z,18nm,1.0s						
LDF	**La Druitiere**	**81.11**	**42**	*e*P	**P**	**04 53 09.1**	**+0.3**
LDF				pmax	pmax		
	comp=Z,109nm,1.9s						
EPF	**Esparros**	**81.28**	**47**	*e*P	**P**	**04 53 10.0**	**+0.1**
EPF				pmax	pmax		
	comp=Z,35nm,1.4s						
RDOG	**Red Dog Mine**	**81.54**	**338**	IAmb	IAmb	04 53 14.4	
	comp=Z,19nm,1.0s						
ANM	**Nome**	**82.18**	**334**	IAmb	IAmb	04 53 18.7	
	comp=Z,18nm,1.1s						
TCF	**Toulx Ste Croi**	**82.64**	**44**	*e*P	**P**	**04 53 17.0**	**0.0**
TCF				pmax	pmax		
	comp=Z,105nm,2.2s						
MTLF	**Montolieu**	**82.65**	**47**	*e*P	**P**	**04 53 17.6**	**+0.5**
MTLF				pmax	pmax		
	comp=Z,254nm,2.2s						
TOC5	**Torodi Ar. Sit**	**83.26**	**77**	IAMs_20	IAMs_20	05 26 32.4	
	comp=Z,1µm,20.0s						
TOC7	**Torodi Ar. Sit**	**83.26**	**77**	IAMs_20	IAMs_20	05 28 51.4	
	comp=Z,920nm,20.0s						
TOB5	**Torodi Ar. Sit**	**83.26**	**77**	IAMs_20	IAMs_20	05 29 00.4	
	comp=Z,1µm,21.0s						
TOB4	**Torodi Ar. Sit**	**83.26**	**77**	IAMs_20	IAMs_20	05 26 21.6	
	comp=Z,1µm,22.0s						
TOB1	**Torodi Ar. Sit**	**83.27**	**77**	IAMs_20	IAMs_20	05 29 00.8	
	comp=Z,874nm,20.0s						
TOA3	**Torodi Ar. Sit**	**83.27**	**77**	IAMs_20	IAMs_20	05 29 02.8	
	comp=Z,892nm,21.0s						
TOA0	**Torodi Ar. Sit**	**83.27**	**77**	P	**P**	**04 53 19.4**	**-1.4**
TOA0				IAMs_20	IAMs_20	05 28 52.8	
	comp=Z,886nm,20.0s						
TORD	**Torodi Ar. Bea**	**83.27**	**77**	P	**P**	**04 53 20.9**	**+0.1**
	comp=Z,7.7nm,0.7s,baz=288,slow=6.2,SNR=16						
TORD				LR	LR	05 29 24.5	
	comp=Z,797nm,21.1s,baz=265,slow=35						
TORD	**Torodi Ar. Bea**	**83.27**	**77**	P	**P**	**04 53 19.5**	**-1.3**
TOC1	**Torodi Ar. Sit**	**83.28**	**77**	IAMs_20	IAMs_20	05 29 02.0	
	comp=Z,1µm,21.0s						
TOA2	**Torodi Ar. Sit**	**83.28**	**77**	IAMs_20	IAMs_20	05 29 02.0	
	comp=Z,1µm,22.0s						
TOC4	**Torodi Ar. Sit**	**83.28**	**77**	IAMs_20	IAMs_20	05 29 03.0	
	comp=Z,897nm,21.0s						
TOB3	**Torodi Ar. Sit**	**83.28**	**77**	IAMs_20	IAMs_20	05 29 03.1	
	comp=Z,888nm,21.0s						
TOC2	**Torodi Ar. Sit**	**83.30**	**77**	IAMs_20	IAMs_20	05 29 02.5	
	comp=Z,928nm,21.0s						
TOC3	**Torodi Ar. Sit**	**83.30**	**77**	IAMs_20	IAMs_20	05 29 02.5	
	comp=Z,896nm,21.0s						
AVF	**Avril sur Loir**	**83.43**	**44**	*e*P	**P**	**04 53 18.5**	**-2.5**
AVF				pmax	pmax		
	comp=Z,58nm,2.0s						
GIVF	**Givet**	**84.35**	**40**	*e*P	**P**	**04 53 25.8**	**+0.1**
GIVF				pmax	pmax		
	comp=Z,14nm,1.0s						
GAMB	**Gambell**	**84.94**	**334**	IAmb	IAmb	04 53 32.5	
	comp=Z,18nm,1.0s						
WLF	**Walferdange**	**85.22**	**41**	*e*P	**P**	**04 53 30.8**	**+0.7**
	comp=Z,13nm,0.9s,baz=277,slow=4.9						
ORIF	**Oris-en-Rattie**	**85.25**	**45**	*e*P	**P**	**04 53 31.5**	**+1.1**
ORIF				pmax	pmax		
	comp=Z,108nm,2.1s						
AHRW	**Bad Neuenahr-A**	**85.78**	**40**	*e*P	**P**	**04 53 32.4**	**-0.4**
	comp=Z,23nm,1.1s,baz=277,slow=4.9						
HINF	**Hinteralfeld**	**85.78**	**43**	*e*P	**P**	**04 53 31.9**	**-1.0**
HINF				pmax	pmax		
	comp=Z,52nm,1.9s						
LPL	**La Plagne**	**85.82**	**45**	*e*P	**P**	**04 53 35.3**	**+1.9**
LPL				pmax	pmax		
	comp=Z,49nm,1.7s						
LPG	**La Plagne**	**85.83**	**45**	*e*P	**P**	**04 53 33.8**	**+0.2**
LPG				pmax	pmax		
	comp=Z,22nm,1.2s						
ECH	**Echery**	**85.96**	**42**	IAmb	IAmb	04 53 43.1	
	comp=Z,21nm,1.1s						
IBBN	**Ibbenburen**	**86.10**	**38**	*e*P	**P**	**04 53 34.9**	**+0.6**
	comp=Z,16nm,0.9s,baz=277,slow=4.9						
TAM	**Tamanrasset**	**86.26**	**68**	P	**P**	**04 53 37.5**	**+1.5**
TAM	**Tamanrasset**	**86.26**	**68**	IAMs_20	IAMs_20	05 31 18.6	
	comp=Z,772nm,19.0s						
KASTN	**Kahler Asten**	**86.58**	**39**	*e*P	**P**	**04 53 37.3**	**+0.5**
	comp=Z,8.9nm,1.1s,baz=277,slow=4.9						
KONO	**Kongsberg**	**86.62**	**31**	IAMs_20	IAMs_20	05 25 26.6	
	comp=Z,1µm,22.0s						
TNS	**Taunus Mts**	**86.67**	**40**	*e*P	**P**	**04 53 36.8**	**-0.5**
	comp=Z,13nm,1.1s,baz=277,slow=4.9						
SPITS	**Spitsbergen Ar**	**86.73**	**12**	P	**P**	**04 53 37.4**	**+0.4**
	comp=Z,44nm,1.1s,baz=205,slow=3.7,SNR=4.0						
BELA	**Belgrano 2**	**87.01**	**171**	P	**P**	**04 53 38.1**	**-0.2**
BELA				IAmb	IAmb	04 53 51.1	
	comp=Z,8.5nm,0.8s						
STU	**Stuttgart**	**87.27**	**41**	*e*P	**P**	**04 53 40.4**	**+0.2**
	comp=Z,12nm,0.8s,baz=277,slow=4.9						
NB2	**NORSAR Subarra**	**87.29**	**29**	P	**P**	**04 53 39.9**	**-0.2**
	comp=Z,2.5nm,0.9s,baz=276,slow=4.8						
NOA	**NORSAR Array B**	**87.29**	**29**	P	**P**	**04 53 39.9**	**-0.2**
	comp=Z,7.8nm,1.0s,baz=276,slow=4.5,SNR=9.3						
BSEG	**Bad Segeberg**	**87.51**	**36**	*e*P	**P**	**04 53 40.6**	**-0.6**
	comp=Z,11nm,1.0s,baz=277,slow=4.9						
CLZ	**Clausthal**	**87.75**	**38**	*e*P	**P**	**04 53 43.2**	**+0.7**
	comp=Z,12nm,1.0s,baz=277,slow=4.9						
ASSE	**Asse, Remlinge**	**87.90**	**38**	*e*P	**P**	**04 53 43.8**	**+0.8**
	comp=Z,10nm,1.0s,baz=277,slow=4.9						
DAVOX	**Davos/Dischmat**	**87.91**	**43**	P	**P**	**04 53 44.0**	**+0.4**
	comp=Z,2.7nm,0.9s,baz=229,slow=11,SNR=2.6						
FLTG	**Flechtingen**	**88.23**	**38**	*e*P	**P**	**04 53 44.8**	**+0.2**
	comp=Z,7.6nm,0.9s,baz=277,slow=4.9						
GRA1	**Grafenberg Arr**	**88.50**	**40**	IAMs_20	IAMs_20	05 28 03.1	
	comp=Z,1µm,21.0s						
NEUB	**Neuenburg**	**88.69**	**39**	*e*P	**P**	**04 53 46.9**	**+0.1**
	comp=Z,5.9nm,0.9s,baz=277,slow=4.9						
WERD	**Werda**	**89.11**	**40**	*e*P	**P**	**04 53 48.7**	**-0.2**
	comp=Z,4.1nm,1.0s,baz=277,slow=4.9						
GUNZ	**Gunzen**	**89.14**	**40**	*e*P	**P**	**04 53 49.9**	**+0.8**
	comp=Z,5.0nm,1.0s,baz=277,slow=4.9						
WERN	**Wernitzgruen**	**89.17**	**40**	*e*P	**P**	**04 53 49.8**	**+0.5**
	comp=Z,4.0nm,1.0s,baz=277,slow=4.9						
TANN	**Tannenbergstha**	**89.21**	**40**	*e*P	**P**	**04 53 49.6**	**+0.2**
	comp=Z,6.4nm,1.0s,baz=277,slow=4.9						
NKC	**Novy Kostel**	**89.23**	**40**	*e*P	**P**	**04 53 53.0**	**+3.5**
NKC				MLR	MLR		
	comp=Z,2µm,23.7s						
NKC	**Novy Kostel**	**89.23**	**40**	*e*P	**P**	**04 53 53.0**	**+3.5**
NKC				AMS	AMS	05 25 40.0	
	comp=Z,2µm,23.7s						
CLL	**Collm**	**89.44**	**39**	*e*P	**P**	**04 53 51.0**	**+0.6**
CLL				*e*		04 54 17.0	
CLL				LmV		05 28 00.0	
	comp=Z,900nm,21.6s						
CLL	**Collm**	**89.44**	**39**	*e*P	**P**	**04 53 51.0**	**+0.6**
CLL				MLR	MLR		
	comp=Z,900nm,21.6s						
CLL	**Collm**	**89.44**	**39**	IAMs_20	IAMs_20	05 28 43.7	
	comp=Z,1µm,21.0s						
CLL	**Collm**	**89.44**	**39**	*e*P	**P**	**04 53 50.8**	**+0.5**
	comp=Z,4.2nm,1.0s,baz=277,slow=4.9						
VNA3	**Neumayer Olymp**	**89.51**	**162**	P	**P**	**04 53 50.0**	**-0.3**
WET	**Wettzell**	**89.64**	**41**	*e*P	**P**	**04 53 52.3**	**+0.8**
	comp=Z,5.7nm,1.0s,baz=277,slow=4.9						
VNA1	**Neumayer--Stat**	**89.77**	**161**	P	**P**	**04 53 49.5**	**-1.9**
BRG	**Berggiesshubel**	**90.08**	**39**	*e*P	**P**	**04 53 54.2**	**+0.7**
	comp=Z,2.5nm,0.8s,baz=277,slow=4.9						
KHC	**Kasperske Hory**	**90.10**	**41⇑**	*e*P	**P**	**04 53 55.1**	**+1.5**
KHC				pmax	pmax		
	comp=Z,41nm,2.7s						
KHC	**Kasperske Hory**	**90.10**	**41**	*e*P	**P**	**04 53 52.7**	**-0.9**
KHC				AMS	AMS	05 26 00.0	
	comp=Z,2µm,29.2s						
KHC	**Kasperske Hory**	**90.10**	**41**	IAMs_20	IAMs_20	05 28 06.4	
	comp=Z,835nm,20.0s						
VNA2	**Neumayer--Watz**	**90.13**	**161**	P	**P**	**04 53 54.7**	**+1.5**
	baz=316,slow=5.1						
GEC2	**GERESS Array S**	**90.22**	**41**	IAMs_20	IAMs_20	05 26 50.6	
	comp=Z,1µm,21.0s						
GEC2	**GERESS Array S**	**90.22**	**41**	*e*P	**P**	**04 53 54.5**	**+0.2**
	comp=Z,3.5nm,0.9s,baz=277,slow=4.9						
GERES	**GERESS Array B**	**90.22**	**41**	P	**P**	**04 53 54.0**	**-0.3**
	comp=Z,2.4nm,0.9s,baz=298,slow=2.9,SNR=6.8						
GERES				LR	LR	05 27 58.9	
	comp=Z,650nm,22.0s,baz=280,slow=31						
GERES	**GERESS Array B**	**90.22**	**41**	P	**P**	**04 53 53.3**	**-1.0**
GERES	**GERESS Array B**	**90.22**	**41**	P	**P**	**04 53 53.3**	**-1.0**
PRA	**Prague**	**90.52**	**40**	AMS	AMS	05 26 40.0	
	comp=Z,1µm,26.4s						
PVCC	**Panska Ves**	**90.53**	**39**	AMS	AMS	05 26 40.0	
	comp=Z,2µm,27.2s						
PRU	**Pruhonice**	**90.60**	**40**	AMS	AMS	05 26 40.0	
	comp=Z,2µm,26.7s						
TREC	**Trest**	**91.31**	**40**	AMS	AMS	05 26 40.0	
	comp=Z,2µm,29.0s						
ARCES	**ARCESS Array B**	**91.36**	**20**	LR	LR	05 29 05.6	
	comp=Z,497nm,21.8s,baz=300,slow=32						
UPC	**Upice**	**91.44**	**39**	AMS	AMS	05 27 10.0	
	comp=Z,2µm,28.0s						
CHVC	**Chvalec**	**91.46**	**39**	*e*P	P	04 54 07.0	+7.1
CHVC				AMS	AMS	05 26 50.0	
	comp=Z,1µm,25.8s						
OSTC	**Ostas**	**91.56**	**39**	*e*P	**P**	**04 54 01.2**	**+0.8**
OSTC				AMS	AMS	05 27 00.0	
	comp=Z,1µm,21.4s						
DPC	**Dobruska-Polom**	**91.67**	**39**	*e*P	**P**	**04 54 01.8**	**+0.9**
DPC				MLR	MLR		
	comp=Z,2µm,23.2s						
DPC	**Dobruska-Polom**	**91.67**	**39**	*e*P	**P**	**04 54 01.8**	**+0.9**
DPC				AMS	AMS	05 29 30.0	
	comp=Z,2µm,23.2s						
SNAA	**Sanae**	**91.73**	**162**	P	**P**	**04 54 00.3**	**-0.3**
SNAA	**Sanae**	**91.73**	**162⇑**	*e*P	**P**	**04 54 00.0**	**-0.7**
SNAA				pmax	pmax		
	comp=Z,9.0nm,1.1s						
SNAA	**Sanae**	**91.73**	**162**	P	**P**	**04 54 00.2**	**-0.5**
KRUC	**Moravsky**	**91.94**	**41**	*e*P	**P**	**04 54 02.6**	**+0.5**
KRLC	**Kraliky**	**92.01**	**40**	*e*P	**P**	**04 54 05.3**	**+2.8**
KRLC				MLR	MLR		
	comp=Z,2µm,24.2s						
KRLC	**Kraliky**	**92.01**	**40**	*e*P	**P**	**04 54 05.3**	**+2.8**
KRLC				AMS	AMS	05 29 40.0	
	comp=Z,2µm,24.2s						
VRAC	**Vranov**	**92.03**	**40**	*e*P	**P**	**04 54 03.2**	**+0.7**
OKC	**Ostrava-Krasne**	**92.92**	**40**	AMS	AMS	05 30 00.0	
	comp=Z,1µm,18.9s						
CEL	**Celeste**	**93.42**	**51**	IAMs_20	IAMs_20	05 29 23.0	
	comp=Z,694nm,22.0s						
PSZ	**Piszkesteto**	**94.45**	**41**	IAMs_20	IAMs_20	05 30 56.4	
	comp=Z,499nm,21.0s						
APA	**Apatity**	**94.80**	**20⇓**	*i*P	**P**	**04 54 17.0**	**+2.2**
APA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
QSPA	**South Pole Qui**	**95.26**	**180**	P	**P**	**04 54 16.5**	**-0.7**
VSU	**Vasula**	**95.50**	**30⇓**	*e*P	**P**	**04 54 19.6**	**+1.4**
MNK	**Minsk**	**97.43**	**33**	*i* P	**P**	**04 54 25.3**	**-1.8**
	comp=E,1.0nm,0.7s						
MNK				*i* P	**P**	**04 54 25.3**	**-1.8**
	comp=N,6.0nm,0.8s						
MNK				*i* P	**P**	**04 54 25.3**	**-1.8**
	comp=Z,4.0nm,0.7s						
MNK				*i* PP	**PP**	**04 58 21.7**	**-2.0**
MNK				*i* PPP	PPP	05 00 26.6	
MNK				*i* S	**SKSac**	**05 05 02.6**	**-2.0**
MNK				*i* PS	**PS**	**05 07 02.9**	**-12**
MNK				*i* SS	**SS**	**05 12 30.4**	**+0.7**
MNK				*i* SSS	SSS	05 16 16.4	
MNK				*i* LR	LR	05 36 43.1	
MNK				*i* LRM	MLR	05 39 03.9	
	comp=E,23nm,20.3s						
MNK				*i* LRM	MLR	05 39 03.9	
	comp=N,169nm,20.2s						
MNK				*i* LRM	MLR	05 39 03.9	
	comp=Z,277nm,23.2s						
VTS	**Vitosha**	**98.00**	**46**	IAMs_20	IAMs_20	05 33 41.8	
	comp=Z,487nm,22.0s						
AKASG	**Malin Array Be**	**99.51**	**37**	LR	LR	05 35 12.5	
	comp=Z,671nm,21.9s,baz=305,slow=33						
SEY	**Seymchan**	**100.41**	**338⇑**	*e*P	**Pdif**	**04 54 42.2**	**+2.0**
TIXI	**Tiksi**	**100.54**	**350⇑**	*e*P	**Pdif**	**04 54 41.3**	**+0.7**
SANT	**Santorini**	**101.27**	**51**	IAMs_20	IAMs_20	05 38 55.8	
	comp=Z,411nm,20.0s						
OBN	**Obninsk**	**101.79**	**31**	*e*P	**Pdif**	**04 54 47.5**	**+1.0**
OBN				*e*PPP	PPP	05 01 06.0	
OBN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
OBN	**Obninsk**	**101.79**	**31**	IAMs_20	IAMs_20	05 36 21.3	
	comp=Z,928nm,21.0s						
PET	**Petropavlovsk**	**102.53**	**327**	*e*P	**Pdif**	**04 54 44.8**	**-5.1**
PET				*e*		04 59 01.0	
PET				*e*S	**Sdif**	**05 06 23.1**	**-11**
PET				*e*SS	**SS**	**05 13 34.8**	**-5.9**
PET				pmax	pmax		
	comp=Z,100nm,17.3s						
PET				pmax	pmax		
	comp=Z,100nm,23.0s						
PET				MLR	MLR		
	comp=Z,900nm,21.0s						
MA2	**Magadan**	**102.96**	**335**	IAMs_20	IAMs_20	05 43 38.8	
	comp=Z,828nm,19.0s						
NRIK	**Noril'sk**	**105.26**	**4**	IAMs_20	IAMs_20	05 41 58.2	
	comp=Z,640nm,22.0s						
KIV	**Kislovodsk**	**110.64**	**39**	*e*PKIKP	**PKiKP**	**04 59 26.0**	**-0.6**
KIV				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KIV	**Kislovodsk**	**110.64**	**39**	IAMs_20	IAMs_20	05 41 36.6	
	comp=Z,685nm,22.0s						
ARU	**Arti**	**110.81**	**22**	*i* PKIKP	**PKiKP**	**04 59 29.2**	**+2.8**
ARU						05 00 02.6	
ARU						05 06 41.3	
DZM	**Mont Dzumac**	**111.37**	**248**	*e*LR	LR	05 32 26.2	
	comp=Z,702nm,27.1s						
GEVA	**Gevas**	**113.61**	**44**	IAMs_20	IAMs_20	05 43 54.7	
	comp=Z,479nm,22.0s						
ABKAR	**Akbulak array**	**116.69**	**26**	PKPdf	**PKPdf**	**04 59 37.0**	**-0.9**
BRVK	**Borovoye**	**117.55**	**18⇑**	*i*PKIKP	**PKiKP**	**04 59 41.3**	**+1.9**
BRVK	**Borovoye**	**117.55**	**18**	IAMs_20	IAMs_20	05 44 22.5	
	comp=Z,815nm,22.0s						
HNR	**Honiara**	**117.90**	**262**	IAMs_20	IAMs_20	05 42 01.4	
	comp=Z,347nm,18.0s						
FURI	**Furi**	**119.79**	**77**	IAMs_20	IAMs_20	05 54 51.5	
	comp=Z,583nm,20.0s						
ZAA0	**Zalesovo Array**	**120.08**	**9**	IAMs_20	IAMs_20	05 54 17.1	
	comp=Z,591nm,22.0s						
ZALV	**Zalesovo Beam**	**120.08**	**9**	PKP	**PKiKP**	**04 59 44.3**	**-0.1**
	comp=Z,6.8nm,1.0s,baz=284,slow=2.4,SNR=14						
ZALV	**Zalesovo Beam**	**120.08**	**9**	PKIKP	**PKPdf**	**04 59 43.5**	**-0.8**
ZALV	**Zalesovo Beam**	**120.08**	**9**	PKPdf	**PKPdf**	**04 59 43.5**	**-0.8**
RAYN	**Ar Rayn**	**121.86**	**58**	IAMs_20	IAMs_20	05 50 32.9	
	comp=Z,480nm,20.0s						
KURK	**Kurchatov**	**121.95**	**14⇑**	*i*PKIKP	**PKiKP**	**04 59 48.7**	**+0.6**
KURK	**Kurchatov**	**121.95**	**14**	PKPdf	**PKPdf**	**04 59 47.0**	**-0.9**
KURK	**Kurchatov**	**121.95**	**14**	IAMs_20	IAMs_20	05 47 02.9	
	comp=Z,817nm,22.0s						
KURBB	**Kurchatov Arra**	**122.02**	**14**	PKP	**PKPdf**	**04 59 47.9**	**-0.2**
	comp=Z,5.2nm,0.9s,baz=330,slow=2.3,SNR=24						
SEM	**Semipalatinsk**	**122.62**	**13**	*e*PKP	**PKPdf**	**04 59 49.1**	**-0.5**
	baz=13						
SEM	**Semipalatinsk**	**122.62**	**13**	*e*PKIKP	**PKPdf**	**04 59 49.1**	**-0.5**
TLY	**Talaya**	**123.04**	**355⇑**	*i*PKIKP	**PKiKP**	**04 59 52.4**	**+2.1**
ATD	**Arta Tunnel**	**123.22**	**73**	IAMs_20	IAMs_20	05 58 50.2	
	comp=Z,495nm,19.0s						
MAJO	**Matsushiro**	**123.59**	**321⇓**	*i*PKIKP	**PKiKP**	**04 59 52.4**	**+0.6**
GYA0B	**ALIBECK ARRAY**	**123.63**	**37**	IAMs_20	IAMs_20	05 50 19.6	
	comp=Z,421nm,22.0s						
ASHT	**Ashkhabad**	**123.78**	**37**	IAMs_20	IAMs_20	05 55 17.6	
	comp=Z,359nm,20.0s						
DGZ	**Jazzator, Alta**	**124.59**	**8⇑**	*i*PKIKP	**PKiKP**	**04 59 54.1**	**+0.5**
EIDS	**Eidsvold**	**124.92**	**243**	IAMs_20	IAMs_20	05 40 59.1	
	comp=Z,741nm,22.0s						
ZSN	**Zaisan**	**126.37**	**11**	*e*PKP	**PKPdf**	**04 59 56.5**	**-0.1**
	baz=10						
ZSN	**Zaisan**	**126.37**	**11**	*e*PKIKP	**PKPdf**	**04 59 56.5**	**-0.1**
MAKZ	**Makanchi**	**126.39**	**13**	PKIKP	**PKPdf**	**04 59 55.6**	**-1.1**
MAKZ	**Makanchi**	**126.39**	**13**	PKPdf	**PKPdf**	**04 59 55.6**	**-1.1**
MAKZ				IAMs_20	IAMs_20	05 58 20.4	
	comp=Z,624nm,21.0s						
ULN	**Ulaanbaatar**	**126.43**	**352⇑**	*i*PKIKP	**PKiKP**	**04 59 57.6**	**+0.3**
ULN	**Ulaanbaatar**	**126.43**	**352**	PKPdf	**PKPdf**	**04 59 55.7**	**-1.2**
ULN	**Ulaanbaatar**	**126.43**	**352**	IAMs_20	IAMs_20	06 01 07.7	
	comp=Z,626nm,19.0s						
MK31	**Makanchi Array**	**126.48**	**13⇓**	*e*PKIKP	**PKPdf**	**04 59 56.4**	**-0.4**
MKAR	**Makanchi Array**	**126.48**	**13**	PKP	**PKiKP**	**04 59 56.9**	**-0.4**
	comp=Z,5.2nm,1.0s,baz=342,slow=2.3,SNR=20						
SONM	**Songino Array**	**126.55**	**352**	PKP	**PKiKP**	**04 59 57.5**	**-0.1**
	comp=Z,4.3nm,0.9s,baz=357,slow=1.5,SNR=20						
SONM				PP	**PP**	**05 01 45.5**	**-6.2**
	comp=Z,1.4nm,1.0s,baz=331,slow=5.1,SNR=3.5						
SONM	**Songino Array**	**126.55**	**352**	PKIKP	**PKPdf**	**04 59 55.9**	**-1.2**
SONM	**Songino Array**	**126.55**	**352**	PKPdf	**PKPdf**	**04 59 55.9**	**-1.2**
IUG	**Iuzhnay**	**126.65**	**25**	*e*PKP	**PKPdf**	**04 59 56.3**	**-1.1**
	baz=25						
IUG				*i* PP	**PP**	**05 01 53.0**	**+0.2**
	baz=25						
IUG	**Iuzhnay**	**126.65**	**25**	*e*PKIKP	**PKPdf**	**04 59 56.3**	**-1.1**
IUG				*i*		05 01 52.9	
SGDS	**Sogindy**	**127.33**	**21**	*e*PKP	**PKiKP**	**04 59 58.9**	**-0.3**
	baz=21						
SGDS	**Sogindy**	**127.33**	**21**	*e*PKIKP	**PKiKP**	**04 59 58.8**	**-0.3**
USP	**Ospenovka**	**127.44**	**21**	P	**PKiKP**	**05 00 00.1**	**+0.7**
	SNR=8.2						
KUU	**Kurty**	**127.52**	**19**	*i* PKP	**PKPdf**	**04 59 58.6**	**-0.3**
	baz=19						
KUU	**Kurty**	**127.52**	**19**	*i* PKIKP	**PKPdf**	**04 59 58.5**	**-0.3**
EKS2	**Erkin-Say**	**127.71**	**22**	P	**PKiKP**	**05 00 01.0**	**+1.0**
	SNR=7.5						
CHKK	**Chushkaly**	**127.76**	**19**	*e*PKP	**PKiKP**	**04 59 59.5**	**-0.4**
	baz=19						
CHKK	**Chushkaly**	**127.76**	**19**	*e*PKIKP	**PKiKP**	**04 59 59.5**	**-0.4**
AAK	**Ala-Archa**	**127.99**	**21**	PKP	**PKiKP**	**05 00 01.9**	**+1.3**
	comp=Z,10nm,1.1s,baz=257,slow=2.3,SNR=8.7						
AAK	**Ala-Archa**	**127.99**	**21**	P	**PKiKP**	**05 00 02.1**	**+1.5**
	SNR=6.4						
AAK	**Ala-Archa**	**127.99**	**21⇑**	*i*PKIKP	**PKiKP**	**05 00 00.9**	**+0.3**
AAK	**Ala-Archa**	**127.99**	**21**	PKPdf	**PKPdf**	**04 59 58.8**	**-1.3**
AAK	**Ala-Archa**	**127.99**	**21**	IAMs_20	IAMs_20	05 58 28.0	
	comp=Z,520nm,20.0s						
TKM2	**Tokmak 2**	**128.13**	**20**	P	**PKiKP**	**05 00 01.4**	**+0.5**
	SNR=5.5						
UCH	**Uchtor**	**128.35**	**22**	P	**PKiKP**	**05 00 02.5**	**+0.8**
	SNR=9.0						
MDOK	**Medeo**	**128.40**	**19**	*e*PKP	**PKiKP**	**05 00 01.0**	**-0.5**
	baz=19						
MDOK	**Medeo**	**128.40**	**19**	*e*PKIKP	**PKiKP**	**05 00 00.9**	**-0.5**
TNSS	**Tian-Shan**	**128.48**	**19**	*e*PKP	**PKiKP**	**05 00 02.1**	**+0.1**
	baz=19						
TNSS	**Tian-Shan**	**128.48**	**19**	*e*PKIKP	**PKiKP**	**05 00 02.0**	**+0.1**
KPKS	**Kokpek**	**128.64**	**17**	*e*PKP	**PKiKP**	**05 00 01.3**	**-0.5**
	baz=17						
KPKS	**Kokpek**	**128.64**	**17**	*e*PKIKP	**PKiKP**	**05 00 01.3**	**-0.5**
KSRS	**Korea Array**	**128.88**	**329**	PKP	**PKiKP**	**05 00 02.7**	**+0.4**
	comp=Z,6.1nm,1.0s,baz=24,slow=0.6,SNR=10						
KSAR	**Wonju Array Be**	**128.91**	**329**	PKIKP	**PKPdf**	**05 00 00.3**	**-1.4**
KSAR	**Wonju Array Be**	**128.91**	**329**		**PKPdf**	**05 00 00.3**	**-1.4**
SATY	**Saty**	**128.92**	**18**	*i* PKP	**PKPdf**	**05 00 00.9**	**-0.8**
	baz=18						
SATY	**Saty**	**128.92**	**18**	*i* PKIKP	**PKPdf**	**05 00 00.9**	**-0.8**
UZB	**Uzynbulak**	**129.03**	**17**	*e*PKP	**PKiKP**	**05 00 02.6**	**-0.1**
	baz=17						
UZB	**Uzynbulak**	**129.03**	**17**	*e*PKIKP	**PKiKP**	**05 00 02.6**	**-0.1**
SHLS	**Shalkode**	**129.15**	**17**	*e*PKP	**PKiKP**	**05 00 02.5**	**-0.3**
	baz=16						
SHLS	**Shalkode**	**129.15**	**17**	*e*PKIKP	**PKiKP**	**05 00 02.5**	**-0.3**
WMQ	**Urumqi**	**130.38**	**9**	*e*PKP	**PKPdf**	**05 00 04.2**	**-0.2**
WMQ				LR	LR		
	comp=Z,560nm,17.9s						
WMQ				LR	LR		
	comp=Z,870nm,19.3s						
WMQ				LR	LR		
	comp=Z,910nm,24.3s						
STKA	**Stephens Creek**	**130.94**	**232**	PKP	**PKiKP**	**05 00 07.0**	**+0.4**
	comp=Z,1.3nm,0.6s,baz=35,slow=4.8,SNR=2.9						
STKA	**Stephens Creek**	**130.94**	**232**	PKIKP	**PKPdf**	**05 00 04.3**	**-1.4**
STKA	**Stephens Creek**	**130.94**	**232**	PKPdf	**PKPdf**	**05 00 04.3**	**-1.4**
KSH	**Kashi**	**131.26**	**22**	PKP	**PKiKP**	**05 00 07.4**	**+0.2**
KSH				PP	**PP**	**05 02 26.6**	**+3.8**
KSH				PKS	**PKSdf**	**05 03 39.4**	**-3.5**
KSH				SKS	**SKSdf**	**05 07 14.5**	**-3.8**
KSH				SKKS	**SKKSac**	**05 09 20.1**	**-0.8**
KSH				AMB	AMB		
	comp=Z,72nm,5.0s						
KSH				LR	LR		
	comp=Z,500nm,15.8s						
KSH				LR	LR		
	comp=Z,280nm,9.1s						
KSH				LR	LR		
	comp=Z,1µm,26.6s						
KBL	**Kabul**	**132.23**	**32**	IAMs_20	IAMs_20	05 56 48.6	
	comp=Z,504nm,22.0s						
HHC	**Hu-ho-hao-te**	**132.32**	**345**	*e*PKP	**PKiKP**	**05 00 09.5**	**+0.2**
HHC				PP	**PP**	**05 02 33.6**	**+4.1**
HHC				SS	SS	05 20 08.4	+1.0
HHC				AMB	AMB		
	comp=Z,120nm,7.8s						
HHC				LR	LR		
	comp=Z,600nm,21.8s						
HHC				LR	LR		
	comp=Z,570nm,20.0s						
HHC				LR	LR		
	comp=Z,880nm,19.3s						
NIL	**Nilore**	**135.06**	**29**	IAMs_20	IAMs_20	05 56 38.3	
	comp=Z,542nm,21.0s						
GTA	**Gaotai**	**135.51**	**357**	*e*PKP	**PKPdf**	**05 00 14.1**	**-0.2**
GTA				PP	**PP**	**05 02 52.0**	**+2.4**
GTA				PKS	**PKSdf**	**05 03 46.8**	**-3.9**
GTA				SS	SS	05 20 47.1	+1.5
GTA				AMB	AMB		
	comp=Z,78nm,9.3s						
GTA				LR	LR		
	comp=Z,380nm,22.2s						
GTA				LR	LR		
	comp=Z,390nm,19.6s						
GTA				LR	LR		
	comp=Z,560nm,20.0s						
NJ2	**Nanjing**	**137.66**	**333**	*e*PKP	**PKPdf**	**05 00 17.4**	**-0.9**
LZH	**Lanzhou**	**138.44**	**352**	sPKP		05 00 27.4	
LZH	**Lanzhou**	**138.44**	**352**	*e*PKP	**PKPdf**	**05 00 12.9**	**-7.0**
XAN	**Xi'an**	**139.44**	**345**	PKP	**PKPdf**	**05 00 20.8**	**-0.8**
AS31	**Alice Springs**	**140.38**	**239**		**PKPdf**	**05 00 21.7**	**-1.9**
ASAR	**Alice Springs**	**140.38**	**239**	PKhKP	PKPpre	05 00 16.2	
	comp=Z,0.7nm,0.8s,baz=77,slow=3.2,SNR=6.3						
ASAR				PKP	**PKPdf**	**05 00 23.1**	**-0.4**
	comp=Z,1.5nm,0.6s,baz=114,slow=2.8,SNR=12						
ASAR	**Alice Springs**	**140.38**	**239**	PKIKP	**PKPdf**	**05 00 21.7**	**-1.8**
ASAR	**Alice Springs**	**140.38**	**239**		**PKPdf**	**05 00 21.7**	**-1.8**
WHN	**Wuhan**	**140.89**	**337**	PKPbc	**PKiKP**	**05 00 32.5**	**+5.7**
WRAB	**Tennant Creek**	**141.23**	**245*c***	*i*PKIKP	**PKiKP**	**05 00 28.2**	**+0.4**
WRAB				pmax	pmax		
	comp=Z,15nm,1.7s						
WRA	**Warramunga Arr**	**141.23**	**245**	PKhKP	PKPpre	05 00 21.1	
	comp=Z,6.8nm,1.0s,baz=108,slow=2.2,SNR=13						
WB0	**Warramunga Arr**	**141.24**	**245**		**PKPdf**	**05 00 23.3**	**-1.9**
CD2	**Chengdu**	**143.53**	**351**	PKP	PKPbc	05 00 27.0	+0.8
CD2				AMB	AMB		
	comp=Z,340nm,7.3s						
CD2				LR	LR		
	comp=Z,730nm,18.1s						
CD2				LR	LR		
	comp=Z,840nm,22.1s						
CD2				LR	LR		
	comp=Z,840nm,23.0s						
DANN	**Dangsing**	**144.10**	**21**	*e*P	**PKPdf**	**05 00 29.3**	**-1.1**
	comp=Z,88nm,1.0s						
GKN	**Gorkha**	**144.72**	**20**	*e*P	PKPbc	05 00 29.8	-0.3
	comp=Z,239nm,1.2s						
LSA	**Lhasa**	**144.74**	**9**	PKIKP	**PKPab**	**05 00 29.5**	**-0.9**
LSA	**Lhasa**	**144.74**	**9**		**PKPab**	**05 00 29.4**	**-0.9**
LSA				IAMs_20	IAMs_20	06 09 02.5	
	comp=Z,449nm,22.0s						
KKN	**Kakani**	**145.13**	**19**	*e*P	**PKPbc**	**05 00 31.2**	**-0.3**
	comp=Z,159nm,0.8s						
GUN	**Gumba**	**145.21**	**18**	*e*P	**PKPab**	**05 00 31.8**	**-0.2**
	comp=Z,552nm,1.1s						
DMN	**Daman**	**145.24**	**19**	*e*P	**PKPab**	**05 00 31.8**	**-0.2**
	comp=Z,216nm,1.0s						
PKIN	**Phulchoki**	**145.36**	**19**	*e*P	**PKPbc**	**05 00 31.3**	**-1.0**
	comp=Z,119nm,0.9s						
PKI	**Pulchoki**	**145.37**	**19**	*e*P	**PKPbc**	**05 00 31.2**	**-1.2**
	comp=Z,226nm,1.1s						
SIJI	**Sorong**	**145.92**	**276**	PKPbc	**PKiKP**	**05 00 37.4**	**-0.3**
	comp=Z,20nm,0.9s,baz=10,slow=6.7,SNR=5.1						
TAPN	**Taplejung**	**146.26**	**16**	*e*P	**PKPbc**	**05 00 34.8**	**-0.4**
	comp=Z,276nm,1.5s						
H01W1	**Cape Leeuwin H**	**146.68**	**206**	T	T	07 45 05.2	
	baz=150,slow=76,SNR=7.0						
H01W2	**Cape Leeuwin H**	**146.69**	**206**	T	T	07 45 06.3	

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         baz=150,slow=76,SNR=6.4
H01W3 Cape Leeuwin H 146.70 206  T         T         07 45 06.3
         baz=150,slow=76,SNR=4.8
GYA   Guiyang        147.23 345 ⇓PKPbc    PKPbc     05 00 37.7 -0.1
GYA                              PP        PP        05 04 08.1 +6.8
GYA                              SKS       SKSdf     05 07 42.7 -2.2
GYA                              AMB       AMB
         comp=Z,160nm,9.0s
GYA                              LR        LR
         comp=Z,490nm,23.5s
GYA                              LR        LR
         comp=Z,270nm,21.0s
GYA                              LR        LR
         comp=Z,490nm,25.6s
SHL   Shillong       148.90  10  PKIKP     PKPdf     05 00 38.1 -0.3
SHL   Shillong       148.90  10  PKPdf     PKPdf     05 00 38.1 -0.3
KMI   Kunming        149.37 350 ⇑PKPbc    PKPdf     05 00 38.9 -0.3
KMI                              pPKP      sPKPdf    05 00 42.2 -0.5
KMI                              sPKP                05 00 44.2
KMI   Kunming        149.37 350  IAMs_20   IAMs_20   06 10 54.1
         comp=Z,481nm,21.0s
FITZ  Fitzroy Crossi 149.61 243  PKPbc     PKPbc     05 00 44.0  0.0
         comp=Z,9.1nm,0.8s,baz=197,slow=2.6,SNR=13
FITZ  Fitzroy Crossi 149.61 243            PKPbc     05 00 42.1 -1.9
HYB   Hyderabad      150.78  39 i PKP      PKPbc     05 00 44.0 -2.9
SLVN  Son La         152.82 347            PKPbc     05 00 49.7 -1.9
QIZ   Qiongzhong     152.94 333  PKPbc     PKPdf     05 00 43.9 -0.6
QIZ                              PP        PP        05 04 37.1 +2.7
QIZ                              SS        SS        05 24 08.9 +2.4
QIZ                              AMB       AMB
         comp=Z,340nm,3.5s
QIZ                              LR        LR
         comp=Z,320nm,16.7s
QIZ                              LR        LR
         comp=Z,470nm,19.2s
QIZ                              LR        LR
         comp=Z,390nm,17.2s
TOLI2 Tolitoli       155.81 285  IAMs_20   IAMs_20   05 58 15.1
         comp=Z,382nm,20.0s
CM34  Chiang Mai Arr 155.99 356  P         PKPdf     05 00 51.0 +2.2
CHTO  Chiang Mai     156.04 356  PKIKP     PKPdf     05 00 47.0 -1.9
CHTO                                                 05 01 14.2
CHTO  Chiang Mai     156.04 356            PKPdf     05 00 47.0 -1.9
CHTO                             PKPab     PKPab     05 01 14.2 -1.7
CHTO  Chiang Mai     156.04 356  IAMs_20   IAMs_20   06 17 23.8
         comp=Z,491nm,22.0s
CMMT  Chiang Mai     156.04 356  P         PKPdf     05 00 51.1 +2.3
         comp=Z,6.5nm,1.2s
NONG  Nongkai        156.15 346  P         PKPab     05 01 17.0 +0.7
         comp=Z,6µmcomp=Z,61nm,1.1s
CM32  Chiang Mai Arr 156.21 357  P         PKPdf     05 00 52.0 +2.9
CM36  Chiang Mai Arr 156.32 356  P         PKPdf     05 00 52.0 +2.7
CMAR  Chiang Mai Arr 156.40 356  PKP       PKPdf     05 00 50.4 +1.0
         comp=Z,5.3nm,0.9s,baz=295,slow=1.8,SNR=17
CMAR                             PKPab     PKPab     05 01 17.4  0.0
         comp=Z,10nm,1.0s,baz=340,slow=4.8,SNR=10
CMAR                             PP        PP        05 04 49.2 -4.1
         comp=Z,0.6nm,0.3s,baz=350,slow=4.7,SNR=1.8
CMAR  Chiang Mai Arr 156.40 356  PKIKP     PKPdf     05 00 47.6 -1.8
CMAR  Chiang Mai Arr 156.40 356            PKPdf     05 00 47.6 -1.8
CM15  Chiang Mai Arr 156.40 356  P         PKPdf     05 00 53.8 +4.4
         comp=Z,8.2nm,0.4s
CM09  Chiang Mai Arr 156.41 356  P         PKPdf     05 00 54.0 +4.6
         comp=Z,12nm,1.0s
CM02  Chiang Mai Arr 156.42 356  P         PKPdf     05 00 52.0 +2.6
         comp=Z,132nmcomp=Z,13nm,1.0s
CM01  Chiang Mai Arr 156.43 356  P         PKPdf     05 00 53.0 +3.6
         comp=Z,11nm,1.1s
CM13  Chiang Mai Arr 156.43 356  P         PKPdf     05 00 52.8 +3.3
         comp=Z,78nmcomp=Z,7.8nm,0.9s
CM04  Chiang Mai Arr 156.45 356  P         PKPdf     05 00 52.0 +2.6
         comp=Z,126nmcomp=Z,14nm,1.2s
CM05  Chiang Mai Arr 156.45 356  P         PKPdf     05 00 51.9 +2.5
         comp=Z,86nmcomp=Z,10nm,1.1s
PHIT  Phitsanulok    157.51 352  P         PKPab     05 01 25.5 +3.4
KKM   Kota Kinabalu  158.13 301  IAMs_20   IAMs_20   06 07 42.0
         comp=Z,390nm,20.0s
CHAI  Chaiyaphum     158.50 348  P         PKPab     05 01 28.0 +1.5
UTHA  Uthaitani      159.23 354  P         PKPab     05 01 32.9 +3.3
SRAK  Srakaew        160.32 347  P         PKPab     05 01 35.7 +1.4
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RSNC 05 04:42:01.7±1.2**, 8°.43N×72°.14W, h0**^{km}±6^{km}**, ML2.3, Mw3.2, Venezuela**

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Code  Station Name      Δ°   AZ°    Phase ID          Time      Res
                                  Op        ISC     h  m  s     ISC
OCAC  Ocana            1.18 261  eP        Pg      04 42 22.3 -2.1
OCAC                             eS        Sg      04 42 39.6 -0.1
OCAC                             i                 04 42 43.3
         comp=Z,58nm,0.3s
PAMC  Pamplona, Colo   1.22 207  eP        Pg      04 42 21.1 -4.0
PAMC                             i                 04 42 43.5
         comp=Z,39nm,0.5s
SDV   Santo Domingo    1.56  73  eP        Pn      04 42 29.8 -1.1
SDV                              eS        Sg      04 42 50.6 -1.3
SDV                              i                 04 42 52.8
         comp=Z,40nm,0.2s
SMLC  San Martn de     1.94 281  eP        Pn      04 42 34.1 -1.9
SMLC                             eS        Sn      04 43 01.2  0.0
TAMC  Tame, Arauca     2.01 170  eP        Pn      04 42 36.1 -0.8
TAMC                             eS        Sn      04 43 02.5 -0.4
TAMC                             i                 04 43 05.5
         comp=Z,35nm,0.5s
BRRC  Barranca, Sant   2.04 230  eP        Pn      04 42 36.2 -1.1
BARC  Barichara        2.10 210  eP        Pn      04 42 37.2 -1.1
BARC                             eS        Sn      04 43 03.8 -1.4
BARC                             i                 04 43 06.3
         comp=Z,22nm,0.4s
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IPEC ***05*** *04:43:55.6±0.3, 51°.60N×16°.26E, h0^{km}, ML3.3/3, Error ellipse: s-maj=1.8km s-min=1.5km az=47.0*

LDG ***05*** *04:43:56.2±0.2, 51°.50N×16°.18E, h1^{km}, Ml3.5/14, Error ellipse: s-maj=4.3km s-min=2.5km az=9.0, Suspected Mining induced.*

IDC ***05*** *04:43:57.5±0.6, 51°.47N×16°.00E, h0^{km}, mb3.6/5, mb1 3.8/13, mb1mx3.6/59, mbtmp3.6/13, ML3.2/8, Error ellipse: s-maj=10.3km s-min=6.6km az=99.0*

PRU ***05*** *04:43:58.7±0.0, 51°.44N×16°.12E, h0^{km}*

BGR ***05*** *04:43:58.5±0.3, 51°.42N×16°.13E, h1^{km}, ML3.6/16, Error ellipse: s-maj=3.3km s-min=2.2km az=16.0*

DNK ***05*** *04:43:58.9±1.4, 51°.70N×15°.86E, h0^{km}±45^{km}, ML2.6*

UPP ***05*** *04:44:01.7±2.9, 51°.81N×15°.58E, h0^{km}, ML3.1, Suspected explosion*

ISC 05 04:43:56.0±0.5**, 51°.56N**±0°.02×**16°.16E**±0°.02**, h0**^{km}**, n125, σ2**^{s}.**13**/233**, mb3.5**/5**, 7C-5D, Poland**

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Code  Station Name      Δ°   AZ°    Phase ID          Time      Res
                                  Op        ISC     h  m  s     ISC
KSP   Ksiaz            0.72 173  i Pg      Pg      04 44 10.2 +0.4
KSP                              e                 04 44 15.8
KSP                              eSg       Sg      04 44 18.7 -0.4
KSP   Ksiaz            0.72 173  ePg       Pg      04 44 10.3 +0.4
KSP                              eSg       Sg      04 44 16.1 -3.0
CHVC  Chvalec          0.97 184  ePG       Pg      04 44 14.7 +0.1
CHVC                             eSG       Sg      04 44 26.0 -1.2
         comp=Z,242nm,0.5s
OSTC  Ostas            1.00 178  ePG       Pg      04 44 15.6 +0.4
OSTC                             eSG       Sg      04 44 27.5 -0.7
         comp=Z,254nm,0.5s
UPC   Upice            1.05 185  ePG       Pg      04 44 16.2  0.0
UPC                              eSG       Sg      04 44 29.2 -0.7
         comp=Z,345nm,0.4s
DPC   Dobruska-Polom   1.21 175  ePG       Pg      04 44 19.1 -0.1
DPC                              eSG       Sg      04 44 33.6 -1.3
         comp=Z,245nm,0.7s
DPC   Dobruska-Polom   1.21 175  ePg       Pg      04 44 19.1 -0.1
DPC                              eSg       Sg      04 44 33.8 -1.2
PVCC  Panska Ves       1.44 225  ePG       Pg      04 44 23.6 +0.1
PVCC                             eSG       Sg      04 44 41.6 -0.5
         comp=Z,575nm,0.4s
KRLC  Kraliky          1.54 165  ePG       Pn      04 44 24.7  0.0
KRLC                             eSG       Sg      04 44 44.0 -1.3
         comp=Z,278nm,0.6s
BRG   Berggiesshubel   1.55 245   Pn       Pn      04 44 24.8 -0.1
BRG                               Pg       Pg      04 44 26.4 +0.7
BRG                               Sg       Sg      04 44 47.0 +1.2
BRG                               Amp              04 44 47.3
         comp=Z,322nm,0.5s
BRG   Berggiesshubel   1.55 245  ePn       Pn      04 44 24.4 -0.5
BRG                              eSg       Sg      04 44 46.2 +0.4
GKP   Gorka Klasztor   1.84  21  eP        Pg      04 44 31.3  0.0
PRA   Prague           1.85 217  ePG       Pn      04 44 28.8 -0.1
PRA                              eSG       Sb      04 44 54.5 +0.3
         comp=Z,93nm,0.6s
FBE   Freiberg         1.87 251  ePn       Pn      04 44 29.2 -0.1
FBE                              eSg       Sg      04 44 56.5 +0.3
PRU   Pruhonice        1.88 214  ePG       Pb      04 44 30.7 -0.4
PRU                              eSG       Sb      04 44 54.9 -0.2
         comp=Z,206nm,0.6s
MORC  Moravsky Berou   1.99 153 ⇑P         Pn      04 44 31.2 +0.2
MORC                            ⇑S         Sb      04 44 58.2 -0.2
MORC  Moravsky Berou   1.99 153  ePN       Pn      04 44 30.7 -0.2
MORC                             eSG       Sb      04 44 58.3 -0.1
MORC  Moravsky Berou   1.99 153  ePn       Pn      04 44 30.6 -0.3
         baz=336
MORC                             eSg       Sb      04 44 58.3 -0.1
         comp=Z,138nm,0.6s,baz=336
MORC  Moravsky Berou   1.99 153  ePn       Pn      04 44 30.9 -0.1
MORC                             eSg       Sb      04 44 58.4 -0.1
CLL   Collm            1.99 264  ePn       Pn      04 44 31.0 +0.1
CLL                              ePg       Pb      04 44 33.0 -0.1
CLL                              i                 04 44 37.0
CLL                              i                 04 44 48.6
CLL                              eSg       Sg      04 45 00.0 +0.1
         comp=Z,171nm,0.5s
CLL   Collm            1.99 264  ePn       Pn      04 44 30.9  0.0
CLL                              eSg       Sg      04 45 00.3 +0.4
OKC   Ostrava-Krasne   2.14 143  ePG       Pb      04 44 36.4 +0.8
OKC                              eSG       Sb      04 45 03.5 +0.9
         comp=Z,286nm,0.8s
OKC   Ostrava-Krasne   2.14 143  ePg       Pb      04 44 36.6 +1.0
OKC                              eSg       Sb      04 45 02.6  0.0
VRAC  Vranov           2.27 173   Pn       Pn      04 44 35.0 +0.2
         comp=Z,4.9nm,0.3s,baz=346,slow=14,SNR=15
VRAC                              Lg       Lg      04 45 07.2
         comp=Z,13nm,0.3s,baz=260,slow=20,SNR=12
VRAC  Vranov           2.27 173 ⇑P         Pn      04 44 35.8 +1.1
VRAC                            ⇑S         Sb      04 45 06.4  0.0
VRAC  Vranov           2.27 173  ePN       Pn      04 44 34.9 +0.2
VRAC                             eSG       Sb      04 45 07.6 +1.2
VRAC  Vranov           2.27 173  ePn       Pn      04 44 34.8  0.0
         baz=355
VRAC                             eSg       Sb      04 45 07.6 +1.2
         comp=Z,180nm,0.8s,baz=355
TREC  Trest            2.31 191  ePN       Pn      04 44 35.8 +0.5
TREC                             ePG       Pb      04 44 38.8 +0.3
TREC                             eSG       Sb      04 45 07.2 -0.3
         comp=Z,128nm,0.5s
PBCC  Pribram          2.32 217  ePN       Pn      04 44 35.6 +0.1
PBCC                             ePG       Pb      04 44 39.1 +0.3
PBCC                             eSG       Sb      04 45 08.7 +0.7
         comp=Z,81nm,0.6s
KRUC  Moravsky         2.50 176  ePN       Pn      04 44 38.1 +0.1
KRUC                             eSG       Sg      04 45 15.4 -1.0
KRUC  Moravsky         2.50 176  ePn       Pn      04 44 38.0 +0.1
         baz=358
KRUC                             eSg       Sg      04 45 15.3 -1.1
         comp=Z,161nm,0.8s,baz=358
TANN  Tannenbergstha   2.60 245  ePn       Pn      04 44 39.6 +0.2
TANN                             ePg       Pg      04 44 46.5 +0.7
TANN                             eSg       Sg      04 45 17.7 -1.8
OJC   Ojcow            2.67 119  ePn       Pn      04 44 39.5 -0.7
OJC                              ePg       Pg      04 44 48.1 +1.0
OJC                              eSn       Sn      04 45 10.0 -3.2
OJC                              eSg       Sg      04 45 23.6 +2.0
OJC   Ojcow            2.67 119  ePn       Pn      04 44 39.4 -0.9
OJC                              ePg       Pg      04 44 48.0 +0.9
OJC                              eSg       Sg      04 45 21.6  0.0
WERD  Werda            2.67 247  ePn       Pn      04 44 40.8 +0.5
WERD                             ePg       Pg      04 44 47.9 +0.6
WERD                             eSg       Sg      04 45 20.6 -1.3
NKC   Novy Kostel      2.70 242  ePN       Pn      04 44 41.3 +0.7
NKC                              ePG       Pb      04 44 45.7 +0.6
NKC                              eSG       Sg      04 45 22.1 -0.5
         comp=Z,218nm,0.4s
JAVC  Velka Javorina   2.87 160  ePN       Pn      04 44 43.9 +0.8
JAVC                             eSG       Sb      04 45 26.4 +2.6
KHC   Kasperske Hory   2.94 215  ePN       Pn      04 44 44.5 +0.5
KHC                              ePG       Pb      04 44 50.2 +1.0
KHC                              eSN       Sn      04 45 19.0 -0.9
KHC                              eSG       Sb      04 45 28.1 +2.4
         comp=Z,104nm,0.6s
CKRC  Cesky Krumlov    2.99 204  ePN       Pn      04 44 45.5 +0.9
CKRC                             ePG       Pb      04 44 50.7 +0.6
CKRC                             eSG       Sb      04 45 29.1 +2.0
MANZ  Manzenberg       3.01 240  ePn       Pn      04 44 45.6 +0.6
MANZ                             ePg       Pg      04 44 54.2 +0.5
MANZ                             eSg       Sg      04 45 32.0 -0.7
ROTZ  Rotzenmuhle      3.09 236  ePn       Pn      04 44 46.3 +0.3
ROTZ                             ePg       Pg      04 44 54.9 -0.3
ROTZ                             eSg       Sg      04 45 33.0 -2.1
GEC2  GERESS Array S   3.14 211  ePn       Pn      04 44 47.1 +0.3
GEC2                             eSg       Sb      04 45 34.3 +2.7
GERES GERESS Array B   3.14 211   Pn       Pn      04 44 47.1 +0.3
         comp=Z,4.8nm,0.3s,baz=30,slow=12,SNR=92
GERES                             Lg       Lg      04 45 31.7
         comp=Z,15nm,0.3s,baz=34,slow=27,SNR=10
SMOL  Smolenice        3.15 164  ePN       Pn      04 44 48.4 +1.5
SMOL                             ePG       Pg      04 44 56.1 -0.3
SMOL                             eSG       Sg      04 45 37.2 -0.1
SMOL                             eLG       Lg      04 45 43.9
WET   Wettzell         3.20 222  ePn       Pn      04 44 47.7 +0.1
WET                              eSg       Sb      04 45 35.8 +2.6
LANS  Liptovska Anna   3.21 137  ePN       Pn      04 44 48.8 +1.1
LANS                             ePG       Pg      04 44 56.7 -0.8
LANS                             eSG       Sg      04 45 39.9 +0.8
LANS                             eLG       Lg      04 45 45.7
MODS  Modra-Piesok     3.27 167  ePN       Pn      04 44 48.9 +0.4
MODS                             ePG       Pg      04 44 57.2 -1.4
MODS                             eSG       Sg      04 45 40.6 -0.3
MODS                             eLG       Lg      04 45 44.2
NIE   Niedzica         3.40 127  eP        Pg      04 45 01.4 +0.1
NIE                              eS        Sg      04 45 45.7 +0.4
ZST   Bratislava       3.42 169  ePG       Pb      04 44 59.4 +2.0
ZST                              eSG       Sg      04 45 46.1 +0.3
ZST                              eLG       Lg      04 45 52.7
VYHS  Vyhne            3.52 150  ePN       Pn      04 44 52.1 +0.2
VYHS                             ePG       Pg      04 45 03.1 -0.3
VYHS                             eSG       Sg      04 45 46.7 -2.3
CLZ   Clausthal        3.61 277  ePn       Pn      04 44 54.8 +1.6
CLZ                              ePg       Pg      04 45 06.6 +1.4
CLZ                              eSg       Sg      04 45 53.4 +1.4
CONA  Conrad Observa   3.64 183   Pn       Pn      04 44 54.4 +0.8
         comp=Z,5.4nm,0.5s,SNR=5.2
CONA                             eSg       Sg      04 45 51.2 -1.6
         comp=Z,76nm,0.5s
BSD   Bornholm Skovb   3.64 349  i P       Pn      04 44 54.6 +1.0
BSD                              i S       Sn      04 45 35.0 -2.2
BSD   Bornholm Skovb   3.64 349  eP        Pn      04 44 54.2 +0.6
BSD                              eS        Sn      04 45 35.9 -1.3
BSD   Bornholm Skovb   3.64 349  i P       Pn      04 44 54.6 +1.0
BSD                              i S       Sn      04 45 35.0 -2.2
BSD                               IAML             04 45 42.6
         comp=Z,6.4nm,0.4s
GRF   Grafenberg Arr   3.66 241  ePn       Pn      04 44 54.5 +0.7
GRF                              ePg       Pg      04 45 07.1 +1.1
GRF                              eSg       Sg      04 45 52.7 -0.6
MOA   Molln            3.91 199  ePn       Pn      04 44 58.0 +0.7
         comp=Z,7.5nm,0.4s
MOA                              eSg       Sb      04 45 56.9 +3.2
         comp=Z,46nm,0.4s
CRVS  Cervenica-Dubn   4.32 126  ePG       Pg      04 45 21.3 +2.5
CRVS                             eSG       Sg      04 46 15.6 +0.9
ARSA  Arzberg          4.33 186  ePn       Pn      04 45 04.3 +1.2
         comp=Z,3.3nm,0.4s
ARSA                             eSg       Sb      04 46 09.6 +3.8
         comp=Z,22nm,0.5s
PSZ   Piszkesteto      4.38 145 ⇓P         Pn      04 45 05.0 +1.2
PSZ                             ⇑S         Sn      04 45 54.2 -1.2
KOLS  Kolonicke sedl   4.72 121  ePN       Pn      04 45 09.5 +1.0
KOLS                             ePG       Pg      04 45 28.1 +1.6
KOLS                             eSG       Sg      04 46 28.1 +0.5
BLEU  Blekinge         4.76 358   P        Pn      04 45 10.2 +1.3
BLEU                              S        Sn      04 46 02.2 -2.6
KBA   Koelnbreinsper   4.84 203  ePn       Pn      04 45 11.2 +0.9
         comp=Z,8.7nm,0.5s
KBA                              eSg       Sb      04 46 22.9 +2.2
         comp=Z,27nm,0.6s
BJUU  Bjuv             4.89 339   P        Pn      04 45 10.5 -0.2
BJUU                              S        Sn      04 46 04.0 -4.0
SUW   Suwalki          4.92  57  eP        Pn      04 45 12.2 +1.0
SOKA  Soboth           4.94 189   Pn       Pn      04 45 12.7 +1.2
         comp=Z,1.7nm,0.4s,SNR=4.1
SOKA                             eSg       Sb      04 46 27.1 +3.8
         comp=Z,13nm,0.5s
DEL   Delary           5.10 346   P        Pn      04 45 14.0 +0.3
OBKA  Obir             5.16 192  ePn       Pn      04 45 15.5 +0.9
         comp=Z,2.3nm,0.7s
OBKA                             eSg       Sb      04 46 34.4 +4.6
         comp=Z,37nm,0.8s
WATA  Walderalm        5.17 217   Pn       Pn      04 45 16.1 +1.3
         comp=Z,15nm,0.6s,SNR=7.7
WATA                             eSg       Sb      04 46 32.5 +2.4
         comp=Z,13nm,0.4s
MYKA  Terra Mystica    5.20 199  ePn       Pn      04 45 14.9 -0.2
         comp=Z,1.2nm,0.3s
MYKA                             eSg       Sb      04 46 36.2 +5.4
         comp=Z,16nm,0.6s
WTTA  Wattenberg       5.21 216   Pn       Pn      04 45 16.8 +1.5
         comp=Z,5.6nm,0.4s,SNR=6.5
WTTA                             eSg       Sb      04 46 36.5 +5.2
         comp=Z,20nm,0.7s
MOTA  Moosalm          5.35 220   Pn       Pn      04 45 17.5 +0.3
         comp=Z,7.0nm,0.5s,SNR=9.3
MOTA                             eSg       Sb      04 46 38.4 +3.2
         comp=Z,20nm,0.6s
ABTA  Abfaltersbach    5.37 208  ePn       Pn      04 45 18.8 +1.3
         comp=Z,5.6nm,0.6s
ABTA                             eSg       Sb      04 46 41.1 +5.3
         comp=Z,16nm,0.9s
RETA  Reutte           5.38 223   Pn       Pn      04 45 17.5 -0.1
         comp=Z,5.9nm,0.5s,SNR=10
RETA                             eSg       Sb      04 46 40.6 +4.7
         comp=Z,23nm,0.7s
SQTA  Sankt Quirin     5.41 219   Pn       Pn      04 45 19.2 +1.2
         comp=Z,11nm,0.6s,SNR=8.8
SQTA                             eSg       Sb      04 46 41.0 +4.2
         comp=Z,14nm,0.5s
VXJU  Vaexsjoe         5.42 353   P        Pn      04 45 19.1 +1.1
VXJU                              S        Sn      04 46 17.7 -3.4
VXJU  Vaexsjoe         5.42 353   P        Pn      04 45 19.1 +1.1
VXJU                              S        Sn      04 46 17.7 -3.4
MORH  Mrgy, Hungar     5.59 162 ⇓P         Pn      04 45 21.7 +1.3
FETA  Feichten         5.76 220  i Pn      Pn      04 45 23.2 +0.4
         comp=Z,2.5nm,0.5s,SNR=4.1
FETA                             eSg       Sg      04 47 06.6 +5.6
         comp=Z,17nm,0.8s
GNOU  Gnosjoe          5.91 347   P        Pn      04 45 25.7 +0.9
GNOU  Gnosjoe          5.91 347   P        Pn      04 45 25.7 +0.9
DAVA  Damuels          5.92 226  ePn       Pn      04 45 24.8 -0.3
         comp=Z,3.6nm,0.4s
DAVA                             eSg       Sg      04 47 08.9 +2.9
         comp=Z,16nm,0.5s
PABE  Paberze          6.11  47  eP        Pn      04 45 28.6 +1.1
DAVOX Davos/Dischmat   6.31 223   Pn       Pn      04 45 30.7 +0.3
         comp=Z,0.8nm,0.3s,baz=51,slow=12,SNR=14
DAVOX                             Lg       Lg      04 47 10.2
         comp=Z,0.7nm,0.3s,baz=154,slow=15,SNR=1.8
MUD   Monsted U'grnd   6.40 323  i P       Pn      04 45 25.9 -5.6
MUD   Monsted U'grnd   6.40 323  i P       Pn      04 45 25.9 -5.5
DRGR                   6.42 135 ⇑P         Pn      04 45 32.1 +0.3
DRGR                            ⇑S         Sn      04 46 43.8 -2.0
CDF   Champ du Feu     6.53 245  ePn       Pn      04 45 30.5 -2.9
CDF   Champ du Feu     6.53 245  eP        Pn      04 45 34.2 +0.8
CDF                              eSg       Sg      04 47 21.3 -4.5
         comp=Z,3.9nm,0.4s
BZS   Buzias           6.96 147 ⇓P         Pn      04 45 40.9 +1.8
BURAR Bucovina Array   7.09 120 ⇓P         Pn      04 45 41.2 +0.2
HINF  Hinteralfeld     7.10 242  ePn       Pn      04 45 38.5 -2.6
HINF  Hinteralfeld     7.10 242  ePg       Pg      04 46 09.0 -3.0
HINF                             eSg       Sg      04 47 38.8 -5.1
         comp=Z,6.8nm,0.4s
NACGM Naroch           7.21  58  i P       Pn      04 45 46.5 +4.0
NACGM                            i P       Pn      04 45 46.5 +4.0
NACGM                            i P       Pn      04 45 46.5 +4.0
NACGM                            i Pb      Pb      04 45 48.0  -14
         comp=Z,16nm,1.4s
NACGM                            i PP      PnPn    04 45 54.0 +4.3
NACGM                            i S       Sn      04 47 08.1 +3.2
NACGM                            i SS      SnSn    04 47 20.7 +4.7
HAU   Haudompre        7.28 245  ePn       Pn      04 45 40.7 -2.8
HAU   Haudompre        7.28 245  ePg       Pg      04 46 12.2 -3.1
HAU                              eSg       Sg      04 47 44.5 -5.0
         comp=Z,7.8nm,0.4s
GIVF  Givet            7.33 263  eSg       Sg      04 47 46.9 -4.2
         comp=Z,7.3nm,0.5s
PAGF  Fort de Pagny    7.36 250  ePn       Pn      04 45 41.9 -2.7
PAGF                             eSg       Sg      04 47 47.2 -4.9
         comp=Z,3.8nm,0.4s
GZR   Gura Zlata       7.57 142 ⇓P         Pn      04 45 48.1 +0.4
SAVF  Savonnieres en   7.68 252  eP        Pn      04 45 50.4 +1.3
SAVF                             eSg       Sg      04 47 58.1 -4.5
         comp=Z,3.6nm,0.4s
BAIF  Baives           7.72 263  eSg       Sg      04 47 59.6 -4.1
         comp=Z,3.0nm,0.3s
MEZF  Maizieres J'vi   7.78 251  eSg       Sg      04 47 59.1 -6.5
         comp=Z,9.9nm,0.5s
SFTF  Sexfontaines     7.93 249  ePn       Pn      04 45 49.5 -2.9
SFTF                             eSg       Sg      04 48 05.4 -5.0
         comp=Z,2.3nm,0.4s
AKASG Malin Array Be   8.27  91   Pn       Pn      04 45 56.8 -0.3
         comp=Z,2.8nm,0.3s,baz=281,slow=12,SNR=18
AKASG                             Sn       Sn      04 47 25.1 -6.0
         comp=Z,1.3nm,0.3s,baz=268,slow=24,SNR=2.4
AKASG                             Lg       Lg      04 48 22.4
         comp=Z,0.4nm,0.3s,baz=276,slow=26,SNR=2.4
MTSE  Matsula          8.40  28  eP        Pn      04 46 00.2 +1.4
LPL   La Plagne        8.69 230  ePn       Pn      04 46 00.2 -2.9
LPG   La Plagne        8.70 229  ePn       Pn      04 46 01.1 -2.2
LPG                              eSg       Sg      04 48 29.3 -5.8
         comp=Z,10nm,0.9s
HFS   Hagfors          8.71 352   Pn       Pn      04 46 03.7 +0.7
         comp=Z,0.3nm,0.3s,baz=172,slow=13,SNR=12
HFS                               Sn       Sn      04 47 38.0 -3.9
         comp=Z,0.4nm,0.3s,baz=166,slow=25,SNR=2.4
LOR   Lormes           9.09 247  ePn       Pn      04 46 05.4 -3.0
LOR                              eSg       Sn      04 48 41.8  +50
         comp=Z,1.0nm,0.3s
VSU   Vasula           9.20  37  eP        Pn      04 46 11.1 +1.3
MBDF  Montbardon       9.27 226  ePn       Pn      04 46 09.4 -1.6
SSF   Saint Saulge     9.40 246  ePn       Pn      04 46 10.1 -2.6
SSF   Saint Saulge     9.40 246  ePg       Pn      04 46 51.5  +39
SSF                              eSg       Sn      04 48 51.5  +52
         comp=Z,2.2nm,0.6s
SMF   Signal de Mont   9.45 243  eSg       Sn      04 48 53.7  +53
         comp=Z,14nm,0.8s
ORIF  Oris-en-Rattie   9.54 230  ePn       Pn      04 46 12.0 -2.6
AVF   Avril sur Loir   9.64 245  ePn       Pn      04 46 14.2 -1.7
AVF                              eSg       Sn      04 49 00.5  +56
         comp=Z,77nm,1.5s
NOA   NORSAR Array B   9.89 346   Pn       Pn      04 46 18.3 -1.1
         comp=Z,0.0nm,0.3s,baz=156,slow=20,SNR=7.2
FINES FINESS Array B  11.31  25   Pn       Pn      04 46 38.5 -0.2
         comp=Z,0.3nm,0.3s,baz=200,slow=11,SNR=12
FINES                             Sn       Sn      04 48 39.2 -6.4
         comp=Z,0.8nm,0.3s,baz=212,slow=18,SNR=8.4
EKA   Eskdalemuir Ar  12.11 296   Pn       Pn      04 46 47.2 -2.4
         baz=99,slow=14,SNR=8.5
ARCES ARCESS Array B  18.57  10   Pn       P       04 48 11.5 -2.7
         baz=195,slow=14,SNR=19
TORD  Torodi Ar. Bea  40.05 202   P        P       04 51 33.2 +0.3
         comp=Z,1.7nm,0.8s,baz=15,slow=6.6,SNR=2.3
SONM  Songino Array   54.86  55   P        P       04 53 29.4 +1.4
         comp=Z,0.2nm,0.4s,baz=289,slow=9.0,SNR=3.2
YKA   Yellowknife Ar  59.83 336   P        P       04 54 03.9 +1.4
         comp=Z,0.7nm,0.6s,baz=34,slow=7.1,SNR=3.6
PDAR  Pinedale Array  74.92 322   P        P       04 55 40.0 +1.2
         comp=Z,0.3nm,0.7s,baz=64,slow=6.3,SNR=3.0
TXAR  Lajitas Array   83.70 310   P        P       04 56 28.9 +2.1
         comp=Z,0.2nm,0.6s,baz=34,slow=3.4,SNR=2.2
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IDC ***05*** *04:45:13.1±1.2, 8°.60N×72°.18W, h0^{km}, mb3.7/7, mb1 4.1/9, mb1mx3.8/43, mbtmp3.8/9, ML2.7/2, Error ellipse: s-maj=28.8km s-min=12.4km az=178.0*

FUNV ***05*** *04:45:15.9, 8°.31N×72°.04W, h2^{km}, MW3.9*

RSNC ***05*** *04:45:15.6±1.5, 8°.37N×72°.12W, h4^{km}±8^{km}, ML3.6*

ISC 05 04:45:15.2±1.3**, 8°.32N**±0°.03×**72°.14W**±0°.03**, h23**^{km}±11^{km}**, n35, σ1**^{s}.**23**/53**, mb3.7**/7**, 1C, Venezuela**

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Code  Station Name      Δ°   AZ°    Phase ID          Time      Res
                                  Op        ISC     h  m  s     ISC
PAMC  Pamplona, Colo   1.12 210  eP        Pn      04 45 35.2 -0.7
PAMC                             ePg       Pb      04 45 36.9 +0.7
PAMC                             eS        Sn      04 45 52.7 +1.7
PAMC                             i                 04 45 58.2
         comp=Z,885nm,0.5s
OCAC  Ocana            1.17 266 ⇑eP        Pn      04 45 36.1 -0.3
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OCAC				eS	Sb	04 45 52.3	+0.6
OCAC				i		04 45 57.7	
	comp=Z,902nm,0.5s						
SOCV	Socops	1.27	92	eP	Pn	04 45 37.4	-0.2
SOCV				eS	Sn	04 45 54.0	+0.1
SDV	Santo Domingo	1.59	69	Pn	Pn	04 45 43.6	+1.4
	comp=Z,82nm,0.3s,baz=200,slow=6.4,SNR=30						
SDV				Lg	Lg	04 46 02.5	
	comp=Z,348nm,0.3s,baz=37,slow=15,SNR=20						
SDV	Santo Domingo	1.59	69	eP	Pn	04 45 43.2	+1.0
SDV				eS	Sn	04 46 03.5	+1.3
SDV				i		04 46 06.5	
	comp=Z,887nm,0.3s						
SDV	Santo Domingo	1.59	69	eP	Pn	04 45 43.5	+1.3
SDV				eS	Sn	04 46 03.8	+1.6
MCQV	Machiques	1.76	347	eP	Pb	04 45 46.7	-0.2
TAMC	Tame, Arauca	1.90	170	eP	Pb	04 45 48.1	-1.3
TAMC				eS	Sb	04 46 13.0	+0.3
TAMC				i		04 46 17.6	
	comp=Z,613nm,0.3s						
BRRC	Barranca, Sant	1.97	232	eP	Pb	04 45 49.6	-0.8
BRRC				eS	Sb	04 46 15.7	+1.1
BRRC				i		04 46 22.1	
	comp=Z,365nm,0.4s						
SMLC	San Martn de	1.97	284	eP	Pn	04 45 48.3	+1.1
SMLC				eS	Sb	04 46 16.1	+1.5
BARC	Barichara	2.00	211	eP	Pb	04 45 50.6	-0.6
BARC				eS	Sb	04 46 15.4	-0.3
BARC				i		04 46 21.9	
	comp=Z,396nm,0.5s						
TORV	Torococo	2.25	57	eP	Pn	04 45 51.8	+0.5
TORV				eS	Sn	04 46 17.9	-0.5
ARGC	Ariguani, Magd	2.58	306	eP	Pn	04 45 57.2	+1.6
RUSC	La Rusia	2.59	201	eP	Pn	04 45 58.1	+1.9
CURV	Curarigua	2.73	52	eP	Pn	04 45 58.1	+0.4
CURV				eS	Sn	04 46 31.5	+1.3
SANV	Sanarito	2.83	65	eP	Pn	04 45 59.6	+0.4
ELOV	Elorza	2.94	116	eP	Pn	04 46 02.3	+1.7
ELOV				eS	Sn	04 46 34.5	-0.8
DABV	Dabajuro	2.98	30	eP	Pn	04 46 03.2	+2.1
SIQV	Siquisique	3.26	45	eP	Pn	04 46 06.8	+1.7
SIQV				eS	Sn	04 46 43.4	+0.2
SPBC	San Pablo de B	3.27	216	eP	Pn	04 46 07.7	+2.5
SMRC	Santa Marta, M	3.50	324	eP	Pn	04 46 06.6	-1.7
ROSC	El Rosal	4.08	212	Pn	Pn	04 46 19.3	+2.7
	comp=Z,2.9nm,0.3s,baz=224,slow=22,SNR=0.7						
ROSC				Sn	Sb	04 47 13.4	-2.3
	comp=Z,6.1nm,0.3s,baz=255,slow=21,SNR=1.5						
BAUV	El Baul	4.10	81	eP	Pn	04 46 17.4	+0.8
BAUV				eS	Sn	04 47 02.0	-1.8
MONV	Montecano	4.20	30	eP	Pn	04 46 18.2	+0.3
TURV	Turiamo	4.74	63	eP	Pn	04 46 26.2	+0.8
TACV	Tcata	5.36	70	eP	Pn	04 46 34.5	+0.6
MERV	Las Mercedes	5.85	80	eP	Pn	04 46 40.8	+0.2
PCRV	Puerto La Cruz	7.63	75	Pn	Pn	04 47 04.0	-1.2
	comp=Z,0.6nm,0.3s,baz=283,slow=18,SNR=1.0						
PCRV				Sn	Sn	04 48 31.6	+0.5
	comp=Z,5.5nm,0.3s,baz=243,slow=2.3,SNR=4.9						
TXAR	Lajitas Array	36.23	309	P	P	04 52 17.1	+0.3
	comp=Z,0.3nm,0.5s,baz=129,slow=9.1,SNR=9.2						
TXAR				PcP	PcP	04 54 42.3	+0.3
	comp=Z,0.2nm,0.5s,baz=150,slow=6.1,SNR=6.2						
ULM	Lac du Bonnet	46.23	339	P	P	04 53 37.2	-1.3
	comp=Z,1.7nm,0.6s,baz=154,slow=7.9,SNR=1.9						
PDAR	Pinedale Array	47.47	323	P	P	04 53 46.9	-1.7
	comp=Z,0.5nm,0.6s,baz=120,slow=9.9,SNR=4.8						
NVAR	Mina Array Bea	51.15	313	P	P	04 54 17.6	+0.7
	comp=Z,0.4nm,0.5s,baz=116,slow=8.1,SNR=3.7						
YKA	Yellowknife Ar	62.21	339	P	P	04 55 34.5	-0.2
	comp=Z,1.1nm,0.5s,baz=123,slow=7.7,SNR=10						
ILAR	Eielson Array	76.03	335	P	P	04 57 00.5	+0.1
	comp=Z,0.4nm,0.5s,baz=96,slow=5.0,SNR=1.5						
NOA	NORSAR Array B	79.55	29	P	P	04 57 20.7	+0.4
	comp=Z,0.5nm,0.6s,baz=265,slow=5.6,SNR=3.8						

NNC 05 04:54:28.2±5.2, 37°.39N×71°.50E, h0km, mb3.8, mpv3.4, 1C-4D, Error ellipse: s-maj=40.1km s-min=36.8km az=162.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	5.72	23	⇓P	Pn	04 55 54.9	+0.3
	1.2nm,0.4s						
AAK				⇓S	Sn	04 57 03.9	+2.9
	5.6nm,0.8s						
KK31	Karatay Array	5.76	353	P	Pn	04 55 54.6	-0.3
	2.3nm,0.3s,baz=177,slow=11,SNR=22						
KK31				⇓S	Sn	04 57 02.7	+1.1
	2.4nm,0.4s,baz=180,slow=19,SNR=6.4						
TKM2	Tokmak 2	6.35	28	⇑P	Pn	04 56 03.4	+0.2
	2.6nm,0.7s						
TKM2				⇓S	Sn	04 57 15.6	-0.9
	0.5nm,0.3s						

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*FUNV **05** 04:58:46.6, 8°.30N×72°.04W, h1km, MW3.4*
*RSNC **05** 04:58:46.9±1.3, 8°.40N×72°.11W, h9km±6km, ML2.9, Mw3.2*
*IDC **05** 04:58:49.2±1.5, 9°.45N×71°.94W, h0km, mb3.0/2, mb1 3.5/4, mb1mx3.3/36, mbtmp3.4/4, ML2.6/2, Error ellipse: s-maj=36.9km s-min=14.0km az=26.0*
ISC 05 04:58:47.3±0.8, **8°.34N**±0°.03×**72°.13W**±0°.03, **h22**km±7km, **n28**, σ**1s.22**/46, **Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAMC	Pamplona, Colo	1.15	210	eP	Pn	04 59 05.8	-2.7
PAMC				ePg	Pb	04 59 08.2	-0.6
PAMC				eS	Sn	04 59 25.4	+1.6
PAMC				i		04 59 33.8	
	comp=Z,247nm,0.2s						
OCAC	Ocana	1.19	265	eP	Pn	04 59 06.7	-2.0
OCAC				eS	Sn	04 59 24.6	+0.4
OCAC				i		04 59 31.8	
	comp=Z,250nm,0.3s						
SOCV	Socops	1.26	93	eP	Pn	04 59 08.2	-1.3
SDV	Santo Domingo	1.57	70	Pn	Pb	04 59 15.0	-0.8
	comp=Z,9.4nm,0.3s,baz=253,slow=12,SNR=21						
SDV				Lg	Lg	04 59 34.9	
	comp=Z,46nm,0.3s,baz=169,slow=20,SNR=19						
SDV	Santo Domingo	1.57	70	eP	Pn	04 59 13.9	-0.2
SDV				eS	Sn	04 59 34.0	+0.2
SDV				i		04 59 44.0	
	comp=Z,134nm,0.3s						
SDV	Santo Domingo	1.57	70	eP	Pn	04 59 14.7	+0.7
SDV				eS	Sb	04 59 35.7	+0.4
MCQV	Machiques	1.74	347	eP	Pb	04 59 17.7	-0.9
MCQV				eS	Sb	04 59 42.1	+2.0
TAMC	Tame, Arauca	1.93	170	eP	Pn	04 59 18.7	0.0
TAMC				eS	Sn	04 59 44.1	+1.7
TAMC				i		04 59 54.2	
	comp=Z,72nm,0.6s						
SMLC	San Martn de	1.98	283	eP	Pn	04 59 19.2	-0.3
SMLC				eS	Sn	04 59 44.1	+0.5
BRRC	Barranca, Sant	2.00	232	eP	Pn	04 59 21.0	+1.3
BRRC				eS	Sn	04 59 46.1	+2.1
BRRC				i		04 59 58.8	
	comp=Z,80nm,0.4s						
BARC	Barichara	2.03	211	eP	Pn	04 59 21.3	+0.8
BARC				eS	Sn	04 59 47.4	+2.2
BARC				i		04 59 58.5	
	comp=Z,140nm,0.3s						
ARGC	Ariguani, Magd	2.58	306	eP	Pn	04 59 28.4	+0.6
ARGC				i		05 00 26.5	
	comp=Z,25nm,0.5s						
RUSC	La Rusia	2.61	201	eP	Pn	04 59 30.2	+1.5
RUSC				eS	Sb	05 00 06.3	+0.6
RUSC				i		05 00 18.7	
	comp=Z,27nm,0.6s						
CURV	Curarigua	2.71	52	eP	Pn	04 59 30.4	+0.8
CURV				eS	Sn	05 00 02.1	+0.4
SANV	Sanarito	2.81	66	eP	Pn	04 59 30.8	-0.2
SANV				eS	Sn	05 00 03.8	-0.4
ZARC	Zaragoza, Cauc	2.84	253	eP	Pn	04 59 32.1	+0.8
PTBC	PUERTO BERRIO,	2.92	232	eP	Pn	04 59 31.9	-0.6
PTBC				eS	Sb	05 00 13.5	-0.7
PTBC				i		05 00 22.7	
	comp=Z,38nm,0.5s						
ELOV	Elorza	2.94	117	eP	Pn	04 59 32.7	0.0
ELOV				eS	Sn	05 00 06.2	-1.2
DABV	Dabajuro	2.95	30	eP	Pn	04 59 33.4	+0.5
DABV				eS	Sn	05 00 08.8	+1.1
SIQV	Siquisique	3.24	45	eP	Pn	04 59 37.7	+0.9
SIQV				eS	Sn	05 00 14.6	-0.1
SPBC	San Pablo de B	3.30	216	eP	Pn	04 59 38.5	+0.7
BAUV	El Baul	4.08	81	eP	Pn	04 59 47.8	-0.6
BAUV				eS	Sn	05 00 33.0	-2.5
ROSC	El Rosal	4.11	212	Pn	Pb	05 00 08.5	+9.3
	comp=Z,2.1nm,0.3s,baz=17,slow=20,SNR=2.9						
RREF	El Recreo	4.68	223	eP	Pn	04 59 59.3	+2.0
TOLC	Tolima	4.90	221	eP	Pn	05 00 00.4	+0.4
PCRV	Puerto La Cruz	7.61	76	Pn	Pn	05 00 38.1	+1.1
	comp=Z,0.3nm,0.3s,baz=202,slow=8.1,SNR=1.3						
PCRV				Sn	Sn	05 02 02.8	+0.1
	comp=Z,0.5nm,0.3s,baz=45,slow=17,SNR=2.0						
TXAR	Lajitas Array	36.23	309	P	P	05 05 50.2	+1.3
	comp=Z,0.1nm,0.3s,baz=133,slow=10,SNR=1.6						
YKA	Yellowknife Ar	62.19	339	P	P	05 09 05.3	-1.5
	comp=Z,0.1nm,0.7s,baz=125,slow=7.9,SNR=3.2						

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*NEIC **05** 05:00:33.4±1.9, 7°.25S±0°.04×126°.85E±0°.09, h313km±10km, mb4.3/9, Error ellipse: s-maj=14.1km s-min=2.4km az=112.0*
*IDC **05** 05:00:33.3±1.3, 7°.29S×126°.83E, h302km±15km, mb3.3/7, mb1 3.5/11, mb1mx3.2/41, mbtmp4.1/11, Error ellipse: s-maj=18.6km s-min=11.4km az=77.0*
ISC 05 05:00:32.7±0.6, **7°.23S**±0°.05×**126°.86E**±0°.07, **h300**km, **n32**, σ**1s.55**/40, **mb4.0**/9, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	3.59	225		Pn	05 01 35.8	+1.2
SOEI				S	S	05 02 22.3	-1.9
BATI	Baumata	4.33	227	P	Pn	05 01 43.3	+0.7
	143nm,0.3s,baz=51,slow=3.0,SNR=54						
BATI				S	S	05 02 38.2	-0.5
	42nm,0.3s,baz=322,slow=19,SNR=14						
MMRI	Maumere	4.79	253	Pn	Pn	05 01 49.4	+1.6
FAKI	Fak Fak	6.86	52	Pn	Pn	05 02 13.4	+0.9
MTN	Manton Dam	6.99	143		Pn	05 02 15.2	+1.3
SIJI	Sorong	7.69	35	P	Pn	05 02 23.1	+0.5
	5.7nm,0.3s,baz=217,slow=20,SNR=22						
SIJI				S	S	05 03 49.5	-2.2
	2.9nm,0.3s,baz=229,slow=19,SNR=8.4						
KNRA	Kununurra	8.60	168	Pn	Pn	05 02 33.7	0.0
FITZ	Fitzroy Crossi	10.87	186	P	Pn	05 03 00.3	-1.3
	0.3nm,0.3s,baz=37,slow=10.0,SNR=2.1						
FITZ				S	S	05 05 04.7	+1.3
	0.3nm,0.3s,baz=112,slow=18,SNR=1.7						
WB0	Warramunga Arr	14.45	150	P	P	05 03 44.3	+0.5
WRA	Warramunga Arr	14.57	151	P	P	05 03 45.4	+0.2
	0.7nm,0.3s,baz=326,slow=12,SNR=34						
WRA				S	S	05 06 22.0	-3.0
	0.3nm,0.3s,baz=326,slow=21,SNR=6.0						
WRA	Warramunga Arr	14.57	151	P	P	05 03 43.8	-1.4
WRA					S	05 06 21.8	-3.2
WB2	Warramunga Arr	14.58	151		P	05 03 45.7	+0.5
WR0	Warramunga Arr	14.69	150	P	Pn	05 03 47.3	-0.2
PSA00	Pilbara Seismi	15.79	205		P	05 03 58.2	-0.2
PSA00				IAmb	IAmb	05 04 17.6	
	comp=Z,21nm,1.4s						
COEN	Coen	17.37	114	P	P	05 04 17.4	+1.7
COEN				IAmb	IAmb	05 04 17.8	
	comp=Z,11nm,1.4s						
AS31	Alice Springs	17.69	158	P	P	05 04 20.3	+1.2
AS31					S	05 07 31.9	+4.7
ASAR	Alice Springs	17.69	158	P	P	05 04 20.1	+1.0
	comp=Z,4.2nm,0.3s,baz=333,slow=11,SNR=131						
ASAR				S	S	05 07 25.6	-1.5
	comp=Z,0.1nm,0.3s,baz=343,slow=21,SNR=5.5						
ASAR	Alice Springs	17.69	158	P	P	05 04 20.3	+1.2
FORT	Forrest	23.46	177	P	P	05 05 15.5	-0.5
FORT				IAmb	IAmb	05 05 27.4	
	comp=Z,35nm,1.1s						
BBOO	Buckleboo	26.85	163	P	P	05 05 46.3	-0.1
BBOO				IAmb	IAmb	05 05 53.6	
	comp=Z,8.8nm,1.0s						
NWAO	Narrogin (SRO)	27.09	198	P	P	05 05 47.4	-1.1
	comp=Z,4.5nm,0.5s,baz=11,slow=10,SNR=1.2						
NWAO	Narrogin (SRO)	27.09	198	P	P	05 05 47.5	-1.1
NWAO				IAmb	IAmb	05 06 06.9	
	comp=Z,22nm,1.3s						
STKA	Stephens Creek	28.11	153	P	P	05 05 58.0	+0.5
	comp=Z,3.9nm,0.4s,baz=322,slow=9.1,SNR=12						
STKA	Stephens Creek	28.11	153	P	P	05 05 58.5	+0.9
RPSI	Rantau Prapat	29.57	289	P	P	05 06 11.8	+1.2
PSI	Prapat	29.61	289	P	P	05 06 11.8	+0.7
	comp=Z,1.9nm,0.3s,baz=180,slow=3.6,SNR=3.8						
SONM	Songino Array	57.73	344	P	P	05 09 53.1	+0.4
	comp=Z,0.1nm,0.4s,baz=163,slow=7.1,SNR=1.8						
PETK	Petropavlovsk-	65.55	20	P	P	05 10 45.8	+1.4
	comp=Z,1.5nm,0.6s,baz=170,slow=2.5,SNR=8.3						
MKAR	Makanchi Array	66.74	328	P	P	05 10 52.1	0.0
	comp=Z,0.1nm,0.5s,baz=118,slow=7.4,SNR=2.1						
KURBB	Kurchatov Arra	71.11	330	P	P	05 11 19.4	+0.7
	comp=Z,0.2nm,0.4s,baz=135,slow=5.1,SNR=2.4						
TIXI	Tiksi	78.72	1	P	P	05 11 58.9	-2.7
QSPA	South Pole Qui	82.75	180	P	P	05 12 22.4	-0.8

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*RSNC **05** 05:04:38.5±1.5, 8°.29N×72°.08W, h0km±8km, ML2.7*
*FUNV **05** 05:04:40.8, 8°.34N×72°.03W, h5km, MW3.1*
ISC 05 05:04:39.2±3.8, **8°.31N**±0°.04×**72°.12W**±0°.03, **h17**km±29km, **n17**, σ**1s.14**/29, **1C**, **Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAMC	Pamplona, Colo	1.12	211	⇑iP	Pb	05 04 59.2	-1.3
PAMC				eS	Sb	05 05 14.5	-0.4
PAMC				i		05 05 20.1	
	comp=Z,123nm,0.2s						
OCAC	Ocana	1.19	267	eP	Pn	05 05 00.1	-1.1
OCAC				eS	Sb	05 05 16.9	+0.2
OCAC				i		05 05 20.5	
	comp=Z,483nm,0.4s						
SOCV	Socops	1.25	91	eP	Pn	05 05 01.8	-0.1
SOCV				eS	Sb	05 05 18.0	-0.2
SDV	Santo Domingo	1.58	68	eP	Pn	05 05 06.8	+0.2
SDV				eS	Sn	05 05 26.7	-0.1
SDV				i		05 05 30.1	
	comp=Z,90nm,0.2s						
SDV	Santo Domingo	1.58	68	eP	Pn	05 05 07.4	+0.8
SDV				eS	Sb	05 05 28.4	+0.6
MCQV	Machiques	1.78	347	i P	Pn	05 05 10.6	+1.4
MCQV				eS	Sb	05 05 34.7	+1.2
BRRC	Barranca, Sant	1.98	233	eP	Pn	05 05 13.6	+1.6
BRRC				eS	Sb	05 05 39.3	+0.1
BRRC				i		05 05 46.8	
	comp=Z,37nm,0.2s						
SMLC	San Martn de	1.99	284	eP	Pn	05 05 12.8	+0.6
SMLC				eS	Sb	05 05 39.8	+0.1
BARC	Barichara	2.00	212	eP	Pn	05 05 14.2	+1.7
BARC				eS	Sb	05 05 40.0	-0.2
BARC				i		05 05 46.1	
	comp=Z,78nm,0.5s						
TORV	Torococo	2.24	56	eP	Pn	05 05 15.8	+0.1
RUSC	La Rusia	2.58	202	eP	Pb	05 05 24.8	-0.6
RUSC				eS	Sb	05 05 59.3	+2.2
RUSC				i		05 06 02.0	
	comp=Z,18nm,0.5s						
CURV	Curarigua	2.72	51	eP	Pn	05 05 23.4	+1.1
SANV	Sanarito	2.81	65	eP	Pn	05 05 25.2	+1.7
ELOV	Elorza	2.92	116	eP	Pn	05 05 26.7	+1.9
DABV	Dabajuro	2.98	29	eP	Pn	05 05 26.8	+1.0
SIQV	Siquisique	3.26	44	eP	Pn	05 05 29.9	+0.2
SIQV				eS	Sn	05 06 07.9	-0.2
BAUV	El Baul	4.08	81	eP	Pn	05 05 41.1	+0.2
BAUV				eS	Sn	05 06 26.0	-2.3

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*RSNC **05** 05:07:23.5±1.5, 8°.32N×72°.20W, h4km±9km, ML2.7*
*FUNV **05** 05:07:24.5, 8°.30N×72°.02W, h6km, MW3.1*
ISC 05 05:07:21.2±1.1, **8°.33N**±0°.03×**72°.13W**±0°.03, **h7**km±11km, **n20**, σ**1s.37**/30, **1C**, **Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAMC	Pamplona, Colo	1.14	210	⇑eP	Pg	05 07 42.8	-0.2
PAMC				eS	Sg	05 07 57.6	-0.3
PAMC				i		05 08 05.0	
	comp=Z,79nm,0.2s						
OCAC	Ocana	1.18	266	eP	Pg	05 07 43.6	-0.3
OCAC				eS	Sg	05 07 57.5	-1.9
OCAC				i		05 08 01.5	
	comp=Z,343nm,0.6s						
SOCV	Socops	1.26	92	eP	Pg	05 07 45.4	0.0
SOCV				eS	Sn	05 08 02.1	-0.2
SDV	Santo Domingo	1.58	69	eP	Pg	05 07 52.1	+0.6
SDV				eS	Sg	05 08 13.2	+1.2
SDV				i		05 08 13.8	
	comp=Z,53nm,0.1s						
SDV	Santo Domingo	1.58	69	eP	Pg	05 07 52.0	+0.5
SDV				eS	Sg	05 08 11.6	-0.4
MCQV	Machiques	1.76	347	eP	Pg	05 07 55.1	+0.2
MCQV				eS	Sg	05 08 19.0	+1.3
TAMC	Tame, Arauca	1.91	170	eP	Pb	05 07 55.8	-0.6
TAMC				eS	Sg	05 08 21.2	-1.4
TAMC				i		05 08 26.2	
	comp=Z,101nm,0.3s						
SMLC	San Martn de	1.98	284	eP	Pn	05 07 56.0	+1.0
SMLC				eS	Sb	05 08 23.5	+1.1
BRRC	Barranca, Sant	1.98	232	eP	Pb	05 07 57.6	0.0
BRRC				i		05 07 58.9	
	comp=Z,56nm,0.4s						
BARC	Barichara	2.02	211	eP	Pb	05 07 58.2	-0.2
TORV	Torococo	2.24	57	eP	Pn	05 07 58.6	-0.1
RUSC	La Rusia	2.60	201	eP	Pb	05 08 09.1	+0.7
CURV	Curarigua	2.71	52	eP	Pn	05 08 07.0	+1.7
SANV	Sanarito	2.81	65	eP	Pn	05 08 08.6	+1.9
ELOV	Elorza	2.93	117	eP	Pn	05 08 09.7	+1.4
DABV	Dabajuro	2.97	30	eP	Pb	05 08 11.5	-2.9
SIQV	Siquisique	3.25	45	eP	Pn	05 08 14.7	+2.1
SIQV				eS	Sn	05 08 51.4	-0.2
BAUV	El Baul	4.08	81	eP	Pn	05 08 25.4	+1.3
BAUV				eS	Sn	05 09 08.8	-3.3
MONV	Montecano	4.18	30	eP	Pn	05 08 26.4	+1.0
TACV	Tcata	5.35	70	eP	Pn	05 08 42.0	+0.5

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*NEIC **05** 05:38:57.8±1.6, 8°.30N±0°.06×72°.13W±0°.05, h10km±1km, mb5.0/321, Mwr4.6(CAR), Error ellipse: s-maj=10.8km s-min=8.0km az=151.0*
*CAR **05** 05:38:58.3±1.7, 8°.19N±0°.03×72°.28W±0°.05, h5km±3km, Error ellipse: s-maj=6.8km s-min=4.1km az=75.0*
*VAO **05** 05:38:58.7±0.9, 8°.19N×72°.20W, h10km, mb4.9*
*FUNV **05** 05:38:58.5, 8°.23N×72°.26W, h5km, MW4.6*
*IDC **05** 05:38:58.4±0.4, 8°.22N×72°.05W, h16km±2km, mb4.7/26, mb1 4.8/32, mb1mx4.8/40, mbtmp4.8/32, ML4.6/5, MS3.7/11, Ms1 3.7/11, ms1mx3.5/40, Error ellipse: s-maj=9.3km s-min=8.5km az=25.0*
*RSNC **05** 05:39:00.1±0.9, 8°.32N×72°.12W, h0km, ML4.5, Mw4.5, Fault plane solution: NP1:ϕ_s65.00000°, δ90.00000°, λ42.00000°.*
*BGR **05** 05:39:02.2±0.0, 8°.18N×71°.12W, h16km±3km, mb4.8*
ISC 05 05:38:58.0±0.3, **8°.22N**±0°.02×**72°.13W**±0°.02, **h13**km±1km, **h14**km**:pP-P**, **n861**, σ**1s.61**/938, **mb5.0**/225, **27C-3D**, **Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAMC	Pamplona, Colo	1.04	213	⇑eP	Pn	05 39 20.0	+1.4
PAMC				eS	Sn	05 39 36.8	+3.6
PAMC				i		05 39 44.1	
	comp=Z,8μm,0.2s						
OCAC	Ocana	1.18	271	⇓iP	Pg	05 39 20.9	+0.2
OCAC				eS	Sn	05 39 37.4	+1.2
OCAC				i		05 39 40.3	
	comp=Z,7μm,0.5s						
SOCV	Socops	1.26	87	eP	Pg	05 39 23.0	+0.6
SOCV				eS	Sg	05 39 42.6	+3.7
SDV	Santo Domingo	1.62	66	Pg	Pb	05 39 28.3	+0.3
	comp=Z,800nm,0.3s,baz=209,slow=6.5,SNR=638						
SDV				Lg	Lg	05 39 48.4	
	comp=Z,5μm,0.3s,baz=304,slow=24,SNR=23						
SDV				LR	LR	05 40 25.7	
	comp=Z,955nm,19.9s,baz=18,slow=56						
SDV	Santo Domingo	1.62	66	Pn	Pg	05 39 28.9	-0.4
SDV				Sn	Sb	05 39 48.5	+0.1
SDV	Santo Domingo	1.62	66	⇓eP	Pb	05 39 28.2	+0.3
SDV				eS	Sb	05 39 49.3	+0.9
SDV				i		05 39 52.3	
	comp=Z,11μm,0.5s						
SDV	Santo Domingo	1.62	66	eP	Pb	05 39 28.3	+0.3
SDV				eS	Sg	05 39 49.9	-0.5
SDV	Santo Domingo	1.62	66	eP	Pb	05 39 28.5	+0.5
SDV				eS	Sg	05 39 51.8	+1.4
TAMC	Tame, Arauca	1.80	169	⇑iP	Pg	05 39 32.7	0.0
TAMC				eS	Sg	05 39 57.9	+1.8
TAMC				i		05 40 04.6	
	comp=Z,5μm,0.6s						
MCQV	Machiques	1.86	348	eP	Pn	05 39 30.6	+1.0
MCQV				eS	Sn	05 39 53.9	+0.9
BRRC	Barranca, Sant	1.92	235	⇑iP	Pg	05 39 34.8	0.0
BRRC				eS	Sg	05 39 59.8	+0.1
BRRC				i		05 40 06.8	
	comp=Z,3μm,0.5s						
BARC	Barichara	1.92	213	eP	Pg	05 39 35.0	0.0
BARC				eS	Sg	05 40 01.2	+1.2
BARC				i		05 40 05.6	
	comp=Z,4μm,0.6s						
SMLC	San Martn de	2.00	287	⇑iP	Pb	05 39 33.2	-1.1
SMLC				eS	Sb	05 40 00.7	+1.5
TORV	Torococo	2.30	55	eP	Pn	05 39 36.3	+0.5
TORV				eS	Sn	05 40 05.4	+1.3
RUSC	La Rusia	2.50	202	eP	Pb	05 39 42.6	-0.4
RUSC				eS	Sg	05 40 16.3	-2.1
RUSC				i		05 40 23.2	
	comp=Z,2μm,0.8s						
CVALL	Valledupar, Ce	2.53	334	eP	Pn	05 39 39.8	+1.0
CVALL				eS	Sn	05 40 11.9	+2.3
CVALL				i		05 40 17.0	
	comp=Z,2μm,0.2s						
ARGC	Ariguani, Magd	2.65	308	eP	Pn	05 39 42.1	+1.7
ARGC				eS	Sn	05 40 15.0	+2.6
ARGC				i		05 40 35.2	
	comp=Z,1μm,0.5s						
CURV	Curarigua	2.79	50	eP	Pn	05 39 43.8	+1.4
CURV				eS	Sn	05 40 18.0	+2.0
ZARC	Zaragoza, Cauc	2.80	255	eP	Pb	05 39 45.2	-2.6
PTBC	PUERTO BERRIO,	2.84	234	⇑iP	Pb	05 39 46.0	-2.7
PTBC				eS	Sb	05 40 22.5	-0.9
PTBC				i		05 40 37.3	
	comp=Z,1μm,0.5s						
SANV	Sanarito	2.86	63	eP	Pn	05 39 45.9	+2.4
SANV				eS	Sn	05 40 20.6	+2.8
ELOV	Elorza	2.89	115	eP	Pn	05 39 46.1	+2.4
ELOV				eS	Sn	05 40 21.4	+3.0
DABV	Dabajuro	3.06	29	eP	Pn	05 39 47.1	+1.0
DABV				eS	Sn	05 40 23.1	+0.4
SPBC	San Pablo de B	3.19	217	⇑iP	Pb	05 39 52.3	-2.4
SPBC				eS	Sb	05 40 32.3	-1.3
SPBC				i		05 40 52.1	
	comp=Z,1μm,0.4s						
SIQV	Siquisique	3.33	43	eP	Pn	05 39 51.3	+1.4
SIQV				eS	Sn	05 40 31.1	+1.8
UREC	San Jos de Ur	3.40	262	eP	Pn	05 39 54.1	+3.4
UREC				eS	Sb	05 40 35.3	-4.1
UREC				i		05 40 49.7	
	comp=Z,1μm,0.7s						
URIC	Uribia, Colomb	3.46	2	eP	Pn	05 39 51.7	0.0
URIC				eS	Sn	05 40 31.5	-1.1
URIC				i		05 40 53.6	
	comp=Z,870nm,0.6s						
MOTC	Monteria, Cord	3.54	279	eP	Pn	05 39 55.9	+3.2
MOTC				eS	Sn	05 40 38.3	+3.9
MOTC				i		05 41 00.5	
	comp=Z,1μm,0.6s						
SMRC	Santa Marta, M	3.58	325	eP	Pn	05 39 52.6	-0.6
SMRC				eS	Sn	05 40 29.3	-6.1
SMRC				i		05 40 50.3	
	comp=Z,1μm,0.4s						
NORC	Norcasia	3.79	226	eP	Pn	05 39 59.1	+3.0
NORC				eS	Sb	05 40 46.5	-4.1
NORC				i		05 40 59.7	
	comp=Z,618nm,0.5s						
CHIC	Chingaza	3.90	204	eP	Pb	05 40 02.6	-4.3
CHIC				eS	Sb	05 40 50.9	-3.4
CHIC				i		05 41 24.9	
	comp=Z,431nm,0.6s						
HELC	Santa Helena	3.93	239	⇑eP	Pn	05 40 02.1	+3.8
HELC				eS	Sb	05 40 50.4	-4.5
HELC				i		05 41 04.8	
	comp=Z,682nm,0.4s						
MAPV	Macapo	3.97	66	eP	Pn	05 40 00.7	+2.1
MAPV				eS	Sn	05 40 46.5	+1.4
PTGC	Puerto Gaitan,	3.99	180	⇑eP	Pn	05 40 01.3	+2.4
PTGC				eS	Sn	05 40 45.9	+0.2
ROSC	El Rosal	4.00	213	Pn	Pb	05 40 04.7	-3.9

	comp=Z,36nm,0.3s,baz=305,slow=1.8,SNR=46						
ROSC				Sn	Sb	05 40 52.6	-4.4
	comp=Z,53nm,0.3s,baz=220,slow=22,SNR=3.8						
ROSC				Lg	Lg	05 41 09.7	
	comp=Z,81nm,0.3s,baz=202,slow=18,SNR=2.7						
ROSC	El Rosal	4.00	213	Pn	Pb	05 40 04.5	-4.1
ROSC	El Rosal	4.00	213	eP	Pb	05 40 04.5	-4.1
ROSC				eS	Sb	05 40 56.7	-0.3
ROSC				i		05 41 13.9	
	comp=Z,445nm,0.6s						
BAUV	El Baul	4.11	80	eP	Pn	05 40 02.0	+1.5
BAUV				eS	Sn	05 40 49.6	+1.2
DBBC	Dabeiba	4.21	254	eP	Pn	05 40 06.5	+4.4
DBBC				eS	Sb	05 41 04.6	+1.6
MONV	Montecano	4.28	30	eP	Pn	05 40 03.3	+0.5
JACV	Jacura	4.33	49	eP	Pn	05 40 05.2	+1.7
GUY2C	Guyana, Caldas	4.38	227⇑	iP	Pn	05 40 08.8	+4.2
GUY2C				eS	Sn	05 41 01.6	+5.8
GUY2C				i		05 41 29.7	
	comp=Z,661nm,0.6s						
CBOC	Ciudad Bolivar	4.51	239⇑	eP	Pn	05 40 11.0	+4.9
CBOC				eS	Sb	05 41 07.8	-3.6
CBOC				i		05 41 30.9	
	comp=Z,427nm,0.6s						
RREF	El Recreo	4.59	224	eP	Pn	05 40 11.9	+4.2
RREF				eS	Sb	05 41 07.8	-6.5
RREF				i		05 41 32.9	
	comp=Z,465nm,0.6s						
CMAN1	Manizales, Cal	4.60	227	eP	Pb	05 40 13.1	-5.7
CMAN1				eS	Sb	05 41 09.6	-4.5
TURV	Turiamo	4.78	62	eP	Pn	05 40 11.1	+1.4
TURV				eS	Sn	05 41 04.5	-0.6
TOLC	Tolima	4.80	221	eP	Pn	05 40 14.8	+4.4
TOLC				eS	Sn	05 41 10.2	+4.2
TOLC				i		05 41 40.1	
	comp=Z,425nm,0.6s						
CIBA1	Ibague, SGC	4.85	220	eP	Pn	05 40 15.4	+4.5
CIBA1				eS	Sn	05 41 09.6	+2.6
ANIL	Santa Ana	4.93	221	eP	Pn	05 40 17.3	+5.3
ANIL				eS	Sn	05 41 12.6	+3.5
CAPC	Capurgana	5.18	275	eP	Pn	05 40 16.2	+1.0
CAPC				eS	Sn	05 41 14.4	-0.5
CAPC				i		05 41 24.4	
	comp=Z,154nm,0.7s						
PAYV	Puerto Ayacuch	5.24	122	eP	Pn	05 40 17.8	+1.7
PAYV				eS	Sn	05 41 16.0	-0.4
PLMC	San Jos del P	5.28	232	eP	Pn	05 40 21.3	+4.7
PLMC				eS	Sn	05 41 24.2	+6.8
PLMC				i		05 41 30.0	
	comp=Z,195nm,0.5s						
ORTC	Ortega, Tolima	5.28	216	eP	Pn	05 40 20.1	+3.4
ORTC				eS	Sn	05 41 25.3	+7.8
ORTC				i		05 41 53.8	
	comp=Z,244nm,0.5s						
TACV	Tcata	5.39	69	eP	Pn	05 40 19.4	+1.2
TACV				eS	Sn	05 41 19.7	-0.4
SOLC	Bahia Solano	5.60	250	eP	Pn	05 40 25.7	+4.7
SOLC				eS	Sn	05 41 28.8	+3.7
SOLC				i		05 41 41.0	
	comp=Z,101nm,0.6s						
CARV	Caracas	5.61	66	eP	Pn	05 40 22.4	+1.0
CARV				eS	Sn	05 41 24.8	-1.0
GUVC	San Jose del G	5.66	185	eP	Pn	05 40 23.9	+2.1
GUVC				eS	Sn	05 41 27.2	+0.5
GUVC				i		05 41 32.5	
	comp=Z,633nm,0.3s						
FUNV	FUNVISIS	5.71	67	eP	Pn	05 40 23.9	+1.3
FUNV				eS	Sn	05 41 26.6	-1.5
PTAC	Punta Ardita,	5.73	260	eP	Pn	05 40 26.1	+3.3
PTAC				eS	Sn	05 41 28.3	0.0
PTAC				i		05 41 43.5	
	comp=Z,255nm,0.7s						
MERV	Las Mercedes	5.86	79	eP	Pn	05 40 25.4	+0.9
MERV				eS	Sn	05 41 30.3	-1.3
YOTC	Yotoco, Valle	5.94	225	eP	Pn	05 40 29.7	+3.9
YOTC				eS	Sn	05 41 36.6	+2.9
YOTC				eS	Sn	05 41 36.6	+2.9
PIZC	Pizarro, Choco	6.12	238	eP	Pn	05 40 34.0	+5.9
PIZC				eP	Pn	05 40 34.0	+5.9
PIZC				eS	Sn	05 41 45.0	+7.0
PIZC				eS	Sn	05 41 45.0	+7.0
PIZC				i		05 42 13.8	
	comp=Z,108nm,0.7s						
PIZC				i		05 42 13.8	
	comp=Z,108nm,0.7s						
BIRV	Birongo	6.21	68	eP	Pn	05 40 30.6	+1.2
BIRV				eS	Sn	05 41 38.8	-1.4
MACC	Macarena, Meta	6.27	196	eP	Pn	05 40 31.6	+1.3
MACC				eP	Pn	05 40 31.6	+1.3
MACC				eS	Sn	05 41 39.6	-2.2
MACC				eS	Sn	05 41 39.6	-2.2
MACC				i		05 42 31.3	
	comp=Z,321nm,0.5s						
MACC				i		05 42 31.3	
	comp=Z,321nm,0.5s						
BETC	Betania	6.41	211	eP	Pn	05 40 34.7	+2.5
BETC				eP	Pn	05 40 34.7	+2.5
BETC				eS	Sb	05 42 01.1	-5.0
BETC				eS	Sb	05 42 01.1	-5.0
MARP	Paez Belalcaza	6.56	216	eP	Pn	05 40 36.8	+2.4
MARP				eP	Pn	05 40 36.8	+2.4
MARP				eS	Sn	05 41 53.1	+3.9
MARP				eS	Sn	05 41 53.1	+3.9
MALC	Bahia Malaga	6.65	231	eP	Pn	05 40 40.5	+5.1
MALC				eP	Pn	05 40 40.5	+5.1
GARC	Garzon, Huila	6.86	209	eP	Pn	05 40 41.5	+2.8
GARC				eP	Pn	05 40 41.5	+2.8
GARC				i		05 42 51.0	
	comp=Z,107nm,0.3s						
GARC				i		05 42 51.0	
	comp=Z,107nm,0.3s						
PCON	Cinco Dias	7.23	216	eP	Pn	05 40 48.8	+4.9
PCON				eP	Pn	05 40 48.8	+4.9
FLOC	Florencia	7.47	208	eP	Pn	05 40 49.0	+2.3
FLOC				eP	Pn	05 40 49.0	+2.3
FLOC				eS	Sn	05 42 09.7	-1.6
FLOC				eS	Sn	05 42 09.7	-1.6
FLOC				i		05 43 21.9	
	comp=Z,65nm,0.5s						
FLOC				i		05 43 21.9	
	comp=Z,65nm,0.5s						
SOTA	Rioblanco	7.51	217	eP	Pn	05 40 52.4	+4.7
SOTA				eP	Pn	05 40 52.4	+4.7
PCRV	Puerto La Cruz	7.65	75	Pn	Pn	05 40 49.7	+0.4
	comp=Z,26nm,0.3s,baz=262,slow=7.1,SNR=74						
PCRV				Sn	Sn	05 42 16.8	+0.9
	comp=Z,72nm,0.3s,baz=281,slow=19,SNR=5.0						
PCRV	Puerto La Cruz	7.65	75	eP	Pn	05 40 50.1	+0.9
PCRV				eS	Sn	05 42 13.1	-2.8
BCIP	Isla Barro Col	7.68	278	Pn	Pn	05 40 51.1	+1.6
BCIP	Isla Barro Col	7.68	278	eP	Pn	05 40 49.9	+0.3
BCIP				eP	Pn	05 40 49.9	+0.3
BCIP				eS	Sn	05 42 09.1	-7.3
BCIP				eS	Sn	05 42 09.1	-7.3
BCIP				i		05 42 23.0	
	comp=Z,54nm,0.7s						
BCIP				i		05 42 23.0	
	comp=Z,54nm,0.7s						
PLCV	Puerto La Cruz	7.69	75		Pn	05 40 49.7	-0.1
BBAC	Balboa, Cauca	7.99	220	eP	Pn	05 40 57.3	+3.3
BBAC				eP	Pn	05 40 57.3	+3.3
BBAC				eS	Sb	05 42 50.9	-0.8
BBAC				eS	Sb	05 42 50.9	-0.8
PTLC	Puerto Leguiza	8.42	199	eP	Pn	05 41 04.7	+4.9
PTLC				eP	Pn	05 41 04.7	+4.9
PTLC				eS	Sb	05 42 55.1	-8.9
PTLC				eS	Sb	05 42 55.1	-8.9
PTLC				i		05 44 12.0	
	comp=Z,120nm,0.6s						
PTLC				i		05 44 12.0	
	comp=Z,120nm,0.6s						
ORIV	Oritupano	8.67	84	eP	Pn	05 41 03.1	0.0
GCUF	Volcan Galeras	8.67	217	eP	Pn	05 41 07.2	+3.5
GCUF				eP	Pn	05 41 07.2	+3.5
CRUV	Carupano	9.11	74	eP	Pn	05 41 10.3	+1.1
CRUV				eS	Sn	05 42 47.0	-4.7
OTAV	Otavalo	10.12	219	Pn	Pn	05 41 27.0	+3.4
OTAV	Otavalo	10.12	219	eP	Pn	05 41 26.4	+2.9
OTAV				eP	Pn	05 41 26.4	+2.9
RIOV	Rio Grande	10.22	90	eP	Pn	05 41 24.6	+0.1
RIOV				eS	Sn	05 43 12.8	-6.1
LGNH	Logne	10.24	357		Pn	05 41 24.8	0.0
SDDR	Presa de Saban	10.73	4	Pn	Pn	05 41 32.8	+1.3
LUEV	Luepa	10.85	102	eP	Pn	05 41 33.4	+0.2
MLPR	Magueyes Islan	10.88	27	Pn	Pn	05 41 30.3	-3.3
GRGR	Grenville	11.02	68	Pn	Pn	05 41 34.6	-0.8
ICMP	Isla Caja de M	11.05	29	Pn	Pn	05 41 32.5	-3.3
MPR	Mayaguez	11.06	26		Pn	05 41 32.8	-3.1
OBIP	Obispado Ponce	11.15	28	Pn	Pn	05 41 35.2	-1.9
SC01	Santiago de lo	11.23	7		Pn	05 41 38.2	0.0
MTDJ	Mount Denham	11.25	333	Pn	Pn	05 41 39.7	+1.0
AGPR	Aguadilla, PR	11.30	25	Pn	Pn	05 41 34.5	-4.7
AOPR	Arecibo Observ	11.34	27		Pn	05 41 37.2	-2.7
PDPR	Patillas Dam,	11.41	31		Pn	05 41 38.1	-2.6
SJG	San Juan	11.43	30	Pn	Pn	05 41 39.1	-1.8
	comp=Z,10nm,0.3s,baz=204,slow=13,SNR=17						
SJG				Sn	Sn	05 43 42.1	-6.4
	comp=Z,2.3nm,0.3s,baz=8.2,slow=23,SNR=2.5						
SJG				LR	LR	05 46 58.8	
	comp=Z,376nm,18.3s,baz=246,slow=42						
SJG	San Juan	11.43	30		Pn	05 41 38.3	-2.7
SJG	San Juan	11.43	30	eP	Pn	05 41 37.3	-3.7
SJG				eP	Pn	05 41 37.3	-3.7
HUMP	Col San Antoni	11.60	31	Pn	Pn	05 41 40.8	-2.6
GCPR	Guaynabo City	11.63	30		Pn	05 41 41.3	-2.4
CBYP	Canovanas	11.71	31		Pn	05 41 42.3	-2.6
MTP	Monte Pirata	11.72	32	Pn	Pn	05 41 42.8	-2.2
SVB	Belmont	11.81	64	Pn	Pn	05 41 45.3	-0.9
CDVI	St. Croix	11.88	36	Pn	Pn	05 41 45.6	-1.6
GTBY	Guantanamo Bay	11.99	346	Pn	Pn	05 41 47.9	-0.8
CUPR	Culebra, Puert	12.04	33		Pn	05 41 47.1	-2.2
FDF	Fort de France	12.56	58		Pn	05 41 53.7	-2.8
ESPN	Las Esperanzas	12.61	289		Pn	05 41 57.2	+0.1
JTS	Las Juntas de	12.82	280	Pn	Pn	05 42 01.9	+1.8
ACON	Acoyapa	13.37	287	Pn	Pn	05 42 08.6	+1.0
CBCY	The Bluff, Cay	13.63	328	Pn	Pn	05 42 09.3	-1.7
LCCY	Blossom Villag	13.74	327	Pn	Pn	05 42 10.8	-1.9
FSCY	Frank Sound, G	14.10	322	Pn	Pn	05 42 15.6	-1.9
PTGA	Pitinga	15.04	126	Pn	Pn	05 42 28.7	-1.6
	comp=Z,6.9nm,0.3s,baz=308,slow=14,SNR=77						
PTGA				Sn	Sn	05 45 10.8	-6.1
	comp=Z,5.8nm,0.3s,baz=33,slow=18,SNR=6.6						
PTGA				Lg	Lg	05 46 49.2	
	comp=Z,7.1nm,0.3s,baz=311,slow=19,SNR=2.9						
PTGA				LR	LR	05 47 52.2	
	comp=Z,222nm,20.3s,baz=281,slow=36						
PTGA	Pitinga	15.04	126	Pn	Pn	05 42 28.8	-1.5
PTGA				IAmb	IAmb	05 42 30.0	
	comp=Z,48nm,0.8s						
CZSB	Cruzeiro do Su	15.85	182	eP	Pn	05 42 40.5	-0.5
TGUH	Tegucigalpa,Un	15.94	293		Pn	05 42 40.7	-1.6
ATAH	Atahualpa	16.48	202	Pn	P	05 42 51.3	-0.9
	comp=Z,0.3nm,0.3s,baz=53,slow=7.8,SNR=3.9						
ATAH				LR	LR	05 50 24.8	
	comp=Z,261nm,19.4s,baz=5.1,slow=42						
ETMB	Extrema	18.86	162	eP	Pn	05 43 19.2	+0.7
SAML	Samuel	19.24	152	P	P	05 43 22.5	+0.3
PETF	Flores	19.33	298	P	Pn	05 43 26.5	+2.2
MDP	Montagnes des	19.60	98	P	P	05 43 26.7	+0.5
	comp=Z,1.1nm,0.3s,baz=269,slow=9.0,SNR=7.2						
MDP				S	S	05 47 00.9	-6.5
	comp=Z,0.5nm,0.3s,baz=176,slow=8.2,SNR=1.4						
MDP				Lg	Lg	05 49 10.6	
	comp=Z,1.5nm,0.3s,baz=197,slow=19,SNR=1.8						
MDP				LR	LR	05 50 48.8	
	comp=Z,220nm,21.9s,baz=252,slow=36						
TEIG	Tepich	19.66	309	P	Pn	05 43 27.6	-0.5
TEIG				LR	LR	05 52 29.1	
	comp=Z,145nm,18.4s,slow=41						
TEIG	Tepich	19.66	309	P	P	05 43 26.9	+0.1
PAYG	Puerto Ayora	20.14	245	P	P	05 43 31.0	-1.1
PAYG				IAmb	IAmb	05 43 39.4	
	comp=Z,48nm,0.8s						
HUEH	Huehuetenango	20.22	292	P	P	05 43 33.6	+0.4
MALB	Monte Alegre	20.43	119	eP	P	05 43 36.2	+0.9
ITTB	Itaituba	20.59	127	eP	Pn	05 43 38.2	-1.0
NNA	Nana	20.61	193	P	Pn	05 43 38.5	-1.0
	comp=Z,8.1nm,0.7s,baz=324,slow=17,SNR=2.7						
NNA				LR	LR	05 52 54.7	
	comp=Z,333nm,18.3s,baz=19,slow=40						
NNA	Nana	20.61	193	P	P	05 43 37.9	+0.7
CCIG	Comitan	21.11	294	P	P	05 43 43.3	+0.6
CCIG				IAmb	IAmb	05 43 50.7	
	comp=Z,51nm,1.0s						
DWPF	Disney Wildern	21.65	337	P	P	05 43 48.6	+0.4
	baz=154						
DWPF	Disney Wildern	21.65	337	P	P	05 43 48.2	0.0
MCPB	Macapa, AP	21.75	112	eP	P	05 43 51.2	+1.8
NPGB	Novo Progresso	22.57	132	eP	P	05 43 59.8	+1.5
CMIG	Matias Romero	23.86	294	P	P	05 44 10.7	-0.6
	comp=Z,4.4nm,0.8s,baz=144,slow=9.8,SNR=4.5						
CMIG				LR	LR	05 54 47.7	
	comp=Z,192nm,18.3s,baz=74,slow=40						
VILB	Vilhena	24.14	150	eP	P	05 44 16.1	+2.1
NHSC	New Hope	25.86	344	P	P	05 44 31.3	+1.9
	baz=161						
TMAB	Tom-Au,PA,Br	26.18	113	eP	P	05 44 34.5	+2.0
SIV	San Ignacio	26.43	156	P	P	05 44 35.1	+0.3
	comp=Z,22nm,0.9s,baz=344,slow=8.3,SNR=85						
PRPB	Parauapebas	26.45	122	eP	P	05 44 37.0	+2.0
Y58A	Scranton	26.49	346	P	P	05 44 36.2	+1.2
X60A	Albert Glenn T	26.78	349	P	P	05 44 38.8	+1.2
	baz=167						
X59A	McDuffie Farm,	26.89	348	P	P	05 44 39.4	+0.7
	baz=166						
250A	Grady	27.05	333	P	P	05 44 39.8	-0.4
250A				IAmb	IAmb	05 44 46.9	
	comp=Z,25nm,0.8s						
X57A	Johnson Farm,	27.13	345	P	P	05 44 41.3	+0.5
	baz=162						
GOGA	Godfrey	27.17	339	P	P	05 44 42.2	+1.0
	baz=155						
GOGA	Godfrey	27.17	339	P	P	05 44 43.0	+1.7
GOGA				IAmb	IAmb	05 44 47.4	
	comp=Z,28nm,0.9s						
W60A	Pink Hill	27.20	350	P	P	05 44 42.3	+0.9
	baz=168						
W61A	Ground Anchor	27.20	351	P	P	05 44 43.6	+2.2
	baz=169						
MNMC	Minye Minye	27.29	175	P	P	05 44 43.1	+0.4
BIRD	Birdtown, Kers	27.39	345	IAmb	IAmb	05 44 49.4	
	comp=Z,17nm,0.7s						
CNNC	Cliffs of the	27.41	350	P	P	05 44 44.7	+1.4
	baz=168						
V62A	Hyde County Ai	27.44	353	P	P	05 44 43.9	+0.4
	baz=172						
W59A	Clinton	27.44	349	P	P	05 44 44.0	+0.4
	baz=166						
W58A	Raeford	27.46	347	P	P	05 44 44.4	+0.6
	baz=165						
HODGE	Hodges	27.52	342	P	P	05 44 45.8	+1.5
HODGE				IAmb	IAmb	05 44 46.6	
	comp=Z,31nm,0.8s						
PSGCX	Pisagua	27.71	176	P	P	05 44 46.1	-0.2
Z51A	Franklin	27.74	336	P	P	05 44 48.5	+2.2
Z51A				IAmb	IAmb	05 44 48.9	
	comp=Z,28nm,0.7s						
V61A	Roper	27.74	352	P	P	05 44 47.3	+1.0
V60A	Jim Taylor Roa	27.82	351	P	P	05 44 47.7	+0.7
	baz=169						
W56A	Indian Trail	27.89	345	P	P	05 44 47.9	+0.2
	baz=162						
V59A	Middlesex	27.98	349	P	P	05 44 49.0	+0.6
	baz=167						
KMSC	Kings Mountain	28.09	344	P	P	05 44 49.8	+0.3
	baz=160						
KMSC	Kings Mountain	28.09	344	P	P	05 44 48.9	-0.6
V58A	Windy Hill, Pi	28.18	348	P	P	05 44 50.7	+0.5
	baz=165						
V58A	Windy Hill, Pi	28.18	348	P	P	05 44 49.9	-0.4
V58A				IAmb	IAmb	05 44 59.6	
	comp=Z,34nm,1.5s						
U61A	Possum Corner	28.26	353	P	P	05 44 51.4	+0.5
	baz=171						
LRAL	Lakeview Retre	28.27	333	P	P	05 44 51.3	+0.3
	baz=148						
PB08	IPOC Station P	28.33	174	P	P	05 44 52.7	+0.6
PB08				IAmb	IAmb	05 45 00.8	
	comp=Z,22nm,1.1s						
V57A	Coltrane Farms	28.41	347	P	P	05 44 52.7	+0.4
	baz=164						
BG3	Lake Jocassee	28.43	341	P	P	05 44 54.3	+1.8
BG3				IAmb	IAmb	05 45 05.7	
	comp=Z,29nm,1.5s						
U60A	Pendleton	28.50	351	P	P	05 44 53.0	+0.1
	baz=169						
V56A	Mocksville	28.51	346	P	P	05 44 53.5	+0.4
	baz=162						
U58A	Oxford	28.65	349	P	P	05 44 54.8	+0.4
	baz=167						
Y49A	Blount Mountai	28.72	335	P	P	05 44 55.7	+0.6
V55A	Taylorsville	28.73	345	P	P	05 44 56.4	+1.3
V55A				IAmb	IAmb	05 44 59.2	
	comp=Z,30nm,1.3s						
U57A	Blanch	28.84	348	P	P	05 44 56.6	+0.5
	baz=165						
W52A	Murphy	28.86	340	P	P	05 44 58.3	+2.0
W52A				IAmb	IAmb	05 44 58.9	
	comp=Z,28nm,0.8s						
Z47A	Carrollton	28.90	332	IAmb	IAmb	05 44 59.1	
	comp=Z,29nm,0.8s						
FPAL	Fort Paine	28.98	337	P	P	05 44 58.7	+1.3
FPAL				IAmb	IAmb	05 45 15.2	
	comp=Z,24nm,1.3s						
U56A	King	28.99	346	P	P	05 44 58.1	+0.6
	baz=163						
V53A	Saluda	29.02	342	P	P	05 44 59.4	+1.7
T60A	Surry	29.09	352	P	P	05 44 58.9	+0.6
	baz=170						
T58A	Grand View Acr	29.18	349	P	P	05 44 59.5	+0.4
	baz=167,SNR=6.4						
PB01	IPOC Station P	29.19	175	P	P	05 44 59.7	+0.2
TKL	Tuckaleechee C	29.32	340	P	P	05 45 00.7	+0.4
	comp=Z,6.8nm,0.7s,baz=154,slow=13,SNR=7.9						
TKL				LR	LR	05 56 58.5	
	comp=Z,165nm,19.9s,baz=154,slow=37						
TKL	Tuckaleechee C	29.32	340	P	P	05 45 01.7	+1.3
TKL				IAmb	IAmb	05 45 08.3	
	comp=Z,31nm,1.4s						
VBMS	Vicksburg	29.36	327	P	P	05 45 01.9	+1.1
	baz=140						
T57A	Hurt	29.37	348	P	P	05 45 01.4	+0.6
	baz=165						
T57A	Hurt	29.37	348	P	P	05 45 01.6	+0.7
T57A				IAmb	IAmb	05 45 06.9	
	comp=Z,20nm,1.1s						
CPCT	Cooper Cave	29.38	339	P	P	05 45 03.0	+2.0
CPCT				IAmb	IAmb	05 45 03.5	
	comp=Z,19nm,0.8s						
V52A	Sevierville	29.43	341	P	P	05 45 03.0	+1.7
V52A				IAmb	IAmb	05 45 14.0	
	comp=Z,25nm,1.2s						
W50A	Signal Mountai	29.45	338		P	05 45 03.3	+1.7
X48A	Hartselle	29.49	334	IAmb	IAmb	05 45 04.1	
	comp=Z,17nm,0.8s						
U54A	Nelsons Funny	29.52	344	P	P	05 45 03.1	+0.8
	baz=160						
U54A	Nelsons Funny	29.52	344	IAmb	IAmb	05 45 04.6	
	comp=Z,19nm,0.8s						
T56A	Rocky Mt	29.57	347	P	P	05 45 03.2	+0.7
	baz=164						
S60A	Water View	29.64	353	P	P	05 45 03.6	+0.4
	baz=171						
V51A	Loudon	29.64	340	IAmb	IAmb	05 45 05.9	
	comp=Z,23nm,0.8s						
S58A	Poland Farm, P	29.75	350	P	P	05 45 04.4	+0.3
	baz=168						
S58A	Poland Farm, P	29.75	350	P	P	05 45 04.6	+0.5
S58A				IAmb	IAmb	05 45 10.9	
	comp=Z,27nm,1.4s						
SMTB	Santa Maria do	29.76	124	eP	P	05 45 06.7	+2.1
S59A	Mechanicsville	29.78	352	P	P	05 45 05.0	+0.6
	baz=170						
BLA	Blacksburg	29.83	347	P	P	05 45 05.3	+0.4
	baz=163						
BLA	Blacksburg	29.83	347	P	P	05 45 05.5	+0.5
BLA				IAmb	IAmb	05 45 07.0	
	comp=Z,18nm,0.8s						
PB07	IPOC Station P	29.84	176	P	P	05 45 06.2	+1.0
PB09	IPOC Station P	29.96	175	P	P	05 45 07.2	+0.8
PB09				IAmb	IAmb	05 45 13.2	
	comp=Z,17nm,0.9s						
S57A	Dark Hollow, R	30.05	349	P	P	05 45 07.6	+0.7
	baz=166						
S57A	Dark Hollow, R	30.05	349	IAmb	IAmb	05 45 13.1	
	comp=Z,14nm,0.6s						
TZTN	Tazewell	30.05	341	P	P	05 45 07.7	+0.8
	baz=157						
TZTN	Tazewell	30.05	341	P	P	05 45 07.6	+0.8
TZTN				IAmb	IAmb	05 45 09.3	
	comp=Z,22nm,1.1s						
R58B	Mineral	30.07	351	P	P	05 45 08.0	+1.1
	baz=168						
R60A	Leonardtown, M	30.19	353	P	P	05 45 09.3	+1.3
	baz=171						
R59A	King George, V	30.19	352	P	P	05 45 08.1	+0.1
	baz=170,SNR=5.8						
CBN	Corbin Frederi	30.23	352	P	P	05 45 08.1	-0.3
	baz=170,SNR=5.3						
PLAL	Pickwick Lake	30.39	334	IAmb	IAmb	05 45 12.5	
	comp=Z,29nm,1.0s						
R58A	Rapidan	30.41	351	P	P	05 45 10.3	+0.3
	baz=168,SNR=6.2						
R57A	Stanardsville	30.50	350	P	P	05 45 12.1	+1.3
	baz=167						
V48A	Smith Brothers	30.51	336	IAmb	IAmb	05 45 13.4	
	comp=Z,29nm,0.8s						
S54A	Dingess, Beckl	30.60	346	P	P	05 45 12.6	+0.9
	baz=162						
OXF	Oxford	30.61	331	P	P	05 45 12.1	+0.3
	baz=145						
OXF	Oxford	30.61	331	P	P	05 45 12.4	+0.6
OXF				IAmb	IAmb	05 45 18.0	
	comp=Z,19nm,0.8s						
LVC	Limon Verde	30.80	174	P	P	05 45 14.0	0.0
	comp=Z,8.1nm,0.7s,baz=13,slow=6.2,SNR=18						
LVC	Limon Verde	30.80	174	P	P	05 45 15.0	+1.0
LVC	Limon Verde	30.80	174	eP	P	05 45 15.3	+1.3
PP1B	Ponte de Pedra	30.80	146	eP	P	05 45 16.1	+2.4
Q60A	Greensboro	30.83	354	P	P	05 45 15.0	+1.3
	baz=173						
R54A	Victor	30.89	346	P	P	05 45 14.7	+0.4
	baz=163						
T50A	Nancy	30.91	340	P	P	05 45 17.1	+2.7
T50A				IAmb	IAmb	05 45 17.4	
	comp=Z,15nm,0.8s						
Q58A	Fox Den Farm,	30.99	352	P	P	05 45 15.5	+0.4
	baz=169						
HKT	Hockley	31.00	317	P	P	05 45 16.9	+1.7
PEXB	Peixe	31.13	130	eP	P	05 45 17.9	+1.3
ARAG	Araguaiana, MT	31.15	140	eP	P	05 45 17.9	+1.2
WVT	Waverly	31.26	335	P	P	05 45 18.2	+0.7
	baz=149						
WVT	Waverly	31.26	335	P	P	05 45 18.2	+0.7
WVT				IAmb	IAmb	05 45 19.9	
	comp=Z,19nm,0.9s						
R53A	Hurricane	31.26	345	P	P	05 45 17.6	+0.1
R53A				IAmb	IAmb	05 45 38.5	
	comp=Z,15nm,0.8s						
Q56A	Snyder Ridge,	31.34	349	P	P	05 45 19.4	+1.2
	baz=166						
X43A	Marvell	31.34	329	P	P	05 45 19.1	+0.8
	baz=142						
SDMD	Soldier’s Deli	31.34	353	P	P	05 45 19.6	+1.4
Z41A	Richland Creek	31.40	325	P	P	05 45 19.9	+1.1
	baz=138						
NATX	Nacogdoches	31.43	321	P	P	05 45 20.1	+1.0
	baz=133						
NATX	Nacogdoches	31.43	321	P	P	05 45 20.1	+1.0
NATX				IAmb	IAmb	05 45 21.3	
	comp=Z,17nm,0.7s						
P58A	Pank, Wackersv	31.48	352	P	P	05 45 20.0	+0.6
	baz=170						
P59A	Jarrettsville	31.49	354	P	P	05 45 20.6	+1.1
	baz=172						
P57A	Homestead Farm	31.57	351	P	P	05 45 21.6	+1.3
	baz=169						
P57A	Homestead Farm	31.57	351	IAmb	IAmb	05 45 22.9	
	comp=Z,17nm,0.8s						
Q54A	Coxs Mills	31.62	347	IAmb	IAmb	05 45 23.0	
	comp=Z,15nm,0.8s						
Q53A	Leroy	31.66	346	P	P	05 45 21.9	+0.9
	baz=162,SNR=7.0						
T47A	Sharon Grove	31.71	337	P	P	05 45 21.5	0.0
PSUB	Penn St. - Bra	31.71	355	IAmb	IAmb	05 45 27.7	
	comp=Z,14nm,0.8s						
P56A	Dayton Farm, R	31.73	350	P	P	05 45 22.7	+1.1
	baz=167,SNR=9.4						
WUPA	West Chester U	31.73	355	P	P	05 45 21.1	-0.5
O61A	Allentown	31.81	356	P	P	05 45 23.1	+0.8
	baz=175						
MVL	Millersville	31.87	354	P	P	05 45 23.7	+0.9
MVL				IAmb	IAmb	05 45 29.5	
	comp=Z,19nm,0.6s						

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UTMT  University of    31.88 334  P     P      05 45 22.9 -0.1
R50A  Paris            31.89 342  IAmb  IAmb   05 45 25.9
      comp=Z,25nm,0.8s
WLAR  White Oak Lake   31.89 326  P     P      05 45 22.5 -0.6
WLAR                              IAmb  IAmb   05 45 25.4
      comp=Z,27nm,0.8s
O58A  Lewisberry       32.06 353  P     P      05 45 25.7 +1.2
      baz=171,SNR=8.7
MCWV  Mont Chateau     32.06 349  P     P      05 45 25.6 +1.1
      baz=165
O60A  Telford          32.10 355  P     P      05 45 26.1 +1.3
      baz=174
PAGS  Pennsylvania G   32.14 353  IAmb  IAmb   05 45 27.2
      comp=Z,14nm,0.8s
O59A  Robesonia        32.16 354  P     P      05 45 26.7 +1.3
      baz=172
R49A  Shelbyville      32.17 341  IAmb  IAmb   05 45 27.6
      comp=Z,20nm,0.8s
P53A  Whipple          32.22 346  IAmb  IAmb   05 45 28.2
      comp=Z,23nm,0.8s
O57A  Amberson         32.23 352  P     P      05 45 27.2 +1.2
      baz=170,SNR=7.3
Q51A  Peebles          32.29 344  IAmb  IAmb   05 45 29.1
      comp=Z,18nm,0.8s
X40A  Basin Creek Fa   32.34 327  P     P      05 45 27.6 +0.5
      baz=139
O56A  Blue Knob Stat   32.43 351  P     P      05 45 28.9 +1.1
      baz=168,SNR=6.3
N61A  South Mountain   32.45 357  P     P      05 45 28.8 +0.9
      baz=176
WCI   Wyandotte Cave   32.50 339  P     P      05 45 29.3 +0.9
      baz=153
WCI   Wyandotte Cave   32.50 339  P     P      05 45 25.4 -3.0
WCI                               IAmb  IAmb   05 45 30.5
      comp=Z,22nm,0.9s
P52A  Corning          32.54 346  P     P      05 45 29.3 +0.6
      baz=161,SNR=8.3
P52A  Corning          32.54 346  P     P      05 45 28.4 -0.3
W41B  Gary Mavity, V   32.55 328  P     P      05 45 29.5 +0.6
      baz=141,SNR=6.2
833A  Chaparral WMA,   32.57 311  P     P      05 45 29.1  0.0
      baz=123
ZAIG  Zacatecas        32.61 300  P     P      05 45 29.5 -0.4
ZAIG                              IAmb  IAmb   05 45 32.7
      comp=Z,13nm,0.8s
N60A  Cedar Hill Far   32.62 356  P     P      05 45 30.7 +1.3
      baz=174
P51A  Williamsport     32.64 344  P     P      05 45 29.0 -0.6
WHAR  Wooly Hollow     32.66 329  P     P      05 45 29.7 -0.2
WHAR                              IAmb  IAmb   05 45 31.6
      comp=Z,20nm,0.8s
O54A  Avella           32.67 348  IAmb  IAmb   05 45 32.1
      comp=Z,16nm,0.8s
Z38A  Mt. Pleasant     32.67 323  P     P      05 45 29.6 -0.3
SSPA  Standing Stone   32.69 352  P     P      05 45 31.3 +1.3
      baz=169
SSPA  Standing Stone   32.69 352  P     P      05 45 29.7 -0.3
SSPA                              IAmb  IAmb   05 45 32.4
      comp=Z,21nm,0.8s
PAL   Palisades        32.69 358  P     P      05 45 30.4 +0.4
      baz=177
435B  Jarrell          32.70 317  P     P      05 45 31.1 +0.9
      baz=128,SNR=6.0
435B  Jarrell          32.70 317  P     P      05 45 30.8 +0.5
LCAR  Lake Charles     32.71 331  P     P      05 45 30.1 -0.2
LCAR                              IAmb  IAmb   05 45 32.1
      comp=Z,19nm,0.9s
N59A  State Game Lan   32.72 355  P     P      05 45 31.2 +0.8
      baz=173,SNR=7.4
N59A  State Game Lan   32.72 355  P     P      05 45 29.6 -0.8
N58A  Sunbury          32.74 354  P     P      05 45 31.1 +0.6
      baz=172,SNR=7.2
N58A  Sunbury          32.74 354  IAmb  IAmb   05 45 33.1
      comp=Z,24nm,0.9s
N57A  Milroy           32.76 352  P     P      05 45 31.5 +0.8
      baz=170,SNR=7.1
AQDB  Aquidauana       32.78 151 eP     P      05 45 33.4 +2.4
MIAR  Mount Ida        32.79 326  P     P      05 45 31.5 +0.5
      baz=138
MIAR  Mount Ida        32.79 326  P     P      05 45 31.7 +0.8
TRNY  Table Rock, Ra   32.84 357  IAmb  IAmb   05 45 33.4
      comp=Z,17nm,0.9s
O53A  New Philadelph   32.91 347  P     P      05 45 33.3 +1.3
      baz=163
PBMO  Poplar Bluff     32.94 332  IAmb  IAmb   05 45 38.7
      comp=Z,13nm,0.9s
M61A  Granite Spring   32.99 358  P     P      05 45 33.3 +0.7
      baz=177
N56A  West Decatur     33.02 351  P     P      05 45 33.6 +0.6
      baz=169,SNR=6.3
M60A  Port Jervis      33.05 357  P     P      05 45 33.9 +0.7
      baz=175
FCAR  Ozark Folk Cen   33.05 329  P     P      05 45 33.3 +0.1
FCAR                              IAmb  IAmb   05 45 34.6
      comp=Z,21nm,0.8s
M63A  Gales Ferry      33.05   0  P     P      05 45 34.4 +1.3
M63A                              IAmb  IAmb   05 45 35.2
      comp=Z,22nm,0.8s
M62A  Hamden           33.09 359  P     P      05 45 34.2 +0.6
      baz=178
P49A  Miami Univ. Ec   33.16 342  P     P      05 45 35.0 +0.8
      baz=157
P49A  Miami Univ. Ec   33.16 342  P     P      05 45 34.8 +0.7
P49A                              IAmb  IAmb   05 45 36.7
      comp=Z,15nm,0.9s
M58A  Price’s Panora   33.24 354  P     P      05 45 35.6 +0.7
      baz=172,SNR=8.6
GO02  Mina Guanaco     33.27 176  P     P      05 45 36.1 +0.5
GO02                              IAmb  IAmb   05 45 43.0
      comp=Z,11nm,0.8s
M57A  Sunshine Farm,   33.28 353  P     P      05 45 36.6 +1.4
      baz=171,SNR=8.0
M59A  Waymart          33.31 355  P     P      05 45 36.2 +0.7
      baz=174,SNR=7.5
ACSO  Alum Creek Sta   33.32 345  P     P      05 45 36.5 +0.9
      baz=160,SNR=5.4
ACSO  Alum Creek Sta   33.32 345  IAmb  IAmb   05 45 37.9
      comp=Z,24nm,0.9s
N54A  Moraine State    33.35 349  P     P      05 45 37.1 +1.3
      baz=166
N54A  Moraine State    33.35 349  IAmb  IAmb   05 45 42.9
      comp=Z,18nm,0.7s
WHTX  Lake Whitney,    33.37 319  P     P      05 45 36.7 +0.6
      baz=130
W39A  Magazine         33.39 327  P     P      05 45 36.8 +0.6
      baz=138,SNR=8.1
W39A  Magazine         33.39 327  IAmb  IAmb   05 45 38.3
      comp=Z,28nm,1.1s
KSCT  Kent School, K   33.39 358  P     P      05 45 36.9 +0.8
KSCT                              IAmb  IAmb   05 45 37.9
      comp=Z,13nm,0.8s
BLO   Bloomington      33.42 339  IAmb  IAmb   05 45 39.3
      comp=Z,25nm,0.8s
T42A  Van Buren        33.45 332  IAmb  IAmb   05 45 38.3
      comp=Z,17nm,0.8s
BDFB  Brasilia         33.66 135  P     P      05 45 38.9  0.0
      comp=Z,6.6nm,0.7s,baz=318,slow=11,SNR=11
BDFB  Brasilia         33.66 135  P     P      05 45 41.0 +2.1
L60A  Shokan           33.69 357  P     P      05 45 39.9 +1.1
      baz=176
U40A  Yellville        33.78 329  P     P      05 45 40.0 +0.4
      baz=141,SNR=26
M54A  Oil Creek Stat   33.82 350  P     P      05 45 41.1 +1.1
      baz=166,SNR=6.8
X37A  Clayton          33.84 324  IAmb  IAmb   05 45 42.2
      comp=Z,12nm,0.9s
L58A  Harry Jones Me   33.85 355  P     P      05 45 41.2 +1.0
      baz=173,SNR=5.6
L61A  Hillsdale 1, H   33.86 358  P     P      05 45 41.2 +0.9
      baz=177
L57A  Andrews Acres    33.90 354  P     P      05 45 41.2 +0.6
      baz=172,SNR=8.4
L59A  Walton           33.93 356  P     P      05 45 42.3 +1.3
      baz=175
M53A  WI Miller and    33.94 348  P     P      05 45 41.1 +0.1
      baz=165
SDBA  SAO DESIDERIO    33.95 127 eP     P      05 45 42.9 +1.5
NBMO  Morrinhos-CE     33.99 108 eP     P      05 45 43.6 +1.8
BINY  Binghamton       34.02 355  P     P      05 45 42.6 +1.0
      baz=173,SNR=7.7
JCT   Junction City    34.06 314  P     P      05 45 42.6 +0.4
      baz=125
MGMO  Mountain Grove   34.11 331  IAmb  IAmb   05 45 44.7
      comp=Z,14nm,0.9s
Q44A  Meyer Farm, Va   34.12 336  IAmb  IAmb   05 45 45.0
      comp=Z,27nm,0.9s
L56A  Greenwood        34.12 353  P     P      05 45 43.8 +1.2
      baz=170,SNR=14
HRV   Adam Dziewonsk   34.16   1  P     P      05 45 43.8 +1.0
      baz=181
K60A  Five Rivers En   34.30 358  P     P      05 45 44.9 +1.0
      baz=177
K62A  Royalston        34.31 360  P     P      05 45 45.0 +0.9
      baz=180
K63A  Dunstable        34.34   1  P     P      05 45 45.0 +0.7
      baz=181
L53A  Girard           34.36 349  P     P      05 45 45.3 +0.7
      baz=166
CCM   Cathedral Cave   34.36 333  P     P      05 45 45.1 +0.5
      baz=145
CCM   Cathedral Cave   34.36 333  P     P      05 45 44.7  0.0
CCM                               IAmb  IAmb   05 45 46.5
      comp=Z,28nm,0.8s
ERPA  Erie             34.47 350  P     P      05 45 46.1 +0.6
      baz=166
ERPA  Erie             34.47 350  P     P      05 45 45.8 +0.2
K59A  Cooperstown      34.50 356  P     P      05 45 46.7 +0.9
      baz=175
WVNY  West Valley, N   34.53 352  P     P      05 45 46.0 -0.1
K58A  Earlville        34.55 355  P     P      05 45 46.9 +0.7
      baz=174
K58A  Earlville        34.55 355  P     P      05 45 46.1 -0.1
K58A                              IAmb  IAmb   05 45 52.9
      comp=Z,20nm,0.8s
K57A  Scipio Center    34.59 354  P     P      05 45 47.3 +0.7
      baz=172,SNR=5.4
U38A  Gravette         34.64 328  P     P      05 45 46.6 -0.5
K56A  Middlesex        34.65 353  P     P      05 45 47.6 +0.6
      baz=171
N47A  Urbana           34.69 342  P     P      05 45 47.6 +0.1
SFIN  Lafayette        34.70 340  P     P      05 45 48.3 +0.8
      baz=153,SNR=7.6
SFIN  Lafayette        34.70 340  P     P      05 45 47.7 +0.2
J60A  Lant Hill Farm   34.91 358  P     P      05 45 50.1 +0.8
      baz=178
J63A  Strafford        34.94   1  P     P      05 45 50.4 +0.9
      baz=182
P43A  Skaggs, Pawnee   34.95 336  P     P      05 45 49.6 -0.1
J61A  Chester          34.99 359  P     P      05 45 50.9 +0.9
      baz=179
TUL1  Leonard          35.02 325  P     P      05 45 49.9 -0.5
      baz=136,SNR=7.2
TUL1  Leonard          35.02 325  P     P      05 45 50.5 +0.1
TUL1                              IAmb  IAmb   05 45 51.3
      comp=Z,17nm,0.8s
S39A  Bolivar          35.05 330  IAmb  IAmb   05 45 52.4
      comp=Z,16nm,0.7s
ITRB  Iturama          35.07 143 eP     P      05 45 52.6 +1.6
W35A  Tecumseh         35.11 323  P     P      05 45 50.4 -0.7
IPMB  Ipameri, GO      35.15 138 eP     P      05 45 53.0 +1.3
J59A  Piesco           35.17 357  P     P      05 45 51.9 +0.3
      baz=176
ABTX  Abilene, Hawle   35.21 317  P     P      05 45 52.2 +0.1
      baz=128,SNR=7.8
ABTX  Abilene, Hawle   35.21 317  IAmb  IAmb   05 45 53.8
      comp=Z,21nm,0.7s
J57A  Williamstown     35.22 355  P     P      05 45 52.8 +0.8
      baz=173,SNR=6.2
J57A  Williamstown     35.22 355  P     P      05 45 51.6 -0.3
L48A  N Adams          35.31 344  P     P      05 45 52.8  0.0
L48A                              IAmb  IAmb   05 45 54.6
      comp=Z,32nm,1.0s
I58A  Old Forge        35.42 356  P     P      05 45 54.3 +0.5
      baz=175,SNR=8.2
AAM   Ann Arbor        35.44 345  P     P      05 45 55.1 +1.3
      baz=160
FNO   Franklin         35.49 323  P     P      05 45 53.3 -1.1
FNO                               IAmb  IAmb   05 45 56.5
      comp=Z,20nm,0.7s
I60A  Shoreham         35.50 359  P     P      05 45 56.2 +1.9
      baz=178
I61A  Oroboro, Fairl   35.58 360  P     P      05 45 56.1 +1.0
      baz=180
OK030 Cody Creek RV    35.60 324  P     P      05 45 55.7 +0.4
I64A  Boothbay         35.63   3  P     P      05 45 57.1 +1.6
      baz=184
K50A  Casco            35.64 347  P     P      05 45 56.3 +0.8
OK031 S. Brethren Rd   35.65 324  P     P      05 45 55.7 -0.1
HDIL  Hopedale         35.65 337  P     P      05 45 56.0 +0.3
      baz=150
HDIL  Hopedale         35.65 337  P     P      05 45 55.2 -0.5
I57A  Carthage         35.72 356  P     P      05 45 57.4 +1.2
      baz=174
I63A  Otisfield        35.72   2  P     P      05 45 57.4 +1.1
      baz=182
QUOK  Quay             35.73 325  P     P      05 45 56.5 +0.1
QUOK                              IAmb  IAmb   05 45 57.4
      comp=Z,30nm,0.8s
LBNH  Lisbon           35.88   0  P     P      05 45 58.8 +1.1
      baz=180
OK029 Liberty Lake     35.90 324  P     P      05 45 57.3 -0.6
OK029                             IAmb  IAmb   05 45 59.0
      comp=Z,23nm,0.8s
M44A  Midewin, Midew   35.92 339  P     P      05 45 57.4 -0.6
P40A  Paris            35.92 333  IAmb  IAmb   05 45 59.0
      comp=Z,18nm,0.8s
JANB  Januaria         35.99 130 eP     P      05 45 59.8 +0.8
PCMB  Pacaembu         36.03 146 eP     P      05 46 00.8 +1.6
H58A  Gabriels         36.10 358  P     P      05 46 00.4 +0.8
      baz=176
H61A  Lyndonville      36.18   0  P     P      05 46 01.0 +0.8
      baz=180
H60A  Morristown       36.21 359  P     P      05 46 01.8 +1.3
      baz=179
H57A  Richville        36.22 356  P     P      05 46 01.0 +0.5
      baz=174
TRCB  Terra Rica       36.26 149 eP     P      05 46 02.6 +1.5
I51A  Listowel         36.29 349  P     P      05 46 01.9 +0.7
      baz=165
TXAR  Lajitas Array    36.30 310  P     P      05 46 02.2 +0.6
      comp=Z,7.9nm,0.7s,baz=128,slow=8.9,SNR=102
TXAR                              PcP   PcP    05 48 27.8 +1.3
      comp=Z,4.0nm,0.6s,baz=134,slow=5.5,SNR=18
TXAR                              LR    LR     06 02 56.6
      comp=Z,56nm,18.2s,baz=0.0,slow=40
TX31  Lajitas Ar. Si   36.30 310  P     P      05 46 01.6  0.0
TX31                              IAmb  IAmb   05 46 03.2
      comp=Z,22nm,0.7s
TX32  Lajitas Array    36.30 310  P     P      05 46 01.8 +0.1
H59A  Cadyville        36.31 358  P     P      05 46 01.9 +0.6
      baz=177
LONY  Lake Ozonia      36.33 357  P     P      05 46 02.6 +1.1
      baz=176
FRNY  Flat Rock        36.50 358  P     P      05 46 04.2 +1.3
FRNY                              IAmb  IAmb   05 46 04.9
      comp=Z,16nm,0.9s
L44A  Lake County Fo   36.58 340  P     P      05 46 04.1 +0.4
      baz=153
J47A  Sunmer           36.62 344  P     P      05 46 04.6 +0.6
H53A  Bobcaygeon       36.65 352  P     P      05 46 04.9 +0.7
      baz=169
P38A  Dawn             36.68 332  IAmb  IAmb   05 46 05.5
      comp=Z,20nm,0.8s
G60A  Masonville       36.74 360  P     P      05 46 05.9 +0.9
      baz=180
G57A  Newington        36.83 357  P     P      05 46 06.5 +0.7
      baz=175,SNR=6.3
G58A  Ormstown         36.83 358  P     P      05 46 06.6 +0.8
      baz=177
AC05  El Transito      36.88 177  IAmb  IAmb   05 46 13.2
      comp=Z,20nm,0.7s
G62A  West of Eustis   36.89   2  P     P      05 46 07.5 +1.2
      baz=182
G62A  West of Eustis   36.89   2  P     P      05 46 08.1 +1.8
G62A                              IAmb  IAmb   05 46 14.8
      comp=Z,19nm,0.7s
SADO  Sadowa           36.92 352  P     P      05 46 06.8 +0.2
      comp=Z,28nm,0.6s,baz=191,slow=7.8,SNR=25
SADO                              pP    sP     05 46 12.1 -0.3
      comp=Z,28nm,0.6s,baz=185,slow=8.7,SNR=9.9
G61A  St-Isidore-de-   36.93   1  P     P      05 46 07.8 +1.2
      baz=181
PLVO  Plevna           36.93 354  P     P      05 46 05.7 -0.9
PLVO                              IAmb  IAmb   05 46 14.2
      comp=Z,17nm,0.8s
PKME  Peaks-Kenny Pk   36.99   3  P     P      05 46 08.1 +1.0
PKME                              IAmb  IAmb   05 46 20.4
      comp=Z,36nm,1.4s
KAN14 Manchester OK    36.99 325  P     P      05 46 06.8 -0.5
KAN14                             IAmb  IAmb   05 46 08.8
      comp=Z,14nm,0.6s
KAN01 Argonia South    37.02 325  P     P      05 46 07.6 +0.1
KAN01                             IAmb  IAmb   05 46 08.5
      comp=Z,29nm,0.8s
L42A  Oliver, Polo     37.05 338  IAmb  IAmb   05 46 08.2
      comp=Z,27nm,0.8s
U32A  Winter Ranch,    37.21 323  P     P      05 46 08.8 -0.3
U32A                              IAmb  IAmb   05 46 10.1
      comp=Z,25nm,0.8s
BB19B Bebedouro        37.21 142 eP     P      05 46 10.9 +1.6
CPUP  Villa Florida    37.23 158  P     P      05 46 08.1 -1.3
      comp=Z,3.9nm,0.8s,baz=336,slow=7.6,SNR=9.1
CPUP                              LR    LR     06 02 46.4
      comp=Z,167nm,18.0s,baz=358,slow=38
CPUP  Villa Florida    37.23 158  P     P      05 46 08.8 -0.6
G54A  Lake Saint Pet   37.40 353  P     P      05 46 11.2 +0.6
      baz=170,SNR=7.9
N38A  Joes South For   37.48 333  P     P      05 46 11.1 -0.2
N38A                              IAmb  IAmb   05 46 12.2
      comp=Z,19nm,0.8s
F59A  Saint Guilaume   37.50 359  P     P      05 46 12.1 +0.7
      baz=179
NBPA  Parau_RN         37.58 111 eP     P      05 46 14.8 +2.2
F60A  Warwick          37.61   0  P     P      05 46 12.9 +0.6
      baz=180
F64A  Sherman          37.65   4  P     P      05 46 13.4 +0.8
      baz=186
KSU1  Kansas State U   37.80 328  P     P      05 46 13.5 -0.5
      baz=138,SNR=9.1
KSU1  Kansas State U   37.80 328  P     P      05 46 13.6 -0.5
KSU1                              IAmb  IAmb   05 46 14.5
      comp=Z,26nm,0.8s
TRQ   Mont Tremblant   37.92 357  P     P      05 46 15.5 +0.4
AMTX  Amarillo         37.93 319  P     P      05 46 14.9 -0.4
      baz=127
AMTX  Amarillo         37.93 319  IAmb  IAmb   05 46 17.7
      comp=Z,28nm,0.6s
ALGO  Algonquin Park   37.94 353  P     P      05 46 15.8 +0.6
      baz=170,SNR=11
CO01  Juntas del Tor   38.02 177  P     P      05 46 17.8 +1.5
E58A  La Victoria      38.03 359  P     P      05 46 16.6 +0.7
      baz=178
GLMI  Grayling         38.05 346  P     P      05 46 17.4 +1.3
      baz=160
JFWS  Jewell Farm      38.05 338  P     P      05 46 16.0 -0.1
      baz=150,SNR=16
JFWS  Jewell Farm      38.05 338  P     P      05 46 15.9 -0.2
E57A  Chemin Saint G   38.09 358  P     P      05 46 17.3 +0.8
      baz=177
E61A  Lac Etchemin     38.10   2  P     P      05 46 18.1 +1.5
      baz=182
MSTX  Muleshoe         38.12 317  P     P      05 46 17.2 +0.2
      baz=125
MSTX  Muleshoe         38.12 317  IAmb  IAmb   05 46 18.7
      comp=Z,21nm,1.1s
PTGB  Pitanga          38.14 150 eP     P      05 46 17.8 +0.7
GO04  Tololo Observa   38.19 178  P     P      05 46 18.4 +0.7
E63A  Oxbow            38.20   4  P     P      05 46 18.3 +1.0
      baz=186
E63A  Oxbow            38.20   4  P     P      05 46 18.2 +0.8
E64A  Bridgewater      38.24   5  P     P      05 46 18.2 +0.5
      baz=187
E55A  Montcerf-Lytto   38.25 356  P     P      05 46 17.9 +0.1
      baz=174,SNR=5.8
GDL2  Guadalupe Moun   38.26 313  P     P      05 46 18.8 +0.5
E56A  St. Veronique    38.27 357  P     P      05 46 18.3 +0.3
      baz=175
FRTB  Fartura          38.36 145 eP     P      05 46 20.4 +1.5
SCIA  State Center     38.38 334  P     P      05 46 19.4 +0.4
      baz=145
SCIA  State Center     38.38 334  P     P      05 46 18.8 -0.2
SCIA                              IAmb  IAmb   05 46 20.0
      comp=Z,39nm,0.8s
I42A  Draeger Farm,    38.44 340  P     P      05 46 19.4  0.0
I42A                              IAmb  IAmb   05 46 20.7
      comp=Z,38nm,0.8s
R32A  Long Quarter,    38.44 326  P     P      05 46 19.6 +0.1
R32A                              IAmb  IAmb   05 46 20.4
      comp=Z,19nm,0.8s
D60A  Saint Jean D’O   38.57   1  P     P      05 46 21.2 +0.8
      baz=182
H43A  Windswept, Lux   38.59 342  P     P      05 46 19.4 -1.3
H43A                              IAmb  IAmb   05 46 21.9
      comp=Z,38nm,0.7s
N35A  Tabor            38.65 331  P     P      05 46 20.8 -0.4
RCBR  Riachuelo        38.73 110  P     P      05 46 21.9 -0.4
D58A  Chemin du LacG   38.74 359  P     P      05 46 22.1 +0.2
      baz=179
MNTX  Cornudas Mount   38.75 312  P     P      05 46 22.8 +0.5
      baz=120,SNR=41
MNTX  Cornudas Mount   38.75 312  IAmb  IAmb   05 46 24.7
      comp=Z,23nm,0.7s
D56A  ZEC Mazanza, M   38.76 357  P     P      05 46 22.6 +0.6
      baz=176
D55A  Sainte-Anne-du   38.77 356  P     P      05 46 22.9 +0.8
      baz=175
K38A  Parkersburg      38.80 335  IAmb  IAmb   05 46 23.1
      comp=Z,32nm,0.9s
D62A  Allapoint, All   38.82   3  P     P      05 46 23.3 +0.8
      baz=185
D62A  Allapoint, All   38.82   3  P     P      05 46 22.6 +0.1
D63A  Stockholm        38.83   4  P     P      05 46 22.9 +0.3
      baz=186
CO03  El Pedregal      38.86 178  P     P      05 46 23.7 +0.6
D61A  St Aubert, Com   38.88   2  P     P      05 46 24.3 +1.2
      baz=183,SNR=12
GDU01 Guandu, BA       38.98 124 eP     P      05 46 25.6 +1.3
I40A  Norwalk          39.03 339  P     P      05 46 23.8 -0.6
LATQ  La Tuque         39.03 359  P     P      05 46 25.1 +0.8
      baz=179
BATG  Bathurst New B   39.27   7  P     P      05 46 26.8 +0.5
CBKS  Cedar Bluff      39.29 325  P     P      05 46 26.8 +0.1
      baz=134
CBKS  Cedar Bluff      39.29 325  P     P      05 46 26.4 -0.4
CBKS                              IAmb  IAmb   05 46 27.6
      comp=Z,25nm,0.9s
SLBS  Sierra La Lagu   39.32 297  P     P      05 46 29.8 +2.7
E46A  Sault Ste Mari   39.42 347  P     P      05 46 28.1 +0.5
E46A                              IAmb  IAmb   05 46 33.9
      comp=Z,42nm,0.7s
VAO   Valinhos         39.62 142 eP     P      05 46 31.4 +1.8
LPIG  La Paz           39.76 298  P     P      05 46 32.1 +1.4
      comp=Z,8.6nm,0.4s,baz=81,slow=4.0,SNR=3.7
E43A  Lone Tree Farm   40.10 344  IAmb  IAmb   05 46 39.0
      comp=Z,22nm,0.6s
BGNE  Belgrade         40.30 329  P     P      05 46 35.1 +0.1
      baz=138
BGNE  Belgrade         40.30 329  P     P      05 46 34.4 -0.6
BGNE                              IAmb  IAmb   05 46 35.9
      comp=Z,28nm,0.7s
PET01 Itanhaem-SP      40.40 144 eP     P      05 46 38.0 +2.0
COWI  Conover          40.48 342  P     P      05 46 36.5 +0.1
COWI                              IAmb  IAmb   05 46 38.3
      comp=Z,22nm,0.8s
VA03  San Esteban      40.78 178  P     P      05 46 40.0 +0.9
NAN01 Guarapari, ES    40.86 130 eP     P      05 46 41.1 +1.2
BNM   Barren Site      40.90 314  P     P      05 46 40.6 +0.3
LSQQ  Lebel-sur-Quev   40.91 355  P     P      05 46 40.4 +0.6
      baz=173
121A  Cookes Peak, D   40.94 311  P     P      05 46 42.4 +1.8
      baz=118,SNR=8.9
121A  Cookes Peak, D   40.94 311  P     P      05 46 40.7 +0.1
121A                              IAmb  IAmb   05 47 04.6
      comp=Z,19nm,0.8s
SPMN  Marine on St.    40.98 338  P     P      05 46 40.2 -0.3
      baz=148,SNR=5.4
SPMN  Marine on St.    40.98 338  P     P      05 46 40.0 -0.5
ROC1  El Roble         40.98 179  P     P      05 46 41.5 +0.6
T25A  Trinidad         41.05 319  P     P      05 46 42.5 +1.0
      baz=126,SNR=13
Y22D  IRIS PASSCAL I   41.06 314  P     P      05 46 42.6 +1.0
      baz=121
KSCO  Kaye Shedlock’   41.10 323  P     P      05 46 41.8  0.0
ANMO  Albuquerque      41.19 315  P     P      05 46 42.9 +0.2
      baz=122
ANMO  Albuquerque      41.19 315  P     P      05 46 43.7 +1.0
ECSD  EROS Data Cent   41.34 333  P     P      05 46 42.3 -1.2
      baz=142,SNR=9.8
ECSD  EROS Data Cent   41.34 333  P     P      05 46 43.4 -0.2
K31A  O'Neill          41.50 330  IAmb  IAmb   05 46 46.1
      comp=Z,43nm,0.8s
RIB01 Linhares ES      41.55 131 eP     P      05 46 46.5 +0.9
MATQ  Matagami         41.66 355  P     P      05 46 46.4 +0.3
      baz=172,SNR=16
E38A  The Farm, Brul   41.71 340  IAmb  IAmb   05 46 48.3
      comp=Z,18nm,0.7s
SDCO  Great Sand Dun   42.11 319  P     P      05 46 51.5 +1.2
      baz=126,SNR=22
CPSB  Cacapava Do Su   42.39 156 eP     P      05 46 51.6 -0.7
Q24A  Divide           42.61 321  P     P      05 46 55.3 +0.9
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	baz=127						
DRLN	Deer Lake	42.71	14	P	P	05 46 54.9	+0.3
DRLN				IAmb	IAmb	05 47 00.7	
	comp=Z,54nm,1.5s						
BO02	Sierra Bellavi	42.80	178	P	P	05 46 56.5	+0.9
BO02				IAmb	IAmb	05 47 02.0	
	comp=Z,15nm,0.7s						
EYMN	Ely	42.86	341	P	P	05 46 55.4	-0.6
	baz=151,SNR=20						
SUSD	Miller	42.96	332	P	P	05 46 55.8	-0.9
	baz=139,SNR=9.1						
S22A	4UR Ranch, Cre	42.97	319	P	P	05 46 58.5	+1.2
	baz=124,SNR=13						
TUC	Tucson	43.10	309	P	P	05 46 59.1	+0.9
	baz=115						
TUC	Tucson	43.10	309	P	P	05 46 59.4	+1.1
ISCO	Idaho Springs	43.40	322	P	P	05 47 01.8	+1.0
	baz=127,SNR=11						
ISCO	Idaho Springs	43.40	322	P	P	05 47 00.3	-0.5
W18A	Petrified Fore	43.60	313	P	P	05 47 03.4	+1.1
	baz=119						
MVCO	Mesa Verde	43.79	317	P	P	05 47 04.1	+0.2
	baz=122,SNR=7.9						
B35A	Bob, Littlefor	43.97	339	IAmb	IAmb	05 47 05.7	
	comp=Z,26nm,0.8s						
D32A	Dogwood Acres,	44.21	336	P	P	05 47 06.0	-0.8
D32A				IAmb	IAmb	05 47 07.0	
	comp=Z,25nm,0.6s						
N23A	Red Feather La	44.27	323	P	P	05 47 08.1	+0.4
	baz=128,SNR=5.4						
PV01	Paradox Valley	44.33	318	IAmb	IAmb	05 47 11.0	
	comp=Z,17nm,0.9s						
PV02	Paradox Valley	44.48	318	IAmb	IAmb	05 47 12.0	
	comp=Z,22nm,0.7s						
214A	Organ Pipe Nat	44.53	308	P	P	05 47 10.8	+1.1
	baz=113,SNR=12						
214A	Organ Pipe Nat	44.53	308	IAmb	IAmb	05 47 11.8	
	comp=Z,12nm,0.8s						
PV07	Paradox Valley	44.55	318	P	P	05 47 09.9	0.0
PV07				IAmb	IAmb	05 47 12.4	
	comp=Z,16nm,0.8s						
PV05	Paradox Valley	44.65	318	P	P	05 47 10.2	-0.5
PV05				IAmb	IAmb	05 47 12.6	
	comp=Z,25nm,0.7s						
AGMN	Agassiz Nation	44.70	338	P	P	05 47 10.1	-0.6
AGMN				IAmb	IAmb	05 47 12.8	
	comp=Z,21nm,0.8s						
PIX	Pinacate	44.89	307	P	P	05 47 12.3	-0.1
WUAZ	Wupatki	44.97	313	P	P	05 47 14.4	+1.2
	baz=118,SNR=22						
WUAZ	Wupatki	44.97	313	P	P	05 47 13.3	+0.1
WUAZ				IAmb	IAmb	05 47 15.7	
	comp=Z,24nm,0.8s						
O20A	White River Ci	45.23	320	P	P	05 47 16.7	+1.4
	baz=125,SNR=7.3						
RSSD	Black Hills	45.27	328	P	P	05 47 16.3	+0.7
	baz=133						
RSSD	Black Hills	45.27	328	P	P	05 47 15.5	-0.1
E28A	Huff	45.37	332	P	P	05 47 15.9	-0.1
K22A	Casper	45.69	324	P	P	05 47 19.4	+0.5
	baz=129,SNR=6.2						
MDND	Maddock	45.85	334	P	P	05 47 19.4	-0.4
	baz=140,SNR=6.1						
MDND	Maddock	45.85	334	P	P	05 47 20.0	+0.2
U15A	North Rim	46.05	314	IAmb	IAmb	05 47 24.6	
	comp=Z,17nm,0.8s						
ULM	Lac du Bonnet	46.33	339	P	P	05 47 23.1	-0.4
	comp=Z,36nm,0.8s,baz=145,slow=8.1,SNR=74						
ULM				pP	pP	05 47 28.2	+0.4
	comp=Z,15nm,0.4s,baz=145,slow=10,SNR=14						
ULM	Lac du Bonnet	46.33	339	P	P	05 47 22.9	-0.6
PDMCI	Parker Dam,Lak	46.49	310	P	P	05 47 25.4	+0.3
	baz=114						
GLA	Glamis	46.52	308	P	P	05 47 25.9	+0.5
	baz=112,SNR=6.1						
GLA	Glamis	46.52	308	P	P	05 47 25.9	+0.5
GLA				IAmb	IAmb	05 47 27.5	
	comp=Z,15nm,0.7s						
KNB	Kanab	46.70	314	P	P	05 47 27.5	+0.6
KNB				IAmb	IAmb	05 47 29.5	
	comp=Z,20nm,0.8s						
TMUT	Trail Mountain	46.70	318	P	P	05 47 27.2	+0.2
LC01	Cunco	46.87	180	P	P	05 47 27.3	-0.6
LC01				IAmb	IAmb	05 47 44.9	
	comp=Z,8.0nm,0.8s						
MVU	Marysvale	46.98	316	P	P	05 47 29.7	+0.6
SZCU	Shurtz Canyon	47.15	315	P	P	05 47 29.7	-0.8
SZCU				IAmb	IAmb	05 47 32.3	
	comp=Z,12nm,0.8s						
IRM	Iron Mountain	47.19	310	P	P	05 47 31.7	+1.0
	baz=113,SNR=12						
BC3	Big Chuckawall	47.23	309	P	P	05 47 31.8	+0.7
	baz=112,SNR=5.7						
SWSC	Sam W. Stewart	47.24	308	P	P	05 47 31.9	+1.0
	baz=111						
IKP	In-Ko-Pah, Jac	47.38	307	P	P	05 47 32.9	+0.7
	baz=111						
BW06	Boulder Array	47.55	323	P	P	05 47 34.0	+0.5
	baz=125,SNR=22						
BW06	Boulder Array	47.55	323	P	P	05 47 32.6	-0.9
BW06				IAmb	IAmb	05 47 35.1	
	comp=Z,13nm,0.9s						
PD31	Pinedale Array	47.55	323	IAmb	IAmb	05 47 35.1	
	comp=Z,13nm,0.9s						
PDAR	Pinedale Array	47.55	323	P	P	05 47 34.0	+0.5
	comp=Z,13nm,0.9s,baz=125,slow=9.2,SNR=78						
PDAR				pP	sP	05 47 39.1	-0.7
	comp=Z,5.3nm,0.5s,baz=120,slow=9.4,SNR=17						
PDAR				PcP	PcP	05 49 03.0	-0.4
	comp=Z,3.3nm,0.8s,baz=121,slow=5.4,SNR=3.8						
PDAR				LR	LR	06 11 24.3	
	comp=Z,60nm,18.5s,baz=50,slow=41						
PDAR	Pinedale Array	47.55	323	P	P	05 47 33.9	+0.4
MONP2	Monument Peak	47.71	307	P	P	05 47 35.7	+0.8
	baz=111,SNR=5.1						
CTU	Camp Tracy	47.78	319	P	P	05 47 34.5	-0.8
TCUT	Toone Canyon	47.78	320	P	P	05 47 34.8	-0.6
BELC	Belle Mtn. Jos	47.78	309	P	P	05 47 36.2	+0.8
	baz=112,SNR=8.4						
GMRC	Granite Mounta	47.83	310	P	P	05 47 36.4	+0.7
	baz=113,SNR=6.0						
TPFO	Pinon Flats	47.99	308	P	P	05 47 37.2	+0.2
	baz=112						
PFO	Pinyon Flats O	48.00	308	P	P	05 47 37.7	+0.7
	baz=112						
LAO	LASA Array	48.14	329	P	P	05 47 38.1	+0.3
	baz=132						
DUG	Dugway, Tooele	48.22	318	P	P	05 47 39.5	+0.9
	baz=120,SNR=6.2						
HEC	Hector,Ludlow	48.36	310	P	P	05 47 40.9	+1.2
	baz=113						
DGMT	Dagmar	48.37	332	P	P	05 47 40.5	+0.9
	baz=135,SNR=21						
DGMT	Dagmar	48.37	332	P	P	05 47 39.7	+0.2
AHID	Auburn Hatcher	48.48	322	P	P	05 47 40.4	-0.4
AHID				IAmb	IAmb	05 47 42.2	
	comp=Z,12nm,0.9s						
MURC	Murrieta	48.57	308	P	P	05 47 41.5	+0.2
	baz=111						
BBRC	Big Bear Solar	48.59	309	P	P	05 47 42.6	+0.9
	baz=112						
LOHW	Long Hollow	48.66	323	P	P	05 47 41.3	-0.8
LOHW				IAmb	IAmb	05 47 44.0	
	comp=Z,16nm,0.8s						
REDW	Red Top Meadow	48.67	323	P	P	05 47 41.5	-0.7
REDW				IAmb	IAmb	05 47 44.1	
	comp=Z,18nm,0.9s						
PLCA	Paso Flores	48.73	178	P	P	05 47 41.9	-0.4
	comp=Z,5.9nm,0.8s,baz=347,slow=7.9,SNR=26						
PLCA				pP	pP	05 47 47.6	+0.9
	comp=Z,2.7nm,0.5s,baz=346,slow=13,SNR=7.9						
PLCA	Paso Flores	48.73	178	P	P	05 47 42.0	-0.4
PLCA	Paso Flores	48.73	178	*e*P	P	05 47 42.3	-0.1
BGU	Big Grassy Mou	48.73	319	P	P	05 47 42.0	-0.6
BGU				IAmb	IAmb	05 47 44.4	
	comp=Z,18nm,0.7s						
SHOC	Shoshone, Teco	48.73	311	P	P	05 47 43.2	+0.7
	baz=114,SNR=5.3						
RLMT	Red Lodge	48.78	325	P	P	05 47 43.5	+0.6
	baz=127,SNR=20						
RLMT	Red Lodge	48.78	325	P	P	05 47 41.9	-1.1
RLMT				IAmb	IAmb	05 47 48.8	
	comp=Z,13nm,0.7s						
GSC	Goldstone, Bar	48.89	310	P	P	05 47 44.7	+0.9
	baz=112,SNR=25						
GSC	Goldstone, Bar	48.89	310	P	P	05 47 43.9	0.0
GSC				IAmb	IAmb	05 47 45.9	
	comp=Z,17nm,0.7s						
FLWY	Flagg Ranch	48.99	323	P	P	05 47 45.2	+0.6
HVU	Hansel Valley	49.00	320	P	P	05 47 44.6	-0.1
YMP	Mirror Lake Pl	49.05	324	P	P	05 47 44.2	-1.0
YMP				IAmb	IAmb	05 47 55.3	
	comp=Z,21nm,0.8s						
H17A	Grant Village	49.10	324	P	P	05 47 46.4	+0.9
	baz=126,SNR=6.3						
H17A	Grant Village	49.10	324	P	P	05 47 45.2	-0.3
YNE	Yellowstone No	49.13	325	P	P	05 47 46.0	+0.3
YNE				IAmb	IAmb	05 47 49.4	
	comp=Z,12nm,0.8s						
TPNV	Topopah Spring	49.13	312	P	P	05 47 46.8	+1.0
	baz=114,SNR=16						
BFSC	Mount Baldy Ra	49.15	309	P	P	05 47 46.2	+0.3
	baz=111						
R11A	Troy Canyon, C	49.25	314	P	P	05 47 47.6	+0.9
	baz=116,SNR=9.2						
FURC	Furnace Creek,	49.39	312	P	P	05 47 48.3	+0.8
	baz=113,SNR=12						
LRMC	Laurel Mtn Rad	49.62	310	P	P	05 47 50.0	+0.4
	baz=112,SNR=6.7						
EDW2	Edwards Air Fo	49.64	309	P	P	05 47 49.9	+0.3
	baz=111,SNR=14						
MPMC	Manual Prospec	49.70	311	P	P	05 47 50.5	+0.4
	baz=113,SNR=9.4						
GRAC	Grapevine Rang	49.97	312	P	P	05 47 53.4	+1.4
	baz=113						
CWC	Cottonwood Cre	50.28	311	P	P	05 47 55.7	+1.1
	baz=112						
ISA	Isabella, Lake	50.29	310	P	P	05 47 55.5	+1.0
	baz=111						
ARVC	Arvin	50.37	309	P	P	05 47 56.0	+0.9
	baz=111						
BOZ	Bozeman (W)	50.40	325	P	P	05 47 56.2	+1.0
	baz=125,SNR=15						
BOZ	Bozeman (W)	50.40	325	P	P	05 47 55.0	-0.3
BOZ				IAmb	IAmb	05 47 57.3	
	comp=Z,14nm,0.8s						
SCZ2	Santa Cruz Isl	50.61	308	P	P	05 47 57.5	+0.6
	baz=109						
TIN	Tinemaha, Big	50.63	312	P	P	05 47 58.7	+1.6
	baz=113						
BCYI	Bear Canyon	50.73	322	P	P	05 47 57.8	-0.1
VES	Vestal, Richgr	50.82	310	P	P	05 47 59.7	+1.3
	baz=111,SNR=11						
EGMT	Eagleton	50.83	328	P	P	05 47 58.8	+0.4
	baz=129,SNR=17						
EGMT	Eagleton	50.83	328	P	P	05 47 58.5	+0.1
EGMT				IAmb	IAmb	05 48 00.2	
	comp=Z,24nm,0.9s						
HLID	Hailey	50.96	321	P	P	05 48 00.5	+1.0
	baz=121,SNR=22						
HLID	Hailey	50.96	321	P	P	05 47 59.5	-0.1
PKM	Mcpherson Peak	51.05	309	P	P	05 48 00.8	+0.5
	baz=110						
NV11	Mina Array Sit	51.12	313	P	P	05 48 00.2	-0.6
NVAR	Mina Array Bea	51.22	313	P	P	05 48 02.4	+0.7
	comp=Z,5.5nm,0.6s,baz=118,slow=7.0,SNR=48						
NVAR				pP	sP	05 48 07.8	-0.2
	comp=Z,5.7nm,0.7s,baz=119,slow=7.6,SNR=12						
NVAR				PcP	PcP	05 49 17.8	+0.9
	comp=Z,3.4nm,0.6s,baz=138,slow=4.3,SNR=8.2						
SMMC	Simmler	51.33	309	P	P	05 48 02.9	+0.6
	baz=110						
FFC	Flin Flon	52.14	339	P	P	05 48 07.1	-0.8
FFC				IAmb	IAmb	05 48 08.6	
	comp=Z,13nm,0.8s						
MSO	Missoula	52.42	325	P	P	05 48 11.1	+0.8
	baz=124,SNR=10						
BEKR	Beckworth	53.26	314	P	P	05 48 16.0	-0.8
BEKR				IAmb	IAmb	05 48 18.2	
	comp=Z,10nm,0.7s						
WALA	Waterton Lakes	53.66	327	P	P	05 48 18.4	-1.0
F10A	Beach Ranch, E	53.91	322	P	P	05 48 20.7	-0.6
F10A				IAmb	IAmb	05 48 22.4	
	comp=Z,14nm,0.7s						
ORV	Oroville	53.96	313	P	P	05 48 21.2	-0.4
I07A	Izee	54.44	319	P	P	05 48 24.8	-0.4
O03E	Paynes Creek	54.45	314	P	P	05 48 25.3	0.0
	baz=112						
G08A	Pilot Rock	54.64	321	P	P	05 48 27.0	+0.3
G08A				IAmb	IAmb	05 48 28.3	
	comp=Z,16nm,0.8s						
E09A	Wood Farm, Sta	54.73	323	P	P	05 48 27.1	-0.1
E09A				IAmb	IAmb	05 48 29.1	
	comp=Z,17nm,1.0s						
NEW	Newport	55.01	325	P	P	05 48 29.5	+0.2
	baz=121,SNR=16						
NEW	Newport	55.01	325	P	P	05 48 28.7	-0.5
NEW				IAmb	IAmb	05 48 30.3	
	comp=Z,9.2nm,0.8s						
M04C	Macdoel	55.04	316	P	P	05 48 30.3	+0.6
	baz=113						
O02D	Mt. Diablo Mer	55.10	314	P	P	05 48 29.1	-0.9
	baz=111						
J05D	Fort Rock, OR	55.23	318	P	P	05 48 31.4	+0.4
	baz=114,SNR=11						
K04D	Chiloquin, OR	55.31	317	P	P	05 48 32.1	+0.5
	baz=114						
D08A	Wollman Farm,	55.46	323	P	P	05 48 32.1	-0.3
L04D	Klamath Falls	55.53	316	P	P	05 48 33.2	+0.1
	baz=113						
M02C	Callahan	55.59	315	P	P	05 48 33.1	-0.5
	baz=112						
I05D	Terrebonne, OR	55.74	319	P	P	05 48 35.3	+0.8
	baz=115						
J04D	Umpqua Nationa	55.80	317	P	P	05 48 35.9	+0.8
	baz=114						
I04A	Tendick Farm,	56.22	318	P	P	05 48 38.3	+0.3
	baz=114						
K02D	Willamette Mer	56.64	316	P	P	05 48 41.4	+0.3
	baz=112						
I03D	Drain, OR	56.81	317	P	P	05 48 42.0	-0.1
	baz=113						
J01E	Myrtle Point	56.99	317	P	P	05 48 43.7	+0.3
	baz=112						
I02D	Swisshome	57.30	318	P	P	05 48 46.3	+0.7
	baz=113						
G03D	McMinnville, O	57.35	319	P	P	05 48 46.8	+0.9
	baz=114						
E04D	Cinebar	57.46	321	P	P	05 48 46.9	+0.2
	baz=115						
D04E	Lakebay	57.85	321	P	P	05 48 49.5	+0.1
	baz=115						
B05A	Bryant	57.92	323	P	P	05 48 49.9	0.0
	baz=116						
D03D	Eldon	58.20	322	P	P	05 48 52.1	+0.2
	baz=115						
NLWA	Neilton Lookou	58.62	321	P	P	05 48 54.4	-0.5
NLWA				IAmb	IAmb	05 48 57.1	
	comp=Z,26nm,1.1s						
PGC	Sidney	58.90	323	P	P	05 48 55.9	-0.8
YKA	Yellowknife Ar	62.30	339	P	P	05 49 19.6	-0.1
	comp=Z,23nm,0.7s,baz=126,slow=7.7,SNR=346						
YKA				pP	pP	05 49 24.6	+0.5
	comp=Z,20nm,0.6s,baz=124,slow=7.6,SNR=34						
MORF	Marmelete	64.02	53	*e*P	P	05 49 31.2	-0.4
	comp=Z,86nm,1.7s						
PNCL	Nicolau / Gran	64.25	52	*e*P	P	05 49 33.7	+0.7
ICESG	Greenland Ices	64.39	12	*i* P	P	05 49 33.0	-0.8
ICESG				IAmb	IAmb	05 49 34.6	
	comp=Z,19nm,0.9s						
MESJ	Messejana	64.44	52	*e*P	P	05 49 35.1	+0.8
PCAS	Casmilo, Conde	64.63	50	*e*P	P	05 49 35.8	+0.3
	comp=Z,75nm,1.9s						
COI	Coimbra	64.72	49	*e*P	P	05 49 36.3	+0.2
PVIS	Viseu	65.21	49	*e*P	P	05 49 39.6	+0.3
POLO	Lamas de Olo	65.41	48	*e*P	P	05 49 40.8	+0.1
PVRL	Vila Real	65.45	48	*e*P	P	05 49 40.9	0.0
MVO	Moncorvo	65.94	49	*e*P	P	05 49 43.9	-0.2
TIC	Toumodi	66.50	86	*e*P	P	05 49 47.5	-0.6
LIC	Lamto	66.54	87	*e*P	P	05 49 48.1	-0.2
	comp=Z,24nm,0.7s						
DBIC	Dimbokro	66.66	86	P	P	05 49 47.8	-1.3
	comp=Z,6.6nm,0.6s,baz=261,slow=6.0,SNR=12						
DBIC				pP	pP	05 49 53.1	-0.5
	comp=Z,4.1nm,0.5s,baz=265,slow=6.9,SNR=3.8						
KIC	Kosan Boka	66.81	87	*e*P	P	05 49 50.0	0.0
	comp=Z,21nm,0.7s						
SUMG	Summit	67.44	10	*i* P	P	05 49 53.2	-0.3
	comp=Z,46nm,0.8s						
SUMG	Summit	67.44	10	P	P	05 49 52.3	-1.1
SUMG	Summit	67.44	10	*i* P	P	05 49 53.2	-0.3
SUMG				IAmb	IAmb	05 49 54.7	
	comp=Z,46nm,0.8s						
ESDC	Sonseca Array	68.01	51	P	P	05 49 56.8	-0.5
	comp=Z,3.3nm,0.9s,baz=261,slow=7.4,SNR=8.0						
ESDC				pP	pP	05 50 02.2	+0.3
	comp=Z,1.8nm,0.7s,baz=270,slow=6.1,SNR=7.1						
ESDC	Sonseca Array	68.01	51	P	P	05 49 56.5	-0.7
ESDC				IAmb	IAmb	05 50 03.2	
	comp=Z,24nm,1.4s						
EKB10	Eskdalemuir Ar	71.39	34	P	P	05 50 17.1	-0.6
INK	Inuvik	72.06	340	P	P	05 50 21.1	-0.3
INK				IAmb	IAmb	05 50 22.7	
	comp=Z,16nm,0.7s						
EPYK	Eagle Plains	72.47	338	P	P	05 50 24.5	+0.4
	baz=110,SNR=17						
EPYK	Eagle Plains	72.47	338	P	P	05 50 24.3	+0.2
TOA0	Torodi Ar. Sit	72.50	79	P	P	05 50 23.6	-1.5
TORD	Torodi Ar. Bea	72.50	79	P	P	05 50 23.7	-1.4
	comp=Z,3.7nm,0.7s,baz=282,slow=5.1,SNR=16						
TORD	Torodi Ar. Bea	72.50	79	P	P	05 50 24.0	-1.1
BCAR	Beaver Creek A	73.55	334	P	P	05 50 31.1	+0.6
CRQM	Cirque	73.63	331	P	P	05 50 30.9	-0.3
CRQM				IAmb	IAmb	05 50 33.4	
	comp=Z,17nm,1.0s						
N25K	Chitina, Valde	74.50	332	P	P	05 50 37.3	+1.2
	baz=102,SNR=13						
DOT	Dot Lake	74.69	334	P	P	05 50 36.8	-0.3
SCRK	Sand Creek	74.73	334	P	P	05 50 38.3	+0.8
	baz=103,SNR=31						
DOU	Dourbes	75.23	40	*d*P	P	05 50 40.4	-0.1
M24K	Tolsona, Glenn	75.33	332	P	P	05 50 41.7	+0.8
	baz=100,SNR=10						
PRP	Porcupine Dome	75.70	336	P	P	05 50 42.9	-0.2
IL18	Eielson Array	76.07	335	P	P	05 50 44.8	-0.3
HDA	Harding Lake	76.08	334	P	P	05 50 45.1	0.0
	baz=100,SNR=13						
IL31		76.12	335	IAmb	IAmb	05 50 46.2	
	comp=Z,7.7nm,0.8s						
ILAR	Eielson Array	76.12	335	P	P	05 50 45.3	0.0
	comp=Z,6.4nm,0.8s,baz=107,slow=4.4,SNR=86						
ILAR				pP	pP	05 50 50.6	+0.6
	comp=Z,3.8nm,0.6s,baz=97,slow=4.7,SNR=16						
ILAR				PP	PP	05 53 36.0	0.0
	comp=Z,0.9nm,0.9s,baz=98,slow=7.5,SNR=5.0						
WLF	Walferdange	76.20	41	*e*P	P	05 50 46.7	+0.6
	comp=Z,15nm,1.0s,baz=270,slow=5.5						
SML	Sawmill	76.28	332	P	P	05 50 46.4	0.0
SML				IAmb	IAmb	05 50 48.0	
	comp=Z,20nm,1.1s						
KNK	Knik Glacier	76.29	331	P	P	05 50 46.3	-0.1
KNK				IAmb	IAmb	05 50 48.6	
	comp=Z,16nm,0.8s						
POKR	Poker Plat Res	76.41	335	P	P	05 50 47.4	+0.5
	baz=100,SNR=6.7						
POKR	Poker Plat Res	76.41	335	P	P	05 50 47.1	+0.1
POKR				IAmb	IAmb	05 50 48.5	
	comp=Z,7.3nm,0.8s						
CCB	Clear Creek Bu	76.49	335	P	P	05 50 47.2	-0.1
COLA	College	76.55	335	P	P	05 50 47.2	-0.5
COLA				IAmb	IAmb	05 50 48.8	
	comp=Z,7.6nm,0.8s						
TCOL	CIGO, UAF Yank	76.55	335	P	P	05 50 48.0	+0.3
	baz=99						
TCOL	CIGO, UAF Yank	76.55	335	IAmb	IAmb	05 50 48.8	
	comp=Z,7.3nm,0.8s						
GHO	Glory Hole Cre	76.56	332	P	P	05 50 47.9	0.0
SEW	Seward	76.60	330	P	P	05 50 47.5	-0.6
SEW				IAmb	IAmb	05 50 50.5	
	comp=Z,22nm,1.0s						
PMR	Palmer	76.63	331	P	P	05 50 47.5	-0.7
PMR				IAmb	IAmb	05 50 49.7	
	comp=Z,12nm,0.8s						
RND	Reindeer	76.75	333	P	P	05 50 49.6	+0.6
MCK	McKinley	76.84	334	P	P	05 50 49.9	+0.5
	baz=98,SNR=5.7						
AHRW	Bad Neuenahr-A	76.84	40	*e*P	P	05 50 50.7	+1.1
	comp=Z,8.5nm,0.8s,baz=270,slow=5.5						
BUG	Bochum--Univer	77.01	39	*e*P	P	05 50 51.3	+0.7
	comp=Z,9.9nm,0.9s,baz=270,slow=5.5						
BUG				*e*pP	pP	05 50 55.0	-0.2
NEA2	Nenana	77.02	334	P	P	05 50 50.4	0.0
	baz=98,SNR=20						
I23K	Minto, Yukon-K	77.22	335	P	P	05 50 52.1	+0.6
	baz=98,SNR=14						
I23K	Minto, Yukon-K	77.22	335	IAmb	IAmb	05 50 53.1	
	comp=Z,15nm,0.8s						
IBBN	Ibbenburen	77.36	38	*e*P	P	05 50 53.0	+0.5
	comp=Z,24nm,1.0s,baz=270,slow=5.5						
SUA	Susitna One	77.39	331	P	P	05 50 52.0	-0.6
TRF	Thorofare Moun	77.40	333	P	P	05 50 53.1	+0.3
BFO	Black Forest	77.57	42	*e*P	P	05 50 54.0	+0.1
	comp=Z,4.7nm,0.9s,baz=270,slow=5.5						
BFO				*e*pP	pP	05 50 58.7	+0.2
KTH	Kantishna Hill	77.69	333	IAmb	IAmb	05 50 55.7	
	comp=Z,14nm,1.0s						
TNS	Taunus Mts	77.71	40	*e*P	P	05 50 55.3	+0.7
	comp=Z,12nm,0.9s,baz=270,slow=5.5						
MLY	Manley	77.78	335	P	P	05 50 55.0	+0.3
	baz=97,SNR=24						
SKT	Skwentna	77.81	332	IAmb	IAmb	05 50 56.4	
	comp=Z,14nm,1.1s						
TOLK	Toolik Lake Re	77.82	339	P	P	05 50 55.2	+0.3
	baz=99,SNR=6.3						
STU	Stuttgart	78.16	42	*e*P	P	05 50 57.3	+0.2
	comp=Z,14nm,0.8s,baz=270,slow=5.5						
KEST	Kesra	78.35	55	P	P	05 50 58.3	-0.2
	comp=Z,12nm,0.9s,baz=250,slow=4.6,SNR=7.7						
MUD	Monsted U'grnd	78.39	34	*i* P	P	05 50 59.2	+1.1
	comp=Z,26nm,0.8s						
MUD	Monsted U'grnd	78.39	34	*i* P	P	05 50 59.2	+1.1
MUD				IAmb	IAmb	05 50 59.8	
	comp=Z,26nm,0.8s						
DAVA	Damuels	78.60	43	*i* P	P	05 51 00.4	+0.6
	comp=Z,26nm,0.9s,SNR=8.4						
GTTG	Gottingen	78.70	39	*e*P	P	05 51 01.1	+1.1
	comp=Z,9.0nm,0.8s,baz=270,slow=5.5						
UBR	Ueberruh	78.75	43	*e*P	P	05 51 00.7	+0.2
	comp=Z,6.0nm,0.8s,baz=270,slow=5.5						
CLZ	Clausthal	78.96	39	*e*P	P	05 51 02.3	+0.8
	comp=Z,11nm,0.8s,baz=270,slow=5.5						
CLZ				*e*pP	pP	05 51 06.9	+0.7
BSEG	Bad Segeberg	78.96	37	*e*P	P	05 51 02.0	+0.6
	comp=Z,14nm,0.9s,baz=270,slow=5.5						
BSEG				*e*pP	sP	05 51 07.1	-0.6
IMAR	Indian Mountai	79.13	336	P	P	05 51 02.5	+0.4
ASSE	Asse, Remlinge	79.15	39	*e*P	P	05 51 03.3	+1.0
	comp=Z,6.6nm,0.9s,baz=270,slow=5.5						
FETA	Feichten	79.18	44	*e*P	P	05 51 03.1	+0.1
	comp=Z,30nm,1.0s						
RETA	Reutte	79.20	43	*e*P	P	05 51 03.2	+0.2
	comp=Z,12nm,1.1s						
MOTA	Moosalm	79.43	43	*i* P	P	05 51 04.5	+0.2
	comp=Z,10nm,0.8s,SNR=4.6						
NAO01	NORSAR Array S	79.47	30	P	P	05 51 03.5	-0.5
FLTG	Flechtingen	79.50	38	*e*P	P	05 51 04.6	+0.3
	comp=Z,12nm,0.9s,baz=270,slow=5.5						
SQTA	Sankt Quirin	79.50	44	*i* P	P	05 51 04.7	0.0
	comp=Z,25nm,1.3s,SNR=6.2						
NB2	NORSAR Subarra	79.64	29	P	P	05 51 06.1	+1.1
	comp=Z,7.2nm,0.7s,baz=268,slow=5.6						
NOA	NORSAR Array B	79.64	29	P	P	05 51 05.0	+0.1
	comp=Z,12nm,0.8s,baz=266,slow=5.5,SNR=47						
NOA				pP	sP	05 51 11.1	-0.3
	comp=Z,2.8nm,0.8s,baz=277,slow=6.6,SNR=6.2						
SVW2	Sparrevohn	79.69	331	P	P	05 51 04.5	-0.8
SVW2				IAmb	IAmb	05 51 05.8	
	comp=Z,13nm,0.6s						
WATA	Walderalm	79.75	43	*e*P	P	05 51 04.6	-1.4
	comp=Z,13nm,1.7s						
WTTA	Wattenberg	79.80	43	*i* P	P	05 51 06.3	0.0
	comp=Z,8.9nm,0.8s,SNR=4.8						
NEUB	Neuenburg	79.83	39	*e*P	P	05 51 06.8	+0.6
	comp=Z,11nm,0.8s,baz=270,slow=5.5						
MANZ	Manzenberg	80.06	41	*e*P	P	05 51 08.3	+0.8
	comp=Z,8.5nm,0.9s,baz=270,slow=5.5						
MANZ				*e*pP	pP	05 51 12.8	+0.6
ROTZ	Rotzenmuhle	80.13	41	*e*P	P	05 51 08.4	+0.5
	comp=Z,1.7nm,0.8s,baz=270,slow=5.5						
WERD	Werda	80.18	40	*e*P	P	05 51 08.7	+0.5
	comp=Z,6.9nm,0.9s,baz=270,slow=5.5						
GUNZ	Gunzen	80.20	40	*e*P	P	05 51 08.7	+0.5
	comp=Z,3.1nm,0.8s,baz=270,slow=5.5						
WERN	Wernitzgruen	80.23	40	*e*P	P	05 51 09.2	+0.8
	comp=Z,6.6nm,0.9s,baz=270,slow=5.5						
NKC	Novy Kostel	80.28	40	*e*P	P	05 51 08.5	-0.2
NKC				*e*pP	pP	05 51 13.3	0.0
TANN	Tannenbergstha	80.28	40	*e*P	P	05 51 09.3	+0.6
	comp=Z,9.2nm,0.9s,baz=270,slow=5.5						
ABTA	Abfaltersbach	80.41	44	*i* P	P	05 51 08.6	-0.9
	comp=Z,12nm,0.8s,SNR=7.0						

A21K	Barrow	80.50	341	P	P	05 51 09.8	+0.5
	baz=92,SNR=7.8						
WET	Wettzell	80.58	42	*e*P	P	05 51 10.8	+0.5
	comp=Z,3.7nm,0.8s,baz=270,slow=5.5						
CLL	Collm	80.61	39	*i* P	P	05 51 10.6	+0.3
	comp=Z,11nm,0.9s						
CLL				*i* pP	pP	05 51 15.0	0.0
	comp=Z,10.0nm,0.9s						
CLL	Collm	80.61	39	*e*P	P	05 51 10.9	+0.5
	comp=Z,6.5nm,0.8s,baz=270,slow=5.5						
FBE	Freiberg	80.84	40	*e*P	P	05 51 12.4	+0.9
	comp=Z,6.5nm,0.9s,baz=270,slow=5.5						
KBA	Koelnbreinsper	80.97	44	*e*P	P	05 51 12.4	-0.2
	comp=Z,8.1nm,1.0s						
KHC	Kasperske Hory	81.04	42	*e*P	P	05 51 12.5	-0.3
KHC				*e*pP	pP	05 51 17.2	-0.3
GEC2	GERESS Array S	81.13	42	*e*P	P	05 51 13.6	+0.2
	comp=Z,6.4nm,0.9s,baz=270,slow=5.5						
GEC2				*e*pP	pP	05 51 18.4	+0.4
GERES	GERESS Array B	81.13	42	P	P	05 51 13.2	-0.1
	comp=Z,5.0nm,0.8s,baz=267,slow=2.7,SNR=17						
GERES				pP	pP	05 51 18.4	+0.4
	comp=Z,3.7nm,0.7s,baz=270,slow=3.5,SNR=9.6						
MYKA	Terra Mystica	81.19	44	*i* P	P	05 51 13.0	-0.7
	comp=Z,9.6nm,0.6s,SNR=5.7						
BRG	Berggiesshubel	81.21	40	*i* P	P	05 51 14.0	+0.4
BRG				Amp		05 51 14.3	
	comp=Z,9.8nm,0.9s						
BRG				*i* pP	pP	05 51 18.9	+0.7
BRG				Amp		05 51 19.3	
	comp=Z,6.9nm,0.8s						
BRG	Berggiesshubel	81.21	40	*e*P	P	05 51 14.2	+0.6
	comp=Z,5.9nm,0.8s,baz=270,slow=5.5						
BRG				*e*pP	pP	05 51 18.9	+0.7
PBCC	Pribram	81.29	41	*e*P	P	05 51 14.9	+0.8
PBCC				*e*x	x	05 51 19.2	
MOA	Molln	81.56	43	*e*P	P	05 51 15.3	-0.2
	comp=Z,8.8nm,1.0s						
PVCC	Panska Ves	81.62	40	*e*P	P	05 51 16.6	+0.8
PVCC				*e*pP	pP	05 51 20.8	+0.3
PRU	Pruhonice	81.63	41	*e*P	P	05 51 16.0	+0.1
PRU				*e*pP	PcP	05 51 21.3	-0.4
OBKA	Obir	81.82	44	*e*P	P	05 51 17.4	+0.3
	comp=Z,7.6nm,0.8s						
SOKA	Soboth	82.14	44	*e*P	P	05 51 18.5	-0.2
	comp=Z,6.6nm,0.8s						
ARSA	Arzberg	82.44	43	*i* P	P	05 51 19.8	-0.4
	comp=Z,8.6nm,0.7s,SNR=4.2						
UPC	Upice	82.54	40	*e*P	P	05 51 21.5	+0.9
CHVC	Chvalec	82.57	40	*e*P	P	05 51 20.6	-0.2
CONA	Conrad Observa	82.62	43	*i* P	P	05 51 21.4	+0.1
	comp=Z,11nm,0.9s,SNR=7.7						
OSTC	Ostas	82.67	40	*e*P	P	05 51 21.5	+0.2
OSTC				*e*x	x	05 51 27.1	
RDOG	Red Dog Mine	82.73	338	P	P	05 51 21.2	-0.1
RDOG				IAmb	IAmb	05 51 23.0	
	comp=Z,5.8nm,0.6s						
DPC	Dobruska-Polom	82.75	40	*e*P	P	05 51 22.2	+0.4
DPC				*e*pP	PcP	05 51 27.1	+0.4
UPP	Uppsala	82.84	31	*e*P	P	05 51 22.0	+0.1
KRUC	Moravsky	82.89	42	*e*P	P	05 51 22.6	+0.1
KRUC				*e*		05 51 27.5	
VRAC	Vranov	83.00	41	*e*P	P	05 51 23.0	-0.1
VRAC				*e*		05 51 28.2	
KRLC	Kraliky	83.07	40	*e*P	P	05 51 24.3	+0.9
KRLC				*e*pP	pP	05 51 28.7	+0.6
ZST	Bratislava	83.43	42	*e*P	P	05 51 25.5	+0.2
MODS	Modra-Piesok	83.53	42	*e*P	P	05 51 25.2	-0.6
MORC	Moravsky Berou	83.58	41	⇑P	P	05 51 26.4	+0.3
MORC	Moravsky Berou	83.58	41	*e*P	P	05 51 26.6	+0.5
MORC				*e*		05 51 31.0	
MORC	Moravsky Berou	83.58	41	P	P	05 51 26.5	+0.3
MORC				IAmb	IAmb	05 51 27.8	
	comp=Z,6.5nm,0.8s						
JAVC	Velka Javorina	83.75	42	*e*P	P	05 51 28.1	+1.1
VYHS	Vyhne	84.55	42	*e*P	P	05 51 31.5	+0.5
MORH	Mrgy, Hungar	84.67	44	⇑P	P	05 51 31.7	+0.1
LANS	Liptovska Anna	84.90	41	*e*P	P	05 51 34.8	+2.0
OJC	Ojcow	84.98	40	P	P	05 51 32.8	-0.4
OJC				IAmb	IAmb	05 51 39.6	
	comp=Z,12nm,0.9s						
ARCES	ARCESS Array B	85.03	20	P	P	05 51 32.4	-0.6
	comp=Z,6.4nm,0.8s,baz=277,slow=3.2,SNR=10						
SLIT	Slitere, Latvi	85.49	33	*e*P	P	05 51 35.1	-0.3
MTSE	Matsula	86.12	31	*e*P	P	05 51 39.2	+0.6
CRVS	Cervenica-Dubn	86.23	41	*e*P	P	05 51 40.9	+1.5
GRUS	Gruza	86.41	46	⇑P	P	05 51 41.1	+0.7
SUW	Suwalki	86.53	36	*e*P	P	05 51 40.8	+0.1
PABE	Paberze	86.74	35	*e*P	P	05 51 41.4	-0.3
FINES	FINESS Array B	86.75	28	P	P	05 51 41.4	-0.2
	comp=Z,10nm,0.8s,baz=298,slow=4.1,SNR=22						
FINES				pP	sP	05 51 47.3	-0.8
	comp=Z,4.6nm,0.7s,baz=280,slow=1.8,SNR=4.5						
FINES	FINESS Array B	86.75	28	P	P	05 51 41.8	+0.2
KOLS	Kolonicke sedl	86.75	41	*e*P	P	05 51 43.4	+1.4
BZS	Buzias	86.81	45	⇑P	P	05 51 43.0	+0.8
DRGR		87.38	43	⇑P	P	05 51 45.5	+0.4
HERR	Herculane	87.47	45	⇑P	P	05 51 45.4	-0.1
GZR	Gura Zlata	87.64	45	⇑P	P	05 51 47.1	+0.7
VSU	Vasula	87.67	31	*e*P	P	05 51 46.4	+0.2
ISAL	Salakas	87.93	34	*e*P	P	05 51 47.2	-0.2
NACGM	Naroch	88.43	35	*i* P	P	05 51 51.0	+1.1
NACGM				*i* P	P	05 51 51.0	+1.1
NACGM				*i* P	P	05 51 51.0	+1.1
NACGM				*i* PP	PP	05 55 37.2	+20
NACGM				*i* PPP	PPP	05 57 38.3	
NACGM				*i* SKS	SKiKP	06 00 18.2	-6.8
NACGM				*i* PS	PnS	06 03 24.4	-14
NACGM				*i* SS	SS	06 09 21.1	+56
NACGM				*i* SSS	SSS	06 12 54.0	
NACGM				*i* LQ	LQ	06 29 48.6	
NACGM				*i* LR	LR	06 35 29.8	
BURAR	Bucovina Array	88.92	42	⇑P	P	05 51 53.3	+0.9
ARR	Arges	88.94	44	⇑P	P	05 51 53.2	+0.6
MNK	Minsk	89.14	35	*i* P	P	05 51 54.0	+0.7
	comp=E,2.0nm,1.0s						
MNK				*i* P	P	05 51 54.0	+0.7
	comp=N,11nm,0.8s						
MNK				*i* P	P	05 51 54.0	+0.7
	comp=Z,38nm,0.7s						
MNK				*i* PP	PP	05 55 23.3	+0.2
MNK				*i* PPP	PPP	05 57 20.1	
MNK				*i* S	SKSac	06 02 23.2	+0.4
MNK				*i* PS	PS	06 03 48.3	+0.6
MNK				*i* SS	SS	06 08 37.9	+2.8
MNK				*i* SSS	SSS	06 12 13.1	
MNK				*i* LQ	LQ	06 26 10.1	
MNK				*i* LR	LR	06 28 16.2	
MNK				*i* LRM	MLR	06 32 15.9	
	comp=Z,93nm,19.3s						
MNK				*i* LRM	MLR	06 32 23.7	
	comp=N,83nm,21.9s						
MNK				*i* LRM	MLR	06 32 50.7	
	comp=E,9.0nm,18.1s						
VOIR		89.21	44	⇑P	P	05 51 54.4	+0.5
VNA3	Neumayer Olymp	89.22	163	P	P	05 51 53.6	+0.5
MTUR	Matau	89.26	45	⇑P	P	05 51 54.6	+0.5
VNA1	Neumayer--Stat	89.34	163	P	P	05 51 53.9	+0.2
DOPR	Dopca	89.35	44	⇑P	P	05 51 55.0	+0.6
BIZ	Bicaz	89.64	43	⇑P	P	05 51 57.1	+1.3
VNA2	Neumayer--Watz	89.73	163	P	P	05 51 58.9	+3.3
MLR	Muntele Rosu	89.82	44	⇑P	P	05 51 57.3	+0.5
PLOR	Plostina	90.23	44	⇑P	P	05 52 00.8	+2.2
AKASG	Malin Array Be	90.82	39	P	P	05 51 59.7	-1.4
	comp=E,5.2nm,0.9s,baz=275,slow=3.9,SNR=15						
AKASG	Malin Array Be	90.82	39	P	P	05 52 00.4	-0.7
SORM	Soroca	90.87	41	⇑P	P	05 52 01.3	-0.1
SNAA	Sanae	91.37	163	P	P	05 52 03.6	+0.4
KLMR	Klimovskoe	93.15	27	*e*P	P	05 52 10.4	-1.3
KLMR				AMP		05 52 17.8	
	comp=Z,30nm,1.5s						
BRTR	Keskin Array B	96.72	48	P	P	05 52 27.9	-0.9
	comp=Z,1.9nm,0.9s,baz=258,slow=3.4,SNR=7.7						
ZALV	Zalesovo Beam	115.08	15	PKP	PKiKP	05 57 38.6	-0.3
	comp=Z,0.7nm,0.5s,baz=318,slow=2.0,SNR=4.6						
KURBB	Kurchatov Arra	116.11	20	PKP	PKiKP	05 57 40.1	-0.9
	comp=Z,0.3nm,0.3s,baz=308,slow=3.4,SNR=2.5						
MKAR	Makanchi Array	120.68	20	PKP	PKPdf	05 57 48.9	-1.1
	comp=Z,0.4nm,0.5s,baz=30,slow=2.9,SNR=5.4						
MKAR				pPKP	pPKPdf	05 57 53.9	-1.0
	comp=Z,0.4nm,0.4s,baz=289,slow=2.9,SNR=4.3						
KSH	Kashi	124.06	30	PKP	PKiKP	05 57 59.1	+2.0
SONM	Songino Array	124.18	1	PKP	PKPdf	05 57 56.2	-0.6
	comp=Z,0.2nm,0.4s,baz=310,slow=3.3,SNR=2.8						
WMQ	Urumqi	125.07	18	*e*P	PKiKP	05 57 58.8	-0.1
WMQ				pmax	pmax		
	comp=Z,250nm,4.7s						
HHC	Hu-ho-hao-te	131.06	356	*e*P	PKiKP	05 58 10.9	-0.1
GTA	Gaotai	132.03	8	⇑PKP	PKPdf	05 58 12.1	+0.1
NJ2	Nanjing	138.60	346	*e*P	PKPdf	05 58 23.0	-1.3
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
STKA	Stephens Creek	140.81	228	PKP	PKPdf	05 58 28.7	+0.5
	comp=Z,6.2nm,0.8s,baz=79,slow=2.0,SNR=10						
CD2	Chengdu	140.90	6	PKP	PKPdf	05 58 26.5	-2.1
GYA	Guiyang	145.51	2	*e*P	PKPbc	05 58 36.6	-0.3
GYA				pmax	pmax		
	comp=Z,13nm,1.2s						
AS31	Alice Springs	150.71	235	PKPdf	PKPdf	05 58 46.0	+0.6
AS31				PKPbc	pPKPdf	05 58 50.4	+0.2
AS31				PKPab	sPKPbc	05 58 56.7	-0.7
ASAR	Alice Springs	150.71	235	PKP	PKPdf	05 58 45.8	+0.4
	comp=Z,4.1nm,0.7s,baz=114,slow=1.7,SNR=47						
ASAR				PKPbc	pPKPdf	05 58 50.4	+0.2
	comp=Z,4.4nm,0.6s,baz=120,slow=3.4,SNR=16						
ASAR				pPKPbc	pPKPbc	05 58 56.1	+0.4
	comp=Z,3.4nm,0.6s,baz=124,slow=3.1,SNR=9.7						
ASAR	Alice Springs	150.71	235	PKPdf	PKPdf	05 58 46.1	+0.7
ASAR					PKPbc	05 58 50.7	-0.2
PAYA	Payao	151.49	16	P	PKPbc	05 58 52.9	+0.2
WR0	Warramunga Arr	151.67	243		PKPbc	05 58 53.1	-0.1
CM34	Chiang Mai Arr	151.76	18	P	PKPab	05 59 02.0	0.0
WB2	Warramunga Arr	151.84	243		PKPdf	05 58 47.4	+0.2
WB2				PKPbc	PKPbc	05 58 53.5	0.0
WRA	Warramunga Arr	151.85	243	PKP	PKPdf	05 58 47.5	+0.4
	comp=Z,14nm,0.6s,baz=109,slow=2.8,SNR=27						
WRA				PKPbc	PKPbc	05 58 53.1	-0.4
	comp=Z,14nm,0.6s,baz=110,slow=2.7,SNR=54						
WRA				pPKPbc	pPKPbc	05 58 59.0	+0.5
	comp=Z,6.1nm,0.6s,baz=107,slow=2.3,SNR=13						
CM35	Chiang Mai Arr	151.93	18	P	PKiKP	05 58 54.0	-0.1
MHMT	Maesarieng	152.00	20	P	PKiKP	05 58 55.0	+0.7
CM36	Chiang Mai Arr	152.06	18	P	PKPbc	05 58 54.0	-0.1
CMAR	Chiang Mai Arr	152.07	18	PKP	PKPdf	05 58 46.7	-0.9
	comp=Z,1.5nm,0.3s,baz=319,slow=2.3,SNR=7.6						
CMAR				PKPbc	sPKPdf	05 58 54.0	0.0
	comp=Z,2.4nm,0.5s,baz=319,slow=3.4,SNR=15						
CMAR	Chiang Mai Arr	152.07	18		PKPdf	05 58 48.0	+0.5
CMAR					PKiKP	05 58 54.3	-0.2
CMAR				PKPab	sPKPbc	05 58 59.9	-0.7
CM02	Chiang Mai Arr	152.09	18	P	PKiKP	05 58 55.0	+0.5
CM13	Chiang Mai Arr	152.09	18	P	PKPbc	05 58 54.0	-0.1
CM09	Chiang Mai Arr	152.10	18	P	PKiKP	05 58 56.1	+1.6
CM01	Chiang Mai Arr	152.11	18	P	PKiKP	05 58 55.0	+0.5
CM05	Chiang Mai Arr	152.12	18	P	PKiKP	05 58 54.5	-0.1
CM04	Chiang Mai Arr	152.13	18	P	PKPbc	05 58 54.0	-0.2
SUKH	Sukhothai	153.20	18	P	PKiKP	05 59 02.3	+5.5

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*NNC **05** 05:41:18.9±2.4, 54°.36N×86°.86E, h0^{km}, mb3.1, mpv2.9, Error ellipse: s-maj=22.2km s-min=11.5km az=1.0, Suspected Mining explosion.*

*IDC **05** 05:41:19.1±2.6, 54°.34N×86°.89E, h0^{km}, mb1 3.2/2, mb1mx3.0/40, mbtmp3.2/2, ML3.0/2, Error ellipse: s-maj=22.4km s-min=15.4km az=57.0*

ISC 05 05:41:20.5±4.5**, 54°.3N**±0°.2×**86°.8E**±0°.2**, h0^{km}, n9, σ1^{s}.77**/15**, 9C-4D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.20	254	*i*		05 48 17.0	
	baz=70,slow=333,SNR=5.9						
ZAA0	Zalesovo Array	1.20	254	⇓P	Pg	05 41 42.0	-1.6
	0.4nm,0.2s						
ZAA0				⇓S	Sn	05 42 00.3	-1.4
	1.0nm,0.4s						
ZALV	Zalesovo Beam	1.20	254	Pg	Pg	05 41 41.9	-1.7
	3.9nm,0.3s,baz=74,slow=17,SNR=42						
ZALV				Lg	Lg	05 42 00.1	
	3.8nm,0.3s,baz=72,slow=24,SNR=6.6						
KURK	Kurchatov	6.14	237	⇑Pn	Pn	05 42 54.2	+1.9
	1.9nm,0.8s						
KURK				⇑Sn	Sn	05 44 07.4	+4.2
	2.6nm,1.2s						
KURK				⇑Lg	Lg	05 44 38.2	
	6.6nm,1.0s						
KURBB	Kurchatov Arra	6.24	237	Pn	Pn	05 42 54.5	+0.7
	0.3nm,0.3s,baz=54,slow=13,SNR=31						
KURBB				Sn	Sn	05 44 05.5	-0.2
	0.0nm,0.3s,baz=51,slow=24,SNR=2.0						
KURBB				Lg	Lg	05 44 40.8	
	0.0nm,0.3s,baz=55,slow=33,SNR=7.2						
KURBB	Kurchatov Arra	6.24	237	⇓Pn	Pn	05 42 54.8	+1.0
	1.0nm,0.2s						
KURBB				⇑Sn	Sn	05 44 06.9	+1.1
	2.4nm,0.6s						
KURBB				⇑Lg	Lg	05 44 41.7	
	11nm,1.4s						
MK31	Makanchi Array	8.04	203	Pn	Pn	05 43 19.6	+1.1
	0.2nm,0.5s,baz=28,slow=14,SNR=15						
MK31				⇑Sn	Sn	05 44 49.8	-0.3
	0.4nm,0.5s,baz=26,slow=18,SNR=4.5						
MK31				⇑Lg	Lg	05 45 36.9	
	3.7nm,1.1s,baz=24,slow=29,SNR=4.3						
MKAR	Makanchi Array	8.04	203	Pn	Pn	05 43 18.9	+0.3
	0.3nm,0.3s,baz=22,slow=13,SNR=17						
MKAR				Sn	Sn	05 44 50.2	+0.1
	0.1nm,0.3s,baz=20,slow=23,SNR=4.6						
MKAR				Lg	Lg	05 45 34.6	
	0.1nm,0.3s,baz=23,slow=30,SNR=7.7						
MAKZ	Makanchi	8.10	204	⇑Pn	Pn	05 43 20.7	+1.4
	0.3nm,0.4s						
MAKZ				⇑Sn	Sn	05 44 49.8	-1.8
	0.7nm,0.7s						
MAKZ				⇓Lg	Lg	05 45 36.9	
	4.5nm,1.4s						

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*TRN **05** 05:58:33.8, 10°.66N×62°.68W, h5^{km}, MD3.7*

*FUNV **05** 05:58:35.1, 10°.65N×62°.76W, h93^{km}, MW3.4*

ISC 05 05:58:35.0±1.5**, 10°.57N**±0°.05×**62°.76W**±0°.06**, h84**^{km}±14^{km}**, n18, σ0^{s}.88**/27**, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRUV	Carupano	0.48	282	*e*P	Pn	05 58 49.4	+0.4
CRUV				*e*S	Sn	05 58 59.3	-0.1
TRN	Trinidad (W)	1.33	87	*e*P	Pn	05 58 59.1	+0.7
TRN				*e*S	Sn	05 59 15.8	-0.3
TRN	Trinidad (W)	1.33	87	*e*P	Pn	05 58 59.3	+0.9
TRN				*e*S	Sn	05 59 15.7	-0.3
ORIV	Oritupano	1.62	203	*e*P	Pn	05 59 03.2	+1.0
PCRV	Puerto La Cruz	1.89	258	*e*P	Pn	05 59 05.2	-0.4
GRGR	Grenville	1.89	35	*e*P	Pn	05 59 04.7	-1.0
GRGR				*e*S	Sn	05 59 28.3	-0.6
GRGR	Grenville	1.89	35	*e*P	Pn	05 59 04.6	-1.1
GRGR				*e*S	Sn	05 59 26.3	-2.6
GCMP	Grenada, Carri	2.31	34	*e*	Pn	05 59 07.0	-4.1
GCMP	Grenada, Carri	2.31	34	*e*P	Pn	05 59 11.2	0.0
GCMP				*e*S	Sn	05 59 38.5	-0.3
SVOC	Richmond Hill,	2.98	30	*e*S	Sn	05 59 55.3	+0.5
SVB	Belmont	3.06	29	*e*P	Pn	05 59 22.5	+1.1
SVB				*e*S	Sn	05 59 57.0	0.0
SVV	Soufriere Volc	3.12	29	*e*P	Pn	05 59 23.0	+0.9
SVV				*e*S	Sn	05 59 58.2	-0.2
MCLT	Moule a Chique	3.59	29	*e*P	Pn	05 59 28.8	+0.3
MCLT				*e*S	Sn	06 00 10.3	+0.5
SLB	Belfond	3.65	27	*e*P	Pn	05 59 29.2	0.0
SLB				*e*S	Sn	06 00 10.9	-0.3
SLBI	Saint Lucia, B	3.85	27	*e*P	Pn	05 59 32.9	+1.0
SLBI				*e*S	Sn	06 00 16.4	+0.4
MPOM	Morne Pois Mar	4.27	26	*e*S	Sn	06 00 27.2	+0.8
LUEV	Luepa	4.87	165	*e*P	Pn	05 59 45.3	-0.8
BAUV	El Baul	5.45	253	*e*P	Pn	05 59 51.8	-2.0
BAUV				*e*S	Sn	06 00 50.1	-5.2

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*IDC **05** 06:01:37.3±7.1, 48°.61N×148°.34E, h397^{km}±31^{km}, mb2.6/5, mb1 2.7/7, mb1mx2.6/45, mbtmp3.4/7, Error ellipse: s-maj=188.9km s-min=19.3km az=168.0*

ISC 05 06:01:35.8±6.7**, 48°N**±1°×**148°.5E**±0°.3**, h400^{km}, n7, σ0^{s}.68**/7**, mb2.8**/5**, Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PETK	Petropavlovsk-	7.56	47	P	Pn	06 03 24.9	-0.7
	0.1nm,0.3s,baz=215,slow=8.6,SNR=4.0						
KLR	Kul'dur	11.06	281	P	Pn	06 04 06.2	+0.2
	0.1nm,0.3s,baz=90,slow=11,SNR=4.3						
ILAR	Eielson Array	37.31	40	P	P	06 08 11.9	+0.7
	0.2nm,0.6s,baz=277,slow=9.9,SNR=5.3						
ZALV	Zalesovo Beam	39.11	303	P	P	06 08 26.4	+0.3
	0.6nm,0.7s,baz=72,slow=11,SNR=2.1						
MKAR	Makanchi Array	43.41	294	P	P	06 09 00.0	-0.7
	0.2nm,0.4s,baz=71,slow=5.4,SNR=2.3						
YKA	Yellowknife Ar	51.52	36	P	P	06 10 02.2	+0.3
	0.1nm,0.5s,baz=306,slow=6.0,SNR=4.1						
FINES	FINESS Array B	61.22	332	P	P	06 11 09.2	-0.3
	1.1nm,0.8s,baz=330,slow=5.3,SNR=1.5						

IDC 05 06:07:17.3±3.3**, 33°.23S×178°.44W, h0^{km}, mb4.1**/2**, mb1 4.3**/3**, mb1mx3.9**/31**, mbtmp4.0**/3**, ML3.8**/1**, Error ellipse: s-maj=74.0km s-min=37.1km az=116.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	6.19	215	Pn	Pn	06 08 50.5	+0.6
	2.1nm,0.3s,baz=25,slow=18,SNR=8.4						
URZ				Sn	Sn	06 10 00.7	-0.7
	3.2nm,0.3s,baz=335,slow=15,SNR=7.6						
ASAR	Alice Springs	42.66	270	P	P	06 15 15.8	-0.1
	2.2nm,0.6s,baz=109,slow=7.5,SNR=24						
WRA	Warramunga Arr	43.91	275	P	P	06 15 25.8	-0.2
	1.7nm,0.8s,baz=117,slow=7.5,SNR=10						
FINES	FINESS Array B	147.64	338	PKPbc	PKPbc	06 27 02.1	-0.8
	3.1nm,0.9s,baz=45,slow=2.8,SNR=3.8						

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*PRU **05** 06:16:42.2±0.0, 42°.60N×26°.24E, h4^{km}, M4.2*

*THE **05** 06:16:43.4, 42°.89N×26°.18E, h0^{km}±4^{km}, ML4.1/5, Error ellipse: s-maj=7.7km s-min=1.4km az=30.0*

*ISK **05** 06:16:45.3, 42°.70N×26°.12E, h11^{km}, ML4.3/38*

*MOS **05** 06:16:45.5±1.1, 42°.71N×26°.22E, h21^{km}, mb4.1/7, Error ellipse: s-maj=4.2km s-min=2.8km az=85.6*

*DDA **05** 06:16:45.1, 42°.80N×26°.10E, h8^{km}±3^{km}, ML4.3*

*SOF **05** 06:16:45.2, 42°.75N×26°.08E, h12^{km}, MD4.1*

*NEIC **05** 06:16:46.7±2.0, 42°.73N±0°.03×26°.05E±0°.03, h10^{km}±1^{km}, mb4.2/14, ML4.3(ISK), ML4.7/5(BUC), Error ellipse: s-maj=5.5km s-min=3.0km az=154.0*

*IDC **05** 06:16:46.6±1.8, 42°.78N×26°.18E, h18^{km}±11^{km}, mb3.8/14, mb1 3.9/24, mb1mx3.7/55, mbtmp3.9/24, ML3.4/10, MS3.6/3, Ms1 3.6/3, ms1mx2.9/62, Error ellipse: s-maj=10.6km s-min=9.3km az=62.0*

*BEO **05** 06:16:47.6±0.6, 42°.89N×25°.92E, h0^{km}, ML4.4/17*

ISC 05 06:16:45.2±0.9**, 42°.76N**±0°.01×**26°.10E**±0°.01**, h8**^{km}±6^{km}**, n522, σ1^{s}.62**/654**, mb3.9**/21**, MS3.7**/3**, 69C-51D, Bulgaria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMB	Yambol	0.46	129	PG	Pg	06 16 53.7	-0.4
JMB				SG	Sg	06 16 59.5	-0.6
JMB	Yambol	0.46	129	P	Pg	06 16 54.3	+0.2
JMB	Yambol	0.46	129	*i* Pg	Pg	06 16 53.9	-0.2
SZH	Strazhica	0.52	346	P	Pb	06 16 56.8	+0.1
SZH				S	Sg	06 17 02.8	+0.5
SZH	Strazhica	0.52	346	*i* Pg	Pb	06 16 56.2	-0.5
PVL	Pavlikeni	0.73	309	P	Pb	06 17 00.9	+0.8
PVL	Pavlikeni	0.73	309	*i* P	Pn	06 17 01.1	-0.6
DIM	Dimitrovgrad	0.82	211	P	Pg	06 17 01.0	-0.1
DIM				S	Sg	06 17 12.1	+0.3
DIM	Dimitrovgrad	0.82	211	*i* Pg	Pg	06 17 01.3	+0.2
RAZG	Razgrad	0.86	20	⇑S	Sn	06 17 16.8	+0.4
RAZG	Razgrad	0.86	20		Sn	06 17 16.8	+0.4
ROIA	ROIAK	0.99	70	*i* P	Pn	06 17 05.7	+0.3
EDRB	Edirne	1.03	152	P	Pg	06 17 04.7	-0.2
EDRB				S	Sb	06 17 19.4	+0.6
	7µm,0.6s						
EDRB	Edirne	1.03	152	PG	Pg	06 17 04.4	-0.5
EDRB				SG	Sg	06 17 18.1	-0.1
PRD	Provadia	1.05	65	P	Pg	06 17 05.4	0.0
PRD				S	Sn	06 17 21.3	+0.4
PRD	Provadia	1.05	65	*i* P	Pn	06 17 05.8	-0.3
ZIMR		1.05	329	⇓P	Pn	06 17 06.6	+0.5
ZIMR				⇓S	Sn	06 17 21.2	+0.3
ZIMR		1.05	329	P	Pn	06 17 06.6	+0.5
ZIMR				S	Sn	06 17 21.2	+0.3
ZIMR		1.05	329		Pn	06 17 06.6	+0.5
ZIMR					Sn	06 17 21.2	+0.3
AVR	AVREN	1.21	72	P	Pg	06 17 08.4	+0.1
KDZ	Kurdzhali	1.22	205	PN	Pg	06 17 08.9	+0.3
KDZ				SN	Sn	06 17 25.9	+0.7
KDZ	Kurdzhali	1.22	205	P	Pg	06 17 08.8	+0.2
KDZ				S	Sn	06 17 27.1	+1.9
KDZ	Kurdzhali	1.22	205	*i* P	Pg	06 17 09.2	+0.6
KIRK	Kırklareli	1.22	143	*i* P	Pb	06 17 08.4	-0.1
KIRK				*i* S	Sg	06 17 24.4	-0.1
PLD	Plovdiv	1.23	238	*e*Pg	Pn	06 17 07.7	-0.9
PLD				*e*Sg	Sn	06 17 25.5	+0.2
PLD	Plovdiv	1.23	238	PN	Pn	06 17 08.2	-0.4
PLD	Plovdiv	1.23	238	P	Pn	06 17 08.0	-0.6
PLD				S	Sn	06 17 25.5	+0.2
PLVB	Pleven	1.26	301	⇓P	Pg	06 17 09.7	+0.4
PLVB				⇑S	Sg	06 17 25.9	+0.3
PLVB	Pleven	1.26	301		Pg	06 17 09.7	+0.4
PLVB					Sg	06 17 25.9	+0.3
ARMN	Kirklareli, Me	1.33	132	*i* P	Pb	06 17 10.2	-0.1
ARMN				*i* S	Sb	06 17 26.7	-0.8
PGB	Panagyurishte	1.44	262	P	Pb	06 17 12.5	+0.1
PGB				S	Sg	06 17 32.7	+1.1
PGB	Panagyurishte	1.44	262	*i* P	Pb	06 17 12.7	+0.3
SGRR	Singureni	1.47	356	⇑P	Pg	06 17 13.6	+0.3
SGRR				⇑S	Sg	06 17 34.7	+2.3
SGRR	Singureni	1.47	356		Pg	06 17 13.6	+0.3
SGRR					Sg	06 17 34.7	+2.3
COPA	Copaceanca	1.52	335	⇓P	Pb	06 17 13.5	-0.2
COPA				⇑S	Sg	06 17 34.7	+0.6
COPA	Copaceanca	1.52	335		Pb	06 17 13.5	-0.2
COPA					Sg	06 17 34.7	+0.6
PHSR	Pinarhisar	1.54	136	PN	Pn	06 17 12.7	-0.3
PHSR				SN	Sn	06 17 32.7	-0.4
BUC1	Bucharest	1.59	358	⇑P	Pg	06 17 16.0	+0.3
BUC1				⇓S	Sg	06 17 38.4	+2.0
BUC1	Bucharest	1.59	358	P	Pg	06 17 16.0	+0.3
BUC1						06 17 38.4	
BUC1	Bucharest	1.59	358		Pg	06 17 16.0	+0.3
BUC1					Sg	06 17 38.4	+2.0
RASA	Rasa	1.64	27	⇓P	Pg	06 17 16.3	-0.5
RASA				⇑S	Sg	06 17 39.6	+1.6
RASA	Rasa	1.64	27		Pg	06 17 16.3	-0.5
RASA					Sg	06 17 39.6	+1.6
RDO	Rodhopi	1.67	195	P	Pn	06 17 14.7	+0.1
RDO	Rodhopi	1.67	195	PN	Pn	06 17 14.7	+0.1
RDO				SN	Sn	06 17 35.6	-0.5
INCR	INCERC-Sediu C	1.68	1	⇓P	Pg	06 17 17.5	0.0
INCR				⇓S	Sg	06 17 41.2	+1.8
INCR	INCERC-Sediu C	1.68	1		Pg	06 17 17.5	0.0
INCR					Sg	06 17 41.2	+1.8
VIZE	Kirklareli, Vi	1.75	132	*i* P	Pb	06 17 16.6	-0.9
VIZE				*i* S	Sn	06 17 38.2	0.0
VLAD	Vladila	1.75	316	⇓P	Pb	06 17 16.9	-0.7
VLAD				⇑S	Sb	06 17 40.3	+0.6
VLAD	Vladila	1.75	316		Pb	06 17 16.9	-0.7
VLAD					Sb	06 17 40.3	+0.6
PSN	Preselentsi	1.78	58	P	Pn	06 17 16.9	+0.7
PSN				S	Sb	06 17 41.2	+0.7
PSN	Preselentsi	1.78	58	*i* P	Pn	06 17 16.1	-0.1
LEHL	Lehliu	1.79	17	⇑P	Pg	06 17 19.0	-0.6
LEHL	Lehliu	1.79	17		Pg	06 17 19.0	-0.6
ICOR	Ion Corvin	1.84	42	⇓P	Pb	06 17 19.1	+0.1
ICOR	Ion Corvin	1.84	42		Pb	06 17 19.1	+0.1
ALN	Alexandroupoli	1.86	181	P	Pn	06 17 17.5	+0.2
ALN				S	Sg	06 17 45.1	+0.2
	3µm,0.8s						
ALN	Alexandroupoli	1.86	181	PN	Pn	06 17 17.3	0.0
ALN	Alexandroupoli	1.86	181	P	Pn	06 17 17.7	+0.4
ALN	Alexandroupoli	1.86	181		Pn	06 17 17.7	+0.4
SULR		1.92	3	⇓P	Pb	06 17 20.9	+0.4
SULR				⇑S	Sg	06 17 47.0	0.0
SULR		1.92	3		Pb	06 17 20.9	+0.4
SULR					Sg	06 17 47.0	0.0
HUMR	Humele	1.95	336	⇓P	Pn	06 17 19.2	+0.6
HUMR				⇑S	Sb	06 17 45.1	-0.2
HUMR	Humele	1.95	336		Pn	06 17 19.2	+0.6
HUMR					Sb	06 17 45.1	-0.2
KESN	Edirne-Kesan	1.98	167	*i* P	Pn	06 17 19.1	-0.2

KESN				*i* S	Sn	06 17 44.8	+0.4
KESN				IAML		06 17 49.0	
	comp=N,2µm,0.8s						
KESN				IAML		06 17 50.0	
	comp=E,2µm,0.5s						
ENEZ	Enez	2.02	179	P	Pn	06 17 20.1	+0.6
ENEZ				S	Sg	06 17 49.4	-0.7
	comp=E,6µm,0.5s						
ENEZ	Enez	2.02	179	PN	Pn	06 17 19.5	0.0
SOF	Sofiya	2.04	269	P	Pb	06 17 21.9	-0.6
AMRR	Amara	2.06	25	⇑P	Pb	06 17 23.1	+0.3
AMRR				⇑S	Sg	06 17 51.2	-0.1
AMRR	Amara	2.06	25	P	Pb	06 17 23.0	+0.3
AMRR				S	Sg	06 17 51.1	-0.1
AMRR	Amara	2.06	25		Pb	06 17 23.1	+0.3
AMRR					Sg	06 17 51.2	-0.1
TKR	Tekirdag	2.06	148	PN	Pn	06 17 20.1	0.0
CAVK	Edirne/Enez-Ca	2.06	179	*i* P	Pn	06 17 20.3	+0.2
CAVK				*i* S	Sb	06 17 48.3	-0.4
CAVK				IAML		06 17 58.0	
	comp=E,3µm,0.9s						
CAVK				IAML		06 18 00.0	
	comp=N,4µm,0.9s						
CTYL	Yalikoy Yolu	2.07	128	PN	Pn	06 17 20.5	+0.3
MANR	Mangalia	2.10	59	⇑P	Pn	06 17 21.2	+0.6
MANR				⇑S	Sg	06 17 52.1	-0.5
MANR	Mangalia	2.10	59		Pn	06 17 21.2	+0.6
MANR					Sg	06 17 52.1	-0.5
ERIK	Erikli-Kesan	2.11	172	PN	Pn	06 17 20.6	-0.1
CVDA	Cernavoda	2.11	41	⇓P	Pb	06 17 23.3	-0.4
CVDA	Cernavoda	2.11	41		Pb	06 17 23.3	-0.4
MMB	Musomiste	2.12	237	P	Pn	06 17 22.0	+1.1
MMB	Musomiste	2.12	237	*i* P	Pn	06 17 21.4	+0.5
VTS	Vitosha	2.12	267	*e*Pg	Pb	06 17 22.9	-1.0
VTS				*e*Sg	Sb	06 17 51.8	+1.4
VTS	Vitosha	2.12	267	⇑P	Pn	06 17 21.9	+0.8
VTS				⇑S	Sn	06 17 48.5	+0.9
VTS	Vitosha	2.12	267	P	Pn	06 17 22.4	+1.3
VTS						06 17 50.3	
VTS	Vitosha	2.12	267		Pn	06 17 22.4	+1.3
VTS					Sb	06 17 50.3	-0.1
VTS	Vitosha	2.12	267	*i* P	Pn	06 17 22.2	+1.2
KAVA	Kavala	2.12	215	P	Pn	06 17 21.2	+0.3
KAVA				S	Sg	06 17 52.3	-1.1
	comp=N,3µm,0.6s						
PLAR	PLOIESTI	2.16	359	⇑P	Pb	06 17 23.7	-0.7
PLAR	PLOIESTI	2.16	359		Pb	06 17 23.7	-0.7
NVR	Nevrokopi	2.18	231	P	Pn	06 17 22.3	+0.5
SLVT	Silivri	2.19	133	PN	Pn	06 17 21.9	+0.1
MFTR	Murfatlar	2.21	49	⇑P	Pb	06 17 24.9	-0.3
MFTR	Murfatlar	2.21	49		Pb	06 17 24.9	-0.3
GZKV	Gazikoy-Tekird	2.21	155	PN	Pn	06 17 22.1	0.0
SART	Tekirdag	2.22	158	*i* P	Pn	06 17 20.7	-1.6
SART				*i* S	Sn	06 17 47.5	-2.4
RKY	Sarkoy-Tekirda	2.22	158	PN	Pn	06 17 22.2	-0.1
PGOR	Pogoanele	2.24	16	⇑P	Pb	06 17 24.6	-1.3
PGOR				⇑S	Sb	06 17 54.9	+1.1
PGOR	Pogoanele	2.24	16		Pb	06 17 24.6	-1.3
PGOR					Sb	06 17 54.9	+1.1
STFAR	Stefanesti-Arg	2.26	339	⇑P	Pb	06 17 24.7	-1.6
STFAR				⇑S	Sb	06 17 54.4	+0.1
STFAR	Stefanesti-Arg	2.26	339		Pb	06 17 24.7	-1.6
STFAR					Sb	06 17 54.5	+0.1
EFOR	EFORIE	2.27	53	⇓P	Pb	06 17 25.9	-0.4
EFOR	EFORIE	2.27	53		Pb	06 17 25.9	-0.4
TLBR	Topalu	2.28	38	⇑P	Pb	06 17 27.1	+0.6
TLBR				⇓S	Sg	06 17 56.8	-1.5
TLBR	Topalu	2.28	38		Pb	06 17 27.1	+0.6
TLBR					Sg	06 17 56.8	-1.5
SMTH	Samothraki Isl	2.33	191	P	Pn	06 17 24.2	+0.5
TSCT	Constanta Port	2.33	52	⇑P	Pb	06 17 26.9	-0.5
TSCT				⇑S	Sg	06 17 58.2	-1.8
TSCT	Constanta Port	2.33	52		Pb	06 17 26.9	-0.5
TSCT					Sg	06 17 58.2	-1.8
CTKS	Kestanelik-??a	2.35	130	PN	Pn	06 17 24.2	+0.2
ELBA	Catalca	2.37	132	*i* P	Pn	06 17 23.6	-0.7
ELBA				*i* S	Sb	06 17 56.4	-1.0
BAIL	Bailesti	2.37	303	⇓S	Sn	06 17 54.3	+0.6
BAIL	Bailesti	2.37	303		Sn	06 17 54.3	+0.6
GELI	Tayfur-Gelibol	2.37	173	PN	Pn	06 17 24.5	+0.1
ISR	Istrita	2.38	8	P	Pn	06 17 26.4	+1.8
THAS	Thassos island	2.39	206	P	Pn	06 17 25.1	+0.6
THAS				S	Sb	06 17 57.8	-0.1
	comp=N,2µm,0.5s						
TIRR	Tirgusor	2.39	44	⇑P	Pb	06 17 27.8	-0.6
TIRR				⇑S	Sb	06 17 59.5	+1.5
TIRR	Tirgusor	2.39	44	P	Pn	06 17 25.0	+0.4
TIRR						06 17 59.5	
TIRR	Tirgusor	2.39	44	Pn	Pn	06 17 25.0	+0.4
TIRR	Tirgusor	2.39	44		Pb	06 17 27.8	-0.6
TIRR					Sb	06 17 59.5	+1.5
KKB	Krupnik	2.41	249	*i* P	Pn	06 17 25.6	+0.7
MRMT	Marmara Adasi	2.42	152	PN	Pn	06 17 24.9	-0.3
LPK	Lapseki	2.43	168	PN	Pn	06 17 25.3	+0.1
SRS	Serrai	2.49	230	P	Pn	06 17 26.5	+0.6
SRS	Serrai	2.49	230	P	Pn	06 17 26.6	+0.6
KRBG	Karabiga-Canak	2.53	159	PN	Pn	06 17 26.6	+0.1
BGKT	Bogazkoy	2.54	127	PN	Pn	06 17 27.1	+0.5
GADA	Gvkgeada	2.57	184	P	Pn	06 17 27.5	+0.4
GADA	Gvkgeada	2.57	184	PN	Pn	06 17 27.5	+0.4
GOKA	anakkale-Gk	2.57	183	*i* P	Pn	06 17 28.0	+0.9
GOKA				*i* S	Sb	06 18 00.9	-2.2
GOKA				IAML		06 18 15.0	
	comp=E,2µm,0.7s						
MTUR	Matau	2.58	343	⇑P	Pn	06 17 28.4	+1.1
MTUR	Matau	2.58	343	P	Pn	06 17 28.4	+1.1
MTUR	Matau	2.58	343		Pn	06 17 28.4	+1.1
ZAPS	Zavoj	2.60	283	*e*Pn	Pn	06 17 29.0	+1.5
ZAPS				*e*Sn	Sn	06 17 58.9	-0.3
RMVG	GOVORA	2.63	331	⇓P	Pn	06 17 30.1	+2.2
RMVG				⇑S	Sn	06 18 02.6	+2.6
RMVG	GOVORA	2.63	331		Pn	06 17 30.1	+2.2
RMVG					Sn	06 18 02.5	+2.6
AVCI	Avcilar-stanb	2.63	131	PN	Pn	06 17 28.3	+0.4
BLKB	Belogradchik	2.65	290	*e*Pn	Pn	06 17 28.9	+0.6
BLKB	Belogradchik	2.65	290	⇓S	Sn	06 17 59.9	-0.7
BLKB	Belogradchik	2.65	290		Sn	06 17 59.9	-0.7
KLYT	Kilyos	2.66	123	PN	Pn	06 17 28.6	+0.4
NEHR	Nehoiu	2.67	3	⇑P	Pb	06 17 31.3	-2.0
NEHR	Nehoiu	2.67	3		Pb	06 17 31.3	-2.0
GRER		2.70	13	⇓P	Pb	06 17 32.3	-1.4
GRER		2.70	13		Pb	06 17 32.3	-1.4
KNL	Balıkesir	2.71	156	*i* P	Pn	06 17 30.0	+1.1
ECEA	Canakkale, Ece	2.71	179	*i* P	Pn	06 17 29.1	+0.1
ECEA				IAML		06 18 16.0	
	comp=N,3µm,0.7s						
ECEA				IAML		06 18 21.0	
	comp=E,2µm,1.3s						
MLR	Muntele Rosu	2.73	358	Pn	Pn	06 17 30.9	+1.4
	comp=E,5.1nm,0.3s,baz=149,slow=9.3,SNR=40						
MLR				Pg	Pg	06 17 36.5	-1.1
	comp=E,66nm,0.3s,baz=224,slow=9.4,SNR=76						
MLR				Lg	Lg	06 18 14.7	
	comp=E,85nm,0.3s,baz=117,slow=23,SNR=7.1						
MLR	Muntele Rosu	2.73	358	⇓P	Pn	06 17 31.1	+1.7
MLR				⇑S	Sb	06 18 06.6	-1.5
MLR	Muntele Rosu	2.73	358		Pn	06 17 31.1	+1.7
MLR					Sb	06 18 06.6	-1.5
EDC	Edincik	2.75	151	PN	Pn	06 17 29.8	+0.3
PUNG	Punghina	2.76	304	⇑P	Pn	06 17 30.9	+1.2
PUNG	Punghina	2.76	304		Pn	06 17 30.9	+1.2
ISK	Istanbul-Kandi	2.78	126	P	Pn	06 17 30.5	+0.5
ISK	Istanbul-Kandi	2.78	126	PN	Pn	06 17 30.4	+0.5
ISK	Istanbul-Kandi	2.78	126	P	Pn	06 17 30.9	+1.0
KAVV	Kandilli-Istan	2.78	127	PN	Pn	06 17 30.4	+0.4
VOIR		2.78	345	⇑P	Pn	06 17 30.7	+0.6
VOIR				⇓S	Sb	06 18 07.4	-2.1
VOIR		2.78	345	P	Pn	06 17 30.7	+0.6
VOIR						06 18 07.4	
VOIR		2.78	345		Pn	06 17 30.7	+0.6
VOIR					Sb	06 18 07.4	-2.1
ARR	Arges	2.82	338	⇑P	Pn	06 17 31.7	+1.1
ARR	Arges	2.82	338		Pn	06 17 31.6	+1.1
SOH	Sokhos	2.82	228	P	Pn	06 17 31.0	+0.4
SOH	Sokhos	2.82	228	P	Pn	06 17 31.1	+0.4
BISRR	Bisoca	2.82	9	⇓P	Pb	06 17 34.4	-1.5
BISRR	Bisoca	2.82	9		Pb	06 17 34.4	-1.5
CFR	Carcaliu	2.83	31	⇓P	Pn	06 17 32.5	+1.8
CFR				⇑S	Sb	06 18 10.0	-0.7
CFR	Carcaliu	2.83	31	P	Pn	06 17 32.4	+1.8
CFR				S	Sb	06 18 10.0	-0.7
CFR	Carcaliu	2.83	31		Pn	06 17 32.5	+1.8
CFR					Sb	06 18 10.0	-0.7
SRE	Strehaia	2.84	313	⇓P	Pn	06 17 31.5	+0.8
SRE				⇑S	Sn	06 18 07.3	+2.3
SRE	Strehaia	2.84	313	P	Pn	06 17 31.5	+0.8
SRE	Strehaia	2.84	313		Pn	06 17 31.5	+0.8
SRE					Sn	06 18 07.3	+2.3
JURR	Jurilovca	2.84	44	⇓P	Pb	06 17 34.5	-1.6
JURR	Jurilovca	2.84	44		Pb	06 17 34.5	-1.6
KNT	Kendrikon	2.87	237	P	Pn	06 17 32.0	+0.7
OUR	Ouranopolis	2.90	214	P	Pn	06 17 31.4	-0.2
OUR	Ouranopolis	2.90	214	PN	Pn	06 17 31.7	+0.1
OUR	Ouranopolis	2.90	214	P	Pn	06 17 31.6	0.0
BOZC	Bozcaada	2.91	181	PN	Pn	06 17 32.2	+0.4
BOZC	Bozcaada	2.91	181	*i* P	Pn	06 17 30.5	-1.3
EZN	Ezine	2.93	177	P	Pn	06 17 32.9	+0.8
EZN	Ezine	2.93	177	PN	Pn	06 17 32.5	+0.4
EZN	Ezine	2.93	177	P	Pn	06 17 32.2	+0.1
LIA	Limnos Island	2.94	194	P	Pn	06 17 32.5	+0.4
PRVS	Prvonek	2.98	267	*e*Pn	Pn	06 17 34.1	+1.3
PRVS				*e*Sn	Sn	06 18 10.2	+1.5
KCTX	Karacabey (Bur	3.01	145	PN	Pn	06 17 33.4	+0.2
ARMT	Armutlu	3.01	136	PN	Pn	06 17 33.7	+0.5
SCHL	Schela	3.01	24	⇓P	Pn	06 17 35.5	+2.4
SCHL				⇑S	Sb	06 18 14.8	-1.1
SCHL	Schela	3.01	24		Pn	06 17 35.5	+2.4
SCHL					Sb	06 18 14.8	-1.1
ZAGS	Zajecar	3.02	292	*e*Pn	Pn	06 17 33.4	+0.2
ZAGS				*e*Sn	Sn	06 18 09.0	-0.5
BAYC	CANAKKALE_Bayr	3.03	174	*i* P	Pn	06 17 33.6	+0.2
BAYC				*i* S	Sn	06 18 07.6	-2.3
PETR	Petresti	3.07	15	⇑P	Pn	06 17 36.9	+2.9
PETR	Petresti	3.07	15		Pn	06 17 36.9	+2.9
SILT	Sile	3.09	120	PN	Pn	06 17 34.9	+0.7
STIP	Stip	3.10	251	*i* Pn	Pn	06 17 32.4	-2.0
PLG	Polygyros	3.11	221	P	Pn	06 17 34.8	+0.3
HORT	Hortiatis	3.12	227	P	Pn	06 17 35.2	+0.5
HORT	Hortiatis	3.12	227	PN	Pn	06 17 35.4	+0.7
PLOR	Plostina	3.12	7	⇑P	Pn	06 17 36.7	+2.0
PLOR	Plostina	3.12	7	P	Pn	06 17 36.7	+2.0
PLOR	Plostina	3.12	7		Pn	06 17 36.7	+2.0
TLCR		3.12	38	⇓P	Pn	06 17 36.8	+2.1
TLCR				⇑S	Sb	06 18 16.8	-2.2
TLCR		3.12	38	P	Pn	06 17 36.7	+2.1
TLCR				S	Sb	06 18 16.7	-2.2
TLCR		3.12	38		Pn	06 17 36.8	+2.1
TLCR					Sb	06 18 16.8	-2.2
GIUM	Giurgiulesti	3.12	28	⇑P	Pb	06 17 38.0	-2.8
GIUM	Giurgiulesti	3.12	28		Pb	06 17 38.0	-2.8
RMGR	Halanga-Turnu	3.12	309	⇓P	Pn	06 17 36.0	+1.4
RMGR	Halanga-Turnu	3.12	309		Pn	06 17 36.0	+1.4
VRI	Vrincioaia	3.14	8	⇓P	Pn	06 17 37.2	+2.3
VRI	Vrincioaia	3.14	8	P	Pn	06 17 37.2	+2.3
VRI	Vrincioaia	3.14	8		Pn	06 17 37.2	+2.3
TRML	Termal-Yalova	3.15	132	PN	Pn	06 17 35.7	+0.7
BARS	Barje	3.16	273	*e*Pn	Pn	06 17 35.6	+0.4
BARS				*e*Sn	Sn	06 18 14.2	+1.2
THE	Thessaloniki	3.17	229	P	Pn	06 17 35.7	+0.5
THE	Thessaloniki	3.17	229	P	Pn	06 17 35.8	+0.5
MDNY	Mudanya-Bursa	3.17	138	PN	Pn	06 17 35.9	+0.6
LOT	Lotru	3.17	329	⇑P	Pn	06 17 36.0	+0.5
LOT	Lotru	3.17	329		Pn	06 17 36.0	+0.5
DJES	Djerdap	3.22	308	*e*Sn	Sn	06 18 13.0	-1.6
DJES				*e*Sn	Sb	06 18 14.0	-8.0
BALY	Balya	3.22	159	*i* P	Pn	06 17 35.9	-0.2
DOPR	Dopca	3.25	351	⇓P	Pn	06 17 37.9	+1.4
DOPR	Dopca	3.25	351		Pn	06 17 37.9	+1.4
KOCA	Canakkale, Ayv	3.25	180	*i* P	Pn	06 17 35.0	-1.5
KOCA				*i* S	Sn	06 18 16.4	+1.1
GEMT	Gemlik	3.28	134	PN	Pn	06 17 37.4	+0.6
YLV	Yalova	3.29	131	PN	Pn	06 17 37.5	+0.5
HRT	Hereke	3.29	125	PN	Pn	06 17 37.9	+0.8
HRT	Hereke	3.29	125	P	Pn	06 17 37.6	+0.5
GRG	Griva	3.30	238	P	Pn	06 17 37.1	0.0
GRG	Griva	3.30	238	PN	Pn	06 17 38.6	+1.5
GRG	Griva	3.30	238	P	Pn	06 17 38.0	+0.9
BOVS	Bovan	3.33	287	*e*Pn	Pn	06 17 38.5	+0.9
BOVS				*e*Sn	Sn	06 18 16.8	-0.5
BOVS	Bovan	3.33	287	⇑P	Pn	06 17 38.5	+0.9
BOVS	Bovan	3.33	287		Pn	06 17 38.5	+0.9
BUHA	Balikesir, Bur	3.33	167	*i* P	Pn	06 17 38.1	+0.5
BUHA				*i* S	Sb	06 18 27.9	+2.6
BUHA				IAML		06 18 39.0	
	comp=N,640nm,0.8s						
OZUR		3.34	356	⇑P	Pn	06 17 39.9	+2.1
OZUR				⇓P	Pn	06 17 40.1	+2.3
OZUR		3.34	356		Pn	06 17 40.1	+2.3
PAIG	Paliouri	3.37	214	P	Pn	06 17 37.7	-0.3
PAIG	Paliouri	3.37	214	P	Pn	06 17 38.1	+0.1
VARL	Varlezi	3.38	21	⇓P	Pn	06 17 41.7	+3.5
VARL	Varlezi	3.38	21		Pn	06 17 41.7	+3.5
HERR	Herculane	3.41	310	⇑P	Pn	06 17 38.1	-0.5
HERR	Herculane	3.41	310		Pn	06 17 38.1	-0.5
AYVA	Ayvalik	3.47	172	*i* P	Pn	06 17 38.9	-0.6
KAND	Kocaeli-Kandir	3.47	117	*i* P	Pn	06 17 39.1	-0.4
SKO	Skopje	3.54	259	P	Pn	06 17 41.6	+1.1
SKO	Skopje	3.54	259	*i* Pn	Pn	06 17 41.8	+1.3
SIGR	SIGRI	3.55	183	PN	Pn	06 17 40.9	+0.4
GZR	Gura Zlata	3.56	319	⇑P	Pn	06 17 40.8	0.0
GZR	Gura Zlata	3.56	319		Pn	06 17 40.8	0.0
ADVT	Abdulvahap	3.58	129	PN	Pn	06 17 41.6	+0.6
MDB	Medias	3.60	341	⇑P	Pn	06 17 43.5	+2.3
MDB	Medias	3.60	341	P	Pn	06 17 43.5	+2.3
MDB	Medias	3.60	341		Pn	06 17 43.5	+2.3
KUBS	Kucevo	3.62	299	*e*Pn	Pn	06 17 41.0	-0.5
KUBS				*e*Sn	Sn	06 18 22.1	-2.3
DURS	Dursunbey	3.62	150	*i* P	Pn	06 17 42.4	+0.7
KAYN	Sakarya, Kayna	3.64	118	*i* P	Pn	06 17 41.8	+0.1
BIR	Birlad	3.67	17	⇓P	Pn	06 17 43.9	+1.7
BIR	Birlad	3.67	17	P	Pn	06 17 43.9	+1.7
BIR	Birlad	3.67	17		Pn	06 17 43.9	+1.7
DKL	Dikili	3.73	170	PN	Pn	06 17 43.7	+0.7
SAUV	Serdivan-Sakar	3.75	121	PN	Pn	06 17 44.2	+0.9
SPNC	Sapanca-Adapaz	3.77	122	PN	Pn	06 17 44.5	+1.0
TESR	Tescani	3.77	6	⇑P	Pn	06 17 45.1	+1.5
TESR	Tescani	3.77	6		Pn	06 17 45.1	+1.5
CAVI	Cavuskoy	3.79	131	PN	Pn	06 17 44.9	+1.0
BILE	Bilecik/Merkez	3.84	131	*i* P	Pn	06 17 43.4	-1.2
ZEDA	zmir-Bergama	3.86	169	*i* P	Pn	06 17 46.0	+1.2
GEYV	SAKARYA_Geyve	3.88	124	*i* P	Pn	06 17 47.5	+2.4
DEV	Deva	3.88	325	⇑P	Pn	06 17 46.5	+1.5
DEV	Deva	3.88	325	P	Pn	06 17 46.5	+1.5
DEV	Deva	3.88	325		Pn	06 17 46.5	+1.5
SAHE	Sakarya_HENDEK	4.03	117	*i* P	Pn	06 17 47.3	+0.2
XOR	Xorichti	4.04	214	P	Pn	06 17 46.9	-0.4
GULT	Gulveren	4.04	124	PN	Pn	06 17 48.7	+1.3
FNA	Florina	4.05	242	P	Pn	06 17 48.4	+0.9
FNA	Florina	4.05	242	P	Pn	06 17 48.8	+1.3
FNA	Florina	4.05	242	Pn	Pn	06 17 48.8	+1.3
VASR	Vaslui	4.07	17	⇓P	Pn	06 17 49.6	+2.0
VASR	Vaslui	4.07	17		Pn	06 17 49.6	+2.0
KZN	Kozani	4.07	234	P	Pn	06 17 48.3	+0.5
NEO	Neokhori	4.08	213	P	Pn	06 17 47.3	-0.5
AKHS	Akhisar	4.09	161	*i* P	Pn	06 17 51.0	+3.1
GRUS	Gruza	4.09	288	*e*Pn	Pn	06 17 49.2	+1.2
GRUS				*e*Sn	Sn	06 18 34.3	-1.7
GRUS	Gruza	4.09	288	⇓P	Pn	06 17 49.1	+1.1
GRUS	Gruza	4.09	288		Pn	06 17 49.1	+1.1
AUBOZ	BOZOYUK	4.10	133	PN	Pn	06 17 49.1	+0.9
AUBOZ	BOZOYUK	4.10	133	*i* P	Pn	06 17 50.0	+1.8
TVSB	Tavsanli	4.17	141	PN	Pn	06 17 49.5	+0.4
BIZ	Bicaz	4.18	0	⇓P	Pn	06 17 51.5	+2.3
BIZ	Bicaz	4.18	0		Pn	06 17 51.5	+2.3
DEMI	Demirci	4.21	151	*i* P	Pn	06 17 51.0	+1.4
DEMI				*i* S	Sn	06 18 35.3	-3.7
BTAS	Taskesti	4.27	119	*i* P	Pn	06 17 51.8	+1.3
SIMA	Simav-Kutahya	4.27	148	PN	Pn	06 17 50.9	+0.4
OHR	Ohrid	4.29	249	*i* Pn	Pn	06 17 52.3	+1.6
BZS	Buzias	4.31	313	*e*Pn	Pn	06 17 51.4	+0.4
BZS				*e*Sn	Sn	06 18 39.0	-2.4
BZS	Buzias	4.31	313	⇓P	Pn	06 17 50.6	-0.4
BZS	Buzias	4.31	313	P	Pn	06 17 50.6	-0.4
BZS	Buzias	4.31	313		Pn	06 17 50.6	-0.4
ANDZ	Kutahya, Merke	4.33	137	*i* P	Pn	06 17 52.3	+0.9
CJR	Cluj-Napoca	4.34	337	⇑P	Pn	06 17 52.9	+1.4
CJR	Cluj-Napoca	4.34	337	P	Pn	06 17 52.9	+1.4
CJR	Cluj-Napoca	4.34	337		Pn	06 17 52.9	+1.4
PHP	Peshkopia	4.34	258	P	Pn	06 17 53.0	+1.5
SRCK	Saricakaya, Es	4.35	127	PN	Pn	06 17 52.7	+1.1
SRCK	Saricakaya, Es	4.35	127	*i* P	Pn	06 17 53.5	+1.9
BORA	Eskisehir	4.36	130	PN	Pn	06 17 52.9	+1.2
BORA	Eskisehir	4.36	130	*i* P	Pn	06 17 51.7	0.0
CHOS	Chios island	4.37	181	PN	Pn	06 17 52.0	+0.2
TRUS	Trudelj	4.40	291	*e*Pn	Pn	06 17 53.0	+0.8
URLA	Izmir	4.41	175	PN	Pn	06 17 52.6	+0.2
IVAS	Ivanjica	4.43	283	*e*Pn	Pn	06 17 53.3	+0.6
IVAS				*e*Sn	Sn	06 18 42.9	-1.6
BANR	Banloc	4.44	308	*e*Pn	Pn	06 17 54.5	+1.8
BANR	Banloc	4.44	308	⇑P	Pn	06 17 53.3	+0.6
BANR	Banloc	4.44	308		Pn	06 17 53.3	+0.6
THL	Klokotos Trika	4.44	225	P	Pn	06 17 52.9	+0.2
MDUB	Mudurnu	4.45	119		Pn	06 17 54.3	+1.3
GDZ	Gediz	4.47	144	*i* P	Pn	06 17 52.6	-0.8
GEDZ	Gediz	4.48	145	PN	Pn	06 17 54.5	+1.1
ARCR	ARCALIA	4.50	345	⇑P	Pn	06 17 55.1	+1.4
ARCR	ARCALIA	4.50	345		Pn	06 17 55.1	+1.4
BEO	Beograd	4.56	299	P	Pn	06 17 57.7	+3.2
MILM	Milestii Mici	4.58	24	⇑P	Pn	06 17 58.3	+3.5
MILM	Milestii Mici	4.58	24		Pn	06 17 58.3	+3.5
USAK	Uak-Merkez	4.61	150	*i* P	Pn	06 17 56.1	+0.9
DIVS	Divibare	4.65	289	*e*Pn	Pn	06 17 56.4	+0.7
DIVS	Divibare	4.65	289	*e*Pn	Pn	06 17 56.1	+0.4
DIVS	Divibare	4.65	289		Pn	06 17 56.7	+1.0
MANT	Manisa	4.65	156	Pn	Pn	06 17 56.6	+0.7
KIS	Kishinev	4.66	24	*e*P	Pn	06 17 57.0	+1.2
KIS				*e*S	Sn	06 18 55.0	+5.1
	comp=N,900nm,1.0s						
KIS				*e*LR	LR	06 19 48.0	
	comp=N,400nm,8.0s						
KIS	Kishinev	4.66	24	*e*P	Pn	06 17 57.0	+1.2
KIS				*e*S	Sn	06 18 55.0	+5.1
AGG	Agios Georgios	4.70	219	P	Pn	06 17 56.5	+0.1
AGG	Agios Georgios	4.70	219	P	Pn	06 17 56.6	+0.1
AGG	Agios Georgios	4.70	219	Pn	Pn	06 17 56.6	+0.2
DRGR		4.70	330	⇑P	Pn	06 17 57.4	+1.0
DRGR		4.70	330	P	Pn	06 17 57.4	+1.0
DRGR		4.70	330		Pn	06 17 57.4	+1.0
SIRR	Siria	4.73	319	⇑P	Pn	06 17 57.8	+1.0
SIRR	Siria	4.73	319		Pn	06 17 57.8	+1.0
MAKR	Makrakomi, Fth	4.80	220	P	Pn	06 17 58.5	+0.7
TIR	Tirane	4.85	255	P	Pn	06 18 01.0	+2.5
TIR	Tirane	4.85	255		Pn	06 18 00.9	+2.5
BURAR	Bucovina Array	4.90	353	⇑P	Pn	06 18 01.2	+2.0
BURAR	Bucovina Array	4.90	353	P	Pn	06 18 01.1	+2.0
BURAR	Bucovina Array	4.90	353		Pn	06 18 00.8	+1.7
BURAR	Bucovina Array	4.90	353		Pn	06 18 01.2	+2.0
BUR08	Bucovina Ar. S	4.93	353	Pn	Pn	06 18 01.3	+1.7
BBLS	Lazići	5.01	285	*e*Pn	Pn	06 18 01.9	+1.2
BBLS				*e*Sn	Sn	06 18 58.0	-0.8
BBLS	Lazići	5.01	285	*e*Pn	Pn	06 18 01.7	+1.0
PDG	Podgorica	5.07	269	*e*Pn	Pn	06 18 03.3	+1.9
PDG	Podgorica	5.07	269	Pn	Pn	06 18 02.1	+0.7
KHAL	Karahalli	5.08	148	*i* P	Pn	06 18 03.4	+1.6
TEKS	Tekeris	5.10	293	*e*Pn	Pn	06 18 02.4	+0.6
TEKS				*e*Sn	Sn	06 18 58.6	-2.2
TEKS	Tekeris	5.10	293	*e*Pn	Pn	06 18 02.3	+0.5
FRGS	Fruska Gora	5.14	300	*e*Pn	Pn	06 18 03.2	+0.8
FRGS	Fruska Gora	5.14	300	*e*Pn	Pn	06 18 03.5	+1.1
ULC	Ulcinj	5.14	263	P	Pn	06 18 06.4	+3.9
BMR	Baia Mare	5.25	340	⇑P	Pn	06 18 06.1	+2.2
BMR	Baia Mare	5.25	340	P	Pn	06 18 06.6	+2.7
BMR				pmax	pmax		
	comp=Z,77nm,0.6s						
BMR	Baia Mare	5.25	340		Pn	06 18 06.1	+2.2
UPM	Unac-Piva	5.30	277	*e*Pn	Pn	06 18 06.5	+1.7
HAPS	Han Pijesak,BI	5.38	287	*e*Pn	Pn	06 18 05.3	-0.5
KSV	Kosov	5.61	353	P	Pn	06 18 13.7	+4.9
HCY	Herceg Novi	5.62	269	*e*Pn	Pn	06 18 12.3	+3.2
APE	Apeiranthos	5.70	185	⇑*e*P	Pn	06 18 09.5	-0.6
TREB	Trebinje	5.71	272	*e*Pn	Pn	06 18 12.9	+2.7
TREB				*e*Sn	Sn	06 19 13.5	-2.4
TREB	Trebinje	5.71	272	*e*Pn	Pn	06 18 13.4	+3.2
SEV	Sevastopol'	5.77	69	*e*P	Pn	06 18 10.8	-0.2
SEV				*e*S	Sn	06 19 17.3	-0.1
SEV				pmax	pmax		
	comp=Z,31nm,0.3s						
SEV				smax	smax		
	comp=N,22nm,0.4s						
SEV				smax	smax		
	comp=E,17nm,0.4s						
TRSU	Trosnyk	5.78	339	P	Pn	06 18 13.8	+2.7
KMPD	K-Podol'skiy	5.81	2	P	Pn	06 18 11.0	-0.6
DBRK	Dubrovnik	5.86	272	*e*Pn	Pn	06 18 14.2	+1.9
DBRK				Sn	Sn	06 19 22.4	+2.7
YAL	Yalta	6.09	71	*e*P	Pn	06 18 13.9	-1.6
YAL				*e*S	Sn	06 19 24.0	-1.3
STON	Ston	6.18	274	*e*Pn	Pn	06 18 18.3	+1.6
STON	Ston	6.18	274	*i* Pn	Pn	06 18 18.1	+1.4
STON				Sn	Sn	06 19 28.3	+0.8
STON	Ston	6.18	274	*e*Pn	Pn	06 18 17.8	+1.1
SIM	Simferopol'	6.19	67	*e*P	Pn	06 18 16.1	-0.8
SIM				*e*S	Sn	06 19 28.6	+0.8
ALU	Alushta	6.31	69	*e*P	Pn	06 18 17.0	-1.5
ALU				*e*S	Sn	06 19 30.1	-0.6
ALU				pmax	pmax		
	comp=Z,24nm,0.3s						
ALU				smax	smax		
	comp=E,35nm,0.4s						
ALU				smax	smax		
	comp=N,33nm,0.3s						
MORH	Mrgy, Hungar	6.36	305	⇓P	Pn	06 18 19.5	+0.4
MORH	Mrgy, Hungar	6.36	305	*e*Pn	Pn	06 18 20.2	+1.1
MORH	Mrgy, Hungar	6.36	305		Pn	06 18 19.5	+0.4
ITM	Ithomi	6.43	211	Pn	Pn	06 18 22.4	+2.3
BR131	Keskin Array S	6.44	116	*de*P	Pn	06 18 20.4	+0.1
BR131	Keskin Array S	6.44	116	Pn	Pn	06 18 21.3	+0.9
BRTR	Keskin Array B	6.44	116	Pn	Pn	06 18 20.7	+0.4
	comp=N,0.7nm,0.3s,baz=289,slow=12,SNR=16						
BRTR	Keskin Array B	6.44	116	P	Pn	06 18 21.4	+1.1
BRTR	Keskin Array B	6.44	116		Pn	06 18 21.4	+1.1
UZH	Uzhgorod	6.45	337	*e*P	Pn	06 18 26.0	+5.6
UZH				*e*S	Sn	06 19 40.6	+6.5
UZH				MLR	MLR		
	comp=Z,20nm,1.0s						
MORS	Morshin	6.56	347	P	Pn	06 18 26.5	+4.6
RICI	Ricice	6.61	279	*i* Pn	Pn	06 18 25.3	+2.8
RICI				Sn	Sn	06 19 39.3	+1.3
ELL	Elmali	6.68	153	P	Pn	06 18 25.4	+1.7
ELL	Elmali	6.68	153		Pn	06 18 25.4	+1.7
MAKA	Makarska	6.68	278	*i* Pn	Pn	06 18 26.2	+2.6
KOLS	Kolonicke sedl	6.73	338	*e*P	Pn	06 18 25.8	+1.6
KOLS				*e*		06 19 37.5	
KOLS	Kolonicke sedl	6.73	338	*e*PN	Pn	06 18 25.8	+1.6
KOLS				*e*SN	Sn	06 19 37.5	-3.5
MGRS	Mrkonjic Grad	6.76	287	*e*Pn	Pn	06 18 25.6	+1.0
BLY	Banja Luka	6.76	290	*e*Pn	Pn	06 18 24.7	+0.1
PSZ	Piszkesteto	6.76	322	P	Pn	06 18 25.3	+0.5
PSZ	Piszkesteto	6.76	322	Pn	Pn	06 18 25.2	+0.5
SUDU	Sudak	6.78	69	*e*P	Pn	06 18 24.7	-0.2
SUDU				*e*S	Sn	06 19 43.0	+0.8
SUDU				pmax	pmax		
	comp=Z,41nm,0.4s						
SUDU				smax	smax		
	comp=E,23nm,0.3s						
SUDU				smax	smax		
	comp=N,11nm,0.3s						
KECS	Kecovo	6.95	327	*e*SN	Sn	06 19 47.3	+0.9
HVAR	Hvar	7.09	277	*e*Pn	Pn	06 18 31.2	+2.0
HVAR				Sn	Sn	06 19 51.6	+1.6
KIJV	Kijevo	7.18	283	*e*Pn	Pn	06 18 33.4	+3.0
KIJV				Sn	Sn	06 19 54.0	+2.0
LVV	L'vov	7.21	349	*e*P	Pn	06 18 36.0	+5.2
LVV				*e*S	Sn	06 20 00.2	+7.5
KWP	Kalwaria Pacla	7.27	342	P	Pn	06 18 33.3	+1.7
KWP	Kalwaria Pacla	7.27	342		Pn	06 18 33.3	+1.7
MOSL	Moslavina	7.30	296	*e*Pn	Pn	06 18 32.6	+0.6
MOSL				Sn	Sn	06 19 49.4	-5.7
IDI	Anoyia	7.52	188	Pn	Pn	06 18 35.4	+0.3
	comp=N,0.4nm,0.3s,baz=312,slow=17,SNR=2.6						
MORI	Morici	7.66	282	*e*Pn	Pn	06 18 40.3	+3.3
MORI				Sn	Sn	06 20 03.6	-0.4
VYHS	Vyhne	7.67	321	*e*P	Pn	06 18 39.5	+2.3
VYHS	Vyhne	7.67	321	*e*PN	Pn	06 18 39.4	+2.3
KALN	Kalnik	7.68	299	*i* Pn	Pn	06 18 37.6	+0.2
ZIRJ	Zirje	7.70	280	*i* Pn	Pn	06 18 39.4	+2.0
UDBI	Udbina	7.71	287	*e*Pn	Pn	06 18 40.0	+2.3
UDBI				Sn	Sn	06 20 03.3	-1.8
SGRT	San Giovanni R	7.75	266		Pn	06 18 39.7	+1.3
NIE	Niedzica	7.79	331	P	Pn	06 18 43.4	+4.7
NIE				pmax	pmax		

	comp=Z,6.0nm,0.7s						
ZAG	Zagreb	7.88	296	ePn	Pn	06 18 45.9	+5.9
LANS	Liptovska Anna	7.89	326	eP	Pn	06 18 45.6	+5.5
LANS				e		06 20 13.2	
LANS	Liptovska Anna	7.89	326	ePN	Pn	06 18 45.6	+5.5
LANS				eSN	Sn	06 20 13.2	+3.7
PTJ	Puntijarka	7.92	297	i Pn	Pn	06 18 41.5	+0.9
PTJ				Sn	Sn	06 20 03.8	-6.5
DUGI	Dugi Otok	8.14	282	ePn	Pn	06 18 46.5	+2.9
OZLJ	Ozalj	8.16	294	i Pn	Pn	06 18 45.5	+1.7
OZLJ				Sn	Sn	06 20 09.4	-6.7
AKASG	Malin Array Be	8.23	14	Pn	Pn	06 18 43.8	-1.0
	comp=Z,3.2nm,0.3s,baz=198,slow=12,SNR=15						
AKASG				Sn	Sn	06 20 12.1	-5.7
	comp=Z,5.1nm,0.3s,baz=218,slow=24,SNR=5.2						
AKASG				Lg	Lg	06 21 07.7	
	comp=Z,2.2nm,0.3s,baz=246,slow=32,SNR=1.5						
AKASG	Malin Array Be	8.23	14	eP	Pn	06 18 45.4	+0.6
AKASG				pmax	pmax		
	comp=Z,5.0nm,0.4s						
AKASG	Malin Array Be	8.23	14		Pn	06 18 43.0	-1.7
AKBB	Malin Array Si	8.23	14⇑	eP	Pn	06 18 45.0	+0.2
AKBB	Malin Array Si	8.23	14	Pn	Pn	06 18 45.5	+0.7
CRES	Cresnjev	8.23	296	ePn	Pn	06 18 44.1	-0.7
NVLJ	Novalja	8.34	286	ePn	Pn	06 18 47.1	+0.8
NVLJ				Sn	Sn	06 20 18.5	-2.1
MODS	Modra-Piesok	8.36	315	eSN	Sn	06 20 16.5	-4.5
ANN	Anapa	8.45	72⇓	eP	Pn	06 18 46.8	-1.0
ANN				pmax	pmax		
	comp=Z,99nm,1.0s						
OJC	Ojcow	8.63	332	P	Pn	06 18 53.7	+3.3
OJC	Ojcow	8.63	332	Pn	Pn	06 18 53.7	+3.3
ARSA	Arzberg	8.74	305	ePn	Pn	06 18 55.2	+3.4
	comp=Z,4.9nm,0.6s						
ARSA				eSn	Sn	06 20 26.1	-4.3
	comp=Z,8.7nm,0.8s						
PAOL	Paolisi	8.78	263	Pn	Pn	06 18 54.6	+2.3
SOKA	Soboth	8.80	300	ePn	Pn	06 18 54.7	+1.9
	comp=Z,2.1nm,0.4s						
SOKA				eSn	Sn	06 20 28.5	-3.6
	comp=Z,0.7nm,0.3s						
CONA	Conrad Observa	8.87	309	ePn	Pn	06 18 55.2	+1.5
	comp=Z,3.6nm,1.1s						
CONA				eSn	Sn	06 20 31.8	-2.0
	comp=Z,1.6nm,0.3s						
OBKA	Obir	9.05	298	ePn	Pn	06 18 57.5	+1.3
	comp=Z,4.3nm,0.7s						
OBKA				eSn	Sn	06 20 37.9	-0.4
	comp=Z,3.4nm,0.5s						
INTR	Introdacqua	9.06	269		Pn	06 18 58.4	+2.1
AQU	L'Aquila	9.38	272	P	Pn	06 19 01.4	+0.7
AQU	L'Aquila	9.38	272		Pn	06 19 01.4	+0.7
MYKA	Terra Mystica	9.68	298	ePn	Pn	06 19 06.5	+1.7
	comp=Z,2.9nm,0.6s						
MYKA				eSn	Sn	06 20 48.8	-4.9
	comp=Z,5.6nm,0.6s						
LZRR	Lazarevskoye	9.74	79⇓	eP	Pn	06 19 03.1	-2.5
MOA	Molln	9.77	305	ePn	Pn	06 19 07.2	+1.3
	comp=Z,5.1nm,0.8s						
MOA				eSn	Sn	06 20 54.3	-1.4
	comp=Z,1.5nm,0.2s						
MURB	Monte Urbino	9.96	278	Pn	Pn	06 19 08.3	-0.3
SOC	Sochi	9.98	81	eP	Pn	06 19 15.8	+7.0
SOC				MLR	MLR		
	comp=Z,157nm,17.0s						
KBA	Koelnbreinsper	10.03	300	ePn	Pn	06 19 11.4	+1.8
	comp=Z,2.6nm,0.9s						
KBA				eSn	Sn	06 20 58.8	-3.4
	comp=Z,1.0nm,0.3s						
GUZR	Guzeripl'	10.28	78d	iP	Pn	06 19 10.8	-2.2
RPOR	Krasnaya Polya	10.38	80⇓	eP	Pn	06 19 11.7	-2.6
GERES	GERESS Array B	10.58	309	Pn	Pn	06 19 18.6	+1.5
	comp=Z,0.2nm,0.3s,baz=108,slow=12,SNR=5.2						
KHC	Kasperske Hory	10.79	310⇑	eP	Pn	06 19 21.0	+1.0
KHC				pmax	pmax		
	comp=Z,5.0nm,1.3s						
KHC	Kasperske Hory	10.79	310	ePN	Pn	06 19 18.7	-1.3
ARXR	Arkhyz	11.12	81⇓	eP	Pn	06 19 23.1	-1.4
WTTA	Wattenberg	11.19	299	ePn	Pn	06 19 25.8	+0.3
	comp=Z,2.0nm,0.6s						
WATA	Walderalm	11.25	299	ePn	Pn	06 19 27.9	+1.6
	comp=Z,1.0nm,0.2s						
SQTA	Sankt Quirin	11.45	298	eSn	Sn	06 21 39.5	+2.5
	comp=Z,1.9nm,0.3s						
MOTA	Moosalm	11.56	299	eSn	Sn	06 21 40.7	+0.9
	comp=Z,1.9nm,0.4s						
FETA	Feichten	11.71	297	ePn	Pn	06 19 35.2	+2.6
	comp=Z,1.4nm,0.5s						
MNK	Minsk	11.81	5	i P	Pn	06 19 31.5	-2.2
	comp=E,1.0nm,0.9s						
MNK				i P	Pn	06 19 31.5	-2.2
	comp=N,27nm,0.8s						
MNK				i P	Pn	06 19 31.5	-2.2
	comp=Z,6.0nm,0.8s						
MNK				i PP	PnPn	06 19 39.3	-2.2
MNK				i PPP	PPP	06 19 46.9	
MNK				i S	Sn	06 21 44.6	-1.1
MNK				i SS	SnSn	06 21 58.2	+0.6
MNK				i SSS	SSS	06 22 10.6	
MNK				i LR	LR	06 23 20.9	
MNK				i LRM	MLR	06 24 15.9	
	comp=Z,39nm,12.1s						
MNK				i LRM	MLR	06 24 24.1	
	comp=E,7.0nm,13.8s						
MNK				i LRM	MLR	06 24 27.5	
	comp=N,78nm,15.9s						
MNK				i ScP	ScP	06 28 51.5	-3.0
MNK				i PcS	PcS	06 28 52.7	-2.6
KIV	Kislovodsk	12.13	79	eP	Pn	06 19 37.5	-0.8
KIV				pmax	pmax		
	comp=Z,26nm,0.9s						
NACGM	Naroch	12.16	2	i P	Pn	06 19 37.1	-1.5
NACGM				i P	Pn	06 19 37.1	-1.5
NACGM				i P	Pn	06 19 37.1	-1.5
NACGM				i PP	PnPn	06 19 44.9	-1.4
NACGM				i S	Sn	06 21 57.1	+2.8
NACGM				i SS	SnSn	06 22 22.8	+17
NACGM				i LQ	LQ	06 23 21.2	
NACGM				i LR	LR	06 24 11.0	
NEY	Neytrino	12.18	82⇑	eP	Pn	06 19 38.8	-0.3
NEY				pmax	pmax		
	comp=Z,2.0nm,0.9s						
VORD	Divnogorie	12.19	43	eP	Pn	06 19 39.0	+0.1
VORD				pmax	pmax		
	comp=Z,10.0nm,1.0s						
DAVOX	Davos/Dischmat	12.21	295	Pn	Pn	06 19 41.6	+2.1
	comp=Z,0.5nm,0.3s,baz=135,slow=20,SNR=4.0						
VSR	Storozhevoye	12.28	42	eP	Pn	06 19 37.7	-2.5
VSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KBZ	Khabaz	12.29	80	Pn	Pn	06 19 39.4	-1.0
	comp=Z,0.3nm,0.3s,baz=294,slow=11,SNR=1.9						
KBZ	Khabaz	12.29	80⇓	eP	Pn	06 19 40.3	0.0
NCK	Nalchik	12.80	81⇑	eP	Pn	06 19 46.5	-0.9
LPSR	Galich'ya Gora	13.08	37	eP	Pn	06 19 50.6	-0.5
LPSR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
VRH	Novokhopyorsk	13.58	46	eP	Pn	06 19 54.8	-3.1
VRH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
OBN	Obninsk	14.13	25	eP	Pn	06 20 03.5	-1.9
OBN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
OBN				MLR	MLR		
	comp=Z,188nm,11.0s						
BTLR	Botlikh	14.79	84⇑	eP	Pn	06 20 15.8	+1.1
VSU	Vasula	15.73	1⇑	eP	Pn	06 20 23.9	-2.9
BELG	Belogornoye	17.37	49	P	Pn	06 20 46.4	-1.3
	comp=Z,0.6nm,0.3s,baz=310,slow=5.0,SNR=9.5						
BELG	Belogornoye	17.37	49⇑	iP	Pn	06 20 47.0	-0.7
BELG				pmax	pmax		
	comp=Z,4.0nm,0.9s						
FINES	FINESS Array B	18.72	360	Pn	P	06 20 59.3	-4.5
	comp=Z,0.2nm,0.3s,baz=168,slow=13,SNR=5.7						
FINES				LR	LR	06 29 08.4	
	comp=Z,88nm,18.1s,baz=160,slow=40						
FINES	FINESS Array B	18.72	360	eP	P	06 21 00.7	-3.1
FINES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
VALR	Valaam	18.85	7⇓	eP	P	06 21 04.6	-0.7
VALR				pmax	pmax		
	comp=Z,18nm,0.9s						
VALR				MLR	MLR		
	comp=Z,11nm,4.4s						
HFS	Hagfors	18.98	341	P	P	06 21 04.9	-1.9
	comp=Z,0.3nm,0.3s,baz=114,slow=14,SNR=2.6						
KONO	Kongsberg	19.73	335⇓	eP	P	06 21 13.9	-1.0
KONO				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KLMR	Klimovskoe	19.86	20	eP	P	06 21 14.4	-1.9
KLMR				pmax	pmax		
	comp=Z,21nm,1.2s						
KLMR	Klimovskoe	19.86	20	ePn	P	06 21 14.5	-1.9
KLMR				AMP		06 21 17.5	
	comp=Z,21nm,1.2s						
NC602	NORSAR Array S	20.05	339	P	P	06 21 18.0	-0.5
NAO01	NORSAR Array S	20.32	338	P	P	06 21 21.9	+0.5
NB2	NORSAR Subarra	20.39	339	P	P	06 21 22.0	-0.2
	comp=Z,8.6nm,1.1s,baz=147,slow=11						
NOA	NORSAR Array B	20.39	339	P	P	06 21 20.7	-1.5
	comp=Z,6.3nm,0.7s,baz=146,slow=9.6,SNR=7.5						
NBO00	NORSAR Array S	20.50	338	P	P	06 21 23.9	+0.5
KIRV	Kirov	21.49	34	P	P	06 21 32.3	-1.6
	comp=Z,14nm,0.5s,baz=265,slow=0.8,SNR=1.7						
KIRV	Kirov	21.49	34⇓	eP	P	06 21 33.8	-0.2
TMCR	Tamitsa	22.51	14	eP	P	06 21 43.5	-1.4
TMCR				pmax	pmax		
	comp=Z,12nm,0.5s						
EKA	Eskdalemuir Ar	22.74	314	P	P	06 21 47.5	+0.1
	comp=Z,0.6nm,0.6s,baz=118,slow=10,SNR=2.0						
ESDC	Sonseca Array	22.77	272	P	P	06 21 48.0	+0.1
	comp=Z,2.9nm,1.0s,baz=68,slow=9.4,SNR=8.0						
ESDC	Sonseca Array	22.77	272	IAmb	IAmb	06 21 50.4	
	comp=Z,3.4nm,1.1s						
AKTO	Aktyubinsk	23.10	60	P	P	06 21 51.5	+0.3
	comp=Z,4.1nm,0.8s,baz=254,slow=13,SNR=2.1						
ABKAR	Akbulak array	24.24	63	P	P	06 22 02.8	+0.5
ABKAR				IAmb	IAmb	06 22 12.5	
	comp=Z,4.3nm,0.8s						
ABKAR	Akbulak array	24.24	63	P	P	06 22 02.9	+0.5
ARU	Arti	24.81	45	P	P	06 22 06.9	-0.6
	comp=Z,1.8nm,0.7s,baz=246,slow=5.9,SNR=7.2						
ARU	Arti	24.81	45⇓	eP	P	06 22 07.3	-0.1
ARU				pmax	pmax		
	comp=Z,8.0nm,1.0s						
ARU				MLR	MLR		
	comp=Z,103nm,13.0s						
ARU	Arti	24.81	45	P	P	06 22 08.0	+0.5
ARU				IAmb	IAmb	06 22 19.7	
	comp=Z,8.1nm,0.9s						
ARCES	ARCESS Array B	26.84	360	P	P	06 22 24.6	-1.1
	comp=Z,4.7nm,1.0s,baz=188,slow=12,SNR=2.2						
ARCES	ARCESS Array B	26.84	360	eP	P	06 22 29.5	+3.8
ARCES				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ARCES	ARCESS Array B	26.84	360	IAmb	IAmb	06 22 25.8	
	comp=Z,13nm,1.2s						
BRVK	Borovoye	30.89	55⇓	eP	P	06 23 00.4	-1.5
BRVK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
AAK	Ala-Archa	35.17	73	P	P	06 23 39.7	+0.1
	comp=Z,1.1nm,0.4s,baz=226,slow=7.7,SNR=6.7						
AAK				LR	LR	06 41 34.7	
	comp=Z,123nm,19.3s,baz=158,slow=42						
AAK	Ala-Archa	35.17	73	P	P	06 23 38.8	-0.8
AAK				IAmb	IAmb	06 23 43.3	
	comp=Z,3.9nm,1.0s						
KURK	Kurchatov	36.19	59⇓	eP	P	06 23 47.4	-0.6
KURK				pmax	pmax		
	comp=Z,1.0nm,1.1s						
TOA0	Torodi Ar. Sit	36.27	223	P	P	06 23 50.2	+1.1
TORD	Torodi Ar. Bea	36.27	223	P	P	06 23 49.7	+0.7
	comp=Z,4.5nm,0.8s,baz=29,slow=9.7,SNR=14						
TORD	Torodi Ar. Bea	36.27	223	P	P	06 23 49.8	+0.7
KOWA	Kowa	38.25	232	P	P	06 24 06.6	+0.8
	comp=Z,1.5nm,0.7s,baz=37,slow=10,SNR=4.0						
MK31	Makanchi Array	39.37	64⇑	eP	P	06 24 15.6	+0.6
MK31	Makanchi Array	39.37	64	P	P	06 24 15.3	+0.4
MKAR	Makanchi Array	39.37	64	P	P	06 24 15.2	+0.2
	comp=Z,1.2nm,0.7s,baz=283,slow=6.5,SNR=14						
MKAR				LR	LR	06 44 12.2	
	comp=Z,116nm,19.1s,baz=174,slow=42						
MKAR	Makanchi Array	39.37	64	eP	P	06 24 16.1	+1.1
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MKAR	Makanchi Array	39.37	64	P	P	06 24 15.6	+0.7
ZAA0	Zalesovo Array	39.49	53	P	P	06 24 16.4	+0.5
ZAA0				IAmb	IAmb	06 24 17.2	
	comp=Z,2.4nm,0.7s						
ZALV	Zalesovo Beam	39.49	53	P	P	06 24 15.7	-0.2
	comp=Z,2.4nm,0.7s,baz=271,slow=9.2,SNR=11						
ZALV	Zalesovo Beam	39.49	53	eP	P	06 24 16.6	+0.7
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ZALV	Zalesovo Beam	39.49	53	P	P	06 24 16.2	+0.4
NRIK	Noril'sk	40.77	29⇑	eP	P	06 24 27.8	+1.5
NRIK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
DGZ	Jazzator, Alta	41.94	58⇑	eP	P	06 24 35.0	-1.3
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.8s						
WMQ	Urumqi	43.92	67	eP	P	06 24 54.5	+2.2
SONM	Songino Array	54.30	55	P	P	06 26 11.3	-0.5
	comp=Z,0.3nm,0.3s,baz=290,slow=8.8,SNR=4.9						
SONM	Songino Array	54.30	55	P	P	06 26 12.8	+1.0
SONM				pmax	pmax		
	comp=Z,1.0nm,1.0s						
SONM	Songino Array	54.30	55	P	P	06 26 12.8	+1.0
HHC	Hu-ho-hao-te	60.99	60	eP	P	06 27 00.7	+1.7
HHC				pmax	pmax		
	comp=Z,9.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,120nm,4.8s						
YKA	Yellowknife Ar	70.46	342	P	P	06 27 59.6	0.0
	comp=Z,0.2nm,0.7s,baz=19,slow=7.2,SNR=3.2						

FUNV **05** *06:21:42.6, 8°.00N×72°.30W, h35^{km}, MW3.2*
RSNC **05** *06:21:44.0±1.2, 8°.33N×72°.16W, h4^{km}±5^{km}, ML2.0*
ISC 05 06:21:41.5±1.4, **8°.22N**±0°.04×**72°.17W**±0°.03, **h12**^{km}±12^{km}, **n17**, σ1^{s}.**31**/33, **Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PAMC	Pamplona, Colo	1.02	211	eP	Pn	06 22 03.1	+1.0
PAMC				eS	Sn	06 22 19.2	+2.5
PAMC				i		06 22 24.8	
	comp=Z,41nm,0.2s						
OCAC	Ocana	1.14	271	eP	Pn	06 22 03.7	+0.2
OCAC				eS	Sg	06 22 19.2	+0.8
OCAC				i		06 22 21.8	
	comp=Z,42nm,0.2s						
SOCV	Socops	1.30	87	eP	Pn	06 22 05.8	+0.2
SOCV				eS	Sn	06 22 23.1	+0.2
SDV	Santo Domingo	1.65	66	eP	Pn	06 22 12.3	+1.8
SDV				eS	Sn	06 22 33.2	+1.3
SDV				i		06 22 37.0	
	comp=Z,21nm,0.4s						
SDV	Santo Domingo	1.65	66	eP	Pn	06 22 12.1	+1.6
SDV				eS	Sn	06 22 32.4	+0.5
TAMC	Tame, Arauca	1.81	168	eP	Pg	06 22 16.5	+0.2
TAMC				eS	Sg	06 22 41.1	+1.2
TAMC				i		06 22 46.0	
	comp=Z,9.6nm,0.4s						
MCQV	Machiques	1.85	349	eP	Pn	06 22 13.2	0.0
MCQV				eS	Sn	06 22 37.3	+0.7
BRRC	Barranca, Sant	1.89	234	eP	Pb	06 22 17.0	+1.0
BRRC				eS	Sg	06 22 42.0	-0.3
BRRC				i		06 22 50.1	
	comp=Z,12nm,0.8s						
BARC	Barichara	1.91	212	eP	Pg	06 22 17.8	-0.3
BARC				eS	Sg	06 22 44.0	+1.1
BARC				i		06 22 48.7	
	comp=Z,12nm,0.7s						
SMLC	San Martn de	1.97	287	eP	Pb	06 22 17.0	-0.4
SMLC				eS	Sb	06 22 42.0	+0.1
TORV	Torococo	2.33	55	eP	Pn	06 22 19.5	-0.3
TORV				eS	Sn	06 22 47.4	-1.2
RUSC	La Rusia	2.48	202	eP	Pb	06 22 26.6	+0.2
RUSC				eS	Sg	06 22 59.2	-2.3
RUSC				i		06 23 05.8	
	comp=Z,3.5nm,0.2s						
CURV	Curarigua	2.81	51	eP	Pn	06 22 27.8	+1.3
CURV				eS	Sn	06 23 01.2	+0.9
PTBC	PUERTO BERRIO,	2.82	234	eP	Pb	06 22 29.9	-1.9
PTBC				eS	Sb	06 23 05.8	-0.6
PTBC				i		06 23 13.3	
	comp=Z,4.9nm,0.2s						
SANV	Sanarito	2.89	64	eP	Pn	06 22 29.1	+1.5
SANV				eS	Sn	06 23 01.9	-0.6
SPBC	San Pablo de B	3.18	217	eS	Sb	06 23 14.5	-2.2
SPBC				i		06 23 27.7	
	comp=Z,3.4nm,0.6s						
BAUV	El Baul	4.14	80	eP	Pn	06 22 44.7	0.0
BAUV				eS	Sn	06 23 30.1	-2.9

RSNC **05** *06:23:41.1±1.6, 8°.36N×72°.12W, h0^{km}±7^{km}, ML2.3*
FUNV **05** *06:23:43.9, 8°.31N×71°.92W, h1^{km}, MW3.1*
ISC 05 06:23:38.9±1.3, **8°.42N**±0°.05×**72°.14W**±0°.03, **h3**^{km}±11^{km}, **n15**, σ1^{s}.**30**/30, **Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OCAC	Ocana	1.18	261	eP	Pn	06 24 02.4	-0.1
OCAC				eS	Sn	06 24 18.5	-0.6
OCAC				i		06 24 22.8	
	comp=Z,82nm,0.4s						
PAMC	Pamplona, Colo	1.21	207	eP	Pg	06 24 01.2	-0.9
PAMC				eS	Sb	06 24 18.3	-0.6
PAMC				i		06 24 22.7	
	comp=Z,54nm,0.3s						
SOCV	Socops	1.28	96	eP	Pg	06 24 03.8	+0.4
SOCV				eS	Sb	06 24 17.9	-2.6
SDV	Santo Domingo	1.56	73	eP	Pb	06 24 09.1	+0.5
SDV				eS	Sg	06 24 29.6	+0.5
SDV				i		06 24 33.3	
	comp=Z,30nm,0.1s						
SDV	Santo Domingo	1.56	73	eP	Pg	06 24 10.3	+1.4
SDV				eS	Sb	06 24 29.3	+0.6
SMLC	San Martn de	1.95	281	eP	Pb	06 24 14.2	-0.8
SMLC				eS	Sg	06 24 41.5	0.0
TAMC	Tame, Arauca	2.00	170	eP	Pn	06 24 13.9	+0.3
TAMC				eS	Sb	06 24 39.8	-1.5
TAMC				i		06 24 45.7	
	comp=Z,29nm,0.2s						
BRRC	Barranca, Sant	2.03	230	eP	Pb	06 24 16.6	+0.2
BRRC				eS	Sb	06 24 41.2	-0.9
BRRC				i		06 24 48.1	
	comp=Z,13nm,0.4s						
BARC	Barichara	2.09	210	eP	Pb	06 24 16.7	-0.9
BARC				eS	Sb	06 24 43.4	-0.6
BARC				i		06 24 50.6	
	comp=Z,22nm,0.3s						
CURV	Curarigua	2.67	53	eP	Pb	06 24 25.5	-1.9
CURV				eS	Sn	06 24 56.8	+0.9
RUSC	La Rusia	2.68	201	eP	Pn	06 24 24.4	+1.0
RUSC				eS	Sn	06 24 57.8	+1.2
RUSC				i		06 25 04.6	
	comp=Z,8.1nm,0.3s						
SANV	Sanarito	2.79	67	eP	Pb	06 24 27.5	-1.9
SANV				eS	Sn	06 24 58.5	-0.3
PTBC	PUERTO BERRIO,	2.96	231	eP	Pn	06 24 28.0	+1.2
PTBC				eS	Sn	06 25 04.2	+1.3
PTBC				i		06 25 12.7	
	comp=Z,7.7nm,0.3s						
SPBC	San Pablo de B	3.35	215	eP	Pn	06 24 33.6	+1.4
SPBC				eS	Sn	06 25 14.5	+1.8
SPBC				i		06 25 26.8	
	comp=Z,6.7nm,0.4s						
BAUV	El Baul	4.08	82	eP	Pn	06 24 44.0	+1.7
BAUV				eS	Sn	06 25 28.3	-2.3

IDC 05 06:26:35.0±2.9, **53°.97N**×**86°.58E**, **h0**^{km}, **mb1 3.2**/2, **mb1mx3.0**/44, **mbtmp3.2**/2, **ML2.6**/2, **Error ellipse: s-maj=22.6km s-min=13.0km az=59.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.04	270	i		06 32 33.5	
	baz=88,slow=331,SNR=15						
ZALV	Zalesovo Beam	1.04	270	Pg	Pg	06 26 54.2	-0.7
	0.5nm,0.3s,baz=84,slow=16,SNR=10						
ZALV				Lg	Lg	06 27 09.4	
	2.2nm,0.3s,baz=92,slow=16,SNR=18						
KURBB	Kurchatov Arra	5.96	239	Pn	Pn	06 28 05.9	+1.4
	0.1nm,0.3s,baz=58,slow=14,SNR=2.1						
KURBB				Lg	Lg	06 29 44.1	
	0.1nm,0.3s,baz=16,slow=24,SNR=1.2						
MKAR	Makanchi Array	7.69	203	Pn	Pn	06 28 29.0	+0.9
	0.1nm,0.3s,baz=25,slow=14,SNR=5.0						
MKAR				Sn	Sn	06 29 55.7	-0.1
	0.0nm,0.3s,baz=20,slow=17,SNR=2.1						
MKAR				Lg	Lg	06 30 37.5	
	0.0nm,0.3s,baz=24,slow=29,SNR=2.9						

FUNV **05** *06:30:52.7, 8°.17N×72°.19W, h35^{km}, MW3.2*
RSNC **05** *06:30:52.1±1.5, 8°.21N×72°.14W, h4^{km}±12^{km}, ML2.3*
ISC 05 06:30:50.7±1.2, **8°.33N**±0°.05×**72°.12W**±0°.03, **h26**^{km}±15^{km}, **n11**, σ1^{s}.**96**/20, **Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PAMC	Pamplona, Colo	1.14	210	eP	Pb	06 31 10.7	-1.5
OCAC	Ocana	1.19	266	eP	Pb	06 31 12.8	+0.1
OCAC				eS	Sn	06 31 27.6	+0.4
OCAC				i		06 32 22.2	
	comp=Z,51nm,0.5s						
SOCV	Socops	1.25	92	eP	Pb	06 31 14.4	+0.7
SOCV				eS	Sb	06 31 30.4	+1.0
SDV	Santo Domingo	1.57	69	eP	Pb	06 31 21.0	+1.8
SDV				eS	Sb	06 31 41.6	+2.8
SDV				i		06 31 46.3	
	comp=Z,13nm,0.5s						
MCQV	Machiques	1.75	347	eP	Pb	06 31 22.1	-0.2
MCQV				eS	Sb	06 31 43.7	-0.2
SMLC	San Martn de	1.99	284	eP	Pb	06 31 25.2	-1.1
SMLC				eS	Sb	06 31 51.9	+1.3
SMLC				i		06 31 54.0	
	comp=Z,58nm,0.5s						
TORV	Torococo	2.23	57	eP	Pb	06 31 27.5	-2.9
TORV				eS	Sn	06 31 52.4	-0.5
CURV	Curarigua	2.71	52	eP	Pb	06 31 35.2	-3.4
CURV				eS	Sn	06 32 07.2	+2.6
SANV	Sanarito	2.80	65	eP	Pb	06 31 36.8	-3.4
SANV				eS	Sn	06 32 08.0	+1.0
BAUV	El Baul	4.08	81	eP	Pn	06 31 52.5	+1.1
BAUV				eS	Sn	06 32 37.0	-1.3
PAYV	Puerto Ayacuch	5.29	123	eP	Pn	06 32 07.1	-1.0

IDC 05 06:35:30.1±3.2, **16°.08S**×**176°.08W**, **h0**^{km}, **mb3.8**/4, **mb1 4.1**/4, **mb1mx3.8**/39, **mbtmp3.8**/4, **MS3.8**/9, **Ms1 3.8**/9, **ms1mx3.5**/45, **Error ellipse: s-maj=174.1km s-min=27.7km az=147.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAR	Rarotonga	16.27	111	LR	LR	06 44 16.8	
	comp=Z,148nm,19.9s,baz=303,slow=32						
DZM	Mont Dzumac	17.56	247	eLR	LR	06 43 27.6	
	comp=Z,805nm,27.0s						
URZ	Urewera	22.90	194	LR	LR	06 48 25.0	
	comp=Z,354nm,19.7s,baz=32,slow=34						
HNR	Honiara	24.29	283	LR	LR	06 48 37.2	
	comp=Z,242nm,21.1s,baz=130,slow=32						
PPT2	Papeete2	25.40	97	eLR	LR	06 47 38.0	
	comp=Z,315nm,26.0s,baz=266						
PPT	Papeete	25.40	97	LR	LR	06 48 42.1	
	comp=Z,98nm,20.5s,baz=262,slow=31						
TBI	Tubuai	26.05	110	eLR	LR	06 48 07.9	
	comp=Z,323nm,28.2s,baz=294						
TAOE	Nuku Hiva Isla	35.76	83	eLR	LR	06 52 23.6	
	comp=Z,219nm,25.2s						
RKT	Rikitea	39.25	107	eLR	LR	06 54 15.0	
	comp=Z,261nm,25.5s						
WRA	Warramunga Arr	47.18	258	P	P	06 44 04.7	-0.2
	1.0nm,1.0s,baz=91,slow=7.3,SNR=4.6						
WRA				LR	LR	07 01 16.7	
	comp=Z,135nm,21.9s,baz=55,slow=33						
ASAR	Alice Springs	47.45	252	P	P	06 44 06.3	-0.7
	1.2nm,0.6s,baz=85,slow=8.3,SNR=21						
JNU	Nakatsue	70.41	315	LR	LR	07 12 13.1	
	comp=Z,48nm,21.3s,baz=7.5,slow=31						
USRK	Ussuriysk Ar.	76.40	324	LR	LR	07 14 37.2	
	comp=Z,52nm,21.7s,baz=142,slow=31						
NVAR	Mina Array Bea	76.57	43	P	P	06 47 22.8	+0.1
	0.5nm,0.5s,baz=237,slow=8.3,SNR=5.1						
DLBC	Dease Lake	83.29	22	LR	LR	07 17 40.5	
	comp=Z,110nm,18.9s,baz=266,slow=30						
ILAR	Eielson Array	83.62	12	P	P	06 47 59.3	-0.7
	0.5nm,0.8s,baz=210,slow=4.9,SNR=4.5						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YKA	Yellowknife Ar	91.75	24	LR	LR	07 22 47.4	
	comp=Z,102nm,21.1s,baz=0.0,slow=31						
BRTR	Keskin Array B	145.00	318	PKPbc	PKPdf	06 55 10.1	+0.2
	1.2nm,0.9s,baz=48,slow=1.8,SNR=4.1						

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*FUNV **05** 06:39:35.2, 8.°25N×72.°09W, h1^{km}, MW3.9*
*RSNC **05** 06:39:35.4±1.1, 8.°49N×72.°18W, h0^{km}±7^{km}, ML3.1*
ISC 05 06:39:38.6±1.5**, 8.°31N**±0.°03×**72.°05W**±0.°02**, h32**^{km}±15^{km}**,**
n31, σ2.^{s}04/58**, Venezuela**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PAMC	Pamplona, Colo	1.16	214	eP	Pn	06 39 57.4	-1.7
PAMC				eS	Sb	06 40 16.2	+0.7
PAMC				i		06 40 19.2	
	comp=Z,238nm,0.3s						
SOCV	Socops	1.18	91	eP	Pn	06 39 57.4	-1.5
SOCV				eS	Sb	06 40 15.3	-0.2
OCAC	Ocana	1.26	267	eP	Pn	06 39 55.7	-4.6
OCAC				eS	Sn	06 40 13.2	-3.0
OCAC				i		06 40 19.5	
	comp=Z,393nm,0.5s						
SDV	Santo Domingo	1.51	68	eP	Pn	06 40 03.4	-0.2
SDV				eS	Sb	06 40 25.5	+0.5
SDV				i		06 40 29.6	
	comp=Z,423nm,0.3s						
SDV	Santo Domingo	1.51	68	eP	Pn	06 40 03.8	+0.1
SDV				eS	Sb	06 40 25.2	+0.1
MCQV	Machiques	1.79	344	eP	Pn	06 40 06.8	-0.7
MCQV				eS	Sb	06 40 31.1	-2.0
TAMC	Tame, Arauca	1.88	172	eP	Pn	06 40 10.3	+1.6
TAMC				eS	Sb	06 40 38.0	+2.5
TAMC				i		06 40 41.8	
	comp=Z,222nm,0.8s						
BRRC	Barranca, Sant	2.04	234	eP	Pn	06 40 10.1	-0.7
BRRC				eS	Sn	06 40 38.1	+3.0
BRRC				i		06 40 42.0	
	comp=Z,90nm,0.4s						
BARC	Barichara	2.04	213	eP	Pn	06 40 10.4	-0.7
BARC				eS	Sb	06 40 39.4	-1.0
BARC				i		06 40 46.0	
	comp=Z,149nm,0.3s						
SMLC	San Martn de	2.06	284	eP	Pn	06 40 07.8	-3.3
SMLC				eS	Sn	06 40 35.6	-0.1
TORV	Torococo	2.18	55	eP	Pn	06 40 12.5	-0.4
TORV				eS	Sn	06 40 38.8	-0.1
CVALL	Valledupar, Ce	2.49	331	eP	Pn	06 40 19.4	+2.3
CVALL				eS	Sn	06 40 47.6	+1.2
CVALL				i		06 40 55.8	
	comp=Z,119nm,0.5s						
RUSC	La Rusia	2.61	203	eP	Pn	06 40 21.7	+2.5
RUSC				eS	Sb	06 40 57.6	+0.6
RUSC				i		06 41 01.3	
	comp=Z,94nm,0.9s						
CURV	Curarigua	2.67	50	eP	Pn	06 40 20.0	+0.5
CURV				eS	Sn	06 40 52.6	+1.8
SANV	Sanarito	2.75	64	eP	Pn	06 40 20.8	+0.1
SANV				eS	Sn	06 40 53.7	+0.8
ELOV	Elorza	2.85	117	eP	Pn	06 40 21.6	-0.5
ELOV				eS	Sn	06 40 55.3	0.0
ZARC	Zaragoza, Cauc	2.90	254	eP	Pn	06 40 23.6	+0.9
ZARC				eS	Sb	06 41 01.5	-3.3
ZARC				i		06 41 08.2	
	comp=Z,103nm,0.3s						
DABV	Dabajuro	2.94	28	eP	Pn	06 40 23.0	-0.2
DABV				eS	Sn	06 40 58.8	+1.2
PTBC	PUERTO BERRIO,	2.97	234	eP	Pn	06 40 19.9	-3.7
PTBC				eS	Sb	06 41 04.4	-2.4
PTBC				i		06 41 09.1	
	comp=Z,42nm,0.5s						
SIQV	Siquisique	3.21	43	eP	Pn	06 40 26.8	-0.1
SIQV				eS	Sn	06 41 05.2	+1.1
SPBC	San Pablo de B	3.32	217	eP	Pn	06 40 29.8	+1.3
SPBC				eS	Sb	06 41 15.4	-1.5
SPBC				i		06 41 26.8	
	comp=Z,23nm,0.4s						
MOTC	Monteria, Cord	3.61	278	eP	Pn	06 40 30.9	-1.5
MOTC				eS	Sb	06 41 29.6	+4.4
MOTC				i		06 41 38.0	
	comp=Z,21nm,0.5s						
NORC	Norcasia	3.91	226	eP	Pn	06 40 39.7	+3.1
NORC				eS	Sn	06 41 27.9	+6.4
NORC				i		06 41 41.7	
	comp=Z,13nm,0.5s						
BAUV	El Baul	4.01	81	eP	Pn	06 40 37.7	-0.2
BAUV				eS	Sn	06 41 22.5	-1.4
HELC	Santa Helena	4.05	239	eP	Pn	06 40 39.5	+0.8
HELC				eS	Sb	06 41 38.4	+0.3
HELC				i		06 41 45.5	
	comp=Z,25nm,0.3s						
PTGC	Puerto Gaitan,	4.09	181	eP	Pn	06 40 39.2	+0.2
PTGC				eS	Sn	06 41 25.2	-0.5
RREF	El Recreo	4.71	224	eP	Pn	06 40 47.9	-0.3
TOLC	Tolima	4.93	222	eP	Pn	06 40 51.6	+0.8
TOLC				eS	Sn	06 41 42.2	-4.7
PAYV	Puerto Ayacuch	5.22	123	eP	Pn	06 40 52.7	-1.9
PAYV				eS	Sn	06 41 50.4	-3.4
PLMC	San Jos del P	5.40	231	eP	Pn	06 40 58.5	+1.4
ORTC	Ortega, Tolima	5.41	216	eP	Pn	06 40 58.7	+1.6

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*IDC **05** 06:43:48.3±2.3, 0.°55N×129.°32E, h0^{km}, mb3.1/3,*
mb1 3.4/3, mb1mx3.2/33, mbtmp3.2/3, Error ellipse:
s-maj=148.4km s-min=28.0km az=69.0
*DJA **05** 06:43:51.7±1.2, 0°N±4°×12°9E±°, h20^{km}±9^{km}, M3.5/6,*
MLv3.5/6
ISC 05 06:43:52.3±1.9**, 0.°6N**±0.°2×**129.°37E**±0.°08**, h35**^{km}**, n14,**
σ0.^{s}97/9**, Halmahera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TNTI	Ternate	2.01	276	P	Pn	06 44 23.7	-0.1
SWI	Sorong	2.36	127	P	Pn	06 44 28.5	-0.1
SWI				S	Sn	06 44 56.5	+0.2
MSAI	Masohi	3.90	186	P	Pn	06 44 50.5	+0.7
SANI	Sanana	4.26	233	P	Pn	06 44 54.1	-0.6
FAKI	Fak Fak	4.49	140	P	Pn	06 44 57.7	-0.3
FAKI				S	Sn	06 45 47.6	-1.5
WRA	Warramunga Arr	20.95	167	P	P	06 48 32.2	-0.2
	0.3nm,0.5s,baz=347,slow=12,SNR=2.8						
ASAR	Alice Springs	24.48	170	P	P	06 49 09.9	+1.5
	0.9nm,0.8s,baz=351,slow=10,SNR=6.9						
H11S3	WAKE ISLAND Hy	40.74	62	T	T	07 34 39.0	
	baz=249,slow=75,SNR=9.9						
H11S2	WAKE ISLAND Hy	40.75	62	T	T	07 34 39.3	
	baz=249,slow=75,SNR=12						
H11S1	WAKE ISLAND Hy	40.75	62	T	T	07 34 39.5	
	baz=249,slow=75,SNR=10						
H11N1	WAKE ISLAND Hy	41.37	60	T	T	07 35 30.8	
	baz=247,slow=75,SNR=17						
H11N2	WAKE ISLAND Hy	41.39	60	T	T	07 35 27.8	
	baz=247,slow=75,SNR=14						
H11N3	WAKE ISLAND Hy	41.39	60	T	T	07 35 28.2	
	baz=247,slow=75,SNR=19						
MKAR	Makanchi Array	61.65	325	P	P	06 54 07.8	+1.1
	0.3nm,0.5s,baz=113,slow=7.6,SNR=4.7						

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*RHSSO **05** 06:51:07.2±0.7, 41.°96N×20.°03E, h10^{km}±2^{km}, ML2.9/11*
*BEO **05** 06:51:09.6±0.3, 42.°05N×19.°93E, h6^{km}±3^{km}, ML2.5/11*
*TIR **05** 06:51:09.4, 42.°00N×20.°01E, h20^{km}±17^{km}, Md2.7, Ml2.8*
*PDG **05** 06:51:09.4±0.2, 42.°04N×19.°85E, h8^{km}±1^{km}, MD2.9/1,*
ML2.4/11, Error ellipse: s-maj=0.3km s-min=0.5km az=0.0
*SKO **05** 06:51:09.9, 41.°96N×19.°70E, h22^{km}*
ISC 05 06:51:09.1±0.8**, 41.°98N**±0.°02×**19.°86E**±0.°02**, h17**^{km}±5^{km}**,**
n59, σ1.^{s}08/103**, 11C-5D, Albania**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PUK	Puka	0.07	19	P	Pg	06 51 12.7	+0.1
	baz=297						
PUK				S	Sg	06 51 15.2	+0.3
	baz=297						
PUK				AMP			
	comp=N,26nm,0.1s,baz=297						
BCI	Bajram Curri	0.42	21	P	Pg	06 51 17.8	+0.1
	baz=6.0						
BCI				S	Sg	06 51 23.5	-0.1
	baz=6.0						
BCI				AMP			
	comp=N,5.1nm,0.4s,baz=6.0						
ULC	Ulcinj	0.46	269	i Pg	Pb	06 51 17.9	-0.9
ULC	Ulcinj	0.46	269	⇓iPg	Pb	06 51 17.9	-0.9
ULC				i Sg	Sb	06 51 25.4	+0.1
PHP	Peshkopia	0.52	124	P	Pg	06 51 18.9	-0.7
	baz=134						
PHP				S	Sb	06 51 27.2	+0.1
	baz=134						
PHP				AMP			
	comp=N,2.0nm,0.4s,baz=134						
PVY	Plav	0.62	7	⇑iPg	Pg	06 51 19.9	-1.6
PVY				i Sg	Sg	06 51 29.0	-0.8
TIR	Tirane	0.63	180	ePg	Pb	06 51 21.6	0.0
TIR				eSg	Sn	06 51 31.6	-1.2
TIR	Tirane	0.63	180	P	Pn	06 51 22.7	-0.5
	baz=190						
TIR				S	Sn	06 51 32.6	-0.3
	baz=190						
TIR	Tirane	0.63	180	i Pg	Pb	06 51 21.7	0.0
PDG	Podgorica	0.64	315	ePg	Pg	06 51 20.8	-1.0
PDG				eSg	Sb	06 51 31.0	+0.6
PDG	Podgorica	0.64	315	⇑iPg	Pg	06 51 20.5	-1.2
PDG				eSg	Sb	06 51 31.1	+0.6
PDG	Podgorica	0.64	315	i Pg	Pg	06 51 20.7	-1.1
PDG				i Sg	Sb	06 51 30.7	+0.3
TTG	Podgorica	0.64	315	⇑iPg	Pg	06 51 20.6	-1.2
TTG				i Sg	Sg	06 51 29.9	-0.4
BUM	Brajici-Budva	0.79	295	⇓iPg	Pg	06 51 23.5	-1.1
BUM				i Sg	Sb	06 51 35.5	+0.6
IVA	Berane	0.90	1	⇓iPg	Pg	06 51 24.8	-1.8
IVA				i Sg	Sg	06 51 38.0	-0.4
CEME	Cevo	0.90	309	⇑iPg	Pg	06 51 25.0	-1.7
CEME				i Sg	Sb	06 51 39.0	+0.9
KOME	Kolasin	0.91	344	⇑iPg	Pg	06 51 25.3	-1.6
KOME				i Sg	Sg	06 51 38.7	-0.2
NKME	Niksic	1.04	320	⇓iPg	Pg	06 51 27.1	-2.2
NKME				i Sg	Sb	06 51 43.4	+1.4
NKY	Niksic	1.05	323	⇑iPg	Pg	06 51 27.9	-1.7
NKY				i Sg	Sb	06 51 44.0	+1.4
OHR	Ohrid	1.11	141	i Pg	Pn	06 51 31.1	+1.1
OHR				i Sg	Sn	06 51 47.2	+2.3
HCY	Herceg Novi	1.12	295	⇑iPg	Pg	06 51 29.1	-1.7
HCY				eSg	Sn	06 51 46.5	+1.5
HCY	Herceg Novi	1.12	295	⇓iPg	Pg	06 51 29.4	-1.4
HCY				i Sg	Sn	06 51 46.8	+1.8
SKO	Skopje	1.18	90	i Pg	Pg	06 51 31.2	-0.7
SKO				i Sg	Sg	06 51 46.6	-0.7
GJIK	Gjilan	1.27	67	i Pg	Pn	06 51 32.4	+0.4
TREB	Trebinje	1.34	304	ePg	Pn	06 51 33.4	+0.4
TREB				eSg	Sn	06 51 53.1	+2.6
TREB	Trebinje	1.34	304	⇑iPg	Pn	06 51 33.5	+0.4
TREB				eSg	Sn	06 51 54.1	+3.6
PLE	Pljevlja	1.40	346	⇑iPg	Pn	06 51 34.1	+0.2
PLE				i Sg	Sg	06 51 55.0	+0.6
UPM	Unac-Piva	1.42	330	⇑iPg	Pn	06 51 34.2	-0.1
UPM				eSg	Sg	06 51 55.2	+0.3
UPM	Unac-Piva	1.42	330	⇑iPg	Pn	06 51 34.4	+0.1
UPM				i Sg	Sg	06 51 55.9	+1.0
DBRK	Dubrovnik	1.45	299	i Pn	Pn	06 51 34.5	0.0
DBRK				Sn	Sg	06 51 55.9	0.0
IVAS	Ivanjica	1.61	8	ePg	Pn	06 51 37.2	+0.3
IVAS				eSg	Sn	06 51 59.5	+2.2
FNA	Florina	1.65	136	i Pn	Pg	06 51 39.5	-1.4
RUDO	Rudo	1.68	348	ePn	Pn	06 51 37.9	+0.2
RUDO				eSg	Sb	06 52 02.0	+1.6
PRVS	Prvonek	1.73	71	ePn	Pn	06 51 38.9	+0.5
PRVS				eSn	Sn	06 52 00.8	+0.8
STIP	Stip	1.76	98	i Pn	Pg	06 51 41.8	-1.2
STON	Ston	1.83	300	ePn	Pn	06 51 40.7	+0.9
STON				eSg	Sg	06 52 08.6	+0.4
STON	Ston	1.83	300	i Pn	Pn	06 51 39.4	-0.3
STON	Ston	1.83	300	ePn	Pn	06 51 39.5	-0.3
STON				eSn	Sb	06 52 05.3	+0.5
BBLS	Lazići	1.92	350	ePg	Pb	06 51 43.2	-0.5
BBLS				eSg	Sb	06 52 07.7	+0.3
BBLS	Lazići	1.92	350	ePn	Pn	06 51 40.6	-0.5
BBLS				eSn	Sn	06 52 04.9	+0.1
GRUS	Gruza	2.01	18	ePn	Pn	06 51 42.2	-0.1
DIVS	Divibare	2.12	3	ePg	Pn	06 51 45.0	+1.1
DIVS				eSn	Sn	06 52 11.0	+1.1
DIVS	Divibare	2.12	3	ePn	Pn	06 51 43.4	-0.5
DIVS				eSn	Sn	06 52 08.9	-1.0
HAPS	Han Pijesak,Bl	2.21	343	ePn	Pn	06 51 45.7	+0.6
HAPS				eSn	Sn	06 52 14.2	+2.1
HAPS	Han Pijesak,Bl	2.21	343	ePn	Pn	06 51 44.7	-0.4
HAPS				eSn	Sn	06 52 13.0	+0.9
MAKA	Makarska	2.47	303	ePn	Pn	06 51 49.6	+1.0
RICI	Ricice	2.52	308	ePn	Pn	06 51 50.8	+1.6
TEKS	Tekeris	2.58	355	ePn	Pn	06 51 49.7	-0.4
TEKS				eSn	Sn	06 52 21.6	+0.5
HVAR	Hvar	2.79	297	ePn	Pn	06 51 53.5	+0.5
HVAR				Sn	Sn	06 52 26.4	+0.2
FRGS	Fruska Gora	3.18	359	ePn	Pn	06 51 57.9	-0.5
FRGS				eSn	Sn	06 52 35.7	-0.2
KIJV	Kijevo	3.25	310	i Pn	Pn	06 52 01.0	+1.7
BLY	Banja Luka	3.39	326	ePn	Pn	06 52 01.5	+0.3
BLY				eSn	Sn	06 52 42.5	+1.5
ZIRJ	Zirje	3.53	300	ePn	Pn	06 52 03.8	+0.7
MORI	Morici	3.59	303	ePn	Pn	06 52 05.2	+1.3
MOSL	Moslavina	4.28	329	ePn	Pn	06 52 14.7	+1.3
MORH	Mrgy, Hungar	4.33	349	ePn	Pn	06 52 13.5	-0.6
MORH				eSn	Sn	06 53 02.9	-1.2
NVLJ	Novalja	4.47	307	ePn	Pn	06 52 16.9	+0.9
CRES	Cresnjev	4.99	322	ePn	Pn	06 52 22.8	-0.5
CRES				eSn	Sn	06 53 19.7	-0.8
CEY	Cerknica	5.44	316	ePn	Pn	06 52 29.6	+0.2

IDC 05 06:52:39.1±2.8**, 6.°25S×154.°78E, h0**^{km}**, mb3.2**/3**,**
mb1 3.5/3**, mb1mx3.3**/35**, mbtmp3.2**/3**, Error ellipse:**
s-maj=191.1km s-min=31.8km az=131.0,
Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.07	234	P	P	06 57 57.0	+0.5
	0.4nm,0.7s,baz=58,slow=9.0,SNR=4.7						
ASAR	Alice Springs	26.51	227	P	P	06 58 17.8	-0.8
	0.1nm,0.4s,baz=57,slow=10,SNR=1.7						
H11S3	WAKE ISLAND Hy	27.25	25	T	T	07 26 57.3	
	baz=205						
H11S2	WAKE ISLAND Hy	27.26	25	T	T	07 26 45.2	
	baz=205						
H11S1	WAKE ISLAND Hy	27.27	25	T	T	07 26 50.1	
	baz=205						
ILAR	Eielson Array	82.77	22	P	P	07 05 05.0	+0.2
	0.2nm,0.8s,baz=254,slow=4.3,SNR=4.6						

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*FUNV **05** 06:52:51.3, 8.°33N×72.°02W, h2^{km}, MW3.4*
*RSNC **05** 06:52:53.2±2.1, 8.°32N×72.°15W, h34^{km}±15^{km}, ML2.9*
ISC 05 06:52:51.6±2.0**, 8.°32N**±0.°04×**72.°12W**±0.°03**, h25**^{km}±19^{km}**,**
n19, σ1.^{s}11/35**, Venezuela**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PAMC	Pamplona, Colo	1.13	210	eP	Pn	06 53 10.7	-1.6
PAMC				ePg	Pb	06 53 12.5	-0.3
PAMC				i		06 53 14.1	
	comp=Z,159nm,0.3s						
PAMC				eS	Sn	06 53 27.1	-0.1
OCAC	Ocana	1.19	266	eP	Pn	06 53 11.3	-1.4
OCAC				eS	Sn	06 53 27.4	-0.7
OCAC				i		06 53 33.2	
	comp=Z,253nm,0.3s						
SOCV	Socops	1.25	92	eP	Pn	06 53 12.6	-0.9
SOCV				eS	Sn	06 53 29.0	-0.5
SDV	Santo Domingo	1.57	69	eP	Pn	06 53 18.5	+0.5
SDV				eS	Sn	06 53 38.6	+0.9
SDV				i		06 53 42.3	
	comp=Z,285nm,0.3s						
SDV	Santo Domingo	1.57	69	eP	Pn	06 53 18.9	+0.9
SDV				eS	Sn	06 53 39.2	+1.5
TAMC	Tame, Arauca	1.91	170	eP	Pn	06 53 23.7	+1.2
TAMC				eS	Sn	06 53 45.6	-0.1
TAMC				i		06 53 54.6	
	comp=Z,96nm,0.7s						
SMLC	San Martn de	1.99	284	eP	Pn	06 53 23.5	-0.1
SMLC				eS	Sn	06 53 47.0	-0.6
BRRC	Barranca, Sant	1.99	233	eP	Pn	06 53 25.6	+2.0
BRRC				eS	Sn	06 53 47.0	-0.6
BRRC				i		06 53 52.5	
	comp=Z,66nm,0.3s						
BARC	Barichara	2.02	212	eP	Pn	06 53 25.9	+1.7
BARC				eS	Sn	06 53 47.9	-0.9
BARC				i		06 53 48.6	
	comp=Z,56nm,0.2s						
TORV	Torococo	2.24	57	eP	Pn	06 53 25.9	-1.3
TORV				eS	Sn	06 53 52.8	-1.3
CURV	Curarigua	2.71	52	eP	Pn	06 53 33.8	+0.1
CURV				eS	Sn	06 54 05.9	+0.2
SANV	Sanarito	2.81	65	eP	Pn	06 53 36.0	+1.0
SANV				eS	Sn	06 54 08.5	+0.4
ELOV	Elorza	2.93	117	eP	Pn	06 53 37.6	+1.1
ELOV				eS	Sn	06 54 09.8	-1.1
DABV	Dabajuro	2.97	29	eP	Pn	06 53 38.3	+1.2
DABV				eS	Sn	06 54 11.7	-0.2
SIQV	Siquisique	3.25	44	eP	Pn	06 53 41.2	+0.3
SPBC	San Pablo de B	3.29	216	eP	Pn	06 53 43.1	+1.6
MOTC	Monteria, Cord	3.53	278	eP	Pn	06 53 46.4	+1.5
MOTC				eS	Sn	06 54 06.3	-20
BAUV	El Baul	4.08	81	eP	Pn	06 53 53.0	+0.7
BAUV				eS	Sn	06 54 37.3	-2.1
PAYV	Puerto Ayacuch	5.29	123	eP	Pn	06 54 08.3	-0.7

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*IDC **05** 07:04:11.5±0.5, 8.°23N×72.°08W, h14^{km}±2^{km}, mb4.1/16,*
mb1 4.3/19, mb1mx4.1/45, mbtmp4.3/19, ML4.3/3, MS3.2/4,
Ms1 3.2/4, ms1mx2.8/38, Error ellipse: s-maj=14.2km
s-min=11.4km az=173.0
*NEIC **05** 07:04:12.8±2.3, 8.°34N±0.°07×72.°08W±0.°05, h10^{km}±1^{km},*
Error ellipse: s-maj=12.9km s-min=6.7km az=150.0
*FUNV **05** 07:04:12.8, 8.°31N×72.°11W, h1^{km}, MW4.3*
*CAR **05** 07:04:13±2.4, 8.°30N±0.°08×72.°15W±0.°06, h5^{km}±4^{km},*
Mwr4.3, mb4.4/12(NEIC), Error ellipse: s-maj=11.0km
s-min=7.7km az=159.0
*RSNC **05** 07:04:13.4±1.0, 8.°36N×72.°10W, h3^{km}, ML3.8, Mw4.0,*
Fault plane solution: NP1:ϕ_s51.00000°, δ80.00000°,
λ136.00000°.
*VAO **05** 07:04:17.4±0.6, 8.°11N×71.°71W, h10^{km}, mb4.3*
ISC 05 07:04:12.4±0.5**, 8.°36N**±0.°02×**72.°06W**±0.°02**, h14**^{km}±3^{km}**,**
n122, σ1.^{s}71/184**, mb4.3**/21**, 3C-4D, Venezuela**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SOCV	Socops	1.19	93	eP	Pb	07 04 35.3	+0.5
SOCV				eS	Sg	07 04 52.6	+1.7
PAMC	Pamplona, Colo	1.19	212	⇓eP	Pn	07 04 33.5	-1.7
PAMC				eS	Sb	07 04 50.0	-0.6
PAMC				i		07 04 55.3	
	comp=Z,2μm,0.6s						
OCAC	Ocana	1.25	265	⇓iP	Pn	07 04 34.1	-1.6
OCAC				eS	Sb	07 04 50.3	-1.8
OCAC				i		07 04 54.3	
	comp=Z,3μm,0.3s						
SDV	Santo Domingo	1.50	69	Pg	Pb	07 04 40.9	+0.6
	comp=Z,176nm,0.3s,baz=247,slow=13,SNR=496						
SDV				Lg	Lg	07 05 01.2	
	comp=Z,267nm,0.3s,baz=279,slow=9.2,SNR=3.2						
SDV	Santo Domingo	1.50	69		Pb	07 04 41.3	+1.0
SDV				Sn	Sg	07 05 01.8	+0.8
SDV	Santo Domingo	1.50	69	⇓eP	Pb	07 04 40.8	+0.6
SDV				eS	Sg	07 05 01.3	+0.3
SDV				i		07 05 04.6	
	comp=Z,2μm,0.2s						
SDV	Santo Domingo	1.50	69	eP	Pb	07 04 41.4	+1.0
SDV	Santo Domingo	1.50	69	eP	Pb	07 04 41.3	+1.0
SDV				eS	Sg	07 05 01.9	+0.9
MCQV	Machiques	1.75	344	eP	Pb	07 04 43.6	-0.7
MCQV				eS	Sb	07 05 07.0	+0.9
TAMC	Tame, Arauca	1.93	172	eP	Pn	07 04 46.1	+1.3
TAMC				eS	Sb	07 05 11.1	-0.2
TAMC				i		07 05 16.8	
	comp=Z,1μm,0.3s						
SMLC	San Martn de	2.04	283	⇑eP	Pn	07 04 46.3	-0.1
SMLC				eS	Sb	07 05 13.4	-1.1
BRRC	Barranca, Sant	2.06	233	⇑iP	Pn	07 04 48.0	+1.4
BRRC				eS	Sn	07 05 13.1	+1.0
BRRC				i		07 05 20.4	
	comp=Z,805nm,0.5s						
BARC	Barichara	2.08	213	⇓eP	Pn	07 04 48.6	+1.5
BARC				i		07 05 20.2	
	comp=Z,821nm,0.4s						
CVALL	Valledupar, Ce	2.44	331	eP	Pn	07 04 52.9	+0.9
CVALL				eS	Sn	07 05 22.9	+1.2
CVALL				i		07 05 29.4	
	comp=Z,852nm,0.2s						
ARGC	Ariguani, Magd	2.63	305	eP	Pn	07 04 55.3	+0.8
ARGC				eS	Sn	07 05 27.3	+1.1
ARGC				i		07 05 39.9	
	comp=Z,297nm,0.2s						
CURV	Curarigua	2.65	51	eP	Pn	07 04 56.4	+1.6
CURV				eS	Sb	07 05 29.7	-2.3
RUSC	La Rusia	2.65	203	eP	Pn	07 04 56.8	+1.6
RUSC				eS	Sn	07 05 29.7	+2.3
RUSC				i		07 05 38.5	
	comp=Z,295nm,0.5s						
SANV	Sanarito	2.74	65	eP	Pn	07 04 58.7	+2.6
SANV				eS	Sn	07 05 31.8	+2.7
ELOV	Elorza	2.88	118	eP	Pn	07 04 59.6	+1.6
ELOV				eS	Sn	07 05 33.2	+0.7
DABV	Dabajuro	2.91	29	eP	Pn	07 05 00.5	+2.2
DABV				eS	Sn	07 05 35.0	+1.9
PTBC	PUERTO BERRIO,	2.99	233	⇑eP	Pn	07 04 59.1	-0.3
PTBC				eS	Sn	07 05 36.4	+1.4
PTBC				i		07 05 45.0	
	comp=Z,400nm,0.6s						
SIQV	Siquisique	3.18	44	eP	Pn	07 05 04.2	+2.1
SIQV				eS	Sn	07 05 42.5	+2.6
URIC	Uribia, Colomb	3.33	1	eP	Pn	07 05 03.5	-0.5
URIC				eS	Sb	07 05 49.9	-1.7
URIC				i		07 06 05.7	
	comp=Z,198nm,0.3s						
SPBC	San Pablo de B	3.35	217	eP	Pn	07 05 05.3	+0.8
SPBC				eS	Sn	07 05 45.1	+1.0
SPBC				i		07 06 06.1	
	comp=Z,244nm,0.4s						
UREC	San Jos de Ur	3.49	260	eP	Pn	07 05 06.7	+0.3
UREC				eS	Sn	07 05 48.9	+1.3
UREC				i		07 06 02.8	
	comp=Z,245nm,0.3s						
SMRC	Santa Marta, M	3.51	323	eP	Pn	07 05 05.9	-0.7
SMRC				eS	Sn	07 05 45.4	-2.7
SMRC				i		07 06 03.9	
	comp=Z,344nm,0.6s						
MOTC	Monteria, Cord	3.59	277	eP	Pn	07 05 08.9	+1.2
MOTC				eS	Sn	07 05 53.6	+3.6
MOTC				i		07 06 14.1	
	comp=Z,123nm,0.5s						
MAPV	Macapo	3.85	67	eP	Pn	07 05 13.5	+2.3
NORC	Norcasia	3.94	225	eP	Pn	07 05 13.0	+0.5
NORC				eS	Sn	07 05 59.9	+1.4
NORC				i		07 06 15.7	
	comp=Z,124nm,0.6s						
BAUV	El Baul	4.01	81	eP	Pn	07 05 14.9	+1.4
BAUV				eS	Sn	07 06 01.5	+1.1
CHIC	Chingaza	4.06	204	eP	Pn	07 05 16.1	+1.5
CHIC				eS	Sn	07 06 04.4	+2.4
CHIC				i		07 06 32.8	
	comp=Z,111nm,0.8s						
HELC	Santa Helena	4.06	238	eP	Pn	07 05 15.5	+1.0
HELC				eS	Sn	07 06 03.9	+1.8
HELC				i		07 06 18.5	
	comp=Z,153nm,0.5s						
MONV	Montecano	4.12	30	eP	Pn	07 05 16.0	+0.9
MONV				eS	Sn	07 06 03.5	+0.3
PTGC	Puerto Gaitan,	4.13	181	e	Pn	07 05 14.7	-0.4
PTGC				eP	Pn	07 05 14.7	-0.4
PTGC				eS	Sn	07 06 01.8	-1.5
PTGC				i		07 06 08.7	
	comp=Z,218nm,0.3s						
ROSC	El Rosal	4.15	213	Pn	Pn	07 05 18.7	+2.9
	comp=Z,7.7nm,0.3s,baz=63,slow=11,SNR=9.5						
ROSC				Lg	Lg	07 06 23.1	
	comp=Z,26nm,0.3s,baz=296,slow=23,SNR=4.3						
ROSC	El Rosal	4.15	213		Pn	07 05 17.3	+1.5
ROSC	El Rosal	4.15	213	eP	Pn	07 05 18.9	+3.1
ROSC				eS	Sn	07 06 09.7	+5.3
ROSC				i		07 06 27.6	
	comp=Z,72nm,0.3s						
JACV	Jacura	4.18	49	eP	Pn	07 05 18.1	+2.2
DBBC	Dabeiba	4.33	252	eP	Pn	07 05 18.7	+0.8
DBBC				eS	Sb	07 06 21.6	+1.1
GUY2C	Guyana, Caldas	4.52	227	eP	Pn	07 05 22.1	+1.1
GUY2C				eS	Sn	07 06 16.5	+2.8

GUY2C				i		07 06 41.1	
	comp=Z,96nm,0.7s						
CBOC	Ciudad Bolivar	4.64	238	eP	Pn	07 05 24.2	+1.9
CBOC				eS	Sn	07 06 17.1	+1.1
CBOC				i		07 06 44.5	
	comp=Z,80nm,0.6s						
TURV	Turiamo	4.65	63	eP	Pn	07 05 24.0	+1.7
TURV				eS	Sn	07 06 16.1	-0.1
RREF	El Recreo	4.74	224	eP	Pn	07 05 24.9	+0.8
TOLC	Tolima	4.95	221	eP	Pn	07 05 28.4	+1.6
TOLC				eS	Sn	07 06 25.7	+1.6
TOLC				i		07 06 53.7	
	comp=Z,137nm,0.6s						
ANIL	Santa Ana	5.08	221	eP	Pn	07 05 30.4	+2.0
PAYV	Puerto Ayacuch	5.25	123	eP	Pn	07 05 30.9	+0.3
PAYV				eS	Sn	07 06 28.8	-2.2
TACV	Tcata	5.27	70	eP	Pn	07 05 32.4	+1.5
TACV				eS	Sn	07 06 30.4	-1.1
PLMC	San Jos del P	5.42	231	eP	Pn	07 05 34.4	+1.4
PLMC				i		07 07 07.5	
	comp=Z,39nm,0.6s						
ORTC	Ortega, Tolima	5.44	216	eP	Pn	07 05 34.3	+1.2
ORTC				eS	Sn	07 06 37.6	+2.0
ORTC				i		07 07 14.8	
	comp=Z,69nm,0.6s						
CARV	Caracas	5.49	67	eP	Pn	07 05 34.8	+0.8
CARV				eS	Sn	07 06 36.4	-0.7
FUNV	FUNVISIS	5.59	68	eP	Pn	07 05 36.5	+1.2
FUNV				eS	Sn	07 06 37.1	-2.2
SOLC	Bahia Solano	5.71	249	eP	Pn	07 05 38.1	+1.2
SOLC				eS	Sn	07 06 42.2	-0.1
SOLC				i		07 07 31.4	
	comp=Z,21nm,0.6s						
MERV	Las Mercedes	5.76	81	eP	Pn	07 05 38.6	+1.0
MERV				eS	Sn	07 06 42.4	-1.2
GUVC	San Jose del G	5.80	186	eP	Pn	07 05 36.8	-1.3
GUVC				eS	Sn	07 06 38.9	-5.6
GUVC				i		07 06 44.9	
	comp=Z,101nm,0.2s						
PTAC	Punta Ardita,	5.82	258	eP	Pn	07 05 39.0	+0.6
PTAC				eS	Sn	07 06 45.9	+0.8
PTAC				i		07 06 49.8	
	comp=Z,105nm,0.3s						
YOTC	Yotoco, Valle	6.08	225	eP	Pn	07 05 42.5	+0.3
YOTC				eS	Sn	07 06 49.1	-2.6
YOTC				i		07 07 10.2	
	comp=Z,13nm,0.8s						
BIRV	Birongo	6.09	69	eP	Pn	07 05 43.8	+1.7
BIRV				eS	Sn	07 06 49.1	-2.5
MACC	Macarena, Meta	6.42	196	eP	Pn	07 05 45.6	-1.0
MACC				eS	Sn	07 06 56.1	-3.8
MACC				i		07 07 54.6	
	comp=Z,46nm,0.7s						
BETC	Betania	6.57	211	eP	Pn	07 05 48.5	-0.2
GARC	Garzon, Huila	7.02	209	eP	Pn	07 05 55.1	0.0
PCON	Cinco Dias	7.38	216	eP	Pn	07 06 01.0	+0.7
PCRV	Puerto La Cruz	7.54	76	Pn	Pn	07 06 02.9	+0.8
	comp=Z,3.3nm,0.3s,baz=319,slow=3.3,SNR=28						
PCRV				Sn	Sn	07 07 28.9	+1.3
	comp=Z,14nm,0.3s,baz=287,slow=22,SNR=14						
BCIP	Isla Barro Col	7.73	277	Pn	Pn	07 06 05.6	+1.0
BBAC	Balboa, Cauca	8.14	220	eP	Pn	07 06 11.4	+0.9
BBAC				eS	Sn	07 07 42.7	+0.2
LGNH	Logne	10.11	357	Pn	Pn	07 06 38.1	+0.9
OTAV	Otavalo	10.28	219	eP	Pn	07 06 45.5	+5.5
SDDR	Presa de Saban	10.59	4		Pn	07 06 46.2	+2.3
MLPR	Magueyes Islan	10.73	27	Pn	Pn	07 06 47.4	+1.6
SJG	San Juan	11.27	30	Pn	Pn	07 06 54.9	+1.7
	comp=Z,2.9nm,0.3s,baz=212,slow=13,SNR=1.9						
SJG				LR	LR	07 11 41.9	
	comp=Z,99nm,20.2s,baz=246,slow=40						
CBYP	Canovanas	11.55	31	Pn	Pn	07 06 57.3	+0.2
CDVI	St. Croix	11.73	37		Pn	07 06 58.6	-0.9
PTGA	Pitinga	15.06	126	Pn	Pn	07 07 41.9	-3.0
	comp=Z,1.5nm,0.3s,baz=303,slow=16,SNR=8.9						
PTGA				Sn	Sn	07 10 22.6	-9.0
	comp=Z,0.4nm,0.3s,baz=329,slow=22,SNR=3.7						
PTGA				Lg	Lg	07 11 60.0	
	comp=Z,1.7nm,0.3s,baz=17,slow=20,SNR=2.1						
PTGA				LR	LR	07 13 17.3	
	comp=Z,56nm,21.8s,baz=280,slow=36						
PTGA	Pitinga	15.06	126		Pn	07 07 44.1	-0.9
PTGA				IAmb	IAmb	07 07 46.1	
	comp=Z,8.4nm,0.8s						
CZSB	Cruzeiro do Su	15.99	182	eP	P	07 07 59.8	-0.8
MACA	Manacapuru-AM	16.11	135	eP	Pn	07 08 00.0	+1.3
ETMB	Extrema	18.97	162	eP	Pn	07 08 34.4	+0.2
SAML	Samuel	19.33	153	P	Pn	07 08 39.3	+0.7
MALB	Monte Alegre	20.43	119	eP	Pn	07 08 52.1	+0.4
ITTB	Itaituba	20.61	127	eP	P	07 08 52.9	+1.4
ITTB				eS	S	07 12 39.7	-2.0
NPGB	Novo Progresso	22.61	132	eP	P	07 09 14.3	+1.3
CMIG	Matias Romero	23.88	294	P	P	07 09 26.9	+1.1
	comp=Z,2.5nm,0.3s,baz=107,slow=13,SNR=4.1						
VILB	Vilhena	24.23	151	eP	P	07 09 30.1	+1.0
TMAB	Tom-Au,PA,Br	26.16	113	eP	P	07 09 47.0	+0.3
PRPB	Parauapebas	26.46	122	eP	P	07 09 53.1	+3.7
PRPB				eS	S	07 14 23.7	+0.6
SIV	San Ignacio	26.52	156	P	P	07 09 49.0	-0.8
	comp=Z,2.6nm,0.8s,baz=347,slow=8.7,SNR=20						
SIV				Lg	Lg	07 18 00.4	
	comp=Z,2.8nm,1.0s,baz=255,slow=22,SNR=3.4						
SIV				LR	LR	07 21 53.3	
	comp=Z,55nm,21.6s,baz=242,slow=40						
SMTB	Santa Maria do	29.78	124	eP	P	07 10 20.2	+1.2
SMTB				eS	S	07 15 15.4	+0.1
ROSB	Rosrio	30.02	111	eP	P	07 10 22.6	+1.5
LVC	Limon Verde	30.93	174	eP	P	07 10 33.0	+3.6
PEXB	Peixe	31.16	130	eP	P	07 10 31.7	+0.5
AQDB	Aquidauana	32.86	151	eP	P	07 10 49.0	+2.9
SDBA	SAO DESIDERIO	33.97	127	eP	P	07 10 57.5	+1.6
IPMB	Ipameri, GO	35.20	138	eP	P	07 11 07.7	+1.1
SADO	Sadowa	36.80	352	P	P	07 11 20.2	+0.5
	comp=Z,4.0nm,0.6s,baz=243,slow=12,SNR=3.8						
PTGB	Pitanga	38.22	150	eP	P	07 11 34.9	+2.7
EYMN	Ely	42.76	341	P	P	07 12 09.2	-0.1
EYMN				IAmb	IAmb	07 12 15.6	
	comp=Z,9.7nm,0.8s						
ULM	Lac du Bonnet	46.22	339	P	P	07 12 35.8	-1.2
	comp=Z,4.0nm,0.6s,baz=124,slow=8.0,SNR=6.3						
CTU	Camp Tracy	47.72	319	P	P	07 12 48.5	-0.7
PSUT	Pine Spring	48.08	315	P	P	07 12 52.7	+0.7
PLCA	Paso Flores	48.86	178	P	P	07 12 55.9	-1.8
	comp=Z,0.9nm,0.7s,baz=10,slow=5.1,SNR=4.5						
MCMT	McKenzie Canyo	50.62	323	P	P	07 13 12.5	+1.2
NVAR	Mina Array Bea	51.18	313	P	P	07 13 15.7	0.0
	comp=Z,0.8nm,0.6s,baz=118,slow=7.9,SNR=5.7						
NVAR				PcP	PcP	07 14 30.7	-0.3
	comp=Z,0.4nm,0.4s,baz=137,slow=3.2,SNR=2.6						
MFID	Camas Ranch	51.72	320	P	P	07 13 19.9	+0.4
MFID				IAmb	IAmb	07 13 20.8	
	comp=Z,4.1nm,1.1s						
JTMT	Jette	53.05	325	P	P	07 13 30.7	+1.3
JTMT				IAmb	IAmb	07 13 30.7	
	comp=Z,4.8nm,0.8s						
NEW	Newport	54.94	325	P	P	07 13 42.2	-0.8
	comp=Z,0.7nm,0.3s,baz=90,slow=11,SNR=3.0						
C09A	Chrisman Ranch	55.37	324	P	P	07 13 46.4	+0.3
YBH	Yreka Blue Hor	55.58	315	P	P	07 13 46.6	-1.2
	comp=Z,2.6nm,1.1s,baz=101,slow=19,SNR=1.9						
YKA	Yellowknife Ar	62.20	339	P	P	07 14 32.7	-0.6
	comp=Z,4.3nm,0.8s,baz=127,slow=7.7,SNR=48						
YKA				pP	pP	07 14 37.2	-0.8
	comp=Z,3.3nm,0.6s,baz=123,slow=7.7,SNR=18						
DLBC	Dease Lake	66.50	331	P	P	07 15 02.3	+0.7
	comp=Z,1.7nm,0.6s,baz=160,slow=5.5,SNR=3.2						
INK	Inuvik	71.96	340	P	P	07 15 34.3	-0.9
	comp=Z,1.7nm,0.7s,baz=87,slow=5.9,SNR=9.7						
INK				pP	pP	07 15 39.9	-0.1
	comp=Z,1.8nm,0.6s,baz=97,slow=8.8,SNR=6.4						
TORD	Torodi Ar. Bea	72.40	79	P	P	07 15 37.3	-1.6
	comp=Z,1.4nm,0.9s,baz=280,slow=4.4,SNR=3.1						
TORD				pP	pP	07 15 42.1	-1.4
	comp=Z,1.1nm,0.7s,baz=277,slow=5.5,SNR=5.4						
BCAR	Beaver Creek A	73.46	334	P	P	07 15 45.3	+1.0
RIDG	Independent Ri	74.96	334	P	P	07 15 54.1	+1.1
RIDG				IAmb	IAmb	07 15 54.8	
	comp=Z,6.7nm,1.0s						
ILAR	Eielson Array	76.03	335	P	P	07 15 58.6	-0.5
	comp=Z,1.1nm,0.7s,baz=118,slow=5.0,SNR=9.5						
ILAR				pP	pP	07 16 03.4	-0.5
	comp=Z,1.0nm,0.5s,baz=108,slow=4.2,SNR=11						
RND	Reindeer	76.67	333	P	P	07 16 03.7	+0.9
NB2	NORSAR Subarra	79.48	29	P	P	07 16 18.9	+0.4
	comp=Z,3.0nm,0.8s,baz=269,slow=5.6						
NOA	NORSAR Array B	79.48	29	P	P	07 16 19.1	+0.7
	comp=Z,2.2nm,0.8s,baz=267,slow=5.6,SNR=7.2						
NOA				pP	pP	07 16 24.0	+0.8
	comp=Z,0.8nm,0.9s,baz=270,slow=5.4,SNR=5.1						
GERES	GERESS Array B	80.98	42	pP	pP	07 16 30.7	-0.9
	comp=Z,0.8nm,0.6s,baz=286,slow=9.6,SNR=2.8						
ARCES	ARCESS Array B	84.88	20	P	P	07 16 46.6	+0.1
	comp=Z,4.2nm,1.1s,baz=281,slow=5.4,SNR=1.3						
ARCES				pP	pP	07 16 51.2	-0.1
	comp=Z,4.3nm,1.1s,baz=264,slow=6.1,SNR=1.3						
FINES	FINESS Array B	86.60	28	P	P	07 16 54.9	-0.3
	comp=Z,1.8nm,0.7s,baz=349,slow=3.9,SNR=4.3						
FINES				pP	pP	07 17 00.0	0.0
	comp=Z,1.1nm,0.6s,baz=280,slow=5.2,SNR=2.1						
AKASG	Malin Array Be	90.67	39	LR	LR	07 55 51.7	
	comp=Z,21nm,20.6s,baz=285,slow=34						
ASAR	Alice Springs	150.85	235	PKP	PKPdf	07 23 58.9	-1.0
	comp=Z,1.2nm,1.0s,baz=92,slow=2.9,SNR=7.3						
ASAR				PKPbc	pPKPdf	07 24 03.5	-1.3
	comp=Z,0.6nm,0.5s,baz=131,slow=3.2,SNR=12						
ASAR				pPKPbc	sPKPdf	07 24 08.3	+1.8
	comp=Z,0.6nm,0.5s,baz=120,slow=3.2,SNR=5.0						
WRA	Warramunga Arr	151.98	243	PKPbc	PKPbc	07 24 06.4	-1.8
	comp=Z,2.5nm,0.6s,baz=110,slow=2.4,SNR=31						
WRA				pPKPbc	pPKPbc	07 24 11.4	-1.7
	comp=Z,2.1nm,0.6s,baz=108,slow=2.8,SNR=9.0						

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*TUL **05** 07:06:46.9±1.7, 36°.53N±0°.01×98°.22W±0°.03, $h5^{km}\pm7^{km}$, ML3.9, mb_Lg3.8/137(NEIC), Mwr3.4/25(NEIC), Error ellipse: s-maj=3.8km s-min=2.0km az=88.0*

*NEIC **05** 07:06:47.7, 36°.52N×98°.18W, $h3^{km}$, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-0.66; $M_{\theta\theta}$1.78; $M_{\phi\phi}$-1.12; $M_{r\theta}$-0.05; $M_{\theta\phi}$-0.43; $M_{\phi r}$-0.59; Fault plane solution: $M_0$1.72000×10^{14} NP1:ϕ_s318.16000°, δ67.88000°, λ-25.32000°. NP2:ϕ_s58.26000°, δ66.66000°, λ-155.79000°. Principal axes: T 1.8399, Plg1.0000°, Azm8.0000°; N -0.2775, Plg57.0000°, Azm100.0000°; P -1.5624, Plg33.0000°, Azm278.0000°;*

*NEIC **05** 07:06:47.0±1.3, 36°.52N±0°.01×98°.18W±0°.02, $h1^{km}\pm9^{km}$ Error ellipse: s-maj=2.2km s-min=1.5km az=140.0*

*IDC **05** 07:06:47.1±1.0, 36°.68N×98°.30W, $h0^{km}$, mb3.3/2, mb1 3.8/7, mb1mx3.5/60, mbtmp3.5/7, ML3.9/4, Error ellipse: s-maj=14.3km s-min=12.1km az=127.0*

*ANF **05** 07:06:50.6±0.9, 36°.56N×98°.18W, $h35^{km}\pm9^{km}$, ML4.6/16, Error ellipse: s-maj=2.4km s-min=2.1km az=179.0*

ISC 05 07:06:47.5±1.1, **36°.54N**±0°.02×**98°.16W**±0°.03, **h10**$^{km}\pm8^{km}$, **n150**, $\sigma1\overset{s}{.}$**04**/139, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	Grant County #	0.39	38		Pg	07 06 55.5	+0.3
GC02				Sg	Sb	07 07 01.6	-1.0
KAN14	Manchester OK	0.44	21		Pg	07 06 56.3	+0.1
KAN10	Anthony SW Sta	0.58	5		Pg	07 06 58.6	-0.2
KAN01	Argonia South	0.69	28		Pg	07 07 00.7	-0.1
KAN08	Anthony NE Sta	0.70	12		Pg	07 07 00.8	-0.2
U32A	Winter Ranch,	0.70	257	Pg	Pg	07 06 59.5	-1.5
U32A				Sg	Sg	07 07 08.8	-1.4
U32A	Winter Ranch,	0.70	257	P		07 06 59.6	
	baz=76						
U32A				S		07 07 08.9	
	baz=76						
KAN13	South Haven SW	0.72	49	Pg	Pg	07 07 01.4	0.0
KAN13				Sg	Sb	07 07 11.9	-0.1
KAN12	Harper NE Stat	0.76	10		Pg	07 07 02.0	-0.3
BCOK	Bluff Creek, N	0.99	153	Pg	Pg	07 07 05.6	-1.0
BCOK				Sg	Sg	07 07 19.4	0.0
OK025	Westminster Rd	1.17	145	Pg	Pg	07 07 09.0	-1.0
OK025				Sg	Sg	07 07 25.3	+0.2
OK031	S. Brethren Rd	1.22	119	Pg	Pg	07 07 10.3	-0.6
OK031				Sg	Sg	07 07 27.1	+0.3
QUOK	Quay	1.23	107	Pg	Pg	07 07 10.5	-0.5
QUOK				Sg	Sb	07 07 27.8	+1.1
OK030	Cody Creek RV	1.27	119	Pn	Pn	07 07 11.3	0.0
OKCSW	OKLAHOMA CITY	1.28	153		Pn	07 07 10.9	-0.6
T35A	Sooner Cattle	1.37	74	Pn	Pg	07 07 13.7	-0.1
T35B	Sooner Cattle	1.37	74	P		07 07 13.3	
	baz=255,SNR=97						
T35B				S		07 07 31.9	
	baz=255						
FNO	Franklin	1.42	154	Pn	Pn	07 07 13.6	+0.2
WMOK	Wichita Mounta	1.87	196	P	Pn	07 07 19.9	+0.3
	baz=14						
WMOK				S	Sn	07 07 44.3	+0.9
	baz=14						
WMOK	Wichita Mounta	1.87	196		Pn	07 07 20.0	+0.3
WMOK				IAmb_Lg		07 07 50.4	
	comp=Z,354nm,0.9s						
WMOK	Wichita Mounta	1.87	196	P		07 07 19.9	
	baz=14,SNR=57						
WMOK				S		07 07 44.8	
	baz=14						
R32A	Long Quarter,	1.93	347		Pb	07 07 22.0	-0.8
R32A	Long Quarter,	1.93	347	P		07 07 22.0	
	baz=168,SNR=26						
R32A				S		07 07 47.6	
	baz=168						
TUL1	Leonard	2.01	108	P	Pn	07 07 22.8	+1.2
	baz=288,SNR=28						
TUL1	Leonard	2.01	108	Pn	Pb	07 07 23.4	-0.8
TUL1				IAmb_Lg		07 07 54.7	
	comp=Z,368nm,0.8s						
TUL1	Leonard	2.01	108	S		07 07 49.5	
	baz=288						
CBKS	Cedar Bluff	2.59	332	P	Pn	07 07 30.3	+0.8
	baz=152,SNR=51						
CBKS				S	Sn	07 08 02.3	+1.2
	baz=152						
CBKS	Cedar Bluff	2.59	332	Pn	Pn	07 07 30.7	+1.1
CBKS				IAmb_Lg		07 08 14.6	
	comp=Z,198nm,0.8s						
CBKS	Cedar Bluff	2.59	332	P		07 07 30.3	
	baz=152,SNR=33						
CBKS				S		07 08 02.6	
	baz=152						
KSU1	Kansas State U	2.83	25	P	Pn	07 07 33.8	+1.0
	baz=207,SNR=129						
KSU1	Kansas State U	2.83	25	Pn	Pn	07 07 34.2	+1.4
KSU1				IAmb_Lg		07 08 24.0	
	comp=Z,213nm,0.7s						
KSU1	Kansas State U	2.83	25	P		07 07 33.9	
	baz=207,SNR=14						
X37A	Clayton	2.99	130	IAmb_Lg		07 08 28.9	
	comp=Z,252nm,0.9s						
U38A	Gravette	3.04	91		Pn	07 07 36.2	+0.5
U38A	Gravette	3.04	91	P		07 07 37.4	
	baz=273,SNR=9.2						
Z35A	Perchaven, San	3.29	167		Pn	07 07 40.0	+0.8
Z35A	Perchaven, San	3.29	167	P		07 07 39.8	
	baz=346,SNR=37						
Z35A				S		07 08 20.3	
	baz=346						
AMTX	Amarillo	3.31	241	P	Pn	07 07 40.1	+0.6
	baz=59						
AMTX	Amarillo	3.31	241	Pn	Pn	07 07 40.8	+1.3
AMTX				IAmb_Lg		07 08 36.3	
	comp=Z,304nm,0.8s						
AMTX	Amarillo	3.31	241	P		07 07 40.6	
	baz=59,SNR=26						
HHAR	Hobbs	3.41	93		Pn	07 07 42.7	+1.9
W39A	Magazine	3.80	109	P	Pn	07 07 47.1	+1.0
	baz=292						
W39A				S	Sn	07 08 32.2	+1.4
	baz=292						
W39A	Magazine	3.80	109		Pn	07 07 48.9	+2.9
W39A				IAmb_Lg		07 08 54.3	
	comp=Z,206nm,0.9s						
S39A	Bolivar	4.03	72		Pn	07 07 51.1	+1.8
S39A				IAmb_Lg		07 08 58.7	
	comp=Z,194nm,0.8s						
S39A	Bolivar	4.03	72	P		07 07 50.0	
	baz=255						
ABTX	Abilene, Hawle	4.10	198	P	Pn	07 07 50.4	+0.2
	baz=16						
ABTX				S	Sn	07 08 37.7	-0.6
	baz=16						
ABTX	Abilene, Hawle	4.10	198	Pn	Pn	07 07 51.7	+1.4
ABTX				IAmb_Lg		07 08 57.1	
	comp=Z,144nm,0.9s						
Z38A	Mt. Pleasant	4.19	141		Pn	07 07 51.6	+0.2
Z38A				IAmb_Lg		07 09 05.3	
	comp=Z,266nm,0.7s						
Z38A	Mt. Pleasant	4.19	141	P		07 07 52.0	
	baz=322						
N33B	J Bar K, Exete	4.22	7	P		07 07 51.8	
	baz=188,SNR=9.9						
N33A	J Bar K, Exete	4.22	7	Pn	Pn	07 07 52.1	+0.2
MIAR	Mount Ida	4.23	117	P	Pn	07 07 53.6	+1.5
	baz=299						
MIAR				S	Sn	07 08 42.6	+1.0
	baz=299						
MIAR	Mount Ida	4.23	117	Pn	Pn	07 07 54.5	+2.5
MIAR				IAmb_Lg		07 09 12.0	
	comp=Z,138nm,0.8s						
MIAR	Mount Ida	4.23	117	P		07 07 53.7	
	baz=299,SNR=14						
U40A	Yellville	4.28	91	P	Pn	07 07 54.1	+1.4
	baz=274,SNR=33						
U40A				S	Sn	07 08 42.4	-0.3
	baz=274						
U40A	Yellville	4.28	91		Pn	07 07 54.4	+1.6
U40A				IAmb_Lg		07 09 04.6	
	comp=Z,203nm,0.8s						
KSCO	Kaye Shedlock’	4.31	306	S	Sn	07 08 43.8	+0.1
	baz=124						
KSCO	Kaye Shedlock’	4.31	306	Pn	Pn	07 07 53.9	+0.6
KSCO				IAmb_Lg		07 09 07.2	
	comp=Z,190nm,0.8s						
MSTX	Muleshoe	4.57	237	P	Pn	07 07 57.0	+0.2
	baz=54,SNR=16						
MSTX	Muleshoe	4.57	237		Pn	07 07 57.4	+0.6
MSTX				IAmb_Lg		07 09 19.2	
	comp=Z,116nm,0.7s						
MSTX	Muleshoe	4.57	237	P		07 07 57.0	
	baz=54						
WHTX	Lake Whitney,	4.58	173	P	Pn	07 07 56.9	+0.1
	baz=352						
WHTX				S	Sn	07 08 49.4	-0.7
	baz=352						
WHTX	Lake Whitney,	4.58	173		Pn	07 07 56.9	+0.1
WHTX	Lake Whitney,	4.58	173	P		07 07 56.9	
	baz=352,SNR=23						
N35A	Tabor	4.74	24		Pn	07 07 60.0	+1.0
MGMO	Mountain Grove	4.76	81		Pn	07 08 02.0	+2.6
MGMO				IAmb_Lg		07 09 28.2	
	comp=Z,187nm,0.8s						
P38A	Dawn	4.77	48		Pn	07 08 00.6	+1.1
P38A				IAmb_Lg		07 09 23.0	
	comp=Z,188nm,0.7s						
P38A	Dawn	4.77	48	P		07 08 00.7	
	baz=232,SNR=19						
X40A	Basin Creek Fa	4.80	114	P	Pn	07 08 01.4	+1.5
	baz=297						
X40A	Basin Creek Fa	4.80	114	IAmb_Lg		07 09 25.7	
	comp=Z,126nm,0.7s						
BGNE	Belgrade	4.86	0	P	Pn	07 08 01.3	+0.6
	baz=181,SNR=8.2						
BGNE				S	Sn	07 08 56.3	-0.7
	baz=181						
BGNE	Belgrade	4.86	0	Pn	Pn	07 08 01.4	+0.7
BGNE				IAmb_Lg		07 09 26.6	
	comp=Z,263nm,0.8s						
BGNE	Belgrade	4.86	0	P		07 08 01.2	
	baz=181,SNR=24						
FCAR	Ozark Folk Cen	4.92	96		Pn	07 08 03.1	+1.6
WHAR	Wooly Hollow	4.92	103	Pn	Pn	07 08 02.7	+1.1
WHAR				IAmb_Lg		07 09 35.5	
	comp=Z,179nm,1.1s						
237A	Washetta, Mont	4.93	156		Pn	07 08 01.8	+0.1
237A				IAmb_Lg		07 09 19.6	
	comp=Z,119nm,0.9s						
237A	Washetta, Mont	4.93	156	P		07 08 01.5	
	baz=337,SNR=8.5						
W41B	Gary Mavity, V	4.99	104	P	Pn	07 08 03.5	+1.1
	baz=287						
W41B				S	Sn	07 08 59.6	-0.6
	baz=287						
R40A	Maddies Statio	5.00	68		Pn	07 08 03.5	+0.9
R40A				IAmb_Lg		07 09 31.6	
	comp=Z,158nm,0.8s						
R40A	Maddies Statio	5.00	68	P		07 08 03.2	
	baz=251,SNR=22						
WLAR	White Oak Lake	5.02	123		Pn	07 08 04.2	+1.3
WLAR				IAmb_Lg		07 09 39.3	
	comp=Z,198nm,1.1s						
T25A	Trinidad	5.05	279	P	Pn	07 08 03.4	-0.1
	baz=95,SNR=16						
T25A				S	Sn	07 09 00.4	-1.7
	baz=95						
Z41A	Richland Creek	5.49	125	P	Pn	07 08 10.4	+1.1
	baz=308						
Z41A				S	Sn	07 09 11.1	-1.3
	baz=308						
NATX	Nacogdoches	5.58	148	S	Sn	07 09 13.8	-1.0
	baz=329						
L34A	Svendsen Farm,	5.59	14	IAmb_Lg		07 09 54.2	
	comp=Z,202nm,0.7s						
P40A	Paris	5.67	56		Pn	07 08 13.0	+1.3
LCAR	Lake Charles	5.67	93	IAmb_Lg		07 09 54.7	
	comp=Z,90nm,0.8s						
T42A	Van Buren	5.69	83		Pn	07 08 14.6	+2.5
CCM	Cathedral Cave	5.71	73	P	Pn	07 08 13.2	+0.7
	baz=257						
CCM	Cathedral Cave	5.71	73	Pn	Pn	07 08 12.9	+0.5
CCM				IAmb_Lg		07 09 50.4	
	comp=Z,202nm,0.7s						
N38A	Joes South For	5.73	41		Pn	07 08 12.8	+0.2
N38A	Joes South For	5.73	41	P		07 08 13.0	
	baz=224,SNR=9.4						
435B	Jarrell	5.77	175	S	Sn	07 09 20.6	+1.2
	baz=355						
435B	Jarrell	5.77	175	Pn	Pn	07 08 13.2	+0.1
435B				IAmb_Lg		07 09 55.9	
	comp=Z,140nm,0.8s						
CCAR	Cane Creek	5.85	115	IAmb_Lg		07 10 05.9	
	comp=Z,181nm,0.8s						
SDCO	Great Sand Dun	5.99	284	P	Pn	07 08 17.0	+0.6
	baz=100,SNR=23						
SDCO	Great Sand Dun	5.99	284	Pn	Pn	07 08 15.9	-0.6
SDCO	Great Sand Dun	5.99	284	P		07 08 17.3	
	baz=100,SNR=12						
Q24A	Divide	6.04	296	P	Pn	07 08 17.1	-0.1
	baz=112						
Q24A				S	Sn	07 09 26.4	-0.2
	baz=112						
K31A	O'Neill	6.09	356	IAmb_Lg		07 10 09.9	
	comp=Z,146nm,0.7s						
K31A	O'Neill	6.09	356	P		07 08 18.4	
	baz=176,SNR=7.1						
JCT	Junction City	6.20	193	P	Pn	07 08 19.9	+0.7
	baz=12						
JCT	Junction City	6.20	193	Pn	Pn	07 08 20.2	+1.0
JCT				IAmb_Lg		07 10 07.4	
	comp=Z,158nm,0.9s						
FVM	French Village	6.33	75	IAmb_Lg		07 10 12.6	
	comp=Z,153nm,0.7s						
SCIA	State Center	6.59	34	P	Pn	07 08 24.8	+0.4
	baz=217						
SCIA	State Center	6.59	34	IAmb_Lg		07 10 27.0	
	comp=Z,149nm,0.7s						
GNAR	Gosnell	6.60	93	IAmb_Lg		07 10 24.3	
	comp=Z,151nm,0.8s						
SLM	Saint Louis	6.63	69	IAmb_Lg		07 10 16.7	
	comp=Z,128nm,0.8s						
ISCO	Idaho Springs	6.71	301	P	Pn	07 08 26.6	+0.2
	baz=117						
143A	Socs Landing,	6.76	123	IAmb_Lg		07 10 40.2	
	comp=Z,101nm,0.9s						
MET	Memphis--Engin	6.83	100	IAmb_Lg		07 10 25.2	
	comp=Z,87nm,0.8s						
HKT	Hockley	6.86	163	IAmb_Lg		07 10 41.0	
	comp=Z,11nm,0.9s						
ANMO	Albuquerque	6.94	259	Pn	Pn	07 08 29.4	+0.1
	comp=Z,0.6nm,0.3s,baz=78,slow=6.1,SNR=14						
ANMO				Pg	Pb	07 08 52.3	+4.1
	comp=Z,1.9nm,0.3s,baz=89,slow=18,SNR=9.7						
ANMO				Lg	Lg	07 10 20.0	
	comp=Z,2.8nm,0.3s,baz=60,slow=11,SNR=5.1						
ANMO	Albuquerque	6.94	259	P	Pn	07 08 29.5	+0.1
	baz=74						
ANMO	Albuquerque	6.94	259		Pn	07 08 30.6	+1.3
ANMO	Albuquerque	6.94	259	P		07 08 29.8	
	baz=74,SNR=12						
HENM	Henderson Moun	6.99	86	IAmb_Lg		07 10 49.3	
	comp=Z,136nm,0.7s						
342A	Flagon Creek P	7.07	135	IAmb_Lg		07 10 51.5	
	comp=Z,69nm,1.3s						
HALT	Halls	7.16	92	IAmb_Lg		07 10 50.1	

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,152nm,1.0s						
S44A	Carbondale	7.20	78	Pn	Pn	07 08 34.2	+1.4
SIUC	Southern Illin	7.24	78	Pn	Pn	07 08 35.2	+1.9
ECSD	EROS Data Cent	7.28	9	P	Pn	07 08 32.8	-1.1
	baz=190						
ECSD	EROS Data Cent	7.28	9	Pn	Pn	07 08 33.1	-0.8
BNM	Barren Site	7.32	253		Pn	07 08 35.2	+0.5
PHWY	Pilot Hill	7.41	312	Pn	Pn	07 08 36.4	+0.4
OXF	Oxford	7.42	103	P	Pn	07 08 36.6	+0.9
	baz=288						
OXF	Oxford	7.42	103		Pn	07 08 36.2	+0.4
W45A	Hickory Valley	7.42	98	IAmb_Lg		07 10 45.3	
	comp=Z,146nm,0.9s						
N23A	Red Feather La	7.48	308	P	Pn	07 08 37.2	+0.4
	baz=123,SNR=6.4						
P43A	Skaggs, Pawnee	7.48	63	Pn	Pn	07 08 38.5	+1.9
Y45A	Yeager Farm, C	7.54	108	IAmb_Lg		07 11 04.7	
	comp=Z,62nm,0.8s						
Y22D	IRIS PASSCAL I	7.58	254	IAmb_Lg		07 10 56.5	
	comp=Z,140nm,0.8s						
Q44A	Meyer Farm, Va	7.62	69	Pn	Pn	07 08 39.2	+0.7
VBMS	Vicksburg	7.65	122	IAmb_Lg		07 11 08.6	
	comp=Z,80nm,1.2s						
735A	Kenedy	7.67	178	IAmb_Lg		07 11 11.5	
	comp=Z,80nm,0.9s						
MNTX	Cornudas Mount	7.70	233	P	Pn	07 08 39.9	+0.2
	baz=49						
MNTX	Cornudas Mount	7.70	233		Pn	07 08 39.7	0.0
SUSD	Miller	7.91	356	IAmb_Lg		07 11 05.5	
	comp=Z,90nm,0.9s						
HDIL	Hopedale	8.02	57	P	Pn	07 08 44.5	+0.5
	baz=243						
HDIL	Hopedale	8.02	57	Pn	Pn	07 08 45.0	+1.0
I37A	Lemond, Waseca	8.30	24	IAmb_Lg		07 11 27.1	
	comp=Z,79nm,0.9s						
WVT	Waverly	8.35	90	IAmb_Lg		07 11 27.9	
	comp=Z,26nm,0.8s						
TX31	Lajitas Ar. Si	8.55	214		Pn	07 08 51.4	-0.1
TXAR	Lajitas Array	8.55	214	Pn	Pn	07 08 51.1	-0.3
	comp=Z,0.4nm,0.3s,baz=34,slow=11,SNR=5.0						
TXAR				Pg	Pg	07 09 22.8	-8.4
	comp=Z,2.7nm,0.3s,baz=37,slow=16,SNR=15						
TXAR				Lg	Lg	07 11 14.8	
	comp=Z,4.8nm,0.3s,baz=45,slow=27,SNR=8.9						
TXAR	Lajitas Array	8.55	214	Pn	Pn	07 08 51.3	-0.2
TX32	Lajitas Array	8.55	214		Pn	07 08 51.8	+0.3
O20A	White River Ci	8.70	297	IAmb_Lg		07 11 34.0	
	comp=Z,46nm,1.1s						
RSSD	Black Hills	8.80	331	P	Pn	07 08 56.0	+1.1
	baz=148						
RSSD	Black Hills	8.80	331		Pn	07 08 56.4	+1.4
RSSD				IAmb_Lg		07 11 35.5	
	comp=Z,68nm,1.0s						
JFWS	Jewell Farm	8.80	41	P	Pn	07 08 54.2	-0.6
	baz=226						
JFWS	Jewell Farm	8.80	41		Pn	07 08 55.5	+0.6
JFWS				IAmb_Lg		07 11 40.0	
	comp=Z,102nm,0.7s						
K22A	Casper	8.88	316		Pn	07 08 55.3	-0.7
K22A				IAmb_Lg		07 11 45.3	
	comp=Z,110nm,1.1s						
T47A	Sharon Grove	8.88	84	IAmb_Lg		07 11 49.1	
	comp=Z,92nm,1.0s						
I40A	Norwalk	9.33	36	IAmb_Lg		07 11 53.9	
	comp=Z,52nm,1.0s						
CLTN	Cedars of Leba	9.55	89	IAmb_Lg		07 11 55.0	
	comp=Z,46nm,1.1s						
HQIL	Hanson Quary C	9.56	54	IAmb_Lg		07 11 53.9	
	comp=Z,75nm,0.8s						
BLO	Bloomington	9.57	71		Pn	07 09 05.6	+0.3
BLO				IAmb_Lg		07 12 01.3	
	comp=Z,107nm,0.7s						
WCI	Wyandotte Cave	9.59	76	IAmb_Lg		07 12 00.6	
	comp=Z,72nm,0.8s						
LRAL	Lakeview Retre	9.82	108	Pn	Pn	07 09 08.8	0.0
F36A	Milaca	9.94	19	Pn	Pn	07 09 09.4	-1.0
U49A	Red Boiling Sp	9.96	87	Pn	Pn	07 09 11.2	+0.5
I42A	Draeger Farm,	10.18	41	Pn	Pn	07 09 13.4	-0.3
P48A	Milroy	10.46	70	Pn	Pn	07 09 17.1	-0.4
G40A	Rib Lake	10.59	32	Pn	Pn	07 09 18.4	-0.9
BW06	Boulder Array	10.76	309	Pn	Pn	07 09 21.0	-0.8
PD31	Pinedale Array	10.76	309		Pn	07 09 20.9	-0.9
PDAR	Pinedale Array	10.76	309	Pn	Pn	07 09 20.9	-0.9
	comp=Z,0.3nm,0.3s,baz=123,slow=14,SNR=8.0						
PDAR				Pg		07 10 04.8	
	comp=Z,0.6nm,0.3s,baz=103,slow=17,SNR=9.1						
PDAR				Lg	Lg	07 12 23.6	
	comp=Z,0.9nm,0.3s,baz=110,slow=30,SNR=3.5						
PDAR	Pinedale Array	10.76	309		Pn	07 09 20.7	-1.2
CPCT	Cooper Cave	11.10	92		Pn	07 09 26.5	+0.2
V51A	Loudon	11.19	90	Pn	Pn	07 09 28.8	+1.3
TKL	Tuckaleechee C	11.67	90	Pn	Pn	07 09 35.0	+0.9
	comp=Z,0.3nm,0.3s,baz=215,slow=11,SNR=4.5						
TKL				Lg	Lg	07 12 52.4	
	comp=Z,1.6nm,0.3s,baz=18,slow=15,SNR=7.1						
ULM	Lac du Bonnet	13.80	6	Pn	Pn	07 09 57.8	-5.3
	comp=Z,0.3nm,0.3s,baz=182,slow=12,SNR=2.8						
ULM				Sn	Sn	07 12 23.0	-13
	comp=Z,0.3nm,0.3s,baz=268,slow=19,SNR=1.7						
ULM				Lg	Lg	07 13 55.0	
	comp=Z,0.3nm,0.3s,baz=301,slow=22,SNR=3.6						
YKA	Yellowknife Ar	27.91	344	P	P	07 12 36.5	-0.9
	comp=Z,0.3nm,0.6s,baz=144,slow=9.3,SNR=5.9						
ILAR	Eielson Array	40.24	330	P	P	07 14 25.1	+0.9
	comp=Z,0.3nm,0.7s,baz=108,slow=7.0,SNR=8.4						

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*GCG **05** 07:07:50.5±0.7, 14°.17N×91°.56W, h69^{km}±16^{km}, MD3.6*
*SNET **05** 07:07:51.7±0.7, 14°.25N×91°.30W, h13^{km}±6^{km}, ML3.2*
ISC 05 07:07:49.1±2.7, **14°.0N**±0°.1×**91°.7W**±0°.1, **h32**^{km}±12^{km}, **n16, σ0ˢ.58**/23, **Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RTAL	Retalhuleu	0.53	357	*e*P	Pn	07 08 00.9	+0.5
RTAL				*e*S	Sb	07 08 07.8	0.0
FUG	Fuego 3	0.92	60	*e*P	Pb	07 08 06.7	0.0
FUG				*e*S	Sn	07 08 18.7	+0.7
PCG	Pacaya	1.10	69	*e*P	Pb	07 08 09.4	-0.3
PCG				*e*S	Sb	07 08 24.2	+0.3
IXG	Ixpaco	1.20	81	*e*P	Pn	07 08 10.3	+0.5
IXG				*e*S	Sb	07 08 26.6	0.0
HUEH	Huehuetenango	1.33	7	*e*P	Pn	07 08 12.1	+0.4
HUEH				*e*S	Sn	07 08 27.2	-1.2
NBG	Las Nubes	1.41	65	*e*P	Pb	07 08 14.5	-0.4
NBG				*e*S	Sn	07 08 30.7	+0.4
UNIC	Universidad Ca	2.05	90	*e*P	Pn	07 08 21.6	+0.2
JAYA	Jayaque - finc	2.17	99	*e*P	Pn	07 08 23.1	-0.2
JAYA				*e*S	Sn	07 08 48.1	-1.1
JAYA				IAML		07 08 51.7	
	comp=Z,482nm,0.2s						
TACO	Tacachico	2.24	90	*e*P	Pn	07 08 23.8	-0.2
MTO3	Montecristo	2.27	79	*e*P	Pn	07 08 24.1	-0.5
MTO3	Montecristo	2.27	79	P	Pn	07 08 24.5	-0.1
PMON	Piamonte	2.30	97	*e*P	Pn	07 08 25.4	+0.6
LALI	Alcalda de L	2.33	102	*e*P	Pn	07 08 25.3	+0.1
SNET	Serv Nac Est T	2.38	97	*e*P	Pn	07 08 26.8	+0.8
SNET				IAML		07 08 57.7	
	comp=Z,133nm,0.3s						
LFRS	El Faro	2.55	98	*e*P	Pn	07 08 29.0	+0.6
LCND	La Caada	3.73	100	*e*P	Pn	07 08 45.1	+0.7
LCND				IAML		07 08 48.9	
	comp=Z,32nm,0.3s						

IDC 05 07:09:47.6±3.1, **54°.16N**×**87°.19E, h0**^{km}**, mb1 3.0**/2, **mb1mx2.9**/59, **mbtmp3.0**/2, **ML2.7**/2, **Error ellipse: s-maj=29.0km s-min=17.9km az=59.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.41	262	*i*		07 17 35.9	
	baz=78,slow=332,SNR=9.9						
ZALV	Zalesovo Beam	1.41	262	Pg	Pn	07 10 13.3	-1.2
	2.3nm,0.3s,baz=81,slow=17,SNR=23						
ZALV				Lg	Lg	07 10 32.6	
	1.6nm,0.3s,baz=83,slow=26,SNR=4.8						
KURBB	Kurchatov Arra	6.38	240	Pn	Pn	07 11 23.6	+1.0
	0.1nm,0.3s,baz=55,slow=14,SNR=6.4						
MKAR	Makanchi Array	8.01	205	Pn	Pn	07 11 46.1	+1.0
	0.1nm,0.3s,baz=28,slow=14,SNR=7.7						
MKAR				Lg	Lg	07 14 00.3	
	0.0nm,0.3s,baz=12,slow=38,SNR=3.0						

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*NNC **05** 07:13:55.1±0.7, 50°.03N×78°.82E, h0^{km}, mb3.0, mpv2.8, Error ellipse: s-maj=17.9km s-min=3.3km az=70.0, Suspected Mining explosion.*
*IDC **05** 07:13:56.7±0.9, 50°.07N×78°.82E, h0^{km}, mb1 2.8/3, mb1mx2.8/56, mbtmp2.8/3, ML2.7/3, Error ellipse: s-maj=11.9km s-min=6.3km az=57.0*
ISC 05 07:13:50.6±0.9, **49°.97N**±0°.05×**77°.79E**±0°.06, **h0**^{km}**, n10, σ0ˢ.98**/13, **4C-4D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KURBB	Kurchatov Arra	0.81	36	Pg	Pb	07 14 07.2	-0.3
	3.4nm,0.3s,baz=166,slow=17,SNR=239						
KURBB				Lg	Lg	07 14 16.6	
	3.0nm,0.3s,baz=166,slow=31,SNR=14						
KURBB	Kurchatov Arra	0.81	36	⇑P	Pb	07 14 07.2	-0.3
	28nm,0.3s						
KURBB				⇓S	Sg	07 14 16.1	-0.4
	74nm,0.6s						
KURK	Kurchatov	0.92	35	⇓P	Pg	07 14 08.4	+0.3
	13nm,0.4s						
KURK				⇑S	Sg	07 14 18.5	-1.5
	16nm,0.6s						
MAKZ	Makanchi	4.22	137	⇑Pg	Pb	07 15 06.1	+0.4
	1.2nm,0.5s						
MAKZ				⇓Lg	Lg	07 15 54.9	
	7.3nm,0.6s						
MK31	Makanchi Array	4.37	135	Pn	Pn	07 14 59.5	+1.2
	0.1nm,0.2s,baz=326,slow=10,SNR=13						
MK31				⇑Pg	Pb	07 15 07.4	-0.9
	1.0nm,0.4s,baz=324,slow=14,SNR=17						
MK31				⇓Lg	Lg	07 16 02.0	
	4.8nm,0.5s,baz=326,slow=27,SNR=11						
MKAR	Makanchi Array	4.37	135	Pn	Pn	07 14 59.4	+1.1
	0.3nm,0.3s,baz=336,slow=12,SNR=14						
MKAR				Pg	Pb	07 15 07.0	-1.3
	0.9nm,0.3s,baz=340,slow=16,SNR=16						
MKAR				Lg	Lg	07 16 00.5	
	0.9nm,0.3s,baz=346,slow=24,SNR=4.4						
BVAR	Borovoye Array	5.54	306	Pn	Pb	07 15 27.5	-0.6
	0.2nm,0.3s,baz=121,slow=14,SNR=3.5						
BVAR				Sn	Sb	07 16 35.9	+0.9
	0.4nm,0.3s,baz=91,slow=24,SNR=7.7						
BVAR				Lg	Lg	07 17 07.0	
	0.3nm,0.3s,baz=104,slow=30,SNR=3.3						
ZALV	Zalesovo Beam	5.89	45	Pn	Pn	07 15 19.9	+0.8
	1.2nm,0.3s,baz=232,slow=14,SNR=16						
ZALV				Lg	Lg	07 16 45.7	
	0.3nm,0.3s,baz=238,slow=27,SNR=3.3						
I46RU	ZALESOVO INFRA	5.89	45	*i*		07 46 20.0	
	baz=225,slow=329,SNR=1.4						
AAK	Ala-Archa	7.68	198	Lg	Lg	07 18 05.1	
	0.1nm,0.3s,baz=165,slow=16,SNR=1.9						

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*IDC **05** 07:25:09.9±2.2, 36°.56N×141°.36E, h0^{km}, mb3.4/4, mb1 3.5/5, mb1mx3.3/52, mbtmp3.4/5, ML2.7/1, MS2.4/1, Ms1 2.4/1, ms1mx2.2/33, Error ellipse: s-maj=46.7km s-min=31.2km az=53.0*
*JMA **05** 07:25:11.9±0.1, 36°.69N×141°.10E, h27^{km}±1^{km}, M3.2*
ISC 05 07:25:10.9±2.3, **36°.67N**±0°.06×**141°.16E**±0°.09, **h7**^{km}±12^{km}, **n25, σ1ˢ.36**/20, **mb3.3**/4, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JHO	Hitachi	0.48	263	P	Pg	07 25 20.6	+0.4
ONAJ	Iwakimizuishiy	0.52	326	P	Pg	07 25 21.5	+0.5
ONAJ				*e*S	Sg	07 25 29.1	+1.3
JHYU	Hitachinakayam	0.56	235	P	Pb	07 25 22.8	-0.3
JHYU				S	Sb	07 25 30.9	-0.4
JFFD	Fukushimafurud	0.64	311	P	Pg	07 25 23.5	+0.3
JFFD				S	Sg	07 25 31.8	+0.3
JFK	Kawauchi	0.73	342	P	Pg	07 25 24.8	-0.2
JYT	Yasato	0.89	241	P	Pb	07 25 27.8	-0.9
JFT	Otama	1.07	322	P	Pb	07 25 30.9	-0.9
JMM	Marumori	1.23	346	P	Pn	07 25 32.6	-1.9
JAG	Ashikaga	1.39	260	P	Pn	07 25 35.6	-1.2
MJAR	Matsushiro Arr	2.38	268	Pn	Pb	07 25 52.3	-1.7
	1.6nm,0.3s,baz=85,slow=17,SNR=22						
MJAR				Sn	Sb	07 26 22.8	-0.7
	1.9nm,0.3s,baz=307,slow=36,SNR=4.5						
MAT	Matsushiro	2.38	268	P	Pn	07 25 49.5	-0.8
MAT				*e*S	Sb	07 26 22.9	-0.7
KSRS	Korea Array	10.61	278	LR	LR	07 31 46.8	
	comp=Z,21nm,20.7s,baz=186,slow=37						
SONM	Songino Array	27.82	305	P	P	07 31 03.2	+2.4
	0.2nm,0.7s,baz=114,slow=11,SNR=2.0						
H11N2	WAKE ISLAND Hy	28.14	120	T	T	08 00 29.4	
	baz=313,slow=75,SNR=190						
H11N1	WAKE ISLAND Hy	28.15	120	T	T	08 00 29.5	
	baz=313,slow=75,SNR=169						
H11N3	WAKE ISLAND Hy	28.16	120	T	T	08 00 31.0	
	baz=313,slow=75,SNR=162						
H11S1	WAKE ISLAND Hy	28.84	122	T	T	08 01 21.7	
	baz=315,slow=76,SNR=80						
H11S3	WAKE ISLAND Hy	28.84	122	T	T	08 01 20.5	
	baz=315,slow=76,SNR=109						
H11S2	WAKE ISLAND Hy	28.85	122	T	T	08 01 22.0	
	baz=315,slow=76,SNR=89						
MKAR	Makanchi Array	44.14	302	P	P	07 33 23.0	+3.0
	0.1nm,0.3s,baz=88,slow=12,SNR=3.1						
KURBB	Kurchatov Arra	46.06	308	P	P	07 33 35.1	0.0
	0.5nm,0.5s,baz=82,slow=7.7,SNR=3.3						
WRA	Warramunga Arr	56.67	188	P	P	07 34 54.2	-0.7
	0.5nm,0.9s,baz=7.5,slow=5.0,SNR=1.8						
H03N2	Juan Fernandez	147.19	96	T	T	10 29 25.5	
	baz=291,slow=76,SNR=8.9						
H03N3	Juan Fernandez	147.20	96	T	T	10 29 26.4	
	baz=291,slow=76,SNR=10.0						
H03N1	Juan Fernandez	147.20	96	T	T	10 29 23.3	
	baz=291,slow=76,SNR=13						

IDC 05 07:27:16.9±2.8, **54°.18N**×**86°.41E, h0**^{km}**, mb1 2.9**/2, **mb1mx2.8**/51, **mbtmp2.9**/2, **ML2.6**/2, **Error ellipse: s-maj=21.6km s-min=12.9km az=58.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	0.97	257	*i*		07 32 48.3	
	baz=75,slow=334,SNR=4.9						
ZALV	Zalesovo Beam	0.97	257	Pg	Pg	07 27 34.0	-1.4
	3.1nm,0.3s,baz=71,slow=17,SNR=43						
ZALV				Lg	Lg	07 27 49.7	
	3.3nm,0.3s,baz=77,slow=30,SNR=24						
KURBB	Kurchatov Arra	6.00	237	Pn	Pn	07 28 47.8	+0.9
	0.1nm,0.3s,baz=54,slow=14,SNR=4.0						
MKAR	Makanchi Array	7.85	201	Pn	Pn	07 29 13.7	+1.4
	0.2nm,0.3s,baz=27,slow=15,SNR=5.0						
MKAR				Lg	Lg	07 31 23.1	
	baz=22,slow=42,SNR=2.1						

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*FUNV **05** 07:27:27.2, 8°.24N×72°.10W, h1^{km}, MW3.8*
*RSNC **05** 07:27:28.3±1.0, 8°.44N×72°.17W, h4^{km}±6^{km}, ML3.1, Mw3.2*
ISC 05 07:27:27.4±2.5, **8°.36N**±0°.04×**72°.11W**±0°.03, **h8**^{km}±18^{km}, **n25, σ1ˢ.24**/45, **Venezuela**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PAMC	Pamplona, Colo	1.17	210	*e*P	Pn	07 27 49.4	-1.1
PAMC				*e*S	Sn	07 28 07.2	+0.3
PAMC				*i*		07 28 09.0	
	comp=Z,545nm,0.2s						
OCAC	Ocana	1.20	264	*e*P	Pn	07 27 48.3	-2.3
OCAC				*e*S	Sb	07 28 03.9	-2.4
OCAC				*i*		07 28 09.5	
	comp=Z,369nm,0.3s						
SOCV	Socops	1.24	93	*e*P	Pn	07 27 50.0	-1.1
SOCV				*e*S	Sn	07 28 07.8	-0.2
SDV	Santo Domingo	1.55	70	*e*P	Pn	07 27 56.1	+0.6
SDV				*e*S	Sb	07 28 17.1	+0.7
SDV				*i*		07 28 21.2	
	comp=Z,243nm,0.3s						
SDV	Santo Domingo	1.55	70	*e*P	Pn	07 27 56.3	+0.8
SDV				*e*S	Sb	07 28 17.2	+0.8
MCQV	Machiques	1.73	346	*e*P	Pb	07 27 59.0	-0.4
MCQV				*e*S	Sg	07 28 23.6	+0.5
TAMC	Tame, Arauca	1.94	171	*e*P	Pn	07 28 01.7	+1.0
TAMC				*e*S	Sb	07 28 28.4	+1.1
TAMC				*i*		07 28 30.7	
	comp=Z,158nm,0.2s						
SMLC	San Martn de	1.99	283	*e*P	Pn	07 28 01.0	-0.3
SMLC				*e*S	Sb	07 28 28.2	-0.6
SMLC				*i*		07 28 29.3	
	comp=Z,387nm,0.1s						
BRRC	Barranca, Sant	2.02	232	*e*P	Pn	07 28 02.4	+0.7
BRRC				*e*S	Sb	07 28 29.2	-0.4
BRRC				*i*		07 28 33.9	
	comp=Z,112nm,0.4s						
BARC	Barichara	2.05	211	*e*P	Pn	07 28 02.8	+0.4
BARC				*e*S	Sn	07 28 29.8	+1.5
BARC				*i*		07 28 33.9	
	comp=Z,198nm,0.5s						
TORV	Torococo	2.21	57	*e*P	Pn	07 28 04.5	+0.1
TORV				*e*S	Sn	07 28 31.4	-0.6
ARGC	Ariguani, Magd	2.58	305	*e*P	Pn	07 28 09.9	+0.4
RUSC	La Rusia	2.63	202	*e*P	Pn	07 28 11.5	+0.8
RUSC				*e*S	Sb	07 28 49.0	+1.2
RUSC				*i*		07 28 49.7	
	comp=Z,40nm,0.6s						
CURV	Curarigua	2.68	52	*e*P	Pn	07 28 11.2	+0.3
CURV				*e*S	Sn	07 28 44.6	+0.9
SANV	Sanarito	2.78	66	*e*P	Pn	07 28 12.5	+0.2
SANV				*e*S	Sn	07 28 46.6	+0.3
ZARC	Zaragoza, Cauc	2.85	253	*e*P	Pn	07 28 13.3	0.0
ELOV	Elorza	2.93	117	*e*P	Pn	07 28 13.1	-1.2
ELOV				*e*S	Sn	07 28 47.0	-2.7
PTBC	PUERTO BERRIO,	2.95	232	*e*P	Pn	07 28 13.5	-1.1
PTBC				*e*S	Sn	07 28 51.5	+1.4
PTBC				*i*		07 29 00.3	
	comp=Z,45nm,0.4s						
SIQV	Siquisique	3.21	45	*e*P	Pn	07 28 19.4	+1.1
SIQV				*e*S	Sn	07 28 56.6	-0.1
SPBC	San Pablo de B	3.32	216	*e*P	Pn	07 28 19.6	-0.1
SPBC				*e*S	Sn	07 29 03.3	+3.8
SPBC				*i*		07 29 19.4	
	comp=Z,29nm,0.5s						
MOTC	Monteria, Cord	3.54	277	*e*P	Pn	07 28 23.3	+0.6
MAPV	Macapo	3.89	68	*e*P	Pn	07 28 28.3	+0.8
BAUV	El Baul	4.06	81	*e*P	Pn	07 28 29.4	-0.5
BAUV				*e*S	Sn	07 29 15.8	-1.9
PTGC	Puerto Gaitan,	4.13	180	*e*P	Pn	07 28 28.6	-2.2
TOLC	Tolima	4.92	221	*e*P	Pn	07 28 42.0	+0.1
TOLC				*e*S	Sn	07 29 38.5	-0.8

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*IDC **05** 07:27:49.1±1.4, 23°.82N×122°.29E, h0^{km}, mb3.3/4, mb1 3.6/4, mb1mx3.2/45, mbtmp3.3/4, Error ellipse: s-maj=101.3km s-min=25.9km az=76.0*
*TAP **05** 07:27:54.9, 23°.79N×122°.05E, h38^{km}, ML3.9, C*
*JMA **05** 07:27:54.1±0.2, 23°.78N×122°.04E, h25^{km}±4^{km}, M3.3*
ISC 05 07:27:50.7±1.0, **23°.72N**±0°.02×**122°.18E**±0°.01, **h13**^{km}±7^{km}, **n149, σ1ˢ.05**/249, **mb3.4**/4, **3C-22D, Taiwan region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HWA	Hwalien	0.59	296	*i* P	Pn	07 28 04.5	-0.3
	baz=292						
HWA				*e*S	Sg	07 28 11.7	+1.6
	baz=292						
ESL	Shilin	0.69	278	⇓*i*P	Pb	07 28 05.7	+1.0
	baz=265						
ESL				*i* S	Sg	07 28 13.0	-0.3
	baz=265						
EGFH	Guangfu	0.69	266	P	Pn	07 28 06.2	-0.1
	baz=251						
EGFH				S	Sg	07 28 14.4	+1.0
	baz=251						
NACB	Ninganchiao	0.70	310	⇓*i*P	Pb	07 28 05.8	+0.9
	baz=308						
NACB				*i* S	Sg	07 28 13.7	+0.1
	baz=308						
HGSD	Ruisui	0.73	252	P	Pn	07 28 06.9	+0.1
	baz=243						
HGSD				S	Sg	07 28 15.4	+0.9
	baz=243						
ETLH	Xiulin Townshi	0.80	307	⇓*i*P	Pb	07 28 07.3	+0.7
	baz=309						
ETLH				*i* S	Sg	07 28 16.6	-0.3
	baz=309						
ENA	Nanau	0.81	330	⇓*i*P	Pn	07 28 08.1	+0.2
	baz=330						
ENA				S	Sg	07 28 17.9	+0.7
	baz=330						
EHY	Hungye	0.82	255	⇓*i*P	Pn	07 28 08.2	+0.2
	baz=260						
EHY				*e*S	Sg	07 28 17.7	+0.5
	baz=260						
EYUL	Yuli	0.87	245	⇑P	Pn	07 28 09.4	+0.6
	baz=228						
EYUL				S	Sb	07 28 20.4	+1.0
	baz=228						
YULB	Yu-li	0.87	248	P	Pn	07 28 09.3	+0.5
	baz=254						
YULB				S	Sg	07 28 19.0	-0.1
	baz=254						
TWF1	Yuli	0.89	246	*i* P	Pn	07 28 09.6	+0.6
	baz=230						
TWF1				S	Sg	07 28 20.5	+0.9
	baz=230						
TWC	Suao	0.94	341	*i* P	Pn	07 28 10.5	+0.9
	baz=358						
TWC				S	Sb	07 28 21.9	+0.7
	baz=358						
WHF	Hehuan Shan	0.94	297	⇓*i*P	Pb	07 28 09.5	+0.3
	baz=289						
WHF				*e*S	Sg	07 28 20.5	-0.8
	baz=289						
VWDT	VWDT	0.95	272	⇓*i*P	Pn	07 28 10.2	+0.4
	baz=268						
VWDT				*i* S	Sg	07 28 21.1	-0.5
	baz=268						
FULB	Fuli	0.97	238	*e*P	Pn	07 28 10.4	+0.3
	baz=219						
FULB				*e*S	Sg	07 28 22.1	0.0
	baz=219						
CHKT	Chengkung	0.97	231	*e*P	Pn	07 28 10.4	+0.3
	baz=214						
CHKT				*e*S	Sg	07 28 21.0	-1.2
	baz=214						
CHGB	Renai	0.98	290	P	Pb	07 28 10.3	+0.5
	baz=288						
CHGB				*i* S	Sg	07 28 21.5	-1.1
	baz=288						
FUSS	Fushou	1.00	302	⇓P	Pb	07 28 10.8	+0.6
	baz=302						
FUSS				*e*S	Sg	07 28 22.3	-1.1
	baz=302						
JYNG	Yonagunijimaku	1.01	44	P	Pn	07 28 13.9	+3.3
JYNG				S	Sn	07 28 27.6	+2.9
NNSB	Datong	1.01	314	⇓P	Pb	07 28 10.9	+0.6
	baz=316						
NNSB				*e*S	Sg	07 28 22.1	-1.5
	baz=316						
NNSH	Datong	1.01	314	⇓P	Pb	07 28 10.8	+0.6
	baz=316						
NNSH				*e*S	Sg	07 28 22.2	-1.4
	baz=316						
NNS	Nan Shan	1.03	314	⇓*i*P	Pb	07 28 11.0	+0.5
	baz=316						
NNS				*e*S	Sg	07 28 22.9	-1.2
	baz=316						
YOJ	Yonaguni jima	1.06	46	*e*P	Pn	07 28 14.6	+3.3
	baz=52						
YOJ				*e*S	Sn	07 28 28.9	+3.0
	baz=52						
YOJ	Yonaguni jima	1.06	46	P	Pn	07 28 14.6	+3.3
YOJ				S	Sn	07 28 28.6	+2.7
TWT	Tachien	1.06	300	*i* P	Pn	07 28 11.9	+0.4
	baz=299						
TWT				*e*S	Sg	07 28 24.6	-0.6
	baz=299						
NDT	Datong Townshi	1.07	325	⇑P	Pn	07 28 12.2	+0.7
	baz=329						
NDT				*e*S	Sg	07 28 24.5	-0.9
	baz=329						
ENTT	Nioudou	1.07	329	P	Pn	07 28 12.0	+0.5
	baz=333						
ENTT				*e*S	Sg	07 28 24.8	-0.7
	baz=333						
TDCB	Techi	1.08	300	⇓*i*P	Pb	07 28 11.9	+0.6
	baz=300						
TDCB				*e*S	Sg	07 28 22.9	-2.7
	baz=300						
EDH	Donghe	1.10	227	⇑*e*P	Pn	07 28 12.8	+1.0
	baz=213						
EDH				*e*S	Sg	07 28 25.4	-0.8

	baz=213						
TWE	**Neicheng** baz=340	1.10	335	eP	Pn	07 28 12.8	+0.9
TWE	baz=340			eS	Sg	07 28 25.6	-0.8
ILA	**Ilan** baz=335	1.11	339	eP	Pn	07 28 13.6	+1.6
SSLB	**Suanglung** baz=270	1.13	274	P	Pb	07 28 12.5	+0.4
SSLB	baz=270			eS	Sg	07 28 25.9	-1.3
YUS	**Yu-Shan** baz=253	1.15	259	⇓iP	Pn	07 28 13.7	+0.7
YUS	baz=253			eS	Sg	07 28 26.2	-1.9
WPL	**Puli Township** baz=275	1.16	285	P	Pn	07 28 13.2	+0.5
WPL	baz=275			eS	Sb	07 28 26.4	-1.2
NTC	**Toucheng** baz=359	1.17	344	eP	Pg	07 28 14.7	+1.3
NTC	baz=359			eS	Sb	07 28 28.6	+0.5
SMLT	**Sun Moon Lake** baz=275	1.19	278	⇓iP	Pb	07 28 13.7	+0.6
SMLT	baz=275			eS	Sb	07 28 26.8	-1.7
DPDB	**Guoxing** baz=277	1.19	285	⇓P	Pb	07 28 13.8	+0.6
DPDB	baz=277			eS	Sb	07 28 27.7	-0.8
ELDTW	**Lidau** baz=237	1.19	244	⇓iP	Pg	07 28 13.7	0.0
ELDTW	baz=237			eS	Sb	07 28 26.3	-2.4
YHNB	**Yeheng** baz=314	1.20	322	⇓iP	Pg	07 28 13.9	0.0
YHNB	baz=314			eS	Sb	07 28 27.2	-1.6
NSK	**Sanguang** baz=314	1.21	322	⇓iP	Pg	07 28 14.0	-0.1
NSK	baz=314			eS	Sb	07 28 27.3	-1.9
WHYT	**Xinyi Township** baz=265	1.22	269	eP	Pg	07 28 15.1	+0.9
NWLT	**Wulai** baz=322	1.22	330	eP	Pg	07 28 14.6	+0.3
NWLT	baz=322			eS	Sb	07 28 28.5	-1.0
TYC	**Yuchr** baz=276	1.23	279	⇓iP	Pb	07 28 14.3	+0.5
TYC	baz=276			eS	Sb	07 28 28.9	-0.6
LDUT	**Ludao** baz=205	1.23	212	eP	Pg	07 28 14.7	+0.2
LDUT	baz=205			eS	Sb	07 28 29.2	-0.4
WHP	**Taichung City** baz=295	1.26	296	eP	Pg	07 28 15.1	+0.1
WHP	baz=295			eS	Sb	07 28 30.9	+0.3
LONT	**Longtian** baz=235	1.26	230	eP	Pn	07 28 14.2	+0.1
LONT	baz=235			eS	Sb	07 28 30.1	-0.5
ALS	**Alishan** baz=266	1.28	261	⇓iP	Pg	07 28 15.9	+0.5
ALS	baz=266			S	Sb	07 28 30.4	-0.9
TIPB	**Shuangxi** baz=357	1.29	345	P	Pg	07 28 16.4	+0.8
TIPB	baz=357			eS	Sb	07 28 31.3	-0.1
TWB1	**Santiao Chiao** baz=358	1.29	352	eP	Pg	07 28 16.1	+0.4
TWB1	baz=358			eS	Sb	07 28 31.4	-0.2
WJS	**Zhushan** baz=271	1.33	275	eP	Pg	07 28 16.6	+0.1
WJS	baz=271			S	Sb	07 28 33.1	+0.4
TWGBT	**Beinan** baz=233	1.35	229	eP	Pn	07 28 15.8	+0.4
TWGBT	baz=233			eS	Sb	07 28 31.7	-1.6
TWG	**Pinlang** baz=233	1.36	229	eP	Pb	07 28 16.2	+0.1
TWG	baz=233			eS	Sb	07 28 31.5	-1.8
TWA	**Mucha** baz=328	1.37	337	eP	Pg	07 28 17.3	+0.2
TWA	baz=328			eS	Sb	07 28 33.2	-0.5
NHDH	**Xindian Distri** baz=325	1.38	334	eP	Pg	07 28 17.8	+0.6
NHDH	baz=325			eS	Sn	07 28 33.5	-0.2
WNT	**Mingjian** baz=274	1.38	277	eP	Pg	07 28 17.4	+0.1
WNT	baz=274			eS	Sn	07 28 33.8	-0.1
CHN5	**Tsauling** baz=261	1.38	265	⇓iP	Pg	07 28 17.6	+0.2
CHN5	baz=261			eS	Sn	07 28 34.4	+0.3
WNT1	**Nantou City** baz=275	1.39	278	eP	Pg	07 28 17.9	+0.5
WNT1	baz=275			eS	Sn	07 28 35.3	+1.3
NWF	**Wu-fen Shan** baz=349	1.39	345	eP	Pg	07 28 17.8	+0.2
NWF	baz=349			eS	Sn	07 28 34.1	-0.2
WFSB	**Wu-fen Shan** baz=349	1.39	345	eP	Pg	07 28 17.9	+0.3
WFSB	baz=349			eS	Sb	07 28 34.9	+0.5
WWF	**Wufeng** baz=281	1.40	284	eP	Pg	07 28 18.0	+0.5
WWF	baz=281			eS	Sn	07 28 34.8	+0.5
TATO	**Taipei** baz=336	1.40	333	eP	Pg	07 28 17.6	-0.1
TATO	baz=336			eS	Sn	07 28 33.7	-0.7
LIOB	**Emei** baz=312	1.41	311	⇓iP	Pg	07 28 17.9	+0.1
LIOB	baz=312			eS	Sn	07 28 33.9	-0.7
NSTT	**Nanjuang** baz=311	1.41	310	eP	Pb	07 28 17.6	+0.7
NSTT	baz=311			eS	Sn	07 28 33.0	-1.6
STYT	**Tauyuan** baz=235	1.42	247	eP	Pb	07 28 17.7	+0.6
STYT	baz=235			eS	Sn	07 28 34.0	-0.9
TWQ1	**Liyutan** baz=295	1.43	296	eP	Pb	07 28 18.2	+0.8
TWQ1	baz=295			eS	Sn	07 28 35.3	+0.1
BACT	**New Taipei Cit** baz=335	1.44	332	eP	Pb	07 28 17.8	+0.4
BACT	baz=335			eS	Sn	07 28 35.8	+0.5
TCU	**Taichung** baz=285	1.44	287	eP	Pg	07 28 18.8	+0.3
TCU	baz=285			eS	Sn	07 28 36.9	+1.5
TAP	**Taipei** baz=339	1.45	335	eP	Pg	07 28 18.3	-0.3
NSY	**Sanyi** baz=298	1.47	298	P	Pb	07 28 18.9	+0.9
NSY	baz=298			eS	Sn	07 28 35.7	-0.5
TNOU	**National Taiwa** baz=4.0	1.47	345	eP	Pg	07 28 18.6	-0.5
TNOU	baz=4.0			eS	Sn	07 28 35.5	-0.6
TPUB	**Ta-pu** baz=241	1.48	254	P	Pg	07 28 19.2	-0.1
TPUB	baz=241			eS	Sn	07 28 37.3	+0.8
WGK	**Gukeng** baz=265	1.48	269	eP	Pb	07 28 18.9	+0.7
WGK	baz=265			eS	Sn	07 28 37.4	+1.0
HSN1	**Hsinchu** baz=316	1.50	315	eP	Pb	07 28 18.6	+0.2
HSN1	baz=316			eS	Sn	07 28 37.4	+0.7
WDLH	**Douliu** baz=266	1.51	269	eP	Pb	07 28 19.2	+0.6
WDLH	baz=266			eS	Sn	07 28 36.1	-0.9
NMLH	**Miaoli** baz=290	1.51	303	eP	Pb	07 28 19.0	+0.4
NMLH	baz=290			eS	Sn	07 28 37.6	+0.6
NTY	**Taoyuan** baz=322	1.51	328	eP	Pg	07 28 19.2	-0.5
NTY	baz=322			eS	Sn	07 28 37.7	+0.7
WTP	**Ta-pu** baz=247	1.51	252	P	Pg	07 28 19.7	-0.2
WTP	baz=247			S	Sn	07 28 38.1	+0.9
HATJ	**Hateruma jima**	1.52	77	P	Pg	07 28 21.4	+1.4
HATJ				eS	Sg	07 28 41.5	+1.7
YM01	**YM01** baz=356	1.53	339	eP	Pn	07 28 18.3	+0.5
YM01	baz=356			eS	Sn	07 28 36.1	-1.5
SBCB	**Hsinchu** baz=315	1.53	315	eP	Pb	07 28 19.7	+0.7
SBCB	baz=315			eS	Sn	07 28 37.8	+0.3
WCHH	**Zhanghua** baz=281	1.53	284	eP	Pg	07 28 20.0	-0.1
WCHH	baz=281			eS	Sn	07 28 38.1	+0.6
YM10	**YM10** baz=356	1.54	339	eP	Pb	07 28 19.2	+0.1
YM10	baz=356			eS	Sn	07 28 37.2	-0.6
NCUH	**Zhongli** baz=326	1.54	324	eP	Pb	07 28 19.4	+0.3
NCUH	baz=326			eS	Sn	07 28 37.0	-0.9
NCU	**National Centr** baz=326	1.54	324	eP	Pb	07 28 19.4	+0.2
NCU	baz=326			eS	Sn	07 28 37.5	-0.3
TWS1	**Kuangyinshan** baz=336	1.54	333	eP	Pb	07 28 19.5	+0.3
TWS1	baz=336			eS	Sn	07 28 37.7	-0.1
WDJ	**Dajia District** baz=293	1.54	294	eP	Pb	07 28 19.3	+0.2
WDJ	baz=293			eS	Sn	07 28 38.2	+0.4
YM11	**YM11** baz=357	1.54	339	eP	Pb	07 28 19.5	+0.3
YM11	baz=357			eS	Sn	07 28 37.6	-0.4
IRIF	**Iriomote-Funau**	1.54	66	P	Pg	07 28 21.9	+1.5
IRIF				eS	Sg	07 28 41.9	+1.4
YM05	**YM05** baz=356	1.54	339	eP	Pb	07 28 19.4	+0.1
YM05	baz=356			eS	Sn	07 28 37.0	-1.0
HSN	**Hsinchu** baz=317	1.54	315	P	Pb	07 28 19.6	+0.4
HSN	baz=317			eS	Sn	07 28 37.7	-0.2
YM04	**YM04** baz=330	1.54	338	eP	Pb	07 28 19.6	+0.3
YM04	baz=330			eS	Sn	07 28 36.6	-1.3
YM08	**YM08** baz=357	1.56	340	eP	Pb	07 28 19.7	+0.2
YM08	baz=357			eS	Sn	07 28 36.8	-1.5
YM03	**YM03** baz=342	1.57	338	eP	Pg	07 28 20.2	-0.7
CHN2	**Minshiung** baz=260	1.58	264	eP	Pg	07 28 20.9	-0.1
CHN2	baz=260			eS	Sn	07 28 39.6	+0.9
ANP	**Anpu** baz=341	1.58	338	i P	Pg	07 28 20.4	-0.7
NTST	**Danshui** baz=338	1.58	335	eP	Pb	07 28 20.4	+0.4
SLGT	**Liugui** baz=231	1.58	243	eP	Pg	07 28 21.2	0.0
ECL	**Taimali** baz=220	1.59	226	eP	Pb	07 28 20.3	+0.3
ECL	baz=220			eS	Sn	07 28 36.6	-2.4
SGST	**Jiashian** baz=232	1.60	247	eP	Pb	07 28 20.7	+0.6
SGST	baz=232			eS	Sn	07 28 40.7	+1.4
CHN1	**Nanshi** baz=247	1.61	251	eP	Pg	07 28 21.7	0.0
CHN1	baz=247			eS	Sn	07 28 41.0	+1.4
TWK	**Hsinying** baz=250	1.62	254	eP	Pb	07 28 21.3	+0.8
TWK	baz=250			eS	Sb	07 28 41.9	+1.0
SNST	**Tainan City** baz=248	1.62	252	eP	Pb	07 28 21.5	+0.9
SNST	baz=248			eS	Sn	07 28 41.1	+1.2
CHY	**Chiayi** baz=259	1.63	263	eP	Pb	07 28 21.6	+0.9
CHY	baz=259			eS	Sn	07 28 40.4	+0.5
TWY	**Chenhua** baz=344	1.64	341	eP	Pb	07 28 20.8	0.0
TWY	baz=344			eS	Sn	07 28 40.6	+0.4
WTK	**Tuku** baz=266	1.64	269	eP	Pb	07 28 21.4	+0.5
WTK	baz=266			eS	Sn	07 28 41.8	+1.4
RLNB	**Erlin** baz=274	1.68	276	eP	Pb	07 28 21.3	-0.1
SSD	**Sandimen** baz=224	1.72	236	eP	Pg	07 28 23.4	-0.4
TSMG	**Majia** baz=223	1.74	235	eP	Pg	07 28 24.4	+0.3
JKRS	**Kuro-shima**	1.75	73	P	Pg	07 28 24.9	+0.6
JKRS				eS	Sg	07 28 47.8	+0.7
SCST	**Cishan** baz=226	1.76	242	eP	Pb	07 28 23.3	+0.4
SCST	baz=226			eS	Sb	07 28 45.6	+0.7
LAY	**Lan-yu** baz=194	1.77	199	eP	Pb	07 28 23.0	-0.1
LAY	baz=194			eS	Sn	07 28 41.7	-1.9
ICHU	**Yijhu** baz=255	1.78	259	eP	Pb	07 28 23.2	-0.1
ICHU	baz=255			eS	Sn	07 28 44.5	+0.7
WSF	**Szhu** baz=265	1.80	268	eS	Sn	07 28 45.5	+1.4
MASBT	**Mashibuluo** baz=221	1.80	233	eP	Pb	07 28 23.6	0.0
EAST	**Anshuo** baz=218	1.81	223	eP	Pn	07 28 22.4	+0.7
CHN8	**Yiju** baz=255	1.85	259	eP	Pb	07 28 24.2	-0.2
JIJ	**Ishigaki jima**	1.90	70	P	Pg	07 28 26.4	-0.9
JIJ				S	Sg	07 28 49.7	-2.3
SLIU	**Shizi** baz=216	1.96	221	eP	Pn	07 28 24.6	+0.8
SCZT	**Fangliau** baz=220	1.97	227	eP	Pb	07 28 27.0	+0.6
JISG	**Ishigakijimahi**	2.13	66	P	Pg	07 28 29.3	-2.3
JISG				eS	Sb	07 28 54.5	-1.0
PHUB	**P'eng-hu** baz=252	2.40	266	eP	Pn	07 28 30.9	+1.2
PNG	**Penghu** baz=264	2.41	267	eP	Pn	07 28 31.3	+1.3
JTJ	**Tarama**	2.48	68	P	Pb	07 28 34.5	-0.6
JTJ				S	Sb	07 29 04.1	-1.5
VCHM	**Qimei** baz=256	2.58	259	eP	Pn	07 28 33.6	+1.4
VWUC	**VWUC** baz=297	2.79	297	eP	Pn	07 28 35.2	+0.1
PTTC	**Pingtan** baz=310	2.82	309	eP	Pn	07 28 35.2	-0.3
JIRB	**Irabujima**	2.94	67	P	Pb	07 28 40.6	-2.5
JIRB				S	Sb	07 29 16.3	-2.7
JMJ	**Miyako jima 2** baz=81	3.04	68	eP	Pb	07 28 42.9	-1.9
JIKM	**Ikemajima**	3.04	66	eS	Sb	07 29 17.6	-4.3
JMJ2	**Miyako jima3**	3.05	70	eS	Sb	07 29 18.7	-3.3
PTMZ	**Houxiangcun** baz=295	3.08	296	eP	Pn	07 28 39.2	+0.1
MATB	**Ma-tsu** baz=321	3.16	320	eP	Pn	07 28 39.8	-0.4
MSUT	**Lienchiang** baz=321	3.19	320	eP	Pn	07 28 40.5	-0.1
KNM	**Kinmen** baz=280	3.50	282	eP	Pn	07 28 46.5	+1.7
KNMB	**Chin-men Tao** baz=281	3.54	283	eP	Pn	07 28 45.5	0.0
LYJJ	**Jianjiangzhen** baz=324	3.57	323	eP	Pn	07 28 45.9	0.0
XPSS	**Dashiqiu** baz=332	3.67	331	eP	Pn	07 28 46.8	-0.4
MHZQ	**Yeshan** baz=311	3.71	310	eP	Pn	07 28 47.2	-0.6
AXDP	**Jialang** baz=287	4.02	288	eP	Pn	07 28 52.1	+0.1
SONM	**Songino Array** 0.6nm,0.6s,baz=153,slow=11,SNR=6.4	27.15	336	P	P	07 33 33.8	-0.1
H11N1	**WAKE ISLAND Hy** baz=288	41.60	87	T	T	08 21 00.2	
H11N2	**WAKE ISLAND Hy** baz=288	41.60	87	T	T	08 21 05.6	
H11N3	**WAKE ISLAND Hy** baz=288	41.62	87	T	T	08 21 04.6	
H11S3	**WAKE ISLAND Hy** baz=282,SNR=3.4	41.72	88	T	T	08 21 09.8	
H11S1	**WAKE ISLAND Hy** baz=282	41.73	88	T	T	08 21 12.2	
H11S2	**WAKE ISLAND Hy** baz=282	41.74	88	T	T	08 21 26.5	
WRA	**Warramunga Arr** 0.2nm,0.7s,baz=345,slow=8.2,SNR=1.5	44.99	164	P	P	07 36 06.4	+0.4
ASAR	**Alice Springs** 0.3nm,0.9s,baz=343,slow=7.0,SNR=2.2	48.46	166	P	P	07 36 34.3	+1.1
YKA	**Yellowknife Ar** 0.2nm,0.6s,baz=313,slow=4.4,SNR=5.7	83.04	23	P	P	07 40 15.3	-0.3

IDC 05 07:32:28.4±2.5, 53°.72N×86°.81E, h0km, mb1 3.0/2, mb1mx2.9/48, mbtmp3.0/2, ML2.6/2, Error ellipse: s-maj=22.5km s-min=12.5km az=72.0

NNC 05 07:32:28.4±4.1, 53°.68N×86°.74E, h0km, mb2.7, mpv2.6, Error ellipse: s-maj=36.9km s-min=14.6km az=44.0, Suspected Mining explosion.

ISC 05 07:32:31.3±4.5, 53°.7N±0°.1×86°.4E±0°.3, h0km, n8, σ1s.06/11, 8C-2D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZAA0	**Zalesovo Array** 0.2nm,0.3s	0.98	288	⇑P	Pg	07 32 50.0	-0.1
ZAA0	3.7nm,0.9s			⇓S	Sn	07 33 07.0	+0.1
ZALV	**Zalesovo Beam** 1.4nm,0.3s,baz=105,slow=17,SNR=12	0.98	288	Pg	Pb	07 32 50.4	-0.7
ZALV	1.2nm,0.3s,baz=99,slow=29,SNR=11			Lg	Lg	07 33 08.1	
ZALV	2.7nm,0.5s,baz=109,slow=26,SNR=4.9			Rg	Rg	07 33 15.5	
I46RU	**ZALESOVO INFRA** baz=99,slow=333,SNR=15	0.98	288	i		07 39 14.2	
KURK	**Kurchatov** 2.2nm,1.2s	5.62	242	⇑Pn	Pn	07 33 56.4	+0.5
KURK	2.7nm,0.9s			⇑Lg	Lg	07 35 34.0	
KURBB	**Kurchatov Arra** 0.1nm,0.3s,baz=59,slow=14,SNR=6.4	5.72	241	Pn	Pn	07 33 58.7	+1.4
KURBB	0.0nm,0.3s,baz=51,slow=31,SNR=1.6			Lg	Lg	07 35 37.1	
MK31	**Makanchi Array** 0.2nm,0.4s,baz=23,slow=12,SNR=4.3	7.35	203	⇑Pn	Pn	07 34 19.1	-0.7
MK31	0.2nm,0.4s,baz=13,slow=30			⇓Sn	Sn	07 35 44.5	+0.5
MK31	0.3nm,0.6s,baz=239,slow=38,SNR=4.5			⇑Lg	Lg	07 36 28.9	
MKAR	**Makanchi Array** 0.2nm,0.3s,baz=24,slow=13,SNR=7.1	7.35	203	Pn	Pn	07 34 20.6	+0.8
MKAR	0.1nm,0.3s,baz=26,slow=17,SNR=1.9			Sn	Sn	07 35 44.2	+0.2
MKAR	baz=25,slow=31,SNR=1.9			Lg	Lg	07 36 25.2	
MAKZ	**Makanchi** 0.4nm,0.6s	7.41	204	⇑Pn	Pn	07 34 22.0	+1.3
MAKZ	0.4nm,0.6s			⇑Sn	Sn	07 35 43.7	-1.8
MAKZ	1.9nm,1.1s			⇑Lg	Lg	07 36 28.4	

NOU 05 07:39:22.2, 38°.38S×175°.66E, h206km, MLv3.8, North Island, New Zealand

WEL 05 07:39:25.6, 38°S±3°×17°6E±°, h185km±5km, M2.6/25, MLv2.6/25, Error ellipse: s-maj=0.0km s-min=0.0km az=68.4, North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WTVZ	**West Tongariro**	0.66	196	P	Pn	07 39 52.1	+0.3
TWVZ	**Taurewa**	0.66	207	P	Pn	07 39 52.0	+0.2
NGZ	**Ngauruhoe**	0.71	194	P	Pn	07 39 52.5	+0.4
TOZ	**Tahuroa Road**	0.79	341	P	Pn	07 39 52.8	+0.3
TGRZ	**Tauranga**	0.83	25	P	Pn	07 39 52.8	+0.2
OPRZ	**Ohinepanea**	0.86	42	P	Pn	07 39 52.5	-0.3
BKZ	**Black Stump Fm**	0.86	143	P	Pn	07 39 53.1	+0.2
BKZ				S	Sn	07 40 12.7	-1.4
WNVZ	**Wahianoa**	0.86	192	P	Pn	07 39 53.3	+0.2
WNVZ				S	Sn	07 40 14.1	-0.4
MTHZ	**Maungataniwha**	0.88	115	P	Pn	07 39 53.4	+0.4
MTHZ				S	Sn	07 40 13.3	-1.0
PKVZ	**Pokaka**	0.89	205	P	Pn	07 39 52.4	-0.7
RTZ	**Ruatahuna**	0.92	99	P	Pn	07 39 53.4	+0.1
RTZ				S	Sn	07 40 14.0	-0.8
MOVZ	**Moawhango**	0.93	183	P	Pn	07 39 53.3	-0.1
MOVZ				S	Sn	07 40 13.1	-2.0
NMHZ	**Naumai**	0.98	129	P	Pn	07 39 55.0	+1.2
NMHZ				S	Sn	07 40 16.2	+0.6
BHHZ	**Black Hill Sta**	1.02	170	P	Pn	07 39 54.1	+0.1
BHHZ				S	Sn	07 40 14.1	-2.1
URZ	**Urewera**	1.04	78	P	Pn	07 39 53.6	-0.4
URZ				S	Sn	07 40 14.3	-1.7
KWHZ	**Kaweka Forest**	1.05	154	P	Pn	07 39 54.9	+0.7
ARHZ	**Aropaoanui**	1.20	131	P	Pn	07 39 56.2	+0.9
ARHZ				S	Sn	07 40 18.4	-0.1
KRHZ	**Kereru**	1.24	160	P	Pn	07 39 56.0	+0.3
KRHZ				S	Sn	07 40 17.7	-1.4
MWZ	**Matawai**	1.35	84	P	Pn	07 39 56.6	0.0
WAZ	**Wanganui**	1.43	207	P	Pn	07 39 57.4	+0.1
PNHZ	**Pukenui**	1.46	169	P	Pn	07 39 57.7	+0.1
PNHZ				S	Sn	07 40 20.7	-1.9
MKAZ	**Moumakai**	1.47	339	P	Pn	07 39 57.9	+0.2
CKHZ	**Cape Kidnapper**	1.53	141	P	Pn	07 39 58.9	+0.7
KAHZ	**Kahuranaki**	1.55	148	P	Pn	07 39 59.2	+0.7
KAHZ				S	Sn	07 40 23.5	-0.5
RUGZ	**Raukumara Rang**	1.55	71	P	Pn	07 39 57.6	-1.0
TSZ	**Takapari Road**	1.58	176	P	Pn	07 39 58.6	-0.1
TSZ				S	Sn	07 40 22.4	-2.2
KHEZ	**Kahui Hut**	1.63	240	P	Pn	07 39 59.5	+0.2
WPHZ	**Waipukurau**	1.65	163	P	Pn	07 39 59.4	0.0
WPHZ				S	Sn	07 40 23.9	-1.9
HAZ	**Te Kaha**	1.71	65	P	Pn	07 39 59.1	-0.8
HAZ				S	Sn	07 40 23.5	-3.1
DVHZ	**Dannevirke**	1.83	172	P	Pn	07 40 00.8	-0.5
DVHZ				S	Sn	07 40 26.5	-2.7
CNGZ	**Carnagh Statio**	1.87	91	P	Pn	07 40 02.3	+0.7
PKGZ	**Pakihiroa**	1.87	72	P	Pn	07 40 01.6	-0.2
PRHZ	**Porangahau**	1.89	161	P	Pn	07 40 01.7	-0.1
PRWZ	**Pori Road**	2.07	177	P	Pn	07 40 03.3	-0.4
WMGZ	**Waiomatatini S**	2.15	73	P	Pn	07 40 04.7	+0.1
MRZ	**Mangatainoka R**	2.18	185	P	Pn	07 40 04.1	-0.9
BFZ	**Birch Farm**	2.22	172	P	Pn	07 40 04.6	-0.8
OGWZ	**Otaki Gorge**	2.39	192	P	Pn	07 40 06.3	-0.9
KIW	**Kapiti Island**	2.48	196	P	Pn	07 40 06.9	-1.4
MTW	**Mount Morrison**	2.68	185	P	Pn	07 40 07.3	-3.3
CAW	**Cannon Point**	2.69	192	P	Pn	07 40 09.3	-1.3
DUWZ	**D'Urville Isla**	2.74	212	P	Pn	07 40 09.7	-1.7
WCZ	**Waipu Caves**	2.80	335	P	Pn	07 40 12.0	-0.1
WEL	**Wellington**	2.91	196	P	Pn	07 40 11.8	-1.6
TRWZ	**Traveller**	2.92	182	P	Pn	07 40 11.7	-1.7

MSWZ	Moikau Station	2.96	188	P	Pn	07 40 12.0	-2.0
TCW	Tory Channel	2.97	203	P	Pn	07 40 12.5	-1.5
BHW	Baring Head	3.01	194	P	Pn	07 40 12.7	-1.9
PLWZ	Palliser	3.12	188	P	Pn	07 40 13.7	-2.1
TUWZ	Tuamarina	3.28	206	P	Pn	07 40 15.8	-1.9
NNZ	Nelson	3.32	214	P	Pn	07 40 16.0	-2.2
QRZ	Quartz Range	3.46	226	P	Pn	07 40 16.9	-3.0
BSWZ	Blackbirch Sta	3.56	204	P	Pn	07 40 19.3	-1.9
THZ	Tophouse	3.97	213	P	Pn	07 40 23.9	-2.5
KHZ	Kahutara	4.30	203	P	Pn	07 40 28.4	-2.1
GVZ	Greta Valley S	4.96	204	P	Pn	07 40 36.4	-2.6
LTZ	Lake Taylor	5.07	211	P	Pn	07 40 37.4	-3.1
OKCZ	Okains Bay	5.64	201	P	Pn	07 40 45.0	-2.8
MQZ	McQueen's Vall	5.74	204	P	Pn	07 40 45.3	-3.9
RACZ	Rakaia	5.93	207	P	Pn	07 40 47.7	-3.9
TMZ	Timaru	6.92	210	P	Pn	07 41 00.7	-3.8
ODZ	Otahua Downs	7.61	209	P	Pn	07 41 10.6	-3.1

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*ATH **05** 07:39:28.0, 36°.71N×27°.39E, h41^{km}±10^{km}, ML3.0/2, Error ellipse: s-maj=14.5km s-min=1.8km az=224.0*

*DDA **05** 07:39:27.2, 36°.73N×27°.47E, h7^{km}±2^{km}, ML2.5*

*ISK **05** 07:39:27.7, 36°.79N×27°.44E, h6^{km}, ML2.7/14*

ISC 05 07:39:28.2±1.0**, 36°.77N**±0°.03×**27°.46E**±0°.03**, h11**^{km}±9^{km}**, n25, σ0^{s}.57**/40**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DATC	Datca-Mugla	0.16	93	PG	Pg	07 39 31.8	+0.1
BDRM	Kayabasi	0.30	357	*i* P	Pg	07 39 34.1	-0.2
BDRM				*i* S	Sg	07 39 38.8	+0.5
BDRM				IAML		07 39 39.0	
	comp=N,2µm,0.3s						
BDRM				IAML		07 39 39.0	
	comp=E,613nm,0.2s						
NISR	Nisiros	0.31	240	P	Pb	07 39 35.6	-0.1
NISR				S	Sb	07 39 41.1	+0.4
NISR				AML	AML	07 39 42.1	
	comp=E,13843µm,0.3s						
NISR				AML	AML	07 39 43.3	
	comp=N,4100µm,0.2s						
BODT	Bodrum	0.32	337	PG	Pg	07 39 33.9	-0.7
BODT				SG	Sg	07 39 38.6	-0.3
YKAV	Yalikavak-Bodr	0.39	338	PG	Pg	07 39 35.3	-0.5
YKAV				SG	Sg	07 39 40.8	-0.2
MLSB	Milas	0.58	25	PG	Pg	07 39 39.2	-0.3
MRSB	Marmaris-Mugla	0.59	95	PG	Pg	07 39 39.9	+0.2
MRSB				SG	Sb	07 39 48.7	-0.2
TURN	Turunc	0.63	89	PG	Pg	07 39 40.5	+0.2
TURN	Turunc	0.63	89	*i* P	Pg	07 39 39.5	-0.8
TURN				*i* S	Sg	07 39 48.4	-0.2
TURN				IAML		07 39 51.0	
	comp=E,248nm,0.2s						
TURN				IAML		07 39 52.0	
	comp=N,258nm,0.3s						
DDIM	Aydin, Didim	0.71	346	*i* P	Pg	07 39 42.3	+0.4
DDIM				*i* S	Sb	07 39 52.7	+0.3
DDIM				IAML		07 39 55.0	
	comp=N,254nm,0.3s						
DDIM				IAML		07 39 58.0	
	comp=E,280nm,0.9s						
YER	Yerkesik	0.75	61	PG	Pg	07 39 42.7	0.0
YER				SG	Sg	07 39 53.6	+1.0
ARG	Arkhangelos	0.77	136	P	Pb	07 39 43.0	-0.5
ARG				S	Sb	07 39 54.0	+0.1
ARG				AML	AML	07 39 56.2	
	comp=E,1798µm,0.4s						
ARG				AML	AML	07 39 56.4	
	comp=N,1242µm,0.4s						
ARG	Arkhangelos	0.77	136	PG	Pb	07 39 43.3	-0.2
ARG				SG	Sb	07 39 54.8	+0.9
MULA	Mugla, Merkez-	0.84	54	*i* P	Pg	07 39 43.6	-0.8
MULA				*i* S	Sg	07 39 56.4	+1.0
MULA				IAML		07 39 58.0	
	comp=E,159nm,0.3s						
MULA				IAML		07 39 59.0	
	comp=N,88nm,0.7s						
GCAM	G?zelcaml?	0.95	349	PG	Pg	07 39 46.2	-0.3
GCAM	G?zelcaml?	0.95	349	*i* P	Pg	07 39 46.1	-0.4
GCAM				IAML		07 39 58.0	
	comp=N,259nm,1.2s						
GCAM				*i* S	Sb	07 39 60.0	+0.8
GCAM				IAML		07 40 07.0	
	comp=E,165nm,0.5s						
DALY	Dalyan (Mula)	0.96	87	PG	Pb	07 39 46.8	+0.1
DALY	Dalyan (Mula)	0.96	87	*i* P	Pg	07 39 45.2	-1.3
DALY				*i* S	Sb	07 39 59.7	+0.3
SMG	Samos	1.06	332	P	Pg	07 39 48.1	-0.5
AYDB	Zeytinkoy-Aydi	1.23	16	PN	Pn	07 39 50.3	-1.1
FETY	Fethiye	1.31	95	PN	Pg	07 39 53.3	0.0
TAVA	DENIZLI_Tavas	1.35	59	*i* P	Pn	07 39 52.5	-0.5
TAVA				*i* S	Sb	07 40 11.5	+0.6
APE	Apeiranthos	1.58	282	PN	Pn	07 39 56.4	+0.3
GOLH	Golhisar	1.74	74	*i* P	Pb	07 40 00.4	+0.1
GOLH				*i* S	Sg	07 40 24.5	+0.2
GOLH				IAML		07 40 36.0	
	comp=N,27nm,0.6s						
CHOS	Chios island	1.97	326	PN	Pn	07 40 02.1	+0.6

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*DJA **05** 07:41:06.0±0.9, 12°S±8°×11°4E±°, h17^{km}±12^{km}, M4.1/11, mb4.1/2, MLv4.1/11*

*IDC **05** 07:41:09.7±2.4, 11°.19S×115°.79E, h0^{km}, mb3.6/4, mb1 3.9/6, mb1mx3.5/49, mbtmp3.6/6, ML3.6/2, Error ellipse: s-maj=110.1km s-min=20.7km az=48.0*

ISC 05 07:41:03.9±1.3**, 11°.83S**±0°.09×**114°.39E**±0°.08**, h35**^{km}**, n14, σ1^{s}.22**/16**, mb3.5**/4**, South of Bali**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DNP	Denpasar	3.24	15	P	Pn	07 41 52.4	+0.2
JAGI	Jajag, Banyuwa	3.35	356	P	Pn	07 41 54.3	+0.5
JAGI				S	Sn	07 42 31.5	-0.8
SRBI	Singaraja	3.81	12	P	Pn	07 41 59.5	-0.6
SRBI				S	Sn	07 42 43.9	+0.2
TWSI	Taliwang, Sumb	3.94	39	P	Pn	07 42 02.6	+0.8
TWSI				S	Sn	07 42 45.5	-1.3
ABJI	Asem Bagus	4.01	358	P	Pn	07 42 03.2	+0.3
PLAI	Plampang	4.48	49	P	Pn	07 42 09.8	+0.5
UGM	Wanagama	5.44	315	P	Pn	07 42 23.0	+0.4
	0.6nm85nm,1.1s						
UGM				S	Sn	07 43 24.5	+0.4
	0.6nm85nm,1.1s						
EDFI	Ende, Flores	7.81	68	P	Pn	07 42 57.6	+2.3
FITZ	Fitzroy Crossi	12.53	121	Pn	Pn	07 43 58.5	-1.3
	0.4nm,0.3s,baz=297,slow=10,SNR=8.9						
FITZ				Sn	Sn	07 46 04.2	-14
	0.4nm,0.3s,baz=188,slow=21,SNR=3.3						
WRA	Warramunga Arr	20.80	115	P	P	07 45 43.8	+1.4
	0.2nm,0.3s,baz=293,slow=10,SNR=14						
WRA				S	S	07 49 23.6	-9.1
	0.1nm,0.3s,baz=291,slow=23,SNR=1.9						
ASAR	Alice Springs	21.97	125	P	P	07 45 56.5	+1.6
	0.7nm,0.5s,baz=303,slow=10,SNR=13						
ASAR				S	S	07 49 53.9	-1.8
	0.6nm,1.0s,baz=309,slow=26,SNR=3.9						
CMAR	Chiang Mai Arr	33.73	333	P	P	07 47 53.8	+12
	1.1nm,0.3s,baz=145,slow=6.4,SNR=2.0						
SONM	Songino Array	59.82	354	P	P	07 51 13.9	+8.0
	0.1nm,0.3s,baz=156,slow=4.7,SNR=1.3						
MKAR	Makanchi Array	65.05	336	P	P	07 51 51.6	+11
	0.2nm,0.4s,baz=142,slow=6.7,SNR=2.6						

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*UPA **05** 07:42:50.7±4.2, 5°.29N×82°.80W, h2^{km}±29^{km}, MW4.3*

*IDC **05** 07:42:52.5±0.8, 5°.21N×82°.62W, h0^{km}, mb4.0/10, mb1 4.3/13, mb1mx4.1/31, mbtmp4.1/13, ML3.5/3, MS3.9/19, Ms1 3.9/19, ms1mx3.7/34, Error ellipse: s-maj=32.3km s-min=15.0km az=58.0*

*NEIC **05** 07:42:53.6±2.0, 5°.28N±0°.04×82°.67W±0°.07, h10^{km}±1^{km}, mb4.6/45, Error ellipse: s-maj=13.5km s-min=2.9km az=240.0*

*UCR **05** 07:42:53.7±1.3, 5°.51N×82°.73W, h0^{km}±61^{km}, MW4.2, mb4.6(NEIC)*

*GCMT **05** 07:42:58.6±0.2, 5°.22N±0°.01×82°.56W±0°.02, h19^{km}±1^{km}, MW4.9/101, Moment Tensor Solution. s27,c28; s101,c133; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.19±.10; $M_{\theta\theta}$-0.09±.09; $M_{\phi\phi}$0.28±.11; $M_{r\theta}$-0.46±.20; $M_{\theta\phi}$2.80±.09; $M_{\phi r}$-0.03±.19; Best double couple: $M_0$2.84400×10^{16} NP1:ϕ_s178.00000°, δ81.00000°, λ-179.00000°. NP2:ϕ_s88.00000°, δ89.00000°, λ-9.00000°. Principal axes: T 2.9380, Plg6.0000°, Azm133.0000°; N -0.1880, Plg81.0000°, Azm264.0000°; P -2.7500, Plg7.0000°, Azm43.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 05 07:42:53.1±0.4**, 5°.28N**±0°.04×**82°.61W**±0°.05**, h10**^{km}**, n169, σ1^{s}.64**/157**, mb4.5**/25**, MS4.0**/16**, 13C-8D, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CACAO	El Cacao, Vera	2.69	40	⇓*i*P	Pn	07 43 34.7	-1.7
GMAL	Guarumal, Vera	2.82	29	*e*P	Pn	07 43 37.0	-1.3
GMAL				*e*S	Sn	07 44 10.0	-2.4
CHIR3	Chiriqui UPA,	3.11	5	*e*P	Pn	07 43 40.6	-1.5
CCOL	Caracol de Cor	3.13	353	⇓*e*P	Pn	07 43 41.1	-1.3
PIRO	Carate, Puerto	3.19	347	⇓*e*P	Pn	07 43 41.4	-1.9
CDITO	Canoas	3.28	355	⇑*i*P	Pn	07 43 42.4	-2.2
PTJ1	Puerto Jimnez	3.31	348	*e*P	Pn	07 43 42.5	-2.5
AZU	Azuero	3.41	43	*e*P	Pn	07 43 45.6	-0.7
BCO2	Palmira	3.42	1	*e*P	Pn	07 43 45.1	-1.5
BCO2				*e*S	Sn	07 44 25.6	-1.7
BRU2	Volcan	3.49	359	⇑*i*P	Pn	07 43 46.1	-1.5
BRU2				*e*S	Sn	07 44 28.1	-1.0
BRU2	Volcan	3.49	359	⇑*e*P	Pn	07 43 46.2	-1.5
BRU2				*e*S	Sn	07 44 28.1	-1.0
BC3P	Paso Ancho	3.51	0	*e*P	Pn	07 43 46.6	-1.4
RIOS	Rincon, Osa	3.52	345	⇑*e*P	Pn	07 43 45.1	-2.7
EDSV	San Vito	3.54	354	⇓*e*P	Pn	07 43 47.1	-1.1
EDPN	Palmar Norte	3.75	347	*e*P	Pn	07 43 49.3	-1.7
POTG	Potrero Grande	3.78	352	⇑*e*P	Pn	07 43 49.5	-2.1
EDBA	Buenos Aires	3.91	350	⇓*e*P	Pn	07 43 52.6	-0.7
EDLM	Las Mercedes	4.09	346	*e*P	Pn	07 43 54.2	-1.5
EDDO	Dominical	4.14	343	⇓*e*P	Pn	07 43 54.9	-1.5
PEZE	Perez Zeledon,	4.21	346	⇑*i*P	Pn	07 43 56.0	-1.5
PEZE				*e*S	Sn	07 44 44.5	-2.3
CDM	Cerro de Muert	4.40	345	⇑*i*P	Pn	07 43 59.0	-1.4
CDM				*e*S	Sn	07 44 50.1	-1.7
RIMA	Rio Macho	4.63	345	⇑*e*P	Pn	07 44 02.1	-1.1
LCR2	La Lucha 2	4.64	343	⇑*e*P	Pn	07 44 01.9	-1.6
ARRA3	Arraijan, Pana	4.69	39	*e*P	Pn	07 44 05.8	+1.8
BCIP	Isla Barro Col	4.74	35	*e*S	Sg	07 45 21.3	-4.2
BCIP	Isla Barro Col	4.74	35		Pn	07 44 06.1	+1.4
JACO	JACO, Garabito	4.80	335	⇑*e*P	Pn	07 44 03.3	-2.2
CVTR	Volcan Turrial	4.84	346	⇑*e*P	Pn	07 44 05.7	-0.8
HDC	Heredia	4.92	342	⇑*i*P	Pn	07 44 06.5	-0.8
HDC				*e*S	Sn	07 45 03.2	-1.2
HDC	Heredia	4.92	342	⇑*e*P	Pn	07 44 06.4	-0.8
HDC	Heredia	4.92	342	Pn	Pn	07 44 07.0	-0.3
LAFE	Finca La Fe, P	5.04	333	*e*P	Pn	07 44 07.7	-1.1
SRA1	San Ramn	5.12	339	*e*P	Pn	07 44 08.9	-1.1
PTAC	Punta Ardita,	5.12	69	*e*P	Pn	07 44 11.5	+1.5
MALC	Bahia Malaga	5.41	103	*e*P	Pn	07 44 15.2	+1.3
JTS	Las Juntas de	5.49	335	*e*P	Pn	07 44 14.3	-0.7
JTS	Las Juntas de	5.49	335	Pn	Pn	07 44 14.3	-0.7
ARE1	Arenal 1	5.55	338	⇓*e*P	Pn	07 44 15.9	0.0
CEDE	Laguna Cedeo	5.57	338	*e*P	Pn	07 44 15.1	-1.1
PLVR	Palo Verde	5.72	332	⇓*e*P	Pn	07 44 15.6	-2.7
CUI	Cuipilapa	5.91	335	*e*P	Pn	07 44 19.5	-1.3
BUEV	Buena Vista	6.14	333	*e*P	Pn	07 44 23.6	-0.5
GB1A	Borinquen Arri	6.16	334	*e*P	Pn	07 44 23.4	-0.8
CAP2	Capurgana	6.20	57	*e*P	Pn	07 44 28.0	+3.3
CAP2				*e*S	Sn	07 45 40.0	+4.3
BBAC	Balboa, Cauca	6.26	121	*e*P	Pn	07 44 23.9	-1.8
BBAC				*e*S	Sn	07 45 30.6	-6.9
PLMC	San Jos del P	6.32	93	*e*P	Pn	07 44 26.8	+0.4
PLMC				*e*S	Sn	07 45 35.9	-2.8
YOTC	Yotoco, Valle	6.38	101	*e*P	Pn	07 44 27.4	+0.1
YOTC				*e*S	Sn	07 45 35.8	-4.5
OTAV	Otavalo	6.51	140	*e*P	Pn	07 44 28.3	-1.0
OTAV	Otavalo	6.51	140	Pn	Pn	07 44 29.6	+0.2
OTAV	Otavalo	6.51	140	*e*P	Pn	07 44 29.5	+0.2
DBBC	Dabeiba	6.59	75	*e*P	Pn	07 44 32.8	+2.6
DBBC				*e*S	Sn	07 45 35.9	-10
GCUF	Volcan Galeras	6.62	127	*e*P	Pn	07 44 32.0	+1.1
PCON	Cinco Dias	6.86	115	*e*P	Pn	07 44 35.5	+1.2
MARP	Paez Belalcaza	7.07	110	*e*P	Pn	07 44 38.6	+1.7
ESPN	Las Esperanzas	7.07	346		Pn	07 44 36.6	-0.1
ACON	Acoyapa	7.11	339		Pn	07 44 36.9	-0.3
GUY2C	Guyana, Caldas	7.22	90	*e*P	Pn	07 44 41.5	+2.3
ANIL	Santa Ana	7.22	96	*e*P	Pn	07 44 40.5	+1.4
RREF	El Recreo	7.25	93	*e*P	Pn	07 44 41.6	+2.0
TOLC	Tolima	7.30	95	*e*P	Pn	07 44 42.0	+1.9
ORTC	Ortega, Tolima	7.47	100	*e*P	Pn	07 44 44.2	+2.0
BETC	Betania	7.60	110	*e*P	Pn	07 44 46.4	+2.3
NORC	Norcasia	7.71	88	*e*P	Pn	07 44 49.0	+3.4
MOTC	Monteria, Cord	7.72	63	*e*P	Pn	07 44 49.0	+3.4
GARC	Garzon, Huila	7.74	113	*e*P	Pn	07 44 47.9	+1.7
FLOC	Florencia	7.86	118	*e*P	Pn	07 44 49.1	+1.6
FLOC				*e*S	Sn	07 46 13.7	-2.9
ROSC	El Rosal	8.27	93	Pn	Pn	07 44 57.5	+4.0
	13nm,0.3s,baz=264,slow=3.4,SNR=13						
ROSC				LR	LR	07 47 54.2	
	comp=Z,282nm,18.9s,baz=30,slow=36						
ROSC	El Rosal	8.27	93	Pn	Pn	07 44 55.2	+1.6
MACC	Macarena, Meta	9.28	109	*e*P	Pn	07 45 08.0	+0.9
PAYG	Puerto Ayora	9.68	233	Pn	Pn	07 45 12.3	-0.3
TGUH	Tegucigalpa,Un	9.86	333	Pn	Pn	07 45 15.2	+0.1
GUVC	San Jose del G	10.32	105	*e*P	Pn	07 45 21.7	+0.3
MTO3	Montecristo	11.24	324		Pn	07 45 34.7	+0.7
ESQI	Esquipulas	11.35	325		Pn	07 45 35.6	0.0
SDV	Santo Domingo	12.41	73	LR	LR	07 50 30.8	
	comp=Z,531nm,20.3s,baz=249,slow=37						
ATAH	Atahualpa	13.03	161	Pn	Pn	07 45 59.8	+1.0
	0.4nm,0.3s,baz=3.2,slow=9.7,SNR=3.5						
ATAH				LR	LR	07 50 35.5	
	comp=Z,2µm,19.8s,baz=338,slow=36						
TEIG	Tepich	15.85	340	LR	LR	07 52 14.7	
	comp=Z,824nm,19.9s,slow=35						
CZSB	Cruzeiro do Su	16.27	143	*e*P	Pn	07 46 41.2	-0.6
CMIG	Matias Romero	16.80	315	Pn	P	07 46 51.2	+0.4
	0.1nm,0.3s,baz=140,slow=16,SNR=2.1						
CMIG				LR	LR	07 52 18.9	
	comp=Z,609nm,19.4s,baz=124,slow=34						
SDDR	Presa de Saban	17.53	38	P	Pn	07 46 58.2	+0.4
NNA	Nana	18.09	162	P	Pn	07 47 05.4	+0.7
	0.2nm,0.3s,baz=340,slow=8.4,SNR=7.3						
NNA				LR	LR	07 53 28.2	
	comp=Z,259nm,19.8s,baz=320,slow=35						
MLPR	Magueyes Islan	19.76	49	P	Pn	07 47 24.9	0.0
MLPR				IAmb	IAmb	07 47 51.3	
	comp=Z,71nm,1.5s						
TLIG	Tlapa	19.82	309	P	Pn	07 47 24.4	-1.2
AOPR	Arecibo Observ	20.21	49	P	Pn	07 47 30.0	-0.2
SJG	San Juan	20.53	50	P	Pn	07 47 34.2	+0.3
	comp=Z,7.9nm,0.7s,baz=240,slow=11,SNR=5.7						
SJG				LR	LR	07 56 03.0	
	comp=Z,184nm,18.3s,baz=232,slow=38						
SJG	San Juan	20.53	50	P	P	07 47 32.8	+1.0
GCPR	Guaynabo City	20.70	50	P	P	07 47 35.3	+1.7
GCPR				IAmb	IAmb	07 47 40.7	
	comp=Z,43nm,1.1s						
HUMP	Col San Antoni	20.77	51	P	P	07 47 33.9	-0.6
MTP	Monte Pirata	20.98	51		P	07 47 37.7	+1.0
MTP				IAmb	IAmb	07 47 43.3	
	comp=Z,52nm,1.1s						
ETMB	Extrema	22.18	133	*e*P	P	07 47 49.7	+0.1
PTGA	Pitinga	23.39	104	P	P	07 48 03.7	+1.4
	comp=Z,1.4nm,0.5s,baz=301,slow=18,SNR=2.2						
PTGA				LR	LR	07 57 15.1	
	comp=Z,259nm,19.0s,baz=284,slow=37						
MACA	Manacapuru-AM	23.45	110	*e*P	P	07 48 00.9	-2.1
SAML	Samuel	23.98	126	P	P	07 48 07.5	-0.5
SAML				IAmb	IAmb	07 48 11.0	
	comp=Z,27nm,1.1s						
ZAIG	Zacatecas	25.96	314	P	P	07 48 27.4	+1.0
MNMC	Minye Minye	27.44	152	P	P	07 48 38.5	-1.2
MNMC				IAmb	IAmb	07 48 54.4	
	comp=Z,10.0nm,0.9s						
Z47A	Carrollton	28.24	350	P	P	07 48 45.6	-0.7
NATX	Nacogdoches	28.66	338	P	P	07 48 50.7	+0.5
VILB	Vilhena	28.70	129	*e*P	P	07 48 50.7	-0.1
MALB	Monte Alegre	29.19	103	*e*P	P	07 48 53.5	-1.5
NPGB	Novo Progresso	29.83	114	*e*P	P	07 48 59.4	-1.3
SIV	San Ignacio	30.02	135	P	P	07 49 02.8	+0.4
	comp=Z,3.2nm,1.1s,baz=280,slow=20,SNR=6.4						
V48A	Smith Brothers	30.56	353	P	P	07 49 06.9	0.0
V48A				IAmb	IAmb	07 49 09.3	
	comp=Z,10nm,0.8s						
H06E1	SOCORRO T-PHAS	30.70	298	T	T	08 21 23.8	
	SNR=53						
TXAR	Lajitas Array	31.13	323	LR	LR	08 01 48.9	
	comp=Z,113nm,20.2s,baz=0.0,slow=36						
LCAR	Lake Charles	31.63	347	P	P	07 49 15.9	-0.5
LCAR				IAmb	IAmb	07 49 17.7	
	comp=Z,8.5nm,0.8s						
T45A	Paducah	32.07	351	P	P	07 49 20.1	-0.1
SIUC	Southern Illin	32.84	350	P	P	07 49 29.5	+2.5
SIUC				IAmb	IAmb	07 49 40.2	
	comp=Z,7.5nm,0.8s						
MGMO	Mountain Grove	32.93	346	P	P	07 49 27.9	+0.1
MGMO				IAmb	IAmb	07 49 29.4	
	comp=Z,8.9nm,0.9s						
FVM	French Village	33.32	349	P	P	07 49 30.6	-0.5
CCM	Cathedral Cave	33.56	348	P	P	07 49 33.0	-0.3
CCM				IAmb	IAmb	07 49 34.3	
	comp=Z,9.5nm,0.9s						
OLIL	Olney	33.67	352	P	P	07 49 33.7	-0.5
S39A	Bolivar	33.71	345	P	P	07 49 34.9	+0.4
P43A	Skaggs, Pawnee	34.77	351	P	P	07 49 44.0	+0.2
HDIL	Hopedale	35.63	351	P	P	07 49 51.2	+0.1
121A	Cookes Peak, D	35.88	322	P	P	07 49 53.4	-0.3
121A				IAmb	IAmb	07 50 00.5	
	comp=Z,14nm,1.2s						
AQDB	Aquidauana	36.80	135	*e*P	P	07 50 01.1	-0.2
ANMO	Albuquerque	36.84	326	P	P	07 50 03.6	+1.8
ANMO				IAmb	IAmb	07 50 05.8	
	comp=Z,10nm,1.4s						
ARAG	Araguaiana, MT	36.94	125	*e*P	P	07 50 02.5	-0.2
SMTB	Santa Maria do	37.64	112	*e*P	P	07 50 07.8	-0.9
CO02	Combarbal	37.94	164	P	P	07 50 12.8	+1.8
SDCO	Great Sand Dun	38.47	330	P	P	07 50 17.7	+2.0
SDCO				IAmb	IAmb	07 50 19.7	
	comp=Z,15nm,1.4s						
H03N2	Juan Fernandez	38.66	175	T	T	08 31 11.7	
	baz=354,slow=76,SNR=8.3						
H03N1	Juan Fernandez	38.67	175	T	T	08 31 12.6	
	baz=354,slow=76,SNR=10						
H03N3	Juan Fernandez	38.68	175	T	T	08 31 11.4	
	baz=354,slow=76,SNR=9.7						
W18A	Petrified Fore	38.84	323	P	P	07 50 19.8	+1.1
W18A				IAmb	IAmb	07 50 23.0	
	comp=Z,13nm,1.2s						
ZON	Zonda	38.96	161	P	P	07 50 20.5	+0.9
ZON				IAmb	IAmb	07 50 23.0	
	comp=Z,12nm,1.3s						
VA03	San Esteban	39.53	164	P	P	07 50 25.1	+0.8
VA03				IAmb	IAmb	07 50 30.6	
	comp=Z,13nm,1.1s						
MVCO	Mesa Verde	39.62	327	P	P	07 50 25.4	+0.2
CPUP	Villa Florida	39.85	143	LR	LR	08 08 00.6	
	comp=Z,219nm,20.0s,baz=322,slow=38						
BDFB	Brasilia	40.07	122	LR	LR	08 07 00.3	
	comp=Z,268nm,20.7s,baz=294,slow=36						
WUAZ	Wupatki	40.09	322	P	P	07 50 29.4	+0.2
SRU	San Rafael Swe	42.09	327	P	P	07 50 46.8	+1.2
RSSD	Black Hills	43.03	337	P	P	07 50 54.4	+1.3
BI02	San Fabin de	43.05	167	P	P	07 50 54.9	+1.6
SHPR	Sheep Range	43.08	321	P	P	07 50 55.0	+1.3
PDAR	Pinedale Array	44.31	331	P	P	07 51 05.8	+2.3
	comp=Z,0.8nm,0.8s,baz=122,slow=11,SNR=6.8						
PDAR				LR	LR	08 11 47.3	
	comp=Z,165nm,18.5s,baz=140,slow=39						
PDAR	Pinedale Array	44.31	331	P	P	07 51 03.0	-0.5
LC01	Cunco	45.07	168	P	P	07 51 11.0	+1.7
LC01				IAmb	IAmb	07 51 11.8	
	comp=Z,6.6nm,0.9s						
HVU	Hansel Valley	45.20	328	P	P	07 51 12.1	+1.5
TPH	Tonopah	45.34	321	P	P	07 51 11.7	-0.1
ULM	Lac du Bonnet	46.19	348	P	P	07 51 17.5	-0.5
	comp=Z,1.8nm,0.5s,baz=166,slow=8.3,SNR=4.9						
OMMB	Old Mammoth Mi	46.20	319	P	P	07 51 18.5	-0.2
OMMB				IAmb	IAmb	07 51 22.1	
	comp=Z,9.4nm,1.3s						
NVAR	Mina Array Bea	46.23	321	P	P	07 51 20.4	+1.6
	comp=Z,2.4nm,0.8s,baz=130,slow=7.1,SNR=19						
NVAR				LR	LR	08 10 56.8	
	comp=Z,251nm,18.3s,baz=161,slow=36						
NVAR	Mina Array Bea	46.23	321	P	P	07 51 19.9	+1.1
MDPB	Devils Postpil	46.26	319	P	P	07 51 20.2	+1.0
MDPB				IAmb	IAmb	07 51 22.6	
	comp=Z,6.3nm,1.0s						
PLCA	Paso Flores	47.11	167	P	P	07 51 25.6	+0.1
	comp=Z,5.1nm,1.2s,baz=321,slow=8.2,SNR=7.0						
PLCA	Paso Flores	47.11	167	P	P	07 51 25.8	+0.4
PLCA				IAmb	IAmb	07 51 27.3	
	comp=Z,8.7nm,1.4s						
PLCA	Paso Flores	47.11	167	*e*P	P	07 51 27.1	+1.6
RKT	Rikitea	58.39	239	*e*LR	LR	08 09 59.4	
	comp=Z,342nm,27.2s						
YKA	Yellowknife Ar	61.77	344	P	P	07 53 12.9	+1.3
	comp=Z,1.0nm,0.7s,baz=133,slow=7.4,SNR=18						
PPT	Papeete	69.86	249	LR	LR	08 16 59.6	
	comp=Z,130nm,18.9s,baz=64,slow=29						
PPT2	Papeete2	69.87	249	*e*LR	LR	08 15 17.6	
	comp=Z,137nm,23.5s						
TBI	Tubuai	71.11	243	*e*LR	LR	08 15 53.2	
	comp=Z,337nm,29.2s						
BCAR	Beaver Creek A	71.71	336	P	P	07 54 17.2	+2.0
ILAR	Eielson Array	74.46	336	P	P	07 54 33.2	+1.9
	comp=Z,1.0nm,0.8s,baz=116,slow=4.6,SNR=13						
ILAR				LR	LR	08 30 09.3	
	comp=Z,65nm,19.6s,baz=146,slow=38						
ILAR	Eielson Array	74.46	336	P	P	07 54 31.6	+0.2
ESDC	Sonseca Array	77.91	51	LR	LR	08 25 40.7	
	comp=Z,30nm,20.4s,baz=320,slow=33						
ESDC	Sonseca Array	77.91	51	P	P	07 54 50.8	-0.8
TORD	Torodi Ar. Bea	83.29	77	P	P	07 55 21.4	+0.6
	comp=Z,0.7nm,0.6s,baz=286,slow=5.8,SNR=2.6						
TORD				LR	LR	08 31 14.0	
	comp=Z,52nm,21.0s,baz=200,slow=35						
NOA	NORSAR Array B	87.28	29	LR	LR	08 29 57.2	
	comp=Z,19nm,21.5s,baz=290,slow=32						
FINES	FINESS Array B	94.19	27	LR	LR	08 41 41.7	
	comp=Z,42nm,18.2s,baz=328,slow=37						
H11N3	WAKE ISLAND Hy	107.31	292	T	T	09 57 11.1	
	baz=79,slow=75,SNR=9.7						
H11N2	WAKE ISLAND Hy	107.32	292	T	T	09 57 11.0	
	baz=79,slow=75,SNR=8.6						
H11N1	WAKE ISLAND Hy	107.33	292	T	T	09 57 18.2	
	baz=79,slow=75,SNR=7.7						
H11S2	WAKE ISLAND Hy	107.76	291	T	T	09 57 45.4	
	baz=77,slow=75,SNR=3.8						
H11S1	WAKE ISLAND Hy	107.76	291	T	T	09 57 43.5	
	baz=77,slow=75,SNR=4.2						
H11S3	WAKE ISLAND Hy	107.77	291	T	T	09 57 46.7	
	baz=77,slow=75,SNR=5.1						
ASAR	Alice Springs	140.38	239	PKP	PKPdf	08 02 22.6	-0.9
	comp=Z,0.4nm,0.8s,baz=116,slow=2.2,SNR=3.1						
WRA	Warramunga Arr	141.23	245	PKP	PKPdf	08 02 23.6	-1.4
	comp=Z,0.3nm,0.8s,baz=122,slow=2.8,SNR=2.1						

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*FUNV **05** 07:45:14.5, 8°.33N×72°.01W, h2^{km}, MW3.8*

ISC 05 07:45:16.7±2.6**, 8°.35N**±0°.07×**71°.93W**±0°.09**, h19**^{km}±6^{km}**, n13, σ0^{s}.78**/22**, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	Socops	1.06	94	*e*P	Pb	07 45 35.7	-0.8
SOCV				*e*S	Sn	07 45 52.1	+1.4
OCAC	Ocana	1.38	265	*e*P	Pn	07 45 33.8	-7.3
SDV	Santo Domingo	1.39	67	*e*P	Pg	07 45 43.1	-0.4
SDV	Santo Domingo	1.39	67	*e*P	Pb	07 45 41.7	-0.3
SDV				*e*S	Sg	07 46 02.4	+0.7
MCQV	Machiques	1.79	340	*e*S	Sn	07 46 09.3	+0.5
TORV	Torococo	2.06	54	*e*P	Pn	07 45 49.1	-1.3
TORV				*e*S	Sn	07 46 15.9	+0.2
CURV	Curarigua	2.55	49	*e*P	Pn	07 45 56.6	-0.4
CURV				*e*S	Sn	07 46 29.3	+1.7
SANV	Sanarito	2.62	64	*e*P	Pn	07 45 58.1	0.0
SANV				*e*S	Sn	07 46 30.1	+0.6
ELOV	Elorza	2.77	119	*e*P	Pn	07 46 00.4	+0.4
ELOV				*e*S	Sn	07 46 33.4	+0.5
DABV	Dabajuro	2.85	26	*e*P	Pn	07 46 01.4	+0.3
DABV				*e*S	Sn	07 46 35.4	+0.4
SIQV	Siquisique	3.10	42	*e*P	Pn	07 46 04.4	-0.1
SIQV				*e*S	Sn	07 46 41.3	+0.3
MAPV	Macapo	3.73	67	*e*P	Pn	07 46 14.1	+0.9
MAPV				*e*S	Sn	07 46 56.2	-0.5
BAUV	El Baul	3.89	81	*e*P	Pn	07 46 15.2	-0.1
BAUV				*e*S	Sn	07 46 59.8	-0.8

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*IDC **05** 07:46:55.3±1.2, 15°.06S×176°.86W, h0^{km}, mb4.2/11,*

mb1 4.5/11, mb1mx4.2/40, mbtmp4.2/11, MS3.7/21, Ms1 3.7/21, ms1mx3.6/42, Error ellipse: s-maj=66.1km s-min=18.6km az=148.0

*NEIC **05** 07:46:56.0±0.7, 15°.0S±0°.1×177°.1W±0°.1, h10^{km}±1^{km}, mb4.7/45, Error ellipse: s-maj=25.3km s-min=17.4km az=152.0*

ISC 05 07:46:59.9±0.6, **15°.1S**±0°.1×**177°.1W**±0°.1, **h35**^{km}**, n97,** σ**1**^{s}**01**/68**, mb4.6**/33**, MS3.8**/21**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	5.25	78		Pn	07 48 05.8	-10
MSVF	Nonsavu	5.37	240	Pn	Pn	07 48 15.7	-2.0
SANVU	Saraoutou	15.19	267		Pn	07 50 30.4	-1.5
DZM	Mont Dzumac	17.10	244	LR	LR	07 56 39.6	
	comp=Z,191nm,19.1s,baz=101,slow=34						
DZM	Mont Dzumac	17.10	244	*e*LR	LR	07 54 18.5	
	comp=Z,235nm,24.4s						
DZM	Mont Dzumac	17.10	244		Pn	07 50 56.9	+0.6
RAR	Rarotonga	17.51	113	LR	LR	07 56 02.1	
	comp=Z,208nm,21.2s,baz=274,slow=32						
RAR	Rarotonga	17.51	113	P	Pn	07 50 59.1	-2.3
HNR	Honiara	23.15	281	LR	LR	07 59 58.3	
	comp=Z,199nm,18.4s,baz=110,slow=34						
PPT	Papeete	26.48	99	LR	LR	07 59 56.4	
	comp=Z,44nm,21.4s,baz=214,slow=30						
PPT2	Papeete2	26.48	99	*e*LQ	LQ	07 58 00.3	
	431nm,30.2s						
PPT2				*e*LR	LR	07 59 15.4	
	comp=Z,88nm,23.2s						
TBI	Tubuai	27.28	112	*e*LQ	LQ	07 58 12.7	
	376nm,29.0s						
TBI				*e*LR	LR	07 59 30.3	
	comp=Z,306nm,25.5s,baz=291						
EIDS	Eidsvold	31.52	246	P	P	07 53 19.4	+0.6
EIDS				IAmb	IAmb	07 53 30.6	
	comp=Z,15nm,1.1s						
H11S2	WAKE ISLAND Hy	37.01	334	T	T	08 33 21.3	
	baz=145						
H11S3	WAKE ISLAND Hy	37.02	334	T	T	08 33 19.4	
	baz=145,SNR=3.8						
H11S1	WAKE ISLAND Hy	37.03	334	T	T	08 33 18.2	
	baz=145						
H11N3	WAKE ISLAND Hy	38.02	335	T	T	08 34 43.9	
	baz=158						
H11N1	WAKE ISLAND Hy	38.03	335	T	T	08 34 36.0	
	baz=158,SNR=5.7						
H11N2	WAKE ISLAND Hy	38.04	335	T	T	08 34 38.7	
	baz=158						
STKA	Stephens Creek	41.15	239	P	P	07 54 41.8	+0.8
	comp=Z,1.5nm,0.7s,baz=77,slow=14,SNR=3.2						
STKA	Stephens Creek	41.15	239	P	P	07 54 41.4	+0.4
WR0	Warramunga Arr	46.28	257	P	P	07 55 21.8	-0.7
WB0	Warramunga Arr	46.43	257	P	P	07 55 23.2	-0.4
WB0				IAmb	IAmb	07 55 26.4	
	comp=Z,5.8nm,1.1s						
WB2	Warramunga Arr	46.46	257	P	P	07 55 23.7	-0.2
WRA	Warramunga Arr	46.47	257	P	P	07 55 25.9	+1.9
	comp=Z,1.6nm,1.0s,baz=90,slow=8.1,SNR=8.4						
WRA	Warramunga Arr	46.47	257	P	P	07 55 24.1	+0.2
AS31	Alice Springs	46.85	252	P	P	07 55 28.1	+1.2
ASAR	Alice Springs	46.85	252	P	P	07 55 29.7	+2.8
	comp=Z,3.2nm,0.7s,baz=84,slow=7.9,SNR=16						
ASAR				LR	LR	08 13 12.5	
	comp=Z,83nm,21.5s,baz=88,slow=34						
ASAR	Alice Springs	46.85	252	P	P	07 55 26.4	-0.5
SIJI	Sorong	52.93	281	LR	LR	08 18 13.4	
	comp=Z,66nm,18.4s,baz=216,slow=35						
DAV	Davao City (W)	60.96	287	LR	LR	08 22 24.3	
	comp=Z,66nm,18.4s,baz=321,slow=35						
KAPI	Kappang	62.84	272	LR	LR	08 23 21.6	
	comp=Z,47nm,18.3s,baz=104,slow=35						
VNDA	Vanda	63.34	185	LR	LR	08 18 46.2	
	comp=Z,53nm,21.8s,baz=20,slow=30						
RPN	Rapa Nui	63.66	113	LR	LR	08 18 12.9	
	comp=Z,46nm,21.6s,baz=271,slow=30						
JYT	Yasato	65.09	323	P	P	07 57 34.6	-2.4
JSG	Sagara	65.25	320	P	P	07 57 37.6	-0.5
MJAR	Matsushiro Arr	66.47	322	LR	LR	08 21 48.2	
	comp=Z,30nm,21.8s,baz=150,slow=32						
PETK	Petropavlovsk-	71.32	344	LR	LR	08 23 20.8	
	comp=Z,82nm,21.6s,baz=138,slow=31						
KSRS	Korea Array	73.50	317	LR	LR	08 26 56.8	
	comp=Z,48nm,18.7s,baz=124,slow=33						
KSAR	Wonju Array Be	73.52	317	P	P	07 58 27.0	-2.2
CMB	Columbia Colle	74.92	43	P	P	07 58 37.3	-0.1
CMB				IAmb	IAmb	07 58 38.5	
	comp=Z,10.0nm,1.2s						
QSPA	South Pole Qui	74.94	180	P	P	07 58 38.5	+1.3
QSPA				IAmb	IAmb	07 58 40.5	
	comp=Z,12nm,1.2s						
ISA	Isabella, Lake	74.95	46	P	P	07 58 37.5	-0.2
ISA				IAmb	IAmb	07 58 39.0	
	comp=Z,7.6nm,1.2s						
ORV	Oroville	75.04	41	P	P	07 58 37.5	-0.5
USRK	Ussuriysk Ar.	75.06	325	LR	LR	08 25 46.6	
	comp=Z,133nm,21.7s,baz=126,slow=31						
PFO	Pinyon Flats O	75.34	49	LR	LR	08 25 11.8	
	comp=Z,58nm,18.6s,baz=252,slow=30						
YBH	Yreka Blue Hor	75.54	39	P	P	07 58 40.5	-0.4
	comp=Z,5.4nm,1.0s,baz=228,slow=6.8,SNR=4.7						
MDPB	Devils Postpil	75.57	44	P	P	07 58 41.0	-0.4
MDPB				IAmb	IAmb	07 58 42.6	
	comp=Z,9.9nm,1.2s						
OMMB	Old Mammoth Mi	75.61	44	P	P	07 58 41.8	0.0
OMMB				IAmb	IAmb	07 58 43.7	
	comp=Z,7.2nm,1.3s						
WAKR	Walker	75.80	43	P	P	07 58 42.4	-0.3
WAKR				IAmb	IAmb	07 58 44.1	
	comp=Z,12nm,1.3s						
LPIG	La Paz	75.92	60	LR	LR	08 23 47.3	
	comp=Z,77nm,19.2s,baz=220,slow=29						
BEKR	Beckworth	75.94	42	P	P	07 58 43.2	-0.3
BEKR				IAmb	IAmb	07 58 44.6	
	comp=Z,9.2nm,1.2s						
LHV	Little Huntoon	76.28	44	P	P	07 58 44.4	-0.7
LHV				IAmb	IAmb	07 58 46.8	
	comp=Z,16nm,1.3s						
RYN	Ryan	76.47	43	P	P	07 58 44.6	-1.9
RYN				IAmb	IAmb	07 58 47.6	
	comp=Z,10nm,1.2s						
NVAR	Mina Array Bea	76.51	44	P	P	07 58 47.0	+0.3
	comp=Z,5.5nm,1.0s,baz=230,slow=9.0,SNR=26						
NVAR	Mina Array Bea	76.51	44	P	P	07 58 46.0	-0.8
NV11	Mina Array Sit	76.61	44	P	P	07 58 47.0	-0.3
NV11				IAmb	IAmb	07 58 49.2	
	comp=Z,14nm,1.2s						
KVN	Kaiserville	76.97	43	P	P	07 58 49.0	-0.3
KVN				IAmb	IAmb	07 58 50.4	
	comp=Z,11nm,1.2s						
R11A	Troy Canyon, C	78.30	45	P	P	07 58 56.2	-0.5
R11A				IAmb	IAmb	07 58 57.8	
	comp=Z,6.3nm,1.3s						
TTA	Tatalina	79.50	10	P	P	07 59 02.9	+0.3
PMR	Palmer	79.58	13	P	P	07 59 02.5	-0.5
PMR				IAmb	IAmb	07 59 04.2	
	comp=Z,16nm,1.4s						
WUAZ	Wupatki	79.94	49	P	P	07 59 06.2	+0.4
E08A	Dider Farm, El	80.42	36	P	P	07 59 07.3	-0.6
E08A				IAmb	IAmb	07 59 10.0	
	comp=Z,13nm,1.3s						
GLB	Gilahina Butte	80.73	15	P	P	07 59 08.7	-0.6
GLB				IAmb	IAmb	07 59 10.6	
	comp=Z,12nm,1.3s						
CTGM	Chitina Glacie	80.99	17	P	P	07 59 10.1	-0.7
CTGM				IAmb	IAmb	07 59 12.3	
	comp=Z,15nm,1.2s						
SEY	Seymchan	81.36	346	P	P	07 59 13.1	+0.6
	comp=Z,2.7nm,0.8s,baz=120,slow=6.0,SNR=6.8						
HLID	Hailey	81.67	41	P	P	07 59 14.7	-0.2
HLID				IAmb	IAmb	07 59 16.4	
	comp=Z,6.3nm,1.1s						
BWN	Browne	81.82	12	P	P	07 59 13.9	-1.0
JLU	Jordanelle	82.19	44	P	P	07 59 17.4	-0.3
WRH	Wood River Hil	82.36	12	P	P	07 59 16.9	-0.9
TCUT	Toone Canyon	82.45	44	P	P	07 59 17.7	-1.5
DOT	Dot Lake	82.54	14	P	P	07 59 18.2	-0.5
DOT				IAmb	IAmb	07 59 20.1	
	comp=Z,8.7nm,1.0s						
CCB	Clear Creek Bu	82.58	12	P	P	07 59 18.0	-0.9
BCAR	Beaver Creek A	82.61	15	P	P	07 59 18.8	-0.3
IMAR	Indian Mountai	82.71	9	P	P	07 59 19.8	+0.3
TCOL	CIGO, UAF Yank	82.77	12	P	P	07 59 19.2	-0.6
COLA	College	82.77	12	P	P	07 59 19.6	-0.2
IL31		82.88	13	P	P	07 59 20.0	-0.4
ILAR	Eielson Array	82.88	13	P	P	07 59 20.5	+0.1
	comp=Z,3.3nm,1.1s,baz=221,slow=5.9,SNR=17						
ILAR	Eielson Array	82.88	13	P	P	07 59 19.8	-0.7
MNTX	Cornudas Mount	82.91	55	P	P	07 59 21.2	-0.2
MNTX				IAmb	IAmb	07 59 23.0	
	comp=Z,7.2nm,1.4s						
MCMT	McKenzie Canyo	83.27	40	P	P	07 59 23.0	-0.2
TXAR	Lajitas Array	83.40	57	P	P	07 59 25.2	+1.1
	comp=Z,0.7nm,0.7s,baz=198,slow=5.7,SNR=3.9						
TXAR				LR	LR	08 28 12.1	
	comp=Z,43nm,21.1s,baz=0.0,slow=30						
DLMT	Dillon	83.69	40	P	P	07 59 25.2	-0.1
DLMT				IAmb	IAmb	07 59 26.8	
	comp=Z,6.1nm,1.1s						
PRP	Porcupine Dome	83.81	13	P	P	07 59 25.1	-0.4
PDAR	Pinedale Array	84.43	43	P	P	07 59 28.9	-0.3
	comp=Z,1.9nm,0.9s,baz=241,slow=3.1,SNR=12						
PDAR	Pinedale Array	84.43	43	P	P	07 59 27.8	-1.4
BMAR	Burnt Mountain	85.66	12	P	P	07 59 35.1	+0.5
CMAR	Chiang Mai Arr	89.17	289	LR	LR	08 35 15.5	
	comp=Z,36nm,21.7s,baz=60,slow=32						
YKA	Yellowknife Ar	91.25	24	P	P	08 00 02.0	+0.8
	comp=Z,2.0nm,1.0s,baz=238,slow=4.4,SNR=12						
SONM	Songino Array	92.28	319	P	P	08 00 09.0	+2.5
	comp=Z,0.4nm,0.8s,baz=116,slow=5.0,SNR=2.2						
PLCA	Paso Flores	92.31	133	LR	LR	08 33 44.1	
	comp=Z,46nm,20.2s,baz=230,slow=30						
TEIG	Tepich	94.00	70	LR	LR	08 36 33.0	
	comp=Z,46nm,18.7s,slow=32						
ATAH	Atahualpa	96.46	99	LR	LR	08 33 26.1	
	comp=Z,32nm,21.9s,baz=156,slow=29						
BRTR	Keskin Array B	143.64	318	PKP	PKPdf	08 06 31.1	-0.6
	comp=Z,3.2nm,1.0s,baz=48,slow=2.1,SNR=9.6						
KHC	Kasperske Hory	144.96	348	*e*PKP	PKPdf	08 06 34.1	+0.6
GERES	GERESS Array B	145.21	348	PKPbc	PKPdf	08 06 34.5	+0.6
	comp=Z,1.8nm,0.9s,baz=77,slow=5.9,SNR=5.1						

IDC 05 08:12:05.8±51.0**, 16°.59S**×**178°.61W, h0**^{km}**, mb3.8**/3**, mb1 4.0**/3**, mb1mx3.6**/42**, mbtmp3.8**/3**, Error ellipse: s-maj=933.1km s-min=163.0km az=77.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	39.11	240	P	P	08 19 35.9	+0.8
	0.5nm,0.3s,baz=112,slow=16,SNR=1.4						
WRA	Warramunga Arr	44.70	258	P	P	08 20 20.4	-0.6
	0.2nm,0.3s,baz=95,slow=7.8,SNR=9.2						
ASAR	Alice Springs	44.98	253	P	P	08 20 23.0	-0.2
	1.7nm,0.5s,baz=88,slow=8.2,SNR=34						

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*RSNC **05** 08:18:56.7±1.4, 8°.42N×72°.16W, h0^{km}±8^{km}, ML3.3, Mw3.5*

*FUNV **05** 08:18:56.4, 8°.15N×72°.09W, h5^{km}, MW3.9*

*IDC **05** 08:18:58.4±2.7, 8°.38N×72°.05W, h35^{km}±29^{km}, mb3.1/2, mb1 3.6/4, mb1mx3.3/27, mbtmp3.5/4, ML2.7/2, Error ellipse: s-maj=42.5km s-min=14.4km az=136.0*

ISC 05 08:18:55.3±1.2**, 8°.34N**±0°.03×**72°.12W**±0°.02**, h6**^{km}±9^{km}**, n36,** σ**1**^{s}**74**/62**, 1C, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAMC	Pamplona, Colo	1.14	210	*e*P	Pg	08 19 16.1	-1.2
PAMC				*e*S	Sn	08 19 36.2	+1.6
PAMC				*i*		08 19 38.2	
	comp=Z,1μm,0.3s						
OCAC	Ocana	1.19	265	*e*P	Pg	08 19 17.6	-0.6
OCAC				*e*S	Sg	08 19 33.4	-0.3
OCAC				*i*		08 19 36.6	
	comp=Z,624nm,0.2s						
SOCV	Socops	1.25	92	*e*P	Pg	08 19 19.1	-0.4
SOCV				*e*S	Sg	08 19 35.2	-0.5
SDV	Santo Domingo	1.57	70	Pg	Pb	08 19 25.5	+0.5
	comp=Z,62nm,0.3s,baz=217,slow=9.5,SNR=230						
SDV				Lg	Lg	08 19 47.1	
	comp=Z,179nm,0.3s,baz=344,slow=21,SNR=19						
SDV	Santo Domingo	1.57	70	*e*P	Pb	08 19 25.0	0.0
SDV				*e*S	Sg	08 19 46.3	+0.4
SDV				*i*		08 19 50.8	
	comp=Z,387nm,0.4s						
SDV	Santo Domingo	1.57	70	*e*P	Pb	08 19 25.4	+0.5
SDV				*e*S	Sg	08 19 47.3	+1.4
MCQV	Machiques	1.75	347	*e*P	Pg	08 19 29.0	+0.1
MCQV				*e*S	Sg	08 19 54.2	+2.5
TAMC	Tame, Arauca	1.92	170	*e*P	Pn	08 19 29.3	+0.7
TAMC				*e*S	Sb	08 19 57.0	+2.1
TAMC				*i*		08 19 59.8	
	comp=Z,212nm,0.4s						
SMLC	San Martn de	1.98	284	*e*P	Pn	08 19 30.0	+0.6
SMLC				*e*S	Sg	08 19 58.0	-1.1
BRRC	Barranca, Sant	1.99	232	⇑*e*P	Pn	08 19 31.3	+1.7
BRRC				*e*S	Sb	08 19 57.2	+0.1
BRRC				*i*		08 20 03.1	
	comp=Z,222nm,0.3s						
BARC	Barichara	2.03	211	*e*P	Pn	08 19 32.0	+1.7
BARC				*i*		08 20 02.1	
	comp=Z,312nm,0.4s						
TORV	Torococo	2.23	57	*e*P	Pn	08 19 33.5	+0.5
TORV				*e*S	Sn	08 20 01.0	+0.1
ARGC	Ariguani, Magd	2.58	306	*e*P	Pg	08 19 43.6	-1.3
RUSC	La Rusia	2.61	201	*e*P	Pb	08 19 42.6	-0.2
RUSC				*e*S	Sb	08 20 16.3	+1.0
RUSC				*i*		08 20 19.7	
	comp=Z,82nm,0.4s						
CURV	Curarigua	2.71	52	*e*P	Pn	08 19 41.3	+1.8
CURV				*e*S	Sn	08 20 14.7	+2.0
SANV	Sanarito	2.81	65	*e*P	Pn	08 19 41.0	+0.1
SANV				*e*S	Sn	08 20 15.1	0.0
PTBC	PUERTO BERRIO,	2.92	233	*e*P	Pn	08 19 42.7	+0.3
PTBC				*e*S	Sn	08 20 17.3	-0.6
PTBC				*i*		08 20 30.2	
	comp=Z,85nm,0.4s						
ELOV	Elorza	2.93	117	*e*P	Pn	08 19 42.0	-0.5
ELOV				*e*S	Sn	08 20 14.8	-3.3
DABV	Dabajuro	2.96	30	*e*P	Pn	08 19 44.7	+1.8
DABV				*e*S	Sn	08 20 21.0	+2.3
SIQV	Siquisique	3.24	45	*e*P	Pn	08 19 48.2	+1.5
SIQV				*e*S	Sn	08 20 27.3	+1.6
UREC	San Jos de Ur	3.43	260	*e*P	Pn	08 19 49.4	+0.1
UREC				*e*S	Sb	08 20 34.7	-3.7
NORC	Norcasia	3.88	225	*e*P	Pn	08 19 56.6	+1.1
NORC				*e*S	Sn	08 20 44.0	+2.5
NORC				*i*		08 20 56.2	
	comp=Z,57nm,0.4s						
MAPV	Macapo	3.91	67	*e*P	Pn	08 19 56.3	+0.3
HELC	Santa Helena	4.00	238	*e*P	Pn	08 19 59.3	+1.9
HELC				*e*S	Sn	08 20 49.8	+4.9
HELC				*i*		08 21 00.9	
	comp=Z,41nm,0.4s						
CHIC	Chingaza	4.01	204	*e*P	Pn	08 19 58.3	+0.5
CHIC				*e*S	Sb	08 20 59.2	+3.4
CHIC				*i*		08 21 05.9	
	comp=Z,18nm,0.5s						
BAUV	El Baul	4.08	81	*e*P	Pn	08 19 58.5	+0.2
BAUV				*e*S	Sn	08 20 44.0	-2.4
ROSC	El Rosal	4.10	212	Pn	Pn	08 20 01.6	+2.7
	comp=Z,3.3nm,0.3s,baz=127,slow=20,SNR=3.1						
ROSC				Sn	Sn	08 20 49.4	+1.8
	comp=Z,5.3nm,0.3s,baz=246,slow=16,SNR=4.3						
ROSC				Lg	Lg	08 21 10.9	
	comp=Z,5.7nm,0.3s,baz=222,slow=20,SNR=3.7						
GUY2C	Guyana, Caldas	4.46	226	*e*P	Pn	08 20 05.5	+1.4
GUY2C				*e*S	Sn	08 20 58.7	+2.2
GUY2C				*i*		08 21 25.1	
	comp=Z,24nm,0.6s						
TOLC	Tolima	4.90	221	*e*P	Pn	08 20 11.6	+1.7
TOLC				*e*S	Sn	08 21 09.5	+2.4
TOLC				*i*		08 21 36.3	
	comp=Z,28nm,0.6s						
ANIL	Santa Ana	5.02	221	*e*P	Pn	08 20 13.8	+2.3
ORTC	Ortega, Tolima	5.38	215	*e*P	Pn	08 20 18.0	+1.7
ORTC				*e*S	Sn	08 21 20.9	+2.2
ORTC				*i*		08 21 50.8	
	comp=Z,13nm,0.5s						
PCRV	Puerto La Cruz	7.61	76	Pn	Pn	08 20 47.8	+0.8
	comp=Z,0.7nm,0.3s,baz=312,slow=9.7,SNR=1.7						
PCRV				Sn	Sn	08 22 13.3	-0.3
	comp=Z,3.4nm,0.3s,baz=291,slow=23,SNR=12						
PTGA	Pitinga	15.10	126	Lg	Lg	08 26 45.3	
	comp=Z,0.6nm,0.3s,baz=318,slow=22,SNR=2.3						
PDAR	Pinedale Array	47.46	323	P	P	08 27 30.2	-1.2
	comp=Z,0.1nm,0.4s,baz=92,slow=9.3,SNR=2.3						
YKA	Yellowknife Ar	62.20	339	P	P	08 29 16.4	-1.0
	comp=Z,0.3nm,0.6s,baz=126,slow=7.3,SNR=7.9						
WRA	Warramunga Arr	151.92	243	PKPbc	PKPbc	08 38 49.8	-2.5
	comp=Z,0.4nm,0.6s,baz=107,slow=2.6,SNR=6.7						

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*FUNV **05** 08:34:46.5, 8°.22N×72°.11W, h1^{km}, MW3.9*

*RSNC **05** 08:34:47.3±1.0, 8°.30N×72°.14W, h4^{km}±5^{km}, ML3.4*

*IDC **05** 08:34:48.4±2.2, 8°.37N×72°.02W, h35^{km}±22^{km}, mb3.3/6, mb1 3.7/7, mb1mx3.5/26, mbtmp3.5/7, ML2.4/1, Error ellipse: s-maj=25.4km s-min=15.1km az=129.0*

ISC 05 08:34:45.4±1.3**, 8°.33N**±0°.03×**72°.12W**±0°.02**, h4**^{km}±9^{km}**, n40,** σ**1**^{s}**76**/67**, mb3.5**/6**, 1C-1D, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAMC	Pamplona, Colo	1.14	210	*e*P	Pg	08 35 06.8	-0.4
PAMC				*e*S	Sg	08 35 21.5	-0.6
PAMC				*i*		08 35 28.5	
	comp=Z,1μm,0.2s						
OCAC	Ocana	1.19	266	⇓*i*P	Pg	08 35 07.8	-0.5
OCAC				*e*S	Sg	08 35 23.6	-0.2
SOCV	Socops	1.25	92	*e*P	Pg	08 35 09.6	+0.1
SOCV				*e*S	Sg	08 35 27.4	+1.7
SDV	Santo Domingo	1.57	69	Pg	Pn	08 35 15.7	+1.5
	comp=Z,61nm,0.3s,baz=249,slow=10,SNR=193						
SDV				Lg	Lg	08 35 36.2	
	comp=Z,191nm,0.3s,baz=317,slow=21,SNR=28						
SDV	Santo Domingo	1.57	69	*e*P	Pn	08 35 15.2	+0.9
SDV				*e*S	Sn	08 35 36.3	+1.1
SDV				*i*		08 35 39.2	
	comp=Z,565nm,0.5s						
SDV	Santo Domingo	1.57	69	*e*P	Pn	08 35 15.8	+1.5
SDV				*e*S	Sn	08 35 36.9	+1.7
MCQV	Machiques	1.76	347	*e*P	Pn	08 35 18.2	+1.5
MCQV				*e*S	Sb	08 35 43.5	+2.8
TAMC	Tame, Arauca	1.91	170	*e*P	Pn	08 35 19.6	+0.8
TAMC				*e*S	Sb	08 35 45.9	+0.8
TAMC				*i*		08 35 49.5	
	comp=Z,431nm,0.3s						
SMLC	San Martn de	1.99	284	*e*P	Pn	08 35 20.0	+0.1
SMLC				*e*S	Sn	08 35 47.5	+2.4
BRRC	Barranca, Sant	1.99	233	⇑*e*P	Pn	08 35 21.6	+1.8
BRRC				*e*S	Sb	08 35 48.9	+1.6
BRRC				*i*		08 35 57.9	
	comp=Z,123nm,0.4s						
BARC	Barichara	2.02	212	*e*P	Pn	08 35 22.2	+1.8
BARC				*i*		08 35 53.1	
	comp=Z,322nm,0.3s						
TORV	Torococo	2.23	57	*e*P	Pn	08 35 23.6	+0.3
TORV				*e*S	Sn	08 35 50.9	-0.6
CVALL	Valledupar, Ce	2.44	333	*e*P	Pn	08 35 26.9	+0.8
CVALL				*e*S	Sn	08 35 57.1	+0.7
CVALL				*i*		08 36 02.8	
	comp=Z,332nm,0.3s						
ARGC	Ariguani, Magd	2.59	306	*e*P	Pn	08 35 29.2	+1.0
ARGC				*e*S	Sn	08 36 00.7	+0.5
ARGC				*i*		08 36 21.8	
	comp=Z,107nm,0.4s						
RUSC	La Rusia	2.60	202	*e*P	Pn	08 35 30.4	+1.7
RUSC				*e*S	Sb	08 36 07.0	+1.6
RUSC				*i*		08 36 09.3	
	comp=Z,67nm,0.3s						
CURV	Curarigua	2.71	52	*e*P	Pn	08 35 30.8	+0.9
CURV				*e*S	Sn	08 36 04.2	+1.1
SANV	Sanarito	2.81	65	*e*P	Pn	08 35 32.2	+1.0
SANV				*e*S	Sn	08 36 05.7	+0.1
ZARC	Zaragoza, Cauc	2.84	253	*e*P	Pn	08 35 32.5	+1.0
ZARC				*e*S	Sb	08 36 12.2	+0.4
ZARC				*i*		08 36 15.8	
	comp=Z,222nm,0.3s						
PTBC	PUERTO BERRIO,	2.92	233	*e*P	Pn	08 35 32.8	+0.1
PTBC				*e*S	Sb	08 36 12.2	-1.9
PTBC				*i*		08 36 17.7	
	comp=Z,110nm,0.5s						
ELOV	Elorza	2.93	117	*e*P	Pn	08 35 32.6	-0.1
ELOV				*e*S	Sn	08 36 06.0	-2.4
DABV	Dabajuro	2.96	29	*e*P	Pn	08 35 35.2	+2.0
DABV				*e*S	Sn	08 36 10.9	+1.6
SIQV	Siquisique	3.24	44	*e*P	Pn	08 35 38.5	+1.4
SIQV				*e*S	Sn	08 36 17.0	+0.7
SPBC	San Pablo de B	3.29	216	*e*P	Pn	08 35 39.3	+1.5
SPBC				*e*S	Sb	08 36 25.4	+0.5
SPBC				*i*		08 36 36.8	
	comp=Z,58nm,0.2s						
UREC	San Jos de Ur	3.43	261	*e*P	Pn	08 35 42.4	+2.8
UREC				*e*S	Sn	08 36 24.7	+3.9
UREC				*i*		08 36 35.5	
	comp=Z,94nm,0.3s						
MOTC	Monteria, Cord	3.54	278	*e*P	Pn	08 35 42.9	+1.8
MOTC				*e*S	Sg	08 36 38.4	-0.7
MOTC				*i*		08 36 47.1	
	comp=Z,84nm,0.5s						
NORC	Norcasia	3.87	225	*e*P	Pn	08 35 46.1	+0.3
NORC				*e*S	Sn	08 36 35.6	+3.9
NORC				*i*		08 36 46.1	
	comp=Z,46nm,0.5s						
MAPV	Macapo	3.91	67	*e*P	Pn	08 35 47.5	+1.2
MAPV				*e*S	Sn	08 36 32.0	-0.8
BAUV	El Baul	4.08	81	*e*P	Pn	08 35 49.0	+0.4
BAUV				*e*S	Sn	08 36 35.1	-1.7
ROSC	El Rosal	4.10	212	Pn	Pn	08 35 52.1	+2.9
	comp=Z,4.4nm,0.3s,baz=313,slow=19,SNR=3.7						
ROSC				Sn	Sn	08 36 43.8	+6.0
	comp=Z,5.3nm,0.3s,baz=230,slow=23,SNR=1.9						
ROSC				Lg	Lg	08 37 01.7	
	comp=Z,7.2nm,0.3s,baz=229,slow=21,SNR=5.4						
JACV	Jacura	4.25	50	*e*P	Pn	08 35 52.2	+1.3
MERV	Las Mercedes	5.83	81	*e*P	Pn	08 36 12.8	+0.1
PCRV	Puerto La Cruz	7.61	75	Pn	Pn	08 36 39.2	+1.9
	comp=Z,1.3nm,0.3s,baz=326,slow=2.1,SNR=6.1						
PCRV				Sn	Sn	08 38 04.2	+0.2
	comp=Z,2.6nm,0.3s,baz=25,slow=21,SNR=3.0						
PTGA	Pitinga	15.09	126	Lg	Lg	08 42 41.4	
	comp=Z,0.5nm,0.3s,baz=319,slow=22,SNR=2.2						
SIV	San Ignacio	26.52	156	P	P	08 40 23.0	-1.4
	comp=Z,1.1nm,1.0s,baz=357,slow=12,SNR=3.8						
TXAR	Lajitas Array	36.24	309	P	P	08 41 48.5	-1.5
	comp=Z,0.4nm,0.7s,baz=116,slow=10,SNR=3.0						
PDAR	Pinedale Array	47.47	323	P	P	08 43 20.1	-1.7
	comp=Z,0.2nm,0.4s,baz=128,slow=12,SNR=4.7						
NVAR	Mina Array Bea	51.16	313	P	P	08 43 49.4	-0.7
	comp=Z,0.2nm,0.5s,baz=104,slow=6.8,SNR=2.3						
YKA	Yellowknife Ar	62.21	339	P	P	08 45 06.2	-1.8
	comp=Z,0.7nm,0.7s,baz=126,slow=7.6,SNR=14						
ILAR	Eielson Array	76.03	335	P	P	08 46 32.4	-1.4
	comp=Z,0.2nm,0.6s,baz=114,slow=5.4,SNR=5.7						
WRA	Warramunga Arr	151.91	243	PKPbc	PKPdf	08 54 39.9	+3.7
	comp=Z,0.4nm,0.5s,baz=107,slow=2.4,SNR=7.6						

NNC 05 09:01:30.9±4.3**, 53°.83N**×**90°.59E, h0**^{km}**, mb3.7, mpv3.4, 8C-6D, Error ellipse: s-maj=32.1km s-min=24.1km az=54.0, Suspected Mining explosion., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	3.41	274	⇓Pg	Pb	09 02 32.8	+0.6
	2.7nm,0.9s						
ZAA0				⇑Lg	Lg	09 03 19.2	
	14nm,0.8s						
KURK	Kurchatov	7.97	252	⇑Pn	Pn	09 03 26.8	-1.2
	3.3nm,0.8s						
KURK				⇑Sn	Sn	09 05 03.2	+4.4
	5.7nm,0.7s						
KURK				⇓Lg	Lg	09 05 44.1	
	15nm,0.9s						
KURBB	Kurchatov Arra	8.07	251	⇑Pn	Pn	09 03 27.9	-1.3
	4.2nm,0.9s						
KURBB				⇑Sn	Sn	09 05 00.9	-0.2
	16nm,0.8s						
KURBB				⇑Lg	Lg	09 05 43.8	
	66nm,1.1s						
MK31	Makanchi Array	8.82	220	⇓Pn	Pn	09 03 39.5	0.0
	0.7nm,0.6s,baz=41,slow=16,SNR=3.6						
MK31				⇑Sn	Sn	09 05 20.7	+1.1
	2.0nm,0.7s,baz=42,slow=22,SNR=3.6						
MK31				⇓Lg	Lg	09 06 11.0	
	13nm,1.0s,baz=38,slow=31,SNR=5.3						
MAKZ	Makanchi	8.93	221	⇓Pn	Pn	09 03 44.7	+3.6
	1.6nm,0.7s						
MAKZ				⇓Sn	Sn	09 05 22.4	+0.1
	2.2nm,0.8s						
MAKZ				⇑Lg	Lg	09 06 13.2	

15nm,0.9s

PGC 05 09:18:24.9±0.0**, 50°.52N×130°.23W, h10km, MLSn2.9**/17**, Mw3.5**/17**, Mw3.3**/18**, 199km west of Pt. Hardy, Bc Vancouver Island, Canada Region, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOLB	**Holberg**	**1.34**	**84**	P	Pn	09 18 47.9	-1.9
HOLB				S	Sb	09 19 04.0	-3.4
PHC	**Port Hardy**	**1.79**	**83**	Pn	Pn	09 18 54.0	-1.9
PHC				Sn	Sn	09 19 15.0	-3.7
MAYB	**Maynard**	**1.96**	**92**	Pn	Pn	09 18 56.4	-1.9
FHRB	**Fair Harbour**	**2.05**	**102**	Pn	Pn	09 18 57.4	-2.0
EDB	**Eliza Dome**	**2.10**	**107**	Pn	Pn	09 18 58.1	-2.1
BBB	**Bella Bella**	**2.13**	**38**	Pn	Pn	09 18 59.2	-1.4
BBB				Sn	Sn	09 19 23.0	-4.1
TLCB	**Telegraph Cove**	**2.17**	**88**	Pn	Pn	09 18 60.0	-1.1
TLCB				Sn	Sn	09 19 25.3	-2.6
WOSB	**Woss**	**2.37**	**97**	Pn	Pn	09 19 02.7	-1.3
NCRB	**Newcastle Ridg**	**2.67**	**91**	Pn	Pn	09 19 06.6	-1.5
GDR	**Gold River**	**2.80**	**104**	Pn	Pn	09 19 08.1	-1.6
BNAB	**Bonilla**	**2.99**	**355**	Pn	Pn	09 19 11.0	-1.3
BNAB				Sn	Sn	09 19 44.8	-3.3
TOFB	**Tofino**	**3.12**	**114**	Pn	Pn	09 19 12.2	-1.8
CBB	**Campbell River**	**3.16**	**97**	Pn	Pn	09 19 13.8	-0.9
CBB				Sn	Sn	09 19 48.5	-3.9
GRNB	**Grenville Isla**	**3.34**	**3**	Pn	Pn	09 19 15.9	-1.2
GRNB				Sn	Sn	09 19 54.0	-2.8
OZB	**Mount Ozzard**	**3.45**	**115**	Pn	Pn	09 19 16.8	-1.9
KITB	**Kitimat**	**3.69**	**15**	Pn	Pn	09 19 21.4	-0.6
KITB				Sn	Sn	09 20 03.5	-2.0
B928	**Bamfield**	**3.72**	**115**	Pn	Pn	09 19 21.3	-1.0
RUBB	**Prince Rupert**	**3.81**	**360**	Pn	Pn	09 19 23.1	-0.5
TXB	**Texada**	**3.82**	**100**	Pn	Pn	09 19 23.2	-0.5
MGB	**Mount Grey**	**3.90**	**111**	Pn	Pn	09 19 24.4	-0.6
SHB	**Sechelt**	**4.20**	**100**	Pn	Pn	09 19 28.9	-0.2
NLLB	**Nanaimo Lost L**	**4.24**	**105**	Pn	Pn	09 19 30.1	+0.6
OCP	**Olym-Cheeka Pk**	**4.28**	**119**	Pn	Pn	09 19 29.9	-0.3
UBRB	**Upper Baezaeko**	**4.50**	**56**	Pn	Pn	09 19 34.1	+0.9
WPB	**Watts Point**	**4.60**	**98**	Pn	Pn	09 19 34.9	+0.3
OBC	**Olympics--Boni**	**4.73**	**119**	Pn	Pn	09 19 37.4	+1.0
VGZ	**Gonzales**	**4.97**	**112**	Pn	Pn	09 19 39.3	-0.2
LLLB	**Lillooet**	**5.32**	**86**	Pn	Pn	09 19 44.4	-0.1
FSB	**Fort Saint Jam**	**5.36**	**40**	Pn	Pn	09 19 45.7	+0.8
VDB	**Vedder Mountai**	**5.47**	**103**	Pn	Pn	09 19 47.6	+1.1
A05A	**Maple Falls**	**5.50**	**103**	Pn	Pn	09 19 48.1	+1.4
HDW	**Hoodsport**	**5.52**	**119**	Pn	Pn	09 19 48.4	+1.1
MBW	**Mount Baker**	**5.68**	**105**	Pn	Pn	09 19 50.8	+1.3
RPW	**Rockport**	**6.05**	**107**	Pn	Pn	09 19 55.5	+1.1
FMW	**Mount Fremont**	**6.70**	**119**	Pn	Pn	09 20 05.3	+1.8
LON	**Longmire**	**6.74**	**121**	Pn	Pn	09 20 05.6	+1.7

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*FUNV **05** 09:45:59.7, 8°.26N×72°.09W, h5km, MW3.3*
*RSNC **05** 09:45:59.5±1.1, 8°.44N×72°.15W, h4km±6km, ML2.3*
ISC 05 09:45:57.8±1.5**, 8°.33N**±0°.03×**72°.12W**±0°.03**, h2**km±13km**, n14, σ1s.06**/28**, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAMC	**Pamplona, Colo**	**1.14**	**211**	*e*P	**Pn**	**09 46 21.4**	**+0.3**
PAMC				*e*S	**Sn**	**09 46 37.2**	**-0.3**
PAMC				*i*		09 46 41.2	
	comp=Z,49nm,0.2s						
OCAC	**Ocana**	**1.19**	**266**	*e*P	**Pg**	**09 46 19.8**	**-0.9**
OCAC				*e*S	**Sg**	**09 46 36.0**	**-0.1**
OCAC				*i*		09 46 41.3	
	comp=Z,79nm,0.3s						
SDV	**Santo Domingo**	**1.57**	**69**	*e*P	**Pn**	**09 46 27.0**	**+0.2**
SDV				*e*S	**Sn**	**09 46 47.6**	**-0.2**
SDV				*i*		09 46 50.5	
	comp=Z,80nm,0.3s						
SDV	**Santo Domingo**	**1.57**	**69**	*e*P	**Pn**	**09 46 27.4**	**+0.6**
SDV				*e*S	**Sb**	**09 46 49.2**	**+1.2**
MCQV	**Machiques**	**1.76**	**346**	*e*P	**Pb**	**09 46 30.9**	**+0.1**
MCQV				*e*S	**Sg**	**09 46 55.1**	**+0.6**
TAMC	**Tame, Arauca**	**1.91**	**170**	*e*P	**Pn**	**09 46 32.1**	**+0.8**
TAMC				*e*S	**Sg**	**09 46 60.0**	**+0.9**
TAMC				*i*		09 47 02.7	
	comp=Z,33nm,0.3s						
SMLC	**San Martn de**	**1.99**	**284**	*e*P	**Pn**	**09 46 32.0**	**-0.4**
SMLC				*e*S	**Sb**	**09 46 59.7**	**-0.3**
BRRC	**Barranca, Sant**	**1.99**	**233**	*e*P	**Pn**	**09 46 33.4**	**+1.0**
BRRC				*e*S	**Sb**	**09 46 59.6**	**-0.4**
BRRC				*i*		09 47 06.1	
	comp=Z,8.9nm,0.5s						
BARC	**Barichara**	**2.02**	**212**	*e*P	**Pb**	**09 46 34.7**	**-0.7**
BARC				*e*S	**Sb**	**09 47 01.6**	**+0.6**
BARC				*i*		09 47 05.3	
	comp=Z,20nm,0.4s						
CURV	**Curarigua**	**2.71**	**52**	*e*P	**Pn**	**09 46 43.7**	**+1.3**
CURV				*e*S	**Sn**	**09 47 16.0**	**+0.2**
SANV	**Sanarito**	**2.81**	**65**	*e*P	**Pn**	**09 46 44.3**	**+0.6**
SANV				*e*S	**Sn**	**09 47 18.1**	**-0.1**
ZARC	**Zaragoza, Cauc**	**2.84**	**253**	*e*P	**Pn**	**09 46 46.7**	**+2.6**
ZARC				*e*S	**Sb**	**09 47 25.4**	**+0.9**
ZARC				*i*		09 47 29.1	
	comp=Z,9.6nm,0.4s						
MAPV	**Macapo**	**3.91**	**67**	*e*P	**Pn**	**09 46 59.3**	**+0.4**
MAPV				*e*S	**Sn**	**09 47 43.5**	**-1.9**
BAUV	**El Baul**	**4.08**	**81**	*e*P	**Pn**	**09 47 01.6**	**+0.4**
BAUV				*e*S	**Sn**	**09 47 46.9**	**-2.6**

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*IDC **05** 10:13:36.1±1.7, 2°.71N×89°.33E, h0km, mb3.8/4, mb1 4.0/5, mb1mx3.6/37, mbtmp3.9/5, ML3.6/1, MS3.4/3, Ms1 3.4/3, ms1mx2.7/49, Error ellipse: s-maj=61.7km s-min=25.9km az=52.0*
ISC 05 10:13:37.1±1.1**, 2°.7N**±0°.3×**89°.2E**±0°.2**, h10km, n11, σ0s.40**/6**, mb4.0**/4**, North Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALK	**Pallekele**	**9.64**	**298**	Pn	**Pn**	**10 15 56.0**	**-0.1**
	0.5nm,0.3s,baz=2.3,slow=3.9,SNR=1.9						
PALK				Sn	Sn	10 17 35.6	-9.0
	2.7nm,0.3s,baz=63,slow=1.8,SNR=3.5						
PALK				LR	LR	10 18 51.9	
	comp=Z,78nm,20.1s,baz=228,slow=32						
PSI	**Prapat**	**9.67**	**89**	LR	LR	10 19 37.2	
	comp=Z,120nm,19.4s,baz=269,slow=38						
H01W3	**Cape Leeuwin H**	**44.09**	**150**	T	T	11 08 47.8	
	baz=325,slow=75,SNR=4.3						
H01W2	**Cape Leeuwin H**	**44.10**	**150**	T	T	11 08 48.2	
	baz=325,slow=75,SNR=5.6						
H01W1	**Cape Leeuwin H**	**44.10**	**150**	T	T	11 08 46.5	
	baz=325,slow=75,SNR=3.7						
SONM	**Songino Array**	**47.34**	**16**	P	**P**	**10 22 11.3**	**0.0**
	0.7nm,0.5s,baz=197,slow=9.2,SNR=7.7						
WRA	**Warramunga Arr**	**49.65**	**119**	P	**P**	**10 22 28.8**	**-0.6**
	1.2nm,0.9s,baz=297,slow=8.7,SNR=14						
ASAR	**Alice Springs**	**50.74**	**124**	P	**P**	**10 22 37.6**	**0.0**
	0.3nm,0.6s,baz=284,slow=8.5,SNR=3.3						
STKA	**Stephens Creek**	**60.36**	**129**	P	**P**	**10 23 47.0**	**+0.3**
	1.8nm,0.6s,baz=342,slow=7.0,SNR=2.9						
MAW	**Mawson**	**72.55**	**190**	LR	LR	10 50 22.9	
	comp=Z,92nm,18.2s,baz=40,slow=30						
TXAR	**Lajitas Array**	**145.84**	**20**	PKPbc	**PKPab**	**10 33 18.1**	**+0.2**
	0.7nm,0.4s,baz=0.0,slow=1.2,SNR=6.8						

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*IDC **05** 10:36:54.0±3.4, 36°.55N×71°.36E, h162km±27km, mb3.2/5, mb1 3.3/11, mb1mx3.0/51, mbtmp3.7/11, Error ellipse: s-maj=33.1km s-min=20.7km az=171.0*
*NNC **05** 10:37:00.7±4.5, 37°.09N×71°.10E, h156km±65km, mb2.8, mpv3.5, Error ellipse: s-maj=37.4km s-min=25.9km az=22.0*
ISC 05 10:36:54.0±0.7**, 36°.71N**±0°.06×**71°.33E**±0°.07**, h150km, n26, σ2s.14**/35**, mb3.5**/5**, 6C-4D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THN	**Thein Dam**	**5.59**	**138**	*e*P	**Pn**	**10 38 18.7**	**+3.5**
THN				*e*S	**Sn**	**10 39 18.5**	**-0.2**
DHRM	**DHARAMSHALA**	**6.05**	**136**	*e*P	**Pn**	**10 38 22.1**	**+0.5**
DHRM				*e*S	**Sn**	**10 39 27.4**	**-2.6**
DHRM				IAML		10 39 29.6	
	comp=N,116nm,0.8s						
DHRM				IAML		10 39 30.1	
	comp=E,189nm,0.3s						
AAK	**Ala-Archa**	**6.41**	**21**	P	**Pn**	**10 38 28.4**	**+2.2**
	comp=E,1.2nm,0.3s,baz=199,slow=8.2,SNR=12						
AAK				S	**Sn**	**10 39 37.9**	**-0.5**
	comp=E,0.3nm,0.3s,baz=319,slow=23,SNR=11						
AAK	**Ala-Archa**	**6.41**	**21**	⇑P	**Pn**	**10 38 28.8**	**+2.6**
	comp=E,1.3nm,0.4s						
AAK				⇑S	**Sn**	**10 39 38.5**	**+0.1**
	comp=E,3.3nm,0.5s						
KK31	**Karatay Array**	**6.42**	**355**	⇓P	**Pn**	**10 38 28.8**	**+2.5**
	comp=E,2.2nm,0.3s,baz=171,slow=11,SNR=104						
KK31				⇑S	**Sn**	**10 39 37.0**	**-1.5**
	comp=E,11nm,0.6s,baz=178,slow=21,SNR=22						
TKM2	**Tokmak 2**	**7.02**	**27**	⇓P	**Pn**	**10 38 36.4**	**+1.9**
	comp=E,2.1nm,0.5s						
TKM2				⇓S	**Sn**	**10 39 55.4**	**+2.1**
	comp=E,2.7nm,0.9s						
SMLA	**Simla**	**7.38**	**137**	*e*P	**Pn**	**10 38 40.2**	**+1.1**
SMLA				*e*S	**Sn**	**10 39 58.5**	**-3.1**
SMLA				IAML		10 40 01.7	
	comp=E,48nm,0.2s						
SMLA				IAML		10 40 01.9	
	comp=N,47nm,0.3s						
KUDL	**Kundal**	**9.58**	**152**	*e*x	x	10 39 54.9	
KUDL				*e*S	Sn	10 40 44.9	-10
GEYT	**Alibeck**	**10.60**	**281**	P	**Pn**	**10 39 21.9**	**+0.1**
	comp=N,0.3nm,0.3s,baz=96,slow=13,SNR=2.6						
GEYT				S	**Sn**	**10 41 21.2**	**+2.1**
	comp=N,0.6nm,0.3s,baz=270,slow=5.9,SNR=1.8						
MKAR	**Makanchi Array**	**12.97**	**36**	P	**Pn**	**10 39 53.1**	**+0.4**
	comp=N,0.1nm,0.3s,baz=222,slow=12,SNR=2.5						
DANN	**Dangsing**	**13.38**	**125**	*e*P	**Pn**	**10 39 57.3**	**-1.1**
	comp=N,12nm,0.3s						
GKN	**Gorkha**	**14.19**	**124**	*e*P	**Pn**	**10 40 08.5**	**0.0**
	comp=N,11nm,0.3s						
DMN	**Daman**	**14.77**	**124**	*e*P	**Pn**	**10 40 16.1**	**+0.3**
	comp=N,5.2nm,0.2s						
KURBB	**Kurchatov Arra**	**14.85**	**18**	P	**Pn**	**10 40 17.4**	**+1.1**
	comp=N,0.1nm,0.3s,baz=207,slow=10,SNR=8.1						
PKI	**Pulchoki**	**14.99**	**123**	*e*P	**Pn**	**10 40 19.3**	**+0.6**
	comp=N,18nm,0.5s						
AB31	**Akbulak array**	**15.04**	**330**	⇑P	**P**	**10 40 21.5**	**+1.1**
	comp=N,0.4nm,0.4s,baz=149,slow=12,SNR=12						
AB31				⇓S	**Sn**	**10 42 57.6**	**-7.9**
	comp=N,0.9nm,0.6s,baz=150,slow=23,SNR=3.1						
GUN	**Gumba**	**15.09**	**121**	*e*P	**Pn**	**10 40 20.5**	**+0.6**
	comp=N,10nm,0.3s						
BVAR	**Borovoye Array**	**16.33**	**358**	P	**Pn**	**10 40 34.8**	**+0.2**
	comp=N,0.3nm,0.3s,baz=153,slow=12,SNR=4.7						
AKTO	**Aktyubinsk**	**16.74**	**329**	⇑P	**Pn**	**10 40 41.8**	**+2.3**
	comp=N,2.6nm,1.0s						
AKTO				⇑S	**S**	**10 43 43.0**	**-2.4**
	comp=N,0.8nm,0.8s						
ZALV	**Zalesovo Beam**	**19.62**	**24**	P	**P**	**10 41 11.4**	**+0.8**
	comp=N,0.8nm,0.3s,baz=217,slow=10,SNR=11						
FINES	**FINESS Array B**	**37.46**	**326**	P	**P**	**10 43 52.2**	**-0.4**
	comp=N,1.2nm,0.8s,baz=110,slow=12,SNR=3.7						
ARCES	**ARCESS Array B**	**41.06**	**337**	P	**P**	**10 44 21.8**	**-0.4**
	comp=N,12nm,1.2s,baz=114,slow=9.0,SNR=3.6						
NB2	**NORSAR Subarra**	**44.38**	**323**	P	**P**	**10 44 49.6**	**+0.5**
	comp=Z,0.9nm,0.6s,baz=98,slow=7.9						
NOA	**NORSAR Array B**	**44.38**	**323**	P	**P**	**10 44 49.7**	**+0.5**
	comp=Z,0.6nm,0.6s,baz=97,slow=7.7,SNR=2.3						
YKA	**Yellowknife Ar**	**81.03**	**3**	P	**P**	**10 48 51.1**	**-0.5**
	comp=Z,0.2nm,0.6s,baz=353,slow=5.0,SNR=5.9						
WRA	**Warramunga Arr**	**81.88**	**122**	P	**P**	**10 48 54.9**	**-1.9**
	comp=Z,0.2nm,0.9s,baz=319,slow=4.6,SNR=1.1						

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*NNC **05** 10:43:24.1±2.1, 52°.17N×75°.49E, h0km, mb2.7, mpv2.3, Error ellipse: s-maj=54.5km s-min=11.8km az=28.0, Suspected Mining explosion.*
*IDC **05** 10:43:28.2±5.7, 51°.75N×75°.59E, h0km, mb1 2.7/1, mb1mx2.5/38, mbtmp2.7/1, ML1.9/1, Error ellipse: s-maj=43.7km s-min=29.8km az=83.0*
ISC 05 10:43:19.4±1.3**, 52°.3N**±0°.1×**75°.69E**±0°.08**, h0km, n9, σ0s.51**/7**, 6C-1D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURK	**Kurchatov**	**2.45**	**131**	⇓Pn	**Pg**	**10 44 05.7**	**-0.6**
	0.8nm,0.6s						
KURK				⇑Sn	**Sb**	**10 44 35.3**	**+0.4**
	2.8nm,0.8s						
KURBB	**Kurchatov Arra**	**2.47**	**133**	Pg	**Pg**	**10 44 06.7**	**-0.1**
	0.1nm,0.3s,baz=303,slow=19,SNR=3.9						
KURBB				Lg	Lg	10 44 38.0	
	0.1nm,0.3s,baz=305,slow=32,SNR=6.0						
KURBB	**Kurchatov Arra**	**2.47**	**133**	⇑Pn	**Pb**	**10 44 05.1**	**+0.5**
	0.6nm,0.5s,baz=309,slow=8.1						
KURBB				⇑Sn	**Sg**	**10 44 38.3**	**-0.5**
	6.7nm,0.8s,baz=310,slow=27						
BRVK	**Borovoye**	**3.37**	**284**	⇑Pg	**Pg**	**10 44 23.6**	**-0.2**
	2.3nm,0.9s						
BRVK				⇑Lg	Lg	10 45 10.0	
	3.1nm,0.8s						
I46RU	**ZALESOVO INFRA**	**5.72**	**70**	*i*		11 22 10.0	
	baz=255,slow=310,SNR=0.7						
ZALV	**Zalesovo Beam**	**5.72**	**70**	Pn	**Pb**	**10 45 00.2**	**+0.2**
	0.1nm,0.3s,baz=259,slow=12,SNR=1.9						
MK31	**Makanchi Array**	**7.02**	**140**	⇑Lg	Lg	10 47 01.7	
	0.5nm,0.6s,baz=240,slow=23,SNR=3.0						
MKAR	**Makanchi Array**	**7.02**	**140**	Lg	Lg	10 46 59.0	
	0.1nm,0.3s,baz=325,slow=31,SNR=5.4						
I34MN	**SONGINO INFRAS**	**20.15**	**91**	*i*		12 51 10.0	
	baz=291,slow=332,SNR=0.8						

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*IDC **05** 11:01:47.0±1.6, 36°.36N×69°.61E, h0km, mb3.5/6, mb1 3.7/9, mb1mx3.4/51, mbtmp3.6/9, ML3.4/3, MS2.6/2, Ms1 2.6/2, ms1mx2.2/44, Error ellipse: s-maj=29.3km s-min=20.1km az=140.0*
*NNC **05** 11:01:53.3±5.9, 36°.61N×69°.12E, h61km±156km, mb3.7, mpv3.8, Error ellipse: s-maj=47.2km s-min=36.2km az=161.0*
ISC 05 11:01:53.8±1.2**, 36°.61N**±0°.10×**69°.21E**±0°.09**, h43km, n21, σ1s.63**/26**, mb3.4**/5**, 5C-5D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	**Almayashu**	**6.51**	**31**	P	**Pn**	**11 03 27.7**	**+0.3**
	SNR=18						
KK31	**Karatay Array**	**6.56**	**8**	⇑P	**Pn**	**11 03 28.1**	**+0.4**
	2.1nm,0.4s,baz=180,slow=12,SNR=49						
KK31				⇓S	**Sn**	**11 04 39.9**	**-1.3**
	1.1nm,0.3s,baz=188,slow=23,SNR=6.8						
UCH	**Uchtor**	**6.95**	**35**	P	**Pn**	**11 03 33.9**	**+0.4**
	SNR=14						
AAK	**Ala-Archa**	**7.27**	**33**	Pn	**Pn**	**11 03 38.1**	**+0.5**
	2.7nm,0.3s,baz=208,slow=6.4,SNR=33						
AAK				Sn	**Sn**	**11 04 59.5**	**+0.6**
	0.2nm,0.3s,baz=319,slow=23,SNR=1.6						
AAK				Lg	Lg	11 05 37.9	
	0.1nm,0.3s,baz=333,slow=18,SNR=1.6						
AAK				LR	LR	11 06 57.2	
	comp=Z,47nm,20.0s,baz=330,slow=42						
AAK	**Ala-Archa**	**7.27**	**33**	P	**Pn**	**11 03 38.3**	**+0.7**
	SNR=11						
AAK	**Ala-Archa**	**7.27**	**33**	⇑P	**Pn**	**11 03 37.3**	**-0.4**
	4.5nm,0.5s						
AAK				⇓S	**Sn**	**11 05 01.8**	**+2.9**
	5.6nm,0.7s						
CHMS	**Chumysh**	**7.67**	**32**	P	**Pn**	**11 03 43.3**	**+0.3**
	SNR=6.7						
USP	**Ospenovka**	**7.79**	**30**	P	**Pn**	**11 03 44.9**	**+0.2**
	SNR=5.2						
TKM2	**Tokmak 2**	**7.99**	**36**	P	**Pn**	**11 03 47.8**	**+0.2**
	SNR=6.3						
TKM2	**Tokmak 2**	**7.99**	**36**	⇓P	**Pn**	**11 03 46.7**	**-0.9**
	1.6nm,0.5s						
TKM2				⇑S	**Sn**	**11 05 18.3**	**+1.6**
	1.9nm,0.6s						
GEYT	**Alibeck**	**8.94**	**282**	LR	LR	11 09 16.8	
	comp=Z,40nm,18.5s,baz=95,slow=48						
MKAR	**Makanchi Array**	**14.09**	**40**	Pn	**Pn**	**11 05 08.2**	**-2.4**
	0.1nm,0.3s,baz=223,slow=16,SNR=3.1						
AB31	**Akbulak array**	**14.33**	**335**	⇑P	**Pn**	**11 05 11.1**	**-2.7**
	0.3nm,0.3s,baz=154,slow=12,SNR=3.8						
AB31				⇓S	**Sn**	**11 07 49.2**	**-2.1**
	0.5nm,0.6s						
AKTO	**Aktyubinsk**	**15.99**	**333**	Pn	**Pn**	**11 05 36.3**	**+0.7**
	0.1nm,0.3s,baz=148,slow=19,SNR=2.3						
AKTO	**Aktyubinsk**	**15.99**	**333**	⇑P	**Pn**	**11 05 35.2**	**-0.5**
	1.9nm,0.9s						
AKTO				⇓S	**Sn**	**11 08 29.8**	**-2.0**
	1.5nm,0.9s						
ZALV	**Zalesovo Beam**	**20.44**	**27**	P	**P**	**11 06 26.4**	**-1.0**
	1.1nm,0.4s,baz=224,slow=8.6,SNR=5.7						
AKASG	**Malin Array Be**	**31.75**	**309**	P	**P**	**11 08 15.4**	**+1.8**
	0.5nm,0.4s,baz=84,slow=7.1,SNR=2.3						
FINES	**FINESS Array B**	**36.59**	**327**	P	**P**	**11 08 57.7**	**+2.3**
	1.5nm,0.9s,baz=122,slow=7.2,SNR=1.7						
NOA	**NORSAR Array B**	**43.42**	**323**	P	**P**	**11 09 53.7**	**+1.6**
	0.5nm,0.6s,baz=99,slow=7.9,SNR=1.7						
YKA	**Yellowknife Ar**	**81.19**	**2**	P	**P**	**11 14 06.2**	**+1.7**
	0.2nm,0.6s,baz=359,slow=5.3,SNR=6.4						
WRA	**Warramunga Arr**	**83.28**	**121**	P	**P**	**11 14 13.2**	**-3.0**
	0.3nm,0.9s,baz=320,slow=4.5,SNR=1.7						

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*IDC **05** 11:19:17.7±2.7, 8°.22N×72°.09W, h21km±20km, mb3.2/3, mb1 3.6/6, mb1mx3.4/43, mbtmp3.6/6, ML3.1/3, MS3.2/1, Ms1 3.2/1, ms1mx2.6/20, Error ellipse: s-maj=30.2km s-min=14.8km az=137.0*
*FUNV **05** 11:19:18.4, 8°.19N×72°.09W, h5km, MW3.3*
*RSNC **05** 11:19:18.5±1.6, 8°.35N×72°.13W, h0km±5km, ML3.2*
ISC 05 11:19:16.9±1.2**, 8°.35N**±0°.03×**72°.10W**±0°.02**, h9**km±8km**, n39, σ1s.82**/68**, mb3.5**/3**, 2C-2D, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAMC	**Pamplona, Colo**	**1.17**	**211**	⇓*e*P	**Pg**	**11 19 38.5**	**-0.9**
PAMC				*e*S	**Sg**	**11 19 56.0**	**+1.4**
PAMC				*i*		11 20 00.1	
	comp=Z,868nm,0.2s						
OCAC	**Ocana**	**1.21**	**265**	⇓*e*P	**Pg**	**11 19 39.3**	**-0.9**
OCAC				*e*S	**Sg**	**11 19 54.8**	**-1.2**
OCAC				*i*		11 20 00.8	
	comp=Z,699nm,0.3s						
SDV	**Santo Domingo**	**1.55**	**70**	Pg	**Pg**	**11 19 47.9**	**+1.3**
	comp=Z,30nm,0.3s,baz=239,slow=13,SNR=130						
SDV				Lg	Lg	11 20 07.4	
	comp=Z,120nm,0.3s,baz=152,slow=23,SNR=22						
SDV	**Santo Domingo**	**1.55**	**70**	*e*P	**Pg**	**11 19 46.9**	**+0.3**
SDV				*e*S	**Sg**	**11 20 07.4**	**+0.7**
SDV				*i*		11 20 10.7	
	comp=Z,307nm,0.6s						
SDV	**Santo Domingo**	**1.55**	**70**	*e*P	**Pg**	**11 19 47.4**	**+0.8**
SDV				*e*S	**Sg**	**11 20 08.2**	**+1.4**
MCQV	**Machiques**	**1.74**	**346**	*e*P	**Pg**	**11 19 50.4**	**0.0**
MCQV				*e*S	**Sg**	**11 20 15.3**	**+2.2**
TAMC	**Tame, Arauca**	**1.93**	**171**	*e*P	**Pn**	**11 19 51.2**	**+1.3**
TAMC				*e*S	**Sb**	**11 20 17.2**	**+0.7**
TAMC				*i*		11 20 21.9	
	comp=Z,347nm,0.3s						
SMLC	**San Martn de**	**2.00**	**283**	⇑*e*P	**Pn**	**11 19 51.7**	**+0.7**
SMLC				*e*S	**Sn**	**11 20 18.6**	**+2.4**
BRRC	**Barranca, Sant**	**2.02**	**232**	⇑*e*P	**Pn**	**11 19 53.4**	**+2.2**
BRRC				*e*S	**Sn**	**11 20 18.4**	**+1.8**
BRRC				*i*		11 20 25.1	
	comp=Z,187nm,0.4s						
BARC	**Barichara**	**2.05**	**212**	*e*P	**Pn**	**11 19 53.2**	**+1.4**
BARC				*e*S	**Sn**	**11 20 20.2**	**+2.6**
BARC				*i*		11 20 24.8	
	comp=Z,257nm,0.4s						
TORV	**Torococo**	**2.21**	**57**	*e*P	**Pn**	**11 19 55.2**	**+1.3**
TORV				*e*S	**Sn**	**11 20 22.2**	**+0.7**
CVALL	**Valledupar, Ce**	**2.43**	**332**	*e*P	**Pn**	**11 19 58.1**	**+1.2**
CVALL				*e*S	**Sn**	**11 20 29.0**	**+2.2**
CVALL				*i*		11 20 34.5	
	comp=Z,140nm,0.5s						
ARGC	**Ariguani, Magd**	**2.59**	**305**	*e*P	**Pn**	**11 20 00.8**	**+1.6**
ARGC				*e*S	**Sn**	**11 20 32.9**	**+2.0**
ARGC				*i*		11 20 53.7	
	comp=Z,63nm,0.3s						
RUSC	**La Rusia**	**2.63**	**202**	*e*P	**Pn**	**11 20 02.0**	**+2.0**
RUSC				*e*S	**Sn**	**11 20 36.3**	**+4.0**
RUSC				*i*		11 20 40.7	
	comp=Z,65nm,0.7s						
CURV	**Curarigua**	**2.68**	**52**	*e*P	**Pb**	**11 20 03.2**	**-2.0**
CURV				*e*S	**Sb**	**11 20 35.8**	**-2.5**
ZARC	**Zaragoza, Cauc**	**2.86**	**253**	*e*P	**Pn**	**11 20 04.2**	**+1.4**
ZARC				*e*S	**Sn**	**11 20 39.1**	**+1.7**
ZARC				*i*		11 20 51.5	
	comp=Z,130nm,0.3s						
PTBC	**PUERTO BERRIO,**	**2.95**	**233**	*e*P	**Pn**	**11 20 04.3**	**+0.3**
PTBC				*e*S	**Sn**	**11 20 41.4**	**+1.9**
PTBC				*i*		11 20 49.4	
	comp=Z,88nm,0.3s						
SIQV	**Siquisique**	**3.21**	**45**	*e*P	**Pn**	**11 20 10.2**	**+2.4**
SIQV				*e*S	**Sn**	**11 20 48.5**	**+2.3**
SPBC	**San Pablo de B**	**3.32**	**216**	*e*P	**Pn**	**11 20 11.0**	**+1.8**
SPBC				*e*S	**Sn**	**11 20 51.5**	**+2.7**
SPBC				*i*		11 21 08.3	
	comp=Z,39nm,0.6s						
MOTC	**Monteria, Cord**	**3.55**	**277**	*e*P	**Pn**	**11 20 14.5**	**+2.2**
MOTC				*e*S	**Sb**	**11 21 01.1**	**-2.2**
MOTC				*i*		11 21 18.8	
	comp=Z,56nm,0.5s						
MAPV	**Macapo**	**3.89**	**67**	*e*P	**Pn**	**11 20 18.2**	**+1.3**
MAPV				*e*S	**Sn**	**11 21 02.8**	**-0.1**
NORC	**Norcasia**	**3.90**	**225**	*e*P	**Pn**	**11 20 18.0**	**+0.8**
NORC				*e*S	**Sn**	**11 21 04.2**	**+1.1**
NORC				*i*		11 21 17.8	
	comp=Z,30nm,0.5s						
HELC	**Santa Helena**	**4.02**	**238**	*e*P	**Pn**	**11 20 21.7**	**+2.6**
HELC				*e*S	**Sn**	**11 21 09.4**	**+2.8**
HELC				*i*		11 21 22.8	
	comp=Z,47nm,0.4s						
CHIC	**Chingaza**	**4.04**	**204**	*e*P	**Pn**	**11 20 20.8**	**+1.4**
CHIC				*i*		11 20 41.5	
	comp=Z,15nm,0.6s						
CHIC				*e*S	**Sn**	**11 21 08.8**	**+1.8**
BAUV	**El Baul**	**4.06**	**81**	*e*P	**Pn**	**11 20 20.4**	**+1.2**
BAUV				*e*S	**Sn**	**11 21 05.3**	**-1.6**
ROSC	**El Rosal**	**4.12**	**212**	Pn	**Pn**	**11 20 18.1**	**-2.4**
	comp=Z,4.0nm,0.3s,baz=59,slow=24,SNR=2.1						
ROSC				Lg	Lg	11 21 25.3	
	comp=Z,6.7nm,0.3s,baz=90,slow=23,SNR=1.9						
GUY2C	**Guyana, Caldas**	**4.49**	**226**	*e*P	**Pn**	**11 20 27.5**	**+1.9**
GUY2C				*e*S	**Sn**	**11 21 20.6**	**+2.4**
GUY2C				*i*		11 21 24.9	
	comp=Z,19nm,0.6s						
CBOC	**Ciudad Bolivar**	**4.60**	**238**	*e*P	**Pn**	**11 20 30.6**	**+3.7**
CBOC				*i*		11 21 48.9	
	comp=Z,13nm,0.5s						
TOLC	**Tolima**	**4.92**	**221**	*e*P	**Pn**	**11 20 32.3**	**+0.9**
TOLC				*e*S	**Sn**	**11 21 31.0**	**+2.3**
ANIL	**Santa Ana**	**5.05**	**221**	*e*P	**Pn**	**11 20 35.5**	**+2.4**
ANIL				*e*S	**Sn**	**11 21 33.6**	**+1.9**
TACV	**Tcata**	**5.32**	**70**	*e*P	**Pn**	**11 20 37.8**	**+1.1**
TACV				*e*S	**Sn**	**11 21 35.9**	**-2.2**
ORTC	**Ortega, Tolima**	**5.41**	**216**	*e*P	**Pn**	**11 20 39.4**	**+1.5**
ORTC				*i*		11 20 42.2	
	comp=Z,13nm,0.3s						
ORTC				*e*S	**Sn**	**11 21 41.0**	**+0.7**
PCRV	**Puerto La Cruz**	**7.59**	**76**	Pn	**Pn**	**11 21 09.2**	**+1.4**
	comp=Z,1.0nm,0.3s,baz=23,slow=6.8,SNR=2.6						
PCRV				Sn	**Sn**	**11 22 35.2**	**+1.1**
	comp=Z,1.3nm,0.3s,baz=27,slow=20,SNR=2.1						
PTGA	**Pitinga**	**15.09**	**126**	Pn	**Pn**	**11 22 49.3**	**-1.2**
	comp=Z,0.3nm,0.3s,baz=311,slow=19,SNR=1.7						
PTGA				Lg	Lg	11 27 05.2	
	comp=Z,0.2nm,0.3s,baz=302,slow=23,SNR=1.6						
TKL	**Tuckaleechee C**	**29.20**	**340**	LR	LR	11 36 46.0	
	comp=Z,49nm,19.8s,baz=355,slow=36						
PDAR	**Pinedale Array**	**47.47**	**323**	P	**P**	**11 27 52.0**	**-0.5**
	comp=Z,0.2nm,0.5s,baz=138,slow=9.6,SNR=1.8						
YKA	**Yellowknife Ar**	**62.19**	**339**	P	**P**	**11 29 38.2**	**-0.4**
	comp=Z,0.4nm,0.6s,baz=123,slow=7.8,SNR=13						
ILAR	**Eielson Array**	**76.02**	**335**	P	**P**	**11 31 03.9**	**-0.5**
	comp=Z,0.2nm,0.6s,baz=104,slow=3.9,SNR=2.0						
WRA	**Warramunga Arr**	**151.94**	**243**	PKPbc	**PKPbc**	**11 39 11.8**	**-1.7**
	comp=Z,0.1nm,0.4s,baz=105,slow=2.5,SNR=5.6						

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*IDC **05** 11:30:56.2±1.5, 8°.48N×72°.35W, h0km, mb3.3/1, mb1 3.7/3, mb1mx3.4/36, mbtmp3.6/3, ML2.3/1, Error ellipse: s-maj=46.4km s-min=34.5km az=124.0*
*FUNV **05** 11:30:59.8, 8°.23N×72°.14W, h17km, MW3.2*
*RSNC **05** 11:30:59.4±1.8, 8°.34N×72°.14W, h3km±7km, ML3.2*
ISC 05 11:30:57.4±1.2**, 8°.37N**±0°.03×**72°.13W**±0°.03**, h6**km±9km**, n28, σ1s.51**/48**, 1C-2D, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAMC	**Pamplona, Colo**	**1.17**	**209**	*e*P	**Pg**	**11 31 18.8**	**-1.0**
PAMC				*i*		11 31 21.9	

	comp=Z,614nm,0.3s						
PAMC				eS	Sg	11 31 34.3	-0.6
OCAC	Ocana	1.19	264⇓	eP	Pg	11 31 19.8	-0.4
OCAC				eS	Sg	11 31 35.4	-0.2
OCAC				i		11 31 37.5	
	comp=Z,594nm,0.2s						
SDV	Santo Domingo	1.57	71⇓	eP	Pg	11 31 27.4	-0.1
SDV				eS	Sg	11 31 48.1	+0.3
SDV				i		11 31 51.4	
	comp=Z,241nm,0.2s						
SDV	Santo Domingo	1.57	71	eP	Pg	11 31 27.8	+0.3
SDV				eS	Sg	11 31 48.0	+0.3
MCQV	Machiques	1.72	347	eP	Pg	11 31 29.7	-0.8
MCQV				eS	Sg	11 31 53.1	+0.4
TAMC	Tame, Arauca	1.95	170	eP	Pn	11 31 31.6	+0.6
TAMC				eS	Sn	11 31 57.1	+1.3
TAMC				i		11 32 02.3	
	comp=Z,204nm,0.3s						
SMLC	San Martn de	1.97	283⇑	eP	Pn	11 31 32.1	+0.8
SMLC				eS	Sb	11 31 58.9	+0.5
SMLC				i		11 32 00.9	
	comp=Z,454nm,0.3s						
BRRC	Barranca, Sant	2.01	232	eP	Pb	11 31 33.7	-0.6
BRRC				eS	Sn	11 31 59.0	+1.8
BRRC				i		11 32 05.7	
	comp=Z,146nm,0.3s						
BARC	Barichara	2.05	211	eP	Pn	11 31 33.8	+1.2
BARC				eS	Sn	11 32 00.3	+1.7
BARC				i		11 32 04.4	
	comp=Z,160nm,0.6s						
TORV	Torococo	2.22	58	eP	Pn	11 31 35.7	+0.8
TORV				eS	Sn	11 32 01.1	-1.6
RUSC	La Rusia	2.63	201	eP	Pn	11 31 42.8	+1.9
RUSC				eS	Sn	11 32 15.0	+1.6
RUSC				i		11 32 20.9	
	comp=Z,54nm,0.6s						
DABV	Dabajuro	2.94	30	eP	Pn	11 31 46.9	+2.3
DABV				eS	Sn	11 32 20.8	+0.6
PTBC	PUERTO BERRIO,	2.94	232	eP	Pn	11 31 44.7	+0.1
PTBC				eS	Sn	11 32 20.0	-0.2
PTBC				i		11 32 28.8	
	comp=Z,78nm,0.2s						
SPBC	San Pablo de B	3.31	216	eP	Pn	11 31 51.4	+1.5
SPBC				eS	Sn	11 32 31.6	+2.0
MOTC	Monteria, Cord	3.52	277	eP	Pn	11 31 55.0	+2.3
MOTC				eS	Sn	11 32 35.8	+1.1
MOTC				i		11 32 59.2	
	comp=Z,44nm,0.6s						
NORC	Norcasia	3.89	225	eP	Pn	11 31 57.7	-0.1
NORC				i		11 32 58.1	
	comp=Z,30nm,0.3s						
MAPV	Macapo	3.91	68	eP	Pn	11 31 58.9	+0.9
MAPV				eS	Sn	11 32 42.8	-1.4
HELC	Santa Helena	4.01	238	eP	Pn	11 32 00.9	+1.2
HELC				i		11 33 04.3	
	comp=Z,34nm,0.4s						
CHIC	Chingaza	4.04	203	eP	Pn	11 32 01.4	+1.2
CHIC				i		11 32 54.1	
	comp=Z,16nm,0.5s						
BAUV	El Baul	4.08	82	eP	Pn	11 32 01.0	+0.6
BAUV				eS	Sn	11 32 45.3	-3.1
ROSC	El Rosal	4.12	212	Pn	Pn	11 32 02.6	+1.3
	comp=Z,3.5nm,0.3s,baz=266,slow=21,SNR=1.9						
ROSC				Lg	Lg	11 32 57.6	
	comp=Z,2.9nm,0.3s,baz=245,slow=21,SNR=4.0						
MONV	Montecano	4.15	31	eP	Pn	11 32 02.8	+1.5
MONV				eS	Sn	11 32 49.2	-1.0
GUY2C	Guyana, Caldas	4.48	226	eP	Pn	11 32 07.8	+1.6
CBOC	Ciudad Bolivar	4.59	237	eP	Pn	11 32 11.0	+3.5
ANIL	Santa Ana	5.04	220	eP	Pn	11 32 15.9	+2.1
ANIL				eS	Sn	11 33 11.9	-0.6
PCRV	Puerto La Cruz	7.61	76	Pn	Pn	11 32 52.5	+3.5
	baz=328,slow=5.2						
PCRV				Sn	Sn	11 34 15.6	0.0
	comp=Z,1.3nm,0.3s,baz=41,slow=11,SNR=1.7						
YKA	Yellowknife Ar	62.17	339	P	P	11 41 18.4	-0.8
	comp=Z,0.4nm,0.7s,baz=121,slow=7.7,SNR=7.5						
WRA	Warramunga Arr	151.92	243	PKPbc	PKPbc	11 50 52.2	-2.1
	comp=Z,0.6nm,1.1s,baz=106,slow=2.7,SNR=5.5						

IDC 05 11:44:52.5±9.5**,32°.72S**×**57°.41E,h0**^{km}**,mb3.6**/2**,**
mb1 3.8/2**,mb1mx3.4**/27**,mbtmp3.6**/2**,MS3.0**/1**,Ms1 3.0**/1**,**
ms1mx2.5/30**,Error ellipse: s-maj=662.0km**
s-min=54.0km az=31.0,Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LBTB	Lobatse	28.82	277	LR	LR	12 01 45.6	
	comp=Z,26nm,18.1s,baz=150,slow=35						
ASAR	Alice Springs	66.72	104	P	P	11 55 45.8	0.0
	0.4nm,0.7s,baz=226,slow=6.9,SNR=4.0						
WRA	Warramunga Arr	68.79	101	P	P	11 55 58.9	0.0
	0.5nm,0.7s,baz=240,slow=5.5,SNR=6.4						
YKA	Yellowknife Ar	149.77	353	PKPbc	PKPbc	12 04 43.1	-0.5
	0.4nm,0.7s,baz=32,slow=2.2,SNR=6.4						

IDC 05 11:51:38.4±999.0**,50°.82N**×**37°.71E,h0**^{km}**,Error ellipse:**
s-maj=1739.0km s-min=256.7km az=78.0,Baltic
States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I31KZ	AKTYUBINSK INF	12.91	84	i		13 11 10.0	
	baz=280,slow=301,SNR=1.4						
I46RU	ZALESOVO INFRA	28.50	65	i		14 47 20.0	
	baz=282,slow=341,SNR=1.6						
I34MN	SONGINO INFRAS	43.42	66	i		16 16 00.0	
	baz=304,slow=336,SNR=0.7						

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*IDC **05** 11:56:47.9±40.0, 37°.13N×19°.40E, h0^{km}, mb3.5/3,*
mb1 3.6/4, mb1mx3.3/44, mbtmp3.5/4, ML3.9/1, MS2.6/1,
Ms1 2.7/1, ms1mx2.3/40, Error ellipse: s-maj=776.0km
s-min=40.1km az=38.0
*ATH **05** 11:57:02.5, 38°.29N×20°.45E, h15^{km}, ML3.3/15, Error*
ellipse: s-maj=1.4km s-min=0.6km az=262.0
*THE **05** 11:57:02.9, 38°.29N×20°.45E, h12^{km}, ML4.0/12, Error*
ellipse: s-maj=0.8km s-min=0.4km az=265.0
*BEO **05** 11:57:02.5±0.8, 38°.20N×20°.24E, h22^{km}±4^{km}, ML3.7/8*
ISC 05 11:57:01.9±0.8**,38°.28N**±0°.02×**20°.41E**±0°.03**,h18**^{km}±2^{km}**,**
n112,σ**1**^{s}**23**/150**,mb3.6**/3**,Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEF4	Livadi, Kephal	0.03	154	P	Pg	11 57 05.2	+0.1
KEF4				S	Sg	11 57 07.2	0.0
KEF4	Livadi, Kephal	0.03	154	P	Pg	11 57 05.2	+0.1
KEF4				S	Sg	11 57 07.2	0.0
	531µm,0.2s						
KEF5	Kardakata, Kep	0.05	94	P	Pg	11 57 05.0	-0.2
KEF5				S	Sg	11 57 06.3	-1.1
KEF5	Kardakata, Kep	0.05	94	P	Pg	11 57 05.0	-0.2
KEF5				S	Sg	11 57 06.2	-1.2
DMLN	Damoulianata-K	0.05	214	P	Pg	11 57 05.6	+0.4
DMLN				S	Sg	11 57 08.0	+0.6
DMLN	Damoulianata-K	0.05	214	P	Pg	11 57 05.6	+0.4
DMLN				S	Sg	11 57 07.8	+0.4
	250µm,0.2s						
LXRA	Lixouri, Kepha	0.08	165	P	Pg	11 57 05.8	+0.4
LXRA				S	Sg	11 57 08.2	+0.4
KEF3	Kipouria, Keph	0.09	212	P	Pg	11 57 05.7	+0.2
KEF3				S	Sg	11 57 08.1	+0.2
KEF3	Kipouria, Keph	0.09	212	P	Pg	11 57 05.7	+0.2
KEF3				S	Sg	11 57 08.0	+0.1
	368µm,0.1s						
ARGA	Argostoli. Kep	0.12	152	P	Pg	11 57 06.0	+0.3
ARGA				S	Sg	11 57 08.5	+0.2
ARG2	Argostoli	0.12	149	P	Pg	11 57 06.1	+0.4
ARG2				S	Sg	11 57 08.6	+0.3
	381µm,0.1s						
VLS	Valsamata	0.18	126	P	Pg	11 57 06.6	+0.1
VLS				S	Sg	11 57 09.7	+0.1
VLS				AML	AML	11 57 09.8	
VLS				AML	AML	11 57 09.8	
VLS	Valsamata	0.18	126	P	Pg	11 57 06.6	+0.1
VLS				S	Sg	11 57 09.7	+0.1
	126µm,0.1s						
VSK1	VASILIKIADES	0.18	44	P	Pg	11 57 06.3	-0.2
FSK	Fiskardo	0.21	34	P	Pg	11 57 06.9	-0.2
FSK				S	Sg	11 57 10.2	-0.4
FSK				AML	AML	11 57 10.3	
FSK				AML	AML	11 57 10.6	
FSK	Fiskardo	0.21	34	P	Pg	11 57 06.9	-0.2
FSK				S	Sg	11 57 10.2	-0.4
	78µm,0.2s						
PSDA	Pessada-Kefalo	0.22	141	P	Pg	11 57 07.4	+0.4
PSDA				S	Sg	11 57 10.5	-0.1
PSDA	Pessada-Kefalo	0.22	141	P	Pg	11 57 07.4	+0.4
PSDA				S	Sb	11 57 11.1	+0.8
	11µm,0.1s						
EVGI	Lefkada island	0.39	30	P	Pg	11 57 09.8	-0.1
EVGI				S	Sg	11 57 15.7	+0.2
EVGI	Lefkada island	0.39	30	P	Pg	11 57 09.9	-0.1
EVGI				S	Sg	11 57 15.7	+0.2
	9µm,0.1s						
DRAG	Dragano-Lefkad	0.42	18	P	Pg	11 57 10.4	-0.2
DRAG	Dragano-Lefkad	0.42	18	P	Pg	11 57 10.4	-0.2
LKD2	Lefkada island	0.54	21	P	Pg	11 57 11.9	-0.8
LKD2				S	Sg	11 57 19.7	-0.4
LKD2				AML	AML	11 57 25.2	
	comp=E,10226µm,0.2s						
LKD2				AML	AML	11 57 26.5	
	comp=N,10216µm,0.3s						
LKD2	Lefkada island	0.54	21	P	Pg	11 57 12.5	-0.3
LKD2				S	Sb	11 57 20.8	+0.5
	comp=N,5µm,0.3s						
AST1	Astakos	0.59	64	P	Pg	11 57 13.3	-0.4
AST1				S	Sb	11 57 22.5	+0.8
	comp=N,8µm,0.3s						
LTHK	Lithakia	0.66	149	P	Pg	11 57 14.5	-0.4
LTHK				S	Sb	11 57 24.7	+1.1
LTHK	Lithakia	0.66	149	P	Pg	11 57 14.8	-0.1
LTHK				S	Sb	11 57 24.8	+1.1
	comp=N,14µm,0.2s						
PDO	Prodromos	0.69	62	P	Pg	11 57 14.7	-0.6
PDO				AML	AML	11 57 30.8	
	comp=E,8548µm,0.3s						
PDO				AML	AML	11 57 31.1	
	comp=N,9978µm,0.4s						
PDO	Prodromos	0.69	62	P	Pg	11 57 15.1	-0.3
PDO				S	Sb	11 57 25.8	+1.4
	comp=N,7µm,0.3s						
RLS	Riolos of Patr	0.86	105	P	Pb	11 57 18.0	-0.3
RLS				AML	AML	11 57 38.1	
	comp=E,2825µm,0.5s						
RLS				AML	AML	11 57 39.4	
	comp=N,3243µm,0.3s						
RLS	Riolos of Patr	0.86	105	P	Pb	11 57 18.1	-0.2
DRO	Drossia	1.08	107	P	Pb	11 57 21.5	-0.5
DRO	Drossia	1.08	107	P	Pb	11 57 21.9	-0.1
LAKA	Lakka	1.24	91	P	Pn	11 57 24.5	+0.3
IGT	Igoumenitsa	1.25	357	P	Pn	11 57 25.4	+0.9
IGT	Igoumenitsa	1.25	357	P	Pb	11 57 25.8	+0.9
IGT	Igoumenitsa	1.25	357	ePg	Pg	11 57 27.1	+1.0
IGT				eSg	Sg	11 57 44.8	+2.4
EVR	Evrytania	1.27	60	P	Pn	11 57 24.8	+0.1
EVR				AML	AML	11 57 48.7	
	comp=N,1668µm,0.5s						
EVR				AML	AML	11 57 55.0	
	comp=E,1602µm,0.5s						
EVR	Evrytania	1.27	60	P	Pn	11 57 25.3	+0.6
SERG	Sergoula	1.30	84	P	Pn	11 57 25.2	+0.1
TRIZ	Trizonia	1.31	86	P	Pn	11 57 25.5	+0.3
KALE	Kalithea	1.36	85	P	Pn	11 57 26.3	+0.2
KALE				AML	AML	11 57 54.2	
	comp=N,3743µm,0.5s						
KALE				AML	AML	11 57 54.3	
	comp=E,1776µm,0.5s						
KALE	Kalithea	1.36	85	P	Pn	11 57 26.4	+0.3
KLV	Kalavryta, Ach	1.39	99	P	Pn	11 57 27.1	+0.7
KLV				AML	AML	11 57 53.6	
	comp=N,1478µm,0.5s						
KLV				AML	AML	11 58 05.8	
	comp=E,1037µm,0.8s						
KLV	Kalavryta, Ach	1.39	99	P	Pn	11 57 27.3	+0.9
KEK	Kerkira	1.51	342	P	Pn	11 57 29.5	+1.5
KEK				AML	AML	11 57 58.3	
	comp=E,2029µm,0.5s						
KEK				AML	AML	11 58 01.8	
	comp=N,1221µm,0.5s						
KEK	Kerkira	1.51	342	P	Pb	11 57 29.7	+0.4
KASA	Kassiopi	1.51	346	P	Pn	11 57 29.3	+1.3
ITM	Ithomi	1.63	132	P	Pb	11 57 31.7	+0.3
ITM				AML	AML	11 58 11.9	
	comp=N,1301µm,0.9s						
ITM				AML	AML	11 58 16.1	
	comp=E,893µm,0.7s						
DSF	Desfina	1.67	85	P	Pn	11 57 31.3	+1.0
DSF	Desfina	1.67	85	P	Pn	11 57 31.4	+1.2
AGG	Agios Georgios	1.68	63	P	Pb	11 57 32.8	+0.6
AGG				AML	AML	11 57 59.2	
	comp=N,1557µm,0.7s						
AGG				AML	AML	11 58 01.4	
	comp=E,1723µm,0.4s						
PYL	PYLOS	1.74	142	P	Pn	11 57 33.0	+1.8
THL	Klokotos Trika	1.79	44	P	Pb	11 57 34.4	+0.3
THL				AML	AML	11 58 10.5	
	comp=N,669µm,0.6s						
THL				AML	AML	11 58 12.3	
	comp=E,914µm,0.5s						
THAL	Thalero	1.79	97	P	Pb	11 57 33.6	-0.5
KPRO	Kipourio	1.83	24	P	Pb	11 57 35.4	+0.6
AXAR	Agios Charalam	1.83	74	P	Pb	11 57 35.4	+0.6
AXAR				AML	AML	11 58 12.5	
	comp=E,3119µm,0.8s						
AXAR				AML	AML	11 58 23.0	
	comp=N,2310µm,0.6s						
PENT	Pentalofos	1.99	16	P	Pb	11 57 38.6	+0.9
PENT				AML	AML	11 58 11.7	
	comp=E,977µm,0.8s						
PENT				AML	AML	11 58 13.0	
	comp=N,1044µm,0.5s						
LTK	Loutraki	2.03	97	P	Pb	11 57 37.8	-0.5
LKR	Lokris	2.07	79	P	Pb	11 57 38.4	-0.4
ATAL	Atalanti	2.09	78	P	Pb	11 57 39.2	0.0
NEST	Nestorio	2.19	13	P	Pb	11 57 41.2	+0.2
VIL2	Platees	2.25	91	P	Pb	11 57 41.4	-0.6
KZN	Kozani	2.28	27	P	Pb	11 57 41.4	-1.1
KZN				AML	AML	11 58 22.9	
	comp=E,590µm,0.4s						
KZN				AML	AML	11 58 25.6	
	comp=N,523µm,0.4s						
VLI	Veliai	2.54	127	P	Pb	11 57 46.7	-0.3
FNA	Florina	2.61	16	ePn	Pn	11 57 45.9	+2.7
FNA				eSn	Sn	11 58 17.6	+3.2
OHR	Ohrid	2.84	6	i Pn	Pn	11 57 49.6	+3.2
STIP	Stip	3.67	21	i Pn	Pn	11 58 01.4	+3.6
SRS	Serrai	3.75	40	ePn	Pn	11 58 00.3	+1.5
SKO	Skopje	3.77	12	ePn	Pn	11 58 00.4	+1.3
SKO				eSn	Sn	11 58 44.4	+1.4
PDG	Podgorica	4.24	348	ePn	Pn	11 58 06.6	+1.1
PDG				eSn	Sn	11 58 54.8	+0.4
PDG	Podgorica	4.24	348	ePn	Pn	11 58 05.6	+0.1
HCY	Herceg Novi	4.41	341	ePn	Pn	11 58 08.1	+0.2
TREB	Trebinje	4.70	341	ePn	Pn	11 58 12.2	+0.3
DBRK	Dubrovnik	4.71	339	i Pn	Pn	11 58 10.5	-1.5
DBRK				Sn	Sn	11 59 03.6	-2.6
BRY	Bratogost	4.83	343	ePn	Pn	11 58 14.3	+0.5
STON	Ston	5.03	337	ePn	Pn	11 58 15.0	-1.3
STON				Sn	Sn	11 59 10.0	-3.9
ZAPS	Zavoj	5.26	18	ePn	Pn	11 58 22.3	+2.7
IVAS	Ivanjica	5.29	358	ePn	Pn	11 58 20.8	+0.7
IVAS				eSn	Sn	11 59 20.0	-0.6
MAKA	Makarska	5.62	334	ePn	Pn	11 58 24.9	+0.4
MAKA				Sn	Sn	11 59 25.1	-3.5
BBLS	Lazići	5.63	353	ePn	Pn	11 58 25.9	+1.2
BBLS	Lazići	5.63	353	ePn	Pn	11 58 25.3	+0.6
RICI	Ricice	5.77	336	ePn	Pn	11 58 27.2	+0.7
RICI				Sn	Sn	11 59 29.8	-2.4
DIVS	Divibare	5.82	357	ePn	Pn	11 58 27.2	-0.1
DIVS	Divibare	5.82	357	ePn	Pn	11 58 27.3	-0.1
HAPS	Han Pijesak,BI	5.90	350	ePn	Pn	11 58 29.4	+0.9
HAPS				eSn	Sn	11 59 33.8	-1.9
HAPS	Han Pijesak,BI	5.90	350	ePn	Pn	11 58 27.4	-1.1
ZIRJ	Zirje	6.46	328	ePn	Pn	11 58 36.0	-0.1
KIJV	Kijevo	6.47	333	ePn	Pn	11 58 36.9	+0.8
KIJV				Sn	Sn	11 59 46.4	-3.0
MORI	Morici	6.61	329	ePn	Pn	11 58 39.2	+1.1
MORI				Sn	Sn	11 59 49.8	-3.1
MGRS	Mrkonjic Grad	6.62	339	ePn	Pn	11 58 40.8	+2.6
BLY	Banja Luka	6.90	341	ePn	Pn	11 58 42.7	+0.7
BLY				eSn	Sn	11 59 58.8	-1.2
BLY	Banja Luka	6.90	341	ePn	Pn	11 58 42.2	+0.2
DUGI	Dugi Otok	6.99	326	ePn	Pn	11 58 44.5	+1.3
UDBI	Udbina	7.15	332	ePn	Pn	11 58 47.5	+1.9
NVLJ	Novalja	7.53	328	ePn	Pn	11 58 51.6	+1.0
NVLJ				Sn	Sn	12 00 11.6	-3.9
MORH	Mrgy, Hungar	8.04	351	ePn	Pn	11 58 57.0	-0.6
OZLJ	Ozalj	8.20	335	i Pn	Pn	11 59 01.1	+1.2
CRES	Cresnjev	8.39	336	ePn	Pn	11 59 02.5	0.0
CEY	Cerknica	8.68	331	ePn	Pn	11 59 07.3	+0.8
OBKA	Obir	9.29	334	ePn	Pn	11 59 15.8	+0.8
	comp=N,1.6nm,0.2s						
KBA	Koelnbreinsper	10.21	332	ePn	Pn	11 59 28.9	+1.4
	comp=N,0.8nm,0.3s						
MOA	Molln	10.56	337	ePn	Pn	11 59 33.8	+1.5
	comp=N,0.9nm,0.2s						
WTTA	Wattenberg	11.04	327	ePn	Pn	11 59 39.8	+0.8
	comp=N,1.9nm,0.4s						
WATA	Walderalm	11.13	327	ePn	Pn	11 59 42.8	+2.7
	comp=N,1.3nm,0.2s						
SQTA	Sankt Quirin	11.20	326	ePn	Pn	11 59 42.8	+1.8
	comp=N,1.5nm,0.3s						
FETA	Feichten	11.27	324	ePn	Pn	11 59 43.5	+1.5
	comp=N,1.2nm,0.6s						
GERES	GERESS Array B	11.62	337	Pn	Pn	11 59 47.4	+0.7
	comp=N,0.3nm,0.3s,baz=160,slow=12,SNR=1.5						
NOA	NORSAR Array B	23.50	349	LR	LR	12 12 02.6	
	comp=N,12nm,18.4s,baz=160,slow=37						
KURBB	Kurchatov Arra	42.24	54	P	P	12 04 52.9	-0.8
	comp=N,0.1nm,0.5s,baz=279,slow=8.9,SNR=2.1						
MKAR	Makanchi Array	45.32	58	P	P	12 05 17.6	-1.0
	comp=N,0.3nm,0.4s,baz=279,slow=7.7,SNR=5.4						
ZALV	Zalesovo Beam	45.69	48	P	P	12 05 21.3	-0.1
	comp=N,1.0nm,0.4s,baz=281,slow=8.0,SNR=6.1						

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*NEIC **05** 11:59:28.3±1.3, 58°.52N±0°.06×155°.2W±0°.1, h142^{km}±5^{km},*
Error ellipse: s-maj=11.0km s-min=6.3km az=125.0
AEIC 05 11:59:29±1.5**,58°.50N**±0°.05×**155°.2W**±0°.1**,h135**^{km}±5^{km}**,**
ML3.3,ML3.5/40(NEIC)**,Error ellipse: s-maj=10.6km**
s-min=6.4km az=121.0,Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KVTA	Katmai Vly 10	0.14	212		Pn	11 59 47.4	+0.1
KAHC	Katmai Hardscr	0.17	27		Pn	11 59 47.2	-0.3
KCG	Knife Ck. Glac	0.19	173		Sn	12 00 02.5	+1.1
KABU	Katmai Buttres	0.24	196		Pn	11 59 47.8	+0.2
KABU					Sn	12 00 02.1	+0.5
KAHG	Katmai Hook Gl	0.32	90		Pn	11 59 48.2	+0.3
KABR	Katmai Barrier	0.38	165		Pn	11 59 48.2	+0.1
KABR					Sn	12 00 03.0	+0.5
PLK2	Peulik 2	0.96	221		Pn	11 59 52.2	+0.2
PLK3	Peulik 3	1.00	217		Pn	11 59 52.6	+0.3
PLK3					Sn	12 00 10.6	+0.6
PLK1	Peulik 1	1.04	228		Pn	11 59 52.9	+0.3
AUW	Augustine West	1.24	44		Pn	11 59 55.0	+0.5
AUCH	Augustine Cone	1.24	45		Pn	11 59 55.1	+0.3
AUCH					Sn	12 00 14.6	+0.3
AUH	Augustine H	1.25	45		Pn	11 59 55.2	+0.5
AUL	Augustine Lava	1.26	44		Pn	11 59 55.3	+0.5
OPT	Oil Point	1.53	40		Pn	11 59 58.1	+0.4
OPT					Sn	12 00 20.1	+0.4
KDAK	Kodiak Island	1.54	117		Pn	11 59 57.9	+0.1
OHAK	Old Harbor	1.62	141		Pn	11 59 58.8	0.0
OHAK					Sn	12 00 21.3	-0.1
OHAK	Old Harbor	1.62	141	IAML		12 00 21.7	
	comp=N,424nm,0.2s						
OHAK				IAML		12 00 22.1	
	comp=E,390nm,0.2s						
ILS	Iliamna Low So	1.82	35		Pn	12 00 00.9	-0.2
IVE	Iliamna Volcan	1.88	35		Pn	12 00 01.7	-0.1
SII	Sitkinak Islan	2.01	164		Pn	12 00 03.5	+0.2
SII					Sn	12 00 29.5	-0.1
HOM	Homer	2.16	56		Sn	12 00 32.6	-0.2
CNPM	China Poot	2.28	61		Pn	12 00 06.9	+0.4
CNPM					Sn	12 00 34.2	-1.3
CNPM	China Poot	2.28	61	IAML		12 00 35.3	
	comp=N,243nm,0.6s						
CNPM				IAML		12 00 35.7	
	comp=E,151nm,0.5s						
RED	Redoubt Volcan	2.28	31		Pn	12 00 06.3	-0.3
RDSO	Redoubt South	2.32	31		Pn	12 00 06.9	-0.3
RSO	Redoubt South	2.32	31		Pn	12 00 07.2	-0.1
NCT	North Crescent	2.36	28		Pn	12 00 07.4	-0.3
BRLK	Bradley Lake	2.54	58		Pn	12 00 09.6	-0.3
BRLK					Sn	12 00 39.6	-1.8
BRLK	Bradley Lake	2.54	58	IAML		12 00 41.9	
	comp=N,91nm,0.6s						
BRSE	Bradley Lake S	2.60	59		Pn	12 00 10.1	-0.5
SVW2	Sparrevohn	2.62	356		Pn	12 00 09.9	-0.9
CHGN	Chignik	2.82	220		Pn	12 00 13.3	-0.1
CHGN					Sn	12 00 47.3	-0.3
CHGN	Chignik	2.82	220	IAML		12 00 48.9	
	comp=N,135nm,0.1s						
CHGN				IAML		12 00 49.0	
	comp=E,138nm,0.1s						
CAPN	Captain Cook N	3.05	40		Pn	12 00 17.4	+1.0
CKL	Chakachamna La	3.06	27		Pn	12 00 16.6	0.0
VNHG	Veniaminof 1	3.15	225		Pn	12 00 18.6	+0.8
SPCP	Crater Peak Br	3.17	27		Pn	12 00 18.1	+0.1
VNSG	Veniaminof 6	3.19	224		Pn	12 00 18.6	+0.3
SPCG	Spurr Capps Gl	3.22	28		Pn	12 00 18.6	-0.1
SLKM	Skilak Lake	3.23	49		Pn	12 00 18.7	0.0
SEW	Seward	3.34	59		Sn	12 00 56.7	-2.9
SEW	Seward	3.34	59		Pn	12 00 20.6	+0.5
O22K	Cooper Landing	3.41	52		Pn	12 00 21.2	+0.2
STLK	Strandline Lak	3.44	28		Pn	12 00 21.6	+0.1
SUA	Susitna One	3.71	35		Pn	12 00 24.8	-0.2
SUA	Susitna One	3.71	35	IAML		12 01 07.9	
	comp=E,63nm,0.9s						
SUA					Sn	12 01 08.1	-0.4
SUA				IAML		12 01 09.8	
	comp=N,52nm,0.4s						
RC01	Rabbit Creek A	3.78	44		Pn	12 00 25.4	-0.4
SKT	Skwentna	3.94	26		Pn	12 00 27.7	-0.2
PWL	Port Wells	4.19	53		Pn	12 00 30.2	-1.1
PMR	Palmer	4.33	42		Sn	12 01 18.7	-4.3
PMR				IAML		12 01 20.5	
	comp=E,32nm,0.5s						
PMR	Palmer	4.33	42		Pn	12 00 31.4	-1.7
TT01	Tatalina	4.45	355		Pn	12 00 33.9	-0.7
KNK	Knik Glacier	4.46	46		Pn	12 00 33.5	-1.4
KNK	Knik Glacier	4.46	46	IAML		12 01 23.8	
	comp=E,63nm,0.5s						
KNK				IAML		12 01 25.2	
	comp=N,60nm,0.4s						
TTA	Tatalina	4.47	355		Pn	12 00 34.3	-0.7
GHO	Glory Hole Cre	4.53	41		Pn	12 00 34.5	-1.3
GHO	Glory Hole Cre	4.53	41		Sn	12 01 23.8	-3.9
GHO				IAML		12 01 25.6	
	comp=N,36nm,0.4s						
GHO				IAML		12 01 25.7	
	comp=E,51nm,0.8s						
PPLA	Purkeypile	4.65	17		Pn	12 00 38.0	+0.5
Q23K	Middleton Isla	4.66	75		Pn	12 00 37.5	+0.1
MID	Middleton Isla	4.66	75		Pn	12 00 37.5	+0.1
GLI	Glacier Island	4.73	56		Pn	12 00 37.4	-1.1
GLI	Glacier Island	4.73	56	IAML		12 01 31.0	
	comp=N,41nm,0.7s						
GLI				IAML		12 01 33.0	
	comp=E,56nm,0.4s						
SML	Sawmill	4.76	43		Pn	12 00 39.4	+0.5
SML	Sawmill	4.76	43	IAML		12 01 38.4	
	comp=N,23nm,1.1s						
SML				IAML		12 01 39.0	
	comp=E,25nm,1.1s						
HIN	Hinchinbrook I	4.81	63		Pn	12 00 39.4	-0.1
FID	Port Fidalgo	4.95	59		Pn	12 00 40.2	-1.2
SCM	Sheep Creek Mo	5.15	46		Pn	12 00 42.6	-1.4
SCM	Sheep Creek Mo	5.15	46	IAML		12 01 44.3	
	comp=E,42nm,0.8s						
SCM				IAML		12 01 44.4	
	comp=N,41nm,1.0s						
EYAK	Cordova Ski Ar	5.21	63		Pn	12 00 44.2	-0.6
DIV	Divide	5.42	57		Pn	12 00 47.4	-0.3
WAT1	Susitna Watana	5.42	34		Pn	12 00 46.0	-1.7
KTH	Kantishna Hill	5.47	20		Pn	12 00 47.7	-0.7
WAT6	Susitna Watana	5.49	39		Pn	12 00 47.1	-1.7
TRF	Thorofare Moun	5.51	23		Pn	12 00 47.8	-1.1
WAT2	Susitna Watana	5.52	33		Pn	12 00 47.3	-1.8
KLU	Klutina	5.52	53		Pn	12 00 48.1	-0.9
KAIM	Kayak Island	5.70	71		Pn	12 00 51.6	+0.3
GOAT	Goat Mountain	5.70	64		Pn	12 00 51.4	-0.1
M24K	Tolsona, Glenn	5.75	47		Pn	12 00 51.3	-0.8
RND	Reindeer	5.80	29		Pn	12 00 51.6	-1.2

HMT	Hamilton	5.86	67		Pn	12 00 53.7	+0.1
BMRM	Bremner River	5.88	61		Pn	12 00 53.6	-0.3
BPAW	Bear Paw Mtn.	5.97	18		Pn	12 00 54.9	-0.1
NICHA	Nichawak Mount	5.98	68		Pn	12 00 55.1	-0.1
SUCK	Suckling Hills	6.04	70		Pn	12 00 56.0	0.0
MCK	McKinley	6.06	27		Pn	12 00 54.8	-1.4
N25K	Chitina, Valde	6.14	55		Pn	12 00 57.2	-0.2
BERG	Berg Lake	6.14	67		Pn	12 00 57.3	0.0
KHIT	Khitrov Hills	6.38	67		Pn	12 01 00.5	0.0
GLB	Gilahina Butte	6.42	58		Pn	12 01 00.8	-0.2
VRDI	Verde Repeater	6.50	60		Pn	12 01 01.9	-0.4
CRQM	Cirque	6.50	65		Pn	12 01 02.1	-0.2
SNH	Sunshine Point	6.53	70		Pn	12 01 02.7	+0.2
PAX	Paxson	6.53	43		Pn	12 01 02.5	-0.1
KULT	Kultieth River	6.59	69		Pn	12 01 03.8	+0.3
TGL	Tana Glacier	6.65	65		Pn	12 01 04.2	-0.1
MCARA	McCarthy VSAT	6.75	59		Pn	12 01 05.5	+0.1
NEA2	Nenana	6.77	23		Pn	12 01 03.4	-2.3
ISLE	Juniper Island	6.85	67		Pn	12 01 07.0	+0.1
WRH	Wood River Hil	6.88	26		Pn	12 01 05.2	-2.0
KIAG	Kiagna River	6.92	64		Pn	12 01 07.7	-0.1
PTPK	Patty Peak	6.94	62		Pn	12 01 08.1	-0.1
BALM	Baldy	6.95	63		Pn	12 01 08.0	-0.3
MESA	MESA	6.96	70		Pn	12 01 08.9	+0.3
YAH	Yahtse	7.09	69		Pn	12 01 10.2	-0.1
CCB	Clear Creek Bu	7.09	26		Pn	12 01 07.9	-2.2
HDA	Harding Lake	7.11	30		Pn	12 01 08.3	-2.0
GRNC	Granite Creek	7.16	66		Pn	12 01 11.6	+0.4
I23K	Minto, Yukon-K	7.21	20		Pn	12 01 10.0	-1.6
RIDG	Independent Ri	7.25	39		Pn	12 01 11.0	-1.2
PS08	TAPS Pump Stn8	7.25	30		Pn	12 01 10.3	-1.9
MDM	Murphy Dome	7.27	24		Pn	12 01 10.5	-1.9
TCOL	CIGO, UAF Yank	7.28	25		Pn	12 01 10.4	-2.1
COLA	College	7.28	25	Pn	Pn	12 01 10.6	-1.9
RKAV	Rock Avalanche	7.28	70		Pn	12 01 13.4	+0.7
BARN	Barnard Glacie	7.28	64		Pn	12 01 12.8	0.0
CTGM	Chitina Glacie	7.41	65		Pn	12 01 14.2	-0.2
IL31		7.42	29		Pn	12 01 12.0	-2.4
ILAR	Eielson Array	7.42	29		Pn	12 01 11.9	-2.6
DOT	Dot Lake	7.45	41	Pn	Pn	12 01 14.8	-0.2
LOGN	Logan Glacier	7.54	66		Pn	12 01 16.1	-0.1
IM03		7.54	4		Pn	12 01 14.2	-1.8
IMAR	Indian Mountai	7.54	4		Pn	12 01 15.3	-0.8
POKR	Poker Plat Res	7.58	26		Pn	12 01 14.6	-2.0
SCRK	Sand Creek	7.69	40		Pn	12 01 16.8	-1.4
YUK2	White River	7.87	59		Pn	12 01 20.6	+0.1
BC03		7.98	49		Pn	12 01 21.4	-0.6
BCAR	Beaver Creek A	7.98	49		Pn	12 01 21.3	-0.7

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*NEIC **05** 12:14:29.7±1.8, 57°.35N±0°.07×148°.90W±0°.09, h16^{km}±5^{km}, Error ellipse: s-maj=10.9km s-min=6.0km az=160.0*

*IDC **05** 12:14:29.3±0.9, 57°.25N×148°.71W, h0^{km}, mb3.6/12, mb1 3.8/17, mb1mx3.7/70, mbtmp3.7/17, ML3.4/5, MS3.1/9, Ms1 3.2/9, ms1mx2.9/43, Error ellipse: s-maj=19.7km s-min=13.9km az=15.0*

*AEIC **05** 12:14:32±1.2, 57°.28N±0°.08×148°.84W±0°.08, h8^{km}±5^{km}, ML3.7, ML3.9/70(NEIC), Error ellipse: s-maj=12.1km s-min=5.5km az=162.0*

ISC 05 12:14:30.2±0.6**, 57°.35N**±0°.06×**148°.82W**±0°.04**, h10**^{km}**,** **n170,** σ**1**^{s}**54**/143**, mb3.7**/13**, MS3.0**/5**, Gulf of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDAK	Kodiak Island	2.08	284	Pn	Pn	12 15 02.9	-2.1
	9.4nm,0.3s,baz=104,slow=7.7,SNR=288						
KDAK				Sn	Sn	12 15 26.4	-4.6
	23nm,0.3s,baz=102,slow=24,SNR=6.9						
KDAK				LR	LR	12 16 10.2	
	comp=Z,437nm,18.6s,baz=125,slow=47						
KDAK	Kodiak Island	2.08	284		Pn	12 15 03.0	-2.1
OHAK	Old Harbor	2.43	269		Pn	12 15 07.1	-2.9
OHAK					Lg	12 15 34.5	
Q23K	Middleton Isla	2.46	31		Pn	12 15 08.6	-1.7
Q23K					Sn	12 15 37.0	-3.3
MID	Middleton Isla	2.46	31		Pn	12 15 08.6	-1.7
MID					Sn	12 15 37.1	-3.3
MID	Middleton Isla	2.46	31	IAML		12 15 38.3	
	comp=N,339nm,0.7s						
CNPM	China Poot	2.53	331		Pn	12 15 09.8	-1.5
CNPM					Lg	12 15 39.7	
BRSE	Bradley Lake S	2.60	338		Pn	12 15 10.8	-1.5
BRLK	Bradley Lake	2.66	337		Pn	12 15 11.5	-1.6
HOM	Homer	2.75	329		Lg	12 15 46.1	
SEW	Seward	2.79	353		Pn	12 15 13.1	-1.7
SII	Sitkinak Islan	3.04	257		Sn	12 15 49.8	-5.0
AU22	Augustine Moun	3.14	312		Pn	12 15 18.3	-1.3
AUCH	Augustine Cone	3.17	312		Pn	12 15 19.3	-0.8
AUCH					LR	12 15 55.6	
AUL	Augustine Lava	3.18	312		Pn	12 15 19.4	-0.8
O22K	Cooper Landing	3.18	352		Pn	12 15 18.8	-1.4
SLKM	Skilak Lake	3.25	348		Pn	12 15 19.8	-1.5
SLKM					Sn	12 15 56.6	-3.4
OPT	Oil Point	3.27	317		Pn	12 15 20.6	-0.9
HIN	Hinchinbrook I	3.29	20		Pn	12 15 20.5	-1.2
HIN					Sn	12 15 57.6	-3.2
HIN	Hinchinbrook I	3.29	20	IAML		12 16 00.7	
	comp=E,316nm,0.7s						
ILS	Iliamna Low So	3.43	321		Pn	12 15 22.6	-1.1
KAIM	Kayak Island	3.46	40		Pn	12 15 22.9	-1.2
IVE	Iliamna Volcan	3.46	322		Pn	12 15 22.5	-1.7
PWL	Port Wells	3.53	4		Pn	12 15 23.5	-1.5
EYAK	Cordova Ski Ar	3.58	25		Pn	12 15 24.5	-1.2
KABU	Katmai Buttres	3.58	288		Pn	12 15 24.6	-1.2
FID	Port Fidalgo	3.62	18		Pn	12 15 24.5	-1.7
FID	Port Fidalgo	3.62	18	IAML		12 16 05.5	
	comp=E,262nm,0.4s						
FID				IAML		12 16 06.4	
	comp=N,215nm,0.4s						
CAPN	Captain Cook N	3.64	342		Pn	12 15 26.3	-0.2
GLI	Glacier Island	3.65	13		Pn	12 15 25.5	-1.2
GLI	Glacier Island	3.65	13	IAML		12 16 07.1	
	comp=E,165nm,0.5s						
GLI				IAML		12 16 07.3	
	comp=N,127nm,0.2s						
RED	Redoubt Volcan	3.70	328		Pn	12 15 25.5	-2.0
RDSO	Redoubt South	3.72	328		Pn	12 15 25.8	-2.0
RAGM	Ragged Mountai	3.73	33		Pn	12 15 26.8	-1.0
RSO	Redoubt South	3.73	328		Pn	12 15 26.5	-1.5
RC01	Rabbit Creek A	3.78	353		Pn	12 15 27.4	-1.1
SUCK	Suckling Hills	3.79	42		Pn	12 15 27.8	-0.9
SUCK	Suckling Hills	3.79	42	IAML		12 16 11.3	
	comp=N,196nm,0.7s						
SUCK				IAML		12 16 13.1	
	comp=E,274nm,0.8s						
HMT	Hamilton	3.82	36		Pn	12 15 28.1	-1.0
DFR	Drift River	3.82	330		Pn	12 15 27.2	-1.9
NICHA	Nichawak Mount	3.84	39		Pn	12 15 28.5	-0.8
NCT	North Crescent	3.86	328		Pn	12 15 28.1	-1.6
GOAT	Goat Mountain	3.87	31		Pn	12 15 28.9	-0.9
JPK	Jack Peak	3.89	16		Pn	12 15 29.0	-1.0
PLK3	Peulik 3	4.03	278		Pn	12 15 30.4	-1.5
BERG	Berg Lake	4.05	39		Pn	12 15 30.8	-1.3
KNK	Knik Glacier	4.08	2		Pn	12 15 31.5	-1.1
KNK	Knik Glacier	4.08	2	IAML		12 16 17.1	
	comp=E,110nm,0.6s						
GRIN	Grindle Hills	4.10	42		Pn	12 15 32.2	-0.6
DIV	Divide	4.10	21		Pn	12 15 31.9	-1.1
SNH	Sunshine Point	4.21	45		Pn	12 15 33.3	-1.2
BMRM	Bremner River	4.23	29		Pn	12 15 33.8	-0.8
KHIT	Khitrov Hills	4.24	41		Pn	12 15 33.6	-1.3
SPCN	Chakachatna No	4.25	337		Pn	12 15 34.5	-0.6
PMR	Palmer	4.26	358		Pn	12 15 34.0	-1.0
SPCG	Spurr Capps Gl	4.28	339		Pn	12 15 34.7	-0.8
SPCP	Crater Peak Br	4.29	338		Pn	12 15 34.8	-0.7
KULT	Kultieth River	4.30	45		Pn	12 15 34.5	-1.1
KLU	Klutina	4.41	18		Pn	12 15 36.4	-0.9
KLU	Klutina	4.41	18	IAML		12 16 26.3	
	comp=N,153nm,0.2s						
GHO	Glory Hole Cre	4.44	359		Pn	12 15 37.0	-0.6
GHO	Glory Hole Cre	4.44	359	IAML		12 16 29.6	
	comp=E,147nm,0.5s						
GHO				IAML		12 16 29.9	
	comp=N,149nm,0.5s						
STLK	Strandline Lak	4.44	341		Pn	12 15 36.6	-1.0
SML	Sawmill	4.48	3		Pn	12 15 37.6	-0.5
SML	Sawmill	4.48	3	IAML		12 16 29.2	
	comp=E,92nm,0.5s						
SML				IAML		12 16 29.8	
	comp=N,88nm,0.6s						
CRQM	Cirque	4.50	38		Pn	12 15 37.5	-1.0
CRQM	Cirque	4.50	38	IAML		12 16 28.8	
	comp=N,130nm,0.5s						
CRQM				IAML		12 16 29.0	
	comp=E,152nm,0.4s						
PS12	TAPS Pump St12	4.54	23		Pn	12 15 38.3	-0.7
MESA	MESA	4.56	49		Pn	12 15 38.4	-1.1
MESA	MESA	4.56	49	IAML		12 16 31.4	
	comp=N,140nm,0.5s						
MESA				IAML		12 16 32.6	
	comp=E,92nm,0.3s						
SCM	Sheep Creek Mo	4.56	9		Pn	12 15 38.8	-0.5
SCM	Sheep Creek Mo	4.56	9	IAML		12 16 35.7	
	comp=N,84nm,0.6s						
SCM				IAML		12 16 45.7	
	comp=E,97nm,0.8s						
TGL	Tana Glacier	4.61	40		Pn	12 15 38.9	-1.1
TGL	Tana Glacier	4.61	40	IAML		12 16 37.2	
	comp=N,85nm,0.8s						
ISLE	Juniper Island	4.68	43		Pn	12 15 39.7	-1.2
ISLE	Juniper Island	4.68	43	IAML		12 16 32.1	
	comp=N,98nm,0.9s						
ISLE				IAML		12 16 38.4	
	comp=E,92nm,0.9s						
YAH	Yahtse	4.75	48		Pn	12 15 41.1	-0.9
YAH	Yahtse	4.75	48	IAML		12 16 35.5	
	comp=E,63nm,0.3s						
YAH				IAML		12 16 36.6	
	comp=N,88nm,0.4s						
VRDI	Verde Repeater	4.76	33		Pn	12 15 41.0	-1.2
VRDI	Verde Repeater	4.76	33	IAML		12 16 35.2	
	comp=E,69nm,0.5s						
VRDI				IAML		12 16 36.7	
	comp=N,98nm,0.5s						
N25K	Chitina, Valde	4.78	25		Pn	12 15 41.4	-0.9
N25K	Chitina, Valde	4.78	25	IAML		12 16 36.9	
	comp=E,127nm,0.8s						
GLB	Gilahina Butte	4.84	30		Pn	12 15 41.9	-1.1
GLB	Gilahina Butte	4.84	30	IAML		12 16 36.8	
	comp=N,61nm,0.5s						
GLB				IAML		12 16 38.1	
	comp=E,108nm,0.5s						
SKT	Skwentna	4.85	345		Pn	12 15 42.7	-0.4
SKT	Skwentna	4.85	345	IAML		12 16 38.5	
	comp=N,53nm,0.6s						
RKAV	Rock Avalanche	4.88	50		Pn	12 15 42.8	-0.9
KIAG	Kiagna River	4.89	40		Pn	12 15 42.6	-1.2
M24K	Tolsona, Glenn	4.96	15		Pn	12 15 44.5	-0.2
M24K	Tolsona, Glenn	4.96	15	IAML		12 16 45.3	
	comp=N,88nm,0.7s						
M24K				IAML		12 16 49.0	
	comp=E,100nm,0.8s						
BALM	Baldy	4.97	39		Pn	12 15 43.8	-1.1
BALM	Baldy	4.97	39	IAML		12 16 40.4	
	comp=E,88nm,0.5s						
GRNC	Granite Creek	4.98	44		Pn	12 15 44.0	-1.2
MCARA	McCarthy VSAT	5.01	34		Pn	12 15 44.5	-0.9
SAMH	Samovar Hills	5.03	53		Pn	12 15 44.7	-1.0
PS11	TAPS Pump St11	5.04	18		Pn	12 15 45.9	+0.1
PTPK	Patty Peak	5.04	38		Pn	12 15 45.1	-0.9
BARN	Barnard Glacie	5.23	42		Pn	12 15 47.5	-1.0
BARN	Barnard Glacie	5.23	42	IAML		12 16 46.2	
	comp=N,78nm,0.8s						
PCA	Pinnacle	5.24	55		Pn	12 15 47.5	-1.1
WAT6	Susitna Watana	5.28	5		Pn	12 15 48.3	-0.9
CTGM	Chitina Glacie	5.29	44		Pn	12 15 48.2	-1.1
CTGM	Chitina Glacie	5.29	44	IAML		12 16 49.3	
	comp=E,73nm,1.0s						
LOGN	Logan Glacier	5.33	46		Pn	12 15 48.7	-1.1
PNL	Peninsula	5.46	61		Pn	12 15 50.7	-0.8
WAT1	Susitna Watana	5.50	1		Pn	12 15 51.5	-0.6
WAT2	Susitna Watana	5.63	1		Pn	12 15 53.6	-0.4
PAX	Paxson	5.88	15		Pn	12 15 56.9	-0.5
YUK2	White River	6.02	39		Pn	12 15 59.1	-0.2
RND	Reindeer	6.08	360		Pn	12 15 59.3	-0.8
YUK3	Moose Creek	6.14	40		Pn	12 16 00.8	-0.3
TRF	Thorofare Moun	6.17	354		Pn	12 16 00.7	-0.7
KTH	Kantishna Hill	6.31	351		Pn	12 16 02.5	-0.8
MCK	McKinley	6.41	360		Pn	12 16 04.2	-0.4
BVCY	Beaver Creek	6.47	35		Pn	12 16 04.9	-0.4
YUK6	Outpost Mounta	6.47	52		Pn	12 16 05.1	-0.5
YUK4	Talbot Arm	6.56	48		Pn	12 16 07.7	+0.9
TT01	Tatalina	6.63	330		Pn	12 16 05.3	-2.3
RIDG	Independent Ri	6.70	15		Pn	12 16 08.2	-0.4
BC03		6.72	28		Pn	12 16 08.0	-0.7
BCAR	Beaver Creek A	6.72	28		Pn	12 16 07.6	-1.2
DOT	Dot Lake	6.74	18		Pn	12 16 08.9	-0.2
YUK5	Granite Creek	6.78	51		Pn	12 16 09.1	-0.7
HYT	Haines Junctio	6.79	54		Pn	12 16 08.7	-1.2
BPAW	Bear Paw Mtn.	6.86	352		Pn	12 16 09.3	-1.4
PLBC	Pleasant Camp	6.88	67		Pn	12 16 09.9	-1.0
SCRK	Sand Creek	7.06	18		Pn	12 16 12.9	-0.7
WRH	Wood River Hil	7.16	3		Pn	12 16 14.2	-0.6
NEA2	Nenana	7.27	359		Pn	12 16 15.3	-1.1
CCB	Clear Creek Bu	7.34	3		Pn	12 16 16.6	-0.7
IL31		7.51	6		Pn	12 16 18.2	-1.4
ILAR	Eielson Array	7.51	6	Pn	Pn	12 16 18.4	-1.2
	comp=E,0.8nm,0.3s,baz=189,slow=13,SNR=46						
ILAR				Sn	Sn	12 17 40.0	-4.6
	comp=E,1.7nm,0.3s,baz=194,slow=22,SNR=8.1						
ILAR				LR	LR	12 19 31.8	
	comp=E,109nm,18.5s,baz=156,slow=40						
ILAR	Eielson Array	7.51	6	Pn	Pn	12 16 19.3	-0.3
TCOL	CIGO, UAF Yank	7.57	3		Pn	12 16 18.8	-1.6
COLA	College	7.57	3		Pn	12 16 20.9	+0.5
MLY	Manley	7.77	354		Pn	12 16 22.6	-0.6
I23K	Minto, Yukon-K	7.83	358		Pn	12 16 22.9	-1.1
WHY	Whitehorse	7.92	59		Pn	12 16 24.4	-1.0
EGAK	Eagle	8.32	23		Pn	12 16 31.3	+0.6
IM03		8.97	347		Pn	12 16 38.2	-1.4
IMAR	Indian Mountai	8.97	347		Pn	12 16 39.8	+0.1
FYU	Fort Yukon	9.40	9		Pn	12 16 45.0	-0.5
DLBC	Dease Lake	10.06	76	Pn	Pn	12 16 53.4	-1.2
	comp=E,0.3nm,0.3s,baz=298,slow=6.2,SNR=9.6						
DLBC				Sn	Sn	12 18 41.8	-5.7
	comp=E,0.5nm,0.3s,baz=314,slow=27,SNR=1.4						
DLBC				LR	LR	12 20 21.2	
	comp=E,66nm,19.0s,baz=272,slow=35						
BM03	Burnt Mountain	10.29	9		Pn	12 16 56.6	-1.1
INK	Inuvik	12.97	26	Pn	Pn	12 17 34.8	+0.6
	comp=E,0.1nm,0.3s,baz=221,slow=14,SNR=3.9						
INK	Inuvik	12.97	26	Pn	Pn	12 17 36.1	+1.8
BBB	Bella Bella	13.00	105	LR	LR	12 21 27.4	
	comp=E,84nm,19.0s,baz=298,slow=32						
YKA	Yellowknife Ar	17.75	59	P	Pn	12 18 36.6	-0.5
	comp=E,0.1nm,0.3s,baz=266,slow=10,SNR=32						
NEW	Newport	21.03	102	P	P	12 19 12.3	-1.5
	comp=E,0.4nm,0.4s,baz=52,slow=15,SNR=1.6						
NEW				LR	LR	12 25 44.4	
	comp=E,46nm,19.9s,baz=340,slow=32						
YBH	Yreka Blue Hor	22.84	122	LR	LR	12 26 03.0	
	comp=E,54nm,20.6s,baz=339,slow=30						
RES	Resolute Bay	26.50	29	P	P	12 20 08.7	+1.6
	comp=E,1.2nm,0.7s,baz=245,slow=7.0,SNR=4.8						
ELK	Elko	27.19	113	LR	LR	12 29 17.0	
	comp=E,47nm,21.2s,baz=345,slow=33						
NVAR	Mina Array Bea	27.51	120	P	P	12 20 17.4	+0.6
	comp=E,0.2nm,0.7s,baz=334,slow=8.0,SNR=2.4						
NVAR				LR	LR	12 28 34.9	
	comp=E,74nm,18.1s,baz=204,slow=31						
PDAR	Pinedale Array	28.64	104	P	P	12 20 26.7	-0.2
	comp=E,0.3nm,0.7s,baz=258,slow=3.6,SNR=2.6						
SEY	Seymchan	28.87	306	P	P	12 20 29.4	+0.9
	comp=E,0.5nm,0.3s,baz=205,slow=6.9,SNR=4.1						
PETK	Petropavlovsk-	30.13	285	P	P	12 20 39.1	-0.6
	comp=E,2.8nm,0.9s,baz=64,slow=13,SNR=1.8						
TXAR	Lajitas Array	41.98	112	P	P	12 22 22.0	+0.7
	comp=E,0.4nm,0.7s,baz=328,slow=10.0,SNR=3.0						
H11N2	WAKE ISLAND Hy	49.64	240	T	T	13 16 53.4	
	baz=25,slow=74						
H11N3	WAKE ISLAND Hy	49.65	240	T	T	13 16 53.9	
	baz=25,slow=74						
H11N1	WAKE ISLAND Hy	49.66	240	T	T	13 16 54.5	
	baz=25						
H11S1	WAKE ISLAND Hy	50.79	239	T	T	13 18 14.8	
	baz=29,slow=74						
H11S2	WAKE ISLAND Hy	50.80	239	T	T	13 18 12.6	
	baz=29,slow=74						
H11S3	WAKE ISLAND Hy	50.81	239	T	T	13 18 12.6	
	baz=29						
TLY	Talaya	56.23	314	LR	LR	12 51 18.8	
	comp=E,27nm,19.0s,baz=44,slow=39						
JCJ	Chichijima	56.37	268	P	P	12 24 12.5	+1.2
	comp=E,59nm,0.4s,baz=266,slow=13,SNR=2.4						
SONM	Songino Array	58.15	310	P	P	12 24 26.2	+2.3
	comp=E,0.7nm,0.8s,baz=44,slow=7.6,SNR=5.6						
ZALV	Zalesovo Beam	60.80	327	P	P	12 24 43.9	+2.0
	comp=E,0.4nm,0.4s,baz=352,slow=8.7,SNR=1.8						
FINES	FINESS Array B	61.48	3	P	P	12 24 46.9	+0.6
	comp=E,2.1nm,1.0s,baz=9.6,slow=9.2,SNR=2.1						
MKAR	Makanchi Array	67.87	325	P	P	12 25 31.3	+3.0
	comp=E,0.1nm,0.5s,baz=20,slow=4.6,SNR=2.9						
AKASG	Malin Array Be	72.30	1	P	P	12 25 57.3	+1.9
	comp=E,0.2nm,0.3s,baz=2.1,slow=6.1,SNR=1.3						

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*NOU **05** 12:19:50.8, 19°.20S×168°.77E, h113^{km}, MLv4.7, Vanuatu Islands*

*IDC **05** 12:19:52.0±3.6, 19°.19S×168°.75E, h48^{km}±34^{km}, mb4.2/17, mb1 4.3/18, mb1mx4.2/36, mbtmp4.5/18, ML4.0/1, MS3.4/16, Ms1 3.4/16, ms1mx3.3/33, Error ellipse: s-maj=19.7km s-min=19.4km az=74.0*

*NEIC **05** 12:19:53.9±1.5, 19°.17S±0°.04×168°.5E±0°.1, h61^{km}±6^{km}, mb4.7/16, Error ellipse: s-maj=15.0km s-min=4.7km az=101.0*

ISC 05 12:19:52.2±0.5**, 19°.21S**±0°.05×**168°.68E**±0°.09**, h50**^{km}**, n77,** σ**1**^{s}**15**/68**, mb4.5**/22**, MS3.4**/13**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	Devils Point	1.55	342	P	Pn	12 20 18.9	+1.4
YATNC	Mamie plateau,	3.29	210	P	Pn	12 20 40.8	-0.5
DZM	Mont Dzumac	3.53	216	P	Pn	12 20 43.9	-0.8
	13nm,0.3s,baz=38,slow=13,SNR=313						
DZM				S	Sn	12 21 24.1	-1.1
	86nm,0.3s,baz=142,slow=22,SNR=9.2						
DZM				LR	LR	12 22 14.0	
	comp=Z,828nm,20.2s,baz=62,slow=40						
DZM	Mont Dzumac	3.53	216	*e*Pn	Pn	12 20 43.9	-0.8
	108nm,0.2s						
DZM				*e*Sn	Sn	12 21 24.4	-0.8
	243nm,0.3s						
DZM				*e*LR	LR	12 21 33.5	
	comp=Z,1µm,24.1s						
DZM	Mont Dzumac	3.53	216	Pn	Pn	12 20 44.1	-0.6
DZM	Mont Dzumac	3.53	216	P	Pn	12 20 44.9	+0.2
PINNC	Pines Island,	3.57	199	P	Pn	12 20 45.3	+0.2
OUENC	Ouen Island, N	3.62	208	P	Pn	12 20 45.8	0.0
NOUC	Port Laguerre	3.63	217	P	Pn	12 20 46.2	+0.2
ONTNC	Ouen Toro	3.71	214	P	Pn	12 20 47.3	+0.2
SANVU	Saraoutou	4.00	339		Pn	12 20 50.0	-1.0
SANVU	Saraoutou	4.00	339	P	Pn	12 20 50.5	-0.6
KOUNC	Koumac, New Ca	4.34	251	P	Pn	12 20 56.0	+0.3
MSVF	Nonsavu	9.01	82	Pn	Pn	12 22 05.1	+5.2
HNR	Honiara	12.88	318	LR	LR	12 27 01.4	
	comp=Z,111nm,21.6s,baz=222,slow=33						
RAO	Raoul Island	15.78	132	LR	LR	12 28 16.6	
	comp=Z,173nm,21.5s,baz=282,slow=32						
AFI	Afiamalu	19.46	77	LR	LR	12 31 30.3	
	comp=Z,40nm,19.4s,baz=262,slow=36						
URZ	Urewera	20.35	161	P	P	12 24 24.9	+0.5
	10nm,0.8s,baz=346,slow=12,SNR=2.2						
URZ				LR	LR	12 30 54.7	
	comp=Z,112nm,21.4s,baz=31,slow=33						
BFZ	Birch Farm	22.36	165	P	P	12 24 51.1	+5.1
BFZ					S	12 28 50.4	+1.8
RPZ	Rata Peaks	24.51	176	P	P	12 25 08.2	+1.3
	11nm,0.5s,baz=318,slow=5.4,SNR=7.0						
RPZ				LR	LR	12 34 10.4	
	comp=Z,210nm,19.3s,baz=13,slow=35						
RPZ	Rata Peaks	24.51	176	IAmb	IAmb	12 25 19.9	
	comp=Z,38nm,1.0s						
STKA	Stephens Creek	27.41	237	P	P	12 25 34.4	+1.2
	comp=Z,1.8nm,0.5s,baz=66,slow=10,SNR=7.2						
STKA				PcP	PcP	12 28 51.2	0.0
	comp=Z,1.4nm,0.5s,baz=70,slow=12,SNR=3.4						
STKA				LR	LR	12 36 14.3	
	comp=Z,91nm,18.2s,baz=33,slow=36						
RAR	Rarotonga	29.65	99	LR	LR	12 35 16.7	
	comp=Z,51nm,19.6s,baz=264,slow=31						
JAY	Jayapura	32.00	298	LR	LR	12 37 09.6	
	comp=Z,98nm,19.0s,baz=122,slow=32						
WRA	Warramunga Arr	32.33	263	P	P	12 26 16.4	-0.6
	comp=Z,0.5nm,0.4s,baz=87,slow=7.1,SNR=27						
WRA				PcP	PcP	12 29 03.9	-0.2
	comp=Z,0.4nm,0.5s,baz=90,slow=2.6,SNR=6.3						
WRA				LR	LR	12 38 35.1	
	comp=Z,78nm,19.9s,baz=125,slow=35						
WRA	Warramunga Arr	32.33	263	IAmb	IAmb	12 26 19.2	
	comp=Z,0.2nm,1.1s						
AS31	Alice Springs	32.62	256	P	P	12 26 19.0	-0.5
ASAR	Alice Springs	32.62	256	P	P	12 26 19.5	0.0
	comp=Z,2.8nm,0.4s,baz=83,slow=8.4,SNR=138						
ASAR				PcP	PcP	12 29 04.5	-0.3
	comp=Z,0.5nm,0.8s,baz=96,slow=3.2,SNR=2.1						
ASAR				LR	LR	12 39 24.9	
	comp=Z,122nm,19.6s,baz=88,slow=36						
ASAR	Alice Springs	32.62	256	P	P	12 26 19.0	-0.5
PPT2	Papeete2	39.58	95	*e*LR	LR	12 38 14.0	
	comp=Z,140nm,29.0s						
PPT	Papeete	39.58	95	LR	LR	12 43 56.2	
	comp=Z,25nm,18.1s,baz=340,slow=36						
FITZ	Fitzroy Crossi	40.72	264	P	P	12 27 29.1	+0.8
	comp=Z,4.7nm,0.8s,baz=110,slow=7.6,SNR=11						
FITZ	Fitzroy Crossi	40.72	264	P	P	12 27 29.4	+1.0
SIJI	Sorong	40.94	292	P	P	12 27 30.5	+0.2
	comp=Z,8.4nm,0.7s,baz=69,slow=7.5,SNR=4.5						
NWAO	Narrogin (SRO)	47.75	243	LR	LR	12 48 43.7	
	comp=Z,72nm,19.7s,baz=116,slow=36						
LEM	Lembang	60.48	273	P	P	12 29 57.9	+0.1
	comp=Z,21nm,0.7s,baz=302,slow=23,SNR=2.7						
MJAR	Matsushiro Arr	62.48	333	P	P	12 30 10.3	-0.3
	comp=Z,3.1nm,0.7s,baz=174,slow=7.1,SNR=6.9						
MJAR				LR	LR	12 53 54.9	
	comp=Z,8.5nm,21.9s,baz=190,slow=33						
MJAR	Matsushiro Arr	62.48	333	IAmb	IAmb	12 30 13.8	
	comp=Z,6.4nm,1.4s						
JKA	Kamikawa-asahi	67.39	340	P	P	12 30 43.6	+1.4
ASAJ	Asahikawa	67.39	340	P	P	12 30 43.7	+1.4
	comp=Z,16nm,0.8s,baz=238,slow=13,SNR=13						
QSPA	South Pole Qui	70.84	180	P	P	12 31 03.9	+0.3
QSPA				IAmb	IAmb	12 31 04.8	
	comp=Z,8.3nm,0.9s						
USRK	Ussuriysk Ar.	71.47	333	P	P	12 31 08.5	+1.0
	comp=Z,4.3nm,0.8s,baz=141,slow=3.9,SNR=5.5						
PSI	Prapat	71.90	280	LR	LR	13 04 50.1	
	comp=Z,40nm,18.6s,baz=90,slow=38						
PETK	Petropavlovsk-	72.64	353	LR	LR	12 58 21.8	
	comp=Z,20nm,21.0s,baz=116,slow=32						
MDJ	Mudanjiang	72.85	332	P	P	12 31 16.9	+1.2
MDJ				IAmb	IAmb	12 31 17.4	
	comp=Z,14nm,0.9s						
CMAR	Chiang Mai Arr	78.01	294	P	P	12 31 47.2	+1.3
	comp=Z,0.7nm,0.5s,baz=116,slow=4.1,SNR=6.0						
MA2	Magadan	79.86	351	P	P	12 31 54.6	-0.5
	baz=148,slow=9.5						
SEY	Seymchan	82.88	353	P	P	12 32 10.5	-0.5
	comp=Z,4.9nm,1.2s,baz=173,slow=6.3,SNR=8.5						
GAMB	Gambell	84.12	9	P	P	12 32 17.6	+0.3
GAMB				IAmb	IAmb	12 32 18.6	
	comp=Z,4.4nm,0.9s						
ULN	Ulaanbaatar	86.53	324	P	P	12 32 30.2	+0.2
ULN				IAmb	IAmb	12 32 44.2	
	comp=Z,11nm,1.4s						
SONM	Songino Array	86.88	323	P	P	12 32 31.8	+0.1
	comp=Z,2.3nm,0.8s,baz=148,slow=5.7,SNR=13						
SONM	Songino Array	86.88	323	IAmb	IAmb	12 32 36.1	
	comp=Z,1.9nm,0.7s						
SNAA	Sanae	89.16	183	P	P	12 32 41.6	-0.6
NVAR	Mina Array Bea	89.18	49	P	P	12 32 43.1	+0.1
	comp=Z,0.9nm,0.7s,baz=225,slow=7.7,SNR=7.7						
VNA3	Neumayer Olymp	89.77	181	P	P	12 32 44.3	-0.7
VNA2	Neumayer--Watz	90.06	181	P	P	12 32 46.0	-0.3
	baz=178,slow=4.7						
ILAR	Eielson Array	90.37	17	P	P	12 32 45.4	-2.2
	comp=Z,0.8nm,0.5s,baz=238,slow=4.9,SNR=16						
POKR	Poker Plat Res	90.47	17	P	P	12 32 48.5	+0.4
POKR				IAmb	IAmb	12 32 51.1	
	comp=Z,4.1nm,0.8s						
W13A	Hualapai Mount	91.07	53	P	P	12 32 52.3	+0.5
U15A	North Rim	92.77	52	IAmb	IAmb	12 33 02.8	
	comp=Z,3.6nm,0.8s						
TXAR	Lajitas Array	97.22	62	P	P	12 33 19.5	-0.6
	comp=Z,0.4nm,0.7s,baz=219,slow=7.0,SNR=2.2						
YKA	Yellowknife Ar	100.89	27	P	Pdif	12 33 34.8	-0.7
	comp=Z,0.5nm,0.6s,baz=252,slow=4.1,SNR=12						
MKAR	Makanchi Array	101.35	316	P	Pdif	12 33 39.7	+1.7
	comp=Z,0.2nm,0.5s,baz=117,slow=5.5,SNR=2.6						
MKAR				PKKPbc	PKKPbc	12 49 44.6	-3.8
	comp=Z,0.7nm,1.2s,baz=274,slow=3.7,SNR=4.6						
ARCES	ARCESS Array B	124.91	345	PKP	PKPdf	12 38 45.0	-1.1
	comp=Z,4.6nm,0.8s,baz=354,slow=4.9,SNR=14						

CONA	Conrad Observa	143.85	329	eP	PKPdf	12 39 21.2	-0.9
	comp=Z,2.8nm,0.7s						
GERES	GERESS Array B	144.22	331	PKP	PKPbc	12 39 21.1	+0.2
	comp=Z,2.3nm,0.8s,baz=6.8,slow=3.4,SNR=4.7						
MOA	Molln	144.67	330	eP	PKPdf	12 39 23.2	-0.2
	comp=Z,8.5nm,0.6s						
SOKA	Soboth	145.11	328	eP	PKPbc	12 39 23.7	-0.1
	comp=Z,20nm,1.8s						
OBKA	Obir	145.47	328	eP	PKPdf	12 39 23.1	-1.8
	comp=Z,24nm,1.5s						
KBA	Koelnbreinsper	145.66	330	eP	PKPdf	12 39 24.7	-0.6
	comp=Z,9.3nm,1.1s						
MYKA	Terra Mystica	145.84	329	eP	PKPdf	12 39 25.7	+0.2
	comp=Z,9.1nm,1.1s						
WTTA	Wattenberg	146.32	331	eP	PKPbc	12 39 27.7	0.0
	comp=Z,17nm,1.2s						
MOTA	Moosalm	146.50	332	eP	PKPdf	12 39 27.3	+0.6
	comp=Z,9.6nm,0.9s						
RETA	Reutte	146.54	332	eP	PKPbc	12 39 28.4	+0.2
	comp=Z,14nm,1.6s						
SQTA	Sankt Quirin	146.55	332	eP	PKPbc	12 39 28.6	+0.3
	comp=Z,13nm,0.8s						
FETA	Feichten	146.91	332	eP	PKPbc	12 39 28.9	-0.4
	comp=Z,10nm,1.1s						
TORD	Torodi Ar. Bea	166.12	246	PKP	PKPdf	12 39 51.3	-1.4
	comp=Z,1.7nm,1.0s,baz=58,slow=0.9,SNR=5.4						
TORD				PKPab	PKPab	12 40 52.1	-1.3
	comp=Z,0.8nm,0.8s,baz=134,slow=1.5,SNR=3.1						

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*IDC **05** 12:30:20.2±1.4, 5°62S×129°88E, h166^{km}±20^{km}, mb3.0/1,*
mb1 3.6/6, mb1mx3.3/30, mbtmp4.0/6, Error ellipse:
s-maj=29.8km s-min=12.6km az=110.0

ISC 05 12:30:18.5±0.9**, 5°86S**±0°06×**130°1E**±0°1**, h150^{km}, n6,**
σ3^{s}02/11**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	5.09	13	P	Pn	12 31 34.7	+1.4
	16nm,0.3s,baz=206,slow=16,SNR=53						
SIJI				S	Sn	12 32 29.4	-2.1
	8.2nm,0.3s,baz=1.0,slow=22,SNR=16						
BATI	Baumata	7.71	236	P	Pn	12 32 09.5	+1.3
	4.8nm,0.3s,baz=107,slow=7.7,SNR=5.2						
BATI				S	Sn	12 33 35.2	+1.0
	0.8nm,0.3s,baz=113,slow=16,SNR=1.6						
FITZ	Fitzroy Crossi	12.92	199	P	Pn	12 33 18.1	+1.3
	1.4nm,0.3s,baz=34,slow=12,SNR=37						
FITZ				S	Sn	12 35 33.5	-6.3
	1.0nm,0.3s,baz=119,slow=21,SNR=8.5						
WRA	Warramunga Arr	14.59	164	P	P	12 33 41.3	+1.0
	0.3nm,0.3s,baz=348,slow=13,SNR=3.7						
WRA				S	Sn	12 36 18.5	-1.4
	0.5nm,0.3s,baz=336,slow=21,SNR=6.8						
ASAR	Alice Springs	18.07	169	P	Pn	12 34 23.5	+3.2
	0.5nm,0.3s,baz=352,slow=12,SNR=64						
ASAR				S	S	12 37 36.4	-1.8
	0.1nm,0.3s,baz=355,slow=23,SNR=5.8						
MKAR	Makanchi Array	67.34	327	P	P	12 40 55.0	-2.5
	0.2nm,0.5s,baz=122,slow=7.8,SNR=4.6						

KRSC 05 12:33:49.0±0.7**, 48°03N×155°35E, h36^{km}**±16^{km}**, ML3.8,**
Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	2.70	10	P	Pn	12 34 32.3	+2.5
SKR				S	Sn	12 35 05.1	+4.0
PAU	Pauzhetka	3.56	15	S	Sn	12 35 28.6	+6.1
MTVR	Mutnovka	4.81	21	S	Sn	12 35 58.5	+5.1
GRL	Gorelyy	4.85	20	eP	Pn	12 35 03.5	+4.1
DALK	Dalny	5.45	22	S	Sn	12 36 15.2	+6.2

KRSC 05 12:44:51.1±1.4**, 49°77N×156°55E, h97^{km}**±20^{km}**, ML4.2,**
Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	0.96	343	eP	Pn	12 45 11.3	+0.5
SKR				eS	Sn	12 45 26.5	+1.0
PAU	Pauzhetka	1.71	5	eP	Pn	12 45 21.4	+1.7
PAU				eS	Sn	12 45 43.7	+2.2
KDTR	Khodutka, Kamc	2.26	25	eP	Pn	12 45 28.9	+2.0
KDTR				eS	Sn	12 45 56.4	+2.1
MTVR	Mutnovka	2.91	20	eP	Pn	12 45 37.7	+2.1
MTVR				eS	Sn	12 46 12.6	+2.8
RUS	Russkaya	2.94	24	eP	Pn	12 45 37.4	+1.5
RUS				eS	Sn	12 46 11.8	+1.4
GRL	Gorelyy	2.95	18	eP	Pn	12 45 38.6	+2.5
GRL				eS	Sn	12 46 14.4	+3.6
APC	Apacha	3.18	7	P	Pn	12 45 40.3	+1.2
KRMR	Karymshinskiy	3.22	17	P	Pn	12 45 42.2	+2.6
DALK	Dalny	3.54	22	eP	Pn	12 45 46.1	+2.1
DALK				eS	Sn	12 46 27.0	+2.1
UGLR	Uglovaya	3.73	22	eP	Pn	12 45 49.2	+2.7
AVH	Avacha	3.76	20	eP	Pn	12 45 49.9	+3.0
KOK	Koryaka	3.76	19	eP	Pn	12 45 49.9	+2.9
SMAR	Somma	3.77	21	eP	Pn	12 45 49.6	+2.4
KRER	Koryakskii	3.80	20	eP	Pn	12 45 50.4	+2.8
KRX	Arik	3.83	19	eP	Pn	12 45 50.4	+2.5
SPN	Mys Shipunski	3.98	32	eP	Pn	12 45 51.8	+2.0
SPN				eS	Sn	12 46 35.8	+0.4
GNL	Ganaly	4.03	12	eP	Pn	12 45 52.1	+1.5

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*RSNC **05** 12:47:48.1±1.4, 8°38N×72°12W, h4^{km}±5^{km}, ML3.3*
*IDC **05** 12:47:49.6±1.1, 9°49N×71°95W, h0^{km}, mb3.6/7, mb1 3.9/9,*
mb1mx3.7/30, mbtmp3.6/9, ML3.0/2, Error ellipse:
s-maj=33.9km s-min=11.9km az=30.0
*FUNV **05** 12:47:49.1, 8°41N×72°05W, h5^{km}, MW3.5*

ISC 05 12:47:48.0±1.2**, 8°39N**±0°03×**72°12W**±0°03**, h24^{km}**±10^{km},
n41, σ1^{s}48/67**, mb3.4**/7**, 2D, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OCAC	Ocana	1.19	263	ePg	Pn	12 48 08.9	-0.5
OCAC				eS	Sb	12 48 24.0	-1.1
OCAC				i		12 48 27.2	
	comp=Z,1µm,0.3s						
PAMC	Pamplona, Colo	1.19	209	⇓eP	Pn	12 48 07.7	-2.0
PAMC				i		12 48 10.7	
	comp=Z,623nm,0.2s						
PAMC				eS	Sb	12 48 25.1	-0.3
SDV	Santo Domingo	1.55	72	Pg	Pb	12 48 15.9	-0.2
	comp=Z,48nm,0.3s,baz=277,slow=14,SNR=90						
SDV				Lg	Lg	12 48 35.1	
	comp=Z,360nm,0.3s,baz=29,slow=14,SNR=27						
SDV				LR	LR	12 48 37.5	
	comp=Z,60nm,18.1s,baz=61,slow=34						
SDV	Santo Domingo	1.55	72	eP	Pb	12 48 15.6	-0.6
SDV				eS	Sb	12 48 35.6	+0.2
SDV				i		12 48 39.5	
	comp=Z,801nm,0.4s						
SDV	Santo Domingo	1.55	72	eP	Pb	12 48 16.1	-0.1
SDV				eS	Sb	12 48 35.7	+0.2
MCQV	Machiques	1.69	346	eP	Pb	12 48 18.6	+0.1
MCQV				eS	Sb	12 48 41.3	+1.9
SMLC	San Martn de	1.97	282	eP	Pn	12 48 20.6	+0.7
SMLC				eS	Sb	12 48 47.1	-0.1
TAMC	Tame, Arauca	1.97	170	eP	Pn	12 48 20.6	+0.6
TAMC				eS	Sn	12 48 45.7	+1.6
TAMC				i		12 48 51.4	
	comp=Z,290nm,0.3s						
BRRC	Barranca, Sant	2.03	231	eP	Pn	12 48 21.5	+0.7
BRRC				eS	Sb	12 48 47.6	-1.4
BRRC				i		12 48 54.5	
	comp=Z,162nm,0.4s						
BARC	Barichara	2.08	210	eP	Pn	12 48 22.9	+1.4
BARC				eS	Sn	12 48 48.6	+1.8
BARC				i		12 48 54.2	
	comp=Z,277nm,0.5s						
TORV	Torococo	2.20	58	eS	Sn	12 48 49.4	-0.4
CVALL	Valledupar, Ce	2.38	332	eP	Pn	12 48 26.8	+1.2
CVALL				i		12 49 02.3	
	comp=Z,311nm,0.5s						
ARGC	Ariguani, Magd	2.55	305	eP	Pn	12 48 29.8	+1.9
ARGC				eS	Sb	12 49 01.7	-2.4
ARGC				i		12 49 11.7	
	comp=Z,114nm,0.4s						
RUSC	La Rusia	2.66	201	eP	Pn	12 48 31.4	+1.5
RUSC				eS	Sn	12 49 04.4	+2.8
RUSC				i		12 49 10.6	
	comp=Z,88nm,0.3s						
ZARC	Zaragoza, Cauc	2.85	252	eP	Pn	12 48 33.6	+1.5
DABV	Dabajuro	2.91	30	eP	Pn	12 48 34.3	+1.4
DABV				eS	Sn	12 49 08.3	+1.2
PTBC	PUERTO BERRIO,	2.96	232	⇓eP	Pn	12 48 33.6	+0.1
PTBC				eS	Sn	12 49 10.5	+2.2
PTBC				i		12 49 19.2	
	comp=Z,95nm,0.4s						
ELOV	Elorza	2.96	118	eP	Pn	12 48 34.7	+1.1
ELOV				eS	Sn	12 49 09.8	+1.4
SIQV	Siquisique	3.20	45	eP	Pn	12 48 38.5	+1.6
SIQV				eS	Sn	12 49 14.5	+0.2
SPBC	San Pablo de B	3.34	215	eP	Pn	12 48 40.4	+1.5
SPBC				eS	Sn	12 49 21.0	+3.1
SPBC				i		12 49 38.1	
	comp=Z,72nm,0.5s						
SMRC	Santa Marta, M	3.44	323	eP	Pn	12 48 39.9	-0.3
SMRC				eS	Sn	12 49 22.1	+1.8
SMRC				i		12 49 37.4	
	comp=Z,120nm,0.5s						
MOTC	Monteria, Cord	3.52	276	eP	Pn	12 48 43.8	+2.5
MOTC				eS	Sn	12 49 25.2	+2.9
MOTC				i		12 49 47.8	
	comp=Z,41nm,0.5s						
NORC	Norcasia	3.92	224	eP	Pn	12 48 47.7	+0.9
NORC				eS	Sn	12 49 32.6	+0.6
NORC				i		12 49 47.4	
	comp=Z,32nm,0.4s						
HELC	Santa Helena	4.03	237	eP	Pn	12 48 50.8	+2.3
HELC				eS	Sn	12 49 37.4	+2.2
HELC				i		12 49 52.5	
	comp=Z,56nm,0.4s						
CHIC	Chingaza	4.07	203	eP	Pn	12 48 50.0	+0.9
CHIC				i		12 49 08.9	
	comp=Z,23nm,0.7s						
BAUV	El Baul	4.07	82	eP	Pn	12 48 49.7	+0.8
BAUV				eS	Sn	12 49 35.0	-0.8
MONV	Montecano	4.12	31	eP	Pn	12 48 50.6	+1.0
MONV				eS	Sn	12 49 37.1	0.0
ROSC	El Rosal	4.15	212	Pn	Pb	12 49 10.1	+9.5
	comp=Z,5.4nm,0.3s,baz=276,slow=20,SNR=4.1						
ROSC				Sn	Sb	12 50 03.6	+13
	comp=Z,5.5nm,0.3s,baz=252,slow=21,SNR=4.3						
GUY2C	Guyana, Caldas	4.50	226	eP	Pn	12 48 57.5	+2.3
GUY2C				eS	Sn	12 49 48.2	+1.1
GUY2C				i		12 50 20.0	
	comp=Z,28nm,0.5s						
TOLC	Tolima	4.94	220	eP	Pn	12 49 02.5	+1.5
TOLC				eS	Sn	12 49 58.4	+0.7
TOLC				i		12 50 22.9	
	comp=Z,18nm,0.6s						
ANIL	Santa Ana	5.07	220	eP	Pn	12 49 05.9	+3.1
ANIL				eS	Sn	12 50 02.9	+2.2
TACV	Tcata	5.32	71	eP	Pn	12 49 06.9	+0.8
TACV				eS	Sn	12 50 04.3	-2.4
ORTC	Ortega, Tolima	5.43	215	eP	Pn	12 49 08.3	+0.7
ORTC				i		12 50 41.3	
	comp=Z,16nm,0.5s						
PCRV	Puerto La Cruz	7.60	76	Pn	Pn	12 49 37.9	+0.5
	comp=Z,0.9nm,0.3s,baz=215,slow=2.1,SNR=2.2						
PCRV				Sn	Sn	12 51 02.6	-0.3
	comp=Z,5.3nm,0.3s,baz=63,slow=24,SNR=8.9						
TXAR	Lajitas Array	36.20	309	P	P	12 54 48.2	-1.0
	comp=Z,0.2nm,0.4s,baz=119,slow=9.4,SNR=1.9						
ULM	Lac du Bonnet	46.16	339	P	P	12 56 09.3	-1.4
	comp=Z,0.8nm,0.4s,baz=180,slow=6.1,SNR=3.6						
PDAR	Pinedale Array	47.42	323	P	P	12 56 20.6	-0.3
	comp=Z,0.2nm,0.5s,baz=124,slow=9.0,SNR=2.5						
NVAR	Mina Array Bea	51.11	313	P	P	12 56 49.8	+0.6
	comp=Z,0.3nm,0.6s,baz=119,slow=5.6,SNR=2.1						
YKA	Yellowknife Ar	62.15	339	P	P	12 58 06.5	-0.5
	comp=Z,0.7nm,0.5s,baz=123,slow=7.6,SNR=13						
INK	Inuvik	71.90	340	P	P	12 59 09.2	+0.3
	comp=Z,0.8nm,0.7s,baz=114,slow=10.0,SNR=2.2						
ILAR	Eielson Array	75.97	335	P	P	12 59 31.6	-1.1
	comp=Z,0.2nm,0.5s,baz=107,slow=4.7,SNR=4.8						

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*IDC **05** 12:48:11.9±2.4, 48°13N×152°50E, h156^{km}±21^{km}, mb3.3/8,*
mb1 3.4/12, mb1mx3.1/50, mbtmp3.7/12, Error ellipse:
s-maj=22.2km s-min=16.6km az=130.0

ISC 05 12:48:11.1±0.9**, 48°1N**±0°2×**152°6E**±0°1**, h150^{km}, n12,**
σ0^{s}94/14**, mb3.4**/8**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PETK	Petropavlovsk-	6.00	31	P	Pn	12 49 38.5	+0.8
	0.2nm,0.3s,baz=210,slow=17,SNR=5.8						
ASAJ	Asahikawa	7.98	244	P	Pn	12 50 04.9	+0.7
	1.1nm,0.3s,baz=64,slow=13,SNR=17						
KLR	Kul'dur	13.80	283	P	Pn	12 51 20.8	+0.4
	0.1nm,0.3s,baz=111,slow=13,SNR=1.5						
USRK	Ussuriysk Ar.	14.77	262	P	Pn	12 51 32.9	+0.4
	baz=67,slow=11,SNR=4.7						
ZALV	Zalesovo Beam	41.54	304	P	P	12 55 41.3	-2.1
	0.4nm,0.4s,baz=78,slow=7.0,SNR=2.1						
ZALV				PcP	PcP	12 57 38.2	+0.4
	0.3nm,0.4s,baz=57,slow=5.3,SNR=2.0						
MKAR	Makanchi Array	46.01	296	P	P	12 56 17.9	-1.3
	0.3nm,0.6s,baz=62,slow=5.6,SNR=3.7						
MKAR				PcP	PcP	12 57 54.0	+0.8
	0.2nm,0.5s,baz=44,slow=4.4,SNR=2.0						
KURBB	Kurchatov Arra	46.42	302	P	P	12 56 22.3	0.0
	0.6nm,0.3s,baz=67,slow=8.4,SNR=1.9						
YKA	Yellowknife Ar	50.08	37	P	P	12 56 50.2	0.0
	0.3nm,0.7s,baz=296,slow=6.3,SNR=4.8						
FINES	FINESS Array B	62.67	334	P	P	12 58 19.2	-0.1
	3.1nm,1.0s,baz=60,slow=7.5,SNR=4.5						
WRA	Warramunga Arr	69.66	198	P	P	12 59 03.3	-0.9
	0.3nm,0.8s,baz=9.4,slow=6.9,SNR=2.6						
ASAR	Alice Springs	73.36	198	P	P	12 59 26.9	+0.5
	0.8nm,0.5s,baz=11,slow=5.7,SNR=31						
TXAR	Lajitas Array	77.16	60	P	P	12 59 47.8	-0.5
	0.4nm,0.5s,baz=305,slow=3.2,SNR=1.7						

IDC 05 12:52:30.5±5.3**, 22°18N×94°48E, h81^{km}**±45^{km}**, mb3.1**/4**,**
mb1 3.2/5**, mb1mx3.0**/31**, mbtmp3.4**/5**, ML3.6**/1**, Error**
ellipse: s-maj=108.9km s-min=21.1km az=62.0,
Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	5.59	131	P	Pn	12 53 51.2	0.0
	0.5nm,0.3s,baz=306,slow=14,SNR=6.3						
MKAR	Makanchi Array	26.47	341	P	P	12 58 00.3	+0.2
	0.2nm,0.6s,baz=146,slow=9.6,SNR=2.6						
ZALV	Zalesovo Beam	32.56	349	P	P	12 58 53.5	-0.3
	0.3nm,0.3s,baz=176,slow=8.2,SNR=4.2						
WRA	Warramunga Arr	57.17	134	P	P	13 02 09.3	-0.1
	0.1nm,0.3s,baz=320,slow=7.6,SNR=2.1						
ASAR	Alice Springs	59.56	138	P	P	13 02 25.9	0.0
	0.1nm,0.4s,baz=326,slow=7.3,SNR=5.6						

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*IDC **05** 13:01:14.2±1.9, 7°88S×126°66E, h0^{km}, mb3.8/1,*
mb1 4.2/3, mb1mx3.8/23, mbtmp4.0/3, ML4.2/2, Error
ellipse: s-maj=267.1km s-min=30.9km az=62.0
*DJA **05** 13:01:29.6±0.4, 7°S±5°×12°9E±°, h142^{km}±16^{km}, M4.0/7,*
mb3.7/6, mB5.3/1, MLv4.2/7, Mw(mB)4.7/1

ISC 05 13:01:27.9±0.9**, 7°60S**±0°07×**128°68E**±0°08**, h150^{km}, n7,**
σ1^{s}77/11**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	4.86	244	P	Pn	13 02 40.9	+1.4
SOEI				S	Sn	13 03 34.3	-1.1
BATI	Baumata	5.59	242	P	Pn	13 02 49.5	+0.3
	0.2nm32nm,0.5s						
FAKI	Fak Fak	5.86	38	P	Pn	13 02 53.6	+0.9
	0.2nm34nm,1.2s						
FAKI				S	Sn	13 03 57.6	-1.4
	0.2nm34nm,1.2s						
EDFI	Ende, Flores	7.01	260	P	Pn	13 03 07.7	-0.5
	0.0nm5.7nm,1.2s						
WRA	Warramunga Arr	13.44	156	Pn	Pn	13 04 33.9	+1.2
	1.4nm,0.3s,baz=324,slow=14,SNR=62						
WRA				Sn	Sn	13 06 59.4	-2.2
	0.7nm,0.3s,baz=340,slow=22,SNR=5.3						
ASAR	Alice Springs	16.74	163	P	Pn	13 05 17.0	+3.2
	0.7nm,0.3s,baz=336,slow=11,SNR=121						
ASAR				S	S	13 08 18.6	-1.3
	0.1nm,0.3s,baz=327,slow=22,SNR=2.1						
MKAR	Makanchi Array	68.02	328	P	P	13 12 10.3	-0.7
	0.3nm,0.3s,baz=114,slow=7.8,SNR=10						

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*NSSP **05** 13:16:58.9, 41°62N×43°50E, h13^{km}, Ms3.1*
*TIF **05** 13:16:58.9, 41°61N×43°54E, h17^{km}*
*MOS **05** 13:16:59.5±1.2, 41°53N×43°49E, h7^{km}, mb3.8/2, Error*
ellipse: s-maj=6.5km s-min=4.0km az=82.2
*DDA **05** 13:16:59.6, 41°49N×43°54E, h5^{km}±5^{km}, MW3.4*
*NORS **05** 13:16:59.4±0.0, 41°68N×43°42E, h6^{km}, MPVA4.3*
*ISK **05** 13:17:00.4, 41°58N×43°41E, h8^{km}, ML3.1/5*

ISC 05 13:17:00.2±0.8**, 41°59N**±0°01×**43°50E**±0°01**, h9^{km}**±6^{km},
n100, σ1^{s}22/180**, 22C-10D, Turkey-Georgia-Armenia**
border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKRG	Bakuriani	0.17	5	P	Pg	13 17 03.4	-0.5
BKRG				S	Sg	13 17 06.4	-0.1
BKRG	Bakuriani	0.17	5	⇓PG	Pg	13 17 03.4	-0.5
AKH	Akhalkalaki	0.18	182	P	Pg	13 17 04.3	+0.2
AKH				S	Sg	13 17 07.5	+0.7
AKH	Akhalkalaki	0.18	182	PG	Pg	13 17 04.3	+0.2
AKH				SG	Sg	13 17 07.8	+1.1
AKH	Akhalkalaki	0.18	182	⇓PG	Pg	13 17 04.2	+0.2
AKH				S	Sg	13 17 07.4	+0.7
BRNG	Burnasheti	0.25	82	P	Pg	13 17 04.7	-0.5
BRNG				S	Sg	13 17 08.6	-0.1
ABS	Abastumani	0.54	288	P	Pg	13 17 10.6	-0.2
ABS				S	Sb	13 17 18.3	-1.6
ABS	Abastumani	0.54	288	⇑PG	Pg	13 17 10.5	-0.2
ABS				S	Sb	13 17 18.3	-1.6
DMNI	Dmanisi	0.58	116	P	Pg	13 17 10.3	-1.2
DMNI				S	Sg	13 17 17.8	-1.3
DMNI	Dmanisi	0.58	116	⇑PG	Pg	13 17 10.3	-1.2
DMNI				S	Sg	13 17 17.8	-1.3
KZRT	Kazreti	0.70	106	P	Pg	13 17 12.2	-1.6
KZRT				S	Sg	13 17 21.9	-1.2
KZRT	Kazreti	0.70	106	⇑PG	Pg	13 17 12.2	-1.6
KZRT				S	Sg	13 17 21.8	-1.2
TKB	Tkibuli	0.85	334	P	Pg	13 17 16.0	-0.6
TKB				S	Sb	13 17 27.9	-0.8
TKB	Tkibuli	0.85	334	PG	Pg	13 17 15.9	-0.6
TKB				S	Sb	13 17 27.8	-0.8
STE	Stepanavan	0.88	132	⇑iP	Pg	13 17 16.8	-0.4
STE				⇑S	Sg	13 17 28.7	+0.1
EAK	Akyaka	0.91	175	i P	Pg	13 17 15.7	-2.0
BTNK	Botanikuri	0.98	84	P	Pb	13 17 19.1	-0.2
BTNK				S	Sb	13 17 32.6	+0.2
BTNK	Botanikuri	0.98	84	i P	Pb	13 17 18.8	-0.5
BTNK				i S	Sg	13 17 31.1	-0.6
BTNK				IAML		13 17 34.0	
	comp=E,412nm,0.4s						
BTNK	Botanikuri	0.98	84	PG	Pb	13 17 19.1	-0.2
BTNK				S	Sb	13 17 32.5	+0.2
SEAG	Tbilisi Sea	0.99	79	P	Pg	13 17 17.6	-1.7
SEAG				S	Sg	13 17 31.2	-1.0
SEAG	Tbilisi Sea	0.99	79	PG	Pg	13 17 17.6	-1.7
SEAG				S	Sg	13 17 31.1	-1.0
ONI	Oni	1.00	358	P	Pg	13 17 18.4	-1.1
ONI				S	Sb	13 17 31.7	-1.4
ONI	Oni	1.00	358	⇓PG	Pg	13 17 18.3	-1.1
ONI				S	Sb	13 17 31.7	-1.4
ONI	Oni	1.00	358	i Pg	Pg	13 17 18.4	-1.1
ONI				eSg	Sb	13 17 32.6	-0.5
KARS	Kars	1.01	199	PG	Pb	13 17 19.8	-0.2
KARS				SG	Sb	13 17 34.2	+0.8
GUDG	Gudauri	1.14	39	P	Pb	13 17 21.6	-0.6
GUDG				S	Sn	13 17 37.0	-1.3
GUDG	Gudauri	1.14	39	PG	Pb	13 17 21.6	-0.6
GUDG				S	Sn	13 17 37.0	-1.3
DIGO	Kars	1.18	185	i P	Pg	13 17 20.0	-2.8
ZEI	Tsey	1.23	14	⇑iPG	Pg	13 17 22.6	-1.3
ZEI				eS	Sn	13 17 40.3	-0.4
ZEI	Tsey	1.23	14	i Pg	Pg	13 17 22.6	-1.3
	comp=E,171nm,0.2s						
ZEI				eSg	Sn	13 17 40.3	-0.4
	comp=E,618nm,0.4s						
DIGR	Digorskoe uzhe	1.31	3	ePG	Pn	13 17 23.9	-1.0
DIGR				eS	Sn	13 17 42.6	0.0
DIGR				pmax	pmax		
	comp=Z,78nm,0.3s						
DIGR				smax	smax		
	comp=N,100nm,0.4s						
DIGR	Digorskoe uzhe	1.31	3	i Pg	Pb	13 17 24.2	-0.9
	comp=N,78nm,0.3s						
DIGR				eSg	Sn	13 17 42.7	0.0
	comp=N,100nm,0.4s						
PNSH	Pansheti	1.33	38	P	Pn	13 17 23.9	-1.4
PNSH				S	Sb	13 17 41.2	-1.6
PNSH	Pansheti	1.33	38	PG	Pn	13 17 23.8	-1.4
PNSH				S	Sb	13 17 41.2	-1.6
SENK	Senkaya-Erzuru	1.35	221	PN	Pb	13 17 25.4	-0.3
BATM	Batumi	1.36	271	P	Pn	13 17 24.7	-0.6
BATM				S	Sg	13 17 43.3	-0.6
BATM	Batumi	1.36	271	PN	Pn	13 17 24.8	-0.6
BATM				SN	Sg	13 17 43.3	-0.6
BATM	Batumi	1.36	271	PG	Pn	13 17 24.7	-0.6
BATM				S	Sg	13 17 43.2	-0.6
LACR	Lac	1.37	25	⇑iPG	Pn	13 17 24.6	-1.0
LACR				eS	Sn	13 17 43.3	-0.7
LACR	Lac	1.37	25	i Pg	Pn	13 17 24.6	-1.0
	comp=N,207nm,0.5s						
LACR				eSg	Sn	13 17 43.3	-0.7
	comp=N,810nm,0.5s						
DBOC	Borcka	1.40	261	i P	Pb	13 17 26.2	-0.4
DBOC				i S	Sb	13 17 43.8	-0.8
DBOC				IAML		13 17 48.0	
	comp=E,434nm,0.4s						
METS	Metsamor	1.50	163	⇑iP	Pg	13 17 29.2	+0.2
METS				⇑iS	Sg	13 17 50.2	+1.6
VNNZ	Vanand	1.50	171	⇓iP	Pb	13 17 27.9	-0.5
VNNZ				⇓iS	Sb	13 17 47.8	+0.2
CHVG	Ch'k'valeri	1.54	317	P	Pg	13 17 28.6	-1.2
CHVG				S	Sg	13 17 50.0	+0.2
CHVG	Ch'k'valeri	1.54	317	PG	Pg	13 17 28.6	-1.2
CHVG				S	Sg	13 17 50.0	+0.2
KORR	Kora	1.55	15	ePG	Pg	13 17 29.2	-0.8
KORR				eS	Sg	13 17 51.4	+1.2
KORR	Kora	1.55	15	ePg	Pg	13 17 29.2	-0.8
	comp=E,186nm,0.4s						
KORR				eSg	Sg	13 17 51.4	+1.2
	comp=E,832nm,0.8s						
KAPZ	Kaputan	1.56	144	⇓iP	Pb	13 17 29.1	-0.2
KAPZ				⇓iS	Sg	13 17 49.8	-0.5
ARNR	Ardon	1.69	20	ePN	Pg	13 17 32.5	-0.2
ARNR				eS	Sg	13 17 56.9	+2.3
ARNR	Ardon	1.69	20	ePg	Pg	13 17 32.5	-0.2
ARNR				eSg	Sg	13 17 56.9	+2.3
VLKR	Vladikavkaz	1.70	31	ePN	Pg	13 17 32.2	-0.5
VLKR				eS	Sg	13 17 56.0	+1.2
VLKR	Vladikavkaz	1.70	31	ePg	Pg	13 17 32.2	-0.5
VLKR				eSg	Sg	13 17 56.0	+1.2
TASB	TASBURUN-IGDIR	1.70	161	PN	Pb	13 17 30.9	-0.7
LSNR	Lesken	1.71	8	⇑iPN	Pg	13 17 32.0	-0.9
LSNR				eS	Sg	13 17 56.4	+1.4
LSNR	Lesken	1.71	8	i Pg	Pg	13 17 32.0	-0.9
LSNR				eSg	Sg	13 17 56.4	+1.4
GNI	Garni	1.72	146	i P	Pb	13 17 31.9	-0.1
GNI				i S	Sg	13 17 55.5	0.0
GNI	Garni	1.72	146	PN	Pg	13 17 32.3	-0.9
GNI	Garni	1.72	146	cePN	Pb	13 17 31.8	-0.2
GNI				pmax	pmax		
	comp=Z,29nm,0.7s						
NEY	Neytrino	1.76	341	ePN	Pb	13 17 32.1	-0.6
NEY				eS	Sg	13 17 55.7	-1.0
NEY				pmax	pmax		
	comp=Z,232nm,0.4s						
NEY				smax	smax		
	comp=E,1µm,0.7s						
NEY	Neytrino	1.76	341	ePg	Pb	13 17 32.2	-0.6
	comp=E,232nm,0.4s						
NEY				eSg	Sg	13 17 55.7	-1.0
	comp=E,1µm,0.7s						
IGDI	IGDIR	1.77	166	i P	Pn	13 17 30.8	-0.3
IGDI				i S	Sb	13 17 54.6	-0.7
IGDI				IAML		13 17 56.0	
	comp=N,97nm,0.5s						
IGDI				IAML		13 17 57.0	
	comp=E,82nm,0.3s						
KMGR	Komgaron	1.78	34	ePN	Pg	13 17 34.0	-0.4
KMGR				eS	Sg	13 18 00.3	+2.8
KMGR	Komgaron	1.78	34	ePg	Pg	13 17 34.0	-0.4
KMGR				eSg	Sg	13 18 00.3	+2.8

KOTA	Agri, Merkez-K	1.80	187	iP	Pb	13 17 33.6	+0.2
NRKZ	NAREK	1.81	151	⇓iP	Pb	13 17 33.9	+0.3
NRKZ				⇓iS	Sg	13 17 57.7	-0.9
STDR	Stavd-Durt	1.83	13	⇑iPN	Pg	13 17 35.5	+0.3
STDR				eS	Sg	13 18 01.0	+2.1
STDR	Stavd-Durt	1.83	13	iPg	Pg	13 17 35.5	+0.3
	comp=E,197nm,0.5s						
STDR				eSg	Sg	13 18 01.0	+2.1
NCK	Nalchik	1.91	2	⇑ePN	Pg	13 17 35.2	-1.6
NCK	Nalchik	1.91	2	ePg	Pg	13 17 36.0	-0.8
	comp=E,168nm,0.4s						
NCK				eSg	Sg	13 18 02.9	+1.4
	comp=E,472nm,0.6s						
BTKR	Batakoyurt	1.94	23	ePN	Pg	13 17 37.7	+0.3
BTKR				eS	Sg	13 18 06.1	+3.5
BTKR	Batakoyurt	1.94	23	ePg	Pg	13 17 37.7	+0.3
	comp=E,79nm,0.7s						
BTKR				eSg	Sg	13 18 06.1	+3.5
	comp=E,194nm,0.8s						
DDFL	Dedoflistskaro	1.97	93	P	Pb	13 17 35.6	-0.7
DDFL				S	Sg	13 18 02.4	-1.2
DDFL	Dedoflistskaro	1.97	93	PN	Pb	13 17 35.6	-0.7
DDFL				S	Sg	13 18 02.3	-1.2
KOPR	Koprukoy-ERZUR	2.03	219	PN	Pn	13 17 35.3	+0.6
AGRB	Hanur-Agry	2.05	191	PN	Pb	13 17 36.1	-1.6
LGD	Lagodekhi	2.07	82	P	Pn	13 17 35.1	0.0
LGD				S	Sn	13 18 01.4	+0.4
LGD	Lagodekhi	2.07	82	PN	Pn	13 17 35.1	0.0
CHAY	Cayeli-Rize	2.15	257	PN	Pn	13 17 37.1	+0.9
KBZ	Khabaz	2.18	348	cePN	Pb	13 17 39.0	-0.9
BTLR	Botlikh	2.29	61	⇑ePN	Pb	13 17 40.0	-1.7
BTLR	Botlikh	2.29	61	ePn	Pb	13 17 40.4	-1.4
BTLR				eSn	Sb	13 18 10.4	+0.2
KRIK	Erzurum-spir	2.32	238	iP	Pg	13 17 43.5	-1.1
KRIK				iS	Sg	13 18 13.6	-1.1
GROC	Groznyy	2.34	46	ePN	Pb	13 17 42.5	-0.1
GROC				eS	Sg	13 18 15.3	-0.2
GROC	Groznyy	2.34	46	ePn	Pb	13 17 42.5	-0.1
	comp=E,66nm,0.4s						
GROC				eSn	Sg	13 18 15.3	-0.2
	comp=E,567nm,0.8s						
DVE	Vedeno	2.38	54	dePN	Pb	13 17 41.3	-1.9
DVE	Vedeno	2.38	54	ePn	Pb	13 17 42.4	-0.8
	comp=E,65nm,0.5s						
DVE				eSn	Sg	13 18 14.0	-2.7
	comp=E,246nm,0.5s						
KIV	Kislovodsk	2.44	346	PN	Pb	13 17 41.9	-2.4
KIV	Kislovodsk	2.44	346	ePN	Pb	13 17 41.8	-2.5
KIV				eS	Sb	13 18 13.4	-1.1
KIV				pmax	pmax		
	comp=Z,51nm,0.8s						
ARXR	Arkhyz	2.57	321	⇑ePN	Pb	13 17 44.2	-2.3
KOPT	Kop Dagi	2.77	236	iP	Pg	13 17 52.5	-0.8
KOPT				iS	Sg	13 18 27.8	-1.3
BAYB	BAYBURT	2.79	243	iP	Pb	13 17 51.0	+0.5
BAYB				iS	Sb	13 18 24.1	-0.7
DBC	Dubki	2.85	59	cePN	Pn	13 17 46.9	+0.9
AKT	Akhty	3.18	91	⇑ePN	Pn	13 17 51.2	+0.8
KELT	Kelkit	3.53	247	iP	Pb	13 18 01.6	-1.3
KELT				iS	Sb	13 18 46.6	+0.8
ALUC	Giresun/Alucra	3.79	252	iP	Pb	13 18 04.7	-2.7
ALUC				iS	Sb	13 18 53.4	-0.1
LZRR	Lazarevskoye	3.83	309	⇑ePN	Pn	13 18 01.4	+2.0
MNK	Minsk	16.56	327	iP	Pn	13 20 52.2	-0.2
	comp=E,4.0nm,0.9s						
MNK				iP	Pn	13 20 52.2	-0.2
	comp=N,14nm,0.8s						
MNK				iP	Pn	13 20 52.2	-0.2
	comp=Z,3.0nm,0.6s						
MNK				iPP	PnPn	13 21 01.3	-0.2
MNK				iPPP	PPP	13 21 09.1	
MNK				iS	Sn	13 23 56.8	+0.6
MNK				iSS	SnSn	13 24 11.6	+2.4
MNK				iSSS	SSS	13 24 24.3	
MNK				iLR	LR	13 26 49.3	
MNK				iLRM	MLR	13 28 08.6	
	comp=E,10.0nm,17.4s						
MNK				iLRM	MLR	13 28 08.6	
	comp=Z,23nm,11.4s						
MNK				iLRM	MLR	13 28 15.1	
	comp=N,226nm,25.5s						
BRVK	Borovoye	21.34	48	⇑eP	P	13 21 49.5	+2.1
AAK	Ala-Archa	22.96	77	⇑eP	P	13 22 07.4	+2.5
AAK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KURK	Kurchatov	25.77	57	⇑eP	P	13 22 34.6	+3.5
KURK				pmax	pmax		
	comp=Z,1.0nm,1.1s						

NORS ***05*** *13:23:08.2±0.0, 41.°63N×43.°44E, h8^{km}, MPVA3.8*
DDA ***05*** *13:23:08.9, 41.°55N×43.°45E, h8^{km}±5^{km}, ML2.4*
TIF ***05*** *13:23:08.5, 41.°60N×43.°54E, h17^{km}*
ISC 05 13:23:09.2±0.9**, 41.°57N**±0.°02×**43.°48E**±0.°02**, h12**^{km}±6^{km}**,**
n33, σ**1^{s}06**/64**, Turkey-Georgia-Armenia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKH	Akhalkalaki	0.16	176	P	Pg	13 23 13.9	+0.9
AKH				S	Sg	13 23 17.1	+1.4
BKRG	Bakuriani	0.19	10	P	Pg	13 23 13.1	-0.5
BKRG				S	Sg	13 23 16.1	-0.6
BRNG	Burnasheti	0.27	78	P	Pg	13 23 14.4	-0.5
BRNG				S	Sg	13 23 18.2	-0.5
BGD	Bogdanovka	0.32	163	P	Pg	13 23 15.4	-0.3
BGD				S	Sg	13 23 20.5	+0.4
ABS	Abastumani	0.53	291	P	Pb	13 23 20.3	-0.3
ABS				S	Sb	13 23 28.3	0.0
DMNI	Dmanisi	0.59	114	P	Pg	13 23 19.9	-0.7
DMNI				S	Sg	13 23 27.4	-1.0
KZRT	Kazreti	0.72	104	P	Pg	13 23 21.9	-1.2
TKB	Tkibuli	0.86	335	P	Pb	13 23 25.6	-0.5
TKB				S	Sn	13 23 37.7	-2.0
EAK	Akyaka	0.89	174	iP	Pg	13 23 25.3	-1.0
EAK				iS	Sg	13 23 37.8	-0.2
EAK				IAML		13 23 38.0	
	comp=E,179nm,0.5s						
EAK				IAML		13 23 38.0	
	comp=N,214nm,0.3s						
BTNK	Botanikuri	1.00	83	P	Pn	13 23 28.8	-0.2
BTNK				S	Sb	13 23 42.2	+0.6
BTNK	Botanikuri	1.00	83	iP	Pn	13 23 29.1	+0.1
BTNK				iS	Sb	13 23 41.8	+0.3
BTNK				IAML		13 23 44.0	
	comp=E,219nm,0.3s						
ONI	Oni	1.02	359	P	Pb	13 23 28.0	-0.8
ONI				S	Sb	13 23 41.9	-0.4
ONI	Oni	1.02	359	iPg	Pb	13 23 28.1	-0.7
ONI				eSg	Sn	13 23 43.0	-0.7
DIGO	Kars	1.16	184	iP	Pg	13 23 30.3	-1.1
DIGO				iS	Sg	13 23 46.1	-0.4
DIGO				IAML		13 23 50.0	
	comp=E,93nm,0.7s						
DIGO				IAML		13 23 50.0	
	comp=N,67nm,0.3s						
GUDG	Gudauri	1.17	39	P	Pn	13 23 31.2	-0.3
GUDG				S	Sb	13 23 46.7	+0.1
ZEI	Tsey	1.26	14	iPg	Pg	13 23 32.3	-1.2
ZEI				eSg	Sn	13 23 50.6	+0.8
DIGR	Digorskoe uzhe	1.33	3	iPg	Pg	13 23 33.9	-0.9
DIGR				eSg	Sn	13 23 53.4	+1.8
BATM	Batumi	1.34	272	P	Pg	13 23 34.5	-0.4
BATM				S	Sn	13 23 52.8	+1.4
BATM	Batumi	1.34	272	iP	Pg	13 23 33.9	-1.0
BATM				iS	Sn	13 23 51.8	+0.4
PNSH	Pansheti	1.36	38	P	Pn	13 23 33.6	-0.6
PNSH				S	Sb	13 23 51.0	-1.1
DBOC	Borcka	1.38	261	iP	Pg	13 23 35.8	+0.1
DBOC				iS	Sg	13 23 54.3	+0.7
DBOC				IAML		13 23 58.0	
	comp=E,53nm,0.5s						
LACR	Lac	1.40	26	ePg	Pg	13 23 35.5	-0.6
LACR				eSg	Sg	13 23 55.0	+0.7
KORR	Kora	1.58	16	ePg	Pg	13 23 39.1	-0.4
KORR				eSg	Sg	13 24 02.1	+2.1
LSNR	Lesken	1.73	8	ePg	Pg	13 23 41.9	-0.5
LSNR				eSg	Sg	13 24 06.2	+1.4
NEY	Neytrino	1.77	342	ePg	Pg	13 23 42.0	-1.2
NEY				eSg	Sg	13 24 05.4	-0.7
KMGR	Komgaron	1.81	34	ePg	Pg	13 23 42.9	-1.0
KMGR				eSg	Sg	13 24 08.9	+1.5
STDR	Stavd-Durt	1.85	13	ePg	Pg	13 23 45.1	+0.4
STDR				eSg	Sg	13 24 12.3	+3.6
DDFL	Dedoflistskaro	1.99	93	P	Pb	13 23 45.5	+0.2
DDFL	Dedoflistskaro	1.99	93	iP	Pb	13 23 45.4	+0.1
DDFL				iS	Sg	13 24 14.6	+1.5
LGD	Lagodekhi	2.09	82	P	Pn	13 23 45.3	+1.3
LGD				S	Sb	13 24 12.1	-0.8
BTLR	Botlikh	2.32	61	ePn	Pn	13 23 48.5	+1.3
BTLR				eSn	Sb	13 24 20.3	+0.7
GROC	Groznyy	2.37	46	ePn	Pb	13 23 50.8	-1.0
GROC				eSn	Sg	13 24 25.1	-0.2
DVE	Vedeno	2.41	54	ePn	Pb	13 23 51.0	-1.5
DVE				eSn	Sb	13 24 23.8	+1.7

IDC ***05*** *13:32:53.0±0.5, 21.°84S×89.°66E, h0^{km}, mb4.9/25, mb1 5.0/25, mb1mx4.9/39, mbtmp4.9/25, MS4.3/35, Ms1 4.3/35, ms1mx4.1/49, Error ellipse: s-maj=15.6km s-min=12.3km az=43.0*
BJI ***05*** *13:32:52.0±0.0, 21.°90S×89.°70E, h10^{km}, mB5.2/51, mb5.3/76, Ms4.9/49, Ms7 4.6/50*
MOS ***05*** *13:32:53.0±1.1, 21.°72S×89.°66E, h10^{km}, mb5.3/61, Error ellipse: s-maj=9.5km s-min=5.1km az=101.4*
NEIC ***05*** *13:32:54.8±1.8, 21.°81S±0.°09×89.°70E±0.°10, h10^{km}±1^{km}, mb5.3/94, Error ellipse: s-maj=15.8km s-min=15.0km az=145.0*
GCMT ***05*** *13:32:58.8±0.2, 21.°81S±0.°01×89.°70E±0.°01, h35^{km}±1^{km}, MW5.1/112, Moment Tensor Solution. s62,c75; s112,c174; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.71±.19; $M_{\theta\theta}$1.78±.14; $M_{\phi\phi}$-3.49±.15; $M_{r\theta}$3.57±.18; $M_{\theta\phi}$-3.99±.10; $M_{\phi r}$0.39±.15; Best double couple: $M_0$6.16000×10^{16} NP1:ϕ_s168.00000°, δ52.00000°, λ16.00000°. NP2:ϕ_s68.00000°, δ77.00000°, λ141.00000°. Principal axes: T 6.0960, Plg36.0000°, Azm21.0000°; N 0.1280, Plg49.0000°, Azm233.0000°; P -6.2240, Plg16.0000°, Azm123.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 05 13:32:55.5±0.7**, 21.°89S**±0.°05×**89.°65E**±0.°05**, h16**^{km}±3^{km}**, n763,** σ**1^{s}15**/770**, mb5.2**/174**, MS4.5**/60**, 29C-17D, Fault plane solution: NP1:**ϕ_s158.24388°**,** δ57.51237°**,** λ8.33694°. **NP2:**ϕ_s63.74338°**,** δ82.97493°**,** λ147.23598°. **Principal axes:** T Plg27.7932°**,** Azm15.9768°**;** N Plg56.5736°**,** Azm232.9832°**;** P Plg17.0567°**,** Azm115.2834°**; South Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KASI	Kota Agung	21.71	44	P	P	13 37 45.5	-0.5
	1µm106nm,1.0s						
H08S2	Diego Garcia H	21.78	308	T	T	13 59 53.4	
	baz=134,slow=76,SNR=52						
H08S1	Diego Carcia H	21.79	308	T	T	13 59 55.1	
	baz=134,slow=76,SNR=20						
H08S3	Diego Garcia H	21.80	308	T	T	13 59 50.3	
	baz=134,slow=76,SNR=462						
LWLI	Liwa	21.83	42	P	P	13 37 47.9	+0.5
	6µm137nm,0.8s						
DGAR	Diego Garcia	21.96	308	P	P	13 37 51.2	+2.5
KSI	Kapahiang	22.06	37	P	P	13 37 50.1	+0.2
KSI				pmax	pmax		
	comp=Z,140nm,0.9s						
KSI	Kapahiang	22.06	37	P	P	13 37 49.7	-0.2
	comp=Z,3µmcomp=Z,140nm,0.9s						
BLSI	Bandar Lampung	22.32	45	P	P	13 37 53.2	+0.7
	comp=Z,72nm,0.4s						
LHSI	Lahat	22.45	39	P	P	13 37 55.1	+1.1
	comp=Z,2µmcomp=Z,186nm,1.2s						
DBJI	Dramaga	22.49	50	P	P	13 37 55.3	+0.9
	comp=Z,70nm,1.4s						
KLSI		22.50	43	P	P	13 37 54.9	+0.4
	comp=Z,543nmcomp=Z,52nm,1.5s						
CISI	Cisompet, Garu	22.59	54	P	P	13 37 54.7	-0.8
CISI				IAmb	IAmb	13 38 09.7	
	comp=Z,127nm,1.4s						
CBJI	Citeko	22.65	50	P	P	13 37 55.8	-0.3
	comp=Z,17µmcomp=Z,264nm,1.1s						
GIRL	Giralia	22.76	97	P	P	13 37 59.0	+1.7
	baz=23						
LEM	Lembang	22.92	52	P	P	13 38 02.1	+2.9
	comp=Z,19nm,0.7s,baz=214,slow=14,SNR=8.3						
LEM				PP	PnPn	13 38 17.5	-6.4
	comp=Z,56nm,0.6s,baz=217,slow=7.6,SNR=8.9						
LEM				LR	LR	13 45 29.4	
	comp=Z,426nm,18.6s,baz=227,slow=33						
LEM	Lembang	22.92	52	P	P	13 38 01.9	+2.7
	comp=Z,45nm,0.7s						
PMBI	Palembang	23.91	40	P	P	13 38 10.0	+1.3
PMBI	Palembang	23.91	40	P	P	13 38 10.3	+1.6
	comp=Z,229nm,0.5s						
JMBI	JAMBI	24.31	36	P	P	13 38 14.7	+2.2
	comp=Z,89nm,0.5s						
GSI	Gunungsitoli	24.32	20	P	P	13 38 13.5	+0.9
GSI				IAmb	IAmb	13 38 16.9	
	comp=Z,101nm,1.3s						
GSI	Gunungsitoli	24.32	20	P	P	13 38 13.7	+1.1
	comp=Z,70nm,1.7s						
MNSI	Mandailing Nat	24.55	25	P	P	13 38 17.9	+3.3
BKNI	Bangkinang	24.73	28	P	P	13 38 18.0	+1.7
BKNI	Bangkinang	24.73	28	P	P	13 38 18.0	+1.7
	comp=Z,8µmcomp=Z,147nm,1.1s						
RGRI	Rengat	24.73	32	P	P	13 38 18.3	+2.0
MORW	Morawa	24.84	112	P	P	13 38 18.2	+0.9
	baz=25,SNR=15						
MORW	Morawa	24.84	112	IAmb	IAmb	13 38 21.0	
	comp=Z,46nm,0.9s						
SBSI	Sibolga	24.99	22	P	P	13 38 20.8	+2.2
	comp=Z,83nm,1.0s						
H01W3	Cape Leeuwin H	25.05	126	T	T	14 04 01.2	
	baz=295,slow=74,SNR=28						
H01W2	Cape Leeuwin H	25.06	126	T	T	14 03 59.1	
	baz=295,slow=74,SNR=33						
H01W1	Cape Leeuwin H	25.07	126	T	T	14 03 58.4	
	baz=295,slow=74,SNR=24						
PPBI	Pangkal Pinang	25.34	42	P	P	13 38 24.1	+2.3
	comp=Z,31µmcomp=Z,83nm,1.1s						
MUN	Mundaring	25.66	119	P	P	13 38 25.0	+0.3
	baz=26,SNR=4.3						
BLDU	Ballidu	25.73	115	P	P	13 38 25.7	+0.4
	baz=26,SNR=19						
TPI	Tanjungpandan	25.85	45	P	P	13 38 27.6	+1.1
	comp=Z,1µmcomp=Z,94nm,1.1s						
TPTI		26.06	17	P	P	13 38 29.6	+1.2
	comp=Z,566nmcomp=Z,52nm,1.4s						
RPSI	Rantau Prapat	26.07	21	P	P	13 38 30.7	+2.2
RPSI	Rantau Prapat	26.07	21	P	P	13 38 28.9	+0.4
PSI	Prapat	26.17	21	P	P	13 38 28.9	-0.6
	comp=Z,7.6nm,0.8s,baz=180,slow=5.2,SNR=8.3						
PSI				LR	LR	13 46 40.6	
	comp=Z,1µm,21.6s,baz=269,slow=32						
TSI	Tuntungan	26.70	20	P	P	13 38 36.5	+2.3
	comp=Z,53nm,1.3s						
NWAO	Narrogin (SRO)	26.77	120	P	P	13 38 35.1	+0.4
	baz=27,SNR=5.2						
NWAO	Narrogin (SRO)	26.77	120	P	P	13 38 34.6	-0.1
	comp=Z,19nm,0.8s,baz=256,slow=6.6,SNR=7.5						
NWAO				PP	PnPn	13 39 10.5	-5.6
	comp=Z,173nm,0.5s,baz=275,slow=11,SNR=94						
NWAO				LR	LR	13 47 06.0	
	comp=Z,774nm,20.4s,baz=285,slow=32						
NWAO	Narrogin (SRO)	26.77	120	P	P	13 38 35.0	+0.4
NWAO				pmax	pmax		
	comp=Z,20nm,0.9s						
NWAO	Narrogin (SRO)	26.77	120	P	P	13 38 35.0	+0.4
MEEK	Meekatharra	26.80	106	P	P	13 38 35.1	+0.1
	baz=27,SNR=9.6						
KLBR	Kellerberrin	26.83	117	P	P	13 38 35.0	-0.3
	baz=27,SNR=10						
MYKOM	Kota Tinggi	27.33	32	P	P	13 38 41.0	+1.2
IPM	Ipoh	28.48	24	P	P	13 38 51.1	+0.9
IPM	Ipoh	28.48	24	P	P	13 38 52.0	+1.9
KULM	Kulim	29.09	23	P	P	13 38 55.8	+0.3
KULM				IAmb	IAmb	13 38 57.1	
	comp=Z,54nm,1.3s						
KULM	Kulim	29.09	23	P	P	13 38 56.0	+0.5
KMBL	Kambalda	30.23	115	P	P	13 39 05.6	+0.1
	baz=30,SNR=12						
PALK	Pallekele	30.28	342	⇑eP	P	13 39 06.1	0.0
PALK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KSM	Kuching	30.77	44	P	P	13 39 10.1	-0.3
KSM				IAmb	IAmb	13 39 26.9	
	comp=Z,40nm,1.3s						
PKDT	Phuket	30.80	17	P	P	13 39 10.8	+0.2
	comp=Z,3µmcomp=Z,244nm,0.9s						
MTKI	Muara Teweh, K	32.23	53	P	P	13 39 23.8	+0.5
	comp=Z,12nm,0.9s						
SBUM	Sibu	32.75	45	P	P	13 39 28.5	+0.7
SBUM				IAmb	IAmb	13 39 29.7	
	comp=Z,42nm,1.1s						
SBUM	Sibu	32.75	45	P	P	13 39 29.0	+1.2
FITZ	Fitzroy Crossi	33.99	90	P	P	13 39 38.9	+0.2
	baz=34,SNR=11						
FITZ	Fitzroy Crossi	33.99	90	P	P	13 39 38.8	+0.2
	comp=Z,7.7nm,0.7s,baz=270,slow=7.5,SNR=21						
FITZ				PP	PnPn	13 40 44.5	-7.3
	comp=Z,18nm,0.7s,baz=235,slow=11,SNR=13						
BNSI	Bone	34.26	64	P	P	13 39 44.5	+3.5
BATI	Baumata	34.61	76	PP	PP	13 40 53.3	-9.3
	comp=Z,38nm,0.8s,baz=289,slow=16,SNR=4.6						
DGPR	DIGLIPUR	35.00	6	eP	P	13 39 46.8	-0.5
SOEI	Soe	35.34	76	P	P	13 39 51.3	+0.8
SOEI				IAmb	IAmb	13 40 15.3	
	comp=Z,47nm,1.1s						
SOEI	Soe	35.34	76	P	P	13 39 51.1	+0.6
	comp=Z,40nm,1.0s						
FORT	Forrest	35.40	113	P	P	13 39 51.7	+0.9
	baz=36,SNR=12						
FORT	Forrest	35.40	113	IAmb	IAmb	13 39 52.6	
	comp=Z,57nm,0.8s						
MPSI	Mapaga	36.86	57	P	P	13 40 03.4	0.0
	comp=Z,26nm,0.9s						
TOLI2	Tolitoli	38.03	57	P	P	13 40 12.0	-1.3
TOLI2				IAmb	IAmb	13 40 13.3	
	comp=Z,50nm,1.1s						
DLV	T Lat	38.38	31	P	P	13 40 15.5	-0.9
DLV				IAmb	IAmb	13 40 17.9	
	comp=Z,83nm,1.3s						
MYLDM	Lahad Datu	39.02	50	P	P	13 40 23.5	+1.9
MYLDM				IAmb	IAmb	13 40 24.6	
	comp=Z,125nm,1.5s						
GOA	Goa	40.26	336	IAMs_20	IAMs_20	13 54 16.0	
	comp=Z,1µm,22.3s						
MTN	Manton Dam	40.50	84	P	P	13 40 34.0	+0.1
	baz=41,SNR=5.6						
HYB	Hyderabad	40.55	344	iP	P	13 40 34.0	-0.3
HYB	Hyderabad	40.55	344	eP	P	13 40 33.2	-1.0
HYB				IAmb	IAmb	13 40 40.5	
	comp=Z,17nm,1.1s						
HYB				IAMs_20	IAMs_20	13 54 05.5	
	comp=Z,632nm,14.9s						
ASPA	Alice Springs	40.72	101	P	P	13 40 35.7	-0.1
	baz=41						
ASAR	Alice Springs	40.72	101	P	P	13 40 35.7	-0.1
	comp=Z,22nm,0.8s,baz=270,slow=7.6,SNR=283						
ASAR				PP	PP	13 42 11.3	+1.6
	comp=Z,11nm,0.8s,baz=265,slow=11,SNR=6.2						
ASAR				LR	LR	13 57 14.8	
	comp=Z,1µm,18.6s,baz=262,slow=36						
ASAR	Alice Springs	40.72	101	P	P	13 40 35.5	-0.4
ASAR					PnPn	13 42 15.7	+1.9
AS31	Alice Springs	40.73	101	P	P	13 40 35.6	-0.2
CM31	Chiang Mai Arr	41.12	13	P	P	13 40 40.1	+1.1
CM31				IAmb	IAmb	13 40 40.8	
	comp=Z,40nm,0.8s						
CMAR	Chiang Mai Arr	41.12	13	P	P	13 40 39.6	+0.7
	comp=Z,22nm,0.6s,baz=203,slow=8.2,SNR=141						
CMAR				PcP	PcP	13 42 38.4	0.0
	comp=Z,1.4nm,0.6s,baz=207,slow=3.9,SNR=5.0						
CMAR				LR	LR	13 56 14.5	
	comp=Z,304nm,18.9s,baz=242,slow=34						
CMAR	Chiang Mai Arr	41.12	13	P	P	13 40 38.6	-0.4
CHTO	Chiang Mai	41.47	13	P	P	13 40 42.5	+0.7
CHTO				pmax	pmax		
	comp=Z,26nm,0.8s						
CHTO	Chiang Mai	41.47	13	P	P	13 40 42.5	+0.7
WRA	Warramunga Arr	41.68	96	P	P	13 40 43.7	0.0
	comp=Z,24nm,0.8s,baz=266,slow=9.6,SNR=142						
WRA				PP	PnPn	13 42 24.7	-0.4
	comp=Z,5.8nm,1.0s,baz=256,slow=11,SNR=2.5						
WRA				PcP	PcP	13 42 40.2	-0.2
	comp=Z,1.2nm,0.4s,baz=265,slow=2.2,SNR=8.7						
WRA				LR	LR	13 56 21.1	
	comp=Z,181nm,21.5s,baz=255,slow=34						
WRA	Warramunga Arr	41.68	96	P	P	13 40 43.6	-0.1
WB2	Warramunga Arr	41.70	96	P	P	13 40 44.0	+0.2
	baz=42						
WB2	Warramunga Arr	41.70	96	P	P	13 40 43.8	-0.1
WRAB	Tennant Creek	41.70	96	d iP	P	13 40 43.6	-0.2
WRAB				pmax	pmax		
	comp=Z,36nm,0.8s						
WB0	Warramunga Arr	41.77	96	P	P	13 40 44.5	+0.1
KDU	Kakadu	41.79	85	P	P	13 40 44.6	+0.1
	baz=42,SNR=3.2						
WR0	Warramunga Arr	41.87	96	P	P	13 40 45.3	+0.1
WR0				IAmb	IAmb	13 40 46.4	
	comp=Z,47nm,0.8s						
BBOO	Buckleboo	42.34	115	P	P	13 40 49.0	0.0
	baz=42,SNR=6.6						
BBOO	Buckleboo	42.34	115	P	P	13 40 48.9	0.0
POO	Poona	43.05	338	eP	P	13 40 54.0	-0.7
POO				eP	pP	13 40 57.2	-1.0
POO				IAMs_20	IAMs_20	13 56 10.7	
	comp=Z,1µm,18.9s						
NGP	Nagpur	44.02	346	eP	P	13 41 02.7	+0.3
NGP				IAmb	IAmb	13 41 06.3	
	comp=Z,6.8nm,0.9s						
NGP				ix	x	13 42 47.8	
SAIH	SAIHA	44.23	4	eP	P	13 41 04.6	+0.3
HTT	Hallett	44.77	116	P	P	13 41 08.6	0.0
	baz=45,SNR=8.4						
SLVN	Son La	45.16	19	P	P	13 41 12.9	+1.2
SLVN				IAmb	IAmb	13 41 14.0	
	comp=Z,43nm,0.9s						
QIZ	Qiongzhong	45.22	27	P	P	13 41 13.1	+1.0
QIZ				PP	PP	13 42 58.9	+0.8
QIZ				S	S	13 47 54.5	+2.9
QIZ				sS	sS	13 48 01.4	+4.0
QIZ				pmax	pmax		
	comp=Z,52nm,1.2s						
QIZ				LR	LR		
	comp=Z,270nm,11.2s						
QIZ				LR	LR		
	comp=Z,290nm,7.7s						
QIZ				LR	LR		
	comp=Z,360nm,12.0s						
DAV	Davao City (W)	45.49	55	LR	LR	14 00 28.1	
	comp=Z,160nm,19.5s,baz=289,slow=36						
BOK	Bokaro	45.56	355	eP	P	13 41 15.9	+1.2
BOK				IAmb	IAmb	13 41 22.8	
	comp=Z,29nm,1.4s						
BOK				IAMs_20	IAMs_20	13 58 06.9	
	comp=Z,634nm,19.4s						
SWI	Sorong	45.59	68	P	P	13 41 15.2	0.0
	comp=Z,24nm,0.8s						
SIJI	Sorong	45.59	68	P	P	13 41 15.5	+0.3
	comp=Z,15nm,0.8s,baz=263,slow=6.7,SNR=7.6						
BHPL	Bhopal	46.41	344	eP	P	13 41 21.3	-0.2
BHPL				IAmb	IAmb	13 41 22.3	
	comp=Z,15nm,0.8s						
QIS	Mount Isa	46.42	98	P	P	13 41 21.8	+0.1
	baz=47,SNR=12						
SILR	SILCHAR	46.50	4	eP	P	13 41 23.9	+1.8
SILR				IAmb	IAmb	13 41 25.7	
	comp=Z,174nm,0.2s						
STKA	Stephens Creek	47.01	114	P	P	13 41 26.1	-0.2
	baz=47,SNR=20						
STKA	Stephens Creek	47.01	114	P	P	13 41 26.2	0.0
	comp=Z,16nm,0.7s,baz=273,slow=6.5,SNR=30						
STKA				LR	LR	14 01 04.5	
	comp=Z,644nm,18.4s,baz=240,slow=36						
STKA	Stephens Creek	47.01	114	d iP	P	13 41 26.1	-0.2
STKA	Stephens Creek	47.01	114	P	P	13 41 26.0	-0.2
SHL	Shillong	47.23	3	P	P	13 41 28.0	0.0
SHL				pmax	pmax		
	comp=Z,72nm,1.2s						
SHL	Shillong	47.23	3	eP	P	13 41 28.2	+0.2
SHL				IAmb	IAmb	13 41 29.5	
	comp=Z,15nm,0.7s						
ARPS	Mount Arapiles	47.30	120	P	P	13 41 29.0	+0.6
	baz=48,SNR=9.3						
KOHI	KOHIMA	47.53	5	eP	P	13 41 30.5	+0.1
KOHI				IAmb	IAmb	13 41 31.8	
	comp=Z,442nm,1.6s						
MOKO	MOKOCHONG	48.16	6	eP	P	13 41 35.3	+0.1
MOKO				IAmb	IAmb	13 41 36.6	
	comp=Z,192nm,1.0s						
TEZP	TEZPUR	48.32	4	eP	P	13 41 36.4	+0.1
TEZP				IAmb	IAmb	13 41 39.6	

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         comp=Z,25nm,0.9s
KMI      Kunming            48.44  16 ⇑P     P      13 41 39.1 +1.7
KMI                                   pP     sP     13 41 44.7 +2.3
KMI                                   sP     pwP    13 41 47.4 -0.1
KMI                                   PcP    PcP    13 43 04.5 +0.8
KMI                                   ScP    ScP    13 46 58.8 +0.9
KMI                                   S      S      13 48 40.6 +2.7
KMI                                   pmax   pmax
         comp=Z,96nm,1.0s
KMI                                   pmax   pmax
         comp=Z,230nm,3.5s
KMI                                   LR     LR
         comp=Z,360nm,15.7s
KMI                                   LR     LR
         comp=Z,250nm,13.8s
KMI                                   LR     LR
         comp=Z,350nm,15.7s
KMI      Kunming            48.44  16  P     P      13 41 39.7 +2.3
KMI                                   pmax   pmax
         comp=Z,124nm,1.1s
KMI      Kunming            48.44  16  P     P      13 41 39.7 +2.3
MAW      Mawson             48.69 193  LR    LR     13 59 18.4
         comp=Z,187nm,18.5s,baz=48,slow=32
TAPN     Taplejung          48.99 358 eP     P      13 41 42.3 +0.5
         comp=Z,142nm,1.0s
ZIRO     ZIRO               49.30   5 eP     P      13 41 43.7 -0.2
ZIRO                                  IAmb   IAmb   13 41 48.0
         comp=Z,70nm,1.0s
PKI      Pulchoki           49.34 355 eP     P      13 41 44.3 -0.2
         comp=Z,52nm,0.8s
PKIN     Phulchoki          49.35 355 eP     P      13 41 44.3 -0.2
         comp=Z,50nm,0.8s
DMN      Daman              49.41 355 eP     P      13 41 45.2 +0.3
         comp=Z,46nm,0.8s
KKN      Kakani             49.57 355 eP     P      13 41 46.0 -0.1
         comp=Z,31nm,0.7s
GUN      Gumba              49.65 356 eP     P      13 41 47.0 +0.2
         comp=Z,164nm,1.0s
QLP      Quilpie            49.69 107  P     P      13 41 47.6 +0.7
         baz=50,SNR=5.4
GKN      Gorkha             49.84 354 eP     P      13 41 48.1  0.0
         comp=Z,32nm,0.7s
TOO      Toolangi           50.25 121  P     P      13 41 52.6 +1.5
         baz=50,SNR=6.0
TOO      Toolangi           50.25 121  P     P      13 41 52.5 +1.4
TOO                                   pmax   pmax
         comp=Z,50nm,1.3s
TOO      Toolangi           50.25 121  P     P      13 41 52.5 +1.4
TOO                                   IAmb   IAmb   13 41 53.5
         comp=Z,50nm,1.2s
DANN     Dangsing           50.27 353 eP     P      13 41 51.5  0.0
         comp=Z,143nm,0.8s
CMSA     Cobar Meteorol     50.51 113  P     P      13 41 53.5 +0.4
         baz=51,SNR=40
GYA      Guiyang            50.82  20 ⇑P     P      13 41 56.1 +0.6
GYA                                   pP     pwP    13 42 03.5 -1.7
GYA                                   PcP    PcP    13 43 12.7 +0.5
GYA                                   PP     PP     13 43 51.6 -0.4
GYA                                   S      S      13 49 10.6 -0.4
GYA                                   SS     SS     13 52 39.6 -6.5
GYA                                   pmax   pmax
         comp=Z,43nm,0.9s
GYA                                   LR     LR
         comp=Z,280nm,19.7s
GYA                                   LR     LR
         comp=Z,210nm,21.5s
GYA                                   LR     LR
         comp=Z,410nm,18.1s
MTSU     Mount Surprise     51.29  96  P     P      13 41 59.9 +0.8
         baz=52,SNR=4.5
LSA      Lhasa              51.32   2  P     P      13 42 00.3 +0.7
LSA                                   pmax   pmax
         comp=Z,129nm,1.3s
LSA      Lhasa              51.32   2  P     P      13 42 00.3 +0.7
YNG      Young              52.64 117  P     P      13 42 09.9 +0.9
         baz=53,SNR=7.0
CAN      Canberra           53.09 118  P     P      13 42 13.5 +1.1
CAN                                   pmax   pmax
         comp=Z,47nm,1.3s
CAN      Canberra           53.09 118  P     P      13 42 13.5 +1.1
CAN                                   IAmb   IAmb   13 42 24.1
         comp=Z,47nm,1.3s
DDI      Dehra Dun          53.10 347 eP     P      13 42 12.8 +0.5
JAY      Jayapura           53.18  76  LR    LR     14 06 21.8
         comp=Z,110nm,18.0s,baz=247,slow=38
RMQ      Roma               53.72 107  P     P      13 42 17.6 +0.5
         baz=54,SNR=4.9
SMLA     Simla              54.06 347 eP     P      13 42 17.5 -1.8
SMLA                                  IAmb   IAmb   13 42 25.0
         comp=Z,53nm,1.5s
CD2      Chengdu            54.22  15  P     P      13 42 20.2 -0.3
CD2                                   S      S      13 49 59.6 +2.3
CD2                                   pmax   pmax
         comp=Z,80nm,0.6s
CD2                                   LR     LR
         comp=Z,340nm,10.3s
CD2                                   LR     LR
         comp=Z,420nm,13.2s
MGCD     Mangrove Creek     54.97 116  P     P      13 42 27.3 +1.3
         baz=55,SNR=6.4
KMBO     Kilima Mbogo       54.98 285  P     P      13 42 28.0 +1.3
         comp=Z,7.8nm,1.2s,baz=102,slow=6.6,SNR=5.6
KMBO                                  LR     LR     14 02 45.1
         comp=Z,199nm,18.8s,baz=96,slow=33
KMBO     Kilima Mbogo       54.98 285 i P    P      13 42 28.5 +1.8
KMBO                                  pmax   pmax
         comp=Z,8.0nm,1.2s
ENH      Enshi              55.26  21  P     P      13 42 28.0 -0.1
ENH                                   IAmb   IAmb   13 42 28.8
         comp=Z,41nm,1.2s
DHRM     DHARAMSHALA        55.33 346 eP     P      13 42 26.6 -2.2
DHRM                                  IAmb   IAmb   13 42 29.1
         comp=Z,24nm,0.9s
ARMA     Armidale           55.69 113  P     P      13 42 32.3 +0.8
         baz=56,SNR=7.0
ARMA     Armidale           55.69 113  P     P      13 42 32.4 +0.8
SYO      Syowa Base         55.90 199⇓esP    sP     13 42 38.0 +1.0
SYO      Syowa Base         55.90 199⇓ePP    PP     13 44 39.1 +2.5
PMG      Port Moresby       56.47  87  P     P      13 42 38.1 +1.0
         comp=Z,5.1nm,0.7s,baz=291,slow=7.2,SNR=2.2
PMG                                   LR     LR     14 05 24.5
         comp=Z,72nm,20.4s,baz=302,slow=35
PMG      Port Moresby       56.47  87  IAmb  IAmb   13 42 38.6
         comp=Z,7.0nm,0.8s
UOSS     Minazif            56.77 323  IAmb  IAmb   13 42 39.2
         comp=Z,71nm,1.6s
WHN      Wuhan              57.29  25 ⇓P     P      13 42 43.2 +0.7
WHN                                   pP     pwP    13 42 52.0 -0.3
WHN                                   pmax   pmax
         comp=Z,60nm,0.8s
NIL      Nilore             57.40 344  P     P      13 42 42.6 -0.7
NIL                                   pmax   pmax
         comp=Z,79nm,1.4s
NIL      Nilore             57.40 344  P     P      13 42 42.6 -0.7
BOSA     Boshof             58.02 249  P     P      13 42 48.6 +0.5
         comp=Z,5.0nm,1.0s,baz=84,slow=6.6,SNR=3.7
BOSA                                  LR     LR     14 01 43.9
         comp=Z,176nm,21.5s,baz=116,slow=30
BOSA     Boshof             58.02 249  P     P      13 42 48.9 +0.8
BOSA                                  pmax   pmax
         comp=Z,19nm,1.1s
BOSA     Boshof             58.02 249  P     P      13 42 48.9 +0.8
LSZ      Lusaka             58.31 265  P     P      13 42 51.6 +1.4
LSZ                                   pmax   pmax
         comp=Z,7.0nm,0.9s
LSZ      Lusaka             58.31 265  P     P      13 42 51.6 +1.4
XAN      Xi'an              58.57  19  P     P      13 42 50.8 -0.7
XAN                                   pP     sP     13 42 57.1 +0.6
XAN                                   pmax   pmax
         comp=Z,41nm,1.1s
LZH      Lanzhou            59.21  13 eP     P      13 42 55.8 -0.3
LZH                                   pP     pP     13 42 59.6 -0.1
LZH                                   sP     sP     13 43 03.6 +2.6
LZH                                   PcP    PcP    13 43 44.4 +0.1
LZH                                   pmax   pmax
         comp=Z,40nm,1.3s
LZH                                   LR     LR
         comp=Z,320nm,13.3s
LZH                                   LR     LR
         comp=Z,260nm,13.8s
LZH                                   LR     LR
         comp=Z,260nm,14.4s
KBL      Kabul              59.44 340  P     P      13 42 57.5 -0.2
KBL                                   pmax   pmax
         comp=Z,16nm,0.7s
KBL      Kabul              59.44 340  P     P      13 42 57.5 -0.2
KBL                                   IAmb   IAmb   13 42 57.9
         comp=Z,16nm,0.7s
NJ2      Nanjing            60.49  28 eP     P      13 43 04.8 +0.1
NJ2                                   pmax   pmax
         comp=Z,39nm,0.7s
MBAR     Mbarara            61.09 282⇑eP     P      13 43 08.5 -1.0
MBAR                                  pmax   pmax
         comp=Z,3.0nm,1.1s
GTA      Gaotai             61.72   9 ⇑P     P      13 43 13.3 +0.2
GTA                                   pP     pP     13 43 17.8 +1.0
GTA                                   sP     sP     13 43 20.5 +2.4
GTA                                   pmax   pmax
         comp=Z,60nm,0.9s
GTA                                   pmax   pmax
         comp=Z,170nm,7.5s
GTA                                   LR     LR
         comp=Z,150nm,19.3s
GTA                                   LR     LR
         comp=Z,220nm,20.0s
GTA                                   LR     LR
         comp=Z,210nm,18.9s
RAYN     Ar Rayn            62.32 314  P     P      13 43 17.3  0.0
RAYN                                  pmax   pmax
         comp=Z,33nm,1.2s
RAYN     Ar Rayn            62.32 314  P     P      13 43 17.3  0.0
RAYN                                  IAmb   IAmb   13 43 18.5
         comp=Z,33nm,1.1s
KSH      Kashi              62.41 348  P     P      13 43 14.7 -3.0
KSH                                   sP     sP     13 43 25.5 +2.7
KSH                                   PcP    PcP    13 43 56.9 -0.2
KSH                                   PP     PP     13 45 37.6 +2.2
KSH                                   S      S      13 51 46.1 +2.0
KSH                                   pmax   pmax
         comp=Z,9.0nm,0.6s
KSH                                   pmax   pmax
         comp=Z,150nm,2.9s
KSH                                   LR     LR
         comp=Z,510nm,5.8s
KSH                                   LR     LR
         comp=Z,450nm,6.3s
KSH                                   LR     LR
         comp=Z,450nm,7.8s
VNDA     Vanda              64.94 167  P     P      13 43 34.7 +0.8
         comp=Z,6.2nm,0.6s,baz=298,slow=6.0,SNR=20
VNDA                                  LR     LR     14 08 10.7
         comp=Z,385nm,18.1s,baz=292,slow=33
VNDA     Vanda              64.94 167  IAmb  IAmb   13 43 42.0
         comp=Z,28nm,0.9s
BTO      Baotou             65.01  17 eP     P      13 43 35.7 +0.9
ULHL     Ulahol             65.01 349  P     P      13 43 35.2 +0.3
         SNR=25
UCH      Uchtor             65.31 348  P     P      13 43 37.3 +0.1
         SNR=16
AML      Almayashu          65.39 347  P     P      13 43 37.6  0.0
         SNR=31
SHLS     Shalkode           65.40 352 eP     P      13 43 35.4 -2.0
         comp=Z,18nm,1.2s,baz=352
SHLS     Shalkode           65.40 352 eP     P      13 43 35.4 -2.0
SHLS                                  pmax   pmax
         comp=Z,18nm,1.2s
WMQ      Urumqi             65.42 358 eP     P      13 43 38.1 +0.8
WMQ                                   pP     sP     13 43 44.0 +1.6
WMQ                                   pmax   pmax
         comp=Z,35nm,1.5s
WMQ                                   pmax   pmax
         comp=Z,220nm,4.5s
WMQ                                   LR     LR
         comp=Z,430nm,16.5s
WMQ                                   LR     LR
         comp=Z,320nm,25.1s
WMQ      Urumqi             65.42 358  P     P      13 43 38.3 +0.9
WMQ                                   pmax   pmax
         comp=Z,34nm,1.1s
WMQ      Urumqi             65.42 358  P     P      13 43 38.3 +0.9
WMQ                                   IAmb   IAmb   13 43 39.0
         comp=Z,34nm,1.1s
UZB      Uzynbulak          65.45 351 eP     P      13 43 37.0 -0.7
         comp=Z,9.6nm,1.4s,baz=351
UZB      Uzynbulak          65.45 351 eP     P      13 43 37.0 -0.7
UZB                                   pmax   pmax
         comp=Z,10.0nm,1.4s
SATY     Saty               65.45 351 eP     P      13 43 35.8 -2.0
         comp=Z,17nm,1.1s,baz=351
SATY     Saty               65.45 351 eP     P      13 43 35.7 -2.0
SATY                                  pmax   pmax
         comp=Z,17nm,1.1s
NVL      N'lazarevskaya     65.50 201 eP     P      13 43 44.5 +7.0
NVL                                   eS     S      13 52 49.9  +28
NVL                                   pmax   pmax
         comp=Z,17nm,0.8s
KBK      Karagaybulak       65.64 348  P     P      13 43 39.4 +0.4
         SNR=17
TNSS     Tian-Shan          65.66 350 eP     P      13 43 38.5 -0.9
         baz=349
TNSS     Tian-Shan          65.66 350 eP     P      13 43 38.5 -0.9
HHC      Hu-ho-hao-te       65.67  18 eP     P      13 43 39.6 +0.5
HHC                                   sP     pwP    13 43 49.2 -0.1
HHC                                   S      S      13 52 24.7 +0.3
HHC                                   sS     sS     13 52 34.7 +4.3
HHC                                   pmax   pmax
         comp=Z,46nm,1.2s
HHC                                   pmax   pmax
         comp=Z,120nm,5.2s
HHC                                   LR     LR
         comp=Z,300nm,16.3s
HHC                                   LR     LR
         comp=Z,390nm,15.5s
HHC                                   LR     LR
         comp=Z,370nm,17.4s
AAK      Ala-Archa          65.71 348  P     P      13 43 39.8 +0.3
         SNR=17
AAK      Ala-Archa          65.71 348 i P    P      13 43 39.0 -0.4
AAK                                   pmax   pmax
         comp=Z,122nm,1.9s
AAK      Ala-Archa          65.71 348  P     P      13 43 39.0 -0.4
AAK                                   IAmb   IAmb   13 43 40.2
         comp=Z,14nm,0.8s
MDOK     Medeo              65.77 350 eP     P      13 43 37.7 -2.1
         baz=350
MDOK     Medeo              65.77 350 eP     P      13 43 37.6 -2.1
TKM2     Tokmak 2           65.78 349  P     P      13 43 39.8 -0.1
         SNR=32
KPKS     Kokpek             65.81 351 eP     P      13 43 38.2 -1.8
         comp=Z,11nm,1.5s,baz=351
KPKS     Kokpek             65.81 351 eP     P      13 43 38.1 -1.8
KPKS                                  pmax   pmax
         comp=Z,11nm,1.5s
AAA      Alma-Ata           65.83 350 eP     P      13 43 39.0 -1.0
         comp=Z,28nm,0.6s,baz=349
AAA      Alma-Ata           65.83 350 eP     P      13 43 39.0 -1.0
AAA                                   pmax   pmax
         comp=Z,28nm,0.6s
MTBS     Maitube            65.84 349 eP     P      13 43 38.8 -1.3
         baz=349
MTBS     Maitube            65.84 349 eP     P      13 43 38.8 -1.3
EKS2     Erkin-Say          65.88 347  P     P      13 43 40.8 +0.3
         SNR=23
CHMS     Chumysh            66.01 348  P     P      13 43 40.7 -0.5
         SNR=9.8
IUG      Iuzhnay            66.25 344 eP     P      13 43 41.6 -1.2
         comp=Z,7.9nm,1.0s,baz=344
IUG      Iuzhnay            66.25 344 eP     P      13 43 41.6 -1.2
IUG                                   pmax   pmax
         comp=Z,8.0nm,1.0s
USP      Ospenovka          66.32 348  P     P      13 43 43.2  0.0
         SNR=61
BJT      Baijiatuau         66.38  22  P     P      13 43 44.0 +0.5
BJT                                   pmax   pmax
         comp=Z,24nm,0.7s
BJT      Baijiatuau         66.38  22  P     P      13 43 44.0 +0.5
BJT                                   IAmb   IAmb   13 43 44.6
         comp=Z,24nm,0.7s
BJI      Beijing            66.40  22  P     P      13 43 43.4 -0.2
BJI                                   PP     PP     13 46 10.6 +0.4
BJI                                   S      S      13 52 37.2 +4.2
BJI                                   pmax   pmax
         comp=Z,32nm,0.8s
BJI                                   pmax   pmax
         comp=Z,51nm,3.5s
BJI                                   LR     LR
         comp=Z,150nm,19.0s
BJI                                   LR     LR
         comp=Z,170nm,18.1s
BJI                                   LR     LR
         comp=Z,920nm,75.5s
CHKK     Chushkaly          66.45 350 eP     P      13 43 42.4 -1.5
         baz=350
CHKK     Chushkaly          66.45 350 eP     P      13 43 42.3 -1.6
SGDS     Sogindy            66.47 348 eP     P      13 43 43.2 -0.9
         comp=Z,10nm,0.9s,baz=348
SGDS     Sogindy            66.47 348 eP     P      13 43 43.2 -0.9
SGDS                                  pmax   pmax
         comp=Z,10.0nm,0.9s
GEYT     Alibeck            66.48 333  P     P      13 43 44.7 +0.4
         comp=Z,54nm,0.8s,baz=178,slow=8.9,SNR=101
GEYT                                  LR     LR     14 10 46.8
         comp=Z,608nm,20.0s,baz=65,slow=34
GEYT     Alibeck            66.48 333  P     P      13 43 44.5 +0.2
GYA0B    ALIBECK ARRAY      66.48 333  P     P      13 43 44.7 +0.4
KUU      Kurty              66.59 350 eP     P      13 43 42.2 -2.7
         comp=Z,26nm,0.9s,baz=349
KUU      Kurty              66.59 350 eP     P      13 43 42.1 -2.7
KUU                                   pmax   pmax
         comp=Z,26nm,0.9s
DZA      Taraz              66.64 345 eP     P      13 43 44.0 -1.2
         comp=Z,10nm,0.9s,baz=345
DZA      Taraz              66.64 345 eP     P      13 43 44.0 -1.2
DZA                                   pmax   pmax
         comp=Z,10.0nm,0.9s
TSUM     Tsumeb             66.95 258  P     P      13 43 49.5 +1.6
KK31     Karatay Array      67.03 345  P     P      13 43 47.6 -0.1
KK31                                  pmax   pmax
         comp=Z,26nm,1.1s
KK31     Karatay Array      67.03 345  P     P      13 43 47.5 -0.1
KK31                                  IAmb   IAmb   13 43 48.5
         comp=Z,26nm,1.1s
KKAR     Karatay Array      67.03 345  P     P      13 43 46.9 -0.8
KKAR                                                13 43 47.6
KKAR                                  pmax   pmax
         comp=Z,26nm,1.1s
KKAR     Karatay Array      67.03 345  P     P      13 43 46.9 -0.8
KKAR     Karatay Array      67.03 345  P     P      13 43 47.5 -0.1
KKAR                                  IAmb   IAmb   13 43 48.5
         comp=Z,26nm,1.1s
TDK      Taldyqorghan       67.36 351 eP     P      13 43 48.7 -1.0
         comp=Z,24nm,1.5s,baz=351
TDK      Taldyqorghan       67.36 351 eP     P      13 43 48.7 -1.0
TDK                                   pmax   pmax
         comp=Z,24nm,1.5s
DL2      Dalian             67.50  27  P     P      13 43 50.8 +0.1
DL2                                   S      S      13 52 47.4 +1.1
DL2                                   pmax   pmax
         comp=Z,42nm,0.8s
DL2                                   LR     LR
         comp=Z,470nm,17.7s
DL2                                   LR     LR
         comp=Z,250nm,17.1s
DL2                                   LR     LR
         comp=Z,440nm,18.2s
TJN      Taejon             68.04  32⇑eP     P      13 43 53.0 -1.1
BTLS     Baital             68.12 348 eP     P      13 43 52.2 -2.2
         comp=Z,13nm,1.6s,baz=348
BTLS     Baital             68.12 348 eP     P      13 43 52.2 -2.2
BTLS                                  pmax   pmax
         comp=Z,13nm,1.6s
QSPA     South Pole Qui     68.20 180  P     P      13 43 55.4 +0.4
         comp=Z,34nm,1.0s,baz=290,slow=1.5,SNR=63
QSPA     South Pole Qui     68.20 180  P     P      13 43 55.5 +0.5
MK31     Makanchi Array     68.69 355c iP    P      13 43 57.2 -0.8
MK31     Makanchi Array     68.69 355  P     P      13 43 57.3 -0.8
MK31                                  IAmb   IAmb   13 43 58.8
         comp=Z,24nm,1.3s
MKAR     Makanchi Array     68.69 355  P     P      13 43 57.4 -0.7
         comp=Z,9.6nm,1.0s,baz=183,slow=4.9,SNR=54
MKAR                                  LR     LR     14 13 41.9
         comp=Z,316nm,19.9s,baz=186,slow=36
MKAR     Makanchi Array     68.69 355 i P    P      13 43 57.2 -0.8
MKAR                                  pmax   pmax
         comp=Z,10.0nm,1.0s
MKAR     Makanchi Array     68.69 355  P     P      13 43 56.6 -1.4
MAKZ     Makanchi           68.73 354  P     P      13 43 57.1 -1.2
MAKZ                                  pmax   pmax
         comp=Z,37nm,1.0s
MAKZ     Makanchi           68.73 354  P     P      13 43 57.1 -1.2
KSAR     Wonju Array Be     69.14  32  P     P      13 44 00.9 -0.1
KSAR     Wonju Array Be     69.14  32  P     P      13 44 00.9 -0.1
ZSN      Zaisan             69.15 357 eP     P      13 43 59.3 -1.6
         comp=Z,32nm,2.3s,baz=356
ZSN      Zaisan             69.15 357 eP     P      13 43 59.3 -1.6
ZSN                                   pmax   pmax
         comp=Z,32nm,2.3s
KSRS     Korea Array        69.16  32  P     P      13 44 01.3 +0.2
         comp=Z,9.3nm,0.9s,baz=222,slow=6.6,SNR=19
SNAA     Sanae              70.19 200  P     P      13 44 08.0 +0.8
SNAA     Sanae              70.19 200ceP     P      13 44 08.3 +1.1
SNAA                                  pmax   pmax
         comp=Z,19nm,2.5s
SNAA     Sanae              70.19 200  P     P      13 44 08.1 +0.8
DZM      Mont Dzumac        70.41 107 eSS    SS     13 57 54.0 +1.2
         comp=Z,144nm,25.4s
DZM                                   eLR    LR     14 05 34.0
         comp=Z,712nm,22.9s
SONM     Songino Array      71.02  12  P     P      13 44 12.9 +0.4
         comp=Z,22nm,0.8s,baz=188,slow=7.4,SNR=123
SONM                                  LR     LR     14 16 19.8
         comp=Z,204nm,19.2s,baz=194,slow=37
SONM     Songino Array      71.02  12  P     P      13 44 12.1 -0.4
ULN      Ulaanbaatar        71.18  12c iP    P      13 44 13.3 -0.2
ULN                                   pmax   pmax
         comp=Z,47nm,1.3s
ULN      Ulaanbaatar        71.18  12  P     P      13 44 13.5  0.0
ULN                                   IAmb   IAmb   13 44 14.5
         comp=Z,28nm,0.8s
DGZ      Jazzator, Alta     71.30 358ceP     P      13 44 14.4 +0.2
DGZ                                   pmax   pmax
         comp=Z,13nm,1.3s
VNA2     Neumayer--Watz     71.78 200  P     P      13 44 17.8 +1.0
         baz=88,slow=5.5
VNA1     Neumayer--Stat     72.12 200  P     P      13 44 20.6 +1.8
VNA3     Neumayer Olymp     72.41 200  P     P      13 44 21.4 +0.8
SEM      Semipalatinsk      72.46 354 eP     P      13 44 18.6 -2.6
         comp=Z,16nm,1.0s,baz=353
SEM      Semipalatinsk      72.46 354 eP     P      13 44 18.6 -2.6
SEM                                   pmax   pmax
         comp=Z,16nm,1.0s
KURK     Kurchatov          72.94 353 i P    P      13 44 21.7 -2.1
KURK                                  pmax   pmax
         comp=Z,44nm,1.1s
KURK     Kurchatov          72.94 353  P     P      13 44 23.5 -0.3
KURK                                  IAmb   IAmb   13 44 24.5
         comp=Z,39nm,1.1s
ZAK      Zakamensk          72.96   9 eP     P      13 44 23.6 -0.5
ZAK                                   pmax   pmax
         comp=Z,11nm,1.0s
BRZS     Berezniki          73.12 349 eP     P      13 44 22.5 -2.4
         comp=Z,10nm,1.4s,baz=348
BRZS     Berezniki          73.12 349 eP     P      13 44 22.5 -2.4
BRZS                                  pmax   pmax
         comp=Z,10.0nm,1.4s
CN2      Changchun          73.16  26 eP     P      13 44 24.6 -0.6
CN2                                   eS     SKiKP  13 53 55.7 -1.2
CN2                                   pmax   pmax
         comp=Z,10.0nm,0.7s
CN2                                   pmax   pmax
         comp=Z,100nm,6.0s
CN2                                   LR     LR
         comp=Z,200nm,14.0s
CN2                                   LR     LR
         comp=Z,300nm,14.0s
CN2                                   LR     LR
         comp=Z,300nm,17.0s
MOY      Mondy              73.92   7 eP     P      13 44 30.1 +0.4
MOY                                   pmax   pmax
         comp=Z,39nm,1.8s
MAJO     Matsushiro         74.03  39⇑eP     P      13 44 29.5 -1.0
MAJO                                  pmax   pmax
         comp=Z,31nm,1.8s
MAT      Matsushiro         74.03  39  P     P      13 44 29.4 -1.1
MAT                                   eS     S      13 54 11.0 +8.5
MJAR     Matsushiro Arr     74.03  39  P     P      13 44 29.9 -0.7
         comp=Z,8.7nm,0.8s,baz=210,slow=6.6,SNR=22
MJAR                                  LR     LR     14 15 47.9
         comp=Z,69nm,21.0s,baz=330,slow=35
GEVA     Gevas              74.14 324  P     P      13 44 32.5 +1.1
GEVA                                  IAmb   IAmb   13 44 33.3
         comp=Z,48nm,1.3s
TLY      Talaya             74.28   9  LR    LR     14 20 00.1
         comp=Z,128nm,18.6s,baz=184,slow=38
TLY      Talaya             74.28   9 eP     P      13 44 31.0 -0.7
TLY                                   pmax   pmax
         comp=Z,57nm,1.5s
TLY                                   MLR    MLR
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	comp=Z,501nm,17.0s						
TLY	Talaya	74.28	9	P	P	13 44 31.0	-0.7
GNI	Garni	74.57	326	c iP	P	13 44 34.1	+0.3
GNI				pmax	pmax		
	comp=Z,18nm,1.0s						
MARD	Mardin	74.73	322	P	P	13 44 36.3	+1.5
MARD				IAmb	IAmb	13 44 36.9	
	comp=Z,21nm,1.0s						
LGD	Lagodekhi	75.06	328	P	P	13 44 37.3	+0.9
BELA	Belgrano 2	75.42	190	P	P	13 44 38.5	+0.5
MDJ	Mudanjiang	75.58	28	P	P	13 44 38.9	-0.4
MDJ				pmax	pmax		
	comp=Z,17nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,140nm,6.1s						
MDJ	Mudanjiang	75.58	28	P	P	13 44 39.0	-0.4
MDJ				IAmb	IAmb	13 44 40.2	
	comp=Z,20nm,1.0s						
AB31	Akbulak array	75.61	340	i P	P	13 44 37.9	-1.5
AB31				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ABKAR	Akbulak array	75.61	340	P	P	13 44 38.4	-1.0
ZAA0	Zalesovo Array	75.64	357	P	P	13 44 38.8	-0.7
ZAA0				IAmb	IAmb	13 44 39.7	
	comp=Z,20nm,0.8s						
ZALV	Zalesovo Beam	75.64	357	P	P	13 44 38.8	-0.6
	comp=Z,11nm,0.8s,baz=179,slow=5.9,SNR=13						
ZALV				LR	LR	14 17 03.0	
	comp=Z,104nm,21.8s,baz=166,slow=35						
ZALV	Zalesovo Beam	75.64	357	i P	P	13 44 36.0	-3.4
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.6s						
HIA	Hailar	75.75	20	P	P	13 44 40.1	-0.1
HIA				pmax	pmax		
	comp=Z,32nm,1.2s						
HIA	Hailar	75.75	20	P	P	13 44 40.1	-0.1
HIA				IAmb	IAmb	13 44 40.7	
	comp=Z,32nm,1.2s						
AKH	Akhalkalaki	76.14	326	P	P	13 44 43.3	+0.5
GROC	Groznyy	76.30	329	eP	P	13 44 41.9	-1.5
GROC				pmax	pmax		
	comp=Z,59nm,1.2s						
USA0B	Ussuriysk Arra	76.34	30	d iP	P	13 44 43.6	0.0
USRK	Ussuriysk Ar.	76.34	30	P	P	13 44 43.3	-0.3
	comp=Z,11nm,0.8s,baz=228,slow=2.3,SNR=18						
USRK				LR	LR	14 20 10.9	
	comp=Z,207nm,18.5s,baz=217,slow=37						
BRVK	Borovoye	76.51	348	c iP	P	13 44 43.2	-1.2
BRVK				pmax	pmax		
	comp=Z,11nm,1.4s						
BRVK	Borovoye	76.51	348	P	P	13 44 43.4	-1.0
GAZ	Gaziantep	76.75	319	IAmb	IAmb	13 44 48.1	
	comp=Z,17nm,0.7s						
KOPT	Kop Dagi	76.76	323	P	P	13 44 48.6	+2.1
KOPT				IAmb	IAmb	13 44 48.8	
	comp=Z,23nm,1.0s						
MALT	Malatya	76.78	321	P	P	13 44 47.7	+1.3
ZEI	Tsey	76.93	327	eP	P	13 44 46.9	-0.4
ZEI				pmax	pmax		
	comp=Z,9.0nm,1.0s						
ONI	Oni	77.01	327	P	P	13 44 48.1	+0.5
BATM	Batumi	77.22	325	P	P	13 44 49.9	+1.2
AKTO	Aktyubinsk	77.25	340	LR	LR	14 19 09.3	
	comp=Z,186nm,18.1s,baz=151,slow=36						
AKTO	Aktyubinsk	77.25	340	i P	P	13 44 46.4	-2.3
CSS	Mathiatis	77.78	316	P	P	13 44 53.0	+1.0
CSS				IAmb	IAmb	13 45 00.4	
	comp=Z,20nm,0.9s						
NEY	Neytrino	77.86	327	⇓eP	P	13 44 52.4	-0.1
NEY				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KBZ	Khabaz	78.11	327	P	P	13 44 54.4	+0.8
	comp=Z,48nm,0.8s,baz=154,slow=4.1,SNR=93						
KBZ				LR	LR	14 19 45.8	
	comp=Z,133nm,18.4s,baz=128,slow=36						
KBZ	Khabaz	78.11	327	c iP	P	13 44 53.8	+0.2
KBZ				pmax	pmax		
	comp=Z,58nm,0.8s						
KIV	Kislovodsk	78.38	327	eP	P	13 44 55.3	0.0
KIV				pmax	pmax		
	comp=Z,114nm,1.1s						
KIV				MLR	MLR		
	comp=Z,505nm,19.0s						
KIV	Kislovodsk	78.38	327	P	P	13 44 55.6	+0.3
KIV				IAmb	IAmb	13 44 56.6	
	comp=Z,47nm,1.1s						
TOKA	Tokat	79.24	321	P	P	13 45 00.2	+0.2
TOKA				IAmb	IAmb	13 45 01.6	
	comp=Z,26nm,1.2s						
SOC	Sochi	79.64	326	eP	P	13 45 00.3	-1.7
SOC				e		13 47 59.2	
SOC				ePPP	PPP	13 49 49.7	
SOC				eS	S	13 55 02.0	-1.5
SOC				eSS	SS	14 00 15.2	+2.6
SOC				eSSS	SSS	14 03 27.8	
SOC				MLR	MLR		
	comp=Z,223nm,13.0s						
KLR	Kul'dur	80.11	26	LR	LR	14 20 17.9	
	comp=Z,310nm,20.4s,baz=212,slow=36						
KLR	Kul'dur	80.11	26	ceP	P	13 45 03.3	-1.1
KLR				pmax	pmax		
	comp=Z,27nm,1.2s						
JEW	Eniwo	80.14	36	P	P	13 45 05.6	+0.9
BRTR	Keskin Array B	80.53	320	P	P	13 45 07.2	0.0
	comp=Z,7.1nm,0.8s,baz=142,slow=6.4,SNR=26						
BRTR				LR	LR	14 19 39.5	
	comp=Z,127nm,18.2s,baz=124,slow=35						
BRTR	Keskin Array B	80.53	320	i P	P	13 45 07.0	-0.2
BRTR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BRTR	Keskin Array B	80.53	320	P	P	13 45 06.8	-0.4
BR131	Keskin Array S	80.53	320	ceP	P	13 45 06.8	-0.4
ILGA	Ilgaz	81.32	321	P	P	13 45 12.4	+1.0
BOD	Bodaibo	81.97	13	eP	P	13 45 13.5	-0.7
BOD				pmax	pmax		
	comp=Z,41nm,1.5s						
ZEA	Zeya	82.02	21	eP	P	13 45 13.5	-1.0
ZEA				pmax	pmax		
	comp=N,10.0nm,0.6s						
ZEA				pmax	pmax		
	comp=E,10.0nm,0.6s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
SVE	Sverdlovsk	82.14	344	eP	P	13 45 14.0	-1.0
SVE				pmax	pmax		
	comp=Z,31nm,1.4s						
ARU	Arti	82.32	343	LR	LR	14 22 14.8	
	comp=Z,179nm,18.4s,baz=150,slow=36						
ARU	Arti	82.32	343	c iP	P	13 45 15.6	-0.4
ARU				S	S	13 55 32.7	+1.8
ARU				pmax	pmax		
	comp=Z,53nm,1.9s						
ARU	Arti	82.32	343	P	P	13 45 15.6	-0.4
ARU				IAmb	IAmb	13 45 17.6	
	comp=Z,16nm,0.9s						
BELG	Belogornoye	82.54	336	LR	LR	14 23 31.4	
	comp=Z,274nm,20.1s,baz=139,slow=37						
BELG	Belogornoye	82.54	336	ceP	P	13 45 16.0	-1.2
BELG				pmax	pmax		
	comp=Z,7.0nm,0.9s						
GRNR	Gornyy	83.25	28	⇑iP	P	13 45 20.9	-0.1
GRNR				pmax	pmax		
	comp=E,3.0nm,0.8s						
GRNR				pmax	pmax		
	comp=N,3.0nm,1.2s						
GRNR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
GRNR				MLR	MLR		
	comp=E,290nm,16.0s						
VRH	Novokhopyorsk	84.07	332	eP	P	13 45 23.7	-1.4
VRH				pmax	pmax		
	comp=Z,40nm,0.8s						
VORD	Divnogorie	84.98	331	eP	P	13 45 27.2	-2.6
VORD				pmax	pmax		
	comp=Z,20nm,0.4s						
VSR	Storozhevoye	85.21	331	eP	P	13 45 29.4	-1.5
VSR				pmax	pmax		
	comp=Z,30nm,1.1s						
LPSR	Galich'ya Gora	86.28	332	eP	P	13 45 34.9	-1.3
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
TIRR	Tirgusor	86.49	321	⇑P	P	13 45 37.3	-0.1
KIRV	Kirov	86.81	340	LR	LR	14 23 27.4	
	comp=Z,222nm,21.9s,baz=160,slow=35						
KIRV	Kirov	86.81	340	ceP	P	13 45 38.1	-0.5
CFR	Carcaliu	87.06	322	⇑P	P	13 45 40.4	+0.2
AGG	Agios Georgios	87.33	314	P	P	13 45 41.7	-0.1
AGG				pmax	pmax		
	comp=Z,39nm,1.2s						
AGG	Agios Georgios	87.33	314	P	P	13 45 41.7	-0.1
VRI	Vrincioaia	88.27	322	⇑P	P	13 45 46.5	+0.4
VRI	Vrincioaia	88.27	322	P	P	13 45 46.6	+0.6
PLOR	Plostina	88.31	321	⇓P	P	13 45 46.8	+0.6
MLR	Muntele Rosu	88.51	321	⇑P	P	13 45 47.5	+0.1
MLR	Muntele Rosu	88.51	321	P	P	13 45 47.9	+0.6
MLR				pmax	pmax		
	comp=Z,14nm,0.8s						
MLR	Muntele Rosu	88.51	321	P	P	13 45 47.9	+0.6
MLR				IAmb	IAmb	13 46 03.9	
	comp=Z,14nm,0.8s						
VTS	Vitosha	88.61	317	⇓P	P	13 45 48.4	+0.5
VTS	Vitosha	88.61	317	P	P	13 45 47.6	-0.3
VTS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
VTS	Vitosha	88.61	317	P	P	13 45 47.6	-0.3
VTS				IAmb	IAmb	13 45 49.1	
	comp=Z,10nm,0.9s						
SORM	Soroca	88.65	324	⇓P	P	13 45 47.1	-0.6
TESR	Tescani	88.68	322	⇓P	P	13 45 48.1	+0.1
MOS	Moscow	89.00	334	eP	P	13 45 47.1	-2.1
VOIR		89.01	320	⇓P	P	13 45 50.1	+0.5
OBN	Obninsk	89.02	333	eP	P	13 45 49.0	-0.3
OBN				e		13 45 50.3	
OBN				e		13 49 18.2	
OBN				ePPP	PPP	13 51 14.0	
OBN				pmax	pmax		
	comp=Z,35nm,1.3s						
OBN				MLR	MLR		
	comp=Z,126nm,18.0s						
OBN	Obninsk	89.02	333	P	P	13 45 48.9	-0.3
DOPR	Dopca	89.10	321	⇑P	P	13 45 49.7	-0.3
YAK	Yakutsk	89.53	18	c iP	P	13 45 50.4	-1.1
AKASG	Malin Array Be	89.69	326	P	P	13 45 51.6	-1.0
	comp=Z,3.8nm,0.8s,baz=119,slow=3.9,SNR=20						
AKASG	Malin Array Be	89.69	326	i P	P	13 45 51.5	-1.0
AKASG				pmax	pmax		
	comp=Z,6.0nm,0.9s						
AKBB	Malin Array Si	89.69	326	⇓eP	P	13 45 51.3	-1.2
AKBB	Malin Array Si	89.69	326	P	P	13 45 52.5	0.0
AKBB				IAmb	IAmb	13 45 53.3	
	comp=Z,30nm,1.6s						
BURAR	Bucovina Array	90.10	322	⇓P	P	13 45 55.2	+0.6
BURAR	Bucovina Array	90.10	322	P	P	13 45 55.3	+0.6
BURAR	Bucovina Array	90.10	322	P	P	13 45 55.3	+0.6
GZR	Gura Zlata	90.34	320	⇓P	P	13 45 56.4	+0.6
NRIK	Noril'sk	90.99	359	P	P	13 45 56.9	-1.2
	comp=Z,23nm,0.9s,baz=156,slow=3.9,SNR=31						
NRIK				LR	LR	14 26 22.4	
	comp=Z,351nm,21.8s,baz=180,slow=35						
NRIK	Noril'sk	90.99	359	ceP	P	13 45 57.4	-0.8
DRGR		91.11	321	⇑P	P	13 45 59.6	+0.2
DRGR		91.11	321	P	P	13 45 59.9	+0.5
BZS	Buzias	91.16	319	⇓P	P	13 45 59.2	-0.3
BZS	Buzias	91.16	319	P	P	13 46 00.3	+0.8
KLMR	Klimovskoe	91.82	338	eP	P	13 45 58.7	-3.5
KLMR				pmax	pmax		
	comp=Z,21nm,1.5s						
KLMR	Klimovskoe	91.82	338	eP	P	13 45 58.7	-3.5
KLMR				AMP		13 46 07.6	
	comp=Z,21nm,1.5s						
MNK	Minsk	92.57	329	i P	P	13 46 04.0	-1.9
	comp=E,2.0nm,0.7s						
MNK				i P	P	13 46 04.0	-1.9
	comp=N,6.0nm,0.7s						
MNK				i P	P	13 46 04.0	-1.9
	comp=Z,7.0nm,0.8s						
MNK				i PP	PP	13 49 45.8	-1.9
MNK				i PPP	PPP	13 51 44.3	
MNK				i S	SKSac	13 56 37.2	-1.3
MNK				i PS	PS	13 58 21.1	-1.7
MNK				i SS	SS	14 03 21.2	-0.7
MNK				i SSS	SSS	14 07 00.5	
MNK				i LQ	LQ	14 21 17.2	
MNK				i LR	LR	14 24 56.9	
MNK				i LRM	MLR	14 28 23.1	
	comp=N,116nm,18.8s						
MNK				i LRM	MLR	14 28 23.8	
	comp=Z,100nm,20.3s						
MNK				i LRM	MLR	14 28 35.5	
	comp=E,26nm,23.1s						
KWP	Kalwaria Pacla	92.59	323	P	P	13 46 06.6	+0.5
KWP				pmax	pmax		
	comp=Z,34nm,1.1s						
KWP	Kalwaria Pacla	92.59	323	P	P	13 46 06.6	+0.5
TOA0	Torodi Ar. Sit	92.95	283	P	P	13 46 09.2	+0.6
TOA0				IAmb	IAmb	13 46 10.4	
	comp=Z,8.6nm,0.9s						
TORD	Torodi Ar. Bea	92.95	283	P	P	13 46 08.8	+0.3
	comp=Z,7.0nm,1.0s,baz=86,slow=3.8,SNR=17						
TORD				LR	LR	14 25 15.1	
	comp=Z,117nm,18.5s,baz=120,slow=34						
TORD	Torodi Ar. Bea	92.95	283	P	P	13 46 09.1	+0.5
MORH	Mrgy, Hungar	93.26	319	⇓P	P	13 46 09.1	-0.1
NACGM	Naroch	93.33	329	i P	P	13 46 23.3	+14
NACGM				i P	P	13 46 23.3	+14
NACGM				i P	P	13 46 23.3	+14
NACGM				i Pb	pwP	13 46 25.3	+5.7
	comp=Z,10.0nm,0.8s						
NACGM				i PP	PP	13 50 06.0	+12
NACGM				i PPP	PPP	13 52 16.2	
NACGM				i SKS	SKiKP	13 54 07.2	-23
NACGM				i SS	SS	14 04 05.9	+33
NACGM				i SSS	SSS	14 07 60.0	
NACGM				i LQ	LQ	14 24 44.2	
NACGM				i LR	LR	14 30 24.0	
VYHS	Vyhne	94.23	321	eP	P	13 46 13.6	-0.1
VYHS				pmax	pmax		
	comp=Z,6.0nm,1.0s						
VYHS	Vyhne	94.23	321	eP	P	13 46 13.6	-0.1
PETK	Petropavlovsk-	94.96	34	LR	LR	14 29 11.8	
	comp=Z,43nm,20.4s,baz=248,slow=36						
KEST	Kesra	95.06	306	LR	LR	14 26 29.9	
	comp=Z,102nm,20.5s,baz=300,slow=34						
DBIC	Dimbokro	96.61	275	LR	LR	14 27 05.2	
	comp=Z,101nm,18.2s,baz=88,slow=34						
TIXI	Tiksi	97.11	12	⇑eP	P	13 46 24.5	-1.7
TIXI				pmax	pmax		
	comp=Z,45nm,1.3s						
FINES	FINESS Array B	97.27	334	LR	LR	14 31 60.0	
	comp=Z,254nm,20.2s,baz=124,slow=36						
GERES	GERESS Array B	97.43	320	LR	LR	14 28 27.4	
	comp=Z,60nm,20.7s,baz=86,slow=34						
SEY	Seymchan	97.76	24	P	P	13 46 27.9	-1.4
	comp=Z,1.4nm,0.7s,baz=263,slow=4.8,SNR=9.0						
CLL	Collm	98.86	322	eP	P	13 46 34.0	-0.6
CLL				Lm	MLR	14 30 00.0	
	comp=Z,100nm,21.1s						
TBI	Tubuai	106.99	124	eLR	LR	14 22 26.2	
	comp=Z,172nm,29.5s						
PPT2	Papeete2	110.00	119	eSS	SS	14 07 27.3	+2.7
	comp=Z,128nm,27.5s						
PPT2	Papeete2	110.00	119	eLR	LR	14 23 48.9	
	comp=Z,141nm,24.0s						
RKT	Rikitea	117.64	133	eLR	LR	14 27 21.8	
	comp=Z,349nm,40.0s						
A21K	Barrow	118.13	20	P	PKPdf	13 51 40.8	-0.1
	baz=285						
IMAR	Indian Mountai	120.56	25		PKPdf	13 51 45.3	-0.5
BB19B	Bebedouro	120.92	227	eP	PKPdf	13 51 47.7	-0.2
COLD	Coldfoot	121.54	23	P	PKPdf	13 51 47.7	0.0
	baz=290						
SUMG	Summit	121.75	344	i P	PKPdf	13 51 47.5	-0.9
	comp=Z,23nm,0.9s						
SUMG	Summit	121.75	344	i PKIKP	PKPdf	13 51 47.5	-0.9
SUMG				pmax	pmax		
	comp=Z,23nm,0.9s						
SUMG	Summit	121.75	344	PKPdf	PKPdf	13 51 47.2	-1.2
SUMG	Summit	121.75	344	i P	PKPdf	13 51 47.5	-0.9
SUMG				IAmb	IAmb	13 51 49.0	
	comp=Z,23nm,0.9s						
MLY	Manley	122.04	26	P	PKPdf	13 51 48.0	-0.7
	baz=288						
I23K	Minto, Yukon-K	122.56	25	P	PKPdf	13 51 49.3	-0.3
	baz=289						
MCK	McKinley	123.19	27	P	PKPdf	13 51 50.9	-0.1
	baz=289						
CCB	Clear Creek Bu	123.35	26		PKPdf	13 51 49.8	-1.4
RC01	Rabbit Creek A	123.63	30	P	PKPdf	13 51 51.7	-0.1
	baz=286						
ILAR	Eielson Array	123.67	25	PKP	PKPdf	13 51 49.9	-1.9
	comp=Z,0.7nm,0.8s,baz=286,slow=3.2,SNR=7.6						
GHO	Glory Hole Cre	123.81	29		PKPdf	13 51 49.8	-2.4
ICESG	Greenland Ices	123.86	340	i P	PKPdf	13 51 51.9	-0.6
ICESG				IAmb	IAmb	13 51 53.0	
	comp=Z,9.1nm,0.9s						
TULEG	Thule	124.25	354		PKPdf	13 51 52.3	-0.3
SCRK	Sand Creek	125.14	26	P	PKPdf	13 51 54.5	-0.3
	baz=294						
DOT	Dot Lake	125.25	26		PKiKP	13 51 55.4	+0.1
KLU	Klutina	125.25	29		PKiKP	13 51 55.3	0.0
BCAR	Beaver Creek A	126.42	26		PKPdf	13 51 56.7	-0.5
INK	Inuvik	126.58	18	PKIKP	PKPdf	13 51 56.7	-0.5
INK	Inuvik	126.58	18	PKPdf	PKPdf	13 51 56.7	-0.5
EPYK	Eagle Plains	126.70	21		PKPdf	13 51 57.2	-0.4
RES	Resolute Bay	127.12	2	PKIKP	PKPdf	13 51 58.3	+0.2
RES	Resolute Bay	127.12	2		PKPdf	13 51 58.3	+0.2
C36M	Paulatuk	128.37	15	P	PKPdf	13 51 59.7	-0.9
	baz=319						
C36M	Paulatuk	128.37	15	PKPdf	PKPdf	13 51 59.6	-1.0
YKA	Yellowknife Ar	136.18	16	PKhKP	PKPpre	13 52 03.1	
	comp=Z,0.2nm,0.7s,baz=347,slow=2.8,SNR=5.4						
YKA				PKP	PKPdf	13 52 14.1	-1.4
	comp=Z,2.5nm,1.0s,baz=329,slow=1.7,SNR=12						
FCC	Fort Churchill	143.07	3	PKIKP	PKPbc	13 52 24.3	-0.7
FCC	Fort Churchill	143.07	3		PKPpre	13 52 24.3	
LTY	Liberty	144.84	37		PKPab	13 52 30.6	-0.2
H04D	Lebanon	145.09	42	P	PKPbc	13 52 30.9	-0.8
	baz=300						
I03D	Drain, OR	145.11	44	P	PKPbc	13 52 31.0	-0.7
	baz=298						
F05D	White Salmon	145.16	39	P	PKPbc	13 52 31.6	-0.2
	baz=303						
K02D	Willamette Mer	145.35	45	P	PKPbc	13 52 31.6	-1.1
	baz=296						
G05D	Wamic, OR	145.59	40	P	PKPdf	13 52 32.7	-0.3
	baz=302						
L02E	Cave Junction	145.63	46	P	PKPdf	13 52 32.8	-0.4
	baz=296						
I04A	Tendick Farm,	145.66	43	P	PKPdf	13 52 33.0	-0.3
	baz=299						
E07A	Sunnyside	145.70	37	PKPdf	PKPab	13 52 34.0	+0.1
C09A	Chrisman Ranch	145.80	34	PKPdf	PKPbc	13 52 33.7	-0.1
HUMO	Hull Mountain	145.86	45	PKPdf	PKPab	13 52 34.8	+0.2
D08A	Wollman Farm,	145.92	36		PKPbc	13 52 34.2	+0.1
HAWA	Hanford	145.98	37	PKPdf	PKPab	13 52 34.6	-0.3
I05D	Terrebonne, OR	146.05	41	P	PKPdf	13 52 34.2	+0.3
	baz=301						
FFC	Flin Flon	146.07	12	PKP2	PKPdf	13 52 33.3	-0.2
FFC	Flin Flon	146.07	12	PKPdf	PKPdf	13 52 33.3	-0.2
NEW	Newport	146.09	33	P	PKPbc	13 52 34.3	-0.4
	baz=311						
NEW	Newport	146.09	33	PKP2	PKPdf	13 52 34.2	+0.4
NEW	Newport	146.09	33	PKPdf	PKPdf	13 52 34.2	+0.4
E08A	Dider Farm, El	146.18	37	PKPdf	PKPbc	13 52 35.2	+0.2
L04D	Klamath Falls	146.47	45	P	PKPbc	13 52 35.8	-0.4
	baz=297						
PINE	Pine Mountain	146.58	42		PKPab	13 52 37.5	-0.1
K04D	Chiloquin, OR	146.64	44	P	PKPbc	13 52 36.5	-0.2
	baz=298						
J05D	Fort Rock, OR	146.65	43	P	PKPbc	13 52 37.0	+0.3
	baz=300						
E09A	Wood Farm, Sta	146.67	36		PKPbc	13 52 36.7	+0.3
N02D	Trinity Center	146.75	48	P	PKPbc	13 52 37.1	+0.1
	baz=295						
G08A	Pilot Rock	146.95	38		PKPab	13 52 38.4	-0.5
M04C	Macdoel	146.98	46	P	PKPbc	13 52 37.8	+0.2
	baz=297						
O02D	Mt. Diablo Mer	147.02	49	P	PKPbc	13 52 38.2	+0.4
	baz=294						
WDC	Whiskeytown Da	147.02	48	PKP2	PKPbc	13 52 37.7	0.0
WDC	Whiskeytown Da	147.02	48		PKPbc	13 52 37.7	0.0
WALA	Waterton Lakes	147.06	29		PKPbc	13 52 37.2	-0.4
K05A	Summer Lake	147.15	44		PKPab	13 52 39.0	-0.8
I07A	Izee	147.31	41		PKPbc	13 52 39.2	+0.7
F10A	Beach Ranch, E	147.51	36		PKPbc	13 52 38.7	-0.3
O03E	Paynes Creek	147.66	48	P	PKPbc	13 52 39.0	-0.5
	baz=295						
JTMT	Jette	147.83	31		PKPbc	13 52 38.7	-1.1
MOD	Modoc Plateau	147.93	45		PKPbc	13 52 40.8	+0.5
BATG	Bathurst New B	147.99	328		PKPbc	13 52 40.5	+0.5
BMO	Blue Mountains	148.15	38	PKP2	PKPbc	13 52 40.2	-0.5
BMO	Blue Mountains	148.15	38		PKPbc	13 52 40.2	-0.5
ORV	Oroville	148.18	49	PKP2	PKPbc	13 52 40.3	-0.5
ORV	Oroville	148.18	49		PKPbc	13 52 40.3	-0.5
LMN	Caledonia Moun	148.30	325		PKPbc	13 52 40.7	-0.2
MSO	Missoula	148.64	32	P	PKPbc	13 52 41.1	-0.9
	baz=314						
MSO	Missoula	148.64	32	PKPdf	PKPdf	13 52 37.7	-0.5
WVOR	Wild Horse Val	148.73	43	PKP2	PKPbc	13 52 43.0	+0.7
WVOR	Wild Horse Val	148.73	43		PKPbc	13 52 43.0	+0.7
BEKR	Beckworth	148.84	48		PKPbc	13 52 43.1	+0.3
D63A	Stockholm	149.14	330	P	PKPbc	13 52 42.3	-0.7
	baz=43						
PQI	Presque Isle	149.36	329		PKPbc	13 52 43.5	-0.1
E64A	Bridgewater	149.45	329	P	PKPbc	13 52 43.1	-0.8
	baz=44						
PAHR	Pah Rah Range	149.58	48		PKiKP	13 52 45.2	-0.5
VCNR	Virginia City	149.58	49		PKiKP	13 52 45.5	-0.2
CMB	Columbia Colle	149.59	51	PKP2	PKPbc	13 52 44.8	+0.3
CMB	Columbia Colle	149.59	51		PKPbc	13 52 44.8	+0.3
EGMT	Eagleton	149.64	26	P	PKPbc	13 52 44.2	-0.1
	baz=322,SNR=41						
EGMT	Eagleton	149.64	26		PKPbc	13 52 44.3	-0.1
PNTR	Pine Nut	149.71	49		PKiKP	13 52 46.0	-0.1
E63A	Oxbow	149.73	329	P	PKPbc	13 52 43.9	-0.6
	baz=43						
E63A	Oxbow	149.73	329		PKPbc	13 52 44.4	-0.2
HRY	Holter Researc	149.74	30		PKPbc	13 52 44.4	-0.3
MFID	Camas Ranch	149.87	39		PKPbc	13 52 45.6	+0.4
D61A	St Aubert, Com	149.96	332	P	PKPbc	13 52 44.5	-0.5
	baz=39						
WAKR	Walker	150.07	50		PKiKP	13 52 47.0	+0.2
LRM	Limekiln Ridge	150.09	32		PKPbc	13 52 44.5	-1.3
F64A	Sherman	150.10	328	P	PKPbc	13 52 45.0	-0.4
	baz=44						
G65A	Princeton	150.18	327	P	PKPbc	13 52 44.9	-0.7
	baz=46						
H66A	Whiting	150.33	326	P	PKPbc	13 52 45.5	-0.5
	baz=47						
DLMT	Dillon	150.34	33		PKPbc	13 52 46.5	+0.3
MATQ	Matagami	150.43	343	P	PKPbc	13 52 45.3	-0.8
	baz=24,SNR=14						
D60A	Saint Jean D’O	150.50	332	P	PKPbc	13 52 45.1	-1.2
	baz=38						
PAGB	Antelope Grade	150.53	56		PKiKP	13 52 48.1	+0.5
F63A	Nahmakanta, Br	150.58	329	P	PKPbc	13 52 46.2	-0.4
	baz=43						
F63A	Nahmakanta, Br	150.58	329		PKPbc	13 52 46.7	0.0
HLID	Hailey	150.58	37	P	PKiKP	13 52 47.3	-0.3
	baz=310,SNR=11						
HLID	Hailey	150.58	37		PKiKP	13 52 47.6	-0.1
MCMT	McKenzie Canyo	150.58	34		PKPbc	13 52 47.1	+0.1
BCYI	Bear Canyon	150.65	35		PKPbc	13 52 47.2	+0.1
BOZ	Bozeman (W)	150.65	31	P	PKPbc	13 52 46.6	-0.4
	baz=316,SNR=7.6						
BOZ	Bozeman (W)	150.65	31	PKIKP	PKPdf	13 52 40.5	-1.0
BOZ	Bozeman (W)	150.65	31		PKPdf	13 52 40.5	-1.0
RYN	Ryan	150.66	49		PKiKP	13 52 48.1	+0.2
E61A	Lac Etchemin	150.68	331	P	PKPbc	13 52 46.4	-0.4
	baz=40,SNR=8.7						
MDPB	Devils Postpil	150.69	51		PKiKP	13 52 48.4	+0.2
G64A	Maxfield	150.74	328	P	PKPbc	13 52 46.5	-0.5
	baz=44,SNR=5.0						
OMMB	Old Mammoth Mi	150.76	51		PKiKP	13 52 48.9	+0.5
KVN	Kaiserville	150.77	48	PKIKP	PKiKP	13 52 47.9	-0.3
KVN	Kaiserville	150.77	48		PKiKP	13 52 47.9	-0.3
LHV	Little Huntoon	150.84	50		PKiKP	13 52 49.0	+1.0
SMMC	Simmler	150.87	56	P	PKiKP	13 52 48.4	+0.1
	baz=289						
H65A	Eastbrook	150.88	327	P	PKPbc	13 52 46.9	-0.4
	baz=46						
LSQQ	Lebel-sur-Quev	150.88	342	P	PKPbc	13 52 46.7	-0.5
	baz=26						
LATQ	La Tuque	150.89	335	P	PKPbc	13 52 46.6	-0.6
	baz=35						
LATQ	La Tuque	150.89	335		PKPbc	13 52 46.9	-0.3
NVAR	Mina Array Bea	150.91	49	PKPbc	PKiKP	13 52 48.6	+0.1
	comp=Z,11nm,0.9s,baz=263,slow=2.4,SNR=52						
NVAR	Mina Array Bea	150.91	49		PKiKP	13 52 48.5	-0.1
PKME	Peaks-Kenny Pk	150.99	328	P	PKPbc	13 52 47.2	-0.4
	baz=43						
NV11	Mina Array Sit	151.01	49		PKiKP	13 52 48.8	+0.1
E60A	Ste Agathe de	151.15	332	P	PKPbc	13 52 47.2	-0.7

	baz=38						
D58A	Chemin du LacG	151.16	335	P	PKPbc	13 52 47.1	-0.9
	baz=35,SNR=8.3						
F61A	St Evariste	151.25	331	P	PKPbc	13 52 47.9	-0.2
	baz=40						
G63A	Kingsbury	151.26	329	P	PKPbc	13 52 47.8	-0.4
	baz=43,SNR=5.1						
DGMT	Dagmar	151.26	19	P	PKPbc	13 52 48.1	-0.1
	baz=332						
DGMT	Dagmar	151.26	19		PKPbc	13 52 48.1	-0.1
QLMT	Earthquake Lak	151.30	32		PKiKP	13 52 49.7	+0.5
ULM	Lac du Bonnet	151.37	7	PKPbc	PKPbc	13 52 47.3	-1.0
	comp=Z,44nm,0.7s,baz=1.2,slow=2.4,SNR=92						
H64A	Troy	151.41	327	P	PKPbc	13 52 47.9	-0.6
	baz=44						
YHL	Hebgen Lake	151.41	32		PKiKP	13 52 49.7	+0.2
GCMT	Greycliff	151.42	29		PKPbc	13 52 48.9	+0.1
YHB	Horse Butte	151.47	32		PKiKP	13 52 50.2	+0.7
YHH	Holmes Hill	151.61	32	PKPdf	PKPdf	13 52 44.7	+1.4
G62A	West of Eustis	151.62	330	P	PKPbc	13 52 48.6	-0.4
	baz=41						
YMR	Madison River	151.65	32		PKiKP	13 52 50.6	+0.7
WVL	Waterville	151.68	328		PKPbc	13 52 48.8	-0.3
F60A	Warwick	151.68	332	P	PKPbc	13 52 48.6	-0.6
	baz=38						
YNR	Norris Junctio	151.75	32		PKiKP	13 52 51.4	+1.2
ELK	Elko	151.78	43	PKIKP	PKiKP	13 52 50.4	+0.1
ELK	Elko	151.78	43		PKiKP	13 52 50.4	+0.1
TPH	Tonopah	151.83	49	PKIKP	PKiKP	13 52 50.8	+0.4
TPH	Tonopah	151.83	49		PKiKP	13 52 50.8	+0.4
YNE	Yellowstone No	151.85	30		PKiKP	13 52 51.0	+0.7
VLDQ	Val d'Or	151.87	342		PKPbc	13 52 49.0	-0.5
CWC	Cottonwood Cre	151.91	53	P	PKiKP	13 52 50.5	-0.1
	baz=294						
E58A	La Victoria	151.91	334	P	PKPbc	13 52 49.0	-0.6
	baz=35						
ISA	Isabella, Lake	151.91	55	P	PKPbc	13 52 50.2	+0.1
	baz=292,SNR=5.4						
ISA	Isabella, Lake	151.91	55	PKIKP	PKiKP	13 52 50.5	0.0
ISA	Isabella, Lake	151.91	55		PKiKP	13 52 50.5	0.0
D56A	ZEC Mazanza, M	151.91	337	P	PKPbc	13 52 49.0	-0.6
	baz=32						
YPP	Pitchstone Pla	152.01	32		PKiKP	13 52 52.0	+1.2
G61A	St-Isidore-de-	152.03	331	P	PKPbc	13 52 49.2	-0.7
	baz=39						
H17A	Grant Village	152.03	32	P	PKiKP	13 52 51.3	+0.6
	baz=317						
H17A	Grant Village	152.03	32		PKiKP	13 52 52.0	+1.3
RLMT	Red Lodge	152.11	29	P	PKPbc	13 52 50.6	+0.1
	baz=320						
RLMT	Red Lodge	152.11	29		PKiKP	13 52 51.0	+0.2
RLMT				PKPab	PKPab	13 52 59.3	-0.6
LAO	LASA Array	152.12	24	P	PKiKP	13 52 50.8	+0.3
	baz=327						
LAO	LASA Array	152.12	24		PKiKP	13 52 50.8	+0.3
F59A	Saint Guilaume	152.13	333	P	PKPbc	13 52 48.7	-1.4
	baz=36						
I64A	Boothbay	152.13	327	P	PKPbc	13 52 49.4	-0.8
	baz=44						
D55A	Sainte-Anne-du	152.19	338	P	PKPbc	13 52 49.8	-0.5
	baz=30						
FLWY	Flagg Ranch	152.20	32		PKiKP	13 52 51.9	+0.9
GRAC	Grapevine Rang	152.20	51	P	PKiKP	13 52 51.1	0.0
	baz=295						
E57A	Chemin Saint G	152.22	336	P	PKPbc	13 52 49.8	-0.6
	baz=33						
MOQ	Mont Orford	152.33	332		PKPbc	13 52 50.3	-0.4
H62A	Milan	152.40	330	P	PKPbc	13 52 50.5	-0.4
	baz=41						
MOOW	Moose Ponds	152.42	33		PKiKP	13 52 51.6	+0.1
E56A	St. Veronique	152.44	337	P	PKPbc	13 52 50.4	-0.5
	baz=32						
MPMC	Manual Prospec	152.50	53	P	PKiKP	13 52 52.1	+0.2
	baz=294,SNR=11						
I63A	Otisfield	152.51	328	P	PKPbc	13 52 50.7	-0.3
	baz=42						
G60A	Masonville	152.53	332	P	PKiKP	13 52 51.5	+0.1
	baz=38						
TRQ	Mont Tremblant	152.53	336		PKPbc	13 52 50.4	-0.8
EDW2	Edwards Air Fo	152.56	56	P	PKiKP	13 52 52.2	+0.4
	baz=291,SNR=8.4						
LRMC	Laurel Mtn Rad	152.58	54	P	PKiKP	13 52 52.2	+0.3
	baz=292						
LOHW	Long Hollow	152.59	33		PKiKP	13 52 52.0	+0.2
REDW	Red Top Meadow	152.64	34		PKiKP	13 52 52.0	0.0
HVU	Hansel Valley	152.65	38	PKIKP	PKPdf	13 52 45.7	+1.0
HVU	Hansel Valley	152.65	38	PKPdf	PKPdf	13 52 45.7	+1.0
MWC	Mount Wilson	152.73	57	PKIKP	PKiKP	13 52 53.5	+1.1
MWC	Mount Wilson	152.73	57		PKiKP	13 52 53.5	+1.1
H61A	Lyndonville	152.78	330	P	PKPbc	13 52 51.5	-0.2
	baz=40						
FURC	Furnace Creek,	152.79	52	P	PKiKP	13 52 52.0	-0.1
	baz=295						
R11A	Troy Canyon, C	152.83	47	P	PKiKP	13 52 52.7	+0.3
	baz=300,SNR=8.2						
R11A	Troy Canyon, C	152.83	47	PKPdf	PKPdf	13 52 46.0	+0.9
LBNH	Lisbon	153.01	330	P	PKPbc	13 52 51.9	-0.3
	baz=40						
TPNV	Topopah Spring	153.03	50	PKIKP	PKiKP	13 52 53.3	+0.4
TPNV	Topopah Spring	153.03	50		PKiKP	13 52 53.3	+0.4
MDND	Maddock	153.06	14	P	PKPbc	13 52 51.5	-0.7
	baz=341						
MDND	Maddock	153.06	14		PKPbc	13 52 51.9	-0.3
MDND				PKPab	PKPab	13 53 03.0	-0.5
G58A	Ormstown	153.22	334	P	PKPbc	13 52 51.9	-0.7
	baz=35						
AGMN	Agassiz Nation	153.29	8	P	PKPbc	13 52 51.6	-1.1
	baz=348						
AGMN	Agassiz Nation	153.29	8		PKPbc	13 52 51.9	-0.8
AGMN					PKPab	13 53 03.2	-1.2
GSC	Goldstone, Bar	153.31	54	P	PKiKP	13 52 53.4	0.0
	baz=293						
GSC	Goldstone, Bar	153.31	54	PKIKP	PKiKP	13 52 54.4	+1.0
GSC						13 53 03.5	
GSC	Goldstone, Bar	153.31	54		PKiKP	13 52 54.4	+1.0
GSC				PKPab	PKPab	13 53 03.5	-1.7
J63A	Strafford	153.32	328	P	PKPbc	13 52 52.6	-0.3
	baz=43						
SPR3	Spring Creek 3	153.33	45		PKiKP	13 52 54.1	+0.4
B35A	Bob, Littlefor	153.45	5		PKPbc	13 52 52.5	-0.5
SHOC	Shoshone, Teco	153.46	53	P	PKiKP	13 52 53.6	0.0
	baz=295						
H59A	Cadyville	153.48	333	P	PKPbc	13 52 52.4	-0.8
	baz=36						
DUG	Dugway, Tooele	153.61	41	P	PKiKP	13 52 54.3	+0.4
	baz=307						
DUG	Dugway, Tooele	153.61	41	PKIKP	PKiKP	13 52 54.7	+0.7
DUG	Dugway, Tooele	153.61	41		PKiKP	13 52 54.7	+0.7
MURC	Murrieta	153.62	58	P	PKPbc	13 52 53.8	-0.2
	baz=289						
PRN	Pahroc Range	153.66	49		PKiKP	13 52 55.5	+1.4
J62A	Henniker	153.72	328	P	PKPbc	13 52 52.8	-1.0
	baz=41						
BW06	Boulder Array	153.72	33	P	PKPbc	13 52 53.1	-1.1
	baz=316						
PDAR	Pinedale Array	153.73	33	PKP	PKPdf	13 52 42.5	-3.8
	comp=Z,0.4nm,0.6s,baz=311,slow=5.9,SNR=3.1						
PDAR				PKPbc	PKPbc	13 52 53.4	-0.8
	comp=Z,2.3nm,1.0s,baz=90,slow=1.5,SNR=9.4						
TCUT	Toone Canyon	153.86	38		PKiKP	13 52 55.4	+0.8
LONY	Lake Ozonia	153.87	334	P	PKPbc	13 52 53.6	-0.5
	baz=35						
LONY	Lake Ozonia	153.87	334		PKPbc	13 52 53.9	-0.2
PSUT	Pine Spring	153.89	45		PKiKP	13 52 55.8	+1.1
K63A	Dunstable	153.97	327	P	PKPab	13 53 07.8	+0.2
	baz=43						
ALGO	Algonquin Park	153.98	340	P	PKPbc	13 52 53.5	-0.7
	baz=26						
J61A	Chester	153.98	329	P	PKPab	13 53 07.8	+0.2
	baz=40						
EYMN	Ely	153.99	2	P	PKPbc	13 52 53.5	-0.8
	baz=357						
EYMN	Ely	153.99	2		PKPbc	13 52 54.1	-0.2
EYMN				PKPab	PKPab	13 53 06.6	-0.9
HRV	Adam Dziewonsk	154.12	327	P	PKPab	13 53 08.3	+0.1
	baz=43						
JLU	Jordanelle	154.17	39		PKPab	13 53 09.1	+0.2
PFO	Pinyon Flats O	154.19	58	P	PKPab	13 53 08.4	-0.7
	baz=290						
TPFO	Pinon Flats	154.20	58	P	PKPab	13 53 08.3	-0.8
	baz=290						
NLU	North Lily Min	154.20	41		PKPab	13 53 09.2	+0.2
GMRC	Granite Mounta	154.37	54	P	PKPab	13 53 08.8	-1.0
	baz=293						
BELC	Belle Mtn. Jos	154.41	56	P	PKPab	13 53 09.4	-0.6
	baz=292						
MPU	Maple Canyon	154.43	40	PKPab	PKPab	13 53 09.9	-0.1
G54A	Lake Saint Pet	154.49	340	P	PKPab	13 53 09.5	-0.2
	baz=27						
M64A	Tiverton	154.62	325	P	PKPab	13 53 10.3	-0.1
	baz=45						
L61B	Northampton	154.72	328	P	PKPab	13 53 10.4	-0.4
	baz=41						
TCRU	Three Creeks R	154.77	44		PKiKP	13 52 59.3	+2.7
J59A	Piesco	154.77	332	P	PKPab	13 53 10.3	-0.7
	baz=36						
K61A	Williamstown	154.84	329	P	PKPab	13 53 10.8	-0.5
	baz=40						
I57A	Carthage	154.87	334	P	PKPab	13 53 11.1	-0.2
	baz=33						
BC3	Big Chuckawall	154.96	57	P	PKPab	13 53 11.7	-0.7
	baz=292						
MVU	Marysvale	154.98	44		PKiKP	13 52 58.9	+2.0
MSU	Marysvale	155.00	44	PKP2	PKPab	13 53 12.9	+0.4
MSU	Marysvale	155.00	44	PKPab	PKPab	13 53 12.9	+0.4
IRM	Iron Mountain	155.01	55	P	PKPab	13 53 12.0	-0.4
	baz=293						
E46A	Sault Ste Mari	155.10	350		PKPdf	13 52 56.1	+8.3
E46A					PKPab	13 53 11.0	-1.2
RSSD	Black Hills	155.11	24	P	PKPab	13 53 11.6	-1.1
	baz=328						
RSSD	Black Hills	155.11	24	PKP2	PKPab	13 53 12.3	-0.4
RSSD	Black Hills	155.11	24		PKPab	13 53 12.3	-0.4
TMUT	Trail Mountain	155.14	41		PKPdf	13 52 58.5	+10
MTPU	Mount Pierson	155.26	45		PKPab	13 53 14.3	+0.5
K22A	Casper	155.28	29	P	PKPab	13 53 12.4	-1.0
	baz=322						
P17A	Butcher Ranch,	155.31	40		PKPab	13 53 13.8	+0.1
H53A	Bobcaygeon	155.38	340	P	PKPab	13 53 12.9	-0.6
	baz=27						
M62A	Hamden	155.58	327	P	PKPab	13 53 14.6	+0.2
	baz=42						
F33A	5 Mile Ranch,	155.62	10	PKPab	PKPab	13 53 13.8	-0.7
GLA	Glamis	155.67	58	P	PKPab	13 53 14.3	-1.0
	baz=291						
GLA	Glamis	155.67	58	PKP2	PKPab	13 53 16.1	+0.8
GLA	Glamis	155.67	58		PKPab	13 53 16.1	+0.8
SRU	San Rafael Swe	155.67	41	PKP2	PKPab	13 53 15.0	-0.2
SRU	San Rafael Swe	155.67	41		PKPab	13 53 15.0	-0.2
PDMCI	Parker Dam,Lak	155.71	54	P	PKPab	13 53 15.4	+0.1
	baz=294						
K58A	Earlville	155.83	333	P	PKPab	13 53 15.2	-0.4
	baz=35						
U15A	North Rim	156.06	48	PKPab	PKPab	13 53 16.5	-0.6
O20A	White River Ci	156.30	36	P	PKPab	13 53 16.2	-1.7
	baz=315						
SUSD	Miller	156.41	16	P	PKPab	13 53 17.2	-0.8
	baz=340						
SUSD	Miller	156.41	16		PKPab	13 53 17.5	-0.5
G40A	Rib Lake	156.69	360	PKPab	PKPab	13 53 18.0	-1.1
PV23	Carpenter Ridg	157.00	40		PKPab	13 53 21.0	-0.1
PV10	Paradox Valley	157.03	40		PKPab	13 53 21.8	+0.6
PV14	Lion Creek, Pa	157.04	40		PKPab	13 53 21.1	-0.2
PV22	Blue Mesa, Par	157.07	40		PKPab	13 53 21.0	-0.3
PV20	West Nyswonger	157.09	40		PKPab	13 53 21.8	+0.4
N60A	Cedar Hill Far	157.10	329	P	PKPab	13 53 20.2	-0.8
	baz=38						
PV04	Paradox Valley	157.10	40		PKPab	13 53 21.2	-0.2
PV19	Morning Glory	157.10	40		PKPab	13 53 21.8	+0.4
L56A	Greenwood	157.14	335	P	PKPab	13 53 20.4	-0.8
	baz=32						
PV17	East Wray Mesa	157.14	40		PKPab	13 53 21.4	-0.2
PV16	Nyswonger Mesa	157.15	40		PKPab	13 53 21.4	-0.2
WUAZ	Wupatki	157.17	49	P	PKPab	13 53 19.2	-2.6
	baz=301						
WUAZ	Wupatki	157.17	49	PKPab	PKPab	13 53 22.5	+0.7
PV11	David Mesa, Pa	157.18	40		PKPab	13 53 21.7	0.0
PV05	Paradox Valley	157.18	41		PKPab	13 53 22.1	+0.3
PV18	Skein Mesa, Pa	157.19	40	PKPab	PKPab	13 53 22.1	+0.2
PV12	Saucer Basin,	157.21	40		PKPab	13 53 22.1	+0.2
PV03	Paradox Valley	157.22	40		PKPab	13 53 21.7	-0.3
PV02	Paradox Valley	157.32	40		PKPab	13 53 22.6	+0.2
N59A	State Game Lan	157.38	330	P	PKPab	13 53 20.8	-1.5
	baz=37						
PV01	Paradox Valley	157.47	40		PKPab	13 53 23.0	-0.1
ECSD	EROS Data Cent	157.61	12	P	PKPab	13 53 21.3	-1.8
	baz=344						
M57A	Sunshine Farm,	157.63	333	P	PKPab	13 53 22.7	-0.6
	baz=34						
214A	Organ Pipe Nat	157.65	59	P	PKPab	13 53 22.1	-1.8
	baz=291						
X16A	Lo Mia Camp, P	157.66	52		PKPab	13 53 22.6	-1.4
SMCO	Snowmass	157.66	36	PKPab	PKPab	13 53 23.6	-0.5
ISCO	Idaho Springs	157.92	33	P	PKPab	13 53 24.2	-0.8
	baz=319						
I40A	Norwalk	158.06	1		PKPab	13 53 24.7	-0.4
MVCO	Mesa Verde	158.10	42	P	PKPab	13 53 24.8	-1.1
	baz=309						
M54A	Oil Creek Stat	158.47	338	P	PKPab	13 53 25.4	-1.5
	baz=28						
S22A	4UR Ranch, Cre	158.75	38	P	PKPab	13 53 27.5	-1.2
	baz=313						
Q24A	Divide	158.78	33	P	PKPab	13 53 27.4	-1.4
	baz=319						
JFWS	Jewell Farm	159.04	360	P	PKPab	13 53 28.0	-1.3
	baz=360						
JFWS	Jewell Farm	159.04	360	PKP2	PKPab	13 53 28.4	-0.9
JFWS	Jewell Farm	159.04	360		PKPab	13 53 28.4	-0.9
TUC	Tucson	159.10	56	PKP2	PKPab	13 53 31.2	+1.0
TUC	Tucson	159.10	56		PKPab	13 53 31.2	+1.0
P58A	Pank, Wackersv	159.22	330	P	PKPab	13 53 29.7	-0.5
	baz=36						
SDCO	Great Sand Dun	159.50	36	P	PKPab	13 53 30.5	-1.4
	baz=316						
P57A	Homestead Farm	159.54	332	P	PKPab	13 53 31.1	-0.6
	baz=34						
Q57A	Strasburg	160.09	332	P	PKPab	13 53 31.8	-2.2
	baz=34						
T25A	Trinidad	160.53	36	P	PKPab	13 53 35.1	-1.3
	baz=317						
ACSO	Alum Creek Sta	160.67	343	P	PKPab	13 53 35.2	-1.3
	baz=21						
R57A	Stanardsville	160.74	331	P	PKPab	13 53 37.5	+0.6
	baz=35						
ANMO	Albuquerque	160.81	44	P	PKPab	13 53 36.9	-0.7
	baz=308						
ANMO	Albuquerque	160.81	44	PKP2	PKPab	13 53 37.3	-0.3
ANMO	Albuquerque	160.81	44	PKPab	PKPab	13 53 37.3	-0.3
U61A	Possum Corner	161.20	323	P	PKPab	13 53 38.7	-0.2
	baz=43						
N41A	Harden Midland	161.24	1	PKPab	PKPab	13 53 38.0	-0.9
121A	Cookes Peak, D	161.25	52	P	PKPab	13 53 39.0	-0.6
	baz=300						
P51A	Williamsport	161.39	342		PKPab	13 53 40.0	+0.3
Q53A	Leroy	161.47	338	P	PKPab	13 53 39.5	-0.5
	baz=26						
T58A	Grand View Acr	161.83	328	P	PKPab	13 53 41.3	-0.4
	baz=37						
R54A	Victor	161.88	336	P	PKPab	13 53 41.0	-0.9
	baz=28						
KSU1	Kansas State U	162.03	16	P	PKPab	13 53 41.2	-1.2
	baz=341						
P38A	Dawn	162.12	8	PKPab	PKPab	13 53 41.9	-0.9
U58A	Oxford	162.27	327	P	PKPab	13 53 42.6	-1.1
	baz=38						
P43A	Skaggs, Pawnee	162.29	358		PKPab	13 53 43.5	0.0
S54A	Dingess, Beckl	162.33	336		PKPdf	13 52 58.9	+2.1
P40A	Paris	162.36	4		PKPab	13 53 43.1	-0.7
V59A	Middlesex	162.60	325	P	PKPab	13 53 43.8	-1.3
	baz=40						
V58A	Windy Hill, Pi	163.03	327	P	PKPab	13 53 46.3	-0.6
	baz=38						
KAN12	Harper NE Stat	163.28	22		PKPdf	13 52 56.3	-1.3
WCI	Wyandotte Cave	163.35	349	P	PKPab	13 53 47.4	-0.8
	baz=13						
MNTX	Cornudas Mount	163.42	51	P	PKPab	13 53 48.5	-0.4
	baz=302						
MNTX	Cornudas Mount	163.42	51	PKPab	PKPab	13 53 48.9	0.0
MSTX	Muleshoe	163.74	40	P	PKPab	13 53 49.2	-1.1
	baz=314						
CCM	Cathedral Cave	163.87	3	P	PKPab	13 53 49.2	-1.3
	baz=357						
S39A	Bolivar	164.05	9		PKPab	13 53 50.1	-1.2
SIUC	Southern Illin	164.20	357		PKPab	13 53 52.1	+0.1
S44A	Carbondale	164.22	357		PKPab	13 53 52.1	+0.1
W56A	Indian Trail	164.27	329	P	PKPab	13 53 52.6	+0.1
	baz=35						
KMSC	Kings Mountain	164.62	331	P	PKPab	13 53 53.8	-0.1
	baz=33						
T47A	Sharon Grove	164.70	350	PKPab	PKPab	13 53 53.7	-0.5
T42A	Van Buren	164.90	2	PKPab	PKPab	13 53 54.2	-0.8
U38A	Gravette	165.09	13		PKPab	13 53 54.6	-1.3
WMOK	Wichita Mounta	165.22	28	P	PKPab	13 53 54.7	-1.9
	baz=328						
WMOK	Wichita Mounta	165.22	28	PKP2	PKPab	13 53 55.7	-1.0
WMOK	Wichita Mounta	165.22	28		PKPab	13 53 55.6	-1.0
TUL1	Leonard	165.25	18	P	PKPab	13 53 55.3	-1.4
	baz=340						
HHAR	Hobbs	165.33	12		PKPab	13 53 55.7	-1.3
U40A	Yellville	165.43	8	P	PKPab	13 53 56.2	-1.2
	baz=350						
U40A	Yellville	165.43	8	PKPab	PKPab	13 53 56.0	-1.4
WVT	Waverly	165.65	352	P	PKPab	13 53 57.4	-0.9
	baz=8.9						
WVT	Waverly	165.65	352	PKP2	PKPab	13 53 57.9	-0.5
WVT	Waverly	165.65	352		PKPab	13 53 57.9	-0.5
TXAR	Lajitas Array	165.90	56	PKP	PKPdf	13 53 00.6	+0.3
	comp=Z,0.4nm,0.7s,baz=345,slow=2.8,SNR=1.9						
TXAR				PKPab	PKPab	13 53 59.4	-0.6
	comp=Z,1.3nm,0.7s,baz=323,slow=2.1,SNR=6.9						
W39A	Magazine	166.41	12	P	PKPab	13 54 01.0	-0.7
	baz=346						
W41B	Gary Mavity, V	166.66	7	P	PKPab	13 54 01.8	-1.1
	baz=352						
MIAR	Mount Ida	167.08	12	P	PKPab	13 54 03.5	-1.2
	baz=346						
X40A	Basin Creek Fa	167.26	9	P	PKPab	13 54 04.1	-1.4
	baz=349						
OXF	Oxford	167.40	356	P	PKPab	13 54 05.1	-1.0
	baz=3.5						
LRAL	Lakeview Retre	168.51	346	P	PKPab	13 54 09.6	-1.5
	baz=15						

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*NORS **05** 14:04:56.9±0.0, 43.°49N×43.°87E, h13^{km}, MPVA3.5*

ISC 05 14:04:58.2±1.1**, 43.°53N**±0.°04×**43.°84E**±0.°03**, h13**^{km}±8^{km}**,**
n12, σ0.^{s}80/24**, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NCK	Nalchik	0.18	259	*e*Pg	Pg	14 05 02.5	+0.2
NCK				*e*Sg	Sb	14 05 07.7	+0.7
STDR	Stavd-Durt	0.23	135	*e*Pg	Pg	14 05 02.3	-0.8
STDR				*e*Sg	Sg	14 05 06.1	-0.4
LSNR	Lesken	0.25	182	*e*Pg	Pg	14 05 03.6	+0.1
LSNR				*e*Sg	Sb	14 05 09.8	+0.8
PRTR	Priterechnaya	0.39	55	*e*Pg	Pg	14 05 06.1	+0.1
PRTR				*e*Sg	Sb	14 05 13.7	+0.8
KORR	Kora	0.47	159	*e*Pg	Pg	14 05 07.6	+0.1
KORR				*e*Sg	Sg	14 05 14.6	+0.8
DIGR	Digorskoe uzhe	0.66	197	*i* Pg	Pg	14 05 10.4	-0.6
DIGR				*e*Sg	Sg	14 05 20.1	+0.4
ZEI	Tsey	0.74	177	*i* Pg	Pb	14 05 11.8	-1.3
ZEI				*e*Sg	Sg	14 05 23.1	+0.7
LACR	Lac	0.78	154	*e*Pg	Pb	14 05 12.8	-0.9
LACR				*e*Sg	Sg	14 05 24.7	+1.2
NEY	Neytrino	0.86	251	*e*Pg	Pb	14 05 14.0	-1.2
NEY				*e*Sg	Sb	14 05 26.8	+0.1
ONI	Oni	0.98	197	P	Pb	14 05 16.7	-0.4
ONI				S	Sg	14 05 31.1	+1.2
ONI	Oni	0.98	197	*i* Pg	Pb	14 05 16.8	-0.4
ONI				*e*Sg	Sn	14 05 31.4	-0.2
GUDG	Gudauri	1.16	156	P	Pn	14 05 20.5	0.0
GUDG				S	Sg	14 05 37.0	+1.2

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*ISK **05** 14:08:04.6, 40.°41N×26.°13E, h5^{km}, ML3.1/31*
*DDA **05** 14:08:05.5, 40.°41N×26.°13E, h19^{km}±1^{km}, MW3.1*
*ATH **05** 14:08:06.1, 40.°44N×26.°12E, h11^{km}±2^{km}, ML2.7/10, Error ellipse: s-maj=2.7km s-min=0.9km az=22.0*
*SOF **05** 14:08:06.9, 40.°50N×25.°81E, h5^{km}, MD3.0*
*THE **05** 14:08:06.4, 40.°43N×26.°07E, h12^{km}±1^{km}, ML2.6/11, Error ellipse: s-maj=1.2km s-min=0.6km az=293.0*

ISC 05 14:08:05.4±0.9**, 40.°44N**±0.°01×**26.°11E**±0.°02**, h12**^{km}±8^{km}**,**
n81, σ0.^{s}62/116**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GELI	Tayfur-Gelibol	0.28	98	PG	Pg	14 08 11.5	+0.4
GOKA	anakkale-Gk	0.29	213	*i* P	Pb	14 08 12.2	-0.5
GOKA				*i* S	Sb	14 08 16.8	-0.7
ENEZ	Enez	0.30	6	P	Pb	14 08 12.8	+0.1
ENEZ				S	Sb	14 08 17.6	0.0
	2µm,0.5s						
ENEZ	Enez	0.30	6	PG	Pb	14 08 12.4	-0.3
ENEZ				SG	Sb	14 08 18.1	+0.5
GADA	Gvkgeada	0.30	214	P	Pb	14 08 12.2	-0.5
GADA				S	Sb	14 08 16.9	-0.7
	978nm,0.2s						
GADA	Gvkgeada	0.30	214	PG	Pg	14 08 11.3	-0.2
ERIK	Erikli-Kesan	0.38	53	PG	Pb	14 08 13.7	-0.5
SMTH	Samothraki Isl	0.45	274	P	Pb	14 08 14.7	-0.6
SMTH				S	Sb	14 08 21.6	-0.3
SMTH				AML	AML	14 08 22.2	
	comp=E,2712µm,0.1s						
SMTH				AML	AML	14 08 22.7	
	comp=N,2676µm,0.1s						
SMTH	Samothraki Isl	0.45	274	P	Pb	14 08 14.7	-0.6
SMTH				S	Sg	14 08 20.2	0.0
	comp=N,1µm,0.1s						
ALN	Alexandroupoli	0.46	354	P	Pb	14 08 15.4	-0.1
ALN				S	Sg	14 08 21.1	+0.5
ALN				AML	AML	14 08 23.1	
	comp=E,2135µm,0.2s						
ALN				AML	AML	14 08 28.1	
	comp=N,1376µm,0.5s						
ALN	Alexandroupoli	0.46	354	P	Pb	14 08 15.7	+0.2
ALN				S	Sb	14 08 22.2	-0.1
	comp=N,1µm,0.3s						
ALN	Alexandroupoli	0.46	354	PG	Pb	14 08 15.7	+0.2
LPK	Lapseki	0.50	97	PG	Pg	14 08 14.7	-0.5
KESN	Edirne-Kesan	0.58	48	*i* P	Pg	14 08 16.8	0.0
BOZC	Bozcaada	0.60	185	PG	Pg	14 08 16.8	-0.3
BOZC				SG	Sb	14 08 25.8	-0.5
BOZC	Bozcaada	0.60	185	*i* P	Pg	14 08 16.9	-0.2
BOZC				*i* P	Pb	14 08 17.1	-0.7
BOZC				*i* S	Sg	14 08 25.5	+0.5
EZN	Ezine	0.63	165	P	Pg	14 08 17.7	0.0
EZN				S	Sb	14 08 27.3	0.0
	comp=N,568nm,0.1s						
EZN	Ezine	0.63	165	PG	Pg	14 08 17.6	-0.1
BAYC	CANAKKALE_Bayr	0.77	154	*i* P	Pg	14 08 20.6	+0.2
BAYC				*i* S	Sg	14 08 30.7	+0.3
RDO	Rodhopi	0.83	328	P	Pb	14 08 22.0	+0.2
RDO				S	Sb	14 08 33.1	+0.1
RDO				AML	AML	14 08 36.9	
	comp=N,1473µm,0.3s						
RDO				AML	AML	14 08 38.0	
	comp=E,1331µm,0.2s						
RDO	Rodhopi	0.83	328	P	Pb	14 08 22.0	+0.2
RDO				S	Sb	14 08 33.5	+0.5
	comp=E,710nm,0.2s						
RDO	Rodhopi	0.83	328	PG	Pb	14 08 22.2	+0.4
RKY	Sarkoy-Tekirda	0.85	73	PG	Pg	14 08 21.9	+0.1
SART	Tekirdag	0.85	73	*i* P	Pg	14 08 20.9	-1.0
SART				*i* S	Sb	14 08 33.8	+0.2
LIA	Limnos Island	0.90	233	P	Pg	14 08 22.7	0.0
LIA				S	Sb	14 08 35.2	+0.4
LIA				AML	AML	14 08 37.0	
	comp=N,745µm,0.2s						
LIA				AML	AML	14 08 37.7	
	comp=E,901µm,0.2s						
LIA	Limnos Island	0.90	233	P	Pb	14 08 22.8	-0.1
LIA				S	Sb	14 08 34.9	+0.1
	comp=E,408nm,0.1s						
KRBG	Karabiga-Canak	0.91	93	PG	Pg	14 08 22.7	-0.2
MAR6	Marsite Statio	0.92	73	PG	Pb	14 08 23.7	+0.4
KOCA	Canakkale, Ayv	0.94	179	*i* P	Pg	14 08 23.3	-0.2
KOCA				*i* S	Sb	14 08 35.9	-0.1
MAR2	Marsite Statio	0.95	73	PG	Pb	14 08 24.3	+0.4
MAR4	Marsite Statio	0.97	69	PG	Pg	14 08 24.2	+0.1
THAS	Thassos island	1.08	279	P	Pb	14 08 25.9	-0.2
THAS				S	Sn	14 08 41.5	+0.3
THAS				AML	AML	14 08 42.8	
	comp=N,494µm,0.3s						
THAS				AML	AML	14 08 44.2	
	comp=E,644µm,0.3s						
THAS	Thassos island	1.08	279	P	Pb	14 08 25.8	-0.2
THAS				S	Sg	14 08 40.4	+0.3
	comp=E,270nm,0.3s						
KNL	Balıkesir	1.09	98	*i* P	Pb	14 08 25.8	-0.4
KNL				*i* S	Sg	14 08 40.7	0.0
MRMT	Marmara Adasi	1.14	81	PN	Pn	14 08 27.7	+0.4

BUHA	Balikesir, Bur	1.19	141	*i* P	Pg	14 08 28.3	-0.1
BUHA				*i* S	Sn	14 08 44.3	+0.2
PRK	Paraskevi	1.20	174	P	Pg	14 08 28.8	+0.3
PRK				S	Sn	14 08 44.7	+0.5
PRK				AML	AML	14 08 46.2	
	comp=N,3384μm,0.5s						
PRK				AML	AML	14 08 47.3	
	comp=E,2668μm,0.6s						
PRK	Paraskevi	1.20	174	P	Pg	14 08 29.0	+0.6
PRK				S	Sn	14 08 45.3	+1.1
	comp=E,1μm,0.5s						
AYVA	Ayvalik	1.21	158	*i* P	Pb	14 08 28.4	+0.1
AYVA				*i* S	Sb	14 08 43.7	-0.2
TKR	Tekirdag	1.21	63	PN	Pg	14 08 28.8	+0.1
SIGR	SIGRI	1.24	189	P	Pn	14 08 28.5	-0.1
SIGR				S	Sg	14 08 45.2	-0.2
SIGR				AML	AML	14 08 46.5	
	comp=N,1124μm,0.4s						
SIGR				AML	AML	14 08 47.1	
	comp=E,694μm,0.5s						
SIGR	SIGRI	1.24	189	P	Pn	14 08 28.5	-0.1
SIGR				S	Sn	14 08 45.5	+0.2
	comp=E,452nm,0.4s						
SIGR	SIGRI	1.24	189	PN	Pn	14 08 28.6	-0.1
EFSA	Agios Efstrati	1.25	224	P	Pn	14 08 28.5	-0.1
EFSA				S	Sg	14 08 45.9	+0.3
KDZ	Kurdzhali	1.32	337	PN	Pg	14 08 31.4	+0.6
KDZ	Kurdzhali	1.32	337	*i* P	Pg	14 08 30.5	-0.3
KAVA	Kavala	1.34	295	P	Pn	14 08 30.0	+0.1
KAVA				S	Sg	14 08 48.1	-0.4
KAVA				AML	AML	14 08 52.1	
	comp=N,233μm,0.3s						
KAVA				AML	AML	14 08 53.0	
	comp=E,257μm,0.1s						
EDC	Edincik	1.34	93	PN	Pn	14 08 30.1	+0.1
BALY	Balya	1.35	121	*i* P	Pn	14 08 29.9	-0.3
BALY				*i* S	Sb	14 08 47.0	-0.9
KVLA	Kavala	1.41	291	P	Pn	14 08 30.9	0.0
EDRB	Edirne	1.48	18	P	Pn	14 08 31.7	-0.3
EDRB				S	Sn	14 08 51.6	+0.3
	comp=E,108nm,0.2s						
EDRB	Edirne	1.48	18	PN	Pn	14 08 31.9	-0.1
DKL	Dikili	1.50	156	PN	Pb	14 08 32.9	-0.2
KIRK	Kırklareli	1.53	29	*i* P	Pn	14 08 32.6	0.0
OUR	Ouranopolis	1.63	267	P	Pb	14 08 35.7	+0.2
OUR				S	Sg	14 08 57.6	-0.3
OUR				AML	AML	14 09 00.2	
	comp=E,420μm,0.3s						
OUR				AML	AML	14 09 00.7	
	comp=N,398μm,0.3s						
RZN	Rozhen	1.64	320	*i* P	Pn	14 08 34.9	+0.7
ZEDA	zmir-Bergama	1.65	153	*i* P	Pn	14 08 34.6	+0.4
ZEDA				*i* S	Sb	14 08 56.1	-0.3
DIM	Dimitrovgrad	1.67	345	*i* P	Pg	14 08 36.9	-0.5
KCTX	Karacabey (Bur	1.72	95	PN	Pb	14 08 36.5	-0.5
VIZE	Kirklareli, Vi	1.73	48	*i* P	Pn	14 08 34.3	-1.1
VIZE				*i* S	Sn	14 08 56.6	-0.9
ARMN	Kirklareli, Me	1.73	34	*i* P	Pn	14 08 35.3	-0.2
SLVT	Silivri	1.78	63	PN	Pb	14 08 37.7	-0.2
CTYL	Yalikoy Yolu	1.94	57	PN	Pn	14 08 38.5	+0.2
PLD	Plovdiv	1.98	328	*i* P	Pg	14 08 42.5	-0.8
CTKS	Kestanelik-??a	1.98	66	PN	Pb	14 08 40.9	-0.5
DURS	Dursunbey	2.00	114	*i* P	Pn	14 08 39.6	+0.5
ARMT	Armutlu	2.10	86	PN	Pb	14 08 42.6	-0.8
URLA	Izmir	2.11	170	PN	Pn	14 08 41.8	+1.2
MDNY	Mudanya-Bursa	2.12	91	PN	Pb	14 08 42.3	-1.4
MMB	Musomiste	2.14	303	*i* P	Pn	14 08 41.2	+0.2
BGKT	Bogazkoy	2.15	69	PN	Pb	14 08 42.9	-1.4
HORT	Hortiatis	2.30	275	P	Pb	14 08 47.5	+0.5
HORT				AML	AML	14 09 21.1	
	comp=N,88μm,0.7s						
HORT				AML	AML	14 09 22.7	
	comp=E,76μm,0.5s						
ISK	Istanbul-Kandi	2.32	73	P	Pn	14 08 44.0	+0.5
ISK	Istanbul-Kandi	2.32	73	PN	Pb	14 08 45.5	-1.7
KAVV	Kandilli-Istan	2.32	73	PN	Pn	14 08 45.4	+1.9
KLYT	Kilyos	2.37	69	PN	Pb	14 08 46.4	-1.6
YLV	Yalova	2.49	86	PN	Pn	14 08 47.7	+1.9
HRT	Hereke	2.73	81	PN	Pn	14 08 51.3	+2.1
SILT	Sile	2.77	74	PN	Pn	14 08 50.8	+1.1
STIP	Stip	3.22	294	*i* Pn	Pn	14 08 54.7	-1.2
KHAL	Karahalli	3.33	127	*i* P	Pn	14 08 58.4	+0.9

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*INET **05** 14:10:53.8, 15°.67N×93°.57W, h207^{km}, ML4.4, MW3.9*
*GCG **05** 14:11:07.9±2.9, 15°.96N×92°.19W, h225^{km}±247^{km}, MD4.7*
*SNET **05** 14:11:08.8±1.1, 15°.76N×92°.15W, h205^{km}*
*SSS **05** 14:11:08.8, 15°.76N×92°.15W, h205^{km}*
*IDC **05** 14:11:09.5±0.7, 15°.73N×91°.88W, h222^{km}±5^{km}, mb3.9/22, mb1 4.0/23, mb1mx3.8/43, mbtmp4.4/23, Error ellipse: s-maj=17.0km s-min=8.2km az=51.0*
*MEX **05** 14:11:09.3±1.4, 15°.70N×92°.29W, h227^{km}±11^{km}, MD4.7*
*NEIC **05** 14:11:09.1±2.1, 15°.76N±0°.07×92°.19W±0°.06, h217^{km}±3^{km}, Error ellipse: s-maj=10.4km s-min=7.8km az=213.0*
ISC 05 14:11:08.9±0.4, **15°.70N**±0°.04×**92°.22W**±0°.03, **h221**^{km}±3^{km}, **n416**, σ**1^{s}30**/465, **mb4.6**/42, **1D, Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCIG	Comitan	0.58	8	*i* P	Pn	14 11 38.6	-0.3
CCIG				*i* S	S	14 12 00.8	-1.8
CCIG	Comitan	0.58	8		S	14 12 00.8	-1.8
CCIG	Comitan	0.58	8		Pn	14 11 38.3	-0.7
THIG		0.79	183	*i* P	Pn	14 11 39.2	-0.5
THIG				*i* S	S	14 12 03.5	-0.3
THIG		0.79	183		Pn	14 11 39.2	-0.5
THIG					S	14 12 03.5	-0.3
PCIG		0.96	270	*i* P	Pn	14 11 39.6	-1.0
PCIG				*i* S	S	14 12 03.6	-1.6
PCIG		0.96	270		Pn	14 11 39.6	-1.0
PCIG					S	14 12 03.6	-1.6
RTAL	Retalhuleu	1.27	156	*e*P	Pn	14 11 43.1	+0.3
RTAL				*e*S	S	14 12 08.3	-0.8
RTAL	Retalhuleu	1.27	156		Pn	14 11 42.9	+0.1
TGIG		1.38	321	*i* P	Pn	14 11 43.6	0.0
TGIG				*i* S	S	14 12 09.3	-1.3
TGIG		1.38	321		Pn	14 11 43.6	0.0
TGIG					S	14 12 09.3	-1.3
FUG	Fuego 3	1.82	133	*e*P	Pn	14 11 48.6	+1.0
PCG	Pacaya	2.03	130	*e*P	Pn	14 11 51.0	+1.3
NBG	Las Nubes	2.12	121	*i* P	Pn	14 11 51.4	+0.9
IXG	Ixpaco	2.29	131	*e*P	Pn	14 11 50.8	-1.4
IXG	Ixpaco	2.29	131	*e*P	Pn	14 11 50.8	-1.4
IXG	Ixpaco	2.29	131	*e*P	Pn	14 11 53.3	+1.1
IXG				*e*S	S	14 12 29.6	+3.7
MRL	Marmol	2.52	104	*i* P	Pn	14 11 54.7	+0.1
PETF	Flores	2.56	62	*e*P	Pn	14 11 54.0	-0.8
PETF	Flores	2.56	62		Pn	14 11 53.9	-1.0
CMIG	Matias Romero	2.91	299	P	Pn	14 11 57.9	-0.7
	583nm,0.3s,baz=105,slow=8.0,SNR=3624						
CMIG				S	S	14 12 33.2	-4.2
	366nm,0.3s,baz=346,slow=19,SNR=27						
CMIG	Matias Romero	2.91	299	*i* P	Pn	14 11 57.6	-1.1
CMIG				*i* S	S	14 12 34.4	-3.0
CMIG	Matias Romero	2.91	299		Pn	14 11 57.6	-1.1
CMIG					S	14 12 34.4	-3.0
ESQI	Esquipulas	3.00	112	*e*P	Pn	14 11 59.9	0.0
ESQI	Esquipulas	3.00	112		Pn	14 11 59.9	0.0
MTO3	Montecristo	3.05	115	*e*P	Pn	14 12 00.5	0.0
MTO3	Montecristo	3.05	115	*e*P	Pn	14 12 00.5	0.0
MTO3	Montecristo	3.05	115		Pn	14 12 00.5	0.0
RTR	El Retiro	3.07	125	*e*P	Pn	14 12 01.2	+0.5
RTR	El Retiro	3.07	125	*e*P	Pn	14 12 01.2	+0.5
SNJE	San Jose	3.12	125	*e*P	Pn	14 12 01.6	+0.3
SNJE	San Jose	3.12	125	*e*P	Pn	14 12 01.6	+0.3
SBLS	San Blas	3.12	126	*e*P	Pn	14 12 01.9	+0.6
SBLS	San Blas	3.12	126	*e*P	Pn	14 12 01.9	+0.6
CEVE	Cerro Verde	3.13	126	*e*P	Pn	14 12 01.8	+0.3
CEVE	Cerro Verde	3.13	126	*e*P	Pn	14 12 01.8	+0.3
TUIG	Tuzandepetl	3.14	318	*i* P	Pn	14 12 00.8	-0.5
TUIG				*i* S	S	14 12 38.5	-3.6
TUIG	Tuzandepetl	3.14	318		Pn	14 12 00.8	-0.5
TUIG					S	14 12 38.5	-3.6
TACO	Tacachico	3.26	121	*e*P	Pn	14 12 02.8	+0.1
TACO	Tacachico	3.26	121	*e*P	Pn	14 12 02.8	+0.1
CEDA	San Andres	3.32	124	*e*P	Pn	14 12 03.6	+0.2
CEDA	San Andres	3.32	124	*e*P	Pn	14 12 03.6	+0.2
JAYA	Jayaque - finc	3.37	127	*e*P	Pn	14 12 04.0	-0.2
JAYA	Jayaque - finc	3.37	127	*e*P	Pn	14 12 04.0	-0.2
SCIG	Sabancuy	3.40	17	*i* P	Pn	14 12 03.1	-1.1
SCIG				*i* S	S	14 12 46.3	-1.3
SCIG	Sabancuy	3.40	17		Pn	14 12 03.1	-1.1
SCIG					S	14 12 46.9	-0.8
BOQS	Boqueron	3.45	124	*e*P	Pn	14 12 05.3	+0.1
BOQS	Boqueron	3.45	124	*e*P	Pn	14 12 05.3	+0.1
SNET	Serv Nac Est T	3.52	124		Pn	14 12 05.0	-0.8
LFU	La Fuente	3.58	122	*e*P	Pn	14 12 07.1	+0.6
LFU	La Fuente	3.58	122	*e*P	Pn	14 12 07.1	+0.6
LBRS	Las Brisas	3.64	122	*e*P	Pn	14 12 07.9	+0.6
LBRS	Las Brisas	3.64	122	*e*P	Pn	14 12 07.9	+0.6
LFRS	El Faro	3.69	124	*e*P	Pn	14 12 08.2	+0.3
LFRS	El Faro	3.69	124	*e*P	Pn	14 12 08.2	+0.3
PAVA	Las Pavas	3.74	121	*e*P	Pn	14 12 08.7	+0.2
PAVA	Las Pavas	3.74	121	*e*P	Pn	14 12 08.7	+0.2
HUIG	Huatulco	3.75	272	*i* P	Pn	14 12 06.6	-1.8
HUIG				*i* S	S	14 12 51.8	-3.3
HUIG	Huatulco	3.75	272		Pn	14 12 06.6	-1.8
HUIG					S	14 12 51.8	-3.3
PANG	Puerto Angel	4.10	270	*i* P	Pn	14 12 11.0	-1.6
PANG				*i* S	S	14 12 59.7	-3.0
PANG	Puerto Angel	4.10	270		Pn	14 12 11.0	-1.6
PANG					S	14 12 59.7	-3.0
TECA	Tecapa	4.21	121	*e*P	Pn	14 12 14.9	+0.6
TECA	Tecapa	4.21	121	*e*P	Pn	14 12 14.9	+0.6
VHO	Vista Hermosa	4.54	288	*i* P	Pn	14 12 18.9	+0.5
VHO				*i* S	S	14 13 12.6	-0.4
PEIG	Puerto Escondi	4.75	274	*i* P	Pn	14 12 19.8	-1.0
PEIG				*i* S	S	14 13 12.6	-4.8
TGUH	Tegucigalpa,Un	5.05	108	*e*P	Pn	14 12 25.1	+0.4
TGUH	Tegucigalpa,Un	5.05	108	*e*P	Pn	14 12 25.1	+0.4
TGUH	Tegucigalpa,Un	5.05	108	Pn	Pn	14 12 24.2	-0.5
TGUH	Tegucigalpa,Un	5.05	108	*e*P	Pn	14 12 25.1	+0.4
TOIG	Toxpalan	5.21	298	*e*P	Pn	14 12 26.5	-0.2
TOIG				*i* S	S	14 13 24.1	-3.9
YOIG	Yosondua	5.24	283	*i* P	Pn	14 12 27.5	+0.3
YOIG				*i* S	S	14 13 29.4	+0.4
TPIG	Tehuac#an	5.61	300	*i* P	Pn	14 12 32.2	+0.4
TPIG				*i* S	S	14 13 37.0	-0.4
TPIG	Tehuac#an	5.61	300		Pn	14 12 32.2	+0.4
TPIG					S	14 13 37.0	-0.4
PNIG	Pinotepa	5.72	278	*i* P	Pn	14 12 32.8	-0.2
PNIG				*i* S	S	14 13 35.7	-3.9
PNIG	Pinotepa	5.72	278		Pn	14 12 32.8	-0.2
PNIG					S	14 13 35.7	-3.9
MYIG	Mrida	5.74	24	*i* P	Pn	14 12 33.3	+0.2
MYIG	Mrida	5.74	24		Pn	14 12 32.5	-0.6
TEIG	Tepich	5.86	39	*i* P	Pn	14 12 33.0	-1.8
TEIG				*i* S	S	14 13 42.0	-0.8
TEIG	Tepich	5.86	39		Pn	14 12 32.9	-1.8
TEIG	Tepich	5.86	39		S	14 13 42.0	-0.8
TEIG	Tepich	5.86	39	⇓*e*P	Pn	14 12 32.9	-1.8
TLIG	Tlapa	6.36	288	*e*P	Pn	14 12 42.4	+1.2
TLIG				*i* S	S	14 13 54.3	-0.3
TLIG	Tlapa	6.36	288	Pn	Pn	14 12 42.5	+1.2
TLIG	Tlapa	6.36	288		S	14 13 54.3	-0.3
HMTT	Tlapaneco	6.42	290	*i* P	Pn	14 12 43.9	+1.9
HMTT				*i* S	S	14 13 55.8	-0.2
HMTT	Tlapaneco	6.42	290		Pn	14 12 43.9	+1.9
HMTT					S	14 13 55.8	-0.2
CRIG	Cruz Grande	6.72	280	*e*P	Pn	14 12 45.9	+0.2
CRIG				*i* S	S	14 14 02.3	-0.5
PPM	Popocatepetl	6.97	300	*e*P	Pn	14 12 51.7	+2.3
PPM				*i* S	S	14 14 12.2	+2.7
ACP2	Acapulco	7.45	280	*i* P	Pn	14 12 56.2	+1.0
ACP2				*i* S	S	14 14 17.1	-2.9
PLIG	Platanillo	7.46	292	*e*P	Pn	14 12 57.3	+2.0
PLIG				*i* S	S	14 14 20.5	+0.1
PLIG	Platanillo	7.46	292		Pn	14 12 57.3	+2.0
PLIG					S	14 14 20.5	+0.1
MAVM	Malinalco, Edo	7.66	296	*e*P	Pn	14 13 00.5	+2.4
MAVM				*i* S	S	14 14 27.2	+1.9
MAVM	Malinalco, Edo	7.66	296		Pn	14 13 00.5	+2.4
MAVM					S	14 14 27.2	+1.9
JTS	Las Juntas de	8.89	126	*e*P	Pn	14 13 13.9	+0.2
JTS				*i* S	S	14 14 56.0	+2.0
JTS	Las Juntas de	8.89	126	Pn	Pn	14 13 14.1	+0.4
JTS	Las Juntas de	8.89	126	*e*P	Pn	14 13 13.9	+0.2
833A	Chaparral WMA,	14.21	333	P	P	14 14 21.7	0.0
	baz=150						
NATX	Nacogdoches	16.14	353	P	Pn	14 14 44.1	+0.2
	baz=171						
JCT	Junction City	16.27	336	P	Pn	14 14 46.6	+1.0
	baz=153						
HPIG		16.77	314	P	P	14 14 50.5	+0.3
HPIG				IAmb	IAmb	14 14 55.7	
	comp=Z,33nm,0.7s						
TX32	Lajitas Array	17.18	324	P	Pn	14 14 56.1	-0.3
TXAR	Lajitas Array	17.18	324	P	Pn	14 14 57.9	+1.5
	comp=Z,0.8nm,0.3s,baz=152,slow=12,SNR=101						
TXAR	Lajitas Array	17.18	324	P	Pn	14 14 56.3	-0.1
TX31	Lajitas Ar. Si	17.19	324	P	Pn	14 14 55.8	-0.6
TX31				IAmb	IAmb	14 14 58.8	
	comp=Z,39nm,0.8s						
MOTC	Monteria, Cord	17.57	111	*e*P	P	14 14 58.0	-0.9
Z47A	Carrollton	17.82	11	P	Pn	14 15 02.7	-1.0
Z47A				IAmb	IAmb	14 15 05.0	
	comp=Z,42nm,0.9s						
LRAL	Lakeview Retre	17.90	14	P	P	14 15 03.1	+0.9
	baz=196,SNR=6.4						
LRAL	Lakeview Retre	17.90	14	P	P	14 15 03.4	+1.2
LRAL				IAmb	IAmb	14 15 04.7	
	comp=Z,18nm,0.7s						
UREC	San Jos de Ur	18.14	114	*e*P	P	14 15 03.7	-1.3
ABTX	Abilene, Hawle	18.15	340	P	P	14 15 05.8	+0.8
	baz=156,SNR=7.9						
CBOC	Ciudad Bolivar	18.67	120	*e*P	P	14 15 11.0	+0.1
Y49A	Blount Mountai	18.82	15	P	P	14 15 11.9	-0.3
Y49A				IAmb	IAmb	14 15 14.3	
	comp=Z,20nm,0.7s						
PLMC	San Jos del P	18.98	123	*e*P	P	14 15 13.2	-1.0
SMLC	San Martn de	19.01	109	*e*P	P	14 15 13.0	-1.4
GOGA	Godfrey	19.33	23	P	P	14 15 18.9	+1.2
	baz=206,SNR=8.0						
GOGA	Godfrey	19.33	23	P	P	14 15 18.2	+0.5
W41B	Gary Mavity, V	19.39	360	P	P	14 15 20.0	+1.8
	baz=180						
W39A	Magazine	19.47	356	P	P	14 15 20.8	+1.7
	baz=175						
YOTC	Yotoco, Valle	19.48	125	*e*P	P	14 15 20.0	+0.4
Y52A	Lilburn	19.53	21	P	P	14 15 20.0	+0.2
GUY2C	Guyana, Caldas	19.55	120	*e*P	P	14 15 20.5	-0.3
PTBC	PUERTO BERRIO,	19.65	116	*e*P	P	14 15 19.7	-1.6
FPAL	Fort Paine	19.68	16	P	P	14 15 20.9	-0.5
NORC	Norcasia	19.79	119	*e*P	P	14 15 22.5	-0.3
GDL2	Guadalupe Moun	19.80	328	P	P	14 15 23.1	+0.3
WMOK	Wichita Mounta	19.85	344	P	P	14 15 23.6	+0.3
	baz=161,SNR=7.2						
WMOK	Wichita Mounta	19.85	344	P	P	14 15 22.2	-1.1
ANIL	Santa Ana	19.93	122	*e*P	P	14 15 25.2	+0.6
MNTX	Cornudas Mount	19.94	325	P	P	14 15 25.3	+1.0
	baz=140,SNR=23						
MNTX	Cornudas Mount	19.94	325	P	P	14 15 25.6	+1.3
MNTX				IAmb	IAmb	14 15 26.7	
	comp=Z,15nm,0.8s						
TOLC	Tolima	19.95	122	*e*P	P	14 15 25.8	+1.0
BBAC	Balboa, Cauca	20.06	131	*e*P	P	14 15 26.8	+0.8
SWET	Sewanee	20.24	15	P	P	14 15 24.8	-2.6
SDDR	Presa de Saban	20.24	78	P	P	14 15 26.9	-0.7
SDDR				IAmb	IAmb	14 15 31.1	
	comp=Z,22nm,0.8s						
LCAR	Lake Charles	20.31	2	P	P	14 15 26.6	-1.5
ORTC	Ortega, Tolima	20.40	123	*e*P	P	14 15 29.4	+0.1
SPBC	San Pablo de B	20.42	117	*e*P	P	14 15 28.2	-1.4
NHSC	New Hope	20.48	30	P	P	14 15 31.4	+1.5
	baz=215						
PCON	Cinco Dias	20.48	129	*e*P	Pn	14 15 33.7	-2.6
MARP	Paez Belalcaza	20.49	127	*e*P	P	14 15 32.3	+1.7
OTAV	Otavalo	20.52	137	P	P	14 15 32.0	+0.9
OTAV				IAmb	IAmb	14 15 36.8	
	comp=Z,16nm,0.8s						
OTAV	Otavalo	20.52	137	*e*P	P	14 15 32.7	+1.7
OTAV	Otavalo	20.52	137	*e*P	P	14 15 33.3	+2.3
HODGE	Hodges	20.52	24	P	P	14 15 30.3	-0.1
HODGE				IAmb	IAmb	14 15 32.8	
	comp=Z,26nm,0.9s						
MSTX	Muleshoe	20.53	334	P	P	14 15 30.9	+0.3
	baz=150						
MSTX	Muleshoe	20.53	334	P	P	14 15 29.9	-0.8
V48A	Smith Brothers	20.53	13	P	P	14 15 30.5	-0.1
V48A				IAmb	IAmb	14 15 31.7	
	comp=Z,22nm,1.1s						
GCUF	Volcan Galeras	20.55	133	*e*P	Pn	14 15 35.5	-1.5
U40A	Yellville	20.58	359	P	P	14 15 31.1	+0.1
	baz=178						
WVT	Waverly	20.72	10	P	P	14 15 32.4	-0.1
	baz=192						
WVT	Waverly	20.72	10	P	P	14 15 31.6	-0.9
WVT				IAmb	IAmb	14 15 33.6	
	comp=Z,12nm,0.5s						
PAMC	Pamplona, Colo	20.84	111	*e*P	P	14 15 32.7	-1.8
CPCT	Cooper Cave	20.84	18	P	P	14 15 33.3	-0.5
CPCT				IAmb	IAmb	14 15 34.8	
	comp=Z,22nm,0.8s						
AMTX	Amarillo	20.91	338	P	P	14 15 35.0	+0.4
	baz=153						
AMTX	Amarillo	20.91	338	P	P	14 15 34.9	+0.3
BG3	Lake Jocassee	20.94	22	P	P	14 15 35.5	+0.7
BG3				IAmb	IAmb	14 15 37.1	
	comp=Z,24nm,0.8s						
JSC	Jenkinsville	20.97	26	P	P	14 15 35.7	+0.6
JSC				IAmb	IAmb	14 15 37.8	
	comp=Z,16nm,0.8s						
CLTN	Cedars of Leba	20.98	13	P	P	14 15 34.3	-0.9
CLTN				IAmb	IAmb	14 15 36.8	
	comp=Z,15nm,0.7s						
BETC	Betania	20.99	126	*e*P	P	14 15 36.9	+1.3
Z59A	Georgetown, SC	21.03	32	P	P	14 15 36.3	+0.6
	baz=217						
PBMO	Poplar Bluff	21.05	4	P	P	14 15 36.1	+0.2
RUSC	La Rusia	21.15	115	*e*P	P	14 15 36.1	-1.6
V51A	Loudon	21.22	18	P	P	14 15 37.7	0.0
V51A				IAmb	IAmb	14 15 38.6	
	comp=Z,18nm,0.8s						
CHIC	Chingaza	21.24	119	*e*P	P	14 15 38.2	-0.4
GARC	Garzon, Huila	21.26	128	*e*P	P	14 15 39.7	+1.1
TKL	Tuckaleechee C	21.26	19	P	P	14 15 38.8	+0.7
	comp=Z,21nm,0.7s,baz=185,slow=12,SNR=30						
TKL	Tuckaleechee C	21.26	19	P	P	14 15 38.1	0.0
TKL				IAmb	IAmb	14 15 39.9	
	comp=Z,34nm,0.8s						
U49A	Red Boiling Sp	21.51	14	P	P	14 15 40.5	0.0
FLOC	Florencia	21.53	129	*e*P	P	14 15 41.2	+0.1
V53A	Saluda	21.59	21	P	P	14 15 41.7	+0.2
V53A				IAmb	IAmb	14 15 43.4	
	comp=Z,37nm,1.0s						
BIRD	Birdtown, Kers	21.62	27	P	P	14 15 41.2	-0.5
BIRD				IAmb	IAmb	14 15 42.7	
	comp=Z,19nm,0.8s						
X57A	Johnson Farm,	21.64	28	P	P	14 15 42.3	+0.5
	baz=213						
KMSC	Kings Mountain	21.68	25	P	P	14 15 42.8	+0.5
	baz=209,SNR=6.6						
T47A	Sharon Grove	21.68	11	P	P	14 15 42.2	-0.1
T47A				IAmb	IAmb	14 15 44.1	
	comp=Z,28nm,0.8s						
121A	Cookes Peak, D	21.92	323	P	P	14 15 47.2	+2.4
	baz=136,SNR=14						
S39A	Bolivar	21.93	358	P	P	14 15 43.8	-0.8
W56A	Indian Trail	21.99	26	P	P	14 15 45.3	+0.1
	baz=211,SNR=7.0						
S44A	Carbondale	22.06	6	P	P	14 15 45.5	-0.3
SDV	Santo Domingo	22.14	105	P	P	14 15 45.4	-1.6
	comp=Z,6.3nm,0.3s,baz=309,slow=11,SNR=6.6						
SDV	Santo Domingo	22.14	105	P	P	14 15 45.0	-2.1
SDV				IAmb	IAmb	14 15 54.4	
	comp=Z,19nm,1.1s						
SDV	Santo Domingo	22.14	105	*e*P	P	14 15 45.5	-1.6
SDV	Santo Domingo	22.14	105	*e*P	P	14 15 45.6	-1.4
TZTN	Tazewell	22.15	19	P	P	14 15 47.5	+0.8
	baz=202,SNR=11						
TZTN	Tazewell	22.15	19	P	P	14 15 47.6	+0.9
T50A	Nancy	22.22	16	P	P	14 15 46.2	-1.1
T50A				IAmb	IAmb	14 15 48.6	
	comp=Z,31nm,0.9s						
W57A	Gilead	22.26	27	P	P	14 15 47.2	-0.5
W57A				IAmb	IAmb	14 15 48.8	
	comp=Z,26nm,0.8s						
CCM	Cathedral Cave	22.29	2	P	P	14 15 48.4	+0.5
	baz=182						
CCM	Cathedral Cave	22.29	2	P	P	14 15 47.3	-0.6
CCM				IAmb	IAmb	14 15 50.7	
	comp=Z,12nm,0.7s						
V55A	Taylorsville	22.35	24	P	P	14 15 48.7	+0.2
V55A				IAmb	IAmb	14 15 50.5	
	comp=Z,17nm,0.8s						
X59A	McDuffie Farm,	22.43	31	P	P	14 15 49.3	+0.1
	baz=216						
W58A	Raeford	22.49	29	P	P	14 15 50.1	+0.2
	baz=214						
R40A	Maddies Statio	22.50	360	P	P	14 15 49.0	-0.9
MACC	Macarena, Meta	22.57	125	*e*P	P	14 15 51.1	+0.4
V56A	Mocksville	22.60	25	P	P	14 15 51.4	+0.6
	baz=210						
U54A	Nelsons Funny	22.71	22	P	P	14 15 53.1	+1.2
	baz=206,SNR=14						
U54A	Nelsons Funny	22.71	22	P	P	14 15 52.6	+0.7
X60A	Albert Glenn T	22.75	32	P	P	14 15 52.7	+0.6
	baz=218						
V57A	Coltrane Farms	22.97	27	P	P	14 15 54.4	+0.2
	baz=212,SNR=8.4						
W59A	Clinton	22.99	30	P	P	14 15 54.7	+0.5
	baz=216						
WCI	Wyandotte Cave	23.04	12	P	P	14 15 55.3	+0.6
	baz=194						
WCI	Wyandotte Cave	23.04	12	P	P	14 15 53.8	-0.9
PTLC	Puerto Leguiza	23.11	130	*e*P	P	14 15 58.3	+2.6
U56A	King	23.11	25	P	P	14 15 56.2	+0.7
	baz=210						
S51A	Beattyville	23.15	18	P	P	14 15 56.3	+0.6
V58A	Windy Hill, Pi	23.19	28	P	P	14 15 56.0	-0.1
	baz=213,SNR=14						
V58A	Windy Hill, Pi	23.19	28	P	P	14 15 56.6	+0.5
W60A	Pink Hill	23.25	31	P	P	14 15 56.6	0.0
	baz=217						
CNNC	Cliffs of the	23.31	31	P	P	14 15 57.7	+0.5
	baz=217						
V59A	Middlesex	23.57	29	P	P	14 15 59.7	+0.2
	baz=215,SNR=15						
U57A	Blanch	23.62	27	P	P	14 16 00.7	+0.6
	baz=212,SNR=9.3						
TUC	Tucson	23.62	318	P	P	14 16 03.0	+2.8
	baz=130						
T56A	Rocky Mt	23.84	25	P	P	14 16 03.1	+1.1
	baz=210						
T25A	Trinidad	23.94	335	P	P	14 16 05.3	+2.1
	baz=150						
U58A	Oxford	23.94	28	P	P	14 16 03.3	+0.4
	baz=214						
CBKS	Cedar Bluff	23.96	345	P	P	14 16 03.9	+0.7
	baz=162						
S54A	Dingess, Beckl	24.03	22	P	P	14 16 04.3	+0.5
	baz=206						
V60A	Jim Taylor Roa	24.04	31	P	P	14 16 04.4	+0.5
	baz=217						
T57A	Hurt	24.14	26	P	P	14 16 04.8	+0.1
	baz=212						
P46A	Rosedale	24.23	9	P	P	14 16 06.2	+0.7
P46A				IAmb	IAmb	14 16 08.7	
	comp=Z,33nm,0.9s						
R53A	Hurricane	24.29	20	P	P	14 16 05.3	-0.8
T58A	Grand View Acr	24.40	27	P	P	14 16 06.9	-0.2
	baz=213,SNR=6.2						
R54A	Victor	24.49	22	P	P	14 16 07.9	-0.1
	baz=207						
Q51A	Peebles	24.51	17	P	P	14 16 08.6	+0.5
S56A	Natural Bridge	24.59	25	P	P	14 16 08.8	-0.1
	baz=210						
P49A	Miami Univ. Ec	24.64	14	P	P	14 16 08.8	-0.5
	baz=197						
U60A	Pendleton	24.65	30	P	P	14 16 09.9	+0.6
	baz=217,SNR=6.8						
214A	Organ Pipe Nat	24.76	314	P	P	14 16 12.6	+2.1
	baz=126,SNR=6.4						
214A	Organ Pipe Nat	24.76	314	P	P	14 16 11.4	+0.9
Q52A	Bidwell	24.77	19	P	P	14 16 11.4	+1.0
Q52A				IAmb	IAmb	14 16 15.3	
	comp=Z,26nm,0.8s						
U61A	Possum Corner	24.89	31	P	P	14 16 12.2	+0.6
	baz=218						
S57A	Dark Hollow, R	24.91	26	P	P	14 16 11.8	+0.1
	baz=211						
Q53A	Leroy	24.91	20	P	P	14 16 12.4	+0.7
	baz=205						
SFIN	Lafayette	24.99	9	P	P	14 16 12.1	-0.3
	baz=191						
SJG	San Juan	25.05	81	P	P	14 16 12.0	-1.2
	comp=Z,9.5nm,0.4s,baz=239,slow=3.7,SNR=5.6						

S58A	Poland Farm, P	25.17	27	P	P	14 16 13.3	-0.7
	baz=213						
Q54A	Coxs Mills	25.26	21	P	P	14 16 15.3	+0.5
T60A	Surry	25.39	30	P	P	14 16 16.0	-0.1
	baz=217						
S22A	4UR Ranch, Cre	25.48	332	P	P	14 16 18.6	+1.4
	baz=145						
R58B	Mineral	25.54	27	P	P	14 16 17.6	+0.3
	baz=213						
MTP	Monte Pirata	25.62	81	P	P	14 16 16.9	-1.5
S59A	Mechanicsville	25.63	28	P	P	14 16 18.3	+0.1
	baz=215						
ACSO	Alum Creek Sta	25.73	16	P	P	14 16 18.9	-0.2
	baz=201						
R58A	Rapidan	25.76	26	P	P	14 16 19.2	-0.2
	baz=213						
MVCO	Mesa Verde	25.83	329	P	P	14 16 21.9	+1.5
	baz=142						
S60A	Water View	25.88	29	P	P	14 16 20.6	+0.1
	baz=216						
Q56A	Snyder Ridge,	25.91	24	P	P	14 16 21.1	+0.4
	baz=210						
CBN	Corbin Frederi	25.96	27	P	P	14 16 22.0	+0.9
	baz=214						
R59A	King George, V	26.07	28	P	P	14 16 22.9	+0.8
	baz=214						
WUAZ	Wupatki	26.13	323	P	P	14 16 24.7	+1.7
	baz=134						
Q57A	Strasburg	26.22	25	P	P	14 16 23.5	+0.1
	baz=211						
O53A	New Philadelph	26.27	19	P	P	14 16 24.5	+0.5
	baz=204						
R60A	Leonardtown, M	26.37	29	P	P	14 16 25.6	+0.7
	baz=216						
Q58A	Fox Den Farm,	26.44	26	P	P	14 16 25.5	+0.1
	baz=213						
ATAH	Atahualpa	26.50	148	P	P	14 16 29.7	+3.0
	comp=Z,18nm,0.7s,baz=336,slow=6.4,SNR=12						
P57A	Homestead Farm	26.76	25	P	P	14 16 28.4	+0.1
	baz=211						
GLA	Glamis	26.78	314	P	P	14 16 30.6	+2.0
	baz=124,SNR=5.2						
PDMCI	Parker Dam,Lak	27.06	317	P	P	14 16 33.0	+2.0
	baz=128						
O56A	Blue Knob Stat	27.22	23	P	P	14 16 32.7	+0.3
	baz=210						
Q60A	Greensboro	27.30	29	P	P	14 16 33.5	+0.4
	baz=216						
SWSC	Sam W. Stewart	27.40	313	P	P	14 16 36.1	+2.1
	baz=123						
PCRV	Puerto La Cruz	27.42	98	P	P	14 16 31.8	-2.8
	comp=Z,6.9nm,0.5s,baz=335,slow=15,SNR=2.5						
IKP	In-Ko-Pah, Jac	27.46	312	P	P	14 16 37.2	+2.5
	baz=122						
PLCV	Puerto La Cruz	27.47	98	P	P	14 16 31.8	-3.2
P59A	Jarrettsville	27.53	27	P	P	14 16 35.2	+0.1
	baz=214						
BC3	Big Chuckawall	27.55	315	P	P	14 16 37.8	+2.2
	baz=125,SNR=8.1						
IRM	Iron Mountain	27.64	316	P	P	14 16 38.5	+2.2
	baz=126						
O58A	Lewisberry	27.75	26	P	P	14 16 37.7	+0.6
	baz=213						
N23A	Red Feather La	27.79	337	P	P	14 16 37.9	+0.2
	baz=150						
SSPA	Standing Stone	27.79	24	P	P	14 16 37.6	+0.2
	baz=210						
MONP2	Monument Peak	27.81	312	P	P	14 16 40.5	+2.5
	baz=122						
N57A	Milroy	28.03	24	P	P	14 16 40.2	+0.7
	baz=211						
P60A	Greenville	28.05	28	P	P	14 16 39.4	-0.4
	baz=216						
BELC	Belle Mtn. Jos	28.12	315	P	P	14 16 43.3	+2.7
	baz=124						
O59A	Robesonia	28.22	27	P	P	14 16 41.5	+0.2
	baz=214						
TPFO	Pinon Flats	28.22	314	P	P	14 16 44.3	+2.7
	baz=123						
PFO	Pinyon Flats O	28.23	314	P	P	14 16 44.4	+2.9
	comp=Z,2.1nm,0.7s,baz=89,slow=11,SNR=4.1						
PFO	Pinyon Flats O	28.23	314	P	P	14 16 43.7	+2.1
	baz=123						
PFO	Pinyon Flats O	28.23	314	IAmb	IAmb	14 16 45.2	
	comp=Z,3.3nm,1.0s						
GMRC	Granite Mounta	28.35	316	P	P	14 16 45.2	+2.5
	baz=126						
N58A	Sunbury	28.44	25	P	P	14 16 43.4	+0.2
	baz=212						
O60A	Telford	28.57	28	P	P	14 16 44.9	+0.7
	baz=215						
O61A	Allentown	28.77	29	P	P	14 16 46.7	+0.6
	baz=217						
N59A	State Game Lan	28.90	26	P	P	14 16 47.9	+0.7
	baz=214						
M58A	Price's Panora	28.99	25	P	P	14 16 48.8	+0.7
	baz=212						
N60A	Cedar Hill Far	29.15	27	P	P	14 16 49.7	+0.3
	baz=215						
BFSC	Mount Baldy Ra	29.40	314	P	P	14 16 54.5	+2.5
	baz=122						
GSC	Goldstone, Bar	29.41	316	P	P	14 16 54.4	+2.4
	baz=125						
N61A	South Mountain	29.42	28	P	P	14 16 52.1	+0.3
	baz=217						
M59A	Waymart	29.55	26	P	P	14 16 53.6	+0.6
	baz=214						
M60A	Port Jervis	29.73	27	P	P	14 16 54.7	+0.1
	baz=216						
K56A	Middlesex	29.79	22	P	P	14 16 55.7	+0.6
	baz=210						
PAL	Palisades	29.80	29	P	P	14 16 55.5	+0.3
	baz=217						
L58A	Harry Jones Me	29.80	25	P	P	14 16 55.6	+0.4
	baz=213						
BINY	Binghamton	29.88	25	P	P	14 16 56.3	+0.4
	baz=212						
TPNV	Topopah Spring	30.04	319	P	P	14 16 59.8	+2.2
	baz=128						
RSSD	Black Hills	30.06	343	P	P	14 16 58.5	+0.8
	baz=157						
M61A	Granite Spring	30.10	28	P	P	14 16 58.0	+0.2
	baz=217						
K57A	Scipio Center	30.12	23	P	P	14 16 58.3	+0.3
	baz=211						
FURC	Furnace Creek,	30.14	318	P	P	14 17 01.1	+3.0
	baz=127						
L59A	Walton	30.25	26	P	P	14 16 59.9	+0.6
	baz=214						
CZSB	Cruzeiro do Su	30.26	139	*e*P	P	14 17 01.9	+2.4
MPMC	Manual Prospec	30.30	317	P	P	14 17 02.4	+2.4
	baz=125,SNR=5.3						
L60A	Shokan	30.44	27	P	P	14 17 01.1	+0.2
	baz=216						
K58A	Earlville	30.48	24	P	P	14 17 01.3	+0.1
	baz=212,SNR=5.2						
K58A	Earlville	30.48	24	P	P	14 17 01.2	0.0
K58A				IAmb	IAmb	14 17 02.5	
	comp=Z,19nm,0.7s						
R11A	Troy Canyon, C	30.53	322	P	P	14 17 04.3	+2.4
	baz=131						
ARVC	Arvin	30.69	314	P	P	14 17 05.6	+2.5
	baz=122						
ISA	Isabella, Lake	30.74	315	P	P	14 17 06.4	+2.7
	baz=123						
PDAR	Pinedale Array	30.80	335	P	P	14 17 05.4	+1.2
	comp=Z,0.1nm,0.5s,baz=137,slow=11,SNR=2.1						
PDAR				PcP	PcP	14 19 55.5	-0.3
	comp=Z,0.3nm,0.5s,baz=140,slow=4.6,SNR=4.5						
PDAR				ScP	ScP	14 23 18.3	+0.7
	comp=Z,0.2nm,0.8s,baz=134,slow=3.9,SNR=4.0						
K59A	Cooperstown	30.82	25	P	P	14 17 04.4	+0.3
	baz=214						
CWC	Cottonwood Cre	30.91	317	P	P	14 17 06.9	+1.6
	baz=125						
M63A	Gales Ferry	30.99	30	P	P	14 17 06.4	+0.8
	baz=220						
H53A	Bobcaygeon	31.01	19	P	P	14 17 06.0	+0.2
	baz=206						
VES	Vestal, Richgr	31.25	315	P	P	14 17 10.4	+2.4
	baz=123						
PKM	Mcpherson Peak	31.26	313	P	P	14 17 10.1	+1.8
	baz=120						
K61A	Williamstown	31.41	27	P	P	14 17 09.4	+0.1
	baz=217						
I58A	Old Forge	31.53	24	P	P	14 17 10.2	-0.2
	baz=213,SNR=6.1						
J59A	Piesco	31.53	25	P	P	14 17 10.7	+0.3
	baz=214						
L63A	North Scituate	31.55	30	P	P	14 17 10.7	+0.2
	baz=220						
J60A	Lant Hill Farm	31.80	27	P	P	14 17 13.3	+0.6
	baz=216						
ELK	Elko	31.96	326	P	P	14 17 17.2	+2.7
	comp=Z,0.9nm,0.7s,baz=203,slow=6.9,SNR=4.1						
L64A	Middleborough	31.98	31	P	P	14 17 14.5	+0.2
	baz=221						
H57A	Richville	32.02	23	P	P	14 17 14.4	-0.2
	baz=212						
I59A	Olmsteadville	32.06	25	P	P	14 17 14.9	-0.1
	baz=215						
NVAR	Mina Array Bea	32.23	320	P	P	14 17 20.2	+3.3
	comp=Z,4.3nm,0.6s,baz=133,slow=8.5,SNR=47						
NVAR				pP	pP	14 18 03.4	+1.6
	comp=Z,2.3nm,0.8s,baz=139,slow=9.5,SNR=4.5						
NVAR				PcP	PcP	14 20 00.5	+0.6
	comp=Z,0.4nm,0.4s,baz=215,slow=25,SNR=4.3						
NVAR				ScP	ScP	14 23 24.7	+2.2
	comp=Z,0.3nm,0.6s,baz=115,slow=4.1,SNR=3.7						
J61A	Chester	32.27	27	P	P	14 17 16.4	-0.4
	baz=217						
I60A	Shoreham	32.34	26	P	P	14 17 17.5	+0.1
	baz=216						
ALGO	Algonquin Park	32.42	19	P	P	14 17 18.3	+0.3
	baz=206						
H58A	Gabriels	32.45	24	P	P	14 17 18.2	-0.2
	baz=214						
LONY	Lake Ozonia	32.46	24	P	P	14 17 18.7	+0.2
	baz=213						
LONY	Lake Ozonia	32.46	24	P	P	14 17 17.3	-1.2
LONY				IAmb	IAmb	14 17 19.2	
	comp=Z,13nm,0.8s						
G57A	Newington	32.72	23	P	P	14 17 21.1	+0.5
	baz=212						
H59A	Cadyville	32.84	25	P	P	14 17 21.9	+0.2
	baz=214						
G58A	Ormstown	33.11	24	P	P	14 17 23.8	-0.3
	baz=213						
H60A	Morristown	33.18	26	P	P	14 17 24.5	-0.2
	baz=216						
I62A	Tamworth	33.23	28	P	P	14 17 25.2	+0.1
	baz=219						
G60A	Masonville	33.76	26	P	P	14 17 29.6	-0.1
	baz=216						
E56A	St. Veronique	33.93	21	P	P	14 17 31.2	+0.1
	baz=210						
E57A	Chemin Saint G	34.14	22	P	P	14 17 33.1	+0.2
	baz=212						
D55A	Sainte-Anne-du	34.19	21	P	P	14 17 33.3	0.0
	baz=209						
E58A	La Victoria	34.43	23	P	P	14 17 35.4	0.0
	baz=213						
D56A	ZEC Mazanza, M	34.46	21	P	P	14 17 35.7	0.0
	baz=210						
ULM	Lac du Bonnet	34.59	356	P	P	14 17 38.7	+2.0
	comp=Z,1.4nm,0.7s,baz=186,slow=10,SNR=3.5						
ULM				pP	pP	14 18 23.3	+1.3
	comp=Z,9.5nm,0.9s,baz=184,slow=9.5,SNR=12						
F60A	Warwick	34.62	25	P	P	14 17 36.8	-0.3
	baz=216						
G62A	West of Eustis	34.63	27	P	P	14 17 36.9	-0.3
	baz=219						
H64A	Troy	34.79	29	P	P	14 17 38.4	-0.1
	baz=221						
G63A	Kingsbury	34.97	28	P	P	14 17 40.1	+0.1
	baz=220						
E60A	Ste Agathe de	35.16	25	P	P	14 17 41.5	-0.1
	baz=216						
D58A	Chemin du LacG	35.18	23	P	P	14 17 42.1	+0.2
	baz=213						
PKME	Peaks-Kenny Pk	35.23	28	P	P	14 17 42.1	-0.1
	baz=220						
H65A	Eastbrook	35.30	30	P	P	14 17 42.4	-0.4
	baz=222						
G64A	Maxfield	35.47	29	P	P	14 17 44.2	-0.1
	baz=221						
LSQQ	Lebel-sur-Quev	35.53	17	P	P	14 17 44.7	-0.1
	baz=206						
F63A	Nahmakanta, Br	35.65	28	P	P	14 17 45.4	-0.4
	baz=220						
PTGA	Pitinga	35.80	114	P	P	14 17 45.2	-2.3
	comp=Z,2.3nm,0.3s,baz=334,slow=22,SNR=3.4						
D60A	Saint Jean D'O	35.81	25	P	P	14 17 47.6	+0.5
	baz=216						
MATQ	Matagami	35.98	16	P	P	14 17 48.0	-0.5
	baz=204						
G65A	Princeton	36.00	30	P	P	14 17 48.8	+0.1
	baz=223						
F64A	Sherman	36.12	29	P	P	14 17 49.7	-0.1
	baz=221						
ETMB	Extrema	36.14	133	*e*P	P	14 17 49.7	-0.7
D61A	St Aubert, Com	36.34	26	P	P	14 17 51.7	+0.1
	baz=217						
E63A	Oxbow	36.50	28	P	P	14 17 53.0	0.0
	baz=221						
D62A	Allapoint, All	36.73	27	P	P	14 17 54.8	-0.2
	baz=219						
D62A	Allapoint, All	36.73	27	P	P	14 17 54.9	-0.1
D62A				IAmb	IAmb	14 17 55.1	
	comp=Z,8.9nm,0.6s						
E64A	Bridgewater	36.77	29	P	P	14 17 54.9	-0.4
	baz=221						
D63A	Stockholm	37.11	28	P	P	14 17 57.6	-0.5
	baz=220,SNR=5.6						
I05D	Terrebonne, OR	37.71	325	P	P	14 18 04.3	+1.0
	baz=130						
SAML	Samuel	37.77	128	P	P	14 18 01.1	-3.0
NEW	Newport	38.39	333	P	P	14 18 10.8	+1.9
	baz=139						
D04E	Lakebay	40.32	328	P	P	14 18 26.9	+2.1
	baz=131						
PB16	IPOC Station P	40.55	146	P	P	14 18 29.1	+1.5
PB16				IAmb	IAmb	14 18 30.5	
	comp=Z,15nm,0.7s						
MNMC	Minye Minye	41.16	146	P	P	14 18 34.4	+2.1
MCPB	Macapa, AP	42.75	108	*e*P	P	14 18 42.8	-2.2
PB01	IPOC Station P	42.79	148	P	P	14 18 46.8	+1.5
PB01				IAmb	IAmb	14 18 47.5	
	comp=Z,20nm,0.9s						
PB07	IPOC Station P	43.16	149	P	P	14 18 49.9	+1.6
PB07				IAmb	IAmb	14 18 50.7	
	comp=Z,26nm,0.8s						
PB09	IPOC Station P	43.55	148	P	P	14 18 53.3	+2.0
PB09				IAmb	IAmb	14 18 53.8	
	comp=Z,20nm,0.6s						
LVC	Limon Verde	44.39	148	P	P	14 19 00.3	+2.0
GO02	Mina Guanaco	46.22	151	P	P	14 19 14.2	+1.7
AC05	El Transito	49.10	154	P	P	14 19 35.9	+1.5
YKA	Yellowknife Ar	49.33	347	P	P	14 19 35.7	+0.2
	comp=Z,3.0nm,0.5s,baz=144,slow=8.0,SNR=61						
YKA				pP	pP	14 20 24.0	+0.1
	comp=Z,5.5nm,0.7s,baz=148,slow=7.8,SNR=20						
YKA				ScP	ScP	14 24 28.8	+0.1
	comp=Z,0.2nm,0.6s,baz=138,slow=3.8,SNR=2.5						
ARAG	Araguaiana, MT	50.65	126	*e*P	P	14 19 45.3	-0.7
PEXB	Peixe	51.50	120	*e*P	P	14 19 51.0	-1.4
BDFB	Brasilia	53.62	123	P	P	14 20 06.7	-1.4
	comp=Z,6.7nm,0.5s,baz=299,slow=8.9,SNR=9.9						
BDFB	Brasilia	53.62	123	P	P	14 20 06.3	-1.7
CPUP	Villa Florida	53.82	141	P	P	14 20 07.6	-1.5
	comp=Z,7.5nm,0.8s,baz=327,slow=7.3,SNR=16						
CPUP	Villa Florida	53.82	141	IAmb	IAmb	14 20 08.8	
	comp=Z,9.2nm,0.8s						
IPMB	Ipameri, GO	54.77	126	*e*P	P	14 20 14.6	-1.7
BI02	San Fabin de	55.71	160	P	P	14 20 23.6	+0.9
LC01	Cunco	57.55	161	P	P	14 20 36.5	+1.0
LC01				IAmb	IAmb	14 20 38.0	
	comp=Z,9.9nm,0.8s						
RES	Resolute Bay	59.01	359	P	P	14 20 44.1	-0.9
	comp=Z,2.3nm,0.6s,baz=198,slow=6.4,SNR=9.3						
RES				pP	pP	14 21 35.7	+0.4
	comp=Z,1.9nm,0.7s,baz=182,slow=8.3,SNR=4.5						
RES	Resolute Bay	59.01	359	P	P	14 20 43.8	-1.2
CPSB	Cacapava Do Su	59.12	141	*e*P	P	14 20 45.7	-0.8
PLCA	Paso Flores	59.64	161	P	P	14 20 51.1	+1.2
	comp=Z,11nm,0.8s,baz=339,slow=8.6,SNR=30						
PLCA	Paso Flores	59.64	161	*e*P	P	14 20 50.8	+0.9
GDU01	Guandu, BA	59.70	117	*e*P	P	14 20 48.0	-2.7
PLTB	Pedras Altas	59.99	142	*e*P	P	14 20 52.2	-0.2
SJMB	Sao Joao De Ma	60.77	122	*e*P	P	14 20 56.5	-1.4
BSFB	Barra de Sao F	61.11	122	*e*P	P	14 20 57.5	-2.6
ILAR	Eielson Array	61.20	336	P	P	14 21 00.8	+0.8
	comp=Z,0.4nm,0.7s,baz=113,slow=6.0,SNR=4.7						
ILAR				PcP	PcP	14 21 40.2	-0.3
	comp=Z,0.4nm,0.9s,baz=132,slow=1.3,SNR=2.7						
ILAR				pP	pP	14 21 49.9	-1.2
	comp=Z,4.2nm,1.2s,baz=126,slow=5.2,SNR=7.1						
RIB01	Linhares ES	61.72	123	*e*P	P	14 21 02.1	-2.1
ALF01	Guarapari-ES	62.12	124	*e*P	P	14 21 05.5	-1.4
A21K	Barrow	67.13	342	P	P	14 21 38.7	+0.4
	baz=109						
SPITS	Spitsbergen Ar	78.47	12	P	P	14 22 44.5	-0.5
	comp=Z,14nm,1.0s,baz=251,slow=1.5,SNR=4.2						
ESDC	Sonseca Array	78.84	52	P	P	14 22 46.1	-1.6
	comp=Z,1.2nm,0.7s,baz=294,slow=7.6,SNR=5.2						
NB2	NORSAR Subarra	82.76	29	P	P	14 23 07.6	-0.4
	comp=Z,1.2nm,0.6s,baz=289,slow=5.3						
NB2	NORSAR Subarra	82.76	29	P	pP	14 24 02.3	+0.4
	comp=Z,0.7nm,0.7s,baz=288,slow=5.1						
NOA	NORSAR Array B	82.76	29	P	P	14 23 07.9	-0.1
	comp=Z,2.2nm,0.7s,baz=290,slow=5.2,SNR=9.9						
NOA				pP	pP	14 24 02.8	+0.9
	comp=Z,1.6nm,0.9s,baz=290,slow=5.1,SNR=3.8						
ARCES	ARCESS Array B	84.60	18	P	P	14 23 16.1	-1.1
	comp=Z,2.5nm,0.6s,baz=306,slow=4.2,SNR=7.9						
SEY	Seymchan	87.12	336	P	P	14 23 30.2	+0.6
	comp=Z,0.3nm,0.3s,baz=180,slow=23,SNR=1.8						
FINES	FINESS Array B	89.06	25	P	P	14 23 37.2	-1.5
	comp=Z,1.2nm,0.5s,baz=309,slow=1.9,SNR=15						
FINES				pP	pP	14 24 32.5	-0.9
	comp=Z,2.1nm,0.7s,baz=336,slow=4.2,SNR=3.4						
FINES	FINESS Array B	89.06	25	P	P	14 23 37.1	-1.6
KEST	Kesra	90.04	53	P	P	14 23 43.2	-0.8
	comp=Z,2.7nm,0.6s,baz=280,slow=6.1,SNR=1.8						
MKAR	Makanchi Array	117.60	4	PKP	PKPdf	14 29 26.8	-1.9
	comp=Z,0.2nm,0.5s,baz=346,slow=1.5,SNR=1.7						
WRA	Warramunga Arr	135.58	257	PKP	PKiKP	14 30 04.7	-0.6
	comp=Z,1.5nm,0.7s,baz=82,slow=2.0,SNR=13						
ASAR	Alice Springs	136.01	252	PKhKP	PKPpre	14 29 56.0	
	comp=Z,0.3nm,0.4s,baz=109,slow=3.8,SNR=12						
ASAR				PKP	PKPdf	14 30 05.0	+0.6
	comp=Z,0.8nm,0.6s,baz=106,slow=3.3,SNR=5.1						
CMAR	Chiang Mai Arr	144.32	342	PKP	PKPab	14 30 17.6	-0.4
	comp=Z,1.0nm,0.4s,baz=344,slow=3.8,SNR=9.6						
CMAR				SKPbc	SKiKP	14 33 39.0	+0.6
	comp=Z,0.3nm,0.4s,baz=338,slow=2.1,SNR=4.2						

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*IDC **05** 14:25:06.3±1.5, 37°.07S×179°.74E, h0^{km}, mb4.1/4, mb1 4.3/5, mb1mx4.0/28, mbtmp4.2/5, ML4.2/1, MS3.3/1, Ms1 3.3/1, ms1mx2.6/37, Error ellipse: s-maj=39.8km s-min=34.9km az=7.0*

*WEL **05** 14:25:07.2, 38°S±6°×18°0W±°, h74^{km}±18^{km}, M4.0/33, ML4.3/33, MLv4.0/33, Error ellipse: s-maj=0.0km s-min=0.0km az=61.2*

*NEIC **05** 14:25:08.8±1.7, 37°.6S±0°.1×179°.98W±0°.04, h35^{km}±2^{km}, mb4.2/9, Error ellipse: s-maj=17.5km s-min=5.7km az=8.0*

*NOU **05** 14:25:14.1, 37°.96S×179°.63E, h110^{km}, MLv4.5, Off E. Coast of N. Island, N.Z.*

ISC 05 14:25:04.1±2.4**, 37°.63S**±0°.06×**179°.87W**±0°.08**, h3**^{km}±13^{km}**, n101, σ1^{s}.17**/111**, mb4.2**/8**, East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	1.37	262	P	Pg	14 25 31.0	+0.6
WMGZ				S	Sb	14 25 48.0	-0.2
MXZ	Matakaoa Point	1.45	272	Pn	Pb	14 25 31.4	-0.3
MXZ	Matakaoa Point	1.45	272	P	Pn	14 25 31.1	0.0
MXZ				S	Sn	14 25 47.9	-2.7
PUZ	Puketiti	1.54	253	P	Pb	14 25 33.5	+0.1
PUZ				S	Sn	14 25 53.3	+0.2
PKGZ	Pakihiroa	1.65	260	P	Pn	14 25 34.4	+0.5
PKGZ				S	Sn	14 25 53.9	-1.7
CNGZ	Carnagh Statio	1.74	240	P	Pb	14 25 37.1	+0.5
TWGZ	Tauwhareparae	1.78	252	P	Pb	14 25 37.1	-0.4
TWGZ				S	Sn	14 25 59.6	+0.6
HAZ	Te Kaha	1.86	265	P	Pn	14 25 37.7	+0.8
RUGZ	Raukumara Rang	1.97	259	P	Pn	14 25 39.2	+0.8
TKGZ	Te Karaka	1.97	245	P	Pn	14 25 39.6	+1.2
TKGZ				S	Sn	14 26 03.5	-0.2
RIGZ	Rimuhau	2.15	239	P	Pn	14 25 42.5	+1.6
RIGZ				S	Sn	14 26 08.6	+0.4
MWZ	Matawai	2.17	250	P	Pn	14 25 41.8	+0.6
MWZ				S	Sn	14 26 07.2	-1.4
PRGZ	Paritu Road	2.19	233	P	Pn	14 25 43.0	+1.6
RAGZ	Rawiri	2.31	247	P	Pn	14 25 44.2	+1.1
MHGZ	Mahia Peninsul	2.31	228	P	Pn	14 25 44.8	+1.7
KNZ	Kokohu	2.38	233	P	Pn	14 25 45.1	+1.1
URZ	Urewera	2.47	254	Pn	Pn	14 25 46.3	+1.1
	59nm,0.3s,baz=280,slow=1.6,SNR=462						
URZ				Sn	Sn	14 26 14.6	-1.2
	52nm,0.3s,baz=330,slow=22,SNR=11						
URZ	Urewera	2.47	254	Pn	Pn	14 25 46.6	+1.4
URZ	Urewera	2.47	254	P	Pn	14 25 46.5	+1.3
SNGZ	Shannon Statio	2.48	242	P	Pn	14 25 46.9	+1.5
WHRZ	Whale Island	2.51	264	P	Pn	14 25 47.1	+1.3
RTZ	Ruatahuna	2.67	247	P	Pn	14 25 49.6	+1.6
WHHZ	Waihua	2.69	237	P	Pn	14 25 49.6	+1.3
WHHZ				S	Sn	14 26 21.6	+0.2
RAHZ	Arahi	2.72	241	P	Pn	14 25 50.2	+1.6
EDRZ	Edgecumbe	2.72	259	P	Pn	14 25 50.1	+1.3
MUGZ	Murupara	2.78	251	P	Pn	14 25 50.5	+1.0
OPRZ	Ohinepanea	2.84	265	P	Pn	14 25 50.4	+0.1
MTHZ	Maungataniwha	2.86	244	P	Pn	14 25 52.0	+1.4
TARZ	Mount Tarawera	2.93	257	P	Pn	14 25 52.9	+1.3
RRRZ	Republican Roa	2.94	255	P	Pn	14 25 52.9	+1.2
ARHZ	Aropaoanui	2.95	235	P	Pn	14 25 53.2	+1.4
ARHZ				S	Sn	14 26 28.7	+0.9
NMHZ	Naumai	2.99	240	P	Pn	14 25 54.1	+1.6
TGRZ	Tauranga	3.07	267	P	Pn	14 25 53.9	+0.5
PRRZ	Plateau Road	3.07	252	P	Pn	14 25 54.3	+0.8
ALRZ	Allen Road	3.13	252	P	Pn	14 25 55.2	+0.9
HRRZ	Handcock Road	3.13	255	P	Pn	14 25 55.4	+1.1
CKHZ	Cape Kidnapper	3.13	229	P	Pn	14 25 55.4	+1.1
HSRZ	Hossack Road	3.14	256	P	Pn	14 25 56.0	+1.5
BKZ	Black Stump Fm	3.24	241		Pn	14 25 57.0	+1.2
BKZ	Black Stump Fm	3.24	241	P	Pn	14 25 57.0	+1.2
MCHZ	McNeill Hill	3.24	235	P	Pn	14 25 57.4	+1.5
KMRZ	Kaimai	3.33	265	P	Pn	14 25 55.8	-1.2
KAHZ	Kahuranaki	3.34	229	P	Pn	14 25 58.3	+1.1
KWHZ	Kaweka Forest	3.41	237	P	Pn	14 25 59.4	+1.1
HATZ	Hinemaiaia	3.42	247	P	Pn	14 25 58.8	+0.5
PXZ	Pawanui	3.50	226	P	Pn	14 25 59.6	+0.3
KUZ	Kuaotunu	3.63	283	P	Pn	14 26 00.7	-0.4
TOZ	Tahuroa Road	3.67	267	P	Pn	14 26 01.9	+0.2
BHHZ	Black Hill Sta	3.69	239	P	Pn	14 26 02.9	+0.9
WPHZ	Waipukurau	3.77	229	P	Pn	14 26 03.6	+0.6
TMVZ	Te Maari	3.78	246	P	Pn	14 26 03.9	+0.6
PNHZ	Pukenui	3.82	232	P	Pn	14 26 04.5	+0.6
OTVZ	Oturere	3.83	245	P	Pn	14 26 04.9	+0.9
MOVZ	Moawhango	3.86	241	P	Pn	14 26 05.1	+0.7
WNVZ	Wahianoa	3.94	243	P	Pn	14 26 06.3	+0.7
GRZ	Great Barrier	3.99	289	P	Pn	14 26 06.0	-0.1
MKAZ	Moumakai	3.99	276	P	Pn	14 26 06.2	+0.1
TSZ	Takapari Road	4.06	232	P	Pn	14 26 07.0	-0.1
DVHZ	Dannevirke	4.08	228	P	Pn	14 26 07.5	+0.2
PKVZ	Pokaka	4.10	245	P	Pb	14 26 12.7	-4.3
ETAZ	East Tamaki Re	4.20	278	P	Pn	14 26 09.7	+0.7
HIZ	Hauiti	4.25	256	P	Pn	14 26 11.4	+1.7
MBAZ	Motutapu North	4.26	280	P	Pn	14 26 11.1	+1.3
BFZ	Birch Farm	4.29	224	Pn	Pn	14 26 09.3	-0.9
BFZ	Birch Farm	4.29	224	P	Pn	14 26 09.6	-0.6
PRWZ	Pori Road	4.36	227	P	Pn	14 26 11.3	+0.2
EPAZ	Eden Park BICE	4.36	278	P	Pn	14 26 12.3	+1.1
POWZ	Post Office Ro	4.37	230	P	Pn	14 26 12.1	+0.7
HBAZ	Herne Bay Bore	4.38	279	P	Pn	14 26 12.5	+1.1
VRZ	Vera Road	4.47	249	P	Pn	14 26 14.7	+1.9
RVAZ	Riverhead Bore	4.51	279	P	Pn	14 26 14.1	+0.8
WAZ	Wanganui	4.55	241	P	Pn	14 26 16.8	+3.0
MRZ	Mangatainoka R	4.65	228	P	Pn	14 26 14.7	-0.5
LREZ	Lake Rotokare	4.85	246	P	Pn	14 26 19.0	+1.1
WCZ	Waipu Caves	4.94	288	P	Pn	14 26 19.6	+0.4
KHEZ	Kahui Hut	5.08	249	P	Pn	14 26 24.3	+3.1
MSWZ	Moikau Station	5.34	223	Pn	Pn	14 26 22.9	-1.8
DUWZ	D'Urville Isla	5.77	235	P	Pn	14 26 30.7	+0.2
OUZ	Omahuta	5.79	293	Pn	Pn	14 26 31.6	+0.8
OUZ	Omahuta	5.79	293	P	Pn	14 26 31.7	+0.8
NNZ	Nelson	6.33	233	P	Pn	14 26 37.3	-1.0
CTZ	Chatham Island	6.58	159	P	Pn	14 26 46.7	+5.0
INZ	Inchbonnie	8.37	230	P	Pn	14 27 05.8	-0.4
RPZ	Rata Peaks	9.19	226	Pn	Pn	14 27 16.0	-1.4
	0.7nm,0.3s,baz=50,slow=17,SNR=2.0						
RPZ				Sn	Sn	14 28 51.1	-10
	2.7nm,0.3s,baz=28,slow=20,SNR=9.4						
STKA	Stephens Creek	32.02	269	P	P	14 31 32.9	+1.2
	0.4nm,0.3s,baz=84,slow=10,SNR=3.1						

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HNR   Honiara           33.46 322  LR      LR       14 41 43.8
            comp=Z,46nm,18.6s,baz=172,slow=30
COEN  Coen              40.39 296  P       P        14 32 43.5  0.0
COEN                               IAmb    IAmb     14 32 45.0
            comp=Z,4.9nm,0.6s
AS31  Alice Springs     41.73 276  P       P        14 32 54.1 -0.4
AS31                               IAmb    IAmb     14 32 55.0
            comp=Z,2.7nm,0.6s
ASAR  Alice Springs     41.73 276  P       P        14 32 54.0 -0.6
            comp=Z,5.8nm,0.6s,baz=122,slow=8.1,SNR=112
ASAR                               PcP     PcP      14 34 51.4 +0.3
            comp=Z,0.3nm,0.6s,baz=124,slow=3.7,SNR=2.0
ASAR  Alice Springs     41.73 276  P       P        14 32 53.7 -0.8
FORT  Forrest           43.15 263  P       P        14 33 06.1 +0.2
WR0   Warramunga Arr    43.20 281  P       P        14 33 05.7 -0.8
WB2   Warramunga Arr    43.36 281  P       P        14 33 07.1 -0.7
WB2                                IAmb    IAmb     14 33 07.5
            comp=Z,2.5nm,0.6s
WRAB  Tennant Creek     43.36 281  P       P        14 33 06.8 -1.0
WRA   Warramunga Arr    43.37 281  P       P        14 33 07.1 -0.8
            comp=Z,1.5nm,0.4s,baz=120,slow=7.9,SNR=23
WRA                                PcP     PcP      14 34 57.1 +0.5
            comp=Z,0.5nm,0.8s,baz=123,slow=2.9,SNR=2.7
WRA   Warramunga Arr    43.37 281  P       P        14 33 06.8 -1.0
WB0   Warramunga Arr    43.42 281  P       P        14 33 07.4 -0.9
WB0                                IAmb    IAmb     14 33 08.3
            comp=Z,5.9nm,1.1s
FITZ  Fitzroy Crossi    51.22 277  P       P        14 34 09.3 +0.3
QSPA  South Pole Qui    52.50 180  P       P        14 34 24.5 +6.4
            comp=Z,0.7nm,0.8s,baz=45,slow=7.1,SNR=2.1
KBZ   Khabaz           147.28 294  PKPbc   PKiKP    14 44 50.2 -0.7
            comp=Z,2.0nm,0.8s,baz=122,slow=3.6,SNR=4.8
FINES FINESS Array B   151.19 334  PKPbc   PKiKP    14 44 59.4 +1.0
            comp=Z,1.0nm,0.4s,baz=58,slow=3.4,SNR=6.9
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*NNC **05** 14:28:47.5±17.0, 41°.23N×83°.21E, h0km, mb3.0, mpv2.6, Error ellipse: s-maj=136.7km s-min=84.4km az=157.0*

*SOME **05** 14:28:51.1, 42°.32N×82°.92E, h0km*

ISC 05 14:28:58.9±2.8**, 42°.1N**±0°.1×**82°.58E**±0°.09**, h13km, n11, σ2ˢ.50**/22**, 3C-2D, Northern Xinjiang**

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Code  Station Name        Δ°  AZ°   Phase ID          Time     Res
                                    Op      ISC      h  m  s   ISC
KTMS  Ketmen             2.15 311   eP      Pn       14 29 34.2 -0.5
            3.3nm,0.3s
KTMS                                eS      Sb       14 30 05.5 +1.0
            11nm,0.5s
SHLS  Shalkode           2.55 297   eP      Pn       14 29 38.2 -1.9
            30nm,0.5s
SHLS                                eS      Sn       14 30 11.7 +0.6
            24nm,0.7s
PDGK  Podgornoye         2.61 300  ⇓Pn      Pb       14 29 44.5 -1.1
            1.4nm,0.6s
PDGK                               ⇓Sn      Sg       14 30 23.3 +0.5
            5.9nm,0.7s
UZB   Uzynbulak          2.84 294   eP      Pb       14 29 48.1 -1.5
            4.2nm,0.4s
UZB                                 eS      Sg       14 30 28.8 -1.5
            6.9nm,0.6s
DJR   Jarkent            3.06 319   eP      Pn       14 29 49.0 +2.0
            0.8nm,0.3s
DJR                                 eS      Sb       14 30 30.7 +0.3
            3.5nm,0.6s
KPKS  Kokpek             3.20 297   eP      Pb       14 29 53.8 -1.8
            2.5nm,0.3s
KPKS                                eS      Sb       14 30 39.2 +4.7
            7.7nm,0.4s
SATY  Saty               3.24 289   eP      Pb       14 29 54.2 -2.2
            1.7nm,0.4s
SATY                                eS      Sb       14 30 40.1 +4.3
            2.6nm,0.6s
MNBS  Baschi             3.67 305   eP      Pb       14 30 00.5 -3.1
            0.6nm,0.4s
MNBS                                eS      Sb       14 30 50.6 +2.5
            5.2nm,0.5s
KAPS  Kapalarasan        3.98 325   eP      Pb       14 30 04.4 -4.6
            0.5nm,0.4s
KAPS                                eS      Sb       14 30 56.9 -0.2
            1.7nm,0.5s
MK31  Makanchi Array     4.74 358   Pn      Pn       14 30 13.8 +3.7
            0.3nm,0.5s,baz=157,slow=15,SNR=7.2
MK31                               ⇑Sn      Sb       14 31 20.3 +1.5
            1.4nm,0.7s,baz=162,slow=25,SNR=6.5
MAKZ  Makanchi           4.77 355  ⇑Pn      Pn       14 30 11.7 +1.2
            0.7nm,0.8s
MAKZ                               ⇑Sn      Sb       14 31 20.7 +1.0
            2.4nm,1.2s
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*JMA **05** 14:32:25.5±0.3, 44°.00N×148°.07E, h0km, M3.9*

*SKHL **05** 14:32:25.9±0.3, 44°.40N×148°.20E, h31km±7km, mb4.5/3*

ISC 05 14:32:23.3±2.3**, 44°.31N**±0°.08×**148°.2E**±0°.1**, h10km, n17, σ1ˢ.66**/28**, Kuril Islands**

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Code  Station Name        Δ°  AZ°   Phase ID          Time     Res
                                    Op      ISC      h  m  s   ISC
KUR   Kuril'sk           0.95 348  i P      Pg       14 32 41.2 -0.3
KUR                                  AMB    AMB      14 32 42.1
            122nm,0.2s
KUR                                i S      Sg       14 32 52.7 -1.1
KUR                                  A      A        14 32 54.0
            926nm,0.2s
KUR                                  A      A        14 32 54.0
            800nm,0.2s
YUK   Yuzh-Kuril'sk      1.67 261  i P      Pb       14 32 54.1  0.0
YUK                                  AMB    AMB      14 32 57.0
            134nm,0.2s
YUK                                 eS      Sb       14 33 15.0 -0.2
YUK                                  A      A        14 33 19.0
            271nm,0.2s
YUK                                  A      A        14 33 19.0
            324nm,0.2s
GRPR  Tuman              1.74 260   eP      Pb       14 32 54.9 -0.4
GRPR                                 AMB    AMB      14 32 57.0
            119nm,0.2s
GRPR                                eS      Sb       14 33 16.5 -0.8
GRPR                                 A      A        14 33 22.0
            452nm,0.2s
GRPR                                 A      A        14 33 22.0
            65nm,0.2s
NEM2  Nemuro 2           1.98 242    P      Pb       14 32 58.2 -1.2
NEM2                                eS      Sn       14 33 22.2 +0.5
GLVR  Golovnino          1.98 254   eP      Pb       14 32 58.0 -1.4
GLVR                                eS      Sn       14 33 22.4 +0.6
GLVR                                 A      A        14 33 30.0
            173nm,0.2s
GLVR                                 A      A        14 33 30.0
            428nm,0.2s
NMR   Nemuro--Hokkai     1.99 243  i P      Pb       14 32 58.0 -1.5
NMR                                 eS      Sn       14 33 22.0 +0.1
JRA   Rausu              2.21 261    P      Pb       14 33 03.0 -0.4
JRA                                 eS      Sb       14 33 30.1 -0.7
JNSB  Nemuroshibetsu     2.33 258    P      Pb       14 33 04.6 -0.8
JKHN  Kushirohamanak     2.49 242    P      Pb       14 33 05.6 -2.5
JNK   Nakash             2.58 255    P      Pb       14 33 07.7 -2.0
JNK                                 eS      Sn       14 33 38.3 +1.7
JAK   Akkeshi            2.83 244    P      Pn       14 33 10.3 +1.8
JAK                                 eS      Sn       14 33 43.3 +0.6
JTKR  Abashiri--Toko     3.08 265    P      Pb       14 33 16.3 -1.7
JAR   Ashorobuto         3.33 254    P      Pb       14 33 18.8 -3.6
JCH   Churui             3.88 246    P      Pn       14 33 25.4 +2.5
JSE   Soyaes             4.03 281    P      Pn       14 33 27.2 +2.2
JKB   Kayabe             5.75 248    P      Pn       14 33 51.3 +2.7
JKB                                 eS      Sn       14 34 54.8 +0.2
JOT   Ohata              5.99 243    P      Pn       14 33 54.0 +2.1
JOT                                 eS      Sn       14 34 58.7 -1.7
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*BJI **05** 14:42:25.0±0.0, 7°.80S×117°.30E, h306km, mB4.5/18, mb4.3/29*

*IDC **05** 14:42:27.7±1.1, 7°.72S×117°.28E, h312km±11km, mb3.9/16, mb1 4.0/21, mb1mx3.9/46, mbtmp4.6/21, Error ellipse: s-maj=13.5km s-min=7.4km az=58.0*

*DJA **05** 14:42:27.3±0.1, 8°S±2°×11°7E±°, h298km±2km, M4.3/29, mb4.4/29, mB4.8/7, MLv4.5/25, Mw(mB)4.1/7*

*NEIC **05** 14:42:27.1±1.6, 7°.71S±0°.08×117°.29E±0°.07, h306km±7km, mb4.2/34, Error ellipse: s-maj=12.1km s-min=10.6km az=178.0*

ISC 05 14:42:26.8±0.3**, 7°.75S**±0°.05×**117°.30E**±0°.05**, h306km, n158, σ1ˢ.36**/169**, mb4.2**/40**, 1C, Bali Sea**

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Code  Station Name        Δ°  AZ°   Phase ID          Time     Res
                                    Op      ISC      h  m  s   ISC
TWSI  Taliwang, Sumb     1.06 203   P       Pn       14 43 07.1 -1.1
TWSI                                S       S        14 43 38.8 -2.3
PLAI  Plampang           1.17 156   P       Pn       14 43 07.4 -1.3
PLAI                                S       S        14 43 38.9 -3.2
SRBI  Singaraja          2.09 261   P       Pn       14 43 14.7 -0.2
DNP   Denpasar           2.26 246   P       Pn       14 43 15.8 -0.5
ABJI  Asem Bagus         3.04 269   P       Pn       14 43 24.0 +0.6
JAGI  Jajag, Banyuwa     3.19 257   Pn      Pn       14 43 24.1 -0.9
JAGI  Jajag, Banyuwa     3.19 257   P       Pn       14 43 23.5 -1.5
KMMI  Kalianget          3.37 282   P       Pn       14 43 29.2 +2.4
WSI   Waingapu           3.53 123   P       Pn       14 43 26.3 -2.1
BSSI  Bau Bau, Buton     3.55  63   P       Pn       14 43 29.2 +0.6
KAPI  Kappang            3.65  42   P       Pn       14 43 30.3 +0.6
            5.5nm,0.3s,baz=218,slow=8.5,SNR=14
KAPI                                S       S        14 44 17.1 -3.0
            1.6nm,0.3s,baz=178,slow=12,SNR=1.4
KAPI  Kappang            3.65  42   Pn      Pn       14 43 29.3 -0.4
BKSI  Bulukumba          3.70  50   P       Pn       14 43 31.2 +1.0
BASI  Baing, Sumba       4.07 127   P       Pn       14 43 32.8 -1.3
BNSI  Bone               4.34  40   P       Pn       14 43 39.2 +2.0
EDFI  Ende, Flores       4.46 103   P       Pn       14 43 36.9 -1.7
SPSI  Sidrap Palu        4.49  33   P       Pn       14 43 39.7 +0.8
KBKI  Kotabaru           4.56 346   P       Pn       14 43 40.9 +1.2
BBKI  Banjar Baru        4.91 330   P       Pn       14 43 45.4 +1.8
            0.6nm2µm139nm,1.2s
MMRI  Maumere            4.97 101   Pn      Pn       14 43 43.6 -0.7
MMRI  Maumere            4.97 101   P       Pn       14 43 43.6 -0.7
TTSI  Tana Toraja        5.30  28   P       Pn       14 43 50.6 +2.4
            0.2nm74nm,0.9s
UGM   Wanagama           6.71 268   Pn      Pn       14 44 05.2 +0.3
UGM   Wanagama           6.71 268   P       Pn       14 44 04.9  0.0
            0.7nm64nm,0.9s
BATI  Baumata            6.75 112   P       Pn       14 44 04.6 -0.8
            26nm,0.3s,baz=314,slow=2.4,SNR=43
BATI                                S       S        14 45 18.7 -6.3
            47nm,0.3s,baz=129,slow=23,SNR=12
BATI  Baumata            6.75 112   P       Pn       14 44 04.5 -0.8
            0.5nm1µm78nm,0.6s
MTKI  Muara Teweh, K     7.17 340   P       Pn       14 44 11.6 +1.1
            0.4nm37nm,0.8s
SOEI  Soe                7.17 107   Pn      Pn       14 44 09.7 -0.8
SOEI  Soe                7.17 107   P       Pn       14 44 09.8 -0.8
            1.0nm2µm63nm,0.6s
MPSI  Mapaga             8.44  18   P       Pn       14 44 28.1 +2.2
            21nm,0.8s
CISI  Cisompet, Garu     9.40 271   Pn      Pn       14 44 38.2 +0.4
CISI  Cisompet, Garu     9.40 271   P       Pn       14 44 36.8 -0.9
            2µm47nm,0.4s
TOLI2 Tolitoli           9.46  22   Pn      Pn       14 44 40.2 +1.8
LEM   Lembang            9.64 275   P       Pn       14 44 41.8 +1.0
            2.7nm,0.3s,baz=64,slow=6.1,SNR=8.1
GTOI  Gorontalo         10.09  35   P       P        14 44 50.2 +0.8
            21nm,1.0s
SANI  Sanana            10.34  57   P       P        14 44 53.5 +1.3
            43nm,0.7s
CBJI  Citeko            10.45 277   P       P        14 44 53.8 +0.4
KSM   Kuching           11.51 322   P       P        14 45 05.5 +0.4
XMI   Christmas Isla    11.77 256   P       P        14 45 09.0 +0.9
            57nm,1.0s
XMIS  Christmas Isla    11.81 256           P        14 45 08.7 +0.1
XMIS  Christmas Isla    11.81 256   P       P        14 45 09.0 +0.5
KLSI                    12.86 283   P       P        14 45 21.2 +1.1
            21nm,0.8s
KASI  Kota Agung        12.90 279   P       P        14 45 21.1 +0.5
            1µm36nm,0.4s
FITZ  Fitzroy Crossi    13.11 143   P       P        14 45 23.8 +0.9
            6.3nm,0.3s,baz=339,slow=9.2,SNR=119
FITZ                                S       S        14 47 51.3 +3.6
            0.7nm,0.3s,baz=178,slow=22,SNR=2.8
FITZ  Fitzroy Crossi    13.11 143           P        14 45 23.9 +1.1
KKM   Kota Kinabalu     13.74 355   P       Pn       14 45 30.5 +0.1
PSA00 Pilbara Seismi    13.96 170           P        14 45 32.8 +0.6
PSA00 Pilbara Seismi    13.96 170   P       P        14 45 32.9 +0.6
MTN   Manton Dam        14.52 112           Pn       14 45 39.8 +0.2
MNAI  Manna             14.65 282   P       P        14 45 40.1 +0.2
            270nm,1.4s
GIRL  Giralia           15.10 191   P       P        14 45 45.1 +0.4
SIJI  Sorong            15.51  65   P       P        14 45 48.9 -0.5
            0.4nm,0.3s,baz=211,slow=16,SNR=2.1
FAKI  Fak Fak           15.64  73   P       P        14 45 51.0 +0.2
FAKI  Fak Fak           15.64  73   P       P        14 45 50.8  0.0
            26nm,1.2s
WB0   Warramunga Arr    20.43 128   P       P        14 46 42.1 +0.2
WB0                                 IAmb    IAmb     14 46 43.5
            comp=Z,9.3nm,1.0s
WRA   Warramunga Arr    20.48 128   P       P        14 46 42.5  0.0
            comp=Z,5.3nm,0.4s,baz=300,slow=12,SNR=54
WRA                                 S       S        14 50 13.2 +0.6
            comp=Z,1.7nm,0.8s,baz=306,slow=16,SNR=4.5
WRA   Warramunga Arr    20.48 128   P       P        14 46 42.0 -0.4
WRAB  Tennant Creek     20.49 128   P       P        14 46 42.7 +0.2
WRAB                                IAmb    IAmb     14 46 44.6
            comp=Z,11nm,0.7s
WB2   Warramunga Arr    20.50 128   P       P        14 46 42.7 +0.1
WB2                                 IAmb    IAmb     14 46 44.2
            comp=Z,13nm,0.9s
WR0   Warramunga Arr    20.65 128   P       P        14 46 44.5 +0.4
WR0                                 IAmb    IAmb     14 46 46.4
            comp=Z,22nm,1.1s
KULM  Kulim             21.06 307   P       P        14 46 48.8 +0.7
KULM                                IAmb    IAmb     14 46 55.6
            comp=Z,10nm,1.0s
PSI   Prapat            21.11 299   P       P        14 46 47.8 -0.9
            comp=Z,6.1nm,0.5s,baz=180,slow=20,SNR=6.0
MORW  Morawa            21.24 183   P       P        14 46 50.6 +1.0
AS31  Alice Springs     22.45 137   P       P        14 47 01.9 +1.2
AS31                                IAmb    IAmb     14 47 03.4
            comp=Z,7.5nm,0.6s
ASAR  Alice Springs     22.45 137   P       P        14 47 01.8 +1.1
            comp=Z,18nm,0.5s,baz=311,slow=9.0,SNR=429
ASAR                                PcP     PcP      14 50 44.6 +0.3
            comp=Z,1.9nm,0.4s,baz=310,slow=1.8,SNR=9.6
ASAR                                ScP     ScP      14 53 51.2 -1.3
            comp=Z,0.7nm,0.7s,baz=276,slow=2.6,SNR=2.8
NWAO  Narrogin (SRO)    25.05 180   P       P        14 47 24.7 +0.7
            comp=Z,6.9nm,0.4s,baz=4.0,slow=8.7,SNR=15
NWAO  Narrogin (SRO)    25.05 180   P       P        14 47 25.1 +1.1
NWAO                                IAmb    IAmb     14 47 25.7
            comp=Z,6.7nm,0.8s
NWAO  Narrogin (SRO)    25.05 180   P       P        14 47 25.1 +1.1
NWAO                                IAmb    IAmb     14 47 25.7
            comp=Z,8.4nm,0.8s
COEN  Coen              26.14 106   P       P        14 47 34.4 +0.4
BBOO  Buckleboo         30.41 148   P       P        14 48 12.9 +1.4
BBOO                                IAmb    IAmb     14 48 13.2
            comp=Z,11nm,0.8s
LAMP  Lampang           31.39 326   P       P        14 48 23.4 +3.3
CM04  Chiang Mai Arr    31.65 325   P       P        14 48 24.0 +1.6
CM05  Chiang Mai Arr    31.67 325   P       P        14 48 24.1 +1.5
CM01  Chiang Mai Arr    31.68 325   P       P        14 48 24.0 +1.3
CM09  Chiang Mai Arr    31.68 325   P       P        14 48 24.3 +1.6
CM36  Chiang Mai Arr    31.68 326   P       P        14 48 23.0 +0.3
CM02  Chiang Mai Arr    31.70 325   P       P        14 48 24.4 +1.5
CM13  Chiang Mai Arr    31.71 325   P       P        14 48 24.0 +1.1
CM31  Chiang Mai Arr    31.72 325   P       P        14 48 24.0 +1.0
CMAR  Chiang Mai Arr    31.72 325   P       P        14 48 24.4 +1.4
            comp=Z,6.8nm,0.4s,baz=153,slow=6.8,SNR=34
CM35  Chiang Mai Arr    31.78 326   P       P        14 48 24.0 +0.5
CM34  Chiang Mai Arr    31.92 326   P       P        14 48 26.0 +1.2
CM32  Chiang Mai Arr    31.93 325   P       P        14 48 26.0 +1.2
PAYA  Payao             31.95 328   P       P        14 48 26.0 +1.0
CMMT  Chiang Mai        32.00 326   P       P        14 48 25.8 +0.3
CHTO  Chiang Mai        32.00 326   P       P        14 48 26.5 +1.0
CHTO                                IAmb    IAmb     14 48 27.0
            comp=Z,4.5nm,0.7s
CM33  Chiang Mai Arr    32.01 326   P       P        14 48 26.0 +0.5
STKA  Stephens Creek    32.99 140   P       P        14 48 35.4 +1.6
            comp=Z,7.9nm,0.4s,baz=320,slow=8.3,SNR=50
STKA                                PcP     PcP      14 51 09.6 -0.4
            comp=Z,1.7nm,0.6s,baz=348,slow=8.4,SNR=2.0
STKA                                ScP     ScP      14 54 22.8 -1.9
            comp=Z,2.0nm,0.8s,baz=338,slow=11,SNR=3.4
STKA  Stephens Creek    32.99 140   P       P        14 48 35.4 +1.6
TOO   Toolangi          39.17 144   P       P        14 49 28.6 +2.7
ARMA  Armidale          39.25 130   P       P        14 49 28.9 +2.1
CAN   Canberra          39.95 138   P       P        14 49 34.3 +1.9
XAN   Xi'an             42.31 350   P       P        14 49 51.4  0.0
XAN                                 pmax    pmax
            comp=Z,11nm,0.8s
JNU   Nakatsue          42.65  17   P       P        14 49 54.3 +0.2
JHS   Saijyo            45.07  18   P       P        14 50 14.3 +1.2
TAPN  Taplejung         45.15 322  eP       P        14 50 14.7 +0.5
KSAR  Wonju Array Be    46.03  12   P       P        14 50 21.9 +1.3
KSRS  Korea Array       46.05  12   P       P        14 50 21.8 +1.0
            comp=Z,8.3nm,0.9s,baz=187,slow=8.6,SNR=19
JWT   Wachi             46.08  21   P       P        14 50 22.0 +1.0
JWT                                 IAmb    IAmb     14 50 26.2
            comp=Z,10nm,0.8s
GUN   Gumba             46.68 321  eP       P        14 50 25.8 -0.4
            comp=Z,19nm,0.8s
PKI   Pulchoki          46.74 320  eP       P        14 50 25.7 -1.0
            comp=Z,10nm,0.8s
PKIN  Phulchoki         46.75 320  eP       P        14 50 25.8 -0.9
            comp=Z,5.1nm,0.5s
DMN   Daman             46.96 320  eP       P        14 50 27.6 -0.7
            comp=Z,21nm,0.9s
KKN   Kakani            46.98 320  eP       P        14 50 27.6 -0.7
GKN   Gorkha            47.53 320  eP       P        14 50 31.7 -0.8
            comp=Z,7.8nm,0.4s
MAJO  Matsushiro        48.23  23   P       P        14 50 37.0 -0.5
MAJO                                IAmb    IAmb     14 50 45.0
            comp=Z,12nm,1.1s
MAT   Matsushiro        48.23  23   P       P        14 50 36.5 -1.0
MJAR  Matsushiro Arr    48.23  23   P       P        14 50 36.9 -0.6
            comp=Z,7.0nm,0.8s,baz=197,slow=8.5,SNR=14
DANN  Dangsing          48.33 319  eP       P        14 50 37.9 -0.9
            comp=Z,18nm,0.5s
JSD   Sado              49.57  22   P       P        14 50 47.6 +0.1
GTA   Gaotai            49.64 342  ⇑P       P        14 50 49.2 +1.0
GTA                                 pmax    pmax
            comp=Z,11nm,1.0s
JMM   Marumori          50.40  24   P       P        14 50 54.0 +0.3
JTM   Tenmabayashi      53.02  23   P       P        14 51 12.9 -0.1
JTM                                 IAmb    IAmb     14 51 17.4
            comp=Z,11nm,0.9s
MDJ   Mudanjiang        53.29  11   P       P        14 51 14.9 +0.1
USRK  Ussuriysk Ar.     53.39  13   P       P        14 51 15.8 +0.3
            comp=Z,9.7nm,0.6s,baz=172,slow=6.8,SNR=18
ULN   Ulaanbaatar       56.11 352   P       P        14 51 34.9 -0.2
ULN                                 IAmb    IAmb     14 51 36.2
            comp=Z,8.2nm,0.9s
SONM  Songino Array     56.17 351   P       P        14 51 35.7 +0.2
            comp=Z,12nm,0.7s,baz=169,slow=9.2,SNR=85
SONM  Songino Array     56.17 351   P       P        14 51 35.9 +0.3
JKA   Kamikawa-asahi    56.47  22   P       P        14 51 37.4  0.0
KSH   Kashi             60.61 324   P       P        14 52 05.4 -0.7
KSH                                 PcP     PcP      14 52 48.7 +1.5
KSH                                 S       S        14 59 50.7 -7.0
KSH                                 pmax    pmax
            comp=Z,5.0nm,1.1s
KSH                                 pmax    pmax
            comp=Z,110nm,5.0s
KSH                                 LR      LR
            comp=Z,140nm,6.9s
KSH                                 LR      LR
            comp=Z,130nm,11.5s
KSH                                 LR      LR
            comp=Z,470nm,5.9s
SHLS  Shalkode          61.22 329  eP       P        14 52 08.3 -1.9
            baz=329
UZB   Uzynbulak         61.44 329  eP       P        14 52 11.1 -0.6
            baz=329
SATY  Saty              61.69 328  eP       P        14 52 12.7 -0.6
            baz=328
KPKS  Kokpek            61.84 329  eP       P        14 52 13.3 -0.9
            comp=Z,6.1nm,1.0s,baz=329
ZSN   Zaisan            62.01 336  eP       P        14 52 14.5 -0.6
            baz=336
KBL   Kabul             62.02 316   P       P        14 52 14.2 -1.6
TNSS  Tian-Shan         62.44 328  eP       P        14 52 17.7 -0.9
            baz=328
MDOK  Medeo             62.48 328  eP       P        14 52 17.6 -0.9
            baz=328
MK31  Makanchi Array    62.59 334   P       P        14 52 18.8 -0.2
MKAR  Makanchi Array    62.59 334   P       P        14 52 18.6 -0.4
            comp=Z,2.8nm,0.4s,baz=153,slow=6.1,SNR=62
MKAR                                PcP     PcP      14 52 54.3 -0.6
            comp=Z,1.1nm,0.7s,baz=143,slow=4.0,SNR=4.8
MAKZ  Makanchi          62.74 333   P       P        14 52 19.4 -0.6
CHKK  Chushkaly         62.98 328  eP       P        14 52 20.2 -1.4
            baz=328
TDK   Taldyqorghan      63.07 330  eP       P        14 52 21.0 -1.2
            comp=Z,6.6nm,1.0s,baz=330
KUU   Kurty             63.35 328  eP       P        14 52 22.4 -1.6
            comp=Z,6.4nm,1.5s,baz=328
WSAR  Wadi Sarin        65.07 300   P       P        14 52 34.1 -1.4
            comp=Z,3.9nm,0.7s,baz=101,slow=7.3,SNR=2.6
DZA   Taraz             65.45 324  eP       P        14 52 36.1 -1.6
            comp=Z,2.3nm,0.4s,baz=324
IUG   Iuzhnay           65.76 323  eP       P        14 52 38.6 -1.1
            comp=Z,4.0nm,0.9s,baz=323
KKAR  Karatay Array     66.06 324   P       P        14 52 40.1 -1.4
SEM   Semipalatinsk     66.22 335  eP       P        14 52 40.8 -1.8
            baz=335
KURK  Kurchatov         67.14 334   P       P        14 52 47.5 -0.5
KURK                                IAmb    IAmb     14 52 48.5
            comp=Z,4.8nm,1.0s
ZAA0  Zalesovo Array    67.29 340   P       P        14 52 47.6 -1.3
ZAA0                                IAmb    IAmb     14 52 48.5
            comp=Z,4.4nm,0.8s
ZALV  Zalesovo Beam     67.29 340   P       P        14 52 47.9 -1.0
            comp=Z,4.2nm,0.7s,baz=137,slow=3.9,SNR=14
BRZS  Berezniki         69.32 331  eP       P        14 53 00.8 -0.8
            comp=Z,2.3nm,0.7s,baz=331
PETK  Petropavlovsk-    69.63  25   P       P        14 53 04.1 +0.8
            comp=Z,2.9nm,0.8s,baz=180,slow=1.2,SNR=5.0
PETK  Petropavlovsk-    69.63  25   P       P        14 53 03.8 +0.4
KBD   Kabd              76.28 302  eP                14 53 40.7
RDF   Al-Radifah        76.33 302  eP                14 53 40.7
MIB   Mutribah          76.76 303  eP                14 53 43.0
RST   Umm Al-Ruwaisa    76.96 303  eP                14 53 44.1
KMBO  Kilima Mbogo      79.98 270   P       P        14 54 03.7 +0.1
            comp=Z,2.3nm,0.7s,baz=43,slow=12,SNR=4.4
KBZ   Khabaz            84.21 315   P       P        14 54 24.3  0.0
            comp=Z,2.2nm,0.9s,baz=252,slow=8.4,SNR=3.7
YKA   Yellowknife Ar   113.74  24   PKiKP   PKiKP    15 00 28.1 -0.7
            comp=Z,0.4nm,0.4s,baz=330,slow=1.1,SNR=10
TORD  Torodi Ar. Bea   116.58 281   PKP     PKPdf    15 00 34.6 -1.0
            comp=Z,1.2nm,0.5s,baz=33,slow=2.0,SNR=8.2
NVAR  Mina Array Bea   121.51  49   PKP     PKPdf    15 00 44.5 -0.3
            comp=Z,0.5nm,0.7s,baz=322,slow=1.9,SNR=4.1
TXAR  Lajitas Array    135.95  55   PKP     PKPdf    15 01 12.7 +0.4
            comp=Z,0.3nm,0.8s,baz=270,slow=1.8,SNR=2.6
WVT   Waverly          143.61  35   PKPdf   PKPbc    15 01 24.4 +0.2
Q51A  Peebles          143.74  28   PKPdf   PKPab    15 01 24.2 +0.5
U49A  Red Boiling Sp   144.47  33           PKPab    15 01 26.7 +0.1
SSPA  Standing Stone   144.56  20           PKPab    15 01 26.8  0.0
T50A  Nancy            144.59  31           PKPab    15 01 26.6 -0.4
CPUP  Villa Florida    145.72 189   PKPbc   PKPbc    15 01 30.9 +0.2
            comp=Z,6.5nm,0.8s,baz=170,slow=2.1,SNR=14
BDFB  Brasilia         152.58 212   PKPbc   PKPbc    15 01 48.8 +0.5
            comp=Z,3.6nm,0.5s,baz=62,slow=0.3,SNR=5.2
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*SOME **05** 14:57:05.4, 41°.93N×79°.28E, h10km*

*NNC **05** 14:57:05.1±1.4, 41°.83N×79°.39E, h0km, mb3.7, mpv3.5, Error ellipse: s-maj=10.0km s-min=5.5km az=152.0*

*KRNET **05** 14:57:05.4±0.1, 41°.82N×79°.24E, h9km, mb2.8*

ISC 05 14:57:08.1±1.5**, 41°.95N**±0°.06×**79°.33E**±0°.04**, h10km, n62, σ1ˢ.29**/104**, 22C-13D, Kyrgyzstan-Xinjiang border region**

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Code  Station Name        Δ°  AZ°   Phase ID          Time     Res
                                    Op      ISC      h  m  s   ISC
PRZ   Przheval'sk        0.87 308 ⇑iP       Pg       14 57 23.1 -1.8
            baz=18
PRZ                               ⇑iS       Sg       14 57 36.1 -0.2
            baz=18
SHLS  Shalkode           1.21   5  eP       Pn       14 57 30.4 -0.8
            161nm,0.2s
SHLS                               eS       Sn       14 57 48.8 +1.1
            133nm,0.4s
SHLS  Shalkode           1.21   5   P       Pn       14 57 30.4 -0.8
            161nm,0.2s
SHLS                                S       Sn       14 57 48.4 +0.7
            133nm,0.4s
UZB   Uzynbulak          1.22 349  eP       Pn       14 57 29.2 -2.1
            18nm,0.2s
UZB                                eS       Sb       14 57 46.8 -0.4
            50nm,0.2s
UZB   Uzynbulak          1.22 349   P       Pn       14 57 29.0 -2.3
            18nm,0.2s
UZB                                 S       Sb       14 57 46.2 -0.9
            50nm,0.2s
SATY  Saty               1.30 329  eP       Pn       14 57 31.1 -1.4
            5.7nm,0.1s
SATY                               eS       Sb       14 57 49.1 -0.4
            121nm,0.2s
SATY  Saty               1.30 329   P       Pn       14 57 30.9 -1.6
            5.7nm,0.1s
SATY                                S       Sb       14 57 49.4 -0.1
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	121nm,0.2s						
PDGK	Podgornoye	1.38	5	P	Pn	14 57 31.9	-1.7
	11nm,0.2s						
PDGK				S	Sn	14 57 51.0	-1.0
	24nm,0.3s						
PDGK	Podgornoye	1.38	5	⇑P	Pn	14 57 31.9	-1.7
	8.2nm,0.3s						
PDGK				⇓S	Sg	14 57 56.3	+3.7
	100nm,0.7s						
ANVS	Anan'yevo	1.49	305	⇓*i*P	Pn	14 57 34.1	-1.0
	baz=10.0						
ANVS				⇓*i*S	Sb	14 57 55.4	+0.5
	baz=10.0						
KPKS	Kokpek	1.59	343	*e*P	Pn	14 57 36.0	-0.3
	76nm,0.2s						
KPKS				*e*S	Sb	14 57 57.8	+0.1
	113nm,0.2s						
KDJ	Kajisay	1.61	277	⇑*i*P	Pn	14 57 34.7	-2.1
	baz=82						
KDJ				⇑*i*S	Sn	14 57 56.4	-1.3
	baz=82						
KTMS	Ketmen	1.67	26	*e*P	Pn	14 57 36.9	-0.7
	39nm,0.2s						
KTMS				*e*S	Sb	14 57 59.8	-0.5
	28nm,0.4s						
KTMS	Ketmen	1.67	26	P	Pn	14 57 36.9	-0.7
	39nm,0.2s						
KTMS				S	Sb	14 57 59.8	-0.5
	28nm,0.4s						
KURS	Kuram	1.76	331	*e*P	Pb	14 57 39.8	-0.7
	8.1nm,0.2s						
KURS				*e*S	Sg	14 58 04.3	-0.3
	32nm,0.6s						
KURS	Kuram	1.76	331	P	Pb	14 57 39.8	-0.7
	8.1nm,0.2s						
KURS				S	Sg	14 58 04.3	-0.3
	32nm,0.6s						
TNSS	Tian-Shan	2.07	302	*e*P	Pb	14 57 44.7	-1.3
	14nm,0.3s						
TNSS				*e*S	Sb	14 58 13.1	+1.1
	23nm,0.3s						
TNSS	Tian-Shan	2.07	302	Pg	Pb	14 57 44.7	-1.3
	14nm,0.3s						
TNSS				Lg	Lg	14 58 13.1	
	23nm,0.3s						
MDOK	Medeo	2.08	306	*e*P	Pb	14 57 44.8	-1.2
	14nm,0.2s						
MDOK				*e*S	Sb	14 58 12.9	+1.0
	44nm,0.6s						
MDOK	Medeo	2.08	306	Pn	Pb	14 57 44.2	-1.7
	9.6nm,0.6s						
MDOK				Sn	Sb	14 58 12.8	+1.0
	64nm,0.4s						
MDOK	Medeo	2.08	306	Pg	Pb	14 57 44.8	-1.2
	14nm,0.2s						
MDOK				Lg	Lg	14 58 12.9	
	44nm,0.6s						
KOTS	Kotyrbulak	2.08	309	*e*P	Pb	14 57 44.7	-1.3
	46nm,0.3s						
KOTS				*e*S	Sb	14 58 13.3	+1.3
	59nm,0.3s						
KOTS	Kotyrbulak	2.08	309	Pg	Pb	14 57 44.7	-1.3
	46nm,0.3s						
KOTS				Lg	Lg	14 58 13.3	
	59nm,0.3s						
KNDC	Almaty	2.16	307	⇑Pn	Pn	14 57 43.3	-0.9
	11nm,0.3s						
KNDC				⇑Sn	Sb	14 58 16.0	+1.9
	45nm,0.5s						
MNBS	Baschi	2.23	343	*e*P	Pb	14 57 47.1	-1.5
	16nm,0.2s						
MNBS				*e*S	Sb	14 58 16.9	+0.6
	213nm,0.3s						
MNBS	Baschi	2.23	343	Pg	Pb	14 57 47.1	-1.5
	16nm,0.2s						
MNBS				Lg	Lg	14 58 16.9	
	213nm,0.3s						
IZV	Izvestkoviy	2.28	299	*e*P	Pb	14 57 48.6	-0.9
	8.7nm,0.1s						
IZV				*e*S	Sb	14 58 19.5	+1.7
	45nm,0.4s						
IZV	Izvestkoviy	2.28	299	Pg	Pb	14 57 48.6	-0.9
	8.7nm,0.1s						
IZV				Lg	Lg	14 58 19.5	
	45nm,0.4s						
ULHL	Ulahol	2.32	278	⇑*i*P	Pn	14 57 46.7	+0.2
	baz=82						
ULHL				⇑*i*S	Sn	14 58 16.6	+1.4
	baz=82						
DJR	Jarkent	2.40	8	*e*P	Pb	14 57 50.1	-1.4
	16nm,0.2s						
DJR				*e*S	Sb	14 58 22.4	+1.2
	110nm,0.3s						
DJR	Jarkent	2.40	8	Pg	Pb	14 57 50.1	-1.4
	16nm,0.2s						
DJR				Lg	Lg	14 58 22.4	
	110nm,0.3s						
MTBS	Maitube	2.45	300	*e*P	Pb	14 57 50.8	-1.4
	8.5nm,0.2s						
MTBS				*e*S	Sb	14 58 23.6	+1.1
	18nm,0.4s						
MTBS	Maitube	2.45	300	Pg	Pb	14 57 50.8	-1.4
	8.5nm,0.2s						
MTBS				Lg	Lg	14 58 23.6	
	18nm,0.4s						
ARXS	Arharly	2.52	335	*e*P	Pb	14 57 52.3	-1.1
	9.5nm,0.4s						
ARXS				*e*S	Sb	14 58 25.7	+1.3
	42nm,0.3s						
ARXS	Arharly	2.52	335	Pg	Pb	14 57 52.3	-1.1
	9.5nm,0.4s						
ARXS				Lg	Lg	14 58 25.7	
	42nm,0.3s						
CHKK	Chushkaly	2.56	319	*e*P	Pb	14 57 53.8	-0.4
	6.7nm,0.3s						
CHKK				*e*S	Sb	14 58 28.5	+2.7
	74nm,0.3s						
CHKK	Chushkaly	2.56	319	Pg	Pb	14 57 53.8	-0.4
	6.7nm,0.3s						
CHKK				Lg	Lg	14 58 28.5	
	74nm,0.3s						
KTBS	Karatobe	2.62	313	*e*P	Pb	14 57 55.8	+0.5
	5.2nm,0.3s						
KTBS				*e*S	Sg	14 58 31.7	-0.7
	80nm,0.4s						
KTBS	Karatobe	2.62	313	Pg	Pb	14 57 55.8	+0.5
	5.2nm,0.3s						
KTBS				Lg	Lg	14 58 31.7	
	80nm,0.4s						
KST	Kastek	2.72	295	*e*P	Pb	14 57 55.5	-1.3
	11nm,0.8s						
KST				*e*S	Sb	14 58 31.8	+1.4
	27nm,0.5s						
KST	Kastek	2.72	295	Pg	Pb	14 57 55.5	-1.3
	11nm,0.8s						
KST				Lg	Lg	14 58 31.8	
	27nm,0.5s						
DGS	Degeres	2.93	297	*e*P	Pb	14 58 00.1	-0.3
	4.6nm,0.5s						
DGS				*e*S	Sb	14 58 39.2	+2.9
	18nm,0.7s						
DGS	Degeres	2.93	297	Pg	Pb	14 58 00.1	-0.3
	4.6nm,0.5s						
DGS				Lg	Lg	14 58 39.2	
	18nm,0.7s						
TKM2	Tokmak 2	2.93	291	⇑*i*P	Pn	14 57 55.6	+0.7
	baz=93						
TKM2				⇑*i*S	Sn	14 58 32.1	+1.9
	baz=93						
TKM2	Tokmak 2	2.93	291	⇑Pg	Pb	14 58 00.1	-0.4
	1.9nm,0.4s						
TKM2				⇑Lg	Lg	14 58 40.9	
	13nm,0.7s						
TDK	Taldyqorghan	3.12	348	*e*P	Pb	14 58 03.4	-0.3
	23nm,0.3s						
TDK				*e*S	Sb	14 58 44.8	+2.9
	54nm,0.7s						
TDK	Taldyqorghan	3.12	348	Pg	Pb	14 58 03.4	-0.3
	23nm,0.3s						
TDK				Lg	Lg	14 58 44.8	
	54nm,0.7s						
KRBS	Karabastau	3.21	304	*e*P	Pb	14 58 04.5	-0.6
	4.0nm,0.3s						
KRBS				*e*S	Sb	14 58 46.4	+2.2
	16nm,0.4s						
KRBS	Karabastau	3.21	304	Pg	Pb	14 58 04.5	-0.6
	4.0nm,0.3s						
KRBS				Lg	Lg	14 58 46.4	
	16nm,0.4s						
KBK	Karagaybulak	3.33	284	⇑*i*P	Pn	14 58 00.7	+0.4
	baz=86						
KBK				⇑*i*S	Sn	14 58 41.0	+1.0
	baz=86						
KAPS	Kapalarasan	3.33	0	*e*P	Pb	14 58 07.2	-0.1
	4.3nm,0.3s						
KAPS				*e*S	Sb	14 58 51.5	+3.5
	12nm,0.5s						
KAPS	Kapalarasan	3.33	0	Pg	Pb	14 58 07.2	-0.1
	4.3nm,0.3s						
KAPS				Lg	Lg	14 58 51.4	
	12nm,0.5s						
UCH	Uchtor	3.60	276	⇓*i*P	Pn	14 58 04.4	+0.1
	baz=78						
UCH				⇓*i*S	Sn	14 58 47.3	+0.3
	baz=78						
AAK	Ala-Archa	3.65	282	⇓*i*P	Pn	14 58 05.1	+0.3
	baz=85						
AAK				⇓*i*S	Sn	14 58 48.8	+0.8
	baz=85						
AAK	Ala-Archa	3.65	282	⇑Pg	Pb	14 58 13.5	+0.7
	1.4nm,0.6s						
AAK				⇓Lg	Lg	14 59 01.9	
	5.3nm,0.7s						
ARLS	Aral	3.74	270	⇑*i*P	Pn	14 58 05.8	-0.2
	baz=72						
ARLS				⇑*i*S	Sn	14 58 49.7	-0.4
	baz=72						
SGDS	Sogindy	3.77	295	Pg	Pb	14 58 14.7	-0.2
	3.8nm,0.6s						
SGDS				Lg	Lg	14 59 04.2	
	7.0nm,0.4s						
EKS2	Erkin-Say	4.18	282	⇓*i*P	Pn	14 58 12.3	+0.3
	baz=84						
EKS2				⇓*i*S	Sn	14 59 01.2	+0.2
	baz=84						
AML	Almayashu	4.20	274	⇑*i*P	Pn	14 58 12.8	+0.2
	baz=76						
AML				⇑*i*S	Sn	14 59 01.9	0.0
	baz=76						
MAKZ	Makanchi	5.21	20	⇑Pn	Pn	14 58 26.5	+0.4
	0.3nm,0.3s						
MAKZ				⇓Sn	Sn	14 59 28.6	+2.4
	3.3nm,0.7s						
MK31	Makanchi Array	5.29	23	⇑Pn	Pn	14 58 27.3	+0.2
	0.2nm,0.2s,baz=201,slow=13,SNR=16						
MK31				Sn	Sn	14 59 30.5	+2.4
	6.9nm,0.8s,baz=196,slow=23,SNR=18						
KK31	Karatay Array	6.62	283	⇓Pg	Pb	14 59 07.7	+4.5
	0.3nm,0.3s,baz=329,slow=42,SNR=3.1						
KK31				⇓Lg	Lg	15 00 38.9	
	0.7nm,0.6s						

IDC 05 15:00:28.2±781.0, 52°.83N×34°.24E, h0^{km}, Error ellipse: s-maj=325.9km s-min=87.6km az=26.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I43RU	DUBNA INFRASON	4.26	23	*i*		15 27 40.0	
	baz=205,slow=336,SNR=1.0						
I31KZ	AKTYUBINSK INF	14.96	90	*i*		16 30 50.0	
	baz=289,slow=313,SNR=1.1						
I46RU	ZALESOVO INFRA	29.67	67	*i*		18 02 40.0	
	baz=290,slow=325,SNR=2.2						

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*TIF **05** 15:07:53.8, 41°.60N×43°.54E, h17^{km}*

*DDA **05** 15:07:54.0, 41°.57N×43°.48E, h20^{km}±1^{km}, MW3.4*

*MOS **05** 15:07:54.9±1.6, 41°.53N×43°.51E, h8^{km}, mb3.8/1, Error ellipse: s-maj=6.7km s-min=3.9km az=88.1*

*NORS **05** 15:07:54.9±0.0, 41°.63N×43°.44E, h0^{km}, MPVA4.3*

*NSSP **05** 15:07:54.0, 41°.62N×43°.45E, h14^{km}, Ms3.1*

*ISK **05** 15:07:54.1, 41°.63N×43°.45E, h6^{km}, ML3.1/6*

ISC 05 15:07:54.5±0.8**, 41°.60N**±0°.01×**43°.49E**±0°.01**, h14**^{km}±5^{km}**, n90,** σ1^{s}.**18**/158**, 19C-16D, Turkey-Georgia-Armenia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKRG	Bakuriani	0.16	9	P	Pg	15 07 58.2	-0.5
BKRG				S	Sg	15 08 01.2	-0.3
BKRG	Bakuriani	0.16	9	⇓PG	Pg	15 07 58.2	-0.5
AKH	Akhalkalaki	0.19	179	P	Pg	15 07 59.1	+0.1
AKH				S	Sg	15 08 02.6	+0.6
AKH	Akhalkalaki	0.19	179	PG	Pg	15 07 59.2	+0.1
AKH				SG	Sg	15 08 02.7	+0.7
AKH	Akhalkalaki	0.19	179	⇓PG	Pg	15 07 59.1	+0.1
AKH				S	Sg	15 08 02.6	+0.6
BRNG	Burnasheti	0.26	84	P	Pg	15 07 59.6	-0.5
BRNG				S	Sg	15 08 03.4	-0.5
ABS	Abastumani	0.53	288	P	Pb	15 08 05.4	-0.3
ABS				S	Sb	15 08 14.0	+0.8
ABS	Abastumani	0.53	288	⇑PG	Pb	15 08 05.4	-0.3
ABS				S	Sb	15 08 14.0	+0.8
DMNI	Dmanisi	0.59	117	P	Pg	15 08 05.2	-1.0
DMNI				S	Sg	15 08 12.9	-1.2
DMNI	Dmanisi	0.59	117	⇑PG	Pg	15 08 05.1	-1.0
DMNI				S	Sg	15 08 12.8	-1.2
KZRT	Kazreti	0.72	107	P	Pg	15 08 07.1	-1.4
KZRT				S	Sg	15 08 16.3	-1.6
KZRT	Kazreti	0.72	107	*i* P	Pg	15 08 07.1	-1.4
KZRT				*i* S	Sg	15 08 15.9	-2.0
KZRT	Kazreti	0.72	107	PG	Pg	15 08 07.0	-1.4
KZRT				S	Sg	15 08 16.3	-1.6
TKB	Tkibuli	0.84	334	P	Pn	15 08 10.7	-1.2
TKB				S	Sn	15 08 22.6	-1.5
TKB	Tkibuli	0.84	334	⇓PG	Pn	15 08 10.7	-1.2
TKB				S	Sn	15 08 22.5	-1.5
STE	Stepanavan	0.89	132	⇑*i*P	Pb	15 08 11.9	0.0
STE				⇑*i*S	Sb	15 08 24.2	+0.5
EAK	Akyaka	0.92	174	*i* P	Pb	15 08 10.3	-2.0
EAK				*i* S	Sg	15 08 22.6	-1.6
BTNK	Botanikuri	0.99	85	P	Pn	15 08 14.0	0.0
BTNK				S	Sn	15 08 27.8	+0.1
BTNK	Botanikuri	0.99	85	*i* P	Pn	15 08 14.0	0.0
BTNK				*i* S	Sn	15 08 26.9	-0.8
BTNK	Botanikuri	0.99	85	⇑PG	Pn	15 08 14.0	0.0
BTNK				S	Sn	15 08 27.8	+0.1
ONI	Oni	0.99	359	P	Pn	15 08 13.2	-0.8
ONI				S	Sn	15 08 27.2	-0.8
ONI	Oni	0.99	359	⇓*i*PG	Pn	15 08 13.3	-0.8
ONI				*e*S	Sn	15 08 27.2	-0.8
ONI	Oni	0.99	359	*i* Pg	Pn	15 08 13.3	-0.8
ONI				*e*Sg	Sn	15 08 27.2	-0.8
SEAG	Tbilisi Sea	1.00	80	P	Pb	15 08 12.6	-1.1
SEAG				S	Sb	15 08 26.2	-0.5
SEAG	Tbilisi Sea	1.00	80	PG	Pb	15 08 12.5	-1.1
SEAG				S	Sb	15 08 26.2	-0.5
KARS	Kars	1.02	198	PG	Pn	15 08 14.7	+0.2
KARS				SG	Sn	15 08 29.7	+1.1
KARS	Kars	1.02	198	PG	Pn	15 08 14.6	+0.1
KARS				S	Sn	15 08 29.6	+1.0
GUDG	Gudauri	1.14	40	P	Pg	15 08 16.2	-0.3
GUDG				S	Sn	15 08 31.8	0.0
GUDG	Gudauri	1.14	40	PG	Pg	15 08 16.2	-0.3
GUDG				S	Sn	15 08 31.7	0.0
ZEI	Tsey	1.23	14	⇑*i*PG	Pg	15 08 17.5	-0.7
ZEI				*e*S	Sg	15 08 34.9	+0.7
ZEI	Tsey	1.23	14	*i* Pg	Pg	15 08 17.5	-0.7
	130nm,0.4s						
ZEI				*e*Sg	Sg	15 08 34.9	+0.7
	788nm,0.6s						
DIGR	Digorskoe uzhe	1.30	3	*e*PG	Pg	15 08 18.9	-0.7
DIGR				*e*S	Sg	15 08 37.0	+0.4
DIGR	Digorskoe uzhe	1.30	3	*e*Pg	Pg	15 08 18.9	-0.7
DIGR				*e*Sg	Sg	15 08 37.0	+0.4
PNSH	Pansheti	1.33	39	P	Pb	15 08 18.8	-0.6
PNSH				S	Sg	15 08 37.0	-0.7
PNSH	Pansheti	1.33	39	PG	Pb	15 08 18.8	-0.6
PNSH				S	Sg	15 08 36.9	-0.7
BATM	Batumi	1.34	271	P	Pg	15 08 19.5	-0.9
BATM				S	Sg	15 08 38.3	+0.4
BATM	Batumi	1.34	271	PN	Pg	15 08 19.6	-0.9
BATM				SN	Sg	15 08 38.1	+0.2
BATM	Batumi	1.34	271	*i* P	Pg	15 08 19.5	-0.9
BATM				*i* S	Sg	15 08 37.9	0.0
BATM	Batumi	1.34	271	PG	Pg	15 08 19.5	-0.9
BATM				S	Sg	15 08 38.3	+0.4
SENK	Senkaya-Erzuru	1.34	220	PN	Pg	15 08 20.2	-0.2
LACR	Lac	1.37	26	⇑*i*PG	Pb	15 08 19.4	-0.5
LACR				*e*S	Sg	15 08 38.1	-0.6
LACR	Lac	1.37	26	*i* Pg	Pb	15 08 19.4	-0.5
	227nm,0.3s						
LACR				*e*Sg	Sg	15 08 38.1	-0.6
	881nm,0.5s						
DBOC	Borcka	1.39	260	*i* P	Pb	15 08 20.3	0.0
DBOC				*i* S	Sg	15 08 38.8	-0.5
DBAD	Bademkaya	1.47	247	*i* P	Pn	15 08 17.7	-3.0
DBAD				*i* S	Sn	15 08 37.0	-2.8
METS	Metsamor	1.51	163	⇓*i*P	Pg	15 08 24.2	+0.6
METS				⇓*i*S	Sg	15 08 45.7	+2.4
VNNZ	Vanand	1.52	170	⇓*i*P	Pb	15 08 22.7	+0.3
VNNZ				⇓*i*S	Sg	15 08 44.3	+1.0
CHVG	Ch'k'valeri	1.53	318	P	Pg	15 08 23.4	-0.6
CHVG				S	Sg	15 08 45.0	+1.1
CHVG	Ch'k'valeri	1.53	318	PG	Pg	15 08 23.3	-0.6
CHVG				S	Sg	15 08 44.9	+1.1
KORR	Kora	1.55	16	*e*PG	Pg	15 08 23.9	-0.4
KORR				*e*S	Sg	15 08 46.2	+1.8
KORR	Kora	1.55	16	*e*Pg	Pg	15 08 23.9	-0.4
	142nm,0.5s						
KORR				*e*Sg	Sg	15 08 46.2	+1.8
	516nm,0.7s						
KAPZ	Kaputan	1.57	144	⇓*i*P	Pb	15 08 24.0	+0.5
KAPZ				⇓*i*S	Sg	15 08 44.8	-0.3
VLKR	Vladikavkaz	1.70	31	*e*PN	Pg	15 08 27.1	0.0
VLKR				*e*S	Sg	15 08 50.9	+1.8
VLKR	Vladikavkaz	1.70	31	*e*Pg	Pg	15 08 27.1	0.0
VLKR				*e*Sg	Sg	15 08 50.9	+1.8
LSNR	Lesken	1.70	8	⇑*i*PN	Pg	15 08 26.9	-0.2
LSNR				*e*S	Sg	15 08 51.2	+2.0
LSNR	Lesken	1.70	8	*i* Pg	Pg	15 08 26.9	-0.2
LSNR				*e*Sg	Sg	15 08 51.2	+2.0
TASB	TASBURUN-IGDIR	1.71	160	PN	Pb	15 08 25.7	0.0
GNI	Garni	1.73	146	*i* P	Pb	15 08 26.6	+0.4
GNI				*i* S	Sg	15 08 50.5	+0.2
GNI	Garni	1.73	146	*de*PN	Pb	15 08 26.5	+0.4
NEY	Neytrino	1.75	341	*d i*PN	Pg	15 08 26.9	-1.1
NEY	Neytrino	1.75	341	*e*Pg	Pg	15 08 27.0	-1.0
NEY				*e*Sg	Sg	15 08 50.5	-0.1
IGDI	IGDIR	1.79	165	*i* P	Pb	15 08 26.1	-0.9
IGDI				*i* S	Sb	15 08 49.8	+0.5
KOTA	Agri, Merkez-K	1.81	187	*i* P	Pg	15 08 28.9	-0.3
STDR	Stavd-Durt	1.82	13	⇑*i*PN	Pg	15 08 30.3	+0.8
STDR				*e*S	Sg	15 08 56.4	+3.3
STDR	Stavd-Durt	1.82	13	*i* Pg	Pg	15 08 30.3	+0.8
STDR				*e*Sg	Sg	15 08 56.4	+3.3
NRKZ	NAREK	1.83	150	⇓*i*P	Pb	15 08 27.8	0.0
NRKZ				⇓*i*S	Sg	15 08 52.1	-1.2
EATA	Eleskirt	1.89	204	*i* P	Pb	15 08 29.1	+0.1
NCK	Nalchik	1.90	2	*e*PN	Pg	15 08 30.8	-0.1
NCK				*e*S	Sg	15 08 57.3	+1.7
NCK	Nalchik	1.90	2	*e*Pg	Pg	15 08 30.8	-0.1
NCK				*e*Sg	Sg	15 08 57.4	+1.7
DDFL	Dedoflistskaro	1.98	94	P	Pb	15 08 30.5	+0.1
DDFL	Dedoflistskaro	1.98	94	*i* P	Pb	15 08 30.3	0.0
DDFL				*i* S	Sg	15 09 00.3	+2.1
DDFL	Dedoflistskaro	1.98	94	⇑PN	Pb	15 08 30.5	+0.1
KOPR	Koprukoy-ERZUR	2.03	218	PN	Pb	15 08 30.2	-1.0
AGRB	Hanur-Agry	2.06	191	PN	Pb	15 08 30.8	-0.9
LGD	Lagodekhi	2.08	83	P	Pb	15 08 30.3	-1.6
LGD				S	Sb	15 08 58.4	+0.8
LGD	Lagodekhi	2.08	83	PN	Pb	15 08 30.3	-1.6
LGD				S	Sb	15 08 58.4	+0.8
KBZ	Khabaz	2.17	349	⇑*e*PN	Pb	15 08 33.8	+0.2
BTLR	Botlikh	2.30	61	*de*PN	Pb	15 08 35.0	-0.8
BTLR	Botlikh	2.30	61	*e*Pn	Pb	15 08 35.3	-0.5
BTLR				*e*Sn	Sb	15 09 05.0	+1.0
GROC	Groznyy	2.34	46	*de*PN	Pg	15 08 37.5	-2.0
DVE	Vedeno	2.38	54	*e*PN	Pb	15 08 36.8	-0.4
DVE				*e*S	Sg	15 09 08.6	-2.5
DVE	Vedeno	2.38	54	*e*Pn	Pb	15 08 36.8	-0.4
DVE				*e*Sn	Sg	15 09 08.6	-2.5
KIV	Kislovodsk	2.43	346	*e*PN	Pg	15 08 39.9	-1.2
KIV				*e*S	Sg	15 09 12.0	-0.6
KIV				pmax	pmax		
	comp=Z,71nm,1.0s						
BEYR	Belyy Ugol+	2.46	349	*ce*PN	Pb	15 08 38.5	-0.1
PYA1	Pyatigorsk	2.48	353	*ce*PN	Pg	15 08 41.7	-0.4
PYA1				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ARXR	Arkhyz	2.55	321	⇑*e*PN	Pb	15 08 40.3	+0.1
DBC	Dubki	2.86	59	⇑*e*PN	Pb	15 08 44.7	-0.6
RPOR	Krasnaya Polya	3.17	313	⇑*e*PN	Pb	15 08 48.5	-2.1
GUZR	Guzeripl'	3.45	315	*ce*PN	Pb	15 08 51.3	-4.1
GOF	Gofitskoye	3.47	355	⇑*e*PN	Pn	15 08 49.4	+1.3
AAK	Ala-Archa	22.96	77	⇑*e*P	P	15 13 02.6	+4.0
AAK				pmax	pmax		
	comp=Z,1.0nm,0.9s						

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*NEIC **05** 15:08:39.7±3.9, 36°.81N±0°.01×98°.26W±0°.04, h3^{km}±4^{km}, Error ellipse: s-maj=5.1km s-min=1.8km az=99.0*

*TUL **05** 15:08:40.8±3.9, 36°.82N±0°.02×98°.29W±0°.04, h4^{km}±4^{km}, ML4.6, mb4.3/90(NEIC), mb_Lg4.7/153(NEIC), Mwr4.2/80(NEIC), Error ellipse: s-maj=0.0km s-min=0.0km az=189.0*

*ANF **05** 15:08:40.4±0.1, 36°.91N×98°.23W, h5^{km}, ML5.7/16, Error ellipse: s-maj=2.7km s-min=1.8km az=169.0*

*IDC **05** 15:08:41.2±0.6, 36°.91N×98°.35W, h0^{km}, mb4.3/12, mb1 4.5/23, mb1mx4.3/46, mbtmp4.3/23, ML4.4/9, MS3.6/12, Ms1 3.6/12, ms1mx3.3/59, Error ellipse: s-maj=9.6km s-min=8.2km az=159.0*

*NEIC **05** 15:08:41.2, 36°.79N×98°.27W, h5^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$-0.70; M$_{\theta\theta}$1.91; M$_{\phi\phi}$-1.21; M$_{r\theta}$0.83; M$_{\theta\phi}$2.15; M$_{\phi r}$-0.59; Fault plane solution: M$_0$2.90000×10^{15} NP1:φ$_s$285.20000°, δ78.33000°, λ-23.14000°. NP2:φ$_s$20.14000°, δ67.37000°, λ-167.34000°. Principal axes: T 3.0640, Plg7.0000°, Azm334.0000°; N -0.3523, Plg64.0000°, Azm80.0000°; P -2.7117, Plg25.0000°, Azm241.0000°;*

ISC 05 15:08:42.8±0.7**, 36°.84N**±0°.02×**98°.19W**±0°.03**, h20**^{km}±3^{km}**, n507,** σ1^{s}.**54**/510**, mb4.3**/21**, MS3.7**/8**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAN14	Manchester OK	0.22	57		Pg	15 08 47.2	-1.0
KAN14				Sg	Sb	15 08 50.6	-0.7
GC02	Grant County #	0.27	86		Pg	15 08 48.0	-0.9
GC02				Sg	Sb	15 08 53.1	+0.1
KAN10	Anthony SW Sta	0.30	15		Pb	15 08 48.1	-1.4
KAN10				Sg	Sb	15 08 53.2	-0.8
CROK	Carrier	0.37	153	Pg	Pg	15 08 48.9	-1.8
CROK				Sg	Sg	15 08 54.5	-1.5
KAN05	Bluff City Nor	0.37	43		Pb	15 08 50.0	-1.0
KAN05				Sg	Sb	15 08 56.2	-0.1
KAN08	Anthony NE Sta	0.43	24		Pb	15 08 50.7	-1.1
KAN08				Sg	Sb	15 08 57.5	-0.5
KAN01	Argonia South	0.47	47		Pb	15 08 51.8	-0.7
KAN01				Sg	Sb	15 08 59.2	+0.1
KAN12	Harper NE Stat	0.49	19		Pb	15 08 51.6	-1.2
KAN12				Sg	Sb	15 08 59.2	-0.3
KAN13	South Haven SW	0.60	73		Pg	15 08 54.1	-0.7
KAN13				Sg	Sg	15 09 03.2	+0.3
KS21	Milan North St	0.62	43		Pg	15 08 54.4	-0.8
KS21				Sg	Sn	15 09 03.8	-2.2
U32A	Winter Ranch,	0.79	235		Pb	15 08 54.8	-3.2
U32A				Sg	Sb	15 09 04.9	-3.4
U32A	Winter Ranch,	0.79	235	P		15 08 54.7	
	baz=52						
U32A				S		15 09 04.9	
	baz=52						
OK029	Liberty Lake	1.20	150		Pn	15 09 03.5	-1.0
OK029				Sg	Sb	15 09 19.9	0.0
BCOK	Bluff Creek, N	1.27	158	Pg	Pn	15 09 04.5	-0.9
BCOK				IAmb_Lg		15 09 21.5	
	comp=Z,4μm,1.0s						
BCOK				Sg	Sn	15 09 22.2	+0.3
T35A	Sooner Cattle	1.35	86		Pb	15 09 07.3	-0.2
T35B	Sooner Cattle	1.35	86	P		15 09 07.3	
	baz=266,SNR=1000						
T35B				S		15 09 26.5	
	baz=266						
ADOK	Arcadia Dam	1.35	150		Pn	15 09 06.3	-0.4
QUOK	Quay	1.37	119		Pb	15 09 07.3	-0.5
OK009	Oakdale Elemen	1.40	153		Pn	15 09 07.1	-0.2
OK031	S. Brethren Rd	1.40	128		Pn	15 09 07.5	+0.2
OK025	Westminster Rd	1.43	151		Pn	15 09 07.5	-0.2
OK025				IAmb_Lg		15 09 29.2	
	comp=Z,3μm,0.8s						

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OK030 Cody Creek RV    1.45 128          Pn   15 09 08.3 +0.3
OKCFA Oklahoma City    1.54 157          Pn   15 09 09.0 -0.2
OKCSW OKLAHOMA CITY    1.55 157          Pn   15 09 09.2 -0.2
R32A  Long Quarter,    1.64 346          Pb   15 09 11.2 -1.2
R32A  Long Quarter,    1.64 346  P            15 09 11.2
      baz=168,SNR=654
R32A                             S            15 09 33.3
      baz=168
FNO   Franklin         1.70 158          Pn   15 09 12.0 +0.6
FNO                              IAmb_Lg      15 09 37.1
      comp=Z,4µm,1.0s
OK011 Prague           1.82 137          Pn   15 09 13.8 +0.8
W35A  Tecumseh         1.99 147          Pn   15 09 15.8 +0.4
TUL1  Leonard          2.15 115  P       Pn   15 09 18.2 +0.7
      baz=295,SNR=462
TUL1  Leonard          2.15 115          Pn   15 09 18.1 +0.6
TUL1  Leonard          2.15 115  P            15 09 18.2
      baz=295,SNR=394
TUL1                             S            15 09 49.3
      baz=295
WMOK  Wichita Mounta   2.15 193  P       Pn   15 09 16.8 -0.7
      baz=11,SNR=706
WMOK                             S       Sn   15 09 44.3 +0.6
      baz=11
WMOK  Wichita Mounta   2.15 193          Pn   15 09 16.9 -0.7
WMOK  Wichita Mounta   2.15 193  P            15 09 17.1
      baz=11,SNR=497
WMOK                             S            15 09 46.4
      baz=11
CBKS  Cedar Bluff      2.32 329  P       Pn   15 09 20.3 +0.3
      baz=150,SNR=345
CBKS  Cedar Bluff      2.32 329          Pn   15 09 20.3 +0.3
CBKS  Cedar Bluff      2.32 329  P            15 09 20.4
      baz=150,SNR=218
CBKS                             S            15 09 52.3
      baz=150
KSU1  Kansas State U   2.58  28  P       Pb   15 09 24.9 -3.6
      baz=211,SNR=121
KSU1  Kansas State U   2.58  28          Pb   15 09 24.9 -3.6
KSU1                             IAmb_Lg      15 10 10.5
      comp=Z,3µm,0.7s
KSU1  Kansas State U   2.58  28  P            15 09 25.0
      baz=211,SNR=44
U38A  Gravette         3.09  96          Pn   15 09 31.8 +1.3
U38A                             IAmb_Lg      15 10 26.3
      comp=Z,2µm,0.8s
U38A  Gravette         3.09  96  P            15 09 31.9
      baz=278,SNR=88
X37A  Clayton          3.21 133          Pn   15 09 32.9 +0.8
X37A                             IAmb_Lg      15 10 27.6
      comp=Z,2µm,0.9s
X37A  Clayton          3.21 133  P            15 09 32.9
      baz=314
AMTX  Amarillo         3.44 237  P       Pn   15 09 35.3  0.0
      baz=54
AMTX  Amarillo         3.44 237          Pn   15 09 35.4  0.0
AMTX                             IAmb_Lg      15 10 28.5
      comp=Z,2µm,0.9s
AMTX  Amarillo         3.44 237  P            15 09 35.4
      baz=54,SNR=64
HHAR  Hobbs            3.47  98          Pn   15 09 36.7 +1.0
HHAR                             IAmb_Lg      15 10 41.5
      comp=Z,2µm,0.9s
HHAR  Hobbs            3.47  98  P            15 09 37.2
      baz=280
Z35A  Perchaven, San   3.58 167          Pn   15 09 36.9 -0.4
Z35A  Perchaven, San   3.58 167  P            15 09 37.2
      baz=347,SNR=21
W39A  Magazine         3.93 113  P       Pn   15 09 43.2 +1.2
      baz=295,SNR=63
W39A  Magazine         3.93 113          Pn   15 09 43.6 +1.5
W39A  Magazine         3.93 113  P            15 09 42.6
      baz=295,SNR=52
N33B  J Bar K, Exete   3.94   8  P            15 09 42.1
      baz=190,SNR=30
N33A  J Bar K, Exete   3.94   8          Pn   15 09 42.3 +0.1
N33A                             IAmb_Lg      15 10 56.0
      comp=Z,2µm,0.8s
S39A  Bolivar          3.98  76          Pn   15 09 44.0 +1.3
S39A  Bolivar          3.98  76  P            15 09 43.8
      baz=259,SNR=274
KSCO  Kaye Shedlock'   4.12 303  P       Pn   15 09 44.7 -0.2
      baz=121,SNR=35
KSCO  Kaye Shedlock'   4.12 303  Pn      Pn   15 09 45.0 +0.1
KSCO                             IAmb_Lg      15 10 52.7
      comp=Z,2µm,1.0s
KSCO  Kaye Shedlock'   4.12 303  P            15 09 45.0
      baz=121,SNR=35
U40A  Yellville        4.32  95  P       Pn   15 09 48.4 +0.9
      baz=278,SNR=168
U40A  Yellville        4.32  95  Pn      Pn   15 09 48.6 +1.1
U40A                             IAmb_Lg      15 11 02.7
      comp=Z,2µm,0.8s
U40A  Yellville        4.32  95  P            15 09 48.3
      baz=278,SNR=124
U40A                             P            15 09 48.3
      baz=278,SNR=124
ABTX  Abilene, Hawle   4.37 196  P       Pn   15 09 47.2 -0.9
      baz=14,SNR=13
ABTX  Abilene, Hawle   4.37 196          Pn   15 09 47.3 -0.9
ABTX                             IAmb_Lg      15 10 60.0
      comp=Z,2µm,0.9s
ABTX  Abilene, Hawle   4.37 196  P            15 09 47.3
      baz=14,SNR=13
MIAR  Mount Ida        4.40 120  P       Pn   15 09 49.1 +0.6
      baz=302,SNR=42
MIAR  Mount Ida        4.40 120  Pn      Pn   15 09 49.3 +0.8
MIAR                             IAmb_Lg      15 11 00.8
      comp=Z,1µm,0.8s
MIAR  Mount Ida        4.40 120  P            15 09 49.2
      baz=302,SNR=108
Z38A  Mt. Pleasant     4.43 143  Pn      Pn   15 09 49.5 +0.5
Z38A                             IAmb_Lg      15 11 08.4
      comp=Z,2µm,0.7s
Z38A  Mt. Pleasant     4.43 143  P            15 09 49.1
      baz=324,SNR=27
N35A  Tabor            4.49  26          Pn   15 09 50.9 +1.2
N35A  Tabor            4.49  26  P            15 09 50.5
      baz=208,SNR=17
BGNE  Belgrade         4.57   0  P       Pn   15 09 51.1 +0.2
      baz=181,SNR=30
BGNE  Belgrade         4.57   0  Pn      Pn   15 09 51.5 +0.6
BGNE  Belgrade         4.57   0  P            15 09 51.4
      baz=181,SNR=64
P38A  Dawn             4.61  51  Pn      Pn   15 09 52.4 +1.0
P38A                             IAmb_Lg      15 11 11.1
      comp=Z,1µm,0.7s
P38A  Dawn             4.61  51  P            15 09 52.2
      baz=235,SNR=78
MSTX  Muleshoe         4.71 234  P       Pn   15 09 52.0 -0.9
      baz=51,SNR=46
MSTX  Muleshoe         4.71 234  Pn      Pn   15 09 52.0 -0.9
MSTX                             IAmb_Lg      15 11 17.8
      comp=Z,1µm,0.7s
MSTX  Muleshoe         4.71 234  P            15 09 52.0
      baz=51,SNR=22
MGMO  Mountain Grove   4.75  84          Pn   15 09 55.0 +1.6
MGMO                             IAmb_Lg      15 11 24.0
      comp=Z,1µm,0.7s
WHTX  Lake Whitney,    4.87 173  P       Pn   15 09 54.4 -0.6
      baz=352,SNR=23
WHTX  Lake Whitney,    4.87 173          Pn   15 09 54.8 -0.2
WHTX                             IAmb_Lg      15 11 27.1
      comp=Z,1µm,1.0s
WHTX  Lake Whitney,    4.87 173  P            15 09 54.4
      baz=352,SNR=100
R40A  Maddies Statio   4.93  71  Pn      Pn   15 09 56.8 +1.1
R40A                             IAmb_Lg      15 11 26.5
      comp=Z,930nm,1.0s
R40A  Maddies Statio   4.93  71  P            15 09 56.5
      baz=255,SNR=91
X40A  Basin Creek Fa   4.95 117  P       Pn   15 09 56.8 +0.7
      baz=299,SNR=94
X40A  Basin Creek Fa   4.95 117          Pn   15 09 57.1 +1.0
X40A                             IAmb_Lg      15 11 24.4
      comp=Z,2µm,0.7s
X40A  Basin Creek Fa   4.95 117  P            15 09 56.6
      baz=299,SNR=160
X40A                             P            15 09 56.6
      baz=299,SNR=160
FCAR  Ozark Folk Cen   4.99  99          Pn   15 09 57.7 +1.1
FCAR                             IAmb_Lg      15 11 24.9
      comp=Z,1µm,0.7s
T25A  Trinidad         4.99 275  P       Pn   15 09 55.8 -1.0
      baz=92,SNR=22
WHAR  Wooly Hollow     5.03 106  Pn      Pn   15 09 57.2 +0.1
WHAR                             IAmb_Lg      15 11 31.3
      comp=Z,1µm,0.9s
W41B  Gary Mavity, V   5.10 107  P       Pn   15 09 58.5 +0.4
      baz=290,SNR=24
W41B                             S       Sn   15 10 56.8 +0.5
      baz=290
W41B  Gary Mavity, V   5.10 107  P            15 09 58.7
      baz=290,SNR=42
237A  Washetta, Mont   5.21 157  Pn      Pn   15 09 59.0 -0.7
237A                             IAmb_Lg      15 11 38.1
      comp=Z,1µm,0.9s
237A  Washetta, Mont   5.21 157  P            15 09 58.9
      baz=338,SNR=48
WLAR  White Oak Lake   5.21 126          Pn   15 10 00.1 +0.4
WLAR                             IAmb_Lg      15 11 38.1
      comp=Z,2µm,1.0s
L34A  Svendsen Farm,   5.31  15          Pn   15 10 01.4 +0.4
L34A  Svendsen Farm,   5.31  15  P            15 10 01.6
      baz=197,SNR=8.1
N38A  Joes South For   5.53  43          Pn   15 10 05.0 +1.0
N38A                             IAmb_Lg      15 11 52.2
      comp=Z,2µm,0.8s
N38A  Joes South For   5.53  43  P            15 10 04.4
      baz=226,SNR=119
P40A  Paris            5.54  59  Pn      Pn   15 10 05.2 +1.0
P40A                             IAmb_Lg      15 11 40.8
      comp=Z,2µm,1.0s
P40A  Paris            5.54  59  P            15 10 05.1
      baz=243,SNR=9.9
CCM   Cathedral Cave   5.66  75  P       Pn   15 10 05.8  0.0
      baz=260
CCM   Cathedral Cave   5.66  75  Pn      Pn   15 10 06.2 +0.4
CCM                              IAmb_Lg      15 11 44.2
      comp=Z,1µm,0.8s
CCM   Cathedral Cave   5.66  75  P            15 10 06.3
      baz=260,SNR=41
Z41A  Richland Creek   5.68 127  P       Pn   15 10 05.7 -0.5
      baz=310,SNR=5.4
Z41A                             S       Sn   15 11 09.0 -1.8
      baz=310
Z41A  Richland Creek   5.68 127  P            15 10 06.1
      baz=310,SNR=12
Z41A                             P            15 10 06.1
      baz=310,SNR=12
T42A  Van Buren        5.69  86  Pn      Pn   15 10 07.2 +1.0
T42A                             IAmb_Lg      15 11 47.7
      comp=Z,1µm,0.8s
T42A  Van Buren        5.69  86  P            15 10 07.5
      baz=270,SNR=48
LCAR  Lake Charles     5.72  96  Pn      Pn   15 10 07.6 +0.9
LCAR                             IAmb_Lg      15 11 48.8
      comp=Z,1µm,0.9s
K31A  O'Neill          5.80 356  Pn      Pn   15 10 08.8 +1.1
ETX02 Prairie Street   5.83 146  Pn      Pn   15 10 07.4 -0.7
NATX  Nacogdoches      5.84 149  P       Pn   15 10 07.3 -1.1
      baz=330
NATX  Nacogdoches      5.84 149          Pn   15 10 07.2 -1.2
NATX                             IAmb_Lg      15 12 02.6
      comp=Z,723nm,0.9s
Q24A  Divide           5.90 293  P       Pn   15 10 08.4 -1.0
      baz=110,SNR=20
SDCO  Great Sand Dun   5.90 281  P       Pn   15 10 08.7 -0.6
      baz=97,SNR=35
SDCO  Great Sand Dun   5.90 281  Pn      Pn   15 10 08.8 -0.6
SDCO                             IAmb_Lg      15 11 48.5
      comp=Z,749nm,1.1s
SDCO  Great Sand Dun   5.90 281  P            15 10 09.3
      baz=97,SNR=38
CCAR  Cane Creek       6.00 117  Pn      Pn   15 10 11.5 +1.0
435B  Jarrell          6.06 175  P       Pn   15 10 10.4 -0.9
      baz=355,SNR=11
435B  Jarrell          6.06 175  Pn      Pn   15 10 10.8 -0.5
435B                             IAmb_Lg      15 11 56.5
      comp=Z,2µm,0.8s
435B  Jarrell          6.06 175  P            15 10 11.0
      baz=355,SNR=13
HBAR  Harrisburg       6.23 100  Pn      Pn   15 10 14.9 +1.3
PBMO  Poplar Bluff     6.23  88          Pn   15 10 15.0 +1.4
FVM   French Village   6.29  77          Pn   15 10 15.0 +0.5
FVM                              IAmb_Lg      15 12 03.2
      comp=Z,1µm,0.8s
SCIA  State Center     6.36  36  P       Pn   15 10 16.6 +1.1
      baz=219,SNR=9.6
SCIA  State Center     6.36  36          Pn   15 10 16.1 +0.6
SCIA                             IAmb_Lg      15 12 05.1
      comp=Z,2µm,0.8s
SCIA  State Center     6.36  36  P            15 10 17.2
      baz=219,SNR=6.7
X43A  Marvell          6.38 109  P       Pn   15 10 16.4 +0.7
      baz=293
JCT   Junction City    6.48 192  P       Pn   15 10 16.5 -0.7
      baz=11,SNR=12
JCT   Junction City    6.48 192  Pn      Pn   15 10 16.8 -0.4
LPAR  Lepanto          6.50  99  Pn      Pn   15 10 18.1 +0.8
CLNB  Carlsbad         6.54 227          Pn   15 10 17.5 -0.6
ISCO  Idaho Springs    6.54 299  P       Pn   15 10 17.4 -0.9
      baz=115,SNR=34
ISCO  Idaho Springs    6.54 299  Pn      Pn   15 10 17.6 -0.6
ISCO                             IAmb_Lg      15 12 13.5
      comp=Z,615nm,0.8s
ISCO  Idaho Springs    6.54 299  P            15 10 17.8
      baz=115,SNR=26
SLM   Saint Louis      6.56  72          Pn   15 10 18.7 +0.6
SLM                              IAmb_Lg      15 12 17.6
      comp=Z,1µm,0.8s
GNAR  Gosnell          6.65  95  Pn      Pn   15 10 19.3 -0.1
PEBM  Pemiscott Bayo   6.75  94  Pn      Pn   15 10 23.1 +2.3
GDL2  Guadalupe Moun   6.88 230          Pn   15 10 22.2 -0.5
PENMO Penman           6.90  91  Pn      Pn   15 10 22.3 -0.5
PENMO                            IAmb_Lg      15 12 24.2
      comp=Z,2µm,0.8s
N41A  Harden Midland   6.91  54  Pn      Pn   15 10 23.7 +0.7
N41A                             IAmb_Lg      15 12 25.7
      comp=Z,1µm,0.7s
N41A  Harden Midland   6.91  54  P            15 10 24.0
      baz=238,SNR=12
143A  Socs Landing,    6.94 124  Pn      Pn   15 10 23.4  0.0
143A                             IAmb_Lg      15 12 39.5
      comp=Z,1µm,0.9s
ANMO  Albuquerque      6.97 257  Pn      Pn   15 10 23.6 -0.4
      comp=Z,1.0nm,0.3s,baz=86,slow=13,SNR=19
ANMO                             Pg      Pb   15 10 46.5 +3.2
      comp=Z,13nm,0.3s,baz=78,slow=18,SNR=16
ANMO                             Lg      Lg   15 12 18.5
      comp=Z,22nm,0.3s,baz=335,slow=23,SNR=8.8
ANMO                             LR      LR   15 13 24.6
      comp=Z,387nm,20.7s,baz=70,slow=41
ANMO  Albuquerque      6.97 257  P       Pn   15 10 23.3 -0.8
      baz=72
ANMO  Albuquerque      6.97 257  Pn      Pn   15 10 23.8 -0.2
ECSD  EROS Data Cent   7.00   9  P       Pn   15 10 23.0 -1.2
      baz=191,SNR=32
ECSD  EROS Data Cent   7.00   9  Pn      Pn   15 10 23.0 -1.2
ECSD                             IAmb_Lg      15 12 28.8
      comp=Z,808nm,0.9s
ECSD  EROS Data Cent   7.00   9  P            15 10 23.0
      baz=191,SNR=65
HENM  Henderson Moun   7.00  88  Pn      Pn   15 10 26.7 +2.5
LNXT  Lenox            7.05  93  Pn      Pn   15 10 26.7 +1.8
HKT   Hockley          7.14 163  Pn      Pn   15 10 24.4 -1.7
K38A  Parkersburg      7.15  34          Pn   15 10 27.1 +0.8
S44A  Carbondale       7.18  80          Pn   15 10 26.6 -0.1
PHWY  Pilot Hill       7.20 310          Pn   15 10 27.4 +0.2
PHWY                             IAmb_Lg      15 12 42.5
      comp=Z,1µm,1.2s
HICK  Hickman          7.21  90  Pn      Pn   15 10 27.7 +0.6
SIUC  Southern Illin   7.21  80          Pn   15 10 27.9 +0.8
N23A  Red Feather La   7.28 306  P       Pn   15 10 28.4 +0.1
      baz=122,SNR=52
342A  Flagon Creek P   7.30 137          Pn   15 10 26.8 -1.5
SMCO  Snowmass         7.32 291  Pn      Pn   15 10 29.6 +0.6
441A  DeRidder         7.36 144  Pn      Pn   15 10 28.6 -0.5
P43A  Skaggs, Pawnee   7.38  65  Pn      Pn   15 10 29.4  0.0
P43A                             IAmb_Lg      15 12 37.7
      comp=Z,1µm,0.8s
P43A  Skaggs, Pawnee   7.38  65  P            15 10 29.8
      baz=250,SNR=130
BNM   Barren Site      7.38 251          Pn   15 10 29.2 -0.5
W45A  Hickory Valley   7.49 100  Pn      Pn   15 10 31.3 +0.4
OXF   Oxford           7.51 105  P       Pn   15 10 31.3  0.0
      baz=290,SNR=42
OXF   Oxford           7.51 105          Pn   15 10 30.9 -0.4
OXF   Oxford           7.51 105  P            15 10 31.4
      baz=290,SNR=15
Q44A  Meyer Farm, Va   7.54  71          Pn   15 10 32.9 +1.2
Q44A  Meyer Farm, Va   7.54  71  P            15 10 32.1
      baz=257,SNR=12
SUSD  Miller           7.62 356  P       Pn   15 10 30.9 -1.9
      baz=176,SNR=6.5
SUSD                             S       Sn   15 11 58.8 +0.3
      baz=176
SUSD  Miller           7.62 356  Pn      Pn   15 10 33.4 +0.6
SUSD                             IAmb_Lg      15 13 03.7
      comp=Z,792nm,0.8s
Y22D  IRIS PASSCAL I   7.64 251  Pn      Pn   15 10 30.4 -2.8
Y22D                             IAmb_Lg      15 12 56.2
      comp=Z,1µm,1.1s
LENM  Lemitar          7.64 252          Pn   15 10 36.3 +3.1
T45A  Paducah          7.65  86  Pn      Pn   15 10 33.6 +0.4
Y45A  Yeager Farm, C   7.66 110          Pn   15 10 33.8 +0.5
Y45A                             IAmb_Lg      15 13 06.0
      comp=Z,1µm,0.8s
MNTX  Cornudas Mount   7.85 231  P       Pn   15 10 34.2 -1.8
      baz=47,SNR=44
MNTX  Cornudas Mount   7.85 231  Pn      Pn   15 10 34.7 -1.2
MNTX                             IAmb_Lg      15 12 56.8
      comp=Z,498nm,0.7s
MNTX  Cornudas Mount   7.85 231  P            15 10 34.9
      baz=47,SNR=39
HDIL  Hopedale         7.89  59  P       Pn   15 10 37.2 +0.8
      baz=245,SNR=18
HDIL  Hopedale         7.89  59  Pn      Pn   15 10 37.5 +1.1
HDIL  Hopedale         7.89  59  P            15 10 37.3
      baz=245,SNR=41
735A  Kenedy           7.96 178          Pn   15 10 35.6 -1.9
735A                             IAmb_Lg      15 13 10.9
      comp=Z,738nm,0.8s
I37A  Lemond, Waseca   8.05  26  Pn      Pn   15 10 38.4 -0.2
344A  Westbrook Farm   8.19 129  Pn      Pn   15 10 40.3 -0.3
OLIL  Olney            8.21  74          Pn   15 10 42.3 +1.5
MVCO  Mesa Verde       8.25 276  Pn      Pn   15 10 41.1 -0.6
MVCO                             IAmb_Lg      15 13 06.8
      comp=Z,753nm,1.3s
PV15  Paradox Valley   8.31 284  Pn      Pn   15 10 43.9 +1.5
O44A  Mansfield        8.31  64          Pn   15 10 42.7 +0.5
O44A                             IAmb_Lg      15 13 04.0
      comp=Z,1µm,0.9s
O44A  Mansfield        8.31  64  P            15 10 42.6
      baz=250,SNR=7.7
PV01  Paradox Valley   8.35 282  Pn      Pn   15 10 42.6 -0.4
L42A  Oliver, Polo     8.38  49  Pn      Pn   15 10 43.0  0.0
L42A                             IAmb_Lg      15 13 11.4
      comp=Z,960nm,0.8s
L42A  Oliver, Polo     8.38  49  P            15 10 43.4
      baz=235,SNR=6.7
WVT   Waverly          8.38  92  P       Pn   15 10 42.9 -0.2
      baz=278
WVT   Waverly          8.38  92  Pn      Pn   15 10 43.0 -0.2
WVT                              IAmb_Lg      15 13 23.9
      comp=Z,476nm,0.9s
PLAL  Pickwick Lake    8.41 100          Pn   15 10 43.8 +0.2
PLAL                             IAmb_Lg      15 13 11.6
      comp=Z,659nm,0.9s
USIN  University of    8.45  79          Pn   15 10 44.4 +0.3
PV02  Paradox Valley   8.49 282  Pn      Pn   15 10 45.3 +0.4
RWWY  Rawlins          8.51 307          Pn   15 10 45.1 -0.1
RWWY                             IAmb_Lg      15 13 21.6
      comp=Z,852nm,1.3s
RSSD  Black Hills      8.53 330  P       Pn   15 10 44.9 -0.5
      baz=147
RSSD  Black Hills      8.53 330  Pn      Pn   15 10 45.4 -0.1
RSSD                             IAmb_Lg      15 13 20.1
      comp=Z,393nm,1.1s
RSSD  Black Hills      8.53 330  P            15 10 46.3
      baz=147,SNR=38
O20A  White River Ci   8.54 296  Pn      Pn   15 10 43.6 -2.0
O20A                             IAmb_Lg      15 13 26.5
      comp=Z,409nm,1.2s
833A  Chaparral WMA,   8.55 187  P       Pn   15 10 45.3 -0.2
      baz=6.0
PV13  Radium Mtn., P   8.55 282  Pn      Pn   15 10 44.2 -1.5
PV12  Saucer Basin,    8.55 283  Pn      Pn   15 10 45.2 -0.5
PV22  Blue Mesa, Par   8.57 285  Pn      Pn   15 10 46.3 +0.3
PV03  Paradox Valley   8.58 283  Pn      Pn   15 10 45.0 -1.2
146A  Union            8.61 116  Pn      Pn   15 10 46.4 +0.2
146A                             IAmb_Lg      15 13 32.1
      comp=Z,781nm,0.9s
PV11  David Mesa, Pa   8.61 283  Pn      Pn   15 10 46.5  0.0
PV11                             IAmb_Lg      15 13 18.3
      comp=Z,623nm,1.0s
JFWS  Jewell Farm      8.61  43  P       Pn   15 10 46.1 -0.2
      baz=228,SNR=66
JFWS  Jewell Farm      8.61  43  Pn      Pn   15 10 46.3  0.0
JFWS                             IAmb_Lg      15 13 20.7
      comp=Z,1µm,0.7s
PV18  Skein Mesa, Pa   8.63 283  Pn      Pn   15 10 46.4 -0.4
PV16  Nyswonger Mesa   8.64 283  Pn      Pn   15 10 46.7 -0.2
PV16                             IAmb_Lg      15 13 20.3
      comp=Z,449nm,1.1s
PV04  Paradox Valley   8.64 284  Pn      Pn   15 10 46.0 -0.9
PV04                             IAmb_Lg      15 13 20.0
      comp=Z,454nm,1.1s
K22A  Casper           8.65 315  P       Pn   15 10 45.9 -1.1
      baz=130,SNR=19
K22A  Casper           8.65 315  Pn      Pn   15 10 46.2 -0.8
K22A                             IAmb_Lg      15 13 36.7
      comp=Z,863nm,1.1s
PV17  East Wray Mesa   8.67 283          Pn   15 10 47.3 -0.1
PV20  West Nyswonger   8.69 283  Pn      Pn   15 10 44.9 -2.7
PV19  Morning Glory    8.69 283  Pn      Pn   15 10 48.3 +0.6
PV14  Lion Creek, Pa   8.73 283  Pn      Pn   15 10 48.1 -0.1
PV23  Carpenter Ridg   8.73 284  Pn      Pn   15 10 47.2 -1.1
PV10  Paradox Valley   8.74 283  Pn      Pn   15 10 50.9 +2.5
PV10                             IAmb_Lg      15 13 23.2
      comp=Z,450nm,1.2s
PV05  Paradox Valley   8.76 281          Pn   15 10 48.8 +0.2
TX31  Lajitas Ar. Si   8.78 213          Pn   15 10 47.2 -1.6
TX32  Lajitas Array    8.78 213  Pn      Pn   15 10 47.2 -1.5
TXAR  Lajitas Array    8.78 213  Pn      Pn   15 10 47.4 -1.3
      comp=Z,3.0nm,0.3s,baz=32,slow=11,SNR=62
TXAR                             Lg      Lg   15 13 12.1
      comp=Z,35nm,0.3s,baz=42,slow=23,SNR=12
TXAR  Lajitas Array    8.78 213  Pn      Pn   15 10 47.0 -1.8
T47A  Sharon Grove     8.88  86  Pn      Pn   15 10 51.3 +1.2
T47A                             IAmb_Lg      15 13 29.8
      comp=Z,789nm,0.8s
T47A  Sharon Grove     8.88  86  P            15 10 51.4
      baz=272,SNR=11
121A  Cookes Peak, D   8.99 244  P       Pn   15 10 49.6 -2.1
      baz=59,SNR=6.3
121A  Cookes Peak, D   8.99 244  Pn      Pn   15 10 50.6 -1.1
346A  Big Creek Wild   9.05 124  Pn      Pn   15 10 53.3 +1.0
Z47A  Carrollton       9.06 111  Pn      Pn   15 10 52.0 -0.5
Z47A                             IAmb_Lg      15 13 52.7
      comp=Z,417nm,0.8s
P46A  Rosedale         9.08  69          Pn   15 10 52.5 -0.3
P46A                             IAmb_Lg      15 13 42.9
      comp=Z,816nm,0.8s
M44A  Midewin, Midew   9.10  57  Pn      Pn   15 10 52.7 -0.3
F33A  5 Mile Ranch,    9.11   8  Pn      Pn   15 10 52.2 -0.9
F33A                             IAmb_Lg      15 13 31.2
      comp=Z,398nm,0.7s
I40A  Norwalk          9.11  37          Pn   15 10 53.4 +0.2
I40A                             IAmb_Lg      15 13 38.7
      comp=Z,593nm,0.8s
I40A  Norwalk          9.11  37  P            15 10 53.6
      baz=222,SNR=7.0
V48A  Smith Brothers   9.25  93  Pn      Pn   15 10 54.8 -0.3
V48A                             IAmb_Lg      15 13 36.2
      comp=Z,1µm,1.2s
SPMN  Marine on St.    9.31  24  P       Pn   15 10 55.2 -0.8
      baz=208
SPMN  Marine on St.    9.31  24  Pn      Pn   15 10 56.4 +0.5
SPMN                             IAmb_Lg      15 13 45.6
      comp=Z,501nm,0.9s
SFIN  Lafayette        9.38  64  P       Pn   15 10 57.2 +0.4
      baz=251,SNR=30
SFIN  Lafayette        9.38  64  Pn      Pn   15 10 56.9  0.0
SFIN                             IAmb_Lg      15 13 41.0
      comp=Z,753nm,0.9s
SFIN  Lafayette        9.38  64  P            15 10 57.0
      baz=251,SNR=28
X48A  Hartselle        9.38 101  Pn      Pn   15 10 57.8 +0.9
X48A                             IAmb_Lg      15 13 43.9
      comp=Z,588nm,1.0s
HQIL  Hanson Quary C   9.42  55          Pn   15 10 56.8 -0.6
HQIL                             IAmb_Lg      15 13 49.6
      comp=Z,981nm,1.2s
BLO   Bloomington      9.50  72  Pn      Pn   15 10 58.3 -0.2
BLO                              IAmb_Lg      15 13 51.5
      comp=Z,925nm,0.8s
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W18A  Petrified Fore     9.51 263  Pn     Pn     15 10 59.2 +0.3
WCI   Wyandotte Cave     9.55  78  P      Pn     15 10 59.2 -0.1
      baz=265
WCI   Wyandotte Cave     9.55  78  Pn     Pn     15 10 59.5 +0.2
WCI                                IAmb_Lg       15 13 56.0
      comp=Z,733nm,0.8s
WCI   Wyandotte Cave     9.55  78  P             15 10 59.7
      baz=265,SNR=14
L44A  Lake County Fo     9.57  53  P      Pn     15 10 59.4  0.0
      baz=240,SNR=14
L44A  Lake County Fo     9.57  53  Pn     Pn     15 10 59.2 -0.2
CLTN  Cedars of Leba     9.58  91         Pn     15 11 00.7 +1.0
CLTN                               IAmb_Lg       15 13 45.8
      comp=Z,651nm,1.1s
K43A  Burlington         9.59  49         Pn     15 11 00.0 +0.3
K43A  Burlington         9.59  49  P             15 11 00.1
      baz=236,SNR=14
F36A  Milaca             9.68  20  Pn     Pn     15 11 00.5 -0.4
F36A                               IAmb_Lg       15 14 08.6
      comp=Z,356nm,1.0s
X18A  Snowflake          9.84 260  Pn     Pn     15 11 03.0 -0.4
E28A  Huff               9.91 350  Pn     Pn     15 11 02.7 -1.4
E28A                               IAmb_Lg       15 14 10.3
      comp=Z,494nm,0.9s
LRAL  Lakeview Retre     9.94 109  P      Pn     15 11 04.2 -0.4
      baz=295,SNR=6.9
LRAL  Lakeview Retre     9.94 109  Pn     Pn     15 11 04.6  0.0
U49A  Red Boiling Sp     9.98  88  Pn     Pn     15 11 05.4 +0.4
U49A  Red Boiling Sp     9.98  88  P             15 11 06.5
      baz=276,SNR=6.0
I42A  Draeger Farm,      9.98  42  Pn     Pn     15 11 04.4 -0.8
I42A  Draeger Farm,      9.98  42  P             15 11 05.3
      baz=228,SNR=30
SRU   San Rafael Swe    10.00 287  Pn     Pn     15 11 06.2 +0.6
SWET  Sewanee           10.06  96         Pn     15 11 07.0 +0.7
Y49A  Blount Mountai    10.07 104  Pn     Pn     15 11 06.4  0.0
P17A  Butcher Ranch,    10.23 289         Pn     15 11 05.8 -2.8
G40A  Rib Lake          10.36  33  Pn     Pn     15 11 09.7 -0.6
G40A  Rib Lake          10.36  33  P             15 11 10.8
      baz=219,SNR=7.0
P48A  Milroy            10.39  72         Pn     15 11 09.3 -1.5
R49A  Shelbyville       10.44  78         Pn     15 11 11.4 +0.1
R49A  Shelbyville       10.44  78  P             15 11 12.7
      baz=266,SNR=6.4
R49A                               P             15 11 12.7
      baz=266,SNR=6.4
FPAL  Fort Paine        10.49  99         Pn     15 11 12.9 +0.8
N47A  Urbana            10.55  64  Pn     Pn     15 11 11.8 -1.1
L46A  Eue Claire        10.55  57  Pn     Pn     15 11 13.8 +0.8
TMUT  Trail Mountain    10.55 287         Pn     15 11 09.4 -3.8
BW06  Boulder Array     10.56 308  P      Pn     15 11 10.3 -2.9
      baz=121,SNR=9.2
PDAR  Pinedale Array    10.56 308  Pn     Pn     15 11 12.0 -1.3
      comp=Z,1.2nm,0.3s,baz=119,slow=12,SNR=41
PDAR                               Pg            15 11 53.5
      comp=Z,3.5nm,0.3s,baz=119,slow=15,SNR=6.1
PDAR                               Lg     Lg     15 14 05.0
      comp=Z,1.7nm,0.3s,baz=108,slow=35,SNR=2.0
PDAR                               LR     LR     15 15 09.6
      comp=Z,322nm,18.1s,baz=123,slow=37
W50A  Signal Mountai    10.56  95  Pn     Pn     15 11 14.8 +1.7
319A  Douglas           10.68 243  Pn     Pn     15 11 13.8 -1.1
T50A  Nancy             10.69  85  Pn     Pn     15 11 16.0 +1.1
WUAZ  Wupatki           10.74 267  P      Pn     15 11 14.8 -0.9
      baz=79
BRAL  Brewton           10.83 118         Pn     15 11 16.7 -0.1
P49A  Miami Univ. Ec    10.94  72  P      Pn     15 11 17.3 -1.0
      baz=260,SNR=11
P49A  Miami Univ. Ec    10.94  72         Pn     15 11 17.5 -0.8
P49A  Miami Univ. Ec    10.94  72  P             15 11 18.5
      baz=260,SNR=8.6
E38A  The Farm, Brul    10.95  25  Pn     Pn     15 11 17.2 -1.1
250A  Grady             10.97 113         Pn     15 11 18.0 -0.7
H43A  Windswept, Lux    10.98  43  Pn     Pn     15 11 17.8 -1.0
H43A  Windswept, Lux    10.98  43  P             15 11 17.6
      baz=230,SNR=20
X16A  Lo Mia Camp, P    11.05 261  Pn     Pn     15 11 17.1 -2.8
X51A  Calhoun           11.08  98  Pn     Pn     15 11 21.3 +1.2
R50A  Paris             11.10  78         Pn     15 11 20.3 -0.2
CPCT  Cooper Cave       11.14  93  Pn     Pn     15 11 22.4 +1.4
MTPU  Mount Pierson     11.19 280  Pn     Pn     15 11 21.2 -0.8
V51A  Loudon            11.22  91         Pn     15 11 23.3 +1.3
V51A  Loudon            11.22  91  P             15 11 23.5
      baz=279,SNR=20
U15A  North Rim         11.34 272  Pn     Pn     15 11 24.4 +0.4
O49A  Covington         11.36  69         Pn     15 11 23.2 -0.8
O49A  Covington         11.36  69  P             15 11 23.2
      baz=257,SNR=21
O49A                               P             15 11 23.2
      baz=257,SNR=21
COWI  Conover           11.47  33         Pn     15 11 24.2 -1.3
LAO   LASA Array        11.52 331  P      Pn     15 11 24.4 -1.8
      baz=146,SNR=13
LAO   LASA Array        11.52 331  Pn     Pn     15 11 24.6 -1.6
AGMN  Agassiz Nation    11.58   8  P      Pn     15 11 24.6 -2.4
      baz=190
AGMN  Agassiz Nation    11.58   8  Pn     Pn     15 11 23.9 -3.1
N49A  Columbus Grove    11.65  65  Pn     Pn     15 11 26.4 -1.6
N49A  Columbus Grove    11.65  65  P             15 11 27.2
      baz=254,SNR=29
N49A                               P             15 11 27.2
      baz=254,SNR=29
S51A  Beattyville       11.67  82         Pn     15 11 28.4 +0.2
S51A  Beattyville       11.67  82  P             15 11 28.5
      baz=270,SNR=14
S51A                               P             15 11 28.5
      baz=270,SNR=14
REDW  Red Top Meadow    11.68 308  Pn     Pn     15 11 27.9 -0.6
TKL   Tuckaleechee C    11.70  91  Pn     Pn     15 11 29.8 +1.1
      comp=Z,8.9nm,0.3s,baz=231,slow=7.0,SNR=43
TKL                                Sn     Sn     15 13 35.8 -3.0
      comp=Z,2.0nm,0.3s,baz=65,slow=8.3,SNR=3.7
TKL                                Lg     Lg     15 14 46.6
      comp=Z,6.5nm,0.3s,baz=341,slow=24,SNR=3.6
TKL   Tuckaleechee C    11.70  91         Pn     15 11 29.3 +0.6
RLMT  Red Lodge         11.76 318  P      Pn     15 11 27.7 -2.0
      baz=131
RLMT  Red Lodge         11.76 318  Pn     Pn     15 11 28.2 -1.5
TZTN  Tazewell          11.76  87  P      Pn     15 11 30.5 +0.9
      baz=276
TZTN  Tazewell          11.76  87  Pn     Pn     15 11 30.6 +1.1
TZTN  Tazewell          11.76  87  P             15 11 30.4
      baz=276,SNR=7.8
L48A  N Adams           11.80  60         Pn     15 11 28.9 -1.1
L48A  N Adams           11.80  60  P             15 11 29.0
      baz=249,SNR=11
L48A                               P             15 11 29.0
      baz=249,SNR=11
V52A  Sevierville       11.82  90  Pn     Pn     15 11 30.7 +0.5
ECR   Eagle Creek       11.86 306         Pn     15 11 30.2 -0.9
Q51A  Peebles           11.93  75  Pn     Pn     15 11 30.0 -1.7
Q51A  Peebles           11.93  75  P             15 11 30.6
      baz=264,SNR=8.6
Q51A                               P             15 11 30.6
      baz=264,SNR=8.6
FLWY  Flagg Ranch       11.96 311  Pn     Pn     15 11 30.4 -1.9
B35A  Bob, Littlefor    11.98  14  Pn     Pn     15 11 28.9 -3.5
LCMT  Little Creek M    12.05 275         Pn     15 11 33.8 +0.2
H17A  Grant Village     12.06 313  Pn     Pn     15 11 31.7 -2.0
451A  Vernon            12.07 117  Pn     Pn     15 11 32.7 -1.0
J47A  Sunmer            12.07  54  Pn     Pn     15 11 34.1 +0.4
EYMN  Ely               12.15  22  P      Pn     15 11 32.3 -2.5
      baz=207,SNR=9.7
EYMN  Ely               12.15  22  Pn     Pn     15 11 31.3 -3.4
EYMN  Ely               12.15  22  P             15 11 33.0
      baz=207,SNR=10
P51A  Williamsport      12.20  73  Pn     Pn     15 11 35.4 -0.1
352A  Blakely           12.21 112  Pn     Pn     15 11 34.5 -1.1
ACSO  Alum Creek Sta    12.38  69  P      Pn     15 11 36.4 -1.6
      baz=259,SNR=50
ACSO  Alum Creek Sta    12.38  69         Pn     15 11 37.0 -1.0
GCMT  Greycliff         12.42 320         Pn     15 11 37.2 -1.4
DGMT  Dagmar            12.43 341  P      Pn     15 11 36.5 -2.2
      baz=158,SNR=33
DGMT  Dagmar            12.43 341  Pn     Pn     15 11 35.7 -2.9
D41A  Chassel           12.47  32         Pn     15 11 36.7 -2.4
D41A  Chassel           12.47  32  P             15 11 37.5
      baz=219,SNR=7.2
AAM   Ann Arbor         12.47  60  P      Pn     15 11 38.1 -1.1
      baz=249,SNR=6.9
AAM   Ann Arbor         12.47  60  Pn     Pn     15 11 38.8 -0.3
V53A  Saluda            12.47  91         Pn     15 11 39.7 +0.5
BG3   Lake Jocassee     12.51  94  Pn     Pn     15 11 38.8 -1.0
G45A  Suttons Bay       12.52  45  Pn     Pn     15 11 38.8 -1.0
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G45A  Suttons Bay       12.52  45  P             15 11 38.0
      baz=234,SNR=15
G45A                               P             15 11 38.0
      baz=234,SNR=15
GOGA  Godfrey           12.53 101  P      Pn     15 11 41.2 +1.2
      baz=290
GOGA  Godfrey           12.53 101  Pn     Pn     15 11 39.3 -0.7
M50A  Fremont           12.62  64  Pn     Pn     15 11 40.0 -1.1
E43A  Lone Tree Farm    12.68  38  Pn     Pn     15 11 39.5 -2.4
Q52A  Bidwell           12.76  76  Pn     Pn     15 11 42.8 -0.3
Q52A  Bidwell           12.76  76  P             15 11 42.8
      baz=265,SNR=14
Q52A                               P             15 11 42.8
      baz=265,SNR=14
P52A  Corning           12.93  73  P      Pn     15 11 44.9 -0.6
      baz=263,SNR=11
P52A  Corning           12.93  73         Pn     15 11 43.8 -1.7
R53A  Hurricane         12.97  78         Pn     15 11 45.3 -0.7
N51A  Ashland           12.98  67         Pn     15 11 45.3 -0.9
GLMI  Grayling          13.00  48  P      Pn     15 11 45.0 -1.4
      baz=237,SNR=6.5
GLMI  Grayling          13.00  48         Pn     15 11 43.8 -2.6
GLMI  Grayling          13.00  48  P             15 11 45.3
      baz=237,SNR=5.8
214A  Organ Pipe Nat    13.01 252  Pn     Pn     15 11 47.1 +0.5
U54A  Nelsons Funny     13.15  86  P      Pn     15 11 47.8 -0.7
      baz=276,SNR=8.9
U54A  Nelsons Funny     13.15  86         Pn     15 11 47.5 -1.0
O52A  Adamsville        13.23  71         Pn     15 11 49.2 -0.3
HODGE Hodges            13.24  97  Pn     Pn     15 11 49.6  0.0
553A  Crawfordville     13.25 116  Pn     Pn     15 11 48.4 -1.5
Q53A  Leroy             13.33  76  P      Pn     15 11 50.1 -0.8
      baz=266,SNR=11
K50A  Casco             13.35  59         Pn     15 11 49.7 -1.5
PAULI Pauline           13.44  94  Pn     Pn     15 11 52.5  0.0
S54A  Dingess, Beckl    13.47  81  P      Pn     15 11 51.8 -1.1
      baz=271,SNR=12
S54A  Dingess, Beckl    13.47  81         Pn     15 11 51.6 -1.4
S54A  Dingess, Beckl    13.47  81  P             15 11 52.0
      baz=271,SNR=6.7
S54A                               P             15 11 52.0
      baz=271,SNR=6.7
P53A  Whipple           13.49  74  Pn     Pn     15 11 52.3 -0.7
ULM   Lac du Bonnet     13.51   6  Pn     Pn     15 11 48.1 -5.2
      comp=Z,1.4nm,0.3s,baz=184,slow=12,SNR=16
ULM                                Sn     Sn     15 14 11.6  -11
      comp=Z,3.2nm,0.3s,baz=283,slow=17,SNR=3.4
ULM                                Lg     Lg     15 15 37.5
      comp=Z,5.7nm,0.3s,baz=89,slow=19,SNR=3.8
ULM   Lac du Bonnet     13.51   6  Pn     Pn     15 11 48.3 -5.1
SHPR  Sheep Range       13.63 274  Pn     Pn     15 11 52.3 -2.9
MCMT  McKenzie Canyo    13.66 310  Pn     Pn     15 11 56.3 +0.7
O53A  New Philadelph    13.72  70  P      Pn     15 11 54.4 -1.8
      baz=261,SNR=8.6
O53A  New Philadelph    13.72  70         Pn     15 11 54.4 -1.8
V55A  Taylorsville      13.72  89  Pn     Pn     15 11 55.7 -0.6
R54A  Victor            13.73  79  P      Pn     15 11 54.4 -2.0
      baz=270,SNR=6.6
BCYI  Bear Canyon       13.75 308  Pn     Pn     15 11 56.3 -0.6
KMSC  Kings Mountain    13.76  92  Pn     Pn     15 11 56.4 -0.4
DLMT  Dillon            13.79 313  Pn     Pn     15 11 56.3 -1.0
ELK   Elko              13.86 292  Pn     Pn     15 11 57.1 -1.2
      comp=Z,0.0nm,0.3s,baz=100,slow=13,SNR=1.5
ELK                                Lg     Lg     15 15 49.9
      comp=Z,0.1nm,0.3s,baz=77,slow=18,SNR=1.7
255A  Hazlehurst        13.87 106  Pn     Pn     15 11 58.7 +0.4
M52A  Chesterland       13.87  65  Pn     Pn     15 11 56.0 -2.3
Q54A  Coxs Mills        13.88  76         Pn     15 11 57.8 -0.5
EGMT  Eagleton          14.05 326  P      Pn     15 11 58.1 -2.6
      baz=139,SNR=16
EGMT  Eagleton          14.05 326  Pn     Pn     15 11 58.4 -2.3
IRM   Iron Mountain     14.07 264  P      Pn     15 11 59.9 -1.2
      baz=74
E46A  Sault Ste Mari    14.07  43  Pn     Pn     15 11 57.3 -3.8
N53A  Lisbon            14.10  68  Pn     Pn     15 11 59.8 -1.6
N53A  Lisbon            14.10  68  P             15 11 60.0
      baz=259,SNR=10.0
N53A                               P             15 11 60.0
      baz=259,SNR=10.0
HRY   Holter Researc    14.15 318         Pn     15 11 59.5 -2.8
BLA   Blacksburg        14.21  83  P      Pn     15 12 02.6 -0.4
      baz=274
BLA   Blacksburg        14.21  83  Pn     Pn     15 12 03.2 +0.3
V56A  Mocksville        14.31  89  P      Pn     15 12 03.8 -0.5
      baz=279
U56A  King              14.32  87  Pn     Pn     15 12 05.0 +0.5
GMRC  Granite Mounta    14.32 267  P      Pn     15 12 03.6 -1.1
      baz=77
O54A  Avella            14.34  71         Pn     15 12 03.7 -1.0
M53A  WI Miller and     14.35  66  P      Pn     15 12 03.2 -1.6
      baz=257,SNR=8.9
M53A  WI Miller and     14.35  66         Pn     15 12 03.5 -1.3
W56A  Indian Trail      14.36  92  P      Pn     15 12 04.0 -1.0
      baz=282
T56A  Rocky Mt          14.53  84  P      Pn     15 12 05.7 -1.7
      baz=275,SNR=8.6
BIRD  Birdtown, Kers    14.57  93         Pn     15 12 06.3 -1.6
N54A  Moraine State     14.76  68  P      Pn     15 12 08.0 -2.5
      baz=260,SNR=6.8
N54A  Moraine State     14.76  68         Pn     15 12 07.3 -3.1
ALLY  Alegheny Colle    14.78  65         Pn     15 12 07.8 -2.9
Y57A  Sumter            14.78  96  Pn     Pn     15 12 08.0 -2.8
I51A  Listowel          14.82  57  P      Pn     15 12 08.8 -2.4
      baz=248
W57A  Gilead            14.83  91         Pn     15 12 10.3 -1.1
S56A  Natural Bridge    14.86  81  P      Pn     15 12 10.2 -1.7
      baz=272,SNR=16
257A  Skidaway Islan    14.97 104  Pn     Pn     15 12 13.7 +0.4
ERPA  Erie              15.01  64  Pn     Pn     15 12 10.9 -2.9
M54A  Oil Creek Stat    15.10  66  P      Pn     15 12 13.5 -1.6
      baz=258,SNR=14
M54A  Oil Creek Stat    15.10  66  Pn     Pn     15 12 14.0 -1.1
M54A  Oil Creek Stat    15.10  66  P             15 12 14.2
      baz=258,SNR=12
T57A  Hurt              15.15  84  P      Pn     15 12 14.5 -1.2
      baz=275,SNR=16
T57A  Hurt              15.15  84         Pn     15 12 15.1 -0.6
TPH   Tonopah           15.17 280         Pn     15 12 13.3 -2.9
PFO   Pinyon Flats O    15.27 263  Lg     Lg     15 16 37.6
      comp=Z,0.3nm,0.3s,baz=319,slow=20,SNR=2.3
PFO                                LR     LR     15 18 39.9
      comp=Z,108nm,18.2s,baz=80,slow=40
RMX   La Rumorosa       15.30 259         Pn     15 12 13.9 -4.0
S57A  Dark Hollow, R    15.34  81         Pn     15 12 16.5 -1.7
ESJX  Sierra Juarez     15.42 257  Pn     Pn     15 12 16.4 -3.1
O56A  Blue Knob Stat    15.73  71  P      Pn     15 12 21.0 -2.3
      baz=264
O56A  Blue Knob Stat    15.73  71  Pn     Pn     15 12 21.4 -1.9
O56A                               IAmb   IAmb   15 12 23.1
      comp=Z,22nm,0.9s
BAR   Barrett           15.74 260         Pn     15 12 19.2 -4.2
M55A  Ridgway           15.76  67         Pn     15 12 21.0 -2.6
M55A  Ridgway           15.76  67  P             15 12 21.7
      baz=259,SNR=12
M55A                               P             15 12 21.7
      baz=259,SNR=12
KVN   Kaiserville       15.86 284         Pn     15 12 23.8 -1.3
NVAR  Mina Array Bea    16.01 282  Pn     P      15 12 28.0 -2.5
      comp=Z,0.2nm,0.3s,baz=92,slow=11,SNR=22
NVAR  Mina Array Bea    16.01 282  Pn     Pn     15 12 25.8 -1.3
N56A  West Decatur      16.02  69  P      Pn     15 12 23.7 -3.2
      baz=262
WVNY  West Valley, N    16.07  64  Pn     Pn     15 12 24.3 -3.3
WVNY                               IAmb   IAmb   15 12 41.5
      comp=Z,20nm,0.9s
P57A  Homestead Farm    16.09  74  Pn     Pn     15 12 25.9 -1.9
P57A                               IAmb   IAmb   15 12 28.0
      comp=Z,36nm,1.4s
R58B  Mineral           16.18  80  Pn     Pn     15 12 29.4 +0.4
R58B                               IAmb   IAmb   15 12 38.9
      comp=Z,24nm,1.1s
RYN   Ryan              16.18 283         P      15 12 30.0 -2.3
J54A  Appleton          16.28  61  Pn     Pn     15 12 27.5 -2.7
J54A                               IAmb   IAmb   15 12 38.7
      comp=Z,28nm,0.7s
SSPA  Standing Stone    16.29  70  P      Pn     15 12 27.5 -2.9
      baz=263
SSPA  Standing Stone    16.29  70         Pn     15 12 27.7 -2.6
SSPA                               IAmb   IAmb   15 12 30.4
      comp=Z,26nm,0.7s
SSPA  Standing Stone    16.29  70  P             15 12 28.5
      baz=263,SNR=5.4
MEDO  Medina            16.38  61         Pn     15 12 28.6 -2.9
MEDO                               IAmb   IAmb   15 12 47.8
      comp=Z,51nm,1.1s
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O57A  Amberson          16.43  72  P      Pn     15 12 30.2 -2.1
      baz=265,SNR=6.9
SADO  Sadowa            16.43  55  Pn     Pn     15 12 28.8 -3.4
      comp=Z,1.8nm,0.3s,baz=275,slow=11,SNR=8.2
SADO                               Sn     Sn     15 15 26.4 -7.5
      comp=Z,0.7nm,0.3s,baz=300,slow=16,SNR=2.5
SADO                               Lg     Lg     15 17 11.1
      comp=Z,2.3nm,0.3s,baz=350,slow=20,SNR=3.5
SADO                               LR     LR     15 18 54.7
      comp=Z,317nm,18.3s,baz=286,slow=37
SADO  Sadowa            16.43  55  Pn     Pn     15 12 28.4 -3.8
SADO                               IAmb   IAmb   15 12 44.9
      comp=Z,9.8nm,0.5s
BMO   Blue Mountains    16.51 305         P      15 12 34.8 -1.0
N57A  Milroy            16.56  70  P      Pn     15 12 30.9 -2.9
      baz=263,SNR=8.5
SLBS  Sierra La Lagu    16.56 221  Pn     Pn     15 12 30.9 -3.0
P58A  Pank, Wackersv    16.64  74  P      Pn     15 12 32.2 -2.7
      baz=267
MDPB  Devils Postpil    16.66 279  Pn     Pn     15 12 32.2 -3.1
WVOR  Wild Horse Val    16.70 296         Pn     15 12 34.8 -0.9
WVOR                               IAmb   IAmb   15 12 42.1
      comp=Z,34nm,1.4s
H53A  Bobcaygeon        16.73  56  P      Pn     15 12 32.3 -3.7
      baz=249
WALA  Waterton Lakes    16.74 322         P      15 12 36.9 -1.5
L56A  Greenwood         16.77  65  P      Pn     15 12 34.6 -2.0
      baz=258
L56A  Greenwood         16.77  65         Pn     15 12 34.3 -2.3
L56A                               IAmb   IAmb   15 12 47.6
      comp=Z,31nm,0.8s
J55A  Hilton            16.85  61  Pn     Pn     15 12 34.3 -3.2
J55A                               IAmb   IAmb   15 12 53.4
      comp=Z,46nm,0.9s
F10A  Beach Ranch, E    16.92 309         P      15 12 40.4 +0.1
M57A  Sunshine Farm,    16.95  68  P      Pn     15 12 37.2 -1.6
      baz=262
M57A  Sunshine Farm,    16.95  68  Pn     Pn     15 12 36.5 -2.3
M57A                               IAmb   IAmb   15 12 39.4
      comp=Z,18nm,0.8s
K56A  Middlesex         17.06  64  P      Pn     15 12 38.2 -2.0
      baz=257
N58A  Sunbury           17.20  70  P      Pn     15 12 39.9 -2.0
      baz=264
N58A  Sunbury           17.20  70  Pn     Pn     15 12 39.8 -2.0
N58A                               IAmb   IAmb   15 12 51.5
      comp=Z,23nm,0.8s
DELO  Deloro Mine       17.36  57  Pn     Pn     15 12 41.5 -2.4
DELO                               IAmb   IAmb   15 12 58.5
      comp=Z,13nm,0.7s
G54A  Lake Saint Pet    17.36  54  P      Pn     15 12 40.8 -3.1
      baz=248,SNR=6.3
M58A  Price's Panora    17.45  68  P      Pn     15 12 43.4 -1.7
      baz=262
J56A  Wolcott           17.53  62  P      Pn     15 12 44.3 -1.7
      baz=256
J56A  Wolcott           17.53  62  Pn     Pn     15 12 43.8 -2.2
J56A                               IAmb   IAmb   15 13 01.2
      comp=Z,39nm,1.1s
ALGO  Algonquin Park    17.61  53  P      Pn     15 12 44.1 -2.8
      baz=246,SNR=6.1
PECO  Prince Edward     17.61  60  Pn     Pn     15 12 44.0 -3.0
PECO                               IAmb   IAmb   15 12 50.7
      comp=Z,25nm,1.0s
MOD   Modoc Plateau     17.81 293  P      Pn     15 12 47.5 -2.2
PLVO  Plevna            17.90  56  P      Pn     15 12 48.9 -1.7
PLVO                               IAmb   IAmb   15 13 02.5
      comp=Z,16nm,0.7s
N59A  State Game Lan    17.92  70  P      Pn     15 12 49.6 -1.2
      baz=264
N59A  State Game Lan    17.92  70  P      Pn     15 12 49.5 -1.2
N59A                               IAmb   IAmb   15 12 55.6
      comp=Z,40nm,1.2s
BINY  Binghamton        17.93  66  P      Pn     15 12 48.9 -2.1
      baz=260
BINY  Binghamton        17.93  66  P      Pn     15 12 49.5 -1.6
BINY                               IAmb   IAmb   15 13 05.3
      comp=Z,52nm,1.4s
WUPA  West Chester U    17.97  73  P      Pn     15 12 50.3 -1.1
NEW   Newport           17.97 315  P      P      15 12 51.2 -0.8
      comp=Z,0.2nm,0.3s,baz=130,slow=9.0,SNR=16
NEW   Newport           17.97 315  P      P      15 12 52.9 +1.0
KSPA  Keystone Colle    17.99  68  P      Pn     15 12 49.4 -2.3
KSPA                               IAmb   IAmb   15 12 60.0
      comp=Z,20nm,0.8s
L58A  Harry Jones Me    18.01  66  P      Pn     15 12 50.9 -1.0
      baz=261
FFC   Flin Flon         18.08 353  P      Pn     15 12 49.6 -3.1
J57A  Williamstown      18.17  62  P      Pn     15 12 51.8 -2.1
      baz=256
J57A  Williamstown      18.17  62  P      Pn     15 12 52.0 -2.0
J57A                               IAmb   IAmb   15 13 03.4
      comp=Z,22nm,0.8s
PMPB  Monarch Peak      18.18 275  P      P      15 12 54.1 -0.2
PMPB                               IAmb   IAmb   15 12 56.9
      comp=Z,15nm,1.0s
K58A  Earlville         18.28  64  P      Pn     15 12 54.2 -1.1
      baz=259
K58A  Earlville         18.28  64  P      P      15 12 54.6 -0.8
K58A                               IAmb   IAmb   15 13 10.0
      comp=Z,26nm,0.9s
E08A  Dider Farm, El    18.29 308  P      P      15 12 54.4 -1.0
N60A  Cedar Hill Far    18.42  70  P      P      15 12 55.9 -0.9
      baz=265
L59A  Walton            18.62  66  P      Pn     15 12 59.5 +0.1
L59A                               IAmb   IAmb   15 13 09.8
      comp=Z,27nm,1.0s
TEIG  Tepich            18.68 150  P      Pn     15 13 01.2 +1.0
TEIG  Tepich            18.68 150  P      Pn     15 13 00.3 +0.1
ODNJ  Ogdensburg        18.81  70  P      P      15 13 00.2 -0.9
ODNJ                               IAmb   IAmb   15 13 03.0
      comp=Z,54nm,1.5s
E07A  Sunnyside         18.82 308  P      Pn     15 13 01.3 -0.5
M60A  Port Jervis       18.82  69  P      P      15 12 60.0 -1.3
      baz=264
K59A  Cooperstown       18.86  64  P      Pn     15 13 01.5 -0.9
      baz=260
H57A  Richville         18.87  59  P      P      15 12 59.0 -2.7
      baz=254
VLDQ  Val d'Or          18.94  47         P      15 13 01.6 -0.8
VLDQ                               IAmb   IAmb   15 13 10.8
      comp=Z,12nm,0.8s
I58A  Old Forge         18.96  62  P      P      15 13 02.0 -0.8
      baz=257
TRNY  Table Rock, Ra    19.10  70  P      P      15 13 04.1 -0.2
J59A  Piesco            19.25  63  P      P      15 13 04.7 -1.2
J59A                               IAmb   IAmb   15 13 20.2
      comp=Z,17nm,1.1s
WDC   Whiskeytown Da    19.35 289  P      P      15 13 05.3 -1.8
WDC                                IAmb   IAmb   15 13 23.4
      comp=Z,20nm,1.4s
LONY  Lake Ozonia       19.46  59  P      Pn     15 13 09.0 -0.6
LONY                               IAmb   IAmb   15 13 24.4
      comp=Z,8.0nm,0.7s
NCB   Newcomb           19.55  61  P      Pn     15 13 09.4 -1.2
NCB                                IAmb   IAmb   15 13 26.4
      comp=Z,12nm,0.6s
YBH   Yreka Blue Hor    19.57 292  P      Pn     15 13 11.1 +0.1
      comp=Z,0.4nm,0.3s,baz=51,slow=6.8,SNR=12
YBH   Yreka Blue Hor    19.57 292  P      Pn     15 13 11.3 +0.3
YBH                                IAmb   IAmb   15 13 13.8
      comp=Z,34nm,1.4s
LTY   Liberty           19.61 309  P      Pn     15 13 11.3  0.0
D55A  Sainte-Anne-du    19.66  52  P      P      15 13 09.6 -0.8
      baz=247
MATQ  Matagami          19.68  43  P      P      15 13 09.5 -1.2
      baz=237
H58A  Gabriels          19.69  60  P      P      15 13 10.3 -0.5
      baz=256
KSCT  Kent School, K    19.71  68  P      Pn     15 13 14.1 +1.5
TRY   Troy              19.71  65  P      Pn     15 13 13.2 +0.7
TRY                                IAmb   IAmb   15 13 13.8
      comp=Z,24nm,0.9s
L61A  Hillsdale 1, H    19.72  67  P      P      15 13 10.8 -0.3
      baz=262
E56A  St. Veronique     19.77  53  P      P      15 13 10.0 -1.5
      baz=249
ACCN  Adirondack Com    19.83  63  P      Pn     15 13 12.5 -1.3
ACCN                               IAmb   IAmb   15 13 17.7
      comp=Z,34nm,1.2s
HUMO  Hull Mountain     19.87 295  P      Pn     15 13 12.9 -1.5
CMIG  Matias Romero     19.88 171  P      Pn     15 13 15.0 +0.3
      comp=Z,0.8nm,0.3s,baz=349,slow=10.0,SNR=7.7
TRQ   Mont Tremblant    19.96  55         P      15 13 13.6 -0.2
J60A  Lant Hill Farm    19.98  64  P      Pn     15 13 14.3 -1.3
      baz=260
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H59A	Cadyville	20.09	60	P	P	15 13 14.6	-0.5
	baz=256						
D56A	ZEC Mazanza, M	20.13	52	P	P	15 13 15.4	-0.1
	baz=248						
FRNY	Flat Rock	20.20	59		Pn	15 13 16.9	-1.4
FRNY				IAmb	IAmb	15 13 33.9	
	comp=Z,36nm,1.3s						
QUA2	Belchertown	20.61	67	P	Pn	15 13 22.3	-0.8
QUA2				IAmb	IAmb	15 13 25.2	
	comp=Z,24nm,1.1s						
UCCT	U. Connecticut	20.66	68	P	Pn	15 13 22.3	-1.4
K62A	Royalston	20.75	66	P	Pn	15 13 25.2	+0.5
K62A				IAmb	IAmb	15 13 38.6	
	comp=Z,30nm,1.2s						
M63A	Gales Ferry	20.76	69	P	Pn	15 13 25.0	+0.2
E58A	La Victoria	20.85	55	P	Pn	15 13 23.9	-2.0
	baz=252						
MOQ	Mont Orford	21.24	58	P	P	15 13 29.2	+1.6
M64A	Tiverton	21.40	69	P	P	15 13 30.2	+1.0
FCC	Fort Churchill	22.10	6	P	P	15 13 36.1	-0.5
FCC				IAmb	IAmb	15 13 41.0	
	comp=Z,7.2nm,0.9s						
D60A	Saint Jean D'O	22.56	55	P	P	15 13 41.0	-0.6
	baz=253						
E63A	Oxbow	24.10	57	P	P	15 13 57.8	+0.7
BATG	Bathurst New B	25.87	56	P	P	15 14 15.2	+2.1
BBB	Bella Bella	26.04	316	LR	LR	15 25 12.2	
	comp=Z,176nm,19.6s,baz=65,slow=38						
LMN	Caledonia Moun	26.48	60	P	P	15 14 22.1	+3.5
YKA	Yellowknife Ar	27.62	344	P	P	15 14 28.9	+0.1
	comp=Z,1.8nm,0.6s,baz=143,slow=9.2,SNR=29						
YKA				Lg	Lg	15 23 06.1	
	comp=Z,4.3nm,0.9s,baz=139,slow=28,SNR=3.0						
YKA				LR	LR	15 25 54.5	
	comp=Z,158nm,19.3s,baz=0.0,slow=38						
DLBC	Dease Lake	29.98	326	P	P	15 14 50.8	+0.9
	comp=Z,2.2nm,0.7s,baz=127,slow=10,SNR=2.5						
DLBC				LR	LR	15 27 36.0	
	comp=Z,184nm,18.9s,baz=109,slow=38						
DLBC	Dease Lake	29.98	326	P	P	15 14 54.0	+4.2
DLBC				IAmb	IAmb	15 15 05.1	
	comp=Z,12nm,1.3s						
INK	Inuvik	37.11	339	LR	LR	15 31 55.2	
	comp=Z,150nm,19.4s,baz=91,slow=38						
IL18	Eielson Array	39.93	330	P	P	15 16 16.0	+0.7
IL31		39.98	330	P	P	15 16 16.5	+0.9
IL31				IAmb	IAmb	15 16 20.7	
	comp=Z,5.1nm,0.7s						
ILAR	Eielson Array	39.98	330	P	P	15 16 16.6	+0.8
	comp=Z,4.0nm,0.8s,baz=108,slow=7.0,SNR=41						
ILAR				LR	LR	15 33 14.4	
	comp=Z,37nm,20.9s,baz=122,slow=37						
ILAR	Eielson Array	39.98	330	P	P	15 16 17.1	+1.4
CCB	Clear Creek Bu	40.31	330	P	P	15 16 20.4	+1.9
CCB				IAmb	IAmb	15 16 22.1	
	comp=Z,4.5nm,0.9s						
WRH	Wood River Hil	40.37	329	P	P	15 16 19.8	+0.8
SFJD	Kangerlussuaq	40.39	27	P	P	15 16 21.4	+2.3
	comp=Z,6.3nm,0.7s,baz=270,slow=9.2,SNR=2.9						
MDM	Murphy Dome	40.58	330	P	P	15 16 23.3	+2.6
TRF	Thorofare Moun	41.00	327	P	P	15 16 27.8	+3.4
KDAK	Kodiak Island	41.04	318	LR	LR	15 33 37.8	
	comp=Z,76nm,18.5s,baz=131,slow=37						
I23K	Minto, Yukon-K	41.10	330	P	P	15 16 28.9	+4.0
I23K				IAmb	IAmb	15 16 30.8	
	comp=Z,10nm,1.4s						
PPLA	Purkeypile	41.70	326	P	P	15 16 33.3	+3.2
PPLA				IAmb	IAmb	15 16 34.8	
	comp=Z,10nm,1.2s						
TTA	Tatalina	43.42	326	P	P	15 16 46.8	+2.7
TTA				IAmb	IAmb	15 16 46.9	
	comp=Z,5.6nm,1.5s						
SUMG	Summit	46.29	21	P	P	15 17 09.0	+1.9
SCO	Scoresbysund	51.22	25	P	P	15 17 46.8	+2.3
SCO				IAmb	IAmb	15 17 56.0	
	comp=Z,3.8nm,0.9s						
ESK	Eskdalemuir	63.26	40	P	P	15 19 11.3	+1.5
EKR1	Eskdalemuir Ar	63.27	40	P	P	15 19 11.3	+1.5
ARC6	ARCESS Array S	66.28	19	P	P	15 19 31.4	+2.2
ARCES	ARCESS Array B	66.28	19	P	P	15 19 31.1	+1.9
	comp=Z,1.7nm,0.5s,baz=317,slow=6.3,SNR=6.8						
ARCES	ARCESS Array B	66.28	19	P	P	15 19 31.7	+2.4
KEV	Kevo	66.51	18	P	P	15 19 32.8	+2.1
PETK	Petropavlovsk-	69.00	321	P	P	15 19 47.9	+1.2
	comp=Z,3.2nm,0.8s,baz=72,slow=9.4,SNR=2.5						
PETK	Petropavlovsk-	69.00	321	P	P	15 19 48.7	+2.0
FIA1	FINESS Array S	72.16	25	P	P	15 20 06.8	+1.1
FINES	FINESS Array B	72.16	25	P	P	15 20 06.6	+0.8
	comp=Z,2.7nm,0.6s,baz=311,slow=4.3,SNR=11						
FINES	FINESS Array B	72.16	25	P	P	15 20 07.2	+1.5
GERES	GERESS Array B	75.49	39	P	P	15 20 27.5	+1.8
	comp=Z,0.7nm,0.6s,baz=308,slow=7.0,SNR=2.3						
AKASG	Malin Array Be	81.33	31	P	P	15 20 59.6	+1.8
	comp=Z,2.3nm,0.7s,baz=313,slow=4.2,SNR=13						
AKASG	Malin Array Be	81.33	31	P	P	15 21 00.2	+2.4
AKASG				IAmb	IAmb	15 21 01.0	
	comp=Z,1.4nm,0.7s						
BURAR	Bucovina Array	81.91	35	P	P	15 21 04.3	+3.3
BURAR				IAmb	IAmb	15 21 05.5	
	comp=Z,2.3nm,0.8s						
ZALV	Zalesovo Beam	89.55	358	P	P	15 21 40.9	+2.3
	comp=Z,0.9nm,0.6s,baz=358,slow=4.5,SNR=4.6						
ZALV				LR	LR	16 04 39.3	
	comp=Z,41nm,18.2s,baz=52,slow=38						
TORD	Torodi Ar. Bea	89.96	74	P	P	15 21 43.1	+1.9
	comp=Z,0.9nm,0.8s,baz=301,slow=4.2,SNR=3.0						
TORD	Torodi Ar. Bea	89.96	74	IAmb	IAmb	15 21 43.9	
	comp=Z,1.0nm,0.8s						
KSRS	Korea Array	94.65	325	LR	LR	16 08 40.7	
	comp=Z,34nm,18.6s,baz=215,slow=38						
MKAR	Makanchi Array	96.75	360	P	P	15 22 14.2	+2.2
	comp=Z,0.2nm,0.6s,baz=17,slow=4.5,SNR=2.3						
HHC	Hu-ho-hao-te	98.02	338	*e*P	Pdif	15 22 19.4	+1.4
HHC				pmax	pmax		
	comp=Z,13nm,1.0s						
HHC				pmax	pmax		
	comp=Z,130nm,4.9s						
WMQ	Urumqi	99.54	356	*e*P	Pdif	15 22 26.9	+2.3

IDC ***05*** *15:33:17.8±4.5, 10°.06N×126°.20E, h0^{km}, mb3.2/3, mb1 3.4/3, mb1mx3.2/56, mbtmp3.2/3, Error ellipse: s-maj=375.5km s-min=28.6km az=65.0*

MAN ***05*** *15:33:24.2, 10°.06N×126°.12E, h13^{km}, mb4.3, ML3.1, MS2.8*

ISC 05 15:33:21.1±1.9**, 10°.20N**±0°.06×**126°.4E**±0°.1**, h25**^{km}±12^{km}**, n10, σ1^{s}.48**/15**, mb3.0**/3**, 1D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLSP	General Luna,	0.47	208	*e*P	Pb	15 33 30.7	-0.2
GLSP				*e*S	Sb	15 33 36.7	-0.8
BUTP	Butuan	1.42	210	*e*P	Pn	15 33 46.2	+0.9
BUTP				*e*S	Sn	15 34 01.9	-1.3
MSLP	Maasin	1.47	267	*e*P	Pn	15 33 46.4	+0.4
MSLP				*e*S	Sb	15 34 07.8	+1.7
CGP	Cagayan de Oro	2.38	223	⇓*e*P	Pn	15 33 59.0	+0.5
CGP				*e*S	Sn	15 34 23.8	-3.3
BUKP	Musuan	2.64	209	*e*P	Pn	15 34 03.9	+1.8
BUKP				*e*S	Sn	15 34 34.3	+1.0
CNP	Catarman	2.83	324	*e*P	Pb	15 34 10.0	-0.9
PAGZ	Pagadian	3.75	232	*e*P	Pn	15 34 18.3	+0.9
WRA	Warramunga Arr	30.97	165	P	P	15 39 36.1	-0.4
	0.1nm,0.5s,baz=343,slow=9.3,SNR=1.5						
ASAR	Alice Springs	34.46	168	P	P	15 40 06.5	-0.6
	0.1nm,0.5s,baz=350,slow=6.9,SNR=6.0						
MKAR	Makanchi Array	52.13	323	P	P	15 42 30.1	+0.7
	0.3nm,0.6s,baz=117,slow=8.3,SNR=4.7						

BJI ***05*** *15:39:30.3±0.0, 22°.59N×118°.45E, h11^{km}, mB4.6/33, mb4.4/41, ML4.8/11, Ms4.5/38, Ms7 4.0/33*

IDC ***05*** *15:39:30.1±0.9, 22°.46N×118°.40E, h0^{km}, mb4.1/9, mb1 4.2/11, mb1mx3.7/68, mbtmp4.0/11, ML3.9/2, MS3.3/15, Ms1 3.4/15, ms1mx3.2/53, Error ellipse: s-maj=34.6km s-min=17.5km az=67.0*

NEIC ***05*** *15:39:33.0±1.8, 22°.60N±0°.07×118°.43E±0°.06, h24^{km}±4^{km}, mb4.3/16, Error ellipse: s-maj=9.5km s-min=8.2km az=171.0*

ISC 05 15:39:32.9±0.6**, 22°.61N**±0°.06×**118°.46E**±0°.05**, h17**^{km}**, n78, σ1^{s}.91**/69**, mb4.1**/18**, MS3.2**/12**, 1C-1D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KNMB	Chin-men Tao	1.85	358		Pn	15 40 02.6	-1.3
KNMB				Sn	Sn	15 40 26.1	-0.8
TPUB	Ta-pu	2.12	70	Pn	Pn	15 40 06.2	-1.3
SSLB	Suanglung	2.58	62		Pn	15 40 13.6	-0.3
YULB	Yu-li	2.73	73	Pn	Pn	15 40 15.8	-0.2
TATO	Taipei	3.64	49		Pn	15 40 28.9	+0.4
MCO	Taipa Grande	4.56	265	P	Pn	15 40 41.0	-0.2
YOJ	Yonaguni jima	4.57	65	Pn	Pn	15 40 40.4	-0.8
GZH	Guangzhou	4.75	277	Pn	Pn	15 40 39.8	-3.9
GZH				Sn	Sn	15 41 31.8	-6.5
GZH				smax	smax		
	comp=N,2µm,0.6s						
GZH				smax	smax		
	comp=E,2µm,0.7s						
TGY	Tagaytay City	8.78	164	LR	LR	15 45 12.6	
	comp=Z,204nm,18.3s,baz=61,slow=40						
SSE	Sheshan	8.80	15	P	Pn	15 41 38.6	-0.7
SSE				pmax	pmax		
	comp=Z,30nm,0.8s						
SSE				smax	smax		
	comp=N,67nm,1.1s						
SSE				smax	smax		
	comp=E,94nm,1.3s						
QIZ	Qiongzhong	8.81	248	P	Pn	15 41 39.2	-0.4
QIZ				S	Sn	15 43 19.6	+1.1
QIZ				pmax	pmax		
	comp=Z,39nm,1.9s						
QIZ				LR	LR		
	comp=N,1µm,9.6s						
QIZ				LR	LR		
	comp=E,960nm,10.0s						
QIZ				LR	LR		
	comp=Z,790nm,9.6s						
QIZ	Qiongzhong	8.81	248	Pn	Pn	15 41 37.2	-2.3
NJ2	Nanjing	9.42	2	*e*P	Pn	15 41 46.5	-1.3
NJ2				S	Sn	15 43 34.4	+1.1
NJ2				pmax	pmax		
	comp=Z,21nm,0.7s						
NJ2				smax	smax		
	comp=N,380nm,0.8s						
NJ2				smax	smax		
	comp=E,220nm,0.8s						
NJ2				LR	LR		
	comp=N,2µm,7.3s						
NJ2				LR	LR		
	comp=E,970nm,8.2s						
NJ2				LR	LR		
	comp=Z,1µm,9.1s						
GYA	Guiyang	11.40	292	⇑P	Pn	15 42 14.7	-0.5
GYA				S	Sn	15 44 24.9	+2.6
GYA				pmax	pmax		
	comp=Z,16nm,0.8s						
GYA				pmax	pmax		
	comp=Z,150nm,3.7s						
GYA				LR	LR		
	comp=N,570nm,8.6s						
GYA				LR	LR		
	comp=E,500nm,8.9s						
GYA				LR	LR		
	comp=Z,400nm,9.1s						
SLVN	Son La	13.57	267	Pn	Pn	15 42 43.4	-1.3
JSU	Suzuyama	13.88	48	Pn	Pn	15 42 46.5	-2.3
XAN	Xi'an	14.14	326	P	P	15 43 01.4	+1.3
XAN				pP	Pn	15 43 05.4	+13
XAN				pmax	pmax		
	comp=Z,4.0nm,0.7s						
XAN				pmax	pmax		
	comp=Z,150nm,5.8s						
XAN				LR	LR		
	comp=N,2µm,11.1s						
XAN				LR	LR		
	comp=E,1µm,12.7s						
XAN				LR	LR		
	comp=Z,940nm,6.9s						
KMI	Kunming	14.60	283	⇓P	Pn	15 43 00.5	+1.5
KMI				S	Sn	15 45 41.4	+0.8
KMI				pmax	pmax		
	comp=Z,11nm,0.5s						
KMI				LR	LR		
	comp=Z,460nm,6.5s						
KMI				LR	LR		
	comp=Z,530nm,8.7s						
KMI				LR	LR		
	comp=Z,390nm,8.6s						
JNU	Nakatsue	15.16	44	LR	LR	15 50 27.5	
	comp=Z,156nm,19.0s,baz=252,slow=43						
KSAR	Wonju Array Be	16.87	27		Pn	15 43 28.3	0.0
KSRS	Korea Array	16.90	27	P	P	15 43 29.9	-0.7
	comp=Z,0.2nm,0.3s,baz=215,slow=14,SNR=3.7						
KSRS				LR	LR	15 49 23.5	
	comp=Z,93nm,18.8s,baz=212,slow=35						
DAV	Davao City (W)	16.90	155	LR	LR	15 50 46.6	
	comp=Z,171nm,20.6s,baz=308,slow=40						
BJT	Baijiatuau	17.47	354	P	P	15 43 36.2	-0.6
PAYA	Payao	17.66	263	P	P	15 43 46.0	+6.9
CM34	Chiang Mai Arr	18.44	262	P	Pn	15 43 51.0	+3.1
CM35	Chiang Mai Arr	18.48	261	P	Pn	15 43 49.0	+0.6
LZH	Lanzhou	18.48	320	*e*P	Pn	15 43 52.5	+4.1
LZH				pP	sP	15 43 55.9	+0.6
LZH				sP	pP	15 43 59.2	+6.1
LZH				pmax	pmax		
	comp=Z,18nm,1.0s						
LZH				pmax	pmax		
	comp=Z,69nm,5.2s						
LZH				LR	LR		
	comp=Z,1µm,10.0s						
LZH				LR	LR		
	comp=Z,730nm,10.8s						
LZH				LR	LR		
	comp=Z,400nm,10.8s						
CM36	Chiang Mai Arr	18.58	261	P	P	15 43 50.0	+0.7
CHTO	Chiang Mai	18.64	262	P	Pn	15 43 50.8	+0.5
CM09	Chiang Mai Arr	18.70	261	P	Pn	15 43 52.9	+1.9
CM04	Chiang Mai Arr	18.72	261	P	Pn	15 43 52.9	+1.6
CM01	Chiang Mai Arr	18.73	261	P	Pn	15 43 52.0	+0.6
CM31	Chiang Mai Arr	18.74	261	P	Pn	15 44 03.6	+12
CMAR	Chiang Mai Arr	18.74	261	P	P	15 43 51.7	+0.7
	comp=Z,0.3nm,0.3s,baz=70,slow=9.6,SNR=17						
CMAR				LR	LR	15 51 00.9	
	comp=Z,84nm,18.6s,baz=124,slow=37						
CMAR	Chiang Mai Arr	18.74	261	P	P	15 43 51.5	+0.5
CM02	Chiang Mai Arr	18.74	261	P	Pn	15 43 52.0	+0.5
CM05	Chiang Mai Arr	18.75	261	P	Pn	15 43 53.1	+1.5
HHC	Hu-ho-hao-te	19.10	344	*e*P	P	15 43 53.9	-1.0
HHC				S	Sn	15 47 24.4	-5.0
HHC				sS	S	15 47 33.2	+2.1
HHC				pmax	pmax		
	comp=Z,16nm,1.0s						
HHC				pmax	pmax		
	comp=Z,140nm,4.5s						
HHC				LR	LR		
	comp=Z,490nm,8.1s						
HHC				LR	LR		
	comp=Z,300nm,9.5s						
HHC				LR	LR		
	comp=Z,280nm,9.1s						
BTO	Baotou	19.31	340	*e*P	Pn	15 44 07.0	+8.6
BTO				S	Sn	15 47 18.9	-16
MHMT	Maesarieng	19.74	261	P	Pn	15 44 05.0	+1.5
MJAR	Matsushiro Arr	22.03	47	LR	LR	15 54 19.0	
	comp=Z,47nm,19.4s,baz=220,slow=40						
GTA	Gaotai	23.08	321	*e*P	P	15 44 37.5	-0.3
GTA				pP	pP	15 44 42.1	-0.6
GTA				sP	sP	15 44 44.7	-0.2
GTA				pmax	pmax		
	comp=Z,72nm,5.3s						
GTA				LR	LR		
	comp=Z,250nm,12.7s						
GTA				LR	LR		
	comp=Z,310nm,13.8s						
GTA				LR	LR		
	comp=Z,240nm,14.2s						
USRK	Ussuriysk Ar.	24.25	24	LR	LR	15 54 21.5	
	comp=Z,64nm,21.5s,baz=184,slow=36						
KULM	Kulim	24.34	228	P	P	15 44 49.8	-0.3
SHL	Shillong	24.43	282	P	P	15 44 50.2	-0.9
SHL				IAmb	IAmb	15 44 52.3	
	comp=Z,20nm,1.2s						
SIJI	Sorong	26.46	150	LR	LR	15 56 20.6	
	comp=Z,51nm,21.1s,baz=38,slow=38						
SONM	Songino Array	26.97	342	P	P	15 45 14.1	+0.4
	comp=Z,0.6nm,0.7s,baz=169,slow=9.5,SNR=3.8						
SONM				LR	LR	15 55 35.3	
	comp=Z,101nm,18.7s,baz=210,slow=36						
SONM	Songino Array	26.97	342	P	P	15 45 12.8	-0.9
PSI	Prapat	27.33	227	LR	LR	15 55 32.6	
	comp=Z,120nm,18.0s,baz=333,slow=35						
KAPI	Kappang	27.48	177	LR	LR	15 57 02.2	
	comp=Z,66nm,18.8s,baz=22,slow=38						
KLR	Kul'dur	28.58	18	LR	LR	15 56 46.5	
	comp=Z,79nm,21.9s,baz=192,slow=36						
ASAJ	Asahikawa	29.25	37	LR	LR	15 57 54.5	
	comp=Z,50nm,20.2s,baz=224,slow=38						
WMQ	Urumqi	33.02	317	*e*P	P	15 46 08.4	+1.0
WMQ				pmax	pmax		
	comp=Z,9.0nm,0.7s						
MK31	Makanchi Array	37.79	319	P	P	15 46 48.2	-0.1
MK31				IAmb	IAmb	15 46 53.4	
	comp=Z,2.0nm,0.8s						
MKAR	Makanchi Array	37.79	319	P	P	15 46 48.0	-0.2
	comp=Z,2.1nm,0.7s,baz=117,slow=9.4,SNR=26						
MAKZ	Makanchi	37.99	318	P	P	15 46 47.1	-2.8
MAKZ				IAmb	IAmb	15 46 50.7	
	comp=Z,2.2nm,0.7s						
KSH	Kashi	39.71	305	P	P	15 47 10.5	+5.9
KSH				pmax	pmax		
	comp=Z,2.0nm,0.5s						
KSH				pmax	pmax		
	comp=Z,190nm,5.0s						
YAK	Yakutsk	40.15	8	P	P	15 47 07.0	-0.7
YAK				IAmb	IAmb	15 47 11.9	
	comp=Z,5.6nm,0.7s						
ZALV	Zalesovo Beam	40.27	330	P	P	15 47 08.5	-0.4
	comp=Z,1.7nm,0.7s,baz=116,slow=6.6,SNR=6.2						
KURK	Kurchatov	41.75	322	P	P	15 47 21.0	-0.1
KURK	Kurchatov	41.75	322	IAmb	IAmb	15 47 22.2	
	comp=Z,2.1nm,0.9s						
KURBB	Kurchatov Arra	41.76	322	P	P	15 47 21.0	-0.1
	comp=Z,1.3nm,0.4s,baz=129,slow=7.3,SNR=12						
PETK	Petropavlovsk-	42.57	34	LR	LR	16 06 36.8	
	comp=Z,32nm,19.6s,baz=279,slow=38						
WB0	Warramunga Arr	44.90	159	P	P	15 47 47.4	+0.6
WB0				IAmb	IAmb	15 47 49.5	
	comp=Z,7.7nm,1.1s						
WRAB	Tennant Creek	45.04	159	P	P	15 47 47.3	-0.6
WRAB				IAmb	IAmb	15 47 55.2	
	comp=Z,4.3nm,1.0s						
WRA	Warramunga Arr	45.04	159	P	P	15 47 46.3	-1.7
	comp=Z,4.1nm,1.0s,baz=335,slow=9.4,SNR=12						
WB2	Warramunga Arr	45.05	159	P	P	15 47 46.6	-1.4
WC3	Warramunga Arr	45.07	159	P	P	15 47 46.8	-1.3
WR0	Warramunga Arr	45.12	158	P	P	15 47 47.6	-1.0
WR0				IAmb	IAmb	15 47 51.5	
	comp=Z,6.8nm,1.1s						
WR0				PcP	PcP	15 49 26.7	-2.3
ASAR	Alice Springs	48.38	161	P	P	15 48 12.8	-1.4
	comp=Z,1.8nm,0.8s,baz=342,slow=7.0,SNR=6.0						
ASAR	Alice Springs	48.38	161	P	P	15 48 13.0	-1.1
NRIK	Noril'sk	50.30	346	P	P	15 48 29.6	+1.3
	comp=Z,2.3nm,0.7s,baz=144,slow=6.9,SNR=4.8						
NRIK	Noril'sk	50.30	346	P	P	15 48 28.6	+0.4
NRIK				IAmb	IAmb	15 48 32.4	
	comp=Z,3.1nm,0.8s						
AB07	Akbulak array	52.77	315	P	P	15 48 46.5	-0.5
STKA	Stephens Creek	58.53	157	LR	LR	16 18 53.3	
	comp=Z,34nm,18.1s,baz=203,slow=40						
MMAI	Mount Meron Ar	72.48	299	LR	LR	16 26 50.2	
	comp=Z,313nm,19.9s,baz=300,slow=39						
NOA	NORSAR Array B	78.43	332	P	P	15 51 34.4	+1.8
	comp=Z,1.7nm,1.1s,baz=69,slow=5.1,SNR=3.2						
YKA	Yellowknife Ar	85.37	22	P	P	15 52 10.9	+1.9
	comp=Z,0.7nm,0.8s,baz=324,slow=4.5,SNR=8.5						

IDC 05 15:45:49.3±782.0**, 52°.95N**×**33°.98E, h0**^{km}**, Error ellipse: s-maj=319.1km s-min=88.0km az=29.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I43RU	DUBNA INFRASON	4.22	25	*i*		16 13 30.0	
	baz=208,slow=337,SNR=0.9						
I31KZ	AKTYUBINSK INF	15.12	90	*i*		17 14 00.0	
	baz=290,slow=320,SNR=1.7						
I46RU	ZALESOVO INFRA	29.77	67	*i*		18 48 40.0	
	baz=290,slow=335,SNR=1.2						

IDC ***05*** *15:55:04.7±2.2, 56°.20N×154°.64W, h0^{km}, mb3.9/5, mb1 4.0/7, mb1mx3.6/45, mbtmp3.8/7, ML3.5/2, MS2.9/2, Ms1 2.9/2, ms1mx2.5/50, Error ellipse: s-maj=51.4km s-min=17.2km az=141.0*

NEIC ***05*** *15:55:07.0±1.9, 56°.58N±0°.03×154°.89W±0°.03, h19^{km}±5^{km}, Error ellipse: s-maj=4.5km s-min=2.7km az=170.0*

AEIC ***05*** *15:55:07±2.0, 56°.60N±0°.03×154°.90W±0°.05, h8^{km}±4^{km}, ML3.6, mb3.8/3(NEIC), ML3.8/24(NEIC), Error ellipse: s-maj=5.3km s-min=3.5km az=142.0*

ISC 05 15:55:06.4±1.6**, 56°.61N**±0°.05×**154°.89W**±0°.04**, h4**^{km}±11^{km}**, n138, σ1^{s}.32**/144**, mb4.0**/6**, Kodiak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SII	Sitkinak Islan	0.39	96	Pg	Pb	15 55 16.4	+0.5
SII				Sg	Sb	15 55 23.3	+1.0
CHIR	Chirikof Islan	0.89	208	Pg	Pb	15 55 24.1	-0.2
CHIR				Sn	Sb	15 55 36.8	+0.3
CHIR				IAML		15 55 41.3	
	comp=N,3µm,0.9s						
CHIR				IAML		15 55 47.1	
	comp=E,3µm,0.6s						
OHAK	Old Harbor	1.07	54	Pg	Pg	15 55 26.8	-0.2
OHAK				Sn	Sn	15 55 43.8	+0.3
OHAK				IAML		15 55 45.8	
	comp=N,2µm,0.6s						
PLK4	Peulik 4	1.30	323		Pn	15 55 30.5	-1.0
PLK3	Peulik 3	1.32	326		Pn	15 55 30.2	-1.4
PLK3					Sb	15 55 48.4	-0.6
PLK2	Peulik 2	1.40	327		Pn	15 55 31.8	-1.0
PLBL	Peulik Blue Cr	1.52	317		Pn	15 55 33.9	-0.4
PLK1	Peulik 1	1.52	323		Pn	15 55 33.9	-0.4
KABR	Katmai Barrier	1.53	358		Pn	15 55 33.6	-1.0
KCE	Katmai Mt Cerb	1.65	355		Pn	15 55 36.0	-0.2
KABU	Katmai Buttres	1.68	353		Pn	15 55 36.1	-0.5
KABU					Sn	15 55 57.9	-0.8
KCG	Knife Ck. Glac	1.71	356		Sn	15 55 59.0	-0.4
KDAK	Kodiak Island	1.72	46	Pn	Pn	15 55 36.7	-0.4
	comp=N,198nm,0.3s,baz=234,slow=7.9,SNR=661						
KDAK				Sn	Sg	15 56 02.6	+0.8
	comp=N,94nm,0.3s,baz=353,slow=16,SNR=11						
KDAK	Kodiak Island	1.72	46		Pn	15 55 36.7	-0.4
PLK5	Peulik 5	1.77	323		Pn	15 55 37.9	+0.2
KELA	Mount Kelaz	1.90	346		Pn	15 55 39.4	-0.2
KAHG	Katmai Hook Gl	1.90	5		Pn	15 55 39.9	+0.3
CHGN	Chignik	1.98	263		Sn	15 56 04.4	-1.4
CHGN	Chignik	1.98	263	Pn	Pn	15 55 40.3	-0.3
CHGN	Chignik	1.98	263	IAML		15 56 07.9	
	comp=E,625nm,0.4s						
CHGN				IAML		15 56 08.8	
	comp=N,704nm,0.9s						
VNSG	Veniaminof 6	2.38	260		Pn	15 55 46.6	+0.3
VNHG	Veniaminof 1	2.41	263		Pn	15 55 46.5	-0.1
AUCH	Augustine Cone	2.87	15		Pn	15 55 53.6	+0.6
AUW	Augustine West	2.87	15		Pn	15 55 53.5	+0.6
AU22	Augustine Moun	2.89	16		Pn	15 55 52.6	-0.5
OPT	Oil Point	3.18	15		Pn	15 55 57.9	+0.8
CNBA	Chernabura Isl	3.21	238	Pn	Pn	15 55 56.5	-0.9
SDPT	Sand Point	3.38	250	Pn	Pn	15 56 00.6	+0.7
SDPT				IAML		15 56 51.9	
	comp=N,166nm,1.1s						
SDPT				IAML		15 57 00.9	
	comp=E,272nm,1.0s						
ILS	Iliamna Low So	3.50	15		Pn	15 56 02.0	+0.4
HOM	Homer	3.51	28		Pn	15 56 02.5	+0.8
CNPM	China Poot	3.51	32	Pn	Pn	15 56 01.6	-0.1
CNPM				IAML		15 56 57.6	
	comp=N,177nm,0.7s						
CNPM				IAML		15 56 59.9	
	comp=E,245nm,0.7s						
IVE	Iliamna Volcan	3.56	15		Pn	15 56 03.5	+1.0
IVE					Sn	15 56 44.5	-0.5
BRLK	Bradley Lake	3.81	32	Pn	Pn	15 56 05.0	-0.8
BRLK				IAML		15 57 05.7	
	comp=N,102nm,0.6s						
BRLK				IAML		15 57 17.5	
	comp=E,164nm,1.0s						
BRSE	Bradley Lake S	3.84	33		Pn	15 56 05.5	-0.7
RED	Redoubt Volcan	3.98	15		Pn	15 56 08.5	+0.3
RSO	Redoubt South	4.03	15		Pn	15 56 09.2	+0.2
NCT	North Crescent	4.10	14		Pn	15 56 10.2	+0.4

DFR	**Drift River**	4.16	15		Pn	15 56 11.2	+0.5
SVW2	**Sparrevohn**	4.52	356		Pn	15 56 14.8	-0.7
SVW2				IAML		15 57 30.6	
	comp=E,86nm,0.7s						
SEW	**Seward**	4.53	37	Pn	Pn	15 56 14.4	-1.2
CAPN	**Captain Cook N**	4.61	23		Pn	15 56 15.6	-1.1
SLKM	**Skilak Lake**	4.61	30		Pn	15 56 16.4	-0.4
O22K	**Cooper Landing**	4.74	33	Pn	Pn	15 56 15.9	-2.5
CKL	**Chakachamna La**	4.79	15		Pn	15 56 19.6	+0.3
SPCP	**Crater Peak Br**	4.88	16		Pn	15 56 20.5	-0.1
SPCG	**Spurr Capps Gl**	4.93	16		Pn	15 56 20.9	-0.4
FALS	**False Pass**	5.13	254	Pn	Pn	15 56 25.5	+1.6
STLK	**Strandline Lak**	5.16	17		Pn	15 56 24.4	+0.1
RC01	**Rabbit Creek A**	5.23	29		Pn	15 56 24.5	-0.8
SUA	**Susitna One**	5.32	22		Pn	15 56 26.5	-0.2
PWL	**Port Wells**	5.46	36		Pn	15 56 27.2	-1.3
SKT	**Skwentna**	5.66	16		Pn	15 56 29.6	-1.5
HIN	**Hinchinbrook I**	5.81	46		Pn	15 56 31.7	-1.5
PMR	**Palmer**	5.81	28	Pn	Pn	15 56 33.2	0.0
KNK	**Knik Glacier**	5.85	32	Pn	Pn	15 56 32.6	-1.3
GLI	**Glacier Island**	5.90	40	Pn	Pn	15 56 33.0	-1.4
FID	**Port Fidalgo**	6.04	43		Pn	15 56 34.2	-2.2
EYAK	**Cordova Ski Ar**	6.20	47	Pn	Pn	15 56 37.0	-1.5
SML	**Sawmill**	6.21	30		Pn	15 56 37.8	-1.0
TT01	**Tatalina**	6.35	355		Pn	15 56 40.3	-0.3
TTA	**Tatalina**	6.37	355	Pn	Pn	15 56 42.1	+1.1
KAIM	**Kayak Island**	6.45	55	Pn	Pn	15 56 40.3	-1.7
PPLA	**Purkeypile**	6.46	11	Pn	Pn	15 56 43.4	+1.2
SCM	**Sheep Creek Mo**	6.52	33	Pn	Pn	15 56 42.1	-1.0
HMT	**Hamilton**	6.71	52	Pn	Pn	15 56 43.9	-1.7
KLU	**Klutina**	6.74	40	Pn	Pn	15 56 45.2	-0.8
BMRM	**Bremner River**	6.90	46		Pn	15 56 47.0	-1.2
M24K	**Tolsona, Glenn**	7.09	35		Pn	15 56 50.3	-0.5
WAT2	**Susitna Watana**	7.12	24		Pn	15 56 50.5	-0.9
UNV	**Unalaska Valle**	7.20	252	Pn	Pn	15 56 52.0	-0.2
TRF	**Thorofare Moun**	7.24	17	Pn	Pn	15 56 52.2	-0.8
KTH	**Kantishna Hill**	7.25	14		Pn	15 56 52.4	-0.6
N25K	**Chitina, Valde**	7.29	42	Pn	Pn	15 56 52.8	-0.8
KULT	**Kultieth River**	7.36	55		Pn	15 56 53.2	-1.3
CRQM	**Cirque**	7.40	51	Pn	Pn	15 56 53.6	-1.6
RND	**Reindeer**	7.46	21	Pn	Pn	15 56 54.7	-1.3
GLB	**Gilahina Butte**	7.49	45	Pn	Pn	15 56 55.2	-1.1
VRDI	**Verde Repeater**	7.51	47	Pn	Pn	15 56 55.5	-1.3
TGL	**Tana Glacier**	7.53	51	Pn	Pn	15 56 55.4	-1.6
ISLE	**Juniper Island**	7.68	53	Pn	Pn	15 56 57.8	-1.2
MESA	**MESA**	7.68	57	Pn	Pn	15 56 57.2	-1.9
BPAW	**Bear Paw Mtn.**	7.76	13	Pn	Pn	15 56 58.1	-2.0
MCARA	**McCarthy VSAT**	7.77	47	Pn	Pn	15 56 58.5	-1.7
KIAG	**Kiagna River**	7.82	51		Pn	15 56 59.1	-1.8
YAH	**Yahtse**	7.85	56	Pn	Pn	15 57 00.1	-1.3
BALM	**Baldy**	7.88	50	Pn	Pn	15 57 00.3	-1.3
PAX	**Paxson**	7.95	33		Pn	15 57 01.6	-1.0
GRNC	**Granite Creek**	7.99	53		Pn	15 57 01.7	-1.7
BWN	**Browne**	8.05	17	Pn	Pn	15 57 06.3	+2.4
BARN	**Barnard Glacie**	8.18	51	Pn	Pn	15 57 04.7	-1.2
SAMH	**Samovar Hills**	8.21	59		Pn	15 57 04.8	-1.5
CTGM	**Chitina Glacie**	8.28	53	Pn	Pn	15 57 05.5	-1.7
SPIA	**Saint Paul Isl**	8.43	280	Pn	Pn	15 57 10.1	+0.9
PCA	**Pinnacle**	8.45	59	Pn	Pn	15 57 08.2	-1.3
WRH	**Wood River Hil**	8.57	20	Pn	Pn	15 57 09.0	-2.0
BCPM	**Bancas Point**	8.71	61	Pn	Pn	15 57 11.8	-1.2
RIDG	**Independent Ri**	8.72	31	Pn	Pn	15 57 14.0	+0.8
HDA	**Harding Lake**	8.75	23	Pn	Pn	15 57 12.2	-1.2
CCB	**Clear Creek Bu**	8.78	20	Pn	Pn	15 57 10.9	-3.1
NIKH	**Nikolski High**	8.85	252	Pn	Pn	15 57 13.1	-1.8
YUK2	**White River**	8.87	48		Pn	15 57 14.3	-1.1
DOT	**Dot Lake**	8.88	33	Pn	Pn	15 57 16.4	+1.0
I23K	**Minto, Yukon-K**	8.98	15	Pn	Pn	15 57 15.1	-1.5
MDM	**Murphy Dome**	8.99	18		Pn	15 57 15.2	-1.6
YUK3	**Moose Creek**	9.03	49		Pn	15 57 15.8	-1.8
IL31		9.08	22	Pn	Pn	15 57 16.1	-1.8
ILAR	**Eielson Array**	9.08	22	Pn	Pn	15 57 16.0	-1.9
	comp=E,0.2nm,0.3s,baz=200,slow=13,SNR=14						
ILAR				Sn	Sn	15 58 55.5	-4.9
	comp=E,0.1nm,0.3s,baz=213,slow=23,SNR=2.8						
ILAR	**Eielson Array**	9.08	22	Pn	Pn	15 57 16.3	-1.6
BC03		9.23	40		Pn	15 57 18.1	-1.9
BCAR	**Beaver Creek A**	9.23	40	Pn	Pn	15 57 19.4	-0.8
POKR	**Poker Plat Res**	9.27	20	Pn	Pn	15 57 18.8	-1.9
IM03		9.43	3		Pn	15 57 21.9	-0.9
IMAR	**Indian Mountai**	9.43	3	Pn	Pn	15 57 22.2	-0.5
ANM	**Nome**	9.49	332	Pn	Pn	15 57 22.2	-1.4
HYT	**Haines Junctio**	9.97	58	Pn	Pn	15 57 28.4	-2.0
EGAK	**Eagle**	10.58	34	Pn	Pn	15 57 37.8	-0.8
DAWY	**Dawson**	10.69	39	Pn	Pn	15 57 38.2	-1.9
SIT	**Sitka**	10.73	79	Pn	Pn	15 57 38.4	-2.1
FYU	**Fort Yukon**	10.98	21	Pn	Pn	15 57 43.1	-0.9
GAMB	**Gambell**	11.00	318	Pn	Pn	15 57 46.1	+1.8
JIS	**Juneau Island**	11.17	73	Pn	Pn	15 57 45.9	-0.7
WHY	**Whitehorse**	11.17	60	Pn	Pn	15 57 44.3	-2.5
BM03	**Burnt Mountain**	11.85	20		Pn	15 57 53.8	-2.2
BMAR	**Burnt Mountain**	11.87	20	Pn	Pn	15 57 53.0	-3.1
RDOG	**Red Dog Mine**	12.06	345	Pn	Pn	15 57 59.4	+0.6
CRAG	**Craig**	12.22	86	Pn	Pn	15 57 59.0	-1.9
INK	**Inuvik**	15.22	31	Pn	P	15 58 45.8	-1.1
	comp=E,0.3nm,0.3s,baz=249,slow=14,SNR=5.1						
INK				LR	LR	16 05 20.1	
	comp=E,25nm,20.5s,baz=75,slow=40						
INK	**Inuvik**	15.22	31	Pn	Pn	15 58 42.7	+1.0
INK				IAmb	IAmb	15 59 02.3	
	comp=Z,2.4nm,0.7s						
AMKA	**Amchitka**	16.00	262	Pn	Pn	15 58 52.0	-0.1
C36M	**Paulatuk**	18.65	35	P	P	15 59 23.6	-1.1
C36M				IAmb	IAmb	15 59 27.4	
	comp=Z,5.7nm,1.2s						
YKA	**Yellowknife Ar**	20.96	57	P	P	15 59 49.8	-0.2
	comp=Z,2.7nm,0.8s,baz=271,slow=9.5,SNR=28						
WALA	**Waterton Lakes**	25.55	90	P	P	16 00 35.4	-0.7
WALA				IAmb	IAmb	16 00 44.8	
	comp=Z,4.4nm,0.9s						
PETK	**Petropavlovsk-**	27.08	283	P	P	16 00 50.6	+0.9
	comp=Z,1.2nm,0.5s,baz=72,slow=7.4,SNR=10.0						
JCJ	**Chichijima**	53.00	264	LR	LR	16 29 18.2	
	comp=Z,22nm,18.3s,baz=138,slow=39						
FINES	**FINESS Array B**	62.29	359	P	P	16 05 29.4	+0.5
	comp=Z,2.4nm,1.0s,baz=14,slow=7.7,SNR=1.6						
MKAR	**Makanchi Array**	66.46	321	P	P	16 05 58.2	+1.7
	comp=Z,11nm,0.6s,baz=42,slow=6.7,SNR=3.0						
AKASG	**Malin Array Be**	73.01	357	P	P	16 06 38.9	+2.1
	comp=Z,0.3nm,0.4s,baz=6.4,slow=6.2,SNR=3.0						
CMAR	**Chiang Mai Arr**	83.34	293	P	P	16 07 35.0	+0.5
	comp=Z,0.5nm,0.8s,baz=13,slow=6.1,SNR=4.6						

NEIC ***05*** *15:57:02.1±1.7, 16°.2S±0°.1×171°.83W±0°.07, h10^{km}±1^{km}, mb4.1/7, Error ellipse: s-maj=20.8km s-min=8.9km az=337.0*

IDC ***05*** *15:57:04.1±4.4, 15°.31S×172°.49W, h0^{km}, mb3.6/3, mb1 3.9/3, mb1mx3.6/29, mbtmp3.6/3, Error ellipse: s-maj=169.7km s-min=19.9km az=131.0*

ISC 05 15:56:54.5±1.6**, 15°.7S**±0°.1×**170°.9W**±0°.3**, h10**^{km}**, n12, σ0^s.94**/12**, mb3.8**/5**, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	1.97	336	Pn	Pg	15 57 32.8	+0.6
	17nm,0.3s,baz=207,slow=11,SNR=30						
AFI				Sn	Sb	15 57 54.9	-0.1
	126nm,0.3s,baz=156,slow=23,SNR=21						
AFI	**Afiamalu**	1.97	336		Pg	15 57 32.2	0.0
AFI				Sn	Sb	15 57 54.5	-0.5
NIUE	**Niue**	3.48	164	Pn	Pb	15 57 55.4	-0.9
NIUE				Sn	Sn	15 58 31.6	+1.4
ODZ	**Otahua Downs**	33.11	204	P	P	16 03 30.4	-0.3
STKA	**Stephens Creek**	45.94	241	P	P	16 05 16.8	-1.0
STKA				IAmb	IAmb	16 05 33.7	
	comp=Z,1.7nm,1.4s						
WB0	**Warramunga Arr**	52.04	257	P	P	16 06 05.1	+0.3
WB0				IAmb	IAmb	16 06 18.1	
	comp=Z,7.0nm,1.5s						
WRA	**Warramunga Arr**	52.08	257	P	P	16 06 06.1	+1.0
	comp=Z,0.3nm,0.9s,baz=94,slow=6.8,SNR=2.1						
AS31	**Alice Springs**	52.27	252	P	P	16 06 07.3	+0.8
ASAR	**Alice Springs**	52.27	252	P	P	16 06 07.8	+1.3
	comp=Z,0.9nm,0.6s,baz=86,slow=7.6,SNR=18						
OHAK	**Old Harbor**	74.13	10	P	P	16 08 40.7	+10
QSPA	**South Pole Qui**	74.34	180	P	P	16 08 37.9	+5.7
ILAR	**Eielson Array**	82.31	10	P	P	16 09 26.7	+11
	comp=Z,0.4nm,0.7s,baz=220,slow=6.0,SNR=7.3						

BJI ***05*** *16:17:44.4±0.0, 35°.08N×24°.88E, h13^{km}, mB4.9/27, mb4.6/34, Ms4.7/3, Ms7 4.6/3*

ISK ***05*** *16:17:45.9, 34°.87N×25°.43E, h15^{km}, ML4.3/40*

MOS ***05*** *16:17:45.4±1.2, 34°.78N×25°.46E, h14^{km}, mb4.6/27, Error ellipse: s-maj=5.2km s-min=2.9km az=86.2*

IDC ***05*** *16:17:45.2±0.5, 34°.89N×25°.48E, h0^{km}, mb4.4/34, mb1 4.3/44, mb1mx4.3/65, mbtmp4.3/44, ML4.0/9, MS3.5/25, Ms1 3.6/25, ms1mx3.4/59, Error ellipse: s-maj=11.1km s-min=7.0km az=23.0*

MED_RC ***05*** *16:17:46.0±0.3, 34°.74N×25°.41E, h27^{km}±1^{km}, MW4.6/12, Moment Tensor Solution.Mantle waves: s12,c16; Duration: 1^s.0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.01±.10; $M_{\theta\theta}$-0.61±.07; $M_{\phi\phi}$0.60±.09; $M_{r\theta}$0.01±.07; $M_{\theta\phi}$0.71±.06; $M_{\phi r}$0.20±.08; Best double couple: $M_0$0.95000×10^{16} NP1:ϕ_s70.00000°, δ79.00000°, λ5.00000°. NP2:ϕ_s339.00000°, δ86.00000°, λ169.00000°. Principal axes: T 0.9600, Plg11.0000°, Azm294.0000°; N -0.0200, Plg78.0000°, Azm137.0000°; P -0.9400, Plg4.0000°, Azm25.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

THE ***05*** *16:17:46.5, 34°.90N×25°.46E, h0^{km}±1^{km}, ML4.3/12 Error ellipse: s-maj=1.4km s-min=0.6km az=168.0*

NIC ***05*** *16:17:46.4±0.0, 34°.45N×25°.72E, h0^{km}±6^{km}, Ml5.0/3*

NEIC ***05*** *16:17:47.8±2.5, 34°.83N±0°.06×25°.39E±0°.06, h17^{km}±4^{km}, mb4.6/72, Mwr4.4/13, ML4.3(THE), Error ellipse: s-maj=9.4km s-min=6.7km az=202.0*

ATH ***05*** *16:17:47.1, 34°.91N×25°.43E, h16^{km}±1^{km}, ML4.4/15, Error ellipse: s-maj=2.1km s-min=1.2km az=355.0*

NEIC ***05*** *16:17:47.1, 34°.83N×25°.38E, h20^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-1.76; $M_{\theta\theta}$-2.11; $M_{\phi\phi}$3.86; $M_{r\theta}$1.89; $M_{\theta\phi}$2.34; $M_{\phi r}$-1.37; Fault plane solution: $M_0$4.70000×10^{15} NP1:ϕ_s237.54000°, δ58.94000°, λ-24.42000°. NP2:ϕ_s340.72000°, δ69.26000°, λ-146.52000°. Principal axes: T 4.7477, Plg7.0000°, Azm107.0000°; N -0.0892, Plg51.0000°, Azm9.0000°; P -4.6585, Plg38.0000°, Azm202.0000°;*

DDA ***05*** *16:17:49.0, 34°.81N×25°.30E, h36^{km}±328^{km}, MW4.3*

HLW ***05*** *16:17:54.3, 34°.35N×25°.89E, h16^{km}±8^{km}, Md4.4*

ISC 05 16:17:46.7±0.7**, 34°.86N**±0°.03×**25°.42E**±0°.02**, h9**^{km}±3^{km}**, n579, σ1^s.67**/627**, mb4.6**/102**, MS3.6**/23**, 24C-37D, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FRMA	**Ierapetra Chan**	0.30	58	P	Pb	16 17 54.1	-0.1
FRMA				S	Sb	16 18 00.2	+0.9
	60μm,0.4s						
LAST	**Lasithi**	0.31	9	P	Pg	16 17 52.6	-0.3
LAST				S	Sg	16 17 57.1	+0.1
LAST				AML	AML	16 17 57.4	
LAST				AML	AML	16 17 57.5	
LAST	**Lasithi**	0.31	9	P	Pg	16 17 52.6	-0.3
LAST				S	Sg	16 17 57.1	+0.1
	186μm,0.4s						
NPS	**Neapolis**	0.43	21	P	Pg	16 17 54.5	-0.7
NPS				S	Sg	16 18 00.1	-0.9
NPS				AML	AML	16 18 01.9	
	comp=N,90007μm,0.4s						
NPS				AML	AML	16 18 06.4	
NPS	**Neapolis**	0.43	21	P	Pg	16 17 54.5	-0.7
NPS				S	Sg	16 18 00.1	-0.9
	comp=N,55μm,0.4s						
NPS	**Neapolis**	0.43	21	P	Pg	16 17 54.5	-0.7
HRKL	**Herakleio**	0.53	330	P	Pg	16 17 56.6	-0.3
HRKL				S	Sb	16 18 04.8	-1.0
HRKL	**Herakleio**	0.53	330	PG	Pg	16 17 56.6	-0.3
HRKL				SG	Sg	16 18 04.6	+0.8
SIVA	**Sivas**	0.53	288	P	Pg	16 17 57.1	+0.1
SIVA				AML	AML	16 18 15.6	
	comp=N,71905μm,0.6s						
SIVA				AML	AML	16 18 20.2	
SIVA	**Sivas**	0.53	288	P	Pg	16 17 57.2	+0.3
SIVA				S	Sb	16 18 06.7	+0.9
	comp=N,46μm,0.7s						
KSTL	**Kastelli Herak**	0.53	327	P	Pg	16 17 53.6	-3.4
KSTL				S	Sg	16 17 58.8	-5.2
IACM	**Heraklion**	0.53	328	P	Pg	16 17 56.8	-0.3
IACM				AML	AML	16 18 16.8	
IACM				AML	AML	16 18 18.8	
IACM	**Heraklion**	0.53	328	P	Pg	16 17 56.8	-0.3
IACM				S	Sb	16 18 05.2	-0.8
TMBK	**Timbaki Herakl**	0.58	292	P	Pg	16 17 58.3	+0.4
TMBK				S	Sb	16 18 08.5	+1.2
	comp=N,13μm,0.8s						
IDI	**Anoyia**	0.61	315	Pg	Pg	16 17 57.7	-0.8
	comp=N,784nm,0.3s,baz=129,slow=14,SNR=2252						
IDI				Lg	Lg	16 18 06.5	
	comp=N,1μm,0.3s,baz=14,slow=19,SNR=30						
IDI				LR	LR	16 18 21.4	
	comp=N,1μm,19.6s,baz=302,slow=58						
IDI	**Anoyia**	0.61	315	P	Pg	16 17 57.9	-0.7
IDI				S	Sg	16 18 07.0	+0.3
IDI				AML	AML	16 18 09.6	
	comp=N,34470μm,0.5s						
IDI				AML	AML	16 18 16.5	
	comp=E,26416μm,0.4s						
IDI	**Anoyia**	0.61	315	P	Pg	16 17 57.8	-0.8
IDI				S	Sg	16 18 07.5	+0.9
	comp=E,15μm,0.5s						
STIA	**Sitia Lasithi**	0.65	58	P	Pg	16 17 57.6	-1.6
STIA				S	Sg	16 18 07.4	-0.4
ZKR	**Zakros**	0.70	68	P	Pg	16 17 59.7	-0.6
ZKR				S	Sg	16 18 10.0	+0.5
ZKR	**Zakros**	0.70	68	P	Pg	16 17 59.6	-0.6
ZKR				S	Sb	16 18 10.4	-0.5
	comp=E,248μm,0.4s						
ZKR	**Zakros**	0.70	68	PG	Pg	16 17 59.6	-0.6
ZKR				SG	Sb	16 18 10.2	-0.7
GVDS	**Gavdos**	1.09	270	P	Pn	16 18 08.4	+0.2
GVDS				S	Sn	16 18 24.0	+0.6
	comp=E,10μm,0.9s						
GVDS	**Gavdos**	1.09	270	PN	Pb	16 18 07.8	0.0
GVD	**Gavdhos**	1.10	270	P	Pn	16 18 08.1	-0.1
GVD				AML	AML	16 18 31.4	
	comp=E,29659μm,1.0s						
GVD				AML	AML	16 18 33.9	
	comp=N,20976μm,0.6s						
GVD	**Gavdhos**	1.10	270	P	Pg	16 18 08.0	+0.2
GVD				S	Sn	16 18 24.2	+0.7
	comp=N,12μm,0.8s						
GVD	**Gavdhos**	1.10	270	PN	Pb	16 18 07.7	-0.1
VAM	**Vamos**	1.14	299	P	Pb	16 18 07.5	-1.1
VAM				AML	AML	16 18 28.4	
	comp=E,23306μm,0.6s						
VAM				AML	AML	16 18 32.2	
	comp=N,23424μm,0.3s						
VAM	**Vamos**	1.14	299	P	Pb	16 18 07.4	-1.2
VAM				S	Sn	16 18 25.0	+0.4
	comp=N,14μm,0.7s						
VAM	**Vamos**	1.14	299	P	Pb	16 18 07.5	-1.1
VAM				S	Sn	16 18 25.0	+0.4
IMMV	**Iera Moni Meta**	1.32	298	P	Pn	16 18 10.8	-0.6
IMMV				AML	AML	16 18 41.9	
	comp=N,34771μm,1.1s						
IMMV				AML	AML	16 18 44.5	
	comp=E,33601μm,0.7s						
IMMV	**Iera Moni Meta**	1.32	298	P	Pn	16 18 11.3	-0.1
IMMV				S	Sg	16 18 30.7	+1.4
	comp=E,17μm,0.9s						
IMMV	**Iera Moni Meta**	1.32	298	PN	Pn	16 18 10.6	-0.8
THR6	**Thira Island,**	1.50	359	P	Pn	16 18 13.1	-0.7
SANT	**Santorini**	1.51	1	P	Pn	16 18 13.1	-1.0
SANT				AML	AML	16 18 36.3	
	comp=E,64242μm,0.8s						
SANT				AML	AML	16 18 38.1	
	comp=N,10497μm,0.6s						
SANT	**Santorini**	1.51	1	PN	Pn	16 18 12.9	-1.1
SANT	**Santorini**	1.51	1		Pn	16 18 13.0	-1.0
SANT				Sn	Sn	16 18 32.1	-1.8
ANAF	**Anafi Island**	1.52	11	P	Pn	16 18 14.5	+0.3
ANAF				S	Sn	16 18 33.0	-1.1
ANAF	**Anafi Island**	1.52	11	P	Pn	16 18 13.7	-0.4
ANAF				S	Sn	16 18 33.3	-0.8
	comp=N,49μm,0.4s						
SNT5	**Nea Kammeni, S**	1.54	359	P	Pn	16 18 13.7	-0.7
THR8	**Santorini-Mono**	1.55	2	P	Pn	16 18 13.5	-0.9
THR3	**Thira Island,**	1.55	359	P	Pn	16 18 13.8	-0.6
SNT1	**Gialos, Santor**	1.56	0	P	Pn	16 18 13.9	-0.6
THR5	**Thira Island,**	1.56	358	P	Pn	16 18 14.0	-0.6
THR7	**Fira-Santorini**	1.56	0	P	Pn	16 18 14.2	-0.5
SAP3	**Santorini-Thir**	1.58	358	P	Pn	16 18 14.0	-0.8
KARP	**Karpathos**	1.58	64	P	Pb	16 18 15.5	-0.7
KARP				AML	AML	16 18 48.9	
	comp=E,44498μm,0.6s						
KARP				AML	AML	16 18 49.3	
	comp=N,40240μm,0.9s						
KARP	**Karpathos**	1.58	64	PN	Pn	16 18 14.4	-0.5
KARP	**Karpathos**	1.58	64		Pn	16 18 15.0	+0.1
KARP				Sn	Sg	16 18 39.5	+1.9
KARP	**Karpathos**	1.58	64	⇑P	Pn	16 18 15.1	+0.1
KARP				S	Sg	16 18 39.6	+2.0
KARP				AML	AML	16 18 48.5	
	comp=N,40nm,0.9s						
KARP				AML	AML	16 18 48.5	
	comp=N,40nm,0.9s						
KARP				AML	AML	16 18 48.5	
	comp=N,44nm,0.6s						
KARP				AML	AML	16 18 48.5	
	comp=N,44nm,0.6s						
SAP4	**Santorini-Oia**	1.61	359	P	Pn	16 18 15.3	0.0
ANKY	**Antikythira Is**	2.00	301	P	Pb	16 18 23.6	+0.3
ANKY				AML	AML	16 19 05.0	
	comp=N,6779μm,0.9s						
ANKY				AML	AML	16 19 06.6	
	comp=E,7624μm,0.9s						
MHLO	**Agia Marina, M**	2.01	336	P	Pn	16 18 21.2	+0.4
MHLO				S	Sb	16 18 47.1	-1.4
MHLO				AML	AML	16 18 55.6	
	comp=E,47882μm,0.6s						
MHLO				AML	AML	16 19 02.0	
	comp=N,47181μm,0.6s						
MHLA	**Plaka, Milos I**	2.05	337	P	Pn	16 18 21.8	+0.5
MHLA				AML	AML	16 19 01.6	
	comp=N,22083μm,0.8s						
MHLA				AML	AML	16 19 04.7	
	comp=E,21358μm,1.0s						
APE	**Apeiranthos**	2.21	2	P	Pn	16 18 23.1	-0.5
APE	**Apeiranthos**	2.21	2	P	Pn	16 18 22.7	-0.9
APE	**Apeiranthos**	2.21	2	PN	Pn	16 18 23.1	-0.5
APE	**Apeiranthos**	2.21	2	*de*P	Pn	16 18 22.9	-0.7
NISR	**Nisiros**	2.24	38	P	Pn	16 18 24.5	+0.6
KOSK	**Kos Island**	2.28	33	PN	Pn	16 18 23.9	-0.5
KTHA	**Kythira Island**	2.38	307	P	Pn	16 18 26.9	+1.1
KTHA				AML	AML	16 19 12.9	
	comp=E,5899μm,0.6s						
KTHA				AML	AML	16 19 14.2	
	comp=N,4464μm,0.7s						
KTHA	**Kythira Island**	2.38	307	PN	Pn	16 18 25.7	-0.2
ARG	**Arkhangelos**	2.59	58	P	Pn	16 18 30.7	+1.9
ARG				AML	AML	16 19 09.9	
	comp=N,4979μm,0.6s						
ARG				AML	AML	16 19 13.3	
	comp=E,6795μm,0.4s						
ARG	**Arkhangelos**	2.59	58	PN	Pn	16 18 28.9	+0.1
ARG	**Arkhangelos**	2.59	58	P	Pn	16 18 30.1	+1.4
ARG				S	Sn	16 19 00.8	+0.5
ARG	**Arkhangelos**	2.59	58	⇑P	Pn	16 18 30.2	+1.5
ARG				S	Sb	16 19 04.4	-0.8
BODT	**Bodrum**	2.68	34	PN	Pn	16 18 29.1	-0.9
YKAV	**Yalikavak-Bodr**	2.72	33	PN	Pn	16 18 30.4	-0.1
BDRM	**Kayabasi**	2.75	36	*i* P	Pn	16 18 29.8	-1.2
BDRM				IAML		16 19 16.0	
	comp=N,322nm,0.8s						
BDRM				IAML		16 19 22.0	
	comp=Z,279nm,0.6s						
BDRM				IAML		16 19 25.0	
	comp=E,374nm,0.7s						
MRSB	**Marmaris-Mugla**	2.92	50	PN	Pn	16 18 33.5	+0.2
DDIM	**Aydin, Didim**	2.98	29	*i* P	Pn	16 18 34.4	+0.2
DDIM				IAML		16 19 38.0	
	comp=N,708nm,0.8s						
DDIM				IAML		16 19 38.0	
	comp=E,724nm,1.1s						
DDIM				IAML		16 20 04.0	
	comp=Z,519nm,1.0s						
TURN	**Turunc**	2.99	49	PN	Pn	16 18 34.2	0.0
TURN	**Turunc**	2.99	49	*i* P	Pn	16 18 35.2	+1.0
TURN				*i* S	Sn	16 19 12.3	+2.2
TURN				IAML		16 19 22.0	
	comp=N,448nm,0.6s						
TURN				IAML		16 19 23.0	
	comp=E,521nm,0.6s						
TURN				IAML		16 19 30.0	
	comp=Z,470nm,0.7s						
MLSB	**Milas**	3.09	37	PN	Pn	16 18 35.6	-0.1
GCAM	**G?zelcaml?**	3.19	27	PN	Pn	16 18 37.1	+0.1
GCAM	**G?zelcaml?**	3.19	27	*i* P	Pn	16 18 36.7	-0.3
GCAM				IAML		16 19 35.0	
	comp=N,291nm,1.0s						
GCAM				IAML		16 19 36.0	
	comp=Z,220nm,0.5s						
GCAM				IAML		16 19 44.0	
	comp=E,423nm,0.7s						
YER	**Yerkesik**	3.25	45	PN	Pn	16 18 37.9	0.0
YER	**Yerkesik**	3.25	45	P	Pn	16 18 39.7	+1.8
VLY	**Voula,Athens**	3.27	337	P	Pb	16 18 41.8	-3.0
DALY	**Dalyan (Mula)**	3.27	52	PN	Pn	16 18 38.2	+0.1
DALY	**Dalyan (Mula)**	3.27	52	*i* P	Pn	16 18 39.8	+1.7
DALY				*i* S	Sn	16 19 19.6	+2.4
DALY				IAML		16 19 31.0	
	comp=N,576nm,0.6s						
DALY				IAML		16 19 45.0	
	comp=E,389nm,1.1s						
DALY				IAML		16 19 47.0	
	comp=Z,339nm,0.7s						
MULA	**Mugla, Merkez-**	3.35	44	*i* P	Pn	16 18 40.9	+1.5
MULA				*i* S	Sb	16 19 25.9	-1.4
MULA				IAML		16 19 31.0	
	comp=N,231nm,0.7s						
MULA				IAML		16 19 41.0	
	comp=Z,182nm,0.6s						
MULA				IAML		16 19 50.0	
	comp=E,357nm,1.1s						
SLUM	**Salum**	3.36	183	P	Pn	16 18 39.4	0.0
	baz=192						
SLUM				S	Sn	16 19 12.3	-7.1
	baz=192						
FETY	**Fethiye**	3.47	58	PN	Pn	16 18 40.9	0.0
CHOS	**Chios island**	3.56	8	PN	Pn	16 18 42.2	0.0
URLA	**Izmir**	3.62	15	PN	Pn	16 18 41.9	-1.1
ITM	**Ithomi**	3.66	310	PN	Pn	16 18 43.9	+0.4
ITM	**Ithomi**	3.66	310	Pn	Pn	16 18 45.8	+2.3
AYDB	**Zeytinkoy-Aydi**	3.67	32	PN	Pn	16 18 43.5	-0.2
AKAS	**Kas**	3.68	67	PN	Pn	16 18 43.8	-0.1
AKAS	**Kas**	3.68	67	*i* P	Pn	16 18 43.7	-0.1
AKAS				*i* S	Sn	16 19 29.6	+2.2
AKAS				IAML		16 19 36.0	
	comp=Z,155nm,0.5s						
AKAS				IAML		16 19 42.0	
	comp=N,363nm,0.6s						
AKAS				IAML		16 20 00.0	
	comp=E,287nm,0.8s						
AKAS	**Kas**	3.68	67	Pn	Pn	16 18 43.0	-0.9
TAVA	**DENIZLI_Tavas**	3.84	46	*i* P	Pn	16 18 48.0	+2.0
TAVA				IAML		16 19 51.0	
	comp=E,263nm,0.9s						
TAVA				IAML		16 20 11.0	
	comp=Z,178nm,0.7s						
TAVA				IAML		16 20 14.0	
	comp=N,204nm,1.2s						
ELL	**Elmali**	4.11	61	PN	Pn	16 18 50.5	+0.8
ELL	**Elmali**	4.11	61	P	Pn	16 18 51.2	+1.5
ELL	**Elmali**	4.11	61	Pn	Pn	16 18 51.2	+1.5
ELL	**Elmali**	4.11	61	P	Pn	16 18 51.2	+1.5
GOLH	**Golhisar**	4.11	53	*i* P	Pn	16 18 51.7	+1.9
GOLH				IAML		16 19 57.0	
	comp=N,348nm,0.8s						
GOLH				IAML		16 20 03.0	
	comp=E,344nm,0.6s						
GOLH				IAML		16 20 09.0	
	comp=Z,347nm,0.9s						
AKUM	**Antalya-Kumluc**	4.27	69	*i* P	Pn	16 18 52.6	+0.8
AKUM				IAML		16 20 12.0	
	comp=Z,126nm,0.8s						
SIGR	**SIGRI**	4.36	4	PN	Pn	16 18 52.9	-0.2
DKL	**Dikili**	4.37	15	PN	Pn	16 18 53.9	+0.7
MANT	**Manisa**	4.42	34	*i* P	Pn	16 18 56.4	+2.3
MANT	**Manisa**	4.42	34	Pn	Pn	16 18 55.7	+1.6
KULA	**Kula-Manisa**	4.48	35	PN	Pn	16 18 55.4	+0.5
KORT	**Korkueli**	4.54	60	PN	Pn	16 18 56.4	+0.8
KORT	**Korkueli**	4.54	60	*i* P	Pn	16 18 58.4	+2.7
KORT				IAML		16 20 25.0	
	comp=Z,108nm,0.8s						
BRDR	**BURDUR-Merkez**	4.70	52	*i* P	Pn	16 19 00.5	+2.6

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BRDR                                IAML              16 20 43.0
      comp=Z,72nm,1.6s
KHAL  Karahalli         4.80  42 i P       Pn         16 19 00.9 +1.7
KHAL                                IAML              16 20 50.0
      comp=Z,40nm,2.5s
USAK  Uak-Merkez        4.81  36 i P       Pn         16 19 01.4 +2.0
USAK                                IAML              16 20 58.0
      comp=Z,40nm,2.1s
BASM  Basmaki-Afyon     4.83  49   PN      Pn         16 19 00.2 +0.6
BUCA  Burdur, Bucak-    4.84  58 i P       Pn         16 19 02.2 +2.5
BUCA                                IAML              16 20 03.0
      comp=Z,107nm,0.5s
AGG   Agios Georgios    4.84 330   PN      Pn         16 19 00.5 +0.8
AGG   Agios Georgios    4.84 330   P       Pn         16 19 01.4 +1.7
AGG   Agios Georgios    4.84 330   Pn      Pn         16 19 01.4 +1.7
BOZC  Bozcaada          5.00   6   PN      Pn         16 19 02.2 +0.3
OSC1  CSNet OBS 1       5.04 104   P       Pn         16 18 59.8 -2.6
OSC1                               S       Sn         16 19 59.1 -1.7
ISP   Isparta           5.07  53   PN      Pn         16 19 04.3 +1.3
ISP   Isparta           5.07  53   P       Pn         16 19 04.2 +1.3
ISP   Isparta           5.07  53   Pn      Pn         16 19 04.2 +1.2
SIMA  Simav-Kutahya     5.09  33   PN      Pn         16 19 04.6 +1.4
KZIL  AFYON_Kizioren    5.09  47 i P       Pn         16 19 05.3 +2.0
KZIL                                IAML              16 20 56.0
      comp=Z,43nm,2.4s
GEDZ  Gediz             5.26  36   PN      Pn         16 19 06.8 +1.3
GDZ   Gediz             5.33  36 i P       Pn         16 19 07.8 +1.3
KEPZ  Antalya-Kepez     5.42  66 i P       Pn         16 19 09.8 +2.1
KEPZ                             i S       Sn         16 20 12.0 +1.8
KEPZ                                IAML              16 20 23.0
      comp=Z,92nm,1.2s
SHUT  Suhut-Afyon       5.53  47   PN      Pn         16 19 10.4 +1.1
OUR   Ouranopolis       5.59 349   PN      Pn         16 19 11.5 +1.6
GELI  Tayfur-Gelibol    5.59   8   PN      Pn         16 19 10.5 +0.5
SWA2                    5.60 180   P       Pn         16 19 09.8 -0.3
      baz=185
TVSB  Tavsanli          5.61  34   PN      Pn         16 19 11.6 +1.3
AKMS  Akamas            5.68  86   P       Pn         16 19 10.3 -1.0
AKMS                               S       Sn         16 20 15.3 -1.3
AKMS                               AML     AML        16 20 24.0
      comp=Z,2.6nm,0.7s
AKMS                               AML     AML        16 20 24.0
      comp=Z,2.6nm,0.7s
AKMS                               AML     AML        16 20 30.4
      comp=Z,2.6nm,0.8s
AKMS                               AML     AML        16 20 30.4
      comp=Z,2.6nm,0.8s
SEDI  Konya, Seydise    5.74  61 i P       Pn         16 19 14.7 +2.5
SEDI                             i S       Sn         16 20 24.2 +5.9
SEDI                                IAML              16 20 27.0
      comp=Z,60nm,0.8s
GAZI  Gazipasa          5.79  74   PN      Pn         16 19 11.9 -0.8
EDC   Edincik           5.81  19   PN      Pn         16 19 14.2 +1.1
ERIK  Erikli-Kesan      5.87   8   PN      Pn         16 19 14.5 +0.7
NATA  Nata              5.88  89   P       Pn         16 19 12.6 -1.5
ALFC  Alefka            5.90  85 ⇑P       Pn         16 19 13.3 -1.0
ALFC                               AML     AML        16 20 22.0
      comp=Z,2.7nm,0.5s
ALFC                               AML     AML        16 20 31.1
      comp=Z,2.4nm,0.7s
ENEZ  Enez              5.90   5   PN      Pn         16 19 15.8 +1.6
OSC2  CSNet OBS 4       5.96 105   P       Pn         16 19 12.2 -2.8
RKY   Sarkoy-Tekirda    5.99  13   PN      Pn         16 19 16.7 +1.2
MRMT  Marmara Adasi     5.99  16   PN      Pn         16 19 16.5 +1.0
HORT  Hortiatis         6.02 343   PN      Pn         16 19 17.5 +1.5
ALN   Alexandroupoli    6.05   4   PN      Pn         16 19 16.1 -0.3
ALN   Alexandroupoli    6.05   4   P       Pn         16 19 16.0 -0.3
ALN   Alexandroupoli    6.05   4   Pn      Pn         16 19 16.0 -0.3
GZKV  Gazikoy-Tekird    6.07  14   PN      Pn         16 19 16.2 -0.4
THE   Thessaloniki      6.09 342   P       Pn         16 19 21.0 +4.2
THE                                pmax    pmax
      comp=Z,24nm,0.7s
MAR4  Marsite Statio    6.11  14   PN      Pn         16 19 18.8 +1.7
LEF   Lefka             6.14  85   PN      Pn         16 19 18.3 +0.8
SZAC  Souni             6.14  89 ⇑P       Pn         16 19 16.3 -1.3
SOH   Sokhos            6.18 345   P       Pn         16 19 22.2 +4.1
SOH                                pmax    pmax
      comp=Z,25nm,0.6s
RDO   Rodhopi           6.28   1   PN      Pn         16 19 21.1 +1.7
CIFT  Cifteler, Eski    6.37  43   PN      Pn         16 19 22.4 +1.7
CAVI  Cavuskoy          6.39  32   PN      Pn         16 19 22.4 +1.4
KONT  Konya--Tatoy      6.39  59   PN      Pn         16 19 22.9 +1.9
TEKE  Tekeli-Mersin     6.41  76   PN      Pn         16 19 21.6 +0.4
SRS   Serrai            6.42 348   P       Pn         16 19 25.2 +3.9
SRS                                pmax    pmax
      comp=Z,40nm,0.9s
BORA  Eskisehir         6.42  37   PN      Pn         16 19 23.0 +1.6
ASGA  Asgata            6.44  88   P       Pn         16 19 20.9 -0.8
CSS   Mathiatis         6.50  87   PN      Pn         16 19 22.1 -0.4
CSS   Mathiatis         6.50  87   Pn      Pn         16 19 21.7 -0.8
CSS   Mathiatis         6.50  87 ⇑P       Pn         16 19 21.3 -1.2
YLV   Yalova            6.50  28   PN      Pn         16 19 24.1 +1.5
LADK  Ladik-KONYA       6.51  57   PN      Pn         16 19 24.4 +1.7
BERE  Bereket-Mersin    6.53  75   PN      Pn         16 19 22.7 -0.3
ADVT  Abdulvahap        6.54  30   PN      Pn         16 19 24.4 +1.4
GRG   Griva             6.54 339   PN      Pn         16 19 25.2 +2.1
GRG   Griva             6.54 339   P       Pn         16 19 26.9 +3.8
GRG                                pmax    pmax
      comp=Z,46nm,0.6s
KNT   Kendrikon         6.60 343   PN      Pn         16 19 25.7 +1.8
SRCK  Saricakaya, Es    6.63  37   PN      Pn         16 19 26.2 +2.0
TEVE  Tevekalti-Mers    6.72  74   PN      Pn         16 19 27.1 +1.5
FNA   Florina           6.73 333   PN      Pn         16 19 27.2 +1.5
FNA   Florina           6.73 333   P       Pn         16 19 26.7 +1.1
FNA   Florina           6.73 333           Pn         16 19 26.7 +1.1
MVOU  Mavrovouni        6.75  86 ⇑P       Pn         16 19 25.2 -0.7
AKKU  Akkuyu-Mersin     6.76  77   PN      Pn         16 19 26.7 +0.7
KDZ   Kurdzhali         6.78 360   PN      Pn         16 19 27.6 +1.2
HNAT  Natroun           6.82 138   P       Pn         16 19 25.7 -1.2
      baz=138
CTKS  Kestanelik-??a    6.82  20   PN      Pn         16 19 28.2 +1.4
IKL   Isikli            6.88  76   PN      Pn         16 19 28.5 +0.8
GULT  Gulveren          6.88  34   PN      Pn         16 19 29.2 +1.5
AUMIH MIHALICIK         6.95  42   PN      Pn         16 19 29.6 +0.8
CTYL  Yalikoy Yolu      6.98  18   PN      Pn         16 19 30.9 +1.8
KLYT  Kilyos            7.00  23   PN      Pn         16 19 30.3 +1.0
SAUV  Serdivan-Sakar    7.04  32   PN      Pn         16 19 31.3 +1.4
EDRB  Edirne            7.06   8   PN      Pn         16 19 31.5 +1.4
OHR   Ohrid             7.23 331 i Pn      Pn         16 19 40.8 +8.2
MDUB  Mudurnu           7.24  38   Pn      Pn         16 19 34.7 +2.0
PLD   Plovdiv           7.26 356   P       Pn         16 19 37.3 +4.4
STIP  Stip              7.29 341 i Pn      Pn         16 19 36.3 +3.1
HSAF  As Saff           7.36 133   P       Pn         16 19 32.9 -1.5
      baz=132
HHAG  Hagoal            7.47 129   P       Pn         16 19 34.6 -1.2
      baz=128
GLL   Jalalah           7.49 133   P       Pn         16 19 34.2 -1.9
      baz=132
BR231 Keskin MP Arra    7.68  47           Pn         16 19 40.0 +1.1
ANTO  Ankara            7.71  47   P       Pn         16 19 39.2  0.0
ANTO  Ankara            7.71  47   Pn      Pn         16 19 39.2  0.0
SKO   Skopje            7.76 337 i Pn      Pn         16 19 41.0 +1.2
TIR   Tirane            7.82 328   P       Pn         16 19 41.1 +0.5
VTS   Vitosha           7.94 348 ⇓P       Pn         16 19 44.9 +2.6
VTS   Vitosha           7.94 348 ⇓P       Pn         16 19 44.9 +2.6
VTS   Vitosha           7.94 348           Pn         16 19 44.3 +1.9
NBNS  Bani Suef         7.97 140   P       Pn         16 19 41.2 -1.5
      baz=139
HFRF  Wahat Farafira    8.07 161   P       Pn         16 19 42.9 -1.2
      baz=163
BR131 Keskin Array S    8.15  51 i P       Pn         16 19 47.1 +1.8
BR131 Keskin Array S    8.15  51   Pn      Pn         16 19 46.5 +1.2
BRTR  Keskin Array B    8.15  51   Pn      Pn         16 19 47.3 +2.0
      comp=Z,2.0nm,0.3s,baz=233,slow=15,SNR=30
BRTR  Keskin Array B    8.15  51 i P       Pn         16 19 47.2 +1.9
BRTR                               pmax    pmax
      comp=Z,8.0nm,0.5s
BRTR  Keskin Array B    8.15  51           Pn         16 19 46.5 +1.2
TIP   Timpagrande       8.16 304   Pn      Pn         16 19 45.8 +0.5
ZAF   Zafarana          8.21 131   P       Pn         16 19 44.7 -1.3
      baz=129
CEL   Celeste           8.38 297   Pn      Pn         16 19 48.9 +0.5
MMAI  Mount Meron Ar    8.50 100   Pn      Pn         16 19 48.5 -1.5
      comp=Z,6.3nm,0.3s,baz=298,slow=12,SNR=24
MMAI                               Sn      Sn         16 21 21.1 -4.9
      comp=Z,6.0nm,0.3s,baz=312,slow=15,SNR=2.6
PLVB  Pleven            8.54 356 ⇓P       Pn         16 19 53.4 +3.0
TAMRE El Minia          8.56 145   P       Pn         16 19 49.2 -1.6
      baz=145
QRWL  Qaraoun           8.60  96 eP       Pn         16 19 48.6 -2.8
HWQ   Hawqa             8.70  91 eP       Pn         16 19 53.2 +0.4
RCY   Rachaya           8.74  96 eP       Pn         16 19 50.8 -2.5

RAZG  Razgrad           8.74   5 ⇑P       Pn         16 19 55.2 +2.0
PDG   Podgorica         8.97 329   Pn      Pn         16 19 55.9 -0.4
ILGA  Ilgaz             9.01  44   Pn      Pn         16 19 59.0 +1.9
GRB   Gharib            9.08 134   P       Pn         16 19 55.9 -2.1
      baz=134
ASUT                    9.11 143   P       Pn         16 19 57.5 -0.8
      baz=143
RAFF  Raffo Rosso       9.26 288   Pn      Pn         16 20 01.1 +0.7
VAE   Valguarnera       9.28 290   Pn      Pn         16 20 02.8 +2.1
      comp=Z,1.6nm,0.3s,baz=86,slow=19,SNR=2.4
VAE                                Sn      Sn         16 21 46.6 +1.5
      comp=Z,1.7nm,0.3s,baz=6.3,slow=9.2,SNR=3.2
EIL   Elat              9.58 120   Pn      Pn         16 20 03.4 -1.4
      comp=Z,3.7nm,0.3s,baz=278,slow=1.0,SNR=24
EIL                                Sn      Sn         16 21 45.0 -7.6
      comp=Z,5.2nm,0.3s,baz=45,slow=16,SNR=6.1
DBRK  Dubrovnik         9.65 326 ePn      Pn         16 20 03.8 -1.9
GAZ   Gaziantep         9.83  73   Pn      Pn         16 20 08.6 +0.4
TIRR  Tirgusor          9.86  13 ⇓P       Pn         16 20 09.7 +1.1
TIRR  Tirgusor          9.86  13 ⇓P       Pn         16 20 09.7 +1.1
TIRR  Tirgusor          9.86  13           Pn         16 20 08.6 +0.1
STON  Ston             10.01 325 ePn      Pn         16 20 10.8 +0.2
DIVS  Divibare         10.14 337   Pn      Pn         16 20 12.0 -0.4
CORL  Corleone         10.23 291   Pn      Pn         16 20 13.1 -0.6
SGRT  San Giovanni R   10.26 315   Pn      Pn         16 20 13.7 -0.4
HERR  Herculane        10.28 348 ⇓P       Pn         16 20 19.7 +5.5
CFR   Carcaliu         10.52  11 ⇑P       Pn         16 20 21.2 +3.7
CFR   Carcaliu         10.52  11 ⇑P       Pn         16 20 21.2 +3.7
VOIR                   10.57 359 ⇑P       Pn         16 20 21.9 +3.5
VOIR                   10.57 359 ⇑P       Pn         16 20 21.9 +3.5
MLR   Muntele Rosu     10.63   2   Pn      Pn         16 20 20.5 +1.3
      comp=Z,0.4nm,0.3s,baz=208,slow=7.0,SNR=7.9
MLR                                LR      LR         16 24 35.6
      comp=Z,235nm,19.2s,baz=188,slow=39
MLR   Muntele Rosu     10.63   2 ⇑P       Pn         16 20 23.2 +4.0
MLR   Muntele Rosu     10.63   2   P       Pn         16 20 21.0 +1.8
MLR   Muntele Rosu     10.63   2   Pn      Pn         16 20 21.0 +1.8
MAKA  Makarska         10.65 325 ePn      Pn         16 20 17.6 -1.8
LOT   Lotru            10.65 354 ⇓P       Pn         16 20 25.3 +5.8
GZR   Gura Zlata       10.72 350 ⇓P       Pn         16 20 22.9 +2.5
GZR   Gura Zlata       10.72 350 ⇓P       Pn         16 20 22.9 +2.5
RICI  Ricice           10.76 326 ePn      Pn         16 20 19.5 -1.4
PLOR  Plostina         11.02   4 ⇑P       Pn         16 20 28.4 +3.9
PLOR  Plostina         11.02   4 ⇑P       Pn         16 20 28.4 +3.9
VRI   Vrincioaia       11.04   5 ⇓P       Pn         16 20 29.0 +4.2
VRI   Vrincioaia       11.04   5 ⇓P       Pn         16 20 29.0 +4.2
DOPR  Dopca            11.10 360 ⇓P       Pn         16 20 29.5 +4.0
BZS   Buzias           11.13 346 ⇓P       Pn         16 20 32.3 +6.3
BZS   Buzias           11.13 346 ⇓P       Pn         16 20 32.3 +6.3
VARL  Varlezi          11.19   9 ⇓P       Pn         16 20 32.1 +5.4
KIJV  Kijevo           11.48 325 ePn      Pn         16 20 28.4 -2.4
INTR  Introdacqua      11.51 312   Pn      Pn         16 20 33.1 +1.9
TESR  Tescani          11.68   4 ⇓P       Pn         16 20 37.7 +4.2
MORI  Morici           11.72 323 ePn      Pn         16 20 31.4 -2.6
AQU   L'Aquila         12.01 312   P       Pn         16 20 38.2 +0.1
AQU   L'Aquila         12.01 312   Pn      Pn         16 20 38.2 +0.1
DRGR                   12.10 351   P       Pn         16 20 43.8 +4.6
DRGR                               pmax    pmax
      comp=Z,8.0nm,0.8s
UDBI  Udbina           12.18 325 ePn      Pn         16 20 38.6 -1.7
MARD  Mardin           12.66  74   Pn      Pn         16 20 48.7 +1.6
BURAR Bucovina Array   12.75 359   P       Pn         16 20 49.9 +1.7
BURAR Bucovina Array   12.75 359   Pn      Pn         16 20 49.9 +1.7
BUR08 Bucovina Ar. S   12.78 359   Pn      Pn         16 20 50.0 +1.4
KOPT  Kop Dagi         13.04  62   Pn      Pn         16 20 55.8 +3.5
KEST  Kesra            13.16 278   Pn      Pn         16 20 53.3 -0.5
      comp=Z,0.1nm,0.3s,baz=76,slow=13,SNR=1.5
SORM  Soroca           13.45   8 ⇓P       Pn         16 21 00.6 +3.0
SORM  Soroca           13.45   8 ⇓P       Pn         16 21 00.6 +3.0
SOC   Sochi            14.08  48 eP       Pn         16 21 05.1 -1.2
SOC                              e                    16 23 43.8
SOC                                pmax    pmax
      comp=Z,21nm,0.9s
SOC                                MLR     MLR
      comp=Z,105nm,15.0s
SOKA  Soboth           14.18 330 ePn      Pn         16 21 08.8 +1.2
      comp=Z,12nm,1.5s
OBKA  Obir             14.25 328 ePn      Pn         16 21 12.0 +3.3
      comp=Z,33nm,1.6s
KOLS  Kolonicke sedl   14.26 352 eP       Pn         16 21 10.4 +1.7
KOLS  Kolonicke sedl   14.26 352 ePN      Pn         16 21 10.4 +1.7
ARSA  Arzberg          14.44 332 ePn      P          16 21 14.8 -3.3
      comp=Z,5.9nm,0.9s
VYHS  Vyhne            14.48 342 eP       Pn         16 21 14.9 +3.2
VYHS  Vyhne            14.48 342 ePN      Pn         16 21 14.9 +3.2
GEVA  Gevas            14.59  71   Pn      Pn         16 21 15.3 +1.9
MYKA  Terra Mystica    14.74 326 ePn      P          16 21 18.5 -3.1
      comp=Z,8.4nm,1.0s
MODS  Modra-Piesok     14.80 338 eP       P          16 21 23.9 +1.8
MODS  Modra-Piesok     14.80 338 e        P          16 21 23.9 +1.8
CONA  Conrad Observa   14.88 334 ePn      Pn         16 21 18.9 +1.6
      comp=Z,7.6nm,1.5s
ZOU   Zoufplan         15.00 325           P          16 21 22.1 -2.4
ZOU                                IAmb    IAmb       16 21 43.4
      comp=Z,18nm,1.0s
KBA   Koelnbreinsper   15.22 327 ePn      P          16 21 27.7 +0.8
      comp=Z,6.0nm,0.8s
CTI   Castel Tesino    15.30 321   P       Pn         16 21 24.8 +1.9
CTI                                pmax    pmax
      comp=Z,11nm,0.7s
CTI   Castel Tesino    15.30 321   Pn      Pn         16 21 24.8 +1.9
ABTA  Abfaltersbach    15.36 325 ePn      Pn         16 21 25.4 +1.8
      comp=Z,11nm,0.9s
MOA   Molln            15.43 331 ePn      Pn         16 21 25.8 +1.3
      comp=Z,4.3nm,0.7s
AKH   Akhalkalaki      15.64  60   P       P          16 21 29.9 -1.7
KRUC  Moravsky         15.69 338   P       P          16 21 32.1 +0.2
KRUC                               pmax    pmax
      comp=Z,13nm,1.4s
NEY   Neytrino         15.82  53⇑eP       Pn         16 21 31.0 +1.3
VRAC  Vranov           15.84 338   Pn      Pn         16 21 30.6 +0.8
      comp=Z,0.2nm,0.3s,baz=156,slow=12,SNR=2.2
MORC  Moravsky Berou   15.99 341   P       P          16 21 33.8 -1.6
MORC                               pmax    pmax
      comp=Z,5.0nm,0.8s
MORC  Moravsky Berou   15.99 341           P          16 21 33.8 -1.6
ONI   Oni              16.03  56   P       P          16 21 38.6 +2.7
KIEV  Kiev             16.07   9   P       Pn         16 21 34.0 +1.3
AKASG Malin Array Be   16.08   9   Pn      Pn         16 21 33.9 +1.1
      comp=Z,8.9nm,0.3s,baz=199,slow=11,SNR=42
AKASG Malin Array Be   16.08   9   P       Pn         16 21 33.3 +0.5
AKASG                              pmax    pmax
      comp=Z,6.0nm,0.7s
AKASG Malin Array Be   16.08   9   Pn      Pn         16 21 33.3 +0.5
AKBB  Malin Array Si   16.08   9 i P       Pn         16 21 33.7 +0.9
AKBB  Malin Array Si   16.08   9           Pn         16 21 34.0 +1.2
AKBB                               IAmb    IAmb       16 21 42.1
      comp=Z,25nm,0.6s
KIV   Kislovodsk       16.12  51 eP       P          16 21 37.9 +1.1
KIV                                pmax    pmax
      comp=Z,85nm,1.0s
KIV                                MLR     MLR
      comp=Z,150nm,13.0s
KIV   Kislovodsk       16.12  51           Pn         16 21 34.4 +0.9
KVAR  Kislovodsk Arr   16.12  51   Pn      Pn         16 21 34.2 +0.6
      baz=252,slow=20,SNR=1.7
WTTA  Wattenberg       16.15 324 ePn      P          16 21 38.0 +0.8
      comp=Z,7.8nm,0.7s
KBZ   Khabaz           16.15  52   Pn      P          16 21 39.1 +2.1
      comp=Z,1.1nm,0.3s,baz=226,slow=8.7,SNR=52
KBZ                                LR      LR         16 27 40.4
      comp=Z,162nm,20.4s,baz=238,slow=37
KBZ   Khabaz           16.15  52⇑eP       Pn         16 21 33.2 -0.5
KBZ                                pmax    pmax
      comp=Z,22nm,1.1s
CKRC  Cesky Krumlov    16.20 333 eP       P          16 21 38.7 +1.1
GNI   Garni            16.21  65   LR      LR         16 29 07.0
      comp=Z,287nm,21.1s,baz=272,slow=42
GNI   Garni            16.21  65⇓eP       Pn         16 21 33.7 -1.1
WATA  Walderalm        16.23 324 ePn      P          16 21 39.1 +1.0
      comp=Z,9.9nm,0.8s
KZRT  Kazreti          16.28  61   P       P          16 21 41.7 +3.1
SQTA  Sankt Quirin     16.32 323 ePn      Pn         16 21 37.0 +0.9
      comp=Z,4.3nm,0.6s
ZEI   Tsey             16.41  56 eP       P          16 21 42.2 +2.0
ZEI                                pmax    pmax
      comp=Z,27nm,1.0s
FETA  Feichten         16.43 322 ePn      P          16 21 39.5 -0.8
      comp=Z,14nm,1.0s
GEC2  GERESS Array S   16.45 332           Pn         16 21 37.2 -0.6
GERES GERESS Array B   16.45 332   Pn      Pn         16 21 37.4 -0.4
      comp=Z,0.2nm,0.3s,baz=148,slow=11,SNR=2.2
GERES GERESS Array B   16.45 332   P       Pn         16 21 37.5 -0.2
GERES GERESS Array B   16.45 332   P       Pn         16 21 37.5 -0.2

MOTA  Moosalm          16.46 324 ePn      Pn         16 21 37.9 -0.1
      comp=Z,1.5nm,0.5s
KRLC  Kraliky          16.47 340 eP       P          16 21 40.6 -0.1
KRLC  Kraliky          16.47 340 eP       P          16 21 40.6 -0.1
DAVOX Davos/Dischmat   16.70 320   Pn      Pn         16 21 40.8 -0.2
      comp=Z,0.0nm,0.3s,baz=149,slow=18,SNR=1.3
DAVOX                              LR      LR         16 29 24.6
      comp=Z,135nm,18.6s,baz=112,slow=42
KHC   Kasperske Hory   16.73 332 eP       P          16 21 42.4 -1.1
KHC   Kasperske Hory   16.73 332 eP       P          16 21 42.4 -1.1
KHC                              ex       x          16 22 11.5
KHC   Kasperske Hory   16.73 332   P       Pn         16 21 41.0 -0.2
DPC   Dobruska-Polom   16.85 340 eP       P          16 21 44.3 -0.5
DPC   Dobruska-Polom   16.85 340 eP       P          16 21 44.3 -0.5
WET   Wettzell         17.02 331   P       P          16 21 50.8 +4.1
WET                                pmax    pmax
      comp=Z,8.0nm,1.5s
DAVA  Damuels          17.03 321 ePn      P          16 21 47.7 +0.6
      comp=Z,0.4nm,0.1s
PRU   Pruhonice        17.09 336 eP       P          16 21 47.5  0.0
PRU   Pruhonice        17.09 336 eP       P          16 21 47.5  0.0
KSP   Ksiaz            17.30 340   P       P          16 21 50.6 +0.8
KSP                                pmax    pmax
      comp=Z,9.0nm,0.9s
BNI   Bardonecchia     17.57 311   P       P          16 21 53.2 +0.2
BNI                                pmax    pmax
      comp=Z,46nm,1.5s
BNI   Bardonecchia     17.57 311   P       P          16 21 53.2 +0.2
BNI                                IAmb    IAmb       16 22 25.6
      comp=Z,46nm,1.5s
SENIN Lac Senin/Sane   17.88 315   P       Pn         16 21 55.3 -0.5
BFO   Black Forest     18.51 322   P       P          16 22 02.4 -0.7
BFO                                pmax    pmax
      comp=Z,9.0nm,0.9s
BFO   Black Forest     18.51 322   P       P          16 22 02.4 -0.7
CLL   Collm            18.73 335 eP       P          16 22 05.0 -0.5
CLL                              epP      sP         16 22 10.0 +1.3
CLL                              i PP     PnPn       16 22 16.1 -1.8
      comp=Z,16nm,1.2s
CLL                                Lm      MLR        16 28 00.0
      comp=Z,200nm,18.1s
CLL   Collm            18.73 335   P       P          16 22 04.8 -0.7
CLL                                pmax    pmax
      comp=Z,10.0nm,0.9s
CLL   Collm            18.73 335   P       P          16 22 04.8 -0.7
VORD  Divnogorie       18.98  28 eP       Pn         16 22 09.4 +0.4
VORD                               pmax    pmax
      comp=Z,10.0nm,0.9s
RST   Umm Al-Ruwaisa   19.02 100 eP                  16 22 08.8
ECH   Echery           19.04 320   P       P          16 22 07.5 -1.5
ECH                                pmax    pmax
      comp=Z,11nm,0.9s
ECH   Echery           19.04 320   P       P          16 22 07.5 -1.5
VSR   Storozhevoye     19.14  27 eP       Pn         16 22 10.4 -0.4
VSR                              eS       Sn         16 25 42.6 -2.6
VSR                                pmax    pmax
      comp=Z,7.0nm,0.4s
VSR                                smax    smax
      comp=E,30nm,1.0s
MIB   Mutribah         19.18  99 eP                  16 22 10.8
SUW   Suwalki          19.22 356 eP       P          16 22 09.5 -1.3
SUW   Suwalki          19.22 356   P       P          16 22 09.0 -1.8
SUW                                pmax    pmax
      comp=Z,45nm,0.8s
SUW   Suwalki          19.22 356   P       P          16 22 08.9 -1.8
SUW                                IAmb    IAmb       16 22 19.1
      comp=Z,45nm,0.8s
UMR   Umm Al-Rimmam    19.58  99 eP                  16 22 14.4
RDF   Al-Radifah       19.68 101 eP                  16 22 16.4
MNK   Minsk            19.72   4 i P      P          16 22 15.4 -0.9
      comp=E,3.0nm,0.8s
MNK                              i P      P          16 22 15.4 -0.9
      comp=N,33nm,0.9s
MNK                              i P      P          16 22 15.4 -0.9
      comp=Z,21nm,0.8s
MNK                              i PP     PnPn       16 22 29.7 -1.7
MNK                              i PPP    PPP        16 22 37.4
MNK                              i S      S          16 25 54.5 -4.1
MNK                              i SS     SnSn       16 26 10.7 -2.8
MNK                              i SSS    SSS        16 26 23.6
MNK                              i LR     LR         16 28 52.7
MNK                              i LRM    MLR        16 31 11.7
      comp=N,33nm,9.4s
MNK                              i LRM    MLR        16 31 19.6
      comp=Z,35nm,10.1s
MNK                              i LRM    MLR        16 31 23.3
MNK                              i ScS    ScS        16 33 54.6 +1.7
TNS   Taunus Mts       19.73 326   P       Pn         16 22 19.5 +1.5
TNS                                pmax    pmax
      comp=Z,19nm,0.9s
NACGM Naroch           20.07   2 i P      P          16 22 19.2 -0.9
NACGM                            i P      P          16 22 19.2 -0.9
NACGM                            i P      P          16 22 19.2 -0.9
NACGM                            i PP     PnPn       16 22 35.3 -0.9
NACGM                            i PPP    PPP        16 22 43.0
NACGM                            i S      S          16 26 04.9 -0.6
NACGM                            i SS     SnSn       16 26 24.0 +1.9
NACGM                            i SSS    SSS        16 26 37.2
NACGM                            i LQ     LQ         16 28 24.2
NACGM                            i LR     LR         16 30 06.8
VRH   Novokhopyorsk    20.15  31 eP       P          16 22 20.1 -0.9
VRH                              eS       S          16 26 05.4 -1.7
VRH                                pmax    pmax
      comp=Z,40nm,0.8s
VRH                                smax    smax
      comp=E,30nm,0.9s
LPSR  Galich'ya Gora   20.19  24 eP       P          16 22 21.9 +0.5
LPSR                               pmax    pmax
      comp=Z,10.0nm,0.7s
LOR   Lormes           20.37 314   P       Pn         16 22 26.8 +1.3
LOR                                pmax    pmax
      comp=Z,11nm,0.9s
IDID  Didziasalis      20.48   2 eP       P          16 22 23.3 -1.2
IIGN  Ignalina         20.50   1 eP       P          16 22 23.3 -1.5
IIGN                               IAmb    IAmb       16 22 24.4
      comp=Z,12nm,0.6s
PABE  Paberze          20.67 358 eP       P          16 22 24.9 -1.8
PABE                               IAmb    IAmb       16 22 25.8
      comp=Z,28nm,1.0s
RAYN  Ar Rayn          20.81 118   P       P          16 22 28.5  0.0
RAYN                               pmax    pmax
      comp=Z,10.0nm,0.9s
RAYN  Ar Rayn          20.81 118           P          16 22 28.5  0.0
TAM   Tamanrasset      21.13 241   P       P          16 22 31.7 -0.3
TAM                                pmax    pmax
      comp=Z,15nm,1.2s
TAM   Tamanrasset      21.13 241   P       P          16 22 31.7 -0.3
MEM   Membach          21.14 324 dP       P          16 22 31.2 -0.6
MEM                              dPnPn    PnPn       16 22 47.5 -3.5
MEM   Membach          21.14 324   P       P          16 22 36.3 +4.5
MEM                                pmax    pmax
      comp=Z,44nm,0.8s
PBUR  Paburge          21.30 355 eP       P          16 22 32.3 -1.2
BSTI  Sart Tilman      21.34 323 dP       P          16 22 36.2 +2.3
BGES  Gesves           21.45 323 dP       P          16 22 34.1 -1.0
DOU   Dourbes          21.52 321 dP       P          16 22 37.1 +1.2
DOU                              dPnPn    PnPn       16 22 54.5 -1.6
DOU   Dourbes          21.52 321   P       P          16 22 37.4 +1.5
DOU                                pmax    pmax
      comp=Z,25nm,1.1s
BMRD  Maredsous        21.56 322 dP       P          16 22 34.9 -1.4
OBN   Obninsk          21.68  17   P       P          16 22 37.0 -0.5
      comp=Z,2.2nm,0.3s,baz=238,slow=19,SNR=1.5
OBN                                LR      LR         16 31 09.1
      comp=Z,25nm,18.2s,baz=184,slow=37
OBN   Obninsk          21.68  17 eP       P          16 22 37.6 +0.1
OBN                              e                    16 22 45.3
OBN                              ePPP     PPP        16 23 05.3
OBN                              e                    16 26 38.2
OBN                                pmax    pmax
      comp=Z,9.0nm,1.0s
SNF   Seneffe          21.93 322 dP       P          16 22 39.8 -0.4
SNF                              dpP      sP         16 22 43.8 +0.4
SNF                              dPnPn    PnPn       16 22 59.9 -1.8
SLIT  Slitere, Latvi   22.88 356 eP       P          16 22 50.6 +0.4
BELG  Belogornoye      23.63  35   P       P          16 22 57.3 -0.5
      comp=Z,22nm,0.6s,baz=43,slow=2.2,SNR=14
BELG                               LR      LR         16 32 45.4
      comp=Z,37nm,18.7s,baz=94,slow=38
BELG  Belogornoye      23.63  35⇑eP       P          16 22 56.8 -1.1
BELG                               pmax    pmax
      comp=Z,4.0nm,0.8s
VSU   Vasula           23.63   2 eP       P          16 22 57.7 -0.2
VSU   Vasula           23.63   2⇓eP       P          16 22 56.4 -1.4
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VSU				pmax	pmax		
	comp=Z,144nm,3.4s						
ESBB	Sonseca Array	23.82	290	P	P	16 23 00.6	+0.7
ESDC	Sonseca Array	23.82	290	P	P	16 23 00.1	+0.1
	comp=Z,7.2nm,0.9s,baz=79,slow=9.4,SNR=20						
ESDC				LR	LR	16 32 18.7	
	comp=Z,61nm,20.9s,baz=320,slow=37						
ESDC	Sonseca Array	23.82	290	P	P	16 23 00.5	+0.5
MTSE	Matsula	23.89	358	eP	P	16 22 58.9	-1.5
PAB	San Pablo	24.11	290	P	P	16 23 04.0	+1.2
PAB				pmax	pmax		
	comp=Z,25nm,1.4s						
PAB	San Pablo	24.11	290	P	P	16 23 04.0	+1.2
PAB				IAmb	IAmb	16 23 17.9	
	comp=Z,25nm,1.4s						
MUD	Monsted U'grnd	24.28	338	i P	P	16 23 01.4	-2.6
MUD	Monsted U'grnd	24.28	338	eP	P	16 23 01.4	-2.6
MUD	Monsted U'grnd	24.28	338	eP	P	16 23 01.4	-2.6
MDT	Midelt	24.98	274	P	P	16 23 11.8	+1.0
	comp=Z,3.0nm,0.8s,baz=94,slow=14,SNR=4.1						
MDT				LR	LR	16 34 28.7	
	comp=Z,73nm,18.7s,baz=42,slow=40						
AAL	Aland	25.58	354	eP	P	16 23 14.3	-1.5
PBRG	Braganca	26.06	295	eP	P	16 23 21.9	+1.5
PBAR	Barrancos	26.23	287	eP	P	16 23 23.5	+1.6
MVO	Moncorvo	26.23	294	eP	P	16 23 23.6	+1.6
HFS	Hagfors	26.42	347	P	P	16 23 21.6	-1.8
	comp=Z,1.1nm,0.6s,baz=128,slow=11,SNR=7.2						
HFS				LR	LR	16 36 21.0	
	comp=Z,146nm,18.6s,baz=197,slow=42						
GEYT	Alibeck	26.42	74	P	P	16 23 26.8	+3.0
	comp=Z,6.0nm,0.4s,baz=274,slow=11,SNR=15						
GEYT	Alibeck	26.42	74	P	P	16 23 26.2	+2.5
GYA0B	ALIBECK ARRAY	26.42	74	P	P	16 23 25.7	+2.0
GYA0B				IAmb	IAmb	16 23 33.8	
	comp=Z,13nm,0.6s						
PMRV	Marv??o	26.47	290	eP	P	16 23 25.6	+1.5
PCBR	Castelo Branco	26.53	291	eP	P	16 23 25.6	+1.0
MTE	Manteigas	26.59	292	eP	P	16 23 26.4	+1.1
FINES	FINESS Array B	26.61	1	P	P	16 23 22.8	-2.3
	comp=Z,2.1nm,0.4s,baz=163,slow=11,SNR=28						
FINES				LR	LR	16 35 36.4	
	comp=Z,137nm,18.6s,baz=162,slow=40						
FIA1	FINESS Array S	26.61	1	P	P	16 23 22.9	-2.2
FIA1				IAmb	IAmb	16 23 24.7	
	comp=Z,22nm,1.4s						
PESTR	Estremoz	26.63	288	eP	P	16 23 26.4	+0.8
VALR	Valaam	26.75	6⇓	eP	P	16 23 23.6	-2.7
VALR				pmax	pmax		
	comp=Z,15nm,0.4s						
PVAQ	Vaqueiros	26.81	285	P	P	16 23 27.4	+0.2
PVAQ	Vaqueiros	26.81	285	eP	P	16 23 27.9	+0.7
PVIS	Viseu	26.87	293	eP	P	16 23 30.9	+3.2
PBEJ	Beja	26.89	287	eP	P	16 23 31.8	+4.0
KONO	Kongsberg	26.89	342	P	P	16 23 26.4	-1.2
KONO				pmax	pmax		
	comp=Z,33nm,1.5s						
KONO	Kongsberg	26.89	342	P	P	16 23 26.4	-1.2
KONO				IAmb	IAmb	16 23 37.4	
	comp=Z,33nm,1.5s						
PBDV	Barranco-do-Ve	27.00	285	eP	P	16 23 32.2	+3.3
PCVE	Castro Verde	27.05	286	eP	P	16 23 30.5	+1.2
NC602	NORSAR Array S	27.40	345	P	P	16 23 30.8	-1.5
NC602				IAmb	IAmb	16 23 49.9	
	comp=Z,16nm,1.4s						
KLMR	Klimovskoe	27.56	15	eP	P	16 23 28.8	-4.8
KLMR				pmax	pmax		
	comp=Z,28nm,1.2s						
KLMR	Klimovskoe	27.56	15	eP	P	16 23 28.9	-4.7
KLMR				AMP		16 23 37.1	
	comp=Z,28nm,1.2s						
NAO01	NORSAR Array S	27.64	345	P	P	16 23 32.8	-1.6
NAO01				IAmb	IAmb	16 24 05.3	
	comp=Z,22nm,1.1s						
NB201	NORSAR Array S	27.74	345	P	P	16 23 33.9	-1.4
NB2	NORSAR Subarra	27.75	345	P	P	16 23 32.2	-3.2
	comp=Z,0.5nm,0.5s,baz=156,slow=9.3						
NOA	NORSAR Array B	27.75	345	P	P	16 23 34.7	-0.7
	comp=Z,0.5nm,0.5s,baz=145,slow=9.2,SNR=2.1						
NOA				LR	LR	16 35 24.3	
	comp=Z,104nm,18.3s,baz=160,slow=38						
AKTO	Aktyubinsk	28.30	47	P	P	16 23 39.8	-0.6
	comp=Z,1.7nm,0.3s,baz=274,slow=5.4,SNR=7.9						
UOSS	Minazif	28.36	102	P	P	16 23 42.7	+1.5
UOSS				IAmb	IAmb	16 23 48.6	
	comp=Z,11nm,0.8s						
EKA	Eskdalemuir Ar	28.41	325	P	P	16 23 40.8	-0.5
	comp=Z,4.2nm,0.7s,baz=124,slow=11,SNR=4.3						
ESK	Eskdalemuir	28.42	325	P	P	16 23 42.7	+1.3
ESK				pmax	pmax		
	comp=Z,41nm,1.4s						
ESK	Eskdalemuir	28.42	325	P	P	16 23 42.7	+1.3
KIRV	Kirov	28.58	26	LR	LR	16 35 53.4	
	comp=Z,93nm,18.7s,baz=194,slow=38						
KIRV	Kirov	28.58	26⇑	eP	P	16 23 41.4	-1.3
ABKAR	Akbulak array	29.10	50	P	P	16 23 47.4	-0.1
ABKAR	Akbulak array	29.10	50	P	P	16 23 48.5	+1.0
ABKAR				IAmb	IAmb	16 24 19.5	
	comp=Z,6.8nm,1.1s						
TOA0	Torodi Ar. Sit	30.46	231	P	P	16 23 60.0	+0.2
TOA0				IAmb	IAmb	16 24 06.4	
	comp=Z,8.9nm,0.7s						
TORD	Torodi Ar. Bea	30.46	231	P	P	16 24 00.1	+0.2
	comp=Z,8.0nm,0.6s,baz=38,slow=9.2,SNR=36						
TORD				LR	LR	16 39 52.3	
	comp=Z,135nm,18.4s,baz=30,slow=44						
TORD	Torodi Ar. Bea	30.46	231	P	P	16 23 59.8	0.0
ARU	Arti	31.17	36	P	P	16 24 05.1	-0.7
	comp=Z,1.0nm,0.5s,baz=234,slow=11,SNR=8.1						
ARU	Arti	31.17	36d	iP	P	16 24 04.9	-0.8
ARU				S	S	16 29 12.3	+0.7
ARU				SS	SnSn	16 30 54.3	+1.1
ARU				pmax	pmax		
	comp=Z,58nm,4.0s						
ARU	Arti	31.17	36	P	P	16 24 05.1	-0.7
ARU				IAmb	IAmb	16 24 15.0	
	comp=Z,5.4nm,0.6s						
SVE	Sverdlovsk	32.37	36	eP	P	16 24 14.8	-1.5
SVE				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KOWA	Kowa	33.36	240	P	P	16 24 25.4	+0.1
	comp=Z,4.9nm,0.6s,baz=42,slow=9.3,SNR=15						
KOWA	Kowa	33.36	240	P	P	16 24 25.5	+0.1
LVZ	Lovozero	33.51	6	P	P	16 24 23.9	-2.2
LVZ				pmax	pmax		
	comp=Z,49nm,1.5s						
LVZ	Lovozero	33.51	6	P	P	16 24 23.9	-2.2
ARCES	ARCESS Array B	34.73	0	P	P	16 24 34.3	-2.3
	comp=Z,4.5nm,0.7s,baz=174,slow=9.7,SNR=17						
ARCES				LR	LR	16 39 19.3	
	comp=Z,97nm,21.3s,baz=260,slow=37						
ARCES	ARCESS Array B	34.73	0	P	P	16 24 34.4	-2.3
ARCES				pmax	pmax		
	comp=Z,34nm,1.5s						
ARCES	ARCESS Array B	34.73	0	P	P	16 24 34.4	-2.3
KEV	Kevo	34.97	1	P	P	16 24 37.3	-1.4
KEV				pmax	pmax		
	comp=Z,100nm,1.4s						
KEV	Kevo	34.97	1	P	P	16 24 37.3	-1.4
IUG	Iuzhnay	35.34	65	eP	P	16 24 43.8	+1.3
	comp=Z,2.8nm,0.9s,baz=65						
IUG	Iuzhnay	35.34	65	eP	P	16 24 43.7	+1.3
IUG				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KK31	Karatay Array	35.65	63	P	P	16 24 44.2	-0.7
KK31				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KK31	Karatay Array	35.65	63	P	P	16 24 44.2	-0.7
KK31				IAmb	IAmb	16 24 50.1	
	comp=Z,5.5nm,1.0s						
KKAR	Karatay Array	35.65	63	P	P	16 24 44.1	-0.9
KKAR						16 24 44.8	
KKAR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KKAR	Karatay Array	35.65	63	P	P	16 24 44.8	-0.2
KKAR				IAmb	IAmb	16 24 50.1	
	comp=Z,5.5nm,1.0s						
KKAR	Karatay Array	35.65	63	P	P	16 24 44.1	-0.9
DZA	Taraz	36.26	63	eP	P	16 24 51.5	+1.3
	comp=Z,3.1nm,0.7s,baz=63						
DZA	Taraz	36.26	63	eP	P	16 24 51.5	+1.3
DZA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BRVK	Borovoye	36.35	46⇑	eP	P	16 24 51.6	+0.8
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BRVK	Borovoye	36.35	46	P	P	16 24 50.8	0.0
BRVK				IAmb	IAmb	16 25 10.4	
	comp=Z,11nm,1.4s						
BRZS	Berezniki	37.36	51	eP	P	16 24 59.3	-0.2
	comp=Z,1.8nm,0.5s,baz=52						
BRZS	Berezniki	37.36	51	eP	P	16 24 59.3	-0.2
BRZS				pmax	pmax		
	comp=Z,2.0nm,0.5s						
BTLS	Baital	38.13	60	eP	P	16 25 06.4	+0.4
	baz=60						
BTLS	Baital	38.13	60	eP	P	16 25 06.4	+0.4
AAK	Ala-Archa	38.60	63	P	P	16 25 10.2	0.0
	comp=Z,3.2nm,0.8s,baz=235,slow=5.0,SNR=16						
AAK	Ala-Archa	38.60	63⇑	eP	P	16 25 09.6	-0.6
AAK				pmax	pmax		
	comp=Z,11nm,0.8s						
AAK	Ala-Archa	38.60	63	P	P	16 25 10.7	+0.5
NIL	Nilore	39.26	78	P	P	16 25 17.5	+1.8
NIL				pmax	pmax		
	comp=Z,7.0nm,0.7s						
NIL	Nilore	39.26	78	P	P	16 25 17.5	+1.8
NIL				IAmb	IAmb	16 25 24.9	
	comp=Z,6.5nm,0.7s						
DBIC	Dimbokro	39.55	232	P	P	16 25 18.1	-0.1
	comp=Z,2.6nm,0.7s,baz=24,slow=12,SNR=3.9						
DBIC				LR	LR	16 44 44.5	
	comp=Z,120nm,19.1s,baz=22,slow=41						
KSH	Kashi	40.12	68	P	P	16 25 25.5	+2.7
KSH				PP	PP	16 26 53.2	-1.8
KSH				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KSH				pmax	pmax		
	comp=Z,92nm,5.4s						
TNSS	Tian-Shan	40.36	62	eP	P	16 25 26.2	+1.0
	baz=62						
TNSS	Tian-Shan	40.36	62	eP	P	16 25 26.1	+1.0
MDOK	Medeo	40.42	62	eP	P	16 25 25.8	+0.5
	baz=62						
MDOK	Medeo	40.42	62	eP	P	16 25 25.8	+0.5
KURBB	Kurchatov Arra	41.15	51	P	P	16 25 30.8	-0.3
	comp=Z,8.5nm,0.5s,baz=276,slow=8.7,SNR=31						
KURK	Kurchatov	41.21	51⇑	eP	P	16 25 30.5	-1.0
KURK				pmax	pmax		
	comp=Z,6.0nm,0.6s						
KURK	Kurchatov	41.21	51	P	P	16 25 30.9	-0.6
KURK				IAmb	IAmb	16 25 36.6	
	comp=Z,9.6nm,0.8s						
SATY	Saty	41.42	62	eP	P	16 25 33.4	-0.2
	comp=Z,3.4nm,0.8s,baz=62						
SATY	Saty	41.42	62	eP	P	16 25 33.4	-0.2
SATY				pmax	pmax		
	comp=Z,3.0nm,0.8s						
SHLS	Shalkode	42.17	62	eP	P	16 25 43.3	+3.6
	baz=62						
SHLS	Shalkode	42.17	62	eP	P	16 25 43.3	+3.6
SEM	Semipalatinsk	42.24	51	eP	P	16 25 40.1	-0.3
	baz=51						
SEM	Semipalatinsk	42.24	51	eP	P	16 25 40.0	-0.3
MAKZ	Makanchi	43.55	56	P	P	16 25 50.3	-0.4
MAKZ				pmax	pmax		
	comp=Z,5.0nm,1.1s						
MAKZ	Makanchi	43.55	56	P	P	16 25 50.3	-0.4
SPITS	Spitsbergen Ar	43.60	357	P	P	16 25 49.3	-1.4
	comp=Z,54nm,1.2s,baz=143,slow=7.3,SNR=5.7						
MK31	Makanchi Array	43.76	56⇑	eP	P	16 25 51.7	-0.8
MK31	Makanchi Array	43.76	56	P	P	16 25 51.9	-0.6
MK31				IAmb	IAmb	16 25 58.6	
	comp=Z,6.7nm,0.6s						
MKAR	Makanchi Array	43.76	56	P	P	16 25 52.3	-0.1
	comp=Z,4.6nm,0.3s,baz=272,slow=7.7,SNR=64						
MKAR				LR	LR	16 45 40.3	
	comp=Z,53nm,19.0s,baz=286,slow=38						
MKAR	Makanchi Array	43.76	56	P	P	16 25 51.9	-0.6
MKAR	Makanchi Array	43.76	56	P	P	16 25 51.9	-0.6
ZAA0	Zalesovo Array	45.06	46	P	P	16 26 01.9	-0.7
ZAA0				IAmb	IAmb	16 26 06.5	
	comp=Z,5.7nm,0.6s						
ZALV	Zalesovo Beam	45.06	46	P	P	16 26 01.9	-0.7
	comp=Z,5.4nm,0.4s,baz=269,slow=8.9,SNR=14						
ZALV				LR	LR	16 47 25.7	
	comp=Z,25nm,18.1s,baz=308,slow=40						
ZALV	Zalesovo Beam	45.06	46	P	P	16 26 01.5	-1.1
ZSN	Zaisan	45.45	55	eP	P	16 26 06.8	+0.9
	baz=55						
ZSN	Zaisan	45.45	55	eP	P	16 26 06.7	+0.9
DGZ	Jazzator, Alta	46.90	52d	eP	P	16 26 17.0	-0.4
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.6s						
WMQ	Urumqi	47.97	60	eP	P	16 26 27.8	+2.0
WMQ				pmax	pmax		
	comp=Z,11nm,1.3s						
NRIK	Noril'sk	48.06	25	P	P	16 26 25.6	-0.3
	comp=Z,4.2nm,0.7s,baz=232,slow=6.8,SNR=11						
NRIK	Noril'sk	48.06	25	P	P	16 26 25.4	-0.6
ICESG	Greenland Ices	49.05	334	eP	P	16 26 37.8	+3.8
SUMG	Summit	49.34	339	i P	P	16 26 35.9	-0.3
SUMG	Summit	49.34	339	i P	P	16 26 35.9	-0.3
SUMG	Summit	49.34	339	P	P	16 26 35.0	-1.2
SUMG	Summit	49.34	339	i P	P	16 26 35.9	-0.3
DANN	Dangsing	49.52	81	eP	P	16 26 38.0	-0.1
GKN	Gorkha	50.37	81	eP	P	16 26 44.9	+0.5
	comp=Z,30nm,0.7s						
DMN	Daman	50.90	81	eP	P	16 26 49.3	+0.7
	comp=Z,41nm,0.9s						
KKN	Kakani	50.97	80	eP	P	16 26 50.4	+1.3
PKIN	Phulchoki	51.15	81	eP	P	16 26 50.9	+0.4
	comp=Z,37nm,1.0s						
PKI	Pulchoki	51.16	81	eP	P	16 26 51.0	+0.4
	comp=Z,30nm,0.9s						
GUN	Gumba	51.41	80	eP	P	16 26 53.6	+1.1
	comp=Z,37nm,0.9s						
TSUM	Tsumeb	54.27	189	P	P	16 27 11.1	-2.2
TSUM				IAmb	IAmb	16 27 37.4	
	comp=Z,12nm,1.6s						
LSA	Lhasa	54.93	76	P	P	16 27 16.5	-2.1
LSA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
LSA	Lhasa	54.93	76	P	P	16 27 16.5	-2.1
LSA				IAmb	IAmb	16 27 25.9	
	comp=Z,4.2nm,0.7s						
ZAK	Zakamensk	56.78	48	eP	P	16 27 32.0	+0.9
ZAK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
TULEG	Thule	57.40	344	P	P	16 27 34.9	0.0
ABPO	Ambohimpanom	57.45	155	P	P	16 27 36.2	+0.1
ABPO				pmax	pmax		
	comp=Z,19nm,1.5s						
ABPO	Ambohimpanom	57.45	155	P	P	16 27 36.2	+0.1
GTA	Gaotai	57.92	62	eP	P	16 27 41.7	+2.4
GTA				pP	sP	16 27 46.4	+3.6
GTA				sP	pP	16 27 48.8	+6.9
GTA				pmax	pmax		
	comp=Z,76nm,4.7s						
GTA				LR	LR		
	comp=Z,83nm,17.8s						
GTA				LR	LR		
	comp=Z,120nm,17.8s						
GTA				LR	LR		
	comp=Z,110nm,16.7s						
SONM	Songino Array	59.51	51	P	P	16 27 50.0	-0.3
	comp=Z,3.7nm,0.6s,baz=278,slow=5.6,SNR=1.6						
SONM				LR	LR	16 57 37.3	
	comp=Z,75nm,19.8s,baz=308,slow=40						
SONM	Songino Array	59.51	51	P	P	16 27 49.5	-0.8
EUNU	Eureka	59.53	349	P	P	16 27 49.3	-0.5
EUNU				IAmb	IAmb	16 27 56.0	
	comp=Z,4.1nm,0.9s						
LBTB	Lobatse	59.54	180	P	P	16 27 51.0	+0.4
LBTB				pmax	pmax		
	comp=Z,17nm,1.6s						
LBTB	Lobatse	59.54	180	P	P	16 27 51.0	+0.4
ULN	Ulaanbaatar	59.92	50⇑	eP	P	16 27 54.0	+0.9
ULN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ULN	Ulaanbaatar	59.92	50	P	P	16 27 53.5	+0.3
ULN				IAmb	IAmb	16 27 59.4	
	comp=Z,4.9nm,0.8s						
BOD	Bodaibo	60.56	38	eP	P	16 27 54.2	-2.9
BOD				pmax	pmax		
	comp=Z,7.0nm,1.5s						
TIXI	Tiksi	61.38	21⇓	eP	P	16 28 01.6	-0.9
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.8s						
TIXI	Tiksi	61.38	21	P	P	16 28 01.6	-0.9
BOSA	Boshof	63.13	180	P	P	16 28 15.4	+0.6
	comp=Z,2.3nm,0.7s,baz=337,slow=9.6,SNR=6.6						
BOSA				LR	LR	16 57 58.2	
	comp=Z,46nm,18.1s,baz=25,slow=38						
RES	Resolute Bay	64.02	345	P	P	16 28 20.7	+0.7
RES	Resolute Bay	64.02	345	P	P	16 28 20.7	+0.7
RES				IAmb	IAmb	16 28 29.4	
	comp=Z,2.7nm,0.9s						
HHC	Hu-ho-hao-te	65.63	56	eP	P	16 28 33.4	+2.1
HHC				pmax	pmax		
	comp=Z,13nm,0.9s						
HHC				pmax	pmax		
	comp=Z,73nm,4.5s						
MHMT	Maesarieng	65.71	84	P	P	16 28 34.9	+3.0
	comp=Z,13nm,0.9s						
YAK	Yakutsk	66.03	30	P	P	16 28 33.6	+0.3
	comp=Z,3.5nm,0.6s,baz=79,slow=5.2,SNR=5.7						
YAK	Yakutsk	66.03	30⇑	eP	P	16 28 33.6	+0.3
YAK				pmax	pmax		
	comp=Z,7.0nm,0.7s						
YAK	Yakutsk	66.03	30	P	P	16 28 33.5	+0.2
CHTO	Chiang Mai	66.21	83	P	P	16 28 35.9	+0.7
CHTO				pmax	pmax		
	comp=Z,5.0nm,1.2s						
CHTO	Chiang Mai	66.21	83	P	P	16 28 35.9	+0.7
CHTO				IAmb	IAmb	16 28 41.6	
	comp=Z,4.8nm,1.2s						
CMMT	Chiang Mai	66.22	83	P	P	16 28 39.0	+3.8
	comp=Z,2.1nm,1.1s						
BATG	Bathurst New B	66.28	312	P	P	16 28 36.4	+1.1
CM15	Chiang Mai Arr	66.38	83	P	P	16 28 40.0	+3.7
	comp=Z,3.8nm,0.9s						
CM13	Chiang Mai Arr	66.38	83	P	P	16 28 41.2	+5.0
	comp=Z,2.7nm,1.0s						
CM31	Chiang Mai Arr	66.39	83	P	P	16 28 36.9	+0.6
CM31				IAmb	IAmb	16 28 44.3	
	comp=Z,4.6nm,1.1s						
CMAR	Chiang Mai Arr	66.39	83	P	P	16 28 36.4	+0.1
	comp=Z,1.9nm,0.8s,baz=297,slow=8.2,SNR=17						
CMAR				LR	LR	17 01 25.6	
	comp=Z,29nm,20.0s,baz=245,slow=40						
CMAR	Chiang Mai Arr	66.39	83	P	P	16 28 37.2	+0.9
CM02	Chiang Mai Arr	66.41	83	P	P	16 28 41.0	+4.6
	comp=Z,3.8nm,0.9s						
CM01	Chiang Mai Arr	66.42	83	P	P	16 28 41.0	+4.5
	comp=Z,4.9nm,0.9s						
CM09	Chiang Mai Arr	66.44	83	P	P	16 28 41.3	+4.6
	comp=Z,4.1nm,1.0s						
CM04	Chiang Mai Arr	66.45	83	P	P	16 28 41.2	+4.5
	comp=Z,4.3nm,1.0s						
CM35	Chiang Mai Arr	66.45	83	P	P	16 28 42.0	+5.3
PAYA	Payao	66.69	82	P	P	16 28 42.4	+4.1
	comp=Z,128nm,0.7s						
HIA	Hailar	67.09	45	P	P	16 28 40.3	-0.1
HIA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
HIA	Hailar	67.09	45	P	P	16 28 40.3	-0.1
HIA				IAmb	IAmb	16 28 46.3	
	comp=Z,5.3nm,0.8s						
D62A	Allapoint, All	68.19	313	P	P	16 28 48.9	+1.6
CN2	Changchun	73.22	48	eP	P	16 29 19.1	+1.1
CN2				eS	S	16 38 46.6	+0.4
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CN2				pmax	pmax		
	comp=Z,100nm,11.0s						
CN2				LR	LR		
	comp=Z,200nm,10.0s						
CN2				LR	LR		
	comp=Z,200nm,10.0s						
CN2				LR	LR		
	comp=Z,200nm,10.0s						
C36M	Paulatuk	73.71	349	P	P	16 29 21.4	+1.0
C36M				IAmb	IAmb	16 29 40.8	
	comp=Z,3.9nm,0.8s						
KLR	Kul'dur	73.86	41	P	P	16 29 21.5	-0.1
	comp=Z,3.3nm,0.7s,baz=318,slow=7.4,SNR=8.5						
KLR	Kul'dur	73.86	41⇓	eP	P	16 29 20.6	-1.0
KLR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
FCC	Fort Churchill	74.07	332	P	P	16 29 23.0	+0.3
FCC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
FCC	Fort Churchill	74.07	332	P	P	16 29 23.0	+0.3
FCC				IAmb	IAmb	16 29 28.9	
	comp=Z,5.8nm,0.8s						
INK	Inuvik	75.95	352	P	P	16 29 33.7	+0.3
	comp=Z,1.0nm,0.7s,baz=13,slow=8.3,SNR=1.9						
USA0B	Ussuriysk Arra	76.90	45⇓	eP	P	16 29 38.1	-1.1
USRK	Ussuriysk Ar.	76.90	45	P	P	16 29 38.9	-0.4
	comp=Z,3.7nm,0.6s,baz=299,slow=5.0,SNR=12						
YKA	Yellowknife Ar	77.80	342	P	P	16 29 43.6	-0.3
	comp=Z,0.6nm,0.4s,baz=37,slow=5.9,SNR=18						
KSRS	Korea Array	78.30	53	P	P	16 29 46.6	-0.5
	comp=Z,1.8nm,0.7s,baz=310,slow=4.4,SNR=7.3						
KSRS				LR	LR	17 09 29.5	
	comp=Z,57nm,18.8s,baz=315,slow=40						
FFC	Flin Flon	80.00	332	P	P	16 29 56.5	+0.3
FFC				pmax	pmax		
	comp=Z,11nm,1.4s						
FFC	Flin Flon	80.00	332	P	P	16 29 56.5	+0.3
FFC				IAmb	IAmb	16 30 11.9	
	comp=Z,11nm,1.4s						
MDM	Murphy Dome	80.39	357	P	P	16 29 58.4	+0.3
MDM				IAmb	IAmb	16 30 10.3	
	comp=Z,16nm,1.7s						
ILAR	Eielson Array	80.52	357	P	P	16 29 59.2	+0.5
	comp=Z,0.2nm,0.4s,baz=338,slow=4.3,SNR=7.3						
DAWY	Dawson	80.68	353	P	P	16 29 60.0	+0.2
DAWY				IAmb	IAmb	16 30 13.2	
	comp=Z,3.6nm,0.8s						
ULM	Lac du Bonnet	80.68	326	P	P	16 30 00.0	+0.1
	comp=Z,0.9nm,0.5s,baz=34,slow=3.6,SNR=2.1						
WRH	Wood River Hil	80.87	357	P	P	16 30 00.7	+0.1
WRH				IAmb	IAmb	16 30 05.5	
	comp=Z,7.8nm,1.2s						
ASAJ	Asahikawa	82.87	40	P	P	16 30 12.0	+0.4
	comp=Z,2.7nm,0.6s,baz=326,slow=3.6,SNR=5.3						
PETK	Petropavlovsk-	83.09	27	LR	LR	17 10 26.2	
	comp=Z,38nm,18.4s,baz=322,slow=38						
SKT	Skwentna	83.47	359	P	P	16 30 13.6	-0.8
MJAR	Matsushiro Arr	85.37	48	P	P	16 30 25.1	+0.6
	comp=Z,2.1nm,0.8s,baz=290,slow=4.4,SNR=4.1						
BDFB	Brasilia	85.79	248	LR	LR	17 09 06.7	
	comp=Z,52nm,18.8s,baz=104,slow=36						
PDAR	Pinedale Array	92.47	329	P	P	16 30 58.7	+0.3
	comp=Z,0.4nm,0.7s,baz=18,slow=3.1,SNR=1.9						
ELK	Elko	96.51	331	LR	LR	17 19 08.2	
	comp=Z,44nm,20.7s,baz=22,slow=38						
CPUP	Villa Florida	99.08	244	LR	LR	17 17 34.5	
	comp=Z,50nm,18.3s,baz=60,slow=36						
WRA	Warramunga Arr	116.34	97	PKP	PKPdf	16 36 30.1	-0.9
	comp=Z,0.4nm,0.8s,baz=317,slow=1.8,SNR=5.0						
ASAR	Alice Springs	117.78	101	PKP	PKPdf	16 36 32.9	-0.9
	comp=Z,0.3nm,0.6s,baz=313,slow=1.6,SNR=8.9						

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*IDC **05** 16:35:59.4±15.0, 37.°89N×19.°89E, h0km, mb3.8/3, mb1 3.9/4, mb1mx3.4/35, mbtmp3.8/4, ML3.7/1, MS3.1/2, Ms1 3.1/2, ms1mx2.6/47, Error ellipse: s-maj=286.0km s-min=33.7km az=37.0*

*IASPEI **05** 16:36:07.7±0.8, 38.°52N±0.°02×20.°56E±0.°03, h14km±4km, mb3.7/3, Error ellipse: s-maj=4.1km s-min=2.3km az=103.7, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*ATH **05** 16:36:08.2, 38.°52N×20.°58E, h12km±1km, ML3.3/11, Error ellipse: s-maj=1.3km s-min=0.5km az=278.0*

*THE **05** 16:36:08.4, 38.°52N×20.°57E, h10km, ML3.6/12, Error ellipse: s-maj=1.1km s-min=0.4km az=285.0*

ISC 05 16:36:07.7±0.7**, 38.°52N**±0.°02×**20.°55E**±0.°03**, h14**km±4km**, n91, σ0.s73**/118**, mb3.7**/3**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FSK	Fiskardo	0.07	171	P	Pg	16 36 10.2	-0.4
FSK				S	Sg	16 36 12.0	-0.4
FSK	Fiskardo	0.07	171	P	Pg	16 36 10.1	-0.4
FSK				S	Sg	16 36 11.7	-0.7
	212µm,0.3s						
EVGI	Lefkada island	0.13	41	P	Pg	16 36 11.3	0.0
EVGI				S	Sg	16 36 13.8	+0.1

EVGI	Lefkada island	0.13	41	P	Pg	16 36 11.3	0.0
EVGI				S	Sg	16 36 13.8	+0.1
	9µm,0.2s						
NYDR	Nydri-Lefkada	0.22	32	P	Pg	16 36 12.8	+0.1
NYDR				S	Sg	16 36 16.5	+0.5
NYDR	Nydri-Lefkada	0.22	32	P	Pg	16 36 12.8	+0.1
NYDR				S	Sg	16 36 16.8	+0.8
	18µm,0.5s						
KEF5	Kardakata, Kep	0.25	194	P	Pg	16 36 13.4	+0.2
KEF5				S	Sg	16 36 17.4	+0.5
KEF5	Kardakata, Kep	0.25	194	P	Pg	16 36 13.4	+0.2
KEF5				S	Sb	16 36 17.8	-0.5
	39µm,0.4s						
LKD2	Lefkada island	0.28	18	P	Pg	16 36 13.8	+0.2
LKD2				S	Sg	16 36 18.1	+0.4
LKD2				AML	AML	16 36 19.1	
	comp=N,11274µm,0.6s						
LKD2				AML	AML	16 36 19.9	
	comp=E,10275µm,0.6s						
LKD2	Lefkada island	0.28	18	P	Pg	16 36 13.8	+0.2
LKD2				S	Sg	16 36 18.4	+0.8
	comp=E,5µm,0.6s						
KEF4	Livadi, Kephal	0.28	200	P	Pg	16 36 14.0	+0.3
KEF4				S	Sb	16 36 18.6	-0.5
KEF4	Livadi, Kephal	0.28	200	P	Pg	16 36 14.1	+0.4
KEF4				S	Sb	16 36 18.6	-0.5
	comp=E,83µm,0.2s						
DMLN	Damoulianata-K	0.32	206	P	Pg	16 36 14.6	+0.3
DMLN				S	Sg	16 36 19.4	+0.6
DMLN	Damoulianata-K	0.32	206	P	Pg	16 36 14.6	+0.3
DMLN				S	Sb	16 36 20.0	-0.1
	comp=E,13µm,0.5s						
LXRA	Lixouri, Kepha	0.34	195	P	Pg	16 36 15.0	+0.5
LXRA				S	Sg	16 36 20.0	+0.7
VLS	Valsamata	0.35	175	P	Pg	16 36 14.7	-0.1
VLS				S	Sg	16 36 20.2	+0.5
VLS				AML	AML	16 36 20.9	
	comp=E,38985µm,0.4s						
VLS				AML	AML	16 36 21.0	
	comp=N,38673µm,0.2s						
VLS	Valsamata	0.35	175	P	Pg	16 36 14.9	+0.1
VLS				S	Sb	16 36 20.8	-0.2
	comp=N,19µm,0.3s						
ARGA	Argostoli. Kep	0.35	189	P	Pg	16 36 15.1	+0.3
ARGA				S	Sg	16 36 20.2	+0.5
KEF3	Kipouria, Keph	0.36	206	P	Pg	16 36 14.8	-0.2
KEF3				S	Sg	16 36 20.4	+0.5
KEF3	Kipouria, Keph	0.36	206	P	Pg	16 36 14.8	-0.2
KEF3				S	Sg	16 36 20.4	+0.5
	comp=N,33µm,0.4s						
PSDA	Pessada-Kefalo	0.41	176	P	Pg	16 36 16.1	+0.2
PSDA				S	Sg	16 36 21.6	+0.1
PSDA	Pessada-Kefalo	0.41	176	P	Pg	16 36 16.1	+0.2
PSDA				S	Sb	16 36 22.7	-0.1
	comp=N,5µm,0.3s						
PDO	Prodromos	0.50	81	P	Pg	16 36 17.7	0.0
PDO				AML	AML	16 36 30.8	
	comp=N,7674µm,0.7s						
PDO				AML	AML	16 36 33.1	
	comp=E,5656µm,0.6s						
PDO	Prodromos	0.50	81	P	Pg	16 36 17.1	-0.5
VLMS	Volimes, Zakyn	0.65	172	P	Pg	16 36 20.4	-0.1
VLMS				S	Sg	16 36 29.1	0.0
VLMS				AML	AML	16 36 31.1	
	comp=N,27019µm,0.4s						
VLMS				AML	AML	16 36 32.4	
	comp=E,14807µm,0.3s						
VLMS	Volimes, Zakyn	0.65	172	P	Pg	16 36 20.4	-0.1
VLMS				S	Sb	16 36 30.5	+0.7
LTHK	Lithakia	0.84	164	P	Pg	16 36 23.5	-0.5
LTHK				S	Sg	16 36 35.3	+0.1
LTHK	Lithakia	0.84	164	P	Pg	16 36 23.6	-0.5
LTHK				S	Sb	16 36 36.5	+1.2
	comp=E,4µm,0.3s						
RLS	Riolos of Patr	0.86	123	P	Pg	16 36 24.2	-0.2
RLS				S	Sg	16 36 35.4	-0.3
RLS				AML	AML	16 36 39.6	
	comp=E,2681µm,0.2s						
RLS				AML	AML	16 36 40.5	
	comp=N,2853µm,0.4s						
RLS	Riolos of Patr	0.86	123	P	Pg	16 36 24.4	0.0
IGT	Igoumenitsa	1.02	351	P	Pb	16 36 27.2	0.0
IGT				AML	AML	16 36 46.1	
	comp=E,3588µm,0.5s						
IGT				AML	AML	16 36 46.3	
	comp=N,2262µm,0.6s						
IGT	Igoumenitsa	1.02	351	P	Pg	16 36 27.6	+0.2
EVR	Evrytania	1.06	68	P	Pb	16 36 27.6	-0.2
EVR				AML	AML	16 36 53.4	
	comp=N,1754µm,0.7s						
EVR				AML	AML	16 36 53.6	
	comp=E,1309µm,0.8s						
EVR	Evrytania	1.06	68	P	Pb	16 36 27.6	-0.2
DRO	Drossia	1.08	122	P	Pb	16 36 27.8	-0.3
DRO	Drossia	1.08	122	P	Pb	16 36 28.2	+0.1
DRO				S	Sn	16 36 44.1	+1.0
	comp=E,3µm,0.4s						
JAN	Janina	1.16	12	P	Pb	16 36 29.4	-0.1
JAN				AML	AML	16 36 50.4	
	comp=E,2846µm,0.7s						
JAN				AML	AML	16 36 50.5	
	comp=N,1949µm,0.5s						
LAKA	Lakka	1.16	104	P	Pn	16 36 28.9	-0.6
LAKA				AML	AML	16 36 52.2	
	comp=N,6065µm,0.6s						
LAKA				AML	AML	16 36 53.5	
	comp=E,7813µm,0.6s						
SERG	Sergoula	1.19	95	P	Pn	16 36 29.5	-0.4
TRIZ	Trizonia	1.21	97	P	Pn	16 36 29.8	-0.3
ALIK	Aliki, Aigiali	1.26	102	P	Pn	16 36 30.8	0.0
KALE	Kalithea	1.26	96	P	Pn	16 36 30.8	-0.1
KALE				AML	AML	16 36 59.3	
	comp=E,878µm,0.5s						
KALE				AML	AML	16 36 59.6	
	comp=N,1718µm,1.0s						
KASA	Kassiopi	1.31	339	P	Pb	16 36 32.1	+0.1
KEK	Kerkira	1.32	334	P	Pb	16 36 32.4	+0.1
KEK	Kerkira	1.32	334	P	Pg	16 36 33.0	-0.2
MAKR	Makrakomi, Fth	1.33	68	P	Pn	16 36 32.3	+0.5
MAKR				AML	AML	16 37 00.9	
	comp=E,1208µm,0.8s						
MAKR				AML	AML	16 37 02.2	
	comp=N,1239µm,0.8s						
AMT	Artemida-Makis	1.35	137	P	Pn	16 36 32.4	+0.3
AMT	Artemida-Makis	1.35	137	P	Pn	16 36 31.7	-0.4
KLV	Kalavryta, Ach	1.35	110	P	Pn	16 36 32.0	-0.1
DSF	Desfina	1.56	94	P	Pn	16 36 35.7	+0.7
DSF	Desfina	1.56	94	P	Pn	16 36 35.5	+0.5
THAL	Thalero	1.73	106	P	Pb	16 36 39.0	-0.3
OHR	Ohrid	2.59	4	*i* Pn	Pn	16 36 50.6	+1.4
STIP	Stip	3.41	21	*i* Pn	Pb	16 37 08.6	+0.8
PDG	Podgorica	4.02	346	*e*Pn	Pn	16 37 09.1	+0.3
HCY	Herceg Novi	4.22	339	*e*Pn	Pn	16 37 10.2	-1.3
TREB	Trebinje	4.51	339	*e*Pn	Pn	16 37 15.1	-0.4
DBRK	Dubrovnik	4.53	337	*i* Pn	Pn	16 37 14.5	-1.2
DBRK				Sn	Sn	16 38 03.7	-4.4
BRY	Bratogost	4.63	341	*e*Pn	Pn	16 37 16.7	-0.6
UPM	Unac-Piva	4.84	346	*e*Pn	Pn	16 37 20.9	+0.7
STON	Ston	4.85	334	*e*Pn	Pn	16 37 18.9	-1.3
STON				Sn	Sn	16 38 11.0	-5.1
BBLS	Lazići	5.41	351	*e*Pn	Pn	16 37 30.1	+2.2
DIVS	Divibare	5.58	356	*e*Pn	Pn	16 37 29.4	-1.0
RICI	Ricice	5.60	334	*i* Pn	Pn	16 37 30.4	-0.1
RICI				Sn	Sn	16 38 33.3	-1.2
HAPS	Han Pijesak,Bl	5.69	348	*e*Pn	Pn	16 37 30.5	-1.3
KIJV	Kijevo	6.30	332	*e*Pn	Pn	16 37 40.4	+0.3
KIJV				Sn	Sn	16 38 49.6	-2.3
ZIRJ	Zirje	6.32	326	*e*Pn	Pn	16 37 40.2	-0.2
MGRS	Mrkonjic Grad	6.44	337	*e*Pn	Pn	16 37 42.9	+0.9
MORI	Morici	6.46	327	*e*Pn	Pn	16 37 43.0	+0.6
MORI				Sn	Sn	16 38 53.0	-2.8
FRGS	Fruska Gora	6.65	355	*e*Pn	Pn	16 37 43.7	-1.2
BLY	Banja Luka	6.71	339	*e*Pn	Pn	16 37 44.6	-1.1
UDBI	Udbina	6.99	331	*e*Pn	Pn	16 37 51.0	+1.4
NVLJ	Novalja	7.38	327	*e*Pn	Pn	16 37 55.4	+0.5
CRES	Cresnjev	8.22	334	*e*Pn	Pn	16 38 05.1	-1.3
CEY	Cerknica	8.52	330	*e*Pn	Pn	16 38 11.0	+0.4
SOKA	Soboth	9.10	335	*e*Pn	Pn	16 38 18.5	-0.1
	comp=N,1.3nm,0.4s						
OBKA	Obir	9.12	333	*e*Pn	Pn	16 38 19.3	+0.4
	comp=N,9.5nm,1.2s						
KEST	Kesra	9.37	256	LR	LR	16 41 12.3	
	comp=N,45nm,20.8s,baz=160,slow=36						
ARSA	Arzberg	9.47	339	*e*Pn	Pn	16 38 24.5	+0.9
	comp=N,2.2nm,0.7s						
KBA	Koelnbreinsper	10.05	331	*e*Pn	Pn	16 38 32.9	+1.2
	comp=N,3.6nm,0.8s						
ABTA	Abfaltersbach	10.12	327	*e*Pn	Pn	16 38 33.2	+0.6
	comp=N,2.8nm,0.6s						
MOA	Molln	10.38	336	*e*Pn	Pn	16 38 36.8	+0.7
	comp=N,3.5nm,0.7s						
WTTA	Wattenberg	10.90	326	*e*Pn	Pn	16 38 44.3	+0.9
	comp=N,3.5nm,0.5s						
WATA	Walderalm	10.98	326	*e*Pn	Pn	16 38 45.7	+1.2
	comp=N,5.1nm,0.5s						
SQTA	Sankt Quirin	11.06	325	*e*Pn	Pn	16 38 46.6	+1.1
	comp=N,0.7nm,0.3s						
MOTA	Moosalm	11.20	325	*e*Pn	Pn	16 38 48.7	+1.3
	comp=N,9.2nm,1.0s						
GERES	GERESS Array B	11.44	337	Pn	Pn	16 38 50.6	0.0
	comp=N,0.2nm,0.3s,baz=161,slow=12,SNR=5.3						
FINES	FINESS Array B	23.20	7	P	P	16 41 14.4	+0.7
	comp=N,1.4nm,0.7s,baz=170,slow=8.5,SNR=4.6						
MKAR	Makanchi Array	45.10	59	P	P	16 44 23.3	0.0
	comp=N,0.5nm,0.5s,baz=278,slow=7.6,SNR=8.4						
ZALV	Zalesovo Beam	45.44	48	P	P	16 44 26.1	+0.3
	comp=N,1.2nm,0.4s,baz=284,slow=8.5,SNR=7.1						
SJG	San Juan	76.43	282	LR	LR	17 16 08.3	
	comp=N,26nm,19.8s,baz=167,slow=32						

NEIC ***05*** *16:36:59.8±1.9, 56.°02N±0.°03×157.°52W±0.°05, h30^{km}±7^{km}, Error ellipse: s-maj=4.5km s-min=3.6km az=165.0*

AEIC ***05*** *16:37:00±2.4, 55.°95N±0.°03×157.°51W±0.°05, h16^{km}±5^{km}, ML3.4, ML3.5/22(NEIC), Error ellipse: s-maj=4.1km s-min=3.9km az=60.0*

IDC ***05*** *16:37:02.5±5.0, 56.°45N×157.°67W, h64^{km}±43^{km}, mb3.3/6, mb1 3.7/9, mb1mx3.4/36, mbtmp3.7/9, ML3.7/3, MS2.5/1, Ms1 2.5/1, ms1mx2.2/39, Error ellipse: s-maj=41.7km s-min=20.7km az=20.0*

ISC 05 16:36:59.6±0.7**, 56.°02N**±0.°06×**157.°51W**±0.°04**, h35**^{km}**, n111, σ1**^{s}**54**/116**, mb3.6**/6**, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHGN	Chignik	0.58	300		Pn	16 37 12.5	+1.1
CHGN					Sn	16 37 21.2	+1.6
VNSG	Veniaminof 6	0.89	278		Pn	16 37 16.7	+1.0
VNSG					Sn	16 37 28.6	+1.3
VNHG	Veniaminof 1	0.95	283		Pn	16 37 17.7	+1.3
CHIR	Chirikof Islan	1.08	100		Pn	16 37 19.6	+1.4
CHIR				Sn	Sn	16 37 34.0	+2.0
CHIR				IAML		16 37 43.5	
	comp=E,907nm,0.9s						
CHIR				IAML		16 37 44.2	
	comp=N,840nm,0.9s						
CNBA	Chernabura Isl	1.69	226		Pn	16 37 26.6	+0.1
CNBA	Chernabura Isl	1.69	226		Sn	16 37 47.4	+0.6
CNBA	Chernabura Isl	1.69	226	IAML		16 37 56.4	
	comp=N,299nm,0.7s						
CNBA				IAML		16 37 56.8	
	comp=E,274nm,0.7s						
SDPT	Sand Point	1.81	250		Pn	16 37 29.4	+1.3
SDPT	Sand Point	1.81	250		Sn	16 37 51.2	+1.4
SDPT	Sand Point	1.81	250	IAML		16 37 58.8	
	comp=E,366nm,1.1s						
SDPT				IAML		16 38 03.1	
	comp=N,402nm,0.7s						
PLK3	Peulik 3	1.81	22		Pn	16 37 31.0	+2.8
PLK3					Sn	16 37 54.4	+4.3
PLK1	Peulik 1	1.86	15		Pn	16 37 31.3	+2.4
SII	Sitkinak Islan	1.93	72	Pn	Pn	16 37 31.1	+1.1
SII				IAML		16 38 10.5	
	comp=E,585nm,0.6s						
PLK5	Peulik 5	2.02	10		Pn	16 37 33.1	+2.1
KABR	Katmai Barrier	2.54	32		Pn	16 37 40.0	+1.7
PS4A	Pavlof South-4	2.55	257		Pn	16 37 39.5	+1.1
KABU	Katmai Buttres	2.57	27		Pn	16 37 41.1	+2.4
KELA	Mount Kelaz	2.62	21		Pn	16 37 41.2	+1.8
OHAK	Old Harbor	2.63	61		Pn	16 37 40.3	+0.8
OHAK				IAML		16 38 26.9	
	comp=N,159nm,0.7s						
KVTA	Katmai Vly 10	2.66	26		Pn	16 37 42.0	+2.0
DT1	Dutton Round H	2.86	253		Pn	16 37 44.0	+1.4
KAHC	Katmai Hardscr	2.97	26		Pn	16 37 46.1	+1.8
KDAK	Kodiak Island	3.23	55	P	Pn	16 37 48.5	+0.8
	comp=N,4.0nm,0.3s,baz=212,slow=6.4,SNR=109						
KDAK				S	Sn	16 38 24.7	-0.3
	comp=N,5.8nm,0.3s,baz=285,slow=5.9,SNR=7.1						
KDAK				LR	LR	16 39 22.9	
	comp=N,73nm,19.3s,baz=218,slow=46						
KDAK	Kodiak Island	3.23	55		Pn	16 37 48.5	+0.8
FALS	False Pass	3.56	253	Pn	Pn	16 37 53.9	+1.6
AUCH	Augustine Cone	4.00	31		Pn	16 38 00.8	+2.4
AUL	Augustine Lava	4.02	31		Pn	16 38 00.6	+2.0
WECS	Westdahl Cape	4.41	253		Pn	16 38 06.7	+2.7
IVE	Iliamna Volcan	4.67	29		Pn	16 38 09.8	+2.2
CNPM	China Poot	4.86	41	Pn	Pn	16 38 11.3	+1.1
CNPM				IAML		16 39 23.7	
	comp=N,38nm,0.9s						
CNPM				IAML		16 39 24.3	
	comp=E,47nm,0.8s						
RED	Redoubt Volcan	5.08	28		Pn	16 38 15.2	+2.0
AKUT	Akutan	5.11	252	Pn	Pn	16 38 14.6	+1.1
RSO	Redoubt South	5.12	27		Pn	16 38 15.8	+1.9
BRLK	Bradley Lake	5.16	41	Pn	Pn	16 38 14.5	+0.2
BRLK				IAML		16 39 15.1	
	comp=E,47nm,2.7s						
BRLK				IAML		16 39 51.7	
	comp=N,30nm,3.1s						
NCT	North Crescent	5.16	26		Pn	16 38 16.4	+2.0
BRSE	Bradley Lake S	5.20	41		Pn	16 38 15.2	+0.4
SVW2	Sparrevohn	5.20	10		Pn	16 38 16.2	+1.5
SVW2				IAML		16 39 16.1	
	comp=N,21nm,0.6s						
SVW2				IAML		16 39 52.7	
	comp=E,18nm,0.6s						
DFR	Drift River	5.25	27		Pn	16 38 17.0	+1.5
UNV	Unalaska Valle	5.62	251	Pn	Pn	16 38 22.0	+1.4
SLKM	Skilak Lake	5.92	37		Pn	16 38 26.4	+1.7
SEW	Seward	5.92	43	Pn	Pn	16 38 24.2	-0.4
SPCP	Crater Peak Br	5.96	26		Pn	16 38 26.8	+1.4
STLK	Strandline Lak	6.24	26		Pn	16 38 31.1	+1.9
SUA	Susitna One	6.50	30	Pn	Pn	16 38 33.5	+0.8
SKT	Skwentna	6.73	25		Pn	16 38 37.1	+1.3
PWL	Port Wells	6.84	41		Pn	16 38 37.0	-0.2
Q23K	Middleton Isla	6.89	56	Pn	Pn	16 38 38.1	+0.2
MID	Middleton Isla	6.89	56	Pn	Pn	16 38 38.5	+0.6
TT01	Tatalina	6.95	6		Pn	16 38 40.3	+1.5
TTA	Tatalina	6.98	6	Pn	Pn	16 38 40.8	+1.5
TTA				Sn	Sn	16 39 55.4	-1.9
PMR	Palmer	7.08	34	Pn	Pn	16 38 44.0	+3.5
SPIA	Saint Paul Isl	7.13	285	Pn	Pn	16 38 43.6	+2.4
KNK	Knik Glacier	7.17	37	Pn	Pn	16 38 42.3	+0.5
GHO	Glory Hole Cre	7.28	34	Pn	Pn	16 38 44.5	+1.1
HIN	Hinchinbrook I	7.28	48	Pn	Pn	16 38 43.8	+0.4
GLI	Glacier Island	7.32	44	Pn	Pn	16 38 44.0	+0.2
PPLA	Purkeypile	7.41	19	Pn	Pn	16 38 49.3	+4.0
FID	Port Fidalgo	7.49	46	Pn	Pn	16 38 45.3	-0.8
SML	Sawmill	7.50	35	Pn	Pn	16 38 47.6	+1.2
EYAK	Cordova Ski Ar	7.68	49	Pn	Pn	16 38 48.0	-0.8
SCM	Sheep Creek Mo	7.85	38		Pn	16 38 51.0	-0.2
KAIM	Kayak Island	7.99	55	Pn	Pn	16 38 53.3	+0.3
KLU	Klutina	8.14	43		Pn	16 38 55.4	+0.2
HMT	Hamilton	8.23	53	Pn	Pn	16 38 57.5	+1.2
KTH	Kantishna Hill	8.25	21		Pn	16 38 58.3	+1.6
WAT6	Susitna Watana	8.26	33		Pn	16 38 57.3	+0.4
TRF	Thorofare Moun	8.30	23	Pn	Pn	16 38 58.3	+0.9
WAT2	Susitna Watana	8.31	29		Pn	16 38 57.8	+0.3
NICHA	Nichawak Mount	8.32	54		Pn	16 38 57.2	-0.4
SUCK	Suckling Hills	8.34	55	Pn	Pn	16 38 58.9	+1.0
M24K	Tolsona, Glenn	8.44	39	Pn	Pn	16 38 59.6	+0.3
RND	Reindeer	8.60	27	Pn	Pn	16 39 00.4	-1.1
N25K	Chitina, Valde	8.73	45	Pn	Pn	16 39 03.2	0.0
BPAW	Bear Paw Mtn.	8.74	19	Pn	Pn	16 39 04.3	+1.0
CRQM	Cirque	8.91	52	Pn	Pn	16 39 06.1	+0.3
GLB	Gilahina Butte	8.95	47	Pn	Pn	16 39 06.3	0.0
VRDI	Verde Repeater	8.99	49	Pn	Pn	16 39 06.7	-0.3
BWN	Browne	9.11	23	Pn	Pn	16 39 08.0	-0.3
ISLE	Juniper Island	9.21	54	Pn	Pn	16 39 10.1	+0.3
MESA	MESA	9.23	57	Pn	Pn	16 39 10.1	-0.1
MCARA	McCarthy VSAT	9.25	49	Pn	Pn	16 39 10.9	+0.5
PAX	Paxson	9.27	36	Pn	Pn	16 39 10.9	+0.3
KIAG	Kiagna River	9.33	52		Pn	16 39 11.5	0.0
BALM	Baldy	9.38	51		Pn	16 39 12.5	+0.2
YAH	Yahtse	9.39	56	Pn	Pn	16 39 13.2	+0.8
ANM	Nome	9.41	339	Pn	Pn	16 39 14.0	+1.5
RKAV	Rock Avalanche	9.55	57		Pn	16 39 14.6	0.0
WRH	Wood River Hil	9.68	25	Pn	Pn	16 39 15.2	-0.9
BARN	Barnard Glacie	9.70	52	Pn	Pn	16 39 16.6	+0.1
CTGM	Chitina Glacie	9.80	53	Pn	Pn	16 39 19.2	+1.2
CCB	Clear Creek Bu	9.89	25		Pn	16 39 18.2	-0.8
HDA	Harding Lake	9.91	28		Pn	16 39 18.3	-1.0
I23K	Minto, Yukon-K	9.99	20		Pn	16 39 19.9	-0.5
RIDG	Independent Ri	10.01	34		Pn	16 39 21.4	+0.7
MDM	Murphy Dome	10.06	23	Pn	Pn	16 39 20.2	-1.2
IM03		10.16	9		Pn	16 39 24.4	+1.7
DOT	Dot Lake	10.20	36	Pn	Pn	16 39 23.5	+0.2
IL31		10.22	26		Pn	16 39 22.3	-1.2
ILAR	Eielson Array	10.22	26	P	Pn	16 39 21.8	-1.7
	comp=E,0.6nm,0.3s,baz=224,slow=14,SNR=26						
ILAR				S	Sn	16 41 10.4	-6.3
	comp=E,0.2nm,0.3s,baz=210,slow=23,SNR=4.9						
POKR	Poker Plat Res	10.37	24	Pn	Pn	16 39 24.6	-1.1
GAMB	Gambell	10.53	323	Pn	Pn	16 39 26.8	-0.9
PRP	Porcupine Dome	11.16	27	Pn	Pn	16 39 36.3	-0.3
SIT	Sitka	12.28	76	Pn	Pn	16 39 51.6	-0.1
WHY	Whitehorse	12.73	59	Pn	Pn	16 39 58.7	+0.6
INK	Inuvik	16.49	32	P	Pn	16 40 46.2	-1.5
	comp=E,0.5nm,0.3s,baz=183,slow=17,SNR=4.9						
YKA	Yellowknife Ar	22.51	56	P	P	16 41 54.6	-1.1
	comp=E,0.5nm,0.6s,baz=274,slow=9.3,SNR=10.0						
SEY	Seymchan	25.77	306	P	P	16 42 23.6	-3.0
	comp=E,0.3nm,0.4s,baz=76,slow=20,SNR=4.2						
NVAR	Mina Array Bea	31.36	107	P	P	16 43 18.8	+1.9
	comp=E,0.6nm,0.7s,baz=300,slow=8.6,SNR=3.9						
PDAR	Pinedale Array	33.20	93	P	P	16 43 34.0	+1.0
	comp=E,0.9nm,0.5s,baz=317,slow=4.4,SNR=14						
ULM	Lac du Bonnet	36.32	72	P	P	16 43 59.2	-0.4
	comp=E,0.9nm,0.5s,baz=311,slow=9.3,SNR=2.0						
TXAR	Lajitas Array	46.17	102	P	P	16 45 21.8	+1.1
	comp=E,0.5nm,0.7s,baz=335,slow=5.5,SNR=6.6						

NEIC ***05*** *17:00:01.0±1.4, 22.°55N±0.°08×118.°4E±0.°1, h7^{km}±6^{km}, mb4.5/6, Error ellipse: s-maj=17.9km s-min=3.9km az=51.0*

IDC ***05*** *17:00:00.2±1.2, 22.°62N×118.°74E, h0^{km}, mb3.6/5, mb1 3.7/6, mb1mx3.4/59, mbtmp3.6/6, ML4.0/1, MS3.4/3, Ms1 3.4/3, ms1mx2.9/31, Error ellipse: s-maj=55.4km s-min=19.6km az=61.0*

BJI ***05*** *17:00:01.0±0.0, 22.°57N×118.°44E, h9^{km}, mB4.4/4, mb4.1/5, ML4.2/6, Ms3.8/6, Ms7 3.7/4*

ISC 05 17:00:02.9±0.8**, 22.°61N**±0.°10×**118.°46E**±0.°09**, h17**^{km}**, n27, σ0**^{s}**93**/23**, mb3.9**/8**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KNMB	Chin-men Tao	1.85	358		Pn	17 00 32.6	-1.3
TPUB	Ta-pu	2.12	71		Pn	17 00 36.8	-0.9
TWG	Pinlang	2.43	84		Pn	17 00 42.2	+0.3
SSLB	Suanglung	2.58	62		Pn	17 00 44.3	+0.2
YULB	Yu-li	2.73	73		Pn	17 00 46.7	+0.6
NACB	Ninganchiao	3.28	61		Pn	17 00 54.4	+0.8
YHNB	Yeheng	3.38	52		Pn	17 00 54.9	-0.1
TATO	Taipei	3.65	49		Pn	17 00 57.7	-0.9
SSE	Sheshan	8.80	15	Pn	Pn	17 02 09.4	0.0
CMAR	Chiang Mai Arr	18.73	261	P	Pn	17 04 23.1	+1.7
	0.2nm,0.3s,baz=80,slow=10,SNR=1.4						
JHJ	Hachijo jima 2	21.53	56	LR	LR	17 11 41.6	
	comp=Z,138nm,20.3s,baz=98,slow=33						
SONM	Songino Array	26.97	342	P	P	17 05 44.3	+0.5
	0.7nm,0.9s,baz=159,slow=8.9,SNR=2.1						
KLR	Kul'dur	28.58	18	LR	LR	17 19 01.0	
	comp=Z,22nm,18.9s,baz=350,slow=40						
WMQ	Urumqi	33.02	317	*e*P	P	17 06 38.8	+1.4
MK31	Makanchi Array	37.79	319	P	P	17 07 18.6	+0.4
MKAR	Makanchi Array	37.79	319	P	P	17 07 19.3	+1.0
	0.6nm,0.7s,baz=115,slow=9.9,SNR=6.6						
MKAR	Makanchi Array	37.79	319	P	P	17 07 18.9	+0.7
ZAA0	Zalesovo Array	40.27	330	P	P	17 07 38.7	-0.2
ZAA0				IAmb	IAmb	17 07 48.4	
	comp=Z,20nm,1.4s						
KURBB	Kurchatov Arra	41.75	322	P	P	17 07 52.4	+1.2
	comp=Z,0.4nm,0.5s,baz=126,slow=7.8,SNR=4.1						
WRA	Warramunga Arr	45.04	159	P	P	17 08 17.1	-0.9
	comp=Z,1.7nm,1.0s,baz=343,slow=8.8,SNR=7.3						
WRA	Warramunga Arr	45.04	159	IAmb	IAmb	17 08 17.9	
	comp=Z,0.1nm,1.1s						
WB2	Warramunga Arr	45.05	159	P	P	17 08 17.6	-0.5
WB2				IAmb	IAmb	17 08 39.4	
	comp=Z,6.6nm,1.2s						
WR0	Warramunga Arr	45.13	158	P	P	17 08 18.1	-0.6
WR0				IAmb	IAmb	17 08 29.6	
	comp=Z,5.6nm,1.2s						
ASAR	Alice Springs	48.38	161	P	P	17 08 43.5	-0.7
	comp=Z,0.7nm,0.7s,baz=344,slow=6.6,SNR=14						
ASAR	Alice Springs	48.38	161	P	P	17 08 43.2	-1.0
NWAO	Narrogin (SRO)	55.23	181	P	P	17 09 33.8	-1.3
KBZ	Khabaz	64.51	309	LR	LR	17 44 33.3	
	comp=Z,67nm,18.5s,baz=201,slow=41						

GCG ***05*** *17:00:37.1±0.3, 12.°94N×89.°67W, h111^{km}±17^{km}, MD3.9*

SNET ***05*** *17:00:40.1±1.0, 12.°88N×90.°52W, h26^{km}±7^{km}, ML3.7*

UCR ***05*** *17:00:40.3±1.0, 12.°87N×90.°50W, h24^{km}±7^{km}, ML3.7*

ISC 05 17:00:40.4±2.6**, 12.°9N**±0.°1×**90.°47W**±0.°08**, h24**^{km}**, n35, σ1**^{s}**52**/42**, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEVE	Cerro Verde	1.27	41	*e*P	Pn	17 01 02.9	+0.1
CEVE				IAML		17 01 25.0	
	comp=Z,2µm,0.2s						
CEVE	Cerro Verde	1.27	41	*e*P	Pn	17 01 02.9	+0.1
CEVE				IAML		17 01 25.0	
	comp=Z,2µm,0.2s						
JAYA	Jayaque - finc	1.27	52	*e*P	Pn	17 01 02.7	-0.1
JAYA				*e*S	Sb	17 01 20.7	+0.9
JAYA				IAML		17 01 25.3	
	comp=Z,799nm,0.2s						
JAYA	Jayaque - finc	1.27	52	*e*P	Pn	17 01 02.7	-0.1
JAYA				*e*S	Sb	17 01 20.7	+0.9
JAYA				IAML		17 01 25.3	
	comp=Z,799nm,0.2s						
SBLS	San Blas	1.28	40	*e*P	Pn	17 01 03.1	+0.1
SBLS	San Blas	1.28	40	*e*P	Pn	17 01 03.1	+0.1
LALI	Alcalda de L	1.28	61	*e*P	Pn	17 01 02.3	-0.6
LALI	Alcalda de L	1.28	61	*e*P	Pn	17 01 02.3	-0.6
IXG	Ixpaco	1.30	1	*e*P	Pn	17 01 03.1	-0.2
IXG	Ixpaco	1.30	1	*e*P	Pn	17 01 03.1	-0.2
IXG	Ixpaco	1.30	1	*e*P	Pb	17 01 04.1	-0.3
IXG				*e*S	Sb	17 01 25.2	+4.5
RTR	El Retiro	1.31	38	*e*P	Pb	17 01 03.6	-0.8
RTR	El Retiro	1.31	38	*e*P	Pb	17 01 03.6	-0.8
SNJE	San Jose	1.31	40	*e*P	Pn	17 01 03.5	+0.1
SNJE	San Jose	1.31	40	*e*P	Pn	17 01 03.5	+0.1
PMON	Piamonte	1.41	53	*e*P	Pn	17 01 04.9	+0.2
PMON	Piamonte	1.41	53	*e*P	Pn	17 01 04.9	+0.2
BOQS	Boqueron	1.45	53	*e*P	Pn	17 01 05.7	+0.3
BOQS	Boqueron	1.45	53	*e*P	Pn	17 01 05.7	+0.3
PCG	Pacaya	1.53	355	*e*P	Pb	17 01 07.6	-0.6
PCG				*e*S	Sb	17 01 31.5	+4.2
TACO	Tacachico	1.55	45	*e*P	Pn	17 01 06.8	+0.2
TACO				*e*S	Sn	17 01 26.1	+0.2
TACO	Tacachico	1.55	45	*e*P	Pn	17 01 06.8	+0.2
TACO				*e*S	Sn	17 01 26.1	+0.2
LFRS	El Faro	1.57	61	*e*P	Pn	17 01 06.8	0.0
LFRS	El Faro	1.57	61	*e*P	Pn	17 01 06.8	0.0
FUG	Fuego 3	1.62	347	*e*P	Pb	17 01 09.7	0.0
PAVA	Las Pavas	1.72	60	*e*P	Pn	17 01 09.7	+0.7
PAVA	Las Pavas	1.72	60	*e*P	Pn	17 01 09.7	+0.7
NBG	Las Nubes	1.72	4	*e*P	Pb	17 01 10.4	-1.1
COEG	Centro de Oper	1.73	64	*e*P	Pn	17 01 08.8	-0.2
COEG	Centro de Oper	1.73	64	*e*P	Pn	17 01 08.8	-0.2
MTO3	Montecristo	1.87	35	*e*P	Pn	17 01 11.9	+0.7
MTO3	Montecristo	1.87	35	*e*P	Pn	17 01 11.9	+0.7
MRL	Marmol	2.34	19	*e*P	Pn	17 01 12.9	-4.6
MRL				*e*S	Sn	17 01 40.9	-4.7
LCND	La Caada	2.56	80	*e*P	Pn	17 01 20.7	+0.4
LCND	La Caada	2.56	80	*e*P	Pn	17 01 20.7	+0.4

IDC ***05*** *17:02:02.5±1.1, 28.°69N×52.°19E, h0^{km}, mb3.9/14, mb1 4.0/17, mb1mx3.7/57, mbtmp3.8/17, ML3.6/3, Error ellipse: s-maj=24.3km s-min=18.6km az=40.0*

TEH ***05*** *17:02:03.7,28°.83N×52°.30E,h8^{km},ML3.7*
THR ***05*** *17:02:05.5±0.3,28°.98N×52°.20E,h6^{km}±9^{km},ML3.6*
ISC 05 17:02:04.4±0.6,**28°.76N**±0°.05×**52°.20E**±0°.05,**h10^{km},n61, σ1^{s}45**/62,**mb3.7**/15,**Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
QIR1	Qir	0.79	111	ePg	Pg	17 02 18.1	-1.6
QIR1				e		17 02 54.9	
	comp=Z,99nm,0.6s						
AHBU	AHRAM	0.80	277	ePg	Pn	17 02 21.0	-0.8
SHI	Shiraz	0.92	17	ePg	Pg	17 02 19.1	-3.0
SHI				e		17 02 40.7	
	comp=Z,99nm,0.4s						
KAZ1	Kazerun	0.99	330	ePg	Pg	17 02 22.8	-0.7
KAZ1				e		17 02 49.9	
	comp=Z,99nm,0.6s						
JHRM	Jahrom	1.23	102	ePg	Pn	17 02 26.9	-0.9
JHRM				e		17 03 04.7	
	comp=Z,99nm,0.6s						
LMD1	Lamerd	1.65	149	ePg	Pg	17 02 35.2	-0.9
LMD1				e		17 03 09.3	
	comp=Z,99nm,0.6s						
LAR1	LAR	2.21	119	ePn	Pn	17 02 42.0	+0.9
LAR1				e		17 03 31.1	
	comp=Z,99nm,0.5s						
KLNJ	Kolanjah	2.30	347	ePn	Pn	17 02 43.3	+0.6
ABEH	Behbahan	2.50	318	ePn	Pn	17 02 45.9	+0.8
IRAM	Ramesheh	3.04	3	ePn	Pn	17 02 53.3	+0.5
IMEH	Mehriz	3.35	38	ePn	Pn	17 02 57.9	+0.9
ISAD	Sadrabad	3.39	22	ePn	Pn	17 02 59.0	+1.3
IGAR	Gharneh	3.63	358	ePn	Pn	17 03 02.1	+1.2
SHK1	Shahrekord	3.73	343	ePn	Pn	17 03 02.6	+0.3
AMIS	Naft Sefid	3.84	320	ePn	Pn	17 03 05.0	+1.4
ICHK	Chekchek	3.96	28	ePn	Pn	17 03 06.1	+0.7
KBD	Kabd	3.97	277	eP		17 03 08.0	
IBAF	Bafgh	4.05	45	ePn	Pn	17 03 06.7	+0.1
NGRK	Negar Kerman	4.05	76	ePn	Pn	17 03 07.3	+0.4
NGRK				e		17 04 28.0	
	comp=Z,99nm,0.7s						
KHGB	Koh Gabri	4.05	66	ePn	Pn	17 03 06.5	-0.2
NASN	Na'in	4.06	7	ePn	Pn	17 03 07.5	+0.6
NASN				Sn	Sn	17 03 52.9	-1.6
NASN	Na'in	4.06	7	ePn	Pn	17 03 07.5	+0.6
IPIR	Pirpir	4.07	344	ePn	Pn	17 03 07.0	0.0
RDF	Al-Radifah	4.08	273	eP		17 03 09.5	
IZEF	Zefreh	4.12	1	ePn	Pn	17 03 08.3	+0.6
KRBR	Kerman	4.16	72	ePn	Pn	17 03 11.1	+2.9
KRBR	Kerman	4.16	72	ePn	Pn	17 03 11.1	+2.9
YZKH	Yazd	4.16	29	ePn	Pn	17 03 09.2	+1.2
YZKH	Yazd	4.16	29	ePn	Pn	17 03 09.2	+1.2
TVBK	TV Kerman	4.16	72	e		17 04 29.5	
	comp=Z,99nm,1.1s						
MIB	Mutribah	4.37	285	eP		17 03 13.8	
IKLH	Kolahrood	4.57	353	ePn	Pn	17 03 14.9	+1.0
ANAR	Anarak	4.60	16	ePn	Pn	17 03 14.7	+0.5
RST	Umm Al-Ruwaisa	4.61	280	eP		17 03 17.4	
CHMN	Cheshme madani	4.79	76	ePn	Pn	17 03 16.7	-0.2
CHMN				e		17 04 24.6	
	comp=Z,99nm,1.0s						
TPRV	Parvadeh(Tabas	5.74	41	ePn	Pn	17 03 30.9	+1.2
IKFM	Kafar-mosalman	6.04	323	ePn	Pn	17 03 35.9	+2.2
IDOB	Doab	6.08	326	ePn	Pn	17 03 36.5	+2.0
IQOM	Qom	6.14	351	ePn	Pn	17 03 34.4	-1.0
HSAM	Samen	6.24	331	ePn	Pn	17 03 38.2	+1.4
TNSJ	Nastanj	6.41	35	ePn	Pn	17 03 39.2	+0.2
TKDS	Koohdasht(Taba	6.41	40	ePn	Pn	17 03 39.7	+0.7
BSRN	Basiran	6.78	60	ePn	Pn	17 03 46.8	+2.7
BSRN	Basiran	6.78	60	ePn	Pn	17 03 46.8	+2.7
IGHG	Ghaleghazi	7.34	321	ePn	Pn	17 03 54.3	+2.4
IDHR	Dehrash	7.72	322	ePn	Pn	17 03 56.9	-0.1
QALM	Alamut, Qazvin	7.76	351	ePn	Pn	17 03 57.1	-0.5
WSAR	Wadi Sarin	7.98	132	Pn	Pn	17 04 00.7	+0.2
	comp=Z,0.6nm,0.3s,baz=335,slow=12,SNR=7.2						
WSAR				Sn	Sn	17 05 30.6	-0.2
	comp=Z,0.6nm,0.3s,baz=77,slow=18,SNR=2.1						
GEYT	Alibeck	10.39	27	Pn	Pn	17 04 34.8	+1.2
	comp=Z,0.4nm,0.3s,baz=216,slow=15,SNR=5.3						
BRTR	Keskin Array B	18.81	310	P	Pn	17 06 25.2	+0.5
	comp=Z,0.2nm,0.3s,baz=128,slow=9.3,SNR=2.4						
AKTO	Aktyubinsk	22.09	10	P	P	17 06 59.8	+0.3
	comp=Z,1.1nm,0.6s,baz=197,slow=14,SNR=2.9						
AAK	Ala-Archa	22.70	46	P	P	17 07 12.3	+5.9
	comp=Z,1.3nm,0.7s,baz=241,slow=8.4,SNR=7.4						
BELG	Belogornoye	23.85	353	P	P	17 07 18.6	+1.0
	comp=Z,7.5nm,0.7s,baz=9.1,slow=2.0,SNR=5.0						
MLR	Muntele Rosu	26.61	316	P	P	17 07 43.9	+0.9
	comp=Z,0.9nm,0.4s,baz=157,slow=13,SNR=1.6						
KURBB	Kurchatov Arra	29.51	35	P	P	17 08 09.2	+0.5
	comp=Z,1.1nm,0.8s,baz=234,slow=9.1,SNR=11						
MKAR	Makanchi Array	29.57	44	P	P	17 08 09.7	+0.4
	comp=Z,0.2nm,0.4s,baz=231,slow=7.2,SNR=3.5						
ZALV	Zalesovo Beam	34.59	34	P	P	17 08 53.2	-0.1
	comp=Z,1.5nm,0.6s,baz=246,slow=9.5,SNR=4.8						
FINES	FINESS Array B	37.00	339	P	P	17 09 13.4	-0.4
	comp=Z,2.2nm,0.6s,baz=144,slow=9.0,SNR=17						
NOA	NORSAR Array B	42.21	332	P	P	17 09 56.5	-0.8
	comp=Z,2.3nm,0.5s,baz=122,slow=8.4,SNR=2.0						
ARCES	ARCESS Array B	43.62	347	P	P	17 10 08.9	+0.4
	comp=Z,5.2nm,1.0s,baz=148,slow=5.3,SNR=3.9						
TORD	Torodi Ar. Bea	49.30	263	P	P	17 10 53.3	-0.6
	comp=Z,0.8nm,0.5s,baz=57,slow=8.5,SNR=3.5						
ILAR	Eielson Array	85.59	8	P	P	17 14 42.5	-0.1
	comp=Z,0.4nm,0.8s,baz=350,slow=4.6,SNR=3.1						
YKA	Yellowknife Ar	88.45	354	P	P	17 14 56.8	+0.3
	comp=Z,0.2nm,0.5s,baz=23,slow=5.1,SNR=4.0						
WRA	Warramunga Arr	92.83	111	P	P	17 15 17.3	-0.4
	comp=Z,0.2nm,0.6s,baz=301,slow=4.4,SNR=1.4						
ASAR	Alice Springs	94.30	115	P	P	17 15 23.4	-1.0
	comp=Z,0.1nm,0.5s,baz=301,slow=4.5,SNR=4.7						

NOU 05 17:32:21.0,15°.32S×167°.70E,h17^{km},MLv4.6,Vanuatu Islands,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	Saraoutou	0.50	255	P	Pb	17 32 31.9	+0.6
DVP	Devils Point	2.44	169	P	Pn	17 32 59.9	-0.1
KOUNC	Koumac, New Ca	6.13	211	P	Pn	17 33 50.8	-0.1
YATNC	Mamie plateau,	6.75	186	P	Pn	17 33 57.6	-1.7
DZM	Mont Dzumac	6.82	190	P	Pn	17 33 59.5	-0.9
NOUC	Port Laguerre	6.87	191	P	Pn	17 34 01.8	+0.7
ONTNC	Ouen Toro	7.05	189	P	Pn	17 34 03.7	+0.2
OUENC	Ouen Island, N	7.11	186	P	Pn	17 34 05.2	+0.9
PINNC	Pines Island,	7.26	182	P	Pn	17 34 06.7	+0.4

IDC ***05*** *17:54:25.1±3.0,38°.14N×142°.02E,h64^{km}±19^{km},mb3.3/4, mb1 3.5/9,mb1mx3.3/53,mbtmp3.7/9,MS3.7/1,Ms1 3.8/1, ms1mx2.5/24,Error ellipse: s-maj=39.7km s-min=13.2km az=121.0*
JMA ***05*** *17:54:25.9,38°.15N×141°.73E,h55^{km}±1^{km},M4.0*
JMA Felt I J1.
NIED ***05*** *17:54:25.9,38°.15N×141°.73E,h55^{km},MW3.8,Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}2.38; $M_{\theta\theta}$0.98; $M_{\phi\phi}$-3.37; $M_{r\theta}$-2.53; $M_{\theta\phi}$1.55; $M_{\phi r}$-3.79; Fault plane solution: $M_0$5.63000×10^{14} NP1: ϕ_s199.00000°,δ76.00000°,λ119.00000°. NP2: ϕ_s312.00000°,δ32.00000°,λ26.00000°.*
ISC 05 17:54:25.6±1.6,**38°.13N**±0°.05×**141°.8E**±0°.1,**h49^{km}**±9^{km},**n35,**σ**1^{s}26**/44,**mb3.7**/7,**Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	Ishinomakikobu	0.33	302	P	Pn	17 54 35.2	+0.3
JIKH				S	Sn	17 54 41.8	+0.2
JIO	Ouri	0.49	311	P	Pn	17 54 36.7	+0.1
JIO				S	Sn	17 54 44.2	-0.4
JKMT	Kesennumamotoy	0.73	338	P	Pn	17 54 39.6	0.0
JKMT				S	Sn	17 54 49.6	-0.3
JMM	Marumori	0.86	252	P	Pn	17 54 40.7	-0.6
JMM				S	Sn	17 54 51.7	-1.1
JOU	Okura	0.94	285	P	Pn	17 54 42.2	-0.3
JOU				S	Sn	17 54 53.9	-1.0
JMK	Ichinoseki	0.94	330	P	Pn	17 54 42.6	+0.1
JMK				S	Sn	17 54 54.7	-0.2
JFK	Kawauchi	1.07	225	P	Pn	17 54 43.9	-0.4
JFK				S	Sn	17 54 57.2	-0.9
JFT	Otama	1.33	243	P	Pn	17 54 47.8	+0.1
JFT				eS	Sn	17 55 04.0	-0.3
JYS	Shirataka	1.39	274	P	Pn	17 54 48.4	-0.1
JYS				S	Sn	17 55 05.4	-0.3
JYK	Kaneyama	1.39	305	P	Pn	17 54 48.3	-0.2
JYK				S	Sn	17 55 05.2	-0.6
JOM	Ohasama	1.40	343	P	Pn	17 54 48.9	+0.2
JOM				S	Sn	17 55 06.2	+0.2
JRG	Rokugo	1.57	324	P	Pn	17 54 51.4	+0.5
JRG				eS	Sn	17 55 11.0	+0.9
JYA	Atsumi	1.72	286	P	Pn	17 54 52.8	-0.2
MJAR	Matsushiro Arr	3.29	242	P	Pn	17 55 15.8	+1.2
	1.0nm,0.3s,baz=79,slow=13,SNR=39						
MJAR				S	Sn	17 55 55.6	+3.2
	0.7nm,0.3s,baz=95,slow=7.5,SNR=5.1						
MJAR				LR	LR	17 57 01.4	
	comp=Z,59nm,20.6s,baz=345,slow=46						
MAT	Matsushiro	3.29	242	P	Pn	17 55 15.8	+1.2
MAT				eS	Sn	17 55 55.5	+3.0
JHJ	Hachijo jima 2	5.27	199	P	Pn	17 55 41.9	+0.1
	17nm,0.3s,baz=70,slow=17,SNR=1.6						
JHJ				S	Sn	17 56 38.3	-2.9
	20nm,0.3s,baz=49,slow=20,SNR=1.7						
ASAJ	Asahikawa	6.00	5	P	Pn	17 55 51.2	-0.6
	1.4nm,0.3s,baz=214,slow=17,SNR=18						
ASAJ				S	Sn	17 56 58.9	-0.3
	0.2nm,0.3s,baz=264,slow=19,SNR=1.7						
USRK	Ussuriysk Ar.	9.57	312	P	Pn	17 56 41.5	+0.9
	baz=120,slow=14,SNR=5.0						
KSRS	Korea Array	11.02	271	P	Pn	17 57 03.0	+2.6
	0.2nm,0.3s,baz=83,slow=14,SNR=2.0						
SONM	Songino Array	27.46	302	P	P	18 00 06.1	-0.9
	0.2nm,0.4s,baz=109,slow=9.2,SNR=2.8						
H11N2	WAKE ISLAND Hy	28.45	123	T	T	18 30 31.9	
	baz=316,slow=75,SNR=241						
H11N1	WAKE ISLAND Hy	28.46	123	T	T	18 30 27.6	
	baz=316,slow=75,SNR=276						
H11N3	WAKE ISLAND Hy	28.47	123	T	T	18 30 33.3	
	baz=316,slow=75,SNR=275						
H11S1	WAKE ISLAND Hy	29.20	125	T	T	18 31 25.0	
	baz=318,slow=76,SNR=60						
H11S3	WAKE ISLAND Hy	29.21	125	T	T	18 31 31.1	
	baz=318,slow=76,SNR=12						
H11S2	WAKE ISLAND Hy	29.22	125	T	T	18 31 26.2	
	baz=318,slow=76,SNR=62						
ZALV	Zalesovo Beam	41.42	311	P	P	18 02 05.7	-1.2
	0.8nm,0.5s,baz=78,slow=7.5,SNR=2.9						
CMAR	Chiang Mai Arr	42.10	254	P	P	18 02 12.2	-0.7
	0.2nm,0.5s,baz=42,slow=7.3,SNR=2.0						
MKAR	Makanchi Array	43.82	301	P	P	18 02 25.6	-0.9
	0.9nm,0.7s,baz=87,slow=10.0,SNR=9.3						
GUN	Gumba	47.38	275	eP	P	18 02 58.8	+3.5
	9.8nm,0.6s						
KKN	Kakani	47.90	275	eP	P	18 02 59.9	+0.7
	3.2nm,0.4s						
PKIN	Phulchoki	47.91	275	eP	P	18 02 58.0	-1.3
GKN	Gorkha	48.31	276	eP	P	18 03 01.6	-0.7
ILAR	Eielson Array	48.39	33	LR	LR	18 25 24.0	
	comp=Z,69nm,18.1s,baz=144,slow=38						
DANN	Dangsing	48.84	277	eP	P	18 03 06.1	-0.4
	8.9nm,0.5s						

IDC ***05*** *17:55:33.5±1.0,33°.24S×178°.38W,h0^{km},mb4.3/5, mb1 4.6/9,mb1mx4.2/35,mbtmp4.4/9,ML4.1/4,MS3.8/5, Ms1 3.8/5,ms1mx3.3/40,Error ellipse: s-maj=34.4km s-min=21.7km az=128.0*
WEL ***05*** *17:55:36.6±1.0,33°S±13°×17°9W±3°1,h135^{km}±31^{km}, M4.7/8,mB4.9/4,MLv4.8/8,Mw(mB)4.1/4,Error ellipse: s-maj=0.0km s-min=0.0km az=111.3*
NEIC ***05*** *17:55:36.4±1.7,33°.07S±0°.08×178°.6W±0°.2,h17^{km}±2^{km}, mb4.6/11,Error ellipse: s-maj=20.4km s-min=10.9km az=108.0*
ISC 05 17:55:38.3±0.6,**33°.12S**±0°.06×**178°.61W**±0°.10,**h32^{km},n70,** σ**2^{s}47**/78,**mb4.5**/10,**MS3.8**/5,**South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	3.90	9	P	Pn	17 56 32.0	-3.9
GLKZ				S	Sn	17 57 14.8	-5.7
RAO	Raoul Island	3.91	9	Pn	Pn	17 56 35.5	-0.5
	49nm,0.3s,baz=164,slow=20,SNR=1.3						
RAO				Sn	Sn	17 57 17.5	-3.3
	85nm,0.3s,baz=259,slow=23,SNR=5.5						
RAO	Raoul Island	3.91	9		Pn	17 56 33.6	-2.4
MXZ	Matakaoa Point	5.09	209	Pn	Pn	17 56 51.8	-0.6
MXZ	Matakaoa Point	5.09	209	S	Sn	17 57 52.3	+2.2
WMGZ	Waiomatatini S	5.28	207	P	Pn	17 56 56.3	+1.4
WMGZ				S	Sn	17 57 54.0	-0.6
PKGZ	Pakihiroa	5.47	209	P	Pn	17 56 56.7	-0.9
PKGZ				S	Sn	17 58 00.1	+0.7
HAZ	Te Kaha	5.48	211	P	Pn	17 56 58.9	+1.2
HAZ				S	Sn	17 58 03.0	+3.5
PUZ	Puketiti	5.56	206	P	Pn	17 56 59.9	+1.2
PUZ				S	Sn	17 58 01.6	+0.1
RUGZ	Raukumara Rang	5.70	211	P	Pn	17 57 00.7	-0.1
TWGZ	Tauwhareparae	5.75	208	P	Pn	17 57 02.9	+1.4
TWGZ				S	Sn	17 58 07.5	+1.1
CNGZ	Carnagh Statio	5.94	205	P	Pn	17 57 02.7	-1.3
MWZ	Matawai	6.07	210	P	Pn	17 57 05.4	-0.5
MWZ				S	Sn	17 58 14.9	+0.7
URZ	Urewera	6.19	213	Pn	Pn	17 57 07.3	-0.1
	5.6nm,0.3s,baz=281,slow=3.9,SNR=24						
URZ				Sn	Sn	17 58 18.1	+1.0
	4.7nm,0.3s,baz=70,slow=21,SNR=14						
URZ	Urewera	6.19	213	Pn	Pn	17 57 05.6	-1.9
URZ	Urewera	6.19	213	P	Pn	17 57 07.8	+0.4
URZ				S	Sn	17 58 17.4	+0.2
OUZ	Omahuta	6.79	250	Pn	Pn	17 57 16.1	+0.4
BKZ	Black Stump Fm	7.21	212	Pn	Pn	17 57 20.5	-1.0
DVHZ	Dannevirke	8.30	209	P	Sn	17 59 05.9	-3.0
POWZ	Post Office Ro	8.54	210	P	Sn	17 59 11.8	-3.1
PRWZ	Pori Road	8.59	209	P	Sn	17 59 11.8	-4.4
BFZ	Birch Farm	8.59	207	P	Sn	17 59 11.7	-4.5
MRZ	Mangatainoka R	8.84	210	P	Pn	17 57 41.8	-2.0
MRZ				P	Sn	17 59 17.8	-4.5
HOWZ	Holdsworth Sta	9.07	209	P	Sn	17 59 21.3	-6.6
TMWZ	Te Maipa	9.10	207	P	Sn	17 59 23.4	-5.2
MTW	Mount Morrison	9.29	209	P	Sn	17 59 27.3	-6.1
CAW	Cannon Point	9.43	211	P	Sn	17 59 29.9	-6.8
PAWZ	Paruwai Farm	9.51	208	P	Sn	17 59 33.1	-5.6
DUWZ	D'Urville Isla	9.71	216	P	Sn	17 59 41.0	-2.7
TCW	Tory Channel	9.86	213	P	Sn	17 59 41.2	-6.1
RPZ	Rata Peaks	13.31	214	Pn	Pn	17 58 44.9	0.0
	0.7nm,0.3s,baz=49,slow=8.9,SNR=3.8						
RPZ				Sn	Sn	18 01 01.2	-11
	0.4nm,0.3s,baz=186,slow=22,SNR=1.9						
RPZ	Rata Peaks	13.31	214		Pn	17 58 44.8	-0.1
DZM	Mont Dzumac	17.20	306	P	P	17 59 39.6	+2.0
	0.2nm,0.3s,baz=116,slow=16,SNR=6.3						
DZM				LR	LR	18 05 25.8	
	comp=Z,423nm,19.8s,baz=124,slow=34						
DZM	Mont Dzumac	17.20	306	ePn	P	17 59 41.9	+4.3
	56nm,1.2s						
DZM				eLR	LR	18 03 49.2	
	comp=Z,295nm,22.9s						
DZM	Mont Dzumac	17.20	306		P	17 59 37.0	-0.7
DZM				IAmb	IAmb	18 00 00.8	
	comp=Z,25nm,1.1s						
PPT2	Papeete2	30.32	66	eLR	LR	18 09 35.6	
	comp=Z,84nm,23.0s						
STKA	Stephens Creek	33.45	261	LR	LR	18 15 34.8	
	comp=Z,262nm,18.0s,baz=44,slow=36						
CTAO	Charters Tower	33.83	284	P	P	18 02 15.5	-2.3
COEN	Coen	39.60	290	P	P	18 03 08.0	+1.0
AS31	Alice Springs	42.52	270	P	P	18 03 32.0	+1.1
ASAR	Alice Springs	42.52	270	P	P	18 03 32.5	+1.5
	comp=Z,8.1nm,0.7s,baz=108,slow=7.3,SNR=111						
ASAR				PcP	PcP	18 05 23.9	+0.6
	comp=Z,1.0nm,0.8s,baz=123,slow=3.4,SNR=2.4						
ASAR				S	S	18 09 51.4	+0.1
	comp=Z,2.0nm,1.0s,baz=118,slow=16,SNR=8.8						
ASAR	Alice Springs	42.52	270	P	P	18 03 31.2	+0.2
WR0	Warramunga Arr	43.58	275	P	P	18 03 40.3	+0.8
WR0				IAmb	IAmb	18 03 41.6	
	comp=Z,7.2nm,0.9s						
WB2	Warramunga Arr	43.75	275	P	P	18 03 41.6	+0.8
WB2				IAmb	IAmb	18 03 42.9	
	comp=Z,9.6nm,0.8s						
WRAB	Tennant Creek	43.75	275	P	P	18 03 41.9	+1.0
WRAB				IAmb	IAmb	18 03 42.9	
	comp=Z,8.2nm,0.8s						
WRA	Warramunga Arr	43.76	275	P	P	18 03 42.1	+1.2
	comp=Z,6.9nm,0.8s,baz=117,slow=7.6,SNR=32						
WRA				S	S	18 10 09.1	-0.4
	comp=Z,0.6nm,1.0s,baz=133,slow=17,SNR=3.1						
WRA	Warramunga Arr	43.76	275	P	P	18 03 41.2	+0.2
WB0	Warramunga Arr	43.79	276	P	P	18 03 42.1	+0.9
WB0				IAmb	IAmb	18 03 43.3	
	comp=Z,9.8nm,0.8s						
QSPA	South Pole Qui	56.99	180	P	P	18 05 22.1	+1.5
SNAA	Sanae	75.45	179	P	P	18 07 12.1	-6.6
SNAA	Sanae	75.45	179	P	P	18 07 19.4	+0.7
SNAA				IAmb	IAmb	18 07 30.5	
	comp=Z,6.3nm,1.0s						
VNA3	Neumayer Olymp	75.63	176	P	P	18 07 20.5	+0.9
VNA2	Neumayer--Watz	76.06	177	P	P	18 07 22.4	+0.4
	baz=184,slow=3.8						
VNA1	Neumayer--Stat	76.29	177	P	P	18 07 23.3	0.0
KSRS	Korea Array	86.09	320	P	P	18 08 17.0	+1.3
	comp=Z,0.8nm,0.7s,baz=123,slow=7.3,SNR=2.2						
KSRS	Korea Array	86.09	320	P	P	18 08 17.0	+1.3
PETK	Petropavlovsk-	88.32	346	P	P	18 08 27.0	+0.9
	comp=Z,1.8nm,0.7s,baz=159,slow=4.5,SNR=4.0						
YBH	Yreka Blue Hor	90.49	38	LR	LR	18 39 49.1	
	comp=Z,27nm,20.0s,baz=226,slow=29						
NVAR	Mina Array Bea	90.58	43	P	P	18 08 38.8	+1.4
	comp=Z,0.2nm,0.3s,baz=224,slow=6.3,SNR=2.2						
TXAR	Lajitas Array	94.29	58	LR	LR	18 45 51.4	
	comp=Z,33nm,18.5s,baz=0.0,slow=32						
CPUP	Villa Florida	98.69	129	LR	LR	18 48 50.1	
	comp=Z,50nm,18.1s,baz=235,slow=32						
MKAR	Makanchi Array	119.10	309	PKP	PKiKP	18 14 23.9	+0.3
	comp=Z,0.2nm,0.6s,baz=92,slow=0.8,SNR=2.6						
KBZ	Khabaz	146.12	300	PKPbc	PKPbc	18 15 15.2	+0.3
	comp=Z,3.1nm,1.0s,baz=130,slow=3.7,SNR=4.5						
FINES	FINESS Array B	147.50	338	PKPbc	PKPbc	18 15 18.3	+0.1
	comp=Z,7.9nm,0.8s,baz=30,slow=3.5,SNR=18						
FINES	FINESS Array B	147.50	338		PKPbc	18 15 18.2	-0.1
NB2	NORSAR Subarra	151.35	350	PKP	PKiKP	18 15 28.2	-0.2
	comp=Z,65nm,2.5s,baz=17,slow=2.6						
NOA	NORSAR Array B	151.35	350	PKPbc	PKiKP	18 15 28.9	+0.5
	comp=Z,0.6nm,0.8s,baz=21,slow=4.8,SNR=6.6						
DBIC	Dimbokro	153.04	166	PKPbc	PKPbc	18 15 32.5	-0.6
	comp=Z,2.1nm,0.7s,baz=214,slow=3.6,SNR=1.9						
AKASG	Malin Array Be	153.08	319	PKPbc	PKiKP	18 15 32.7	+0.4
	comp=Z,0.5nm,0.4s,baz=50,slow=2.6,SNR=1.1						
BRTR	Keskin Array B	153.32	294	PKPbc	PKiKP	18 15 33.9	+0.6
	comp=Z,1.6nm,0.6s,baz=127,slow=3.6,SNR=6.9						

MEX ***05*** *17:56:57.4±1.3,27°.99N×112°.41W,h5^{km},MD4.3*
IDC ***05*** *17:56:59.6±1.4,27°.66N×111°.41W,h0^{km},mb3.7/3, mb1 3.9/9,mb1mx3.7/42,mbtmp3.6/9,ML3.6/6,MS3.8/23, Ms1 3.8/23,ms1mx3.7/35,Error ellipse: s-maj=19.2km s-min=13.4km az=54.0*
ISC 05 17:56:59.1±0.8,**27°.55N**±0°.05×**111°.61W**±0°.04,**h10^{km},n38,** σ**2^{s}61**/23,**mb3.8**/3,**MS3.8**/17,**Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SRIG	Santa Rosalia	0.60	248	eP	Pb	17 57 10.2	-1.6
SRIG				eS	Sb	17 57 18.1	-2.1
HSIG		1.58	22	eP	Pn	17 57 21.9	-5.4
HSIG				i S	Sn	17 57 44.4	-3.4
TSIG	Topolobambo	3.01	129	i P	Pg	17 57 54.5	-2.4
TSIG				eS	Sg	17 58 39.2	+3.3
LPIG	La Paz	3.63	161	Pn	Pn	17 57 56.4	+1.1
	5.8nm,0.3s,baz=353,slow=8.1,SNR=3.8						
LPIG				LR	LR	17 58 35.4	
	comp=Z,257nm,21.5s,baz=282,slow=26						
LPIG				Lg	Lg	17 58 58.3	
	4.4nm,0.3s,baz=234,slow=4.4,SNR=1.3						
CGIG		4.25	48	eP	Pn	17 58 03.7	-0.4
CGIG				i S	Sn	17 58 57.0	+3.2
214A	Organ Pipe Nat	4.52	347	eP	Pn	17 58 03.9	-3.7
214A				i S	Sn	17 58 50.3	-10
SSIG	Sanalona	4.85	123	i P	Pb	17 58 20.2	-4.0
SSIG				eS	Sb	17 59 25.3	+2.7
HPIG		5.33	95	eP	Pb	17 58 31.6	-1.0
HPIG				eS	Sb	17 59 34.6	-2.0
121A	Cookes Peak, D	5.97	33	eP	Pn	17 58 27.8	0.0
121A				eS	Sn	17 59 33.6	-2.8
TXAR	Lajitas Array	7.22	74	Pn	Pn	17 58 44.3	-0.5
	1.0nm,0.3s,baz=252,slow=14,SNR=12						
TXAR				Lg	Lg	18 00 41.1	
	2.9nm,0.3s,baz=45,slow=6.4,SNR=6.3						
TXAR				LR	LR	18 01 40.9	
	comp=Z,2µm,18.3s,baz=0.0,slow=40						
PFO	Pinyon Flats O	7.35	327	Lg	Lg	18 00 54.5	
	0.1nm,0.3s,baz=253,slow=11,SNR=1.3						
PFO				LR	LR	18 01 25.3	
	comp=Z,763nm,19.4s,baz=142,slow=36						
ANMO	Albuquerque	8.60	30	Pn	Pn	17 59 03.3	-0.5
	0.1nm,0.3s,baz=203,slow=13,SNR=1.9						
ANMO				Lg	Lg	18 01 28.0	
	0.4nm,0.3s,baz=177,slow=13,SNR=3.4						
ANMO				LR	LR	18 01 57.7	
	comp=Z,597nm,18.2s,baz=194,slow=36						
NVAR	Mina Array Bea	12.21	334	Pn	Pn	17 59 57.0	+3.6
	0.1nm,0.3s,baz=155,slow=15,SNR=4.9						
NVAR				LR	LR	18 04 18.3	
	comp=Z,204nm,21.2s,baz=106,slow=36						
ELK	Elko	13.50	348	Pn	Pn	18 00 14.5	+3.5
	0.1nm,0.3s,baz=168,slow=11,SNR=3.9						
ELK				Lg	Lg	18 04 03.7	
	0.1nm,0.3s,baz=155,slow=19,SNR=1.3						
PDAR	Pinedale Array	15.28	6	Pn	Pn	18 00 38.1	+2.9
	0.1nm,0.3s,baz=188,slow=13,SNR=3.2						
PDAR				Lg	Lg	18 04 58.5	
	baz=184,slow=20,SNR=1.1						
CMIG	Matias Romero	18.63	120	LR	LR	18 07 38.4	
	comp=Z,340nm,19.5s,baz=272,slow=34						
NEW	Newport	21.12	350	P	P	18 01 45.3	+1.2
	3.6nm,0.8s,baz=175,slow=12,SNR=6.4						
NEW				LR	LR	18 09 54.7	
	comp=Z,210nm,21.1s,baz=170,slow=37						
TKL	Tuckaleechee C	24.99	64	P	P	18 02 23.3	+0.2
	6.0nm,0.8s,baz=255,slow=10,SNR=4.4						
ULM	Lac du Bonnet	25.66	24	LR	LR	18 13 23.5	
	comp=Z,189nm,18.5s,baz=218,slow=39						
BBB	Bella Bella	27.54	338	LR	LR	18 13 33.8	
	comp=Z,213nm,18.5s,baz=268,slow=36						
YKA	Yellowknife Ar	35.00	358	LR	LR	18 18 10.5	
	comp=Z,170nm,19.2s,baz=0.0,slow=36						
ROSC	El Rosal	42.06	116	LR	LR	18 25 06.9	
	comp=Z,101nm,18.3s,baz=259,slow=40						
ILAR	Eielson Array	43.42	339	P	P	18 05 03.6	+1.8
	0.4nm,1.0s,baz=148,slow=7.6,SNR=4.1						
SFJD	Kangerlussuaq	53.69	25	LR	LR	18 29 35.9	
	comp=Z,242nm,18.5s,baz=255,slow=37						
PTGA	Pitinga	56.97	111	LR	LR	18 33 18.8	
	comp=Z,52nm,19.3s,baz=23,slow=38						
PPT	Papeete	58.01	224	LR	LR	18 25 30.5	
	comp=Z,98nm,18.4s,baz=7.0,slow=29						
H03N2	Juan Fernandez	68.12	151	T	T	19 22 18.1	
	baz=331,slow=77,SNR=5.2						
H03N1	Juan Fernandez	68.14	151	T	T	19 22 23.1	
	baz=331,slow=77,SNR=6.4						
H03N3	Juan Fernandez	68.14	151	T	T	19 22 19.7	
	baz=331,slow=77,SNR=6.9						
JMIC	Jan Mayen	68.37	20	LR	LR	18 39 12.1	
	comp=Z,99nm,18.6s,baz=264,slow=37						
BDFB	Brasilia	75.10	117	LR	LR	18 44 18.2	
	comp=Z,48nm,19.2s,baz=84,slow=38						
FINES	FINESS Array B	84.96	19	LR	LR	18 46 30.9	
	comp=Z,96nm,20.6s,baz=319,slow=35						
ESDC	Sonseca Array	85.14	48	LR	LR	18 45 16.6	
	comp=Z,38nm,19.3s,baz=285,slow=34						
MJAR	Matsushiro Arr	88.51	311	LR	LR	18 43 33.6	
	comp=Z,35nm,20.8s,baz=195,slow=32						
GERES	GERESS Array B	89.64	33	LR	LR	18 50 14.0	
	comp=Z,94nm,18.2s,baz=303,slow=36						
AKASG	Malin Array Be	94.75	24	LR	LR	18 53 41.6	
	comp=Z,46nm,20.6s,baz=330,slow=36						
KEST	Kesra	95.98	45	LR	LR	18 51 51.7	
	comp=Z,61nm,20.3s,baz=298,slow=34						
ZALV	Zalesovo Beam	97.61	350	LR	LR	19 00 43.1	
	comp=Z,30nm,18.2s,baz=359,slow=39						

UPP ***05*** *18:03:26.9±0.1,67°.07N×20°.95E,h0^{km},ML2.2,Explosion*
IDC ***05*** *18:03:27.3±1.1,67°.00N×21°.08E,h0^{km},mb1 3.2/3, mb1mx3.0/36,mbtmp3.1/3,ML1.8/3,Error ellipse: s-maj=21.4km s-min=9.6km az=105.0*
HEL ***05*** *18:03:27.7±0.1,67°.06N×20°.94E,h0^{km},ML2.1, ML2.2(UPP),Explosion*
ISC 05 18:03:26.8±0.8,**67°.05N**±0°.02×**20°.93E**±0°.03,**h0^{km},n36,** σ**1^{s}12**/49,**Sweden**

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Code   Station Name        Δ°    AZ°    Phase ID       Time        Res
                                        Op      ISC    h  m  s     ISC
ERTU   Ertsjaerv           0.70 134    eP      Pg     18 03 40.0  -0.2
ERTU                                   eS      Sg     18 03 46.6  -2.7
PAJU   Pajala              0.86  91     P      Pg     18 03 42.8  -0.3
PAJU   Pajala              0.86  91    eP      Pg     18 03 42.6  -0.6
PAJU                                   eSB     Sb     18 03 55.8  -0.6
HARU   Harads              0.89 179     P      Pg     18 03 43.8   0.0
HARU   Harads              0.89 179    eP      Pg     18 03 43.8   0.0
RATU   Laukkuluspa         0.94 327     P      Pg     18 03 44.1  -0.5
RATU   Laukkuluspa         0.94 327    eP      Pg     18 03 44.1  -0.5
KUA    Kurravaara          0.94 346     P      Pg     18 03 44.3  -0.4
KUA                                     S      Sb     18 03 57.5  -1.4
KUA    Kurravaara          0.94 346    eP      Pg     18 03 44.3  -0.4
KUA                                    eS      Sb     18 03 57.5  -1.4
SALU   Saltoluokta         1.00 291     P      Pg     18 03 45.6  -0.3
SALU   Saltoluokta         1.00 291    eP      Pg     18 03 45.6  -0.3
LANU   Lannavaara          1.08  21     P      Pg     18 03 46.4  -1.1
LANU                                    S      Sg     18 04 01.5  -0.1
LANU   Lannavaara          1.08  21    eP      Pg     18 03 46.4  -1.1
LANU                                   eSN     Sn     18 04 06.9  +1.9
NIKU   Nikkaluokta         1.10 319     P      Pg     18 03 47.2  -0.6
NIKU   Nikkaluokta         1.10 319    eP      Pg     18 03 47.2  -0.6
KOVU   Salmi               1.22 346     P      Pg     18 03 49.5  -0.5
KOVU   Salmi               1.22 346    eP      Pg     18 03 49.5  -0.5
SJUU   Sjulsmark           1.57 170     P      Pn     18 03 56.0  +0.1
SJUU   Sjulsmark           1.57 170    eP      Pn     18 03 56.0  +0.1
TOF    Tornio              1.67 124    eP      Pn     18 03 57.5  +0.3
TOF                                     MSG           18 04 17.4
       comp=Z,27nm,0.2s
TOF                                    eSN     Sg     18 04 21.1  +0.8
KIF    Kilpisjarvi         1.97 359    eP      Pg     18 04 04.2  -0.1
KIF    Kilpisjarvi         1.97 359    ePB     Pb     18 04 02.7  -0.6
KIF                                     MSG           18 04 26.9
       comp=Z,18nm,0.2s
KIF                                    eSG     Sg     18 04 30.3  +0.5
RNF    Rovaniemi           2.06 100    ePB     Pn     18 04 03.6  +1.0
RNF                                    eSG     Sb     18 04 32.3  +1.3
SGF    Sodankyl            2.21  77    eP      Pn     18 04 05.8  +1.2
       baz=259
SGF                                    eSG     Sb     18 04 36.1  +0.7
BURU   Burvik              2.48 176     P      Pn     18 04 09.8  +1.5
BURU   Burvik              2.48 176    eP      Pn     18 04 09.8  +1.5
       baz=353
OUL    Oulu                2.83 132    ePB     Pb     18 04 15.9  -2.1
ARA0   ARCESS Array S      3.02  32    eP      Pn     18 04 17.4  +1.7
ARCES  ARCESS Array B      3.02  32     Pn     Pn     18 04 16.4  +0.7
       baz=220,slow=14,SNR=18
ARCES                                   Sn     Sn     18 04 54.7  +2.1
       baz=213,slow=23,SNR=12
OUF    Merijarvi           3.12 148    eP      Pn     18 04 18.5  +1.4
OUF                                     MSG           18 04 58.0
       comp=Z,2.1nm,0.2s
MSF    Maaselka            3.45 106    eP      Pn     18 04 22.7  +1.1
KU6    Riekki              3.73 102    eP      Pn     18 04 26.8  +1.3
HUSU   Husum               3.79 192    eP      Pn     18 04 28.0  +1.7
HUSU                                   eS      Sn     18 05 13.5  +2.0
VAF    Ylistaro            4.09 169    eP      Pn     18 04 31.9  +1.5
       baz=353
FINES  FINESS Array B      6.06 156     Pn     Pn     18 04 56.7  -0.7
       comp=Z,0.1nm,0.3s,baz=346,slow=13,SNR=11
FINES                                   Sn     Sn     18 06 07.3  -0.1
       comp=Z,0.2nm,0.3s,baz=342,slow=24,SNR=1.5
NOA    NORSAR Array B      7.38 220     Pn     Pn     18 05 15.1  -0.5
       comp=Z,0.0nm,0.3s,baz=30,slow=13,SNR=5.2
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*BJI **05** 18:19:21.7±0.0, 8.°11S×128.°86E, h149^{km}, mB5.0/44, mb5.1/69*

*GCMT **05** 18:19:27.8±0.3, 7.°51S±0.°02×128.°39E±0.°03, h136^{km}±4^{km}, MW4.8/66, Moment Tensor Solution. s19,c22; s66,c89; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.50±.09; $M_{\theta\theta}$-1.66±.10; $M_{\phi\phi}$0.16±.11; $M_{r\theta}$0.53±.07; $M_{\theta\phi}$1.13±.11; $M_{\phi r}$0.86±.08; Best double couple: $M_0$2.19500×10^{16} NP1:ϕ_s325.00000°,δ53.00000°,λ135.00000°. NP2: ϕ_s86.00000°,δ56.00000°,λ47.00000°. Principal axes: T 2.1870, Plg56.0000°, Azm298.0000°; N 0.0190, Plg34.0000°, Azm114.0000°; P -2.2040, Plg2.0000°, Azm205.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **05** 18:19:27.8±1.5, 7.°52S±0.°07×128.°37E±0.°07, h139^{km}±4^{km}, mb5.0/73 Error ellipse: s-maj=10.4km s-min=9.6km az=188.0*

*IDC **05** 18:19:28.1±1.5, 7.°44S×128.°29E, h132^{km}±12^{km}, mb4.6/19, mb1 4.6/23, mb1mx4.5/28, mbtmp5.0/23, MS3.3/9, Ms1 3.3/9, ms1mx3.1/32, Error ellipse: s-maj=10.4km s-min=8.6km az=74.0*

*DJA **05** 18:19:28.0±0.1, 8°S±1°×12°8E±°, h134^{km}±2^{km}, M4.7/68, mb5.1/68, mB5.2/40, MLv5.3/16, Mw(mB)4.6/40, MwMwp5.8/3, Mwp5.9/3*

*KLM **05** 18:19:29, 7.°69S×128.°60E, h171^{km}, mb5.1*

ISC 05 18:19:28.9±0.2**, 7.°64S**±0.°03×**128.°42E**±0.°04**, h151**^{km}**, n336,** σ**1.°76**/354**, mb5.0**/92**, 3C-7D, Banda Sea**

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Code   Station Name        Δ°    AZ°    Phase ID       Time        Res
                                        Op      ISC    h  m  s     ISC
SAUI   Saumlaki            2.87  97    Pn      Pn     18 20 13.3  -1.4
SAUI   Saumlaki            2.87  97    P       Pn     18 20 13.4  -1.4
SAUI                                   S       Sn     18 20 48.5  -1.7
BNDI   Bandanaira          3.43  26    P       Pn     18 20 20.0  -1.8
BNDI                                   S       Sn     18 21 01.9  -1.0
MSAI   Masohi              4.29   7    P       Pn     18 20 32.0  -1.1
NLAI   Namlea              4.56 343    P       Pn     18 20 37.1  +0.5
SOEI   Soe                 4.61 243    Pn      Pn     18 20 36.2  -1.3
SOEI   Soe                 4.61 243    P       Pn     18 20 36.6  -0.8
SOEI                                   S       Sn     18 21 28.6  -2.1
BATI   Baumata             5.35 241    P       Pn     18 20 46.2  -0.9
       313nm,0.3s,baz=135,slow=3.9,SNR=449
BATI                                   S       Sn     18 21 45.1  -2.9
       408nm,0.3s,baz=334,slow=23,SNR=17
BATI   Baumata             5.35 241    P       Pn     18 20 46.1  -1.0
       4.9nm12μm2μm,0.8s
BATI                                   S       Sn     18 21 46.1  -2.0
       4.9nm12μm2μm,0.8s
MTN    Manton Dam          5.82 153    P       Pn     18 20 51.2  -2.1
       baz=6.0,SNR=348
MTN    Manton Dam          5.82 153    Pn      Pn     18 20 51.3  -2.1
FAKI   Fak Fak             6.04  39    Pn      Pn     18 20 53.0  -3.3
FAKI   Fak Fak             6.04  39    P       Pn     18 20 53.2  -3.1
       1.4nm3μm263nm,0.7s
SANI   Sanana              6.06 336    P       Pn     18 20 57.0  +0.5
       0.5nm1μm142nm,1.0s
MMRI   Maumere             6.20 260    Pn      Pn     18 20 56.2  -2.1
MMRI   Maumere             6.20 260    P       Pn     18 20 56.7  -1.7
       1.6nm3μm221nm,0.8s
KDU    Kakadu              6.41 142    P       Pn     18 20 59.4  -1.7
       baz=6.6,SNR=851
EDFI   Ende, Flores        6.75 260    P       Pn     18 21 05.0  -0.8
       0.5nm1μm46nm,0.8s
KDI    Kendari             6.83 302    P       Pn     18 21 07.6  +0.8
       0.3nm2μm75nm,0.9s
SIJI   Sorong              7.30  23    P       Pn     18 21 10.7  -2.3
       0.7nm,0.3s,baz=304,slow=15,SNR=9.4
SIJI                                   S       Sn     18 22 31.8  -3.0
       6.3nm,0.3s,baz=217,slow=20,SNR=2.0
SIJI                                   LR      LR     18 23 25.8
       comp=Z,222nm,22.0s,baz=184,slow=33
SWI    Sorong              7.30  23    P       Pn     18 21 10.4  -2.7
       1.1nm3μm312nm,0.8s
KNRA   Kununurra           8.00 178    P       Pn     18 21 21.1  -1.3
       baz=8.2,SNR=8.6
KNRA   Kununurra           8.00 178            Pn     18 21 20.7  -1.6
BASI   Baing, Sumba        8.16 251    P       Pn     18 21 22.1  -2.5
       3μm213nm,0.6s
WSI    Waingapu            8.28 255    P       Pn     18 21 23.8  -2.3
       13μm624nm,0.5s
TNTI   Ternate             8.42 353    Pn      Pn     18 21 27.8  -0.2
TNTI   Ternate             8.42 353    P       Pn     18 21 28.4  +0.4
       71nm,1.1s
BKSI   Bulukumba           8.56 285    P       Pn     18 21 29.1  -0.8
       574nm56nm,0.8s
LUWI   Luwuk               8.64 319    Pn      Pn     18 21 28.3  -2.6
LUWI   Luwuk               8.64 319    P       Pn     18 21 31.9  +1.0
       2μm160nm,0.9s
BNSI   Bone                8.87 291    P       Pn     18 21 33.9  -0.1
       742nm79nm,1.0s
KAPI   Kappang             9.00 286    P       Pn     18 21 36.3  +0.5
       2.6nm,0.3s,baz=119,slow=7.4,SNR=9.6
KMSI   Cibinong            9.28 331    P       Pn     18 21 40.7  +1.2
       1μm108nm,0.7s
SPSI   Sidrap Palu         9.35 292    P       Pn     18 21 40.1  -0.3
       427nm41nm,0.7s
APSI   Ampana              9.50 314    P       Pn     18 21 43.2  +0.9
       586nm64nm,1.0s
SRPI   Serui, Papua        9.67  54    P       Pn     18 21 44.1  -0.5
       78nm,0.6s
TTSI   Tana Toraja         9.70 298    P       Pn     18 21 48.0  +2.9
       547nm54nm,0.9s
BAKI   Biak                9.98  50    P       Pn     18 21 47.3  -1.5
       319nm,0.9s
MRSI   Marisa             10.33 321    P       Pn     18 21 55.8  +2.4
       592nm48nm,0.6s
PLAI   Plampang           10.60 263    P       Pn     18 21 53.6  -3.4
       1μm90nm,0.6s
FITZ   Fitzroy Crossi     10.74 194    P       Pn     18 21 54.8  -4.0
       baz=11,SNR=206
FITZ                                   S       Sn     18 23 50.9  -6.8
       baz=11
FITZ   Fitzroy Crossi     10.74 194    P       Pn     18 21 54.8  -4.0
       31nm,0.3s,baz=23,slow=10,SNR=342
FITZ                                   S       Sn     18 23 49.7  -8.0
       26nm,0.3s,baz=99,slow=13,SNR=7.8
FITZ                                   LR      LR     18 27 17.8
       comp=Z,354nm,18.6s,baz=17,slow=43
FITZ   Fitzroy Crossi     10.74 194    Pn      Pn     18 21 55.1  -3.7
TWSI   Taliwang, Sumb     11.47 264    P       Pn     18 22 04.3  -4.1
       471nm23nm,0.5s
TOLI2  Tolitoli           11.56 318    Pn      Pn     18 22 10.1  +0.6
MPSI   Mapaga             11.62 313    P       Pn     18 22 11.1  +0.8
       737nm15nm,0.9s
KBKI   Kotabaru           12.93 289    P       P      18 22 29.7  -2.5
       45nm,0.7s
BKB    Balikpapan         13.12 298    P       P      18 22 38.7  +4.4
JAY    Jayapura           13.25  68    P       Pn     18 22 30.6  -0.9
       3.0nm,0.3s,baz=216,slow=15,SNR=5.9
JAY                                    S       Sn     18 24 56.3  -1.9
       0.8nm,0.3s,baz=102,slow=20,SNR=2.6
WB0    Warramunga Arr     13.38 155            Pn     18 22 28.9  -4.1
WRAB   Tennant Creek      13.51 155            Pn     18 22 30.7  -4.0
WRA    Warramunga Arr     13.51 155    P       Pn     18 22 31.4  -3.3
       23nm,0.3s,baz=330,slow=13,SNR=284
WRA                                    S       Sn     18 24 53.6   -11
       39nm,0.3s,baz=332,slow=24,SNR=19
WRA                                    LR      LR     18 28 57.6
       comp=Z,188nm,18.1s,baz=320,slow=41
WRA    Warramunga Arr     13.51 155            Pn     18 22 29.7  -5.0
WB2    Warramunga Arr     13.52 155    Pn      Pn     18 22 31.0  -3.8
WR0    Warramunga Arr     13.61 155    Pn      Pn     18 22 31.9  -4.0
DDMP   Don Marcelino,     13.91 349    eP      P      18 22 42.6  -0.6
BBKI   Banjar Baru        14.13 286    P       P      18 22 44.9  -0.7
       176nm,0.8s
JAGI   Jajag, Banyuwa     14.15 266    P       Pn     18 22 37.1  -5.8
JAGI   Jajag, Banyuwa     14.15 266    P       Pn     18 22 36.8  -6.1
SKMP   Bagumbayan, Su     14.59 345    eP      P      18 22 50.6   0.0
MATI   Mati               14.65 351    eP      P      18 22 51.0  -0.3
DAV    Davao City (W)     14.88 349    P       P      18 22 55.3  +1.5
       baz=0.0,slow=2.0,SNR=1.0
DAV                                    S       S      18 25 43.6  -0.4
       81nm,0.3s,baz=282,slow=12,SNR=2.7
KCP    Kidapawan          14.92 347⇓iP     P      18 22 55.9  +1.5
KCP    Kidapawan          14.92 347⇑eP     S      18 25 48.7  +3.8
MTKI   Muara Teweh, K     15.03 296    P       P      18 22 57.2  +1.6
       1μm146nm,0.7s
BUKP   Musuan             15.77 348    eP      P      18 23 04.8  +1.0
COEN   Coen               15.79 115    P       Pn     18 23 01.6  -1.6
       baz=16
COEN   Coen               15.79 115    P       Pn     18 23 02.1  -1.1
MYLDM  Lahad Datu         16.13 322    P       Pn     18 23 00.5  -6.8
MYLDM                                  IAmb    IAmb   18 23 29.7
       comp=Z,94nm,1.0s
PSA00  Pilbara Seismi     16.14 210            Pn     18 23 05.1  -2.3
PSA00  Pilbara Seismi     16.14 210    P       Pn     18 23 02.9  -4.5
PSA00                                  IAmb    IAmb   18 23 12.2
       comp=Z,50nm,0.8s
PAGZ   Pagadian           16.18 342    eP      P      18 23 09.4  +1.1
CGP    Cagayan de Oro     16.41 347⇓eP     P      18 23 13.3  +2.5
BUTP   Butuan             16.73 350    eP      Pn     18 23 16.2  +1.6
AS31   Alice Springs      16.78 162    P       P      18 23 13.3  -1.6
AS31                                   IAmb    IAmb   18 23 20.7
       comp=Z,31nm,0.7s
ASAR   Alice Springs      16.79 162    P       P      18 23 14.1  -0.8
       comp=Z,8.5nm,0.3s,baz=333,slow=9.6,SNR=232
ASAR                                   S       S      18 26 11.3   -11
       comp=Z,4.8nm,0.3s,baz=322,slow=14,SNR=4.1
ASAR   Alice Springs      16.79 162    P       Pn     18 23 15.9  +0.6
QIS    Mount Isa          16.80 141    P       P      18 23 14.6  -0.4
       baz=17,SNR=32
SPMM   Sapulut            17.11 315    P       Pn     18 23 22.0  +2.8
GLSP   General Luna,      17.46 352    eP      P      18 23 21.7  -0.6
MSLP   Maasin             18.01 349    eP      Pn     18 23 29.9   0.0
KKM    Kota Kinabalu      18.25 318            P      18 23 28.1  -3.0
KKM                                    IAmb    IAmb   18 23 40.9
       comp=Z,99nm,1.1s
CNOP   Candoni, Negro     18.28 342    eP      P      18 23 31.5  +0.2
PMG    Port Moresby       18.61  97    P       Pn     18 23 39.1  +2.1
       comp=Z,1.7nm,0.3s,baz=303,slow=6.0,SNR=8.4
PMG                                    S       S      18 26 53.5  -5.8
       comp=Z,1.4nm,0.3s,baz=176,slow=23,SNR=6.4
PMG    Port Moresby       18.61  97            P      18 23 35.9  +0.9
PMG    Port Moresby       18.61  97    P       Pn     18 23 41.6  +4.5
MTSU   Mount Surprise     18.66 126    P       Pn     18 23 37.7  +0.1
       baz=19,SNR=11
SBUM   Sibu               19.02 301    Pn      P      18 23 39.8  +0.4
SBUM                                   IAmb    IAmb   18 23 45.2
       comp=Z,97nm,0.9s
BESP   Borongan           19.34 351    eP      P      18 23 43.7  +0.9
BATP   Bataraza           19.46 327    eP      Pn     18 23 45.9  -1.0
CUYO   Cuyo Island        19.79 338    eP      P      18 23 48.0  +0.3
KSM    Kuching            20.21 296    P       P      18 23 49.5  -2.7
GIRL   Giralia            20.22 221    P       Pn     18 23 55.0  -0.9
       baz=20,SNR=6.2
CISI   Cisompet, Garu     20.43 269    P       P      18 23 54.2  -0.4
       comp=Z,1μmcomp=Z,91nm,0.7s
LEM    Lembang            20.65 271    P       P      18 23 55.7  -1.5
       comp=Z,45nm,0.7s,baz=82,slow=1.1,SNR=8.7
LEM                                    S       S      18 27 40.5  +0.5
       comp=Z,13nm,0.8s,baz=188,slow=17,SNR=2.1
LEM                                    LR      LR     18 34 01.1
       comp=Z,56nm,19.1s,baz=160,slow=42
LEM    Lembang            20.65 271    P       P      18 23 55.9  -1.3
       comp=Z,37nm,0.9s
ENPP   El Nido            20.75 334    eP      P      18 23 55.9  -2.0
MEEK   Meekatharra        21.07 205    P       P      18 24 02.5  +1.1
       baz=21,SNR=48
BUSP   Coron              21.16 337    eP      P      18 24 02.2  -0.1
TPI    Tanjungpandan      21.24 282    P       P      18 24 02.8  -0.5
       comp=Z,44nm,0.7s
CBJI   Citeko             21.44 272    P       P      18 24 01.7  -3.8
       comp=Z,102nm,1.0s
PVCP   Virac              21.52 349    eP      P      18 24 05.6  -0.6
BOAC   Boac               21.95 343    eP      P      18 24 10.4  -0.3
JCNP   Jose Panganiba     22.51 345    eP      P      18 24 14.6  -1.6
LQP    Lukban             22.66 342⇓eP     P      18 24 17.0  -0.8
LUBP   Lubang             22.73 339    eP      P      18 24 16.6  -1.7
TGY    Tagaytay City      22.84 341    P       P      18 24 18.9  -0.4
       comp=Z,529nm,0.8s,baz=163,slow=6.5,SNR=10
PPBI   Pangkal Pinang     22.85 283    P       P      18 24 20.7  +1.2
FORT   Forrest            23.03 181    P       P      18 24 23.2  +2.4
       baz=23,SNR=27
FORT   Forrest            23.03 181    P       P      18 24 21.9  +1.0
QVP    Quezon City--P     23.31 342    eP      P      18 24 24.5  +1.0
KLSI                      23.73 276    P       P      18 24 33.4  +5.9
QLP    Quilpie            24.10 143    P       P      18 24 32.7  +1.9
       baz=24,SNR=23
BALP   Baler              24.20 344    eP      P      18 24 30.3  -1.3
MORW   Morawa             24.30 207    P       P      18 24 34.2  +1.6
       baz=24,SNR=14
MORW   Morawa             24.30 207    P       P      18 24 34.1  +1.6
MORW                                   IAmb    IAmb   18 25 01.7
       comp=Z,32nm,0.8s
KMBL   Kambalda           24.39 194    P       P      18 24 35.4  +2.2
       baz=25,SNR=12
LHSI   Lahat              25.05 277    P       P      18 24 42.7  +3.2
       comp=Z,35nm,0.7s
CAUP   Cauayan            25.28 345    eP      P      18 24 40.3  -1.1
BLDU   Ballidu            25.36 204    P       P      18 24 43.6  +1.5
       baz=26,SNR=13
KLBR   Kellerberrin       25.83 201    P       P      18 24 48.5  +2.2
       baz=26,SNR=5.7
BBOO   Buckleboo          26.03 165    P       P      18 24 50.4  +2.3
       baz=26,SNR=46
BBOO   Buckleboo          26.03 165    P       P      18 24 49.8  +1.7
MYKOM  Kota Tinggi        26.24 290    P       P      18 24 50.0  -0.2
MYKOM                                  IAmb    IAmb   18 24 54.5
       comp=Z,58nm,1.2s
MYKOM  Kota Tinggi        26.24 290    P       P      18 24 50.0  -0.2
APYP   Conner             26.31 344    eP      P      18 24 48.8  -1.9
MUN    Mundaring          26.76 204    P       P      18 24 56.2  +1.6
       baz=27,SNR=5.5
STKA   Stephens Creek     27.06 155    P       P      18 24 59.5  +2.1
       baz=27,SNR=20
STKA   Stephens Creek     27.06 155    P       P      18 24 59.5  +2.1
       comp=Z,6.0nm,0.5s,baz=324,slow=10,SNR=42
STKA                                   S       S      18 30 06.0   +42
       comp=Z,15nm,1.1s,baz=66,slow=23,SNR=2.3
NWAO   Narrogin (SRO)     27.22 201    P       P      18 25 00.8  +2.0
       baz=27,SNR=19
NWAO   Narrogin (SRO)     27.22 201    P       P      18 25 00.2  +1.4
       comp=Z,17nm,0.6s,baz=47,slow=7.9,SNR=27
NWAO                                   S       S      18 30 10.4   +44
       comp=Z,8.0nm,0.7s,baz=340,slow=14,SNR=1.9
NWAO   Narrogin (SRO)     27.22 201    P       P      18 24 59.5  +0.7
HTT    Hallett            27.45 161    P       P      18 25 03.2  +2.4
       baz=28,SNR=26
CMSA   Cobar Meteorol     28.73 148    P       P      18 25 14.5  +2.3
       baz=29,SNR=30
IPM    Ipoh               29.87 293    P       P      18 25 22.3  -0.2
MNSI   Mandailing Nat     29.96 285    P       P      18 25 21.8  -1.5
       comp=Z,46nm,0.6s
KULM   Kulim              30.54 294    P       P      18 25 27.7  -0.7
KULM                                   IAmb    IAmb   18 25 28.9
       comp=Z,26nm,0.7s
RPSI   Rantau Prapat      31.17 288    P       P      18 25 33.2  -0.7
PSI    Prapat             31.20 288    P       P      18 25 33.2  -1.2
       comp=Z,53nm,0.7s,baz=179,slow=5.1,SNR=48
HNR    Honiara            31.22  96    LR      LR     18 37 50.5
       comp=Z,101nm,19.3s,baz=198,slow=35
ARPS   Mount Arapiles     31.47 159    P       P      18 25 39.3  +3.0
       baz=32,SNR=67
TPUB   Ta-pu              31.68 346    P       P      18 25 36.2  -2.1
YNG    Young              32.30 148    P       P      18 25 45.9  +2.3
       baz=32,SNR=12
TRTT   Trang              32.51 298    P       P      18 25 45.0  -0.6
       comp=Z,67nm,1.1s
CAN    Canberra           33.40 149    P       P      18 25 55.2  +2.0
CAN                                    IAmb    IAmb   18 25 57.9
       comp=Z,12nm,0.6s
TOO    Toolangi           33.58 155    P       P      18 25 58.1  +3.3
       baz=34,SNR=17
SRAK   Srakaew            33.88 309    P       P      18 25 54.0  -3.5
       comp=Z,195nm,0.9s
LHMI   Lhok Sumawe        33.90 291    P       P      18 25 56.7  -1.1
PATY   Pattaya            34.16 307    P       P      18 26 00.7  +0.8
       comp=Z,3μmcomp=Z,45nm,1.0s
CHAI   Chaiyaphum         35.10 312    P       P      18 26 08.7  +0.6
       comp=Z,37nm,1.0s
PHET   Kaeng Krachan      35.14 305    P       P      18 26 09.3  +0.9
NONG   Nongkai            35.70 316    P       P      18 26 13.0  -0.2
       comp=Z,52nm,1.0s
SRDT   SRDT               36.36 307    P       P      18 26 19.2  +0.4
       comp=Z,23nm,0.9s
LOEI   Loei               36.66 313    P       P      18 26 20.9  -0.5
       comp=Z,23nm,1.1s
UTHA   Uthaitani          36.81 309    P       P      18 26 23.2  +0.6
       comp=Z,354nmcomp=Z,35nm,0.8s
PHIT   Phitsanulok        37.08 312    P       P      18 26 26.1  +1.3
       comp=Z,728nmcomp=Z,87nm,0.8s
UTTA   Uttaradit          37.33 313    P       P      18 26 27.7  +0.7
       comp=Z,458nmcomp=Z,44nm,0.7s
SLVN   Son La             37.53 321    P       P      18 26 27.8  -0.9
SLVN                                   IAmb    IAmb   18 26 30.3
       comp=Z,42nm,1.1s
SUKH   Sukhothai          37.84 311    P       P      18 26 32.6  +1.4
       comp=Z,37nm,0.9s
LAMP   Lampang            38.50 313    P       P      18 26 37.9  +1.1
       comp=Z,478nmcomp=Z,40nm,0.7s
CM31   Chiang Mai Arr     38.96 312    P       P      18 26 40.6  -0.1
CM31                                   IAmb    IAmb   18 26 42.7
       comp=Z,16nm,0.8s
CMAR   Chiang Mai Arr     38.96 312    P       P      18 26 40.5  -0.1
       comp=Z,9.8nm,0.9s,baz=143,slow=7.1,SNR=61
CMAR                                   PcP     PcP    18 28 49.7  +1.5
       comp=Z,2.2nm,0.6s,baz=172,slow=2.5,SNR=8.5
CMAR   Chiang Mai Arr     38.96 312    P       P      18 26 39.8  -0.9
CMAR                                           PcP    18 28 49.2  +1.0
SSE    Sheshan            39.13 350    P       P      18 26 40.9  -0.9
SSE                                    IAmb    IAmb   18 26 42.1
       comp=Z,32nm,0.8s
CMMT   Chiang Mai         39.18 312    P       P      18 26 41.0  -1.5
       comp=Z,17nm,0.9s
CHTO   Chiang Mai         39.19 312    P       P      18 26 42.0  -0.5
CHTO                                   IAmb    IAmb   18 26 44.9
       comp=Z,23nm,0.8s
MHMT   Maesarieng         39.54 311    P       P      18 26 49.0  +3.6
GYA    Guiyang            39.93 329   ⇓P       P      18 26 48.9  +0.2
GYA                                    pmax    pmax
       comp=Z,35nm,0.9s
WHN    Wuhan              40.29 341⇑iP     P      18 26 51.6  +0.2
WHN                                    pmax    pmax
       comp=Z,150nm,1.0s
NJ2    Nanjing            40.51 347⇓iP     P      18 26 53.3  +0.1
NJ2                                    pmax    pmax
       comp=Z,46nm,0.7s
KMI    Kunming            41.06 323   ⇑P       P      18 26 58.9  +0.8
KMI                                    pP      pP     18 27 30.4  +0.5
KMI                                    sP      sP     18 27 44.8  -1.5
KMI                                    pmax    pmax
       comp=Z,29nm,1.3s
KMI                                    pmax    pmax
       comp=Z,91nm,4.2s
KMI    Kunming            41.06 323    P       P      18 26 57.4  -0.7
KMI                                    IAmb    IAmb   18 27 00.1
       comp=Z,60nm,1.4s
ENH    Enshi              41.85 335    P       P      18 27 03.5  -0.7
ENH                                    IAmb    IAmb   18 27 04.4
       comp=Z,28nm,0.7s
KSRS   Korea Array        44.86 359    P       P      18 27 28.2  +0.1
       comp=Z,7.5nm,0.7s,baz=180,slow=9.2,SNR=28
KSRS                                   LR      LR     18 48 17.8
       comp=Z,14nm,18.6s,baz=175,slow=39
TIA    Tai'an             44.89 347    P       P      18 27 27.3  -1.2
TIA                                    pmax    pmax
       comp=Z,30nm,1.0s
MAJO   Matsushiro         44.90  11    P       P      18 27 26.8  -1.7
MAT    Matsushiro         44.90  11    P       P      18 27 26.5  -2.0
MJAR   Matsushiro Arr     44.90  11    P       P      18 27 26.3  -2.2
       comp=Z,8.1nm,0.8s,baz=192,slow=9.5,SNR=14
KS19   Wonju Array Si     44.91 359    P       P      18 27 27.8  -0.8
KS19                                   IAmb    IAmb   18 27 29.1
       comp=Z,54nm,1.4s
CD2    Chengdu            45.03 330    eP      P      18 27 30.0  +0.3
XAN    Xi'an              45.38 337    P       P      18 27 31.3  -1.2
XAN                                    pmax    pmax
       comp=Z,64nm,0.8s
SHL    Shillong           48.49 314    P       P      18 27 55.6  -1.3
BJT    Baijiatuau         48.75 347    P       P      18 27 57.6  -0.8
BJI    Beijing            48.77 347    P       P      18 27 57.7  -0.8
BJI                                    PcP     PcP    18 29 22.4  +1.3
BJI                                    pmax    pmax
       comp=Z,46nm,1.0s
BJI                                    pmax    pmax
       comp=Z,71nm,3.5s
LZH    Lanzhou            49.25 334    eP      P      18 28 02.7  +0.2
LZH                                    pP      pP     18 28 32.0  -3.4
LZH                                    sP      sP     18 28 50.4  -1.3
LZH                                    pmax    pmax
       comp=Z,23nm,1.1s
LZH                                    pmax    pmax
       comp=Z,84nm,4.9s
HHC    Hu-ho-hao-te       50.68 343    eP      P      18 28 12.8  -0.3
HHC                                    pmax    pmax
       comp=Z,31nm,0.9s
HHC                                    pmax    pmax
       comp=Z,79nm,5.1s
BTO    Baotou             50.91 342    eP      P      18 28 15.3  +0.5
CN2    Changchun          51.27 357    eP      P      18 28 16.7  -0.6
CN2                                    pmax    pmax
       comp=Z,10.0nm,0.6s
LSA    Lhasa              51.59 318    P       P      18 28 20.8  +0.2
USRK   Ussuriysk Ar.      51.70   3    P       P      18 28 20.1  -0.3
       comp=Z,5.3nm,0.7s,baz=179,slow=5.9,SNR=12
USRK                                   LR      LR     18 53 30.1
       comp=Z,20nm,18.1s,baz=1.9,slow=40
USRK   Ussuriysk Ar.      51.70   3    P       P      18 28 19.9  -0.5
RPZ    Rata Peaks         51.70 141    P       P      18 28 23.6  +2.9
       comp=Z,22nm,0.4s,baz=259,slow=2.4,SNR=15
RPZ    Rata Peaks         51.70 141    P       P      18 28 21.1  +0.4
MDJ    Mudanjiang         52.02   1    P       P      18 28 22.6  -0.3
MDJ                                    IAmb    IAmb   18 28 24.6
       comp=Z,27nm,1.4s
TAPN   Taplejung          52.55 313    eP      P      18 28 27.4  -0.1
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GTA	Gaotai	53.79	333	⇓P	P	18 28 36.0	-0.1
GTA				pP	pP	18 29 07.2	-2.6
GTA				pmax	pmax		
	comp=Z,18nm,0.8s						
GTA				pmax	pmax		
	comp=Z,100nm,7.8s						
GTA				LR	LR		
	comp=Z,95nm,18.5s						
GTA				LR	LR		
	comp=Z,150nm,18.5s						
GTA				LR	LR		
	comp=Z,120nm,16.4s						
GUN	Gumba	54.21	312	*e*P	P	18 28 39.0	-0.6
	comp=Z,159nm,0.6s						
PKI	Pulchoki	54.36	312	*e*P	P	18 28 40.2	-0.5
	comp=Z,70nm,0.6s						
PKIN	Phulchoki	54.38	312	*e*P	P	18 28 40.2	-0.6
	comp=Z,72nm,0.6s						
KKN	Kakani	54.58	312	*e*P	P	18 28 41.8	-0.4
	comp=Z,66nm,0.7s						
DMN	Daman	54.61	312	*e*P	P	18 28 42.2	-0.2
	comp=Z,74nm,0.8s						
GKN	Gorkha	55.17	312	*e*P	P	18 28 45.7	-0.6
	comp=Z,85nm,0.4s						
HYB	Hyderabad	55.20	297	*i* P	P	18 28 45.0	-1.6
YSS	Yuzh-Sakhalins	55.83	12	P	P	18 28 49.1	-1.3
YSS				IAmb	IAmb	18 28 51.0	
	comp=Z,14nm,0.6s						
DANN	Dangsing	56.01	312	*e*P	P	18 28 52.1	-0.4
	comp=Z,91nm,0.8s						
HIA	Hailar	57.17	353	P	P	18 28 59.4	-0.6
ULN	Ulaanbaatar	58.40	343	P	P	18 29 09.0	+0.3
SONM	Songino Array	58.56	343	P	P	18 29 09.8	0.0
	comp=Z,29nm,0.9s,baz=172,slow=6.7,SNR=109						
SONM				PKP2bc		18 58 57.1	
	comp=Z,0.7nm,1.0s,baz=290,slow=4.4,SNR=3.7						
SONM	Songino Array	58.56	343	P	P	18 29 09.6	-0.2
TLY	Talaya	62.80	343	P	P	18 29 38.7	+0.4
TLY				IAmb	IAmb	18 29 40.8	
	comp=Z,7.9nm,0.7s						
WMQ	Urumqi	63.09	328	P	P	18 29 41.1	+0.7
WMQ				pP	pP	18 30 12.0	-2.9
WMQ				sP	sP	18 30 30.4	-0.3
WMQ				pmax	pmax		
	comp=Z,35nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,190nm,4.7s						
WMQ	Urumqi	63.09	328	P	P	18 29 40.5	+0.1
PEA0B	Petropavlovsk-	65.42	19	P	P	18 29 55.9	+0.6
PETK	Petropavlovsk-	65.42	19	P	P	18 29 55.9	+0.5
	comp=Z,23nm,0.7s,baz=173,slow=3.7,SNR=67						
PETK				LR	LR	18 59 04.8	
	comp=Z,16nm,19.5s,baz=105,slow=36						
PETK	Petropavlovsk-	65.42	19	P	P	18 29 55.5	+0.2
NIL	Nilore	66.46	312	P	P	18 30 01.6	-0.8
ZSN	Zaisan	67.01	329	*e*P	P	18 30 04.3	-1.3
	baz=329						
SHLS	Shalkode	67.28	323	*e*P	P	18 30 05.1	-2.4
	comp=Z,6.8nm,0.8s,baz=323						
KSH	Kashi	67.44	318	P	P	18 30 08.7	+0.1
KSH				PcP	PcP	18 30 36.7	+1.7
KSH				S	S	18 38 47.9	-4.8
KSH				pmax	pmax		
	comp=Z,5.0nm,1.4s						
KSH				pmax	pmax		
	comp=Z,150nm,4.9s						
KSH				LR	LR		
	comp=Z,170nm,5.2s						
KSH				LR	LR		
	comp=Z,250nm,6.0s						
KSH				LR	LR		
	comp=Z,410nm,6.1s						
UZB	Uzynbulak	67.53	323	*e*P	P	18 30 08.0	-1.1
	baz=323						
SATY	Saty	67.85	323	*e*P	P	18 30 10.0	-1.1
	baz=322						
MK31	Makanchi Array	67.91	328	P	P	18 30 11.1	-0.2
MK31				IAmb	IAmb	18 30 13.0	
	comp=Z,14nm,0.8s						
MKAR	Makanchi Array	67.91	328	P	P	18 30 11.3	0.0
	comp=Z,16nm,0.5s,baz=120,slow=8.3,SNR=344						
MKAR				LR	LR	19 01 36.0	
	comp=Z,39nm,20.3s,baz=347,slow=37						
MKAR	Makanchi Array	67.91	328	P	P	18 30 10.7	-0.6
KPKS	Kokpek	67.92	323	*e*P	P	18 30 10.2	-1.3
	comp=Z,18nm,1.0s,baz=323						
MAKZ	Makanchi	68.09	328	P	P	18 30 11.9	-0.5
MAKZ				IAmb	IAmb	18 30 14.0	
	comp=Z,14nm,0.8s						
TNSS	Tian-Shan	68.72	322	*e*P	P	18 30 16.5	-0.4
	baz=322						
MDOK	Medeo	68.73	322	*e*P	P	18 30 15.6	-1.0
	baz=322						
AAA	Alma-Ata	68.84	322	*e*P	P	18 30 16.7	-0.5
	baz=322						
TDK	Taldyqorghan	68.97	324	*e*P	P	18 30 16.9	-1.0
	comp=Z,7.6nm,0.8s,baz=324						
CHKK	Chushkaly	69.15	323	*e*P	P	18 30 17.7	-1.4
	baz=323						
MA2	Magadan	69.33	12	P	P	18 30 19.6	-0.2
MA2				IAmb	IAmb	18 30 21.0	
	comp=Z,16nm,0.9s						
YAK	Yakutsk	69.47	1	P	P	18 30 20.0	-0.5
TKM2	Tokmak 2	69.49	321	P	P	18 30 21.6	+0.2
	SNR=11						
KUU	Kurty	69.56	323	*e*P	P	18 30 20.9	-0.7
	comp=Z,19nm,0.7s,baz=322						
KBK	Karagaybulak	69.75	321	P	P	18 30 23.1	+0.1
	SNR=8.3						
UCH	Uchtor	69.80	320	P	P	18 30 24.0	+0.4
	SNR=8.0						
KBL	Kabul	69.98	311	P	P	18 30 23.9	-0.7
AAK	Ala-Archa	70.03	321	P	P	18 30 25.1	+0.5
	SNR=11						
AAK	Ala-Archa	70.03	321	P	P	18 30 24.9	+0.3
AML	Almayashu	70.27	320	P	P	18 30 26.7	+0.3
	SNR=17						
EKS2	Erkin-Say	70.49	320	P	P	18 30 28.1	+0.7
	SNR=14						
SEM	Semipalatinsk	71.24	330	*e*P	P	18 30 30.0	-1.9
	comp=Z,11nm,0.6s,baz=330						
ZAA0	Zalesovo Array	71.47	335	P	P	18 30 32.1	-0.7
ZAA0				IAmb	IAmb	18 30 33.0	
	comp=Z,22nm,0.8s						
ZALV	Zalesovo Beam	71.47	335	P	P	18 30 32.0	-0.8
	comp=Z,18nm,0.4s,baz=128,slow=5.2,SNR=94						
ZALV	Zalesovo Beam	71.47	335	P	P	18 30 31.7	-1.1
BTLS	Baital	71.56	323	*e*P	P	18 30 32.6	-1.1
	baz=322						
VNDA	Vanda	72.01	173	P	P	18 30 37.9	+2.2
	comp=Z,5.8nm,0.7s,baz=348,slow=4.4,SNR=7.1						
VNDA	Vanda	72.01	173	P	P	18 30 38.0	+2.2
VNDA				IAmb	IAmb	18 30 47.7	
	comp=Z,32nm,1.2s						
KURK	Kurchatov	72.25	329	P	P	18 30 36.9	-0.7
IUG	Iuzhnay	72.66	318	*e*P	P	18 30 39.2	-1.2
	baz=318						
KK31	Karatay Array	72.79	319	P	P	18 30 40.5	-0.5
KKAR	Karatay Array	72.79	319	P	P	18 30 40.5	-0.6
KKAR	Karatay Array	72.79	319	P	P	18 30 40.5	-0.6
MAW	Mawson	73.79	201	P	P	18 30 49.1	+2.8
	comp=Z,26nm,1.1s,baz=90,slow=10,SNR=1.9						
BRZS	Berezniki	74.97	326	*e*P	P	18 30 52.6	-0.9
	comp=Z,13nm,0.7s,baz=326						
HRA	Herat	75.11	308	P	P	18 30 53.8	-1.2
BRVK	Borovoye	77.84	328	P	P	18 31 09.3	-0.3
BRVK				IAmb	IAmb	18 31 10.4	
	comp=Z,26nm,0.9s						
TIXI	Tiksi	79.12	0	P	P	18 31 15.0	-1.3
TIXI				IAmb	IAmb	18 31 17.7	
	comp=Z,17nm,0.8s						
OPO	Ambohidratompo	79.33	253	P	P	18 31 20.1	+1.3
	baz=90,slow=10						
GEYT	Alibeck	79.43	311	P	P	18 31 19.1	+0.3
	comp=Z,3.0nm,0.7s,baz=165,slow=6.2,SNR=5.8						
GEYT	Alibeck	79.43	311	P	P	18 31 18.6	-0.1
NRIK	Noril'sk	81.80	346	P	P	18 31 30.7	+0.1
	comp=Z,12nm,0.6s,baz=134,slow=5.1,SNR=19						
NRIK	Noril'sk	81.80	346	P	P	18 31 30.7	+0.1
NRIK				IAmb	IAmb	18 31 32.1	
	comp=Z,13nm,0.7s						
ABKAR	Akbulak array	82.04	322	P	P	18 31 31.7	-0.6
ABKAR	Akbulak array	82.04	322	P	P	18 31 31.5	-0.7
SYO	Syowa Base	82.50	201	⇓*e*P	P	18 31 36.7	+2.4
GAMB	Gambell	84.10	23	P	P	18 31 42.3	-0.2
GAMB				IAmb	IAmb	18 31 44.1	
	comp=Z,17nm,1.0s						
ARU	Arti	85.42	328	P	P	18 31 48.8	-0.5
ARU				IAmb	IAmb	18 31 49.8	
	comp=Z,30nm,1.0s						
RDF	Al-Radifah	85.74	300	*e*P		18 31 50.9	
MIB	Mutribah	86.08	301	*e*P		18 31 52.0	
RST	Umm Al-Ruwaisa	86.32	300	*e*P		18 31 53.3	
RAYN	Ar Rayn	86.57	294	P	P	18 31 55.1	-0.7
RDOG	Red Dog Mine	89.25	20	P	P	18 32 07.3	-0.1
RDOG				IAmb	IAmb	18 32 08.8	
	comp=Z,10nm,1.1s						
TTA	Tatalina	90.25	26	P	P	18 32 12.0	-0.3
KBZ	Khabaz	92.00	314	P	P	18 32 21.6	+1.0
	comp=Z,1.4nm,0.9s,baz=331,slow=6.6,SNR=2.7						
SKT	Skwentna	92.03	28	P	P	18 32 19.1	-1.5
KTH	Kantishna Hill	92.64	26	P	P	18 32 22.8	-0.6
KTH				IAmb	IAmb	18 32 24.3	
	comp=Z,11nm,1.2s						
RND	Reindeer	93.52	27	P	P	18 32 26.2	-1.2
I23K	Minto, Yukon-K	93.61	25	P	P	18 32 27.2	-0.4
I23K				IAmb	IAmb	18 32 28.3	
	comp=Z,15nm,1.2s						
COLD	Coldfoot	93.66	23	P	P	18 32 27.9	0.0
WRH	Wood River Hil	94.03	26	P	P	18 32 28.9	-0.7
WRH				IAmb	IAmb	18 32 29.2	
	comp=Z,8.0nm,1.0s						
CCB	Clear Creek Bu	94.18	25	P	P	18 32 29.7	-0.5
CCB				IAmb	IAmb	18 32 30.2	
	comp=Z,10.0nm,1.2s						
ILAR	Eielson Array	94.59	25	P	P	18 32 30.4	-1.8
	comp=Z,2.3nm,1.0s,baz=260,slow=4.4,SNR=10						
ILAR				PKKPbc	PKKPdf	18 49 31.9	0.0
	comp=Z,0.8nm,0.8s,baz=12,slow=3.3,SNR=6.6						
ILAR	Eielson Array	94.59	25	P	P	18 32 29.8	-2.4
SNAA	Sanae	94.68	194	P	P	18 32 35.0	+2.4
SNAA	Sanae	94.68	194	P	P	18 32 35.1	+2.4
SNAA				IAmb	IAmb	18 32 36.0	
	comp=Z,9.7nm,1.0s						
PAX	Paxson	94.97	27	P	P	18 32 33.2	-1.0
PAX				IAmb	IAmb	18 32 34.7	
	comp=Z,9.0nm,1.0s						
KLMR	Klimovskoe	96.08	331	*e*P	P	18 32 32.5	-6.5
KLMR				AMP		18 32 37.7	
	comp=Z,14nm,1.0s						
VNA2	Neumayer--Watz	96.26	193	P	P	18 32 40.7	+0.9
LSZ	Lusaka	97.78	253	P	Pdif	18 32 48.5	+0.5
LSZ				IAmb	IAmb	18 32 50.3	
	comp=Z,4.7nm,1.0s						
BOSA	Boshof	97.79	240	P	P	18 32 47.4	-0.4
	comp=Z,1.8nm,0.7s,baz=122,slow=5.1,SNR=3.9						
ARCES	ARCESS Array B	101.62	340	P	Pdif	18 33 02.3	-1.4
	comp=Z,6.9nm,0.9s,baz=47,slow=8.9,SNR=4.9						
AKASG	Malin Array Be	101.69	320	P	Pdif	18 33 03.2	-1.2
	comp=Z,0.5nm,0.4s,baz=68,slow=4.7,SNR=3.2						
FINES	FINESS Array B	102.57	331	P	Pdif	18 33 06.5	-1.5
	comp=Z,1.4nm,0.8s,baz=81,slow=8.6,SNR=1.6						
FINES				PKiKP	PKiKP	18 37 29.4	+1.1
	comp=Z,0.7nm,0.5s,baz=108,slow=4.4,SNR=5.8						
YKA	Yellowknife Ar	109.01	26	PKiKP	PKiKP	18 37 40.4	+0.2
	comp=Z,1.0nm,0.6s,baz=309,slow=0.9,SNR=17						
YKA				PKKPbc	PKKPbc	18 48 49.0	-1.6
	comp=Z,1.0nm,0.7s,baz=108,slow=3.7,SNR=12						
YKA				SKKP		18 52 51.1	
	comp=Z,0.4nm,0.6s,baz=123,slow=3.0,SNR=6.7						
CLL	Collm	111.70	322	*e*PKiKP	PKiKP	18 37 45.0	-0.7
CLL				*e*PP	PP	18 38 31.0	+1.1
GERES	GERESS Array B	111.90	320	PKiKP	PKiKP	18 37 46.3	0.0
	comp=Z,1.2nm,0.5s,baz=186,slow=1.3,SNR=5.9						
NVAR	Mina Array Bea	112.92	52	PKiKP	PKiKP	18 37 51.6	+2.9
	comp=Z,0.3nm,0.4s,baz=270,slow=0.9,SNR=1.9						
WTTA	Wattenberg	113.63	318	*e*P	PKiKP	18 37 49.8	+0.1
	comp=Z,4.4nm,0.4s						
WATA	Walderalm	113.66	319	*e*P	PKiKP	18 37 49.8	0.0
	comp=Z,4.8nm,0.7s						
MOTA	Moosalm	113.96	319	*e*P	PKiKP	18 37 50.3	-0.1
	comp=Z,2.9nm,0.5s						
FETA	Feichten	114.30	318	*e*P	PKiKP	18 37 51.2	+0.2
	comp=Z,1.0nm,0.5s						
ELK	Elko	114.83	49	PKKPbc	PKKPbc	18 48 29.8	-1.1
	comp=Z,0.8nm,0.4s,baz=279,slow=20,SNR=5.9						
KEST	Kesra	117.95	306	PKP	PKiKP	18 37 59.4	+1.1
	comp=Z,6.7nm,1.0s,baz=57,slow=2.1,SNR=7.8						
PDAR	Pinedale Array	118.45	45	PKP	PKiKP	18 37 59.7	+0.4
	comp=Z,1.1nm,0.7s,baz=215,slow=2.2,SNR=9.1						
PDAR				PKKPbc	PKKPbc	18 48 18.6	+0.3
	comp=Z,0.7nm,0.6s,baz=139,slow=6.5,SNR=6.9						
PDAR	Pinedale Array	118.45	45		PKKPbc	18 48 18.1	-0.2
LAO	LASA Array	119.38	40	PKPdf	PKiKP	18 38 02.0	+1.3
PV13	Radium Mtn., P	120.27	50		PKPdf	18 38 02.0	-0.9
RSSD	Black Hills	121.78	42	PKPdf	PKiKP	18 38 06.1	+0.4
FRB	Frobisher Bay	122.68	9	PKP	PKPdf	18 38 06.3	-0.1
	comp=Z,1.7nm,0.4s,baz=325,slow=4.2,SNR=9.5						
ANMO	Albuquerque	122.94	53	PKP	PKiKP	18 38 08.6	+0.3
	comp=Z,0.7nm,0.4s,baz=127,slow=3.4,SNR=3.4						
ANMO	Albuquerque	122.94	53		PKPdf	18 38 04.6	-3.5
ULM	Lac du Bonnet	123.83	33	PKP	PKPdf	18 38 08.9	-0.1
	comp=Z,1.7nm,0.5s,baz=339,slow=5.9,SNR=5.4						
ULM	Lac du Bonnet	123.83	33		PKPdf	18 38 08.3	-0.7
MNTX	Cornudas Mount	124.61	57	PKPdf	PKiKP	18 38 11.5	+0.1
TXAR	Lajitas Array	126.60	59	PKP	PKiKP	18 38 15.9	+0.3
	comp=Z,0.5nm,0.6s,baz=270,slow=2.7,SNR=3.8						
TXAR	Lajitas Array	126.60	59		PKPdf	18 38 15.3	+0.3
ESDC	Sonseca Array	126.84	315	PKP	PKiKP	18 38 16.2	+0.5
	comp=Z,0.6nm,0.9s,baz=337,slow=7.1,SNR=4.2						
TORD	Torodi Ar. Bea	127.39	281	PKP	PKiKP	18 38 17.2	-0.1
	comp=Z,4.2nm,0.6s,baz=64,slow=1.9,SNR=14						
TORD	Torodi Ar. Bea	127.39	281		PKiKP	18 38 17.1	-0.3
PLCA	Paso Flores	128.79	162	PKP	PKiKP	18 38 20.9	+1.2
	comp=Z,2.3nm,0.8s,baz=182,slow=5.3,SNR=6.0						
PLCA				SKPbc	SKPbc	18 41 29.0	
	comp=Z,1.3nm,0.7s,baz=58,slow=5.3,SNR=3.7						
JCT	Junction City	129.55	57	PKPdf	PKiKP	18 38 22.5	+1.1
P38A	Dawn	130.78	43	PKPdf	PKiKP	18 38 23.4	-0.1
KIC	Kosan Boka	133.51	272	*e*PKIKP	PKiKP	18 38 30.3	+0.5
	comp=Z,9.8nm,0.8s						
DBIC	Dimbokro	133.65	272	PKP	PKPdf	18 38 29.1	+0.4
	comp=Z,3.1nm,0.5s,baz=97,slow=2.3,SNR=9.1						
DBIC				SKPbc	SKPab	18 41 45.5	-0.7
	comp=Z,2.8nm,0.6s,baz=85,slow=7.8,SNR=4.8						
DBIC	Dimbokro	133.65	272		PKPdf	18 38 28.2	-0.5
LIC	Lamto	133.78	271	*e*PKIKP	PKiKP	18 38 30.2	-0.1
	comp=Z,8.6nm,0.5s						
TIC	Toumodi	133.81	272	*e*PKIKP	PKiKP	18 38 30.2	-0.2
BO02	Sierra Bellavi	134.06	158		PKPdf	18 38 29.0	-0.1
TKL	Tuckaleechee C	139.44	42	PKP	PKiKP	18 38 40.4	-0.9
	comp=Z,3.8nm,0.6s,baz=169,slow=9.2,SNR=5.4						
LVC	Limon Verde	145.48	151	PKPbc	PKiKP	18 38 53.2	-1.3
	comp=Z,9.0nm,0.5s,baz=247,slow=4.0,SNR=12						
LVC	Limon Verde	145.48	151		PKPdf	18 38 49.3	-1.2
CPUP	Villa Florida	145.78	171	PKPbc	PKPab	18 38 52.1	+0.6
	comp=Z,7.5nm,0.5s,baz=187,slow=0.6,SNR=20						
NNA	Nana	148.20	128	PKPbc	PKiKP	18 39 00.1	+0.3
	comp=Z,7.8nm,0.3s,baz=261,slow=7.9,SNR=5.5						
ATAH	Atahualpa	149.50	118	PKPbc	PKiKP	18 39 05.2	+2.2
	comp=Z,16nm,0.8s,baz=261,slow=2.4,SNR=9.1						
LPAZ	La Paz	151.13	145	PKP	PKPdf	18 39 01.8	+1.7
	comp=Z,1.6nm,0.9s,baz=189,slow=13,SNR=5.2						
LPAZ				PKPbc	PKiKP	18 39 08.1	+1.6
	comp=Z,7.1nm,0.4s,baz=42,slow=3.0,SNR=36						
LPAZ				PKPab	PKPab	18 39 17.1	+2.9
	comp=Z,12nm,0.6s,baz=187,slow=4.2,SNR=21						
LPAZ	La Paz	151.13	145		PKiKP	18 39 08.2	+1.7
SIV	San Ignacio	154.71	158	PKP	PKPdf	18 39 06.6	+2.1
	comp=Z,1.5nm,0.8s,baz=225,slow=2.7,SNR=7.0						
SIV				PKPbc	PKiKP	18 39 14.7	+1.5
	comp=Z,2.3nm,0.8s,baz=307,slow=1.5,SNR=7.5						
SIV				PKPab	PKPab	18 39 30.6	+2.1
	comp=Z,6.5nm,0.6s,baz=227,slow=5.1,SNR=17						

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*NEIC **05** 18:30:25.7±4.4, 13.°96N±0.°09×93.°22W±0.°06, h82^{km}±12^{km}, Error ellipse: s-maj=14.2km s-min=5.7km az=208.0*

*IDC **05** 18:30:26.3±2.3, 14.°18N×93.°15W, h0^{km}, mb3.6/6, mb1 4.0/9, mb1mx3.8/49, mbtmp3.7/9, ML3.6/1, MS3.3/2, Ms1 3.3/2, ms1mx2.7/38, Error ellipse: s-maj=58.9km s-min=26.1km az=32.0*

*MEX **05** 18:30:28.1±1.0, 14.°06N×93.°32W, h40^{km}, MD4.1*

*GCG **05** 18:30:29.3±0.3, 15.°33N×92.°47W, h173^{km}±26^{km}, MD4.0*

ISC 05 18:30:25.8±2.0**, 14.°28N**±0.°06×**93.°16W**±0.°04**, h1**^{km}±11^{km}**, n39,** σ1.^{s}**95**/47**, mb3.6**/6**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		1.07	54	*i* P	Pn	18 30 48.5	+0.6
THIG				*i* S	Sn	18 31 03.4	-0.1
THIG		1.07	54		Pn	18 30 48.5	+0.6
THIG					Sn	18 31 03.4	-0.1
PCIG		1.42	358	*i* P	Pg	18 30 53.6	+0.6
PCIG				*i* S	Sg	18 31 11.7	+0.3
PCIG		1.42	358		Pg	18 30 53.6	+0.6
PCIG					Sb	18 31 10.3	-1.4
RTAL	Retalhuleu	1.44	80		Pn	18 30 52.7	-0.4
HUEH	Huehuetenango	1.91	57		Pn	18 30 57.8	-1.9
CCIG	Comitan	2.22	26	*e*P	Pg	18 31 08.1	-0.4
CCIG				*e*S	Sg	18 31 37.0	-0.3
CCIG	Comitan	2.22	26		Pb	18 31 07.5	+0.6
FUG	Fuego 3	2.25	85	*e*P	Pn	18 31 04.8	+0.4
FUG				*e*S	Sn	18 31 32.5	-0.5
PCG	Pacaya	2.48	87	*e*P	Pn	18 31 07.7	+0.1
TGIG		2.48	1	*i* P	Pn	18 31 08.0	+0.5
TGIG				*i* S	Sn	18 31 38.0	-0.5
TGIG		2.48	1		Pb	18 31 10.7	-0.6
TGIG					Sb	18 31 42.3	-0.2
IXG	Ixpaco	2.64	92	*e*P	Pn	18 31 10.2	+0.5
HUIG	Huatulco	3.21	298	*i* P	Pn	18 31 18.7	+1.3
HUIG				*e*S	Sn	18 31 53.0	-3.3
HUIG	Huatulco	3.21	298		Pn	18 31 08.1	-9.3
HUIG					Sn	18 31 53.0	-3.3
CMIG	Matias Romero	3.25	330	Pn	Pn	18 31 20.0	+2.1
	5.5nm,0.3s,baz=145,slow=12,SNR=30						
CMIG				Lg	Lg	18 32 04.6	
	12nm,0.3s,baz=271,slow=23,SNR=8.6						
CMIG	Matias Romero	3.25	330	*e*P	Pn	18 31 19.7	+1.7
CMIG				*e*S	Sn	18 31 55.5	-1.9
CMIG	Matias Romero	3.25	330		Pn	18 31 19.7	+1.7
CMIG					Sb	18 32 05.5	+1.0
MTO3	Montecristo	3.69	88	Pn	Pn	18 31 23.5	-0.7
ESQI	Esquipulas	3.71	85	Pn	Pn	18 31 23.8	-0.6
PETF	Flores	4.12	50		Pn	18 31 29.7	-0.2
TLIG	Tlapa	6.14	303	Pn	Pn	18 31 57.7	-0.1
TEIG	Tepich	7.53	38	Pn	Pn	18 32 18.7	+1.8
TEIG	Tepich	7.53	38	Pn	Pn	18 32 14.9	-2.0
JTS	Las Juntas de	8.95	115	Pn	Pn	18 32 32.5	-3.8
TXAR	Lajitas Array	17.86	329	Pn	P	18 34 39.6	+3.1
	baz=126,slow=9.0,SNR=4.8						
TXAR	Lajitas Array	17.86	329	P	Pn	18 34 31.7	-4.1
TX31	Lajitas Ar. Si	17.86	329	P	Pn	18 34 30.7	-5.0
TX31				IAmb	IAmb	18 34 45.5	
	comp=Z,14nm,1.1s						
TX32	Lajitas Array	17.86	329	P	Pn	18 34 30.6	-5.2
TX32				IAmb	IAmb	18 34 45.5	
	comp=Z,4.4nm,1.0s						
SDV	Santo Domingo	22.70	101	P	P	18 35 29.9	+0.5
	comp=Z,2.9nm,0.7s,baz=354,slow=10,SNR=1.8						
TKL	Tuckaleechee C	22.90	20	LR	LR	18 44 43.3	
	comp=Z,77nm,18.8s,baz=188,slow=37						
ANMO	Albuquerque	23.82	332	P	P	18 35 40.7	+0.1
	comp=Z,0.5nm,0.4s,baz=133,slow=19,SNR=1.9						
PDAR	Pinedale Array	31.71	337	P	P	18 36 53.7	+2.3
	comp=Z,0.7nm,1.1s,baz=124,slow=12,SNR=2.0						
NVAR	Mina Array Bea	32.75	322	P	P	18 37 02.7	+2.0
	comp=Z,0.2nm,0.4s,baz=146,slow=7.1,SNR=1.9						
ULM	Lac du Bonnet	35.94	357	LR	LR	18 54 11.0	
	comp=Z,42nm,18.4s,baz=100,slow=40						
YKA	Yellowknife Ar	50.50	347	P	P	18 39 26.2	+0.9
	comp=Z,2.2nm,0.8s,baz=148,slow=7.8,SNR=28						
ILAR	Eielson Array	62.14	337	P	P	18 40 49.9	+1.5
	comp=Z,0.5nm,0.9s,baz=148,slow=7.4,SNR=4.8						
ILAR	Eielson Array	62.14	337	P	P	18 40 38.8	-10
CMAR	Chiang Mai Arr	145.35	340	PKPbc	PKPbc	18 50 06.2	-0.1
	comp=Z,0.9nm,0.8s,baz=344,slow=3.9,SNR=7.1						

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*NEIC **05** 18:33:46.7±0.9, 62.°16N±0.°03×149.°60W±0.°04, h55^{km}±5^{km}, Error ellipse: s-maj=3.6km s-min=2.9km az=194.0*

*AEIC **05** 18:33:47±1.0, 62.°17N±0.°03×149.°62W±0.°05, h49^{km}±6^{km}, ML3.2, ML3.4/106(NEIC), Error ellipse: s-maj=3.8km s-min=3.0km az=152.0*

*ANF **05** 18:33:47.5±0.3, 62.°19N×149.°62W, h50^{km}±6^{km}, ML3.5/14, Error ellipse: s-maj=4.9km s-min=2.7km az=97.0*

ISC 05 18:33:47.1±1.2**, 62.°16N**±0.°02×**149.°62W**±0.°03**, h49**^{km}±10^{km}**, n145,** σ0.^{s}**85**/157**, Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CUT	Chulitna	0.39	309	P	Pn	18 33 56.7	-0.3
	baz=128,SNR=17						
CUT				S	Sn	18 34 04.9	+0.9
	baz=128						
CUT	Chulitna	0.39	309		Pn	18 33 56.8	-0.3
CUT					Sn	18 34 05.0	+1.0
GHO	Glory Hole Cre	0.51	140		Sn	18 34 07.3	+0.6
GHO	Glory Hole Cre	0.51	140		Pn	18 33 57.9	-0.6
GHO	Glory Hole Cre	0.51	140	IAML		18 34 07.8	
	comp=N,3µm,0.4s						
GHO				IAML		18 34 08.3	
	comp=E,3µm,0.3s						
PMR	Palmer	0.62	158		Pn	18 33 58.5	-1.2
PMR				IAML		18 34 09.0	
	comp=E,967nm,0.5s						
PMR	Palmer	0.62	158		Sn	18 34 08.9	+0.1
SML	Sawmill	0.71	120		Pn	18 34 00.0	-0.9
SML				IAML		18 34 14.3	
	comp=E,2µm,0.2s						
SML	Sawmill	0.71	120		Sn	18 34 11.7	+0.7
HUR	Hurricane	0.82	359		Pn	18 34 02.2	-0.2
WAT1	Susitna Watana	0.83	36		Pn	18 34 02.0	-0.6
SUA	Susitna One	0.88	218		Pn	18 34 02.6	-0.7
SUA	Susitna One	0.88	218		Sn	18 34 15.9	+0.7
SUA	Susitna One	0.88	218	IAML		18 34 17.1	
	comp=E,371nm,0.5s						
SUA				IAML		18 34 20.0	
	comp=N,355nm,0.5s						
SKT	Skwentna	0.92	259		Pn	18 34 02.7	-1.0
SKT				IAML		18 34 18.5	
	comp=N,1µm,0.3s						
SKT				IAML		18 34 19.3	
	comp=E,855nm,0.2s						
KNK	Knik Glacier	0.93	143		Pn	18 34 03.2	-0.7
KNK				IAML		18 34 18.6	
	comp=N,1µm,0.5s						
WAT2	Susitna Watana	0.93	30		Pn	18 34 03.5	-0.5
WAT2					Sn	18 34 16.8	+0.4
WAT6	Susitna Watana	0.97	64		Pn	18 34 03.8	-0.8
WAT6					Sn	18 34 17.2	-0.1
FIS	Fire Island	1.06	196		Pn	18 34 06.2	+0.6
RC01	Rabbit Creek A	1.08	183	P	Pn	18 34 05.0	-0.8
	baz=2.9,SNR=120						
RC01				S	Sn	18 34 20.2	+0.5
	baz=2.9						
RC01	Rabbit Creek A	1.08	183		Pn	18 34 05.2	-0.6
RC01					Sn	18 34 20.2	+0.5
SCM	Sheep Creek Mo	1.13	106		Pn	18 34 06.0	-0.6
SCM				IAML		18 34 23.9	
	comp=N,700nm,0.4s						
SCM				IAML		18 34 24.2	
	comp=E,934nm,0.9s						
STLK	Strandline Lak	1.24	239		Pn	18 34 07.6	-0.5
RND	Reindeer	1.30	15		Pn	18 34 08.5	-0.3
RND	Reindeer	1.30	15		Sn	18 34 25.3	+0.2
RND	Reindeer	1.30	15	IAML		18 34 26.1	
	comp=E,281nm,0.5s						
RND				IAML		18 34 26.6	
	comp=N,252nm,0.5s						
TRF	Thorofare Moun	1.33	347	Pn	Pn	18 34 08.9	-0.5
TRF				IAML		18 34 27.7	
	comp=N,410nm,0.4s						
PPLA	Purkeypile	1.40	303		Pn	18 34 09.9	-0.4
SPCG	Spurr Capps Gl	1.44	234		Pn	18 34 10.6	-0.2
PWL	Port Wells	1.45	154		Pn	18 34 10.2	-0.6
PWL					Sn	18 34 28.9	+0.2
SPCP	Crater Peak Br	1.51	234		Pn	18 34 11.3	-0.4
KTH	Kantishna Hill	1.52	337		Pn	18 34 11.7	-0.2
KTH				IAML		18 34 31.8	
	comp=N,514nm,0.8s						
KTH				IAML		18 34 31.8	
	comp=E,420nm,0.4s						
SPCN	Chakachatna No	1.54	233		Pn	18 34 12.7	+0.5
CAPN	Captain Cook N	1.58	208	P	Pn	18 34 14.0	+1.4
	baz=27						
CAPN	Captain Cook N	1.58	208		Pn	18 34 14.0	+1.4
MCK	McKinley	1.61	11	P	Pn	18 34 13.2	+0.2
	baz=192,SNR=41						
MCK				S	Sn	18 34 32.7	+0.1
	baz=192						
MCK	McKinley	1.61	11		Pn	18 34 13.2	+0.2
M24K	Tolsona, Glenn	1.62	91	P	Pn	18 34 13.9	+0.6
	baz=274,SNR=118						

M24K				S	Sn	18 34 36.1	+3.1
	baz=274						
M24K	Tolsona, Glenn	1.62	91		Pn	18 34 13.9	+0.6
M24K				IAML		18 34 37.5	
	comp=N,367nm,0.3s						
M24K				IAML		18 34 43.5	
	comp=E,585nm,0.7s						
SLKM	Skilak Lake	1.69	190		Pn	18 34 13.2	-1.0
O22K	Cooper Landing	1.69	182		Pn	18 34 13.2	-0.9
GLI	Glacier Island	1.77	136		Pn	18 34 15.0	-0.2
GLI				IAML		18 34 43.7	
	comp=N,514nm,0.5s						
KLU	Klutina	1.88	109		Pn	18 34 16.3	-0.5
KLU				IAML		18 34 45.1	
	comp=E,252nm,0.4s						
KLU				IAML		18 34 47.6	
	comp=N,265nm,0.4s						
VMT	TAPS Tl Valdez	1.90	123		Pn	18 34 16.7	-0.2
PS11	TAPS Pump St11	1.95	91		Pn	18 34 18.7	+1.0
BWN	Browne	2.02	2		Pn	18 34 18.3	-0.3
BWN				IAML		18 34 57.3	
	comp=E,172nm,0.6s						
BWN				IAML		18 35 08.3	
	comp=N,195nm,0.9s						
BPAW	Bear Paw Mtn.	2.04	343		Pn	18 34 18.4	-0.6
SEW	Seward	2.07	178		Pn	18 34 19.4	0.0
FID	Port Fidalgo	2.07	132		Pn	18 34 18.5	-0.8
FID				IAML		18 34 53.2	
	comp=N,298nm,0.3s						
FID				IAML		18 34 54.1	
	comp=E,315nm,0.5s						
PAX	Paxson	2.08	65		Pn	18 34 20.1	+0.5
DIV	Divide	2.11	118		Pn	18 34 19.2	-0.8
CHUM	Lake Minchumin	2.12	326		Pn	18 34 19.9	-0.1
DFR	Drift River	2.16	224		Pn	18 34 20.4	-0.3
PS12	TAPS Pump St12	2.23	106		Pn	18 34 21.2	-0.4
NCT	North Crescent	2.26	226		Pn	18 34 22.0	-0.1
RSO	Redoubt South	2.28	223		Pn	18 34 22.1	-0.3
RDSO	Redoubt South	2.28	223		Pn	18 34 22.0	-0.4
RED	Redoubt Volcan	2.32	222		Pn	18 34 22.7	-0.2
HIN	Hinchinbrook I	2.33	138	Pn	Pn	18 34 22.5	-0.4
WRH	Wood River Hil	2.42	16	Pn	Pn	18 34 23.6	-0.4
N25K	Chitina, Valde	2.44	101	P	Pn	18 34 24.3	-0.2
	baz=286,SNR=22						
N25K				S	Sn	18 34 53.4	+0.2
	baz=286						
N25K	Chitina, Valde	2.44	101	Pn	Pn	18 34 24.3	-0.2
N25K				IAML		18 35 02.8	
	comp=N,173nm,0.4s						
NEA2	Nenana	2.45	6	P	Pn	18 34 24.2	-0.4
	baz=186,SNR=16						
NEA2				S	Sn	18 34 52.9	-0.4
	baz=186						
NEA2	Nenana	2.45	6		Pn	18 34 24.2	-0.4
EYAK	Cordova Ski Ar	2.47	129	Pn	Pn	18 34 24.4	-0.4
BRLK	Bradley Lake	2.49	195	Pn	Pn	18 34 24.1	-1.0
BRLK				IAML		18 35 01.5	
	comp=E,112nm,0.6s						
BRSE	Bradley Lake S	2.49	193		Pn	18 34 24.8	-0.4
HDA	Harding Lake	2.56	27	P	Pn	18 34 25.9	-0.2
	baz=210,SNR=18						
HDA				S	Sn	18 34 56.2	+0.3
	baz=210						
HDA				S	Sn	18 34 56.2	+0.3
	baz=210						
HDA	Harding Lake	2.56	27		Pn	18 34 25.8	-0.2
HDA				IAML		18 35 01.7	
	comp=E,129nm,0.3s						
HDA				IAML		18 35 02.3	
	comp=N,171nm,0.4s						
CCB	Clear Creek Bu	2.62	17		Pn	18 34 26.5	-0.4
BMRM	Bremner River	2.68	114		Pn	18 34 27.0	-0.8
RIDG	Independent Ri	2.69	52	Pn	Pn	18 34 27.8	-0.2
RIDG				IAML		18 35 05.8	
	comp=N,148nm,0.9s						
PS08	TAPS Pump Stn8	2.70	27		Pn	18 34 27.8	-0.2
IVE	Iliamna Volcan	2.71	219		Pn	18 34 28.1	-0.2
CNPM	China Poot	2.76	197		Pn	18 34 29.1	+0.3
CNPM				IAML		18 35 09.7	
	comp=N,87nm,0.5s						
CNPM				IAML		18 35 10.2	
	comp=E,100nm,0.7s						
ILS	Iliamna Low So	2.78	219		Pn	18 34 29.1	-0.1
TCOL	CIGO, UAF Yank	2.83	15	P	Pn	18 34 30.0	+0.2
	baz=197,SNR=5.1						
TCOL				Sn	Sn	18 35 02.5	-0.1
	baz=197						
TCOL	CIGO, UAF Yank	2.83	15		Pn	18 34 29.9	+0.1
TCOL				IAML		18 35 04.3	
	comp=N,196nm,0.4s						
COLA	College	2.83	15		Pn	18 34 29.9	+0.1
MENT	Mentasta	2.84	72		Pn	18 34 29.9	-0.1
MENT				IAML		18 35 17.7	
	comp=E,140nm,0.7s						
MENT				IAML		18 35 21.7	
	comp=N,141nm,0.7s						
GLB	Gilahina Butte	2.85	102	Pn	Pn	18 34 29.6	-0.5
GLB				IAML		18 35 16.1	
	comp=N,101nm,0.9s						
MDM	Murphy Dome	2.87	12	Pn	Pn	18 34 30.2	-0.2
IL31		2.89	24	Pn	Pn	18 34 30.1	-0.4
ILAR	Eielson Array	2.89	24	Pn	Pn	18 34 29.9	-0.7
MLY	Manley	2.92	351	P	Pn	18 34 30.8	-0.2
	baz=170,SNR=21						
MLY	Manley	2.92	351		Pn	18 34 30.9	-0.2
DOT	Dot Lake	2.95	57		Pn	18 34 31.3	-0.1
RAGM	Ragged Mountai	2.98	125	Pn	Pn	18 34 31.5	-0.4
I23K	Minto, Yukon-K	3.00	2	P	Pn	18 34 32.1	0.0
	baz=182,SNR=30						
I23K				Sn	Sn	18 35 06.8	+0.2
	baz=182						
I23K	Minto, Yukon-K	3.00	2		Pn	18 34 32.0	0.0
I23K				IAML		18 35 07.7	
	comp=N,82nm,0.8s						
SVW2	Sparrevohn	3.04	252	Pn	Pn	18 34 31.8	-0.9
SVW2				IAML		18 35 08.8	
	comp=N,95nm,0.6s						
SVW2				IAML		18 35 09.7	
	comp=E,87nm,0.6s						
TT01	Tatalina	3.06	287		Pn	18 34 32.4	-0.5
TTA	Tatalina	3.06	287	Pn	Pn	18 34 32.0	-0.9
OPT	Oil Point	3.08	217		Pn	18 34 32.9	-0.3
VRDI	Verde Repeater	3.08	105	Pn	Pn	18 34 32.7	-0.8
POKR	Poker Plat Res	3.12	17	P	Pn	18 34 33.8	+0.1
	baz=199,SNR=12						
POKR				Sn	Sn	18 35 09.2	-0.6
	baz=199						
POKR	Poker Plat Res	3.12	17	Pn	Pn	18 34 33.6	-0.1
SCRK	Sand Creek	3.14	52	P	Pn	18 34 34.4	+0.2
	baz=237						
SCRK	Sand Creek	3.14	52		Pn	18 34 34.6	+0.4
HMT	Hamilton	3.17	123		Pn	18 34 33.3	-1.2
MCARA	McCarthy VSAT	3.23	101		Pn	18 34 34.7	-0.6
MCARA				IAML		18 35 26.7	
	comp=N,136nm,0.4s						
AU22	Augustine Moun	3.35	215		Pn	18 34 38.1	+1.3
NICHA	Nichawak Mount	3.35	123		Pn	18 34 36.3	-0.6
AUL	Augustine Lava	3.36	216		Pn	18 34 38.4	+1.3
BERG	Berg Lake	3.36	119		Pn	18 34 36.5	-0.6
AUP	Augustine Pinn	3.37	215		Pn	18 34 38.4	+1.2
AUCH	Augustine Cone	3.38	215		Pn	18 34 38.6	+1.3
KAIM	Kayak Island	3.38	129	Pn	Pn	18 34 36.1	-1.2
KAIM				IAML		18 35 08.9	
	comp=E,114nm,3.5s						
KAIM				IAML		18 35 36.1	
	comp=N,106nm,3.1s						
CRQM	Cirque	3.42	112		Pn	18 34 37.6	-0.3
KHIT	Khitrov Hills	3.52	116		Pn	18 34 38.7	-0.7
SUCK	Suckling Hills	3.53	124		Pn	18 34 38.6	-0.8
SUCK	Suckling Hills	3.53	124	IAML		18 35 53.3	
	comp=E,66nm,3.0s						
PTPK	Patty Peak	3.55	103		Pn	18 34 39.5	-0.3
TGL	Tana Glacier	3.55	110	Pn	Pn	18 34 38.7	-1.0
TGL				IAML		18 35 35.9	
	comp=N,92nm,0.9s						
BALM	Baldy	3.66	105	Pn	Pn	18 34 40.0	-1.2
BALM				IAML		18 35 36.5	
	comp=E,50nm,0.6s						
BALM				IAML		18 35 37.1	
	comp=N,83nm,0.5s						
KIAG	Kiagna River	3.69	106		Pn	18 34 40.6	-1.1
BC03		3.73	73		Pn	18 34 42.1	0.0
BCAR	Beaver Creek A	3.73	73		Pn	18 34 41.7	-0.5
PRP	Porcupine Dome	3.82	27	Pn	Pn	18 34 43.1	-0.3
PRP				IAML		18 35 34.5	
	comp=N,39nm,0.4s						
ISLE	Juniper Island	3.84	111		Pn	18 34 42.6	-1.1
ISLE				IAML		18 35 47.6	
	comp=N,82nm,0.6s						
BARN	Barnard Glacie	3.96	103		Pn	18 34 44.8	-0.6
BARN				IAML		18 35 47.4	
	comp=N,70nm,0.8s						
BARN				IAML		18 35 48.6	
	comp=E,53nm,0.5s						
GRNC	Granite Creek	4.04	107		Pn	18 34 45.7	-0.9
BVCY	Beaver Creek	4.10	83		Pn	18 34 47.7	+0.5
CTGM	Chitina Glacie	4.14	103		Pn	18 34 47.3	-0.6
CTGM				IAML		18 35 54.9	
	comp=N,42nm,0.6s						
YUK2	White River	4.16	91		Pn	18 34 48.2	+0.1
YAH	Yahtse	4.21	112		Pn	18 34 44.5	-4.3
YAH				IAML		18 35 49.7	
	comp=N,61nm,3.3s						
YAH				IAML		18 35 53.2	
	comp=E,40nm,1.5s						
MESA	MESA	4.21	115	Pn	Pn	18 34 47.6	-1.3
MESA				IAML		18 35 52.6	
	comp=E,64nm,0.6s						
IM03		4.24	337		Pn	18 34 48.8	-0.2
IMAR	Indian Mountai	4.24	337		Pn	18 34 48.2	-0.9
YUK3	Moose Creek	4.34	91		Pn	18 34 50.7	+0.1
LOGN	Logan Glacier	4.34	104		Pn	18 34 50.0	-0.6
TABL	Table Mountain	4.44	109		Pn	18 34 51.0	-1.0
TABL				IAML		18 36 04.8	
	comp=N,36nm,2.1s						
TABL				IAML		18 36 40.6	
	comp=E,38nm,4.0s						
EGAK	Eagle	4.61	52		Pn	18 34 54.5	+0.3
EGAK				IAML		18 36 07.9	
	comp=E,32nm,0.7s						
EGAK				IAML		18 36 09.5	
	comp=E,47nm,1.0s						
KDAK	Kodiak Island	4.64	200	Pn	Pn	18 34 52.5	-2.1
KDAK				IAML		18 36 39.0	
	comp=E,30nm,2.9s						
KDAK				IAML		18 36 47.5	
	comp=E,30nm,3.3s						
KVTA	Katmai Vly 10	4.73	219		Pn	18 34 55.7	-0.1
KABU	Katmai Buttres	4.82	218		Pn	18 34 56.6	-0.5
PCA	Pinnacle	4.99	110		Pn	18 34 58.4	-1.1
COLD	Coldfoot	5.09	357	P	Pn	18 35 00.8	0.0
	baz=177,SNR=7.4						
COLD	Coldfoot	5.09	357	Pn	Pn	18 34 57.8	-2.9
OHAK	Old Harbor	5.29	202	Pn	Pn	18 35 00.1	-3.4
PNL	Peninsula	5.58	112		Pn	18 35 06.7	-0.7
BM03	Burnt Mountain	5.69	20		Pn	18 35 09.1	0.0
BMAR	Burnt Mountain	5.71	20		Pn	18 35 09.4	+0.3
WHY	Whitehorse	7.23	95		Pn	18 35 29.7	-0.5
ANM	Nome	7.47	296	Pn	Pn	18 35 34.0	+0.6

IDC ***05*** *18:58:35.1±14.0, 18°.09S×173°.41W, h81^{km}±75^{km}, mb3.4/3, mb1 3.7/4, mb1mx3.4/39, mbtmp3.8/4, ML3.2/1, Error ellipse: s-maj=314.9km s-min=33.2km az=139.0*

NEIC ***05*** *18:58:40.6±1.4, 17°.3S±0°.1×174°.0W±0°.1, h108^{km}±9^{km}, mb4.5/12, Error ellipse: s-maj=18.0km s-min=15.0km az=103.0*

ISC 05 18:58:39.1±0.6, **17°.22S**±0°.07×**174°.08W**±0°.07, **h100**^{km}, **n21**, σ**1.^{s}79**/24, **mb4.4**/9, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	3.97	34	P	Pn	18 59 40.1	+2.1
	1.3nm,0.3s,baz=132,slow=23,SNR=1.0						
AFI				S	Sn	19 00 19.6	-4.0
	14nm,0.3s,baz=222,slow=15,SNR=7.6						
AFI	Afiamalu	3.97	34		Pn	18 59 39.3	+1.3
AFI				Sn	Sn	19 00 19.6	-4.0
NIUE	Niue	4.36	116		Pn	18 59 44.2	+1.1
NIUE				Sn	Sn	19 00 30.4	-2.5
MSVF	Nonsavu	7.53	265	Pn	Pn	19 00 23.9	-2.5
RAO	Raoul Island	12.48	196	Pn	Pn	19 01 31.8	-1.4
SANVU	Saraoutou	18.05	273	P	Pn	19 02 43.3	-0.3
SANVU				IAmb	IAmb	19 03 11.1	
	comp=Z,19nm,0.8s						
BBOO	Buckleboo	47.35	241	P	P	19 07 04.5	+1.3
BBOO				IAmb	IAmb	19 07 20.1	
	comp=Z,23nm,1.5s						
WR0	Warramunga Arr	48.63	258	P	P	19 07 14.3	+1.1
WR0				IAmb	IAmb	19 07 29.2	
	comp=Z,7.8nm,1.4s						
WB0	Warramunga Arr	48.79	259	P	P	19 07 15.3	+0.8
WB0				IAmb	IAmb	19 07 22.2	
	comp=Z,5.3nm,1.4s						
WB2	Warramunga Arr	48.81	258	P	P	19 07 14.9	+0.3
WB2				IAmb	IAmb	19 07 34.0	
	comp=Z,6.9nm,1.4s						
WRAB	Tennant Creek	48.81	258	P	P	19 07 14.6	0.0
WRAB				IAmb	IAmb	19 07 41.4	
	comp=Z,9.1nm,1.4s						
WRA	Warramunga Arr	48.82	258	P	P	19 07 15.6	+0.9
	comp=Z,0.4nm,0.4s,baz=98,slow=6.8,SNR=17						
AS31	Alice Springs	48.95	253	P	P	19 07 16.4	+0.7
ASAR	Alice Springs	48.95	253	P	P	19 07 16.6	+0.9
	comp=Z,1.5nm,0.6s,baz=88,slow=8.2,SNR=43						
ASAR	Alice Springs	48.95	253	P	P	19 07 16.6	+0.8
NWAO	Narrogin (SRO)	63.17	241	P	P	19 08 56.3	-0.6
MDPB	Devils Postpil	75.15	42	P	P	19 10 11.9	+1.0
TUC	Tucson	78.04	51	P	P	19 10 28.6	+1.5
LON	Longmire	79.13	34	P	P	19 10 33.4	+0.6
LON				IAmb	IAmb	19 10 34.9	
	comp=Z,19nm,1.5s						
YPP	Pitchstone Pla	84.02	40	P	P	19 10 58.5	-0.4
ILAR	Eielson Array	84.35	11	P	P	19 11 01.4	+1.8
	comp=Z,0.3nm,0.9s,baz=206,slow=6.0,SNR=1.6						

IDC ***05*** *19:08:02.9±0.7, 56°.13N×113°.72E, h0^{km}, mb3.7/14, mb1 3.9/19, mb1mx3.7/50, mbtmp3.7/19, ML3.5/5, MS3.2/4, Ms1 3.2/4, ms1mx2.7/42, Error ellipse: s-maj=19.7km s-min=10.2km az=146.0*

MOS ***05*** *19:08:02.3±0.9, 56°.00N×113°.74E, h8^{km}, mb3.9/9, Error ellipse: s-maj=8.2km s-min=5.9km az=66.3*

BYKL ***05*** *19:08:03.5±0.1, 56°.05N×113°.69E, h5^{km}±2^{km}*

ISC 05 19:08:03.4±0.9, **56°.12N**±0°.02×**113°.78E**±0°.02, **h6**^{km}±5^{km}, **n110**, σ**2.^{s}47**/179, **mb3.8**/21, **14C-8D**, **East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVKR	Severomuysk	0.12	271	⇑*i*Pg	Pg	19 08 05.6	-0.4
SVKR				Pmax		19 08 05.7	
	18µm,0.2s						
SVKR				*e*Sg	Sg	19 08 08.0	+0.1
SVKR				Smax		19 08 15.5	
	84µm,0.9s						
SVKR	Severomuysk	0.12	271	⇑*i*PG	Pg	19 08 05.6	-0.4
SVKR				*e*S	Sg	19 08 07.9	+0.1
UKT	Uakit	0.63	188	⇑*i*Pg	Pg	19 08 13.2	-2.4
UKT				Pmax		19 08 18.4	
	741nm,0.7s						
UKT				*e*Sg	Sg	19 08 20.5	-3.4
UKT				*e*Sb	Sb	19 08 26.6	+0.5
UKT				max		19 08 27.7	
	2µm,0.2s						
NLYR	Nelyaty	1.14	70	⇓*i*Pg	Pg	19 08 25.4	+0.2
NLYR				*e*Pb	Pn	19 08 27.4	+1.5
NLYR				max		19 08 27.8	
	2µm,0.3s						
NLYR				*e*		19 08 28.9	
NLYR				*e*Sg	Sn	19 08 42.0	+0.2
NLYR				*e*Sb	Sb	19 08 45.8	+5.3
NLYR				max		19 08 46.8	
	5µm,0.9s						
NLYR	Nelyaty	1.14	70	*e*PG	Pg	19 08 25.3	+0.1
NLYR				*e*		19 08 41.3	
NLYR				pmax	pmax		
	comp=Z,2µm,0.8s						
NLYR				smax	smax		
	comp=E,5µm,1.0s						
YOA	Uoyan	1.15	272	⇑*i*Pg	Pg	19 08 23.3	-2.2
YOA				Pmax		19 08 28.7	
	comp=E,1µm,0.3s						
YOA				*e*Sg	Sg	19 08 39.2	-1.2
YOA				Smax		19 08 48.7	
	comp=E,7µm,0.4s						
YOA	Uoyan	1.15	272	⇑*i*PG	Pg	19 08 23.5	-2.0
YOA				*i*		19 08 39.3	
YOA				pmax	pmax		
	comp=Z,686nm,0.1s						
YOA				smax	smax		
	comp=E,7µm,0.4s						
KMO	Kumora	1.47	262	⇑*i*Pg	Pn	19 08 28.5	-1.9
KMO				*e*Pb	Pb	19 08 30.0	-1.1
KMO				*e*		19 08 33.4	
KMO				max		19 08 33.6	
	comp=E,708nm,0.4s						
KMO				*e*Sg	Sn	19 08 48.1	-1.8
KMO				*e*Sb	Sg	19 08 50.9	+0.4
KMO				max		19 08 52.1	
	comp=E,4µm,1.0s						
KMO	Kumora	1.47	262	⇑*i*PG	Pn	19 08 28.4	-1.9
KMO				*e*		19 08 47.2	
KMO				pmax	pmax		
	comp=Z,156nm,0.3s						
KMO				smax	smax		
	comp=N,4µm,1.0s						
BOD	Bodaibo	1.71	4	⇑*i*Pn	Pb	19 08 35.2	-0.1
BOD				*e*Pg	Pg	19 08 35.4	-0.8
BOD				Pmax		19 08 37.9	
	comp=N,805nm,1.1s						
BOD				*e*Sg	Sg	19 08 58.1	-0.3
BOD				Smax		19 09 00.5	
	comp=N,3µm,0.6s						
BOD	Bodaibo	1.71	4	*e*PN	Pb	19 08 35.2	-0.1
BOD				*e*		19 08 58.0	
BOD				pmax	pmax		
	comp=Z,806nm,0.9s						
BOD				smax	smax		
	comp=E,3µm,0.6s						
YLYR	Ulyunkhan	1.94	231	⇑*i*Pg	Pn	19 08 36.5	-0.4
YLYR				*e*		19 08 38.0	
YLYR				max		19 08 38.4	
	comp=E,440nm,0.3s						
YLYR				*e*Sg	Sn	19 09 01.8	+0.3
YLYR				Smax		19 09 08.0	
	comp=E,2µm,0.4s						
YLYR	Ulyunkhan	1.94	231	*e*PN	Pn	19 08 36.7	-0.2
YLYR				*e*		19 08 37.8	
YLYR				*e*S	Sn	19 09 00.7	-0.8
YLYR				*e*		19 09 01.8	
YLYR				pmax	pmax		
	comp=Z,445nm,0.3s						
YLYR				smax	smax		
	comp=N,2µm,0.5s						
NIZ	Nizh Angarsk	2.41	264	*e*Pn	Pn	19 08 43.3	0.0
NIZ				*e*Pg	Pb	19 08 44.9	-2.2
NIZ				Pmax		19 08 47.0	
	comp=N,125nm,0.4s						
NIZ				*e*Sn	Sn	19 09 11.9	-1.2
NIZ				*e*Sg	Sb	19 09 16.2	-0.8
NIZ				Smax		19 09 18.3	
	comp=N,2µm,0.4s						
NIZ	Nizh Angarsk	2.41	264	*e*PN	Pn	19 08 43.4	+0.1
NIZ				*e*		19 08 44.9	
NIZ				*e*		19 09 14.1	
NIZ				pmax	pmax		
	comp=Z,125nm,0.5s						
NIZ				smax	smax		
	comp=N,2µm,0.8s						
CRS	Chara	2.61	71	⇓*i*Pn	Pn	19 08 47.9	+1.8
CRS				*e*Pg	Pb	19 08 52.3	+1.7
CRS				Pmax		19 08 52.8	
	comp=N,520nm,0.7s						
CRS				*e*Sn	Sn	19 09 20.0	+1.9
CRS				*e*Sg	Sg	19 09 27.7	+0.5
CRS				Smax		19 09 29.2	
	comp=N,2µm,1.0s						
CRS	Chara	2.61	71	*e*PN	Pn	19 08 47.8	+1.7
CRS				*e*		19 08 52.0	
CRS				*e*		19 09 27.2	
CRS				pmax	pmax		
	comp=Z,520nm,0.6s						
CRS				smax	smax		
	comp=E,2µm,1.6s						
SYVR	Suvo	3.29	223	*e*Pn	Pn	19 08 54.8	-0.7
SYVR				*e*Pg	Pb	19 09 01.0	-1.2
SYVR				*e*PgPg	PbPb	19 09 04.7	-0.6
SYVR				max		19 09 06.7	
	comp=E,205nm,0.9s						
SYVR				*e*Sn	Sn	19 09 31.4	-3.5
SYVR				*e*Sg	Sb	19 09 42.6	+0.2
SYVR				Smax		19 09 56.4	
	comp=E,1µm,1.5s						
SYVR	Suvo	3.29	223	*e*PN	Pn	19 08 54.6	-0.9
SYVR				*e*		19 09 00.9	
SYVR				*e*		19 09 41.5	
SYVR				pmax	pmax		
	comp=Z,204nm,0.2s						
SYVR				smax	smax		
	comp=N,1µm,1.0s						
VTMR	Vitim	3.40	349	*e*Pn	Pn	19 08 57.8	+0.9
VTMR				*e*Pg	Pb	19 09 05.6	+1.6
VTMR				*e*Sn	Sn	19 09 37.7	+0.3
VTMR				*e*Sg	Sg	19 09 49.5	-2.9
KHNR	Khani	3.53	74	*e*Pn	Pn	19 08 59.9	+1.1
KHNR				*e*Pg	Pb	19 09 07.7	+1.5
KHNR				*e*Sn	Sn	19 09 39.9	-0.9
KHNR				*e*Sg	Sg	19 09 54.2	-2.5
TUP	Tupik	3.92	113	*e*Pn	Pn	19 09 04.6	+0.5
TUP				*e*Pg	Pb	19 09 14.3	+1.4
TUP				Pmax		19 09 17.4	
	comp=N,129nm,0.5s						
TUP				*e*Sn	Sn	19 09 49.3	-1.1
TUP				*e*Sg	Sg	19 10 06.0	-3.1
TUP				*e*		19 10 10.1	
TUP				max		19 10 15.5	
	comp=N,926nm,1.1s						
TUP	Tupik	3.92	113	*e*PN	Pn	19 09 04.8	+0.7
TUP				*e*		19 09 14.0	
TUP				*e*		19 10 06.3	
TUP				pmax	pmax		
	comp=Z,134nm,0.6s						
TUP				smax	smax		
	comp=N,922nm,1.4s						
MXMB	Maximikha	4.09	228	*e*Pn	Pn	19 09 05.7	-0.7
MXMB				*e*Pg	Pb	19 09 14.6	-1.1
MXMB				*e*Sn	Sn	19 09 50.9	-3.6
MXMB				*e*Sg	Sb	19 10 06.4	+1.1
CIT	Chita	4.11	182	*e*Pg	Pb	19 09 15.2	-0.9
CIT				Pmax		19 09 18.6	
	comp=N,118nm,0.4s						
CIT				*e*Sg	Sb	19 10 07.6	+1.7
CIT				Smax		19 10 15.3	
	comp=N,530nm,0.4s						
CIT	Chita	4.11	182	*e*PN	Pn	19 09 05.5	-1.2
CIT				*e*		19 09 15.8	
CIT				*e*S	Sn	19 09 52.4	-2.6
CIT				*e*		19 10 07.5	
CIT				pmax	pmax		
	comp=Z,115nm,1.8s						
CIT				smax	smax		
	comp=E,514nm,1.7s						
OGRR	Ongureny	4.35	238	⇓*i*Pn	Pn	19 09 10.4	+0.5
OGRR				*e*Pg	Pb	19 09 21.3	+1.2
OGRR				Pmax		19 09 24.1	
	comp=E,105nm,0.8s						
OGRR				*e*Sn	Sn	19 09 56.1	-4.8
OGRR				*e*Sg	Sb	19 10 16.9	+4.1
OGRR				Smax		19 10 27.8	
	comp=E,248nm,0.5s						
OGRR	Ongureny	4.35	238	*e*PN	Pn	19 09 10.4	+0.5
OGRR				*e*		19 09 21.3	
OGRR				*e*		19 10 15.4	
OGRR				pmax	pmax		
	comp=Z,104nm,1.0s						
OGRR				smax	smax		
	comp=N,252nm,1.5s						
YKLR	Yuktali	4.41	81	*e*Pg	Pb	19 09 23.2	+2.0
YKLR				*e*Sg	Sg	19 10 22.5	-2.3
TRG	Tyrgan	5.49	235	*e*Pn	Pn	19 09 25.5	-0.1
TRG				*e*Pg	Pb	19 09 40.4	+0.8
TRG				*e*		19 09 44.1	
TRG				max		19 09 47.2	
	comp=N,23nm,0.7s						
TRG				*e*Sn	Sn	19 10 23.4	-5.6
TRG				*e*Sg	Sb	19 10 49.7	+4.1
TRG				Smax		19 10 59.8	
	comp=N,156nm,0.9s						
TRG	Tyrgan	5.49	235	*e*PN	Pn	19 09 24.5	-1.1
TRG				*e*		19 09 39.8	
TRG				*e*S	Sn	19 10 24.7	-4.3

TRG				*e*		19 10 48.7	
TRG				pmax	pmax		
	comp=Z,20nm,0.5s						
TRG				smax	smax		
	comp=E,156nm,0.6s						
FFNB	Fofonovo	5.80	228	*e*Pn	Pn	19 09 28.8	-1.1
FFNB				*e*Pg	Pb	19 09 46.5	+1.6
FFNB				*e*Sg	Sb	19 11 00.7	+6.1
KAB	Kabansk	5.84	229	*e*Pn	Pn	19 09 31.6	+1.1
KAB				max		19 10 03.6	
	comp=E,142nm,0.7s						
KAB				*e*		19 10 33.9	
KAB				*e*Sg	Sb	19 11 03.0	+7.2
KAB				Smax		19 11 30.0	
	comp=E,857nm,1.3s						
HRMR	Khuramsha	6.04	225	*e*Pn	Pn	19 09 33.0	-0.2
HRMR				*e*Pg	Pb	19 09 51.2	+2.2
HRMR				Pmax		19 09 55.2	
	comp=E,71nm,0.5s						
HRMR				*e*Sg	Sb	19 11 08.4	+6.9
HRMR				Smax		19 11 24.5	
	comp=E,935nm,0.9s						
IENR	Iengra	6.19	84	*e*Sg	Sg	19 11 17.5	-4.5
BGT	Bolshoye Golou	6.39	234	*e*Pn	Pn	19 09 37.1	-0.9
BGT				*e*Pg	Pb	19 09 56.8	+1.8
BGT				Pmax		19 10 00.0	
	comp=E,13nm,0.6s						
BGT				*e*Sn	Sn	19 10 46.7	-4.6
BGT				*e*Sg	Sb	19 11 19.4	+7.8
BGT				Smax		19 11 28.8	
	comp=E,107nm,0.6s						
KPC	Khapcheranga	6.48	188	*e*Pn	Pn	19 09 37.5	-1.8
KPC				*e*Pg	Pb	19 09 59.3	+2.8
KPC				Pmax		19 10 02.8	
	comp=E,18nm,0.7s						
KPC				*e*Sg	Sb	19 11 21.8	+7.6
KPC				*e*		19 11 37.2	
KPC				max		19 11 39.2	
	comp=E,369nm,1.2s						
KPC	Khapcheranga	6.48	188	*e*PN	Pn	19 09 37.7	-1.6
KPC				*e*		19 09 58.1	
KPC				*e*S	Sn	19 10 50.6	-2.9
KPC				*e*		19 11 21.4	
KPC				pmax	pmax		
	comp=Z,18nm,0.7s						
KPC				smax	smax		
	comp=E,370nm,1.5s						
LSTR	Listvyanka	6.78	235	*e*Pn	Pn	19 09 42.5	-0.8
LSTR				*e*Pg	Pb	19 10 02.8	+1.3
LSTR				Pmax		19 10 04.4	
	comp=E,13nm,0.8s						
LSTR				*e*Sg	Sb	19 11 30.3	+7.7
LSTR				Smax		19 11 36.7	
	comp=E,107nm,1.5s						
IRK	Irkutsk	6.79	239	*e*Sg	Sb	19 11 30.7	+7.6
IRK				Smax		19 11 34.7	
	comp=E,281nm,0.6s						
IRK	Irkutsk	6.79	239	*e*PG	Pb	19 10 07.1	+5.3
IRK				*e*		19 11 32.8	
IRK				pmax	pmax		
	comp=Z,36nm,0.2s						
IRK				smax	smax		
	comp=E,295nm,1.0s						
TLY	Talaya	7.45	238	Pn	Pn	19 09 53.1	+0.5
	comp=E,0.0nm,0.3s,baz=5.6,slow=19,SNR=2.0						
TLY				Pg	Pb	19 10 17.7	+4.7
	comp=E,0.0nm,0.3s,baz=25,slow=7.9,SNR=3.6						
TLY				Lg	Lg	19 11 52.1	
	comp=E,0.0nm,0.3s,baz=237,slow=23,SNR=8.3						
TLY	Talaya	7.45	238	*e*Pn	Pn	19 09 52.7	+0.1
TLY				*e*Pg	Pb	19 10 15.6	+2.6
TLY				Pmax		19 10 28.8	
	comp=E,11nm,0.9s						
TLY				*e*Sg	Sb	19 11 51.4	+9.3
TLY				Smax		19 12 02.0	
	comp=E,72nm,0.9s						
TLY	Talaya	7.45	238⇑	*e*PN	Pn	19 09 53.0	+0.4
HIA	Hailar	7.76	150⇓	*e*PN	Pn	19 09 56.4	-0.4
HIA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ARS	Arshan	7.90	243	*e*Pn	Pn	19 09 58.5	-0.2
ARS				*e*Pg	Pb	19 10 24.4	+3.8
ARS				Pmax		19 10 27.8	
	comp=Z,28nm,0.5s						
ARS				*e*Sg	Sb	19 12 04.5	+10
ARS				Smax		19 12 09.9	
	comp=Z,331nm,0.8s						
ARS	Arshan	7.90	243	*e*PN	Pn	19 09 58.1	-0.6
ARS				*e*		19 10 26.1	
ARS				pmax	pmax		
	comp=Z,28nm,0.6s						
ZEA	Zeya	8.12	101	*e*PN	Pn	19 10 05.7	+4.0
ZEA				*e*		19 10 28.5	
ZEA				*e*S	Sn	19 11 37.3	+3.6
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ZEA				smax	smax		
	comp=N,40nm,0.7s						
ZAK	Zakamensk	8.52	232	*e*Pn	Pn	19 10 09.2	+2.0
ZAK				max		19 10 37.9	
	comp=N,7.0nm,0.3s						
ZAK				*e*Sg	Sg	19 12 25.2	-11
ZAK				Smax		19 13 10.2	
	comp=N,111nm,1.8s						
MOY	Mondy	8.76	245	*e*Pn	Pn	19 10 11.0	+0.4
MOY				max		19 10 28.2	
	comp=N,14nm,0.8s						
MOY				*e*		19 11 49.4	
MOY				*e*Sg	Sg	19 12 32.4	-12
MOY				Smax		19 12 49.6	
	comp=N,139nm,1.5s						
MOY	Mondy	8.76	245	*e*PN	Pn	19 10 10.5	-0.1
MOY				*e*		19 10 38.6	
MOY				*e*S	Sn	19 11 45.9	-3.8
MOY				*e*		19 12 31.8	
ORL	Orlik	8.91	252	*e*Pn	Pn	19 10 12.3	-0.4
ORL				max		19 10 40.2	
	comp=N,19nm,1.1s						
ORL				*e*Sn	Sn	19 11 48.5	-4.9
ORL				*e*Sg	Sg	19 12 37.9	-11
ORL				Smax		19 12 46.8	
	comp=N,84nm,1.2s						
ORL	Orlik	8.91	252	*e*PN	Pn	19 10 12.8	+0.1
ORL				*e*		19 10 42.7	
ORL				*e*S	Sn	19 11 49.0	-4.4
ORL				*e*		19 12 35.3	
ORL				pmax	pmax		
	comp=Z,20nm,0.7s						
ORL				smax	smax		
	comp=N,83nm,1.4s						
ULN	Ulaanbaatar	9.24	209⇓	*e*P	Pn	19 10 15.3	-1.9
SONM	Songino Array	9.46	212	Pn	Pn	19 10 20.0	-0.2
	comp=N,0.5nm,0.3s,baz=20,slow=13,SNR=11						
SONM				Sn	Sn	19 12 00.8	-6.0
	comp=N,0.6nm,0.3s,baz=27,slow=20,SNR=4.1						
SONM				Lg	Lg	19 12 54.8	
	comp=N,2.8nm,0.3s,baz=26,slow=28,SNR=8.0						
SONM	Songino Array	9.46	212	*e*P	Pn	19 10 21.6	+1.4
SONM				pmax	pmax		
	comp=Z,1.0nm,0.3s						
YAK	Yakutsk	10.09	48	Pn	Pn	19 10 24.6	-4.0
	comp=Z,0.1nm,0.3s,baz=56,slow=2.7,SNR=2.4						
YAK				Sn	Sn	19 12 14.8	-7.2
	comp=Z,0.1nm,0.3s,baz=251,slow=18,SNR=1.9						
YAK				Lg	Lg	19 13 16.5	
	comp=Z,0.1nm,0.3s,baz=157,slow=23,SNR=9.5						
YAK	Yakutsk	10.09	48	*de*P	Pn	19 10 30.2	+1.6
YAK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KLR	Kul'dur	12.88	115	Pn	Pn	19 11 07.7	+0.9
	comp=Z,0.4nm,0.3s,baz=309,slow=18,SNR=8.8						
KLR				Sn	Sn	19 13 19.8	-11
	comp=Z,0.3nm,0.3s,baz=307,slow=20,SNR=2.9						
KLR				Lg	Lg	19 14 47.5	
	comp=Z,0.3nm,0.3s,baz=256,slow=6.1,SNR=6.6						
KLR				LR	LR	19 15 42.9	
	comp=Z,49nm,18.7s,baz=328,slow=36						
KLR	Kul'dur	12.88	115⇑	*e*P	Pn	19 11 07.2	+0.4
KLR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
USRK	Ussuriysk Ar.	16.62	128	Lg	Lg	19 16 44.0	
	baz=326,slow=30,SNR=2.5						
ZALV	Zalesovo Beam	16.69	275	Pn	Pn	19 11 57.0	-0.6
	comp=Z,0.1nm,0.3s,baz=56,slow=12,SNR=2.0						
ZALV				Lg	Lg	19 16 40.0	
	comp=Z,0.1nm,0.3s,baz=69,slow=22,SNR=2.5						
ZALV	Zalesovo Beam	16.69	275	P	Pn	19 11 57.0	-0.6
TIXI	Tiksi	16.85	17	*i* P	Pn	19 11 55.8	-3.7
NRIK	Noril'sk	17.67	329	P	Pn	19 12 06.2	-3.6
	comp=Z,0.6nm,0.3s,baz=135,slow=11,SNR=3.0						
NRIK				S	Sn	19 15 13.3	-13
	comp=Z,0.8nm,0.3s,baz=30,slow=17,SNR=4.2						
NRIK				Lg	Lg	19 17 12.6	
	comp=Z,0.2nm,0.3s,baz=247,slow=17,SNR=0.8						
NRIK	Noril'sk	17.67	329⇑	*e*P	Pn	19 12 10.1	+0.3
NRIK				pmax	pmax		
	comp=Z,20nm,3.8s						
GTA	Gaotai	19.11	215	*e*P	P	19 12 27.0	+0.1
GTA				pP	sP	19 12 31.8	+1.9
GTA				sP	pP	19 12 33.9	+5.1
GTA				pmax	pmax		
	comp=Z,1.0nm,1.1s						
GTA				smax	smax		
	comp=N,2.0nm,1.7s						
GTA				smax	smax		
	comp=E,6.0nm,1.8s						
YSS	Yuzh-Sakhalins	20.09	105⇓	*e*P	P	19 12 37.7	+0.3
YSS				pmax	pmax		
	comp=Z,10.0nm,1.2s						
SEY	Seymchan	20.46	55	P	Pn	19 12 43.5	0.0
	comp=Z,2.1nm,0.5s,baz=267,slow=8.4,SNR=12						
KSRS	Korea Array	20.95	147	LR	LR	19 21 30.0	
	comp=Z,49nm,21.2s,baz=357,slow=38						
KURK	Kurchatov	21.47	270⇑	*e*P	P	19 12 53.0	+0.7
KURK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MK31	Makanchi Array	21.55	258⇑	*e*P	P	19 12 53.0	-0.3
MKAR	Makanchi Array	21.55	258	P	P	19 12 53.6	+0.4
	comp=Z,1.0nm,0.6s,baz=54,slow=8.8,SNR=14						
MKAR				Lg	Lg	19 19 24.4	
	comp=Z,0.1nm,0.4s,baz=55,slow=25,SNR=2.1						
KURBB	Kurchatov Arra	21.57	270	P	P	19 12 53.6	+0.2
	comp=Z,2.1nm,0.5s,baz=64,slow=12,SNR=16						
KURBB				Lg	Lg	19 19 22.4	
	comp=Z,0.2nm,0.2s,baz=68,slow=30,SNR=2.2						
ASAJ	Asahikawa	21.85	111	LR	LR	19 22 28.6	
	comp=Z,44nm,19.9s,baz=328,slow=40						
BVAR	Borovoye Array	25.03	281	P	P	19 13 28.2	+0.3
	comp=Z,0.7nm,0.6s,baz=48,slow=16,SNR=7.7						
BRVK	Borovoye	25.07	281⇓	*e*P	P	19 13 29.0	+0.7
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BRZS	Berezniki	25.16	273	*e*P	P	19 13 29.4	+0.3
	baz=273						
BRZS	Berezniki	25.16	273	*e*P	P	19 13 29.4	+0.3
SHLS	Shalkode	25.43	254	*e*P	P	19 13 30.2	-1.6
	comp=Z,1.5nm,0.8s,baz=254						
SHLS	Shalkode	25.43	254	*e*P	P	19 13 30.1	-1.6
SHLS				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KPKS	Kokpek	25.64	255	*e*P	P	19 13 34.3	+0.6
	comp=Z,1.8nm,1.1s,baz=255						
KPKS	Kokpek	25.64	255	*e*P	P	19 13 34.2	+0.6
KPKS				pmax	pmax		
	comp=Z,2.0nm,1.1s						
UZB	Uzynbulak	25.67	254	*e*P	P	19 13 33.9	-0.1
	comp=Z,2.9nm,1.1s,baz=254						
UZB	Uzynbulak	25.67	254	*e*P	P	19 13 33.8	-0.1
UZB				pmax	pmax		
	comp=Z,3.0nm,1.1s						
CHKK	Chushkaly	26.31	258	*e*P	P	19 13 40.3	+0.6
	baz=258						
CHKK	Chushkaly	26.31	258	*e*P	P	19 13 40.2	+0.6
MDOK	Medeo	26.73	257	*e*P	P	19 13 43.9	+0.3
	baz=257						
MDOK	Medeo	26.73	257	*e*P	P	19 13 43.8	+0.3
TNSS	Tian-Shan	26.87	257	*e*P	P	19 13 45.6	+0.5
	baz=257						
TNSS	Tian-Shan	26.87	257	*e*P	P	19 13 45.6	+0.5
MTBS	Maitube	27.09	257	*e*P	P	19 13 47.1	+0.3
	baz=257						
MTBS	Maitube	27.09	257	*e*P	P	19 13 47.0	+0.3
KSH	Kashi	29.85	252	P	P	19 14 16.4	+5.0
KSH				pmax	pmax		
	comp=Z,2.0nm,1.1s						
KSH				pmax	pmax		
	comp=Z,320nm,5.6s						
CMAR	Chiang Mai Arr	39.23	203	P	P	19 15 33.5	+1.1
	comp=Z,0.7nm,0.3s,baz=6.2,slow=9.2,SNR=5.3						
CMAR	Chiang Mai Arr	39.23	203	*e*P	P	19 15 35.2	+2.8
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
GEYT	Alibeck	40.80	268	P	P	19 15 46.7	+1.3
	comp=Z,1.0nm,0.6s,baz=24,slow=15,SNR=1.9						
OBN	Obninsk	41.47	302	*e*P	P	19 15 52.4	+1.8
OBN				*e*		19 17 24.8	
OBN				*e*		19 17 48.1	
OBN				*e*PPP	PPP	19 17 55.9	
OBN				pmax	pmax		
	comp=Z,4.0nm,1.3s						
FINES	FINESS Array B	42.50	315	P	P	19 15 57.7	-1.1
	comp=Z,2.2nm,0.8s,baz=54,slow=7.5,SNR=4.6						
FINES	FINESS Array B	42.50	315	*e*P	P	19 16 01.1	+2.2
FINES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ILAR	Eielson Array	44.80	37	P	P	19 16 19.4	+1.9
	comp=Z,1.2nm,1.0s,baz=304,slow=10,SNR=11						
MNK	Minsk	45.87	306	*i* P	P	19 16 25.1	-0.9
	comp=E,1.0nm,0.7s						
MNK				*i* P	P	19 16 25.1	-0.9
	comp=N,8.0nm,0.7s						
MNK				*i* P	P	19 16 25.1	-0.9
	comp=Z,6.0nm,0.8s						
MNK				*i* PP	PP	19 18 12.6	-0.5
MNK				*i* PPP	PPP	19 18 52.7	
MNK				*i* PcS	PcS	19 21 56.6	-0.4
MNK				*i* ScP	ScP	19 21 57.8	+1.6
MNK				*i* S	S	19 23 09.6	-0.5
MNK				*i* SS	SS	19 26 35.8	+1.8
MNK				*i* SSS	SSS	19 27 25.3	
MNK				*i* LQ	LQ	19 32 19.1	
MNK				*i* LR	LR	19 35 48.4	
MNK				*i* LRM	MLR	19 38 05.7	
	comp=Z,30nm,9.9s						
MNK				*i* LRM	MLR	19 38 11.2	
	comp=N,182nm,18.1s						
MNK				*i* LRM	MLR	19 38 14.8	
	comp=E,18nm,20.8s						
AKASG	Malin Array Be	47.69	301	P	P	19 16 40.0	-0.3
	comp=E,0.3nm,0.5s,baz=42,slow=8.6,SNR=4.6						
AKASG	Malin Array Be	47.69	301	*e*P	P	19 16 43.0	+2.7
YKA	Yellowknife Ar	55.87	25	P	P	19 17 41.3	+0.1
	comp=E,1.0nm,0.6s,baz=335,slow=6.7,SNR=14						
ESDC	Sonseca Array	71.00	314	P	P	19 19 21.5	-0.3
	comp=E,0.7nm,0.8s,baz=36,slow=6.3,SNR=3.3						
NVAR	Mina Array Bea	75.97	40	P	P	19 19 51.1	-0.1
	comp=E,0.4nm,0.5s,baz=321,slow=5.2,SNR=2.7						
WRA	Warramunga Arr	77.73	160	P	P	19 20 00.1	-0.7
	comp=E,0.5nm,0.3s,baz=349,slow=6.2,SNR=2.3						
ASAR	Alice Springs	81.28	161	P	P	19 20 20.1	-0.1
	comp=E,0.1nm,0.4s,baz=353,slow=5.5,SNR=1.2						
KMBO	Kilima Mbogo	83.44	258	LR	LR	20 00 11.8	
	comp=E,31nm,18.6s,baz=90,slow=38						

IDC 05 19:13:03.1±2.2**, 1°.45S×126°.22E, h0^{km}, mb2.9**/3**, mb1 3.2**/3**, mb1mx3.1**/33**, mbtmp3.0**/3**, Error ellipse: s-maj=190.1km s-min=29.0km az=65.0, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	20.03	157	P	P	19 17 38.1	+0.4
	0.3nm,0.4s,baz=336,slow=10,SNR=6.8						
ASAR	Alice Springs	23.31	162	P	P	19 18 12.8	-0.2
	0.1nm,0.3s,baz=347,slow=12,SNR=4.1						
MKAR	Makanchi Array	61.54	327	P	P	19 23 22.0	-0.1
	0.1nm,0.6s,baz=147,slow=8.1,SNR=1.7						

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*JMA **05** 19:51:44.8±0.2, 39°.39N×143°.70E, h45^{km}, M3.6*

*NIED **05** 19:51:44.8, 39°.39N×143°.70E, h45^{km}, MW3.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}1.66; $M_{\theta\theta}$0.16; $M_{\phi\phi}$-1.82; $M_{r\theta}$0.39; $M_{\theta\phi}$-0.22; $M_{\phi r}$0.55; Fault plane solution: $M_0$1.88000×10^{14} NP1:ϕ_s17.00000°, δ55.00000°, λ103.00000°. NP2:ϕ_s175.00000°, δ37.00000°, λ72.00000°.*

*IDC **05** 19:51:47.3±2.9, 39°.79N×142°.98E, h0^{km}, mb3.4/4, mb1 3.5/5, mb1mx3.4/42, mbtmp3.4/5, ML2.8/1 Error ellipse: s-maj=63.4km s-min=33.0km az=145.0*

ISC 05 19:51:45.5±1.2**, 39°.47N**±0°.06×**143°.50E**±0°.08**, h11^{km}, n24, σ1^{s}.22**/25**, mb3.3**/4**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MIYJ	Miyakonagasawa	1.31	275	P	Pn	19 52 09.5	-0.2
MIYJ				*e*S	Sn	19 52 27.0	-0.1
JTH	Tanohata	1.35	291	P	Pn	19 52 10.2	-0.1
OFUJ	Ofunato	1.47	255	P	Pn	19 52 11.5	-0.5
JOM	Ohasama	1.71	271	P	Pn	19 52 15.6	+0.4
JANG	Nango	1.78	301	P	Pn	19 52 15.7	-0.5
JMK	Ichinoseki	1.85	255	P	Pn	19 52 17.0	-0.1
JIO	Ouri	1.96	240	P	Pn	19 52 17.6	-1.0
JIO				*e*S	Sn	19 52 40.7	-2.5
JYK	Kaneyama	2.50	258	P	Pn	19 52 26.5	+0.4
JOT	Ohata	2.68	316	P	Pn	19 52 29.1	+0.6
JNBK	Urakawa-nobuka	2.87	349	P	Pn	19 52 32.0	+0.8
JKB	Kayabe	3.06	323	*e*S	Sn	19 53 10.4	0.0
JCH	Churui	3.15	358	P	Pn	19 52 34.7	-0.3
JCH				*e*S	Sn	19 53 11.7	-0.8
JFT	Otama	3.15	233	P	Pn	19 52 34.7	-0.4
JAW	Awa shima	3.46	254	P	Pn	19 52 40.6	+1.2
JAK	Akkeshi	3.64	14	P	Pn	19 52 40.8	-1.0
JAK				*e*S	Sn	19 53 22.2	-2.5
MAT	Matsushiro	5.10	237	P	Pn	19 53 02.6	+0.8
MJAR	Matsushiro Arr	5.10	237	Pn	Pn	19 53 02.9	+1.1
	0.4nm,0.3s,baz=34,slow=14,SNR=18						
SONM	Songino Array	27.90	300	P	P	19 57 34.2	-1.3
	0.2nm,0.4s,baz=88,slow=10,SNR=2.2						
H11N2	WAKE ISLAND Hy	28.15	128	T	T	20 27 01.0	
	baz=319,slow=75,SNR=5.3						
H11N1	WAKE ISLAND Hy	28.16	128	T	T	20 27 04.8	
	baz=319,slow=75,SNR=4.2						
H11N3	WAKE ISLAND Hy	28.17	128	T	T	20 27 00.2	
	baz=319,slow=75,SNR=4.7						
ZALV	Zalesovo Beam	41.54	310	P	P	19 59 31.7	-1.1
	0.6nm,0.5s,baz=94,slow=8.7,SNR=2.4						
MKAR	Makanchi Array	44.27	300	P	P	19 59 54.8	-0.1
	0.2nm,0.6s,baz=84,slow=8.6,SNR=3.3						
ILAR	Eielson Array	46.56	34	P	P	20 00 15.9	+3.1
	0.3nm,0.8s,baz=263,slow=7.2,SNR=2.2						

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*NEIC **05** 20:01:58.9±2.0, 43°.56N±0°.02×105°.25W±0°.07, h0^{km}±2^{km}, ML3.4/66, Error ellipse: s-maj=9.0km s-min=3.1km az=104.0*

*IDC **05** 20:01:59.6±1.1, 43°.93N×105°.80W, h0^{km}, mb1 3.5/5, mb1mx3.4/46, mbtmp3.2/5, ML3.1/4, Error ellipse: s-maj=23.8km s-min=9.4km az=146.0*

ISC 05 20:01:58.2±0.9**, 43°.61N**±0°.06×**105°.29W**±0°.06**, h0^{km}, n90, σ1^{s}.35**/89**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	Black Hills	1.04	60	Pg	Pg	20 02 16.6	-1.4
RSSD				IAML		20 02 39.6	
	559nm,0.6s						
K22A	Casper	1.32	224	Pn	Pg	20 02 22.5	-0.9
PHWY	Pilot Hill	2.31	183	Pn	Pn	20 02 38.0	+0.2
RWWY	Rawlins	2.39	217	Pn	Pn	20 02 38.2	-0.6
RWWY				IAML		20 03 16.4	
	296nm,0.9s						
RWWY				IAML		20 03 19.9	
	275nm,0.8s						
LAO	LASA Array	3.15	348	Pn	Pn	20 02 50.4	+1.4
LAO				IAML		20 03 56.5	
	191nm,1.0s						
RLMT	Red Lodge	3.23	299	Pn	Pn	20 02 51.1	+0.8
RLMT				IAML		20 03 54.1	
	53nm,0.6s						
RLMT				IAML		20 04 03.5	
	67nm,0.9s						
BW06	Boulder Array	3.23	256	Pn	Pn	20 02 51.4	+1.0
BW06				IAML		20 03 47.9	
	52nm,0.6s						
PD31	Pinedale Array	3.23	256	Pn	Pn	20 02 51.8	+1.4
PDAR	Pinedale Array	3.23	256	Pn	Pn	20 02 51.5	+1.0
	1.7nm,0.3s,baz=73,slow=15,SNR=38						
PDAR				Lg	Lg	20 03 33.9	
	6.0nm,0.3s,baz=68,slow=29,SNR=1.8						
PDAR	Pinedale Array	3.23	256	Pn	Pn	20 02 52.0	+1.6
YNE	Yellowstone No	3.66	294	Pn	Pn	20 02 57.5	+1.2
YMP	Mirror Lake Pl	3.68	290	Pn	Pn	20 02 58.3	+1.7
LKWY	Lake	3.80	286	Pn	Pn	20 02 58.7	+0.4
LKWY				IAML		20 04 07.7	
	51nm,1.1s						
LKWY				IAML		20 04 10.1	
	53nm,2.2s						
GCMT	Greycliff	3.81	306	Pn	Pn	20 02 59.1	+0.9
ISCO	Idaho Springs	3.82	184	Pn	Pn	20 02 59.0	+0.5
LOHW	Long Hollow	3.86	272	Pn	Pn	20 02 57.9	-1.1
H17A	Grant Village	3.90	283		Pn	20 03 02.8	+3.3
H17A				IAML		20 04 06.8	
	comp=N,50nm,1.2s						
H17A				IAML		20 04 11.7	
	comp=E,38nm,1.2s						
FLWY	Flagg Ranch	3.94	279	Pn	Pn	20 03 02.0	+1.9
FLWY				IAML		20 04 13.4	
	comp=E,104nm,2.6s						
FLWY				IAML		20 04 15.4	
	comp=E,52nm,3.0s						
MOOW	Moose Ponds	3.96	274	Pn	Pn	20 03 02.6	+2.2
SNOW	Snow King Moun	3.98	270	Pn	Pn	20 03 01.3	+0.7
SNOW				IAML		20 04 19.0	
	comp=E,68nm,1.0s						
SNOW				IAML		20 04 29.7	
	comp=E,60nm,0.8s						
YNR	Norris Junctio	4.03	288	Pn	Pn	20 03 02.4	+1.0
YPP	Pitchstone Pla	4.04	281	Pn	Pn	20 03 02.3	+0.8
REDW	Red Top Meadow	4.06	268	Pn	Pn	20 03 02.9	+1.2
REDW				IAML		20 04 26.2	
	comp=E,103nm,0.8s						
REDW				IAML		20 04 30.1	
	comp=E,70nm,0.9s						
O20A	White River Ci	4.12	213	Pn	Pn	20 03 04.4	+1.9
O20A				IAML		20 04 25.4	
	comp=E,56nm,1.5s						
O20A				IAML		20 04 55.9	
	comp=N,65nm,2.8s						
YHH	Holmes Hill	4.17	288		Pn	20 03 03.7	+0.4
YMR	Madison River	4.22	286		Pn	20 03 05.1	+1.1
AHID	Auburn Hatcher	4.33	261		Pn	20 03 05.7	+0.2
AHID				IAML		20 04 23.7	
	comp=N,50nm,0.8s						
AHID				IAML		20 04 31.1	
	comp=E,40nm,0.8s						
E28A	Huff	4.40	46		Pn	20 03 08.7	+2.5
YHB	Horse Butte	4.40	287		Pn	20 03 05.4	-1.0
RDMU	Red Mountain	4.40	228	Pn	Pn	20 03 05.6	-0.8
YHL	Hebgen Lake	4.41	288		Pn	20 03 07.3	+0.6
ECR	Eagle Creek	4.47	265		Pn	20 03 08.4	+1.0
QLMT	Earthquake Lak	4.58	288		Pn	20 03 10.5	+1.6
SMCO	Snowmass	4.61	197	Pn	Pn	20 03 08.8	-0.7
SMCO				IAML		20 04 34.1	
	comp=E,34nm,1.0s						
SMCO				IAML		20 04 36.8	
	comp=E,29nm,1.2s						
SUSD	Miller	4.64	78	Pn	Pn	20 03 10.5	+0.9
K31A	O'Neill	4.88	99	Pn	Pn	20 03 13.0	+0.1
DGMT	Dagmar	4.92	9		Pn	20 03 15.3	+1.9
BOZ	Bozeman (W)	4.94	296	Pn	Pn	20 03 13.1	-0.7
BOZ				IAML		20 04 44.2	
	comp=E,17nm,0.6s						
BOZ				IAML		20 05 53.1	
	comp=E,16nm,4.2s						
KSCO	Kaye Shedlock'	5.01	156		Pn	20 03 14.5	-0.3
TCUT	Toone Canyon	5.17	243	Pn	Pn	20 03 15.2	-1.9
EGMT	Eagleton	5.40	326	Pn	Pn	20 03 21.1	+1.0
DLMT	Dillon	5.51	291	Pn	Pn	20 03 20.6	-1.1
LRM	Limekiln Ridge	5.56	296	Pn	Pn	20 03 23.2	+0.8
HRY	Holter Researc	5.57	306		Pn	20 03 23.3	+1.0
MCMT	McKenzie Canyo	5.57	285		Pn	20 03 21.6	-0.9
CTU	Camp Tracy	5.62	241		Pn	20 03 21.2	-1.9
PV22	Blue Mesa, Par	5.72	209		Pn	20 03 25.1	+0.5
PV07	Paradox Valley	5.76	207	Pn	Pn	20 03 23.8	-1.3
SPUT	South Promonto	5.78	249	Pn	Pn	20 03 24.4	-0.9
PV15	Paradox Valley	5.79	206		Pn	20 03 23.9	-1.7
MDND	Maddock	5.81	41	Pn	Pn	20 03 26.0	+0.4
P17A	Butcher Ranch,	5.82	227		Pn	20 03 26.4	+0.6
SDCO	Great Sand Dun	5.86	182		Pn	20 03 26.9	+0.3
PV23	Carpenter Ridg	5.87	210		Pn	20 03 23.3	-3.5
PV04	Paradox Valley	5.89	209		Pn	20 03 28.3	+1.5
BCYI	Bear Canyon	5.90	280	Pn	Pn	20 03 27.0	0.0

PV12	**Saucer Basin,**	**5.92**	**208**		**Pn**	**20 03 26.1**	**-1.3**
PV14	**Lion Creek, Pa**	**5.95**	**210**		**Pn**	**20 03 29.1**	**+1.4**
MPU	**Maple Canyon**	**5.95**	**235**		**Pn**	**20 03 27.8**	**+0.1**
PV20	**West Nyswonger**	**5.96**	**209**		**Pn**	**20 03 30.1**	**+2.4**
PV11	**David Mesa, Pa**	**5.96**	**208**	Pn	**Pn**	**20 03 29.6**	**+1.7**
PV16	**Nyswonger Mesa**	**5.96**	**209**		**Pn**	**20 03 28.2**	**+0.3**
SRU	**San Rafael Swe**	**5.98**	**223**		**Pn**	**20 03 28.5**	**+0.4**
PV19	**Morning Glory**	**5.99**	**209**		**Pn**	**20 03 28.1**	**-0.1**
PV03	**Paradox Valley**	**5.99**	**208**		**Pn**	**20 03 29.3**	**+1.0**
PV02	**Paradox Valley**	**6.00**	**207**		**Pn**	**20 03 29.2**	**+0.8**
PV17	**East Wray Mesa**	**6.01**	**209**		**Pn**	**20 03 27.0**	**-1.5**
PV01	**Paradox Valley**	**6.01**	**206**		**Pn**	**20 03 28.2**	**-0.3**
PV18	**Skein Mesa, Pa**	**6.02**	**208**	Pn	**Pn**	**20 03 28.8**	**+0.1**
PV13	**Radium Mtn., P**	**6.07**	**207**		**Pn**	**20 03 29.7**	**+0.3**
TMUT	**Trail Mountain**	**6.19**	**228**		**Pn**	**20 03 31.8**	**+0.7**
PV05	**Paradox Valley**	**6.24**	**209**	Pn	**Pn**	**20 03 28.7**	**-3.0**
ECSD	**EROS Data Cent**	**6.29**	**86**		**Pn**	**20 03 34.2**	**+2.0**
BGU	**Big Grassy Mou**	**6.34**	**248**	Pn	**Pn**	**20 03 31.9**	**-1.1**
CBKS	**Cedar Bluff**	**6.36**	**137**		**Pn**	**20 03 31.6**	**-1.6**
Q16A	**Castle Valley**	**6.45**	**225**	Pn	**Pn**	**20 03 35.2**	**+0.6**
DUG	**Dugway, Tooele**	**6.57**	**241**	Pn	**Pn**	**20 03 37.8**	**+1.6**
F33A	**5 Mile Ranch,**	**6.78**	**68**	Pn	**Pn**	**20 03 41.0**	**+2.0**
MVCO	**Mesa Verde**	**6.85**	**202**	Pn	**Pn**	**20 03 41.6**	**+1.6**
R32A	**Long Quarter,**	**7.18**	**134**	Pn	**Pn**	**20 03 45.8**	**+1.3**
MSU	**Marysvale**	**7.28**	**228**	Pn	**Pn**	**20 03 43.4**	**-2.6**
MVU	**Marysvale**	**7.31**	**228**	Pn	**Pn**	**20 03 46.6**	**+0.3**
TCRU	**Three Creeks R**	**7.36**	**230**	Pn	**Pn**	**20 03 47.8**	**+0.7**
MTPU	**Mount Pierson**	**7.63**	**226**	Pn	**Pn**	**20 03 52.3**	**+1.4**
I10CA	**LAC DU BONNET**	**9.14**	**41**	*i*		20 57 10.0	
	baz=221,slow=338,SNR=2.5						
AMTX	**Amarillo**	**9.15**	**161**	Pn	**Pn**	**20 04 11.6**	**0.0**
ULM	**Lac du Bonnet**	**9.24**	**41**	Pn	**Pn**	**20 04 12.1**	**-0.5**
	comp=E,0.5nm,0.3s,baz=233,slow=9.1,SNR=6.4						
ULM				Lg	Lg	20 06 44.7	
	comp=E,0.7nm,0.3s,baz=135,slow=19,SNR=3.3						
NVAR	**Mina Array Bea**	**11.11**	**247**	Pn	**Pn**	**20 04 37.6**	**-0.8**
	comp=E,0.4nm,0.3s,baz=60,slow=14,SNR=3.6						
TXAR	**Lajitas Array**	**14.31**	**174**	Pn	**P**	**20 05 30.9**	**+1.3**
	baz=327,slow=13,SNR=1.1						
TXAR				Pg		20 06 28.1	
	baz=2.5,slow=16,SNR=4.4						
YKA	**Yellowknife Ar**	**19.69**	**347**	P	**P**	**20 06 27.4**	**-1.2**
	comp=E,0.1nm,0.3s,baz=151,slow=10,SNR=3.0						

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*IDC **05** 20:04:48.9±1.9, 58°.35S×24°.48W, h0^{km}, mb4.2/3, mb1 4.4/3, mb1mx4.0/23, mbtmp4.2/3, Error ellipse: s-maj=82.9km s-min=34.7km az=178.0*

*NEIC **05** 20:04:49.1±1.7, 58°.8S±0°.2×23°.8W±0°.3, h25^{km}±6^{km}, mb4.3/12, Error ellipse: s-maj=24.5km s-min=18.5km az=155.0*

ISC 05 20:04:47.6±0.8**, 58°.9S**±0°.1×**24°.0W**±0°.1**, h10**^{km}**, n24,** σ**1^{s}28**/23**, mb4.2**/7**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**8.28**	**298**		Pn	20 06 31.3	-16
VNA1	**Neumayer--Stat**	**13.54**	**157**	P	**P**	**20 08 08.2**	**-0.4**
VNA3	**Neumayer Olymp**	**13.77**	**160**	P	**P**	**20 08 11.1**	**-0.1**
VNA2	**Neumayer--Watz**	**13.94**	**157**	P	**P**	**20 08 12.6**	**-0.4**
	baz=324,slow=15						
SNAA	**Sanae**	**15.47**	**155**	P	**P**	**20 08 33.5**	**+3.4**
SNAA	**Sanae**	**15.47**	**155**	P	**P**	**20 08 31.9**	**+1.8**
BELA	**Belgrano 2**	**19.45**	**187**	P	**P**	**20 09 13.6**	**-0.2**
PMSA	**Palmer Station**	**19.55**	**235**	P	**P**	**20 09 13.7**	**-1.3**
EFI	**East Falkland**	**20.52**	**276**	P	**P**	**20 09 26.8**	**+1.1**
EFI				IAmb	IAmb	20 09 28.3	
	comp=Z,15nm,0.7s						
PLCA	**Paso Flores**	**34.22**	**281**	P	**P**	**20 11 32.1**	**-1.1**
	comp=Z,7.1nm,1.1s,baz=139,slow=8.6,SNR=8.7						
PLCA	**Paso Flores**	**34.22**	**281**	P	**P**	**20 11 33.4**	**+0.2**
LC01	**Cunco**	**36.27**	**282**	P	**P**	**20 11 50.7**	**-0.1**
LC01				IAmb	IAmb	20 11 52.7	
	comp=Z,5.9nm,0.9s						
BI02	**San Fabin de**	**37.68**	**285**	P	**P**	**20 12 02.4**	**-0.5**
BI02				IAmb	IAmb	20 12 09.8	
	comp=Z,3.9nm,0.9s						
BO02	**Sierra Bellavi**	**38.91**	**287**	P	**P**	**20 12 14.2**	**+1.0**
BO02				IAmb	IAmb	20 12 31.7	
	comp=Z,12nm,1.4s						
MT02	**Curacav**	**40.31**	**288**	P	**P**	**20 12 25.8**	**+0.9**
CO01	**Juntas del Tor**	**42.49**	**292**	P	**P**	**20 12 42.0**	**-1.0**
CO01				IAmb	IAmb	20 12 49.6	
	comp=Z,7.8nm,1.4s						
LPAZ	**La Paz**	**53.39**	**304**	P	**P**	**20 14 07.8**	**-0.2**
	comp=Z,1.9nm,0.5s,baz=150,slow=4.5,SNR=7.8						
LPAZ	**La Paz**	**53.39**	**304**	P	**P**	**20 14 07.8**	**-0.2**
LPAZ				IAmb	IAmb	20 14 11.6	
	comp=Z,1.9nm,0.8s						
TORD	**Torodi Ar. Bea**	**74.73**	**26**	P	**P**	**20 16 28.0**	**+0.6**
	comp=Z,0.7nm,0.5s,baz=200,slow=5.6,SNR=4.4						
TORD	**Torodi Ar. Bea**	**74.73**	**26**	P	**P**	**20 16 26.0**	**-1.4**
YKA	**Yellowknife Ar**	**139.39**	**314**	PKP	**PKiKP**	**20 24 15.8**	**+0.1**
	comp=Z,0.4nm,0.7s,baz=117,slow=3.1,SNR=7.6						
SONM	**Songino Array**	**149.11**	**89**	PKPbc	**PKPab**	**20 24 38.2**	**-1.4**
	comp=Z,0.4nm,0.7s,baz=224,slow=4.0,SNR=1.6						
SONM	**Songino Array**	**149.11**	**89**		**PKPab**	**20 24 38.5**	**-1.1**
ILAR	**Eielson Array**	**153.23**	**307**	PKPbc	**PKiKP**	**20 24 46.3**	**+2.2**
	comp=Z,0.8nm,0.7s,baz=144,slow=3.6,SNR=7.3						

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*NEIC **05** 20:10:01.4±0.9, 9°.6S±0°.2×160°.8E±0°.1, h109^{km}±5^{km}, mb4.2/10, Error ellipse: s-maj=25.3km s-min=15.1km az=189.0*

*IDC **05** 20:10:01.8±1.8, 9°.62S×160°.71E, h105^{km}±8^{km}, mb3.5/7, mb1 3.7/8, mb1mx3.5/31, mbtmp3.8/8, Error ellipse: s-maj=31.1km s-min=21.8km az=105.0*

ISC 05 20:09:59.7±0.9**, 9°.7S**±0°.1×**160°.9E**±0°.1**, h100**^{km}**, n26,** σ**0^{s}59**/27**, mb3.7**/11**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.01**	**287**	P	**Pn**	**20 10 20.5**	**+0.2**
	271nm,0.3s,baz=167,slow=6.0,SNR=70						
HNR				S	**Sn**	**20 10 35.3**	**-0.4**
	302nm,0.3s,baz=170,slow=20,SNR=15						
DZM	**Mont Dzumac**	**13.37**	**157**	P	**P**	**20 13 11.3**	**-0.2**
	0.3nm,0.3s,baz=26,slow=9.5,SNR=11						
PMG	**Port Moresby**	**13.58**	**270**	P	**P**	**20 13 13.6**	**-0.2**
WR0	**Warramunga Arr**	**27.41**	**245**	P	**P**	**20 15 36.5**	**+0.3**
WR0				IAmb	IAmb	20 15 37.2	
	comp=Z,11nm,1.5s						
WB0	**Warramunga Arr**	**27.49**	**246**	P	**P**	**20 15 37.1**	**+0.2**
WB0				IAmb	IAmb	20 16 04.0	
	comp=Z,12nm,1.4s						
WRAB	**Tennant Creek**	**27.58**	**245**	P	**P**	**20 15 38.0**	**+0.3**
WRAB				IAmb	IAmb	20 15 38.7	
	comp=Z,3.6nm,0.8s						
WB2	**Warramunga Arr**	**27.58**	**245**	P	**P**	**20 15 38.2**	**+0.5**
WB2				IAmb	IAmb	20 15 38.8	
	comp=Z,9.4nm,1.3s						
WRA	**Warramunga Arr**	**27.59**	**245**	P	**P**	**20 15 38.0**	**+0.2**
	comp=Z,1.9nm,0.6s,baz=76,slow=9.3,SNR=22						
WRA	**Warramunga Arr**	**27.59**	**245**	P	**P**	**20 15 37.8**	**0.0**
STKA	**Stephens Creek**	**28.40**	**216**	P	**P**	**20 15 46.2**	**+1.3**
	comp=Z,0.8nm,0.5s,baz=49,slow=16,SNR=3.8						
STKA	**Stephens Creek**	**28.40**	**216**	P	**P**	**20 15 44.8**	**-0.1**
AS31	**Alice Springs**	**29.28**	**238**	P	**P**	**20 15 52.8**	**-0.1**
ASAR	**Alice Springs**	**29.28**	**238**	P	**P**	**20 15 52.6**	**-0.2**
	comp=Z,0.6nm,0.5s,baz=64,slow=10,SNR=14						
ASAR	**Alice Springs**	**29.28**	**238**	P	**P**	**20 15 52.4**	**-0.5**
BBOO	**Buckleboo**	**32.46**	**221**	P	**P**	**20 16 21.6**	**+0.9**
FITZ	**Fitzroy Crossi**	**35.19**	**252**	P	**P**	**20 16 44.0**	**-0.6**
CMAR	**Chiang Mai Arr**	**67.25**	**295**	P	**P**	**20 20 44.8**	**+0.8**
	comp=Z,0.7nm,0.7s,baz=126,slow=5.7,SNR=7.4						
CMAR	**Chiang Mai Arr**	**67.25**	**295**	P	**P**	**20 20 43.4**	**-0.6**
SONM	**Songino Array**	**74.85**	**325**	P	**P**	**20 21 30.5**	**+0.9**
	comp=Z,0.9nm,0.7s,baz=143,slow=6.7,SNR=4.5						
SONM	**Songino Array**	**74.85**	**325**	P	**P**	**20 21 30.4**	**+0.9**
SII	**Sitkinak Islan**	**75.71**	**24**	P	**P**	**20 21 33.0**	**-1.1**
ILAR	**Eielson Array**	**83.84**	**20**	P	**P**	**20 22 18.4**	**+0.5**
	comp=Z,0.3nm,0.8s,baz=242,slow=5.1,SNR=1.8						
ILAR	**Eielson Array**	**83.84**	**20**	P	**P**	**20 22 18.0**	**+0.2**
MKAR	**Makanchi Array**	**89.34**	**318**	P	**P**	**20 22 44.9**	**-0.2**
	comp=Z,0.2nm,0.4s,baz=99,slow=6.4,SNR=5.7						
MKAR	**Makanchi Array**	**89.34**	**318**	P	**P**	**20 22 44.7**	**-0.4**
ESDC	**Sonseca Array**	**147.28**	**338**	PKPbc	**PKPbc**	**20 29 31.9**	**-0.2**
	comp=Z,0.6nm,1.0s,baz=28,slow=5.8,SNR=1.9						

IDC 05 20:19:11.0±45.0**, 16°.50S**×**176°.31W, h0**^{km}**, mb4.1**/3**, mb1 4.3**/3**, mb1mx3.7**/36**, mbtmp4.1**/3**, MS3.5**/1**, Ms1 3.5**/1**, ms1mx2.6**/32**, Error ellipse: s-maj=850.8km s-min=156.6km az=78.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**41.06**	**240**	P	P	20 26 57.6	+1.1
	1.1nm,0.4s,baz=82,slow=9.5,SNR=8.0						
WRA	**Warramunga Arr**	**46.87**	**258**	P	P	20 27 42.4	-0.9
	0.3nm,0.3s,baz=99,slow=7.8,SNR=17						
ASAR	**Alice Springs**	**47.11**	**253**	P	P	20 27 44.8	-0.4
	5.5nm,0.5s,baz=88,slow=8.0,SNR=119						
SIJI	**Sorong**	**53.90**	**281**	LR	LR	20 50 29.7	
	comp=Z,37nm,18.2s,baz=88,slow=35						

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*MOS **05** 20:28:41.4±0.9, 38°.67N×141°.94E, h55^{km}, mb4.7/16, Error ellipse: s-maj=7.7km s-min=5.3km az=112.7*

*JMA **05** 20:28:42.9, 38°.62N×141°.90E, h48^{km}±1^{km}, M4.1*

JMA Felt II J1.

*NIED **05** 20:28:43.0, 38°.62N×141°.90E, h48^{km}, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.05; $M_{\theta\theta}$-0.11; $M_{\phi\phi}$-0.94; $M_{r\theta}$0.46; $M_{\theta\phi}$-0.45; $M_{\phi r}$1.18; Fault plane solution: $M_0$1.67000×10^{15} NP1:ϕ_s22.00000°, δ70.00000°, λ89.00000°. NP2:ϕ_s205.00000°, δ20.00000°, λ93.00000°.*

*NEIC **05** 20:28:43.1±1.1, 38°.60N±0°.05×141°.92E±0°.09, h57^{km}±5^{km}, mb4.5/27 Error ellipse: s-maj=10.2km s-min=7.5km az=112.0*

*IDC **05** 20:28:43.4±0.7, 38°.60N×141°.88E, h55^{km}±6^{km}, mb3.7/18, mb1 3.9/24, mb1mx3.8/42, mbtmp4.0/24, MS3.1/9, Ms1 3.2/9, ms1mx2.9/43, Error ellipse: s-maj=15.1km s-min=10.8km az=108.0*

ISC 05 20:28:42.8±0.6**, 38°.61N**±0°.04×**141°.98E**±0°.05**, h56**^{km}±4^{km}**, n179,** σ**1^{s}31**/197**, mb4.3**/51**, MS3.1**/5**, 7C-10D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKMT	**Kesennumamotoy**	**0.45**	**297**	P	**Pn**	**20 28 52.8**	**-1.0**
JKMT				S	**Sn**	**20 28 59.5**	**-2.2**
JIKH	**Ishinomakikobu**	**0.50**	**234**	P	**Pn**	**20 28 53.5**	**-0.9**
JIKH				S	**Sn**	**20 29 00.7**	**-2.1**
JIO	**Ouri**	**0.52**	**253**	P	**Pn**	**20 28 53.6**	**-1.0**
JIO				S	**Sn**	**20 29 00.8**	**-2.3**
OFUJ	**Ofunato**	**0.53**	**333**	P	**Pn**	**20 28 54.0**	**-0.7**
OFUJ				S	**Sn**	**20 29 01.7**	**-1.7**
JMK	**Ichinoseki**	**0.69**	**300**	P	**Pn**	**20 28 55.8**	**-0.8**
JMK				*e*S	**Sn**	**20 29 04.8**	**-1.9**
JOM	**Ohasama**	**1.02**	**328**	P	**Pn**	**20 29 00.4**	**-0.5**
JOM				*e*S	**Sn**	**20 29 13.5**	**-0.8**
JOU	**Okura**	**1.06**	**257**	P	**Pn**	**20 29 00.7**	**-0.8**
JOU				*e*S	**Sn**	**20 29 13.9**	**-1.4**
JMM	**Marumori**	**1.19**	**232**	P	**Pn**	**20 29 02.2**	**-1.0**
JMM				*e*S	**Sn**	**20 29 16.5**	**-1.9**
JMM	**Marumori**	**1.19**	**232**		**Pn**	**20 29 02.1**	**-1.0**
JYK	**Kaneyama**	**1.30**	**284**	P	**Pn**	**20 29 04.1**	**-0.6**
JRG	**Rokugo**	**1.31**	**307**	P	**Pn**	**20 29 04.2**	**-0.6**
JFK	**Kawauchi**	**1.52**	**216**	P	**Pn**	**20 29 06.9**	**-0.7**
JYS	**Shirataka**	**1.55**	**256**	P	**Pn**	**20 29 07.7**	**-0.4**
JTM	**Tenmabayashi**	**2.29**	**342**	Pn	**Pn**	**20 29 18.4**	**+0.3**
JYT	**Yasato**	**2.77**	**211**	Pn	**Pn**	**20 29 24.2**	**-0.4**
JSD	**Sado**	**2.98**	**260**		**Pn**	**20 29 26.8**	**-0.7**
ERM	**Erimo**	**3.52**	**14**	*de*P	**Pn**	**20 29 35.7**	**+0.8**
ERM	**Erimo**	**3.52**	**14**		**Pn**	**20 29 35.2**	**+0.3**
MAJO	**Matsushiro**	**3.64**	**237**	*d i*P	**Pn**	**20 29 37.8**	**+1.2**
MAJO	**Matsushiro**	**3.64**	**237**		**Pn**	**20 29 36.5**	**-0.1**
MAT	**Matsushiro**	**3.64**	**237**	P	**Pn**	**20 29 37.7**	**+1.1**
MAT				*e*S	**Sn**	**20 30 21.3**	**+3.0**
MJAR	**Matsushiro Arr**	**3.64**	**237**	P	**Pn**	**20 29 38.0**	**+1.4**
	1.6nm,0.3s,baz=39,slow=12,SNR=59						
MJAR				LR	LR	20 31 13.8	
	comp=Z,228nm,18.6s,baz=75,slow=42						
MJAR	**Matsushiro Arr**	**3.64**	**237**	P	**Pn**	**20 29 38.0**	**+1.4**
MJAR	**Matsushiro Arr**	**3.64**	**237**		**Pn**	**20 29 37.1**	**+0.5**
MJB9	**Matsu-Tunnel**	**3.64**	**237**	Pn	**Pn**	**20 29 37.4**	**+0.8**
JEW	**Eniwo**	**4.25**	**355**	Pn	**Pn**	**20 29 46.8**	**+1.9**
JGF	**Kuroka**	**4.76**	**232**		**Pn**	**20 29 53.0**	**+1.0**
INU	**Inuyama**	**5.13**	**232**		**Pn**	**20 29 58.0**	**+1.0**
ASAJ	**Asahikawa**	**5.52**	**5**	P	**Pn**	**20 30 02.6**	**+0.2**
	2.8nm,0.3s,baz=181,slow=16,SNR=23						
ASAJ				S	**Sn**	**20 31 07.6**	**+3.1**
	2.9nm,0.3s,baz=132,slow=26,SNR=5.3						
ASAJ				LR	LR	20 32 11.3	
	comp=Z,99nm,21.1s,baz=178,slow=38						
JKA	**Kamikawa-asahi**	**5.52**	**5**	Pn	**Pn**	**20 30 02.5**	**+0.2**
NMR	**Nemuro--Hokkai**	**5.54**	**30**	*e*P	**Pn**	**20 30 00.7**	**-1.8**
NMR				*e*S	**Sn**	**20 31 00.4**	**-4.4**
JHJ	**Hachijo jima 2**	**5.76**	**199**	S	**Sn**	**20 31 07.3**	**-3.0**
	29nm,0.3s,baz=51,slow=22,SNR=1.5						
GLVR	**Golovnino**	**5.78**	**26**	*e*P	**Pn**	**20 30 04.7**	**-1.1**
GLVR				*e*S	**Sn**	**20 31 07.0**	**-3.7**
GLVR				smax	smax		
	comp=E,205nm,0.4s						
GLVR				smax	smax		
	comp=N,408nm,0.3s						
GRPR	**Tuman**	**6.09**	**27**	*e*P	**Pn**	**20 30 09.0**	**-1.1**
GRPR				*e*S	**Sn**	**20 31 13.3**	**-5.1**
GRPR				pmax	pmax		
	comp=Z,88nm,0.2s						
GRPR				smax	smax		
	comp=N,201nm,0.4s						
GRPR				smax	smax		
	comp=E,253nm,0.4s						
JWT	**Wachi**	**6.23**	**240**		**Pn**	**20 30 15.1**	**+3.1**
TEY	**Ternei**	**7.57**	**330**	*e*P	Pn	20 30 35.4	+5.0
YSS	**Yuzh-Sakhalins**	**8.36**	**4**	*e*P	**Pn**	**20 30 42.9**	**+1.7**
YSS				*e*S	**Sn**	**20 32 14.8**	**+0.7**
YSS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
USA0B	**Ussuriysk Arra**	**9.36**	**310**	⇓*e*P	**Pn**	**20 30 54.2**	**-0.6**
USA0B	**Ussuriysk Arra**	**9.36**	**310**	Pn	**Pn**	**20 30 52.6**	**-2.2**
USRK	**Ussuriysk Ar.**	**9.36**	**310**	P	**Pn**	**20 30 55.2**	**+0.4**
	baz=114,slow=14,SNR=8.4						
USRK				LR	LR	20 34 11.4	
	comp=Z,95nm,21.5s,baz=124,slow=35						
USRK	**Ussuriysk Ar.**	**9.36**	**310**	Pn	**Pn**	**20 30 51.9**	**-2.9**
JNU	**Nakatsue**	**10.54**	**242**	P	**Pn**	**20 31 11.6**	**+0.5**
	comp=Z,0.6nm,0.3s,baz=76,slow=9.3,SNR=6.0						
JNU	**Nakatsue**	**10.54**	**242**		**Pn**	**20 31 11.1**	**0.0**
MDJ	**Mudanjiang**	**11.04**	**307**	Pn	**Pn**	**20 31 16.2**	**-1.7**
KSRS	**Korea Array**	**11.15**	**268**	P	**Pn**	**20 31 20.8**	**+1.4**
	comp=Z,0.3nm,0.3s,baz=77,slow=14,SNR=6.4						
KSRS				LR	LR	20 35 16.0	
	comp=Z,95nm,19.7s,baz=84,slow=35						
KLR	**Kul'dur**	**12.91**	**329**	P	**Pn**	**20 31 44.5**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=138,slow=21,SNR=1.5						
KLR				LR	LR	20 36 37.5	
	comp=Z,85nm,19.1s,baz=132,slow=37						
ZEA	**Zeya**	**18.19**	**331**	*e*P	**P**	**20 32 50.4**	**-0.4**
ZEA				pmax	pmax		
	comp=N,10.0nm,1.1s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MA2	**Magadan**	**21.72**	**12**	P	**P**	**20 33 29.4**	**+0.4**
	comp=Z,4.2nm,0.7s,baz=177,slow=13,SNR=4.0						
MA2	**Magadan**	**21.72**	**12**	⇓*e*P	**P**	**20 33 30.3**	**+1.3**
MA2				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MA2	**Magadan**	**21.72**	**12**	P	**P**	**20 33 29.2**	**+0.2**
SSLB	**Suanglung**	**23.20**	**237**	P	**P**	**20 33 42.7**	**-2.2**
SSLB				IAmb	IAmb	20 33 58.9	
	comp=Z,31nm,1.2s						
TPUB	**Ta-pu**	**23.75**	**236**	P	**P**	**20 33 48.5**	**-1.5**
YAK	**Yakutsk**	**24.64**	**346**	⇓*e*P	**P**	**20 33 56.8**	**-1.0**
YAK				pmax	pmax		
	comp=Z,12nm,1.0s						
SEY	**Seymchan**	**25.16**	**11**	P	**P**	**20 34 04.7**	**+2.2**
	comp=Z,5.8nm,0.9s,baz=208,slow=5.9,SNR=20						
SEY	**Seymchan**	**25.16**	**11**	⇓*e*P	**P**	**20 34 04.5**	**+2.0**
BOD	**Bodaibo**	**26.46**	**326**	*e*P	**P**	**20 34 13.9**	**-0.4**
BOD				pmax	pmax		
	comp=Z,4.0nm,2.1s						
ULN	**Ulaanbaatar**	**26.88**	**301**	⇑*e*P	**P**	**20 34 19.0**	**+0.6**
ULN	**Ulaanbaatar**	**26.88**	**301**	P	**P**	**20 34 18.5**	**+0.1**
SONM	**Songino Array**	**27.32**	**301**	P	**P**	**20 34 22.4**	**+0.1**
	comp=Z,1.0nm,0.6s,baz=101,slow=7.9,SNR=5.3						
SONM				LR	LR	20 45 27.1	
	comp=Z,45nm,19.9s,baz=156,slow=37						
SONM	**Songino Array**	**27.32**	**301**	P	**P**	**20 34 22.0**	**-0.2**
ENH	**Enshi**	**27.95**	**263**	P	**P**	**20 34 27.6**	**-0.4**
H11N2	**WAKE ISLAND Hy**	**28.61**	**124**	T	T	21 04 57.4	
	baz=317,slow=75,SNR=2052						
H11N1	**WAKE ISLAND Hy**	**28.62**	**124**	T	T	21 04 58.6	
	baz=317,slow=75,SNR=1793						
H11N3	**WAKE ISLAND Hy**	**28.63**	**124**	T	T	21 04 59.7	
	baz=317,slow=75,SNR=2059						
H11S1	**WAKE ISLAND Hy**	**29.38**	**126**	T	T	21 05 52.1	
	baz=319,slow=76,SNR=264						
H11S3	**WAKE ISLAND Hy**	**29.38**	**126**	T	T	21 05 53.8	
	baz=319,slow=76,SNR=523						
H11S2	**WAKE ISLAND Hy**	**29.39**	**126**	T	T	21 05 55.5	
	baz=319,slow=76,SNR=216						
TLY	**Talaya**	**29.67**	**309**	P	**P**	**20 34 42.8**	**-0.2**
	comp=Z,1.2nm,0.4s,baz=110,slow=1.1,SNR=4.2						
TLY	**Talaya**	**29.67**	**309**	⇑*e*P	**P**	**20 34 43.9**	**+0.9**
TLY				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ZAK	**Zakamensk**	**29.68**	**306**	*e*P	**P**	**20 34 43.0**	**-0.2**
ZAK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
TIXI	**Tiksi**	**33.79**	**353**	⇑*e*P	**P**	**20 35 18.1**	**-0.7**
TIXI	**Tiksi**	**33.79**	**353**	P	**P**	**20 35 18.8**	**-0.1**
TIXI				IAmb	IAmb	20 35 46.9	
	comp=Z,3.3nm,0.8s						
DGZ	**Jazzator, Alta**	**39.85**	**304**	*c i*P	**P**	**20 36 11.9**	**+1.0**
DGZ				pmax	pmax		
	comp=Z,17nm,0.9s						
WMQ	**Urumqi**	**40.55**	**295**	P	**P**	**20 36 17.6**	**+1.0**
WMQ				pmax	pmax		
	comp=Z,13nm,1.0s						
WMQ	**Urumqi**	**40.55**	**295**	P	**P**	**20 36 17.6**	**+1.0**
WMQ				IAmb	IAmb	20 36 19.8	
	comp=Z,13nm,1.0s						
ZAA0	**Zalesovo Array**	**41.20**	**311**	P	**P**	**20 36 21.7**	**-0.1**
ZAA0				IAmb	IAmb	20 36 22.7	
	comp=Z,7.5nm,1.1s						
ZALV	**Zalesovo Beam**	**41.20**	**311**	P	**P**	**20 36 21.7**	**0.0**
	comp=Z,3.6nm,0.5s,baz=87,slow=7.9,SNR=20						
ZALV				PcP	**PcP**	**20 38 20.3**	**+0.5**
	comp=Z,1.0nm,0.3s,baz=110,slow=2.3,SNR=6.3						
ZALV	**Zalesovo Beam**	**41.20**	**311**	*i* P	**P**	**20 36 22.2**	**+0.5**
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.5s						
ZALV	**Zalesovo Beam**	**41.20**	**311**	P	**P**	**20 36 21.1**	**-0.6**
ZSN	**Zaisan**	**41.83**	**301**	*e*P	**P**	**20 36 27.4**	**+0.4**
	comp=Z,11nm,0.9s,baz=302						
ZSN	**Zaisan**	**41.83**	**301**	*e*P	**P**	**20 36 27.4**	**+0.4**
ZSN				pmax	pmax		
	comp=Z,11nm,0.9s						
CHTO	**Chiang Mai**	**42.13**	**255**	P	**P**	**20 36 30.2**	**+0.5**
CHTO				pmax	pmax		
	comp=Z,7.0nm,1.3s						
CHTO	**Chiang Mai**	**42.13**	**255**	P	**P**	**20 36 30.2**	**+0.5**
CHTO				IAmb	IAmb	20 36 39.7	
	comp=Z,7.4nm,1.3s						
CMAR	**Chiang Mai Arr**	**42.34**	**254**	P	**P**	**20 36 31.1**	**-0.4**
	comp=Z,0.4nm,0.6s,baz=45,slow=9.0,SNR=2.7						
CMAR				LR	LR	20 53 42.5	
	comp=Z,10nm,18.3s,baz=75,slow=36						
LSA	**Lhasa**	**42.53**	**274**	P	**P**	**20 36 34.3**	**+0.8**
LSA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
LSA	**Lhasa**	**42.53**	**274**	P	**P**	**20 36 34.3**	**+0.8**
MK31	**Makanchi Array**	**43.68**	**301**	*ce*P	**P**	**20 36 42.2**	**+0.2**
MK31	**Makanchi Array**	**43.68**	**301**	P	**P**	**20 36 41.8**	**-0.2**
MKAR	**Makanchi Array**	**43.68**	**301**	P	**P**	**20 36 42.3**	**+0.3**
	comp=Z,1.5nm,0.5s,baz=87,slow=10.0,SNR=25						
MKAR				LR	LR	20 55 34.3	
	comp=Z,24nm,19.8s,baz=356,slow=37						
MKAR	**Makanchi Array**	**43.68**	**301**	P	**P**	**20 36 41.0**	**-1.1**
MAKZ	**Makanchi**	**43.89**	**301**	P	**P**	**20 36 43.5**	**-0.2**
MAKZ				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MAKZ	**Makanchi**	**43.89**	**301**	P	**P**	**20 36 43.5**	**-0.2**
SHL	**Shillong**	**43.89**	**268**	P	**P**	**20 36 43.4**	**-0.7**
SHL				pmax	pmax		
	comp=Z,4.0nm,0.7s						
SHL	**Shillong**	**43.89**	**268**	P	**P**	**20 36 43.4**	**-0.7**
SHL				IAmb	IAmb	20 36 48.5	
	comp=Z,4.3nm,0.7s						
SEM	**Semipalatinsk**	**44.36**	**306**	*e*P	**P**	**20 36 46.6**	**-1.1**
	baz=306						
SEM	**Semipalatinsk**	**44.36**	**306**	*e*P	**P**	**20 36 46.5**	**-1.1**
KURK	**Kurchatov**	**45.33**	**307**	*c i*P	**P**	**20 36 55.2**	**+0.2**
KURK				pmax	pmax		
	comp=Z,17nm,0.8s						
KURK	**Kurchatov**	**45.33**	**307**	P	**P**	**20 36 54.1**	**-0.9**
SHLS	**Shalkode**	**46.52**	**297**	*e*P	**P**	**20 37 02.0**	**-2.8**
	baz=296						
SHLS	**Shalkode**	**46.52**	**297**	*e*P	**P**	**20 37 01.9**	**-2.8**
TDK	**Taldyqorghan**	**46.74**	**299**	*e*P	**P**	**20 37 06.0**	**-0.3**
	comp=Z,2.8nm,0.6s,baz=299						
TDK	**Taldyqorghan**	**46.74**	**299**	*e*P	**P**	**20 37 06.0**	**-0.3**
TDK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KPKS	**Kokpek**	**46.98**	**297**	*e*P	**P**	**20 37 07.9**	**-0.3**
	baz=297						
KPKS	**Kokpek**	**46.98**	**297**	*e*P	**P**	**20 37 07.8**	**-0.4**
SATY	**Saty**	**47.29**	**297**	*e*P	**P**	**20 37 09.7**	**-1.0**
	baz=297						
SATY	**Saty**	**47.29**	**297**	*e*P	**P**	**20 37 09.7**	**-1.0**
ILAR	**Eielson Array**	**47.93**	**33**	P	**P**	**20 37 16.7**	**+1.5**
	comp=Z,0.6nm,0.7s,baz=264,slow=5.9,SNR=9.6						
ILAR	**Eielson Array**	**47.93**	**33**	P	**P**	**20 37 16.6**	**+1.4**
KKN	**Kakani**	**47.99**	**275**	*e*P	**P**	**20 37 16.7**	**+0.3**
	comp=Z,14nm,0.8s						
PKIN	**Phulchoki**	**48.00**	**274**	*e*P	**P**	**20 37 16.4**	**-0.2**
	comp=Z,3.1nm,0.4s						
CHKK	**Chushkaly**	**48.04**	**298**	*e*P	**P**	**20 37 16.0**	**-0.4**
	baz=298						
CHKK	**Chushkaly**	**48.04**	**298**	*e*P	**P**	**20 37 16.0**	**-0.4**
MDOK	**Medeo**	**48.21**	**297**	*e*P	**P**	**20 37 17.6**	**-0.3**
	baz=297						
MDOK	**Medeo**	**48.21**	**297**	*e*P	**P**	**20 37 17.5**	**-0.3**
AAA	**Alma-Ata**	**48.28**	**297**	*e*P	**P**	**20 37 17.4**	**-0.9**
	baz=298						
AAA	**Alma-Ata**	**48.28**	**297**	*e*P	**P**	**20 37 17.4**	**-0.9**
GKN	**Gorkha**	**48.39**	**275**	*e*P	**P**	**20 37 19.6**	**+0.1**
	comp=Z,14nm,0.8s						
KUU	**Kurty**	**48.48**	**298**	*e*P	**P**	**20 37 18.8**	**-1.0**
	baz=298						
KUU	**Kurty**	**48.48**	**298**	*e*P	**P**	**20 37 18.7**	**-1.0**
MTBS	**Maitube**	**48.65**	**297**	*e*P	**P**	**20 37 20.4**	**-0.7**
	baz=298						
MTBS	**Maitube**	**48.65**	**297**	*e*P	**P**	**20 37 20.4**	**-0.7**
DANN	**Dangsing**	**48.91**	**276**	*e*P	**P**	**20 37 24.3**	**+0.7**
	comp=Z,17nm,0.5s						
BRZS	**Berezniki**	**49.21**	**307**	*e*P	**P**	**20 37 24.7**	**-0.5**
	baz=307						
BRZS	**Berezniki**	**49.21**	**307**	*e*P	**P**	**20 37 24.7**	**-0.5**
BTLS	**Baital**	**49.69**	**300**	*e*P	**P**	**20 37 28.9**	**-0.2**
	baz=301						
BTLS	**Baital**	**49.69**	**300**	*e*P	**P**	**20 37 28.8**	**-0.2**
BRVK	**Borovoye**	**49.91**	**311**	⇓*e*P	**P**	**20 37 31.3**	**+0.8**
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.7s						
BRVK	**Borovoye**	**49.91**	**311**	P	**P**	**20 37 30.9**	**+0.3**
BRVK				IAmb	IAmb	20 37 31.8	
	comp=Z,4.0nm,1.0s						
AAK	**Ala-Archa**	**50.15**	**297**	P	**P**	**20 37 32.8**	**+0.1**
AAK				pmax	pmax		
	comp=Z,4.0nm,1.5s						
AAK	**Ala-Archa**	**50.15**	**297**	P	**P**	**20 37 32.8**	**+0.1**
MTN	**Manton Dam**	**52.18**	**193**	P	**P**	**20 37 48.2**	**+0.4**
DZA	**Taraz**	**52.25**	**299**	*e*P	**P**	**20 37 48.7**	**+0.3**
	comp=Z,2.8nm,0.7s,baz=299						
DZA	**Taraz**	**52.25**	**299**	*e*P	**P**	**20 37 48.6**	**+0.3**
DZA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KK31	**Karatay Array**	**52.74**	**299**	P	**P**	**20 37 51.9**	**0.0**
KK31				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KK31	**Karatay Array**	**52.74**	**299**	P	**P**	**20 37 51.9**	**0.0**
KK31				IAmb	IAmb	20 37 52.9	
	comp=Z,3.2nm,0.9s						
KKAR	**Karatay Array**	**52.74**	**299**	P	**P**	**20 37 51.7**	**-0.2**
KKAR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KKAR	**Karatay Array**	**52.74**	**299**	P	**P**	**20 37 51.7**	**-0.2**
KKAR				IAmb	IAmb	20 37 52.9	
	comp=Z,3.2nm,0.9s						
KKAR	**Karatay Array**	**52.74**	**299**	P	**P**	**20 37 51.6**	**-0.2**
PSI	**Prapat**	**52.99**	**239**	P	**P**	**20 37 54.5**	**+0.4**
PSI				pmax	pmax		
	comp=Z,11nm,1.3s						
RPSI	**Rantau Prapat**	**53.07**	**239**	P	**P**	**20 37 54.5**	**-0.1**
IUG	**Iuzhnay**	**53.42**	**298**	*e*P	**P**	**20 37 56.8**	**-0.3**

	baz=298						
IUG	**Iuzhnay**	**53.42**	**298**	*e*P	**P**	**20 37 56.7**	**-0.3**
SVE	**Sverdlovsk**	**54.27**	**318**	*e*P	**P**	**20 38 04.0**	**+1.2**
SVE				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ARU	**Arti**	**55.49**	**318**	*d i*P	**P**	**20 38 11.9**	**+0.2**
ARU						20 40 11.7	
ARU				S	**S**	**20 45 53.4**	**+1.0**
ARU				SS	**SS**	**20 49 34.7**	**-2.5**
ARU				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ARU	**Arti**	**55.49**	**318**	P	**P**	**20 38 11.8**	**+0.2**
ARU				IAmb	IAmb	20 38 12.7	
	comp=Z,5.6nm,0.9s						
ABKAR	**Akbulak array**	**57.28**	**310**	P	**P**	**20 38 24.4**	**-0.1**
ABKAR				IAmb	IAmb	20 38 24.9	
	comp=Z,3.4nm,0.6s						
ABKAR	**Akbulak array**	**57.28**	**310**	P	**P**	**20 38 24.4**	**-0.1**
WRA	**Warramunga Arr**	**58.68**	**188**	P	**P**	**20 38 34.6**	**+0.1**
	comp=Z,1.0nm,0.6s,baz=6.3,slow=7.2,SNR=14						
WRA	**Warramunga Arr**	**58.68**	**188**	P	**P**	**20 38 34.6**	**+0.1**
SANVU	**Saraoutou**	**58.73**	**151**	P	**P**	**20 38 34.7**	**-0.2**
KIRV	**Kirov**	**59.27**	**323**	*de*P	**P**	**20 38 38.9**	**+0.7**
YKA	**Yellowknife Ar**	**62.23**	**31**	P	**P**	**20 38 59.4**	**+1.2**
	comp=Z,0.4nm,0.8s,baz=305,slow=6.1,SNR=5.6						
YKA				pP	**pP**	**20 39 13.9**	**+0.7**
	comp=Z,0.1nm,0.4s,baz=298,slow=5.4,SNR=2.4						
ASAR	**Alice Springs**	**62.41**	**188**	P	**P**	**20 39 00.7**	**+0.8**
	comp=Z,0.4nm,0.7s,baz=18,slow=6.1,SNR=8.0						
ASAR				pP	**pP**	**20 39 15.5**	**+0.5**
	comp=Z,1.3nm,0.7s,baz=11,slow=5.0,SNR=10.0						
ASAR	**Alice Springs**	**62.41**	**188**	P	**P**	**20 38 60.0**	**+0.1**
OBN	**Obninsk**	**67.11**	**323**	*e*P	**P**	**20 39 30.2**	**+0.1**
OBN				*e*		20 40 00.2	
OBN				*e*		20 42 01.6	
OBN				*e*PPP	PPP	20 43 36.7	
OBN				pmax	pmax		
	comp=Z,6.0nm,1.3s						
FINES	**FINESS Array B**	**67.63**	**332**	P	**P**	**20 39 32.3**	**-1.1**
	comp=Z,2.7nm,0.8s,baz=35,slow=9.7,SNR=7.2						
FINES	**FINESS Array B**	**67.63**	**332**	P	**P**	**20 39 32.5**	**-0.9**
FINES	**FINESS Array B**	**67.63**	**332**	P	**P**	**20 39 32.5**	**-0.9**
KIV	**Kislovodsk**	**70.22**	**311**	*e*P	**P**	**20 39 51.0**	**+1.1**
KIV				pmax	pmax		
	comp=Z,20nm,0.9s						
KBZ	**Khabaz**	**70.22**	**310**	P	**P**	**20 39 49.6**	**-0.1**
	comp=Z,2.4nm,0.8s,baz=64,slow=1.9,SNR=6.8						
KBZ	**Khabaz**	**70.22**	**310**	⇓*e*P	**P**	**20 39 50.8**	**+1.1**
KBZ				pmax	pmax		
	comp=Z,12nm,3.0s						
MNK	**Minsk**	**71.45**	**326**	*i* P	**P**	**20 39 54.2**	**-2.7**
	comp=E,3.0nm,1.2s						
MNK				*i* P	**P**	**20 39 54.2**	**-2.7**
	comp=N,11nm,0.9s						
MNK				*i* P	**P**	**20 39 54.2**	**-2.7**
	comp=Z,5.0nm,0.8s						
MNK				*i* PcP	**pP**	**20 40 13.5**	**+1.2**
MNK				*i* PP	**PP**	**20 42 32.8**	**-2.6**
MNK				*i* PPP	PPP	20 44 23.7	
MNK				*i* S	**S**	**20 49 06.3**	**-4.6**
MNK				*i* SS	**SS**	**20 53 41.8**	**-3.7**
MNK				*i* SSS	SSS	20 57 01.4	
MNK				*i* LQ	LQ	21 06 26.4	
MNK				*i* LR	LR	21 10 48.5	
MNK				*i* LRM	MLR	21 13 29.9	
	comp=Z,93nm,13.8s						
MNK				*i* LRM	MLR	21 13 38.6	
	comp=N,202nm,18.8s						
MNK				*i* LRM	MLR	21 13 43.6	
	comp=E,23nm,19.6s						
NB2	**NORSAR Subarra**	**72.91**	**337**	P	**P**	**20 40 06.3**	**+0.6**
	comp=Z,1.2nm,0.7s,baz=38,slow=6.2						
NOA	**NORSAR Array B**	**72.91**	**337**	P	**P**	**20 40 06.3**	**+0.6**
	comp=Z,1.9nm,0.7s,baz=37,slow=6.0,SNR=6.4						
AKASG	**Malin Array Be**	**73.33**	**322**	P	**P**	**20 40 08.3**	**+0.1**
	comp=Z,1.5nm,0.5s,baz=44,slow=6.1,SNR=7.6						
AKASG	**Malin Array Be**	**73.33**	**322**	P	**P**	**20 40 08.4**	**+0.1**
PDAR	**Pinedale Array**	**76.25**	**46**	P	**P**	**20 40 26.1**	**+0.5**
	comp=Z,0.5nm,0.7s,baz=324,slow=2.0,SNR=4.8						
BUR08	**Bucovina Ar. S**	**77.34**	**322**	P	**P**	**20 40 32.2**	**+0.7**
BUR08				IAmb	IAmb	20 40 59.6	
	comp=Z,8.7nm,1.5s						
BURAR	**Bucovina Array**	**77.36**	**322**	P	**P**	**20 40 31.8**	**+0.3**
BRTR	**Keskin Array B**	**78.14**	**312**	P	**P**	**20 40 36.6**	**+0.4**
	comp=Z,0.8nm,0.5s,baz=203,slow=30,SNR=4.5						
BRTR	**Keskin Array B**	**78.14**	**312**	P	**P**	**20 40 36.1**	**-0.1**
CLL	**Collm**	**79.96**	**330**	*e*P	**P**	**20 40 46.0**	**+0.3**
KHC	**Kasperske Hory**	**81.44**	**329**	⇑*e*P	**P**	**20 40 54.3**	**+0.6**
KHC				pmax	pmax		
	comp=Z,16nm,2.5s						
TXAR	**Lajitas Array**	**88.81**	**53**	P	**P**	**20 41 32.8**	**+1.8**
	comp=Z,0.3nm,0.8s,baz=296,slow=2.7,SNR=3.5						
TXAR				pP	**pP**	**20 41 47.0**	**+0.2**
	comp=Z,0.4nm,0.7s,baz=312,slow=4.3,SNR=4.6						
TXAR	**Lajitas Array**	**88.81**	**53**	P	**P**	**20 41 31.5**	**+0.5**
ESDC	**Sonseca Array**	**96.07**	**334**	LR	LR	21 30 46.2	
	comp=Z,42nm,19.2s,baz=30,slow=39						
LPAZ	**La Paz**	**145.50**	**58**	PKPbc	**PKPab**	**20 48 17.1**	**+0.9**
	comp=Z,0.9nm,0.7s,baz=350,slow=7.2,SNR=3.8						
LPAZ	**La Paz**	**145.50**	**58**	PKIKP	**PKPdf**	**20 48 15.2**	**-0.6**
LPAZ	**La Paz**	**145.50**	**58**		**PKPdf**	**20 48 15.2**	**-0.6**

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*IDC **05** 20:38:54.8±1.3, 30°.47N×142°.53E, h0^{km}, mb3.4/6, mb1 3.7/7, mb1mx3.5/38, mbtmp3.5/7, ML2.9/1, Error ellipse: s-maj=49.5km s-min=21.6km az=79.0*

*JMA **05** 20:38:57.7±0.1, 31°.01N×143°.08E, h88^{km}, M3.8*

ISC 05 20:39:01.8±1.7, **31°.1N**±0°.1×**142°.8E**±0°.2, **h30**^{km}, **n15**, σ**1^{s}23**/17, **mb3.5**/5, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSO1	**Boso 1**	**3.92**	**337**	P	**Pn**	**20 39 58.5**	**-0.8**
BSO1				*e*S	**Sn**	**20 40 45.4**	**+1.4**
JCJ	**Chichijima**	**3.98**	**188**	Sn	Sn	20 40 28.6	-18
	19nm,0.3s,baz=279,slow=22,SNR=2.4						
BSO3	**Boso 3**	**4.22**	**333**	P	**Pn**	**20 40 02.6**	**-1.1**
BSO3				*e*S	**Sn**	**20 40 52.7**	**+0.9**
JOD2	**Odawara 2**	**5.24**	**324**	P	**Pn**	**20 40 17.3**	**-0.8**
JOD2				S	**Sn**	**20 41 19.2**	**+1.7**
JYT	**Yasato**	**5.61**	**338**	*e*S	**Sn**	**20 41 27.1**	**+0.5**
JHO	**Hitachi**	**5.86**	**342**	*e*S	**Sn**	**20 41 32.9**	**+0.3**
JRY	**Ryogami san**	**5.94**	**328**	P	**Pn**	**20 40 27.0**	**-0.7**
JRY				*e*S	**Sn**	**20 41 35.9**	**+1.2**
MJAR	**Matsushiro Arr**	**6.69**	**326**	Pn	**Pn**	**20 40 37.1**	**-0.8**
	0.2nm,0.3s,baz=159,slow=10,SNR=4.7						
MJAR				Sn	**Sn**	**20 41 53.3**	**+0.2**
	0.2nm,0.3s,baz=158,slow=25,SNR=4.0						
JMK	**Ichinoseki**	**8.00**	**351**	P	**Pn**	**20 40 54.0**	**-1.8**
KLR	**Kul'dur**	**20.00**	**338**	P	**Pn**	**20 43 32.5**	**-1.2**
	0.4nm,0.3s,baz=152,slow=9.3,SNR=1.7						
SONM	**Songino Array**	**32.38**	**312**	P	**P**	**20 45 29.0**	**+0.2**
	0.4nm,0.6s,baz=116,slow=9.1,SNR=3.6						
MKAR	**Makanchi Array**	**48.47**	**307**	P	**P**	**20 47 40.6**	**-1.0**
	0.2nm,0.5s,baz=88,slow=9.5,SNR=3.0						
WRA	**Warramunga Arr**	**51.35**	**190**	P	P	20 47 56.3	-7.2
	0.6nm,0.4s,baz=7.5,slow=7.6,SNR=7.3						
ASAR	**Alice Springs**	**55.07**	**190**	P	P	20 48 23.7	-7.2
	0.3nm,0.5s,baz=7.1,slow=7.2,SNR=4.0						
YKA	**Yellowknife Ar**	**68.42**	**29**	P	**P**	**20 50 02.5**	**+2.1**
	0.1nm,0.3s,baz=294,slow=6.0,SNR=1.6						

IDC 05 20:45:36.5±1.7, **0°.34N**×**128°.81E**, **h0**^{km}, **mb3.3**/4, **mb1 3.5**/5, **mb1mx3.3**/34, **mbtmp3.3**/5, **ML2.6**/1, **MS3.3**/1, **Ms1 3.3**/1, **ms1mx2.5**/14, **Error ellipse: s-maj=57.7km s-min=26.6km az=58.0**, **Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**2.73**	**116**	Pn	Pn	20 46 21.4	-0.2
	1.1nm,0.3s,baz=149,slow=23,SNR=9.4						
WRA	**Warramunga Arr**	**20.87**	**165**	P	P	20 50 18.7	-1.7
	0.3nm,0.6s,baz=344,slow=11,SNR=1.7						
WRA				LR	LR	20 59 51.0	
	comp=Z,78nm,18.5s,baz=295,slow=41						
ASAR	**Alice Springs**	**24.36**	**169**	P	P	20 50 57.0	+0.4
	0.4nm,0.5s,baz=356,slow=10,SNR=9.9						
STKA	**Stephens Creek**	**34.25**	**160**	P	P	20 52 25.1	+0.7
	0.6nm,0.3s,baz=331,slow=18,SNR=3.9						
MKAR	**Makanchi Array**	**61.51**	**325**	P	P	20 55 55.2	-0.2
	0.2nm,0.6s,baz=117,slow=8.2,SNR=2.0						

NNC 05 21:22:18.5±5.7, **37°.00N**×**70°.92E**, **h0**^{km}, **mb3.7**, **mpv3.3**, **5C-1D**, **Error ellipse: s-maj=45.2km s-min=42.2km az=131.0**, **Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**6.11**	**357**	⇑P	Pn	21 23 51.7	+1.7
	1.4nm,0.3s,baz=178,slow=12,SNR=41						
KK31				⇑S	Sn	21 25 01.3	+0.6
	0.9nm,0.5s,baz=187,slow=23,SNR=4.1						
AAK	**Ala-Archa**	**6.27**	**25**	⇑P	Pn	21 23 51.9	-0.4
	2.4nm,0.8s						
AAK				⇓S	Sn	21 25 04.9	+0.2
	2.6nm,0.8s						
TKM2	**Tokmak 2**	**6.92**	**30**	⇑P	Pn	21 23 59.9	-1.5
	0.8nm,0.5s						
TKM2				⇑S	Sn	21 25 24.0	+3.1
	1.1nm,0.9s						

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*ECX **05** 21:46:04.5±0.5, 30°.67N×114°.16W, h19^{km}±14^{km}, MD2.5, ML2.6*

*MEX **05** 21:46:06.7±17.0, 30°.98N×114°.05W, h15^{km}, MD4.0*

ISC 05 21:46:00.8±2.2, **30°.7N**±0°.2×**114°.04W**±0°.06, **h10**^{km}, **n9**, σ**1^{s}15**/13, **3C-1D**, **Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFX	**San Felipe**	**0.79**	**298**	*e*P	**Pb**	**21 46 17.0**	**+0.4**
SFX				*e*S	**Sg**	**21 46 26.8**	**+0.4**
SFX				IAML		21 46 28.0	
	comp=E,235nm,0.4s						
SFX				⇑*e*		21 46 28.0	
SFX				IAML		21 46 28.3	
	comp=N,229nm,0.2s						
SFX				⇓*e*		21 46 28.3	
PIX	**Pinacate**	**1.02**	**29**	*e*P	**Pn**	**21 46 23.2**	**+2.0**
ECBX	**El Chinero**	**1.18**	**313**	⇑*e*P	**Pn**	**21 46 23.1**	**-0.3**
SPX	**San Pedro Mart**	**1.28**	**287**	*e*P	**Pn**	**21 46 25.0**	**-0.1**
SPX				IAML		21 46 50.6	
	comp=N,120nm,0.8s						
SPX				IAML		21 46 51.1	
	comp=E,108nm,0.6s						
SPX				*e*		21 46 51.1	
SPIG	**San Pedro Mart**	**1.28**	**287**	⇑*e*P	**Pb**	**21 46 25.8**	**+0.5**
	baz=162,slow=16						
SPIG				*i* S	**Sb**	**21 46 40.0**	**-2.0**
SPIG	**San Pedro Mart**	**1.28**	**287**	*e*P	**Pn**	**21 46 24.7**	**-0.4**
SQX	**San Quintin**	**1.59**	**267**	*e*P	**Pn**	**21 46 29.4**	**+0.4**
214A	**Organ Pipe Nat**	**1.66**	**39**	*e*P	**Pn**	**21 46 28.9**	**-1.1**
214A				*i* S	**Sn**	**21 46 50.4**	**-1.1**
VTX	**Valle De La Tr**	**1.66**	**296**	*e*P	**Pb**	**21 46 32.1**	**+0.5**
VTX				*e*S	**Sn**	**21 46 52.8**	**+1.2**

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*IDC **05** 21:49:38.7±1.0, 43°.24N×20°.76E, h0^{km}, mb3.6/7, mb1 3.8/16, mb1mx3.7/64, mbtmp3.7/16, ML3.7/9, MS3.1/12, Ms1 3.1/12, ms1mx2.9/59, Error ellipse: s-maj=15.6km s-min=9.8km az=7.0*

*MED_RC **05** 21:49:39.0±0.9, 43°.23N×20°.88E, h14^{km}±5^{km}, MW4.1/9, Moment Tensor Solution.Mantle waves: s9,c11; Duration: 1^{s}0 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-0.56±.34; M$_{\theta\theta}$1.71±.31; M$_{\phi\phi}$-1.15±.22; M$_{r\theta}$-0.01±.59; M$_{\theta\phi}$1.33±.30; M$_{\phi r}$0.16±.34; Best double couple: M$_{0}$1.96000×10^{15} NP1:ϕ_s113.00000°, δ84.00000°, λ-5.00000°. NP2: ϕ_s204.00000°, δ85.00000°, λ-174.00000°. Principal axes: T 2.2300, Plg1.0000°, Azm339.0000°; N -0.5400, Plg82.0000°, Azm241.0000°; P -1.6900, Plg7.0000°, Azm69.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

*BEO **05** 21:49:39.8±0.2, 43°.22N×20°.93E, h11^{km}±4^{km}, ML4.0/11*

*LDG **05** 21:49:39.2±0.1, 43°.28N×20°.85E, h2^{km}, Ml3.6/17, Error ellipse: s-maj=3.0km s-min=2.6km az=7.0*

*KRSZO **05** 21:49:39.1±0.6, 43°.22N×20°.89E, h5^{km}±4^{km}, ML4.6/42, Error ellipse: s-maj=2.5km s-min=2.1km az=145.0*

*MOS **05** 21:49:39.6±1.4, 43°.28N×20°.86E, h15^{km}, mb4.3/4, Error ellipse: s-maj=4.5km s-min=2.8km az=100.8*

*RHSSO **05** 21:49:40.3±0.6, 43°.26N×20°.90E, h9^{km}±2^{km}, ML4.2/15*

*NEIC **05** 21:49:40.6±1.9, 43°.26N±0°.03×20°.88E±0°.04, h8^{km}±1^{km}, Error ellipse: s-maj=4.7km s-min=3.8km az=123.0*

*PDG **05** 21:49:40.0±0.3, 43°.23N×20°.87E, h15^{km}, MD3.9/9, ML3.7/12, Error ellipse: s-maj=0.3km s-min=0.4km az=0.0*

*TIR **05** 21:49:40.7, 43°.09N×20°.91E, h10^{km}±1^{km}, Ml4.2*

*THE **05** 21:49:41.2, 43°.20N×21°.08E, h1^{km}±6^{km}, ML3.9/7, Error ellipse: s-maj=10.3km s-min=1.5km az=344.0*

*PRU **05** 21:49:41.7±0.0, 43°.38N×21°.00E, h1^{km}, M3.8*

ISC 05 21:49:38.9±1.0, **43°.24N**±0°.01×**20°.88E**±0°.01, **h1**^{km}±7^{km}, **n701**, σ**1^{s}94**/1042, **mb3.8**/12, **MS3.2**/4, **50C-42D**, **Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IVAS	**Ivanjica**	**0.63**	**303**	*e*Pg	**Pg**	**21 49 51.6**	**+0.7**
IVAS				*e*Sg	**Sg**	**21 50 01.1**	**+2.0**
IVAS	**Ivanjica**	**0.63**	**303**	Pg	**Pg**	**21 49 51.6**	**+0.7**
IVAS				Lg	Lg	21 50 01.1	
GRUS	**Gruza**	**0.66**	**350**	*e*Pg	**Pg**	**21 49 52.7**	**+1.2**
GRUS				*e*Sg	**Sg**	**21 50 01.8**	**+1.7**
GRUS	**Gruza**	**0.66**	**350**	⇑P	**Pg**	**21 49 52.9**	**+1.3**
GRUS				⇓S	**Sb**	**21 50 02.2**	**-0.7**
GRUS	**Gruza**	**0.66**	**350**		**Pg**	**21 49 52.9**	**+1.3**
GRUS					**Sb**	**21 50 02.2**	**-0.7**
GRUS	**Gruza**	**0.66**	**350**	Pg	**Pg**	**21 49 52.7**	**+1.2**
GRUS				Pb	**Pg**	**21 49 52.9**	**+1.3**
GRUS				Lg	Lg	21 50 01.8	
GRUS				Sg	**Sb**	**21 50 02.2**	**-0.7**
BOVS	**Bovan**	**0.72**	**56**	*e*Pg	**Pg**	**21 49 53.4**	**+0.8**
BOVS				*e*Sg	**Sg**	**21 50 02.9**	**+0.9**
BOVS	**Bovan**	**0.72**	**56**	⇑P	**Pg**	**21 49 53.4**	**+0.8**
BOVS				⇓S	**Sg**	**21 50 03.3**	**+1.3**
BOVS	**Bovan**	**0.72**	**56**		**Pg**	**21 49 53.4**	**+0.8**
BOVS					**Sg**	**21 50 03.3**	**+1.3**
BOVS	**Bovan**	**0.72**	**56**	Pg	**Pg**	**21 49 53.4**	**+0.8**
BOVS				Pg	**Pg**	**21 49 53.4**	**+0.8**
BOVS				Lg	Lg	21 50 02.9	
BOVS				Sg	**Sg**	**21 50 03.3**	**+1.3**
IVA	**Berane**	**0.81**	**243**	⇑*i*Pg	**Pg**	**21 49 54.9**	**+0.5**
IVA				*i* Sg	**Sb**	**21 50 07.6**	**+0.3**
PVY	**Plav**	**0.93**	**227**	⇓*i*Pg	**Pg**	**21 49 57.1**	**+0.3**
PVY				*i* Sg	**Sb**	**21 50 11.7**	**+0.8**
TRUS	**Trudelj**	**1.04**	**341**	*e*Pg	**Pg**	**21 49 59.7**	**+0.9**
TRUS				*e*Sg	**Sg**	**21 50 13.5**	**+1.1**
TRUS	**Trudelj**	**1.04**	**341**	Pn	**Pg**	**21 49 59.7**	**+0.9**
TRUS				Lg	Lg	21 50 13.5	
BCI	**Bajram Curri**	**1.06**	**215**	P	**Pg**	**21 49 59.6**	**+0.5**
	baz=221						
BCI				S	**Sg**	**21 50 14.0**	**+1.2**
	baz=221						
BCI				AMP			
	comp=E,60nm,0.7s,baz=221						
KOME	**Kolasin**	**1.07**	**249**	⇓*i*Pg	**Pg**	**21 49 59.8**	**+0.4**
KOME				*i* Sg	**Sn**	**21 50 16.6**	**-0.1**
DIVS	**Divibare**	**1.07**	**323**	*e*Pg	**Pg**	**21 50 00.1**	**+0.7**
DIVS				*e*Sg	**Sn**	**21 50 16.6**	**-0.1**
DIVS	**Divibare**	**1.07**	**323**	⇑*i*Pg	**Pg**	**21 49 59.7**	**+0.2**
DIVS				*e*Sg	**Sb**	**21 50 14.8**	**-0.1**
DIVS	**Divibare**	**1.07**	**323**	Pg	**Pg**	**21 49 59.9**	**+0.5**
DIVS					**Sn**	**21 50 16.7**	**-0.1**
DIVS	**Divibare**	**1.07**	**323**	Pn	**Pg**	**21 49 59.6**	**+0.2**
	comp=Z,24nm,SNR=141						
DIVS				Pg	**Pg**	**21 49 59.9**	**+0.5**
DIVS				Pb	**Pg**	**21 50 00.1**	**+0.7**
DIVS				Lg	Lg	21 50 14.6	
DIVS				Sg	**Sb**	**21 50 14.8**	**-0.1**
DIVS				Sn	**Sn**	**21 50 16.6**	**-0.1**
PLE	**Pljevlja**	**1.09**	**275**	P	**Pg**	**21 50 00.5**	**+0.7**
PLE				S	**Sg**	**21 50 13.0**	**-1.0**
PLE	**Pljevlja**	**1.09**	**275**	*e*Pg	**Pg**	**21 50 00.2**	**+0.4**
PLE				*i* Sg	**Sn**	**21 50 17.2**	**-0.1**
PLE	**Pljevlja**	**1.09**	**275**	Pn	**Pg**	**21 50 00.5**	**+0.7**
PLE				Lg	Lg	21 50 13.0	
ZAGS	**Zajecar**	**1.14**	**59**	*e*Pg	**Pg**	**21 50 01.2**	**+0.5**
ZAGS				*e*Sg	**Sg**	**21 50 15.1**	**-0.3**
ZAGS	**Zajecar**	**1.14**	**59**	Pn	**Pg**	**21 50 01.2**	**+0.5**
ZAGS				Lg	Lg	21 50 15.1	
RUDO	**Rudo**	**1.16**	**290**	*e*Pg	**Pg**	**21 50 00.6**	**-0.6**
RUDO				*e*Sg	**Sg**	**21 50 17.2**	**+1.0**
RUDO	**Rudo**	**1.16**	**290**	Pn	**Pg**	**21 50 00.6**	**-0.6**
RUDO				Sn	**Sg**	**21 50 17.2**	**+1.0**
BBLS	**Lazići**	**1.24**	**301**	*e*Pg	**Pb**	**21 50 03.1**	**-0.1**
BBLS				*e*Sg	**Sn**	**21 50 20.7**	**-0.2**
BBLS	**Lazići**	**1.24**	**301**	*e*Pg	**Pb**	**21 50 02.3**	**-0.9**
BBLS				*e*Sg	**Sb**	**21 50 20.1**	**+0.4**
BBLS	**Lazići**	**1.24**	**301**	Pn	**Pb**	**21 50 02.3**	**-0.9**
BBLS				Pb	**Pb**	**21 50 03.1**	**-0.1**
BBLS				Pg	**Pn**	**21 50 03.5**	**+0.1**
	comp=Z,93nm,SNR=163						
BBLS				Sn	**Sb**	**21 50 20.1**	**+0.4**
BBLS				Lg	Lg	21 50 20.3	
BBLS				Sg	**Sn**	**21 50 20.7**	**-0.2**
ZAPS	**Zavoj**	**1.28**	**88**	*e*Pg	**Pn**	**21 50 02.2**	**-1.8**
ZAPS				*e*Sg	**Sb**	**21 50 19.0**	**-1.8**
ZAPS	**Zavoj**	**1.28**	**88**	Pn	**Pn**	**21 50 02.2**	**-1.8**
ZAPS				Sn	**Sb**	**21 50 19.0**	**-1.8**
KUBS	**Kucevo**	**1.31**	**26**	*e*Pg	**Pn**	**21 50 03.1**	**-1.2**
KUBS				*e*Sg	**Sb**	**21 50 20.9**	**-0.6**
KUBS	**Kucevo**	**1.31**	**26**	Pn	**Pn**	**21 50 03.1**	**-1.2**
KUBS				Sn	**Sb**	**21 50 20.9**	**-0.6**
SKO	**Skopje**	**1.33**	**162**	P	**Pn**	**21 50 04.1**	**-0.5**
SKO	**Skopje**	**1.33**	**162**	⇑*i*Pn	**Pn**	**21 50 04.1**	**-0.5**
SKO	**Skopje**	**1.33**	**162**	Pn	**Pn**	**21 50 04.1**	**-0.5**
BLKB	**Belogradchik**	**1.36**	**73**	⇑S	**Sg**	**21 50 23.9**	**+1.3**
BLKB	**Belogradchik**	**1.36**	**73**		**Sg**	**21 50 23.9**	**+1.3**
BLKB	**Belogradchik**	**1.36**	**73**	Sn	**Sg**	**21 50 23.9**	**+1.3**
PUK	**Puka**	**1.40**	**212**	P	**Pn**	**21 50 06.1**	**+0.5**
	baz=217						
PUK				S	**Sb**	**21 50 24.5**	**+0.3**
	baz=217						
PUK				AMP			
	comp=N,16nm,0.5s,baz=217						
PUK	**Puka**	**1.40**	**212**	Lg	Lg	21 51 05.2	
PDG	**Podgorica**	**1.44**	**236**	*e*Pg	**Pn**	**21 50 06.1**	**-0.1**
PDG				*e*Sg	**Sg**	**21 50 27.4**	**+2.2**
PDG	**Podgorica**	**1.44**	**236**	⇑P	**Pn**	**21 50 06.5**	**+0.3**
PDG				⇓S	**Sg**	**21 50 27.1**	**+1.9**
PDG	**Podgorica**	**1.44**	**236**	⇑*i*Pg	**Pn**	**21 50 06.0**	**-0.1**
PDG				*e*Sg	**Sg**	**21 50 26.9**	**+1.7**
PDG	**Podgorica**	**1.44**	**236**		**Sg**	**21 50 27.1**	**+1.9**
PDG	**Podgorica**	**1.44**	**236**		**Pn**	**21 50 06.0**	**-0.1**
PDG	**Podgorica**	**1.44**	**236**	Pn	**Pn**	**21 50 06.0**	**-0.1**
PDG				Pn	**Pn**	**21 50 06.1**	**-0.1**
PDG				Pb	**Pn**	**21 50 06.5**	**+0.3**
PDG				Lg	Lg	21 50 26.9	
PDG				Sg	**Sg**	**21 50 27.1**	**+1.9**
PDG				Sb	**Sg**	**21 50 27.4**	**+2.2**
TTG	**Podgorica**	**1.44**	**236**	⇑*i*Pg	**Pn**	**21 50 06.4**	**+0.3**
TTG				*i* Sg	**Sg**	**21 50 27.5**	**+2.2**
UPM	**Unac-Piva**	**1.44**	**269**	⇓*i*Pg	**Pn**	**21 50 06.8**	**+0.5**
UPM				*e*Sg	**Sg**	**21 50 26.7**	**+1.4**
UPM	**Unac-Piva**	**1.44**	**269**	*e*Pg	**Pn**	**21 50 06.6**	**+0.3**
UPM				*i* Sg	**Sg**	**21 50 27.6**	**+2.4**
UPM	**Unac-Piva**	**1.44**	**269**	Pn	**Pn**	**21 50 06.8**	**+0.5**
UPM				Sn	**Sg**	**21 50 26.7**	**+1.4**
NKY	**Niksic**	**1.45**	**254**	P	**Pn**	**21 50 06.7**	**+0.4**
NKY	**Niksic**	**1.45**	**254**	*e*Pg	**Pn**	**21 50 06.7**	**+0.4**
NKY				*i* Sg	**Sg**	**21 50 27.7**	**+2.3**
NKY	**Niksic**	**1.45**	**254**	Pn	**Pn**	**21 50 06.7**	**+0.4**
NKME	**Niksic**	**1.49**	**252**	*e*Pg	**Pn**	**21 50 07.1**	**+0.3**
NKME				*i* Sg	**Sg**	**21 50 28.6**	**+1.9**
PHP	**Peshkopia**	**1.59**	**192**	P	**Pn**	**21 50 08.6**	**+0.4**
PHP				S	**Sg**	**21 50 31.4**	**+1.6**
PHP	**Peshkopia**	**1.59**	**192**	P	**Pn**	**21 50 08.5**	**+0.4**
PHP				S	**Sn**	**21 50 29.3**	**0.0**
PHP	**Peshkopia**	**1.59**	**192**	P	**Pn**	**21 50 08.5**	**+0.4**
	baz=195						
PHP				S	**Sn**	**21 50 29.3**	**0.0**
	baz=195						
PHP				AMP			
	comp=N,12nm,0.7s,baz=195						
PHP	**Peshkopia**	**1.59**	**192**	Pn	**Pn**	**21 50 08.5**	**+0.4**
PHP				Pn	**Pn**	**21 50 08.6**	**+0.4**
PHP				Sn	**Sn**	**21 50 29.3**	**0.0**
PHP				Lg	Lg	21 50 31.4	
BEO	**Beograd**	**1.60**	**350**	P	**Pn**	**21 50 07.2**	**-1.1**
BEO	**Beograd**	**1.60**	**350**	Pn	**Pn**	**21 50 07.2**	**-1.1**
BEO				Pg	**Pb**	**21 50 08.5**	**-0.6**
	comp=Z,9.6nm,SNR=85						
BEO				Sn	**Sn**	**21 50 28.8**	**-0.7**
CEME	**Cevo**	**1.60**	**245**	⇓*i*Pn	**Pn**	**21 50 08.7**	**+0.4**
CEME				*i* Sn	**Sg**	**21 50 31.3**	**+1.1**
TEKS	**Tekeris**	**1.63**	**324**	*e*Pg	**Pn**	**21 50 09.0**	**+0.2**
TEKS				*e*Sg	**Sg**	**21 50 34.0**	**+2.6**
TEKS	**Tekeris**	**1.63**	**324**	⇑*i*Pn	**Pn**	**21 50 08.8**	**0.0**
TEKS				*e*Sn	**Sn**	**21 50 30.2**	**-0.3**
TEKS	**Tekeris**	**1.63**	**324**	Pn	**Pn**	**21 50 08.8**	**0.0**
TEKS				Pg	**Pn**	**21 50 09.0**	**+0.2**
TEKS				Sn	**Sn**	**21 50 30.2**	**-0.3**
TEKS				Lg	Lg	21 50 34.0	
HAPS	**Han Pijesak,Bl**	**1.64**	**302**	*e*Pn	**Pn**	**21 50 08.2**	**-0.7**
HAPS				*e*Sg	**Sg**	**21 50 32.8**	**+1.4**
HAPS	**Han Pijesak,Bl**	**1.64**	**302**	*e*Pn	**Pn**	**21 50 08.2**	**-0.7**
HAPS				*e*Sn	**Sn**	**21 50 30.3**	**-0.4**
HAPS	**Han Pijesak,Bl**	**1.64**	**302**	Pn	**Pn**	**21 50 08.2**	**-0.7**
HAPS				Sn	**Sn**	**21 50 30.3**	**-0.4**
HAPS				Lg	Lg	21 50 32.8	
MDVR	**Moldovita**	**1.66**	**21**	⇓P	**Pn**	**21 50 09.1**	**0.0**
MDVR				⇑S	**Sg**	**21 50 33.0**	**+1.0**
MDVR	**Moldovita**	**1.66**	**21**		**Pn**	**21 50 09.1**	**0.0**
MDVR					**Sg**	**21 50 33.0**	**+1.0**
MDVR	**Moldovita**	**1.66**	**21**	Pn	**Pn**	**21 50 09.1**	**0.0**
MDVR				Lg	Lg	21 50 33.0	
BUM	**Brajici-Budva**	**1.74**	**238**	⇓*i*Pn	**Pn**	**21 50 10.6**	**+0.4**
BUM				*i* Sn	**Sb**	**21 50 34.6**	**+0.7**
BRY	**Bratogost**	**1.75**	**260**	P	**Pn**	**21 50 10.8**	**+0.3**
BRY				S	**Sn**	**21 50 32.0**	**-1.5**
BRY	**Bratogost**	**1.75**	**260**	⇓*i*Pn	**Pn**	**21 50 10.9**	**+0.4**
BRY	**Bratogost**	**1.75**	**260**	⇓*i*Pn	**Pn**	**21 50 10.8**	**+0.3**
BRY				*i* Sn	**Sb**	**21 50 35.0**	**+0.7**
BRY	**Bratogost**	**1.75**	**260**	Pn	**Pn**	**21 50 10.8**	**+0.3**
BRY				Pg	**Pn**	**21 50 10.9**	**+0.4**
BRY				Sn	**Sn**	**21 50 32.0**	**-1.5**
ULC	**Ulcinj**	**1.76**	**224**	P	**Pb**	**21 50 12.0**	**+0.1**
ULC				S	**Sn**	**21 50 33.0**	**-0.5**
ULC	**Ulcinj**	**1.76**	**224**	⇓*i*Pn	**Pn**	**21 50 10.9**	**+0.4**
ULC				*i* Sn	**Sb**	**21 50 35.1**	**+0.7**
ULC	**Ulcinj**	**1.76**	**224**	Pn	**Pb**	**21 50 12.0**	**+0.1**
ULC				Sn	**Sn**	**21 50 33.0**	**-0.5**
PUNG	**Punghina**	**1.81**	**54**	⇓P	**Pn**	**21 50 11.7**	**+0.5**
PUNG				⇓S	**Sb**	**21 50 37.4**	**+1.3**
PUNG	**Punghina**	**1.81**	**54**		**Pn**	**21 50 11.7**	**+0.5**
PUNG					**Sb**	**21 50 37.4**	**+1.3**
PUNG	**Punghina**	**1.81**	**54**	Pn	**Pn**	**21 50 11.7**	**+0.5**
PUNG				Lg	Lg	21 50 37.4	
STIP	**Stip**	**1.82**	**148**	⇓*i*Pn	**Pn**	**21 50 11.3**	**-0.1**
VTS	**Vitosha**	**1.84**	**109**	*e*Pg	**Pn**	**21 50 12.1**	**+0.4**
VTS				*e*Sg	**Sn**	**21 50 36.2**	**+0.6**
VTS	**Vitosha**	**1.84**	**109**	⇑P	**Pn**	**21 50 12.4**	**+0.7**
VTS				⇑S	**Sn**	**21 50 36.3**	**+0.6**
VTS	**Vitosha**	**1.84**	**109**	P	**Pn**	**21 50 12.0**	**+0.4**
VTS	**Vitosha**	**1.84**	**109**		**Pn**	**21 50 12.0**	**+0.3**
VTS	**Vitosha**	**1.84**	**109**	Pg	**Pn**	**21 50 12.0**	**+0.4**
VTS				Pn	**Pn**	**21 50 12.2**	**+0.4**
	comp=Z,5.6nm,SNR=109						
VTS				Pb	**Pn**	**21 50 12.4**	**+0.7**
VTS				Sn	**Sn**	**21 50 35.4**	**-0.3**
VTS				Lg	Lg	21 50 36.2	
VTS				Lg	Lg	21 50 36.3	
DJES	**Djerdap**	**1.85**	**39**	*e*Pg	**Pn**	**21 50 13.0**	**+1.2**
DJES				*e*Sg	**Sg**	**21 50 39.3**	**+0.9**
DJES	**Djerdap**	**1.85**	**39**	⇓P	**Pb**	**21 50 13.3**	**-0.3**
DJES				⇓S	**Sn**	**21 50 35.9**	**0.0**
DJES	**Djerdap**	**1.85**	**39**		**Pb**	**21 50 13.3**	**-0.3**
DJES					**Sn**	**21 50 35.9**	**0.0**
DJES	**Djerdap**	**1.85**	**39**	Pn	**Pn**	**21 50 13.0**	**+1.2**
DJES				Pg	**Pb**	**21 50 13.3**	**-0.3**
DJES				Pg	**Pg**	**21 50 14.7**	**+0.3**
	comp=Z,11nm,SNR=67						
DJES				Sn	**Sn**	**21 50 34.7**	**-1.2**
DJES				Sn	**Sn**	**21 50 35.9**	**0.0**
DJES				Lg	Lg	21 50 39.3	
SOF	**Sofiya**	**1.88**	**106**	P	**Pb**	**21 50 15.4**	**+1.3**
SOF	**Sofiya**	**1.88**	**106**	Pg	**Pb**	**21 50 15.4**	**+1.3**
HCY	**Herceg Novi**	**1.93**	**247**	P	**Pb**	**21 50 14.2**	**-0.6**
HCY				S	**Sn**	**21 50 36.0**	**-1.6**
HCY	**Herceg Novi**	**1.93**	**247**	⇓*i*Pn	**Pn**	**21 50 14.1**	**+1.3**
HCY				*e*Sn	**Sn**	**21 50 38.2**	**+0.6**
HCY	**Herceg Novi**	**1.93**	**247**	⇓*i*Pn	**Pn**	**21 50 13.1**	**+0.3**
HCY				*i* Sn	**Sb**	**21 50 39.1**	**-0.2**
HCY	**Herceg Novi**	**1.93**	**247**	Pn	**Pn**	**21 50 14.1**	**+1.3**

HCY				Pg	Pb	21 50 14.2	-0.6
HCY				Sn	Sn	21 50 36.0	-1.6
HCY				Lg	Lg	21 50 38.2	
TREB	Trebinje	1.93	255	*e*Pg	Pn	21 50 14.1	+1.3
TREB				*e*Sg	Sg	21 50 42.3	+1.5
TREB	Trebinje	1.93	255	⇑*i*Pn	Pn	21 50 13.9	+1.1
TREB				*e*Sn	Sn	21 50 37.9	+0.2
TREB	Trebinje	1.93	255	Pn	Pn	21 50 13.9	+1.1
TREB				Pg	Pn	21 50 14.1	+1.3
TREB				Sn	Sn	21 50 37.9	+0.2
TREB				Lg	Lg	21 50 42.3	
RMGR	Halanga-Turnu	1.93	42	⇓P	Pn	21 50 14.0	+1.1
RMGR				⇓S	Sn	21 50 38.4	+0.6
RMGR	Halanga-Turnu	1.93	42		Pn	21 50 14.0	+1.1
RMGR					Sn	21 50 38.4	+0.6
RMGR	Halanga-Turnu	1.93	42	Pn	Pn	21 50 14.0	+1.1
RMGR				Sn	Sn	21 50 38.4	+0.6
BAIL	Bailesti	1.95	66	⇓P	Pn	21 50 14.5	+1.4
BAIL	Bailesti	1.95	66		Pn	21 50 14.5	+1.4
BAIL	Bailesti	1.95	66	Pn	Pn	21 50 14.5	+1.4
HERR	Herculane	1.98	33	⇑P	Pn	21 50 13.8	+0.3
HERR	Herculane	1.98	33		Pn	21 50 13.8	+0.3
HERR	Herculane	1.98	33	Pn	Pn	21 50 13.8	+0.3
TIR	Tirane	2.03	202	P	Pb	21 50 16.5	-0.2
TIR	Tirane	2.03	202	P	Pb	21 50 16.4	-0.2
TIR	Tirane	2.03	202		Pb	21 50 16.4	-0.2
TIR	Tirane	2.03	202	P	Pb	21 50 16.4	-0.2
	baz=205						
TIR				S	Sb	21 50 43.5	+1.0
	baz=205						
TIR				AMP			
	comp=E,5.5nm,0.9s,baz=205						
TIR	Tirane	2.03	202	Pn	Pb	21 50 16.4	-0.2
TIR				Pn	Pb	21 50 16.5	-0.2
TIR				Pg	Pg	21 50 17.4	-0.4
	comp=Z,6.9nm,SNR=16						
TIR				Sn	Sg	21 50 44.4	+0.2
FRGS	Fruska Gora	2.07	339	*e*Pn	Pn	21 50 14.2	-0.5
FRGS	Fruska Gora	2.07	339	⇓P	Pb	21 50 16.4	-0.8
FRGS	Fruska Gora	2.07	339	⇑*i*Pn	Pn	21 50 14.2	-0.5
FRGS				*e*Sn	Sn	21 50 41.0	-0.2
FRGS	Fruska Gora	2.07	339		Pb	21 50 16.4	-0.8
FRGS	Fruska Gora	2.07	339	Pg	Pn	21 50 14.2	-0.5
FRGS				Pn	Pb	21 50 14.3	-2.9
	comp=Z,3.2nm,SNR=48						
FRGS				Pb	Pb	21 50 16.4	-0.8
FRGS				Sn	Sn	21 50 41.0	-0.2
DBRK	Dubrovnik	2.09	255	*i* Pn	Pn	21 50 15.6	+0.7
DBRK				Sn	Sb	21 50 43.1	-0.8
DBRK	Dubrovnik	2.09	255	Pn	Pn	21 50 15.6	+0.7
DBRK				Sn	Sb	21 50 43.1	-0.8
OHR	Ohrid	2.13	182	P	Pn	21 50 16.8	+1.2
OHR	Ohrid	2.13	182	*i* Pn	Pn	21 50 16.1	+0.6
OHR	Ohrid	2.13	182	Pn	Pn	21 50 16.8	+1.2
BANR	Banloc	2.15	5	⇑P	Pn	21 50 16.7	+0.8
BANR	Banloc	2.15	5		Pn	21 50 16.7	+0.8
BANR	Banloc	2.15	5	Pg	Pn	21 50 16.5	+0.7
	comp=Z,3.0nm,SNR=17						
BANR				Pn	Pn	21 50 16.7	+0.8
BANR				Sn	Sb	21 50 44.6	-1.1
SRE	Strehaia	2.20	49	⇓P	Pn	21 50 18.0	+1.4
SRE				⇑S	Sb	21 50 46.8	-0.4
SRE	Strehaia	2.20	49	P	Pn	21 50 18.0	+1.4
SRE						21 50 46.8	
SRE	Strehaia	2.20	49		Pn	21 50 18.0	+1.4
SRE					Sb	21 50 46.8	-0.4
SRE	Strehaia	2.20	49	Pn	Pn	21 50 18.0	+1.4
SRE				Pn	Pn	21 50 18.0	+1.4
SRE				Sn	Sb	21 50 46.8	-0.4
STON	Ston	2.36	262	*i* Pn	Pn	21 50 19.5	+0.8
STON				Sn	Sb	21 50 50.9	-0.9
STON	Ston	2.36	262	Pn	Pn	21 50 19.5	+0.8
STON				Sn	Sb	21 50 50.9	-0.9
BZS	Buzias	2.44	12	P	Pn	21 50 19.3	-0.5
BZS	Buzias	2.44	12	Pn	Pn	21 50 19.3	-0.5
	comp=Z,3.8nm,SNR=133						
BZS				Sn	Sn	21 50 48.6	-1.6
FNA	Florina	2.48	171	P	Pn	21 50 21.3	+0.8
FNA				S	Sn	21 50 53.3	+1.9
	comp=Z,1µm,0.5s						
FNA	Florina	2.48	171	*e*P	Pn	21 50 21.4	+0.9
FNA	Florina	2.48	171	P	Pn	21 50 21.7	+1.3
FNA	Florina	2.48	171		Pn	21 50 21.7	+1.3
FNA	Florina	2.48	171	Pn	Pn	21 50 21.3	+0.8
FNA				Pg	Pn	21 50 21.4	+0.9
FNA				Pb	Pg	21 50 21.7	-4.7
FNA				Sn	Sn	21 50 53.3	+1.9
	comp=Z,1µm,0.5s						
TIM	Timisoara	2.51	5	⇓P	Pn	21 50 22.1	+1.3
TIM				⇑S	Sn	21 50 51.4	-0.6
TIM	Timisoara	2.51	5		Pn	21 50 22.1	+1.3
TIM					Sn	21 50 51.4	-0.6
TIM	Timisoara	2.51	5	Pn	Pn	21 50 22.1	+1.3
TIM				Sn	Sn	21 50 51.4	-0.6
GRG	Griva	2.55	153	P	Pn	21 50 22.0	+0.7
GRG				S	Sn	21 50 52.8	-0.2
	comp=Z,602nm,1.1s						
GRG	Griva	2.55	153	*e*P	Pn	21 50 21.9	+0.7
GRG	Griva	2.55	153	P	Pn	21 50 22.1	+0.7
GRG	Griva	2.55	153	Pn	Pn	21 50 21.9	+0.7
GRG				Pg	Pn	21 50 22.0	+0.7
GRG				Pb	Pb	21 50 22.1	-3.2
GRG				Sn	Sn	21 50 52.8	-0.2
	comp=Z,602nm,1.1s						
GZR	Gura Zlata	2.55	32	⇑P	Pn	21 50 22.1	+0.8
GZR	Gura Zlata	2.55	32	P	Pn	21 50 22.2	+0.8
GZR	Gura Zlata	2.55	32		Pn	21 50 22.1	+0.8
GZR	Gura Zlata	2.55	32	Pn	Pn	21 50 22.1	+0.8
GZR				Pg	Pn	21 50 22.2	+0.8
GZR				Pb	Pb	21 50 22.3	-3.1
	comp=Z,4.2nm,SNR=103						
GZR				Sn	Sn	21 50 52.3	-0.8
KNT	Kendrikon	2.56	143	P	Pn	21 50 21.9	+0.4
KNT	Kendrikon	2.56	143	*e*P	Pn	21 50 21.6	+0.1
KNT	Kendrikon	2.56	143	Pn	Pn	21 50 21.6	+0.1
KNT				Pg	Pn	21 50 21.9	+0.4
KBN	Korca	2.61	182	P	Pb	21 50 25.1	-1.4
KBN				S	Sb	21 50 57.4	-1.8
	comp=Z,1µm,1.4s						
KBN	Korca	2.61	182	P	Pb	21 50 25.2	-1.3
KBN				S	Sb	21 50 58.3	-0.8
KBN	Korca	2.61	182	P	Pb	21 50 25.2	-1.3
	baz=183						
KBN				S	Sb	21 50 58.4	-0.8
	baz=183						
KBN				AMP			
	comp=E,4.7nm,1.0s,baz=183						
KBN	Korca	2.61	182	Pn	Pb	21 50 25.1	-1.4
KBN				Pg	Pb	21 50 25.2	-1.3
KBN				Sn	Sb	21 50 57.4	-1.8
	comp=E,1µm,1.4s						
KBN				Lg	Lg	21 50 58.3	
VLAD	Vladila	2.67	72	⇑P	Pn	21 50 24.2	+1.2
VLAD	Vladila	2.67	72		Pn	21 50 24.2	+1.2
VLAD	Vladila	2.67	72	Pn	Pn	21 50 24.2	+1.2
MMB	Musomiste	2.68	127	P	Pn	21 50 23.8	+0.7
MMB	Musomiste	2.68	127	Pn	Pn	21 50 23.8	+0.7
PLVB	Pleven	2.73	86	⇓P	Pn	21 50 25.0	+1.1
PLVB				⇑S	Sn	21 50 57.5	0.0
PLVB	Pleven	2.73	86		Pn	21 50 25.0	+1.1
PLVB					Sn	21 50 57.5	0.0
PLVB	Pleven	2.73	86	Pn	Pn	21 50 25.0	+1.1
PLVB				Sn	Sn	21 50 57.5	0.0
RICI	Ricice	2.75	277	*i* Pn	Pn	21 50 26.6	+2.5
RICI				Sn	Sn	21 51 00.0	+2.2
RICI	Ricice	2.75	277	Pn	Pn	21 50 26.6	+2.5
RICI				Sn	Sn	21 51 00.0	+2.2
MAKA	Makarska	2.82	272	*i* Pn	Pn	21 50 26.7	+1.7
MAKA	Makarska	2.82	272	Pn	Pn	21 50 26.7	+1.7
NEST	Nestorio	2.83	177	P	Pn	21 50 26.2	+1.0
NEST				S	Sn	21 51 01.6	+1.7
	comp=E,708nm,0.9s						
NEST	Nestorio	2.83	177	Pn	Pn	21 50 26.2	+1.0
NEST				Sn	Sn	21 51 01.6	+1.7
	comp=E,708nm,0.9s						
NVR	Nevrokopi	2.91	129	P	Pn	21 50 26.5	+0.2
NVR				S	Sn	21 51 02.4	+0.5
	comp=E,2µm,1.0s						
NVR	Nevrokopi	2.91	129	Pn	Pn	21 50 26.5	+0.2
NVR				Sn	Sn	21 51 02.4	+0.5
	comp=E,2µm,1.0s						
SRS	Serrai	2.92	136	P	Pn	21 50 26.8	+0.3
SRS				S	Sn	21 51 01.8	-0.5
	comp=E,2µm,0.8s						
SRS	Serrai	2.92	136	P	Pn	21 50 26.6	+0.1
SRS	Serrai	2.92	136	Pn	Pn	21 50 26.6	+0.1
SRS				Pg	Pb	21 50 26.8	-5.0
SRS				Sn	Sn	21 51 01.8	-0.5
	comp=E,2µm,0.8s						
MGRS	Mrkonjic Grad	2.99	295	⇑*i*Pn	Pn	21 50 28.5	+1.1
MGRS				*e*Sn	Sn	21 51 03.3	-0.6
MGRS	Mrkonjic Grad	2.99	295	Pn	Pn	21 50 28.5	+1.1
MGRS				Sn	Sn	21 51 03.3	-0.6
KZN	Kozani	3.00	167	P	Pn	21 50 28.5	+0.8
KZN	Kozani	3.00	167	Pn	Pn	21 50 28.5	+0.8
DEV	Deva	3.01	28	⇓P	Pn	21 50 28.4	+0.7
DEV				⇑S	Sn	21 51 03.8	-0.7
DEV	Deva	3.01	28	P	Pn	21 50 28.4	+0.7
DEV						21 51 03.8	
DEV	Deva	3.01	28		Pn	21 50 28.4	+0.7
DEV					Sn	21 51 03.8	-0.7
DEV	Deva	3.01	28	Pn	Pn	21 50 28.4	+0.7
DEV				Pn	Pn	21 50 28.4	+0.7
DEV				Pg	Pb	21 50 28.9	-4.4
	comp=Z,4.0nm,SNR=96						
DEV				Sn	Sn	21 51 03.7	-0.7
LOT	Lotru	3.03	42	⇑P	Pn	21 50 28.5	+0.4
LOT	Lotru	3.03	42	*e*P	Pn	21 50 28.5	+0.4
LOT	Lotru	3.03	42		Pn	21 50 28.5	+0.4
LOT	Lotru	3.03	42	Pg	Pn	21 50 28.5	+0.4
LOT				Pb	Pn	21 50 28.5	+0.4
LOT				Pn	Pb	21 50 28.7	-5.0
	comp=Z,2.2nm,SNR=44						
LOT				Sn	Sn	21 51 03.3	-1.7
THE	Thessaloniki	3.03	148	P	Pn	21 50 28.1	+0.1
THE	Thessaloniki	3.03	148	P	Pn	21 50 28.4	+0.4
THE	Thessaloniki	3.03	148	Pn	Pn	21 50 28.1	+0.1
THE				Pg	Pb	21 50 28.4	-5.2
PLD	Plovdiv	3.04	111	*e*P	Pn	21 50 26.8	-1.2
PLD	Plovdiv	3.04	111	P	Pb	21 50 33.4	-0.3
PLD	Plovdiv	3.04	111	Pn	Pn	21 50 26.8	-1.2
PLD				Pg	Pb	21 50 33.4	-0.3
SOH	Sokhos	3.04	142	P	Pn	21 50 28.4	+0.3
SOH	Sokhos	3.04	142	Pn	Pn	21 50 28.4	+0.3
BLY	Banja Luka	3.06	301	⇑*i*Pn	Pn	21 50 28.9	+0.5
BLY				*e*Sn	Sn	21 51 05.7	0.0
BLY	Banja Luka	3.06	301	Pn	Pn	21 50 28.9	+0.5
BLY				Pg	Pb	21 50 29.4	-4.7
	comp=Z,3.0nm,SNR=18						
BLY				Sn	Sn	21 51 05.7	0.0
BLY				Lg	Lg	21 51 05.9	
SIRR	Siria	3.08	10	Pn	Pn	21 50 29.1	+0.5
	comp=Z,2.1nm,SNR=47						
SIRR				Sn	Sn	21 51 03.4	-2.7
LSK	Leskovik	3.09	184	P	Pn	21 50 31.4	+2.5
LSK	Leskovik	3.09	184	Pn	Pn	21 50 31.4	+2.5
AMBH	Ambrzfalva	3.11	358	⇑P	Pn	21 50 29.7	+0.7
AMBH	Ambrzfalva	3.11	358		Pn	21 50 29.7	+0.7
AMBH	Ambrzfalva	3.11	358	Pn	Pn	21 50 29.8	+0.7
	comp=Z,2.6nm,SNR=15						
AMBH				Lg	Lg	21 51 19.0	
HORT	Hortiatis	3.12	147	P	Pn	21 50 29.4	+0.2
HORT	Hortiatis	3.12	147	*e*P	Pn	21 50 29.4	+0.2
HORT	Hortiatis	3.12	147	Pn	Pn	21 50 29.4	+0.2
HORT				Pn	Pn	21 50 29.4	+0.2
HUMR	Humele	3.23	65	⇓P	Pn	21 50 31.8	+1.1
HUMR	Humele	3.23	65		Pn	21 50 31.8	+1.1
HUMR	Humele	3.23	65	Pn	Pn	21 50 31.8	+1.1
COPA	Copaceanca	3.27	73	⇑P	Pn	21 50 32.2	+0.9
COPA	Copaceanca	3.27	73		Pn	21 50 32.2	+0.9
COPA	Copaceanca	3.27	73	Pn	Pn	21 50 32.2	+0.9
ZIMR		3.29	81	⇑P	Pn	21 50 32.3	+0.8
ZIMR		3.29	81	P	Pn	21 50 32.3	+0.8
ZIMR		3.29	81		Pn	21 50 32.3	+0.8
ZIMR		3.29	81	Pn	Pn	21 50 32.3	+0.8
ZIMR				Pg	Pn	21 50 32.3	+0.8
KPRO	Kipourio	3.30	174	P	Pn	21 50 33.2	+1.5
KPRO	Kipourio	3.30	174	Pn	Pn	21 50 33.2	+1.5
KIJV	Kijevo	3.34	285	*e*Pn	Pn	21 50 34.9	+2.7
KIJV	Kijevo	3.34	285	Pn	Pn	21 50 34.9	+2.7
LIT	Litokhoron	3.36	158	P	Pn	21 50 32.8	+0.3
LIT	Litokhoron	3.36	158	Pn	Pn	21 50 32.8	+0.3
MORH	Mrgy, Hungar	3.38	333	⇑P	Pn	21 50 32.7	0.0
MORH	Mrgy, Hungar	3.38	333	⇑*i*Pn	Pn	21 50 32.5	-0.1
MORH				*e*Sn	Sn	21 51 12.7	-0.7
MORH	Mrgy, Hungar	3.38	333		Pn	21 50 32.7	0.0
MORH	Mrgy, Hungar	3.38	333	Pg	Pn	21 50 32.6	-0.1
	comp=Z,0.7nm,SNR=11						
MORH				Pn	Pb	21 50 32.7	-6.8
MORH				Sn	Sn	21 51 12.7	-0.7
SRN	Sarande	3.42	191	P	Pn	21 50 36.0	+2.7
SRN	Sarande	3.42	191	Pn	Pn	21 50 36.0	+2.7
ARR	Arges	3.43	50	⇑P	Pn	21 50 34.7	+1.2
ARR	Arges	3.43	50		Pn	21 50 34.7	+1.2
ARR	Arges	3.43	50	Pn	Pn	21 50 34.7	+1.2
PRIJ	Prijedor	3.47	302	*e*Pn	Pn	21 50 34.0	+0.1
PRIJ				*e*Sn	Sn	21 51 14.7	-0.9
PRIJ	Prijedor	3.47	302	Pn	Pn	21 50 34.0	+0.1
PRIJ				Sn	Sn	21 51 14.7	-0.9
VOIR		3.71	52	⇑P	Pn	21 50 38.5	+1.1
VOIR		3.71	52	P	Pn	21 50 38.5	+1.1
VOIR		3.71	52		Pn	21 50 38.5	+1.1
VOIR		3.71	52	Pn	Pn	21 50 38.5	+1.1
VOIR				Pg	Pn	21 50 38.5	+1.1
KDZ	Kurdzhali	3.71	114	*e*P	Pn	21 50 35.8	-1.6
KDZ	Kurdzhali	3.71	114	Pn	Pn	21 50 35.8	-1.6
OUR	Ouranopolis	3.71	140	*e*P	Pn	21 50 37.2	-0.1
OUR	Ouranopolis	3.71	140	Pn	Pn	21 50 37.2	-0.1
THL	Klokotos Trika	3.77	167	P	Pn	21 50 38.9	+0.8
THL	Klokotos Trika	3.77	167	Pn	Pn	21 50 38.9	+0.8
DRGR		3.78	19	⇑P	Pn	21 50 39.7	+1.3
DRGR		3.78	19	P	Pn	21 50 39.7	+1.3
DRGR		3.78	19		Pn	21 50 39.7	+1.3
DRGR		3.78	19	Pn	Pn	21 50 39.7	+1.3
	comp=Z,1.4nm,SNR=29						
DRGR				Sn	Sn	21 51 21.0	-2.5
MOSL	Moslavina	3.79	310	*e*Pn	Pn	21 50 38.3	-0.1
MOSL				Sn	Sn	21 51 20.4	-3.2
MOSL	Moslavina	3.79	310	Pn	Pn	21 50 38.3	-0.1
MOSL				Sn	Sn	21 51 20.4	-3.2
MORI	Morici	3.81	281	*e*Pn	Pn	21 50 40.4	+1.7
MORI				Sn	Sn	21 51 22.5	-1.6
MORI	Morici	3.81	281	Pn	Pn	21 50 40.4	+1.7
MORI				Sn	Sn	21 51 22.5	-1.6
SGRR	Singureni	3.82	73	⇓P	Pn	21 50 39.8	+1.0
SGRR	Singureni	3.82	73		Pn	21 50 39.8	+1.0
SGRR	Singureni	3.82	73	Pn	Pn	21 50 39.8	+1.0
ZIRJ	Zirje	3.84	278	*e*Pn	Pn	21 50 39.8	+0.8
ZIRJ				Sn	Sn	21 51 24.8	+0.1
ZIRJ	Zirje	3.84	278	Pn	Pn	21 50 39.8	+0.8
ZIRJ				Sn	Sn	21 51 24.8	+0.1
UDBI	Udbina	3.92	291	*e*Pn	Pn	21 50 41.2	+1.0
UDBI	Udbina	3.92	291	Pn	Pn	21 50 41.2	+1.0
PAIG	Paliouri	3.92	147	P	Pn	21 50 40.5	+0.4
PAIG	Paliouri	3.92	147	P	Pn	21 50 40.8	+0.7
PAIG	Paliouri	3.92	147	Pn	Pn	21 50 40.5	+0.4
PAIG				Pg	Pb	21 50 40.8	-7.9
CJR	Cluj-Napoca	3.97	28	⇓P	Pn	21 50 41.7	+0.7
CJR	Cluj-Napoca	3.97	28	P	Pn	21 50 41.7	+0.7
CJR	Cluj-Napoca	3.97	28		Pn	21 50 41.7	+0.7
CJR	Cluj-Napoca	3.97	28	Pn	Pn	21 50 41.7	+0.7
CJR				Pg	Pb	21 50 41.7	-8.0
CJR				Pb	Pg	21 50 42.2	-13
	comp=Z,3.9nm,SNR=76						
RDO	Rodhopi	4.04	120	*e*P	Pn	21 50 42.1	+0.3
RDO	Rodhopi	4.04	120	Pn	Pn	21 50 42.1	+0.3
SGRT	San Giovanni R	4.08	250	Pn	Pn	21 50 42.7	+0.3
SGRT	San Giovanni R	4.08	250	Pn	Pn	21 50 42.7	+0.3
BSZH	Besenyszg	4.08	354	Pn	Pn	21 50 43.3	+0.9
	comp=Z,0.4nm,SNR=4.7						
SECR		4.14	63	⇑P	Pn	21 50 45.1	+1.8
SECR		4.14	63		Pn	21 50 45.1	+1.8
SECR		4.14	63	Pn	Pn	21 50 45.1	+1.8
DOPR	Dopca	4.22	48	⇓P	Pn	21 50 45.5	+1.2
DOPR	Dopca	4.22	48		Pn	21 50 45.5	+1.2
DOPR	Dopca	4.22	48	Pn	Pn	21 50 45.5	+1.2
TIH	Tihany	4.23	331	Pn	Pn	21 50 44.4	0.0
	comp=Z,5.1nm,SNR=23						
TIH				Sn	Sn	21 51 33.8	-0.6
MLR	Muntele Rosu	4.27	56	Pn	Pn	21 50 46.5	+1.4
	comp=Z,5.7nm,0.3s,baz=225,slow=2.0,SNR=52						
MLR				Sn	Sn	21 51 37.0	+1.3
	comp=Z,5.9nm,0.3s,baz=25,slow=10,SNR=4.3						
MLR				Lg	Lg	21 51 57.3	
	comp=Z,7.2nm,0.3s,baz=125,slow=23,SNR=7.0						
MLR				LR	LR	21 52 53.1	
	comp=Z,400nm,19.3s,baz=272,slow=45						
MLR	Muntele Rosu	4.27	56	⇓P	Pn	21 50 46.5	+1.4
MLR	Muntele Rosu	4.27	56		Pn	21 50 45.9	+0.7
MLR	Muntele Rosu	4.27	56	Pn	Pn	21 50 46.5	+1.4
	comp=Z,5.7nm,0.3s,SNR=52						
MLR				Pn	Pn	21 50 46.5	+1.4
MLR				Pg	Pn	21 50 46.5	+1.4
MLR				Pb	Pn	21 50 47.0	+1.8
	comp=Z,0.7nm,SNR=13						
MLR				Sn	Sn	21 51 37.0	+1.3
	comp=Z,5.9nm,0.3s,SNR=4.3						
MLR				Lg	Lg	21 51 57.3	
	comp=Z,7.2nm,0.3s,SNR=7.0						
MLR				LR	LR	21 52 53.1	
	comp=Z,400nm,19.3s						
KALN	Kalnik	4.28	314	*e*Pn	Pn	21 50 45.1	-0.1
KALN				Sn	Sn	21 51 34.6	-1.1
KALN	Kalnik	4.28	314	Pn	Pn	21 50 45.1	-0.1
KALN				Sn	Sn	21 51 34.6	-1.1
DUGI	Dugi Otok	4.29	282	*i* Pn	Pn	21 50 46.4	+1.0
DUGI	Dugi Otok	4.29	282	Pn	Pn	21 50 46.4	+1.0
MAKR	Makrakomi, Fth	4.33	167	P	Pn	21 50 46.9	+1.1
MAKR	Makrakomi, Fth	4.33	167	Pn	Pn	21 50 46.9	+1.1
AGG	Agios Georgios	4.35	165	*e*P	Pn	21 50 47.3	+1.1
AGG	Agios Georgios	4.35	165	P	Pn	21 50 47.0	+0.8
AGG	Agios Georgios	4.35	165		Pn	21 50 47.0	+0.8
AGG	Agios Georgios	4.35	165	Pn	Pn	21 50 47.0	+0.8
AGG				Pg	Pn	21 50 47.3	+1.1
BEHE	Becsehely	4.35	319	⇑*i*Pn	Pn	21 50 47.0	+0.9
BEHE				*e*Sn	Sn	21 51 36.4	-1.1
BEHE	Becsehely	4.35	319	Pn	Pn	21 50 47.0	+0.9
BEHE				Pg	Pn	21 50 49.0	+2.9
	comp=Z,1.8nm,SNR=6.5						
BEHE				Sn	Sn	21 51 36.4	-1.1
BEHE				Lg	Lg	21 51 37.5	
PTJ	Puntijarka	4.41	309	*e*Pn	Pn	21 50 47.1	+0.2
PTJ				Sn	Sn	21 51 34.9	-4.1
PTJ	Puntijarka	4.41	309	Pn	Pn	21 50 47.1	+0.2
PTJ				Sn	Sn	21 51 34.9	-4.1
BUD	Budapest	4.44	344	P	Pn	21 50 46.9	-0.4
BUD	Budapest	4.44	344	Pn	Pn	21 50 46.9	-0.4
BUD				Sn	Sn	21 51 39.3	-0.4
NEHR	Nehoiu	4.46	59	⇓P	Pn	21 50 48.1	+0.5
NEHR	Nehoiu	4.46	59		Pn	21 50 48.1	+0.5
NEHR	Nehoiu	4.46	59	Pn	Pn	21 50 48.1	+0.5
LEHL	Lehliu	4.47	72	⇓P	Pn	21 50 48.7	+1.0
LEHL	Lehliu	4.47	72		Pn	21 50 48.7	+1.0
LEHL	Lehliu	4.47	72	Pn	Pn	21 50 48.7	+1.0
ALN	Alexandroupoli	4.50	120	P	Pn	21 50 48.6	+0.5
ALN	Alexandroupoli	4.50	120	*e*P	Pn	21 50 48.7	+0.6
ALN	Alexandroupoli	4.50	120	P	Pn	21 50 49.2	+1.1
ALN	Alexandroupoli	4.50	120	Pn	Pn	21 50 49.2	+1.1
ALN	Alexandroupoli	4.50	120	Pn	Pn	21 50 48.6	+0.5
ALN				Pg	Pn	21 50 48.7	+0.6
ALN				Pb	Pn	21 50 49.2	+1.1
CSKK	Cskako	4.52	337	Pn	Pn	21 50 48.3	-0.1
	comp=Z,0.7nm,SNR=54						
CSKK				Sn	Sn	21 51 42.3	+0.7
NVLJ	Novalja	4.54	289	*i* Pn	Pn	21 50 50.0	+1.4
NVLJ	Novalja	4.54	289	Pn	Pn	21 50 50.0	+1.4
OZLJ	Ozalj	4.55	303	*e*Pn	Pn	21 50 48.9	+0.2
OZLJ	Ozalj	4.55	303	Pn	Pn	21 50 48.9	+0.2
EDRB	Edirne	4.55	106	P	Pn	21 50 48.9	+0.1
EDRB	Edirne	4.55	106	*e*P	Pn	21 50 49.1	+0.3
EDRB	Edirne	4.55	106	Pn	Pn	21 50 48.9	+0.1
EDRB				Pg	Pn	21 50 49.1	+0.3
ARCR	ARCALIA	4.56	31	Pn	Pn	21 50 51.1	+2.1
	comp=Z,1.6nm,SNR=14						
MPLH	Magyarpolny	4.58	330	Pn	Pn	21 50 49.4	+0.1
	comp=Z,1.1nm,SNR=22						
MPLH				Sn	Sn	21 51 41.5	-1.8
ENEZ	Enez	4.66	121	P	Pn	21 50 50.6	+0.3
ENEZ	Enez	4.66	121	*e*P	Pn	21 50 50.0	-0.3
ENEZ	Enez	4.66	121	Pn	Pn	21 50 50.0	-0.3
ENEZ				Pg	Pn	21 50 50.6	+0.3
CRES	Cresnjev	4.66	306	⇑*i*Pn	Pn	21 50 50.7	+0.3
CRES				*e*Sn	Sn	21 51 43.2	-1.9
CRES	Cresnjev	4.66	306	Pg	Pn	21 50 50.7	+0.3
CRES				Lg	Lg	21 51 43.2	
NEF	NEVSHA	4.67	88	P	Pn	21 50 51.2	+0.7
NEF	NEVSHA	4.67	88	Pn	Pn	21 50 51.2	+0.7
PSZ	Piszkesteto	4.73	352	⇓P	Pn	21 50 51.2	-0.2
PSZ	Piszkesteto	4.73	352	P	Pn	21 50 50.7	-0.7
PSZ	Piszkesteto	4.73	352	Pn	Pn	21 50 50.7	-0.7
PSZ	Piszkesteto	4.73	352		Pn	21 50 51.2	-0.2
PSZ	Piszkesteto	4.73	352	Pg	Pn	21 50 50.7	-0.7
	comp=Z,0.4nm,SNR=5.6						
PSZ				Pn	Pn	21 50 51.2	-0.2
PSZ				Sn	Sn	21 51 45.8	-1.1
PRD	Provadia	4.76	88	P	Pn	21 50 52.6	+0.8
PRD	Provadia	4.76	88	Pn	Pn	21 50 52.6	+0.8
BMR	Baia Mare	4.80	22	Pn	Pn	21 50 51.9	-0.4
	comp=Z,1.5nm,SNR=16						
GADA	Gvkgeada	4.83	127	*e*P	Pn	21 50 53.2	+0.5
GADA	Gvkgeada	4.83	127	Pn	Pn	21 50 53.2	+0.5
EGYH	Egyhazaskeszo	4.87	330	Pn	Pn	21 50 49.8	-3.4
	comp=Z,0.6nm,SNR=2.8						
EGYH				Sn	Sn	21 51 45.8	-4.4
PLOR	Plostina	4.88	56	⇑P	Pn	21 50 54.5	+1.1
PLOR	Plostina	4.88	56	P	Pn	21 50 54.5	+1.1
PLOR	Plostina	4.88	56		Pn	21 50 54.5	+1.1
PLOR	Plostina	4.88	56	Pn	Pn	21 50 54.5	+1.1
PLOR				Pg	Pb	21 50 54.5	-11
SRO	Srobarova	4.92	339	*e*P	Pn	21 50 55.7	+1.8
SRO	Srobarova	4.92	339	*e*PN	Pn	21 50 55.7	+1.8
SRO	Srobarova	4.92	339	Pn	Pn	21 50 55.7	+1.8
SRO				Pn	Pn	21 50 55.7	+1.8
ERIK	Erikli-Kesan	4.92	120	*e*P	Pn	21 50 54.1	+0.2
ERIK	Erikli-Kesan	4.92	120	Pn	Pn	21 50 54.1	+0.2
VRI	Vrincioaia	4.94	56	⇑P	Pn	21 50 55.3	+1.2
VRI	Vrincioaia	4.94	56	*e*P	Pn	21 50 55.1	+0.9
VRI	Vrincioaia	4.94	56	P	Pn	21 50 55.3	+1.2
VRI	Vrincioaia	4.94	56		Pn	21 50 55.3	+1.2
VRI	Vrincioaia	4.94	56	Pn	Pn	21 50 55.1	+0.9
	comp=Z,0.5nm,SNR=4.4						
VRI				Pg	Pn	21 50 55.3	+1.2
VRI				Pg	Pn	21 50 55.3	+1.2
GELI	Tayfur-Gelibol	5.05	122	*e*P	Pn	21 50 56.1	+0.4
GELI	Tayfur-Gelibol	5.05	122	Pn	Pn	21 50 56.1	+0.4
ODBI	Odobesti	5.09	58	⇓P	Pn	21 50 57.4	+1.2
ODBI	Odobesti	5.09	58		Pn	21 50 57.4	+1.2
ODBI	Odobesti	5.09	58	Pn	Pn	21 50 57.4	+1.2
PAOL	Paolisi	5.19	247		Pn	21 50 58.9	+1.3
BIZ	Bicaz	5.23	43	⇑P	Pn	21 50 59.8	+1.6
BIZ	Bicaz	5.23	43		Pn	21 50 59.8	+1.6
BIZ	Bicaz	5.23	43	Pn	Pn	21 50 59.8	+1.6
LPK	Lapseki	5.24	121	*e*P	Pn	21 50 58.7	+0.3
LPK	Lapseki	5.24	121	Pn	Pn	21 50 58.7	+0.3
TESR	Tescani	5.25	49	⇑P	Pn	21 50 59.2	+0.8
TESR	Tescani	5.25	49		Pn	21 50 59.2	+0.8
TESR	Tescani	5.25	49	x	x	21 50 55.4	
	comp=Z,36nm,1.0s						
TESR				Pn	Pn	21 50 59.2	+0.8
CEY	Cerknica	5.25	301	⇓*i*Pn	Pn	21 50 59.1	+0.6
CEY				*e*Sn	Sn	21 51 57.6	-2.0
CEY	Cerknica	5.25	301	Pn	Pn	21 50 59.1	+0.6
CEY				Sn	Sn	21 51 57.6	-2.0
KECS	Kecovo	5.25	357	*e*P	Pn	21 50 58.9	+0.4
KECS				*e*		21 51 55.6	
KECS	Kecovo	5.25	357	*e*PN	Pn	21 50 58.9	+0.4
KECS				*e*SN	Sn	21 51 55.5	-4.2
KECS	Kecovo	5.25	357	Pn	Pn	21 50 58.9	+0.4
KECS				Pn	Pn	21 50 58.9	+0.4
KECS				Pg	Pn	21 50 59.2	+0.7
	comp=Z,1.3nm,SNR=12						
KECS				Sn	Sn	21 51 55.5	-4.2
KECS				Lg	Lg	21 51 56.1	
KECS				Pg	Pg		
	comp=Z,285nm,0.6s						
KECS				Pg	Pg		
KECS				Pg	Pg		
INTR	Introdacqua	5.29	259	Pn	Pn	21 51 00.3	+1.2
INTR	Introdacqua	5.29	259	Pn	Pn	21 51 00.3	+1.2
EZN	Ezine	5.32	128	*e*P	Pn	21 50 59.6	+0.2
EZN	Ezine	5.32	128	Pn	Pn	21 50 59.6	+0.2
LJU	Ljubljana	5.33	304	*e*Pn	Pn	21 50 59.9	+0.3
LJU				*e*Sn	Sn	21 51 59.3	-2.3

LJU	Ljubljana	5.33	304	Pn	Pn	21 50 59.9	+0.3
LJU				Sn	Sn	21 51 59.3	-2.3
BURAR	Bucovina Array	5.33	33	⇓P	Pn	21 51 01.1	+1.4
BURAR	Bucovina Array	5.33	33	P	Pn	21 51 01.1	+1.4
BURAR	Bucovina Array	5.33	33	Pn	Pn	21 51 02.1	+2.4
BURAR	Bucovina Array	5.33	33		Pn	21 51 01.1	+1.4
BURAR	Bucovina Array	5.33	33	Pn	Pn	21 51 01.1	+1.4
BURAR				Pg	Pn	21 51 01.1	+1.4
BURAR				Pb	Pn	21 51 02.1	+2.4
PSN	Preselentsi	5.33	83	P	Pn	21 51 00.5	+0.9
PSN	Preselentsi	5.33	83	Pn	Pn	21 51 00.5	+0.9
TLBR	Topalu	5.34	73	⇑P	Pn	21 51 00.2	+0.5
TLBR	Topalu	5.34	73		Pn	21 51 00.2	+0.5
TLBR	Topalu	5.34	73	Pn	Pn	21 51 00.2	+0.5
RKY	Sarkoy-Tekirda	5.34	116	eP	Pn	21 51 00.3	+0.5
RKY	Sarkoy-Tekirda	5.34	116	Pn	Pn	21 51 00.3	+0.5
BUR08	Bucovina Ar. S	5.35	33	Pn	Pn	21 51 02.1	+2.1
BUR08	Bucovina Ar. S	5.35	33	Pn	Pn	21 51 02.1	+2.1
MAR4	Marsite Statio	5.37	115	eP	Pn	21 51 00.8	+0.6
MAR4	Marsite Statio	5.37	115	Pn	Pn	21 51 00.8	+0.6
SOP	Sopron	5.38	327	P	Pn	21 51 01.4	+1.1
SOP				pmax	pmax		
	comp=Z,81nm,0.9s						
SOP	Sopron	5.38	327	Pn	Pn	21 50 59.7	-0.6
	comp=Z,67nm,1.1s,SNR=9.6						
SOP				x	x	21 51 00.2	
	comp=Z,67nm,1.1s						
SOP				Pg	Pn	21 51 01.4	+1.1
SOP				Sn	Sn	21 52 01.5	-1.4
SOP				pmax	pmax		
	comp=Z,81nm,0.9s						
SOP				Pn			
SOKA	Soboth	5.39	312	Pn	Pn	21 51 00.3	-0.1
	comp=Z,16nm,0.4s,SNR=24						
SOKA				eSn	Sn	21 51 60.0	-3.2
	comp=Z,34nm,0.6s						
SOKA	Soboth	5.39	312		Pn	21 51 00.3	-0.1
SOKA					Sn	21 51 60.0	-3.2
SOKA	Soboth	5.39	312	Pn	Pn	21 51 00.3	-0.1
	comp=Z,16nm,0.4s,SNR=24						
SOKA				Sn	Sn	21 51 60.0	-3.2
	comp=Z,34nm,0.6s						
MAR6	Marsite Statio	5.39	116	eP	Pn	21 51 00.7	+0.3
MAR6	Marsite Statio	5.39	116	Pn	Pn	21 51 00.7	+0.3
GZKV	Gazikoy-Tekird	5.41	115	eP	Pn	21 51 01.5	+0.9
GZKV	Gazikoy-Tekird	5.41	115	Pn	Pn	21 51 01.5	+0.9
MAR2	Marsite Statio	5.42	116	eP	Pn	21 51 00.1	-0.6
MAR2	Marsite Statio	5.42	116	Pn	Pn	21 51 00.1	-0.6
GHRR		5.44	57	x	x	21 51 06.8	
	comp=Z,49nm,1.4s						
VYHS	Vyhne	5.45	346	eP	Pn	21 51 01.7	+0.5
VYHS	Vyhne	5.45	346	ePN	Pn	21 51 01.7	+0.5
VYHS	Vyhne	5.45	346	Pg	Pn	21 51 01.0	-0.1
	SNR=3.7						
VYHS				Pn	Pn	21 51 01.7	+0.5
VYHS				Pn	Pn	21 51 01.7	+0.5
VYHS				Pg			
	comp=Z,5.8nm,0.7s						
UZH	Uzhgorod	5.48	10	eP	Pn	21 51 05.0	+3.4
UZH				eS	Sn	21 52 09.6	+4.3
UZH	Uzhgorod	5.48	10	Pn	Pn	21 51 05.0	+3.4
UZH				Sn	Sn	21 52 09.6	+4.3
SIGR	SIGRI	5.50	135	eP	Pn	21 51 02.9	+1.0
SIGR	SIGRI	5.50	135	Pn	Pn	21 51 02.9	+1.0
ARSA	Arzberg	5.51	319	Pn	Pn	21 51 02.1	0.0
	comp=Z,27nm,0.3s,SNR=69						
ARSA				eSn	Sn	21 52 04.1	-2.1
	comp=Z,40nm,0.5s						
ARSA	Arzberg	5.51	319		Pn	21 51 02.1	0.0
ARSA					Sn	21 52 04.0	-2.1
ARSA	Arzberg	5.51	319	Pn	Pn	21 51 02.0	0.0
	comp=Z,0.5nm,SNR=7.5						
ARSA				x	x	21 51 02.3	
	comp=Z,64nm,0.9s						
ARSA				Sn	Sn	21 52 01.4	-4.7
ARSA				Lg	Lg	21 52 04.1	
	comp=Z,40nm,0.5s						
ARSA				Pn	Pn		
	comp=Z,65nm,0.9s						
ARSA				Pn	Pn		
OBKA	Obir	5.56	308	Pn	Pn	21 51 03.3	+0.5
	comp=Z,17nm,0.4s,SNR=30						
OBKA				eSn	Sn	21 52 04.8	-2.7
	comp=Z,41nm,0.6s						
OBKA	Obir	5.56	308		Pn	21 51 03.3	+0.5
OBKA					Sn	21 52 04.8	-2.7
OBKA	Obir	5.56	308	Pn	Pn	21 51 03.3	+0.5
	comp=Z,17nm,0.4s,SNR=30						
OBKA				Pg	Pn	21 51 03.6	+0.8
	comp=Z,61nm,0.7s,SNR=3.4						
OBKA				x	x	21 51 03.9	
	comp=Z,60nm,0.7s						
OBKA				Sn	Sn	21 52 04.8	-2.7
	comp=Z,41nm,0.6s						
OBKA				Pg			
CFR	Carcaliu	5.56	67	⇑P	Pn	21 51 02.5	-0.2
CFR	Carcaliu	5.56	67	P	Pn	21 51 02.5	-0.2
CFR	Carcaliu	5.56	67		Pn	21 51 02.5	-0.2
CFR	Carcaliu	5.56	67	x	x	21 51 02.2	
	comp=Z,50nm,0.6s						
CFR				Pn	Pn	21 51 02.5	-0.2
CFR				Pg	Pn	21 51 02.5	-0.2
AQU	L'Aquila	5.57	263	ePn	Pn	21 51 03.6	+0.7
AQU	L'Aquila	5.57	263	Pn	Pn	21 51 03.6	+0.7
KRBG	Karabiga-Canak	5.57	118	eP	Pn	21 51 03.8	+0.9
KRBG	Karabiga-Canak	5.57	118	Pn	Pn	21 51 03.8	+0.9
TIRR	Tirgusor	5.58	75	P	Pn	21 51 08.5	+5.5
TIRR	Tirgusor	5.58	75		Pn	21 51 08.5	+5.5
TIRR	Tirgusor	5.58	75	Pn	Pn	21 51 08.5	+5.5
ZST	Bratislava	5.62	333	eP	Pn	21 51 03.9	+0.4
ZST				e		21 52 06.1	
ZST	Bratislava	5.62	333	ePN	Pn	21 51 03.9	+0.4
ZST				eSN	Sn	21 52 06.1	-2.6
ZST	Bratislava	5.62	333	Pn	Pn	21 51 04.0	+0.4
	comp=Z,401nm,0.9s,SNR=2.3						
ZST				Sn	Sn	21 52 05.4	-3.2
ZST				Lg	Lg	21 52 06.1	
ZST				Pn			
MRMT	Marmara Adasi	5.66	115	eP	Pn	21 51 04.1	0.0
MRMT	Marmara Adasi	5.66	115	Pn	Pn	21 51 04.1	0.0
TRI	Trieste	5.66	298	P	Pn	21 51 07.2	+3.2
TRI	Trieste	5.66	298	Pn	Pn	21 51 07.2	+3.2
CRVS	Cervenica-Dubn	5.68	4	eP	Pn	21 51 04.8	+0.4
CRVS	Cervenica-Dubn	5.68	4	ePN	Pn	21 51 04.8	+0.4
CRVS	Cervenica-Dubn	5.68	4	Pn	Pn	21 51 04.8	+0.4
CRVS				Pn	Pn	21 51 04.8	+0.4
CRVS				Pg	Pb	21 51 04.9	-14
	comp=Z,5.8nm,0.8s,SNR=2.8						
CRVS				x	x	21 51 07.3	
	comp=Z,9.5nm,1.2s						
CRVS				Pg			
MODS	Modra-Piesok	5.72	335	eP	Pn	21 51 04.5	-0.4
MODS				e		21 52 05.6	
MODS	Modra-Piesok	5.72	335	ePN	Pn	21 51 04.5	-0.4
MODS				eSN	Sn	21 52 05.6	-5.6
MODS	Modra-Piesok	5.72	335	Pn	Pn	21 51 04.5	-0.4
MODS				Pn	Pn	21 51 04.5	-0.4
MODS				Sn	Sn	21 52 05.6	-5.6
CTYL	Yalikoy Yolu	5.76	105	eP	Pn	21 51 05.6	+0.1
CTYL	Yalikoy Yolu	5.76	105	Pn	Pn	21 51 05.6	+0.1
KOLS	Kolonicke sedl	5.78	9	eP	Pn	21 51 06.2	+0.5
KOLS				pmax	pmax		
	comp=N,109nm,1.0s						
KOLS	Kolonicke sedl	5.78	9	ePN	Pn	21 51 06.2	+0.5
KOLS				ePG	Pg	21 51 32.9	+3.4
KOLS				eSG	Sg	21 52 46.5	+2.2
KOLS				eLG	Lg	21 53 00.2	
KOLS	Kolonicke sedl	5.78	9	Pn	Pn	21 51 06.2	+0.5
KOLS				Pn	Pn	21 51 06.2	+0.5
KOLS				Pg	Pn	21 51 06.4	+0.7
	comp=Z,135nm,0.6s,SNR=7.0						
KOLS				x	x	21 51 06.6	
	comp=Z,36nm,0.6s						
KOLS				Pb	Pg	21 51 32.9	+3.4
KOLS				Lg	Lg	21 52 46.5	
KOLS				Sg	Sg	21 53 00.2	+16
KOLS				pmax	pmax		
	comp=Z,109nm,1.0s						
KOLS				Pg			
SMOL	Smolenice	5.80	337	eP	Pn	21 51 06.4	+0.4
SMOL				e		21 52 09.5	
SMOL	Smolenice	5.80	337	ePN	Pn	21 51 06.4	+0.4
SMOL				ePG	Pg	21 51 30.2	+0.3
SMOL				eSN	Sn	21 52 09.5	-3.6
SMOL	Smolenice	5.80	337	Pn	Pn	21 51 06.4	+0.4
SMOL				Pn	Pn	21 51 06.4	+0.4
SMOL				Pg	Pg	21 51 30.2	+0.3
SMOL				Sn	Sn	21 52 09.5	-3.6
CONA	Conrad Observa	5.86	325	i Pn	Pn	21 51 06.4	-0.5
	comp=Z,7.9nm,0.3s,SNR=26						
CONA				eSn	Sn	21 52 13.8	-1.0
	comp=Z,25nm,0.4s						
CONA	Conrad Observa	5.86	325		Pn	21 51 06.4	-0.5
CONA					Sn	21 52 13.8	-1.0
CONA	Conrad Observa	5.86	325	Pn	Pn	21 51 06.4	-0.5
	comp=Z,7.9nm,0.3s,SNR=26						
CONA				Sn	Sn	21 52 13.8	-1.0
	comp=Z,25nm,0.4s						
EDC	Edincik	5.96	117	eP	Pn	21 51 08.5	+0.2
EDC	Edincik	5.96	117	Pn	Pn	21 51 08.5	+0.2
LANS	Liptovska Anna	5.99	351	eP	Pn	21 51 09.2	+0.5
LANS				e		21 52 19.5	
LANS	Liptovska Anna	5.99	351	ePN	Pn	21 51 09.2	+0.5
LANS				eSN	Sn	21 52 19.5	+1.5
LANS	Liptovska Anna	5.99	351	Pg	Pn	21 51 09.2	+0.5
LANS				Pg	Pn	21 51 09.2	+0.5
LANS				Sn	Sn	21 52 19.5	+1.5
CTKS	Kestanelik-??a	6.00	107	eP	Pn	21 51 08.8	0.0
CTKS	Kestanelik-??a	6.00	107	Pn	Pn	21 51 08.8	0.0
TLCR		6.03	68	⇑P	Pn	21 51 10.0	+0.9
TLCR		6.03	68	P	Pn	21 51 10.0	+0.9
TLCR		6.03	68		Pn	21 51 10.0	+0.9
TLCR		6.03	68	Pn	Pn	21 51 10.0	+0.9
TLCR				Pg	Pb	21 51 10.0	-15
JAVC	Velka Javorina	6.05	339	ePN	Pn	21 51 09.1	-0.4
JAVC	Velka Javorina	6.05	339	Pn	Pn	21 51 09.1	-0.4
JAVC				x	x	21 51 11.3	
	comp=Z,27nm,1.0s						
MURB	Monte Urbino	6.10	273		Pn	21 51 14.0	+3.8
MYKA	Terra Mystica	6.16	306	Pn	Pn	21 51 12.0	+1.0
	comp=Z,39nm,0.6s,SNR=33						
MYKA				eSn	Sn	21 52 19.4	-2.6
	comp=Z,15nm,0.5s						
MYKA	Terra Mystica	6.16	306		Pn	21 51 12.0	+1.0
MYKA					Sn	21 52 19.4	-2.6
MYKA	Terra Mystica	6.16	306	Pn	Pn	21 51 12.0	+1.0
	comp=Z,39nm,0.6s,SNR=33						
MYKA				Sn	Sn	21 52 19.4	-2.6
	comp=Z,15nm,0.5s						
NIE	Niedzica	6.19	356	P	Pn	21 51 12.8	+1.4
NIE				pmax	pmax		
	comp=Z,16nm,1.1s						
NIE	Niedzica	6.19	356	Pn	Pn	21 51 12.3	+0.9
	comp=Z,17nm,1.0s,SNR=3.5						
NIE				x	x	21 51 12.8	
	comp=Z,16nm,1.1s						
NIE				Sn	Sn	21 52 20.5	-2.4
NIE				pmax	pmax		
	comp=Z,16nm,1.1s						
NIE				Pn			
ISK	Istanbul-Kandi	6.46	107	eP	Pn	21 51 15.4	+0.4
ISK	Istanbul-Kandi	6.46	107	Pn	Pn	21 51 15.4	+0.4
ZOU	Zoufplan	6.52	303	Pn	Pn	21 51 17.8	+1.7
ZOU	Zoufplan	6.52	303	Pn	Pn	21 51 17.8	+1.7
MOA	Molln	6.54	317	ePn	Pn	21 51 16.9	+0.7
	comp=Z,7.5nm,0.4s						
MOA				eSn	Sn	21 52 32.6	+1.1
	comp=Z,53nm,0.5s						
MOA	Molln	6.54	317		Pn	21 51 16.9	+0.7
MOA					Sn	21 52 32.6	+1.1
MOA	Molln	6.54	317	Pn	Pn	21 51 16.9	+0.7
	comp=Z,7.5nm,0.4s						
MOA				x	x	21 51 17.4	
	comp=Z,45nm,0.8s						
MOA				Sn	Sn	21 52 32.6	+1.1
	comp=Z,53nm,0.5s						
STAL	STALIGIAL	6.55	300		Pn	21 51 19.0	+2.6
KBA	Koelnbreinsper	6.57	308	Pn	Pn	21 51 17.0	+0.3
	SNR=11						
KBA				eSn	Sn	21 52 28.8	-3.5
	comp=Z,21nm,0.6s						
KBA	Koelnbreinsper	6.57	308	P	Pn	21 51 17.0	+0.3
KBA						21 52 28.8	
KBA	Koelnbreinsper	6.57	308		Pn	21 51 17.0	+0.3
KBA					Sn	21 52 28.8	-3.5
KBA	Koelnbreinsper	6.57	308	Pn	Pn	21 51 17.0	+0.3
KBA				Pn	Pn	21 51 17.0	+0.3
KBA				x	x	21 51 17.7	
	comp=Z,26nm,0.6s						
KBA				Sn	Sn	21 52 28.8	-3.5
	comp=Z,21nm,0.6s						
KRUC	Moravsky	6.60	333	ePN	Pn	21 51 16.7	-0.3
KRUC				eSN	Sn	21 52 30.7	-2.2
KRUC	Moravsky	6.60	333	P	Pn	21 51 18.1	+1.1
KRUC				pmax	pmax		
	comp=Z,19nm,1.0s						
KRUC	Moravsky	6.60	333	Pn	Pn	21 51 16.7	-0.3
KRUC				x	x	21 51 18.1	
	comp=Z,19nm,1.0s						
KRUC				Sn	Sn	21 52 30.7	-2.2
KRUC				pmax	pmax		
	comp=Z,19nm,1.0s						
VRAC	Vranov	6.76	335	Pn	Pn	21 51 17.8	-1.3
	comp=Z,1.6nm,0.3s,baz=161,slow=12,SNR=9.7						
VRAC				Sn	Sn	21 52 34.6	-2.1
	comp=Z,0.7nm,0.3s,baz=265,slow=17,SNR=1.7						
VRAC	Vranov	6.76	335	ePN	Pn	21 51 20.0	+0.8
VRAC	Vranov	6.76	335	Pn	Pn	21 51 17.8	-1.3
VRAC				Pg	Pn	21 51 17.8	-1.3
	comp=Z,1.6nm,0.3s,SNR=9.7						
VRAC				Pb	Pn	21 51 20.0	+0.8
VRAC				x	x	21 51 20.6	
	comp=Z,20nm,0.7s						
VRAC				Sn	Sn	21 52 34.6	-2.1
	comp=Z,0.7nm,0.3s,SNR=1.7						
ABTA	Abfaltersbach	6.89	303	Pn	Pn	21 51 22.5	+1.4
	comp=Z,14nm,0.4s,SNR=12						
ABTA				eSn	Sn	21 52 39.3	-0.9
	comp=Z,7.1nm,0.5s						
ABTA	Abfaltersbach	6.89	303		Pn	21 51 22.5	+1.4
ABTA					Sn	21 52 39.3	-0.9
ABTA	Abfaltersbach	6.89	303	Pn	Pn	21 51 22.5	+1.4
	comp=Z,14nm,0.4s,SNR=12						
ABTA				Sn	Sn	21 52 39.3	-0.9
	comp=Z,7.1nm,0.5s						
LVV	L'vov	6.93	17	eP	Pn	21 51 21.7	+0.2
LVV				e		21 52 44.9	
LVV	L'vov	6.93	17	Pn	Pn	21 51 21.7	+0.2
MORC	Moravsky Berou	6.93	342	ePN	Pn	21 51 21.0	-0.6
MORC	Moravsky Berou	6.93	342	P	Pn	21 51 21.3	-0.3
MORC	Moravsky Berou	6.93	342		Pn	21 51 21.3	-0.3
MORC	Moravsky Berou	6.93	342	Pn	Pn	21 51 21.0	-0.6
MORC				Pg	Pn	21 51 21.3	-0.3
MORC				x	x	21 51 21.4	
	comp=Z,13nm,1.2s						
OJC	Ojcow	7.02	354	Pn	Pn	21 51 23.5	+0.8
	comp=Z,14nm,0.7s,SNR=2.3						
OJC				Pn			
APE	Apeiranthos	7.12	148	⇑eP	Pn	21 51 23.3	-0.8
APE	Apeiranthos	7.12	148	Pn	Pn	21 51 23.3	-0.8
TREC	Trest	7.12	330	eP	Pn	21 51 25.1	+1.0
TREC				e		21 52 41.8	
TREC	Trest	7.12	330	ePN	Pn	21 51 25.1	+1.0
TREC				eSN	Sn	21 52 41.8	-3.8
TREC	Trest	7.12	330	Pn	Pn	21 51 25.1	+1.0
TREC				x	x	21 51 25.6	
	comp=Z,7.0nm,1.4s						
TREC				Sn	Sn	21 52 41.8	-3.8
CTI	Castel Tesino	7.16	296	P	Pn	21 51 25.7	+1.0
CTI	Castel Tesino	7.16	296		Pn	21 51 25.7	+1.0
CTI	Castel Tesino	7.16	296	Pn	Pn	21 51 25.7	+1.0
CKRC	Cesky Krumlov	7.21	323	ePN	Pn	21 51 25.9	+0.5
CKRC				eSN	Sn	21 52 45.7	-2.3
CKRC	Cesky Krumlov	7.21	323	Pn	Pn	21 51 25.9	+0.5
CKRC				Sn	Sn	21 52 45.7	-2.3
KRLC	Kraliky	7.40	339	eP	Pn	21 51 28.5	+0.6
KRLC	Kraliky	7.40	339	ePN	Pn	21 51 28.5	+0.6
KRLC	Kraliky	7.40	339	Pn	Pn	21 51 28.5	+0.6
GEC2	GERESS Array S	7.51	321	Pn	Pn	21 51 31.6	+2.1
GEC2	GERESS Array S	7.51	321	Pn	Pn	21 51 31.6	+2.1
GERES	GERESS Array B	7.51	321	Pn	Pn	21 51 30.2	+0.7
	comp=Z,1.7nm,0.3s,baz=153,slow=13,SNR=19						
GERES				Sn	Sn	21 52 49.5	-5.8
	comp=Z,1.1nm,0.3s,baz=138,slow=22,SNR=1.4						
GERES				LR	LR	21 54 48.3	
	comp=Z,139nm,19.2s,baz=133,slow=42						
GERES	GERESS Array B	7.51	321	P	Pn	21 51 30.7	+1.2
GERES	GERESS Array B	7.51	321		Pn	21 51 30.6	+1.2
GERES	GERESS Array B	7.51	321	Pn	Pn	21 51 30.2	+0.7
	comp=Z,1.7nm,0.3s,SNR=19						
GERES				Pg	Pn	21 51 30.7	+1.2
GERES				Sn	Sn	21 52 49.5	-5.8
	comp=Z,1.1nm,0.3s,SNR=1.4						
GERES				LR	LR	21 54 48.3	
	comp=Z,139nm,19.2s						
VAE	Valguarnera	7.58	223	Pn	Pn	21 51 34.4	+3.8
	comp=Z,0.8nm,0.3s,baz=156,slow=21,SNR=1.0						
VAE				Sn	Sn	21 52 53.9	-3.2
	comp=Z,0.6nm,0.3s,baz=346,slow=15,SNR=1.2						
VAE	Valguarnera	7.58	223	Pn	Pn	21 51 34.4	+3.8
	comp=Z,0.8nm,0.3s,SNR=1.0						
VAE				Sn	Sn	21 52 53.9	-3.2
	comp=Z,0.6nm,0.3s,SNR=1.2						
WTTA	Wattenberg	7.66	305	i Pn	Pn	21 51 33.8	+2.0
	comp=Z,27nm,0.3s,SNR=28						
WTTA				eSn	Sn	21 52 57.4	-1.8
	comp=Z,12nm,0.5s						
WTTA	Wattenberg	7.66	305	P	Pn	21 51 33.8	+2.0
WTTA						21 52 57.4	
WTTA	Wattenberg	7.66	305		Pn	21 51 33.8	+2.0
WTTA					Sn	21 52 57.4	-1.8
WTTA	Wattenberg	7.66	305	Pn	Pn	21 51 33.8	+2.0
	comp=Z,27nm,0.3s,SNR=28						
WTTA				Pg	Pn	21 51 33.8	+2.0
WTTA				x	x	21 51 34.2	
	comp=Z,48nm,1.0s						
WTTA				Sn	Sn	21 52 57.4	-1.8
	comp=Z,12nm,0.5s						
WATA	Walderalm	7.73	305	i Pn	Pn	21 51 34.8	+2.1
	comp=Z,34nm,0.7s,SNR=24						
WATA				eSn	Sn	21 52 59.9	-1.0
	comp=Z,15nm,0.6s						
WATA	Walderalm	7.73	305	P	Pn	21 51 34.8	+2.1
WATA						21 52 59.9	
WATA	Walderalm	7.73	305		Pn	21 51 34.8	+2.1
WATA					Sn	21 52 59.9	-1.0
WATA	Walderalm	7.73	305	Pn	Pn	21 51 34.8	+2.1
WATA				Pg	Pb	21 51 34.8	-19
	comp=Z,34nm,0.7s,SNR=24						
WATA				Sn	Sn	21 52 59.9	-1.0
	comp=Z,15nm,0.6s						
DPC	Dobruska-Polom	7.77	338	eP	Pn	21 51 33.0	-0.1
DPC	Dobruska-Polom	7.77	338	ePN	Pn	21 51 33.0	-0.1
DPC	Dobruska-Polom	7.77	338	Pn	Pn	21 51 33.0	-0.1
DPC				x	x	21 51 35.5	
	comp=Z,85nm,0.9s						
KHC	Kasperske Hory	7.77	322	⇓eP	Pn	21 51 33.7	+0.7
KHC				pmax	pmax		
	comp=Z,59nm,1.7s						
KHC	Kasperske Hory	7.77	322	ePN	Pn	21 51 33.4	+0.3
KHC				eSN	Sn	21 52 58.6	-3.1
KHC	Kasperske Hory	7.77	322	Pn	Pn	21 51 33.8	+0.7
KHC	Kasperske Hory	7.77	322	Pn	Pn	21 51 33.4	+0.3
KHC				Pg	Pn	21 51 33.7	+0.7
KHC				Pb	Pn	21 51 33.8	+0.7
KHC				Sn	Sn	21 52 58.6	-3.1
KHC				pmax	pmax		
	comp=Z,59nm,1.7s						
SQTA	Sankt Quirin	7.90	304	i Pn	Pn	21 51 37.3	+2.3
	comp=Z,18nm,0.3s,SNR=32						
SQTA				eSn	Sn	21 53 01.9	-3.2
	comp=Z,9.4nm,0.5s						
SQTA	Sankt Quirin	7.90	304	P	Pn	21 51 37.3	+2.3
SQTA						21 53 01.9	
SQTA	Sankt Quirin	7.90	304		Pn	21 51 37.3	+2.3
SQTA					Sn	21 53 01.9	-3.2
SQTA	Sankt Quirin	7.90	304	Pn	Pn	21 51 37.3	+2.3
	comp=Z,18nm,0.3s,SNR=32						
SQTA				Pg	Pn	21 51 37.3	+2.3
SQTA				Sn	Sn	21 53 01.9	-3.2
	comp=Z,9.4nm,0.5s						
OSTC	Ostas	7.99	338	ePN	Pn	21 51 37.1	+1.1
OSTC	Ostas	7.99	338	Pn	Pn	21 51 37.1	+1.1
MOTA	Moosalm	8.02	304	i Pn	Pn	21 51 38.4	+1.8
	comp=Z,22nm,0.5s,SNR=31						
MOTA				eSn	Sn	21 53 07.2	-0.9
	comp=Z,5.9nm,0.5s						
MOTA	Moosalm	8.02	304	P	Pn	21 51 38.4	+1.8
MOTA						21 53 07.2	
MOTA	Moosalm	8.02	304		Pn	21 51 38.4	+1.8
MOTA					Sn	21 53 07.2	-0.9
MOTA	Moosalm	8.02	304	Pn	Pn	21 51 38.4	+1.8
	comp=Z,22nm,0.5s,SNR=31						
MOTA				Pn	Pn	21 51 38.4	+1.8
MOTA				Sn	Sn	21 53 07.2	-0.9
	comp=Z,5.9nm,0.5s						
PRU	Pruhonice	8.04	329	eP	Pn	21 51 37.4	+0.7
PRU				e		21 53 04.6	
PRU	Pruhonice	8.04	329	ePN	Pn	21 51 37.4	+0.7
PRU				eSN	Sn	21 53 04.6	-3.5
PRU	Pruhonice	8.04	329	x	x	21 51 36.4	
	comp=Z,5.2nm,1.9s						
PRU				Pn	Pn	21 51 37.4	+0.7
PRU				Sn	Sn	21 53 04.6	-3.5
CHVC	Chvalec	8.06	338	ePN	Pn	21 51 37.9	+0.9
CHVC	Chvalec	8.06	338	Pn	Pn	21 51 37.9	+0.9
WET	Wettzell	8.10	320	P	Pn	21 51 38.3	+0.7
WET				pmax	pmax		
	comp=Z,11nm,0.9s						
WET	Wettzell	8.10	320	x	x	21 51 38.3	
	comp=Z,11nm,0.9s						
WET				pmax	pmax		
	comp=Z,11nm,0.9s						
FETA	Feichten	8.11	301	ePn	Pn	21 51 40.9	+3.0
	comp=Z,3.5nm,0.3s						
FETA				eSn	Sn	21 53 09.4	-0.8
	comp=Z,3.9nm,0.5s						
FETA	Feichten	8.11	301		Pn	21 51 40.9	+3.0
FETA					Sn	21 53 09.4	-0.8
FETA	Feichten	8.11	301	Pn	Pn	21 51 40.9	+3.0
	comp=Z,3.5nm,0.3s						
FETA				Sn	Sn	21 53 09.4	-0.8
	comp=Z,3.9nm,0.5s						
KSP	Ksiaz	8.22	339	P	Pn	21 51 42.3	+3.0
KSP				pmax	pmax		
	comp=Z,15nm,1.7s						
KSP	Ksiaz	8.22	339	Pn	Pn	21 51 40.3	+1.1
	comp=Z,16nm,1.7s,SNR=1.5						
KSP				x	x	21 51 42.3	
	comp=Z,15nm,1.7s						
KSP				pmax	pmax		
	comp=Z,15nm,1.7s						
RETA	Reutte	8.29	304	i Pn	Pn	21 51 41.6	+1.4
	comp=Z,7.5nm,0.3s,SNR=17						
RETA				eSn	Sn	21 53 13.2	-1.4
	comp=Z,4.5nm,0.3s						
RETA	Reutte	8.29	304		Pn	21 51 41.6	+1.4
RETA					Sn	21 53 13.2	-1.4
RETA	Reutte	8.29	304	Pn	Pn	21 51 41.6	+1.4
	comp=Z,7.5nm,0.3s,SNR=17						
RETA				Sn	Sn	21 53 13.2	-1.4
	comp=Z,4.5nm,0.3s						
IDI	Anoyia	8.53	157	LR	LR	21 55 30.2	
	comp=Z,86nm,19.3s,baz=252,slow=41						
IDI	Anoyia	8.53	157	LR	LR	21 55 30.2	
	comp=Z,86nm,19.3s						
DAVOX	Davos/Dischmat	8.56	298	Pn	Pn	21 51 44.1	0.0
	comp=Z,1.5nm,0.3s,baz=116,slow=17,SNR=12						
DAVOX				Sn	Sn	21 53 21.5	+0.1
	comp=Z,0.6nm,0.3s,baz=154,slow=23,SNR=1.9						
DAVOX	Davos/Dischmat	8.56	298	Pn	Pn	21 51 44.1	0.0
	comp=Z,1.5nm,0.3s,SNR=12						
DAVOX				Pg	Pn	21 51 44.1	0.0
DAVOX				Sn	Sn	21 53 21.5	+0.1
	comp=Z,0.6nm,0.3s,SNR=1.9						
DAVA	Damuels	8.75	301	i Pn	Pn	21 51 49.0	+2.3
	comp=Z,4.5nm,0.3s,SNR=6.9						
DAVA				eSn	Sn	21 53 22.8	-3.1
	comp=Z,6.3nm,0.3s						
DAVA	Damuels	8.75	301		Pn	21 51 49.0	+2.3
DAVA					Sn	21 53 22.8	-3.1
DAVA	Damuels	8.75	301	Pn	Pn	21 51 49.0	+2.3
	comp=Z,4.5nm,0.3s,SNR=6.9						
DAVA				x	x	21 51 49.2	
	comp=Z,25nm,0.8s						
DAVA				Sn	Sn	21 53 22.8	-3.1
	comp=Z,6.3nm,0.3s						
PGF	Pioggiola	8.75	270	ePn	Pn	21 51 45.0	-1.6
PGF				eSn	Sn	21 53 19.0	-6.9
	comp=Z,1.3nm,0.5s						
PGF	Pioggiola	8.75	270	Pn	Pn	21 51 45.0	-1.6
PGF				Sn	Sn	21 53 19.0	-6.9

	comp=Z,0.7nm,0.5s						
UBR	Ueberruh	8.78	304	x	x	21 51 48.8	
	comp=Z,39nm,1.1s						
MANZ	Manzenberg	9.05	321	x	x	21 51 49.9	
	comp=Z,14nm,0.8s						
TANN	Tannenbergstha	9.21	324	x	x	21 51 56.9	
	comp=Z,19nm,1.2s						
AKASG	Malin Array Be	9.39	34	Pn	Pn	21 51 56.5	+1.3
	comp=Z,0.4nm,0.3s,baz=222,slow=12,SNR=4.4						
AKASG				Lg	Lg	21 54 32.0	
	comp=Z,0.4nm,0.3s,baz=218,slow=29,SNR=4.3						
AKASG	Malin Array Be	9.39	34	Pn	Pn	21 51 56.5	+1.3
	comp=Z,0.4nm,0.3s,SNR=4.4						
AKASG				Lg	Lg	21 54 32.0	
	comp=Z,0.4nm,0.3s,SNR=4.3						
BNALP	Bannalp	9.53	297	x	x	21 52 01.9	
	comp=Z,20nm,2.6s						
CLL	Collm	9.68	329	*e*Pn	Pn	21 52 00.0	+0.8
CLL				*e*Sn	Sn	21 53 23.0	-26
CLL				*e*Sb		21 54 21.0	
CLL				*e*Sg		21 54 55.0	
CLL	Collm	9.68	329	*e*P	Pn	21 52 00.0	+0.8
CLL	Collm	9.68	329	x	x	21 51 59.8	
	comp=Z,14nm,0.8s						
CLL				Pn	Pn	21 52 00.0	+0.8
CLL				Pn	Pn	21 52 00.0	+0.8
CLL				Sn	Sn	21 53 23.0	-26
CLL				Lg	Lg	21 54 21.0	
CLL				Sg		21 54 55.0	
SBF	Sospel	9.79	278	*e*Pn	Pn	21 51 59.0	-1.7
SBF				*e*Sn	Sn	21 53 43.1	-8.1
	comp=Z,1.4nm,0.3s						
SBF	Sospel	9.79	278	Pn	Pn	21 51 59.0	-1.7
SBF				Sn	Sn	21 53 43.1	-8.1
	comp=Z,0.7nm,0.3s						
SLE	Schleitheim	9.80	302	P	Pn	21 52 02.3	+1.4
SLE				pmax	pmax		
	comp=Z,33nm,0.6s						
SLE	Schleitheim	9.80	302	x	x	21 52 02.3	
	comp=Z,33nm,0.6s						
SLE				pmax	pmax		
	comp=Z,33nm,0.6s						
BFO	Black Forest	10.13	304	P	Pn	21 52 06.1	+0.6
BFO	Black Forest	10.13	304		Pn	21 52 06.1	+0.6
BFO	Black Forest	10.13	304	x	x	21 52 05.7	
	comp=Z,13nm,0.5s						
BFO				Pn	Pn	21 52 06.1	+0.6
SENIN	Lac Senin/Sane	10.15	293	Pn	Pn	21 52 07.2	+1.4
SENIN	Lac Senin/Sane	10.15	293	Pn	Pn	21 52 07.2	+1.4
BRTR	Keskin Array B	10.20	106	LR	LR	21 57 07.7	
	comp=Z,34nm,20.5s,baz=308,slow=44						
BRTR	Keskin Array B	10.20	106	LR	LR	21 57 07.7	
	comp=Z,34nm,20.5s						
MBDF	Montbardon	10.28	283	*e*Pn	Pn	21 52 05.0	-2.6
MBDF				*e*Sn	Sn	21 53 55.6	-7.9
	comp=Z,2.0nm,0.4s						
MBDF	Montbardon	10.28	283	Pn	Pn	21 52 05.0	-2.6
MBDF				Sn	Sn	21 53 55.6	-7.9
	comp=Z,1.0nm,0.4s						
FRF	La Foret Royal	10.37	277	*e*Pn	Pn	21 52 07.0	-1.6
FRF				*e*Sn	Sn	21 53 57.3	-8.1
	comp=Z,2.8nm,0.4s						
FRF	La Foret Royal	10.37	277	Pn	Pn	21 52 07.0	-1.6
FRF				Sn	Sn	21 53 57.3	-8.1
	comp=Z,1.4nm,0.4s						
LPG	La Plagne	10.37	287	*e*Pn	Pn	21 52 08.0	-0.9
LPG				*e*Sn	Sn	21 53 57.4	-8.4
	comp=Z,8.8nm,0.6s						
LPG	La Plagne	10.37	287	Pn	Pn	21 52 08.0	-0.9
LPG				Sn	Sn	21 53 57.4	-8.4
	comp=Z,4.4nm,0.6s						
BNI	Bardonecchia	10.37	285	P	Pn	21 52 08.5	-0.3
BNI	Bardonecchia	10.37	285	Pn	Pn	21 52 08.5	-0.3
BNI	Bardonecchia	10.37	285	Pn	Pn	21 52 08.5	-0.3
BNI				Pg	Pn	21 52 08.5	-0.3
LPL	La Plagne	10.38	288	*e*P	Pn	21 52 12.9	+3.8
LPL				*e*Sn	Sn	21 53 57.8	-8.3
	comp=Z,6.6nm,0.4s						
LPL	La Plagne	10.38	288	Pn	Pn	21 52 12.9	+3.8
LPL				Sn	Sn	21 53 57.8	-8.3
	comp=Z,3.3nm,0.4s						
ECH	Echery	10.80	302	P	Pn	21 52 15.2	+0.6
ECH	Echery	10.80	302	Pn	Pn	21 52 15.2	+0.6
ECH	Echery	10.80	302	Pn	Pn	21 52 15.2	+0.6
ECH				Pg	Pn	21 52 15.2	+0.6
CDF	Champ du Feu	10.81	303	*e*Pn	Pn	21 52 14.3	-0.4
CDF				*e*Sn	Sn	21 54 08.6	-7.7
	comp=Z,2.2nm,0.4s						
CDF	Champ du Feu	10.81	303	Pn	Pn	21 52 14.3	-0.4
CDF				Sn	Sn	21 54 08.6	-7.7
	comp=Z,1.1nm,0.4s						
HINF	Hinteralfeld	10.85	300	*e*Pn	Pn	21 52 14.4	-0.9
HINF				*e*Sn	Sn	21 54 08.5	-8.8
	comp=Z,6.1nm,0.5s						
HINF	Hinteralfeld	10.85	300	Pn	Pn	21 52 14.4	-0.9
HINF				Sn	Sn	21 54 08.5	-8.8
	comp=Z,3.0nm,0.5s						
ORIF	Oris-en-Rattie	10.92	284	*e*Pn	Pn	21 52 13.9	-2.5
ORIF				*e*Sn	Sn	21 54 11.0	-8.2
	comp=Z,2.6nm,0.5s						
ORIF	Oris-en-Rattie	10.92	284	Pn	Pn	21 52 13.9	-2.5
ORIF				Sn	Sn	21 54 11.0	-8.2
	comp=Z,1.3nm,0.5s						
TNS	Taunus Mts	11.02	314	P	Pn	21 52 18.0	+0.4
TNS				pmax	pmax		
	comp=Z,45nm,0.7s						
TNS	Taunus Mts	11.02	314	x	x	21 52 18.0	
	comp=Z,46nm,0.7s						
TNS				pmax	pmax		
	comp=Z,45nm,0.7s						
SMRF	Simiane la Rot	11.13	279	*e*Pn	Pn	21 52 17.5	-1.6
SMRF	Simiane la Rot	11.13	279	Pn	Pn	21 52 17.5	-1.6
HAU	Haudompre	11.23	300	*e*Pn	Pn	21 52 19.8	-0.7
HAU	Haudompre	11.23	300	*e*P	Pn	21 52 23.9	+3.4
HAU				*e*Sn	Sn	21 54 18.4	-8.3
	comp=Z,8.2nm,0.5s						
HAU	Haudompre	11.23	300	Pn	Pn	21 52 19.8	-0.7
HAU				Pg	Pn	21 52 23.9	+3.4
HAU				Sn	Sn	21 54 18.4	-8.3
	comp=Z,4.1nm,0.5s						
VIVF	Saint-Julien-l	11.78	283	*e*Pn	Pn	21 52 25.3	-2.7
VIVF				*e*Sn	Sn	21 54 29.9	-10
	comp=Z,1.2nm,0.4s						
VIVF	Saint-Julien-l	11.78	283	Pn	Pn	21 52 25.3	-2.7
VIVF				Sn	Sn	21 54 29.9	-10
	comp=Z,0.6nm,0.4s						
WLF	Walferdange	12.01	307	P	Pn	21 52 32.3	+1.2
WLF	Walferdange	12.01	307	Pn	Pn	21 52 32.2	+1.2
WLF	Walferdange	12.01	307	Pn	Pn	21 52 32.2	+1.2
WLF				Pg	Pn	21 52 32.3	+1.2
MNK	Minsk	12.17	20	Pn	Pn	21 52 32.2	-1.1
	comp=Z,3.0nm,1.2s						
MNK				Pn	Pn	21 52 32.2	-1.1
	comp=Z,14nm,1.0s						
MNK				Pn	Pn	21 52 32.2	-1.1
	comp=Z,7.0nm,0.8s						
MNK				PnPn	PnPn	21 52 40.0	-1.0
MNK				PPP	PPP	21 52 47.6	
MNK				Sn	Sn	21 54 50.0	+0.5
MNK				SnSn	SnSn	21 55 03.9	+2.5
MNK				SSS	SSS	21 55 16.3	
MNK				MLR	MLR	21 57 35.6	
	comp=Z,9.0nm,12.7s						
MNK				MLR	MLR	21 57 40.9	
	comp=Z,291nm,23.1s						
MNK				MLR	MLR	21 57 40.9	
	comp=Z,110nm,19.0s						
MEZF	Maizieres J'vi	12.22	301	*e*Pn	Pn	21 52 32.0	-1.9
MEZF	Maizieres J'vi	12.22	301	Pn	Pn	21 52 32.0	-1.9
NACGM	Naroch	12.29	16	Pn	Pn	21 52 54.5	+20
NACGM				Pn	Pn	21 52 54.5	+20
NACGM				Pg		21 52 57.1	
	comp=Z,10.0nm,1.0s						
NACGM				PbPb	PbPb	21 53 02.5	-12
NACGM				PPP	PPP	21 53 10.3	
NACGM				Lg	Lg	21 55 42.2	
NACGM				SbSb	SbSb	21 55 55.3	+13
NACGM				SSS	SSS	21 56 08.3	
NACGM	Naroch	12.29	16	*i* P	Pn	21 52 54.5	+20
NACGM				*i* P	Pn	21 52 54.5	+20
NACGM				*i* P	Pn	21 52 54.5	+20
NACGM				*i* PP	PbPb	21 53 02.5	-12
NACGM				*i* PPP	PPP	21 53 10.3	
NACGM				*i* S	Sn	21 55 42.2	+50
NACGM				*i* SS	SbSb	21 55 55.3	+13
NACGM				*i* SSS	SSS	21 56 08.3	
NACGM				*i* LQ	LQ	21 57 18.6	
NACGM				*i* LR	LR	21 58 27.0	
SMF	Signal de Mont	12.54	292	*e*Pn	Pn	21 52 36.3	-2.1
SMF				*e*Sn	Sn	21 54 48.8	-10
	comp=Z,0.4nm,0.2s						
SMF	Signal de Mont	12.54	292	Pn	Pn	21 52 36.3	-2.1
SMF				Sn	Sn	21 54 48.8	-10
	comp=Z,0.2nm,0.2s						
SSF	Saint Saulge	12.84	293	*e*P	Pn	21 52 46.5	+4.0
SSF				*e*Sn	Sn	21 54 56.2	-10
	comp=Z,0.6nm,0.3s						
SSF	Saint Saulge	12.84	293	Pn	Pn	21 52 46.5	+4.0
SSF				Sn	Sn	21 54 56.2	-10
	comp=Z,0.3nm,0.3s						
AVF	Avril sur Loir	12.90	292	*e*Pn	Pn	21 52 41.8	-1.4
AVF	Avril sur Loir	12.90	292	Pn	Pn	21 52 41.8	-1.4
BAIF	Baives	13.32	307	*e*P	Pn	21 52 51.9	+3.0
BAIF				*e*Sn	Sn	21 55 06.9	-11
	comp=Z,1.2nm,0.4s						
BAIF	Baives	13.32	307	Pn	Pn	21 52 51.9	+3.0
BAIF				Sn	Sn	21 55 06.9	-11
	comp=Z,0.6nm,0.4s						
MMAI	Mount Meron Ar	15.30	127	LR	LR	21 59 30.8	
	comp=Z,62nm,18.3s,baz=160,slow=38						
MMAI	Mount Meron Ar	15.30	127	LR	LR	21 59 30.8	
	comp=Z,62nm,18.3s						
OBN	Obninsk	15.65	35	*e*P	Pn	21 53 18.8	-1.6
OBN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
OBN	Obninsk	15.65	35	Pn	Pn	21 53 18.8	-1.6
OBN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KIV	Kislovodsk	15.81	80	P	P	21 53 25.6	-1.1
KIV				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KIV	Kislovodsk	15.81	80		P	21 53 25.6	-1.1
KIV				IAmb	IAmb	21 53 35.6	
	comp=Z,2.1nm,0.9s						
KIV	Kislovodsk	15.81	80	P	P	21 53 25.6	-1.1
KIV				*i* Amb		21 53 35.6	
	comp=Z,2.1nm,0.9s						
KIV				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KBZ	Khabaz	15.99	81	Pn	Pn	21 53 26.3	+1.5
	comp=Z,0.1nm,0.3s,baz=237,slow=18,SNR=2.7						
KBZ				LR	LR	22 00 17.6	
	comp=Z,57nm,19.8s,baz=230,slow=40						
KBZ	Khabaz	15.99	81⇑	*e*P	Pn	21 53 22.8	-2.0
KBZ				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KBZ	Khabaz	15.99	81	Pn	Pn	21 53 22.8	-2.0
KBZ				P	Pn	21 53 26.3	+1.5
	comp=Z,0.1nm,0.3s,SNR=2.7						
KBZ				LR	LR	22 00 17.6	
	comp=Z,57nm,19.8s						
KBZ				pmax	pmax		
	comp=Z,3.0nm,1.0s						
HFS	Hagfors	17.48	348	P	Pn	21 53 43.9	+0.3
	comp=Z,0.1nm,0.3s,baz=163,slow=15,SNR=1.5						
HFS	Hagfors	17.48	348	Pn	Pn	21 53 43.9	+0.3
HFS				Pn	Pn	21 53 43.9	+0.3
HFS				Pn	Pn	21 53 43.9	+0.3
	comp=Z,0.1nm,0.3s,SNR=1.5						
GNI	Garni	18.07	92	LR	LR	22 02 30.5	
	comp=Z,24nm,19.7s,baz=282,slow=42						
GNI	Garni	18.07	92	LR	LR	22 02 30.5	
	comp=Z,24nm,19.7s						
NC602	NORSAR Array S	18.41	345		Pn	21 53 55.2	+0.1
FINES	FINESS Array B	18.50	8	P	Pn	21 53 56.8	+0.6
	comp=Z,0.2nm,0.3s,baz=168,slow=13,SNR=8.3						
FINES	FINESS Array B	18.50	8	*i* P	Pn	21 53 56.7	+0.6
FINES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
FINES	FINESS Array B	18.50	8	Pn	Pn	21 53 56.7	+0.6
FINES				Pn	Pn	21 53 56.8	+0.6
	comp=Z,0.2nm,0.3s,SNR=8.3						
FINES				Pn	Pn	21 53 56.8	+0.6
FIA1	FINESS Array S	18.50	8	P	P	21 53 55.9	-0.2
FIA1				IAmb	IAmb	21 54 05.4	
	comp=Z,28nm,1.5s						
FIA1	FINESS Array S	18.50	8	P	P	21 53 55.9	-0.2
FIA1				*i* Amb		21 54 05.4	
	comp=Z,28nm,1.5s						
NC405	NORSAR Array S	18.73	346	P	P	21 53 58.5	-0.2
NC405	NORSAR Array S	18.73	346	P	P	21 53 58.5	-0.2
NOA	NORSAR Array B	18.75	345	LR	LR	22 03 12.0	
	comp=Z,62nm,18.8s,baz=10.0,slow=43						
NOA	NORSAR Array B	18.75	345	LR	LR	22 03 12.0	
	comp=Z,62nm,18.8s						
EKA	Eskdalemuir Ar	19.69	316	P	P	21 54 08.8	-0.4
	baz=116,slow=11,SNR=5.4						
EKA	Eskdalemuir Ar	19.69	316	P	P	21 54 08.8	-0.4
EKA				P	P	21 54 08.8	-0.4
BELG	Belogornoye	20.06	54	LR	LR	22 02 28.3	
	comp=Z,130nm,20.4s,baz=297,slow=38						
BELG	Belogornoye	20.06	54⇑	*e*P	P	21 54 13.7	+0.4
BELG				pmax	pmax		
	comp=Z,2.0nm,1.1s						
BELG	Belogornoye	20.06	54	P	P	21 54 13.7	+0.4
BELG				LR	LR	22 02 28.3	
	comp=Z,130nm,20.4s						
BELG				pmax	pmax		
	comp=Z,2.0nm,1.1s						
MDT	Midelt	22.53	251	LR	LR	22 04 57.6	
	comp=Z,51nm,18.5s,baz=22,slow=41						
MDT	Midelt	22.53	251	LR	LR	22 04 57.6	
	comp=Z,51nm,18.5s						
KIRV	Kirov	23.40	39⇑	*e*P	P	21 54 48.4	-0.5
KIRV	Kirov	23.40	39	P	P	21 54 48.4	-0.5
AKTO	Aktyubinsk	26.19	61	LR	LR	22 08 04.5	
	comp=Z,69nm,19.5s,baz=281,slow=42						
AKTO	Aktyubinsk	26.19	61	LR	LR	22 08 04.5	
	comp=Z,69nm,19.5s						
ARU	Arti	27.27	48	P	P	21 55 24.9	+0.5
	comp=Z,0.5nm,0.5s,baz=309,slow=6.5,SNR=1.5						
ARU	Arti	27.27	48	P	P	21 55 25.1	+0.7
ARU						21 56 07.8	
ARU				S	S	22 00 07.2	+2.8
ARU				SS	SnSn	22 01 17.7	+6.1
ARU	Arti	27.27	48	P	P	21 55 24.9	+0.5
	comp=Z,0.5nm,0.5s,SNR=1.5						
ARU				pP	P	21 55 25.1	+0.7
ARU				S	S	22 00 07.2	+2.8
ARU				SnSn	SnSn	22 01 17.7	+6.1
BRVK	Borovoye	33.77	56⇑	*e*P	P	21 56 22.0	+0.1
BRVK				pmax	pmax		
	comp=Z,7.0nm,2.8s						
BRVK	Borovoye	33.77	56	P	P	21 56 22.0	+0.1
BRVK				pmax	pmax		
	comp=Z,7.0nm,2.8s						
TORD	Torodi Ar. Bea	34.25	215	P	P	21 56 25.3	-1.1
	comp=Z,1.2nm,0.6s,baz=16,slow=9.3,SNR=6.1						
TORD	Torodi Ar. Bea	34.25	215	P	P	21 56 25.3	-1.1
	comp=Z,1.2nm,0.6s,SNR=6.1						
KURK	Kurchatov	39.20	58⇓	*e*P	P	21 57 06.1	-2.2
KURK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
KURK	Kurchatov	39.20	58	P	P	21 57 06.1	-2.2
KURK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
ZALV	Zalesovo Beam	42.24	52	P	P	21 57 33.9	+0.6
	comp=Z,1.4nm,0.6s,baz=284,slow=8.7,SNR=5.6						
ZALV				LR	LR	22 15 20.1	
	comp=Z,52nm,18.3s,baz=18,slow=36						
ZALV	Zalesovo Beam	42.24	52	P	P	21 57 33.9	+0.6
	comp=Z,1.4nm,0.6s,SNR=5.6						
ZALV				P	P	21 57 33.9	+0.6
ZALV				LR	LR	22 15 20.1	
	comp=Z,52nm,18.3s						
MKAR	Makanchi Array	42.59	63	P	P	21 57 36.5	+0.2
	comp=Z,0.7nm,1.0s,baz=292,slow=6.4,SNR=3.5						
MKAR				PcP	PcP	21 59 29.6	+1.0
	comp=Z,0.4nm,0.7s,baz=288,slow=2.7,SNR=3.1						
MKAR	Makanchi Array	42.59	63	*i* P	P	21 57 37.2	+0.9
MKAR	Makanchi Array	42.59	63	P	P	21 57 36.5	+0.2
	comp=Z,0.7nm,1.0s,SNR=3.5						
MKAR				pP	P	21 57 37.2	+0.9
MKAR				PcP	PcP	21 59 29.6	+1.0
	comp=Z,0.4nm,0.7s,SNR=3.1						
DGZ	Jazzator, Alta	44.93	58⇑	*e*P	P	21 57 55.8	+0.5
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.6s						
DGZ	Jazzator, Alta	44.93	58	P	P	21 57 55.8	+0.5
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TLY	Talaya	53.74	50⇓	*e*P	P	21 59 00.5	-1.9
TLY				pmax	pmax		
	comp=Z,3.0nm,0.9s						
TLY	Talaya	53.74	50	P	P	21 59 00.5	-1.9
TLY				pmax	pmax		
	comp=Z,3.0nm,0.9s						
TIXI	Tiksi	54.83	22⇓	*e*P	P	21 59 09.9	-0.1
TIXI	Tiksi	54.83	22	P	P	21 59 09.9	-0.1
SONM	Songino Array	57.12	53	P	P	21 59 27.8	+0.9
	comp=Z,0.7nm,0.8s,baz=292,slow=5.1,SNR=5.8						
SONM	Songino Array	57.12	53	P	P	21 59 27.8	+0.9
	comp=Z,0.7nm,0.8s,SNR=5.8						
SONM				P	P	21 59 27.8	+0.9
LZH	Lanzhou	61.78	66	*e*P	P	22 00 03.4	+4.0
LZH				sP	PcP	22 00 34.9	-5.7
LZH				pmax	pmax		
	comp=Z,15nm,1.1s						
LZH	Lanzhou	61.78	66	P	P	22 00 03.4	+4.0
LZH				sP	PcP	22 00 34.9	-5.7
YKA	Yellowknife Ar	68.74	340	P	P	22 00 43.7	-0.1
	comp=Z,0.4nm,0.8s,baz=40,slow=5.8,SNR=4.1						
YKA	Yellowknife Ar	68.74	340	*i* P	P	22 00 45.9	+2.1
YKA	Yellowknife Ar	68.74	340	P	P	22 00 43.7	-0.1
	comp=Z,0.4nm,0.8s,SNR=4.1						
YKA				pP	P	22 00 45.9	+2.1
ILAR	Eielson Array	71.90	355	P	P	22 01 03.1	-0.1
	comp=Z,0.3nm,0.8s,baz=1.6,slow=6.6,SNR=2.7						
ILAR	Eielson Array	71.90	355	P	P	22 01 03.1	-0.1
	comp=Z,0.3nm,0.8s,SNR=2.7						
ILAR				P	P	22 01 03.1	-0.1

VAO ***05*** *21:50:49.8±0.3, 10°.99N×61°.86W, h10^{km}, mb4.7*

FUNV ***05*** *21:50:55.4, 10°.94N×61°.90W, h24^{km}, MW4.0*

CAR ***05*** *21:50:55.9±4.5, 10°.94N±0°.05×61°.92W±0°.04, h28^{km}±4^{km}, Error ellipse: s-maj=0.0km s-min=0.0km az=54.0*

NEIC ***05*** *21:50:56.6±2.3, 11°.08N±0°.06×62°.05W±0°.06, h82^{km}±5^{km}, mb4.6/157, Error ellipse: s-maj=9.0km s-min=8.1km az=136.0*

TRN ***05*** *21:50:56.0, 11°.05N×62°.00W, h22^{km}*

IDC ***05*** *21:50:58.7±0.4, 11°.04N×62°.38W, h104^{km}±3^{km}, mb4.1/39, mb1 4.2/43, mb1mx4.1/60, mbtmp4.4/43, MS3.4/19, Ms1 3.5/19, ms1mx3.3/47, Error ellipse: s-maj=9.1km s-min=6.8km az=145.0*

ISC 05 21:50:55.0±0.4**, 10°.98N**±0°.03×**62°.11W**±0°.03**, h70**^{km}±3^{km}**, n378,** σ**1^{s}.40**/396**, mb4.6**/120**, 1C-1D, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRN	Trinidad (W)	0.77	115	*e*P	Pn	21 51 10.3	-0.4
TRN				*e*S	Sn	21 51 19.6	-2.6
TPP	Pointe-a-Pierr	0.92	135	*e*P	Pn	21 51 13.8	+1.3
TBH	Brigand Hill	1.14	115	*e*P	Pn	21 51 16.0	+0.8
TBH				*e*S	Sn	21 51 30.5	+0.2
CRUV	Carupano	1.15	255	*e*P	Pn	21 51 17.1	+1.8
CRUV				*e*S	Sn	21 51 33.6	+3.1
GRGR	Grenville	1.23	21	*e*P	Pn	21 51 16.7	+0.2
GRGR				*e*S	Sn	21 51 32.2	-0.3
GRGR				*e*S		21 51 58.0	
GRGR	Grenville	1.23	21		Pn	21 51 16.9	+0.4
GRGR				Sn	Sn	21 51 31.7	-0.8
GRGR	Grenville	1.23	21	*e*P	Pn	21 51 16.5	+0.1
GRGR				*e*S	Sn	21 51 32.2	-0.3
TPR	Prospect	1.33	81	*e*P	Pn	21 51 18.2	+0.5
TPR				*e*S	Sn	21 51 34.3	-0.4
BOT	Bacolet	1.38	82	*e*P	Pn	21 51 19.0	+0.6
BOT				*e*S	Sn	21 51 34.9	-1.1
GCMP	Grenada, Carri	1.64	24	*e*P	Pn	21 51 22.1	+0.2
GCMP				*e*S	Sn	21 51 42.1	-0.1
ORIV	Oritupano	2.29	214	*e*P	Pn	21 51 32.6	+2.1
ORIV				*e*S	Sn	21 51 59.6	+1.9
SVOC	Richmond Hill,	2.33	22	*e*P	Pn	21 51 31.8	+0.7
SVOC				*e*S	Sn	21 51 58.8	0.0
SVB	Belmont	2.43	20	*e*P	Pn	21 51 33.0	+0.5
SVB				*e*S	Sn	21 52 00.2	-1.0
SVB	Belmont	2.43	20	Pn	Pn	21 51 33.1	+0.6
PLCV	Puerto La Cruz	2.57	252		Pn	21 51 37.2	+2.8
PCRV	Puerto La Cruz	2.61	252	P	Pn	21 51 37.2	+2.3
	72nm,0.3s,baz=51,slow=4.6,SNR=304						
PCRV				S	Sn	21 52 03.9	-1.6
	83nm,0.3s,baz=12,slow=6.9,SNR=5.4						
PCRV	Puerto La Cruz	2.61	252	*e*P	Pn	21 51 37.1	+2.3
RIOV	Rio Grande	2.91	174	*e*P	Pn	21 51 39.1	+0.1
RIOV				*e*S	Sn	21 52 10.2	-2.5
MCLT	Moule a Chique	2.95	23	*e*P	Pn	21 51 40.5	+1.0
MCLT				*e*S	Sn	21 52 12.7	-1.0
MCLT	Moule a Chique	2.95	23		Pn	21 51 40.3	+0.8
SLDE	Delcer	2.99	20	*e*P	Pn	21 51 41.2	+1.1
SLDE				*e*S	Sn	21 52 15.4	+0.6
SLPA	Patience	3.09	22	*e*P	Pn	21 51 43.2	+1.8
SLPA				*e*S	Sn	21 52 17.3	+0.1
SLCP	Castries, St.	3.21	20	*e*S	Sn	21 52 20.4	+0.4
SLBI	Saint Lucia, B	3.23	20	*e*P	Pn	21 51 43.8	+0.5
SLBI				*e*S	Sn	21 52 19.2	-1.3
SLW	Petit Monier	3.23	21	*e*P	Pn	21 51 45.3	+1.9
SLW				*e*S	Sn	21 52 19.7	-1.1
BCHC	Barbados, Cave	3.24	48	*e*P	Pn	21 51 45.7	+2.3
BBGH	Gun Hill	3.30	49	*e*P	Pn	21 51 45.6	+1.4
BBGH	Gun Hill	3.30	49	Pn	Pn	21 51 44.9	+0.6
BBSP	Saint Philip	3.35	51	*e*P	Pn	21 51 46.5	+1.6
MPOM	Morne Pois Mar	3.66	19	*e*P	Pn	21 51 50.1	+1.0
MPOM				*e*S	Sn	21 52 30.2	-0.9
BIM	Bigot	3.66	16	*e*P	Pn	21 51 50.1	+0.8
BIM				*e*S	Sn	21 52 29.9	-1.4
FDF	Fort de France	3.85	14	*e*P	Pn	21 51 52.6	+0.8
FDF	Fort de France	3.85	14	Pn	Pn	21 51 52.6	+0.8
ILAM	Ilet Lapin Mar	3.96	18	*e*P	Pn	21 51 54.4	+1.1
ILAM				*e*S	Sn	21 52 37.7	-0.9
BIRV	Birongo	4.12	263	*e*P	Pn	21 51 58.6	+3.2
BIRV				*e*S	Sn	21 52 44.5	+2.1
DLPL	La Plaine	4.41	11	*e*P	Pn	21 52 01.6	+2.1
DLPL	La Plaine	4.41	11	*e*S	Sn	21 52 49.2	-0.4
DLPL	La Plaine	4.41	11	Pn	Pn	21 51 59.8	+0.4
MERV	Las Mercedes	4.46	248	*e*P	Pn	21 52 02.0	+1.9
MERV				*e*S	Sn	21 52 51.4	+0.5
DSLB	Salisbury	4.49	9	*e*P	Pn	21 52 02.6	+2.1
DSLB	Salisbury	4.49	9	*e*S	Sn	21 52 51.2	-0.2
TDBA	Terre de Bas,	4.87	5	*e*P	Pn	21 52 08.0	+2.4
TDBA	Terre de Bas,	4.87	5	*e*S	Sn	21 53 01.0	+0.3
TDBA	Terre de Bas,	4.87	5	*e*S	Sn	21 53 04.2	+3.5
TBG	Guadaloupe-3	4.87	5	*e*P	Pn	21 52 07.6	+1.9
TBG	Guadaloupe-3	4.87	5	*e*S	Sn	21 53 00.9	+0.1
MAGL	Barre de l'ile	5.01	9	*e*P	Pn	21 52 09.8	+2.2
MAGL	Barre de l'ile	5.01	9	*e*S	Sn	21 53 04.2	0.0
CBE	Ff, Capester	5.09	5	*e*P	Pn	21 52 11.3	+2.6
ABD	La Joyeuse, An	5.50	6	*e*P	Pn	21 52 17.5	+3.2
ABD	La Joyeuse, An	5.50	6	*e*S	Sn	21 53 15.1	-1.1
TURV	Turiamo	5.65	265	*e*P	Pn	21 52 19.0	+2.6
TURV				*e*S	Sn	21 53 20.8	+0.8
MLYT	Lee's Yard	5.71	359	*e*P	Pn	21 52 18.5	+1.3
MLYT	Lee's Yard	5.71	359	*e*S	Sn	21 53 22.0	+0.6
BPA	Boggy Peak	6.04	2	*e*P	Pn	21 52 23.9	+2.2
BPA	Boggy Peak	6.04	2	*e*S	Sn	21 53 29.3	-0.2
ANBD	Bethesda, Anti	6.04	3	*e*P	Pn	21 52 24.0	+2.2
ANBD	Bethesda, Anti	6.04	3	*e*S	Sn	21 53 29.7	+0.1
BAUV	El Baul	6.18	251	*e*P	Pn	21 52 24.9	+1.2
BAUV				*e*S	Sn	21 53 32.3	-0.7
SKOC	St. Kitts, UWI	6.31	355	*e*P	Pn	21 52 28.0	+2.6
MAPV	Macapo	6.35	260	*e*P	Pn	21 52 27.8	+1.8
MAPV				*e*S	Sn	21 53 37.3	+0.2
SKI	Saint Kitts	6.35	355	*e*P	Pn	21 52 28.3	+2.4
SKI	Saint Kitts	6.35	355	*e*S	Sn	21 53 36.8	-0.3
SKI	Saint Kitts	6.35	355	Pn	Pn	21 52 28.0	+2.0
SEUS	St. Eustatius	6.53	353	*e*P	Pn	21 52 31.7	+3.2
SEUS	St. Eustatius	6.53	353		Pn	21 52 30.9	+2.4
JACV	Jacura	6.60	272	*e*P	Pn	21 52 32.4	+3.0
JACV				*e*S	Sn	21 53 42.8	-0.5
ANWB	Willy Bob	6.66	3	*e*P	Pn	21 52 32.6	+2.4
ANWB	Willy Bob	6.66	3	*e*S	Sn	21 53 44.1	-0.5
ANWB	Willy Bob	6.66	3	Pn	Pn	21 52 31.8	+1.6
SABA	Saba	6.70	351	*e*P	Pn	21 52 33.1	+2.4
SABA	Saba	6.70	351		Pn	21 52 32.1	+1.4
CDVI	St. Croix	7.21	339	*e*P	Pn	21 52 38.8	+1.0
CDVI	St. Croix	7.21	339	Pn	Pn	21 52 38.6	+0.9
CURV	Curarigua	7.78	264	*e*P	Pn	21 52 47.5	+1.8
CURV				*e*S	Sn	21 54 11.2	-1.1
PAYV	Puerto Ayacuch	7.78	225	*e*P	Pn	21 52 46.3	+0.7

PAYV				eS	Sn	21 54 09.2	-3.1
MTP	Monte Pirata	7.82	335	Pn	Pn	21 52 47.1	+1.0
CUPR	Culebra, Puert	7.91	338	Pn	Pn	21 52 48.2	+0.9
PDPR	Patillas Dam,	7.96	332		Pn	21 52 48.4	+0.5
HUMP	Col San Antoni	7.99	334		Pn	21 52 49.2	+0.8
ICMP	Isla Caja de M	8.09	329	Pn	Pn	21 52 49.7	0.0
SJG	San Juan	8.10	332	P	Pn	21 52 50.6	+0.7
	5.1nm,0.3s,baz=114,slow=16,SNR=6.2						
SJG				S	Sn	21 54 14.1	-5.9
	17nm,0.3s,baz=341,slow=15,SNR=6.9						
SJG				LR	LR	21 56 13.2	
	comp=Z,161nm,20.9s,baz=120,slow=40						
SJG	San Juan	8.10	332		Pn	21 52 52.0	+2.2
SJG	San Juan	8.10	332	eP	Pn	21 52 50.5	+0.6
CBYP	Canovanas	8.11	334		Pn	21 52 51.5	+1.4
GCPR	Guaynabo City	8.24	333	Pn	Pn	21 52 53.2	+1.4
OBIP	Obispado Ponce	8.26	329	Pn	Pn	21 52 53.2	+1.0
MLPR	Magueyes Islan	8.43	326	Pn	Pn	21 52 56.2	+1.8
AOPR	Arecibo Observ	8.59	329		Pn	21 52 58.5	+1.8
EMPR	Esperanza - Ma	8.59	331	Pn	Pn	21 52 58.7	+2.0
SDV	Santo Domingo	8.65	257	P	Pn	21 52 58.0	+0.5
	3.9nm,0.3s,baz=59,slow=6.4,SNR=25						
SDV				S	Sn	21 54 30.1	-3.6
	17nm,0.3s,baz=46,slow=13,SNR=9.4						
SDV				LR	LR	21 57 19.3	
	comp=Z,156nm,18.9s,baz=93,slow=45						
SDV	Santo Domingo	8.65	257	eP	Pn	21 52 58.1	+0.5
SDV	Santo Domingo	8.65	257	eP	Pn	21 52 58.1	+0.5
MPR	Mayaguez	8.68	327	Pn	Pn	21 52 59.0	+1.2
AGPR	Aguadilla, PR	8.88	328	Pn	Pn	21 53 02.2	+1.6
SDD	Santo Domingo	10.59	315	Pn	Pn	21 53 26.1	+2.1
BANI	BANI	10.86	314	Pn	Pn	21 53 30.6	+2.8
MDP	Montagnes des	11.04	121	P	Pn	21 53 24.8	-5.4
	4.6nm,0.3s,baz=311,slow=15,SNR=26						
MDP				S	Sn	21 55 18.1	-14
	53nm,0.3s,baz=59,slow=24,SNR=24						
MDP				LR	LR	21 59 17.3	
	comp=Z,188nm,19.5s,baz=291,slow=44						
PAMC	Pamplona, Colo	11.06	252	⇓eP	Pn	21 53 30.4	-0.5
BARC	Barichara	11.78	249	eP	Pn	21 53 40.5	+0.2
PTGA	Pitinga	11.82	169	P	Pn	21 53 38.4	-2.5
	12nm,0.3s,baz=358,slow=17,SNR=73						
PTGA				S	Sn	21 55 40.4	-11
	14nm,0.3s,baz=259,slow=20,SNR=15						
PTGA				LR	LR	21 58 52.5	
	comp=Z,257nm,20.1s,baz=354,slow=40						
PTGA	Pitinga	11.82	169	eP	Pn	21 53 38.9	-2.0
PTGA	Pitinga	11.82	169	eP	Pn	21 53 38.3	-2.5
SDDR	Presa de Saban	11.91	313	Pn	Pn	21 53 46.0	+4.0
RUSC	La Rusia	11.97	246	eP	Pn	21 53 42.5	-0.7
SMLC	San Martn de	11.98	261	eP	Pn	21 53 42.1	-0.8
ARGC	Ariguani, Magd	11.99	266	eP	Pn	21 53 46.0	+2.9
SPBC	San Pablo de B	12.96	247	eP	Pn	21 53 55.4	-0.9
PTBC	PUERTO BERRIO,	12.97	251	eP	Pn	21 53 56.2	-0.2
CHIC	Chingaza	13.12	242	eP	Pn	21 54 00.8	+2.0
ROSC	El Rosal	13.54	244	P	Pn	21 54 04.2	-0.2
	baz=66,slow=19,SNR=1.7						
ROSC				LR	LR	22 00 37.0	
	comp=Z,404nm,20.8s,baz=60,slow=43						
ROSC	El Rosal	13.54	244	P	Pn	21 54 04.8	+0.4
GRTK	Grand Turk	13.59	322	Pn	Pn	21 54 01.4	-3.1
UREC	San Jos de Ur	13.62	258	eP	Pn	21 54 05.2	0.0
NORC	Norcasia	13.72	248	eP	Pn	21 54 06.2	-0.3
HELC	Santa Helena	14.09	251	eP	P	21 54 16.9	-0.4
MACA	Manacapuru-AM	14.12	174	eP	Pn	21 54 10.1	-1.6
GUY2C	Guyana, Caldas	14.31	247	eP	Pn	21 54 15.0	+0.4
DBBC	Dabeiba	14.47	255	eP	P	21 54 20.0	-1.2
TOLC	Tolima	14.54	245	eP	Pn	21 54 18.7	+1.2
CBOC	Ciudad Bolivar	14.66	251	eP	P	21 54 21.9	-1.4
ORTC	Ortega, Tolima	14.79	243	eP	Pn	21 54 21.5	+1.0
MALB	Monte Alegre	14.95	148	eP	Pn	21 54 18.5	-4.0
MCPB	Macapa, AP	15.06	138	eP	Pn	21 54 19.1	-4.8
PLMC	San Jos del P	15.27	248	eP	P	21 54 29.8	-0.3
GTBY	Guantanamo Bay	15.36	307	P	P	21 54 30.7	-0.3
GTBY				IAmb	IAmb	21 54 32.4	
	comp=Z,39nm,1.1s						
BETC	Betania	15.58	239	eP	P	21 54 35.4	+1.9
YOTC	Yotoco, Valle	15.72	245	eP	P	21 54 36.5	+1.3
GARC	Garzon, Huila	15.89	238	eP	P	21 54 38.3	+1.1
MARP	Paez Belalcaza	15.93	241	eP	P	21 54 40.8	+3.2
FLOC	Florencia	16.37	236	eP	P	21 54 45.0	+2.8
ITTB	Itaituba	16.51	157	eP	Pn	21 54 38.2	-4.0
PCON	Cinco Dias	16.58	240	eP	P	21 54 47.8	+2.7
BBAC	Balboa, Cauca	17.46	240	eP	P	21 54 57.0	+2.6
BCIP	Isla Barro Col	17.55	266	P	P	21 54 56.9	+1.7
BCIP				IAmb	IAmb	21 55 11.7	
	comp=Z,37nm,1.1s						
CBCY	The Bluff, Cay	19.10	299	P	Pn	21 55 14.3	+0.5
CBCY				IAmb	IAmb	21 55 26.9	
	comp=Z,49nm,0.8s						
NPGB	Novo Progresso	19.12	159	eP	P	21 55 12.4	-0.1
TMAB	Tom-Au,PA,Br	19.24	133	eP	P	21 55 14.1	+0.3
LCCY	Blossom Villag	19.35	299	P	Pn	21 55 17.0	+0.3
OTAV	Otavalo	19.43	238	P	Pn	21 55 19.7	+1.6
OTAV	Otavalo	19.43	238	eP	Pn	21 55 19.8	+1.6
OTAV	Otavalo	19.43	238	eP	Pn	21 55 18.8	+0.7
SAML	Samuel	19.82	183	P	Pn	21 55 21.4	-0.9
SAML				IAmb	IAmb	21 55 23.7	
	comp=Z,27nm,0.9s						
SAML	Samuel	19.82	183	eP	Pn	21 55 21.2	-1.0
FSCY	Frank Sound, G	20.17	297	P	P	21 55 24.6	+0.7
PRPB	Parauapebas	20.98	144	eP	P	21 55 30.7	-2.0
ETMB	Extrema	21.06	191	eP	P	21 55 34.8	+1.3
CZSB	Cruzeiro do Su	21.37	210	eP	P	21 55 39.1	+2.4
061Z	Ochoppi	23.13	312	P	P	21 55 55.4	0.0
VILB	Vilhena	23.85	175	eP	P	21 56 03.9	+1.9
ATAH	Atahualpa	24.22	223	P	P	21 56 06.0	+0.2
	comp=Z,23nm,0.5s,baz=4.6,slow=3.6,SNR=22						
ATAH				LR	LR	22 06 24.7	
	comp=Z,113nm,21.4s,baz=54,slow=38						
SMTB	Santa Maria do	24.44	143	eP	P	21 56 07.8	+0.5
SNDB	Serra Nova Dou	25.21	154	eP	P	21 56 15.8	+1.4
PEXB	Peixe	26.72	149	eP	P	21 56 29.1	+1.0
TEIG	Tepich	26.79	293	P	P	21 56 26.7	-2.0
	comp=Z,5.7nm,0.5s						
TEIG				PcP	PcP	21 59 48.9	-1.3
TEIG				LR	LR	22 05 32.3	
	comp=Z,46nm,21.7s,slow=33						
TEIG	Tepich	26.79	293	P	P	21 56 29.4	+0.7
TEIG				IAmb	IAmb	21 56 29.6	
	comp=Z,18nm,1.1s						
SIV	San Ignacio	26.82	178	P	P	21 56 30.5	+1.7
	comp=Z,2.6nm,0.7s,baz=16,slow=9.8,SNR=12						
SIV				LR	LR	22 07 26.3	
	comp=Z,188nm,20.4s,baz=56,slow=37						
NNA	Nana	27.10	213	P	P	21 56 31.3	-0.3
	comp=Z,5.0nm,0.3s,baz=29,slow=16,SNR=2.2						
NNA				LR	LR	22 08 04.2	
	comp=Z,101nm,18.2s,baz=28,slow=38						
LPAZ	La Paz	27.74	192	P	P	21 56 38.8	+1.0
	comp=Z,2.9nm,0.8s,baz=359,slow=9.7,SNR=8.9						
LPAZ				LR	LR	22 08 26.9	
	comp=Z,186nm,20.3s,baz=46,slow=38						
LPAZ	La Paz	27.74	192	P	P	21 56 40.6	+2.9
LPAZ	La Paz	27.74	192	eP	P	21 56 39.9	+2.2
ARAG	Araguaiana, MT	28.41	159	eP	P	21 56 42.9	-0.1
SDBA	SAO DESIDERIO	28.84	143	eP	P	21 56 47.2	+0.2
CCIG	Comitan	29.63	284	P	P	21 56 55.9	+1.6
GOGA	Godfrey	29.70	322	P	P	21 56 54.6	+0.2
BDFB	Brasilia	29.91	152	P	P	21 56 58.3	+1.8
	comp=Z,4.8nm,0.6s,baz=312,slow=10,SNR=7.2						
BDFB				LR	LR	22 09 52.1	
	comp=Z,149nm,19.3s,baz=345,slow=38						
BDFB	Brasilia	29.91	152	P	P	21 56 58.2	+1.8
NBPA	Parau_RN	29.92	123	eP	P	21 56 57.3	+0.7
PB16	IPOC Station P	30.03	194	P	P	21 56 56.3	-1.7
PB16					PcP	22 00 00.2	+1.3
JANB	Januaria	31.31	145	eP	P	21 57 09.5	+0.7
PSGCX	Pisagua	31.39	195	P	P	21 57 08.7	-0.9
PSGCX				IAmb	IAmb	21 57 22.8	
	comp=Z,13nm,1.1s						
TKL	Tuckaleechee C	31.46	325	LR	LR	22 09 36.8	
	comp=Z,15nm,18.9s,baz=156,slow=36						
WSPT	Westport, CT	31.66	344	P	P	21 57 10.4	-1.1
WSPT				IAmb	IAmb	21 57 13.3	
	comp=Z,20nm,1.0s						
PB08	IPOC Station P	31.69	193	P	P	21 57 14.8	+2.3
LRAL	Lakeview Retre	31.69	318	P	P	21 57 12.3	+0.3
Y49A	Blount Mountai	31.83	320	P	P	21 57 13.6	+0.4
IPMB	Ipameri, GO	31.88	154	eP	P	21 57 15.2	+1.3
Z47A	Carrollton	32.50	317	P	P	21 57 20.0	+0.9
Z47A				IAmb	IAmb	21 57 20.4	
	comp=Z,9.8nm,0.6s						
Q54A	Coxs Mills	32.51	332	P	P	21 57 19.3	+0.2
Q54A				IAmb	IAmb	21 57 23.0	
	comp=Z,11nm,0.6s						
X48A	Hartselle	32.61	320	P	P	21 57 20.6	+0.6
PB01	IPOC Station P	32.64	193	P	P	21 57 20.8	+0.3
PB01				IAmb	IAmb	21 57 24.6	
	comp=Z,8.0nm,0.9s						
SSPA	Standing Stone	32.66	337	P	P	21 57 21.5	+1.1
SSPA				IAmb	IAmb	21 57 25.8	
	comp=Z,10nm,1.1s						
T50A	Nancy	33.04	325	P	P	21 57 24.1	+0.3
T50A				IAmb	IAmb	21 57 25.2	
	comp=Z,8.1nm,0.6s						
PLAL	Pickwick Lake	33.60	319	P	P	21 57 29.5	+0.8
PLAL				IAmb	IAmb	21 57 30.4	
	comp=Z,12nm,1.1s						
LVC	Limon Verde	34.04	191	P	P	21 57 34.0	+1.0
	comp=Z,2.6nm,0.7s,baz=16,slow=6.8,SNR=1.8						
LVC	Limon Verde	34.04	191	P	P	21 57 35.7	+2.7
OXF	Oxford	34.18	318	P	P	21 57 33.2	-0.5
OXF				IAmb	IAmb	21 57 35.3	
	comp=Z,13nm,0.9s						
WVT	Waverly	34.18	321	P	P	21 57 34.1	+0.4
DIAM	Diamantina, MG	34.31	148	eP	P	21 57 36.4	+1.3
GBN	Guysborough	34.31	1	P	P	21 57 35.0	+0.4
T47A	Sharon Grove	34.32	323	IAmb	IAmb	21 57 36.3	
	comp=Z,8.7nm,0.7s						
NCB	Newcomb	34.50	344	P	P	21 57 37.0	+0.6
G62A	West of Eustis	34.88	350	P	P	21 57 40.6	+1.0
BLO	Bloomington	35.50	326	P	P	21 57 46.1	+1.0
SJMB	Sao Joao De Ma	36.00	145	eP	P	21 57 50.8	+1.3
BSFB	Barra de Sao F	36.29	145	eP	P	21 57 53.7	+1.7
N47A	Urbana	36.32	329	P	P	21 57 52.7	+0.7
BATG	Bathurst New B	36.33	355	P	P	21 57 51.9	-0.1
BATG				IAmb	IAmb	21 58 09.3	
	comp=Z,12nm,1.1s						
X40A	Basin Creek Fa	36.50	315	P	P	21 57 53.8	+0.2
X40A				IAmb	IAmb	21 57 54.9	
	comp=Z,3.5nm,0.6s						
L48A	N Adams	36.52	332	P	P	21 57 54.6	+0.9
WHAR	Wooly Hollow	36.56	316	P	P	21 57 54.2	+0.1
WHAR				IAmb	IAmb	21 57 57.1	
	comp=Z,7.2nm,1.0s						
HKT	Hockley	36.60	306	P	P	21 57 54.3	-0.2
HKT				IAmb	IAmb	21 57 55.1	
	comp=Z,5.6nm,0.9s						
GO02	Mina Guanaco	36.65	191	P	P	21 57 56.7	+1.4
GO02				IAmb	IAmb	21 58 11.2	
	comp=Z,8.2nm,1.1s						
SFIN	Lafayette	36.68	327	P	P	21 57 55.1	0.0
SFIN				IAmb	IAmb	21 57 57.0	
	comp=Z,9.1nm,0.8s						
TRQ	Mont Tremblant	36.69	345	P	P	21 57 55.2	+0.1
SADO	Sadowa	36.72	340	P	P	21 57 54.9	-0.4
	comp=Z,2.1nm,0.5s,baz=153,slow=9.0,SNR=1.7						
SADO				LR	LR	22 12 12.2	
	comp=Z,63nm,20.8s,baz=137,slow=35						
SADO	Sadowa	36.72	340	P	P	21 57 54.4	-1.0
T42A	Van Buren	36.79	320	P	P	21 57 55.1	-1.0
FCAR	Ozark Folk Cen	36.79	317	IAmb	IAmb	21 57 56.8	
	comp=Z,6.6nm,0.7s						
PTGB	Pitanga	36.81	165	eP	P	21 57 58.5	+2.2
FVM	French Village	36.96	321	IAmb	IAmb	21 57 58.3	
	comp=Z,9.1nm,0.6s						
O44A	Mansfield	37.26	326	P	P	21 58 00.2	+0.2
CPUP	Villa Florida	37.37	173	P	P	21 58 02.5	+1.5
	comp=Z,0.9nm,0.5s,baz=11,slow=12,SNR=1.6						
CPUP				PcP	PcP	22 00 19.3	+0.5
	comp=Z,0.5nm,0.4s,baz=23,slow=3.6,SNR=2.8						
CPUP				LR	LR	22 13 40.9	
	comp=Z,76nm,20.3s,baz=18,slow=36						
P43A	Skaggs, Pawnee	37.50	324	P	P	21 58 02.3	+0.3
CCM	Cathedral Cave	37.51	321	P	P	21 58 01.8	-0.3
CCM				IAmb	IAmb	21 58 02.9	
	comp=Z,8.3nm,0.7s						
W39A	Magazine	37.53	315	P	P	21 58 02.5	+0.1
W39A				IAmb	IAmb	21 58 04.3	
	comp=Z,8.4nm,1.1s						
U40A	Yellville	37.54	317	P	P	21 58 02.1	-0.3
U40A				IAmb	IAmb	21 58 02.6	
	comp=Z,4.6nm,0.7s						
MGMO	Mountain Grove	37.62	319	P	P	21 58 03.3	+0.3
MGMO				IAmb	IAmb	21 58 05.1	
	comp=Z,4.6nm,0.6s						
M44A	Midewin, Midew	37.90	328	P	P	21 58 05.3	-0.1
M44A				IAmb	IAmb	21 58 05.8	
	comp=Z,9.3nm,0.7s						
MAN01	Angra dos Reis	38.04	152	eP	P	21 58 08.1	+1.3
DRLN	Deer Lake	38.35	5	P	P	21 58 09.0	-0.1
DRLN				IAmb	IAmb	21 58 14.7	
	comp=Z,11nm,0.9s						
S39A	Bolivar	38.61	319	P	P	21 58 10.8	-0.7
K43A	Burlington	39.00	329	P	P	21 58 14.6	0.0
L42A	Oliver, Polo	39.20	327	P	P	21 58 15.6	-0.6
P38A	Dawn	39.88	321	P	P	21 58 21.8	-0.2
P38A				IAmb	IAmb	21 58 24.7	
	comp=Z,5.7nm,0.5s						
JCT	Junction City	39.98	305	P	P	21 58 22.7	-0.3
JCT				IAmb	IAmb	21 58 26.0	
	comp=Z,8.2nm,0.8s						
H43A	Windswept, Lux	40.02	331	P	P	21 58 23.3	+0.3
JFWS	Jewell Farm	40.14	327	P	P	21 58 24.2	+0.2
I42A	Draeger Farm,	40.15	330	P	P	21 58 24.6	+0.4
T35A	Sooner Cattle	40.32	316	P	P	21 58 24.4	-1.2
T35A				IAmb	IAmb	21 58 25.7	
	comp=Z,8.2nm,0.7s						
N38A	Joes South For	40.42	323	P	P	21 58 25.9	-0.6
ABTX	Abilene, Hawle	40.66	308	IAmb	IAmb	21 58 29.4	
	comp=Z,12nm,0.8s						
KAN14	Manchester OK	41.34	315	P	P	21 58 33.3	-0.8
G40A	Rib Lake	41.78	330	P	P	21 58 38.0	+0.4
G40A				IAmb	IAmb	21 58 39.1	
	comp=Z,3.7nm,0.4s						
I37A	Lemond, Waseca	42.57	326	P	P	21 58 44.5	+0.5
TXAR	Lajitas Array	42.79	302	P	P	21 58 45.3	-0.9
	comp=Z,3.0nm,0.6s,baz=118,slow=8.0,SNR=24						
TXAR				PcP	PcP	22 00 35.6	-0.9
	comp=Z,2.6nm,0.5s,baz=126,slow=6.3,SNR=9.5						
TXAR				pPcP		22 01 02.0	
	comp=Z,1.3nm,0.5s,baz=128,slow=6.1,SNR=5.0						
TXAR	Lajitas Array	42.79	302	P	P	21 58 45.8	-0.3
AMTX	Amarillo	43.11	310	P	P	21 58 49.9	+1.2
AMTX				IAmb	IAmb	21 59 03.5	
	comp=Z,4.8nm,0.6s						
MSTX	Muleshoe	43.59	308	IAmb	IAmb	21 58 52.2	
	comp=Z,10nm,0.8s						
F36A	Milaca	43.87	328	P	P	21 58 53.2	-1.2
ECSD	EROS Data Cent	44.20	324	P	P	21 58 56.9	-0.3
ECSD				IAmb	IAmb	21 58 57.2	
	comp=Z,5.2nm,0.7s						
EYMN	Ely	44.33	332	P	P	21 58 57.7	-0.4
EYMN				IAmb	IAmb	21 59 15.2	
	comp=Z,17nm,1.1s						
MT02	Curacav	44.82	191	P	P	21 59 04.6	+2.5
MT02				IAmb	IAmb	21 59 12.9	
	comp=Z,12nm,1.1s						
MNTX	Cornudas Mount	44.90	304	P	P	21 59 02.6	-0.3
B35A	Bob, Littlefor	45.68	331	P	P	21 59 08.5	-0.2
B35A				IAmb	IAmb	21 59 09.5	
	comp=Z,5.2nm,0.7s						
MACI	Morro de la Ar	45.96	61	P	P	21 59 10.6	-0.9
BO02	Sierra Bellavi	46.26	190	P	P	21 59 15.0	+1.5
BO02				IAmb	IAmb	21 59 20.8	
	comp=Z,5.7nm,0.7s						
ANMO	Albuquerque	46.78	308	P	P	21 59 16.1	-1.8
	comp=Z,2.1nm,0.5s,baz=87,slow=9.3,SNR=6.7						
ANMO	Albuquerque	46.78	308	P	P	21 59 18.3	+0.4
121A	Cookes Peak, D	47.09	304	IAmb	IAmb	21 59 21.8	
	comp=Z,7.9nm,1.1s						
SLBS	Sierra La Lagu	47.17	292	P	P	21 59 21.5	+0.6
ISCO	Idaho Springs	47.98	314	P	P	21 59 25.9	-1.4
ULM	Lac du Bonnet	48.00	331	P	P	21 59 24.7	-2.2
	comp=Z,6.6nm,0.6s,baz=132,slow=7.6,SNR=17						
ULM				PcP	PcP	22 00 51.5	-2.5
	comp=Z,4.2nm,0.5s,baz=126,slow=3.9,SNR=5.0						
ULM	Lac du Bonnet	48.00	331	IAmb	IAmb	21 59 27.4	
	comp=Z,6.2nm,0.6s						
PV02	Paradox Valley	49.62	311	IAmb	IAmb	21 59 41.9	
	comp=Z,4.8nm,0.7s						
PV13	Radium Mtn., P	49.67	311	IAmb	IAmb	21 59 41.1	
	comp=Z,8.4nm,1.1s						
PV12	Saucer Basin,	49.71	311	P	P	21 59 40.6	+0.2
PV12				IAmb	IAmb	21 59 43.5	
	comp=Z,5.2nm,0.9s						
PV03	Paradox Valley	49.72	311	P	P	21 59 39.5	-1.0
PV03				IAmb	IAmb	21 59 42.4	
	comp=Z,2.9nm,0.5s						
PV16	Nyswonger Mesa	49.79	311	P	P	21 59 40.7	-0.3
PV16				IAmb	IAmb	21 59 44.0	
	comp=Z,6.9nm,1.1s						
PV17	East Wray Mesa	49.81	311	P	P	21 59 40.7	-0.5
PV20	West Nyswonger	49.84	311	P	P	21 59 40.8	-0.6
PV20				IAmb	IAmb	21 59 43.5	
	comp=Z,3.2nm,0.6s						
PV19	Morning Glory	49.84	311	P	P	21 59 41.0	-0.5
PV19				IAmb	IAmb	21 59 43.5	
	comp=Z,4.3nm,0.7s						
PV05	Paradox Valley	49.85	311	P	P	21 59 41.4	-0.1
PV14	Lion Creek, Pa	49.89	311	IAmb	IAmb	21 59 43.0	
	comp=Z,4.8nm,0.5s						
PV23	Carpenter Ridg	49.91	311	P	P	21 59 42.0	0.0
PV23				IAmb	IAmb	21 59 56.9	
	comp=Z,4.3nm,0.9s						
LC01	Cunco	50.45	190	P	P	21 59 51.0	+5.4
LC01				IAmb	IAmb	21 59 52.8	
	comp=Z,7.1nm,0.8s						
H10N3	ASCENSION HYDR	50.93	110	T	T	22 55 33.2	
	baz=293,slow=75,SNR=18						
H10N2	ASCENSION HYDR	50.94	110	T	T	22 55 36.3	
	baz=293,slow=75,SNR=19						
H10N1	ASCENSION HYDR	50.95	110	T	T	22 55 44.9	
	baz=293,slow=75,SNR=60						
RDMU	Red Mountain	51.07	314	P	P	21 59 49.1	-1.6
H10S3	ASCENSION HYDR	51.19	111	T	T	22 55 56.0	
	baz=295,slow=75,SNR=56						
H10S2	ASCENSION HYDR	51.20	111	T	T	22 55 57.4	
	baz=285,slow=75,SNR=26						
SRU	San Rafael Swe	51.25	312	IAmb	IAmb	21 59 52.3	
	comp=Z,4.4nm,0.6s						
NRS	Narsarsuaq	51.57	10	P	P	21 59 54.3	+0.6
U15A	North Rim	51.76	308	P	P	21 59 56.2	+0.3
TMUT	Trail Mountain	51.81	312	IAmb	IAmb	21 59 57.4	
	comp=Z,3.8nm,0.7s						
BW06	Boulder Array	51.90	316	IAmb	IAmb	21 59 55.9	
	comp=Z,3.5nm,0.8s						
PDAR	Pinedale Array	51.90	316	P	P	21 59 55.4	-1.5
	comp=Z,2.5nm,0.5s,baz=117,slow=9.7,SNR=36						
PDAR				PcP	PcP	22 01 07.4	-1.4
	comp=Z,1.8nm,0.7s,baz=113,slow=5.3,SNR=6.2						
PDAR				LR	LR	22 23 10.7	
	comp=Z,35nm,20.0s,baz=80,slow=37						
PDAR	Pinedale Array	51.90	316	P	P	21 59 55.6	-1.2
PLCA	Paso Flores	52.04	188	P	P	21 59 57.4	-0.2
	comp=Z,1.8nm,0.6s,baz=356,slow=12,SNR=5.4						
PLCA				LR	LR	22 23 08.2	
	comp=Z,95nm,18.1s,baz=352,slow=37						
PLCA	Paso Flores	52.04	188	P	P	21 59 58.7	+1.2
PLCA	Paso Flores	52.04	188	eP	P	21 59 59.6	+2.0
MTPU	Mount Pierson	52.14	310	P	P	21 59 58.8	-0.1
KNB	Kanab	52.33	308	P	P	22 00 00.2	+0.1
JLU	Jordanelle	52.42	313	P	P	22 00 00.1	-0.7
JLU				IAmb	IAmb	22 00 02.7	
	comp=Z,5.6nm,1.1s						
TCUT	Toone Canyon	52.57	314	P	P	21 59 59.2	-2.6
TCUT				IAmb	IAmb	22 00 02.4	
	comp=Z,5.7nm,0.7s						
NLU	North Lily Min	52.66	312	P	P	22 00 01.3	-1.2
RLMT	Red Lodge	52.67	319	P	P	21 59 59.4	-3.2
FRB	Frobisher Bay	52.89	356	P	P	22 00 03.0	-0.5
	comp=Z,3.5nm,0.6s,baz=176,slow=8.2,SNR=11						
AHID	Auburn Hatcher	52.95	316	P	P	22 00 03.1	-1.5
AHID				IAmb	IAmb	22 00 04.9	
	comp=Z,3.2nm,0.7s						
REDW	Red Top Meadow	53.01	317	P	P	22 00 04.5	-0.5
REDW				IAmb	IAmb	22 00 06.3	
	comp=Z,5.2nm,1.1s						
SPX	San Pedro Mart	53.12	301	P	P	22 00 06.7	+0.5
DUG	Dugway, Tooele	53.27	312	IAmb	IAmb	22 00 07.1	
	comp=Z,3.3nm,0.7s						
SPUT	South Promonto	53.38	314	P	P	22 00 07.5	-0.2
FCC	Fort Churchill	53.45	340	IAmb	IAmb	22 00 07.3	
	comp=Z,3.8nm,0.8s						
PSUT	Pine Spring	53.54	310	IAmb	IAmb	22 00 13.6	
	comp=Z,4.6nm,0.7s						
BGU	Big Grassy Mou	53.66	313	IAmb	IAmb	22 00 09.8	
	comp=Z,5.1nm,0.9s						
FFC	Flin Flon	53.75	333	P	P	22 00 08.3	-1.6
HVU	Hansel Valley	53.76	314	P	P	22 00 09.6	-0.9
YHB	Horse Butte	53.77	318	IAmb	IAmb	22 00 12.8	
	comp=Z,4.1nm,0.7s						
YHL	Hebgen Lake	53.80	318	P	P	22 00 11.2	+0.3
YHL				IAmb	IAmb	22 00 12.8	
	comp=Z,9.3nm,1.0s						
EGMT	Eagleton	54.24	322	IAmb	IAmb	22 00 15.8	
	comp=Z,5.2nm,0.8s						
ELK	Elko	55.20	312	P	P	22 00 20.1	-0.9
	comp=Z,0.7nm,0.4s,baz=56,slow=7.6,SNR=4.4						
HLID	Hailey	55.50	316	IAmb	IAmb	22 00 23.4	
	comp=Z,5.6nm,1.1s						
TPH	Tonopah	55.98	309	P	P	22 00 24.9	-1.8
KOWA	Kowa	56.65	80	P	P	22 00 32.9	+1.4
KOWA				IAmb	IAmb	22 00 51.9	
	comp=Z,9.6nm,1.0s						
DBIC	Dimbokro	56.67	89	P	P	22 00 32.1	+0.4
	comp=Z,2.0nm,0.4s,baz=268,slow=7.0,SNR=7.3						
DBIC				LR	LR	22 20 47.6	
	comp=Z,24nm,21.4s,baz=131,slow=31						
DBIC	Dimbokro	56.67	89	P	P	22 00 31.8	+0.1
DBIC				IAmb	IAmb	22 00 32.1	
	comp=Z,4.2nm,1.0s						
NV11	Mina Array Sit	56.78	309	P	P	22 00 31.9	-0.4
MDT	Midelt	56.89	58	P	P	22 00 34.0	+1.0
	comp=Z,1.7nm,0.6s,baz=205,slow=5.2,SNR=4.1						
NVAR	Mina Array Bea	56.89	309	P	P	22 00 32.1	-1.0
	comp=Z,0.8nm,0.7s,baz=99,slow=6.6,SNR=4.9						
NVAR				PcP	PcP	22 01 26.9	-1.0
	comp=Z,0.7nm,0.7s,baz=131,slow=4.5,SNR=3.8						
NVAR				LR	LR	22 30 36.5	
	comp=Z,30nm,18.3s,baz=68,slow=42						
ESDC	Sonseca Array	58.65	50	P	P	22 00 46.2	+1.0
	comp=Z,4.8nm,0.9s,baz=263,slow=7.2,SNR=20						
NEW	Newport	58.87	320	P	P	22 00 45.2	-1.4
	comp=Z,2.8nm,0.6s,baz=143,slow=7.0,SNR=6.7						
NEW	Newport	58.87	320	P	P	22 00 45.6	-1.0
NEW				IAmb	IAmb	22 00 45.8	
	comp=Z,7.9nm,1.1s						
ICESG	Greenland Ices	59.84	9	iP	P	22 00 53.2	-0.1
ICESG				IAmb	IAmb	22 00 54.2	
	comp=Z,43nm,1.2s						
ICESG				i		22 01 20.1	
YBH	Yreka Blue Hor	60.90	312	P	P	22 00 59.0	-1.7
	comp=Z,1.7nm,0.5s,baz=34,slow=3.6,SNR=2.4						
TORD	Torodi Ar. Bea	62.29	81	P	P	22 01 10.8	+0.4
	comp=Z,1.9nm,0.6s,baz=292,slow=6.5,SNR=13						
TORD				LR	LR	22 26 34.4	
	comp=Z,36nm,21.5s,baz=140,slow=34						
SUMG	Summit	63.17	8	iP	P	22 01 16.5	+0.8
	comp=Z,55nm,1.0s						
SUMG				i		22 01 42.6	
SUMG	Summit	63.17	8	P	P	22 01 16.0	+0.3
SUMG	Summit	63.17	8	iP	P	22 01 16.6	+0.8
SUMG				IAmb	IAmb	22 01 17.3	
	comp=Z,55nm,1.0s						
SUMG				i		22 01 42.7	
YKA	Yellowknife Ar	63.57	336	P	P	22 01 15.7	-2.3
	comp=Z,1.1nm,0.6s,baz=109,slow=8.1,SNR=20						
EKA	Eskdalemuir Ar	63.60	33	P	P	22 01 18.7	+0.4
	comp=Z,0.5nm,0.5s,baz=266,slow=6.5,SNR=7.6						
SCO	Scoresbysund	64.51	14	P	P	22 01 25.6	+1.6
SCO				IAmb	IAmb	22 01 27.9	
	comp=Z,4.8nm,0.6s						
DBG	Daneborg	67.61	11	⇑iP	P	22 01 45.0	+1.1
DBG				IAmb	IAmb	22 01 45.7	
	comp=Z,13nm,0.9s						
DBG				i		22 02 10.8	
KEST	Kesra	68.65	56	P	P	22 01 52.5	+1.3
	comp=Z,5.2nm,1.0s,baz=9.8,slow=1.0,SNR=4.4						
DAVA	Damuels	69.80	44	eP	P	22 01 58.9	+0.7
	comp=Z,7.5nm,0.7s						
EUNU	Eureka	70.01	356	IAmb	IAmb	22 01 59.9	
	comp=Z,6.1nm,0.8s						
FETA	Feichten	70.36	44	eP	P	22 02 02.2	+0.6
	comp=Z,5.7nm,0.7s						
RETA	Reutte	70.42	43	eP	P	22 02 02.2	+0.3
	comp=Z,16nm,2.1s						
MOTA	Moosalm	70.64	44	eP	P	22 02 02.2	-1.1
	comp=Z,9.6nm,1.0s						
SQTA	Sankt Quirin	70.70	44	eP	P	22 02 03.6	0.0
	comp=Z,9.5nm,0.7s						
ABTA	Abfaltersbach	71.55	44	eP	P	22 02 06.9	-1.9
	comp=Z,12nm,1.2s						

NB2	**NORSAR Subarra**	72.40	29	P	**P**	**22 02 15.1**	**+1.6**
	comp=Z,7.8nm,1.0s,baz=264,slow=6.2						
NOA	**NORSAR Array B**	72.40	29	P	**P**	**22 02 14.3**	**+0.8**
	comp=Z,4.5nm,0.9s,baz=262,slow=6.0,SNR=13						
NOA				pP	**sP**	**22 02 41.0**	**+1.1**
	comp=Z,3.0nm,0.9s,baz=262,slow=5.9,SNR=4.9						
GERES	**GERESS Array B**	72.48	42	P	**P**	**22 02 14.8**	**+0.5**
	comp=Z,2.3nm,0.7s,baz=262,slow=3.9,SNR=5.2						
GERES				pP	**sP**	**22 02 41.1**	**+0.4**
	comp=Z,1.6nm,0.6s,baz=278,slow=0.9,SNR=3.0						
NC303	**NORSAR Array S**	72.50	29	P	**P**	**22 02 15.9**	**+1.8**
NC602	**NORSAR Array S**	72.51	30	P	**P**	**22 02 16.4**	**+2.4**
NC405	**NORSAR Array S**	72.65	29	P	**P**	**22 02 16.4**	**+1.4**
HFS	**Hagfors**	73.48	30	P	**P**	**22 02 20.7**	**+0.9**
	comp=Z,5.2nm,0.5s,baz=254,slow=1.1,SNR=24						
HFS				pP	**sP**	**22 02 47.5**	**+1.2**
	comp=Z,3.6nm,0.6s,baz=242,slow=3.2,SNR=3.6						
ARSA	**Arzberg**	73.64	44	*e*P	**P**	**22 02 20.1**	**-1.0**
	comp=Z,2.9nm,0.6s						
CONA	**Conrad Observa**	73.88	43	*e*P	**P**	**22 02 22.2**	**-0.3**
	comp=Z,11nm,1.9s						
MODS	**Modra-Piesok**	74.84	43	*e*P	**P**	**22 02 28.1**	**+0.1**
SMOL	**Smolenice**	74.94	43	*e*P	**P**	**22 02 29.5**	**+0.9**
SALU	**Saltoluokta**	76.33	23	*e*P	**P**	**22 02 36.6**	**+0.5**
KIF	**Kilpisjarvi**	77.28	22	*e*P	**P**	**22 02 42.1**	**+0.7**
ILAR	**Eielson Array**	77.92	334	P	**P**	**22 02 43.3**	**-1.8**
	comp=Z,1.2nm,0.6s,baz=90,slow=4.6,SNR=24						
ILAR				pP	**sP**	**22 03 09.8**	**-1.9**
	comp=Z,0.9nm,0.6s,baz=91,slow=4.9,SNR=4.5						
ILAR	**Eielson Array**	77.92	334	P	**P**	**22 02 43.4**	**-1.7**
MDM	**Murphy Dome**	78.49	334	P	**P**	**22 02 47.2**	**-1.1**
MDM				IAmb	IAmb	22 02 47.8	
	comp=Z,4.1nm,0.6s						
SML	**Sawmill**	78.62	331	P	**P**	**22 02 50.0**	**+0.9**
SML				IAmb	IAmb	22 02 52.1	
	comp=Z,7.2nm,1.0s						
ARCES	**ARCESS Array B**	78.96	21	P	**P**	**22 02 51.5**	**+0.7**
	comp=Z,15nm,0.6s,baz=269,slow=6.1,SNR=33						
ARCES				pP	**sP**	**22 03 17.7**	**+0.3**
	comp=Z,8.8nm,0.7s,baz=274,slow=4.7,SNR=4.7						
ARCES	**ARCESS Array B**	78.96	21	P	**P**	**22 02 52.0**	**+1.2**
FINES	**FINESS Array B**	79.58	29	P	**P**	**22 02 55.3**	**+1.1**
	comp=Z,2.7nm,0.4s,baz=269,slow=3.8,SNR=40						
FINES				pP	**sP**	**22 03 21.6**	**+0.7**
	comp=Z,2.5nm,0.5s,baz=260,slow=3.6,SNR=3.2						
CNPM	**China Poot**	80.19	329	P	**P**	**22 02 57.1**	**-0.6**
CNPM				IAmb	IAmb	22 03 08.5	
	comp=Z,17nm,1.0s						
BURAR	**Bucovina Array**	80.20	43	P	**P**	**22 02 59.8**	**+1.8**
PPLA	**Purkeypile**	80.35	332	P	**P**	**22 02 58.1**	**-0.5**
IMAR	**Indian Mountai**	80.73	336	P	**P**	**22 02 59.4**	**-1.0**
KDAK	**Kodiak Island**	81.06	327	P	**P**	**22 03 01.0**	**-1.2**
	comp=Z,4.2nm,0.7s,baz=150,slow=8.1,SNR=1.3						
KDAK	**Kodiak Island**	81.06	327	P	**P**	**22 03 01.5**	**-0.8**
KDAK				IAmb	IAmb	22 03 16.9	
	comp=Z,6.2nm,0.8s						
A21K	**Barrow**	81.13	341	P	**P**	**22 03 02.8**	**+0.4**
OHAK	**Old Harbor**	81.50	327	P	**P**	**22 03 03.6**	**-1.0**
OHAK				IAmb	IAmb	22 03 05.8	
	comp=Z,13nm,1.2s						
SVW2	**Sparrevohn**	82.16	331	P	**P**	**22 03 07.5**	**-0.6**
SVW2				IAmb	IAmb	22 03 08.4	
	comp=Z,14nm,1.2s						
AKASG	**Malin Array Be**	82.45	40	P	**P**	**22 03 10.3**	**+0.6**
	comp=Z,0.5nm,0.5s,baz=275,slow=4.6,SNR=2.5						
LVZ	**Lovozero**	82.45	22	P	**P**	**22 03 10.6**	**+1.1**
OBN	**Obninsk**	86.00	35	P	**P**	**22 03 28.4**	**+0.8**
	comp=Z,3.5nm,0.6s,baz=32,slow=8.4,SNR=7.1						
OBN	**Obninsk**	86.00	35	P	**P**	**22 03 29.0**	**+1.4**
BRTR	**Keskin Array B**	87.45	50	P	**P**	**22 03 35.7**	**+0.4**
	comp=Z,2.8nm,0.8s,baz=260,slow=5.2,SNR=9.7						
BRTR	**Keskin Array B**	87.45	50	P	**P**	**22 03 36.0**	**+0.8**
KIRV	**Kirov**	91.58	29	P	**P**	**22 03 54.0**	**+0.1**
	comp=Z,9.6nm,0.6s,baz=64,slow=2.9,SNR=5.4						
BOSA	**Boshof**	92.89	118	P	**P**	**22 04 01.1**	**+0.3**
	comp=Z,2.7nm,0.9s,baz=341,slow=6.7,SNR=5.9						
ARU	**Arti**	96.95	29	P	**P**	**22 04 18.7**	**0.0**
	comp=Z,1.0nm,0.6s,baz=304,slow=4.9,SNR=6.7						
MJAR	**Matsushiro Arr**	129.01	339	PKP	**PKPdf**	**22 09 54.3**	**-1.1**
	comp=Z,2.1nm,0.8s,baz=101,slow=1.7,SNR=4.9						
KSRS	**Korea Array**	130.91	349	PKP	**PKPdf**	**22 09 57.6**	**-1.3**
	comp=Z,0.8nm,0.9s,baz=8.2,slow=1.8,SNR=5.4						
CD2	**Chengdu**	136.20	18	PKP	**PKPdf**	**22 10 07.0**	**-2.1**
CMAR	**Chiang Mai Arr**	145.29	33	PKPbc	**PKPbc**	**22 10 25.1**	**-0.5**
	comp=Z,23nm,0.9s,baz=315,slow=5.6,SNR=97						
CMAR				pPKPbc	**sPKPdf**	**22 10 53.1**	**-0.2**
	comp=Z,9.8nm,0.7s,baz=315,slow=5.4,SNR=7.4						
STKA	**Stephens Creek**	149.81	223	PKP	**PKPdf**	**22 10 31.1**	**-1.8**
	comp=Z,3.1nm,0.8s,baz=96,slow=5.4,SNR=5.5						
STKA				PKPbc	**PKPbc**	**22 10 36.6**	**-1.0**
	comp=Z,2.3nm,0.6s,baz=104,slow=4.7,SNR=3.9						
JAY	**Jayapura**	155.85	289	PKPab	**PKPab**	**22 11 08.3**	**-0.9**
	comp=Z,13nm,0.6s,baz=323,slow=19,SNR=4.4						
ASAR	**Alice Springs**	160.20	228	PKP	**PKPdf**	**22 10 45.8**	**-1.5**
	comp=Z,0.9nm,0.8s,baz=91,slow=0.9,SNR=8.1						
ASAR				PKPab	**PKPab**	**22 11 26.1**	**-1.6**
	comp=Z,0.3nm,0.5s,baz=113,slow=3.4,SNR=1.9						
WRA	**Warramunga Arr**	161.82	239	PKP	**PKPdf**	**22 10 47.9**	**-1.1**
	comp=Z,3.5nm,1.0s,baz=78,slow=0.6,SNR=16						
WRA				pPKP	**sPKPdf**	**22 11 15.1**	**-1.5**
	comp=Z,1.3nm,0.9s,baz=93,slow=0.6,SNR=4.6						
WRA				PKPab	**PKPab**	**22 11 33.5**	**-1.4**
	comp=Z,1.6nm,0.6s,baz=107,slow=4.5,SNR=14						

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*NEIC **05** 21:57:53.9±1.5, 13°.13N±0°.09×143°.7E±0°.1, h219^{km}±8^{km}, mb4.4/29, Error ellipse: s-maj=18.7km s-min=12.6km az=106.0*

*IDC **05** 21:57:53.0±0.7, 13°.17N×143°.69E, h210^{km}±8^{km}, mb3.6/16, mb1 3.7/17, mb1mx3.6/51, mbtmp4.1/17, Error ellipse: s-maj=21.5km s-min=9.6km az=89.0*

ISC 05 21:57:52.0±0.4**, 13°.14N**±0°.07×**143°.59E**±0°.09**, h200**^{km}**, n59, σ0^{s}.97**/61**, mb4.4**/32**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	1.32	70	P	**Pn**	**21 58 26.3**	**+2.1**
	96nm,0.3s,baz=296,slow=7.3,SNR=79						
GUMO				S	**Sn**	**21 58 50.5**	**+1.4**
	107nm,0.3s,baz=161,slow=21,SNR=12						
GUMO	**Guam**	1.32	70		**Pn**	**21 58 26.4**	**+2.2**
GUMO					**Sn**	**21 58 49.9**	**+0.7**
ANA2	**Anatahan**	3.79	33	Pn	**Pn**	**21 58 50.3**	**-0.9**
JCJ	**Chichijima**	13.95	355	P	**P**	**22 01 04.3**	**+1.0**
SIJI	**Sorong**	18.52	222	P	**Pn**	**22 01 56.0**	**-0.3**
	1.4nm,0.3s,baz=48,slow=11,SNR=6.1						
FAKI	**Fak Fak**	19.53	216	P	**Pn**	**22 02 07.4**	**-0.8**
PMG	**Port Moresby**	22.68	171	P	**P**	**22 02 37.4**	**+0.8**
	3.7nm,0.3s,baz=96,slow=9.7,SNR=2.3						
JNU	**Nakatsue**	23.03	332	P	**P**	**22 02 40.1**	**+0.4**
	13nm,1.0s,baz=292,slow=14,SNR=6.3						
MJAR	**Matsushiro Arr**	23.80	349	P	**P**	**22 02 45.9**	**-0.8**
	1.3nm,0.5s,baz=163,slow=10,SNR=6.4						
LUWI	**Luwuk**	25.00	237	P	**P**	**22 02 58.3**	**+0.6**
COEN	**Coen**	26.92	181	P	**P**	**22 03 15.9**	**+1.0**
KSRS	**Korea Array**	27.97	333	P	**P**	**22 03 24.6**	**+0.6**
	0.9nm,0.6s,baz=138,slow=9.2,SNR=1.9						
KSAR	**Wonju Array Be**	27.98	333	P	**P**	**22 03 25.5**	**+1.4**
WB0	**Warramunga Arr**	33.93	196	P	**P**	**22 04 16.9**	**+0.4**
WB0				IAmb	IAmb	22 04 17.4	
	comp=Z,7.9nm,0.6s						
WR0	**Warramunga Arr**	34.08	195	P	**P**	**22 04 18.2**	**+0.5**
WR0				IAmb	IAmb	22 04 18.7	
	comp=Z,4.4nm,0.6s						
WRAB	**Tennant Creek**	34.10	196	P	**P**	**22 04 18.1**	**+0.2**
WRAB				IAmb	IAmb	22 04 19.0	
	comp=Z,11nm,0.7s						
WB2	**Warramunga Arr**	34.11	196	P	**P**	**22 04 18.3**	**+0.3**
WB2				IAmb	IAmb	22 04 19.1	
	comp=Z,9.3nm,0.7s						
WRA	**Warramunga Arr**	34.11	196	P	**P**	**22 04 18.3**	**+0.3**
	comp=Z,6.6nm,0.6s,baz=17,slow=9.5,SNR=113						
WRA	**Warramunga Arr**	34.11	196	P	**P**	**22 04 17.4**	**-0.6**
WC3	**Warramunga Arr**	34.12	196	P	**P**	**22 04 18.4**	**+0.3**
WC3				IAmb	IAmb	22 04 19.2	
	comp=Z,6.7nm,0.7s						
FITZ	**Fitzroy Crossi**	35.74	210	P	**P**	**22 04 32.2**	**+0.3**
KLR	**Kul'dur**	37.29	347	P	**P**	**22 04 43.8**	**-0.9**
	comp=Z,1.7nm,0.4s,baz=141,slow=14,SNR=5.1						
AS31	**Alice Springs**	37.78	195	P	**P**	**22 04 49.8**	**+0.6**
ASAR	**Alice Springs**	37.79	195	P	**P**	**22 04 49.1**	**-0.1**
	comp=Z,1.3nm,0.7s,baz=18,slow=12,SNR=23						
ASAR	**Alice Springs**	37.79	195	P	**P**	**22 04 49.3**	**+0.1**
UGM	**Wanagama**	38.94	239	P	**P**	**22 04 57.9**	**-1.0**
STKA	**Stephens Creek**	44.80	182	P	**P**	**22 05 46.0**	**-0.1**
	comp=Z,1.1nm,0.5s,baz=9.0,slow=5.8,SNR=3.4						
GIRL	**Giralia**	45.74	219	P	**P**	**22 05 54.7**	**+1.1**
FORT	**Forrest**	46.15	199	P	**P**	**22 05 56.8**	**+0.1**
FORT				IAmb	IAmb	22 06 00.6	
	comp=Z,26nm,1.1s						
BBOO	**Buckleboo**	46.25	189	P	**P**	**22 05 57.4**	**0.0**
BBOO				IAmb	IAmb	22 06 04.5	
	comp=Z,8.2nm,1.1s						
SONM	**Songino Array**	46.39	326	P	**P**	**22 05 59.3**	**+0.8**
	comp=Z,0.9nm,0.5s,baz=147,slow=7.9,SNR=9.7						
SONM	**Songino Array**	46.39	326	P	**P**	**22 05 59.5**	**+0.9**
GSI	**Gunungsitoli**	47.04	259	P	**P**	**22 06 02.8**	**-1.2**
GSI				IAmb	IAmb	22 06 07.4	
	comp=Z,13nm,0.9s						
KNTN	**Kanton**	47.09	106	P	**P**	**22 06 00.5**	**-3.7**
MORW	**Morawa**	49.69	212	P	**P**	**22 06 23.9**	**+0.1**
MORW				IAmb	IAmb	22 06 24.5	
	comp=Z,11nm,0.8s						
MK31	**Makanchi Array**	60.95	316	P	**P**	**22 07 45.3**	**+1.2**
MKAR	**Makanchi Array**	60.95	316	P	**P**	**22 07 44.7**	**+0.6**
	comp=Z,0.9nm,0.5s,baz=90,slow=8.4,SNR=20						
MKAR	**Makanchi Array**	60.95	316	P	**P**	**22 07 45.1**	**+1.0**
MAKZ	**Makanchi**	61.17	316	P	**P**	**22 07 45.4**	**-0.1**
ZALV	**Zalesovo Beam**	61.27	325	P	**P**	**22 07 46.0**	**0.0**
	comp=Z,0.8nm,0.5s,baz=104,slow=6.6,SNR=4.6						
KURK	**Kurchatov**	64.13	320	P	**P**	**22 08 05.7**	**+0.8**
KURK				IAmb	IAmb	22 08 05.9	
	comp=Z,2.5nm,0.5s						
CNPM	**China Poot**	66.25	30	P	**P**	**22 08 19.2**	**+0.7**
CNPM				IAmb	IAmb	22 08 25.9	
	comp=Z,25nm,1.2s						
BRLK	**Bradley Lake**	66.48	30	P	**P**	**22 08 20.0**	**+0.1**
BRLK				IAmb	IAmb	22 08 36.1	
	comp=Z,13nm,1.1s						
KKAR	**Karatay Array**	68.81	311	P	**P**	**22 08 35.6**	**+0.7**
ILAR	**Eielson Array**	69.50	25	P	**P**	**22 08 38.7**	**0.0**
	comp=Z,0.5nm,0.6s,baz=250,slow=6.0,SNR=2.7						
BRVK	**Borovoye**	69.58	322	P	**P**	**22 08 40.2**	**+0.9**
BRVK				IAmb	IAmb	22 08 40.8	
	comp=Z,4.2nm,0.5s						
KAIM	**Kayak Island**	69.71	31	P	**P**	**22 08 40.3**	**+0.3**
ISLE	**Juniper Island**	70.83	30	P	**P**	**22 08 47.9**	**+0.9**
ISLE				IAmb	IAmb	22 08 48.8	
	comp=Z,11nm,1.1s						
ABKAR	**Akbulak array**	76.04	318	P	**P**	**22 09 17.5**	**+0.2**
ABKAR	**Akbulak array**	76.04	318	P	**P**	**22 09 17.8**	**+0.4**
ARU	**Arti**	76.43	325	P	**P**	**22 09 19.5**	**+0.1**
	baz=100,slow=4.3						
YKA	**Yellowknife Ar**	83.83	27	P	**P**	**22 09 58.9**	**+0.1**
	comp=Z,0.2nm,0.5s,baz=292,slow=4.6,SNR=2.8						
ARCES	**ARCESS Array B**	87.13	342	P	**P**	**22 10 15.0**	**0.0**
	comp=Z,8.3nm,1.2s,baz=77,slow=6.6,SNR=5.5						
NVAR	**Mina Array Bea**	88.17	51	P	**P**	**22 10 20.9**	**0.0**
	comp=Z,0.7nm,0.8s,baz=259,slow=5.8,SNR=4.1						
FIA1	**FINESS Array S**	91.04	335	P	**P**	**22 10 31.7**	**-1.7**
FIA1				IAmb	IAmb	22 10 40.9	
	comp=Z,3.5nm,0.9s						
FINES	**FINESS Array B**	91.04	335	P	**P**	**22 10 32.4**	**-1.0**
	comp=Z,1.1nm,0.5s,baz=73,slow=4.4,SNR=18						
FINES	**FINESS Array B**	91.04	335	P	**P**	**22 10 32.0**	**-1.4**
JMIC	**Jan Mayen**	93.94	351	P	**P**	**22 10 45.8**	**-0.9**
	comp=Z,45nm,0.4s,baz=144,slow=11,SNR=2.0						
LPAZ	**La Paz**	149.18	100	PKPbc	**PKPbc**	**22 17 18.3**	**-0.3**
	comp=Z,0.7nm,0.4s,baz=333,slow=2.3,SNR=2.9						

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*IDC **05** 22:09:28.5±4.0, 2°.22N×127°.07E, h92^{km}±39^{km}, mb3.7/6, mb1 3.9/7, mb1mx3.4/37, mbtmp4.1/7, MS2.7/1, Ms1 2.7/1, ms1mx2.2/44, Error ellipse: s-maj=59.6km s-min=16.6km az=71.0*

*DJA **05** 22:09:29.3±1.2, 3°N±4°×12°7E±°, h35^{km}±30^{km}, M4.4/12, mb4.6/5, mB5.0/3, MLv4.4/12, Mw(mB)4.4/3*

*NEIC **05** 22:09:30.7±1.3, 2°.22N±0°.06×127°.03E±0°.09, h116^{km}±8^{km}, mb4.4/23, Error ellipse: s-maj=12.8km s-min=8.4km az=80.0*

ISC 05 22:09:28.9±0.5**, 2°.38N**±0°.05×**127°.14E**±0°.06**, h100**^{km}**, n49, σ1^{s}.64**/53**, mb4.3**/16**, 1C, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	1.61	172		**Pn**	**22 09 57.7**	**+1.1**
TNTI	**Ternate**	1.61	172	P	**Pn**	**22 09 57.9**	**+1.3**
TNTI				S	**Sn**	**22 10 19.4**	**+1.9**
SGSI	**Sangihe**	2.07	309	P	**Pn**	**22 10 00.9**	**-1.5**
KMSI	**Cibinong**	3.63	241	P	**Pn**	**22 10 25.8**	**+2.6**
KMSI				S	**Sn**	**22 11 07.9**	**+2.8**
GTOI	**Gorontalo**	4.48	247	P	**Pn**	**22 10 36.8**	**+2.2**
SANI	**Sanana**	4.55	195	P	**Pn**	**22 10 34.6**	**-0.9**
KCP	**Kidapawan**	5.04	336⇑	*e*P	**Pn**	**22 10 42.6**	**+0.4**
SIJI	**Sorong**	5.23	128	P	**Pn**	**22 10 44.6**	**-0.3**
	4.3nm,0.3s,baz=323,slow=20,SNR=11						
SIJI				S	**Sn**	**22 11 46.0**	**+2.0**
	baz=231,slow=22,SNR=1.0						
MRSI	**Marisa**	5.53	250	P	**Pn**	**22 10 51.3**	**+2.4**
	0.8nm2µm216nm,0.6s						
LUWI	**Luwuk**	5.53	232	Pn	**Pn**	**22 10 48.4**	**-0.5**
LUWI	**Luwuk**	5.53	232	P	**Pn**	**22 10 52.7**	**+3.8**
	0.6nm2µm37nm,0.8s						
APSI	**Ampana**	6.39	239	P	**Pn**	**22 11 03.6**	**+3.1**
TOLI2	**Tolitoli**	6.48	259		**Pn**	**22 11 02.3**	**+0.5**
FAKI	**Fak Fak**	7.33	136	Pn	**Pn**	**22 11 13.9**	**+0.5**
MYLDM	**Lahad Datu**	9.06	288	Pn	**Pn**	**22 11 38.7**	**+1.8**
KAPI	**Kappang**	10.41	225	S	**Sn**	**22 13 46.0**	**-4.1**
	0.8nm,0.3s,baz=55,slow=3.9,SNR=2.2						
FITZ	**Fitzroy Crossi**	20.40	184	P	**P**	**22 13 57.4**	**-0.7**
	2.4nm,0.5s,baz=6.9,slow=9.0,SNR=9.4						
CISI	**Cisompet, Garu**	21.66	243	P	**P**	**22 14 07.7**	**-3.9**
CISI				IAmb	IAmb	22 14 25.7	
	comp=Z,20nm,1.0s						
TPUB	**Ta-pu**	21.74	344	P	**P**	**22 14 13.3**	**+0.9**
TPUB				IAmb	IAmb	22 14 26.6	
	comp=Z,22nm,1.0s						
WB0	**Warramunga Arr**	23.13	162	P	**P**	**22 14 25.7**	**-0.9**
WB0				IAmb	IAmb	22 14 26.4	
	comp=Z,12nm,0.8s						
WRAB	**Tennant Creek**	23.27	163	P	**P**	**22 14 27.1**	**-0.8**
WRAB				IAmb	IAmb	22 14 28.4	
	comp=Z,9.1nm,0.7s						
WRA	**Warramunga Arr**	23.28	163	P	**P**	**22 14 26.8**	**-1.2**
	comp=Z,4.6nm,0.3s,baz=338,slow=10,SNR=100						
WRA	**Warramunga Arr**	23.28	163	P	**P**	**22 14 25.8**	**-2.2**
WB2	**Warramunga Arr**	23.28	163	P	**P**	**22 14 27.2**	**-0.8**
WB2				IAmb	IAmb	22 14 28.5	
	comp=Z,10nm,0.7s						
WR0	**Warramunga Arr**	23.36	162	P	**P**	**22 14 27.4**	**-1.3**
PSA00	**Pilbara Seismi**	24.85	196	P	**P**	**22 14 43.2**	**+1.0**
PSA00				IAmb	IAmb	22 14 44.6	
	comp=Z,12nm,0.8s						
KULM	**Kulim**	26.59	277	P	**P**	**22 14 57.1**	**-0.9**
KULM				IAmb	IAmb	22 15 15.9	
	comp=Z,12nm,1.1s						
ASAR	**Alice Springs**	26.71	166	P	**P**	**22 14 58.1**	**-0.9**
	comp=Z,1.1nm,0.5s,baz=347,slow=7.0,SNR=18						
ASAR				PcP	**PcP**	**22 18 20.6**	**+0.4**
	comp=Z,1.0nm,0.5s,baz=354,slow=2.5,SNR=11						
ASAR	**Alice Springs**	26.71	166	P	**P**	**22 14 58.7**	**-0.4**
FORT	**Forrest**	32.98	179	P	**P**	**22 15 52.7**	**-1.6**
MORW	**Morawa**	33.03	198	P	**P**	**22 15 53.3**	**-1.5**
BBOO	**Buckleboo**	36.00	167	P	**P**	**22 16 20.1**	**-0.3**
BBOO				IAmb	IAmb	22 16 21.8	
	comp=Z,7.8nm,1.1s						
NWAO	**Narrogin (SRO)**	36.34	194	P	**P**	**22 16 22.9**	**-0.4**
NWAO				IAmb	IAmb	22 16 27.4	
	comp=Z,3.5nm,0.8s						
STKA	**Stephens Creek**	36.73	159	P	**P**	**22 16 25.3**	**-1.3**
	comp=Z,9.2nm,0.7s,baz=332,slow=8.1,SNR=19						
STKA				PcP	**PcP**	**22 18 47.6**	**+0.4**
	comp=Z,0.5nm,0.5s,baz=308,slow=5.3,SNR=3.0						
KLR	**Kul'dur**	46.84	4	LR	LR	22 41 39.3	
	comp=Z,8.2nm,18.1s,baz=318,slow=41						
SONM	**Songino Array**	48.70	341	P	**P**	**22 18 02.8**	**-0.5**
	comp=Z,0.4nm,0.5s,baz=168,slow=6.5,SNR=3.1						
SONM	**Songino Array**	48.70	341	P	**P**	**22 18 04.5**	**+1.3**
MK31	**Makanchi Array**	58.90	326	P	**P**	**22 19 18.9**	**+1.4**
MKAR	**Makanchi Array**	58.90	326	P	**P**	**22 19 18.9**	**+1.5**
	comp=Z,0.7nm,0.4s,baz=117,slow=8.0,SNR=20						
MKAR	**Makanchi Array**	58.90	326	P	**P**	**22 19 18.7**	**+1.2**
MAKZ	**Makanchi**	59.08	325	P	**P**	**22 19 18.0**	**-0.8**
BKZ	**Black Stump Fm**	61.31	138	P	**P**	**22 19 34.5**	**+0.3**
KURK	**Kurchatov**	63.10	328	P	**P**	**22 19 46.7**	**+0.9**
KURK				IAmb	IAmb	22 19 47.4	
	comp=Z,2.2nm,0.7s						
BRVK	**Borovoye**	68.74	327	P	**P**	**22 20 22.7**	**+0.8**
ABKAR	**Akbulak array**	73.45	321	P	**P**	**22 20 50.8**	**+0.3**
ABKAR	**Akbulak array**	73.45	321	P	**P**	**22 20 51.1**	**+0.6**
ABKAR				IAmb	IAmb	22 21 00.6	
	comp=Z,0.5nm,0.9s						
CHGN	**Chignik**	79.42	33	P	**P**	**22 21 24.8**	**+0.8**
HDA	**Harding Lake**	86.10	26	P	**P**	**22 21 56.9**	**-1.5**
HDA				IAmb	IAmb	22 21 57.9	
	comp=Z,2.8nm,0.7s						
HYT	**Haines Junctio**	90.56	29	P	**P**	**22 22 20.8**	**+1.0**

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*MDD **05** 22:10:41.2±2.9, 38°.70N×14°.63W, h0^{km}, mb3.7/11, Error ellipse: s-maj=26.8km s-min=18.4km az=70.0, PRXIMO*

*INMG **05** 22:10:44.1±1.2, 38°.66N×14°.99W, h10^{km}, ML2.4, Error ellipse: s-maj=10.7km s-min=5.8km az=68.0*

ISC 05 22:10:41.9±3.7**, 38°.74N**±0°.08×**14°.5W**±0°.2**, h10**^{km}**, n24, σ1^{s}.76**/38**, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMAFR	**Mafra**	4.06	85	P	**Pn**	**22 11 45.8**	**+1.7**
	1.8nm,0.1s,SNR=7.9						
PMAFR				S	**Sn**	**22 12 34.4**	**+2.7**
	4.8nm,0.1s,SNR=7.9						
PTEO	**Sao Teotonio**	4.69	103	*e*S	**Sn**	**22 12 46.7**	**-0.5**
PTEO				A	A	22 12 57.0	
	8.7nm,0.8s						
PNCL	**Nicolau / Gran**	4.71	96	*e*P	**Pn**	**22 11 55.6**	**+2.5**
PNCL				*e*S	**Sn**	**22 12 46.2**	**-1.6**
PNCL				A	A	22 12 51.7	
	2.3nm,0.3s						
PFVI	**Vila Bisbo**	4.75	108	P	**Pn**	**22 11 53.9**	**+0.3**
	0.6nm,0.1s,SNR=7.9						
PFVI				S	**Sn**	**22 12 45.4**	**-3.2**
	1.9nm,0.2s,SNR=7.9						
MORF	**Marmelete**	4.82	106	*e*S	**Sn**	**22 12 48.9**	**-1.6**
MORF				A	A	22 12 54.9	
	5.9nm,0.2s						
PMTG	**Montargil**	4.89	84	*e*P	**Pn**	**22 11 57.7**	**+2.2**
PMTG				*e*S	**Sn**	**22 12 52.6**	**+0.5**
MESJ	**Messejana**	5.00	98	*e*S	**Sn**	**22 12 54.9**	**-0.1**
MESJ				A	A	22 13 00.4	
	2.5nm,0.9s						
PCVE	**Castro Verde**	5.19	100	*e*S	**Sn**	**22 12 58.3**	**-1.3**
PCVE				A	A	22 13 03.0	
	3.0nm,0.7s						
PESTR	**Estremoz**	5.38	87	*e*S	**Sn**	**22 13 04.9**	**+0.6**
PBDV	**Barranco-do-Ve**	5.38	104	*e*P	**Pn**	**22 12 04.0**	**+1.7**
PBDV				*e*S	**Sn**	**22 13 03.1**	**-1.3**
PBDV				A	A	22 13 08.7	
	5.2nm,0.8s						
PVAQ	**Vaqueiros**	5.50	102	*e*S	**Sn**	**22 13 05.1**	**-2.1**
PVAQ				A	A	22 13 09.6	
	2.3nm,0.3s						
PMRV	**Marv??o**	5.55	81	*e*P	**Pn**	**22 12 06.3**	**+1.6**
PMRV				*e*S	**Sn**	**22 13 08.1**	**-0.5**
PMRV				A	A	22 13 26.9	
	1.8nm,0.6s						
EGRO	**El Granado**	5.64	100	P	**Pn**	**22 12 08.0**	**+2.2**
	0.2nm,0.1s,SNR=7.9						
EGRO				S	**Sn**	**22 13 08.0**	**-2.7**
	2.2nm,0.2s,SNR=7.9						
ELOB	**Lobios**	5.81	55	P	**Pn**	**22 12 09.1**	**+0.9**
	0.6nm,0.1s,SNR=7.9						
ELOB				S	**Sn**	**22 13 13.6**	**-1.4**
	0.5nm,0.1s,SNR=7.9						
PBAR	**Barrancos**	5.87	93	A	A	22 13 19.2	
	1.0nm,0.2s						
EMAZ	**Mazaricos**	5.92	43	P	**Pn**	**22 12 10.8**	**+1.2**
	0.2nm,0.1s,SNR=7.9						
EMAZ				S	**Sn**	**22 13 14.7**	**-2.9**
	0.7nm,0.2s,SNR=7.9						
MVO	**Moncorvo**	6.21	65	P	**Pn**	**22 12 15.2**	**+1.5**
	0.5nm,0.1s,SNR=7.9						
MVO				S	**Sn**	**22 13 23.2**	**-1.6**
	0.8nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	6.22	97	P	**Pn**	**22 12 13.7**	**-0.1**
	0.0nm,0.0s,SNR=7.9						
EMIN				S	**Sn**	**22 13 23.1**	**-1.8**
	0.6nm,0.2s,SNR=7.9						
EAGO	**Agolada(Pontev**	6.32	48	P	**Pn**	**22 12 15.0**	**-0.2**
	0.5nm,0.1s,SNR=7.9						
EAGO				S	**Sn**	**22 13 24.9**	**-2.5**
	0.3nm,0.2s,SNR=7.9						
EPLA	**Plasencia**	6.64	76	P	**Pn**	**22 12 20.4**	**+0.8**
	0.0nm,0.0s,SNR=6.4						
EPLA				S	**Sn**	**22 13 35.2**	**0.0**
	0.4nm,0.2s,SNR=6.8						
ECAL	**Calabor**	6.72	59	P	**Pn**	**22 12 21.9**	**+1.2**
	0.2nm,0.1s,SNR=4.0						
ECAL				S	**Sn**	**22 13 38.7**	**+1.4**
	0.5nm,0.2s,SNR=4.0						
ECAB	**El Cabril**	7.14	93	P	**Pn**	**22 12 27.1**	**+0.5**
	0.0nm,0.0s,SNR=6.9						
ECAB				S	**Sn**	**22 13 44.7**	**-3.1**
	0.5nm,0.3s,SNR=7.9						
EADA	**Adamuz**	7.79	91	S	**Sn**	**22 14 01.7**	**-2.0**
	0.4nm,0.2s,SNR=7.9						
EGOR	**Sierra Gorda,**	8.35	98	P	**Pn**	**22 12 44.1**	**+0.9**
	SNR=7.9						

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*IDC **05** 22:17:26.0±1.8, 7°.19S×129°.03E, h160^{km}±17^{km}, mb3.8/11, mb1 4.0/15, mb1mx3.8/43, mbtmp4.4/15, MS3.4/5, Ms1 3.4/5, ms1mx2.9/38, Error ellipse: s-maj=16.5km s-min=11.5km az=70.0*

*BJI **05** 22:17:26.0±0.0, 7°.20S×129°.10E, h170^{km}, mB4.9/5, mb4.2/6*

*DJA **05** 22:17:27.8±0.2, 7°S±2°×12°9E±°, h174^{km}±3^{km}, M4.8/21, mb4.8/21, mB5.4/12, MLv4.9/15, Mw(mB)4.8/12, MwMwp7.6/1, Mwp7.3/1*

*NEIC **05** 22:17:27.6±1.8, 7°.14S±0°.07×129°.15E±0°.07, h177^{km}±3^{km}, mb4.5/34, Error ellipse: s-maj=11.0km s-min=9.9km az=57.0*

ISC 05 22:17:25.8±0.4**, 7°.17S**±0°.05×**129°.06E**±0°.05**, h156**^{km}**, n104, σ1^{s}.65**/102**, mb4.4**/29**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	2.36	110	Pn	**Pn**	**22 18 07.4**	**+1.9**
SAUI	**Saumlaki**	2.36	110	P	**Pn**	**22 18 07.7**	**+2.2**
SAUI				S	**Sn**	**22 18 38.2**	**+2.1**
BNDI	**Bandanaira**	2.76	18	P	**Pn**	**22 18 13.9**	**+3.4**
MSAI	**Masohi**	3.80	358	P	Pn	22 18 30.2	+6.5
NLAI	**Namlea**	4.37	333	P	Pn	22 18 40.6	+10
FAKI	**Fak Fak**	5.28	37	Pn	**Pn**	**22 18 42.3**	**-0.8**
FAKI	**Fak Fak**	5.28	37	P	**Pn**	**22 18 42.0**	**-1.1**
	1.5nm5µm308nm,0.7s						
SOEI	**Soe**	5.39	241	Pn	**Pn**	**22 18 46.9**	**+2.2**
SOEI	**Soe**	5.39	241	P	**Pn**	**22 18 47.2**	**+2.5**
	2.5nm7µm689nm,0.6s						
SANI	**Sanana**	5.94	329	P	**Pn**	**22 18 56.3**	**+4.5**
	0.2nm41nm,0.6s						
MTN	**Manton Dam**	5.99	160	Pn	**Pn**	**22 18 52.5**	**+0.1**
BATI	**Baumata**	6.13	240	P	**Pn**	**22 18 55.1**	**+0.7**
	307nm,0.3s,baz=139,slow=2.7,SNR=186						
BATI				S	**Sn**	**22 20 03.5**	**-0.3**
	91nm,0.3s,baz=202,slow=21,SNR=11						
BATI				LR	LR	22 21 15.5	
	comp=Z,180nm,19.4s,baz=252,slow=38						
BATI	**Baumata**	6.13	240	P	**Pn**	**22 18 56.0**	**+1.6**
	2.3nm7µm536nm,0.5s						
SIJI	**Sorong**	6.64	19	P	**Pn**	**22 19 01.2**	**+0.1**
	12nm,0.3s,baz=86,slow=2.6,SNR=25						
SIJI				S	**Sn**	**22 20 12.7**	**-3.1**
	25nm,0.3s,baz=240,slow=20,SNR=14						
SWI	**Sorong**	6.64	19	P	**Pn**	**22 19 01.5**	**+0.4**
	0.9nm3µm91nm,0.7s						
MMRI	**Maumere**	6.92	257	Pn	**Pn**	**22 19 06.4**	**+1.6**
MMRI	**Maumere**	6.92	257	P	**Pn**	**22 19 09.1**	**+4.3**
	0.4nm52nm,0.5s						
EDFI	**Ende, Flores**	7.47	257	P	**Pn**	**22 19 15.9**	**+3.6**
	0.1nm594nm16nm,0.6s						
TNTI	**Ternate**	8.07	348	Pn	**Pn**	**22 19 20.8**	**+0.6**
TNTI	**Ternate**	8.07	348	P	Pn	22 19 25.2	+5.0
	0.1nm33nm,0.8s						
LUWI	**Luwuk**	8.74	314	Pn	**Pn**	**22 19 27.2**	**-2.0**
BASI	**Baing, Sumba**	8.92	250	P	**Pn**	**22 19 33.3**	**+1.9**
	2µm116nm,0.6s						
BAKI	**Biak**	9.20	50	P	**Pn**	**22 19 38.0**	**+2.8**
	5µm462nm,0.8s						
KAPI	**Kappang**	9.51	283	Pn	**Pn**	**22 19 41.6**	**+2.4**
PLAI	**Plampang**	11.30	261	P	**Pn**	**22 20 03.0**	**+0.1**
	51nm,0.6s						
FITZ	**Fitzroy Crossi**	11.36	197	P	**Pn**	**22 20 01.7**	**-1.9**

	7.2nm,0.3s,baz=27,slow=9.8,SNR=156						
FITZ				S	Sn	22 21 59.7	-10
	5.3nm,0.3s,baz=292,slow=23,SNR=4.1						
FITZ				LR	LR	22 25 06.0	
	comp=Z,127nm,19.1s,baz=14,slow=41						
FITZ	**Fitzroy Crossi**	**11.36**	**197**	Pn	**Pn**	**22 20 01.9**	**-1.8**
TWSI	**Taliwang, Sumb**	**12.16**	**262**	P	**P**	**22 20 19.5**	**-0.7**
	13nm,0.6s						
WB0	**Warramunga Arr**	**13.55**	**158**	Pn	**Pn**	**22 20 28.9**	**-2.9**
WRAB	**Tennant Creek**	**13.68**	**159**		**Pn**	**22 20 30.3**	**-3.2**
WRA	**Warramunga Arr**	**13.69**	**159**	P	**Pn**	**22 20 29.6**	**-4.0**
	1.7nm,0.3s,baz=326,slow=14,SNR=51						
WRA				S	Sn	22 22 52.5	-13
	3.3nm,0.3s,baz=333,slow=22,SNR=8.1						
WRA				LR	LR	22 27 00.5	
	comp=Z,158nm,18.2s,baz=175,slow=42						
WB2	**Warramunga Arr**	**13.69**	**159**	Pn	**Pn**	**22 20 31.5**	**-2.2**
WR0	**Warramunga Arr**	**13.78**	**158**	Pn	**Pn**	**22 20 32.2**	**-2.6**
BBKI	**Banjar Baru**	**14.63**	**284**	P	P	22 20 53.7	+6.1
JAGI	**Jajag, Banyuwa**	**14.83**	**264**	Pn	**Pn**	**22 20 48.0**	**0.0**
COEN	**Coen**	**15.42**	**117**	P	**Pn**	**22 20 55.6**	**+0.4**
MTKI	**Muara Teweh, K**	**15.42**	**293**	P	**P**	**22 21 00.6**	**+4.2**
MYLDM	**Lahad Datu**	**16.18**	**319**		**P**	**22 21 06.8**	**+2.0**
MYLDM				IAmb	IAmb	22 21 25.4	
	comp=Z,15nm,1.0s						
PSA00	**Pilbara Seismi**	**16.86**	**211**		**Pn**	**22 21 13.9**	**+1.2**
PSA00				IAmb	IAmb	22 21 22.1	
	comp=Z,20nm,0.5s						
PSA00	**Pilbara Seismi**	**16.86**	**211**	P	**Pn**	**22 21 13.1**	**+0.4**
PSA00				IAmb	IAmb	22 21 31.3	
	comp=Z,6.5nm,0.8s						
AS31	**Alice Springs**	**17.05**	**165**		**Pn**	**22 21 15.2**	**+0.2**
AS31				IAmb	IAmb	22 21 16.6	
	comp=Z,7.5nm,0.8s						
ASAR	**Alice Springs**	**17.05**	**165**	P	**Pn**	**22 21 15.4**	**+0.4**
	comp=Z,2.9nm,0.3s,baz=341,slow=10,SNR=188						
ASAR				S	**S**	**22 24 19.4**	**-4.7**
	comp=Z,1.5nm,0.3s,baz=348,slow=26,SNR=5.1						
ASAR				LR	LR	22 28 46.5	
	comp=Z,125nm,20.4s,baz=342,slow=40						
ASAR	**Alice Springs**	**17.05**	**165**		**Pn**	**22 21 15.1**	**+0.1**
PMG	**Port Moresby**	**18.04**	**98**	P	**P**	**22 21 25.9**	**+0.7**
	comp=Z,1.2nm,0.3s,baz=297,slow=11,SNR=3.3						
KKM	**Kota Kinabalu**	**18.35**	**315**		**P**	**22 21 29.3**	**+0.6**
KKM				IAmb	IAmb	22 21 37.9	
	comp=Z,18nm,1.1s						
UGM	**Wanagama**	**18.40**	**267**	P	**P**	**22 21 29.9**	**+0.8**
UGM				IAmb	IAmb	22 21 42.2	
	comp=Z,45nm,1.1s						
SBUM	**Sibu**	**19.34**	**299**	P	**P**	**22 21 40.5**	**+1.1**
SBUM				IAmb	IAmb	22 21 44.3	
	comp=Z,12nm,0.9s						
KSM	**Kuching**	**20.59**	**294**	P	**P**	**22 21 53.0**	**+0.2**
KSM				IAmb	IAmb	22 21 57.6	
	comp=Z,16nm,0.8s						
GIRL	**Giralia**	**20.99**	**221**	P	**P**	**22 21 59.0**	**+2.0**
CTAO	**Charters Tower**	**21.04**	**129**	P	**P**	**22 21 58.2**	**+0.6**
CTAO				IAmb	IAmb	22 22 04.2	
	comp=Z,12nm,1.1s						
CISI	**Cisompet, Garu**	**21.08**	**268**	P	**P**	**22 21 57.9**	**-0.1**
CISI				IAmb	IAmb	22 22 16.0	
	comp=Z,14nm,0.6s						
DBJI	**Dramaga**	**22.16**	**270**	P	**P**	**22 22 08.4**	**-1.0**
FORT	**Forrest**	**23.50**	**182**	P	**P**	**22 22 22.0**	**+0.4**
MORW	**Morawa**	**25.00**	**208**	P	**P**	**22 22 36.1**	**+0.8**
MORW				IAmb	IAmb	22 22 52.3	
	comp=Z,9.2nm,1.0s						
BBOO	**Buckleboo**	**26.32**	**167**	P	**P**	**22 22 47.0**	**-0.1**
BBOO				IAmb	IAmb	22 22 47.2	
	comp=Z,17nm,1.1s						
STKA	**Stephens Creek**	**27.22**	**156**	P	**P**	**22 22 54.8**	**-0.3**
	comp=Z,5.2nm,0.8s,baz=336,slow=9.0,SNR=16						
STKA				LR	LR	22 35 38.8	
	comp=Z,140nm,18.0s,baz=26,slow=40						
STKA	**Stephens Creek**	**27.22**	**156**	P	**P**	**22 22 55.2**	**0.0**
RPSI	**Rantau Prapat**	**31.64**	**287**	P	**P**	**22 23 34.4**	**-0.1**
PSI	**Prapat**	**31.67**	**287**	P	**P**	**22 23 34.4**	**-0.5**
	comp=Z,5.9nm,0.5s,baz=180,slow=2.9,SNR=6.3						
CAN	**Canberra**	**33.47**	**150**	P	**P**	**22 23 50.5**	**+0.3**
TOO	**Toolangi**	**33.74**	**156**	P	**P**	**22 23 53.8**	**+1.3**
TOO				IAmb	IAmb	22 23 54.1	
	comp=Z,8.2nm,1.1s						
SANVU	**Saraoutou**	**38.24**	**106**	P	**P**	**22 24 30.4**	**-0.6**
DZM	**Mont Dzumac**	**38.95**	**116**	P	**P**	**22 24 35.7**	**-1.3**
DZM				IAmb	IAmb	22 24 36.8	
	comp=Z,3.3nm,0.7s						
CMAR	**Chiang Mai Arr**	**39.14**	**311**	P	**P**	**22 24 38.6**	**+0.2**
	comp=Z,1.3nm,0.4s,baz=142,slow=7.7,SNR=12						
HHC	**Hu-ho-hao-te**	**50.42**	**343**	*e*P	**P**	**22 26 08.8**	**+1.3**
HHC				pmax	pmax		
	comp=Z,13nm,0.9s						
HHC				pmax	pmax		
	comp=Z,130nm,6.4s						
MLZ	**Mavora Lakes**	**50.86**	**145**	P	**P**	**22 26 10.2**	**-0.5**
MLZ				IAmb	IAmb	22 26 13.2	
	comp=Z,15nm,1.2s						
WHZ	**Wether Hill Ro**	**51.08**	**146**	P	**P**	**22 26 12.4**	**+0.1**
QRZ	**Quartz Range**	**51.15**	**138**	P	**P**	**22 26 13.4**	**+0.5**
RPZ	**Rata Peaks**	**51.67**	**142**	P	**P**	**22 26 17.8**	**+1.0**
LSA	**Lhasa**	**51.69**	**317**	P	**P**	**22 26 18.4**	**+0.8**
LSA				IAmb	IAmb	22 26 19.7	
	comp=Z,4.8nm,0.5s						
LTZ	**Lake Taylor**	**51.95**	**140**	P	**P**	**22 26 19.0**	**+0.2**
TUWZ	**Tuamarina**	**52.37**	**138**	P	**P**	**22 26 21.6**	**-0.3**
JKA	**Kamikawa-asahi**	**52.50**	**12**	P	**P**	**22 26 22.8**	**+0.1**
JKA				IAmb	IAmb	22 26 32.8	
	comp=Z,12nm,1.0s						
TAPN	**Taplejung**	**52.71**	**312**	*e*P	**P**	**22 26 25.4**	**+0.4**
	comp=Z,24nm,0.4s						
GTA	**Gaotai**	**53.68**	**332**	*e*P	P	22 26 37.2	+5.5
GTA				pP	pwP	22 27 16.0	+3.5
GTA				sP	PcP	22 27 32.7	-3.2
GUN	**Gumba**	**54.37**	**312**	*e*P	**P**	**22 26 37.2**	**+0.1**
	comp=Z,12nm,0.4s						
PKI	**Pulchoki**	**54.54**	**311**	*e*P	**P**	**22 26 38.0**	**-0.3**
	comp=Z,3.7nm,0.4s						
PKIN	**Phulchoki**	**54.55**	**311**	*e*P	**P**	**22 26 38.7**	**+0.4**
	comp=Z,5.9nm,0.4s						
KKN	**Kakani**	**54.75**	**311**	*e*P	**P**	**22 26 39.4**	**-0.3**
GKN	**Gorkha**	**55.34**	**311**	*e*P	**P**	**22 26 43.8**	**-0.1**
	comp=Z,8.3nm,0.3s						
DANN	**Dangsing**	**56.18**	**311**	*e*P	**P**	**22 26 49.6**	**-0.4**
	comp=Z,8.0nm,0.7s						
SONM	**Songino Array**	**58.32**	**342**	P	**P**	**22 27 04.4**	**0.0**
	comp=Z,0.5nm,0.8s,baz=167,slow=7.4,SNR=4.6						
WMQ	**Urumqi**	**63.04**	**328**	*e*P	**P**	**22 27 38.9**	**+2.5**
WMQ				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KSH	**Kashi**	**67.52**	**318**	P	**P**	**22 28 06.2**	**+0.8**
KSH				pmax	pmax		
	comp=Z,120nm,5.6s						
MKAR	**Makanchi Array**	**67.86**	**327**	P	**P**	**22 28 07.4**	**+0.1**
	comp=Z,1.3nm,0.5s,baz=120,slow=7.5,SNR=33						
MKAR	**Makanchi Array**	**67.86**	**327**	P	**P**	**22 28 07.2**	**-0.1**
MK31	**Makanchi Array**	**67.86**	**327**	P	**P**	**22 28 07.6**	**+0.3**
MAKZ	**Makanchi**	**68.04**	**327**	P	**P**	**22 28 08.4**	**+0.1**
AAK	**Ala-Archa**	**70.08**	**320**	P	**P**	**22 28 21.1**	**-0.1**
	comp=Z,0.8nm,0.5s,baz=138,slow=7.8,SNR=6.1						
AAK	**Ala-Archa**	**70.08**	**320**	IAmb	IAmb	22 28 23.4	
	comp=Z,1.1nm,0.6s						
ZALV	**Zalesovo Beam**	**71.33**	**334**	P	**P**	**22 28 26.6**	**-1.7**
	comp=Z,0.9nm,0.5s,baz=146,slow=5.7,SNR=6.0						
SEY	**Seymchan**	**72.15**	**11**	P	**P**	**22 28 33.5**	**+0.5**
	comp=Z,1.9nm,0.5s,baz=202,slow=4.7,SNR=10						
KURBB	**Kurchatov Arra**	**72.17**	**329**	P	**P**	**22 28 33.0**	**-0.5**
	comp=Z,0.9nm,0.4s,baz=123,slow=4.8,SNR=13						
KURK	**Kurchatov**	**72.18**	**329**	P	**P**	**22 28 33.1**	**-0.4**
VNDA	**Vanda**	**72.39**	**173**	P	**P**	**22 28 34.0**	**-0.3**
	comp=Z,7.5nm,1.1s,baz=309,slow=7.2,SNR=6.6						
KKAR	**Karatay Array**	**72.86**	**319**	P	**P**	**22 28 37.6**	**-0.1**
SOCY	**Socotra**	**77.07**	**284**	P	**P**	**22 28 59.9**	**-2.6**
SOCY				IAmb	IAmb	22 29 11.4	
	comp=Z,16nm,1.1s						
BVAR	**Borovoye Array**	**77.72**	**328**	P	**P**	**22 29 04.6**	**-0.6**
	comp=Z,0.3nm,0.4s,baz=135,slow=2.9,SNR=7.1						
ABKAR	**Akbulak array**	**82.07**	**322**	P	**P**	**22 29 28.0**	**-0.7**
ABKAR	**Akbulak array**	**82.07**	**322**	IAmb	IAmb	22 29 32.4	
	comp=Z,2.3nm,1.1s						
ARCES	**ARCESS Array B**	**101.42**	**340**	P	**Pdif**	**22 30 59.0**	**0.0**
	comp=Z,6.8nm,1.0s,baz=65,slow=6.4,SNR=5.6						
TORD	**Torodi Ar. Bea**	**127.93**	**281**	PKP	**PKPdf**	**22 36 13.7**	**-0.4**
	comp=Z,0.8nm,0.5s,baz=116,slow=2.4,SNR=5.3						
CPUP	**Villa Florida**	**146.12**	**170**	PKPbc	**PKPdf**	**22 36 47.3**	**+0.1**
	comp=Z,4.6nm,0.8s,baz=178,slow=4.8,SNR=7.5						
LPAZ	**La Paz**	**151.14**	**144**	PKP	**PKPdf**	**22 36 53.5**	**-2.8**
	comp=Z,0.4nm,0.4s,baz=180,slow=5.1,SNR=1.7						
LPAZ				PKPbc	**PKPbc**	**22 37 02.2**	**-0.1**
	comp=Z,1.5nm,0.9s,baz=35,slow=3.7,SNR=5.7						

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*TUL **05** 22:24:15.5±1.0, 36°.81N±0°.02×98°.28W±0°.04, h7^{km}±6^{km}, ML3.3, mb_Lg3.1/59(NEIC), Error ellipse: s-maj=4.4km s-min=2.4km az=78.0*

*NEIC **05** 22:24:15.9±0.8, 36°.810N±0°.009×98°.28W±0°.05, h9^{km}±6^{km}, Error ellipse: s-maj=5.5km s-min=0.9km az=79.0*

*ANF **05** 22:24:16.1±0.8, 36°.81N×98°.25W, h8^{km}, ML3.9/5, Error ellipse: s-maj=9.5km s-min=7.6km az=97.0*

ISC 05 22:24:15.9±1.1**, 36°.80N**±0°.02×**98°.27W**±0°.03**, h7**^{km}±9^{km}**,**
n59, σ0^{s}.57/51**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAN14	**Manchester OK**	**0.29**	**57**	Pg	**Pg**	**22 24 21.7**	**+0.1**
GC02	**Grant County #**	**0.33**	**81**	Pg	**Pg**	**22 24 22.5**	**+0.1**
GC02				Sg	**Sg**	**22 24 27.4**	**+0.7**
KAN10	**Anthony SW Sta**	**0.35**	**23**		**Pg**	**22 24 22.6**	**-0.2**
KAN10				Sg	**Sg**	**22 24 27.6**	**+0.2**
CROK	**Carrier**	**0.37**	**142**	Pg	**Pg**	**22 24 23.4**	**+0.2**
CROK				Sg	**Sg**	**22 24 28.9**	**+0.8**
KAN05	**Bluff City Nor**	**0.44**	**46**	Pg	**Pg**	**22 24 24.2**	**-0.3**
KAN01	**Argonia South**	**0.54**	**49**	Pg	**Pg**	**22 24 26.2**	**-0.1**
KAN01				Sg	**Sg**	**22 24 33.6**	**+0.3**
KAN12	**Harper NE Stat**	**0.54**	**23**	Pg	**Pg**	**22 24 26.1**	**-0.3**
KAN12				Sg	**Sg**	**22 24 33.6**	**+0.2**
KAN13	**South Haven SW**	**0.67**	**71**	Pg	**Pg**	**22 24 28.5**	**-0.2**
KAN13				Sg	**Sg**	**22 24 37.5**	**+0.1**
U32A	**Winter Ranch,**	**0.73**	**235**	Pg	**Pg**	**22 24 29.3**	**-0.6**
OK029	**Liberty Lake**	**1.20**	**147**		**Pb**	**22 24 38.0**	**-1.0**
BCOK	**Bluff Creek, N**	**1.26**	**155**	Pn	**Pn**	**22 24 38.9**	**-1.1**
QUOK	**Quay**	**1.41**	**116**		**Pn**	**22 24 41.9**	**-0.1**
T35A	**Sooner Cattle**	**1.41**	**85**		**Pn**	**22 24 41.7**	**-0.4**
OK031	**S. Brethren Rd**	**1.43**	**126**		**Pn**	**22 24 41.9**	**-0.5**
OK031					**Sb**	**22 25 01.7**	**+0.4**
OK025	**Westminster Rd**	**1.43**	**148**	Pn	**Pn**	**22 24 42.4**	**0.0**
OK025				IAmb_Lg		22 25 03.6	
	comp=Z,93nm,0.8s						
OK030	**Cody Creek RV**	**1.48**	**126**		**Pn**	**22 24 42.9**	**-0.2**
OKCFA	**Oklahoma City**	**1.53**	**154**		**Pn**	**22 24 43.5**	**-0.3**
OKCSW	**OKLAHOMA CITY**	**1.55**	**154**		**Pn**	**22 24 43.8**	**-0.2**
R32A	**Long Quarter,**	**1.66**	**348**	Pn	**Pn**	**22 24 45.5**	**0.0**
W35A	**Tecumseh**	**2.00**	**145**	Pn	**Pn**	**22 24 50.6**	**+0.4**
W35A				IAmb_Lg		22 25 18.2	
	comp=Z,138nm,0.8s						
WMOK	**Wichita Mounta**	**2.10**	**192**	P	**Pn**	**22 24 52.6**	**+1.0**
	baz=11						
WMOK				S	**Sn**	**22 25 18.5**	**+0.5**
	baz=11						
WMOK	**Wichita Mounta**	**2.10**	**192**	Pn	**Pn**	**22 24 52.1**	**+0.5**
TUL1	**Leonard**	**2.19**	**113**	P	**Pn**	**22 24 53.8**	**+1.0**
	baz=295						
TUL1				S	**Sn**	**22 25 19.8**	**-0.3**
	baz=295						
TUL1	**Leonard**	**2.19**	**113**		**Pn**	**22 24 53.5**	**+0.8**
CBKS	**Cedar Bluff**	**2.32**	**330**	P	**Pn**	**22 24 54.6**	**-0.1**
	baz=150						
CBKS				S	**Sn**	**22 25 23.5**	**0.0**
	baz=150						
CBKS	**Cedar Bluff**	**2.32**	**330**	Pn	**Pn**	**22 24 55.3**	**+0.6**
KSU1	**Kansas State U**	**2.64**	**29**	P	**Pn**	**22 24 59.0**	**0.0**
	baz=210						
KSU1				S	**Sn**	**22 25 32.0**	**+0.6**
	baz=210						
KSU1	**Kansas State U**	**2.64**	**29**	Pn	**Pn**	**22 25 00.5**	**+1.5**
KSU1				IAmb_Lg		22 25 46.1	
	comp=Z,59nm,0.9s						
U38A	**Gravette**	**3.14**	**95**	Pn	**Pn**	**22 25 06.9**	**+1.0**
U38A				IAmb_Lg		22 26 00.6	
	comp=Z,58nm,0.9s						
X37A	**Clayton**	**3.23**	**132**	Pn	**Pn**	**22 25 07.9**	**+0.8**
X37A				IAmb_Lg		22 26 05.9	
	comp=Z,44nm,0.7s						
AMTX	**Amarillo**	**3.37**	**236**	P	**Pn**	**22 25 09.9**	**+0.8**
	baz=54						
AMTX				S	**Sn**	**22 25 49.7**	**+0.2**
	baz=54						
AMTX	**Amarillo**	**3.37**	**236**	Pn	**Pn**	**22 25 09.9**	**+0.8**
AMTX				IAmb_Lg		22 26 02.9	
	comp=Z,55nm,0.8s						
Z35A	**Perchaven, San**	**3.56**	**166**	Pn	**Pn**	**22 25 11.5**	**-0.2**
N33A	**J Bar K, Exete**	**3.98**	**9**	Pn	**Pn**	**22 25 16.9**	**-0.5**
N33A				IAmb_Lg		22 26 32.6	
	comp=Z,51nm,0.8s						
KSCO	**Kaye Shedlock'**	**4.09**	**304**	IAmb_Lg		22 26 28.0	
	comp=Z,39nm,0.9s						
U40A	**Yellville**	**4.38**	**94**	IAmb_Lg		22 26 33.0	
	comp=Z,62nm,1.0s						
MIAR	**Mount Ida**	**4.43**	**119**	IAmb_Lg		22 26 38.4	
	comp=Z,30nm,0.9s						
Z38A	**Mt. Pleasant**	**4.44**	**142**	Pn	**Pn**	**22 25 23.5**	**-0.2**
Z38A				IAmb_Lg		22 26 41.3	
	comp=Z,45nm,0.7s						
BGNE	**Belgrade**	**4.60**	**1**	Pn	**Pn**	**22 25 25.7**	**-0.3**
BGNE				IAmb_Lg		22 26 48.3	
	comp=Z,59nm,0.7s						
MSTX	**Muleshoe**	**4.64**	**234**	IAmb_Lg		22 26 47.8	
	comp=Z,26nm,0.9s						
P38A	**Dawn**	**4.67**	**51**	IAmb_Lg		22 26 48.7	
	comp=Z,28nm,0.7s						
MGMO	**Mountain Grove**	**4.81**	**84**	Pn	**Pn**	**22 25 28.7**	**-0.2**
WHTX	**Lake Whitney,**	**4.84**	**172**	Pn	**Pn**	**22 25 29.2**	**-0.1**
X40A	**Basin Creek Fa**	**4.99**	**116**	IAmb_Lg		22 26 58.7	
	comp=Z,49nm,0.7s						
FCAR	**Ozark Folk Cen**	**5.04**	**99**	IAmb_Lg		22 26 55.7	
	comp=Z,25nm,0.9s						
WHAR	**Wooly Hollow**	**5.07**	**106**	IAmb_Lg		22 27 05.0	
	comp=Z,34nm,0.7s						
OGNE	**Ogallala**	**5.07**	**326**	IAmb_Lg		22 27 08.6	
	comp=Z,37nm,0.7s						
237A	**Washetta, Mont**	**5.20**	**156**	Pn	**Pn**	**22 25 33.5**	**-0.7**
WLAR	**White Oak Lake**	**5.24**	**125**	IAmb_Lg		22 27 15.2	
	comp=Z,45nm,0.7s						
P40A	**Paris**	**5.61**	**59**	IAmb_Lg		22 27 15.0	
	comp=Z,48nm,0.9s						
CCM	**Cathedral Cave**	**5.73**	**75**	IAmb_Lg		22 27 18.5	
	comp=Z,20nm,0.7s						
435B	**Jarrell**	**6.03**	**174**	IAmb_Lg		22 27 28.4	
	comp=Z,32nm,1.0s						
N41A	**Harden Midland**	**6.98**	**54**	IAmb_Lg		22 27 60.0	
	comp=Z,35nm,0.8s						
PHWY	**Pilot Hill**	**7.17**	**311**	IAmb_Lg		22 28 13.3	
	comp=Z,18nm,0.9s						
S44A	**Carbondale**	**7.24**	**80**	IAmb_Lg		22 28 11.2	
	comp=Z,27nm,0.8s						
SIUC	**Southern Illin**	**7.27**	**80**	IAmb_Lg		22 28 09.2	
	comp=Z,26nm,0.8s						
O44A	**Mansfield**	**8.38**	**64**	IAmb_Lg		22 28 52.8	
	comp=Z,21nm,0.8s						
PLAL	**Pickwick Lake**	**8.47**	**99**	IAmb_Lg		22 28 45.0	
	comp=Z,15nm,1.1s						
P46A	**Rosedale**	**9.15**	**69**	IAmb_Lg		22 29 11.8	
	comp=Z,20nm,0.9s						

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*BJI **05** 22:27:30.5±0.0, 56°.54N×156°.72W, h27^{km}, mB5.1/24, mb4.8/34, Ms4.8/3, Ms7 4.4/2*

*IDC **05** 22:27:30.0±4.7, 56°.46N×156°.20W, h17^{km}±29^{km}, mb4.3/32, mb1 4.3/34, mb1mx4.2/61, mbtmp4.4/34, ML4.0/2, MS3.3/10, Ms1 3.3/10, ms1mx3.1/43, Error ellipse: s-maj=20.2km s-min=11.2km az=180.0*

*NEIC **05** 22:27:32.4±2.2, 56°.25N±0°.05×155°.89W±0°.06, h39^{km}±5^{km}, Error ellipse: s-maj=7.5km s-min=4.9km az=161.0*

*AEIC **05** 22:27:33±2.3, 56°.24N±0°.04×155°.87W±0°.06, h34^{km}±3^{km}, ML4.3, mb4.7/96(NEIC), ML4.4/18(NEIC), Mwr4.1/12(NEIC), Error ellipse: s-maj=6.5km s-min=4.2km az=161.0*

*NEIC **05** 22:27:33, 56°.24N×155°.87W, h38^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}0.32; $M_{\theta\theta}$1.12; $M_{\phi\phi}$-1.44; $M_{r\theta}$0.26; $M_{\theta\phi}$0.90; $M_{\phi r}$0.83; Fault plane solution: $M_0$1.81000×10^{15} NP1:ϕ_s117.41000°, δ60.22000°, λ4.09000°. NP2:ϕ_s25.38000°, δ86.45000°, λ150.16000°. Principal axes: T 1.6195, Plg23.0000°, Azm337.0000°; N 0.3306, Plg60.0000°, Azm199.0000°; P -1.9501, Plg18.0000°, Azm75.0000°;*

*ANF **05** 22:27:40.6±3.2, 56°.68N×155°.33W, h50^{km}, ML5.1/3 Error ellipse: s-maj=41.4km s-min=33.8km az=118.0*

ISC 05 22:27:34.0±0.8**, 56°.43N**±0°.05×**155°.86W**±0°.04**, h53**^{km}±8^{km}**,**
n390, σ1^{s}.42/400**, mb4.6**/90**, MS3.5**/11**, 1C, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SII	**Sitkinak Islan**	**0.94**	**81**		**Pn**	**22 27 51.1**	**+0.2**
SII				Sn	**Sn**	**22 28 06.9**	**+3.5**
PLK3	**Peulik 3**	**1.29**	**350**		**Pn**	**22 27 56.9**	**+1.2**
PLK3					**Sn**	**22 28 15.8**	**+4.0**
PLK2	**Peulik 2**	**1.37**	**349**		**Pn**	**22 27 58.2**	**+1.5**
PLBL	**Peulik Blue Cr**	**1.38**	**338**		**Pn**	**22 27 58.1**	**+1.2**
PLBL					**Sn**	**22 28 17.4**	**+3.3**
CHGN	**Chignik**	**1.43**	**266**		**Pn**	**22 27 56.4**	**-1.1**
CHGN				Sn	**Sn**	**22 28 13.5**	**-1.6**
PLK1	**Peulik 1**	**1.44**	**344**		**Pn**	**22 27 59.0**	**+1.3**
OHAK	**Old Harbor**	**1.62**	**59**		**Pn**	**22 28 00.4**	**+0.3**
OHAK	**Old Harbor**	**1.62**	**59**		**Sn**	**22 28 20.6**	**+0.8**
PLK5	**Peulik 5**	**1.67**	**341**		**Pn**	**22 28 02.0**	**+1.2**
KABR	**Katmai Barrier**	**1.78**	**15**		**Pn**	**22 28 03.6**	**+1.3**
ACHA	**Angle Creek He**	**1.81**	**9**		**Pn**	**22 28 04.2**	**+1.3**
ACHA					**Sn**	**22 28 28.4**	**+3.7**
VNSG	**Veniaminof 6**	**1.83**	**262**		**Pn**	**22 28 02.5**	**-0.5**
KABU	**Katmai Buttres**	**1.88**	**9**		**Pn**	**22 28 05.2**	**+1.5**
KABU					**Sn**	**22 28 31.4**	**+5.1**
KELA	**Mount Kelaz**	**2.02**	**2**		**Pn**	**22 28 06.6**	**+1.0**
KDAK	**Kodiak Island**	**2.25**	**51**	Pn	**Pn**	**22 28 08.5**	**-0.1**
	63nm,0.3s,baz=231,slow=5.2,SNR=1050						
KDAK				Sn	**Sn**	**22 28 35.1**	**0.0**
	126nm,0.3s,baz=219,slow=5.8,SNR=12						
KDAK				Lg	Lg	22 28 45.7	
	69nm,0.3s,baz=309,slow=16,SNR=3.8						
KDAK	**Kodiak Island**	**2.25**	**51**		**Pn**	**22 28 09.0**	**+0.4**
KDAK				IAML		22 28 52.5	
	1µm,0.6s						
KDAK				IAML		22 28 57.0	
	1µm,0.7s						
KAHC	**Katmai Hardscr**	**2.27**	**11**		**Pn**	**22 28 10.4**	**+1.3**
CNBA	**Chernabura Isl**	**2.66**	**234**		**Pn**	**22 28 11.9**	**-2.4**
CNBA	**Chernabura Isl**	**2.66**	**234**		**Sn**	**22 28 41.3**	**-4.0**
SDPT	**Sand Point**	**2.82**	**249**		**Pn**	**22 28 15.2**	**-1.2**
SDPT					**Sn**	**22 28 47.3**	**-1.9**
SDPT	**Sand Point**	**2.82**	**249**	IAML		22 28 58.9	
	comp=N,2µm,0.7s						
SDPT				IAML		22 29 06.5	
	comp=E,2µm,0.8s						
AUCH	**Augustine Cone**	**3.21**	**23**		**Pn**	**22 28 23.2**	**+1.2**
OPT	**Oil Point**	**3.52**	**22**		**Pn**	**22 28 28.0**	**+1.8**
PS4A	**Pavlof South-4**	**3.55**	**255**		**Pn**	**22 28 25.3**	**-1.2**
HAG	**Hague Volcano**	**3.58**	**254**		**Pn**	**22 28 26.1**	**-0.9**
ILS	**Iliamna Low So**	**3.84**	**21**		**Pn**	**22 28 32.3**	**+1.8**
DT1	**Dutton Round H**	**3.86**	**253**		**Pn**	**22 28 29.3**	**-1.5**
IVE	**Iliamna Volcan**	**3.90**	**21**		**Pn**	**22 28 32.8**	**+1.4**
HOM	**Homer**	**3.94**	**33**	P	**Pn**	**22 28 33.3**	**+1.5**
	baz=215						
HOM				S	**Sn**	**22 29 15.0**	**-1.7**
	baz=215						
HOM	**Homer**	**3.94**	**33**		**Pn**	**22 28 33.2**	**+1.4**
HOM					**Sn**	**22 29 19.7**	**+3.0**
CNPM	**China Poot**	**3.96**	**36**		**Pn**	**22 28 33.0**	**+0.8**
CNPM	**China Poot**	**3.96**	**36**	IAML		22 29 35.7	
	comp=N,428nm,0.5s						
CNPM				IAML		22 29 56.2	
	comp=E,583nm,1.0s						
BRLK	**Bradley Lake**	**4.26**	**36**		**Pn**	**22 28 36.5**	**+0.2**
BRLK	**Bradley Lake**	**4.26**	**36**	IAML		22 29 24.0	
	comp=N,533nm,0.3s						
BRLK				IAML		22 29 48.7	
	comp=E,288nm,0.6s						
RED	**Redoubt Volcan**	**4.32**	**21**		**Pn**	**22 28 38.6**	**+1.4**
RSO	**Redoubt South**	**4.36**	**21**		**Pn**	**22 28 39.6**	**+1.8**
NCT	**North Crescent**	**4.42**	**19**		**Pn**	**22 28 40.0**	**+1.5**
DFR	**Drift River**	**4.50**	**20**		**Pn**	**22 28 41.3**	**+1.8**
RDT	**Redoubt**	**4.54**	**22**		**Pn**	**22 28 41.5**	**+1.4**
FALS	**False Pass**	**4.56**	**253**	Pn	**Pn**	**22 28 39.1**	**-1.2**
FALS	**False Pass**	**4.56**	**253**		**Sn**	**22 29 30.7**	**-1.3**
SVW2	**Sparrevohn**	**4.69**	**2**		**Pn**	**22 28 43.0**	**+0.9**
SVW2				IAML		22 30 12.5	
	comp=N,205nm,1.0s						
SVW2				IAML		22 30 18.5	
	comp=E,278nm,0.9s						
CAPN	**Captain Cook N**	**5.00**	**27**	P	**Pn**	**22 28 48.4**	**+2.1**
	baz=211						
CAPN	**Captain Cook N**	**5.00**	**27**		**Pn**	**22 28 48.0**	**+1.6**
SEW	**Seward**	**5.00**	**40**		**Pn**	**22 28 45.9**	**-0.5**
SLKM	**Skilak Lake**	**5.05**	**34**		**Pn**	**22 28 47.1**	**0.0**
CKL	**Chakachamna La**	**5.12**	**19**		**Pn**	**22 28 49.9**	**+1.7**
SPCN	**Chakachatna No**	**5.18**	**20**		**Pn**	**22 28 50.2**	**+1.4**
SPCP	**Crater Peak Br**	**5.22**	**20**		**Pn**	**22 28 50.8**	**+1.3**
SPCG	**Spurr Capps Gl**	**5.27**	**21**		**Pn**	**22 28 51.9**	**+1.7**
WESP	**Westdahl Peak**	**5.40**	**253**		**Pn**	**22 28 50.0**	**-2.0**
STLK	**Strandline Lak**	**5.50**	**21**		**Pn**	**22 28 54.4**	**+1.2**
RC01	**Rabbit Creek A**	**5.66**	**32**	P	**Pn**	**22 28 55.7**	**+0.4**
	baz=216						
RC01				S	**Sn**	**22 29 56.4**	**-2.4**
	baz=216						
RC01	**Rabbit Creek A**	**5.66**	**32**		**Pn**	**22 28 55.7**	**+0.4**
SUA	**Susitna One**	**5.70**	**26**	Pn	**Pn**	**22 28 56.7**	**+0.7**
Q23K	**Middleton Isla**	**5.89**	**55**	P	**Pn**	**22 28 58.8**	**+0.3**
	baz=242						
Q23K	**Middleton Isla**	**5.89**	**55**	Pn	**Pn**	**22 28 58.1**	**-0.4**
MID	**Middleton Isla**	**5.90**	**55**	Pn	**Pn**	**22 28 58.3**	**-0.2**
PWL	**Port Wells**	**5.93**	**38**		**Pn**	**22 28 58.8**	**-0.3**
SKT	**Skwentna**	**6.00**	**20**		**Pn**	**22 29 01.1**	**+1.1**
AKSA	**Akutan Strait**	**6.07**	**252**		**Pn**	**22 28 59.4**	**-1.7**
AKSA	**Akutan Strait**	**6.07**	**252**		**Pn**	**22 28 59.4**	**-1.7**
AKUT	**Akutan**	**6.11**	**252**	Pn	**Pn**	**22 29 00.2**	**-1.4**
PMR	**Palmer**	**6.24**	**31**		**Pn**	**22 29 03.3**	**+0.1**
KNK	**Knik Glacier**	**6.30**	**34**		**Pn**	**22 29 04.3**	**+0.2**
HIN	**Hinchinbrook I**	**6.32**	**47**	Pn	**Pn**	**22 29 04.5**	**0.0**
GLI	**Glacier Island**	**6.39**	**42**	Pn	**Pn**	**22 29 05.9**	**+0.6**
TT01	**Tatalina**	**6.50**	**359**		**Pn**	**22 29 08.1**	**+1.1**
TTA	**Tatalina**	**6.53**	**359**		**Pn**	**22 29 08.6**	**+1.3**
FID	**Port Fidalgo**	**6.54**	**45**		**Pn**	**22 29 06.5**	**-0.9**
UNV	**Unalaska Valle**	**6.63**	**251**		**Pn**	**22 29 05.7**	**-3.0**
CUT	**Chulitna**	**6.64**	**23**	P	**Pn**	**22 29 10.7**	**+2.0**
	baz=207						
CUT				S	**Sn**	**22 30 22.4**	**-0.5**
	baz=207						
SML	**Sawmill**	**6.64**	**33**		**Pn**	**22 29 08.9**	**0.0**
EYAK	**Cordova Ski Ar**	**6.72**	**48**		**Pn**	**22 29 09.5**	**-0.3**
MSW	**Makushin Switc**	**6.75**	**253**		**Pn**	**22 29 08.3**	**-1.9**
PPLA	**Purkeypile**	**6.75**	**14**		**Pn**	**22 29 12.6**	**+2.2**
SCM	**Sheep Creek Mo**	**6.97**	**35**		**Pn**	**22 29 13.2**	**-0.2**
KAIM	**Kayak Island**	**6.99**	**55**		**Pn**	**22 29 12.5**	**-1.1**
DIV	**Divide**	**7.05**	**44**		**Pn**	**22 29 14.1**	**-0.4**
RAGM	**Ragged Mountai**	**7.09**	**51**	Pn	**Pn**	**22 29 15.7**	**+0.7**
KLU	**Klutina**	**7.22**	**41**		**Pn**	**22 29 16.8**	**0.0**
HMT	**Hamilton**	**7.25**	**52**		**Pn**	**22 29 16.8**	**-0.3**
NICHA	**Nichawak Mount**	**7.33**	**54**		**Pn**	**22 29 17.7**	**-0.6**
SUCK	**Suckling Hills**	**7.34**	**55**		**Pn**	**22 29 17.3**	**-1.2**
WAT1	**Susitna Watana**	**7.41**	**27**		**Pn**	**22 29 19.1**	**-0.3**
BMRM	**Bremner River**	**7.42**	**47**		**Pn**	**22 29 18.8**	**-0.7**
WAT6	**Susitna Watana**	**7.42**	**30**		**Pn**	**22 29 19.3**	**-0.4**
PS12	**TAPS Pump St12**	**7.50**	**43**		**Pn**	**22 29 20.5**	**0.0**
WAT2	**Susitna Watana**	**7.51**	**26**		**Pn**	**22 29 20.6**	**-0.3**
M24K	**Tolsona, Glenn**	**7.55**	**37**	P	**Pn**	**22 29 22.4**	**+1.2**
	baz=224						
M24K	**Tolsona, Glenn**	**7.55**	**37**		**Pn**	**22 29 21.5**	**+0.2**
KTH	**Kantishna Hill**	**7.56**	**17**		**Pn**	**22 29 22.1**	**+0.6**
TRF	**Thorofare Moun**	**7.58**	**19**		**Pn**	**22 29 22.4**	**+0.6**
KHIT	**Khitrov Hills**	**7.74**	**53**		**Pn**	**22 29 23.1**	**-0.8**
PS11	**TAPS Pump St11**	**7.77**	**39**		**Pn**	**22 29 24.1**	**-0.1**
N25K	**Chitina, Valde**	**7.79**	**44**	P	**Pn**	**22 29 25.3**	**+0.7**
	baz=232						
N25K				S	**Sn**	**22 30 48.3**	**-3.0**
	baz=232						
N25K	**Chitina, Valde**	**7.79**	**44**		**Pn**	**22 29 24.5**	**-0.1**
SNH	**Sunshine Point**	**7.82**	**56**		**Pn**	**22 29 24.6**	**-0.4**
RND	**Reindeer**	**7.83**	**24**		**Pn**	**22 29 25.5**	**+0.3**
KULT	**Kultieth River**	**7.90**	**56**		**Pn**	**22 29 25.6**	**-0.6**
DHY	**Denali Highway**	**7.92**	**29**		**Pn**	**22 29 26.2**	**-0.3**
CRQM	**Cirque**	**7.93**	**52**		**Pn**	**22 29 26.6**	**-0.1**
SPIA	**Saint Paul Isl**	**7.94**	**281**		**Pn**	**22 29 24.4**	**-2.1**
GLB	**Gilahina Butte**	**8.00**	**46**		**Pn**	**22 29 26.8**	**-0.7**
VRDI	**Verde Repeater**	**8.03**	**48**		**Pn**	**22 29 27.9**	**-0.1**
TGL	**Tana Glacier**	**8.07**	**52**		**Pn**	**22 29 27.7**	**-0.7**
BPAW	**Bear Paw Mtn.**	**8.07**	**15**	Pn	**Pn**	**22 29 29.7**	**+1.4**
MCK	**McKinley**	**8.10**	**22**	P	**Pn**	**22 29 28.8**	**0.0**
	baz=208						
MCK				S	**Sn**	**22 30 57.6**	**-1.2**
	baz=208						
MCK	**McKinley**	**8.10**	**22**		**Pn**	**22 29 29.0**	**+0.2**
ISLE	**Juniper Island**	**8.22**	**54**		**Pn**	**22 29 30.1**	**-0.4**
MESA	**MESA**	**8.23**	**57**	Pn	**Pn**	**22 29 29.8**	**-0.9**

NIKH	Nikolski High	8.28	251	Pn	Pn	22 29 30.2	-1.1
MCARA	McCarthy VSAT	8.29	48		Pn	22 29 31.2	-0.1
KIAG	Kiagna River	8.35	52		Pn	22 29 31.3	-1.1
BWN	Browne	8.39	20	Pn	Pn	22 29 33.6	+0.9
YAH	Yahtse	8.39	56		Pn	22 29 32.5	-0.5
PAX	Paxson	8.40	34		Pn	22 29 33.1	+0.2
BALM	Baldy	8.40	51		Pn	22 29 33.1	0.0
PTPK	Patty Peak	8.43	50		Pn	22 29 32.9	-0.5
GRNC	Granite Creek	8.53	54		Pn	22 29 34.2	-0.7
CHX	Chaix Hills	8.58	59		Pn	22 29 35.0	-0.4
TABL	Table Mountain	8.70	56		Pn	22 29 36.4	-0.8
BARN	Barnard Glacie	8.71	52		Pn	22 29 37.0	-0.3
SAMH	Samovar Hills	8.76	59		Pn	22 29 37.2	-0.8
CTGM	Chitina Glacie	8.82	53		Pn	22 29 38.5	-0.2
NEA2	Nenana	8.85	19	P	Pn	22 29 37.4	-1.6
	baz=205						
LOGN	Logan Glacier	8.91	54		Pn	22 29 39.2	-0.8
WRH	Wood River Hil	8.93	22		Pn	22 29 38.7	-1.4
MENT	Mentasta	8.95	38		Pn	22 29 41.8	+1.3
MLY	Manley	8.99	14	P	Pn	22 29 39.7	-1.2
	baz=198						
PCA	Pinnacle	9.00	59		Pn	22 29 40.2	-1.0
HDA	Harding Lake	9.13	25	P	Pn	22 29 42.4	-0.5
	baz=212						
HDA				S	Sn	22 31 19.8	-4.2
	baz=212						
HDA				S	Sn	22 31 19.8	-4.2
	baz=212						
HDA	Harding Lake	9.13	25		Pn	22 29 42.6	-0.3
YKU2	Yakutat	9.14	64	Pn	Pn	22 29 43.9	+1.0
CCB	Clear Creek Bu	9.14	22		Pn	22 29 42.0	-1.0
RIDG	Independent Ri	9.16	32	Pn	Pn	22 29 44.5	+1.2
PS08	TAPS Pump Stn8	9.27	25		Pn	22 29 44.2	-0.6
I23K	Minto, Yukon-K	9.30	17		Pn	22 29 43.8	-1.3
PNL	Peninsula	9.31	63		Pn	22 29 43.9	-1.5
DOT	Dot Lake	9.33	34		Pn	22 29 46.5	+0.9
MDM	Murphy Dome	9.33	20		Pn	22 29 45.5	-0.2
YUK2	White River	9.40	49		Pn	22 29 47.3	+0.7
ANM	Nome	9.40	334		Pn	22 29 48.0	+1.4
IL31		9.45	24		Pn	22 29 46.7	-0.5
ILAR	Eielson Array	9.45	24	Pn	Pn	22 29 46.0	-1.3
	comp=E,0.9nm,0.3s,baz=218,slow=12,SNR=22						
ILAR				Sn	Sn	22 31 23.8	-8.1
	comp=E,0.9nm,0.3s,baz=221,slow=19,SNR=1.6						
ILAR	Eielson Array	9.45	24	Pn	Pn	22 29 46.4	-0.9
YUK3	Moose Creek	9.55	50		Pn	22 29 48.8	0.0
SCRK	Sand Creek	9.59	33		Pn	22 29 49.0	-0.2
POKR	Poker Plat Res	9.63	22	Pn	Pn	22 29 50.0	+0.2
IM03		9.64	5		Pn	22 29 50.0	+0.2
IMAR	Indian Mountai	9.64	5		Pn	22 29 50.8	+1.0
BC03		9.72	41		Pn	22 29 50.3	-0.5
BCAR	Beaver Creek A	9.72	41		Pn	22 29 51.1	+0.2
YUK7	Dusty Glacier	10.14	59		Pn	22 29 55.8	-1.1
YUK4	Talbot Arm	10.16	54		Pn	22 29 57.4	+0.2
PRP	Porcupine Dome	10.39	24	Pn	Pn	22 30 00.1	-0.2
GAMB	Gambell	10.78	320		Pn	22 30 06.1	+0.7
EGAK	Eagle	11.03	35	Pn	Pn	22 30 09.4	+0.6
COLD	Coldfoot	11.16	11	Pn	Pn	22 30 12.9	+2.4
SIT	Sitka	11.29	78	Pn	Pn	22 30 10.3	-2.0
SKAG	Skagway	11.31	66	Pn	Pn	22 30 13.5	+0.9
FYU	Fort Yukon	11.35	22		Pn	22 30 13.4	+0.3
WHY	Whitehorse	11.73	60		Pn	22 30 16.9	-1.5
JIS	Juneau Island	11.73	72	Pn	Pn	22 30 19.1	+0.7
RDOG	Red Dog Mine	12.11	347		Pn	22 30 22.8	-0.8
BMAR	Burnt Mountain	12.22	21		Pn	22 30 24.3	-0.8
TOLK	Toolik Lake Re	12.59	11	Pn	Pn	22 30 30.0	-0.1
CRAG	Craig	12.77	85	Pn	Pn	22 30 31.7	-0.7
ADK	Adak	13.01	258	Pn	Pn	22 30 33.9	-1.9
EPYK	Eagle Plains	13.47	35		Pn	22 30 43.5	+1.4
DLBC	Dease Lake	14.03	71	LR	LR	22 35 39.5	
	comp=E,121nm,19.7s,baz=266,slow=34						
A21K	Barrow	14.96	359		P	22 31 04.9	-1.3
INK	Inuvik	15.65	32	Pn	Pn	22 31 10.8	+0.2
	comp=E,0.2nm,0.3s,baz=193,slow=7.6,SNR=2.3						
INK				Sn	S	22 34 14.2	-1.3
	comp=E,0.2nm,0.3s,baz=29,slow=27,SNR=11						
INK	Inuvik	15.65	32		Pn	22 31 10.8	+0.2
YKA	Yellowknife Ar	21.51	57	P	P	22 32 19.1	+1.1
	comp=E,6.6nm,0.5s,baz=271,slow=9.3,SNR=51						
YKA				LR	LR	22 41 34.2	
	comp=E,137nm,18.1s,baz=0.0,slow=39						
YKA	Yellowknife Ar	21.51	57	P	P	22 32 19.1	+1.1
F10A	Beach Ranch, E	26.03	97	P	P	22 33 03.8	+1.9
SEY	Seymchan	26.28	306	P	P	22 33 01.9	-2.0
	comp=E,3.1nm,0.7s,baz=72,slow=10,SNR=14						
PEA0B	Petropavlovsk-	26.60	283	P	P	22 33 06.1	-0.8
PEA0B				IAmb	IAmb	22 33 06.4	
	comp=Z,13nm,1.1s						
PETK	Petropavlovsk-	26.60	283	P	P	22 33 05.7	-1.3
	comp=Z,4.9nm,0.4s,baz=72,slow=13,SNR=27						
PETK				LR	LR	22 42 47.6	
	comp=Z,33nm,20.6s,baz=92,slow=35						
PETK	Petropavlovsk-	26.60	283	P	P	22 33 05.8	-1.1
JTMT	Jette	26.61	91	P	P	22 33 08.9	+1.6
BCYI	Bear Canyon	29.18	96	P	P	22 33 31.6	+1.3
YHH	Holmes Hill	30.29	93	P	P	22 33 43.5	+3.2
YHH				IAmb	IAmb	22 33 44.0	
	comp=Z,5.3nm,0.7s						
NVAR	Mina Array Bea	30.62	110	P	P	22 33 43.7	+0.7
	comp=Z,0.6nm,0.5s,baz=320,slow=8.3,SNR=2.6						
NVAR				LR	LR	22 43 27.6	
	comp=Z,103nm,21.7s,baz=324,slow=31						
FCC	Fort Churchill	32.16	60	P	P	22 33 57.5	+1.4
BW06	Boulder Array	32.31	95	P	P	22 33 59.3	+1.3
PD31	Pinedale Array	32.31	95	P	P	22 34 00.3	+2.4
PDAR	Pinedale Array	32.31	95	P	P	22 34 00.1	+2.2
	comp=Z,1.6nm,0.6s,baz=320,slow=4.1,SNR=17						
PDAR				LR	LR	22 45 43.5	
	comp=Z,22nm,20.9s,baz=356,slow=34						
PDAR	Pinedale Array	32.31	95	P	P	22 34 00.1	+2.2
SRU	San Rafael Swe	34.28	101	P	P	22 34 16.6	+1.5
O20A	White River Ci	34.82	97	P	P	22 34 21.1	+1.3
O20A				IAmb	IAmb	22 34 23.3	
	comp=Z,9.7nm,0.8s						
ULM	Lac du Bonnet	35.32	74	P	P	22 34 24.5	+0.8
	comp=Z,1.0nm,0.4s,baz=293,slow=10,SNR=4.5						
ULM				LR	LR	22 48 54.0	
	comp=Z,79nm,18.6s,baz=343,slow=36						
ULM	Lac du Bonnet	35.32	74	P	P	22 34 24.5	+0.8
PV17	East Wray Mesa	35.73	100	P	P	22 34 28.5	+0.9
PV03	Paradox Valley	35.81	100	P	P	22 34 29.9	+1.6
PV13	Radium Mtn., P	35.90	100	P	P	22 34 30.0	+0.9
AGMN	Agassiz Nation	36.44	77	P	P	22 34 34.1	+0.8
AGMN				IAmb	IAmb	22 34 35.6	
	comp=Z,7.0nm,0.7s						
SDCO	Great Sand Dun	38.02	98	P	P	22 34 48.3	+1.2
EYMN	Ely	39.00	74	P	P	22 34 56.7	+1.8
EYMN				IAmb	IAmb	22 35 04.1	
	comp=Z,11nm,1.0s						
JKA	Kamikawa-asahi	39.87	279	P	P	22 35 00.9	-1.3
JKA	Kamikawa-asahi	39.87	279	IAmb	IAmb	22 35 02.7	
	comp=Z,6.8nm,0.8s						
ASAJ	Asahikawa	39.88	279	P	P	22 35 00.9	-1.3
	comp=Z,6.1nm,0.6s,baz=92,slow=10,SNR=6.6						
BNM	Barren Site	40.05	103	P	P	22 35 04.9	+0.9
E43A	Lone Tree Farm	42.38	73	P	P	22 35 23.9	+1.1
E43A				IAmb	IAmb	22 35 41.6	
	comp=Z,14nm,1.1s						
KLR	Kul'dur	42.43	292	P	P	22 35 22.2	-0.9
	comp=Z,11nm,0.7s,baz=63,slow=7.7,SNR=36						
SFJD	Kangerlussuaq	44.99	32	P	P	22 35 44.9	+1.4
HDIL	Hopedale	45.02	81	P	P	22 35 45.5	+1.5
TX31	Lajitas Ar. Si	45.36	104	P	P	22 35 48.3	+1.4
TX31				IAmb	IAmb	22 35 50.1	
	comp=Z,6.3nm,0.8s						
TX32	Lajitas Array	45.36	104	P	P	22 35 47.8	+0.9
TXAR	Lajitas Array	45.36	104	P	P	22 35 49.0	+2.1
	comp=Z,1.7nm,0.8s,baz=307,slow=5.5,SNR=14						
TXAR				LR	LR	22 53 23.2	
	comp=Z,45nm,18.2s,baz=0.0,slow=34						
TXAR	Lajitas Array	45.36	104	P	P	22 35 48.7	+1.8
USRK	Ussuriysk Ar.	45.56	286	P	P	22 35 45.1	-3.1
	comp=Z,0.7nm,0.4s,baz=59,slow=8.9,SNR=5.5						
NRIK	Noril'sk	46.44	334	P	P	22 35 54.5	-0.3
	comp=Z,4.4nm,0.5s,baz=49,slow=7.5,SNR=7.1						
NRIK				LR	LR	22 58 36.3	
	comp=Z,42nm,18.2s,baz=345,slow=40						
NRIK	Noril'sk	46.44	334	P	P	22 35 54.5	-0.3
NRIK	Noril'sk	46.44	334	IAmb	IAmb	22 35 55.4	
	comp=Z,5.1nm,0.8s						
JCT	Junction City	46.57	100	P	P	22 35 57.1	+0.7
JCT				IAmb	IAmb	22 35 59.4	
	comp=Z,15nm,1.1s						
N47A	Urbana	46.76	78	P	P	22 35 57.1	-0.6
N47A				IAmb	IAmb	22 36 05.0	
	comp=Z,6.0nm,0.8s						
P46A	Rosedale	46.82	81	P	P	22 35 59.2	+1.1
H11S1	WAKE ISLAND Hy	47.08	232	T	T	23 26 35.2	
	baz=20						
H11S2	WAKE ISLAND Hy	47.10	232	T	T	23 26 31.4	
	baz=20						
H11S3	WAKE ISLAND Hy	47.10	232	T	T	23 26 23.8	
	baz=20						
MJAR	Matsushiro Arr	47.52	274	P	P	22 36 03.0	-0.7
	comp=Z,1.0nm,0.4s,baz=38,slow=6.5,SNR=3.8						
CN2	Changchun	49.28	290	*e*P	P	22 36 16.3	-0.8
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
R50A	Paris	49.34	80	P	P	22 36 18.3	+0.7
PLAL	Pickwick Lake	49.68	86	P	P	22 36 21.5	+1.2
CLTN	Cedars of Leba	49.83	83	P	P	22 36 23.0	+1.6
CLTN				IAmb	IAmb	22 36 24.3	
	comp=Z,6.2nm,0.6s						
JWT	Wachi	49.99	275	P	P	22 36 22.4	-0.2
M55A	Ridgway	50.08	73	P	P	22 36 18.3	-5.0
L56A	Greenwood	50.24	71	P	P	22 36 25.7	+1.2
L56A				IAmb	IAmb	22 36 26.2	
	comp=Z,7.0nm,0.7s						
M56A	Emporium	50.37	72	P	P	22 36 26.4	+1.0
M56A				IAmb	IAmb	22 36 31.8	
	comp=Z,8.6nm,1.1s						
SSPA	Standing Stone	51.13	73	P	P	22 36 31.9	+0.7
SSPA				IAmb	IAmb	22 36 50.4	
	comp=Z,12nm,1.1s						
CPCT	Cooper Cave	51.30	82	P	P	22 36 33.3	+0.8
FPAL	Fort Paine	51.37	84	P	P	22 36 33.5	+0.5
FPAL				IAmb	IAmb	22 36 40.8	
	comp=Z,7.5nm,1.1s						
Y49A	Blount Mountai	51.43	85	P	P	22 36 33.7	+0.2
BATG	Bathurst New B	52.39	59	P	P	22 36 40.7	+0.3
KSRS	Korea Array	52.50	283	P	P	22 36 41.6	+0.3
	comp=Z,2.1nm,0.7s,baz=42,slow=6.9,SNR=7.8						
KSRS				LR	LR	22 58 26.7	
	comp=Z,11nm,19.7s,baz=45,slow=36						
KSRS	Korea Array	52.50	283	P	P	22 36 41.6	+0.3
ARCES	ARCESS Array B	54.34	359	P	P	22 36 54.3	-0.2
	comp=Z,1.8nm,0.5s,baz=16,slow=7.0,SNR=14						
ULN	Ulaanbaatar	55.35	306	P	P	22 37 02.0	-0.2
ULN				IAmb	IAmb	22 37 02.4	
	comp=Z,2.2nm,0.5s						
SONM	Songino Array	55.67	306	P	P	22 37 04.1	-0.4
	comp=Z,4.1nm,0.7s,baz=48,slow=7.4,SNR=20						
SONM				LR	LR	23 00 47.7	
	comp=Z,52nm,18.1s,baz=319,slow=36						
SONM	Songino Array	55.67	306	P	P	22 37 04.5	0.0
SONM				IAmb	IAmb	22 37 05.6	
	comp=Z,5.0nm,1.0s						
HHC	Hu-ho-hao-te	58.48	297	*e*P	P	22 37 25.1	+0.7
HHC				pmax	pmax		
	comp=Z,17nm,1.1s						
HHC				pmax	pmax		
	comp=Z,120nm,4.6s						
ZAA0	Zalesovo Array	59.35	323	P	P	22 37 30.2	+0.1
ZAA0				IAmb	IAmb	22 37 30.9	
	comp=Z,4.1nm,1.1s						
ZALV	Zalesovo Beam	59.35	323	P	P	22 37 29.8	-0.3
	comp=Z,1.9nm,0.3s,baz=31,slow=7.0,SNR=18						
ZALV	Zalesovo Beam	59.35	323	P	P	22 37 29.8	-0.3
NJ2	Nanjing	61.45	286	*e*P	P	22 37 42.0	-2.8
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NC204	NORSAR Array S	62.17	7	P	P	22 37 49.9	+0.7
NC303	NORSAR Array S	62.26	7	P	P	22 37 50.4	+0.7
NC405	NORSAR Array S	62.39	7	P	P	22 37 51.3	+0.6
NBO00	NORSAR Array S	62.41	7	P	P	22 37 51.6	+0.8
NBO00				IAmb	IAmb	22 37 58.1	
	comp=Z,6.0nm,0.8s						
NB201	NORSAR Array S	62.43	7	P	P	22 37 51.1	+0.2
NB2	NORSAR Subarra	62.43	7	P	P	22 37 51.5	+0.5
	comp=Z,1.1nm,0.5s,baz=353,slow=6.9						
NOA	NORSAR Array B	62.43	7	P	P	22 37 51.9	+0.9
	comp=Z,3.5nm,0.8s,baz=353,slow=6.7,SNR=11						
NOA	NORSAR Array B	62.43	7	P	P	22 37 51.9	+0.9
KLMR	Klimovskoe	62.43	352	*e*P	P	22 37 49.9	-1.0
KLMR				AMP		22 37 52.5	
	comp=Z,19nm,1.4s						
FIA1	FINESS Array S	62.46	359	P	P	22 37 51.8	+0.7
FIA1				IAmb	IAmb	22 38 10.8	
	comp=Z,4.3nm,1.1s						
FINES	FINESS Array B	62.46	359	P	P	22 37 51.5	+0.5
	comp=Z,2.1nm,0.4s,baz=12,slow=8.9,SNR=30						
FINES	FINESS Array B	62.46	359	P	P	22 37 51.0	-0.1
NC602	NORSAR Array S	62.76	7	P	P	22 37 53.8	+0.7
KIRV	Kirov	63.57	346	P	P	22 37 58.1	-0.3
	comp=Z,7.2nm,0.7s,baz=166,slow=2.9,SNR=3.8						
KIRV	Kirov	63.57	346	P	P	22 37 58.1	-0.3
SEM	Semipalatinsk	63.85	324	*e*P	P	22 37 59.3	-1.5
	baz=324						
ARU	Arti	64.11	340	P	P	22 38 01.5	-0.6
	comp=Z,1.1nm,0.4s,baz=84,slow=4.7,SNR=11						
ARU	Arti	64.11	340	P	P	22 38 01.4	-0.6
ARU				IAmb	IAmb	22 38 02.1	
	comp=Z,4.5nm,0.5s						
KURK	Kurchatov	64.11	325	P	P	22 38 02.5	+0.4
KURBB	Kurchatov Arra	64.22	325	P	P	22 38 02.7	-0.2
	comp=Z,1.4nm,0.4s,baz=27,slow=6.5,SNR=14						
BRVK	Borovoye	64.50	331	P	P	22 38 04.8	+0.2
BRVK				IAmb	IAmb	22 38 05.4	
	comp=Z,4.9nm,0.8s						
BVAR	Borovoye Array	64.50	331	P	P	22 38 04.2	-0.5
	comp=Z,2.4nm,0.6s,baz=202,slow=43,SNR=14						
BVAR	Borovoye Array	64.50	331	P	P	22 38 04.2	-0.5
ZSN	Zaisan	64.77	319	*e*P	P	22 38 06.7	+0.1
	comp=Z,5.5nm,0.9s,baz=319						
XAN	Xi'an	65.08	294	P	P	22 38 09.0	+0.2
XAN				pP	pP	22 38 15.8	-7.6
XAN				pmax	pmax		
	comp=Z,7.0nm,0.6s						
GTA	Gaotai	65.21	304	⇑P	P	22 38 09.3	-0.4
GTA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,55nm,7.3s						
GTA				LR	LR		
	comp=Z,110nm,17.8s						
GTA				LR	LR		
	comp=Z,130nm,16.0s						
VSU	Vasula	65.44	359	*e*P	P	22 38 11.2	+0.5
MK31	Makanchi Array	66.25	320	P	P	22 38 15.9	-0.2
MKAR	Makanchi Array	66.25	320	P	P	22 38 15.9	-0.3
	comp=Z,2.4nm,0.6s,baz=39,slow=6.6,SNR=34						
MKAR	Makanchi Array	66.25	320	P	P	22 38 15.5	-0.7
SLIT	Slitere, Latvi	66.29	1	*e*P	P	22 38 16.4	+0.3
MAKZ	Makanchi	66.35	321	P	P	22 38 16.7	-0.1
MAKZ				IAmb	IAmb	22 38 16.8	
	comp=Z,3.1nm,0.6s						
EKB10	Eskdalemuir Ar	66.37	17	P	P	22 38 18.5	+1.8
EKB9	Eskdalemuir Ar	66.38	17	P	P	22 38 18.5	+1.8
EKB9				IAmb	IAmb	22 38 31.9	
	comp=Z,6.0nm,1.1s						
EKB8	Eskdalemuir Ar	66.38	17	P	P	22 38 18.4	+1.6
EKB8				IAmb	IAmb	22 38 19.0	
	comp=Z,8.1nm,0.9s						
EKB7	Eskdalemuir Ar	66.39	17	P	P	22 38 19.1	+2.3
EKB6	Eskdalemuir Ar	66.39	17	P	P	22 38 19.2	+2.3
EKR1	Eskdalemuir Ar	66.40	17	P	P	22 38 18.8	+1.9
EKR1				IAmb	IAmb	22 38 35.9	
	comp=Z,6.5nm,0.9s						
EKB	Eskdalemuir	66.40	17	P	P	22 38 18.8	+1.9
EKB				IAmb	IAmb	22 38 18.9	
	comp=Z,10nm,1.1s						
EKB5	Eskdalemuir Ar	66.40	17	P	P	22 38 18.8	+1.9
EKB5				IAmb	IAmb	22 38 32.1	
	comp=Z,5.9nm,0.9s						
EKR2	Eskdalemuir Ar	66.40	17	P	P	22 38 19.0	+2.0
EKR2				IAmb	IAmb	22 38 26.1	
	comp=Z,5.3nm,0.9s						
EKB4	Eskdalemuir Ar	66.41	17	P	P	22 38 18.7	+1.8
EKB4				IAmb	IAmb	22 38 25.6	
	comp=Z,5.3nm,0.9s						
EKR3	Eskdalemuir Ar	66.41	17	P	P	22 38 19.5	+2.6
EKB3	Eskdalemuir Ar	66.41	17	P	P	22 38 19.0	+2.0
EKR4	Eskdalemuir Ar	66.41	17	P	P	22 38 19.2	+2.2
ESK	Eskdalemuir	66.41	17	P	P	22 38 18.0	+1.0
ESK				IAmb	IAmb	22 38 29.2	
	comp=Z,5.1nm,0.9s						
EKR5	Eskdalemuir Ar	66.42	17	P	P	22 38 19.2	+2.2
EKR5				IAmb	IAmb	22 38 24.8	
	comp=Z,4.5nm,0.8s						
EKB2	Eskdalemuir Ar	66.42	17	P	P	22 38 19.5	+2.5
EKB2				IAmb	IAmb	22 38 39.0	
	comp=Z,4.4nm,0.8s						
EKR6	Eskdalemuir Ar	66.42	17	P	P	22 38 18.7	+1.6
EKB1	Eskdalemuir Ar	66.43	17	P	P	22 38 19.4	+2.3
EKB1				IAmb	IAmb	22 38 32.8	
	comp=Z,8.4nm,1.1s						
EKR7	Eskdalemuir Ar	66.43	17	P	P	22 38 19.0	+1.9
EKR7				IAmb	IAmb	22 38 24.1	
	comp=Z,9.6nm,1.1s						
EKR8	Eskdalemuir Ar	66.43	17	P	P	22 38 19.7	+2.6
EKR8				IAmb	IAmb	22 38 33.7	
	comp=Z,9.7nm,1.1s						
EKR9	Eskdalemuir Ar	66.44	17	P	P	22 38 18.8	+1.6
EKR9				IAmb	IAmb	22 38 36.5	
	comp=Z,8.4nm,1.1s						
EKR10	Eskdalemuir Ar	66.44	17	P	P	22 38 18.5	+1.4
EKR10				IAmb	IAmb	22 38 35.7	
	comp=Z,8.8nm,1.1s						
BRZS	Berezniki	66.58	328	*e*P	P	22 38 17.2	-0.9
	baz=328						
WMQ	Urumqi	66.76	315	*e*P	P	22 38 19.6	+0.1
WMQ				pmax	pmax		
	comp=Z,13nm,1.1s						
PBUR	Paburge	67.89	1	*e*P	P	22 38 26.5	+0.2
ISAL	Salakas	68.35	359	*e*P	P	22 38 30.1	+0.9
PABE	Paberze	68.43	0	*e*P	P	22 38 30.7	+1.0
IIGN	Ignalina	68.57	359	*e*P	P	22 38 31.5	+1.0
IDID	Didziasalis	68.60	358	*e*P	P	22 38 31.6	+0.9
TDK	Taldyqorghan	69.16	322	*e*P	P	22 38 34.2	-0.3
	comp=Z,2.8nm,0.7s,baz=322						
MNK	Minsk	69.39	358	*i* P	P	22 38 31.0	-4.7
	comp=E,1.0nm,0.8s						
MNK				*i* P	P	22 38 31.0	-4.7
	comp=N,13nm,1.1s						
MNK				*i* P	P	22 38 31.0	-4.7
	comp=Z,5.0nm,0.9s						
MNK				*i* PP	PP	22 41 04.2	-4.5
MNK				*i* PPP	PPP	22 42 45.1	
MNK				*i* S	S	22 47 32.5	-5.7
MNK				*i* SS	SS	22 52 01.0	-3.7
MNK				*i* SSS	SSS	22 55 18.6	
MNK				*i* LQ	LQ	23 04 03.2	
MNK				*i* LR	LR	23 09 33.2	
MNK				*i* LRM	MLR	23 11 32.0	
	comp=N,55nm,14.2s						
MNK				*i* LRM	MLR	23 11 42.8	
	comp=E,2.0nm,8.2s						
MNK				*i* LRM	MLR	23 11 42.8	
	comp=Z,112nm,19.0s						
ESPN	Las Esperanzas	69.73	99	P	P	22 38 35.1	-3.2
BELG	Belogornoye	69.83	345	P	P	22 38 38.2	-0.1
	comp=Z,8.5nm,0.5s,baz=228,slow=2.5,SNR=7.0						
BELG	Belogornoye	69.83	345	P	P	22 38 38.2	-0.1
AKTO	Aktyubinsk	69.87	338	P	P	22 38 38.6	0.0
	comp=Z,4.2nm,0.6s,baz=19,slow=5.5,SNR=16						
SUW	Suwalki	69.92	1	*e*P	P	22 38 39.5	+0.6
SUW	Suwalki	69.92	1	P	P	22 38 38.0	-0.9
SHLS	Shalkode	70.41	320	*e*P	P	22 38 41.8	-0.5
	comp=Z,6.6nm,0.9s,baz=320						
KPKS	Kokpek	70.41	321	*e*P	P	22 38 42.5	+0.2
	comp=Z,6.3nm,0.6s,baz=321						
AB05	Akbulak array	70.54	336	P	P	22 38 43.5	+0.6
AB06	Akbulak array	70.55	336	P	P	22 38 42.8	0.0
AB02	Akbulak array	70.55	336	P	P	22 38 43.1	+0.2
AB01	Akbulak array	70.56	336	P	P	22 38 43.1	+0.2
AB04	Akbulak array	70.56	336	P	P	22 38 43.1	+0.2
AB31	Akbulak array	70.56	336	P	P	22 38 43.0	+0.1
ABKAR	Akbulak array	70.56	336	P	P	22 38 43.0	+0.1
ABKAR	Akbulak array	70.56	336	P	P	22 38 43.2	+0.3
AB09	Akbulak array	70.56	336	P	P	22 38 43.3	+0.4
AB03	Akbulak array	70.56	336	P	P	22 38 43.7	+0.8
AB07	Akbulak array	70.57	336	P	P	22 38 42.9	0.0
BTLS	Baital	70.57	325	*e*P	P	22 38 43.0	-0.1
	comp=Z,4.4nm,0.5s,baz=325						
AB08	Akbulak array	70.58	336	P	P	22 38 42.7	-0.3
CHKK	Chushkaly	70.65	322	*e*P	P	22 38 42.8	-0.8
	baz=322						
KUU	Kurty	70.84	323	*e*P	P	22 38 43.9	-0.9
	baz=323						
SATY	Saty	70.86	321	*e*P	P	22 38 44.8	-0.3
	baz=321						
MDOK	Medeo	71.24	322	*e*P	P	22 38 47.4	0.0
	baz=322						
AAA	Alma-Ata	71.25	322	*e*P	P	22 38 47.8	+0.5
	comp=Z,4.4nm,0.8s,baz=322						
TNSS	Tian-Shan	71.39	322	*e*P	P	22 38 48.2	-0.4
	baz=322						
MTBS	Maitube	71.48	322	*e*P	P	22 38 48.4	-0.3
	baz=322						
TKM2	Tokmak 2	71.95	323	P	P	22 38 52.9	+1.2
	SNR=6.3						
CHMS	Chumysh	72.16	323	P	P	22 38 53.8	+1.0
	SNR=7.8						
KBK	Karagaybulak	72.40	323	P	P	22 38 55.0	+0.6
	SNR=8.7						
AAK	Ala-Archa	72.57	323	P	P	22 38 56.1	+0.7
	comp=Z,4.9nm,0.6s,baz=131,slow=3.5,SNR=28						
AAK	Ala-Archa	72.57	323	P	P	22 38 56.5	+1.1
	SNR=7.7						
AAK	Ala-Archa	72.57	323	P	P	22 38 56.4	+1.1
AAK				IAmb	IAmb	22 38 57.1	
	comp=Z,6.1nm,0.6s						
EKS2	Erkin-Say	72.78	324	P	P	22 38 57.6	+1.0
	SNR=8.3						
AKASG	Malin Array Be	73.16	357	P	P	22 38 58.6	+0.1
	comp=Z,8.5nm,0.4s,baz=8.1,slow=5.8,SNR=42						
AKASG	Malin Array Be	73.16	357	P	P	22 38 58.5	+0.1
AKBB	Malin Array Si	73.16	357	P	P	22 38 58.8	+0.3
AML	Almayashu	73.29	324	P	P	22 39 01.3	+1.4
	SNR=7.1						
DZA	Taraz	73.36	326	*e*P	P	22 38 59.9	0.0
	baz=326						
DPC	Dobruska-Polom	73.39	5	*e*P	P	22 39 01.2	+1.2
KK05	Karatay Array	73.41	326	P	P	22 39 01.0	+0.9
KK09	Karatay Array	73.41	326	P	P	22 39 01.3	+1.2
KK04	Karatay Array	73.42	326	P	P	22 39 00.6	+0.4
KK01	Karatay Array	73.42	326	P	P	22 39 00.3	+0.1
KK02	Karatay Array	73.42	326	P	P	22 39 00.7	+0.5
KK31	Karatay Array	73.42	326	P	P	22 39 00.9	+0.7
KK31				IAmb	IAmb	22 39 01.6	
	comp=Z,8.2nm,0.8s						
KKAR	Karatay Array	73.42	326	P	P	22 39 01.1	+0.9
KKAR	Karatay Array	73.42	326	P	P	22 39 01.3	+1.1
KKAR				IAmb	IAmb	22 39 01.5	
	comp=Z,8.2nm,0.8s						
KK03	Karatay Array	73.42	326	P	P	22 39 01.1	+0.9
KK06	Karatay Array	73.43	326	P	P	22 39 01.0	+0.8
KK08	Karatay Array	73.43	326	P	P	22 39 01.4	+1.2
KK07	Karatay Array	73.44	326	P	P	22 39 01.0	+0.6
BRLS	Borolday	73.69	327	*e*P	P	22 39 03.0	+1.2
	baz=327						
IUG	Iuzhnay	74.44	326	*e*P	P	22 39 06.9	+0.6
	comp=Z,5.6nm,1.2s,baz=326						
KHC	Kasperske Hory	74.44	7	*e*P	P	22 39 08.0	+1.9
LANS	Liptovska Anna	74.72	3	*e*P	P	22 39 10.2	+2.5
GERES	GERESS Array B	74.74	7	P	P	22 39 08.3	+0.4
	comp=Z,0.8nm,0.5s,baz=22,slow=5.4,SNR=3.4						
KSH	Kashi	74.85	321	P	P	22 39 12.5	+3.8
KSH				pP	pP	22 39 18.3	-5.2
KSH				pmax	pmax		
	comp=Z,7.0nm,0.5s						
KSH				pmax	pmax		
	comp=Z,330nm,5.2s						
KOLS	Kolonicke sedl	75.00	1	*e*P	P	22 39 12.1	+2.8
BUR08	Bucovina Ar. S	76.30	359	P	P	22 39 18.1	+1.3
BURAR	Bucovina Array	76.33	359	P	P	22 39 17.5	+0.5
LSA	Lhasa	77.23	305	P	P	22 39 23.5	+0.6
LSA				IAmb	IAmb	22 39 24.7	
	comp=Z,6.5nm,0.7s						
KIV	Kislovodsk	78.77	346	P	P	22 39 31.7	+1.0
KIV				IAmb	IAmb	22 39 32.5	
	comp=Z,6.5nm,0.6s						
VLC	Villacollemand	79.12	10	P	P	22 39 32.1	-0.3
NIL	Nilore	81.07	320	P	P	22 39 44.2	+1.0
ESDC	Sonseca Array	81.35	22	P	P	22 39 46.3	+1.7
	comp=Z,0.8nm,0.9s,baz=347,slow=5.2,SNR=1.6						
GEYT	Alibeck	81.69	333	P	P	22 39 47.4	+1.0
	comp=Z,4.0nm,0.6s,baz=349,slow=6.0,SNR=8.3						
GEYT	Alibeck	81.69	333	P	P	22 39 47.8	+1.3
GYA0	ALIBECK ARRAY	81.69	333	P	P	22 39 46.8	+0.4
GYA0				IAmb	IAmb	22 39 48.5	
	comp=Z,6.3nm,0.9s						
GYA0B	ALIBECK ARRAY	81.69	333	P	P	22 39 46.1	-0.3

GYA0B				IAmb	IAmb	22 39 48.5	
	comp=Z,6.5nm,0.9s						
GYB4	ALIBECK ARRAY	81.69	333	P	P	22 39 47.0	+0.6
GYB4				IAmb	IAmb	22 39 48.5	
	comp=Z,4.4nm,0.7s						
CMAR	Chiang Mai Arr	82.91	293	P	P	22 39 52.7	-0.3
	comp=Z,2.4nm,0.7s,baz=8.9,slow=5.4,SNR=13						
BR131	Keskin Array S	83.88	353	P	P	22 39 59.5	+1.6
BR131				IAmb	IAmb	22 40 00.5	
	comp=Z,6.6nm,0.9s						
BRTR	Keskin Array B	83.88	353	P	P	22 39 58.7	+0.8
	comp=Z,2.1nm,0.8s,baz=44,slow=5.5,SNR=11						
BRTR	Keskin Array B	83.88	353	P	P	22 39 59.0	+1.1
HRA	Herat	83.92	329	P	P	22 39 59.5	+1.2
MARD	Mardin	85.56	347	P	P	22 40 08.8	+2.5
ITM	Ithomi	86.74	2	P	P	22 40 13.5	+1.5
CSS	Mathiatis	88.64	352	P	P	22 40 22.7	+1.5

IDC ***05*** *22:35:40.4±4.1, 5°.86S×68°.14E, h0^{km}, mb3.5/4, mb1 3.6/4, mb1mx3.3/53, mbtmp3.5/4, Error ellipse: s-maj=134.2km s-min=36.8km az=65.0*

ISC 05 22:35:42.0±2.3**, 5°.9S**±0°.4×**68°.3E**±0°.3**, h10^{km}, n11,** σ**0^s.69**/11**, mb3.6**/4**, Chagos Archipelago region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	4.55	113	Pn	Pn	22 36 50.3	-0.5
	baz=316,slow=17,SNR=13						
H08S1				Sn	Sn	22 37 44.0	+0.3
	baz=268						
H08S3	Diego Garcia H	4.56	113	Pn	Pn	22 36 49.9	-1.0
	baz=316,slow=17,SNR=90						
H08S3				Sn	Sn	22 37 44.2	+0.4
	baz=268						
H08S2	Diego Garcia H	4.57	113	Pn	Pn	22 36 50.5	-0.5
	baz=316,slow=17,SNR=55						
H08S2				Sn	Sn	22 37 44.3	+0.1
	baz=268						
H01W3	Cape Leeuwin H	51.17	131	T	T	23 39 52.9	
	baz=295						
H01W2	Cape Leeuwin H	51.17	131	T	T	23 39 45.0	
	baz=295						
H01W1	Cape Leeuwin H	51.19	131	T	T	23 39 50.1	
	baz=295						
MKAR	Makanchi Array	53.88	12	P	P	22 45 04.8	-0.7
	0.1nm,0.5s,baz=208,slow=7.6,SNR=1.6						
SONM	Songino Array	63.11	28	P	P	22 46 10.8	+0.8
	1.3nm,0.9s,baz=227,slow=7.2,SNR=6.5						
ASAR	Alice Springs	65.39	113	P	P	22 46 25.8	+0.5
	0.3nm,0.6s,baz=280,slow=6.5,SNR=2.1						
WRA	Warramunga Arr	65.56	109	P	P	22 46 27.2	+0.7
	0.3nm,0.7s,baz=283,slow=6.1,SNR=2.2						
NVAR	Mina Array Bea	147.03	9	PKPbc	PKPbc	22 55 25.5	-0.4
	0.6nm,0.7s,baz=29,slow=2.1,SNR=2.6						

ANF ***05*** *22:48:24.9±1.7, 36°.95N×97°.62W, h6^{km}±11^{km}, ML3.8/8, Error ellipse: s-maj=5.5km s-min=4.5km az=42.0*

TUL ***05*** *22:48:24.1±1.0, 36°.95N±0°.04×97°.62W±0°.05, h2^{km}±7^{km}, ML3.4, mb_Lg3.2/57(NEIC), Error ellipse: s-maj=7.2km s-min=2.6km az=222.0*

NEIC ***05*** *22:48:24.5±1.0, 36°.91N±0°.03×97°.64W±0°.04, h5^{km}±7^{km}, Error ellipse: s-maj=6.3km s-min=2.4km az=53.0*

ISC 05 22:48:24.1±1.1**, 36°.92N**±0°.02×**97°.62W**±0°.02**, h2^{km}**±10^{km}**, n78,** σ**0^s.73**/80**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAN13	South Haven SW	0.15	51	Pg	Pg	22 48 27.2	+0.2
KAN13				Sg	Sg	22 48 29.2	+0.2
GC02	Grant County #	0.20	250		Pg	22 48 28.7	+0.7
KAN01	Argonia South	0.26	335		Pg	22 48 29.2	+0.1
KAN01				Sg	Sg	22 48 32.7	+0.3
KAN05	Bluff City Nor	0.28	313		Pg	22 48 29.6	+0.2
KAN05				Sg	Sg	22 48 33.4	+0.5
KAN14	Manchester OK	0.28	278		Pg	22 48 29.9	+0.5
KAN14				Sg	Sg	22 48 33.7	+0.7
KS21	Milan North St	0.37	355		Pg	22 48 31.1	-0.1
KS21				Sg	Sg	22 48 35.9	0.0
KAN08	Anthony NE Sta	0.41	318		Pg	22 48 32.2	+0.2
KAN08				Sg	Sg	22 48 37.9	+0.5
KAN10	Anthony SW Sta	0.43	298		Pg	22 48 32.7	+0.4
KAN10				Sg	Sg	22 48 38.8	+0.9
KAN12	Harper NE Stat	0.48	321		Pg	22 48 33.3	0.0
KAN12				Sg	Sg	22 48 39.9	+0.3
CROK	Carrier	0.51	215		Pb	22 48 34.5	-1.2
CROK				Sg	Sb	22 48 41.6	-1.9
T35A	Sooner Cattle	0.89	90		Pg	22 48 41.0	-0.2
T35B	Sooner Cattle	0.89	90	P		22 48 40.7	
	baz=272,SNR=86						
T35B				S		22 48 52.6	
	baz=272						
QUOK	Quay	1.05	135		Pg	22 48 44.4	+0.2
OK029	Liberty Lake	1.13	173		Pg	22 48 45.9	+0.1
OK031	S. Brethren Rd	1.15	147		Pg	22 48 46.1	-0.1
OK030	Cody Creek RV	1.20	145		Pg	22 48 47.0	-0.1
U32A	Winter Ranch,	1.23	244		Pb	22 48 47.5	-0.6
U32A	Winter Ranch,	1.23	244	P		22 48 47.5	
	baz=62						
U32A				S		22 49 04.3	
	baz=62						
BCOK	Bluff Creek, N	1.26	180		Pg	22 48 48.2	0.0
OK025	Westminster Rd	1.36	170	Pn	Pn	22 48 49.9	-0.1
OKCFA	Oklahoma City	1.51	175		Pn	22 48 52.2	+0.1
OKCSW	OKLAHOMA CITY	1.52	174		Pn	22 48 52.6	+0.3
R32A	Long Quarter,	1.73	330		Pn	22 48 55.3	+0.1
R32A	Long Quarter,	1.73	330	P		22 48 55.4	
	baz=149,SNR=42						
R32A				S		22 49 18.3	
	baz=149						
TUL1	Leonard	1.79	124	P	Pn	22 48 56.4	+0.5
	baz=306						
TUL1				S	Sn	22 49 20.6	+1.4
	baz=306						
TUL1	Leonard	1.79	124	Pn	Pn	22 48 56.8	+0.8
TUL1				IAmb_Lg		22 49 21.7	
	comp=Z,170nm,0.9s						
TUL1	Leonard	1.79	124	P		22 48 56.5	
	baz=306,SNR=104						
TUL1				S		22 49 20.6	
	baz=306						
W35A	Tecumseh	1.86	161		Pn	22 48 57.5	+0.5
KSU1	Kansas State U	2.32	20	P	Pn	22 49 03.0	-0.3
	baz=201						
KSU1				S	Sn	22 49 32.9	+0.6
	baz=201						
KSU1	Kansas State U	2.32	20		Pn	22 49 04.2	+1.0
KSU1	Kansas State U	2.32	20	P		22 49 03.3	
	baz=201,SNR=20						
KSU1				S		22 49 33.0	
	baz=201						
WMOK	Wichita Mounta	2.37	204	P	Pn	22 49 04.6	+0.6
	baz=23						
WMOK				S	Sb	22 49 35.3	-1.9
	baz=23						
WMOK	Wichita Mounta	2.37	204		Pn	22 49 04.6	+0.6
WMOK	Wichita Mounta	2.37	204	P		22 49 04.4	
	baz=23,SNR=77						
CBKS	Cedar Bluff	2.52	319	P	Pn	22 49 06.8	+0.6
	baz=138						
CBKS				S	Sn	22 49 38.0	+0.5
	baz=138						
CBKS	Cedar Bluff	2.52	319		Pn	22 49 06.0	-0.1
CBKS	Cedar Bluff	2.52	319	P		22 49 06.2	
	baz=138,SNR=23						
U38A	Gravette	2.65	99		Pn	22 49 08.1	+0.3
X37A	Clayton	2.96	141	Pn	Pn	22 49 12.8	+0.8
X37A	Clayton	2.96	141	P		22 49 12.7	
	baz=323						
HHAR	Hobbs	3.03	101		Pn	22 49 14.0	+0.9
S39A	Bolivar	3.51	76		Pn	22 49 19.9	+0.2
W39A	Magazine	3.55	118	P	Pn	22 49 20.7	+0.5
	baz=301						
W39A				S	Sn	22 50 04.2	+1.4
	baz=301						
W39A	Magazine	3.55	118		Pn	22 49 20.8	+0.5
W39A				IAmb_Lg		22 50 22.4	
	comp=Z,44nm,0.7s						
W39A	Magazine	3.55	118	P		22 49 21.2	
	baz=301						
Z35A	Perchaven, San	3.59	175	Pn	Pn	22 49 21.6	+0.8
N33A	J Bar K, Exete	3.81	2	Pn	Pn	22 49 24.3	+0.4
AMTX	Amarillo	3.87	240	P	Pn	22 49 25.2	+0.6
	baz=57						
AMTX				S	Sn	22 50 12.3	+1.5
	baz=57						
AMTX	Amarillo	3.87	240	IAmb_Lg		22 50 29.9	
	comp=Z,39nm,0.7s						
AMTX	Amarillo	3.87	240	P		22 49 25.3	
	baz=57						
U40A	Yellville	3.88	97	P	Pn	22 49 25.0	+0.3
	baz=280						
U40A	Yellville	3.88	97		Pn	22 49 25.3	+0.6
U40A	Yellville	3.88	97	P		22 49 25.5	
	baz=280,SNR=18						
U40A				P		22 49 25.5	
	baz=280,SNR=18						
MIAR	Mount Ida	4.05	125	P	Pn	22 49 27.7	+0.6
	baz=307						
MIAR				S	Sn	22 50 16.0	+0.8
	baz=307						
MIAR	Mount Ida	4.05	125	Pn	Pn	22 49 28.7	+1.6
P38A	Dawn	4.20	49		Pn	22 49 28.9	-0.2
P38A				IAmb_Lg		22 50 39.9	
	comp=Z,52nm,0.8s						
P38A	Dawn	4.20	49	P		22 49 28.8	
	baz=231						
N35A	Tabor	4.23	21	Pn	Pn	22 49 30.5	+1.0
Z38A	Mt. Pleasant	4.24	149	Pn	Pn	22 49 30.4	+0.7
Z38A				IAmb_Lg		22 50 42.1	
	comp=Z,46nm,0.8s						
MGMO	Mountain Grove	4.29	85		Pn	22 49 30.8	+0.5
MGMO				IAmb_Lg		22 50 39.4	
	comp=Z,33nm,0.8s						
R40A	Maddies Statio	4.47	71		Pn	22 49 33.6	+0.9
KSCO	Kaye Shedlock'	4.47	299	Pn	Pn	22 49 33.1	+0.1
BGNE	Belgrade	4.50	355	Pn	Pn	22 49 33.8	+0.5
BGNE				IAmb_Lg		22 50 49.0	
	comp=Z,67nm,0.7s						
FCAR	Ozark Folk Cen	4.55	101		Pn	22 49 34.2	+0.3
FCAR				IAmb_Lg		22 50 45.3	
	comp=Z,30nm,0.9s						
X40A	Basin Creek Fa	4.59	121		Pn	22 49 35.4	+0.9
ABTX	Abilene, Hawle	4.60	202		Pn	22 49 34.3	-0.3
WHAR	Wooly Hollow	4.62	109	Pn	Pn	22 49 36.0	+1.2
WHAR				IAmb_Lg		22 51 00.0	
	comp=Z,40nm,0.8s						
P40A	Paris	5.10	58	IAmb_Lg		22 51 11.5	
	comp=Z,31nm,0.8s						
237A	Washetta, Mont	5.13	163	Pn	Pn	22 49 41.4	-0.5
L34A	Svendsen Farm,	5.13	10	Pn	Pn	22 49 40.6	-1.3
L34A				IAmb_Lg		22 51 14.7	
	comp=Z,41nm,0.7s						
MSTX	Muleshoe	5.13	237	Pn	Pn	22 49 41.6	-0.4
N38A	Joes South For	5.16	40		Pn	22 49 40.9	-1.5
N38A				IAmb_Lg		22 51 18.0	
	comp=Z,59nm,0.9s						
CCM	Cathedral Cave	5.20	75	IAmb_Lg		22 51 13.5	
	comp=Z,35nm,1.0s						
T42A	Van Buren	5.23	87		Pn	22 49 43.8	+0.5
T42A				IAmb_Lg		22 51 11.7	
	comp=Z,26nm,1.0s						
LCAR	Lake Charles	5.28	97	Pn	Pn	22 49 44.5	+0.6
OGNE	Ogallala	5.29	321	Pn	Pn	22 49 44.0	-0.2
CCAR	Cane Creek	5.64	120		Pn	22 49 49.0	+0.2
K31A	O'Neill	5.76	352	Pn	Pn	22 49 51.0	+0.5
K31A				IAmb_Lg		22 51 31.4	
	comp=Z,41nm,0.7s						
PBMO	Poplar Bluff	5.77	89	IAmb_Lg		22 51 32.9	
	comp=Z,33nm,0.8s						
SCIA	State Center	6.04	33	IAmb_Lg		22 51 44.4	
	comp=Z,43nm,0.9s						
SLM	Saint Louis	6.10	71	IAmb_Lg		22 51 36.2	
	comp=Z,28nm,0.9s						
435B	Jarrell	6.12	180	IAmb_Lg		22 51 53.1	
	comp=Z,22nm,0.8s						
N41A	Harden Midland	6.50	52	IAmb_Lg		22 51 49.7	
	comp=Z,38nm,0.8s						
JCT	Junction City	6.68	196	Pn	Pn	22 50 02.5	-0.7
JCT				IAmb_Lg		22 52 08.8	
	comp=Z,28nm,1.1s						
SUSD	Miller	7.58	353	IAmb_Lg		22 52 33.1	
	comp=Z,20nm,0.9s						
OLIL	Olney	7.75	74	IAmb_Lg		22 52 41.1	
	comp=Z,35nm,1.0s						
O44A	Mansfield	7.87	63	IAmb_Lg		22 52 32.1	
	comp=Z,24nm,0.9s						
USIN	University of	7.99	80	IAmb_Lg		22 52 37.8	
	comp=Z,33nm,1.0s						
JFWS	Jewell Farm	8.24	41	IAmb_Lg		22 53 08.7	
	comp=Z,15nm,0.8s						
WCI	Wyandotte Cave	9.09	78	IAmb_Lg		22 53 13.2	
	comp=Z,13nm,0.8s						

NEIC ***05*** *22:49:50.9±1.9, 21°.65S±0°.05×68°.41W±0°.10, h125^{km}±6^{km}, Error ellipse: s-maj=13.6km s-min=6.9km az=79.0*

IDC ***05*** *22:49:50.7±0.9, 21°.75S×68°.17W, h117^{km}±13^{km}, mb4.0/3, mb1 3.9/5, mb1mx3.5/33, mbtmp4.2/5, MS2.6/1, Ms1 2.7/1, ms1mx2.4/28, Error ellipse: s-maj=33.9km s-min=20.7km az=121.0*

VAO ***05*** *22:49:51.1±0.5, 21°.76S×68°.75W, h154^{km}±5^{km}, mb3.9*

GUC ***05*** *22:49:52.1±0.6, 21°.67S×68°.47W, h122^{km}±4^{km}, ML4.0*

ISC 05 22:49:51.0±0.6**, 21°.64S**±0°.04×**68°.47W**±0°.06**, h127^{km}**±6^{km}**, n74,** σ**1^s.30**/93**, mb4.1**/6**, 10C-2D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	IPOC Station P	0.74	258	⇑iP	Pn	22 50 11.9	+0.4
PB09				iS	Sn	22 50 27.1	0.0
PB09	IPOC Station P	0.74	258		Pn	22 50 12.1	+0.5
PB09				Sn	Sn	22 50 27.7	+0.6
LVC	Limon Verde	1.05	203	P	Pn	22 50 14.6	+0.1
	45nm,0.3s,baz=37,slow=9.9,SNR=281						
LVC				S	Sn	22 50 31.4	-0.9
	161nm,0.3s,baz=270,slow=23,SNR=20						
LVC	Limon Verde	1.05	203	eP	Pn	22 50 14.7	+0.1
LVC				iS	Sn	22 50 32.2	-0.2
LVC	Limon Verde	1.05	203	Pn	Pn	22 50 14.7	+0.1
LVC				Sn	Sn	22 50 32.2	-0.2
LVC	Limon Verde	1.05	203	eP	Pn	22 50 14.7	+0.1
PB01	IPOC Station P	1.12	302	⇑iP	Pn	22 50 15.0	0.0
PB01				eS	Sn	22 50 33.1	0.0
PB01				IAML		22 50 34.8	
	comp=N,2μm,0.2s						
PB01	IPOC Station P	1.12	302		Pn	22 50 15.2	+0.2
PB01				Sn	Sn	22 50 33.4	+0.3
PB07	IPOC Station P	1.32	266	⇑iP	Pn	22 50 17.1	0.0
PB07				iS	Sn	22 50 36.5	-0.5
PB07				IAML		22 50 38.2	
	comp=E,3μm,0.5s						
PB07	IPOC Station P	1.32	266		Pn	22 50 17.3	+0.2
PB02	IPOC Station P	1.37	283	⇑iP	Pn	22 50 17.6	0.0
PB02				iS	Sn	22 50 37.5	-0.3
PB02				IAML		22 50 38.7	
	comp=E,3μm,0.3s						
PB06	IPOC Station P	1.48	224	⇑iP	Pn	22 50 19.0	+0.2
PB06				iS	Sn	22 50 39.8	-0.1
PB06				IAML		22 50 41.2	
	comp=E,1μm,0.4s						
PB06	IPOC Station P	1.48	224		Pn	22 50 19.0	+0.2
PB08	IPOC Station P	1.62	337	⇑iP	Pn	22 50 21.8	+1.1
PB08				iS	Sn	22 50 44.5	+1.1
PB08	IPOC Station P	1.62	337		Pn	22 50 21.7	+0.9
PB04	IPOC Station P	1.71	246	⇑iP	Pn	22 50 21.3	-0.2
PB04				iS	Sn	22 50 43.9	-0.8
PB04				IAML		22 50 46.0	
	comp=E,1μm,0.4s						
PB04	IPOC Station P	1.71	246		Pn	22 50 21.4	-0.1
PATCX	Punta Patache	1.77	297	⇑iP	Pn	22 50 22.4	+0.3
PATCX				iS	Sn	22 50 45.6	-0.3
PATCX	Punta Patache	1.77	297	Pn	Pn	22 50 22.5	+0.3
PB15	IPOC Station P	1.82	211	⇓iP	Pn	22 50 23.4	+0.5
PB15				iS	Sn	22 50 47.8	+0.6
PB15	IPOC Station P	1.82	211		Pn	22 50 23.0	+0.2
HMBC	Humberstone	1.90	315	⇑iP	Pn	22 50 23.9	+0.1
HMBC				iS	Sn	22 50 48.2	-0.5
HMBC				IAML		22 50 49.8	
	comp=E,2μm,0.2s						
TA01	Diego Aracena	1.93	303	⇑iP	Pn	22 50 23.8	-0.2
TA01				iS	Sn	22 50 48.5	-0.6
TA01				IAML		22 50 50.2	
	comp=E,1μm,0.3s						
TA01	Diego Aracena	1.93	303	Pn	Pn	22 50 23.7	-0.2
PSGC	Pisagua	2.56	322	⇓iP	Pn	22 50 31.2	-0.8
PSGC				eS	Sn	22 51 02.3	-1.1
PSGC				IAML		22 51 05.3	
	comp=E,336nm,0.2s						
PSGCX	Pisagua	2.56	322	Pn	Pn	22 50 31.1	-0.8
PB10	IPOC Station P	2.68	226	Pn	Pn	22 50 33.7	+0.3
MNMC	Minye Minye	2.71	337	Pn	Pn	22 50 34.5	+0.3
PB16	IPOC Station P	3.43	343	Pn	Pn	22 50 44.9	+1.1
PB14	IPOC Station P	3.47	211	Pn	Pn	22 50 43.1	-0.9
GO02	Mina Guanaco	3.66	196	Pn	Pn	22 50 46.1	-0.4
AC01	Pan de Azucar	4.89	203	Pn	Pn	22 51 00.4	-2.2
AC02	Maricunga	5.21	187	Pn	Pn	22 51 06.9	-0.5
LPAZ	La Paz	5.33	3	P	Pn	22 51 11.0	+1.8
	comp=E,0.5nm,0.3s,baz=184,slow=4.0,SNR=9.3						
LPAZ				S	Sn	22 52 06.5	-3.4
	comp=E,0.4nm,0.3s,baz=47,slow=6.3,SNR=2.2						
LPAZ				LR	LR	22 53 43.0	
	comp=E,58nm,19.7s,baz=94,slow=43						
LPAZ	La Paz	5.33	3		Pn	22 51 09.9	+0.8
LPAZ	La Paz	5.33	3	eP	Pn	22 51 12.3	+3.1
GO03	Copiap	6.14	195	Pn	Pn	22 51 16.9	-2.6
AC04	Llanos de Chal	6.95	199	Pn	Pn	22 51 26.5	-3.9
AC05	El Transito	7.35	192	Pn	Pn	22 51 33.0	-2.9
LCO	Las Campanas	7.61	195	Pn	Pn	22 51 35.9	-3.6
GO04	Tololo Observa	8.75	193	Pn	Pn	22 51 50.6	-4.3
SIV	San Ignacio	8.97	53	P	Pn	22 51 54.1	-3.6
	comp=E,2.0nm,0.3s,baz=237,slow=14,SNR=29						
SIV				S	Sn	22 53 26.6	-11
	comp=E,0.2nm,0.3s,baz=316,slow=20,SNR=2.4						
MT02	Curacav	11.81	191	Pn	Pn	22 52 34.1	-1.5
AQDB	Aquidauana	11.98	87	eP	Pn	22 52 40.5	+2.7
TRCB	Terra Rica	14.71	97	eP	P	22 53 16.3	+0.6
PTGB	Pitanga	15.39	105	eP	P	22 53 23.9	+0.5
ITAB	Concordia	15.88	114	eP	P	22 53 29.0	+0.4
PCMB	Pacaembu	16.00	93	eP	P	22 53 31.3	+1.3
CPSB	Cacapava Do Su	16.07	126	eP	P	22 53 30.4	-0.3
PLTB	Pedras Altas	16.66	130	eP	P	22 53 37.0	-0.2
ARAG	Araguaiana, MT	16.84	72	eP	P	22 53 41.0	+1.7
SNDB	Serra Nova Dou	19.02	62	eP	P	22 54 02.3	-1.0
NPGB	Novo Progresso	19.26	43	eP	Pn	22 54 07.3	-0.8
IPMB	Ipameri, GO	19.40	83	eP	P	22 54 07.6	+0.2
VAO	Valinhos	19.94	98	eP	P	22 54 12.5	-0.8
ITTB	Itaituba	21.15	38	eP	P	22 54 25.4	-0.8
PTGA	Pitinga	22.37	23	eP	P	22 54 38.3	-0.7
SMTB	Santa Maria do	23.77	61	eP	P	22 54 52.2	0.0
OTAV	Otavalo	23.83	335	eP	P	22 54 50.4	-2.7
MALB	Monte Alegre	24.04	37	eP	P	22 54 54.9	+0.3
SDBA	SAO DESIDERIO	24.30	72	eP	P	22 54 56.7	-0.2
NBPA	Parau_RN	34.20	67	eP	P	22 56 25.3	+0.6
V53A	Saluda	58.59	346	P	P	22 59 36.0	+1.3
V53A				IAmb	IAmb	22 59 51.0	
	comp=Z,5.3nm,1.1s						
DBIC	Dimbokro	68.38	73	P	P	23 00 38.7	-0.7
	comp=Z,4.4nm,0.8s,baz=236,slow=7.3,SNR=5.6						
DBIC	Dimbokro	68.38	73	P	P	23 00 38.8	-0.6
DBIC				IAmb	IAmb	23 00 40.7	
	comp=Z,8.4nm,0.9s						
QSPA	South Pole Qui	68.55	180	P	P	23 00 41.2	+1.3
W13A	Hualapai Mount	71.00	322	P	P	23 00 55.6	+0.3
EYMN	Ely	72.29	344	P	P	23 01 03.7	+1.2
KOWA	Kowa	72.69	66	P	P	23 01 06.1	+0.5
KOWA				IAmb	IAmb	23 01 25.9	
	comp=Z,2.4nm,0.9s						
TOA0	Torodi Ar. Sit	77.01	70	P	P	23 01 30.2	-0.3
TOA0				IAmb	IAmb	23 01 31.6	
	comp=Z,2.6nm,0.8s						
TORD	Torodi Ar. Bea	77.01	70	P	P	23 01 30.2	-0.3
	comp=Z,2.3nm,0.7s,baz=254,slow=5.3,SNR=15						
TORD				pP	pP	23 02 03.3	-0.4
	comp=Z,1.2nm,0.7s,baz=260,slow=5.8,SNR=4.3						
TORD	Torodi Ar. Bea	77.01	70	P	P	23 01 30.4	-0.1
YKA	Yellowknife Ar	91.46	340	P	P	23 02 43.4	+0.9
	comp=Z,0.6nm,0.5s,baz=128,slow=5.1,SNR=10						
MKAR	Makanchi Array	145.50	36	PKPbc	PKPdf	23 09 14.5	+0.3
	comp=Z,0.6nm,0.6s,baz=323,slow=3.9,SNR=8.4						

WEL ***05*** *23:02:00, 38°.61S×177°.91E, h22^{km}, ML4.5, Mw4.4, Moment Tensor Solution. s4 Moment tensor: Scale 10^{15} Nm; M$_{rr}$-1.09; M$_{\theta\theta}$0.28; M$_{\phi\phi}$0.81; M$_{r\theta}$-1.19; M$_{\theta\phi}$-0.49; M$_{\phi r}$-3.69; Fault plane solution: M$_0$4.00000×10^{15} NP1: ϕ_s141.00000°, δ10.00000°, λ-144.00000°. NP2: ϕ_s15.00000°, δ84.00000°, λ-82.00000°. Principal axes: T -428.6100, Plg39.0000°, Azm98.0000°; N 57.8200, Plg8.0000°, Azm194.0000°; P 370.7900, Plg50.0000°, Azm294.0000°;*

NOU ***05*** *23:02:26.7, 38°.77S×178°.52E, h0^{km}, MLv4.7, Off E. Coast of N. Island, N.Z.*

NEIC ***05*** *23:02:29.7±2.2, 38°.82S±0°.05×178°.00E±0°.09, h5^{km}±6^{km}, mb4.3/15, Error ellipse: s-maj=11.4km s-min=5.9km az=114.0*

IDC ***05*** *23:02:33.5±2.0, 39°.03S×177°.26E, h0^{km}, mb4.1/4, mb1 4.3/5, mb1mx4.1/37, mbtmp4.1/5, ML3.4/1, MS3.7/8, Ms1 3.7/8, ms1mx3.3/37, Error ellipse: s-maj=39.9km s-min=10.4km az=95.0*

WEL ***05*** *23:02:35.1, 39°S±1°×17°8E±°, h19^{km}±1^{km}, M4.5/48, ML4.8/48, MLv4.5/48, Error ellipse: s-maj=0.0km s-min=0.0km az=86.4*

ISC 05 23:02:34.1±0.8**, 38°.68S**±0°.02×**177°.94E**±0°.03**, h32^{km}**±5^{km}**, n166,** σ**1^s.89**/166**, mb4.2**/10**, MS3.8**/7**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RIGZ	Rimuhau	0.14	260	P	Pb	23 02 40.1	+0.1
RIGZ				S	Sb	23 02 44.7	+0.6
PRGZ	Paritu Road	0.24	191	P	Pb	23 02 43.1	+2.0
PRGZ				S	Sb	23 02 51.4	+5.6
TKGZ	Te Karaka	0.25	343	P	Pb	23 02 40.2	-0.9
TKGZ				S	Sb	23 02 44.8	-1.1
CNGZ	Carnagh Statio	0.29	47	P	Pn	23 02 43.1	+1.0
KNZ	Kokohu	0.40	212	P	Pn	23 02 45.1	+1.5
KNZ				S	Sn	23 02 54.3	+4.2
RAGZ	Rawiri	0.45	294	P	Pb	23 02 43.7	-0.3
RAGZ				S	Sb	23 02 50.7	-0.1
MHGZ	Mahia Peninsul	0.47	183	P	Pn	23 02 46.8	+2.2
MHGZ				S	Sn	23 02 56.8	+4.9
MWZ	Matawai	0.48	317	P	Pb	23 02 43.6	-0.6
MWZ				S	Sb	23 02 49.2	-2.0
SNGZ	Shannon Statio	0.48	258	P	Pn	23 02 45.4	+0.6
SNGZ				S	Sn	23 02 53.9	+1.8
TWGZ	Tauwhareparae	0.51	3	P	Pn	23 02 45.1	0.0
TWGZ				S	Sn	23 02 54.0	+1.2
PUZ	Puketiti	0.66	22	P	Pn	23 02 47.6	+0.4
PUZ				S	Sn	23 02 58.3	+1.8
WHHZ	Waihua	0.68	234	P	Pn	23 02 49.2	+1.7
WHHZ				S	Sn	23 03 01.6	+4.6
RAHZ	Arahi	0.71	250	P	Pn	23 02 49.4	+1.5
RAHZ				S	Sn	23 03 01.6	+3.8
RUGZ	Raukumara Rang	0.74	344	P	Pb	23 02 48.3	-0.4
RUGZ				S	Sb	23 02 58.5	-0.2
RTZ	Ruatahuna	0.76	275	P	Pn	23 02 49.3	+0.7
RTZ				S	Sn	23 03 00.7	+1.8
URZ	Urewera	0.78	303	Pg	Pb	23 02 48.8	-0.3
	1μm,0.3s,baz=205,slow=4.3,SNR=1114						
URZ				Lg	Lg	23 02 59.3	
	2μm,0.3s,baz=239,slow=21,SNR=19						
URZ				LR	LR	23 03 26.2	
	comp=Z,5μm,18.1s,baz=211,slow=67						
URZ	Urewera	0.78	303	Pn	Pb	23 02 49.0	-0.1
URZ	Urewera	0.78	303	P	Pb	23 02 49.0	-0.1
URZ				S	Sb	23 02 59.3	-0.1
PKGZ	Pakihiroa	0.80	8	P	Pn	23 02 49.9	+0.7
PKGZ				S	Sn	23 03 01.9	+1.9
MTHZ	Maungataniwha	0.88	258	P	Pn	23 02 51.6	+1.4
HAZ	Te Kaha	0.93	352	P	Pb	23 02 51.2	-0.6
ARHZ	Aropaoanui	0.94	231	P	Pn	23 02 52.8	+1.7
WMGZ	Waiomatatini S	0.94	24	P	Pn	23 02 51.9	+0.9
MUGZ	Murupara	0.94	282	P	Pn	23 02 52.2	+1.1
NMHZ	Naumai	0.98	245	P	Pn	23 02 53.4	+1.7
EDRZ	Edgecumbe	1.11	301	P	Pb	23 02 54.6	-0.1
WHRZ	Whale Island	1.12	317	P	Pb	23 02 55.0	0.0
MXZ	Matakaoa Point	1.15	15	Pn	Pn	23 02 54.8	+0.8
MXZ	Matakaoa Point	1.15	15	P	Pn	23 02 54.8	+0.8
RRRZ	Republican Roa	1.17	287	P	Pb	23 02 55.7	-0.1
CKHZ	Cape Kidnapper	1.18	214	P	Pb	23 02 55.7	-0.3
MRHZ	Matea Rd	1.20	262	P	Pb	23 02 57.0	+0.7
TARZ	Mount Tarawera	1.21	291	P	Pb	23 02 56.7	+0.2
MARZ	Manawahe	1.22	305	P	Pb	23 02 56.1	-0.4
PRRZ	Plateau Road	1.23	278	P	Pb	23 02 56.3	-0.4
BKZ	Black Stump Fm	1.23	246		Pn	23 02 54.9	-0.3

BKZ	**Black Stump Fm**	**1.23**	**246**	P	**Pb**	**23 02 56.6**	**-0.1**
MCHZ	**McNeill Hill**	**1.23**	**231**	P	**Pb**	**23 02 56.8**	**0.0**
ALRZ	**Allen Road**	**1.26**	**275**	P	**Pb**	**23 02 57.0**	**-0.2**
MKRZ	**Makatiti**	**1.28**	**295**	P	**Pb**	**23 02 59.4**	**+1.8**
WIZ	**White Island**	**1.30**	**333**	P	**Pb**	**23 02 58.0**	**+0.1**
WSRZ	**White Island S**	**1.31**	**332**	P	**Pb**	**23 02 59.3**	**+1.2**
HLRZ	**Highlands Stat**	**1.32**	**288**	P	**Pb**	**23 02 58.5**	**+0.2**
HRRZ	**Handcock Road**	**1.33**	**282**	P	**Pb**	**23 02 58.9**	**+0.4**
OMRZ	**Omania**	**1.36**	**294**	P	**Pb**	**23 02 58.1**	**-0.9**
OPRZ	**Ohinepanea**	**1.38**	**307**	P	**Pn**	**23 02 57.5**	**+0.5**
HSRZ	**Hossack Road**	**1.38**	**285**	P	**Pb**	**23 02 58.8**	**-0.5**
KAHZ	**Kahuranaki**	**1.39**	**216**	P	**Pb**	**23 02 58.4**	**-1.0**
KWHZ	**Kaweka Forest**	**1.40**	**237**	P	**Pb**	**23 02 58.9**	**-0.7**
LIRZ	**Lichensteins R**	**1.40**	**298**	P	**Pb**	**23 02 58.7**	**-0.9**
WPRZ	**Whakapapatarin**	**1.40**	**276**	P	**Pb**	**23 02 59.3**	**-0.4**
HATZ	**Hinemaiaia**	**1.46**	**261**	P	**Pb**	**23 03 00.9**	**+0.3**
UTU	**Utuhina**	**1.46**	**290**	P	**Pb**	**23 03 01.7**	**+1.0**
GRRZ	**Galatos Road**	**1.48**	**282**	P	**Pb**	**23 03 01.3**	**+0.4**
KARZ	**Kaharoa**	**1.49**	**296**	P	**Pn**	**23 02 59.6**	**+1.0**
NGRZ	**Ngongotaha**	**1.50**	**292**	P	**Pb**	**23 03 00.5**	**-0.7**
WHTZ	**Whakaora**	**1.55**	**270**	P	**Pb**	**23 03 06.1**	**+3.8**
KRHZ	**Kereru**	**1.55**	**231**	P	**Pb**	**23 03 00.7**	**-1.6**
PXZ	**Pawanui**	**1.59**	**212**	P	**Pb**	**23 03 00.6**	**-2.1**
TGRZ	**Tauranga**	**1.63**	**305**	P	**Pn**	**23 03 01.0**	**+0.5**
RITZ	**Rihia Road**	**1.65**	**259**	P	**Pb**	**23 03 04.7**	**+0.8**
BHHZ	**Black Hill Sta**	**1.67**	**241**	P	**Pb**	**23 03 02.6**	**-1.6**
KUTZ	**Kaahu Road**	**1.67**	**276**	P	**Pb**	**23 03 03.0**	**-1.3**
RATZ	**Rangitukua**	**1.71**	**263**	P	**Pb**	**23 03 05.3**	**+0.4**
WATZ	**Wairara**	**1.73**	**268**	P	**Pn**	**23 03 03.0**	**+1.0**
KATZ	**Kakaramea**	**1.78**	**260**	P	**Pb**	**23 03 08.4**	**+2.3**
KMRZ	**Kaimai**	**1.78**	**297**	P	**Pb**	**23 03 09.7**	**+3.6**
ETVZ	**East Tongariro**	**1.80**	**255**	P	**Pb**	**23 03 06.0**	**-0.4**
TMVZ	**Te Maari**	**1.80**	**255**	P	**Pb**	**23 03 05.2**	**-1.3**
WPHZ	**Waipukurau**	**1.81**	**220**	P	**Pn**	**23 03 03.7**	**+0.7**
PNHZ	**Pukenui**	**1.83**	**227**	P	**Pn**	**23 03 03.8**	**+0.5**
OTVZ	**Oturere**	**1.84**	**254**	P	**Pb**	**23 03 07.7**	**+0.6**
KRVZ	**Karewarewa**	**1.84**	**256**	P	**Pb**	**23 03 06.7**	**-0.5**
MOVZ	**Moawhango**	**1.85**	**246**	P	**Pb**	**23 03 05.7**	**-1.6**
TUVZ	**Tukino**	**1.88**	**251**	P	**Pb**	**23 03 07.6**	**-0.2**
PRHZ	**Porangahau**	**1.88**	**212**	P	**Pn**	**23 03 05.0**	**+1.0**
WTVZ	**West Tongariro**	**1.89**	**256**	P	**Pb**	**23 03 10.1**	**+2.2**
NGZ	**Ngauruhoe**	**1.89**	**254**	P	**Pb**	**23 03 08.6**	**+0.6**
TLZ	**Tolley Road**	**1.92**	**280**	P	**Pb**	**23 03 11.8**	**+3.4**
WHVZ	**Whangaehu Hut**	**1.93**	**251**	P	**Pb**	**23 03 08.3**	**-0.5**
WNVZ	**Wahianoa**	**1.94**	**250**	P	**Pb**	**23 03 06.5**	**-2.3**
MYRZ	**Mayor Island**	**1.94**	**316**	P	**Pb**	**23 03 11.4**	**+2.6**
DRZ	**Dome Shelter**	**1.95**	**252**	P	**Pb**	**23 03 12.8**	**+3.7**
FWVZ	**Far West T-bar**	**1.95**	**252**	P	**Pb**	**23 03 09.4**	**+0.4**
TWVZ	**Taurewa**	**1.99**	**258**	P	**Pb**	**23 03 08.2**	**-1.6**
MTVZ	**Mangateitei**	**2.05**	**249**	P	**Pb**	**23 03 08.4**	**-2.3**
TSZ	**Takapari Road**	**2.06**	**228**	P	**Pn**	**23 03 06.9**	**+0.4**
ANWZ	**Angora Road**	**2.11**	**212**	P	**Pn**	**23 03 07.8**	**+0.7**
PKVZ	**Pokaka**	**2.11**	**252**	P	**Pb**	**23 03 09.7**	**-2.0**
DVHZ	**Dannevirke**	**2.12**	**220**	P	**Pn**	**23 03 07.4**	**0.0**
TOZ	**Tahuroa Road**	**2.14**	**296**	P	**Pn**	**23 03 08.4**	**+0.8**
BFZ	**Birch Farm**	**2.39**	**213**		**Pn**	**23 03 09.8**	**-1.2**
POWZ	**Post Office Ro**	**2.40**	**224**	P	**Pn**	**23 03 11.3**	**+0.2**
PRWZ	**Pori Road**	**2.41**	**219**	P	**Pn**	**23 03 11.9**	**+0.6**
HIZ	**Hauiti**	**2.42**	**273**		**Pn**	**23 03 12.9**	**+1.4**
HIZ	**Hauiti**	**2.42**	**273**	P	**Pn**	**23 03 13.7**	**+2.2**
VRZ	**Vera Road**	**2.52**	**259**	P	**Pb**	**23 03 15.7**	**-3.0**
WAZ	**Wanganui**	**2.53**	**244**	P	**Pb**	**23 03 15.6**	**-3.3**
CPWZ	**Castlepoint**	**2.60**	**211**	P	**Pn**	**23 03 14.6**	**+0.7**
KUZ	**Kuaotunu**	**2.62**	**317**	P	**Pn**	**23 03 14.7**	**+0.6**
TIWZ	**Tintock**	**2.62**	**217**	P	**Pn**	**23 03 14.4**	**+0.1**
MKAZ	**Moumakai**	**2.71**	**305**	P	**Pn**	**23 03 17.2**	**+1.9**
LREZ	**Lake Rotokare**	**2.86**	**253**	P	**Pn**	**23 03 20.3**	**+2.8**
ETAZ	**East Tamaki Re**	**2.94**	**305**	P	**Pn**	**23 03 20.6**	**+2.0**
DREZ	**Durham Road**	**2.96**	**259**	P	**Pb**	**23 03 22.3**	**-3.8**
NEZ	**North Egmont**	**3.06**	**258**	P	**Pb**	**23 03 24.1**	**-3.7**
AWAZ	**Awhitu Peninsu**	**3.07**	**301**	P	**Pn**	**23 03 21.8**	**+1.4**
KHEZ	**Kahui Hut**	**3.12**	**257**	P	**Pn**	**23 03 24.8**	**+3.6**
PKE	**Pukeiti**	**3.13**	**259**	P	**Pb**	**23 03 25.3**	**-3.7**
NBEZ	**Newall Road No**	**3.23**	**258**	P	Pb	23 03 26.4	-4.3
NMEZ	**Namu Road**	**3.25**	**256**	P	**Pn**	**23 03 25.8**	**+3.0**
MSWZ	**Moikau Station**	**3.42**	**216**	Pn	**Pn**	**23 03 23.2**	**-2.0**
PLWZ	**Palliser**	**3.54**	**215**	Pn	**Pn**	**23 03 25.4**	**-1.5**
BHW	**Baring Head**	**3.60**	**220**		**Pn**	**23 03 25.4**	**-2.2**
SNZO	**South Karori**	**3.62**	**222**	Pn	**Pn**	**23 03 24.1**	**-3.7**
WCZ	**Waipu Caves**	**3.96**	**313**	P	**Pn**	**23 03 33.8**	**+1.2**
TUWZ	**Tuamarina**	**4.12**	**227**		**Pn**	**23 03 30.6**	**-4.2**
NNZ	**Nelson**	**4.33**	**233**	Pn	**Pn**	**23 03 34.7**	**-2.9**
BSWZ	**Blackbirch Sta**	**4.34**	**224**	Pn	**Pn**	**23 03 34.1**	**-3.8**
QRZ	**Quartz Range**	**4.69**	**241**	Pn	**Pn**	**23 03 40.1**	**-2.5**
OUZ	**Omahuta**	**4.90**	**313**	Pn	**Pn**	**23 03 46.1**	**+0.6**
OUZ	**Omahuta**	**4.90**	**313**	P	**Pn**	**23 03 47.4**	**+1.9**
THZ	**Tophouse**	**4.93**	**230**	Pn	**Pn**	**23 03 43.9**	**-2.1**
KHZ	**Kahutara**	**5.01**	**221**	Pn	Pn	23 03 41.5	-5.5
LTZ	**Lake Taylor**	**5.94**	**225**	Pn	**Pn**	**23 03 56.6**	**-3.3**
MQZ	**McQueen's Vall**	**6.41**	**217**	Pn	**Pn**	**23 04 02.4**	**-3.9**
OXZ	**Oxford**	**6.44**	**222**	Pn	**Pn**	**23 04 02.8**	**-3.9**
CTZ	**Chatham Island**	**6.50**	**143**	P	**Pn**	**23 04 09.2**	**+1.7**
RPZ	**Rata Peaks**	**7.23**	**224**	Pn	Pn	23 04 12.0	-5.5
	0.8nm,0.3s,baz=51,slow=14,SNR=2.1						
RPZ				Sn	Sn	23 05 28.3	-10
	3.5nm,0.3s,baz=222,slow=2.3,SNR=17						
FOZ	**Fox Glacier**	**7.82**	**229**	Pn	**Pn**	**23 04 24.6**	**-0.9**
LBZ	**Lake Benmore**	**8.14**	**223**	Pn	**Pn**	**23 04 27.4**	**-2.6**
ODZ	**Otahua Downs**	**8.37**	**218**	Pn	**Pn**	**23 04 29.8**	**-3.2**
WKZ	**Wanaka**	**9.06**	**225**	Pn	**Pn**	**23 04 39.5**	**-3.1**
MLZ	**Mavora Lakes**	**9.90**	**224**	Pn	**Pn**	**23 04 50.5**	**-3.6**
WHZ	**Wether Hill Ro**	**10.32**	**223**	Pn	Pn	23 04 52.7	-7.2
LHI	**Lord Howe Isla**	**17.01**	**289**		**Pn**	**23 06 29.9**	**+0.5**
DZM	**Mont Dzumac**	**19.27**	**326**	LR	LR	23 13 51.6	
	comp=Z,187nm,18.3s,baz=104,slow=35						
DZM	**Mont Dzumac**	**19.27**	**326**	P	**Pn**	**23 06 58.2**	**+0.9**
RAR	**Rarotonga**	**25.89**	**54**	LR	LR	23 16 44.8	
	comp=Z,59nm,19.7s,baz=234,slow=32						
STKA	**Stephens Creek**	**30.30**	**272**	P	**P**	**23 08 42.2**	**-0.2**
	2.4nm,0.8s,baz=111,slow=8.6,SNR=4.3						
STKA				LR	LR	23 19 35.2	
	comp=Z,171nm,19.7s,baz=45,slow=34						
BBOO	**Buckleboo**	**34.27**	**267**	P	**P**	**23 09 17.0**	**-0.3**
BBOO				IAmb	IAmb	23 09 29.8	
	comp=Z,8.9nm,1.1s						
COEN	**Coen**	**39.34**	**299**	P	**P**	**23 10 01.3**	**+0.8**
COEN				IAmb	IAmb	23 10 20.5	
	comp=Z,4.0nm,1.1s						
AS31	**Alice Springs**	**40.15**	**279**	P	**P**	**23 10 07.4**	**+0.1**
ASAR	**Alice Springs**	**40.15**	**279**	P	**P**	**23 10 07.5**	**+0.3**
	comp=Z,3.2nm,0.7s,baz=119,slow=7.3,SNR=30						
ASAR	**Alice Springs**	**40.15**	**279**	P	**P**	**23 10 07.1**	**-0.2**
FORT	**Forrest**	**41.33**	**265**	P	**P**	**23 10 17.3**	**+0.5**
WR0	**Warramunga Arr**	**41.74**	**284**	P	**P**	**23 10 21.1**	**+0.8**
WB2	**Warramunga Arr**	**41.90**	**284**	P	**P**	**23 10 22.0**	**+0.3**
WB2				IAmb	IAmb	23 10 34.7	
	comp=Z,4.3nm,0.9s						
WRAB	**Tennant Creek**	**41.90**	**284**	P	**P**	**23 10 21.9**	**+0.2**
WRAB				IAmb	IAmb	23 10 34.8	
	comp=Z,4.7nm,0.8s						
WRA	**Warramunga Arr**	**41.91**	**284**	P	**P**	**23 10 21.5**	**-0.2**
	comp=Z,1.0nm,0.8s,baz=127,slow=7.1,SNR=8.5						
WRA				LR	LR	23 27 29.9	
	comp=Z,128nm,19.1s,baz=115,slow=36						
WRA	**Warramunga Arr**	**41.91**	**284**	IAmb	IAmb	23 10 30.9	
	comp=Z,0.2nm,1.1s						
WB0	**Warramunga Arr**	**41.97**	**284**	P	**P**	**23 10 22.1**	**-0.2**
WB0				IAmb	IAmb	23 10 28.8	
	comp=Z,2.5nm,0.8s						
NWAO	**Narrogin (SRO)**	**48.79**	**257**	P	**P**	**23 11 16.6**	**+0.5**
FITZ	**Fitzroy Crossi**	**49.65**	**279**	P	**P**	**23 11 23.5**	**+0.6**
	comp=Z,3.0nm,0.8s,baz=135,slow=7.1,SNR=2.4						
FITZ	**Fitzroy Crossi**	**49.65**	**279**	IAmb	IAmb	23 11 28.0	
	comp=Z,5.2nm,1.0s						
QSPA	**South Pole Qui**	**51.45**	**180**	P	P	23 11 40.0	+4.1
QSPA				IAmb	IAmb	23 11 41.5	
	comp=Z,4.9nm,1.1s						
BATI	**Baumata**	**55.99**	**285**	LR	LR	23 38 38.6	
	comp=Z,148nm,18.4s,baz=207,slow=39						
BELA	**Belgrano 2**	**62.03**	**173**	P	**P**	**23 12 51.1**	**+0.4**
KAPI	**Kappang**	**62.29**	**287**	LR	LR	23 41 42.1	
	comp=Z,66nm,18.0s,baz=107,slow=38						
H03N3	**Juan Fernandez**	**78.88**	**124**	T	T	00 41 02.7	
	baz=232,slow=72,SNR=21						
H03N2	**Juan Fernandez**	**78.89**	**124**	T	T	00 41 01.5	
	baz=232,slow=72,SNR=18						
H03N1	**Juan Fernandez**	**78.90**	**124**	T	T	00 41 01.2	
	baz=232,slow=72,SNR=16						
PSI	**Prapat**	**83.18**	**279**	LR	LR	23 53 04.4	
	comp=Z,47nm,19.6s,baz=267,slow=37						
CMAR	**Chiang Mai Arr**	**93.10**	**291**	LR	LR	00 01 57.4	
	comp=Z,22nm,18.7s,baz=190,slow=38						
FINES	**FINESS Array B**	**151.34**	**332**	PKPbc	**PKPab**	**23 22 29.0**	**-2.7**
	comp=Z,0.9nm,0.7s,baz=72,slow=5.0,SNR=1.2						
TORD	**Torodi Ar. Bea**	**154.35**	**188**	PKPbc	**PKiKP**	**23 22 34.6**	**+3.0**
	comp=Z,0.2nm,0.3s,baz=173,slow=1.2,SNR=1.7						

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*INET **05** 23:07:17.1, 12°.10N×87°.94W, h20^{km}, ML3.8*

SNET 05 23:07:17.8±0.6**, 12°.23N×88°.01W, h17^{km}**±3^{km}**, ML3.3, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LCND	**La Caada**	**1.08**	**6**	*e*P	Pb	23 07 37.1	-1.0
LCND				*e*S	Sb	23 07 51.8	-0.2
LCND				IAML		23 07 57.4	
	comp=Z,934nm,0.4s						
COEB	**Comit de Eme**	**1.36**	**338**	*e*S	Sg	23 08 01.2	-0.8
COEB				IAML		23 08 07.9	
	comp=Z,297nm,0.3s						
FAGO	**Alcalda de S**	**1.46**	**356**	*e*P	Pn	23 07 43.1	-0.3
FAGO				*e*S	Sb	23 08 03.3	+0.3
PQSS	**Presa 15 de Se**	**1.49**	**339**	*e*P	Pn	23 07 43.5	-0.3
PQSS				*e*S	Sb	23 08 03.4	-0.4
COEG	**Centro de Oper**	**1.62**	**329**	*e*S	Sb	23 08 07.1	-0.6
PAVA	**Las Pavas**	**1.73**	**329**	*e*P	Pn	23 07 47.3	0.0
TACO	**Tacachico**	**2.17**	**323**	*e*P	Pn	23 07 53.0	-0.3

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*IDC **05** 23:41:18.5±56.0, 37°.40N×20°.47E, h0^{km}, mb3.7/3, mb1 3.7/3, mb1mx3.3/48, mbtmp3.7/3, MS3.6/1, Ms1 3.6/1, ms1mx2.6/40, Error ellipse: s-maj=1062.0km s-min=67.8km az=40.0*

*ATH **05** 23:41:28.5, 37°.85N×21°.23E, h28^{km}±2^{km}, ML2.8/11, Error ellipse: s-maj=2.6km s-min=0.6km az=202.0*

*THE **05** 23:41:28.8, 37°.85N×21°.24E, h2^{km}±2^{km}, ML2.8/12, Error ellipse: s-maj=2.7km s-min=0.5km az=259.0*

ISC 05 23:41:28.6±0.8**, 37°.87N**±0°.02×**21°.23E**±0°.02**, h22^{km}**±5^{km}**, n67, σ0^{s}.72**/100**, mb3.8**/3**, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RLS	**Riolos of Patr**	**0.27**	**44**	P	**Pb**	**23 41 35.0**	**+0.1**
RLS				S	**Sb**	**23 41 40.0**	**+0.7**
RLS				AML	AML	23 41 40.4	
	comp=E,9989µm,0.3s						
RLS				AML	AML	23 41 40.5	
	comp=N,8635µm,0.2s						
RLS	**Riolos of Patr**	**0.27**	**44**	P	**Pb**	**23 41 35.0**	**+0.1**
RLS				S	**Sb**	**23 41 37.9**	**-1.3**
	comp=N,5µm,0.2s						
LTHK	**Lithakia**	**0.35**	**243**	P	**Pb**	**23 41 36.0**	**-0.1**
LTHK				S	**Sb**	**23 41 42.2**	**+0.9**
LTHK	**Lithakia**	**0.35**	**243**	P	**Pb**	**23 41 36.0**	**-0.1**
LTHK				S	**Sb**	**23 41 41.5**	**+0.3**
	comp=N,5µm,0.2s						
DRO	**Drossia**	**0.39**	**77**	P	**Pb**	**23 41 36.8**	**0.0**
DRO				S	**Sb**	**23 41 43.7**	**+1.2**
DRO				AML	AML	23 41 44.1	
	comp=E,3285µm,0.3s						
DRO				AML	AML	23 41 46.8	
	comp=N,4761µm,0.3s						
DRO	**Drossia**	**0.39**	**77**	P	**Pb**	**23 41 36.8**	**0.0**
DRO				S	**Sb**	**23 41 42.6**	**+0.1**
	comp=N,2µm,0.3s						
VLMS	**Volimes, Zakyn**	**0.45**	**272**	P	**Pb**	**23 41 37.4**	**-0.4**
VLMS				S	**Sb**	**23 41 44.7**	**+0.5**
VLMS				AML	AML	23 41 45.4	
	comp=E,7826µm,0.1s						
VLMS				AML	AML	23 41 47.9	
	comp=N,5957µm,0.2s						
VLMS	**Volimes, Zakyn**	**0.45**	**272**	P	**Pb**	**23 41 37.4**	**-0.4**
VLMS				S	**Sb**	**23 41 44.6**	**+0.5**
	comp=N,3µm,0.2s						
AMT	**Artemida-Makis**	**0.51**	**131**	P	**Pb**	**23 41 38.5**	**-0.3**
AMT				S	**Sb**	**23 41 45.8**	**+0.1**
AMT				AML	AML	23 41 51.3	
	comp=E,1540µm,0.2s						
AMT				AML	AML	23 41 53.0	
	comp=N,1215µm,0.4s						
AMT	**Artemida-Makis**	**0.51**	**131**	P	**Pb**	**23 41 38.5**	**-0.3**
AMT				S	**Sb**	**23 41 45.1**	**-0.6**
	comp=N,730nm,0.3s						
PSDA	**Pessada-Kefalo**	**0.57**	**296**	P	**Pb**	**23 41 39.8**	**-0.1**
PSDA				S	**Sb**	**23 41 48.6**	**+1.1**
PSDA	**Pessada-Kefalo**	**0.57**	**296**	P	**Pb**	**23 41 39.8**	**-0.1**
PSDA				S	**Sb**	**23 41 48.8**	**+1.3**
	comp=N,255nm,0.2s						
VLS	**Valsamata**	**0.59**	**302**	P	**Pb**	**23 41 39.9**	**-0.5**
VLS				S	**Sb**	**23 41 49.0**	**+0.7**
VLS				AML	AML	23 41 51.9	
	comp=N,5325µm,0.2s						
VLS				AML	AML	23 41 51.9	
	comp=E,5264µm,0.3s						
VLS	**Valsamata**	**0.59**	**302**	P	**Pb**	**23 41 40.4**	**+0.1**
VLS				S	**Sb**	**23 41 49.8**	**+1.5**
	comp=E,3µm,0.2s						
UPR	**University Cam**	**0.61**	**46**	P	**Pb**	**23 41 40.8**	**+0.3**
ARGA	**Argostoli. Kep**	**0.67**	**298**	P	**Pb**	**23 41 42.1**	**+0.6**
ARGA				S	**Sb**	**23 41 51.0**	**+0.6**
LAKA	**Lakka**	**0.70**	**57**	P	**Pb**	**23 41 41.8**	**-0.2**
LAKA				S	**Sb**	**23 41 51.5**	**+0.1**
LAKA	**Lakka**	**0.70**	**57**	P	**Pb**	**23 41 41.9**	**-0.2**
LXRA	**Lixouri, Kepha**	**0.71**	**298**	P	**Pb**	**23 41 42.2**	**0.0**
KEF5	**Kardakata, Kep**	**0.73**	**305**	P	**Pb**	**23 41 42.3**	**-0.3**
KEF5				S	**Sb**	**23 41 53.2**	**+1.0**
KEF5	**Kardakata, Kep**	**0.73**	**305**	P	**Pb**	**23 41 42.3**	**-0.3**
KEF5				S	**Sn**	**23 41 54.3**	**+0.3**
PDO	**Prodromos**	**0.73**	**357**	P	**Pb**	**23 41 42.8**	**+0.2**
PDO				S	**Sb**	**23 41 53.1**	**+0.8**
PDO				AML	AML	23 41 56.5	
	comp=E,2585µm,0.2s						
PDO				AML	AML	23 41 56.6	
	comp=N,2919µm,0.3s						
PDO	**Prodromos**	**0.73**	**357**	P	**Pb**	**23 41 42.9**	**+0.2**
PDO				S	**Sn**	**23 41 54.1**	**0.0**
	comp=N,2µm,0.2s						
KEF4	**Livadi, Kephal**	**0.75**	**302**	P	**Pb**	**23 41 42.7**	**-0.1**
KEF4				S	**Sb**	**23 41 53.7**	**+1.1**
KEF4	**Livadi, Kephal**	**0.75**	**302**	P	**Pb**	**23 41 42.8**	**-0.1**
KEF4				S	**Sn**	**23 41 54.9**	**+0.5**
KLV	**Kalavryta, Ach**	**0.75**	**76**	P	**Pb**	**23 41 42.5**	**-0.4**
KLV				S	**Sb**	**23 41 53.7**	**+0.9**
KLV				AML	AML	23 42 00.8	
	comp=N,425µm,0.4s						
KLV				AML	AML	23 42 01.4	
	comp=E,411µm,0.5s						
KLV	**Kalavryta, Ach**	**0.75**	**76**	P	**Pb**	**23 41 42.6**	**-0.4**
KLV				S	**Sn**	**23 41 54.5**	**-0.1**
DMLN	**Damoulianata-K**	**0.77**	**299**	P	**Pb**	**23 41 43.7**	**+0.4**
DMLN				S	**Sn**	**23 41 55.5**	**+0.4**
	comp=E,1µm,0.3s						
KEF3	**Kipouria, Keph**	**0.77**	**296**	P	**Pb**	**23 41 42.8**	**-0.5**
KEF3				S	**Sb**	**23 41 54.0**	**+0.6**
KEF3	**Kipouria, Keph**	**0.77**	**296**	P	**Pb**	**23 41 43.0**	**-0.3**
KEF3				S	**Sb**	**23 41 54.8**	**+1.4**
FSK	**Fiskardo**	**0.79**	**319**	P	**Pb**	**23 41 43.3**	**-0.4**
FSK				S	**Sb**	**23 41 54.9**	**+1.0**
FSK				AML	AML	23 42 02.9	
	comp=N,512µm,0.3s						
FSK				AML	AML	23 42 03.3	
	comp=E,749µm,0.2s						
FSK	**Fiskardo**	**0.79**	**319**	P	**Pb**	**23 41 43.3**	**-0.4**
ALIK	**Aliki, Aigiali**	**0.80**	**60**	P	**Pb**	**23 41 43.6**	**-0.2**
TRIZ	**Trizonia**	**0.83**	**53**	P	**Pb**	**23 41 44.0**	**-0.3**
TRIZ	**Trizonia**	**0.83**	**53**	P	**Pb**	**23 41 44.1**	**-0.3**
SERG	**Sergoula**	**0.85**	**50**	P	**Pb**	**23 41 44.5**	**-0.2**
SERG				S	**Sb**	**23 41 56.0**	**+0.3**
SERG				AML	AML	23 41 59.9	
	comp=N,680µm,0.5s						
SERG				AML	AML	23 42 00.0	
	comp=E,872µm,0.2s						
SERG	**Sergoula**	**0.85**	**50**	P	**Pb**	**23 41 44.5**	**-0.2**
SERG				S	**Sn**	**23 41 57.8**	**+0.8**
	comp=E,408nm,0.2s						
EVGI	**Lefkada island**	**0.88**	**329**	P	**Pb**	**23 41 45.0**	**-0.1**
EVGI	**Lefkada island**	**0.88**	**329**	P	**Pb**	**23 41 45.0**	**-0.1**
ITM	**Ithomi**	**0.88**	**141**	P	**Pb**	**23 41 45.1**	**-0.1**
ITM	**Ithomi**	**0.88**	**141**	P	**Pb**	**23 41 45.2**	**0.0**
KALE	**Kalithea**	**0.89**	**54**	P	**Pb**	**23 41 45.0**	**-0.4**
KALE				S	**Sb**	**23 41 56.6**	**-0.2**
KALE				AML	AML	23 42 02.1	
	comp=E,734µm,0.3s						
KALE				AML	AML	23 42 02.1	
	comp=N,720µm,0.2s						
KALE	**Kalithea**	**0.89**	**54**	P	**Pb**	**23 41 45.0**	**-0.4**
NYDR	**Nydri-Lefkada**	**0.94**	**334**	P	**Pb**	**23 41 45.9**	**-0.3**
NYDR				S	**Sn**	**23 42 00.8**	**+1.5**
	comp=N,320nm,0.7s						
LKD2	**Lefkada island**	**1.02**	**334**	P	**Pn**	**23 41 47.4**	**-0.2**
LKD2				S	**Sb**	**23 42 00.9**	**+0.2**
LKD2				AML	AML	23 42 09.3	
	comp=E,1128µm,0.3s						
LKD2				AML	AML	23 42 10.0	
	comp=N,1195µm,0.3s						
LKD2	**Lefkada island**	**1.02**	**334**	P	**Pn**	**23 41 47.5**	**-0.2**
VLX	**Vlachokerasia**	**1.04**	**118**	P	**Pn**	**23 41 48.0**	**+0.2**
PYL	**PYLOS**	**1.05**	**157**	P	**Pn**	**23 41 47.5**	**-0.5**
PYL	**PYLOS**	**1.05**	**157**	P	**Pn**	**23 41 47.4**	**-0.5**
PYL				S	**Sn**	**23 42 02.7**	**+0.8**
	comp=N,178nm,0.5s						
EVR	**Evrytania**	**1.14**	**23**	P	**Pn**	**23 41 49.6**	**+0.3**
EVR	**Evrytania**	**1.14**	**23**	P	**Pn**	**23 41 49.7**	**+0.3**
THAL	**Thalero**	**1.15**	**81**	P	**Pn**	**23 41 49.5**	**+0.2**
DSF	**Desfina**	**1.16**	**62**	P	**Pn**	**23 41 49.6**	**+0.1**
DSF	**Desfina**	**1.16**	**62**	P	**Pn**	**23 41 49.5**	**+0.1**
MAKR	**Makrakomi, Fth**	**1.35**	**31**	P	**Pb**	**23 41 53.6**	**+0.5**
LTK	**Loutraki**	**1.38**	**83**	P	**Pb**	**23 41 54.4**	**+0.7**
AXAR	**Agios Charalam**	**1.44**	**51**	P	**Pn**	**23 41 54.2**	**+0.9**
AGG	**Agios Georgios**	**1.44**	**36**	P	**Pb**	**23 41 55.3**	**+0.5**
AGG	**Agios Georgios**	**1.44**	**36**	P	**Pb**	**23 41 56.0**	**+1.2**
LKR	**Lokris**	**1.60**	**60**	P	**Pb**	**23 41 57.3**	**-0.1**
VIL2	**Platees**	**1.65**	**77**	P	**Pb**	**23 41 59.7**	**+1.5**
VLI	**Veliai**	**1.78**	**130**	P	**Pb**	**23 42 04.1**	**+3.6**
THL	**Klokotos Trika**	**1.80**	**20**	P	**Pb**	**23 42 01.2**	**+0.3**
FINES	**FINESS Array B**	**23.80**	**6**	P	**P**	**23 46 37.6**	**-1.8**
	comp=N,3.7nm,0.9s,baz=178,slow=8.3,SNR=5.2						
MKAR	**Makanchi Array**	**44.99**	**58**	P	**P**	**23 49 41.6**	**-0.5**
	comp=N,0.3nm,0.4s,baz=274,slow=7.7,SNR=7.4						
ZALV	**Zalesovo Beam**	**45.48**	**48**	P	**P**	**23 49 44.8**	**-1.1**
	comp=N,0.6nm,0.5s,baz=273,slow=8.5,SNR=3.6						
TLY	**Talaya**	**57.09**	**47**	LR	LR	00 16 42.4	
	comp=N,60nm,20.9s,baz=311,slow=37						

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*DJA **05** 23:42:09.8±0.3, 9°S±6°×11°4E±°, h71^{km}±9^{km}, M3.8/12, mb4.0/3, mB5.2/1, MLv3.7/12, Mw(mB)4.5/1*

*IDC **05** 23:42:12.2±13.0, 8°.40S×114°.19E, h120^{km}±133^{km}, mb2.9/3, mb1 3.2/4, mb1mx2.9/40, mbtmp3.3/4, ML3.2/1, Error ellipse: s-maj=150.1km s-min=39.0km az=49.0*

ISC 05 23:42:08.8±1.0**, 9°.07S**±0°.10×**113°.76E**±0°.06**, h82^{km}, n14, σ1^{s}.43**/19**, mb3.3**/3**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAGI	**Jajag, Banyuwa**	**0.71**	**33**	P	**Pn**	**23 42 25.8**	**+1.0**
JAGI				S	**Sn**	**23 42 37.7**	**+1.1**
ABJI	**Asem Bagus**	**1.35**	**20**	P	**Pn**	**23 42 33.0**	**+0.7**
ABJI				S	**Sn**	**23 42 50.9**	**+0.9**
SRBI	**Singaraja**	**1.74**	**56**	P	**Pn**	**23 42 38.0**	**+0.7**
SRBI				S	**Sn**	**23 42 59.0**	**+0.1**
KMMI	**Kalianget**	**2.02**	**6**	P	**Pn**	**23 42 41.4**	**+0.4**
TWSI	**Taliwang, Sumb**	**3.10**	**84**	P	**Pn**	**23 42 57.3**	**+1.7**
UGM	**Wanagama**	**3.40**	**290**	P	**Pn**	**23 43 01.0**	**+1.4**
UGM				S	**Sn**	**23 43 40.6**	**+1.6**
PLAI	**Plampang**	**3.98**	**87**	P	**Pn**	**23 43 09.4**	**+2.0**
PLAI				S	**Sn**	**23 43 53.3**	**+0.4**
CISI	**Cisompet, Garu**	**6.07**	**284**	P	**Pn**	**23 43 37.1**	**+1.0**
	0.2nm2µm24nm,0.7s						
BSSI	**Bau Bau, Buton**	**7.28**	**67**	P	**Pn**	**23 43 53.9**	**+1.4**
	0.1nm21nm,1.6s						
EDFI	**Ende, Flores**	**7.84**	**88**	P	**Pn**	**23 43 59.8**	**-0.5**
FITZ	**Fitzroy Crossi**	**14.62**	**129**	P	**P**	**23 45 36.1**	**+0.5**
	0.1nm,0.3s,baz=315,slow=16,SNR=1.5						
FITZ				S	Sn	23 48 05.3	-7.2
	0.1nm,0.3s,baz=255,slow=21,SNR=1.3						
WRA	**Warramunga Arr**	**22.64**	**121**	P	**P**	**23 47 03.2**	**-0.1**
	1.9nm,1.4s,baz=297,slow=12,SNR=5.5						
ASAR	**Alice Springs**	**24.12**	**129**	P	**P**	**23 47 17.8**	**+0.6**
	0.5nm,0.5s,baz=302,slow=8.8,SNR=5.3						
MKAR	**Makanchi Array**	**62.29**	**336**	P	**P**	**23 52 18.7**	**-3.6**
	0.1nm,0.4s,baz=161,slow=6.1,SNR=1.5						

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*IDC **05** 23:42:16.2±1.1, 5°.09N×78°.14W, h0^{km}, mb3.7/5, mb1 3.8/8, mb1mx3.6/29, mbtmp3.7/8, ML2.8/3, MS3.2/6, Ms1 3.2/6, ms1mx2.9/34, Error ellipse: s-maj=34.8km s-min=20.3km az=37.0*

*RSNC **05** 23:42:19.9±0.8, 5°.26N×78°.13W, h35^{km}±13^{km}, ML2.8, Mw3.5*

*NEIC **05** 23:42:21.1±1.7, 5°.14N±0°.06×78°.11W±0°.08, h32^{km}±3^{km}, mb4.2/10, Error ellipse: s-maj=12.6km s-min=7.8km az=63.0*

ISC 05 23:42:18.4±3.3**, 5°.22N**±0°.04×**78°.14W**±0°.05**, h15^{km}**±21^{km}**, n53, σ1^{s}.54**/66**, mb3.9**/8**, MS3.2**/4**, 2D, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PIZC	**Pizarro, Choco**	**0.82**	**108**⇓	*e*P	**Pb**	**23 42 33.9**	**-0.5**
PIZC				*e*S	**Sb**	**23 42 45.0**	**-0.3**
SOLC	**Bahia Solano**	**1.24**	**36**	*e*P	**Pn**	**23 42 39.9**	**-1.3**
SOLC				*e*S	**Sb**	**23 42 54.7**	**-2.6**
SOLC				*i*		23 42 57.8	
	comp=Z,112nm,0.3s						
MALC	**Bahia Malaga**	**1.45**	**146**	*e*P	**Pn**	**23 42 43.3**	**-0.7**
MALC				*e*S	**Sn**	**23 43 01.9**	**-0.9**
MALC				*i*		23 43 05.0	
	comp=Z,118nm,0.5s						
PLMC	**San Jos del P**	**1.88**	**100**	*e*P	**Pn**	**23 42 48.9**	**-1.1**
PLMC				*e*S	**Sn**	**23 43 12.4**	**-1.2**
PLMC				*i*		23 43 14.3	
	comp=Z,316nm,0.6s						
PTAC	**Punta Ardita,**	**1.94**	**10**	*e*P	**Pn**	**23 42 49.2**	**-1.6**
PTAC				*e*S	**Sn**	**23 43 10.6**	**-4.4**
YOTC	**Yotoco, Valle**	**2.17**	**124**⇓	*e*P	**Pn**	**23 42 53.0**	**-1.2**
YOTC				*e*S	**Sn**	**23 43 19.0**	**-1.9**
YOTC				*i*		23 43 21.3	
	comp=Z,42nm,0.5s						
CBOC	**Ciudad Bolivar**	**2.22**	**73**	*e*P	**Pn**	**23 42 53.9**	**-0.9**
CBOC				*e*S	**Sn**	**23 43 19.5**	**-2.5**
CBOC				*i*		23 43 22.6	
	comp=Z,62nm,0.5s						
DBBC	**Dabeiba**	**2.62**	**47**	*e*P	**Pn**	**23 43 00.8**	**+0.5**
GUY2C	**Guyana, Caldas**	**2.77**	**90**	*e*P	**Pn**	**23 43 03.2**	**+0.6**
GUY2C				*e*S	**Sn**	**23 43 37.1**	**+1.1**
GUY2C				*i*		23 43 40.8	
	comp=Z,65nm,0.6s						
HELC	**Santa Helena**	**2.77**	**70**	*e*P	**Pn**	**23 43 02.9**	**+0.2**
HELC				*e*S	**Sn**	**23 43 36.1**	**0.0**
HELC				*i*		23 43 40.2	
	comp=Z,18nm,0.4s						
RREF	**El Recreo**	**2.80**	**96**	*e*P	**Pn**	**23 43 04.7**	**+1.4**
ANIL	**Santa Ana**	**2.83**	**105**	*e*P	**Pn**	**23 43 03.9**	**+0.6**
ANIL				*e*S	**Sn**	**23 43 38.1**	**+0.9**
ANIL				*i*		23 43 48.9	
	comp=Z,14nm,0.4s						
TOLC	**Tolima**	**2.88**	**103**	*e*P	**Pn**	**23 43 04.7**	**+0.6**
TOLC				*e*S	**Sn**	**23 43 36.9**	**-1.8**
TOLC				*i*		23 43 51.3	
	comp=Z,42nm,0.6s						
ORTC	**Ortega, Tolima**	**3.17**	**114**	*e*P	**Pn**	**23 43 09.3**	**+1.5**
ORTC				*e*S	**Sn**	**23 43 46.7**	**+1.3**
ORTC				*i*		23 43 55.7	
	comp=Z,44nm,0.5s						
MARP	**Paez Belalcaza**	**3.22**	**137**	*e*P	**Pn**	**23 43 09.3**	**+0.7**
NORC	**Norcasia**	**3.28**	**84**	*e*P	**Pn**	**23 43 11.0**	**+1.7**
NORC				*e*S	**Sn**	**23 43 48.8**	**+0.8**
NORC				*i*		23 43 53.5	
	comp=Z,30nm,0.5s						
BBAC	**Balboa, Cauca**	**3.30**	**164**	*e*P	**Pn**	**23 43 11.5**	**+1.7**
BBAC				*e*S	**Sn**	**23 43 47.4**	**-1.5**
BBAC				*i*		23 43 56.9	
	comp=Z,10nm,0.3s						
PCON	**Cinco Dias**	**3.36**	**149**	*e*P	**Pn**	**23 43 11.7**	**+0.8**
PCON				*e*S	**Sn**	**23 43 49.2**	**-1.6**
PCON				*i*		23 43 59.1	
	comp=Z,29nm,0.7s						
BETC	**Betania**	**3.69**	**133**	*e*P	**Pn**	**23 43 16.7**	**+1.7**
ROSC	**El Rosal**	**3.83**	**96**	Pn	**Pn**	**23 43 15.8**	**-1.4**
	comp=Z,5.3nm,0.3s,baz=113,slow=22,SNR=4.1						
ROSC				Sn	**Sb**	**23 44 09.1**	**-3.2**
	baz=307,slow=21,SNR=1.3						
ROSC				LR	LR	23 45 10.3	
	comp=Z,197nm,21.0s,baz=282,slow=46						
ROSC	**El Rosal**	**3.83**	**96**	Pn	**Pn**	**23 43 15.6**	**-1.6**
PTBC	**PUERTO BERRIO,**	**3.90**	**70**	*e*P	**Pn**	**23 43 20.1**	**+2.4**

PTBC				*e*S	Sn	23 44 04.3	+1.0
PTBC				*i*		23 44 10.2	
	comp=Z,15nm,0.5s						
SPBC	San Pablo de B	4.08	84	*e*P	Pn	23 43 22.2	+1.9
SPBC				*e*S	Sn	23 44 09.6	+1.7
SPBC				*i*		23 44 13.6	
	comp=Z,12nm,0.5s						
BCIP	Isla Barro Col	4.26	337	Pn	Pn	23 43 23.1	+0.2
CHIC	Chingaza	4.43	97	*e*P	Pn	23 43 29.0	+3.5
OTAV	Otavalo	4.96	184	Pn	Pn	23 43 32.6	-0.2
HDC	Heredia	7.59	309	Pn	Pn	23 44 10.3	+1.7
SDV	Santo Domingo	8.29	64	Pn	Pn	23 44 19.8	+1.4
	comp=Z,0.7nm,0.3s,baz=253,slow=9.6,SNR=5.2						
SDV				Sn	Sn	23 45 52.0	0.0
	comp=Z,0.3nm,0.3s,baz=3.0,slow=20,SNR=1.0						
SDV				LR	LR	23 47 42.5	
	comp=Z,83nm,20.8s,baz=184,slow=39						
SDV	Santo Domingo	8.29	64	Pn	Pn	23 44 19.9	+1.5
JTS	Las Juntas de	8.42	307	Pn	Pn	23 44 22.4	+2.5
PTGA	Pitinga	19.09	108	P	P	23 46 41.4	+0.7
	comp=Z,0.2nm,0.3s,baz=294,slow=19,SNR=2.0						
CMIG	Matias Romero	20.20	307	LR	LR	23 53 11.1	
	comp=Z,38nm,20.0s,baz=144,slow=32						
SAML	Samuel	20.51	133	P	P	23 46 56.0	-0.2
SAML				IAmb	IAmb	23 46 58.6	
	comp=Z,8.9nm,0.8s						
LPAZ	La Paz	23.56	155	LR	LR	23 57 10.5	
	comp=Z,68nm,19.2s,baz=128,slow=38						
PB16	IPOC Station P	24.91	160	P	P	23 47 40.5	-1.1
MDP	Montagnes des	25.40	89	LR	LR	23 58 32.6	
	comp=Z,78nm,18.8s,baz=276,slow=38						
MNMC	Minye Minye	25.62	161	P	P	23 47 49.5	+1.7
PB08	IPOC Station P	26.71	161	P	P	23 47 57.3	-0.4
PB08				IAmb	IAmb	23 48 03.6	
	comp=Z,4.3nm,0.9s						
SIV	San Ignacio	27.01	142	P	P	23 47 59.0	-1.2
	comp=Z,1.1nm,0.7s,baz=339,slow=12,SNR=6.0						
PATCX	Punta Patache	27.04	163	P	P	23 48 00.3	-0.1
Z47A	Carrollton	29.33	343	P	P	23 48 22.3	+1.7
Z47A				IAmb	IAmb	23 48 24.9	
	comp=Z,6.9nm,0.7s						
TXAR	Lajitas Array	34.02	318	P	P	23 49 03.3	+1.2
	comp=Z,0.2nm,0.6s,baz=134,slow=6.4,SNR=1.8						
H06E1	SOCORRO T-PHAS	34.70	296	T	T	00 25 45.3	
BDFB	Brasilia	36.33	125	LR	LR	00 04 52.4	
	comp=Z,106nm,18.9s,baz=108,slow=37						
F64A	Sherman	41.37	10	P	P	23 50 01.6	-2.3
O20A	White River Ci	44.06	326	P	P	23 50 24.8	-1.3
O20A				IAmb	IAmb	23 50 25.4	
	comp=Z,3.0nm,0.5s						
ULM	Lac du Bonnet	47.29	345	P	P	23 50 51.5	+0.3
	comp=Z,1.4nm,0.6s,baz=128,slow=4.1,SNR=4.9						
ULM	Lac du Bonnet	47.29	345	IAmb	IAmb	23 50 54.2	
	comp=Z,2.2nm,1.1s						
YKA	Yellowknife Ar	63.13	342	P	P	23 52 46.7	+1.4
	comp=Z,0.4nm,0.6s,baz=137,slow=6.1,SNR=7.6						
TORD	Torodi Ar. Bea	78.95	78	P	P	23 54 22.6	+0.4
	comp=Z,0.7nm,0.8s,baz=279,slow=5.4,SNR=3.0						
ASAR	Alice Springs	144.10	236	PKP	PKPab	00 01 52.1	+0.1
	comp=Z,1.2nm,0.8s,baz=119,slow=4.0,SNR=12						
WRA	Warramunga Arr	145.18	242	PKPbc	PKPab	00 01 56.2	+0.1
	comp=Z,1.8nm,1.0s,baz=105,slow=3.5,SNR=14						
WRA	Warramunga Arr	145.18	242		PKPdf	00 01 56.5	0.0

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*IDC **05** 23:45:34.1±1.2,27°.90N×127°.15E,h189km±13km,mb3.2/7, mb1 3.3/10,mb1mx3.1/50,mbtmp3.7/10,Error ellipse: s-maj=29.3km s-min=11.5km az=82.0*

*JMA **05** 23:45:36.2±0.2,27°.85N×126°.99E,h158km,M4.2*

ISC 05 23:45:33.2±0.8,**27°.80N**±0°.06×**126°.97E**±0°.06,**h182**km±7km, **n36,**σ**1.80**/59,**mb3.5**/7,**Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIH	Iheya	1.17	131	P	Pn	23 46 04.0	+1.6
JIH				S	Sn	23 46 24.9	-0.1
JAGN	Aguni-jima	1.23	169	P	Pn	23 46 04.3	+1.3
JAGN				S	Sn	23 46 25.9	-0.1
JKE	Kume jima 2	1.48	186	P	Pn	23 46 06.4	+1.2
JKE				S	Sn	23 46 30.4	+0.4
JOKE	Okinoerabujima	1.48	107	P	Pn	23 46 06.6	+1.4
JOKE				S	Sn	23 46 29.6	-0.4
JOW	Kunigami	1.51	130	P	Pn	23 46 06.3	+0.9
	185nm,0.3s,baz=120,slow=24,SNR=196						
JOW				S	Sn	23 46 27.7	-2.7
	349nm,0.3s,baz=97,slow=27,SNR=14						
JOW				LR	LR	23 46 31.3	
	comp=Z,49nm,20.6s,baz=332,slow=39						
JOW	Kunigami	1.51	130	P	Pn	23 46 06.9	+1.4
JOW				S	Sn	23 46 29.5	-0.9
JYRO	Yoronjima	1.53	120	P	Pn	23 46 07.0	+1.4
JYRO				S	Sn	23 46 29.6	-1.0
JNTH	Nagotoyohara	1.58	144	P	Pn	23 46 07.9	+1.7
JNTH				S	Sn	23 46 31.3	-0.4
JTK	Tokunoshima	1.75	90	P	Pn	23 46 09.0	+1.2
JTK				S	Sn	23 46 34.6	0.0
JJT3	Tamagusuku3	1.81	156	P	Pn	23 46 11.0	+2.6
JJT3				S	Sn	23 46 36.2	+0.5
JAMN	Amaminishikomi	2.00	77	P	Pn	23 46 11.4	+1.1
JAMN				*e*S	Sn	23 46 38.7	-0.5
JTAJ	Takarajima	2.38	55	P	Pn	23 46 16.6	+2.0
JAM	Amami Oshima	2.40	75	P	Pn	23 46 16.2	+1.3
JAM				S	Sn	23 46 47.1	-0.2
JZK	Kikaishima	2.70	78	*e*S	Sn	23 46 54.2	+0.7
JIKM	Ikemajima	3.26	209	P	Pn	23 46 25.6	+0.5
JIKM				*e*S	Sn	23 47 04.2	-1.5
JIRB	Irabujima	3.38	209	P	Pn	23 46 26.5	-0.1
JIRB				S	Sn	23 47 05.8	-2.4
JMJ2	Miyako jima3	3.39	206	P	Pn	23 46 27.1	+0.4
JTJ	Tarama	3.75	213	P	Pn	23 46 31.2	-0.1
JTJ				*e*S	Sn	23 47 13.9	-2.8
JISG	Ishigakijimahi	4.00	217	P	Pn	23 46 33.9	-0.5
JISG				S	Sn	23 47 19.2	-3.0
JIJ	Ishigaki jima	4.27	217	P	Pn	23 46 36.7	-1.1
JIJ				S	Sn	23 47 24.0	-4.4
JMZ	Minamidaito 2	4.28	117	P	Pn	23 46 38.6	+0.7
JMZ				S	Sn	23 47 25.9	-2.8
JKDJ	Kitadaitoujima	4.28	115	P	Pn	23 46 39.8	+1.8
JKDJ				S	Sn	23 47 26.8	-1.9
JMTN	Minamitane	4.30	52	P	Pn	23 46 39.8	+1.6
JMTN				S	Sn	23 47 29.3	+0.2
JKRS	Kuro-shima	4.44	218	P	Pn	23 46 39.1	-0.9
JKRS				*e*S	Sn	23 47 30.1	-2.3
JTN	Tanegashima 3	4.51	50	P	Pn	23 46 42.5	+1.7
JTN				*e*S	Sn	23 47 33.7	-0.3
JNU	Nakatsue	6.28	31	P	Pn	23 47 03.8	-0.1
	0.5nm,0.3s,baz=226,slow=23,SNR=3.7						
JNU				S	Sn	23 48 08.5	-7.0
	0.3nm,0.3s,baz=45,slow=8.2,SNR=2.3						
KSRS	Korea Array	9.66	5	P	Pn	23 47 48.0	-0.1
	0.3nm,0.3s,baz=183,slow=13,SNR=6.1						
MJAR	Matsushiro Arr	12.89	45	P	Pn	23 48 31.1	+1.2
	0.0nm,0.3s,baz=228,slow=9.9,SNR=1.9						
USRK	Ussuriysk Ar.	16.85	13	P	P	23 49 15.2	-2.2
	baz=174,slow=8.0,SNR=2.5						
KLR	Kul'dur	21.71	8	P	P	23 50 07.2	-2.5
	0.7nm,0.4s,baz=218,slow=6.4,SNR=5.9						
SONM	Songino Array	25.63	327	P	P	23 50 46.7	+0.9
	0.8nm,0.6s,baz=143,slow=11,SNR=9.8						
MKAR	Makanchi Array	39.66	311	P	P	23 52 47.6	+0.3
	0.2nm,0.4s,baz=82,slow=11,SNR=6.9						
FITZ	Fitzroy Crossi	45.65	182	P	P	23 53 36.6	+1.0
	1.4nm,0.5s,baz=10,slow=6.8,SNR=7.5						
WRA	Warramunga Arr	48.00	171	P	P	23 53 53.9	0.0
	0.7nm,0.6s,baz=353,slow=8.4,SNR=8.0						
ASAR	Alice Springs	51.61	172	P	P	23 54 22.3	+1.3
	0.3nm,0.4s,baz=351,slow=7.2,SNR=6.0						
YKA	Yellowknife Ar	77.57	25	P	P	23 57 08.5	-0.2
	0.7nm,0.6s,baz=303,slow=5.0,SNR=11						

DJA 05 23:59:54.5±0.7,**1°N**±6°×**9°9E**±°,**h10**km,**M4.0**/5,**MLv4.0**/5, **Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MNSI	Mandailing Nat	1.04	80	P	Pg	00 00 12.7	-1.9
MNSI				S	Sg	00 00 26.8	-1.4
GSI	Gunungsitoli	1.19	305	P	Pb	00 00 15.6	-1.5
BKNI	Bangkinang	2.51	97	P	Pb	00 00 39.7	+0.1
SDSI	Sungai Dareh	3.27	118	P	Pn	00 00 48.0	+2.2

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*IDC **06** 00:01:51.6±4.4,0°.68N×98°.75E,h0km,mb3.2/4,mb1 3.4/4, mb1mx3.2/40,mbtmp3.2/4,Error ellipse: s-maj=179.6km s-min=27.4km az=59.0*

*DJA **06** 00:01:56.7±0.4,1°N±7°×9°9E±°,h10km,M3.7/5,MLv3.7/5*

ISC 06 00:01:52.1±1.0,**0°.5N**±0°.1×**98°.59E**±0°.06,**h10**km,**n9,** σ**0.71**/12,**mb3.3**/4,**Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MNSI	Mandailing Nat	1.02	76	P	Pb	00 02 12.0	+0.2
MNSI				S	Sn	00 02 27.1	+0.3
GSI	Gunungsitoli	1.27	307	P	Pn	00 02 15.0	-0.9
GSI				S	Sn	00 02 33.6	+0.6
PDSI	Padang	2.36	128	P	Pb	00 02 34.5	-0.3
BKNI	Bangkinang	2.46	95	P	Pg	00 02 39.0	-0.2
BKNI				S	Sg	00 03 10.2	-0.9
SDSI	Sungai Dareh	3.19	117	P	Pb	00 02 49.7	+0.8
WRA	Warramunga Arr	40.51	122	P	P	00 09 32.1	+0.4
	0.3nm,0.8s,baz=305,slow=8.9,SNR=1.7						
ASAR	Alice Springs	41.89	127	P	P	00 09 43.4	+0.4
	0.1nm,0.3s,baz=308,slow=8.1,SNR=1.7						
SONM	Songino Array	47.59	7	P	P	00 10 29.2	+1.0
	0.2nm,0.4s,baz=194,slow=9.5,SNR=2.5						
MKAR	Makanchi Array	48.22	345	P	P	00 10 32.5	-0.6
	0.2nm,0.5s,baz=164,slow=8.9,SNR=4.4						

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*IDC **06** 00:06:54.3±1.4,23°.83N×122°.05E,h0km,mb3.6/6, mb1 3.7/7,mb1mx3.4/40,mbtmp3.6/7,ML3.1/1,MS2.0/1, Ms1 2.0/1,ms1mx2.0/44,Error ellipse: s-maj=54.3km s-min=26.6km az=64.0*

*TAP **06** 00:06:58.5,23°.97N×122°.34E,h26km,ML3.6,D*

*JMA **06** 00:06:58.7±0.1,23°.90N×122°.27E,h26km±3km,M3.4*

ISC 06 00:06:57.1±1.0,**23°.91N**±0°.02×**122°.30E**±0°.02,**h13**km±7km, **n114,**σ**0.86**/205,**mb3.6**/6,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HWA	Hwalien	0.64	277	*i* P	Pb	00 07 11.5	+1.3
	baz=259						
HWA				S	Sb	00 07 21.1	+1.9
	baz=259						
TWD	Chiawan	0.67	285	*i* P	Pb	00 07 11.2	+0.5
	baz=279						
TWD				S	Sb	00 07 20.8	+0.9
	baz=279						
NACB	Ninganchiao	0.70	293	P	Pb	00 07 11.8	+0.5
	baz=273						
NACB				S	Sb	00 07 21.8	+1.0
	baz=273						
ENA	Nanau	0.73	316	*i* P	Pb	00 07 11.7	-0.1
	baz=317						
ENA				S	Sn	00 07 24.1	-0.2
	baz=317						
JYNG	Yonagunijimaku	0.80	47	P	Pn	00 07 14.3	+0.1
JYNG				*e*S	Sb	00 07 25.0	+1.3
ESL	Shilin	0.80	264	*i* P	Pb	00 07 13.1	+0.1
	baz=259						
ESL				S	Sb	00 07 24.1	+0.4
	baz=259						
ETLH	Xiulin Townshi	0.81	292	P	Pb	00 07 13.6	+0.4
	baz=275						
ETLH				S	Sb	00 07 24.9	+0.9
	baz=275						
TWC	Suao	0.81	330	*i* P	Pg	00 07 12.7	-0.2
	baz=324						
TWC				*i* S	Sg	00 07 22.6	-1.0
	baz=324						
EGFH	Guangfu	0.83	254	*e*S	Sb	00 07 25.4	+0.7
	baz=250						
YOJ	Yonaguni jima	0.85	49	P	Pn	00 07 14.9	0.0
	baz=58						
YOJ				S	Sg	00 07 24.6	-0.1
	baz=58						
YOJ	Yonaguni jima	0.85	49	P	Pn	00 07 14.8	0.0
YOJ				*e*S	Sb	00 07 26.5	+1.3
HGSD	Ruisui	0.90	243	P	Pb	00 07 15.0	+0.3
	baz=241						
HGSD				*e*S	Sb	00 07 28.1	+1.4
	baz=241						
WHF	Hehuan Shan	0.98	284	*i* P	Pb	00 07 16.5	+0.3
	baz=267						
WHF				*i* S	Sb	00 07 29.3	+0.1
	baz=267						
EHY	Hungye	0.98	246	*i* P	Pb	00 07 16.8	+0.8
	baz=259						
EHY				S	Sb	00 07 30.1	+1.1
	baz=259						
NNSB	Datong	0.99	302	P	Pb	00 07 16.6	+0.4
	baz=285						
NNSB				S	Sb	00 07 30.1	+0.8
	baz=285						
NNSH	Datong	0.99	302	*i* P	Pb	00 07 16.5	+0.2
	baz=285						
NNSH				S	Sb	00 07 29.8	+0.6
	baz=285						
ENTT	Nioudou	0.99	318	*i* P	Pb	00 07 16.8	+0.5
	baz=312						
ENTT				S	Sb	00 07 30.3	+1.0
	baz=312						
ILA	Ilan	0.99	330	*e*P	Pb	00 07 16.5	+0.2
	baz=324						
ILA				*e*S	Sb	00 07 30.2	+0.9
	baz=324						
TWE	Neicheng	1.00	325	*i* P	Pn	00 07 16.9	+0.1
	baz=320						
TWE				*i* S	Sn	00 07 31.2	+0.3
	baz=320						
NDT	Datong Townshi	1.00	314	*i* P	Pb	00 07 17.0	+0.6
	baz=308						
NDT				*i* S	Sb	00 07 29.5	0.0
	baz=308						
NNS	Nan Shan	1.00	302	*i* P	Pb	00 07 16.9	+0.5
	baz=286						
NNS				S	Sb	00 07 29.8	+0.1
	baz=286						
FUSS	Fushou	1.03	290	P	Pb	00 07 17.5	+0.5
	baz=284						
FUSS				S	Sb	00 07 31.1	+0.7
	baz=284						
NTC	Toucheng	1.04	336	*i* P	Pb	00 07 17.0	0.0
	baz=330						
NTC				*i* S	Sg	00 07 30.2	-0.5
	baz=330						
CHGB	Renai	1.04	279	P	Pb	00 07 17.6	+0.3
	baz=264						
CHGB				S	Sb	00 07 31.3	+0.4
	baz=264						
YULB	Yu-li	1.05	241	P	Pb	00 07 17.6	+0.3
	baz=255						
YULB				S	Sb	00 07 31.5	+0.5
	baz=255						
EYUL	Yuli	1.06	239	P	Pb	00 07 17.7	+0.4
	baz=237						
EYUL				S	Sb	00 07 32.2	+1.1
	baz=237						
TWF1	Yuli	1.07	239	*i* P	Pb	00 07 18.2	+0.6
	baz=237						
TWF1				S	Sb	00 07 32.9	+1.3
	baz=237						
VWDT	VWDT	1.07	262	P	Pb	00 07 18.2	+0.6
	baz=259						
VWDT				S	Sn	00 07 33.2	+0.5
	baz=259						
TWT	Tachien	1.09	289	*i* P	Pb	00 07 18.4	+0.5
	baz=272						
TWT				S	Sb	00 07 32.4	+0.3
	baz=272						
TDCB	Techi	1.10	289	P	Pb	00 07 18.5	+0.3
	baz=274						
TDCB				S	Sb	00 07 33.1	+0.6
	baz=274						
NWLT	Wulai	1.13	320	*i* P	Pb	00 07 18.9	+0.3
	baz=314						
NWLT				*e*S	Sb	00 07 33.7	+0.3
	baz=314						
TWB1	Santiao Chiao	1.14	345	*i* P	Pg	00 07 18.5	-0.5
	baz=340						
TWB1				S	Sn	00 07 34.8	+0.5
	baz=340						
YHNB	Yeheng	1.14	312	P	Pb	00 07 18.9	+0.1
	baz=306						
YHNB				*e*S	Sn	00 07 35.1	+0.6
	baz=306						
TIPB	Shuangxi	1.15	338	*i* P	Pb	00 07 19.0	+0.1
	baz=333						
TIPB				*i* S	Sg	00 07 33.2	-1.0
	baz=333						
NSK	Sanguang	1.15	312	*i* P	Pg	00 07 19.0	-0.4
	baz=306						
NSK				*e*S	Sb	00 07 34.5	+0.6
	baz=306						
FULB	Fuli	1.16	233	*i* P	Pg	00 07 18.9	-0.6
	baz=220						
FULB				*i* S	Sb	00 07 35.2	+1.0
	baz=220						
CHKT	Chengkung	1.18	227	P	Pg	00 07 18.8	-1.0
	baz=227						
CHKT				S	Sg	00 07 32.5	-2.5
	baz=227						
WPL	Puli Township	1.23	275	P	Pn	00 07 21.1	+0.9
	baz=272						
SSLB	Suanglung	1.24	265	P	Pb	00 07 20.5	0.0
	baz=262						
SSLB				S	Sg	00 07 36.9	-0.3
	baz=262						
NWF	Wu-fen Shan	1.25	338	*i* P	Pb	00 07 20.6	-0.2
	baz=332						
NWF				*i* S	Sg	00 07 36.2	-1.5
	baz=332						
WFSB	Wu-fen Shan	1.25	338	P	Pb	00 07 20.3	-0.4
	baz=333						
WFSB				S	Sg	00 07 36.3	-1.3
	baz=333						
TWA	Mucha	1.25	329	*i* P	Pg	00 07 21.4	+0.1
	baz=323						
TWA				*e*S	Sn	00 07 37.7	+0.5
	baz=323						
DPDB	Guoxing	1.27	276	P	Pg	00 07 21.3	-0.2
	baz=264						
DPDB				*e*S	Sg	00 07 37.3	-0.6
	baz=264						
NHDH	Xindian Distri	1.27	326	*i* P	Pg	00 07 21.4	-0.2
	baz=320						
NHDH				S	Sn	00 07 38.8	+1.3
	baz=320						
SMLT	Sun Moon Lake	1.28	269	*i* P	Pn	00 07 21.4	+0.5
	baz=266						
SMLT				S	Sg	00 07 38.2	-0.4
	baz=266						
WHP	Taichung City	1.29	287	*i* P	Pg	00 07 22.2	+0.2
	baz=272						
WHP				*e*S	Sg	00 07 38.5	-0.3
	baz=272						
TATO	Taipei	1.30	325	P	Pg	00 07 22.0	-0.1
	baz=319						
TATO				*e*S	Sn	00 07 39.0	+0.7
	baz=319						
EDH	Donghe	1.30	225	P	Pn	00 07 20.1	-1.0
	baz=215						
EDH				S	Sb	00 07 36.8	-1.5
	baz=215						
YUS	Yu-Shan	1.30	252	*i* P	Pb	00 07 22.5	+0.7
	baz=249						
YUS				S	Sg	00 07 38.2	-1.1
	baz=249						
TYC	Yuchr	1.32	270	*i* P	Pn	00 07 21.8	+0.5
	baz=267						
TYC				*e*S	Sb	00 07 39.2	+0.4
	baz=267						
TNOU	National Taiwa	1.33	339	*e*P	Pn	00 07 20.6	-0.9
	baz=333						
TNOU				S	Sb	00 07 38.9	-0.1
	baz=333						
TAP	Taipei	1.34	327	*e*S	Sg	00 07 39.7	-0.7
	baz=322						
IRIF	Iriomote-Funau	1.37	72	P	Pg	00 07 23.6	+0.1
IRIF				*e*S	Sb	00 07 40.9	+0.7
ELDTW	Lidau	1.38	239	*e*P	Pn	00 07 22.1	-0.2
	baz=238						
ELDTW				S	Sb	00 07 39.6	-0.8
	baz=238						
HATJ	Hateruma jima	1.38	83	P	Pn	00 07 22.9	+0.7
HATJ				*e*S	Sb	00 07 40.9	+0.4
LIOB	Emei	1.39	302	*i* P	Pg	00 07 23.9	+0.1
	baz=285						
LIOB				S	Sg	00 07 41.9	+0.1
	baz=285						
NSTT	Nanjuang	1.39	302	*i* P	Pg	00 07 23.7	-0.2
	baz=285						
NSTT				*i* S	Sg	00 07 41.5	-0.4
	baz=285						
YM01	YM01	1.40	332	P	Pn	00 07 21.0	-1.5
	baz=342						
YM01				S	Sb	00 07 40.4	-0.8
	baz=342						
YM10	YM10	1.42	332	P	Pn	00 07 22.9	+0.1
	baz=342						
YM10				*e*S	Sb	00 07 41.3	-0.3
	baz=342						
YM11	YM11	1.42	332	P	Pn	00 07 23.1	+0.3
	baz=343						
YM05	YM05	1.42	332	P	Pn	00 07 22.7	-0.1
	baz=343						
YM04	YM04	1.43	331	P	Pn	00 07 22.8	0.0
	baz=342						
ALS	Alishan	1.43	254	*i* P	Pb	00 07 24.3	+0.5
	baz=252						
ALS				*e*S	Sb	00 07 42.2	+0.1
	baz=252						
YM08	YM08	1.43	333	P	Pn	00 07 22.9	0.0
	baz=329						
TWS1	Kuangyinshan	1.44	326	*i* P	Pn	00 07 22.3	-0.6
	baz=321						
TWS1				S	Sg	00 07 43.5	0.0
	baz=321						
WJS	Zhushan	1.44	267	*e*S	Sg	00 07 45.9	+2.3
	baz=264						
LDUT	Ludao	1.45	212	P	Pn	00 07 22.4	-0.6
	baz=213						
LDUT				S	Sn	00 07 40.4	-1.5
	baz=213						
YM03	YM03	1.45	331	P	Pn	00 07 23.4	+0.3
	baz=326						
YM03				*e*S	Sb	00 07 41.7	-0.6
	baz=326						
ANP	Anpu	1.46	331	P	Pn	00 07 23.4	0.0
	baz=327						
TWQ1	Liyutan	1.47	288	P	Pg	00 07 25.1	-0.2
	baz=283						
TWQ1				*e*S	Sg	00 07 44.6	+0.3
	baz=283						
LONT	Longtian	1.47	228	*e*S	Sn	00 07 43.2	+0.7
	baz=240						
NCUH	Zhongli	1.47	316	P	Pn	00 07 24.1	+0.7
	baz=310						
NCUH				*e*S	Sg	00 07 44.2	-0.3
	baz=310						
WWF	Wufeng	1.47	276	P	Pg	00 07 25.9	+0.5
	baz=267						
WWF				S	Sg	00 07 47.3	+2.7
	baz=267						
NTST	Danshui	1.48	328	P	Pn	00 07 23.7	+0.2
	baz=339						
NTST				*e*S	Sn	00 07 43.0	+0.4
	baz=339						
WNT	Mingjian	1.48	269	P	Pg	00 07 26.8	+1.2
	baz=266						
WNT				S	Sg	00 07 44.6	-0.2
	baz=266						
WNT1	Nantou City	1.48	270	P	Pg	00 07 26.1	+0.5
	baz=267						
WNT1				S	Sg	00 07 46.4	+1.5
	baz=267						
SBCB	Hsinchu	1.49	307	*e*P	Pg	00 07 25.9	+0.1
	baz=303						
TCU	Taichung	1.51	280	*i* P	Pg	00 07 26.2	+0.1
	baz=275						
TCU				*i* S	Sg	00 07 46.7	+1.0
	baz=275						
TWY	Chenhua	1.51	335	P	Pn	00 07 24.0	+0.1
	baz=330						
TWY				*e*S	Sn	00 07 43.5	+0.1
	baz=330						
NMLH	Miaoli	1.52	295	*e*P	Pb	00 07 25.7	+0.5
	baz=290						
NMLH				*e*S	Sg	00 07 47.2	+1.2
	baz=290						
CHN5	Tsauling	1.52	259	*i* P	Pb	00 07 25.9	+0.7
	baz=246						
CHN5				*i* S	Sb	00 07 45.3	+0.8
	baz=246						
TWGBT	Beinan	1.56	226	P	Pn	00 07 24.0	-0.6
	baz=239						
TWGBT				S	Sn	00 07 44.6	-0.1
	baz=239						

TWG	Pinlang	1.56	227	*i* P	Pn	00 07 24.6	0.0
	baz=239						
TWG				*i* S	Sn	00 07 44.4	-0.4
	baz=239						
WDJ	Dajia District	1.58	287	*e*P	Pg	00 07 27.1	-0.4
	baz=282						
WDJ				*e*S	Sg	00 07 47.6	-0.5
	baz=282						
JKRS	Kuro-shima	1.59	78	P	Pb	00 07 26.8	+0.3
JKRS				*e*S	Sb	00 07 47.3	+0.7
STYT	Tauyuan	1.60	243	*i* P	Pn	00 07 25.6	+0.3
	baz=232						
STYT				*e*S	Sb	00 07 47.5	+0.8
	baz=232						
WCHH	Zhanghua	1.60	277	*e*P	Pb	00 07 27.3	+0.6
	baz=273						
WCHH				S	Sg	00 07 49.4	+0.6
	baz=273						
WDLH	Douliu	1.63	263	P	Pg	00 07 28.3	-0.1
	baz=260						
WDLH				*e*S	Sg	00 07 49.5	-0.1
	baz=260						
TPUB	Ta-pu	1.65	249	P	Pb	00 07 28.2	+0.8
	baz=247						
TPUB				*e*S	Sb	00 07 48.9	+0.8
	baz=247						
WTP	Ta-pu	1.68	247	*i* P	Pb	00 07 28.8	+0.8
	baz=246						
WTP				*e*S	Sb	00 07 50.1	+0.9
	baz=246						
JIJ	Ishigaki jima	1.74	74	P	Pn	00 07 28.4	+1.3
JIJ				S	Sn	00 07 50.8	+1.6
WTK	Tuku	1.77	263	S	Sg	00 07 53.1	-0.9
	baz=261						
CHY	Chiayi	1.77	257	*e*P	Pb	00 07 30.2	+0.7
	baz=255						
CHY				*e*S	Sg	00 07 53.3	-0.8
	baz=255						
SLGT	Liugui	1.77	240	*i* P	Pb	00 07 30.4	+0.9
	baz=231						
SLGT				*e*S	Sn	00 07 51.4	+1.4
	baz=231						
SGST	Jiashian	1.78	243	S	Sb	00 07 53.0	+1.1
	baz=233						
CHN1	Nanshi	1.78	247	*i* P	Pg	00 07 31.2	-0.1
	baz=245						
CHN1				*i* S	Sg	00 07 53.5	-0.9
	baz=245						
TWK	Hsinying	1.78	249	*i* P	Pb	00 07 30.4	+0.7
	baz=248						
TWK				*i* S	Sb	00 07 53.5	+1.4
	baz=248						
SNST	Tainan City	1.79	248	P	Pb	00 07 30.2	+0.3
	baz=247						
SNST				*i* S	Sg	00 07 53.9	-0.9
	baz=247						
ECL	Taimali	1.80	224	*i* P	Pn	00 07 28.2	+0.3
	baz=224						
ECL				S	Sn	00 07 50.2	-0.4
	baz=224						
SSD	Sandimen	1.92	233	P	Pn	00 07 30.6	+1.0
	baz=227						
SSD				*e*S	Sn	00 07 54.2	+0.6
	baz=227						
ICHU	Yijhu	1.93	254	*e*P	Pb	00 07 32.1	-0.2
	baz=252						
ICHU				S	Sb	00 07 57.2	+0.9
	baz=252						
TSMG	Majia	1.94	232	*e*P	Pn	00 07 31.2	+1.4
	baz=227						
TSMG				*e*S	Sn	00 07 54.6	+0.6
	baz=227						
JISG	Ishigakijimahi	1.96	69	P	Pn	00 07 30.8	+0.8
JISG				S	Sn	00 07 55.1	+0.6
LAY	Lan-yu	1.98	201	*e*S	Sn	00 07 53.4	-1.8
	baz=211						
MASBT	Mashibuluo	2.00	230	P	Pn	00 07 32.6	+1.9
	baz=225						
MASBT				*e*S	Sn	00 07 57.0	+1.3
	baz=225						
EAST	Anshuo	2.02	222	*i* P	Pn	00 07 32.4	+1.4
	baz=222						
JTJ	Tarama	2.31	71	*e*S	Sn	00 08 04.9	+1.7
KSRS	Korea Array	14.34	18	Pn	Pn	00 10 22.4	+2.5
	0.1nm,0.3s,baz=190,slow=13,SNR=4.5						
KSRS				LR	LR	00 15 26.5	
	comp=Z,6.3nm,21.4s,baz=225,slow=35						
SONM	Songino Array	27.03	336	P	P	00 12 38.3	-0.8
	2.8nm,0.7s,baz=150,slow=10,SNR=27						
MKAR	Makanchi Array	39.25	316	P	P	00 14 24.8	-0.7
	0.3nm,0.4s,baz=101,slow=9.8,SNR=9.5						
ZALV	Zalesovo Beam	41.03	327	P	P	00 14 38.4	-1.7
	1.6nm,0.7s,baz=101,slow=7.9,SNR=6.3						
KURBB	Kurchatov Arra	42.98	320	P	P	00 14 52.6	-3.4
	0.1nm,0.3s,baz=100,slow=9.3,SNR=1.5						
WRA	Warramunga Arr	45.13	164	P	P	00 15 12.9	-0.7
	0.6nm,0.9s,baz=346,slow=9.4,SNR=2.6						
YKA	Yellowknife Ar	82.83	23	P	P	00 19 20.5	-0.5
	0.3nm,0.6s,baz=317,slow=4.2,SNR=3.1						

IDC 06 00:13:47.5±4.5**, 14°.03N**×**90°.32E, h0^{km}, mb3.5**/4**, mb1 3.6**/5**, mb1mx3.3**/45**, mbtmp3.6**/5**, ML4.1**/1**, Error ellipse: s-maj=116.5km s-min=36.7km az=129.0, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALK	Pallekele	11.59	236	Pn	Pn	00 16 34.5	+0.1
	1.2nm,0.3s,baz=156,slow=17,SNR=5.4						
MKAR	Makanchi Array	33.35	350	P	P	00 20 29.1	+1.8
	0.3nm,0.7s,baz=174,slow=8.3,SNR=4.2						
SONM	Songino Array	36.26	18	P	P	00 20 52.7	+0.1
	0.8nm,0.5s,baz=197,slow=9.2,SNR=10.0						
KURBB	Kurchatov Arra	37.74	348	P	P	00 21 03.8	-1.1
	0.3nm,0.7s,baz=163,slow=6.8,SNR=1.7						
ZALV	Zalesovo Beam	40.07	355	P	P	00 21 23.0	-1.4
	0.3nm,0.4s,baz=181,slow=6.9,SNR=1.7						

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*PRE **06** 00:47:59.8±1.1, 26°.95S×26°.81E, h2^{km}, ML3.4*
*NEIC **06** 00:48:00.0±1.1, 26°.96S±0°.04×27°.1E±0°.1, h5^{km}±1^{km}, mb4.3/5, Error ellipse: s-maj=20.9km s-min=5.8km az=95.0*
*IDC **06** 00:48:02.0±1.5, 26°.88S×26°.67E, h0^{km}, mb3.7/2, mb1 3.9/7, mb1mx3.6/46, mbtmp3.9/7, ML4.0/5, Error ellipse: s-maj=28.1km s-min=12.4km az=101.0*
*BUL **06** 00:48:07.3±1.2, 26°.72S×26°.69E, h10^{km}, MD4.7*
*EAF **06** 00:48:07.3±1.2, 26°.72S×26°.69E, h10^{km}, MD4.2*
ISC 06 00:48:01.2±1.2**, 26°.92S**±0°.03×**26°.81E**±0°.04**, h13**^{km}±8^{km}**, n46,** σ1^{s}**77**/72**, mb4.1**/4**, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRYS	Parys	0.49	91	*e*P	Pg	00 48 09.7	-1.1
PRYS				*e*S	Sg	00 48 16.5	-0.9
PRYS				AML	AML	00 48 31.6	
	comp=Z,397nm,0.3s						
WDLM	Western Deep L	0.73	48	*e*P	Pg	00 48 14.2	-1.3
WDLM				*e*S	Sg	00 48 24.4	-0.7
WDLM				AML	AML	00 48 34.1	
	comp=Z,1µm,0.4s						
KLOF	Kloof	0.91	52	*e*P	Pg	00 48 18.4	-0.4
KLOF				*e*S	Sg	00 48 30.2	-0.6
KLOF				AML	AML	00 48 38.4	
	comp=Z,2µm,0.2s						
KSR	Koster	1.06	4	*e*P	Pb	00 48 21.6	+0.1
KSR				*e*S	Sb	00 48 35.3	-0.2
KSR				AML	AML	00 48 40.3	
	comp=N,7µm,0.1s						
ERPM	east rand prop	1.40	66	*e*P	Pg	00 48 28.6	+0.4
ERPM				*e*S	Sn	00 48 47.4	+2.4
ERPM				AML	AML	00 48 51.4	
	comp=Z,513nm,0.4s						
BOSA	Boshof	2.18	219	Pn	Pn	00 48 39.3	+2.0
	comp=Z,28nm,0.3s,baz=38,slow=12,SNR=763						
BOSA				Lg	Lg	00 49 09.1	
	comp=Z,66nm,0.3s,baz=123,slow=22,SNR=6.8						
BOSA	Boshof	2.18	219	*e*P	Pn	00 48 37.6	+0.3
BOSA				*e*S	Sn	00 49 05.2	+0.9
BOSA				AML	AML	00 49 19.9	
	comp=Z,182nm,0.3s						
BOSA	Boshof	2.18	219	Pn	Pn	00 48 39.3	+2.0
BOSA				Sn	Sb	00 49 08.5	+0.9
LBTB	Lobatse	2.19	330	Pn	Pb	00 48 40.1	-0.6
	comp=Z,27nm,0.3s,baz=152,slow=13,SNR=436						
LBTB				Lg	Lg	00 49 08.5	
	comp=Z,275nm,0.3s,baz=234,slow=11,SNR=77						
LBTB				Rg	Rg	00 49 15.0	
	comp=Z,150nm,0.4s,baz=171,slow=10.0,SNR=25						
LBTB	Lobatse	2.19	330	*e*P	Pn	00 48 38.3	+0.9
LBTB				*e*S	Sb	00 49 06.6	-1.2
LBTB				AML	AML	00 49 09.5	
	comp=N,624nm,0.2s						
LBTB	Lobatse	2.19	330		Pb	00 48 40.4	-0.3
LBTB					Sb	00 49 08.8	+1.0
LBTB	Lobatse	2.19	330	*i* P	Pb	00 48 40.8	0.0
LBTB				*i* Sg	Sb	00 49 07.9	+0.1
LBTB	Lobatse	2.19	330	*i* P	Pb	00 48 40.8	0.0
LBTB				*i* Sg	Sb	00 49 07.9	+0.1
UPI	Upington	5.14	252	*e*P	Pn	00 49 18.6	+0.7
UPI				*e*S	Sn	00 50 15.8	-1.3
UPI				AML	AML	00 50 41.9	
	comp=Z,50nm,0.4s						
MOPA	Mopani	5.36	52	*e*P	Pn	00 49 21.2	+0.3
MOPA				*e*S	Sn	00 50 21.1	-1.4
MOPA				AML	AML	00 50 53.6	
	comp=Z,73nm,0.5s						
MSNA	Messina	5.41	33	*e*P	Pn	00 49 22.2	+0.6
MSNA				*e*S	Sn	00 50 20.9	-2.9
MSNA				AML	AML	00 50 58.0	
	comp=Z,53nm,0.5s						
KEIM	Keimoes	5.47	250	*e*P	Pn	00 49 23.1	+0.5
KEIM				*e*S	Sn	00 50 24.0	-1.4
KEIM				AML	AML	00 51 04.0	
	comp=Z,67nm,0.9s						
SOE	Somerset East	5.88	190	*e*P	Pn	00 49 28.7	+0.6
SOE				*e*S	Sn	00 50 32.8	-2.5
SOE				AML	AML	00 51 16.8	
	comp=Z,46nm,0.5s						
MATP	Matopo	6.64	14	Pn	Pn	00 49 40.5	+1.8
	comp=Z,1.3nm,0.3s,baz=197,slow=13,SNR=35						
MATP				Sn	Sn	00 50 53.6	-0.8
	comp=Z,2.1nm,0.3s,baz=141,slow=5.8,SNR=8.1						
MATP				Lg	Lg	00 51 26.3	
	comp=Z,9.3nm,0.3s,baz=255,slow=18,SNR=7.2						
GRAN	Grantham	6.72	216	*e*P	Pn	00 49 40.4	+0.8
GRAN				*e*S	Sn	00 50 53.2	-2.8
GRAN				AML	AML	00 51 11.4	
	comp=Z,23nm,0.6s						
BLWY	Bulawayo	6.95	14	*i* P	Pn	00 49 44.8	+1.9
BLWY				*i* S	Sn	00 50 59.0	-2.8
BLWY	Bulawayo	6.95	14	*i* P	Pn	00 49 44.8	+1.9
BLWY				*i* S	Sn	00 50 59.0	-2.8
ROSN	Rosenhof	7.43	195	*e*P	Pn	00 49 49.9	+0.7
ROSN				*e*S	Sn	00 51 09.2	-4.2
ROSN				AML	AML	00 51 14.3	
	comp=Z,92nm,0.2s						
KROM	Kromhout	7.45	194	*e*P	Pn	00 49 50.3	+0.8
KROM				*e*S	Sn	00 51 09.9	-3.9
KROM				AML	AML	00 51 13.4	
	comp=Z,96nm,0.4s						
SUR	Sutherland	7.54	222	Pn	Pn	00 49 52.9	+1.8
	comp=Z,3.2nm,0.3s,baz=42,slow=8.4,SNR=54						
SUR				Sn	Sn	00 51 15.1	-1.4
	comp=Z,4.3nm,0.3s,baz=304,slow=20,SNR=7.1						
SUR				Lg	Lg	00 51 52.4	
	comp=Z,7.0nm,0.3s,baz=322,slow=23,SNR=9.0						
SUR	Sutherland	7.54	222	Pn	Pn	00 49 52.7	+1.7
CVNA	Calvinia	7.66	232	*e*P	Pn	00 49 53.0	+0.4
CVNA				*e*S	Sn	00 51 15.7	-3.5
CVNA				AML	AML	00 52 01.0	
	comp=Z,44nm,0.4s						
AUSN	Aus	9.43	269	*e*P	Pn	00 50 17.9	+0.9
AUSN				*e*S	Sn	00 51 58.4	-4.6
AUSN				AML	AML	00 52 53.3	
	comp=Z,8.4nm,0.7s						
ELIM	Elim	9.77	217	*e*P	Pn	00 50 21.4	-0.1
ELIM				*e*S	Sn	00 52 05.9	-5.2
ELIM				AML	AML	00 52 19.6	
	comp=Z,7.2nm,0.6s						
TSUM	Tsumeb	11.45	310	Sn	Sn	00 52 50.5	-2.0
	comp=Z,0.4nm,0.3s,baz=339,slow=13,SNR=4.2						
TSUM				Lg	Lg	00 53 56.0	
	comp=Z,0.8nm,0.3s,baz=249,slow=13,SNR=5.2						
TSUM	Tsumeb	11.45	310	Pn	Pn	00 50 46.5	+2.0
TSUM	Tsumeb	11.45	310	*i* P	Pn	00 50 45.6	+1.0
TSUM	Tsumeb	11.45	310	*i* P	Pn	00 50 45.6	+1.0
LSZ	Lusaka	11.65	7	Pn	Pn	00 50 47.7	+0.3
	comp=Z,0.7nm,0.3s,baz=190,slow=13,SNR=8.3						
LSZ				Lg	Lg	00 54 07.5	
	comp=Z,1.0nm,0.3s,baz=86,slow=21,SNR=5.2						
LSZ	Lusaka	11.65	7	Pn	Pn	00 50 48.1	+0.7
LSZ	Lusaka	11.65	7	*i* P	Pn	00 50 47.9	+0.5
LSZ	Lusaka	11.65	7	*i* P	Pn	00 50 47.9	+0.5
TOA0	Torodi Ar. Sit	46.71	325	P	P	00 56 31.5	+1.5
TOA0				IAmb	IAmb	00 56 33.9	
	comp=Z,1.4nm,0.8s						
TORD	Torodi Ar. Bea	46.71	325	P	P	00 56 32.0	+2.0
	comp=Z,1.0nm,0.6s,baz=143,slow=6.8,SNR=4.9						
TORD	Torodi Ar. Bea	46.71	325	P	P	00 56 29.7	-0.3
SOCY	Socotra	46.98	38	P	P	00 56 33.4	+1.1
SNAA	Sanae	47.73	192		P	00 56 37.8	+0.3
SNAA				IAmb	IAmb	00 56 52.2	
	comp=Z,4.0nm,1.1s						
RAYN	Ar Rayn	53.30	22	P	P	00 57 19.7	-0.4
ESDC	Sonseca Array	72.20	335	P	P	00 59 26.5	+0.7
	comp=Z,1.2nm,1.1s,baz=161,slow=6.5,SNR=4.6						
YKA	Yellowknife Ar	136.29	335	PKP	PKiKP	01 07 25.4	+1.9
	comp=Z,0.1nm,0.4s,baz=61,slow=1.3,SNR=1.7						
NVAR	Mina Array Bea	148.65	300	PKPbc	PKiKP	01 07 52.2	+2.2
	comp=Z,0.6nm,0.5s,baz=114,slow=2.2,SNR=5.8						

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*NEIC **06** 01:01:46.2±1.0, 59°.67N±0°.04×153°.06W±0°.08, h118^{km}±3^{km}, Error ellipse: s-maj=6.1km s-min=5.3km az=115.0*
*AEIC **06** 01:01:47±1.5, 59°.66N±0°.04×153°.06W±0°.07, h110^{km}±4^{km}, ML3.4, Error ellipse: s-maj=5.8km s-min=4.6km az=150.0*
*ANF **06** 01:01:48.3±1.0, 59°.80N×152°.87W, h116^{km}±10^{km}, ML3.9/11, Error ellipse: s-maj=11.1km s-min=6.5km az=159.0*
ISC 06 01:01:45.6±1.5**, 59°.69N**±0°.05×**153°.05W**±0°.05**, h123**^{km}±7^{km}**, n138,** σ1^{s}**02**/159**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OPT	Oil Point	0.10	248		Pn	01 02 02.5	+0.1
ILS	Iliamna Low So	0.27	358		Pn	01 02 03.0	+0.1
IVE	Iliamna Volcan	0.33	3		Pn	01 02 03.2	+0.1
IVE					Sn	01 02 15.5	-0.8
AU22	Augustine Moun	0.36	206		Sn	01 02 15.3	-0.9
AUL	Augustine Lava	0.37	213		Pn	01 02 03.5	+0.3
AUL					Sn	01 02 15.6	-0.7
AUW	Augustine West	0.39	214		Pn	01 02 03.5	+0.2
HOM	Homer	0.71	92	P	Pn	01 02 05.9	+0.7
	baz=270,SNR=7.8						
HOM				S	Sn	01 02 20.3	+0.1
	baz=270						
HOM	Homer	0.71	92		Pn	01 02 05.9	+0.7
HOM					Sn	01 02 20.1	-0.1
RED	Redoubt Volcan	0.74	11		Pn	01 02 06.1	+0.5
RED					Sn	01 02 20.1	-0.7
RSO	Redoubt South	0.79	11		Pn	01 02 06.8	+0.7
NCT	North Crescent	0.88	4		Pn	01 02 07.4	+0.6
NCT					Sn	01 02 22.5	-0.3
DFR	Drift River	0.92	11		Pn	01 02 07.8	+0.6
DFR					Sn	01 02 23.3	-0.3
CNPM	China Poot	0.94	99		Pn	01 02 07.5	+0.3
CNPM					Sn	01 02 23.0	-0.6
BRLK	Bradley Lake	1.10	85		Pn	01 02 09.1	+0.3
BRSE	Bradley Lake S	1.17	86		Pn	01 02 09.8	+0.3
BRSE					Sn	01 02 26.9	-0.8
KAHG	Katmai Hook Gl	1.43	213		Pn	01 02 12.7	+0.2
CAPN	Captain Cook N	1.44	40	P	Pn	01 02 15.2	+2.8
	baz=221						
CAPN	Captain Cook N	1.44	40		Pn	01 02 15.1	+2.8
KAHC	Katmai Hardscr	1.45	225		Pn	01 02 13.0	+0.2
KARR	Katmai Rainbow	1.47	216		Pn	01 02 13.3	+0.4
SPCN	Chakachatna No	1.60	15		Pn	01 02 15.6	+1.2
SPWE	Spurr West	1.61	8		Pn	01 02 16.0	+1.5
SLKM	Skilak Lake	1.64	59		Pn	01 02 15.2	+0.5
SPCP	Crater Peak Br	1.64	15		Pn	01 02 16.2	+1.3
SPCG	Spurr Capps Gl	1.69	17		Pn	01 02 16.6	+1.2
KVTA	Katmai Vly 10	1.75	222		Pn	01 02 16.6	+0.4
KABU	Katmai Buttres	1.84	220		Pn	01 02 17.6	+0.4
KABU					Sn	01 02 40.9	-0.5
O22K	Cooper Landing	1.84	63	P	Pn	01 02 18.4	+1.2
	baz=245						
O22K				S	Sn	01 02 40.9	-0.5
	baz=245						
O22K	Cooper Landing	1.84	63		Pn	01 02 18.2	+1.1
SEW	Seward	1.86	76		Pn	01 02 18.0	+0.7
SVW2	Sparrevohn	1.89	319		Pn	01 02 18.3	+0.5
STLK	Strandline Lak	1.91	18		Pn	01 02 19.3	+1.2
KDAK	Kodiak Island	1.93	173		Pn	01 02 17.4	-0.8
CAHL	Cahill	2.02	216		Pn	01 02 19.8	+0.4
SUA	Susitna One	2.11	32		Pn	01 02 22.1	+1.5
RC01	Rabbit Creek A	2.16	48	P	Pn	01 02 22.3	+1.2
	baz=230,SNR=12						
RC01				S	Sn	01 02 47.9	-0.4
	baz=230						
RC01	Rabbit Creek A	2.16	48		Pn	01 02 22.1	+1.0
RC01					Sn	01 02 47.7	-0.6
SKT	Skwentna	2.41	17		Pn	01 02 25.4	+1.0
OHAK	Old Harbor	2.48	183		Pn	01 02 24.2	-1.0
PLK3	Peulik 3	2.62	221		Pn	01 02 27.5	+0.5
PWL	Port Wells	2.62	61		Pn	01 02 27.5	+0.5
PMR	Palmer	2.71	44		Pn	01 02 28.1	0.0
KNK	Knik Glacier	2.85	51		Pn	01 02 30.3	+0.4
CUT	Chulitna	3.04	25	P	Pn	01 02 34.1	+1.7
	baz=207						
CUT				S	Sn	01 03 08.4	0.0
	baz=207						
SML	Sawmill	3.14	45		Pn	01 02 34.1	+0.3
GLI	Glacier Island	3.19	66		Pn	01 02 33.9	-0.6
SII	Sitkinak Islan	3.20	191		Pn	01 02 33.5	-1.0
PPLA	Purkeypile	3.24	7		Pn	01 02 37.0	+1.8
HIN	Hinchinbrook I	3.36	75		Pn	01 02 37.0	+0.4
FID	Port Fidalgo	3.44	69		Pn	01 02 37.3	-0.4
TT01	Tatalina	3.53	337		Pn	01 02 39.6	+0.8
SCM	Sheep Creek Mo	3.53	50		Pn	01 02 39.7	+0.8
TTA	Tatalina	3.55	338		Pn	01 02 39.8	+0.6
EYAK	Cordova Ski Ar	3.75	74	Pn	Pn	01 02 42.1	+0.4
WAT1	Susitna Watana	3.83	33		Pn	01 02 43.5	+0.7
WAT6	Susitna Watana	3.88	39		Pn	01 02 44.1	+0.5
DIV	Divide	3.89	65		Pn	01 02 44.9	+1.3
WAT2	Susitna Watana	3.92	31		Pn	01 02 44.8	+0.6
KLU	Klutina	3.95	60		Pn	01 02 45.1	+0.6
TRF	Thorofare Moun	4.00	18		Pn	01 02 45.8	+0.6
KTH	Kantishna Hill	4.01	14		Pn	01 02 45.9	+0.7
M24K	Tolsona, Glenn	4.14	51	P	Pn	01 02 48.3	+1.3
	baz=237,SNR=6.6						
M24K				S	Sn	01 03 34.6	0.0
	baz=237						
M24K	Tolsona, Glenn	4.14	51		Pn	01 02 48.3	+1.3
RND	Reindeer	4.23	26		Pn	01 02 49.1	+0.8
DHY	Denali Highway	4.36	36		Pn	01 02 50.6	+0.7
KAIM	Kayak Island	4.36	83	Pn	Pn	01 02 50.7	+0.8
BMRM	Bremner River	4.39	69		Pn	01 02 51.0	+0.7
HMT	Hamilton	4.46	78	Pn	Pn	01 02 52.0	+0.8
MCK	McKinley	4.50	24	P	Pn	01 02 52.9	+1.1
	baz=207,SNR=26						
MCK				S	Sn	01 03 41.8	-1.5
	baz=207						
MCK	McKinley	4.50	24		Pn	01 02 52.9	+1.1
BPAW	Bear Paw Mtn.	4.53	12		Pn	01 02 53.1	+0.9
N25K	Chitina, Valde	4.58	62	P	Pn	01 02 53.9	+1.0
	baz=249,SNR=6.9						
N25K				S	Sn	01 03 43.9	-1.3
	baz=249						
N25K	Chitina, Valde	4.58	62		Pn	01 02 53.8	+0.9
NICHA	Nichawak Mount	4.60	79		Pn	01 02 54.0	+0.9
SUCK	Suckling Hills	4.69	81	Pn	Pn	01 02 55.2	+0.9
BWN	Browne	4.80	19		Pn	01 02 57.0	+1.2
GLB	Gilahina Butte	4.88	65		Pn	01 02 57.6	+0.7
PAX	Paxson	4.91	45		Pn	01 02 58.0	+0.7
KHIT	Khitrov Hills	4.97	77		Pn	01 02 58.6	+0.5
VRDI	Verde Repeater	4.99	68	Pn	Pn	01 02 59.7	+1.2
CRQM	Cirque	5.05	74		Pn	01 03 00.1	+0.7
TGL	Tana Glacier	5.20	74		Pn	01 03 02.4	+1.1
KULT	Kultieth River	5.22	79		Pn	01 03 02.4	+1.0
MCARA	McCarthy VSAT	5.23	67	Pn	Pn	01 03 02.5	+1.0
NEA2	Nenana	5.26	19	P	Pn	01 03 02.2	+0.2
	baz=202,SNR=26						
NEA2				S	Sn	01 04 00.1	-1.3
	baz=202						
NEA2	Nenana	5.26	19		Pn	01 03 02.4	+0.5
WRH	Wood River Hil	5.33	24		Pn	01 03 03.1	+0.2
ISLE	Juniper Island	5.43	76		Pn	01 03 05.4	+1.0
PTPK	Patty Peak	5.45	69		Pn	01 03 06.2	+1.6
KIAG	Kiagna River	5.46	72		Pn	01 03 05.9	+1.2
MLY	Manley	5.47	10	P	Pn	01 03 05.4	+0.7
	baz=192,SNR=25						
MLY	Manley	5.47	10		Pn	01 03 05.5	+0.7
BALM	Baldy	5.48	71		Pn	01 03 06.2	+1.2
HDA	Harding Lake	5.53	29	P	Pn	01 03 06.3	+0.7
	baz=214,SNR=18						
HDA				S	Sn	01 04 05.9	-2.1
	baz=214						
HDA				S	Sn	01 04 05.9	-2.1
	baz=214						
HDA	Harding Lake	5.53	29		Pn	01 03 05.9	+0.3
CCB	Clear Creek Bu	5.54	24		Pn	01 03 05.8	+0.1
MENT	Mentasta	5.55	50		Pn	01 03 07.5	+1.7
MESA	MESA	5.60	80		Pn	01 03 07.9	+1.2
RIDG	Independent Ri	5.63	40		Pn	01 03 08.1	+1.2
PS08	TAPS Pump Stn8	5.68	28		Pn	01 03 07.7	+0.2
YAH	Yahtse	5.71	78		Pn	01 03 09.4	+1.3
GRNC	Granite Creek	5.73	75		Pn	01 03 09.6	+1.2
TCOL	CIGO, UAF Yank	5.74	23	P	Pn	01 03 08.9	+0.7
	baz=207,SNR=11						
TCOL				S	Sn	01 04 10.9	-1.9
	baz=207						
TCOL	CIGO, UAF Yank	5.74	23		Pn	01 03 09.2	+0.9
COLA	College	5.74	23		Pn	01 03 08.8	+0.5
I23K	Minto, Yukon-K	5.74	16	P	Pn	01 03 09.0	+0.7
	baz=199,SNR=31						
I23K	Minto, Yukon-K	5.74	16		Pn	01 03 09.0	+0.7
MDM	Murphy Dome	5.74	21		Pn	01 03 08.7	+0.3
BARN	Barnard Glacie	5.81	71		Pn	01 03 11.0	+1.5
DOT	Dot Lake	5.83	43	Pn	Pn	01 03 10.6	+1.0
IL31		5.85	27		Pn	01 03 10.1	+0.2
ILAR	Eielson Array	5.85	27	Pn	Pn	01 03 09.9	+0.1
CTGM	Chitina Glacie	5.96	73		Pn	01 03 13.1	+1.7
TABL	Table Mountain	6.01	78		Pn	01 03 13.1	+0.9
POKR	Poker Plat Res	6.04	23	P	Pn	01 03 12.8	+0.5
	baz=208,SNR=9.4						
POKR				S	Sn	01 04 17.2	-2.9
	baz=208						
POKR	Poker Plat Res	6.04	23		Pn	01 03 12.5	+0.1
SCRK	Sand Creek	6.07	41	P	Pn	01 03 13.3	+0.4
	baz=229						
SCRK				S	Sn	01 04 19.0	-2.1
	baz=229						
SCRK	Sand Creek	6.07	41		Pn	01 03 13.3	+0.4
LOGN	Logan Glacier	6.10	74		Pn	01 03 14.7	+1.3
IM03		6.33	357		Pn	01 03 17.3	+1.1
IMAR	Indian Mountai	6.33	357		Pn	01 03 17.5	+1.3
YUK2	White River	6.34	65		Pn	01 03 18.7	+2.1
PS06	TAPS Pump Stn6	6.37	12		Pn	01 03 17.9	+1.0
BC03		6.38	53		Pn	01 03 18.2	+1.3
BCAR	Beaver Creek A	6.38	53		Pn	01 03 18.6	+1.5
PCA	Pinnacle	6.45	81		Pn	01 03 19.6	+1.6
YUK3	Moose Creek	6.52	66		Pn	01 03 21.0	+1.9
PRP	Porcupine Dome	6.79	27		Pn	01 03 23.1	+0.4
EGAK	Eagle	7.53	42	Pn	Pn	01 03 33.3	+0.8
COLD	Coldfoot	7.67	8	P	Pn	01 03 34.9	+0.5
	baz=191,SNR=11						
COLD	Coldfoot	7.67	8		Pn	01 03 34.8	+0.5
FYU	Fort Yukon	7.75	24		Pn	01 03 36.2	+0.8
HYT	Haines Junctio	7.81	75	Pn	Pn	01 03 37.5	+1.0
BM03	Burnt Mountain	8.61	22		Pn	01 03 47.8	+0.6
BMAR	Burnt Mountain	8.63	22		Pn	01 03 47.3	0.0
WHY	Whitehorse	9.10	76	Pn	Pn	01 03 55.3	+1.4
TOLK	Toolik Lake Re	9.11	8	P	Pn	01 03 53.1	-0.7
	baz=191						
TOLK	Toolik Lake Re	9.11	8	Pn	Pn	01 03 55.4	+1.6

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*BJI **06** 01:25:05.3±0.0, 33°.44N×135°.06E, h10^{km}, mB4.9/48, mb4.7/63, Ms4.7/62, Ms7 4.4/59*
*IDC **06** 01:25:10.2±0.5, 33°.78N×134°.37E, h0^{km}, mb4.4/24, mb1 4.6/32, mb1mx4.4/47, mbtmp4.4/32, ML3.9/7, MS3.9/32, Ms1 3.9/32, ms1mx3.8/40, Error ellipse: s-maj=13.0km s-min=11.2km az=150.0*
*NEIC **06** 01:25:11.8±1.1, 33°.76N±0°.05×134°.40E±0°.04, h11^{km}±4^{km}, mb4.8/104, Mwr4.7/21, Error ellipse: s-maj=8.0km s-min=5.3km az=176.0*
*MOS **06** 01:25:11.1±1.0, 33°.82N×134°.33E, h17^{km}, mb5.0/45,*

MS4.2/7,Error ellipse: s-maj=6.5km s-min=4.0km az=116.7

*NEIC **06** 01:25:12.4,33°.74N×134°.36E,h9^{km},Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-0.59; $M_{\theta\theta}$1.34; $M_{\phi\phi}$-0.75; $M_{r\theta}$0.16; $M_{\theta\phi}$-0.57; $M_{\phi r}$0.62; Fault plane solution: $M_0$1.45000×10^{16} NP1:ϕ_s246.21000°, δ64.03000°,λ-150.62000°. NP2:ϕ_s142.36000°, δ63.83000°,λ-29.20000°. Principal axes: T 1.4849, Plg0.0000°, Azm14.0000°; N -0.0796, Plg52.0000°, Azm284.0000°; P -1.4052, Plg38.0000°, Azm104.0000°;*

*JMA **06** 01:25:12.4,33°.73N×134°.37E,h11^{km},M5.1 Broadband fault plane solution: P waves. NP1:ϕ_s40.00000°, δ51.00000°,λ156.00000°. NP2:ϕ_s145.00000°,δ72.00000°, λ42.00000°. Principal axes: T Plg42.0000°, Azm10.0000°; N Plg45.0000°, Azm165.0000°; P Plg13.0000°, Azm268.0000°;*

*NIED **06** 01:25:12.4,33°.73N×134°.37E,h11^{km},MW4.8,Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.04; $M_{\theta\theta}$1.36; $M_{\phi\phi}$-1.32; $M_{r\theta}$0.12; $M_{\theta\phi}$-0.61; $M_{\phi r}$0.31; Fault plane solution: $M_0$1.51000×10^{16} NP1: ϕ_s238.00000°,δ83.00000°,λ-170.00000°. NP2: ϕ_s146.00000°,δ80.00000°,λ-7.00000°.*

*GCMT **06** 01:25:13.8±0.3,33°.76N±0°.02×134°.27E±0°.02,h15^{km}±1^{km}, MW4.8/89,Moment Tensor Solution. s18,c18; s89,c119; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.33±.08; $M_{\theta\theta}$1.52±.06; $M_{\phi\phi}$-1.85±.08; $M_{r\theta}$0.08±.13; $M_{\theta\phi}$-0.72±.05; $M_{\phi r}$-0.15±.13; Best double couple: $M_0$1.84100×10^{16} NP1:ϕ_s57.00000°,δ85.00000°,λ179.00000°. NP2: ϕ_s147.00000°,δ89.00000°,λ5.00000°. Principal axes: T 1.6770, Plg5.0000°, Azm12.0000°; N 0.3270, Plg84.0000°, Azm157.0000°; P -2.0050, Plg3.0000°, Azm282.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 06 01:25:13.0±0.5**,33°.75N**±0°.03×**134°.42E**±0°.02**,h16**^{km}±3^{km}**, n479,**σ**1**^{s}**71**/469**,mb4.8**/131**,MS4.1**/43**,41C-31D,Fault plane solution: NP1:**ϕ_s139.28880°**,**δ70.59429°, λ45.55264°. **NP2:**ϕ_s30.57617°**,**δ47.67483°**,**λ153.29500°. **Principal axes:** T Plg45.3213°**,** Azm4.5227°**;** N Plg41.3359°**,** Azm157.3399°**;** P Plg13.9563°**,** Azm259.9670°**; Shikoku**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAI	**Aioi**	**0.05**	**36**	⇓P	**Pg**	**01 25 15.0**	**-1.0**
JAI				S	**Sg**	**01 25 17.0**	**-1.0**
JMAF	**Mimaanabuki**	**0.36**	**323**	⇑P	**Pg**	**01 25 19.7**	**-0.8**
JMAF				S	**Sg**	**01 25 24.4**	**-1.2**
MRT2	**Murotomisaki 2**	**0.43**	**212**	⇑P	**Pg**	**01 25 20.2**	**-1.5**
MRT2				eS	**Sg**	**01 25 25.2**	**-2.4**
JMN	**Monobe**	**0.45**	**267**	⇓P	**Pg**	**01 25 20.7**	**-1.3**
JMN				eS	**Sg**	**01 25 26.1**	**-2.1**
JMN	**Monobe**	**0.45**	**267**	Pg	**Pg**	**01 25 20.7**	**-1.3**
JMN				Sg	**Sg**	**01 25 26.4**	**-1.7**
JJS	**Sakaide**	**0.74**	**327**	⇑P	**Pb**	**01 25 26.2**	**-1.2**
JJS				eS	**Sb**	**01 25 35.9**	**-1.4**
JWM	**Minabe**	**0.79**	**83**	⇓P	**Pb**	**01 25 27.7**	**-0.5**
JWM				eS	**Sb**	**01 25 38.4**	**-0.2**
JAWN	**Awajishima-nag**	**0.83**	**29**	⇑P	**Pb**	**01 25 28.7**	**-0.4**
JAWN				eS	**Sb**	**01 25 40.1**	**+0.1**
JTNC	**Tanabenakahech**	**0.99**	**86**	⇓P	**Pb**	**01 25 31.1**	**-0.7**
JTNC				S	**Sb**	**01 25 44.6**	**-0.1**
JWY	**Kouya**	**1.08**	**64**	⇑P	**Pb**	**01 25 32.9**	**-0.4**
JET	**Tanbara**	**1.14**	**272**	⇓P	**Pn**	**01 25 32.2**	**-2.1**
JMIK	**Miki**	**1.18**	**26**	⇑P	**Pn**	**01 25 34.3**	**-0.4**
JAD	**Aida**	**1.20**	**350**	⇑P	**Pn**	**01 25 34.0**	**-1.1**
JKU	**Kubokawa**	**1.22**	**249**	⇓P	**Pn**	**01 25 33.4**	**-1.9**
JKS	**Kasai**	**1.27**	**16**	⇑P	**Pn**	**01 25 35.3**	**-0.8**
JMMH	**Miemihama**	**1.34**	**87**	⇓P	**Pn**	**01 25 35.9**	**-1.1**
JHE	**Heguri**	**1.38**	**49**	⇑P	**Pn**	**01 25 37.1**	**-0.5**
UWA2	**Uwa jima 2**	**1.59**	**251**	⇓P	**Pn**	**01 25 38.7**	**-1.8**
JHM	**Kurahashi**	**1.62**	**284**	⇓P	**Pn**	**01 25 39.7**	**-1.1**
JTO	**Tosashimizu**	**1.62**	**237**	P	**Pn**	**01 25 38.7**	**-2.1**
JNA	**Nagahama**	**1.63**	**264**	⇓P	**Pn**	**01 25 39.4**	**-1.6**
JHS	**Saijyo**	**1.64**	**319**	⇑P	**Pn**	**01 25 40.4**	**-0.8**
JHS	**Saijyo**	**1.64**	**319**	Pn	**Pn**	**01 25 40.4**	**-0.8**
JHS				Sn	**Sn**	**01 26 01.8**	**-0.2**
JKR	**Kurayoshi**	**1.69**	**343**	⇑P	**Pn**	**01 25 41.4**	**-0.5**
JWT	**Wachi**	**1.73**	**28**	⇑P	**Pn**	**01 25 42.1**	**-0.2**
JWT	**Wachi**	**1.73**	**28**	Pn	**Pn**	**01 25 41.9**	**-0.4**
JKSM	**Kasumi**	**1.84**	**6**	⇑P	**Pn**	**01 25 43.8**	**-0.1**
JHT	**Toyohira**	**1.89**	**299**	⇓P	**Pn**	**01 25 43.6**	**-0.9**
TSUJ	**Tsu 2**	**1.91**	**60**	P	**Pn**	**01 25 44.3**	**-0.5**
JKY	**Yasaka**	**1.95**	**17**	⇑P	**Pn**	**01 25 45.3**	**-0.1**
JIE	**Ise**	**2.00**	**71**	P	**Pn**	**01 25 45.7**	**-0.4**
JGT2	**ShimaneMisato**	**2.05**	**310**	⇑P	**Pn**	**01 25 46.1**	**-0.7**
JNM	**Ikuma**	**2.08**	**327**	P	**Pn**	**01 25 47.2**	**0.0**
JKD	**Kudamatsu**	**2.14**	**279**	⇓P	**Pn**	**01 25 47.0**	**-1.0**
JFM	**Mihama**	**2.19**	**36**	⇑P	**Pn**	**01 25 48.9**	**+0.2**
JHIK	**Hikimi**	**2.21**	**291**	⇓P	**Pn**	**01 25 47.9**	**-1.0**
JAA	**Atsumi**	**2.42**	**68**	P	**Pn**	**01 25 52.3**	**+0.4**
JYTA	**Yamagatataniai**	**2.65**	**45**	⇑P	**Pn**	**01 25 55.5**	**+0.5**
JYTA				S	**Sn**	**01 26 28.0**	**+1.2**
INU	**Inuyama**	**2.67**	**53**	Pn	**Pn**	**01 25 55.2**	**-0.1**
JAO	**Obara**	**2.79**	**56**	⇑P	**Pn**	**01 25 57.4**	**+0.4**
JTY	**Toyota**	**2.83**	**281**	⇓P	**Pn**	**01 25 56.7**	**-0.8**
HMMJ	**Hamamatsu 2**	**2.95**	**67**	P	**Pn**	**01 25 59.4**	**+0.3**
JKG	**Kaga**	**2.97**	**31**	P	**Pn**	**01 26 00.1**	**+0.8**
JYZW	**Yoshizawa**	**3.01**	**65**	P	**Pn**	**01 26 00.7**	**+0.8**
JFA	**Akaike**	**3.02**	**270**	⇓P	**Pn**	**01 25 58.7**	**-1.4**
JNU	**Nakatsue**	**3.03**	**259**	Pn	**Pn**	**01 26 00.0**	**-0.2**
	13nm,0.3s,baz=34,slow=2.9,SNR=87						
JNU				Pg	**Pb**	**01 26 07.9**	**+1.5**
	140nm,0.3s,baz=70,slow=3.6,SNR=18						
JNU				Lg	Lg	01 26 47.1	
	15nm,0.3s,baz=156,slow=16,SNR=1.9						
JNU	**Nakatsue**	**3.03**	**259**	Pn	**Pn**	**01 25 59.6**	**-0.6**
JGF	**Kuroka**	**3.04**	**52**	P	**Pn**	**01 26 00.5**	**0.0**
JGF	**Kuroka**	**3.04**	**52**	Pn	**Pn**	**01 25 59.8**	**-0.7**
JSG	**Sagara**	**3.25**	**73**		**Pn**	**01 26 02.9**	**-0.4**
JNY	**Yasuok**	**3.26**	**60**	P	**Pn**	**01 26 03.9**	**+0.4**
SHZ3	**Shizuoka 3**	**3.40**	**66**	P	**Pn**	**01 26 05.9**	**+0.6**
JGN	**Niukaw**	**3.42**	**43**	P	**Pn**	**01 26 06.1**	**+0.4**
JNT	**Takato**	**3.72**	**54**	P	**Pn**	**01 26 10.5**	**+0.7**
JHTM	**Izuhatsuma**	**3.98**	**71**	P	**Pn**	**01 26 13.8**	**+0.5**
JNG	**Nsakai**	**4.01**	**48**	P	**Pn**	**01 26 14.7**	**+0.8**
JSU	**Suzuyama**	**4.03**	**237**	Pn	**Pn**	**01 26 12.7**	**-1.3**
JOD2	**Odawara 2**	**4.14**	**67**	P	**Pn**	**01 26 16.7**	**+1.2**
MAT	**Matsushiro**	**4.17**	**47**	P	**Pn**	**01 26 16.6**	**+0.6**
MAT				eS	**Sn**	**01 27 06.7**	**+2.4**
MAT	**Matsushiro**	**4.17**	**47**	P	**Pn**	**01 26 16.5**	**+0.6**
MAJO	**Matsushiro**	**4.17**	**47**	c iP	**Pn**	**01 26 16.4**	**+0.5**
MAJO	**Matsushiro**	**4.17**	**47**	Pn	**Pn**	**01 26 16.3**	**+0.5**
MJAR	**Matsushiro Arr**	**4.17**	**47**	Pn	**Pn**	**01 26 17.2**	**+1.3**
	8.2nm,0.3s,baz=251,slow=14,SNR=199						
MJAR				Lg	Lg	01 27 29.9	
	1.2nm,0.3s,baz=221,slow=26,SNR=7.8						
MJAR				LR	LR	01 28 18.0	
	comp=Z,2µm,18.9s,baz=245,slow=45						
MJAR	**Matsushiro Arr**	**4.17**	**47**	P	**Pn**	**01 26 15.7**	**-0.2**
MJAR	**Matsushiro Arr**	**4.17**	**47**		**Pn**	**01 26 15.7**	**-0.2**
MJB9	**Matsu-Tunnel**	**4.17**	**47**		**Pn**	**01 26 17.0**	**+1.0**
JTU	**Tsushima**	**4.23**	**282**	Pn	**Pn**	**01 26 15.4**	**-1.3**
JRY	**Ryogami san**	**4.32**	**57**	P	**Pn**	**01 26 19.0**	**+1.0**
JSGW	**Sagamiharawaka**	**4.36**	**64**	P	**Pn**	**01 26 19.7**	**+1.2**
JGK	**Kuni**	**4.45**	**50**	P	**Pn**	**01 26 21.6**	**+1.8**
JHJ	**Hachijo jima 2**	**4.53**	**97**	Pn	**Pn**	**01 26 20.9**	**+0.1**
	41nm,0.3s,baz=88,slow=22,SNR=2.0						
JHJ				Sn	**Sn**	**01 27 11.2**	**-2.0**
	21nm,0.3s,baz=95,slow=21,SNR=1.6						
JHJ				LR	LR	01 27 13.8	
	comp=Z,600nm,19.1s,baz=268,slow=27						
JHJ2	**Mitsune**	**4.56**	**97**	Pn	**Pn**	**01 26 20.8**	**-0.5**
JSD	**Sado**	**5.29**	**35**	Pn	**Pn**	**01 26 31.4**	**+0.1**
JYT	**Yasato**	**5.34**	**61**	Pn	**Pn**	**01 26 32.6**	**+0.6**
TJN	**Taejon**	**6.35**	**296**	⇑eP	**Pn**	**01 26 43.2**	**-2.6**
KSRS	**Korea Array**	**6.45**	**307**	Pn	**Pn**	**01 26 46.2**	**-1.0**
	3.4nm,0.3s,baz=123,slow=14,SNR=19						
KSRS				LR	LR	01 28 57.0	
	comp=Z,502nm,20.9s,baz=164,slow=35						
KSAR	**Wonju Array Be**	**6.47**	**307**	P	**Pn**	**01 26 46.8**	**-0.7**
KSAR	**Wonju Array Be**	**6.47**	**307**		**Pn**	**01 26 46.8**	**-0.7**
KS19	**Wonju Array Si**	**6.51**	**307**		**Pn**	**01 26 46.4**	**-1.7**
JMM	**Marumori**	**6.61**	**50**		**Pn**	**01 26 50.4**	**+1.1**
INCN	**Inchon**	**7.35**	**303**	P	**Pn**	**01 26 58.7**	**-0.9**
INCN	**Inchon**	**7.35**	**303**	Pn	**Pn**	**01 26 58.7**	**-0.9**
JOW	**Kunigami**	**8.70**	**219**	Pn	**Pn**	**01 27 18.1**	**-0.1**
	3.4nm,0.3s,baz=117,slow=17,SNR=3.4						
MSHR	**Mys Shultsa**	**9.18**	**345**	⇑eP	**Pn**	**01 27 22.7**	**-1.9**
JCJ	**Chichijima**	**9.43**	**133**	LR	LR	01 30 42.6	
	comp=Z,576nm,19.6s,baz=136,slow=35						
USA0B	**Ussuriysk Arra**	**10.60**	**350**	P	**Pn**	**01 27 43.4**	**-0.7**
USA0B	**Ussuriysk Arra**	**10.60**	**350**	Pn	**Pn**	**01 27 43.4**	**-0.7**
USRK	**Ussuriysk Ar.**	**10.60**	**350**	Pn	**Pn**	**01 27 45.1**	**+1.0**
	baz=156,slow=13,SNR=8.0						
USRK				LR	LR	01 31 31.7	
	comp=Z,509nm,18.6s,baz=159,slow=36						
USRK	**Ussuriysk Ar.**	**10.60**	**350**		**Pn**	**01 27 44.4**	**+0.2**
JEW	**Eniwo**	**10.62**	**29**	Pn	**Pn**	**01 27 43.7**	**-0.6**
ERM	**Erimo**	**10.75**	**37**	⇑eP	**Pn**	**01 27 46.8**	**+0.7**
ERM				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ERM	**Erimo**	**10.75**	**37**	Pn	**Pn**	**01 27 46.6**	**+0.5**
MDJ	**Mudanjiang**	**11.47**	**342**	P	**Pn**	**01 27 57.5**	**+1.5**
MDJ				pP		01 28 00.8	
MDJ				sP		01 28 03.1	
MDJ				S	**Sn**	**01 30 08.9**	**+5.1**
MDJ				SS	**SnSn**	**01 30 25.2**	**+9.3**
MDJ				pmax	pmax		
	comp=Z,6.0nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,250nm,5.1s						
MDJ				LR	LR		
	comp=Z,1µm,12.1s						
MDJ				LR	LR		
	comp=Z,2µm,12.1s						
MDJ				LR	LR		
	comp=Z,840nm,14.9s						
MDJ	**Mudanjiang**	**11.47**	**342**		**Pn**	**01 27 54.9**	**-1.2**
DL2	**Dalian**	**11.52**	**300**	P	Pn	01 27 51.7	-5.0
DL2				S	Sn	01 29 55.2	-10
DL2				pmax	pmax		
	comp=Z,54nm,1.2s						
DL2				pmax	pmax		
	comp=Z,510nm,6.4s						
DL2				LR	LR		
	comp=N,4µm,13.9s						
DL2				LR	LR		
	comp=E,2µm,15.7s						
DL2				LR	LR		
	comp=Z,2µm,10.2s						
ASAJ	**Asahikawa**	**12.14**	**29**	Pn	**Pn**	**01 28 06.4**	**+1.2**
	comp=Z,0.8nm,0.3s,baz=251,slow=24,SNR=5.1						
ASAJ				LR	LR	01 33 34.1	
	comp=Z,269nm,19.0s,baz=228,slow=42						
NJ2	**Nanjing**	**13.19**	**267**	eP	**Pn**	**01 28 18.2**	**-1.4**
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
NJ2				LR	LR		
	comp=Z,1µm,10.9s						
NJ2				LR	LR		
	comp=Z,660nm,11.1s						
NJ2				LR	LR		
	comp=Z,700nm,13.7s						
YSS	**Yuzh-Sakhalins**	**14.62**	**23**	eP	**Pn**	**01 28 37.2**	**-1.9**
YSS				eS	**Sn**	**01 31 16.7**	**-4.0**
YSS				pmax	pmax		
	comp=Z,20nm,1.2s						
YSS				MLR	MLR		
	comp=E,600nm,15.0s						
YSS				MLR	MLR		
	comp=Z,1µm,15.0s						
YSS	**Yuzh-Sakhalins**	**14.62**	**23**		**Pn**	**01 28 37.1**	**-2.0**
KLR	**Kul'dur**	**15.59**	**353**	Pn	**Pn**	**01 28 52.8**	**+0.9**
	comp=Z,0.3nm,0.3s,baz=171,slow=12,SNR=24						
KLR				LR	LR	01 34 37.8	
	comp=Z,250nm,18.7s,baz=170,slow=36						
KLR	**Kul'dur**	**15.59**	**353**	ceP	**Pn**	**01 28 53.0**	**+1.1**
KLR				pmax	pmax		
	comp=Z,14nm,0.8s						
BJT	**Baijiatuau**	**15.87**	**298**	P	**Pn**	**01 28 52.5**	**-3.1**
BJT				pmax	pmax		
	comp=Z,33nm,0.8s						
BJT	**Baijiatuau**	**15.87**	**298**	Pn	**Pn**	**01 28 52.5**	**-3.1**
BJI	**Beijing**	**15.88**	**299**	P	**P**	**01 29 01.8**	**+2.5**
BJI				S	**Sn**	**01 31 52.9**	**+1.7**
BJI				pmax	pmax		
	comp=Z,11nm,1.4s						
BJI				pmax	pmax		
	comp=Z,150nm,4.3s						
BJI				LR	LR		
	comp=Z,2µm,15.7s						
BJI				LR	LR		
	comp=Z,1µm,19.0s						
BJI				LR	LR		
	comp=Z,520nm,18.0s						
GRNR	**Gornyy**	**17.07**	**4**	⇓iP	**Pn**	**01 29 07.5**	**-3.3**
GRNR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
GRNR				MLR	MLR		
	comp=Z,480nm,15.0s						
TYV	**Tymovskoe**	**18.13**	**17**	eP	Pn	01 29 16.1	-7.8
TYV				pmax	pmax		
	comp=Z,8.0nm,0.8s						
HIA	**Hailar**	**18.95**	**329**	deP	**Pn**	**01 29 34.1**	**+0.2**
HIA				pmax	pmax		
	comp=Z,11nm,1.0s						
HIA	**Hailar**	**18.95**	**329**	P	**P**	**01 29 29.3**	**-3.9**
HHC	**Hu-ho-hao-te**	**19.48**	**298**	eP	**Pn**	**01 29 40.3**	**-0.2**
HHC				sP	sP	01 29 47.1	+0.9
HHC				S	**Sn**	**01 33 18.0**	**-0.8**
HHC				sS	sS	01 33 28.1	+1.7
HHC				pmax	pmax		
	comp=Z,33nm,0.8s						
HHC				pmax	pmax		
	comp=Z,490nm,4.1s						
HHC				LR	LR		
	comp=Z,910nm,11.0s						
HHC				LR	LR		
	comp=Z,940nm,11.1s						
HHC				LR	LR		
	comp=Z,1µm,12.1s						
SZP	**Santa**	**20.43**	**221**	P	**P**	**01 29 48.4**	**-1.1**
BTO	**Baotou**	**20.57**	**296**	eP	Pn	01 30 01.5	+8.1
BTO				S	Sn	01 33 49.1	+4.1
ZEA	**Zeya**	**20.62**	**348**	eP	**P**	**01 29 50.3**	**-1.0**
ZEA				pmax	pmax		
	comp=E,10.0nm,0.7s						
ZEA				pmax	pmax		
	comp=N,20nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,40nm,1.0s						
ZEA				MLR	MLR		
	comp=N,300nm,12.0s						
ZEA				MLR	MLR		
	comp=Z,500nm,15.0s						
XAN	**Xi'an**	**21.16**	**278**	P	**P**	**01 30 03.3**	**+5.9**
XAN				sP	sP	01 30 09.8	+5.4
XAN				PP	**PnPn**	**01 30 26.7**	**+10**
XAN				S	Sn	01 33 58.8	-0.3
XAN				pmax	pmax		
	comp=Z,32nm,0.8s						
XAN				pmax	pmax		
	comp=Z,170nm,4.0s						
XAN				LR	LR		
	comp=Z,720nm,12.8s						
XAN				LR	LR		
	comp=Z,510nm,9.8s						
XAN				LR	LR		
	comp=Z,830nm,13.9s						
ENH	**Enshi**	**21.41**	**267**	P	**P**	**01 29 58.5**	**-1.6**
GUMO	**Guam**	**22.21**	**152**	LR	LR	01 35 35.1	
	comp=Z,171nm,21.9s,baz=240,slow=28						
SKR	**Severo-Kuril's**	**23.20**	**37**	eP	**P**	**01 30 23.3**	**+4.5**
SKR				eS	**S**	**01 34 33.2**	**+3.3**
SKR				pmax	pmax		
	comp=Z,63nm,0.8s						
SKR				pmax	pmax		
	comp=Z,300nm,3.2s						
SKR				MLR	MLR		
	comp=Z,300nm,17.0s						
SKR				MLR	MLR		
	comp=Z,600nm,15.0s						
ULN	**Ulaanbaatar**	**24.89**	**313**	⇑eP	**P**	**01 30 35.7**	**+0.6**
ULN				pmax	pmax		
	comp=Z,14nm,1.7s						
ULN	**Ulaanbaatar**	**24.89**	**313**	P	**P**	**01 30 34.1**	**-1.0**
GYA	**Guiyang**	**25.04**	**261**	⇑P	**P**	**01 30 43.1**	**+6.5**
GYA				S	**S**	**01 35 06.6**	**+6.3**
GYA				pmax	pmax		
	comp=Z,14nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,7.6s						
GYA				LR	LR		
	comp=N,2µm,12.3s						
GYA				LR	LR		
	comp=E,710nm,16.1s						
GYA				LR	LR		
	comp=Z,950nm,12.3s						
LZH	**Lanzhou**	**25.13**	**284**	eP	**P**	**01 30 41.0**	**+3.6**
LZH				pP	sP	01 30 45.4	+0.9
LZH				sP	pP	01 30 49.4	+6.9
LZH				eS	**S**	**01 35 07.9**	**+6.2**
LZH				sS	sS	01 35 19.8	+10
LZH				SS	SnSn	01 36 11.6	+20
LZH				pmax	pmax		
	comp=Z,57nm,1.1s						
LZH				pmax	pmax		
	comp=Z,240nm,4.3s						
LZH				LR	LR		
	comp=Z,860nm,10.8s						
LZH				LR	LR		
	comp=Z,940nm,12.5s						
LZH				LR	LR		
	comp=Z,510nm,12.7s						
SONM	**Songino Array**	**25.28**	**312**	P	**P**	**01 30 38.2**	**-0.4**
	comp=Z,8.6nm,1.0s,baz=124,slow=11,SNR=28						
SONM				LR	LR	01 39 59.3	
	comp=Z,277nm,18.2s,baz=95,slow=35						
SONM	**Songino Array**	**25.28**	**312**	P	**P**	**01 30 38.0**	**-0.6**
SONM				pmax	pmax		
	comp=Z,14nm,0.8s						
SONM	**Songino Array**	**25.28**	**312**	P	**P**	**01 30 38.0**	**-0.6**
SONM				IAmb	IAmb	01 30 45.3	
	comp=Z,14nm,0.8s						
PEA0B	**Petropavlovsk-**	**25.49**	**34**	deP	**P**	**01 30 40.6**	**+0.3**
PEA0B	**Petropavlovsk-**	**25.49**	**34**	P	**P**	**01 30 38.7**	**-1.6**
PETK	**Petropavlovsk-**	**25.49**	**34**	P	**P**	**01 30 39.9**	**-0.4**
	comp=Z,28nm,0.8s,baz=212,slow=5.3,SNR=25						
PETK				LR	LR	01 42 08.5	
	comp=Z,197nm,18.1s,baz=223,slow=40						
PETK	**Petropavlovsk-**	**25.49**	**34**	P	**P**	**01 30 40.4**	**+0.1**
PET	**Petropavlovsk**	**25.89**	**35**	eP	**P**	**01 30 45.7**	**+1.9**
PET				eS	**S**	**01 35 10.9**	**-2.0**
PET						01 36 28.6	
PET				pmax	pmax		
	comp=Z,47nm,1.3s						
PET				MLR	MLR		
	comp=Z,700nm,17.0s						
PET				MLR	MLR		
	comp=Z,1µm,14.0s						
CD2	**Chengdu**	**26.02**	**272**	P	**P**	**01 30 44.3**	**-1.0**
CD2				S	**S**	**01 35 23.5**	**+7.9**
CD2				pmax	pmax		
	comp=Z,20nm,0.6s						
CD2				LR	LR		
	comp=Z,2µm,12.2s						
CD2				LR	LR		
	comp=Z,1µm,11.6s						
CD2				LR	LR		
	comp=Z,1µm,12.9s						
QIZ	**Qiongzhong**	**26.36**	**242**	P	**P**	**01 30 48.1**	**-0.3**
QIZ				S	**S**	**01 35 22.9**	**+1.9**
QIZ				sS	**pS**	**01 35 26.7**	**-0.4**
QIZ				LR	LR		
	comp=Z,810nm,14.3s						
QIZ				LR	LR		
	comp=Z,860nm,12.8s						
QIZ				LR	LR		
	comp=Z,500nm,9.2s						
BOD	**Bodaibo**	**27.74**	**336**	eP	**P**	**01 30 58.2**	**-2.3**
BOD				pmax	pmax		
	comp=Z,11nm,1.5s						
DAV	**Davao City (W)**	**27.79**	**199**	LR	LR	01 41 40.9	
	comp=Z,133nm,20.6s,baz=303,slow=36						
MA2	**Magadan**	**28.00**	**18**	⇓eP	**P**	**01 31 02.9**	**+0.1**
MA2				pmax	pmax		
	comp=Z,6.0nm,0.7s						
MA2	**Magadan**	**28.00**	**18**	P	**P**	**01 31 02.6**	**-0.2**
MA2				IAmb	IAmb	01 31 11.6	
	comp=Z,14nm,1.0s						
ZAK	**Zakamensk**	**28.19**	**316**	eP	**P**	**01 31 04.1**	**-0.6**
ZAK				pmax	pmax		
	comp=Z,15nm,1.1s						
GTA	**Gaotai**	**28.24**	**292**	eP	**P**	**01 31 08.1**	**+2.8**
GTA				pP	sP	01 31 15.2	+2.7
GTA				sP	pP	01 31 18.4	+8.0
GTA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,75nm,5.2s						
GTA				LR	LR		
	comp=Z,330nm,14.2s						
GTA				LR	LR		
	comp=Z,460nm,13.1s						
GTA				LR	LR		
	comp=Z,580nm,13.8s						
YAK	**Yakutsk**	**28.46**	**355**	LR	LR	01 42 01.5	
	comp=Z,305nm,19.1s,baz=152,slow=36						
YAK	**Yakutsk**	**28.46**	**355**	eP	**P**	**01 31 05.9**	**-0.9**
YAK				e*PP	**pP**	**01 31 11.5**	**-0.4**
YAK				e		01 31 54.1	
YAK				ePPP	PPP	01 32 05.1	
YAK				e		01 34 17.1	
YAK				eS	**S**	**01 35 54.1**	**+0.8**
YAK				e*SS	**sS**	**01 36 07.0**	**+5.2**
YAK				eSS	**SnSn**	**01 37 14.3**	**+2.4**
YAK				pmax	pmax		
	comp=Z,22nm,0.8s						
YAK				pmax	pmax		
	comp=N,9.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,2.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,125nm,3.3s						
YAK				pmax	pmax		
	comp=N,38nm,3.2s						
YAK				pmax	pmax		
	comp=E,52nm,3.5s						
YAK				smax	smax		
	comp=N,59nm,3.4s						
YAK				smax	smax		
	comp=E,52nm,3.4s						
YAK				MLR	MLR		
	comp=Z,214nm,16.0s						
YAK				MLR	MLR		
	comp=N,190nm,18.0s						
YAK				MLR	MLR		
	comp=E,107nm,17.0s						
YAK	**Yakutsk**	**28.46**	**355**	P	**P**	**01 31 05.7**	**-1.1**
TLY	**Talaya**	**28.54**	**318**	LR	LR	01 43 00.0	
	comp=E,295nm,19.4s,baz=118,slow=38						
TLY	**Talaya**	**28.54**	**318**	eP	**P**	**01 31 07.4**	**-0.4**
TLY				pmax	pmax		
	comp=Z,12nm,0.9s						
TLY				MLR	MLR		
	comp=Z,1µm,14.0s						
TLY	**Talaya**	**28.54**	**318**	P	**P**	**01 31 06.7**	**-1.0**
KMI	**Kunming**	**28.81**	**261**	⇑eP	**P**	**01 31 07.2**	**-3.4**
KMI				pmax	pmax		
	comp=Z,16nm,0.5s						
SEY	**Seymchan**	**31.31**	**16**	P	**P**	**01 31 32.1**	**0.0**
	comp=Z,1.2nm,0.3s,baz=200,slow=7.5,SNR=11						
SEY	**Seymchan**	**31.31**	**16**	⇓eP	**P**	**01 31 32.4**	**+0.3**
NONG	**Nongkai**	**32.02**	**249**	P	P	01 31 46.5	+7.8
	comp=Z,29nm,1.1s						
H11N2	**WAKE ISLAND Hy**	**32.04**	**108**	T	T	02 05 34.0	
	baz=303,slow=75,SNR=229						
H11N1	**WAKE ISLAND Hy**	**32.05**	**108**	T	T	02 05 34.2	
	baz=303,slow=75,SNR=202						
H11N3	**WAKE ISLAND Hy**	**32.06**	**108**	T	T	02 05 35.3	
	baz=303,slow=75,SNR=259						
H11S3	**WAKE ISLAND Hy**	**32.55**	**110**	T	T	02 05 53.1	
	baz=304,slow=75,SNR=8.8						
H11S1	**WAKE ISLAND Hy**	**32.55**	**110**	T	T	02 06 08.5	
	baz=304,slow=75,SNR=346						
H11S2	**WAKE ISLAND Hy**	**32.57**	**110**	T	T	02 06 09.8	
	baz=304,slow=75,SNR=214						
LAMP	**Lampang**	**34.52**	**253**	P	P	01 32 07.8	+7.1
	comp=Z,32nm,1.0s						
PHIT	**Phitsanulok**	**34.65**	**250**	P	P	01 32 15.8	+14
	comp=Z,45nm,1.0s						
CMMT	**Chiang Mai**	**34.91**	**254**	P	P	01 32 08.9	+4.8
	comp=Z,298nmcomp=Z,9.1nm,1.1s						
CHTO	**Chiang Mai**	**34.92**	**254**	P	**P**	**01 32 03.9**	**-0.2**
CHTO				pmax	pmax		
	comp=Z,21nm,1.3s						
CHTO	**Chiang Mai**	**34.92**	**254**	P	**P**	**01 32 03.9**	**-0.2**
CHTO				IAmb	IAmb	01 32 10.9	

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                comp=Z,20nm,1.2s
CM09   Chiang Mai Arr   35.08 253   P       P       01 32 14.0 +8.5
                comp=Z,6.4nm,1.2s
SUKH   Sukhothai        35.10 251   P       P       01 32 14.8 +9.2
                comp=Z,14nm,0.9s
CM31   Chiang Mai Arr   35.11 253   P       P       01 32 05.5 -0.2
CMAR   Chiang Mai Arr   35.11 253   P       P       01 32 07.0 +1.2
                comp=Z,3.1nm,0.7s,baz=46,slow=8.7,SNR=9.0
CMAR                                LR      LR      01 46 34.8
                comp=Z,152nm,19.7s,baz=83,slow=37
CMAR   Chiang Mai Arr   35.11 253   P       P       01 32 05.8 +0.1
CMAR   Chiang Mai Arr   35.11 253   P       P       01 32 05.8 +0.1
CM04   Chiang Mai Arr   35.11 253   P       P       01 32 13.0 +7.3
                comp=Z,7.7nm,1.0s
MRSI   Marisa           35.11 202   P       P       01 32 11.8 +6.1
CM01   Chiang Mai Arr   35.12 253   P       P       01 32 14.0 +8.2
                comp=Z,143nmcomp=Z,7.6nm,1.0s
CM02   Chiang Mai Arr   35.12 253   P       P       01 32 13.8 +8.1
                comp=Z,6.2nm,0.9s
CM05   Chiang Mai Arr   35.14 253   P       P       01 32 14.0 +8.0
                comp=Z,5.9nm,1.0s
CM13   Chiang Mai Arr   35.16 253   P       P       01 32 14.7 +8.6
                comp=Z,5.5nm,0.8s
FAKI   Fak Fak          36.53 184   P       P       01 32 17.6 -0.2
FAKI   Fak Fak          36.53 184   P       P       01 32 21.2 +3.3
                comp=Z,89nm,0.8s
LSA    Lhasa            36.83 276   P       P       01 32 20.0 -0.9
LSA                                 pmax    pmax
                comp=Z,10.0nm,0.8s
LSA    Lhasa            36.83 276   P       P       01 32 20.0 -0.9
LSA                                 IAmb    IAmb    01 32 27.7
                comp=Z,10nm,0.8s
WMQ    Urumqi           37.34 300  eP       P       01 32 25.3 +0.6
WMQ                                 pP      pP      01 32 29.2 -0.6
WMQ                                 S       S       01 38 10.9 -0.9
WMQ                                 pmax    pmax
                comp=Z,17nm,1.3s
WMQ                                 pmax    pmax
                comp=Z,180nm,4.9s
WMQ                                 LR      LR
                comp=Z,640nm,9.7s
WMQ                                 LR      LR
                comp=Z,630nm,13.3s
WMQ                                 LR      LR
                comp=Z,140nm,13.9s
SHL    Shillong         37.64 269   P       P       01 32 26.7 -0.8
SHL                                 pmax    pmax
                comp=Z,22nm,0.7s
SHL    Shillong         37.64 269   P       P       01 32 26.7 -0.8
SHL                                 IAmb    IAmb    01 32 32.8
                comp=Z,22nm,0.7s
DGZ    Jazzator, Alta   37.85 309⇓ eP       P       01 32 28.7 -0.3
DGZ                                 pmax    pmax
                comp=Z,2.0nm,1.0s
TIXI   Tiksi            38.07 357⇑ eP       P       01 32 29.3 -1.0
TIXI                                pmax    pmax
                comp=Z,73nm,0.8s
TIXI   Tiksi            38.07 357   P       P       01 32 29.1 -1.2
TIXI                                IAmb    IAmb    01 32 30.5
                comp=Z,18nm,0.8s
ZSN    Zaisan           39.38 305  eP       P       01 32 40.7 -1.0
                baz=305
ZSN                                i S      S       01 38 42.2 -0.2
                baz=305
ZSN    Zaisan           39.38 305  eP       P       01 32 40.6 -1.0
ZSN                                i S      S       01 38 42.1 -0.2
STKI   Sintang          39.84 217   P       P       01 32 49.3 +3.6
ZAA0   Zalesovo Array   40.07 316   P       P       01 32 46.2 -1.1
ZALV   Zalesovo Beam    40.07 316   P       P       01 32 46.7 -0.6
                comp=Z,2.4nm,0.6s,baz=98,slow=7.7,SNR=14
ZALV                                PcP     PcP     01 34 51.0 -0.8
                comp=Z,2.5nm,0.7s,baz=99,slow=4.7,SNR=7.3
ZALV                                LR      LR      01 50 01.2
                comp=Z,225nm,19.7s,baz=94,slow=37
ZALV   Zalesovo Beam    40.07 316   P       P       01 32 46.0 -1.3
ZALV   Zalesovo Beam    40.07 316   P       P       01 32 46.0 -1.3
KAPI   Kappang          40.98 203   LR      LR      01 50 23.0
                comp=Z,79nm,21.6s,baz=353,slow=37
MK31   Makanchi Array   41.13 304ceP        P       01 32 55.6 -0.6
MK31   Makanchi Array   41.13 304   IAmb    IAmb    01 33 02.4
                comp=Z,17nm,1.1s
MKAR   Makanchi Array   41.13 304   P       P       01 32 55.9 -0.3
                comp=Z,7.6nm,0.9s,baz=90,slow=10,SNR=34
MKAR   Makanchi Array   41.13 304   P       P       01 32 55.6 -0.5
MAKZ   Makanchi         41.34 304   P       P       01 32 57.4 -0.5
MAKZ                                pmax    pmax
                comp=Z,21nm,1.0s
MAKZ   Makanchi         41.34 304   P       P       01 32 57.4 -0.5
MAKZ                                IAmb    IAmb    01 33 04.3
                comp=Z,21nm,1.0s
MMPI   Merauke          42.37 171   P       P       01 33 13.4 +6.9
SEM    Semipalatinsk    42.52 310  eP       P       01 33 06.1 -1.6
                baz=310
SEM    Semipalatinsk    42.52 310  eP       P       01 33 06.1 -1.6
SHLS   Shalkode         43.36 299  eP       P       01 33 11.1 -3.6
                baz=299
SHLS   Shalkode         43.36 299  eP       P       01 33 11.0 -3.6
KURK   Kurchatov        43.56 310⇓ eP       P       01 33 15.3 -0.6
KURK                                pmax    pmax
                comp=Z,18nm,1.7s
KURK   Kurchatov        43.56 310   P       P       01 33 15.0 -0.8
KURK                                IAmb    IAmb    01 33 21.5
                comp=Z,24nm,1.1s
UZB    Uzynbulak        43.69 299  eP       P       01 33 16.1 -1.2
                comp=Z,10nm,1.2s,baz=299
UZB    Uzynbulak        43.69 299  eP       P       01 33 16.0 -1.2
UZB                                 pmax    pmax
                comp=Z,11nm,1.2s
KPKS   Kokpek           43.89 300  eP       P       01 33 17.6 -1.2
                baz=300
KPKS   Kokpek           43.89 300  eP       P       01 33 17.6 -1.2
TDK    Taldyqorghan     43.93 302  eP       P       01 33 18.7 -0.4
                baz=302
TDK    Taldyqorghan     43.93 302  eP       P       01 33 18.6 -0.4
NRIK   Noril'sk         44.01 338   P       P       01 33 17.4 -1.8
                comp=Z,1.5nm,0.5s,baz=106,slow=8.0,SNR=4.3
NRIK                                LR      LR      01 54 16.5
                comp=Z,212nm,18.4s,baz=122,slow=40
NRIK   Noril'sk         44.01 338⇑ eP       P       01 33 18.3 -0.9
NRIK                                pmax    pmax
                comp=Z,6.0nm,1.0s
NRIK   Noril'sk         44.01 338   P       P       01 33 18.7 -0.5
SATY   Saty             44.14 299  eP       P       01 33 20.1 -0.8
                baz=299
SATY   Saty             44.14 299  eP       P       01 33 20.1 -0.8
SOEI   Soe              44.33 194   P       P       01 33 21.4 -1.1
SOEI   Soe              44.33 194   P       P       01 33 23.0 +0.5
                comp=Z,36nm,0.9s
BATI   Baumata          44.90 195   P       P       01 33 29.3 +2.4
                comp=Z,48nm,0.8s
CHKK   Chushkaly        45.07 301  eP       P       01 33 27.4 -0.7
                baz=300
CHKK   Chushkaly        45.07 301  eP       P       01 33 27.4 -0.7
MDOK   Medeo            45.12 300  eP       P       01 33 28.3 -0.4
                baz=299
MDOK   Medeo            45.12 300  eP       P       01 33 28.2 -0.4
AAA    Alma-Ata         45.20 300  eP       P       01 33 29.5 +0.2
                baz=299
AAA    Alma-Ata         45.20 300  eP       P       01 33 29.5 +0.2
TNSS   Tian-Shan        45.21 299  eP       P       01 33 29.4 -0.2
                baz=299
TNSS   Tian-Shan        45.21 299  eP       P       01 33 29.4 -0.2
KUU    Kurty            45.53 301  eP       P       01 33 31.0 -0.8
                comp=Z,15nm,1.1s,baz=300
KUU    Kurty            45.53 301  eP       P       01 33 30.9 -0.8
KUU                                 pmax    pmax
                comp=Z,15nm,1.1s
MTBS   Maitube          45.57 300  eP       P       01 33 31.3 -0.9
                baz=299
MTBS   Maitube          45.57 300  eP       P       01 33 31.2 -0.9
TKM2   Tokmak 2         46.20 299   P       P       01 33 37.9 +0.5
                SNR=16
MTN    Manton Dam       46.44 184   P       P       01 33 38.6 -0.5
KSH    Kashi            46.55 295   P       P       01 33 47.3 +7.3
KSH                                 PcP     PcP     01 35 18.4 +4.3
KSH                                 S       S       01 40 31.4 +3.4
KSH                                 pmax    pmax
                comp=Z,12nm,1.7s
KSH                                 pmax    pmax
                comp=Z,65nm,8.1s
KSH                                 LR      LR
                comp=Z,1µm,16.7s
KSH                                 LR      LR
                comp=Z,640nm,12.4s
KSH                                 LR      LR
                comp=Z,330nm,16.1s
KBK    Karagaybulak     46.72 299   P       P       01 33 45.7 +4.4
                SNR=12
CHMS   Chumysh          46.80 300   P       P       01 33 46.2 +4.4
                SNR=10
SGDS   Sogindy          46.82 300  eP       P       01 33 41.2 -0.8
                baz=300
SGDS   Sogindy          46.82 300  eP       P       01 33 41.1 -0.8
USP    Ospenovka        46.94 300   P       P       01 33 46.9 +4.0
                SNR=15
BTLS   Baital           47.00 303  eP       P       01 33 42.3 -1.0
                comp=Z,6.2nm,1.1s,baz=302
BTLS   Baital           47.00 303  eP       P       01 33 42.2 -1.0
BTLS                                pmax    pmax
                comp=Z,6.0nm,1.1s
AAK    Ala-Archa        47.05 299   P       P       01 33 44.2 +0.3
AAK    Ala-Archa        47.05 299⇓ eP       P       01 33 43.2 -0.7
AAK                                 pmax    pmax
                comp=Z,16nm,1.2s
AAK    Ala-Archa        47.05 299   P       P       01 33 43.7 -0.2
AAK                                 IAmb    IAmb    01 33 51.0
                comp=Z,10nm,1.0s
UCH    Uchtor           47.11 299   P       P       01 33 49.2 +4.5
                SNR=10
ANM    Nome             47.34  31   P       P       01 33 45.5 -0.2
ANM                                 pmax    pmax
                comp=Z,10.0nm,0.7s
ANM    Nome             47.34  31   P       P       01 33 45.5 -0.2
ANM                                 IAmb    IAmb    01 33 48.1
                comp=Z,9.7nm,0.7s
BRZS   Berezniki        47.39 309  eP       P       01 33 45.2 -1.1
                comp=Z,4.1nm,0.7s,baz=309
BRZS   Berezniki        47.39 309  eP       P       01 33 45.1 -1.1
BRZS                                pmax    pmax
                comp=Z,4.0nm,0.7s
EKS2   Erkin-Say        47.57 299   P       P       01 33 57.4 +9.5
                SNR=5.2
AML    Almayashu        47.73 299   P       P       01 33 49.4 -0.1
                SNR=9.1
BRVK   Borovoye         48.68 314ceP        P       01 33 55.5 -0.6
BRVK                                pmax    pmax
                comp=Z,8.0nm,0.6s
BRVK   Borovoye         48.68 314   P       P       01 33 55.8 -0.3
RDOG   Red Dog Mine     48.98  26   P       P       01 33 58.8 +0.4
RDOG                                IAmb    IAmb    01 34 00.3
                comp=Z,18nm,1.5s
DZA    Taraz            49.29 300  eP       P       01 34 00.7 -0.4
                baz=300
DZA    Taraz            49.29 300  eP       P       01 34 00.7 -0.4
KK31   Karatay Array    49.84 301   P       P       01 34 05.1 -0.1
KK31                                pmax    pmax
                comp=Z,26nm,1.0s
KK31   Karatay Array    49.84 301   P       P       01 34 05.1 -0.1
KKAR   Karatay Array    49.84 301   P       P       01 34 05.0 -0.2
KKAR   Karatay Array    49.84 301   P       P       01 34 05.0 -0.2
NIL    Nilore           50.19 288   P       P       01 34 08.0 -0.1
NIL                                 pmax    pmax
                comp=Z,30nm,1.1s
NIL    Nilore           50.19 288   P       P       01 34 08.0 -0.1
IUG    Iuzhnay          50.39 299  eP       P       01 34 09.1 -0.5
                baz=299
IUG    Iuzhnay          50.39 299  eP       P       01 34 09.0 -0.5
A21K   Barrow           51.69  23   P       P       01 34 18.8 +0.1
                baz=262
FITZ   Fitzroy Crossi   52.24 191   P       P       01 34 22.9 -0.4
FITZ                                IAmb    IAmb    01 34 27.5
                comp=Z,10nm,0.8s
IMAR   Indian Mountai   52.34  29   P       P       01 34 24.3 +0.6
HYB    Hyderabad        52.35 266  i P      P       01 34 28.0 +3.6
PPLA   Purkeypile       53.08  33   P       P       01 34 30.0 +0.7
WB0    Warramunga Arr   53.22 180   P       P       01 34 29.8 -0.8
WB0                                 IAmb    IAmb    01 34 34.3
                comp=Z,17nm,0.9s
KBL    Kabul            53.22 290   P       P       01 34 30.4 -0.5
KBL                                 pmax    pmax
                comp=Z,23nm,1.6s
KBL    Kabul            53.22 290   P       P       01 34 30.4 -0.5
KBL                                 IAmb    IAmb    01 34 36.8
                comp=Z,23nm,1.6s
KDAK   Kodiak Island    53.31  40⇑ eP       P       01 34 29.8 -1.1
KDAK                                pmax    pmax
                comp=Z,31nm,1.1s
WRAB   Tennant Creek    53.39 180deP        P       01 34 31.5 -0.3
WRAB                                pmax    pmax
                comp=Z,24nm,1.3s
WRAB   Tennant Creek    53.39 180   P       P       01 34 31.1 -0.7
WRAB                                IAmb    IAmb    01 34 35.5
                comp=Z,15nm,0.8s
WB2    Warramunga Arr   53.40 180   P       P       01 34 31.2 -0.7
WRA    Warramunga Arr   53.40 180   P       P       01 34 31.0 -0.9
                comp=Z,14nm,0.8s,baz=355,slow=7.8,SNR=33
WRA                                 LR      LR      01 58 00.1
                comp=Z,68nm,18.2s,baz=15,slow=37
MLY    Manley           53.61  31   P       P       01 34 34.3 +1.2
                baz=273,SNR=7.7
COLD   Coldfoot         53.75  28   P       P       01 34 34.1 +0.1
                baz=272
COLD   Coldfoot         53.75  28   P       P       01 34 34.3 +0.3
COLD                                IAmb    IAmb    01 34 45.0
                comp=Z,16nm,1.6s
SVE    Sverdlovsk       53.85 319  eP       P       01 34 34.9  0.0
SVE                                 pmax    pmax
                comp=Z,40nm,1.1s
TOLK   Toolik Lake Re   53.96  26   P       P       01 34 35.5 -0.1
                baz=271
I23K   Minto, Yukon-K   54.19  30   P       P       01 34 37.8 +0.6
                baz=274
I23K   Minto, Yukon-K   54.19  30   IAmb    IAmb    01 35 04.4
                comp=Z,20nm,1.6s
NEA2   Nenana           54.35  31   P       P       01 34 39.2 +0.7
                baz=274,SNR=16
RC01   Rabbit Creek A   54.38  35   P       P       01 34 38.8 +0.1
                baz=276
MCK    McKinley         54.49  32   P       P       01 34 39.9 +0.4
                baz=275,SNR=5.0
WRH    Wood River Hil   54.79  31   IAmb    IAmb    01 34 45.3
                comp=Z,8.7nm,0.9s
COLA   College          54.85  31⇑ eP       P       01 34 42.8 +0.8
COLA                                pmax    pmax
                comp=Z,8.0nm,0.8s
SML    Sawmill          54.97  34   IAmb    IAmb    01 34 44.5
                comp=Z,11nm,0.8s
POKR   Poker Plat Res   55.01  30   P       P       01 34 44.3 +1.1
                baz=276,SNR=13
POKR   Poker Plat Res   55.01  30   P       P       01 34 44.0 +0.9
ARU    Arti             55.04 319d iP       P       01 34 41.7 -1.9
ARU                                                 01 36 42.3
ARU                                 S       S       01 42 24.3 -0.8
ARU                                 SS      SS      01 46 04.6 -3.8
ARU                                 pmax    pmax
                comp=Z,28nm,1.7s
ARU    Arti             55.04 319   P       P       01 34 42.6 -1.0
DHY    Denali Highway   55.25  33   IAmb    IAmb    01 34 54.3
                comp=Z,12nm,1.2s
ILAR   Eielson Array    55.27  31   P       P       01 34 45.0 -0.2
                comp=Z,3.7nm,0.8s,baz=266,slow=6.3,SNR=43
ILAR                                LR      LR      02 00 40.4
                comp=Z,84nm,18.6s,baz=270,slow=38
ILAR   Eielson Array    55.27  31   P       P       01 34 44.8 -0.3
ILAR   Eielson Array    55.27  31   P       P       01 34 44.8 -0.3
HDA    Harding Lake     55.29  31   P       P       01 34 45.0 -0.2
                baz=276,SNR=8.1
HDA    Harding Lake     55.29  31   IAmb    IAmb    01 34 46.0
                comp=Z,13nm,0.9s
AB31   Akbulak array    55.67 310⇑ eP       P       01 34 46.6 -1.6
AB31                                pmax    pmax
                comp=Z,15nm,0.8s
ABKAR  Akbulak array    55.67 310   P       P       01 34 47.6 -0.6
PRP    Porcupine Dome   55.76  30   IAmb    IAmb    01 34 50.7
                comp=Z,8.2nm,0.9s
AKTO   Aktyubinsk       56.60 312  i P      P       01 34 53.3 -1.6
AKTO                                pmax    pmax
                comp=Z,14nm,0.9s
SCRK   Sand Creek       56.63  32   P       P       01 34 55.0  0.0
                baz=279,SNR=7.3
DOT    Dot Lake         56.65  32   P       P       01 34 54.6 -0.4
DOT                                 IAmb    IAmb    01 34 55.6
                comp=Z,7.3nm,1.0s
N25K   Chitina, Valde   56.76  34   P       P       01 34 56.8 +0.9
                baz=280
MENT   Mentasta         56.92  33   IAmb    IAmb    01 35 07.1
                comp=Z,9.5nm,0.7s
AS31   Alice Springs    57.10 181   P       P       01 34 59.0 +0.4
ASAR   Alice Springs    57.10 181   P       P       01 34 59.0 +0.4
                comp=Z,5.7nm,0.8s,baz=9.4,slow=9.8,SNR=25
ASAR                                LR      LR      01 58 53.4
                comp=Z,67nm,18.5s,baz=38,slow=35
ASAR   Alice Springs    57.10 181   P       P       01 34 58.3 -0.3
ASAR   Alice Springs    57.10 181   P       P       01 34 58.3 -0.3
BCAR   Beaver Creek A   57.77  32   P       P       01 35 03.7 +0.7
EPYK   Eagle Plains     59.15  28   P       P       01 35 13.5 +1.0
                baz=284
EPYK   Eagle Plains     59.15  28   P       P       01 35 12.8 +0.2
KIRV   Kirov            59.39 323⇓ eP       P       01 35 13.8 -0.4
GEYT   Alibeck          60.36 298   P       P       01 35 19.9 -1.5
                comp=Z,2.3nm,0.8s,baz=48,slow=4.4,SNR=4.6
GEYT                                LR      LR      02 02 08.4
                comp=Z,237nm,18.7s,baz=340,slow=37
GEYT   Alibeck          60.36 298   IAmb    IAmb    01 35 27.6
                comp=Z,2.2nm,0.8s
GYA0B  ALIBECK ARRAY    60.36 298   P       P       01 35 20.6 -0.7
GYA0B                               IAmb    IAmb    01 35 27.6
                comp=Z,5.0nm,0.8s
BELG   Belogornoye      62.25 316deP        P       01 35 33.0 -0.8
BELG                                pmax    pmax
                comp=Z,3.0nm,0.9s
C36M   Paulatuk         62.74  23   P       P       01 35 37.3 +0.6
                baz=293
C36M   Paulatuk         62.74  23   P       P       01 35 36.7 -0.1
DZM    Mont Dzumac      63.35 147  eLR      LR      01 54 38.4
                comp=Z,182nm,21.9s
KLMR   Klimovskoe       63.42 327  eP       P       01 35 39.3 -2.1
KLMR                                pmax    pmax
                comp=Z,21nm,1.5s
KLMR   Klimovskoe       63.42 327  eP       P       01 35 39.3 -2.1
KLMR                                AMP             01 35 50.5
                comp=Z,21nm,1.5s
ARCES  ARCESS Array B   64.99 338   P       P       01 35 50.4 -1.2
                comp=Z,3.8nm,0.8s,baz=46,slow=7.2,SNR=5.1
ARCES                               LR      LR      02 06 51.4
                comp=Z,62nm,19.1s,baz=30,slow=38
STKA   Stephens Creek   65.63 173   P       P       01 35 55.8 -0.4
                comp=Z,10nm,0.7s,baz=340,slow=6.9,SNR=6.2
STKA                                LR      LR      02 03 34.4
                comp=Z,118nm,19.9s,baz=19,slow=35
STKA   Stephens Creek   65.63 173⇑ eP       P       01 35 55.9 -0.2
STKA   Stephens Creek   65.63 173   P       P       01 35 55.7 -0.4
MAK    Makhachkala      65.89 307  eP       P       01 35 58.4 +0.5
MAK                                e                01 38 17.2
MAK                                ePPP     PPP     01 39 54.4
MAK                                eS       S       01 44 45.3 +1.0
MAK                                eSS      SS      01 48 56.7 -2.0
MAK                                 pmax    pmax
                comp=Z,46nm,0.7s
MAK                                 MLR     MLR
                comp=Z,604nm,15.0s
VRH    Novokhopyorsk    66.09 317  eP       P       01 35 55.0 -4.0
VRH                                 pmax    pmax
                comp=Z,9.0nm,0.7s
MOS    Moscow           66.40 322  eP       P       01 35 58.3 -2.6
MOS                                 pmax    pmax
                comp=Z,78nm,2.6s
LPSR   Galich'ya Gora   67.07 319  eP       P       01 36 04.0 -1.2
LPSR                                pmax    pmax
                comp=Z,20nm,1.5s
RES    Resolute Bay     67.12  13   IAmb    IAmb    01 36 06.0
                comp=Z,6.2nm,0.8s
OBN    Obninsk          67.21 322  i P      P       01 36 04.1 -2.0
OBN                                i                01 36 10.9
OBN                                i                01 36 34.3
OBN                                 pmax    pmax
                comp=Z,5.0nm,1.4s
OBN                                 MLR     MLR
                comp=Z,162nm,16.0s
OBN    Obninsk          67.21 322   P       P       01 36 05.8 -0.3
VSR    Storozhevoye     67.54 317  eP       P       01 36 05.2 -3.1
VSR                                 pmax    pmax
                comp=Z,10.0nm,0.8s
ZEI    Tsey             68.36 308  eP       P       01 36 14.8 +0.9
ZEI                                 pmax    pmax
                comp=Z,5.0nm,0.6s
DAG    Danmarks Havn    68.46 354   P       P       01 36 13.1 -0.5
KBZ    Khabaz           68.60 309   P       P       01 36 14.0 -1.0
                comp=Z,5.9nm,1.0s,baz=86,slow=2.1,SNR=13
KBZ                                 LR      LR      02 08 48.5
                comp=Z,232nm,19.1s,baz=56,slow=38
KBZ    Khabaz           68.60 309ceP        P       01 36 14.4 -0.6
KBZ                                 pmax    pmax
                comp=Z,10.0nm,1.0s
KIV    Kislovodsk       68.63 309  eP       P       01 36 16.0 +0.6
KIV                                 pmax    pmax
                comp=Z,68nm,1.0s
KIV    Kislovodsk       68.63 309   P       P       01 36 14.9 -0.5
ONI    Oni              68.74 308   P       P       01 36 18.4 +2.3
NEY    Neytrino         68.93 308⇑ eP       P       01 36 15.4 -2.0
NEY                                 pmax    pmax
                comp=Z,1.0nm,0.8s
FINES  FINESS Array B   68.96 331   P       P       01 36 16.0 -0.9
                comp=Z,4.2nm,0.7s,baz=68,slow=5.0,SNR=14
FINES                               LR      LR      02 10 57.1
                comp=Z,83nm,19.1s,baz=80,slow=40
GNI    Garni            68.97 305⇑ eP       P       01 36 17.4 -0.3
GNI                                 pmax    pmax
                comp=Z,15nm,1.7s
GNI    Garni            68.97 305   P       P       01 36 16.3 -1.4
TULEG  Thule            69.00   6   P       P       01 36 16.7 -0.3
AKH    Akhalkalaki      69.25 306   P       P       01 36 20.1 +0.7
YKA    Yellowknife Ar   69.43  28   P       P       01 36 20.1 +0.3
                comp=Z,1.6nm,0.9s,baz=301,slow=5.7,SNR=15
YKA                                 LR      LR      02 12 41.8
                comp=Z,43nm,18.8s,baz=0.0,slow=41
MNK    Minsk            71.88 324  i P      P       01 36 29.2 -5.8
                comp=E,1.0nm,0.8s
MNK                                i P      P       01 36 29.2 -5.8
                comp=N,11nm,1.1s
MNK                                i P      P       01 36 29.2 -5.8
                comp=Z,5.0nm,0.8s
MNK                                i PcP    PcP     01 36 48.5 -5.2
MNK                                i PP     PP      01 39 07.4 -6.7
MNK                                i PPP    PPP     01 40 50.7
MNK                                i S      S       01 45 48.1 -6.9
MNK                                i SS     SS      01 50 23.1 -7.4
MNK                                i SSS    SSS     01 53 42.4
MNK                                i LQ     LQ      02 02 58.2
MNK                                i LR     LR      02 08 50.1
MNK                                i LRM    MLR     02 11 19.3
                comp=N,230nm,16.3s
MNK                                i LRM    MLR     02 11 22.7
                comp=Z,305nm,17.6s
MNK                                i LRM    MLR     02 11 27.5
                comp=E,33nm,16.3s
NACGM  Naroch           72.20 325  i P      P       01 36 36.2 -0.6
NACGM                              i P      P       01 36 36.2 -0.6
NACGM                              i P      P       01 36 36.2 -0.6
NACGM                              i PcP    PcP     01 36 52.7 -2.3
NACGM                              i PP     PP      01 39 18.6 +1.9
NACGM                              i PPP    PPP     01 41 03.2
NACGM                              i S      S       01 46 04.3 +5.8
NACGM                              i SS     SS      01 50 51.2  +16
NACGM                              i SSS    SSS     01 54 36.1
NACGM                              i LQ     LQ      02 02 37.2
NACGM                              i LR     LR      02 05 10.2
MARD   Mardin           73.04 304   P       P       01 36 42.3 -0.1
AKASG  Malin Array Be   73.26 320   P       P       01 36 42.1 -1.2
                comp=E,3.6nm,0.6s,baz=54,slow=6.3,SNR=16
AKASG                               LR      LR      02 08 58.1
                comp=E,184nm,18.2s,baz=0.0,slow=36
AKASG  Malin Array Be   73.26 320   P       P       01 36 42.2 -1.1
AKBB   Malin Array Si   73.26 320⇓ eP       P       01 36 42.3 -0.9
KIEV   Kiev             73.28 320   P       P       01 36 41.0 -2.3
UPNV   Upernavik        73.50   3  i P      P       01 36 44.4 +0.1
UPNV                                IAmb    IAmb    01 36 45.1
                comp=Z,11nm,0.7s
SUMG   Summit           73.84 358  i P      P       01 36 47.0 +0.2
                comp=Z,33nm,0.8s
SUMG   Summit           73.84 358  i P      P       01 36 47.0 +0.2
SUMG                                pmax    pmax
                comp=Z,33nm,0.8s
SUMG   Summit           73.84 358   P       P       01 36 47.2 +0.5
SUMG   Summit           73.84 358  i P      P       01 36 47.1 +0.2
SUMG                                IAmb    IAmb    01 36 48.4
                comp=Z,33nm,0.8s
MALT   Malatya          74.15 306   P       P       01 36 49.8 +0.9
TOKA   Tokat            74.43 308   P       P       01 36 50.2 -0.2
TOKA                                IAmb    IAmb    01 36 56.8
                comp=Z,7.0nm,0.9s
NB2    NORSAR Subarra   74.87 335   P       P       01 36 51.1 -1.4
                comp=Z,1.1nm,0.6s,baz=46,slow=5.9
NOA    NORSAR Array B   74.87 335   P       P       01 36 51.8 -0.7
                comp=Z,1.4nm,0.7s,baz=47,slow=5.7,SNR=9.2
NOA                                 LR      LR      02 13 47.6
                comp=Z,69nm,18.4s,baz=65,slow=39
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KMPD	K-Podol'skiy	75.95	319	P	P	01 36 57.0	-1.9
I05D	Terrebonne, OR	76.22	46	P	P	01 37 00.7	0.0
	baz=304						
NEW	Newport	76.40	41	P	P	01 37 01.9	+0.4
	baz=306						
RAYN	Ar Rayn	76.47	289	P	P	01 37 01.7	-0.6
RAYN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
RAYN	Ar Rayn	76.47	289	P	P	01 37 01.7	-0.6
RAYN				IAmb	IAmb	01 37 08.0	
	comp=Z,5.4nm,0.8s						
BR131	Keskin Array S	76.59	309	*de*P	P	01 37 02.6	-0.3
BRTR	Keskin Array B	76.59	309	P	P	01 37 02.4	-0.5
	comp=Z,9.1nm,0.9s,baz=90,slow=6.2,SNR=12						
BRTR	Keskin Array B	76.59	309	*ce*P	P	01 37 04.6	+1.7
BRTR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
BRTR	Keskin Array B	76.59	309	P	P	01 37 02.2	-0.7
J05D	Fort Rock, OR	76.88	47	P	P	01 37 05.3	+0.8
	baz=304						
M02C	Callahan	76.93	49	P	P	01 37 06.1	+1.4
	baz=304						
BUR08	Bucovina Ar. S	77.17	319	IAmb	IAmb	01 38 30.6	
	comp=Z,21nm,1.8s						
BURAR	Bucovina Array	77.18	319	P	P	01 37 05.6	-0.4
BURAR	Bucovina Array	77.18	319	P	P	01 37 05.6	-0.4
N02D	Trinity Center	77.25	49	P	P	01 37 07.8	+1.3
	baz=304						
KOLS	Kolonicke sedl	77.96	321	*e*P	P	01 37 10.3	+0.1
KOLS	Kolonicke sedl	77.96	321	*e*P	P	01 37 10.3	+0.1
JTMT	Jette	78.24	40	P	P	01 37 12.2	+0.2
JTMT				IAmb	IAmb	01 37 13.7	
	comp=Z,7.9nm,0.8s						
BEKR	Beckworth	79.35	49	P	P	01 37 18.6	+0.3
BEKR				IAmb	IAmb	01 37 19.8	
	comp=Z,6.6nm,0.8s						
FCC	Fort Churchill	79.38	23	IAmb	IAmb	01 37 18.8	
	comp=Z,10nm,1.1s						
OSTC	Ostas	79.93	325	*e*P	P	01 37 27.4	+6.4
VYHS	Vyhne	80.00	322	*e*P	P	01 37 22.3	+0.9
VYHS	Vyhne	80.00	322	*e*P	P	01 37 22.3	+0.9
DPC	Dobruska-Polom	80.02	325	*e*P	P	01 37 28.9	+7.3
DPC	Dobruska-Polom	80.02	325	*e*P	P	01 37 28.9	+7.3
EGMT	Eagleton	80.43	38	P	P	01 37 24.2	+0.4
	baz=311,SNR=5.8						
EGMT	Eagleton	80.43	38	P	P	01 37 23.7	-0.2
EGMT				IAmb	IAmb	01 37 25.7	
	comp=Z,14nm,1.1s						
HLID	Hailey	80.73	43	P	P	01 37 26.2	+0.5
	baz=308						
CLL	Collm	80.91	327	*e*P	P	01 37 26.0	-0.2
CLL				Lm	MLR	02 15 00.0	
	comp=Z,300nm,18.5s						
CLL	Collm	80.91	327	*e*P	P	01 37 26.0	-0.2
CLL				MLR	MLR		
	comp=Z,300nm,18.5s						
BOZ	Bozeman (W)	81.00	41	P	P	01 37 27.7	+0.6
	baz=310						
PRU	Pruhonice	81.11	325	*e*P	P	01 37 26.7	-0.6
PRU	Pruhonice	81.11	325	*e*P	P	01 37 26.7	-0.6
NVAR	Mina Array Bea	81.49	49	P	P	01 37 30.9	+1.0
	comp=Z,3.9nm,1.0s,baz=291,slow=5.1,SNR=9.3						
NVAR				LR	LR	02 08 02.8	
	comp=Z,38nm,21.7s,baz=330,slow=32						
NVAR	Mina Array Bea	81.49	49	P	P	01 37 30.0	+0.1
YHL	Hebgen Lake	81.72	41	IAmb	IAmb	01 38 49.6	
	comp=Z,20nm,1.7s						
YHB	Horse Butte	81.78	41	IAmb	IAmb	01 37 33.2	
	comp=Z,6.9nm,0.9s						
CONA	Conrad Observa	81.87	323	*e*P	P	01 37 32.2	+0.6
	comp=Z,1.9nm,0.6s						
CKRC	Cesky Krumlov	82.02	325	*e*P	P	01 37 32.0	-0.2
KHC	Kasperske Hory	82.16	325	*e*P	P	01 37 32.9	0.0
KHC	Kasperske Hory	82.16	325	*e*P	P	01 37 32.9	0.0
GERES	GERESS Array B	82.30	325	P	P	01 37 33.1	-0.7
	comp=Z,1.2nm,0.5s,baz=57,slow=4.9,SNR=3.2						
CWC	Cottonwood Cre	82.82	51	P	P	01 37 37.1	+0.3
	baz=307						
DGMT	Dagmar	82.88	35	P	P	01 37 37.0	+0.3
	baz=314						
GRAC	Grapevine Rang	82.94	50	P	P	01 37 38.3	+1.0
	baz=307						
LAO	LASA Array	83.11	37	P	P	01 37 38.5	+0.5
	baz=313						
SOKA	Soboth	83.13	323	*e*P	P	01 37 38.0	-0.2
	comp=Z,6.1nm,0.8s						
MPMC	Manual Prospec	83.43	51	P	P	01 37 40.3	+0.3
	baz=307						
FURC	Furnace Creek,	83.58	50	P	P	01 37 41.4	+0.9
	baz=308						
TPNV	Topopah Spring	83.68	50	P	P	01 37 41.8	+0.5
	baz=308,SNR=5.0						
TPNV	Topopah Spring	83.68	50	P	P	01 37 41.2	0.0
TPNV				pmax	pmax		
	comp=Z,7.0nm,0.9s						
TPNV	Topopah Spring	83.68	50	P	P	01 37 41.2	0.0
TPNV				IAmb	IAmb	01 37 43.3	
	comp=Z,6.7nm,0.9s						
KBA	Koelnbreinsper	83.69	324	*e*P	P	01 37 41.3	+0.2
	comp=Z,1.2nm,0.5s						
DUG	Dugway, Tooele	83.77	45	P	P	01 37 42.2	+0.6
	baz=310						
DUG	Dugway, Tooele	83.77	45	P	P	01 37 42.1	+0.5
DUG				pmax	pmax		
	comp=Z,15nm,1.6s						
DUG	Dugway, Tooele	83.77	45	P	P	01 37 42.1	+0.5
DUG				IAmb	IAmb	01 38 07.7	
	comp=Z,15nm,1.6s						
EDW2	Edwards Air Fo	83.81	52	P	P	01 37 42.2	+0.4
	baz=307						
BW06	Boulder Array	83.97	42	P	P	01 37 42.4	-0.3
	baz=311						
PDAR	Pinedale Array	83.97	42	P	P	01 37 42.8	0.0
	comp=Z,1.8nm,0.7s,baz=304,slow=1.3,SNR=19						
PDAR	Pinedale Array	83.97	42	P	P	01 37 42.5	-0.2
SHOC	Shoshone, Teco	84.31	50	P	P	01 37 44.6	+0.3
	baz=308,SNR=5.2						
GSC	Goldstone, Bar	84.33	51	P	P	01 37 45.0	+0.5
	baz=308						
GSC	Goldstone, Bar	84.33	51	IAmb	IAmb	01 37 45.9	
	comp=Z,6.4nm,0.9s						
BFSC	Mount Baldy Ra	84.42	52	P	P	01 37 45.3	+0.3
	baz=307						
SCI2	San Clemente I	84.58	54	P	P	01 37 45.9	+0.2
	baz=307						
MOTA	Moosalm	84.59	325	*e*P	P	01 37 45.1	-0.5
	comp=Z,1.7nm,0.5s						
SQTA	Sankt Quirin	84.63	325	*e*P	P	01 37 45.3	-0.5
	comp=Z,2.0nm,0.5s						
SHPR	Sheep Range	84.64	49	IAmb	IAmb	01 37 48.1	
	comp=Z,5.2nm,0.9s						
HEC	Hector,Ludlow	84.92	51	P	P	01 37 48.0	+0.5
	baz=308						
ULM	Lac du Bonnet	85.28	30	P	P	01 37 48.4	-0.5
	comp=Z,2.8nm,0.9s,baz=334,slow=11,SNR=3.4						
ULM				LR	LR	02 19 50.1	
	comp=Z,33nm,20.2s,baz=345,slow=38						
ULM	Lac du Bonnet	85.28	30	⇑*e*P	P	01 37 49.0	+0.2
GMRC	Granite Mounta	85.39	51	P	P	01 37 50.3	+0.4
	baz=308						
MDND	Maddock	85.46	33	P	P	01 37 50.0	+0.1
	baz=318						
MTPU	Mount Pierson	85.52	47	IAmb	IAmb	01 38 50.1	
	comp=Z,17nm,1.7s						
LCMT	Little Creek M	85.53	48	IAmb	IAmb	01 37 52.5	
	comp=Z,6.3nm,1.1s						
PFO	Pinyon Flats O	85.59	52	P	P	01 37 50.7	-0.1
	baz=308,SNR=7.8						
PFO	Pinyon Flats O	85.59	52	*de*P	P	01 37 51.4	+0.5
PFO				pmax	pmax		
	comp=Z,14nm,0.9s						
PFO	Pinyon Flats O	85.59	52	P	P	01 37 51.0	+0.1
PFO				IAmb	IAmb	01 37 52.1	
	comp=Z,9.7nm,0.9s						
TPFO	Pinon Flats	85.59	52	P	P	01 37 50.6	-0.3
	baz=308,SNR=9.0						
BELC	Belle Mtn. Jos	85.65	52	P	P	01 37 51.0	-0.2
	baz=308,SNR=6.2						
KNB	Kanab	85.78	48	IAmb	IAmb	01 37 54.2	
	comp=Z,7.5nm,1.0s						
SRU	San Rafael Swe	85.82	45	IAmb	IAmb	01 37 53.4	
	comp=Z,3.7nm,0.6s						
BAR	Barrett	86.02	53	IAmb	IAmb	01 37 54.0	
	comp=Z,6.2nm,0.9s						
MONP2	Monument Peak	86.05	53	P	P	01 37 53.1	-0.2
	baz=308,SNR=6.1						
IRM	Iron Mountain	86.11	51	P	P	01 37 53.9	+0.6
	baz=309						
BC3	Big Chuckawall	86.22	52	P	P	01 37 54.2	+0.2
	baz=308						
IKP	In-Ko-Pah, Jac	86.41	53	P	P	01 37 55.2	+0.3
	baz=308						
SWSC	Sam W. Stewart	86.43	52	P	P	01 37 55.2	+0.3
	baz=308						
O20A	White River Ci	86.46	43	P	P	01 37 55.2	0.0
	baz=312						
PDMCI	Parker Dam,Lak	86.67	51	P	P	01 37 55.9	-0.1
	baz=309						
N23A	Red Feather La	87.23	41	P	P	01 37 58.8	-0.2
	baz=314						
WUAZ	Wupatki	87.64	48	P	P	01 38 01.4	+0.5
	baz=311						
SUSD	Miller	88.29	35	P	P	01 38 03.9	+0.2
	baz=318						
PPT	Papeete	88.49	112	LR	LR	02 08 15.8	
	comp=Z,39nm,22.0s,baz=118,slow=29						
PPT2	Papeete2	88.51	112	*e*LR	LR	02 06 07.2	
	comp=Z,98nm,26.5s						
S22A	4UR Ranch, Cre	88.89	44	P	P	01 38 07.2	+0.2
	baz=313						
SDCO	Great Sand Dun	89.65	43	P	P	01 38 10.7	+0.1
	baz=314						
T25A	Trinidad	90.69	43	P	P	01 38 15.5	+0.2
	baz=315						
ANMO	Albuquerque	91.02	46	P	P	01 38 17.1	+0.2
	baz=313						
ANMO	Albuquerque	91.02	46	⇓*e*P	P	01 38 16.8	-0.1
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.0s						
TAOE	Nuku Hiva Isla	91.09	100	*e*LR	LR	02 07 28.1	
	comp=Z,253nm,26.2s						
121A	Cookes Peak, D	91.84	48	P	P	01 38 21.1	+0.4
	baz=313						
AMTX	Amarillo	93.85	43	P	P	01 38 29.2	-0.6
	baz=316						
D56A	ZEC Mazanza, M	95.39	20	P	P	01 38 36.0	-0.5
	baz=336						
WMOK	Wichita Mounta	95.58	41	P	P	01 38 37.5	-0.2
	baz=318						
TXAR	Lajitas Array	96.61	48	P	P	01 38 43.2	+0.7
	comp=Z,0.9nm,0.7s,baz=283,slow=2.8,SNR=12						
TXAR	Lajitas Array	96.61	48	P	P	01 38 42.7	+0.2
TXAR	Lajitas Array	96.61	48	P	P	01 38 42.7	+0.2
G57A	Newington	97.10	21	P	P	01 38 43.9	-0.4
	baz=336						
ESDC	Sonseca Array	97.41	329	LR	LR	02 26 33.3	
	comp=Z,106nm,18.2s,baz=0.0,slow=38						
Q58A	Fox Den Farm,	101.78	25	P	Pdif	01 39 04.4	-0.9
	baz=333						
R58A	Rapidan	102.24	26	P	Pdif	01 39 06.9	-0.5
	baz=333						
R61A	Willards	103.14	24	P	Pdif	01 39 11.3	0.0
	baz=335						
W60A	Pink Hill	105.23	27	P	Pdif	01 39 20.7	-0.1
	baz=333						
V62A	Hyde County Ai	105.42	25	P	PKiKP	01 43 35.4	+0.2
	baz=334						
TORD	Torodi Ar. Bea	115.19	308	PKP	PKiKP	01 43 52.6	-1.5
	comp=Z,0.4nm,0.5s,baz=5.6,slow=1.9,SNR=2.1						
LPAZ	La Paz	153.27	55	PKPbc	PKiKP	01 45 12.7	+1.0
	comp=Z,0.4nm,0.4s,baz=225,slow=1.4,SNR=1.9						

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*IDC **06** 01:34:36.1±4.7, 6°.16S×108°.77E, h172km±105km, mb3.3/3, mb1 3.5/3, mb1mx2.9/33, mbtmp3.8/3 Error ellipse: s-maj=201.0km s-min=100.4km az=112.0*

*DJA **06** 01:34:39.0±0.4, 8°S±7°×10°9E±°, h108km±6km, M4.0/12, mb4.3/2, mB5.0/1, MLv3.8/12, Mw(mB)4.3/1*

ISC 06 01:34:39.2±1.1**, 7°.9S**±0°.1×**108°.77E**±0°.07**, h100**km**, n10, σ1ˢ.03**/12**, mb3.4**/3**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CISI	Cisompet, Garu	1.02	292	P	Pn	01 35 00.7	+0.8
LEM	Lembang	1.59	314	P	Pn	01 35 06.1	-0.7
	36nm,0.3s,baz=151,slow=22,SNR=14						
LEM				LR	LR	01 35 23.4	
	comp=Z,31nm,20.2s,baz=230,slow=36						
LEM				S	Sn	01 35 28.7	+1.1
	13nm,0.3s,baz=148,slow=18,SNR=4.3						
LEM	Lembang	1.59	314	P	Pn	01 35 07.2	+0.5
UGM	Wanagama	1.73	89	P	Pn	01 35 09.3	+0.9
UGM				S	Sn	01 35 32.5	+1.9
SMRI	Semarang	1.87	62	P	Pn	01 35 09.7	-0.5
SKJI	Sukabumi	2.38	293	P	Pn	01 35 17.3	+0.5
DBJI	Dramaga	2.43	304	P	Pn	01 35 17.4	0.0
WRA	Warramunga Arr	27.48	118	P	P	01 40 15.1	-1.2
	0.2nm,0.2s,baz=297,slow=11,SNR=9.6						
ASAR	Alice Springs	28.72	126	P	P	01 40 26.5	-0.8
	0.7nm,0.7s,baz=306,slow=8.5,SNR=6.2						
STKA	Stephens Creek	38.72	132	P	P	01 41 53.2	-0.5
	2.4nm,0.5s,baz=321,slow=7.9,SNR=6.5						

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*KRNET **06** 01:42:13.4±0.1, 41°.98N×80°.14E, mb2.6*

*NNC **06** 01:42:41.7±0.5, 43°.24N×78°.78E, h0km, mb2.1, mpv2.3, Error ellipse: s-maj=4.6km s-min=2.4km az=8.0*

*SOME **06** 01:42:42.0, 43°.25N×78°.73E, h10km*

ISC 06 01:42:41.2±1.0**, 43°.20N**±0°.03×**78°.74E**±0°.03**, h18**km±7km**, n16, σ2ˢ.41**/28**, 8C, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UZB	Uzynbulak	0.21	104	*e*P	Pg	01 42 46.4	+0.1
	4.1nm,0.1s						
UZB				*e*S	Sg	01 42 49.6	-0.3
	58nm,0.1s						
UZB	Uzynbulak	0.21	104	P	Pg	01 42 46.4	+0.1
	4.1nm,0.1s						
UZB				S	Sg	01 42 49.6	-0.3
	58nm,0.1s						
KPKS	Kokpek	0.27	351	*e*P	Pg	01 42 46.1	-1.2
	43nm,0.1s						
KPKS				*e*S	Sg	01 42 49.1	-2.3
	32nm,0.2s						
SATY	Saty	0.28	240	*e*P	Pg	01 42 48.0	+0.6
	1.3nm,0.1s						
SATY				*e*S	Sg	01 42 52.5	+0.7
	1.8nm,0.1s						
SATY	Saty	0.28	240	P	Pg	01 42 48.1	+0.6
	1.8nm,0.1s						
SATY				S	Sg	01 42 52.5	+0.7
	13nm,0.1s						
KURS	Kuram	0.51	305	*e*P	Pg	01 42 51.0	-0.4
	0.7nm,0.1s						
KURS				*e*S	Sg	01 42 57.5	-0.8
	2.2nm,0.5s						
KURS	Kuram	0.51	305	P	Pg	01 42 51.0	-0.4
	0.7nm,0.1s						
KURS				S	Sg	01 42 57.5	-0.8
	2.2nm,0.5s						
PDGK	Podgornoye	0.56	76	P	Pg	01 42 52.1	-0.2
	0.4nm,0.1s						
PDGK				S	Sg	01 42 59.5	-0.5
	2.8nm,0.2s						
PDGK	Podgornoye	0.56	76	⇑P	Pg	01 42 52.2	-0.2
	0.5nm,0.7s						
PDGK				⇑S	Sg	01 42 59.2	-0.8
	1.2nm,0.2s						
PRZ	Przheval'sk	0.76	199	⇑*i*P	Pg	01 42 39.9	-16
	baz=93						
PRZ				⇑*i*S	Sg	01 42 59.3	-6.8
	baz=93						
ANVS	Anan'yevo	0.89	243	⇑*i*P	Pg	01 42 50.7	-7.9
	baz=95						
ANVS				⇑*i*S	Sn	01 43 18.3	+6.7
	baz=95						
MNBS	Baschi	0.91	344	*e*P	Pg	01 42 58.1	-0.9
	2.3nm,0.1s						
MNBS				*e*S	Sg	01 43 09.7	-1.4
	1.7nm,0.2s						
MNBS	Baschi	0.91	344	P	Pg	01 42 58.1	-0.9
	2.3nm,0.1s						
MNBS				S	Sg	01 43 09.7	-1.4
	1.7nm,0.2s						
KDJ	Kajisay	1.57	228	⇑*i*P	Pn	01 42 53.8	-15
	baz=75						
KDJ				⇑*i*S	Sn	01 43 23.1	-5.3
	baz=75						
KAPS	Kapalarasan	2.13	12	*e*P	Pb	01 43 20.0	+0.7
	0.1nm,0.2s						
KAPS				*e*S	Sb	01 43 47.2	+1.8
	1.3nm,0.1s						
KAPS	Kapalarasan	2.13	12	Pg	Pb	01 43 20.0	+0.7
	0.1nm,0.2s						
KAPS				Lg	Lg	01 43 47.2	
	1.3nm,0.1s						

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*DSN **06** 02:19:32.2±2.8, 28°.44N×55°.19E, h15km, ML3.6/8, Error ellipse: s-maj=39.7km s-min=11.8km az=38.0*

*IDC **06** 02:19:35.0±1.4, 27°.99N×55°.08E, h0km, mb3.8/8, mb1 3.8/10, mb1mx3.5/51, mbtmp3.7/10, ML3.6/2, Error ellipse: s-maj=28.3km s-min=23.5km az=156.0*

*TEH **06** 02:19:36.0, 27°.96N×55°.19E, h10km, ML3.7*

*THR **06** 02:19:37.6±0.5, 27°.87N×55°.18E, h37km±6km, ML3.4*

*OMAN **06** 02:19:37.7±1.3, 28°.07N×55°.40E, h10km, ml3.3/13, Error ellipse: s-maj=17.0km s-min=8.2km az=33.0*

ISC 06 02:19:38.3±0.6**, 27°.93N**±0°.03×**55°.22E**±0°.04**, h26**km**, n89, σ2ˢ.15**/99**, mb3.7**/8**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LAR1	LAR	0.79	251	*e*Pg	Pb	02 19 50.8	-2.7
LAR1				*e*		02 20 12.5	
	comp=Z,99nm,0.5s						
BNDS	Bandar-Abbas	1.00	122	*e*Pg	Pn	02 19 56.5	-0.3
BNDS	Bandar-Abbas	1.00	122	*e*Pg	Pn	02 19 56.5	-0.3
JHRM	Jahrom	1.55	292	*e*Pg	Pb	02 20 05.2	-1.3
LMD1	Lamerd	1.91	252	*e*Pn	Pb	02 20 10.7	-1.9
LMD1				*e*		02 21 01.1	
	comp=Z,99nm,0.4s						
QIR1	Qir	1.99	286	*e*Pn	Pn	02 20 10.9	+0.5
QIR1				*e*		02 20 53.9	
	comp=Z,99nm,0.5s						
SHME	Shamm	2.05	156	*e*Pn	Pn	02 20 12.1	+1.0
SHME	Shamm	2.05	156	P	Pn	02 20 12.3	+1.2
SHME				S	Sb	02 20 41.3	+1.4
NGRK	Negar Kerman	2.16	38	*e*Pn	Pn	02 20 14.1	+1.1
NGRK				*e*		02 20 53.4	
	comp=Z,99nm,0.8s						
KHNJ	Kahnooj	2.20	89	*e*Pn	Pn	02 20 15.1	+1.8
BANOM	Banah	2.22	154	*e*P	Pn	02 20 15.1	+1.5
	SNR=52						
BANOM				S	Sb	02 20 49.0	+4.0
BANOM	Banah	2.22	154	*e*Pn	Pn	02 20 14.9	+1.3
BANOM	Banah	2.22	154	P	Pn	02 20 15.1	+1.5
	SNR=52						
BANOM				S	Sb	02 20 46.0	+1.0
KRBR	Kerman	2.45	33	*e*Pn	Pn	02 20 18.1	+1.2
KRBR				IAML		02 21 04.0	
	comp=E,164nm,0.5s						
KRBR	Kerman	2.45	33	*e*Pn	Pn	02 20 18.1	+1.2
TVBK	TV Kerman	2.45	33	*e*Pn	Pb	02 20 19.1	-2.9
TVBK				*e*		02 20 58.6	
	comp=Z,99nm,0.5s						
KHGB	Koh Gabri	2.67	24	*e*Pn	Pn	02 20 20.9	+1.0
KHGB				*e*		02 21 06.1	
	comp=Z,99nm,1.0s						
MASF	Masafi	2.69	161	P	Pn	02 20 22.3	+2.4
	SNR=13						
MASF				S	Sb	02 20 56.3	-2.0
MSFE	Esma-Masafi	2.70	162	*i* P	Pn	02 20 22.3	+2.2
	SNR=12						
MSFE	Esma-Masafi	2.70	162	*e*Pn	Pn	02 20 21.9	+1.8
MDH	Madha	2.80	159	*e*Pn	Pn	02 20 22.3	+0.9
MDH	Madha	2.80	159	P	Pn	02 20 23.4	+2.0
CHMN	Cheshme madani	2.80	46	*e*Pn	Pb	02 20 24.7	-3.2
SHI	Shiraz	2.92	306	*e*Pn	Pn	02 20 23.0	-0.2
NAZ	Nazwa, Dubai	2.96	172	P	Pn	02 20 26.7	+3.1
NAZ	Nazwa, Dubai	2.96	172	*e*Pn	Pb	02 20 26.9	-3.5
NAZ	Nazwa, Dubai	2.96	172	P	Pb	02 20 27.4	-3.0
KBAM	BAM	3.09	66	*e*Pn	Pn	02 20 28.2	+2.7
UOSS	Minazif	3.10	163	*i* P	Pn	02 20 27.4	+1.8
	SNR=20						
UOSS	Minazif	3.10	163	*e*Pn	Pn	02 20 27.4	+1.8
UOSS	Minazif	3.10	163	P	Pn	02 20 27.7	+2.0
FAQ	Al Faqa, Dubai	3.19	174	P	Pn	02 20 28.5	+1.6
FAQ	Al Faqa, Dubai	3.19	174	*e*Pn	Pn	02 20 29.5	+2.6
FAQ	Al Faqa, Dubai	3.19	174	P	Pn	02 20 29.9	+3.1
HATD	Hatta, Dubai	3.20	165	P	Pn	02 20 30.2	+3.2
HATD	Hatta, Dubai	3.20	165	*e*Pn	Pb	02 20 30.8	-3.7
HATD	Hatta, Dubai	3.20	165	P	Pn	02 20 29.7	+2.7
HATD				S	Sb	02 21 09.5	-3.7
ASUD	Al Ashush, Dub	3.30	178	P	Pn	02 20 30.5	+2.3
ASUD	Al Ashush, Dub	3.30	178	*e*Pn	Pn	02 20 31.7	+3.4
ASUD	Al Ashush, Dub	3.30	178	P	Pn	02 20 31.6	+3.4
ASUD				S	Sb	02 21 12.7	-3.1
ASHO	Ashiyiah	3.32	167	*i* P	Pn	02 20 30.7	+2.0
	SNR=29						
ASHO	Ashiyiah	3.32	167	*e*Pn	Pn	02 20 31.2	+2.5
ASHO	Ashiyiah	3.32	167	P	Pn	02 20 31.0	+2.3
	SNR=29						
IMEH	Mehriz	3.48	351	*e*Pn	Pn	02 20 32.6	+1.5
IBAF	Bafgh	3.66	5	*e*Pn	Pn	02 20 34.5	+1.1
ALNE	Al Ain	3.89	173	*e*Pn	Pn	02 20 40.1	+3.6
ALNE	Al Ain	3.89	173	P	Pn	02 20 39.3	+2.8
ALNE				S	Sn	02 21 26.6	+5.3
SOHO	SOHO	3.96	162	P	Pn	02 20 39.4	+1.9
SOHO	SOHO	3.96	162	*e*Pn	Pn	02 20 39.1	+1.6
SOHO	SOHO	3.96	162	P	Pn	02 20 40.2	+2.7
SOHO				S	Sn	02 21 27.8	+4.7
ISAD	Sadrabad	4.18	342	*e*Pn	Pn	02 20 42.1	+1.4
MZWR	Madinat Zayed	4.33	196	P	Pn	02 20 46.1	+3.7
MZWR				S	Sn	02 21 36.3	+4.2
KLNJ	Kolanjah	4.40	315	*e*Pn	Pn	02 20 43.4	-0.4
YZKH	Yazd	4.47	353	*e*Pn	Pn	02 20 45.8	+1.2
YZKH	Yazd	4.47	353	*e*Pn	Pn	02 20 45.8	+1.2
IRAM	Ramesheh	4.58	328	*e*Pn	Pn	02 20 47.0	+0.9
ARQ	Araqi	4.73	165	P	Pn	02 20 50.9	+2.9
HOQ	Hoqain	4.73	156	P	Pn	02 20 50.2	+2.2
IGAR	Gharneh	5.23	329	*e*Pn	Pn	02 20 55.6	+0.5
TPRV	Parvadeh(Tabas	5.23	14	*e*Pn	Pn	02 20 56.5	+1.5
CHBR	Chabahar	5.25	115	*e*Pn	Pn	02 20 55.7	+0.5
CHBR	Chabahar	5.25	115	*e*Pn	Pn	02 20 55.7	+0.5
BSRN	Basiran	5.26	39	*e*Pn	Pn	02 20 57.2	+1.8
BSRN	Basiran	5.26	39	*e*Pn	Pn	02 20 57.2	+1.8
NASN	Na'in	5.28	337	*e*Pn	Pn	02 20 57.2	+1.4
NASN	Na'in	5.28	337	*e*Pn	Pn	02 20 57.2	+1.4
ANAR	Anarak	5.39	347	*e*Pn	Pn	02 20 58.2	+1.0
NHDN	Nehbandan	5.44	50	*e*Pn	Pn	02 20 59.9	+2.0
IZEF	Zefreh	5.54	334	*e*Pn	Pn	02 20 59.9	+0.6
IKOO	Kooshah	5.55	35	*e*Pn	Pn	02 21 01.4	+1.9
WSAR	Wadi Sarin	5.60	146	Pn	Pn	02 21 01.5	+1.6
	comp=Z,0.7nm,0.3s,baz=344,slow=10.0,SNR=13						
WSAR				Sn	Sn	02 22 04.8	+1.3
	comp=Z,0.7nm,0.3s,baz=171,slow=20,SNR=1.6						
SHK1	Shahrekord	5.77	320	*e*Pn	Pn	02 21 02.4	0.0
IPIR	Pirpir	6.03	323	*e*Pn	Pn	02 21 06.1	0.0
AFRZ	Afriz	6.38	30	*e*Pn	Pn	02 21 13.8	+3.1
RDF	Al-Radifah	6.82	280	*e*P		02 21 14.5	
MIB	Mutribah	7.15	287	*e*P		02 21 18.9	
RST	Umm Al-Ruwaisa	7.38	284	*e*P		02 21 22.4	
IDOB	Doab	8.40	316	*e*Pn	Pn	02 21 37.8	-0.8
IKFM	Kafar-mosalman	8.44	313	*e*Pn	Pn	02 21 40.1	+1.2
HSAM	Samen	8.44	319	*e*Pn	Pn	02 21 38.3	-0.9
HAGD	Aghdareh	8.61	324	*e*Pn	Pn	02 21 40.3	-1.1
RAYN	Ar Rayn	9.79	246	*i* P	Pn	02 21 56.1	-1.5
	SNR=5.7						
SHAO	Shalim	9.87	178	*i* P	Pn	02 21 57.8	-0.9
	SNR=6.4						
MMAI	Mount Meron Ar	17.81	291	P	P	02 23 43.8	-1.2
	comp=Z,0.5nm,0.3s,baz=96,slow=15,SNR=1.5						
AAK	Ala-Archa	21.44	42	P	P	02 24 25.9	+1.2
	comp=Z,1.2nm,0.5s,baz=219,slow=6.8,SNR=5.8						
AKTO	Aktyubinsk	22.57	5	P	P	02 24 36.2	-0.3
	comp=Z,1.2nm,0.6s,baz=172,slow=12,SNR=6.7						
BELG	Belogornoye	25.08	349	P	P	02 25 00.4	-0.2
	comp=Z,6.0nm,0.9s,baz=70,slow=7.2,SNR=3.7						
MKAR	Makanchi Array	28.37	41	P	P	02 25 30.4	+0.1
	comp=Z,0.2nm,0.4s,baz=239,slow=14,SNR=4.5						
KURBB	Kurchatov Arra	28.74	32	P	P	02 25 35.2	+1.7
	comp=Z,0.3nm,0.4s,baz=232,slow=9.1,SNR=2.9						
ZALV	Zalesovo Beam	33.84	32	P	P	02 26 18.3	0.0
	comp=Z,1.5nm,0.6s,baz=242,slow=8.8,SNR=7.0						
FINES	FINESS Array B	38.74	338	P	P	02 26 59.7	-0.3
	comp=Z,1.1nm,0.4s,baz=148,slow=9.8,SNR=11						
TORD	Torodi Ar. Bea	51.85	265	P	P	02 28 44.0	-0.7
	comp=Z,1.1nm,0.7s,baz=60,slow=7.7,SNR=4.8						

IDC 06 02:30:46.3±3.0**, 6°.79S**×**133°.24E, h0**km**, mb3.2**/1**, mb1 3.4**/3**, mb1mx3.3**/19**, mbtmp3.2**/3**, ML3.5**/2**, Error ellipse: s-maj=135.6km s-min=27.6km az=78.0, Aru**

Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	13.12	175	Pn	Pn	02 33 55.0	+1.0
	0.3nm,0.3s,baz=353,slow=14,SNR=18						
WRA				Sn	Sn	02 36 21.1	+0.2
	0.5nm,0.3s,baz=356,slow=24,SNR=8.8						
ASAR	Alice Springs	16.80	178	Pn	Pn	02 34 43.8	+0.7
	0.1nm,0.3s,baz=352,slow=8.6,SNR=5.8						
ASAR				Sn	Sn	02 37 48.6	-1.8
	0.2nm,0.3s,baz=358,slow=29,SNR=5.8						
MKAR	Makanchi Array	69.84	325	P	P	02 41 58.8	-0.1
	0.1nm,0.4s,baz=120,slow=8.5,SNR=1.8						

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*TEH **06** 02:40:28.0, 27°.93N×52°.78E, h10^{km}, ML3.2*
*OMAN **06** 02:40:29.4±0.9, 27°.71N×52°.70E, h10^{km}, mb5.0/6, ml3.3/10, Error ellipse: s-maj=41.5km s-min=16.1km az=277.0*
ISC 06 02:40:28.1±1.0**, 27°.90N**±0°.05×**52°.73E**±0°.06**, h14**^{km}**, n39,** σ**1**^{s}**.03**/44**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QIR1	Qir	0.64	26	*e*Pg	Pg	02 40 39.4	-1.3
QIR1				*e*		02 41 07.9	
	comp=Z,99nm,0.6s						
LMD1	Lamerd	0.68	145	*e*Pg	Pg	02 40 41.0	-0.4
LMD1				*e*		02 40 58.5	
	comp=Z,99nm,0.4s						
JHRM	Jahrom	0.96	51	*e*Pg	Pb	02 40 46.1	-0.6
JHRM				*e*		02 41 14.7	
	comp=Z,99nm,0.5s						
LAR1	LAR	1.48	98	*e*Pg	Pg	02 40 56.4	-0.2
LAR1				*e*		02 41 21.9	
	comp=Z,99nm,0.4s						
SHI	Shiraz	1.75	354	*e*Pn	Pb	02 40 59.8	-0.3
SHI				*e*		02 41 29.7	
	comp=Z,99nm,0.6s						
KAZ1	Kazerun	1.97	331	*e*Pn	Pb	02 41 03.9	+0.1
KAZ1				*e*		02 41 51.8	
	comp=Z,99nm,0.8s						
KLNJ	Kolanjah	3.25	343	*e*Pn	Pn	02 41 20.7	+1.6
SHME	Shamm	3.56	120	P	Pn	02 41 23.7	+0.7
BANOM	Banah	3.75	121	P	Pn	02 41 26.2	+0.7
	SNR=14						
IMEH	Mehriz	3.85	25	*e*Pn	Pn	02 41 28.4	+1.3
IRAM	Ramesheh	3.91	356	*e*Pn	Pn	02 41 29.6	+1.6
NAZ	Nazwa, Dubai	3.92	137	P	Pn	02 41 29.2	+1.4
NAZ				S	Sn	02 42 14.5	+0.9
NGRK	Negar Kerman	3.92	63	*e*Pn	Pn	02 41 29.2	+0.9
NGRK				*e*		02 42 17.9	
	comp=Z,99nm,0.4s						
SLWR	Sila	3.92	194	P	Pn	02 41 27.7	-0.2
MASF	Masafi	3.97	129	P	Pn	02 41 29.5	+0.9
ASUD	Al Ashush, Dub	4.01	144	P	Pn	02 41 30.6	+1.5
ASUD				S	Sn	02 42 17.3	+1.4
FAQ	Al Faqa, Dubai	4.06	140	P	Pn	02 41 30.7	+0.9
FAQ				S	Sn	02 42 16.6	-0.5
KHGB	Koh Gabri	4.11	52	*e*Pn	Pn	02 41 32.0	+1.3
KHGB				*e*		02 41 51.8	
	comp=Z,99nm,0.9s						
MDH	Madha	4.12	128	P	Pn	02 41 31.0	+0.5
MZWR	Madinat Zayed	4.25	166	P	Pn	02 41 32.6	+0.2
UOSS	Minazif	4.29	133	P	Pn	02 41 33.2	+0.2
HATD	Hatta, Dubai	4.32	134	P	Pn	02 41 33.9	+0.4
ASHO	Ashiyiah	4.38	136	P	Pn	02 41 34.6	+0.3
	SNR=20						
ASHO				S	Sn	02 42 25.2	0.0
IBAF	Bafgh	4.43	33	*e*Pn	Pn	02 41 36.8	+1.7
ICHK	Chekchek	4.57	18	*e*Pn	Pn	02 41 38.9	+1.9
CHMN	Cheshme madani	4.65	64	*e*Pn	Pn	02 41 40.4	+2.1
SOHO	SOHO	5.08	137	P	Pn	02 41 43.9	+0.1
KBAM	BAM	5.19	75	*e*Pn	Pn	02 41 46.7	+1.3
ANAR	Anarak	5.34	9	*e*Pn	Pn	02 41 48.5	+0.9
ARQ	Araqi	5.69	142	P	Pn	02 41 52.2	0.0
	SNR=13						
HOQ	Hoqain	5.96	135	P	Pn	02 41 56.0	0.0
	SNR=9.4						
HOQ				S	Sn	02 43 02.7	-1.4
BSY	Bisya	6.54	141	P	Pn	02 42 04.2	+0.3
	SNR=5.7						
SMDO	Samad	6.81	134	P	Pn	02 42 07.7	-0.1
	SNR=6.6						
WBK	Wadi Bani Khal	7.72	132	P	Pn	02 42 19.5	-0.7
	SNR=7.7						
JLN	Jalan Bani Buh	8.34	132	P	Pn	02 42 27.7	-0.8
MHTO	MHTO	8.38	144	P	Pn	02 42 28.9	-0.2
	SNR=13						
WHFO	Wadi Hawf	9.98	174	P	Pn	02 42 49.8	-1.4
	SNR=11						
DMTO	DMTO	10.34	168	P	Pn	02 42 56.5	+0.5
ABTO	Aybut	10.51	177	P	Pn	02 42 56.8	-1.6

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*NEIC **06** 02:45:36.1±1.9, 17°.0S±0°.1×173°.87W±0°.10, h66^{km}±6^{km}, mb4.7/67, Error ellipse: s-maj=18.1km s-min=12.5km az=199.0*
*IDC **06** 02:45:41.4±0.7, 16°.70S×174°.09W, h105^{km}±5^{km}, mb4.3/15, mb1 4.5/16, mb1mx4.2/34, mbtmp4.6/16, MS3.7/10, Ms1 3.7/10, ms1mx3.3/46, Error ellipse: s-maj=19.3km s-min=11.3km az=139.0*
*NOU **06** 02:45:42.6, 16°.57S×172°.68W, h213^{km}, mb4.9, Samoa Islands Region*
*GCMT **06** 02:45:45.1±0.4, 16°.79S±0°.03×173°.53W±0°.02, h116^{km}±4^{km}, MW5.0/74, Moment Tensor Solution. s15,c17; s74,c88; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.38±.17; $M_{\theta\theta}$-2.23±.24; $M_{\phi\phi}$2.61±.20; $M_{r\theta}$0.45±.15; $M_{\theta\phi}$-2.82±.15; $M_{\phi r}$1.76±.10; Best double couple: $M_0$4.13300×10^{16} NP1:ϕ_s290.00000°, δ64.00000°, λ-179.00000°. NP2:ϕ_s200.00000°, δ89.00000°, λ-26.00000°. Principal axes: T 4.3430, Plg17.0000°, Azm248.0000°; N -0.4190, Plg64.0000°, Azm17.0000°; P -3.9240, Plg19.0000°, Azm152.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 06 02:45:40.1±0.4**, 17°.06S**±0°.06×**173°.75W**±0°.06**, h100**^{km}**, n152,** σ**2**^{s}**.07**/122**, mb4.5**/38**, 1D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	4.15	119	Pn	Pn	02 46 39.8	-1.5
NIUE				Sn	Sn	02 47 23.6	-5.2
NIUE	Niue	4.15	119	P	Pn	02 46 40.2	-1.1
MSVF	Nonsavu	7.86	264		Pn	02 47 36.5	+4.7
GLKZ	Green Lake	12.74	197	P	Pn	02 48 38.4	+0.9
GLKZ				S	Sn	02 50 51.7	-5.9
RAR	Rarotonga	13.83	110	P	Pn	02 48 53.0	+1.1
	4.6nm,0.3s,baz=322,slow=11,SNR=6.9						
SANVU	Saraoutou	18.36	272	P	P	02 49 46.0	-1.1
SANVU				IAmb	IAmb	02 50 20.3	
	comp=Z,36nm,1.0s						
PINNC	Pines Island,	18.53	250	P	Pn	02 49 54.6	+4.4
YATNC	Mamie plateau,	18.91	252	P	Pn	02 50 00.5	+5.7
DZM	Mont Dzumac	19.32	252	P	P	02 49 56.8	-0.8
	comp=Z,0.3nm,0.3s,baz=90,slow=16,SNR=4.9						
DZM	Mont Dzumac	19.32	252	*e*P	Pn	02 50 03.2	+3.5
	comp=Z,94nm,0.8s						
DZM				*e*LR	LR	02 54 47.0	
	comp=Z,583nm,28.8s						
DZM	Mont Dzumac	19.32	252	P	Pn	02 49 59.0	-0.6
DZM	Mont Dzumac	19.32	252	P	Pn	02 50 04.4	+4.7
ONTNC	Ouen Toro	19.36	251	P	Pn	02 50 04.5	+4.5
NOUC	Port Laguerre	19.45	252	P	Pn	02 50 05.9	+4.8
KOUNC	Koumac, New Ca	21.08	257	P	P	02 50 20.3	+3.8
OUZ	Omahuta	21.32	210	P	P	02 50 19.8	+0.9
GRZ	Great Barrier	21.38	205	P	P	02 50 23.2	+3.6
WCZ	Waipu Caves	21.58	207	P	P	02 50 23.2	+1.5
MXZ	Matakaoa Point	21.59	197	P	P	02 50 25.1	+3.3
KUZ	Kuaotunu	21.71	203	P	P	02 50 24.8	+1.7
HAZ	Te Kaha	21.93	198	P	P	02 50 24.4	-0.9
PKGZ	Pakihiroa	21.96	198	P	P	02 50 26.7	+0.9
WIAZ	Waiheke Island	21.98	204	P	P	02 50 25.7	-0.3
PUZ	Puketiti	22.08	197	P	P	02 50 29.2	+2.1
RUGZ	Raukumara Rang	22.15	198	P	P	02 50 29.3	+1.4
RUGZ				S	S	02 54 24.8	-0.9
ETAZ	East Tamaki Re	22.20	205	P	P	02 50 30.7	+2.4
MKAZ	Moumakai	22.24	204	P	P	02 50 30.9	+2.3
TWGZ	Tauwhareparae	22.26	197	P	P	02 50 33.3	+4.3
TWGZ				S	S	02 54 30.2	+2.9
MWZ	Matawai	22.54	198	P	P	02 50 34.1	+2.3
TKGZ	Te Karaka	22.54	197	P	P	02 50 33.8	+2.1
URZ	Urewera	22.59	199	P	P	02 50 33.7	+1.4
	comp=Z,101nm,0.6s,baz=42,slow=2.4,SNR=80						
URZ	Urewera	22.59	199	P	P	02 50 28.8	-3.5
URZ	Urewera	22.59	199	P	P	02 50 33.3	+1.0
URZ				S	S	02 54 31.3	-1.3
TOZ	Tahuroa Road	22.66	203	P	P	02 50 35.5	+2.5
RAGZ	Rawiri	22.72	198	P	P	02 50 36.4	+2.7
RIGZ	Rimuhau	22.81	197	P	P	02 50 37.6	+3.0
RIGZ				S	S	02 54 37.2	+1.0
PAE	Paea	23.07	95	*e*T	T	03 14 10.5	
	comp=Z,2.6nm,0.3s						
PPT2	Papeete2	23.08	95	*e*LQ	LQ	02 55 16.1	
	comp=Z,388nm,28.8s						
PPT2				*e*LR	LR	02 55 57.2	
	comp=Z,488nm,32.2s						
PPT2	Papeete2	23.08	95	*e*T	T	03 14 11.8	
	comp=Z,3.0nm,0.3s						
PPT	Papeete	23.08	95	LR	LR	02 58 24.2	
	comp=Z,29nm,19.1s,baz=255,slow=32						
TVO	Taravao	23.38	95	*e*T	T	03 14 33.6	
	comp=Z,1.2nm,0.2s						
TBI	Tubuai	23.62	109	*e*LQ	LQ	02 55 34.6	
	comp=Z,467nm,37.5s						
TBI				*e*LR	LR	02 56 22.7	
	comp=Z,306nm,32.8s						
TBI	Tubuai	23.62	109	*e*T	T	03 15 00.0	
	comp=Z,10nm,0.3s						
VAH	Vaihoa	25.15	90	*e*T	T	03 16 42.2	
	comp=Z,4.8nm,0.2s						
HNR	Honiara	26.68	283	P	P	02 51 06.3	-3.7
	comp=Z,58nm,0.4s,baz=186,slow=22,SNR=39						
RPZ	Rata Peaks	29.53	203	P	P	02 51 37.6	+2.5
	comp=Z,57nm,0.9s,baz=128,slow=2.0,SNR=10						
TAOE	Nuku Hiva Isla	33.70	80	*e*T	T	03 27 18.3	
	comp=Z,34nm,0.2s						
ARMA	Armidale	34.23	241	P	P	02 52 15.9	-0.6
RKT	Rikitea	36.83	106	*e*LR	LR	03 02 18.7	
	comp=Z,292nm,33.8s						
CAN	Canberra	37.77	234	P	P	02 52 45.8	-0.9
PMG	Port Moresby	38.75	276	P	P	02 52 52.0	-3.1
	comp=Z,4.5nm,0.3s,baz=69,slow=9.3,SNR=5.9						
PMG	Port Moresby	38.75	276	P	P	02 52 53.3	-1.8
PMG	Port Moresby	38.75	276	P	P	02 52 55.1	0.0
H11S2	WAKE ISLAND Hy	40.22	331	T	T	03 34 23.2	
	baz=146,slow=76,SNR=41						
H11S3	WAKE ISLAND Hy	40.23	331	T	T	03 34 28.7	
	baz=146,slow=76,SNR=15						
H11S1	WAKE ISLAND Hy	40.24	331	T	T	03 34 27.2	
	baz=146,slow=76,SNR=22						
TOO	Toolangi	41.18	232	P	P	02 53 13.8	-1.1
H11N3	WAKE ISLAND Hy	41.19	332	T	T	03 36 51.7	
	baz=146,slow=76,SNR=9.5						
H11N1	WAKE ISLAND Hy	41.20	332	T	T	03 36 58.2	
	baz=146,slow=76,SNR=9.4						
H11N2	WAKE ISLAND Hy	41.21	332	T	T	03 36 52.1	
	baz=146,slow=76,SNR=8.8						
COEN	Coen	41.57	268	P	P	02 53 17.6	-0.8
TAU	Tasmania Unive	41.89	224	P	P	02 53 19.3	-1.3
STKA	Stephens Creek	42.94	241	P	P	02 53 29.5	+0.2
	comp=Z,29nm,0.9s,baz=85,slow=9.4,SNR=57						
STKA	Stephens Creek	42.94	241	P	P	02 53 28.5	-0.8
BBOO	Buckleboo	47.71	241	P	P	02 54 05.7	-1.2
WB0	Warramunga Arr	49.13	258	P	P	02 54 15.3	-2.7
WB0				IAmb	IAmb	02 54 17.1	
	comp=Z,11nm,1.1s						
WB2	Warramunga Arr	49.15	258	P	P	02 54 15.5	-2.7
WB2				IAmb	IAmb	02 54 17.4	
	comp=Z,16nm,1.4s						
WRA	Warramunga Arr	49.16	258	P	P	02 54 16.6	-1.7
	comp=Z,6.2nm,1.1s,baz=96,slow=7.0,SNR=26						
WRA	Warramunga Arr	49.16	258	P	P	02 54 15.8	-2.5
AS31	Alice Springs	49.30	253	P	P	02 54 17.5	-1.9
ASAR	Alice Springs	49.30	253	P	P	02 54 18.1	-1.2
	comp=Z,46nm,0.8s,baz=88,slow=8.5,SNR=414						
ASAR				pP	pP	02 54 43.5	+0.8
	comp=Z,16nm,0.8s,baz=86,slow=8.4,SNR=5.2						
ASAR				S	S	03 01 13.9	-4.5
	comp=Z,0.7nm,1.0s,baz=91,slow=14,SNR=4.1						
ASAR	Alice Springs	49.30	253	P	P	02 54 17.5	-1.9
FORT	Forrest	54.38	244	P	P	02 54 55.1	-1.9
FAKI	Fak Fak	54.82	279	P	P	02 54 59.3	-1.0
SWI	Sorong	56.42	281	P	P	02 55 13.1	+1.3
FITZ	Fitzroy Crossi	57.56	259	LR	LR	03 17 28.6	
	comp=Z,36nm,19.3s,baz=84,slow=33						
RPN	Rapa Nui	59.97	112	LR	LR	03 16 03.3	
	comp=Z,30nm,19.6s,baz=192,slow=30						
SOEI	Soe	60.53	268	P	P	02 55 42.2	+1.7
BATI	Baumata	61.00	268	LR	LR	03 20 49.2	
	comp=Z,172nm,18.6s,baz=194,slow=35						
VNDA	Vanda	61.70	186	P	P	02 55 50.9	+3.6
	comp=Z,4.1nm,0.9s,baz=14,slow=7.8,SNR=1.3						
EDFI	Ende, Flores	63.24	269	P	P	02 55 58.3	-0.4
NWAO	Narrogin (SRO)	63.53	241	LR	LR	03 20 51.1	
	comp=Z,58nm,20.4s,baz=280,slow=33						
PLAI	Plampang	66.97	268	P	P	02 56 23.4	+0.7
TWSI	Taliwang, Sumb	67.84	267	P	P	02 56 28.3	+0.1
QSPA	South Pole Qui	72.99	180	P	P	02 57 01.7	+2.9
QSPA				IAmb	IAmb	02 57 02.4	
	comp=Z,12nm,0.9s						
PETK	Petropavlovsk-	74.10	343	P	P	02 57 02.1	-3.1
	comp=Z,2.6nm,0.8s,baz=126,slow=11,SNR=2.2						
GSC	Goldstone, Bar	74.98	45	IAmb	IAmb	02 57 11.8	
	comp=Z,7.0nm,1.1s						
YBH	Yreka Blue Hor	75.11	37	LR	LR	03 25 48.5	
	comp=Z,67nm,18.2s,baz=58,slow=32						
NVAR	Mina Array Bea	75.78	42	P	P	02 57 15.8	+0.4
	comp=Z,4.9nm,0.8s,baz=226,slow=9.8,SNR=24						
NVAR				pP	pP	02 57 42.2	+1.7
	comp=Z,2.3nm,0.7s,baz=226,slow=9.4,SNR=5.5						
NVAR	Mina Array Bea	75.78	42	P	P	02 57 15.3	-0.2
NV11	Mina Array Sit	75.87	42	IAmb	IAmb	02 57 17.2	
	comp=Z,8.6nm,1.1s						
KVN	Kaiserville	76.27	41	P	P	02 57 17.9	-0.3
TPH	Tonopah	76.27	43	P	P	02 57 17.8	-0.4
SHPR	Sheep Range	76.76	45	IAmb	IAmb	02 57 22.5	
	comp=Z,6.2nm,1.0s						
KSM	Kuching	77.01	276	P	P	02 57 21.7	-1.0
KS19	Wonju Array Si	77.17	316	P	P	02 57 23.3	+0.2
PRN	Pahroc Range	77.33	44	IAmb	IAmb	02 57 25.8	
	comp=Z,9.2nm,1.2s						
TUC	Tucson	77.69	51	P	P	02 57 26.3	+0.1
WVOR	Wild Horse Val	77.93	38	P	P	02 57 27.2	-0.1
WVOR				IAmb	IAmb	02 57 28.4	
	comp=Z,10nm,1.1s						
U15A	North Rim	78.68	46	IAmb	IAmb	02 57 33.7	
	comp=Z,8.1nm,1.0s						
ELK	Elko	79.04	41	LR	LR	03 26 50.3	
	comp=Z,45nm,18.5s,baz=306,slow=31						
PKCU	Pink Cliffs	79.19	45	P	P	02 57 35.6	+0.9
DUG	Dugway, Tooele	80.30	43	IAmb	IAmb	02 58 08.3	
	comp=Z,15nm,1.7s						
F10A	Beach Ranch, E	80.85	36	IAmb	IAmb	02 57 43.4	
	comp=Z,9.7nm,0.9s						
TMUT	Trail Mountain	80.89	44	P	P	02 57 44.0	+0.4
NJ2	Nanjing	80.90	307	*e*P	P	02 57 45.1	+1.6
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
HLID	Hailey	81.11	39	IAmb	IAmb	02 57 45.5	
	comp=Z,6.5nm,1.0s						
TX32	Lajitas Array	81.81	56	IAmb	IAmb	02 57 50.6	
	comp=Z,14nm,1.5s						
TXAR	Lajitas Array	81.81	56	P	P	02 57 49.4	+0.9
	comp=Z,2.7nm,1.1s,baz=228,slow=6.6,SNR=14						
ANMO	Albuquerque	82.12	50	LR	LR	03 27 50.2	
	comp=Z,36nm,18.4s,baz=262,slow=31						
ANMO	Albuquerque	82.12	50	P	P	02 57 51.0	+0.8
ANMO				IAmb	IAmb	02 57 52.0	
	comp=Z,19nm,1.9s						
NEW	Newport	82.26	34	LR	LR	03 27 14.2	
	comp=Z,72nm,18.5s,baz=332,slow=30						
REDW	Red Top Meadow	83.20	41	P	P	02 57 55.5	-0.2
REDW				IAmb	IAmb	02 58 27.3	
	comp=Z,14nm,1.4s						
WRH	Wood River Hil	83.64	11	IAmb	IAmb	02 58 28.2	
	comp=Z,10nm,1.0s						
BW06	Boulder Array	83.72	42	IAmb	IAmb	02 57 58.7	
	comp=Z,4.2nm,0.8s						
PDAR	Pinedale Array	83.72	42	P	P	02 57 58.0	-0.3
	comp=Z,3.2nm,0.7s,baz=216,slow=3.2,SNR=37						
PDAR	Pinedale Array	83.72	42	P	P	02 57 57.5	-0.7
CCB	Clear Creek Bu	83.85	11	IAmb	IAmb	02 58 29.1	
	comp=Z,6.0nm,0.9s						
H17A	Grant Village	83.90	40	IAmb	IAmb	02 58 01.3	
	comp=Z,4.6nm,0.8s						
SEY	Seymchan	84.03	345	P	P	02 57 57.6	-1.5
	comp=Z,2.5nm,0.8s,baz=113,slow=3.4,SNR=7.5						
SEY				pP	pP	02 58 24.6	-0.1
	comp=Z,1.2nm,0.5s,baz=200,slow=3.2,SNR=2.1						
MDM	Murphy Dome	84.06	11	IAmb	IAmb	02 58 05.0	
	comp=Z,14nm,1.4s						
ILAR	Eielson Array	84.13	11	P	P	02 57 58.4	-1.1
	comp=Z,0.6nm,0.6s,baz=226,slow=5.6,SNR=13						
ILAR				pP	pP	02 58 27.4	+2.1
	comp=Z,2.9nm,1.1s,baz=222,slow=6.3,SNR=4.7						
ILAR	Eielson Array	84.13	11	P	P	02 57 58.0	-1.6
IMAR	Indian Mountai	84.15	8	P	P	02 57 59.4	-0.2
CMIG	Matias Romero	84.75	70	LR	LR	03 27 47.5	
	comp=Z,35nm,18.3s,baz=220,slow=30						
ABTX	Abilene, Hawle	86.29	54	P	P	02 58 11.1	-0.1
BMAR	Burnt Mountain	86.93	11	P	P	02 58 13.3	-0.1
PLCA	Paso Flores	88.65	132	P	P	02 58 25.7	+3.2
	comp=Z,1.6nm,0.9s,baz=53,slow=2.1,SNR=4.1						
PLCA	Paso Flores	88.65	132	IAmb	IAmb	03 00 20.6	
	comp=Z,9.4nm,1.4s						
HHC	Hu-ho-hao-te	89.91	313	*e*P	P	02 58 29.1	+0.9
HHC				pmax	pmax		
	comp=Z,7.0nm,1.0s						
SYO	Syowa Base	90.92	191⇓	*e*sP	sP	02 58 55.8	-13
YKA	Yellowknife Ar	91.74	24	P	P	02 58 35.2	-0.8
	comp=Z,0.6nm,1.0s,baz=218,slow=3.8,SNR=7.7						
YKA				pP	pP	02 59 03.2	+1.1
	comp=Z,0.5nm,0.8s,baz=230,slow=4.4,SNR=3.8						
MKAR	Makanchi Array	111.74	314	PKiKP	PKiKP	03 04 02.9	-0.4
	comp=Z,0.3nm,0.7s,baz=263,slow=1.0,SNR=3.9						
BVAR	Borovoye Array	118.97	322	PKP	PKPdf	03 04 16.4	-0.4
	comp=Z,0.5nm,0.7s,baz=18,slow=11,SNR=5.4						
KMBO	Kilima Mbogo	144.50	242	PKP	PKPdf	03 05 06.6	+0.4
	comp=Z,3.1nm,0.9s,baz=77,slow=5.8,SNR=6.1						
CLL	Collm	145.41	353	*e*PKPbc	PKPbc	03 05 06.0	-0.3
KOLS	Kolonicke sedl	145.64	341	*e*PKP	PKPab	03 05 07.1	-0.5
KOLS				*e*		03 31 53.0	
CHVC	Chvalec	145.64	349	*e*PKP	PKPab	03 05 07.1	-0.5
OSTC	Ostas	145.64	349	*e*PKP	PKPab	03 05 07.2	-0.3
OSTC				*e*x	x	03 05 36.1	
DPC	Dobruska-Polom	145.82	349	*e*PKP	PKPab	03 05 08.2	-0.1
KRLC	Kraliky	145.99	348	*e*PKP	PKPab	03 05 08.9	0.0
PRU	Pruhonice	146.48	350	*e*PKP	PKiKP	03 05 13.2	+0.7
PRU				*e*x	x	03 05 40.9	
VYHS	Vyhne	147.00	345	*e*PKP	PKPbc	03 05 11.5	+0.3
BRTR	Keskin Array B	147.21	319	PKPbc	PKPbc	03 05 12.4	+0.2
	comp=Z,5.2nm,0.9s,baz=128,slow=2.0,SNR=16						
KHC	Kasperske Hory	147.46	351	*e*PKP	PKiKP	03 05 14.9	+0.3
KHC				*e*x	x	03 06 01.1	
MODS	Modra-Piesok	147.49	346	*e*PKP	PKPbc	03 05 11.9	-0.7
CONA	Conrad Observa	148.22	348	*e*P	PKPbc	03 05 15.2	+0.6
	comp=Z,1.5nm,0.6s						
MMAI	Mount Meron Ar	149.32	307	PKPbc	PKiKP	03 05 18.9	-0.1
	comp=Z,5.6nm,0.8s,baz=90,slow=3.5,SNR=5.3						
SOKA	Soboth	149.58	348	*e*P	PKPbc	03 05 17.4	-0.7
	comp=Z,1.0nm,0.5s						
DAVA	Damuels	149.71	355	*e*P	PKiKP	03 05 19.1	-0.3
	comp=Z,2.8nm,0.8s						
FETA	Feichten	149.89	354	*e*P	PKPbc	03 05 19.0	0.0
	comp=Z,3.7nm,0.9s						
EIL	Elat	150.91	301	PKPbc	PKiKP	03 05 22.1	-0.2
	comp=Z,3.4nm,0.8s,baz=326,slow=5.0,SNR=4.0						

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*JMA **06** 02:56:31.9±0.4, 38°.18N×134°.11E, h466^{km}, M3.5*
*IDC **06** 02:56:32.2±1.0, 38°.36N×133°.75E, h439^{km}±13^{km}, mb3.0/8, mb1 3.0/13, mb1mx2.8/59, mbtmp3.7/13, Error ellipse: s-maj=17.1km s-min=13.9km az=75.0*
ISC 06 02:56:32.3±0.8**, 38°.3N**±0°.1×**133°.9E**±0°.1**, h447**^{km}**, n20,** σ**0**^{s}**.78**/20**, mb3.3**/8**, Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JWT	Wachi	3.30	157	P	P	02 57 41.1	-0.4
JNG	Nsakai	3.90	118	P	P	02 57 46.0	-0.5
MJAR	Matsushiro Arr	3.91	116	P	P	02 57 46.5	0.0
	0.2nm,0.3s,baz=297,slow=10,SNR=9.0						
KSRS	Korea Array	4.77	261	P	P	02 57 53.5	-0.7
	0.5nm,0.3s,baz=72,slow=10,SNR=6.9						
JFT	Otama	5.20	97	P	P	02 57 58.0	-0.5
JRG	Rokugo	5.40	77	P	P	02 57 59.0	-1.4
JMM	Marumori	5.50	93	P	P	02 58 00.7	-0.7
JFK	Kawauchi	5.65	98	P	P	02 58 01.5	-1.5
JNU	Nakatsue	5.74	206	P	P	02 58 03.2	-0.8
	0.8nm,0.3s,baz=27,slow=4.5,SNR=1.6						
JMK	Ichinoseki	5.80	82	P	P	02 58 04.0	-0.4
USRK	Ussuriysk Ar.	6.02	347	P	P	02 58 06.8	+0.3
	baz=156,slow=9.5,SNR=7.3						
ASAJ	Asahikawa	8.76	46	P	P	02 58 35.6	-0.2
	1.5nm,0.3s,baz=216,slow=19,SNR=2.9						
SONM	Songino Array	22.08	304	P	P	03 00 52.1	-0.6
	0.6nm,0.4s,baz=114,slow=11,SNR=5.1						
CMAR	Chiang Mai Arr	36.24	247	P	P	03 02 56.9	+0.7
	1.2nm,0.3s,baz=69,slow=7.8,SNR=4.4						
MKAR	Makanchi Array	38.30	300	P	P	03 03 12.4	-0.5
	0.5nm,0.7s,baz=89,slow=11,SNR=6.6						
KURBB	Kurchatov Arra	40.42	306	P	P	03 03 29.3	-0.7
	1.3nm,0.7s,baz=88,slow=8.2,SNR=8.9						
ILAR	Eielson Array	51.62	32	P	P	03 04 56.6	+1.1
	0.5nm,0.7s,baz=286,slow=8.7,SNR=6.3						
WRA	Warramunga Arr	57.98	179	P	P	03 05 41.2	+0.4
	0.3nm,0.5s,baz=354,slow=7.8,SNR=7.5						
ASAR	Alice Springs	61.68	180	P	P	03 06 06.3	+0.7
	0.4nm,0.7s,baz=13,slow=12,SNR=4.6						
FINES	FINESS Array B	64.76	330	P	P	03 06 24.9	-0.1
	4.7nm,1.1s,baz=62,slow=6.5,SNR=5.1						

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*GCMT **06** 03:06:01.8±0.3, 33°.71S±0°.03×179°.59E±0°.02, h15^{km}±1^{km}, MW4.9/85, Moment Tensor Solution. s41,c48; s85,c113; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.47±.16; $M_{\theta\theta}$0.31±.11; $M_{\phi\phi}$2.16±.11; $M_{r\theta}$0.19±.24; $M_{\theta\phi}$1.23±.07; $M_{\phi r}$0.85±.21; Best double couple: $M_0$2.76600×10^{16} NP1:ϕ_s32.00000°, δ36.00000°, λ-81.00000°. NP2: ϕ_s202.00000°, δ54.00000°, λ-96.00000°. Principal axes: T 2.9090, Plg9.0000°, Azm296.0000°; N -0.2840, Plg5.0000°, Azm205.0000°; P -2.6230, Plg80.0000°, Azm86.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*WEL **06** 03:06:02.7±0.7, 34°S±8°×17°9W±1°6, h33^{km}, M4.5/30, mB5.1/13, ML4.8/30, MLv4.8/30, Mw(mB)4.5/13 Error ellipse: s-maj=0.0km s-min=0.0km az=113.6*
*NEIC **06** 03:06:02.8±1.6, 33°.64S±0°.09×179°.4E±0°.1, h14^{km}±5^{km}, mb4.6/11, Error ellipse: s-maj=16.4km s-min=13.4km az=96.0*
*IDC **06** 03:06:02.6±2.2, 33°.71S×179°.13E, h0^{km}, mb4.4/6, mb1 4.6/7, mb1mx4.3/35, mbtmp4.4/7, ML4.1/1, MS3.8/20, Ms1 3.8/20, ms1mx3.8/30, Error ellipse: s-maj=48.1km s-min=30.3km az=105.0*
*NOU **06** 03:06:56.9, 38°.03S×178°.48E, h0^{km}, MLv3.8, Off E. Coast of N. Island, N.Z.*
ISC 06 03:06:05.5±0.6**, 33°.64S**±0°.06×**179°.54E**±0°.10**, h35**^{km}**, n99,** σ**1**^{s}**.74**/78**, mb4.5**/10**, MS3.9**/23**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	4.04	194	Pn	Pn	03 07 05.2	+0.5
MXZ	Matakaoa Point	4.04	194	P	Pn	03 07 04.7	-0.1
WMGZ	Waiomatatini S	4.27	192	P	Pn	03 07 07.3	-0.7
HAZ	Te Kaha	4.35	199	P	Pn	03 07 08.4	-0.6
HAZ				S	Sn	03 08 00.5	+2.1
PKGZ	Pakihiroa	4.40	195	P	Pn	03 07 08.1	-1.7
PKGZ				S	Sn	03 08 03.3	+3.4
PUZ	Puketiti	4.54	193	P	Pn	03 07 09.6	-2.1
RUGZ	Raukumara Rang	4.57	199	P	Pn	03 07 11.7	-0.5
WHRZ	Whale Island	4.70	206	P	Pn	03 07 15.0	+1.2
TWGZ	Tauwhareparae	4.70	195	P	Pn	03 07 12.6	-1.3
TWGZ				S	Sn	03 08 09.1	+1.9
OPRZ	Ohinepanea	4.85	209	P	Pn	03 07 18.3	+2.5
GLKZ	Green Lake	4.87	27	P	Pn	03 07 16.8	+0.5
GLKZ				S	Sn	03 08 12.0	+0.5
TGRZ	Tauranga	4.88	212	P	Pn	03 07 21.8	+5.6
CNGZ	Carnagh Statio	4.95	192	P	Pn	03 07 15.9	-1.4
MWZ	Matawai	4.96	199	P	Pn	03 07 16.2	-1.3
TKGZ	Te Karaka	4.98	196	P	Pn	03 07 16.3	-1.4
TKGZ				S	Sn	03 08 17.6	+3.6
URZ	Urewera	5.01	202	Pn	Pn	03 07 16.3	-1.8
	8.6nm,0.3s,baz=262,slow=3.3,SNR=44						
URZ				Sn	Sn	03 08 13.8	-1.0

	1.5nm,0.3s,baz=64,slow=16,SNR=1.4						
URZ	**Urewera**	**5.01**	**202**		**Pn**	**03 07 18.0**	**-0.1**
URZ	**Urewera**	**5.01**	**202**	P	**Pn**	**03 07 16.6**	**-1.5**
URZ				S	**Sn**	**03 08 14.3**	**-0.5**
OUZ	**Omahuta**	**5.16**	**251**		**Pn**	**03 07 17.8**	**-2.4**
TOZ	**Tahuroa Road**	**5.24**	**218**	P	Pn	03 07 32.1	+11
RIGZ	**Rimuhau**	**5.25**	**195**	P	**Pn**	**03 07 19.8**	**-1.7**
RIGZ				S	**Sn**	**03 08 21.0**	**+0.2**
RTZ	**Ruatahuna**	**5.38**	**202**	P	**Pn**	**03 07 22.7**	**-0.5**
RTZ				S	**Sn**	**03 08 27.4**	**+3.5**
SNGZ	**Shannon Statio**	**5.43**	**199**	P	**Pn**	**03 07 23.2**	**-0.7**
SNGZ				S	**Sn**	**03 08 26.2**	**+1.1**
PRGZ	**Paritu Road**	**5.44**	**194**	P	**Pn**	**03 07 21.5**	**-2.5**
RAHZ	**Arahi**	**5.62**	**200**	P	**Pn**	**03 07 26.3**	**-0.3**
MTHZ	**Maungataniwha**	**5.64**	**202**	P	**Pn**	**03 07 25.9**	**-0.9**
MTHZ				S	**Sn**	**03 08 33.2**	**+2.9**
MHGZ	**Mahia Peninsul**	**5.66**	**193**	P	**Pn**	**03 07 25.3**	**-1.6**
WHHZ	**Waihua**	**5.74**	**198**	P	**Pn**	**03 07 27.2**	**-0.9**
NMHZ	**Naumai**	**5.87**	**201**	P	**Pn**	**03 07 28.6**	**-1.4**
ARHZ	**Aropaoanui**	**5.97**	**199**	P	**Pn**	**03 07 29.9**	**-1.4**
BKZ	**Black Stump Fm**	**6.04**	**203**	Pn	**Pn**	**03 07 30.6**	**-1.7**
BKZ	**Black Stump Fm**	**6.04**	**203**	P	**Pn**	**03 07 30.9**	**-1.4**
HIZ	**Hauiti**	**6.17**	**217**	P	Pn	03 07 44.6	+11
MCHZ	**McNeill Hill**	**6.23**	**201**	P	**Pn**	**03 07 32.7**	**-2.2**
TMVZ	**Te Maari**	**6.28**	**208**	P	**Pn**	**03 07 35.5**	**-0.2**
ETVZ	**East Tongariro**	**6.29**	**208**	P	**Pn**	**03 07 35.8**	**-0.1**
KWHZ	**Kaweka Forest**	**6.29**	**203**	P	**Pn**	**03 07 36.0**	**+0.2**
CKHZ	**Cape Kidnapper**	**6.32**	**198**	P	**Pn**	**03 07 40.2**	**+4.1**
BHHZ	**Black Hill Sta**	**6.47**	**205**	P	**Pn**	**03 07 36.3**	**-2.0**
KAHZ	**Kahuranaki**	**6.50**	**198**	P	**Pn**	**03 07 35.8**	**-2.9**
WNVZ	**Wahianoa**	**6.50**	**208**	P	**Pn**	**03 07 38.0**	**-0.8**
KRHZ	**Kereru**	**6.51**	**202**	P	**Pn**	**03 07 35.2**	**-3.5**
MOVZ	**Moawhango**	**6.51**	**207**	P	Pn	03 07 44.5	+5.7
PREZ	**Palmer Road**	**7.15**	**216**	P	Pn	03 07 53.1	+5.6
PRWZ	**Pori Road**	**7.47**	**201**	P	**Pn**	**03 07 52.6**	**+0.8**
BFZ	**Birch Farm**	**7.50**	**200**	P	**Pn**	**03 07 47.9**	**-4.5**
HOWZ	**Holdsworth Sta**	**7.92**	**203**	P	**Pn**	**03 07 56.5**	**-1.6**
TMWZ	**Te Maipa**	**8.00**	**200**	P	**Pn**	**03 07 58.9**	**-0.3**
MSVF	**Nonsavu**	**15.90**	**355**	Pn	**Pn**	**03 09 45.7**	**-1.0**
DZM	**Mont Dzumac**	**16.32**	**312**	LR	LR	03 15 03.8	
	comp=Z,1µm,18.5s,baz=162,slow=34						
DZM	**Mont Dzumac**	**16.32**	**312**	*e*LR	LR	03 13 31.4	
	comp=Z,2µm,24.6s						
RAR	**Rarotonga**	**22.09**	**61**	LR	LR	03 18 48.3	
	comp=Z,117nm,19.6s,baz=230,slow=34						
TBI	**Tubuai**	**29.01**	**77**	*e*LQ	LQ	03 17 52.7	
	507nm,25.0s						
TBI				*e*LR	LR	03 19 18.0	
	comp=Z,584nm,31.2s,baz=234						
TBI	**Tubuai**	**29.01**	**77**	*e*T	T	03 42 08.6	
	24nm,0.4s						
HNR	**Honiara**	**30.09**	**319**	LR	LR	03 20 25.2	
	comp=Z,74nm,21.5s,baz=154,slow=29						
STKA	**Stephens Creek**	**31.85**	**263**	P	**P**	**03 12 27.5**	**+0.4**
	1.6nm,0.9s,baz=117,slow=14,SNR=2.9						
STKA				LR	LR	03 23 59.8	
	comp=Z,362nm,19.4s,baz=97,slow=34						
PAE	**Paea**	**31.90**	**68**	*e*T	T	03 45 45.7	
	5.6nm,0.2s						
PPT2	**Papeete2**	**31.95**	**68**	*e*LQ	LQ	03 18 57.5	
	448nm,25.8s						
PPT2				*e*LR	LR	03 20 38.6	
	comp=Z,594nm,28.5s,baz=221						
PPT2	**Papeete2**	**31.95**	**68**	*e*T	T	03 45 49.6	
	6.4nm,0.3s						
PPT	**Papeete**	**31.96**	**68**	LR	LR	03 22 08.2	
	comp=Z,110nm,21.6s,baz=232,slow=30						
TVO	**Taravao**	**32.09**	**68**	*e*T	T	03 46 00.0	
	2.0nm,0.3s						
MEH	**Mehetia**	**32.96**	**70**	*e*T	T	03 47 04.7	
	17nm,0.3s						
VAH	**Vaihoa**	**34.85**	**66**	*e*T	T	03 49 26.8	
	40nm,0.2s						
PMG	**Port Moresby**	**38.31**	**302**	LR	LR	03 26 50.2	
	comp=Z,542nm,19.9s,baz=136,slow=33						
AS31	**Alice Springs**	**40.98**	**272**	P	**P**	**03 13 44.6**	**-0.6**
AS31				IAmb	IAmb	03 13 55.6	
	comp=Z,3.8nm,0.8s						
ASAR	**Alice Springs**	**40.98**	**272**	P	**P**	**03 13 44.6**	**-0.5**
	comp=Z,8.1nm,0.9s,baz=112,slow=7.3,SNR=43						
ASAR				LR	LR	03 29 57.4	
	comp=Z,254nm,19.1s,baz=129,slow=35						
ASAR	**Alice Springs**	**40.98**	**272**	P	**P**	**03 13 44.5**	**-0.6**
RKT	**Rikitea**	**41.08**	**87**	*e*LR	LR	03 24 54.5	
	comp=Z,632nm,25.0s						
WR0	**Warramunga Arr**	**42.10**	**277**	P	**P**	**03 13 54.5**	**+0.2**
WR0				IAmb	IAmb	03 14 04.4	
	comp=Z,9.2nm,0.9s						
WB2	**Warramunga Arr**	**42.27**	**277**	P	**P**	**03 13 56.3**	**+0.7**
WB2				IAmb	IAmb	03 14 05.7	
	comp=Z,14nm,0.8s						
WRA	**Warramunga Arr**	**42.27**	**277**	P	**P**	**03 13 54.7**	**-1.0**
	comp=Z,9.4nm,0.8s,baz=118,slow=7.5,SNR=47						
WRA				LR	LR	03 29 58.9	
	comp=Z,175nm,20.9s,baz=100,slow=34						
WRA	**Warramunga Arr**	**42.27**	**277**	P	**P**	**03 13 54.8**	**-1.0**
WB0	**Warramunga Arr**	**42.31**	**277**	P	**P**	**03 13 56.3**	**+0.2**
TAOE	**Nuku Hiva Isla**	**44.52**	**66**	*e*LR	LR	03 26 23.3	
	comp=Z,352nm,32.7s						
VNDA	**Vanda**	**44.67**	**185**	LR	LR	03 27 57.7	
	comp=Z,144nm,21.0s,baz=342,slow=30						
FITZ	**Fitzroy Crossi**	**50.38**	**274**	P	**P**	**03 14 58.5**	**-0.9**
	comp=Z,5.6nm,0.9s,baz=142,slow=8.1,SNR=6.9						
FITZ	**Fitzroy Crossi**	**50.38**	**274**	P	**P**	**03 14 59.0**	**-0.3**
FITZ				IAmb	IAmb	03 15 00.7	
	comp=Z,8.9nm,1.1s						
SIJI	**Sorong**	**55.71**	**295**	P	**P**	**03 15 38.2**	**-0.5**
	comp=Z,3.1nm,0.3s,baz=104,slow=8.3,SNR=3.7						
QSPA	**South Pole Qui**	**56.48**	**180**	P	**P**	**03 15 42.8**	**-0.9**
MAW	**Mawson**	**68.54**	**202**	LR	LR	03 46 16.8	
	comp=Z,132nm,18.1s,baz=72,slow=35						
SNAA	**Sanae**	**74.97**	**179**	P	**P**	**03 17 40.2**	**-2.4**
VNA3	**Neumayer Olymp**	**75.20**	**177**	P	**P**	**03 17 41.6**	**-2.4**
VNA2	**Neumayer--Watz**	**75.61**	**178**	P	**P**	**03 17 44.2**	**-2.1**
	baz=175,slow=5.9						
VNA1	**Neumayer--Stat**	**75.85**	**177**	P	**P**	**03 17 45.1**	**-2.5**
JOW	**Kunigami**	**77.36**	**314**	LR	LR	03 48 26.8	
	comp=Z,70nm,21.1s,baz=206,slow=33						
MJAR	**Matsushiro Arr**	**79.77**	**327**	P	**P**	**03 18 12.7**	**+2.9**
	comp=Z,2.5nm,1.0s,baz=165,slow=10,SNR=4.0						
MJAR				LR	LR	03 50 46.0	
	comp=Z,15nm,20.4s,baz=195,slow=34						
PLCA	**Paso Flores**	**81.80**	**134**	LR	LR	03 47 47.3	
	comp=Z,42nm,18.6s,baz=220,slow=30						
PSI	**Prapat**	**83.74**	**278**	LR	LR	03 57 40.7	
	comp=Z,33nm,18.1s,baz=264,slow=37						
KSRS	**Korea Array**	**85.51**	**321**	LR	LR	03 50 54.2	
	comp=Z,23nm,20.2s,baz=122,slow=32						
KSAR	**Wonju Array Be**	**85.52**	**321**	P	**P**	**03 18 41.5**	**+1.8**
PETK	**Petropavlovsk-**	**88.46**	**347**	LR	LR	03 54 07.6	
	comp=Z,29nm,20.0s,baz=108,slow=33						
GLA	**Glamis**	**90.59**	**50**	P	**P**	**03 19 05.1**	**+1.0**
CMAR	**Chiang Mai Arr**	**92.53**	**290**	LR	LR	04 05 13.7	
	comp=Z,25nm,18.0s,baz=176,slow=38						
TUC	**Tucson**	**92.75**	**53**	P	**P**	**03 19 15.3**	**+1.1**
TUC				IAmb	IAmb	03 19 36.0	
	comp=Z,4.6nm,1.2s						
KLR	**Kul'dur**	**92.81**	**331**	LR	LR	03 54 33.0	
	comp=Z,34nm,21.3s,baz=116,slow=31						
LPAZ	**La Paz**	**98.66**	**116**	LR	LR	03 56 03.3	
	comp=Z,46nm,21.0s,baz=216,slow=30						
CPUP	**Villa Florida**	**99.55**	**130**	LR	LR	03 56 31.8	
	comp=Z,127nm,22.0s,baz=221,slow=30						
KBZ	**Khabaz**	**145.04**	**300**	PKP	**PKiKP**	**03 25 41.9**	**-0.7**
	comp=Z,2.4nm,0.9s,baz=66,slow=5.7,SNR=5.5						
FINES	**FINESS Array B**	**147.38**	**337**	PKPbc	**PKPbc**	**03 25 44.9**	**+0.3**
	comp=Z,2.3nm,0.8s,baz=73,slow=4.7,SNR=1.7						

IDC ***06*** *03:28:45.4±1.7, 56°.36N×169°.10W, h0^{km}, mb3.8/6, mb1 3.9/9, mb1mx3.6/52, mbtmp3.8/9, ML3.1/3, MS3.3/3, Ms1 3.4/3, ms1mx2.7/56, Error ellipse: s-maj=41.8km s-min=19.5km az=177.0*

NEIC ***06*** *03:28:45.2±2.6, 56°.67N±0°.05×169°.05W±0°.09, h10^{km}±1^{km}, mb4.0/3, ML3.7/21(AEIC), Error ellipse: s-maj=11.1km s-min=5.6km az=223.0*

AEIC ***06*** *03:28:47±1.9, 56°.66N±0°.06×169°.06W±0°.10, h40^{km}±7^{km}, Error ellipse: s-maj=10.1km s-min=5.3km az=222.0*

ISC 06 03:28:49.1±0.6**, 56°.68N**±0°.06×**169°.05W**±0°.06**, h35**^{km}**, n45, σ1^{s}73**/47**, mb3.7**/4**, Pribilof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPIA	**Saint Paul Isl**	**0.82**	**307**		**Pn**	**03 29 03.8**	**-0.4**
SPIA					**Sn**	**03 29 15.3**	**+0.1**
AKGG	**Akutan Green G**	**3.04**	**144**		**Pn**	**03 29 33.4**	**-1.3**
AKGG					**Sn**	**03 30 10.2**	**+0.5**
MSW	**Makushin Switc**	**3.06**	**154**		**Pn**	**03 29 34.5**	**-0.5**
AKRB	**Akutan Reef Bi**	**3.07**	**145**		**Pn**	**03 29 34.9**	**-0.2**
MNAT	**Makushin Natee**	**3.11**	**153**		**Pn**	**03 29 35.3**	**-0.4**
MAPS	**Pakushin South**	**3.12**	**156**		**Pn**	**03 29 36.0**	**+0.2**
MAPS					**Sn**	**03 30 11.6**	**-0.2**
AKBBA	**Akutan Broad B**	**3.14**	**144**		**Pn**	**03 29 35.5**	**-0.6**
AKUT	**Akutan**	**3.16**	**142**	Pn	**Pn**	**03 29 35.3**	**-1.0**
UNV	**Unalaska Valle**	**3.19**	**152**		**Pn**	**03 29 35.0**	**-1.7**
UNV					**Sn**	**03 30 12.9**	**-0.6**
WEBT	**Westdahl Beart**	**3.21**	**129**		**Pn**	**03 29 36.6**	**-0.4**
WESP	**Westdahl Peak**	**3.29**	**130**		**Pn**	**03 29 37.8**	**-0.4**
OKFG	**Magazine Ridge**	**3.34**	**168**		**Pn**	**03 29 38.6**	**-0.2**
OKTU	**Okmok Mt. Tuli**	**3.36**	**170**		**Pn**	**03 29 37.5**	**-1.6**
FALS	**False Pass**	**3.67**	**118**	Pn	**Pn**	**03 29 42.9**	**-0.4**
NIKH	**Nikolski High**	**3.72**	**178**		**Pn**	**03 29 43.1**	**-0.8**
SDPT	**Sand Point**	**4.99**	**102**		**Pn**	**03 30 00.3**	**-1.1**
KOFP	**Korovin Flat P**	**5.31**	**216**		**Pn**	**03 30 07.6**	**+1.7**
ATKA	**Atka Island**	**5.40**	**216**		**Pn**	**03 30 08.7**	**+1.7**
GAMB	**Gambell**	**7.24**	**351**		**Pn**	**03 30 31.8**	**-0.4**
ANM	**Nome**	**8.11**	**11**	Pn	**Pn**	**03 30 42.6**	**-1.6**
SVW2	**Sparrevohn**	**8.25**	**52**	Pn	**Pn**	**03 30 44.3**	**-1.8**
AMKA	**Amchitka**	**8.67**	**237**	Pn	**Pn**	**03 30 50.4**	**-1.5**
KDAK	**Kodiak Island**	**9.00**	**76**	Pn	**Pn**	**03 30 58.8**	**+2.4**
	0.3nm,0.3s,baz=284,slow=10,SNR=1.4						
KDAK	**Kodiak Island**	**9.00**	**76**		**Pn**	**03 30 54.2**	**-2.2**
TTA	**Tatalina**	**9.06**	**41**	Pn	**Pn**	**03 30 55.6**	**-1.7**
ILAR	**Eielson Array**	**13.46**	**44**	Pn	**Pn**	**03 32 00.0**	**+2.6**
	0.0nm,0.3s,baz=239,slow=12,SNR=5.2						
ILAR				LR	LR	03 36 45.4	
	comp=Z,80nm,18.5s,baz=290,slow=35						
ILAR	**Eielson Array**	**13.46**	**44**		**Pn**	**03 31 54.0**	**-3.4**
DOT	**Dot Lake**	**14.18**	**50**	Pn	**Pn**	**03 32 03.2**	**-4.0**
TOLK	**Toolik Lake Re**	**14.86**	**28**	Pn	**Pn**	**03 32 14.7**	**-1.6**
BCAR	**Beaver Creek A**	**15.02**	**54**	Pn	**Pn**	**03 32 17.4**	**-1.1**
BMAR	**Burnt Mountain**	**15.59**	**36**	Pn	**Pn**	**03 32 22.7**	**-3.2**
PETK	**Petropavlovsk-**	**19.34**	**273**	P	**Pn**	**03 33 13.8**	**+1.3**
	0.4nm,0.3s,baz=80,slow=12,SNR=6.4						
PETK	**Petropavlovsk-**	**19.34**	**273**	P	**P**	**03 33 08.9**	**-2.3**
INK	**Inuvik**	**19.75**	**40**	P	**Pn**	**03 33 18.6**	**+1.4**
	3.7nm,0.8s,baz=214,slow=9.8,SNR=7.6						
INK	**Inuvik**	**19.75**	**40**	P	**P**	**03 33 14.3**	**-1.2**
INK				IAmb	IAmb	03 33 54.0	
	comp=Z,16nm,1.8s						
SEY	**Seymchan**	**20.13**	**304**	P	Pn	03 33 22.2	+0.5
	comp=Z,2.8nm,0.8s,baz=110,slow=10,SNR=9.8						
YKA	**Yellowknife Ar**	**27.43**	**55**	P	**P**	**03 34 33.5**	**+2.5**
	comp=Z,0.8nm,0.8s,baz=280,slow=8.1,SNR=11						
YKA				LR	LR	03 45 53.0	
	comp=Z,61nm,18.4s,baz=0.0,slow=37						
ULM	**Lac du Bonnet**	**42.10**	**66**	P	**P**	**03 36 40.8**	**+3.5**
	comp=Z,0.8nm,0.4s,baz=287,slow=17,SNR=1.8						
TXAR	**Lajitas Array**	**52.61**	**92**	P	**P**	**03 38 01.1**	**+1.7**
	comp=Z,0.7nm,0.9s,baz=317,slow=6.2,SNR=7.9						
TXAR	**Lajitas Array**	**52.61**	**92**	P	**P**	**03 37 58.2**	**-1.2**
ABKAR	**Akbulak array**	**66.88**	**327**	P	**P**	**03 39 35.8**	**-1.3**
KK31	**Karatay Array**	**68.72**	**317**	P	**P**	**03 39 47.4**	**-1.5**
KKAR	**Karatay Array**	**68.72**	**317**	P	**P**	**03 39 47.0**	**-1.8**
AKASG	**Malin Array Be**	**71.92**	**348**	P	**P**	**03 40 10.3**	**+2.0**
	comp=Z,1.2nm,0.6s,baz=13,slow=5.9,SNR=3.2						
PMG	**Port Moresby**	**75.07**	**225**	LR	LR	04 09 52.4	
	comp=Z,34nm,19.8s,baz=248,slow=33						

JMA ***06*** *03:39:42.6±0.3, 33°.14N×138°.44E, h309^{km}, M3.1*

IDC ***06*** *03:39:45.5±2.0, 33°.29N×138°.23E, h279^{km}±22^{km}, mb3.2/4, mb1 3.2/7, mb1mx2.8/71, mbtmp3.6/7, Error ellipse: s-maj=50.3km s-min=17.6km az=73.0*

ISC 06 03:39:46.4±1.1**, 33°.4N**±0°.1×**138°.4E**±0°.1**, h300**^{km}**, n20, σ1^{s}10**/21**, mb3.3**/4**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TK02	**Tokai 2**	**0.73**	**317**	P	**Pn**	**03 40 24.3**	**-1.0**
TTO4	**TONANKAI O.B.S**	**0.90**	**311**	P	**Pn**	**03 40 24.8**	**-1.1**
TTO5	**TONANKAI O.B.S**	**0.99**	**328**	P	**Pn**	**03 40 25.6**	**-0.9**
TK04	**Tokai 4**	**1.04**	**338**	P	**Pn**	**03 40 26.2**	**-0.6**
TTO2	**TONANKAI O.B.S**	**1.15**	**286**	P	**Pn**	**03 40 26.2**	**-0.9**
TTO1	**TONANKAI O.B.S**	**1.33**	**279**	P	**Pn**	**03 40 27.1**	**-1.0**
HMMJ	**Hamamatsu 2**	**1.53**	**340**	P	**Pn**	**03 40 28.7**	**-1.0**
JOD2	**Odawara 2**	**1.94**	**18**	P	**Pn**	**03 40 32.5**	**-0.1**
JNY	**Yasuok**	**1.98**	**348**	P	**Pn**	**03 40 32.5**	**-0.5**
BSO4	**Boso 4**	**2.27**	**46**	*e*S	**S**	**03 41 12.9**	**-1.3**
JWY	**Kouya**	**2.43**	**290**	P	**Pn**	**03 40 36.0**	**-0.9**
JHU	**Hanno**	**2.55**	**17**	P	**Pn**	**03 40 37.6**	**-0.2**
JHU				*e*S	**S**	**03 41 16.3**	**-2.5**
JRY	**Ryogami san**	**2.63**	**10**	P	**Pn**	**03 40 38.8**	**+0.2**
MJAR	**Matsushiro Arr**	**3.12**	**358**	P	**Pn**	**03 40 42.4**	**-0.9**
	0.2nm,0.3s,baz=171,slow=11,SNR=5.6						
KSRS	**Korea Array**	**9.41**	**298**	P	**Pn**	**03 41 56.0**	**-1.2**
	0.2nm,0.3s,baz=112,slow=13,SNR=5.5						
KLR	**Kul'dur**	**16.55**	**345**	P	**P**	**03 43 20.6**	**+0.5**
	0.2nm,0.3s,baz=179,slow=7.8,SNR=4.7						
SONM	**Songino Array**	**27.97**	**311**	P	**P**	**03 45 11.2**	**+1.2**
	0.2nm,0.4s,baz=104,slow=12,SNR=1.9						
WRA	**Warramunga Arr**	**53.20**	**185**	P	**P**	**03 48 34.4**	**0.0**
	0.6nm,0.3s,baz=0.1,slow=7.7,SNR=24						
ASAR	**Alice Springs**	**56.92**	**185**	P	**P**	**03 49 00.9**	**0.0**
	0.4nm,0.5s,baz=19,slow=12,SNR=8.2						
FINES	**FINESS Array B**	**70.83**	**332**	P	**P**	**03 50 32.2**	**+1.7**
	3.1nm,0.9s,baz=67,slow=5.0,SNR=5.3						

KRNET ***06*** *03:44:31.5±0.1, 39°.25N×73°.10E, h15^{km}, mb3.9*

IDC ***06*** *03:44:32.5±1.0, 39°.14N×73°.08E, h0^{km}, mb3.8/8, mb1 3.9/14, mb1mx3.6/69, mbtmp3.8/14, ML3.3/5, MS3.0/2, Ms1 3.0/2, ms1mx2.5/42, Error ellipse: s-maj=19.9km s-min=18.0km az=9.0*

SOME ***06*** *03:44:35.6, 39°.53N×72°.83E, h5^{km}*

NNC ***06*** *03:44:39.1±1.1, 39°.54N×73°.08E, h0^{km}, mb4.3, mpv3.9, Error ellipse: s-maj=9.0km s-min=5.3km az=175.0*

ISC 06 03:44:35.1±1.5**, 39°.06N**±0°.06×**72°.92E**±0°.03**, h23**^{km}±11^{km}**, n91, σ1^{s}88**/126**, mb3.9**/8**, 38C-15D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	**Karamyk**	**0.96**	**296**	⇑*i*P	**Pb**	**03 44 51.3**	**-2.0**
	baz=84						
DRK				⇑*i*S	**Sb**	**03 45 05.7**	**0.0**
	baz=84						
SFK	**Sufi-Kurgan**	**1.05**	**25**	⇓*i*P	Pn	03 44 47.4	-7.2
	baz=22						
SFK				⇓*i*S	Sb	03 44 58.8	-9.3
	baz=22						
OHH	**Osh**	**1.46**	**356**	⇑*i*P	Pn	03 44 56.2	-4.0
	baz=49						
OHH				⇑*i*S	**Sn**	**03 45 14.2**	**-4.5**
	baz=49						
BTK	**Batken**	**1.91**	**302**	⇑*e*P	**Pn**	**03 45 07.3**	**+1.0**
	baz=95						
BTK				⇑*i*S	**Sb**	**03 45 33.7**	**+1.1**
	baz=95						
ARSB	**Arslanbob**	**2.26**	**1**	⇑*e*P	**Pn**	**03 45 09.1**	**-2.1**
	baz=58						
ARSB				⇑*i*S	**Sn**	**03 45 36.8**	**-1.6**
	baz=58						
KSH	**Kashi**	**2.41**	**78**	Pg	**Pn**	**03 45 08.5**	**-4.7**
KSH				Sg	Sn	03 45 32.5	-10
KSH				smax	smax		
	comp=N,410nm,0.6s						
KSH				smax	smax		
	comp=E,360nm,0.8s						
TRKS	**Terek-Say**	**2.81**	**332**	⇑*e*P	**Pn**	**03 45 18.1**	**-0.7**
	baz=27						
TRKS				⇑*i*S	**Sn**	**03 45 51.6**	**-0.5**
	baz=27						
ARLS	**Aral**	**2.99**	**20**	⇑*i*P	**Pn**	**03 45 19.2**	**-2.1**
	baz=19						
ARLS				⇑*i*S	**Sn**	**03 45 54.2**	**-2.3**
	baz=19						
AML	**Almayashu**	**3.12**	**11**	⇓*e*P	**Pn**	**03 45 21.5**	**-1.7**
	baz=9.0						
AML				⇓*i*S	**Sn**	**03 45 58.3**	**-1.7**
	baz=9.0						
AML	**Almayashu**	**3.12**	**11**	P	**Pn**	**03 45 23.7**	**+0.5**
	SNR=42						
UCH	**Uchtor**	**3.38**	**20**	⇑*e*P	**Pn**	**03 45 25.4**	**-1.5**
	baz=19						
UCH				⇑*e*S	**Sn**	**03 46 04.2**	**-2.4**
	baz=19						
UCH	**Uchtor**	**3.38**	**20**	P	**Pn**	**03 45 27.3**	**+0.4**
	SNR=27						
MNAS	**Manas**	**3.43**	**355**	⇑*e*P	**Pn**	**03 45 25.9**	**-1.4**
	baz=52						
MNAS				⇑*i*S	**Sn**	**03 46 06.0**	**-1.4**
	baz=52						
EKS2	**Erkin-Say**	**3.65**	**10**	⇑*e*P	**Pn**	**03 45 29.0**	**-1.3**
	baz=8.0						
EKS2				⇑*i*S	**Sn**	**03 46 10.9**	**-1.8**
	baz=8.0						
EKS2	**Erkin-Say**	**3.65**	**10**	P	**Pn**	**03 45 31.2**	**+0.9**
	SNR=22						
MRKS	**Merke**	**3.68**	**3**	*e*P	**Pb**	**03 45 37.2**	**-2.3**
	comp=E,32nm,0.3s						
MRKS				*e*S	**Sb**	**03 46 21.9**	**-1.9**
	comp=E,74nm,0.5s						
MRKS	**Merke**	**3.68**	**3**	Pg	**Pb**	**03 45 37.5**	**-2.0**
	comp=E,32nm,0.3s						
MRKS				Lg	Lg	03 46 22.2	
	comp=E,74nm,0.5s						
AAK	**Ala-Archa**	**3.76**	**18**	Pn	**Pn**	**03 45 32.8**	**+0.9**
	comp=E,8.3nm,0.3s,baz=193,slow=12,SNR=141						
AAK				Lg	Lg	03 46 18.8	
	comp=E,5.1nm,0.3s,baz=40,slow=18,SNR=9.0						
AAK	**Ala-Archa**	**3.76**	**18**	⇑*i*P	**Pn**	**03 45 30.4**	**-1.5**
	baz=17						
AAK				⇑*i*S	**Sn**	**03 46 13.4**	**-2.1**
	baz=17						
AAK	**Ala-Archa**	**3.76**	**18**	P	**Pn**	**03 45 32.6**	**+0.7**
	SNR=74						
AAK	**Ala-Archa**	**3.76**	**18**	⇓Pn	**Pn**	**03 45 32.5**	**+0.7**
	comp=E,35nm,0.6s						
AAK				⇑Lg	Lg	03 46 17.0	
	comp=E,108nm,0.9s						
IUG	**Iuzhnay**	**3.79**	**325**	*e*P	**Pb**	**03 45 42.7**	**+1.4**
	comp=E,90nm,0.5s						
IUG				*e*S	**Sb**	**03 46 30.1**	**+3.4**
	comp=E,151nm,0.6s						
IUG	**Iuzhnay**	**3.79**	**325**	Pg	**Pb**	**03 45 42.7**	**+1.4**
	comp=E,90nm,0.5s						
IUG				Lg	Lg	03 46 30.0	
	comp=E,151nm,0.6s						
KBK	**Karagaybulak**	**3.90**	**23**	⇑*e*P	**Pn**	**03 45 32.6**	**-1.2**
	baz=22						
KBK				⇑*i*S	**Sn**	**03 46 16.0**	**-3.0**
	baz=22						
KBK	**Karagaybulak**	**3.90**	**23**	P	**Pn**	**03 45 35.9**	**+2.1**
	SNR=19						
DZA	**Taraz**	**4.01**	**343**	*e*P	**Pb**	**03 45 43.2**	**-1.8**
	comp=E,176nm,0.1s						
DZA				*e*S	**Sb**	**03 46 30.9**	**-2.2**
	comp=E,169nm,0.3s						
DZA	**Taraz**	**4.01**	**343**	Pg	Pn	03 45 40.9	+5.8
	comp=E,143nm,0.1s						
DZA				Lg	Lg	03 46 27.3	
	comp=E,116nm,0.4s						
ULHL	**Ulahol**	**4.06**	**37**	⇑*e*P	**Pn**	**03 45 34.5**	**-1.5**
	baz=38						
ULHL				⇑*i*S	**Sn**	**03 46 19.9**	**-3.0**
	baz=38						
ULHL	**Ulahol**	**4.06**	**37**	P	**Pn**	**03 45 37.1**	**+1.1**
	SNR=7.3						
CHMS	**Chumysh**	**4.17**	**19**	⇓*e*P	**Pn**	**03 45 35.8**	**-1.5**
	baz=18						
CHMS				⇓*i*S	**Sn**	**03 46 22.6**	**-2.7**
	baz=18						
CHMS	**Chumysh**	**4.17**	**19**	P	**Pn**	**03 45 38.1**	**+0.8**
	SNR=22						
TKM2	**Tokmak 2**	**4.35**	**27**	⇓*e*P	**Pn**	**03 45 38.4**	**-1.6**
	baz=26						
TKM2				⇓*i*S	**Sn**	**03 46 27.0**	**-3.1**
	baz=26						
TKM2	**Tokmak 2**	**4.35**	**27**	P	**Pn**	**03 45 41.0**	**+1.0**
	SNR=14						
TKM2	**Tokmak 2**	**4.35**	**27**	⇓Pn	**Pn**	**03 45 40.4**	**+0.4**
	comp=E,9.0nm,0.8s						
TKM2				⇑Pg	**Pb**	**03 45 51.2**	**+0.2**
	comp=E,28nm,0.8s						
TKM2				⇓Lg	Lg	03 46 42.4	
	comp=E,28nm,0.8s						
USP	**Ospenovka**	**4.36**	**15**	⇑*e*P	**Pn**	**03 45 38.5**	**-1.5**
	baz=14						
USP				⇑*i*S	**Sn**	**03 46 27.4**	**-2.8**
	baz=14						
USP	**Ospenovka**	**4.36**	**15**	P	**Pn**	**03 45 40.6**	**+0.6**
	SNR=19						
KK31	**Karatay Array**	**4.43**	**336**	⇑Pn	**Pn**	**03 45 42.0**	**+1.2**
	comp=E,8.9nm,0.5s,baz=146,slow=11,SNR=78						
KK31				⇑Lg	Lg	03 46 34.5	
	comp=E,14nm,0.3s						
KDJ	**Kajisay**	**4.46**	**45**	⇓*i*P	**Pn**	**03 45 39.4**	**-2.0**
	baz=46						
KDJ				⇓*e*S	**Sn**	**03 46 28.9**	**-3.8**
	baz=46						
SGDS	**Sogindy**	**4.57**	**16**	Pg	**Pb**	**03 45 54.4**	**-0.2**
	comp=E,12nm,0.3s						
SGDS				Lg	Lg	03 46 49.7	
	comp=E,38nm,0.8s						
KST	**Kastek**	**4.59**	**29**	*e*P	**Pb**	**03 45 54.9**	**-0.1**
	comp=E,26nm,0.9s						
KST				*e*S	**Sb**	**03 46 50.6**	**+0.7**
	comp=E,46nm,0.7s						
KST	**Kastek**	**4.59**	**29**	Pg	**Pb**	**03 45 54.9**	**-0.1**
	comp=E,26nm,0.9s						
KST				Lg	Lg	03 46 50.6	
	comp=E,46nm,0.7s						
DGS	**Degeres**	**4.70**	**26**	*e*P	**Pb**	**03 45 57.2**	**+0.5**
	comp=E,18nm,0.6s						
DGS				*e*S	**Sb**	**03 46 54.4**	**+1.6**
	comp=E,43nm,0.8s						
DGS	**Degeres**	**4.70**	**26**	Pg	**Pb**	**03 45 56.6**	**-0.1**
	comp=E,18nm,0.6s						
DGS				Lg	Lg	03 46 54.4	
	comp=E,43nm,0.8s						
MTBS	**Maitube**	**4.85**	**32**	*e*P	**Pb**	**03 45 59.5**	**+0.1**
	comp=E,21nm,0.6s						
MTBS				*e*S	**Sb**	**03 46 58.5**	**+1.3**
	comp=E,26nm,0.7s						
MTBS	**Maitube**	**4.85**	**32**	Pg	**Pb**	**03 45 59.5**	**+0.1**
	comp=E,21nm,0.6s						
MTBS				Lg	Lg	03 46 58.5	
	comp=E,26nm,0.7s						
IZV	**Izvestkoviy**	**4.85**	**34**	*e*P	**Pb**	**03 45 59.3**	**-0.1**
	comp=E,20nm,0.6s						
IZV				*e*S	**Sb**	**03 46 58.5**	**+1.2**
	comp=E,46nm,0.9s						
IZV	**Izvestkoviy**	**4.85**	**34**	Pg	**Pb**	**03 45 59.3**	**-0.1**
	comp=E,20nm,0.6s						
IZV				Lg	Lg	03 46 58.5	
	comp=E,46nm,0.9s						
TNSS	**Tian-Shan**	**5.00**	**36**	*e*P	**Pb**	**03 46 03.8**	**+1.7**
	comp=E,13nm,0.5s						
TNSS				*e*S	**Sb**	**03 47 05.8**	**+3.9**
	comp=E,12nm,0.9s						
TNSS	**Tian-Shan**	**5.00**	**36**	Pg	**Pb**	**03 46 03.8**	**+1.7**
	comp=E,13nm,0.5s						
KRBS	**Karabastau**	**5.07**	**23**	*e*P	**Pb**	**03 46 01.2**	**-1.9**
	comp=E,14nm,0.5s						
KRBS				*e*S	**Sb**	**03 47 01.6**	**-2.0**
	comp=E,14nm,0.8s						
KRBS	**Karabastau**	**5.07**	**23**	Pg	**Pb**	**03 46 01.2**	**-1.9**
	comp=E,14nm,0.5s						
MDOK	**Medeo**	**5.14**	**36**	*e*P	**Pb**	**03 46 03.5**	**-0.9**
	comp=E,7.7nm,0.5s						
MDOK				*e*S	**Sb**	**03 47 05.5**	**-0.3**
	comp=E,23nm,1.0s						
MDOK	**Medeo**	**5.14**	**36**	⇑Pn	**Pn**	**03 45 52.5**	**+1.7**
	comp=E,7.6nm,0.7s						
MDOK				⇑Pg	**Pb**	**03 46 02.3**	**-2.1**
	comp=E,15nm,1.0s						
MDOK				⇑Lg	Lg	03 47 07.3	
	comp=E,41nm,0.8s						
MDOK	**Medeo**	**5.14**	**36**	Pg	**Pb**	**03 46 03.6**	**-0.9**
	comp=E,7.7nm,0.5s						
MDOK				Lg	Lg	03 47 05.5	
	comp=E,23nm,1.0s						
ANVS	**Anan'yevo**	**5.17**	**43**	⇑*i*P	**Pn**	**03 45 49.1**	**-2.1**
	baz=43						
ANVS				⇑*i*S	**Sn**	**03 46 45.1**	**-5.1**
	baz=43						
KOTS	**Kotyrbulak**	**5.23**	**36**	*e*P	**Pb**	**03 46 06.5**	**+0.7**
	comp=E,38nm,0.5s						
KOTS				*e*S	**Sb**	**03 47 10.8**	**+2.6**
	comp=E,120nm,0.6s						
KOTS	**Kotyrbulak**	**5.23**	**36**	Pg	**Pb**	**03 46 06.5**	**+0.7**
	comp=E,38nm,0.5s						
KOTS				Lg	Lg	03 47 10.8	
	comp=E,120nm,0.6s						
KTBS	**Karatobe**	**5.44**	**30**	*e*P	**Pb**	**03 46 09.9**	**+0.6**
	comp=E,10nm,0.7s						

KTBS				*e*S	Sb	03 47 16.4	+2.3
	comp=E,44nm,0.6s						
KTBS	Karatobe	5.44	30	Pg	Pb	03 46 09.9	+0.6
	comp=E,10nm,0.7s						
KTBS				Lg	Lg	03 47 16.4	
	comp=E,44nm,0.6s						
CHKK	Chushkaly	5.68	31	*e*P	Pb	03 46 14.3	+0.9
	comp=E,4.5nm,0.4s						
CHKK				*e*S	Sb	03 47 24.5	+3.5
	comp=E,22nm,0.8s						
CHKK	Chushkaly	5.68	31	Pg	Pb	03 46 14.3	+0.9
	comp=E,4.5nm,0.4s						
CHKK				Lg	Lg	03 47 24.5	
	comp=E,22nm,0.8s						
SATY	Saty	5.75	44	*e*P	Pb	03 46 13.1	-1.7
	comp=E,18nm,1.0s						
SATY				*e*S	Sb	03 47 22.2	-1.0
	comp=E,24nm,1.5s						
SATY	Saty	5.75	44	Pg	Pb	03 46 13.1	-1.7
	comp=E,18nm,1.0s						
KURS	Kuram	5.93	40	*e*P	Pb	03 46 20.0	+2.3
	comp=E,8.8nm,0.7s						
KURS				*e*S	Sb	03 47 33.9	+5.7
	comp=E,9.9nm,0.7s						
KURS	Kuram	5.93	40	Pg	Pb	03 46 20.0	+2.3
	comp=E,8.8nm,0.8s						
KURS				Lg	Lg	03 47 33.9	
	comp=E,14nm,1.4s						
BTLS	Baital	6.03	8	*e*P	Pb	03 46 20.0	+0.6
	comp=E,2.9nm,0.5s						
BTLS				*e*S	Sb	03 47 34.4	+3.3
	comp=E,14nm,1.1s						
BTLS	Baital	6.03	8	Pg	Pb	03 46 20.0	+0.6
	comp=E,2.9nm,0.5s						
BTLS				Lg	Lg	03 47 34.4	
	comp=E,14nm,1.1s						
KPKS	Kokpek	6.18	43	*e*P	Pb	03 46 23.3	+1.3
	comp=E,11nm,1.2s						
KPKS				*e*S	Sb	03 47 38.7	+3.3
	comp=E,22nm,0.7s						
ARXS	Arharly	6.32	34	*e*P	Pb	03 46 24.8	+0.4
	comp=E,19nm,0.6s						
ARXS				*e*S	Sb	03 47 42.7	+3.2
	comp=E,24nm,0.9s						
ARXS	Arharly	6.32	34	Pg	Pb	03 46 24.8	+0.4
	comp=E,19nm,0.6s						
ARXS				Lg	Lg	03 47 42.7	
	comp=E,24nm,0.9s						
MNBS	Baschi	6.48	38	Pg	Pb	03 46 28.6	+1.5
	comp=E,6.9nm,0.7s						
MNBS				Lg	Lg	03 47 49.4	
	comp=E,27nm,0.9s						
PDGK	Podgornoye	6.53	47	Pg	Pb	03 46 29.5	+1.5
	comp=E,4.0nm,1.1s						
PDGK				Lg	Lg	03 47 49.7	
	comp=E,8.0nm,0.8s						
PDGK	Podgornoye	6.53	47	⇓Pn	Pn	03 46 09.4	-0.4
	comp=E,4.1nm,0.7s						
PDGK				⇑Pg	Pb	03 46 26.2	-1.9
	comp=E,20nm,1.6s						
PDGK				⇑Lg	Lg	03 47 45.9	
	comp=E,22nm,0.8s						
KAPS	Kapalarasan	7.84	35	Pg	Pb	03 46 55.4	+5.2
	comp=E,3.0nm,0.8s						
MKAR	Makanchi Array	10.33	39	Pn	Pn	03 47 02.0	+0.2
	comp=E,0.0nm,0.3s,baz=233,slow=14,SNR=4.8						
GEYT	Alibeck	11.66	269	Pn	Pn	03 47 19.8	-0.3
	comp=E,0.7nm,0.3s,baz=96,slow=15,SNR=2.7						
WMQ	Urumqi	12.06	62	*e*P	Pn	03 47 25.3	-0.2
AB31	Akbulak array	13.78	322	P	Pn	03 47 47.1	-1.9
	comp=E,0.9nm,0.4s,baz=127,slow=14,SNR=44						
AB31				⇓S	Sn	03 50 13.5	-7.7
	comp=E,3.8nm,0.7s						
AKTO	Aktyubinsk	15.50	322	Pn	Pn	03 48 11.2	-0.9
	comp=E,0.2nm,0.3s,baz=113,slow=14,SNR=6.9						
AKTO				LR	LR	03 53 55.2	
	comp=E,50nm,20.5s,baz=207,slow=36						
AKTO	Aktyubinsk	15.50	322	⇑P	Pn	03 48 11.0	-1.1
	comp=E,10nm,1.2s						
ZALV	Zalesovo Beam	16.95	25	Pn	Pn	03 48 28.9	-1.7
	comp=E,0.2nm,0.3s,baz=218,slow=10,SNR=4.4						
ARU	Arti	19.80	336	P	P	03 49 03.9	+0.2
	baz=151,slow=7.6,SNR=4.6						
ARU				LR	LR	03 55 56.0	
	comp=E,56nm,20.1s,baz=180,slow=35						
GTA	Gaotai	20.81	81	*e*P	P	03 49 16.1	+1.1
GTA				pP	pP	03 49 23.4	+0.9
GTA				sP	sP	03 49 27.4	+1.2
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
SONM	Songino Array	25.67	59	P	P	03 50 03.8	+0.5
	comp=Z,0.3nm,0.4s,baz=272,slow=10.0,SNR=3.9						
FINES	FINESS Array B	36.27	324	P	P	03 51 37.2	+0.9
	comp=Z,1.0nm,0.5s,baz=103,slow=8.4,SNR=6.4						
ARCES	ARCESS Array B	39.39	336	P	P	03 52 03.2	+0.6
	comp=Z,2.8nm,0.8s,baz=106,slow=9.5,SNR=4.2						
HFS	Hagfors	42.04	320	P	P	03 52 25.8	+1.3
	comp=Z,1.0nm,0.4s,baz=97,slow=12,SNR=7.7						
TORD	Torodi Ar. Bea	67.30	269	P	P	03 55 30.0	+1.7
	comp=Z,0.8nm,0.6s,baz=39,slow=5.4,SNR=2.3						
YKA	Yellowknife Ar	78.61	4	P	P	03 56 35.0	+0.5
	comp=Z,0.4nm,0.5s,baz=356,slow=5.4,SNR=7.1						
WRA	Warramunga Arr	82.09	123	P	P	03 56 54.5	+0.7
	comp=Z,0.8nm,0.8s,baz=324,slow=4.8,SNR=9.4						
ASAR	Alice Springs	84.51	126	P	P	03 57 06.9	+0.7
	comp=Z,0.2nm,0.3s,baz=332,slow=5.7,SNR=2.7						

REY ***06*** *03:48:07.2, 64°.66N×17°.36W, h6^{km}*

BGS ***06*** *03:48:09.8±2.4, 64°.62N×17°.71W, h5^{km}, MS4.3*

IDC ***06*** *03:48:11.2±0.4, 64°.66N×17°.71W, h0^{km}, mb4.3/32, mb1 4.4/36, mb1mx4.2/62, mbtmp4.3/36, ML2.8/3, MS3.7/34, Ms1 3.8/34, ms1mx3.7/47, Error ellipse: s-maj=13.7km s-min=7.5km az=13.0*

MOS ***06*** *03:48:11.3±1.3, 64°.74N×17°.69W, h10^{km}, mb4.8/78, Error ellipse: s-maj=8.8km s-min=5.2km az=110.9*

NEIC ***06*** *03:48:11.9±1.9, 64°.62N±0°.08×17°.7W±0°.1, h7^{km}±3^{km}, mb4.7/140, Error ellipse: s-maj=11.6km s-min=7.8km az=189.0*

GCMT ***06*** *03:48:13.9±0.4, 64°.51N±0°.05×17°.31W±0°.08, h19^{km}±1^{km}, MW4.8/79, Moment Tensor Solution. s18,c18; s79,c92; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.77±.15; M$_{\theta\theta}$0.85±.11; M$_{\phi\phi}$0.91±.09; M$_{r\theta}$-0.48±.31; M$_{\theta\phi}$-0.61±.06; M$_{\phi r}$0.23±.20; Best double couple: M$_0$1.72000×10^{16} NP1:φ$_s$321.00000°, δ37.00000°, λ-82.00000°. NP2: φ$_s$131.00000°, δ54.00000°, λ-96.00000°. Principal axes: T 1.5770, Plg9.0000°, Azm225.0000°; N 0.2890, Plg5.0000°, Azm135.0000°; P -1.8620, Plg80.0000°, Azm16.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 06 03:48:12.4±0.3**, 64°.55N**±0°.04×**17°.82W**±0°.03**, h10^{km}, n408, σ1^{s}.59**/377**, mb4.6**/151**, MS3.7**/34**, 18C-14D, Iceland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
IHAM	Hamarinn	0.07	180	P	Pg	03 48 12.4	-2.3
	baz=228						
IVON	Vonarskard	0.13	13	P	Pg	03 48 10.5	-5.0
	baz=276						
BARD	Bardarbunga	0.19	61	P	Pg	03 48 08.6	-7.9
	baz=245						
ISKR	Skrokkalda	0.24	273	P	Pg	03 48 15.4	-2.0
	baz=258						
ISKR				S	Sg	03 48 21.9	+1.1
	baz=258						
IDJK	Dyngjujokull	0.26	100	P	Pg	03 48 10.4	-7.3
	baz=160						
IGRF	Grimsfjall	0.28	121	P	Pg	03 48 12.2	-5.9
	baz=171						
IJOK	Jokulheimar	0.29	217	P	Pg	03 48 15.5	-2.8
	baz=228						
IVOT	Vottur	0.40	135	P	Pg	03 48 14.5	-5.7
	baz=169						
IURH	Urdarhals	0.40	47	P	Pg	03 48 11.0	-9.2
	baz=29						
IIEY	Innrieyrar	0.47	196	P	Pg	03 48 19.1	-2.6
	baz=211						
IIEY				S	Sg	03 48 27.8	-0.2
	baz=211						
IKVE	Kverkfjoll	0.51	75	P	Pg	03 48 13.3	-9.0
	baz=86						
IKAL	Kalfafell	0.61	174	P	Pg	03 48 20.0	-4.1
	baz=191						
THOR	Thorvaldshraun	0.62	51	P	Pg	03 48 14.7	-10
	baz=46						
THOR				S	Sg	03 48 20.4	-12
	baz=46						
IKRE	Kreppuhraun	0.66	69	P	Pg	03 48 15.1	-10
	baz=73						
IKRE				S	Sg	03 48 21.4	-13
	baz=73						
IKSK	Karasker	0.70	123	P	Pg	03 48 18.0	-8.0
	baz=142						
IASK	Askja	0.71	44	P	Pg	03 48 16.4	-10
	baz=37						
IASK				S	Sg	03 48 23.2	-12
	baz=37						
IMKO	Mokollar	0.77	55	P	Pg	03 48 17.0	-10
	baz=53						
IMKO				S	Sg	03 48 24.4	-13
	baz=53						
IHVE	Hveravellir	0.82	294	P	Pg	03 48 24.1	-4.1
	baz=284						
ISVA	Svartarkot	0.83	17	P	Pg	03 48 19.3	-9.0
	baz=3.8						
IFAG	Fagurholsmyri	0.85	142	P	Pg	03 48 22.2	-6.5
	baz=158						
ISNB	Snabyli	0.89	204	P	Pg	03 48 26.3	-3.2
	baz=212						
IVSH	V-Sauoahnukur	0.94	73	P	Pg	03 48 19.8	-11
	baz=77						
IVSH				S	Sg	03 48 29.6	-13
	baz=77						
IRJU	Rjupnafell	1.01	202	P	Pg	03 48 28.5	-3.3
	baz=209						
IADA	Aoalbol	1.07	63	P	Pg	03 48 21.7	-11
	baz=64						
IMEL	Melhnausar	1.14	25	P	Pb	03 48 23.9	-10
	baz=18						
IREN	Reynihlio	1.17	19	P	Pb	03 48 24.6	-10
	baz=11						
IKVO	Krokottuvotn	1.23	18	P	Pn	03 48 25.9	-10
	baz=11						
IGRS	Grimsstaoir	1.31	33	P	Pn	03 48 26.2	-10
	baz=27						
ISKI	Skildingahlsh	1.37	14	P	Pn	03 48 28.2	-9.3
	baz=6.4						
IGHA	Grjothals	1.39	20	P	Pn	03 48 28.2	-10
	baz=14						
BORG	Borgarnes	1.52	279	Pn	Pn	03 48 38.4	-1.2
	194nm,0.3s,baz=102,slow=8.2,SNR=71						
BORG				Lg	Lg	03 49 02.4	
	137nm,0.3s,baz=243,slow=22,SNR=15						
BORG	Borgarnes	1.52	279	Pn	Pn	03 48 37.8	-1.9
BORG				Sn	Sg	03 49 01.2	-0.1
SCO	Scoresbysund	6.17	347	*e*	Pn	03 49 36.8	-6.6
	baz=168,slow=10						
SCO				*i* P	Pn	03 49 40.0	-3.3
SCO				*i* S	Sn	03 50 52.8	-0.9
SCO				IAML		03 51 06.3	
	comp=Z,5.6nm,0.5s						
JMIC	Jan Mayen	7.36	24	LR	LR	03 52 06.6	
	comp=Z,716nm,18.0s,baz=212,slow=32						
LEWI	Lewis, Hebride	8.29	136	*e*P	Pn	03 50 10.8	-1.8
KPL	Plockton	9.33	135	*e*P	Pn	03 50 25.0	-1.7
ICESG	Greenland Ices	9.70	308	*e*P	Pn	03 50 38.5	+6.4
INVG	Invergeldie, C	10.58	134	*e*P	Pn	03 50 41.5	-2.4
INVG				IAMs_20	IAMs_20	03 55 36.7	
	comp=Z,3μm,11.2s						
EAB	Aberfoyle	10.69	135	*e*P	Pn	03 50 44.5	-0.9
SUMG	Summit	10.96	326	*i* P	Pn	03 50 53.3	+4.0
SUMG	Summit	10.96	326	*i* P	Pn	03 50 53.3	+4.0
SUMG	Summit	10.96	326		Pn	03 50 49.2	-0.1
SUMG	Summit	10.96	326	*i* P	Pn	03 50 53.4	+4.0
PGBU	Glenifferbraes	10.97	137	*e*P	Pn	03 50 47.2	-2.0
PGBU				IAMs_20	IAMs_20	03 56 12.3	
	comp=Z,2μm,11.3s						
CLGH	Cloghs, Cushen	11.15	143	*e*P	Pn	03 50 51.1	-0.6
NEWG	New Galloway	11.64	138	*e*P	Pn	03 50 56.4	-1.9
NEWG				IAMs_20	IAMs_20	03 56 32.6	
	comp=Z,2μm,12.8s						
GAL1	Galloway	11.72	140	*e*P	Pn	03 50 57.1	-2.3
EKA	Eskdalemuir Ar	11.77	135	Pn	Pn	03 50 58.7	-1.5
	baz=323,slow=13,SNR=30						
ESK	Eskdalemuir	11.77	135	*e*P	Pn	03 50 59.4	-0.8
ESK				IAMs_20	IAMs_20	03 56 22.7	
	comp=Z,2μm,12.3s						
ESK	Eskdalemuir	11.77	135	P	Pn	03 50 59.8	-0.4
ESK	Eskdalemuir	11.77	135	Pn	Pn	03 50 59.8	-0.4
DAG	Danmarks Havn	12.29	359	P	Pn	03 51 08.6	+1.5
DAG				pmax	pmax		
	comp=Z,15nm,1.6s						
KESW	Keswick, Cumbr	12.43	137	*e*P	Pn	03 51 07.9	-1.2
KESW				IAMs_20	IAMs_20	03 56 57.1	
	comp=Z,2μm,11.4s						
NC204	NORSAR Array S	13.37	91	Pn	Pn	03 51 20.3	-1.6
SFJD	Kangerlussuaq	13.59	295	LR	LR	03 56 00.1	
	comp=Z,382nm,21.9s,baz=86,slow=34						
NB2	NORSAR Subarra	13.67	92	Pn	Pn	03 51 23.5	-2.6
	comp=Z,15nm,1.2s,baz=298,slow=14						
NOA	NORSAR Array B	13.67	92	Pn	Pn	03 51 22.1	-4.0
	comp=Z,0.0nm,0.3s,baz=300,slow=13,SNR=4.3						
NOA				LR	LR	03 56 47.6	
	comp=Z,225nm,19.2s,baz=295,slow=38						
HFS	Hagfors	15.18	92	Pn	Pn	03 51 44.8	-1.8
	comp=Z,0.1nm,0.3s,baz=277,slow=13,SNR=2.1						
HFS				LR	LR	03 57 23.5	
	comp=Z,297nm,18.7s,baz=288,slow=36						
SPITS	Spitsbergen Ar	17.03	23	LR	LR	03 56 41.0	
	comp=Z,335nm,19.8s,baz=205,slow=30						
ARCES	ARCESS Array B	17.30	54	LR	LR	03 57 21.9	
	comp=Z,258nm,20.3s,baz=260,slow=32						
UCC	Uccle	18.03	129	P	Pn	03 52 21.7	-1.1
UCC				pmax	pmax		
	comp=Z,14nm,0.9s						
UCC	Uccle	18.03	129	Pn	Pn	03 52 21.7	-1.1
SNF	Seneffe	18.25	130	*d*x	Pn	03 52 28.6	+3.1
RGN	Rugen	18.48	108	P	P	03 52 26.9	-1.3
RGN				IAmb	IAmb	03 52 34.2	
	comp=Z,78nm,1.1s						
BMRD	Maredsous	18.59	129	*d*x	Pn	03 52 32.2	+2.5
GRR	Gorron	18.60	142	*e*P	Pn	03 52 31.8	+2.0
GRR				pmax	pmax		
	comp=Z,66nm,1.2s						
BAIF	Baives	18.62	131	*e*P	Pn	03 52 31.4	+1.5
BAIF				pmax	pmax		
	comp=Z,33nm,1.2s						
BGES	Gesves	18.63	129	*d*x	Pn	03 52 30.1	0.0
MEM	Membach	18.75	127	*d*x	Pn	03 52 32.9	+1.3
MEM	Membach	18.75	127	P	Pn	03 52 33.9	+2.3
MEM				pmax	pmax		
	comp=Z,26nm,1.9s						
BTNL	Ternell	18.82	127	*d*x	Pn	03 52 35.0	+2.7
MSF	Maaselka	19.33	65	P	P	03 52 37.8	+0.4
FINES	FINESS Array B	19.86	79	P	P	03 52 42.4	-0.8
	comp=Z,0.2nm,0.3s,baz=337,slow=9.1,SNR=7.2						
FINES				LR	LR	04 00 08.3	
	comp=Z,121nm,19.6s,baz=351,slow=36						
FINES	FINESS Array B	19.86	79	P	P	03 52 41.8	-1.4
TULEG	Thule	19.87	328	P	P	03 52 42.1	-1.1
TNS	Taunus Mts	19.94	124	P	Pn	03 52 48.2	+2.3
TNS				pmax	pmax		
	comp=Z,18nm,1.6s						
APA	Apatity	20.51	59	⇓*i*P	P	03 52 47.2	-3.0
APA				pmax	pmax		
	comp=Z,15nm,0.9s						
APA				MLR	MLR		
	comp=Z,1μm,12.0s						
CLL	Collm	20.78	115	*e*P	P	03 52 53.0	-0.3
	comp=Z,38nm,1.2s						
CLL				*e*S	S	03 56 46.0	+1.1
CLL				LmH		04 00 00.0	
	comp=N,300nm,19.1s						
CLL				LmH		04 00 00.0	
	comp=E,400nm,19.0s						
CLL	Collm	20.78	115	*e*P	P	03 52 53.0	-0.3
CLL				*e*S	S	03 56 46.0	+1.1
CLL				pmax	pmax		
	comp=Z,38nm,1.2s						
CLL	Collm	20.78	115	P	P	03 52 52.4	-0.9
CLL				IAmb	IAmb	03 52 57.4	
	comp=Z,32nm,1.1s						
LVZ	Lovozero	20.87	57	⇑*e*P	P	03 52 52.9	-1.3
LVZ				pmax	pmax		
	comp=Z,19nm,1.2s						
LOR	Lormes	20.96	135	P	P	03 52 55.9	+0.6
LOR				pmax	pmax		
	comp=Z,39nm,1.4s						
GKP	Gorka Klasztor	21.02	106	*e*P	P	03 53 01.9	+6.1
GKP	Gorka Klasztor	21.02	106	*e*P	P	03 52 57.7	+1.9
SSF	Saint Saulge	21.04	136	*e*P	P	03 52 56.8	+0.7
SSF				pmax	pmax		
	comp=Z,50nm,1.2s						
CDF	Champ du Feu	21.06	128	*e*P	P	03 52 58.9	+2.5
CDF				pmax	pmax		
	comp=Z,36nm,1.3s						
HAU	Haudompre	21.10	130	*e*P	P	03 52 58.1	+1.3
HAU				pmax	pmax		
	comp=Z,42nm,1.1s						
PBUR	Paburge	21.12	95	*e*P	P	03 52 58.1	+1.2
ECH	Echery	21.19	129	P	P	03 52 58.3	+0.6
ECH				pmax	pmax		
	comp=Z,29nm,1.1s						
ECH	Echery	21.19	129	P	P	03 52 58.3	+0.6
AVF	Avril sur Loir	21.24	137	*e*P	P	03 52 58.8	+0.6
AVF				pmax	pmax		
	comp=Z,38nm,1.2s						
BGF	Bois d'Agland	21.30	138	*e*P	P	03 53 00.5	+1.6
BGF				pmax	pmax		
	comp=Z,45nm,1.1s						
GRA1	Grafenberg Arr	21.39	120	P	P	03 53 00.6	+0.7
GRA1				IAmb	IAmb	03 53 15.1	
	comp=Z,36nm,1.1s						
GRF	Grafenberg Arr	21.39	120	P	P	03 53 00.6	+0.7
GRF				pmax	pmax		
	comp=Z,36nm,1.1s						
GRF	Grafenberg Arr	21.39	120	*e*P	P	03 53 02.5	+2.6
	baz=325,slow=9.8						
GRFO	Grafenberg	21.39	120	P	P	03 52 58.7	-1.2
GRFO				pmax	pmax		
	comp=Z,8.0nm,1.1s						
GRFO	Grafenberg	21.39	120	P	P	03 52 58.6	-1.2
NKC	Novy Kostel	21.42	118	*e*P	P	03 53 03.8	+3.6
NKC	Novy Kostel	21.42	118	*e*P	P	03 53 03.8	+3.6
STU	Stuttgart	21.42	125	P	P	03 52 59.0	-1.2
STU				pmax	pmax		
	comp=Z,31nm,0.9s						
STU	Stuttgart	21.42	125	P	P	03 52 59.0	-1.2
STU				IAmb	IAmb	03 53 06.8	
	comp=Z,31nm,0.9s						
HINF	Hinteralfeld	21.43	130	*e*P	P	03 53 01.7	+1.3
HINF				pmax	pmax		
	comp=Z,65nm,1.8s						
BRG	Berggiesshubel	21.49	114	P	P	03 53 01.9	+1.0
BRG				pmax	pmax		
	comp=Z,30nm,1.2s						
BRG	Berggiesshubel	21.49	114	*i* P	P	03 53 01.6	+0.7
BRG				Amp		03 53 05.0	
	comp=Z,46nm,1.4s						
BRG				*e*x	x	03 53 11.1	
BRG				Amp		03 53 16.3	
	comp=Z,55nm,1.4s						
BFO	Black Forest	21.49	127	P	P	03 53 02.3	+1.3
BFO				pmax	pmax		
	comp=Z,28nm,1.1s						
BFO	Black Forest	21.49	127	P	P	03 53 02.3	+1.3
FRB	Frobisher Bay	21.66	291	P	P	03 53 03.7	+1.1
	comp=Z,6.1nm,0.9s,baz=62,slow=10,SNR=13						
FRB				LR	LR	04 01 12.5	
	comp=Z,196nm,21.8s,baz=66,slow=36						
VSU	Vasula	21.71	85	*e*P	P	03 53 04.2	+1.0
VSU	Vasula	21.71	85	⇑*e*P	P	03 53 02.6	-0.6
VSU				pmax	pmax		
	comp=Z,47nm,1.0s						
SLE	Schleitheim	22.03	127	P	P	03 53 09.8	+3.0
SLE				pmax	pmax		
	comp=Z,30nm,1.3s						
RJF	Les Rejaudoux	22.08	142	*e*P	P	03 53 07.1	-0.2
RJF				pmax	pmax		
	comp=Z,46nm,1.2s						
PABE	Paberze	22.34	94	*e*P	P	03 53 11.0	+1.0
PRU	Pruhonice	22.43	115	*e*P	P	03 53 12.1	+1.2
PRU	Pruhonice	22.43	115	*e*P	P	03 53 12.1	+1.2
KSP	Ksiaz	22.45	111	*e*P	P	03 53 13.2	+2.0
KSP	Ksiaz	22.45	111	P	P	03 53 14.2	+3.0
KSP				pmax	pmax		
	comp=Z,41nm,1.2s						
WET	Wettzell	22.46	119	P	P	03 53 14.8	+3.4
CHVC	Chvalec	22.55	112	*e*P	P	03 53 14.2	+1.9
OSTC	Ostas	22.64	112	*e*P	P	03 53 15.5	+2.2
KHC	Kasperske Hory	22.74	118	*ce*P	P	03 53 16.7	+2.3
KHC				pmax	pmax		
	comp=Z,52nm,1.1s						
KHC	Kasperske Hory	22.74	118	*e*P	P	03 53 14.7	+0.3
KHC				*e*pP	pP	03 53 17.2	-0.4
KHC				*e*S	Sn	03 57 31.1	-6.0
KHC	Kasperske Hory	22.74	118	P	P	03 53 15.5	+1.1
DPC	Dobruska-Polom	22.84	112	*e*P	P	03 53 17.1	+1.7
DPC	Dobruska-Polom	22.84	112	*e*P	P	03 53 17.1	+1.7
DAVA	Damuels	22.93	126	*e*P	P	03 53 18.8	+2.4
	comp=Z,22nm,1.4s						
SSB	Saint Sauveur	22.96	136	P	P	03 53 15.4	-1.3
SSB				pmax	pmax		
	comp=Z,49nm,1.5s						
SSB	Saint Sauveur	22.96	136	P	P	03 53 15.3	-1.3
SSB				IAmb	IAmb	03 53 33.3	
	comp=Z,49nm,1.5s						
SUW	Suwalki	23.00	98	*e*P	P	03 53 18.1	+1.1
SUW	Suwalki	23.00	98	P	P	03 53 17.6	+0.6
SUW				pmax	pmax		
	comp=Z,49nm,1.1s						
SUW	Suwalki	23.00	98	P	P	03 53 17.6	+0.6
GEC2	GERESS Array S	23.02	118	P	P	03 53 19.2	+1.8
GEC2				IAmb	IAmb	03 53 34.8	
	comp=Z,42nm,1.5s						
GEC2B	GERESS ARRAY S	23.02	118	P	P	03 53 18.1	+0.8
GERES	GERESS Array B	23.02	118	P	P	03 53 17.5	+0.1
	comp=Z,4.4nm,0.9s,baz=323,slow=8.7,SNR=8.2						
GERES				LR	LR	04 02 46.9	
	comp=Z,218nm,19.3s,baz=322,slow=38						
GERES	GERESS Array B	23.02	118	P	P	03 53 17.1	-0.3
RETA	Reutte	23.07	124	*e*P	P	03 53 19.7	+1.9
	comp=Z,11nm,1.3s						
ISAL	Salakas	23.23	92	*e*P	P	03 53 20.1	+0.9
KRLC	Kraliky	23.24	112	*e*P	P	03 53 20.8	+1.3
KRLC	Kraliky	23.24	112	*e*P	P	03 53 20.8	+1.3
CKRC	Cesky Krumlov	23.28	117	*e*P	P	03 53 20.9	+1.0
CKRC				*e*S	S	03 57 38.0	+6.1
MOTA	Moosalm	23.31	124	*e*P	P	03 53 23.9	+3.5
	comp=Z,27nm,1.4s						
TREC	Trest	23.35	115	*e*P	P	03 53 22.0	+1.4
TREC	Trest	23.35	115	*e*P	P	03 53 22.0	+1.4
DAVOX	Davos/Dischmat	23.36	126	P	P	03 53 21.1	+0.2
	comp=Z,5.1nm,0.9s,baz=280,slow=7.2,SNR=5.5						
DAVOX				LR	LR	04 03 30.5	
	comp=Z,243nm,18.7s,baz=322,slow=39						
IIGN	Ignalina	23.41	92	*e*P	P	03 53 22.2	+1.1
FETA	Feichten	23.45	125	*e*P	P	03 53 24.5	+2.7
	comp=Z,28nm,1.3s						
SQTA	Sankt Quirin	23.45	124	*e*P	P	03 53 25.4	+3.6
	comp=Z,14nm,1.0s						
WATA	Walderalm	23.49	123	*e*P	P	03 53 23.9	+1.7
	comp=Z,14nm,1.1s						
TMCR	Tamitsa	23.52	65	*e*P	P	03 53 19.8	-2.3
TMCR				pmax	pmax		
	comp=Z,75nm,1.3s						
WTTA	Wattenberg	23.57	123	*e*P	P	03 53 24.2	+1.2
	comp=Z,18nm,1.1s						
IDID	Didziasalis	23.66	92	*e*P	P	03 53 24.3	+0.7
EUNU	Eureka	23.72	336	P	P	03 53 25.2	+1.2
EUNU				IAmb	IAmb	03 53 31.6	
	comp=Z,23nm,1.1s						
VRAC	Vranov	23.77	113	P	P	03 53 24.5	-0.2
	comp=Z,8.0nm,0.9s,baz=321,slow=11,SNR=7.1						
VRAC				LR	LR	04 03 51.8	
	comp=Z,202nm,19.4s,baz=328,slow=40						
VRAC	Vranov	23.77	113	*e*P	P	03 53 26.6	+1.8
MORC	Moravsky Berou	23.78	112	*e*P	P	03 53 26.4	+1.5
MORC	Moravsky Berou	23.78	112	P	P	03 53 24.8	-0.1
MORC				pmax	pmax		
	comp=Z,20nm,1.3s						
MORC	Moravsky Berou	23.78	112	P	P	03 53 24.8	-0.1
KRUC	Moravsky	23.89	114	*e*P	P	03 53 27.4	+1.5
KRUC	Moravsky	23.89	114	P	P	03 53 28.2	+2.3
KRUC				pmax	pmax		
	comp=Z,17nm,2.0s						
NACGM	Naroch	23.95	93	*i* P	P	03 53 26.4	0.0
NACGM				*i* P	P	03 53 26.4	0.0
NACGM				*i* P	P	03 53 26.4	0.0
NACGM				*i* PPP	PPP	03 54 09.9	
NACGM				*i* S	S	03 57 40.3	-2.3
NACGM				*i* SS	SnSn	03 58 23.8	+1.9
NACGM				*i* SSS	SSS	03 58 37.3	

NACGM				*i* LQ	LQ	04 00 51.9	
NACGM				*i* LR	LR	04 02 05.3	
OJC	**Ojcow**	**24.36**	**108**	P	**P**	**03 53 30.5**	**+0.3**
OJC				pmax	pmax		
	comp=Z,26nm,1.4s						
OJC	**Ojcow**	**24.36**	**108**	P	**P**	**03 53 30.5**	**+0.3**
OJC				IAmb	IAmb	03 53 56.8	
	comp=Z,26nm,1.4s						
JAVC	**Velka Javorina**	**24.56**	**113**	*e*P	**P**	**03 53 34.6**	**+2.5**
CONA	**Conrad Observa**	**24.60**	**116**	*e*P	**P**	**03 53 33.3**	**+0.7**
	comp=Z,8.6nm,1.0s						
MNK	**Minsk**	**24.70**	**92**	*i* P	**P**	**03 53 32.3**	**-0.9**
	comp=E,2.0nm,0.9s						
MNK				*i* P	**P**	**03 53 32.3**	**-0.9**
	comp=N,19nm,1.2s						
MNK				*i* P	**P**	**03 53 32.3**	**-0.9**
	comp=Z,13nm,0.8s						
MNK				*i* PP	**PnPn**	**03 54 04.2**	**-0.5**
MNK				*i* PPP	PPP	03 54 12.2	
MNK				*i* S	**S**	**03 57 54.4**	**-0.1**
MNK				*i* SS	**SnSn**	**03 58 42.9**	**+2.8**
MNK				*i* SSS	SSS	03 58 56.6	
MNK				*i* LR	LR	04 02 48.9	
MNK				*i* LRM	MLR	04 04 08.3	
	comp=N,191nm,14.2s						
MNK				*i* LRM	MLR	04 04 11.0	
	comp=Z,153nm,15.6s						
MNK				*i* LRM	MLR	04 04 12.3	
	comp=E,14nm,13.6s						
SMOL	**Smolenice**	**24.74**	**114**	*e*P	**P**	**03 53 35.0**	**+1.3**
SMOL				pmax	pmax		
	comp=Z,12nm,1.1s						
SMOL	**Smolenice**	**24.74**	**114**	*e*P	**P**	**03 53 35.0**	**+1.3**
MODS	**Modra-Piesok**	**24.79**	**114**	*e*P	**P**	**03 53 35.8**	**+1.6**
MODS				pmax	pmax		
	comp=Z,33nm,1.5s						
MODS	**Modra-Piesok**	**24.79**	**114**	*e*P	**P**	**03 53 35.8**	**+1.6**
ARSA	**Arzberg**	**25.03**	**118**	*e*P	**P**	**03 53 37.8**	**+1.5**
	comp=Z,7.4nm,0.9s						
LANS	**Liptovska Anna**	**25.05**	**110**	*e*P	**P**	**03 53 39.2**	**+2.7**
LANS				pmax	pmax		
	comp=Z,10.0nm,1.0s						
LANS	**Liptovska Anna**	**25.05**	**110**	*e*P	**P**	**03 53 39.2**	**+2.7**
VYHS	**Vyhne**	**25.32**	**112**	*e*P	**P**	**03 53 40.5**	**+1.6**
VYHS				pmax	pmax		
	comp=Z,36nm,1.4s						
VYHS	**Vyhne**	**25.32**	**112**	*e*P	**P**	**03 53 40.5**	**+1.6**
KLMR	**Klimovskoe**	**25.77**	**71**	*e*P	**P**	**03 53 39.6**	**-3.3**
KLMR				*e*		03 57 12.7	
KLMR				pmax	pmax		
	comp=Z,58nm,1.4s						
KLMR	**Klimovskoe**	**25.77**	**71**	*e*P	**P**	**03 53 39.7**	**-3.2**
KLMR				AMP		03 53 47.1	
	comp=Z,58nm,1.4s						
KLMR				*e*PcP	**PcP**	**03 57 12.8**	**+0.8**
KLMR				LQ	LQ	04 01 00.4	
KLMR				LQ	LQ	04 01 00.4	
KLMR				LR	LR	04 02 44.0	
ESDC	**Sonseca Array**	**26.20**	**155**	P	**P**	**03 53 47.7**	**+0.6**
	comp=Z,1.7nm,0.8s,baz=347,slow=8.8,SNR=8.3						
ESDC				LR	LR	04 03 50.0	
	comp=Z,167nm,18.1s,baz=335,slow=36						
ESDC	**Sonseca Array**	**26.20**	**155**	P	**P**	**03 53 47.2**	**+0.2**
PSZ	**Piszkesteto**	**26.20**	**111**	P	**P**	**03 53 46.1**	**-0.9**
PSZ				pmax	pmax		
	comp=Z,24nm,1.2s						
PSZ	**Piszkesteto**	**26.20**	**111**	P	**P**	**03 53 46.1**	**-0.9**
PSZ				IAmb	IAmb	03 53 50.1	
	comp=Z,24nm,1.2s						
KOLS	**Kolonicke sedl**	**26.37**	**107**	*e*P	**P**	**03 53 50.2**	**+1.8**
KOLS				pmax	pmax		
	comp=Z,31nm,1.6s						
KOLS	**Kolonicke sedl**	**26.37**	**107**	*e*P	**P**	**03 53 50.2**	**+1.8**
LVV	**L'vov**	**26.42**	**104**	*e*P	P	03 53 40.5	-8.4
LVV				*e*		03 54 47.1	
LVV				*e*S	**S**	**03 58 24.8**	**+2.8**
LVV				MLR	MLR		
	comp=N,300nm,14.0s						
LVV				MLR	MLR		
	comp=E,300nm,14.0s						
LVV				MLR	MLR		
	comp=Z,200nm,14.0s						
RES	**Resolute Bay**	**26.48**	**324**	P	**P**	**03 53 48.5**	**-0.6**
	comp=Z,1.4nm,0.4s,baz=88,slow=6.1,SNR=4.6						
RES	**Resolute Bay**	**26.48**	**324**	P	**P**	**03 53 48.3**	**-0.8**
UZH	**Uzhgorod**	**26.62**	**107**	⇑*i*P	**P**	**03 53 53.0**	**+2.4**
UZH				*e*		03 53 55.4	
UZH				*e*		03 54 00.5	
KIEV	**Kiev**	**27.96**	**97**	P	**P**	**03 54 03.0**	**+0.3**
AKASG	**Malin Array Be**	**27.97**	**97**	P	**P**	**03 54 01.8**	**-0.9**
	comp=Z,2.6nm,0.8s,baz=323,slow=9.6,SNR=7.9						
AKASG				LR	LR	04 05 02.1	
	comp=Z,132nm,18.9s,baz=330,slow=36						
AKASG	**Malin Array Be**	**27.97**	**97**	*ce*P	**P**	**03 54 03.4**	**+0.7**
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.8s						
AKASG	**Malin Array Be**	**27.97**	**97**	IAmb	IAmb	03 54 07.9	
	comp=Z,2.3nm,1.1s						
AKBB	**Malin Array Si**	**27.97**	**97**	⇑*e*P	**P**	**03 54 03.1**	**+0.4**
AKBB	**Malin Array Si**	**27.97**	**97**	P	**P**	**03 54 02.0**	**-0.7**
AKBB				IAmb	IAmb	03 54 10.7	
	comp=Z,23nm,1.4s						
OBN	**Obninsk**	**28.03**	**84**	P	**P**	**03 54 03.1**	**-0.1**
	comp=Z,3.3nm,0.6s,baz=302,slow=23,SNR=5.7						
OBN	**Obninsk**	**28.03**	**84**	*e*P	**P**	**03 54 02.7**	**-0.5**
OBN				pmax	pmax		
	comp=Z,42nm,1.3s						
OBN	**Obninsk**	**28.03**	**84**	P	**P**	**03 54 02.3**	**-0.9**
DRGR		**28.25**	**109**	P	**P**	**03 54 08.5**	**+3.1**
DRGR				pmax	pmax		
	comp=Z,22nm,2.3s						
KMPD	**K-Podol'skiy**	**28.41**	**103**	P	**P**	**03 54 07.0**	**+0.4**
BURAR	**Bucovina Array**	**28.63**	**105**	P	P	03 54 15.0	+6.2
BURAR	**Bucovina Array**	**28.63**	**105**	P	**P**	**03 54 08.0**	**-0.7**
VRI	**Vrincioaia**	**30.65**	**106**	P	**P**	**03 54 30.7**	**+4.1**
LPSR	**Galich'ya Gora**	**30.78**	**85**	*e*P	**P**	**03 54 26.4**	**-1.2**
LPSR				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KIRV	**Kirov**	**31.15**	**69**	P	**P**	**03 54 30.6**	**-0.2**
	comp=Z,14nm,0.9s,baz=165,slow=6.8,SNR=4.3						
KIRV	**Kirov**	**31.15**	**69**	⇓*e*P	**P**	**03 54 31.1**	**+0.3**
VSR	**Storozhevoye**	**31.88**	**87**	*e*P	**P**	**03 54 35.8**	**-1.5**
VSR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
VORD	**Divnogorie**	**32.11**	**87**	*e*P	**P**	**03 54 38.0**	**-1.4**
VORD				pmax	pmax		
	comp=Z,10.0nm,1.4s						
MDT	**Midelt**	**32.80**	**159**	P	**P**	**03 54 47.5**	**+1.9**
	comp=Z,8.6nm,1.1s,baz=354,slow=8.0,SNR=5.5						
VRH	**Novokhopyorsk**	**32.99**	**85**	*e*P	**P**	**03 54 46.4**	**-0.6**
VRH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KEST	**Kesra**	**33.17**	**137**	LR	LR	04 08 56.0	
	comp=Z,156nm,18.0s,baz=260,slow=38						
SRS	**Serrai**	**33.32**	**115**	P	**P**	**03 54 52.9**	**+2.8**
SRS				pmax	pmax		
	comp=Z,20nm,1.2s						
FCC	**Fort Churchill**	**34.60**	**297**	P	**P**	**03 55 03.1**	**+2.2**
FCC				pmax	pmax		
	comp=Z,10.0nm,1.3s						
FCC	**Fort Churchill**	**34.60**	**297**	P	**P**	**03 55 03.1**	**+2.2**
BELG	**Belogornoye**	**34.65**	**79**	P	**P**	**03 55 02.1**	**+0.8**
	comp=Z,26nm,0.9s,baz=128,slow=4.5,SNR=6.6						
BELG	**Belogornoye**	**34.65**	**79**	⇑*e*P	**P**	**03 55 00.5**	**-0.9**
BELG				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ANN	**Anapa**	**36.04**	**96**	*e*P	**P**	**03 55 17.4**	**+4.0**
ANN				*e*S	**S**	**04 00 58.3**	**+6.3**
ANN				pmax	pmax		
	comp=Z,50nm,1.0s						
ARU	**Arti**	**36.26**	**66**	P	**P**	**03 55 15.4**	**+0.2**
	comp=Z,1.6nm,0.2s,baz=312,slow=7.7,SNR=3.7						
ARU	**Arti**	**36.26**	**66**	P	**P**	**03 55 14.7**	**-0.5**
ARU						03 56 31.2	
ARU				S	**S**	**04 00 56.7**	**+1.5**
ARU				SS	**SnSn**	**04 03 21.9**	**+0.7**
ARU	**Arti**	**36.26**	**66**	IAmb	IAmb	03 55 20.3	
	comp=Z,16nm,1.4s						
NRIK	**Noril'sk**	**36.63**	**35**	P	**P**	**03 55 18.4**	**+0.1**
	comp=Z,6.9nm,1.0s,baz=314,slow=6.4,SNR=5.5						
NRIK				LR	LR	04 10 45.3	
	comp=Z,81nm,20.5s,baz=8.5,slow=37						
NRIK	**Noril'sk**	**36.63**	**35**	⇑*e*P	**P**	**03 55 18.6**	**+0.3**
NRIK				pmax	pmax		
	comp=Z,14nm,1.2s						
NRIK	**Noril'sk**	**36.63**	**35**	P	**P**	**03 55 18.8**	**+0.5**
NRIK				IAmb	IAmb	03 55 22.8	
	comp=Z,12nm,1.1s						
SOC	**Sochi**	**37.99**	**95**	*e*P	**P**	**03 55 29.8**	**-0.3**
SOC				*e*		03 56 55.6	
SOC				*e*S	**S**	**04 01 21.9**	**0.0**
SOC				*e*SS	**SnSn**	**04 04 04.8**	**+1.3**
SOC				*e*SSS	SSS	04 04 26.0	
SOC				MLR	MLR		
	comp=Z,309nm,15.0s						
BR131	**Keskin Array S**	**38.58**	**105**	⇑*e*P	**P**	**03 55 33.6**	**-1.7**
BRTR	**Keskin Array B**	**38.58**	**105**	P	**P**	**03 55 36.8**	**+1.5**
	comp=Z,3.8nm,0.9s,baz=285,slow=5.7,SNR=5.7						
BRTR	**Keskin Array B**	**38.58**	**105**	P	**P**	**03 55 33.5**	**-1.8**
SADO	**Sadowa**	**38.68**	**270**	P	**P**	**03 55 37.3**	**+1.5**
	comp=Z,9.0nm,0.9s,baz=46,slow=7.2,SNR=3.3						
SADO	**Sadowa**	**38.68**	**270**	IAmb	IAmb	03 55 38.2	
	comp=Z,22nm,1.4s						
KIV	**Kislovodsk**	**38.98**	**92**	*e*P	**P**	**03 55 37.8**	**-0.7**
KIV				pmax	pmax		
	comp=Z,15nm,1.0s						
KIV				MLR	MLR		
	comp=Z,146nm,16.0s						
KIV	**Kislovodsk**	**38.98**	**92**	P	**P**	**03 55 37.8**	**-0.7**
YKA	**Yellowknife Ar**	**39.19**	**313**	P	**P**	**03 55 39.7**	**-0.2**
	comp=Z,5.2nm,1.0s,baz=44,slow=8.8,SNR=28						
YKA				PcP	**PcP**	**03 57 49.8**	**+1.0**
	comp=Z,2.6nm,1.1s,baz=48,slow=3.4,SNR=9.2						
YKA				LR	LR	04 11 50.6	
	comp=Z,131nm,18.5s,baz=0.0,slow=36						
YKA	**Yellowknife Ar**	**39.19**	**313**	*i* P	**P**	**03 55 41.0**	**+1.1**
YKA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KBZ	**Khabaz**	**39.25**	**92**	P	**P**	**03 55 40.4**	**-0.2**
	comp=Z,4.2nm,1.0s,baz=320,slow=10,SNR=6.3						
KBZ				LR	LR	04 12 11.4	
	comp=Z,208nm,18.3s,baz=324,slow=37						
KBZ	**Khabaz**	**39.25**	**92**	⇑*e*P	**P**	**03 55 41.4**	**+0.8**
KBZ				pmax	pmax		
	comp=Z,11nm,1.2s						
INK	**Inuvik**	**39.87**	**328**	P	**P**	**03 55 44.8**	**-0.7**
	comp=Z,5.4nm,1.1s,baz=33,slow=10,SNR=6.1						
INK	**Inuvik**	**39.87**	**328**	P	**P**	**03 55 45.0**	**-0.5**
INK				pmax	pmax		
	comp=Z,8.0nm,1.2s						
INK	**Inuvik**	**39.87**	**328**	P	**P**	**03 55 45.0**	**-0.5**
ZEI	**Tsey**	**40.44**	**92**	*e*P	**P**	**03 55 50.6**	**-0.2**
ZEI				pmax	pmax		
	comp=Z,7.0nm,1.4s						
AKTO	**Aktyubinsk**	**40.45**	**73**	P	**P**	**03 55 50.5**	**0.0**
	comp=Z,6.6nm,1.0s,baz=303,slow=9.2,SNR=10.0						
FFC	**Flin Flon**	**40.53**	**297**	P	**P**	**03 55 52.5**	**+1.4**
FFC				pmax	pmax		
	comp=Z,10.0nm,1.3s						
FFC	**Flin Flon**	**40.53**	**297**	P	**P**	**03 55 52.5**	**+1.4**
GROC	**Groznyy**	**40.92**	**90**	*e*P	**P**	**03 55 51.5**	**-3.0**
GROC				*e*		03 57 54.6	
GROC				pmax	pmax		
	comp=Z,24nm,1.3s						
A21K	**Barrow**	**41.49**	**341**	P	**P**	**03 55 58.4**	**-0.5**
ULM	**Lac du Bonnet**	**41.51**	**289**	P	**P**	**03 55 59.6**	**+0.4**
	comp=Z,3.3nm,0.9s,baz=63,slow=5.2,SNR=4.7						
ULM				LR	LR	04 13 29.4	
	comp=Z,108nm,18.3s,baz=57,slow=37						
ULM	**Lac du Bonnet**	**41.51**	**289**	⇑*e*P	**P**	**03 56 00.2**	**+1.0**
M54A	**Oil Creek Stat**	**41.53**	**267**	P	**P**	**03 55 60.0**	**+0.3**
MALT	**Malatya**	**41.79**	**101**	P	**P**	**03 56 05.6**	**+3.8**
ABKAR	**Akbulak array**	**42.16**	**73**	P	**P**	**03 56 04.5**	**-0.1**
ABKAR				IAmb	IAmb	03 56 07.8	
	comp=Z,18nm,1.4s						
TIXI	**Tiksi**	**42.18**	**15**	⇑*e*P	**P**	**03 56 05.6**	**+1.1**
TIXI				pmax	pmax		
	comp=Z,88nm,1.3s						
TIXI	**Tiksi**	**42.18**	**15**	P	**P**	**03 56 02.8**	**-1.7**
TIXI				IAmb	IAmb	03 56 10.6	
	comp=Z,18nm,1.1s						
TOLK	**Toolik Lake Re**	**42.80**	**336**	P	**P**	**03 56 08.9**	**-0.7**
TOLK				IAmb	IAmb	03 56 13.4	
	comp=Z,18nm,1.0s						
BMAR	**Burnt Mountain**	**42.94**	**333**	P	**P**	**03 56 11.4**	**+0.6**
GNI	**Garni**	**42.96**	**93**	⇑*e*P	**P**	**03 56 11.7**	**+0.3**
GNI				pmax	pmax		
	comp=Z,31nm,1.5s						
GNI	**Garni**	**42.96**	**93**	P	**P**	**03 56 10.2**	**-1.2**
M50A	**Fremont**	**43.08**	**270**	IAmb	IAmb	03 56 17.0	
	comp=Z,14nm,0.8s						
BRVK	**Borovoye**	**43.31**	**62**	⇓*e*P	**P**	**03 56 14.1**	**+0.2**
BRVK				pmax	pmax		
	comp=Z,9.0nm,1.0s						
BRVK	**Borovoye**	**43.31**	**62**	P	**P**	**03 56 12.2**	**-1.6**
MARD	**Mardin**	**43.63**	**99**	P	**P**	**03 56 15.7**	**-1.1**
MARD				IAmb	IAmb	03 56 20.8	
	comp=Z,14nm,0.9s						
FYU	**Fort Yukon**	**43.81**	**333**	P	**P**	**03 56 17.6**	**-0.1**
COLD	**Coldfoot**	**44.17**	**336**	P	**P**	**03 56 20.5**	**-0.1**
COLD				IAmb	IAmb	03 56 25.1	
	comp=Z,13nm,1.3s						
TAM	**Tamanrasset**	**44.48**	**149**	P	**P**	**03 56 24.9**	**+1.1**
TAM				pmax	pmax		
	comp=Z,5.0nm,1.2s						
TAM	**Tamanrasset**	**44.48**	**149**	P	**P**	**03 56 24.9**	**+1.1**
PRP	**Porcupine Dome**	**44.79**	**332**	P	**P**	**03 56 25.0**	**-0.8**
PRP				IAmb	IAmb	03 56 35.7	
	comp=Z,10nm,1.2s						
F33A	**5 Mile Ranch,**	**45.15**	**285**	IAmb	IAmb	03 56 33.7	
	comp=Z,10nm,1.1s						
RDOG	**Red Dog Mine**	**45.37**	**342**	P	**P**	**03 56 30.4**	**+0.2**
RDOG				IAmb	IAmb	03 56 36.6	
	comp=Z,14nm,1.1s						
IL31		**45.72**	**332**	P	**P**	**03 56 33.0**	**0.0**
IL31				IAmb	IAmb	03 56 38.3	
	comp=Z,11nm,1.2s						
ILAR	**Eielson Array**	**45.72**	**332**	P	**P**	**03 56 32.1**	**-0.9**
	comp=Z,6.6nm,1.1s,baz=22,slow=5.1,SNR=21						
ILAR				PcP	**PcP**	**03 58 11.3**	**+0.8**
	comp=Z,3.1nm,1.0s,baz=5.9,slow=3.0,SNR=10						
ILAR				LR	LR	04 16 58.3	
	comp=Z,65nm,18.4s,baz=57,slow=38						
ILAR	**Eielson Array**	**45.72**	**332**	P	**P**	**03 56 33.3**	**+0.3**
ILAR						03 58 10.8	
ILAR	**Eielson Array**	**45.72**	**332**	P	**P**	**03 56 33.3**	**+0.3**
ILAR				PcP	**PcP**	**03 58 10.8**	**+0.2**
MDM	**Murphy Dome**	**45.82**	**333**	P	**P**	**03 56 34.1**	**+0.2**
COLA	**College**	**45.83**	**333**	⇑*e*P	**P**	**03 56 33.5**	**-0.3**
COLA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
I23K	**Minto, Yukon-K**	**45.87**	**334**	IAmb	IAmb	03 56 38.8	
	comp=Z,11nm,1.2s						
CCB	**Clear Creek Bu**	**46.02**	**333**	IAmb	IAmb	03 56 42.2	
	comp=Z,15nm,1.4s						
HDA	**Harding Lake**	**46.06**	**332**	IAmb	IAmb	03 56 40.7	
	comp=Z,12nm,1.2s						
DOT	**Dot Lake**	**46.13**	**330**	IAmb	IAmb	03 56 43.5	
	comp=Z,9.3nm,1.3s						
BCAR	**Beaver Creek A**	**46.13**	**328**	P	**P**	**03 56 37.6**	**+1.3**
WCI	**Wyandotte Cave**	**47.11**	**270**	P	**P**	**03 56 45.1**	**+0.9**
WCI				pmax	pmax		
	comp=Z,16nm,1.0s						
WCI	**Wyandotte Cave**	**47.11**	**270**	P	**P**	**03 56 45.1**	**+0.9**
ZAA0	**Zalesovo Array**	**47.81**	**51**	P	**P**	**03 56 48.8**	**-0.7**
ZAA0				IAmb	IAmb	03 56 53.3	
	comp=Z,10.0nm,1.2s						
ZALV	**Zalesovo Beam**	**47.81**	**51**	P	**P**	**03 56 49.1**	**-0.4**
	comp=Z,3.9nm,0.9s,baz=327,slow=7.9,SNR=10						
ZALV				PcP	**PcP**	**03 58 19.4**	**+1.3**
	comp=Z,0.5nm,0.3s,baz=151,slow=3.4,SNR=3.9						
ZALV	**Zalesovo Beam**	**47.81**	**51**	*i* P	**P**	**03 56 50.2**	**+0.7**
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ZALV	**Zalesovo Beam**	**47.81**	**51**	P	**P**	**03 56 48.3**	**-1.1**
KURK	**Kurchatov**	**48.29**	**58**	*de*P	**P**	**03 56 52.9**	**-0.3**
KURK				pmax	pmax		
	comp=Z,14nm,1.3s						
KURK	**Kurchatov**	**48.29**	**58**	P	**P**	**03 56 52.4**	**-0.8**
KURK				IAmb	IAmb	03 56 57.8	
	comp=Z,9.0nm,1.0s						
KURBB	**Kurchatov Arra**	**48.34**	**58**	P	**P**	**03 56 53.1**	**-0.5**
	comp=Z,8.0nm,1.1s,baz=322,slow=7.4,SNR=11						
ANM	**Nome**	**49.01**	**342**	P	**P**	**03 57 00.8**	**+2.2**
ANM				pmax	pmax		
	comp=Z,11nm,1.1s						
ANM	**Nome**	**49.01**	**342**	P	**P**	**03 57 00.8**	**+2.2**
ANM				IAmb	IAmb	03 57 02.4	
	comp=Z,11nm,1.1s						
GEYT	**Alibeck**	**50.58**	**83**	LR	LR	04 18 55.5	
	comp=Z,74nm,19.1s,baz=345,slow=36						
GEYT	**Alibeck**	**50.58**	**83**	P	**P**	**03 57 12.7**	**+1.8**
GYA0B	**ALIBECK ARRAY**	**50.58**	**83**	P	**P**	**03 57 11.6**	**+0.7**
GYA0B				IAmb	IAmb	03 57 24.1	
	comp=Z,6.0nm,0.8s						
S39A	**Bolivar**	**50.59**	**276**	P	**P**	**03 57 11.3**	**+0.4**
GCMT	**Greycliff**	**50.61**	**295**	P	**P**	**03 57 11.7**	**+0.5**
HRY	**Holter Researc**	**50.69**	**297**	P	**P**	**03 57 11.2**	**-0.5**
KOWA	**Kowa**	**50.90**	**163**	P	**P**	**03 57 14.2**	**+0.8**
YNE	**Yellowstone No**	**51.40**	**295**	P	**P**	**03 57 16.8**	**-0.4**
KK31	**Karatay Array**	**51.45**	**69**	P	**P**	**03 57 17.4**	**0.0**
KK31				pmax	pmax		
	comp=Z,21nm,1.5s						
KK31	**Karatay Array**	**51.45**	**69**	P	**P**	**03 57 17.4**	**0.0**
KKAR	**Karatay Array**	**51.45**	**69**	P	**P**	**03 57 16.0**	**-1.4**
KKAR	**Karatay Array**	**51.45**	**69**	P	**P**	**03 57 15.9**	**-1.4**
BOZ	**Bozeman (W)**	**51.53**	**297**	P	**P**	**03 57 19.8**	**+1.7**
BOZ				pmax	pmax		
	comp=Z,10.0nm,1.1s						
BOZ	**Bozeman (W)**	**51.53**	**297**	P	**P**	**03 57 19.8**	**+1.7**
BOZ				IAmb	IAmb	03 57 23.0	
	comp=Z,10.0nm,1.1s						
YMP	**Mirror Lake Pl**	**51.68**	**295**	P	**P**	**03 57 19.7**	**+0.3**
K22A	**Casper**	**51.97**	**291**	IAmb	IAmb	03 57 24.2	
	comp=Z,6.9nm,0.8s						
DGZ	**Jazzator, Alta**	**52.26**	**52**	⇓*e*P	**P**	**03 57 23.9**	**+0.4**
DGZ				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SEY	**Seymchan**	**52.62**	**6**	P	**P**	**03 57 24.1**	**-1.6**
	comp=Z,3.0nm,0.9s,baz=32,slow=4.2,SNR=5.0						
SEY	**Seymchan**	**52.62**	**6**	⇓*e*P	**P**	**03 57 25.0**	**-0.7**
MAKZ	**Makanchi**	**52.78**	**58**	P	**P**	**03 57 26.0**	**-1.2**
MAKZ				pmax	pmax		
	comp=Z,8.0nm,1.1s						
MAKZ	**Makanchi**	**52.78**	**58**	P	**P**	**03 57 26.0**	**-1.2**
MK31	**Makanchi Array**	**52.90**	**58**	⇑*e*P	**P**	**03 57 28.3**	**+0.2**
MKAR	**Makanchi Array**	**52.90**	**58**	P	**P**	**03 57 27.0**	**-1.2**
	comp=Z,4.1nm,1.0s,baz=316,slow=5.1,SNR=14						
MKAR				LR	LR	04 18 50.9	
	comp=Z,58nm,18.5s,baz=324,slow=35						
MKAR	**Makanchi Array**	**52.90**	**58**	*ce*P	**P**	**03 57 28.5**	**+0.4**
MKAR				pmax	pmax		
	comp=Z,5.0nm,1.1s						
MKAR	**Makanchi Array**	**52.90**	**58**	P	**P**	**03 57 27.7**	**-0.4**
SNOW	**Snow King Moun**	**52.98**	**294**	IAmb	IAmb	03 57 34.1	
	comp=Z,13nm,1.3s						
TOA0	**Torodi Ar. Sit**	**53.09**	**156**	P	**P**	**03 57 30.1**	**+0.4**
TORD	**Torodi Ar. Bea**	**53.09**	**156**	P	**P**	**03 57 30.3**	**+0.6**
	comp=Z,4.7nm,1.0s,baz=343,slow=9.4,SNR=14						
TORD	**Torodi Ar. Bea**	**53.09**	**156**	P	**P**	**03 57 29.8**	**+0.1**
BW06	**Boulder Array**	**53.09**	**293**	IAmb	IAmb	03 57 32.6	
	comp=Z,13nm,1.1s						
PD31	**Pinedale Array**	**53.09**	**293**	P	**P**	**03 57 30.3**	**+0.4**
PD31				IAmb	IAmb	03 57 32.6	
	comp=Z,11nm,1.1s						
PDAR	**Pinedale Array**	**53.09**	**293**	P	**P**	**03 57 29.0**	**-0.9**
	comp=Z,6.1nm,1.0s,baz=55,slow=6.2,SNR=25						
PDAR				LR	LR	04 20 00.8	
	comp=Z,105nm,18.7s,baz=39,slow=36						
REDW	**Red Top Meadow**	**53.10**	**294**	IAmb	IAmb	03 57 38.1	
	comp=Z,12nm,1.4s						
BCYI	**Bear Canyon**	**53.30**	**297**	P	**P**	**03 57 29.9**	**-1.4**
AAK	**Ala-Archa**	**53.43**	**67**	⇓*e*P	**P**	**03 57 33.3**	**+1.0**
AAK				pmax	pmax		
	comp=Z,42nm,1.3s						
AAK	**Ala-Archa**	**53.43**	**67**	P	**P**	**03 57 31.1**	**-1.2**
OK031	**S. Brethren Rd**	**53.56**	**278**	P	**P**	**03 57 33.5**	**+0.5**
OK031				IAmb	IAmb	03 57 37.6	
	comp=Z,15nm,1.3s						
ECR	**Eagle Creek**	**53.57**	**295**	P	**P**	**03 57 33.9**	**+0.5**
CROK	**Carrier**	**53.58**	**279**	P	**P**	**03 57 32.9**	**-0.3**
BMO	**Blue Mountains**	**54.32**	**300**	P	**P**	**03 57 38.9**	**+0.3**
BMO				pmax	pmax		
	comp=Z,7.0nm,1.2s						
BMO	**Blue Mountains**	**54.32**	**300**	P	**P**	**03 57 38.9**	**+0.3**
O20A	**White River Ci**	**54.79**	**290**	IAmb	IAmb	03 57 50.2	
	comp=Z,12nm,1.4s						
MOY	**Mondy**	**54.84**	**42**	*e*P	**P**	**03 57 41.7**	**-0.6**
MOY				pmax	pmax		
	comp=Z,31nm,1.3s						
WMOK	**Wichita Mounta**	**55.43**	**279**	P	**P**	**03 57 47.4**	**+0.7**
WMOK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
WMOK	**Wichita Mounta**	**55.43**	**279**	P	**P**	**03 57 47.4**	**+0.7**
WMOK				IAmb	IAmb	03 57 51.9	
	comp=Z,7.3nm,1.1s						
TLY	**Talaya**	**55.58**	**40**	P	**P**	**03 57 47.3**	**-0.2**
TLY				pmax	pmax		
	comp=Z,5.0nm,1.1s						
TLY	**Talaya**	**55.58**	**40**	P	**P**	**03 57 47.3**	**-0.2**
MA2	**Magadan**	**55.89**	**7**	⇓*e*P	**P**	**03 57 49.5**	**-0.2**
MA2				pmax	pmax		
	comp=Z,8.0nm,1.4s						
MA2	**Magadan**	**55.89**	**7**	P	**P**	**03 57 49.4**	**-0.2**
MA2				IAmb	IAmb	03 57 58.3	
	comp=Z,7.8nm,1.1s						
DUG	**Dugway, Tooele**	**56.57**	**294**	IAmb	IAmb	03 58 00.8	
	comp=Z,7.5nm,1.2s						
ZAK	**Zakamensk**	**56.64**	**41**	*e*P	**P**	**03 57 53.2**	**-2.0**
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.2s						
KSH	**Kashi**	**56.67**	**67**	P	**P**	**03 57 57.0**	**+1.3**
KSH				sP	sP	03 58 04.7	+4.0
KSH				pmax	pmax		
	comp=Z,12nm,1.7s						
KSH				pmax	pmax		
	comp=Z,71nm,3.9s						
KSH				LR	LR		
	comp=N,230nm,9.0s						
KSH				LR	LR		
	comp=E,280nm,6.1s						
KSH				LR	LR		
	comp=Z,330nm,16.1s						
WHTX	**Lake Whitney,**	**57.21**	**276**	P	**P**	**03 57 59.9**	**+0.5**
WMQ	**Urumqi**	**57.41**	**56**	*e*P	**P**	**03 58 03.0**	**+2.2**
WMQ	**Urumqi**	**57.41**	**56**	P	**P**	**03 57 59.6**	**-1.2**
WMQ	**Urumqi**	**57.41**	**56**	P	**P**	**03 57 59.6**	**-1.2**
WMQ				IAmb	IAmb	03 58 08.4	
	comp=Z,11nm,1.0s						
ABTX	**Abilene, Hawle**	**57.60**	**278**	P	**P**	**03 58 01.8**	**-0.4**
ABTX				IAmb	IAmb	03 58 07.2	
	comp=Z,13nm,1.2s						
KBL	**Kabul**	**58.09**	**76**	P	**P**	**03 58 04.9**	**-1.0**
KBL				pmax	pmax		
	comp=Z,13nm,1.5s						
KBL	**Kabul**	**58.09**	**76**	P	**P**	**03 58 04.9**	**-1.0**
KBL				IAmb	IAmb	03 58 09.1	
	comp=Z,13nm,1.5s						
ANMO	**Albuquerque**	**58.49**	**286**	⇑*e*P	**P**	**03 58 11.0**	**+2.4**
ANMO				pmax	pmax		
	comp=Z,4.0nm,1.7s						
DBIC	**Dimbokro**	**58.51**	**165**	P	**P**	**03 58 09.5**	**+0.9**
	comp=Z,9.0nm,1.1s,baz=355,slow=7.5,SNR=4.3						
DBIC				LR	LR	04 25 03.3	
	comp=Z,45nm,18.4s,baz=203,slow=38						
CCUT	**Cedar City**	**59.06**	**293**	P	**P**	**03 58 13.7**	**+1.2**
BNM	**Barren Site**	**59.24**	**285**	P	**P**	**03 58 13.7**	**-0.2**
R11A	**Troy Canyon, C**	**59.25**	**295**	IAmb	IAmb	03 58 29.0	
	comp=Z,3.8nm,0.6s						
KNB	**Kanab**	**59.30**	**292**	P	**P**	**03 58 14.5**	**+0.3**
KNB				pmax	pmax		
	comp=Z,7.0nm,1.3s						
KNB	**Kanab**	**59.30**	**292**	P	**P**	**03 58 14.5**	**+0.3**
JCT	**Junction City**	**59.52**	**277**	P	**P**	**03 58 15.2**	**-0.4**
JCT				pmax	pmax		
	comp=Z,13nm,1.2s						
JCT	**Junction City**	**59.52**	**277**	P	**P**	**03 58 15.2**	**-0.4**
U15A	**North Rim**	**59.60**	**291**	IAmb	IAmb	03 58 18.8	
	comp=Z,6.2nm,1.1s						
KVN	**Kaiserville**	**59.61**	**297**	IAmb	IAmb	03 58 20.1	
	comp=Z,7.2nm,1.1s						
SONM	**Songino Array**	**59.82**	**40**	P	**P**	**03 58 16.2**	**-1.4**
	comp=Z,1.5nm,1.1s,baz=327,slow=7.8,SNR=7.3						
SONM	**Songino Array**	**59.82**	**40**	P	**P**	**03 58 15.9**	**-1.7**
ULN	**Ulaanbaatar**	**59.97**	**40**	⇓*e*P	**P**	**03 58 19.4**	**+0.8**
ULN				pmax	pmax		
	comp=Z,6.0nm,1.3s						
ULN	**Ulaanbaatar**	**59.97**	**40**	P	**P**	**03 58 18.1**	**-0.5**
VCNR	**Virginia City**	**59.99**	**299**	P	**P**	**03 58 19.6**	**+0.7**
NVAR	**Mina Array Bea**	**60.23**	**297**	P	**P**	**03 58 20.4**	**-0.2**
	comp=Z,1.2nm,0.9s,baz=11,slow=3.6,SNR=6.2						
NVAR				LR	LR	04 24 32.5	
	comp=Z,174nm,18.9s,baz=28,slow=36						
NVAR	**Mina Array Bea**	**60.23**	**297**	P	**P**	**03 58 19.6**	**-1.1**
NIL	**Nilore**	**60.62**	**73**	P	**P**	**03 58 22.9**	**-0.2**

NIL				pmax	pmax		
	comp=Z,16nm,1.0s						
NIL	Nilore	60.62	73	P	P	03 58 22.9	-0.2
SHPR	Sheep Range	60.68	294	P	P	03 58 24.9	+1.3
SHPR				IAmb	IAmb	03 58 26.7	
	comp=Z,7.8nm,1.3s						
X16A	Lo Mia Camp, P	61.00	289	IAmb	IAmb	03 58 29.9	
	comp=Z,5.4nm,1.0s						
TXAR	Lajitas Array	62.17	280	P	P	03 58 33.5	-0.1
	comp=Z,3.1nm,1.0s,baz=54,slow=3.9,SNR=15						
TXAR				LR	LR	04 25 02.4	
	comp=Z,126nm,19.1s,baz=0.0,slow=36						
TXAR	Lajitas Array	62.17	280	P	P	03 58 31.8	-1.9
TX31	Lajitas Ar. Si	62.17	280	P	P	03 58 33.9	+0.2
TX32	Lajitas Array	62.17	280	P	P	03 58 32.7	-1.0
TX32				IAmb	IAmb	03 58 38.5	
	comp=Z,6.0nm,1.2s						
TUC	Tucson	62.56	288	P	P	03 58 35.5	-0.8
TUC				pmax	pmax		
	comp=Z,6.0nm,1.3s						
TUC	Tucson	62.56	288	P	P	03 58 35.5	-0.8
TUC				IAmb	IAmb	03 58 41.0	
	comp=Z,6.0nm,1.3s						
ISA	Isabella, Lake	62.72	296	P	P	03 58 37.1	-0.2
ISA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
ISA	Isabella, Lake	62.72	296	P	P	03 58 37.1	-0.2
ISA				IAmb	IAmb	03 58 41.2	
	comp=Z,4.9nm,1.1s						
319A	Douglas	62.75	286	P	P	03 58 36.5	-1.1
RMX	La Rumorosa	64.45	292	P	P	03 58 49.3	+0.4
RMX				IAmb	IAmb	03 59 10.7	
	comp=Z,5.2nm,1.3s						
HPIG		65.11	280	P	P	03 58 53.8	+0.5
GTA	Gaotai	65.48	49	eP	P	03 58 54.0	-1.4
GTA				pP	pP	03 58 57.3	-1.8
GTA				sP	sP	03 59 00.0	-0.4
GTA				pmax	pmax		
	comp=Z,2.0nm,1.7s						
GTA				pmax	pmax		
	comp=Z,120nm,6.0s						
GTA				LR	LR		
	comp=N,70nm,15.3s						
GTA				LR	LR		
	comp=E,99nm,16.4s						
GTA				LR	LR		
	comp=Z,75nm,15.3s						
SDV	Santo Domingo	66.64	239	P	P	03 59 04.4	+1.2
ZAIG	Zacatecas	67.45	276	P	P	03 59 08.2	-0.2
ZAIG				IAmb	IAmb	03 59 13.5	
	comp=Z,4.7nm,0.7s						
BJT	Baijiatuau	69.69	36	P	P	03 59 22.3	+0.5
BJT				pmax	pmax		
	comp=Z,8.0nm,1.3s						
BJT	Baijiatuau	69.69	36	P	P	03 59 22.3	+0.5
BJT				IAmb	IAmb	03 59 25.7	
	comp=Z,8.3nm,1.3s						
LZH	Lanzhou	69.81	47	eP	P	03 59 25.2	+2.4
LZH				pP	sP	03 59 27.9	0.0
LZH				sP	pP	03 59 29.5	+3.0
LZH				pmax	pmax		
	comp=Z,14nm,1.3s						
LSA	Lhasa	71.19	60	P	P	03 59 31.3	-0.4
LSA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
LSA	Lhasa	71.19	60	P	P	03 59 31.3	-0.4
LSA				IAmb	IAmb	03 59 36.3	
	comp=Z,5.3nm,1.0s						
ROSC	El Rosal	71.75	241	LR	LR	04 25 37.6	
	comp=Z,41nm,21.3s,baz=42,slow=31						
KSRS	Korea Array	74.82	28	LR	LR	04 36 47.7	
	comp=Z,24nm,18.6s,baz=358,slow=39						
KSAR	Wonju Array Be	74.82	28	P	P	03 59 51.4	-1.1
KSAR	Wonju Array Be	74.82	28	P	P	03 59 51.4	-1.1
SHL	Shillong	75.20	62	P	P	03 59 53.3	-1.8
SHL				pmax	pmax		
	comp=Z,13nm,1.2s						
SHL	Shillong	75.20	62	P	P	03 59 53.3	-1.8
ENH	Enshi	76.95	45	P	P	04 00 04.7	-0.1
NJ2	Nanjing	77.92	37	eP	P	04 00 09.5	-0.6
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
BDFB	Brasilia	83.21	209	LR	LR	04 31 23.1	
	comp=Z,102nm,20.8s,baz=252,slow=31						
CHTO	Chiang Mai	83.99	58	P	P	04 00 42.0	-0.7
CHTO				pmax	pmax		
	comp=Z,9.0nm,1.3s						
CHTO	Chiang Mai	83.99	58	P	P	04 00 42.0	-0.7
ATAH	Atahualpa	84.30	240	LR	LR	04 35 48.0	
	comp=Z,25nm,20.1s,baz=15,slow=34						
CMAR	Chiang Mai Arr	84.31	58	P	P	04 00 44.0	-0.4
	comp=Z,1.0nm,0.4s,baz=315,slow=6.5,SNR=10						
CMAR				LR	LR	04 41 15.2	
	comp=Z,23nm,19.0s,baz=352,slow=38						
CMAR	Chiang Mai Arr	84.31	58	ceP	P	04 00 44.0	-0.4
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
CMAR	Chiang Mai Arr	84.31	58	P	P	04 00 43.5	-0.9
SIV	San Ignacio	86.80	221	LR	LR	04 32 59.8	
	comp=Z,58nm,19.1s,baz=58,slow=31						
NNA	Nana	88.19	237	LR	LR	04 37 13.0	
	comp=Z,28nm,21.2s,baz=352,slow=33						
LPAZ	La Paz	89.22	228	LR	LR	04 40 14.3	
	comp=Z,39nm,18.0s,baz=6.0,slow=35						
BOSA	Boshof	98.75	143	LR	LR	04 51 55.6	
	comp=Z,45nm,18.1s,baz=309,slow=39						
ASAR	Alice Springs	135.14	38	PKP	PKiKP	04 07 32.2	-0.8
	comp=Z,1.3nm,1.0s,baz=313,slow=1.6,SNR=6.5						
ASAR	Alice Springs	135.14	38	PKPdf	PKPdf	04 07 32.0	+0.5
BBOO	Buckleboo	144.40	40	PKPdf	PKPdf	04 07 47.1	-0.9
STKA	Stephens Creek	144.89	31	PKP	PKPbc	04 07 48.1	0.0
	comp=Z,3.9nm,1.0s,baz=8.6,slow=5.0,SNR=4.6						
STKA	Stephens Creek	144.89	31	PKPdf	PKPdf	04 07 49.8	+0.9

DDA 06 04:35:06.8, 39.°11N×29.°03E, h7^{km}±3^{km}, ML1.2, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DEMI	Demirci	0.25	255	i P	Pg	04 35 12.6	+0.8
DEMI				IAML		04 35 16.0	
	comp=E,61nm,0.2s						
DEMI				IAML		04 35 16.0	
	comp=N,29nm,0.3s						
DEMI				i S	Sg	04 35 16.3	+1.0
GDZ	Gediz	0.35	93	i P	Pg	04 35 13.5	-0.2
GDZ				IAML		04 35 18.0	
	comp=E,16nm,0.3s						
GDZ				i S	Sg	04 35 18.7	+0.3
USAK	Uak-Merkez	0.40	181	i P	Pb	04 35 15.6	-0.5
USAK				i S	Sb	04 35 21.4	-1.0

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*ISK **06** 04:35:50.7, 39.°16N×29.°01E, h5^{km}, ML2.1/9*

DDA 06 04:35:51.1, 39.°11N×29.°03E, h7^{km}±3^{km}, ML1.7, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIMA	Simav-Kutahya	0.05	232	PG	Pg	04 35 52.9	+0.2
SIMA				SG	Sg	04 35 54.7	+0.8
SHAP	Saphane-Kutahy	0.17	121	PG	Pg	04 35 55.9	+1.2
SHAP				SG	Sg	04 35 59.1	+2.0
DEMI	Demirci	0.25	254	i P	Pg	04 35 57.0	+0.8
DEMI				IAML		04 36 00.0	
	comp=E,72nm,0.2s						
DEMI				i S	Sg	04 36 00.6	+1.1
DEMI				IAML		04 36 01.0	
	comp=N,132nm,0.2s						
GEDZ	Gediz	0.30	103	PG	Pg	04 35 57.8	+0.7
GEDZ				SG	Sb	04 36 02.9	-1.2
GDZ	Gediz	0.35	94	i P	Pg	04 35 57.8	-0.2
GDZ				IAML		04 36 03.0	
	comp=E,46nm,0.3s						
GDZ				i S	Sg	04 36 03.2	+0.5
USAK	Uak-Merkez	0.40	181	i P	Pb	04 35 60.0	-0.5
TVSB	Tavsanli	0.47	45	PG	Pg	04 35 59.2	-1.1
CAVI	Cavuskoy	1.26	30	PN	Pn	04 36 14.4	-0.7
MDNY	Mudanya-Bursa	1.26	355	PN	Pn	04 36 14.5	-0.6
KCTX	Karacabey (Bur	1.26	336	PN	Pn	04 36 14.1	-1.1
BORA	Eskisehir	1.34	55	PN	Pn	04 36 16.1	-0.3
ARMT	Armutlu	1.46	355	PN	Pn	04 36 17.4	-0.5
YLV	Yalova	1.48	10	PN	Pn	04 36 17.7	-0.5
TRML	Termal-Yalova	1.50	4	PN	Pn	04 36 18.1	-0.3
SRCK	Saricakaya, Es	1.54	53	PN	Pn	04 36 19.3	+0.3

ISK 06 04:36:42.5, 39.°19N×28.°99E, h10^{km}±1^{km}, ML1.5/3, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIMA	Simav-Kutahya	0.11	183	PG	Pg	04 36 45.6	+0.4
SIMA				SG	Sg	04 36 47.7	+0.5
SHAP	Saphane-Kutahy	0.25	133	PG	Pg	04 36 47.9	+0.3
SHAP				SG	Sg	04 36 51.9	+1.0
TVSB	Tavsanli	0.45	55	PG	Pg	04 36 51.7	+0.4
TVSB				SG	Sb	04 36 58.5	-0.9

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*IDC **06** 04:42:40.6±0.8, 45.°48N×153.°60E, h0^{km}, mb3.8/13, mb1 4.0/19, mb1mx3.9/42, mbtmp3.8/19, ML3.4/6, MS2.8/3, Ms1 2.9/3, ms1mx2.5/35, Error ellipse: s-maj=21.4km s-min=15.2km az=147.0*

*NEIC **06** 04:42:43.1±1.3, 45.°6N±0.°1×153.°6E±0.°1, h13^{km}±6^{km}, mb4.3/12, Error ellipse: s-maj=21.5km s-min=11.3km az=151.0*

*JMA **06** 04:42:43.1±0.8, 46.°07N×153.°40E, h30^{km}, M4.4*

*MOS **06** 04:42:44.1±1.5, 45.°24N×153.°62E, h39^{km}, mb4.5/11, Error ellipse: s-maj=10.8km s-min=8.1km az=3.6*

*SKHL **06** 04:42:44.6±0.8, 45.°80N×153.°50E, h26^{km}±6^{km}, mb4.6/6*

ISC 06 04:42:46.1±0.7, 45.°60N±0.°08×153.°54E±0.°07, h35^{km}, n102, σ2.^{s}11/107, mb4.1/24, MS2.5/3, 7C-6D, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	Kuril'sk	4.01	267	ePN	Pn	04 43 44.9	0.0
KUR				pmax	pmax		
	comp=Z,367nm,0.3s						
KUR				pmax	pmax		
	comp=E,30nm,0.2s						
KUR				pmax	pmax		
	comp=N,105nm,0.4s						
KUR	Kuril'sk	4.01	267	eP	Pn	04 43 45.0	0.0
KUR				AMB	AMB	04 43 45.9	
	comp=N,180nm,0.4s						
KUR				eS	Sn	04 44 29.8	-0.8
KUR				A	A	04 44 33.0	
	comp=N,379nm,0.4s						
KUR				A	A	04 44 33.0	
	comp=N,220nm,0.4s						
SKR	Severo-Kuril's	5.37	18	ePN	Pn	04 44 02.5	-1.1
SKR				MLR	MLR		
	comp=Z,300nm,16.0s						
SKR				MLR	MLR		
	comp=Z,200nm,15.0s						
SKR	Severo-Kuril's	5.37	18	eP	Pn	04 44 01.4	-2.2
SKR				AMB	AMB	04 44 04.3	
	comp=Z,30nm,0.5s						
SKR				eS	Sn	04 44 59.1	-5.1
SKR				A	A	04 45 01.1	
	comp=Z,60nm,0.3s						
SKR				A	A	04 45 01.1	
	comp=Z,80nm,0.3s						
GRPR	Tuman	5.75	257	ePN	Pn	04 44 09.2	+0.3
GRPR				pmax	pmax		
	comp=E,37nm,0.3s						
GRPR				pmax	pmax		
	comp=Z,67nm,0.3s						
GRPR				pmax	pmax		
	comp=N,41nm,0.1s						
GRPR	Tuman	5.75	257	eP	Pn	04 44 09.6	+0.7
GRPR				AMB	AMB	04 44 10.0	
	comp=N,67nm,0.3s						
GRPR				eS	Sn	04 45 12.9	-0.7
GRPR				A	A	04 45 18.0	
	comp=N,173nm,0.4s						
GRPR				A	A	04 45 18.0	
	comp=N,82nm,0.4s						
NEM2	Nemuro 2	6.00	251	P	Pn	04 44 09.8	-2.5
NEM2				eS	Sn	04 45 14.7	-5.1
NMR	Nemuro--Hokkai	6.01	251	ePN	Pn	04 44 09.7	-2.7
NMR	Nemuro--Hokkai	6.01	251	eP	Pn	04 44 10.0	-2.4
NMR				eS	Sn	04 45 15.7	-4.3
JRA	Rausu	6.21	258	P	Pn	04 44 15.4	+0.2
PAU	Pauzhetka	6.26	19	eP	Pn	04 44 13.9	-2.0
PAU				AMB	AMB	04 44 20.9	
	comp=N,28nm,0.4s						
PAU				eS	Sn	04 45 21.2	-4.9
PAU				A	A	04 45 23.5	
	comp=N,120nm,0.3s						
PAU				A	A	04 45 23.5	
	comp=N,100nm,0.3s						
JAK	Akkeshi	6.85	251	P	Pn	04 44 22.0	-2.0
JAK				eS	Sn	04 45 35.4	-5.3
JTKR	Abashiri--Toko	7.04	260	P	Pn	04 44 26.8	+0.2
JAR	Ashorobuto	7.36	255	P	Pn	04 44 30.3	-0.6
JMP	Maruseppu	7.41	261	P	Pn	04 44 32.1	+0.4
JOB	Onbets	7.47	252	P	Pn	04 44 30.6	-1.8
YSS	Yuzh-Sakhalins	7.59	284	ePN	Pn	04 44 37.9	+3.8
YSS				MLR	MLR		
	comp=Z,300nm,15.0s						
YSS	Yuzh-Sakhalins	7.59	284	Pn	Pn	04 44 32.9	-1.2
YSS	Yuzh-Sakhalins	7.59	284	eP	Pn	04 44 34.7	+0.6
YSS				AMB	AMB	04 44 38.5	
	comp=Z,20nm,1.0s						
JKK2	Kamakawa 2	7.87	261	P	Pn	04 44 38.7	+0.7
JKA	Kamikawa-asahi	7.91	263	Pn	Pn	04 44 37.9	-0.6
JKA	Kamikawa-asahi	7.91	263	eP	Pn	04 44 38.8	+0.3
ASAJ	Asahikawa	7.91	263	Pn	Pn	04 44 38.8	+0.3
	comp=Z,2.8nm,0.3s,baz=73,slow=5.0,SNR=11						
PEA0B	Petropavlovsk-	7.99	18	PN	Pn	04 44 38.0	-1.6
PEA0B	Petropavlovsk-	7.99	18	Pn	Pn	04 44 38.0	-1.6
PETK	Petropavlovsk-	7.99	18	Pn	Pn	04 44 37.6	-2.0
	comp=Z,1.3nm,0.3s,baz=178,slow=11,SNR=18						
PETK	Petropavlovsk-	7.99	18	PN	Pn	04 44 37.8	-1.8
PETK	Petropavlovsk-	7.99	18		Pn	04 44 37.8	-1.8
MYR	Moyori	8.10	250	eP	Pn	04 44 39.4	-1.7
PET	Petropavlovsk	8.15	22	eP	Pn	04 44 40.7	-1.0
PET				eS	Sn	04 46 07.4	-5.1
PET				A	A	04 46 10.2	
	comp=Z,50nm,0.6s						
PET				A	A	04 46 10.2	
	comp=Z,50nm,0.6s						
JFR	Furan	8.21	257	P	Pn	04 44 42.3	-0.3
ERM	Erimo	8.31	248	PN	Pn	04 44 43.3	-0.7
ERM	Erimo	8.31	248	Pn	Pn	04 44 43.3	-0.7
JBT2	Biratori 2	8.51	255	P	Pn	04 44 45.6	-1.1
JBT2				eS	Sn	04 46 18.3	-3.1
TYV	Tymovskoe	8.97	310	eP	Pn	04 44 53.2	+0.3
JKB	Kayabe	9.78	252	P	Pn	04 45 01.7	-2.4
JKB				eS	Sn	04 46 45.0	-7.5
JTM	Tenmabayashi	10.29	247	eS	Sn	04 46 56.3	-8.9
MA2	Magadan	14.10	354	P	Pn	04 46 02.0	-1.1
MA2	Magadan	14.10	354		Pn	04 46 02.0	-1.1
MJAR	Matsushiro Arr	14.66	237	Pn	Pn	04 46 07.5	-3.3
	comp=Z,0.0nm,0.3s,baz=213,slow=34,SNR=2.1						
MAJO	Matsushiro	14.66	237	⇑eP	Pn	04 46 08.2	-2.6
MAJO				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MAJO	Matsushiro	14.66	237	eP	Pn	04 46 08.2	-2.6
KLR	Kul'dur	15.18	292	Pn	Pn	04 46 16.9	-0.8
	comp=Z,0.1nm,0.3s,baz=86,slow=10,SNR=3.8						
KLR	Kul'dur	15.18	292	⇑eP	P	04 46 22.0	-0.3
KLR	Kul'dur	15.18	292	eP	Pn	04 46 16.7	-0.9
EKMR	Ekimchan	15.33	307	eP	Pn	04 46 18.0	-1.6
EKMR				AMB	AMB	04 46 27.9	
	comp=Z,6.0nm,0.8s						
USA0B	Ussuriysk Arra	15.33	272	⇑eP	Pn	04 46 18.9	-0.7
USRK	Ussuriysk Ar.	15.33	272	Pn	Pn	04 46 18.6	-1.0
	baz=76,slow=12,SNR=4.8						
MDJ	Mudanjiang	16.92	275	Pn	Pn	04 46 38.7	-1.2
SEY	Seymchan	17.38	358	P	Pn	04 46 44.4	-1.2
	comp=Z,0.2nm,0.3s,baz=177,slow=16,SNR=3.6						
BMKR	Bomnak	18.18	309	eP	Pn	04 46 51.4	-4.0
KROS	Kirovskiy	19.13	307	eP	Pn	04 47 07.3	+0.4
KSRS	Korea Array	20.77	256	P	P	04 47 22.8	-1.0
	comp=Z,1.4nm,0.7s,baz=64,slow=10,SNR=5.1						
KSRS				LR	LR	04 55 13.2	
	comp=Z,18nm,21.2s,baz=50,slow=36						
KSRS	Korea Array	20.77	256	eP	P	04 47 24.8	+1.0
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KSRS	Korea Array	20.77	256	eP	P	04 47 24.8	+1.0
KS19	Wonju Array Si	20.78	256	P	P	04 47 21.8	-2.1
YAK	Yakutsk	21.45	329	LR	LR	04 55 44.9	
	comp=Z,20nm,21.0s,baz=48,slow=36						
HIA	Hailar	23.04	291	⇓eP	P	04 47 50.3	+2.3
HIA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
SONM	Songino Array	32.01	291	P	P	04 49 09.6	+0.5
	comp=Z,3.3nm,1.3s,baz=71,slow=7.6,SNR=5.5						
TLY	Talaya	32.98	299	⇓eP	P	04 49 21.7	+4.3
TLY				pmax	pmax		
	comp=Z,3.0nm,1.1s						
IMAR	Indian Mountai	34.53	35	P	P	04 49 30.6	-0.1
COLA	College	36.87	37	⇑eP	P	04 49 51.8	+1.2
COLA				pmax	pmax		
	comp=Z,13nm,1.9s						
COLA	College	36.87	37	P	P	04 49 51.4	+0.8
ILAR	Eielson Array	37.27	38	P	P	04 49 55.4	+1.2
	comp=Z,0.3nm,0.6s,baz=260,slow=8.2,SNR=5.4						
GTA	Gaotai	39.46	281	eP	P	04 50 15.1	+2.2
GTA				pP	sP	04 50 25.3	+1.6
GTA				sP	pwP	04 50 29.4	-2.2
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
INK	Inuvik	42.47	32	P	P	04 50 37.5	+0.3
	comp=Z,0.7nm,0.5s,baz=10.0,slow=10,SNR=3.2						
INK	Inuvik	42.47	32	IAmb	IAmb	04 50 51.0	
	comp=Z,5.1nm,1.2s						
DGZ	Jazzator, Alta	43.43	300	⇓eP	P	04 50 47.9	+2.5
DGZ				pmax	pmax		
	comp=Z,8.0nm,2.0s						
MK31	Makanchi Array	47.74	298	deP	P	04 51 20.8	+1.5
MK31	Makanchi Array	47.74	298	P	P	04 51 19.8	+0.5
MK31				IAmb	IAmb	04 51 21.8	
	comp=Z,2.7nm,0.8s						
MKAR	Makanchi Array	47.74	298	P	P	04 51 20.6	+1.2
	comp=Z,3.0nm,0.8s,baz=69,slow=7.7,SNR=16						
KURK	Kurchatov	48.25	305	ceP	P	04 51 24.8	+1.6
KURK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
KURK	Kurchatov	48.25	305	P	P	04 51 23.4	+0.2
KURK				IAmb	IAmb	04 51 25.4	
	comp=Z,3.4nm,0.8s						
YKA	Yellowknife Ar	51.68	36	P	P	04 51 48.7	-0.3
	comp=Z,0.2nm,0.6s,baz=299,slow=6.3,SNR=3.5						
BRVK	Borovoye	51.86	310	P	P	04 51 51.3	+0.8
BRVK				pmax	pmax		
	comp=Z,17nm,1.9s						
BRVK	Borovoye	51.86	310	P	P	04 51 51.3	+0.8
CMAR	Chiang Mai Arr	52.40	258	LR	LR	05 17 15.1	
	comp=Z,14nm,18.0s,baz=12,slow=40						
AAK	Ala-Archa	54.62	297	⇑eP	P	04 52 13.9	+2.8
AAK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KK31	Karatay Array	56.82	300	P	P	04 52 27.4	+0.6
KK31				pmax	pmax		
	comp=Z,3.0nm,1.2s						
KK31	Karatay Array	56.82	300	P	P	04 52 27.4	+0.6
KK31				IAmb	IAmb	04 52 33.1	
	comp=Z,2.7nm,1.2s						
KKAR	Karatay Array	56.82	300	P	P	04 52 27.2	+0.4
KKAR	Karatay Array	56.82	300	P	P	04 52 27.2	+0.4
ABKAR	Akbulak array	59.39	311	P	P	04 52 45.2	+0.5
NIL	Nilore	60.55	289	P	P	04 52 53.9	+1.0
NIL				pmax	pmax		
	comp=Z,10.0nm,1.1s						
NIL	Nilore	60.55	289	P	P	04 52 53.9	+1.0
NVAR	Mina Array Bea	62.71	62	P	P	04 53 08.0	+0.4
	comp=Z,0.6nm,0.6s,baz=306,slow=7.7,SNR=3.9						
KBL	Kabul	62.77	292	P	P	04 53 08.5	+0.4
KBL				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KBL	Kabul	62.77	292	P	P	04 53 08.5	+0.4
KBL				IAmb	IAmb	04 53 15.0	
	comp=Z,2.2nm,0.7s						
BELG	Belogornoye	63.59	319	⇓eP	P	04 53 16.3	+3.4
BELG				pmax	pmax		
	comp=Z,2.0nm,1.1s						
FINES	FINESS Array B	65.21	335	P	P	04 53 23.6	+0.2
	comp=Z,1.8nm,0.7s,baz=28,slow=8.9,SNR=6.7						
WRA	Warramunga Arr	67.52	200	P	P	04 53 36.9	-1.7
	comp=Z,0.6nm,0.8s,baz=18,slow=6.7,SNR=4.5						
NOA	NORSAR Array B	69.41	341	P	P	04 53 50.6	+0.6
	comp=Z,0.5nm,0.5s,baz=26,slow=6.1,SNR=2.0						
ASAR	Alice Springs	71.21	199	P	P	04 54 00.7	-0.7
	comp=Z,0.7nm,0.8s,baz=14,slow=6.0,SNR=6.2						
KBZ	Khabaz	71.87	314	⇑eP	P	04 54 07.0	+1.8
AKASG	Malin Array Be	72.67	327	P	P	04 54 10.4	+0.6
	comp=Z,2.1nm,0.6s,baz=34,slow=6.4,SNR=8.0						
AKASG	Malin Array Be	72.67	327	eP	P	04 54 13.6	+3.8
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.6s						
AKBB	Malin Array Si	72.67	327	⇓eP	P	04 54 13.2	+3.4
COCO	West Island	76.85	237	i P	P	04 54 34.6	+0.2
TXAR	Lajitas Array	77.80	61	P	P	04 54 39.2	-0.6
	comp=Z,1.3nm,0.9s,baz=306,slow=4.0,SNR=5.8						
ABPO	Ambohimpanom	114.66	268	i PKIKP	PKPdf	05 01 23.1	+0.2
PLCA	Paso Flores	147.79	97	PKPbc	PKPbc	05 02 27.9	+1.2
	comp=Z,1.8nm,1.1s,baz=348,slow=5.8,SNR=3.2						
PLCA	Paso Flores	147.79	97	PKP2	PKPbc	05 02 28.0	+1.2

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*SOME **06** 04:46:24.3, 41.°70N×81.°03E, h5^{km}*

*NNC **06** 04:46:25.1±1.5, 41.°61N×81.°02E, h0^{km}, mb3.6, mpv3.2, Error ellipse: s-maj=10.5km s-min=9.5km az=156.0*

ISC 06 04:46:29.2±3.1, 41.°81N±0.°10×80.°87E±0.°08, h9^{km}±14^{km}, n39, σ1.^{s}20/61, 1C-5D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTMS	Ketmen	1.68	347	eP	Pn	04 46 58.7	-0.2
	31nm,0.2s						
KTMS				eS	Sg	04 47 23.8	+0.5
	46nm,0.6s						
KTMS	Ketmen	1.68	347	Pg	Pn	04 46 58.7	-0.2
	29nm,0.2s						
KTMS				Lg	Lg	04 47 24.1	
	58nm,0.4s						
SHLS	Shalkode	1.70	323	eP	Pn	04 46 57.2	-2.0
	27nm,0.2s						
SHLS				eS	Sn	04 47 21.1	-0.1
	74nm,0.5s						
SHLS	Shalkode	1.70	323	P	Pn	04 46 57.2	-2.0
	27nm,0.2s						
SHLS				S	Sn	04 47 21.1	-0.1
	74nm,0.5s						
PDGK	Podgornoye	1.83	327	Pg	Pb	04 47 02.2	-0.7
	7.2nm,0.4s						
PDGK				Lg	Lg	04 47 29.9	
	14nm,0.5s						
PDGK	Podgornoye	1.83	327	⇓Pn	Pn	04 47 01.1	+0.2
	3.7nm,0.5s						
PDGK				⇓Pg	Pg	04 47 05.0	+0.7
	6.8nm,0.4s						
PDGK				⇓Sn	Sg	04 47 30.2	+2.2
	25nm,0.7s						
UZB	Uzynbulak	1.91	315	eP	Pb	04 47 03.6	-0.7
	18nm,0.5s						
UZB				eS	Sg	04 47 32.0	+1.3
	29nm,0.4s						
UZB	Uzynbulak	1.91	315	Pg	Pb	04 47 03.6	-0.7
	18nm,0.5s						
UZB				Lg	Lg	04 47 32.0	
	29nm,0.4s						
SATY	Saty	2.21	305	eP	Pb	04 47 09.2	-0.2
	4.9nm,0.3s						
SATY				eS	Sg	04 47 41.3	+1.0
	16nm,0.3s						
SATY	Saty	2.21	305	Pg	Pb	04 47 09.8	+0.5
	14nm,0.7s						
KPKS	Kokpek	2.31	317	eP	Pb	04 47 10.8	-0.3
	17nm,0.3s						
KPKS				eS	Sg	04 47 44.2	+0.7
	70nm,0.5s						
KURS	Kuram	2.60	311	eP	Pb	04 47 16.1	+0.1
	5.7nm,0.4s						
KURS				eS	Sg	04 47 53.7	+0.9
	13nm,0.8s						
KURS	Kuram	2.60	311	Pg	Pb	04 47 16.1	+0.1
	5.7nm,0.4s						
KURS				Lg	Lg	04 47 53.7	
	13nm,0.8s						
DJR	Jarkent	2.65	343	eP	Pb	04 47 15.7	-1.1
	2.6nm,0.4s						
DJR				eS	Sg	04 47 52.6	-1.5
	9.7nm,0.5s						
DJR	Jarkent	2.65	343	Pg	Pb	04 47 15.7	-1.1
	2.6nm,0.4s						
DJR				Lg	Lg	04 47 52.6	
	9.7nm,0.5s						
MNBS	Baschi	2.91	322	eP	Pb	04 47 21.2	0.0

	3.9nm,0.3s						
MNBS				*e*S	**Sg**	**04 48 02.4**	**-0.1**
	23nm,0.7s						
MNBS	**Baschi**	**2.91**	**322**	Pg	**Pb**	**04 47 21.2**	**0.0**
	3.9nm,0.3s						
KOTS	**Kotyrbulak**	**3.12**	**298**	*e*P	**Pb**	**04 47 25.8**	**+0.9**
	5.6nm,0.3s						
KOTS				*e*S	**Sg**	**04 48 10.2**	**+0.8**
	20nm,0.5s						
KOTS	**Kotyrbulak**	**3.12**	**298**	Pg	**Pb**	**04 47 25.8**	**+0.9**
	5.6nm,0.3s						
KOTS				Lg	Lg	04 48 10.2	
	20nm,0.5s						
MDOK	**Medeo**	**3.13**	**297**	*e*P	**Pb**	**04 47 24.6**	**-0.5**
	3.4nm,0.6s						
MDOK				*e*S	**Sg**	**04 48 08.0**	**-1.9**
	9.4nm,0.7s						
TNSS	**Tian-Shan**	**3.15**	**294**	*e*P	**Pb**	**04 47 25.1**	**-0.5**
	2.6nm,0.4s						
TNSS				*e*S	**Sg**	**04 48 08.6**	**-1.9**
	4.9nm,0.6s						
ARXS	**Arharly**	**3.28**	**318**	*e*P	**Pb**	**04 47 27.8**	**+0.2**
	3.7nm,0.3s						
ARXS				*e*S	**Sg**	**04 48 13.5**	**-1.0**
	9.9nm,0.6s						
ARXS	**Arharly**	**3.28**	**318**	Pg	**Pb**	**04 47 27.8**	**+0.2**
	3.7nm,0.3s						
IZV	**Izvestkoviy**	**3.38**	**293**	*e*P	**Pb**	**04 47 29.4**	**+0.1**
	1.9nm,0.4s						
IZV				*e*S	**Sg**	**04 48 16.1**	**-1.6**
	12nm,0.6s						
IZV	**Izvestkoviy**	**3.38**	**293**	Pg	**Pb**	**04 47 29.4**	**+0.1**
	1.9nm,0.4s						
IZV				Lg	Lg	04 48 16.1	
	12nm,0.6s						
CHKK	**Chushkaly**	**3.51**	**307**	*e*P	**Pb**	**04 47 32.9**	**+1.4**
	2.4nm,0.4s						
CHKK				*e*S	**Sg**	**04 48 22.2**	**+0.2**
	11nm,0.4s						
CHKK	**Chushkaly**	**3.51**	**307**	Pg	**Pb**	**04 47 32.9**	**+1.4**
	2.4nm,0.4s						
CHKK				Lg	Lg	04 48 22.2	
	11nm,0.4s						
KTBS	**Karatobe**	**3.62**	**303**	*e*P	**Pb**	**04 47 34.1**	**+0.7**
	2.8nm,0.5s						
KTBS				*e*S	**Sg**	**04 48 24.5**	**-1.1**
	12nm,0.4s						
KTBS	**Karatobe**	**3.62**	**303**	Pg	**Pb**	**04 47 34.1**	**+0.7**
	2.8nm,0.5s						
KTBS				Lg	Lg	04 48 24.5	
	12nm,0.4s						
KAPS	**Kapalarasan**	**3.65**	**343**	*e*P	**Pb**	**04 47 34.4**	**+0.6**
	2.3nm,0.7s						
KAPS				*e*S	**Sg**	**04 48 24.7**	**-1.5**
	3.5nm,0.4s						
KAPS	**Kapalarasan**	**3.65**	**343**	Pg	**Pb**	**04 47 34.4**	**+0.6**
	2.3nm,0.7s						
KAPS				Lg	Lg	04 48 24.7	
	3.5nm,0.4s						
KST	**Kastek**	**3.84**	**290**	*e*P	**Pb**	**04 47 38.1**	**+1.1**
	3.4nm,0.3s						
KST				*e*S	**Sg**	**04 48 31.4**	**-1.0**
	6.0nm,0.5s						
KST	**Kastek**	**3.84**	**290**	Pg	**Pb**	**04 47 38.1**	**+1.1**
	3.4nm,0.3s						
KST				Lg	Lg	04 48 31.4	
	6.0nm,0.5s						
DGS	**Degeres**	**4.03**	**293**	*e*P	**Pb**	**04 47 42.3**	**+1.9**
	3.0nm,0.6s						
DGS				*e*S	**Sg**	**04 48 38.3**	**-0.3**
	4.5nm,0.8s						
DGS	**Degeres**	**4.03**	**293**	Pg	**Pb**	**04 47 42.3**	**+1.9**
	3.0nm,0.6s						
DGS				Lg	Lg	04 48 38.3	
	4.5nm,0.8s						
TKM2	**Tokmak 2**	**4.06**	**288**	Pn	**Pn**	**04 47 31.4**	**-0.3**
TKM2				Lg	Lg	04 48 37.8	
KRBS	**Karabastau**	**4.26**	**298**	*e*P	**Pb**	**04 47 44.9**	**+0.6**
	1.2nm,0.5s						
KRBS				*e*S	**Sg**	**04 48 42.6**	**-3.4**
	3.6nm,0.3s						
KRBS	**Karabastau**	**4.26**	**298**	Lg	Lg	04 48 42.6	
	3.6nm,0.3s						
MK31	**Makanchi Array**	**5.09**	**11**	Pn	**Pn**	**04 47 43.9**	**-1.7**
	0.1nm,0.2s,baz=192,slow=15,SNR=13						
MK31				⇑Pg	Pb	04 47 52.1	-6.3
	0.1nm,0.3s,baz=184,slow=13,SNR=5.3						
MK31				⇓Sn	**Sn**	**04 48 47.4**	**+3.0**
	0.8nm,0.5s						
MK31				⇓Lg	Lg	04 49 05.2	
	0.8nm,0.5s						

MAN ***06*** *05:34:33.6, 13.°01N×124.°92E, h1^{km}, mb4.5, ML3.3, MS3.2*
IDC ***06*** *05:34:45.7±33.0, 11.°59N×126.°57E, h0^{km}, mb3.7/3, mb1 3.9/3, mb1mx3.4/34, mbtmp3.7/3, MS3.0/2, Ms1 3.0/2, ms1mx2.4/43, Error ellipse: s-maj=575.8km s-min=231.9km az=157.0*
ISC 06 05:34:34.6±0.8**, 12.°60N**±0.°05×**124.°17E**±0.°06**, h14^{km}, n10, σ1.^{s}60**/12**, mb3.7**/3**, 1C, Samar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNP	**Catarman**	**0.49**	**100**	*e*P	**Pg**	**05 34 44.4**	**0.0**
CNP				*e*S	**Sg**	**05 34 51.8**	**+0.9**
PVCP	**Virac**	**0.99**	**359**	*e*P	**Pb**	**05 34 51.6**	**-2.0**
PVCP				*e*S	**Sb**	**05 35 08.2**	**+1.6**
JCNP	**Jose Panganiba**	**2.21**	**320**	*e*P	**Pg**	**05 35 16.9**	**0.0**
JCNP				*e*S	**Sg**	**05 35 46.2**	**+0.5**
MSLP	**Maasin**	**2.54**	**164**	*e*P	**Pg**	**05 35 21.7**	**-1.6**
MSLP				*e*S	**Sg**	**05 35 59.2**	**+3.0**
LQP	**Lukban**	**2.97**	**301**	⇑*e*P	**Pn**	**05 35 22.8**	**+1.3**
JOW	**Kunigami**	**14.68**	**15**	LR	LR	05 43 30.7	
	comp=Z,21nm,18.7s,baz=130,slow=34						
WRA	**Warramunga Arr**	**33.85**	**163**	P	**P**	**05 41 15.8**	**-1.0**
	0.3nm,0.6s,baz=346,slow=9.4,SNR=5.4						
ASAR	**Alice Springs**	**37.28**	**165**	P	**P**	**05 41 47.0**	**+0.8**
	0.7nm,0.5s,baz=350,slow=7.3,SNR=14						
STKA	**Stephens Creek**	**47.27**	**160**	P	**P**	**05 43 07.0**	**-0.6**
	0.8nm,0.4s,baz=333,slow=6.8,SNR=4.8						
ARU	**Arti**	**66.16**	**326**	LR	LR	06 17 15.9	
	comp=Z,27nm,19.2s,baz=150,slow=37						

IDC ***06*** *06:11:53.5±3.5, 53.°69N×91.°00E, h0^{km}, mb1 3.1/3, mb1mx2.9/55, mbtmp3.1/3, ML2.7/3, Error ellipse: s-maj=33.5km s-min=24.5km az=28.0*
NNC ***06*** *06:11:59.4±2.5, 53.°61N×90.°42E, h0^{km}, mb3.3, mpv3.0, Error ellipse: s-maj=20.0km s-min=14.2km az=101.0, Suspected Mining explosion.*
ISC 06 06:11:57.4±4.2**, 53.°6N**±0.°2×**90.°7E**±0.°2**, h0^{km}, n10, σ1.^{s}31**/9**, 7C-2D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**3.49**	**278**	*i*		06 38 45.2	
	baz=87,slow=323,SNR=7.2						
ZAA0	**Zalesovo Array**	**3.49**	**278**	⇓Pn	**Pn**	**06 12 53.0**	**+0.1**
	1.7nm,0.9s,baz=96,slow=15						
ZAA0				⇓Lg	Lg	06 13 45.3	
	8.1nm,0.8s,baz=93,slow=29						
ZALV	**Zalesovo Beam**	**3.49**	**278**	Pn	**Pn**	**06 12 53.1**	**+0.3**
	1.2nm,0.3s,baz=90,slow=15,SNR=16						
ZALV				Lg	Lg	06 13 47.5	
	1.6nm,0.3s,baz=95,slow=27,SNR=8.1						
KURK	**Kurchatov**	**7.95**	**254**	⇑Pn	**Pn**	**06 13 54.0**	**-0.1**
	4.0nm,1.1s						
KURK				⇑Sn	**Sn**	**06 15 26.1**	**+1.5**
	6.5nm,1.1s						
KURK				⇑Lg	Lg	06 16 07.7	
	19nm,1.1s						
KURBB	**Kurchatov Arra**	**8.04**	**253**	Pn	**Pn**	**06 13 54.0**	**-1.3**
	0.1nm,0.3s,baz=65,slow=14,SNR=6.2						
KURBB				Sn	**Sn**	**06 15 28.1**	**+1.2**
	0.1nm,0.3s,baz=67,slow=25,SNR=9.8						
KURBB				Lg	Lg	06 16 13.9	
	0.0nm,0.3s,baz=66,slow=32,SNR=8.0						
KURBB	**Kurchatov Arra**	**8.04**	**253**	⇑Sn	**Sn**	**06 15 25.0**	**-1.9**
	10nm,0.8s						
KURBB				⇑Lg	Lg	06 16 12.8	
	15nm,0.8s						
TLY	**Talaya**	**8.12**	**98**	Lg	Lg	06 15 58.2	
	0.0nm,0.3s,baz=35,slow=2.6,SNR=9.8						
MK31	**Makanchi Array**	**8.67**	**222**	⇑Pn	**Pn**	**06 14 04.9**	**+0.9**
	0.2nm,0.4s,baz=38,slow=13,SNR=7.8						
MK31				⇑Lg	Lg	06 16 26.9	
	7.1nm,1.0s						
MKAR	**Makanchi Array**	**8.67**	**222**	Pn	**Pn**	**06 14 03.3**	**-0.7**
	0.2nm,0.3s,baz=34,slow=13,SNR=8.4						
MKAR				Lg	Lg	06 16 33.6	
	0.1nm,0.3s,baz=34,slow=30,SNR=2.6						
SONM	**Songino Array**	**11.50**	**114**	Lg	Lg	06 17 53.7	
	baz=302,slow=25,SNR=6.4						

IDC ***06*** *06:17:36.2±3.3, 4.°43S×100.°54E, h0^{km}, mb3.6/4, mb1 3.8/4, mb1mx3.5/48, mbtmp3.6/4, Error ellipse: s-maj=116.1km s-min=23.3km az=54.0*
ISC 06 06:17:37.8±2.9**, 4.°9S**±0.°4×**99.°9E**±0.°6**, h35^{km}, n6, σ0.^{s}58**/6**, mb3.5**/5**, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**23.20**	**358**	P	**P**	**06 22 41.3**	**-0.5**
	1.2nm,0.3s,baz=182,slow=8.6,SNR=5.7						
BATI	**Baumata**	**24.12**	**104**	P	**P**	**06 22 51.3**	**+0.6**
	17nm,0.4s,baz=104,slow=1.9,SNR=3.5						
WRA	**Warramunga Arr**	**36.69**	**117**	P	**P**	**06 24 41.5**	**-0.3**
	0.5nm,0.8s,baz=306,slow=8.5,SNR=3.5						
ASAR	**Alice Springs**	**37.70**	**123**	P	**P**	**06 24 49.9**	**-0.5**
	0.3nm,0.5s,baz=299,slow=8.6,SNR=5.2						
MKAR	**Makanchi Array**	**53.76**	**345**	P	**P**	**06 26 57.0**	**+0.3**
	0.3nm,0.6s,baz=161,slow=7.9,SNR=2.8						
TXAR	**Lajitas Array**	**146.98**	**40**	PKPbc	**PKiKP**	**06 37 20.4**	**+0.2**
	0.3nm,0.7s,baz=300,slow=2.0,SNR=3.5						

IDC 06 06:22:46.6±29.0**, 15.°97S**×**174.°15W, h0^{km}, mb4.1**/4**, mb1 4.3**/4**, mb1mx3.8**/31**, mbtmp4.1**/4**, Error ellipse: s-maj=569.6km s-min=164.1km az=84.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**43.13**	**240**	P	P	06 30 49.7	+0.7
	0.9nm,0.4s,baz=108,slow=13,SNR=3.7						
WRA	**Warramunga Arr**	**49.02**	**257**	P	P	06 31 34.7	-0.9
	0.5nm,0.3s,baz=95,slow=7.1,SNR=19						
ASAR	**Alice Springs**	**49.25**	**252**	P	P	06 31 37.0	-0.4
	4.4nm,0.4s,baz=89,slow=8.0,SNR=91						
FITZ	**Fitzroy Crossi**	**57.39**	**259**	P	P	06 32 38.1	+0.8
	0.5nm,0.3s,baz=86,slow=10,SNR=1.4						

IDC ***06*** *06:30:49.8±3.2, 25.°55S×179.°50E, h519^{km}±47^{km}, mb3.1/5, mb1 3.6/7, mb1mx3.3/22, mbtmp4.2/7, Error ellipse: s-maj=77.0km s-min=19.6km az=169.0*
ISC 06 06:30:48.2±0.8**, 25.°5S**±0.°1×**179.°4E**±0.°2**, h507^{km}, n11, σ1.^{s}54**/12**, mb3.5**/5**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**4.47**	**148**	P	**P**	**06 32 12.1**	**+1.2**
	79nm,0.3s,baz=274,slow=23,SNR=4.1						
URZ	**Urewera**	**12.90**	**188**	P	**P**	**06 33 35.7**	**-0.3**
	4.9nm,0.3s,baz=355,slow=12,SNR=6.1						
URZ				S	**S**	**06 35 53.0**	**-1.4**
	1.7nm,0.3s,baz=66,slow=22,SNR=5.9						
ASAR	**Alice Springs**	**41.25**	**263**	P	**P**	**06 37 50.6**	**+1.8**
	0.9nm,0.8s,baz=89,slow=9.5,SNR=10.0						
WRA	**Warramunga Arr**	**41.76**	**268**	P	**P**	**06 37 54.3**	**+1.4**
	1.4nm,0.8s,baz=103,slow=8.1,SNR=9.4						
NVAR	**Mina Array Bea**	**86.27**	**44**	P	**P**	**06 42 37.0**	**+0.9**
	1.3nm,0.7s,baz=217,slow=8.7,SNR=6.2						
TXAR	**Lajitas Array**	**91.73**	**58**	P	**P**	**06 43 02.7**	**+1.0**
	1.1nm,0.9s,baz=207,slow=6.5,SNR=11						
ILAR	**Eielson Array**	**93.68**	**14**	P	**P**	**06 43 08.3**	**-1.3**
	0.4nm,1.0s,baz=226,slow=6.1,SNR=1.3						
FINES	**FINESS Array B**	**139.74**	**340**	SKPbc	**SKiKP**	**06 52 06.5**	**-1.3**
	4.3nm,1.0s,baz=84,slow=4.3,SNR=5.6						
NB2	**NORSAR Subarra**	**143.53**	**350**	PKP	**PKPdf**	**06 49 22.9**	**-1.4**
	comp=Z,1.5nm,0.6s,baz=17,slow=3.4						
NOA	**NORSAR Array B**	**143.53**	**350**	PKP	**PKPdf**	**06 49 22.9**	**-1.4**
	comp=Z,0.5nm,0.5s,baz=22,slow=3.8,SNR=12						
AKASG	**Malin Array Be**	**145.96**	**326**	PKPbc	**PKPab**	**06 49 30.5**	**-1.8**
	comp=Z,0.6nm,0.3s,baz=44,slow=4.0,SNR=3.7						

IDC 06 06:41:21.5±1.8**, 27.°28S**×**75.°17E, h0^{km}, mb3.8**/5**, mb1 4.0**/5**, mb1mx3.5**/49**, mbtmp3.8**/5**, MS3.4**/2**, Ms1 3.5**/2**, ms1mx2.9**/44**, Error ellipse: s-maj=80.3km s-min=27.5km az=25.0, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOSA	**Boshof**	**43.85**	**256**	LR	LR	07 05 59.9	
	comp=Z,47nm,18.2s,baz=152,slow=34						
CMAR	**Chiang Mai Arr**	**50.97**	**30**	LR	LR	07 09 51.4	
	comp=Z,37nm,18.4s,baz=194,slow=34						
ASAR	**Alice Springs**	**52.74**	**100**	P	P	06 50 38.2	-0.2
	1.1nm,0.6s,baz=250,slow=6.6,SNR=27						
WRA	**Warramunga Arr**	**54.29**	**96**	P	P	06 50 50.1	+0.2
	1.5nm,0.7s,baz=250,slow=7.3,SNR=16						
MKAR	**Makanchi Array**	**74.00**	**5**	P	P	06 52 57.2	-1.5
	0.3nm,0.8s,baz=190,slow=6.9,SNR=3.6						
TORD	**Torodi Ar. Bea**	**81.74**	**289**	P	P	06 53 42.0	-0.5
	0.6nm,0.7s,baz=116,slow=3.4,SNR=2.5						
AKASG	**Malin Array Be**	**87.60**	**333**	P	P	06 54 13.0	+1.8
	0.2nm,0.3s,baz=142,slow=4.8,SNR=5.0						

IDC 06 06:45:11.0±2.6**, 54.°34N**×**86.°05E, h0^{km}, mb1 2.7**/2**, mb1mx2.7**/43**, mbtmp2.7**/2**, ML2.6**/2**, Error ellipse: s-maj=19.8km s-min=11.4km az=51.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.82**	**242**	*i*		06 49 45.9	
	baz=60,slow=337,SNR=2.3						
ZALV	**Zalesovo Beam**	**0.82**	**242**	Pg	Pg	06 45 26.2	-0.5
	0.4nm,0.3s,baz=60,slow=17,SNR=7.7						
ZALV				Lg	Lg	06 45 38.6	
	2.2nm,0.3s,baz=62,slow=30,SNR=22						
KURBB	**Kurchatov Arra**	**5.91**	**234**	Pn	Pn	06 46 40.5	+0.8
	0.1nm,0.3s,baz=50,slow=13,SNR=4.5						
MKAR	**Makanchi Array**	**7.93**	**199**	Pn	Pn	06 47 08.2	+0.8
	0.1nm,0.3s,baz=22,slow=8.0,SNR=8.0						

DNK ***06*** *06:45:29.9±2.7, 81.°13N×1.°92W, h0^{km}±45^{km}, ML3.5*
BER ***06*** *06:45:33.1±4.1, 81.°16N×3.°21W, h15^{km}±62^{km}, ML2.8, ML3.5(DNK), Confirmed Earthquake*
ISC 06 06:45:25.7±1.1**, 81.°38N**±0.°08×**3.°68W**±0.°05**, h12^{km}, n22, σ3.^{s}18**/42**, 3D, North of Svalbard**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBS	**Kingsbay**	**3.63**	**125**	Pn	**Pn**	**06 46 23.7**	**+2.1**
KBS				Sn	**Sn**	**06 47 00.5**	**-3.9**
KBS	**Kingsbay**	**3.63**	**125**	⇓*i*P	**Pn**	**06 46 23.6**	**+2.1**
KBS				*e*S	**Sn**	**06 47 00.5**	**-3.9**
KBS				IAML		06 47 02.4	
	comp=Z,55nm,0.2s						
KBS	**Kingsbay**	**3.63**	**125**	*i* P	**Pn**	**06 46 23.8**	**+2.1**
KBS				*i* S	**Sn**	**06 47 00.4**	**-3.9**
BRBA	**Barentsburg A**	**4.60**	**127**	Pn	**Pn**	**06 46 38.9**	**+3.9**
BRBA				Sn	**Sn**	**06 47 27.6**	**-0.6**
BRBA	**Barentsburg A**	**4.60**	**127**	Pn	**Pn**	**06 46 38.9**	**+3.9**
BRBA				Sn	**Sn**	**06 47 27.6**	**-0.6**
SPA0	**Spitsbergen Ar**	**4.77**	**122**	Pn	**Pn**	**06 46 39.5**	**+2.2**
	baz=333,slow=12						
SPA0				Sn	**Sn**	**06 47 29.8**	**-2.7**
	baz=335,slow=37						
SPA0	**Spitsbergen Ar**	**4.77**	**122**	⇓Pn	**Pn**	**06 46 39.5**	**+2.2**
	baz=333,slow=12						
SPA0				Sn	**Sn**	**06 47 29.8**	**-2.7**
	baz=335,slow=37						
DAG	**Danmarks Havn**	**5.41**	**219**	⇓*e*P	**Pn**	**06 46 50.1**	**+4.0**
DAG				*e*S	**Sn**	**06 47 45.9**	**-2.2**
HSPB	**Hornsund (broa**	**5.65**	**131**	Pn	**Pn**	**06 46 52.3**	**+3.0**
HSPB				Sn	**Sn**	**06 47 53.2**	**-0.8**
HSPB	**Hornsund (broa**	**5.65**	**131**	*e*P	**Pn**	**06 46 52.5**	**+3.1**
HSPB				*e*S	**Sn**	**06 47 51.1**	**-2.9**
HSPB				IAML		06 47 54.2	
	comp=Z,13nm,0.4s						
HSPB	**Hornsund (broa**	**5.65**	**131**	*e*P	**Pn**	**06 46 52.3**	**+3.0**
HSPB				*e*S	**Sn**	**06 47 52.3**	**-1.7**
HOPEN	**Hopen**	**7.26**	**117**	*e*S	**Sn**	**06 48 28.9**	**-4.5**
HOPEN				IAML		06 48 29.4	
	comp=Z,12nm,0.2s						
ZFI2	**Zemlya Franca-**	**7.76**	**68**	*e*P	**Pn**	**06 47 20.3**	**+2.1**
ZFI2				*e*S	**Sn**	**06 48 40.6**	**-5.1**
	comp=Z,18nm,0.8s						
ZFI	**Zemlya Franca-**	**7.76**	**68**	*e*P	**Pn**	**06 47 21.0**	**+2.8**
ZFI				*e*S	**Sn**	**06 48 42.9**	**-2.9**
DBG	**Daneborg**	**7.87**	**214**	Pn	**Pn**	**06 47 23.3**	**+3.6**
DBG				Sn	**Sn**	**06 48 43.9**	**-4.6**
DBG	**Daneborg**	**7.87**	**214**	Pn	**Pn**	**06 47 23.3**	**+3.6**
DBG				Sn	**Sn**	**06 48 43.9**	**-4.6**
DBG				IAML		06 48 57.2	
	comp=Z,17nm,0.4s						
DBG	**Daneborg**	**7.87**	**214**	*e*	**Pn**	**06 47 22.2**	**+2.5**
	baz=15,slow=12						
DBG				*i* P	**Pn**	**06 47 23.2**	**+3.6**
DBG				*i* S	**Sn**	**06 48 45.9**	**-2.5**
DBG				IAML		06 48 57.2	
	comp=Z,17nm,0.4s						
SUMG	**Summit**	**11.49**	**240**	*i* P	**Pn**	**06 48 11.6**	**+2.0**
SUMG				*i* S	**Sn**	**06 50 14.0**	**-3.8**
SUMG	**Summit**	**11.49**	**240**	*i* P	**Pn**	**06 48 11.7**	**+2.0**
SUMG				*i* S	**Sn**	**06 50 14.1**	**-3.8**
SUMG				IAML		06 50 23.8	
	comp=Z,10nm,0.4s						
SUMG	**Summit**	**11.49**	**240**	*i* P	**Pn**	**06 48 11.7**	**+2.0**
SUMG				*i* S	**Sn**	**06 50 14.1**	**-3.8**
SUMG				IAML		06 50 23.8	
	comp=Z,10nm,0.4s						
ARA0	**ARCESS Array S**	**13.66**	**133**	Pn	**Pn**	**06 48 40.5**	**+1.6**
	baz=354,slow=18						
ARA0	**ARCESS Array S**	**13.66**	**133**	Pn	**Pn**	**06 48 40.5**	**+1.6**
	baz=354,slow=18						

IDC 06 06:45:38.2±2.8**, 54.°00N**×**86.°63E, h0^{km}, mb1 2.7**/2**, mb1mx2.6**/43**, mbtmp2.7**/2**, ML2.4**/2**, Error ellipse: s-maj=22.5km s-min=14.1km az=64.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.07**	**268**	*i*		06 51 28.5	
	baz=85,slow=329,SNR=5.3						
ZALV	**Zalesovo Beam**	**1.07**	**268**	Pg	Pg	06 45 58.2	-0.6
	0.4nm,0.3s,baz=84,slow=16,SNR=2.8						
ZALV				Lg	Lg	06 46 13.5	
	1.5nm,0.3s,baz=91,slow=28,SNR=8.4						
ZALV				Rg	Rg	06 46 18.4	
	7.5nm,0.9s,baz=90,slow=26,SNR=18						
KURBB	**Kurchatov Arra**	**6.01**	**239**	Pn	Pn	06 47 08.7	+0.4
	0.1nm,0.3s,baz=50,slow=13,SNR=5.6						
KURBB				Lg	Lg	06 48 51.5	
	0.0nm,0.3s,baz=56,slow=34,SNR=4.0						
MKAR	**Makanchi Array**	**7.72**	**203**	Pn	Pn	06 47 33.1	+1.2
	0.1nm,0.3s,baz=24,slow=13,SNR=4.4						

IDC 06 06:57:17.0±3.0**, 54.°10N**×**86.°53E, h0^{km}, mb1 2.5**/2**, mb1mx2.5**/43**, mbtmp2.5**/2**, ML2.3**/2**, Error ellipse: s-maj=24.1km s-min=14.5km az=56.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.02**	**262**	*i*		07 03 13.2	
	baz=82,slow=331,SNR=4.4						
ZALV	**Zalesovo Beam**	**1.02**	**262**	Pg	Pg	06 57 35.5	-1.1
	0.4nm,0.3s,baz=80,slow=16,SNR=7.0						
ZALV				Lg	Lg	06 57 50.9	
	0.8nm,0.3s,baz=79,slow=24,SNR=9.1						
KURBB	**Kurchatov Arra**	**6.01**	**238**	Pn	Pn	06 58 48.6	+1.6
	0.1nm,0.3s,baz=55,slow=14,SNR=3.1						
MKAR	**Makanchi Array**	**7.79**	**202**	Pn	Pn	06 59 12.4	+0.8
	0.1nm,0.3s,baz=21,slow=11,SNR=4.4						
MKAR				Lg	Lg	07 01 24.2	
	0.0nm,0.3s,baz=26,slow=31,SNR=2.9						

ARE ***06*** *07:06:30±0.8, 16.°1S±0.°2×74.°9W±0.°2, h39^{km}±10^{km}, Error ellipse: s-maj=34.9km s-min=11.7km az=55.0*
NEIC 06 07:06:33.6±1.3**, 16.°2S**±0.°1×**75.°2W**±0.°1**, h41^{km}**±23^{km}**, ML4.2**(ARE)**, Error ellipse: s-maj=23.0km s-min=12.0km az=52.0, Off coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	**Nana**	**4.54**	**339**	Pn	Pn	07 07 39.9	0.0
PSGCX	**Pisagua**	**5.83**	**126**		Pn	07 07 57.2	-0.4
MNMC	**Minye Minye**	**6.02**	**119**	*e*P	Pn	07 07 59.1	-1.3
MNMC	**Minye Minye**	**6.02**	**119**		Pn	07 07 59.6	-0.8
TA01	**Diego Aracena**	**6.38**	**133**		Pn	07 08 04.2	-0.9
PATCX	**Punta Patache**	**6.57**	**135**		Pn	07 08 07.7	-0.1
LPAZ	**La Paz**	**6.74**	**91**		Pn	07 08 11.4	+0.8
PB08	**IPOC Station P**	**6.89**	**125**		Pn	07 08 12.3	-0.2
PB01	**IPOC Station P**	**7.18**	**133**		Pn	07 08 15.8	-0.4
PB07	**IPOC Station P**	**7.38**	**138**		Pn	07 08 19.1	0.0
PB09	**IPOC Station P**	**7.86**	**136**	Pn	Pn	07 08 25.7	+0.2
PB06	**IPOC Station P**	**8.31**	**142**	Pn	Pn	07 08 31.9	+0.2
PB10	**IPOC Station P**	**8.43**	**150**	Pn	Pn	07 08 33.9	+0.8
LVC	**Limon Verde**	**8.64**	**138**	Pn	Pn	07 08 37.1	+0.6
PB15	**IPOC Station P**	**8.75**	**143**	Pn	Pn	07 08 38.6	+0.7
AC02	**Maricunga**	**11.93**	**153**	Pn	Pn	07 09 20.6	-1.1

NNC ***06*** *07:13:53.9±1.0, 50.°02N×78.°76E, h0^{km}, mb3.1, mpv2.8, Error ellipse: s-maj=26.3km s-min=4.7km az=73.0, Suspected Mining explosion.*
IDC ***06*** *07:13:55.1±1.0, 50.°08N×78.°81E, h0^{km}, mb1 2.7/2, mb1mx2.7/33, mbtmp2.7/2, ML2.4/2, Error ellipse: s-maj=12.1km s-min=6.4km az=62.0*
ISC 06 07:13:53.8±2.7**, 49.°98N**±0.°08×**78.°5E**±0.°4**, h0^{km}, n8, σ0.^{s}86**/11**, 7C-1D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**0.64**	**1**	Pg	**Pg**	**07 14 06.0**	**-0.1**
	2.4nm,0.3s,baz=166,slow=17,SNR=78						
KURBB				Lg	Lg	07 14 14.8	
	2.1nm,0.3s,baz=159,slow=34,SNR=20						
KURBB	**Kurchatov Arra**	**0.64**	**1**	⇑P	**Pg**	**07 14 06.0**	**-0.1**
	18nm,0.3s						
KURBB				⇑S	**Sg**	**07 14 15.0**	**+0.5**
	109nm,0.8s						
KURK	**Kurchatov**	**0.74**	**5**	⇑P	**Pg**	**07 14 07.4**	**-0.5**
	8.3nm,0.4s						
KURK				⇑S	**Sg**	**07 14 17.4**	**-0.1**
	10.0nm,0.4s						
MAKZ	**Makanchi**	**3.93**	**143**	⇑Pn	**Pb**	**07 15 02.2**	**-1.7**
	2.9nm,0.6s						
MAKZ				⇑Lg	Lg	07 15 48.1	
	6.6nm,0.5s						
MK31	**Makanchi Array**	**4.07**	**140**	⇑Pn	**Pn**	**07 14 58.2**	**+0.9**
	0.2nm,0.3s,baz=325,slow=11,SNR=12						
MK31				Pg	**Pb**	**07 15 06.6**	**+0.3**
	0.8nm,0.5s,baz=326,slow=13,SNR=8.2						
MK31				⇓Lg	Lg	07 15 58.6	
	4.0nm,0.5s						
MKAR	**Makanchi Array**	**4.07**	**140**	Pn	**Pn**	**07 14 58.1**	**+0.9**
	0.2nm,0.3s,baz=333,slow=11,SNR=12						
MKAR				Pg	**Pb**	**07 15 05.8**	**-0.5**
	0.4nm,0.3s,baz=327,slow=15,SNR=15						
MKAR				Lg	Lg	07 15 59.5	
	0.6nm,0.3s,baz=331,slow=26,SNR=4.5						
ZALV	**Zalesovo Beam**	**5.56**	**42**	Pn	**Pn**	**07 15 18.3**	**+0.5**
	0.8nm,0.3s,baz=231,slow=14,SNR=7.3						
I46RU	**ZALESOVO INFRA**	**5.57**	**42**	*i*		07 46 30.0	
	baz=226,slow=324,SNR=2.3						

WEL ***06*** *07:15:00, 38.°39S×178.°03E, h33^{km}, ML4.0, Mw4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15} Nm; M$_{rr}$-0.49; M$_{\theta\theta}$0.54; M$_{\phi\phi}$-0.05; M$_{r\theta}$0.64; M$_{\theta\phi}$0.64; M$_{\phi r}$1.90; Fault plane solution: M$_0$2.16000×10^{15} NP1: φ$_s$92.00000°, δ19.00000°, λ-21.00000°. NP2: φ$_s$201.00000°, δ83.00000°, λ-108.00000°. Principal axes: T 214.4500, Plg36.0000°, Azm307.0000°; N 3.5200, Plg18.0000°, Azm203.0000°; P -217.9800, Plg49.0000°, Azm92.0000°;*
NOU ***06*** *07:15:20.5, 38.°52S×178.°66E, h3^{km}, MLv4.4, Off E. Coast of N. Island, N.Z.*
IDC ***06*** *07:15:24.1±1.1, 37.°96S×178.°17E, h0^{km}, mb4.3/4, mb1 4.4/4, mb1mx4.1/22, mbtmp4.3/4, MS3.5/4, Ms1 3.5/4, ms1mx3.1/31, Error ellipse: s-maj=31.8km s-min=12.2km az=159.0*
NEIC ***06*** *07:15:25.9, 38.°49S×177.°98E, h25^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$-0.46;*

$M_{\theta\theta}$0.43; $M_{\phi\phi}$0.02; $M_{r\theta}$-0.12; $M_{\theta\phi}$0.85; $M_{\phi r}$-1.10; Fault plane solution: $M_0$1.46000×10^{15} NP1:ϕ_s14.51000°, δ78.64000°,λ-126.05000°. NP2:ϕ_s269.37000°, δ37.56000°,λ-18.85000°. Principal axes: T 1.4703, Plg25.0000°, Azm132.0000°; N -0.0133, Plg35.0000°, Azm23.0000°; P -1.4570, Plg44.0000°, Azm249.0000°;

*NEIC **06** 07:15:27.3±1.2,38.°49S±0.°07×177.°9E±0.°1,h19^{km}±7^{km} Error ellipse: s-maj=16.4km s-min=10.2km az=86.0*

*WEL **06** 07:15:29.1,38.°4S±0.°9×17°8E±°,h29^{km}±1^{km},M4.2/36, ML4.5/36,MLv4.2/36,Error ellipse: s-maj=0.0km s-min=0.0km az=79.3*

ISC 06 07:15:29.2±0.8,**38.°43S**±0.°03×**178.°06E**±0.°04,**h34**^{km}±2^{km}, **n161**,σ**1^{s}26**/169,**mb4.3**/8,**MS3.5**/3,**Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNGZ	Carnagh Statio	0.13	116	P	Pb	07 15 35.9	+0.6
TKGZ	Te Karaka	0.17	266	P	Pn	07 15 34.8	+1.3
TKGZ				S	Sb	07 15 39.7	-0.1
TWGZ	Tauwhareparae	0.26	346	P	Pn	07 15 35.7	-0.5
TWGZ				S	Sn	07 15 41.2	+1.4
RIGZ	Rimuhau	0.36	220	P	Pb	07 15 38.6	+0.7
RIGZ				S	Sb	07 15 46.5	+2.6
PUZ	Puketiti	0.39	24	P	Pb	07 15 37.6	-0.6
PUZ				S	Sb	07 15 45.1	+0.8
MWZ	Matawai	0.43	282	P	Pb	07 15 37.8	-0.9
MWZ				S	Sb	07 15 44.6	-0.8
RAGZ	Rawiri	0.51	262	P	Pb	07 15 39.8	-0.2
RAGZ				S	Sn	07 15 48.2	+0.4
PRGZ	Paritu Road	0.51	196	P	Pn	07 15 40.9	+0.8
PKGZ	Pakihiroa	0.54	1	P	Pn	07 15 39.9	-0.6
PKGZ				S	Sb	07 15 48.3	+0.1
RUGZ	Raukumara Rang	0.55	327	P	Pn	07 15 39.3	-1.4
RUGZ				S	Sb	07 15 47.0	-1.6
KNZ	Kokohu	0.67	207	P	Pn	07 15 42.5	+0.4
SNGZ	Shannon Statio	0.67	238	P	Pn	07 15 42.7	+0.5
SNGZ				S	Sb	07 15 53.7	+2.1
WMGZ	Waiomatatini S	0.67	25	P	Pn	07 15 42.4	+0.2
WMGZ				S	Sb	07 15 53.7	+2.1
HAZ	Te Kaha	0.70	342	P	Pn	07 15 41.7	-1.0
MHGZ	Mahia Peninsul	0.73	189	P	Pn	07 15 44.0	+0.8
URZ	Urewera	0.77	282	Pg	Pn	07 15 43.1	-0.5
	975nm,0.3s,baz=195,slow=2.8,SNR=2766						
URZ				Lg	Lg	07 15 53.0	
	874nm,0.3s,baz=112,slow=8.5,SNR=13						
URZ				LR	LR	07 16 11.8	
	comp=Z,1μm,19.4s,baz=32,slow=54						
URZ	Urewera	0.77	282	P	Pn	07 15 43.1	-0.5
RTZ	Ruatahuna	0.87	257	P	Pn	07 15 45.3	+0.3
MXZ	Matakaoa Point	0.89	13	P	Pn	07 15 45.4	+0.2
RAHZ	Arahi	0.91	237	P	Pn	07 15 45.9	+0.4
WHHZ	Waihua	0.92	225	P	Pn	07 15 46.4	+0.8
MUGZ	Murupara	1.01	267	P	Pn	07 15 47.4	+0.4
WHRZ	Whale Island	1.03	303	P	Pn	07 15 47.4	+0.2
MTHZ	Maungataniwha	1.04	246	P	Pn	07 15 47.9	+0.4
EDRZ	Edgecumbe	1.09	287	P	Pn	07 15 48.2	+0.2
WIZ	White Island	1.13	322	P	Pn	07 15 48.2	-0.4
WSRZ	White Island S	1.14	322	P	Pn	07 15 49.1	+0.3
MARZ	Manawahe	1.18	292	P	Pn	07 15 49.3	+0.1
ARHZ	Aropaoanui	1.18	225	P	Pn	07 15 49.8	+0.5
NMHZ	Naumai	1.19	235	P	Pn	07 15 50.0	+0.5
RRRZ	Republican Roa	1.22	274	P	Pn	07 15 50.2	+0.4
TARZ	Mount Tarawera	1.24	278	P	Pn	07 15 50.6	+0.4
MKRZ	Makatiti	1.29	282	P	Pn	07 15 52.3	+1.5
PRRZ	Plateau Road	1.31	266	P	Pn	07 15 51.5	+0.4
OPRZ	Ohinepanea	1.32	296	P	Pn	07 15 50.6	-0.6
MRHZ	Matea Rd	1.35	252	P	Pn	07 15 52.2	+0.5
ALRZ	Allen Road	1.35	264	P	Pn	07 15 52.3	+0.6
HLRZ	Highlands Stat	1.35	277	P	Pn	07 15 52.1	+0.4
OMRZ	Omania	1.37	283	P	Pn	07 15 51.9	0.0
LIRZ	Lichensteins R	1.39	287	P	Pn	07 15 52.1	0.0
HRRZ	Handcock Road	1.40	271	P	Pn	07 15 52.6	+0.3
BKZ	Black Stump Fm	1.43	238		Pn	07 15 53.4	+0.6
BKZ	Black Stump Fm	1.43	238	P	Pn	07 15 53.2	+0.4
HSRZ	Hossack Road	1.43	274	P	Pn	07 15 53.2	+0.5
CKHZ	Cape Kidnapper	1.45	212	P	Pn	07 15 52.8	-0.1
MCHZ	McNeill Hill	1.47	226	P	Pn	07 15 53.8	+0.5
KARZ	Kaharoa	1.49	285	P	Pn	07 15 53.3	-0.2
UTU	Utuhina	1.49	279	P	Pn	07 15 54.4	+0.9
WPRZ	Whakapapatarin	1.49	266	P	Pn	07 15 54.4	+0.8
NGRZ	Ngongotaha	1.51	282	P	Pn	07 15 54.6	+0.8
GRRZ	Galatos Road	1.53	272	P	Pn	07 15 54.7	+0.5
TGRZ	Tauranga	1.58	296	P	Pn	07 15 54.2	-0.6
HATZ	Hinemaiaia	1.61	253	P	Pn	07 15 55.9	+0.7
KWHZ	Kaweka Forest	1.62	232	P	Pn	07 15 55.5	+0.1
KAHZ	Kahuranaki	1.65	214	P	Pn	07 15 55.5	-0.2
WHTZ	Whakaora	1.67	261	P	Pn	07 15 57.1	+1.1
KUTZ	Kaahu Road	1.76	267	P	Pn	07 15 57.7	+0.4
KMRZ	Kaimai	1.77	289	P	Pn	07 15 56.9	-0.5
KRHZ	Kereru	1.79	227	P	Pn	07 15 57.4	-0.3
RITZ	Rihia Road	1.81	252	P	Pn	07 15 58.6	+0.7
MYRZ	Mayor Island	1.84	308	P	Pn	07 15 57.8	-0.5
RATZ	Rangitukua	1.84	256	P	Pn	07 15 59.4	+0.9
WATZ	Wairara	1.84	261	P	Pn	07 15 59.0	+0.5
PXZ	Pawanui	1.85	210	P	Pn	07 15 57.6	-0.9
BHHZ	Black Hill Sta	1.88	235	P	Pn	07 15 59.1	+0.1
KATZ	Kakaramea	1.93	253	P	Pn	07 16 00.5	+0.8
TMVZ	Te Maari	1.97	249	P	Pn	07 16 00.6	+0.4
ETVZ	East Tongariro	1.97	248	P	Pn	07 16 00.6	+0.4
KRVZ	Karewarewa	2.00	250	P	Pn	07 16 01.1	+0.4
OTVZ	Oturere	2.01	248	P	Pn	07 16 01.5	+0.7
MOVZ	Moawhango	2.05	241	P	Pn	07 16 01.7	+0.5
WTVZ	West Tongariro	2.05	250	P	Pn	07 16 01.9	+0.6
TUVZ	Tukino	2.06	245	P	Pn	07 16 02.5	+1.0
NGZ	Ngauruhoe	2.06	248	P	Pn	07 16 02.1	+0.6
WPHZ	Waipukurau	2.06	217	P	Pn	07 16 00.8	-0.6
PNHZ	Pukenui	2.07	224	P	Pn	07 16 00.8	-0.8
WHVZ	Whangaehu Hut	2.11	245	P	Pn	07 16 03.4	+1.1
WNVZ	Wahianoa	2.12	244	P	Pn	07 16 02.9	+0.5
FWVZ	Far West T-bar	2.12	246	P	Pn	07 16 03.4	+0.9
TOZ	Tahuroa Road	2.13	288	P	Pn	07 16 02.0	-0.3
PRHZ	Porangahau	2.14	211	P	Pn	07 16 01.1	-1.4
TWVZ	Taurewa	2.15	252	P	Pn	07 16 03.3	+0.6
MTVZ	Mangateitei	2.23	244	P	Pn	07 16 04.9	+1.1
PKVZ	Pokaka	2.29	247	P	Pn	07 16 06.0	+1.4
TSZ	Takapari Road	2.30	224	P	Pn	07 16 03.6	-1.1
DVHZ	Dannevirke	2.38	218	P	Pn	07 16 04.6	-1.1
KUZ	Kuaotunu	2.50	311	P	Pn	07 16 06.2	-1.2
HIZ	Hauiti	2.52	267		Pn	07 16 08.9	+1.2
HIZ	Hauiti	2.52	267	P	Pn	07 16 08.8	+1.2
POWZ	Post Office Ro	2.65	221	P	Pn	07 16 08.1	-1.3
MKAZ	Moumakai	2.65	299	P	Pn	07 16 08.9	-0.6
MKAZ				P	Pn	07 16 08.9	-0.6
BFZ	Birch Farm	2.65	211		Pn	07 16 08.6	-0.9
BFZ				Sn	Sn	07 16 38.9	-1.6
BFZ	Birch Farm	2.65	211	P	Pn	07 16 07.4	-2.1
PRWZ	Pori Road	2.67	217	P	Pn	07 16 09.0	-0.8
VRZ	Vera Road	2.67	254	P	Pn	07 16 11.4	+1.7
WAZ	Wanganui	2.73	240	P	Pn	07 16 12.0	+1.3
WIAZ	Waiheke Island	2.84	304	P	Pn	07 16 11.7	-0.3
TIWZ	Tintock	2.88	215	P	Pn	07 16 11.3	-1.5
ETAZ	East Tamaki Re	2.89	300	P	Pn	07 16 12.7	0.0
MRZ	Mangatainoka R	2.94	220	P	Pn	07 16 11.5	-2.0
MHEZ	Mangahewa	2.99	256	P	Pn	07 16 17.5	+3.3
GRZ	Great Barrier	3.00	316	P	Pn	07 16 13.8	-0.5
MBAZ	Motutapu North	3.01	302	P	Pn	07 16 14.4	0.0
AWAZ	Awhitu Peninsu	3.03	296	P	Pn	07 16 15.1	+0.4
EPAZ	Eden Park BICE	3.05	299	P	Pn	07 16 15.4	+0.4
HBAZ	Herne Bay Bore	3.08	300	P	Pn	07 16 15.6	+0.3
DREZ	Durham Road	3.11	255	P	Pn	07 16 14.2	-1.6
WTAZ	Waiatarua	3.14	297	P	Pn	07 16 16.3	+0.1
HOWZ	Holdsworth Sta	3.15	218	P	Pn	07 16 14.3	-2.1
TMWZ	Te Maipa	3.15	211	P	Pn	07 16 14.5	-1.9
NEZ	North Egmont	3.21	254	P	Pn	07 16 19.2	+2.0
RVAZ	Riverhead Bore	3.22	300	P	Pn	07 16 17.6	+0.3
OGWZ	Otaki Gorge	3.27	222	P	Pn	07 16 16.0	-1.9
PKE	Pukeiti	3.27	255	P	Pn	07 16 20.2	+2.1
KHEZ	Kahui Hut	3.27	253	P	Pn	07 16 20.0	+1.9
NBEZ	Newall Road No	3.38	254	P	Pn	07 16 22.0	+2.5
KIW	Kapiti Island	3.44	224	P	Pn	07 16 18.1	-2.2
PAWZ	Paruwai Farm	3.58	214	P	Pn	07 16 20.1	-2.2
MSWZ	Moikau Station	3.69	215	Pn	Pn	07 16 23.1	-0.6
PLWZ	Palliser	3.81	214	Pn	Pn	07 16 23.1	-2.3
BHW	Baring Head	3.86	218	Pn	Pn	07 16 23.4	-2.7
SNZO	South Karori	3.87	221	Pn	Pn	07 16 24.1	-2.1
WCZ	Waipu Caves	3.87	309	P	Pn	07 16 26.2	0.0
DUWZ	D'Urville Isla	3.98	232	P	Pn	07 16 26.0	-1.8
TUWZ	Tuamarina	4.36	225	Pn	Pn	07 16 29.8	-3.2
NNZ	Nelson	4.55	231	Pn	Pn	07 16 32.9	-2.7
OUZ	Omahuta	4.80	310	Pn	Pn	07 16 38.7	-0.4
OUZ	Omahuta	4.80	310	P	Pn	07 16 39.4	+0.3
QRZ	Quartz Range	4.90	239	Pn	Pn	07 16 37.4	-2.9
THZ	Tophouse	5.17	228	Pn	Pn	07 16 41.3	-2.8
KHZ	Kahutara	5.27	219	Pn	Pn	07 16 42.9	-2.6
LTZ	Lake Taylor	6.19	224	Pn	Pn	07 16 56.2	-2.0
AMCZ	Amberley	6.27	219	P	Pn	07 16 59.5	+0.3
CTZ	Chatham Island	6.65	145	P	Pn	07 17 04.8	+0.4
RPZ	Rata Peaks	7.48	223	Pn	Pn	07 17 12.9	-2.9
	1.1nm,0.3s,baz=124,slow=3.6,SNR=1.4						
RPZ				Sn	Sn	07 18 29.4	-10
	15nm,0.3s,baz=0.6,slow=21,SNR=32						
ARCZ	Arundel	7.57	221	P	Pn	07 17 15.0	-2.0
LBZ	Lake Benmore	8.39	222	Pn	Pn	07 17 25.6	-2.8
ODZ	Otahua Downs	8.62	218	Pn	Pn	07 17 28.5	-3.0
JCZ	Jackson Bay	8.97	228	P	Pn	07 17 35.8	-0.6
DZM	Mont Dzumac	19.11	325	LR	LR	07 25 17.4	
	comp=Z,89nm,20.5s,baz=164,slow=32						
STKA	Stephens Creek	30.38	271	P	P	07 21 38.3	+0.3
	3.1nm,0.8s,baz=116,slow=9.1,SNR=10						
STKA				LR	LR	07 32 20.0	
	comp=Z,94nm,20.0s,baz=62,slow=33						
BBOO	Buckleboo	34.38	266	P	P	07 22 12.5	-0.5
BBOO				IAmb	IAmb	07 22 20.7	
	comp=Z,9.1nm,1.1s						
COEN	Coen	39.30	299	P	P	07 22 54.8	-0.2
COEN				IAmb	IAmb	07 22 55.5	
	comp=Z,6.0nm,1.1s						
PMG	Port Moresby	40.05	308	LR	LR	07 38 01.4	
	comp=Z,106nm,18.1s,baz=140,slow=34						
AS31	Alice Springs	40.21	278	P	P	07 23 01.6	-1.0
ASAR	Alice Springs	40.21	278	P	P	07 23 01.8	-0.8
	comp=Z,4.1nm,0.6s,baz=129,slow=8.8,SNR=91						
ASAR	Alice Springs	40.21	278	P	P	07 23 01.6	-1.0
FORT	Forrest	41.44	265	P	P	07 23 11.8	-0.8
WR0	Warramunga Arr	41.77	284	P	P	07 23 14.4	-1.1
WB2	Warramunga Arr	41.93	283	P	P	07 23 15.3	-1.4
WB2				IAmb	IAmb	07 23 16.9	
	comp=Z,16nm,1.5s						
WRA	Warramunga Arr	41.94	283	P	P	07 23 15.3	-1.5
	comp=Z,3.0nm,0.8s,baz=127,slow=6.9,SNR=31						
WRA	Warramunga Arr	41.94	283	P	P	07 23 15.9	-0.9
WB0	Warramunga Arr	42.00	284	P	P	07 23 16.1	-1.2
WB0				IAmb	IAmb	07 23 16.7	
	comp=Z,5.9nm,1.0s						
FITZ	Fitzroy Crossi	49.71	279	LR	LR	07 44 31.8	
	comp=Z,50nm,18.2s,baz=117,slow=35						
FITZ	Fitzroy Crossi	49.71	279	P	P	07 24 17.1	-1.0
QSPA	South Pole Qui	51.70	180	P	P	07 24 35.6	+2.9
	comp=Z,1.4nm,0.6s,baz=50,slow=1.4,SNR=14						
QSPA	South Pole Qui	51.70	180	P	P	07 24 35.1	+2.5
MKAR	Makanchi Array	120.26	308	PKP	PKPdf	07 34 15.3	-0.9
	comp=Z,0.1nm,0.4s,baz=105,slow=3.4,SNR=1.9						
KURBB	Kurchatov Arra	124.05	311	PKP	PKPdf	07 34 22.9	-0.3
	comp=Z,0.2nm,0.3s,baz=119,slow=1.7,SNR=1.9						
ARCES	ARCESS Array B	145.54	343	PKPbc	PKPdf	07 35 02.8	+0.2
	comp=Z,4.0nm,0.9s,baz=27,slow=3.3,SNR=4.6						
FINES	FINESS Array B	151.16	332	PKPbc	PKPbc	07 35 18.9	+1.0
	comp=Z,2.9nm,0.8s,baz=64,slow=3.2,SNR=1.9						

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*IDC **06** 07:34:09.0±1.6,9.°34N×77.°07W,h0^{km},mb3.6/2,mb1 3.8/3, mb1mx3.4/30,mbtmp3.6/3,ML2.3/1,Error ellipse: s-maj=97.8km s-min=25.6km az=66.0*

*RSNC **06** 07:34:14.3±1.0,9.°23N×77.°00W,h24^{km}±6^{km},ML3.4, Mw3.4*

ISC 06 07:34:13.9±1.5,**9.°28N**±0.°06×**77.°01W**±0.°05,**h36**^{km}±2^{km}, **n30**,σ**1^{s}33**/44,**6C-2D,Near north coast of Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAPC	Capurgana	0.72	208	⇓*i*P	Pn	07 34 26.7	-0.9
CAPC				*e*S	Sn	07 34 36.0	-1.4
CAPC				*i*		07 34 36.6	
	comp=Z,2μm,0.2s						
MOTC	Monteria, Cord	1.42	110	⇑*i*P	Pn	07 34 38.0	+0.9
MOTC				*e*S	Sn	07 34 56.1	+1.5
MOTC				*i*		07 34 58.2	
	comp=Z,172nm,0.6s						
UREC	San Jos de Ur	2.11	136	⇑*e*P	Pn	07 34 46.7	+0.1
UREC				*e*S	Sn	07 35 11.9	+0.3
UREC				*i*		07 35 13.8	
	comp=Z,188nm,0.2s						
PTAC	Punta Ardita,	2.26	201	⇑*e*P	Pn	07 34 49.5	+0.8
PTAC				*e*S	Sn	07 35 15.6	+0.2
DBBC	Dabeiba	2.38	161	*e*P	Pn	07 34 50.0	-0.5
DBBC				*i*		07 35 20.2	
	comp=Z,658nm,0.6s						
ZARC	Zaragoza, Cauc	2.77	130	⇑*i*P	Pn	07 34 56.1	+0.3
ZARC				*e*S	Sn	07 35 26.4	-1.6
ZARC				*i*		07 35 29.8	
	comp=Z,190nm,0.6s						
ARGC	Ariguani, Magd	2.79	78	⇓*e*P	Pn	07 34 57.6	+1.6
ARGC				*e*S	Sn	07 35 28.4	+0.1
ARGC				*i*		07 35 28.6	
	comp=Z,135nm,0.3s						
BCIP	Isla Barro Col	2.79	268	*e*P	Pn	07 34 56.5	+0.5
BCIP				*i*		07 35 32.5	
	comp=Z,82nm,0.5s						
SMLC	San Martn de	2.94	99	*e*P	Pn	07 34 58.0	-0.1
SMLC				*e*S	Sn	07 35 30.1	-2.1
SMLC				*i*		07 35 32.9	
	comp=Z,178nm,0.4s						
SOLC	Bahia Solano	3.06	187	*e*P	Pn	07 35 00.7	+1.0
SOLC				*i*		07 35 39.7	
	comp=Z,59nm,0.3s						
HELC	Santa Helena	3.40	154	⇑*e*P	Pn	07 35 04.3	-0.5
HELC				*e*S	Sn	07 35 41.9	-2.1
PTBC	PUERTO BERRIO,	3.71	137	*e*P	Pn	07 35 08.5	-0.3
PTBC				*e*S	Sn	07 35 50.4	-0.9
PTBC				*i*		07 35 52.4	
	comp=Z,68nm,0.5s						
OCAC	Ocana	3.79	106	*e*P	Pn	07 35 10.5	+0.5
OCAC				*e*S	Sn	07 35 51.8	-1.6
OCAC				*i*		07 35 56.1	
	comp=Z,189nm,0.4s						
BRRC	Barranca, Sant	3.91	123	⇑*e*P	Pn	07 35 11.9	+0.4
NORC	Norcasia	4.26	150	*e*P	Pn	07 35 15.4	-0.9
NORC				*i*		07 36 07.6	
	comp=Z,35nm,0.5s						
GUY2C	Guyana, Caldas	4.35	158	*e*P	Pn	07 35 19.2	+1.4
PLMC	San Jos del P	4.40	171	*e*P	Pn	07 35 18.5	+0.2
BARC	Barichara	4.64	125	*e*P	Pn	07 35 21.9	+0.3
BARC				*e*S	Sn	07 36 14.4	+0.1
BARC				*i*		07 36 21.4	
	comp=Z,69nm,0.4s						
PAMC	Pamplona, Colo	4.68	114	*e*P	Pn	07 35 22.9	+0.4
TOLC	Tolima	4.96	160	*e*P	Pn	07 35 30.4	+4.2
RUSC	La Rusia	5.14	131	*e*P	Pn	07 35 28.4	-0.4
ROSC	El Rosal	5.15	149	Pn	Pn	07 35 30.4	+1.5
	comp=Z,2.1nm,0.3s,baz=142,slow=22,SNR=2.7						
ROSC				Sn	Sn	07 36 30.1	+2.8
	comp=Z,4.1nm,0.3s,baz=337,slow=22,SNR=7.9						
URIC	Uribia, Colomb	5.49	64	*e*P	Pn	07 35 33.9	+0.8
URIC				*e*S	Sn	07 36 32.5	-2.6
URIC				*i*		07 36 37.5	
	comp=Z,28nm,0.3s						
CHIC	Chingaza	5.65	145	*e*P	Pn	07 35 36.0	+0.2
CHIC				*e*S	Sn	07 36 37.6	-2.0
CHIC				*i*		07 36 45.1	
	comp=Z,16nm,0.4s						
SDV	Santo Domingo	6.31	93	*e*P	Pn	07 35 44.7	+0.1
PTGC	Puerto Gaitan,	6.99	136	*e*P	Pn	07 35 52.8	-1.0
PLCA	Paso Flores	50.12	174	P	P	07 43 05.8	+0.3
	comp=Z,1.0nm,0.7s,baz=7.1,slow=8.1,SNR=5.5						
YKA	Yellowknife Ar	59.67	341	P	P	07 44 14.1	-0.2
	comp=Z,0.2nm,0.4s,baz=129,slow=7.7,SNR=4.3						
ASAR	Alice Springs	147.18	240	PKPbc	PKPbc	07 53 53.1	-1.0
	comp=Z,0.3nm,0.7s,baz=131,slow=3.4,SNR=2.7						
WRA	Warramunga Arr	147.93	247	PKPbc	PKiKP	07 53 58.2	0.0
	comp=Z,0.5nm,1.0s,baz=101,slow=3.6,SNR=4.8						

IDC 06 07:55:06.0±3.3,**53.°59N**×**87.°87E**,**h0**^{km},**mb1 3.0**/2, **mb1mx2.9**/55,**mbtmp3.0**/2,**ML2.7**/2,**Error ellipse: s-maj=33.2km s-min=18.1km az=53.0,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.84	282	*i*		08 05 41.6	
	baz=98,slow=324,SNR=1.7						
ZALV	Zalesovo Beam	1.84	282	Pn	Pn	07 55 38.7	-0.2
	1.7nm,0.3s,baz=104,slow=15,SNR=19						
ZALV				Lg	Lg	07 56 04.8	
	1.4nm,0.3s,baz=102,slow=27,SNR=14						
KURBB	Kurchatov Arra	6.47	246	Pn	Pn	07 56 42.8	+0.3
	0.2nm,0.3s,baz=69,slow=14,SNR=4.5						
MKAR	Makanchi Array	7.69	210	Pn	Pn	07 57 00.5	+1.3
	0.1nm,0.3s,baz=28,slow=12,SNR=5.8						

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*MAN **06** 08:03:15.4,9.°65N×126.°36E,h22^{km},mb5.8,ML4.8,MS5.2 MAN INTENSITY III - CARRASCAL.*

*BJI **06** 08:03:16.7±0.0,9.°50N×126.°36E,h76^{km},mB5.1/59, mb5.1/77,Ms5.1/80,Ms7 4.9/77*

*GCMT **06** 08:03:17.4±0.1,9.°61N±0.°01×126.°52E±0.°01,h29^{km}, MW5.4/130,Moment Tensor Solution. s123,c196; s130,c223; Duration: 1^{s}2 Moment tensor: Scale 10^{17} Nm; M_{rr}1.15±.02; $M_{\theta\theta}$0.22±.02; $M_{\phi\phi}$-1.36±.02; $M_{r\theta}$0.01±.03; $M_{\theta\phi}$0.14±.01; $M_{\phi r}$1.02±.04; Best double couple: $M_0$1.62300×10^{17} NP1:ϕ_s170.00000°,δ26.00000°, λ82.00000°. NP2:ϕ_s359.00000°,δ65.00000°,λ94.00000°. Principal axes: T 1.5150, Plg70.0000°, Azm277.0000°; N 0.2230, Plg4.0000°, Azm177.0000°; P -1.7310, Plg19.0000°, Azm86.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*MOS **06** 08:03:17.6±1.1,9.°57N×126.°24E,h77^{km},mb5.3/58, MS4.8/10 Error ellipse: s-maj=7.7km s-min=3.8km az=113.1*

*DJA **06** 08:03:17.0±0.5,10°N±4°×12°6E±°,h55^{km}±5^{km},M5.1/48, mb5.1/48,mB5.5/34,MLv6.0/4,Mw(mB)5.0/34, MwMwp5.1/13,Mwp5.4/13*

*IDC **06** 08:03:18.6±1.6,9.°57N×126.°25E,h65^{km}±14^{km},mb4.7/44, mb1 4.8/51,mb1mx4.7/58,mbtmp5.0/51,MS4.6/38, Ms1 4.6/38,ms1mx4.6/45,Error ellipse: s-maj=11.4km s-min=6.9km az=79.0*

*NEIC **06** 08:03:19.4±1.7,9.°55N±0.°07×126.°26E±0.°09,h77^{km}±6^{km}, mb5.2/96,Error ellipse: s-maj=13.5km s-min=9.9km az=82.0*

*KLM **06** 08:03:22,9.°53N×126.°44E,h97^{km},mb5.3*

ISC 06 08:03:17.7±0.4,**9.°59N**±0.°03×**126.°37E**±0.°04,**h58**^{km}±3^{km}, **h59**^{km}**:pP-P,n622**,σ**1^{s}69**/668,**mb5.1**/193,**MS4.7**/64, **24C-9D,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLSP	General Luna,	0.31	309	*e*P	Pn	08 03 22.5	-5.2
GLSP				*e*S	Sn	08 03 30.2	-4.7
BUTP	Butuan	0.96	230	*e*P	Pn	08 03 31.9	-3.3
BUTP				*e*S	Sn	08 03 46.6	-1.5
MSLP	Maasin	1.59	290	*e*P	Pn	08 03 43.1	-0.5
MSLP				*e*S	Sn	08 04 07.4	+4.4
CGP	Cagayan de Oro	2.00	236	⇓*i*P	Pn	08 03 48.8	-0.4
CGP				*i* S	Sn	08 04 16.5	+3.3
BUKP	Musuan	2.13	217	*e*P	Pn	08 03 50.1	-1.0
BUKP				*e*S	Sn	08 04 20.6	+4.2
BESP	Borongan	2.20	335	*e*P	Pn	08 03 49.2	-2.7
LLP	Lapu-Lapu	2.48	287	⇓*e*P	Pn	08 03 56.8	+1.1
LLP				*e*S	Sn	08 04 29.7	+4.8
DAV	Davao City (W)	2.62	197	P	Pn	08 03 59.3	+1.7
	299nm,0.3s,baz=74,slow=4.6,SNR=13						
DAV				S	Sn	08 04 31.8	+3.5
	309nm,0.3s,baz=285,slow=24,SNR=6.2						
DAV				LR	LR	08 04 38.8	
	comp=Z,7μm,19.0s,baz=327,slow=31						
DAV	Davao City (W)	2.62	197		Pn	08 03 58.4	+0.7
DAV				Sn	Sn	08 04 30.4	+2.1
DAV	Davao City (W)	2.62	197	⇓*e*P	Pn	08 04 02.7	+5.0
MATI	Mati	2.63	182	*e*P	Pn	08 03 55.8	-1.9
MATI				*e*S	Sn	08 04 32.5	+4.1
CNP	Catarman	3.35	330	*e*P	Pn	08 04 07.2	-0.5
CNP				*e*S	Sn	08 04 55.3	+9.0
DDMP	Don Marcelino,	3.52	191	*e*P	Pn	08 04 11.1	+1.1
DDMP				*e*S	Sn	08 04 53.5	+3.0
SKMP	Bagumbayan, Su	3.55	211	*e*P	Pn	08 04 08.4	-1.9
CNOP	Candoni, Negro	3.69	274	*e*P	Pn	08 04 11.9	-0.3
CNOP				*e*S	Sn	08 04 57.9	+3.4
GUIM	Jordan	3.87	286	*e*P	Pn	08 04 14.6	-0.1
GUIM				*e*S	Sn	08 04 59.1	+0.2
JAP	San Jose, Anti	4.51	285	⇓*e*P	Pn	08 04 27.2	+3.8
PVCP	Virac	4.54	332	*e*P	Pn	08 04 23.1	-0.8
PVCP				*e*S	Sn	08 05 16.7	+1.3
JCNP	Jose Panganiba	5.90	323	*e*P	Pn	08 04 41.1	-1.4
JCNP				*e*S	Sn	08 05 48.8	0.0
SGSI	Sangihe	5.92	188	P	Pn	08 04 44.6	+1.7
	5.6nm9μm869nm,0.6s						
LQP	Lukban	6.53	314	⇓*e*P	Pn	08 04 53.0	+1.7
PGP	Puerto Galera	6.58	307	⇑*e*P	Pn	08 05 01.1	+9.1
TGY	Tagaytay City	6.96	311	P	Pn	08 04 57.6	+0.4
	74nm,0.3s,baz=141,slow=4.1,SNR=15						
TGY				LR	LR	08 07 56.6	
	comp=Z,17μm,19.0s,baz=123,slow=40						
MNI	Manado	8.23	191	P	Pn	08 05 17.5	+2.9
MNI				pmax	pmax		
	comp=Z,136nm,0.9s						
I39PW	PALAU INFRASON	8.34	104	*i*		08 56 40.0	
	baz=285,slow=315,SNR=0.9						
TNTI	Ternate	8.81	173		Pn	08 05 25.2	+2.7
TNTI	Ternate	8.81	173	P	Pn	08 05 24.7	+2.2
	comp=Z,3μmcomp=Z,140nm,0.9s						
MYLDM	Lahad Datu	8.95	241	Pn	Pn	08 05 24.8	+0.4
KMSI	Cibinong	9.27	195	P	Pn	08 05 31.4	+2.7
	comp=Z,11μmcomp=Z,221nm,0.7s						
GTOI	Gorontalo	9.50	201	P	Pn	08 05 31.3	-0.6
	comp=Z,1μmcomp=Z,113nm,0.8s						
MRSI	Marisa	10.07	206	P	Pn	08 05 40.2	+0.5
	comp=Z,1μmcomp=Z,145nm,1.3s						
TOLI2	Tolitoli	10.09	214		Pn	08 05 41.7	+1.7
KKM	Kota Kinabalu	10.66	251		Pn	08 05 49.5	+1.6
LUWI	Luwuk	11.15	199	Pn	Pn	08 05 56.1	+1.6
LUWI	Luwuk	11.15	199	P	Pn	08 05 54.5	0.0
	comp=Z,6μmcomp=Z,291nm,1.1s						
MPSI	Mapaga	11.22	215	P	Pn	08 05 57.9	+2.4
	comp=Z,5μmcomp=Z,18nm,0.8s						
APSI	Ampana	11.44	205	P	Pn	08 06 00.7	+2.3
	comp=Z,2μmcomp=Z,108nm,0.9s						
SWI	Sorong	11.47	155	P	Pn	08 06 02.3	+3.5
SWI				pmax	pmax		
	comp=Z,86nm,1.0s						
SWI	Sorong	11.47	155	P	Pn	08 05 58.5	-0.3
	comp=Z,4μmcomp=Z,1μmcomp=Z,88nm,0.9s						
SIJI	Sorong	11.47	155	P	Pn	08 06 00.3	+1.4
	comp=Z,8.7nm,0.3s,baz=341,slow=21,SNR=11						
SIJI				S	Sn	08 07 54.8	-11
	comp=Z,1.6nm,0.3s,baz=151,slow=23,SNR=1.6						
SIJI				LR	LR	08 11 14.2	
	comp=Z,2μm,18.6s,baz=334,slow=41						
SANI	Sanana	11.57	182	P	Pn	08 05 56.7	-3.5
	comp=Z,1μmcomp=Z,73nm,0.8s						
NLAI	Namlea	12.76	177	P	Pn	08 06 19.1	+2.6
	comp=Z,2μmcomp=Z,46nm,0.6s						
MSAI	Masohi	13.10	169	P	Pn	08 06 24.1	+3.0
	comp=Z,1μmcomp=Z,29nm,1.0s						
FAKI	Fak Fak	13.73	154		Pn	08 06 29.9	+0.2
FAKI	Fak Fak	13.73	154	P	Pn	08 06 30.0	+0.2
	comp=Z,3μmcomp=Z,2μmcomp=Z,110nm,1.3s						
TWG	Pinlang	14.11	340	P	P	08 06 39.7	-0.9
TTSI	Tana Toraja	14.15	208	P	Pn	08 06 36.8	+1.6
	comp=Z,2μmcomp=Z,110nm,1.4s						
BKB	Balikpapan	14.32	222	P	P	08 06 39.6	-3.5
	comp=Z,5μmcomp=Z,152nm,1.9s						
YULB	Yu-li	14.56	341	P	P	08 06 44.2	-1.5
TPUB	Ta-pu	14.70	339	P	P	08 06 46.1	-1.2
SPSI	Sidrap Palu	14.98	206	P	P	08 06 48.4	-2.0
	comp=Z,3μmcomp=Z,60nm,0.9s						
SSLB	Suanglung	15.04	341	P	P	08 06 51.1	+0.1
BNSI	Bone	15.23	204	P	P	08 06 53.7	+0.5
	comp=Z,3μmcomp=Z,163nm,1.3s						
SBUM	Sibu	15.75	244		Pn	08 06 56.3	+0.3
SBUM				IAmb	IAmb	08 07 12.2	
	comp=Z,398nm,1.4s						
SBUM	Sibu	15.75	244	P	P	08 06 59.0	0.0
KAPI	Kappang	15.94	205	P	P	08 06 58.9	-2.1
	comp=Z,2.2nm,0.3s,baz=33,slow=3.7,SNR=6.1						
KAPI				LR	LR	08 13 36.6	
	comp=Z,3μm,20.9s,baz=40,slow=39						
KAPI	Kappang	15.94	205	P	P	08 06 59.1	-1.9
BKSI	Bulukumba	16.07	203	P	P	08 07 03.0	+0.5
	comp=Z,58nm,1.2s						
KBKI	Kotabaru	16.35	219	P	P	08 07 06.2	+0.6
	comp=Z,1μmcomp=Z,109nm,1.1s						

SMPI	**Sarmi**	**16.83**	**132**	P	**Pn**	**08 07 06.4**	**-3.2**
	comp=Z,4µmcomp=Z,3µmcomp=Z,136nm,1.4s						
QZH	**Quanzhou**	**16.97**	**335**	⇑*i*P	**P**	**08 07 17.9**	**+5.5**
QZH				pP	**sP**	**08 07 30.3**	**-1.8**
QZH				S	**S**	**08 10 35.4**	**+8.9**
QZH				pmax	pmax		
	comp=Z,620nm,8.3s						
QZH				LR	LR		
	comp=N,2µm,13.8s						
QZH				LR	LR		
	comp=E,910nm,12.9s						
QZH				LR	LR		
	comp=Z,2µm,16.4s						
JOW	**Kunigami**	**17.25**	**6**	P	**P**	**08 07 16.6**	**+1.2**
	comp=Z,2.1nm,0.3s,baz=228,slow=8.3,SNR=8.8						
JOW				LR	LR	08 12 43.7	
	comp=Z,3µm,21.7s,baz=160,slow=33						
BBKI	**Banjar Baru**	**17.32**	**222**	P	**P**	**08 07 20.4**	**+4.0**
	comp=Z,3µmcomp=Z,46nm,0.9s						
KSM	**Kuching**	**17.89**	**244**		**P**	**08 07 21.8**	**-1.0**
KSM	**Kuching**	**17.89**	**244**	P	**P**	**08 07 26.0**	**+3.3**
GENI	**Genyem**	**18.31**	**131**	P	**Pn**	**08 07 30.8**	**+3.0**
	comp=Z,8µmcomp=Z,6µmcomp=Z,190nm,1.4s						
GUMO	**Guam**	**18.55**	**76**	LR	LR	08 14 56.3	
	comp=Z,2µm,18.3s,baz=262,slow=37						
QIZ	**Qiongzhong**	**18.55**	**302**	P	**P**	**08 07 29.0**	**-0.9**
QIZ				pP	sP	08 07 46.2	-3.6
QIZ				S	**Sn**	**08 10 56.0**	**-1.4**
QIZ				pmax	pmax		
	comp=Z,39nm,1.6s						
QIZ				pmax	pmax		
	comp=Z,800nm,4.4s						
QIZ				LR	LR		
	comp=Z,2µm,18.4s						
QIZ				LR	LR		
	comp=Z,2µm,17.5s						
QIZ				LR	LR		
	comp=Z,4µm,19.0s						
MMRI	**Maumere**	**18.57**	**193**	P	**P**	**08 07 28.6**	**-1.4**
JAY	**Jayapura**	**18.67**	**129**	P	**Pn**	**08 07 33.5**	**+1.4**
	comp=Z,0.6nm,0.3s,baz=22,slow=5.4,SNR=3.5						
JAY				LR	LR	08 14 33.3	
	comp=Z,3µm,18.7s,baz=342,slow=36						
SOEI	**Soe**	**19.33**	**186**	P	**Pn**	**08 07 39.1**	**-1.0**
SOEI				IAmb	IAmb	08 08 04.0	
	comp=Z,152nm,0.8s						
BATI	**Baumata**	**19.85**	**188**	P	**Pn**	**08 07 45.5**	**-0.6**
	comp=Z,9.7nm,0.3s,baz=326,slow=0.4,SNR=24						
BATI				LR	LR	08 17 22.8	
	comp=Z,1µm,19.4s,baz=352,slow=43						
PLAI	**Plampang**	**20.20**	**205**	P	Pn	08 07 51.1	+0.9
	comp=Z,2µmcomp=Z,1µmcomp=Z,65nm,0.8s						
WBSI	**Waikabubak, Su**	**20.33**	**200**	P	Pn	08 07 52.3	+0.5
	comp=Z,102nm,0.9s						
TWSI	**Taliwang, Sumb**	**20.51**	**208**	P	Pn	08 07 55.7	+1.8
	comp=Z,923nmcomp=Z,35nm,0.9s						
SRBI	**Singaraja**	**20.78**	**213**	P	**P**	**08 07 53.5**	**-0.7**
	comp=Z,1µmcomp=Z,56nm,0.9s						
JAGI	**Jajag, Banyuwa**	**21.68**	**215**	P	**P**	**08 08 03.3**	**-0.5**
JAGI				IAmb	IAmb	08 08 30.2	
	comp=Z,147nm,1.5s						
JAGI	**Jajag, Banyuwa**	**21.68**	**215**	P	**P**	**08 08 05.6**	**+1.8**
	comp=Z,2µmcomp=Z,54nm,0.9s						
SSE	**Sheshan**	**21.94**	**348**	P	**P**	**08 08 07.2**	**+0.8**
SSE				S	**S**	**08 12 05.2**	**-0.3**
SSE				pmax	pmax		
	comp=Z,63nm,1.6s						
SSE				pmax	pmax		
	comp=Z,420nm,7.3s						
SSE				LR	LR		
	comp=Z,590nm,19.8s						
SSE				LR	LR		
	comp=Z,320nm,19.6s						
SSE	**Sheshan**	**21.94**	**348**	P	**P**	**08 08 06.8**	**+0.4**
MTN	**Manton Dam**	**22.78**	**168**	P	**P**	**08 08 14.6**	**-1.0**
	baz=23,SNR=18						
MTN	**Manton Dam**	**22.78**	**168**	P	**P**	**08 08 14.4**	**-1.2**
MTN				IAmb	IAmb	08 08 24.0	
	comp=Z,113nm,1.1s						
JCJ	**Chichijima**	**22.94**	**39**	P	**P**	**08 08 17.0**	**-0.2**
	comp=Z,136nm,0.6s,baz=281,slow=18,SNR=4.4						
JCJ				LR	LR	08 15 27.4	
	comp=Z,1µm,21.2s,baz=265,slow=32						
KDU	**Kakadu**	**22.94**	**165**	P	**P**	**08 08 15.7**	**-1.6**
	baz=23,SNR=39						
WOJI	**Wonogiri, Jawa**	**23.16**	**222**	P	**P**	**08 08 19.7**	**+0.3**
	comp=Z,34nm,1.1s						
PPBI	**Pangkal Pinang**	**23.29**	**241**	P	**P**	**08 08 21.0**	**+0.2**
	comp=Z,17µmcomp=Z,67nm,1.1s						
NJ2	**Nanjing**	**23.41**	**344**	⇑*i*P	**P**	**08 08 21.8**	**+0.1**
NJ2				pP	**sP**	**08 08 42.0**	**+0.4**
NJ2				sP	pwP	08 08 50.7	+14
NJ2				S	**S**	**08 12 32.6**	**+2.0**
NJ2				pmax	pmax		
	comp=Z,67nm,0.9s						
NJ2				pmax	pmax		
	comp=Z,670nm,5.7s						
NJ2				LR	LR		
	comp=Z,890nm,19.4s						
NJ2				LR	LR		
	comp=Z,630nm,12.8s						
NJ2				LR	LR		
	comp=Z,1µm,18.7s						
MYKOM	**Kota Tinggi**	**23.70**	**252**	P	**P**	**08 08 24.2**	**-0.3**
MYKOM	**Kota Tinggi**	**23.70**	**252**	P	**P**	**08 08 27.0**	**+2.5**
JNU	**Nakatsue**	**23.79**	**9**	P	**P**	**08 08 24.6**	**-0.6**
	comp=Z,24nm,0.8s,baz=75,slow=5.7,SNR=11						
JNU				LR	LR	08 17 25.4	
	comp=Z,1µm,21.9s,baz=174,slow=36						
JNU	**Nakatsue**	**23.79**	**9**	P	**P**	**08 08 24.3**	**-0.9**
NONG	**Nongkai**	**24.05**	**293**	P	**P**	**08 08 27.9**	**+0.1**
	comp=Z,59nm,1.2s						
CHAI	**Chaiyaphum**	**24.59**	**287**	P	**P**	**08 08 32.0**	**-0.6**
	comp=Z,1µmcomp=Z,136nm,0.7s						
JMN	**Monobe**	**25.00**	**15**	P	**P**	**08 08 36.5**	**+0.3**
JMN				IAmb	IAmb	08 08 46.4	
	comp=Z,163nm,1.4s						
GYA	**Guiyang**	**25.09**	**315**	*e*P	**P**	**08 08 38.5**	**+1.2**
GYA				sS	sS	08 13 22.5	+1.5
GYA				pmax	pmax		
	comp=Z,10.0nm,1.9s						
GYA				LR	LR		
	comp=Z,2µm,16.7s						
GYA				LR	LR		
	comp=Z,3µm,16.0s						
GYA				LR	LR		
	comp=Z,5µm,16.8s						
CBJI	**Citeko**	**25.12**	**231**	P	P	08 08 50.1	+13
CISI	**Cisompet, Garu**	**25.13**	**228**	P	**P**	**08 08 36.2**	**-1.4**
CISI				IAmb	IAmb	08 08 55.3	
	comp=Z,206nm,1.5s						
CISI	**Cisompet, Garu**	**25.13**	**228**	P	**P**	**08 08 37.3**	**-0.4**
	comp=Z,84nm,0.8s						
IPM	**Ipoh**	**25.65**	**260**	P	**P**	**08 08 41.6**	**-0.8**
IPM				IAmb	IAmb	08 08 57.5	
	comp=Z,51nm,0.9s						
IPM	**Ipoh**	**25.65**	**260**	P	**P**	**08 08 44.0**	**+1.6**
KULM	**Kulim**	**25.85**	**262**	P	**P**	**08 08 44.2**	**0.0**
KULM				IAmb	IAmb	08 09 00.3	
	comp=Z,70nm,1.1s						
KULM	**Kulim**	**25.85**	**262**	P	**P**	**08 08 46.0**	**+1.8**
ENH	**Enshi**	**25.92**	**325**	P	**P**	**08 08 42.8**	**-1.8**
PHIT	**Phitsanulok**	**26.33**	**289**	P	**P**	**08 08 49.8**	**+1.3**
	comp=Z,2µmcomp=Z,188nm,0.8s						
UTTA	**Uttaradit**	**26.34**	**291**	P	**P**	**08 08 49.9**	**+1.5**
	comp=Z,45nm,0.9s						
TRTT	**Trang**	**26.43**	**268**	P	**P**	**08 08 49.7**	**+0.4**
	comp=Z,4µmcomp=Z,51nm,0.9s						
PHET	**Kaeng Krachan**	**26.43**	**280**	P	**P**	**08 08 50.0**	**+0.7**
	comp=Z,107nm,0.9s						
KASI	**Kota Agung**	**26.47**	**236**	P	**P**	**08 08 47.3**	**-2.4**
	comp=Z,1µmcomp=Z,60nm,0.9s						
JHJ	**Hachijo jima 2**	**26.48**	**26**	LR	LR	08 19 48.8	
	comp=Z,1µm,19.4s,baz=234,slow=37						
NANT	**Nan**	**26.49**	**293**	P	**P**	**08 08 48.0**	**-1.9**
	comp=Z,79µmcomp=Z,861nm,0.7s						
TJN	**Taejon**	**26.68**	**2**	*i* P	**P**	**08 08 50.7**	**-0.7**
JWT	**Wachi**	**26.87**	**17**	P	**P**	**08 08 54.3**	**+1.2**
UTHA	**Uthaitani**	**26.93**	**285**	P	**P**	**08 08 54.9**	**+1.1**
	comp=Z,957nmcomp=Z,123nm,0.9s						
SDSI	**Sungai Dareh**	**26.95**	**249**	P	**P**	**08 08 54.4**	**+0.4**
	comp=Z,1µmcomp=Z,22nm,0.9s						
KSI	**Kapahiang**	**27.10**	**242**	P	**P**	**08 08 56.6**	**+1.1**
	comp=Z,128nm,0.5s						
SURT	**Suratani**	**27.22**	**271**	P	**P**	**08 08 59.4**	**+2.9**
	comp=Z,3.9nm,1.1s						
KMI	**Kunming**	**27.27**	**308**	⇓P	**P**	**08 08 59.8**	**+2.8**
KMI				PP	**PnPn**	**08 09 47.1**	**+3.7**
KMI				S	**S**	**08 13 25.2**	**-7.4**
KMI				sS	sS	08 13 58.5	+2.8
KMI				pmax	pmax		
	comp=Z,29nm,1.2s						
KMI				LR	LR		
	comp=Z,1µm,20.0s						
KMI				LR	LR		
	comp=Z,2µm,20.7s						
KMI				LR	LR		
	comp=Z,2µm,20.8s						
PAYA	**Payao**	**27.40**	**294**	P	**P**	**08 08 58.8**	**+0.8**
	comp=Z,10µmcomp=Z,839nm,0.9s						
INU	**Inuyama**	**27.42**	**19**	P	**P**	**08 08 58.4**	**+0.4**
INU				IAmb	IAmb	08 08 59.7	
	comp=Z,29nm,0.5s						
FITZ	**Fitzroy Crossi**	**27.52**	**182**	P	**P**	**08 08 58.2**	**-0.8**
	baz=28,SNR=87						
FITZ	**Fitzroy Crossi**	**27.52**	**182**	P	**P**	**08 08 58.5**	**-0.5**
	comp=Z,97nm,0.9s,baz=7.1,slow=7.7,SNR=88						
FITZ				LR	LR	08 21 56.4	
	comp=Z,441nm,21.6s,baz=22,slow=41						
FITZ	**Fitzroy Crossi**	**27.52**	**182**	P	**P**	**08 08 58.6**	**-0.4**
JGF	**Kuroka**	**27.76**	**19**	P	**P**	**08 09 01.4**	**+0.3**
KSAR	**Wonju Array Be**	**27.77**	**3**	P	**P**	**08 09 00.6**	**-0.5**
KSAR	**Wonju Array Be**	**27.77**	**3**	P	**P**	**08 09 00.6**	**-0.5**
KSRS	**Korea Array**	**27.78**	**3**	P	**P**	**08 09 00.8**	**-0.3**
	comp=Z,9.1nm,0.7s,baz=181,slow=10.0,SNR=27						
KSRS				LR	LR	08 22 31.5	
	comp=Z,2µm,18.5s,baz=174,slow=42						
CM35	**Chiang Mai Arr**	**27.86**	**292**	P	**P**	**08 09 03.0**	**+0.8**
CM36	**Chiang Mai Arr**	**27.88**	**292**	P	**P**	**08 09 02.0**	**-0.3**
CM34	**Chiang Mai Arr**	**27.91**	**292**	P	**P**	**08 09 03.0**	**+0.4**
CM04	**Chiang Mai Arr**	**27.95**	**291**	P	**P**	**08 09 04.0**	**+1.0**
	comp=Z,187nmcomp=Z,25nm,0.9s						
CM09	**Chiang Mai Arr**	**27.95**	**291**	P	**P**	**08 09 05.0**	**+2.0**
	comp=Z,252nmcomp=Z,32nm,1.1s						
CM01	**Chiang Mai Arr**	**27.98**	**291**	P	P	08 09 10.1	+6.8
CM05	**Chiang Mai Arr**	**27.98**	**291**	P	**P**	**08 09 05.2**	**+1.9**
	comp=Z,114nmcomp=Z,9.7nm,1.8s						
CM02	**Chiang Mai Arr**	**27.99**	**291**	P	**P**	**08 09 05.5**	**+2.2**
	comp=Z,237nmcomp=Z,18nm,1.0s						
CM31	**Chiang Mai Arr**	**28.00**	**291**	P	**P**	**08 09 08.2**	**+4.7**
	comp=Z,619nm,0.8s						
CM31	**Chiang Mai Arr**	**28.00**	**291**	P	**P**	**08 09 03.8**	**+0.4**
CMAR	**Chiang Mai Arr**	**28.00**	**291**	P	**P**	**08 09 03.8**	**+0.4**
	comp=Z,3.4nm,0.6s,baz=107,slow=7.2,SNR=14						
CMAR				PcP	**PcP**	**08 12 18.4**	**+1.0**
	comp=Z,1.5nm,0.4s,baz=6.8,slow=0.9,SNR=4.4						
CMAR				LR	LR	08 20 43.6	
	comp=Z,1µm,18.3s,baz=163,slow=38						
CMAR	**Chiang Mai Arr**	**28.00**	**291**	P	**P**	**08 09 03.2**	**-0.2**
PMG	**Port Moresby**	**28.00**	**132**	P	**P**	**08 09 04.1**	**+0.7**
	comp=Z,20nm,0.6s,baz=14,slow=6.6,SNR=8.7						
PMG	**Port Moresby**	**28.00**	**132**	*ce*P	**P**	**08 09 03.6**	**+0.2**
PMG				pmax	pmax		
	comp=Z,36nm,1.0s						
PMG	**Port Moresby**	**28.00**	**132**	P	**P**	**08 09 03.4**	**-0.1**
PMG	**Port Moresby**	**28.00**	**132**	P	**P**	**08 09 03.9**	**+0.5**
CM15	**Chiang Mai Arr**	**28.02**	**291**	P	**P**	**08 09 06.0**	**+2.4**
	comp=Z,18nm,0.9s						
CM13	**Chiang Mai Arr**	**28.02**	**291**	P	**P**	**08 09 06.3**	**+2.7**
	comp=Z,161nmcomp=Z,18nm,1.1s						
MNSI	**Mandailing Nat**	**28.05**	**253**	P	**P**	**08 09 05.0**	**+1.1**
	comp=Z,48nm,0.9s						
CMMT	**Chiang Mai**	**28.09**	**292**	P	**P**	**08 09 04.3**	**+0.1**
	comp=Z,295nmcomp=Z,9.7nm,1.2s						
CM33	**Chiang Mai Arr**	**28.09**	**292**	P	**P**	**08 09 04.0**	**-0.2**
CHTO	**Chiang Mai**	**28.09**	**292**	P	**P**	**08 09 03.5**	**-0.7**
CHTO				pmax	pmax		
	comp=Z,17nm,1.0s						
CHTO	**Chiang Mai**	**28.09**	**292**	P	**P**	**08 09 03.5**	**-0.7**
PSI	**Prapat**	**28.09**	**258**	P	**P**	**08 09 04.2**	**-0.3**
	comp=Z,22nm,0.6s,baz=0.4,slow=3.0,SNR=18						
PSI				LR	LR	08 22 16.0	
	comp=Z,1µm,20.8s,baz=90,slow=41						
RPSI	**Rantau Prapat**	**28.12**	**258**	P	**P**	**08 09 04.2**	**-0.4**
RPSI	**Rantau Prapat**	**28.12**	**258**	P	**P**	**08 09 02.2**	**-2.3**
RPSI				IAmb	IAmb	08 09 10.9	
	comp=Z,48nm,1.0s						
CM32	**Chiang Mai Arr**	**28.14**	**292**	P	**P**	**08 09 06.0**	**+1.3**
COEN	**Coen**	**28.73**	**144**	P	**P**	**08 09 09.0**	**-0.9**
MHMT	**Maesarieng**	**28.87**	**290**	P	**P**	**08 09 11.0**	**-0.1**
MAT	**Matsushiro**	**28.90**	**20**	P	**P**	**08 09 10.5**	**-0.8**
MAT				S	**S**	**08 13 55.6**	**-2.1**
MJAR	**Matsushiro Arr**	**28.90**	**20**	P	**P**	**08 09 10.4**	**-0.8**
	comp=Z,7.2nm,0.7s,baz=193,slow=9.4,SNR=14						
MJAR				LR	LR	08 20 39.8	
	comp=Z,982nm,19.0s,baz=210,slow=36						
XAN	**Xi'an**	**29.14**	**329**	P	**P**	**08 09 11.8**	**-1.6**
XAN				pP	sP	08 09 34.5	+0.3
XAN				PP	**PnPn**	**08 10 06.7**	**-1.8**
XAN				S	**S**	**08 14 02.3**	**+0.8**
XAN				pmax	pmax		
	comp=Z,25nm,0.9s						
XAN				pmax	pmax		
	comp=Z,220nm,4.4s						
XAN				LR	LR		
	comp=Z,2µm,16.2s						
XAN				LR	LR		
	comp=Z,680nm,17.2s						
XAN				LR	LR		
	comp=Z,3µm,16.7s						
SISI	**Saibi**	**29.25**	**250**	P	**P**	**08 09 14.9**	**+0.3**
	comp=Z,79nm,1.1s						
DL2	**Dalian**	**29.50**	**352**	P	**P**	**08 09 17.5**	**+1.0**
DL2				pP	**pwP**	**08 09 34.4**	**+1.1**
DL2				S	**S**	**08 14 08.3**	**+1.3**
DL2				pmax	pmax		
	comp=Z,70nm,0.7s						
DL2				pmax	pmax		
	comp=Z,460nm,7.6s						
DL2				LR	LR		
	comp=Z,1µm,18.0s						
DL2				LR	LR		
	comp=Z,570nm,18.7s						
DL2				LR	LR		
	comp=Z,1µm,18.0s						
GSI	**Gunungsitoli**	**29.80**	**256**	P	**P**	**08 09 19.2**	**-0.3**
GSI	**Gunungsitoli**	**29.80**	**256**	P	**P**	**08 09 19.2**	**-0.3**
CD2	**Chengdu**	**29.88**	**318**	P	**P**	**08 09 20.0**	**0.0**
CD2				S	**S**	**08 14 18.2**	**+4.9**
CD2				pmax	pmax		
	comp=Z,20nm,0.4s						
CD2				pmax	pmax		
	comp=Z,370nm,9.3s						
CD2				LR	LR		
	comp=Z,4µm,20.1s						
CD2				LR	LR		
	comp=Z,4µm,17.2s						
CD2				LR	LR		
	comp=Z,6µm,16.7s						
WRAB	**Tennant Creek**	**30.37**	**165**	*ce*P	**P**	**08 09 22.7**	**-1.6**
WRAB				pmax	pmax		
	comp=Z,16nm,1.3s						
WRAB	**Tennant Creek**	**30.37**	**165**	P	**P**	**08 09 23.2**	**-1.1**
WRA	**Warramunga Arr**	**30.37**	**165**	P	**P**	**08 09 22.8**	**-1.6**
	comp=Z,4.2nm,0.6s,baz=350,slow=9.6,SNR=31						
WRA				S	**S**	**08 14 14.3**	**-6.7**
	comp=Z,4.4nm,1.1s,baz=342,slow=16,SNR=4.7						
WRA				LR	LR	08 23 57.1	
	comp=Z,534nm,19.2s,baz=10.0,slow=41						
WRA	**Warramunga Arr**	**30.37**	**165**	*ce*P	**P**	**08 09 22.7**	**-1.7**
WRA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
WRA	**Warramunga Arr**	**30.37**	**165**	P	**P**	**08 09 22.3**	**-2.1**
TIY	**Taiyuan**	**30.70**	**338**	*e*P	**P**	**08 09 25.1**	**-2.1**
TIY				pmax	pmax		
	comp=Z,39nm,1.0s						
TIY				pmax	pmax		
	comp=Z,330nm,5.8s						
TIY				LR	LR		
	comp=Z,570nm,10.2s						
TIY				LR	LR		
	comp=Z,300nm,13.1s						
TIY				LR	LR		
	comp=Z,580nm,17.7s						
PSA00	**Pilbara Seismi**	**31.62**	**192**	P	**P**	**08 09 34.2**	**-1.1**
PSA00				IAmb	IAmb	08 09 38.5	
	comp=Z,36nm,0.9s						
PSA00	**Pilbara Seismi**	**31.62**	**192**	P	**P**	**08 09 33.8**	**-1.6**
PSA00				IAmb	IAmb	08 09 38.7	
	comp=Z,18nm,1.0s						
BJT	**Baijiatuau**	**31.64**	**345**	P	**P**	**08 09 35.5**	**+0.2**
BJT				pmax	pmax		
	comp=Z,52nm,1.0s						
BJT	**Baijiatuau**	**31.64**	**345**	P	**P**	**08 09 35.5**	**+0.2**
BJT				IAmb	IAmb	08 09 37.1	
	comp=Z,52nm,1.0s						
SNY	**Shenyang**	**32.21**	**356**	⇑P	**P**	**08 09 40.5**	**+0.2**
SNY				S	**S**	**08 14 54.7**	**+5.5**
SNY				pmax	pmax		
	comp=Z,71nm,1.3s						
SNY				LR	LR		
	comp=Z,800nm,18.0s						
SNY				LR	LR		
	comp=Z,410nm,11.0s						
SNY				LR	LR		
	comp=Z,1µm,20.3s						
QIS	**Mount Isa**	**32.66**	**157**	P	**P**	**08 09 43.6**	**-0.9**
	baz=33,SNR=26						
MTSU	**Mount Surprise**	**32.75**	**147**	P	**P**	**08 09 45.5**	**+0.2**
	baz=33,SNR=6.3						
MSHR	**Mys Shultsa**	**33.13**	**6**	*i* P	**P**	**08 09 48.4**	**0.0**
MSHR				pmax	pmax		
	comp=Z,11nm,0.9s						
LZH	**Lanzhou**	**33.39**	**326**	*e*P	**P**	**08 09 50.4**	**-0.6**
LZH				pP	sP	08 10 11.7	0.0
LZH				*e*S	**S**	**08 15 12.0**	**+3.8**
LZH				SS	**SnSn**	**08 17 10.7**	**-3.7**
LZH				pmax	pmax		
	comp=Z,12nm,1.3s						
LZH				pmax	pmax		
	comp=Z,140nm,4.9s						
LZH				LR	LR		
	comp=Z,2µm,17.1s						
LZH				LR	LR		
	comp=Z,3µm,17.4s						
LZH				LR	LR		
	comp=Z,2µm,19.6s						
HHC	**Hu-ho-hao-te**	**33.79**	**340**	*e*P	**P**	**08 09 55.0**	**+0.7**
HHC				pP	sP	08 10 12.8	-1.7
HHC				S	**S**	**08 15 15.9**	**+1.8**
HHC				SS	**SnSn**	**08 17 21.6**	**-2.1**
HHC				pmax	pmax		
	comp=Z,53nm,1.1s						
HHC				pmax	pmax		
	comp=Z,180nm,4.6s						
HHC				LR	LR		
	comp=Z,770nm,14.7s						
HHC				LR	LR		
	comp=Z,520nm,14.3s						
HHC				LR	LR		
	comp=Z,910nm,15.7s						
AS31	**Alice Springs**	**33.86**	**168**	P	**P**	**08 09 53.3**	**-1.6**
ASAR	**Alice Springs**	**33.86**	**168**	P	**P**	**08 09 53.6**	**-1.3**
	comp=Z,5.2nm,0.5s,baz=352,slow=7.1,SNR=116						
ASAR				PcP	**PcP**	**08 12 32.8**	**0.0**
	comp=Z,2.6nm,0.8s,baz=346,slow=3.3,SNR=2.0						
ASAR				S	**S**	**08 15 10.1**	**-5.3**
	comp=Z,1.2nm,0.7s,baz=354,slow=22,SNR=4.4						
ASAR				ScP	**ScP**	**08 16 13.1**	**+0.2**
	comp=Z,0.7nm,0.8s,baz=346,slow=2.5,SNR=1.7						
ASAR				LR	LR	08 26 14.6	
	comp=Z,767nm,18.3s,baz=344,slow=41						
ASAR	**Alice Springs**	**33.86**	**168**	P	**P**	**08 09 54.1**	**-0.9**
ASPA	**Alice Springs**	**33.86**	**168**	P	**P**	**08 09 53.8**	**-1.1**
	baz=34						
BTO	**Baotou**	**34.13**	**338**	*e*P	**P**	**08 09 58.0**	**+0.8**
IMP	**Imphal**	**34.36**	**300**	*e*P	**P**	**08 09 58.7**	**-0.7**
SAIH	**SAIHA**	**34.46**	**296**	*e*P	**P**	**08 10 00.1**	**-0.2**
SAIH				IAmb	IAmb	08 10 02.0	
	comp=Z,56nm,0.6s						
KOHI	**KOHIMA**	**34.55**	**302**	*e*x	x	08 09 59.3	
USA0B	**Ussuriysk Arra**	**34.83**	**7**	*i* P	**P**	**08 10 03.1**	**+0.1**
USA0B	**Ussuriysk Arra**	**34.83**	**7**	P	**P**	**08 10 02.4**	**-0.7**
USA0B				IAmb	IAmb	08 10 06.2	
	comp=Z,35nm,0.7s						
USRK	**Ussuriysk Ar.**	**34.83**	**7**	P	**P**	**08 10 04.5**	**+1.4**
	comp=Z,30nm,0.7s,baz=192,slow=6.7,SNR=48						
USRK				LR	LR	08 25 38.1	
	comp=Z,637nm,18.3s,baz=178,slow=38						
USRK	**Ussuriysk Ar.**	**34.83**	**7**	P	**P**	**08 10 04.2**	**+1.2**
MDJ	**Mudanjiang**	**35.01**	**4**	P	**P**	**08 10 05.8**	**+1.2**
MDJ				pP	pwP	08 10 25.8	+2.7
MDJ				S	**S**	**08 15 34.6**	**+2.0**
MDJ				pmax	pmax		
	comp=Z,64nm,1.6s						
MDJ				pmax	pmax		
	comp=Z,550nm,3.6s						
MDJ				LR	LR		
	comp=Z,990nm,18.4s						
MDJ				LR	LR		
	comp=Z,840nm,15.9s						
MDJ				LR	LR		
	comp=Z,1µm,16.9s						
MDJ	**Mudanjiang**	**35.01**	**4**	P	**P**	**08 10 04.6**	**-0.1**
MDJ				IAmb	IAmb	08 10 16.8	
	comp=Z,36nm,1.0s						
CTAO	**Charters Tower**	**35.39**	**147**	P	**P**	**08 10 06.8**	**-1.4**
CTAO				pmax	pmax		
	comp=Z,29nm,1.0s						
CTAO	**Charters Tower**	**35.39**	**147**	P	**P**	**08 10 06.8**	**-1.4**
CTAO				IAmb	IAmb	08 10 17.0	
	comp=Z,29nm,1.0s						
TEZP	**TEZPUR**	**35.97**	**303**	*e*P	**P**	**08 10 12.3**	**-0.9**
TEZP				*i* x	x	08 10 50.7	
TEZP				*e*x	x	08 11 50.8	
SHL	**Shillong**	**36.37**	**300**	P	**P**	**08 10 15.5**	**-1.3**
SHL				pmax	pmax		
	comp=Z,97nm,0.6s						
SHL	**Shillong**	**36.37**	**300**	*e*P	**P**	**08 10 17.6**	**+0.8**
SHL	**Shillong**	**36.37**	**300**	P	**P**	**08 10 15.5**	**-1.3**
SHL	**Shillong**	**36.37**	**300**	P	**P**	**08 10 16.4**	**-0.4**
	SNR=26						
TEY	**Ternei**	**36.41**	**12**	⇑*e*P	**P**	**08 10 17.3**	**+0.7**
TEY				pmax	pmax		
	comp=N,20nm,1.5s						
TEY				pmax	pmax		
	comp=Z,20nm,2.1s						
MEEK	**Meekatharra**	**36.79**	**192**	P	**P**	**08 10 19.7**	**-0.4**
	baz=37,SNR=21						
ASAJ	**Asahikawa**	**37.17**	**19**	P	**P**	**08 10 24.3**	**+1.2**
	comp=Z,20nm,0.6s,baz=225,slow=13,SNR=38						
JKA	**Kamikawa-asahi**	**37.17**	**19**	P	**P**	**08 10 23.7**	**+0.6**
JKA				IAmb	IAmb	08 10 32.6	
	comp=Z,38nm,0.8s						
GTA	**Gaotai**	**38.00**	**326**	P	**P**	**08 10 29.5**	**-0.9**
GTA				pP	sP	08 10 47.7	-3.5
GTA				sP	pP	08 10 58.3	+14
GTA				PP	**PnPn**	**08 12 02.5**	**+2.5**
GTA				PcP	**PcP**	**08 12 45.9**	**+0.9**
GTA				S	**S**	**08 16 17.6**	**-1.0**
GTA				SS	**SnSn**	**08 18 52.5**	**-13**
GTA				pmax	pmax		
	comp=Z,13nm,0.7s						
GTA				pmax	pmax		
	comp=Z,190nm,6.1s						
GTA				LR	LR		
	comp=Z,2µm,17.5s						
GTA				LR	LR		
	comp=Z,1µm,16.0s						
GTA				LR	LR		
	comp=Z,2µm,18.2s						
YUK	**Yuzh-Kuril'sk**	**38.26**	**23**	*e*P	**P**	**08 10 31.5**	**-0.8**
YUK				*e*		08 12 00.5	
YUK				*e*S	**S**	**08 16 20.3**	**-1.9**
YUK				pmax	pmax		
	comp=Z,277nm,1.2s						
YUK				pmax	pmax		
	comp=Z,413nm,2.2s						
YUK				MLR	MLR		
	comp=N,361nm,15.0s						
YUK				MLR	MLR		
	comp=Z,278nm,15.0s						
YUK				MLR	MLR		
	comp=E,702nm,16.0s						
LSA	**Lhasa**	**38.51**	**306**	P	**P**	**08 10 35.2**	**0.0**
LSA				pmax	pmax		
	comp=E,69nm,1.6s						
LSA	**Lhasa**	**38.51**	**306**	P	**P**	**08 10 37.2**	**+2.0**
LSA	**Lhasa**	**38.51**	**306**	P	**P**	**08 10 34.7**	**-0.5**
LSA				pmax	pmax		
	comp=Z,49nm,1.4s						
LSA	**Lhasa**	**38.51**	**306**	P	**P**	**08 10 34.7**	**-0.5**
LSA				IAmb	IAmb	08 10 50.5	
	comp=Z,49nm,1.4s						
LSA	**Lhasa**	**38.51**	**306**	P	**P**	**08 10 37.0**	**+1.8**
MORW	**Morawa**	**39.70**	**194**	P	**P**	**08 10 44.4**	**-0.1**
	baz=40,SNR=15						
GTK	**Tadong**	**39.72**	**301**	*e*P	**P**	**08 10 45.2**	**+0.2**

YSS	**Yuzh-Sakhalins**	**39.76**	**18**	*αe*P	**P**	**08 10 45.8**	**+1.0**
YSS				*e**SP	pwP	08 11 15.0	+11
YSS				*e*S	**S**	**08 16 44.0**	**-0.6**
YSS				*e*SSS	SSS	08 20 12.3	
YSS				pmax	pmax		
	comp=Z,30nm,1.4s						
YSS				MLR	MLR		
	comp=Z,700nm,15.0s						
YSS	**Yuzh-Sakhalins**	**39.76**	**18**	P	**P**	**08 10 44.1**	**-0.7**
YSS				IAmb	IAmb	08 10 53.5	
	comp=Z,31nm,1.0s						
KLR	**Kul'dur**	**39.77**	**6**	P	**P**	**08 10 45.8**	**+0.9**
	comp=Z,9.0nm,0.5s,baz=196,slow=4.8,SNR=52						
KLR	**Kul'dur**	**39.77**	**6**	*ce*P	**P**	**08 10 44.7**	**-0.2**
KLR				pmax	pmax		
	comp=Z,14nm,1.0s						
HIA	**Hailar**	**39.94**	**353**	P	**P**	**08 10 46.6**	**+0.3**
HIA				pmax	pmax		
	comp=Z,23nm,0.9s						
HIA	**Hailar**	**39.94**	**353**	P	**P**	**08 10 46.6**	**+0.3**
HIA				IAmb	IAmb	08 10 47.5	
	comp=Z,23nm,0.9s						
H11S3	**WAKE ISLAND Hy**	**40.02**	**73**	T	T	08 53 47.6	
	baz=262,slow=75,SNR=352						
H11S1	**WAKE ISLAND Hy**	**40.03**	**73**	T	T	08 53 51.4	
	baz=262,slow=75,SNR=192						
H11S2	**WAKE ISLAND Hy**	**40.04**	**73**	T	T	08 54 03.7	
	baz=262,slow=75,SNR=210						
FORT	**Forrest**	**40.17**	**178**	P	**P**	**08 10 48.2**	**-0.1**
	baz=40,SNR=120						
FORT	**Forrest**	**40.17**	**178**	P	**P**	**08 10 48.0**	**-0.3**
H11N1	**WAKE ISLAND Hy**	**40.38**	**71**	T	T	08 54 18.1	
	baz=265,slow=74,SNR=275						
H11N2	**WAKE ISLAND Hy**	**40.38**	**71**	T	T	08 54 18.5	
	baz=265,slow=74,SNR=169						
H11N3	**WAKE ISLAND Hy**	**40.40**	**71**	T	T	08 54 19.4	
	baz=265,slow=74,SNR=237						
TAPN	**Taplejung**	**40.48**	**301**	*e*P	**P**	**08 10 51.1**	**-0.4**
	comp=Z,71nm,0.4s						
ODAN	**Odare**	**40.60**	**300**	*e*P	**P**	**08 10 52.0**	**-0.4**
	comp=Z,231nm,0.6s						
KMBL	**Kambalda**	**40.95**	**186**	P	**P**	**08 10 54.5**	**-0.3**
	baz=41,SNR=27						
BLDU	**Ballidu**	**41.03**	**193**	P	**P**	**08 10 55.2**	**-0.3**
	baz=41,SNR=12						
BOK	**Bokaro**	**41.11**	**295**	*e*P	**P**	**08 10 55.8**	**-0.5**
RAMN	**Ramite**	**41.31**	**300**	*e*P	**P**	**08 10 57.8**	**-0.4**
	comp=Z,148nm,0.6s						
ULN	**Ulaanbaatar**	**41.49**	**340**	*ce*P	**P**	**08 10 59.8**	**+0.5**
ULN				pmax	pmax		
	comp=Z,9.0nm,0.6s						
ULN	**Ulaanbaatar**	**41.49**	**340**	P	**P**	**08 10 58.8**	**-0.5**
ULN	**Ulaanbaatar**	**41.49**	**340**	P	**P**	**08 10 58.5**	**-0.8**
SONM	**Songino Array**	**41.69**	**340**	P	**P**	**08 11 00.9**	**0.0**
	comp=Z,5.9nm,0.6s,baz=159,slow=9.2,SNR=24						
SONM				PcP	**PcP**	**08 12 56.6**	**0.0**
	comp=Z,3.0nm,0.6s,baz=159,slow=4.0,SNR=4.1						
SONM				LR	LR	08 30 08.1	
	comp=Z,920nm,19.3s,baz=156,slow=39						
SONM	**Songino Array**	**41.69**	**340**	P	**P**	**08 11 00.7**	**-0.2**
KLBR	**Kellerberrin**	**41.77**	**191**	P	**P**	**08 11 01.1**	**-0.4**
	baz=42,SNR=16						
GRNR	**Gornyy**	**41.89**	**10**	⇓*i*P	**P**	**08 11 04.5**	**+2.2**
GRNR				*e*S	**S**	**08 17 20.3**	**+4.1**
GRNR				pmax	pmax		
	comp=N,10.0nm,0.9s						
GRNR				pmax	pmax		
	comp=Z,10.0nm,1.2s						
GRNR				smax	smax		
	comp=N,2.0nm,0.8s						
GRNR				MLR	MLR		
	comp=E,380nm,16.0s						
GUN	**Gumba**	**42.20**	**301**	*e*P	**P**	**08 11 05.1**	**-0.5**
	comp=E,173nm,0.6s						
MUN	**Mundaring**	**42.46**	**193**	P	**P**	**08 11 07.3**	**+0.2**
	baz=43,SNR=15						
PKI	**Pulchoki**	**42.50**	**301**	*e*P	**P**	**08 11 06.9**	**-1.1**
	comp=E,65nm,0.5s						
PKIN	**Phulchoki**	**42.51**	**301**	*e*P	**P**	**08 11 06.9**	**-1.2**
	comp=E,82nm,0.6s						
KKN	**Kakani**	**42.67**	**301**	*e*P	**P**	**08 11 08.7**	**-0.6**
	comp=E,60nm,0.6s						
DMN	**Daman**	**42.77**	**300**	*e*P	**P**	**08 11 09.2**	**-0.9**
	comp=E,36nm,0.5s						
BBOO	**Buckleboo**	**43.16**	**168**	P	**P**	**08 11 12.6**	**-0.2**
	baz=43,SNR=107						
BBOO	**Buckleboo**	**43.16**	**168**	P	**P**	**08 11 11.9**	**-0.9**
NWAO	**Narrogin (SRO)**	**43.16**	**191**	P	**P**	**08 11 12.8**	**0.0**
	baz=43,SNR=16						
NWAO	**Narrogin (SRO)**	**43.16**	**191**	P	**P**	**08 11 12.4**	**-0.5**
	comp=E,80nm,1.0s,baz=19,slow=9.7,SNR=25						
NWAO	**Narrogin (SRO)**	**43.16**	**191**	P	**P**	**08 11 12.4**	**-0.5**
NWAO	**Narrogin (SRO)**	**43.16**	**191**	P	**P**	**08 11 13.1**	**+0.2**
NWAO				IAmb	IAmb	08 11 14.4	
	comp=Z,96nm,1.1s						
GKN	**Gorkha**	**43.28**	**301**	*e*P	**P**	**08 11 12.9**	**-1.2**
	comp=Z,43nm,0.5s						
TYV	**Tymovskoe**	**43.29**	**15**	*e*P	**P**	**08 11 15.6**	**+2.0**
TYV				pmax	pmax		
	comp=Z,300nm,2.5s						
TYV				pmax	pmax		
	comp=Z,9.0nm,0.7s						
CIT	**Chita**	**43.59**	**349**	*e*P	**P**	**08 11 17.3**	**+1.2**
CIT				*e*		08 11 32.8	
CIT				*e*		08 11 45.8	
CIT				pmax	pmax		
	comp=Z,175nm,1.8s						
STKA	**Stephens Creek**	**43.73**	**161**	P	**P**	**08 11 17.0**	**-0.4**
	baz=44,SNR=32						
STKA	**Stephens Creek**	**43.73**	**161**	P	**P**	**08 11 17.0**	**-0.4**
	comp=Z,9.7nm,0.6s,baz=342,slow=7.5,SNR=49						
STKA				LR	LR	08 31 05.1	
	comp=Z,438nm,21.4s,baz=336,slow=38						
STKA	**Stephens Creek**	**43.73**	**161**	*i* P	**P**	**08 11 16.0**	**-1.4**
STKA	**Stephens Creek**	**43.73**	**161**	P	**P**	**08 11 16.0**	**-1.4**
ZEA	**Zeya**	**44.04**	**1**	*e*P	**P**	**08 11 20.3**	**+0.7**
ZEA				pmax	pmax		
	comp=Z,30nm,0.7s						
DANN	**Dangsing**	**44.12**	**301**	*e*P	**P**	**08 11 20.2**	**-0.8**
	comp=Z,145nm,0.6s						
HTT	**Hallett**	**44.41**	**165**	P	**P**	**08 11 23.6**	**+0.7**
	baz=44,SNR=14						
CMSA	**Cobar Meteorol**	**44.88**	**156**	P	**P**	**08 11 26.8**	**+0.1**
	baz=45,SNR=6.0						
ZAK	**Zakamensk**	**44.94**	**339**	*e*P	**P**	**08 11 26.1**	**-0.9**
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.2s						
PALK	**Pallekele**	**45.21**	**271**	P	**P**	**08 11 29.3**	**-0.3**
	comp=Z,11nm,0.8s,baz=191,slow=5.1,SNR=3.8						
PALK	**Pallekele**	**45.21**	**271**	P	**P**	**08 11 30.9**	**+1.3**
TLY	**Talaya**	**45.91**	**340**	P	**P**	**08 11 34.9**	**+0.4**
	comp=Z,6.7nm,0.6s,baz=185,slow=4.0,SNR=22						
TLY	**Talaya**	**45.91**	**340**	*e*P	**P**	**08 11 34.5**	**0.0**
TLY				*e*S	**S**	**08 18 22.6**	**+7.8**
TLY				pmax	pmax		
	comp=Z,39nm,0.8s						
TLY				MLR	MLR		
	comp=Z,549nm,13.0s						
TLY	**Talaya**	**45.91**	**340**	P	**P**	**08 11 34.0**	**-0.5**
TLY				IAmb	IAmb	08 11 50.7	
	comp=Z,23nm,0.9s						
MOY	**Mondy**	**46.81**	**339**	*e*P	**P**	**08 11 41.9**	**+0.2**
MOY				pmax	pmax		
	comp=Z,43nm,2.3s						
NGP	**Nagpur**	**46.89**	**290**	*e*P	**P**	**08 11 42.7**	**0.0**
NGP				IAmb	IAmb	08 11 46.8	
	comp=Z,26nm,0.9s						
HYB	**Hyderabad**	**47.04**	**285**	*i* P	**P**	**08 11 44.0**	**0.0**
HYB				*e*sP	sP	08 12 11.0	+5.3
HYB	**Hyderabad**	**47.04**	**285**	*e*P	**P**	**08 11 43.1**	**-0.9**
HYB				IAmb	IAmb	08 11 44.8	
	comp=Z,31nm,0.6s						
SANVU	**Saraoutou**	**47.48**	**121**	P	**P**	**08 11 49.1**	**+1.8**
SKR	**Severo-Kuril's**	**47.75**	**25**	*e*P	**P**	**08 11 52.5**	**+3.7**
SKR				*e*S	**S**	**08 18 40.4**	**-0.6**
SKR				pmax	pmax		
	comp=Z,100nm,4.6s						
SKR				MLR	MLR		
	comp=Z,500nm,13.0s						
SKR				MLR	MLR		
	comp=Z,300nm,17.0s						
WMQ	**Urumqi**	**47.82**	**322**	*e*P	**P**	**08 11 50.5**	**+0.8**
WMQ				pP	sP	08 12 10.3	-0.9
WMQ				sP	pP	08 12 20.4	+16
WMQ				PcP	**PcP**	**08 13 17.0**	**-0.8**
WMQ				PP	**PP**	**08 13 38.2**	**-3.7**
WMQ				pmax	pmax		
	comp=Z,16nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,180nm,4.1s						
WMQ				LR	LR		
	comp=Z,1µm,19.5s						
WMQ				LR	LR		
	comp=Z,920nm,15.1s						
WMQ				LR	LR		
	comp=Z,640nm,23.9s						
ARPS	**Mount Arapiles**	**48.35**	**163**	P	**P**	**08 11 52.2**	**-1.4**
	baz=48,SNR=20						
YNG	**Young**	**48.39**	**155**	P	**P**	**08 11 53.9**	**-0.1**
	baz=48,SNR=14						
BHPL	**Bhopal**	**48.65**	**292**	*e*P	**P**	**08 11 55.5**	**-0.9**
CAN	**Canberra**	**49.52**	**156**	P	**P**	**08 12 02.3**	**-0.4**
CAN				pmax	pmax		
	comp=Z,36nm,1.3s						
CAN	**Canberra**	**49.52**	**156**	P	**P**	**08 12 02.3**	**-0.4**
CAN				IAmb	IAmb	08 12 17.2	
	comp=Z,36nm,1.3s						
CNB	**Canberra Magne**	**49.66**	**155**	P	**P**	**08 12 04.6**	**+0.7**
	baz=50,SNR=5.1						
NDI	**New Delhi**	**49.78**	**299**	*e*P	**P**	**08 12 02.0**	**-2.9**
TOO	**Toolangi**	**50.21**	**160**	P	**P**	**08 12 09.1**	**+1.2**
	baz=50,SNR=6.6						
TOO	**Toolangi**	**50.21**	**160**	P	**P**	**08 12 07.8**	**-0.1**
TOO				pmax	pmax		
	comp=Z,35nm,1.2s						
TOO	**Toolangi**	**50.21**	**160**	P	**P**	**08 12 07.8**	**-0.1**
TOO				IAmb	IAmb	08 12 26.2	
	comp=Z,35nm,1.2s						
PEA0B	**Petropavlovsk-**	**50.22**	**24**	*ce*P	**P**	**08 12 07.8**	**+0.1**
PETK	**Petropavlovsk-**	**50.22**	**24**	P	**P**	**08 12 09.3**	**+1.6**
	comp=Z,19nm,0.6s,baz=201,slow=3.7,SNR=38						
PETK				LR	LR	08 33 33.7	
	comp=Z,495nm,19.1s,baz=210,slow=36						
PETK	**Petropavlovsk-**	**50.22**	**24**	P	**P**	**08 12 08.4**	**+0.7**
DZM	**Mont Dzumac**	**50.34**	**129**	*e*P	**P**	**08 12 12.0**	**+2.8**
	comp=Z,60nm,1.0s						
DZM				*e*S	**S**	**08 19 17.9**	**-0.4**
	comp=Z,1µm,26.8s						
DZM				*e*LR	LR	08 26 44.9	
	comp=Z,1µm,26.1s						
SMLA	**Simla**	**50.38**	**303**	*e*P	**P**	**08 12 08.7**	**-0.6**
PET	**Petropavlovsk**	**50.54**	**25**	*e*P	**P**	**08 12 11.2**	**+1.0**
PET				*e**PP	**pwP**	**08 12 32.4**	**+2.7**
PET				*e*		08 13 27.9	
PET				*e*S	**S**	**08 19 18.6**	**-1.5**
PET				*e*SS	**SS**	**08 22 57.7**	**+3.0**
PET				pmax	pmax		
	comp=Z,45nm,1.5s						
PET				pmax	pmax		
	comp=Z,200nm,16.0s						
PET				MLR	MLR		
	comp=Z,800nm,16.0s						
PET				MLR	MLR		
	comp=Z,800nm,15.0s						
DHRM	**DHARAMSHALA**	**51.38**	**304**	*e*P	**P**	**08 12 14.6**	**-2.5**
DHRM				*e*x	x	08 12 29.0	
DHRM				*i* sP	sP	08 12 44.4	+5.4
DGZ	**Jazzator, Alta**	**51.40**	**329**	*i* P	**P**	**08 12 15.9**	**-1.0**
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ZSN	**Zaisan**	**51.48**	**325**	*e*P	**P**	**08 12 16.2**	**-1.3**
	baz=324						
ZSN				*e*S	**S**	**08 19 30.3**	**-3.1**
	baz=324						
ZSN	**Zaisan**	**51.48**	**325**	*e*P	**P**	**08 12 16.1**	**-1.3**
ZSN				*e*S	**S**	**08 19 30.2**	**-3.1**
GOA	**Goa**	**51.53**	**282**	*e*P	**P**	**08 12 18.1**	**-0.1**
POO	**Poona**	**51.57**	**286**	*e*P	**P**	**08 12 17.0**	**-1.5**
YAK	**Yakutsk**	**52.40**	**2**	P	**P**	**08 12 25.0**	**+1.0**
	comp=Z,11nm,0.3s,baz=221,slow=0.9,SNR=14						
YAK	**Yakutsk**	**52.40**	**2**	*e*P	**P**	**08 12 24.0**	**+0.1**
YAK				*e**PP	**sP**	**08 12 43.9**	**-0.4**
YAK				*e*		08 13 34.5	
YAK				*e*		08 14 23.5	
YAK				*e*PPP	PPP	08 15 29.2	
YAK				*e*S	**S**	**08 19 44.2**	**-1.2**
YAK				*e**SS	sS	08 20 19.2	+11
YAK				*e*		08 22 07.3	
YAK				*e*SS	**SS**	**08 23 23.6**	**-0.3**
YAK				*e*SSS	SSS	08 25 13.2	
YAK				pmax	pmax		
	comp=Z,92nm,1.3s						
YAK				pmax	pmax		
	comp=N,48nm,1.2s						
YAK				pmax	pmax		
	comp=E,22nm,1.5s						
YAK				pmax	pmax		
	comp=Z,85nm,3.0s						
YAK				pmax	pmax		
	comp=N,56nm,2.5s						
YAK				pmax	pmax		
	comp=E,18nm,2.5s						
YAK				smax	smax		
	comp=N,90nm,2.8s						
YAK				smax	smax		
	comp=E,57nm,3.0s						
YAK	**Yakutsk**	**52.40**	**2**	P	**P**	**08 12 24.1**	**+0.2**
MK31	**Makanchi Array**	**52.63**	**323**	*ce*P	**P**	**08 12 25.4**	**-0.5**
MK31	**Makanchi Array**	**52.63**	**323**	P	**P**	**08 12 24.8**	**-1.2**
MK31				IAmb	IAmb	08 12 26.9	
	comp=Z,21nm,0.7s						
MKAR	**Makanchi Array**	**52.63**	**323**	P	**P**	**08 12 25.3**	**-0.6**
	comp=Z,27nm,0.6s,baz=121,slow=8.0,SNR=248						
MKAR				PcP	**PcP**	**08 13 35.2**	**-0.1**
	comp=Z,4.4nm,0.6s,baz=104,slow=5.9,SNR=1.2						
MKAR				LR	LR	08 36 11.5	
	comp=Z,1µm,21.8s,baz=120,slow=38						
MKAR	**Makanchi Array**	**52.63**	**323**	P	**P**	**08 12 24.8**	**-1.2**
SHLS	**Shalkode**	**52.72**	**318**	*e*P	**P**	**08 12 23.8**	**-3.0**
	comp=Z,11nm,0.8s,baz=318						
SHLS	**Shalkode**	**52.72**	**318**	*e*P	**P**	**08 12 23.7**	**-3.0**
SHLS				pmax	pmax		
	comp=Z,11nm,0.8s						
PDGK	**Podgornoye**	**52.77**	**318**	*i* P	**P**	**08 12 25.9**	**-1.3**
PDGK				pmax	pmax		
	comp=Z,14nm,0.6s						
MAKZ	**Makanchi**	**52.82**	**323**	P	**P**	**08 12 26.6**	**-0.8**
MAKZ				pmax	pmax		
	comp=Z,24nm,0.6s						
MAKZ	**Makanchi**	**52.82**	**323**	P	**P**	**08 12 26.6**	**-0.8**
UZB	**Uzynbulak**	**53.00**	**318**	*e*P	**P**	**08 12 28.0**	**-0.9**
	comp=Z,7.3nm,0.5s,baz=317						
UZB	**Uzynbulak**	**53.00**	**318**	*e*P	**P**	**08 12 28.0**	**-0.9**
UZB				pmax	pmax		
	comp=Z,7.0nm,0.5s						
MA2	**Magadan**	**53.16**	**15**	*ce*P	**P**	**08 12 30.7**	**+1.1**
MA2				pmax	pmax		
	comp=Z,12nm,0.8s						
MA2	**Magadan**	**53.16**	**15**	P	**P**	**08 12 30.5**	**+0.9**
KPKS	**Kokpek**	**53.36**	**318**	*e*P	**P**	**08 12 30.3**	**-1.2**
	comp=Z,10nm,0.5s,baz=318						
KPKS	**Kokpek**	**53.36**	**318**	*e*P	**P**	**08 12 30.3**	**-1.2**
KPKS				pmax	pmax		
	comp=Z,10.0nm,0.5s						
SATY	**Saty**	**53.38**	**317**	*e*P	**P**	**08 12 30.8**	**-0.9**
	comp=Z,8.1nm,0.7s,baz=317						
SATY				*e*S	**S**	**08 19 56.7**	**-3.0**
	baz=317						
SATY	**Saty**	**53.38**	**317**	*e*P	**P**	**08 12 30.7**	**-0.9**
SATY				*e*S	**S**	**08 19 56.6**	**-3.0**
SATY				pmax	pmax		
	comp=Z,8.0nm,0.7s						
KSH	**Kashi**	**53.76**	**312**	P	**P**	**08 12 35.7**	**+1.2**
KSH				PP	**PP**	**08 14 38.1**	**+2.1**
KSH				S	**S**	**08 20 07.3**	**+2.3**
KSH				pmax	pmax		
	comp=Z,36nm,1.4s						
KSH				pmax	pmax		
	comp=Z,140nm,3.1s						
KSH				LR	LR		
	comp=Z,300nm,11.5s						
KSH				LR	LR		
	comp=Z,790nm,14.9s						
KSH				LR	LR		
	comp=Z,1µm,18.4s						
TDK	**Taldyqorghan**	**54.19**	**319**	*e*P	**P**	**08 12 36.8**	**-0.7**
	comp=Z,14nm,0.6s,baz=319						
TDK				*e*S	**S**	**08 20 07.9**	**-2.6**
	baz=319						
TDK	**Taldyqorghan**	**54.19**	**319**	*e*P	**P**	**08 12 36.7**	**-0.7**
TDK				*e*S	**S**	**08 20 07.8**	**-2.6**
TDK				pmax	pmax		
	comp=Z,14nm,0.6s						
NIL	**Nilore**	**54.20**	**305**	P	**P**	**08 12 36.9**	**-0.8**
NIL				pmax	pmax		
	comp=Z,95nm,0.8s						
NIL	**Nilore**	**54.20**	**305**	P	**P**	**08 12 36.9**	**-0.8**
NIL	**Nilore**	**54.20**	**305**	P	**P**	**08 12 37.6**	**-0.2**
MDOK	**Medeo**	**54.33**	**317**	*e*P	**P**	**08 12 37.8**	**-0.9**
	baz=317						
MDOK	**Medeo**	**54.33**	**317**	*e*P	**P**	**08 12 37.7**	**-0.9**
TNSS	**Tian-Shan**	**54.35**	**317**	*e*P	**P**	**08 12 38.5**	**-0.6**
	baz=316						
TNSS	**Tian-Shan**	**54.35**	**317**	*e*P	**P**	**08 12 38.5**	**-0.6**
AAA	**Alma-Ata**	**54.44**	**317**	*e*P	**P**	**08 12 39.2**	**-0.2**
	baz=317						
AAA	**Alma-Ata**	**54.44**	**317**	*e*P	**P**	**08 12 39.1**	**-0.2**
ULHL	**Ulahol**	**54.53**	**316**	P	**P**	**08 12 40.0**	**-0.2**
	SNR=14						
CHKK	**Chushkaly**	**54.64**	**318**	*e*P	**P**	**08 12 39.3**	**-1.4**
	baz=317						
CHKK	**Chushkaly**	**54.64**	**318**	*e*P	**P**	**08 12 39.3**	**-1.4**
MTBS	**Maitube**	**54.73**	**317**	*e*P	**P**	**08 12 40.7**	**-0.8**
	baz=316						
MTBS	**Maitube**	**54.73**	**317**	*e*P	**P**	**08 12 40.7**	**-0.8**
KUU	**Kurty**	**55.09**	**317**	*e*P	**P**	**08 12 41.7**	**-2.3**
	comp=Z,37nm,1.1s,baz=317						
KUU	**Kurty**	**55.09**	**317**	*e*P	**P**	**08 12 41.6**	**-2.3**
KUU				pmax	pmax		
	comp=Z,37nm,1.1s						
TKM2	**Tokmak 2**	**55.22**	**316**	P	**P**	**08 12 44.8**	**-0.4**
	SNR=19						
TKM2	**Tokmak 2**	**55.22**	**316**	*i* P	**P**	**08 12 44.4**	**-0.8**
TKM2				pmax	pmax		
	comp=Z,20nm,1.3s						
ZAA0	**Zalesovo Array**	**55.27**	**332**	P	**P**	**08 12 44.0**	**-1.0**
ZAA0				IAmb	IAmb	08 12 44.8	
	comp=Z,12nm,0.7s						
ZALV	**Zalesovo Beam**	**55.27**	**332**	P	**P**	**08 12 43.6**	**-1.4**
	comp=Z,15nm,0.7s,baz=121,slow=6.7,SNR=68						
ZALV				PcP	**PcP**	**08 13 44.2**	**-1.0**
	comp=Z,3.6nm,0.6s,baz=116,slow=3.4,SNR=1.4						
ZALV				LR	LR	08 39 15.0	
	comp=Z,702nm,18.2s,baz=132,slow=39						
ZALV	**Zalesovo Beam**	**55.27**	**332**	P	**P**	**08 12 44.0**	**-1.0**
ZALV	**Zalesovo Beam**	**55.27**	**332**	P	**P**	**08 12 44.0**	**-1.0**
KBK	**Karagaybulak**	**55.57**	**316**	P	**P**	**08 12 47.8**	**+0.1**
	SNR=17						
SEM	**Semipalatinsk**	**55.63**	**326**	*e*P	**P**	**08 12 46.0**	**-1.9**
	baz=326						
SEM	**Semipalatinsk**	**55.63**	**326**	*e*P	**P**	**08 12 46.0**	**-1.9**
UCH	**Uchtor**	**55.72**	**315**	P	**P**	**08 12 49.6**	**+0.6**
	SNR=49						
CHMS	**Chumysh**	**55.83**	**316**	P	**P**	**08 12 48.8**	**-0.6**
	SNR=8.0						
AAK	**Ala-Archa**	**55.88**	**315**	P	**P**	**08 12 49.5**	**-0.3**
	comp=Z,5.6nm,0.6s,baz=143,slow=8.3,SNR=19						
AAK	**Ala-Archa**	**55.88**	**315**	P	**P**	**08 12 49.8**	**-0.1**
	SNR=8.3						
AAK	**Ala-Archa**	**55.88**	**315**	*i* P	**P**	**08 12 50.2**	**+0.3**
	SNR=11						
AAK	**Ala-Archa**	**55.88**	**315**	P	**P**	**08 12 48.8**	**-1.0**
AAK	**Ala-Archa**	**55.88**	**315**	P	**P**	**08 12 49.9**	**+0.1**
SGDS	**Sogindy**	**56.08**	**316**	*e*P	**P**	**08 12 49.6**	**-1.6**
	baz=316						
SGDS	**Sogindy**	**56.08**	**316**	*e*P	**P**	**08 12 49.5**	**-1.6**
USP	**Ospenovka**	**56.10**	**316**	P	**P**	**08 12 50.9**	**-0.3**
	SNR=14						
AML	**Almayashu**	**56.26**	**315**	P	**P**	**08 12 53.2**	**+0.3**
	SNR=38						
EKS2	**Erkin-Say**	**56.38**	**315**	P	**P**	**08 12 53.7**	**+0.3**
	SNR=18						
SEY	**Seymchan**	**56.45**	**14**	P	**P**	**08 12 54.6**	**+1.3**
	comp=Z,12nm,0.6s,baz=212,slow=5.1,SNR=45						
SEY	**Seymchan**	**56.45**	**14**	*i* P	**P**	**08 12 52.5**	**-0.8**
KURK	**Kurchatov**	**56.68**	**326**	*ce*P	**P**	**08 12 54.0**	**-1.2**
KURK				pmax	pmax		
	comp=Z,49nm,1.3s						
KURK	**Kurchatov**	**56.68**	**326**	P	**P**	**08 12 54.1**	**-1.0**
KURK	**Kurchatov**	**56.68**	**326**	P	**P**	**08 12 54.2**	**-1.0**
KURBB	**Kurchatov Arra**	**56.69**	**326**	P	**P**	**08 12 54.5**	**-0.7**
	comp=Z,9.6nm,0.5s,baz=124,slow=6.8,SNR=61						
BTLS	**Baital**	**57.04**	**318**	*e*P	**P**	**08 12 56.5**	**-1.3**
	comp=Z,9.1nm,0.9s,baz=318						
BTLS	**Baital**	**57.04**	**318**	*e*P	**P**	**08 12 56.5**	**-1.3**
BTLS				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KBL	**Kabul**	**57.80**	**305**	P	**P**	**08 13 02.5**	**-1.1**
KBL				pmax	pmax		
	comp=Z,47nm,0.7s						
KBL	**Kabul**	**57.80**	**305**	P	**P**	**08 13 02.5**	**-1.1**
KBL	**Kabul**	**57.80**	**305**	P	**P**	**08 13 03.4**	**-0.3**
	SNR=17						
MSVF	**Nonsavu**	**57.81**	**118**	P	**P**	**08 13 06.1**	**+2.4**
DZA	**Taraz**	**58.16**	**315**	*e*P	**P**	**08 13 04.8**	**-1.0**
	comp=Z,8.8nm,0.6s,baz=315						
DZA	**Taraz**	**58.16**	**315**	*e*P	**P**	**08 13 04.8**	**-1.0**
DZA				pmax	pmax		
	comp=Z,9.0nm,0.6s						
KK31	**Karatay Array**	**58.80**	**315**	P	**P**	**08 13 09.7**	**-0.5**
KK31				pmax	pmax		
	comp=Z,24nm,0.7s						
KK31	**Karatay Array**	**58.80**	**315**	P	**P**	**08 13 09.7**	**-0.5**
KKAR	**Karatay Array**	**58.80**	**315**	P	**P**	**08 13 09.5**	**-0.7**
KKAR				pmax	pmax		
	comp=Z,24nm,0.7s						
KKAR	**Karatay Array**	**58.80**	**315**	P	**P**	**08 13 09.5**	**-0.7**
KKAR	**Karatay Array**	**58.80**	**315**	P	**P**	**08 13 09.6**	**-0.7**
KKAR				IAmb	IAmb	08 13 10.6	
	comp=Z,24nm,0.7s						
IUG	**Iuzhnay**	**58.86**	**314**	*e*P	**P**	**08 13 10.0**	**-0.8**
	comp=Z,14nm,0.7s,baz=313						
IUG	**Iuzhnay**	**58.86**	**314**	*e*P	**P**	**08 13 10.0**	**-0.8**
IUG				pmax	pmax		
	comp=Z,14nm,0.7s						
BRZS	**Berezniki**	**59.78**	**323**	*e*P	**P**	**08 13 15.9**	**-1.0**
	comp=Z,13nm,0.9s,baz=323						
BRZS	**Berezniki**	**59.78**	**323**	*e*P	**P**	**08 13 15.8**	**-1.0**
BRZS				pmax	pmax		
	comp=Z,13nm,0.9s						
TIXI	**Tiksi**	**62.03**	**1**	*c i*P	**P**	**08 13 31.7**	**+0.1**
TIXI	**Tiksi**	**62.03**	**1**	P	**P**	**08 13 31.8**	**+0.1**
BVAR	**Borovoye Array**	**62.28**	**326**	P	**P**	**08 13 32.9**	**-0.8**
	comp=Z,6.9nm,0.7s,baz=146,slow=11,SNR=39						
BRVK	**Borovoye**	**62.35**	**326**	*ce*P	**P**	**08 13 33.4**	**-0.8**
BRVK				pmax	pmax		
	comp=Z,43nm,1.3s						
BRVK	**Borovoye**	**62.35**	**326**	P	**P**	**08 13 33.5**	**-0.7**
BRVK				IAmb	IAmb	08 13 34.8	
	comp=Z,26nm,0.8s						
BRVK	**Borovoye**	**62.35**	**326**	P	**P**	**08 13 32.9**	**-1.3**
HRA	**Herat**	**63.33**	**304**	P	**P**	**08 13 40.1**	**-1.2**
NRIK	**Noril'sk**	**64.70**	**346**	P	**P**	**08 13 49.6**	**+0.3**
	comp=Z,20nm,0.8s,baz=127,slow=6.4,SNR=48						
NRIK				LR	LR	08 46 12.5	
	comp=Z,817nm,18.0s,baz=146,slow=40						
NRIK	**Noril'sk**	**64.70**	**346**	*ce*P	**P**	**08 13 48.3**	**-1.1**
NRIK				pmax	pmax		
	comp=Z,24nm,0.9s						
NRIK	**Noril'sk**	**64.70**	**346**	P	**P**	**08 13 49.6**	**+0.3**
NRIK				IAmb	IAmb	08 13 50.2	
	comp=Z,28nm,0.8s						
WBK	**Wadi Bani Khal**	**65.58**	**290**	P	**P**	**08 13 55.4**	**-0.6**
WSAR	**Wadi Sarin**	**65.89**	**291**	P	**P**	**08 13 56.8**	**-1.2**
	baz=123,slow=7.6						
BIDO	**Bidbid**	**66.35**	**291**	P	**P**	**08 14 00.8**	**-0.1**
	SNR=7.1						
MHTO	**MHTO**	**66.54**	**289**	P	**P**	**08 14 00.8**	**-1.4**
	SNR=7.2						
RPZ	**Rata Peaks**	**66.76**	**146**	P	**P**	**08 14 03.8**	**+0.7**
	comp=Z,48nm,1.1s,baz=321,slow=1.8,SNR=15						
GEYT	**Alibeck**	**67.03**	**307**	P	**P**	**08 14 05.2**	**+0.2**
	comp=Z,9.5nm,0.8s,baz=152,slow=4.2,SNR=16						
GEYT				LR	LR	08 48 21.8	
	comp=Z,930nm,19.7s,baz=60,slow=40						
GEYT	**Alibeck**	**67.03**	**307**	P	**P**	**08 14 04.3**	**-0.7**
GYA0B	**ALIBECK ARRAY**	**67.03**	**307**	P	**P**	**08 14 04.4**	**-0.7**
GYA0B				IAmb	IAmb	08 14 19.7	
	comp=Z,25nm,1.1s						
URZ	**Urewera**	**67.09**	**139**	P	**P**	**08 14 06.8**	**+1.6**
	comp=Z,21nm,0.9s,baz=198,slow=6.4,SNR=1.4						
HOQ	**Hoqain**	**67.10**	**292**	P	**P**	**08 14 04.9**	**-0.8**
AB31	**Akbulak array**	**67.46**	**319**	⇑*e*P	P	08 14 21.2	+14
AB31				pmax	pmax		
	comp=Z,25nm,0.8s						
ABKAR	**Akbulak array**	**67.46**	**319**	P	**P**	**08 14 06.6**	**-0.8**
ABKAR				IAmb	IAmb	08 14 07.8	

	comp=Z,22nm,0.7s						
SOHO	**SOHO**	**67.80**	**292**	P	**P**	**08 14 09.7**	**-0.4**
BANOM	**Banah**	**68.00**	**294**	P	**P**	**08 14 11.5**	**+0.1**
MDH	**Madha**	**68.00**	**293**	P	**P**	**08 14 10.9**	**-0.5**
UOSS	**Minazif**	**68.09**	**293**	P	**P**	**08 14 11.4**	**-0.5**
MSFE	**Esma-Masafi**	**68.13**	**293**	P	**P**	**08 14 12.9**	**+0.7**
SHME	**Shamm**	**68.14**	**294**	P	**P**	**08 14 13.5**	**+1.3**
HATD	**Hatta, Dubai**	**68.16**	**293**	*i* P	**P**	**08 14 13.1**	**+0.8**
	SNR=7.4						
HATD	**Hatta, Dubai**	**68.16**	**293**	P	**P**	**08 14 11.8**	**-0.6**
ASHO	**Ashiyiah**	**68.23**	**293**	*i* P	**P**	**08 14 13.6**	**+0.8**
	SNR=6.7						
ALNE	**Al Ain**	**68.52**	**292**	*i* P	**P**	**08 14 15.5**	**+0.9**
	SNR=9.1						
ALNE	**Al Ain**	**68.52**	**292**	P	**P**	**08 14 14.3**	**-0.3**
FAQ	**Al Faqa, Dubai**	**68.65**	**293**	P	**P**	**08 14 15.5**	**0.0**
SVE	**Sverdlovsk**	**68.84**	**327**	*e*P	**P**	**08 14 15.9**	**0.0**
SVE				pmax	pmax		
	comp=Z,59nm,1.3s						
UNV	**Unalaska Valle**	**68.87**	**36**	P	**P**	**08 14 16.4**	**+0.2**
SHAO	**Shalim**	**68.88**	**286**	*i* P	**P**	**08 14 18.0**	**+1.0**
	SNR=12						
SHAO	**Shalim**	**68.88**	**286**	P	**P**	**08 14 17.3**	**+0.4**
	SNR=6.1						
DMTO	**DMTO**	**69.54**	**285**	P	**P**	**08 14 21.0**	**0.0**
	SNR=5.4						
ARU	**Arti**	**69.85**	**327**	P	**P**	**08 14 21.3**	**-0.9**
	comp=Z,14nm,0.5s,baz=116,slow=4.0,SNR=72						
ARU	**Arti**	**69.85**	**327**	*d i*P	**P**	**08 14 20.9**	**-1.3**
ARU						08 14 40.9	
ARU				S	**S**	**08 23 25.8**	**-1.5**
ARU				SS	**SS**	**08 27 50.7**	**-6.2**
ARU				pmax	pmax		
	comp=Z,33nm,0.6s						
ARU	**Arti**	**69.85**	**327**	P	**P**	**08 14 21.6**	**-0.6**
DOK	**Doka**	**70.26**	**286**	P	**P**	**08 14 24.9**	**-0.6**
	SNR=9.3						
RBK	**Rabkut**	**70.27**	**285**	P	**P**	**08 14 25.5**	**0.0**
	SNR=7.4						
WHFO	**Wadi Hawf**	**70.65**	**286**	P	**P**	**08 14 26.4**	**-1.5**
	SNR=5.1						
SOCY	**Socotra**	**70.94**	**280**	P	**P**	**08 14 28.8**	**-0.9**
SOCY				IAmb	IAmb	08 14 37.1	
	comp=Z,28nm,0.9s						
ABTO	**Aybut**	**71.14**	**285**	P	**P**	**08 14 30.5**	**-0.4**
	SNR=8.4						
ANM	**Nome**	**72.12**	**25**	P	**P**	**08 14 37.5**	**+1.7**
ANM				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ANM	**Nome**	**72.12**	**25**	P	**P**	**08 14 37.5**	**+1.7**
KIRV	**Kirov**	**75.08**	**328**	*ce*P	**P**	**08 14 52.7**	**-0.5**
BELG	**Belogornoye**	**75.60**	**322**	*i* P	**P**	**08 14 54.8**	**-1.6**
BELG				pmax	pmax		
	comp=Z,9.0nm,0.9s						
TTA	**Tatalina**	**75.88**	**27**	P	**P**	**08 14 59.3**	**+1.4**
TTA				pmax	pmax		
	comp=Z,25nm,1.4s						
TTA	**Tatalina**	**75.88**	**27**	P	**P**	**08 14 59.3**	**+1.4**
SVW2	**Sparrevohn**	**75.89**	**29**	P	**P**	**08 14 59.4**	**+1.5**
SVW2				IAmb	IAmb	08 15 01.3	
	comp=Z,44nm,1.3s						
LGD	**Lagodekhi**	**76.33**	**311**	P	**P**	**08 15 02.6**	**+1.8**
GROC	**Groznyy**	**76.65**	**312**	*e*P	**P**	**08 14 59.3**	**-3.2**
GROC				*e*		08 15 10.8	
GROC				*e**PP	**sP**	**08 15 23.1**	**-1.9**
KDAK	**Kodiak Island**	**77.18**	**33**	P	**P**	**08 15 05.8**	**+0.6**
KDAK				pmax	pmax		
	comp=Z,26nm,0.7s						
KDAK	**Kodiak Island**	**77.18**	**33**	P	**P**	**08 15 05.8**	**+0.6**
KDAK				IAmb	IAmb	08 15 09.8	
	comp=Z,26nm,0.7s						
IMAR	**Indian Mountai**	**77.18**	**24**	P	**P**	**08 15 05.3**	**+0.2**
GNI	**Garni**	**77.51**	**309**	*c i*P	**P**	**08 15 07.7**	**0.0**
GNI				pmax	pmax		
	comp=Z,45nm,2.0s						
KZRT	**Kazreti**	**77.72**	**310**	P	**P**	**08 15 09.0**	**+0.3**
SKT	**Skwentna**	**77.88**	**29**	P	**P**	**08 15 09.2**	**0.0**
RAYN	**Ar Rayn**	**77.92**	**292**	*i* P	**P**	**08 15 09.5**	**-0.6**
	SNR=35						
RAYN	**Ar Rayn**	**77.92**	**292**	P	**P**	**08 15 08.8**	**-1.3**
RAYN				pmax	pmax		
	comp=Z,25nm,0.7s						
RAYN	**Ar Rayn**	**77.92**	**292**	P	**P**	**08 15 08.8**	**-1.3**
RAYN				IAmb	IAmb	08 15 10.7	
	comp=Z,25nm,0.7s						
ZEI	**Tsey**	**78.05**	**312**	*e*P	**P**	**08 15 09.3**	**-1.4**
ZEI				pmax	pmax		
	comp=Z,25nm,0.9s						
BPAW	**Bear Paw Mtn.**	**78.22**	**26**	P	**P**	**08 15 12.0**	**+1.0**
BPAW				IAmb	IAmb	08 15 14.4	
	comp=Z,29nm,1.0s						
MLY	**Manley**	**78.37**	**25**	P	**P**	**08 15 13.2**	**+1.4**
	baz=268						
ONI	**Oni**	**78.39**	**312**	P	**P**	**08 15 13.6**	**+1.2**
AKH	**Akhalkalaki**	**78.41**	**310**	P	**P**	**08 15 13.2**	**+0.5**
CUT	**Chulitna**	**78.49**	**28**	P	**P**	**08 15 13.2**	**+0.8**
	baz=269						
COLD	**Coldfoot**	**78.68**	**23**	P	**P**	**08 15 15.3**	**+1.9**
	baz=268						
COLD	**Coldfoot**	**78.68**	**23**	P	**P**	**08 15 14.2**	**+0.8**
RC01	**Rabbit Creek A**	**78.72**	**30**	P	**P**	**08 15 13.6**	**-0.1**
	baz=269						
KBZ	**Khabaz**	**78.74**	**313**	P	**P**	**08 15 13.9**	**-0.2**
	comp=Z,6.6nm,0.9s,baz=104,slow=3.9,SNR=13						
KBZ				LR	LR	08 55 10.4	
	comp=Z,779nm,18.1s,baz=70,slow=40						
KBZ	**Khabaz**	**78.74**	**313**	*ce*P	**P**	**08 15 14.0**	**-0.2**
KBZ				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KIV	**Kislovodsk**	**78.89**	**313**	P	**P**	**08 15 15.3**	**+0.2**
KIV	**Kislovodsk**	**78.89**	**313**	*e*P	**P**	**08 15 14.0**	**-1.1**
KIV				pmax	pmax		
	comp=Z,84nm,1.0s						
KIV				MLR	MLR		
	comp=Z,2µm,18.0s						
KIV	**Kislovodsk**	**78.89**	**313**	P	**P**	**08 15 13.8**	**-1.3**
KIV				IAmb	IAmb	08 15 24.2	
	comp=Z,23nm,0.8s						
NEY	**Neytrino**	**78.89**	**312**	*i* P	**P**	**08 15 15.0**	**-0.3**
NEY				pmax	pmax		
	comp=Z,2.0nm,0.8s						
I23K	**Minto, Yukon-K**	**78.95**	**25**	P	**P**	**08 15 16.1**	**+1.2**
	baz=269						
NEA2	**Nenana**	**79.07**	**26**	P	**P**	**08 15 16.7**	**+1.1**
	baz=269						
MCK	**McKinley**	**79.12**	**27**	P	**P**	**08 15 16.7**	**+0.8**
	baz=270						
VRH	**Novokhopyorsk**	**79.25**	**320**	*e*P	**P**	**08 15 15.5**	**-1.3**
VRH				pmax	pmax		
	comp=Z,90nm,1.8s						
SML	**Sawmill**	**79.40**	**29**	P	**P**	**08 15 17.5**	**0.0**
SML				pmax	pmax		
	comp=Z,76nm,1.4s						
SML	**Sawmill**	**79.40**	**29**	P	**P**	**08 15 17.4**	**0.0**
MDM	**Murphy Dome**	**79.43**	**26**	P	**P**	**08 15 17.1**	**-0.5**
MDM				IAmb	IAmb	08 15 20.5	
	comp=Z,13nm,0.7s						
TCOL	**CIGO, UAF Yank**	**79.59**	**26**	P	**P**	**08 15 19.0**	**+0.6**
	baz=270						
COLA	**College**	**79.59**	**26**	*i* P	**P**	**08 15 17.6**	**-0.8**
COLA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
POKR	**Poker Plat Res**	**79.77**	**25**	P	**P**	**08 15 20.2**	**+0.8**
	baz=271						
HDA	**Harding Lake**	**79.99**	**26**	P	**P**	**08 15 20.6**	**0.0**
	baz=271						
ILAR	**Eielson Array**	**80.01**	**26**	P	**P**	**08 15 20.6**	**-0.1**
	comp=Z,7.5nm,0.6s,baz=238,slow=4.9,SNR=116						
ILAR				PKKPbc	**PKKPbc**	**08 34 05.0**	**-2.8**
	comp=Z,0.3nm,0.6s,baz=128,slow=2.7,SNR=5.8						
ILAR				LR	LR	08 53 33.8	
	comp=Z,98nm,18.7s,baz=292,slow=38						
ILAR	**Eielson Array**	**80.01**	**26**	P	**P**	**08 15 18.9**	**-1.8**
KLMR	**Klimovskoe**	**80.17**	**330**	*e*P	**P**	**08 15 18.6**	**-3.0**
KLMR				pmax	pmax		
	comp=Z,54nm,0.8s						
KLMR	**Klimovskoe**	**80.17**	**330**	*e*P	**P**	**08 15 18.7**	**-2.9**
KLMR				AMP		08 15 21.8	
	comp=Z,54nm,0.8s						
M24K	**Tolsona, Glenn**	**80.41**	**28**	P	**P**	**08 15 24.6**	**+1.7**
	baz=272						
FYU	**Fort Yukon**	**80.64**	**24**	P	**P**	**08 15 23.6**	**-0.4**
FYU				IAmb	IAmb	08 15 34.3	
	comp=Z,42nm,1.4s						
PAX	**Paxson**	**80.70**	**28**	P	**P**	**08 15 24.2**	**-0.4**
PAX				pmax	pmax		
	comp=Z,13nm,1.0s						
PAX	**Paxson**	**80.70**	**28**	P	**P**	**08 15 24.2**	**-0.4**
TMCR	**Tamitsa**	**80.72**	**334**	*e*P	**P**	**08 15 23.7**	**-0.8**
TMCR				pmax	pmax		
	comp=Z,60nm,0.9s						
KOPT	**Kop Dagi**	**80.77**	**309**	P	**P**	**08 15 25.2**	**-0.4**
KOPT				IAmb	IAmb	08 15 37.6	
	comp=Z,23nm,1.2s						
MARD	**Mardin**	**80.78**	**306**	P	**P**	**08 15 23.9**	**-1.7**
MARD				IAmb	IAmb	08 15 27.1	
	comp=Z,28nm,0.6s						
VORD	**Divnogorie**	**80.80**	**320**	*e*P	**P**	**08 15 24.0**	**-1.1**
VORD				pmax	pmax		
	comp=Z,60nm,1.8s						
BMAR	**Burnt Mountain**	**80.85**	**23**	P	**P**	**08 15 26.4**	**+1.2**
VSR	**Storozhevoye**	**80.86**	**320**	*e*P	**P**	**08 15 24.2**	**-1.3**
VSR				pmax	pmax		
	comp=Z,50nm,1.8s						
LPSR	**Galich'ya Gora**	**80.91**	**322**	*e*P	**P**	**08 15 24.8**	**-0.9**
LPSR				pmax	pmax		
	comp=Z,50nm,0.7s						
RIDG	**Independent Ri**	**80.94**	**27**	P	**P**	**08 15 25.3**	**-0.5**
RIDG				IAmb	IAmb	08 15 42.9	
	comp=Z,24nm,0.8s						
N25K	**Chitina, Valde**	**81.18**	**29**	P	**P**	**08 15 28.9**	**+1.8**
	baz=274						
SCRK	**Sand Creek**	**81.30**	**27**	P	**P**	**08 15 28.9**	**+1.1**
	baz=274						
MOS	**Moscow**	**81.45**	**325**	*e*P	**P**	**08 15 26.6**	**-1.9**
MOS				*e*		08 15 46.9	
MOS				pmax	pmax		
	comp=Z,59nm,0.8s						
MOS				MLR	MLR		
	comp=Z,900nm,21.0s						
OBN	**Obninsk**	**82.10**	**325**	*i* P	**P**	**08 15 28.9**	**-3.1**
OBN				*i* S	S	08 25 30.6	-12
OBN				pmax	pmax		
	comp=Z,33nm,1.6s						
OBN				MLR	MLR		
	comp=Z,693nm,21.0s						
APA	**Apatity**	**82.34**	**337**	⇓*i*P	**P**	**08 15 32.9**	**-0.1**
APA				pmax	pmax		
	comp=Z,31nm,0.8s						
BCAR	**Beaver Creek A**	**82.36**	**27**	P	**P**	**08 15 34.1**	**+0.8**
MALT	**Malatya**	**82.53**	**308**	P	**P**	**08 15 35.5**	**+0.7**
YAH	**Yahtse**	**82.68**	**30**	P	**P**	**08 15 36.2**	**+1.0**
YAH				IAmb	IAmb	08 15 40.2	
	comp=Z,27nm,0.8s						
OPO	**Ambohidratompo**	**82.92**	**250**	P	**P**	**08 15 36.4**	**-0.8**
	comp=Z,6.7nm,0.7s,baz=66,slow=12						
GAZ	**Gaziantep**	**83.62**	**307**	P	**P**	**08 15 39.7**	**-0.6**
GAZ				IAmb	IAmb	08 15 41.3	
	comp=Z,22nm,1.0s						
KVT	**Kavak**	**84.03**	**311**	P	**P**	**08 15 43.6**	**+1.3**
EPYK	**Eagle Plains**	**84.05**	**24**	P	**P**	**08 15 43.0**	**+1.1**
	baz=280						
EPYK	**Eagle Plains**	**84.05**	**24**	P	**P**	**08 15 43.0**	**+1.1**
EPYK				IAmb	IAmb	08 15 43.9	
	comp=Z,26nm,0.9s						
ARCES	**ARCESS Array B**	**84.86**	**340**	P	**P**	**08 15 46.0**	**+0.1**
	comp=Z,38nm,0.6s,baz=80,slow=6.6,SNR=117						
ARCES	**ARCESS Array B**	**84.86**	**340**	P	**P**	**08 15 46.0**	**+0.1**
HAMF	**Hammerfest**	**85.19**	**341**	*e*P	**P**	**08 15 47.9**	**+0.4**
MMAI	**Mount Meron Ar**	**85.66**	**303**	LR	LR	08 59 15.5	
	comp=Z,213nm,19.9s,baz=100,slow=39						
KTK1	**Kautokeino**	**85.78**	**339**	*e*P	**P**	**08 15 50.1**	**-0.4**
BRTR	**Keskin Array B**	**86.04**	**309**	P	**P**	**08 15 51.8**	**-0.8**
	comp=Z,3.4nm,0.7s,baz=122,slow=4.4,SNR=12						
BRTR				LR	LR	09 00 00.8	
	comp=Z,240nm,20.2s,baz=72,slow=40						
FINES	**FINESS Array B**	**86.54**	**332**	P	**P**	**08 15 53.5**	**-0.8**
	comp=Z,24nm,0.6s,baz=75,slow=4.9,SNR=177						
FINES				LR	LR	08 58 39.0	
	comp=Z,647nm,18.8s,baz=84,slow=38						
FINES	**FINESS Array B**	**86.54**	**332**	P	**P**	**08 15 53.0**	**-1.3**
TRO	**Tromso**	**87.05**	**340**	*e*P	**P**	**08 15 56.3**	**-0.3**
AKASG	**Malin Array Be**	**87.15**	**321**	P	**P**	**08 15 56.0**	**-1.6**
	comp=Z,4.8nm,0.5s,baz=58,slow=5.5,SNR=29						
AKASG				LR	LR	08 59 36.6	
	comp=Z,429nm,18.9s,baz=75,slow=39						
AKASG	**Malin Array Be**	**87.15**	**321**	P	**P**	**08 15 56.0**	**-1.6**
AKASG	**Malin Array Be**	**87.15**	**321**	P	**P**	**08 15 55.9**	**-1.7**
AKBB	**Malin Array Si**	**87.15**	**321**	*ce*P	**P**	**08 15 55.6**	**-2.0**
AKBB	**Malin Array Si**	**87.15**	**321**	P	**P**	**08 15 56.3**	**-1.3**
AKBB				IAmb	IAmb	08 16 05.5	
	comp=Z,10nm,0.8s						
MNK	**Minsk**	**87.16**	**325**	*i* P	**P**	**08 16 01.8**	**+4.3**
	comp=E,1.0nm,0.7s						
MNK				*i* P	**P**	**08 16 01.8**	**+4.3**
	comp=N,15nm,0.7s						
MNK				*i* P	**P**	**08 16 01.8**	**+4.3**
	comp=Z,8.0nm,0.7s						
MNK				*i* pP	sP	08 16 23.4	+3.8
MNK				*i* sP	pP	08 16 40.1	+27
MNK				*i* PP	**PP**	**08 19 22.5**	**+1.0**
MNK				*i* PPP	PPP	08 21 22.2	
MNK				*i* S	S	08 26 21.3	-11
MNK				*i* ScS	**ScS**	**08 26 42.4**	**+2.6**
MNK				*i* sS	**sS**	**08 27 00.4**	**+0.3**
MNK				*i* SS	SS	08 32 44.6	+28
MNK				*i* SSS	SSS	08 35 57.6	
MNK				*i* SKKS	**SKKSdf**	**08 40 45.9**	**-3.1**
MNK				*i* LQ	LQ	08 46 27.7	
MNK				*i* LR	LR	08 50 23.6	
MNK				*i* LRM	MLR	08 56 48.8	
	comp=N,686nm,19.7s						
MNK				*i* LRM	MLR	08 56 52.4	
	comp=E,98nm,19.7s						
MNK				*i* LRM	MLR	08 56 53.4	
	comp=Z,514nm,19.7s						
KIEV	**Kiev**	**87.17**	**321**	P	**P**	**08 15 54.0**	**-3.6**
PPT	**Papeete**	**87.26**	**108**	LR	LR	08 47 40.1	
	comp=Z,303nm,21.4s,baz=287,slow=30						
PPT2	**Papeete2**	**87.26**	**108**	*e*S	**S**	**08 26 32.0**	**-2.9**
	comp=Z,408nm,26.0s						
PPT2				*e*SS	**SS**	**08 32 16.3**	**-4.2**
	comp=Z,173nm,25.0s						
PPT2	**Papeete2**	**87.26**	**108**	*e*LR	LR	08 43 48.9	
	comp=Z,783nm,23.5s,baz=285						
IDID	**Didziasalis**	**87.63**	**326**	*e*P	**P**	**08 15 59.6**	**-0.1**
NACGM	**Naroch**	**87.70**	**325**	*i* P	**P**	**08 15 59.8**	**-0.3**
NACGM				*i* P	**P**	**08 15 59.8**	**-0.3**
NACGM				*i* P	**P**	**08 15 59.8**	**-0.3**
NACGM				*i* PP	PP	08 19 11.8	-14
NACGM				*i* PPP	PPP	08 21 16.0	
NACGM				*i* S	SKSac	08 26 10.3	-13
NACGM				*i* SSS	SSS	08 35 59.6	
NACGM				*i* LQ	LQ	08 49 42.6	
NACGM				*i* LR	LR	08 56 33.0	
C36M	**Paulatuk**	**87.85**	**20**	P	**P**	**08 16 01.0**	**+0.5**
	baz=292						
C36M	**Paulatuk**	**87.85**	**20**	P	**P**	**08 16 00.8**	**+0.4**
IIGN	**Ignalina**	**87.91**	**326**	*e*P	**P**	**08 16 00.9**	**-0.2**
ISAL	**Salakas**	**87.91**	**326**	*e*P	**P**	**08 16 00.9**	**-0.1**
KIS	**Kishinev**	**88.17**	**317**	*e*P	P	08 16 11.0	+8.5
KIS				LRM	MLR	08 58 51.0	
	comp=Z,350nm,19.0s						
KIS	**Kishinev**	**88.17**	**317**	*e*P	P	08 16 11.0	+8.5
MTSE	**Matsula**	**88.32**	**329**	*e*P	**P**	**08 16 01.0**	**-1.9**
TBI	**Tubuai**	**88.46**	**114**	*e*S	**S**	**08 26 43.8**	**-2.2**
	comp=Z,390nm,26.2s						
TBI				*e*SS	**SS**	**08 32 34.4**	**-3.2**
	comp=Z,273nm,28.0s						
TBI				*e*LQ	LQ	08 40 36.7	
	comp=Z,341nm,37.8s						
TBI				*e*LR	LR	08 44 24.0	
	comp=Z,898nm,27.2s,baz=290						
KIBK	**Kibwezi**	**88.73**	**267**	P	**P**	**08 16 06.3**	**+0.3**
	SNR=5.3						
STEI	**Steigen**	**88.92**	**339**	*e*P	**P**	**08 16 04.5**	**-1.1**
EUNU	**Eureka**	**88.92**	**5**	P	**P**	**08 16 05.9**	**+0.4**
EUNU				IAmb	IAmb	08 16 29.1	
	comp=Z,26nm,1.4s						
MAW	**Mawson**	**89.10**	**200**	LR	LR	08 50 20.6	
	comp=Z,241nm,21.9s,baz=61,slow=32						
PABE	**Paberze**	**89.11**	**326**	*e*P	**P**	**08 16 06.6**	**-0.1**
FAUS	**Fauske**	**89.12**	**339**	*e*P	**P**	**08 16 05.9**	**-0.6**
VNDA	**Vanda**	**89.24**	**173**	P	**P**	**08 16 06.8**	**-0.1**
	comp=Z,7.8nm,1.0s,baz=344,slow=7.2,SNR=5.9						
VNDA				LR	LR	08 57 36.8	
	comp=Z,265nm,18.1s,baz=345,slow=36						
KMBO	**Kilima Mbogo**	**89.32**	**269**	P	**P**	**08 16 08.1**	**-0.8**
	comp=Z,8.2nm,0.9s,baz=42,slow=4.3,SNR=11						
KMBO				LR	LR	08 55 33.5	
	comp=Z,278nm,19.1s,baz=94,slow=35						
KMBO	**Kilima Mbogo**	**89.32**	**269**	*i* P	**P**	**08 16 09.3**	**+0.4**
KMBO				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MOR8	**Moi Rana**	**89.91**	**338**	*e*P	**P**	**08 16 08.7**	**-1.6**
KONS	**Konsvik**	**90.26**	**338**	*e*P	**P**	**08 16 11.8**	**-0.1**
BURAR	**Bucovina Array**	**90.42**	**318**	P	**P**	**08 16 11.6**	**-1.6**
BURAR	**Bucovina Array**	**90.42**	**318**		**P**	**08 16 11.6**	**-1.6**
BUR08	**Bucovina Ar. S**	**90.42**	**318**	P	**P**	**08 16 11.9**	**-1.3**
BUR08				IAmb	IAmb	08 16 19.2	
	comp=Z,14nm,1.4s						
NSS	**Namsos**	**91.55**	**337**	*e*P	**P**	**08 16 17.1**	**-0.8**
KOLS	**Kolonicke sedl**	**91.95**	**320**	*e*P	**P**	**08 16 20.4**	**+0.2**
KOLS	**Kolonicke sedl**	**91.95**	**320**	*e*P	**P**	**08 16 20.4**	**+0.2**
UZH	**Uzhgorod**	**92.03**	**320**	*e*P	**P**	**08 16 20.2**	**-0.3**
UZH				*e*		08 16 41.4	
NC303	**NORSAR Array S**	**93.26**	**334**	P	**P**	**08 16 24.8**	**-1.1**
NC602	**NORSAR Array S**	**93.40**	**333**	*e*P	**P**	**08 16 25.9**	**-0.6**
NORES	**NORESS Array B**	**93.40**	**333**	P	**P**	**08 16 26.0**	**-0.6**
NORES				pmax	pmax		
	comp=Z,4.0nm,0.4s						
NB2	**NORSAR Subarra**	**93.41**	**334**	P	**P**	**08 16 25.4**	**-1.3**
	comp=Z,5.8nm,0.7s,baz=65,slow=4.6						
NB2	**NORSAR Subarra**	**93.41**	**334**	P	**P**	**08 16 25.4**	**-1.3**
	baz=65,slow=4.6						
NOA	**NORSAR Array B**	**93.41**	**334**	P	**P**	**08 16 25.4**	**-1.3**
	comp=Z,4.4nm,0.6s,baz=66,slow=4.5,SNR=24						
TULEG	**Thule**	**93.56**	**4**	P	**P**	**08 16 27.4**	**+0.4**
TULEG				IAmb	IAmb	08 16 27.9	
	comp=Z,8.6nm,0.9s						
DOMB	**Dombas**	**93.86**	**335**	*e*P	**P**	**08 16 28.2**	**-0.5**
OSL	**Oslo**	**94.13**	**333**	*e*P	**P**	**08 16 29.6**	**-0.2**
MOL	**Molde**	**94.22**	**336**	*e*P	**P**	**08 16 29.0**	**-1.2**
VYHS	**Vyhne**	**94.25**	**321**	*e*P	**P**	**08 16 31.3**	**+0.5**
VYHS	**Vyhne**	**94.25**	**321**	*e*P	**P**	**08 16 31.3**	**+0.5**
YKA	**Yellowknife Ar**	**94.34**	**24**	P	**P**	**08 16 31.9**	**+1.1**
	comp=Z,12nm,0.6s,baz=302,slow=3.9,SNR=188						
YKA				PKKPbc	**PKKPdf**	**08 33 29.5**	**-1.9**
	comp=Z,0.3nm,0.5s,baz=115,slow=3.4,SNR=5.6						
AKN	**Aaknes**	**94.64**	**336**	*e*P	**P**	**08 16 32.3**	**+0.1**
SKAR	**Skarslia**	**94.84**	**334**	*e*P	**P**	**08 16 32.9**	**-0.4**
TAOE	**Nuku Hiva Isla**	**94.84**	**98**	*e*PS	PS	08 29 11.3	+3.3
	comp=Z,421nm,29.5s						
TAOE	**Nuku Hiva Isla**	**94.84**	**98**	*e*LR	LR	08 47 24.3	
	comp=Z,985nm,25.6s						
OSTC	**Ostas**	**95.12**	**323**	AMS	AMS	09 02 10.0	
	comp=Z,900nm,21.5s						
UPC	**Upice**	**95.26**	**323**	AMS	AMS	09 02 00.0	
	comp=Z,600nm,17.7s						
BLS5	**Blasjo**	**96.27**	**334**	*e*P	**P**	**08 16 39.0**	**-0.8**
PRU	**Pruhonice**	**96.33**	**323**	AMS	AMS	09 02 50.0	
	comp=Z,700nm,21.3s						
CLL	**Collm**	**96.70**	**325**	*e*SP	SP	08 29 16.0	-2.8
CLL				*e*SSSS		08 41 42.0	
CLL				Lm	MLR	09 04 00.0	
	comp=Z,500nm,19.3s						
KHC	**Kasperske Hory**	**97.25**	**322**	*e*P	**P**	**08 16 43.2**	**-1.2**
KHC				MLR	MLR		
	comp=Z,400nm,18.5s						
KHC	**Kasperske Hory**	**97.25**	**322**	*e*P	**P**	**08 16 43.2**	**-1.2**
KHC				*e*x	x	08 16 50.2	
KHC				AMS	AMS	09 03 10.0	
	comp=Z,400nm,18.5s						
GERES	**GERESS Array B**	**97.29**	**322**	P	**P**	**08 16 44.3**	**-0.5**
	comp=Z,1.9nm,0.7s,baz=57,slow=22,SNR=2.2						
GERES				LR	LR	09 02 19.7	
	comp=Z,415nm,21.7s,baz=109,slow=36						
QSPA	**South Pole Qui**	**99.45**	**180**	P	**Pdif**	**08 16 53.9**	**0.0**
	comp=Z,1.5nm,1.0s,baz=156,slow=10.0,SNR=2.6						
RKT	**Rikitea**	**101.61**	**112**	*e*LR	LR	08 50 31.4	
	comp=Z,703nm,25.5s						
NVAR	**Mina Array Bea**	**103.23**	**47**	Pdiff	**Pdif**	**08 17 12.9**	**+1.3**
	comp=Z,0.8nm,0.6s,baz=293,slow=4.9,SNR=5.7						
SNAA	**Sanae**	**110.75**	**195**	PKiKP	**PKiKP**	**08 21 42.5**	**-1.1**
VNA2	**Neumayer--Watz**	**112.37**	**195**	PKiKP	**PKiKP**	**08 21 47.0**	**+0.4**
	baz=1.2,slow=9.6						
VNA3	**Neumayer Olymp**	**112.72**	**194**	PKiKP	**PKiKP**	**08 21 46.2**	**-1.1**
VNA1	**Neumayer--Stat**	**112.77**	**195**	PKiKP	**PKiKP**	**08 21 46.3**	**-1.0**
TXAR	**Lajitas Array**	**118.19**	**49**	PKP	**PKiKP**	**08 22 00.5**	**+1.3**
	comp=Z,0.3nm,0.5s,baz=3.7,slow=3.3,SNR=13						
TXAR				PKKPbc	**PKKPbc**	**08 32 18.8**	**+0.3**
	comp=Z,0.5nm,0.8s,baz=141,slow=6.1,SNR=4.4						
TORD	**Torodi Ar. Bea**	**120.61**	**291**	PKP	**PKPdf**	**08 22 03.3**	**-0.7**
	comp=Z,2.1nm,0.6s,baz=32,slow=2.0,SNR=8.3						
TORD	**Torodi Ar. Bea**	**120.61**	**291**		**PKPdf**	**08 22 03.7**	**-0.4**
KIC	**Kosan Boka**	**128.78**	**286**	*e*PKP1	**PKiKP**	**08 22 20.2**	**-0.2**
	comp=Z,4.9nm,0.6s						
TIC	**Toumodi**	**128.96**	**287**	*e*PKP1	**PKiKP**	**08 22 21.6**	**+0.8**
LIC	**Lamto**	**129.09**	**286**	*e*PKP1	**PKiKP**	**08 22 20.8**	**-0.2**
	comp=Z,11nm,0.6s						
PLCA	**Paso Flores**	**145.54**	**157**	PKPbc	**PKPab**	**08 22 50.6**	**+0.3**
	comp=Z,12nm,0.8s,baz=233,slow=3.1,SNR=43						
PLCA	**Paso Flores**	**145.54**	**157**	*e*P	**PKPab**	**08 22 50.8**	**+0.4**
MOTC	**Monteria, Cord**	**151.46**	**51**	*e*P	**PKPdf**	**08 23 02.2**	**+2.1**
URIC	**Uribia, Colomb**	**152.06**	**41**	*e*P	**PKiKP**	**08 23 08.2**	**+0.3**
UREC	**San Jos de Ur**	**152.20**	**52**	*e*P	**PKiKP**	**08 23 08.2**	**-0.1**
SMLC	**San Martn de**	**152.65**	**49**	*e*P	**PKPbc**	**08 23 08.6**	**-0.3**
OTAV	**Otavalo**	**153.43**	**70**	*e*P	**PKiKP**	**08 23 12.6**	**+1.1**
OTAV	**Otavalo**	**153.43**	**70**	*e*P	**PKPdf**	**08 23 05.0**	**+1.3**
OCAC	**Ocana**	**153.58**	**49**	*e*P	**PKiKP**	**08 23 11.6**	**+0.3**
YOTC	**Yotoco, Valle**	**153.65**	**60**	*e*P	**PKiKP**	**08 23 11.9**	**+0.5**
PTBC	**PUERTO BERRIO,**	**153.78**	**53**	*e*P	**PKiKP**	**08 23 11.4**	**-0.2**
BBAC	**Balboa, Cauca**	**153.80**	**65**	*e*P	**PKiKP**	**08 23 12.5**	**+0.6**
GUY2C	**Guyana, Caldas**	**153.81**	**57**	*e*P	**PKiKP**	**08 23 13.3**	**+1.1**
NORC	**Norcasia**	**154.03**	**55**	*e*P	**PKiKP**	**08 23 12.7**	**+0.5**
GCUF	**Volcan Galeras**	**154.05**	**67**	*e*P	**PKiKP**	**08 23 14.8**	**+2.0**
TOLC	**Tolima**	**154.20**	**58**	*e*P	**PKiKP**	**08 23 14.2**	**+1.4**
PCON	**Cinco Dias**	**154.41**	**64**	*e*P	**PKiKP**	**08 23 15.1**	**+1.5**
MARP	**Paez Belalcaza**	**154.56**	**62**	*e*P	**PKiKP**	**08 23 15.1**	**+1.5**
ORTC	**Ortega, Tolima**	**154.63**	**59**	*e*P	**PKiKP**	**08 23 14.1**	**+0.7**
PAMC	**Pamplona, Colo**	**154.63**	**49**	*e*P	**PKiKP**	**08 23 15.3**	**+1.4**
BARC	**Barichara**	**154.74**	**51**	*e*P	**PKiKP**	**08 23 14.9**	**+1.1**
ROSC	**El Rosal**	**154.89**	**56**	PKPab	**PKPab**	**08 23 29.5**	**-0.2**
	comp=Z,6.8nm,0.6s,baz=130,slow=16,SNR=4.2						
SDV	**Santo Domingo**	**155.03**	**43**	*e*P	**PKPdf**	**08 23 11.1**	**+5.5**
SDV	**Santo Domingo**	**155.03**	**43**	*e*P	**PKPdf**	**08 23 07.1**	**+1.6**
RUSC	**La Rusia**	**155.25**	**52**	*e*P	PKPdf	08 23 17.6	+11
FLOC	**Florencia**	**155.42**	**64**	*e*P	PKPdf	08 23 15.5	+10
CHIC	**Chingaza**	**155.49**	**56**	*e*P	**PKPdf**	**08 23 07.7**	**+1.2**
MACC	**Macarena, Meta**	**156.73**	**61**	*e*P	**PKPab**	**08 23 38.3**	**+1.2**
CZSB	**Cruzeiro do Su**	**161.05**	**86**	*e*P	**PKPdf**	**08 23 13.9**	**+1.3**
NBRF	**Rio Formoso -**	**161.71**	**271**	*e*P	**PKPdf**	**08 23 14.7**	**+1.4**
CPUP	**Villa Florida**	**162.98**	**169**	PKPab	**PKPab**	**08 24 03.4**	**-0.3**
	comp=Z,1.7nm,0.8s,baz=102,slow=3.3,SNR=3.1						
CPUP	**Villa Florida**	**162.98**	**169**	*e*P	**PKPdf**	**08 23 17.4**	**+3.2**
LPAZ	**La Paz**	**164.38**	**117**	PKP	**PKPdf**	**08 23 16.0**	**-0.6**
	comp=Z,0.5nm,0.5s,baz=337,slow=4.3,SNR=4.5						
LPAZ				PKPab	**PKPab**	**08 24 12.0**	**+0.9**
	comp=Z,5.8nm,1.1s,baz=258,slow=6.0,SNR=4.6						
LPAZ	**La Paz**	**164.38**	**117**	*e*P	**PKPdf**	**08 23 18.2**	**+1.6**
NAN01	**Guarapari, ES**	**164.53**	**237**	*e*P	**PKPdf**	**08 23 17.1**	**+1.2**
NBPS	**Pedro II - PI**	**166.86**	**292**	*e*P	**PKPdf**	**08 23 20.9**	**+2.8**

IDC 06 08:09:32.7±1.0**, 33°.28N**×**140°.08E, h172**^{km}±7^{km}**, mb3.2**/3**, mb1 3.4**/3**, mb1mx2.9**/46**, mbtmp3.6**/3**, Error ellipse: s-maj=34.6km s-min=11.9km az=57.0, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**0.29**	**237**	P	Pn	08 09 56.5	+0.7
	19nm,0.3s,baz=53,slow=23,SNR=7.6						
JHJ				S	Sn	08 10 14.3	+0.8
	26nm,0.3s,baz=252,slow=23,SNR=2.2						
MKAR	**Makanchi Array**	**45.28**	**305**	P	P	08 17 32.9	-0.1
	0.9nm,0.8s,baz=76,slow=6.1,SNR=3.2						
WRA	**Warramunga Arr**	**53.21**	**187**	P	P	08 18 33.1	-0.1
	0.3nm,0.4s,baz=4.5,slow=7.6,SNR=6.9						
ILAR	**Eielson Array**	**53.26**	**31**	P	P	08 18 32.9	-0.2
	0.7nm,0.9s,baz=270,slow=7.2,SNR=2.5						

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*NEIC **06** 08:32:08.8±2.2, 16°.99N±0°.09×95°.44W±0°.05, h121^{km}±10^{km}, Error ellipse: s-maj=13.4km s-min=6.5km az=195.0*

*MEX **06** 08:32:09.3±1.0, 17°.07N×95°.41W, h112^{km}±9^{km}, MD4.5*

*IDC **06** 08:32:09.4±0.6, 17°.18N×94°.93W, h109^{km}±6^{km}, mb3.5/8, mb1 3.8/9, mb1mx3.6/34, mbtmp3.9/9, Error ellipse: s-maj=39.1km s-min=19.9km az=65.0*

ISC 06 08:32:08.8±0.7**, 17°.02N**±0°.05×**95°.37W**±0°.04**, h109**^{km}±6^{km}**, n103,** σ1^{s}.08/117**, mb4.4**/20**, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMIG	**Matias Romero**	0.47	81	P	Pn	08 32 25.4	0.0
	baz=262,slow=7.3						
CMIG				S	Sn	08 32 36.8	-1.1
	629nm,0.3s,baz=336,slow=23,SNR=32						
CMIG	**Matias Romero**	0.47	81	*i* P	Pn	08 32 25.4	0.0
CMIG				*i* S	Sn	08 32 37.1	-0.8
CMIG	**Matias Romero**	0.47	81		Pn	08 32 25.4	0.0
CMIG					Sn	08 32 37.1	-0.8
OXBJ	**Oaxaca**	1.30	272	*i* P	Pn	08 32 34.2	+0.7
OXBJ				*i* S	Sn	08 32 52.5	+0.3
OXBJ	**Oaxaca**	1.30	272		Pn	08 32 34.2	+0.7
OXBJ					Sn	08 32 52.5	+0.3
VHO	**Vista Hermosa**	1.31	273	*i* P	Pn	08 32 34.2	+0.7
VHO				*i* S	Sn	08 32 52.8	+0.4
HUIG	**Huatulco**	1.43	210	*i* P	Pn	08 32 34.3	-0.5
HUIG				*i* S	Sn	08 32 54.7	+0.2
HUIG	**Huatulco**	1.43	210		Pn	08 32 34.3	-0.5
HUIG					Sn	08 32 54.7	+0.2
TOIG	**Toxpalan**	1.94	304	*i* P	Pn	08 32 41.8	+0.6
TOIG				*i* S	Sn	08 33 05.7	-0.2
TOIG				*i* S	Sn	08 33 05.7	-0.2
PEIG	**Puerto Escondi**	1.99	240	*i* P	Pn	08 32 40.3	-1.4
PEIG				*i* S	Sn	08 33 06.6	-0.1
YOIG	**Yosondua**	2.09	266	*i* P	Pn	08 32 43.4	+0.2
YOIG				*i* S	Sn	08 33 09.2	-0.3
TGIG		2.16	96	*i* P	Pn	08 32 44.0	+0.1
TGIG				*i* P	Pn	08 32 44.0	+0.1
TGIG		2.16	96		Pn	08 32 44.0	+0.1
PNIG	**Pinotepa**	2.72	257	*i* P	Pn	08 32 49.8	-1.3
PNIG				*i* S	Sn	08 33 21.1	-2.5
PNIG	**Pinotepa**	2.72	257		Pn	08 32 49.8	-1.3
PNIG					Sn	08 33 21.1	-2.5
TLIG	**Tlapa**	3.11	281		Pn	08 32 57.2	+0.8
CCIG	**Comitan**	3.18	103		Pn	08 32 58.3	+0.9
HUEH	**Huehuetenango**	4.08	114		Pn	08 33 10.5	+1.0
UNM	**Universidad Na**	4.29	303		Pn	08 33 12.6	+0.2
RTAL	**Retalhuleu**	4.32	125	Pn	Pn	08 33 14.4	+1.9
PETF	**Flores**	5.26	90		Pn	08 33 24.9	-0.4
MOIG	**Morelia**	6.13	296	Pn	Pn	08 33 38.1	+0.9
ESQI	**Esquipulas**	6.29	112	Pn	Pn	08 33 40.0	+0.7
MTO3	**Montecristo**	6.34	113	Pn	Pn	08 33 39.7	-0.4
TEIG	**Tepich**	7.44	64	Pn	Pn	08 33 51.8	-2.9
ZAIG	**Zacatecas**	8.87	311		Pn	08 34 14.9	+0.5
ACON	**Acoyapa**	11.07	116	Pn	Pn	08 34 45.2	+1.1
HDC	**Heredia**	12.97	121	Pn	Pn	08 35 10.1	+0.8
JCT	**Junction City**	14.00	344		Pn	08 35 21.6	-0.9
TX31	**Lajitas Ar. Si**	14.43	330	Pn	Pn	08 35 29.1	+1.1
TX32	**Lajitas Array**	14.43	330	Pn	Pn	08 35 28.9	+0.8
TXAR	**Lajitas Array**	14.43	330	P	Pn	08 35 29.3	+1.2
	0.1nm,0.3s,baz=148,slow=13,SNR=13						
TXAR	**Lajitas Array**	14.43	330	Pn	Pn	08 35 28.6	+0.6
237A	**Washetta, Mont**	14.92	359	P	P	08 35 36.7	-0.3
WHTX	**Lake Whitney,**	15.03	353	Pn	Pn	08 35 35.5	0.0
346A	**Big Creek Wild**	15.28	19	P	P	08 35 40.1	-0.9
346A				IAmb	IAmb	08 35 55.6	
	comp=Z,35nm,1.0s						
ABTX	**Abilene, Hawle**	16.01	347		P	08 35 49.4	+0.3
Z38A	**Mt. Pleasant**	16.18	1		P	08 35 50.7	-0.2
Z35A	**Perchaven, San**	16.33	354	P	P	08 35 52.0	-0.6
Z35A				IAmb	IAmb	08 35 54.5	
	comp=Z,19nm,0.8s						
553A	**Crawfordville**	16.49	35	P	P	08 35 54.6	+0.3
WLAR	**White Oak Lake**	16.72	7	P	Pn	08 35 56.1	-0.4
WLAR				IAmb	IAmb	08 35 59.3	
	comp=Z,17nm,0.8s						
X37A	**Clayton**	17.50	360	P	Pn	08 36 06.0	0.0
X37A				IAmb	IAmb	08 36 09.6	
	comp=Z,34nm,1.4s						
MIAR	**Mount Ida**	17.53	5	P	P	08 36 05.3	-0.6
LRAL	**Lakeview Retre**	17.65	24	P	P	08 36 06.7	-0.4
WMOK	**Wichita Mounta**	17.91	351	P	Pn	08 36 10.2	-0.7
W35A	**Tecumseh**	18.11	356	P	P	08 36 11.5	-0.8
W39A	**Magazine**	18.16	4	P	P	08 36 13.1	+0.3
W39A				IAmb	IAmb	08 36 13.9	
	comp=Z,14nm,0.7s						
WHAR	**Wooly Hollow**	18.41	8	P	P	08 36 15.7	+0.3
OK025	**Westminster Rd**	18.57	355	P	P	08 36 17.7	+0.4
AMTX	**Amarillo**	18.67	344	P	Pn	08 36 19.3	-0.7
BCOK	**Bluff Creek, N**	18.67	354	P	P	08 36 18.5	+0.1
OK029	**Liberty Lake**	18.80	355	P	P	08 36 19.8	0.0
OK029				IAmb	IAmb	08 36 20.3	
	comp=Z,14nm,0.5s						
TUL1	**Leonard**	18.82	359	P	P	08 36 19.8	-0.2
TUL1				IAmb	IAmb	08 36 20.2	
	comp=Z,24nm,0.7s						
OK030	**Cody Creek RV**	18.88	356	P	P	08 36 19.4	-1.2
OK030				IAmb	IAmb	08 36 21.5	
	comp=Z,32nm,0.9s						
X48A	**Hartselle**	18.89	22	P	P	08 36 19.6	-1.2
OK031	**S. Brethren Rd**	18.91	356	P	P	08 36 20.8	-0.1
OK031				IAmb	IAmb	08 36 21.9	
	comp=Z,29nm,0.9s						
FCAR	**Ozark Folk Cen**	19.02	8	P	P	08 36 21.7	-0.5
FCAR				IAmb	IAmb	08 36 22.6	
	comp=Z,20nm,0.6s						
LPAR	**Lepanto**	19.05	13	P	P	08 36 22.4	-0.1
QUOK	**Quay**	19.12	357	P	P	08 36 22.9	-0.3
HHAR	**Hobbs**	19.23	3	P	P	08 36 24.0	-0.4
HHAR				IAmb	IAmb	08 36 24.6	
	comp=Z,18nm,0.8s						
LCAR	**Lake Charles**	19.34	10	P	P	08 36 24.9	-0.8
LCAR				IAmb	IAmb	08 36 25.6	
	comp=Z,15nm,0.6s						
U38A	**Gravette**	19.36	2	P	P	08 36 25.4	-0.5
U38A				IAmb	IAmb	08 36 27.0	
	comp=Z,15nm,0.6s						
U40A	**Yellville**	19.39	6		P	08 36 26.6	+0.4
GOGA	**Godfrey**	19.53	31	P	P	08 36 25.7	-1.9
Y52A	**Lilburn**	19.61	29	P	P	08 36 27.4	-1.2
Y52A				IAmb	IAmb	08 36 40.2	
	comp=Z,18nm,0.9s						
T35A	**Sooner Cattle**	19.85	357		P	08 36 30.7	-0.4
PBMO	**Poplar Bluff**	20.16	12	P	P	08 36 34.0	-0.5
WVT	**Waverly**	20.18	18	P	P	08 36 33.8	-0.9
W50A	**Signal Mountai**	20.21	24	P	P	08 36 32.9	-2.2
MGMO	**Mountain Grove**	20.25	7	P	P	08 36 35.0	-0.4
MGMO				IAmb	IAmb	08 36 38.5	
	comp=Z,9.6nm,0.6s						
T42A	**Van Buren**	20.29	10	P	P	08 36 35.2	-0.6
T42A				IAmb	IAmb	08 36 36.3	
	comp=Z,18nm,1.0s						
ANMO	**Albuquerque**	20.42	333	P	Pn	08 36 39.2	-1.4
	comp=Z,1.5nm,0.6s,baz=135,slow=12,SNR=11						
S39A	**Bolivar**	20.67	5		P	08 36 39.5	-0.5
HODGE	**Hodges**	20.79	32	P	P	08 36 39.4	-1.8
HODGE				IAmb	IAmb	08 36 39.8	
	comp=Z,14nm,0.6s						
T45A	**Paducah**	20.79	15	P	P	08 36 40.6	-0.6
T47A	**Sharon Grove**	21.19	19		P	08 36 43.8	-1.7
T47A				IAmb	IAmb	08 36 46.9	
	comp=Z,14nm,0.7s						
U49A	**Red Boiling Sp**	21.20	22	P	P	08 36 43.6	-2.0
TKL	**Tuckaleechee C**	21.24	27	P	P	08 36 43.4	-2.7
	comp=Z,4.9nm,0.7s,baz=181,slow=12,SNR=11						
TKL	**Tuckaleechee C**	21.24	27	P	P	08 36 43.9	-2.3
S44A	**Carbondale**	21.29	13	P	P	08 36 45.5	-1.1
S44A				IAmb	IAmb	08 36 46.9	
	comp=Z,23nm,0.8s						
SIUC	**Southern Illin**	21.32	14	P	P	08 36 45.8	-1.1
SIUC				IAmb	IAmb	08 36 47.0	
	comp=Z,16nm,0.7s						
R40A	**Maddies Statio**	21.37	7	P	P	08 36 46.3	-1.2
R40A				IAmb	IAmb	08 36 48.8	
	comp=Z,13nm,0.6s						
KSU1	**Kansas State U**	22.03	357	P	P	08 36 54.2	-0.3
KSU1				IAmb	IAmb	08 36 55.5	
	comp=Z,16nm,0.7s						
SDCO	**Great Sand Dun**	22.49	339	P	P	08 37 00.8	+1.2
OLIL	**Olney**	22.55	15	P	P	08 36 59.0	-0.8
OLIL				IAmb	IAmb	08 36 59.4	
	comp=Z,27nm,0.8s						
P38A	**Dawn**	22.58	4	P	P	08 36 58.2	-1.9
WCI	**Wyandotte Cave**	22.58	19	P	P	08 36 58.2	-1.9
WCI				IAmb	IAmb	08 36 58.9	
	comp=Z,11nm,0.7s						
P40A	**Paris**	22.62	7	P	P	08 36 59.1	-1.3
P40A				IAmb	IAmb	08 37 00.2	
	comp=Z,15nm,0.7s						
U54A	**Nelsons Funny**	22.84	29	P	P	08 37 00.7	-2.0
U54A				IAmb	IAmb	08 37 01.3	
	comp=Z,26nm,0.8s						
R50A	**Paris**	23.29	22	P	P	08 37 05.1	-1.9
R50A				IAmb	IAmb	08 37 05.3	
	comp=Z,7.8nm,0.5s						
P46A	**Rosedale**	23.61	16	P	P	08 37 09.1	-0.8
O44A	**Mansfield**	23.82	13	P	P	08 37 10.8	-0.9
P48A	**Milroy**	23.98	19	P	P	08 37 11.6	-1.6
P48A				IAmb	IAmb	08 37 12.1	
	comp=Z,14nm,0.6s						
Q52A	**Bidwell**	24.68	25	P	P	08 37 17.8	-1.8
Q52A				IAmb	IAmb	08 37 19.4	
	comp=Z,21nm,0.8s						
O49A	**Covington**	24.99	20	P	P	08 37 20.6	-1.7
PDAR	**Pinedale Array**	28.38	338	P	P	08 37 54.7	+1.7
	comp=Z,0.1nm,0.4s,baz=151,slow=11,SNR=2.4						
NVAR	**Mina Array Bea**	29.30	321	P	P	08 38 03.0	+1.7
	comp=Z,1.9nm,0.7s,baz=134,slow=8.7,SNR=14						
AGMN	**Agassiz Nation**	31.20	359	P	P	08 38 16.8	-0.8
AGMN				IAmb	IAmb	08 38 17.3	
	comp=Z,6.8nm,0.7s						
BOZ	**Bozeman (W)**	31.57	338	P	P	08 38 21.1	0.0
YKA	**Yellowknife Ar**	47.39	348	P	P	08 40 31.1	-0.6
	comp=Z,2.4nm,0.7s,baz=150,slow=7.7,SNR=36						
ILAR	**Eielson Array**	58.81	337	P	P	08 41 55.6	+0.2
	comp=Z,0.7nm,1.0s,baz=119,slow=7.3,SNR=5.7						
PLCA	**Paso Flores**	61.91	159	P	P	08 42 17.5	+0.6
	comp=Z,1.6nm,1.0s,baz=4.4,slow=6.4,SNR=4.1						
ARCES	**ARCESS Array B**	84.28	18	P	P	08 44 27.5	-0.6
	comp=Z,3.1nm,0.8s,baz=316,slow=5.1,SNR=4.4						

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*BEO **06** 08:52:22.8±0.8, 38°.46N×14°.78E, h0^{km}, ML4.3/9*

*PDG **06** 08:52:26.7±1.9, 38°.75N×15°.01E, h0^{km}±11^{km}, ML4.3/13, Error ellipse: s-maj=7.5km s-min=4.9km az=90.0*

*LDG **06** 08:52:26.0, 38°.64N×15°.07E, h273^{km}*

*MED_RC **06** 08:52:26.0±1.2, 38°.88N×15°.30E, h263^{km}±7^{km}, MW4.8/12, Moment Tensor Solution.Mantle waves: s12,c13; Duration: 1^{s}1 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.75±.16; $M_{\theta\theta}$0.74±.25; $M_{\phi\phi}$1.02±.26; $M_{r\theta}$-0.83±.23; $M_{\theta\phi}$1.05±.28; $M_{\phi r}$-0.10±.22; Best double couple: $M_0$2.03000×10^{16} NP1:ϕ_s205.00000°,δ38.00000°, λ-117.00000°. NP2:ϕ_s57.00000°,δ57.00000°, λ-71.00000°. Principal axes: T 2.0500, Plg10.0000°, Azm134.0000°; N -0.0200, Plg16.0000°, Azm226.0000°; P -2.0200, Plg71.0000°, Azm14.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

*ROM **06** 08:52:27.3±0.2, 38°.696N±0°.007×15°.16E±0°.01, h256^{km}±1^{km}, ML4.7/1, Mw4.7 Error ellipse: s-maj=1.2km s-min=0.8km az=114.0, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-1.18; $M_{\theta\theta}$1.10; $M_{\phi\phi}$0.08; $M_{r\theta}$-0.36; $M_{\theta\phi}$0.62; $M_{\phi r}$0.05; Fault plane solution: $M_0$1.33864×10^{16} NP1:ϕ_s234.00000°,δ39.00000°, λ-107.00000°. NP2:ϕ_s75.00000°,δ53.00000°, λ-77.00000°.*

*NEIC **06** 08:52:28.6±2.2, 38°.75N±0°.06×15°.10E±0°.08, h245^{km}±6^{km}, mb4.8/74, ML4.7(ROM) Error ellipse: s-maj=9.5km s-min=8.4km az=149.0*

*MOS **06** 08:52:28.2±1.0, 38°.70N×14°.99E, h258^{km}, mb4.7/48, Error ellipse: s-maj=4.1km s-min=2.5km az=86.2*

*IDC **06** 08:52:29.4±0.8, 38°.82N×14°.94E, h251^{km}±8^{km}, mb4.3/34, mb1 4.3/45, mb1mx4.3/55, mbtmp4.9/45, Error ellipse: s-maj=8.1km s-min=6.8km az=128.0*

*BJI **06** 08:52:29.8±0.0, 38°.95N×14°.98E, h271^{km}, mB4.9/31, mb4.7/50*

ISC 06 08:52:28.8±0.4, **38°.81N**±0°.03×**15°.00E**±0°.03, **h246**^{km}±3^{km}, **h246**^{km}**:pP-P, n1082,** σ**1^{s}32**/1206, **mb4.7**/127, **108C-91D, Sicily**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IST3	**Stromboli F**	0.18	92	⇓P	Pn	08 53 01.0	+0.4
IST3				S	S	08 53 25.9	+0.5
IST3				AML	AML		
	comp=E,7475µm,0.7s						
IST3				AML	AML		
	comp=N,14650µm,1.0s						
IST3				AML	AML		
	comp=N,14650µm,1.0s						
LLI	**Lipari**	0.36	186	⇓P	Pn	08 53 01.1	+0.2
IFIL	**Filicudi I Eol**	0.41	234	⇓P	Pn	08 53 01.1	+0.2
IFIL				S	S	08 53 26.6	+0.4
VPL	**Vulcano Piano**	0.43	181	⇓P	Pn	08 53 00.7	-0.4
VPL				S	S	08 53 26.4	0.0
VPL				AML	AML		
	comp=E,34350µm,0.5s						
VPL				AML	AML		
	comp=N,45650µm,0.8s						
VPL				AML	AML		
	comp=N,45650µm,0.8s						
VPL				AML	AML		
	comp=E,34350µm,0.5s						
MILZ	**Milazzo**	0.56	161	⇓P	Pn	08 53 00.6	-0.8
MILZ				S	S	08 53 25.4	-1.6
MILZ				AML	AML		
	comp=N,20550µm,0.6s						
MILZ				AML	AML		
	comp=N,20550µm,0.6s						
MILZ				AML	AML		
	comp=E,25550µm,0.7s						
IACL	**Alicudi**	0.57	242	⇓P	Pn	08 53 01.7	+0.3
IACL				S	S	08 53 27.9	+0.9
IACL				AML	AML		
	comp=N,5540µm,1.1s						
IACL				AML	AML		
	comp=E,5375µm,0.7s						
MPNC	**Port Mandanici**	0.72	157	⇓P	Pn	08 53 01.1	-1.0
MPNC				S	S	08 53 27.2	-1.0
MPNC				AML	AML		
	comp=E,38200µm,0.5s						
MPNC				AML	AML		
	comp=E,38200µm,0.5s						
MPNC				AML	AML		
	comp=N,46000µm,0.8s						
JOPP	**Joppolo**	0.72	106	⇓P	Pn	08 53 01.4	-0.6
JOPP				S	S	08 53 25.8	-2.3
JOPP				AML	AML		
	comp=N,10200µm,0.3s						
JOPP				AML	AML		
	comp=E,9410µm,1.1s						
MCSR	**Castroreale**	0.77	165	⇓P	Pn	08 53 01.9	-0.4
MCSR				S	S	08 53 29.3	+0.6
MCSR				AML	AML		
	comp=E,44200µm,0.3s						
MCSR				AML	AML		
	comp=N,47650µm,0.9s						
MCSR				AML	AML		
	comp=N,47650µm,0.9s						
MCSR				AML	AML		
	comp=E,44200µm,0.3s						
MUCR	**Ucria**	0.77	187	⇓P	Pn	08 53 01.5	-0.9
MUCR				AML	AML		
	comp=N,8485µm,0.6s						
MUCR				AML	AML		
	comp=N,8985µm,0.6s						
MUCR				AML	AML		
	comp=N,9140µm,0.6s						
MUCR				AML	AML		
	comp=E,6565µm,0.8s						
NOV	**Novara**	0.79	172	⇓P	Pn	08 53 02.4	-0.1
NOV				S	S	08 53 28.8	0.0
NOV				AML	AML		
	comp=E,37400µm,0.7s						
NOV				AML	AML		
	comp=N,19600µm,0.8s						
NOV				AML	AML		
	comp=E,37400µm,0.7s						
MSFR	**San Fratello**	0.84	203	⇓P	Pn	08 53 02.4	-0.2
MSFR				S	S	08 53 28.1	-1.1
MSFR				AML	AML		
	comp=E,2320µm,1.4s						
MSFR				AML	AML		
	comp=N,1995µm,1.1s						
MSCL	**Scilla**	0.85	132	P	Pn	08 53 01.6	-1.1
AIO	**Antillo**	0.85	167	⇓P	Pn	08 53 02.6	-0.2
CEL	**Celeste**	0.89	128	Pn	Pn	08 53 01.9	-1.0
CEL				S	S	08 53 27.5	-2.1
CEL	**Celeste**	0.89	128	⇓P	Pn	08 53 01.9	-1.0
CEL				S	S	08 53 27.2	-2.4
CEL				AML	AML		
	comp=E,12700µm,1.4s						
CEL				AML	AML		
	comp=N,13950µm,1.5s						
CEL				AML	AML		
	comp=E,12950µm,1.4s						
CEL				AML	AML		
	comp=N,17150µm,1.5s						
CEL				AML	AML		
	comp=E,15500µm,1.4s						
CEL				AML	AML		
	comp=N,17150µm,1.5s						
MNO	**Monte Soro**	0.90	195	⇓P	Pn	08 53 03.6	+0.4
MNO				S	S	08 53 31.7	+1.6
MNO	**Monte Soro**	0.90	195	⇓P	Pn	08 53 03.6	+0.4
MNO				S	S	08 53 30.9	+0.8
MNO				AML	AML		
	comp=E,10135µm,0.6s						
MNO				AML	AML		
	comp=E,10160µm,0.6s						
MNO				AML	AML		
	comp=N,24850µm,0.9s						
GMB	**Gambarie**	0.91	134	⇓P	Pn	08 53 02.3	-0.8
GMB				S	S	08 53 28.9	-1.1
GMB	**Gambarie**	0.91	134	P	Pn	08 53 02.2	-0.9
GMB				S	S	08 53 28.6	-1.4
GMB				AML	AML		
	comp=E,81700µm,1.4s						
GMB				AML	AML		
	comp=N,67900µm,0.9s						
GMB				AML	AML		
	comp=N,67900µm,0.9s						
GMB				AML	AML		
	comp=E,81700µm,1.4s						
MTTG	**Motta San Giov**	0.97	146	⇓P	Pn	08 53 02.8	-0.5
MTTG				S	S	08 53 30.0	-0.4
MTTG				AML	AML		
	comp=E,29200µm,0.7s						
MTTG				AML	AML		
	comp=N,37300µm,0.7s						
MTTG				AML	AML		
	comp=N,37300µm,0.7s						
MTTG				AML	AML		
	comp=E,29200µm,0.7s						
EMSG	**Monte Spagnolo**	0.98	182	P	Pn	08 53 03.9	+0.3
EMSG				AML	AML		
	comp=E,18850µm,0.7s						
EMSG				AML	AML		
	comp=N,18550µm,0.7s						
EMSG				AML	AML		
	comp=N,18600µm,0.7s						
EMSG				AML	AML		
	comp=N,18600µm,0.7s						
CET2	**Cetraro**	1.04	46	⇓P	Pn	08 53 03.8	+0.2
CET2				S	S	08 53 29.7	-1.3
CET2				AML	AML		
	comp=N,12400µm,0.9s						
CET2				AML	AML		
	comp=E,10615µm,0.3s						
CAR1	**CAROLEI**	1.05	64	P	Pn	08 53 03.4	-0.3
SOI	**Samo**	1.11	131	P	Pn	08 53 03.3	-0.7
SOI	**Samo**	1.11	131	⇓P	Pn	08 53 03.3	-0.7
SOI				S	S	08 53 28.9	-2.8
SOI				AML	AML		
	comp=N,15000µm,0.8s						
SOI				AML	AML		
	comp=E,14200µm,0.8s						
SOI				AML	AML		
	comp=N,15000µm,0.8s						
ESLN	**Serra La Nave**	1.11	181	⇓P	Pn	08 53 03.9	-0.5
GIB	**Gibilmanna**	1.12	223	⇓P	Pn	08 53 03.7	-0.6
GALF	**Gagliano Caste**	1.15	197	⇓P	Pn	08 53 04.5	+0.1
GALF				AML	AML		
	comp=E,4755µm,0.9s						
GALF				AML	AML		
	comp=E,4750µm,0.9s						
GALF				AML	AML		
	comp=N,5490µm,0.8s						
SPS2	**Spezzano della**	1.15	65	P	Pn	08 53 04.2	-0.1
SPS2				S	S	08 53 30.8	-1.4
SPS2				AML	AML		
	comp=N,3785µm,0.9s						
SPS2				AML	AML		
	comp=E,3085µm,0.4s						
PLAC	**Placanica**	1.18	107	⇓P	Pn	08 53 04.0	-0.5
PLAC				S	S	08 53 29.8	-2.8
PLAC				AML	AML		
	comp=N,18350µm,0.3s						
PLAC				AML	AML		
	comp=E,14600µm,0.4s						
PLAC				AML	AML		
	comp=N,18350µm,0.3s						
PLAC				AML	AML		
	comp=E,19150µm,0.3s						
PLAC				AML	AML		
	comp=N,14900µm,0.4s						
PLAC				AML	AML		
	comp=E,14600µm,0.4s						
PLAC				AML	AML		
	comp=E,19150µm,0.3s						
PLAC				AML	AML		
	comp=N,18350µm,0.3s						
ESML	**S. M. di Licod**	1.19	185	⇓P	Pn	08 53 04.5	-0.1
PETRA	**Petralia Sopra**	1.19	216	⇓P	Pn	08 53 04.6	-0.2
PETRA				S	S	08 53 33.2	+0.2
PETRA				AML	AML		
	comp=N,4745µm,1.5s						
PETRA				AML	AML		
	comp=E,5330µm,0.7s						
ECNV	**Catenanuova**	1.23	191	⇓P	Pn	08 53 05.6	+0.7
ECNV				AML	AML		
	comp=E,9915µm,1.6s						
ECNV				AML	AML		
	comp=N,15950µm,1.1s						
ECNV				AML	AML		
	comp=N,15900µm,1.1s						
T0702	**Acquaformosa (**	1.24	42	⇓P	Pn	08 53 05.1	+0.2
T0702				S	S	08 53 32.2	-1.2
T0702				AML	AML		
	comp=E,76µm,0.7s						
T0702				AML	AML		
	comp=N,3890µm,1.2s						
CAGR	**Agira**	1.25	198	⇓P	Pn	08 53 05.8	+0.8
SERS	**Sersale**	1.34	80	⇓P	Pn	08 53 05.7	0.0
SERS				S	S	08 53 32.9	-1.7
SERS				AML	AML		
	comp=E,9745µm,0.8s						
SERS				AML	AML		
	comp=N,5930µm,0.7s						
SERS				AML	AML		
	comp=E,5745µm,0.7s						
SERS				AML	AML		
	comp=N,11550µm,0.8s						
SERS				AML	AML		
	comp=E,12200µm,0.8s						
SERS				AML	AML		
	comp=N,8625µm,1.0s						
SERS				AML	AML		
	comp=E,7425µm,1.1s						
SERS				AML	AML		
	comp=N,12000µm,0.8s						
CUC	**Castrocucco**	1.34	28	⇓P	Pn	08 53 06.3	+0.8
CUC				S	S	08 53 34.7	+0.1
CUC				AML	AML		
	comp=E,4000µm,1.0s						
CUC				AML	AML		
	comp=N,1965µm,0.8s						
CUC				AML	AML		
	comp=E,3285µm,1.0s						
CUC				AML	AML		
	comp=N,2415µm,0.8s						
TDS	**Terranova Siba**	1.34	50	⇓P	Pn	08 53 06.1	+0.6
TDS				S	S	08 53 34.5	+0.1
TDS	**Terranova Siba**	1.34	50	⇓P	Pn	08 53 06.1	+0.6
TDS				S	S	08 53 34.5	+0.1
TDS				AML	AML		
	comp=E,5795µm,1.5s						
TDS				AML	AML		
	comp=N,3095µm,1.5s						
SOLUN	**Solunto**	1.35	239	⇓P	Pn	08 53 05.4	-0.2
SOLUN				S	S	08 53 33.2	-1.3
SOLUN				AML	AML		
	comp=E,2125µm,0.6s						
SOLUN				AML	AML		
	comp=N,2120µm,1.1s						
RESU	**Resuttano**	1.38	213	⇓P	Pn	08 53 06.5	+0.6
RESU				AML	AML		
	comp=N,3525µm,0.8s						
RESU				AML	AML		
	comp=E,2855µm,1.0s						

MGR	**Morigerati**	1.40	18	⇓P	Pn	08 53 07.0 +1.2
MGR				S	S	08 53 35.9 +0.7
MGR				AML	AML	
	comp=N,2115µm,1.1s					
MGR				AML	AML	
	comp=N,2115µm,1.1s					
MGR				AML	AML	
	comp=E,2520µm,1.4s					
MGR				AML	AML	
	comp=E,2875µm,1.4s					
VAE	**Valguarnera**	1.40	199	P	Pn	08 53 07.0 +0.9
	comp=E,35nm,0.3s,baz=136,slow=7.8,SNR=44					
VAE				S	S	08 53 37.1 +1.7
	comp=E,53nm,0.3s,baz=90,slow=22,SNR=9.0					
TIP	**Timpagrande**	1.42	74	⇓P	Pn	08 53 06.4 +0.2
TIP				⇑S	S	08 53 34.1 -1.5
TIP	**Timpagrande**	1.42	74		Pn	08 53 06.1 -0.1
TIP				S	S	08 53 33.9 -1.6
TIP	**Timpagrande**	1.42	74	⇓P	Pn	08 53 06.3 +0.1
TIP				S	S	08 53 34.1 -1.5
TIP				AML	AML	
	comp=E,5455µm,1.4s					
TIP				AML	AML	
	comp=E,4675µm,1.4s					
TIP				AML	AML	
	comp=N,9335µm,0.9s					
TIP				AML	AML	
	comp=N,11700µm,0.9s					
USI	**Ustica**	1.43	267	⇓P	Pn	08 53 07.0 +0.9
MPG	**Monte Pellegri**	1.44	244	⇓P	Pn	08 53 06.3 0.0
MPG				S	S	08 53 35.0 -0.7
HLNI	**Lentini**	1.46	184	⇓P	Pn	08 53 05.8 -0.7
HLNI				S	S	08 53 34.0 -2.0
HLNI				AML	AML	
	comp=E,4285µm,1.4s					
HLNI				AML	AML	
	comp=N,5150µm,0.9s					
SALB	**San Lorenzo Be**	1.50	44	⇓P	Pn	08 53 07.6 +0.9
SALB				AML	AML	
	comp=E,3350µm,1.1s					
SALB				AML	AML	
	comp=N,1490µm,0.7s					
SALB				AML	AML	
	comp=E,4765µm,1.1s					
SALB				AML	AML	
	comp=N,2040µm,0.7s					
SALB				AML	AML	
	comp=E,5500µm,0.3s					
SALB				AML	AML	
	comp=N,3220µm,0.7s					
SALB				AML	AML	
	comp=E,5305µm,0.3s					
SALB				AML	AML	
	comp=N,2975µm,0.7s					
CMPR	**Campora**	1.53	9	⇓P	Pn	08 53 08.4 +1.5
CMPR				S	S	08 53 38.4 +1.4
CMPR				AML	AML	
	comp=E,3455µm,1.1s					
CMPR				AML	AML	
	comp=N,3035µm,1.2s					
AGST	**Augusta-Monte**	1.56	173	⇓P	Pn	08 53 06.1 -1.0
AGST				AML	AML	
	comp=N,11450µm,0.3s					
AGST				AML	AML	
	comp=E,6390µm,1.5s					
PIPA	**Pietrapaola**	1.57	64	⇓P	Pn	08 53 07.5 +0.3
PIPA				AML	AML	
	comp=N,10550µm,0.8s					
PIPA				AML	AML	
	comp=N,10350µm,0.8s					
PIPA				AML	AML	
	comp=E,10125µm,0.9s					
PIPA				AML	AML	
	comp=E,9795µm,0.9s					
MTSN	**Montesano sull**	1.57	22	⇓P	Pn	08 53 08.2 +0.9
MTSN				AML	AML	
	comp=E,2495µm,1.3s					
MTSN				AML	AML	
	comp=N,1625µm,1.3s					
CORL	**Corleone**	1.61	236	Pn	Pn	08 53 07.7 0.0
CORL	**Corleone**	1.61	236	⇓P	Pn	08 53 07.5 -0.2
CORL				AML	AML	
	comp=E,7345µm,0.6s					
CORL				AML	AML	
	comp=N,5550µm,0.6s					
CORL				AML	AML	
	comp=E,8020µm,0.7s					
CORL				AML	AML	
	comp=N,5555µm,0.6s					
LADO	**San Nicola del**	1.61	72	⇓P	Pn	08 53 07.6 0.0
LADO				AML	AML	
	comp=E,839µm,1.0s					
LADO				AML	AML	
	comp=N,815µm,0.7s					
SCHR	**S. Chirico Rap**	1.62	31	⇓P	Pn	08 53 08.9 +1.2
SCHR				S	S	08 53 39.4 +1.0
SCHR				AML	AML	
	comp=N,1705µm,1.6s					
SCHR				AML	AML	
	comp=E,1955µm,1.2s					
AG51	**Grumento Nova**	1.62	24	P	Pn	08 53 08.8 +1.1
SSY	**Sortino**	1.65	178	⇓P	Pn	08 53 07.2 -0.8
RAFF	**Raffo Rosso**	1.66	198	Pn	Pn	08 53 07.7 -0.4
RAFF				S	S	08 53 38.4 -0.5
RAFF	**Raffo Rosso**	1.66	198	⇓P	Pn	08 53 07.9 -0.1
RAFF				S	S	08 53 38.0 -0.9
RAFF				AML	AML	
	comp=N,9860µm,1.0s					
RAFF				AML	AML	
	comp=E,10620µm,1.0s					
ORI	**Oriolo Calabro**	1.69	41	⇓P	Pn	08 53 09.2 +1.1
ORI				AML	AML	
	comp=E,6405µm,0.4s					
ORI				AML	AML	
	comp=N,5610µm,1.6s					
AG11	**Viggiano (PZ)**	1.69	26	P	Pn	08 53 09.0 +0.7
AG11				S	S	08 53 40.9 +1.5
AG11				AML	AML	
	comp=E,6965µm,1.1s					
AG11				AML	AML	
	comp=N,5340µm,1.6s					
MEU	**Monte Lauro**	1.70	182	P	Pn	08 53 08.0 -0.5
MEU				AML	AML	
	comp=N,16050µm,0.7s					
MEU				AML	AML	
	comp=E,6270µm,0.8s					
MEU				AML	AML	
	comp=N,16050µm,0.7s					
CLTA	**Licata**	1.84	207	⇓P	Pn	08 53 09.6 +0.1
HAVL	**Avola**	1.85	177	⇓P	Pn	08 53 08.9 -0.7
HAVL				S	S	08 53 39.9 -1.9
HAVL				AML	AML	
	comp=N,10600µm,0.9s					
HAVL				AML	AML	
	comp=E,5855µm,0.7s					
HMDC	**Modica**	1.85	185	⇓P	Pn	08 53 09.4 -0.3
HMDC				S	S	08 53 40.7 -1.2
HMDC				AML	AML	
	comp=N,10065µm,1.0s					
HMDC				AML	AML	
	comp=E,5475µm,0.9s					
CRAC	**Craco**	1.91	35	P	Pn	08 53 11.3 +1.3
MRLC	**Muro Lucano**	1.98	11	⇑P	Pn	08 53 12.7 +2.0
MRLC				AML	AML	
	comp=E,1170µm,1.1s					
MRLC				AML	AML	
	comp=N,1445µm,1.6s					
MRLC				AML	AML	
	comp=E,1215µm,1.1s					
MRLC				AML	AML	
	comp=N,1470µm,1.6s					
ACER	**Acerenza**	2.11	20	P	Pn	08 53 13.1 +1.2
ACER				AML	AML	
	comp=N,1665µm,1.0s					
ACER				AML	AML	
	comp=N,1685µm,1.0s					
ACER				AML	AML	
	comp=E,2975µm,1.1s					
ACER				AML	AML	
	comp=E,3040µm,1.1s					
HPAC	**Pachino**	2.11	178	⇓P	Pn	08 53 11.6 -0.4
HPAC				S	S	08 53 44.8 -1.1
HPAC				AML	AML	
	comp=E,13600µm,0.9s					
HPAC				AML	AML	
	comp=N,10150µm,0.8s					

MIGL	**Miglionico**	2.11	31	⇓P	Pn	08 53 12.3 +0.5
MIGL				AML	AML	
	comp=N,7965µm,1.4s					
MIGL				AML	AML	
	comp=E,7000µm,1.2s					
SNAL	**S. Angelo Dei**	2.12	4	⇑P	Pn	08 53 14.1 +2.1
SNAL				AML	AML	
	comp=E,2925µm,1.4s					
SNAL				AML	AML	
	comp=N,3880µm,1.6s					
SNAL				AML	AML	
	comp=E,2770µm,1.3s					
SNAL				AML	AML	
	comp=N,3970µm,1.6s					
PAOL	**Paolisi**	2.25	352	Pn	Pn	08 53 14.1 +0.9
PALZ	**Palazzo San Ge**	2.26	19	⇑P	Pn	08 53 14.4 +1.1
PALZ				S	S	08 53 49.4 +0.9
PALZ				AML	AML	
	comp=E,3040µm,1.3s					
PALZ				AML	AML	
	comp=N,3525µm,1.3s					
MATE	**Matera**	2.26	35	⇑P	Pn	08 53 12.5 -0.7
MATE	**Matera**	2.26	35	⇓P	Pn	08 53 13.1 -0.2
MATE				AML	AML	
	comp=E,4925µm,0.7s					
MATE				AML	AML	
	comp=N,7025µm,0.8s					
SGTA	**Sant Agata di**	2.34	7	⇑P	Pn	08 53 16.3 +2.1
SGTA				AML	AML	
	comp=E,1155µm,1.3s					
SGTA				AML	AML	
	comp=N,878µm,1.5s					
VITU	**Vitulano (BN)**	2.39	353	P	Pn	08 53 16.6 +1.9
VITU				AML	AML	
	comp=N,1300µm,0.7s					
VITU				AML	AML	
	comp=E,879µm,1.0s					
PSB1	**Pescosannita**	2.42	357	⇑P	Pn	08 53 17.1 +2.2
PSB1				AML	AML	
	comp=E,1120µm,1.6s					
PSB1				AML	AML	
	comp=N,1240µm,1.2s					
PSB1				AML	AML	
	comp=E,1136µm,1.6s					
PSB1				AML	AML	
	comp=N,1265µm,1.6s					
MRVN	**Minervino Murg**	2.43	22	⇑P	Pn	08 53 15.8 +0.8
MRVN				S	S	08 53 51.6 0.0
MRVN				AML	AML	
	comp=N,1170µm,0.9s					
MRVN				AML	AML	
	comp=E,2335µm,1.0s					
AMUR	**Altamura**	2.44	30	⇓P	Pn	08 53 15.4 +0.4
AMUR				S	S	08 53 51.1 -0.5
AMUR				AML	AML	
	comp=E,2460µm,1.1s					
AMUR				AML	AML	
	comp=N,2670µm,1.0s					
NOCI	**Noci**	2.54	38	⇓P	Pn	08 53 15.7 -0.4
NOCI				S	S	08 53 51.9 -1.6
NOCI				AML	AML	
	comp=N,3760µm,1.1s					
NOCI				AML	AML	
	comp=E,2785µm,0.3s					
PTRJ	**Pietraroja**	2.58	352	⇑P	Pn	08 53 18.8 +2.3
PTRJ				S	S	08 53 57.0 +2.6
PTRJ				AML	AML	
	comp=E,1725µm,0.8s					
PTRJ				AML	AML	
	comp=E,1945µm,0.8s					
PTRJ				AML	AML	
	comp=N,1230µm,0.8s					
PTRJ				AML	AML	
	comp=N,1345µm,0.7s					
BSSO	**Busso**	2.75	354	⇑P	Pn	08 53 21.1 +2.7
BSSO				AML	AML	
	comp=N,539µm,0.9s					
BSSO				AML	AML	
	comp=E,388µm,0.9s					
MESG	**Mesagne**	2.83	50	⇓P	Pn	08 53 18.6 -0.5
MESG				AML	AML	
	comp=E,2380µm,1.5s					
MESG				AML	AML	
	comp=N,2950µm,0.9s					
CERA	**Filignano**	2.89	345	⇑P	Pn	08 53 22.2 +2.4
CERA				AML	AML	
	comp=N,1440µm,0.8s					
CERA				AML	AML	
	comp=E,1263µm,0.7s					
CERA				AML	AML	
	comp=N,1475µm,0.8s					
CERA				AML	AML	
	comp=E,1238µm,0.7s					
SCTE	**Santa Cesarea**	2.97	64	Pn	Pn	08 53 19.5 -1.1
SCTE	**Santa Cesarea**	2.97	64	P	Pn	08 53 20.0 -0.6
SCTE				AML	AML	
	comp=E,4170µm,0.6s					
SCTE				AML	AML	
	comp=N,3490µm,0.8s					
MSAG	**Monte S. Angel**	2.98	13	⇑P	Pn	08 53 22.1 +1.3
MSAG				AML	AML	
	comp=N,1475µm,1.0s					
MSAG				AML	AML	
	comp=E,560µm,1.2s					
SGRT	**San Giovanni R**	3.00	11	Pn	Pn	08 53 21.6 +0.6
POFI	**Posta Fibreno**	3.07	342	⇑P	Pn	08 53 24.4 +2.7
POFI				AML	AML	
	comp=E,993µm,0.8s					
POFI				AML	AML	
	comp=N,1084µm,0.8s					
VVLD	**Villa Vallelon**	3.24	341	⇑P	Pn	08 53 26.2 +2.6
VVLD				AML	AML	
	comp=E,498µm,0.8s					
VVLD				AML	AML	
	comp=N,529µm,0.8s					
GUAR	**Guarcino**	3.25	337	⇑P	Pn	08 53 26.2 +2.5
GUAR				AML	AML	
	comp=N,1230µm,0.8s					
GUAR				AML	AML	
	comp=E,742µm,0.8s					
INTR	**Introdacqua**	3.31	346		Pn	08 53 27.4 +2.9
INTR	**Introdacqua**	3.31	346	⇑P	Pn	08 53 27.3 +2.9
INTR				AML	AML	
	comp=E,1545µm,0.8s					
INTR				AML	AML	
	comp=N,2510µm,0.8s					
TREM	**Isole Tremiti**	3.34	7	P	Pn	08 53 26.6 +2.0
RCAV	**Rocca di Cave**	3.42	333	P	Pn	08 53 28.1 +2.5
PTQR	**Pietraquaria**	3.44	340	⇑P	Pn	08 53 28.7 +2.9
PTQR				AML	AML	
	comp=E,692µm,0.9s					
PTQR				AML	AML	
	comp=N,509µm,0.9s					
CERT	**Cerreto**	3.50	335	⇑P	Pn	08 53 29.0 +2.5
CERT				AML	AML	
	comp=E,1160µm,0.8s					
CERT				AML	AML	
	comp=N,1029µm,0.8s					
FIAM	**Fiamignano**	3.74	338	⇑P	Pn	08 53 32.8 +3.5
FIAM				AML	AML	
	comp=N,1525µm,0.6s					
FIAM				AML	AML	
	comp=E,2430µm,0.7s					
AQU	**L'Aquila**	3.75	342	P	Pn	08 53 31.0 +1.6
AQU	**L'Aquila**	3.75	342	⇑*i*Pn	Pn	08 53 31.5 +2.1
AQU	**L'Aquila**	3.75	342	Pn	Pn	08 53 31.0 +1.6
AQU	**L'Aquila**	3.75	342	⇑P	Pn	08 53 33.1 +3.7
AQU				AML	AML	
	comp=E,1128µm,1.0s					
AQU				AML	AML	
	comp=E,1147µm,0.8s					
AQU				AML	AML	
	comp=N,1855µm,0.9s					
AQU				AML	AML	
	comp=N,1960µm,0.9s					
RM33	**Pellescritta (**	3.94	340	P	Pn	08 53 35.0 +3.3
RM33				AML	AML	
	comp=N,923µm,0.9s					
RM33				AML	AML	
	comp=E,1008µm,0.8s					
TERO	**Teramo**	3.96	345	⇑P	Pn	08 53 35.1 +3.3
SRN	**Sarande**	4.02	73	AML	AML	
	comp=E,458µm,0.8s					
SRN				AML	AML	
	comp=N,439µm,0.7s					
LNSS	**Leonessa**	4.07	339	⇑P	Pn	08 53 36.5 +3.2

LNSS				AML	AML	
	comp=E,1190µm,0.9s					
LNSS				AML	AML	
	comp=N,770µm,1.0s					
IGT	**Igoumenitsa**	4.21	78	P	Pn	08 53 35.4 +0.6
CESX	**Cesi**	4.22	335	⇑P	Pn	08 53 37.8 +2.9
KEF3	**Kipouria, Keph**	4.24	97	P	Pn	08 53 35.5 +0.3
DMLN	**Damoulianata-K**	4.25	96	P	Pn	08 53 35.2 -0.2
KEF4	**Livadi, Kephal**	4.29	96	P	Pn	08 53 35.8 0.0
KEF5	**Kardakata, Kep**	4.32	95	P	Pn	08 53 36.1 -0.1
FSK	**Fiskardo**	4.37	93	P	Pn	08 53 36.6 -0.2
VSL	**Villasalto**	4.42	281	Pn	Pn	08 53 38.8 +1.4
LKD2	**Lefkada island**	4.42	88	P	Pn	08 53 37.5 +0.1
EVGI	**Lefkada island**	4.43	91	P	Pn	08 53 37.4 -0.1
VLS	**Valsamata**	4.43	96	P	Pn	08 53 37.2 -0.3
VLS	**Valsamata**	4.43	96	⇓P	Pn	08 53 37.4 -0.2
VLS	**Valsamata**	4.43	96	⇓P	Pn	08 53 37.3 -0.2
VLS				AML	AML	
	comp=E,262µm,1.1s					
VLS				AML	AML	
	comp=N,338µm,0.7s					
PSDA	**Pessada-Kefalo**	4.44	97	P	Pn	08 53 37.3 -0.3
NYDR	**Nydri-Lefkada**	4.46	89	P	Pn	08 53 37.8 0.0
FDMO	**Fiordimonte**	4.47	342	⇑P	Pn	08 53 41.2 +3.3
CSP1	**Cessapalombo**	4.49	343	⇑P	Pn	08 53 41.5 +3.3
HCY	**Herceg Novi**	4.51	35	*e*Pn	Pn	08 53 38.4 +0.1
HCY	**Herceg Novi**	4.51	35	*e*Pn	Pn	08 53 39.0 +0.7
HCY				*i* Sn	S	08 54 33.0 -0.7
LATE	**Laterza**	4.51	328		Pn	08 53 41.1 +2.6
TIR	**Tirane**	4.51	54	*e*Pn	Pn	08 53 37.7 -0.7
TIR				*e*Sn	S	08 54 32.1 -1.8
TIR	**Tirane**	4.51	54	⇑P	Pn	08 53 39.5 +1.1
TIR				⇑S	S	08 54 31.1 -2.8
TIR	**Tirane**	4.51	54	P	Pn	08 53 39.2 +0.8
TIR	**Tirane**	4.51	54		Pn	08 53 39.2 +0.8
ULC	**Ulcinj**	4.52	44	P	Pn	08 53 39.5 +0.9
ULC	**Ulcinj**	4.52	44	*e*Pn	Pn	08 53 38.8 +0.2
ULC				*i* Sn	S	08 54 32.7 -1.4
DBRK	**Dubrovnik**	4.54	31	*i* P	Pn	08 53 38.8 +0.1
STON	**Ston**	4.55	26	*e*Pn	Pn	08 53 38.7 -0.1
STON				*e*Sn	S	08 54 33.5 -1.0
STON	**Ston**	4.55	26	*i* P	Pn	08 53 38.6 -0.2
STON	**Ston**	4.55	26	⇑*i*Pn	Pn	08 53 38.7 -0.1
BUM	**Brajici-Budva**	4.58	39	*e*Pn	Pn	08 53 40.0 +0.7
BUM				*i* Sn	S	08 54 34.6 -0.8
JAN	**Janina**	4.62	78	P	Pn	08 53 40.7 +0.9
MGAB	**Montegabbione**	4.65	333	AML	AML	
	comp=N,438µm,0.9s					
MGAB				AML	AML	
	comp=E,470µm,0.7s					
TREB	**Trebinje**	4.66	32	*e*Pn	Pn	08 53 39.5 -0.7
TREB				*e*Sn	S	08 54 37.7 +0.6
TREB	**Trebinje**	4.66	32	*e*Pn	Pn	08 53 40.9 +0.7
MAKA	**Makarska**	4.73	18	*i* P	Pn	08 53 42.1 +1.1
CEME	**Cevo**	4.78	37	*e*Pn	Pn	08 53 42.6 +0.9
CEME				*i* Sn	S	08 54 39.1 -0.7
MURB	**Monte Urbino**	4.83	338		Pn	08 53 45.7 +3.4
PDO	**Prodromos**	4.84	91	P	Pn	08 53 42.9 +0.4
PDG	**Podgorica**	4.86	40	*e*Pn	Pn	08 53 43.2 +0.6
PDG				*e*Sn	S	08 54 40.7 -0.6
PDG	**Podgorica**	4.86	40	⇑P	Pn	08 53 43.4 +0.8
PDG				⇑S	S	08 54 36.4 -4.9
PDG	**Podgorica**	4.86	40	⇑*i*Pn	Pn	08 53 43.4 +0.8
PDG	**Podgorica**	4.86	40	Pn	Pn	08 53 43.6 +1.0
TTG	**Podgorica**	4.86	40	*e*Pn	Pn	08 53 43.1 +0.5
TTG				*i* Sn	S	08 54 40.6 -0.7
ZIRJ	**Zirje**	4.87	6	*i* P	Pn	08 53 43.2 +0.6
BRY	**Bratogost**	4.89	32	P	Pn	08 53 44.6 +1.4
BRY	**Bratogost**	4.89	32	⇑*i*Pn	Pn	08 53 44.0 +0.8
BRY	**Bratogost**	4.89	32	*e*Pn	Pn	08 53 43.7 +0.5
BRY				*i* Sn	S	08 54 41.7 -0.7
RICI	**Ricice**	4.95	18	P	Pn	08 53 44.9 +1.1
NKME	**Niksic**	4.97	36	*e*Pn	Pn	08 53 44.8 +0.8
NKME				*i* Sn	S	08 54 43.3 -0.6
NKY	**Niksic**	5.02	36	P	Pn	08 53 46.6 +1.9
NKY	**Niksic**	5.02	36	*e*Pn	Pn	08 53 45.1 +0.4
NKY				*i* Sn	S	08 54 44.5 -0.7
KPRO	**Kipourio**	5.06	75	P	Pn	08 53 46.7 +1.5
CASP	**Castiglione de**	5.07	323	Pn	Pn	08 53 48.0 +2.8
MORI	**Morici**	5.08	6	*i* P	Pn	08 53 45.5 +0.2
DUGI	**Dugi Otok**	5.18	0	*i* P	Pn	08 53 47.2 +0.7
UPM	**Unac-Piva**	5.29	33	⇓*i*Pn	Pn	08 53 49.0 +0.9
UPM				*i* Sn	S	08 54 50.6 -0.8
FNA	**Florina**	5.29	66	P	Pn	08 53 48.5 +0.5
FNA	**Florina**	5.29	66	P	Pn	08 53 48.9 +0.8
FNA	**Florina**	5.29	66	Pn	Pn	08 53 48.9 +0.8
KOME	**Kolasin**	5.30	39	*e*Pn	Pn	08 53 49.1 +1.0
KOME				*i* Sn	S	08 54 50.5 -0.8
KIJV	**Kijevo**	5.30	11	*i* P	Pn	08 53 49.1 +1.1
EVR	**Evrytania**	5.32	87	P	Pn	08 53 49.9 +1.5
PVY	**Plav**	5.34	43	*e*Pn	Pn	08 53 49.5 +0.8
PVY				*i* Sn	S	08 54 50.9 -1.5
KEST	**Kesra**	5.45	237	P	Pn	08 53 50.8 +0.7
	comp=E,2.3nm,0.3s,baz=1.7,slow=3.1,SNR=27					
KEST	**Kesra**	5.45	237	Pn	Pn	08 53 51.7 +1.6
OSSC	**Osservatorio P**	5.50	330		Pn	08 53 53.8 +3.3
IVA	**Berane**	5.50	41	*e*Pn	Pn	08 53 51.8 +1.2
IVA				*i* Sn	S	08 54 55.0 -0.9
SERG	**Sergoula**	5.54	92	P	Pn	08 53 52.4 +1.3
MAKR	**Makrakomi, Fth**	5.57	86	P	Pn	08 53 53.6 +2.2
PLE	**Pljevlja**	5.61	35	P	Pn	08 53 54.5 +2.6
PLE	**Pljevlja**	5.61	35	*e*Pn	Pn	08 53 52.9 +1.0
PLE				*i* Sn	S	08 54 56.9 -1.4
KALE	**Kalithea**	5.61	92	P	Pn	08 53 53.5 +1.5
ITM	**Ithomi**	5.71	104	Pn	Pn	08 53 53.6 +0.4
AGG	**Agios Georgios**	5.72	86	P	Pn	08 53 54.6 +1.2
AGG	**Agios Georgios**	5.72	86	P	Pn	08 53 54.8 +1.4
AGG	**Agios Georgios**	5.72	86	Pn	Pn	08 53 54.8 +1.4
UDBI	**Udbina**	5.75	5	*i* P	Pn	08 53 54.8 +1.2
NVLJ	**Novalja**	5.75	359	*i* P	Pn	08 53 54.5 +0.9
MGRS	**Mrkonjic Grad**	5.82	15	⇑*i*Pn	Pn	08 53 56.7 +2.2
RUDO	**Rudo**	5.83	33	*e*Pn	Pn	08 53 55.0 +0.4
PGF	**Pioggiola**	5.89	311	*e*Pn	Pn	08 53 56.5 +1.0
DSF	**Desfina**	5.91	91	P	Pn	08 53 56.4 +0.7
LIT	**Litokhoron**	5.94	75	P	Pn	08 53 56.4 +0.3
LIT	**Litokhoron**	5.94	75	P	Pn	08 53 56.8 +0.7
LIT	**Litokhoron**	5.94	75		Pn	08 53 56.8 +0.7
BBLS	**Lazići**	6.04	32	*e*Pn	Pn	08 53 58.3 +1.0
BBLS	**Lazići**	6.04	32	⇑*i*Pn	Pn	08 53 56.6 -0.7
HAPS	**Han Pijesak,Bl**	6.05	28	*e*Pn	Pn	08 53 57.8 +0.3
HAPS	**Han Pijesak,Bl**	6.05	28	⇑*i*Pn	Pn	08 53 57.9 +0.4
IVAS	**Ivanjica**	6.15	38	*e*Pn	Pn	08 53 58.9 +0.3
BLY	**Banja Luka**	6.16	15	*e*Pn	Pn	08 54 00.4 +1.7
BLY	**Banja Luka**	6.16	15	⇑*i*Pn	Pn	08 54 00.2 +1.5
VLC	**Villacollemand**	6.37	329		Pn	08 54 04.7 +3.3
XOR	**Xorichti**	6.40	82	P	Pn	08 54 02.8 +1.0
DIVS	**Divibare**	6.48	34	*e*Pn	Pn	08 54 03.3 +0.5
DIVS	**Divibare**	6.48	34	Pn	Pn	08 54 03.7 +0.9
RIY	**Rijeka**	6.53	357	*e*Pn	Pn	08 54 04.1 +0.8
RIY	**Rijeka**	6.53	357	⇑*i*Pn	Pn	08 54 04.1 +0.8
GRUS	**Gruza**	6.65	38	*e*Pn	Pn	08 54 05.3 +0.4
BOJS	**Bojanci**	6.70	2	*i* P	Pn	08 54 07.5 +2.1
SOH	**Sokhos**	6.74	70	P	Pn	08 54 07.1 +1.0
SOH				pmax	pmax	
	comp=Z,38nm,1.1s					
TRUS	**Trudelj**	6.76	35	*e*Pn	Pn	08 54 07.1 +0.8
OZLJ	**Ozalj**	6.81	3	*i* P	Pn	08 54 08.8 +1.9
MSSA	**Maissana**	6.87	325		Pn	08 54 11.0 +3.3
PRMA	**PARMA**	6.90	331		Pn	08 54 10.8 +2.8
CEY	**Cerknica**	6.94	357	*e*Pn	Pn	08 54 09.6 +1.1
CEY	**Cerknica**	6.94	357	⇑*i*Pn	Pn	08 54 08.8 +0.3
TRI	**Trieste**	6.96	353	P	Pn	08 54 10.3 +1.6
TRI	**Trieste**	6.96	353	Pn	Pn	08 54 10.3 +1.6
BOVS	**Bovan**	6.99	44	*e*Pn	Pn	08 54 09.7 +0.6
SRS	**Serrai**	6.99	68	P	Pn	08 54 07.2 -2.1
SRS				pmax	pmax	
	comp=Z,29nm,0.8s					
TEOL	**Teolo**	7.00	340		Pn	08 54 10.6 +1.3
CRES	**Cresnjev**	7.02	3	⇑*i*Pn	Pn	08 54 11.0 +1.4
PTJ	**Puntijarka**	7.13	5	P	Pn	08 54 11.9 +0.9
LEGS	**Legarje**	7.14	2	*i* P	Pn	08 54 13.0 +1.9
LJU	**Ljubljana**	7.24	357	*e*Pn	Pn	08 54 14.1 +1.8
LJU	**Ljubljana**	7.24	357	*i* P	Pn	08 54 14.3 +2.0
LJU	**Ljubljana**	7.24	357	⇑*i*Pn	Pn	08 54 14.2 +1.9
PDKS	**Podkum**	7.25	0	*i* P	Pn	08 54 14.5 +2.1
VOJS	**Vojsko**	7.27	354	*i* P	Pn	08 54 14.1 +1.3
FRGS	**Fruska Gora**	7.29	28	*e*Pn	Pn	08 54 13.4 +0.5
FRGS	**Fruska Gora**	7.29	28	⇑P	Pn	08 54 13.6 +0.7
FRGS	**Fruska Gora**	7.29	28	⇑*i*Pn	Pn	08 54 13.8 +0.9
ZAPS	**Zavoj**	7.29	50	*e*Pn	Pn	08 54 14.6 +1.5

VTS	Vitosha	7.32	56	⇑P	Pn	08 54 15.7	+2.1
VTS				⇓S	S	08 55 36.1	-1.5
VTS	Vitosha	7.32	56	P	Pn	08 54 15.1	+1.5
VTS	Vitosha	7.32	56		Pn	08 54 15.1	+1.5
ZAGS	Zajecar	7.39	45	ePn	Pn	08 54 14.9	+0.7
SBF	Sospel	7.61	314	ePn	Pn	08 54 17.6	+0.6
SBF	Sospel	7.61	314	eP	Pn	08 54 18.1	+1.1
SBF				pmax	pmax		
	comp=Z,139nm,0.7s						
SAOF	Saorge	7.62	315	P	Pn	08 54 19.2	+2.1
SAOF				pmax	pmax		
	comp=Z,132µm,1.0s						
STAL	STALIGIAL	7.64	348		Pn	08 54 19.6	+2.2
CTI	Castel Tesino	7.65	342	P	Pn	08 54 18.9	+1.3
CTI	Castel Tesino	7.65	342	Pn	Pn	08 54 18.9	+1.3
OBKA	Obir	7.71	358	ePn	Pn	08 54 19.5	+1.2
	comp=Z,49nm,0.8s,SNR=11						
BEHE	Becsehely	7.77	9	⇑iPn	Pn	08 54 22.0	+3.0
PERS	Pernice	7.83	1	i P	Pn	08 54 21.6	+1.9
PERS				e		08 54 29.0	
LMR	La Mourre	7.84	308	ePn	Pn	08 54 20.9	+0.9
LMR	La Mourre	7.84	308	eP	Pn	08 54 20.7	+0.7
LMR				pmax	pmax		
	comp=Z,38nm,0.9s						
SOKA	Soboth	7.87	0	i Pn	Pn	08 54 22.2	+1.8
	comp=Z,180nm,0.7s,SNR=50						
MORH	Mrgy, Hungar	7.88	19	⇑P	Pn	08 54 21.5	+1.2
MORH	Mrgy, Hungar	7.88	19	⇑iPn	Pn	08 54 21.0	+0.7
MYKA	Terra Mystica	7.88	353	i Pn	Pn	08 54 22.4	+1.9
	comp=Z,17nm,0.5s,SNR=7.6						
FRF	La Foret Royal	7.89	310	ePn	Pn	08 54 22.0	+1.5
FRF	La Foret Royal	7.89	310	eP	Pn	08 54 22.0	+1.5
FRF				pmax	pmax		
	comp=Z,59nm,0.9s						
ZOU	Zoufplan	7.89	350	Pn	Pn	08 54 22.2	+1.6
ABTA	Abfaltersbach	8.14	348	i Pn	Pn	08 54 25.5	+1.7
	comp=Z,58nm,0.7s,SNR=16						
HERR	Herculane	8.21	40	⇑P	Pn	08 54 26.4	+1.8
KBA	Koelnbreinsper	8.36	352	ePn	Pn	08 54 28.2	+1.6
	comp=Z,16nm,0.9s,SNR=6.6						
KBA	Koelnbreinsper	8.36	352	P	Pn	08 54 28.5	+1.9
KBA				pmax	pmax		
	comp=Z,72nm,0.9s						
BZS	Buzias	8.39	34	ePn	Pn	08 54 28.1	+1.2
BZS	Buzias	8.39	34	⇑P	Pn	08 54 28.5	+1.6
BZS				⇓S	S	08 55 59.0	-3.0
BZS	Buzias	8.39	34	P	Pn	08 54 28.0	+1.2
BZS				pmax	pmax		
	comp=Z,85nm,1.0s						
ARSA	Arzberg	8.45	2	ePn	Pn	08 54 29.3	+1.7
ARSA	Arzberg	8.45	2	i Pn	Pn	08 54 29.3	+1.7
	comp=Z,34nm,0.7s,SNR=18						
APE	Apeiranthos	8.50	99	i P	Pn	08 54 28.0	-0.4
MBDF	Montbardon	8.53	317	ePn	Pn	08 54 31.5	+2.7
MBDF	Montbardon	8.53	317	eP	Pn	08 54 31.2	+2.4
MBDF				pmax	pmax		
	comp=Z,142nm,0.8s						
IDI	Anoyia	8.65	111	P	Pn	08 54 31.4	+1.0
	comp=Z,4.7nm,0.3s,baz=266,slow=13,SNR=22						
IDI				S	S	08 56 09.1	+0.6
	comp=Z,1.0nm,0.3s,baz=208,slow=10,SNR=3.2						
ALN	Alexandroupoli	8.75	73	P	Pn	08 54 32.7	+1.2
ALN	Alexandroupoli	8.75	73	Pn	Pn	08 54 32.7	+1.2
GZR	Gura Zlata	8.76	39	⇑P	Pn	08 54 33.0	+1.4
SMRF	Simiane la Rot	8.76	309	ePn	Pn	08 54 33.6	+2.0
FETA	Feichten	8.79	341	ePn	Pn	08 54 34.5	+2.5
	comp=Z,27nm,0.7s,SNR=61						
BNI	Bardonecchia	8.79	318	P	Pn	08 54 34.6	+2.5
BNI	Bardonecchia	8.79	318		Pn	08 54 34.6	+2.5
WTTA	Wattenberg	8.80	345	ePn	Pn	08 54 35.1	+2.9
	comp=Z,58nm,0.6s,SNR=14						
WTTA	Wattenberg	8.80	345	P	Pn	08 54 35.6	+3.3
WTTA				pmax	pmax		
	comp=Z,139nm,1.0s						
DAVOX	Davos/Dischmat	8.81	336	P	Pn	08 54 33.9	+1.5
	comp=Z,3.6nm,0.3s,baz=148,slow=15,SNR=52						
SQTA	Sankt Quirin	8.85	343	ePn	Pn	08 54 36.3	+3.4
	comp=Z,66nm,0.8s,SNR=45						
WATA	Walderalm	8.88	345	i Pn	Pn	08 54 35.6	+2.3
	comp=Z,52nm,0.7s,SNR=31						
SIRR	Siria	8.93	31	⇑P	Pn	08 54 35.3	+1.6
SOP	Sopron	8.95	7	P	Pn	08 54 35.8	+1.9
SOP				pmax	pmax		
	comp=Z,48nm,0.7s						
MOTA	Moosalm	8.99	343	i Pn	Pn	08 54 37.4	+2.7
	comp=Z,58nm,1.0s,SNR=24						
MOA	Molln	9.05	357	i Pn	Pn	08 54 37.2	+1.9
	comp=Z,49nm,0.9s,SNR=22						
LPG	La Plagne	9.06	320	ePn	Pn	08 54 38.0	+2.4
LPG				eSn	S	08 56 05.5	-13
	comp=Z,81nm,1.1s						
LPG	La Plagne	9.06	320	eP	Pn	08 54 38.1	+2.4
LPG				pmax	pmax		
	comp=Z,256nm,0.8s						
LPL	La Plagne	9.09	320	ePn	Pn	08 54 38.8	+2.9
LPL				eSn	S	08 56 04.5	-14
	comp=Z,122nm,1.0s						
LPL	La Plagne	9.09	320	eP	Pn	08 54 38.6	+2.7
LPL				pmax	pmax		
	comp=Z,105nm,0.6s						
ORIF	Oris-en-Rattie	9.14	315	ePn	Pn	08 54 39.0	+2.6
ORIF				eSn	S	08 56 08.0	-12
	comp=Z,73nm,1.1s						
ORIF	Oris-en-Rattie	9.14	315	eP	Pn	08 54 38.7	+2.3
ORIF				pmax	pmax		
	comp=Z,90nm,0.8s						
CONA	Conrad Observa	9.14	4	i Pn	Pn	08 54 38.5	+2.0
	comp=Z,100nm,0.8s,SNR=36						
DEV	Deva	9.18	37	P	Pn	08 54 33.7	-3.1
DEV				pmax	pmax		
	comp=Z,36nm,0.8s						
RETA	Reutte	9.21	342	ePn	Pn	08 54 40.2	+2.8
	comp=Z,46nm,0.6s,SNR=14						
DAVA	Damuels	9.26	338	i Pn	Pn	08 54 40.4	+2.3
	comp=Z,0.1nm,0.1s,SNR=31						
SRO	Srobarova	9.32	14	eP	P	08 54 42.3	-3.3
SRO	Srobarova	9.32	14	eP	P	08 54 42.3	-3.3
SENIN	Lac Senin/Sane	9.44	326		Pn	08 54 42.1	+1.7
ZST	Bratislava	9.51	9	eP	Pn	08 54 43.1	+2.1
ZST	Bratislava	9.51	9	eP	Pn	08 54 43.1	+2.1
UBR	Ueberruh	9.56	340	ePn	Pn	08 54 44.8	+3.1
ARR	Arges	9.71	44	⇑P	Pn	08 54 45.9	+2.3
MODS	Modra-Piesok	9.71	9	eP	Pn	08 54 44.6	+1.1
MODS	Modra-Piesok	9.71	9	eP	Pn	08 54 44.6	+1.1
FUR	Furstenfeldbru	9.74	345	P	Pn	08 54 46.5	+2.6
FUR				pmax	pmax		
	comp=Z,151nm,0.9s						
FUR	Furstenfeldbru	9.74	345	ePn	Pn	08 54 46.9	+3.0
PSZ	Piszkesteto	9.78	20	⇑P	Pn	08 54 46.4	+1.9
PSZ	Piszkesteto	9.78	20	P	Pn	08 54 45.8	+1.3
PSZ	Piszkesteto	9.78	20		Pn	08 54 45.8	+1.3
DRGR		9.78	33	⇑P	Pn	08 54 47.1	+2.5
DRGR		9.78	33	P	Pn	08 54 46.8	+2.2
DRGR				pmax	pmax		
	comp=Z,18nm,1.4s						
VIVF	Saint-Julien-l	9.79	311	eP	Pn	08 54 43.4	-1.2
VIVF	Saint-Julien-l	9.79	311	ePn	Pn	08 54 46.4	+1.8
VIVF	Saint-Julien-l	9.79	311	eP	Pn	08 54 46.1	+1.5
VIVF				pmax	pmax		
	comp=Z,57nm,0.8s						
LASF	Ste Croix	9.88	306	eP	Pn	08 54 45.2	-0.6
VOIR		9.98	45	⇑P	Pn	08 54 49.5	+2.5
CKRC	Cesky Krumlov	10.02	357	eP	Pn	08 54 49.2	+1.7
VYHS	Vyhne	10.07	15	eP	Pn	08 54 49.7	+1.5
VYHS	Vyhne	10.07	15	eP	Pn	08 54 49.7	+1.5
GEC2	GERESS Array S	10.08	355		Pn	08 54 49.9	+1.6
GEC2	GERESS Array S	10.08	355	ePn	Pn	08 54 50.4	+2.1
GERES	GERESS Array B	10.08	355	P	Pn	08 54 50.0	+1.7
	comp=Z,1.4nm,0.3s,baz=167,slow=13,SNR=49						
GERES	GERESS Array B	10.08	355		Pn	08 54 49.0	+0.7
SSB	Saint Sauveur	10.11	313	P	Pn	08 54 50.2	+1.5
SSB	Saint Sauveur	10.11	313		Pn	08 54 50.2	+1.5
CJR	Cluj-Napoca	10.12	36	⇑P	Pn	08 54 51.0	+2.3
SLE	Schleitheim	10.13	334	P	Pn	08 54 50.4	+1.5
SLE				pmax	pmax		
	comp=Z,157nm,1.2s						
JAVC	Velka Javorina	10.23	10	ePN	P	08 54 53.1	-2.7
KRUC	Moravsky	10.30	5	ePN	Pn	08 54 53.3	+2.3
KRUC	Moravsky	10.30	5	P	Pn	08 54 53.7	+2.7
KRUC				pmax	pmax		
	comp=Z,61nm,0.8s						
KHC	Kasperske Hory	10.37	355	ceP	Pn	08 54 53.3	+1.4
KHC				pmax	pmax		
	comp=Z,237nm,1.3s						
KHC	Kasperske Hory	10.37	355	eP	Pn	08 54 53.5	+1.6
KHC				ex	x	08 56 59.8	
KHC	Kasperske Hory	10.37	355		Pn	08 54 53.8	+1.9
WET	Wettzell	10.45	352	P	Pn	08 54 54.5	+1.6
WET				pmax	pmax		
	comp=Z,82nm,0.6s						
WET	Wettzell	10.45	352	ePn	Pn	08 54 55.1	+2.2
GRC1	Grafenberg Arr	10.49	347	P	Pn	08 54 54.8	+1.4
TREC	Trest	10.49	2	eP	Pn	08 54 55.8	+2.4
TREC	Trest	10.49	2	eP	Pn	08 54 55.8	+2.4
MLR	Muntele Rosu	10.51	47	P	Pn	08 54 56.3	+2.5
	comp=Z,0.7nm,0.3s,baz=134,slow=18,SNR=9.0						
MLR	Muntele Rosu	10.51	47	ePn	P	08 54 58.2	-0.9
MLR	Muntele Rosu	10.51	47	⇑P	P	08 54 57.9	-1.2
MLR	Muntele Rosu	10.51	47	P	Pn	08 54 55.1	+1.2
MLR	Muntele Rosu	10.51	47		Pn	08 54 55.1	+1.2
VRAC	Vranov	10.56	6	P	Pn	08 54 56.6	+2.3
	comp=Z,2.5nm,0.3s,baz=198,slow=11,SNR=18						
VRAC	Vranov	10.56	6	⇑P	P	08 54 57.0	-2.5
VRAC	Vranov	10.56	6	ePN	Pn	08 54 56.5	+2.3
MTLF	Montolieu	10.66	299	eP	Pn	08 54 53.7	-1.9
MTLF	Montolieu	10.66	299	ePn	Pn	08 54 57.4	+1.9
BFO	Black Forest	10.67	335	P	Pn	08 54 56.2	+0.5
BFO	Black Forest	10.67	335		Pn	08 54 56.2	+0.5
BFO	Black Forest	10.67	335	ePn	Pn	08 54 58.0	+2.2
HINF	Hinteralfeld	10.78	329	eP	Pn	08 54 57.3	+0.2
HINF	Hinteralfeld	10.78	329	eP	Pn	08 54 57.0	-0.1
HINF				pmax	pmax		
	comp=Z,46nm,0.9s						
STU	Stuttgart	10.80	339	P	Pn	08 54 58.7	+1.4
STU	Stuttgart	10.80	339		Pn	08 54 58.7	+1.4
STU	Stuttgart	10.80	339	ePn	P	08 54 60.0	-2.1
BMR	Baia Mare	10.81	32	P	Pn	08 54 58.7	+1.3
BMR				pmax	pmax		
	comp=Z,28nm,0.6s						
LANS	Liptovska Anna	10.83	16	eP	P	08 55 04.6	+2.2
LANS	Liptovska Anna	10.83	16	eP	P	08 55 04.6	+2.2
PBCC	Pribram	10.90	357	eP	Pn	08 55 00.2	+1.7
ECH	Echery	10.99	331	P	Pn	08 55 00.5	+0.8
ECH	Echery	10.99	331		Pn	08 55 00.5	+0.8
CDF	Champ du Feu	11.11	332	eP	Pn	08 55 01.9	+0.7
CDF	Champ du Feu	11.11	332	eP	Pn	08 55 01.9	+0.7
CDF				pmax	pmax		
	comp=Z,173nm,0.8s						
MORC	Moravsky Berou	11.12	9	⇑P	P	08 55 03.9	-1.8
MORC	Moravsky Berou	11.12	9	ePN	Pn	08 55 03.1	+1.8
MORC	Moravsky Berou	11.12	9	P	Pn	08 55 02.8	+1.5
MORC	Moravsky Berou	11.12	9		Pn	08 55 02.8	+1.5
PLOR	Plostina	11.13	47	⇑P	Pn	08 55 03.4	+2.0
HAU	Haudompre	11.13	328	eP	Pn	08 55 02.1	+0.6
HAU	Haudompre	11.13	328	eP	Pn	08 55 01.6	+0.1
HAU				pmax	pmax		
	comp=Z,46nm,0.7s						
ROTZ	Rotzenmuhle	11.14	351	ePn	Pn	08 55 03.5	+2.0
UZH	Uzhgorod	11.14	26	eP	Pn	08 55 01.3	-0.3
VRI	Vrincioaia	11.18	47	⇑P	P	08 55 05.0	-1.4
PRU	Pruhonice	11.19	358	eP	Pn	08 55 03.7	+1.6
PRU	Pruhonice	11.19	358	eP	Pn	08 55 03.7	+1.6
GRFO	Grafenberg	11.21	347	P	Pn	08 55 03.5	+1.1
GRFO	Grafenberg	11.21	347		Pn	08 55 03.5	+1.1
GRA1	Grafenberg Arr	11.21	347		Pn	08 55 04.2	+1.7
GRF	Grafenberg Arr	11.21	347	P	Pn	08 55 04.2	+1.7
GRF	Grafenberg Arr	11.21	347	ePn	Pn	08 55 04.4	+2.0
NIE	Niedzica	11.27	18	eP	P	08 55 06.1	-1.2
NIE	Niedzica	11.27	18	P	P	08 55 06.3	-1.0
NIE				pmax	pmax		
	comp=Z,12nm,0.9s						
PRA	Prague	11.27	358	eP	P	08 55 06.5	-0.7
PRA	Prague	11.27	358	eP	P	08 55 06.5	-0.7
HARR	Harsova	11.30	55	⇓P	P	08 55 08.6	+0.9
TLBR	Topalu	11.31	55	⇑P	P	08 55 08.8	+1.0
SMF	Signal de Mont	11.34	317	eP	Pn	08 55 04.2	+0.2
KRLC	Kraliky	11.34	6	eP	P	08 55 06.7	-1.4
KRLC	Kraliky	11.34	6	eP	P	08 55 06.7	-1.4
MANZ	Manzenberg	11.37	350	ePn	P	08 55 06.4	-2.0
KOLS	Kolonicke sedl	11.40	25	eP	P	08 55 10.7	+2.0
KOLS	Kolonicke sedl	11.40	25	eP	P	08 55 10.7	+2.0
BIZ	Bicaz	11.50	41	⇑P	P	08 55 09.4	-0.5
TIRR	Tirgusor	11.51	56	⇓P	P	08 55 10.8	+0.8
TIRR	Tirgusor	11.51	56	⇓P	P	08 55 10.8	+0.8
TESR	Tescani	11.52	44	⇓P	P	08 55 10.6	+0.5
BURAR	Bucovina Array	11.53	37	⇑P	P	08 55 10.0	-0.3
BURAR	Bucovina Array	11.53	37	P	P	08 55 09.3	-1.0
BUR08	Bucovina Ar. S	11.54	37	P	P	08 55 09.5	-1.0
NKC	Novy Kostel	11.57	352	eP	Pn	08 55 08.7	+1.8
NKC	Novy Kostel	11.57	352	eP	Pn	08 55 08.7	+1.8
NKC				ex	x	08 55 11.2	
DPC	Dobruska-Polom	11.58	4	eP	Pn	08 55 08.7	+1.6
DPC	Dobruska-Polom	11.58	4	eP	Pn	08 55 08.7	+1.6
WERN	Wernitzgruen	11.63	352	ePn	P	08 55 10.0	-1.3
CFR	Carcaliu	11.66	53	⇑P	P	08 55 13.0	+1.4
AVF	Avril sur Loir	11.69	317	eP	Pn	08 55 08.3	-0.1
TPGR	Topolog	11.69	55	⇑P	P	08 55 13.7	+1.6
GUNZ	Gunzen	11.71	352	ePn	P	08 55 11.3	-0.9
PVCC	Panska Ves	11.72	359	eP	P	08 55 11.5	-0.8
PVCC	Panska Ves	11.72	359	eP	P	08 55 11.5	-0.8
LOR	Lormes	11.73	320	eP	Pn	08 55 08.5	-0.5
	baz=142						
LOR	Lormes	11.73	320	ePn	P	08 55 14.4	+1.9
	baz=128						
LOR				eS	S	08 57 18.7	-1.0
LOR	Lormes	11.73	320	P	Pn	08 55 09.3	+0.3
LOR				pmax	pmax		
	comp=Z,32nm,0.9s						
SSF	Saint Saulge	11.78	318	eP	Pn	08 55 09.6	+0.1
OSTC	Ostas	11.78	4	eP	P	08 55 12.5	-0.5
OSTC				ex	x	08 55 16.6	
WERD	Werda	11.79	352	ePn	P	08 55 12.2	-0.9
BGF	Bois d'Agland	11.82	315	eP	Pn	08 55 08.6	-1.5
PAGF	Fort de Pagny	11.82	328	eP	Pn	08 55 09.8	-0.3
PAGF	Fort de Pagny	11.82	328	ePn	P	08 55 14.9	+1.5
SFTF	Sexfontaines	11.84	326	eP	Pn	08 55 10.1	-0.2
	baz=141						
EPF	Esparros	11.86	295	eP	Pn	08 55 08.8	-1.9
EPF	Esparros	11.86	295	ePn	P	08 55 14.6	+0.6
EPF	Esparros	11.86	295	eP	Pn	08 55 08.6	-2.1
EPF				pmax	pmax		
	comp=Z,53nm,1.7s						
AKAS	Kas	11.88	98	Pn	Pn	08 55 10.2	-0.9
OJC	Ojcow	11.91	15	eP	P	08 55 14.8	+0.4
BIR	Birlad	11.92	47	⇑P	P	08 55 15.9	+1.4
RJF	Les Rejaudoux	11.93	307	eP	Pn	08 55 09.7	-1.8
RJF	Les Rejaudoux	11.93	307	ePn	P	08 55 15.0	+0.3
RJF	Les Rejaudoux	11.93	307	eP	P	08 55 16.5	+1.8
RJF				pmax	pmax		
	comp=Z,94nm,1.1s						
ELL	Elmali	11.98	95	P	Pn	08 55 13.4	+1.1
ELL	Elmali	11.98	95		Pn	08 55 13.4	+1.1
TCF	Toulx Ste Croi	12.02	313	eP	Pn	08 55 13.8	+1.2
MEZF	Maizieres J’vi	12.06	327	eP	Pn	08 55 14.2	+1.2
	baz=152						
KSP	Ksiaz	12.07	4	eP	P	08 55 15.9	-0.3
KSP	Ksiaz	12.07	4	P	P	08 55 16.2	0.0
KSP				pmax	pmax		
	comp=Z,36nm,0.8s						
BRG	Berggiesshubel	12.09	357	P	P	08 55 16.1	-0.3
BRG				pmax	pmax		
	comp=Z,157nm,0.9s						
BRG	Berggiesshubel	12.09	357	i P	P	08 55 15.7	-0.6
BRG				Amp		08 55 17.0	
	comp=Z,23nm,0.8s						
BRG				i x	x	08 55 18.7	
BRG				Amp		08 55 20.0	
	comp=Z,131nm,0.9s						
BRG				i x	x	08 55 28.7	
BRG				Amp		08 55 30.3	
	comp=Z,26nm,0.6s						
BRG				S	S	08 57 36.4	+8.6
BRG				Amp		08 57 37.0	
	comp=N,17nm,1.6s						
SAVF	Savonnieres en	12.12	327	eP	Pn	08 55 14.7	+1.0
	baz=155						
KWP	Kalwaria Pacla	12.14	24	eP	P	08 55 17.5	+0.5
KWP	Kalwaria Pacla	12.14	24	P	P	08 55 16.7	-0.3
KWP	Kalwaria Pacla	12.14	24	P	P	08 55 16.7	-0.3
LFF	La Frestale	12.26	305	eP	Pn	08 55 13.5	-2.0
LFF	La Frestale	12.26	305	ePn	P	08 55 17.9	-0.4
TNS	Taunus Mts	12.33	340	P	P	08 55 19.2	+0.1
TNS				pmax	pmax		
	comp=Z,155nm,1.0s						
TNS	Taunus Mts	12.33	340	ePn	P	08 55 20.7	+1.6
HYF	Humbligny	12.37	317	eP	Pn	08 55 17.6	+0.7
ETSF	Etsaut	12.47	294	eP	Pn	08 55 17.1	-1.1
ETSF	Etsaut	12.47	294	ePn	P	08 55 22.3	+1.6
ETSF	Etsaut	12.47	294	eP	Pn	08 55 19.2	+1.0
ETSF				pmax	pmax		
	comp=Z,26nm,0.6s						
UBBA	Unterbreizbach	12.52	345	ePn	P	08 55 22.4	+1.4
WLF	Walferdange	12.56	333	dP	P	08 55 22.0	+0.4
WLF				dx	x	08 55 35.1	
WLF	Walferdange	12.56	333	P	P	08 55 21.6	0.0
WLF	Walferdange	12.56	333	P	P	08 55 21.6	0.0
CLL	Collm	12.58	354	i P	P	08 55 22.4	+0.6
	comp=Z,102nm,1.2s						
CLL				LmV		10 42 00.0	
	comp=Z,200nm,18.3s						
CLL	Collm	12.58	354	i P	P	08 55 22.4	+0.6
CLL				pmax	pmax		
	comp=Z,102nm,1.2s						
CLL	Collm	12.58	354	P	P	08 55 22.6	+0.8
MDUB	Mudurnu	12.60	77	P	Pn	08 55 20.4	+0.5
LVV	L'vov	12.76	27	eP	P	08 55 26.0	+2.2
KIS	Kishinev	13.01	47	eP	P	08 55 28.0	+1.4
KIS				i S	S	08 57 50.0	+0.9
	comp=Z,160nm,1.6s						
KIS	Kishinev	13.01	47	eP	P	08 55 28.0	+1.4
KIS				i S	S	08 57 50.0	+0.9
KIS				smax	smax		
	comp=N,160nm,1.6s						
GTTG	Gottingen	13.22	346	ePn	P	08 55 30.6	+1.7
KASTN	Kahler Asten	13.23	342	ePn	P	08 55 30.5	+1.4
HORU	Horodok	13.24	35	P	Pn	08 55 27.8	+0.2
BTNL	Ternell	13.35	335	dP	P	08 55 31.3	+1.0
MEM	Membach	13.41	335	dP	P	08 55 31.5	+0.5
MEM	Membach	13.41	335	P	P	08 55 32.0	+1.0
MEM				pmax	pmax		
	comp=Z,61nm,0.8s						
GIVF	Givet	13.41	331	eP	P	08 55 30.8	-0.3
CLZ	Clausthal	13.43	348	ePn	P	08 55 33.0	+1.8
SORM	Soroca	13.44	42	⇑P	P	08 55 33.0	+1.7
BCLA	Clavier	13.49	333	dPn	P	08 55 31.6	-0.3
BCLA				dsPn	sPn	08 56 30.3	+2.5
DOU	Dourbes	13.50	330	dPn	P	08 55 31.5	-0.5
DOU				dP	Pn	08 55 32.5	+1.9
DOU				dx	x	08 55 52.3	
DOU				dsPn	sPn	08 56 24.4	-3.4
DOU	Dourbes	13.50	330	P	P	08 55 33.6	+1.6
DOU				pmax	pmax		
	comp=Z,28nm,0.8s						
BGES	Gesves	13.54	332	dPn	P	08 55 32.0	-0.5
BGES				dP	Pn	08 55 33.1	+1.8
BGES				dx	x	08 55 47.5	
MFF	Saint Martin d	13.57	310	eP	Pn	08 55 31.1	-0.6
BMRD	Maredsous	13.60	331	dPn	Pn	08 55 32.4	+0.5
BMRD				dP	P	08 55 33.5	+0.4
BAIF	Baives	13.62	329	eP	P	08 55 33.3	0.0
ASSE	Asse, Remlinge	13.66	349	ePn	P	08 55 36.5	+2.7
BUG	Bochum--Univer	13.75	339	P	P	08 55 37.0	+2.3
BUG				pmax	pmax		
	comp=Z,62nm,1.1s						
BUG	Bochum--Univer	13.75	339	ePn	P	08 55 37.8	+3.1
FLTG	Flechtingen	13.78	350	ePn	P	08 55 37.6	+2.6
SNF	Seneffe	13.95	330	dPn	Pn	08 55 36.1	0.0
SNF				dP	P	08 55 37.4	+0.5
UCC	Uccle	14.15	331	P	P	08 55 40.1	+0.9
UCC	Uccle	14.15	331		P	08 55 40.1	+0.9
BR131	Keskin Array S	14.47	80	i P	Pn	08 55 42.5	-0.4
BRTR	Keskin Array B	14.47	80	P	P	08 55 45.2	+2.1
	comp=Z,0.2nm,0.3s,baz=269,slow=11,SNR=9.1						
BRTR	Keskin Array B	14.47	80	P	P	08 55 43.5	+0.4
BRTR	Keskin Array B	14.47	80	P	P	08 55 43.5	+0.4
ILGA	Ilgaz	14.54	75	P	P	08 55 44.2	+0.3
LDF	La Druitiere	14.65	317	eP	Pn	08 55 43.4	-1.3
ESBB	Sonseca Array	14.72	279	P	Pn	08 55 46.1	+0.3
ESDC	Sonseca Array	14.72	279	P	Pn	08 55 47.1	+1.3
	comp=Z,0.5nm,0.3s,baz=76,slow=11,SNR=46						
ESDC	Sonseca Array	14.72	279	P	Pn	08 55 46.8	+1.0
GRR	Gorron	14.93	315	eP	P	08 55 47.3	-0.6
GRR	Gorron	14.93	315	ePn	Pn	08 55 57.2	+9.1
GRR				eSn	S	08 58 27.7	-5.1
GRR	Gorron	14.93	315	eP	Pn	08 55 48.7	+0.6
GRR				pmax	pmax		
	comp=Z,14nm,0.7s						
FLN	La Foliniere	14.94	317	eP	P	08 55 46.7	-1.3
	baz=136						
FLN				eSn	S	08 58 24.7	-8.4
FLN	La Foliniere	14.94	317	eP	Pn	08 55 48.3	+0.1
FLN				pmax	pmax		
	comp=Z,47nm,1.0s						
CSS	Mathiatis	15.16	99	P	P	08 55 49.2	-1.4
CSS				IAmb	IAmb	08 55 55.4	
	comp=Z,53nm,0.8s						
BSEG	Bad Segeberg	15.47	350	P	Pn	08 55 54.4	0.0
BSEG				pmax	pmax		
	comp=Z,261nm,0.8s						
KIEV	Kiev	15.56	36	P	P	08 55 54.0	-0.8
AKASG	Malin Array Be	15.57	36	P	P	08 55 54.6	-0.3
	comp=Z,16nm,0.3s,baz=228,slow=9.0,SNR=49						
AKASG				S	S	08 58 42.5	-3.8
	comp=Z,1.2nm,0.3s,baz=225,slow=19,SNR=12						
AKASG	Malin Array Be	15.57	36	P	P	08 55 54.8	-0.1
AKASG				pmax	pmax		
	comp=Z,7.0nm,0.7s						
AKASG	Malin Array Be	15.57	36	P	P	08 55 54.8	-0.1
AKBB	Malin Array Si	15.57	36	ceP	P	08 55 55.2	+0.3
AKBB	Malin Array Si	15.57	36	P	P	08 55 55.2	+0.3
AKBB				IAmb	IAmb	08 55 57.1	
	comp=Z,22nm,0.6s						
SGMF	Saint Gilles	15.82	312	eP	P	08 55 56.6	-1.0
QUIF	Quistinic	16.01	311	eP	Pn	08 56 00.6	-0.4
QUIF	Quistinic	16.01	311	eP	Pn	08 56 00.3	-0.7
SUW	Suwalki	16.20	18	eP	P	08 56 02.4	+0.6
SUW	Suwalki	16.20	18	eP	P	08 56 02.0	+0.2
SUW	Suwalki	16.20	18	P	P	08 56 01.4	-0.4
SUW				pmax	pmax		
	comp=Z,65nm,0.6s						
SUW	Suwalki	16.20	18	P	P	08 56 01.4	-0.4
ROSF	Rostrenen	16.27	312	eP	P	08 56 01.6	-1.1
ROSF	Rostrenen	16.27	312	eP	P	08 56 02.8	+0.1
ROSF				pmax	pmax		
	comp=Z,37nm,0.6s						
BSD	Bornholm Skovb	16.32	360	i P	P	08 56 02.0	-1.0
	comp=Z,22nm,0.9s						
BSD	Bornholm Skovb	16.32	360	i P	P	08 56 02.0	-1.0
BSD				pmax	pmax		
	comp=Z,22nm,0.9s						
BSD	Bornholm Skovb	16.32	360	i P	P	08 56 02.0	-1.0
BSD				IAmb	IAmb	08 56 06.4	
	comp=Z,22nm,0.9s						
TOKA	Tokat	16.63	78	P	Pn	08 56 08.4	-0.1
TOKA				IAmb	IAmb	08 56 10.6	
	comp=Z,46nm,0.8s						
LLD	Lille Linde	16.64	354	i P	P	08 56 06.8	+0.3
LLD	Lille Linde	16.64	354	i P	P	08 56 06.8	+0.3
LLD	Lille Linde	16.64	354	i P	P	08 56 06.8	+0.3
PBRG	Braganca	16.84	287	eP	Pn	08 56 10.6	-0.3
	comp=Z,38nm,1.9s						
COP	Copenhagen	16.97	355	i P	Pn	08 56 11.2	-1.0
COP	Copenhagen	16.97	355	i P	Pn	08 56 11.2	-1.0
COP	Copenhagen	16.97	355	i P	Pn	08 56 11.2	-1.0
COP				i P	Pn	08 56 11.3	-1.0
MDT	Midelt	16.98	255	P	P	08 56 11.4	+0.8
	comp=Z,0.7nm,0.3s,baz=98,slow=17,SNR=16						
MVO	Moncorvo	17.04	285	eP	Pn	08 56 12.2	-1.0
	comp=Z,61nm,0.9s						
PBAR	Barrancos	17.26	275	eP	P	08 56 13.9	+0.3
	comp=Z,111nm,1.4s						
PMRV	Marv??o	17.38	279	eP	P	08 56 15.8	+0.9
	comp=Z,114nm,0.8s						
PCBR	Castelo Branco	17.42	280	eP	P	08 56 16.0	+0.8
	comp=Z,48nm,1.4s						
MTE	Manteigas	17.44	282		P	08 56 15.3	-0.2
MTE				IAmb	IAmb	08 56 17.1	
	comp=Z,28nm,0.8s						
MTE	Manteigas	17.44	282	eP	P	08 56 16.3	+0.8
	comp=Z,38nm,0.9s						
MMAI	Mount Meron Ar	17.50	103	P	P	08 56 17.4	+1.1
	comp=Z,2.6nm,0.3s,baz=306,slow=10.0,SNR=7.9						
MMAI				S	S	08 59 30.9	+5.6
	comp=Z,3.6nm,0.3s,baz=262,slow=19,SNR=7.0						
PVRL	Vila Real	17.56	285	eP	P	08 56 17.6	+0.8
	comp=Z,22nm,0.7s						
PESTR	Estremoz	17.60	277		P	08 56 17.3	+0.1
PESTR				IAmb	IAmb	08 56 18.4	
	comp=Z,39nm,0.9s						

PESTR	Estremoz	17.60	277	eP	P	08 56 17.5	+0.3
	comp=Z,98nm,1.0s						
POLO	Lamas de Olo	17.62	286	eP	Pn	08 56 19.9	-0.2
	comp=Z,20nm,1.4s						
STRD	Stroud	17.66	323⇑	eP	P	08 56 17.9	+0.2
STRD				IAmb	IAmb	08 56 19.0	
	comp=Z,151nm,0.7s						
PVIS	Viseu	17.70	283	eP	P	08 56 19.2	+0.9
	comp=Z,63nm,1.3s						
ANN	Anapa	17.74	63	eP	P	08 56 16.6	-2.0
ANN				eS	S	08 59 27.4	-2.3
ANN				pmax	pmax		
	comp=Z,124nm,0.8s						
PABE	Paberze	17.76	17	eP	P	08 56 18.9	+0.2
PABE				IAmb	IAmb	08 56 25.6	
	comp=Z,119nm,0.8s						
PCAB	Cabril	17.80	287	eP	P	08 56 20.4	+1.0
	comp=Z,72nm,0.9s						
PBUR	Paburge	17.84	13	eP	P	08 56 19.7	+0.2
PVAQ	Vaqueiros	17.93	273	P	P	08 56 19.7	-1.0
PVAQ				IAmb	IAmb	08 56 21.0	
	comp=Z,25nm,0.7s						
PVAQ	Vaqueiros	17.93	273	eP	P	08 56 20.6	-0.2
	comp=Z,43nm,1.8s						
PBEJ	Beja	17.93	275	eP	P	08 56 21.1	+0.3
	comp=Z,45nm,1.1s						
NACGM	Naroch	17.96	22	i P	P	08 56 21.0	+0.1
NACGM				i P	P	08 56 21.0	+0.1
NACGM				i P	P	08 56 21.0	+0.1
NACGM				i Pb	Pn	08 56 22.3	-1.5
	comp=Z,68nm,0.7s						
NACGM				i S	S	08 59 31.1	-2.8
MNK	Minsk	17.97	25	eP	P	08 56 20.0	-1.0
MNK				eS	S	08 59 27.0	-7.0
MNK	Minsk	17.97	25	i P	P	08 56 19.7	-1.4
	comp=E,8.0nm,0.8s						
MNK				i P	P	08 56 19.7	-1.4
	comp=N,69nm,0.8s						
MNK				i P	P	08 56 19.7	-1.4
	comp=Z,146nm,0.8s						
MNK				i sP	sP	08 57 16.1	-15
MNK				i S	S	08 59 30.6	-3.4
MNK				i PcP	PcP	09 00 44.8	+0.9
MNK				i ScP	ScP	09 04 00.8	+5.3
MNK				i PcS	PcS	09 04 21.4	+1.2
MNK				i LRM	MLR	09 05 04.8	
	comp=Z,188nm,18.1s						
MNK				i LRM	MLR	09 05 07.1	
	comp=E,33nm,18.1s						
MNK				i LRM	MLR	09 06 04.5	
	comp=N,650nm,18.4s						
PMTG	Montargil	18.06	278	eP	P	08 56 22.4	+0.2
	comp=N,93nm,1.5s						
MUD	Monsted U'grnd	18.08	350	i P	P	08 56 20.8	-1.3
	comp=N,43nm,0.8s						
MUD	Monsted U'grnd	18.08	350	P	P	08 56 22.6	+0.5
MUD				pmax	pmax		
	comp=Z,68nm,0.8s						
MUD	Monsted U'grnd	18.08	350	i P	P	08 56 20.9	-1.3
MUD				IAmb	IAmb	08 56 27.1	
	comp=Z,43nm,0.8s						
COI	Coimbra	18.11	282	P	P	08 56 23.3	+0.6
COI				pmax	pmax		
	comp=Z,132nm,0.9s						
COI	Coimbra	18.11	282		P	08 56 23.3	+0.6
COI	Coimbra	18.11	282	eP	P	08 56 24.0	+1.3
	comp=Z,188nm,1.1s						
PBDV	Barranco-do-Ve	18.13	272	eP	P	08 56 22.9	-0.1
	comp=Z,65nm,1.7s						
PCVE	Castro Verde	18.14	274	eP	P	08 56 23.5	+0.5
	comp=Z,74nm,1.2s						
PCAS	Casmilo, Conde	18.19	281	eP	P	08 56 24.4	+0.8
	comp=Z,165nm,1.2s						
IIGN	Ignalina	18.19	21	eP	P	08 56 23.5	+0.1
IIGN				IAmb	IAmb	08 56 30.1	
	comp=Z,38nm,1.0s						
MCH1	Michaelchurch	18.20	322⇑	eP	P	08 56 24.0	+0.5
MCH1				IAmb	IAmb	08 56 26.0	
	comp=Z,34nm,0.8s						
MESJ	Messejana	18.24	274	eP	P	08 56 23.3	-0.8
MESJ				AMb	AMB	08 56 26.0	
	comp=Z,54nm,0.8s						
MESJ	Messejana	18.24	274	eP	P	08 56 23.3	-0.8
MESJ	Messejana	18.24	274	eP	P	08 56 25.1	+1.0
	comp=Z,55nm,0.8s						
IDID	Didziasalis	18.30	22	eP	P	08 56 24.5	-0.1
ISAL	Salakas	18.36	20	eP	P	08 56 25.0	-0.2
ISAL				IAmb	IAmb	08 56 31.0	
	comp=Z,46nm,0.8s						
PNCL	Nicolau / Gran	18.43	275	eP	P	08 56 26.8	+0.6
	comp=Z,117nm,1.8s						
PSBE	So Bento	18.46	280	eP	P	08 56 27.8	+1.3
	comp=Z,113nm,1.4s						
LBWR	Ladybower, Pea	18.57	327⇑	eP	P	08 56 27.6	+0.1
LBWR				IAmb	IAmb	08 56 28.4	
	comp=Z,101nm,0.9s						
GOET	G??ttrup	18.63	350	i P	P	08 56 28.6	+0.5
GOET	G??ttrup	18.63	350	i P	P	08 56 28.7	+0.5
PTEO	Sao Teotonio	18.69	274	eP	P	08 56 29.5	+0.6
	comp=Z,69nm,1.2s						
EIL	Elat	18.82	113	P	P	08 56 31.6	+1.2
	comp=Z,0.9nm,0.3s,baz=309,slow=7.6,SNR=26						
LIS	Lisbon	18.82	277	eP	P	08 56 29.3	-1.1
LIS				AMb	AMB	08 56 32.8	
	comp=Z,153nm,1.2s						
LIS	Lisbon	18.82	277	eP	P	08 56 29.3	-1.1
LIS	Lisbon	18.82	277	eP	P	08 56 31.8	+1.4
	comp=Z,155nm,1.0s						
FOEL	Foel Wylfa	18.87	324⇑	eP	P	08 56 29.6	-1.1
FOEL				IAmb	IAmb	08 56 30.7	
	comp=Z,149nm,0.8s						
GDLE	Glaisdale, N Y	18.95	331	eP	P	08 56 31.2	-0.4
RSBS	Rosebush, Pemb	19.03	320	eP	P	08 56 33.0	+0.6
RSBS				IAmb	IAmb	08 56 34.1	
	comp=Z,73nm,0.7s						
SOC	Sochi	19.18	68	eP	P	08 56 33.2	-0.9
SOC				eS	S	08 59 58.3	+0.3
SOC				pmax	pmax		
	comp=Z,84nm,0.9s						
SLIT	Slitere, Latvi	19.43	12	eP	P	08 56 36.1	-0.6
YLL	Llanberis	19.48	324⇑	eP	P	08 56 37.6	+0.4
WLF1	Llynfaes	19.68	324⇑	eP	P	08 56 39.5	+0.2
WLF1				IAmb	IAmb	08 56 40.0	
	comp=Z,282nm,0.7s						
WME	Myndd Eilian	19.70	324⇑	eP	P	08 56 39.9	+0.3
KOPT	Kop Dagi	19.72	78	P	P	08 56 41.4	+1.0
KOPT				IAmb	IAmb	08 56 46.4	
	comp=Z,47nm,1.2s						
YRC	Rhoscolyn	19.74	323	eP	P	08 56 39.9	0.0
WPS	Cemaes, Angles	19.80	324⇑	eP	P	08 56 40.7	+0.1
WPS				IAmb	IAmb	08 56 41.5	
	comp=Z,116nm,0.7s						
HOMB	Homborsund	19.93	350	eP	P	08 56 41.3	-0.6
HOMB	Homborsund	19.93	350	i P	P	08 56 42.1	+0.2
KESW	Keswick, Cumbr	19.99	328	eP	P	08 56 41.9	-0.7
KESW				IAmb	IAmb	08 56 42.9	
	comp=Z,110nm,1.0s						
SNART	Snartemo	20.19	348	eP	P	08 56 45.6	+0.9
SNART	Snartemo	20.19	348	i P	P	08 56 45.2	+0.4
MARD	Mardin	20.34	86	P	P	08 56 45.9	-0.9
WIM	Isle of Man	20.36	325	eP	P	08 56 45.6	-1.1
IOMK	Kirk Michael	20.39	326⇑	eP	P	08 56 46.1	-0.8
IOMK				IAmb	IAmb	08 56 48.8	
	comp=Z,70nm,0.7s						
EKA	Eskdalemuir Ar	20.54	330	P	P	08 56 47.4	-1.2
	comp=Z,16nm,0.6s,baz=140,slow=11,SNR=65						
EKA				PcP	PcP	09 00 48.1	-0.3
	comp=Z,1.6nm,0.7s,baz=119,slow=2.9,SNR=4.9						
ESK	Eskdalemuir	20.55	329⇑	eP	P	08 56 47.4	-1.3
ESK				IAmb	IAmb	08 56 48.5	
	comp=Z,144nm,1.5s						
ESK	Eskdalemuir	20.55	329	P	P	08 56 46.0	-2.6
ESK				pmax	pmax		
	comp=Z,141nm,1.5s						
ESK	Eskdalemuir	20.55	329	P	P	08 56 46.0	-2.6
DSB	Dublin	20.59	321	eP	P	08 56 48.9	-0.3
DSB	Dublin	20.59	321	P	P	08 56 48.8	-0.3
MTSE	Matsula	20.72	13	eP	P	08 56 50.3	-0.1
ESY	Stoneypath	20.76	331⇑	eP	P	08 56 50.3	-0.5
EBL	Broad Law	20.82	330	eP	P	08 56 50.1	-1.3
NEWG	New Galloway	20.82	328⇑	eP	P	08 56 50.2	-1.3
NEWG				IAmb	IAmb	08 56 51.5	
	comp=Z,48nm,0.8s						
VORD	Divnogorie	20.96	47	eP	P	08 56 52.2	-0.8
VORD				eS	S	09 00 27.3	-3.2
VORD				pmax	pmax		
	comp=Z,10.0nm,0.6s						
VORD				smax	smax		
	comp=E,50nm,1.0s						
EDI	Edinburgh	20.98	331	eP	P	08 56 51.8	-1.3
EDI				IAmb	IAmb	08 56 54.8	
	comp=Z,30nm,0.8s						
VSR	Storozhevoye	21.00	46	eP	P	08 56 52.9	-0.5
VSR				eS	S	09 00 26.7	-4.5
VSR				pmax	pmax		
	comp=Z,80nm,0.9s						
VSR				smax	smax		
	comp=N,60nm,1.0s						
VSU	Vasula	21.08	17	eP	P	08 56 53.0	-1.1
VSU	Vasula	21.08	17	i P	P	08 56 53.8	-0.3
KONO	Kongsberg	21.14	352	ceP	P	08 56 53.8	-0.9
KONO				pmax	pmax		
	comp=Z,63nm,1.3s						
KONO	Kongsberg	21.14	352	P	P	08 56 53.4	-1.3
KONO				IAmb	IAmb	08 56 55.6	
	comp=Z,42nm,0.9s						
KONO	Kongsberg	21.14	352	eP	P	08 56 53.5	-1.3
OSL	Oslo	21.32	354	eP	P	08 56 56.1	-0.3
NEY	Neytrino	21.34	69	i P	P	08 56 57.1	+0.1
NEY				pmax	pmax		
	comp=Z,12nm,1.0s						
BLS5	Blasjo	21.34	348	eP	P	08 56 56.1	-0.6
KIV	Kislovodsk	21.35	67	i P	P	08 56 57.4	+0.3
	SNR=6.2						
KIV	Kislovodsk	21.35	67	eP	P	08 56 57.7	+0.7
KIV				pmax	pmax		
	comp=Z,121nm,1.0s						
KIV	Kislovodsk	21.35	67	P	P	08 56 56.4	-0.6
KIV				IAmb	IAmb	08 57 01.0	
	comp=Z,53nm,1.2s						
KMY	Karmoy	21.36	346	eP	P	08 56 55.4	-1.3
HFS	Hagfors	21.36	358	P	P	08 56 55.2	-1.6
	comp=Z,26nm,0.8s,baz=181,slow=7.4,SNR=22						
HFS				S	S	09 00 33.8	-3.1
	comp=Z,3.5nm,0.8s,baz=130,slow=17,SNR=2.4						
DRUM	Mains of Drumt	21.47	333⇑	eP	P	08 56 55.9	-1.9
DRUM				IAmb	IAmb	08 56 58.1	
	comp=Z,58nm,0.9s						
KBZ	Khabaz	21.49	68	P	P	08 56 58.6	+0.5
	comp=Z,19nm,0.9s,baz=295,slow=7.0,SNR=22						
KBZ				PcP	PcP	09 00 51.4	+0.9
	comp=Z,4.5nm,0.9s,baz=126,slow=4.7,SNR=4.1						
KBZ	Khabaz	21.49	68	ceP	P	08 56 59.6	+1.4
KBZ				pmax	pmax		
	comp=Z,28nm,1.0s						
LPSR	Galich'ya Gora	21.54	42	eP	P	08 56 57.7	-0.8
LPSR				eS	S	09 00 36.8	-3.0
LPSR				pmax	pmax		
	comp=Z,90nm,0.9s						
LPSR				smax	smax		
	comp=N,110nm,1.6s						
CLGH	Cloghs, Cushen	21.61	326	eP	P	08 56 57.9	-1.2
EAB	Aberfoyle	21.62	330	eP	P	08 56 58.5	-0.8
AAL	Aland	21.62	7	eP	P	08 56 58.5	-0.8
INVG	Invergeldie, C	21.68	331⇑	eP	P	08 56 59.2	-0.6
INVG				IAmb	IAmb	08 56 59.7	
	comp=Z,88nm,1.1s						
GOF	Gofitskoye	21.71	64⇑	eP	P	08 57 00.6	+0.3
GOF				pmax	pmax		
	comp=Z,151nm,1.3s						
ODD1	Odda	21.78	349	eP	P	08 57 00.7	-0.1
OBN	Obninsk	21.83	35	P	P	08 57 00.6	-0.6
	comp=Z,13nm,0.3s,baz=207,slow=13,SNR=8.3						
OBN	Obninsk	21.83	35⇑	iP	P	08 57 00.4	-0.8
OBN				i		09 00 42.6	
OBN				pmax	pmax		
	comp=Z,55nm,1.0s						
OBN	Obninsk	21.83	35	P	P	08 56 59.9	-1.3
GEVA	Gevas	21.92	82	P	P	08 57 02.5	0.0
GEVA				IAmb	IAmb	08 57 05.5	
	comp=Z,18nm,1.0s						
NC602	NORSAR Array S	22.06	355	P	P	08 57 02.7	-0.5
NC602				IAmb	IAmb	08 57 04.7	
	comp=Z,44nm,0.8s						
NC602	NORSAR Array S	22.06	355	eP	P	08 57 02.5	-0.7
ZEI	Tsey	22.19	70	eP	P	08 57 06.2	+1.3
ZEI				pmax	pmax		
	comp=Z,32nm,1.2s						
SKAR	Skarslia	22.30	351	eP	P	08 57 05.4	-0.2
NB2	NORSAR Subarra	22.38	355	P	P	08 57 05.4	-0.9
	comp=Z,44nm,1.1s,baz=172,slow=11						
NB2	NORSAR Subarra	22.38	355	P	P	08 57 05.4	-0.9
	baz=172,slow=11						
NOA	NORSAR Array B	22.38	355	P	P	08 57 05.6	-0.7
	comp=Z,25nm,0.8s,baz=172,slow=9.0,SNR=67						
NB201	NORSAR Array S	22.39	355	P	P	08 57 05.5	-0.9
NBO00	NORSAR Array S	22.40	355	P	P	08 57 04.9	-1.5
BER	Bergen	22.44	347	eP	P	08 57 07.1	+0.4
VRH	Novokhopyorsk	22.45	48	eP	P	08 57 07.8	+0.8
VRH				eS	S	09 00 51.2	-3.5
VRH				pmax	pmax		
	comp=Z,120nm,0.6s						
VRH				smax	smax		
	comp=E,30nm,0.9s						
NC303	NORSAR Array S	22.56	355	P	P	08 57 07.2	-0.7
ASK	Askoy	22.56	347	e	P	08 57 07.6	-0.2
ASK				eP	P	08 57 07.9	+0.1
NC204	NORSAR Array S	22.65	355	P	P	08 57 07.3	-1.4
MOS	Moscow	22.69	34	eP	P	08 57 07.5	-1.6
MOS				e*PP	pP	08 57 56.9	+5.6
MOS				eS	S	09 00 56.5	-1.9
MOS				pmax	pmax		
	comp=Z,128nm,1.0s						
MOS				pmax	pmax		
	comp=Z,300nm,1.7s						
KPL	Plockton	22.95	331⇑	eP	P	08 57 10.0	-1.4
KPL				IAmb	IAmb	08 57 11.7	
	comp=Z,77nm,1.1s						
GNI	Garni	22.95	77	P	P	08 57 11.9	0.0
	comp=Z,23nm,1.0s,baz=156,slow=1.6,SNR=14						
GNI	Garni	22.95	77	ceP	P	08 57 13.7	+1.8
GNI				pmax	pmax		
	comp=Z,68nm,1.7s						
HYA	Hoyanger	23.05	349	eP	P	08 57 12.9	+0.7
PUL	Pulkovo	23.13	20	ceP	P	08 57 13.8	+0.8
PUL				pmax	pmax		
	comp=Z,201nm,0.7s						
DOMB	Dombas	23.55	353	eP	P	08 57 17.5	+0.6
GROC	Groznyy	23.58	69	eP	P	08 57 13.8	-3.5
GROC				e*PP	pP	08 58 00.7	-0.6
GROC				pmax	pmax		
	comp=Z,44nm,0.7s						
FINES	FINESS Array B	23.68	13	P	P	08 57 17.9	-0.1
	comp=Z,24nm,0.3s,baz=188,slow=9.1,SNR=130						
FINES				PcP	PcP	09 00 54.0	-0.7
	comp=Z,2.3nm,0.7s,baz=134,slow=4.0,SNR=1.5						
FINES	FINESS Array B	23.68	13	P	P	08 57 17.5	-0.5
FIA1	FINESS Array S	23.68	13	P	P	08 57 17.4	-0.6
AKN	Aaknes	23.91	351	eP	P	08 57 19.9	-0.2
SUF	Sumiainen	24.89	12	P	P	08 57 28.9	0.0
NSS	Namsos	25.82	357	eP	P	08 57 36.8	-0.5
BELG	Belogornoye	26.30	48	P	P	08 57 42.2	+0.5
	comp=Z,101nm,1.0s,baz=41,slow=2.5,SNR=18						
BELG	Belogornoye	26.30	48	i P	P	08 57 42.9	+1.2
BELG				pmax	pmax		
	comp=Z,17nm,1.0s						
KLMR	Klimovskoe	26.85	27	eP	P	08 57 45.4	-1.0
KLMR				pmax	pmax		
	comp=Z,43nm,0.8s						
KLMR	Klimovskoe	26.85	27	eP	P	08 57 45.4	-1.0
KLMR				AMP		08 57 47.0	
	comp=Z,43nm,0.8s						
TORD	Torodi Ar. Bea	28.15	208	P	P	08 57 58.3	-0.2
	comp=Z,2.3nm,0.6s,baz=13,slow=9.9,SNR=6.7						
FAUS	Fauske	28.63	0	eP	P	08 58 01.2	-0.9
STEI	Steigen	29.18	0	eP	P	08 58 07.2	+0.3
KOWA	Kowa	29.46	220	P	P	08 58 09.1	-0.9
	comp=Z,2.6nm,0.5s,baz=30,slow=11,SNR=10						
KOWA				PcP	PcP	09 01 08.9	-0.3
	comp=Z,2.6nm,0.6s,baz=34,slow=3.6,SNR=4.4						
KOWA	Kowa	29.46	220	P	P	08 58 08.8	-1.2
KIRV	Kirov	29.63	37	P	P	08 58 11.6	+0.5
	comp=Z,74nm,0.7s,baz=338,slow=1.2,SNR=24						
KIRV				S	S	09 02 46.0	-1.7
	comp=Z,11nm,0.5s,baz=82,slow=22,SNR=21						
KIRV	Kirov	29.63	37	ceP	P	08 58 11.3	+0.3
KTK1	Kautokeino	30.59	6	eP	P	08 58 18.5	-0.9
TRO	Tromso	30.96	3	eP	P	08 58 22.4	-0.2
LVZ	Lovozero	31.11	14	ceP	P	08 58 24.6	+0.6
LVZ				pmax	pmax		
	comp=Z,31nm,0.8s						
LVZ	Lovozero	31.11	14	P	P	08 58 23.0	-1.0
ARCES	ARCESS Array B	31.30	7	P	P	08 58 24.6	-1.1
	comp=Z,17nm,0.7s,baz=188,slow=8.9,SNR=62						
ARCES				PcP	PcP	09 01 12.2	-0.9
	comp=Z,3.4nm,0.7s,baz=213,slow=1.4,SNR=5.2						
ABKAR	Akbulak array	33.51	57	P	P	08 58 44.8	-0.2
ARU	Arti	33.54	44	c iP	P	08 58 45.2	0.0
ARU				*PP	pP	08 59 35.8	+1.4
ARU						09 00 05.6	
ARU				S	S	09 03 49.8	+1.3
ARU				SS	SS	09 06 22.3	-0.2
ARU				pmax	pmax		
	comp=Z,49nm,1.2s						
ARU	Arti	33.54	44	P	P	08 58 44.9	-0.3
ARU				IAmb	IAmb	08 58 46.5	
	comp=Z,27nm,0.6s						
GEYT	Alibeck	33.59	78	P	P	08 58 47.1	+1.1
	comp=Z,6.4nm,0.7s,baz=259,slow=12,SNR=11						
GEYT	Alibeck	33.59	78	P	P	08 58 45.9	0.0
GYA0B	ALIBECK ARRAY	33.59	78	P	P	08 58 46.2	+0.2
GYA0B				IAmb	IAmb	08 58 47.6	
	comp=Z,9.9nm,0.8s						
SVE	Sverdlovsk	34.75	44	eP	P	08 58 56.2	+0.7
SVE				pmax	pmax		
	comp=Z,66nm,1.0s						
DBIC	Dimbokro	36.68	214	P	P	08 59 12.2	-0.2
	comp=Z,3.9nm,0.5s,baz=6.6,slow=6.8,SNR=17						
DBIC	Dimbokro	36.68	214	P	P	08 59 11.7	-0.7
SHME	Shamm	36.69	98	P	P	08 59 13.0	+0.6
TIC	Toumodi	36.77	215	eP	P	08 59 14.9	+1.7
ASUD	Al Ashush, Dub	36.80	101	P	P	08 59 14.7	+1.3
ASUD	Al Ashush, Dub	36.80	101	P	P	08 59 14.7	+1.3
NAZ	Nazwa, Dubai	36.87	100	P	P	08 59 14.8	+0.9
NAZ	Nazwa, Dubai	36.87	100	P	P	08 59 14.9	+0.9
KIC	Kosan Boka	36.91	214	eP	P	08 59 14.0	-0.3
	comp=Z,6.4nm,0.3s						
FAQ	Al Faqa, Dubai	36.94	100	P	P	08 59 15.4	+0.8
SCO	Scoresbysund	37.09	340	P	P	08 59 13.7	-1.5
SCO				pmax	pmax		
	comp=Z,11nm,0.9s						
SCO	Scoresbysund	37.09	340	P	P	08 59 13.7	-1.5
LIC	Lamto	37.15	214	eP	P	08 59 16.2	-0.2
	comp=Z,17nm,0.3s						
UOSS	Minazif	37.31	99	P	P	08 59 16.8	-0.8
UOSS				IAmb	IAmb	08 59 18.9	
	comp=Z,22nm,0.8s						
UOSS	Minazif	37.31	99	P	P	08 59 17.9	+0.2
HATD	Hatta, Dubai	37.31	100	i P	P	08 59 18.0	+0.3
	SNR=9.4						
HATD				P	P	08 59 18.4	+0.7
HATD	Hatta, Dubai	37.31	100	P	P	08 59 18.3	+0.6
	SNR=9.4						
ASHO	Ashiyiah	37.33	100	i P	P	08 59 18.5	+0.6
	SNR=6.8						
ASHO	Ashiyiah	37.33	100	P	P	08 59 18.5	+0.6
	SNR=6.8						
ALNE	Al Ain	37.43	101	i P	P	08 59 19.3	+0.6
	SNR=6.2						
ALNE	Al Ain	37.43	101	P	P	08 59 19.5	+0.8
UMZA	Um Al Zommool	37.73	103	P	P	08 59 22.0	+0.9
HRA	Herat	37.86	82	P	P	08 59 21.5	-0.9
SOHO	SOHO	37.99	100	i P	P	08 59 23.9	+0.6
	SNR=6.2						
SOHO	SOHO	37.99	100	P	P	08 59 24.3	+0.9
HSPB	Hornsund (broa	38.30	0	eP	P	08 59 26.5	+1.3
ARQ	Araqi	38.42	101	P	P	08 59 28.0	+1.1
	SNR=8.5						
DBG	Daneborg	39.26	346	i P	P	08 59 34.4	+1.2
DOK	Doka	39.39	109	P	P	08 59 35.4	+0.4
	SNR=8.4						
BIDO	Bidbid	39.55	100	P	P	08 59 36.7	+0.4
SMDO	Samad	39.74	100	P	P	08 59 38.4	+0.5
	SNR=5.1						
BRVK	Borovoye	39.99	51	ceP	P	08 59 40.3	+0.9
BRVK				pmax	pmax		
	comp=Z,63nm,1.0s						
BRVK	Borovoye	39.99	51	P	P	08 59 39.4	-0.1
BRVK				IAmb	IAmb	08 59 41.5	
	comp=Z,47nm,0.8s						
RBK	Rabkut	40.15	111	P	P	08 59 41.0	-0.3
	SNR=6.0						
JMDO	Jabal Madar	40.16	101	P	P	08 59 41.6	+0.3
	SNR=7.3						
DAG	Danmarks Havn	40.79	349	P	P	08 59 45.3	-0.3
MHTO	MHTO	40.85	103	P	P	08 59 48.0	+1.1
	SNR=17						
DQM	DQM	41.14	105	P	P	08 59 50.0	+0.7
	SNR=6.0						
IUG	Iuzhnay	41.39	67	eP	P	08 59 50.9	-0.2
	comp=Z,9.1nm,0.8s,baz=67						
IUG				eS	S	09 05 46.9	-0.2
	baz=67						
IUG	Iuzhnay	41.39	67	eP	P	08 59 50.9	-0.2
IUG				eS	S	09 05 46.9	-0.2
IUG				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KK31	Karatay Array	41.50	66	P	P	08 59 51.8	-0.1
KK31				pmax	pmax		
	comp=Z,14nm,0.7s						
KK31	Karatay Array	41.50	66	P	P	08 59 51.8	-0.1
KK31				IAmb	IAmb	08 59 54.2	
	comp=Z,14nm,0.7s						
KKAR	Karatay Array	41.50	66	P	P	08 59 51.8	-0.1
KKAR	Karatay Array	41.50	66	P	P	08 59 51.8	-0.1
BRZS	Berezniki	41.73	55	eP	P	08 59 53.5	-0.2
	comp=Z,9.5nm,0.8s,baz=55						
BRZS	Berezniki	41.73	55	eP	P	08 59 53.5	-0.2
BRZS				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MBAR	Mbarara	41.80	156	P	P	08 59 52.7	-2.1
ICESG	Greenland Ices	41.86	334	i P	P	08 59 54.0	-0.8
ICESG				IAmb	IAmb	08 59 55.4	
	comp=Z,11nm,0.8s						
DZA	Taraz	42.13	66	eP	P	08 59 57.0	-0.2
	baz=66						
DZA	Taraz	42.13	66	eP	P	08 59 56.9	-0.2
SUMG	Summit	42.67	339	i P	P	09 00 02.1	+0.8
	comp=Z,19nm,0.8s						
SUMG	Summit	42.67	339	i P	P	09 00 02.1	+0.8
SUMG				pmax	pmax		
	comp=Z,19nm,0.8s						
SUMG	Summit	42.67	339	P	P	09 00 02.0	+0.6
SUMG	Summit	42.67	339	i P	P	09 00 02.2	+0.8
SUMG				IAmb	IAmb	09 00 03.2	
	comp=Z,19nm,0.8s						
KBL	Kabul	43.03	78	P	P	09 00 04.2	-0.4
KBL				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KBL	Kabul	43.03	78	P	P	09 00 04.2	-0.4
BTLS	Baital	43.53	62	eP	P	09 00 08.2	+0.1
	baz=62						
BTLS	Baital	43.53	62	eP	P	09 00 08.2	+0.1
EKS2	Erkin-Say	43.93	65	P	P	09 00 12.9	+1.3
	SNR=25						
USP	Ospenovka	44.28	64	P	P	09 00 14.7	+0.4
	SNR=7.1						
SGDS	Sogindy	44.33	64	eP	P	09 00 15.1	+0.5
	baz=64						
SGDS	Sogindy	44.33	64	eP	P	09 00 15.1	+0.5
AAK	Ala-Archa	44.45	65	P	P	09 00 17.1	+1.4
	SNR=6.7						
AAK	Ala-Archa	44.45	65	i P	P	09 00 16.8	+1.1
	SNR=9.0						
AAK	Ala-Archa	44.45	65	ceP	P	09 00 16.9	+1.2
AAK				pmax	pmax		
	comp=Z,44nm,1.7s						
AAK	Ala-Archa	44.45	65	P	P	09 00 14.7	-1.0
UCH	Uchtor	44.58	66	P	P	09 00 18.2	+1.1
	SNR=11						
KBK	Karagaybulak	44.77	65	P	P	09 00 19.3	+1.1
	SNR=5.6						
TKM2	Tokmak 2	45.15	65	i P	P	09 00 21.0	-0.3
TKM2				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KURK	Kurchatov	45.38	53	ceP	P	09 00 22.8	+0.2
KURK				pmax	pmax		
	comp=Z,55nm,1.0s						
KURK	Kurchatov	45.38	53	P	P	09 00 22.5	-0.1
KURK				IAmb	IAmb	09 00 23.9	
	comp=Z,42nm,0.8s						
KUU	Kurty	45.40	63	eP	P	09 00 23.0	0.0
	comp=Z,29nm,0.9s,baz=63						
KUU	Kurty	45.40	63	eP	P	09 00 23.0	0.0
KUU				pmax	pmax		

	comp=Z,29nm,0.9s						
SFJD	Kangerlussuaq	45.52	330	P	P	09 00 23.9	+0.4
SFJD				pmax	pmax		
	comp=Z,9.0nm,0.9s						
SFJD	Kangerlussuaq	45.52	330	P	P	09 00 23.9	+0.4
MTBS	Maitube	45.68	64	*e*P	P	09 00 25.6	+0.4
	baz=64						
MTBS	Maitube	45.68	64	*e*P	P	09 00 25.6	+0.4
ULHL	Ulahol	45.80	65	P	P	09 00 27.4	+1.1
	SNR=6.2						
CHKK	Chushkaly	45.87	63	*e*P	P	09 00 26.5	-0.2
	baz=63						
CHKK	Chushkaly	45.87	63	*e*P	P	09 00 26.4	-0.2
AAA	Alma-Ata	46.00	64	*e*P	P	09 00 28.2	+0.5
	baz=64						
AAA	Alma-Ata	46.00	64	*e*P	P	09 00 28.1	+0.5
TNSS	Tian-Shan	46.07	64	*e*P	P	09 00 29.1	+0.5
	baz=64						
TNSS	Tian-Shan	46.07	64	*e*P	P	09 00 29.1	+0.5
MDOK	Medeo	46.10	64	*e*P	P	09 00 28.8	+0.1
	baz=64						
MDOK	Medeo	46.10	64	*e*P	P	09 00 28.7	+0.1
SEM	Semipalatinsk	46.45	53	*e*P	P	09 00 31.0	-0.3
	baz=53						
SEM	Semipalatinsk	46.45	53	*e*P	P	09 00 31.0	-0.3
KSH	Kashi	46.47	69	P	P	09 00 31.2	-0.3
KSH				PP	PP	09 02 21.1	-2.5
KSH				S	S	09 06 59.0	-1.5
KSH				pmax	pmax		
	comp=Z,13nm,0.8s						
KSH				pmax	pmax		
	comp=Z,150nm,4.1s						
TDK	Taldyqorghan	46.53	61	*e*P	P	09 00 32.1	+0.3
	baz=61						
TDK	Taldyqorghan	46.53	61	*e*P	P	09 00 32.0	+0.3
SATY	Saty	47.08	64	*e*P	P	09 00 36.3	+0.1
	baz=64						
SATY	Saty	47.08	64	*e*P	P	09 00 36.2	+0.1
KPKS	Kokpek	47.16	63	*e*P	P	09 00 36.3	-0.5
	baz=63						
KPKS	Kokpek	47.16	63	*e*P	P	09 00 36.2	-0.5
UZB	Uzynbulak	47.49	63	*e*P	P	09 00 38.8	-0.5
	baz=63						
UZB	Uzynbulak	47.49	63	*e*P	P	09 00 38.8	-0.5
PDGK	Podgornoye	47.76	63	*i* P	P	09 00 40.9	-0.5
PDGK				pmax	pmax		
	comp=Z,18nm,0.9s						
SHLS	Shalkode	47.79	63	*e*P	P	09 00 43.4	+1.8
	comp=Z,8.5nm,0.6s,baz=63						
SHLS	Shalkode	47.79	63	*e*P	P	09 00 43.4	+1.8
SHLS				pmax	pmax		
	comp=Z,9.0nm,0.6s						
NRIK	Noril'sk	48.19	27	P	P	09 00 45.5	+1.5
	comp=Z,37nm,0.7s,baz=255,slow=4.1,SNR=85						
NRIK	Noril'sk	48.19	27	⇑*e*P	P	09 00 45.6	+1.5
NRIK				pmax	pmax		
	comp=Z,42nm,0.9s						
NRIK	Noril'sk	48.19	27	P	P	09 00 44.4	+0.3
NRIK				IAmb	IAmb	09 00 46.4	
	comp=Z,41nm,0.8s						
MAKZ	Makanchi	48.44	58	P	P	09 00 45.5	-0.8
MAKZ				pmax	pmax		
	comp=Z,14nm,1.0s						
MAKZ	Makanchi	48.44	58	P	P	09 00 45.5	-0.8
ZALV	Zalesovo Beam	48.49	48	P	P	09 00 47.0	+0.4
	comp=Z,12nm,0.4s,baz=286,slow=8.5,SNR=16						
ZALV	Zalesovo Beam	48.49	48	P	P	09 00 46.3	-0.3
MK31	Makanchi Array	48.65	58	*ce*P	P	09 00 48.0	0.0
MK31	Makanchi Array	48.65	58	P	P	09 00 48.0	0.0
MK31				IAmb	IAmb	09 00 49.1	
	comp=Z,18nm,0.7s						
MKAR	Makanchi Array	48.65	58	P	P	09 00 48.2	+0.3
	comp=Z,24nm,0.7s,baz=284,slow=6.4,SNR=272						
MKAR				PcP	PcP	09 02 09.3	+0.1
	comp=Z,5.5nm,0.7s,baz=286,slow=4.4,SNR=7.6						
MKAR				S	S	09 07 30.9	+0.2
	comp=Z,0.4nm,0.7s,baz=292,slow=12,SNR=2.2						
MKAR	Makanchi Array	48.65	58	P	P	09 00 47.7	-0.2
MKAR	Makanchi Array	48.65	58	P	P	09 00 47.7	-0.2
ZSN	Zaisan	50.14	56	*e*P	P	09 00 59.2	0.0
	comp=Z,8.7nm,0.6s,baz=56						
ZSN	Zaisan	50.14	56	*e*P	P	09 00 59.2	0.0
ZSN				pmax	pmax		
	comp=Z,9.0nm,0.6s						
DGZ	Jazzator, Alta	51.11	53	*i* P	P	09 01 07.0	+0.4
DGZ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
TULEG	Thule	51.21	343	P	P	09 01 05.6	-1.1
WMQ	Urumqi	53.21	60	*e*P	P	09 01 22.6	+0.7
WMQ				pP	pP	09 02 17.5	+1.8
WMQ				PcP	PcP	09 02 27.4	+1.0
WMQ				PP	PP	09 03 26.3	+1.8
WMQ				pmax	pmax		
	comp=Z,24nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,130nm,4.7s						
FRB	Frobisher Bay	53.27	327	P	P	09 01 21.5	-0.4
EUNU	Eureka	54.00	348	P	P	09 01 27.0	-0.1
EUNU				IAmb	IAmb	09 01 28.9	
	comp=Z,32nm,1.1s						
DANN	Dangsing	57.02	78	*e*P	P	09 01 49.5	-0.1
	comp=Z,119nm,0.8s						
GKN	Gorkha	57.87	78	*e*P	P	09 01 54.8	-0.5
	comp=Z,72nm,0.9s						
RES	Resolute Bay	57.92	343	P	P	09 01 54.6	-0.1
RES				pmax	pmax		
	comp=Z,13nm,1.2s						
RES	Resolute Bay	57.92	343	P	P	09 01 54.6	-0.1
DMN	Daman	58.42	78	*e*P	P	09 01 59.3	0.0
KKN	Kakani	58.47	78	*e*P	P	09 01 59.3	-0.2
	comp=Z,64nm,0.7s						
PKIN	Phulchoki	58.66	78	*e*P	P	09 02 00.7	-0.2
	comp=Z,38nm,0.6s						
PKI	Pulchoki	58.67	78	*e*P	P	09 02 00.9	-0.2
	comp=Z,62nm,1.0s						
GUN	Gumba	58.86	78	*e*P	P	09 02 02.5	+0.1
	comp=Z,178nm,1.0s						
RAMN	Ramite	59.90	78	*e*P	P	09 02 09.1	-0.3
TLY	Talaya	60.01	46	*ce*P	P	09 02 10.9	+1.5
TLY				pmax	pmax		
	comp=Z,27nm,1.7s						
TIXI	Tiksi	60.54	19	*d i*P	P	09 02 12.7	+0.1
TIXI	Tiksi	60.54	19	P	P	09 02 13.0	+0.4
TIXI				IAmb	IAmb	09 02 13.9	
	comp=Z,11nm,0.9s						
D56A	ZEC Mazanza, M	62.76	310	P	P	09 02 27.4	-0.5
	baz=61						
LSQQ	Lebel-sur-Quev	63.10	313	P	P	09 02 29.5	-0.6
	baz=61						
MATQ	Matagami	63.14	313	P	P	09 02 29.9	-0.4
	baz=61						
GTA	Gaotai	63.30	60	P	P	09 02 32.1	+0.4
GTA				PcP	PcP	09 03 07.6	+1.0
GTA				pP	pP	09 03 30.1	+2.6
GTA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,160nm,5.5s						
GTA				LR	LR		
	comp=Z,89nm,17.1s						
GTA				LR	LR		
	comp=Z,240nm,17.1s						
GTA				LR	LR		
	comp=Z,130nm,16.4s						
SONM	Songino Array	63.36	49	P	P	09 02 32.3	+0.3
	comp=Z,14nm,0.8s,baz=286,slow=7.2,SNR=75						
SONM				PcP	PcP	09 03 07.8	+1.2
	comp=Z,4.8nm,0.9s,baz=277,slow=3.7,SNR=7.2						
SONM	Songino Array	63.36	49	P	P	09 02 31.6	-0.4
ULN	Ulaanbaatar	63.73	49	*ce*P	P	09 02 35.0	+0.6
ULN				pmax	pmax		
	comp=Z,8.0nm,0.8s						
LONY	Lake Ozonia	63.83	307	P	P	09 02 35.4	+0.5
	baz=60						
SHL	Shillong	64.66	77	P	P	09 02 39.3	-1.5
SHL				pmax	pmax		
	comp=Z,9.0nm,0.8s						
SHL	Shillong	64.66	77	P	P	09 02 39.3	-1.5
SHL				IAmb	IAmb	09 02 39.9	
	comp=Z,8.8nm,0.8s						
RCBR	Riachuelo	64.70	239	*e*P	P	09 02 42.5	+1.5
M61A	Granite Spring	64.97	304	P	P	09 02 42.5	+0.2
	baz=60						
ALGO	Algonquin Park	65.28	310	P	P	09 02 44.5	+0.3
	baz=59						
G54A	Lake Saint Pet	65.59	309	P	P	09 02 46.4	+0.1
	baz=59						
BINY	Binghamton	65.94	306	P	P	09 02 48.6	0.0
	baz=59						
N60A	Cedar Hill Far	66.06	304	P	P	09 02 49.6	+0.3
	baz=59						
H53A	Bobcaygeon	66.32	309	P	P	09 02 51.0	+0.1
	baz=58						
FCC	Fort Churchill	66.45	328	P	P	09 02 51.8	+0.4
FCC	Fort Churchill	66.45	328	P	P	09 02 51.8	+0.4
N59A	State Game Lan	66.47	304	P	P	09 02 52.2	+0.2
	baz=58						
NBLI	Livramento-PB	66.53	238	*e*P	P	09 02 53.6	+0.9
PALK	Pallekele	66.58	100	P	P	09 02 53.1	+0.1
	comp=Z,14nm,0.9s						
L57A	Andrews Acres	66.59	306	P	P	09 02 53.2	+0.6
	baz=58						
YAK	Yakutsk	66.64	28	*e*P	P	09 02 51.8	-0.7
YAK				*e*S	SKiKP	09 12 03.9	-24
YAK				pmax	pmax		
	comp=Z,23nm,0.9s						
YAK				pmax	pmax		
	comp=N,7.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,11nm,1.1s						
YAK				smax	smax		
	comp=N,19nm,2.2s						
YAK				smax	smax		
	comp=E,20nm,2.1s						
YAK	Yakutsk	66.64	28	P	P	09 02 51.3	-1.3
M58A	Price's Panora	66.67	305	P	P	09 02 53.7	+0.5
	baz=58						
L56A	Greenwood	66.97	306	P	P	09 02 55.6	+0.5
	baz=58						
M57A	Sunshine Farm,	67.12	305	P	P	09 02 55.9	-0.1
	baz=58						
N58A	Sunbury	67.12	305	P	P	09 02 55.7	-0.3
	baz=58						
NBPS	Pedro II - PI	67.47	244	*e*P	P	09 02 58.7	+0.1
N57A	Milroy	67.70	305	P	P	09 02 59.6	0.0
	baz=57						
M56A	Emporium	67.71	306	P	P	09 03 00.7	+1.0
	baz=57						
LZH	Lanzhou	67.74	61	*e*P	P	09 03 01.2	+1.0
LZH				pmax	pmax		
	comp=E,24nm,1.3s						
BOSA	Boshof	67.75	170	P	P	09 02 59.6	-0.4
	comp=E,3.5nm,0.6s,baz=353,slow=6.7,SNR=12						
BOSA	Boshof	67.75	170	P	P	09 03 00.1	+0.1
BOSA				pmax	pmax		
	comp=Z,14nm,1.4s						
BOSA	Boshof	67.75	170	P	P	09 03 00.1	+0.1
BOSA				IAmb	IAmb	09 03 09.4	
	comp=Z,14nm,1.4s						
SSPA	Standing Stone	67.98	305	P	P	09 03 01.3	-0.1
	baz=57						
C36M	Paulatuk	68.03	345	P	P	09 03 01.6	+0.5
	baz=33						
C36M	Paulatuk	68.03	345	P	P	09 03 01.6	+0.5
C36M				IAmb	IAmb	09 03 02.4	
	comp=Z,19nm,0.8s						
N56A	West Decatur	68.09	305	P	P	09 03 02.5	+0.4
	baz=57						
P58A	Pank, Wackersv	68.22	304	P	P	09 03 03.2	+0.4
	baz=57						
ROSB	Rosrio	68.34	247	*e*P	P	09 03 04.2	+0.3
O56A	Blue Knob Stat	68.61	305	P	P	09 03 06.0	+0.7
	baz=57						
M54A	Oil Creek Stat	68.63	307	P	P	09 03 05.4	0.0
	baz=57						
P57A	Homestead Farm	68.68	304	P	P	09 03 05.0	-0.7
	baz=57						
Q58A	Fox Den Farm,	68.76	303	P	P	09 03 06.4	+0.2
	baz=57						
CBN	Corbin Frederi	68.96	303	P	P	09 03 07.5	+0.1
	baz=57						
N54A	Moraine State	69.14	306	P	P	09 03 09.3	+0.8
	baz=56						
Q57A	Strasburg	69.19	304	P	P	09 03 09.1	+0.3
	baz=56						
P56A	Dayton Farm, R	69.21	304	P	P	09 03 09.0	0.0
	baz=56						
R58B	Mineral	69.43	303	P	P	09 03 10.5	+0.2
	baz=56						
R57A	Stanardsville	69.67	303	P	P	09 03 11.4	-0.4
	baz=56						
Q56A	Snyder Ridge,	69.69	304	P	P	09 03 12.2	+0.2
	baz=56						
S58A	Poland Farm, P	69.74	302	P	P	09 03 12.5	+0.3
	baz=56						
MCWV	Mont Chateau	69.77	305	P	P	09 03 12.9	+0.5
	baz=56						
U60A	Pendleton	69.78	301	P	P	09 03 13.0	+0.6
	baz=56						
HIA	Hailar	70.04	42	*i* P	P	09 03 14.8	+0.9
HIA				pmax	pmax		
	comp=Z,19nm,0.9s						
HIA	Hailar	70.04	42	P	P	09 03 14.3	+0.4
HIA				IAmb	IAmb	09 03 15.7	
	comp=Z,18nm,0.7s						
HHC	Hu-ho-hao-te	70.19	53	*e*P	P	09 03 15.4	+0.3
HHC				pmax	pmax		
	comp=Z,22nm,0.9s						
HHC				pmax	pmax		
	comp=Z,110nm,4.8s						
INK	Inuvik	70.63	348	P	P	09 03 16.5	-0.5
INK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
INK	Inuvik	70.63	348	P	P	09 03 16.5	-0.5
U58A	Oxford	70.75	301	P	P	09 03 18.6	+0.3
	baz=56						
T57A	Hurt	70.88	302	P	P	09 03 19.5	+0.4
	baz=56						
V59A	Middlesex	70.89	301	P	P	09 03 19.0	-0.2
	baz=56						
P52A	Corning	71.24	306	P	P	09 03 21.4	+0.1
	baz=55						
YKA	Yellowknife Ar	71.24	338	P	P	09 03 20.9	0.0
	comp=Z,8.8nm,0.7s,baz=46,slow=5.7,SNR=118						
U57A	Blanch	71.25	302	P	P	09 03 21.4	+0.1
	baz=55						
Q53A	Leroy	71.30	305	P	P	09 03 21.7	+0.1
	baz=55						
R54A	Victor	71.34	304	P	P	09 03 21.6	-0.3
	baz=55						
T56A	Rocky Mt	71.37	303	P	P	09 03 22.1	0.0
	baz=55						
ACSO	Alum Creek Sta	71.43	307	P	P	09 03 22.8	+0.5
	baz=55						
BLA	Blacksburg	71.52	303	P	P	09 03 23.4	+0.3
	baz=55						
V57A	Coltrane Farms	71.85	302	P	P	09 03 24.8	-0.2
	baz=55						
W58A	Raeford	71.99	301	P	P	09 03 25.3	-0.5
	baz=55						
XAN	Xi'an	72.34	60	P	P	09 03 28.5	+0.6
XAN				pmax	pmax		
	comp=Z,33nm,1.3s						
MCPB	Macapa, AP	72.50	255	*e*P	P	09 03 29.1	+0.1
ULM	Lac du Bonnet	72.55	321	P	P	09 03 28.4	-0.4
	comp=Z,13nm,0.7s,baz=60,slow=5.7,SNR=25						
U54A	Nelsons Funny	72.84	303	P	P	09 03 30.8	-0.1
	baz=54						
EPYK	Eagle Plains	72.91	348	P	P	09 03 30.5	-0.2
EPYK				IAmb	IAmb	09 03 31.8	
	comp=Z,21nm,0.7s						
P49A	Miami Univ. Ec	72.92	307	P	P	09 03 30.3	-0.9
	baz=54						
BMAR	Burnt Mountain	72.96	352	P	P	09 03 31.7	+0.8
GDU01	Guandu, BA	72.96	236	*e*P	P	09 03 32.0	+0.4
SEY	Seymchan	73.02	19	*i* P	P	09 03 32.0	+0.7
KMI	Kunming	73.06	71	⇑*e*P	P	09 03 38.6	+6.1
KMI				pmax	pmax		
	comp=Z,16nm,0.5s						
KMSC	Kings Mountain	73.32	302	P	P	09 03 32.9	-0.7
	baz=54						
BJI	Beijing	73.52	52	P	P	09 03 35.6	+1.0
BJI				PcP	PcP	09 03 47.8	-1.5
BJI				pmax	pmax		
	comp=Z,19nm,0.9s						
BJI				pmax	pmax		
	comp=Z,130nm,4.8s						
BJT	Baijiatuau	73.53	52	P	P	09 03 33.7	-1.0
BJT				pmax	pmax		
	comp=Z,16nm,0.9s						
BJT	Baijiatuau	73.53	52	P	P	09 03 33.7	-1.0
BJT				IAmb	IAmb	09 03 36.2	
	comp=Z,16nm,0.9s						
COLD	Coldfoot	73.69	354	P	P	09 03 36.0	+0.8
	baz=12,SNR=22						
COLD	Coldfoot	73.69	354	P	P	09 03 34.7	-0.4
COLD				IAmb	IAmb	09 03 37.1	
	comp=Z,15nm,0.9s						
NHSC	New Hope	73.73	299	P	P	09 03 36.3	+0.3
	baz=54						
AGMN	Agassiz Nation	73.81	319	P	P	09 03 35.7	-0.5
	baz=49						
CMMT	Chiang Mai	73.86	79	P	P	09 03 36.0	-1.0
	comp=Z,9.2nm,1.2s						
TZTN	Tazewell	73.95	304	P	P	09 03 37.4	+0.1
	baz=53						
CM15	Chiang Mai Arr	74.05	79	P	P	09 03 39.4	+1.3
CMAR	Chiang Mai Arr	74.06	79	P	P	09 03 38.3	+0.1
	comp=Z,10nm,0.9s,baz=307,slow=7.1,SNR=33						
CMAR	Chiang Mai Arr	74.06	79	*ce*P	P	09 03 38.2	+0.1
CMAR				pmax	pmax		
	comp=Z,6.0nm,0.5s						
CM02	Chiang Mai Arr	74.08	79	P	P	09 03 39.0	+0.8
	comp=Z,116nmcomp=Z,14nm,1.0s						
CM01	Chiang Mai Arr	74.09	79	P	P	09 03 39.2	+0.9
	comp=Z,126nmcomp=Z,11nm,0.9s						
CM05	Chiang Mai Arr	74.09	79	P	P	09 03 38.0	-0.3
	comp=Z,75nmcomp=Z,9.3nm,0.9s						
CM09	Chiang Mai Arr	74.11	79	P	P	09 03 39.4	+1.0
	comp=Z,15nm,0.9s						
CM04	Chiang Mai Arr	74.12	79	P	P	09 03 39.4	+0.9
	comp=Z,13nm,1.0s						
JFWS	Jewell Farm	74.19	313	P	P	09 03 37.3	-1.2
	baz=52						
LAMP	Lampang	74.55	79	P	P	09 03 41.8	+0.8
	comp=Z,1µmcomp=Z,40nm,1.0s						
WCI	Wyandotte Cave	74.68	307	P	P	09 03 39.8	-1.6
	baz=52						
PRPB	Parauapebas	74.69	249	*e*P	P	09 03 42.2	+0.4
SMTB	Santa Maria do	74.93	245	*e*P	P	09 03 43.0	-0.1
HDIL	Hopedale	75.09	310	P	P	09 03 42.7	-1.0
	baz=52						
MALB	Monte Alegre	75.14	255	*e*P	P	09 03 44.8	+0.4
GYA	Guiyang	75.15	68	⇓P	P	09 03 44.1	-0.4
GYA				pmax	pmax		
	comp=Z,14nm,1.0s						
SUKH	Sukhothai	75.16	79	P	P	09 03 45.0	+0.6
	comp=Z,25nm,0.8s						
MA2	Magadan	75.39	22	*ce*P	P	09 03 45.9	+0.9
MA2				pmax	pmax		
	comp=Z,29nm,0.7s						
MA2	Magadan	75.39	22	P	P	09 03 44.8	-0.2
POKR	Poker Plat Res	75.50	352	P	P	09 03 46.3	+0.7
	baz=14,SNR=7.1						
SDBA	SAO DESIDERIO	75.55	241	*e*P	P	09 03 46.6	0.0
I23K	Minto, Yukon-K	75.66	353	P	P	09 03 46.7	+0.3
	baz=12,SNR=6.3						
ILAR	Eielson Array	75.78	352	P	P	09 03 48.0	+0.9
	comp=Z,4.0nm,0.8s,baz=357,slow=5.9,SNR=46						
ILAR	Eielson Array	75.78	352	P	P	09 03 47.1	-0.1
COLA	College	75.78	353	*i* P	P	09 03 48.8	+1.7
COLA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
TCOL	CIGO, UAF Yank	75.78	353	P	P	09 03 48.6	+1.5
	baz=14						
MLY	Manley	75.89	354	P	P	09 03 48.8	+1.0
	baz=11,SNR=9.2						
PHIT	Phitsanulok	75.94	79	P	P	09 03 49.9	+1.1
	comp=Z,1µmcomp=Z,86nm,1.0s						
T47A	Sharon Grove	75.95	306	P	P	09 03 48.2	-0.4
T47A				IAmb	IAmb	09 03 49.3	
	comp=Z,45nm,1.2s						
KLR	Kul'dur	76.07	37	*ce*P	P	09 03 49.2	+0.1
KLR				pmax	pmax		
	comp=Z,12nm,1.0s						
HDA	Harding Lake	76.14	352	P	P	09 03 49.6	+0.4
	baz=14,SNR=15						
WRH	Wood River Hil	76.20	353	P	P	09 03 49.6	+0.1
WRH				IAmb	IAmb	09 03 50.8	
	comp=Z,18nm,1.0s						
SCRK	Sand Creek	76.21	351	P	P	09 03 50.7	+1.0
	baz=17,SNR=8.9						
NAN01	Guarapari, ES	76.38	234	*e*P	P	09 03 51.9	+0.8
DOT	Dot Lake	76.53	351	P	P	09 03 51.2	-0.2
DOT				IAmb	IAmb	09 03 53.7	
	comp=Z,16nm,1.0s						
BCAR	Beaver Creek A	76.78	349	P	P	09 03 52.8	-0.1
WVT	Waverly	76.94	306	P	P	09 03 52.5	-1.7
	baz=51						
MCK	McKinley	77.00	353	P	P	09 03 54.5	+0.4
	baz=13,SNR=8.2						
JANB	Januaria	77.05	238	*e*P	P	09 03 55.4	+0.4
ECSD	EROS Data Cent	77.21	316	P	P	09 03 55.5	-0.1
	baz=48						
BSFB	Barra de Sao F	77.57	233	*e*P	P	09 03 58.4	+0.6
RIB01	Linhares ES	77.65	233	*e*P	P	09 03 57.7	-0.5
PEXB	Peixe	77.68	243	*e*P	P	09 03 59.1	+0.6
SJMB	Sao Joao De Ma	77.69	234	*e*P	P	09 03 59.1	+0.7
CCM	Cathedral Cave	77.84	309	P	P	09 03 58.4	-0.7
	baz=50						
ITTB	Itaituba	77.89	254	*e*P	P	09 03 59.6	-0.1
CHAI	Chaiyaphum	77.91	79	P	P	09 04 00.0	+0.2
	comp=Z,458nmcomp=Z,43nm,1.0s						
M24K	Tolsona, Glenn	78.29	351	P	P	09 04 01.3	0.0
	baz=15						
LRAL	Lakeview Retre	78.33	303	P	P	09 04 01.6	-0.3
	baz=51						
N25K	Chitina, Valde	78.57	350	P	P	09 04 02.7	-0.1
	baz=16						
PTGA	Pitinga	78.77	260	*e*P	P	09 04 05.1	+0.6
OXF	Oxford	78.96	305	P	P	09 04 04.6	-0.7
	baz=50						
NPGB	Novo Progresso	79.36	252	*e*P	P	09 04 07.4	-0.3
BGNE	Belgrade	79.62	315	P	P	09 04 09.0	+0.2
	baz=47						
RC01	Rabbit Creek A	79.68	353	P	P	09 04 08.9	+0.2
	baz=12						
SNDB	Serra Nova Dou	79.70	246	*e*P	P	09 04 09.8	+0.4
USA0B	Ussuriysk Arra	79.71	41	*i* P	P	09 04 09.5	+0.3
USRK	Ussuriysk Ar.	79.71	41	P	P	09 04 09.5	+0.3
	comp=Z,21nm,0.8s,baz=286,slow=4.6,SNR=30						
USRK	Ussuriysk Ar.	79.71	41	P	P	09 04 08.2	-1.0
U40A	Yellville	79.92	309	P	P	09 04 10.3	-0.2
	baz=49,SNR=7.4						
BDFB	Brasilia	79.96	241	P	P	09 04 12.0	+1.0
	comp=Z,14nm,0.6s,baz=46,slow=5.9,SNR=22						
BDFB	Brasilia	79.96	241	P	P	09 04 12.0	+1.0
NJ2	Nanjing	80.17	57	⇓*i*P	P	09 04 12.2	+0.4
NJ2				pmax	pmax		
	comp=Z,24nm,0.5s						
KSU1	Kansas State U	80.32	313	P	P	09 04 12.4	-0.2
	baz=47,SNR=9.9						
W41B	Gary Mavity, V	80.32	307	P	P	09 04 12.4	-0.2
	baz=49,SNR=5.9						
EGMT	Eagleton	80.58	326	P	P	09 04 14.7	+0.9
	baz=40						
RSSD	Black Hills	80.80	320	P	P	09 04 15.3	0.0
	baz=44						
RSSD	Black Hills	80.80	320	P	P	09 04 15.0	-0.3
RSSD				pmax	pmax		
	comp=Z,11nm,1.5s						
MACA	Manacapuru-AM	80.87	258	*e*P	P	09 04 16.2	+0.5
DUB01	Friburgo-RJ	80.94	232	*e*P	P	09 04 17.0	+1.1
SDV	Santo Domingo	81.11	274	*e*P	P	09 04 17.3	0.0
X40A	Basin Creek Fa	81.13	307	P	P	09 04 16.9	0.0
	baz=49						
W39A	Magazine	81.25	308	P	P	09 04 17.1	-0.4
	baz=48						
MIAR	Mount Ida	81.55	308	P	P	09 04 19.3	+0.2
	baz=48						
MIAR	Mount Ida	81.55	308	P	P	09 04 17.8	-1.3
BSCB	Bom Sucesso	81.65	235	*e*P	P	09 04 19.3	-0.5
T35A	Sooner Cattle	81.74	311	P	P	09 04 19.0	-1.0
IPMB	Ipameri, GO	81.74	239	*e*P	P	09 04 21.0	+0.8
TUL1	Leonard	81.99	310	P	P	09 04 21.4	+0.1
	baz=47						
KSAR	Wonju Array Be	82.18	48	P	P	09 04 21.8	-0.5
KSAR	Wonju Array Be	82.18	48	P	P	09 04 21.8	-0.5
KSRS	Korea Array	82.20	48	P	P	09 04 22.9	+0.5
	comp=Z,12nm,0.8s,baz=314,slow=4.7,SNR=49						
KAN13	South Haven SW	82.24	312	P	P	09 04 22.3	-0.3
GCMT	Greycliff	82.24	324	P	P	09 04 22.3	-0.4
RLMT	Red Lodge	82.57	324	P	P	09 04 25.0	+0.6
	baz=40						
ARAG	Araguaiana, MT	82.62	243	*e*P	P	09 04 25.5	+0.8
YSS	Yuzh-Sakhalins	82.71	33	⇓*i*P	P	09 04 25.3	+0.5
YSS				pmax	pmax		
	comp=Z,80nm,0.8s						
YSS	Yuzh-Sakhalins	82.71	33	P	P	09 04 24.8	0.0

PETK	Petropavlovsk-	82.92	22	P	P	09 04 25.7	-0.1
	comp=Z,3.6nm,0.9s,baz=36,slow=7.9,SNR=4.4						
K22A	Casper	83.11	321	P	P	09 04 27.1	-0.1
	baz=42,SNR=14						
BOZ	Bozeman (W)	83.27	325	P	P	09 04 28.6	+0.6
	baz=39						
MSO	Missoula	83.30	327	P	P	09 04 28.6	+0.6
	baz=38						
NEW	Newport	83.44	330	P	P	09 04 29.1	+0.4
	baz=36,SNR=6.0						
PSI	Prapat	83.52	92	P	P	09 04 29.7	+0.1
	comp=Z,12nm,0.7s,baz=0.1,slow=3.4,SNR=7.9						
PHWY	Pilot Hill	83.57	319	P	P	09 04 28.0	-1.8
YMR	Madison River	83.69	324	P	P	09 04 29.4	-0.8
KSCO	Kaye Shedlock'	83.74	316	P	P	09 04 31.2	+0.7
	baz=44						
KSCO	Kaye Shedlock'	83.74	316	P	P	09 04 30.1	-0.3
KSCO				IAmb	IAmb	09 04 32.3	
	comp=Z,30nm,1.0s						
N23A	Red Feather La	84.12	319	P	P	09 04 33.4	+0.9
	baz=42,SNR=7.8						
BB19B	Bebedouro	84.13	237	eP	P	09 04 33.4	+1.0
ITRB	Iturama	84.39	239	eP	P	09 04 33.8	+0.1
BW06	Boulder Array	84.50	322	P	P	09 04 34.0	-0.3
	baz=40,SNR=5.8						
PDAR	Pinedale Array	84.50	322	P	P	09 04 34.6	+0.3
	comp=Z,1.9nm,0.6s,baz=60,slow=5.2,SNR=18						
PDAR	Pinedale Array	84.50	322	P	P	09 04 33.2	-1.1
WMOK	Wichita Mounta	84.57	311	P	P	09 04 35.0	+0.4
	baz=46,SNR=5.3						
ISCO	Idaho Springs	84.75	318	P	P	09 04 36.3	+0.5
	baz=42,SNR=8.3						
ISCO	Idaho Springs	84.75	318	P	P	09 04 34.2	-1.5
ISCO				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ISCO	Idaho Springs	84.75	318	P	P	09 04 34.2	-1.5
ISCO				IAmb	IAmb	09 04 37.6	
	comp=Z,8.2nm,0.8s						
ASAJ	Asahikawa	84.86	35	P	P	09 04 35.8	0.0
	comp=Z,4.9nm,0.7s,baz=288,slow=3.5,SNR=7.1						
WHTX	Lake Whitney,	85.67	308	P	P	09 04 40.2	+0.2
	baz=46,SNR=7.3						
O20A	White River Ci	85.85	320	P	P	09 04 40.7	-0.3
	baz=41,SNR=5.9						
PP1B	Ponte de Pedra	86.06	244	eP	P	09 04 43.0	+1.1
T25A	Trinidad	86.06	316	P	P	09 04 42.4	+0.2
	baz=43						
SDCO	Great Sand Dun	86.21	317	P	P	09 04 42.7	-0.2
	baz=42						
PCMB	Pacaembu	86.32	239	eP	P	09 04 45.0	+1.8
ABTX	Abilene, Hawle	86.56	310	P	P	09 04 45.0	+0.6
	baz=45,SNR=6.4						
435B	Jarrell	86.58	307	P	P	09 04 44.6	+0.2
	baz=46						
VILB	Vilhena	86.81	251	eP	P	09 04 45.9	+0.2
S22A	4UR Ranch, Cre	86.91	318	P	P	09 04 46.5	+0.1
	baz=42						
JNU	Nakatsue	86.95	49	P	P	09 04 46.5	+0.2
	comp=Z,15nm,1.0s,baz=40,slow=9.6,SNR=4.1						
JLU	Jordanelle	87.06	322	P	P	09 04 45.5	-1.5
MSTX	Muleshoe	87.44	313	P	P	09 04 49.0	+0.3
	baz=44						
SRU	San Rafael Swe	87.77	321	P	P	09 04 49.1	-1.1
SRU				pmax	pmax		
	comp=Z,11nm,0.7s						
SRU	San Rafael Swe	87.77	321	P	P	09 04 49.1	-1.1
SDSI	Sungai Dareh	87.79	93	P	P	09 04 50.5	+0.1
DUG	Dugway, Tooele	88.03	323	P	P	09 04 51.4	0.0
	baz=38,SNR=5.8						
TRCB	Terra Rica	88.05	239	eP	P	09 04 52.2	+0.7
JCT	Junction City	88.16	308	P	P	09 04 52.5	+0.4
	baz=45						
MVCO	Mesa Verde	88.19	318	P	P	09 04 52.5	+0.2
	baz=40						
MJAR	Matsushiro Arr	88.55	42	P	P	09 04 53.1	-0.6
	comp=Z,3.9nm,0.9s,baz=312,slow=5.1,SNR=8.5						
AQDB	Aquidauana	88.56	242	eP	P	09 04 54.4	+0.6
ANMO	Albuquerque	88.80	315	P	P	09 04 55.3	+0.1
	baz=42						
ANMO	Albuquerque	88.80	315	ceP	P	09 04 56.4	+1.2
ANMO				pmax	pmax		
	comp=Z,3.0nm,1.0s						
PTGB	Pitanga	89.00	237	eP	P	09 04 56.3	+0.3
ETMB	Extrema	89.32	257	eP	P	09 04 57.0	-0.6
CLNB	Carlsbad	89.32	312	P	P	09 04 56.9	-0.6
MNTX	Cornudas Mount	90.60	313	P	P	09 05 03.4	0.0
	baz=42						
WUAZ	Wupatki	90.97	319	P	P	09 05 05.5	+0.2
	baz=39,SNR=5.3						
TXAR	Lajitas Array	91.32	310	P	P	09 05 07.9	+1.0
	comp=Z,2.1nm,0.8s,baz=56,slow=4.7,SNR=25						
TXAR				PKKPbc	PKKPbc	09 22 27.2	+1.4
	comp=Z,0.7nm,1.0s,baz=152,slow=5.7,SNR=4.5						
TXAR	Lajitas Array	91.32	310	P	P	09 05 06.7	-0.2
X16A	Lo Mia Camp, P	91.86	318	P	P	09 05 08.0	-1.4
NVAR	Mina Array Bea	91.98	325	PKKPbc	PKKPbc	09 22 25.7	+1.2
	comp=Z,0.1nm,0.4s,baz=185,slow=3.3,SNR=3.9						
OTAV	Otavalo	92.55	272	P	P	09 05 12.0	-1.1
OTAV				pmax	pmax		
	comp=Z,8.0nm,1.2s						
OTAV	Otavalo	92.55	272	P	P	09 05 12.0	-1.1
OTAV				IAmb	IAmb	09 05 14.5	
	comp=Z,8.3nm,1.2s						
OTAV	Otavalo	92.55	272	eP	P	09 05 12.5	-0.6
TUC	Tucson	93.14	317	P	P	09 05 15.5	+0.3
	baz=39						
TUC	Tucson	93.14	317	P	P	09 05 14.0	-1.2
TUC				pmax	pmax		
	comp=Z,4.0nm,0.9s						
TUC	Tucson	93.14	317	P	P	09 05 13.9	-1.2
TUC				IAmb	IAmb	09 05 17.7	
	comp=Z,4.1nm,0.9s						
GMRC	Granite Mounta	93.70	321	P	P	09 05 18.3	+0.5
	baz=36						
IRM	Iron Mountain	93.95	321	P	P	09 05 19.0	+0.2
	baz=37						
HEC	Hector,Ludlow	93.99	322	P	P	09 05 19.4	+0.3
	baz=36						
ISA	Isabella, Lake	94.33	324	P	P	09 05 21.0	+0.4
	baz=34						
BELC	Belle Mtn. Jos	94.50	321	P	P	09 05 21.6	+0.1
	baz=36						
BC3	Big Chuckawall	94.50	320	P	P	09 05 21.3	-0.1
	baz=36						
LPAZ	La Paz	94.83	253	eP	P	09 05 22.3	-1.4
PFO	Pinyon Flats O	95.04	321	P	P	09 05 23.7	-0.2
	baz=36						
TPFO	Pinon Flats	95.04	321	P	P	09 05 23.5	-0.4
	baz=36						
ITQB	Itaqui	95.34	236	eP	P	09 05 25.4	+0.5
MONP2	Monument Peak	95.60	321	P	P	09 05 26.2	-0.3
	baz=36						
IKP	In-Ko-Pah, Jac	95.64	320	P	P	09 05 26.1	-0.5
	baz=36						
FITZ	Fitzroy Crossi	117.05	92	PKP	PKPdf	09 10 44.6	0.0
	comp=Z,1.8nm,0.7s,baz=187,slow=5.0,SNR=4.0						
WRA	Warramunga Arr	124.88	88	PKP	PKPdf	09 10 59.2	-0.5
	comp=Z,3.5nm,0.7s,baz=316,slow=1.8,SNR=45						
WRAB	Tennant Creek	124.88	88	c iPKIKP	PKPdf	09 10 59.6	-0.1
WRAB				pmax	pmax		
	comp=Z,10.0nm,2.5s						
ASAR	Alice Springs	126.54	93	PKP	PKPdf	09 11 02.4	-0.5
	comp=Z,5.7nm,0.9s,baz=328,slow=1.8,SNR=42						
PMG	Port Moresby	128.23	69	c iPKIKP	PKiKP	09 11 07.5	+0.6
PMG				pmax	pmax		
	comp=Z,10.0nm,1.7s						
QSPA	South Pole Qui	128.66	180	PKP	PKPdf	09 11 05.0	-0.6
	comp=Z,4.5nm,0.8s,baz=78,slow=12,SNR=25						
STKA	Stephens Creek	136.41	98	PKhKP	PKPpre	09 11 12.7	
	comp=Z,0.5nm,0.3s,baz=328,slow=8.3,SNR=2.9						
STKA				PKP	PKPdf	09 11 20.4	-0.8
	comp=Z,3.6nm,0.8s,baz=317,slow=1.5,SNR=8.2						

RSNC 06 08:58:36.0±0.7**, 6°.84N**×**73°.20W, h138**km±6km**, ML1.3, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAMC	Pamplona, Colo	0.71	45	eP	Pn	08 58 57.6	-0.3
PAMC				eS	Sn	08 59 14.6	+0.1
PAMC				i		08 59 16.6	
	comp=Z,2.3nm,0.6s						
PAMC	Pamplona, Colo	0.71	45	eP	Pn	08 58 57.6	-0.3
PAMC				eS	Sn	08 59 14.6	+0.1
PAMC				i		08 59 16.6	
	comp=Z,2.3nm,0.6s						
RUSC	La Rusia	0.95	173	eP	Pn	08 58 59.0	-0.8
RUSC				eS	Sn	08 59 16.8	-1.0
RUSC				i		08 59 18.9	
	comp=Z,1.6nm,0.3s						
RUSC	La Rusia	0.95	173	eP	Pn	08 58 59.2	-0.6
RUSC				eS	Sn	08 59 17.2	-0.6
RUSC				i		08 59 18.9	
	comp=Z,1.6nm,0.3s						
PTBC	PUERTO BERRIO,	1.28	257	eP	Pn	08 59 01.8	-0.5
PTBC				eS	Sn	08 59 22.0	-0.5
PTBC				i		08 59 24.8	
	comp=Z,2.2nm,0.1s						
PTBC	PUERTO BERRIO,	1.28	257	eP	Pn	08 59 01.8	-0.6
PTBC				eS	Sn	08 59 21.9	-0.6
PTBC				i		08 59 24.7	
	comp=Z,2.2nm,0.1s						
SPBC	San Pablo de B	1.46	216	eP	Pn	08 59 03.7	-0.7
SPBC				eS	Sn	08 59 26.1	0.0
SPBC				i		08 59 33.6	
	comp=Z,2.8nm,0.2s						
SPBC	San Pablo de B	1.46	216	eP	Pn	08 59 04.2	-0.2
SPBC				eS	Sn	08 59 26.1	0.0
SPBC				i		08 59 33.5	
	comp=Z,2.8nm,0.2s						
SMLC	San Martn de	2.13	336	eP	Pn	08 59 11.3	-0.7
SMLC				eS	Sn	08 59 39.0	-0.8
SMLC				i		08 59 43.8	
	comp=Z,3.4nm,0.1s						
SMLC	San Martn de	2.13	336	eP	Pn	08 59 11.4	-0.7
SMLC				eS	Sn	08 59 39.0	-0.8
SMLC				i		08 59 43.6	
	comp=Z,3.4nm,0.1s						

*JMA **06** 09:03:00.0±0.1, 23°.97N×122°.41E, h23km±3km, M2.7*
*TAP **06** 09:03:00.6, 23°.95N×122°.36E, h27km, ML2.9, D*
ISC 06 09:02:59.7±1.2**, 23°.95N**±0°.04×**122°.39E**±0°.02**, h23**km±13km**, n41, σ0s.56**/82**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.71	46	P	Pb	09 03 12.9	-0.6
JYNG				S	Sb	09 03 22.1	-0.8
TWD	Chiawan	0.73	280	eP	Pb	09 03 14.0	+0.2
	baz=281						
TWD				eS	Sb	09 03 23.6	+0.1
	baz=281						
NACB	Ninganchiao	0.76	287	i P	Pb	09 03 14.6	+0.4
	baz=287						
NACB				eS	Sb	09 03 24.7	+0.6
	baz=287						
ENA	Nanau	0.76	309	eP	Pb	09 03 14.5	+0.2
	baz=310						
ENA				eS	Sb	09 03 24.3	+0.1
	baz=310						
YOJ	Yonaguni jima	0.77	48	P	Pb	09 03 13.8	-0.6
YOJ				eS	Sb	09 03 23.2	-1.2
TWC	Suao	0.82	323	eP	Pb	09 03 15.1	-0.2
	baz=325						
TWC				eS	Sb	09 03 26.0	+0.1
	baz=325						
ETLH	Xiulin Townshi	0.86	287	eP	Pb	09 03 16.5	+0.4
	baz=287						
ETLH				eS	Sb	09 03 27.6	+0.3
	baz=287						
HGSD	Ruisui	0.99	243	eP	Pn	09 03 18.2	-0.1
	baz=242						
HGSD				eS	Sb	09 03 31.1	+0.2
	baz=242						
TWE	Neicheng	1.01	320	eP	Pn	09 03 18.7	+0.2
	baz=321						
TWE				eS	Sb	09 03 31.5	+0.1
	baz=321						
ENTT	Nioudou	1.01	313	eP	Pn	09 03 18.7	+0.1
	baz=313						
ENTT				eS	Sb	09 03 31.8	+0.2
	baz=313						
NDT	Datong Townshi	1.03	309	eP	Pn	09 03 18.8	+0.1
	baz=310						
NDT				eS	Sb	09 03 31.9	-0.1
	baz=310						
NNSB	Datong	1.03	298	eP	Pn	09 03 19.1	+0.1
	baz=298						
NNSB				eS	Sb	09 03 32.6	+0.5
	baz=298						
NNSH	Datong	1.03	298	P	Pn	09 03 19.0	0.0
	baz=298						
NNSH				eS	Sb	09 03 32.7	+0.5
	baz=298						
NTC	Toucheng	1.03	331	eP	Pn	09 03 19.2	+0.4
	baz=331						
NTC				eS	Sn	09 03 32.8	+0.3
	baz=331						
WHF	Hehuan Shan	1.04	281	eP	Pn	09 03 18.9	-0.5
	baz=281						
WHF				eS	Sb	09 03 32.4	-0.3
	baz=281						
NNS	Nan Shan	1.04	298	eP	Pn	09 03 18.9	-0.2
	baz=298						
NNS				eS	Sb	09 03 32.1	-0.4
	baz=298						
EHY	Hungye	1.07	246	P	Pn	09 03 19.2	-0.1
	baz=245						
EHY				eS	Sb	09 03 32.6	-0.5
	baz=245						
FUSS	Fushou	1.08	286	eP	Pn	09 03 20.0	+0.3
	baz=286						
FUSS				eS	Sb	09 03 33.3	-0.5
	baz=286						
CHGB	Renai	1.11	276	eP	Pn	09 03 19.9	-0.2
	baz=276						
CHGB				eS	Sn	09 03 34.4	-0.5
	baz=276						
TIPB	Shuangxi	1.14	333	eP	Pn	09 03 20.5	+0.2
	baz=334						
TIPB				eS	Sn	09 03 35.4	+0.2
	baz=334						
TWT	Tachien	1.15	286	eP	Pb	09 03 21.6	+0.6
	baz=285						
TWT				eS	Sn	09 03 35.5	-0.1
	baz=285						
EYUL	Yuli	1.15	239	eP	Pn	09 03 20.5	+0.1
	baz=238						
EYUL				eS	Sn	09 03 35.7	+0.3
	baz=238						
NWLT	Wulai	1.15	316	eP	Pn	09 03 20.9	+0.4
	baz=316						
NWLT				eS	Sn	09 03 35.4	-0.2
	baz=316						
VWDT	VWDT	1.16	261	eP	Pn	09 03 20.5	0.0
	baz=260						
VWDT				eS	Sn	09 03 34.9	-0.7
	baz=260						
TDCB	Techi	1.16	285	eP	Pn	09 03 20.7	-0.1
	baz=285						
TDCB				eS	Sn	09 03 35.0	-0.9
	baz=285						
TWF1	Yuli	1.16	239	eP	Pn	09 03 20.5	-0.1
	baz=238						
TWF1				eS	Sn	09 03 35.0	-0.7
	baz=238						
NSK	Sanguang	1.18	308	eP	Pn	09 03 20.9	-0.1
	baz=308						
NSK				eS	Sn	09 03 35.2	-1.2
	baz=308						
FULB	Fuli	1.25	233	eP	Pn	09 03 21.9	0.0
	baz=232						
FULB				eS	Sn	09 03 37.8	-0.2
	baz=232						
IRIF	Iriomote-Funau	1.29	72	P	Pn	09 03 22.7	+0.4
IRIF				S	Sn	09 03 39.0	+0.2
HATJ	Hateruma jima	1.30	85	P	Pn	09 03 23.4	+0.9
HATJ				eS	Sn	09 03 39.6	+0.4
SSLB	Suanglung	1.32	263	eP	Pn	09 03 23.0	+0.2
	baz=263						
SSLB				eS	Sn	09 03 38.5	-1.2
	baz=263						
WHP	Taichung City	1.35	284	eP	Pn	09 03 23.8	+0.5
	baz=284						
WHP				eS	Sn	09 03 40.4	-0.3
	baz=284						
TYC	Yuchr	1.40	268	eP	Pn	09 03 23.8	0.0
	baz=268						
TYC				eS	Sn	09 03 41.2	-0.4
	baz=268						
LIOB	Emei	1.43	299	eP	Pn	09 03 25.4	+1.1
	baz=299						
LIOB				eS	Sn	09 03 42.4	-0.1
	baz=299						
JKRS	Kuro-shima	1.51	79	P	Pn	09 03 26.1	+0.7
JKRS				S	Sn	09 03 44.9	+0.5
ALS	Alishan	1.51	254	eP	Pn	09 03 26.2	+0.5
	baz=252						
ALS				eS	Sn	09 03 43.3	-1.5
	baz=252						
CHN5	Tsauling	1.60	258	eP	Pn	09 03 27.6	+0.8
	baz=257						
CHN5				eS	Sn	09 03 46.0	-0.8
	baz=257						
JIJ	Ishigaki jima	1.66	75	P	Pn	09 03 28.0	+0.6
JIJ				eS	Sn	09 03 48.3	+0.3
TPUB	Ta-pu	1.73	248	eP	Pn	09 03 29.4	+0.9
	baz=247						
TPUB				eS	Sn	09 03 49.9	-0.1
	baz=247						
JISG	Ishigakijimahi	1.87	70	P	Pn	09 03 30.8	+0.5
JISG				S	Sn	09 03 51.8	-1.4
JTJ	Tarama	2.22	72	P	Pn	09 03 36.3	+1.1
JTJ				S	Sn	09 04 01.5	-0.5

*JMA **06** 09:06:53.9±0.1, 35°.99N×140°.21E, h41km±1km, M3.3*
JMA Felt I J1.
*IDC **06** 09:06:54.2±4.6, 35°.93N×140°.25E, h36km±39km, mb3.3/7, mb1 3.6/8, mb1mx3.4/43, mbtmp3.5/8, ML3.6/1, MS3.0/2, Ms1 3.0/2, ms1mx2.6/33, Error ellipse: s-maj=30.5km s-min=19.3km az=82.0*
ISC 06 09:06:54.3±0.8**, 35°.97N**±0°.07×**140°.22E**±0°.06**, h35**km**, n16, σ0s.75**/15**, mb3.5**/7**, 2D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIHU	Itakohorinouch	0.25	90	⇓P	Pn	09 07 02.0	+0.4
JYT	Yasato	0.26	356	⇓P	Pn	09 07 01.7	0.0
JSMT	Sammumatsuo	0.37	150	P	Pn	09 07 03.7	+0.5
JAG	Ashikaga	0.77	307	P	Pn	09 07 08.0	-0.6
MJAR	Matsushiro Arr	1.72	290	Pn	Pn	09 07 21.6	-0.1
	1.9nm,0.3s,baz=89,slow=19,SNR=63						
MAT	Matsushiro	1.72	290	P	Pn	09 07 22.5	+0.7
MAT				S	Sn	09 07 44.0	+1.4
JHJ	Hachijo jima 2	2.86	187	Pn	Pn	09 07 37.0	-0.4
	21nm,0.3s,baz=255,slow=20,SNR=1.5						
ASAJ	Asahikawa	8.34	12	LR	LR	09 12 33.0	
	comp=Z,51nm,18.5s,baz=188,slow=40						
PETK	Petropavlovsk-	21.09	30	LR	LR	09 20 05.5	
	comp=Z,78nm,18.1s,baz=324,slow=38						
SONM	Songino Array	27.61	306	P	P	09 12 39.6	+1.3
	0.3nm,0.6s,baz=108,slow=9.3,SNR=2.0						
MKAR	Makanchi Array	43.88	303	P	P	09 14 56.7	-0.5
	0.5nm,0.6s,baz=95,slow=10,SNR=5.8						
ILAR	Eielson Array	50.91	32	P	P	09 15 51.4	-0.2
	0.5nm,0.7s,baz=268,slow=6.3,SNR=7.6						
WRA	Warramunga Arr	55.88	187	P	P	09 16 27.5	-1.0
	0.4nm,0.6s,baz=1.3,slow=7.7,SNR=15						
ASAR	Alice Springs	59.61	187	P	P	09 16 54.8	+0.1
	0.3nm,0.7s,baz=9.8,slow=12,SNR=6.3						
NVAR	Mina Array Bea	76.40	52	P	P	09 18 40.6	+0.2
	0.3nm,0.6s,baz=316,slow=2.5,SNR=2.3						
TXAR	Lajitas Array	91.54	52	P	P	09 19 57.2	-0.5
	0.1nm,0.6s,baz=320,slow=2.7,SNR=2.0						

IDC 06 09:15:10.9±5.1**, 1°.95S**×**103°.47E, h0**km**, mb3.4**/3**, mb1 3.6**/3**, mb1mx3.3**/40**, mbtmp3.4**/3**, Error ellipse: s-maj=286.7km s-min=28.7km az=53.0, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	35.06	123	P	P	09 22 06.1	+0.1
	0.3nm,0.4s,baz=302,slow=8.9,SNR=6.3						
ASAR	Alice Springs	36.52	129	P	P	09 22 18.1	-0.3
	0.2nm,0.3s,baz=300,slow=7.8,SNR=8.1						
MKAR	Makanchi Array	52.00	342	P	P	09 24 22.0	0.0
	0.3nm,0.5s,baz=147,slow=9.0,SNR=4.6						

*NEIC **06** 09:26:27.3±0.5, 1°.1N±0°.1×127°.7E±0°.1, h141km±7km, mb4.2/10, Error ellipse: s-maj=23.0km s-min=13.6km az=58.0*
*IDC **06** 09:26:28.1±13.0, 0°.96N×127°.41E, h149km±136km, mb3.7/6, mb1 3.8/7, mb1mx3.3/40, mbtmp4.1/7, ML4.0/1, Error ellipse: s-maj=85.1km s-min=24.8km az=63.0*
*DJA **06** 09:26:30.8±0.5, 1°N±3°×12°7E±°, h171km±5km, M4.2/12, mb4.1/3, mB4.3/1, MLv4.2/12, Mw(mB)3.4/1*
ISC 06 09:26:27.7±0.9**, 1°.11N**±0°.10×**127°.6E**±0°.1**, h150**km**, n30, σ1s.72**/31**, mb4.1**/11**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	0.42	217	Pn	Pn	09 26 46.4	-2.3
TNTI				Sn	Sn	09 27 02.3	-2.4
TNTI	Ternate	0.42	217	P	Pn	09 26 54.5	+5.8
TNTI				S	Sn	09 27 11.5	+6.8
SANI	Sanana	3.54	207	P	Pn	09 27 21.6	-0.4
KMSI	Cibinong	3.68	262	P	Pn	09 27 23.3	-0.5
NLAI	Namlea	4.35	187	P	Pn	09 27 33.7	+1.1
GTOI	Gorontalo	4.63	264	P	Pn	09 27 37.4	+1.1
LUWI	Luwuk	5.30	246	Pn	Pn	09 27 46.3	+1.2
LUWI	Luwuk	5.30	246	P	Pn	09 27 42.8	-2.3
MRSI	Marisa	5.71	264	P	Pn	09 27 49.0	-1.6
	0.1nm34nm,0.5s						
APSI	Ampana	6.30	251	P	Pn	09 27 56.7	-1.7
TOLI2	Tolitoli	6.84	270	Pn	Pn	09 28 04.9	-0.7
MTN	Manton Dam	14.29	166	Pn	Pn	09 29 42.8	-0.6
FITZ	Fitzroy Crossi	19.18	186	P	P	09 30 38.6	-1.3
	0.4nm,0.3s,baz=15,slow=7.7,SNR=9.0						
FITZ	Fitzroy Crossi	19.18	186	P	P	09 30 38.6	-1.3
WB0	Warramunga Arr	21.78	163	P	P	09 31 07.7	-0.2
WRAB	Tennant Creek	21.93	163	P	P	09 31 09.2	-0.1
WRAB				IAmb	IAmb	09 31 16.3	
	comp=Z,11nm,0.8s						
WRA	Warramunga Arr	21.93	163	P	P	09 31 09.1	-0.3
	comp=Z,9.7nm,0.6s,baz=341,slow=11,SNR=102						
WRA	Warramunga Arr	21.93	163	P	P	09 31 08.0	-1.4
WB2	Warramunga Arr	21.94	163	P	P	09 31 09.1	-0.3
WB2				IAmb	IAmb	09 31 16.4	
	comp=Z,12nm,0.8s						
WR0	Warramunga Arr	22.01	162	P	P	09 31 09.6	-0.6
WR0				IAmb	IAmb	09 31 10.5	
	comp=Z,5.9nm,0.7s						
AS31	Alice Springs	25.37	166	P	P	09 31 41.1	-0.1
AS31				IAmb	IAmb	09 31 44.3	
	comp=Z,1.6nm,0.3s						
ASAR	Alice Springs	25.37	166	P	P	09 31 40.9	-0.3
	comp=Z,1.2nm,0.6s,baz=341,slow=7.9,SNR=33						
ASAR	Alice Springs	25.37	166	P	P	09 31 41.1	-0.1
BBOO	Buckleboo	34.67	167	P	P	09 33 03.0	0.0
STKA	Stephens Creek	35.38	159	P	P	09 33 08.8	-0.2
	comp=Z,2.0nm,0.4s,baz=343,slow=11,SNR=7.4						
SONM	Songino Array	50.05	341	P	P	09 35 07.8	+0.6
	comp=Z,0.5nm,0.6s,baz=158,slow=8.6,SNR=3.6						
MK31	Makanchi Array	60.20	326	P	P	09 36 20.9	+1.0
MKAR	Makanchi Array	60.20	326	P	P	09 36 20.9	+1.0
	comp=Z,0.7nm,0.6s,baz=124,slow=8.7,SNR=9.7						
KURBB	Kurchatov Arra	64.41	328	P	P	09 36 47.5	-0.3
	comp=Z,0.9nm,0.5s,baz=131,slow=6.0,SNR=2.5						
KURK	Kurchatov	64.42	328	P	P	09 36 48.5	+0.8
KURK				IAmb	IAmb	09 37 16.6	
	comp=Z,2.6nm,0.9s						

*IDC **06** 09:31:14.2±1.3, 26°.02N×141°.87E, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.4/55, mbtmp3.7/4, Error ellipse: s-maj=77.1km s-min=17.2km az=99.0*
ISC 06 09:31:13.6±1.7**, 26°.1N**±0°.2×**143°.0E**±0°.4**, h10**km**, n5, σ0s.74**/6**, mb3.8**/4**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	1.24	323	Pn	Pn	09 31 36.6	-0.5
	12nm,0.3s,baz=270,slow=20,SNR=1.7						
JCJ				Sn	Sn	09 31 54.4	+0.5
	51nm,0.3s,baz=287,slow=23,SNR=12						
JCJ				LR	LR	09 32 07.7	
	comp=Z,284nm,18.7s,baz=308,slow=48						
KLR	Kul'dur	24.70	342	P	P	09 36 35.1	+0.3
	0.9nm,0.5s,baz=158,slow=5.4,SNR=4.8						
WRA	Warramunga Arr	46.54	191	P	P	09 39 41.0	-0.6

	0.5nm,0.5s,baz=11,slow=8.6,SNR=10						
ASAR	**Alice Springs**	**50.26**	**191**	P	**P**	**09 40 11.1**	**+0.8**
	0.2nm,0.8s,baz=17,slow=9.7,SNR=1.9						
FINES	**FINESS Array B**	**79.17**	**334**	P	**P**	**09 43 18.3**	**-0.1**
	4.0nm,0.8s,baz=72,slow=4.8,SNR=5.4						

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*DJA **06** 09:38:58.8±1.0, 10°N±3°×12°7E±°, h17^{km}±6^{km}, M5.0/37, mb4.8/37, mB5.3/15, MLv5.7/2, Mw(mB)4.7/15, MwMwp5.2/1, Mwp5.5/1*

*MAN **06** 09:39:02.6, 9°.63N×126°.41E, h15^{km}, mb5.5, ML4.5, MS4.7*
MAN INTENSITY II - DAPA AND SOCORRO.

*BJI **06** 09:39:04.2±0.0, 9°.24N×126°.49E, h90^{km}, mB5.1/40, mb4.9/56*

*GCMT **06** 09:39:05.6±0.2, 9°.57N±0°.02×126°.49E±0°.01, h31^{km}, MW5.1/96, Moment Tensor Solution. s78,c101; s96,c136; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.97±.17; $M_{\theta\theta}$0.17±.11; $M_{\phi\phi}$-5.14±.11; $M_{r\theta}$0.17±.16; $M_{\theta\phi}$0.35±.08; $M_{\phi r}$2.80±.17; Best double couple: $M_0$5.79200×10^{16} NP1:ϕ_s172.00000°, δ31.00000°, λ84.00000°. NP2:ϕ_s360.00000°, δ59.00000°, λ94.00000°. Principal axes: T 5.7060, Plg75.0000°, Azm280.0000°; N 0.1750, Plg3.0000°, Azm178.0000°; P -5.8790, Plg14.0000°, Azm87.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **06** 09:39:05.6±1.5, 9°.50N±0°.07×126°.31E±0°.09, h63^{km}±6^{km}, mb4.9/92 Error ellipse: s-maj=13.6km s-min=10.0km az=75.0*

*IDC **06** 09:39:06.5±1.7, 9°.51N×126°.27E, h70^{km}±16^{km}, mb4.3/42, mb1 4.3/46, mb1mx4.3/64, mbtmp4.6/46, MS4.2/29, Ms1 4.2/29, ms1mx4.1/40, Error ellipse: s-maj=13.8km s-min=8.3km az=83.0*

ISC 06 09:39:04.1±0.5, **9°.61N**±0°.03×**126°.47E**±0°.05, **h44**^{km}±4^{km}, **n290**, σ1^{s}.**81**/282, **mb4.8**/115, **MS4.3**/36, **3C-4D**, **Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLSP	**General Luna,**	**0.38**	**298**	*e*P	**Pn**	**09 39 10.4**	**-3.2**
GLSP				*e*S	**Sn**	**09 39 19.1**	**-1.2**
BUTP	**Butuan**	**1.05**	**233**	*e*P	**Pn**	**09 39 19.8**	**-2.5**
BUTP				*e*S	**Sn**	**09 39 33.8**	**-2.0**
MSLP	**Maasin**	**1.67**	**288**	*e*P	**Pn**	**09 39 30.9**	**0.0**
MSLP				*e*S	**Sn**	**09 39 57.1**	**+6.1**
CGP	**Cagayan de Oro**	**2.09**	**237**	⇑*i*P	**Pn**	**09 39 36.1**	**-0.5**
CGP				*e*S	**Sn**	**09 40 03.1**	**+1.7**
BUKP	**Musuan**	**2.21**	**219**	*e*P	**Pn**	**09 39 38.1**	**-0.2**
BUKP				*e*S	**Sn**	**09 40 07.5**	**+3.1**
LLP	**Lapu-Lapu**	**2.56**	**286**	⇑*e*P	**Pn**	**09 39 45.1**	**+2.0**
LLP				*e*S	**Sn**	**09 40 18.7**	**+5.6**
DAV	**Davao City (W)**	**2.67**	**199**	P	**Pn**	**09 39 45.9**	**+1.3**
	106nm,0.3s,baz=7.4,slow=9.0,SNR=5.6						
DAV				S	**Sn**	**09 40 21.0**	**+5.3**
	161nm,0.3s,baz=280,slow=23,SNR=5.6						
DAV				LR	LR	09 40 26.2	
	comp=Z,2µm,19.0s,baz=329,slow=32						
DAV	**Davao City (W)**	**2.67**	**199**		**Pn**	**09 39 46.4**	**+1.8**
DAV	**Davao City (W)**	**2.67**	**199**	⇓*e*P	Pn	09 39 50.0	+5.3
CNP	**Catarman**	**3.39**	**329**	*e*P	**Pn**	**09 39 55.9**	**+1.5**
CNP				*e*S	**Sn**	**09 40 35.5**	**+2.1**
PAGZ	**Pagadian**	**3.52**	**240**	*e*P	**Pn**	**09 39 56.2**	**0.0**
PAGZ				*e*S	**Sn**	**09 40 39.5**	**+2.9**
DDMP	**Don Marcelino,**	**3.56**	**192**	*e*P	**Pn**	**09 39 57.2**	**+0.4**
DDMP				*e*S	**Sn**	**09 40 42.4**	**+4.7**
SKMP	**Bagumbayan, Su**	**3.61**	**212**	*e*P	**Pn**	**09 39 59.5**	**+2.0**
SKMP				*e*S	Sn	09 40 53.3	+14
CNOP	**Candoni, Negro**	**3.78**	**274**	*e*P	**Pn**	**09 40 00.2**	**+0.3**
CNOP				*e*S	**Sn**	**09 40 49.0**	**+5.9**
JAP	**San Jose, Anti**	**4.59**	**285**	⇓*e*P	Pn	09 40 14.8	+3.8
JCNP	**Jose Panganiba**	**5.94**	**322**	*e*P	**Pn**	**09 40 28.8**	**-0.7**
JCNP				*e*S	**Sn**	**09 41 34.5**	**-1.9**
LQP	**Lukban**	**6.58**	**313**	⇓*e*P	Pn	09 40 42.2	+3.7
TGY	**Tagaytay City**	**7.02**	**310**	P	**Pn**	**09 40 47.1**	**+2.7**
	50nm,0.3s,baz=25,slow=22,SNR=7.3						
TGY				LR	LR	09 43 44.9	
	comp=Z,6µm,19.1s,baz=130,slow=40						
I39PW	**PALAU INFRASON**	**8.25**	**104**	*i*		10 33 20.0	
	baz=284,slow=309,SNR=0.5						
TNTI	**Ternate**	**8.82**	**174**		**Pn**	**09 41 07.9**	**-1.2**
TNTI	**Ternate**	**8.82**	**174**	P	Pn	09 41 13.2	+4.1
	68nm,1.2s						
MYLDM	**Lahad Datu**	**9.04**	**241**		**Pn**	**09 41 11.1**	**-1.0**
KMSI	**Cibinong**	**9.31**	**196**	P	Pn	09 41 19.5	+3.7
	98nm,1.0s						
GTOI	**Gorontalo**	**9.55**	**201**	P	**Pn**	**09 41 20.8**	**+1.7**
	417nm30nm,0.6s						
MRSI	**Marisa**	**10.13**	**207**	P	Pn	09 41 31.2	+4.2
	49nm,0.8s						
TOLI2	**Tolitoli**	**10.16**	**214**	Pn	**Pn**	**09 41 26.9**	**-0.5**
LUWI	**Luwuk**	**11.20**	**199**	Pn	**Pn**	**09 41 44.0**	**+2.4**
LUWI	**Luwuk**	**11.20**	**199**	P	Pn	09 41 48.4	+6.7
SIJI	**Sorong**	**11.45**	**155**	P	**Pn**	**09 41 47.1**	**+1.9**
	2.8nm,0.3s,baz=290,slow=22,SNR=6.4						
APSI	**Ampana**	**11.50**	**205**	P	**Pn**	**09 41 47.7**	**+2.0**
	774nm53nm,1.1s						
FAKI	**Fak Fak**	**13.71**	**155**	Pn	**Pn**	**09 42 16.5**	**+0.5**
FAKI	**Fak Fak**	**13.71**	**155**	P	**Pn**	**09 42 17.1**	**+1.1**
	922nm54nm,1.3s						
TTSI	**Tana Toraja**	**14.21**	**208**	P	**Pn**	**09 42 25.4**	**+2.7**
	757nm52nm,1.2s						
YULB	**Yu-li**	**14.57**	**341**	Pn	**P**	**09 42 30.8**	**-2.4**
TPUB	**Ta-pu**	**14.72**	**338**	Pn	**Pn**	**09 42 31.0**	**+1.5**
SPSI	**Sidrap Palu**	**15.04**	**207**	P	**P**	**09 42 38.0**	**-0.5**
	1µm26nm,1.1s						
BNSI	**Bone**	**15.29**	**205**	P	**P**	**09 42 40.9**	**-0.3**
	2µm70nm,1.4s						
MTKI	**Muara Teweh, K**	**15.57**	**228**	P	**P**	**09 42 45.1**	**+0.7**
KAPI	**Kappang**	**15.99**	**205**	LR	LR	09 49 24.0	
	comp=Z,850nm,20.9s,baz=40,slow=39						
SMPI	**Sarmi**	**16.77**	**133**	P	**Pn**	**09 42 56.9**	**+0.9**
	84nm,1.3s						
JOW	**Kunigami**	**17.22**	**5**	P	**P**	**09 43 05.8**	**+3.3**
	0.9nm,0.3s,baz=239,slow=4.2,SNR=5.1						
JOW				LR	LR	09 51 09.7	
	comp=Z,806nm,18.2s,baz=162,slow=42						
BBKI	**Banjar Baru**	**17.40**	**222**	P	**P**	**09 43 10.7**	**+6.1**
GUMO	**Guam**	**18.45**	**76**	LR	LR	09 48 57.2	
	comp=Z,720nm,21.4s,baz=272,slow=32						
MMRI	**Maumere**	**18.60**	**193**	P	Pn	09 43 26.0	+7.5
JAY	**Jayapura**	**18.61**	**130**	LR	LR	09 50 29.3	
	comp=Z,1µm,18.1s,baz=355,slow=36						
QIZ	**Qiongzhong**	**18.62**	**302**	P	**Pn**	**09 43 19.4**	**+0.7**
QIZ				pP	**sP**	**09 43 33.8**	**-0.4**
QIZ				S	**Sn**	**09 46 45.5**	**-0.6**
QIZ				sS	sS	09 47 13.3	+10
QIZ				pmax	pmax		
	comp=Z,270nm,2.6s						
QIZ				LR	LR		
	comp=N,860nm,14.3s						
QIZ				LR	LR		
	comp=E,830nm,11.8s						
QIZ				LR	LR		
	comp=Z,1µm,17.7s						
EDFI	**Ende, Flores**	**18.84**	**195**	P	**Pn**	**09 43 24.2**	**+2.7**
	299nm21nm,0.9s						
SOEI	**Soe**	**19.36**	**187**	P	**P**	**09 43 24.6**	**-1.7**
SOEI				IAmb	IAmb	09 43 49.7	
	comp=Z,61nm,0.7s						
SOEI	**Soe**	**19.36**	**187**	P	**Pn**	**09 43 29.6**	**+1.9**
	comp=Z,1µmcomp=Z,84nm,0.7s						
BATI	**Baumata**	**19.88**	**188**	P	**P**	**09 43 31.4**	**-0.5**
	comp=Z,5.4nm,0.3s,baz=113,slow=2.8,SNR=11						
BATI				LR	LR	09 52 03.5	
	comp=Z,566nm,19.7s,baz=358,slow=39						
BATI	**Baumata**	**19.88**	**188**	P	**P**	**09 43 32.5**	**+0.7**
	comp=Z,1µmcomp=Z,130nm,0.9s						
ANA2	**Anatahan**	**19.90**	**68**	P	**P**	**09 43 33.3**	**+1.2**
PLAI	**Plampang**	**20.25**	**206**	P	Pn	09 43 41.5	+3.3
	comp=Z,57nm,0.9s						
WBSI	**Waikabubak, Su**	**20.38**	**200**	P	Pn	09 43 41.7	+2.1
	comp=Z,55nm,1.1s						
TWSI	**Taliwang, Sumb**	**20.57**	**208**	P	Pn	09 43 44.0	+2.1
	comp=Z,22nm,1.0s						
SSE	**Sheshan**	**21.94**	**348**	P	**P**	**09 43 54.8**	**+0.9**
SSE				IAmb	IAmb	09 43 57.9	
	comp=Z,101nm,1.3s						
MTN	**Manton Dam**	**22.78**	**168**	P	**P**	**09 44 02.6**	**-0.4**
MTN				IAmb	IAmb	09 44 14.6	
	comp=Z,39nm,0.8s						
JCJ	**Chichijima**	**22.87**	**38**	LR	LR	09 51 03.8	
	comp=Z,509nm,20.3s,baz=262,slow=31						
NJ2	**Nanjing**	**23.42**	**344**	⇓*i*P	**P**	**09 44 10.9**	**+1.6**
NJ2				pP	**pwP**	**09 44 25.5**	**+1.6**
NJ2				sP	sP	09 44 40.2	+16
NJ2				S	**S**	**09 48 20.0**	**+0.5**
NJ2				pmax	pmax		
	comp=Z,24nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,320nm,4.5s						
NJ2				LR	LR		
	comp=Z,290nm,15.6s						
NJ2				LR	LR		
	comp=Z,340nm,11.4s						
NJ2				LR	LR		
	comp=Z,850nm,15.2s						
JNU	**Nakatsue**	**23.75**	**9**	P	**P**	**09 44 13.3**	**+0.8**
	comp=Z,19nm,0.9s,baz=148,slow=7.3,SNR=8.9						
JNU				LR	LR	09 53 13.2	
	comp=Z,353nm,21.7s,baz=176,slow=36						
JNU	**Nakatsue**	**23.75**	**9**	P	**P**	**09 44 13.5**	**+1.0**
JNU				IAmb	IAmb	09 44 20.6	
	comp=Z,26nm,0.9s						
NONG	**Nongkai**	**24.13**	**293**	P	**P**	**09 44 16.8**	**+0.7**
	comp=Z,41nm,1.7s						
SLVN	**Son La**	**24.63**	**301**	P	**P**	**09 44 19.5**	**-1.2**
CHAI	**Chaiyaphum**	**24.67**	**287**	P	**P**	**09 44 20.8**	**-0.2**
	comp=Z,29nm,0.7s						
JMN	**Monobe**	**24.96**	**15**	P	**P**	**09 44 25.5**	**+2.0**
JMN				IAmb	IAmb	09 44 27.2	
	comp=Z,40nm,1.0s						
IPM	**Ipoh**	**25.75**	**260**	P	**P**	**09 44 30.3**	**-0.6**
IPM				IAmb	IAmb	09 44 50.8	
	comp=Z,52nm,1.4s						
KLSI		**25.90**	**238**	P	**P**	**09 44 32.8**	**+0.6**
	comp=Z,12nm,1.1s						
KULM	**Kulim**	**25.95**	**262**	P	**P**	**09 44 30.8**	**-1.9**
KULM				IAmb	IAmb	09 44 52.6	
	comp=Z,35nm,1.2s						
ENH	**Enshi**	**25.96**	**325**	P	**P**	**09 44 31.6**	**-1.0**
ENH				IAmb	IAmb	09 44 43.0	
	comp=Z,37nm,1.4s						
PHIT	**Phitsanulok**	**26.42**	**289**	P	**P**	**09 44 39.3**	**+2.5**
	comp=Z,2µmcomp=Z,48nm,0.8s						
UTTA	**Uttaradit**	**26.42**	**291**	P	**P**	**09 44 38.3**	**+1.4**
	comp=Z,16nm,0.9s						
JHJ	**Hachijo jima 2**	**26.43**	**26**	LR	LR	09 53 04.2	
	comp=Z,323nm,20.2s,baz=228,slow=32						
PHET	**Kaeng Krachan**	**26.52**	**280**	P	**P**	**09 44 41.4**	**+3.6**
	comp=Z,832nmcomp=Z,70nm,0.9s						
UTHA	**Uthaitani**	**27.01**	**285**	P	**P**	**09 44 43.9**	**+1.7**
	comp=Z,312nmcomp=Z,39nm,1.1s						
SUKH	**Sukhothai**	**27.21**	**290**	P	**P**	**09 44 47.0**	**+3.0**
	comp=Z,395nmcomp=Z,14nm,0.8s						
KMI	**Kunming**	**27.33**	**307**	⇑*e*P	**P**	**09 44 48.3**	**+3.0**
KMI				pmax	pmax		
	comp=Z,17nm,0.5s						
FITZ	**Fitzroy Crossi**	**27.54**	**182**	P	**P**	**09 44 45.9**	**-1.0**
	comp=Z,10nm,0.5s,baz=356,slow=8.4,SNR=27						
FITZ	**Fitzroy Crossi**	**27.54**	**182**	P	**P**	**09 44 46.0**	**-0.9**
FITZ				IAmb	IAmb	09 44 47.7	
	comp=Z,58nm,1.4s						
KSAR	**Wonju Array Be**	**27.74**	**2**	P	**P**	**09 44 48.0**	**-0.5**
KSRS	**Korea Array**	**27.76**	**2**	P	**P**	**09 44 49.8**	**+1.1**
	comp=Z,6.1nm,0.9s,baz=177,slow=10,SNR=26						
KSRS				LR	LR	09 58 19.6	
	comp=Z,578nm,18.5s,baz=174,slow=41						
CM35	**Chiang Mai Arr**	**27.94**	**292**	P	**P**	**09 44 54.0**	**+3.4**
PMG	**Port Moresby**	**27.95**	**132**	P	**P**	**09 44 51.4**	**+0.9**
	comp=Z,11nm,0.9s,baz=257,slow=18,SNR=3.5						
PMG	**Port Moresby**	**27.95**	**132**	P	**P**	**09 44 49.8**	**-0.7**
PMG				IAmb	IAmb	09 44 58.2	
	comp=Z,21nm,0.9s						
CM36	**Chiang Mai Arr**	**27.96**	**291**	P	**P**	**09 44 51.0**	**+0.3**
CM34	**Chiang Mai Arr**	**27.99**	**292**	P	**P**	**09 44 51.0**	**0.0**
CM09	**Chiang Mai Arr**	**28.03**	**291**	P	P	09 45 00.5	+9.1
CM02	**Chiang Mai Arr**	**28.07**	**291**	P	P	09 45 01.0	+9.3
CMAR	**Chiang Mai Arr**	**28.08**	**291**	P	**P**	**09 44 50.6**	**-1.2**
	comp=Z,1.7nm,0.3s,baz=114,slow=7.4,SNR=9.6						
CM13	**Chiang Mai Arr**	**28.11**	**291**	P	P	09 45 01.4	+9.4
MNSI	**Mandailing Nat**	**28.14**	**253**	P	**P**	**09 44 51.9**	**-0.5**
CMMT	**Chiang Mai**	**28.17**	**292**	P	**P**	**09 44 54.1**	**+1.5**
CM33	**Chiang Mai Arr**	**28.17**	**292**	P	**P**	**09 44 53.0**	**+0.4**
CHTO	**Chiang Mai**	**28.17**	**292**	P	**P**	**09 44 51.1**	**-1.5**
PSI	**Prapat**	**28.19**	**258**	P	**P**	**09 44 51.5**	**-1.5**
	comp=Z,5.5nm,0.5s,baz=0.8,slow=2.5,SNR=8.7						
RPSI	**Rantau Prapat**	**28.21**	**258**	P	**P**	**09 44 50.2**	**-2.8**
RPSI				IAmb	IAmb	09 45 15.7	
	comp=Z,43nm,1.4s						
RPSI	**Rantau Prapat**	**28.21**	**258**	P	**P**	**09 44 51.5**	**-1.6**
CM32	**Chiang Mai Arr**	**28.22**	**292**	P	P	09 45 02.0	+9.0
COEN	**Coen**	**28.69**	**144**	P	**P**	**09 44 56.5**	**-0.7**
MJAR	**Matsushiro Arr**	**28.86**	**20**	P	**P**	**09 44 58.1**	**-0.4**
	comp=Z,2.4nm,0.7s,baz=195,slow=8.4,SNR=6.2						
MJAR				LR	LR	09 56 27.7	
	comp=Z,346nm,19.1s,baz=210,slow=36						
XAN	**Xi'an**	**29.17**	**329**	P	**P**	**09 45 00.0**	**-1.4**
XAN				pP	sP	09 45 21.0	+4.1
XAN				PP	**PnPn**	**09 45 58.7**	**+3.1**
XAN				S	**S**	**09 49 44.3**	**-6.5**
XAN				pmax	pmax		
	comp=Z,11nm,0.7s						
XAN				LR	LR		
	comp=Z,56µm,15.5s						
XAN				LR	LR		
	comp=Z,21µm,16.1s						
XAN				LR	LR		
	comp=Z,950nm,16.7s						
DL2	**Dalian**	**29.50**	**352**	P	**P**	**09 45 06.6**	**+2.5**
DL2				*e*S	**S**	**09 49 59.2**	**+3.6**
DL2				sS	sS	09 50 30.2	+17
DL2				pmax	pmax		
	comp=Z,51nm,1.0s						
DL2				pmax	pmax		
	comp=Z,170nm,9.1s						
DL2				LR	LR		
	comp=Z,510nm,15.3s						
DL2				LR	LR		
	comp=Z,430nm,17.9s						
DL2				LR	LR		
	comp=Z,620nm,15.8s						
GSI	**Gunungsitoli**	**29.89**	**256**	P	**P**	**09 45 05.7**	**-2.2**
CD2	**Chengdu**	**29.93**	**318**	*e*P	**P**	**09 45 08.8**	**+0.6**
CD2				S	**S**	**09 50 01.1**	**-1.7**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				LR	LR		
	comp=Z,1µm,24.5s						
CD2				LR	LR		
	comp=Z,1µm,20.6s						
CD2				LR	LR		
	comp=Z,2µm,15.2s						
WB0	**Warramunga Arr**	**30.21**	**165**	P	**P**	**09 45 08.2**	**-2.4**
WRAB	**Tennant Creek**	**30.36**	**165**	P	**P**	**09 45 11.1**	**-0.9**
WRA	**Warramunga Arr**	**30.37**	**165**	P	**P**	**09 45 10.3**	**-1.7**
	comp=Z,1.5nm,0.7s,baz=346,slow=8.8,SNR=15						
WB2	**Warramunga Arr**	**30.37**	**165**	P	**P**	**09 45 10.7**	**-1.3**
WR0	**Warramunga Arr**	**30.44**	**165**	P	**P**	**09 45 11.2**	**-1.5**
JMM	**Marumori**	**30.96**	**22**	P	**P**	**09 45 17.9**	**+0.9**
JMM				IAmb	IAmb	09 45 19.1	
	comp=Z,42nm,1.1s						
BJT	**Baijiatuau**	**31.64**	**345**	P	**P**	**09 45 23.7**	**+0.7**
BJT				IAmb	IAmb	09 45 24.7	
	comp=Z,43nm,1.3s						
PSA00	**Pilbara Seismi**	**31.66**	**192**	P	**P**	**09 45 22.5**	**-0.9**
PSA00				IAmb	IAmb	09 45 36.1	
	comp=Z,13nm,0.8s						
PSA00	**Pilbara Seismi**	**31.66**	**192**	P	**P**	**09 45 22.0**	**-1.4**
BJI	**Beijing**	**31.66**	**345**	P	**P**	**09 45 23.9**	**+0.7**
BJI				pP	pwP	09 45 45.5	+7.0
BJI				sP	sP	09 45 53.1	+14
BJI				pmax	pmax		
	comp=Z,25nm,1.2s						
BJI				pmax	pmax		
	comp=Z,170nm,4.0s						
BJI				LR	LR		
	comp=Z,300nm,15.6s						
BJI				LR	LR		
	comp=Z,200nm,19.5s						
BJI				LR	LR		
	comp=Z,350nm,25.1s						
LZH	**Lanzhou**	**33.43**	**326**	*e*P	**P**	**09 45 39.8**	**+0.8**
LZH				pP	sP	09 46 04.7	+9.0
LZH				sP	pP	09 46 16.4	+26
LZH				pmax	pmax		
	comp=Z,15nm,1.1s						
LZH				LR	LR		
	comp=Z,580nm,16.3s						
LZH				LR	LR		
	comp=Z,850nm,17.1s						
LZH				LR	LR		
	comp=Z,670nm,18.7s						
HHC	**Hu-ho-hao-te**	**33.80**	**339**	*e*P	**P**	**09 45 42.3**	**+0.2**
HHC				sP	sP	09 46 15.3	+17
HHC				S	**S**	**09 51 00.3**	**-2.8**
HHC				pmax	pmax		
	comp=Z,22nm,0.9s						
HHC				pmax	pmax		
	comp=Z,160nm,6.3s						
HHC				LR	LR		
	comp=Z,370nm,17.5s						
HHC				LR	LR		
	comp=Z,350nm,16.1s						
HHC				LR	LR		
	comp=Z,320nm,17.3s						
AS31	**Alice Springs**	**33.86**	**168**	P	**P**	**09 45 40.8**	**-1.8**
ASAR	**Alice Springs**	**33.86**	**168**	P	**P**	**09 45 41.3**	**-1.3**
	comp=Z,1.2nm,0.4s,baz=353,slow=7.0,SNR=28						
ASAR	**Alice Springs**	**33.86**	**168**	P	**P**	**09 45 40.7**	**-1.9**
BTO	**Baotou**	**34.15**	**337**	*e*P	P	09 45 57.3	+12
USA0B	**Ussuriysk Arra**	**34.80**	**7**	P	**P**	**09 45 52.0**	**+1.5**
USRK	**Ussuriysk Ar.**	**34.80**	**7**	P	**P**	**09 45 51.0**	**+0.5**
	comp=Z,8.8nm,0.8s,baz=189,slow=8.1,SNR=17						
USRK				LR	LR	09 59 04.6	
	comp=Z,249nm,21.3s,baz=176,slow=34						
USRK	**Ussuriysk Ar.**	**34.80**	**7**	P	**P**	**09 45 51.3**	**+0.8**
MDJ	**Mudanjiang**	**34.99**	**4**	P	**P**	**09 45 54.1**	**+2.0**
MDJ				pP	pwP	09 46 11.8	+3.3
MDJ				sP	sP	09 46 24.0	+17
MDJ				S	**S**	**09 51 22.6**	**+1.6**
MDJ				pmax	pmax		
	comp=Z,29nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,290nm,5.0s						
MDJ				LR	LR		
	comp=Z,370nm,18.4s						
MDJ				LR	LR		
	comp=Z,410nm,15.9s						
MDJ				LR	LR		
	comp=Z,490nm,16.1s						
MDJ	**Mudanjiang**	**34.99**	**4**	P	**P**	**09 45 53.7**	**+1.5**
SHL	**Shillong**	**36.44**	**300**	P	**P**	**09 46 03.9**	**-1.2**
ASAJ	**Asahikawa**	**37.12**	**19**	P	**P**	**09 46 12.4**	**+2.0**
	comp=Z,14nm,0.8s,baz=234,slow=13,SNR=14						
JKA	**Kamikawa-asahi**	**37.12**	**19**	P	**P**	**09 46 12.3**	**+1.9**
GTA	**Gaotai**	**38.03**	**326**	P	**P**	**09 46 17.7**	**-0.7**
GTA				pP	sP	09 46 36.2	+2.2
GTA				sP	pP	09 46 45.6	+16
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,110nm,4.8s						
GTA				LR	LR		
	comp=Z,490nm,17.5s						
GTA				LR	LR		
	comp=Z,370nm,16.0s						
GTA				LR	LR		
	comp=Z,880nm,18.2s						
LSA	**Lhasa**	**38.57**	**306**	P	**P**	**09 46 22.8**	**-0.6**
LSA				IAmb	IAmb	09 46 40.7	
	comp=Z,18nm,1.3s						
YSS	**Yuzh-Sakhalins**	**39.72**	**17**	P	**P**	**09 46 32.2**	**+0.1**
YSS				IAmb	IAmb	09 46 42.5	
	comp=Z,23nm,1.0s						
MORW	**Morawa**	**39.74**	**194**	P	**P**	**09 46 31.2**	**-1.4**
MORW				IAmb	IAmb	09 46 47.8	
	comp=Z,24nm,0.9s						
KLR	**Kul'dur**	**39.74**	**5**	P	**P**	**09 46 33.0**	**+0.6**
	comp=Z,2.0nm,0.3s,baz=192,slow=5.7,SNR=15						
KLR				LR	LR	10 05 29.1	
	comp=Z,258nm,18.2s,baz=195,slow=40						
H11S3	**WAKE ISLAND Hy**	**39.93**	**73**	T	T	10 29 31.8	
	baz=262,slow=75,SNR=133						
HIA	**Hailar**	**39.93**	**353**	P	**P**	**09 46 34.9**	**+0.9**
HIA				IAmb	IAmb	09 46 35.8	
	comp=Z,33nm,1.5s						
H11S1	**WAKE ISLAND Hy**	**39.94**	**73**	T	T	10 29 33.0	
	baz=262,slow=75,SNR=58						
H11S2	**WAKE ISLAND Hy**	**39.94**	**73**	T	T	10 29 38.5	
	baz=262,slow=75,SNR=49						
FORT	**Forrest**	**40.18**	**178**	P	**P**	**09 46 34.3**	**-1.9**
H11N1	**WAKE ISLAND Hy**	**40.28**	**71**	T	T	10 29 59.5	
	baz=265,slow=74,SNR=95						
H11N2	**WAKE ISLAND Hy**	**40.29**	**71**	T	T	10 30 06.4	
	baz=265,slow=74,SNR=65						
H11N3	**WAKE ISLAND Hy**	**40.30**	**71**	T	T	10 30 08.3	
	baz=265,slow=74,SNR=72						
TAPN	**Taplejung**	**40.55**	**301**	*e*P	**P**	**09 46 40.0**	**+0.2**
	comp=Z,37nm,0.4s						
ODAN	**Odare**	**40.68**	**300**	*e*P	**P**	**09 46 41.1**	**+0.4**
	comp=Z,95nm,0.8s						
RAMN	**Ramite**	**41.38**	**300**	*e*P	**P**	**09 46 46.9**	**+0.4**
	comp=Z,48nm,0.7s						
ULN	**Ulaanbaatar**	**41.51**	**340**	P	**P**	**09 46 46.6**	**-0.6**
SONM	**Songino Array**	**41.71**	**340**	P	**P**	**09 46 48.9**	**+0.2**
	comp=Z,1.6nm,0.6s,baz=157,slow=9.3,SNR=8.3						
SONM				ScP	**ScP**	**09 52 29.6**	**-2.0**
	comp=Z,0.4nm,0.6s,baz=132,slow=2.1,SNR=1.8						
SONM				LR	LR	10 05 46.6	
	comp=Z,355nm,19.5s,baz=146,slow=38						
SONM	**Songino Array**	**41.71**	**340**	P	**P**	**09 46 48.3**	**-0.4**
GUN	**Gumba**	**42.27**	**301**	*e*P	**P**	**09 46 53.3**	**-0.6**
	comp=Z,75nm,0.7s						
PKI	**Pulchoki**	**42.57**	**300**	*e*P	**P**	**09 46 54.9**	**-1.5**
	comp=Z,23nm,0.6s						
PKIN	**Phulchoki**	**42.58**	**300**	*e*P	**P**	**09 46 54.9**	**-1.5**
	comp=Z,17nm,0.5s						
DMN	**Daman**	**42.84**	**300**	*e*P	**P**	**09 46 57.2**	**-1.3**
BBOO	**Buckleboo**	**43.16**	**168**	P	**P**	**09 47 00.0**	**-0.5**
BBOO				IAmb	IAmb	09 47 13.2	
	comp=Z,22nm,0.9s						
NWAO	**Narrogin (SRO)**	**43.20**	**191**	P	**P**	**09 46 60.0**	**-0.9**
	comp=Z,17nm,0.8s,baz=19,slow=6.6,SNR=11						
NWAO	**Narrogin (SRO)**	**43.20**	**191**	P	**P**	**09 47 00.3**	**-0.5**
NWAO				IAmb	IAmb	09 47 01.8	
	comp=Z,26nm,1.0s						
NWAO	**Narrogin (SRO)**	**43.20**	**191**	P	**P**	**09 47 00.1**	**-0.8**
NWAO				IAmb	IAmb	09 47 01.8	
	comp=Z,33nm,1.0s						
GKN	**Gorkha**	**43.35**	**301**	*e*P	**P**	**09 47 01.2**	**-1.3**
	comp=Z,19nm,0.5s						
STKA	**Stephens Creek**	**43.71**	**161**	P	**P**	**09 47 04.7**	**-0.3**
	comp=Z,1.6nm,0.3s,baz=342,slow=6.2,SNR=5.7						
STKA				LR	LR	10 09 54.3	
	comp=Z,156nm,18.1s,baz=356,slow=42						
STKA	**Stephens Creek**	**43.71**	**161**	P	**P**	**09 47 04.2**	**-0.8**
DANN	**Dangsing**	**44.19**	**301**	*e*P	**P**	**09 47 07.8**	**-1.6**
TLY	**Talaya**	**45.92**	**340**	P	**P**	**09 47 22.8**	**+0.4**
	comp=Z,3.1nm,0.6s,baz=199,slow=9.1,SNR=5.6						
TLY	**Talaya**	**45.92**	**340**	P	**P**	**09 47 22.1**	**-0.3**
TLY				IAmb	IAmb	09 47 37.5	
	comp=Z,23nm,1.5s						
HYB	**Hyderabad**	**47.13**	**285**	*i* P	**P**	**09 47 32.0**	**-0.4**
HYB				*e*pP	**sP**	**09 47 47.5**	**-1.6**
WMQ	**Urumqi**	**47.86**	**322**	*e*P	**P**	**09 47 38.7**	**+0.9**
WMQ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,79nm,4.9s						
WMQ				LR	LR		
	comp=Z,880nm,14.7s						
WMQ				LR	LR		
	comp=Z,840nm,17.5s						
WMQ				LR	LR		
	comp=Z,540nm,16.1s						
PEA0B	**Petropavlovsk-**	**50.16**	**24**	P	**P**	**09 47 56.4**	**+1.3**
PETK	**Petropavlovsk-**	**50.16**	**24**	P	**P**	**09 47 57.2**	**+2.1**
	comp=Z,5.6nm,0.7s,baz=198,slow=4.8,SNR=8.2						
PETK				LR	LR	10 09 30.9	
	comp=Z,157nm,18.8s,baz=201,slow=36						
PETK	**Petropavlovsk-**	**50.16**	**24**	P	**P**	**09 47 56.4**	**+1.2**
TOO	**Toolangi**	**50.20**	**160**	P	**P**	**09 47 56.0**	**+0.4**
TOO				IAmb	IAmb	09 48 23.4	
	comp=Z,10nm,1.0s						
DZM	**Mont Dzumac**	**50.28**	**129**	LR	LR	10 06 07.0	
	comp=Z,226nm,20.7s,baz=7.0,slow=32						
DZM	**Mont Dzumac**	**50.28**	**129**	*e*LR	LR	10 02 24.8	
	comp=Z,471nm,26.3s						
YAK	**Yakutsk**	**52.38**	**2**	P	**P**	**09 48 11.5**	**-0.1**
	comp=Z,6.9nm,0.3s,baz=162,slow=4.1,SNR=8.5						
YAK	**Yakutsk**	**52.38**	**2**	P	**P**	**09 48 12.3**	**+0.8**
MK31	**Makanchi Array**	**52.67**	**323**	P	**P**	**09 48 13.2**	**-0.8**
MKAR	**Makanchi Array**	**52.67**	**323**	P	**P**	**09 48 13.6**	**-0.5**

	comp=Z,5.8nm,0.7s,baz=121,slow=8.2,SNR=42						
MKAR				LR	LR	10 12 10.7	
	comp=Z,482nm,21.5s,baz=118,slow=38						
MKAR	Makanchi Array	52.67	323	P	P	09 48 13.4	-0.6
SHLS	Shalkode	52.76	318	eP	P	09 48 10.8	-4.1
	comp=Z,4.7nm,1.4s,baz=318						
MAKZ	Makanchi	52.86	323	P	P	09 48 14.2	-1.2
MAKZ				IAmb	IAmb	09 48 16.0	
	comp=Z,21nm,1.5s						
UZB	Uzynbulak	53.05	318	eP	P	09 48 15.3	-1.8
	comp=Z,2.8nm,0.8s,baz=318						
MA2	Magadan	53.12	15	P	P	09 48 17.4	+0.3
MA2				IAmb	IAmb	09 48 19.1	
	comp=Z,9.3nm,0.8s						
KPKS	Kokpek	53.41	318	eP	P	09 48 17.9	-1.7
	comp=Z,3.5nm,0.8s,baz=318						
SATY	Saty	53.43	317	eP	P	09 48 18.0	-1.9
	baz=317						
KSH	Kashi	53.82	312	P	P	09 48 23.7	+0.9
KSH				S	S	09 55 58.8	+4.1
KSH				pmax	pmax		
	comp=Z,27nm,1.3s						
KSH				pmax	pmax		
	comp=Z,160nm,8.2s						
KSH				LR	LR		
	comp=Z,410nm,6.6s						
KSH				LR	LR		
	comp=Z,270nm,10.3s						
KSH				LR	LR		
	comp=Z,570nm,14.9s						
TDK	Taldyqorghan	54.24	319	eP	P	09 48 24.3	-1.3
	comp=Z,4.8nm,0.5s,baz=320						
NIL	Nilore	54.27	305	P	P	09 48 25.5	-0.6
MDOK	Medeo	54.38	317	eP	P	09 48 25.4	-1.4
	baz=317						
TNSS	Tian-Shan	54.40	317	eP	P	09 48 25.4	-1.9
	baz=317						
CHKK	Chushkaly	54.69	318	eP	P	09 48 27.6	-1.3
	baz=318						
KUU	Kurty	55.14	317	eP	P	09 48 30.2	-2.0
	comp=Z,17nm,1.2s,baz=318						
ZAA0	Zalesovo Array	55.30	331	P	P	09 48 31.4	-1.6
ZALV	Zalesovo Beam	55.30	331	P	P	09 48 31.9	-1.1
	comp=Z,3.5nm,0.7s,baz=126,slow=6.2,SNR=16						
ZALV				LR	LR	10 15 12.0	
	comp=Z,183nm,18.2s,baz=124,slow=39						
SEM	Semipalatinsk	55.67	326	eP	P	09 48 33.6	-2.5
	baz=326						
AAK	Ala-Archa	55.93	315	P	P	09 48 36.9	-1.1
	comp=Z,1.0nm,0.3s,baz=165,slow=12,SNR=6.1						
AAK	Ala-Archa	55.93	315	P	P	09 48 37.5	-0.6
SEY	Seymchan	56.41	14	P	P	09 48 42.1	+1.3
	comp=Z,6.0nm,0.8s,baz=229,slow=5.6,SNR=21						
KURK	Kurchatov	56.72	326	P	P	09 48 42.3	-1.0
KURBB	Kurchatov Arra	56.73	326	P	P	09 48 42.4	-0.9
	comp=Z,2.5nm,0.6s,baz=124,slow=6.8,SNR=23						
BTLS	Baital	57.09	318	eP	P	09 48 44.0	-2.0
	comp=Z,2.3nm,0.9s,baz=318						
KBL	Kabul	57.87	305	P	P	09 48 50.3	-1.7
DZA	Taraz	58.22	315	eP	P	09 48 52.6	-1.5
	baz=315						
KK31	Karatay Array	58.85	315	P	P	09 48 57.8	-0.7
KK31				IAmb	IAmb	09 48 58.4	
	comp=Z,8.0nm,0.8s						
KKAR	Karatay Array	58.85	315	P	P	09 48 57.5	-1.0
KKAR	Karatay Array	58.85	315	P	P	09 48 57.8	-0.7
KKAR				IAmb	IAmb	09 48 58.4	
	comp=Z,8.0nm,0.8s						
IUG	Iuzhnay	58.92	314	eP	P	09 48 57.1	-1.9
	comp=Z,4.6nm,0.8s,baz=314						
BRZS	Berezniki	59.82	323	eP	P	09 49 02.8	-2.2
	comp=Z,3.5nm,0.9s,baz=323						
TIXI	Tiksi	62.01	1	P	P	09 49 18.7	-0.7
BVAR	Borovoye Array	62.32	326	P	P	09 49 21.2	-0.7
	comp=Z,2.3nm,0.6s,baz=159,slow=12,SNR=14						
BRVK	Borovoye	62.39	326	P	P	09 49 20.9	-1.4
BRVK				IAmb	IAmb	09 49 22.5	
	comp=Z,12nm,0.9s						
HRA	Herat	63.39	304	P	P	09 49 28.5	-1.1
NRIK	Noril'sk	64.70	346	P	P	09 49 36.9	-0.3
	comp=Z,10nm,1.0s,baz=138,slow=7.4,SNR=6.6						
NRIK				LR	LR	10 22 09.7	
	comp=Z,283nm,18.2s,baz=148,slow=40						
NRIK	Noril'sk	64.70	346	P	P	09 49 37.8	+0.5
NRIK				IAmb	IAmb	09 49 38.6	
	comp=Z,23nm,1.2s						
WSAR	Wadi Sarin	65.97	291	P	P	09 49 45.3	-1.0
	comp=Z,2.9nm,0.7s,baz=343,slow=1.3,SNR=3.6						
GEYT	Alibeck	67.10	307	P	P	09 49 52.3	-1.1
	comp=Z,11nm,1.2s,baz=153,slow=4.6,SNR=5.9						
GEYT				LR	LR	10 24 10.3	
	comp=Z,330nm,20.2s,baz=75,slow=40						
GEYT	Alibeck	67.10	307	P	P	09 49 52.7	-0.6
GYA0B	ALIBECK ARRAY	67.10	307	P	P	09 49 52.7	-0.6
GYA0B				IAmb	IAmb	09 49 59.0	
	comp=Z,7.0nm,0.7s						
ABKAR	Akbulak array	67.50	319	P	P	09 49 54.6	-1.0
ABKAR	Akbulak array	67.50	319	P	P	09 49 54.8	-0.9
ABKAR				IAmb	IAmb	09 49 55.6	
	comp=Z,7.0nm,0.8s						
AKTO	Aktyubinsk	68.96	320	P	P	09 50 03.3	-1.4
	comp=Z,5.0nm,0.8s,baz=97,slow=8.1,SNR=14						
ARU	Arti	69.89	327	P	P	09 50 09.3	-1.0
	comp=Z,2.3nm,0.5s,baz=106,slow=1.3,SNR=14						
ARU	Arti	69.89	327	P	P	09 50 09.3	-1.0
ARU				IAmb	IAmb	09 50 10.0	
	comp=Z,11nm,0.7s						
RDOG	Red Dog Mine	73.94	22	P	P	09 50 36.2	+1.8
RDOG				IAmb	IAmb	09 50 37.6	
	comp=Z,29nm,1.4s						
KIRV	Kirov	75.11	328	P	P	09 50 40.8	-0.5
	comp=Z,23nm,0.7s,baz=121,slow=3.6,SNR=9.2						
BELG	Belogornoye	75.64	322	P	P	09 50 43.1	-1.4
	comp=Z,19nm,0.8s,baz=13,slow=2.7,SNR=7.3						
TTA	Tatalina	75.82	27	P	P	09 50 46.2	+0.7
KDAK	Kodiak Island	77.11	33	P	P	09 50 54.5	+1.7
IMAR	Indian Mountai	77.12	24	P	P	09 50 54.4	+1.7
PPLA	Purkeypile	77.56	28	P	P	09 50 56.4	+1.0
PPLA				IAmb	IAmb	09 50 57.5	
	comp=Z,14nm,1.2s						
CNPM	China Poot	77.88	31	P	P	09 50 58.8	+1.8
RAYN	Ar Rayn	78.00	292	P	P	09 50 57.4	-1.1
RAYN				IAmb	IAmb	09 51 00.2	
	comp=Z,11nm,0.8s						
BRLK	Bradley Lake	78.06	31	P	P	09 50 59.1	+1.0
KTH	Kantishna Hill	78.17	27	P	P	09 51 01.2	+2.5
KTH				IAmb	IAmb	09 51 10.9	
	comp=Z,12nm,1.2s						
TRF	Thorofare Moun	78.45	27	P	P	09 51 00.3	0.0
TRF				IAmb	IAmb	09 51 02.5	
	comp=Z,17nm,1.3s						
COLD	Coldfoot	78.62	23	P	P	09 51 02.7	+1.7
COLD				IAmb	IAmb	09 51 06.1	
	comp=Z,9.7nm,1.0s						
KBZ	Khabaz	78.80	313	P	P	09 51 01.4	-1.0
	comp=Z,3.4nm,0.9s,baz=165,slow=3.2,SNR=5.7						
KBZ				LR	LR	10 30 05.9	
	comp=Z,236nm,18.7s,baz=70,slow=39						
RND	Reindeer	79.09	27	P	P	09 51 04.3	+0.6
RND				IAmb	IAmb	09 51 05.5	
	comp=Z,18nm,1.3s						
KNK	Knik Glacier	79.28	29	P	P	09 51 05.5	+0.8
KNK				IAmb	IAmb	09 51 07.7	
	comp=Z,18nm,1.0s						
SML	Sawmill	79.33	29	P	P	09 51 04.0	-1.1
MDM	Murphy Dome	79.38	26	P	P	09 51 05.3	+0.1
WRH	Wood River Hil	79.43	26	P	P	09 51 06.2	+0.7
TCOL	CIGO, UAF Yank	79.53	26	P	P	09 51 05.6	-0.4
COLA	College	79.54	26	P	P	09 51 05.9	-0.1
CCB	Clear Creek Bu	79.56	26	P	P	09 51 06.3	+0.2
HDA	Harding Lake	79.93	26	P	P	09 51 05.5	-2.7
HDA				IAmb	IAmb	09 51 22.1	
	comp=Z,7.6nm,0.8s						
IL31		79.95	26	P	P	09 51 07.8	-0.5
ILAR	Eielson Array	79.95	26	P	P	09 51 07.8	-0.5
	comp=Z,2.0nm,0.6s,baz=233,slow=4.9,SNR=29						
ILAR	Eielson Array	79.95	26	P	P	09 51 08.4	+0.1
KLMR	Klimovskoe	80.20	330	eP	P	09 51 07.7	-2.0
KLMR				AMP		09 51 10.0	
	comp=Z,34nm,1.1s						
KLU	Klutina	80.49	29	P	P	09 51 12.9	+1.6
KLU				IAmb	IAmb	09 51 13.0	
	comp=Z,19nm,1.3s						
BMAR	Burnt Mountain	80.80	23	P	P	09 51 14.8	+1.9
KOPT	Kop Dagi	80.83	309	P	P	09 51 13.1	-0.8
MARD	Mardin	80.84	306	P	P	09 51 12.8	-1.0
MARD				IAmb	IAmb	09 51 15.8	
	comp=Z,8.8nm,0.7s						
RIDG	Independent Ri	80.88	27	P	P	09 51 13.8	+0.4
RIDG				IAmb	IAmb	09 51 15.6	
	comp=Z,26nm,1.2s						
MENT	Mentasta	81.44	28	P	P	09 51 15.8	-0.5
MENT				IAmb	IAmb	09 51 32.7	
	comp=Z,20nm,1.3s						
BCAR	Beaver Creek A	82.31	27	P	P	09 51 22.2	+1.2
BCPM	Bancas Point	83.71	30	P	P	09 51 25.3	-2.9
EPYK	Eagle Plains	84.00	24	P	P	09 51 31.1	+1.5
HYT	Haines Junctio	84.62	29	P	P	09 51 35.1	+2.1
INK	Inuvik	84.83	22	P	P	09 51 33.1	-0.5
ARCES	ARCESS Array B	84.88	340	P	P	09 51 33.2	-0.7
	comp=Z,12nm,0.7s,baz=44,slow=3.7,SNR=14						
WHY	Whitehorse	85.92	29	P	P	09 51 38.6	-0.8
BRTR	Keskin Array B	86.10	309	P	P	09 51 39.5	-1.4
	comp=Z,1.3nm,0.8s,baz=199,slow=3.4,SNR=4.4						
BRTR				LR	LR	10 35 58.9	
	comp=Z,78nm,19.5s,baz=74,slow=40						
FINES	FINESS Array B	86.56	332	P	P	09 51 41.5	-0.9
	comp=Z,4.1nm,0.3s,baz=83,slow=4.3,SNR=50						
FINES				LR	LR	10 34 06.6	
	comp=Z,257nm,18.5s,baz=66,slow=38						
FINES	FINESS Array B	86.56	332	P	P	09 51 41.7	-0.7
EIL	Elat	86.62	299	P	P	09 51 42.9	-0.6
	comp=Z,5.8nm,0.9s,baz=45,slow=6.6,SNR=4.3						
PPT2	Papeete2	87.18	108	eLR	LR	10 19 39.2	
	comp=Z,300nm,23.8s,baz=284						
AKASG	Malin Array Be	87.20	321	P	P	09 51 44.5	-1.2
	comp=Z,1.7nm,0.6s,baz=68,slow=4.8,SNR=9.8						
AKASG				LR	LR	10 35 25.2	
	comp=Z,157nm,18.8s,baz=60,slow=39						
AKASG	Malin Array Be	87.20	321	P	P	09 51 44.3	-1.5
AKBB	Malin Array Si	87.20	321	P	P	09 51 45.1	-0.7
MNK	Minsk	87.20	325	iP	P	09 51 39.8	-5.9
	comp=E,1.0nm,0.9s						
MNK				iP	P	09 51 39.8	-5.9
	comp=N,16nm,0.9s						
MNK				iP	P	09 51 39.8	-5.9
	comp=Z,7.0nm,0.9s						
MNK				iPcP	PcP	09 51 41.6	-6.2
MNK				ipP	sP	09 52 01.3	-1.5
MNK				isP	pwP	09 52 10.2	+9.1
MNK				isP	pwP	09 52 10.2	+9.1
MNK				iPP	PP	09 54 43.5	-26
MNK				iPPP	PPP	09 56 59.2	
MNK				iS	S	10 01 58.1	-24
MNK				iScS	SKKSac	10 02 19.6	+0.9
MNK				isS	ScS	10 02 38.0	+8.7
MNK				iSS	SS	10 08 16.7	+11
MNK				iSSS	SSS	10 11 05.2	
MNK				iSKKS		10 14 59.6	
MNK				iLQ	LQ	10 23 51.3	
MNK				iLR	LR	10 27 02.1	
MNK				iLRM	MLR	10 32 33.5	
	comp=Z,122nm,18.4s						
MNK				iLRM	MLR	10 32 35.8	
	comp=E,23nm,18.4s						
MNK				iLRM	MLR	10 32 37.7	
	comp=N,105nm,18.4s						
C36M	Paulatuk	87.80	20	P	P	09 51 49.5	+1.3
TBI	Tubuai	88.38	114	eLR	LR	10 20 08.2	
	comp=N,333nm,24.0s,baz=293						
VNDA	Vanda	89.25	173	LR	LR	10 33 39.5	
	comp=N,114nm,18.1s,baz=351,slow=37						
KMBO	Kilima Mbogo	89.41	269	P	P	09 51 56.1	-1.2
	comp=N,1.2nm,0.3s,baz=95,slow=3.7,SNR=4.7						
KMBO				LR	LR	10 32 08.8	
	comp=N,115nm,18.1s,baz=92,slow=36						
BURAR	Bucovina Array	90.46	318	P	P	09 52 00.0	-1.4
KOLS	Kolonicke sedl	92.00	320	eP	P	09 52 08.2	-0.1
RES	Resolute Bay	92.11	10	P	P	09 52 09.1	+0.8
RES				IAmb	IAmb	09 52 10.4	
	comp=Z,6.9nm,0.9s						
HFS	Hagfors	92.72	332	P	P	09 52 10.1	-1.4
	comp=Z,3.7nm,0.7s,baz=91,slow=5.9,SNR=11						
NOA	NORSAR Array B	93.44	334	P	P	09 52 13.3	-1.5
	comp=Z,1.5nm,0.7s,baz=66,slow=4.6,SNR=4.7						
NOA				LR	LR	10 38 22.5	
	comp=Z,195nm,19.0s,baz=65,slow=38						
YKA	Yellowknife Ar	94.28	24	P	P	09 52 18.6	+0.1
	comp=Z,3.9nm,0.7s,baz=302,slow=4.0,SNR=6.7						
VNA2	Neumayer--Watz	112.41	195	PKiKP	PKiKP	09 57 32.1	-2.6
VNA3	Neumayer Olymp	112.76	194	PKiKP	PKiKP	09 57 37.5	+2.1
VNA1	Neumayer--Stat	112.81	195	PKiKP	PKiKP	09 57 36.2	+0.7
TXAR	Lajitas Array	118.11	49	PKP	PKiKP	09 57 48.5	+1.3
	comp=Z,0.2nm,0.5s,baz=48,slow=1.3,SNR=8.5						
TXAR	Lajitas Array	118.11	49	PKPdf	PKiKP	09 57 48.3	+1.2
TORD	Torodi Ar. Bea	120.69	291	PKP	PKPdf	09 57 52.7	+0.4
	comp=Z,0.8nm,0.7s,baz=64,slow=3.4,SNR=2.7						
PLCA	Paso Flores	145.52	157	PKPbc	PKPdf	09 58 37.2	-0.7
	comp=Z,5.3nm,0.9s,baz=202,slow=5.4,SNR=14						
PLCA	Paso Flores	145.52	157	PKPdf	PKPdf	09 58 37.3	-0.6
UREC	San Jos de Ur	152.12	53	eP	PKPbc	09 58 56.9	+1.0
SMLC	San Martn de	152.57	49	eP	PKPbc	09 58 57.2	+0.4
YOTC	Yotoco, Valle	153.56	60	eP	PKPbc	09 58 59.1	-0.1
GUY2C	Guyana, Caldas	153.73	57	eP	PKPbc	09 59 00.0	0.0
TOLC	Tolima	154.11	58	eP	PKPbc	09 58 59.5	-1.1
RUSC	La Rusia	155.17	52	eP	PKPdf	09 59 05.5	+11

NNC 06 09:40:44.0±1.1, 53°.68N×87°.68E, h0^{km}, mb3.6, mpv3.3, 5C-2D, Error ellipse: s-maj=8.3km s-min=5.4km az=78.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	1.72	280	⇓Pn	Pn	09 41 15.0	-0.2
	1.8nm,0.4s,baz=99,slow=14						
ZAA0				⇑Sn	Sb	09 41 38.7	+0.2
	12nm,0.8s,baz=98,slow=26						
KURK	Kurchatov	6.31	246	⇑Pn	Pn	09 42 18.6	+0.3
	1.1nm,0.3s						
KURK				⇑Lg	Lg	09 43 59.6	
	5.9nm,1.0s						
KURBB	Kurchatov Arra	6.41	245	⇑Pn	Pn	09 42 20.0	+0.4
	5.9nm,0.7s						
KURBB				⇓Lg	Lg	09 44 00.4	
	8.7nm,0.6s						
MK31	Makanchi Array	7.71	209	⇑Pn	Pn	09 42 37.5	0.0
	0.9nm,0.5s,baz=29,slow=12,SNR=21						

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*IDC **06** 09:43:49.7±2.1, 20°.36S×172°.70E, h0^{km}, mb4.0/7, mb1 4.3/7, mb1mx3.9/40, mbtmp4.0/7, MS4.0/10, Ms1 4.0/10, ms1mx3.7/28, Error ellipse: s-maj=99.1km s-min=28.6km az=158.0*

*GCMT **06** 09:43:55.0±0.3, 20°.54S±0°.02×172°.54E±0°.02, h18^{km}±1^{km}, MW4.8/68, Moment Tensor Solution. s25,c29; s68,c90; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.49±.17; M$_{\theta\theta}$0.59±.12; M$_{\phi\phi}$0.89±.11; M$_{r\theta}$-1.04±.29; M$_{\theta\phi}$1.64±.07; M$_{\phi r}$0.30±.22; Best double couple: M$_0$2.34900×10^{16} NP1:ϕ_s191.00000°, δ49.00000°, λ-140.00000°. NP2: ϕ_s72.00000°, δ61.00000°, λ-49.00000°. Principal axes: T 2.4550, Plg7.0000°, Azm134.0000°; N -0.2120, Plg35.0000°, Azm230.0000°; P -2.2420, Plg54.0000°, Azm34.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 06 09:43:55.0±1.7, 20°.4S±0°.5×172°.7E±0°.3, h35^{km}, n21, σ1^{s}.23/8, mb4.0/7, MS4.0/12, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	6.04	253	ePn	Pn	09 45 21.9	+0.1
DZM				eLR	LR	09 46 46.8	
HNR	Honiara	16.42	310	LR	LR	09 53 06.1	
	comp=Z,389nm,18.7s,baz=213,slow=34						
TBI	Tubuai	35.20	102	eLR	LR	10 00 17.0	
	comp=Z,388nm,30.8s						
PPT2	Papeete2	35.76	92	eLR	LR	10 00 35.7	
	comp=Z,361nm,26.2s,baz=262						
PPT	Papeete	35.76	92	LR	LR	10 01 27.6	
	comp=Z,253nm,21.1s,baz=244,slow=30						
JAY	Jayapura	35.89	296	LR	LR	10 05 32.2	
	comp=Z,303nm,18.1s,baz=177,slow=36						
ASAR	Alice Springs	36.00	258	P	P	09 50 52.2	-0.7
	0.6nm,0.8s,baz=90,slow=9.3,SNR=2.7						
FITZ	Fitzroy Crossi	44.34	265	P	P	09 52 01.6	-0.4
	1.5nm,0.7s,baz=114,slow=10.0,SNR=2.1						
RKT	Rikitea	48.49	103	eLR	LR	10 06 39.2	
	comp=Z,335nm,31.8s						
JOW	Kunigami	63.69	316	LR	LR	10 17 35.2	
	comp=Z,106nm,21.8s,baz=160,slow=32						
LEM	Lembang	64.29	272	LR	LR	10 23 21.8	
	comp=Z,96nm,18.1s,baz=217,slow=37						
MJAR	Matsushiro Arr	65.33	330	LR	LR	10 17 21.9	
	comp=Z,57nm,21.8s,baz=160,slow=31						
JNU	Nakatsue	66.53	322	LR	LR	10 18 32.3	
	comp=Z,134nm,20.8s,baz=48,slow=31						
USRK	Ussuriysk Ar.	74.29	331	LR	LR	10 23 28.7	
	comp=Z,88nm,21.5s,baz=151,slow=32						
CMAR	Chiang Mai Arr	81.93	293	P	P	09 56 13.5	+2.0
	0.7nm,0.3s,baz=123,slow=4.4,SNR=4.6						
SEY	Seymchan	84.59	351	P	P	09 56 24.1	-0.1
	0.9nm,0.5s,baz=179,slow=12,SNR=3.9						
NVAR	Mina Array Bea	87.19	47	P	P	09 56 38.3	+0.4
	0.6nm,0.7s,baz=238,slow=6.3,SNR=2.6						
ILAR	Eielson Array	90.42	16	P	P	09 56 50.7	-1.6
	0.5nm,0.8s,baz=230,slow=4.7,SNR=4.5						
TXAR	Lajitas Array	94.51	61	P	P	09 57 12.6	+0.4
	0.5nm,0.8s,baz=215,slow=4.3,SNR=5.2						
PDAR	Pinedale Array	95.07	46	LR	LR	10 35 22.1	
	comp=Z,108nm,19.9s,baz=320,slow=32						
PLCA	Paso Flores	95.50	137	LR	LR	10 30 51.6	
	comp=Z,54nm,21.2s,baz=214,slow=30						

KRSC 06 09:49:06.5±1.7, 49°.61N×156°.73E, h6^{km}±28^{km}, ML4.1, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.14	340	eP	Pg	09 49 27.1	-1.3
SKR				eS	Sg	09 49 43.0	-0.2
PAU	Pauzhetka	1.86	2	eP	Pb	09 49 39.8	-1.0
PAU				eS	Sb	09 50 04.2	0.0
KDTR	Khodutka, Kamc	2.36	21	eP	Pb	09 49 47.8	-1.5
KDTR				eS	Sb	09 50 18.1	-0.6
MTVR	Mutnovka	3.02	17	eP	Pn	09 49 57.0	+2.1
MTVR				eS	Sb	09 50 35.0	-2.7
RUS	Russkaya	3.04	21	eP	Pn	09 49 56.2	+1.2
RUS				eS	Sn	09 50 33.9	+2.2
GRL	Gorelyy	3.06	16	eP	Pn	09 49 57.7	+2.2
KRMR	Karymshinskiy	3.34	15	eP	Pb	09 50 02.8	-3.2
UGLR	Uglovaya	3.83	19	eP	Pb	09 50 10.3	-4.2
AVH	Avacha	3.87	18	eP	Pn	09 50 09.9	+3.4
KOK	Koryaka	3.87	17	eP	Pn	09 50 10.1	+3.5
SMAR	Somma	3.88	19	eP	Pn	09 50 10.6	+3.8
KRER	Koryakskii	3.91	18	eP	Pb	09 50 12.7	-3.1
KRX	Arik	3.94	17	eP	Pn	09 50 11.2	+3.7
SPN	Mys Shipunski	4.05	29	eP	Pn	09 50 11.9	+2.9
GNL	Ganaly	4.16	10	eP	Pn	09 50 13.5	+3.0
TUMD	Tumrok D	6.03	20	eP	Pn	09 50 42.3	+6.2

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*MEX **06** 09:55:37.0±0.3, 29°.99N×114°.44W, h14^{km}, MD3.9*

*ECX **06** 09:55:37.0±0.6, 30°.66N×114°.16W, h20^{km}±16^{km}, MD3.1, ML2.7*

ISC 06 09:55:36.2±2.5, 30°.6N±0°.1×114°.17W±0°.06, h26^{km}±22^{km}, n11, σ1^{s}.68/15, 3C-2D, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFX	San Felipe	0.73	307	⇑eP	Pb	09 55 49.6	-0.7
SFX				eS	Sb	09 55 59.3	-0.6
PIX	Pinacate	1.14	32	eP	Pn	09 55 55.7	-0.7
ECBX	El Chinero	1.16	319	eP	Pn	09 55 55.9	-0.7
SPX	San Pedro Mart	1.20	292	eP	Pn	09 55 57.3	-0.2
SPX				⇓e		09 56 25.6	
SPIG	San Pedro Mart	1.20	292	iP	Pb	09 55 58.4	-0.1
SPIG				iS	Sb	09 56 15.1	+1.3
SPIG	San Pedro Mart	1.20	292	eP	Pn	09 55 57.2	-0.4
SQX	San Quintin	1.47	270	eP	Pn	09 56 01.8	+0.9
SQX				eS	Sb	09 56 21.1	0.0
VTX	Valle De La Tr	1.60	300	eP	Pn	09 56 02.8	0.0
VTX				⇑e		09 56 27.6	
VTX				IAML		09 56 27.6	
	comp=E,102nm,0.3s						
VTX				IAML		09 56 27.6	
	comp=N,92nm,0.3s						
VTX				⇓e		09 56 27.6	
214A	Organ Pipe Nat	1.79	40	iP	Pn	09 56 05.5	+0.1
214A				iS	Sb	09 56 32.4	+2.1
CBX	Cerro Bola	2.73	309	⇑e		09 57 04.8	
CBX				IAML		09 57 04.8	
	comp=E,49nm,0.4s						
TJIG	Tijuana	2.81	311	iP	Pb	09 56 23.5	-2.3
TJIG				iS	Sb	09 57 03.9	+4.1

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*SOME **06** 10:06:03.6, 42°.25N×76°.42E, h20^{km}*

*NNC **06** 10:06:03.5±0.5, 42°.28N×76°.43E, h0^{km}, mb3.3, mpv3.5, Error ellipse: s-maj=3.3km s-min=1.7km az=168.0*

*KRNET **06** 10:06:03.5±0.1, 42°.25N×76°.44E, h20^{km}, mb3.1*

ISC 06 10:06:04.0±0.9, 42°.26N±0°.03×76°.43E±0°.01, h11^{km}±7^{km}, n86, σ0^{s}.77/152, 33C-8D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ULHL	Ulahol	0.14	264	⇑iP	Pg	10 06 07.7	+0.2
	baz=68						
ULHL				⇑iS	Sg	10 06 10.8	+0.9
	baz=68						
KDJ	Kajisay	0.57	103	⇑iP	Pg	10 06 14.5	-0.7
	baz=2.0						
KDJ				⇑iS	Sg	10 06 22.6	-0.2
	baz=2.0						
IZV	Izvestkoviy	0.79	10	eP	Pg	10 06 18.8	-0.5
	baz=9.0						
IZV				eS	Sg	10 06 29.9	+0.3
	baz=9.0						
IZV	Izvestkoviy	0.79	10	eP	Pg	10 06 18.8	-0.5
	21nm,0.2s						
IZV				eS	Sg	10 06 29.9	+0.3
	137nm,0.1s						
IZV	Izvestkoviy	0.79	10	P	Pg	10 06 18.8	-0.5
	25nm,0.1s						
IZV				S	Sg	10 06 29.9	+0.3
	137nm,0.1s						
KST	Kastek	0.85	336	eP	Pg	10 06 19.8	-0.7
	baz=37						
KST				eS	Sg	10 06 31.4	-0.3
	baz=37						
KST	Kastek	0.85	336	eP	Pg	10 06 19.8	-0.7
	20nm,0.1s						
KST				eS	Sg	10 06 31.4	-0.3
	258nm,0.2s						
KST	Kastek	0.85	336	P	Pg	10 06 19.8	-0.7
	20nm,0.1s						
KST				S	Sg	10 06 31.4	-0.3
	258nm,0.2s						
TNSS	Tian-Shan	0.86	26	⇓eP	Pg	10 06 20.0	-0.8
	baz=25						
TNSS				⇓eS	Sg	10 06 31.9	-0.2
	baz=25						
TNSS	Tian-Shan	0.86	26	⇓eP	Pg	10 06 20.0	-0.8
	40nm,0.2s						
TNSS				eS	Sg	10 06 31.9	-0.2
	42nm,0.2s						
TNSS	Tian-Shan	0.86	26	P	Pg	10 06 20.0	-0.8
	40nm,0.2s						
TNSS				S	Sg	10 06 31.9	-0.2
	42nm,0.2s						
MTBS	Maitube	0.87	0	eP	Pg	10 06 20.0	-0.8
	baz=60						
MTBS				eS	Sg	10 06 32.0	-0.1
	baz=60						
MTBS	Maitube	0.87	0	eP	Pg	10 06 20.0	-0.8
	19nm,0.1s						
MTBS				eS	Sg	10 06 32.0	-0.1
	109nm,0.1s						
MTBS	Maitube	0.87	0	P	Pg	10 06 20.0	-0.8
	19nm,0.1s						
MTBS				S	Sg	10 06 32.0	-0.1
	109nm,0.1s						
TKM2	Tokmak 2	0.90	317	⇓iP	Pg	10 06 20.6	-0.8
	baz=18						
TKM2				⇓iS	Sg	10 06 33.2	0.0
	baz=18						
TKM2	Tokmak 2	0.90	317	P	Pg	10 06 20.8	-0.6
	SNR=9.9						
TKM2	Tokmak 2	0.90	317	⇑P	Pg	10 06 20.8	-0.6
	1.1nm,0.2s						
TKM2				⇓S	Sg	10 06 33.2	0.0
	44nm,0.3s						
MDOK	Medeo	1.01	27	eP	Pg	10 06 22.4	-1.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	baz=26						
MDOK	baz=26			*e*S	Sg	10 06 36.1	-0.6
MDOK	Medeo 25nm,0.2s	1.01	27	*e*P	Pg	10 06 22.4	-1.1
MDOK	31nm,0.3s			*e*S	Sg	10 06 36.1	-0.6
MDOK	Medeo 7.9nm,0.3s	1.01	27	⇑P	Pg	10 06 22.3	-1.1
MDOK	25nm,0.5s			⇑S	Sg	10 06 36.0	-0.7
MDOK	Medeo 25nm,0.2s	1.01	27	Pg	Pg	10 06 22.4	-1.1
MDOK	31nm,0.3s			Lg	Lg	10 06 36.1	
AAA	Alma-Ata baz=20	1.01	21	*e*P	Pg	10 06 22.9	-0.7
AAA	baz=20			*e*S	Sg	10 06 36.8	0.0
AAA	Alma-Ata 46nm,0.1s	1.01	21	*e*P	Pg	10 06 22.9	-0.7
AAA	71nm,0.1s			*e*S	Sg	10 06 36.7	0.0
AAA	Alma-Ata 46nm,0.1s	1.01	21	P	Pg	10 06 22.9	-0.7
AAA	71nm,0.1s			S	Sg	10 06 36.7	0.0
KNDC	Almaty 28nm,0.2s	1.03	22	⇑P	Pg	10 06 23.5	-0.4
KNDC	51nm,0.3s			⇓S	Sb	10 06 38.0	+0.4
ANVS	Anan'yevo baz=59	1.05	60	⇑*i*P	Pg	10 06 23.2	-1.1
ANVS	baz=59			⇑*i*S	Sg	10 06 37.4	-0.7
DGS	Degeres baz=34	1.09	334	*e*P	Pb	10 06 24.2	-0.9
DGS	baz=34			*e*S	Sg	10 06 38.8	-0.6
DGS	Degeres 15nm,0.1s	1.09	334	*e*P	Pb	10 06 24.2	-0.9
DGS	58nm,0.2s			*e*S	Sg	10 06 38.7	-0.6
DGS	Degeres 15nm,0.1s	1.09	334	P	Pb	10 06 24.2	-0.9
DGS	58nm,0.2s			S	Sg	10 06 38.7	-0.6
KOTS	Kotyrbulak baz=27	1.09	27	*e*P	Pb	10 06 24.2	-0.9
KOTS	baz=27			*e*S	Sg	10 06 39.0	-0.4
KOTS	Kotyrbulak 43nm,0.1s	1.09	27	*e*P	Pb	10 06 24.1	-0.9
KOTS	64nm,0.3s			*e*S	Sg	10 06 38.9	-0.4
KOTS	Kotyrbulak 43nm,0.1s	1.09	27	P	Pb	10 06 24.1	-0.9
KOTS	64nm,0.3s			S	Sg	10 06 38.9	-0.4
KBK	Karagaybulak baz=91	1.17	290	⇑*i*P	Pb	10 06 25.4	-0.9
KBK	baz=91			⇑*i*S	Sb	10 06 41.3	-0.2
KBK	Karagaybulak SNR=8.8	1.17	290	P	Pb	10 06 25.7	-0.6
UCH	Uchtor baz=70	1.42	269	⇑*i*P	Pn	10 06 29.8	-0.4
UCH	baz=70			⇑*i*S	Sb	10 06 49.0	-0.1
UCH	Uchtor SNR=6.6	1.42	269	P	Pn	10 06 29.7	-0.6
CHMS	Chumysh baz=2.0	1.44	301	⇑*i*P	Pn	10 06 30.1	0.0
CHMS	baz=2.0			⇑*i*S	Sb	10 06 49.5	+0.2
CHMS	Chumysh SNR=6.3	1.44	301	P	Sn	10 06 49.1	+0.1
KTBS	Karatobe baz=7.0	1.46	7	*e*P	Pn	10 06 30.7	+0.2
KTBS	baz=7.0			*e*S	Sb	10 06 50.3	+0.3
KTBS	Karatobe 11nm,0.2s	1.46	7	*e*P	Pn	10 06 30.6	+0.2
KTBS	30nm,0.3s			*e*S	Sb	10 06 50.2	+0.3
KTBS	Karatobe 11nm,0.2s	1.46	7	P	Pn	10 06 30.7	+0.2
KTBS	30nm,0.3s			S	Sb	10 06 50.2	+0.3
PRZ	Przheval'sk baz=80	1.48	81	⇑*i*P	Pn	10 06 30.5	-0.3
PRZ	baz=80			⇑*i*S	Sn	10 06 50.3	+0.1
AAK	Ala-Archa baz=86	1.48	285	⇑*i*P	Pn	10 06 30.8	0.0
AAK	baz=86			⇑*i*S	Sb	10 06 50.7	+0.2
AAK	Ala-Archa SNR=11	1.48	285	P	Pn	10 06 31.0	+0.3
AAK	Ala-Archa 1.5nm,0.3s	1.48	285	⇓P	Pn	10 06 30.8	0.0
AAK	22nm,0.8s			⇑S	Sb	10 06 50.5	0.0
KRBS	Karabastau baz=39	1.54	339	*e*P	Pn	10 06 32.0	+0.5
KRBS	baz=39			*e*S	Sb	10 06 52.6	+0.5
KRBS	Karabastau 16nm,0.1s	1.54	339	*e*P	Pn	10 06 32.0	+0.5
KRBS	18nm,0.1s			*e*S	Sb	10 06 52.6	+0.5
KRBS	Karabastau 16nm,0.1s	1.54	339	P	Pn	10 06 32.0	+0.5
KRBS	18nm,0.1s			S	Sb	10 06 52.6	+0.5
ARLS	Aral baz=57	1.62	256	⇑*i*P	Pn	10 06 33.0	+0.3
ARLS	baz=57			⇑*i*S	Sb	10 06 54.2	-0.3
KUU	Kurty baz=58	1.63	358	*e*P	Pb	10 06 33.6	-0.5
KUU	baz=58			*e*S	Sb	10 06 54.9	+0.1
KUU	Kurty 20nm,0.1s	1.63	358	*e*P	Pb	10 06 33.6	-0.5
KUU	40nm,0.1s			*e*S	Sb	10 06 54.9	+0.1
KUU	Kurty 20nm,0.1s	1.63	358	P	Pb	10 06 33.6	-0.5
KUU	40nm,0.1s			S	Sb	10 06 54.9	+0.1
SATY	Saty baz=60	1.66	61	*e*P	Pb	10 06 34.1	-0.7
SATY	baz=60			*e*S	Sb	10 06 56.0	+0.2
SATY	Saty 3.8nm,0.1s	1.66	61	*e*P	Pb	10 06 34.1	-0.7
SATY	63nm,0.2s			*e*S	Sb	10 06 56.0	+0.2
SATY	Saty 3.8nm,0.1s	1.66	61	P	Pb	10 06 34.1	-0.7
SATY	63nm,0.2s			S	Sb	10 06 56.0	+0.2
USP	Ospenovka baz=6.0	1.74	306	⇑*i*P	Pn	10 06 35.1	+0.9
USP	baz=6.0			⇑*i*S	Sb	10 06 57.8	-0.1
USP	Ospenovka SNR=8.3	1.74	306	P	Pb	10 06 35.7	-0.3
KURS	Kuram baz=45	1.77	46	*e*P	Pb	10 06 36.0	-0.6
KURS	baz=45			*e*S	Sb	10 06 58.9	+0.1
KURS	Kuram 1.0nm,0.0s	1.77	46	*e*P	Pb	10 06 36.0	-0.6
KURS	14nm,0.3s			*e*S	Sb	10 06 59.0	+0.1
KURS	Kuram 1.0nm,0.0s	1.77	46	P	Pb	10 06 36.0	-0.6
KURS	14nm,0.3s			S	Sb	10 06 59.0	+0.1
SGDS	Sogindy 5.9nm,0.1s	1.78	313	P	Pb	10 06 36.0	-0.7
SGDS	15nm,0.1s			S	Sb	10 06 59.1	+0.1
EKS2	Erkin-Say baz=83	2.00	282	⇑*i*P	Pn	10 06 38.7	+0.8
EKS2	baz=83			⇑*i*S	Sb	10 07 04.4	-1.1
EKS2	Erkin-Say SNR=14	2.00	282	P	Pb	10 06 41.1	+0.6
AML	Almayashu baz=68	2.04	267	⇑*i*P	Pn	10 06 39.4	+0.8
AML	baz=68			⇑*i*S	Sb	10 07 05.6	-1.1
AML	Almayashu SNR=6.4	2.04	267	P	Pb	10 06 41.3	0.0
UZB	Uzynbulak 5.7nm,0.1s	2.11	64	*e*P	Pb	10 06 41.4	-0.9
UZB	40nm,0.5s			*e*S	Sb	10 07 08.4	-0.1
UZB	Uzynbulak 5.7nm,0.1s	2.11	64	Pg	Pb	10 06 41.4	-0.9
UZB	40nm,0.5s			Lg	Lg	10 07 08.4	
ARXS	Arharly 19nm,0.3s	2.20	27	*e*P	Pb	10 06 43.0	-0.9
ARXS	15nm,0.2s			*e*S	Sb	10 07 11.4	+0.2
ARXS	Arharly 19nm,0.3s	2.20	27	Pg	Pb	10 06 43.0	-0.9
ARXS	15nm,0.2s			Lg	Lg	10 07 11.4	
MNBS	Baschi 2.9nm,0.1s	2.32	38	*e*P	Pb	10 06 46.2	+0.2
MNBS	24nm,0.1s			*e*S	Sb	10 07 16.5	+1.9
MNBS	Baschi 2.9nm,0.1s	2.32	38	Pg	Pb	10 06 46.2	+0.2
SHLS	Shalkode 4.1nm,0.0s	2.41	67	*e*P	Pg	10 06 50.9	+0.7
SHLS	27nm,0.3s			*e*S	Sg	10 07 24.6	+3.2
SHLS	Shalkode 4.1nm,0.0s	2.41	67	Pg	Pg	10 06 50.9	+0.7
SHLS	27nm,0.3s			Lg	Lg	10 07 24.6	
MRKS	Merke 2.6nm,0.2s	2.42	283	*e*P	Pb	10 06 47.9	+0.4
MRKS	21nm,0.2s			*e*S	Sg	10 07 19.9	-1.7
MRKS	Merke 4.9nm,0.3s	2.42	283	Pg	Pb	10 06 47.9	+0.4
MRKS	21nm,0.2s			Lg	Lg	10 07 19.9	
PDGK	Podgornoye 0.5nm,0.1s	2.49	64	Pg	Pb	10 06 47.1	-1.8
PDGK	7.8nm,0.5s			Lg	Lg	10 07 18.5	
PDGK	Podgornoye 2.4nm,0.7s	2.49	64	⇑Pn	Pb	10 06 46.9	-2.0
PDGK	12nm,0.6s			⇑Sn	Sb	10 07 18.5	-1.1
MNAS	Manas baz=76	2.92	276	⇑*i*P	Pn	10 06 51.5	+1.0
MNAS	baz=76			⇑*i*S	Sn	10 07 26.4	+0.8
KTMS	Ketmen 1.4nm,0.2s	3.12	66	*e*P	Pb	10 06 59.1	-0.4
KTMS	12nm,0.4s			*e*S	Sb	10 07 38.9	+1.3
KTMS	Ketmen 1.4nm,0.2s	3.12	66	Pg	Pb	10 06 58.6	-1.0
KTMS	12nm,0.4s			Lg	Lg	10 07 37.7	
DJR	Jarkent 1.3nm,0.2s	3.21	49	*e*P	Pb	10 07 00.7	-0.4
DJR	6.7nm,0.2s			*e*S	Sb	10 07 41.4	+1.2
DJR	Jarkent 1.3nm,0.2s	3.21	49	Pg	Pb	10 07 00.7	-0.4
DJR	6.7nm,0.2s			Lg	Lg	10 07 41.4	
BTLS	Baital 1.0nm,0.1s	3.27	329	*e*P	Pb	10 07 02.9	+0.8
BTLS	4.9nm,0.3s			*e*S	Sb	10 07 44.7	+2.7
BTLS	Baital 1.0nm,0.1s	3.27	329	Pg	Pb	10 07 02.9	+0.8
BTLS	4.9nm,0.3s			Lg	Lg	10 07 44.7	
KAPS	Kapalarasan 2.0nm,0.4s	3.69	34	*e*P	Pb	10 07 09.5	+0.2
KAPS	3.2nm,0.3s			*e*S	Sb	10 07 56.3	+2.2
KAPS	Kapalarasan 3.2nm,0.3s	3.69	34	Lg	Lg	10 07 56.3	

IDC 06 10:16:20.9±1.2, 6°.12S×129°.62E, h0^{km}, mb4.1/3, mb1 4.2/7, mb1mx3.8/32, mbtmp4.1/7, ML3.8/4, MS3.7/3, Ms1 3.7/3, ms1mx2.9/34, Error ellipse: s-maj=52.4km s-min=20.0km az=78.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong 1.9nm,0.3s,baz=169,slow=22,SNR=10	5.46	18	Pn	Pn	10 17 42.8	-1.0
SIJI	1.3nm,0.3s,baz=205,slow=22,SNR=1.8			Sn	Sn	10 18 39.7	-7.6
KAPI	Kappang comp=Z,133nm,18.1s,baz=66,slow=38	9.89	276	LR	LR	10 22 36.8	
FITZ	Fitzroy Crossi 0.9nm,0.3s,baz=38,slow=12,SNR=17	12.53	198	Pn	Pn	10 19 20.1	-0.5
FITZ	comp=Z,116nm,18.3s,baz=82,slow=39			LR	LR	10 24 25.1	
WRA	Warramunga Arr 0.3nm,0.3s,baz=340,slow=13,SNR=17	14.49	162	Pn	Pn	10 19 45.5	-1.9
WRA	0.2nm,0.3s,baz=337,slow=23,SNR=3.4			Sn	Sn	10 22 18.9	-10
ASAR	Alice Springs 0.7nm,0.3s,baz=347,slow=11,SNR=27	17.93	167	P	Pn	10 20 31.9	0.0
STKA	Stephens Creek 0.6nm,0.3s,baz=341,slow=10,SNR=3.1	27.97	158	P	P	10 22 13.9	+0.6
MKAR	Makanchi Array 2.2nm,0.5s,baz=122,slow=8.4,SNR=27	67.29	327	P	P	10 27 18.4	+0.9
ZALV	Zalesovo Beam 0.7nm,0.5s,baz=123,slow=7.6,SNR=4.6	70.63	334	P	P	10 27 37.0	-1.1
INK	Inuvik comp=Z,218nm,19.4s,baz=70,slow=34	98.19	22	LR	LR	11 12 21.3	

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*IDC **06** 10:39:15.7±2.1, 20°.41S×172°.51E, h0^{km}, mb3.9/7, mb1 4.1/7, mb1mx3.9/27, mbtmp3.9/7, MS3.7/15, Ms1 3.7/15, ms1mx3.5/44, Error ellipse: s-maj=87.5km s-min=25.4km az=146.0*

ISC 06 10:39:21.1±1.7, 20°.4S±0°.4×172°.6E±0°.3, h35^{km}, n25, σ1^{s}.29/11, mb3.9/7, MS3.8/13, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac comp=Z,325nm,21.4s,baz=86,slow=35	5.97	253	LR	LR	10 42 40.2	
DZM	Mont Dzumac	5.97	253	*e*Pn	Pn	10 40 48.6	+1.5
DZM	comp=Z,634nm,26.5s			*e*LR	LR	10 42 09.7	
RAO	Raoul Island comp=Z,429nm,19.3s,baz=79,slow=32	12.31	137	LR	LR	10 45 56.8	
HNR	Honiara comp=Z,211nm,18.2s,baz=133,slow=34	16.38	310	LR	LR	10 48 30.8	
URZ	Urewera comp=Z,338nm,19.1s,baz=32,slow=33	18.21	169	LR	LR	10 49 17.1	
RAR	Rarotonga comp=Z,59nm,19.7s,baz=272,slow=31	25.83	97	LR	LR	10 52 43.5	
PMG	Port Moresby comp=Z,190nm,18.1s,baz=134,slow=34	26.86	290	LR	LR	10 54 14.8	
STKA	Stephens Creek 1.0nm,0.4s,baz=43,slow=8.2,SNR=3.7	29.98	241	P	P	10 45 25.8	-0.6
STKA	comp=Z,52nm,18.6s,baz=199,slow=34			LR	LR	10 55 58.8	
TBI	Tubuai comp=Z,213nm,30.5s	35.27	102	*e*LR	LR	10 55 44.7	
PPT2	Papeete2 comp=Z,257nm,26.5s	35.83	92	*e*LR	LR	10 56 02.8	
JAY	Jayapura comp=Z,149nm,19.1s,baz=90,slow=36	35.83	296	LR	LR	11 00 37.4	
WRA	Warramunga Arr 0.6nm,1.0s,baz=98,slow=8.0,SNR=5.0	35.86	264	P	P	10 46 16.1	-1.7
WRA	comp=Z,142nm,18.1s,baz=90,slow=36			LR	LR	11 00 42.1	
ASAR	Alice Springs 0.5nm,0.8s,baz=87,slow=7.8,SNR=6.5	35.94	258	P	P	10 46 16.9	-1.6
ASAR	comp=Z,150nm,20.6s,baz=95,slow=34			LR	LR	10 59 47.3	
FITZ	Fitzroy Crossi comp=Z,103nm,19.3s,baz=102,slow=34	44.28	265	LR	LR	11 04 36.8	
BATI	Baumata comp=Z,192nm,19.8s,baz=146,slow=35	48.12	275	LR	LR	11 07 17.2	
KAPI	Kappang comp=Z,33nm,19.9s,baz=86,slow=36	53.53	279	LR	LR	11 11 09.4	
VNDA	Vanda comp=Z,84nm,19.5s,baz=352,slow=32	57.39	183	LR	LR	11 09 52.3	
PETK	Petropavlovsk- 2.9nm,0.9s,baz=174,slow=14,SNR=3.0	74.35	351	P	P	10 50 55.0	+0.2
CMAR	Chiang Mai Arr 0.6nm,0.3s,baz=139,slow=3.9,SNR=6.2	81.87	293	P	P	10 51 38.3	+1.0
NVAR	Mina Array Bea 0.5nm,0.7s,baz=232,slow=8.8,SNR=3.6	87.24	47	P	P	10 52 05.3	+1.0
SONM	Songino Array comp=Z,61nm,18.4s,baz=150,slow=35	90.07	322	LR	LR	11 32 02.3	
ILAR	Eielson Array 0.5nm,0.8s,baz=226,slow=4.8,SNR=5.7	90.44	16	P	P	10 52 17.1	-1.4
JAVC	Velka Javorina	145.23	331	*e*PKP	PKPdf	10 58 56.1	+1.1
KRUC	Moravsky	145.66	332	*e*PKP	PKPab	10 58 56.1	-0.2
GERES	GERESS Array B 1.9nm,0.7s,baz=44,slow=4.5,SNR=3.3	146.97	334	PKPbc	PKPbc	10 58 59.9	-0.2

IDC 06 10:47:15.6±999.0, 56°.76N×35°.77E, h0^{km}, Error ellipse: s-maj=1143.0km s-min=21.2km az=92.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I43RU	DUBNA INFRASON baz=273,slow=280,SNR=0.7	0.80	92	*i*		10 52 10.0	
I31KZ	AKTYUBINSK INF baz=307,slow=316,SNR=0.7	14.63	106	*i*		12 09 50.0	
I46RU	ZALESOVO INFRA baz=293,slow=327,SNR=2.6	27.55	75	*i*		13 37 00.0	

IDC 06 10:50:04.8±1.4, 12°.62N×144°.48E, h82^{km}±19^{km}, mb3.1/4, mb1 3.4/4, mb1mx3.1/35, mbtmp3.4/4, Error ellipse: s-maj=58.1km s-min=19.9km az=97.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam 250nm,0.3s,baz=302,slow=3.5,SNR=203	1.04	21	P	Pn	10 50 23.0	-1.4
GUMO	661nm,0.3s,baz=6.6,slow=24,SNR=12			S	Sn	10 50 39.6	+0.5
WRA	Warramunga Arr 0.6nm,0.6s,baz=20,slow=9.6,SNR=11	33.86	197	P	P	10 56 39.4	-0.3
ASAR	Alice Springs 0.5nm,0.6s,baz=21,slow=13,SNR=14	37.52	196	P	P	10 57 11.6	+0.5
MKAR	Makanchi Array 0.2nm,0.4s,baz=88,slow=8.8,SNR=7.2	61.93	316	P	P	11 00 16.1	0.0
ILAR	Eielson Array 0.2nm,0.7s,baz=253,slow=5.6,SNR=1.5	69.60	25	P	P	11 01 04.7	-0.3

IDC 06 10:55:04.6±2.3, 2°.88N×127°.81E, h0^{km}, mb3.3/3, mb1 3.6/3, mb1mx3.4/30, mbtmp3.4/3, Error ellipse: s-maj=155.0km s-min=27.9km az=67.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr 0.2nm,0.3s,baz=344,slow=10,SNR=15	23.57	164	P	P	11 00 17.1	+0.2
ASAR	Alice Springs 0.2nm,0.4s,baz=345,slow=7.1,SNR=6.9	27.04	168	P	P	11 00 48.1	-0.7
MKAR	Makanchi Array 0.2nm,0.4s,baz=126,slow=5.3,SNR=3.0	58.87	325	P	P	11 05 05.7	+0.5

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*IDC **06** 11:04:05.3±2.0, 7°.56S×128°.58E, h144^{km}±22^{km}, mb3.5/3, mb1 3.5/8, mb1mx3.3/42, mbtmp3.9/8, Error ellipse: s-maj=23.8km s-min=19.3km az=120.0*

ISC 06 11:04:05.1±0.9, 7°.71S±0°.07×128°.69E±0°.09, h151^{km}, n8, σ2^{s}.04/12, mb3.7/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata 23nm,0.3s,baz=173,slow=0.6,SNR=30	5.55	243	P	Pn	11 05 26.3	+0.5
BATI	17nm,0.3s,baz=337,slow=23,SNR=17			S	Sn	11 06 28.3	-0.7
SIJI	Sorong 1.4nm,0.3s,baz=45,slow=23,SNR=8.1	7.26	21	P	Pn	11 05 48.0	-0.7
FITZ	Fitzroy Crossi 0.5nm,0.3s,baz=4.4,slow=9.8,SNR=11	10.75	196	P	Pn	11 06 36.1	+1.2
FITZ	1.4nm,0.3s,baz=23,slow=11,SNR=5.3			S	Sn	11 08 31.2	-2.6
WRA	Warramunga Arr 0.4nm,0.3s,baz=343,slow=14,SNR=30	13.34	156	P	Pn	11 07 10.5	+1.8
WRA	1.6nm,0.3s,baz=328,slow=23,SNR=13			S	Sn	11 09 34.0	-2.4
ASAR	Alice Springs 0.2nm,0.3s,baz=340,slow=10,SNR=36	16.64	163	P	Pn	11 07 53.8	+4.1
ASAR	0.4nm,0.3s,baz=316,slow=19,SNR=6.1			S	S	11 10 53.4	-1.3
SONM	Songino Array 1.3nm,1.0s,baz=156,slow=7.2,SNR=5.8	58.71	343	P	P	11 13 46.7	-0.3
MKAR	Makanchi Array 0.6nm,0.5s,baz=114,slow=8.4,SNR=15	68.11	328	P	P	11 14 48.6	0.0
ZALV	Zalesovo Beam 0.7nm,0.5s,baz=142,slow=5.5,SNR=4.1	71.65	334	P	P	11 15 09.3	-0.7

IDC 06 11:08:59.0±3.9, 15°.86S×173°.23W, h0^{km}, mb3.5/3, mb1 3.8/3, mb1mx3.5/44, mbtmp3.5/3, Error ellipse: s-maj=517.0km s-min=34.3km az=157.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr 0.2nm,0.7s,baz=85,slow=7.7,SNR=1.1	49.90	257	P	P	11 17 54.5	-0.2
ASAR	Alice Springs 0.6nm,0.6s,baz=88,slow=8.3,SNR=8.6	50.12	252	P	P	11 17 56.4	-0.1
TXAR	Lajitas Array 0.4nm,0.9s,baz=223,slow=6.8,SNR=3.7	80.74	56	P	P	11 21 14.7	0.0

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*KRSC **06** 11:10:40.9±1.1, 48°.84N×156°.92E, h15^{km}±23^{km}, ML4.3*

*MOS **06** 11:10:42.6±0.9, 48°.79N×156°.23E, h41^{km}, mb4.1/5, Error ellipse: s-maj=11.9km s-min=4.3km az=78.2*

*SKHL **06** 11:10:43.8±0.3, 48°.80N×156°.20E, h49^{km}±5^{km}, mb4.7/6, mbv5.2/2, msh5.1/1*

*IDC **06** 11:10:46.8±0.7, 48°.91N×156°.10E, h57^{km}±7^{km}, mb3.3/12, mb1 3.6/17, mb1mx3.5/53, mbtmp3.7/17, Error ellipse: s-maj=21.5km s-min=13.5km az=139.0*

ISC 06 11:10:44.7±0.6, 48°.80N±0°.07×156°.13E±0°.07, h42^{km}±5^{km}, n103, σ1^{s}.16/116, mb3.7/16, 4C, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.89	360	*e*PN	Pn	11 11 14.2	-0.2
SKR				*e*S	Sn	11 11 37.9	+1.0
SKR	comp=Z,35nm,0.9s			pmax	pmax		
SKR	comp=Z,100nm,1.6s			pmax	pmax		
SKR	comp=N,477nm,0.6s			smax	smax		
SKR	comp=E,342nm,0.6s			smax	smax		
SKR	Severo-Kuril's	1.89	360	*e*P	Pn	11 11 13.5	-0.9
SKR				*e*S	Sn	11 11 37.6	+0.7
SKR	Severo-Kuril's	1.89	360	*e*P	Pn	11 11 13.2	-1.2
SKR	comp=E,170nm,0.6s			AMB	AMB	11 11 14.4	
SKR	comp=E,140nm,2.0s			AMB	AMB	11 11 16.4	
SKR				*e*S	Sn	11 11 35.0	-1.9
SKR	comp=E,760nm,0.4s			A	A	11 11 43.0	
SKR	comp=E,410nm,0.4s			A	A	11 11 43.0	
PAU	Pauzhetka	2.71	9	PN	Pn	11 11 25.1	-0.6
PAU				S	Sn	11 11 56.8	-0.4
PAU	Pauzhetka	2.71	9	*e*P	Pn	11 11 25.1	-0.6
PAU				*e*S	Sn	11 11 56.8	-0.4
PAU	Pauzhetka	2.71	9	*e*P	Pn	11 11 25.1	-0.6
PAU	comp=E,420nm,3.0s			AMB	AMB	11 11 27.3	
PAU	comp=E,180nm,0.5s			AMB	AMB	11 11 33.6	
PAU				*e*S	Sn	11 11 56.3	-0.9
PAU	comp=E,320nm,0.3s			A	A	11 11 58.1	

PAU				A	A	11 11 58.1	
	comp=E,330nm,0.3s						
KDTR	Khodutka, Kamc	3.26	22	PN	Pn	11 11 31.0	-2.3
KDTR	Khodutka, Kamc	3.26	22	eP	Pn	11 11 31.0	-2.3
MTVR	Mutnovka	3.91	19	PN	Pn	11 11 41.1	-1.3
MTVR	Mutnovka	3.91	19	eP	Pn	11 11 41.1	-1.3
RUS	Russkaya	3.94	22	PN	Pn	11 11 41.5	-1.1
RUS	Russkaya	3.94	22	eP	Pn	11 11 41.5	-1.1
RUS				eS	Sn	11 12 25.1	-2.5
RUS	Russkaya	3.94	22	eP	Pn	11 11 41.5	-1.1
GRL	Gorelyy	3.96	17	PN	Pn	11 11 42.3	-0.6
GRL	Gorelyy	3.96	17	eP	Pn	11 11 42.3	-0.6
APC	Apacha	4.18	9	PN	Pn	11 11 46.9	+1.0
APC	Apacha	4.18	9	eP	Pn	11 11 46.9	+1.0
KRMR	Karymshinskiy	4.23	17	PN	Pn	11 11 47.1	+0.5
KRMR				S	Sn	11 12 34.8	+0.1
KRMR	Karymshinskiy	4.23	17	eP	Pn	11 11 47.1	+0.5
KRMR				eS	Sn	11 12 34.8	+0.1
PEA0B	Petropavlovsk-	4.43	12	iPN	Pn	11 11 49.4	+0.1
PETK	Petropavlovsk-	4.43	12	P	Pn	11 11 49.8	+0.5
	comp=E,1.4nm,0.3s,baz=182,slow=15,SNR=10.0						
PET	Petropavlovsk	4.52	20	ePN	Pn	11 11 49.8	-0.8
PET				eS	Sn	11 12 41.6	-0.2
PET				pmax	pmax		
	comp=Z,54nm,0.6s						
PET				smax	smax		
	comp=N,138nm,0.7s						
PET				smax	smax		
	comp=E,125nm,0.8s						
PET				MLR	MLR		
	comp=Z,300nm,16.0s						
PET	Petropavlovsk	4.52	20	eP	Pn	11 11 49.7	-0.8
PET	Petropavlovsk	4.52	20	eP	Pn	11 11 50.2	-0.4
PET				AMB	AMB	11 11 55.5	
	comp=Z,83nm,0.5s						
PET				eS	Sn	11 12 40.8	-1.0
PET				A	A	11 12 56.5	
	comp=Z,130nm,0.8s						
PET				A	A	11 12 56.5	
	comp=Z,120nm,0.8s						
DALK	Dalny	4.55	20	PN	Pn	11 11 49.6	-1.4
DALK	Dalny	4.55	20	eP	Pn	11 11 49.6	-1.4
UGLR	Uglovaya	4.73	20	PN	Pn	11 11 53.3	-0.3
UGLR	Uglovaya	4.73	20	eP	Pn	11 11 53.3	-0.3
AVH	Avacha	4.76	19	PN	Pn	11 11 54.1	+0.1
AVH	Avacha	4.76	19	eP	Pn	11 11 54.1	+0.1
AVH	Avacha	4.76	19	eP	Pn	11 11 54.1	+0.1
KOK	Koryaka	4.77	18	PN	Pn	11 11 54.1	0.0
KOK	Koryaka	4.77	18	eP	Pn	11 11 54.1	0.0
KOK	Koryaka	4.77	18	eP	Pn	11 11 54.1	0.0
SMAR	Somma	4.78	20	PN	Pn	11 11 53.4	-0.9
SMAR	Somma	4.78	20	eP	Pn	11 11 53.4	-0.9
KRER	Koryakskii	4.80	19	PN	Pn	11 11 54.6	0.0
KRER	Koryakskii	4.80	19	eP	Pn	11 11 54.6	0.0
KRX	Arik	4.83	18	PN	Pn	11 11 54.9	-0.1
KRX	Arik	4.83	18	eP	Pn	11 11 54.9	-0.1
SPN	Mys Shipunski	4.96	28	PN	Pn	11 11 55.5	-1.1
SPN	Mys Shipunski	4.96	28	eP	Pn	11 11 55.5	-1.1
SPN	Mys Shipunski	4.96	28	eP	Pn	11 11 55.5	-1.1
GNL	Ganaly	5.03	12	PN	Pn	11 11 57.9	+0.2
GNL	Ganaly	5.03	12	eP	Pn	11 11 57.9	+0.2
KUR	Kuril'sk	6.68	241	ePN	Pn	11 12 21.7	+1.5
KUR				pmax	pmax		
	comp=Z,53nm,0.6s						
KUR				pmax	pmax		
	comp=N,18nm,0.4s						
KUR				pmax	pmax		
	comp=E,13nm,0.6s						
KUR				pmax	pmax		
	comp=Z,130nm,1.1s						
KUR	Kuril'sk	6.68	241	eP	Pn	11 12 21.7	+1.5
KUR				AMB	AMB	11 12 23.3	
	comp=Z,360nm,4.0s						
KUR				AMB	AMB	11 12 29.0	
	comp=Z,53nm,0.6s						
KUR				eS	Sn	11 13 33.2	-1.8
KUR				A	A	11 13 34.7	
	comp=Z,50nm,0.7s						
KUR				A	A	11 13 34.7	
	comp=Z,30nm,0.7s						
KUR				A	A	11 13 38.0	
	comp=Z,710nm,4.0s						
KUR				A	A	11 13 38.0	
	comp=Z,980nm,4.0s						
KZV	Kizimen	6.83	21	PN	Pn	11 12 22.5	+0.2
KZV	Kizimen	6.83	21	eP	Pn	11 12 22.5	+0.2
TUMD	Tumrok D	6.93	21	eP	Pn	11 12 23.6	-0.1
TUMR	Tumrok	6.95	19	PN	Pn	11 12 23.6	-0.4
TUMR	Tumrok	6.95	19	eP	Pn	11 12 24.0	0.0
YUK	Yuzh-Kuril'sk	8.54	240	eP	Pn	11 12 46.0	+0.2
YUK				AMB	AMB	11 12 48.4	
	comp=Z,95nm,0.5s						
GRPR	Tuman	8.62	240	PN	Pn	11 12 45.9	-0.9
GRPR	Tuman	8.62	240	eP	Pn	11 12 46.9	+0.1
GRPR				eS	Sn	11 14 20.0	-2.7
TYV	Tymovskoe	8.95	288	eP	Pn	11 12 50.6	-0.7
NMR	Nemuro--Hokkai	9.04	237	ePN	Pn	11 12 49.3	-3.2
NMR	Nemuro--Hokkai	9.04	237	eP	Pn	11 12 49.0	-3.5
YSS	Yuzh-Sakhalins	9.18	263	iPN	Pn	11 12 56.8	+2.4
YSS	Yuzh-Sakhalins	9.18	263	eP	Pn	11 12 55.5	+1.1
OKH	Okha	9.55	305	eP	Pn	11 13 00.7	+1.2
JKA	Kamikawa-asahi	10.44	248	eP	Pn	11 13 13.4	+1.7
ASAJ	Asahikawa	10.44	248	P	Pn	11 13 13.4	+1.7
	comp=Z,0.8nm,0.3s,baz=89,slow=20,SNR=10						
MA2	Magadan	11.24	346	P	Pn	11 13 24.1	+1.5
	comp=Z,0.4nm,0.3s,baz=146,slow=11,SNR=4.6						
EKMR	Ekimchan	15.20	295	eP	Pn	11 14 14.5	-1.8
EKMR				AMB	AMB	11 14 23.1	
	comp=Z,5.0nm,0.6s						
KLR	Kul'dur	15.99	281	P	P	11 14 28.7	-0.7
	comp=Z,0.3nm,0.3s,baz=79,slow=12,SNR=8.5						
KLR	Kul'dur	15.99	281	iP	P	11 14 28.4	-1.0
KLR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KLR	Kul'dur	15.99	281	eP	Pn	11 14 24.0	-2.5
BMKR	Bomnak	17.83	300	eP	Pn	11 14 47.6	-1.8
MJAR	Matsushiro Arr	17.94	234	P	P	11 14 51.9	+0.8
	comp=Z,0.0nm,0.3s,baz=28,slow=11,SNR=2.9						
MJAR	Matsushiro Arr	17.94	234	eP	P	11 14 51.9	+0.8
KROS	Kirovskiy	18.88	298	eP	Pn	11 15 03.2	+1.0
YAK	Yakutsk	19.83	322	iP	Pn	11 15 14.0	+0.6
YAK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
YAK	Yakutsk	19.83	322	eP	Pn	11 15 14.0	+0.6
KSRS	Korea Array	23.37	252	P	P	11 15 49.9	+0.5
	comp=Z,1.0nm,0.4s,baz=45,slow=11,SNR=5.9						
KSRS	Korea Array	23.37	252	eP	P	11 15 49.9	+0.5
TIK	Tiksi	26.13	341	eP	P	11 16 16.8	+2.5
TIXI	Tiksi	26.14	341	iP	P	11 16 16.8	+2.4
H11S1	WAKE ISLAND Hy	31.41	160	T	T	11 50 38.3	
	baz=345,slow=76,SNR=11						
H11S3	WAKE ISLAND Hy	31.42	161	T	T	11 50 52.0	
	baz=345,slow=76,SNR=14						
H11S2	WAKE ISLAND Hy	31.42	160	T	T	11 50 41.3	
	baz=345,slow=76,SNR=13						
ILAR	Eielson Array	33.67	40	P	P	11 17 20.7	-0.5
	comp=Z,0.1nm,0.6s,baz=248,slow=6.5,SNR=1.3						
ZALV	Zalesovo Beam	43.09	305	P	P	11 18 39.1	-1.2
	comp=Z,0.7nm,0.5s,baz=64,slow=9.8,SNR=1.5						
DGZ	Jazzator, Alta	43.41	298	iP	P	11 18 42.3	-0.8
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.9s						
MK31	Makanchi Array	47.82	297	ceP	P	11 19 18.4	+0.5
MKAR	Makanchi Array	47.82	297	P	P	11 19 17.5	-0.4
	comp=Z,0.5nm,0.6s,baz=63,slow=6.6,SNR=6.9						
MKAR	Makanchi Array	47.82	297	eP	P	11 19 17.5	-0.4
KURK	Kurchatov	47.93	303	ceP	P	11 19 17.7	-1.0
KURK				pmax	pmax		
	comp=Z,3.0nm,1.7s						
KURK	Kurchatov	47.93	303	eP	P	11 19 17.7	-1.0
YKA	Yellowknife Ar	48.06	39	P	P	11 19 20.1	+0.7
	comp=Z,0.8nm,1.0s,baz=297,slow=7.1,SNR=5.9						
YKA				pP	sP	11 19 34.4	+0.1
	comp=Z,0.6nm,0.8s,baz=298,slow=7.0,SNR=5.1						
BRVK	Borovoye	51.17	309	ceP	P	11 19 42.9	-0.4
BRVK				pmax	pmax		
	comp=Z,7.0nm,2.5s						
BRVK	Borovoye	51.17	309	eP	P	11 19 42.9	-0.4
CMAR	Chiang Mai Arr	54.82	257	P	P	11 20 12.4	+1.9
	comp=Z,0.9nm,0.7s,baz=34,slow=7.4,SNR=5.9						
PDAR	Pinedale Array	61.90	56	P	P	11 21 00.8	+0.7
	comp=Z,0.1nm,0.5s,baz=318,slow=1.2,SNR=1.9						
PDAR				pP	sP	11 21 15.3	+0.6
	comp=Z,0.8nm,1.0s,baz=341,slow=1.9,SNR=3.3						
FINES	FINESS Array B	63.03	336	P	P	11 21 06.0	-0.9
	comp=Z,7.2nm,1.2s,baz=44,slow=5.8,SNR=6.2						
FINES	FINESS Array B	63.03	336	iP	P	11 21 07.5	+0.6
FINES				pmax	pmax		
	comp=Z,7.0nm,1.2s						
KIV	Kislovodsk	70.80	315	eP	P	11 21 55.3	-1.4
KIV				pmax	pmax		
	comp=Z,16nm,1.0s						
KIV	Kislovodsk	70.80	315	eP	P	11 21 55.3	-1.4
AKASG	Malin Array Be	70.94	327	P	P	11 21 56.8	-0.5
	comp=Z,0.3nm,0.3s,baz=34,slow=6.6,SNR=2.0						
WRA	Warramunga Arr	71.14	202	P	P	11 21 59.4	+0.5
	comp=Z,0.7nm,0.7s,baz=22,slow=6.8,SNR=4.9						
TXAR	Lajitas Array	74.73	63	P	P	11 22 20.4	+0.1
	comp=Z,0.1nm,0.4s,baz=296,slow=5.3,SNR=3.9						
TXAR				pP	sP	11 22 35.0	-0.3
	comp=Z,0.5nm,0.7s,baz=301,slow=4.9,SNR=4.5						
ASAR	Alice Springs	74.83	201	P	P	11 22 21.1	+0.5
	comp=Z,0.3nm,0.7s,baz=14,slow=5.3,SNR=2.1						
ASAR				pP	pwP	11 22 38.6	+1.5
	comp=Z,0.4nm,0.6s,baz=11,slow=5.2,SNR=3.2						
BFO	Black Forest	79.32	339	ceP	P	11 22 49.0	+3.3

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*SSNC **06** 11:21:54.4±1.0, 19°.83N×73°.38W, h7^{km}±8^{km}, MD3.2, ML2.6, MW3.2*
*OSPL **06** 11:21:56.5±0.5, 20°.01N×73°.44W, h75^{km}±24^{km}, ML3.0*
ISC 06 11:21:54.5±1.6, **20°.02N**±0°.07×**73°.41W**±0°.04, **h26**^{km}±16^{km}, **n8**, σ**0^{s}.95**/14, **Haiti region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MASC	Masc	0.79	282	ePg	Pb	11 22 09.1	-0.5
MASC				eSg	Sb	11 22 20.2	+0.4
MASC				IAML		11 22 23.7	
	comp=N,406nm,0.2s						
MASC				IAML		11 22 23.8	
	comp=E,329nm,0.2s						
MOAC	Moa	1.59	294	eP	Pn	11 22 21.4	+0.4
MOAC				eS	Sn	11 22 42.0	+1.4
MOAC				IAML		11 22 42.2	
	comp=N,46nm,0.2s						
MOAC				IAML		11 22 42.4	
	comp=E,75nm,0.2s						
LGNH	Logne	1.68	153	iP	Pn	11 22 22.8	+0.6
LGNH				eS	Sn	11 22 42.8	0.0
LGNH				IAML		11 22 43.9	
	comp=Z,14nm,0.8s						
RCC	Rio Carpintero	2.15	270	eP	Pn	11 22 28.3	-0.3
RCC				eS	Sn	11 22 53.3	-1.1
RCC				IAML		11 22 56.6	
	comp=N,18nm,0.1s						
RCC				IAML		11 22 56.7	
	comp=E,13nm,0.1s						
SDDR	Presa de Saban	2.25	117	iP	Pn	11 22 30.9	+0.8
SDDR				eS	Sn	11 22 56.1	-1.0
SDDR				IAML		11 22 57.8	
	comp=Z,90nm,0.4s						
GRTK	Grand Turk	2.60	55	iP	Pn	11 22 35.6	+0.8
GRTK				eS	Sn	11 23 04.3	-1.3
GRTK				IAML		11 23 28.9	
	comp=Z,71nm,1.6s						
LMGC	Las Mercedes	3.38	271	eP	Pn	11 22 46.3	+0.8
LMGC				eS	Sn	11 23 24.1	-0.7
CCCC	Cccc	4.25	287	eP	Pn	11 22 52.2	-5.2
CCCC				eS	Sn	11 23 36.1	-10
CCCC				IAML		11 23 38.2	
	comp=N,6.0nm,0.4s						
CCCC				IAML		11 23 39.1	
	comp=E,8.3nm,0.3s						

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*SOME **06** 11:28:16.3, 43°.75N×69°.55E*
*NNC **06** 11:28:20.0±1.4, 43°.73N×69°.77E, h0^{km}, mb3.6, mpv3.1, Error ellipse: s-maj=9.5km s-min=8.0km az=40.0, Suspected Mining explosion.*
*KRNET **06** 11:28:20.2±0.1, 43°.89N×69°.19E, mb3.2*
ISC 06 11:28:20.9±2.2, **43°.62N**±0°.09×**69°.56E**±0°.08, **h0**^{km}, **n24**, σ**1^{s}.56**/35, **26C-2D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	Karatay Array	0.86	126	⇓P	Pg	11 28 35.7	-1.8
	3.0nm,0.4s,baz=324,slow=17,SNR=137						
KK31				⇑S	Sg	11 28 47.7	-0.9
	23nm,0.5s						
IUG	Iuzhnay	1.51	167	P	Pb	11 28 49.7	-0.2
	20nm,0.4s						
IUG				S	Sn	11 29 11.5	+1.7
	65nm,0.4s						
TAS	Tashkent	2.30	185	⇑iP	Pn	11 29 00.4	+0.3
	baz=78						
TAS				⇑iS	Sn	11 29 29.6	+0.4
	baz=78						
TRKS	Terek-Say	2.39	150	⇑iP	Pb	11 29 04.5	-0.4
	baz=48						
TRKS				⇑iS	Sg	11 29 36.7	-1.0
	baz=48						
MNAS	Manas	2.44	117	⇑iP	Pn	11 29 03.5	+1.4
	baz=19						
MNAS				⇑iS	Sb	11 29 35.4	-0.9
	baz=19						
MRKS	Merke	2.82	107	Pg	Pb	11 29 10.0	-2.1
	4.5nm,0.3s						
EKS2	Erkin-Say	3.23	106	⇑iP	Pn	11 29 14.5	+1.5
	baz=9.0						
EKS2				⇑iS	Sn	11 29 54.2	+2.0
	baz=9.0						
EKS2	Erkin-Say	3.23	106	P	Pb	11 29 18.0	-1.2
	SNR=10						
AML	Almayashu	3.38	115	⇑iP	Pn	11 29 16.9	+1.6
	baz=16						
AML				⇑iS	Sn	11 29 58.4	+2.1
	baz=16						
AML	Almayashu	3.38	115	P	Pb	11 29 20.7	-1.3
	SNR=6.1						
ARSB	Arslanbob	3.42	131	⇑iP	Pn	11 29 17.5	+2.0
	baz=31						
ARSB				⇑iS	Sn	11 29 59.9	+3.1
	baz=31						
USP	Ospenovka	3.61	94	P	Pb	11 29 24.1	-1.5
	SNR=15						
AAK	Ala-Archa	3.74	104	P	Pb	11 29 26.4	-1.5
	SNR=13						
AAK	Ala-Archa	3.74	104	⇑Pn	Pb	11 29 26.2	-1.7
	3.5nm,0.4s						
AAK				⇑Lg	Lg	11 30 18.1	
	6.7nm,0.5s						
CHMS	Chumysh	3.84	98	⇑eP	Pn	11 29 22.5	+1.3
	baz=0.0						
CHMS				⇑iS	Sn	11 30 08.4	+1.3
	baz=0.0						
UCH	Uchtor	3.89	109	⇑iP	Pn	11 29 24.0	+1.6
	baz=11						
UCH				⇑iS	Sn	11 30 10.5	+1.5
	baz=11						
UCH	Uchtor	3.89	109	P	Pb	11 29 29.2	-1.5
	SNR=6.8						
ARLS	Aral	3.92	115	⇑iP	Pn	11 29 24.2	+1.7
	baz=17						
ARLS				⇑iS	Sn	11 30 11.3	+2.0
	baz=17						
KBK	Karagaybulak	4.06	102	⇑iP	Pn	11 29 26.0	+1.6
	baz=4.0						
KBK				⇑iS	Sn	11 30 14.0	+1.3
	baz=4.0						
KRBS	Karabastau	4.44	87	Lg	Lg	11 30 37.8	
	5.5nm,0.5s						
TKM2	Tokmak 2	4.46	97	⇑iP	Pn	11 29 31.5	+1.5
	baz=0.0						
TKM2				⇑iS	Sn	11 30 23.5	+0.8
	baz=0.0						
TKM2	Tokmak 2	4.46	97	⇑Pn	Pb	11 29 39.5	-0.7
	3.4nm,0.8s						
TKM2				⇓Lg	Lg	11 30 38.7	
	4.0nm,0.5s						
DGS	Degeres	4.54	93	Pg	Pb	11 29 41.0	-0.4
	2.0nm,0.4s						
KUU	Kurty	4.92	84	Lg	Lg	11 30 51.1	
	6.7nm,0.3s						

IDC 06 11:37:45.8±6.2, **2°.98S**×**126°.68E**, **h93**^{km}±70^{km}, **mb3.6**/2, **mb1 3.8**/5, **mb1mx3.3**/48, **mbtmp4.0**/5, **ML4.1**/3, **MS2.6**/1, **Ms1 2.6**/1, **ms1mx2.2**/41, **Error ellipse: s-maj=53.8km s-min=19.8km az=94.0, Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	5.04	65	P	Pn	11 38 57.7	-1.3
	5.5nm,0.3s,baz=241,slow=23,SNR=20						
SIJI				S	Sn	11 39 57.3	+1.2
	3.1nm,0.3s,baz=1.8,slow=21,SNR=8.1						
SIJI				LR	LR	11 41 53.5	
	comp=Z,59nm,19.5s,baz=2.0,slow=49						
FITZ	Fitzroy Crossi	15.06	184	P	P	11 41 15.5	-1.2
	0.5nm,0.3s,baz=11,slow=9.2,SNR=22						
WRA	Warramunga Arr	18.44	157	P	P	11 41 54.0	-0.2
	0.7nm,0.3s,baz=332,slow=13,SNR=63						
ASAR	Alice Springs	21.72	162	P	P	11 42 29.4	-0.2
	4.0nm,0.6s,baz=343,slow=11,SNR=57						
MKAR	Makanchi Array	63.08	327	P	P	11 48 03.5	0.0
	0.7nm,0.7s,baz=121,slow=7.3,SNR=7.7						

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*IDC **06** 11:42:37.8±1.8, 11°.17S×164°.48E, h0^{km}, mb3.6/4, mb1 3.9/6, mb1mx3.6/46, mbtmp3.8/6, ML4.3/2, MS3.3/3, Ms1 3.3/3, ms1mx2.8/34, Error ellipse: s-maj=38.3km s-min=33.5km az=135.0*
*NEIC **06** 11:42:42.7±0.3, 11°.1S±0°.2×164°.5E±0°.2, h39^{km}±26^{km}, mb4.3/4, Error ellipse: s-maj=41.2km s-min=6.2km az=214.0*
ISC 06 11:42:42.4±1.3, **11°.2S**±0°.2×**164°.4E**±0°.2, **h29**^{km}, **n16**, σ**0^{s}.67**/14, **mb3.8**/7, **Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	4.74	292	Pn	Pn	11 43 52.5	+0.5
	38nm,0.3s,baz=145,slow=6.9,SNR=10						
HNR				LR	LR	11 45 50.5	
	comp=Z,135nm,20.3s,baz=74,slow=40						
HNR	Honiara	4.74	292		Pn	11 43 52.0	+0.1
SANVU	Saraoutou	5.00	147	Pn	Pn	11 43 55.9	+0.4
DZM	Mont Dzumac	10.96	170	Pn	Pn	11 45 17.3	-0.1
	0.9nm,0.3s,baz=300,slow=22,SNR=8.6						
DZM	Mont Dzumac	10.96	170	Pn	Pn	11 45 17.1	-0.3
PMG	Port Moresby	17.07	274	LR	LR	11 52 55.6	
	comp=Z,81nm,18.6s,baz=72,slow=36						
WR0	Warramunga Arr	30.02	249	P	P	11 48 48.0	-0.9
WR0				IAmb	IAmb	11 49 06.2	
	comp=Z,7.1nm,1.5s						
WB0	Warramunga Arr	30.11	250	P	P	11 48 49.7	-0.1
WB0				IAmb	IAmb	11 48 59.8	
	comp=Z,11nm,1.5s						
WB2	Warramunga Arr	30.19	250	P	P	11 48 50.3	-0.1
WB2				IAmb	IAmb	11 49 03.6	
	comp=Z,9.7nm,1.4s						
WRA	Warramunga Arr	30.20	250	P	P	11 48 50.5	-0.1
	comp=Z,0.8nm,0.9s,baz=80,slow=9.1,SNR=4.3						
WRA	Warramunga Arr	30.20	250	P	P	11 48 52.1	+1.6
ASAR	Alice Springs	31.55	243	P	P	11 49 03.2	+0.8
	comp=Z,0.3nm,0.7s,baz=67,slow=10,SNR=2.5						
RPZ	Rata Peaks	32.88	171	LR	LR	12 02 39.5	
	comp=Z,179nm,18.1s,baz=26,slow=36						
FITZ	Fitzroy Crossi	38.07	255	P	P	11 49 58.3	-0.5
	comp=Z,1.1nm,0.7s,baz=101,slow=15,SNR=2.0						
FITZ	Fitzroy Crossi	38.07	255	P	P	11 49 58.6	-0.1
ILAR	Eielson Array	84.10	19	P	P	11 55 09.8	-0.3
	comp=Z,0.4nm,0.9s,baz=236,slow=5.9,SNR=4.3						

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*IDC **06** 12:04:07.6±0.6, 57°.19N×157°.23W, h0^{km}, mb4.1/21, mb1 4.3/24, mb1mx4.1/55, mbtmp4.1/24, ML4.1/3, MS3.6/24, Ms1 3.6/24, ms1mx3.5/44, Error ellipse: s-maj=23.7km s-min=10.5km az=12.0*
*NEIC **06** 12:04:08.6±1.4, 57°.04N±0°.03×157°.06W±0°.06, h5^{km}±3^{km}, Error ellipse: s-maj=5.5km s-min=3.7km az=132.0*
*AEIC **06** 12:04:08±1.4, 57°.04N±0°.03×157°.07W±0°.07, h5^{km}±3^{km}, ML4.4, mb4.6/41(NEIC), ML4.3/2(NEIC), Error ellipse: s-maj=5.7km s-min=4.1km az=119.0*
*ANF **06** 12:04:09.8±1.6, 57°.05N×157°.06W, h9^{km}±12^{km}, ML5.2/2, Error ellipse: s-maj=16.2km s-min=7.4km az=89.0*
ISC 06 12:04:08.5±1.3, **57°.04N**±0°.04×**157°.04W**±0°.04, **h5**^{km}±8^{km}, **n244**, σ**1^{s}.14**/249, **mb4.4**/42, **MS3.7**/22, **Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLBL	Peulik Blue Cr	0.67	10		Pg	12 04 21.5	+0.1
PLK3	Peulik 3	0.78	32		Pg	12 04 23.1	-0.3
PLK1	Peulik 1	0.80	17		Pg	12 04 23.6	-0.2
PLK2	Peulik 2	0.82	28		Pg	12 04 24.0	-0.3
PLK5	Peulik 5	0.97	5		Pg	12 04 27.1	+0.2
CHGN	Chignik	1.06	226		Pg	12 04 27.9	-0.9
CHGN				Sg	Sg	12 04 41.7	-0.7
CHGN				IAML		12 04 43.3	
	comp=E,8μm,0.5s						
CHGN				IAML		12 04 44.5	
	comp=N,9μm,0.4s						
KJL	Kejulik	1.29	37		Pg	12 04 32.2	-1.0
CAHL	Cahill	1.38	42		Pn	12 04 33.5	-0.9
VNHG	Veniaminof 1	1.43	236		Pn	12 04 33.9	-1.3
CHIR	Chirikof Islan	1.45	147	Pn	Pn	12 04 35.1	-0.2
CHIR				Sn	Sn	12 04 55.0	+0.2
KABU	Katmai Buttres	1.56	37		Pn	12 04 36.4	-0.4
KABU					Sn	12 04 57.5	0.0
VNSS	Veniaminof 8	1.56	240		Pn	12 04 36.8	-0.2
KABR	Katmai Barrier	1.56	45		Pn	12 04 36.6	-0.4
KVTA	Katmai Vly 10	1.64	34		Pn	12 04 37.9	-0.1
SII	Sitkinak Islan	1.64	106	Pn	Pn	12 04 38.1	+0.1
SII					Sn	12 04 58.6	-1.0
KAHC	Katmai Hardscr	1.95	33		Pn	12 04 42.0	-0.2
OHAK	Old Harbor	2.06	83	Pn	Pn	12 04 43.7	+0.1
OHAK				Sn	Sn	12 05 09.7	+0.1
KDAK	Kodiak Island	2.52	71	Pn	Pn	12 04 50.9	+0.8
	comp=N,133nm,0.3s,baz=219,slow=4.0,SNR=2714						
KDAK				Sn	Sn	12 05 23.2	+2.0
	comp=N,144nm,0.3s,baz=48,slow=21,SNR=11						
KDAK				LR	LR	12 05 58.4	
	comp=N,2μm,21.4s,baz=269,slow=43						
SDPT	Sand Point	2.56	230	Pn	Pn	12 04 50.6	+0.1
AUCH	Augustine Cone	3.01	38		Pn	12 04 57.5	+0.7
HAG	Hague Volcano	3.22	240		Pn	12 05 01.0	+1.3
OPT	Oil Point	3.30	36		Pn	12 05 01.2	+0.4
DT1	Dutton Round H	3.52	239		Pn	12 05 04.3	+0.6
ILS	Iliamna Low So	3.59	34		Pn	12 05 05.2	+0.3
IVE	Iliamna Volcan	3.66	34		Pn	12 05 06.2	+0.4
HOM	Homer	3.87	45	P	Pn	12 05 09.6	+1.0
	baz=230,SNR=9.6						
HOM				S	Sn	12 05 56.2	+1.8
	baz=230						
HOM	Homer	3.87	45		Pn	12 05 09.8	+1.2
CNPM	China Poot	3.95	48	Pn	Pn	12 05 11.1	+1.4
RED	Redoubt Volcan	4.05	31		Pn	12 05 12.0	+0.8
RSO	Redoubt South	4.10	31		Pn	12 05 12.8	+0.9
NCT	North Crescent	4.13	29		Pn	12 05 13.0	+0.8
SVW2	Sparrevohn	4.14	10		Pn	12 05 13.1	+0.8
FALS	False Pass	4.20	241		Pn	12 05 13.6	+0.5
DFR	Drift River	4.22	31		Pn	12 05 14.2	+0.7
BRLK	Bradley Lake	4.24	47	Pn	Pn	12 05 14.9	+1.2
BRSE	Bradley Lake S	4.28	48		Pn	12 05 14.8	+0.6
SSBA	Shishaldin	4.59	243		Pn	12 05 19.6	+1.2
CAPN	Captain Cook N	4.83	37	P	Pn	12 05 22.6	+0.9
	baz=222,SNR=9.0						
SPBG	Spurr Blockage	4.87	28		Pn	12 05 23.0	+0.6
SPCN	Chakachatna No	4.89	29		Pn	12 05 23.7	+1.2
SPCP	Crater Peak Br	4.93	29		Pn	12 05 24.8	+1.5
SLKM	Skilak Lake	4.97	43		Pn	12 05 25.2	+1.6
SPCG	Spurr Capps Gl	4.99	29		Pn	12 05 25.3	+1.3
SEW	Seward	5.02	49	Pn	Pn	12 05 24.3	0.0
O22K	Cooper Landing	5.14	45		Pn	12 05 28.2	+2.2
STLK	Strandline Lak	5.21	29		Pn	12 05 28.7	+1.6
SUA	Susitna One	5.49	33	Pn	Pn	12 05 32.2	+1.3
RC01	Rabbit Creek A	5.54	40	P	Pn	12 05 32.3	+0.8
	baz=226,SNR=26						
RC01				S	Sn	12 06 36.1	+0.7
	baz=226						
RC01	Rabbit Creek A	5.54	40		Pn	12 05 32.7	+1.2
SKT	Skwentna	5.69	27	Pn	Pn	12 05 35.1	+1.5
AKUT	Akutan	5.74	243	Pn	Pn	12 05 37.1	+2.8
TT01	Tatalina	5.91	5		Pn	12 05 36.7	+0.1
PWL	Port Wells	5.91	46		Pn	12 05 36.7	0.0
TTA	Tatalina	5.93	5		Pn	12 05 37.2	+0.2
PMR	Palmer	6.10	38	Pn	Pn	12 05 40.6	+1.4
KNK	Knik Glacier	6.21	42		Pn	12 05 41.1	+0.3
UNV	Unalaska Valle	6.26	243	Pn	Pn	12 05 42.9	+1.5
GHO	Glory Hole Cre	6.30	38	Pn	Pn	12 05 45.5	+3.5
MSW	Makushin Switc	6.36	245		Pn	12 05 44.9	+2.1

PPLA	Purkeypile	6.36	20		Pn	12 05 44.5	+1.7
GLI	Glacier Island	6.42	49	Pn	Pn	12 05 43.7	+0.1
HIN	Hinchinbrook I	6.44	54	Pn	Pn	12 05 43.1	-0.8
SML	Sawmill	6.53	39		Pn	12 05 46.5	+1.4
FID	Port Fidalgo	6.62	51		Pn	12 05 45.9	-0.4
EYAK	Cordova Ski Ar	6.84	54	Pn	Pn	12 05 49.6	+0.3
SCM	Sheep Creek Mo	6.90	42		Pn	12 05 50.6	+0.4
WAT1	Susitna Watana	7.20	33		Pn	12 05 54.4	+0.1
KTH	Kantishna Hill	7.21	22		Pn	12 05 56.1	+1.7
KAIM	Kayak Island	7.22	61	Pn	Pn	12 05 54.7	+0.1
KLU	Klutina	7.24	47		Pn	12 05 54.7	-0.1
TRF	Thorofare Moun	7.25	25		Pn	12 05 57.4	+2.2
WAT6	Susitna Watana	7.27	36		Pn	12 05 55.3	0.0
WAT2	Susitna Watana	7.29	32		Pn	12 05 56.0	+0.3
HMT	Hamilton	7.43	58	Pn	Pn	12 05 57.8	+0.3
M24K	Tolsona, Glenn	7.50	43	P	Pn	12 05 59.1	+0.7
	baz=232						
M24K				S	Sn	12 07 24.3	+0.6
	baz=232						
M24K	Tolsona, Glenn	7.50	43		Pn	12 05 59.4	+1.0
NICHA	Nichawak Mount	7.54	59		Pn	12 05 58.7	-0.2
RND	Reindeer	7.57	29		Pn	12 05 59.5	0.0
SUCK	Suckling Hills	7.57	61	Pn	Pn	12 05 59.8	+0.4
BPAW	Bear Paw Mtn.	7.68	20	Pn	Pn	12 06 01.5	+0.6
MCK	McKinley	7.82	27	P	Pn	12 06 03.0	+0.3
	baz=215,SNR=9.7						
MCK				S	Sn	12 07 33.3	+1.8
	baz=215						
N25K	Chitina, Valde	7.83	49	P	Pn	12 06 03.3	+0.3
	baz=240						
N25K				S	Sn	12 07 30.7	-1.3
	baz=240						
N25K	Chitina, Valde	7.83	49		Pn	12 06 03.4	+0.3
BWN	Browne	8.06	24		Pn	12 06 07.2	+1.2
GLB	Gilahina Butte	8.09	51		Pn	12 06 06.7	+0.2
CRQM	Cirque	8.10	57		Pn	12 06 06.9	0.0
VRDI	Verde Repeater	8.15	53	Pn	Pn	12 06 07.4	0.0
TGL	Tana Glacier	8.24	57	Pn	Pn	12 06 09.1	+0.4
PAX	Paxson	8.30	39		Pn	12 06 09.2	-0.2
MCARA	McCarthy VSAT	8.40	53		Pn	12 06 10.5	-0.2
MESA	MESA	8.48	62	Pn	Pn	12 06 12.6	+0.6
NEA2	Nenana	8.51	24	P	Pn	12 06 12.4	+0.1
	baz=211,SNR=15						
NEA2	Nenana	8.51	24		Pn	12 06 12.8	+0.6
KIAG	Kiagna River	8.52	57		Pn	12 06 12.6	+0.1
BALM	Baldy	8.57	56		Pn	12 06 13.5	+0.4
PTPK	Patty Peak	8.57	55		Pn	12 06 13.3	+0.1
ANM	Nome	8.57	335		Pn	12 06 13.7	+0.7
MLY	Manley	8.58	18	P	Pn	12 06 13.2	+0.1
	baz=204,SNR=29						
MLY	Manley	8.58	18		Pn	12 06 13.5	+0.3
YAH	Yahtse	8.63	61		Pn	12 06 14.4	+0.3
WRH	Wood River Hil	8.64	27		Pn	12 06 13.4	-0.6
GRNC	Granite Creek	8.73	59		Pn	12 06 15.8	+0.3
RKAV	Rock Avalanche	8.80	62		Pn	12 06 16.6	+0.2
CCB	Clear Creek Bu	8.85	27		Pn	12 06 16.6	-0.3
HDA	Harding Lake	8.88	30	P	Pn	12 06 17.8	+0.4
	baz=218,SNR=12						
HDA				S	Sn	12 07 56.9	-0.8
	baz=218						
HDA				S	Sn	12 07 56.9	-0.8
	baz=218						
HDA	Harding Lake	8.88	30		Pn	12 06 17.6	+0.3
BARN	Barnard Glacie	8.89	57		Pn	12 06 18.0	+0.4
MENT	Mentasta	8.91	43		Pn	12 06 18.1	+0.4
I23K	Minto, Yukon-K	8.94	21	P	Pn	12 06 18.6	+0.5
	baz=208,SNR=42						
I23K	Minto, Yukon-K	8.94	21		Pn	12 06 17.8	-0.2
TABL	Table Mountain	8.94	61		Pn	12 06 19.0	+0.7
CTGM	Chitina Glacie	9.00	58		Pn	12 06 19.4	+0.2
MDM	Murphy Dome	9.02	25		Pn	12 06 18.9	-0.2
RIDG	Independent Ri	9.02	37		Pn	12 06 20.3	+1.0
TCOL	CIGO, UAF Yank	9.03	26	P	Pn	12 06 20.2	+0.9
	baz=214,SNR=9.7						
TCOL				S	Sn	12 08 02.5	+1.3
	baz=214						
TCOL	CIGO, UAF Yank	9.03	26		Pn	12 06 19.7	+0.4
COLA	College	9.03	26		Pn	12 06 19.4	+0.1
IM03		9.11	9		Pn	12 06 20.0	-0.4
IMAR	Indian Mountai	9.11	9		Pn	12 06 20.2	-0.2
LOGN	Logan Glacier	9.11	59		Pn	12 06 20.4	-0.2
IL31		9.19	28		Pn	12 06 20.9	-0.5
ILAR	Eielson Array	9.19	28	Pn	Pn	12 06 20.9	-0.6
	comp=N,1.5nm,0.3s,baz=218,slow=14,SNR=60						
ILAR				Sn	Sn	12 08 01.6	-3.5
	baz=209,slow=16,SNR=2.9						
ILAR				LR	LR	12 10 15.7	
	comp=N,137nm,20.7s,baz=229,slow=40						
ILAR	Eielson Array	9.19	28	Pn	Pn	12 06 21.9	+0.4
DOT	Dot Lake	9.22	39	Pn	Pn	12 06 24.1	+2.1
PCA	Pinnacle	9.29	64	Pn	Pn	12 06 22.6	-0.3
POKR	Poker Plat Res	9.33	26	P	Pn	12 06 23.5	0.0
	baz=214,SNR=12						
POKR	Poker Plat Res	9.33	26		Pn	12 06 24.3	+0.8
SCRK	Sand Creek	9.46	37	P	Pn	12 06 25.5	+0.1
	baz=229						
YUK2	White River	9.52	53		Pn	12 06 27.1	+1.0
YUK3	Moose Creek	9.68	54		Pn	12 06 29.4	+0.9
BC03		9.71	45		Pn	12 06 29.4	+0.7
BCAR	Beaver Creek A	9.71	45		Pn	12 06 28.6	-0.2
PRP	Porcupine Dome	10.13	28	Pn	Pn	12 06 33.8	-0.7
COLD	Coldfoot	10.71	14	P	Pn	12 06 42.9	+0.6
	baz=201,SNR=15						
COLD	Coldfoot	10.71	14	Pn	Pn	12 06 43.0	+0.8
HYT	Haines Junctio	10.77	61	Pn	Pn	12 06 44.5	+1.2
EGAK	Eagle	10.92	38	Pn	Pn	12 06 47.2	+1.9
FYU	Fort Yukon	11.04	25	Pn	Pn	12 06 47.7	+0.8
RDOG	Red Dog Mine	11.38	349	Pn	Pn	12 06 55.5	+4.1
WHY	Whitehorse	12.01	63		Pn	12 07 01.3	+1.0
EPYK	Eagle Plains	13.36	37		Pn	12 07 20.3	+1.8
DLBC	Dease Lake	14.46	73	Pn	Pn	12 07 35.4	+1.8
	comp=N,0.3nm,0.3s,baz=221,slow=25,SNR=2.7						
INK	Inuvik	15.49	34	Pn	Pn	12 07 45.4	-1.8
	comp=N,0.4nm,0.3s,baz=210,slow=11,SNR=12						
INK	Inuvik	15.49	34	Pn	Pn	12 07 42.4	-4.8
BBB	Bella Bella	17.37	94	LR	LR	12 13 15.8	
	comp=N,178nm,20.6s,baz=302,slow=31						
C36M	Paulatuk	18.99	36	P	P	12 08 28.1	-2.3
C36M				IAmb	IAmb	12 08 44.3	
	comp=Z,14nm,0.6s						
YKA	Yellowknife Ar	21.73	58	P	P	12 08 59.8	-0.4
	comp=Z,5.0nm,0.7s,baz=271,slow=9.2,SNR=79						
YKA				PcP	PcP	12 13 00.4	-0.1
	comp=Z,0.6nm,0.6s,baz=272,slow=0.7,SNR=4.6						
YKA				ScP	ScP	12 16 37.6	-0.3
	comp=Z,0.5nm,0.8s,baz=285,slow=1.1,SNR=8.0						
YKA				LR	LR	12 17 37.5	
	comp=Z,294nm,20.2s,baz=0.0,slow=37						
SEY	Seymchan	25.39	304	P	P	12 09 35.6	-0.7
	comp=Z,3.5nm,0.9s,baz=92,slow=8.3,SNR=13						
NEW	Newport	25.43	93	P	P	12 09 38.2	+1.3
	comp=Z,2.9nm,0.9s,baz=302,slow=9.7,SNR=4.0						
PETK	Petropavlovsk-	25.84	281	P	P	12 09 41.4	+1.0
	comp=Z,2.0nm,0.5s,baz=83,slow=9.7,SNR=10						
PETK				LR	LR	12 20 17.4	
	comp=Z,92nm,20.6s,baz=88,slow=38						
YBH	Yreka Blue Hor	26.73	110	P	P	12 09 50.3	+1.6
	comp=Z,4.6nm,1.0s,baz=32,slow=14,SNR=4.3						
YBH				LR	LR	12 18 13.0	
	comp=Z,114nm,19.9s,baz=330,slow=32						
RES	Resolute Bay	28.94	29	LR	LR	12 23 32.0	
	comp=Z,114nm,19.8s,baz=236,slow=40						
HLID	Hailey	29.84	98	P	P	12 10 17.2	+0.6
MCMT	McKenzie Canyo	29.86	95	P	P	12 10 13.8	-3.0
BCYI	Bear Canyon	29.89	96	P	P	12 10 16.0	-1.1
ELK	Elko	31.35	103	P	P	12 10 31.4	+1.4
	comp=Z,2.4nm,0.9s,baz=310,slow=9.8,SNR=9.3						
NVAR	Mina Array Bea	31.44	110	P	P	12 10 31.7	+1.0
	comp=Z,3.1nm,0.8s,baz=297,slow=9.0,SNR=14						
NVAR				LR	LR	12 21 20.4	
	comp=Z,159nm,19.1s,baz=344,slow=33						
NVAR	Mina Array Bea	31.44	110	P	P	12 10 30.8	+0.1
FCC	Fort Churchill	32.41	60	P	P	12 10 37.8	-1.1
PD31	Pinedale Array	33.01	95	P	P	12 10 43.6	-1.0
PDAR	Pinedale Array	33.01	95	P	P	12 10 45.4	+0.8
	comp=Z,0.6nm,0.6s,baz=289,slow=4.5,SNR=6.0						
PDAR				LR	LR	12 22 04.9	
	comp=Z,48nm,20.2s,baz=325,slow=32						
PDAR	Pinedale Array	33.01	95	P	P	12 10 45.1	+0.6
TPNV	Topopah Spring	33.62	109	P	P	12 10 51.6	+1.8
TPNV				IAmb	IAmb	12 10 52.9	
	comp=Z,6.2nm,0.8s						
MPMC	Manual Prospec	33.67	111	P	P	12 10 50.4	+0.1
	baz=321,SNR=5.4						
PRN	Pahroc Range	33.90	107	P	P	12 10 54.5	+2.3
PRN				IAmb	IAmb	12 11 05.0	
	comp=Z,7.4nm,1.2s						
MVU	Marysvale	34.58	103	P	P	12 11 00.2	+2.0
MVU				IAmb	IAmb	12 11 12.4	
	comp=Z,12nm,0.9s						
MSU	Marysvale	34.59	103	P	P	12 10 59.7	+1.4
SRU	San Rafael Swe	35.04	101	P	P	12 11 02.5	+0.3
RSSD	Black Hills	35.13	88	P	P	12 11 03.6	+0.7
RSSD				IAmb	IAmb	12 11 08.4	
	comp=Z,4.1nm,0.8s						
O20A	White River Ci	35.54	97	P	P	12 11 05.7	-0.8
O20A				IAmb	IAmb	12 11 30.0	
	comp=Z,12nm,1.1s						
YAK	Yakutsk	35.65	309	P	P	12 11 06.3	-0.5
	comp=Z,4.3nm,0.4s,baz=236,slow=1.8,SNR=3.9						
ULM	Lac du Bonnet	35.78	74	P	P	12 11 08.6	+0.4
	comp=Z,3.2nm,0.7s,baz=299,slow=7.5,SNR=7.1						
ULM				LR	LR	12 25 49.5	
	comp=Z,185nm,18.4s,baz=322,slow=36						
ULM	Lac du Bonnet	35.78	74	P	P	12 11 08.1	0.0
ULM				IAmb	IAmb	12 11 19.2	
	comp=Z,15nm,1.4s						
IRM	Iron Mountain	36.35	111	P	P	12 11 14.1	+0.9
	baz=322,SNR=10						
MONP2	Monument Peak	36.71	114	P	P	12 11 16.5	0.0
	baz=324,SNR=5.5						
AGMN	Agassiz Nation	36.94	77	P	P	12 11 18.3	+0.2
AGMN				IAmb	IAmb	12 11 30.1	
	comp=Z,9.5nm,1.1s						
B35A	Bob, Littlefor	38.03	75	P	P	12 11 27.4	0.0
JKA	Kamikawa-asahi	39.14	277	P	P	12 11 36.6	0.0
JKA				IAmb	IAmb	12 11 41.2	
	comp=Z,13nm,1.3s						
ASAJ	Asahikawa	39.14	277	P	P	12 11 36.3	-0.4
	comp=Z,5.9nm,0.9s,baz=328,slow=7.2,SNR=4.9						
214A	Organ Pipe Nat	39.28	111	P	P	12 11 38.4	+0.4
	baz=323,SNR=5.8						
EYMN	Ely	39.47	74	P	P	12 11 39.8	+0.5
EYMN				IAmb	IAmb	12 11 43.4	
	comp=Z,10nm,0.8s						
F36A	Milaca	39.71	78	P	P	12 11 40.9	-0.5
SPMN	Marine on St.	40.51	78	P	P	12 11 48.0	0.0
SPMN				IAmb	IAmb	12 11 53.5	
	comp=Z,8.0nm,0.5s						
KLR	Kul'dur	41.60	291	P	P	12 11 56.0	-1.0
	comp=Z,2.7nm,0.6s,baz=46,slow=7.2,SNR=12						
G40A	Rib Lake	41.87	77	P	P	12 11 58.8	-0.5
G40A				IAmb	IAmb	12 12 15.6	
	comp=Z,20nm,1.4s						
COWI	Conover	41.88	75	P	P	12 11 59.3	0.0
E43A	Lone Tree Farm	42.83	73	P	P	12 12 06.4	-0.6
E43A				IAmb	IAmb	12 12 11.2	
	comp=Z,12nm,0.8s						
MNTX	Cornudas Mount	43.37	103	P	P	12 12 13.0	+1.4
E46A	Sault Ste Mari	44.24	71	P	P	12 12 18.8	+0.4
E46A				IAmb	IAmb	12 12 19.9	
	comp=Z,8.9nm,0.8s						
WMOK	Wichita Mounta	44.62	94	P	P	12 12 22.1	+0.5
USRK	Ussuriysk Ar.	44.77	285	LR	LR	12 31 04.8	
	comp=Z,82nm,20.1s,baz=46,slow=36						
R40A	Maddies Statio	45.57	85	P	P	12 12 28.2	-0.9
R40A				IAmb	IAmb	12 12 35.9	
	comp=Z,14nm,1.3s						
NRIK	Noril'sk	45.60	333	LR	LR	12 33 24.9	
	comp=Z,124nm,18.6s,baz=44,slow=39						
TX31	Lajitas Ar. Si	46.14	104	P	P	12 12 34.3	+0.5
TX31				IAmb	IAmb	12 12 41.5	
	comp=Z,7.1nm,0.9s						
TX32	Lajitas Array	46.14	104	P	P	12 12 33.7	-0.1
TXAR	Lajitas Array	46.14	104	P	P	12 12 34.2	+0.4
	comp=Z,0.7nm,0.7s,baz=310,slow=5.7,SNR=13						
X37A	Clayton	46.59	91	P	P	12 12 37.4	+0.3
X37A				IAmb	IAmb	12 12 45.5	
	comp=Z,4.5nm,0.8s						
MJAR	Matsushiro Arr	46.83	273	P	P	12 12 38.6	-0.4
	comp=Z,1.2nm,0.6s,baz=34,slow=7.2,SNR=3.6						
MJAR				LR	LR	12 31 08.5	
	comp=Z,66nm,21.9s,baz=195,slow=35						
JCT	Junction City	47.31	99	P	P	12 12 43.3	+0.4
JCT				IAmb	IAmb	12 12 51.0	
	comp=Z,7.1nm,1.1s						
WVT	Waverly	49.56	84	P	P	12 13 00.2	+0.1
WVT				IAmb	IAmb	12 13 28.1	
	comp=Z,11nm,1.3s						
R50A	Paris	49.88	79	P	P	12 13 02.2	-0.2
M54A	Oil Creek Stat	50.02	73	P	P	12 13 03.5	0.0
M55A	Ridgway	50.51	72	P	P	12 13 07.3	0.0
L56A	Greenwood	50.66	71	P	P	12 13 08.3	-0.1
M56A	Emporium	50.81	72	P	P	12 13 09.6	0.0
SSPA	Standing Stone	51.57	73	P	P	12 13 15.4	+0.2
KSRS	Korea Array	51.73	282	LR	LR	12 35 13.9	
	comp=Z,22nm,20.5s,baz=50,slow=36						
KSAR	Wonju Array Be	51.76	282	P	P	12 13 16.4	-0.2
BATG	Bathurst New B	52.64	59	P	P	12 13 22.6	-0.5
SONM	Songino Array	54.78	305	P	P	12 13 35.7	-3.3
	comp=Z,1.4nm,0.7s,baz=54,slow=7.3,SNR=2.4						
SONM				LR	LR	12 38 33.0	
	comp=Z,130nm,19.5s,baz=84,slow=38						
SONM	Songino Array	54.78	305	IAmb	IAmb	12 13 41.3	
	comp=Z,1.6nm,0.8s						
HHC	Hu-ho-hao-te	57.62	296	*e*P	P	12 14 00.8	+1.5
HHC				pmax	pmax		
	comp=Z,9.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,130nm,7.2s						
CMIG	Matias Romero	60.74	104	LR	LR	12 43 28.2	
	comp=Z,28nm,19.2s,baz=344,slow=39						
FINES	FINESS Array B	61.83	358	P	P	12 14 26.6	-1.2
	comp=Z,3.1nm,0.9s,baz=339,slow=7.4,SNR=3.1						
NOA	NORSAR Array B	61.90	6	P	P	12 14 26.4	-1.9
	comp=Z,0.6nm,0.7s,baz=317,slow=15,SNR=2.3						
GTA	Gaotai	64.33	303	*e*P	P	12 14 45.8	+0.9
GTA				pP	sP	12 14 53.6	+6.3
GTA				sP	pP	12 14 57.1	+10
GTA				pmax	pmax		
	comp=Z,2.0nm,1.4s						
GTA				pmax	pmax		
	comp=Z,85nm,5.2s						
GTA				LR	LR		
	comp=N,180nm,16.0s						
GTA				LR	LR		
	comp=E,110nm,16.3s						
GTA				LR	LR		
	comp=Z,160nm,15.6s						
MK31	Makanchi Array	65.36	319	P	P	12 14 51.1	-0.4
MKAR	Makanchi Array	65.36	319	P	P	12 14 50.2	-1.2
	comp=Z,0.2nm,0.6s,baz=49,slow=8.1,SNR=1.9						
MKAR				LR	LR	12 46 22.8	
	comp=Z,65nm,18.1s,baz=18,slow=39						
MKAR	Makanchi Array	65.36	319	P	P	12 14 50.9	-0.6
WMQ	Urumqi	65.86	314	*e*P	P	12 14 55.2	+0.4
ABKAR	Akbulak array	69.73	335	P	P	12 15 19.1	+0.2
KSH	Kashi	73.96	320	P	P	12 15 47.2	+2.5
KSH				pmax	pmax		
	comp=Z,27nm,1.3s						
KSH				pmax	pmax		
	comp=Z,180nm,5.7s						
JAY	Jayapura	77.42	245	LR	LR	12 48 34.8	
	comp=Z,52nm,19.7s,baz=312,slow=34						
KBZ	Khabaz	78.21	345	LR	LR	12 56 05.7	
	comp=Z,30nm,18.2s,baz=353,slow=40						
GEYT	Alibeck	80.84	333	LR	LR	12 57 01.2	
	comp=Z,43nm,18.6s,baz=295,slow=39						
PAYA	Payao	80.85	291	P	P	12 16 24.0	+0.6
ESDC	Sonseca Array	81.01	21	P	P	12 16 24.2	+0.2
	comp=Z,1.4nm,0.6s,baz=340,slow=4.6,SNR=9.4						
ESDC				LR	LR	12 55 40.9	
	comp=Z,27nm,18.1s,baz=265,slow=38						
ESDC	Sonseca Array	81.01	21	P	P	12 16 23.6	-0.4
CM33	Chiang Mai Arr	81.77	292	P	P	12 16 30.0	+1.7
CMMT	Chiang Mai	81.78	292	P	P	12 16 31.0	+2.7
CM09	Chiang Mai Arr	82.06	292	P	P	12 16 34.0	+4.2
CMAR	Chiang Mai Arr	82.08	292	P	P	12 16 27.9	-1.9
	comp=Z,1.4nm,0.4s,baz=18,slow=5.5,SNR=10						
CMAR				LR	LR	12 58 14.6	
	comp=Z,29nm,18.1s,baz=35,slow=40						
CMAR	Chiang Mai Arr	82.08	292	P	P	12 16 28.9	-1.0
CM02	Chiang Mai Arr	82.09	292	P	P	12 16 32.5	+2.5
CM01	Chiang Mai Arr	82.10	292	P	P	12 16 32.0	+2.1
CM04	Chiang Mai Arr	82.11	292	P	P	12 16 31.0	+1.0
CM05	Chiang Mai Arr	82.12	292	P	P	12 16 31.8	+1.7
CM13	Chiang Mai Arr	82.12	292	P	P	12 16 30.6	+0.5
BRTR	Keskin Array B	83.18	352	P	P	12 16 35.7	+0.2
	comp=Z,0.9nm,0.6s,baz=13,slow=7.6,SNR=2.5						
WRA	Warramunga Arr	95.53	242	P	P	12 17 33.1	-1.2
	comp=Z,0.7nm,0.8s,baz=36,slow=5.6,SNR=4.9						
URZ	Urewera	97.42	200	LR	LR	12 55 09.9	
	comp=Z,42nm,19.0s,baz=31,slow=31						
ASAR	Alice Springs	98.92	240	LR	LR	12 56 11.5	
	comp=Z,43nm,20.9s,baz=64,slow=32						
BOSA	Boshof	151.54	356	PKPbc	PKPbc	12 24 02.1	-1.2
	comp=Z,3.6nm,1.0s,baz=63,slow=2.3,SNR=4.4						
BOSA	Boshof	151.54	356		PKPbc	12 24 02.8	-0.6

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*IDC **06** 12:04:39.7±0.8, 9°.62N×126°.56E, h0^{km}, mb3.9/8, mb1 4.1/8, mb1mx3.7/47, mbtmp3.9/8, MS3.1/5, Ms1 3.1/5, ms1mx2.7/48, Error ellipse: s-maj=53.6km s-min=18.4km az=79.0*

*NEIC **06** 12:04:41.8±1.4, 9°.77N±0°.09×126°.6E±0°.2, h10^{km}±2^{km}, mb4.3/9, Error ellipse: s-maj=36.1km s-min=6.0km az=66.0*

*MAN **06** 12:04:46.8, 9°.52N×126°.24E, h10^{km}, mb4.3, ML3.1, MS2.9*

ISC 06 12:04:41.1±2.8, **9°.66N**±0°.04×**126°.54E**±0°.07, **h5**^{km}±16^{km}, **n34, σ1^{s}.33**/37, **mb4.1**/11, **MS3.1**/3, **1C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
GLSP	General Luna,	0.42	287	*e*P	Pn	12 04 53.5	-0.4
GLSP				*e*S	Sb	12 05 00.4	+2.6
BUTP	Butuan	1.14	233	*e*P	Pb	12 05 02.8	-0.5
BUTP				*e*S	Sg	12 05 16.9	-0.8
MSLP	Maasin	1.72	286	*e*P	Pn	12 05 11.4	-0.3
MSLP				*e*S	Sg	12 05 38.7	+2.4
CGP	Cagayan de Oro	2.18	237⇑	*e*P	Pn	12 05 18.9	+0.8
CGP				*e*S	Sn	12 05 44.9	-0.6
BUKP	Musuan	2.29	220	*e*P	Pb	12 05 21.2	-1.9
BUKP				*e*S	Sb	12 05 51.0	-0.8
LLP	Lapu-Lapu	2.61	285⇓	*e*P	Pb	12 05 27.9	-0.6
LLP				*e*S	Sb	12 05 59.1	-1.8
DAV	Davao City (W)	2.75	200	Pn	Pn	12 05 27.6	+1.7
	45nm,0.3s,baz=41,slow=11,SNR=1.5						
DAV	Davao City (W)	2.75	200		Pn	12 05 27.9	+2.0
CNP	Catarman	3.37	327	*e*P	Pb	12 05 40.1	-1.4
CNP				*e*S	Sn	12 06 17.2	+2.2
PAGZ	Pagadian	3.60	240	*e*P	Pn	12 05 39.1	+1.4
SIJI	Sorong	11.47	156	LR	LR	12 11 58.3	
	comp=Z,30nm,20.0s,baz=338,slow=38						
KAPI	Kappang	16.07	205	LR	LR	12 15 49.6	
	comp=Z,42nm,18.3s,baz=14,slow=42						
FITZ	Fitzroy Crossi	27.60	182	P	P	12 10 29.1	-0.5
	1.6nm,0.6s,baz=18,slow=10,SNR=8.2						
FITZ				LR	LR	12 23 46.0	
	comp=Z,52nm,18.1s,baz=164,slow=42						
FITZ	Fitzroy Crossi	27.60	182	P	P	12 10 29.9	+0.3
FITZ				IAmb	IAmb	12 10 40.2	
	comp=Z,9.1nm,1.3s						
CMAR	Chiang Mai Arr	28.12	291	LR	LR	12 22 39.4	
	comp=Z,13nm,18.7s,baz=115,slow=38						
WRA	Warramunga Arr	30.41	165	P	P	12 10 53.3	-1.3
	comp=Z,0.5nm,0.7s,baz=344,slow=9.7,SNR=3.2						
WR0	Warramunga Arr	30.47	165	P	P	12 10 56.5	+1.3
WR0				IAmb	IAmb	12 11 08.3	
	comp=Z,2.3nm,0.9s						
AS31	Alice Springs	33.90	168	P	P	12 11 24.2	-1.0
ASAR	Alice Springs	33.90	168	P	P	12 11 23.6	-1.7
	comp=Z,0.2nm,0.3s,baz=347,slow=6.9,SNR=12						
ASAR	Alice Springs	33.90	168	P	P	12 11 25.4	+0.1
FORT	Forrest	40.24	178	P	P	12 12 17.7	-1.3
BBOO	Buckleboo	43.20	168	P	P	12 12 44.2	+0.9
BBOO				IAmb	IAmb	12 12 45.7	
	comp=Z,17nm,1.4s						
NWAO	Narrogin (SRO)	43.27	191	P	P	12 12 45.5	+1.7
MK31	Makanchi Array	52.66	323	P	P	12 13 56.2	-0.3
MKAR	Makanchi Array	52.66	323	P	P	12 13 55.8	-0.7
	comp=Z,1.3nm,0.6s,baz=122,slow=8.2,SNR=21						
MKAR	Makanchi Array	52.66	323	P	P	12 13 56.4	-0.2
KK31	Karatay Array	58.86	315	P	P	12 14 40.1	-1.0
KK31				IAmb	IAmb	12 14 40.9	
	comp=Z,1.6nm,0.6s						
KKAR	Karatay Array	58.86	315	P	P	12 14 40.4	-0.7
ILAR	Eielson Array	79.87	26	P	P	12 16 49.2	-1.5
	comp=Z,0.3nm,0.6s,baz=260,slow=4.5,SNR=3.1						
ARCES	ARCESS Array B	84.85	340	P	P	12 17 16.6	0.0
	comp=Z,2.3nm,0.6s,baz=63,slow=3.3,SNR=8.2						
ARCES	ARCESS Array B	84.85	340	P	P	12 17 17.0	+0.4
FINES	FINESS Array B	86.55	332	P	P	12 17 24.6	-0.6
	comp=Z,1.3nm,0.4s,baz=90,slow=5.4,SNR=12						
HFS	Hagfors	92.70	332	LR	LR	13 04 09.4	
	comp=Z,55nm,18.6s,baz=305,slow=38						
YKA	Yellowknife Ar	94.20	24	P	P	12 18 02.4	+1.3
	comp=Z,0.4nm,0.6s,baz=303,slow=4.2,SNR=7.9						

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*NOU **06** 12:37:06.1, 17°.27S×169°.62E, h426^{km}, MLv4.9, Vanuatu Islands*

*IDC **06** 12:37:31.9±12.0, 18°.08S×165°.91E, h0^{km}, mb3.8/3, mb1 3.9/4, mb1mx3.7/36, mbtmp3.7/4, ML3.1/1, Error ellipse: s-maj=209.7km s-min=33.3km az=55.0*

ISC 06 12:37:33.0±1.2, **17°.83S**±0°.07×**166°.3E**±0°.1, **h35**^{km}**, n10, σ1^{s}.50**/10, **mb3.7**/3, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
DVP	Devils Point	1.83	87	P	Pn	12 38 01.8	-0.2
SANVU	Saraoutou	2.53	21	P	Pn	12 38 10.8	-0.8
KOUNC	Koumac, New Ca	3.29	214	P	Pn	12 38 39.3	+17
DZM	Mont Dzumac	4.23	178	Pn	Pn	12 38 34.5	-0.6
	1.3nm,0.3s,baz=55,slow=12,SNR=28						
DZM				Sn	Sn	12 39 25.1	+1.9
	5.9nm,0.3s,baz=350,slow=24,SNR=11						
DZM	Mont Dzumac	4.23	178	P	Pn	12 38 35.7	+0.6
YATNC	Mamie plateau,	4.25	172	P	Pn	12 38 33.4	-1.9
OUENC	Ouen Island, N	4.60	173	P	Pn	12 38 37.9	-2.2
STKA	Stephens Creek	26.32	233	P	P	12 43 04.6	-1.0
	1.2nm,0.6s,baz=55,slow=12,SNR=4.3						
WRA	Warramunga Arr	30.26	261	P	P	12 43 41.7	+0.8
	0.2nm,0.3s,baz=91,slow=8.7,SNR=14						
ASAR	Alice Springs	30.77	254	P	P	12 43 46.3	+0.9
	1.2nm,0.4s,baz=81,slow=8.7,SNR=40						

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*IDC **06** 12:52:03.2±2.3, 7°.00S×130°.07E, h107^{km}±25^{km}, mb3.6/3, mb1 3.7/8, mb1mx3.4/43, mbtmp3.9/8, Error ellipse: s-maj=23.0km s-min=18.0km az=81.0*

*NEIC **06** 12:52:04.1±2.2, 6°.90S±0°.08×130°.01E±0°.05, h123^{km}±9^{km}, mb4.1/3, Error ellipse: s-maj=11.9km s-min=7.1km az=170.0*

*DJA **06** 12:52:04.2±0.7, 7°S±6°×13°0E±°, h153^{km}±15^{km}, M4.5/6, mb4.5/3, MLv4.5/6*

ISC 06 12:52:02.7±0.7, **6°.87S**±0°.06×**130°.05E**±0°.07, **h104**^{km}**, n27, σ2^{s}.44**/28, **mb4.0**/5, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.67	132	Pn	Pn	12 52 35.5	+4.3
SAUI	Saumlaki	1.67	132	P	Pn	12 52 35.6	+4.3
SAUI				S	Sn	12 52 58.9	+6.0
FAKI	Fak Fak	4.49	29	Pn	Pn	12 53 10.1	+1.4
FAKI	Fak Fak	4.49	29	P	Pn	12 53 10.6	+1.9
MTN	Manton Dam	6.04	170	Pn	Pn	12 53 30.7	+1.2
SIJI	Sorong	6.08	12	P	Pn	12 53 32.2	+2.0
	0.3nm,0.3s,baz=163,slow=19,SNR=5.6						
SIJI				S	Sn	12 54 36.2	-2.3
	1.9nm,0.3s,baz=232,slow=22,SNR=9.7						
SOEI	Soe	6.40	243	Pn	Pn	12 53 36.5	+1.9
SOEI	Soe	6.40	243	P	Pn	12 53 37.3	+2.7
	0.3nm67nm,0.9s						
BATI	Baumata	7.13	242	P	Pn	12 53 46.2	+1.7
	14nm,0.3s,baz=84,slow=2.7,SNR=20						
BATI				S	Sn	12 55 03.9	-0.1
	6.1nm,0.3s,baz=118,slow=22,SNR=14						
BATI	Baumata	7.13	242	P	Pn	12 53 46.4	+1.9
FITZ	Fitzroy Crossi	11.96	201	P	Pn	12 54 47.3	-2.6
	0.2nm,0.3s,baz=28,slow=11,SNR=8.0						
FITZ				S	Sn	12 56 49.7	-12
	0.8nm,0.3s,baz=40,slow=15,SNR=11						
WB0	Warramunga Arr	13.50	162	Pn	Pn	12 55 06.9	-3.2
WRAB	Tennant Creek	13.64	163	Pn	Pn	12 55 08.9	-3.1
WRA	Warramunga Arr	13.65	163	P	Pn	12 55 08.8	-3.3
	0.3nm,0.3s,baz=339,slow=14,SNR=21						
WRA				S	Sn	12 57 30.7	-12
	1.7nm,0.3s,baz=333,slow=23,SNR=14						
WRA	Warramunga Arr	13.65	163		Pn	12 55 09.2	-2.8
WB2	Warramunga Arr	13.65	163	Pn	Pn	12 55 08.9	-3.2
WR0	Warramunga Arr	13.73	162	Pn	Pn	12 55 09.4	-3.6

COEN	**Coen**	**14.70**	**120**	Pn	**P**	**12 55 27.1**	**-1.9**
AS31	**Alice Springs**	**17.11**	**168**	P	**Pn**	**12 55 54.4**	**-1.2**
AS31				IAmb	IAmb	12 55 58.5	
	comp=Z,1.6nm,0.5s						
ASAR	**Alice Springs**	**17.11**	**168**	P	**P**	**12 55 55.0**	**-0.6**
	comp=Z,0.7nm,0.3s,baz=345,slow=8.5,SNR=60						
ASAR				S	Sn	12 58 52.6	-13
	comp=Z,0.4nm,0.3s,baz=82,slow=23,SNR=7.1						
ASAR	**Alice Springs**	**17.11**	**168**	P	**P**	**12 55 54.9**	**-0.8**
BBOO	**Buckleboo**	**26.41**	**169**	P	**P**	**12 57 29.3**	**-0.4**
BBOO				IAmb	IAmb	12 57 29.9	
	comp=Z,10nm,1.2s						
STKA	**Stephens Creek**	**27.12**	**158**	P	**P**	**12 57 35.6**	**-0.4**
	comp=Z,1.1nm,0.6s,baz=331,slow=8.9,SNR=5.2						
CMAR	**Chiang Mai Arr**	**39.68**	**310**	P	**P**	**12 59 26.1**	**+1.1**
	comp=Z,0.5nm,0.3s,baz=124,slow=5.6,SNR=2.3						
MKAR	**Makanchi Array**	**68.14**	**327**	P	**P**	**13 02 52.2**	**+0.6**
	comp=Z,1.0nm,0.5s,baz=124,slow=8.6,SNR=4.8						
MKAR	**Makanchi Array**	**68.14**	**327**	P	**P**	**13 02 52.1**	**+0.4**
QSPA	**South Pole Qui**	**83.11**	**180**	P	**P**	**13 04 15.2**	**-1.7**
QSPA				IAmb	IAmb	13 04 35.5	
	comp=Z,4.7nm,1.4s						

NNC 06 12:59:09.6±8.0**,41°.98N**×**85°.63E,h0^{km},mb3.6,mpv3.2, 6C-1D,Error ellipse: s-maj=68.5km s-min=31.5km az=108.0,Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PDGK	**Podgornoye**	**4.72**	**289**	⇓Pn	Pn	13 00 22.3	+0.1
	4.9nm,1.4s						
DJR	**Jarkent**	**4.88**	**301**	Pg	Pb	13 00 37.2	+1.2
	1.0nm,0.2s						
DJR				Lg	Lg	13 01 35.8	
	3.4nm,0.3s						
MK31	**Makanchi Array**	**5.38**	**335**	⇑Pn	Pg	13 00 59.3	+6.7
	0.1nm,0.3s,baz=146,slow=18,SNR=6.5						
MK31				⇑Sn	Sn	13 01 34.6	+0.9
	1.3nm,0.5s,baz=145,slow=17						
MK31				⇑Lg	Lg	13 01 42.5	
	1.3nm,0.3s,baz=144,slow=29						
MAKZ	**Makanchi**	**5.49**	**333**	⇑Pn	Pg	13 01 01.4	+6.6
	1.6nm,1.1s						
MAKZ				⇑Sn	Sn	13 01 38.6	+2.1
	1.3nm,0.6s						
MAKZ				⇑Lg	Lg	13 01 48.9	
	1.1nm,0.4s						
ZSN	**Zaisan**	**5.50**	**355**	Pg	Pb	13 00 49.2	+2.7
	2.1nm,0.2s						
ZSN				Lg	Lg	13 01 55.5	
	3.2nm,0.2s						
MNBS	**Baschi**	**5.70**	**294**	Pg	Pb	13 00 54.3	+4.3
	1.8nm,0.2s						
MNBS				Lg	Lg	13 02 03.8	
	3.0nm,0.3s						

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*IDC **06** 13:13:05.1±3.0,27°.65N×93°.55E,h0^{km},mb3.5/5, mb1 3.6/5,mb1mx3.3/40,mbtmp3.5/5,Error ellipse: s-maj=242.5km s-min=20.3km az=62.0*

*NDI **06** 13:13:09.4±2.0,26°.87N×91°.98E,h16^{km}±12^{km},ML3.4*

ISC 06 13:13:08.7±0.9**,26°.91N**±0°.05×**91°.99E**±0°.04**,h23^{km},n13,** σ**1^s.74**/16**,mb3.5**/5**,Northeastern India**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUWA	**GUWAHATI**	**0.76**	**201**	*e*P	**Pb**	**13 13 24.1**	**+0.8**
GUWA				*e*S	**Sb**	**13 13 34.6**	**+1.4**
GUWA				IAML		13 13 34.8	
	comp=E,2µm,0.4s						
TEZP	**TEZPUR**	**0.78**	**112**	*e*P	**Pb**	**13 13 24.4**	**+0.9**
TEZP				*e*S	**Sb**	**13 13 35.5**	**+1.8**
TEZP				IAML		13 13 35.7	
	comp=E,5µm,0.1s						
SHL	**Shillong**	**1.34**	**184**	*e*P	**Pn**	**13 13 33.3**	**+1.1**
SHL				*e*S	**Sn**	**13 13 50.3**	**+1.0**
SHL				IAML		13 13 51.0	
	comp=E,600nm,0.1s						
SHL				IAML		13 13 51.6	
	comp=N,682nm,0.2s						
ZIRO	**ZIRO**	**1.77**	**69**	*e*P	**Pn**	**13 13 40.4**	**+2.4**
ZIRO				IAML		13 13 42.0	
	comp=N,607nm,0.4s						
ZIRO				*e*S	**Sb**	**13 14 03.7**	**+1.4**
ZIRO				IAML		13 14 08.2	
	comp=E,1µm,0.3s						
KOHI	**KOHIMA**	**2.24**	**121**	IAML		13 14 12.3	
	comp=E,113nm,0.5s						
KOHI				IAML		13 14 13.1	
	comp=N,105nm,0.1s						
MOKO	**MOKOCHONG**	**2.33**	**104**	*e*P	**Pn**	**13 13 46.1**	**+0.2**
MOKO				IAML		13 14 28.9	
	comp=E,217nm,0.3s						
MOKO				IAML		13 14 29.0	
	comp=N,209nm,0.3s						
GTK	**Tadong**	**3.05**	**279**	*e*P	**Pn**	**13 13 58.2**	**+2.5**
GTK				*e*S	**Sn**	**13 14 31.1**	**-0.5**
SAIH	**SAIHA**	**4.49**	**168**	*e*P	**Pn**	**13 14 16.1**	**+0.6**
SAIH				*e*S	**Sn**	**13 15 05.8**	**-1.3**
MKAR	**Makanchi Array**	**21.28**	**341**	P	**P**	**13 17 51.2**	**-2.3**
	comp=N,1.3nm,0.6s,baz=147,slow=11,SNR=11						
KURBB	**Kurchatov Arra**	**25.82**	**340**	P	**P**	**13 18 36.2**	**-1.9**
	comp=N,0.5nm,0.8s,baz=151,slow=9.7,SNR=2.3						
ZALV	**Zalesovo Beam**	**27.53**	**351**	P	P	13 18 48.6	-4.9
	comp=N,1.1nm,0.7s,baz=146,slow=8.0,SNR=4.5						
WRA	**Warramunga Arr**	**62.08**	**134**	P	P	13 23 24.7	-3.2
	comp=N,0.2nm,0.4s,baz=325,slow=7.1,SNR=7.0						
ASAR	**Alice Springs**	**64.56**	**137**	P	**P**	**13 23 41.9**	**-2.4**
	comp=N,0.2nm,0.5s,baz=316,slow=6.8,SNR=8.1						

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*MDD **06** 13:32:56.5±4.6,32°.25N×7°.70W,h0^{km},mb3.6/4,Error ellipse: s-maj=59.6km s-min=38.4km az=119.0,PRXIMO*

*IGIL **06** 13:32:58.5,32°.32N×7°.71W,h4^{km}*

ISC 06 13:32:57.5±3.7**,32°.4N**±0°.2×**7°.6W**±0°.1**,h10^{km},n10,** σ**1^s.65**/16**,Morocco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AVE	**Averroes**	**0.96**	**7**	*e*P	**Pn**	**13 33 18.2**	**+1.2**
AVE				*e*S	**Sn**	**13 33 35.1**	**+4.4**
IFR	**Ifrane**	**2.35**	**60**	*e*P	**Pg**	**13 33 42.1**	**-0.5**
IFR				*e*S	**Sg**	**13 34 13.2**	**+0.1**
MORF	**Marmelete**	**5.03**	**350**	*e*P	**Pn**	**13 34 12.8**	**-0.3**
MORF	**Marmelete**	**5.03**	**350**	P	**Pn**	**13 34 12.8**	**-0.3**
EGRO	**El Granado**	**5.17**	**1**	P	**Pn**	**13 34 16.0**	**+1.0**
	1.1nm,0.2s,SNR=7.9						
EGRO				S	**Sn**	**13 35 14.2**	**-0.5**
	6.5nm,0.4s,SNR=7.9						
EMIN	**Mina Concepcio**	**5.46**	**7**	P	**Pn**	**13 34 19.2**	**+0.3**
	0.5nm,0.2s,SNR=7.9						
EMIN				S	**Sn**	**13 35 19.9**	**-1.9**
	10nm,0.6s,SNR=7.9						
MESJ	**Messejana**	**5.51**	**354**	*e*P	**Pn**	**13 34 19.2**	**-0.4**
MESJ	**Messejana**	**5.51**	**354**	P	**Pn**	**13 34 19.2**	**-0.4**
ECAB	**El Cabril**	**5.98**	**16**	P	**Pn**	**13 34 26.7**	**+0.6**
	0.6nm,0.3s,SNR=7.9						
ECAB				S	**Sn**	**13 35 32.5**	**-2.1**
	6.9nm,0.7s,SNR=7.9						
EADA	**Adamuz**	**6.30**	**22**	P	**Pn**	**13 34 31.6**	**+1.1**
	1.2nm,0.4s,SNR=7.9						
EADA				S	**Sn**	**13 35 40.6**	**-1.9**
	3.3nm,0.4s,SNR=4.6						

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*IDC **06** 13:33:55.5±0.7,6°.78N×72°.98W,h164^{km}±7^{km},mb3.3/7, mb1 3.7/9,mb1mx3.4/31,mbtmp3.8/9,Error ellipse: s-maj=15.8km s-min=7.7km az=124.0*

*RSNC **06** 13:33:56.5±2.5,6°.82N×73°.16W,h150^{km}±10^{km},ML3.7, Mw4.0,Fault plane solution: NP1:φ$_s$18.00000°, δ54.00000°,λ17.00000°.*

ISC 06 13:33:54.9±0.7**,6°.82N**±0°.03×**73°.10W**±0°.03**,h158^{km}**±5^{km}**, n52,**σ**1^s.76**/94**,mb3.4**/7**,8C-5D,Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.24**	**199**	⇑*i*P	**Pn**	**13 34 16.9**	**+0.4**
BARC				*e*S	**Sn**	**13 34 31.8**	**-1.2**
BARC				*i*		13 34 33.7	
	comp=Z,1µm,0.7s						
PAMC	**Pamplona, Colo**	**0.65**	**38**	⇑*i*P	**Pn**	**13 34 19.6**	**+1.1**
PAMC				*i*		13 34 20.1	
	comp=Z,1µm,0.2s						
PAMC				*e*S	**Sn**	**13 34 36.7**	**+0.1**
BRRC	**Barranca, Sant**	**0.67**	**295**	⇑*i*P	**Pn**	**13 34 18.8**	**+0.7**
BRRC				*i*		13 34 19.0	
	comp=Z,1µm,0.2s						
BRRC				*e*S	**Sn**	**13 34 35.7**	**0.0**
RUSC	**La Rusia**	**0.92**	**179**	⇓*i*P	**Pn**	**13 34 20.8**	**+0.4**
RUSC				*e*S	**Sn**	**13 34 39.3**	**-0.6**
RUSC				*i*		13 34 40.6	
	comp=Z,416nm,0.3s						
TAMC	**Tame, Arauca**	**1.36**	**106**	⇑*i*P	**Pn**	**13 34 25.1**	**+1.4**
TAMC				*i*		13 34 45.9	
	comp=Z,393nm,0.5s						
TAMC				*e*S	**Sn**	**13 34 46.2**	**+0.5**
PTBC	**PUERTO BERRIO,**	**1.38**	**258**	*e*P	**Pn**	**13 34 23.5**	**-0.3**
PTBC				*e*S	**Sn**	**13 34 44.5**	**-1.4**
PTBC				*i*		13 34 52.6	
	comp=Z,499nm,0.5s						
OCAC	**Ocana**	**1.43**	**351**	*e*P	**Pn**	**13 34 24.8**	**+0.3**
OCAC				*e*S	**Sn**	**13 34 46.8**	**-0.5**
OCAC				*i*		13 34 51.9	
	comp=Z,540nm,0.3s						
SPBC	**San Pablo de B**	**1.51**	**220**	⇓*e*P	**Pn**	**13 34 25.7**	**+0.4**
SPBC				*e*S	**Sn**	**13 34 47.6**	**-1.0**
SPBC				*i*		13 34 50.9	
	comp=Z,1µm,0.2s						
NORC	**Norcasia**	**2.16**	**235**	*e*P	**Pn**	**13 34 32.7**	**+0.3**
NORC				*e*S	**Sn**	**13 35 00.4**	**-0.8**
NORC				*i*		13 35 06.3	
	comp=Z,381nm,0.5s						
SMLC	**San Martn de**	**2.19**	**334**	*e*P	**Pn**	**13 34 32.9**	**+0.2**
SMLC				*e*S	**Sn**	**13 35 01.7**	**-0.3**
SMLC				*i*		13 35 05.2	
	comp=Z,434nm,0.1s						
CHIC	**Chingaza**	**2.27**	**196**	⇓*i*P	**Pn**	**13 34 34.5**	**+0.5**
CHIC				*e*S	**Sn**	**13 35 03.6**	**-0.6**
CHIC				*i*		13 35 07.9	
	comp=Z,316nm,0.5s						
ROSC	**El Rosal**	**2.31**	**212**	P	**Pn**	**13 34 36.3**	**+1.7**
	comp=Z,86nm,0.3s,baz=308,slow=3.2,SNR=85						
ROSC				S	**Sn**	**13 35 07.4**	**+2.3**
	comp=Z,106nm,0.3s,baz=311,slow=21,SNR=9.9						
ROSC	**El Rosal**	**2.31**	**212**	⇓*i*P	**Pn**	**13 34 36.1**	**+1.6**
ROSC				*e*S	**Sn**	**13 35 06.6**	**+1.4**
ROSC				*i*		13 35 12.9	
	comp=Z,977nm,0.5s						
HELC	**Santa Helena**	**2.49**	**256**	*e*P	**Pn**	**13 34 38.0**	**+1.3**
HELC				*e*S	**Sn**	**13 35 07.0**	**-1.9**
HELC				*i*		13 35 15.6	
	comp=Z,275nm,0.3s						
UREC	**San Jos de Ur**	**2.58**	**291**	*e*P	**Pn**	**13 34 36.6**	**-0.8**
UREC				*e*S	**Sn**	**13 35 08.0**	**-2.3**
UREC				*i*		13 35 19.5	
	comp=Z,262nm,0.2s						
SOCV	**Socops**	**2.66**	**57**	*e*P	**Pn**	**13 34 39.2**	**+0.9**
SOCV				*e*S	**Sn**	**13 35 09.0**	**-3.0**
GUY2C	**Guyana, Caldas**	**2.75**	**235**	*e*P	**Pn**	**13 34 40.7**	**+0.7**
GUY2C				*e*S	**Sn**	**13 35 15.4**	**+0.6**
GUY2C				*i*		13 35 27.0	
	comp=Z,306nm,0.6s						
PTGC	**Puerto Gaitan,**	**2.78**	**160**	⇓*e*P	**Pn**	**13 34 39.7**	**-0.1**
PTGC				*i*		13 34 40.2	
	comp=Z,670nm,0.1s						
PTGC				*e*S	**Sn**	**13 35 12.1**	**-2.6**
RREF	**El Recreo**	**2.94**	**230**	*e*P	**Pn**	**13 34 43.6**	**+1.2**
RREF				*e*S	**Sn**	**13 35 19.1**	**0.0**
RREF				*i*		13 35 28.5	
	comp=Z,403nm,0.3s						
TOLC	**Tolima**	**3.13**	**225**	*e*P	**Pn**	**13 34 45.5**	**+1.0**
TOLC				*e*S	**Sn**	**13 35 23.1**	**+0.1**
SDV	**Santo Domingo**	**3.19**	**50**	P	**Pn**	**13 34 46.2**	**+1.0**
	comp=Z,66nm,0.3s,baz=231,slow=9.7,SNR=236						
SDV				S	**Sn**	**13 35 24.0**	**-0.2**
	comp=Z,26nm,0.3s,baz=224,slow=22,SNR=11						
SDV	**Santo Domingo**	**3.19**	**50**	⇑*e*P	**Pn**	**13 34 46.2**	**+1.0**
SDV				*e*S	**Sn**	**13 35 23.2**	**-1.0**
MOTC	**Monteria, Cord**	**3.20**	**308**	*e*P	**Pn**	**13 34 43.8**	**-1.3**
MOTC				*e*S	**Sn**	**13 35 22.2**	**-1.8**
MOTC				*i*		13 35 40.7	
	comp=Z,301nm,0.8s						
ARGC	**Ariguani, Magd**	**3.22**	**339**	*e*P	**Pn**	**13 34 46.9**	**+1.5**
ARGC				*e*S	**Sn**	**13 35 24.6**	**-0.1**
ARGC				*i*		13 35 39.1	
	comp=Z,154nm,0.3s						
ANIL	**Santa Ana**	**3.26**	**225**	*e*P	**Pn**	**13 34 46.8**	**+0.7**
ANIL				*e*S	**Sn**	**13 35 25.5**	**-0.3**
ANIL				*i*		13 35 30.8	
	comp=Z,102nm,0.4s						
ORTC	**Ortega, Tolima**	**3.60**	**217**	*e*P	**Pn**	**13 34 50.7**	**+0.5**
ORTC				*e*S	**Sn**	**13 35 33.4**	**+0.2**
ORTC				*i*		13 35 41.4	
	comp=Z,293nm,0.6s						
ELOV	**Elorza**	**3.60**	**87**	⇑*e*P	**Pn**	**13 34 50.8**	**+0.6**
ELOV				*e*S	**Sn**	**13 35 27.2**	**-5.9**
CVALL	**Valledupar, Ce**	**3.67**	**358**	*e*P	**Pn**	**13 34 50.9**	**-0.2**
CVALL				*e*S	**Sn**	**13 35 32.5**	**-2.3**
CVALL				*i*		13 35 39.0	
	comp=Z,171nm,0.2s						
PLMC	**San Jos del P**	**3.69**	**239**	⇑*i*P	**Pn**	**13 34 52.2**	**+0.8**
PLMC				*i*		13 34 54.5	
	comp=Z,70nm,0.3s						
PLMC				*e*S	**Sn**	**13 35 33.3**	**-2.2**
CRJC	**Cerrejon, Guaj**	**4.18**	**3**	*e*P	**Pn**	**13 34 57.0**	**-0.7**
CRJC				*e*S	**Sn**	**13 35 44.1**	**-2.6**
CRJC				*i*		13 35 57.3	
	comp=Z,143nm,0.2s						
GUVC	**San Jose del G**	**4.28**	**174**	*e*P	**Pn**	**13 34 59.1**	**+0.1**
GUVC				*e*S	**Sn**	**13 35 48.3**	**-0.7**
GUVC				*i*		13 35 54.0	
	comp=Z,135nm,0.3s						
YOTC	**Yotoco, Valle**	**4.29**	**229**	*e*P	**Pn**	**13 34 58.9**	**-0.4**
YOTC				*e*S	**Sn**	**13 35 47.2**	**-2.1**
SMRC	**Santa Marta, M**	**4.46**	**346**	*e*P	**Pn**	**13 35 01.9**	**+0.6**
SMRC				*e*S	**Sn**	**13 35 49.1**	**-4.1**
SMRC				*i*		13 35 56.5	
	comp=Z,122nm,0.4s						
MACC	**Macarena, Meta**	**4.71**	**189**	*e*P	**Pn**	**13 35 02.5**	**-2.2**
MACC				*e*S	**Sn**	**13 35 53.9**	**-5.2**
MACC				*i*		13 36 01.0	
	comp=Z,71nm,0.6s						
BETC	**Betania**	**4.73**	**210**	*e*P	**Pn**	**13 35 03.9**	**-1.0**
BETC				*e*S	**Sn**	**13 35 56.7**	**-3.0**
DABV	**Dabajuro**	**4.75**	**31**	*e*P	**Pn**	**13 35 05.5**	**+0.4**
DABV				*e*S	**Sn**	**13 35 58.9**	**-1.1**
MARP	**Paez Belalcaza**	**4.87**	**216**	*e*P	**Pn**	**13 35 07.6**	**+0.6**
MARP				*e*S	**Sn**	**13 35 59.4**	**-3.9**
MARP				*i*		13 36 10.1	
	comp=Z,18nm,0.4s						
URIC	**Uribia, Colomb**	**4.97**	**13**	*e*P	**Pn**	**13 35 07.0**	**-1.1**
URIC				*e*S	**Sn**	**13 36 00.8**	**-4.4**
URIC				*i*		13 36 07.7	
	comp=Z,38nm,0.6s						
GARC	**Garzon, Huila**	**5.18**	**207**	*e*P	**Pn**	**13 35 10.7**	**-0.5**
GARC				*e*S	**Sn**	**13 36 04.7**	**-6.0**
GARC				*i*		13 36 14.6	
	comp=Z,74nm,0.3s						
PCON	**Cinco Dias**	**5.54**	**216**	*e*P	**Pn**	**13 35 17.3**	**+1.1**
PCON				*e*S	**Sn**	**13 36 19.9**	**+0.3**
PCON				*i*		13 36 52.5	
	comp=Z,24nm,0.5s						
FLOC	**Florencia**	**5.79**	**206**	⇑*i*P	**Pn**	**13 35 19.2**	**+0.2**
FLOC				*e*S	**Sn**	**13 36 22.8**	**-2.1**
FLOC				*i*		13 36 30.3	
	comp=Z,26nm,0.4s						
BBAC	**Balboa, Cauca**	**6.31**	**221**	*e*P	**Pn**	**13 35 26.9**	**+0.8**
BBAC				*i*		13 35 28.4	
	comp=Z,24nm,0.4s						
BBAC				*e*S	**Sn**	**13 36 34.7**	**-2.8**
LPAZ	**La Paz**	**23.48**	**168**	P	**P**	**13 38 51.6**	**+0.5**
	comp=Z,1.1nm,0.7s,baz=350,slow=6.1,SNR=3.2						
SIV	**San Ignacio**	**25.61**	**152**	P	**P**	**13 39 08.6**	**-1.2**
	comp=Z,0.8nm,0.8s,baz=342,slow=13,SNR=3.3						
TXAR	**Lajitas Array**	**36.48**	**312**	P	**P**	**13 40 45.9**	**+0.9**
	comp=Z,0.6nm,0.6s,baz=125,slow=8.8,SNR=9.0						
ULM	**Lac du Bonnet**	**47.29**	**340**	P	**P**	**13 42 11.9**	**-0.4**
	comp=Z,2.9nm,0.5s,baz=130,slow=7.4,SNR=7.5						
PDAR	**Pinedale Array**	**48.09**	**324**	P	**P**	**13 42 19.9**	**+1.1**
	comp=Z,0.4nm,0.5s,baz=129,slow=9.7,SNR=5.8						
YKA	**Yellowknife Ar**	**63.27**	**340**	P	**P**	**13 44 07.1**	**+0.7**
	comp=Z,1.3nm,0.5s,baz=129,slow=7.3,SNR=36						
ILAR	**Eielson Array**	**76.97**	**335**	P	**P**	**13 45 31.0**	**+1.2**
	comp=Z,0.3nm,0.9s,baz=115,slow=4.1,SNR=3.1						
MKAR	**Makanchi Array**	**122.31**	**20**	PKP	**PKPdf**	**13 52 31.0**	**-0.4**
	comp=Z,0.1nm,0.4s,baz=311,slow=3.9,SNR=2.9						
ASAR	**Alice Springs**	**149.13**	**234**	PKPbc	**PKPbc**	**13 53 24.9**	**-0.5**
	comp=Z,1.3nm,0.7s,baz=119,slow=3.2,SNR=27						
WRA	**Warramunga Arr**	**150.35**	**241**	PKPbc	**PKPbc**	**13 53 28.0**	**-0.5**
	comp=Z,0.8nm,0.6s,baz=110,slow=2.4,SNR=18						

IDC 06 13:35:56.6±8.0**,3°.17S**×**145°.79E,h0^{km},mb3.6**/4**, mb1 3.8**/5**,mb1mx3.6**/31**,mbtmp3.7**/5**,ML1.4**/1**,MS3.3**/3**, Ms1 3.3**/3**,ms1mx2.7**/31**,Error ellipse: s-maj=124.6km s-min=48.6km az=32.0,Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	**Jayapura**	**5.12**	**277**	LR	LR	13 39 15.6	
	comp=Z,136nm,18.2s,baz=135,slow=39						
PMG	**Port Moresby**	**6.34**	**168**	Pn	Pn	13 37 29.6	-1.8
	0.5nm,0.3s,baz=356,slow=13,SNR=2.8						
WRA	**Warramunga Arr**	**20.07**	**213**	P	Pn	13 40 32.9	-0.5
	3.8nm,0.9s,baz=33,slow=11,SNR=23						
BATI	**Baumata**	**23.04**	**251**	LR	LR	13 52 14.8	
	comp=Z,149nm,18.4s,baz=288,slow=42						
ASAR	**Alice Springs**	**23.39**	**208**	P	P	13 41 07.2	-0.1
	1.4nm,0.9s,baz=37,slow=9.1,SNR=12						
FITZ	**Fitzroy Crossi**	**24.69**	**232**	P	P	13 41 19.6	0.0
	1.1nm,0.6s,baz=59,slow=5.9,SNR=3.6						
FITZ				LR	LR	13 52 08.4	
	comp=Z,61nm,18.1s,baz=80,slow=39						
STKA	**Stephens Creek**	**28.82**	**187**	P	P	13 41 56.6	0.0
	0.5nm,0.4s,baz=12,slow=9.3,SNR=2.5						

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*IDC **06** 13:39:35.3±0.6,9°.29N×78°.60W,h73^{km}±4^{km},mb3.6/6, mb1 3.9/8,mb1mx3.7/26,mbtmp4.1/8,MS3.3/17, Ms1 3.3/17,ms1mx3.1/38,Error ellipse: s-maj=23.6km s-min=14.2km az=48.0*

*UPA **06** 13:39:37.3±1.0,9°.27N×78°.63W,h69^{km}±3^{km},MW4.8, Fault plane solution: NP1:φ$_s$230.70000°,δ27.61000°, λ-76.96000°.*

*NEIC **06** 13:39:37.7±2.3,9°.37N±0°.03×78°.64W±0°.08,h60^{km}±22^{km}, mb4.2/2,Error ellipse: s-maj=11.7km s-min=4.2km az=94.0*

*UCR **06** 13:40:02.7±1.3,9°.76N×80°.60W,h20^{km},MW3.6, mb4.2(NEIC)*

ISC 06 13:39:35.8±0.5**,9°.35N**±0°.05×**78°.59W**±0°.03**,h76^{km}**±3^{km}**, n145,**σ**1^s.61**/179**,mb4.0**/14**,30C-5D,Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHPO	**Chepo, Panama**	**0.55**	**251**	⇑*i*P	**Pn**	**13 39 49.8**	**+0.1**
CHPO				*i* S	**Sn**	**13 39 59.1**	**-0.7**
UPD2	**Meteti**	**0.97**	**145**	⇑*i*P	**Pn**	**13 39 55.3**	**+1.0**
UPD2				*e*S	**Sn**	**13 40 08.3**	**+0.1**
UPD2	**Meteti**	**0.97**	**145**	⇑*e*P	**Pn**	**13 39 55.2**	**+0.8**
UPD2				*e*S	**Sn**	**13 40 08.5**	**+0.3**
UPD2				*i*		13 40 14.5	
	comp=Z,10µm,0.2s						
UPA	**Univ. de Panam**	**1.00**	**249**	⇑*e*P	**Pn**	**13 39 54.7**	**0.0**
UPA				*e*P	**Pn**	**13 39 55.0**	**+0.3**
UPA				*e*S	**Sn**	**13 40 08.2**	**-0.5**
UPA				*i* S	**Sn**	**13 40 08.2**	**-0.5**
UPA	**Univ. de Panam**	**1.00**	**249**	⇑*e*P	**Pn**	**13 39 54.5**	**-0.2**
UPA				*e*S	**Sn**	**13 40 07.6**	**-1.1**
UPA				*i*		13 40 08.8	
	comp=Z,2µm,0.4s						
FLAM	**Flamenco Islan**	**1.03**	**245**	*i* P	**Pn**	**13 39 55.0**	**0.0**
FLAM				*i* S	**Sn**	**13 40 08.6**	**-0.8**
MFS3	**Miraflores**	**1.05**	**251**	⇑*i*P	**Pn**	**13 39 55.4**	**+0.1**
MFS3				*i* S	**Sn**	**13 40 08.9**	**-0.9**
PML3	**Paraiso**	**1.07**	**252**	⇓*i*P	**Pn**	**13 39 55.6**	**+0.2**
PML3				*i* S	**Sn**	**13 40 09.7**	**-0.5**
TABO3	**Taboga, Panama**	**1.10**	**240**	⇑*i*P	**Pn**	**13 39 55.7**	**-0.2**
TABO3				*i* S	**Sn**	**13 40 10.1**	**-0.8**
GAMB1	**Gamboa**	**1.13**	**259**	*i* P	**Pn**	**13 39 56.8**	**+0.5**
GAMB1				*i* S	**Sn**	**13 40 11.8**	**+0.2**
CHOR3	**La Chorrera**	**1.25**	**249**	⇓*i*P	**Pn**	**13 39 58.0**	**+0.3**
CHOR3				*i* S	**Sn**	**13 40 13.2**	**-1.0**
BCIP	**Isla Barro Col**	**1.25**	**262**	⇑*i*P	**Pn**	**13 39 58.3**	**+0.5**
BCIP				*i* S	**Sn**	**13 40 12.7**	**-1.5**
BCIP	**Isla Barro Col**	**1.25**	**262**	Pn	**Pn**	**13 39 58.2**	**+0.5**
BCIP	**Isla Barro Col**	**1.25**	**262**	⇑*i*P	**Pn**	**13 39 58.2**	**+0.5**
BCIP				*i*		13 40 00.1	
	comp=Z,2µm,0.4s						
BCIP				*e*S	**Sn**	**13 40 13.1**	**-1.1**
CAP2	**Capurgana**	**1.40**	**120**	⇑*e*P	**Pn**	**13 40 00.7**	**+1.1**
CAP2				*e*S	**Sn**	**13 40 18.5**	**+0.9**
CAPC	**Capurgana**	**1.41**	**120**	*e*P	**Pn**	**13 40 00.2**	**+0.4**
CAPC				*e*S	**Sn**	**13 40 16.9**	**-1.0**
CAPC				*i*		13 40 23.5	
	comp=Z,6µm,0.2s						
VTON	**El Valle, Cocl**	**1.68**	**244**	⇑*i*P	**Pn**	**13 40 03.4**	**0.0**
VTON				*i* S	**Sn**	**13 40 23.0**	**-1.3**
PNME	**Penonome**	**1.92**	**244**	⇑*i*P	**Pn**	**13 40 06.5**	**-0.1**
PNME				*i* S	**Sn**	**13 40 29.5**	**-0.4**
PNME	**Penonome**	**1.92**	**244**	*e*P	**Pn**	**13 40 06.3**	**-0.3**
PNME				*i*		13 40 31.3	
	comp=Z,1µm,0.2s						
PCRI3	**Pocri, Los San**	**2.26**	**222**	*i* P	**Pn**	**13 40 11.4**	**+0.3**
PCRI3				*i* S	**Sn**	**13 40 36.6**	**-1.5**
AZU	**Azuero**	**2.27**	**227**	⇑*e*P	**Pn**	**13 40 11.3**	**0.0**
AZU				*i* S	**Sn**	**13 40 37.0**	**-1.5**
AZU	**Azuero**	**2.27**	**227**	*e*P	**Pn**	**13 40 11.0**	**-0.3**
AZU				*e*S	**Sn**	**13 40 35.7**	**-2.8**
AZU				*i*		13 40 37.8	
	comp=Z,3µm,0.2s						
PTAC	**Punta Ardita,**	**2.32**	**161**	⇑*e*P	**Pn**	**13 40 11.1**	**-0.8**
PTAC				*e*S	**Sn**	**13 40 38.8**	**-0.8**
PTAC	**Punta Ardita,**	**2.32**	**161**	*e*P	**Pn**	**13 40 10.9**	**-1.0**
PTAC				*e*S	**Sn**	**13 40 37.5**	**-2.0**
PTAC				*i*		13 40 45.3	
	comp=Z,6µm,0.2s						
OCU3	**Ocu, Herrera**	**2.58**	**237**	*i* P	**Pn**	**13 40 15.6**	**+0.2**
SFRA3	**San Francisco,**	**2.60**	**245**	*i* P	**Pn**	**13 40 15.7**	**0.0**
SFRA3				*i* S	**Sn**	**13 40 45.7**	**-0.6**
STIA3	**Santiago, Vera**	**2.67**	**242**	⇑*i*P	**Pn**	**13 40 16.5**	**-0.1**
STIA3				*i* S	**Sn**	**13 40 47.3**	**-0.6**
CNAZ3	**Canazas, Verag**	**2.77**	**249**	*i* P	**Pn**	**13 40 18.4**	**+0.4**
CNAZ3				*e*S	**Sn**	**13 40 48.4**	**-2.1**
PONU3	**Ponuga, Veragu**	**2.78**	**239**	*e*P	**Pn**	**13 40 19.0**	**+0.8**
MESA3	**La Mesa, Verag**	**2.83**	**245**	⇑*i*P	**Pn**	**13 40 18.8**	**0.0**
RSUS3	**Rio de Jesus,**	**2.88**	**242**	*i* P	**Pn**	**13 40 20.0**	**+0.5**
MOTC	**Monteria, Cord**	**2.94**	**101**	⇑*i*P	**Pn**	**13 40 21.4**	**+1.0**
MOTC				*i*		13 40 57.6	
	comp=Z,1µm,0.4s						
MONA	**Monteria**	**2.95**	**101**	⇑*i*P	**Pn**	**13 40 21.4**	**+0.9**
MONA				*e*S	**Sn**	**13 40 54.0**	**-0.9**
CACAO	**El Cacao, Vera**	**3.00**	**229**	⇑*e*P	**Pn**	**13 40 22.2**	**+1.1**
GMAL	**Guarumal, Vera**	**3.06**	**239**	⇑*i*P	**Pn**	**13 40 22.9**	**+1.0**
GMAL				*i* S	**Sn**	**13 40 55.5**	**-1.9**
PVID3	**Puerto Vidal,**	**3.25**	**247**	*e*P	**Pn**	**13 40 23.1**	**-1.4**
NANC3	**Nancito, Chiri**	**3.30**	**251**	*e*P	**Pn**	**13 40 25.7**	**+0.5**
SOLC	**Bahia Solano**	**3.31**	**159**	*e*P	**Pn**	**13 40 24.4**	**-1.0**
SOLC				*e*S	**Sn**	**13 41 00.9**	**-2.8**
SOLC				*i*		13 41 12.1	
	comp=Z,292nm,0.5s						
UREC	**San Jos de Ur**	**3.41**	**117**	⇑*e*P	**Pn**	**13 40 27.3**	**+0.5**
UREC				*i*		13 41 11.3	
	comp=Z,334nm,0.4s						
PSOM3	**Paja de Sombre**	**3.75**	**260**	*e*P	**Pn**	**13 40 34.0**	**+2.6**
GUAL3	**Gualaca, Chiri**	**3.76**	**258**	*e*P	**Pn**	**13 40 32.4**	**+1.0**
CHIR3	**Chiriqui UPA,**	**3.82**	**256**	*e*P	**Pn**	**13 40 32.2**	**0.0**
LNBQ3	**Los Naranjos,**	**3.85**	**262**	*e*P	**Pn**	**13 40 33.1**	**+0.3**
PEDE3	**Pedregal, Chir**	**3.91**	**256**	*e*P	**Pn**	**13 40 33.3**	**-0.2**
PTAR3	**Potrerillos Ar**	**3.92**	**261**	*i* P	**Pn**	**13 40 35.3**	**+1.6**
BCO2	**Palmira**	**3.94**	**261**	⇑*i*P	**Pn**	**13 40 34.9**	**+0.7**
BC3P	**Paso Ancho**	**4.01**	**263**	*e*P	**Pn**	**13 40 34.6**	**-0.4**
BRU2	**Volcan**	**4.09**	**263**	⇑*i*P	**Pn**	**13 40 37.1**	**+1.0**
ZARC	**Zaragoza, Cauc**	**4.12**	**116**	⇑*e*P	**Pn**	**13 40 37.2**	**+0.7**
CDITO	**Canoas**	**4.30**	**260**	*e*P	**Pn**	**13 40 37.9**	**-1.0**
ARGC	**Ariguani, Magd**	**4.31**	**83**	*e*P	**Pn**	**13 40 40.6**	**+1.6**
HELC	**Santa Helena**	**4.36**	**136**	⇑*i*P	**Pn**	**13 40 41.3**	**+1.3**
HELC				*e*S	**Sn**	**13 41 29.8**	**0.0**
HELC	**Santa Helena**	**4.36**	**136**	⇑*e*P	**Pn**	**13 40 41.0**	**+1.0**
HELC				*i*		13 41 38.0	
	comp=Z,101nm,0.5s						
POTG	**Potrero Grande**	**4.49**	**267**	*e*P	**Pn**	**13 40 41.7**	**+0.3**
SMLC	**San Martn de**	**4.49**	**97**	*e*P	**Pn**	**13 40 41.3**	**-0.2**
PIZC	**Pizarro, Choco**	**4.52**	**164**	*e*P	**Pn**	**13 40 42.7**	**+0.8**
PIZC				*i*		13 41 40.1	
	comp=Z,83nm,0.7s						
DRK0	**Durika**	**4.60**	**269**	*i* P	**Pn**	**13 40 44.0**	**+0.9**
DRK0	**Durika**	**4.60**	**269**	*e*P	**Pn**	**13 40 43.7**	**+0.6**
SMRC	**Santa Marta, M**	**4.66**	**67**	*e*P	**Pn**	**13 40 44.3**	**+0.6**
PRVC	**Isla de Provid**	**4.84**	**326**	*e*P	**Pn**	**13 40 45.8**	**-0.4**

RIOS	Rincon, Osa	4.91	263	eP	Pn	13 40 50.9	+3.8
PTBC	PUERTO BERRIO,	4.95	124⇑	eP	Pn	13 40 47.9	+0.2
PTBC				eS	Sn	13 41 39.1	-4.6
PTBC				i		13 41 57.7	
	comp=Z,137nm,0.7s						
PLMC	San Jos del P	4.97	152	eP	Pn	13 40 47.2	-0.9
PLMC				i		13 41 44.1	
	comp=Z,108nm,0.4s						
CDM	Cerro de Muert	5.11	273	eP	Pn	13 40 51.1	+0.8
GUY2C	Guyana, Caldas	5.20	142	eP	Pn	13 40 53.0	+1.5
GUY2C				i		13 41 55.8	
	comp=Z,163nm,0.7s						
RIMA	Rio Macho	5.22	275⇑	eP	Pn	13 40 52.6	+1.0
NORC	Norcasia	5.26	135	eP	Pn	13 40 54.4	+2.3
NORC				i		13 40 57.9	
	comp=Z,70nm,0.6s						
NORC				eS	Sn	13 41 50.4	-1.1
BRRC	Barranca, Sant	5.31	114	eP	Pn	13 40 53.7	+1.0
OCAC	Ocana	5.32	102	eP	Pn	13 40 53.1	+0.2
LCR2	La Lucha 2	5.36	275⇓	eP	Pn	13 40 55.2	+1.7
CVALL	Valledupar, Ce	5.37	77	eP	Pn	13 40 54.1	+0.5
MALC	Bahia Malaga	5.44	167	eP	Pn	13 40 57.5	+3.0
RREF	El Recreo	5.46	144	eP	Pn	13 40 58.3	+3.0
RREF				i		13 42 04.3	
	comp=Z,85nm,0.6s						
TOLC	Tolima	5.74	145	eP	Pn	13 41 00.5	+1.8
ANIL	Santa Ana	5.77	147	eP	Pn	13 41 02.2	+3.1
ANIL				i		13 42 11.7	
	comp=Z,12nm,0.4s						
YOTC	Yotoco, Valle	5.78	157	eP	Pn	13 40 59.4	+0.3
SPBC	San Pablo de B	5.79	129	eP	Pn	13 41 00.5	+1.2
CRJC	Cerrejon, Guaj	5.86	73	eP	Pn	13 41 00.4	+0.2
BARC	Barichara	6.01	117	eP	Pn	13 41 03.2	+0.8
CEDE	Laguna Cedeo	6.13	281	eP	Pn	13 41 04.6	+0.7
ARE1	Arenal 1	6.14	281	eP	Pn	13 41 05.6	+1.5
PAMC	Pamplona, Colo	6.16	108⇑	eP	Pn	13 41 05.2	+0.5
ROSC	El Rosal	6.16	136	P	Pn	13 41 08.4	+3.8
	comp=Z,6.7nm,0.3s,baz=133,slow=3.8,SNR=16						
ROSC				S	Sn	13 42 18.1	+4.2
	comp=Z,2.4nm,0.3s,baz=352,slow=18,SNR=7.5						
ROSC				LR	LR	13 43 17.6	
	comp=Z,196nm,19.1s,baz=334,slow=36						
ROSC	El Rosal	6.16	136	Pn	Pn	13 41 08.1	+3.4
ROSC	El Rosal	6.16	136	eP	Pn	13 41 07.8	+3.1
ORTC	Ortega, Tolima	6.34	148	eP	Pn	13 41 10.5	+3.8
RUSC	La Rusia	6.45	122	eP	Pn	13 41 09.5	+0.9
PLVR	Palo Verde	6.74	279	eP	Pn	13 41 13.9	+1.6
URIC	Uribia, Colomb	6.89	70	eP	Pn	13 41 15.5	+1.2
MARP	Paez Belalcaza	6.97	158	eP	Pn	13 41 18.5	+2.9
ACON	Acoyapa	6.98	292	Pn	Pn	13 41 17.2	+1.8
PCON	Cinco Dias	7.31	163⇑	eP	Pn	13 41 24.2	+3.8
BBAC	Balboa, Cauca	7.40	170	eP	Pn	13 41 23.1	+1.7
SOTA	Rioblanco	7.43	165	eP	Pn	13 41 25.2	+3.1
SOCV	Socops	7.71	97	eP	Pn	13 41 25.9	+0.4
GARC	Garzon, Huila	7.75	156	eP	Pn	13 41 27.6	+1.4
SDV	Santo Domingo	7.87	93	P	Pn	13 41 29.0	+1.2
	comp=Z,7.4nm,0.3s,baz=279,slow=8.3,SNR=44						
SDV				S	Sn	13 42 52.3	-3.1
	comp=Z,126nm,0.3s,baz=36,slow=20,SNR=13						
SDV				LR	LR	13 46 11.2	
	comp=Z,188nm,18.6s,baz=294,slow=50						
SDV	Santo Domingo	7.87	93	Pn	Pn	13 41 28.6	+0.9
SDV	Santo Domingo	7.87	93⇓	eP	Pn	13 41 28.8	+1.1
DABV	Dabajuro	7.98	78	eP	Pn	13 41 30.3	+1.2
GCUF	Volcan Galeras	8.16	171	eP	Pn	13 41 35.7	+3.6
FLOC	Florencia	8.25	159	eP	Pn	13 41 31.6	-1.2
MACC	Macarena, Meta	8.57	146	eP	Pn	13 41 37.7	+0.5
MTDJ	Mount Denham	8.88	6	Pn	Pn	13 41 42.8	+1.2
MTDJ	Mount Denham	8.88	6	eP	Pn	13 41 42.7	+1.2
OTAV	Otavalo	9.05	179⇓	eP	Pn	13 41 46.1	+1.9
FSCY	Frank Sound, G	10.22	346	Pn	Pn	13 42 01.4	+1.7
LCCY	Blossom Villag	10.36	352	Pn	Pn	13 42 02.5	+0.9
CBCY	The Bluff, Cay	10.39	354	Pn	Pn	13 42 02.1	+0.1
LGNH	Logne	10.80	32	Pn	Pn	13 42 10.5	+2.9
GTBY	Guantanamo Bay	11.04	17	Pn	Pn	13 42 14.0	+3.2
GTBY	Guantanamo Bay	11.04	17	eP	Pn	13 42 13.2	+2.3
SDDR	Presa de Saban	11.90	36	Pn	Pn	13 42 25.1	+2.4
SDDR	Presa de Saban	11.90	36	eP	Pn	13 42 25.5	+2.8
PCRV	Puerto La Cruz	13.77	85	P	Pn	13 42 46.8	-1.0
	comp=Z,2.1nm,0.3s,baz=292,slow=5.9,SNR=5.9						
PCRV				S	Sn	13 45 11.9	-7.4
	comp=Z,1.1nm,0.3s,baz=156,slow=20,SNR=2.0						
GRTK	Grand Turk	14.06	30	Pn	P	13 42 55.2	-1.6
TEIG	Tepich	14.30	320	LR	LR	13 48 31.4	
	comp=Z,72nm,20.2s,slow=37						
SJG	San Juan	14.89	53	LR	LR	13 48 28.9	
	comp=Z,51nm,19.6s,baz=243,slow=36						
ATAH	Atahualpa	16.38	179	LR	LR	13 50 23.0	
	comp=Z,71nm,19.7s,baz=342,slow=40						
CMIG	Matias Romero	17.62	298	LR	LR	13 50 42.5	
	comp=Z,85nm,21.6s,baz=120,slow=38						
PTGA	Pitinga	21.07	117	LR	LR	13 53 35.0	
	comp=Z,139nm,21.9s,baz=188,slow=40						
PTGA	Pitinga	21.07	117	P	P	13 44 17.7	+3.6
PTGA				IAmb	IAmb	13 44 20.5	
	comp=Z,15nm,1.1s						
SAML	Samuel	23.78	139	P	P	13 44 42.3	+0.5
SAML				IAmb	IAmb	13 44 43.7	
	comp=Z,7.5nm,1.1s						
MDP	Montagnes des	26.07	97	LR	LR	13 55 48.6	
	comp=Z,93nm,20.1s,baz=294,slow=37						
TKL	Tuckaleechee C	26.61	351	LR	LR	13 56 04.1	
	comp=Z,42nm,18.8s,baz=165,slow=37						
SIV	San Ignacio	30.57	145	P	P	13 45 42.7	+0.1
	comp=Z,0.6nm,0.6s,baz=344,slow=7.4,SNR=2.5						
SIV				pP	pP	13 45 59.0	-1.5
	comp=Z,1.7nm,0.8s,baz=351,slow=9.8,SNR=4.5						
TXAR	Lajitas Array	30.78	314	P	P	13 45 45.7	+1.3
	comp=Z,0.4nm,0.9s,baz=137,slow=8.1,SNR=6.1						
TXAR				pP	pP	13 46 02.1	+0.1
	comp=Z,0.7nm,0.9s,baz=107,slow=8.4,SNR=3.7						
TXAR				sP	sP	13 46 11.7	+0.9
	comp=Z,1.7nm,0.9s,baz=135,slow=11,SNR=9.4						
LPIG	La Paz	33.63	300	LR	LR	13 59 45.7	
	comp=Z,65nm,19.0s,baz=130,slow=36						
SADO	Sadowa	35.29	359	LR	LR	14 02 00.2	
	comp=Z,53nm,18.2s,baz=148,slow=38						
ANMO	Albuquerque	36.03	319	sP	sP	13 46 57.8	+1.0
	comp=Z,5.4nm,0.9s,baz=147,slow=10.0,SNR=12						
ANMO				LR	LR	14 04 13.4	
	comp=Z,31nm,18.5s,baz=130,slow=41						
PDAR	Pinedale Array	42.92	326	pP	pP	13 47 46.7	+1.0
	comp=Z,0.3nm,0.5s,baz=150,slow=10,SNR=3.9						
PDAR				sP	sP	13 47 55.4	+1.1
	comp=Z,2.5nm,0.9s,baz=132,slow=11,SNR=9.8						
ULM	Lac du Bonnet	43.23	344	P	P	13 47 29.5	+0.1
	comp=Z,1.0nm,0.5s,baz=149,slow=9.0,SNR=3.6						
ULM				pP	pP	13 47 47.5	0.0
	comp=Z,3.4nm,0.8s,baz=143,slow=7.2,SNR=4.7						
ULM				sP	sP	13 47 56.1	+0.1
	comp=Z,5.6nm,0.9s,baz=155,slow=8.5,SNR=5.3						
NVAR	Mina Array Bea	45.88	316	sP	sP	13 48 19.2	+0.8
	comp=Z,1.0nm,0.8s,baz=131,slow=6.8,SNR=3.9						
NVAR				LR	LR	14 10 10.2	
	comp=Z,53nm,18.2s,baz=359,slow=40						
PLCA	Paso Flores	50.38	172	pP	pP	13 48 44.9	+0.4
	comp=Z,1.2nm,0.7s,baz=329,slow=8.1,SNR=2.5						
YBH	Yreka Blue Hor	50.41	317	LR	LR	14 12 54.6	
	comp=Z,26nm,19.5s,baz=144,slow=40						
YKA	Yellowknife Ar	59.10	341	P	P	13 49 27.6	-0.4
	comp=Z,0.4nm,0.5s,baz=128,slow=8.0,SNR=10						
YKA				pP	pP	13 49 47.1	0.0
	comp=Z,2.0nm,1.0s,baz=130,slow=7.8,SNR=6.9						
YKA				sP	sP	13 49 55.4	-0.1
	comp=Z,2.2nm,0.8s,baz=129,slow=8.1,SNR=8.8						
ESDC	Sonseca Array	72.27	51	pP	pP	13 51 12.3	-1.0
	comp=Z,2.5nm,1.0s,baz=269,slow=5.8,SNR=5.8						
ESDC				LR	LR	14 17 15.9	
	comp=Z,21nm,21.5s,baz=350,slow=31						
ILAR	Eielson Array	72.41	335	pP	pP	13 51 13.2	-0.4
	comp=Z,1.0nm,1.0s,baz=94,slow=4.1,SNR=4.9						
ILAR				sP	sP	13 51 21.1	-0.9
	comp=Z,0.9nm,0.9s,baz=76,slow=3.0,SNR=4.0						
TORD	Torodi Ar. Bea	78.53	78	P	P	13 51 30.5	+0.8
	comp=Z,0.5nm,0.7s,baz=298,slow=6.8,SNR=3.6						
TORD				pP	pP	13 51 48.4	-1.6
	comp=Z,0.9nm,0.8s,baz=293,slow=5.3,SNR=2.5						
TORD				LR	LR	14 25 57.9	
	comp=Z,10nm,20.4s,baz=165,slow=35						
NOA	NORSAR Array B	81.80	29	LR	LR	14 27 01.5	
	comp=Z,18nm,18.1s,baz=15,slow=35						
ARCES	ARCESS Array B	86.18	20	P	P	13 52 09.4	+0.9
	comp=Z,8.0nm,1.1s,baz=311,slow=6.3,SNR=3.9						
MKAR	Makanchi Array	121.56	15	pPKP	pPKPdf	13 58 40.8	-1.7
	comp=Z,0.6nm,0.9s,baz=38,slow=2.2,SNR=3.8						
ASAR	Alice Springs	145.86	241	PKPbc	PKPdf	13 59 06.4	-0.3
	comp=Z,1.2nm,0.6s,baz=116,slow=3.7,SNR=35						
ASAR				pPKPbc	pPKPdf	13 59 27.2	-1.2
	comp=Z,1.2nm,0.8s,baz=117,slow=3.4,SNR=4.9						
WRA	Warramunga Arr	146.51	248	PKPbc	PKPdf	13 59 07.0	-0.9
	comp=Z,1.0nm,0.8s,baz=97,slow=3.0,SNR=9.8						
WRA				pPKPbc	pPKPdf	13 59 29.4	-0.2
	comp=Z,0.7nm,1.0s,baz=92,slow=3.6,SNR=2.4						
CMAR	Chiang Mai Arr	152.26	5	PKPbc	PKPbc	13 59 22.6	-1.3
	comp=Z,0.4nm,0.3s,baz=328,slow=2.6,SNR=5.7						
CMAR				pPKPbc	pPKPbc	13 59 43.4	-2.0
	comp=Z,0.6nm,0.6s,baz=306,slow=1.7,SNR=1.8						

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*IDC **06** 14:01:25.4±4.7, 16°.23S×175°.94W, h0^{km}, mb4.9/3, mb1 5.1/3, mb1mx3.9/31, mbtmp4.9/3, MS4.0/1, Ms1 4.0/1, ms1mx2.8/32, Error ellipse: s-maj=156.0km s-min=92.1km az=152.0*

*NEIC **06** 14:02:05.8±2.8, 16°.95S±0°.03×175°.8W±0°.2, h403^{km}±22^{km}, mb4.2/19, Error ellipse: s-maj=30.8km s-min=3.0km az=96.0*

ISC 06 14:02:05.7±0.9**, 17°.0S**±0°.1×**175°.8W**±0°.1**, h400^{km}, n29,** σ**1^{s}16**/27**, mb4.2**/12**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	5.93	262		S	14 03 58.3	-54
NIUE	Niue	5.97	112	Pn	Pn	14 03 39.3	+1.2
RAO	Raoul Island	12.40	189	P	P	14 04 48.3	-1.4
KNTN	Kanton	14.64	16	P	P	14 05 12.9	-1.5
SANVU	Saraoutou	16.40	273	P	P	14 05 34.2	+0.8
DZM	Mont Dzumac	17.50	250	P	P	14 05 44.2	-0.9
DZM				IAmb	IAmb	14 05 49.0	
	comp=Z,17nm,0.9s						
EIDS	Eidsvold	31.94	249	P	P	14 07 54.3	-2.1
EIDS				IAmb	IAmb	14 07 59.3	
	comp=Z,14nm,1.1s						
ARMA	Armidale	32.58	240	P	P	14 08 01.7	-0.3
ARMA				IAmb	IAmb	14 08 03.6	
	comp=Z,6.0nm,0.7s						
CTAO	Charters Tower	36.07	259	P	P	14 08 30.4	-1.3
CTAO				IAmb	IAmb	14 08 33.6	
	comp=Z,16nm,1.1s						
PMG	Port Moresby	36.79	277	P	P	14 08 38.8	+1.1
PMG				IAmb	IAmb	14 08 39.9	
	comp=Z,12nm,0.8s						
COEN	Coen	39.61	268	P	P	14 09 01.2	+0.3
COEN				IAmb	IAmb	14 09 01.8	
	comp=Z,8.4nm,0.8s						
STKA	Stephens Creek	41.28	241	P	P	14 09 15.4	+1.3
	comp=Z,4.2nm,0.4s,baz=95,slow=11,SNR=17						
STKA	Stephens Creek	41.28	241	P	P	14 09 15.3	+1.1
BBOO	Buckleboo	46.05	241	P	P	14 09 52.6	+0.9
BBOO				IAmb	IAmb	14 09 53.4	
	comp=Z,14nm,0.9s						
WR0	Warramunga Arr	47.08	258	P	P	14 09 58.4	-1.3
WB0	Warramunga Arr	47.23	259	P	P	14 09 59.6	-1.2
WB2	Warramunga Arr	47.25	258	P	P	14 09 59.9	-1.1
WB2				IAmb	IAmb	14 10 00.9	
	comp=Z,7.5nm,0.6s						
WRAB	Tennant Creek	47.26	258	P	P	14 09 59.9	-1.2
WRAB				IAmb	IAmb	14 10 00.8	
	comp=Z,6.6nm,0.6s						
WRA	Warramunga Arr	47.27	258	P	P	14 10 00.1	-1.1
	comp=Z,4.6nm,0.6s,baz=97,slow=6.8,SNR=146						
WRA	Warramunga Arr	47.27	258	P	P	14 09 59.9	-1.2
AS31	Alice Springs	47.45	253	P	P	14 10 02.3	-0.2
ASAR	Alice Springs	47.45	253	P	P	14 10 02.5	0.0
	comp=Z,40nm,0.5s,baz=89,slow=7.9,SNR=1500						
ASAR				PcP	PcP	14 11 33.1	+7.4
	comp=Z,0.6nm,0.5s,baz=111,slow=3.9,SNR=3.4						
ASAR	Alice Springs	47.45	253	P	P	14 10 01.9	-0.6
MTN	Manton Dam	51.33	267	P	P	14 10 31.7	+0.2
FORT	Forrest	52.67	244	P	P	14 10 41.7	+0.6
FITZ	Fitzroy Crossi	55.65	259	P	P	14 11 02.7	+0.2
SOEI	Soe	58.58	269	P	P	14 11 24.8	+1.9
BATI	Baumata	59.05	268	LR	LR	14 36 39.3	
	comp=Z,120nm,18.7s,baz=274,slow=36						
PSA00	Pilbara Seismi	60.57	254	P	P	14 11 36.7	+0.6
PSA00				IAmb	IAmb	14 11 38.4	
	comp=Z,9.4nm,0.9s						

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*KRSC **06** 14:03:15.7±1.6, 48°.89N×157°.10E, h31^{km}±25^{km}, ML4.4*

*MOS **06** 14:03:15.6±1.2, 48°.79N×156°.29E, h40^{km}, mb4.0/1, Error ellipse: s-maj=13.1km s-min=4.2km az=75.1*

*SKHL **06** 14:03:16.5±0.4, 48°.80N×156°.20E, h52^{km}±8^{km}, mb4.3/8*

*IDC **06** 14:03:20.5±3.0, 49°.00N×156°.06E, h57^{km}±27^{km}, mb3.4/14, mb1 3.6/17, mb1mx3.5/37, mbtmp3.7/17, ML3.3/3, MS3.5/5, Ms1 3.5/5, ms1mx3.0/24, Error ellipse: s-maj=22.5km s-min=13.5km az=142.0*

ISC 06 14:03:17.4±4.2**, 48°.81N**±0°.07×**156°.22E**±0°.08**, h36^{km}**±29^{km}**, n95,** σ**1^{s}23**/104**, mb3.7**/14**, MS3.6**/4**, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.88	358	ePN	Pn	14 03 48.3	+1.4
SKR				eS	Sn	14 04 09.7	+0.4
SKR				pmax	pmax		
	comp=Z,50nm,0.4s						
SKR				smax	smax		
	comp=N,721nm,0.5s						
SKR				smax	smax		
	comp=E,348nm,0.4s						
SKR	Severo-Kuril's	1.88	358	eP	Pn	14 03 46.9	0.0
SKR				eS	Sn	14 04 10.3	+1.0
SKR	Severo-Kuril's	1.88	358	eP	Pn	14 03 46.9	0.0
SKR				AMB	AMB	14 03 52.4	
	comp=E,140nm,0.5s						
SKR				eS	Sn	14 04 09.0	-0.3
SKR				A	A	14 04 15.0	
	comp=E,830nm,0.3s						
SKR				A	A	14 04 15.0	
	comp=E,480nm,0.3s						
PAU	Pauzhetka	2.69	8	PN	Pn	14 03 58.3	+0.3
PAU				S	Sn	14 04 29.9	+0.6
PAU	Pauzhetka	2.69	8	eP	Pn	14 03 58.3	+0.3
PAU				eS	Sn	14 04 29.9	+0.6
PAU	Pauzhetka	2.69	8	eP	Pn	14 03 58.5	+0.5
PAU				AMB	AMB	14 04 02.6	
	comp=E,84nm,0.6s						
PAU				eS	Sn	14 04 30.3	+1.0
PAU				A	A	14 04 31.2	
	comp=E,490nm,0.3s						
PAU				A	A	14 04 31.2	
	comp=E,280nm,0.3s						
KDTR	Khodutka, Kamc	3.23	21	PN	Pn	14 04 04.3	-1.2
KDTR				S	Sn	14 04 40.4	-2.2
KDTR	Khodutka, Kamc	3.23	21	eP	Pn	14 04 04.3	-1.2
KDTR				eS	Sn	14 04 40.4	-2.2
MTVR	Mutnovka	3.88	18	PN	Pn	14 04 14.2	-0.4
MTVR	Mutnovka	3.88	18	eP	Pn	14 04 14.2	-0.4
MTVR				eS	Sn	14 04 57.4	-1.6
RUS	Russkaya	3.91	21	PN	Pn	14 04 14.3	-0.5
RUS	Russkaya	3.91	21	eP	Pn	14 04 14.3	-0.5
RUS				eS	Sn	14 04 57.0	-2.4
RUS	Russkaya	3.91	21	eP	Pn	14 04 14.3	-0.5
GRL	Gorelyy	3.93	17	PN	Pn	14 04 15.3	+0.1
GRL				S	Sn	14 04 59.2	-0.9
GRL	Gorelyy	3.93	17	eP	Pn	14 04 15.3	+0.1
GRL				eS	Sn	14 04 59.2	-0.9
APC	Apacha	4.17	8	PN	Pn	14 04 19.4	+1.1
APC	Apacha	4.17	8	eP	Pn	14 04 19.4	+1.1
KRMR	Karymshinskiy	4.21	16	PN	Pn	14 04 20.6	+1.8
KRMR	Karymshinskiy	4.21	16	eP	Pn	14 04 20.6	+1.8
PETK	Petropavlovsk-	4.41	12	P	Pn	14 04 22.7	+1.0
	comp=E,1.5nm,0.3s,baz=202,slow=12,SNR=12						
PET	Petropavlovsk	4.49	19	PN	Pn	14 04 22.5	-0.3
PET	Petropavlovsk	4.49	19	eP	Pn	14 04 22.5	-0.3
PET	Petropavlovsk	4.49	19	eP	Pn	14 04 23.3	+0.5
PET				AMB	AMB	14 04 40.3	
	comp=E,50nm,0.6s						
PET				eS	Sn	14 05 14.0	+0.3
PET				A	A	14 05 30.2	
	comp=E,120nm,0.6s						
PET				A	A	14 05 30.2	
	comp=E,110nm,0.6s						
DALK	Dalny	4.52	20	PN	Pn	14 04 22.7	-0.5
DALK	Dalny	4.52	20	eP	Pn	14 04 22.7	-0.5
UGLR	Uglovaya	4.70	19	PN	Pn	14 04 26.0	+0.2
UGLR	Uglovaya	4.70	19	eP	Pn	14 04 26.0	+0.2
AVH	Avacha	4.74	19	PN	Pn	14 04 27.3	+1.1
AVH	Avacha	4.74	19	eP	Pn	14 04 27.3	+1.1
AVH	Avacha	4.74	19	eP	Pn	14 04 27.3	+1.1
KOK	Koryaka	4.74	18	PN	Pn	14 04 27.5	+1.2
KOK	Koryaka	4.74	18	eP	Pn	14 04 27.5	+1.2
KOK	Koryaka	4.74	18	eP	Pn	14 04 27.5	+1.2
SMAR	Somma	4.75	19	PN	Pn	14 04 26.8	+0.3
SMAR	Somma	4.75	19	eP	Pn	14 04 26.8	+0.3
KRER	Koryakskii	4.78	19	PN	Pn	14 04 27.8	+0.9
KRER	Koryakskii	4.78	19	eP	Pn	14 04 27.8	+0.9
NLC	Nalytchevo	4.79	23	PN	Pn	14 04 25.4	-1.5
NLC	Nalytchevo	4.79	23	eP	Pn	14 04 25.4	-1.5
KRX	Arik	4.81	18	PN	Pn	14 04 27.9	+0.6
KRX	Arik	4.81	18	eP	Pn	14 04 27.9	+0.6
SPN	Mys Shipunski	4.92	28	PN	Pn	14 04 27.4	-1.3
SPN	Mys Shipunski	4.92	28	eP	Pn	14 04 27.4	-1.3
GNL	Ganaly	5.01	12	PN	Pn	14 04 31.3	+1.3
GNL	Ganaly	5.01	12	eP	Pn	14 04 31.3	+1.3
KUR	Kuril'sk	6.74	241	PN	Pn	14 04 55.1	+1.5
KUR				pmax	pmax		
	comp=Z,58nm,0.5s						
KUR				pmax	pmax		
	comp=N,10.0nm,0.4s						
KUR				pmax	pmax		
	comp=E,17nm,0.3s						
KUR	Kuril'sk	6.74	241	eP	Pn	14 04 53.3	-0.3
KUR				AMB	AMB	14 05 00.8	
	comp=E,70nm,0.7s						
KUR				eS	Sn	14 06 06.1	-3.0
KUR				A	A	14 06 16.2	
	comp=E,60nm,0.7s						
KUR				A	A	14 06 16.2	
	comp=E,40nm,0.7s						
KZV	Kizimen	6.80	20	PN	Pn	14 04 54.0	-0.6
KZV	Kizimen	6.80	20	eP	Pn	14 04 54.0	-0.6
TUMD	Tumrok D	6.90	20	eP	Pn	14 04 55.5	-0.4
TUMR	Tumrok	6.92	19	PN	Pn	14 04 55.5	-0.7
TUMR	Tumrok	6.92	19	eP	Pn	14 04 57.0	+0.8
KBTR	Krutoberegovo	8.43	26	PN	Pn	14 05 15.5	-1.3
KBTR	Krutoberegovo	8.43	26	eP	Pn	14 05 15.5	-1.3
YUK	Yuzh-Kuril'sk	8.60	240	PN	Pn	14 05 19.4	+0.2
YUK	Yuzh-Kuril'sk	8.60	240	eP	Pn	14 05 19.4	+0.2
GRPR	Tuman	8.68	240	ePN	Pn	14 05 19.4	-0.8
GRPR	Tuman	8.68	240	eP	Pn	14 05 19.9	-0.3
GRPR				eS	Sn	14 06 54.0	-2.8
GLVR	Golovnino	8.98	240	ePN	Pn	14 05 23.1	-1.2
GLVR	Golovnino	8.98	240	eP	Pn	14 05 23.6	-0.7
GLVR				eS	Sn	14 07 01.0	-3.1
TYV	Tymovskoe	9.01	288	eP	Pn	14 05 24.5	-0.2
TYV				AMB	AMB	14 05 25.4	
	comp=E,3.0nm,0.5s						
NMR	Nemuro--Hokkai	9.09	237	ePN	Pn	14 05 22.7	-3.2
NMR	Nemuro--Hokkai	9.09	237	eP	Pn	14 05 22.0	-3.9
YSS	Yuzh-Sakhalins	9.24	263	ePN	Pn	14 05 31.9	+4.0
YSS	Yuzh-Sakhalins	9.24	263	eP	Pn	14 05 28.0	+0.1
YSS				AMB	AMB	14 05 35.8	
	comp=E,10.0nm,0.8s						
UGL	Uglegorsk	9.32	277	eP	Pn	14 05 30.0	+0.9
UGL				AMB	AMB	14 05 38.1	
	comp=E,20nm,0.6s						
JKA	Kamikawa-asahi	10.50	249	eP	Pn	14 05 47.5	+2.3
ASAJ	Asahikawa	10.50	249	P	Pn	14 05 47.5	+2.2
	comp=E,0.6nm,0.3s,baz=61,slow=13,SNR=13						
EKMR	Ekimchan	15.25	295	eP	Pn	14 06 47.2	-2.6
EKMR				AMB	AMB	14 07 03.0	
	comp=E,5.0nm,0.7s						
KLR	Kul'dur	16.05	281	P	P	14 07 02.2	-0.9
	comp=E,0.2nm,0.3s,baz=94,slow=12,SNR=4.4						
KLR				LR	LR	14 13 49.4	
	comp=E,169nm,18.0s,baz=76,slow=40						
KLR	Kul'dur	16.05	281	erx	rx	14 07 02.2	
BMKR	Bomnak	17.88	300	eP	Pn	14 07 21.3	-1.7
KROS	Kirovskiy	18.93	298	eP	Pn	14 07 37.0	+1.3
KROS				AMB	AMB	14 07 47.3	
	comp=E,6.0nm,0.4s						
KSRS	Korea Array	23.43	252	P	P	14 08 23.8	+0.7
	comp=E,1.2nm,0.5s,baz=45,slow=10.0,SNR=7.6						
KSRS				LR	LR	14 17 23.8	
	comp=E,64nm,18.8s,baz=54,slow=36						
KSRS	Korea Array	23.43	252	eP	P	14 08 23.8	+0.7
H11S1	WAKE ISLAND Hy	31.39	161	T	T	14 43 59.4	
	baz=347,slow=76,SNR=19						
H11S3	WAKE ISLAND Hy	31.41	161	T	T	14 43 58.6	
	baz=347,slow=76,SNR=28						
H11S2	WAKE ISLAND Hy	31.41	161	T	T	14 44 00.5	
	baz=347,slow=76,SNR=26						
SONM	Songino Array	32.67	288	LR	LR	14 24 09.8	
	comp=E,99nm,18.7s,baz=78,slow=38						
ILAR	Eielson Array	33.63	40	P	P	14 09 53.9	-0.1
	comp=E,0.2nm,0.6s,baz=247,slow=7.9,SNR=5.7						
INK	Inuvik	38.78	34	P	P	14 10 38.0	+0.1
	comp=E,0.9nm,0.6s,baz=286,slow=7.4,SNR=2.5						
INK	Inuvik	38.78	34	P	P	14 10 38.0	+0.1
ZALV	Zalesovo Beam	43.13	305	P	P	14 11 12.4	-1.5
	comp=E,0.3nm,0.5s,baz=46,slow=6.2,SNR=1.9						
MKAR	Makanchi Array	47.87	297	P	P	14 11 50.8	-0.7
	comp=E,0.6nm,0.7s,baz=68,slow=8.0,SNR=8.2						
MKAR				LR	LR	14 33 20.2	
	comp=E,61nm,18.1s,baz=32,slow=38						
MKAR	Makanchi Array	47.87	297	eP	P	14 11 50.8	-0.7
YKA	Yellowknife Ar	48.01	39	P	P	14 11 53.4	+1.0
	comp=E,0.8nm,0.8s,baz=298,slow=7.2,SNR=6.8						
CMAR	Chiang Mai Arr	54.88	258	P	P	14 12 45.4	+1.1
	comp=E,0.7nm,0.6s,baz=35,slow=7.7,SNR=6.2						
PDAR	Pinedale Array	61.85	56	P	P	14 13 34.4	+1.4
	comp=E,0.2nm,0.7s,baz=270,slow=4.4,SNR=2.8						
FINES	FINESS Array B	63.05	336	P	P	14 13 39.8	-0.6
	comp=E,4.0nm,1.1s,baz=36,slow=10.0,SNR=6.8						
KBZ	Khabaz	70.91	315	P	P	14 14 30.4	-0.1
	comp=E,1.9nm,1.0s,baz=184,slow=6.9,SNR=4.0						
KBZ	Khabaz	70.91	315	eP	P	14 14 30.4	-0.1
AKASG	Malin Array Be	70.97	328	P	P	14 14 30.1	-0.7
	comp=E,0.4nm,0.4s,baz=38,slow=6.1,SNR=2.9						
AKASG				LR	LR	14 47 17.8	
	comp=E,42nm,18.6s,baz=30,slow=37						
WRA	Warramunga Arr	71.17	202	P	P	14 14 33.5	+1.3
	comp=E,0.3nm,0.7s,baz=18,slow=6.4,SNR=3.3						
TXAR	Lajitas Array	74.67	63	P	P	14 14 53.2	-0.1
	comp=E,0.2nm,0.4s,baz=289,slow=5.4,SNR=2.7						
ASAR	Alice Springs	74.86	201	P	P	14 14 56.0	+2.0
	comp=E,0.3nm,0.8s,baz=23,slow=5.1,SNR=3.2						

IDC 06 14:35:58.3±2.5**, 23°.24N**×**143°.47E, h0^{km}, mb3.6**/5**, mb1 3.8**/5**, mb1mx3.5**/45**, mbtmp3.6**/5**, MS3.1**/1**, Ms1 3.1**/1**, ms1mx2.3**/31**, Error ellipse: s-maj=119.0km s-min=22.8km az=82.0, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNU	Nakatsue	14.83	314	LR	LR	14 43 55.9	
	comp=Z,63nm,18.6s,baz=50,slow=32						
KLR	Kul'dur	27.54	343	P	P	14 41 47.6	+1.0
	0.7nm,0.5s,baz=139,slow=9.4,SNR=3.6						
WRA	Warramunga Arr	43.84	192	P	P	14 44 06.4	0.0
	0.3nm,0.4s,baz=15,slow=9.0,SNR=9.5						
ASAR	Alice Springs	47.55	192	P	P	14 44 35.6	-0.1
	0.1nm,0.3s,baz=14,slow=9.0,SNR=6.6						
MKAR	Makanchi Array	53.86	312	P	P	14 45 22.8	-0.4
	0.2nm,0.7s,baz=90,slow=7.2,SNR=2.3						
FINES	FINESS Array B	81.91	334	P	P	14 48 18.9	-0.6
	4.8nm,1.0s,baz=61,slow=6.5,SNR=3.5						

KRSC 06 14:36:13.7±1.2**, 48°.89N**×**156°.96E, h24^{km}**±20^{km}**, ML3.7, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.88	343	eP	Pn	14 36 45.5	+1.2
SKR				eS	Sb	14 37 08.8	-1.5
PAU	Pauzhetka	2.58	358	eP	Pb	14 36 56.7	-2.6
PAU				eS	Sb	14 37 28.2	-2.4
KDTR	Khodutka, Kamc	3.01	13	eP	Pn	14 37 03.0	+3.2
MTVR	Mutnovka	3.69	12	eP	Pn	14 37 12.7	+3.5
MTVR				eS	Sn	14 37 56.5	+4.6
RUS	Russkaya	3.69	15	eP	Pn	14 37 13.0	+3.9
RUS				eS	Sn	14 37 56.7	+5.0
GRL	Gorelyy	3.74	11	eP	Pn	14 37 13.7	+3.8
KRMR	Karymshinskiy	4.02	10	eP	Pb	14 37 18.8	-4.9
DALK	Dalny	4.30	15	eP	Pn	14 37 21.4	+3.9
UGLR	Uglovaya	4.49	15	eP	Pn	14 37 24.6	+4.4
AVH	Avacha	4.53	14	eP	Pn	14 37 25.8	+5.1
SMAR	Somma	4.53	14	eP	Pn	14 37 25.5	+4.6
KOK	Koryaka	4.54	13	eP	Pn	14 37 26.0	+5.1
KRER	Koryakskii	4.57	14	eP	Pn	14 37 26.2	+4.8

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KRX	**Arik**	**4.60**	**13**	*e*P	Pn	14 37 27.0	+5.2
SPN	**Mys Shipunski**	**4.64**	**23**	*e*P	Pn	14 37 27.0	+4.8
GNL	**Ganaly**	**4.86**	**7**	*e*P	Pn	14 37 29.7	+4.4
KBTR	**Krutoberegovo**	**8.15**	**24**	*e*P	Pn	14 38 14.6	+4.2

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*IDC **06** 14:38:50.6±3.0, 14°.93S×167°.66E, h127km±24km, mb4.1/14, mb1 4.2/15, mb1mx4.0/32, mbtmp4.5/15, Error ellipse: s-maj=21.3km s-min=15.9km az=114.0*

*NEIC **06** 14:38:53.2±2.6, 14°.69S±0°.09×167°.46E±0°.10, h151km±7km, mb4.4/19, Error ellipse: s-maj=17.1km s-min=8.5km az=135.0*

ISC 06 14:38:53.3±0.5, **14°.76S**±0°.06×**167°.52E**±0°.09, **h150km, n65, σ1s.37**/68, **mb4.3**/19, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**0.75**	**204**		**Pn**	**14 39 15.8**	**-0.4**
DZM	**Mont Dzumac**	**7.35**	**188**	P	**Pn**	**14 40 39.6**	**+1.4**
	3.1nm,0.3s,baz=59,slow=10.0,SNR=23						
DZM				S	**Sn**	**14 41 59.6**	**-0.8**
	baz=306,slow=22,SNR=2.1						
DZM	**Mont Dzumac**	**7.35**	**188**	Pn	**Pn**	**14 40 40.0**	**+1.8**
HNR	**Honiara**	**9.10**	**305**	P	**Pn**	**14 41 03.6**	**+2.1**
	3.7nm,0.3s,baz=18,slow=3.2,SNR=2.8						
HNR				S	**Sn**	**14 42 43.7**	**+1.1**
	7.0nm,0.3s,baz=70,slow=10,SNR=3.1						
HNR	**Honiara**	**9.10**	**305**		**Pn**	**14 40 58.4**	**-3.1**
EIDS	**Eidsvold**	**18.69**	**233**	Pn	**Pn**	**14 43 02.3**	**0.0**
EIDS				IAmb	IAmb	14 43 02.7	
	comp=Z,16nm,0.8s						
PMG	**Port Moresby**	**20.60**	**283**	P	**P**	**14 43 22.0**	**+1.1**
	comp=Z,8.4nm,0.8s,baz=323,slow=1.7,SNR=5.1						
CTAO	**Charters Tower**	**20.97**	**252**	P	**P**	**14 43 24.7**	**-0.1**
CTAO				IAmb	IAmb	14 43 25.9	
	comp=Z,23nm,1.1s						
ARMA	**Armidale**	**21.37**	**220**	P	**P**	**14 43 30.0**	**+0.9**
ARMA				IAmb	IAmb	14 43 31.7	
	comp=Z,15nm,1.0s						
COEN	**Coen**	**23.60**	**269**	P	**P**	**14 43 50.8**	**0.0**
TGRZ	**Tauranga**	**24.16**	**163**	P	P	14 44 05.5	+10
URZ	**Urewera**	**24.90**	**162**	P	**P**	**14 44 00.1**	**-2.2**
	comp=Z,8.1nm,0.8s,baz=289,slow=18,SNR=1.6						
PUZ	**Puketiti**	**25.09**	**160**	P	**P**	**14 44 07.4**	**+3.3**
MWZ	**Matawai**	**25.10**	**161**	P	**P**	**14 44 06.1**	**+1.9**
TWGZ	**Tauwhareparae**	**25.10**	**160**	P	**P**	**14 44 06.2**	**+2.0**
OTVZ	**Oturere**	**25.35**	**165**	P	**P**	**14 44 09.7**	**+3.2**
MTHZ	**Maungataniwha**	**25.37**	**163**	P	**P**	**14 44 07.6**	**+1.0**
BKZ	**Black Stump Fm**	**25.57**	**164**	P	**P**	**14 44 08.7**	**+0.3**
BKZ	**Black Stump Fm**	**25.57**	**164**	P	**P**	**14 44 08.7**	**+0.3**
NMHZ	**Naumai**	**25.59**	**163**	P	**P**	**14 44 09.7**	**+1.0**
PRGZ	**Paritu Road**	**25.75**	**161**	P	**P**	**14 44 11.2**	**+1.2**
BHHZ	**Black Hill Sta**	**25.76**	**165**	P	**P**	**14 44 11.2**	**+1.1**
KRHZ	**Kereru**	**25.98**	**164**	P	**P**	**14 44 12.3**	**+0.1**
STKA	**Stephens Creek**	**29.16**	**230**	P	**P**	**14 44 41.4**	**+0.9**
	comp=Z,6.7nm,0.5s,baz=41,slow=8.6,SNR=20						
STKA				PcP	**PcP**	**14 47 44.5**	**+0.1**
	comp=Z,2.6nm,0.6s,baz=64,slow=4.1,SNR=6.4						
STKA	**Stephens Creek**	**29.16**	**230**	P	**P**	**14 44 41.3**	**+0.8**
WR0	**Warramunga Arr**	**31.87**	**256**	P	**P**	**14 45 03.0**	**-1.5**
WR0				IAmb	IAmb	14 45 04.4	
	comp=Z,4.3nm,0.9s						
WB0	**Warramunga Arr**	**31.99**	**256**	P	**P**	**14 45 04.3**	**-1.3**
WB0				IAmb	IAmb	14 45 05.4	
	comp=Z,9.9nm,1.1s						
WB2	**Warramunga Arr**	**32.04**	**256**	P	**P**	**14 45 04.6**	**-1.4**
WB2				IAmb	IAmb	14 45 05.2	
	comp=Z,4.8nm,0.9s						
WRAB	**Tennant Creek**	**32.05**	**256**	P	**P**	**14 45 04.4**	**-1.7**
WRAB				IAmb	IAmb	14 45 05.8	
	comp=Z,4.5nm,1.0s						
WRA	**Warramunga Arr**	**32.06**	**256**	P	**P**	**14 45 04.5**	**-1.7**
	comp=Z,1.9nm,0.4s,baz=85,slow=9.1,SNR=34						
WRA	**Warramunga Arr**	**32.06**	**256**	P	**P**	**14 45 04.0**	**-2.2**
AS31	**Alice Springs**	**32.89**	**249**	P	**P**	**14 45 12.1**	**-1.4**
ASAR	**Alice Springs**	**32.89**	**249**	P	**P**	**14 45 12.2**	**-1.3**
	comp=Z,6.3nm,0.5s,baz=80,slow=9.2,SNR=281						
ASAR				PcP	**PcP**	**14 47 54.0**	**-0.6**
	comp=Z,0.7nm,0.6s,baz=70,slow=2.3,SNR=7.5						
ASAR				ScP	**ScP**	**14 51 26.9**	**+2.0**
	comp=Z,1.7nm,1.0s,baz=88,slow=3.5,SNR=9.3						
BBOO	**Buckleboo**	**33.76**	**232**	P	**P**	**14 45 21.2**	**+0.4**
MTN	**Manton Dam**	**35.37**	**269**	P	**P**	**14 45 35.5**	**+0.6**
MTN				IAmb	IAmb	14 45 37.4	
	comp=Z,4.9nm,0.7s						
FORT	**Forrest**	**39.49**	**239**	P	**P**	**14 46 09.1**	**-0.3**
FITZ	**Fitzroy Crossi**	**40.25**	**259**	P	**P**	**14 46 15.2**	**-0.6**
EDFI	**Ende, Flores**	**45.20**	**272**	P	**P**	**14 46 56.2**	**+0.3**
NWAO	**Narrogin (SRO)**	**48.95**	**239**	P	**P**	**14 47 22.8**	**-1.8**
NWAO				IAmb	IAmb	14 47 32.9	
	comp=Z,12nm,0.9s						
MORW	**Morawa**	**49.48**	**244**	P	**P**	**14 47 26.3**	**-2.3**
PETK	**Petropavlovsk-**	**68.11**	**354**	P	**P**	**14 49 38.4**	**+1.6**
	comp=Z,3.6nm,0.8s,baz=148,slow=8.4,SNR=7.2						
PETK	**Petropavlovsk-**	**68.11**	**354**	P	**P**	**14 49 36.6**	**-0.2**
CMAR	**Chiang Mai Arr**	**75.18**	**294**	P	**P**	**14 50 21.6**	**+1.8**
	comp=Z,0.7nm,0.5s,baz=147,slow=4.9,SNR=6.5						
CMAR	**Chiang Mai Arr**	**75.18**	**294**	P	**P**	**14 50 19.9**	**0.0**
QSPA	**South Pole Qui**	**75.27**	**180**	P	**P**	**14 50 19.7**	**0.0**
SEY	**Seymchan**	**78.34**	**353**	P	**P**	**14 50 37.5**	**+0.9**
	comp=Z,2.3nm,0.8s,baz=158,slow=7.0,SNR=8.7						
ULN	**Ulaanbaatar**	**82.30**	**324**	P	**P**	**14 50 58.6**	**+0.3**
ULN				IAmb	IAmb	14 51 01.0	
	comp=Z,4.9nm,1.1s						
SONM	**Songino Array**	**82.66**	**323**	P	**P**	**14 51 01.8**	**+1.7**
	comp=Z,1.5nm,0.5s,baz=146,slow=6.5,SNR=9.6						
ILAR	**Eielson Array**	**86.48**	**18**	P	**P**	**14 51 17.9**	**-0.9**
	comp=Z,1.8nm,0.8s,baz=233,slow=5.7,SNR=16						
SNAA	**Sanae**	**93.53**	**183**	P	**P**	**14 51 50.8**	**-1.1**
VNA3	**Neumayer Olymp**	**94.19**	**181**	P	**P**	**14 51 53.3**	**-1.6**
VNA2	**Neumayer--Watz**	**94.46**	**182**	P	**P**	**14 51 54.6**	**-1.4**
	baz=179,slow=5.1						
VNA1	**Neumayer--Stat**	**94.76**	**181**	P	**P**	**14 51 56.0**	**-1.4**
TXAR	**Lajitas Array**	**96.08**	**61**	P	**P**	**14 52 03.1**	**-1.2**
	comp=Z,0.4nm,0.4s,baz=262,slow=6.3,SNR=3.8						
MKAR	**Makanchi Array**	**97.39**	**316**	P	Pdif	14 52 10.8	+0.9
	comp=Z,1.6nm,0.7s,baz=88,slow=6.6,SNR=19						
YKA	**Yellowknife Ar**	**97.46**	**27**	P	**P**	**14 52 09.2**	**-0.4**
	comp=Z,0.4nm,0.7s,baz=251,slow=4.8,SNR=4.3						
ZALV	**Zalesovo Beam**	**97.56**	**324**	P	Pdif	14 52 10.8	+0.4
	comp=Z,1.4nm,0.6s,baz=105,slow=6.2,SNR=6.6						
ARCES	**ARCESS Array B**	**120.34**	**345**	PKP	**PKPdf**	**14 57 26.0**	**-0.2**
	comp=Z,0.9nm,0.3s,baz=56,slow=1.3,SNR=17						
BOSA	**Boshof**	**123.51**	**220**	PKP	**PKPdf**	**14 57 33.6**	**-0.2**
	comp=Z,1.0nm,0.4s,baz=244,slow=1.8,SNR=5.9						
FINES	**FINESS Array B**	**125.84**	**338**	PKP	**PKiKP**	**14 57 37.2**	**-0.1**
	comp=Z,4.2nm,1.0s,baz=104,slow=3.5,SNR=5.5						
DAVOX	**Davos/Dischmat**	**143.01**	**334**	PKP	**PKPdf**	**14 58 08.1**	**-1.6**
	comp=Z,7.6nm,0.9s,baz=270,slow=3.0,SNR=7.7						
SENIN	**Lac Senin/Sane**	**144.39**	**336**	PKPdf	**PKPdf**	**14 58 12.0**	**-0.1**
KEST	**Kesra**	**151.39**	**321**	PKPbc	**PKiKP**	**14 58 30.9**	**+0.5**
	comp=Z,3.2nm,0.6s,baz=125,slow=3.4,SNR=5.0						
ESDC	**Sonseca Array**	**154.08**	**345**	PKPab	**PKPab**	**14 58 50.5**	**+0.8**
	comp=Z,0.8nm,0.8s,baz=19,slow=4.5,SNR=5.0						
TORD	**Torodi Ar. Bea**	**166.15**	**265**	PKP	**PKPdf**	**14 58 42.2**	**+0.7**
	comp=Z,0.7nm,0.7s,baz=43,slow=1.4,SNR=2.6						
TORD				PKPab	**PKPab**	**14 59 42.8**	**-0.2**
	comp=Z,0.8nm,0.8s,baz=89,slow=3.6,SNR=2.7						

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*KRNET **06** 14:54:19.9±0.1, 39°.56N×74°.78E, mb2.9*

*SOME **06** 14:54:20.5, 39°.85N×74°.97E, h5km*

*NNC **06** 14:54:27.8±2.5, 39°.94N×74°.47E, h0km, mb3.5, mpv3.2, Error ellipse: s-maj=21.3km s-min=16.0km az=151.0*

ISC 06 14:54:22.3±1.7, **39°.59N**±0°.08×**74°.72E**±0°.05, **h10km, n27, σ1s.60**/45, **25C-9D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	**Sufi-Kurgan**	**1.03**	**294**	⇓*i*P	**Pg**	**14 54 40.5**	**-1.6**
	baz=95						
SFK				⇓*i*S	**Sg**	**14 54 55.6**	**+0.1**
	baz=95						
OHH	**Osh**	**1.75**	**303**	⇑*i*P	**Pn**	**14 54 53.2**	**+0.4**
	baz=3.0						
OHH				⇑*i*S	**Sb**	**14 55 17.7**	**+1.0**
	baz=3.0						
ARSB	**Arslanbob**	**2.18**	**323**	⇓*e*P	**Pn**	**14 54 59.5**	**+0.8**
	baz=23						
ARSB				⇓*i*S	**Sb**	**14 55 28.4**	**-0.6**
	baz=23						
DRK	**Karamyk**	**2.26**	**268**	⇑*i*P	**Pn**	**14 55 00.7**	**+0.7**
	baz=69						
DRK				⇑*i*S	**Sb**	**14 55 30.5**	**-1.0**
	baz=69						
ARLS	**Aral**	**2.28**	**353**	⇓*i*P	**Pn**	**14 55 00.9**	**+0.7**
	baz=52						
ARLS				⇓*i*S	**Sb**	**14 55 31.0**	**-1.1**
	baz=52						
UCH	**Uchtor**	**2.63**	**357**	⇑*i*P	**Pn**	**14 55 05.8**	**+0.5**
	baz=56						
UCH				⇑*i*S	**Sn**	**14 55 39.3**	**+1.8**
	baz=56						
AML	**Almayashu**	**2.65**	**343**	⇑*i*P	**Pn**	**14 55 06.1**	**+0.6**
	baz=43						
AML				⇑*i*S	**Sn**	**14 55 40.1**	**+2.2**
	baz=43						
ULHL	**Ulahol**	**2.89**	**23**	⇓*e*P	**Pn**	**14 55 08.8**	**+0.3**
	baz=22						
ULHL				⇓*e*S	**Sn**	**14 55 44.8**	**+1.3**
	baz=22						
BTK	**Batken**	**3.04**	**280**	⇑*e*P	**Pn**	**14 55 11.3**	**+0.8**
	baz=80						
BTK				⇑*i*S	**Sn**	**14 55 49.2**	**+2.2**
	baz=80						
AAK	**Ala-Archa**	**3.04**	**357**	⇑*i*P	**Pn**	**14 55 11.2**	**+0.5**
	baz=56						
AAK				⇑*i*S	**Sn**	**14 55 48.8**	**+1.6**
	baz=56						
AAK	**Ala-Archa**	**3.04**	**357**	⇑Pn	**Pn**	**14 55 12.3**	**+1.7**
	4.5nm,0.6s						
AAK				⇓Lg	Lg	14 55 54.6	
	4.2nm,0.6s						
KBK	**Karagaybulak**	**3.06**	**3**	⇑*i*P	**Pn**	**14 55 11.6**	**+0.7**
	baz=2.0						
KBK				⇑*i*S	**Sn**	**14 55 49.4**	**+1.7**
	baz=2.0						
EKS2	**Erkin-Say**	**3.15**	**347**	⇑*i*P	**Pn**	**14 55 12.6**	**+0.6**
	baz=47						
EKS2				⇑*i*S	**Sn**	**14 55 51.5**	**+1.8**
	baz=47						
MNAS	**Manas**	**3.34**	**331**	⇑*i*P	**Pn**	**14 55 15.5**	**+0.8**
	baz=30						
MNAS				⇑*i*S	**Sn**	**14 55 55.4**	**+0.9**
	baz=30						
MRKS	**Merke**	**3.34**	**341**	*e*P	**Pb**	**14 55 20.4**	**-1.3**
	3.3nm,0.2s						
MRKS				*e*S	**Sb**	**14 56 01.2**	**-1.3**
	3.8nm,1.1s						
MRKS	**Merke**	**3.34**	**341**	Pg	**Pb**	**14 55 22.4**	**+0.7**
	3.3nm,0.2s						
MRKS				Lg	Lg	14 56 01.1	
	3.8nm,1.1s						
TRKS	**Terek-Say**	**3.34**	**306**	⇑*i*P	**Pn**	**14 55 15.0**	**+0.2**
	baz=6.0						
TRKS				⇑*i*S	**Sn**	**14 55 55.1**	**+0.5**
	baz=6.0						
TKM2	**Tokmak 2**	**3.39**	**11**	⇑*e*P	**Pn**	**14 55 15.9**	**+0.5**
	baz=10.0						
TKM2				⇑*i*S	**Sn**	**14 55 56.8**	**+1.0**
	baz=10.0						
TKM2	**Tokmak 2**	**3.39**	**11**	⇑Pn	**Pn**	**14 55 16.7**	**+1.2**
	2.1nm,0.4s						
TKM2				⇑Lg	Lg	14 56 01.4	
	3.9nm,0.5s						
KST	**Kastek**	**3.57**	**15**	*e*P	**Pn**	**14 55 21.7**	**+3.8**
	1.7nm,0.4s						
KST				*e*S	**Sn**	**14 56 04.2**	**+4.1**
	4.5nm,0.7s						
IZV	**Izvestkoviy**	**3.72**	**22**	Pg	**Pg**	**14 55 32.4**	**-1.2**
	2.2nm,0.2s						
IZV				Lg	Lg	14 56 17.9	
	4.5nm,0.4s						
DGS	**Degeres**	**3.73**	**12**	*e*P	**Pb**	**14 55 25.0**	**-3.3**
	2.9nm,0.8s						
DGS				*e*S	**Sb**	**14 56 11.0**	**-2.5**
	4.7nm,0.6s						
DGS	**Degeres**	**3.73**	**12**	Pg	**Pg**	**14 55 32.6**	**-1.1**
	3.1nm,0.4s						
DGS				Lg	Lg	14 56 18.1	
	4.7nm,0.6s						
TNSS	**Tian-Shan**	**3.83**	**25**	Pg	**Pg**	**14 55 34.3**	**-1.3**
	2.1nm,0.3s						
TNSS				Lg	Lg	14 56 21.3	
	1.4nm,0.5s						
KOTS	**Kotyrbulak**	**4.06**	**26**	Pg	**Pg**	**14 55 38.1**	**-1.8**
	2.7nm,0.3s						
KOTS				Lg	Lg	14 56 27.6	
	16nm,0.7s						
KRBS	**Karabastau**	**4.16**	**10**	Pg	**Pb**	**14 55 37.7**	**+2.1**
	2.2nm,0.5s						
KTBS	**Karatobe**	**4.37**	**19**	Pg	**Pg**	**14 55 44.4**	**-1.5**
	1.2nm,0.3s						
KTBS				Lg	Lg	14 56 38.5	
	5.5nm,0.4s						

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*DSN **06** 14:55:15.8±1.2, 26°.66N×56°.07E, h10km, ML3.2/10, Error ellipse: s-maj=22.1km s-min=6.5km az=66.0*

*OMAN **06** 14:55:17.8±9.1, 26°.61N×56°.03E, h10km, mb4.4/1, ml3.0/14, Error ellipse: s-maj=681.2km s-min=301.0km az=230.0*

ISC 06 14:55:16.7±3.3, **26°.6N**±0°.1×**56°.02E**±0°.09, **h5**km±15km, **n27, σ1s.03**/32, **Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHME	**Shamm**	**0.56**	**168**	*e*P	**Pg**	**14 55 26.4**	**-1.1**
	SNR=30						
SHME				S	**Sb**	**14 55 36.3**	**-1.0**
SHME	**Shamm**	**0.56**	**168**	P	**Pg**	**14 55 26.6**	**-0.8**
	SNR=30						
BANOM	**Banah**	**0.72**	**159**	*e*P	**Pg**	**14 55 30.0**	**-0.5**
	SNR=64						
BANOM				S	**Sb**	**14 55 41.9**	**0.0**
BANOM	**Banah**	**0.72**	**159**	P	**Pb**	**14 55 30.9**	**-0.9**
	SNR=57						
BANOM				S	**Sb**	**14 55 42.0**	**0.0**
	SNR=6.3						
MASF	**Masafi**	**1.23**	**174**	P	**Pg**	**14 55 40.6**	**+0.3**
	SNR=33						
MASF				S	**Sg**	**14 55 58.8**	**+2.5**
MSFE	**Esma-Masafi**	**1.24**	**174**	*e*P	**Pb**	**14 55 40.5**	**-0.2**
	SNR=33						
MDH	**Madha**	**1.32**	**169**	*e*P	**Pn**	**14 55 41.0**	**-0.8**
	SNR=11						
MDH	**Madha**	**1.32**	**169**	P	**Pb**	**14 55 41.4**	**-0.6**
	SNR=10						
NAZ	**Nazwa, Dubai**	**1.64**	**191**	P	**Pb**	**14 55 46.7**	**-0.7**
NAZ	**Nazwa, Dubai**	**1.64**	**191**	P	**Pb**	**14 55 47.0**	**-0.4**
UOSS	**Minazif**	**1.66**	**174**	*e*P	**Pb**	**14 55 46.6**	**-1.1**
	SNR=24						
UOSS	**Minazif**	**1.66**	**174**	P	**Pn**	**14 55 46.1**	**-0.3**
UOSS				S	**Sg**	**14 56 10.2**	**+0.3**
HATD	**Hatta, Dubai**	**1.77**	**177**	*e*P	**Pb**	**14 55 49.0**	**-0.7**
	SNR=16						
HATD	**Hatta, Dubai**	**1.77**	**177**	P	**Pb**	**14 55 49.9**	**+0.3**
FAQ	**Al Faqa, Dubai**	**1.89**	**192**	P	**Pn**	**14 55 48.4**	**-1.1**
FAQ	**Al Faqa, Dubai**	**1.89**	**192**	P	**Pb**	**14 55 52.3**	**+0.6**
ASHO	**Ashiyiah**	**1.91**	**179**	P	**Pb**	**14 55 50.4**	**-1.7**
ASUD	**Al Ashush, Dub**	**2.06**	**198**	*e*P	**Pn**	**14 55 53.0**	**+1.0**
	SNR=8.1						
ASUD	**Al Ashush, Dub**	**2.06**	**198**	P	**Pn**	**14 55 53.0**	**+1.0**
	SNR=6.6						
SOHO	**SOHO**	**2.50**	**169**	P	**Pn**	**14 55 56.9**	**-1.1**
SOHO	**SOHO**	**2.50**	**169**	P	**Pn**	**14 55 57.9**	**-0.2**
HOQ	**Hoqain**	**3.23**	**158**	P	**Pn**	**14 56 09.1**	**+1.0**
ARQ	**Araqi**	**3.28**	**172**	P	**Pn**	**14 56 09.6**	**+0.8**
SMDO	**Samad**	**3.98**	**152**	P	**Pn**	**14 56 20.3**	**+1.8**
WBK	**Wadi Bani Khal**	**4.80**	**145**	P	**Pn**	**14 56 30.0**	**+0.4**
	SNR=8.6						
JLN	**Jalan Bani Buh**	**5.40**	**144**	P	**Pn**	**14 56 39.5**	**+1.5**
WHFO	**Wadi Hawf**	**8.88**	**194**	P	**Pn**	**14 57 26.4**	**+0.5**
	SNR=7.5						

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*IDC **06** 15:05:32.4±3.0, 0°.65N×124°.15E, h164km±26km, mb2.8/3, mb1 3.2/5, mb1mx3.0/28, mbtmp3.5/5, MS2.8/1, Ms1 2.8/1, ms1mx2.3/14, Error ellipse: s-maj=40.1km s-min=21.6km az=72.0*

*DJA **06** 15:05:33.0±0.6, 0°N±7°×12°4E±°, h149km±7km, M3.7/8, MLv3.7/8*

ISC 06 15:05:32.4±1.0, **0°.6N**±0°.1×**124°.1E**±0°.1, **h162**km±7km, **n12, σ0s.99**/15, **mb3.2**/4, **Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMSI	**Cibinong**	**0.16**	**274**	P	**Pn**	**15 05 53.8**	**-0.2**
KMSI				S	**Sn**	**15 06 09.8**	**-0.7**
GTOI	**Gorontalo**	**1.13**	**274**	P	**Pn**	**15 06 00.6**	**+1.2**
LUWI	**Luwuk**	**2.10**	**221**	P	**Pn**	**15 06 08.6**	**-0.8**
MRSI	**Marisa**	**2.20**	**268**	P	**Pn**	**15 06 09.8**	**-0.8**
APSI	**Ampana**	**2.89**	**240**	P	**Pn**	**15 06 18.9**	**0.0**
MPSI	**Mapaga**	**4.25**	**267**	P	**Pn**	**15 06 37.0**	**+0.8**
SIJI	**Sorong**	**7.27**	**101**	P	**Pn**	**15 07 16.5**	**+0.4**
	1.9nm,0.3s,baz=280,slow=13,SNR=8.6						
FITZ	**Fitzroy Crossi**	**18.60**	**176**	P	**P**	**15 09 37.9**	**+0.4**
	0.2nm,0.3s,baz=351,slow=6.0,SNR=7.9						
WRA	**Warramunga Arr**	**22.70**	**154**	P	**P**	**15 10 20.8**	**+0.3**
	0.4nm,0.4s,baz=336,slow=10,SNR=12						
WRA				LR	LR	15 18 48.3	
	comp=Z,26nm,21.1s,baz=140,slow=35						
ASAR	**Alice Springs**	**25.89**	**159**	P	**P**	**15 10 50.3**	**+0.9**
	0.2nm,0.4s,baz=339,slow=11,SNR=15						
ASAR				PcP	**PcP**	**15 14 14.9**	**+0.6**
	0.1nm,0.3s,baz=348,slow=2.0,SNR=4.3						
ASAR				ScP	**ScP**	**15 17 36.8**	**-2.1**
	0.3nm,0.7s,baz=328,slow=3.3,SNR=4.1						
NWAO	**Narrogin (SRO)**	**33.94**	**190**	P	**P**	**15 12 00.7**	**+0.5**
	8.3nm,0.8s,baz=0.0,slow=11,SNR=2.5						
MKAR	**Makanchi Array**	**58.74**	**328**	P	**P**	**15 15 12.5**	**-0.8**
	0.1nm,0.3s,baz=127,slow=9.2,SNR=4.1						

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*TUL **06** 15:31:08.5±0.7, 35°.55N±0°.03×96°.76W±0°.02, h5km±7km, ML3.1, mb_Lg2.9/45(NEIC), Error ellipse: s-maj=4.3km s-min=1.8km az=157.0*

*ANF **06** 15:31:08.4±0.6, 35°.59N×96°.77W, h1km±5km, ML3.8/10, Error ellipse: s-maj=7.6km s-min=3.4km az=170.0*

*NEIC **06** 15:31:09.1±1.4, 35°.57N±0°.03×96°.77W±0°.03, h8km±7km, Error ellipse: s-maj=5.6km s-min=2.2km az=147.0*

ISC 06 15:31:08.4±1.2, **35°.57N**±0°.03×**96°.76W**±0°.02, **h2**km±10km, **n59, σ0s.57**/50, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK011	**Prague**	**0.10**	**144**		**Pg**	**15 31 10.7**	**+0.3**
OK011				Sg	**Sg**	**15 31 12.1**	**+0.4**
OK030	**Cody Creek RV**	**0.36**	**357**		**Pb**	**15 31 16.5**	**-1.1**
OK031	**S. Brethren Rd**	**0.39**	**351**		**Pb**	**15 31 17.0**	**-1.1**
W35A	**Tecumseh**	**0.42**	**193**		**Pg**	**15 31 16.4**	**-0.1**
OK025	**Westminster Rd**	**0.47**	**272**		**Pg**	**15 31 17.7**	**+0.3**
OKCSW	**OKLAHOMA CITY**	**0.58**	**254**		**Pg**	**15 31 19.6**	**+0.2**
OKCFA	**Oklahoma City**	**0.58**	**255**		**Pg**	**15 31 19.7**	**+0.1**
QUOK	**Quay**	**0.60**	**4**		**Pg**	**15 31 20.7**	**+0.7**
QUOK				Sg	**Sb**	**15 31 29.6**	**-1.1**
FNO	**Franklin**	**0.61**	**240**		**Pg**	**15 31 20.5**	**+0.5**
OK029	**Liberty Lake**	**0.61**	**292**		**Pg**	**15 31 20.6**	**+0.5**
BCOK	**Bluff Creek, N**	**0.70**	**278**		**Pg**	**15 31 21.6**	**-0.2**
BCOK				Sg	**Sg**	**15 31 31.9**	**+1.0**
TUL1	**Leonard**	**0.86**	**66**	P	**Pg**	**15 31 24.9**	**0.0**
	baz=246						
TUL1				S	**Sg**	**15 31 36.2**	**+0.1**
	baz=246						
TUL1	**Leonard**	**0.86**	**66**		**Pg**	**15 31 24.9**	**0.0**
TUL1	**Leonard**	**0.86**	**66**	P		15 31 24.9	
	baz=246,SNR=78						
TUL1				S		15 31 36.2	
	baz=246						
T35A	**Sooner Cattle**	**1.36**	**8**		**Pn**	**15 31 33.6**	**-0.8**
T35B	**Sooner Cattle**	**1.36**	**8**	P		15 31 33.6	
	baz=188,SNR=60						
T35B				S		15 31 52.8	
	baz=188						
CROK	**Carrier**	**1.36**	**314**		**Pn**	**15 31 33.9**	**-0.6**
X37A	**Clayton**	**1.50**	**130**	Pn	**Pn**	**15 31 35.9**	**-0.4**
X37A				IAmb_Lg		15 31 55.4	
	comp=Z,50nm,1.2s						
X37A	**Clayton**	**1.50**	**130**	P		15 31 36.0	
	baz=311						
X37A				S		15 31 56.3	
	baz=311						
KAN14	**Manchester OK**	**1.69**	**325**		**Pn**	**15 31 39.1**	**+0.1**
KAN01	**Argonia South**	**1.78**	**333**		**Pn**	**15 31 40.5**	**+0.4**
KAN05	**Bluff City Nor**	**1.78**	**330**		**Pb**	**15 31 40.7**	**-1.1**
WMOK	**Wichita Mounta**	**1.85**	**244**	P	**Pn**	**15 31 41.2**	**0.0**
	baz=63						
WMOK				S	**Sb**	**15 32 06.4**	**-0.2**
	baz=63						
WMOK	**Wichita Mounta**	**1.85**	**244**		**Pn**	**15 31 41.1**	**-0.1**
WMOK				IAmb_Lg		15 32 11.7	
	comp=Z,52nm,0.8s						
WMOK	**Wichita Mounta**	**1.85**	**244**	P		15 31 41.0	
	baz=63,SNR=131						
WMOK				S		15 32 06.4	
	baz=63						
KS21	**Milan North St**	**1.86**	**337**	IAmb_Lg		15 32 10.8	
	comp=Z,66nm,0.8s						
KAN10	**Anthony SW Sta**	**1.89**	**326**		**Pn**	**15 31 42.0**	**+0.3**
KAN08	**Anthony NE Sta**	**1.92**	**330**		**Pn**	**15 31 42.5**	**+0.3**
U32A	**Winter Ranch,**	**1.99**	**295**	Pn	**Pn**	**15 31 43.5**	**+0.3**
U32A	**Winter Ranch,**	**1.99**	**295**	P		15 31 42.9	
	baz=114						
U32A				S		15 32 11.8	
	baz=114						
KAN12	**Harper NE Stat**	**1.99**	**330**		**Pn**	**15 31 43.6**	**+0.4**
U38A	**Gravette**	**2.11**	**65**		**Pn**	**15 31 45.5**	**+0.7**
U38A	**Gravette**	**2.11**	**65**	P		15 31 45.5	
	baz=246,SNR=23						
Z35A	**Perchaven, San**	**2.27**	**190**	Pn	**Pn**	**15 31 47.3**	**+0.4**
Z35A	**Perchaven, San**	**2.27**	**190**	P		15 31 47.4	
	baz=10						
Z35A				S		15 32 17.2	
	baz=10						
HHAR	**Hobbs**	**2.40**	**72**		**Pn**	**15 31 48.9**	**+0.2**
W39A	**Magazine**	**2.46**	**98**	P	**Pn**	**15 31 49.5**	**0.0**
	baz=279						
W39A				S	**Sn**	**15 32 20.8**	**+0.7**
	baz=279						
W39A	**Magazine**	**2.46**	**98**	IAmb_Lg		15 32 31.9	
	comp=Z,55nm,0.9s						
W39A	**Magazine**	**2.46**	**98**	P		15 31 49.5	
	baz=279						
MIAR	**Mount Ida**	**2.80**	**110**	P	**Pn**	**15 31 55.1**	**+0.8**
	baz=292						
MIAR				S	**Sn**	**15 32 29.3**	**+0.7**
	baz=292						
MIAR	**Mount Ida**	**2.80**	**110**	P		15 31 55.0	
	baz=292,SNR=12						
U40A	**Yellville**	**3.27**	**75**	P	**Pn**	**15 32 00.7**	**+0.1**
	baz=257						
U40A				S	**Sn**	**15 32 40.7**	**+0.6**
	baz=257						
U40A	**Yellville**	**3.27**	**75**		**Pn**	**15 32 00.6**	**0.0**
U40A	**Yellville**	**3.27**	**75**	P		15 32 00.5	
	baz=257,SNR=14						
U40A				P		15 32 00.5	
	baz=257,SNR=14						
X40A	**Basin Creek Fa**	**3.40**	**107**	IAmb_Lg		15 32 56.9	
	comp=Z,26nm,0.8s						
S39A	**Bolivar**	**3.48**	**52**		**Pn**	**15 32 04.4**	**+0.8**
S39A				IAmb_Lg		15 33 08.7	
	comp=Z,22nm,0.7s						
S39A	**Bolivar**	**3.48**	**52**	P		15 32 04.2	
	baz=233,SNR=16						
S39A				S		15 32 46.3	
	baz=233						
KSU1	**Kansas State U**	**3.53**	**2**	P	**Pn**	**15 32 04.3**	**+0.1**
	baz=182						
KSU1				S	**Sn**	**15 32 48.0**	**+1.4**
	baz=182						
KSU1	**Kansas State U**	**3.53**	**2**	IAmb_Lg		15 33 03.1	
	comp=Z,19nm,0.7s						
WLAR	**White Oak Lake**	**3.54**	**121**	IAmb_Lg		15 33 10.1	
	comp=Z,35nm,0.8s						
WHTX	**Lake Whitney,**	**3.61**	**189**	S	**Sn**	**15 32 49.0**	**+0.4**
	baz=9.1						
WHAR	**Wooly Hollow**	**3.66**	**93**		**Pn**	**15 32 06.4**	**+0.4**
WHAR				IAmb_Lg		15 33 05.8	
	comp=Z,29nm,1.0s						
W41B	**Gary Mavity, V**	**3.71**	**95**	P	**Pn**	**15 32 06.5**	**-0.2**
	baz=277						
W41B	**Gary Mavity, V**	**3.71**	**95**	P		15 32 07.0	
	baz=277,SNR=10						
FCAR	**Ozark Folk Cen**	**3.79**	**84**		**Pn**	**15 32 07.6**	**-0.2**
ABTX	**Abilene, Hawle**	**3.79**	**220**	P	**Pn**	**15 32 07.5**	**-0.3**
	baz=38						
ABTX	**Abilene, Hawle**	**3.79**	**220**	IAmb_Lg		15 33 07.1	
	comp=Z,21nm,0.8s						
MGMO	**Mountain Grove**	**3.96**	**65**	IAmb_Lg		15 33 20.0	
	comp=Z,22nm,0.8s						
CBKS	**Cedar Bluff**	**4.02**	**325**	P	**Pn**	**15 32 11.3**	**+0.3**
	baz=143						
AMTX	**Amarillo**	**4.09**	**262**	IAmb_Lg		15 33 30.1	
	comp=Z,33nm,0.8s						

R40A	**Maddies Statio** comp=Z,20nm,0.8s	**4.51**	**52**	IAmb_Lg		15 33 30.2	
P38A	**Dawn** comp=Z,26nm,0.8s	**4.79**	**31**	IAmb_Lg		15 33 51.0	
T42A	**Van Buren** comp=Z,14nm,0.7s	**4.80**	**71**	IAmb_Lg		15 33 51.7	
435B	**Jarrell** comp=Z,25nm,1.1s	**4.82**	**188**	IAmb_Lg		15 33 42.7	
MSTX	**Muleshoe** comp=Z,13nm,1.1s	**5.20**	**254**	IAmb_Lg		15 33 59.0	
PBMO	**Poplar Bluff** comp=Z,20nm,0.8s	**5.26**	**75**	IAmb_Lg		15 34 05.5	
N35A	**Tabor**	**5.36**	**9**	Pn	**Pn**	**15 32 29.4**	**0.0**
N35A	**Tabor** baz=190	**5.36**	**9**	P		15 32 29.4	
FVM	**French Village** comp=Z,18nm,0.8s	**5.63**	**63**	IAmb_Lg		15 34 14.3	
S44A	**Carbondale** comp=Z,22nm,0.8s	**6.40**	**68**	IAmb_Lg		15 34 34.2	
SIUC	**Southern Illin** comp=Z,25nm,0.8s	**6.43**	**68**	IAmb_Lg		15 34 32.9	
Q44A	**Meyer Farm, Va** comp=Z,21nm,0.7s	**7.02**	**59**	IAmb_Lg		15 35 03.5	

IDC 06 15:33:00.4±3.1**,32°.99S**×**177°.39W,h0**^{km}**,mb3.5**/2**,**
mb1 3.7/3**,mb1mx3.6**/26**,mbtmp3.5**/3**,ML3.7**/1**,Error ellipse: s-maj=75.4km s-min=51.1km az=129.0,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera** 1.4nm,0.3s,baz=270,slow=3.5,SNR=12	**6.91**	**219**	Pn	Pn	15 34 42.3	-0.5
URZ	 1.6nm,0.3s,baz=36,slow=19,SNR=4.7			Sn	Sn	15 35 52.9	-9.2
ASAR	**Alice Springs** 0.4nm,0.7s,baz=111,slow=7.6,SNR=11	**43.55**	**269**	P	P	15 41 05.8	-0.3
WRA	**Warramunga Arr** 0.3nm,0.5s,baz=115,slow=7.6,SNR=8.3	**44.76**	**274**	P	P	15 41 16.1	+0.2
MKAR	**Makanchi Array** 0.1nm,0.6s,baz=81,slow=1.9,SNR=2.5	**119.81**	**309**	PKP	PKPdf	15 51 52.1	-0.2

*KRNET **06** 15:37:34.7±0.1,39°.69N×77°.75E,h27^{km},mb3.8*
*SOME **06** 15:37:39.0,40°.03N×77°.35E,h5^{km}*
*NNC **06** 15:37:40.8±0.7,40°.08N×77°.44E,h0^{km},mb4.1,mpv3.8, Error ellipse: s-maj=5.1km s-min=4.2km az=153.0*
ISC 06 15:37:36.2±1.0**,39°.73N**±0°.05×**77°.62E**±0°.04**,h10**^{km}**,n88,**
σ**1**^{s}**.74**/132**,33C-13D,Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDJ	**Kajisay** baz=50	**2.42**	**352**	⇑*e*P	**Pn**	**15 38 16.0**	**0.0**
KDJ	 baz=50			⇑*i*S	**Sn**	**15 38 46.7**	**+0.9**
ULHL	**Ulahol** baz=36	**2.72**	**338**	⇓*i*P	**Pn**	**15 38 20.8**	**+0.7**
ULHL	 baz=36			⇓*i*S	**Sn**	**15 38 54.4**	**+1.2**
ULHL	**Ulahol** SNR=40	**2.72**	**338**	P	**Pn**	**15 38 21.2**	**+1.1**
ANVS	**Anan'yevo** baz=59	**3.05**	**1**	⇓*i*P	**Pn**	**15 38 25.1**	**+0.5**
ANVS	 baz=59			⇓*i*S	**Sn**	**15 39 00.8**	**-0.5**
ARLS	**Aral** baz=11	**3.29**	**311**	⇑*e*P	**Pn**	**15 38 28.4**	**+0.6**
ARLS	 baz=11			⇑*i*S	**Sn**	**15 39 07.9**	**+0.8**
TNSS	**Tian-Shan** 50nm,0.4s	**3.34**	**351**	*e*P	**Pb**	**15 38 35.3**	**-0.5**
TNSS	 83nm,0.7s			*e*S	**Sb**	**15 39 15.8**	**-0.8**
TNSS	**Tian-Shan** 50nm,0.4s	**3.34**	**351**	Pg	**Pb**	**15 38 35.3**	**-0.5**
TNSS	 83nm,0.7s			Lg	Lg	15 39 15.8	
SATY	**Saty** 15nm,0.5s	**3.38**	**10**	*e*P	**Pb**	**15 38 37.2**	**+1.1**
SATY	 74nm,0.3s			*e*S	**Sb**	**15 39 18.9**	**+1.6**
SATY	**Saty** 15nm,0.5s	**3.38**	**10**	Pg	**Pb**	**15 38 37.2**	**+1.1**
SATY	 74nm,0.3s			Lg	Lg	15 39 18.9	
IZV	**Izvestkoviy** 23nm,0.3s	**3.39**	**347**	*e*P	**Pb**	**15 38 36.0**	**-0.4**
IZV	 184nm,0.4s			*e*S	**Sb**	**15 39 17.1**	**-0.6**
IZV	**Izvestkoviy** 23nm,0.3s	**3.39**	**347**	Pg	**Pb**	**15 38 36.0**	**-0.4**
IZV	 184nm,0.4s			Lg	Lg	15 39 17.1	
UCH	**Uchtor** baz=17	**3.43**	**318**	⇓*e*P	**Pn**	**15 38 30.7**	**+0.6**
UCH	 baz=17			⇓*i*S	**Sn**	**15 39 11.9**	**+0.9**
UCH	**Uchtor** SNR=28	**3.43**	**318**	P	**Pn**	**15 38 30.9**	**+0.8**
MDOK	**Medeo** 27nm,0.4s	**3.46**	**353**	*e*P	**Pb**	**15 38 37.8**	**+0.3**
MDOK	 94nm,0.5s			*e*S	**Sb**	**15 39 19.9**	**+0.3**
MDOK	**Medeo** 5.0nm,0.4s	**3.46**	**353**	⇑Pn	**Pn**	**15 38 31.1**	**+0.9**
MDOK	 45nm,0.8s			⇑Pg	**Pb**	**15 38 38.0**	**+0.5**
MDOK	 78nm,0.4s			⇑Lg	Lg	15 39 17.3	
MDOK	**Medeo** 27nm,0.4s	**3.46**	**353**	Pg	**Pb**	**15 38 37.8**	**+0.3**
MDOK	 94nm,0.5s			Lg	Lg	15 39 19.9	
MTBS	**Maitube** 10nm,0.3s	**3.51**	**346**	*e*P	**Pb**	**15 38 38.2**	**-0.2**
MTBS	 63nm,0.3s			*e*S	**Sb**	**15 39 20.8**	**-0.5**
MTBS	**Maitube** 10nm,0.3s	**3.51**	**346**	Pg	**Pb**	**15 38 38.2**	**-0.2**
MTBS	 63nm,0.3s			Lg	Lg	15 39 20.7	
AAA	**Alma-Ata** 56nm,0.3s	**3.52**	**352**	*e*P	**Pb**	**15 38 39.2**	**+0.7**
AAA	 135nm,0.3s			*e*S	**Sb**	**15 39 22.3**	**+1.1**
AAA	**Alma-Ata** 56nm,0.3s	**3.52**	**352**	Pg	**Pb**	**15 38 39.2**	**+0.7**
AAA	 135nm,0.3s			Lg	Lg	15 39 22.3	
KNDC	**Almaty** 74nm,0.7s	**3.52**	**352**	⇑Pg	**Pg**	**15 38 40.6**	**-3.0**
KNDC	 305nm,0.6s			⇓Lg	Lg	15 39 22.0	
KOTS	**Kotyrbulak** 64nm,0.3s	**3.52**	**354**	*e*P	**Pb**	**15 38 39.3**	**+0.6**
KOTS	 174nm,0.7s			*e*S	**Sb**	**15 39 22.1**	**+0.5**
KOTS	**Kotyrbulak** 64nm,0.3s	**3.52**	**354**	Pg	**Pb**	**15 38 39.3**	**+0.6**
KOTS	 174nm,0.7s			Lg	Lg	15 39 22.1	
TKM2	**Tokmak 2** baz=34	**3.53**	**335**	⇓*i*P	**Pn**	**15 38 32.3**	**+1.0**
TKM2	 baz=34			⇓*i*S	**Sn**	**15 39 14.4**	**+1.2**
TKM2	**Tokmak 2** SNR=30	**3.53**	**335**	P	**Pn**	**15 38 32.5**	**+1.2**
TKM2	**Tokmak 2** 6.3nm,0.5s	**3.53**	**335**	⇑Pn	**Pn**	**15 38 32.0**	**+0.7**
TKM2	 66nm,0.7s			⇑Lg	Lg	15 39 21.5	
KST	**Kastek** 22nm,0.4s	**3.54**	**340**	*e*P	**Pb**	**15 38 39.0**	**+0.1**
KST	 71nm,0.6s			*e*S	**Sb**	**15 39 22.0**	**0.0**
KST	**Kastek** 22nm,0.4s	**3.54**	**340**	Pg	**Pb**	**15 38 39.0**	**+0.1**
KST	 71nm,0.6s			Lg	Lg	15 39 22.0	
KBK	**Karagaybulak** baz=25	**3.55**	**326**	⇓*e*P	**Pn**	**15 38 32.5**	**+1.0**
KBK	 baz=25			⇓*i*S	**Sn**	**15 39 14.8**	**+1.2**
KBK	**Karagaybulak** SNR=12	**3.55**	**326**	P	**Pn**	**15 38 32.8**	**+1.3**
UZB	**Uzynbulak** 20nm,0.5s	**3.57**	**17**	*e*P	**Pb**	**15 38 40.8**	**+1.2**
UZB	 51nm,0.8s			*e*S	**Sb**	**15 39 25.2**	**+2.2**
UZB	**Uzynbulak** 20nm,0.5s	**3.57**	**17**	Pg	**Pb**	**15 38 40.8**	**+1.2**
UZB	 51nm,0.8s			Lg	Lg	15 39 25.2	
SHLS	**Shalkode** 24nm,0.4s	**3.69**	**21**	*e*P	**Pg**	**15 38 46.4**	**-0.5**
SHLS	 107nm,0.8s			*e*S	**Sg**	**15 39 34.6**	**-0.1**
SHLS	**Shalkode** 24nm,0.4s	**3.69**	**21**	Pg	**Pg**	**15 38 46.4**	**-0.5**
SHLS	 107nm,0.8s			Lg	Lg	15 39 34.7	
AAK	**Ala-Archa** baz=21	**3.74**	**322**	⇑*e*P	**Pn**	**15 38 34.9**	**+0.8**
AAK	 baz=21			⇑*i*S	**Sn**	**15 39 19.4**	**+1.1**
AAK	**Ala-Archa** SNR=14	**3.74**	**322**	P	**Pn**	**15 38 35.2**	**+1.1**
AAK	**Ala-Archa** 3.9nm,0.5s	**3.74**	**322**	⇑Pn	**Pn**	**15 38 35.3**	**+1.1**
AAK	 20nm,0.7s			⇓Pg	**Pb**	**15 38 41.9**	**-0.5**
AAK	 83nm,0.5s			⇑Lg	Lg	15 39 28.0	
DGS	**Degeres** 22nm,0.6s	**3.77**	**339**	*e*P	**Pb**	**15 38 42.8**	**-0.1**
DGS	 73nm,0.6s			*e*S	**Sb**	**15 39 28.5**	**-0.3**
DGS	**Degeres** 22nm,0.6s	**3.77**	**339**	Pg	**Pb**	**15 38 42.8**	**-0.1**
DGS	 73nm,0.6s			Lg	Lg	15 39 28.5	
KURS	**Kuram** 18nm,0.6s	**3.78**	**6**	*e*P	**Pb**	**15 38 43.8**	**+0.8**
KURS	 44nm,1.0s			*e*S	**Sb**	**15 39 30.2**	**+1.5**
KURS	**Kuram** 18nm,0.6s	**3.78**	**6**	Pg	**Pb**	**15 38 43.8**	**+0.8**
KURS	 44nm,1.0s			Lg	Lg	15 39 30.2	
KPKS	**Kokpek** 40nm,0.4s	**3.82**	**12**	*e*P	**Pb**	**15 38 44.9**	**+1.3**
KPKS	 75nm,0.5s			*e*S	**Sb**	**15 39 32.3**	**+2.3**
AML	**Almayashu** baz=10.0	**3.82**	**310**	⇑*i*P	**Pn**	**15 38 36.3**	**+0.9**
AML	 baz=10.0			⇑*i*S	**Sn**	**15 39 21.0**	**+0.4**
AML	**Almayashu** SNR=31	**3.82**	**310**	P	**Pn**	**15 38 37.0**	**+1.6**
PDGK	**Podgornoye** 7.5nm,0.3s	**3.86**	**21**	Pg	**Pg**	**15 38 46.0**	**-4.1**
PDGK	 29nm,0.6s			Lg	Lg	15 39 33.9	
PDGK	**Podgornoye** 1.6nm,0.5s	**3.86**	**21**	⇑Pn	**Pn**	**15 38 36.6**	**+0.9**
PDGK	 25nm,0.8s			⇓Pg	**Pb**	**15 38 42.9**	**-1.5**
PDGK	 106nm,1.1s			⇑Lg	Lg	15 39 34.1	
ARSB	**Arslanbob** baz=96	**3.88**	**296**	⇑*i*P	**Pn**	**15 38 36.5**	**+0.5**
ARSB	 baz=96			⇑*i*S	**Sn**	**15 39 22.3**	**+0.7**
CHMS	**Chumysh** baz=27	**3.91**	**327**	⇑*i*P	**Pn**	**15 38 37.2**	**+0.8**
CHMS	 baz=27			⇑*i*S	**Sn**	**15 39 23.4**	**+1.0**
CHMS	**Chumysh** SNR=18	**3.91**	**327**	P	**Pn**	**15 38 37.6**	**+1.3**
KTBS	**Karatobe** 8.7nm,0.3s	**4.04**	**350**	*e*P	**Pb**	**15 38 47.9**	**+0.5**
KTBS	 229nm,0.6s			*e*S	**Sb**	**15 39 37.4**	**+1.0**
KTBS	**Karatobe** 8.7nm,0.3s	**4.04**	**350**	Pg	**Pb**	**15 38 47.9**	**+0.5**
KTBS	 229nm,0.6s			Lg	Lg	15 39 37.4	
EKS2	**Erkin-Say** baz=16	**4.12**	**317**	⇑*e*P	**Pn**	**15 38 40.5**	**+1.2**
EKS2	 baz=16			⇑*i*S	**Sn**	**15 39 28.5**	**+0.9**
EKS2	**Erkin-Say** SNR=12	**4.12**	**317**	P	**Pn**	**15 38 41.3**	**+2.0**
CHKK	**Chushkaly** 16nm,0.5s	**4.15**	**354**	*e*P	**Pb**	**15 38 50.2**	**+1.0**
CHKK	 92nm,0.4s			*e*S	**Sb**	**15 39 41.2**	**+1.8**
CHKK	**Chushkaly** 16nm,0.5s	**4.15**	**354**	Pg	**Pb**	**15 38 50.2**	**+1.0**
CHKK	 92nm,0.4s			Lg	Lg	15 39 41.2	
KRBS	**Karabastau** 18nm,0.6s	**4.22**	**340**	*e*P	**Pb**	**15 38 51.2**	**+0.7**
KRBS	 48nm,0.4s			*e*S	**Sb**	**15 39 43.3**	**+1.7**
KRBS	**Karabastau** 18nm,0.6s	**4.22**	**340**	Pg	**Pb**	**15 38 51.2**	**+0.7**
KRBS	 48nm,0.4s			Lg	Lg	15 39 43.3	
KTMS	**Ketmen** 7.4nm,0.3s	**4.24**	**28**	*e*P	**Pg**	**15 38 54.7**	**-2.7**
KTMS	 44nm,0.6s			*e*S	**Sg**	**15 39 49.0**	**-3.3**
KTMS	**Ketmen** 7.4nm,0.3s	**4.24**	**28**	Pg	**Pg**	**15 38 54.7**	**-2.7**
USP	**Ospenovka** baz=27	**4.24**	**327**	⇑*i*P	**Pn**	**15 38 41.8**	**+1.0**
USP	 baz=27			⇑*i*S	**Sn**	**15 39 31.2**	**+0.8**
KUU	**Kurty** 12nm,0.9s	**4.27**	**347**	*e*P	**Pb**	**15 38 51.2**	**-0.1**
KUU	 81nm,0.7s			*e*S	**Sb**	**15 39 43.2**	**+0.4**
KUU	**Kurty** 12nm,0.9s	**4.27**	**347**	Pg	**Pb**	**15 38 51.2**	**-0.1**
KUU	 81nm,0.7s			Lg	Lg	15 39 43.2	
SGDS	**Sogindy** 22nm,0.5s	**4.34**	**330**	Pg	**Pb**	**15 38 53.1**	**+0.6**
SGDS	 41nm,0.6s			Lg	Lg	15 39 46.1	
MNBS	**Baschi** 15nm,0.6s	**4.38**	**7**	*e*P	**Pb**	**15 38 54.9**	**+1.6**
MNBS	 76nm,0.5s			*e*S	**Sb**	**15 39 49.4**	**+3.1**
MNBS	**Baschi** 15nm,0.6s	**4.38**	**7**	Pg	**Pb**	**15 38 54.9**	**+1.6**
MNBS	 76nm,0.5s			Lg	Lg	15 39 49.4	
MRKS	**Merke** 25nm,0.6s	**4.48**	**314**	*e*P	**Pb**	**15 38 55.3**	**+0.4**
MRKS	 20nm,0.4s			*e*S	**Sb**	**15 39 50.0**	**+1.0**
MRKS	**Merke** 25nm,0.6s	**4.48**	**314**	Pg	**Pb**	**15 38 55.3**	**+0.4**
MRKS	 20nm,0.4s			Lg	Lg	15 39 50.0	
ARXS	**Arharly** 10nm,0.4s	**4.48**	**2**	*e*P	**Pb**	**15 38 55.7**	**+0.7**
ARXS	 50nm,0.6s			*e*S	**Sb**	**15 39 50.8**	**+1.8**
ARXS	**Arharly** 10nm,0.4s	**4.48**	**2**	Pg	**Pb**	**15 38 55.7**	**+0.7**
ARXS	 50nm,0.6s			Lg	Lg	15 39 50.8	
DRK	**Karamyk** baz=69	**4.50**	**269**	⇑*i*P	**Pn**	**15 38 46.1**	**+1.4**
DRK	 baz=69			⇑*i*S	**Sn**	**15 39 37.0**	**-0.3**
MNAS	**Manas** baz=7.0	**4.75**	**307**	⇑*i*P	**Pn**	**15 38 49.0**	**+1.1**
MNAS	 baz=7.0			⇑*i*S	**Sn**	**15 39 42.8**	**-0.2**
DJR	**Jarkent** 4.9nm,0.3s	**4.87**	**19**	*e*P	**Pb**	**15 39 04.2**	**+2.6**
DJR	 24nm,0.4s			*e*S	**Sg**	**15 40 05.4**	**-7.2**
DJR	**Jarkent** 4.9nm,0.3s	**4.87**	**19**	Pg	**Pb**	**15 39 04.2**	**+2.6**
DJR	 24nm,0.4s			Lg	Lg	15 40 05.4	
TDK	**Taldyqorghan** 13nm,0.3s	**5.30**	**6**	*e*P	**Pb**	**15 39 11.0**	**+2.2**
TDK	 70nm,0.4s			*e*S	**Sb**	**15 40 17.0**	**+4.4**
TDK	**Taldyqorghan** 13nm,0.3s	**5.30**	**6**	Pg	**Pb**	**15 39 11.0**	**+2.2**
TDK	 70nm,0.4s			Lg	Lg	15 40 17.0	
KAPS	**Kapalarasan** 2.5nm,0.2s	**5.70**	**12**	*e*P	**Pb**	**15 39 18.9**	**+3.3**
KAPS	 15nm,0.8s			*e*S	**Sb**	**15 40 30.6**	**+6.5**
KAPS	**Kapalarasan** 2.5nm,0.2s	**5.70**	**12**	Pg	**Pb**	**15 39 18.9**	**+3.3**
KAPS	 15nm,0.8s			Lg	Lg	15 40 30.6	
BTLS	**Baital** 2.8nm,0.4s	**5.93**	**335**	*e*P	**Pb**	**15 39 22.5**	**+2.9**
BTLS	 15nm,0.9s			*e*S	**Sb**	**15 40 36.7**	**+6.1**
BTLS	**Baital** 2.8nm,0.4s	**5.93**	**335**	Pg	**Pb**	**15 39 22.5**	**+2.9**
BTLS	 15nm,0.9s			Lg	Lg	15 40 36.7	
KK31	**Karatay Array** 0.2nm,0.3s,baz=91,slow=8.4,SNR=4.3	**6.32**	**305**	⇑Pn	**Pn**	**15 39 12.5**	**+3.1**
KK31	 1.7nm,0.5s,baz=128,slow=17,SNR=16			⇑Pg	**Pb**	**15 39 28.0**	**+1.8**
KK31	 18nm,0.8s			⇑Lg	Lg	15 40 49.5	
MK31	**Makanchi Array** 0.1nm,0.3s,baz=196,slow=14,SNR=5.2	**7.84**	**24**	Pn	**Pn**	**15 39 31.5**	**+1.3**
KURK	**Kurchatov**	**11.01**	**3**	Pn	**Pn**	**15 40 11.1**	**-2.5**
DANN	**Dangsing** 8.7nm,0.3s	**12.44**	**154**	*e*P	**Pn**	**15 40 33.2**	**-0.3**
GKN	**Gorkha** 11nm,0.3s	**13.06**	**151**	*e*P	**Pn**	**15 40 42.2**	**+0.3**
DMN	**Daman** 6.9nm,0.5s	**13.59**	**151**	*e*P	**Pn**	**15 40 47.7**	**-1.6**
GUN	**Gumba**	**13.63**	**147**	*e*P	**Pn**	**15 40 50.2**	**+0.3**
PKIN	**Phulchoki** 11nm,0.4s	**13.73**	**150**	*e*P	**Pn**	**15 40 50.5**	**-0.7**
PKI	**Pulchoki** 6.8nm,0.4s	**13.74**	**150**	*e*P	**Pn**	**15 40 50.8**	**-0.6**

*IDC **06** 15:56:27.2±22.0,38°.35N×145°.53E,h0^{km},mb3.3/2, mb1 3.5/3,mb1mx3.2/30,mbtmp3.2/3,ML2.5/1,Error ellipse: s-maj=466.5km s-min=55.5km az=15.0*
*JMA **06** 15:56:41.9±0.2,37°.41N×144°.52E,h41^{km},M3.7*
ISC 06 15:56:39.8±1.4**,37°.39N**±0°.06×**144°.76E**±0°.09**,h35**^{km}**,n23,**
σ**1**^{s}**.86**/33**,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	**Ishinomakikobu**	**2.77**	**290**	P	**Pn**	**15 57 22.6**	**+1.0**
JIKH				*e*S	**Sn**	**15 57 52.6**	**-1.2**
JIO	**Ouri**	**2.90**	**292**	P	**Pn**	**15 57 24.6**	**+1.1**
JIO				*e*S	**Sn**	**15 57 56.3**	**-0.8**
JKMT	**Kesennumamotoy**	**2.96**	**300**	P	**Pn**	**15 57 25.3**	**+1.1**
JKMT				*e*S	**Sn**	**15 57 57.8**	**-0.7**
OFUJ	**Ofunato**	**2.96**	**306**	P	**Pn**	**15 57 25.4**	**+1.1**
JMK	**Ichinoseki**	**3.20**	**300**	P	**Pn**	**15 57 28.9**	**+1.4**
JMK				*e*S	**Sn**	**15 58 04.3**	**-0.1**
JOM	**Ohasama**	**3.43**	**308**	P	**Pn**	**15 57 32.2**	**+1.5**
JFT	**Otama**	**3.52**	**273**	P	**Pn**	**15 57 33.8**	**+1.7**
JFT				*e*S	**Sn**	**15 58 11.8**	**-0.8**
JYK	**Kaneyama**	**3.79**	**295**	P	**Pn**	**15 57 37.8**	**+2.1**
BSO1	**Boso 1**	**4.11**	**229**	P	**Pn**	**15 57 39.0**	**-0.6**
BSO1				*e*S	**Sn**	**15 58 26.0**	**-0.2**
JAH	**Hinai**	**4.26**	**312**	P	**Pn**	**15 57 45.1**	**+2.9**
JAH				*e*S	**Sn**	**15 58 32.2**	**+1.4**
JRY	**Ryogami san**	**4.91**	**256**	P	**Pn**	**15 57 51.3**	**+0.2**
JRY				*e*S	**Sn**	**15 58 43.3**	**-3.3**
JOT	**Ohata**	**4.91**	**325**	P	**Pn**	**15 57 54.0**	**+2.9**
JOD2	**Odawara 2**	**5.05**	**247**	P	**Pn**	**15 57 53.2**	**+0.1**
JOD2				*e*S	**Sn**	**15 58 47.0**	**-3.2**
MJAR	**Matsushiro Arr** 0.1nm,0.3s,baz=71,slow=9.1,SNR=7.8	**5.32**	**263**	Pn	**Pn**	**15 57 58.5**	**+1.8**
JCH	**Churui**	**5.33**	**349**	P	**Pn**	**15 57 57.7**	**+0.9**
JCH				*e*S	**Sn**	**15 58 55.2**	**-1.7**
JKB	**Kayabe**	**5.33**	**328**	P	**Pn**	**15 57 59.7**	**+2.8**
JKB				*e*S	**Sn**	**15 58 56.4**	**-0.6**
NEM2	**Nemuro 2**	**6.01**	**7**	P	**Pn**	**15 58 05.6**	**-0.6**
NEM2				*e*S	**Sn**	**15 59 09.5**	**-4.3**
JTKR	**Abashiri--Toko**	**6.60**	**355**	P	**Pn**	**15 58 15.6**	**+1.3**
JTKR				*e*S	**Sn**	**15 59 25.5**	**-2.8**
H11N2	**WAKE ISLAND Hy** baz=317,slow=74,SNR=17	**26.11**	**126**	T	T	16 29 18.3	
H11N1	**WAKE ISLAND Hy** baz=317,slow=74,SNR=6.2	**26.12**	**126**	T	T	16 29 15.5	
H11N3	**WAKE ISLAND Hy** baz=317,slow=74,SNR=12	**26.13**	**126**	T	T	16 29 16.9	
WRA	**Warramunga Arr** 0.3nm,0.5s,baz=11,slow=7.3,SNR=2.8	**57.87**	**192**	P	**P**	**16 06 28.9**	**+0.8**
ASAR	**Alice Springs** 0.1nm,0.6s,baz=7.1,slow=7.2,SNR=5.3	**61.59**	**191**	P	**P**	**16 06 52.7**	**-1.0**

IDC 06 16:12:08.3±999.0**,55°.37N**×**31°.82E,h0**^{km}**,Error ellipse: s-maj=742.9km s-min=147.3km az=69.0,Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I43RU	**DUBNA INFRASON** baz=248,slow=321	**3.32**	**64**	*i*		16 33 50.0	
I31KZ	**AKTYUBINSK INF** baz=298,slow=312,SNR=1.0	**16.53**	**97**	*i*		17 51 30.0	
I46RU	**ZALESOVO INFRA** baz=296,slow=339,SNR=3.0	**30.08**	**70**	*i*		19 16 10.0	

*AEIC **06** 16:18:05±2.0,52°.0N±0°.1×178°.00E±0°.09,h154^{km}±5^{km}, Error ellipse: s-maj=19.4km s-min=7.5km az=186.0*
*NEIC **06** 16:18:06.6±1.8,51°.9N±0°.2×178°.06E±0°.09,h151^{km}±7^{km}, mb4.5/79,Error ellipse: s-maj=28.2km s-min=7.8km az=186.0*
*IDC **06** 16:18:07.6±2.5,52°.15N×178°.09E,h148^{km}±22^{km}, mb3.8/21,mb1 4.0/24,mb1mx3.9/40,mbtmp4.3/24,Error ellipse: s-maj=18.1km s-min=9.3km az=172.0*
ISC 06 16:18:07.0±0.5**,52°.02N**±0°.09×**178°.10E**±0°.04**,h150**^{km}**,**
n272,σ**1**^{s}**.09**/272**,mb4.4**/63**,Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LSNW	**Little Sitkin**	**0.26**	**100**		**Pn**	**16 18 26.0**	**-1.4**
LSSA	**Little Sitkin**	**0.27**	**105**		**Pn**	**16 18 26.0**	**-1.4**
LSPA	**Little Sitkin**	**0.30**	**102**		**Pn**	**16 18 26.0**	**-1.5**
LSPA					**Sn**	**16 18 42.5**	**-0.6**
CESW	**Semis' Southwe**	**0.91**	**97**		**Pn**	**16 18 29.5**	**-1.5**
CEAP	**Semis' Anvil P**	**0.92**	**90**		**Pn**	**16 18 30.1**	**-0.9**
AMKA	**Amchitka**	**0.99**	**130**	Pn	**Pn**	**16 18 30.0**	**-1.5**
AMKA	**Amchitka**	**0.99**	**130**		**Sn**	**16 18 48.1**	**-2.2**
CERAA	**Semis' Rag'd T**	**0.99**	**96**		**Pn**	**16 18 30.4**	**-1.3**
CERAA					**Sn**	**16 18 48.9**	**-1.5**
SMY	**Shemya**	**2.55**	**288**	Pn	**Pn**	**16 18 46.7**	**-1.9**
SMY	**Shemya**	**2.55**	**288**		**Sn**	**16 19 17.1**	**-3.7**
ADK	**Adak**	**3.23**	**90**	Pn	**Pn**	**16 18 55.6**	**-1.6**
ADK	**Adak**	**3.23**	**90**		**Sn**	**16 19 33.9**	**-2.2**
ATKA	**Atka Island**	**4.75**	**85**	Pn	**Pn**	**16 19 15.1**	**-1.9**
NIKH	**Nikolski High**	**8.02**	**78**		**Pn**	**16 19 59.7**	**-0.8**
OKFG	**Magazine Ridge**	**8.61**	**75**		**Pn**	**16 20 08.4**	**0.0**
MAPS	**Pakushin South**	**9.22**	**73**		**Pn**	**16 20 16.6**	**+0.2**
UNV	**Unalaska Valle**	**9.48**	**73**		**Pn**	**16 20 20.0**	**+0.1**
PEA0B	**Petropavlovsk-**	**12.46**	**283**	Pn	**Pn**	**16 20 59.9**	**+0.9**
PETK	**Petropavlovsk-** 3.1nm,0.3s,baz=92,slow=19,SNR=69	**12.46**	**283**	P	**Pn**	**16 20 59.6**	**+0.7**
PETK	 0.7nm,0.3s,baz=124,slow=19,SNR=4.9			S	**Sn**	**16 23 09.4**	**-7.2**
PETK	**Petropavlovsk-**	**12.46**	**283**	Pn	**Pn**	**16 20 60.0**	**+1.0**
SEY	**Seymchan** 0.1nm,0.3s,baz=120,slow=16,SNR=8.2	**17.48**	**319**	P	**P**	**16 22 00.6**	**+0.4**
TTA	**Tatalina**	**17.55**	**41**	P	**Pn**	**16 22 02.4**	**+0.2**
KDAK	**Kodiak Island** 3.4nm,0.3s,baz=291,slow=4.3,SNR=29	**17.73**	**59**	P	**P**	**16 22 02.1**	**-0.8**
RSO	**Redoubt South**	**18.14**	**51**	P	**Pn**	**16 22 10.0**	**+0.8**
RDOG	**Red Dog Mine**	**18.52**	**23**	P	**Pn**	**16 22 13.8**	**+0.3**
RDOG	 comp=Z,21nm,0.6s			IAmb	IAmb	16 22 17.9	
CNPM	**China Poot**	**18.68**	**54**	P	**P**	**16 22 13.5**	**+0.2**
BRLK	**Bradley Lake**	**18.89**	**54**	P	**P**	**16 22 15.4**	**-0.3**
SKT	**Skwentna**	**19.13**	**47**	P	**Pn**	**16 22 19.4**	**-1.2**
SKT	 comp=Z,20nm,0.6s			IAmb	IAmb	16 22 23.9	
PPLA	**Purkeypile**	**19.14**	**44**	P	**Pn**	**16 22 20.4**	**-0.5**
O22K	**Cooper Landing**	**19.60**	**52**	P	**P**	**16 22 22.7**	**-0.6**

SEW	Seward	19.67	53	P	P	16 22 24.4	+0.4
RC01	Rabbit Creek A	19.72	50	P	P	16 22 24.8	+0.3
	baz=257,SNR=5.7						
CUT	Chulitna	19.82	46	P	P	16 22 26.1	+0.6
	baz=252						
IMAR	Indian Mountai	19.89	35	P	P	16 22 27.5	+1.2
KTH	Kantishna Hill	19.91	43	P	Pn	16 22 28.4	-1.5
PMR	Palmer	20.12	49	P	Pn	16 22 30.5	-1.8
PMR				IAmb	IAmb	16 22 31.9	
	comp=Z,14nm,0.6s						
TRF	Thorofare Moun	20.14	43	P	P	16 22 30.3	+1.0
KNK	Knik Glacier	20.40	50	P	P	16 22 32.0	+0.2
SML	Sawmill	20.54	48	P	P	16 22 33.3	-0.1
MLY	Manley	20.56	39	P	P	16 22 33.8	+0.3
	baz=245,SNR=5.3						
RND	Reindeer	20.74	44	P	P	16 22 36.0	+0.5
RND				IAmb	IAmb	16 22 37.6	
	comp=Z,13nm,0.6s						
MCK	McKinley	20.81	43	P	P	16 22 36.2	0.0
	baz=251,SNR=13						
SCM	Sheep Creek Mo	21.01	49	P	P	16 22 38.4	-0.1
NEA2	Nenana	21.05	41	P	P	16 22 39.0	+0.3
	baz=248,SNR=43						
I23K	Minto, Yukon-K	21.14	39	P	P	16 22 40.2	+0.5
	baz=247,SNR=13						
I23K	Minto, Yukon-K	21.14	39	P	P	16 22 41.2	+1.5
WRH	Wood River Hil	21.40	41	P	P	16 22 41.8	-0.7
WRH				IAmb	IAmb	16 22 45.4	
	comp=Z,12nm,1.0s						
MDM	Murphy Dome	21.52	40	P	P	16 22 44.6	+0.8
CCB	Clear Creek Bu	21.58	41	P	P	16 22 43.8	-0.5
CCB				IAmb	IAmb	16 22 47.3	
	comp=Z,13nm,0.6s						
M24K	Tolsona, Glenn	21.60	48	P	P	16 22 44.7	0.0
	baz=258,SNR=9.3						
M24K	Tolsona, Glenn	21.60	48	P	P	16 22 45.9	+1.2
KLU	Klutina	21.61	50	P	P	16 22 44.9	0.0
KLU				IAmb	IAmb	16 22 50.9	
	comp=Z,20nm,0.6s						
TCOL	CIGO, UAF Yank	21.63	40	P	P	16 22 45.0	+0.1
	baz=249						
COLA	College	21.64	40	P	P	16 22 44.3	-0.6
COLA				IAmb	IAmb	16 22 47.6	
	comp=Z,23nm,0.7s						
COLD	Coldfoot	21.74	34	P	P	16 22 46.4	+0.4
	baz=241						
COLD	Coldfoot	21.74	34	P	P	16 22 47.1	+1.0
HDA	Harding Lake	21.85	42	P	P	16 22 47.2	-0.1
	baz=252,SNR=5.7						
POKR	Poker Plat Res	21.89	40	P	P	16 22 47.8	+0.2
	baz=249,SNR=20						
POKR	Poker Plat Res	21.89	40	P	P	16 22 48.2	+0.6
POKR				IAmb	IAmb	16 22 51.0	
	comp=Z,15nm,0.6s						
IL31		21.99	41	P	P	16 22 47.4	-1.2
IL31				IAmb	IAmb	16 22 49.5	
	comp=Z,6.7nm,0.5s						
ILAR	Eielson Array	21.99	41	P	P	16 22 47.0	-1.7
	comp=Z,4.6nm,0.5s,baz=243,slow=8.6,SNR=63						
ILAR				PcP	PcP	16 26 40.4	-0.3
	comp=Z,0.4nm,0.6s,baz=279,slow=4.0,SNR=4.8						
ILAR				ScP	ScP	16 30 04.3	+0.7
	comp=Z,0.5nm,0.7s,baz=295,slow=3.3,SNR=6.2						
ILAR	Eielson Array	21.99	41	P	P	16 22 47.4	-1.2
PAX	Paxson	22.10	46	P	P	16 22 49.9	0.0
PAX				IAmb	IAmb	16 22 51.6	
	comp=Z,26nm,0.8s						
N25K	Chitina, Valde	22.25	50	P	P	16 22 51.6	+0.3
	baz=261,SNR=9.7						
N25K	Chitina, Valde	22.25	50	P	P	16 22 51.8	+0.4
A21K	Barrow	22.44	21	P	P	16 22 52.5	-0.4
	baz=224,SNR=8.6						
A21K	Barrow	22.44	21	P	P	16 22 52.6	-0.4
A21K				IAmb	IAmb	16 22 54.0	
	comp=Z,19nm,0.6s						
SUCK	Suckling Hills	22.48	54	P	P	16 22 54.5	+0.9
RIDG	Independent Ri	22.56	44	P	P	16 22 53.8	-0.4
GLB	Gilahina Butte	22.60	50	P	P	16 22 55.1	+0.4
GLB				IAmb	IAmb	16 22 56.5	
	comp=Z,19nm,0.6s						
VRDI	Verde Repeater	22.75	51	P	P	16 22 56.6	+0.4
DOT	Dot Lake	22.88	45	P	P	16 22 56.9	-0.3
DOT				IAmb	IAmb	16 22 58.1	
	comp=Z,20nm,0.7s						
MENT	Mentasta	22.88	47	P	P	16 22 58.3	+1.1
MCARA	McCarthy VSAT	22.97	51	P	P	16 22 59.7	+1.6
MCARA				IAmb	IAmb	16 23 02.2	
	comp=Z,16nm,0.6s						
SCRK	Sand Creek	22.98	44	P	P	16 22 57.4	-0.8
	baz=256,SNR=16						
TGL	Tana Glacier	23.00	52	P	P	16 22 59.9	+1.4
FYU	Fort Yukon	23.25	37	P	P	16 23 01.0	+0.6
FYU				IAmb	IAmb	16 23 03.3	
	comp=Z,13nm,0.6s						
BALM	Baldy	23.27	52	P	P	16 23 01.3	+0.4
BALM				IAmb	IAmb	16 23 02.7	
	comp=Z,17nm,1.0s						
BARN	Barnard Glacie	23.60	52	P	P	16 23 04.8	+0.8
CTGM	Chitina Glacie	23.75	52	P	P	16 23 06.0	+0.7
BMAR	Burnt Mountain	23.80	35	P	P	16 23 06.6	+1.0
TABL	Table Mountain	23.82	53	P	P	16 23 06.4	+0.4
EGAK	Eagle	24.36	43	P	P	16 23 11.1	+0.5
EPYK	Eagle Plains	26.48	40	P	P	16 23 30.3	+0.4
	baz=259,SNR=12						
EPYK	Eagle Plains	26.48	40	P	P	16 23 30.1	+0.3
INK	Inuvik	28.06	36	P	P	16 23 44.4	+0.6
	comp=Z,7.2nm,0.4s,baz=258,slow=7.0,SNR=23						
INK	Inuvik	28.06	36	P	P	16 23 44.6	+0.8
INK				IAmb	IAmb	16 23 45.6	
	comp=Z,8.4nm,0.5s						
KLR	Kul'dur	29.15	283	P	P	16 23 54.3	+0.6
	comp=Z,2.5nm,0.4s,baz=68,slow=9.0,SNR=20						
DLBC	Dease Lake	29.62	57	P	P	16 23 59.2	+1.5
	comp=Z,2.2nm,0.6s,baz=174,slow=23,SNR=4.5						
USRK	Ussuriysk Ar.	31.31	274	P	P	16 24 13.3	+0.6
	comp=Z,1.8nm,0.6s,baz=50,slow=5.4,SNR=6.8						
C36M	Paulatuk	31.59	35	P	P	16 24 15.5	+0.6
	baz=267,SNR=7.4						
C36M	Paulatuk	31.59	35	P	P	16 24 15.7	+0.9
H11N2	WAKE ISLAND Hy	33.40	199	T	T	16 59 56.1	
	baz=11,slow=76,SNR=22						
H11N3	WAKE ISLAND Hy	33.41	199	T	T	16 59 52.8	
	baz=11,slow=76,SNR=24						
H11N1	WAKE ISLAND Hy	33.41	199	T	T	16 59 56.2	
	baz=11,slow=76,SNR=27						
H11S1	WAKE ISLAND Hy	34.62	199	T	T	17 01 24.1	
	baz=10,slow=76,SNR=8.8						
H11S3	WAKE ISLAND Hy	34.64	199	T	T	17 01 25.8	
	baz=10,slow=76,SNR=7.8						
H11S2	WAKE ISLAND Hy	34.64	199	T	T	17 01 27.5	
	baz=10,slow=76,SNR=4.9						
YKA	Yellowknife Ar	36.19	47	P	P	16 24 55.8	+1.2
	comp=Z,12nm,0.6s,baz=283,slow=7.7,SNR=174						
G05D	Wamic, OR	39.57	75	P	P	16 25 23.0	-0.2
	baz=302						
RES	Resolute Bay	39.96	24	P	P	16 25 26.9	+1.0
RES				IAmb	IAmb	16 25 27.6	
	comp=Z,5.7nm,0.9s						
NEW	Newport	40.46	69	P	P	16 25 29.6	-1.0
	baz=300						
NEW	Newport	40.46	69	P	P	16 25 30.5	0.0
NEW				IAmb	IAmb	16 25 31.0	
	comp=Z,6.8nm,0.8s						
MOD	Modoc Plateau	42.05	79	P	P	16 25 44.1	+0.4
MOD				IAmb	IAmb	16 25 45.3	
	comp=Z,8.2nm,0.7s						
BMO	Blue Mountains	42.17	73	P	P	16 25 45.1	+0.5
NRIK	Noril'sk	42.87	329	P	P	16 25 49.9	+0.2
	comp=Z,1.0nm,0.3s,baz=61,slow=16,SNR=4.8						
MSO	Missoula	43.05	69	P	P	16 25 50.8	-0.9
	baz=303						
HLID	Hailey	44.61	73	P	P	16 26 04.0	-0.2
	baz=305						
SONM	Songino Array	44.63	294	P	P	16 26 05.3	+1.0
	comp=Z,2.0nm,0.6s,baz=67,slow=8.4,SNR=8.2						
SONM	Songino Array	44.63	294	P	P	16 26 03.1	-1.2
BCYI	Bear Canyon	44.77	72	P	P	16 26 05.4	-0.2
EGMT	Eagleton	44.77	65	P	P	16 26 04.7	-0.7
	baz=303						
MCMT	McKenzie Canyo	44.80	71	P	P	16 26 05.2	-0.6
BOZ	Bozeman (W)	45.07	69	P	P	16 26 07.0	-0.8
	baz=305						
NVAR	Mina Array Bea	45.38	81	P	P	16 26 11.7	+1.3
	comp=Z,2.6nm,0.6s,baz=299,slow=7.8,SNR=9.7						
HHC	Hu-ho-hao-te	45.66	283	*e*P	P	16 26 13.6	+1.2
HHC				pmax	pmax		
	comp=Z,13nm,0.8s						
HHC				pmax	pmax		
	comp=Z,110nm,6.1s						
ELK	Elko	45.80	77	P	P	16 26 13.7	0.0
YHB	Horse Butte	45.80	70	P	P	16 26 13.7	+0.1
YHB				IAmb	IAmb	16 26 14.0	
	comp=Z,6.4nm,0.8s						
H17A	Grant Village	46.37	70	P	P	16 26 17.9	-0.3
	baz=306						
VES	Vestal, Richgr	46.55	85	P	P	16 26 19.0	-0.3
	baz=311						
RLMT	Red Lodge	46.70	68	P	P	16 26 19.5	-1.1
	baz=306						
NJ2	Nanjing	46.88	269	*e*P	P	16 26 21.5	-0.4
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
FCC	Fort Churchill	46.90	45	P	P	16 26 21.9	+0.2
FCC				IAmb	IAmb	16 26 22.8	
	comp=Z,11nm,1.0s						
ISA	Isabella, Lake	47.04	84	P	P	16 26 22.9	-0.3
	baz=311						
MPMC	Manual Prospec	47.39	83	P	P	16 26 25.6	-0.5
	baz=311						
FURC	Furnace Creek,	47.51	82	P	P	16 26 26.1	-0.6
	baz=310						
TPNV	Topopah Spring	47.57	81	P	P	16 26 26.5	-1.0
	baz=310						
TPNV	Topopah Spring	47.57	81	P	P	16 26 26.9	-0.6
TPNV				IAmb	IAmb	16 26 29.4	
	comp=Z,6.7nm,0.8s						
DUG	Dugway, Tooele	47.59	76	P	P	16 26 26.5	-1.1
	baz=308,SNR=6.7						
DUG	Dugway, Tooele	47.59	76	P	P	16 26 27.5	-0.1
DUG				IAmb	IAmb	16 26 29.4	
	comp=Z,7.0nm,0.9s						
EDW2	Edwards Air Fo	47.85	85	P	P	16 26 28.3	-1.2
	baz=311						
BW06	Boulder Array	47.94	71	P	P	16 26 29.0	-1.3
	baz=307,SNR=5.4						
BW06	Boulder Array	47.94	71	P	P	16 26 29.9	-0.4
PD31	Pinedale Array	47.94	71	P	P	16 26 29.9	-0.3
PDAR	Pinedale Array	47.94	71	P	P	16 26 29.9	-0.4
	comp=Z,2.3nm,0.5s,baz=310,slow=3.6,SNR=28						
PDAR	Pinedale Array	47.94	71	P	P	16 26 29.7	-0.6
PRN	Pahroc Range	48.01	80	P	P	16 26 29.9	-0.9
PRN				IAmb	IAmb	16 26 32.9	
	comp=Z,4.4nm,0.7s						
PSUT	Pine Spring	48.01	78	P	P	16 26 31.1	+0.2
SHOC	Shoshone, Teco	48.24	83	P	P	16 26 32.0	-0.4
	baz=311						
GSC	Goldstone, Bar	48.31	83	P	P	16 26 31.1	-1.9
	baz=311,SNR=7.6						
GSC	Goldstone, Bar	48.31	83	P	P	16 26 31.5	-1.5
GSC				IAmb	IAmb	16 26 34.5	
	comp=Z,12nm,1.1s						
BFSC	Mount Baldy Ra	48.49	85	P	P	16 26 34.5	0.0
	baz=312						
HEC	Hector,Ludlow	48.91	84	P	P	16 26 37.6	0.0
	baz=312						
TMUT	Trail Mountain	49.12	76	P	P	16 26 39.6	+0.2
TMUT				IAmb	IAmb	16 26 41.7	
	comp=Z,6.9nm,1.1s						
MURC	Murrieta	49.20	85	P	P	16 26 39.4	-0.4
	baz=312						
RDMU	Red Mountain	49.29	73	P	P	16 26 40.5	-0.1
RDMU				IAmb	IAmb	16 26 41.6	
	comp=Z,5.5nm,0.9s						
GMRC	Granite Mounta	49.35	83	P	P	16 26 38.9	-2.1
	baz=312,SNR=5.0						
PFO	Pinyon Flats O	49.65	85	P	P	16 26 41.9	-1.4
	baz=312						
SRU	San Rafael Swe	49.65	75	P	P	16 26 44.2	+0.8
SRU				IAmb	IAmb	16 26 44.5	
	comp=Z,4.4nm,0.6s						
TPFO	Pinon Flats	49.65	85	P	P	16 26 42.7	-0.6
	baz=312						
BELC	Belle Mtn. Jos	49.67	84	P	P	16 26 42.1	-1.3
	baz=312						
IRM	Iron Mountain	50.09	83	P	P	16 26 45.6	-0.8
	baz=312						
MONP2	Monument Peak	50.16	86	P	P	16 26 46.1	-1.2
	baz=313						
BC3	Big Chuckawall	50.23	84	P	P	16 26 46.4	-1.3
	baz=312						
RSSD	Black Hills	50.28	66	P	P	16 26 46.9	-1.1
	baz=308						
U15A	North Rim	50.32	79	P	P	16 26 49.3	+0.7
U15A				IAmb	IAmb	16 26 50.8	
	comp=Z,5.4nm,0.9s						
O20A	White River Ci	50.35	73	P	P	16 26 48.0	-0.6
	baz=310						
CBX	Cerro Bola	50.40	86	P	P	16 26 49.1	+0.1
CBX				IAmb	IAmb	16 26 51.1	
	comp=Z,5.4nm,0.7s						
MDND	Maddock	50.44	60	P	P	16 26 48.1	-0.8
	baz=307						
SWSC	Sam W. Stewart	50.50	85	P	P	16 26 49.2	-0.3
	baz=313						
IKP	In-Ko-Pah, Jac	50.51	86	P	P	16 26 49.2	-0.6
	baz=313						
PDMCI	Parker Dam,Lak	50.60	83	P	P	16 26 49.9	-0.4
	baz=312						
ULM	Lac du Bonnet	50.93	56	P	P	16 26 52.3	-0.2
	comp=Z,5.8nm,0.6s,baz=311,slow=7.9,SNR=12						
ULM	Lac du Bonnet	50.93	56	P	P	16 26 52.1	-0.4
ULM				IAmb	IAmb	16 26 52.9	
	comp=Z,6.2nm,0.7s						
GLA	Glamis	51.03	84	P	P	16 26 53.2	-0.4
	baz=313						
N23A	Red Feather La	51.22	71	P	P	16 26 54.0	-1.1
	baz=310						
WUAZ	Wupatki	51.48	79	P	P	16 26 56.3	-0.7
	baz=312						
MVCO	Mesa Verde	52.10	76	P	P	16 27 00.7	-1.0
	baz=311						
ISCO	Idaho Springs	52.11	71	P	P	16 27 01.5	-0.4
	baz=310						
AGMN	Agassiz Nation	52.14	58	P	P	16 27 01.1	-0.4
	baz=308						
ZALV	Zalesovo Beam	52.17	312	P	P	16 27 04.5	+2.8
	comp=Z,0.6nm,0.5s,baz=28,slow=6.6,SNR=2.9						
ZALV				PcP	PcP	16 28 12.7	+1.5
	comp=Z,1.1nm,0.7s,baz=20,slow=5.1,SNR=2.7						
S22A	4UR Ranch, Cre	52.74	74	P	P	16 27 05.6	-0.9
	baz=311						
W18A	Petrified Fore	52.74	79	P	P	16 27 05.5	-0.9
	baz=312						
214A	Organ Pipe Nat	53.02	84	P	P	16 27 07.6	-0.7
	baz=314						
LZH	Lanzhou	53.35	284	*e*P	P	16 27 14.8	+4.0
LZH				pP	pP	16 27 45.9	+1.1
LZH				sP	sP	16 27 56.2	-4.9
LZH				pmax	pmax		
	comp=Z,14nm,1.2s						
OGNE	Ogallala	53.45	68	P	P	16 27 10.3	-1.0
	baz=311						
SDCO	Great Sand Dun	53.53	73	P	P	16 27 11.2	-1.1
	baz=312						
GTA	Gaotai	53.53	289	*e*P	P	16 27 13.4	+1.3
GTA				pP	pP	16 27 45.3	-0.7
GTA				sP	sP	16 28 01.9	-0.4
GTA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
EYMN	Ely	54.62	56	P	P	16 27 18.9	-0.8
	baz=311						
ECSD	EROS Data Cent	54.66	62	P	P	16 27 18.5	-1.5
	baz=311						
ARCES	ARCESS Array B	57.11	349	P	P	16 27 36.6	-0.4
	comp=Z,4.4nm,1.0s,baz=49,slow=12,SNR=1.2						
WMQ	Urumqi	57.36	301	*e*P	P	16 27 41.5	+2.2
MNTX	Cornudas Mount	57.73	79	P	P	16 27 41.2	-0.7
	baz=315						
SCIA	State Center	57.74	62	P	P	16 27 41.4	-0.5
	baz=313						
MK31	Makanchi Array	58.11	306	P	P	16 27 44.0	-0.4
MKAR	Makanchi Array	58.11	306	P	P	16 27 44.3	-0.1
	comp=Z,2.0nm,0.7s,baz=48,slow=5.9,SNR=25						
MKAR				PcP	sP	16 28 34.8	+0.7
	comp=Z,0.6nm,0.7s,baz=25,slow=5.5,SNR=3.8						
MAKZ	Makanchi	58.26	307	P	P	16 27 44.4	-1.0
JFWS	Jewell Farm	58.65	59	P	P	16 27 47.1	-1.0
	baz=314						
BRVK	Borovoye	59.16	318	P	P	16 27 51.6	+0.2
BRVK				IAmb	IAmb	16 27 54.4	
	comp=Z,5.6nm,0.5s						
WMOK	Wichita Mounta	59.54	72	P	P	16 27 52.1	-2.4
	baz=314						
MATQ	Matagami	60.02	47	P	P	16 27 56.0	-1.5
	baz=316						
BRZS	Berezniki	60.37	314	*e*P	P	16 27 59.3	-0.6
	baz=314						
TX31	Lajitas Ar. Si	60.45	79	P	P	16 28 00.9	+0.1
TX31				IAmb	IAmb	16 28 04.2	
	comp=Z,5.1nm,0.6s						
TX32	Lajitas Array	60.45	79	P	P	16 28 00.8	+0.1
TXAR	Lajitas Array	60.45	79	P	P	16 28 01.2	+0.4
	comp=Z,1.6nm,0.6s,baz=302,slow=4.9,SNR=23						
TXAR	Lajitas Array	60.45	79	P	P	16 28 01.0	+0.3
LSQQ	Lebel-sur-Quev	60.83	47	P	P	16 28 01.5	-1.4
	baz=317						
ARU	Arti	61.02	326	P	P	16 28 05.1	+1.0
U40A	Yellville	61.82	66	P	P	16 28 08.3	-1.5
	baz=315						
SHLS	Shalkode	62.10	305	*e*P	P	16 28 11.2	-0.5
	comp=Z,1.8nm,0.6s,baz=305						
SFIN	Lafayette	62.11	59	P	P	16 28 10.5	-1.1
	baz=316						
W39A	Magazine	62.11	68	P	P	16 28 10.7	-1.0
	baz=316						
KPKS	Kokpek	62.27	306	*e*P	P	16 28 12.6	-0.2
	baz=306						
UZB	Uzynbulak	62.33	305	*e*P	P	16 28 12.9	-0.4
	baz=305						
FCAR	Ozark Folk Cen	62.56	66	P	P	16 28 13.4	-1.3
MIAR	Mount Ida	62.70	68	P	P	16 28 14.6	-1.0
	baz=316						
CHKK	Chushkaly	62.83	307	*e*P	P	16 28 15.9	-0.5
	baz=307						
D55A	Sainte-Anne-du	63.01	47	P	P	16 28 16.4	-1.1
	baz=318						
KUU	Kurty	63.12	307	*e*P	P	16 28 17.3	-1.0
	baz=308						
MDOK	Medeo	63.31	307	*e*P	P	16 28 19.4	-0.4
	baz=307						
D56A	ZEC Mazanza, M	63.32	47	P	P	16 28 18.4	-1.2
	baz=319						
AAA	Alma-Ata	63.34	307	*e*P	P	16 28 19.7	-0.2
	baz=307						
BTLS	Baital	63.38	310	*e*P	P	16 28 20.2	+0.2
	baz=310						
E56A	St. Veronique	63.57	48	P	P	16 28 19.5	-1.7
	baz=319						
MTBS	Maitube	63.64	307	*e*P	P	16 28 22.2	+0.4
	baz=307						
E57A	Chemin Saint G	64.07	47	P	P	16 28 23.1	-1.4
	baz=319						
D58A	Chemin du LacG	64.12	46	P	P	16 28 23.4	-1.4
	baz=319						
FINES	FINESS Array B	64.71	346	P	P	16 28 28.0	-0.4
	comp=Z,3.3nm,0.9s,baz=14,slow=6.2,SNR=12						
FINES	FINESS Array B	64.71	346	P	P	16 28 28.3	0.0
WVT	Waverly	64.79	63	P	P	16 28 28.3	-1.0
	baz=317						
AAK	Ala-Archa	64.95	308	P	P	16 28 31.1	+0.6
AAK				IAmb	IAmb	16 28 31.9	
	comp=Z,2.1nm,0.6s						
OXF	Oxford	65.09	65	P	P	16 28 30.5	-0.8
	baz=317						
D60A	Saint Jean D’O	65.12	45	P	P	16 28 30.3	-1.0
	baz=320						
D61A	St Aubert, Com	65.22	44	P	P	16 28 31.1	-0.8
	baz=321						
K56A	Middlesex	65.38	52	P	P	16 28 32.2	-0.9
	baz=319						
J57A	Williamstown	65.48	50	P	P	16 28 32.1	-1.6
	baz=319						
G59A	Clarenceville	65.52	47	P	P	16 28 32.5	-1.3
	baz=320						
H59A	Cadyville	65.62	48	P	P	16 28 32.8	-1.7
	baz=320						
L56A	Greenwood	65.69	52	P	P	16 28 34.2	-0.9
	baz=319						
K57A	Scipio Center	65.75	51	P	P	16 28 34.6	-0.8
	baz=319						
M56A	Emporium	65.88	53	P	P	16 28 35.5	-0.8
	baz=319						
G60A	Masonville	65.90	47	P	P	16 28 35.5	-0.8
	baz=320						
L57A	Andrews Acres	66.14	52	P	P	16 28 36.9	-1.1
	baz=319						
J59A	Piesco	66.15	49	P	P	16 28 36.4	-1.5
	baz=320						
ABKAR	Akbulak array	66.24	321	P	P	16 28 39.1	+0.7
ABKAR	Akbulak array	66.24	321	P	P	16 28 39.4	+0.9
M57A	Sunshine Farm,	66.51	53	P	P	16 28 39.3	-1.0
	baz=319						
KK31	Karatay Array	66.51	310	P	P	16 28 39.7	-0.6
KKAR	Karatay Array	66.51	310	P	P	16 28 41.1	+0.8
L58A	Harry Jones Me	66.59	51	P	P	16 28 40.2	-0.6
	baz=320						
SSPA	Standing Stone	66.66	54	P	P	16 28 40.5	-0.7
	baz=319						
N57A	Milroy	66.74	53	P	P	16 28 40.8	-1.0
	baz=319						
NOA	NORSAR Array B	66.80	353	P	P	16 28 39.9	-1.9
	comp=Z,0.5nm,0.5s,baz=7.8,slow=6.2,SNR=2.3						
J60A	Lant Hill Farm	66.82	49	P	P	16 28 41.0	-1.3
	baz=320						
H62A	Milan	66.83	47	P	P	16 28 41.4	-0.8
	baz=321						
R54A	Victor	66.94	57	P	P	16 28 42.2	-0.8
	baz=319						
N58A	Sunbury	67.09	53	P	P	16 28 43.0	-0.9
	baz=320						
O57A	Amberson	67.11	54	P	P	16 28 43.6	-0.5
	baz=319						
P57A	Homestead Farm	67.47	54	P	P	16 28 45.4	-0.9
	baz=319						
IUG	Iuzhnay	67.47	310	*e*P	P	16 28 47.1	+0.6
	baz=310						
N59A	State Game Lan	67.49	52	P	P	16 28 45.8	-0.8
	baz=320						
O58A	Lewisberry	67.53	53	P	P	16 28 45.6	-1.2
	baz=320						
U54A	Nelsons Funny	67.75	59	P	P	16 28 46.7	-1.5
	baz=319						
P59A	Jarrettsville	68.17	53	P	P	16 28 49.3	-1.4
	baz=320						
CMAR	Chiang Mai Arr	69.04	273	P	P	16 28 55.3	-1.0
	comp=Z,0.2nm,0.4s,baz=30,slow=5.5,SNR=1.4						
KMSC	Kings Mountain	69.05	60	P	P	16 28 54.9	-1.3
	baz=319						
GUN	Gumba	69.82	290	*e*P	P	16 29 02.9	+1.4
	comp=Z,14nm,0.5s						
KKN	Kakani	70.26	290	*e*P	P	16 29 05.5	+1.4
	comp=Z,9.2nm,0.6s						
PKI	Pulchoki	70.35	290	*e*P	P	16 29 05.9	+1.1
	comp=Z,9.2nm,0.6s						
PKIN	Phulchoki	70.36	290	*e*P	P	16 29 05.9	+1.2
	comp=Z,11nm,0.5s						
GKN	Gorkha	70.47	291	*e*P	P	16 29 06.3	+1.0
	comp=Z,8.1nm,0.6s						
DANN	Dangsing	70.72	291	*e*P	P	16 29 07.9	+1.0
	comp=Z,16nm,0.8s						
AKASG	Malin Array Be	74.31	340	P	P	16 29 27.2	-0.2
	comp=Z,3.9nm,0.5s,baz=22,slow=6.3,SNR=9.3						
AKASG	Malin Array Be	74.31	340	P	P	16 29 27.0	-0.4
KBZ	Khabaz	77.08	328	P	P	16 29 44.5	+1.3
	comp=Z,1.4nm,0.8s,baz=306,slow=4.8,SNR=4.1						
BUR08	Bucovina Ar. S	78.04	342	P	P	16 29 49.4	+0.7
BURAR	Bucovina Array	78.07	342	P	P	16 29 49.7	+0.9
WRA	Warramunga Arr	81.18	221	P	P	16 30 07.0	+1.3
	comp=Z,0.9nm,0.7s,baz=31,slow=6.3,SNR=13						
ASAR	Alice Springs	84.70	220	P	P	16 30 25.4	+1.6
	comp=Z,0.5nm,0.8s,baz=26,slow=5.6,SNR=9.2						
TORD	Torodi Ar. Bea	115.03	356	PKP	PKiKP	16 36 30.0	-0.3
	comp=Z,0.7nm,0.5s,baz=349,slow=2.3,SNR=5.1						
DBIC	Dimbokro	121.49	3	PKP	PKiKP	16 36 43.0	+0.1
	comp=Z,2.2nm,0.9s,baz=45,slow=5.7,SNR=3.7						
BOSA	Boshof	149.09	309	PKPbc	PKiKP	16 37 38.3	-0.1
	comp=Z,2.4nm,0.5s,baz=32,slow=4.9,SNR=11						

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*IDC **06** 16:26:19.7±2.9, 51°.58N×179°.15E, h0^{km}, mb3.5/4, mb1 3.8/4, mb1mx3.4/56, mbtmp3.5/4, Error ellipse: s-maj=96.5km s-min=30.5km az=7.0*

*NEIC **06** 16:26:34.0±0.7, 51°.78N±0°.07×179°.54E±0°.06, h92^{km}±3^{km}, ML3.1/14(AEIC), Error ellipse: s-maj=10.1km s-min=5.5km az=178.0*

*AEIC **06** 16:26:34.7±1.1, 51°.77N±0°.05×179°.51E±0°.07, h90^{km}±3^{km}, Error ellipse: s-maj=8.7km s-min=4.6km az=147.0*

ISC 06 16:26:33.0±0.9, **51°.8N**±0°.1×**179°.40E**±0°.06, **h100**^{km}±6^{km}, **n17**, σ**1^{s}.36**/22, **mb3.6**/4, **Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CESW	Semis' Southwe	0.18	34		Pn	16 26 46.8	-0.3
CESW					Sn	16 26 56.6	-1.1
CERAA	Semis' Rag'd T	0.24	48		Pn	16 26 46.9	-0.4
CEAP	Semis' Anvil P	0.28	24		Pn	16 26 47.4	0.0
CEAP					Sn	16 26 57.9	-0.4
AMKA	Amchitka	0.38	189		Pn	16 26 48.2	+0.3
AMKA					Sn	16 26 59.2	+0.1
LSPA	Little Sitkin	0.55	292		Pn	16 26 49.9	+0.7
LSPA					Sn	16 27 02.3	+1.0
LSSA	Little Sitkin	0.58	290		Pn	16 26 50.1	+0.6
LSNW	Little Sitkin	0.59	292		Pn	16 26 49.9	+0.5
ADK	Adak	2.43	85		Pn	16 27 10.8	-0.4
ADK					Sn	16 27 38.8	-1.7
SMY	Shemya	3.40	289	Pn	Pn	16 27 25.5	+1.4
ATKA	Atka Island	3.99	81		Pn	16 27 32.2	+0.3
NIKH	Nikolski High	7.30	76	Pn	Pn	16 28 19.0	+2.2
AKUT	Akutan	9.27	69	Pn	Pn	16 28 47.6	+4.1
PET	Petropavlovsk	12.73	284	Pn	P	16 29 37.0	-0.4
YKA	Yellowknife Ar	35.79	46	P	P	16 33 21.8	-0.3
	0.7nm,0.7s,baz=280,slow=7.6,SNR=8.7						
PDAR	Pinedale Array	47.26	71	P	P	16 34 55.9	-0.3
	0.4nm,0.5s,baz=313,slow=4.1,SNR=6.1						
MKAR	Makanchi Array	58.92	307	P	P	16 36 19.9	-1.4
	0.2nm,0.3s,baz=51,slow=6.9,SNR=5.9						
TXAR	Lajitas Array	59.70	80	P	P	16 36 27.6	+0.5
	0.2nm,0.5s,baz=305,slow=3.2,SNR=3.3						

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*IDC **06** 16:39:15.0±1.9, 31.°53S×177.°45W, h0^{km}, mb4.2/3, mb1 4.4/4, mb1mx4.0/39, mbtmp4.2/4, ML3.8/1, MS3.3/3, Ms1 3.2/3, ms1mx2.8/36, Error ellipse: s-maj=58.2km s-min=30.4km az=133.0*

*NEIC **06** 16:39:20.1±2.8, 31.°37S±0.°07×177.°6W±0.°2, h35^{km}±2^{km}, mb4.4/15, Error ellipse: s-maj=26.8km s-min=12.0km az=99.0*

ISC 06 16:39:19.1±1.2**, 31.°26S**±0.°06×**177.°7W**±0.°2**, h26**^{km}**, n31, σ1.^{s}67**/33**, mb4.4**/10**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	2.01	355	Pn	Pn	16 39 50.1	-1.3
	206nm,0.3s,baz=125,slow=6.6,SNR=10						
RAO				Sn	Sn	16 40 14.1	-1.6
	375nm,0.3s,baz=340,slow=23,SNR=6.8						
RAO				LR	LR	16 40 46.5	
	comp=Z,303nm,21.0s,baz=188,slow=40						
RAO	Raoul Island	2.01	355	Pn	Pn	16 39 50.9	-0.5
MXZ	Matakaoa Point	7.09	207	Pn	Pn	16 41 00.3	-0.9
URZ	Urewera	8.18	210	Pn	Pn	16 41 13.1	-3.0
	1.3nm,0.3s,baz=247,slow=3.7,SNR=11						
URZ				Sn	Sn	16 42 46.5	-1.1
	2.5nm,0.3s,baz=129,slow=20,SNR=8.2						
URZ	Urewera	8.18	210	Pn	Pn	16 41 15.5	-0.6
BKZ	Black Stump Fm	9.20	209	Pn	Pn	16 41 26.9	-3.3
THZ	Tophouse	12.91	213	Pn	Pn	16 42 24.1	+3.3
LTZ	Lake Taylor	14.00	212	Pn	Pn	16 42 33.2	-2.5
OXZ	Oxford	14.53	211	Pn	Pn	16 42 42.1	-0.9
WHZ	Wether Hill Ro	18.37	213	P	P	16 43 30.7	-1.1
WHZ				IAmb	IAmb	16 43 48.8	
	comp=Z,56nm,1.5s						
CTAO	Charters Tower	34.19	280	P	P	16 46 04.8	+2.2
STKA	Stephens Creek	34.54	258	P	P	16 46 07.2	+1.7
	comp=Z,0.9nm,0.4s,baz=87,slow=11,SNR=5.8						
STKA				LR	LR	16 58 53.5	
	comp=Z,40nm,18.1s,baz=31,slow=34						
STKA	Stephens Creek	34.54	258	P	P	16 46 08.0	+2.6
BBOO	Buckleboo	38.98	255	P	P	16 46 43.8	+0.5
BBOO				IAmb	IAmb	16 46 56.4	
	comp=Z,6.7nm,1.0s						
COEN	Coen	39.76	287	P	P	16 46 47.7	-2.2
COEN				IAmb	IAmb	16 47 05.5	
	comp=Z,7.5nm,1.2s						
AS31	Alice Springs	43.32	268	P	P	16 47 20.6	+1.5
ASAR	Alice Springs	43.32	268	P	P	16 47 20.4	+1.3
	comp=Z,3.2nm,0.5s,baz=106,slow=7.4,SNR=132						
ASAR	Alice Springs	43.32	268	P	P	16 47 20.2	+1.1
WR0	Warramunga Arr	44.21	273	P	P	16 47 27.1	+0.8
WR0				IAmb	IAmb	16 47 38.4	
	comp=Z,4.8nm,0.9s						
WB2	Warramunga Arr	44.38	273	P	P	16 47 28.8	+1.2
WB2				IAmb	IAmb	16 47 40.3	
	comp=Z,5.1nm,0.8s						
WRAB	Tennant Creek	44.38	273	P	P	16 47 28.9	+1.2
WRAB				IAmb	IAmb	16 47 35.0	
	comp=Z,7.4nm,1.1s						
WRA	Warramunga Arr	44.39	273	P	P	16 47 28.9	+1.2
	comp=Z,2.2nm,0.4s,baz=111,slow=8.0,SNR=34						
WRA				LR	LR	17 05 23.3	
	comp=Z,58nm,18.5s,baz=135,slow=35						
WRA	Warramunga Arr	44.39	273	P	P	16 47 26.8	-0.9
WB0	Warramunga Arr	44.41	273	P	P	16 47 29.2	+1.3
WB0				IAmb	IAmb	16 47 40.8	
	comp=Z,6.6nm,0.9s						
FORT	Forrest	46.08	256	P	P	16 47 40.8	-0.1
MTN	Manton Dam	50.37	279	P	P	16 48 13.1	-1.2
FITZ	Fitzroy Crossi	52.62	270	P	P	16 48 30.6	-0.5
QSPA	South Pole Qui	58.85	180	P	P	16 49 17.2	+1.9
QSPA				IAmb	IAmb	16 49 31.4	
	comp=Z,5.0nm,0.7s						
MKAR	Makanchi Array	118.52	310	PKP	PKPdf	16 58 04.3	+0.1
	comp=Z,0.1nm,0.4s,baz=176,slow=0.3,SNR=5.2						
FINES	FINESS Array B	146.04	340	PKPbc	PKPbc	16 58 56.4	+0.6
	comp=Z,3.4nm,0.6s,baz=54,slow=3.6,SNR=26						
AKASG	Malin Array Be	152.13	322	PKPbc	PKiKP	16 59 13.0	+0.9
	comp=Z,0.9nm,0.3s,baz=47,slow=3.2,SNR=4.6						

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*IDC **06** 16:44:03.4±0.9, 1.°94N×97.°16W, h0^{km}, mb4.1/8, mb1 4.3/8, mb1mx4.0/45, mbtmp4.1/8, MS3.5/8, Ms1 3.5/8, ms1mx3.2/28, Error ellipse: s-maj=48.5km s-min=19.6km az=60.0*

ISC 06 16:44:04.5±1.1**, 1.°9N**±0.°2×**97.°2W**±0.°3**, h10**^{km}**, n27, σ1.^{s}08**/13**, mb4.0**/8**, MS3.4**/7**, West of Galapagos Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	15.27	9	LR	LR	16 51 57.3	
	comp=Z,273nm,20.6s,baz=172,slow=31						
TEIG	Tepich	20.20	25	LR	LR	16 55 05.7	
	comp=Z,151nm,18.8s,slow=33						
H06E1	SOCORRO T-PHAS	21.49	322	T	T	17 10 59.2	
	SNR=9.5						
LPIG	La Paz	25.45	331	LR	LR	16 57 23.5	
	comp=Z,169nm,18.6s,baz=202,slow=31						
TXAR	Lajitas Array	27.97	348	P	P	16 49 57.6	+2.1
	1.0nm,0.9s,baz=160,slow=12,SNR=8.0						
TXAR				LR	LR	17 00 00.6	
	comp=Z,103nm,19.0s,baz=0.0,slow=34						
LPAZ	La Paz	33.94	123	P	P	16 50 49.5	+0.5
	1.7nm,0.9s,baz=303,slow=8.9,SNR=4.8						
LPAZ				LR	LR	17 03 01.8	
	comp=Z,36nm,19.4s,baz=16,slow=34						
SJG	San Juan	34.48	60	LR	LR	17 04 07.8	
	comp=Z,28nm,18.3s,baz=220,slow=35						
H03N2	Juan Fernandez	39.15	155	T	T	17 33 07.2	
	baz=333,slow=77,SNR=72						
H03N1	Juan Fernandez	39.16	155	T	T	17 33 07.7	
	baz=333,slow=77,SNR=159						
H03N3	Juan Fernandez	39.17	155	T	T	17 33 09.0	
	baz=333,slow=77,SNR=94						
SIV	San Ignacio	39.90	118	P	P	16 51 39.2	+0.2
	1.8nm,1.0s,baz=309,slow=10,SNR=4.9						
PDAR	Pinedale Array	42.16	346	P	P	16 51 57.5	-0.1
	1.0nm,0.7s,baz=134,slow=8.5,SNR=8.1						
PDAR				LR	LR	17 08 20.6	
	comp=Z,86nm,18.6s,baz=159,slow=35						
ULM	Lac du Bonnet	48.19	1	P	P	16 52 43.2	-1.8
	1.9nm,0.6s,baz=169,slow=16,SNR=4.9						
PLCA	Paso Flores	48.90	153	LR	LR	17 09 05.2	
	comp=Z,71nm,18.1s,baz=314,slow=31						
YKA	Yellowknife Ar	61.84	351	P	P	16 54 23.3	-0.2
	1.3nm,0.9s,baz=152,slow=7.2,SNR=9.9						
INK	Inuvik	70.73	347	P	P	16 55 21.6	+1.1
	4.8nm,1.0s,baz=146,slow=7.4,SNR=5.3						
ILAR	Eielson Array	72.12	340	P	P	16 55 29.6	+0.6
	3.6nm,0.8s,baz=148,slow=4.9,SNR=40						
H11N3	WAKE ISLAND Hy	94.89	290	T	T	18 42 52.3	
	baz=86,slow=75,SNR=6.8						
H11N2	WAKE ISLAND Hy	94.90	290	T	T	18 42 51.3	
	baz=86,slow=75,SNR=7.2						
H11N1	WAKE ISLAND Hy	94.91	290	T	T	18 42 54.0	
	baz=86,slow=75,SNR=6.7						
H11S2	WAKE ISLAND Hy	95.17	289	T	T	18 43 11.7	
	baz=86,slow=75,SNR=17						
H11S1	WAKE ISLAND Hy	95.17	289	T	T	18 43 13.6	
	baz=86,slow=75,SNR=14						
H11S3	WAKE ISLAND Hy	95.18	289	T	T	18 43 13.5	
	baz=86,slow=75,SNR=8.0						
ASAR	Alice Springs	126.04	242	PKP	PKPdf	17 03 07.7	-0.3
	0.6nm,0.8s,baz=103,slow=1.3,SNR=7.4						
WRA	Warramunga Arr	126.57	247	PKP	PKiKP	17 03 09.2	-0.3
	1.0nm,0.8s,baz=84,slow=1.5,SNR=9.0						
MKAR	Makanchi Array	131.51	0	PKP	PKiKP	17 03 18.1	-0.6
	0.8nm,0.9s,baz=341,slow=2.6,SNR=5.5						
CMAR	Chiang Mai Arr	154.27	323	PKP	PKPdf	17 03 58.2	+0.4
	0.6nm,0.8s,baz=287,slow=1.2,SNR=4.7						
CMAR				PKPbc	pPKPbc	17 04 07.3	-1.2
	1.0nm,0.8s,baz=359,slow=1.8,SNR=7.3						

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*TUL **06** 16:49:05.8±1.2, 36.°73N±0.°04×98.°33W±0.°04, h4^{km}±7^{km}, ML3.4, mb_Lg3.4/90(NEIC), Error ellipse: s-maj=5.6km s-min=4.7km az=166.0*

*ANF **06** 16:49:06.5±0.7, 36.°72N×98.°34W, h5^{km}, ML4.2/8, Error ellipse: s-maj=8.9km s-min=6.7km az=75.0*

*NEIC **06** 16:49:07.0±1.5, 36.°72N±0.°02×98.°27W±0.°04, h12^{km}±7^{km}, Error ellipse: s-maj=5.5km s-min=1.7km az=62.0*

ISC 06 16:49:05.9±1.3**, 36.°70N**±0.°03×**98.°29W**±0.°03**, h4**^{km}±11^{km}**, n78, σ0.^{s}79**/46**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CROK	Carrier	0.32	127		Pb	16 49 13.2	-0.9
CROK				Sg	Sb	16 49 18.4	-1.2
KAN14	Manchester OK	0.37	46		Pg	16 49 13.4	+0.3
KAN14				Sg	Sg	16 49 18.8	+1.0
KAN10	Anthony SW Sta	0.46	20		Pg	16 49 14.7	+0.1
KAN05	Bluff City Nor	0.53	39		Pg	16 49 16.4	+0.3
KAN08	Anthony NE Sta	0.59	26		Pg	16 49 17.2	+0.1
KAN01	Argonia South	0.63	43		Pg	16 49 18.1	+0.3
KAN12	Harper NE Stat	0.65	21		Pg	16 49 18.2	-0.1
KAN12				Sg	Sg	16 49 27.0	+0.4
U32A	Winter Ranch,	0.65	241		Pg	16 49 18.3	-0.1
U32A	Winter Ranch,	0.65	241	P		16 49 18.3	
	baz=58						
KAN13	South Haven SW	0.73	64		Pb	16 49 20.0	-1.1
BCOK	Bluff Creek, N	1.18	152		Pg	16 49 28.4	0.0
OK025	Westminster Rd	1.36	145		Pg	16 49 31.6	-0.2
QUOK	Quay	1.38	112		Pg	16 49 32.4	+0.1
OK030	Cody Creek RV	1.44	122		Pg	16 49 33.5	0.0
T35A	Sooner Cattle	1.45	81		Pg	16 49 33.0	-0.6
T35B	Sooner Cattle	1.45	81	P		16 49 33.0	
	baz=263,SNR=110						
T35B				S		16 49 52.8	
	baz=263						
OKCFA	Oklahoma City	1.45	152		Pb	16 49 33.0	-0.4
OKCSW	OKLAHOMA CITY	1.46	151		Pb	16 49 33.2	-0.4
FNO	Franklin	1.61	153		Pb	16 49 35.9	-0.3
R32A	Long Quarter,	1.75	349		Pn	16 49 37.5	+0.3
R32A	Long Quarter,	1.75	349	P		16 49 37.4	
	baz=170,SNR=17						
R32A				S		16 50 00.3	
	baz=170						
WMOK	Wichita Mounta	1.99	192	P	Pn	16 49 41.1	+0.7
	baz=11						
WMOK				S	Sb	16 50 07.2	-0.8
	baz=11						
WMOK	Wichita Mounta	1.99	192		Pn	16 49 41.4	+0.9
WMOK	Wichita Mounta	1.99	192	P		16 49 41.3	
	baz=11						
WMOK				S		16 50 08.8	
	baz=11						
TUL1	Leonard	2.17	110	P	Pb	16 49 43.8	-1.9
	baz=292						
TUL1				S	Sb	16 50 12.3	-0.6
	baz=292						
TUL1	Leonard	2.17	110	P		16 49 44.9	
	baz=292,SNR=12						
TUL1				S		16 50 14.6	
	baz=292						
CBKS	Cedar Bluff	2.40	332	P	Pn	16 49 46.4	+0.4
	baz=151						
CBKS				S	Sn	16 50 16.4	+0.3
	baz=151						
CBKS	Cedar Bluff	2.40	332	P		16 49 46.2	
	baz=151						
CBKS				S		16 50 19.0	
	baz=151						
KSU1	Kansas State U	2.75	29	P	Pn	16 49 51.3	+0.6
	baz=210						
KSU1				S	Sn	16 50 25.5	+1.1
	baz=210						
KSU1	Kansas State U	2.75	29	IAmb_Lg		16 50 38.7	
	comp=Z,176nm,1.0s						
U38A	Gravette	3.16	94	IAmb_Lg		16 50 51.7	
	comp=Z,79nm,0.8s						
U38A	Gravette	3.16	94	P		16 49 57.3	
	baz=276,SNR=11						
X37A	Clayton	3.18	131	Pn	Pn	16 49 57.7	+1.0
X37A	Clayton	3.18	131	P		16 49 57.7	
	baz=312						
AMTX	Amarillo	3.29	238	P	Pn	16 49 58.6	+0.3
	baz=55						
AMTX	Amarillo	3.29	238	Pn	Pn	16 49 59.7	+1.3
AMTX				IAmb_Lg		16 50 51.1	
	comp=Z,134nm,0.9s						
Z35A	Perchaven, San	3.46	165		Pn	16 50 01.9	+1.3
HHAR	Hobbs	3.53	95	IAmb_Lg		16 51 00.4	
	comp=Z,66nm,0.7s						
W39A	Magazine	3.95	111	P	Pn	16 50 08.7	+1.3
	baz=294						
W39A	Magazine	3.95	111	IAmb_Lg		16 51 21.0	
	comp=Z,117nm,0.9s						
N33B	J Bar K, Exete	4.09	9	P		16 50 08.3	
	baz=190,SNR=7.9						
S39A	Bolivar	4.09	74		Pn	16 50 09.8	+0.5
S39A	Bolivar	4.09	74	P		16 50 09.7	
	baz=258,SNR=19						
KSCO	Kaye Shedlock'	4.13	305	P	Pn	16 50 10.1	+0.1
	baz=123						
KSCO	Kaye Shedlock'	4.13	305	Pn	Pn	16 50 10.4	+0.4
KSCO				IAmb_Lg		16 51 21.8	
	comp=Z,69nm,0.7s						
KSCO	Kaye Shedlock'	4.13	305	P		16 50 10.3	
	baz=123,SNR=7.3						
ABTX	Abilene, Hawle	4.21	196	P	Pn	16 50 11.7	+0.7
	baz=14						
ABTX	Abilene, Hawle	4.21	196	IAmb_Lg		16 51 22.7	
	comp=Z,53nm,0.9s						
Z38A	Mt. Pleasant	4.37	141	IAmb_Lg		16 51 28.6	
	comp=Z,59nm,0.8s						
U40A	Yellville	4.39	93	Pn	Pn	16 50 14.0	+0.6
U40A				IAmb_Lg		16 51 29.8	
	comp=Z,84nm,0.8s						
U40A	Yellville	4.39	93	P		16 50 14.5	
	baz=276,SNR=9.4						
U40A				P		16 50 14.5	
	baz=276,SNR=9.4						
U40A				S		16 51 06.3	
	baz=276						
U40A				S		16 51 06.3	
	baz=276						
MIAR	Mount Ida	4.40	118	Pn	Pn	16 50 15.2	+1.7
MIAR				IAmb_Lg		16 51 28.0	
	comp=Z,70nm,0.7s						
MIAR	Mount Ida	4.40	118	P		16 50 14.7	
	baz=301,SNR=7.2						
BGNE	Belgrade	4.71	1		Pn	16 50 17.5	-0.2
BGNE	Belgrade	4.71	1	P		16 50 17.4	
	baz=182,SNR=21						
P38A	Dawn	4.76	51	IAmb_Lg		16 51 46.4	
	comp=Z,78nm,0.9s						
MGMO	Mountain Grove	4.85	83		Pn	16 50 20.7	+1.0
MGMO				IAmb_Lg		16 51 45.1	
	comp=Z,58nm,0.9s						
X40A	Basin Creek Fa	4.96	115	IAmb_Lg		16 51 53.0	
	comp=Z,66nm,0.9s						
FCAR	Ozark Folk Cen	5.05	97	IAmb_Lg		16 51 58.1	
	comp=Z,42nm,0.9s						
R40A	Maddies Statio	5.05	70	IAmb_Lg		16 51 53.3	
	comp=Z,50nm,0.9s						
WHAR	Wooly Hollow	5.07	104	IAmb_Lg		16 51 59.5	
	comp=Z,85nm,0.8s						
237A	Washetta, Mont	5.12	156	Pn	Pn	16 50 23.1	-0.2
237A				IAmb_Lg		16 52 01.1	
	comp=Z,52nm,0.9s						
OGNE	Ogallala	5.15	327	Pn	Pn	16 50 25.0	+1.1
OGNE				IAmb_Lg		16 51 56.2	
	comp=Z,95nm,0.7s						
WLAR	White Oak Lake	5.20	124	IAmb_Lg		16 51 58.8	
	comp=Z,74nm,0.8s						
N38A	Joes South For	5.69	42	IAmb_Lg		16 52 10.5	
	comp=Z,83nm,0.7s						
CCM	Cathedral Cave	5.78	74	IAmb_Lg		16 52 11.1	
	comp=Z,50nm,0.7s						
LCAR	Lake Charles	5.79	94	IAmb_Lg		16 52 12.7	
	comp=Z,38nm,0.7s						
435B	Jarrell	5.93	174	IAmb_Lg		16 52 18.5	
	comp=Z,51nm,0.9s						
K31A	O'Neill	5.93	357	Pn	Pn	16 50 34.4	-0.1
K31A	O'Neill	5.93	357	P		16 50 34.3	
	baz=177,SNR=6.3						
CCAR	Cane Creek	6.01	116	IAmb_Lg		16 52 31.6	
	comp=Z,62nm,0.8s						
PBMO	Poplar Bluff	6.32	87	IAmb_Lg		16 52 26.8	
	comp=Z,49nm,0.7s						
FVM	French Village	6.40	76	IAmb_Lg		16 52 41.3	
	comp=Z,37nm,0.8s						
143A	Socs Landing,	6.93	123	IAmb_Lg		16 53 01.2	
	comp=Z,34nm,0.8s						
N41A	Harden Midland	7.06	53	IAmb_Lg		16 52 52.6	
	comp=Z,58nm,0.8s						
ECSD	EROS Data Cent	7.14	10	IAmb_Lg		16 52 52.3	
	comp=Z,39nm,1.0s						
S44A	Carbondale	7.28	79	IAmb_Lg		16 53 03.8	
	comp=Z,42nm,0.7s						
SIUC	Southern Illin	7.31	79	IAmb_Lg		16 52 57.7	
	comp=Z,40nm,0.7s						
P43A	Skaggs, Pawnee	7.51	64	IAmb_Lg		16 53 08.6	
	comp=Z,55nm,0.9s						
Y22D	IRIS PASSCAL I	7.52	252	IAmb_Lg		16 53 24.4	
	comp=Z,47nm,0.9s						
W45A	Hickory Valley	7.55	99	IAmb_Lg		16 53 12.2	
	comp=Z,44nm,0.7s						
OXF	Oxford	7.56	104	IAmb_Lg		16 53 12.2	
	comp=Z,29nm,0.7s						
Y45A	Yeager Farm, C	7.69	109	IAmb_Lg		16 53 23.6	
	comp=Z,40nm,0.7s						
SUSD	Miller	7.75	356	IAmb_Lg		16 53 18.3	
	comp=Z,37nm,0.7s						
I37A	Lemond, Waseca	8.21	26	IAmb_Lg		16 53 38.1	
	comp=Z,30nm,0.8s						
OLIL	Olney	8.33	73	IAmb_Lg		16 53 39.4	
	comp=Z,33nm,1.0s						
O44A	Mansfield	8.45	63	IAmb_Lg		16 53 43.2	
	comp=Z,33nm,0.8s						
WVT	Waverly	8.46	91	IAmb_Lg		16 53 41.4	
	comp=Z,22nm,1.1s						
L42A	Oliver, Polo	8.53	49	IAmb_Lg		16 53 46.0	
	comp=Z,48nm,0.8s						
K22A	Casper	8.69	316	IAmb_Lg		16 53 50.2	
	comp=Z,26nm,0.9s						
JFWS	Jewell Farm	8.77	42	IAmb_Lg		16 53 54.5	
	comp=Z,35nm,0.8s						
F33A	5 Mile Ranch,	9.26	9	IAmb_Lg		16 54 02.9	
	comp=Z,20nm,1.0s						
V48A	Smith Brothers	9.32	92	IAmb_Lg		16 54 09.3	
	comp=Z,26nm,1.2s						

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*ISK **06** 16:50:19.5, 37.°29N×26.°75E, h5^{km}, ML3.1/7*

*THE **06** 16:50:20.6, 37.°27N×26.°80E, h7^{km}±1^{km}, ML2.9/3, Error ellipse: s-maj=1.7km s-min=0.5km az=83.0*

*DDA **06** 16:50:20.4, 37.°29N×26.°76E, h7^{km}±3^{km}, ML2.7*

*ATH **06** 16:50:21.6, 37.°34N×26.°83E, h17^{km}±4^{km}, ML2.8/1, Error ellipse: s-maj=6.3km s-min=1.2km az=76.0*

ISC 06 16:50:20.6±1.0**, 37.°30N**±0.°02×**26.°78E**±0.°02**, h12**^{km}±9^{km}**, n28, σ0.^{s}68**/49**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDIM	Aydin, Didim	0.40	67	*i* P	Pg	16 50 28.9	+0.3
DDIM				*i* S	Sb	16 50 35.5	-0.3
DDIM				IAML		16 50 36.0	
	comp=E,556nm,0.3s						
SMG	Samos	0.41	7	P	Pg	16 50 29.2	+0.5
SMG				S	Sg	16 50 34.1	0.0
SMG				AML	AML	16 50 37.1	
	comp=E,4027μm,0.3s						
SMG				AML	AML	16 50 37.3	
	comp=N,3153μm,0.2s						
SMG	Samos	0.41	7	P	Pg	16 50 29.2	+0.5
SMG				S	Sb	16 50 35.8	-0.2
	comp=N,2μm,0.3s						
BODT	Bodrum	0.49	119	P	Pg	16 50 29.6	-0.6
BODT				S	Sg	16 50 36.5	-0.2
BODT	Bodrum	0.49	119	PG	Pg	16 50 29.8	-0.4
GCAM	G?zelcaml?	0.54	42	PG	Pg	16 50 31.3	+0.2
GCAM				SG	Sb	16 50 39.8	+0.1
GCAM	G?zelcaml?	0.54	42	*i* P	Pb	16 50 31.8	-0.2
GCAM				*i* S	Sb	16 50 39.2	-0.5
GCAM				IAML		16 50 41.0	
	comp=E,2μm,0.4s						
GCAM				IAML		16 50 43.0	
	comp=N,1μm,0.2s						
BDRM	Kayabasi	0.58	114	*i* P	Pb	16 50 32.2	-0.6
BDRM				*i* P	Pb	16 50 32.2	-0.6
BDRM				*i* S	Sb	16 50 40.4	-0.6
BDRM				*i* S	Sb	16 50 40.5	-0.6
BDRM				IAML		16 50 43.0	
	comp=E,495nm,0.2s						
BDRM				IAML		16 50 44.0	
	comp=N,1μm,0.3s						
NISR	Nisiros	0.74	158	P	Pb	16 50 36.1	+0.6
DGB	zmir	0.75	6	*i* P	Pb	16 50 35.8	+0.2
DGB				*i* S	Sg	16 50 45.9	+0.8
ZEYE	Izmir, Urla-Ze	0.96	347	*i* P	Pg	16 50 38.5	-0.6
ZEYE				*i* S	Sg	16 50 51.7	0.0
ZEYE				IAML		16 50 55.0	
	comp=E,173nm,0.2s						
ZEYE				IAML		16 50 56.0	
	comp=N,202nm,1.0s						
APE	Apeiranthos	1.02	257	P	Pg	16 50 40.0	-0.3
APE				S	Sb	16 50 54.5	+0.8
	comp=N,228nm,0.2s						
URLA	Izmir	1.07	352	*i* P	Pg	16 50 39.4	-1.7
URLA				*i* S	Sb	16 50 55.7	+0.7
AYDB	Zeytinkoy-Aydi	1.09	54	PN	Pg	16 50 41.5	-0.2
AYDB				SN	Sn	16 50 57.3	+0.3
BLCB	Balcova	1.10	11	P	Pg	16 50 41.2	-0.6
BLCB				S	Sn	16 50 57.4	+0.3
BLCB	Balcova	1.10	11	PN	Pg	16 50 41.2	-0.6
YER	Yerkesik	1.21	97	PN	Pg	16 50 43.5	-0.4
CHOS	Chios island	1.22	332	P	Pb	16 50 43.6	-0.2
CHOS				S	Sg	16 50 59.3	-0.8
CHOS	Chios island	1.22	332	P	Pb	16 50 43.6	-0.2
CHOS				S	Sg	16 51 00.3	+0.2
ANAF	Anafi Island	1.24	221	P	Pg	16 50 44.8	+0.3
ANAF	Anafi Island	1.24	221	P	Pn	16 50 42.9	-0.9
ANAF				S	Sb	16 51 00.4	+0.4
	comp=N,1μm,0.4s						
TURN	Turunc	1.29	114	*i* P	Pg	16 50 47.2	+1.9
TURN				*i* S	Sb	16 50 59.8	-1.5
TNSA	Tinos	1.31	281	P	Pg	16 50 46.0	+0.3
DALY	Dalyan (Mula)	1.58	107	PN	Pb	16 50 49.2	-0.5
DALY	Dalyan (Mula)	1.58	107	*i* P	Pg	16 50 51.2	+0.3
DALY				*i* S	Sg	16 51 11.3	-0.1
DALY				IAML		16 51 19.0	
	comp=N,121nm,2.2s						
AKHS	Akhisar	1.77	27	*i* P	Pg	16 50 54.9	+0.3
AKHS				*i* S	Sg	16 51 19.0	+1.4
MANT	Manisa	1.84	49	*i* P	Pg	16 50 56.5	+0.5
FETY	Fethiye	1.96	109	PN	Pn	16 50 54.6	+0.8

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*TUL **06** 17:11:55.6±1.2, 36.°731N±0.°008×98.°34W±0.°04, h4^{km}±6^{km}, ML3.1, mb_Lg2.9/43(NEIC), Error ellipse: s-maj=4.2km s-min=1.0km az=82.0*

*ANF **06** 17:11:56.2±1.0, 36.°74N×98.°37W, h5^{km}, ML3.8/7, Error ellipse: s-maj=12.4km s-min=10.3km az=56.0*

*NEIC **06** 17:11:56.3±1.2, 36.°72N±0.°02×98.°32W±0.°05, h9^{km}±6^{km}, Error ellipse: s-maj=5.6km s-min=2.7km az=100.0*

ISC 06 17:11:56.1±1.2**, 36.°72N**±0.°02×**98.°33W**±0.°03**, h4**^{km}±10^{km}**, n72, σ0.^{s}68**/82**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CROK	Carrier	0.35	128		Pg	17 12 03.0	+0.1
CROK				Sg	Sg	17 12 08.0	+0.5
KAN14	Manchester OK	0.38	51		Pg	17 12 03.3	0.0
KAN14				Sg	Sg	17 12 08.6	+0.3

KAN10	Anthony SW Sta	0.44	25	Pg	Pg	17 12 04.5	-0.1
KAN10				Sg	Sg	17 12 10.6	+0.3
KAN05	Bluff City Nor	0.53	43		Pg	17 12 06.1	-0.2
KAN05				Sg	Sg	17 12 13.6	+0.3
KAN08	Anthony NE Sta	0.58	30		Pg	17 12 07.1	-0.1
KAN08				Sg	Sg	17 12 15.0	+0.3
KAN01	Argonia South	0.63	47		Pg	17 12 07.8	-0.3
KAN01				Sg	Sg	17 12 16.7	+0.4
KAN12	Harper NE Stat	0.63	25		Pg	17 12 07.9	-0.3
KAN12				Sg	Sg	17 12 16.9	+0.5
U32A	Winter Ranch,	0.64	238		Pg	17 12 08.3	-0.1
U32A				Sg	Sg	17 12 17.3	+0.6
KAN13	South Haven SW	0.74	67		Pg	17 12 09.9	-0.4
OK029	Liberty Lake	1.16	142	Pg	Pg	17 12 17.7	-0.6
OK029				Sg	Sg	17 12 33.3	-0.1
BCOK	Bluff Creek, N	1.21	151		Pg	17 12 18.2	-1.0
BCOK				IAmb_Lg		17 12 35.5	
	comp=Z,110nm,0.9s						
BCOK				Sg	Sg	17 12 35.6	+0.6
OK025	Westminster Rd	1.39	145		Pn	17 12 21.5	-0.8
QUOK	Quay	1.42	112		Pn	17 12 22.2	-0.4
OK031	S. Brethren Rd	1.43	122	Pn	Pn	17 12 22.3	-0.4
T35A	Sooner Cattle	1.47	82		Pn	17 12 22.9	-0.5
OK030	Cody Creek RV	1.48	122	Pn	Pn	17 12 23.3	-0.1
OKCFA	Oklahoma City	1.48	151		Pn	17 12 23.1	-0.5
OKCSW	OKLAHOMA CITY	1.50	151		Pn	17 12 23.2	-0.5
FNO	Franklin	1.65	152		Pn	17 12 26.0	+0.3
R32A	Long Quarter,	1.72	350		Pn	17 12 27.3	+0.4
WMOK	Wichita Mounta	2.01	191	P	Pn	17 12 31.0	+0.2
	baz=10						
WMOK				S	Sn	17 12 57.1	+0.6
	baz=10						
WMOK	Wichita Mounta	2.01	191		Pn	17 12 31.2	+0.4
TUL1	Leonard	2.20	111	P	Pn	17 12 34.2	+0.8
	baz=293						
TUL1				S	Sn	17 13 02.1	+1.0
	baz=293						
TUL1	Leonard	2.20	111		Pn	17 12 34.3	+0.9
TUL1				IAmb_Lg		17 13 08.0	
	comp=Z,81nm,0.8s						
CBKS	Cedar Bluff	2.37	332	P	Pn	17 12 35.5	-0.2
	baz=152						
CBKS				S	Sn	17 13 05.4	+0.1
	baz=152						
CBKS	Cedar Bluff	2.37	332		Pn	17 12 36.2	+0.4
KSU1	Kansas State U	2.74	29	P	Pn	17 12 40.0	-0.7
	baz=210						
KSU1	Kansas State U	2.74	29		Pn	17 12 41.4	+0.6
U38A	Gravette	3.19	94		Pn	17 12 47.5	+0.5
X37A	Clayton	3.21	131		Pn	17 12 47.6	+0.3
X37A				IAmb_Lg		17 13 41.3	
	comp=Z,33nm,0.7s						
AMTX	Amarillo	3.28	237	P	Pn	17 12 49.2	+0.8
	baz=55						
AMTX				S	Sn	17 13 28.3	+0.4
	baz=55						
AMTX	Amarillo	3.28	237		Pn	17 12 48.4	0.0
Z35A	Perchaven, San	3.50	165	Pn	Pn	17 12 52.4	+1.2
HHAR	Hobbs	3.56	96		Pn	17 12 52.7	+0.6
W39A	Magazine	3.99	111		Pn	17 12 59.1	+1.1
N33A	J Bar K, Exete	4.07	9	Pn	Pn	17 12 57.7	-1.3
KSCO	Kaye Shedlock’	4.10	305	P	Pn	17 12 59.6	0.0
	baz=123						
KSCO	Kaye Shedlock’	4.10	305	Pn	Pn	17 12 58.8	-0.7
KSCO				IAmb_Lg		17 14 11.6	
	comp=Z,32nm,0.7s						
S39A	Bolivar	4.11	75		Pn	17 12 59.6	0.0
S39A				IAmb_Lg		17 14 06.1	
	comp=Z,25nm,0.9s						
ABTX	Abilene, Hawle	4.23	195	P	Pn	17 13 01.4	+0.2
	baz=14						
ABTX	Abilene, Hawle	4.23	195	Pn	Pn	17 12 59.7	-1.6
ABTX				IAmb_Lg		17 14 11.6	
	comp=Z,21nm,0.8s						
Z38A	Mt. Pleasant	4.41	141	IAmb_Lg		17 14 18.4	
	comp=Z,25nm,0.8s						
U40A	Yellville	4.42	93	Pn	Pn	17 13 04.0	+0.1
U40A				IAmb_Lg		17 14 19.2	
	comp=Z,26nm,0.7s						
MIAR	Mount Ida	4.44	118	Pn	Pn	17 13 04.6	+0.5
MIAR				IAmb_Lg		17 14 21.7	
	comp=Z,26nm,1.0s						
MSTX	Muleshoe	4.55	234	Pn	Pn	17 13 06.0	+0.2
N35A	Tabor	4.63	26		Pn	17 13 04.7	-2.1
BGNE	Belgrade	4.68	2		Pn	17 13 07.3	-0.2
BGNE				IAmb_Lg		17 14 29.2	
	comp=Z,43nm,0.8s						
P38A	Dawn	4.76	51		Pn	17 13 08.1	-0.5
P38A				IAmb_Lg		17 14 36.2	
	comp=Z,28nm,0.9s						
MGMO	Mountain Grove	4.87	83		Pn	17 13 09.8	-0.4
MGMO				IAmb_Lg		17 14 37.6	
	comp=Z,16nm,0.8s						
X40A	Basin Creek Fa	5.00	115	Pn	Pn	17 13 12.0	+0.1
X40A				IAmb_Lg		17 14 42.8	
	comp=Z,20nm,0.8s						
R40A	Maddies Statio	5.07	70	Pn	Pn	17 13 12.0	-0.8
FCAR	Ozark Folk Cen	5.08	98	Pn	Pn	17 13 13.0	0.0
WHAR	Wooly Hollow	5.10	104		Pn	17 13 13.6	+0.4
WHAR				IAmb_Lg		17 14 49.2	
	comp=Z,25nm,0.7s						
OGNE	Ogallala	5.11	327		Pn	17 13 13.6	+0.1
237A	Washetta, Mont	5.15	155	Pn	Pn	17 13 13.0	-0.9
L34A	Svendsen Farm,	5.45	16	Pn	Pn	17 13 18.1	0.0
N38A	Joes South For	5.69	43	Pn	Pn	17 13 21.7	+0.4
N38A				IAmb_Lg		17 15 05.6	
	comp=Z,32nm,0.7s						
P40A	Paris	5.69	59	Pn	Pn	17 13 21.1	-0.2
CCM	Cathedral Cave	5.80	75	Pn	Pn	17 13 22.3	-0.5
CCM				IAmb_Lg		17 15 00.9	
	comp=Z,20nm,0.7s						
T42A	Van Buren	5.81	85		Pn	17 13 22.0	-1.0
SDCO	Great Sand Dun	5.81	282		Pn	17 13 22.8	-0.5
LCAR	Lake Charles	5.82	94	Pn	Pn	17 13 21.4	-1.8
LCAR				IAmb_Lg		17 15 06.8	
	comp=Z,15nm,1.0s						
CPRX	Cap Rock	5.85	233	Pn	Pn	17 13 23.3	-0.4
PBMO	Poplar Bluff	6.34	87	Pn	Pn	17 13 30.4	+0.1
PBMO				IAmb_Lg		17 15 29.2	
	comp=Z,17nm,0.8s						
FVM	French Village	6.42	76	IAmb_Lg		17 15 16.5	
	comp=Z,16nm,0.9s						
ISCO	Idaho Springs	6.50	300	Pn	Pn	17 13 32.8	0.0
ANMO	Albuquerque	6.84	257	Pn	Pn	17 13 35.2	-2.1
ECSD	EROS Data Cent	7.12	10	Pn	Pn	17 13 40.8	-0.2
P43A	Skaggs, Pawnee	7.52	65	IAmb_Lg		17 16 02.9	
	comp=Z,19nm,0.7s						
OXF	Oxford	7.59	104	Pn	Pn	17 13 46.8	-0.7
MNTX	Cornudas Mount	7.70	231	Pn	Pn	17 13 48.7	-0.2
K22A	Casper	8.65	316	IAmb_Lg		17 16 40.3	
	comp=Z,16nm,0.9s						

*TUL **06** 17:20:20.3±1.5, 36.°13N±0.°01×97.°28W±0.°02, h5^{km}±7^{km}, ML3.3, mb_Lg3.4/101(NEIC), Error ellipse: s-maj=2.7km s-min=1.7km az=89.0*

*NEIC **06** 17:20:20.5±1.0, 36.°142N±0.°005×97.°28W±0.°02, h6^{km}±7^{km}, Error ellipse: s-maj=2.8km s-min=0.7km az=80.0*

*ANF **06** 17:20:20.4±0.9, 36.°14N×97.°25W, h5^{km}, ML4.2/8, Error ellipse: s-maj=9.9km s-min=6.4km az=13.0*

*IDC **06** 17:20:25.0±2.2, 36.°60N×97.°77W, h0^{km}, mb3.1/1, mb1 3.6/4, mb1mx3.4/36, mbtmp3.3/4, ML3.4/3, Error ellipse: s-maj=44.5km s-min=15.5km az=104.0*

ISC 06 17:20:20.1±1.0**, 36.°14N**±0.°02×**97.°28W**±0.°02**, h8**^{km}±8^{km}**, n117, σ1^{s}01**/115**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK029	Liberty Lake	0.37	203		Pg	17 20 27.4	0.0
OK029				Sg	Sg	17 20 32.7	+0.4
OK031	S. Brethren Rd	0.40	117		Pg	17 20 28.3	+0.3
OK031				Sg	Sg	17 20 33.8	+0.5
OK030	Cody Creek RV	0.45	117		Pg	17 20 29.3	+0.4
OK030				Sg	Sg	17 20 35.4	+0.5
QUOK	Quay	0.46	86		Pg	17 20 29.6	+0.4
QUOK				Sg	Sg	17 20 36.2	+0.9
BCOK	Bluff Creek, N	0.55	209		Pg	17 20 30.9	+0.1
BCOK				IAmb_Lg		17 20 37.9	
	comp=Z,450nm,0.8s						
BCOK				Sg	Sg	17 20 38.4	+0.4
OK025	Westminster Rd	0.56	185		Pg	17 20 31.1	+0.2
CROK	Carrier	0.68	303		Pg	17 20 33.3	+0.1
OKCFA	Oklahoma City	0.73	191		Pg	17 20 34.2	-0.1
OKCFA				Sg	Sg	17 20 44.2	+0.3
OKCSW	OKLAHOMA CITY	0.74	190		Pg	17 20 34.3	-0.1
FNO	Franklin	0.89	186		Pg	17 20 37.2	0.0
FNO				Sg	Sg	17 20 49.4	+0.8
KAN13	South Haven SW	0.89	350		Pg	17 20 37.4	+0.2
KAN13				Sg	Sg	17 20 49.5	+0.7
KAN13				IAmb_Lg		17 20 49.8	
	comp=Z,312nm,0.9s						
KAN14	Manchester OK	0.98	326		Pg	17 20 39.0	-0.1
KAN14				Sg	Sg	17 20 52.3	+0.4
T35A	Sooner Cattle	0.99	38		Pg	17 20 39.2	0.0
T35A				Sg	Sg	17 20 52.1	0.0
T35B	Sooner Cattle	0.99	38	P		17 20 39.3	
	baz=218,SNR=169						
T35B				S		17 20 52.2	
	baz=218						
KAN05	Bluff City Nor	1.08	334		Pg	17 20 40.9	0.0
KAN05				Sg	Sb	17 20 56.1	+0.9
KAN01	Argonia South	1.08	339		Pg	17 20 40.9	0.0
KAN10	Anthony SW Sta	1.18	327		Pg	17 20 42.5	-0.3
KAN10				Sg	Sg	17 20 58.5	+0.3
KAN08	Anthony NE Sta	1.22	333		Pg	17 20 43.1	-0.4
KAN08				Sg	Sb	17 20 59.8	+0.5
TUL1	Leonard	1.23	100	P	Pg	17 20 42.9	-0.7
	baz=281						
TUL1				S	Sb	17 21 00.2	+0.7
	baz=281						
TUL1	Leonard	1.23	100		Pg	17 20 43.0	-0.7
TUL1	Leonard	1.23	100	P		17 20 42.8	
	baz=281,SNR=35						
TUL1				S		17 20 59.6	
	baz=281						
KAN12	Harper NE Stat	1.29	334		Pn	17 20 44.4	-0.1
U32A	Winter Ranch,	1.41	280		Pn	17 20 46.2	+0.1
U32A	Winter Ranch,	1.41	280	S		17 21 06.1	
	baz=100						
WMOK	Wichita Mounta	1.86	222	P	Pn	17 20 53.2	+0.9
	baz=41						
WMOK				S	Sn	17 21 17.7	+1.7
	baz=41						
WMOK	Wichita Mounta	1.86	222		Pn	17 20 53.0	+0.8
WMOK				IAmb_Lg		17 21 22.8	
	comp=Z,238nm,0.8s						
WMOK	Wichita Mounta	1.86	222	P		17 20 53.3	
	baz=41						
WMOK				S		17 21 19.1	
	baz=41						
X37A	Clayton	2.20	134		Pn	17 20 57.8	+0.9
X37A				IAmb_Lg		17 21 30.5	
	comp=Z,160nm,0.7s						
X37A	Clayton	2.20	134	P		17 20 58.0	
	baz=315						
U38A	Gravette	2.36	82		Pn	17 21 00.3	+1.2
R32A	Long Quarter,	2.55	334		Pn	17 21 02.9	+1.2
R32A				IAmb_Lg		17 21 47.1	
	comp=Z,159nm,1.0s						
R32A	Long Quarter,	2.55	334	P		17 21 03.1	
	baz=153						
R32A				Sb		17 21 39.8	
	baz=153						
Z35A	Perchaven, San	2.80	180	Pn	Pn	17 21 06.2	+1.0
Z35A	Perchaven, San	2.80	180	P		17 21 06.3	
	baz=360						
W39A	Magazine	3.00	107	P	Pn	17 21 08.8	+1.0
	baz=289						
W39A				S	Sn	17 21 45.4	+1.5
	baz=289						
W39A	Magazine	3.00	107		Pn	17 21 09.1	+1.2
W39A				IAmb_Lg		17 22 00.9	
	comp=Z,78nm,0.7s						
KSU1	Kansas State U	3.00	10	P	Pn	17 21 09.1	+1.1
	baz=190						
KSU1				S	Sn	17 21 45.8	+1.6
	baz=190						
KSU1	Kansas State U	3.00	10		Pn	17 21 09.2	+1.2
KSU1				IAmb_Lg		17 22 00.8	
	comp=Z,155nm,0.8s						
KSU1	Kansas State U	3.00	10	P		17 21 09.4	
	baz=190						
CBKS	Cedar Bluff	3.31	325	S	Sn	17 21 53.7	+1.9
	baz=143						
CBKS	Cedar Bluff	3.31	325	Pn	Pn	17 21 13.3	+1.1
CBKS				IAmb_Lg		17 22 08.2	
	comp=Z,109nm,0.8s						
MIAR	Mount Ida	3.42	117	P	Pn	17 21 14.7	+1.0
	baz=299						
MIAR				S	Sn	17 21 55.9	+1.5
	baz=299						
MIAR	Mount Ida	3.42	117		Pn	17 21 15.2	+1.5
MIAR				IAmb_Lg		17 22 14.3	
	comp=Z,77nm,0.8s						
Z38A	Mt. Pleasant	3.44	146	Pn	Pn	17 21 14.8	+0.9
S39A	Bolivar	3.53	63		Pn	17 21 16.9	+1.6
S39A	Bolivar	3.53	63	P		17 21 16.4	
	baz=245,SNR=14						
U40A	Yellville	3.58	85	P	Pn	17 21 16.3	+0.4
	baz=268						
U40A				S	Sn	17 22 00.2	+1.7
	baz=268						
U40A	Yellville	3.58	85		Pn	17 21 16.5	+0.5
U40A	Yellville	3.58	85	P		17 21 16.6	
	baz=268,SNR=15						
U40A				P		17 21 16.6	
	baz=268,SNR=15						
AMTX	Amarillo	3.80	252	P	Pn	17 21 20.9	+1.8
	baz=70						
AMTX	Amarillo	3.80	252		Pn	17 21 18.6	-0.4
AMTX				IAmb_Lg		17 22 26.2	
	comp=Z,71nm,0.7s						
X40A	Basin Creek Fa	3.99	113		Pn	17 21 22.8	+1.2
X40A				IAmb_Lg		17 22 26.7	
	comp=Z,99nm,0.8s						
ABTX	Abilene, Hawle	4.01	210		Pn	17 21 23.4	+1.5
WHTX	Lake Whitney,	4.14	182		Pn	17 21 24.6	+1.0
WHTX	Lake Whitney,	4.14	182	P		17 21 24.7	
	baz=2.0						
WHAR	Wooly Hollow	4.15	100		Pn	17 21 24.7	+1.0
WHAR				IAmb_Lg		17 22 38.9	
	comp=Z,97nm,0.8s						
MGMO	Mountain Grove	4.16	74		Pn	17 21 24.7	+0.9
MGMO				IAmb_Lg		17 22 35.6	
	comp=Z,116nm,0.8s						
FCAR	Ozark Folk Cen	4.19	92		Pn	17 21 25.1	+0.8
WLAR	White Oak Lake	4.21	124	IAmb_Lg		17 22 35.3	
	comp=Z,88nm,0.8s						
W41B	Gary Mavity, V	4.21	102	P		17 21 24.9	
	baz=285,SNR=10.0						
W41B				S		17 22 14.6	
	baz=285						
237A	Washetta, Mont	4.30	163	S		17 22 16.8	
	baz=344						
237A	Washetta, Mont	4.30	163		Pn	17 21 25.8	-0.1
237A				IAmb_Lg		17 22 46.1	
	comp=Z,68nm,1.0s						
R40A	Maddies Statio	4.54	60		Pn	17 21 29.8	+0.7
R40A				IAmb_Lg		17 22 53.2	
	comp=Z,62nm,0.7s						
R40A	Maddies Statio	4.54	60	P		17 21 30.2	
	baz=243,SNR=12						
P38A	Dawn	4.57	39		Pn	17 21 30.2	+0.7
P38A				IAmb_Lg		17 22 42.6	
	comp=Z,50nm,1.1s						
N33B	J Bar K, Exete	4.59	358	S		17 22 23.6	
	baz=178						
N33A	J Bar K, Exete	4.59	358		Pn	17 21 30.6	+0.7
N33A				IAmb_Lg		17 22 47.6	
	comp=Z,75nm,0.8s						
NATX	Nacogdoches	4.88	153	IAmb_Lg		17 23 07.0	
	comp=Z,46nm,0.8s						
N35A	Tabor	4.89	15	Pn	Pn	17 21 34.8	+0.9
N35A	Tabor	4.89	15	P		17 21 34.7	
	baz=196,SNR=5.2						
LCAR	Lake Charles	4.96	89	IAmb_Lg		17 23 01.2	
	comp=Z,52nm,0.7s						
MSTX	Muleshoe	5.00	246		Pn	17 21 36.5	+0.9
CCAR	Cane Creek	5.03	115	Pn	Pn	17 21 36.0	+0.1
T42A	Van Buren	5.06	78		Pn	17 21 36.9	+0.7
T42A				IAmb_Lg		17 22 59.0	
	comp=Z,92nm,0.9s						
KSCO	Kaye Shedlock’	5.12	306		Pn	17 21 35.9	-1.3
KSCO				IAmb_Lg		17 23 11.7	
	comp=Z,87nm,1.3s						
CCM	Cathedral Cave	5.19	67		Pn	17 21 38.5	+0.5
CCM				IAmb_Lg		17 23 11.0	
	comp=Z,94nm,1.0s						
BGNE	Belgrade	5.31	353		Pn	17 21 39.9	+0.3
BGNE				IAmb_Lg		17 23 19.4	
	comp=Z,110nm,0.8s						
BGNE	Belgrade	5.31	353	P		17 21 39.9	
	baz=172,SNR=8.9						
435B	Jarrell	5.35	183		Pn	17 21 41.2	+1.0
P40A	Paris	5.35	49		Pn	17 21 41.7	+1.5
P40A				IAmb_Lg		17 23 08.6	
	comp=Z,71nm,0.7s						
HBAR	Harrisburg	5.41	94	Pn	Pn	17 21 42.0	+0.9
PBMO	Poplar Bluff	5.56	81	Pn	Pn	17 21 44.2	+1.2
PBMO				IAmb_Lg		17 23 25.0	
	comp=Z,82nm,1.1s						
N38A	Joes South For	5.63	33	Pn	Pn	17 21 43.8	-0.3
N38A				IAmb_Lg		17 23 34.2	
	comp=Z,110nm,0.7s						
LPAR	Lepanto	5.69	93	IAmb_Lg		17 23 28.5	
	comp=Z,111nm,0.9s						
FVM	French Village	5.78	69	Pn	Pn	17 21 44.8	-1.4
FVM				IAmb_Lg		17 23 27.5	
	comp=Z,87nm,1.0s						
L34A	Svendsen Farm,	5.86	7	Pn	Pn	17 21 49.4	+2.1
143A	Socs Landing,	5.94	124	IAmb_Lg		17 23 35.4	
	comp=Z,52nm,0.8s						
JCT	Junction City	6.03	201		Pn	17 21 49.6	+0.1
JCT				IAmb_Lg		17 23 36.9	
	comp=Z,55nm,0.8s						
OGNE	Ogallala	6.07	324		Pn	17 21 49.6	-0.7
OGNE				IAmb_Lg		17 23 35.3	
	comp=Z,51nm,0.8s						
PARMO	Parma	6.09	83		Pn	17 21 51.2	+0.8
SLM	Saint Louis	6.14	64	Pn	Pn	17 21 49.4	-1.6
SLM				IAmb_Lg		17 23 40.1	
	comp=Z,81nm,0.7s						
CPRX	Cap Rock	6.25	242	Pn	Pn	17 21 52.3	-0.5
HKT	Hockley	6.29	168	Pn	Pn	17 21 52.1	-0.9
HALT	Halls	6.44	90	IAmb_Lg		17 23 49.1	
	comp=Z,64nm,0.7s						
SCIA	State Center	6.57	28	Pn	Pn	17 21 57.5	+0.5
SCIA				IAmb_Lg		17 23 59.8	
	comp=Z,84nm,0.7s						
K31A	O'Neill	6.58	350	Pn	Pn	17 21 57.4	+0.3
S44A	Carbondale	6.61	74	Pn	Pn	17 21 59.4	+1.9
OXF	Oxford	6.63	102	Pn	Pn	17 21 58.6	+0.7
OXF				IAmb_Lg		17 24 07.1	
	comp=Z,39nm,0.8s						
SIUC	Southern Illin	6.65	74	Pn	Pn	17 21 58.5	+0.5
W45A	Hickory Valley	6.66	96	IAmb_Lg		17 24 08.8	
	comp=Z,58nm,0.8s						
Y45A	Yeager Farm, C	6.74	107	IAmb_Lg		17 24 00.8	
	comp=Z,34nm,0.7s						
SDCO	Great Sand Dun	6.78	286		Pn	17 22 00.7	+0.6
N41A	Harden Midland	6.80	46	Pn	Pn	17 22 01.8	+1.7
P43A	Skaggs, Pawnee	7.06	58	Pn	Pn	17 22 04.0	+0.3
ISCO	Idaho Springs	7.53	302	Pn	Pn	17 22 11.1	+0.7
ANMO	Albuquerque	7.58	264	Lg	Lg	17 24 12.7	
	comp=Z,0.4nm,0.3s,baz=98,slow=2.0,SNR=6.7						
PLAL	Pickwick Lake	7.59	96	IAmb_Lg		17 24 20.0	
	comp=Z,26nm,1.1s						
ECSD	EROS Data Cent	7.60	4	Pn	Pn	17 22 10.5	-0.7
WVT	Waverly	7.65	87	Pn	Pn	17 22 11.6	-0.1
OLIL	Olney	7.75	68	IAmb_Lg		17 24 46.6	
	comp=Z,52nm,0.9s						
O44A	Mansfield	8.02	57	IAmb_Lg		17 24 36.5	
	comp=Z,63nm,0.7s						
MNTX	Cornudas Mount	8.06	239	Pn	Pn	17 22 18.1	+0.6
L42A	Oliver, Polo	8.32	43	Pn	Pn	17 22 20.9	-0.2
SUSD	Miller	8.39	352	IAmb_Lg		17 24 57.1	
	comp=Z,63nm,1.1s						
I37A	Lemond, Waseca	8.41	20	IAmb_Lg		17 24 53.1	
	comp=Z,38nm,0.8s						
TXAR	Lajitas Array	8.66	220	Pn	Pn	17 22 31.4	+5.7
	comp=Z,0.2nm,0.3s,baz=27,slow=10,SNR=2.3						
TXAR				Lg	Lg	17 24 52.0	
	comp=Z,0.8nm,0.3s,baz=34,slow=27,SNR=9.8						
TXAR	Lajitas Array	8.66	220	Pn	Pn	17 22 25.0	-0.8
JFWS	Jewell Farm	8.67	37	Pn	Pn	17 22 26.9	+1.0
JFWS				IAmb_Lg		17 24 58.2	
	comp=Z,52nm,0.8s						
P46A	Rosedale	8.69	63	IAmb_Lg		17 25 07.0	
	comp=Z,51nm,0.7s						
SFIN	Lafayette	9.06	59	IAmb_Lg		17 25 06.6	
	comp=Z,54nm,0.7s						
I40A	Norwalk	9.27	31	Pn	Pn	17 22 34.1	+0.1
SWET	Sewanee	9.28	92		Pn	17 22 33.7	-0.5
RSSD	Black Hills	9.50	329	Pn	Pn	17 22 37.9	+0.5
RSSD				IAmb_Lg		17 25 27.1	
	comp=Z,20nm,0.9s						
K43A	Burlington	9.53	44	Pn	Pn	17 22 36.8	-0.8
K22A	Casper	9.66	315	IAmb_Lg		17 25 51.3	
	comp=Z,33nm,1.0s						
SPMN	Marine on St.	9.69	19	IAmb_Lg		17 25 31.9	
	comp=Z,22nm,0.8s						
W50A	Signal Mountai	9.78	92	IAmb_Lg		17 25 42.2	
	comp=Z,21nm,0.8s						
F36A	Milaca	10.12	15	Pn	Pn	17 22 43.4	-2.2
G40A	Rib Lake	10.58	28	Pn	Pn	17 22 50.8	-1.2
H43A	Windswept, Lux	11.04	38	Pn	Pn	17 22 57.2	-1.0
PDAR	Pinedale Array	11.56	309	Pn	Pn	17 23 05.0	-0.7
	comp=Z,0.2nm,0.3s,baz=120,slow=14,SNR=4.2						
PDAR				Lg	Lg	17 26 16.3	
	comp=Z,0.1nm,0.3s,baz=84,slow=26,SNR=2.9						
ULM	Lac du Bonnet	14.14	4	Pn	Pn	17 23 35.8	-4.8
	comp=Z,0.5nm,0.3s,baz=184,slow=14,SNR=5.0						
ULM				Lg	Lg	17 27 35.9	
	comp=Z,0.3nm,0.3s,baz=81,slow=19,SNR=2.0						
ULM	Lac du Bonnet	14.14	4		Pn	17 23 36.5	-4.1
YKA	Yellowknife Ar	28.50	343	P	P	17 26 15.8	+0.3
	comp=Z,0.1nm,0.6s,baz=142,slow=10,SNR=3.0						

*IDC **06** 17:31:41.4±4.7, 27.°31S×67.°06W, h133^{km}±39^{km}, mb3.6/3, mb1 3.5/5, mb1mx3.3/31, mbtmp3.9/5, MS2.6/1, Ms1 2.6/1, ms1mx2.3/24, Error ellipse: s-maj=37.5km s-min=36.1km az=132.0*

*NEIC **06** 17:31:41.2±2.9, 27.°33S±0.°06×67.°14W±0.°07, h138^{km}±7^{km}, mb4.2/5, Error ellipse: s-maj=10.1km s-min=7.8km az=126.0*

ISC 06 17:31:41.4±0.6**, 27.°31S**±0.°05×**67.°20W**±0.°07**, h146**^{km}**, n51, σ1^{s}40**/59**, mb4.0**/4**, Catamarca Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AC02	Maricunga	1.78	285	Pn	Pn	17 32 16.8	+2.5
GO03	Copiap	2.71	263		Pn	17 32 26.2	+1.2
GO03				Sn	Sn	17 32 59.2	+0.6
GO02	Mina Guanaco	3.03	314		Pn	17 32 31.8	+2.5
GO02				Sn	Sn	17 33 09.0	+2.8
AC05	El Transito	3.11	240		Pn	17 32 31.4	+1.3
AC05				Sn	Sn	17 33 09.1	+1.2
AC01	Pan de Azucar	3.25	290	Pn	Pn	17 32 33.0	+1.1
AC01				Sn	Sn	17 33 10.6	-0.3
LCO	Las Campanas	3.52	240		Pn	17 32 35.9	+0.4
LCO				Sn	Sn	17 33 17.6	0.0
AC04	Llanos de Chal	3.55	255		Pn	17 32 35.9	+0.3
AC04				Sn	Sn	17 33 15.6	-2.0
CO01	Juntas del Tor	3.68	223		Pn	17 32 39.2	+1.7
CO01				Sn	Sn	17 33 23.2	+2.1
PB14	IPOC Station P	3.93	312		Pn	17 32 42.4	+1.4
GO04	Tololo Observa	4.26	227	Pn	Pn	17 32 44.8	-0.3
ZON	Zonda	4.41	197	Pn	Pn	17 32 47.0	+0.1
PB15	IPOC Station P	4.57	333		Pn	17 32 49.5	+0.2
CO03	El Pedregal	4.66	220	Pn	Pn	17 32 50.0	-0.2
PB10	IPOC Station P	4.85	321	Pn	Pn	17 32 53.5	+0.7
LVC	Limon Verde	4.93	341	P	Pn	17 32 55.8	+1.6
	2.1nm,0.3s,baz=153,slow=12,SNR=35						
LVC				S	Sn	17 33 51.4	+0.6
	1.6nm,0.3s,baz=264,slow=23,SNR=14						
LVC				LR	LR	17 35 06.8	
	comp=Z,56nm,19.3s,baz=216,slow=41						
LVC	Limon Verde	4.93	341		Pn	17 32 55.1	+0.9
PB06	IPOC Station P	5.06	334	Pn	Pn	17 32 57.0	+1.2
CO02	Combarbal	5.11	220	Pn	Pn	17 32 55.3	-0.9
PB04	IPOC Station P	5.63	331	Pn	Pn	17 33 03.4	+0.1
PB09	IPOC Station P	5.79	341	Pn	Pn	17 33 06.6	+1.1
PB07	IPOC Station P	6.07	336		Pn	17 33 09.1	-0.1
VA03	San Esteban	6.16	207	Pn	Pn	17 33 10.1	-0.1
PB01	IPOC Station P	6.58	341	Pn	Pn	17 33 15.6	-0.3
MT02	Curacav	6.84	209	Pn	Pn	17 33 17.4	-1.8
PATCX	Punta Patache	7.00	337	Pn	Pn	17 33 20.1	-1.4
TA01	Diego Aracena	7.25	337	Pn	Pn	17 33 23.2	-1.5
PB08	IPOC Station P	7.36	346	Pn	Pn	17 33 26.4	-0.2
BO02	Sierra Bellavi	8.07	201		Pn	17 33 33.0	-2.7

PSGCX	Pisagua	8.13	340	Pn	Pn	17 33 34.2	-2.5
MNMC	Minye Minye	8.43	344		Pn	17 33 38.7	-2.2
CPUP	Villa Florida	8.87	86	Pn	Pn	17 33 46.1	-0.3
PB16	IPOC Station P	9.18	346	Pn	Pn	17 33 48.3	-2.9
AP01	Chacalluta	9.36	341	Pn	Pn	17 33 50.3	-2.6
BI02	San Fabin de	9.94	199	Pn	Pn	17 33 57.8	-2.9
LC01	Cunco	12.20	198	Pn	Pn	17 34 28.9	-1.4
SIV	San Ignacio	12.62	28	P	Pn	17 34 34.8	-1.1
	0.2nm,0.3s,baz=220,slow=16,SNR=3.9						
SAML	Samuel	18.65	12	P	P	17 35 47.6	-0.6
PTGA	Pitinga	27.32	16	P	P	17 37 13.0	+0.4
	1.5nm,0.4s,baz=330,slow=20,SNR=3.5						
PTGA	Pitinga	27.32	16	P	P	17 37 12.9	+0.2
PTGA				IAmb	IAmb	17 37 15.6	
	comp=Z,5.8nm,1.2s						
AOPR	Arecibo Observ	45.39	1	P	P	17 39 45.1	-0.3
SNAA	Sanae	56.31	160	P	P	17 41 07.3	+0.8
SNAA				IAmb	IAmb	17 41 27.5	
	comp=Z,5.0nm,1.2s						
QSPA	South Pole Qui	62.91	180	P	P	17 41 53.6	+1.7
TORD	Torodi Ar. Bea	77.94	68	P	P	17 43 24.1	+0.4
	comp=Z,0.3nm,0.3s,baz=256,slow=4.3,SNR=2.6						
BOSA	Boshof	79.40	117	P	P	17 43 32.8	+1.0
	comp=Z,1.8nm,0.9s,baz=272,slow=4.0,SNR=3.9						
BOSA	Boshof	79.40	117	IAmb	IAmb	17 43 35.4	
	comp=Z,4.7nm,1.2s						
ASAR	Alice Springs	125.38	204	PKP	PKPdf	17 50 26.1	+0.5
	comp=Z,0.3nm,0.8s,baz=153,slow=2.0,SNR=5.3						
WRA	Warramunga Arr	128.60	206	PKP	PKPdf	17 50 32.7	+0.8
	comp=Z,0.1nm,0.5s,baz=164,slow=1.8,SNR=4.6						
AAK	Ala-Archa	145.41	54	PKPbc	PKiKP	17 51 04.8	-1.3
	baz=192,slow=3.3						
ZALV	Zalesovo Beam	146.37	30	PKPbc	PKPbc	17 51 05.0	+0.4
	comp=Z,2.6nm,0.4s,baz=310,slow=2.4,SNR=11						
ZALV	Zalesovo Beam	146.37	30	PKPdf	PKPdf	17 51 03.8	+0.7
ZALV					PKPab	17 51 05.9	+0.1
MKAR	Makanchi Array	149.13	43	PKPbc	PKiKP	17 51 13.9	+0.4
	comp=Z,1.1nm,0.7s,baz=332,slow=2.1,SNR=13						

IDC ***06*** *17:39:43.8±1.5, 20°.41S×172°.56E, h0^{km}, mb4.1/10, mb1 4.3/11, mb1mx4.1/22, mbtmp4.0/11, ML3.5/1, MS3.5/23, Ms1 3.5/23, ms1mx3.4/37, Error ellipse: s-maj=55.4km s-min=20.5km az=149.0*

NEIC ***06*** *17:39:49.9±2.1, 20°.6S±0°.1×172°.58E±0°.09, h42^{km}±7^{km}, mb4.8/19, Error ellipse: s-maj=16.1km s-min=11.2km az=166.0*

ISC 06 17:39:48.8±0.6**, 20°.6S**±0°.1×**172°.63E**±0°.10**, h35^{km}, n74, σ1^{s}.03**/52**, mb4.3**/18**, MS3.5**/22**, 1D, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	5.84	62		Pn	17 41 13.6	+0.5
DZM	Mont Dzumac	5.96	254	Pn	Pn	17 41 14.9	+0.1
	1.2nm,0.3s,baz=275,slow=22,SNR=8.4						
DZM	Mont Dzumac	5.96	254	*e*Pn	Pn	17 41 16.4	+1.7
DZM				*e*LR	LR	17 42 37.6	
DZM	Mont Dzumac	5.96	254		Pn	17 41 14.7	0.0
SANVU	Saraoutou	7.24	314		Pn	17 41 32.2	-0.1
RAO	Raoul Island	12.18	137	LR	LR	17 46 23.6	
	comp=Z,370nm,19.2s,baz=310,slow=32						
HNR	Honiara	16.49	310	LR	LR	17 48 59.5	
	comp=Z,156nm,19.1s,baz=164,slow=34						
HNR	Honiara	16.49	310	P	P	17 43 41.8	+1.8
HNR				IAmb	IAmb	17 43 52.6	
	comp=Z,73nm,0.9s						
URZ	Urewera	18.06	169	LR	LR	17 49 38.3	
	comp=Z,178nm,19.4s,baz=30,slow=33						
RPZ	Rata Peaks	23.13	183	LR	LR	17 52 38.8	
	comp=Z,124nm,18.1s,baz=42,slow=33						
STKA	Stephens Creek	29.94	242	P	P	17 45 54.0	+0.2
	comp=Z,2.6nm,0.8s,baz=70,slow=10,SNR=6.7						
STKA				LR	LR	17 57 22.4	
	comp=Z,77nm,18.2s,baz=65,slow=35						
STKA	Stephens Creek	29.94	242	IAmb	IAmb	17 45 56.6	
	comp=Z,0.7nm,0.9s						
BBOO	Buckleboo	34.71	242	P	P	17 46 36.3	+0.7
BBOO				IAmb	IAmb	17 46 42.6	
	comp=Z,14nm,1.2s						
TBI	Tubuai	35.21	102	*e*LR	LR	17 56 09.0	
	comp=Z,187nm,31.5s						
PPT2	Papeete2	35.79	92	*e*LR	LR	17 56 23.9	
	comp=Z,233nm,29.2s						
PPT	Papeete	35.79	92	LR	LR	18 00 35.6	
	comp=Z,23nm,18.1s,baz=207,slow=35						
WB0	Warramunga Arr	35.85	264	P	P	17 46 45.5	-0.1
WB2	Warramunga Arr	35.86	264	P	P	17 46 44.5	-1.2
WB2				IAmb	IAmb	17 46 51.0	
	comp=Z,12nm,1.4s						
WRAB	Tennant Creek	35.87	264	P	P	17 46 44.8	-0.8
WRAB				IAmb	IAmb	17 46 51.1	
	comp=Z,9.9nm,1.4s						
WRA	Warramunga Arr	35.88	264	P	P	17 46 44.4	-1.4
	comp=Z,0.8nm,0.8s,baz=99,slow=8.3,SNR=5.0						
WRA				LR	LR	18 01 19.9	
	comp=Z,99nm,18.5s,baz=175,slow=36						
WRA	Warramunga Arr	35.88	264	IAmb	IAmb	17 46 47.3	
	comp=Z,0.2nm,1.1s						
ASAR	Alice Springs	35.94	258	P	P	17 46 45.3	-1.0
	comp=Z,0.8nm,0.8s,baz=87,slow=8.7,SNR=10						
ASAR				LR	LR	18 00 16.2	
	comp=Z,51nm,19.1s,baz=86,slow=34						
MTN	Manton Dam	40.39	274	P	P	17 47 22.3	-1.5
MTN				IAmb	IAmb	17 47 29.5	
	comp=Z,12nm,1.0s						
GUMO	Guam	43.55	319	LR	LR	18 06 12.9	
	comp=Z,71nm,18.0s,baz=92,slow=37						
FITZ	Fitzroy Crossi	44.29	265	LR	LR	18 05 39.0	
	comp=Z,56nm,20.0s,baz=102,slow=35						
FITZ	Fitzroy Crossi	44.29	265	P	P	17 47 55.2	-0.3
FITZ				IAmb	IAmb	17 48 02.8	
	comp=Z,24nm,1.8s						
SIJI	Sorong	44.89	291	LR	LR	18 06 02.7	
	comp=Z,61nm,20.3s,baz=160,slow=35						
BATI	Baumata	48.16	275	LR	LR	18 08 19.6	
	comp=Z,120nm,19.1s,baz=156,slow=36						
KAPI	Kappang	53.58	279	LR	LR	18 11 54.3	
	comp=Z,26nm,20.2s,baz=84,slow=36						
VNDA	Vanda	57.25	183	LR	LR	18 09 23.1	
	comp=Z,46nm,21.4s,baz=10.0,slow=31						
TGY	Tagaytay City	61.38	300	LR	LR	18 12 52.0	
	comp=Z,40nm,20.6s,baz=177,slow=32						
JOW	Kunigami	63.77	316	LR	LR	18 12 52.8	
	comp=Z,47nm,21.8s,baz=172,slow=31						
LEM	Lembang	64.26	272	LR	LR	18 19 30.5	
	comp=Z,60nm,18.2s,baz=206,slow=37						
MJAR	Matsushiro Arr	65.44	330	LR	LR	18 15 45.9	
	comp=Z,19nm,20.9s,baz=230,slow=33						
JNU	Nakatsue	66.62	322	LR	LR	18 14 55.0	
	comp=Z,16nm,21.7s,baz=48,slow=32						
QSPA	South Pole Qui	69.50	180	P	P	17 50 53.3	-0.4
KSRS	Korea Array	71.42	324	P	P	17 51 05.7	+0.1
	comp=Z,0.4nm,0.7s,baz=134,slow=7.2,SNR=5.0						
KSRS				LR	LR	18 21 03.4	
	comp=Z,20nm,18.6s,baz=186,slow=35						
PETK	Petropavlovsk-	74.49	351	P	P	17 51 23.1	-0.3
	comp=Z,2.5nm,0.8s,baz=111,slow=8.1,SNR=4.7						
PETK				LR	LR	18 18 44.4	
	comp=Z,18nm,20.3s,baz=116,slow=32						
CMAR	Chiang Mai Arr	81.95	293	P	P	17 52 06.1	+0.6
	comp=Z,1.0nm,0.8s,baz=135,slow=4.0,SNR=8.3						
CMAR				LR	LR	18 29 17.2	
	comp=Z,7.3nm,18.5s,baz=190,slow=36						
KDAK	Kodiak Island	83.25	18	P	P	17 52 13.2	+1.9
ISA	Isabella, Lake	85.86	50	P	P	17 52 24.7	-0.6
NVAR	Mina Array Bea	87.31	47	P	P	17 52 33.8	+1.4
	comp=Z,0.6nm,0.5s,baz=217,slow=7.1,SNR=4.4						
PRN	Pahroc Range	89.11	49	P	P	17 52 41.8	+0.9
PRN				IAmb	IAmb	17 52 42.8	
	comp=Z,9.1nm,1.3s						
SONM	Songino Array	90.20	322	P	P	17 52 45.8	+0.1
	comp=Z,0.4nm,0.7s,baz=117,slow=8.3,SNR=3.5						
SONM	Songino Array	90.20	322	IAmb	IAmb	17 52 46.1	
	comp=Z,1.1nm,1.1s						
LCMT	Little Creek M	90.23	50	P	P	17 52 47.1	+0.9
CCUT	Cedar City	90.38	50	P	P	17 52 47.9	+0.9
X16A	Lo Mia Camp, P	90.46	53	P	P	17 52 47.9	+0.5
X16A				IAmb	IAmb	17 52 49.9	
	comp=Z,5.7nm,1.1s						
ILAR	Eielson Array	90.57	16	P	P	17 52 44.9	-2.0
	comp=Z,1.1nm,0.7s,baz=228,slow=5.4,SNR=11						
U15A	North Rim	90.67	51	P	P	17 52 49.5	+1.1
U15A				IAmb	IAmb	17 52 50.3	
	comp=Z,6.1nm,0.9s						
WUAZ	Wupatki	90.97	52	P	P	17 52 50.5	+0.8
TXAR	Lajitas Array	94.61	61	P	P	17 53 07.2	+0.7
	comp=Z,0.7nm,0.7s,baz=235,slow=4.4,SNR=4.5						
PLCA	Paso Flores	95.42	137	LR	LR	18 32 17.3	
	comp=Z,26nm,18.5s,baz=170,slow=33						
MORC	Moravsky Berou	144.76	332	*e*PKP	PKPbc	17 59 20.4	-0.5
DPC	Dobruska-Polom	144.86	333	*e*PKP	PKPdf	17 59 21.2	-0.9
DPC				*e*x	x	17 59 27.8	
UPC	Upice	144.87	334	*e*PKP	PKPdf	17 59 21.1	-1.0
KRLC	Kraliky	144.87	333	*e*PKP	PKPdf	17 59 21.0	-1.1
KRLC				*e*x	x	17 59 27.9	
JAVC	Velka Javorina	145.37	331	*e*PKP	PKPdf	17 59 23.8	+0.8
CLL	Collm	145.40	337	⇓*i*PKPbc	PKPbc	17 59 21.8	-1.0
	comp=Z,16nm,0.9s						
CLL				*i* PKiKP	PKiKP	17 59 27.1	+0.2
CLL				*i*		17 59 28.8	
	comp=Z,17nm,1.5s						
CLL				*e*pPKPbc	sPKPab	17 59 35.0	-1.8
CLL	Collm	145.40	337		PKPbc	17 59 22.0	-0.8
VRAC	Vranov	145.53	332	*e*PKP	PKPab	17 59 23.3	-0.3
KRUC	Moravsky	145.80	332	*e*PKP	PKPab	17 59 23.9	-0.7
CONA	Conrad Observa	146.87	331	*e*P	PKPab	17 59 27.5	-1.4
	comp=Z,7.3nm,0.9s						
CKRC	Cesky Krumlov	146.88	333	*e*PKP	PKPbc	17 59 27.0	-0.4
CKRC				*e*x	x	17 59 33.7	
KHC	Kasperske Hory	146.94	335	*e*PKP	PKPbc	17 59 27.2	-0.4
KHC				*e*x	x	17 59 35.5	
KHC	Kasperske Hory	146.94	335		PKPbc	17 59 26.8	-0.8
GEC2	GERESS Array S	147.11	334		PKPbc	17 59 27.2	-1.0
GERES	GERESS Array B	147.11	334	PKPbc	PKPbc	17 59 27.7	-0.5
	comp=Z,3.9nm,0.7s,baz=29,slow=3.0,SNR=8.4						
GERES	GERESS Array B	147.11	334		PKPbc	17 59 26.7	-1.5
WTTA	Wattenberg	149.21	334	*e*P	PKPbc	17 59 31.7	-2.2
	comp=Z,11nm,1.2s						
ABTA	Abfaltersbach	149.25	333	*e*P	PKPbc	17 59 32.5	-1.4
	comp=Z,13nm,1.3s						
MOTA	Moosalm	149.36	335	*e*P	PKPbc	17 59 32.9	-1.3
	comp=Z,8.1nm,0.9s						
SQTA	Sankt Quirin	149.42	335	*i* P	PKPbc	17 59 33.7	-0.7
	comp=Z,6.7nm,0.7s						
FETA	Feichten	149.77	335	*e*P	PKPbc	17 59 34.2	-1.0
	comp=Z,6.3nm,0.9s						

IDC ***06*** *17:53:26.3±3.5, 36°.11N×69°.85E, h103^{km}±29^{km}, mb3.4/8, mb1 3.6/14, mb1mx3.3/55, mbtmp3.9/14, Error ellipse: s-maj=28.4km s-min=19.1km az=171.0*

BJI ***06*** *17:53:28.4±0.0, 36°.20N×69°.87E, h131^{km}, mB4.6/1, mb4.3/6*

NNC ***06*** *17:53:29.3±2.2, 37°.64N×71°.52E, h0^{km}, mb4.5, mpv4.4, Error ellipse: s-maj=17.4km s-min=11.0km az=165.0*

NEIC ***06*** *17:53:30.2±2.2, 36°.37N±0°.05×69°.76E±0°.07, h131^{km}±7^{km}, mb4.0/10, Error ellipse: s-maj=9.6km s-min=5.7km az=130.0*

ISC 06 17:53:30.7±0.6**, 36°.26N**±0°.05×**69°.86E**±0°.05**, h150^{km}, n77, σ1^{s}.95**/88**, mb3.7**/11**, 7C-4D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBL	Kabul	1.84	202		Pn	17 54 03.2	-1.1
KBL				Sn	Sn	17 54 28.2	-1.8
NIL	Nilore	3.81	132	Pn	Pn	17 54 29.3	+0.8
NIL				Sn	Sn	17 55 13.7	+0.3
TAS	Tashkent	5.07	355	Pn	Pn	17 54 42.7	-2.3
KSH	Kashi	5.82	54	P	Pn	17 54 50.8	-4.3
KSH				S	Sn	17 55 50.4	-11
KSH				pmax	pmax		
	comp=Z,4.0nm,0.3s						
KSH				pmax	pmax		
	comp=Z,180nm,5.7s						
KSH				smax	smax		
	comp=N,280nm,0.5s						
KSH				smax	smax		
	comp=E,140nm,0.5s						
KSH				LR	LR		
	comp=Z,280nm,6.1s						
IUG	Iuzhnay	5.88	1	Pg	Pn	17 54 54.6	-1.2
	75nm,0.2s						
IUG				Lg	Lg	17 55 57.6	
	101nm,0.5s						
HRA	Herat	6.50	255	Pn	Pn	17 55 03.5	-0.7
AML	Almayashu	6.57	26	P	Pn	17 55 04.2	-1.1
	SNR=172						
DHRM	DHARAMSHALA	6.67	125	*e*P	Pn	17 55 05.6	-0.9
DHRM				*e*S	Sn	17 56 18.3	-3.1
DHRM				IAML		17 56 20.2	
	comp=N,102nm,0.5s						
DHRM				IAML		17 56 20.6	
	comp=E,167nm,1.1s						
KK31	Karatay Array	6.85	4	⇓P	Pn	17 55 06.9	-1.7
	comp=E,7.6nm,0.3s,baz=193,slow=13,SNR=293						
KK31				⇑S	Sn	17 56 21.3	-4.1
	comp=E,6.1nm,0.3s						
KK31	Karatay Array	6.85	4		Pn	17 55 06.9	-1.7
KK31				Sn	Sn	17 56 21.0	-4.4
KKAR	Karatay Array	6.85	4		Pn	17 55 06.9	-1.7
KKAR				Sn	Sn	17 56 21.0	-4.5
UCH	Uchtor	6.96	30	P	Pn	17 55 10.0	-0.6
	SNR=68						
EKS2	Erkin-Say	7.07	24	P	Pn	17 55 10.8	-0.9
	SNR=39						
AAK	Ala-Archa	7.30	28	P	Pn	17 55 13.9	-0.9
	comp=E,9.4nm,0.3s,baz=198,slow=5.6,SNR=175						
AAK				S	Sn	17 56 33.6	-3.0
	comp=E,2.8nm,0.3s,baz=144,slow=19,SNR=8.8						
AAK	Ala-Archa	7.30	28	P	Pn	17 55 14.1	-0.8
	SNR=42						
AAK	Ala-Archa	7.30	28	⇑P	Pn	17 55 14.0	-0.8
	comp=E,21nm,0.5s						
AAK				⇑S	Sn	17 56 33.8	-2.8
	comp=E,42nm,0.7s						
AAK	Ala-Archa	7.30	28	Pn	Pn	17 55 14.1	-0.8
AAK				Sn	Sn	17 56 34.7	-1.9
KBK	Karagaybulak	7.50	30	P	Pn	17 55 17.2	-0.2
	SNR=29						
CHMS	Chumysh	7.71	28	P	Pn	17 55 19.5	-0.7
	SNR=12						
ULHL	Ulahol	7.75	38	P	Pn	17 55 22.1	+1.2
	SNR=6.1						
USP	Ospenovka	7.85	26	P	Pn	17 55 21.3	-0.7
	SNR=53						
SMLA	Simla	7.95	128	*e*P	Pn	17 55 23.1	-0.3
SMLA				*e*S	Sn	17 56 48.2	-3.9
SMLA				IAML		17 56 51.0	
	comp=E,30nm,0.1s						
SMLA				IAML		17 56 56.4	
	comp=N,31nm,0.6s						
TKM2	Tokmak 2	7.99	32	P	Pn	17 55 24.6	+0.6
	SNR=18						
TKM2	Tokmak 2	7.99	32	⇑P	Pn	17 55 23.2	-0.7
	comp=N,11nm,0.5s						
TKM2				⇓S	Sn	17 56 51.2	-1.8
	comp=N,12nm,0.9s						
SGDS	Sogindy	8.06	26	Pg	Pn	17 55 23.5	-1.4
	comp=N,79nm,0.4s						
SGDS				Lg	Lg	17 56 47.4	
	comp=N,30nm,0.8s						
KST	Kastek	8.24	33	Pg	Pn	17 55 26.9	-0.4
	comp=N,25nm,0.4s						
KST				Lg	Lg	17 56 52.9	
	comp=N,11nm,0.8s						
DGS	Degeres	8.32	31	Pg	Pn	17 55 28.5	+0.2
	comp=N,12nm,0.6s						
DGS				Lg	Lg	17 56 55.9	
	comp=N,5.9nm,0.7s						
MTBS	Maitube	8.52	34	Pg	Pn	17 55 32.3	+1.4
	comp=N,13nm,0.4s						
MTBS				Lg	Lg	17 57 02.3	
	comp=N,6.5nm,0.3s						
IZV	Izvestkoviy	8.53	36	Pg	Pn	17 55 31.2	0.0
	comp=N,11nm,0.6s						
IZV				Lg	Lg	17 57 00.3	
	comp=N,4.2nm,0.1s						
KRBS	Karabastau	8.66	29	Pg	Pn	17 55 31.9	-0.9
	comp=N,5.3nm,0.3s						
TNSS	Tian-Shan	8.69	37	Pg	Pn	17 55 32.9	-0.7
	comp=N,6.2nm,0.4s						
TNSS				Lg	Lg	17 57 03.0	
	comp=N,1.8nm,0.8s						
MDOK	Medeo	8.84	37	P	Pn	17 55 30.7	-4.6
MDOK	Medeo	8.84	37	Pg	Pn	17 55 35.9	+0.6
	comp=N,7.6nm,0.4s						
MDOK				Lg	Lg	17 57 08.7	
	comp=N,3.9nm,0.8s						
KOTS	Kotyrbulak	8.92	36	Pg	Pn	17 55 36.5	+0.2
	comp=N,26nm,0.5s						
KOTS				Lg	Lg	17 57 09.9	
	comp=N,6.2nm,0.6s						
KTBS	Karatobe	9.09	33	Pg	Pn	17 55 41.2	+2.6
	comp=N,1.2nm,0.3s						
KTBS				Lg	Lg	17 57 17.5	
	comp=N,6.9nm,0.7s						
GEYT	Alibeck	9.53	284	P	Pn	17 55 40.5	-3.9
	comp=N,0.8nm,0.3s,baz=130,slow=13,SNR=7.0						
GEYT				S	Sn	17 57 21.6	-8.4
	comp=N,0.7nm,0.3s,baz=220,slow=51,SNR=4.3						
GYA0B	ALIBECK ARRAY	9.53	284	Pn	Pn	17 55 41.4	-3.1
MAKZ	Makanchi	13.88	37	Pn	Pn	17 56 39.4	-1.6
MK31	Makanchi Array	14.03	38	⇑P	P	17 56 48.1	+2.2
	comp=N,0.5nm,0.3s,baz=210,slow=9.6,SNR=13						
MK31	Makanchi Array	14.03	38		Pn	17 56 42.0	-0.8
MKAR	Makanchi Array	14.03	38	P	Pn	17 56 42.0	-0.8
	comp=N,0.1nm,0.3s,baz=229,slow=16,SNR=9.0						
MKAR	Makanchi Array	14.03	38	Pn	Pn	17 56 42.0	-0.8
DANN	Dangsing	14.14	120	*e*P	Pn	17 56 42.7	-2.0
	comp=N,9.2nm,0.5s						
AB31	Akbulak array	14.87	334	⇑P	Pn	17 56 51.2	-2.1
	comp=N,2.1nm,0.4s,baz=151,slow=12,SNR=147						
AB31				⇓S	Sn	17 59 22.8	-15
	comp=N,1.3nm,0.5s						
ABKAR	Akbulak array	14.87	334	Pn	Pn	17 56 50.7	-2.5
GKN	Gorkha	14.97	119	*e*P	Pn	17 56 52.4	-2.5
	comp=N,9.1nm,0.4s						
KKN	Kakani	15.55	119	*e*P	Pn	17 57 00.5	-1.6
	comp=N,9.8nm,0.5s						
WMQ	Urumqi	15.59	56	*e*P	P	17 57 03.7	+0.4
KURBB	Kurchatov Arra	15.65	21	P	Pn	17 57 00.8	-2.1
	comp=N,0.1nm,0.3s,baz=210,slow=12,SNR=13						
KURK	Kurchatov	15.76	21	⇓P	P	17 57 06.6	+1.5
	comp=N,2.6nm,0.9s						
KURK	Kurchatov	15.76	21	Pn	Pn	17 57 01.7	-2.6
PKIN	Phulchoki	15.76	119	*e*P	Pn	17 57 03.5	-1.3
	comp=N,16nm,0.5s						
PKI	Pulchoki	15.78	119	*e*P	Pn	17 57 03.2	-1.8
	comp=N,19nm,0.6s						
GUN	Gumba	15.91	117	*e*P	Pn	17 57 05.1	-1.6
AKTO	Aktyubinsk	16.55	333	P	P	17 57 13.4	-0.4
	comp=N,1.1nm,0.3s,baz=138,slow=14,SNR=18						
BVAR	Borovoye Array	16.76	1	P	Pn	17 57 18.1	+1.7
	comp=N,2.3nm,0.3s,baz=152,slow=5.9,SNR=52						
BRVK	Borovoye	16.80	1	⇑P	Pn	17 57 17.6	+0.8
	comp=N,2.0nm,0.4s						
BRVK	Borovoye	16.80	1		P	17 57 15.1	-1.3
BRVK				IAmb	IAmb	17 57 22.5	
	comp=Z,4.5nm,0.8s						
ZAA0	Zalesovo Array	20.52	26	P	P	17 57 58.7	+1.8
ZAA0				IAmb	IAmb	17 57 59.6	
	comp=Z,5.6nm,0.7s						
ZALV	Zalesovo Beam	20.52	26	P	P	17 57 58.6	+1.8
	comp=Z,6.2nm,0.3s,baz=218,slow=11,SNR=38						
ZALV	Zalesovo Beam	20.52	26	P	P	17 57 57.7	+0.8
ARU	Arti	21.57	343	P	P	17 58 09.0	+0.9
	comp=Z,0.9nm,0.4s,baz=179,slow=7.3,SNR=6.5						
ARU	Arti	21.57	343	P	P	17 58 08.7	+0.6
ARU				IAmb	IAmb	17 58 12.3	
	comp=Z,4.8nm,0.9s						
KBZ	Khabaz	21.90	298	P	P	17 58 11.7	0.0
	comp=Z,0.6nm,0.7s,baz=98,slow=14,SNR=2.2						
BELG	Belogornoye	22.51	323	P	P	17 58 18.3	+0.7
	comp=Z,5.7nm,0.5s,baz=124,slow=5.1,SNR=3.6						
KOPT	Kop Dagi	23.35	288	P	P	17 58 27.4	+1.6
KOPT				IAmb	IAmb	17 58 27.8	
	comp=Z,16nm,1.5s						
GTA	Gaotai	23.81	73	*e*P	P	17 58 33.3	+3.4
GTA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ANTO	Ankara	29.27	288	P	P	17 59 22.4	+3.7
HHC	Hu-ho-hao-te	32.70	69	*e*P	P	17 59 50.7	+1.8
HHC				pmax	pmax		
	comp=Z,8.0nm,1.1s						
ARCES	ARCESS Array B	41.02	338	P	P	18 00 60.0	+1.4
	comp=Z,5.1nm,0.9s,baz=100,slow=6.7,SNR=4.6						
NC303	NORSAR Array S	43.97	324	P	P	18 01 23.8	+1.3
NB201	NORSAR Array S	43.98	323	P	P	18 01 24.4	+1.7
NB201				IAmb	IAmb	18 01 38.3	
	comp=Z,3.4nm,0.7s						
NOA	NORSAR Array B	44.02	323	P	P	18 01 23.9	+0.9
	comp=Z,0.9nm,0.7s,baz=98,slow=7.8,SNR=3.2						
CTI	Castel Tesino	44.02	302	P	P	18 01 23.9	+0.6
NC204	NORSAR Array S	44.26	324	P	P	18 01 25.9	+1.0
YKA	Yellowknife Ar	81.52	2	P	P	18 05 32.8	+1.9
	comp=Z,0.2nm,0.6s,baz=354,slow=5.6,SNR=4.4						
ASAR	Alice Springs	84.88	124	P	P	18 05 49.2	+0.5
	comp=Z,0.2nm,0.6s,baz=306,slow=5.1,SNR=7.7						

TAP 06 18:00:31.2, 24°.83N×122°.02E, h5^{km}±1^{km}, ML1.9, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NTC	Toucheng	0.17	278	*e*P	Pg	18 00 34.5	-0.1
	baz=278						
NTC				*i* S	Sg	18 00 37.0	+0.2
	baz=278						
TWB1	Santiao Chiao	0.18	352	*e*P	Pg	18 00 34.5	-0.3
	baz=354						
TWB1				*e*S	Sg	18 00 36.8	-0.3
	baz=354						
TIPB	Shuangxi	0.22	309	P	Pg	18 00 35.5	-0.1
	baz=309						
TIPB				*e*S	Sg	18 00 38.5	0.0
	baz=309						
TWC	Suao	0.27	215	P	Pg	18 00 36.5	+0.1
	baz=212						
TWC				*e*S	Sg	18 00 39.9	0.0
	baz=212						
NWF	Wu-fen Shan	0.32	318	*e*P	Pg	18 00 37.4	0.0
	baz=318						
NWF				*i* S	Sg	18 00 42.1	+0.4
	baz=318						
WFSB	Wu-fen Shan	0.32	318	*e*P	Pg	18 00 37.4	0.0
	baz=318						
WFSB				*i* S	Sg	18 00 42.0	+0.4
	baz=318						
TWE	Neicheng	0.34	251	*e*P	Pg	18 00 37.5	-0.1
	baz=249						
TWA	Mucha	0.42	291	*e*S	Sg	18 00 44.8	0.0
	baz=290						
ENTT	Nioudou	0.45	245	*e*P	Pg	18 00 39.9	0.0
	baz=244						
NWLT	Wulai	0.47	264	*i* P	Pg	18 00 40.0	-0.3
	baz=263						
NWLT				*e*S	Sg	18 00 46.5	+0.1
	baz=263						
ENA	Nanau	0.47	212	*e*P	Pg	18 00 40.6	+0.3
	baz=211						
NDT	Datong Townshi	0.51	244	*e*P	Pg	18 00 41.1	+0.1
	baz=243						
NSK	Sanguang	0.62	256	*e*P	Pg	18 00 43.1	+0.1
	baz=255						
NNSB	Datong	0.70	235	*e*P	Pg	18 00 44.7	0.0
	baz=235						
NNSH	Datong	0.70	235	*e*P	Pg	18 00 44.8	+0.1
	baz=235						
NACB	Ninganchiao	0.76	211	*e*P	Pg	18 00 46.0	+0.2
	baz=210						
NACB				*e*S	Sg	18 00 56.1	+0.5
	baz=210						

JMA 06 18:00:55.8±0.2**, 25°.11N×123°.86E, h113^{km}±4^{km}, M1.9, Northeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JISG	Ishigakijimahi	0.66	142	P	Pn	18 01 14.2	+0.1
JISG				*e*S	Sn	18 01 28.2	+0.3
IRIF	Iriomote-Funau	0.78	189	P	Pn	18 01 15.2	0.0
IRIF				S	Sn	18 01 30.4	+0.7
JIJ	Ishigaki jima	0.79	161	P	Pn	18 01 15.0	-0.2
JIJ				S	Sn	18 01 29.4	-0.4
JKRS	Kuro-shima	0.88	171	P	Pn	18 01 16.2	+0.1
JKRS				S	Sn	18 01 32.1	+0.8
JTJ	Tarama	0.90	121	P	Pn	18 01 16.7	+0.5
JTJ				S	Sn	18 01 32.3	+0.7
HATJ	Hateruma jima	1.05	183	P	Pn	18 01 18.1	+0.3
HATJ				*e*S	Sn	18 01 35.0	+0.7
JIRB	Irabujima	1.22	103	*e*S	Sn	18 01 38.2	+0.6
JMJ2	Miyako jima3	1.38	105	*e*S	Sn	18 01 41.9	+1.1

*IDC **06** 18:02:26.9±1.6, 7°.61S×128°.62E, h151^{km}±20^{km}, mb2.8/1, mb1 3.0/6, mb1mx2.8/39, mbtmp3.4/6, Error ellipse: s-maj=25.1km s-min=14.4km az=119.0*

ISC 06 18:02:26.2±0.9, **7°.76S**±0°.06×**128°.81E**±0°.09, **h150**^{km}**, n6, σ2^{s}.64**/11**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata** 8.6nm,0.3s,baz=84,slow=5.7,SNR=18	**5.63**	**244**	P	**Pn**	**18 03 49.3**	**+1.3**
BATI	3.9nm,0.3s,baz=73,slow=17,SNR=2.8			S	**Sn**	**18 04 50.3**	**-1.8**
SIJI	**Sorong** 0.4nm,0.3s,baz=189,slow=22,SNR=8.2	**7.27**	**20**	P	**Pn**	**18 04 10.1**	**+0.1**
SIJI	0.3nm,0.3s,baz=252,slow=20,SNR=1.3			S	**Sn**	**18 05 29.9**	**-1.4**
FITZ	**Fitzroy Crossi** 0.3nm,0.3s,baz=26,slow=8.5,SNR=16	**10.73**	**196**	P	**Pn**	**18 04 56.4**	**+0.6**
FITZ	0.4nm,0.3s,baz=121,slow=5.9,SNR=2.6			S	**Sn**	**18 06 51.7**	**-2.8**
WRA	**Warramunga Arr** 0.1nm,0.3s,baz=329,slow=15,SNR=4.6	**13.24**	**157**	P	**Pn**	**18 05 30.6**	**+2.1**
WRA	0.2nm,0.3s,baz=336,slow=23,SNR=4.1			S	**Sn**	**18 07 51.2**	**-3.9**
ASAR	**Alice Springs** 0.1nm,0.3s,baz=335,slow=10,SNR=12	**16.55**	**163**	P	**Pn**	**18 06 14.3**	**+4.6**
ASAR	0.1nm,0.3s,baz=345,slow=25,SNR=2.9			S	**S**	**18 09 14.1**	**+0.3**
MKAR	**Makanchi Array** 0.2nm,0.7s,baz=117,slow=7.1,SNR=3.1	**68.22**	**328**	P	**P**	**18 13 09.8**	**-0.8**

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*IDC **06** 18:10:21.9±2.7, 5°.12S×132°.60E, h0^{km}, mb3.1/1, mb1 3.8/5, mb1mx3.5/34, mbtmp3.7/5, ML3.7/4, Error ellipse: s-maj=122.3km s-min=24.5km az=81.0*

*DJA **06** 18:10:29.1±1.2, 5°S±8°×13°2E±°, h10^{km}, M3.8/6, MLv3.8/6*

ISC 06 18:10:21.4±0.9, **5°.30S**±0°.05×**132°.11E**±0°.09, **h10**^{km}**, n8, σ4^{s}.21**/14**, Aru Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**2.33**	**289**	P	**Pg**	**18 11 09.2**	**+3.1**
BNDI				S	**Sn**	**18 11 23.3**	**-5.2**
FAKI	**Fak Fak**	**2.37**	**3**	P	**Pn**	**18 11 00.9**	**+0.5**
FAKI				S	**Sn**	**18 11 24.9**	**-4.7**
SIJI	**Sorong** 3.8nm,0.3s,baz=58,slow=4.4,SNR=74	**4.48**	**349**	Pn	**Pn**	**18 11 30.1**	**+0.7**
SIJI	4.0nm,0.3s,baz=264,slow=23,SNR=16			Sn	**Sn**	**18 12 15.3**	**-6.5**
SWI	**Sorong**	**4.49**	**349**	P	**Pn**	**18 11 30.3**	**+0.7**
FITZ	**Fitzroy Crossi** 0.3nm,0.3s,baz=35,slow=11,SNR=19	**14.20**	**206**	Pn	**P**	**18 13 48.8**	**-1.5**
FITZ	0.7nm,0.3s,baz=219,slow=16,SNR=9.2			Sn	**Sn**	**18 16 18.2**	**-2.3**
WRA	**Warramunga Arr** 0.4nm,0.3s,baz=357,slow=13,SNR=20	**14.71**	**172**	Pn	**Pn**	**18 13 51.4**	**+1.6**
WRA	0.4nm,0.3s,baz=353,slow=24,SNR=8.5			Sn	**Sn**	**18 16 30.1**	**-2.9**
ASAR	**Alice Springs** 0.3nm,0.3s,baz=352,slow=9.2,SNR=20	**18.34**	**175**	P	**P**	**18 14 40.5**	**+4.3**
ASAR	0.1nm,0.3s,baz=353,slow=28,SNR=3.3			S	**Sn**	**18 17 54.2**	**-6.8**
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=120,slow=5.2,SNR=2.6	**67.99**	**326**	P	**P**	**18 21 23.9**	**+3.0**

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*JMA **06** 18:27:44.9±0.1, 24°.14N×121°.73E, h15^{km}±1^{km}, M3.0*

*TAP **06** 18:27:45.2, 24°.19N×121°.76E, h13^{km}, ML3.8, C*

*ASIES **06** 18:27:45.0, 24°.21N×121°.72E, h18^{km}, MW3.5*

ISC 06 18:27:45.1±0.9, **24°.18N**±0°.01×**121°.78E**±0°.02, **h10**^{km}±6^{km}**, n128, σ0^{s}.84**/229**, 1C-22D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NACB	**Ninganchiao** baz=257	**0.17**	**267**	⇓*i*P	**Pg**	**18 27 48.9**	**0.0**
NACB	baz=257			*i*S	**Sg**	**18 27 51.7**	**+0.2**
TWD	**Chiawan** baz=240	**0.20**	**239**	⇓*i*P	**Pg**	**18 27 49.4**	**+0.1**
TWD	baz=240			*i*S	**Sg**	**18 27 52.7**	**+0.6**
ENA	**Nanau** baz=356	**0.25**	**352**	⇓*i*P	**Pg**	**18 27 50.4**	**+0.1**
ENA	baz=356			*i*S	**Sg**	**18 27 54.0**	**+0.4**
HWA	**Hwalien** baz=223	**0.26**	**218**	*e*P	**Pb**	**18 27 51.9**	**0.0**
HWA	baz=223			*e*S	**Sb**	**18 27 57.4**	**+1.1**
ETLH	**Xiulin Townshi** baz=274	**0.27**	**275**	⇓*i*P	**Pg**	**18 27 50.7**	**0.0**
ETLH	baz=274			*i*S	**Sg**	**18 27 54.5**	**0.0**
TWC	**Suao** baz=5.0	**0.43**	**8**	⇓*i*P	**Pg**	**18 27 53.8**	**+0.2**
TWC	baz=5.0			S	**Sg**	**18 27 59.7**	**+0.4**
NNSB	**Datong** baz=304	**0.44**	**304**	⇓*i*P	**Pg**	**18 27 53.9**	**+0.1**
NNSB	baz=304			S	**Sg**	**18 27 59.3**	**-0.3**
NNSH	**Datong** baz=304	**0.44**	**304**	⇓*i*P	**Pg**	**18 27 53.8**	**+0.1**
NNSH	baz=304			S	**Sg**	**18 27 59.6**	**0.0**
NNS	**Nan Shan** baz=305	**0.45**	**305**	⇓*i*P	**Pg**	**18 27 54.1**	**+0.1**
NNS	baz=305			S	**Sg**	**18 27 60.0**	**-0.1**
WHF	**Hehuan Shan** baz=265	**0.47**	**266**	⇓*i*P	**Pg**	**18 27 54.5**	**0.0**
WHF	baz=265			*i*S	**Sg**	**18 28 00.8**	**-0.1**
NDT	**Datong Townshi** baz=330	**0.48**	**330**	⇓*i*P	**Pb**	**18 27 55.0**	**-0.7**
NDT	baz=330			*i*S	**Sb**	**18 28 02.4**	**-0.5**
ESL	**Shilin** baz=226	**0.49**	**221**	⇓*i*P	**Pg**	**18 27 54.6**	**0.0**
ESL	baz=226			*e*S	**Sb**	**18 28 03.0**	**+0.1**
FUSS	**Fushou** baz=277	**0.49**	**278**	⇓*i*P	**Pb**	**18 27 55.1**	**-0.9**
FUSS	baz=277			*i*S	**Sg**	**18 28 01.7**	**+0.2**
ENTT	**Nioudou** baz=338	**0.50**	**337**	⇓*i*P	**Pg**	**18 27 55.1**	**+0.3**
ENTT	baz=338			*i*S	**Sg**	**18 28 01.9**	**+0.5**
TWE	**Neicheng** baz=351	**0.55**	**349**	⇓*i*P	**Pg**	**18 27 56.1**	**+0.3**
TWE	baz=351			*i*S	**Sg**	**18 28 03.6**	**+0.6**
TWT	**Tachien** baz=277	**0.56**	**277**	⇓*i*P	**Pb**	**18 27 56.6**	**-0.5**
TWT	baz=277			*i*S	**Sb**	**18 28 04.0**	**-1.1**
CHGB	**Renai** baz=253	**0.57**	**258**	⇓*i*P	**Pb**	**18 27 56.4**	**-0.8**
CHGB	baz=253			*i*S	**Sg**	**18 28 03.2**	**-0.5**
TDCB	**Techi** baz=277	**0.57**	**277**	⇓*i*P	**Pb**	**18 27 56.7**	**-0.6**
TDCB	baz=277			*i*S	**Sg**	**18 28 04.0**	**+0.1**
ILA	**Ilan** baz=353	**0.58**	**357**	*i*P	**Pg**	**18 27 56.8**	**+0.3**
ILA	baz=353			S	**Sb**	**18 28 05.0**	**-0.7**
EGFH	**Guangfu** baz=227	**0.60**	**212**	*e*P	**Pb**	**18 27 57.7**	**-0.1**
EGFH	baz=227			*e*S	**Sb**	**18 28 07.3**	**+1.0**
NSK	**Sanguang** baz=323	**0.62**	**322**	⇓*i*P	**Pg**	**18 27 57.4**	**+0.2**
NSK	baz=323			*i*S	**Sg**	**18 28 05.7**	**+0.2**
NWLT	**Wulai** baz=337	**0.64**	**337**	⇓*i*P	**Pb**	**18 27 58.0**	**-0.5**
NWLT	baz=337			*i*S	**Sg**	**18 28 06.1**	**0.0**
NTC	**Toucheng** baz=4.0	**0.67**	**4**	P	**Pg**	**18 27 58.4**	**+0.2**
NTC	baz=4.0			*i*S	**Sg**	**18 28 06.8**	**-0.1**
VWDT	**VWDT** baz=234	**0.72**	**234**	⇑*i*P	**Pb**	**18 27 59.6**	**-0.2**
VWDT	baz=234			*i*S	**Sb**	**18 28 10.2**	**+0.5**
HGSD	**Ruisui** baz=194	**0.76**	**206**	P	**Pb**	**18 28 00.4**	**0.0**
HGSD	baz=194			*i*S	**Sn**	**18 28 13.3**	**0.0**
WHP	**Taichung City** baz=277	**0.77**	**277**	P	**Pb**	**18 28 00.4**	**-0.2**
WHP	baz=277			*i*S	**Sb**	**18 28 10.6**	**-0.6**
WPL	**Puli Township** baz=257	**0.77**	**257**	*i*P	**Pb**	**18 28 00.3**	**-0.3**
WPL	baz=257			S	**Sg**	**18 28 09.9**	**-0.2**
TIPB	**Shuangxi** baz=3.0	**0.79**	**3**	⇓*i*P	**Pg**	**18 28 00.6**	**+0.2**
TIPB	baz=3.0			*i*S	**Sg**	**18 28 10.4**	**-0.2**
EHY	**Hungye** baz=223	**0.79**	**212**	P	**Pg**	**18 27 59.8**	**-0.6**
EHY	baz=223			*e*S	**Sb**	**18 28 12.5**	**+0.7**
DPDB	**Guoxing** baz=259	**0.80**	**259**	*i*P	**Pb**	**18 28 00.9**	**-0.2**
DPDB	baz=259			S	**Sb**	**18 28 11.8**	**0.0**
NHDH	**Xindian Distri** baz=343	**0.81**	**343**	*e*P	**Pb**	**18 28 01.0**	**-0.3**
NHDH	baz=343			*e*S	**Sb**	**18 28 11.7**	**-0.6**
TWA	**Mucha** baz=348	**0.81**	**347**	*e*P	**Pb**	**18 28 01.2**	**-0.1**
TWA	baz=348			*i*S	**Sb**	**18 28 12.4**	**0.0**
TATO	**Taipei** baz=341	**0.83**	**341**	*e*P	**Pn**	**18 28 02.0**	**-0.8**
TATO	baz=341			*e*S	**Sb**	**18 28 12.2**	**-0.7**
LIOB	**Emei** baz=304	**0.84**	**304**	*e*P	**Pn**	**18 28 01.9**	**-1.0**
LIOB	baz=304			*e*S	**Sb**	**18 28 12.9**	**-0.1**
NSTT	**Nanjuang** baz=302	**0.84**	**302**	*e*P	**Pb**	**18 28 01.2**	**-0.6**
NSTT	baz=302			S	**Sb**	**18 28 12.7**	**-0.4**
TWB1	**Santiao Chiao** baz=13	**0.84**	**13**	*e*P	**Pg**	**18 28 01.5**	**+0.1**
TWB1	baz=13			S	**Sg**	**18 28 12.1**	**-0.3**
SSLB	**Suanglung** baz=252	**0.85**	**243**	P	**Pb**	**18 28 01.6**	**-0.4**
SSLB	baz=252			*e*S	**Sg**	**18 28 12.2**	**-0.5**
SMLT	**Sun Moon Lake** baz=250	**0.86**	**250**	*i*P	**Pb**	**18 28 01.8**	**-0.4**
SMLT	baz=250			*i*S	**Sb**	**18 28 13.5**	**-0.2**
NWF	**Wu-fen Shan** baz=353	**0.89**	**360**	⇓P	**Pb**	**18 28 02.6**	**0.0**
NWF	baz=353			*e*S	**Sb**	**18 28 14.3**	**-0.2**
WFSB	**Wu-fen Shan** baz=353	**0.89**	**360**	⇓*i*P	**Pb**	**18 28 02.6**	**+0.1**
WFSB	baz=353			*i*S	**Sb**	**18 28 14.2**	**-0.2**
TYC	**Yuchr** baz=245	**0.89**	**252**	*i*P	**Pb**	**18 28 02.3**	**-0.3**
TYC	baz=245			*e*S	**Sb**	**18 28 13.6**	**-0.9**
HSN1	**Hsinchu** baz=311	**0.91**	**311**	*e*P	**Pn**	**18 28 03.9**	**-0.1**
HSN1	baz=311			*e*S	**Sn**	**18 28 16.8**	**-0.4**
NTY	**Taoyuan** baz=332	**0.93**	**332**	*e*P	**Pn**	**18 28 04.1**	**0.0**
NTY	baz=332			*e*S	**Sn**	**18 28 16.0**	**-1.5**
EYUL	**Yuli** baz=223	**0.93**	**207**	*e*P	**Pb**	**18 28 03.5**	**+0.1**
EYUL	baz=223			*e*S	**Sn**	**18 28 18.6**	**+1.0**
TWQ1	**Liyutan** baz=280	**0.94**	**280**	P	**Pn**	**18 28 04.0**	**-0.3**
TWQ1	baz=280			*e*S	**Sn**	**18 28 16.3**	**-1.4**
TWF1	**Yuli** baz=220	**0.94**	**208**	*e*P	**Pg**	**18 28 01.8**	**-1.4**
TWF1	baz=220			*e*S	**Sn**	**18 28 16.6**	**-1.1**
SBCB	**Hsinchu** baz=310	**0.95**	**310**	P	**Pn**	**18 28 04.5**	**+0.1**
SBCB	baz=310			*e*S	**Sn**	**18 28 18.1**	**+0.1**
NCUH	**Zhongli** baz=325	**0.95**	**325**	P	**Pn**	**18 28 04.5**	**0.0**
NCUH	baz=325			*e*S	**Sn**	**18 28 18.8**	**+0.6**
NCU	**National Centr** baz=325	**0.95**	**326**	*e*P	**Pn**	**18 28 04.4**	**-0.1**
NCU	baz=325			*e*S	**Sn**	**18 28 18.1**	**0.0**
HSN	**Hsinchu** baz=305	**0.96**	**310**	*e*P	**Pn**	**18 28 03.9**	**-0.8**
HSN	baz=305			*e*S	**Sn**	**18 28 18.6**	**+0.3**
TNOU	**National Taiwa** baz=359	**0.96**	**360**	P	**Pg**	**18 28 04.0**	**+0.3**
TNOU	baz=359			*e*S	**Sb**	**18 28 16.6**	**-0.1**
NMLH	**Miaoli** baz=291	**0.97**	**292**	*e*P	**Pn**	**18 28 05.2**	**+0.4**
NMLH	baz=291			*e*S	**Sn**	**18 28 17.5**	**-1.0**
TWS1	**Kuangyinshan** baz=340	**0.97**	**340**	*e*P	**Pn**	**18 28 04.6**	**-0.1**
TWS1	baz=340			*e*S	**Sn**	**18 28 19.1**	**+0.5**
WHYT	**Xinyi Township** baz=247	**0.98**	**241**	P	**Pn**	**18 28 04.3**	**-0.6**
WHYT	baz=247			*e*S	**Sb**	**18 28 17.2**	**+0.1**
TCU	**Taichung** baz=268	**1.01**	**268**	P	**Pn**	**18 28 06.2**	**+0.9**
TCU	baz=268			*e*S	**Sn**	**18 28 20.4**	**+0.9**
NTST	**Danshui** baz=343	**1.02**	**343**	*e*P	**Pn**	**18 28 05.3**	**-0.2**
NTST	baz=343			*e*S	**Sn**	**18 28 21.3**	**+1.4**
ANP	**Anpu** baz=347	**1.03**	**347**	P	**Pn**	**18 28 05.5**	**-0.2**
ANP	baz=347			*e*S	**Sb**	**18 28 18.2**	**-0.4**
WJS	**Zhushan** baz=246	**1.03**	**250**	P	**Pn**	**18 28 05.6**	**0.0**
WJS	baz=246			*e*S	**Sn**	**18 28 21.2**	**+1.2**
WNT1	**Nantou City** baz=252	**1.04**	**255**	*e*P	**Pn**	**18 28 06.3**	**+0.6**
WNT1	baz=252			*e*S	**Sn**	**18 28 21.7**	**+1.3**
WNT	**Mingjian** baz=251	**1.05**	**253**	*e*P	**Pn**	**18 28 06.3**	**+0.5**
WNT	baz=251			*e*S	**Sn**	**18 28 21.9**	**+1.4**
WDJ	**Dajia District** baz=280	**1.05**	**279**	*e*P	**Pn**	**18 28 06.9**	**+1.0**
WDJ	baz=280			*e*S	**Sn**	**18 28 21.9**	**+1.3**
FULB	**Fuli** baz=221	**1.08**	**205**	*e*P	**Pb**	**18 28 05.6**	**-0.2**
FULB	baz=221			*e*S	**Sn**	**18 28 20.8**	**-0.4**
JYNG	**Yonagunijimaku**	**1.09**	**76**	P	**Pn**	**18 28 06.5**	**+0.1**
JYNG				S	**Sn**	**18 28 21.9**	**+0.3**
TWY	**Chenhua** baz=344	**1.10**	**351**	*e*P	**Pg**	**18 28 06.7**	**+0.4**
TWY	baz=344			*e*S	**Sn**	**18 28 22.0**	**+0.2**
ALS	**Alishan** baz=221	**1.12**	**233**	P	**Pb**	**18 28 06.2**	**-0.4**
ALS	baz=221			*e*S	**Sn**	**18 28 23.4**	**+0.9**
WCHH	**Zhanghua** baz=266	**1.12**	**265**	*e*P	**Pg**	**18 28 07.7**	**+1.0**
WCHH	baz=266			*e*S	**Sn**	**18 28 24.3**	**+2.0**
CHKT	**Chengkung** baz=187	**1.14**	**200**	*e*P	**Pb**	**18 28 06.3**	**-0.6**
YOJ	**Yonaguni jima**	**1.16**	**76**	P	**Pn**	**18 28 07.3**	**0.0**
YOJ				*e*S	**Sn**	**18 28 23.3**	**+0.2**
CHN5	**Tsauling** baz=241	**1.17**	**240**	P	**Pg**	**18 28 07.9**	**+0.4**
CHN5	baz=241			S	**Sn**	**18 28 24.8**	**+1.3**
ELDTW	**Lidau** baz=205	**1.21**	**215**	*e*P	**Pn**	**18 28 06.3**	**-1.9**
ELDTW	baz=205			*e*S	**Sn**	**18 28 24.5**	**-0.2**
WGK	**Gukeng** baz=247	**1.22**	**246**	*e*P	**Pb**	**18 28 07.9**	**-0.4**
WGK	baz=247			*e*S	**Sg**	**18 28 27.1**	**+2.7**
WDLH	**Douliu** baz=248	**1.24**	**247**	P	**Pg**	**18 28 09.0**	**+0.1**
WDLH	baz=248			*e*S	**Sg**	**18 28 27.5**	**+2.5**
EDH	**Donghe** baz=185	**1.28**	**200**	P	**Pn**	**18 28 08.0**	**-1.1**
EDH	baz=185			*e*S	**Sg**	**18 28 27.5**	**+1.2**
RLNB	**Erlin** baz=259	**1.33**	**258**	*e*P	**Pg**	**18 28 10.4**	**-0.3**
WTK	**Tuku** baz=251	**1.37**	**249**	*e*P	**Pg**	**18 28 10.8**	**-0.5**
WTK	baz=251			*e*S	**Sg**	**18 28 29.7**	**+0.6**
TPUB	**Ta-pu** baz=232	**1.37**	**230**	P	**Pg**	**18 28 10.9**	**-0.6**
TPUB	baz=232			*e*S	**Sg**	**18 28 30.2**	**+0.9**
STYT	**Tauyuan** baz=224	**1.38**	**223**	*e*P	**Pb**	**18 28 10.7**	**-0.4**
STYT	baz=224			*e*S	**Sg**	**18 28 30.1**	**+0.5**
LONT	**Longtian** baz=207	**1.40**	**205**	*e*P	**Pn**	**18 28 08.5**	**-2.2**
LONT	baz=207			*e*S	**Sg**	**18 28 30.6**	**+0.3**
CHY	**Chiayi** baz=243	**1.42**	**242**	P	**Pb**	**18 28 11.5**	**-0.1**
CHY	baz=243			*e*S	**Sg**	**18 28 33.4**	**+2.6**
WTP	**Ta-pu** baz=230	**1.42**	**229**	*e*P	**Pg**	**18 28 11.8**	**-0.5**
WTP	baz=230			*e*S	**Sg**	**18 28 33.6**	**+2.8**
PCYT	**Pengchaiyu** baz=8.0	**1.47**	**10**	*e*P	**Pn**	**18 28 11.8**	**+0.3**
TWK	**Hsinying** baz=234	**1.50**	**233**	P	**Pb**	**18 28 12.9**	**-0.1**
TWK	baz=234			*e*S	**Sg**	**18 28 33.8**	**+0.5**
TWG	**Pinlang** baz=191	**1.50**	**206**	*e*P	**Pn**	**18 28 10.9**	**-1.1**
TWGBT	**Beinan** baz=207	**1.50**	**205**	*e*P	**Pn**	**18 28 09.8**	**-2.2**
TWGBT	baz=207			*e*S	**Sn**	**18 28 29.5**	**-2.2**
SNST	**Tainan City** baz=232	**1.52**	**231**	*e*P	**Pb**	**18 28 12.9**	**-0.4**
SNST	baz=232			*e*S	**Sg**	**18 28 35.1**	**+1.1**
CHN1	**Nanshi** baz=231	**1.52**	**229**	P	**Pb**	**18 28 13.2**	**-0.1**
CHN1	baz=231			*e*S	**Sg**	**18 28 33.6**	**-0.4**
WSF	**Szhu** baz=251	**1.53**	**250**	*e*P	**Pb**	**18 28 13.0**	**-0.5**
WSF	baz=251			*e*S	**Sg**	**18 28 35.6**	**+1.4**
WLGB	**Puzi** baz=245	**1.53**	**243**	P	**Pn**	**18 28 12.4**	**0.0**
WLGB	baz=245			*e*S	**Sg**	**18 28 34.8**	**+0.6**
LDUT	**Ludao** baz=181	**1.53**	**191**	*e*P	**Pn**	**18 28 11.3**	**-1.1**
LDUT	baz=181			*e*S	**Sn**	**18 28 30.2**	**-2.1**
SGST	**Jiashian** baz=227	**1.55**	**225**	P	**Pn**	**18 28 12.8**	**0.0**
SGST	baz=227			*e*S	**Sg**	**18 28 35.4**	**+0.3**
SLGT	**Liugui** baz=223	**1.58**	**222**	P	**Pb**	**18 28 14.1**	**-0.2**
SLGT	baz=223			*e*S	**Sg**	**18 28 37.2**	**+1.4**
ICHU	**Yijhu** baz=241	**1.60**	**240**	P	**Pb**	**18 28 14.3**	**-0.4**
ICHU	baz=241			*e*S	**Sg**	**18 28 38.0**	**+1.4**
CHN8	**Yiju** baz=227	**1.66**	**240**	P	**Pb**	**18 28 14.6**	**-1.2**
CHN8	baz=227			*e*S	**Sg**	**18 28 39.4**	**+0.8**
CHN3	**Shinhua** baz=231	**1.70**	**230**	*e*P	**Pg**	**18 28 17.3**	**-0.5**
CHN3	baz=231			*e*S	**Sg**	**18 28 42.4**	**+2.5**
SCST	**Cishan** baz=223	**1.75**	**223**	*e*P	**Pb**	**18 28 17.0**	**-0.3**
SCST	baz=223			*e*S	**Sg**	**18 28 42.0**	**+0.6**
ECL	**Taimali** baz=193	**1.75**	**206**	*e*P	**Pn**	**18 28 15.2**	**-0.3**
SCLT	**Jiali** baz=237	**1.77**	**236**	*e*S	**Sg**	**18 28 41.8**	**-0.2**
SSD	**Sandimen** baz=230	**1.78**	**217**	P	**Pb**	**18 28 16.9**	**-0.8**
SSD	baz=230			*e*S	**Sg**	**18 28 42.6**	**+0.3**
IRIF	**Iriomote-Funau**	**1.79**	**85**	P	**Pn**	**18 28 16.8**	**+0.9**
IRIF				*e*S	**Sn**	**18 28 39.6**	**+0.9**
TSMG	**Majia** baz=229	**1.80**	**216**	P	**Pb**	**18 28 17.5**	**-0.7**
TSMG	baz=229			*e*S	**Sg**	**18 28 42.1**	**-1.0**
TWM1	**Shoushan** baz=223	**1.84**	**223**	*e*P	**Pb**	**18 28 18.3**	**-0.5**
TWM1	baz=223			*e*S	**Sg**	**18 28 43.4**	**-0.9**
HATJ	**Hateruma jima**	**1.85**	**93**	P	**Pn**	**18 28 17.1**	**+0.2**
HATJ				*e*S	**Sn**	**18 28 40.9**	**+0.6**
MASBT	**Mashibuluo** baz=214	**1.89**	**214**	*e*P	**Pn**	**18 28 17.2**	**-0.1**
MASBT	baz=214			*e*S	**Sb**	**18 28 43.6**	**+0.4**
EAST	**Anshuo** baz=195	**1.99**	**206**	*e*P	**Pn**	**18 28 19.5**	**+0.8**
SSPT	**Xinbi** baz=198	**2.02**	**214**	*e*P	**Pb**	**18 28 22.0**	**0.0**
JKRS	**Kuro-shima**	**2.04**	**88**	P	**Pn**	**18 28 20.2**	**+0.8**
JKRS				*e*S	**Sn**	**18 28 46.3**	**+1.5**
SCZT	**Fangliau** baz=196	**2.09**	**211**	*e*P	**Pn**	**18 28 21.2**	**+1.0**
PNG	**Penghu** baz=256	**2.13**	**254**	*e*P	**Pn**	**18 28 20.8**	**+0.1**
PHUB	**P'eng-hu** baz=255	**2.13**	**252**	*e*P	**Pn**	**18 28 19.9**	**-0.8**
LAY	**Lan-yu** baz=188	**2.14**	**186**	*e*P	**Pn**	**18 28 19.2**	**-1.7**
WDGT	**Dungji** baz=247	**2.15**	**245**	*e*P	**Pn**	**18 28 21.7**	**+0.7**
SLIU	**Shizi** baz=207	**2.15**	**205**	*e*P	**Pb**	**18 28 23.2**	**-1.0**
JIJ	**Ishigaki jima**	**2.16**	**85**	P	**Pn**	**18 28 21.1**	**0.0**
JIJ				S	**Sn**	**18 28 47.8**	**-0.2**
PTTC	**Pingtan** baz=305	**2.25**	**306**	*e*P	**Pn**	**18 28 21.5**	**-0.8**
VWUC	**VWUC** baz=280	**2.27**	**291**	*e*P	**Pn**	**18 28 21.7**	**-0.9**
JISG	**Ishigakijimahi**	**2.34**	**80**	P	**Pn**	**18 28 23.8**	**+0.2**
JISG				S	**Sn**	**18 28 52.4**	**0.0**
VCHM	**Qimei** baz=232	**2.36**	**246**	*e*P	**Pn**	**18 28 24.2**	**+0.3**
TWK1	**Hengchun** baz=191	**2.40**	**202**	*e*P	**Pb**	**18 28 26.9**	**-1.5**
TWKBT	**Hengchun** baz=191	**2.40**	**202**	*e*P	**Pn**	**18 28 26.2**	**+1.8**
PTMZ	**Houxiangcun** baz=290	**2.57**	**290**	*e*P	**Pn**	**18 28 26.0**	**-0.7**
MATB	**Ma-tsu** baz=318	**2.57**	**320**	*e*P	**Pn**	**18 28 25.8**	**-1.0**
MSUT	**Lienchiang**	**2.60**	**320**	*e*P	**Pn**	**18 28 26.9**	**-0.2**

	baz=318						
LYJJ	Jianjiangzhen	2.98	323	eP	Pn	18 28 31.4	-1.0
	baz=320						
QZH	Quanzhou	3.00	285	Pn	Pn	18 28 34.8	+2.1
QZH				Sn	Sn	18 29 08.9	+0.2
QZH				smax	smax		
	comp=N,250nm,0.9s						
QZH				smax	smax		
	comp=E,100nm,0.5s						
KNM	Kinmen	3.06	275	eP	Pn	18 28 35.5	+2.0
	baz=275						
KNMB	Chin-men Tao	3.11	276	eP	Pn	18 28 33.5	-0.7
	baz=276						
MHZQ	Yeshan	3.14	308	eP	Pn	18 28 33.9	-0.7
	baz=307						
AXDP	Jialang	3.54	282	eP	Pn	18 28 39.4	-0.8
	baz=282						

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*IDC **06** 18:38:30.3±0.9, 31°.14S×177°.72W, h0^{km}, mb4.3/7, mb1 4.5/7, mb1mx4.1/36, mbtmp4.3/7, MS3.9/18, Ms1 3.9/18, ms1mx3.7/37, Error ellipse: s-maj=30.8km s-min=21.1km az=131.0*

*NEIC **06** 18:38:30.6±2.3, 31°.32S±0°.07×177°.7W±0°.1, h10^{km}±1^{km}, mb4.8/20, Error ellipse: s-maj=19.9km s-min=11.1km az=102.0*

ISC 06 18:38:31.2±0.6**, 31°.29S**±0°.07×**177°.7W**±0°.1**, h10**^{km}**, n78, σ1^{s}.47**/57**, mb4.7**/16**, MS3.9**/19**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	2.04	355	Pn	Pn	18 39 04.2	-1.4
	213nm,0.3s,baz=94,slow=11,SNR=11						
RAO				Sn	Sn	18 39 28.4	-2.7
	370nm,0.3s,baz=69,slow=21,SNR=8.2						
MXZ	Matakaoa Point	7.08	207	Pn	Pn	18 40 14.9	+0.1
URZ	Urewera	8.16	210	Pn	Pn	18 40 27.3	-2.3
	0.8nm,0.3s,baz=270,slow=4.8,SNR=7.3						
URZ				Sn	Sn	18 42 00.9	-1.1
	3.0nm,0.3s,baz=137,slow=18,SNR=6.5						
URZ	Urewera	8.16	210	Pn	Pn	18 40 28.2	-1.5
BKZ	Black Stump Fm	9.18	210	Pn	Pn	18 40 40.5	-3.3
BFZ	Birch Farm	10.58	206	Pn	Pn	18 41 02.6	-0.2
TUWZ	Tuamarina	12.15	211	Pn	Pn	18 41 21.5	-2.8
NNZ	Nelson	12.24	213	Pn	Pn	18 41 24.1	-1.5
QRZ	Quartz Range	12.37	217	Pn	Pn	18 41 26.7	-0.6
BSWZ	Blackbirch Sta	12.41	211	Pn	Pn	18 41 26.6	-1.3
THZ	Tophouse	12.89	213	Pn	Pn	18 41 33.3	-1.2
KHZ	Kahutara	13.13	210	Pn	Pn	18 41 35.6	-2.1
LTZ	Lake Taylor	13.98	212	Pn	Pn	18 41 46.6	-2.8
NIUE	Niue	14.04	32	Pn	Pn	18 41 43.9	-6.3
MQZ	McQueen's Vall	14.56	209	Pn	Pn	18 41 54.6	-2.6
DZM	Mont Dzumac	16.87	299	LR	LR	18 47 56.4	
	comp=Z,897nm,19.1s,baz=164,slow=34						
DZM	Mont Dzumac	16.87	299	eLR	LR	18 46 23.6	
	comp=Z,785nm,22.8s						
TBI	Tubuai	26.25	79	eLR	LR	18 50 30.4	
	comp=Z,276nm,26.8s,baz=248						
TBI	Tubuai	26.25	79	eT	T	19 11 00.0	
	10nm,0.3s						
ARMA	Armidale	26.31	264	P	P	18 44 10.7	+3.5
ARMA				IAmb	IAmb	18 44 40.1	
	comp=Z,35nm,1.6s						
CAN	Canberra	28.05	253	P	P	18 44 24.7	+1.9
CAN				IAmb	IAmb	18 45 11.6	
	comp=Z,40nm,1.6s						
EIDS	Eidsvold	28.05	274	P	P	18 44 22.9	+0.1
PAE	Paea	28.86	69	eT	T	19 14 29.9	
	comp=Z,2.7nm,0.3s						
PPT2	Papeete2	28.91	68	eLR	LR	18 51 47.1	
	comp=Z,218nm,25.2s,baz=246						
PPT	Papeete	28.92	68	LR	LR	18 55 33.7	
	comp=Z,68nm,18.2s,baz=190,slow=35						
HNR	Honiara	30.08	312	LR	LR	18 54 57.5	
	comp=Z,200nm,19.8s,baz=130,slow=33						
VAH	Vaihoa	31.77	67	eT	T	19 18 10.2	
	comp=Z,10nm,0.2s						
CTAO	Charters Tower	34.20	280	P	P	18 45 19.1	+1.9
STKA	Stephens Creek	34.54	258	P	P	18 45 20.2	+0.3
	comp=Z,2.9nm,0.7s,baz=101,slow=10,SNR=7.6						
STKA				LR	LR	18 58 08.8	
	comp=Z,211nm,18.8s,baz=42,slow=34						
STKA	Stephens Creek	34.54	258	P	P	18 45 20.9	+0.9
XMAS	Kiritimati	38.34	34	P	P	18 45 52.5	0.0
BBOO	Buckleboo	38.98	255	P	P	18 45 57.4	-0.4
PMG	Port Moresby	39.22	296	LR	LR	19 01 13.8	
	comp=Z,136nm,18.3s,baz=88,slow=35						
COEN	Coen	39.77	287	P	P	18 46 06.8	+2.3
AS31	Alice Springs	43.33	268	P	P	18 46 33.5	-0.2
ASAR	Alice Springs	43.33	268	P	P	18 46 34.2	+0.5
	comp=Z,4.7nm,0.7s,baz=104,slow=7.4,SNR=58						
ASAR				ScP	ScP	18 52 15.8	+1.9
	comp=Z,1.7nm,1.0s,baz=108,slow=5.3,SNR=6.1						
ASAR				LR	LR	19 04 14.4	
	comp=Z,192nm,19.1s,baz=111,slow=36						
ASAR	Alice Springs	43.33	268	P	P	18 46 33.2	-0.5
WR0	Warramunga Arr	44.22	273	P	P	18 46 39.9	-0.9
WR0				IAmb	IAmb	18 46 52.8	
	comp=Z,9.7nm,0.9s						
WB2	Warramunga Arr	44.38	273	P	P	18 46 41.7	-0.5
WB2				IAmb	IAmb	18 46 55.8	
	comp=Z,26nm,1.4s						
WRAB	Tennant Creek	44.39	273	P	P	18 46 42.4	+0.2
WRAB				IAmb	IAmb	18 46 55.8	
	comp=Z,26nm,1.4s						
WRA	Warramunga Arr	44.40	273	P	P	18 46 42.7	+0.4
	comp=Z,3.3nm,0.4s,baz=111,slow=8.1,SNR=71						
WRA				LR	LR	19 04 28.4	
	comp=Z,300nm,18.1s,baz=110,slow=35						
WRA	Warramunga Arr	44.40	273	P	P	18 46 42.3	0.0
WB0	Warramunga Arr	44.42	273		P	18 46 42.1	-0.4
WB0				IAmb	IAmb	18 46 55.3	
	comp=Z,13nm,0.8s						
FORT	Forrest	46.08	256	P	P	18 46 55.4	-0.1
FORT				IAmb	IAmb	18 47 05.8	
	comp=Z,14nm,0.9s						
MTN	Manton Dam	50.38	279	P	P	18 47 27.5	-1.4
MTN				IAmb	IAmb	18 47 59.7	
	comp=Z,9.7nm,1.0s						
WAKE	Wake Island	52.48	341	P	P	18 47 43.0	-1.3
FITZ	Fitzroy Crossi	52.62	270	P	P	18 47 46.4	+0.8
	comp=Z,4.8nm,1.0s,baz=144,slow=5.9,SNR=8.2						
FITZ				LR	LR	19 09 28.0	
	comp=Z,211nm,18.2s,baz=114,slow=35						
FITZ	Fitzroy Crossi	52.62	270	P	P	18 47 44.1	-1.5
BATI	Baumata	58.02	278	LR	LR	19 14 13.4	
	comp=Z,278nm,18.0s,baz=137,slow=37						
QSPA	South Pole Qui	58.83	180	P	P	18 48 32.0	+2.3
BELA	Belgrano 2	68.87	172	P	P	18 49 33.4	-2.1
MAW	Mawson	71.57	201	LR	LR	19 20 50.0	
	comp=Z,102nm,18.8s,baz=122,slow=35						
LEM	Lembang	73.41	272	LR	LR	19 22 02.7	
	comp=Z,92nm,20.6s,baz=70,slow=36						
SNAA	Sanae	77.26	178	P	P	18 50 36.2	+11
SNAA	Sanae	77.26	178	P	P	18 50 25.9	+0.5
SNAA				IAmb	IAmb	18 50 49.5	
	comp=Z,9.3nm,1.3s						
VNA3	Neumayer Olymp	77.41	176	P	P	18 50 38.8	+13
VNA2	Neumayer--Watz	77.84	177	P	P	18 50 41.6	+13
	baz=168,slow=5.8						
VNA1	Neumayer--Stat	78.07	176	P	P	18 50 43.1	+13
MJAR	Matsushiro Arr	79.12	325	LR	LR	19 20 32.1	
	comp=Z,28nm,21.8s,baz=205,slow=32						
PLCA	Paso Flores	81.72	133	LR	LR	19 19 38.7	
	comp=Z,63nm,20.1s,baz=176,slow=30						
LPIG	La Paz	84.78	58	LR	LR	19 24 15.3	
	comp=Z,94nm,18.0s,baz=214,slow=32						
KSRS	Korea Array	85.19	320	LR	LR	19 26 58.9	
	comp=Z,20nm,18.7s,baz=115,slow=34						
PETK	Petropavlovsk-	86.73	345	P	P	18 51 15.1	+0.2
	comp=Z,2.3nm,0.7s,baz=151,slow=6.6,SNR=5.6						
PETK				LR	LR	19 23 20.9	
	comp=Z,44nm,21.7s,baz=128,slow=31						
PETK	Petropavlovsk-	86.73	345	P	P	18 51 14.6	-0.4
YBH	Yreka Blue Hor	88.57	38	LR	LR	19 23 35.2	
	comp=Z,42nm,20.5s,baz=218,slow=31						
NVAR	Mina Array Bea	88.71	43	P	P	18 51 26.3	+1.2
	comp=Z,0.4nm,0.2s,baz=206,slow=6.0,SNR=2.9						
KLR	Kul'dur	91.93	330	P	P	18 51 39.6	+0.1
	comp=Z,1.0nm,0.8s,baz=137,slow=5.1,SNR=3.5						
TXAR	Lajitas Array	92.65	57	LR	LR	19 28 08.8	
	comp=Z,46nm,18.1s,baz=0.0,slow=32						
MKAR	Makanchi Array	118.54	310	PKP	PKPdf	18 57 18.1	-0.9
	comp=Z,0.4nm,0.7s,baz=230,slow=1.9,SNR=4.7						
ZALV	Zalesovo Beam	118.86	318	PKP	PKiKP	18 57 20.4	+1.0
	comp=Z,0.2nm,0.3s,baz=108,slow=4.7,SNR=2.2						
KBZ	Khabaz	145.81	303	PKPbc	PKPab	18 58 11.6	+0.7
	comp=Z,1.9nm,0.8s,baz=216,slow=2.9,SNR=3.7						
FINES	FINESS Array B	146.06	340	PKPbc	PKPdf	18 58 09.9	+0.1
	comp=Z,8.8nm,0.7s,baz=51,slow=3.9,SNR=26						
NB2	NORSAR Subarra	149.66	351	PKP	PKPbc	18 58 20.0	-0.5
	comp=Z,1.0nm,0.7s,baz=17,slow=2.6						
NOA	NORSAR Array B	149.66	351	PKPbc	PKPbc	18 58 19.9	-0.5
	comp=Z,1.1nm,1.0s,baz=84,slow=0.9,SNR=2.9						
AKASG	Malin Array Be	152.16	322	PKPbc	PKPbc	18 58 26.0	-0.6
	comp=Z,4.5nm,0.8s,baz=48,slow=2.7,SNR=8.0						
AKASG	Malin Array Be	152.16	322		PKPbc	18 58 25.8	-0.8
BRTR	Keskin Array B	153.24	297	PKPbc	PKiKP	18 58 29.5	-0.2
	comp=Z,0.9nm,0.5s,baz=196,slow=1.0,SNR=3.0						
TORD	Torodi Ar. Bea	161.94	178	PKPab	PKPab	18 59 20.3	+1.2
	comp=Z,1.6nm,1.0s,baz=182,slow=2.4,SNR=3.2						

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*IDC **06** 18:39:55.4±3.2, 52°.26N×172°.59E, h0^{km}, mb3.6/9, mb1 3.8/10, mb1mx3.6/48, mbtmp3.6/10, ML2.3/1, Error ellipse: s-maj=93.5km s-min=18.7km az=175.0*

*NEIC **06** 18:40:00.7±1.5, 52°.5N±0°.2×172°.49E±0°.06, h32^{km}±9^{km}, mb4.5/20, Error ellipse: s-maj=31.6km s-min=5.1km az=177.0*

ISC 06 18:39:59.6±1.1**, 52°.5N**±0°.2×**172°.44E**±0°.06**, h24**^{km}**, n40, σ1^{s}.45**/36**, mb4.3**/18**, Near Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMY	Shemya	1.05	74	Pn	Pn	18 40 17.6	-1.1
SMY				Sn	Sn	18 40 31.7	-1.0
AMKA	Amchitka	4.38	101	Pn	Pn	18 41 04.1	-0.5
PEA0B	Petropavlovsk-	8.96	280	Pn	Pn	18 42 08.3	+0.9
PETK	Petropavlovsk-	8.96	280	Pn	Pn	18 42 08.4	+1.0
	0.2nm,0.3s,baz=95,slow=18,SNR=8.2						
PETK				Sn	Sn	18 43 43.3	-4.1
	0.2nm,0.3s,baz=61,slow=41,SNR=4.3						
AKUT	Akutan	13.14	74	Pn	Pn	18 43 05.7	+1.3
OHAK	Old Harbor	20.17	63		P	18 44 29.0	-2.9
KDAK	Kodiak Island	20.54	61	P	P	18 44 35.6	-0.3
	13nm,0.9s,baz=314,slow=12,SNR=7.3						
SKT	Skwentna	21.44	49	P	P	18 44 45.2	-0.4
SKT				IAmb	IAmb	18 45 14.0	
	comp=Z,20nm,1.5s						
BRLK	Bradley Lake	21.49	56	P	P	18 44 46.8	+0.6
KTH	Kantishna Hill	22.03	45	P	P	18 44 51.6	-0.4
KTH				IAmb	IAmb	18 45 12.9	
	comp=Z,26nm,1.7s						
BPAW	Bear Paw Mtn.	22.13	44	P	P	18 44 49.5	-3.5
BPAW				IAmb	IAmb	18 44 51.5	
	comp=Z,19nm,1.5s						
TRF	Thorofare Moun	22.28	46	P	P	18 44 56.0	+1.2
KNK	Knik Glacier	22.81	51	P	P	18 45 00.4	0.0
KNK				IAmb	IAmb	18 45 15.2	
	comp=Z,36nm,1.5s						
SCM	Sheep Creek Mo	23.39	51	P	P	18 45 04.9	-1.4
SCM				IAmb	IAmb	18 45 22.9	
	comp=Z,43nm,1.5s						
A21K	Barrow	23.40	25	P	P	18 45 06.1	0.0
WRH	Wood River Hil	23.44	44	P	P	18 45 06.3	-0.4
WRH				IAmb	IAmb	18 45 32.8	
	comp=Z,9.4nm,1.5s						
MDM	Murphy Dome	23.49	43	P	P	18 45 07.7	+0.5
IL31		24.01	43	P	P	18 45 12.0	0.0
ILAR	Eielson Array	24.01	43	P	P	18 45 11.8	-0.3
	comp=Z,1.0nm,0.7s,baz=250,slow=8.5,SNR=12						
KLU	Klutina	24.03	52	P	P	18 45 09.3	-3.1
KLU				IAmb	IAmb	18 45 37.0	
	comp=Z,15nm,1.1s						
N25K	Chitina, Valde	24.67	51	P	P	18 45 16.8	-1.5
N25K				IAmb	IAmb	18 45 35.1	
	comp=Z,27nm,1.6s						
RIDG	Independent Ri	24.73	46	P	P	18 45 18.0	-0.7
RIDG				IAmb	IAmb	18 45 42.2	
	comp=Z,12nm,1.4s						
GLB	Gilahina Butte	25.05	52	P	P	18 45 21.6	0.0
GLB				IAmb	IAmb	18 45 35.9	
	comp=Z,21nm,1.4s						
DOT	Dot Lake	25.07	46	P	P	18 45 22.0	+0.3
BMAR	Burnt Mountain	25.53	38	P	P	18 45 26.3	+0.4
H11N2	WAKE ISLAND Hy	32.94	190	T	T	19 21 54.9	
	baz=6.3,slow=76,SNR=19						
H11N3	WAKE ISLAND Hy	32.95	190	T	T	19 21 57.9	
	baz=6.3,slow=76,SNR=19						
H11N1	WAKE ISLAND Hy	32.96	190	T	T	19 22 00.5	
	baz=6.3,slow=76,SNR=24						
H11S1	WAKE ISLAND Hy	34.17	190	T	T	19 23 30.6	
	baz=6.1,slow=76,SNR=34						
H11S3	WAKE ISLAND Hy	34.18	190	T	T	19 23 29.0	
	baz=6.1,slow=76,SNR=22						
H11S2	WAKE ISLAND Hy	34.19	190	T	T	19 23 33.0	
	baz=6.1,slow=76,SNR=17						
YKA	Yellowknife Ar	38.40	46	P	P	18 47 18.6	+0.1
	comp=Z,0.2nm,0.5s,baz=292,slow=7.5,SNR=4.2						
SONM	Songino Array	41.25	291	P	P	18 47 43.7	+1.1
	comp=Z,0.2nm,0.6s,baz=64,slow=6.6,SNR=2.2						
ZALV	Zalesovo Beam	49.24	309	P	P	18 48 46.7	+1.0
	comp=Z,0.3nm,0.4s,baz=46,slow=8.3,SNR=2.3						
PDAR	Pinedale Array	51.05	68	P	P	18 48 60.0	+0.1
	comp=Z,0.2nm,0.5s,baz=316,slow=5.0,SNR=2.1						
ULM	Lac du Bonnet	53.50	53	P	P	18 49 16.1	-1.5
	comp=Z,0.9nm,0.5s,baz=307,slow=5.1,SNR=1.8						
ULM	Lac du Bonnet	53.50	53	P	P	18 49 17.6	0.0
ULM				IAmb	IAmb	18 49 35.0	
	comp=Z,11nm,1.6s						
MKAR	Makanchi Array	55.00	303	P	P	18 49 28.0	-0.7
	comp=Z,0.1nm,0.3s,baz=57,slow=7.1,SNR=4.2						
MKAR	Makanchi Array	55.00	303	P	P	18 49 28.7	0.0
ARCES	ARCESS Array B	55.95	347	P	P	18 49 36.8	+1.7
	comp=Z,4.3nm,0.8s,baz=8.0,slow=9.1,SNR=1.7						

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*IDC **06** 18:49:40.0±1.3, 7°.12N×124°.70E, h0^{km}, mb3.7/5, mb1 4.0/6, mb1mx3.5/42, mbtmp3.9/6, ML4.2/1, Error ellipse: s-maj=22.2km s-min=11.6km az=176.0*

*MAN **06** 18:49:41.2, 7°.28N×124°.81E, h1^{km}, mb4.7, ML3.6, MS3.5*
MAN INTENSITY III - CARMEN.

*NEIC **06** 18:49:42.0±2.8, 7°.64N±0°.04×124°.98E±0°.08, h54^{km}±14^{km}, mb4.2/11, Error ellipse: s-maj=12.0km s-min=2.4km az=112.0*

ISC 06 18:49:41.1±1.1**, 7°.33N**±0°.03×**124°.84E**±0°.04**, h20**^{km}±4^{km}**, n34, σ1^{s}.32**/39**, mb4.0**/9**, 3C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCP	Kidapawan	0.40	141	⇑iP	Pb	18 49 50.1	+0.4
KCP				i S	Sb	18 49 56.0	+0.5
BUKP	Musuan	0.59	22	eP	Pg	18 49 53.3	+0.3
BUKP				eS	Sg	18 50 02.2	+1.2
DAV	Davao City (W)	0.78	109	Pg	Pn	18 49 57.0	0.0
	549nm,0.3s,baz=280,slow=9.1,SNR=90						
DAV				Lg	Lg	18 50 08.9	
	829nm,0.3s,baz=0.0,slow=20,SNR=58						
DAV	Davao City (W)	0.78	109		Pn	18 49 56.9	0.0
SKMP	Bagumbayan, Su	0.85	200	eP	Pb	18 49 56.5	-0.7
SKMP				eS	Sn	18 50 08.8	-1.1
CGP	Cagayan de Oro	1.13	353	⇑iP	Pg	18 50 03.3	+0.2
CGP				i S	Sg	18 50 18.8	+0.9
MATI	Mati	1.46	105	eP	Pn	18 50 05.7	-0.7
MATI				eS	Sn	18 50 22.5	-2.4
DDMP	Don Marcelino,	1.49	144	eP	Pn	18 50 06.8	0.0
DDMP				eS	Sg	18 50 29.6	+0.2
PAGZ	Pagadian	1.53	290	eP	Pg	18 50 09.1	-1.6
PAGZ				eS	Sg	18 50 31.4	+0.7
BUTP	Butuan	1.81	25	eP	Pg	18 50 15.5	-0.4
BUTP				eS	Sg	18 50 39.2	-0.2
MSLP	Maasin	2.79	0	eP	Pb	18 50 28.1	-2.3
LLP	Lapu-Lapu	3.10	344	⇑eP	Pb	18 50 33.0	-2.5
LLP				eS	Sn	18 51 08.2	+2.9
MYLDM	Lahad Datu	6.65	252	Pn	Pn	18 51 22.6	+4.9
TNTI	Ternate	6.98	159	Pn	Pn	18 51 26.8	+4.5
TOLI2	Tolitoli	7.38	213	Pn	Pn	18 51 28.7	+0.9
LUWI	Luwuk	8.56	194	Pn	Pn	18 51 48.8	+4.7
BATI	Baumata	17.45	184	P	P	18 53 43.5	-1.2
	0.9nm,0.3s,baz=146,slow=3.6,SNR=2.7						
MTN	Manton Dam	20.99	163	P	P	18 54 23.9	+0.4
MTN				IAmb	IAmb	18 55 14.0	
	comp=Z,24nm,1.5s						
FITZ	Fitzroy Crossi	25.27	178	P	P	18 55 07.0	+0.7
	comp=Z,3.1nm,1.0s,baz=7.3,slow=7.6,SNR=6.0						
FITZ	Fitzroy Crossi	25.27	178	P	P	18 55 05.8	-0.5
FITZ				IAmb	IAmb	18 55 18.7	
	comp=Z,11nm,1.6s						
COEN	Coen	27.90	139	P	P	18 55 30.3	+0.2
COEN				IAmb	IAmb	18 55 45.6	
	comp=Z,13nm,1.4s						
WB0	Warramunga Arr	28.52	161	P	P	18 55 33.8	-1.8
WB0				IAmb	IAmb	18 55 38.3	
	comp=Z,10nm,1.4s						
WRAB	Tennant Creek	28.66	161	P	P	18 55 35.2	-1.5
WRA	Warramunga Arr	28.66	161	P	P	18 55 36.4	-0.4
	comp=Z,0.6nm,0.8s,baz=331,slow=12,SNR=6.3						
WRA	Warramunga Arr	28.66	161	P	P	18 55 34.9	-2.0
WB2	Warramunga Arr	28.67	161	P	P	18 55 35.6	-1.3
WB2				IAmb	IAmb	18 56 29.8	
	comp=Z,2.9nm,0.9s						
WR0	Warramunga Arr	28.75	161	P	P	18 55 37.4	-0.1
WR0				IAmb	IAmb	18 56 15.4	
	comp=Z,4.2nm,1.1s						
AS31	Alice Springs	32.05	164	P	P	18 56 04.6	-2.1
ASAR	Alice Springs	32.05	164	P	P	18 56 07.2	+0.4
	comp=Z,0.6nm,0.5s,baz=336,slow=6.6,SNR=15						
ASAR	Alice Springs	32.05	164	P	P	18 56 06.0	-0.8
BBOO	Buckleboo	41.32	166	P	P	18 57 26.1	+0.5
STKA	Stephens Creek	42.14	159	P	P	18 57 33.0	+0.7
	comp=Z,1.8nm,0.7s,baz=338,slow=3.3,SNR=5.9						
STKA	Stephens Creek	42.14	159	IAmb	IAmb	18 57 33.9	
	comp=Z,1.0nm,1.0s						
MKAR	Makanchi Array	53.55	325	P	P	18 59 03.3	+2.7
	comp=Z,0.2nm,0.6s,baz=125,slow=5.3,SNR=2.4						

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*NEIC **06** 19:01:36.0±2.2, 8°.61S±0°.07×118°.32E±0°.07, h134^{km}±4^{km}, mb4.5/20, Error ellipse: s-maj=10.3km s-min=9.2km az=46.0*

*DJA **06** 19:01:36.8±0.2, 9°S±4°×11°8E±°, h123^{km}±3^{km}, M4.6/16, mb4.6/7, mB5.2/3, MLv4.6/16, Mw(mB)4.5/3*

*IDC **06** 19:01:37.4±1.5, 8°.57S×118°.47E, h140^{km}±13^{km}, mb3.7/9, mb1 3.9/15, mb1mx3.7/37, mbtmp4.2/15, Error ellipse: s-maj=18.1km s-min=8.4km az=64.0*

ISC 06 19:01:37.8±0.4**, 8°.66S**±0°.05×**118°.36E**±0°.05**, h152**^{km}**, n77, σ1^{s}.91**/85**, mb4.4**/14**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	Plampang	0.60	254	P	Pn	19 01 56.5	-3.5
PLAI				S	Sn	19 02 11.1	-5.7
WBSI	Waikabubak, Su	1.41	134	P	Pn	19 02 03.1	-3.6
TWSI	Taliwang, Sumb	1.47	267	P	Pn	19 02 04.8	-2.4
WSI	Waingapu	2.16	118	P	Pn	19 02 12.6	-2.3
BASI	Baing, Sumba	2.68	125	P	Pn	19 02 19.3	-2.0
DNP	Denpasar	3.12	269	P	Pn	19 02 25.5	-1.3
SRBI	Singaraja	3.17	280	P	Pn	19 02 25.3	-2.1
BSSI	Bau Bau, Buton	3.27	40	P	Pn	19 02 26.7	-2.1
EDFI	Ende, Flores	3.29	92	P	Pn	19 02 26.9	-2.2
BKSI	Bulukumba	3.75	28	P	Pn	19 02 33.2	-1.7
MMRI	Maumere	3.83	90	Pn	Pn	19 02 33.9	-2.0
MMRI	Maumere	3.83	90	P	Pn	19 02 34.7	-1.3
KAPI	Kappang	3.88	21	P	Pn	19 02 35.0	-1.6
	3.7nm,0.3s,baz=194,slow=6.8,SNR=14						
KAPI				S	Sn	19 03 19.1	-3.1
	4.7nm,0.3s,baz=162,slow=23,SNR=11						
JAGI	Jajag, Banyuwa	4.17	272		Pn	19 02 37.8	-2.6
JAGI	Jajag, Banyuwa	4.17	272	P	Pn	19 02 37.6	-2.8
ABJI	Asem Bagus	4.18	282	P	Pn	19 02 39.3	-1.2
BNSI	Bone	4.57	22	P	Pn	19 02 46.0	+0.3
BATI	Baumata	5.45	107	P	Pn	19 02 56.0	-1.4
	78nm,0.3s,baz=318,slow=2.5,SNR=171						
BATI				S	Sn	19 03 56.4	-3.0
	61nm,0.3s,baz=144,slow=21,SNR=8.6						
BATI	Baumata	5.45	107	P	Pn	19 02 56.2	-1.1
	0.6nm3µm76nm,0.4s						
SOEI	Soe	5.93	101	Pn	Pn	19 03 01.9	-1.9
SOEI	Soe	5.93	101	P	Pn	19 03 02.4	-1.4
	0.9nm3µm166nm,0.6s						
UGM	Wanagama	7.79	275	Pn	Pn	19 03 26.2	-2.4
SANI	Sanana	10.04	50	P	Pn	19 03 59.4	+1.0
CISI	Cisompet, Garu	10.50	275	Pn	Pn	19 04 00.6	-4.0
LEM	Lembang	10.80	279	P	Pn	19 04 09.1	+0.5
	4.0nm,0.3s,baz=139,slow=17,SNR=4.9						
CBJI	Citeko	11.63	280	P	Pn	19 04 16.8	-2.5
DBJI	Dramaga	11.70	280	P	Pn	19 04 19.7	-0.6
	29nm,0.7s						
FITZ	Fitzroy Crossi	11.75	144	P	Pn	19 04 19.6	-1.3
	0.6nm,0.3s,baz=330,slow=6.8,SNR=14						
FITZ				S	Sn	19 06 21.3	-9.5
	4.2nm,0.3s,baz=198,slow=22,SNR=13						
FITZ	Fitzroy Crossi	11.75	144	Pn	Pn	19 04 19.3	-1.5
TNG	Tangerang	11.88	281	P	Pn	19 04 21.5	-1.1
KSM	Kuching	12.88	321		P	19 04 39.0	-1.4
PSA00	Pilbara Seismi	12.92	174	Pn	Pn	19 04 34.8	-1.1
MTN	Manton Dam	13.22	109	Pn	Pn	19 04 37.5	-2.3
KASI	Kota Agung	14.11	282	P	Pn	19 04 52.2	+1.1
	889nm40nm,0.5s						
GIRL	Giralia	14.46	195		Pn	19 04 56.8	+1.4
KKM	Kota Kinabalu	14.76	352		P	19 05 01.8	+0.3
FAKI	Fak Fak	14.94	68	Pn	Pn	19 04 58.4	-3.2
SWI	Sorong	15.00	60	P	Pn	19 05 03.3	+1.0
	21nm,0.8s						
SIJI	Sorong	15.00	60	P	Pn	19 05 00.9	-1.4
	1.0nm,0.3s,baz=226,slow=2.2,SNR=6.0						
MNAI	Manna	15.89	285	Pn	Pn	19 05 11.0	-2.3
WB0	Warramunga Arr	19.04	127	P	P	19 05 48.2	-0.2
WB0				IAmb	IAmb	19 05 54.9	
	comp=Z,14nm,0.6s						
WB0					S	19 09 13.3	-3.3
WRA	Warramunga Arr	19.10	128	P	P	19 05 48.9	-0.1
	comp=Z,1.4nm,0.3s,baz=302,slow=12,SNR=88						
WRA				S	S	19 09 15.9	-1.8
	comp=Z,1.1nm,0.3s,baz=302,slow=22,SNR=7.9						
WRA	Warramunga Arr	19.10	128	P	P	19 05 48.8	-0.3
WRA					S	19 09 16.5	-1.2
WRAB	Tennant Creek	19.10	128	P	P	19 05 49.0	-0.1
WB2	Warramunga Arr	19.11	128	P	P	19 05 49.0	-0.1
WR0	Warramunga Arr	19.26	127	P	P	19 05 50.9	+0.1
WR0				IAmb	IAmb	19 05 53.9	
	comp=Z,15nm,0.7s						
WR0					S	19 09 19.1	-1.9
MORW	Morawa	20.42	186	P	P	19 06 03.4	+0.2
MORW				IAmb	IAmb	19 06 28.5	
	comp=Z,33nm,1.4s						
AS31	Alice Springs	21.07	137	P	P	19 06 11.0	+0.8
ASAR	Alice Springs	21.07	137	P	P	19 06 11.1	+0.8
	comp=Z,6.3nm,0.4s,baz=309,slow=9.1,SNR=280						
ASAR				S	S	19 09 56.9	+0.6
	comp=Z,1.0nm,0.8s,baz=319,slow=19,SNR=6.0						
ASAR				ScP	ScP	19 13 36.0	+2.4
	comp=Z,1.3nm,0.6s,baz=339,slow=2.3,SNR=7.7						
FORT	Forrest	23.80	159	P	P	19 06 37.9	+1.2
NWAO	Narrogin (SRO)	24.17	182	P	P	19 06 41.4	+1.4
	comp=Z,6.6nm,0.6s,baz=12,slow=9.0,SNR=8.5						
NWAO	Narrogin (SRO)	24.17	182	P	P	19 06 41.5	+1.4
NWAO				IAmb	IAmb	19 07 15.4	
	comp=Z,34nm,1.4s						
NWAO	Narrogin (SRO)	24.17	182	P	P	19 06 41.5	+1.4
COEN	Coen	24.88	104	P	P	19 06 47.2	+0.4
COEN				IAmb	IAmb	19 06 47.8	
	comp=Z,7.7nm,0.7s						
BBOO	Buckleboo	29.08	148	P	P	19 07 25.2	+1.0
BBOO				IAmb	IAmb	19 07 26.3	
	comp=Z,15nm,1.5s						
STKA	Stephens Creek	31.61	140	P	P	19 07 48.2	+1.8
	comp=Z,3.3nm,0.5s,baz=307,slow=9.9,SNR=8.8						
STKA	Stephens Creek	31.61	140	P	P	19 07 47.6	+1.1
TOO	Toolangi	37.81	144	P	P	19 08 42.3	+2.7
TOO				IAmb	IAmb	19 09 07.3	
	comp=Z,16nm,1.6s						
ARMA	Armidale	37.86	129	P	P	19 08 43.9	+3.7
ARMA				IAmb	IAmb	19 08 49.6	
	comp=Z,24nm,1.4s						
CAN	Canberra	38.58	138	P	P	19 08 48.6	+2.5
LZH	Lanzhou	46.56	344	eP	P	19 09 52.1	+1.5
LZH				pP	pP	19 10 25.3	+1.4
LZH				sP	sP	19 10 42.6	+2.0
LZH				pmax	pmax		
	comp=Z,13nm,1.2s						
KSRS	Korea Array	46.74	10	P	P	19 09 52.5	+0.9
	comp=Z,1.2nm,0.9s,baz=187,slow=8.8,SNR=4.3						
USRK	Ussuriysk Ar.	54.04	12	P	P	19 10 46.9	+0.4
	comp=Z,1.2nm,0.6s,baz=196,slow=5.6,SNR=4.4						
SONM	Songino Array	57.24	350	P	P	19 11 09.0	-0.4
	comp=Z,0.4nm,0.4s,baz=173,slow=8.3,SNR=6.0						
SONM	Songino Array	57.24	350	P	P	19 11 08.9	-0.5
RPZ	Rata Peaks	57.48	137	P	P	19 11 12.8	+1.7
WMQ	Urumqi	59.18	335	eP	P	19 11 24.3	+1.5
BKZ	Black Stump Fm	60.00	130	P	P	19 11 30.5	+1.9

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array comp=Z,0.3nm,0.5s,baz=158,slow=6.6,SNR=7.7	63.87	333	P	P	19 11 53.3	-0.9
MKAR	Makanchi Array	63.87	333	P	P	19 11 53.2	-1.0
ZALV	Zalesovo Beam comp=Z,0.5nm,0.3s,baz=148,slow=4.7,SNR=3.8	68.50	339	P	P	19 12 23.4	-0.1
PETK	Petropavlovsk-	70.02	24	P	P	19 12 33.4	+0.5
VNDA	Vanda comp=Z,8.4nm,1.2s,baz=301,slow=5.9,SNR=5.2	72.42	171	P	P	19 12 49.5	+2.6
ABKAR	Akbulak array	76.92	325	P	P	19 13 11.9	-1.4
YKA	Yellowknife Ar comp=Z,0.1nm,0.3s,baz=293,slow=3.7,SNR=2.7	114.14	24	PKP	PKPdf	19 19 58.9	+0.2
TORD	Torodi Ar. Bea comp=Z,0.3nm,0.4s,baz=56,slow=2.1,SNR=4.0	117.78	280	PKP	PKPdf	19 20 07.4	+0.2
CPUP	Villa Florida comp=Z,4.3nm,0.7s,baz=142,slow=3.5,SNR=8.1	144.97	187	PKPbc	PKPdf	19 20 59.8	+2.0

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*TAP **06** 19:18:33.6, 21°.94N×121°.60E, h17^{km}, ML3.1, D*
*JMA **06** 19:18:35.6±0.3, 22°.20N×121°.75E, h7^{km}, M3.3*
ISC 06 19:18:34.1±1.2, **22°.00N**±0°.06×**121°.66E**±0°.04, **h17**^{km}±6^{km}, **n78**, σ**0^s.97**/89, **1C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LAY	Lan-yu baz=339	0.11	290	⇑iP	Pg	19 18 37.7	-0.1
LAY	 baz=339			S	Sg	19 18 40.9	+0.7
LDUT	Ludao baz=350	0.69	345	P	Pb	19 18 47.8	0.0
LDUT	 baz=350			eS	Sn	19 18 59.1	-0.4
TSEB	Hengchuen, Pin baz=267	0.71	262	eP	Pg	19 18 47.9	-0.2
TSEB	 baz=267			eS	Sg	19 18 57.6	0.0
TWKBT	Hengchun baz=270	0.79	266	eP	Pg	19 18 48.1	-1.4
TAW	Tawu baz=303	0.79	297	eP	Pg	19 18 48.8	-0.8
TAW	 baz=303			eS	Sg	19 18 59.6	-0.6
TWK1	Hengchun baz=270	0.80	266	eP	Pg	19 18 48.2	-1.5
SLIU	Shizi baz=290	0.83	285	eP	Pg	19 18 49.1	-1.2
EAST	Anshuo baz=302	0.84	297	eP	Pg	19 18 49.5	-1.1
HEN	Hengchun baz=274	0.86	270	eP	Pg	19 18 49.1	-1.7
ECL	Taimali baz=318	0.88	312	eP	Pg	19 18 50.7	-0.7
TTN	Taitung baz=333	0.89	328	eP	Pn	19 18 51.9	0.0
TWGBT	Beinan baz=331	0.97	327	eP	Pg	19 18 52.5	-0.6
TWGBT	 baz=331			eS	Sn	19 19 07.3	+0.8
TWG	Pinlang baz=331	0.98	326	eP	Pg	19 18 52.7	-0.5
TWG	 baz=331			eS	Sn	19 19 07.3	+0.7
EDH	Donghe baz=345	1.02	341	eP	Pb	19 18 53.5	+0.1
LONT	Longtian baz=335	1.03	332	eP	Pg	19 18 53.3	-0.8
SCZT	Fangliau baz=295	1.03	291	eP	Pb	19 18 52.9	-0.6
SSPT	Xinbi baz=299	1.12	296	eP	Pn	19 18 55.8	+0.7
CHKT	Chengkung baz=349	1.13	346	eP	Pg	19 18 55.2	-0.8
MASBT	Mashibuluo baz=306	1.13	303	eP	Pb	19 18 54.5	-0.7
TSMG	Majia baz=310	1.17	307	eP	Pb	19 18 55.8	-0.2
SSD	Sandimen baz=312	1.21	308	eP	Pb	19 18 56.8	+0.3
WLCH	Liuqiu baz=290	1.24	287	eP	Pb	19 18 57.7	+0.7
FULB	Fuli baz=347	1.24	344	eP	Pn	19 18 57.0	+0.3
FULB	 baz=347			eS	Sn	19 19 14.1	+1.0
TWP	Hsiaoliuchiu baz=289	1.25	286	eP	Pg	19 18 58.4	+0.1
ELDTW	Lidau baz=336	1.32	333	eP	Pn	19 18 58.1	+0.1
SLGT	Liugui baz=320	1.36	317	eP	Pb	19 18 59.4	+0.2
EYUL	Yuli baz=349	1.38	347	eP	Pb	19 18 59.6	+0.1
TWF1	Yuli baz=349	1.39	346	eP	Pb	19 18 59.4	-0.3
SCST	Cishan baz=312	1.39	309	eP	Pn	19 18 59.3	+0.4
STYT	Tauyuan baz=327	1.43	324	eP	Pb	19 19 00.1	-0.2
SGST	Jiashian baz=320	1.47	317	eP	Pn	19 19 00.6	+0.8
HGSD	Ruisui baz=354	1.50	352	eP	Pb	19 19 01.1	-0.5
EHY	Hungye baz=350	1.53	348	eP	Pn	19 19 01.1	+0.4
WTP	Ta-pu baz=325	1.57	322	eP	Pb	19 19 03.0	+0.2
CHN1	Nanshi baz=321	1.58	319	eP	Pg	19 19 04.3	-0.2
TPUB	Ta-pu baz=326	1.61	324	eP	Pb	19 19 03.1	-0.2
YUS	Yu-Shan baz=338	1.62	336	eP	Pg	19 19 04.4	-1.0
SNST	Tainan City baz=321	1.62	319	eP	Pb	19 19 04.1	+0.5
TWK	Hsinying baz=322	1.66	320	eP	Pb	19 19 04.7	+0.4
CHN4	Tsaushan baz=326	1.67	324	eP	Pb	19 19 05.1	+0.7
ALS	Alishan baz=335	1.70	332	eP	Pb	19 19 05.1	0.0
VWDT	VWDT baz=346	1.81	345	eP	Pb	19 19 05.9	-0.9
ESL	Shilin baz=355	1.82	353	eP	Pn	19 19 05.1	+0.5
CHN5	Tsauling baz=332	1.83	330	eP	Pb	19 19 07.6	+0.4
WHYT	Xinyi Township baz=338	1.84	336	eP	Pb	19 19 07.1	-0.4
SSLB	Suanglung baz=342	1.89	340	eP	Pb	19 19 08.2	-0.1
WDLH	Douliu baz=330	1.97	329	eP	Pb	19 19 09.4	-0.2
SMLT	Sun Moon Lake baz=341	2.00	340	eP	Pb	19 19 10.3	+0.1
WJS	Zhushan baz=336	2.01	335	eP	Pb	19 19 09.9	-0.3
TYC	Yuchr baz=341	2.03	339	eP	Pb	19 19 11.0	+0.4
WNT	Mingjian baz=336	2.07	334	eP	Pb	19 19 11.0	-0.3
CHGB	Renai baz=349	2.10	348	eP	Pn	19 19 09.8	+1.1
DPDB	Guoxing baz=343	2.13	342	eP	Pb	19 19 11.4	-1.0
NACB	Ninganchiao baz=359	2.16	358	eP	Pn	19 19 10.0	+0.6
WHF	Hehuan Shan baz=352	2.17	350	eP	Pb	19 19 11.5	-1.6
ETLH	Xiulin Townshi baz=357	2.20	356	eP	Pn	19 19 11.0	+0.9
FUSS	Fushou baz=351	2.27	350	eP	Pb	19 19 12.9	-1.9
WHP	Taichung City baz=345	2.36	344	eP	Pb	19 19 15.8	-0.5
ENA	Nanau baz=3.0	2.42	2	eP	Pn	19 19 14.7	+1.8
NNSB	Datong baz=355	2.43	354	eP	Pn	19 19 14.5	+1.3
NNSH	Datong baz=355	2.43	354	eP	Pb	19 19 16.7	-0.8
NNS	Nan Shan baz=355	2.44	354	eP	Pn	19 19 14.9	+1.5
PHUB	P'eng-hu baz=310	2.45	308	eP	Pn	19 19 13.5	+0.2
PHUB	 baz=310			eS	Sn	19 19 43.0	+0.1
TWQ1	Liyutan baz=342	2.48	341	eP	Pb	19 19 16.9	-1.3
PNG	Penghu baz=310	2.49	309	eP	Pn	19 19 14.5	+0.6
NDT	Datong Townshi baz=358	2.59	357	eP	Pn	19 19 17.1	+1.7
ENTT	Nioudou baz=359	2.63	358	eP	Pn	19 19 17.9	+2.1
NSK	Sanguang baz=355	2.68	354	eP	Pn	19 19 18.8	+2.2
LIOB	Emei baz=348	2.70	347	eP	Pb	19 19 19.8	-2.2
JYNG	Yonagunijimaku	2.71	26	P	Pn	19 19 17.9	+1.0
NWLT	Wulai baz=358	2.77	357	eP	Pb	19 19 20.9	-2.3
HATJ	Hateruma jima	2.84	44	P	Pn	19 19 19.7	+0.9
TIPB	Shuangxi baz=3.0	2.96	3	eP	Pn	19 19 22.9	+2.5
IRIF	Iriomote-Funau	3.00	39	P	Pn	19 19 22.2	+1.2
JKRS	Kuro-shima	3.10	44	P	Pn	19 19 23.4	+1.1
JIJ	Ishigaki jima	3.28	44	P	Pn	19 19 26.1	+1.4
JIJ				eS	Sn	19 20 03.1	-0.3
JISG	Ishigakijimahi	3.54	43	P	Pn	19 19 29.4	+1.0
JISG				S	Sn	19 20 09.3	-0.6
JTJ	Tarama	3.84	46	P	Pn	19 19 33.2	+0.8
JTJ				eS	Sn	19 20 17.9	+0.8

IDC 06 19:29:37.3±2.0, **3°.53N**×**89°.30E**, **h0**^{km}, **mb3.4**/3, **mb1 3.6**/4, **mb1mx3.4**/45, **mbtmp3.5**/4, **ML3.5**/1, **Error ellipse: s-maj=58.5km s-min=28.7km az=47.0, North Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALK	Pallekele 0.5nm,0.3s,baz=227,slow=13,SNR=3.9	9.33	294	Pn	Pn	19 31 53.1	-0.1
PALK	 2.9nm,0.3s,baz=292,slow=19,SNR=8.7			Sn	Sn	19 33 33.4	-5.5
H08S3	Diego Garcia H baz=59,slow=74,SNR=17	20.11	237	T	T	19 54 18.6	
H08S2	Diego Garcia H baz=59,slow=74,SNR=3.4	20.11	236	T	T	19 54 21.1	
H08S1	Diego Carcia H baz=59	20.12	236	T	T	19 54 21.4	
MKAR	Makanchi Array 0.3nm,0.6s,baz=182,slow=9.5,SNR=5.4	43.52	353	P	P	19 37 42.5	-0.3
H01W3	Cape Leeuwin H baz=326,slow=76,SNR=4.0	44.78	151	T	T	20 24 28.7	
H01W2	Cape Leeuwin H baz=326,slow=76,SNR=4.8	44.79	151	T	T	20 24 29.8	
H01W1	Cape Leeuwin H baz=326,slow=76,SNR=4.2	44.79	151	T	T	20 24 34.0	
SONM	Songino Array 0.3nm,0.5s,baz=202,slow=9.0,SNR=3.7	46.53	16	P	P	19 38 06.8	+0.1
WRA	Warramunga Arr 0.3nm,0.5s,baz=298,slow=8.6,SNR=8.3	50.00	120	P	P	19 38 33.7	-0.2

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*DJA **06** 19:30:01.2±1.5, 8°S±15°×12°3E±°, h193^{km}±14^{km}, M3.4/6, mb3.5/1, MLv3.4/6*
*IDC **06** 19:30:04.9±1.5, 8°.35S×122°.86E, h204^{km}±13^{km}, mb3.0/2, mb1 3.2/6, mb1mx3.0/35, mbtmp3.6/6, Error ellipse: s-maj=70.8km s-min=19.1km az=59.0*
ISC 06 19:30:01.5±2.0, **8°.2S**±0°.2×**122°.9E**±0°.1, **h221**^{km}, **n13**, σ**1^s.62**/14, **Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMRI	Maumere	0.77	238	P	Pn	19 30 30.4	-1.7
EDFI	Ende, Flores	1.30	246	P	Pn	19 30 33.7	-1.9
SOEI	Soe	2.03	138	P	Pn	19 30 42.5	+0.5
BATI	Baumata 28nm,0.3s,baz=352,slow=0.9,SNR=81	2.11	159	P	Pn	19 30 43.6	+0.9
BATI	 62nm,0.3s,baz=300,slow=1.7,SNR=10			S	S	19 31 14.8	0.0
BATI	Baumata	2.11	159	P	Pn	19 30 43.4	+0.7
BASI	Baing, Sumba	3.03	229	P	Pn	19 30 52.4	-0.2
WBSI	Waikabubak, Su	3.74	248	P	Pn	19 31 00.2	-0.8
TWSI	Taliwang, Sumb	5.97	265	P	Pn	19 31 28.6	-0.2
FITZ	Fitzroy Crossi 0.3nm,0.3s,baz=2.4,slow=8.7,SNR=13	10.17	165	P	Pn	19 32 23.5	+0.9
FITZ	 0.7nm,0.3s,baz=165,slow=9.1,SNR=10			S	S	19 34 14.2	-2.5
WRA	Warramunga Arr 0.2nm,0.3s,baz=309,slow=13,SNR=15	16.07	138	P	Pn	19 33 38.0	+2.2
WRA	 0.2nm,0.3s,baz=311,slow=23,SNR=3.9			S	S	19 36 30.1	-2.5
ASAR	Alice Springs 0.3nm,0.3s,baz=330,slow=13,SNR=32	18.63	147	P	Pn	19 34 07.2	+1.4
ASAR	 0.1nm,0.3s,baz=311,slow=20,SNR=5.9			S	S	19 37 35.3	+12
STKA	Stephens Creek 0.4nm,0.3s,baz=324,slow=14,SNR=4.8	29.26	146	P	P	19 35 48.1	+4.9
MKAR	Makanchi Array 0.1nm,0.4s,baz=125,slow=7.2,SNR=2.8	65.61	331	P	P	19 40 27.2	+5.5

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*ISU **06** 19:31:15, 41°.70N×70°.10E, h5^{km}, Hypocentre not reviewed by the ISC*
*SOME **06** 19:31:15.7, 41°.73N×70°.22E, h10^{km}*
*KRNET **06** 19:31:16.0±0.1, 41°.70N×70°.27E, h15^{km}, mb2.6*
*NNC **06** 19:31:16.3±4.9, 41°.80N×70°.13E, h0^{km}, mb2.6, mpv2.9, Error ellipse: s-maj=31.5km s-min=18.7km az=31.0*
ISC 06 19:31:15.2±1.2, **41°.75N**±0°.03×**70°.21E**±0°.03, **h3**^{km}±12^{km}, **n17**, σ**1^s.71**/33, **18C-4D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHRV	Charvak	0.22	240	eP		19 31 19.0	
CHRV				eS		19 31 22.0	
CHMG	Chimgan	0.25	216	eP		19 31 19.0	
CHMG				eS		19 31 23.0	
IUG	Iuzhnay 30nm,0.1s	0.41	342	eP	Pg	19 31 23.6	+0.4
IUG	 31nm,0.2s			eS	Sg	19 31 29.9	+1.3
IUG	Iuzhnay 30nm,0.1s	0.41	342	P	Pg	19 31 23.6	+0.4
IUG	 31nm,0.2s			S	Sg	19 31 29.9	+1.3
TRKS	Terek-Say baz=9.0	0.73	107	⇑iP	Pg	19 31 29.9	+0.6
TRKS	 baz=9.0			⇑iS	Sb	19 31 40.6	-0.7
TAS	Tashkent baz=44	0.81	238	⇑iP	Pb	19 31 31.9	0.0
TAS	 baz=44			⇑iS	Sb	19 31 43.2	-0.1
BRLS	Borolday 24nm,0.2s	1.30	348	eP	Pn	19 31 38.1	-2.3
BRLS	 32nm,0.2s			eS	Sb	19 31 54.4	-3.2
KK31	Karatay Array 0.6nm,0.3s,baz=198,slow=17,SNR=5.5	1.37	9	⇑P	Pb	19 31 41.7	+0.2
KK31	 8.1nm,0.5s,baz=197,slow=26			⇑S	Sb	19 31 58.9	-0.6
BTK	Batken baz=65	1.76	165	⇑iP	Pb	19 31 47.5	-0.6
BTK	 baz=65			⇑iS	Sg	19 32 10.9	-0.7
BTK	Batken	1.76	165	eP		19 31 48.0	
BTK				eS		19 32 12.0	
MNAS	Manas baz=64	1.86	66	⇑iP	Pb	19 31 50.3	+0.4
MNAS	 baz=64			⇑iS	Sg	19 32 15.6	+0.6
ARSB	Arslanbob baz=99	2.13	101	⇓iP	Pb	19 31 54.1	-0.4
ARSB	 baz=99			⇓iS	Sb	19 32 22.1	+0.7
OHH	Osh baz=21	2.30	121	⇑iP	Pb	19 31 56.5	-0.9
OHH	 baz=21			⇑iS	Sb	19 32 25.9	-0.4
MRKS	Merke 2.3nm,0.3s	2.45	65	eP	Pb	19 32 00.6	+0.6
MRKS	 6.2nm,0.2s			eS	Sg	19 32 33.5	-0.4
MRKS	Merke 2.3nm,0.3s	2.45	65	Pg	Pb	19 32 00.6	+0.6
MRKS	 6.2nm,0.2s			Lg	Lg	19 32 33.5	
AML	Almayashu baz=79	2.63	81	⇑iP	Pb	19 32 01.6	-1.6
AML	 baz=79			⇑iS	Sb	19 32 35.1	-0.9
EKS2	Erkin-Say baz=69	2.80	70	⇑iP	Pb	19 32 04.0	-2.0
EKS2	 baz=69			⇑iS	Sb	19 32 39.1	-1.7
ARLS	Aral baz=86	3.08	87	⇑eP	Pb	19 32 08.4	-2.3
ARLS	 baz=86			⇑iS	Sb	19 32 45.5	-3.3
UCH	Uchtor baz=79	3.24	80	⇓iP	Pn	19 32 10.0	+2.5
UCH	 baz=79			⇓iS	Sn	19 32 49.8	+3.0
KST	Kastek 1.1nm,0.3s	4.45	71	eP	Pb	19 32 37.0	+2.8
KST	 2.7nm,0.8s			eS	Sg	19 33 35.0	-3.2

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*IDC **06** 19:37:14.5±1.1, 6°.36S×148°.28E, h0^{km}, mb4.4/5, mb1 4.6/7, mb1mx4.0/41, mbtmp4.4/7, ML4.0/1, MS3.5/21, Ms1 3.5/21, ms1mx3.4/41, Error ellipse: s-maj=35.5km s-min=18.0km az=108.0*
*NEIC **06** 19:37:22.2±1.5, 6°.6S±0°.1×148°.1E±0°.1, h52^{km}±7^{km}, mb4.6/22, Error ellipse: s-maj=19.3km s-min=14.9km az=110.0*
*DJA **06** 19:37:27.4±0.5, 7°S±5°×14°8E±°, h81^{km}±7^{km}, M4.5/12, mB5.0/3, mb4.6/12, MLv4.5/2, Mw(mB)4.4/3*
ISC 06 19:37:22.1±0.6, **6°.50S**±0°.07×**148°.2E**±0°.1, **h51**^{km}, **n59**, σ**1^s.59**/46, **mb4.5**/15, **MS3.5**/17, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby 25nm,0.3s,baz=39,slow=5.6,SNR=87	3.06	199	Pn	Pn	19 38 08.1	+0.1
PMG	 38nm,0.3s,baz=138,slow=22,SNR=8.8			Sn	Sn	19 38 44.9	+1.5
PMG	 comp=Z,818nm,18.7s,baz=60,slow=45			LR	LR	19 39 39.1	
PMG	Port Moresby	3.06	199		Pn	19 38 07.9	-0.1
JAY	Jayapura comp=Z,394nm,18.4s,baz=164,slow=43	8.43	298	LR	LR	19 43 18.3	
COEN	Coen	8.90	213	Pn	Pn	19 39 27.0	-1.1
HNR	Honiara comp=Z,129nm,20.0s,baz=274,slow=34	12.02	105	LR	LR	19 44 02.4	
CTAO	Charters Tower	13.64	188	Pn	Pn	19 40 34.0	+1.1
SIJI	Sorong comp=Z,154nm,19.6s,baz=77,slow=43	17.77	288	LR	LR	19 49 55.7	
MTN	Manton Dam	17.93	248		Pn	19 41 27.9	-0.1
WB0	Warramunga Arr	18.80	224	P	P	19 41 36.2	-1.3
WB0	 comp=Z,20nm,1.1s			IAmb	IAmb	19 41 39.6	
WR0	Warramunga Arr	18.82	223	P	P	19 41 36.7	-1.0
WR0	 comp=Z,22nm,1.2s			IAmb	IAmb	19 41 39.5	
WRAB	Tennant Creek	18.94	224	P	P	19 41 38.1	-0.9
WB2	Warramunga Arr	18.94	224	P	P	19 41 38.4	-0.7
WRA	Warramunga Arr comp=Z,0.5nm,0.3s,baz=46,slow=12,SNR=35	18.95	224	P	P	19 41 38.5	-0.7
WRA	 comp=Z,0.0nm,0.3s,baz=44,slow=2.7,SNR=6.1			ScP	ScP	19 49 40.0	+4.8
WRA	Warramunga Arr	18.95	224	P	P	19 41 37.6	-1.6
EIDS	Eidsvold	18.97	172	P	P	19 41 39.2	-0.1
EIDS	 comp=Z,58nm,1.6s			IAmb	IAmb	19 42 05.9	
GUMO	Guam comp=Z,130nm,21.6s,baz=103,slow=33	20.22	351	LR	LR	19 48 14.2	
AS31	Alice Springs	21.90	217		P	19 42 10.7	-0.4
ASAR	Alice Springs comp=Z,14nm,0.8s,baz=53,slow=9.3,SNR=240	21.90	217	P	P	19 42 11.1	0.0
ASAR	 comp=Z,0.8nm,0.9s,baz=55,slow=3.6,SNR=5.5			ScP	ScP	19 49 48.2	+6.0
ASAR	 comp=Z,120nm,18.5s,baz=49,slow=39			LR	LR	19 51 27.9	
ASAR	Alice Springs	21.90	217		P	19 42 09.7	-1.4
SOEI	Soe	23.88	261	P	P	19 42 30.6	-0.8
SOEI	 comp=Z,32nm,1.1s			IAmb	IAmb	19 43 01.9	
ARMA	Armidale	24.02	173	P	P	19 42 30.9	-1.5
ARMA	 comp=Z,21nm,1.3s			IAmb	IAmb	19 42 56.7	
BATI	Baumata comp=Z,12nm,0.8s,baz=203,slow=6.1,SNR=4.5	24.52	260	P	P	19 42 39.0	+1.9
BATI	Baumata comp=Z,473nmcomp=Z,13nm,0.9s	24.52	260	P	P	19 42 39.1	+2.0
FITZ	Fitzroy Crossi comp=Z,10.0nm,0.5s,baz=57,slow=8.8,SNR=69	24.82	240	P	P	19 42 39.8	+0.1
FITZ	Fitzroy Crossi	24.82	240	P	P	19 42 39.2	-0.5
FITZ	 comp=Z,15nm,0.8s			IAmb	IAmb	19 42 40.4	
LUWI	Luwuk	25.91	281	P	P	19 42 48.7	-0.9
LUWI	 comp=Z,33nm,0.9s			IAmb	IAmb	19 43 23.6	
STKA	Stephens Creek comp=Z,12nm,1.0s,baz=349,slow=9.4,SNR=15	25.99	193	P	P	19 42 49.6	-0.6
STKA	 comp=Z,264nm,19.0s,baz=24,slow=39			LR	LR	19 54 10.3	
STKA	Stephens Creek	25.99	193	P	P	19 42 49.8	-0.3
KAPI	Kappang comp=Z,79nm,18.6s,baz=80,slow=42	28.31	271	LR	LR	19 56 54.2	
BBOO	Buckleboo	28.51	202	P	P	19 43 12.2	-0.5
BBOO	 comp=Z,12nm,1.2s			IAmb	IAmb	19 43 42.5	
CAN	Canberra	28.70	179	P	P	19 43 12.7	-1.8
CAN	 comp=Z,32nm,1.5s			IAmb	IAmb	19 43 16.1	
FORT	Forrest	30.65	215	P	P	19 43 31.4	-0.4
FORT	 comp=Z,28nm,1.4s			IAmb	IAmb	19 43 32.3	
JCJ	Chichijima comp=Z,41nm,20.5s,baz=53,slow=34	33.89	350	LR	LR	19 56 35.5	
OUZ	Omahuta	36.94	144	P	P	19 44 24.4	-1.8
MORW	Morawa	37.73	230	P	P	19 44 33.3	+0.2
JOW	Kunigami comp=Z,118nm,21.7s,baz=158,slow=31	38.33	331	LR	LR	19 57 12.8	
NWAO	Narrogin (SRO)	38.96	223	P	P	19 44 42.8	-0.6
NWAO	 comp=Z,41nm,1.5s			IAmb	IAmb	19 44 48.9	
LEM	Lembang comp=Z,25nm,18.9s,baz=8.0,slow=44	40.27	267	LR	LR	20 06 56.1	
URZ	Urewera comp=Z,82nm,21.0s,baz=31,slow=32	41.07	145	LR	LR	19 59 04.0	
RPZ	Rata Peaks comp=Z,135nm,18.1s,baz=302,slow=34	42.17	155	LR	LR	20 01 20.1	
KHZ	Kahutara	42.23	152	P	P	19 45 08.1	-2.1
MJAR	Matsushiro Arr comp=Z,6.3nm,0.9s,baz=172,slow=7.8,SNR=6.3	43.82	348	P	P	19 45 24.9	+1.8
MJAR	 comp=Z,60nm,21.8s,baz=160,slow=34			LR	LR	20 01 39.8	
KSRS	Korea Array comp=Z,72nm,21.0s,baz=165,slow=34	47.63	338	LR	LR	20 04 00.2	
USRK	Ussuriysk Ar. comp=Z,28nm,18.1s,baz=168,slow=36	52.53	345	LR	LR	20 08 25.4	
CMAR	Chiang Mai Arr comp=Z,16nm,21.6s,baz=176,slow=34	54.51	298	LR	LR	20 08 31.8	
PETK	Petropavlovsk- comp=Z,44nm,21.6s,baz=194,slow=32	59.92	7	LR	LR	20 09 39.4	
PETK	Petropavlovsk-	59.92	7	P	P	19 47 23.4	+0.7
SONM	Songino Array comp=Z,0.2nm,0.6s,baz=141,slow=4.8,SNR=2.0	65.40	330	P	P	19 47 58.3	-1.3
SONM	 comp=Z,57nm,20.4s,baz=192,slow=36			LR	LR	20 16 21.6	
UNV	Unalaska Valle	71.13	26	P	P	19 48 34.8	-0.2
MKAR	Makanchi Array comp=Z,0.2nm,0.5s,baz=96,slow=9.6,SNR=2.4	78.62	320	P	P	19 49 17.1	-1.5
ZALV	Zalesovo Beam comp=Z,25nm,21.1s,baz=84,slow=36	80.05	328	LR	LR	20 25 04.8	
ILAR	Eielson Array comp=Z,0.4nm,0.8s,baz=265,slow=4.5,SNR=2.5	85.48	23	P	P	19 49 52.6	-1.5
YBH	Yreka Blue Hor comp=Z,38nm,21.0s,baz=260,slow=30	93.62	49	LR	LR	20 23 18.8	
I07A	Izee	96.14	46	P	P	19 50 46.3	+1.6
SAML	Samuel	145.18	116		PKPdf	19 56 55.2	0.0
TORD	Torodi Ar. Bea comp=Z,2.0nm,0.7s,baz=71,slow=3.1,SNR=7.1	146.34	284	PKPbc	PKPab	19 56 59.2	+0.1
TORD	Torodi Ar. Bea	146.34	284		PKPbc	19 56 58.1	-0.2
PTGA	Pitinga comp=Z,1.5nm,0.5s,baz=297,slow=14,SNR=4.6	151.01	103	PKPbc	PKiKP	19 57 11.4	+0.3
PTGA	Pitinga	151.01	103		PKiKP	19 57 11.2	+0.1

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*NEIC **06** 19:40:06.4±2.0, 6°.8S±0°.1×148°.8E±0°.1, h75^{km}±11^{km}, mb4.0/11, Error ellipse: s-maj=25.2km s-min=10.7km az=137.0*
*IDC **06** 19:40:08.8±4.8, 6°.86S×148°.75E, h94^{km}±37^{km}, mb3.6/3,*

mb1 3.7/5, mb1mx3.3/43, mbtmp3.8/5, MS3.7/1, Ms1 3.7/1, ms1mx2.8/24, Error ellipse: s-maj=88.8km s-min=32.3km az=112.0

ISC 06 19:40:08.6±0.8**, 6°.9S**±0°.1×**148°.8E**±0°.1**, h100^{km}, n20,** σ**1^{s}50**/19**, mb3.7**/3**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**2.95**	**213**	P	**Pn**	**19 40 54.1**	**+0.4**
	13nm,0.3s,baz=33,slow=14,SNR=7.4						
PMG				S	**Sn**	**19 41 29.8**	**+1.4**
	4.1nm,0.3s,baz=36,slow=19,SNR=2.2						
PMG	**Port Moresby**	**2.95**	**213**		**Pn**	**19 40 53.7**	**0.0**
RABL	**Rabaul**	**4.32**	**51**	Pn	**Pn**	**19 41 09.7**	**-2.5**
COEN	**Coen**	**8.90**	**218**	Pn	**Pn**	**19 42 12.4**	**-2.1**
MTN	**Manton Dam**	**18.35**	**250**	P	**P**	**19 44 13.5**	**-1.9**
MTN				IAmb	IAmb	19 44 48.7	
	comp=Z,19nm,1.3s						
WB0	**Warramunga Arr**	**18.93**	**226**	P	**P**	**19 44 21.7**	**-0.1**
WB0				IAmb	IAmb	19 44 27.6	
	comp=Z,9.2nm,1.5s						
WR0	**Warramunga Arr**	**18.95**	**225**	P	**P**	**19 44 21.6**	**-0.4**
WRAB	**Tennant Creek**	**19.07**	**226**	P	**Pn**	**19 44 23.5**	**-1.6**
WRAB				IAmb	IAmb	19 45 00.5	
	comp=Z,12nm,1.6s						
WB2	**Warramunga Arr**	**19.07**	**226**	P	**Pn**	**19 44 23.6**	**-1.6**
WB2				IAmb	IAmb	19 44 42.3	
	comp=Z,7.0nm,1.2s						
WRA	**Warramunga Arr**	**19.08**	**226**	P	**Pn**	**19 44 24.0**	**-1.3**
	comp=Z,0.3nm,0.3s,baz=52,slow=11,SNR=5.6						
SANVU	**Saraoutou**	**19.95**	**117**	P	**P**	**19 44 32.0**	**-0.9**
SANVU				IAmb	IAmb	19 44 59.8	
	comp=Z,27nm,1.4s						
AS31	**Alice Springs**	**21.94**	**219**	P	**P**	**19 44 56.3**	**+2.1**
ASAR	**Alice Springs**	**21.95**	**219**	P	**P**	**19 44 56.2**	**+2.0**
	comp=Z,2.5nm,0.6s,baz=52,slow=9.1,SNR=9.2						
ASAR	**Alice Springs**	**21.95**	**219**	P	**P**	**19 44 56.0**	**+1.7**
BATI	**Baumata**	**25.04**	**261**	LR	LR	19 56 20.2	
	comp=Z,167nm,19.2s,baz=103,slow=39						
FITZ	**Fitzroy Crossi**	**25.14**	**242**	P	**P**	**19 45 24.9**	**+0.3**
	comp=Z,3.7nm,0.3s,baz=56,slow=6.5,SNR=15						
KNTN	**Kanton**	**39.56**	**86**	P	**P**	**19 47 31.0**	**+0.6**
SONM	**Songino Array**	**66.06**	**330**	P	**P**	**19 50 45.5**	**+0.5**
	comp=Z,0.2nm,0.7s,baz=145,slow=5.3,SNR=2.2						
SONM	**Songino Array**	**66.06**	**330**	IAmb	IAmb	19 50 45.9	
	comp=Z,0.7nm,1.2s						
KTH	**Kantishna Hill**	**83.49**	**23**	P	**P**	**19 52 25.5**	**+0.5**

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*IDC **06** 19:45:58.3±6.9, 52°.08N×172°.43E, h0^{km}, mb3.6/5, mb1 3.9/5, mb1mx3.4/52, mbtmp3.7/5, Error ellipse: s-maj=133.0km s-min=78.7km az=85.0*

*NEIC **06** 19:46:05.1±2.3, 52°.4N±0°.3×172°.8E±0°.1, h34^{km}±11^{km}, mb4.3/23, Error ellipse: s-maj=36.2km s-min=10.2km az=178.0*

ISC 06 19:46:05.1±1.2**, 52°.4N**±0°.2×**172°.76E**±0°.09**, h35^{km}, n40,** σ**1^{s}14**/34**, mb4.4**/13**, Near Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMY	**Shemya**	**0.90**	**65**		**Pn**	**19 46 20.9**	**-0.3**
SMY				Sn	**Sn**	**19 46 31.0**	**-2.1**
AMKA	**Amchitka**	**4.17**	**101**	Pn	**Pn**	**19 47 05.6**	**-0.6**
ADK	**Adak**	**6.52**	**90**	Pn	**Pn**	**19 47 38.6**	**+0.2**
PEA0B	**Petropavlovsk-**	**9.17**	**281**	Pn	**Pn**	**19 48 13.4**	**-1.4**
PETK	**Petropavlovsk-**	**9.17**	**281**	Pn	**Pn**	**19 48 14.5**	**-0.3**
TTA	**Tatalina**	**19.57**	**45**	P	**Pn**	**19 50 31.1**	**-0.1**
OHAK	**Old Harbor**	**20.04**	**62**		**P**	**19 50 34.3**	**-0.4**
KDAK	**Kodiak Island**	**20.42**	**61**	P	**P**	**19 50 39.0**	**+0.2**
	8.5nm,0.8s,baz=274,slow=5.7,SNR=8.8						
KDAK	**Kodiak Island**	**20.42**	**61**	IAmb	IAmb	19 50 54.8	
	comp=Z,14nm,1.1s						
CNPM	**China Poot**	**21.19**	**56**	P	**P**	**19 50 47.1**	**-0.1**
PPLA	**Purkeypile**	**21.24**	**47**	P	**P**	**19 50 46.2**	**-1.7**
PPLA				IAmb	IAmb	19 51 18.4	
	comp=Z,25nm,1.5s						
BRLK	**Bradley Lake**	**21.38**	**55**	P	**P**	**19 50 48.2**	**-1.1**
IMAR	**Indian Mountai**	**21.57**	**38**	P	**P**	**19 50 51.7**	**+0.5**
KTH	**Kantishna Hill**	**21.95**	**45**	P	**P**	**19 50 57.8**	**+2.3**
KTH				IAmb	IAmb	19 51 20.4	
	comp=Z,21nm,1.4s						
KNK	**Knik Glacier**	**22.72**	**51**	P	**P**	**19 51 04.2**	**+0.7**
KNK				IAmb	IAmb	19 51 14.5	
	comp=Z,28nm,1.4s						
SML	**Sawmill**	**22.82**	**50**	P	**P**	**19 51 05.3**	**+0.6**
SML				IAmb	IAmb	19 51 39.5	
	comp=Z,29nm,1.4s						
SCM	**Sheep Creek Mo**	**23.30**	**50**	P	**P**	**19 51 08.7**	**-0.9**
WRH	**Wood River Hil**	**23.38**	**44**	P	**P**	**19 51 09.1**	**-1.1**
WRH				IAmb	IAmb	19 51 24.3	
	comp=Z,7.1nm,1.2s						
MDM	**Murphy Dome**	**23.43**	**42**	P	**P**	**19 51 11.2**	**+0.5**
CCB	**Clear Creek Bu**	**23.54**	**43**	P	**P**	**19 51 10.9**	**-0.8**
Q23K	**Middleton Isla**	**23.68**	**56**	P	**P**	**19 51 12.2**	**-0.8**
MID	**Middleton Isla**	**23.68**	**56**	P	**P**	**19 51 12.2**	**-0.9**
POKR	**Poker Plat Res**	**23.80**	**42**	P	**P**	**19 51 15.6**	**+1.4**
IL31		**23.95**	**43**	P	**P**	**19 51 14.4**	**-1.2**
ILAR	**Eielson Array**	**23.95**	**43**	P	**P**	**19 51 15.2**	**-0.4**
	comp=Z,0.8nm,0.7s,baz=248,slow=7.8,SNR=7.9						
N25K	**Chitina, Valde**	**24.58**	**51**	P	**P**	**19 51 22.6**	**+1.1**
N25K				IAmb	IAmb	19 51 33.7	
	comp=Z,15nm,1.4s						
GLB	**Gilahina Butte**	**24.95**	**52**	P	**P**	**19 51 25.4**	**+0.6**
GLB				IAmb	IAmb	19 51 39.5	
	comp=Z,24nm,1.4s						
BARN	**Barnard Glacie**	**25.99**	**52**	P	**P**	**19 51 34.3**	**-0.1**
BARN				IAmb	IAmb	19 51 39.9	
	comp=Z,25nm,1.5s						
CTGM	**Chitina Glacie**	**26.15**	**53**	P	**P**	**19 51 37.2**	**+1.4**
DAWY	**Dawson**	**27.09**	**46**	P	**P**	**19 51 43.9**	**-0.2**
DAWY				IAmb	IAmb	19 52 21.2	
	comp=Z,8.9nm,1.4s						
INK	**Inuvik**	**29.76**	**37**	P	**P**	**19 52 10.7**	**+2.9**
	comp=Z,1.0nm,0.7s,baz=241,slow=10,SNR=1.7						
INK	**Inuvik**	**29.76**	**37**	P	**P**	**19 52 07.5**	**-0.3**
INK				IAmb	IAmb	19 52 30.5	
	comp=Z,3.0nm,1.1s						
H11N2	**WAKE ISLAND Hy**	**32.88**	**190**	T	T	20 27 48.0	
	baz=6.3,slow=76,SNR=20						
H11N3	**WAKE ISLAND Hy**	**32.89**	**190**	T	T	20 27 55.3	
	baz=6.3,slow=76,SNR=16						
H11N1	**WAKE ISLAND Hy**	**32.89**	**190**	T	T	20 27 47.2	
	baz=6.3,slow=76,SNR=18						
H11S1	**WAKE ISLAND Hy**	**34.10**	**190**	T	T	20 29 32.2	
	baz=6.2,slow=76,SNR=34						
H11S3	**WAKE ISLAND Hy**	**34.12**	**190**	T	T	20 29 37.9	
	baz=6.2,slow=76,SNR=25						
H11S2	**WAKE ISLAND Hy**	**34.12**	**190**	T	T	20 29 30.2	
	baz=6.2,slow=76,SNR=15						
YKA	**Yellowknife Ar**	**38.33**	**46**	P	**P**	**19 53 23.5**	**+1.5**
	comp=Z,0.2nm,0.4s,baz=294,slow=7.5,SNR=3.6						
TXAR	**Lajitas Array**	**63.59**	**76**	P	**P**	**19 56 32.8**	**+0.5**
	comp=Z,0.3nm,0.4s,baz=301,slow=5.8,SNR=4.7						

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*IDC **06** 19:50:60.0±1.2, 4°.12S×128°.53E, h0^{km}, mb3.6/3, mb1 3.8/5, mb1mx3.5/38, mbtmp3.6/5, ML3.4/2, Error ellipse: s-maj=42.3km s-min=24.5km az=69.0*

*DJA **06** 19:51:02.7±0.7, 4°S±7°×12°9E±°, h10^{km}, M3.5/7, MLv3.5/7*

ISC 06 19:51:04.5±0.9**, 4°.06S**±0°.07×**128°.70E**±0°.07**, h35^{km}, n10,** σ**1^{s}34**/13**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	**Masohi**	**0.74**	**18**	P	**Pn**	**19 51 16.3**	**-2.2**
MSAI				S	**Sn**	**19 51 27.9**	**-0.7**
BNDI	**Bandanaira**	**1.29**	**111**	P	**Pn**	**19 51 25.5**	**-0.5**
SANI	**Sanana**	**3.36**	**306**	P	**Pn**	**19 51 55.2**	**+0.7**
FAKI	**Fak Fak**	**3.72**	**72**	P	**Pn**	**19 52 00.6**	**+1.1**
SIJI	**Sorong**	**4.08**	**39**	Pn	**Pn**	**19 52 05.8**	**+1.5**
	4.0nm,0.3s,baz=73,slow=5.8,SNR=21						
SIJI				Sn	**Sn**	**19 52 51.0**	**+0.1**
	3.4nm,0.3s,baz=210,slow=23,SNR=9.2						
SWI	**Sorong**	**4.08**	**39**	P	**Pn**	**19 52 05.3**	**+0.9**
WRA	**Warramunga Arr**	**16.72**	**161**	Pn	**Pn**	**19 54 54.0**	**-2.2**
	0.1nm,0.3s,baz=343,slow=12,SNR=12						
ASAR	**Alice Springs**	**20.13**	**166**	P	**P**	**19 55 36.6**	**+1.0**
	3.0nm,0.6s,baz=346,slow=11,SNR=69						
ASAR				PcP	**PcP**	**19 59 50.6**	**+0.6**
	0.2nm,0.5s,baz=3.1,slow=1.8,SNR=6.0						
CMAR	**Chiang Mai Arr**	**36.88**	**308**	P	**P**	**19 58 09.2**	**-0.7**
	0.3nm,0.4s,baz=106,slow=6.7,SNR=4.5						
MKAR	**Makanchi Array**	**65.07**	**327**	P	**P**	**20 01 42.5**	**+1.0**
	0.3nm,0.5s,baz=127,slow=7.7,SNR=5.3						

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*IDC **06** 20:35:19.8±1.5, 0°.73N×121°.90E, h0^{km}, mb3.4/3, mb1 3.7/4, mb1mx3.3/34, mbtmp3.5/4, ML3.6/1, Error ellipse: s-maj=132.2km s-min=23.1km az=63.0*

*DJA **06** 20:35:33.1±0.5, 1°N±7°×12°2E±°, h55^{km}±8^{km}, M3.6/7, MLv3.6/7*

ISC 06 20:35:31.2±1.1**, 0°.6N**±0°.1×**121°.59E**±0°.07**, h113^{km}, n10,** σ**2^{s}40**/11**, mb3.1**/3**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRSI	**Marisa**	**0.36**	**103**	P	**Pn**	**20 35 44.7**	**-2.9**
MRSI				S	**Sn**	**20 35 55.1**	**-4.8**
GTOI	**Gorontalo**	**1.43**	**87**	P	**Pn**	**20 35 55.8**	**-1.5**
APSI	**Ampana**	**1.46**	**178**	P	**Pn**	**20 35 56.7**	**-1.1**
MPSI	**Mapaga**	**1.70**	**262**	P	**Pn**	**20 36 00.0**	**-0.6**
LUWI	**Luwuk**	**1.99**	**143**	P	**Pn**	**20 36 04.7**	**+0.5**
KMSI	**Cibinong**	**2.40**	**90**	P	**Pn**	**20 36 11.0**	**+1.6**
FITZ	**Fitzroy Crossi**	**18.97**	**168**	P	**P**	**20 39 45.0**	**+1.1**
	0.1nm,0.3s,baz=10,slow=11,SNR=6.2						
WRA	**Warramunga Arr**	**23.91**	**149**	P	**P**	**20 40 35.5**	**+0.7**
	1.4nm,0.4s,baz=326,slow=10,SNR=47						
ASAR	**Alice Springs**	**26.89**	**154**	P	**P**	**20 41 02.4**	**+0.6**
	0.3nm,0.5s,baz=340,slow=14,SNR=6.5						
MKAR	**Makanchi Array**	**57.40**	**329**	P	**P**	**20 45 10.3**	**+2.3**
	0.1nm,0.5s,baz=127,slow=8.3,SNR=3.2						

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*NEIC **06** 20:53:20.9±1.7, 6°.5S±0°.1×148°.3E±0°.1, h56^{km}±15^{km}, mb4.0/10, Error ellipse: s-maj=23.8km s-min=2.5km az=132.0*

*IDC **06** 20:53:29.2±6.2, 7°.21S×148°.40E, h101^{km}±46^{km}, mb3.7/2, mb1 3.6/4, mb1mx3.1/46, mbtmp3.8/4, Error ellipse: s-maj=89.5km s-min=59.5km az=131.0*

ISC 06 20:53:19.8±0.8**, 6°.47S**±0°.10×**148°.3E**±0°.1**, h46^{km}, n18,** σ**1^{s}35**/21**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.14**	**202**	P	**Pn**	**20 54 08.6**	**+1.7**
	7.3nm,0.3s,baz=36,slow=8.1,SNR=13						
PMG				S	**Sn**	**20 54 44.6**	**+1.4**
	2.4nm,0.3s,baz=12,slow=19,SNR=3.3						
PMG	**Port Moresby**	**3.14**	**202**		**Pn**	**20 54 08.8**	**+2.0**
PMG				Sn	**Sn**	**20 54 43.5**	**+0.4**
RABL	**Rabaul**	**4.43**	**59**	Pn	**Pn**	**20 54 25.1**	**+0.5**
RABL				Sn	**Sn**	**20 55 17.4**	**+2.5**
COEN	**Coen**	**9.01**	**214**	Pn	**Pn**	**20 55 27.5**	**+0.1**
FAKI	**Fak Fak**	**16.42**	**282**	Pn	**Pn**	**20 57 07.2**	**0.0**
WB0	**Warramunga Arr**	**18.93**	**224**	P	**P**	**20 57 37.1**	**+0.1**
WB0				IAmb	IAmb	20 58 08.5	
	comp=Z,9.5nm,1.6s						
WR0	**Warramunga Arr**	**18.96**	**224**	P	**P**	**20 57 36.2**	**-1.2**
EIDS	**Eidsvold**	**18.98**	**172**	P	**P**	**20 57 34.0**	**-3.5**
EIDS				IAmb	IAmb	20 58 10.2	
	comp=Z,30nm,1.4s						
WRAB	**Tennant Creek**	**19.07**	**224**	P	**P**	**20 57 38.4**	**-0.2**
WRAB				IAmb	IAmb	20 57 45.7	
	comp=Z,16nm,1.6s						
WB2	**Warramunga Arr**	**19.08**	**224**	P	**P**	**20 57 38.4**	**-0.3**
WB2				IAmb	IAmb	20 57 45.8	
	comp=Z,8.5nm,1.4s						
WRA	**Warramunga Arr**	**19.09**	**224**	P	**P**	**20 57 39.0**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=53,slow=11,SNR=15						
WRA	**Warramunga Arr**	**19.09**	**224**	P	**P**	**20 57 37.2**	**-1.5**
AS31	**Alice Springs**	**22.02**	**218**	P	**P**	**20 58 11.1**	**+0.6**
ASAR	**Alice Springs**	**22.02**	**218**	P	**P**	**20 58 11.0**	**+0.4**
	comp=Z,1.9nm,0.6s,baz=53,slow=9.4,SNR=28						
FITZ	**Fitzroy Crossi**	**24.97**	**240**	P	**P**	**20 58 40.0**	**+0.7**
	comp=Z,2.4nm,0.3s,baz=54,slow=8.8,SNR=32						
FITZ	**Fitzroy Crossi**	**24.97**	**240**	P	**P**	**20 58 40.1**	**+0.7**
FITZ				IAmb	IAmb	20 58 41.6	
	comp=Z,3.5nm,0.7s						
TIXI	**Tiksi**	**79.01**	**354**	P	**P**	**21 05 18.6**	**+0.1**
TORD	**Torodi Ar. Bea**	**146.50**	**284**	PKPbc	**PKiKP**	**21 13 00.1**	**0.0**
	comp=Z,0.3nm,0.5s,baz=73,slow=2.8,SNR=2.3						

IDC 06 20:55:39.5±31.0**, 17°.47S**×**175°.70W, h0^{km}, mb4.0**/4**, mb1 4.2**/4**, mb1mx3.8**/38**, mbtmp4.0**/4**, Error ellipse: s-maj=603.7km s-min=152.3km az=84.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**41.10**	**241**	P	P	21 03 26.3	+0.9
	1.8nm,0.8s,baz=107,slow=7.1,SNR=4.5						
WRA	**Warramunga Arr**	**47.25**	**259**	P	P	21 04 14.8	-0.1
	1.1nm,0.4s,baz=98,slow=7.6,SNR=38						
ASAR	**Alice Springs**	**47.39**	**254**	P	P	21 04 15.4	-0.5
	2.3nm,0.6s,baz=90,slow=7.8,SNR=41						
FITZ	**Fitzroy Crossi**	**55.65**	**260**	P	P	21 05 17.2	-0.6
	0.4nm,0.3s,baz=102,slow=6.9,SNR=1.3						

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*IDC **06** 21:01:06.5±0.4, 28°.34N×104°.95E, h0^{km}, mb4.5/38, mb1 4.6/39, mb1mx4.5/55, mbtmp4.5/39, ML4.6/1, MS4.0/30, Ms1 4.0/30, ms1mx3.9/38, Error ellipse: s-maj=12.6km s-min=8.7km az=53.0*

*MOS **06** 21:01:06.8±1.0, 28°.40N×104°.97E, h14^{km}, mb4.9/52, Error ellipse: s-maj=5.8km s-min=3.6km az=119.6*

*BJI **06** 21:01:07.8±0.0, 28°.36N×104°.90E, h7^{km}, mB4.8/34, mb4.6/51, ML4.7/21, Ms4.5/60, Ms7 4.5/59*

*NEIC **06** 21:01:07.8±1.6, 28°.35N±0°.07×104°.89E±0°.08, h10^{km}±1^{km}, mb5.0/128, ML4.8(BJI), Error ellipse: s-maj=12.3km s-min=10.3km az=134.0*

*GCMT **06** 21:01:09.8±0.3, 28°.33N±0°.03×105°.00E±0°.03, h14^{km}±1^{km}, MW4.8/90, Moment Tensor Solution. s16,c16; s90,c119; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.97±.13; $M_{\theta\theta}$-0.69±.08; $M_{\phi\phi}$-1.28±.09; $M_{r\theta}$-0.43±.24; $M_{\theta\phi}$-0.31±.04; $M_{\phi r}$-0.16±.19; Best double couple: $M_0$1.74400×10^{16} NP1:ϕ_s18.00000°, δ40.00000°, λ79.00000°. NP2: ϕ_s212.00000°, δ51.00000°, λ99.00000°. Principal axes: T 2.0420, Plg81.0000°, Azm167.0000°; N -0.5970, Plg7.0000°, Azm26.0000°; P -1.4460, Plg6.0000°, Azm295.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 06 21:01:08.2±0.8**, 28°.38N**±0°.03×**104°.97E**±0°.03**, h10^{km}**±4^{km}**, n541,** σ**1^{s}49**/569**, mb4.9**/175**, MS4.1**/39**, 33C-5D, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GYA	**Guiyang**	**2.43**	**141**	*e*Pg	**Pb**	**21 01 50.5**	**-1.7**
GYA				Sg	**Sb**	**21 02 22.6**	**+0.3**
GYA				smax	smax		
	comp=N,4µm,1.5s						
GYA				smax	smax		
	comp=E,4µm,1.4s						
CD2	**Chengdu**	**2.73**	**338**	Pn	**Pn**	**21 01 53.9**	**+1.7**
CD2				Pg	**Pg**	**21 02 01.3**	**+0.7**
CD2				Sn	**Sb**	**21 02 28.0**	**-2.8**
CD2				Sg	**Sg**	**21 02 38.7**	**+2.6**
CD2				smax	smax		
	comp=N,7µm,0.7s						
CD2				smax	smax		
	comp=E,9µm,0.6s						
KMI	**Kunming**	**3.81**	**212**	⇓Pn	**Pn**	**21 02 09.0**	**+1.8**
KMI				Sn	**Sn**	**21 02 53.2**	**+1.1**
KMI				Sg	**Sg**	**21 03 10.8**	**+0.2**
KMI				smax	smax		
	comp=N,620nm,1.2s						
KMI				smax	smax		
	comp=E,370nm,1.1s						
KMI				LR	LR		
	comp=E,5µm,8.2s						
KMI				LR	LR		
	comp=Z,5µm,10.2s						
KMI	**Kunming**	**3.81**	**212**	P	**Pn**	**21 02 08.8**	**+1.6**
KMI	**Kunming**	**3.81**	**212**	Pn	**Pn**	**21 02 08.8**	**+1.6**
ENH	**Enshi**	**4.37**	**63**	Pn	**Pn**	**21 02 17.5**	**+2.8**
XAN	**Xi'an**	**6.58**	**30**	Pn	**Pn**	**21 02 46.7**	**+1.7**
XAN				Sn	**Sn**	**21 04 00.0**	**-0.1**
XAN				Sg	**Sg**	**21 04 38.0**	**-1.3**
XAN				smax	smax		
	comp=N,2µm,1.3s						
XAN				smax	smax		
	comp=E,2µm,1.2s						
XAN				LR	LR		
	comp=N,6µm,9.9s						
XAN				LR	LR		
	comp=E,5µm,11.0s						
XAN				LR	LR		
	comp=Z,4µm,14.9s						
SLVN	**Son La**	**7.08**	**188**		**Pn**	**21 02 52.5**	**+0.4**
LZH	**Lanzhou**	**7.74**	**353**	*e*Pn	**Pn**	**21 03 02.4**	**+1.3**
LZH				*e*Sn	Sn	21 04 40.2	+11
LZH				smax	smax		
	comp=N,130nm,1.0s						
LZH				smax	smax		
	comp=E,260nm,1.1s						
LZH				LR	LR		
	comp=N,3µm,4.6s						
LZH				LR	LR		
	comp=E,3µm,6.2s						
LZH				LR	LR		
	comp=Z,3µm,8.7s						
GZH	**Guangzhou**	**9.20**	**123**	P	**Pn**	**21 03 19.7**	**-1.3**
GZH				S	**Sn**	**21 05 03.1**	**-1.6**
QIZ	**Qiongzhong**	**10.32**	**153**	P	**Pn**	**21 03 38.2**	**+1.8**
QIZ				S	**Sn**	**21 05 33.1**	**+0.9**
QIZ				pmax	pmax		
	comp=Z,35nm,1.8s						
QIZ				LR	LR		
	comp=N,2µm,11.6s						
QIZ				LR	LR		
	comp=Z,3µm,10.4s						
CM34	**Chiang Mai Arr**	**10.88**	**211**	P	**Pn**	**21 03 47.0**	**+2.9**
LAMP	**Lampang**	**10.97**	**208**	P	Pn	21 03 50.5	+5.2
	291nm39nm,0.8s						
CM33	**Chiang Mai Arr**	**11.00**	**211**	P	**Pn**	**21 03 49.0**	**+3.2**
CHTO	**Chiang Mai**	**11.01**	**211**	P	**Pn**	**21 03 47.1**	**+1.3**
CHTO	**Chiang Mai**	**11.01**	**211**		**Pn**	**21 03 47.1**	**+1.3**
CM35	**Chiang Mai Arr**	**11.03**	**210**	P	**Pn**	**21 03 50.0**	**+3.9**
CM32	**Chiang Mai Arr**	**11.19**	**211**	P	**Pn**	**21 03 52.0**	**+3.7**
CM36	**Chiang Mai Arr**	**11.20**	**210**	P	**Pn**	**21 03 52.0**	**+3.6**
CM09	**Chiang Mai Arr**	**11.31**	**210**	P	**Pn**	**21 03 53.8**	**+3.8**
	527nm73nm,1.1s						
CM31	**Chiang Mai Arr**	**11.32**	**211**	P	**Pn**	**21 03 53.7**	**+3.6**
	11µm1µm,1.0s						
CM31	**Chiang Mai Arr**	**11.32**	**211**		**Pn**	**21 03 52.1**	**+2.1**
CMAR	**Chiang Mai Arr**	**11.32**	**211**	Pn	**Pn**	**21 03 54.0**	**+3.9**
	0.8nm,0.3s,baz=19,slow=11,SNR=118						
CMAR				LR	LR	21 08 37.0	
	comp=Z,1µm,19.1s,baz=72,slow=40						
CMAR	**Chiang Mai Arr**	**11.32**	**211**	*i* P	**Pn**	**21 03 53.7**	**+3.6**
CMAR				pmax	pmax		
	comp=Z,55nm,1.0s						
CMAR	**Chiang Mai Arr**	**11.32**	**211**		**Pn**	**21 03 53.1**	**+3.0**
CM15	**Chiang Mai Arr**	**11.33**	**211**	P	**Pn**	**21 03 53.9**	**+3.6**
	comp=Z,402nmcomp=Z,58nm,1.0s						
CM02	**Chiang Mai Arr**	**11.34**	**210**	P	**Pn**	**21 03 53.0**	**+2.7**
	comp=Z,561nmcomp=Z,82nm,1.0s						
CM01	**Chiang Mai Arr**	**11.35**	**210**	P	**Pn**	**21 03 54.0**	**+3.6**
	comp=Z,492nmcomp=Z,72nm,1.0s						
CM04	**Chiang Mai Arr**	**11.35**	**210**	P	**Pn**	**21 03 54.2**	**+3.6**
	comp=Z,511nmcomp=Z,76nm,1.1s						
CM13	**Chiang Mai Arr**	**11.37**	**211**	P	**Pn**	**21 03 54.2**	**+3.5**
	comp=Z,318nmcomp=Z,48nm,1.0s						
CM05	**Chiang Mai Arr**	**11.37**	**210**	P	**Pn**	**21 03 54.4**	**+3.6**
	comp=Z,360nmcomp=Z,51nm,1.0s						
GTA	**Gaotai**	**11.80**	**340**	P	**Pn**	**21 03 58.3**	**+1.6**
GTA				pP		21 04 02.4	
GTA				sP		21 04 05.5	
GTA				pmax	pmax		
	comp=Z,10.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,120nm,4.4s						
GTA				LR	LR		
	comp=Z,2µm,13.8s						
GTA				LR	LR		
	comp=Z,1µm,11.3s						
GTA				LR	LR		
	comp=Z,3µm,13.8s						
PHIT	**Phitsanulok**	**11.90**	**202**	P	Pn	21 04 03.4	+5.3
	comp=Z,520nmcomp=Z,43nm,1.1s						
SUKH	**Sukhothai**	**11.91**	**206**	P	**Pn**	**21 04 01.8**	**+3.7**
	comp=Z,437nmcomp=Z,50nm,1.0s						
SHL	**Shillong**	**12.01**	**260**	P	**Pn**	**21 03 59.1**	**-0.5**
SHL	**Shillong**	**12.01**	**260**	Pn	**Pn**	**21 03 59.1**	**-0.5**
MHMT	**Maesarieng**	**12.04**	**214**	P	**Pn**	**21 04 03.0**	**+3.1**
	comp=Z,428nmcomp=Z,26nm,1.2s						
LSA	**Lhasa**	**12.17**	**280**	P	**Pn**	**21 04 03.1**	**+1.0**
LSA				pP		21 04 07.4	
LSA				S	**Sn**	**21 06 25.8**	**+7.7**
LSA				pmax	pmax		
	comp=Z,36nm,0.4s						
LSA				LR	LR		
	comp=Z,1µm,7.1s						
LSA				LR	LR		
	comp=Z,5µm,8.5s						
LSA				LR	LR		
	comp=Z,8µm,10.0s						
LSA	**Lhasa**	**12.17**	**280**	P	**Pn**	**21 04 02.4**	**+0.3**
LSA	**Lhasa**	**12.17**	**280**	Pn	**Pn**	**21 04 02.4**	**+0.3**
NJ2	**Nanjing**	**12.55**	**70**	*e*P	**Pn**	**21 04 08.7**	**+1.9**
NJ2				pP		21 04 18.7	
NJ2				sP		21 04 21.9	
NJ2				S	**Sn**	**21 06 27.2**	**+0.5**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,190nm,4.5s						
NJ2				LR	LR		
	comp=Z,3µm,8.5s						
NJ2				LR	LR		
	comp=Z,5µm,9.9s						
NJ2				LR	LR		
	comp=Z,7µm,10.7s						
KNMB	**Chin-men Tao**	**12.64**	**105**	Pn	**Pn**	**21 04 08.3**	**+0.2**
CHAI	**Chaiyaphum**	**12.72**	**193**	P	**Pn**	**21 04 12.8**	**+3.5**
	comp=Z,22nm,1.0s						
BTO	**Baotou**	**12.88**	**17**	*e*P	**Pn**	**21 04 13.3**	**+1.8**
UBPT	**Khong Chiam**	**13.05**	**178**	P	**Pn**	**21 04 17.0**	**+3.3**
	comp=Z,23nm,1.1s						
UBPT	**Khong Chiam**	**13.05**	**178**		**Pn**	**21 04 15.7**	**+2.0**
HHC	**Hu-ho-hao-te**	**13.56**	**22**	*e*P	**Pn**	**21 04 24.4**	**+3.6**
HHC				S	**Sn**	**21 06 57.7**	**+6.1**
HHC				pmax	pmax		
	comp=Z,16nm,1.1s						
HHC				pmax	pmax		
	comp=Z,120nm,5.2s						
HHC				LR	LR		
	comp=Z,950nm,10.5s						
HHC				LR	LR		
	comp=Z,1µm,15.1s						
UTHA	**Uthaitani**	**13.75**	**203**	P	**Pn**	**21 04 27.2**	**+3.9**
	comp=Z,229nmcomp=Z,26nm,1.0s						
SRAK	**Srakaew**	**14.55**	**191**	P	**P**	**21 04 44.1**	**+3.2**
BJT	**Baijiatuau**	**14.84**	**36**	P	**Pn**	**21 04 39.2**	**+1.2**
BJT	**Baijiatuau**	**14.84**	**36**	Pn	**Pn**	**21 04 39.2**	**+1.2**
BJI	**Beijing**	**14.86**	**36**	P	**Pn**	**21 04 39.1**	**+0.8**
BJI				S	**Sn**	**21 07 27.1**	**+4.2**
BJI				pmax	pmax		
	comp=Z,7.0nm,1.8s						
TPUB	**Ta-pu**	**14.97**	**106**	Pn	**Pn**	**21 04 41.2**	**+1.2**
TPUB				IAmb	IAmb	21 04 55.4	
	comp=Z,39nm,1.1s						
SSLB	**Suanglung**	**15.07**	**104**		**Pn**	**21 04 43.4**	**+2.1**
SSLB				IAmb	IAmb	21 04 52.8	
	comp=Z,91nm,1.3s						
PATY	**Pattaya**	**15.85**	**195**	P	**P**	**21 04 57.0**	**+1.7**
	comp=Z,6µmcomp=Z,53nm,1.2s						
PHET	**Kaeng Krachan**	**16.18**	**199**	P	**P**	**21 04 59.0**	**0.0**
	comp=Z,686nmcomp=Z,73nm,1.1s						
RAMN	**Ramite**	**16.34**	**269**	*e*P	**Pn**	**21 04 56.0**	**-2.1**
	comp=Z,67nm,0.6s						
GUN	**Gumba**	**16.85**	**273**	*e*P	**Pn**	**21 05 01.1**	**-3.5**
PKI	**Pulchoki**	**17.30**	**272**	*e*P	**Pn**	**21 05 06.7**	**-3.6**
	comp=Z,158nm,1.1s						
PKIN	**Phulchoki**	**17.31**	**272**	*e*P	**Pn**	**21 05 07.1**	**-3.3**
	comp=Z,38nm,0.4s						
KKN	**Kakani**	**17.39**	**273**	*e*P	**Pn**	**21 05 07.8**	**-3.5**
	comp=Z,219nm,1.2s						
DMN	**Daman**	**17.57**	**272**	*e*P	**Pn**	**21 05 10.1**	**-3.4**
	comp=Z,37nm,0.6s						
GKN	**Gorkha**	**17.93**	**274**	*e*P	**Pn**	**21 05 13.7**	**-4.2**
	comp=Z,25nm,0.5s						
DANN	**Dangsing**	**18.67**	**275**	*e*P	**P**	**21 05 22.8**	**-4.0**
	comp=Z,109nm,0.6s						
SONM	**Songino Array**	**19.45**	**3**	P	**Pn**	**21 05 36.5**	**+0.3**
	comp=Z,1.8nm,0.3s,baz=181,slow=11,SNR=54						
SONM				LR	LR	21 14 03.9	
	comp=Z,636nm,20.3s,baz=183,slow=40						
SONM	**Songino Array**	**19.45**	**3**	P	**Pn**	**21 05 36.1**	**-0.2**
SONM				pmax	pmax		
	comp=Z,8.0nm,0.8s						
SONM	**Songino Array**	**19.45**	**3**	P	**Pn**	**21 05 36.1**	**-0.2**

ULN	Ulaanbaatar	19.52	4	ceP	P	21 05 33.8	-2.0
ULN				pmax	pmax		
	comp=Z,31nm,2.5s						
ULN	Ulaanbaatar	19.52	4	P	P	21 05 35.1	-0.7
PBA	Port Blair	20.19	217	P	P	21 05 40.2	-3.0
INCN	Inchon	20.28	58	P	Pn	21 05 45.3	-0.8
INCN				pmax	pmax		
	comp=Z,45nm,1.2s						
INCN	Inchon	20.28	58	P	Pn	21 05 45.2	-0.8
TJN	Taejon	20.49	61	ceP	P	21 05 46.8	+0.5
JOW	Kunigami	20.70	89	P	P	21 05 49.3	+0.6
	comp=Z,19nm,0.4s,baz=242,slow=7.4,SNR=21						
JOW	Kunigami	20.70	89	P	P	21 05 48.7	0.0
WMQ	Urumqi	20.73	323	eP	P	21 05 48.7	-0.2
WMQ				pP	sP	21 05 54.1	+0.8
WMQ				sP	pP	21 06 04.1	+12
WMQ				S	S	21 09 40.9	+0.6
WMQ				ScP	ScP	21 13 37.2	+2.1
WMQ				pmax	pmax		
	comp=Z,21nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,150nm,3.9s						
WMQ				LR	LR		
	comp=Z,1µm,8.5s						
WMQ				LR	LR		
	comp=Z,1µm,7.5s						
WMQ				LR	LR		
	comp=Z,710nm,23.5s						
WMQ	Urumqi	20.73	323	P	P	21 05 48.6	-0.2
WMQ				pmax	pmax		
	comp=Z,14nm,0.6s						
WMQ	Urumqi	20.73	323	P	P	21 05 48.6	-0.2
TRTT	Trang	21.04	195	P	P	21 05 58.3	+6.0
KSAR	Wonju Array Be	21.21	59	P	P	21 05 54.4	+0.3
KSAR	Wonju Array Be	21.21	59	P	P	21 05 54.4	+0.3
KS19	Wonju Array Si	21.22	59	P	P	21 05 55.5	+1.4
KSRS	Korea Array	21.24	59	P	P	21 05 54.9	+0.5
	comp=Z,14nm,0.6s,baz=243,slow=9.8,SNR=39						
KSRS				LR	LR	21 13 54.9	
	comp=Z,222nm,21.2s,baz=258,slow=36						
ZAK	Zakamensk	22.01	357	eP	P	21 06 03.7	+1.0
ZAK				pmax	pmax		
	comp=Z,34nm,1.2s						
CN2	Changchun	22.51	41	eP	P	21 06 08.6	+0.7
CN2				epP	sP	21 06 16.9	+4.6
CN2				eS	S	21 10 17.6	+2.8
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
CN2				LR	LR		
	comp=Z,460nm,12.0s						
CN2				LR	LR		
	comp=Z,650nm,12.0s						
JNU	Nakatsue	22.73	72	P	P	21 06 11.2	+0.7
	comp=Z,18nm,0.9s,baz=261,slow=4.9,SNR=7.6						
JNU	Nakatsue	22.73	72	P	P	21 06 10.6	+0.1
JNU				IAmb	IAmb	21 06 11.9	
	comp=Z,66nm,1.4s						
TLY	Talaya	23.30	358	P	P	21 06 17.9	+1.8
	comp=Z,2.3nm,0.7s,baz=183,slow=6.5,SNR=8.1						
TLY				LR	LR	21 16 21.6	
	comp=Z,694nm,20.2s,baz=160,slow=39						
TLY	Talaya	23.30	358	eP	P	21 06 17.9	+1.8
TLY				eS	S	21 10 32.2	+3.7
TLY				pmax	pmax		
	comp=Z,31nm,1.8s						
TLY				MLR	MLR		
	comp=Z,2µm,10.0s						
KULM	Kulim	23.33	191	P	P	21 06 16.8	+0.2
KULM				IAmb	IAmb	21 06 19.0	
	comp=Z,56nm,1.2s						
KULM	Kulim	23.33	191	P	P	21 06 18.0	+1.3
MOY	Mondy	23.45	354	eP	P	21 06 19.3	+1.6
MOY				pmax	pmax		
	comp=Z,44nm,2.8s						
HIA	Hailar	23.74	25	P	P	21 06 21.5	+1.0
HIA				pmax	pmax		
	comp=Z,12nm,0.5s						
HIA	Hailar	23.74	25	P	P	21 06 21.5	+1.0
HIA				IAmb	IAmb	21 06 25.1	
	comp=Z,12nm,0.5s						
IPM	Ipoh	24.07	190	P	P	21 06 21.7	-2.2
IPM				IAmb	IAmb	21 06 24.7	
	comp=Z,63nm,1.3s						
IPM	Ipoh	24.07	190	P	P	21 06 24.0	+0.2
CIT	Chita	24.47	13	eP	P	21 06 28.3	+1.0
CIT				e		21 06 58.4	
CIT				pmax	pmax		
	comp=Z,41nm,2.3s						
KKM	Kota Kinabalu	24.64	152	P	P	21 06 28.5	-0.7
ZSN	Zaisan	24.65	326	eP	P	21 06 28.1	-0.9
	baz=326						
ZSN	Zaisan	24.65	326	eP	P	21 06 28.1	-0.9
DGZ	Jazzator, Alta	25.16	333	c iP	P	21 06 34.3	+0.6
DGZ				pmax	pmax		
	comp=Z,27nm,0.9s						
SHLS	Shalkode	25.28	312	eP	P	21 06 31.4	-3.5
	comp=Z,37nm,1.5s,baz=312						
SHLS	Shalkode	25.28	312	eP	P	21 06 31.3	-3.5
SHLS				pmax	pmax		
	comp=Z,37nm,1.5s						
PDGK	Podgornoye	25.34	313	iP	P	21 06 35.5	+0.1
PDGK				pmax	pmax		
	comp=Z,75nm,1.4s						
MDJ	Mudanjiang	25.43	44	P	P	21 06 36.4	+0.3
MDJ				pP	sP	21 06 47.6	+7.0
MDJ				S	S	21 11 02.3	-0.6
MDJ				sS	sS	21 11 17.3	+9.1
MDJ				pmax	pmax		
	comp=Z,7.0nm,2.0s						
MDJ				pmax	pmax		
	comp=Z,130nm,4.4s						
MDJ				LR	LR		
	comp=Z,610nm,13.9s						
MDJ				LR	LR		
	comp=Z,630nm,17.8s						
MDJ				LR	LR		
	comp=Z,1µm,17.5s						
TSI	Tuntungan	25.48	195	P	P	21 06 37.6	+0.9
	comp=Z,275nm,1.2s						
MK31	Makanchi Array	25.56	322	ceP	P	21 06 36.9	-0.3
MK31	Makanchi Array	25.56	322	P	P	21 06 37.6	+0.4
MK31				IAmb	IAmb	21 06 40.7	
	comp=Z,30nm,1.1s						
MKAR	Makanchi Array	25.56	322	P	P	21 06 37.3	+0.1
	comp=Z,17nm,0.9s,baz=122,slow=9.1,SNR=46						
MKAR				PcP	PcP	21 10 08.0	-0.3
	comp=Z,4.7nm,1.1s,baz=123,slow=4.5,SNR=3.9						
MKAR				ScP	ScP	21 13 46.9	-0.9
	comp=Z,0.6nm,0.9s,baz=103,slow=4.2,SNR=3.2						
MKAR				LR	LR	21 18 21.9	
	comp=Z,373nm,19.5s,baz=123,slow=40						
UZB	Uzynbulak	25.57	312	eP	P	21 06 36.8	-0.7
	comp=Z,26nm,1.4s,baz=312						
UZB	Uzynbulak	25.57	312	eP	P	21 06 36.8	-0.7
UZB				pmax	pmax		
	comp=Z,26nm,1.4s						
MAKZ	Makanchi	25.74	322	P	P	21 06 38.7	-0.1
MAKZ				pmax	pmax		
	comp=Z,42nm,1.2s						
MAKZ	Makanchi	25.74	322	P	P	21 06 38.7	-0.1
MAKZ				IAmb	IAmb	21 06 42.5	
	comp=Z,42nm,1.2s						
KPKS	Kokpek	25.93	312	eP	P	21 06 39.5	-1.2
	comp=Z,26nm,1.5s,baz=312						
KPKS	Kokpek	25.93	312	eP	P	21 06 39.5	-1.2
KPKS				pmax	pmax		
	comp=Z,26nm,1.5s						
SATY	Saty	25.93	311	eP	P	21 06 40.1	-0.7
	comp=Z,19nm,1.6s,baz=311						
SATY	Saty	25.93	311	eP	P	21 06 40.1	-0.7
SATY				pmax	pmax		
	comp=Z,19nm,1.6s						
TPTI		26.06	198	P	P	21 06 42.8	+0.9
	comp=Z,38nm,1.4s						
PSI	Prapat	26.08	194	P	P	21 06 41.9	-0.4
	comp=Z,29nm,1.1s,baz=360,slow=4.7,SNR=10.0						
PSI				LR	LR	21 17 34.7	
	comp=Z,258nm,20.2s,baz=78,slow=38						
RPSI	Rantau Prapat	26.19	194	IAmb	IAmb	21 06 45.7	
	comp=Z,34nm,1.1s						
KSH	Kashi	26.39	302	P	P	21 06 47.6	+2.7
KSH				pP	sP	21 06 54.9	+5.4
KSH				S	S	21 11 19.3	+1.0
KSH				pmax	pmax		
	comp=Z,17nm,1.0s						
KSH				pmax	pmax		
	comp=Z,110nm,2.7s						
KSH				LR	LR		
	comp=Z,300nm,7.0s						
KSH				LR	LR		
	comp=Z,320nm,7.8s						
KSH				LR	LR		
	comp=Z,580nm,15.1s						
MYLDM	Lahad Datu	26.41	148	P	P	21 06 46.2	+1.1
JWT	Wachi	26.68	67	P	P	21 06 48.8	+1.3
SBUM	Sibu	26.70	164	P	P	21 06 46.9	-0.8
SBUM				IAmb	IAmb	21 06 50.4	
	comp=Z,74nm,1.5s						
SBUM	Sibu	26.70	164	P	P	21 06 50.0	+2.3
USA0B	Ussuriysk Arra	26.73	47	P	P	21 06 47.1	-0.7
USA0B				pmax	pmax		
	comp=Z,14nm,0.9s						
USA0B	Ussuriysk Arra	26.73	47	P	P	21 06 47.0	-0.7
USRK	Ussuriysk Ar.	26.73	47	P	P	21 06 48.3	+0.5
	comp=Z,9.5nm,0.7s,baz=263,slow=5.9,SNR=7.1						
USRK				LR	LR	21 18 34.4	
	comp=Z,200nm,20.3s,baz=218,slow=39						
USRK	Ussuriysk Ar.	26.73	47	P	P	21 06 47.7	-0.1
USRK	Ussuriysk Ar.	26.73	47	P	P	21 06 47.7	-0.1
TDK	Taldyqorghan	26.83	315	eP	P	21 06 48.5	-0.3
	comp=Z,15nm,0.7s,baz=315						
TDK	Taldyqorghan	26.83	315	eP	P	21 06 48.4	-0.3
TDK				pmax	pmax		
	comp=Z,15nm,0.7s						
MDOK	Medeo	26.88	311	eP	P	21 06 48.4	-0.9
	baz=310						
MDOK	Medeo	26.88	311	eP	P	21 06 48.4	-0.9
TNSS	Tian-Shan	26.89	310	eP	P	21 06 50.4	+0.6
	baz=310						
TNSS	Tian-Shan	26.89	310	eP	P	21 06 50.3	+0.6
AAA	Alma-Ata	26.99	311	eP	P	21 06 50.5	+0.3
	baz=310						
AAA	Alma-Ata	26.99	311	eP	P	21 06 50.5	+0.3
CHKK	Chushkaly	27.21	312	eP	P	21 06 51.8	-0.4
	baz=312						
CHKK	Chushkaly	27.21	312	eP	P	21 06 51.7	-0.4
NIL	Nilore	27.62	289	P	P	21 06 56.1	+0.1
NIL				pmax	pmax		
	comp=Z,9.0nm,0.8s						
NIL	Nilore	27.62	289	P	P	21 06 56.1	+0.1
KUU	Kurty	27.65	312	eP	P	21 06 54.7	-1.4
	baz=311						
KUU	Kurty	27.65	312	eP	P	21 06 54.7	-1.4
TKM2	Tokmak 2	27.76	309	iP	P	21 07 02.3	+4.9
TKM2				pmax	pmax		
	comp=Z,4.0nm,1.4s						
JGF	Kuroka	28.30	67	P	P	21 07 01.2	-0.9
JGF				IAmb	IAmb	21 07 20.4	
	comp=Z,17nm,0.9s						
AAK	Ala-Archa	28.42	308	P	P	21 07 03.7	+0.5
	comp=Z,0.9nm,0.4s,baz=138,slow=8.0,SNR=8.7						
AAK				LR	LR	21 20 56.5	
	comp=Z,393nm,21.7s,baz=82,slow=42						
AAK	Ala-Archa	28.42	308	ceP	P	21 07 02.7	-0.5
AAK				pmax	pmax		
	comp=Z,38nm,2.5s						
AAK	Ala-Archa	28.42	308	P	P	21 07 02.0	-1.1
SEM	Semipalatinsk	28.89	326	eP	P	21 07 05.4	-2.0
	baz=326						
SEM	Semipalatinsk	28.89	326	eP	P	21 07 05.3	-2.0
KLR	Kul'dur	29.22	37	P	P	21 07 09.8	-0.1
	comp=Z,1.8nm,0.8s,baz=257,slow=9.4,SNR=10.0						
KLR				LR	LR	21 20 23.4	
	comp=Z,556nm,18.6s,baz=230,slow=40						
KLR	Kul'dur	29.22	37	ceP	P	21 07 09.0	-1.0
KLR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
SDSI	Sungai Dareh	29.34	187	P	P	21 07 11.6	+0.3
	comp=Z,7.7nm,1.2s						
ZAA0	Zalesovo Array	29.50	336	P	P	21 07 11.3	-1.1
ZALV	Zalesovo Beam	29.50	336	P	P	21 07 12.5	+0.1
	comp=Z,5.2nm,0.6s,baz=139,slow=9.2,SNR=21						
ZALV				LR	LR	21 19 54.1	
	comp=Z,506nm,21.6s,baz=134,slow=38						
ZALV	Zalesovo Beam	29.50	336	P	P	21 07 12.0	-0.4
ZALV	Zalesovo Beam	29.50	336	P	P	21 07 12.0	-0.4
BTLS	Baital	29.62	312	eP	P	21 07 12.9	-0.7
	baz=312						
BTLS	Baital	29.62	312	eP	P	21 07 12.9	-0.7
KURBB	Kurchatov Arra	29.88	325	P	P	21 07 16.1	+0.3
	comp=Z,6.3nm,0.8s,baz=133,slow=9.5,SNR=49						
KURBB				PcP	PcP	21 10 18.3	-0.3
	comp=Z,2.4nm,0.8s,baz=116,slow=2.1,SNR=7.0						
KURK	Kurchatov	29.89	326	ceP	P	21 07 16.6	+0.7
KURK				pmax	pmax		
	comp=Z,25nm,1.3s						
KURK	Kurchatov	29.89	326	P	P	21 07 16.0	+0.1
KURK				IAmb	IAmb	21 07 21.7	
	comp=Z,12nm,0.7s						
BOD	Bodaibo	30.10	10	eP	P	21 07 18.5	+0.8
BOD				pmax	pmax		
	comp=Z,9.0nm,1.5s						
ZEA	Zeya	30.14	27	eP	P	21 07 19.2	+1.1
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.3s						
ZEA				MLR	MLR		
	comp=Z,400nm,15.0s						
JHJ	Hachijo jima 2	30.20	72	LR	LR	21 20 22.3	
	comp=Z,254nm,18.6s,baz=280,slow=38						
DZA	Taraz	30.71	307	eP	P	21 07 22.5	-0.9
	baz=307						
DZA	Taraz	30.71	307	eP	P	21 07 22.4	-0.9
TOLI2	Tolitoli	31.05	148	P	P	21 07 25.9	-0.5
TOLI2				IAmb	IAmb	21 07 32.9	
	comp=Z,13nm,0.9s						
PALK	Pallekele	31.09	232	P	P	21 07 27.1	+0.2
	comp=Z,9.5nm,0.8s,baz=144,slow=9.7,SNR=6.7						
PALK				LR	LR	21 21 16.7	
	comp=Z,118nm,18.4s,baz=145,slow=39						
KBL	Kabul	31.14	291	P	P	21 07 26.9	-0.6
KBL				pmax	pmax		
	comp=Z,10.0nm,1.2s						
KBL	Kabul	31.14	291	P	P	21 07 26.9	-0.6
KK31	Karatay Array	31.34	307	P	P	21 07 28.5	-0.4
KK31				pmax	pmax		
	comp=Z,10.0nm,1.4s						
KK31	Karatay Array	31.34	307	P	P	21 07 28.5	-0.4
KKAR	Karatay Array	31.34	307	P	P	21 07 28.6	-0.3
KKAR						21 07 29.5	
KKAR				pmax	pmax		
	comp=Z,10.0nm,1.4s						
KKAR	Karatay Array	31.34	307	P	P	21 07 29.5	+0.6
KKAR	Karatay Array	31.34	307	P	P	21 07 28.6	-0.3
KKAR				IAmb	IAmb	21 07 32.1	
	comp=Z,10.0nm,1.4s						
IUG	Iuzhnay	31.43	305	eP	P	21 07 29.1	-0.7
	baz=305						
IUG	Iuzhnay	31.43	305	eP	P	21 07 29.1	-0.7
LHSI	Lahat	32.05	183	P	P	21 07 36.5	+1.3
	comp=Z,32nm,0.9s						
MRSI	Marisa	32.15	147	P	P	21 07 37.2	+1.1
	comp=Z,24nm,0.9s						
GTOI	Gorontalo	32.54	145	P	P	21 07 39.1	-0.5
	comp=Z,26nm,1.2s						
MNAI	Manna	32.61	184	P	P	21 07 38.5	-1.6
BRZS	Berezniki	32.65	320	eP	P	21 07 40.3	0.0
	baz=320						
BRZS	Berezniki	32.65	320	eP	P	21 07 40.3	0.0
KLSI		32.88	180	P	P	21 07 44.2	+1.7
KMSI	Cibinong	33.09	143	P	P	21 07 45.8	+1.4
	comp=Z,37nm,0.8s						
TTSI	Tana Toraja	34.35	153	P	P	21 07 56.8	+1.5
	comp=Z,21nm,1.4s						
YSS	Yuzh-Sakhalins	34.76	47	eP	P	21 07 56.3	-2.3
YSS				MLR	MLR		
	comp=Z,800nm,14.0s						
YSS				MLR	MLR		
	comp=N,500nm,15.0s						
LEM	Lembang	35.09	175	P	P	21 08 03.8	+1.9
LEM				pmax	pmax		
	comp=Z,46nm,1.0s						
BVAR	Borovoye Array	35.41	324	P	P	21 08 04.0	-0.1
	comp=Z,0.9nm,0.6s,baz=166,slow=21,SNR=13						
BVAR				PcP	PcP	21 10 33.1	-0.8
	comp=Z,1.5nm,0.7s,baz=169,slow=12,SNR=5.3						
BRVK	Borovoye	35.48	324	ceP	P	21 08 05.1	+0.3
BRVK				pmax	pmax		
	comp=Z,12nm,1.3s						
BRVK	Borovoye	35.48	324	P	P	21 08 04.7	-0.1
KAPI	Kappang	36.13	154	P	P	21 08 10.3	-0.3
KAPI				pmax	pmax		
	comp=Z,29nm,1.3s						
KAPI	Kappang	36.13	154	P	P	21 08 10.3	-0.3
KAPI				IAmb	IAmb	21 08 18.2	
	comp=Z,29nm,1.2s						
UGM	Wanagama	36.48	171	P	P	21 08 14.7	+1.0
UGM	Wanagama	36.48	171	P	P	21 08 15.4	+1.8
HRA	Herat	36.76	290	P	P	21 08 15.3	-1.0
YAK	Yakutsk	37.40	19	P	P	21 08 20.9	-0.1
	comp=Z,5.5nm,0.3s,baz=236,slow=2.0,SNR=4.7						
YAK	Yakutsk	37.40	19	eP	P	21 08 20.1	-0.9
YAK				e		21 09 45.0	
YAK				e		21 10 39.3	
YAK				eS	S	21 14 05.3	-3.6
YAK				e		21 18 31.0	
YAK				pmax	pmax		
	comp=Z,12nm,0.9s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.4s						
YAK				pmax	pmax		
	comp=N,6.0nm,1.2s						
YAK				pmax	pmax		
	comp=Z,29nm,2.8s						
YAK				pmax	pmax		
	comp=N,30nm,2.3s						
YAK				pmax	pmax		
	comp=E,29nm,2.3s						
YAK				smax	smax		
	comp=N,24nm,2.5s						
YAK				smax	smax		
	comp=E,43nm,2.6s						
SIJI	Sorong	38.49	135	P	P	21 08 31.7	+0.9
	comp=E,6.1nm,0.6s,baz=353,slow=17,SNR=3.7						
GUMO	Guam	39.85	103	LR	LR	21 25 35.0	
	comp=E,195nm,19.5s,baz=322,slow=37						
GEYT	Alibeck	40.01	296	P	P	21 08 44.6	+1.2
	comp=E,15nm,0.8s,baz=111,slow=8.1,SNR=26						
GEYT				LR	LR	21 28 48.9	
	comp=E,331nm,18.3s,baz=225,slow=42						
GEYT	Alibeck	40.01	296	P	P	21 08 42.4	-0.9
GYA0B	ALIBECK ARRAY	40.01	296	P	P	21 08 43.8	+0.5
GYA0B				IAmb	IAmb	21 08 46.3	
	comp=Z,72nm,1.5s						
AB31	Akbulak array	40.07	314	iP	P	21 08 43.5	-0.1
AB31				pmax	pmax		
	comp=Z,12nm,1.0s						
ABKAR	Akbulak array	40.07	314	P	P	21 08 44.1	+0.5
ABKAR	Akbulak array	40.07	314	P	P	21 08 44.2	+0.5
ABKAR				IAmb	IAmb	21 08 45.0	
	comp=Z,14nm,1.1s						
WBSI	Waikabubak, Su	40.29	158	P	P	21 08 43.9	-1.8
EDFI	Ende, Flores	40.29	154	P	P	21 08 45.3	-0.6
	comp=Z,202nmcomp=Z,8.3nm,1.0s						
MMRI	Maumere	40.40	153	P	P	21 08 45.2	-1.4
MMRI				IAmb	IAmb	21 08 47.0	
	comp=Z,31nm,0.8s						
MMRI	Maumere	40.40	153	P	P	21 08 46.4	-0.3
	comp=Z,56nm,1.3s						
AKTO	Aktyubinsk	41.57	315	P	P	21 08 56.4	+0.4
	comp=Z,5.1nm,0.7s,baz=91,slow=19,SNR=14						
WBK	Wadi Bani Khal	41.73	273	P	P	21 08 57.1	-0.5
WSAR	Wadi Sarin	41.84	274	P	P	21 08 59.7	+1.1
	comp=Z,3.4nm,0.7s,baz=79,slow=5.6,SNR=4.3						
SVE	Sverdlovsk	42.14	325	eP	P	21 09 01.2	+0.6
SVE				pmax	pmax		
	comp=Z,31nm,1.8s						
NRIK	Noril'sk	42.23	351	P	P	21 09 01.8	+0.6
	comp=Z,20nm,0.4s,baz=143,slow=7.4,SNR=28						
NRIK				LR	LR	21 28 05.5	
	comp=Z,226nm,21.7s,baz=174,slow=38						
NRIK	Noril'sk	42.23	351	ceP	P	21 09 01.7	+0.6
NRIK				pmax	pmax		
	comp=Z,32nm,1.0s						
NRIK	Noril'sk	42.23	351	P	P	21 09 01.1	0.0
NRIK				IAmb	IAmb	21 09 03.3	
	comp=Z,60nm,1.2s						
SOEI	Soe	42.25	151	P	P	21 09 00.6	-1.4
SOEI				IAmb	IAmb	21 09 14.3	
	comp=Z,18nm,0.9s						
SOEI	Soe	42.25	151	P	P	21 09 00.4	-1.6
SMDO	Samad	42.40	274	P	P	21 09 03.5	+0.2
	SNR=5.5						
BATI	Baumata	42.41	152	P	P	21 09 02.4	-0.8
	comp=Z,13nm,0.5s,baz=263,slow=2.0,SNR=8.0						
BATI	Baumata	42.41	152	P	P	21 09 01.9	-1.2
HOQ	Hoqain	42.90	275	P	P	21 09 04.9	-2.3
ARU	Arti	43.06	324	P	P	21 09 07.4	-0.6
	comp=Z,2.5nm,0.7s,baz=147,slow=6.2,SNR=15						
ARU	Arti	43.06	324	c iP	P	21 09 07.9	-0.1
ARU						21 10 46.7	
ARU				S	S	21 15 34.8	+1.2
ARU				SS	SS	21 18 42.7	-2.9
ARU				pmax	pmax		
	comp=Z,36nm,1.8s						
ARU	Arti	43.06	324	P	P	21 09 07.6	-0.4
MHTO	MHTO	43.12	271	P	P	21 09 07.6	-1.4
BSY	Bisya	43.24	274	P	P	21 09 08.6	-1.4
	SNR=6.9						
DQM	DQM	43.86	270	P	P	21 09 15.2	+0.2
TIXI	Tiksi	45.28	10	iP	P	21 09 23.1	-2.4
TIXI	Tiksi	45.28	10	P	P	21 09 25.0	-0.6
TIXI				IAmb	IAmb	21 09 26.7	
	comp=Z,20nm,1.1s						
PETK	Petropavlovsk-	45.65	42	LR	LR	21 31 11.8	
	comp=Z,238nm,18.4s,baz=256,slow=40						
GENI	Genyem	45.73	126	P	P	21 09 32.0	+2.2
SEY	Seymchan	46.11	28	iP	P	21 09 31.9	-0.4
DOK	Doka	47.34	270	P	P	21 09 41.2	-1.3
	SNR=7.0						
WHFO	Wadi Hawf	47.91	269	P	P	21 09 45.2	-1.9
	SNR=8.8						
MTN	Manton Dam	48.17	145	P	P	21 09 47.9	-1.0
MTN				IAmb	IAmb	21 09 55.1	
	comp=Z,8.5nm,0.7s						
BELG	Belogornoye	48.32	316	iP	P	21 09 49.6	0.0
KIRV	Kirov	48.41	325	ceP	P	21 09 50.8	+0.6
ABTO	Aybut	48.55	269	P	P	21 09 50.7	-1.2
	SNR=5.2						
GROC	Groznyy	49.26	304	eP	P	21 09 52.3	-4.7
GROC				e		21 11 18.1	
GROC				pmax	pmax		
	comp=Z,26nm,1.3s						
UMR	Umm Al-Rimmam	49.66	286	eP		21 09 59.6	
KBD	Kabd	49.77	285	eP		21 10 00.6	
MIB	Mutribah	49.92	286	eP		21 10 01.5	
RDF	Al-Radifah	49.95	285	eP		21 10 02.0	
SOCY	Socotra	50.09	262	P	P	21 10 01.2	-2.6
SOCY				IAmb	IAmb	21 10 07.1	
	comp=Z,22nm,0.9s						
GNI	Garni	50.28	300	ceP	P	21 10 06.0	+0.9
GNI				pmax	pmax		
	comp=Z,28nm,1.3s						
GNI	Garni	50.28	300	P	P	21 10 05.0	-0.1
GNI				IAmb	IAmb	21 10 12.8	
	comp=Z,38nm,1.3s						
RST	Umm Al-Ruwaisa	50.28	286	eP		21 10 03.3	
FITZ	Fitzroy Crossi	50.35	154	P	P	21 10 04.3	-1.1
	comp=Z,7.5nm,1.1s,baz=339,slow=4.5,SNR=6.4						
FITZ	Fitzroy Crossi	50.35	154	P	P	21 10 03.7	-1.7
ZEI	Tsey	50.67	304	eP	P	21 10 07.7	-0.3
ZEI				pmax	pmax		
	comp=Z,20nm,1.4s						
ONI	Oni	51.02	303	P	P	21 10 12.2	+1.7
AKH	Akhalkalaki	51.09	302	⇑P	P	21 10 12.3	+1.1
AKH	Akhalkalaki	51.09	302	P	P	21 10 12.3	+1.1
KBZ	Khabaz	51.33	305	P	P	21 10 12.9	+0.3
	comp=Z,3.2nm,1.0s,baz=78,slow=13,SNR=6.7						
KBZ				LR	LR	21 36 12.4	
	comp=Z,152nm,18.4s,baz=70,slow=41						
KBZ	Khabaz	51.33	305	ceP	P	21 10 12.5	-0.2
KBZ				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KIV	Kislovodsk	51.46	305	eP	P	21 10 14.3	+0.5
KIV				pmax	pmax		
	comp=Z,87nm,1.0s						
KIV				MLR	MLR		
	comp=Z,319nm,17.0s						
KIV	Kislovodsk	51.46	305	P	P	21 10 14.1	+0.2
NEY	Neytrino	51.49	304	iP	P	21 10 14.7	+0.5
NEY				pmax	pmax		
	comp=Z,1.0nm,0.7s						
GEVA	Gevas	51.81	298	P	P	21 10 16.1	-0.6
GEVA				IAmb	IAmb	21 10 18.1	
	comp=Z,16nm,1.4s						
VRH	Novokhopyorsk	51.90	314	eP	P	21 10 14.9	-1.9
VRH				pmax	pmax		

	comp=Z,10.0nm,0.6s						
RAYN	Ar Rayn	53.24	279	P	P	21 10 26.4	-0.8
RAYN				pmax	pmax		
	comp=Z,22nm,1.2s						
RAYN	Ar Rayn	53.24	279	P	P	21 10 26.4	-0.8
RAYN				IAmb	IAmb	21 10 27.5	
	comp=Z,22nm,1.1s						
VSR	Storozhevoye	53.51	314	eP	P	21 10 25.9	-2.8
VSR				pmax	pmax		
	comp=Z,20nm,1.6s						
LPSR	Galich'ya Gora	53.63	316	eP	P	21 10 27.9	-1.7
LPSR				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KLMR	Klimovskoe	53.74	326	eP	P	21 10 28.4	-1.8
KLMR				pmax	pmax		
	comp=Z,49nm,1.2s						
KLMR	Klimovskoe	53.74	326	eP	P	21 10 28.5	-1.8
KLMR				AMP		21 10 31.5	
	comp=Z,49nm,1.2s						
MARD	Mardin	53.76	297	P	P	21 10 30.0	-0.9
MARD				IAmb	IAmb	21 10 33.0	
	comp=Z,26nm,1.4s						
MOS	Moscow	54.42	320	eP	P	21 10 33.6	-1.7
MOS				e		21 11 43.7	
MOS				pmax	pmax		
	comp=Z,59nm,1.1s						
TMCR	Tamitsa	54.81	330	eP	P	21 10 37.9	-0.1
TMCR				pmax	pmax		
	comp=Z,29nm,1.1s						
OBN	Obninsk	55.02	319	d iP	P	21 10 39.7	+0.1
OBN				i		21 10 44.3	
OBN				i		21 11 39.9	
OBN				pmax	pmax		
	comp=Z,43nm,1.3s						
OBN				MLR	MLR		
	comp=Z,258nm,18.0s						
OBN	Obninsk	55.02	319	P	P	21 10 38.8	-0.8
MALT	Malatya	55.40	299	P	P	21 10 44.5	+1.6
PMG	Port Moresby	55.43	126	P	P	21 10 43.6	+0.5
	comp=Z,30nm,0.7s,baz=330,slow=2.9,SNR=17						
PMG	Port Moresby	55.43	126	ceP	P	21 10 44.4	+1.3
PMG				pmax	pmax		
	comp=Z,31nm,0.7s						
PMG	Port Moresby	55.43	126	P	P	21 10 43.1	0.0
WB0	Warramunga Arr	55.68	146	P	P	21 10 44.2	-0.6
WRAB	Tennant Creek	55.80	146	ceP	P	21 10 44.0	-1.7
WRAB				pmax	pmax		
	comp=Z,38nm,1.3s						
WRAB	Tennant Creek	55.80	146	P	P	21 10 45.3	-0.3
WRA	Warramunga Arr	55.80	146	P	P	21 10 45.2	-0.5
	comp=Z,14nm,0.7s,baz=337,slow=8.3,SNR=123						
WRA	Warramunga Arr	55.80	146	P	P	21 10 44.5	-1.2
WRA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
WRA	Warramunga Arr	55.80	146	P	P	21 10 44.5	-1.2
WB2	Warramunga Arr	55.80	146	P	P	21 10 45.3	-0.4
WR0	Warramunga Arr	55.91	146	P	P	21 10 46.0	-0.6
COEN	Coen	56.02	134	P	P	21 10 47.1	-0.3
COEN				IAmb	IAmb	21 10 48.9	
	comp=Z,7.8nm,0.8s						
TOKA	Tokat	56.51	301	P	P	21 10 50.4	-0.4
TOKA				IAmb	IAmb	21 10 59.4	
	comp=Z,7.0nm,0.5s						
GAZ	Gaziantep	56.57	298	P	P	21 10 51.5	+0.2
GAZ				IAmb	IAmb	21 10 53.4	
	comp=Z,29nm,1.3s						
JOF	Joensuu	57.73	329	P	P	21 10 59.2	+0.3
BR131	Keskin Array S	58.77	301	P	P	21 11 05.3	-1.5
BR131				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BR131	Keskin Array S	58.77	301	P	P	21 11 05.3	-1.5
BR131				IAmb	IAmb	21 11 06.6	
	comp=Z,6.1nm,0.8s						
BRTR	Keskin Array B	58.77	301	P	P	21 11 05.8	-1.0
	comp=Z,1.7nm,0.6s,baz=134,slow=7.1,SNR=4.6						
BRTR				LR	LR	21 40 52.6	
	comp=Z,26nm,19.2s,baz=60,slow=41						
BRTR	Keskin Array B	58.77	301	i P	P	21 11 06.4	-0.4
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
AS31	Alice Springs	58.78	149	P	P	21 11 06.7	0.0
ASAR	Alice Springs	58.78	149	P	P	21 11 06.7	-0.1
	comp=Z,7.6nm,0.6s,baz=330,slow=6.8,SNR=95						
ASAR				PcP	PcP	21 11 57.3	+0.9
	comp=Z,2.6nm,0.6s,baz=341,slow=4.5,SNR=6.8						
ASAR	Alice Springs	58.78	149	P	P	21 11 06.8	+0.1
ASAR	Alice Springs	58.78	149	P	P	21 11 06.8	+0.1
BR231	Keskin MP Arra	59.39	302	P	P	21 11 10.8	-0.2
BR231				IAmb	IAmb	21 11 22.8	
	comp=Z,28nm,1.4s						
AKASG	Malin Array Be	59.81	315	P	P	21 11 13.0	-0.6
	comp=Z,1.6nm,0.5s,baz=73,slow=6.4,SNR=17						
AKASG				LR	LR	21 39 15.4	
	comp=Z,90nm,18.9s,baz=80,slow=38						
AKASG	Malin Array Be	59.81	315	P	P	21 11 13.0	-0.6
AKASG	Malin Array Be	59.81	315	P	P	21 11 12.1	-1.5
AKBB	Malin Array Si	59.81	315	ceP	P	21 11 13.7	+0.1
AKBB	Malin Array Si	59.81	315	P	P	21 11 12.1	-1.5
ARCES	ARCESS Array B	60.05	336	P	P	21 11 14.7	-0.2
	comp=Z,7.7nm,0.9s,baz=85,slow=7.7,SNR=14						
ARCES				LR	LR	21 39 37.4	
	comp=Z,235nm,18.2s,baz=110,slow=38						
OUL	Oulu	60.06	331	P	P	21 11 14.9	-0.1
MNK	Minsk	60.07	319	i P	P	21 11 14.2	-1.1
	comp=E,1.0nm,0.9s						
MNK				i P	P	21 11 14.2	-1.1
	comp=N,15nm,0.9s						
MNK				i P	P	21 11 14.2	-1.1
	comp=Z,11nm,0.9s						
MNK				i PcP	PcP	21 11 59.5	-1.6
MNK				i PP	PP	21 13 26.9	-0.6
MNK				i PPP	PPP	21 14 49.5	
MNK				i S	S	21 19 25.3	-2.8
MNK				i ScS	SKKSac	21 21 01.9	-3.6
MNK				i SS	SS	21 23 24.2	-0.3
MNK				i SSS	SSS	21 26 08.0	
MNK				i LQ	LQ	21 31 59.1	
MNK				i LR	LR	21 33 20.9	
MNK				i LRM	MLR	21 38 14.8	
	comp=Z,227nm,19.4s						
MNK				i LRM	MLR	21 38 15.0	
	comp=E,26nm,19.3s						
MNK				i LRM	MLR	21 39 43.7	
	comp=N,414nm,20.0s						
SUF	Sumiainen	60.11	329	P	P	21 11 15.0	-0.4
SUF				pmax	pmax		
	comp=Z,25nm,2.3s						
ATD	Arta Tunnel	60.16	267	P	P	21 11 15.7	-0.8
VSU	Vasula	60.22	324	eP	P	21 11 16.1	-0.1
FIA1	FINESS Array S	60.25	327	P	P	21 11 16.3	-0.1
FIA1				IAmb	IAmb	21 11 22.7	
	comp=Z,16nm,1.1s						
FINES	FINESS Array B	60.25	327	P	P	21 11 15.8	-0.5
	comp=Z,3.7nm,0.6s,baz=80,slow=6.5,SNR=31						
FINES				LR	LR	21 41 29.9	
	comp=Z,104nm,18.2s,baz=97,slow=40						
FINES	FINESS Array B	60.25	327	i P	P	21 11 16.2	-0.2
FINES				pmax	pmax		
	comp=Z,4.0nm,0.6s						
IDID	Didziasalis	60.61	320	eP	P	21 11 19.0	0.0
NACGM	Naroch	60.65	320	i P	P	21 11 19.0	-0.2
NACGM				i P	P	21 11 19.0	-0.2
NACGM				i P	P	21 11 19.0	-0.2
NACGM				i Pb	pP	21 11 21.4	-1.3
	comp=Z,29nm,1.4s						
NACGM				i PcP	PcP	21 11 55.8	-7.6
NACGM				i PP	PP	21 13 35.3	+2.7
NACGM				i PPP	PPP	21 15 01.5	
NACGM				i S	S	21 19 41.0	+5.5
NACGM				i PS		21 21 14.4	
NACGM				i SS	SS	21 23 38.8	+5.4
NACGM				i SSS	SSS	21 26 42.1	
NACGM				i LQ	LQ	21 32 27.8	
NACGM				i LR	LR	21 36 59.0	
NACGM				i Sb	SKKSdf	21 39 21.6	-2.6
	comp=Z,297nm,21.0s						
SORM	Soroca	60.81	312	⇑P	P	21 11 19.6	-0.9
SORM	Soroca	60.81	312	P	P	21 11 19.6	-0.9
IIGN	Ignalina	60.90	320	eP	P	21 11 20.9	0.0
ISAL	Salakas	60.92	320	eP	P	21 11 21.4	+0.4
HORU	Horodok	61.85	313	P	P	21 11 27.3	-0.2
PABE	Paberze	62.14	321	eP	P	21 11 29.5	+0.2
ELL	Elmali	62.35	299	P	P	21 11 29.8	-1.4
ELL				pmax	pmax		
	comp=Z,64nm,1.0s						
ELL	Elmali	62.35	299	P	P	21 11 29.8	-1.4
VRI	Vrincioaia	62.37	309	⇑P	P	21 11 31.3	+0.2
VRI	Vrincioaia	62.37	309	P	P	21 11 32.0	+0.9
VRI				pmax	pmax		
	comp=Z,28nm,1.3s						
PLOR	Plostina	62.43	309	⇑P	P	21 11 31.3	-0.3
PLOR	Plostina	62.43	309	P	P	21 11 31.2	-0.3
BIZ	Bicaz	62.55	311	⇑P	P	21 11 32.4	+0.2
NEHR	Nehoiu	62.77	309	⇑P	P	21 11 34.8	+1.1
SUW	Suwalki	62.87	319	eP	P	21 11 33.6	-0.6
SUW	Suwalki	62.87	319	P	P	21 11 33.0	-1.2
SUW				pmax	pmax		
	comp=Z,26nm,1.0s						
SUW	Suwalki	62.87	319	P	P	21 11 33.0	-1.2
KSV	Kosov	62.92	312	P	P	21 11 35.0	+0.3
BURAR	Bucovina Array	62.99	312	P	P	21 11 35.3	+0.1
MLR	Muntele Rosu	62.99	309	⇑P	P	21 11 36.3	+0.9
MLR	Muntele Rosu	62.99	309	P	P	21 11 34.2	-1.2
MLR				pmax	pmax		
	comp=Z,11nm,0.9s						
MLR	Muntele Rosu	62.99	309	P	P	21 11 34.2	-1.2
MLR				IAmb	IAmb	21 11 36.9	
	comp=Z,11nm,0.9s						
LVV	L'vov	63.25	314	eP	P	21 11 36.7	-0.1
DOPR	Dopca	63.26	310	⇑P	P	21 11 37.3	+0.3
MORS	Morshin	63.49	314	P	P	21 11 38.8	+0.3
ARR	Arges	63.92	309	⇑P	P	21 11 41.6	+0.1
KWP	Kalwaria Pacla	64.13	314	P	P	21 11 42.3	-0.4
KWP				pmax	pmax		
	comp=Z,50nm,1.2s						
KWP	Kalwaria Pacla	64.13	314	P	P	21 11 42.2	-0.4
LOT	Lotru	64.49	310	⇑P	P	21 11 45.2	-0.1
KOLS	Kolonicke sedl	64.58	314	eP	P	21 11 47.0	+1.4
KOLS	Kolonicke sedl	64.58	314	eP	P	21 11 47.0	+1.4
UPP	Uppsala	64.61	326	eP	P	21 11 45.2	-0.3
ANM	Nome	64.61	29	P	P	21 11 45.9	+0.4
ANM				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ANM	Nome	64.61	29	P	P	21 11 45.9	+0.4
PLD	Plovdiv	64.74	306	P	P	21 11 47.5	+0.7
DRGR		64.84	311	⇑P	P	21 11 47.8	+0.3
DRGR		64.84	311	P	P	21 11 47.9	+0.4
DRGR				pmax	pmax		
	comp=Z,11nm,1.2s						
DEV	Deva	64.96	310	P	P	21 11 49.2	+1.1
DEV				pmax	pmax		
	comp=Z,6.0nm,0.9s						
CRVS	Cervenica-Dubn	65.10	314	eP	P	21 11 51.0	+2.0
CRVS	Cervenica-Dubn	65.10	314	eP	P	21 11 51.0	+2.0
GZR	Gura Zlata	65.18	310	⇑P	P	21 11 49.9	+0.2
HERR	Herculane	65.56	309	⇓P	P	21 11 52.5	+0.4
VTS	Vitosha	65.64	307	⇑P	P	21 11 53.3	+0.5
VTS	Vitosha	65.64	307	P	P	21 11 52.9	+0.1
VTS				pmax	pmax		
	comp=Z,12nm,1.0s						
VTS	Vitosha	65.64	307	P	P	21 11 52.9	+0.1
VTS				IAmb	IAmb	21 11 54.8	
	comp=Z,12nm,1.0s						
SIRR	Siria	65.69	311	⇑P	P	21 11 53.2	+0.3
NIE	Niedzica	65.70	314	P	P	21 11 52.8	-0.1
NIE				pmax	pmax		
	comp=Z,4.0nm,1.5s						
OJC	Ojcow	65.80	315	P	P	21 11 53.2	-0.3
OJC				pmax	pmax		
	comp=Z,13nm,1.0s						
OJC	Ojcow	65.80	315	P	P	21 11 53.2	-0.3
OJC				IAmb	IAmb	21 11 55.3	
	comp=Z,13nm,1.0s						
A21K	Barrow	66.04	20	P	P	21 11 54.2	-0.5
	baz=288						
MDVR	Moldovita	66.07	309	⇑P	P	21 11 55.1	-0.3
PSZ	Piszkesteto	66.38	313	P	P	21 11 57.1	-0.3
PSZ				pmax	pmax		
	comp=Z,13nm,1.3s						
PSZ	Piszkesteto	66.38	313	P	P	21 11 57.1	-0.3
PSZ				IAmb	IAmb	21 11 59.3	
	comp=Z,13nm,1.3s						
VYHS	Vyhne	66.89	314	eP	P	21 12 01.0	+0.5
VYHS				pmax	pmax		
	comp=Z,12nm,1.3s						
VYHS	Vyhne	66.89	314	eP	P	21 12 01.0	+0.5
NC405	NORSAR Array S	67.10	328	P	P	21 12 00.5	-1.2
NORES	NORESS Array B	67.30	328	P	P	21 12 02.0	-0.9
NORES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
MORC	Moravsky Berou	67.32	315	⇑P	P	21 12 02.9	-0.3
MORC	Moravsky Berou	67.32	315	eP	P	21 12 03.6	+0.3
MORC	Moravsky Berou	67.32	315	P	P	21 12 02.8	-0.5
MORC				pmax	pmax		
	comp=Z,14nm,1.4s						
MORC	Moravsky Berou	67.32	315	P	P	21 12 02.8	-0.5
MORC				IAmb	IAmb	21 12 04.4	
	comp=Z,14nm,1.4s						
NB201	NORSAR Array S	67.32	328	P	P	21 12 02.7	-0.4
NB2	NORSAR Subarra	67.36	328	P	P	21 12 02.6	-0.7
	comp=Z,1.6nm,0.6s,baz=72,slow=6.5						
NOA	NORSAR Array B	67.36	328	P	P	21 12 02.2	-1.1
	comp=Z,2.5nm,0.6s,baz=74,slow=6.4,SNR=13						
NOA				LR	LR	21 43 23.2	
	comp=Z,75nm,18.0s,baz=70,slow=38						
NC204	NORSAR Array S	67.49	329	P	P	21 12 03.0	-1.3
JAVC	Velka Javorina	67.51	314	eP	P	21 12 05.9	+1.3
KRLC	Kraliky	67.69	316	eP	P	21 12 05.8	+0.1
KRLC	Kraliky	67.69	316	eP	P	21 12 05.8	+0.1
KSP	Ksiaz	67.76	317	P	P	21 12 06.3	+0.3
KSP				pmax	pmax		
	comp=Z,9.0nm,1.5s						
DPC	Dobruska-Polom	67.89	316	eP	P	21 12 07.3	+0.4
DPC	Dobruska-Polom	67.89	316	eP	P	21 12 07.3	+0.4
OSTC	Ostas	67.89	317	eP	P	21 12 07.3	+0.4
UPC	Upice	68.03	316	eP	P	21 12 08.5	+0.8
UPC	Upice	68.03	316	eP	P	21 12 08.5	+0.8
VRAC	Vranov	68.05	315	eP	P	21 12 08.1	+0.2
VRAC	Vranov	68.05	315	P	P	21 12 08.4	+0.5
VRAC				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KRUC	Moravsky	68.25	315	eP	P	21 12 09.3	+0.2
KRUC	Moravsky	68.25	315	P	P	21 12 09.9	+0.8
KRUC				pmax	pmax		
	comp=Z,10.0nm,2.6s						
IMAR	Indian Mountai	68.84	25	P	P	21 12 11.6	-0.9
CONA	Conrad Observa	68.95	314	eP	P	21 12 14.1	+0.4
	comp=Z,17nm,1.7s						
TTA	Tatalina	69.07	29	P	P	21 12 14.6	+0.5
TTA				pmax	pmax		
	comp=Z,15nm,1.5s						
TTA	Tatalina	69.07	29	P	P	21 12 14.6	+0.5
TTA				IAmb	IAmb	21 12 25.3	
	comp=Z,15nm,1.5s						
PRU	Pruhonice	69.09	316	eP	P	21 12 14.4	+0.1
PRU	Pruhonice	69.09	316	eP	P	21 12 14.4	+0.1
BRG	Berggiesshubel	69.16	317	P	P	21 12 14.8	+0.1
BRG				pmax	pmax		
	comp=Z,10.0nm,1.1s						
BRG	Berggiesshubel	69.16	317	eP	P	21 12 14.5	-0.3
BRG				Amp		21 12 16.5	
	comp=Z,6.1nm,0.9s						
STKA	Stephens Creek	69.32	147	P	P	21 12 15.3	-0.5
	comp=Z,2.5nm,0.6s,baz=337,slow=6.4,SNR=8.3						
STKA				LR	LR	21 47 37.6	
	comp=Z,33nm,18.7s,baz=11,slow=40						
STKA	Stephens Creek	69.32	147	i P	P	21 12 15.2	-0.6
STKA	Stephens Creek	69.32	147	P	P	21 12 14.3	-1.6
ARSA	Arzberg	69.39	313	eP	P	21 12 15.9	-0.4
	comp=Z,5.9nm,1.1s						
PBCC	Pribram	69.53	316	eP	P	21 12 16.8	-0.3
CLL	Collm	69.57	318	i P	P	21 12 16.8	-0.5
	comp=Z,19nm,1.4s						
CLL				e		21 12 31.0	
CLL				Lm	MLR	21 44 00.0	
	comp=N,200nm,19.3s						
CLL				Lm	MLR	21 44 00.0	
	comp=E,100nm,21.6s						
CLL				Lm	MLR	21 44 00.0	
	comp=Z,200nm,18.5s						
CLL	Collm	69.57	318	P	P	21 12 16.2	-1.1
CLL				pmax	pmax		
	comp=Z,20nm,1.5s						
CLL	Collm	69.57	318	P	P	21 12 16.2	-1.1
CLL				IAmb	IAmb	21 12 18.7	
	comp=Z,20nm,1.5s						
CKRC	Cesky Krumlov	69.63	315	eP	P	21 12 18.3	+0.6
COLD	Coldfoot	69.65	24	P	P	21 12 17.3	-0.2
	baz=295						
COLD	Coldfoot	69.65	24	P	P	21 12 17.7	+0.3
COLD				IAmb	IAmb	21 12 23.6	
	comp=Z,6.3nm,0.8s						
DAG	Danmarks Havn	69.65	348	P	P	21 12 16.8	-0.5
DAG				pmax	pmax		
	comp=Z,8.0nm,1.5s						
MUD	Monsted U'grnd	69.89	324	P	P	21 12 20.1	+1.0
MUD				pmax	pmax		
	comp=Z,58nm,1.5s						
KHC	Kasperske Hory	69.97	316	ceP	P	21 12 20.1	+0.2
KHC				pmax	pmax		
	comp=Z,21nm,1.7s						
KHC	Kasperske Hory	69.97	316	eP	P	21 12 19.9	0.0
KHC				AMS	AMS	21 44 20.0	
	comp=Z,500nm,16.6s						
KHC	Kasperske Hory	69.97	316	P	P	21 12 18.8	-1.1
KHC				IAmb	IAmb	21 12 21.2	
	comp=Z,12nm,1.5s						
MOA	Molln	69.99	314	eP	P	21 12 20.2	+0.2
	comp=Z,10.0nm,1.4s						
GEC2	GERESS Array S	70.00	315	P	P	21 12 19.0	-1.1
GEC2				IAmb	IAmb	21 12 21.8	
	comp=Z,11nm,1.2s						
GERES	GERESS Array B	70.00	315	P	P	21 12 20.4	+0.3
	comp=Z,2.0nm,0.6s,baz=76,slow=5.6,SNR=8.4						
GERES				LR	LR	21 44 56.2	
	comp=Z,279nm,19.0s,baz=84,slow=38						
GERES	GERESS Array B	70.00	315	P	P	21 12 19.3	-0.8
GERES	GERESS Array B	70.00	315	P	P	21 12 19.3	-0.8
BSEG	Bad Segeberg	70.18	321	P	P	21 12 22.2	+1.3
BSEG				pmax	pmax		
	comp=Z,21nm,1.7s						
MLY	Manley	70.38	26	P	P	21 12 22.0	0.0
	baz=295						
WET	Wettzell	70.40	316	P	P	21 12 23.1	+0.6
WET				pmax	pmax		
	comp=Z,6.0nm,1.3s						
BPAW	Bear Paw Mtn.	70.67	27	P	P	21 12 24.3	+0.4
BPAW				IAmb	IAmb	21 12 25.9	
	comp=Z,11nm,0.8s						
PPLA	Purkeypile	70.69	28	P	P	21 12 24.6	+0.4
I23K	Minto, Yukon-K	70.85	26	P	P	21 12 24.7	-0.2
	baz=296						
I23K	Minto, Yukon-K	70.85	26	P	P	21 12 24.6	-0.2
I23K				IAmb	IAmb	21 12 26.5	
	comp=Z,20nm,1.4s						
KMBO	Kilima Mbogo	71.05	258	P	P	21 12 27.2	0.0
	comp=Z,3.5nm,0.6s,baz=44,slow=8.7,SNR=7.8						
KMBO				LR	LR	21 43 06.2	
	comp=Z,43nm,20.7s,baz=88,slow=36						
KMBO	Kilima Mbogo	71.05	258	i P	P	21 12 28.0	+0.8
KMBO				pmax	pmax		
	comp=Z,4.0nm,0.6s						
GRA1	Grafenberg Arr	71.21	317	P	P	21 12 26.7	-0.6
GRA1				IAmb	IAmb	21 12 28.3	
	comp=Z,18nm,1.1s						
GRF	Grafenberg Arr	71.21	317	P	P	21 12 26.7	-0.6
GRF				pmax	pmax		
	comp=Z,18nm,1.1s						
GRFO	Grafenberg	71.21	317	P	P	21 12 26.1	-1.3
GRFO				pmax	pmax		
	comp=Z,17nm,1.1s						
GRFO	Grafenberg	71.21	317	P	P	21 12 26.1	-1.3
GRFO				IAmb	IAmb	21 12 28.3	
	comp=Z,17nm,1.1s						
NEA2	Nenana	71.21	26	P	P	21 12 26.8	-0.3
	baz=297						
BWN	Browne	71.25	26	P	P	21 12 27.6	+0.3
SKT	Skwentna	71.36	29	P	P	21 12 27.9	-0.1
MDM	Murphy Dome	71.37	25	P	P	21 12 28.4	+0.3
BMAR	Burnt Mountain	71.50	22	P	P	21 12 29.3	+0.5
ABTA	Abfaltersbach	71.50	314	eP	P	21 12 28.3	-0.9
	comp=Z,7.3nm,0.8s						
DBG	Daneborg	71.53	346	i P	P	21 12 27.8	-1.1
DBG				IAmb	IAmb	21 12 29.4	
	comp=Z,9.8nm,1.1s						
TCOL	CIGO, UAF Yank	71.55	25	P	P	21 12 29.3	+0.3
	baz=298						
TCOL	CIGO, UAF Yank	71.55	25	P	P	21 12 29.0	0.0
TCOL				IAmb	IAmb	21 12 30.9	
	comp=Z,11nm,0.8s						
COLA	College	71.55	25	i P	P	21 12 28.7	-0.4
COLA				pmax	pmax		
	comp=Z,17nm,1.0s						
COLA	College	71.55	25	P	P	21 12 29.4	+0.4
COLA				IAmb	IAmb	21 12 30.9	
	comp=Z,11nm,0.8s						
POKR	Poker Plat Res	71.59	25	P	P	21 12 29.6	+0.2
	baz=298						
POKR	Poker Plat Res	71.59	25	P	P	21 12 29.9	+0.5
POKR				IAmb	IAmb	21 12 31.5	
	comp=Z,17nm,0.9s						
EUNU	Eureka	71.61	2	P	P	21 12 30.2	+0.8
MCK	McKinley	71.65	27	P	P	21 12 29.8	0.0
	baz=297						
CCB	Clear Creek Bu	71.67	26	P	P	21 12 29.6	-0.2
RND	Reindeer	71.83	27	P	P	21 12 29.8	-1.1
RND				pmax	pmax		
	comp=Z,14nm,1.0s						
RND	Reindeer	71.83	27	P	P	21 12 29.8	-1.1
RND				IAmb	IAmb	21 12 31.6	
	comp=Z,14nm,1.0s						
WTTA	Wattenberg	71.86	314	eP	P	21 12 31.2	-0.4
	comp=Z,11nm,1.1s						
WATA	Walderalm	71.87	314	eP	P	21 12 31.0	-0.6
	comp=Z,18nm,1.9s						
IL31		71.96	25	P	P	21 12 31.2	-0.3
ILAR	Eielson Array	71.96	25	P	P	21 12 30.9	-0.8
	comp=Z,1.8nm,0.8s,baz=285,slow=4.9,SNR=16						
ILAR				LR	LR	21 48 02.3	
	comp=Z,103nm,18.7s,baz=306,slow=39						
ILAR	Eielson Array	71.96	25	P	P	21 12 30.5	-1.1
ILAR	Eielson Array	71.96	25	P	P	21 12 30.5	-1.1
PRP	Porcupine Dome	72.11	24	P	P	21 12 32.0	-0.6
PRP				IAmb	IAmb	21 12 35.8	
	comp=Z,11nm,0.8s						
SQTA	Sankt Quirin	72.15	314	eP	P	21 12 32.8	-0.4
	comp=Z,7.5nm,0.6s						
MOTA	Moosalm	72.17	315	eP	P	21 12 32.8	-0.5
	comp=Z,7.1nm,0.9s						
RC01	Rabbit Creek A	72.52	29	P	P	21 12 35.1	+0.1
	baz=297						
FETA	Feichten	72.53	314	eP	P	21 12 35.1	-0.4
	comp=Z,14nm,1.5s						
PMR	Palmer	72.55	29	IAmb	IAmb	21 12 36.5	
	comp=Z,26nm,1.2s						
SCM	Sheep Creek Mo	73.19	28	P	P	21 12 38.6	-0.5
SCM				pmax	pmax		
	comp=Z,54nm,1.4s						
SCM	Sheep Creek Mo	73.19	28	P	P	21 12 38.6	-0.5
RIDG	Independent Ri	73.25	26	IAmb	IAmb	21 12 41.9	
	comp=Z,8.5nm,0.6s						
PAX	Paxson	73.39	27	P	P	21 12 38.9	-1.3
PAX				pmax	pmax		
	comp=Z,11nm,1.4s						
PAX	Paxson	73.39	27	P	P	21 12 38.9	-1.3
PAX				IAmb	IAmb	21 12 50.0	
	comp=Z,11nm,1.4s						
SCRK	Sand Creek	73.45	25	P	P	21 12 40.1	-0.5
	baz=301						
BFO	Black Forest	73.49	316	P	P	21 12 39.9	-1.1
BFO				pmax	pmax		
	comp=Z,7.0nm,1.0s						
BFO	Black Forest	73.49	316	P	P	21 12 39.9	-1.1
M24K	Tolsona, Glenn	73.54	28	P	P	21 12 41.0	-0.1
DOT	Dot Lake	73.59	26	P	P	21 12 40.6	-0.7
KLU	Klutina	73.95	28	P	P	21 12 42.9	-0.7
KLU				IAmb	IAmb	21 12 45.7	
	comp=Z,22nm,1.0s						
WLF	Walferdange	74.24	318	P	P	21 12 44.0	-1.3
WLF				pmax	pmax		
	comp=Z,20nm,1.0s						
WLF	Walferdange	74.24	318	P	P	21 12 44.0	-1.3
WLF				IAmb	IAmb	21 12 47.0	
	comp=Z,20nm,1.0s						
SANVU	Saraoutou	74.29	118	P	P	21 12 45.8	-0.3
N25K	Chitina, Valde	74.44	28	P	P	21 12 46.8	+0.4
	baz=301						
N25K	Chitina, Valde	74.44	28	P	P	21 12 45.7	-0.7
N25K				IAmb	IAmb	21 12 48.3	
	comp=Z,29nm,1.4s						
INK	Inuvik	74.47	19	P	P	21 12 46.0	-0.3
INK				pmax	pmax		
	comp=Z,18nm,1.4s						
INK	Inuvik	74.47	19	P	P	21 12 46.0	-0.3

INK				IAmb	IAmb	21 12 47.1	
	comp=Z,18nm,1.4s						
EPYK	Eagle Plains	74.67	22	P	P	21 12 46.9	-0.7
	baz=306						
EPYK	Eagle Plains	74.67	22	P	P	21 12 47.1	-0.6
BCAR	Beaver Creek A	74.77	26	P	P	21 12 48.6	+0.3
GLB	Gilahina Butte	74.84	28	P	P	21 12 48.0	-0.7
GLB				IAmb	IAmb	21 12 51.1	
	comp=Z,7.2nm,0.6s						
DAWY	Dawson	75.11	24	P	P	21 12 49.4	-0.7
TULEG	Thule	75.26	358	P	P	21 12 50.1	-0.7
TULEG				IAmb	IAmb	21 12 52.6	
	comp=Z,11nm,1.0s						
CTGM	Chitina Glacie	76.11	27	P	P	21 12 55.7	-0.4
CTGM				IAmb	IAmb	21 13 02.6	
	comp=Z,19nm,1.2s						
SUMG	Summit	76.25	349	*i*P	P	21 12 57.0	0.0
	comp=Z,97nm,1.3s						
SUMG	Summit	76.25	349	*i*P	P	21 12 57.0	0.0
SUMG				pmax	pmax		
	comp=Z,97nm,1.3s						
SUMG	Summit	76.25	349	P	P	21 12 56.9	0.0
SUMG	Summit	76.25	349	*i*P	P	21 12 57.0	0.0
SUMG				IAmb	IAmb	21 12 58.1	
	comp=Z,97nm,1.3s						
C36M	Paulatuk	76.28	16	P	P	21 12 56.2	-0.5
	baz=317						
C36M	Paulatuk	76.28	16	P	P	21 12 56.1	-0.5
C36M				IAmb	IAmb	21 12 57.9	
	comp=Z,16nm,0.9s						
RES	Resolute Bay	76.37	5	P	P	21 12 57.0	-0.1
RES				pmax	pmax		
	comp=Z,14nm,1.3s						
RES	Resolute Bay	76.37	5	P	P	21 12 57.0	-0.1
RES				IAmb	IAmb	21 12 58.6	
	comp=Z,14nm,1.2s						
MBAR	Mbarara	76.44	262	P	P	21 12 57.6	-1.2
MBAR				pmax	pmax		
	comp=Z,13nm,1.2s						
MBAR	Mbarara	76.44	262	P	P	21 12 57.6	-1.2
MBAR				IAmb	IAmb	21 13 00.5	
	comp=Z,13nm,1.2s						
KEST	Kesra	78.19	304	LR	LR	21 53 35.2	
	comp=Z,38nm,18.1s,baz=282,slow=40						
ICESG	Greenland Ices	79.43	348	*i*P	P	21 13 14.8	+0.1
ICESG				IAmb	IAmb	21 13 16.1	
	comp=Z,60nm,1.3s						
YKA	Yellowknife Ar	84.06	17	P	P	21 13 38.8	-0.1
	comp=Z,1.3nm,0.5s,baz=333,slow=4.7,SNR=23						
YKA	Yellowknife Ar	84.06	17	*i*P	P	21 13 38.7	-0.1
YKA				pmax	pmax		
	comp=Z,2.0nm,0.4s						
ESDC	Sonseca Array	85.41	313	P	P	21 13 45.7	-0.4
	comp=Z,3.2nm,1.2s,baz=29,slow=6.8,SNR=5.9						
ESDC				LR	LR	21 55 54.8	
	comp=Z,76nm,18.5s,baz=355,slow=38						
ESDC	Sonseca Array	85.41	313	P	P	21 13 45.3	-0.9
LSZ	Lusaka	85.95	250	P	P	21 13 48.7	-0.5
LSZ				pmax	pmax		
	comp=Z,31nm,1.4s						
LSZ	Lusaka	85.95	250	P	P	21 13 48.7	-0.5
FRB	Frobisher Bay	88.04	357	P	P	21 13 58.4	0.0
FRB				pmax	pmax		
	comp=Z,20nm,2.8s						
BOSA	Boshof	94.99	240	LR	LR	21 54 36.0	
	comp=Z,52nm,18.6s,baz=33,slow=34						
TORD	Torodi Ar. Bea	95.18	288	P	P	21 14 33.6	+1.1
	comp=Z,0.7nm,0.9s,baz=63,slow=2.0,SNR=2.6						
TORD				LR	LR	22 01 35.2	
	comp=Z,72nm,18.1s,baz=110,slow=38						
SYO	Syowa Base	107.99	200	⇓*e*Pdiff	Pdif	21 15 28.0	-0.3
SYO	Syowa Base	107.99	200	⇓*e*pPdiff	pPdif	21 15 32.3	+0.4
SNAA	Sanae	122.27	201	PKPdf	PKPdf	21 20 01.6	-1.0
VNA2	Neumayer--Watz	123.83	201	PKPdf	PKPdf	21 20 04.6	-1.0
VNA1	Neumayer--Stat	124.17	202	PKPdf	PKPdf	21 20 06.0	-0.2
VNA3	Neumayer Olymp	124.49	201	PKPdf	PKPdf	21 20 06.1	-0.7
SDV	Santo Domingo	142.71	353	*e*P	PKPdf	21 20 38.2	-4.6
PAMC	Pamplona, Colo	144.42	356	*e*P	PKPab	21 20 43.3	-0.9
BARC	Barichara	145.19	357	*e*P	PKPbc	21 20 45.5	-1.2
PTBC	PUERTO BERRIO,	145.28	359	*e*P	PKPbc	21 20 46.1	-0.6
HELC	Santa Helena	145.63	1	*e*P	PKPab	21 20 48.9	+0.4
RUSC	La Rusia	145.88	357	*e*P	PKPdf	21 20 48.5	-0.2
CBOC	Ciudad Bolivar	145.94	2	*e*P	PKPbc	21 20 48.9	-0.1
NORC	Norcasia	146.25	360	*e*P	PKPbc	21 20 49.5	-0.3
GUY2C	Guyana, Caldas	146.59	1	*e*P	PKPbc	21 20 51.1	-0.2
PLMC	San Jos del P	146.88	2	*e*P	PKPbc	21 20 51.7	0.0
ROSC	El Rosal	146.97	359	PKPbc	PKPab	21 20 53.0	-0.6
	comp=Z,22nm,0.4s,baz=131,slow=2.1,SNR=13						
ROSC	El Rosal	146.97	359		PKPab	21 20 53.5	-0.2
ROSC	El Rosal	146.97	359	*e*P	PKPab	21 20 52.9	-0.7
CHIC	Chingaza	147.16	358	*e*P	PKPbc	21 20 52.5	-0.4
TOLC	Tolima	147.22	1	*e*P	PKPbc	21 20 52.8	-0.2
PTGC	Puerto Gaitan,	147.49	355	*e*P	PKPbc	21 20 52.4	-0.9
YOTC	Yotoco, Valle	147.80	2	*e*P	PKPbc	21 20 53.6	-0.7
ORTC	Ortega, Tolima	147.90	0	*e*P	PKPdf	21 20 52.6	+1.0
MARP	Paez Belalcaza	148.94	2	*e*P	PKPbc	21 20 57.6	+0.1
PCON	Cinco Dias	149.44	3	*e*P	PKiKP	21 21 00.0	-0.2
GARC	Garzon, Huila	149.60	1	*e*P	PKPbc	21 20 58.9	-0.3
BBAC	Balboa, Cauca	149.70	4	*e*P	PKPbc	21 20 58.9	-0.4
CRUC	La Cruz	150.17	4	*e*P	PKiKP	21 21 01.8	+0.3
FLOC	Florencia	150.20	1	*e*P	PKPbc	21 21 00.3	0.0
OTAV	Otavalo	151.36	7	*e*P	PKPbc	21 21 03.6	0.0
BDFB	Brasilia	152.01	291	PKPbc	PKPbc	21 21 02.8	-1.7
	comp=Z,2.5nm,0.5s,baz=343,slow=3.9,SNR=3.8						
LPAZ	La Paz	166.38	331	PKP	PKPdf	21 21 14.2	-1.1
	comp=Z,2.7nm,1.1s,baz=88,slow=2.4,SNR=7.4						
LPAZ	La Paz	166.38	331		PKPdf	21 21 15.7	+0.5

IDC 06 21:23:08.4±3.5, 37°.22N×141°.36E, h45^{km}±35^{km}, mb3.2/2, mb1 3.3/4, mb1mx2.9/42, mbtmp3.3/4, ML2.8/2, Error ellipse: s-maj=46.0km s-min=30.3km az=102.0

JMA 06 21:23:10.4, 37°.34N×141°.08E, h66^{km}±1^{km}, M3.3

JMA Felt I J1.

ISC 06 21:23:10.3±1.2, 37°.33N±0°.05×141°.16E±0°.08, h63^{km}±7^{km}, n23, σ0^{s}.68/28, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	Kawauchi	0.23	279	P	Pn	21 23 20.3	-0.1
JFK				S	Sn	21 23 27.6	-0.1
ONAJ	Iwakimizuishiy	0.37	232	P	Pn	21 23 21.4	0.0
ONAJ				S	Sn	21 23 29.6	+0.2
JMST	Minamisoumatoc	0.45	331	P	Pn	21 23 22.1	+0.1
JMST				S	Sn	21 23 30.7	+0.1
JFFD	Fukushimafurud	0.54	244	P	Pn	21 23 22.8	-0.1
JFFD				S	Sn	21 23 31.7	-0.5
JMM	Marumori	0.61	331	P	Pn	21 23 23.8	+0.1
JMM				S	Sn	21 23 33.5	0.0
JFT	Otama	0.68	286	P	Pn	21 23 24.5	-0.1
JFT				S	Sn	21 23 34.6	-0.4
JOU	Okura	1.10	339	P	Pn	21 23 29.7	-0.2
JOU				S	Sn	21 23 44.2	-0.2
JIO	Ouri	1.13	7	P	Pn	21 23 30.3	+0.2
JIO				S	Sn	21 23 44.8	-0.1
JFY	Yanaizu	1.16	274	P	Pn	21 23 30.2	-0.4
JFY				S	Sn	21 23 44.8	-1.0
JYS	Shirataka	1.24	316	P	Pn	21 23 31.5	-0.1
JNS	Sasagawa	1.54	289	P	Pn	21 23 34.9	-0.7
JAG	Ashikaga	1.64	237	P	Pn	21 23 36.9	-0.1
JAG				S	Sn	21 23 56.6	-0.5
MJAR	Matsushiro Arr	2.49	252	P	Pn	21 23 47.8	-0.7
	0.5nm,0.3s,baz=59,slow=12,SNR=20						
MJAR				S	Sn	21 24 06.8	-11
	1.0nm,0.3s,baz=63,slow=12,SNR=28						
MAT	Matsushiro	2.50	252	P	Pn	21 23 49.2	+0.6
MAT				S	Sn	21 24 19.6	+1.7
ASAJ	Asahikawa	6.86	9	P	Pn	21 24 47.6	-0.6
	0.3nm,0.3s,baz=164,slow=20,SNR=4.7						
SONM	Songino Array	27.45	304	P	P	21 28 52.2	+1.9
	0.4nm,0.7s,baz=106,slow=9.4,SNR=3.6						
H11N2	WAKE ISLAND Hy	28.47	121	T	T	21 59 25.1	
	baz=315,slow=75,SNR=5.7						
H11N1	WAKE ISLAND Hy	28.48	121	T	T	21 59 19.1	
	baz=315,slow=75,SNR=7.8						
H11N3	WAKE ISLAND Hy	28.49	121	T	T	21 59 23.1	
	baz=315,slow=75,SNR=6.7						
H11S1	WAKE ISLAND Hy	29.19	123	T	T	22 00 06.0	
	baz=317,slow=74,SNR=5.5						
H11S3	WAKE ISLAND Hy	29.19	123	T	T	22 00 10.6	
	baz=317						
H11S2	WAKE ISLAND Hy	29.21	123	T	T	22 00 05.5	
	baz=317,slow=74,SNR=4.8						
WRA	Warramunga Arr	57.33	188	P	P	21 32 50.9	-0.9
	0.2nm,0.5s,baz=3.7,slow=7.4,SNR=7.2						

KRNET 06 22:01:36.0±0.1, 42°.68N×79°.37E, h35^{km}, mb1.8

NNC 06 22:01:43.9±0.9, 42°.67N×79°.01E, h0^{km}, mb2.4, mpv2.4, Error ellipse: s-maj=6.4km s-min=3.0km az=161.0

SOME 06 22:01:44.0, 42°.67N×79°.02E, h10^{km}

ISC 06 22:01:40.7±1.7, 42°.52N±0°.06×79°.02E±0°.03, h2^{km}±12^{km}, n34, σ0^{s}.88/66, 7C-1D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRZ	Przheval'sk	0.46	266	⇑*i*P	Pg	22 01 50.5	+1.0
	baz=56						
PRZ				⇑*i*S	Sb	22 02 01.0	+1.9
	baz=56						
UZB	Uzynbulak	0.63	360	*e*P	Pg	22 01 53.4	+0.6
	4.2nm,0.2s						
UZB				*e*S	Sg	22 02 00.4	-0.6
	7.1nm,0.1s						
UZB	Uzynbulak	0.63	360	*e*P	Pg	22 01 53.4	+0.6
	4.2nm,0.2s						
UZB				*e*S	Sg	22 02 00.4	-0.6
	7.1nm,0.1s						
UZB	Uzynbulak	0.63	360	P	Pg	22 01 53.4	+0.6
	4.2nm,0.2s						
UZB				S	Sg	22 02 00.4	-0.6
	7.1nm,0.1s						
SATY	Saty	0.71	320	*e*P	Pg	22 01 55.1	+0.9
	1.0nm,0.1s						
SATY				*e*S	Sg	22 02 03.2	-0.2
	7.3nm,0.1s						
SATY	Saty	0.71	320	*e*P	Pg	22 01 55.1	+0.9
	1.0nm,0.1s						
SATY				*e*S	Sg	22 02 03.2	-0.2
	7.3nm,0.1s						
SATY	Saty	0.71	320	P	Pg	22 01 55.1	+0.9
	1.0nm,0.1s						
SATY				S	Sg	22 02 03.2	-0.2
	7.3nm,0.1s						
PDGK	Podgornoye	0.88	23	P	Pg	22 01 58.3	+0.7
	0.2nm,0.1s						
PDGK				S	Sg	22 02 08.7	-0.3
	2.0nm,0.5s						
PDGK	Podgornoye	0.88	23	⇓P	Pb	22 01 58.7	-0.1
	2.2nm,1.1s						
PDGK				⇑S	Sg	22 02 08.6	-0.4
	4.8nm,0.7s						
KPKS	Kokpek	0.98	345	*e*P	Pg	22 01 59.8	+0.3
	1.7nm,0.2s						
KPKS				*e*S	Sg	22 02 11.2	-1.0
	5.9nm,0.3s						
KPKS	Kokpek	0.98	345	*e*P	Pg	22 01 59.8	+0.3
	1.7nm,0.2s						
KPKS				*e*S	Sg	22 02 11.2	-1.0
	5.9nm,0.3s						
ANVS	Anan'yevo	1.03	285	⇑*i*P	Pg	22 01 58.8	-1.7
	baz=75						
ANVS				⇑*i*S	Sb	22 02 15.6	0.0
	baz=75						
KTMS	Ketmen	1.35	46	*e*P	Pn	22 02 07.2	+0.5
	1.1nm,0.2s						
KTMS				*e*S	Sb	22 02 24.0	-0.6
	1.7nm,0.1s						
KTMS	Ketmen	1.35	46	*e*P	Pn	22 02 07.2	+0.5
	1.1nm,0.2s						
KTMS				*e*S	Sb	22 02 24.0	-0.6
	1.7nm,0.1s						
KTMS	Ketmen	1.35	46	P	Pn	22 02 07.2	+0.5
	1.1nm,0.2s						
KTMS				S	Sb	22 02 24.0	-0.6
	1.7nm,0.1s						
KDJ	Kajisay	1.42	255	⇑*i*P	Pn	22 02 05.4	-2.3
	baz=52						
KDJ				⇑*i*S	Sn	22 02 27.0	-0.1
	baz=52						
TNSS	Tian-Shan	1.61	290	*e*P	Pb	22 02 12.6	+1.1
	0.3nm,0.1s						
TNSS				*e*S	Sb	22 02 32.7	+0.2
	1.2nm,0.3s						
TNSS	Tian-Shan	1.61	290	*e*P	Pb	22 02 12.6	+1.1
	0.3nm,0.1s						
TNSS				*e*S	Sb	22 02 32.7	+0.2
	1.2nm,0.3s						
TNSS	Tian-Shan	1.61	290	P	Pb	22 02 12.6	+1.1
	0.3nm,0.1s						
TNSS				S	Sb	22 02 32.7	+0.2
	1.2nm,0.3s						
MNBS	Baschi	1.63	344	*e*P	Pb	22 02 11.7	+0.1
	0.8nm,0.1s						
MNBS				*e*S	Sg	22 02 31.8	-1.1
	5.9nm,0.2s						
MNBS	Baschi	1.63	344	*e*P	Pb	22 02 11.7	+0.1
	0.8nm,0.1s						
MNBS				*e*S	Sg	22 02 31.8	-1.1
	5.9nm,0.2s						
MNBS	Baschi	1.63	344	P	Pb	22 02 11.6	+0.1
	0.8nm,0.1s						
MNBS				S	Sg	22 02 31.8	-1.1
	5.9nm,0.2s						
DJR	Jarkent	1.90	17	*e*P	Pb	22 02 16.7	+0.5
	0.5nm,0.1s						
DJR				*e*S	Sg	22 02 40.3	-1.4
	4.7nm,0.3s						
DJR	Jarkent	1.90	17	*e*P	Pb	22 02 16.7	+0.5
	0.5nm,0.1s						
DJR				*e*S	Sg	22 02 40.3	-1.4
	4.7nm,0.3s						
DJR	Jarkent	1.90	17	P	Pb	22 02 16.7	+0.5
	0.5nm,0.1s						
DJR				S	Sg	22 02 40.3	-1.4
	4.7nm,0.3s						
ARXS	Arharly	1.91	333	*e*P	Pb	22 02 16.7	+0.4
	0.6nm,0.1s						
ARXS				*e*S	Sb	22 02 40.2	-0.4
	2.5nm,0.3s						
ARXS	Arharly	1.91	333	*e*P	Pb	22 02 16.7	+0.4
	0.6nm,0.1s						
ARXS				*e*S	Sb	22 02 40.2	-0.4
	2.5nm,0.3s						
ARXS	Arharly	1.91	333	P	Pb	22 02 16.7	+0.4
	0.6nm,0.1s						
ARXS				S	Sb	22 02 40.2	-0.4
	2.5nm,0.3s						
KTBS	Karatobe	2.09	306	*e*P	Pb	22 02 20.7	+1.3
	1.2nm,0.2s						
KTBS				*e*S	Sg	22 02 46.9	-0.9
	2.4nm,0.5s						
KTBS	Karatobe	2.09	306	*e*P	Pb	22 02 20.7	+1.3
	1.2nm,0.2s						
KTBS				*e*S	Sg	22 02 46.9	-0.9
	2.4nm,0.5s						
KTBS	Karatobe	2.09	306	Pg	Pb	22 02 20.7	+1.3
	1.2nm,0.2s						
KTBS				Lg	Lg	22 02 46.9	
	2.4nm,0.5s						
KAPS	Kapalarasan	2.78	5	*e*P	Pb	22 02 31.9	+0.8
	0.4nm,0.4s						
KAPS				*e*S	Sb	22 03 06.4	+0.8
	1.5nm,0.6s						
KAPS	Kapalarasan	2.78	5	*e*P	Pb	22 02 31.9	+0.8
	0.4nm,0.4s						
KAPS				*e*S	Sb	22 03 06.4	+0.8
	1.5nm,0.6s						
KAPS	Kapalarasan	2.78	5	Pg	Pb	22 02 31.9	+0.8
	0.4nm,0.4s						
KAPS				Lg	Lg	22 03 06.4	
	1.5nm,0.6s						

INET 06 22:02:19.1, 12°.35N×87°.87W, h44^{km}, MW5.2

GCG 06 22:02:25.3±0.3, 12°.63N×87°.62W, h19^{km}, MD4.9

UCR 06 22:02:26.7±2.1, 12°.50N×87°.91W, h35^{km}±999^{km}, ML5.4, MW5.9, mb5.4(NEIC)

IDC 06 22:02:26.2±0.5, 12°.79N×87°.48W, h61^{km}±4^{km}, mb4.6/32, mb1 4.8/35, mb1mx4.6/54, mbtmp4.9/35, MS4.3/34, Ms1 4.4/34, ms1mx4.4/34, Error ellipse: s-maj=15.6km s-min=7.3km az=54.0

SNET 06 22:02:27.5±1.4, 12°.57N×88°.05W, h18^{km}±6^{km}, ML5.3, MW5.9

GCMT 06 22:02:27.1±0.1, 12°.44N±0°.01×88°.08W±0°.01, h59^{km}, MW5.3/140, Moment Tensor Solution. s140,c221; s125,c207; Duration: 1^{s}.1 Moment tensor: Scale 10^{17} Nm; M_{rr}1.22±.02; $M_{\theta\theta}$-0.98±.01; $M_{\phi\phi}$-0.24±.02; $M_{r\theta}$0.09±.01; $M_{\theta\phi}$0.63±.01; $M_{\phi r}$-0.02±.01; Best double couple: $M_0$1.28200×10^{17} NP1:ϕ_s301.00000°,δ43.00000°, λ92.00000°. NP2:ϕ_s119.00000°,δ47.00000°,λ88.00000°. Principal axes: T 1.2230, Plg88.0000°, Azm353.0000°; N 0.1170, Plg1.0000°, Azm120.0000°; P -1.3410, Plg2.0000°, Azm210.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

NEIC 06 22:02:28.1±1.8, 12°.54N±0°.06×87°.72W±0°.06, h77^{km}±4^{km}, mb5.2/546, Mww5.4, Md5.6(SNET) Error ellipse: s-maj=8.9km s-min=7.1km az=217.0

NEIC 06 22:02:30, 12°.44N×87°.81W, h50^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.60; $M_{\theta\theta}$-1.22; $M_{\phi\phi}$-0.39; $M_{r\theta}$0.03; $M_{\theta\phi}$0.85; $M_{\phi r}$-0.18; Fault plane solution: $M_0$1.69000×10^{17} NP1:ϕ_s297.00000°, δ43.00000°,λ82.00000°. NP2:ϕ_s127.00000°,δ47.00000°, λ97.00000°. Principal axes: T 1.6196, Plg84.0000°, Azm100.0000°; N 0.1295, Plg5.0000°, Azm302.0000°; P -1.7491, Plg2.0000°, Azm212.0000°;

BGR 06 22:02:47.9±0.0, 12°.66N×86°.45W, h33^{km}, mb5.1, Ms4.7

ISC 06 22:02:26.9±0.4, 12°.58N±0°.03×87°.78W±0°.03, h75^{km}±3^{km}, h75^{km}:pP-P, n1062, σ1^{s}.58/942, mb5.2/285, 8C-22D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	Conchagua	0.69	356	⇓*i*P	Pn	22 02 41.2	-1.1
CNCH				*e*S	Sn	22 02 52.4	-1.2
CNCH	Conchagua	0.69	356	⇓*i*P	Pn	22 02 41.0	-1.3
CNCH				⇓*i*P	Pn	22 02 41.2	-1.1
CNCH				*e*S	Sn	22 02 52.4	-1.2
CRIN	San Cristobal	0.72	80		Pn	22 02 42.0	-0.5
CRIN				Sn	Sn	22 02 54.1	0.0
LCND	La Caada	0.73	352	⇓*i*P	Pn	22 02 41.3	-1.3
LCND				*e*S	Sn	22 02 52.9	-1.3
LCND				IAML		22 02 56.1	
	comp=Z,148μm,0.4s						
LCND	La Caada	0.73	352	⇓*i*P	Pn	22 02 41.3	-1.3
LCND				⇓*e*P	Pn	22 02 41.4	-1.3
LCND				*e*S	Sn	22 02 52.9	-1.3
LCND				IAML		22 02 56.1	
	comp=Z,148μm,0.4s						
CNRM	Centro Naciona	0.97	337	*e*P	Pn	22 02 44.5	-0.9
CNRM				*e*S	Sn	22 02 58.3	-0.7
CNRM				IAML		22 03 05.0	
	comp=Z,36000μm,0.2s						
CNRM	Centro Naciona	0.97	337	*e*P	Pn	22 02 44.5	-0.9
CNRM				*e*S	Sn	22 02 58.3	-0.7
CNRM				IAML		22 03 05.0	
	comp=Z,36000μm,0.2s						
PACA	Pacayal	1.03	329	*e*P	Pn	22 02 45.4	-0.8
PACA				*e*S	Sn	22 02 58.9	-1.7
PACA	Pacayal	1.03	329	*e*P	Pn	22 02 45.4	-0.8
PACA				*e*S	Sn	22 02 58.9	-1.7
TECA	Tecapa	1.15	322	⇓*i*P	Pn	22 02 46.1	-1.7
TECA	Tecapa	1.15	322	⇓*i*P	Pn	22 02 46.1	-1.7
FAGO	Alcalda de S	1.15	344	⇓*e*P	Pn	22 02 46.9	-0.7
FAGO				*e*S	Sn	22 03 03.0	-0.1
FAGO	Alcalda de S	1.15	344	⇓*e*P	Pn	22 02 46.9	-0.7
FAGO				*e*S	Sn	22 03 03.0	-0.1
COEB	Comit de Eme	1.17	321	⇑*e*P	Pn	22 02 46.5	-1.4
COEB				*e*S	Sn	22 03 01.2	-2.5
COEB				IAML		22 03 03.9	
	comp=Z,45μm,0.4s						
COEB	Comit de Eme	1.17	321	⇑*e*P	Pn	22 02 46.5	-1.4
COEB				*e*S	Sn	22 03 01.2	-2.5
COEB				IAML		22 03 03.9	
	comp=Z,45μm,0.4s						
PQSS	Presa 15 de Se	1.29	324	*e*P	Pn	22 02 48.4	-0.9
UESV	Universidad de	1.44	317	*e*P	Pn	22 02 50.0	-1.3
UESV				AML	AML	22 03 12.4	
	comp=Z,40μm,0.2s						
UESV	Universidad de	1.44	317	*e*P	Pn	22 02 50.0	-1.3
UESV				AML	AML	22 03 12.4	
	comp=Z,40μm,0.2s						
COEG	Centro de Oper	1.49	314	⇑*e*P	Pn	22 02 50.7	-1.4
COEG				*e*S	Sn	22 03 08.8	-2.2
COEG				IAML		22 03 12.7	
	comp=Z,49μm,0.3s						
COEG	Centro de Oper	1.49	314	⇑*e*P	Pn	22 02 50.7	-1.4
COEG				*e*S	Sn	22 03 08.8	-2.2
COEG				IAML		22 03 12.7	
	comp=Z,49μm,0.3s						
TGUH	Tegucigalpa,Un	1.55	19	⇓*i*P	Pn	22 02 53.3	+0.4
TGUH	Tegucigalpa,Un	1.55	19	⇓*i*P	Pn	22 02 53.3	+0.4
TGUH	Tegucigalpa,Un	1.55	19	Pn	Pn	22 02 53.2	+0.4
TGUH	Tegucigalpa,Un	1.55	19	⇓*e*P	Pn	22 02 53.2	+0.4
LFRS	El Faro	1.62	310	⇓*i*P	Pn	22 02 52.4	-1.4
LFRS	El Faro	1.62	310	⇓*i*P	Pn	22 02 52.4	-1.4
LBRS	Las Brisas	1.69	313	*e*P	Pn	22 02 53.6	-1.0
LBRS	Las Brisas	1.69	313	*e*P	Pn	22 02 53.6	-1.0
AEIL	Aeropuerto Ilo	1.71	311	*e*P	Pn	22 02 54.4	-0.5
AEIL				*e*S	Sn	22 03 14.9	-1.3
AEIL				IAML		22 03 19.7	
	comp=Z,61μm,0.2s						
AEIL	Aeropuerto Ilo	1.71	311	*e*P	Pn	22 02 54.4	-0.5
AEIL				*e*S	Sn	22 03 14.9	-1.3
AEIL				IAML		22 03 19.7	
	comp=Z,61μm,0.2s						
LFU	La Fuente	1.74	312	⇓*e*P	Pn	22 02 54.8	-0.6
LFU	La Fuente	1.74	312	⇓*e*P	Pn	22 02 54.8	-0.6
LALI	Alcalda de L	1.75	301	*e*P	Pn	22 02 53.5	-1.9
LALI	Alcalda de L	1.75	301	*e*P	Pn	22 02 53.5	-1.9
UDBS	Universidad Do	1.75	310	*e*P	Pn	22 02 54.6	-0.8
UDBS				*e*S	Sn	22 03 15.2	-1.8
UDBS				AML	AML	22 03 19.7	
	comp=Z,64μm,0.3s						
UDBS	Universidad Do	1.75	310	*e*P	Pn	22 02 54.6	-0.8
UDBS				*e*S	Sn	22 03 15.2	-1.8
UDBS				AML	AML	22 03 19.7	
	comp=Z,64μm,0.3s						
IGN	Direccin Gen	1.76	310	*e*P	Pn	22 02 54.7	-0.9
IGN				*e*S	Sn	22 03 15.2	-2.1
IGN	Direccin Gen	1.76	310	*e*P	Pn	22 02 54.7	-0.9
IGN				*e*S	Sn	22 03 15.2	-2.1
OPAM	Oficina de Pla	1.78	309	*e*P	Pn	22 02 54.9	-1.0
OPAM				*e*S	Sn	22 03 15.8	-2.0
OPAM	Oficina de Pla	1.78	309	*e*P	Pn	22 02 54.9	-1.0
OPAM				*e*S	Sn	22 03 15.8	-2.0
UESS	Universidad de	1.79	310	*e*P	Pn	22 02 55.0	-1.0
UESS				AML	AML	22 03 21.3	
	comp=Z,29μm,0.2s						
UESS	Universidad de	1.79	310	*e*P	Pn	22 02 55.0	-1.0
UESS				AML	AML	22 03 21.3	
	comp=Z,29μm,0.2s						
SNET	Serv Nac Est T	1.79	308	*e*P	Pn	22 02 54.9	-1.1
SNET				IAML		22 03 17.4	
	comp=Z,29μm,0.3s						
SNET	Serv Nac Est T	1.79	308	*e*P	Pn	22 02 54.9	-1.1
SNET				IAML		22 03 17.4	
	comp=Z,29μm,0.3s						
SNET	Serv Nac Est T	1.79	308		Pn	22 02 54.7	-1.4
ITCA	Escuela Especi	1.82	307	*e*P	Pn	22 02 54.6	-1.9
ITCA				*e*S	Sn	22 03 17.0	-1.8
ITCA	Escuela Especi	1.82	307	*e*P	Pn	22 02 54.6	-1.9
ITCA				*e*S	Sn	22 03 17.0	-1.8
BOQS	Boqueron	1.86	308	*e*P	Pn	22 02 56.0	-1.1
BOQS	Boqueron	1.86	308	*e*P	Pn	22 02 56.0	-1.1
PMON	Piamonte	1.87	307	*e*P	Pn	22 02 56.1	-1.0
PMON				*e*S	Sn	22 03 17.4	-2.6
PMON	Piamonte	1.87	307	*e*P	Pn	22 02 56.1	-1.0
PMON				*e*S	Sn	22 03 17.4	-2.6
LLGN	La Laguna	1.94	324	*e*P	Pn	22 02 57.5	-0.6
LLGN	La Laguna	1.94	324	*e*P	Pn	22 02 57.5	-0.6
JAYA	Jayaque - finc	1.94	304	*e*P	Pn	22 02 56.6	-1.5
JAYA				*e*S	Sn	22 03 19.2	-2.6
JAYA				IAML		22 03 22.8	
	comp=Z,39μm,0.2s						
JAYA	Jayaque - finc	1.94	304	*e*P	Pn	22 02 56.6	-1.5
JAYA				*e*S	Sn	22 03 19.2	-2.6
JAYA				IAML		22 03 22.8	
	comp=Z,39μm,0.2s						
CEDA	San Andres	1.99	308	*e*S	Sn	22 03 21.5	-1.2
CEDA	San Andres	1.99	308	*e*S	Sn	22 03 21.5	-1.2
TACO	Tacachico	2.06	312	⇓*i*P	Pn	22 02 58.4	-1.3
TACO	Tacachico	2.06	312	⇓*i*P	Pn	22 02 58.4	-1.3
CEVE	Cerro Verde	2.18	305	*e*P	Pn	22 03 00.8	-0.6
CEVE				IAML		22 03 33.4	
	comp=Z,34μm,0.4s						
CEVE	Cerro Verde	2.18	305	*e*P	Pn	22 03 00.8	-0.6

CEVE				IAML		22 03 33.4	
	comp=Z,34µm,0.4s						
SBLS	San Blas	2.19	305	*e*P	Pn	22 03 00.8	-0.7
SBLS	San Blas	2.19	305	*e*P	Pn	22 03 00.8	-0.7
SNJE	San Jose	2.19	306	*e*P	Pn	22 03 00.8	-0.6
SNJE	San Jose	2.19	306	*e*P	Pn	22 03 00.8	-0.6
UNIC	Universidad Ca	2.21	309	*e*P	Pn	22 03 01.5	-0.2
UNIC				*e*S	Sn	22 03 27.4	-0.8
UNIC	Universidad Ca	2.21	309	*e*P	Pn	22 03 01.5	-0.2
UNIC				*e*S	Sn	22 03 27.4	-0.8
RTR	El Retiro	2.24	306	*e*P	Pn	22 03 02.0	-0.1
RTR	El Retiro	2.24	306	*e*P	Pn	22 03 02.0	-0.1
JUA	Alcaldia, muni	2.29	303	*i* P	Pn	22 03 03.6	+0.8
JUA				*e*S	Sn	22 03 28.1	-2.0
JUA				AML	AML	22 03 32.7	
	comp=Z,27µm,0.3s						
MTO3	Montecristo	2.37	320	⇓*i*P	Pn	22 03 03.5	-0.5
MTO3	Montecristo	2.37	320	⇓*i*P	Pn	22 03 03.5	-0.5
MTO3	Montecristo	2.37	320		Pn	22 03 03.2	-0.8
ESQI	Esquipulas	2.49	323	*e*P	Pn	22 03 05.3	-0.1
ESQI	Esquipulas	2.49	323		Pn	22 03 05.4	+0.1
ACON	Acoyapa	2.62	103		Pn	22 03 05.9	-1.2
HZTE	Horizontes, Gu	2.83	131	*e*P	Pn	22 03 10.9	+0.9
HZTE				*e*S	Sn	22 03 42.6	-0.5
GBS3	Finca Las Img	2.90	128	*i* P	Pn	22 03 10.7	-0.2
GB1A	Borinquen Arri	2.92	127	*i* P	Pn	22 03 11.2	0.0
GB1A				*e*S	Sn	22 03 44.2	-1.1
BUEV	Buena Vista	2.92	127	*i* P	Pn	22 03 11.4	+0.1
BUEV				*i* S	Sn	22 03 46.0	+0.6
BUAI	Buenos Aires	2.94	125	*i* P	Pn	22 03 11.6	+0.2
GPS2	Hotel Rincn d	2.99	127	*e*P	Pn	22 03 13.4	+1.2
GPS2				*e*S	Sn	22 03 46.8	-0.3
MRL	Marmol	3.10	324	*e*P	Pn	22 03 14.8	+1.0
COLC	Colonia	3.16	127	*i* P	Pn	22 03 15.5	+1.1
NBG	Las Nubes	3.20	309	*e*P	Pn	22 03 16.9	+1.7
CUI	Cuipilapa	3.20	126	*e*P	Pn	22 03 15.5	+0.5
CUI				*e*S	Sn	22 03 50.1	-1.9
PLVR	Palo Verde	3.25	133	*e*P	Pn	22 03 15.1	-0.8
PLVR				*e*S	Sn	22 03 50.1	-3.5
PCG	Pacaya	3.29	304	*e*P	Pn	22 03 18.1	+1.7
GRZA	Playa Garza	3.38	141	*e*P	Pn	22 03 16.7	-0.8
ESPN	Las Esperanzas	3.42	96		Pn	22 03 17.7	-0.2
FUG	Fuego 3	3.51	302	*e*P	Pn	22 03 21.2	+1.8
JTS	Las Juntas de	3.59	129	Pn	Pn	22 03 20.0	-0.3
JTS	Las Juntas de	3.59	129	*e*P	Pn	22 03 20.2	0.0
CEDE	Laguna Cedeo	3.66	124	*e*P	Pn	22 03 22.4	+1.1
ARE1	Arenal 1	3.67	125	*e*P	Pn	22 03 22.9	+1.5
CASO	Castillo	3.67	125	*i* P	Pn	22 03 22.3	+0.9
LAFE	Finca La Fe, P	3.94	134	*e*P	Pn	22 03 24.6	-0.5
SRA1	San Ramn	4.08	127	*e*P	Pn	22 03 32.5	+5.5
JACO	JACO, Garabito	4.22	133	*e*P	Pn	22 03 30.1	+1.2
RTAL	Retalhuleu	4.27	297		Pn	22 03 29.6	+0.1
HDC	Heredia	4.42	125	*e*P	Pn	22 03 35.2	+3.6
HDC	Heredia	4.42	125		Pn	22 03 33.4	+1.7
HDC3	Heredia 3	4.42	125	*e*P	Pn	22 03 34.6	+2.9
HUEH	Huehuetenango	4.52	307		Pn	22 03 36.3	+3.1
LCR2	La Lucha 2	4.66	127	*e*P	Pn	22 03 37.7	+2.7
CVTR	Volcan Turrial	4.69	122	*e*P	Pn	22 03 38.5	+2.8
RIMA	Rio Macho	4.75	126	*e*P	Pn	22 03 38.8	+2.5
PETF	Flores	4.76	335	Pn	Pn	22 03 38.2	+1.9
CDM	Cerro de Muert	4.96	127	*e*P	Pn	22 03 41.5	+2.1
MRVA	Moravia de Chi	5.06	122	*e*P	Pn	22 03 43.3	+2.9
EDDO	Dominical	5.07	130	*e*P	Pn	22 03 43.1	+2.6
EDDO				*e*S	Sn	22 04 35.3	-2.5
PEZE	Perez Zeledon,	5.13	128	*e*P	Pn	22 03 43.6	+2.2
EDLM	Las Mercedes	5.26	128	*e*P	Pn	22 03 44.4	+1.2
EDLM				*e*S	Sn	22 04 40.7	-1.9
DRK0	Durika	5.54	126	*e*P	Pn	22 03 48.9	+1.8
EDPN	Palmar Norte	5.56	130	*e*P	Pn	22 03 49.6	+2.4
EDPN				*e*S	Sn	22 04 47.9	-2.0
EDBA	Buenos Aires	5.58	127	*e*P	Pn	22 03 49.2	+1.8
EDBA				*e*S	Sn	22 04 47.9	-2.4
CCIG	Comitan	5.60	312		Pn	22 03 49.4	+1.5
RIOS	Rincon, Osa	5.70	132	*e*P	Pn	22 03 50.8	+1.8
POTG	Potrero Grande	5.77	127	*e*P	Pn	22 03 51.8	+1.7
PTJ1	Puerto Jimnez	5.96	132	*e*P	Pn	22 03 54.9	+2.3
EDSV	San Vito	6.02	128	*e*P	Pn	22 04 00.8	+7.2
PIRO	Carate, Puerto	6.03	133	*e*P	Pn	22 03 55.2	+1.7
BRU2	Volcan	6.26	126	*e*P	Pn	22 03 58.8	+1.9
CCOL	Caracol de Cor	6.29	131	*e*P	Pn	22 03 59.7	+2.6
PRVC	Isla de Provid	6.30	82	*e*P	Pn	22 03 57.8	+0.5
TEIG	Tepich	7.62	356	P	Pn	22 04 15.1	-0.2
TEIG				LR	LR	22 07 36.3	
	comp=Z,5µm,21.6s,slow=42						
TEIG	Tepich	7.62	356	Pn	Pn	22 04 17.3	+2.0
TEIG	Tepich	7.62	356	*e*P	Pn	22 04 17.8	+2.5
CMIG	Matias Romero	8.20	304	P	Pn	22 04 24.4	+1.1
	comp=Z,4.8nm,0.3s,baz=156,slow=9.1,SNR=28						
CMIG				S	Sn	22 06 03.2	+8.7
	comp=Z,8.4nm,0.3s,baz=92,slow=23,SNR=2.2						
BCIP	Isla Barro Col	8.51	113	*e*P	Pn	22 04 30.4	+3.0
BCIP	Isla Barro Col	8.51	113	Pn	Pn	22 04 28.7	+1.3
BCIP	Isla Barro Col	8.51	113	*e*P	Pn	22 04 30.3	+2.8
FSCY	Frank Sound, G	9.22	43		Pn	22 04 39.5	+2.3
LCCY	Blossom Villag	10.21	45		Pn	22 04 49.9	-0.8
CBCY	The Bluff, Cay	10.49	46	Pn	Pn	22 04 56.4	+2.0
NEJ	Negril	10.71	57	*i* P	Pn	22 05 00.9	+3.4
MCJ	Malvern	11.09	60	⇑*i*P	Pn	22 05 06.1	+3.3
MCJ				*i* S		22 08 38.0	
MTDJ	Mount Denham	11.36	59	Pn	Pn	22 05 08.1	+1.6
MTDJ	Mount Denham	11.36	59	*e*P	Pn	22 05 09.1	+2.6
TLIG	Tlapa	11.53	297	Pn	Pn	22 05 10.6	+1.7
BBJ	Bamboo Saint A	11.66	59	⇑*i*P	Pn	22 05 13.9	+3.4
BBJ				*i* S		22 08 54.1	
STH	Stony Hill	11.91	61	*i* P	Pn	22 05 17.3	+3.4
STH				*i* S		22 08 34.7	
HOJ	Hope	11.93	62	*i* P	Pn	22 05 18.0	+3.8
CMJ	Castle Mountai	12.31	62	⇑*i*P	Pn	22 05 23.1	+3.8
DBBC	Dabeiba	12.67	115	*e*P	Pn	22 05 25.2	+0.9
CBOC	Ciudad Bolivar	13.39	119	*e*P	Pn	22 05 35.1	+1.0
PAYG	Puerto Ayora	13.40	191	Pn	Pn	22 05 36.7	+2.6
HELC	Santa Helena	13.65	117	*e*P	Pn	22 05 37.1	-0.6
PLMC	San Jos del P	13.68	123	*e*P	Pn	22 05 37.8	0.0
SMLC	San Martn de	13.98	104	*e*P	P	22 05 44.8	-2.6
YOTC	Yotoco, Valle	14.17	126	*e*P	Pn	22 05 44.1	-0.2
GTBY	Guantanamo Bay	14.18	57	Pn	Pn	22 05 45.5	+1.2
GUY2C	Guyana, Caldas	14.27	120	*e*P	Pn	22 05 47.9	+2.0
PTBC	PUERTO BERRIO,	14.44	113	*e*P	Pn	22 05 48.3	+0.6
RREF	El Recreo	14.46	121	*e*P	Pn	22 05 46.7	-1.8
NORC	Norcasia	14.53	118	*e*P	P	22 05 53.4	0.0
ANIL	Santa Ana	14.63	122	*e*P	P	22 05 54.2	-0.7
TOLC	Tolima	14.65	122	*e*P	P	22 05 53.9	-1.3
CRJC	Cerrejon, Guaj	14.67	95	*e*P	P	22 05 56.2	+1.1
MOIG	Morelia	14.68	300	Pn	P	22 05 53.7	-1.6
061Z	Ochoppi	14.72	25	Pn	Pn	22 05 52.3	+1.1
BBAC	Balboa, Cauca	14.79	134	*e*P	Pn	22 05 53.4	+0.9
OCAC	Ocana	14.86	105	*e*P	P	22 05 58.6	+1.4
ORTC	Ortega, Tolima	15.09	124	*e*P	Pn	22 05 57.3	+1.1
MARP	Paez Belalcaza	15.19	129	*e*P	P	22 06 03.6	+2.6
PCON	Cinco Dias	15.19	131	*e*P	P	22 05 60.0	-1.4
GCUF	Volcan Galeras	15.30	137	*e*P	P	22 06 01.6	-1.0
CRUC	La Cruz	15.32	135	*e*P	P	22 06 02.5	-0.2
ROSC	El Rosal	15.36	119	P	Pn	22 05 59.6	-0.3
	comp=Z,2.3nm,0.3s,baz=116,slow=7.5,SNR=10.0						
ROSC				LR	LR	22 12 33.1	
	comp=Z,1µm,20.8s,baz=320,slow=40						
ROSC	El Rosal	15.36	119	P	P	22 06 02.5	-0.6
ROSC	El Rosal	15.36	119	*e*P	P	22 06 02.0	-1.0
OTAV	Otavalo	15.36	142	Pn	P	22 06 01.5	-1.6
OTAV	Otavalo	15.36	142	*e*P	P	22 06 05.9	+2.7
OTAV				*e*P	Pn	22 06 06.0	+6.0
OTAV	Otavalo	15.36	142	*e*P	P	22 06 02.0	-1.1
URIC	Uribia, Colomb	15.46	92	*e*P	P	22 06 05.1	+1.3
BARC	Barichara	15.57	111	*e*P	P	22 06 03.8	-1.4
BETC	Betania	15.68	128	*e*P	P	22 06 04.9	-1.4
PAMC	Pamplona, Colo	15.74	108	*e*P	Pn	22 06 04.8	0.0
LGNH	Logne	15.76	66	IAmb	IAmb	22 06 24.4	
	comp=Z,399nm,1.2s						
RUSC	La Rusia	15.95	113	*e*P	Pn	22 06 08.1	+0.6
GARC	Garzon, Huila	15.96	129	*e*P	P	22 06 08.9	-0.7
CHIC	Chingaza	15.97	118	*e*P	P	22 06 09.3	-0.6
060A	Indiantown	15.98	25		P	22 06 12.2	+2.9
FLOC	Florencia	16.24	131	*e*P	P	22 06 12.4	-0.1
DWPF	Disney Wildern	16.55	20	P	P	22 06 16.0	+0.3
	baz=202						
DWPF	Disney Wildern	16.55	20	P	P	22 06 17.3	+1.5
DWPF				IAmb	IAmb	22 06 22.4	
	comp=Z,248nm,1.0s						
TAMC	Tame, Arauca	16.90	110	*e*P	P	22 06 20.4	+0.6
SDDR	Presa de Saban	17.09	66	P	P	22 06 22.8	+0.9
SDV	Santo Domingo	17.24	101	P	Pn	22 06 21.8	-1.5
	comp=Z,1.0nm,0.3s,baz=275,slow=5.7,SNR=40						
SDV				LR	LR	22 13 42.0	
	comp=Z,866nm,21.3s,baz=284,slow=40						
SDV	Santo Domingo	17.24	101		Pn	22 06 23.2	-0.1
SDV	Santo Domingo	17.24	101	*e*P	Pn	22 06 22.9	-0.4
SDV	Santo Domingo	17.24	101	*e*P	Pn	22 06 23.1	-0.1
MACC	Macarena, Meta	17.26	126	*e*P	Pn	22 06 22.6	-0.6
ZAIG	Zacatecas	17.34	308	P	P	22 06 27.1	+2.3
656A	Willston	17.40	15	P	P	22 06 26.9	+1.8
PTGC	Puerto Gaitan,	17.57	117	*e*P	P	22 06 29.6	+2.5
KVTX	Kingsville	17.64	329	P	Pn	22 06 30.2	+2.3
KVTX				IAmb	IAmb	22 06 32.6	
	comp=Z,108nm,0.8s						
BANI	BANI	17.75	69	P	Pn	22 06 32.1	+2.7
553A	Crawfordville	17.80	10	P	Pn	22 06 31.2	+1.6
553A				IAmb	IAmb	22 06 39.8	
	comp=Z,221nm,1.1s						
PTLC	Puerto Leguiza	17.83	133	*e*P	Pn	22 06 34.2	+4.0
451A	Vernon	18.05	6	P	Pn	22 06 35.0	+2.2
451A				IAmb	IAmb	22 06 38.1	
	comp=Z,136nm,0.9s						
GRTK	Grand Turk	18.21	59	P	Pn	22 06 36.8	+2.0
GRTK				IAmb	IAmb	22 06 55.1	
	comp=Z,206nm,1.1s						
BRAL	Brewton	18.51	2	P	Pn	22 06 39.3	+1.0
	baz=182						
BRAL	Brewton	18.51	2	P	Pn	22 06 40.4	+2.0
BRAL				IAmb	IAmb	22 06 59.5	
	comp=Z,141nm,0.8s						
735A	Kenedy	18.70	332	Pn	Pn	22 06 43.0	+2.5
735A				IAmb	IAmb	22 07 00.3	
	comp=Z,337nm,1.5s						
441A	DeRidder	18.76	345	P	Pn	22 06 44.5	+3.2
346A	Big Creek Wild	18.78	356	Pn	Pn	22 06 43.7	+2.1
456A	Hilliard	18.83	16	P	Pn	22 06 44.9	+2.8
HKT	Hockley	18.83	338		Pn	22 06 43.9	+1.9
344A	Westbrook Farm	18.98	352	Pn	Pn	22 06 46.8	+2.9
352A	Blakely	18.99	8	Pn	Pn	22 06 47.0	+2.9
833A	Chaparral WMA,	19.05	327	P	Pn	22 06 44.8	+0.1
	baz=143,SNR=27						
342A	Flagon Creek P	19.17	348	P	Pn	22 06 48.1	+2.0
250A	Grady	19.36	4	P	Pn	22 06 50.1	+1.8
VBMS	Vicksburg	19.71	353	P	Pn	22 06 52.6	+0.1
	baz=172						
255A	Hazlehurst	19.86	13	P	Pn	22 06 54.3	0.0
146A	Union	20.00	357	P	Pn	22 06 56.1	+0.2
146A				IAmb	IAmb	22 07 01.2	
	comp=Z,163nm,0.9s						
NATX	Nacogdoches	20.11	343	P	Pn	22 06 57.3	+0.1
	baz=160						
152A	Waverly Hall	20.19	7	P	Pn	22 06 58.7	+0.5
435B	Jarrell	20.26	335	P	Pn	22 06 57.8	-1.1
	baz=151,SNR=5.5						
435B	Jarrell	20.26	335	P	Pn	22 07 00.3	+1.3
435B				IAmb	IAmb	22 07 18.0	
	comp=Z,124nm,0.8s						
257A	Skidaway Islan	20.28	17	P	Pn	22 06 59.9	+0.7
LRAL	Lakeview Retre	20.37	2	P	Pn	22 07 00.4	+0.1
	baz=182,SNR=28						
LRAL	Lakeview Retre	20.37	2	P	Pn	22 07 00.9	+0.6
154A	Montrose	20.40	11	P	Pn	22 07 00.9	+0.3
Z47A	Carrollton	20.53	359	P	Pn	22 07 02.9	+0.9
MPR	Mayaguez	20.66	72	IAmb	IAmb	22 07 22.1	
	comp=Z,74nm,0.9s						
237A	Washetta, Mont	20.69	340	P	Pn	22 07 04.5	+0.4
MLPR	Magueyes Islan	20.70	72	P	P	22 07 01.4	+0.1
AGPR	Aguadilla, PR	20.75	71	P	P	22 07 03.1	+1.3
AGPR				IAmb	IAmb	22 07 21.4	
	comp=Z,203nm,1.1s						
JCT	Junction City	21.00	330	P	P	22 07 04.9	+0.4
	baz=146,SNR=23						
JCT	Junction City	21.00	330	P	P	22 07 06.0	+1.6
AOPR	Arecibo Observ	21.05	72	P	P	22 07 04.1	-1.0
AOPR				IAmb	IAmb	22 07 22.8	
	comp=Z,156nm,1.2s						
Z41A	Richland Creek	21.09	348	P	P	22 07 07.3	+2.0
	baz=166,SNR=15						
GOGA	Godfrey	21.11	10	P	P	22 07 07.5	+2.0
	baz=192,SNR=40						
GOGA	Godfrey	21.11	10	P	P	22 07 08.3	+2.8
ICMP	Isla Caja de M	21.17	73	P	P	22 07 07.3	+1.1
ICMP				IAmb	IAmb	22 07 10.2	
	comp=Z,109nm,0.8s						
Y49A	Blount Mountai	21.22	3	P	P	22 07 08.9	+2.2
Y45A	Yeager Farm, C	21.25	356	P	P	22 07 09.8	+2.7
WHTX	Lake Whitney,	21.27	337	P	P	22 07 10.0	+2.7
	baz=153						
WHTX	Lake Whitney,	21.27	337	P	P	22 07 10.3	+3.0
EMPR	Esperanza - Ma	21.29	71	P	P	22 07 07.7	+0.2
EMPR				IAmb	IAmb	22 07 18.0	
	comp=Z,92nm,0.9s						
Y52A	Lilburn	21.46	8	P	P	22 07 11.6	+2.4
Z56A	Williston	21.47	15	P	P	22 07 11.4	+2.1
Z56A				IAmb	IAmb	22 07 16.4	
	comp=Z,121nm,0.8s						
CSU	Charleston Sou	21.50	18	P	P	22 07 13.1	+3.4
CCAR	Cane Creek	21.55	351	P	P	22 07 13.2	+3.1
SJG	San Juan	21.56	73	P	P	22 07 08.8	-1.7
	comp=Z,51nm,0.8s,baz=267,slow=6.7,SNR=27						
SJG				LR	LR	22 15 40.2	
	comp=Z,2µm,21.7s,baz=263,slow=37						
SJG	San Juan	21.56	73	P	P	22 07 11.7	+1.2
SJG				IAmb	IAmb	22 07 29.1	
	comp=Z,97nm,1.1s						
SJG	San Juan	21.56	73	*e*P	P	22 07 11.1	+0.6
WLAR	White Oak Lake	21.57	348	P	P	22 07 12.8	+2.4
NHSC	New Hope	21.59	18	P	P	22 07 13.3	+2.7
	baz=200,SNR=8.1						
NHSC	New Hope	21.59	18	P	P	22 07 13.7	+3.1
Z38A	Mt. Pleasant	21.61	343	P	P	22 07 13.4	+2.5
Z38A				IAmb	IAmb	22 07 31.3	
	comp=Z,107nm,1.1s						
PDPR	Patillas Dam,	21.66	73	P	P	22 07 12.3	+0.7
ATAH	Atahualpa	21.69	154	P	P	22 07 12.9	+0.6
	comp=Z,20nm,0.9s,baz=346,slow=7.7,SNR=21						
ATAH				LR	LR	22 14 44.9	
	comp=Z,987nm,20.6s,baz=331,slow=34						
X48A	Hartselle	21.79	2	P	P	22 07 15.3	+2.6
HUMP	Col San Antoni	21.85	73	P	P	22 07 14.0	+0.4
CBYP	Canovanas	21.87	72	P	P	22 07 13.2	-0.6
OXF	Oxford	21.89	356	P	P	22 07 15.5	+1.7
	baz=176,SNR=7.9						
Z59A	Georgetown, SC	21.99	19	P	P	22 07 16.7	+1.9
	baz=202						
X43A	Marvell	22.02	353	P	P	22 07 17.2	+2.0
	baz=172						
MTP	Monte Pirata	22.12	73	P	P	22 07 17.4	+0.9
MTP				IAmb	IAmb	22 07 19.4	
	comp=Z,105nm,0.8s						
TXAR	Lajitas Array	22.27	321	P	P	22 07 19.3	+1.2
	comp=Z,74nm,0.7s,baz=143,slow=9.0,SNR=167						
TXAR				PcP	PcP	22 11 14.4	+2.7
	comp=Z,4.2nm,0.8s,baz=157,slow=6.0,SNR=5.6						
TXAR				pPcP		22 11 31.0	
	comp=Z,8.3nm,0.9s,baz=132,slow=1.9,SNR=7.7						
TXAR				ScP	ScP	22 14 45.5	+2.8
	comp=Z,2.1nm,0.9s,baz=134,slow=5.4,SNR=4.8						
TXAR	Lajitas Array	22.27	321	P	P	22 07 18.4	+0.3
TX32	Lajitas Array	22.27	321	IAmb	IAmb	22 07 22.1	
	comp=Z,82nm,0.8s						
X40A	Basin Creek Fa	22.29	349	P	P	22 07 19.3	+1.1
	baz=167,SNR=12						
PLAL	Pickwick Lake	22.31	359	IAmb	IAmb	22 07 38.2	
	comp=Z,178nm,1.2s						
Z35A	Perchaven, San	22.40	339	IAmb	IAmb	22 07 23.9	
	comp=Z,149nm,0.8s						
JSC	Jenkinsville	22.41	14	IAmb	IAmb	22 07 40.2	
	comp=Z,92nm,1.1s						
MIAR	Mount Ida	22.49	347	P	P	22 07 21.9	+1.5
	baz=165,SNR=69						
MIAR	Mount Ida	22.49	347	P	P	22 07 21.7	+1.3
MIAR				IAmb	IAmb	22 07 23.9	
	comp=Z,132nm,0.8s						
SWET	Sewanee	22.60	4	IAmb	IAmb	22 07 41.8	
	comp=Z,182nm,1.3s						
W50A	Signal Mountai	22.63	5	IAmb	IAmb	22 07 40.8	
	comp=Z,68nm,0.9s						
W52A	Murphy	22.69	8	IAmb	IAmb	22 07 43.3	
	comp=Z,170nm,1.1s						
ABTX	Abilene, Hawle	22.72	333	P	P	22 07 23.5	+0.7
	baz=149,SNR=25						
ABTX	Abilene, Hawle	22.72	333	P	P	22 07 23.4	+0.6
ABTX				IAmb	IAmb	22 07 25.7	
	comp=Z,87nm,0.8s						
CDVI	St. Croix	22.79	74	P	P	22 07 23.9	+0.2
CDVI				IAmb	IAmb	22 07 40.8	
	comp=Z,66nm,0.8s						
PAULI	Pauline	22.80	13	P	P	22 07 25.8	+2.2
Y59A	Loris	22.81	19	P	P	22 07 25.6	+2.0
Y59A				IAmb	IAmb	22 07 35.1	
	comp=Z,145nm,0.8s						
PCRV	Puerto La Cruz	22.81	94	P	P	22 07 23.4	-0.6
	comp=Z,41nm,0.7s,baz=175,slow=4.1,SNR=14						
PCRV				LR	LR	22 19 24.2	
	comp=Z,499nm,18.3s,slow=45						
W41B	Gary Mavity, V	22.86	351	P	P	22 07 24.9	+0.8
	baz=169,SNR=28						
X57A	Johnson Farm,	22.88	17	P	P	22 07 26.0	+1.6
	baz=199						
BIRD	Birdtown, Kers	22.95	16	IAmb	IAmb	22 07 44.8	
	comp=Z,192nm,1.2s						
CPCT	Cooper Cave	22.96	7	IAmb	IAmb	22 07 43.9	
	comp=Z,86nm,1.0s						
X37A	Clayton	22.97	344	IAmb	IAmb	22 07 28.8	
	comp=Z,101nm,1.1s						
HBAR	Harrisburg	23.02	354	P	P	22 07 26.8	+1.0
Y60A	Bolivia	23.04	21	P	P	22 07 27.5	+1.6
V48A	Smith Brothers	23.08	2	IAmb	IAmb	22 07 44.1	
	comp=Z,105nm,1.4s						
H06E1	SOCORRO T-PHAS	23.11	288	T	T	22 31 50.1	
	SNR=4.2						
W39A	Magazine	23.16	347	P	P	22 07 28.3	+1.2
	baz=165,SNR=24						
KMSC	Kings Mountain	23.21	14	P	P	22 07 29.4	+1.8
	baz=196,SNR=26						
KMSC	Kings Mountain	23.21	14	IAmb	IAmb	22 07 47.5	
	comp=Z,150nm,1.1s						
TKL	Tuckaleechee C	23.26	8	P	P	22 07 27.9	-0.2
	comp=Z,93nm,0.9s,baz=181,slow=9.8,SNR=56						
TKL				LR	LR	22 17 15.1	
	comp=Z,520nm,19.5s,baz=204,slow=39						
HALT	Halls	23.27	357	P	P	22 07 28.6	+0.4
GNAR	Gosnell	23.37	355	P	P	22 07 30.3	+1.3
W56A	Indian Trail	23.38	15	P	P	22 07 30.7	+1.5
	baz=198,SNR=16						
V53A	Saluda	23.42	10	IAmb	IAmb	22 07 50.3	
	comp=Z,164nm,1.1s						
X59A	McDuffie Farm,	23.43	19	P	P	22 07 30.4	+0.8
	baz=203						
CLTN	Cedars of Leba	23.45	3	IAmb	IAmb	22 07 47.6	
	comp=Z,64nm,0.9s						
WVT	Waverly	23.45	360	P	P	22 07 31.1	+1.3
	baz=180						
WVT	Waverly	23.45	360	P	P	22 07 29.9	+0.1
V52A	Sevierville	23.47	9	IAmb	IAmb	22 07 50.4	
	comp=Z,156nm,1.1s						
LNXT	Lenox	23.47	357	P	P	22 07 31.1	+1.2
PEBM	Pemiscott Bayo	23.51	356	P	P	22 07 32.0	+1.7
W57A	Gilead	23.56	16	IAmb	IAmb	22 07 33.2	
	comp=Z,51nm,0.7s						
GLAT	Glass	23.63	357	P	P	22 07 33.5	+2.2
X60A	Albert Glenn T	23.64	21	P	P	22 07 32.8	+1.3
	baz=204,SNR=6.4						
W58A	Raeford	23.65	18	P	P	22 07 32.9	+1.4
	baz=201,SNR=11						
UTMT	University of	23.68	358	P	P	22 07 32.5	+0.7
SLBS	Sierra La Lagu	23.75	301	P	P	22 07 36.2	+3.5
SLBS				IAmb	IAmb	22 07 53.7	
	comp=Z,222nm,1.4s						
HICK	Hickman	23.89	357	P	P	22 07 35.2	+1.4
U49A	Red Boiling Sp	23.90	4	IAmb	IAmb	22 07 53.3	
	comp=Z,205nm,1.3s						
W59A	Clinton	24.03	19	P	P	22 07 35.9	+0.9
	baz=203						
PARMO	Parma	24.05	356	P	P	22 07 35.6	+0.5
PARMO				IAmb	IAmb	22 07 37.2	
	comp=Z,105nm,0.6s						
V56A	Mocksville	24.05	15	P	P	22 07 36.6	+1.5
	baz=198,SNR=20						
U40A	Yellville	24.11	350	P	P	22 07 36.6	+0.9
	baz=168,SNR=40						
U40A	Yellville	24.11	350	IAmb	IAmb	22 07 56.0	
	comp=Z,63nm,0.9s						
W60A	Pink Hill	24.16	21	P	P	22 07 37.3	+1.2
	baz=204,SNR=6.4						
TZTN	Tazewell	24.16	8	P	P	22 07 37.8	+1.6
	baz=190,SNR=14						
TZTN	Tazewell	24.16	8	IAmb	IAmb	22 07 57.1	
	comp=Z,209nm,1.4s						
PBMO	Poplar Bluff	24.21	355	IAmb	IAmb	22 07 38.4	
	comp=Z,64nm,0.9s						
WMOK	Wichita Mounta	24.21	337	P	P	22 07 37.3	+0.6
	baz=153,SNR=50						
LPIG	La Paz	24.22	301	P	P	22 07 39.1	+2.3
	comp=Z,70nm,1.1s,baz=342,slow=7.4,SNR=7.8						
HHAR	Hobbs	24.24	348	IAmb	IAmb	22 07 57.1	
	comp=Z,112nm,1.3s						
CNNC	Cliffs of the	24.27	20	P	P	22 07 38.4	+1.2
	baz=204						
CNNC	Cliffs of the	24.27	20	P	P	22 07 38.5	+1.3
CNNC				IAmb	IAmb	22 07 57.5	
	comp=Z,98nm,0.9s						
V57A	Coltrane Farms	24.31	16	P	P	22 07 39.2	+1.7
	baz=199,SNR=24						
TUL1	Leonard	24.33	344	P	P	22 07 38.0	+0.3
	baz=161,SNR=12						
TUL1	Leonard	24.33	344	IAmb	IAmb	22 07 57.8	
	comp=Z,181nm,1.2s						
OKCFA	Oklahoma City	24.36	341	P	P	22 07 39.4	+1.3
OKCFA				IAmb	IAmb	22 07 56.6	
	comp=Z,100nm,1.2s						
SEUS	St. Eustatius	24.43	75	P	P	22 07 38.7	-0.2
U54A	Nelsons Funny	24.43	12	P	P	22 07 40.6	+1.8
	baz=194,SNR=25						
U54A	Nelsons Funny	24.43	12	IAmb	IAmb	22 07 59.8	
	comp=Z,152nm,0.8s						
OK025	Westminster Rd	24.48	341	IAmb	IAmb	22 07 58.6	
	comp=Z,174nm,1.4s						
W61A	Ground Anchor	24.53	22	P	P	22 07 41.2	+1.7
	baz=206						
U56A	King	24.59	14	P	P	22 07 41.9	+1.8
	baz=197,SNR=7.9						
U56A	King	24.59	14	IAmb	IAmb	22 08 01.4	
	comp=Z,65nm,0.9s						
OK030	Cody Creek RV	24.63	342	IAmb	IAmb	22 07 58.1	
	comp=Z,104nm,1.0s						
V59A	Middlesex	24.64	19	P	P	22 07 42.1	+1.5
	baz=203,SNR=14						
OK031	S. Brethren Rd	24.67	342	P	P	22 07 41.2	+0.4
OK031				IAmb	IAmb	22 07 59.1	
	comp=Z,174nm,1.2s						
OK029	Liberty Lake	24.71	341	IAmb	IAmb	22 08 00.8	
	comp=Z,112nm,0.8s						
QUOK	Quay	24.83	343	IAmb	IAmb	22 07 44.5	
	comp=Z,102nm,0.9s						
U57A	Blanch	24.94	16	P	P	22 07 44.6	+1.4
	baz=200,SNR=21						
V60A	Jim Taylor Roa	24.96	21	P	P	22 07 45.3	+1.8
	baz=205						
V60A	Jim Taylor Roa	24.96	21	P	P	22 07 44.4	+0.9
V60A				IAmb	IAmb	22 08 03.4	
	comp=Z,136nm,0.9s						
MNTX	Cornudas Mount	24.99	322	P	P	22 07 44.8	+0.9
	baz=136,SNR=51						
S44A	Carbondale	25.05	357	IAmb	IAmb	22 08 02.8	
	comp=Z,131nm,0.9s						
SIUC	Southern Illin	25.06	357	IAmb	IAmb	22 08 03.0	
	comp=Z,149nm,1.1s						
U58A	Oxford	25.13	18	P	P	22 07 45.9	+1.0
	baz=201,SNR=10						
CZSB	Cruzeiro do Su	25.13	143	*e*P	P	22 07 47.7	+2.5
V61A	Roper	25.23	22	P	P	22 07 47.0	+1.1
V61A				IAmb	IAmb	22 08 05.8	
	comp=Z,112nm,1.0s						
V62A	Hyde County Ai	25.25	23	P	P	22 07 46.3	+0.2
	baz=208						
V62A	Hyde County Ai	25.25	23	P	P	22 07 46.8	+0.7
USIN	University of	25.28	0	IAmb	IAmb	22 08 05.0	
	comp=Z,151nm,1.4s						
MSTX	Muleshoe	25.30	330	P	P	22 07 47.2	+0.5
	baz=144,SNR=68						
MSTX	Muleshoe	25.30	330	IAmb	IAmb	22 07 48.5	
	comp=Z,147nm,0.8s						
T56A	Rocky Mt	25.32	15	P	P	22 07 48.3	+1.6
	baz=198,SNR=5.7						
BLA	Blacksburg	25.40	14	P	P	22 07 49.0	+1.5
	baz=197,SNR=7.2						
BLA	Blacksburg	25.40	14	IAmb	IAmb	22 08 09.4	
	comp=Z,98nm,0.9s						
T57A	Hurt	25.49	16	P	P	22 07 49.9	+1.6
	baz=199,SNR=13						

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T57A  Hurt              25.49  16 IAmb   IAmb   22 08 08.0
      comp=Z,80nm,1.1s
S39A  Bolivar           25.49 350 IAmb   IAmb   22 07 49.7
      comp=Z,48nm,0.7s
GRGR  Grenville         25.52  88 P      P      22 07 49.6 +0.8
GRGR                              IAmb   IAmb   22 08 09.4
      comp=Z,185nm,1.4s
CROK  Carrier           25.53 341 IAmb   IAmb   22 07 50.8
      comp=Z,195nm,1.2s
AMTX  Amarillo          25.53 333 P      P      22 07 49.8 +1.0
      baz=147
AMTX  Amarillo          25.53 333 IAmb   IAmb   22 08 08.5
      comp=Z,108nm,1.1s
CCM   Cathedral Cave    25.56 354 P      P      22 07 49.1 +0.2
      baz=172
CCM   Cathedral Cave    25.56 354 P      P      22 07 48.9 +0.1
CCM                               IAmb   IAmb   22 07 50.4
      comp=Z,56nm,0.8s
WCI   Wyandotte Cave    25.58   3 P      P      22 07 49.5 +0.5
      baz=183
WCI   Wyandotte Cave    25.58   3 P      P      22 07 49.8 +0.7
WCI                               IAmb   IAmb   22 08 07.1
      comp=Z,95nm,0.9s
ANWB  Willy Bob         25.59  75 IAmb   IAmb   22 07 50.8
      comp=Z,61nm,0.7s
U60A  Pendleton         25.64  20 P      P      22 07 51.1 +1.5
      baz=204,SNR=8.0
T58A  Grand View Acr    25.64  17 P      P      22 07 50.9 +1.2
      baz=201,SNR=7.3
U61A  Possum Corner     25.76  21 P      P      22 07 51.8 +1.1
      baz=206
U61A  Possum Corner     25.76  21 P      P      22 07 51.4 +0.7
U61A                              IAmb   IAmb   22 08 10.0
      comp=Z,189nm,1.4s
U32A  Winter Ranch,     25.76 339 IAmb   IAmb   22 07 53.6
      comp=Z,108nm,1.0s
S54A  Dingess, Beckl    25.77  12 P      P      22 07 52.0 +1.2
      baz=194,SNR=5.5
R50A  Paris             25.78   6 IAmb   IAmb   22 08 11.2
      comp=Z,59nm,1.1s
KAN13 South Haven SW    25.84 342 P      P      22 07 52.2 +0.8
SVB   Belmont           25.86  86 P      P      22 07 52.0 +0.1
DLPL  La Plaine         25.89  81 P      P      22 07 53.1 +1.0
FDF   Fort de France    25.96  82 P      P      22 07 52.3  -0.6
FDF                               IAmb   IAmb   22 07 53.0
      comp=Z,47nm,0.8s
S56A  Natural Bridge    26.05  15 P      P      22 07 54.9 +1.6
      baz=198,SNR=6.5
KAN01 Argonia South     26.05 342 P      P      22 07 54.4 +1.0
R53A  Hurricane         26.17  10 P      P      22 07 55.4 +1.1
R54A  Victor            26.21  12 P      P      22 07 55.8 +1.0
      baz=195,SNR=6.8
Q44A  Meyer Farm, Va    26.24 358 IAmb   IAmb   22 07 56.2
      comp=Z,60nm,0.8s
S57A  Dark Hollow, R    26.29  16 P      P      22 07 57.0 +1.5
      baz=200,SNR=5.9
T60A  Surry             26.39  20 P      P      22 07 57.9 +1.5
      baz=205
T60A  Surry             26.39  20 P      P      22 07 57.7 +1.4
T60A                              IAmb   IAmb   22 08 13.0
      comp=Z,77nm,0.9s
S58A  Poland Farm, P    26.40  18 P      P      22 07 58.0 +1.5
      baz=202,SNR=5.5
BLO   Bloomington       26.51   2 IAmb   IAmb   22 08 16.0
      comp=Z,110nm,1.5s
Q51A  Peebles           26.63   8 IAmb   IAmb   22 08 17.6
      comp=Z,101nm,0.9s
NNA   Nana              26.71 156 P      P      22 07 59.8 +0.2
Q52A  Bidwell           26.73  10 IAmb   IAmb   22 08 18.5
      comp=Z,84nm,0.9s
Q53A  Leroy             26.76  11 P      P      22 08 01.2 +1.5
      baz=194,SNR=6.5
S59A  Mechanicsville    26.77  19 P      P      22 08 01.4 +1.6
      baz=203
R58B  Mineral           26.78  18 P      P      22 08 01.6 +1.7
      baz=202,SNR=7.4
P48A  Milroy            26.86   4 P      P      22 08 00.6   0.0
R57A  Stanardsville     26.91  16 P      P      22 08 02.5 +1.5
      baz=200,SNR=10
S60A  Water View        26.93  20 P      P      22 08 02.5 +1.3
      baz=204
P49A  Miami Univ. Ec    26.98   5 P      P      22 08 02.4 +0.7
      baz=186,SNR=6.3
P43A  Skaggs, Pawnee    27.00 357 P      P      22 08 02.0 +0.2
Q54A  Coxs Mills        27.01  12 IAmb   IAmb   22 08 04.4
      comp=Z,51nm,0.7s
121A  Cookes Peak, D    27.03 321 P      P      22 08 04.4 +2.0
      baz=133,SNR=20
R58A  Rapidan           27.05  17 P      P      22 08 04.2 +1.8
      baz=201,SNR=7.8
HSIG                    27.06 311 P      P      22 08 05.1 +2.6
CBN   Corbin Frederi    27.16  18 P      P      22 08 04.9 +1.7
      baz=202
CBN   Corbin Frederi    27.16  18 P      P      22 08 04.7 +1.4
CBN                               IAmb   IAmb   22 08 24.1
      comp=Z,54nm,0.7s
SRIG  Santa Rosalia     27.20 306 P      P      22 08 05.3 +1.5
SRIG                              IAmb   IAmb   22 08 07.1
      comp=Z,34nm,0.7s
R59A  King George, V    27.23  19 P      P      22 08 05.9 +2.0
      baz=203
S61A  Accomac           27.24  21 P      P      22 08 05.8 +1.8
      baz=206
319A  Douglas           27.24 317 P      P      22 08 05.7 +1.4
P53A  Whipple           27.39  11 IAmb   IAmb   22 08 24.7
      comp=Z,100nm,0.9s
P52A  Corning           27.41  10 P      P      22 08 06.3 +0.8
      baz=192,SNR=6.7
P52A  Corning           27.41  10 IAmb   IAmb   22 08 24.3
      comp=Z,82nm,0.9s
P38A  Dawn              27.41 350 IAmb   IAmb   22 08 07.5
      comp=Z,55nm,0.9s
Q56A  Snyder Ridge,     27.44  15 P      P      22 08 07.3 +1.5
      baz=198
Q56A  Snyder Ridge,     27.44  15 P      P      22 08 07.1 +1.3
R60A  Leonardtown, M    27.46  19 P      P      22 08 06.4 +0.4
      baz=204
O44A  Mansfield         27.47 359 IAmb   IAmb   22 08 25.1
      comp=Z,70nm,1.2s
KSU1  Kansas State U    27.55 345 P      P      22 08 07.5 +0.7
      baz=161
KSU1  Kansas State U    27.55 345 IAmb   IAmb   22 08 09.6
      comp=Z,74nm,1.2s
Y22D  IRIS PASSCAL I    27.59 324 P      P      22 08 07.5 +0.1
      baz=136
Y22D  IRIS PASSCAL I    27.59 324 P      P      22 08 10.2 +2.8
Q57A  Strasburg         27.63  16 P      P      22 08 08.7 +1.1
      baz=200
O49A  Covington         27.67   6 IAmb   IAmb   22 08 25.8
      comp=Z,44nm,1.0s
SFIN  Lafayette         27.70   1 P      P      22 08 07.8  -0.3
      baz=181,SNR=7.1
Q58A  Fox Den Farm,     27.75  17 P      P      22 08 10.2 +1.7
      baz=201
ACSO  Alum Creek Sta    27.87   8 P      P      22 08 10.5 +0.9
      baz=190,SNR=6.7
ACSO  Alum Creek Sta    27.87   8 IAmb   IAmb   22 08 28.2
      comp=Z,79nm,1.1s
MCWV  Mont Chateau      27.87  13 P      P      22 08 11.1 +1.4
      baz=197,SNR=6.0
HDIL  Hopedale          27.90 358 P      P      22 08 10.0 +0.1
      baz=177
HDIL  Hopedale          27.90 358 IAmb   IAmb   22 08 27.5
      comp=Z,43nm,0.8s
O52A  Adamsville        27.93  10 P      P      22 08 10.9 +0.7
O52A                              IAmb   IAmb   22 08 28.9
      comp=Z,57nm,0.9s
P56A  Dayton Farm, R    27.96  15 P      P      22 08 12.2 +1.7
      baz=199,SNR=11
ANMO  Albuquerque       27.97 326 P      P      22 08 11.1 +0.3
      comp=Z,6.3nm,0.6s,baz=152,slow=10,SNR=24
ANMO                              LR     LR     22 21 35.9
      comp=Z,246nm,20.0s,baz=132,slow=41
ANMO  Albuquerque       27.97 326 P      P      22 08 12.4 +1.6
      baz=138
ANMO  Albuquerque       27.97 326 P      P      22 08 12.3 +1.4
Q59A  Harwood           27.98  19 P      P      22 08 12.6 +2.0
      baz=204
N41A  Harden Midland    28.15 355 P      P      22 08 11.0  -1.1
N41A                              IAmb   IAmb   22 08 13.0
      comp=Z,39nm,0.8s
P57A  Homestead Farm    28.16  16 P      P      22 08 14.3 +2.1
      baz=200,SNR=14
P57A  Homestead Farm    28.16  16 P      P      22 08 14.1 +1.9
P57A                              IAmb   IAmb   22 08 15.4
      comp=Z,46nm,0.7s
O53A  New Philadelph    28.16  11 P      P      22 08 13.2 +0.9
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      baz=194,SNR=11
O53A  New Philadelph    28.16  11 P      P      22 08 12.7 +0.5
O53A                              IAmb   IAmb   22 08 31.2
      comp=Z,85nm,1.1s
CBKS  Cedar Bluff       28.20 340 P      P      22 08 13.2 +0.5
      baz=155,SNR=6.5
CBKS  Cedar Bluff       28.20 340 IAmb   IAmb   22 08 15.0
      comp=Z,36nm,0.8s
O54A  Avella            28.26  12 P      P      22 08 13.8 +0.7
O54A                              IAmb   IAmb   22 08 31.9
      comp=Z,56nm,0.9s
P58A  Pank, Wackersv    28.36  17 P      P      22 08 15.4 +1.4
      baz=202,SNR=8.5
Q60A  Greensboro        28.37  20 P      P      22 08 15.4 +1.3
      baz=205
N49A  Columbus Grove    28.41   6 IAmb   IAmb   22 08 32.4
      comp=Z,57nm,1.0s
SDMD  Soldier's Deli    28.43  18 P      P      22 08 15.6 +1.0
N38A  Joes South For    28.51 351 IAmb   IAmb   22 08 33.7
      comp=Z,114nm,1.5s
N51A  Ashland           28.63   9 IAmb   IAmb   22 08 34.7
      comp=Z,50nm,1.2s
T25A  Trinidad          28.64 332 P      P      22 08 18.8 +2.0
      baz=144
P59A  Jarrettsville     28.73  18 P      P      22 08 19.0 +1.7
      baz=203,SNR=5.3
O56A  Blue Knob Stat    28.75  15 P      P      22 08 19.0 +1.5
      baz=199
O56A  Blue Knob Stat    28.75  15 P      P      22 08 18.8 +1.3
N53A  Lisbon            28.77  11 IAmb   IAmb   22 08 36.3
      comp=Z,57nm,1.1s
TUC   Tucson            28.83 317 P      P      22 08 19.8 +1.4
      baz=128
TUC   Tucson            28.83 317 P      P      22 08 19.5 +1.2
TUC   Tucson            28.83 317 IAmb   IAmb   22 08 26.9
      comp=Z,17nm,1.0s
TUC                                      PcP    22 11 28.9 +2.4
O57A  Amberson          28.94  16 P      P      22 08 20.7 +1.6
      baz=201,SNR=10.0
N35A  Tabor             29.01 348 IAmb   IAmb   22 08 38.6
      comp=Z,106nm,1.2s
M50A  Fremont           29.01   7 IAmb   IAmb   22 08 38.0
      comp=Z,86nm,1.1s
O58A  Lewisberry        29.06  17 P      P      22 08 21.8 +1.6
      baz=202
N54A  Moraine State     29.09  12 P      P      22 08 21.6 +1.1
      baz=196,SNR=12
N54A  Moraine State     29.09  12 IAmb   IAmb   22 08 39.3
      comp=Z,48nm,0.9s
MVL   Millersville      29.11  18 P      P      22 08 21.6 +0.9
P60A  Greenville        29.17  19 P      P      22 08 22.7 +1.5
      baz=205
PAGS  Pennsylvania G    29.21  18 IAmb   IAmb   22 08 24.2
      comp=Z,48nm,0.8s
SSPA  Standing Stone    29.27  16 P      P      22 08 23.0 +0.9
WUPA  West Chester U    29.29  19 P      P      22 08 23.0 +0.8
P61A  Hammonton         29.33  21 P      P      22 08 24.0 +1.4
      baz=206
PSUB  Penn St. - Bra    29.33  20 P      P      22 08 23.4 +0.8
L46A  Eue Claire        29.35   2 IAmb   IAmb   22 08 39.4
      comp=Z,125nm,1.4s
L42A  Oliver, Polo      29.36 357 IAmb   IAmb   22 08 41.5
      comp=Z,65nm,1.4s
L48A  N Adams           29.40   5 IAmb   IAmb   22 08 24.1
      comp=Z,26nm,0.7s
M53A  WI Miller and     29.42  11 P      P      22 08 24.3 +0.9
      baz=194
M53A  WI Miller and     29.42  11 IAmb   IAmb   22 08 42.0
      comp=Z,73nm,1.4s
N56A  West Decatur      29.43  15 P      P      22 08 24.6 +1.0
      baz=199,SNR=6.2
KSCO  Kaye Shedlock'    29.44 336 P      P      22 08 24.8 +1.0
      baz=149,SNR=6.5
KSCO  Kaye Shedlock'    29.44 336 P      P      22 08 25.1 +1.4
KSCO                              IAmb   IAmb   22 08 43.3
      comp=Z,62nm,1.1s
O59A  Robesonia         29.45  18 P      P      22 08 25.5 +1.8
      baz=203
N57A  Milroy            29.47  16 P      P      22 08 24.9 +1.0
      baz=200,SNR=6.9
L44A  Lake County Fo    29.49 360 P      P      22 08 24.1 +0.1
      baz=180
L44A  Lake County Fo    29.49 360 IAmb   IAmb   22 08 41.0
      comp=Z,69nm,0.9s
SCIA  State Center      29.60 352 P      P      22 08 26.1 +1.1
      baz=169
SCIA  State Center      29.60 352 IAmb   IAmb   22 08 44.2
      comp=Z,24nm,0.6s
SDCO  Great Sand Dun    29.64 331 P      P      22 08 27.5 +1.8
      baz=143,SNR=36
SDCO  Great Sand Dun    29.64 331 IAmb   IAmb   22 08 44.4
      comp=Z,46nm,1.3s
M54A  Oil Creek Stat    29.68  12 P      P      22 08 26.7 +1.0
      baz=196,SNR=14
M54A  Oil Creek Stat    29.68  12 IAmb   IAmb   22 08 27.6
      comp=Z,44nm,0.7s
O60A  Telford           29.70  19 P      P      22 08 27.5 +1.7
      baz=205
X18A  Snowflake         29.71 321 P      P      22 08 27.7 +1.4
ALLY  Alegheny Colle    29.72  12 IAmb   IAmb   22 08 44.7
      comp=Z,76nm,1.4s
N58A  Sunbury           29.78  17 P      P      22 08 27.9 +1.4
      baz=202,SNR=5.9
O61A  Allentown         29.79  21 P      P      22 08 27.8 +1.2
      baz=206
AAM   Ann Arbor         29.83   6 P      P      22 08 27.9 +0.9
      baz=188
AAM   Ann Arbor         29.83   6 IAmb   IAmb   22 08 45.0
      comp=Z,53nm,1.1s
LUPA  Lehigh Univers    29.97  19 IAmb   IAmb   22 08 30.7
      comp=Z,30nm,0.8s
W18A  Petrified Fore    29.98 322 P      P      22 08 30.6 +2.0
      baz=133,SNR=5.6
W18A  Petrified Fore    29.98 322 P      P      22 08 30.0 +1.4
M56A  Emporium          29.99  15 P      P      22 08 29.7 +1.2
      baz=199
M56A  Emporium          29.99  15 IAmb   IAmb   22 08 47.4
      comp=Z,63nm,1.2s
K43A  Burlington        30.02 359 IAmb   IAmb   22 08 45.8
      comp=Z,36nm,1.1s
BGNE  Belgrade          30.12 344 P      P      22 08 30.4 +0.8
      baz=160,SNR=6.6
BGNE  Belgrade          30.12 344 IAmb   IAmb   22 08 32.5
      comp=Z,68nm,0.8s
M57A  Sunshine Farm,    30.13  16 P      P      22 08 31.2 +1.5
      baz=201,SNR=11
M57A  Sunshine Farm,    30.13  16 IAmb   IAmb   22 08 32.2
      comp=Z,34nm,0.8s
N59A  State Game Lan    30.13  18 P      P      22 08 31.6 +1.9
      baz=204,SNR=12
N59A  State Game Lan    30.13  18 P      P      22 08 30.9 +1.1
N59A                              IAmb   IAmb   22 08 32.6
      comp=Z,34nm,0.7s
ERPA  Erie              30.20  12 P      P      22 08 31.0 +0.7
      baz=195
ERPA  Erie              30.20  12 IAmb   IAmb   22 08 48.9
      comp=Z,62nm,0.9s
L34A  Svendsen Farm,    30.22 347 IAmb   IAmb   22 08 31.4
      comp=Z,44nm,0.7s
K38A  Parkersburg       30.27 353 IAmb   IAmb   22 08 31.9
      comp=Z,32nm,0.7s
S22A  4UR Ranch, Cre    30.29 329 P      P      22 08 33.1 +1.6
      baz=141,SNR=46
JFWS  Jewell Farm       30.30 356 P      P      22 08 31.6 +0.4
      baz=175
N60A  Cedar Hill Far    30.30  19 P      P      22 08 32.4 +1.2
      baz=205
BRNJ  Basking Ridge     30.31  20 P      P      22 08 32.8 +1.6
BRNJ                              IAmb   IAmb   22 08 34.1
      comp=Z,38nm,0.8s
M58A  Price's Panora    30.35  17 P      P      22 08 33.1 +1.4
      baz=202,SNR=5.7
K50A  Casco             30.42   8 P      P      22 08 32.8 +0.7
N61A  South Mountain    30.46  20 P      P      22 08 33.9 +1.3
      baz=206
Q24A  Divide            30.46 333 P      P      22 08 34.5 +1.4
      baz=145
PTGA  Pitinga           30.61 114 P      P      22 08 32.4  -1.7
      comp=Z,4.7nm,0.8s,baz=320,slow=7.6,SNR=10
PTGA                              LR     LR     22 21 53.7
      comp=Z,1µm,21.8s,baz=306,slow=38
PTGA  Pitinga           30.61 114 P      P      22 08 32.9  -1.2
PTGA  Pitinga           30.61 114 eP     P      22 08 33.2  -1.0
ODNJ  Ogdensburg        30.65  20 IAmb   IAmb   22 08 53.5
      comp=Z,57nm,1.3s
MVCO  Mesa Verde        30.76 326 P      P      22 08 37.1 +1.5
      baz=138,SNR=14
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MVCO  Mesa Verde        30.76 326 IAmb   IAmb   22 08 39.0
      comp=Z,29nm,0.8s
L56A  Greenwood         30.76  15 P      P      22 08 36.4 +1.1
      baz=200
L56A  Greenwood         30.76  15 P      P      22 08 36.4 +1.1
L56A                              IAmb   IAmb   22 08 55.8
      comp=Z,41nm,1.1s
WVNY  West Valley, N    30.77  13 IAmb   IAmb   22 08 52.8
      comp=Z,57nm,1.5s
M59A  Waymart           30.81  18 P      P      22 08 36.8 +1.2
      baz=204,SNR=12
PAL   Palisades         30.82  21 P      P      22 08 37.0 +1.3
      baz=207
PAL   Palisades         30.82  21 P      P      22 08 37.1 +1.4
PAL                               IAmb   IAmb   22 08 38.2
      comp=Z,25nm,0.8s
L57A  Andrews Acres     30.82  16 P      P      22 08 37.0 +1.2
      baz=201
M60A  Port Jervis       30.87  20 P      P      22 08 37.6 +1.4
      baz=206,SNR=6.8
ETMB  Extrema           30.89 135 eP     P      22 08 37.6 +0.9
OGNE  Ogallala          30.90 339 P      P      22 08 38.5 +1.9
      baz=152
OGNE  Ogallala          30.90 339 P      P      22 08 38.2 +1.6
OGNE                              IAmb   IAmb   22 08 39.5
      comp=Z,37nm,1.0s
M61A  Granite Spring    31.14  21 P      P      22 08 40.1 +1.5
      baz=207
L58A  Harry Jones Me    31.14  17 P      P      22 08 40.2 +1.6
      baz=203,SNR=7.7
WSPT  Westport, CT      31.17  21 P      P      22 08 40.3 +1.5
I42A  Draeger Farm,     31.22 358 IAmb   IAmb   22 08 58.7
      comp=Z,66nm,1.1s
WUAZ  Wupatki           31.24 321 P      P      22 08 41.3 +1.6
      baz=131,SNR=9.8
BINY  Binghamton        31.25  17 P      P      22 08 40.7 +1.2
      baz=202,SNR=5.7
BINY  Binghamton        31.25  17 IAmb   IAmb   22 08 41.9
      comp=Z,28nm,0.8s
K56A  Middlesex         31.35  15 P      P      22 08 41.5 +1.0
      baz=200,SNR=6.2
ISCO  Idaho Springs     31.35 333 P      P      22 08 42.1 +1.2
      baz=145,SNR=7.5
I45A  Fountain          31.38   2 P      P      22 08 39.6  -1.0
YLE   Yale              31.44  22 P      P      22 08 41.7 +0.5
YLE                               IAmb   IAmb   22 08 58.3
      comp=Z,41nm,1.1s
SMCO  Snowmass          31.48 331 IAmb   IAmb   22 08 45.0
      comp=Z,26nm,0.8s
L59A  Walton            31.52  18 P      P      22 08 43.1 +1.1
      baz=204,SNR=8.0
L59A  Walton            31.52  18 IAmb   IAmb   22 09 01.2
      comp=Z,55nm,1.0s
M62A  Hamden            31.56  22 P      P      22 08 43.0 +0.7
      baz=208
J54A  Appleton          31.59  13 P      P      22 08 43.0 +0.6
J54A                              IAmb   IAmb   22 08 44.1
      comp=Z,49nm,0.7s
PV15  Paradox Valley    31.59 328 P      P      22 08 44.1 +1.2
K57A  Scipio Center     31.59  16 P      P      22 08 43.7 +1.1
      baz=201
L60A  Shokan            31.59  19 P      P      22 08 44.1 +1.5
      baz=206,SNR=7.0
KSCT  Kent School, K    31.61  21 P      P      22 08 42.4  -0.2
KSCT                              IAmb   IAmb   22 08 45.5
      comp=Z,36nm,1.1s
PV02  Paradox Valley    31.62 327 P      P      22 08 44.2 +1.1
PV02                              IAmb   IAmb   22 08 46.9
      comp=Z,21nm,0.6s
PV13  Radium Mtn., P    31.63 327 P      P      22 08 44.8 +1.5
PV13                              IAmb   IAmb   22 08 46.2
      comp=Z,41nm,1.0s
I51A  Listowel          31.65   9 P      P      22 08 44.6 +1.5
      baz=192
PV05  Paradox Valley    31.72 327 P      P      22 08 45.5 +1.5
PV05                              IAmb   IAmb   22 08 46.5
      comp=Z,46nm,0.7s
PV07  Paradox Valley    31.75 328 P      P      22 08 46.0 +1.8
PV07                              IAmb   IAmb   22 09 02.8
      comp=Z,52nm,1.2s
J55A  Hilton            31.77  14 P      P      22 08 45.9 +1.8
J55A                              IAmb   IAmb   22 08 51.0
      comp=Z,26nm,0.8s
H43A  Windswept, Lux    31.78   0 P      P      22 08 44.4 +0.2
H43A                              IAmb   IAmb   22 09 02.6
      comp=Z,27nm,0.8s
M63A  Gales Ferry       31.84  23 P      P      22 08 46.2 +1.4
      baz=210
K58A  Earlville         31.86  17 P      P      22 08 46.0 +1.1
      baz=203
K58A  Earlville         31.86  17 IAmb   IAmb   22 09 04.6
      comp=Z,76nm,1.4s
PV22  Blue Mesa, Par    31.89 328 IAmb   IAmb   22 08 48.3
      comp=Z,29nm,0.9s
PV23  Carpenter Ridg    31.95 327 P      P      22 08 47.2 +1.2
PV23                              IAmb   IAmb   22 08 49.5
      comp=Z,56nm,0.8s
ECSD  EROS Data Cent    31.96 348 P      P      22 08 45.6  -0.3
      baz=164,SNR=30
ECSD  EROS Data Cent    31.96 348 IAmb   IAmb   22 08 46.6
      comp=Z,45nm,1.0s
L61A  Hillsdale 1, H    32.00  20 P      P      22 08 47.5 +1.4
      baz=207
J56A  Wolcott           32.01  15 P      P      22 08 47.5 +1.3
      baz=200,SNR=5.7
J56A  Wolcott           32.01  15 P      P      22 08 46.2   0.0
K59A  Cooperstown       32.11  18 P      P      22 08 48.6 +1.5
      baz=204
UCCT  U. Connecticut    32.12  22 P      P      22 08 48.4 +1.3
UCCT                              IAmb   IAmb   22 09 07.7
      comp=Z,53nm,1.1s
GLMI  Grayling          32.25   4 P      P      22 08 48.3   0.0
      baz=186
K60A  Five Rivers En    32.27  19 P      P      22 08 50.1 +1.6
      baz=206
PDMCI Parker Dam,Lak    32.27 316 P      P      22 08 50.2 +1.6
      baz=126,SNR=6.9
J57A  Williamstown      32.36  16 P      P      22 08 50.0 +0.7
      baz=202
J57A  Williamstown      32.36  16 IAmb   IAmb   22 09 09.2
      comp=Z,78nm,1.1s
N23A  Red Feather La    32.40 334 P      P      22 08 52.0 +2.0
      baz=145
L63A  North Scituate    32.41  23 P      P      22 08 50.8 +1.2
      baz=210
L63A  North Scituate    32.41  23 P      P      22 08 51.5 +1.9
L63A                              IAmb   IAmb   22 08 54.8
      comp=Z,69nm,1.3s
SAML  Samuel            32.48 130 P      P      22 08 50.0  -0.6
SAML                              IAmb   IAmb   22 08 52.3
      comp=Z,37nm,0.8s
SAML  Samuel            32.48 130 eP     P      22 08 50.5  -0.1
BRYW  Bryant College    32.48  23 IAmb   IAmb   22 08 52.2
      comp=Z,42nm,1.0s
K61A  Williamstown      32.52  20 P      P      22 08 52.4 +1.7
      baz=207
L61B  Northampton       32.52  21 P      P      22 08 52.1 +1.3
      baz=208
W13A  Hualapai Mount    32.57 318 P      P      22 08 52.8 +1.3
G40A  Rib Lake          32.64 357 IAmb   IAmb   22 09 10.3
      comp=Z,47nm,1.2s
SWSC  Sam W. Stewart    32.67 313 P      P      22 08 54.1 +2.1
      baz=122
IKP   In-Ko-Pah, Jac    32.73 312 P      P      22 08 54.3 +1.5
      baz=121
BC3   Big Chuckawall    32.80 314 P      P      22 08 55.5 +2.0
      baz=123
SPMN  Marine on St.     32.82 353 P      P      22 08 52.6  -0.6
      baz=171,SNR=15
SPMN  Marine on St.     32.82 353 IAmb   IAmb   22 09 10.9
      comp=Z,70nm,1.1s
O20A  White River Ci    32.84 330 P      P      22 08 55.4 +1.7
      baz=141,SNR=57
J59A  Piesco            32.84  18 P      P      22 08 54.3 +0.8
      baz=204
H53A  Bobcaygeon        32.84  12 P      P      22 08 54.0 +0.5
      baz=197,SNR=7.0
NEE2  Needles Airpor    32.86 317 P      P      22 08 55.8 +2.0
      baz=126
K62A  Royalston         32.87  21 P      P      22 08 55.9 +2.1
      baz=209
I58A  Old Forge         32.91  17 P      P      22 08 54.8 +0.7
      baz=203,SNR=6.4
SADO  Sadowa            32.92  11 P      P      22 08 53.2  -0.9
      comp=Z,42nm,0.6s,baz=218,slow=9.0,SNR=60
SADO                              LR     LR     22 22 02.2
      comp=Z,699nm,20.3s,baz=195,slow=36
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SADO  Sadowa           32.92  11 IAmb   IAmb   22 08 56.2
      comp=Z,42nm,0.7s
I57A  Carthage         32.94  16 P      P      22 08 55.4 +1.0
      baz=202
J60A  Lant Hill Farm   32.98  19 P      P      22 08 56.3 +1.6
      baz=206
PKCU  Pink Cliffs      33.08 323 P      P      22 08 56.9 +0.9
KNB   Kanab            33.10 322 P      P      22 08 57.1 +1.1
SUSD  Miller           33.17 345 P      P      22 08 56.2  -0.2
      baz=160,SNR=11
I59A  Olmsteadville    33.33  18 P      P      22 08 58.0 +0.2
      baz=205,SNR=6.6
J61A  Chester          33.36  20 P      P      22 08 59.3 +1.3
      baz=208
BELC  Belle Mtn. Jos   33.37 314 P      P      22 09 00.3 +1.9
      baz=123
NCB   Newcomb          33.38  18 P      P      22 09 00.2 +2.0
NCB                              IAmb   IAmb   22 09 17.7
      comp=Z,59nm,1.4s
MTPU  Mount Pierson    33.41 324 P      P      22 09 00.6 +1.6
COWI  Conover          33.43 358 IAmb   IAmb   22 08 58.9
      comp=Z,20nm,0.8s
TPFO  Pinon Flats      33.48 313 P      P      22 09 00.5 +1.2
      baz=122
XPFO  Pion Flat        33.48 313 P      P      22 09 00.2 +0.8
PFO   Pinyon Flats O   33.49 313 PcP    PcP    22 11 41.4 +2.5
      comp=Z,8.7nm,0.7s,baz=82,slow=1.9,SNR=9.9
PFO                              pPcP          22 11 58.0
      comp=Z,13nm,0.9s,baz=48,slow=3.1,SNR=7.9
PFO                              LR     LR     22 24 42.1
      comp=Z,677nm,20.1s,baz=128,slow=40
PFO   Pinyon Flats O   33.49 313 P      P      22 09 01.0 +1.6
      baz=122
H57A  Richville        33.50  16 P      P      22 09 00.4 +1.2
      baz=202
J62A  Henniker         33.51  21 P      P      22 09 01.5 +2.2
      baz=209
F36A  Milaca           33.53 353 IAmb   IAmb   22 09 00.7
      comp=Z,22nm,0.8s
I60A  Shoreham         33.56  19 P      P      22 09 00.9 +1.2
      baz=206
GMRC  Granite Mounta   33.57 316 P      P      22 09 01.8 +1.7
      baz=124
PLVO  Plevna           33.62  14 P      P      22 09 01.3 +1.1
E43A  Lone Tree Farm   33.69   1 IAmb   IAmb   22 09 01.3
      comp=Z,24nm,0.8s
MSU   Marysvale        33.72 324 P      P      22 09 03.3 +1.8
G54A  Lake Saint Pet   33.73  12 P      P      22 09 01.6 +0.4
      baz=197,SNR=5.6
H58A  Gabriels         33.80  18 P      P      22 09 02.5 +0.6
      baz=204,SNR=8.0
J63A  Strafford        33.82  22 P      P      22 09 03.3 +1.3
      baz=210
LONY  Lake Ozonia      33.87  17 P      P      22 09 02.8 +0.4
      baz=203,SNR=6.2
TCRU  Three Creeks R   33.95 324 P      P      22 09 04.4 +1.0
HEC   Hector,Ludlow    34.06 315 P      P      22 09 06.2 +1.9
      baz=124
K22A  Casper           34.09 335 P      P      22 09 06.0 +1.4
      baz=146,SNR=7.2
K22A  Casper           34.09 335 IAmb   IAmb   22 09 23.6
      comp=Z,54nm,1.2s
H59A  Cadyville        34.16  18 P      P      22 09 05.6 +0.7
      baz=205
G57A  Newington        34.20  16 P      P      22 09 05.9 +0.7
      baz=202
SHPR  Sheep Range      34.24 319 P      P      22 09 08.6 +2.6
I62A  Tamworth         34.25  21 P      P      22 09 07.5 +1.9
      baz=209,SNR=6.1
ALGO  Algonquin Park   34.27  12 P      P      22 09 06.1 +0.2
      baz=197,SNR=6.4
FRNY  Flat Rock        34.36  18 IAmb   IAmb   22 09 25.4
      comp=Z,46nm,1.2s
LBNH  Lisbon           34.36  20 P      P      22 09 07.5 +0.9
      baz=208
D41A  Chassel          34.38 359 IAmb   IAmb   22 09 25.3
      comp=Z,74nm,1.2s
H60A  Morristown       34.39  19 P      P      22 09 07.9 +1.0
      baz=207
RSSD  Black Hills      34.40 339 P      P      22 09 08.9 +1.7
      baz=151
RSSD  Black Hills      34.40 339 P      P      22 09 09.1 +1.8
RSSD                             IAmb   IAmb   22 09 10.2
      comp=Z,22nm,0.7s
G58A  Ormstown         34.51  17 P      P      22 09 09.1 +1.2
      baz=204
H61A  Lyndonville      34.62  20 P      P      22 09 10.3 +1.4
      baz=208
GSC   Goldstone, Bar   34.64 316 P      P      22 09 11.1 +1.8
LPAZ  La Paz           34.65 145 P      P      22 09 11.0 +0.9
      comp=Z,4.2nm,0.6s,baz=345,slow=8.7,SNR=19
LPAZ                             PcP    PcP    22 11 44.3 +1.2
      comp=Z,16nm,1.2s,baz=351,slow=5.0,SNR=4.8
LPAZ                             LR     LR     22 24 17.7
      comp=Z,436nm,20.8s,baz=309,slow=38
LPAZ  La Paz           34.65 145 P      P      22 09 10.4 +0.3
LPAZ  La Paz           34.65 145 eP     P      22 09 11.2 +1.1
BFSC  Mount Baldy Ra   34.66 313 P      P      22 09 10.6 +1.0
      baz=121
I63A  Otisfield        34.67  22 P      P      22 09 11.3 +2.0
      baz=210
I63A  Otisfield        34.67  22 P      P      22 09 11.4 +2.1
JLU   Jordanelle       34.80 328 P      P      22 09 12.5 +1.6
H62A  Milan            34.92  21 P      P      22 09 13.1 +1.6
      baz=209
G60A  Masonville       34.99  19 P      P      22 09 12.8 +0.8
      baz=207
PASC  Pasadena Art C   35.00 313 P      P      22 09 13.5 +1.1
E55A  Montcerf-Lytto   35.19  14 P      P      22 09 14.6 +0.8
      baz=200
TPNV  Topopah Spring   35.21 319 P      P      22 09 16.5 +2.2
      baz=126
EDW2  Edwards Air Fo   35.23 314 P      P      22 09 15.6 +1.2
      baz=122
DUG   Dugway, Tooele   35.24 326 P      P      22 09 16.3 +1.7
      baz=134,SNR=16
DUG   Dugway, Tooele   35.24 326 IAmb   IAmb   22 09 17.6
      comp=Z,28nm,1.2s
D32A  Dogwood Acres,   35.31 349 P      P      22 09 14.0  -0.8
FURC  Furnace Creek,   35.33 317 P      P      22 09 17.3 +2.2
      baz=125
EYMN  Ely              35.39 356 P      P      22 09 14.3  -1.2
      baz=174,SNR=14
EYMN  Ely              35.39 356 IAmb   IAmb   22 09 15.5
      comp=Z,15nm,0.6s
H63A  New Sharon       35.40  22 P      P      22 09 17.2 +1.6
      baz=211
G61A  St-Isidore-de-   35.41  20 P      P      22 09 17.4 +1.6
      baz=208
WVL   Waterville       35.45  23 P      P      22 09 17.3 +1.3
MDP   Montagnes des    35.47  99 LR     LR     22 25 09.6
      comp=Z,588nm,19.6s,baz=286,slow=39
PDAR  Pinedale Array   35.51 332 P      P      22 09 17.9 +1.1
      comp=Z,13nm,0.6s,baz=127,slow=10,SNR=142
PDAR                             PcP    PcP    22 11 44.6  -0.2
      comp=Z,2.4nm,0.8s,baz=151,slow=3.9,SNR=3.2
PDAR                             pPcP          22 12 02.6
      comp=Z,4.1nm,0.9s,baz=143,slow=5.1,SNR=3.8
PDAR                             LR     LR     22 27 40.2
      comp=Z,279nm,18.7s,baz=142,slow=43
PDAR  Pinedale Array   35.51 332 P      P      22 09 17.5 +0.6
BW06  Boulder Array    35.51 332 P      P      22 09 17.0 +0.1
      baz=142,SNR=22
MPMC  Manual Prospec   35.52 316 P      P      22 09 18.5 +1.5
      baz=124
F59A  Saint Guilaume   35.52  18 P      P      22 09 17.3 +0.7
      baz=206
E56A  St. Veronique    35.53  15 P      P      22 09 17.9 +1.2
      baz=202
PB16  IPOC Station P   35.62 149 IAmb   IAmb   22 09 21.3
      comp=Z,43nm,0.9s
R11A  Troy Canyon, C   35.64 321 P      P      22 09 19.7 +1.7
      baz=129
R11A  Troy Canyon, C   35.64 321 P      P      22 09 19.7 +1.7
E57A  Chemin Saint G   35.64  16 P      P      22 09 18.6 +0.9
      baz=203
H64A  Troy             35.68  23 P      P      22 09 20.1 +2.0
      baz=212
G62A  West of Eustis   35.70  21 P      P      22 09 19.3 +1.1
      baz=210,SNR=8.6
E58A  La Victoria      35.85  17 P      P      22 09 19.9 +0.5
      baz=204
D55A  Sainte-Anne-du   35.86  14 P      P      22 09 19.8 +0.3
      baz=201,SNR=8.9
F60A  Warwick          35.89  19 P      P      22 09 20.6 +0.9
      baz=207
G63A  Kingsbury        35.94  22 P      P      22 09 21.4 +1.2
      baz=211
B35A  Bob, Littlefor   36.01 353 IAmb   IAmb   22 09 37.6
      comp=Z,34nm,1.3s
ITTB  Itaituba         36.02 116 eP     P      22 09 19.0  -2.3
D56A  ZEC Mazanza, M   36.07  15 P      P      22 09 21.7 +0.4
      baz=202
H65A  Eastbrook        36.11  24 P      P      22 09 23.3 +1.7
      baz=213,SNR=5.3
PKME  Peaks-Kenny Pk   36.19  22 P      P      22 09 23.8 +1.5
      baz=211
MALB  Monte Alegre     36.23 111 eP     P      22 09 23.6 +0.4
AGMN  Agassiz Nation   36.24 351 P      P      22 09 22.1  -0.6
      baz=166,SNR=32
AGMN  Agassiz Nation   36.24 351 IAmb   IAmb   22 09 24.9
      comp=Z,51nm,0.9s
G64A  Maxfield         36.38  23 P      P      22 09 25.6 +1.7
      baz=212
PSGCX Pisagua          36.40 151 IAmb   IAmb   22 09 26.7
      comp=Z,20nm,0.8s
VLDQ  Val d'Or         36.46  12 IAmb   IAmb   22 09 42.6
      comp=Z,42nm,1.2s
VES   Vestal, Richgr   36.49 315 P      P      22 09 27.2 +2.1
      baz=122
TPH   Tonopah          36.50 319 P      P      22 09 26.1 +0.8
MDND  Maddock          36.52 347 P      P      22 09 25.4 +0.2
      baz=160,SNR=21
PKM   Mcpherson Peak   36.52 313 P      P      22 09 27.3 +1.7
      baz=120
H66A  Whiting          36.56  25 P      P      22 09 27.1 +1.6
      baz=215
D58A  Chemin du LacG   36.62  17 P      P      22 09 26.6 +0.6
      baz=205
F63A  Nahmakanta, Br   36.63  22 P      P      22 09 27.0 +0.9
      baz=211
F63A  Nahmakanta, Br   36.63  22 P      P      22 09 27.1 +0.9
F63A                             IAmb   IAmb   22 09 45.8
      comp=Z,53nm,1.1s
LOHW  Long Hollow      36.65 332 IAmb   IAmb   22 09 29.2
      comp=Z,63nm,1.1s
G65A  Princeton        36.80  24 P      P      22 09 29.4 +1.9
      baz=214,SNR=8.0
MOOW  Moose Ponds      36.82 332 IAmb   IAmb   22 09 31.1
      comp=Z,41nm,0.8s
LATQ  La Tuque         36.91  17 P      P      22 09 29.4 +0.9
      baz=205,SNR=5.1
LATQ  La Tuque         36.91  17 IAmb   IAmb   22 09 47.0
      comp=Z,34nm,1.3s
ELK   Elko             36.97 324 P      P      22 09 30.9 +1.5
      comp=Z,15nm,0.8s,baz=136,slow=9.7
ELK                              LR     LR     22 25 51.3
      comp=Z,254nm,21.2s,baz=148,slow=38
ELK   Elko             36.97 324 IAmb   IAmb   22 09 32.4
      comp=Z,20nm,0.9s
GGN   Saint George     37.02  25 P      P      22 09 30.4 +1.0
F64A  Sherman          37.05  23 P      P      22 09 30.9 +1.3
      baz=212,SNR=5.1
D60A  Saint Jean D'O   37.05  19 P      P      22 09 30.4 +0.8
      baz=208
TA01  Diego Aracena    37.21 152 P      P      22 09 32.7 +1.5
TA01                             IAmb   IAmb   22 09 33.8
      comp=Z,46nm,0.9s
H17A  Grant Village    37.24 333 P      P      22 09 33.2 +1.6
      baz=141,SNR=8.7
H17A  Grant Village    37.24 333 IAmb   IAmb   22 09 51.3
      comp=Z,27nm,1.1s
RLMT  Red Lodge        37.25 335 P      P      22 09 31.8 +0.2
      baz=144
RLMT  Red Lodge        37.25 335 IAmb   IAmb   22 09 49.6
      comp=Z,60nm,1.4s
LKWY  Lake             37.30 333 P      P      22 09 33.8 +1.7
LKWY                             IAmb   IAmb   22 09 51.3
      comp=Z,64nm,1.4s
VILB  Vilhena          37.30 132 eP     P      22 09 32.3 +0.1
PB08  IPOC Station P   37.33 150 P      P      22 09 33.7 +1.0
PB08                             IAmb   IAmb   22 09 35.5
      comp=Z,26nm,1.0s
YMP   Mirror Lake Pl   37.33 333 P      P      22 09 34.5 +2.1
OMMB  Old Mammoth Mi   37.39 317 P      P      22 09 34.2 +1.2
LAO   LASA Array       37.39 339 P      P      22 09 33.7 +1.1
      baz=149,SNR=5.8
LAO   LASA Array       37.39 339 IAmb   IAmb   22 09 51.6
      comp=Z,54nm,1.2s
NVAR  Mina Array Bea   37.39 319 P      P      22 09 35.5 +2.5
      comp=Z,9.3nm,0.8s,baz=134,slow=7.2,SNR=31
NVAR                             PcP    PcP    22 11 52.3 +1.8
      comp=Z,9.7nm,0.7s,baz=134,slow=3.9,SNR=12
NVAR                             pPcP          22 12 08.9
      comp=Z,17nm,0.7s,baz=137,slow=3.9,SNR=13
NVAR                             ScP    ScP    22 15 35.2 +3.9
      comp=Z,2.6nm,0.7s,baz=148,slow=4.7,SNR=5.6
NVAR                             LR     LR     22 28 14.7
      comp=Z,571nm,19.5s,baz=132,slow=42
NVAR  Mina Array Bea   37.39 319 P      P      22 09 34.7 +1.7
LHV   Little Huntoon   37.42 319 P      P      22 09 35.2 +2.3
LHV                              IAmb   IAmb   22 09 36.7
      comp=Z,24nm,0.9s
PATCX Punta Patache    37.44 152 P      P      22 09 34.7 +1.4
PATCX                            IAmb   IAmb   22 09 35.8
      comp=Z,39nm,1.0s
LSQQ  Lebel-sur-Quev   37.45  12 P      P      22 09 33.5 +0.5
      baz=197
E63A  Oxbow            37.49  22 P      P      22 09 34.7 +1.3
      baz=212
D61A  St Aubert, Com   37.55  20 P      P      22 09 34.9 +1.1
      baz=209
NPGB  Novo Progresso   37.66 119 eP     P      22 09 35.9 +0.6
E64A  Bridgewater      37.71  23 P      P      22 09 36.1 +0.9
      baz=213
D62A  Allapoint, All   37.83  21 P      P      22 09 37.4 +1.2
      baz=211
PQI   Presque Isle     37.85  22 P      P      22 09 37.4 +1.0
PQI                              IAmb   IAmb   22 09 38.1
      comp=Z,44nm,1.2s
PB01  IPOC Station P   37.94 152 IAmb   IAmb   22 09 39.9
      comp=Z,24nm,0.7s
MATQ  Matagami         38.00  11 P      P      22 09 37.9 +0.3
      baz=196,SNR=27
D63A  Stockholm        38.13  22 P      P      22 09 39.8 +1.1
      baz=212,SNR=7.4
ULM   Lac du Bonnet    38.15 352 P      P      22 09 37.8  -1.1
      comp=Z,39nm,0.7s,baz=167,slow=9.0,SNR=85
ULM                              LR     LR     22 27 50.3
      comp=Z,306nm,20.7s,baz=159,slow=40
DGMT  Dagmar           38.30 342 P      P      22 09 41.2 +0.9
      baz=154,SNR=35
PB07  IPOC Station P   38.35 153 P      P      22 09 42.1 +1.0
PB07                             IAmb   IAmb   22 09 43.7
      comp=Z,37nm,0.9s
HLID  Hailey           38.46 328 P      P      22 09 43.3 +1.5
      baz=135,SNR=31
HLID  Hailey           38.46 328 IAmb   IAmb   22 09 45.4
      comp=Z,27nm,1.0s
BOZ   Bozeman (W)      38.65 333 P      P      22 09 44.8 +1.4
      baz=141,SNR=16
BOZ   Bozeman (W)      38.65 333 IAmb   IAmb   22 09 46.0
      comp=Z,37nm,0.7s
PB09  IPOC Station P   38.70 152 P      P      22 09 45.5 +1.4
PB04  IPOC Station P   38.77 153 P      P      22 09 45.0 +0.5
PB04                             IAmb   IAmb   22 09 46.9
      comp=Z,53nm,1.3s
SIV   San Ignacio      38.78 136 P      P      22 09 45.2 +0.6
      comp=Z,73nm,0.9s,baz=314,slow=7.8,SNR=207
SIV                              PcP    PcP    22 11 56.4 +1.5
      comp=Z,28nm,0.8s,baz=263,slow=1.9,SNR=6.2
DLMT  Dillon           38.90 332 P      P      22 09 47.0 +1.5
MFID  Camas Ranch      39.10 327 IAmb   IAmb   22 09 52.5
      comp=Z,17nm,0.8s
PB06  IPOC Station P   39.34 153 P      P      22 09 50.1 +0.8
PB06                             IAmb   IAmb   22 09 51.8
      comp=Z,28nm,1.0s
BEKR  Beckworth        39.53 319 P      P      22 09 52.1 +1.4
LVC   Limon Verde      39.56 152 P      P      22 09 52.5 +1.1
      comp=Z,17nm,0.7s,baz=324,slow=5.8,SNR=17
LVC   Limon Verde      39.56 152 P      P      22 09 53.0 +1.6
LVC                              IAmb   IAmb   22 09 54.5
      comp=Z,38nm,1.0s
LVC   Limon Verde      39.56 152 eP     P      22 09 52.4 +1.1
PB10  IPOC Station P   39.63 155 P      P      22 09 51.6  0.0
PB10                             IAmb   IAmb   22 09 54.2
      comp=Z,31nm,0.9s
EGMT  Eagleton         39.81 337 P      P      22 09 54.1 +1.2
      baz=145,SNR=17
EGMT  Eagleton         39.81 337 IAmb   IAmb   22 10 12.1
      comp=Z,43nm,1.1s
PB15  IPOC Station P   39.83 153 P      P      22 09 54.3 +0.8
PB15                             IAmb   IAmb   22 09 56.0
      comp=Z,56nm,1.5s
WVOR  Wild Horse Val   40.01 324 P      P      22 09 55.7 +1.0
WVOR                             IAmb   IAmb   22 09 58.0
      comp=Z,36nm,0.8s
ORV   Oroville         40.09 318 P      P      22 09 56.4 +1.2
MSO   Missoula         40.62 332 P      P      22 10 00.4 +0.8
      baz=139,SNR=31
MSO   Missoula         40.62 332 P      P      22 10 00.5 +0.8
MSO                              IAmb   IAmb   22 10 17.5
      comp=Z,79nm,1.2s
O03E  Paynes Creek     40.68 319 P      P      22 10 01.2 +1.0
      baz=123
PB14  IPOC Station P   40.68 155 P      P      22 10 01.2 +0.6
BMO   Blue Mountains   40.86 328 P      P      22 10 01.5  -0.1
JTMT  Jette            41.47 333 IAmb   IAmb   22 10 24.4
      comp=Z,34nm,1.2s
GO02  Mina Guanaco     41.49 155 P      P      22 10 08.2 +0.9
GO02                             IAmb   IAmb   22 10 10.0
      comp=Z,40nm,0.9s
M04C  Macdoel          41.53 321 P      P      22 10 07.9 +0.6
      baz=124
F10A  Beach Ranch, E   41.58 329 IAmb   IAmb   22 10 09.1
      comp=Z,41nm,0.8s
YBH   Yreka Blue Hor   42.05 320 P      P      22 10 11.3  -0.1
      comp=Z,3.5nm,0.7s,baz=115,slow=6.9,SNR=2.1
L04D  Klamath Falls    42.06 321 P      P      22 10 12.3 +0.7
      baz=124
PRPB  Parauapebas      42.08 114 eP     P      22 10 11.4  -0.5
PINE  Pine Mountain    42.17 324 IAmb   IAmb   22 10 14.5
      comp=Z,26nm,0.8s
KHMM  Horse Mountain   42.23 319 IAmb   IAmb   22 10 15.3
      comp=Z,34nm,0.8s
WALA  Waterton Lakes   42.31 335 IAmb   IAmb   22 10 31.0
      comp=Z,25nm,0.9s
E09A  Wood Farm, Sta   42.42 329 IAmb   IAmb   22 10 16.1
      comp=Z,23nm,0.7s
I05D  Terrebonne, OR   42.73 324 P      P      22 10 17.9 +1.0
      baz=127
I04A  Tendick Farm,    43.03 323 P      P      22 10 19.6 +0.3
      baz=126,SNR=7.9
HAWA  Hanford          43.05 328 IAmb   IAmb   22 10 20.6
      comp=Z,25nm,0.8s
NEW   Newport          43.14 331 P      P      22 10 20.2 +0.1
      comp=Z,17nm,0.8s,baz=138,slow=8.3,SNR=29
NEW   Newport          43.14 331 P      P      22 10 20.3 +0.2
      baz=136,SNR=15
AC02  Maricunga        43.17 155 P      P      22 10 21.7 +0.7
AC02                             IAmb   IAmb   22 10 24.1
      comp=Z,32nm,0.8s
G05D  Wamic, OR        43.27 325 P      P      22 10 22.7 +1.5
      baz=128,SNR=6.5
GO03  Copiap           43.41 157 P      P      22 10 22.8 +0.3
GO03                             IAmb   IAmb   22 10 24.6
      comp=Z,39nm,1.4s
H04A  Detroit Lake     43.43 324 IAmb   IAmb   22 10 24.0
      comp=Z,36nm,0.8s
FFC   Flin Flon        43.51 348 P      P      22 10 23.2 +0.4
FFC                              IAmb   IAmb   22 10 40.0
      comp=Z,53nm,1.1s
I03D  Drain, OR        43.53 322 P      P      22 10 24.0 +0.8
      baz=124
H04D  Lebanon          43.65 324 P      P      22 10 24.4 +0.2
      baz=126
SNDB  Serra Nova Dou   43.66 123 eP     P      22 10 25.1 +0.5
F05D  White Salmon     43.75 326 P      P      22 10 25.7 +0.7
      baz=128,SNR=5.2
I02D  Swisshome        44.06 322 P      P      22 10 27.8 +0.3
      baz=124
LTY   Liberty          44.20 328 IAmb   IAmb   22 10 30.4
      comp=Z,28nm,0.7s
PP1B  Ponte de Pedra   44.21 132 eP     P      22 10 30.0 +1.0
B08A  Colville Reser   44.27 330 IAmb   IAmb   22 10 30.5
      comp=Z,32nm,0.8s
G03D  McMinnville, O   44.35 324 P      P      22 10 30.4 +0.6
      baz=126,SNR=5.5
LON   Longmire         44.48 327 IAmb   IAmb   22 10 32.6
      comp=Z,24nm,0.8s
AC05  El Transito      44.52 158 P      P      22 10 32.6 +1.2
AC05                             IAmb   IAmb   22 10 33.8
      comp=Z,28nm,0.9s
LCO   Las Campanas     44.52 158 P      P      22 10 32.3 +0.7
LCO                              IAmb   IAmb   22 10 33.7
      comp=Z,28nm,1.0s
RPN   Rapa Nui         44.67 208 LR     LR     22 24 27.9
      comp=Z,827nm,21.3s,baz=33,slow=29
F04D  Rainier, OR      44.73 325 P      P      22 10 34.2 +1.4
      baz=127
C06D  Leavenworth      44.75 329 P      P      22 10 34.2 +1.2
      baz=131
E04D  Cinebar          44.77 326 P      P      22 10 33.8 +0.7
      baz=128
D05A  Enumclaw         44.85 327 IAmb   IAmb   22 10 35.5
      comp=Z,55nm,0.8s
SMTB  Santa Maria do   45.26 116 eP     P      22 10 36.6  -0.8
D04E  Lakebay          45.26 327 P      P      22 10 37.4 +0.4
      baz=128
ARAG  Araguaiana, MT   45.35 127 eP     P      22 10 37.1  -1.0
GO04  Tololo Observa   45.54 159 P      P      22 10 40.5 +0.8
GO04                             IAmb   IAmb   22 10 41.9
      comp=Z,31nm,1.1s
AQDB  Aquidauana       45.55 136 eP     P      22 10 39.3  -0.2
B05A  Bryant           45.59 328 P      P      22 10 39.2  -0.4
      baz=130
D03D  Eldon            45.65 327 P      P      22 10 40.2 +0.1
      baz=128,SNR=5.4
NLWA  Neilton Lookou   45.99 326 P      P      22 10 43.4 +0.6
NLWA                             IAmb   IAmb   22 10 45.0
      comp=Z,44nm,0.8s
CO03  El Pedregal      46.19 159 P      P      22 10 45.3 +0.7
CO03                             IAmb   IAmb   22 10 46.7
      comp=Z,40nm,1.0s
PEXB  Peixe            46.22 121 eP     P      22 10 45.5 +0.6
CO02  Combarbal        46.42 160 P      P      22 10 47.1 +0.7
H03N2 Juan Fernandez   46.53 170 T      T      23 00 18.1
      baz=348,slow=76,SNR=6.1
H03N1 Juan Fernandez   46.54 170 T      T      23 00 23.1
      baz=348,slow=76,SNR=5.2
H03N3 Juan Fernandez   46.55 170 T      T      23 00 22.1
      baz=348,slow=76,SNR=5.1
ZON   Zonda            47.55 158 P      P      22 10 56.7 +1.5
ZON                              IAmb   IAmb   22 10 58.3
      comp=Z,75nm,1.3s
VA03  San Esteban      48.00 160 P      P      22 10 59.8 +1.2
MT02  Curacav          48.27 161 P      P      22 11 00.2  -0.4
MT02                             IAmb   IAmb   22 11 02.7
      comp=Z,50nm,1.4s
PEL   Peldehue         48.31 161 P      P      22 11 01.6 +0.7
PEL                              IAmb   IAmb   22 11 02.8
      comp=Z,30nm,1.1s
BDFB  Brasilia         48.32 124 P      P      22 11 01.7 +0.3
      comp=Z,9.1nm,0.7s,baz=289,slow=12,SNR=11
BDFB                             LR     LR     22 32 14.4
      comp=Z,764nm,21.3s,baz=311,slow=37
BDFB  Brasilia         48.32 124 P      P      22 11 00.6  -0.8
MT05  Renca            48.52 161 P      P      22 11 03.4 +0.8
CPUP  Villa Florida    48.71 143 P      P      22 11 03.7  -0.4
      comp=Z,22nm,0.9s,baz=329,slow=7.9,SNR=33
CPUP                             PcP    PcP    22 12 28.9 +0.6
      comp=Z,7.7nm,0.9s,baz=262,slow=4.9,SNR=3.7
CPUP                             LR     LR     22 33 20.2
      comp=Z,310nm,18.5s,baz=322,slow=38
CPUP  Villa Florida    48.71 143 P      P      22 11 03.7  -0.4
CPUP                             IAmb   IAmb   22 11 04.3
      comp=Z,43nm,1.1s
CPUP  Villa Florida    48.71 143 eP     P      22 11 04.3 +0.2
TRCB  Terra Rica       49.21 135 eP     P      22 11 07.4  -0.6
SDBA  SAO DESIDERIO    49.25 119 eP     P      22 11 09.1 +0.6
PCMB  Pacaembu         49.39 133 eP     P      22 11 08.7  -0.7
IPMB  Ipameri, GO      49.47 127 eP     P      22 11 09.8  -0.4
BO02  Sierra Bellavi   49.80 162 IAmb   IAmb   22 11 15.0
      comp=Z,63nm,1.4s
PTGB  Pitanga          50.88 137 eP     P      22 11 20.1  -0.6
BB19B Bebedouro        51.04 131 eP     P      22 11 21.1  -0.9
BI03  Tigo             51.09 165 P      P      22 11 22.2 +0.3
BI02  San Fabin de     51.39 163 P      P      22 11 25.6 +1.3
BI02                             IAmb   IAmb   22 11 27.1
      comp=Z,50nm,1.2s
ITQB  Itaqui           51.64 145 eP     P      22 11 26.7 +0.5
FRTB  Fartura          51.70 134 eP     P      22 11 26.0  -0.9
ITAB  Concordia        52.56 139 eP     P      22 11 32.8  -0.4
RCLB  Rio Claro- Sao   52.59 131 eP     P      22 11 33.9 +0.4
FRB   Frobisher Bay    52.86  11 P      P      22 11 33.3  -1.4
      comp=Z,28nm,0.7s,baz=210,slow=8.1,SNR=65
DIAM  Diamantina, MG   53.24 124 eP     P      22 11 37.9  -0.6
LC01  Cunco            53.32 165 P      P      22 11 39.4 +0.9
LC01                             IAmb   IAmb   22 11 40.5
      comp=Z,54nm,1.1s
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VAO   Valinhos         53.36 131 eP      P        22 11 38.9 -0.3
YKA   Yellowknife Ar   53.40 345  P      P        22 11 38.4 -0.4
      comp=Z,9.3nm,0.7s,baz=136,slow=8.3,SNR=181
YKA                               pP     pP       22 11 54.6 -3.0
      comp=Z,12nm,0.7s,baz=146,slow=7.2,SNR=14
YKA                               PcP    PcP      22 12 45.3 +0.2
      comp=Z,5.4nm,0.7s,baz=140,slow=4.2,SNR=8.9
YKA                               pPcP            22 13 02.5
      comp=Z,9.2nm,0.8s,baz=138,slow=4.6,SNR=8.0
YKA                               ScP    ScP      22 16 39.0 +2.6
      comp=Z,1.5nm,0.8s,baz=140,slow=4.7,SNR=5.8
YKA                               LR     LR       22 37 20.2
      comp=Z,312nm,19.9s,baz=0.0,slow=39
PET01 Itanhaem-SP      53.92 133 eP      P        22 11 42.6 -0.5
CPSB  Cacapava Do Su   54.02 143 eP      P        22 11 43.6 -0.1
PARB  Paraibuna        54.55 131 eP      P        22 11 48.9 +1.0
CNLB  Canela           54.82 140 eP      P        22 11 49.3 -0.3
PLTB  Pedras Altas     54.92 144 eP      P        22 11 50.5 +0.1
PLCA  Paso Flores      55.39 164  P      P        22 11 54.8 +1.2
      comp=Z,27nm,1.0s,baz=339,slow=8.5,SNR=25
PLCA                              LR     LR       22 31 53.0
      comp=Z,200nm,18.5s,baz=358,slow=32
PLCA  Paso Flores      55.39 164  P      P        22 11 54.7 +1.2
PLCA  Paso Flores      55.39 164 eP      P        22 11 54.5 +0.9
SJMB  Sao Joao De Ma   55.47 123 eP      P        22 11 54.3 -0.1
DLBC  Dease Lake       55.65 335  P      P        22 11 56.0 +0.7
      comp=Z,26nm,0.7s,baz=131,slow=6.2,SNR=24
DLBC  Dease Lake       55.65 335  P      P        22 11 56.1 +0.8
DLBC                              IAmb   IAmb     22 11 57.6
      comp=Z,36nm,0.8s
BSFB  Barra de Sao F   55.81 123 eP      P        22 11 58.2 +1.3
TAOE  Nuku Hiva Isla   56.22 250 eT      T        23 11 55.4
      comp=Z,110nm,0.2s
DUB01 Friburgo-RJ      56.30 127 eP      P        22 11 59.7 -0.7
RIB01 Linhares ES      56.42 123 eP      P        22 12 00.9 -0.3
LL01  San Ignacio de   56.48 166  P      P        22 12 01.9 +0.7
GO07  Milladeo Hill,   56.91 168  P      P        22 12 05.3 +1.1
RKT   Rikitea          58.24 233 eS      S        22 20 11.2 +0.6
      comp=Z,549nm,26.0s
RKT                              eLR     LR       22 29 28.9
      comp=Z,772nm,29.0s
SFJD  Kangerlussuaq    59.68  16  P      P        22 12 22.0 -1.2
      comp=Z,9.5nm,0.7s,baz=263,slow=4.7,SNR=4.8
SFJD  Kangerlussuaq    59.68  16  P      P        22 12 22.9 -0.3
SFJD                              IAmb   IAmb     22 12 41.2
      comp=Z,36nm,1.2s
HYT   Haines Junctio   60.14 334  P      P        22 12 27.3 +0.6
RES   Resolute Bay     62.22 358  P      P        22 12 39.2 -1.2
      comp=Z,9.0nm,0.6s,baz=183,slow=9.7,SNR=33
TGL   Tana Glacier     62.41 333  P      P        22 12 43.6 +1.6
TGL                               IAmb   IAmb     22 13 00.3
      comp=Z,29nm,1.0s
EPYK  Eagle Plains     62.84 340  P      P        22 12 45.1 +0.4
EPYK                              IAmb   IAmb     22 12 45.4
      comp=Z,37nm,1.3s
VRDI  Verde Repeater   62.89 333  P      P        22 12 46.5 +1.2
VRDI                              IAmb   IAmb     22 13 02.3
      comp=Z,40nm,1.4s
INK   Inuvik           62.99 343  P      P        22 12 44.4 -1.1
      comp=Z,12nm,0.9s,baz=122,slow=7.8,SNR=23
INK                               pP     pP       22 13 01.9 -2.9
      comp=Z,15nm,0.9s,baz=136,slow=6.3,SNR=7.2
BCAR  Beaver Creek A   63.00 336  P      P        22 12 46.0 +0.2
GLB   Gilahina Butte   63.13 333  P      P        22 12 47.4 +0.7
GLB                               IAmb   IAmb     22 13 04.6
      comp=Z,23nm,1.0s
N25K  Chitina, Valde   63.55 333  P      P        22 12 49.8 +0.3
      baz=114
N25K  Chitina, Valde   63.55 333  IAmb   IAmb     22 13 07.5
      comp=Z,18nm,0.8s
KLU   Klutina          64.08 333  P      P        22 12 53.8 +0.8
KLU                               IAmb   IAmb     22 13 10.7
      comp=Z,17nm,0.8s
ICESG Greenland Ices   64.16  17 i P     P        22 12 52.1 -1.6
ICESG                             IAmb   IAmb     22 12 53.0
      comp=Z,36nm,0.8s
ICESG                            e                22 13 09.1
DOT   Dot Lake         64.18 336  IAmb   IAmb     22 13 11.2
      comp=Z,17nm,0.8s
SCRK  Sand Creek       64.29 336  P      P        22 12 54.8 +0.4
      baz=116
RIDG  Independent Ri   64.54 336  IAmb   IAmb     22 13 13.6
      comp=Z,31nm,1.0s
TULEG Thule            64.74   5  IAmb   IAmb     22 13 15.5
      comp=Z,51nm,1.3s
TULEG Thule            64.74   5 i P     P        22 12 56.9 -0.1
TULEG                             IAmb   IAmb     22 12 57.9
      comp=Z,19nm,0.9s
TULEG                            e                22 13 14.6
SML   Sawmill          65.27 333  P      P        22 13 00.3 -0.4
SML                               IAmb   IAmb     22 13 17.9
      comp=Z,26nm,1.0s
PRP   Porcupine Dome   65.55 337  P      P        22 13 02.8 +0.2
HDA   Harding Lake     65.65 336  P      P        22 13 02.8 -0.2
      baz=113,SNR=8.6
HDA   Harding Lake     65.65 336  IAmb   IAmb     22 13 20.1
      comp=Z,22nm,0.9s
RC01  Rabbit Creek A   65.66 332  P      P        22 13 03.1 -0.1
      baz=109
IL18  Eielson Array    65.72 336  P      P        22 13 03.1 -0.4
IL31                   65.77 336  IAmb   IAmb     22 13 20.9
      comp=Z,37nm,1.3s
ILAR  Eielson Array    65.77 336  P      P        22 13 03.2 -0.6
      comp=Z,7.2nm,0.9s,baz=110,slow=5.2,SNR=70
ILAR                              pP     pP       22 13 19.6 -3.7
      comp=Z,12nm,1.0s,baz=161,slow=4.5,SNR=14
ILAR                              PKPPKP P'P'df   22 41 42.0 -0.5
      comp=Z,0.6nm,1.0s,baz=315,slow=4.3,SNR=4.1
ILAR                              LR     LR       22 47 47.4
      comp=Z,169nm,18.0s,baz=124,slow=41
FYU   Fort Yukon       65.89 338  P      P        22 13 04.9 +0.4
BMAR  Burnt Mountain   66.05 339  P      P        22 13 05.6  0.0
RND   Reindeer         66.06 334  P      P        22 13 05.7 -0.1
POKR  Poker Plat Res   66.12 336  P      P        22 13 05.7 -0.4
      baz=113,SNR=6.4
POKR  Poker Plat Res   66.12 336  P      P        22 13 05.8 -0.2
MCK   McKinley         66.21 335  P      P        22 13 06.5 -0.2
      baz=111,SNR=5.9
SUMG  Summit           66.54  14 i P     P        22 13 08.0 -1.1
SUMG                             e                22 13 26.1
SUMG  Summit           66.54  14  P      P        22 13 08.5 -0.6
SUMG  Summit           66.54  14 i P     P        22 13 08.0 -1.1
SUMG                             e                22 13 26.1
NEA2  Nenana           66.57 336  P      P        22 13 09.0 +0.1
      baz=111
TRF   Thorofare Moun   66.68 334  IAmb   IAmb     22 13 27.1
      comp=Z,32nm,1.0s
SKT   Skwentna         66.75 333  IAmb   IAmb     22 13 27.3
      comp=Z,28nm,1.1s
I23K  Minto, Yukon-K   66.89 336  P      P        22 13 10.8 -0.1
      baz=111,SNR=11
I23K  Minto, Yukon-K   66.89 336  IAmb   IAmb     22 13 28.5
      comp=Z,40nm,1.2s
PMOZ  Porto Moniz, M   67.05  60  A      A        22 40 41.3
      comp=Z,188nm,20.0s
BPAW  Bear Paw Mtn.    67.19 335  IAmb   IAmb     22 13 29.8
      comp=Z,29nm,1.1s
MLY   Manley           67.40 336  P      P        22 13 13.8 -0.5
      baz=110,SNR=16
COLD  Coldfoot         67.96 338  P      P        22 13 18.4 +0.8
      baz=111,SNR=15
COLD  Coldfoot         67.96 338  IAmb   IAmb     22 13 36.1
      comp=Z,24nm,1.0s
PPT   Papeete          67.96 245  LR     LR       22 34 19.2
      comp=Z,584nm,21.6s,baz=4.0,slow=28
PPT2  Papeete2         67.97 245 eS      S        22 22 11.2 -1.2
      comp=Z,225nm,26.2s
PPT2                             eLQ     LQ       22 31 09.4
      comp=Z,5µm,37.0s
PPT2                             eLR     LR       22 33 50.7
      comp=Z,2µm,26.5s,baz=59
TOLK  Toolik Lake Re   68.26 340  P      P        22 13 19.6  0.0
      baz=112,SNR=8.3
IMAR  Indian Mountai   68.89 336  P      P        22 13 22.6 -0.9
CHGN  Chignik          68.89 326  P      P        22 13 23.1 -0.6
CHGN                              IAmb   IAmb     22 13 27.6
      comp=Z,53nm,0.9s
TBI   Tubuai           70.10 239 eS      S        22 22 38.2 +1.0
      comp=Z,201nm,32.0s
TBI   Tubuai           70.10 239 eLR     LR       22 35 02.4
      comp=Z,1µm,26.8s,baz=67
TBI   Tubuai           70.10 239 eT      T        23 29 20.6
      comp=Z,14nm,0.3s
RDOG  Red Dog Mine     72.86 338  P      P        22 13 47.4 -0.1
UNV   Unalaska Valle   73.30 323  P      P        22 13 50.9 +0.6
UNV                               IAmb   IAmb     22 13 53.8
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      comp=Z,46nm,1.1s
ANM   Nome             73.39 334  P      P        22 13 51.0 +0.3
PTEO  Sao Teotonio     73.82  54 epP     pP       22 14 15.1 +1.5
PCAS  Casmilo, Conde   73.86  52 epP     pP       22 14 15.3 +1.5
PCAS                              A      A        22 14 17.0
      comp=Z,154nm,1.7s
MORF  Marmelete        73.89  55 epP     pP       22 14 15.0 +0.9
MORF  Marmelete        73.89  55 epP     pP       22 14 15.9 +1.8
MORF                              A      A        22 14 16.8
      comp=Z,79nm,1.4s
COI   Coimbra          73.91  52  P      P        22 13 55.7 +1.5
COI                               IAmb   IAmb     22 14 12.7
      comp=Z,86nm,1.5s
PMTG  Montargil        74.12  53 epP     pP       22 14 15.9 +0.6
PMTG                              A      A        22 14 17.3
      comp=Z,64nm,1.5s
MESJ  Messejana        74.20  54 epP     pP       22 14 16.8 +1.0
MESJ  Messejana        74.20  54 epP     pP       22 14 16.4 +0.6
PVIS  Viseu            74.28  51 epP     pP       22 14 16.9 +0.6
PVIS                              A      A        22 14 18.3
      comp=Z,73nm,1.5s
POLO  Lamas de Olo     74.32  50 epP     pP       22 14 17.3 +0.7
PBDV  Barranco-do-Ve   74.47  55 epP     pP       22 14 18.4 +1.0
PBDV                              A      A        22 14 21.0
      comp=Z,46nm,1.6s
MTE   Manteigas        74.56  51  P      P        22 13 58.7 +0.6
MTE                               IAmb   IAmb     22 13 59.9
      comp=Z,25nm,1.1s
MTE   Manteigas        74.56  51 epP     pP       22 14 18.6 +0.6
MTE                               A      A        22 14 19.9
      comp=Z,84nm,1.3s
MTE                               A      A        22 42 32.8
      comp=Z,312nm,20.0s
PESTR Estremoz         74.63  53  P      P        22 13 59.6 +1.1
PESTR Estremoz         74.63  53  A      A        22 14 23.9
      comp=Z,56nm,1.3s
PESTR                             A      A        22 39 34.2
      comp=Z,289nm,24.0s
PVAQ  Vaqueiros        74.63  54  P      P        22 13 58.6 +0.2
PVAQ  Vaqueiros        74.63  54 epP     pP       22 14 19.5 +1.2
PVAQ                              A      A        22 14 20.9
      comp=Z,58nm,1.6s
PVAQ                              A      A        22 40 44.4
      comp=Z,285nm,22.0s
PCBR  Castelo Branco   74.65  52 epP     pP       22 14 19.6 +1.2
PCBR                              A      A        22 14 24.1
      comp=Z,78nm,1.4s
PMRV  Marv??o          74.74  52 epP     pP       22 14 20.0 +1.0
PMRV                              A      A        22 14 21.0
      comp=Z,50nm,1.4s
PMRV                              A      A        22 39 36.9
      comp=Z,293nm,26.0s
MVO   Moncorvo         74.91  51 epP     pP       22 14 20.5 +0.5
MVO                               A      A        22 14 22.0
      comp=Z,47nm,1.5s
MVO                               A      A        22 43 54.8
      comp=Z,175nm,20.0s
PBAR  Barrancos        75.11  54 epP     pP       22 14 22.1 +1.0
PBAR                              A      A        22 14 24.1
      comp=Z,57nm,1.5s
EKR1  Eskdalemuir Ar   76.70  36  P      P        22 14 10.3 +0.4
EKR2  Eskdalemuir Ar   76.71  36  P      P        22 14 10.1 +0.1
EKB6  Eskdalemuir Ar   76.71  36  P      P        22 14 11.1 +1.1
EKR4  Eskdalemuir Ar   76.72  36  P      P        22 14 10.8 +0.8
EKR8  Eskdalemuir Ar   76.75  36  P      P        22 14 09.6 -0.7
PAB   San Pablo        77.08  52  P      P        22 14 13.2 +0.7
ESDC  Sonseca Array    77.36  52  P      P        22 14 11.7 -2.4
      comp=Z,2.1nm,0.8s,baz=286,slow=5.4,SNR=11
ESDC                              pP     pP       22 14 30.8 -3.3
      comp=Z,22nm,1.0s,baz=279,slow=4.7,SNR=19
ESDC                              LR     LR       22 44 07.8
      comp=Z,302nm,20.4s,baz=280,slow=32
ESDC  Sonseca Array    77.36  52  P      P        22 14 15.2 +1.1
ESBB  Sonseca Array    77.36  52  P      P        22 14 14.5 +0.5
ATKA  Atka Island      77.99 321  P      P        22 14 17.4 +0.3
ATKA                              IAmb   IAmb     22 14 25.0
      comp=Z,19nm,0.8s
HOPE  Hope Point       79.47 152  P      P        22 14 26.1 +1.0
HOPE                              IAmb   IAmb     22 14 27.2
      comp=Z,39nm,0.9s
CLF   Chambon-Foret    80.80  43  P      P        22 14 31.6 -1.0
CLF                               IAmb   IAmb     22 14 31.8
      comp=Z,33nm,1.4s
KOWA  Kowa             80.99  77  P      P        22 14 32.5 -1.8
TIC   Toumodi          81.54  85 ePKP2   pP       22 15 00.6 +3.3
LIC   Lamto            81.62  85 ePKP2   pP       22 15 01.8 +4.1
      comp=Z,99nm,1.6s
DBIC  Dimbokro         81.70  85  LR     LR       22 47 37.9
      comp=Z,324nm,20.9s,baz=262,slow=33
KIC   Kosan Boka       81.87  85 ePKP2   pP       22 15 00.4 +1.4
      comp=Z,21nm,1.1s
NB2   NORSAR Subarra   83.41  29  P      P        22 14 44.7 -1.3
      comp=Z,4.0nm,0.7s,baz=286,slow=5.1
NOA   NORSAR Array B   83.41  29  P      P        22 14 43.9 -2.1
      comp=Z,2.7nm,0.9s,baz=286,slow=5.0,SNR=6.0
NOA                               pP     pP       22 15 02.6 -3.6
      comp=Z,2.4nm,0.8s,baz=286,slow=5.0,SNR=3.3
NOA                               LR     LR       22 46 55.7
      comp=Z,136nm,21.9s,baz=280,slow=32
BFO   Black Forest     84.73  42  P      P        22 14 54.9 +1.9
DAVA  Damuels          85.99  43 i P     pP       22 15 20.6 +0.8
      comp=Z,28nm,1.0s
ARCES ARCESS Array B   86.17  19  P      P        22 14 58.2 -1.5
      comp=Z,4.5nm,0.9s,baz=299,slow=5.4,SNR=3.8
ARCES                             LR     LR       22 55 07.3
      comp=Z,97nm,18.1s,baz=280,slow=37
GRF   Grafenberg Arr   86.25  40 eP      pP       22 15 21.6 +0.8
      comp=Z,18nm,1.1s,baz=276,slow=5.6
GRF                              eL      L        22 48 17.5
      comp=Z,396nm,21.5s
RETA  Reutte           86.52  42 eP      pP       22 15 23.1 +0.8
      comp=Z,14nm,1.0s
FETA  Feichten         86.62  43 eP      pP       22 15 22.6 -0.2
      comp=Z,18nm,1.4s
TORD  Torodi Ar. Bea   86.70  77  P      P        22 15 01.1 -2.3
      comp=Z,0.6nm,0.7s,baz=286,slow=5.3,SNR=3.0
TORD                              LR     LR       22 49 02.3
      comp=Z,373nm,21.6s,baz=270,slow=32
MOTA  Moosalm          86.78  42  P      pP       22 15 24.1 +0.4
      comp=Z,12nm,1.1s
SQTA  Sankt Quirin     86.88  42 eP      pP       22 15 23.7 -0.4
      comp=Z,14nm,1.2s
CLL   Collm            86.92  38 eP      P        22 15 02.0 -1.7
CLL                              i pP    pP       22 15 24.5 +0.5
      comp=Z,12nm,1.0s
CLL                              epPP             22 18 40.0
CLL                              eSKSac  SKSac    22 25 25.0 +0.8
CLL                              eSP     SP       22 26 33.0 -3.5
CLL                              ePPS    PPS      22 27 03.0
CLL                              eSS     SS       22 31 18.0 -1.4
CLL                              eSSS    SSS      22 34 54.0
CLL                              eSSSS            22 37 54.0
CLL                               LmV             22 50 00.0
      comp=Z,200nm,20.4s
WTTA  Wattenberg       87.15  42 i P     pP       22 15 26.7 +1.2
      comp=Z,15nm,1.5s
ABTA  Abfaltersbach    87.87  43 eP      pP       22 15 28.0 -0.8
      comp=Z,12nm,1.1s
KHC   Kasperske Hory   87.89  40 epP     pP       22 15 26.5 -2.3
KHC                               AMS    AMS      22 48 00.0
      comp=Z,500nm,18.4s
PBCC  Pribram          87.99  40 epP     pP       22 15 31.0 +1.8
GERES GERESS Array B   88.05  40  P      P        22 15 07.6 -1.7
      comp=Z,0.7nm,0.8s,baz=275,slow=11,SNR=1.9
GERES                             pP     pP       22 15 26.1 -3.6
      comp=Z,0.4nm,0.3s,baz=101,slow=11,SNR=4.1
GERES                             LR     LR       22 48 56.5
      comp=Z,374nm,21.8s,baz=294,slow=32
KBA   Koelnbreinsper   88.33  42  P      pP       22 15 31.6 +0.5
      comp=Z,18nm,1.6s
KEST  Kesra            88.44  54  LR     LR       22 50 00.8
      comp=Z,154nm,18.3s,baz=298,slow=32
CKRC  Cesky Krumlov    88.44  40 epP     pP       22 15 32.9 +1.5
MOA   Molln            88.70  41 eP      pP       22 15 32.7  0.0
      comp=Z,9.4nm,1.3s
TREC  Trest            89.03  40  AMS    AMS      22 49 00.0
      comp=Z,500nm,18.8s
OSTC  Ostas            89.08  38 epP     pP       22 15 39.6 +5.2
DPC   Dobruska-Polom   89.21  38 epP     pP       22 15 33.9 -1.2
ARSA  Arzberg          89.69  42 eP      pP       22 15 37.7 +0.3
      comp=Z,8.3nm,1.1s
CONA  Conrad Observa   89.70  41 eP      pP       22 15 39.1 +1.6
      comp=Z,9.3nm,1.0s
FINES FINESS Array B   90.00  26  pP     pP       22 15 35.9 -2.5
      comp=Z,4.9nm,1.0s,baz=305,slow=6.7,SNR=2.9
FINES                             LR     LR       22 55 47.6
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      comp=Z,166nm,19.6s,baz=296,slow=36
MNK   Minsk            94.06  32 i P     P        22 15 29.7 -7.2
      comp=E,0.0nm,1.0s
MNK                              i P     P        22 15 29.7 -7.2
      comp=N,7.0nm,1.0s
MNK                              i P     P        22 15 29.7 -7.2
      comp=Z,5.0nm,1.0s
MNK                              i pP    pP       22 15 51.4 -6.0
MNK                              i sP    sP       22 16 00.3 -5.1
MNK                              i PPP   PPP      22 21 17.9
MNK                              i S     SKSac    22 25 56.9 -8.4
MNK                              i sS    S        22 26 36.1 -5.4
MNK                              i SP    SP       22 27 49.0 -6.5
MNK                              i PS    PS       22 27 59.4 -5.9
MNK                              i SS    SS       22 32 49.7  -12
MNK                              i SSS   SSS      22 35 32.5
MNK                              i SKKS  SKKSdf   22 39 32.2  -10
MNK                              i LQ    LQ       22 52 56.2
MNK                              i LR    LR       22 56 12.8
MNK                              i LRM   MLR      23 04 20.0
      comp=N,801nm,20.4s
MNK                              i LRM   MLR      23 04 20.0
      comp=Z,184nm,20.4s
MNK                              i LRM   MLR      23 04 22.5
      comp=E,28nm,20.4s
PETK  Petropavlovsk-   94.11 327  LR     LR       22 59 25.7
      comp=E,53nm,20.8s,baz=50,slow=36
BELA  Belgrano 2       95.03 170  P      P        22 15 40.5 -0.4
KLMR  Klimovskoe       95.79  23  P      P        22 15 40.1 -4.6
KLMR                              AMP             22 15 45.0
      comp=Z,16nm,1.3s
KLMR                             ePP     PP       22 19 30.8 -5.9
AKASG Malin Array Be   96.60  35  LR     LR       22 58 07.3
      comp=Z,177nm,19.7s,baz=285,slow=35
VNA3  Neumayer Olymp   98.03 161  Pdiff  Pdif     22 15 55.7 +1.2
VNA1  Neumayer--Stat   98.33 161  Pdiff  Pdif     22 15 57.3 +1.4
VNA2  Neumayer--Watz   98.67 161  Pdiff  Pdif     22 15 58.4 +1.0
SNAA  Sanae           100.26 161  Pdiff  Pdif     22 16 04.9 +0.3
DZM   Mont Dzumac     109.09 251 eLR     LR       22 53 05.0
      comp=Z,376nm,26.9s
BVAR  Borovoye Array  112.02  14  PP     PP       22 21 36.3 -1.0
      comp=Z,0.7nm,0.8s,baz=319,slow=4.3,SNR=4.4
ZALV  Zalesovo Beam   113.44   5  PKiKP  PKiKP    22 20 55.1 -1.2
      comp=Z,0.6nm,0.4s,baz=304,slow=2.9,SNR=3.9
ZALV                              PP     PP       22 21 45.9 -1.4
      comp=Z,1.4nm,0.8s,baz=336,slow=3.3,SNR=5.3
ZALV                              PKKPbc PKKPab   22 31 46.8 -3.9
      comp=Z,0.8nm,0.9s,baz=194,slow=3.1,SNR=4.3
SYO   Syowa Base      114.54 162⇓ePdiff  Pdif     22 17 07.4 -0.6
KURBB Kurchatov Arra  115.94  10  PKP    PKiKP    22 20 59.6 -1.6
      comp=Z,0.5nm,0.6s,baz=345,slow=2.0,SNR=5.8
KURBB                             PP     PP       22 22 07.7 +2.7
      comp=Z,1.6nm,1.0s,baz=348,slow=6.5,SNR=4.7
BOSA  Boshof          116.04 116  PKP    PKPdf    22 21 01.7 -0.5
      comp=Z,5.2nm,0.8s,baz=258,slow=2.3,SNR=11
BOSA                              PKKPbc PKKPbc   22 31 34.7 +1.5
      comp=Z,1.5nm,0.8s,baz=226,slow=7.1,SNR=3.3
BOSA  Boshof          116.04 116         PKPdf    22 21 01.8 -0.3
SONM  Songino Array   118.55 349  PKP    PKPdf    22 21 06.4 -0.2
      comp=Z,0.4nm,0.3s,baz=299,slow=1.0,SNR=6.2
SONM                              PP     PP       22 22 29.7 +6.4
      comp=Z,0.8nm,0.9s,baz=359,slow=4.2,SNR=3.7
SONM                              PKKPbc PKKPbc   22 31 23.1 -2.0
      comp=Z,0.6nm,0.7s,baz=188,slow=2.8,SNR=5.4
KS19  Wonju Array Si  119.99 328  PKPdf  PKiKP    22 21 09.5  0.0
KSRS  Korea Array     119.99 328  PKP    PKiKP    22 21 09.4  0.0
      comp=Z,6.4nm,0.7s,baz=6.9,slow=1.5,SNR=28
KSRS                              pPKP   pPKPdf   22 21 26.6 -4.1
      comp=Z,7.2nm,0.7s,baz=13,slow=1.5,SNR=9.1
KSAR  Wonju Array Be  120.02 328         PKiKP    22 21 09.6  0.0
MKAR  Makanchi Array  120.23   8  PKKPbc PKKPbc   22 31 17.4 -1.4
      comp=Z,0.5nm,0.7s,baz=174,slow=3.1,SNR=6.0
WMQ   Urumqi          123.72   4 eP      PKPdf    22 21 15.4 -1.1
WMQ                               pmax   pmax
      comp=Z,150nm,5.1s
WMQ                               LR     LR
      comp=N,890nm,29.0s
WMQ                               LR     LR
      comp=E,2µm,29.2s
WMQ                               LR     LR
      comp=Z,370nm,28.9s
HHC   Hu-ho-hao-te    123.91 342 eP      PKPdf    22 21 15.2 -1.8
HHC                               LR     LR
      comp=N,200nm,19.2s
HHC                               LR     LR
      comp=Z,250nm,20.4s
BTO   Baotou          124.57 344 ePKP    PKiKP    22 21 18.6  0.0
GTA   Gaotai          127.80 353  PKP    PKPdf    22 21 24.4 -0.2
GTA                               sPKP            22 22 00.5
GTA                               LR     LR
      comp=N,130nm,22.2s
GTA                               LR     LR
      comp=E,180nm,21.4s
GTA                               LR     LR
      comp=Z,260nm,23.3s
NJ2   Nanjing         128.81 331 eP      PKiKP    22 21 27.3 +0.1
NJ2                               pmax   pmax
      comp=Z,6.0nm,0.5s
LZH   Lanzhou         130.37 348 ePKP    PKiKP    22 21 32.0 +1.6
LZH                               sPKP            22 22 02.6
LZH                               LR     LR
      comp=N,240nm,12.7s
LZH                               LR     LR
      comp=E,280nm,15.2s
LZH                               LR     LR
      comp=Z,260nm,16.3s
LZH   Lanzhou         130.37 348 eP      PKiKP    22 21 39.6 +9.2
LZH                               pP     pPKPdf   22 21 53.7 +2.9
LZH                               sP     sPKPdf   22 22 00.8 +2.2
LZH                               pmax   pmax
      comp=Z,15nm,1.3s
STKA  Stephens Creek  130.88 239  PKP    PKiKP    22 21 31.4 +0.1
      comp=Z,4.1nm,0.7s,baz=53,slow=2.3,SNR=11
STKA  Stephens Creek  130.88 239  PKPdf  PKiKP    22 21 32.4 +1.1
XAN   Xi'an           130.99 342  PKP    PKiKP    22 21 31.6  0.0
XAN                               pPKP   pPKPdf   22 21 48.2 -3.7
XAN                               PP     PP       22 24 03.5  +17
XAN                               AMB    AMB
      comp=Z,180nm,4.7s
XAN                               LR     LR
      comp=N,230nm,24.1s
XAN                               LR     LR
      comp=E,300nm,22.2s
XAN                               LR     LR
      comp=Z,390nm,23.0s
CD2   Chengdu         135.36 346  PKP    PKPdf    22 21 38.5 -0.5
CD2                               PP     PP       22 24 15.1 +0.7
CD2                               AMB    AMB
      comp=Z,160nm,7.8s
CD2                               LR     LR
      comp=N,450nm,21.6s
CD2                               LR     LR
      comp=E,230nm,18.6s
CD2                               LR     LR
      comp=Z,470nm,21.6s
LSA   Lhasa           137.96   1         PKPdf    22 21 44.3 -0.1
DANN  Dangsing        138.50  11 eP      PKPdf    22 21 46.2 +1.0
      comp=Z,22nm,0.8s
GYA   Guiyang         138.73 340 eP      PKPdf    22 21 46.0 +0.6
GYA                               pmax   pmax
      comp=Z,8.0nm,1.2s
WB0   Warramunga Arr  138.96 254  PKPdf  PKPdf    22 21 46.8 +1.0
WRAB  Tennant Creek   138.99 254         PKiKP    22 21 47.5 -0.5
WRA   Warramunga Arr  138.99 254  PKhKP  PKPpre   22 21 37.6
      comp=Z,3.4nm,0.9s,baz=100,slow=2.9,SNR=18
WRA                               PKP    PKiKP    22 21 47.0 -1.1
      comp=Z,13nm,1.0s,baz=90,slow=2.2,SNR=29
WRA   Warramunga Arr  138.99 254  PKPdf  PKiKP    22 21 47.3 -0.8
GKN   Gorkha          139.00  10 eP      PKPdf    22 21 46.5 +0.6
ASAR  Alice Springs   139.02 248  PKhKP  PKPpre   22 21 37.1
      comp=Z,2.2nm,0.8s,baz=107,slow=1.7,SNR=19
ASAR                              PKP    PKiKP    22 21 47.4 -0.7
      comp=Z,7.1nm,0.9s,baz=94,slow=1.5,SNR=27
ASAR                              SKPbc  SKiKP    22 25 19.1 +1.3
      comp=Z,3.3nm,1.0s,baz=97,slow=2.7,SNR=6.5
ASAR  Alice Springs   139.02 248  PKPdf  PKiKP    22 21 47.1 -1.0
GUN   Gumba           139.28   9 eP      PKPdf    22 21 46.7  0.0
KKN   Kakani          139.31   9 eP      PKPdf    22 21 45.6 -1.0
PKIN  Phulchoki       139.54   9 eP      PKPdf    22 21 46.5 -0.6
PKI   Pulchoki        139.55   9 eP      PKPdf    22 21 46.8 -0.4
KMI   Kunming         141.15 345⇑ePKP    PKPdf    22 21 50.1 +0.1
KMI                               LR     LR
      comp=N,210nm,28.7s
KMI                               LR     LR
      comp=E,190nm,21.3s
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KMI				LR	LR		
	comp=Z,350nm,26.4s						
SHL	Shillong	142.08	0	PKPdf	PKPdf	22 21 51.8	+0.2
QIZ	Qiongzhong	144.11	331	PKP	PKPdf	22 21 55.4	+0.3
QIZ				PP	PP	22 25 09.6	+1.1
HYB	Hyderabad	147.28	25	*i* PKP	PKPdf	22 22 01.0	+0.5
CHTO	Chiang Mai	148.11	348	PKPdf	PKPdf	22 22 02.5	+0.6
CM35	Chiang Mai Arr	148.20	347	P	PKPdf	22 22 03.0	+1.0
CM32	Chiang Mai Arr	148.28	348	P	PKPbc	22 22 06.0	+0.5
CM36	Chiang Mai Arr	148.36	347	P	PKPdf	22 22 03.0	+0.7
CM31	Chiang Mai Arr	148.46	348	P	PKPbc	22 22 06.3	+0.3
	comp=Z,2.0nmcomp=Z,414nm,0.4s						
CMAR	Chiang Mai Arr	148.46	348	PKP	PKPdf	22 22 03.0	+0.6
	comp=Z,1.3nm,0.3s,baz=315,slow=2.3,SNR=9.8						
CMAR				PKPbc	PKPbc	22 22 05.8	-0.2
	comp=Z,9.7nm,0.7s,baz=344,slow=3.5,SNR=20						
CM09	Chiang Mai Arr	148.46	348	P	PKPbc	22 22 06.0	0.0
	comp=Z,0.1nmcomp=Z,152nmcomp=Z,14nm,0.8s						
CM15	Chiang Mai Arr	148.46	348	P	PKPbc	22 22 06.0	0.0
CM02	Chiang Mai Arr	148.48	348	P	PKPbc	22 22 04.3	-1.8
	comp=Z,126nmcomp=Z,0.1nmcomp=Z,19nm,0.8s						
CM01	Chiang Mai Arr	148.49	348	P	PKPbc	22 22 05.7	-0.4
	comp=Z,0.1nmcomp=Z,152nmcomp=Z,19nm,0.8s						
CM13	Chiang Mai Arr	148.50	348	P	PKPbc	22 22 05.0	-1.1
	comp=Z,0.0nmcomp=Z,110nmcomp=Z,14nm,0.8s						
CM04	Chiang Mai Arr	148.50	348	P	PKPdf	22 22 03.0	+0.5
	comp=Z,0.1nmcomp=Z,148nmcomp=Z,20nm,0.8s						
CM05	Chiang Mai Arr	148.51	348	P	PKPdf	22 22 04.0	+1.5
	comp=Z,0.0nmcomp=Z,102nmcomp=Z,15nm,0.8s						
TOLI2	Tolitoli	148.56	294		PKiKP	22 22 07.4	-0.5
MHMT	Maesarieng	148.93	349	P	PKiKP	22 22 09.0	+0.5
NWAO	Narrogin (SRO)	149.45	224		PKiKP	22 22 09.6	+0.4
PSA00	Pilbara Seismi	152.16	248		PKPdf	22 22 09.0	+0.9
PSA00				PKPbc	PKiKP	22 22 15.4	+0.3
PSA00					pPKPdf	22 22 31.3	+1.9

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*ECX **06** 22:07:12.1±0.7, 30°.62N×114°.24W, h15^{km}±6^{km}, MD2.7, ML2.8*
*MEX **06** 22:07:13.8±0.6, 30°.32N×114°.38W, h17^{km}±999^{km}, MD3.9*
ISC 06 22:07:07.6±3.0**, 30°.5N**±0°.1×**114°.12W**±0°.06**, h5**^{km}±14^{km}**, n8, σ1^s.58**/13**, 1C-1D, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFX	San Felipe	0.81	310	*e*P	Pg	22 07 23.7	+0.5
SFX				*e*S	Sg	22 07 33.2	-0.6
SFX				⇑*e*		22 07 34.6	
SFX				IAML		22 07 34.6	
	comp=E,339nm,0.4s						
PIX	Pinacate	1.19	28	*e*P	Pn	22 07 29.9	-1.0
SPX	San Pedro Mart	1.27	295	*e*P	Pb	22 07 32.5	+0.3
SPX				IAML		22 07 57.2	
	comp=N,214nm,0.8s						
SPX				IAML		22 07 57.8	
	comp=E,225nm,0.7s						
SPX				⇓*e*		22 07 57.8	
SPIG	San Pedro Mart	1.27	295	*i* P	Pb	22 07 32.4	+0.2
SPIG				*i* S	Sb	22 07 46.3	-2.8
SPIG	San Pedro Mart	1.27	295	*e*P	Pb	22 07 31.4	-0.9
SQX	San Quintin	1.51	273	*e*P	Pn	22 07 36.0	+0.7
SQX				*e*S	Sn	22 07 54.6	-0.8
214A	Organ Pipe Nat	1.82	38	*e*P	Pn	22 07 39.3	-0.3
214A				*e*S	Sn	22 08 05.1	+2.0
TJIG	Tijuana	2.90	312	*e*P	Pn	22 07 57.1	+2.7
TJIG				*i* S	Sn	22 08 29.9	+0.2

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*BJI **06** 22:07:23.1±0.0, 11°.98S×162°.38E, h22^{km}, mB5.0/15, mb4.5/24, Ms4.6/1, Ms7 4.3/1*
*NEIC **06** 22:07:30.5±1.6, 11°.47S±0°.06×162°.00E±0°.05, h41^{km}±6^{km}, mb4.7/40, Error ellipse: s-maj=10.1km s-min=4.5km az=146.0*
*IDC **06** 22:07:31.8±2.9, 11°.51S×161°.87E, h42^{km}±24^{km}, mb4.1/13, mb1 4.3/16, mb1mx4.1/45, mbtmp4.4/16, ML3.8/3, MS4.0/10, Ms1 4.0/10, ms1mx3.5/27, Error ellipse: s-maj=25.2km s-min=17.8km az=103.0*
ISC 06 22:07:30.6±0.4**, 11°.50S**±0°.06×**161°.99E**±0°.07**, h39**^{km}**, n96, σ1^s.01**/92**, mb4.7**/43**, MS4.0**/7**, 1C, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	2.88	315	P	Pn	22 08 13.7	-0.2
	127nm,0.3s,baz=189,slow=11,SNR=20						
HNR				S	Sn	22 08 45.2	-2.2
	844nm,0.3s,baz=148,slow=22,SNR=21						
HNR				LR	LR	22 09 25.0	
	comp=Z,1µm,20.7s,baz=147,slow=40						
HNR	Honiara	2.88	315		Pn	22 08 13.5	-0.5
SANVU	Saraoutou	6.41	128	Pn	Pn	22 09 02.6	+0.1
DZM	Mont Dzumac	11.34	159	P	Pn	22 10 12.1	+1.9
	1.4nm,0.3s,baz=118,slow=21,SNR=17						
DZM				S	Sn	22 12 13.7	-2.1
	0.8nm,0.3s,baz=183,slow=20,SNR=2.0						
DZM				LR	LR	22 13 51.9	
	comp=Z,430nm,18.5s,baz=3.0,slow=33						
DZM	Mont Dzumac	11.34	159	Pn	Pn	22 10 10.9	+0.7
PMG	Port Moresby	14.74	277	P	Pn	22 10 56.8	+0.3
	2.2nm,0.3s,baz=89,slow=7.5,SNR=8.6						
PMG				LR	LR	22 16 28.8	
	comp=Z,1µm,19.6s,baz=100,slow=37						
PMG	Port Moresby	14.74	277	Pn	Pn	22 10 56.3	-0.1
MSVF	Nonsavu	16.72	114		Pn	22 11 20.5	-1.7
EIDS	Eidsvold	17.23	215	Pn	Pn	22 11 27.4	-1.0
CTAO	Charters Tower	17.37	239		P	22 11 31.8	+0.6
COEN	Coen	18.52	260		Pn	22 11 46.6	+2.3
PATS	Pohnpei	18.58	348	P	Pn	22 11 45.0	0.0
ARMA	Armidale	21.14	206	P	P	22 12 13.9	+1.5
ARMA				IAmb	IAmb	22 12 26.4	
	comp=Z,26nm,1.1s						
JAY	Jayapura	22.92	291	P	P	22 12 31.2	-0.3
	comp=Z,14nm,0.6s,baz=27,slow=5.7,SNR=4.3						
STKA	Stephens Creek	27.66	220	P	P	22 13 14.8	0.0
	comp=Z,2.5nm,0.7s,baz=50,slow=15,SNR=7.8						
STKA				LR	LR	22 23 32.8	
	comp=Z,421nm,20.5s,baz=25,slow=35						
STKA	Stephens Creek	27.66	220	P	P	22 13 15.4	+0.6
WR0	Warramunga Arr	27.70	249	P	P	22 13 15.5	+0.1
WR0				IAmb	IAmb	22 13 27.9	
	comp=Z,9.1nm,0.8s						
WB0	Warramunga Arr	27.79	249	P	P	22 13 15.4	-0.8
WB0				IAmb	IAmb	22 13 17.1	
	comp=Z,13nm,0.8s						
WRAB	Tennant Creek	27.86	249	P	P	22 13 16.5	-0.4
WRAB				IAmb	IAmb	22 13 23.1	
	comp=Z,11nm,1.0s						
WB2	Warramunga Arr	27.86	249	P	P	22 13 16.6	-0.3
WB2				IAmb	IAmb	22 13 17.3	
	comp=Z,8.4nm,0.8s						
WRA	Warramunga Arr	27.88	249	P	P	22 13 16.8	-0.2
	comp=Z,7.8nm,0.9s,baz=79,slow=9.7,SNR=41						
WRA				LR	LR	22 24 06.2	
	comp=Z,431nm,19.8s,baz=75,slow=36						
WRA	Warramunga Arr	27.88	249	P	P	22 13 16.5	-0.5
AS31	Alice Springs	29.31	242	P	P	22 13 29.4	-0.4
ASAR	Alice Springs	29.32	242	P	P	22 13 29.1	-0.6
	comp=Z,8.9nm,0.8s,baz=63,slow=9.8,SNR=94						
ASAR				LR	LR	22 24 13.0	
	comp=Z,250nm,20.9s,baz=66,slow=34						
ASAR	Alice Springs	29.32	242	P	P	22 13 28.5	-1.3
TOO	Toolangi	29.88	207	P	P	22 13 34.7	+0.1
TOO				IAmb	IAmb	22 13 53.7	
	comp=Z,11nm,1.1s						
QRZ	Quartz Range	30.65	164	P	P	22 13 40.4	-0.9
QRZ				IAmb	IAmb	22 13 42.0	
	comp=Z,36nm,1.1s						
FAKI	Fak Fak	30.69	284	P	P	22 13 40.2	-1.8
FAKI				IAmb	IAmb	22 13 45.0	
	comp=Z,22nm,1.1s						
BBOO	Buckleboo	31.88	224	P	P	22 13 52.5	+0.2
BBOO				IAmb	IAmb	22 13 53.5	
	comp=Z,15nm,0.7s						
FORT	Forrest	36.79	233	P	P	22 14 35.8	+0.9
SANI	Sanana	36.92	282	P	P	22 14 36.2	+0.1
	comp=Z,23nm,0.9s						
BATI	Baumata	37.65	268	P	P	22 14 43.8	+1.5
	comp=Z,25nm,0.9s						
GTOI	Gorontalo	40.56	285	P	P	22 15 07.9	+1.2
	comp=Z,328nmcomp=Z,28nm,0.7s						
PSA00	Pilbara Seismi	41.51	250	P	P	22 15 13.7	-0.7
BNSI	Bone	42.04	276	P	P	22 15 19.5	+0.7
	comp=Z,20nm,0.8s						
TOLI2	Tolitoli	42.83	284	P	P	22 15 24.3	-0.9
TOLI2				IAmb	IAmb	22 15 37.7	
	comp=Z,14nm,0.9s						
NWAO	Narrogin (SRO)	46.17	235	LR	LR	22 35 08.1	
	comp=Z,208nm,18.7s,baz=104,slow=36						
MORW	Morawa	46.18	241	P	P	22 15 52.3	+0.4
MORW				IAmb	IAmb	22 15 52.8	
	comp=Z,12nm,0.8s						
MYLDM	Lahad Datu	46.33	289	P	P	22 15 55.3	+2.1
UGM	Wanagama	50.81	269	P	P	22 16 27.5	-0.2
JGF	Kuroka	52.32	335	P	P	22 16 37.9	-0.7
JGF				IAmb	IAmb	22 16 45.8	
	comp=Z,4.8nm,0.9s						
JMN	Monobe	52.34	330	P	P	22 16 38.4	-0.4
JMN				IAmb	IAmb	22 16 52.6	
	comp=Z,22nm,1.1s						
SSLB	Suanglung	53.29	311	P	P	22 16 45.0	-0.9
SSLB				IAmb	IAmb	22 16 58.5	
	comp=Z,12nm,1.1s						
JNU	Nakatsue	53.38	327	P	P	22 16 46.1	-0.4
JNU				IAmb	IAmb	22 17 02.9	
	comp=Z,17nm,1.1s						
CISI	Cisompet, Garu	53.51	269	P	P	22 16 45.1	-2.7
JHS	Saijyo	53.73	331	P	P	22 16 46.9	-2.1
JHS				IAmb	IAmb	22 16 49.7	
	comp=Z,9.6nm,1.0s						
ASAJ	Asahikawa	58.10	344	P	P	22 17 20.6	+0.6
	comp=Z,5.6nm,0.8s,baz=233,slow=15,SNR=4.3						
KSRS	Korea Array	58.25	328	P	P	22 17 21.2	0.0
	comp=Z,1.7nm,0.8s,baz=142,slow=6.3,SNR=4.2						
NJ2	Nanjing	59.82	318	*e*P	P	22 17 33.6	+1.4
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
USA0B	Ussuriysk Arra	61.78	336	P	P	22 17 44.8	-0.6
USA0B				IAmb	IAmb	22 17 46.6	
	comp=Z,9.6nm,1.1s						
USRK	Ussuriysk Ar.	61.78	336	P	P	22 17 45.9	+0.6
	comp=Z,2.5nm,0.7s,baz=156,slow=7.5,SNR=9.8						
IPM	Ipoh	62.69	281	P	P	22 17 51.5	-0.6
MNSI	Mandailing Nat	63.18	277	P	P	22 17 55.2	-0.1
	comp=Z,30nm,1.0s						
KULM	Kulim	63.26	282	P	P	22 17 55.0	-0.8
RPSI	Rantau Prapat	64.27	279	P	P	22 18 01.8	-0.7
RPSI				IAmb	IAmb	22 18 03.5	
	comp=Z,17nm,1.0s						
PETK	Petropavlovsk-	64.46	357	P	P	22 18 04.3	+1.4
	comp=Z,1.6nm,0.7s,baz=181,slow=10,SNR=2.2						
GSI	Gunungsitoli	65.25	277	P	P	22 18 09.6	+0.6
GSI	Gunungsitoli	65.25	277	P	P	22 18 09.5	+0.6
	comp=Z,60nm,1.1s						
KMI	Kunming	68.25	303	⇑*e*P	P	22 18 29.0	+0.9
KMI				pmax	pmax		
	comp=Z,9.0nm,0.6s						
CMAR	Chiang Mai Arr	68.94	295	P	P	22 18 33.2	+1.0
	comp=Z,1.4nm,0.3s,baz=129,slow=5.5,SNR=7.1						
CMAR	Chiang Mai Arr	68.94	295	P	P	22 18 32.2	-0.1
CHTO	Chiang Mai	69.07	295	P	P	22 18 32.4	-0.6
HHC	Hu-ho-hao-te	69.84	321	*e*P	P	22 18 38.5	+1.0
HHC				pmax	pmax		
	comp=Z,8.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,130nm,5.0s						
LZH	Lanzhou	72.37	314	*e*P	P	22 18 52.8	-0.2
LZH				pP	sP	22 19 05.4	-1.1
LZH				sP	PcP	22 19 10.7	-0.1
LZH				pmax	pmax		
	comp=Z,15nm,1.0s						
ULN	Ulaanbaatar	76.55	325	P	P	22 19 17.2	+0.2
ULN				IAmb	IAmb	22 19 19.7	
	comp=Z,5.5nm,0.9s						
GTA	Gaotai	76.75	315	P	P	22 19 18.5	+0.2
GTA				pP	PcP	22 19 29.9	+0.4
GTA				sP	pwP	22 19 35.1	-0.2
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s						
SONM	Songino Array	76.90	325	P	P	22 19 19.3	+0.4
	comp=Z,2.7nm,0.8s,baz=144,slow=5.8,SNR=19						
SONM	Songino Array	76.90	325	P	P	22 19 19.3	+0.4
QSPA	South Pole Qui	78.50	180	P	P	22 19 28.8	+1.2
QSPA				IAmb	IAmb	22 19 47.7	
	comp=Z,7.1nm,1.0s						
PAF	Port-aux-Franc	82.53	221	P	P	22 19 48.0	-1.4
ILAR	Eielson Array	85.14	20	P	P	22 20 03.0	+0.6
	comp=Z,0.7nm,0.8s,baz=235,slow=5.3,SNR=8.0						
ILAR	Eielson Array	85.14	20	P	P	22 20 02.5	+0.2
WMQ	Urumqi	86.83	316	*e*P	P	22 20 11.7	+0.5
BMAR	Burnt Mountain	87.55	18	P	P	22 20 12.0	-2.1
NVAR	Mina Array Bea	89.14	51	LR	LR	22 54 23.4	
	comp=Z,71nm,18.2s,baz=258,slow=32						
MK31	Makanchi Array	91.35	317	P	P	22 20 31.4	-1.0
MKAR	Makanchi Array	91.35	317	P	P	22 20 32.1	-0.3
	comp=Z,0.5nm,0.5s,baz=96,slow=6.0,SNR=9.4						
MKAR	Makanchi Array	91.35	317	P	P	22 20 31.7	-0.7
LRM	Limekiln Ridge	95.08	44	P	P	22 20 52.2	+2.3
SNAA	Sanae	96.39	185	P	P	22 20 56.0	+0.7
PDAR	Pinedale Array	96.58	48	LR	LR	22 58 19.7	
	comp=Z,42nm,19.0s,baz=84,slow=32						
YKA	Yellowknife Ar	97.08	28	P	Pdif	22 20 59.5	+1.2
	comp=Z,0.5nm,0.8s,baz=248,slow=4.4,SNR=4.0						
VNA3	Neumayer Olymp	97.25	183	P	P	22 20 57.2	-1.9
VNA2	Neumayer--Watz	97.45	184	P	P	22 20 59.0	-0.9
VNA1	Neumayer--Stat	97.77	183	P	Pdif	22 21 01.4	0.0
TXAR	Lajitas Array	99.28	62	LR	LR	23 01 04.5	
	comp=Z,52nm,19.1s,baz=0.0,slow=32						
ARCES	ARCESS Array B	115.81	344	PKP	PKPdf	22 26 08.2	-0.2
	comp=Z,1.8nm,0.8s,baz=66,slow=1.5,SNR=4.3						
FINES	FINESS Array B	120.80	337	PKP	PKPdf	22 26 17.9	-0.3
	comp=Z,1.1nm,0.8s,baz=64,slow=4.4,SNR=3.8						
KMBO	Kilima Mbogo	123.68	261	PKP	PKiKP	22 26 26.6	+0.8
	comp=Z,1.8nm,0.8s,baz=25,slow=21,SNR=3.9						
AKASG	Malin Array Be	125.18	325	PKP	PKiKP	22 26 28.1	+0.8
	comp=Z,2.5nm,0.8s,baz=64,slow=2.0,SNR=11						
NB2	NORSAR Subarra	126.11	343	PKPdf	PKiKP	22 26 28.9	0.0
	comp=Z,0.5nm,0.6s,baz=33,slow=1.7						
NOA	NORSAR Array B	126.11	343	PKP	PKiKP	22 26 28.6	-0.4
	comp=Z,1.0nm,0.7s,baz=78,slow=2.0,SNR=3.7						
CLL	Collm	132.97	334	*e*PKPdf	PKiKP	22 26 43.0	+0.1
GERES	GERESS Array B	134.39	331	PKP	PKPdf	22 26 44.8	+0.1
	comp=Z,0.8nm,0.7s,baz=298,slow=2.9,SNR=4.0						
ESDC	Sonseca Array	149.30	338	PKPbc	PKiKP	22 27 16.3	-0.6
	comp=Z,1.0nm,0.8s,baz=4.4,slow=1.2,SNR=4.5						
TORD	Torodi Ar. Bea	160.68	277	PKPab	PKPab	22 28 09.6	+0.2
	comp=Z,2.8nm,1.1s,baz=77,slow=2.1,SNR=6.1						

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*NEIC **06** 22:23:30.5±2.0, 57°.93N±0°.03×157°.49W±0°.06, h14^{km}±6^{km}, Error ellipse: s-maj=4.9km s-min=4.2km az=116.0*
AEIC 06 22:23:29.0±2.5**, 57°.95N**±0°.04×**157°.66W**±0°.05**, h13**^{km}±6^{km}**, ML3.2, ML3.5**/22(NEIC)**, Error ellipse: s-maj=5.4km s-min=3.8km az=158.0, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLK5	Peulik 5	0.42	84		Pg	22 23 37.4	0.0
PLBL	Peulik Blue Cr	0.52	119		Pg	22 23 38.7	-0.5
PLBL					Sg	22 23 46.1	0.0
PLK1	Peulik 1	0.58	105		Pg	22 23 40.2	-0.2
PLK3	Peulik 3	0.79	109		Pg	22 23 44.1	-0.2
KJL	Kejulik	1.12	84		Pb	22 23 49.2	-1.0
KJL					Sb	22 24 03.5	-1.1
CAHL	Cahill	1.26	85		Pn	22 23 51.8	-0.6
KABU	Katmai Buttres	1.30	75		Pn	22 23 52.2	-0.8
KABU					Sb	22 24 09.6	-0.4
KBM	Katmai Bkd Mtn	1.34	75		Pn	22 23 53.0	-0.5
KAHC	Katmai Hardscr	1.56	62		Pn	22 23 56.4	-0.2
CHGN	Chignik	1.71	194		Pn	22 23 58.9	+0.5
CHGN				IAML		22 24 27.2	
	comp=N,299nm,0.6s						
CHGN	Chignik	1.71	194		Sg	22 24 22.8	-1.1
VNHG	Veniaminof 1	1.92	206		Pn	22 24 02.5	+1.0
VNSS	Veniaminof 8	1.99	210		Pb	22 24 04.2	-0.9
SII	Sitkinak Islan	2.35	125		Pn	22 24 08.7	+1.4
SII	Sitkinak Islan	2.35	125	IAML		22 24 47.3	
	comp=E,252nm,0.7s						
CHIR	Chirikof Islan	2.41	152		Pn	22 24 09.8	+1.7
CHIR	Chirikof Islan	2.41	152	IAML		22 24 47.1	
	comp=E,187nm,2.1s						
CHIR				IAML		22 25 24.0	
	comp=N,236nm,3.0s						
OHAK	Old Harbor	2.47	105		Pn	22 24 10.7	+1.8
AUCH	Augustine Cone	2.62	56		Pn	22 24 11.4	+0.4
KDAK	Kodiak Island	2.72	91	Pn	Pn	22 24 14.0	+1.7
OPT	Oil Point	2.87	52		Pn	22 24 15.0	+0.6
SDPT	Sand Point	3.04	212		Pn	22 24 18.4	+1.7
SDPT	Sand Point	3.04	212	IAML		22 25 20.0	
	comp=N,144nm,2.4s						
ILS	Iliamna Low So	3.11	48		Pn	22 24 18.7	+0.8
IVE	Iliamna Volcan	3.17	47		Pn	22 24 19.3	+0.7
SVW2	Sparrevohn	3.33	18		Pn	22 24 22.2	+1.5
SVW2				IAML		22 25 22.8	
	comp=N,116nm,0.6s						
RED	Redoubt Volcan	3.53	43		Pn	22 24 24.4	+0.9
RSO	Redoubt South	3.56	43		Pn	22 24 25.3	+1.2
CNPM	China Poot	3.70	62	Pn	Pn	22 24 27.6	+1.8
CNPM				IAML		22 26 11.4	
	comp=E,81nm,3.1s						
BRLK	Bradley Lake	3.96	60	Pn	Pn	22 24 30.3	+0.9
BRLK				IAML		22 26 32.8	
	comp=N,70nm,3.4s						
SEW	Seward	4.76	60	Pn	Pn	22 24 39.9	-0.4
TT01	Tatalina	5.04	9		Pn	22 24 44.0	-0.2
TTA	Tatalina	5.06	9		Pn	22 24 44.2	-0.4
TTA				IAML		22 26 27.3	
	comp=E,25nm,1.1s						
TTA				IAML		22 26 34.5	
	comp=N,29nm,1.6s						
SKT	Skwentna	5.08	35	Pn	Pn	22 24 44.9	+0.2
SKT				IAML		22 26 38.0	
	comp=E,23nm,3.3s						
SKT				IAML		22 26 43.0	
	comp=N,30nm,3.8s						
PPLA	Purkeypile	5.65	26	Pn	Pn	22 24 53.8	+1.1
KNK	Knik Glacier	5.81	49	Pn	Pn	22 24 55.7	+1.0
SML	Sawmill	6.08	47	Pn	Pn	22 24 58.8	+0.2
SCM	Sheep Creek Mo	6.49	49	Pn	Pn	22 25 05.4	+1.2
KTH	Kantishna Hill	6.51	28	Pn	Pn	22 25 05.4	+0.9
TRF	Thorofare Moun	6.59	30	Pn	Pn	22 25 07.5	+1.8
KLU	Klutina	6.91	54	Pn	Pn	22 25 09.5	-0.5
BPAW	Bear Paw Mtn.	6.96	25	Pn	Pn	22 25 12.6	+2.0
M24K	Tolsona, Glenn	7.10	49	Pn	Pn	22 25 12.7	+0.2
DHY	Denali Highway	7.22	40	Pn	Pn	22 25 15.8	+1.6
N25K	Chitina, Valde	7.54	55	Pn	Pn	22 25 18.8	+0.2
ANM	Nome	7.60	334	Pn	Pn	22 25 19.7	+0.5
GLB	Gilahina Butte	7.83	58	Pn	Pn	22 25 23.4	+1.0
PAX	Paxson	7.84	45	Pn	Pn	22 25 24.1	+1.4
CRQM	Cirque	7.93	63	Pn	Pn	22 25 23.6	-0.4
WRH	Wood River Hil	8.00	31		Pn	22 25 28.2	+3.5
RIDG	Independent Ri	8.52	42	Pn	Pn	22 25 34.3	+2.3
IL31		8.56	33	Pn	Pn	22 25 35.0	+2.5
ILAR	Eielson Array	8.56	33	Pn	Pn	22 25 34.9	+2.3
POKR	Poker Plat Res	8.68	30	Pn	Pn	22 25 36.0	+1.9
DOT	Dot Lake	8.75	44	Pn	Pn	22 25 36.6	+1.5
TABL	Table Mountain	8.83	67	Pn	Pn	22 25 37.2	+0.8
CTGM	Chitina Glacie	8.84	63	Pn	Pn	22 25 39.0	+2.6

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*JMA **06** 22:31:43.9±0.1, 24°.78N×121°.77E, h104^{km}±1^{km}, M2.6*
*TAP **06** 22:31:44.1, 24°.83N×121°.80E, h104^{km}, ML3.2, B*
ISC 06 22:31:43.8±1.4**, 24°.87N**±0°.04×**121°.80E**±0°.03**, h109**^{km}±6^{km}**, n100, σ0^s.56**/165**, 3C-1D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NTC	Toucheng	0.04	122	P	Pn	22 31 59.0	+0.3
	baz=66						
NTC				*e*S	Sn	22 32 09.8	-0.1
	baz=66						
TIPB	Shuangxi	0.10	15	*i* P	Pn	22 31 59.1	+0.2
	baz=358						
TIPB				*e*S	Sn	22 32 09.9	-0.3
	baz=358						
ILA	Ilan	0.12	202	P	Pn	22 31 59.3	+0.4
	baz=231						
ILA				*e*S	Sn	22 32 11.4	+1.3
	baz=231						
TWE	Neicheng	0.19	218	*i* P	Pn	22 31 59.3	+0.2
	baz=242						
TWE				*e*S	Sn	22 32 11.8	+1.3
	baz=242						
NWF	Wu-fen Shan	0.20	356	P	Pn	22 31 59.4	+0.2
	baz=3.0						
NWF				*e*S	Sn	22 32 09.8	-0.9
	baz=3.0						
WFSB	Wu-fen Shan	0.20	356	P	Pn	22 31 59.4	+0.4
	baz=3.0						
WFSB				*e*S	Sn	22 32 10.3	-0.2
	baz=3.0						
TWA	Mucha	0.22	299	P	Pn	22 31 59.4	+0.2
	baz=294						
TWA				S	Sn	22 32 10.6	-0.1
	baz=294						
TWB1	Santiao Chiao	0.22	52	P	Pn	22 31 59.2	+0.1
	baz=52						
TWB1				S	Sn	22 32 10.1	-0.5
	baz=52						
NHDH	Xindian Distri	0.26	290	*e*P	Pn	22 31 59.3	0.0
	baz=286						
NHDH				*e*S	Sn	22 32 11.3	+0.5
	baz=286						
TWC	Suao	0.27	170	*e*P	Pn	22 31 59.9	+0.6
	baz=153						
TWC				*e*S	Sn	22 32 11.1	+0.2
	baz=153						
TNOU	National Taiwa	0.28	356	P	Pn	22 31 59.6	+0.3
	baz=1.0						
TNOU				*e*S	Sn	22 32 10.9	-0.1
	baz=1.0						
NWLT	Wulai	0.28	250	P	Pn	22 31 58.8	-0.6
	baz=253						
NWLT				*e*S	Sn	22 32 10.1	-1.0
	baz=253						
TAP1	Taipei	0.30	304	*e*S	Sn	22 32 11.4	+0.3
	baz=301						
TAP	Taipei	0.31	302	*e*P	Pn	22 31 59.4	0.0
	baz=301						
TAP				*e*S	Sn	22 32 11.7	+0.5
	baz=301						
ENTT	Nioudou	0.31	222	⇑*i*P	Pn	22 31 59.6	+0.1
	baz=239						
ENTT				*e*S	Sn	22 32 11.3	0.0
	baz=239						
NDT	Datong Townshi	0.37	224	*e*P	Pn	22 31 59.7	-0.1
	baz=242						
NDT				*e*S	Sn	22 32 10.8	-1.0
	baz=242						
ANP	Anpu	0.40	321	*e*P	Pn	22 31 60.0	-0.1
	baz=321						
TWS1	Kuangyinshan	0.41	303	P	Pn	22 32 00.3	+0.4
	baz=297						
TWS1				*e*S	Sn	22 32 11.9	-0.2
	baz=297						
NTST	Danshui	0.43	313	P	Pn	22 32 00.2	+0.1
	baz=308						
NTST				*e*S	Sn	22 32 12.2	0.0
	baz=308						
TWY	Chenhua	0.44	336	P	Pn	22 32 00.6	+0.5
	baz=337						
TWY				*e*S	Sn	22 32 12.2	-0.1
	baz=337						
NSK	Sanguang	0.44	244	P	Pn	22 31 60.0	-0.3
	baz=244						
NSK				*e*S	Sn	22 32 11.9	-0.7
	baz=244						
ENA	Nanau	0.45	186	P	Pn	22 32 00.6	+0.4
	baz=193						
ENA				*e*S	Sn	22 32 12.8	+0.3
	baz=193						
NSM	Shimen	0.45	336	*e*P	Pn	22 32 00.4	+0.2
	baz=337						
NTY	Taoyuan	0.47	286	*e*P	Pn	22 32 00.6	+0.3
	baz=290						
NTY				*e*S	Sn	22 32 12.3	-0.4
	baz=290						
NCU	National Centr	0.56	280	*e*P	Pn	22 32 01.0	+0.1
	baz=284						
NCU				*e*S	Sn	22 32 13.8	0.0
	baz=284						
NCUH	Zhongli	0.56	280	*e*P	Pn	22 32 01.1	+0.1
	baz=284						
NCUH				*e*S	Sn	22 32 13.7	-0.2
	baz=284						
NNS	Nan Shan	0.58	222	*e*P	Pn	22 32 01.4	+0.1
	baz=221						
NNS				*e*S	Sn	22 32 14.1	-0.2
	baz=221						
NNSB	Datong	0.58	220	*e*P	Pn	22 32 01.2	0.0
	baz=221						
NNSB				*e*S	Sn	22 32 14.1	-0.2
	baz=221						
NNSH	Datong	0.58	220	*e*P	Pn	22 32 01.3	0.0

	baz=227						
NNSH	baz=227			eS	Sn	22 32 13.7	-0.7
HSN1	Hsinchu baz=260	0.71	262	P	Pn	22 32 02.3	+0.2
HSN1	baz=260			eS	Sn	22 32 16.4	+0.4
NACB	Ninganchiao baz=202	0.72	195	eP	Pn	22 32 00.9	-1.3
NACB	baz=202			eS	Sn	22 32 15.4	-0.7
ETLH	Xiulin Townshi baz=213	0.72	203	P	Pn	22 32 02.0	-0.4
ETLH	baz=213			S	Sn	22 32 15.7	-0.6
SBCB	Hsinchu baz=273	0.74	264	eP	Pn	22 32 02.7	+0.3
SBCB	baz=273			eS	Sn	22 32 16.2	-0.2
LIOB	Emei baz=251	0.74	252	⇑iP	Pn	22 32 02.7	+0.2
LIOB	baz=251			eS	Sn	22 32 16.3	-0.2
HSN	Hsinchu baz=270	0.75	265	eP	Pn	22 32 02.5	0.0
HSN	baz=270			eS	Sn	22 32 15.9	-0.7
NSTT	Nanjuang baz=250	0.76	252	P	Pn	22 32 02.8	+0.2
NSTT	baz=250			S	Sn	22 32 16.1	-0.6
PCYT	Pengchaiyu baz=13	0.79	18	eP	Pn	22 32 03.4	+0.5
FUSS	Fushou baz=216	0.80	219	eP	Pn	22 32 03.9	+0.6
FUSS	baz=216			eS	Sn	22 32 18.1	+0.3
TWD	Chiawan baz=198	0.81	193	eP	Pn	22 32 02.2	-0.8
TWD	baz=198			eS	Sn	22 32 16.4	-1.1
TWT	Tachien baz=234	0.84	223	eP	Pn	22 32 04.3	+0.8
TWT	baz=234			eS	Sn	22 32 18.9	+0.6
TDCB	Techi baz=234	0.85	223	eP	Pn	22 32 04.0	+0.4
TDCB	baz=234			eS	Sn	22 32 18.5	+0.1
WHF	Hehuan Shan baz=211	0.87	214	iP	Pn	22 32 04.4	+0.3
WHF	baz=211			eS	Sn	22 32 19.2	-0.2
NMLH	Miaoli baz=253	0.97	250	eP	Pn	22 32 04.8	+0.2
NMLH	baz=253			eS	Sn	22 32 20.4	+0.1
WHP	Taichung City baz=236	0.97	233	⇑iP	Pn	22 32 05.2	+0.5
WHP	baz=236			S	Sn	22 32 19.3	-1.2
CHGB	Renai baz=219	0.99	215	⇓iP	Pn	22 32 05.9	+0.9
CHGB	baz=219			eS	Sn	22 32 22.0	+1.0
NSY	Sanyi baz=247	1.05	244	eP	Pn	22 32 05.6	+0.2
NSY	baz=247			eS	Sn	22 32 22.1	+0.4
TWQ1	Liyutan baz=236	1.07	241	eP	Pn	22 32 05.9	+0.2
TWQ1	baz=236			eS	Sn	22 32 21.7	-0.5
ESL	Shilin baz=193	1.11	198	eP	Pn	22 32 04.6	-1.5
JYNG	Yonagunijimaku	1.13	112	P	Pn	22 32 06.2	0.0
JYNG				eS	Sn	22 32 22.6	-0.6
WPL	Puli Township baz=231	1.15	222	eP	Pn	22 32 06.8	+0.3
WPL	baz=231			eS	Sn	22 32 22.1	-1.6
DPDB	Guoxing baz=233	1.15	224	eP	Pn	22 32 07.1	+0.5
WDJ	Dajia District baz=246	1.18	244	eP	Pn	22 32 07.5	+0.7
YOJ	Yonaguni jima	1.18	110	P	Pn	22 32 06.7	-0.1
YOJ				eS	Sn	22 32 23.9	-0.3
EGFH	Guangfu baz=195	1.25	196	eP	Pn	22 32 08.2	+0.6
VWDT	VWDT baz=218	1.27	208	eP	Pn	22 32 08.3	+0.5
VWDT	baz=218			eS	Sn	22 32 26.4	+0.5
SMLT	Sun Moon Lake baz=230	1.28	220	eP	Pn	22 32 08.5	+0.4
SMLT	baz=230			eS	Sn	22 32 26.7	+0.2
TYC	Yuchr baz=232	1.29	222	P	Pn	22 32 08.6	+0.5
TYC	baz=232			eS	Sn	22 32 26.1	-0.4
SSLB	Suanglung baz=227	1.33	216	P	Pn	22 32 09.1	+0.5
SSLB	baz=227			eS	Sn	22 32 27.2	0.0
HGSD	Ruisui baz=198	1.42	194	eP	Pn	22 32 09.4	-0.2
WNT	Mingjian baz=228	1.42	226	eP	Pn	22 32 09.8	+0.2
WNT	baz=228			eS	Sn	22 32 29.4	+0.3
EHY	Hungye baz=191	1.43	198	eP	Pn	22 32 08.6	-1.2
WJS	Zhushan baz=234	1.43	223	eP	Pn	22 32 09.7	-0.1
WJS	baz=234			eS	Sn	22 32 29.2	-0.2
WHYT	Xinyi Township baz=226	1.45	216	eP	Pn	22 32 10.8	+0.7
WHYT	baz=226			eS	Sn	22 32 30.8	+0.9
YUS	Yu-Shan baz=221	1.58	209	eP	Pn	22 32 13.2	+1.1
YUS	baz=221			eS	Sn	22 32 34.1	+0.7
EYUL	Yuli baz=195	1.58	196	eP	Pn	22 32 12.6	+1.0
TWF1	Yuli baz=192	1.58	197	eP	Pn	22 32 10.7	-0.9
CHN5	Tsauling baz=230	1.63	219	eP	Pn	22 32 12.4	+0.2
CHN5	baz=230			eS	Sn	22 32 34.4	+0.5
ALS	Alishan baz=224	1.63	214	eP	Pn	22 32 13.1	+0.7
ALS	baz=224			eS	Sn	22 32 34.5	+0.3
WGK	Gukeng baz=235	1.63	224	eP	Pn	22 32 12.6	+0.4
WDLH	Douliu baz=235	1.65	224	eP	Pn	22 32 11.8	-0.6
FULB	Fuli baz=192	1.73	195	eP	Pn	22 32 12.7	-0.8
FULB	baz=192			eS	Sn	22 32 35.3	-0.6
WTK	Tuku baz=229	1.75	228	eP	Pn	22 32 13.4	-0.2
ELDTW	Lidau baz=191	1.82	203	eP	Pn	22 32 14.8	+0.1
ELDTW	baz=191			eS	Sn	22 32 39.0	+0.9
IRIF	Iriomote-Funau	1.84	107	P	Pn	22 32 14.8	+0.1
IRIF				S	Sn	22 32 37.5	-0.8
CHY	Chiayi baz=232	1.86	223	eP	Pn	22 32 14.9	0.0
CHN4	Tsaushan baz=219	1.87	216	eP	Pn	22 32 15.7	+0.6
CHN4	baz=219			eS	Sn	22 32 39.0	0.0
TPUB	Ta-pu baz=216	1.89	214	eP	Pn	22 32 15.8	+0.4
PTTC	Pingtan baz=290	1.94	289	eP	Pn	22 32 15.3	-0.6
EDH	Donghe baz=185	1.94	193	eP	Pn	22 32 15.8	-0.2
WTP	Ta-pu baz=223	1.95	214	eP	Pn	22 32 15.8	-0.3
STYT	Tauyuan baz=210	1.95	209	eP	Pn	22 32 16.7	+0.5
TWK	Hsinying baz=218	2.00	217	eP	Pn	22 32 16.6	-0.2
HATJ	Hateruma jima	2.00	114	P	Pn	22 32 17.1	+0.3
HATJ				eS	Sn	22 32 41.7	-0.3
SGST	Jiashian baz=221	2.10	212	eP	Pn	22 32 17.3	-0.7
MATB	Ma-tsu baz=308	2.10	308	eP	Pn	22 32 17.8	-0.2
JKRS	Kuro-shima	2.11	107	P	Pn	22 32 18.5	+0.3
JKRS				eS	Sn	22 32 44.2	-0.2
VWUC	VWUC baz=274	2.13	274	eP	Pn	22 32 18.0	-0.4
TWGBT	Beinan baz=189	2.15	198	eP	Pn	22 32 18.6	-0.1
JIJ	Ishigaki jima	2.19	103	P	Pn	22 32 19.2	0.0
JIJ				S	Sn	22 32 45.1	-1.3
JISG	Ishigakijimahi	2.30	97	P	Pn	22 32 21.1	+0.5
JISG				S	Sn	22 32 49.6	+0.7
TSMG	Majia baz=207	2.40	206	eP	Pn	22 32 22.8	+0.8
PTMZ	Houxiangcun baz=275	2.44	274	eP	Pn	22 32 22.3	0.0
PHUB	P'eng-hu baz=231	2.44	237	eP	Pn	22 32 21.6	-0.8
LYJJ	Jianjiangzhen baz=313	2.48	313	eP	Pn	22 32 23.1	+0.1
MASBT	Mashibuluo baz=207	2.49	206	eP	Pn	22 32 23.8	+0.7
JTJ	Tarama	2.65	94	P	Pn	22 32 26.0	+0.8
JTJ				S	Sn	22 32 56.7	-0.3
SCZT	Fangliau baz=204	2.71	204	eP	Pn	22 32 27.4	+1.3
MHZQ	Yeshan baz=297	2.78	297	eP	Pn	22 32 27.1	+0.2
KNMB	Chin-men Tao baz=263	3.13	263	eP	Pn	22 32 31.0	-0.4
AXDP	Jialang baz=270	3.48	271	eP	Pn	22 32 35.8	-0.3

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*TAP **06** 22:42:51.6, 24°.53N×122°.74E, h99^{km}±1^{km}, ML2.8, D*

*JMA **06** 22:42:51.9±0.1, 24°.45N×122°.73E, h95^{km}±1^{km}, M2.0*

ISC 06 22:42:52.8±1.5**, 24°.46N**±0°.05×**122°.73E**±0°.03**, h87**^{km}±10^{km}**, n51, σ0^{s}.76**/93**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.19	92	P	Pn	22 43 05.6	+0.2
JYNG				S	Sn	22 43 15.8	+1.1
YOJ	Yonaguni jima	0.25	89	P	Pn	22 43 05.8	+0.2
YOJ				S	Sn	22 43 16.1	+1.0
TWC	Suao baz=278	0.82	281	eP	Pn	22 43 09.7	-0.6
TWC	baz=278			eS	Sn	22 43 23.0	-0.3
ENA	Nanau baz=258	0.91	268	eP	Pn	22 43 11.2	-0.1
ENA	baz=258			eS	Sn	22 43 25.7	+0.8
IRIF	Iriomote-Funau	0.92	97	P	Pn	22 43 11.3	0.0
IRIF				S	Sn	22 43 25.7	+0.5
TIPB	Shuangxi baz=294	0.97	302	eP	Pn	22 43 11.5	-0.5
TIPB	baz=294			eS	Sn	22 43 25.1	-1.2
TWE	Neicheng baz=280	1.00	285	eP	Pn	22 43 12.0	-0.3
TWE	baz=280			eS	Sn	22 43 27.0	0.0
HATJ	Hateruma jima	1.06	112	eS	Sn	22 43 28.7	+0.7
NWF	Wu-fen Shan baz=295	1.06	305	eP	Pn	22 43 12.8	-0.3
WFSB	Wu-fen Shan baz=295	1.06	305	eP	Pn	22 43 12.6	-0.4
NACB	Ninganchiao baz=244	1.08	255	eP	Pn	22 43 12.6	-0.6
NACB	baz=244			eS	Sn	22 43 27.3	-1.2
ENTT	Nioudou baz=275	1.08	280	eP	Pn	22 43 13.4	+0.1
ENTT	baz=275			eS	Sn	22 43 28.9	+0.4
TWD	Chiawan baz=246	1.10	250	eP	Pn	22 43 13.1	-0.4
TWD	baz=246			eS	Sn	22 43 29.1	0.0
NDT	Datong Townshi baz=275	1.12	278	eP	Pn	22 43 13.8	0.0
NDT	baz=275			eS	Sn	22 43 29.6	+0.2
NWLT	Wulai baz=289	1.16	286	P	Pn	22 43 13.7	-0.5
NWLT	baz=289			eS	Sn	22 43 29.7	-0.7
ETLH	Xiulin Townshi baz=249	1.17	258	P	Pn	22 43 14.1	-0.3
ETLH	baz=249			eS	Sn	22 43 30.5	-0.1
JKRS	Kuro-shima	1.18	100	P	Pn	22 43 14.8	+0.3
JKRS				S	Sn	22 43 31.6	+0.8
NNSB	Datong baz=258	1.23	269	eP	Pn	22 43 14.6	-0.6
NNSB	baz=258			eS	Sn	22 43 31.6	-0.4
NNSH	Datong baz=259	1.23	269	eP	Pn	22 43 14.8	-0.3
NNSH	baz=259			eS	Sn	22 43 31.9	-0.1
NNS	Nan Shan baz=258	1.24	269	eP	Pn	22 43 15.1	-0.2
NNS	baz=258			eS	Sn	22 43 31.8	-0.4
NSK	Sanguang baz=276	1.27	280	eP	Pn	22 43 15.3	-0.4
NSK	baz=276			eS	Sn	22 43 32.2	-0.6
JIJ	Ishigaki jima	1.29	94	P	Pn	22 43 15.5	-0.3
JIJ				S	Sn	22 43 32.3	-0.7
BACT	New Taipei Cit baz=284	1.29	295	P	Pn	22 43 16.1	+0.3
ESL	Shilin baz=238	1.35	242	eP	Pn	22 43 16.2	-0.4
FUSS	Fushou baz=257	1.38	262	P	Pn	22 43 17.0	-0.1
FUSS	baz=257			eS	Sn	22 43 34.9	-0.4
WHF	Hehuan Shan baz=259	1.38	257	P	Pn	22 43 17.1	-0.2
WHF	baz=259			eS	Sn	22 43 35.2	-0.4
EGFH	Guangfu baz=230	1.43	237	P	Pn	22 43 17.3	-0.3
EGFH	baz=230			eS	Sn	22 43 34.6	-1.6
TWT	Tachien baz=258	1.44	262	P	Pn	22 43 18.1	+0.3
TWT	baz=258			eS	Sn	22 43 36.8	+0.2
JISG	Ishigakijimahi	1.44	85	P	Pn	22 43 17.3	-0.4
JISG				S	Sn	22 43 35.6	-0.9
TDCB	Techi baz=256	1.45	262	eP	Pn	22 43 18.0	+0.1
TDCB	baz=256			eS	Sn	22 43 36.7	-0.2
CHGB	Renai baz=245	1.48	255	P	Pn	22 43 18.3	-0.1
CHGB	baz=245			eS	Sn	22 43 37.0	-0.7
HGSD	Ruisui baz=226	1.54	232	eP	Pn	22 43 18.4	-0.5
HGSD	baz=226			eS	Sn	22 43 38.0	-0.6
LIOB	Emei baz=273	1.57	277	P	Pn	22 43 19.5	0.0
LIOB	baz=273			eS	Sn	22 43 39.5	-0.1
NSTT	Nanjuang baz=273	1.59	277	eP	Pn	22 43 20.1	+0.6
NSTT	baz=273			eS	Sn	22 43 39.1	-0.7
EHY	Hungye baz=239	1.60	234	eP	Pn	22 43 18.9	-0.9
VWDT	VWDT baz=236	1.61	245	P	Pn	22 43 20.1	+0.2
VWDT	baz=236			eS	Sn	22 43 41.0	+0.6
WHP	Taichung City baz=258	1.64	264	eP	Pn	22 43 21.4	+1.0
WHP	baz=258			eS	Sn	22 43 41.5	+0.3
TWF1	Yuli baz=235	1.71	230	eP	Pn	22 43 21.1	-0.2
TWF1	baz=235			eS	Sn	22 43 42.5	-0.3
SSLB	Suanglung baz=244	1.76	248	eP	Pn	22 43 21.9	+0.1
SSLB	baz=244			eS	Sn	22 43 43.6	-0.2
SMLT	Sun Moon Lake baz=242	1.77	251	eP	Pn	22 43 23.1	+1.0
TYC	Yuchr baz=244	1.80	253	eP	Pn	22 43 23.4	+1.1
TYC	baz=244			eS	Sn	22 43 46.6	+1.9
JTJ	Tarama	1.80	84	P	Pn	22 43 22.1	-0.2
JTJ				S	Sn	22 43 44.2	-0.5
FULB	Fuli baz=218	1.82	227	eP	Pn	22 43 22.1	-0.5
FULB	baz=218			eS	Sn	22 43 44.6	-0.6
EDH	Donghe baz=216	1.98	222	eP	Pn	22 43 23.6	-1.1
EDH	baz=216			eS	Sn	22 43 47.5	-1.4
ALS	Alishan baz=234	2.00	242	eP	Pn	22 43 25.9	+0.7
ALS	baz=234			eS	Sn	22 43 51.0	+1.1
ELDTW	Lidau baz=225	2.02	232	eP	Pn	22 43 25.1	-0.2
ELDTW	baz=225			eS	Sn	22 43 49.8	-0.2
CHN5	Tsauling baz=236	2.07	246	eP	Pn	22 43 27.1	+1.2
CHN5	baz=236			eS	Sn	22 43 52.8	+1.7
LDUT	Ludao baz=208	2.12	213	eP	Pn	22 43 25.8	-0.8
LDUT	baz=208			eS	Sn	22 43 51.1	-1.2
TPUB	Ta-pu baz=230	2.24	240	eP	Pn	22 43 29.4	+1.1
CHN4	Tsaushan baz=232	2.25	241	eP	Pn	22 43 30.0	+1.8
CHN4	baz=232			eS	Sn	22 43 56.9	+1.6
WTP	Ta-pu baz=229	2.29	239	eP	Pn	22 43 30.9	+2.1

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*IDC **06** 22:51:19.4±0.9, 9°.57N×126°.34E, h0^{km}, mb3.8/8, mb1 4.0/8, mb1mx3.7/43, mbtmp3.8/8, MS3.0/2, Ms1 3.0/2, ms1mx2.6/43, Error ellipse: s-maj=58.3km s-min=19.6km az=78.0*

*MAN **06** 22:51:23.4, 9°.44N×126°.42E, h1^{km}, mb4.6, ML3.4, MS3.3*

*NEIC **06** 22:51:29.5±0.8, 9°.4N±0°.1×126°.1E±0°.2, h78^{km}±9^{km}, mb4.4/12, Error ellipse: s-maj=27.4km s-min=14.7km az=88.0*

ISC 06 22:51:24.5±1.3**, 9°.48N**±0°.04×**126°.44E**±0°.07**, h29**^{km}±9^{km}**, n35, σ2^{s}.00**/38**, mb4.2**/15**, 1C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLSP	General Luna,	0.43	314	eP	Pb	22 51 32.5	-1.2
GLSP				eS	Sb	22 51 39.6	-0.4
BUTP	Butuan	0.96	238	eP	Pb	22 51 41.7	-0.8
BUTP				eS	Sn	22 51 57.5	+2.8
MSLP	Maasin	1.69	293	eP	Pn	22 51 52.9	+0.8
MSLP				eS	Sb	22 52 17.5	+1.8
CGP	Cagayan de Oro	2.00	240	⇑eP	Pb	22 51 58.0	-2.3
CGP				iS	Sb	22 52 25.5	+0.7
BUKP	Musuan	2.10	221	eP	Pb	22 52 00.4	-1.5
BUKP				eS	Sb	22 52 25.8	-1.8
MATI	Mati	2.53	184	eP	Pb	22 52 07.6	-1.6
MATI				eS	Sb	22 52 36.5	-3.4
DAV	Davao City (W) 70nm,0.3s,baz=101,slow=21,SNR=4.3	2.54	200	Sn	Sb	22 52 46.6	+6.2
DAV	comp=Z,99nm,18.8s,baz=337,slow=41			LR	LR	22 53 06.0	
LLP	Lapu-Lapu	2.58	289	⇓eP	Pb	22 52 07.1	-2.9
LLP				eS	Sb	22 52 39.2	-2.0
CNP	Catarman	3.48	330	eP	Pn	22 52 20.3	+3.6
TOLI2	Tolitoli	10.04	214	Pn	Pn	22 53 47.6	+0.7
TPUB	Ta-pu	14.82	339	Pn	Pn	22 54 55.0	+2.8
JMZ	Minamidaito 2	16.87	15		P	22 55 22.6	+2.1
MTN	Manton Dam	22.66	168	P	P	22 56 23.8	+0.1
MTN	comp=Z,18nm,1.3s			IAmb	IAmb	22 57 08.3	
FITZ	Fitzroy Crossi comp=Z,3.1nm,0.9s,baz=12,slow=4.5,SNR=8.1	27.42	182	P	P	22 57 07.9	0.0
WB0	Warramunga Arr	30.10	165	P	P	22 57 31.7	-0.1
WRA	Warramunga Arr comp=Z,0.2nm,0.6s,baz=345,slow=9.5,SNR=1.5	30.26	165	P	P	22 57 34.5	+1.4
WRA	comp=Z,92nm,21.9s,baz=95,slow=41			LR	LR	23 12 08.1	
WR0	Warramunga Arr	30.32	165	P	P	22 57 34.1	+0.4
WR0	comp=Z,15nm,1.6s			IAmb	IAmb	22 58 29.5	
ASAR	Alice Springs comp=Z,0.2nm,0.3s,baz=354,slow=7.2,SNR=1.7	33.74	168	P	P	22 58 02.5	-1.2
ASAR	Alice Springs	33.74	168	P	P	22 58 03.9	+0.1
FORT	Forrest	40.06	178	P	P	22 58 56.8	-0.6
H11N1	WAKE ISLAND Hy baz=266,slow=74,SNR=15	40.35	71	T	T	23 42 31.3	
H11N2	WAKE ISLAND Hy baz=266,slow=74,SNR=10	40.36	71	T	T	23 42 28.5	
H11N3	WAKE ISLAND Hy baz=266,slow=74,SNR=14	40.37	71	T	T	23 42 26.8	
BBOO	Buckleboo	43.05	168	P	P	22 59 21.8	0.0
BBOO	comp=Z,23nm,1.6s			IAmb	IAmb	23 00 28.9	
MK31	Makanchi Array	52.75	323	P	P	23 00 35.7	-1.2
MK31	comp=Z,5.8nm,2.0s			IAmb	IAmb	23 01 10.0	
MKAR	Makanchi Array comp=Z,0.6nm,0.5s,baz=124,slow=7.9,SNR=14	52.75	323	P	P	23 00 35.6	-1.3
MKAR	Makanchi Array	52.75	323	P	P	23 00 35.3	-1.6
MAKZ	Makanchi	52.95	323	P	P	23 00 33.7	-4.6
MAKZ	comp=Z,2.1nm,0.7s			IAmb	IAmb	23 01 10.8	
KK31	Karatay Array	58.92	315	P	P	23 01 19.9	-1.3
KK31	comp=Z,5.2nm,1.6s			IAmb	IAmb	23 01 37.1	
KKAR	Karatay Array	58.92	315	P	P	23 01 19.6	-1.5
KKAR	Karatay Array	58.92	315	P	P	23 01 19.8	-1.4
KKAR	comp=Z,5.2nm,1.6s			IAmb	IAmb	23 01 37.1	
ILAR	Eielson Array comp=Z,0.2nm,0.6s,baz=247,slow=3.7,SNR=2.4	80.07	26	P	P	23 03 30.6	-0.8
ARCES	ARCESS Array B comp=Z,2.1nm,0.7s,baz=58,slow=4.6,SNR=6.1	84.99	340	P	P	23 03 55.8	-1.1
FINES	FINESS Array B comp=Z,0.9nm,0.4s,baz=65,slow=5.0,SNR=11	86.66	332	P	P	23 04 03.6	-1.7
YKA	Yellowknife Ar comp=Z,0.4nm,0.7s,baz=307,slow=3.7,SNR=8.6	94.40	24	P	P	23 04 41.2	-0.3

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*CRAAG **06** 23:02:45.0, 35°.93N×2°.20E, Ml3.1*

*MDD **06** 23:02:46.3±0.7, 35°.92N×2°.25E, h3^{km}±9^{km}, mb3.9/14, Error ellipse: s-maj=13.3km s-min=5.0km az=161.0, PRXIMO*

ISC 06 23:02:45.7±1.2**, 35°.90N**±0°.06×**2°.25E**±0°.04**, h16**^{km}**, n31,** σ**0^{s}.91**/45**, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EBNR	Beni Rached	0.70	304	P	Pg	23 02 59.1	-0.3
ECHA	Ech Chlef	0.76	289	P	Pg	23 03 00.3	-0.1
ECHF	Ech Chlef	0.78	289	P	Pg	23 03 00.3	-0.6
ETRT	Tiaret	0.93	237	P	Pb	23 03 03.0	-0.4
ETRT	Tiaret	0.93	237	P	Pb	23 03 03.0	-0.4
EANR	'Ain N'Sour	0.93	273	P	Pb	23 03 04.0	+0.5
EANR	'Ain N'Sour	0.93	273	P	Pb	23 03 04.0	+0.5
ADJB	Djebel Djouab	1.00	75	P	Pb	23 03 05.4	+0.8
ADJB	Djebel Djouab	1.00	75	P	Pb	23 03 05.4	+0.8
ABA	Alger-Bouzarea	1.10	35	P	Pb	23 03 05.7	-0.6
ABA	Alger-Bouzarea	1.10	35	P	Pb	23 03 05.7	-0.6
ABMS	Boumerdes	1.31	49	P	Pn	23 03 09.3	+0.1
ABMS	Boumerdes	1.31	49	P	Pn	23 03 09.3	+0.1
EIBI	Ibiza	3.20	347	P	Pn	23 03 36.1	+0.8

	13nm,0.3s,SNR=19						
EIBI				S	Sn	23 04 12.7	-0.5
	180nm,1.6s						
EBEN2	Beniarda presa	3.38	326	P	Pn	23 03 38.7	+0.9
	2.1nm,0.1s,SNR=7.9						
EBEN2				S	Sn	23 04 18.0	+0.3
	16nm,0.7s,SNR=7.9						
EMUR	La Murta	3.40	306	P	Pn	23 03 38.2	+0.1
	2.8nm,0.4s,SNR=5.7						
EMUR				S	Sn	23 04 18.4	+0.2
	17nm,1.0s						
ENIJ	Nijar	3.75	288	P	Pn	23 03 43.3	+0.4
	1.6nm,0.2s,SNR=7.9						
ENIJ				S	Sn	23 04 25.8	-0.9
	24nm,1.0s,SNR=7.9						
ETOS	Mallorca	3.88	6	P	Pn	23 03 45.1	+0.4
	2.8nm,0.2s,SNR=10.0						
ETOS				S	Sn	23 04 30.0	-0.1
	240nm,1.6s						
ETOB	Tobarra	4.08	313	P	Pn	23 03 49.0	+1.5
	1.3nm,0.2s,SNR=86						
ETOB				S	Sn	23 04 34.5	-0.5
	5.9nm,0.5s,SNR=7.9						
EBER	Berja	4.26	285	P	Pn	23 03 50.1	+0.1
	2.2nm,0.1s,SNR=8.3						
EBER				S	Sn	23 04 38.2	-1.4
	17nm,0.9s						
SESP	Santiago Espad	4.43	301	P	Pn	23 03 54.1	+1.7
	3.2nm,0.2s,SNR=7.9						
SESP				S	Sn	23 04 44.0	+0.3
	4.9nm,0.5s,SNR=7.9						
ECHE	Chera	4.48	326	P	Pn	23 03 54.1	+1.2
	1.5nm,0.2s,SNR=7.9						
ECHE				S	Sn	23 04 43.8	-0.9
	3.4nm,0.5s,SNR=7.9						
EQES	Quesada	4.67	296	P	Pn	23 03 57.3	+1.7
	2.0nm,0.3s,SNR=15						
EQES				S	Sn	23 04 48.9	-0.6
	52nm,1.9s						
EQUE	Quentar	4.76	288	P	Pn	23 03 58.0	+1.1
	2.7nm,0.3s,SNR=14						
EQUE				S	Sn	23 04 51.6	-0.1
	10nm,1.2s						
ELGU	Los Guajares,	4.84	283	P	Pn	23 03 57.6	-0.2
	3.0nm,0.2s,SNR=7.9						
ELGU				S	Sn	23 04 51.2	-2.4
	2.6nm,1.0s,SNR=7.9						
EMOS	Mosqueruela	4.94	335	P	Pn	23 04 00.4	+0.9
	1.3nm,0.1s,SNR=30						
EMOS				S	Sn	23 04 54.9	-1.5
	104nm,1.9s						
EGOR	Sierra Gorda,	5.26	285	P	Pn	23 04 05.5	+1.7
	1.0nm,0.3s,SNR=7.9						
EGOR				S	Sn	23 05 05.0	+0.8
	0.9nm,0.4s,SNR=7.9						
ESDC	Sonseca Array	6.19	309	P	Pn	23 04 16.3	-0.2
	0.7nm,0.3s,baz=123,slow=13,SNR=15						
PAB	San Pablo	6.37	307	P	Pn	23 04 19.4	+0.4
	0.2nm,0.1s,SNR=7.9						
ECAB	El Cabril	6.51	292	P	Pn	23 04 21.5	+0.7
	0.6nm,0.3s,SNR=7.9						
PVAQ	Vaqueiros	8.15	284	*e*Pn	Pn	23 04 44.0	+0.7

UPP 06 23:19:15.0±0.0, 67°.18N×20°.60E, h0km, ML1.6, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DUNU	Dundret	0.06	193	P	Pg	23 19 16.4	+0.3
MASU	Masugnsbyn	0.61	62	P	Pg	23 19 26.6	-0.1
RATU	Laukkuluspa	0.75	329	P	Pg	23 19 29.1	-0.3
KUA	Kurravaara	0.78	353	P	Pg	23 19 29.7	-0.3
KUA				S	Sg	23 19 40.8	+0.6
SALU	Saltoluokta	0.84	285	P	Pg	23 19 30.7	-0.4
NIKU	Nikkaluokta	0.92	320	P	Pg	23 19 32.1	-0.4
PAJU	Pajala	0.99	98	P	Pg	23 19 33.3	-0.7
LANU	Lannavaara	1.02	31	P	Pg	23 19 33.8	-0.7
KOVU	Salmi	1.06	351	P	Pg	23 19 34.9	-0.4

UPP 06 23:19:22.9±0.3, 67°.19N×20°.66E, h0km, ML1.8, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DUNU	Dundret	0.07	210	P	Pg	23 19 24.6	+0.3
	baz=23						
DUNU				S	Sg	23 19 25.8	+0.6
MASU	Masugnsbyn	0.58	62	P	Pg	23 19 34.0	-0.1
MASU	Masugnsbyn	0.58	62	S	Pg	23 19 34.0	0.0

*MAN **06** 23:33:28.7, 13°.94N×120°.40E, h91km, mb4.2, ML3.1, MS2.8*

*IDC **06** 23:33:29.9±1.3, 13°.92N×120°.61E, h104km±11km, mb3.5/11, mb1 3.7/11, mb1mx3.4/48, mbtmp3.9/11, Error ellipse: s-maj=48.6km s-min=17.0km az=69.0*

*NEIC **06** 23:33:30.6±0.9, 13°.94N±0°.03×120°.7E±0°.2, h112km±6km, mb4.3/12, Error ellipse: s-maj=26.8km s-min=4.8km az=92.0*

ISC 06 23:33:29.4±0.8, 13°.91N±0°.04×120°.35E±0°.08, h100km±8km, n38, σ1ˢ25/43, mb4.0/17, 1C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGY	Tagaytay City	0.60	71	P	Pn	23 33 46.5	+0.5
	462nm,0.3s,baz=304,slow=1.3,SNR=21						
TGY				S	Sn	23 33 58.8	+0.4
	1µm,0.3s,baz=304,slow=23,SNR=12						
TGY	Tagaytay City	0.60	71	*e*P	Pn	23 33 46.2	+0.2
TGY				*i* S	Sn	23 33 58.6	+0.2
PGP	Puerto Galera	0.71	125	⇑*e*P	Pn	23 33 46.9	-0.1
PGP				*e*S	Sn	23 33 59.0	-1.1
BOAC	Boac	1.52	107	*e*P	Pn	23 33 58.7	+2.8
BOAC				*e*S	Sn	23 34 16.5	+0.6
SJMP	San Jose	1.62	152	*e*P	Pn	23 33 57.7	+0.5
SJMP				*e*S	Sn	23 34 18.0	-0.3
BUSP	Coron	1.90	184	*e*P	Pn	23 34 01.0	+0.2
BUSP				*e*S	Sn	23 34 24.7	+0.1
SMPP	San Manuel, Pa	2.25	8	*e*P	Pn	23 34 03.6	-1.7
SMPP				*e*S	Sn	23 34 31.2	-1.5
ENPP	El Nido	2.83	199	*e*P	Pn	23 34 13.4	+0.4
ENPP				*e*S	Sn	23 34 46.5	0.0
CUYO	Cuyo Island	3.11	168	*e*P	Pn	23 34 22.4	+5.7
SZP	Santa	3.62	2	Pn	Pn	23 34 27.3	+3.8
MYLDM	Lahad Datu	8.86	192	Pn	Pn	23 35 40.9	+6.2
UGM	Wanagama	23.77	205	P	P	23 38 34.3	+1.2
KSAR	Wonju Array Be	24.38	15	P	P	23 38 38.0	-0.3
ULN	Ulaanbaatar	35.62	345	P	P	23 40 18.1	+0.5
ULN				IAmb	IAmb	23 40 19.2	
	comp=Z,2.6nm,0.7s						
SONM	Songino Array	35.76	344	P	P	23 40 19.6	+0.7
	comp=Z,4.2nm,0.7s,baz=163,slow=10,SNR=39						
SONM	Songino Array	35.76	344	P	P	23 40 19.7	+0.8
WB0	Warramunga Arr	36.21	157	P	P	23 40 21.5	-1.3
WRA	Warramunga Arr	36.35	157	P	P	23 40 22.6	-1.4
	comp=Z,0.2nm,0.4s,baz=331,slow=10,SNR=4.6						
WRA	Warramunga Arr	36.35	157	IAmb	IAmb	23 40 25.0	
	comp=Z,0.1nm,1.1s						
WB2	Warramunga Arr	36.35	157	P	P	23 40 23.0	-1.0
WB2				IAmb	IAmb	23 40 29.4	
	comp=Z,3.0nm,1.1s						
WR0	Warramunga Arr	36.44	157	P	P	23 40 24.6	-0.2
WR0				IAmb	IAmb	23 40 27.5	
	comp=Z,2.3nm,0.9s						
ASAR	Alice Springs	39.63	160	P	P	23 40 51.7	+0.1
	comp=Z,0.3nm,0.3s,baz=348,slow=7.7,SNR=2.4						
TLY	Talaya	40.01	344	P	P	23 40 55.1	+0.8
	comp=Z,1.0nm,0.4s,baz=243,slow=6.5,SNR=4.6						
MKAR	Makanchi Array	45.66	324	P	P	23 41 41.3	+1.2
	comp=Z,0.4nm,0.6s,baz=125,slow=8.4,SNR=7.3						
MAKZ	Makanchi	45.85	324	P	P	23 41 42.1	+0.5
ZALV	Zalesovo Beam	48.72	333	P	P	23 42 03.9	+0.2
	comp=Z,0.9nm,0.5s,baz=123,slow=7.4,SNR=4.4						
PETK	Petropavlovsk-	49.01	29	P	P	23 42 05.0	-1.0
KURK	Kurchatov	49.83	326	P	P	23 42 13.5	+1.4
KURK				IAmb	IAmb	23 42 14.3	
	comp=Z,4.0nm,0.8s						
KKAR	Karatay Array	51.59	314	P	P	23 42 27.2	+1.6
BRVK	Borovoye	55.48	326	P	P	23 42 54.9	+1.1
BRVK				IAmb	IAmb	23 42 55.8	
	comp=Z,4.8nm,0.5s						
TIXI	Tiksi	57.94	3	P	P	23 43 07.7	-3.2
ABKAR	Akbulak array	60.35	319	P	P	23 43 29.1	+1.1
ABKAR				IAmb	IAmb	23 43 29.2	
	comp=Z,1.6nm,0.6s						
ABKAR	Akbulak array	60.35	319	P	P	23 43 28.7	+0.8
ILAR	Eielson Array	78.71	26	P	P	23 45 19.8	-0.7
	comp=Z,0.6nm,1.0s,baz=268,slow=4.4,SNR=2.6						
ARCES	ARCESS Array B	78.77	339	P	P	23 45 22.0	+1.2
	comp=Z,7.9nm,1.1s,baz=72,slow=5.9,SNR=2.0						
FINES	FINESS Array B	79.94	331	P	P	23 45 26.9	-0.3
	comp=Z,1.1nm,0.8s,baz=56,slow=4.8,SNR=5.6						
AKASG	Malin Array Be	80.08	320	P	P	23 45 28.1	-0.1
	comp=Z,0.4nm,0.4s,baz=43,slow=35,SNR=2.0						
YKA	Yellowknife Ar	92.71	22	P	P	23 46 29.3	-0.8
	comp=Z,0.3nm,0.5s,baz=305,slow=3.8,SNR=5.9						

WEL 06 23:38:37.7±0.7, 38°S±5°×18°0W±°, h33km, M3.6/24, ML3.9/24, MLv3.6/24, Error ellipse: s-maj=0.0km s-min=0.0km az=20.6, East of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	1.26	273	P	Pn	23 38 58.7	-0.2
MXZ	Matakaoa Point	1.39	284	P	Pn	23 39 00.1	-0.6
MXZ				S	Sn	23 39 17.9	+0.1
PUZ	Puketiti	1.39	262	P	Pn	23 39 00.4	-0.3
PUZ				S	Sn	23 39 18.5	+0.5
PKGZ	Pakihiroa	1.52	270	P	Pn	23 39 02.2	-0.5
PKGZ				S	Sn	23 39 20.3	-1.0
CNGZ	Carnagh Statio	1.53	247	P	Pn	23 39 03.3	+0.7
TWGZ	Tauwhareparae	1.62	260	P	Pn	23 39 04.0	+0.1
TWGZ				S	Sn	23 39 24.0	+0.3
HAZ	Te Kaha	1.76	274	P	Pn	23 39 05.6	-0.2
HAZ				S	Sn	23 39 27.1	0.0
TKGZ	Te Karaka	1.78	252	P	Pn	23 39 06.5	+0.4
TKGZ				S	Sn	23 39 28.2	+0.6
RUGZ	Raukumara Rang	1.84	267	P	Pn	23 39 06.8	-0.2
RUGZ				S	Sn	23 39 28.1	-1.1
RIGZ	Rimuhau	1.94	245	P	Pn	23 39 08.8	+0.5
RIGZ				S	Sn	23 39 32.2	+0.7
PRGZ	Paritu Road	1.95	238	P	Pn	23 39 09.5	+1.0
MWZ	Matawai	2.00	257	P	Pn	23 39 09.0	-0.2
MWZ				S	Sn	23 39 32.5	-0.5
MHGZ	Mahia Peninsul	2.06	232	P	Pn	23 39 10.6	+0.6
MHGZ				S	Sn	23 39 37.1	+2.4
KNZ	Kokohu	2.14	238	P	Pn	23 39 11.6	+0.5
URZ	Urewera	2.31	260	P	Pn	23 39 14.1	+0.8
URZ				S	Sn	23 39 41.1	+0.4
WHRZ	Whale Island	2.39	270	P	Pn	23 39 15.6	+1.0
WHRZ				S	Sn	23 39 42.5	-0.3
WHHZ	Waihua	2.47	241	P	Pn	23 39 16.3	+0.7
WHHZ				S	Sn	23 39 46.1	+1.5
RTZ	Ruatahuna	2.48	252	P	Pn	23 39 16.5	+0.6
RTZ				S	Sn	23 39 46.0	+0.9
RAHZ	Arahi	2.50	245	P	Pn	23 39 16.9	+0.8
RAHZ				S	Sn	23 39 45.9	+0.4
MUGZ	Murupara	2.61	256	P	Pn	23 39 17.9	+0.3
MUGZ				S	Sn	23 39 48.3	+0.3
MTHZ	Maungataniwha	2.66	248	P	Pn	23 39 18.7	+0.4
MTHZ				S	Sn	23 39 50.0	+0.6
ARHZ	Aropaoanui	2.72	239	P	Pn	23 39 19.9	+0.8
ARHZ				S	Sn	23 39 52.1	+1.4
NMHZ	Naumai	2.78	244	P	Pn	23 39 20.4	+0.5
NMHZ				S	Sn	23 39 53.1	+0.8
TARZ	Mount Tarawera	2.78	262	P	Pn	23 39 20.4	+0.5
MRHZ	Matea Rd	2.97	251	P	Pn	23 39 22.9	+0.5
MRHZ				S	Sn	23 39 56.6	-0.4
MCHZ	McNeill Hill	3.01	238	P	Pn	23 39 23.4	+0.3
BKZ	Black Stump Fm	3.03	244	P	Pn	23 39 23.5	+0.2
KAHZ	Kahuranaki	3.09	231	P	Pn	23 39 24.3	+0.2
KWHZ	Kaweka Forest	3.19	240	P	Pn	23 39 25.7	+0.1
PXZ	Pawanui	3.24	228	P	Pn	23 39 25.0	-1.2
KRHZ	Kereru	3.33	237	P	Pn	23 39 27.2	-0.2
BHHZ	Black Hill Sta	3.46	242	P	Pn	23 39 29.6	+0.2
WPHZ	Waipukurau	3.52	231	P	Pn	23 39 29.4	-0.6
PNHZ	Pukenui	3.58	235	P	Pn	23 39 31.0	0.0
TMVZ	Te Maari	3.58	249	P	Pn	23 39 31.9	+0.9
KUZ	Kuaotunu	3.60	287	P	Pn	23 39 30.1	-1.0
OTVZ	Oturere	3.63	248	P	Pn	23 39 33.2	+1.6
MOVZ	Moawhango	3.65	244	P	Pn	23 39 32.8	+0.9
NGZ	Ngauruhoe	3.68	248	P	Pn	23 39 34.4	+2.0
WNVZ	Wahianoa	3.73	246	P	Pn	23 39 34.1	+1.0
DVHZ	Dannevirke	3.83	230	P	Pn	23 39 33.4	-0.9
MKAZ	Moumakai	3.93	280	P	Pn	23 39 35.2	-0.4
HIZ	Hauiti	4.10	260	P	Pn	23 39 38.9	+0.9
PRWZ	Pori Road	4.10	228	P	Pn	23 39 37.5	-0.5
POWZ	Post Office Ro	4.12	232	P	Pn	23 39 37.9	-0.5
PKE	Pukeiti	4.89	253	P	Pn	23 39 52.0	+3.1
WCZ	Waipu Caves	4.94	292	P	Pn	23 39 49.5	0.0
OUZ	Omahuta	5.81	295	P	Pn	23 40 02.1	+0.6
CTZ	Chatham Island	6.37	157	P	Pn	23 40 11.0	+1.8
CTZ				S	Sn	23 41 16.6	-4.0
THZ	Tophouse	6.68	233	P	Pn	23 40 12.9	-0.7

*IDC **06** 23:59:06.1±1.4, 18°.65S×70°.36W, h0km, mb3.9/2, mb1 4.1/4, mb1mx3.7/27, mbtmp4.0/4, ML3.9/2, MS2.4/2, Ms1 2.5/2, ms1mx2.2/31, Error ellipse: s-maj=43.5km s-min=33.5km az=88.0*

*GUC **06** 23:59:14.3±0.7, 18°.91S×69°.95W, h48km±31km, ML3.9*

ISC 06 23:59:13.3±1.0, 18°.92S±0°.04×70°.08W±0°.08, h56km±9km, n29, σ1ˢ61/30, 1C-5D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNMCX	Minye Minye	0.50	115	*i* S	Sn	23 59 33.6	-0.3
AP01	Chacalluta	0.60	335	⇓*i*P	Pn	23 59 26.9	+0.8
AP01				*i* S	Sn	23 59 36.7	+1.4
AP01				IAML		23 59 42.4	
	comp=N,5µm,0.2s						
PSGCX	Pisagua	0.68	184	*e*P	Pn	23 59 27.2	0.0
PSGCX				*i* S	Sn	23 59 37.3	+0.1
PB16	IPOC Station P	0.79	43	⇓*i*P	Pn	23 59 29.1	0.0
PB16				*i* S	Sn	23 59 39.9	-0.6
PB16				IAML		23 59 40.8	
	comp=N,5µm,0.3s						
PB08	IPOC Station P	1.50	144	⇓*i*P	Pn	23 59 38.5	+0.3
PB08				*i* S	Sn	23 59 57.2	+0.3
PB08				IAML		23 59 57.9	
	comp=E,5µm,0.3s						
TA01	Diego Aracena	1.64	183	⇓*i*P	Pn	23 59 39.5	-0.4
TA01				*i* S	Sn	23 59 58.8	-1.1
TA01				IAML		00 00 05.9	
	comp=N,925nm,0.4s						
PATCX	Punta Patache	1.89	182	*e*P	Pn	23 59 42.6	-0.7
PB01	IPOC Station P	2.19	165	*e*P	Pn	23 59 47.1	-0.2
PB01				*i* S	Sn	00 00 16.4	+3.0
PB01				IAML		00 00 18.0	
	comp=N,1µm,0.5s						
PB02	IPOC Station P	2.40	176	⇑*i*P	Pn	23 59 50.3	0.0
PB02				*i* S	Sn	00 00 18.8	+0.3
PB02				IAML		00 00 37.9	
	comp=E,1µm,0.4s						
PB07	IPOC Station P	2.80	176	*e*P	Pn	23 59 56.4	+0.6
PB07				*i* S	Sn	00 00 29.4	+0.9
PB07				IAML		00 00 38.0	
	comp=E,710nm,0.4s						
PB09	IPOC Station P	2.97	165	*e*P	Pn	23 59 59.4	+1.2
PB09				*i* S	Sn	00 00 36.7	+4.1
PB09				IAML		00 00 45.2	
	comp=E,437nm,0.5s						
PB03	IPOC Station P	3.13	174	⇓*i*P	Pn	00 00 00.7	+0.3
PB03				*i* S	Sn	00 00 36.5	-0.1
PB03				IAML		00 00 46.1	
	comp=E,400nm,0.5s						
LPAZ	La Paz	3.21	36	Pn	Pn	00 00 05.4	+3.6
	comp=E,1.6nm,0.3s,baz=217,slow=13,SNR=15						
LPAZ				LR	LR	00 01 38.1	
	comp=E,49nm,21.5s,baz=227,slow=48						
LVC	Limon Verde	3.83	164	Pn	Pn	00 00 11.6	+1.5
	comp=E,10nm,0.3s,baz=334,slow=10,SNR=47						
LVC				Sn	Sn	00 00 57.1	+3.0
	comp=E,11nm,0.3s,baz=330,slow=10,SNR=1.7						
LVC				LR	LR	00 01 41.6	
	comp=E,60nm,18.6s,baz=20,slow=37						
SIV	San Ignacio	9.07	73	Pn	Pn	00 01 21.1	-0.6
	comp=E,0.8nm,0.3s,baz=265,slow=11,SNR=12						
H03N1	Juan Fernandez	16.48	207	T	T	00 20 04.7	
	baz=30,slow=73,SNR=64						
H03N2	Juan Fernandez	16.49	207	T	T	00 20 00.7	
	baz=30,slow=73,SNR=34						
H03N3	Juan Fernandez	16.50	207	T	T	00 19 59.6	
	baz=30,slow=73,SNR=50						
PTGA	Pitinga	20.62	30	P	P	00 03 45.5	-2.7
	comp=E,1.1nm,0.2s,baz=211,slow=12,SNR=2.0						
PCRV	Puerto La Cruz	29.41	11	LR	LR	00 16 22.1	
	comp=E,358nm,21.3s,slow=36						
YKA	Yellowknife Ar	88.40	341	P	P	00 11 58.4	-0.4
	comp=E,0.5nm,0.5s,baz=132,slow=5.4,SNR=11						
H11S2	WAKE ISLAND Hy	126.42	279	T	T	02 37 12.9	
	baz=100,slow=75,SNR=77						
H11S1	WAKE ISLAND Hy	126.43	279	T	T	02 37 16.5	
	baz=100,slow=75,SNR=41						
H11N3	WAKE ISLAND Hy	126.44	281	T	T	02 37 14.9	
	baz=100,slow=74,SNR=11						
H11S3	WAKE ISLAND Hy	126.44	279	T	T	02 37 14.2	
	baz=100,slow=75,SNR=51						
H11N2	WAKE ISLAND Hy	126.45	281	T	T	02 37 17.3	
	baz=100,slow=74,SNR=16						
H11N1	WAKE ISLAND Hy	126.45	281	T	T	02 37 15.8	
	baz=100,slow=74,SNR=11						
WRA	Warramunga Arr	134.56	213	PKP	PKPdf	00 18 25.2	-1.1
	comp=E,0.3nm,0.9s,baz=137,slow=1.7,SNR=1.2						
SONM	Songino Array	151.01	5	PKPbc	PKPbc	00 19 00.5	+0.4
	comp=E,0.7nm,0.6s,baz=346,slow=3.0,SNR=5.3						

*IDC **07** 00:26:02.6±1.8, 7°.02S×129°.51E, h144km±18km, mb3.5/6, mb1 3.7/11, mb1mx3.4/53, mbtmp4.0/11, Error ellipse: s-maj=34.2km s-min=14.8km az=100.0*

*NEIC **07** 00:26:04.2±2.1, 7°.01S±0°.08×129°.42E±0°.03, h158km±12km, mb4.2/6, Error ellipse: s-maj=11.3km s-min=4.7km az=180.0*

ISC 07 00:26:03.2±0.6, 7°.05S±0°.06×129°.41E±0°.07, h150km, n28, σ1ˢ92/33, mb3.6/7, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	2.09	117	Pn	Pn	00 26 41.5	+2.1
SAUI				Sn	Sn	00 27 08.0	+0.7
FAKI	Fak Fak	4.98	35	Pn	Pn	00 27 17.4	+1.0
SOEI	Soe	5.76	242	Pn	Pn	00 27 28.2	+1.4
MTN	Manton Dam	6.01	164	Pn	Pn	00 27 31.6	+1.6
SIJI	Sorong	6.41	17	P	Pn	00 27 35.0	-0.4
	1.3nm,0.3s,baz=192,slow=21,SNR=2.0						
SIJI				S	Sn	00 28 45.4	-2.3
	3.2nm,0.3s,baz=210,slow=22,SNR=6.9						
BATI	Baumata	6.49	241	P	Pn	00 27 38.5	+2.0
	6.4nm,0.3s,baz=154,slow=2.3,SNR=2.4						
BATI				S	Sn	00 28 48.9	-0.7
	11nm,0.3s,baz=113,slow=8.1,SNR=14						
FITZ	Fitzroy Crossi	11.58	198	P	Pn	00 28 43.4	-0.7
	0.4nm,0.3s,baz=25,slow=10,SNR=25						
FITZ				S	Sn	00 30 42.1	-10
	1.8nm,0.3s,baz=129,slow=18,SNR=6.5						
FITZ	Fitzroy Crossi	11.58	198		Pn	00 28 43.7	-0.4
WB0	Warramunga Arr	13.54	160		Pn	00 29 08.2	-1.2
WRAB	Tennant Creek	13.68	160	Pn	Pn	00 29 10.3	-0.8
WRA	Warramunga Arr	13.68	160	P	Pn	00 29 09.0	-2.2
	0.8nm,0.3s,baz=344,slow=13,SNR=36						
WRA				S	Sn	00 31 31.9	-11
	2.0nm,0.3s,baz=331,slow=23,SNR=8.5						
WRA	Warramunga Arr	13.68	160		Pn	00 29 09.3	-1.9
WB2	Warramunga Arr	13.69	160		Pn	00 29 09.5	-1.7
WR0	Warramunga Arr	13.77	159		Pn	00 29 11.2	-1.1
COEN	Coen	15.17	118	Pn	Pn	00 29 30.1	+0.3
COEN				IAmb	IAmb	00 29 45.4	
	comp=Z,22nm,1.6s						
AS31	Alice Springs	17.08	166		Pn	00 29 54.0	+0.9
AS31				IAmb	IAmb	00 29 55.0	
	comp=Z,4.9nm,0.5s						
ASAR	Alice Springs	17.08	166	P	Pn	00 29 54.2	+1.1
	comp=Z,2.3nm,0.3s,baz=345,slow=10,SNR=156						
ASAR				S	S	00 32 54.8	-8.2
	comp=Z,0.5nm,0.3s,baz=337,slow=25,SNR=5.6						
ASAR	Alice Springs	17.08	166		Pn	00 29 54.6	+1.4
PSA00	Pilbara Seismi	17.15	212		Pn	00 29 54.5	+0.7
PSA00				IAmb	IAmb	00 29 55.2	
	comp=Z,7.1nm,0.7s						
FORT	Forrest	23.64	183	P	P	00 31 01.7	+0.9
FORT				IAmb	IAmb	00 31 57.2	
	comp=Z,12nm,0.9s						
BBOO	Buckleboo	26.37	167	P	P	00 31 26.7	+1.2
CMAR	Chiang Mai Arr	39.31	311	P	P	00 33 17.2	-0.7
	comp=Z,3.3nm,0.2s,baz=133,slow=7.8,SNR=2.3						
SONM	Songino Array	58.30	342	P	P	00 35 43.2	+0.9
	comp=Z,0.2nm,0.4s,baz=150,slow=6.6,SNR=2.0						
MK31	Makanchi Array	67.94	327	P	P	00 36 46.3	+0.5
MKAR	Makanchi Array	67.94	327	P	P	00 36 46.4	+0.6
	comp=Z,1.4nm,0.5s,baz=116,slow=8.2,SNR=33						
MKAR				PcP	PcP	00 37 11.2	+0.1
	comp=Z,0.4nm,0.6s,baz=117,slow=5.0,SNR=3.6						
ZALV	Zalesovo Beam	71.37	334	P	P	00 37 06.6	0.0
	comp=Z,0.3nm,0.4s,baz=140,slow=6.5,SNR=2.9						
KURBB	Kurchatov Arra	72.24	329	P	P	00 37 12.1	+0.2
	comp=Z,0.6nm,0.4s,baz=124,slow=4.9,SNR=10						
BVAR	Borovoye Array	77.79	328	P	P	00 37 43.6	-0.1
	comp=Z,0.2nm,0.4s,baz=64,slow=6.6,SNR=3.3						

MAN 07 00:31:35.8, 11°.26N×125°.23E, h6km, mb4.6, ML3.4, MS3.3, 1D, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSLP	Maasin	1.18	198	*e*P	Pn	00 31 58.9	+0.1
MSLP				*e*S	Sn	00 32 18.1	+3.0
CNP	Catarman	1.36	336	*e*P	Pn	00 32 01.1	-0.2
CNP				*e*S	Sn	00 32 19.8	+0.2
LLP	Lapu-Lapu	1.56	233	⇓*e*P	Pn	00 32 04.4	+0.4
LLP				*e*S	Sb	00 32 25.0	0.0
GUIM	Jordan	2.67	257	*e*P	Pn	00 32 19.8	+0.5
GUIM				*e*S	Sn	00 32 52.0	0.0
CNOP	Candoni, Negro	2.92	241	*e*P	Pn	00 32 21.8	-0.9
CNOP				*e*S	Sn	00 32 57.1	-1.0
JCNP	Jose Panganiba	3.89	321	*e*P	Pn	00 32 37.6	+1.4

*NEIC **07** 00:32:02.3±0.8, 12°.17N±0°.08×124°.9E±0°.2, h273km±11km, mb4.0/20, Error ellipse: s-maj=36.0km s-min=8.9km az=76.0*

*IDC **07** 00:32:11.2±6.7, 12°.17N×125°.04E, h370km±76km, mb3.2/15, mb1 3.2/15, mb1mx3.0/61, mbtmp4.0/15, Error ellipse: s-maj=38.7km s-min=16.5km az=69.0*

ISC 07 00:32:04.8±0.7, 12°.2N±0°.1×124°.9E±0°.2, h300km, n54, σ0ˢ65/54, mb3.8/23, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TPUB	Ta-pu	11.74	340	Pn	Pn	00 34 43.0	-1.2
WB0	Warramunga Arr	33.14	163	P	P	00 38 12.9	-0.8
WRA	Warramunga Arr	33.29	164	P	P	00 38 14.2	-0.9
	0.5nm,0.6s,baz=342,slow=9.8,SNR=3.7						
WRA	Warramunga Arr	33.29	164	P	P	00 38 13.4	-1.6
WB2	Warramunga Arr	33.29	164	P	P	00 38 14.8	-0.3
WB2				IAmb	IAmb	00 38 55.2	
	comp=Z,9.8nm,1.5s						
WC3	Warramunga Arr	33.31	164	P	P	00 38 14.5	-0.7
ASAR	Alice Springs	36.74	166	P	P	00 38 45.0	+0.6
	comp=Z,0.3nm,0.4s,baz=347,slow=7.3,SNR=2.6						
SONM	Songino Array	38.73	340	P	P	00 39 01.9	+1.1
	comp=Z,0.7nm,0.6s,baz=152,slow=9.9,SNR=5.5						
SONM	Songino Array	38.73	340	P	P	00 39 01.5	+0.8
BBOO	Buckleboo	46.03	167	P	P	00 39 59.9	+0.7
PETK	Petropavlovsk-	48.47	26	P	P	00 40 16.9	-0.7
	comp=Z,2.0nm,0.8s,baz=206,slow=4.0,SNR=4.1						
PETK	Petropavlovsk-	48.47	26	P	P	00 40 17.6	0.0
MK31	Makanchi Array	49.66	322	P	P	00 40 27.7	+0.9
MKAR	Makanchi Array	49.66	322	P	P	00 40 27.8	+1.0
	comp=Z,1.5nm,0.6s,baz=121,slow=8.5,SNR=25						
MAKZ	Makanchi	49.85	322	P	P	00 40 28.6	+0.4
NIL	Nilore	51.52	303	P	P	00 40 40.4	-0.4
NIL				IAmb	IAmb	00 40 40.9	
	comp=Z,3.7nm,0.7s						
ZALV	Zalesovo Beam	52.27	331	P	P	00 40 46.1	+0.3
	comp=Z,0.5nm,0.3s,baz=114,slow=9.7,SNR=4.8						
KURK	Kurchatov	53.70	325	P	P	00 40 57.1	+0.8
KURBB	Kurchatov Arra	53.70	325	P	P	00 40 57.3	+1.0
	comp=Z,0.8nm,0.3s,baz=163,slow=3.0,SNR=25						
KBL	Kabul	55.12	304	P	P	00 41 06.5	-0.6
KK06	Karatay Array	55.91	314	P	P	00 41 12.4	+0.2
KK05	Karatay Array	55.92	314	P	P	00 41 12.7	+0.4
KK02	Karatay Array	55.92	314	P	P	00 41 12.6	+0.3
KK31	Karatay Array	55.92	314	P	P	00 41 12.4	+0.1
KK31				IAmb	IAmb	00 41 13.3	
	comp=Z,2.1nm,0.6s						
KKAR	Karatay Array	55.92	314	P	P	00 41 12.8	+0.5

KKAR				IAmb	IAmb	00 41 13.3	
	comp=Z,2.1nm,0.6s						
KKAR	Karatay Array	55.92	314	P	P	00 41 12.9	+0.6
KK07	Karatay Array	55.92	314	P	P	00 41 12.5	+0.2
KK01	Karatay Array	55.92	314	P	P	00 41 12.5	+0.2
KK04	Karatay Array	55.93	314	P	P	00 41 12.8	+0.4
KK03	Karatay Array	55.93	314	P	P	00 41 13.0	+0.6
KK09	Karatay Array	55.93	314	P	P	00 41 12.7	+0.3
KK08	Karatay Array	55.94	314	P	P	00 41 12.5	0.0
BVAR	Borovoye Array	59.30	325	P	P	00 41 36.7	+1.2
	comp=Z,0.2nm,0.5s,baz=289,slow=36,SNR=3.5						
BRVK	Borovoye	59.37	325	P	P	00 41 36.5	+0.6
BRVK				IAmb	IAmb	00 42 13.8	
	comp=Z,9.7nm,1.9s						
HRA	Herat	60.67	303	P	P	00 41 44.7	-0.7
HRA				IAmb	IAmb	00 43 43.6	
	comp=Z,9.4nm,1.9s						
NRIK	Noril'sk	61.80	346	P	P	00 41 52.9	+0.9
	comp=Z,1.4nm,0.4s,baz=156,slow=7.7,SNR=3.9						
AB06	Akbulak array	64.50	319	P	P	00 42 09.5	-0.5
AB07	Akbulak array	64.50	319	P	P	00 42 10.0	0.0
AB02	Akbulak array	64.52	319	P	P	00 42 10.3	+0.2
AB03	Akbulak array	64.52	319	P	P	00 42 10.1	0.0
AB01	Akbulak array	64.52	319	P	P	00 42 10.5	+0.4
AB31	Akbulak array	64.52	319	P	P	00 42 09.9	-0.2
AB31				IAmb	IAmb	00 42 11.1	
	comp=Z,2.9nm,0.7s						
ABKAR	Akbulak array	64.52	319	P	P	00 42 10.6	+0.5
ABKAR				IAmb	IAmb	00 42 11.1	
	comp=Z,2.9nm,0.7s						
ABKAR	Akbulak array	64.52	319	P	P	00 42 10.6	+0.5
AB05	Akbulak array	64.52	319	P	P	00 42 10.4	+0.2
AB04	Akbulak array	64.52	319	P	P	00 42 10.2	+0.1
AB08	Akbulak array	64.52	319	P	P	00 42 10.4	+0.2
AB09	Akbulak array	64.53	319	P	P	00 42 10.3	+0.1
AKTO	Aktyubinsk	65.96	320	P	P	00 42 18.5	-0.8
	comp=Z,1.0nm,0.5s,baz=69,slow=8.5,SNR=4.2						
ARU	Arti	66.86	326	P	P	00 42 25.0	+0.2
	comp=Z,0.4nm,0.5s,baz=110,slow=6.2,SNR=3.7						
BELG	Belogornoye	72.64	321	P	P	00 42 59.4	-0.6
	comp=Z,5.3nm,0.7s,baz=162,slow=20,SNR=3.7						
ARCES	ARCESS Array B	81.90	339	P	P	00 43 50.7	-0.1
	comp=Z,6.8nm,1.1s,baz=59,slow=4.7,SNR=6.6						
FINES	FINESS Array B	83.54	331	P	P	00 43 59.6	+0.3
	comp=Z,1.0nm,0.5s,baz=64,slow=5.0,SNR=8.5						
AKASG	Malin Array Be	84.20	320	P	P	00 44 02.0	-0.8
	comp=Z,0.8nm,0.5s,baz=60,slow=5.5,SNR=2.7						

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*IDC **07** 00:47:32.5±0.8, 28°.30N×104°.86E, h0^{km}, mb3.9/11, mb1 4.0/12, mb1mx3.7/63, mbtmp3.9/12, ML3.6/1, MS2.8/3, Ms1 2.9/3, ms1mx2.5/40, Error ellipse: s-maj=35.4km s-min=16.6km az=58.0*

*NEIC **07** 00:47:37.8±1.0, 28°.32N±0°.09×104°.94E±0°.03, h36^{km}±8^{km}, mb4.2/14, Error ellipse: s-maj=12.8km s-min=2.8km az=170.0*

ISC 07 00:47:36.0±0.6**, 28°.41N**±0°.08×**105°.01E**±0°.09**, h19**^{km}**, n49, σ1^{s}77**/47**, mb4.0**/17**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMI	Kunming	3.85	212	Pn	Pn	00 48 33.3	-1.1
ENH	Enshi	4.33	64		Pn	00 48 43.4	+2.6
SLVN	Son La	7.12	188	Pn	Pn	00 49 18.4	-0.8
CM34	Chiang Mai Arr	10.92	211	P	Pn	00 50 14.0	+2.7
CM33	Chiang Mai Arr	11.04	211	P	Pn	00 50 16.0	+3.0
CHTO	Chiang Mai	11.05	211	Pn	Pn	00 50 13.3	+0.3
CM35	Chiang Mai Arr	11.07	210	P	Pn	00 50 18.0	+4.6
CM36	Chiang Mai Arr	11.24	210	P	Pn	00 50 19.0	+3.3
CMAR	Chiang Mai Arr	11.36	211	Pn	Pn	00 50 18.4	+1.1
	0.8nm,0.3s,baz=20,slow=11,SNR=19						
CMAR				LR	LR	00 54 59.5	
	comp=Z,22nm,19.4s,baz=285,slow=40						
CMAR	Chiang Mai Arr	11.36	211		Pn	00 50 18.0	+0.7
CM15	Chiang Mai Arr	11.37	211	P	Pn	00 50 21.0	+3.5
	7.4nm,0.5s						
CM02	Chiang Mai Arr	11.38	211	P	Pn	00 50 21.0	+3.4
	7.8nm,1.1s						
CM01	Chiang Mai Arr	11.38	210	P	Pn	00 50 21.1	+3.4
CM04	Chiang Mai Arr	11.39	210	P	Pn	00 50 20.9	+3.1
	7.7nm,1.1s						
CM05	Chiang Mai Arr	11.41	210	P	Pn	00 50 20.0	+2.0
CM13	Chiang Mai Arr	11.41	211	P	Pn	00 50 21.4	+3.4
	116nm4.3nm,1.0s						
LSA	Lhasa	12.19	279	Pn	Pn	00 50 28.5	-0.5
SONM	Songino Array	19.42	3	P	Pn	00 52 02.2	-0.2
	0.2nm,0.3s,baz=183,slow=11,SNR=6.7						
SONM	Songino Array	19.42	3	IAmb	IAmb	00 52 08.0	
	comp=Z,1.1nm,0.9s						
KSRS	Korea Array	21.20	59	P	P	00 52 21.3	+0.9
	comp=Z,2.1nm,0.8s,baz=247,slow=9.4,SNR=7.4						
MK31	Makanchi Array	25.55	322	P	P	00 53 02.9	-0.6
MKAR	Makanchi Array	25.55	322	P	P	00 53 02.9	-0.6
	comp=Z,1.6nm,0.8s,baz=123,slow=11,SNR=14						
MKAR				PcP	PcP	00 56 33.2	-1.3
	comp=Z,0.6nm,0.9s,baz=157,slow=1.1,SNR=3.8						
MKAR	Makanchi Array	25.55	322	P	P	00 53 03.1	-0.4
MAKZ	Makanchi	25.73	322	P	P	00 53 04.1	-1.1
MAKZ				IAmb	IAmb	00 53 07.9	
	comp=Z,3.0nm,0.7s						
ZAA0	Zalesovo Array	29.48	336	P	P	00 53 38.0	-0.6
ZALV	Zalesovo Beam	29.48	336	P	P	00 53 38.4	-0.2
	comp=Z,0.6nm,0.4s,baz=133,slow=10,SNR=4.5						
ZALV				LR	LR	01 06 09.6	
	comp=Z,19nm,18.9s,baz=79,slow=38						
ZALV	Zalesovo Beam	29.48	336	P	P	00 53 39.8	+1.1
KURK	Kurchatov	29.89	325	P	P	00 53 42.8	+0.5
KURK				IAmb	IAmb	00 53 43.3	
	comp=Z,3.0nm,1.1s						
KKAR	Karatay Array	31.35	307	P	P	00 53 55.0	-0.3
GEYT	Alibeck	40.02	296	LR	LR	01 15 10.9	
	comp=Z,31nm,19.1s,baz=85,slow=42						
GEYT	Alibeck	40.02	296	P	P	00 55 08.8	-1.0
ABKAR	Akbulak array	40.07	314	P	P	00 55 09.8	-0.2
ABKAR	Akbulak array	40.07	314	P	P	00 55 10.1	+0.1
ABKAR				IAmb	IAmb	00 55 10.8	
	comp=Z,5.7nm,1.4s						
NRIK	Noril'sk	42.20	351	P	P	00 55 27.6	+0.4
	comp=Z,2.0nm,0.4s,baz=142,slow=8.3,SNR=7.1						
NRIK	Noril'sk	42.20	351	P	P	00 55 27.8	+0.5
NRIK				IAmb	IAmb	00 55 28.3	
	comp=Z,4.6nm,1.1s						
ARU	Arti	43.05	324	P	P	00 55 35.1	+0.8
	comp=Z,0.4nm,0.3s,baz=17,slow=22,SNR=3.7						
PETK	Petropavlovsk-	45.61	42	P	P	00 55 55.7	+0.8
RAYN	Ar Rayn	53.26	279	P	P	00 56 53.0	-0.8
RAYN				IAmb	IAmb	00 56 53.2	
	comp=Z,4.9nm,1.2s						
WB0	Warramunga Arr	55.69	146	P	P	00 57 09.4	-1.8
WRA	Warramunga Arr	55.81	146	P	P	00 57 11.4	-0.6
	comp=Z,0.5nm,0.3s,baz=298,slow=8.1,SNR=19						
WRA	Warramunga Arr	55.81	146	IAmb	IAmb	00 57 11.9	
	comp=Z,0.1nm,1.1s						
WB2	Warramunga Arr	55.81	146	P	P	00 57 10.8	-1.4
WB2				IAmb	IAmb	00 57 12.0	
	comp=Z,4.4nm,1.1s						
WR0	Warramunga Arr	55.92	146	P	P	00 57 12.1	-0.8
WR0				IAmb	IAmb	00 57 20.9	
	comp=Z,7.5nm,1.5s						
COEN	Coen	56.02	134	P	P	00 57 13.2	-0.4
ASAR	Alice Springs	58.79	149	P	P	00 57 32.7	-0.4
	comp=Z,1.1nm,0.8s,baz=334,slow=6.9,SNR=8.3						
ARCES	ARCESS Array B	60.03	336	P	P	00 57 40.6	-0.5
	comp=Z,3.6nm,0.9s,baz=83,slow=8.4,SNR=1.7						
FINES	FINESS Array B	60.24	327	P	P	00 57 42.2	-0.4
	comp=Z,6.4nm,1.1s,baz=90,slow=5.7,SNR=4.2						
GERES	GERESS Array B	70.00	315	P	P	00 58 46.0	-0.4
	comp=Z,0.4nm,0.4s,baz=23,slow=5.3,SNR=4.3						
YKA	Yellowknife Ar	84.02	17	P	P	01 00 04.7	-0.2
	comp=Z,0.1nm,0.3s,baz=334,slow=4.9,SNR=5.2						

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*IDC **07** 00:49:20.2±3.3, 2°.90N×128°.30E, h120^{km}±37^{km}, mb3.4/8, mb1 3.5/10, mb1mx3.3/44, mbtmp3.9/10, Error ellipse: s-maj=28.9km s-min=19.6km az=95.0*

*NEIC **07** 00:49:21.4±1.3, 2°.8N±0°.1×128°.3E±0°.1, h140^{km}±11^{km}, mb4.1/10, Error ellipse: s-maj=22.0km s-min=10.4km az=215.0*

*DJA **07** 00:49:24.9±1.8, 3°N±6°×12°8E±1°5, h140^{km}±11^{km}, M4.2/6, mb4.3/1, MLv4.2/6*

ISC 07 00:49:22.5±0.6**, 2°.82N**±0°.07×**128°.26E**±0°.09**, h150**^{km}**, n29, σ1^{s}00**/29**, mb4.0**/11**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	2.22	204	P	Pn	00 50 02.1	+1.8
SGSI	Sangihe	2.86	288	P	Pn	00 50 08.5	+0.3
SIJI	Sorong	4.74	141	P	Pn	00 50 30.4	-2.1
	1.8nm,0.3s,baz=323,slow=24,SNR=2.1						
KMSI	Cibinong	4.82	243	P	Pn	00 50 34.7	+1.0
GTOI	Gorontalo	5.68	248	P	Pn	00 50 46.2	+1.2
FAKI	Fak Fak	6.96	145		Pn	00 50 55.5	-6.6
TOLI2	Tolitoli	7.67	257	Pn	Pn	00 51 11.3	-0.2
KAPI	Kappang	11.53	228	P	Pn	00 52 02.5	-0.2
	0.4nm,0.3s,baz=84,slow=16,SNR=1.4						
KAPI				S	Sn	00 54 07.9	-2.3
	baz=221,slow=22,SNR=0.9						
MTN	Manton Dam	15.82	170		Pn	00 52 56.5	-0.7
FITZ	Fitzroy Crossi	20.95	187	P	P	00 53 55.2	+1.5
	0.8nm,0.7s,baz=9.5,slow=12,SNR=1.8						
WB0	Warramunga Arr	23.24	165	P	P	00 54 16.3	-0.4
WRA	Warramunga Arr	23.39	165	P	P	00 54 18.7	+0.6
	0.6nm,0.6s,baz=345,slow=10,SNR=8.1						
WRA	Warramunga Arr	23.39	165	P	P	00 54 19.6	+1.5
WB2	Warramunga Arr	23.40	165	P	P	00 54 19.0	+0.9
WB2				IAmb	IAmb	00 54 52.7	
	comp=Z,8.4nm,1.4s						
WR0	Warramunga Arr	23.46	165	P	P	00 54 19.7	+1.0
WR0				IAmb	IAmb	00 54 23.2	
	comp=Z,15nm,1.8s						
MJAR	Matsushiro Arr	34.79	14	P	P	00 55 57.6	-1.2
	comp=Z,0.9nm,0.3s,baz=193,slow=10,SNR=4.7						
USRK	Ussuriysk Ar.	41.34	4	P	P	00 56 53.6	+0.1
	comp=Z,1.8nm,0.7s,baz=174,slow=2.9,SNR=4.5						
USRK	Ussuriysk Ar.	41.34	4	P	P	00 56 53.5	0.0
KLR	Kul'dur	46.34	3	P	P	00 57 33.2	-0.1
	comp=Z,0.3nm,0.4s,baz=233,slow=10,SNR=3.5						
SONM	Songino Array	48.65	340	P	P	00 57 52.0	+0.6
	comp=Z,0.7nm,0.7s,baz=148,slow=9.0,SNR=6.4						
SONM	Songino Array	48.65	340	P	P	00 57 52.1	+0.6
PETK	Petropavlovsk-	55.71	21	P	P	00 58 43.5	+0.3
MK31	Makanchi Array	59.17	325	P	P	00 59 07.9	+0.2
MK31				IAmb	IAmb	00 59 42.5	
	comp=Z,2.6nm,1.4s						
MKAR	Makanchi Array	59.17	325	P	P	00 59 08.2	+0.5
	comp=Z,1.2nm,0.5s,baz=128,slow=8.6,SNR=13						
MKAR	Makanchi Array	59.17	325	P	P	00 59 08.0	+0.2
MAKZ	Makanchi	59.36	325	P	P	00 59 08.8	-0.2
MAKZ				IAmb	IAmb	00 59 10.3	
	comp=Z,6.8nm,1.4s						
WKZ	Wanaka	59.73	147	P	P	00 59 10.9	-0.6
LBZ	Lake Benmore	60.08	146	P	P	00 59 14.0	+0.1
NRIK	Noril'sk	71.68	346	P	P	01 00 27.7	+0.1
	comp=Z,1.2nm,0.4s,baz=107,slow=6.4,SNR=3.7						

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*IDC **07** 01:42:56.7±2.4, 36°.36N×70°.39E, h198^{km}±22^{km}, mb3.5/18, mb1 3.5/23, mb1mx3.4/59, mbtmp4.0/23, Error ellipse: s-maj=16.3km s-min=11.9km az=163.0*

*MOS **07** 01:42:57.2±0.9, 36°.51N×70°.44E, h208^{km}, mb4.2/7, Error ellipse: s-maj=7.7km s-min=4.3km az=74.5*

*NEIC **07** 01:42:58.2±2.1, 36°.55N±0°.07×70°.28E±0°.08, h211^{km}±6^{km}, mb4.2/14, Error ellipse: s-maj=11.1km s-min=9.1km az=149.0*

*NNC **07** 01:42:59.2±1.4, 36°.76N×70°.20E, h189^{km}±16^{km}, mb3.5, mpv4.4, Error ellipse: s-maj=16.3km s-min=7.5km az=165.0*

ISC 07 01:42:57.0±0.4**, 36°.43N**±0°.04×**70°.43E**±0°.04**, h204**^{km}**, n174, σ1^{s}60**/186**, mb3.9**/20**, 18C-6D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	Kabul	2.19	211	PN	Pn	01 43 39.9	+1.8
KBL	Kabul	2.19	211	Pn	Pn	01 43 39.9	+1.8
KBL	Kabul	2.19	211	P	Pn	01 43 39.9	+1.8
	SNR=549						
KBL				S	S	01 44 10.5	+1.0
NIL	Nilore	3.61	139	PN	Pn	01 43 57.3	+3.1
NIL	Nilore	3.61	139	Pn	Pn	01 43 57.3	+3.1
NIL	Nilore	3.61	139	P	Pn	01 43 57.3	+3.1
IUG	Iuzhnay	5.72	357	*e*P	Pn	01 44 20.9	+0.1
	2.9nm,0.6s,baz=357						
IUG	Iuzhnay	5.72	357	*e*PN	Pn	01 44 20.8	+0.1
IUG				pmax	pmax		
	comp=Z,3.0nm,0.6s						
THN	Thein Dam	5.91	131	*e*S	S	01 45 30.0	-1.1
AML	Almayashu	6.24	23	P	Pn	01 44 27.7	0.0
	SNR=66						
DHRM	DHARAMSHALA	6.40	129	*e*P	Pn	01 44 30.1	+0.4
DHRM				*e*S	S	01 45 41.1	-1.8
DHRM				IAML		01 45 43.1	
	comp=N,459nm,0.3s						
DHRM				IAML		01 45 43.4	
	comp=E,429nm,0.2s						
DZA	Taraz	6.50	6	*e*P	Pn	01 44 30.4	-0.3
	baz=5.9						
DZA	Taraz	6.50	6	*e*PN	Pn	01 44 30.3	-0.3
UCH	Uchtor	6.60	27	P	Pn	01 44 32.7	+0.3
	SNR=27						
KK31	Karatay Array	6.67	1	P	Pn	01 44 31.5	-1.4
	comp=E,0.9nm,0.2s,baz=178,slow=9.8,SNR=14						
KK31				⇑S	S	01 45 43.2	-5.7
	comp=E,13nm,0.3s						
KK31	Karatay Array	6.67	1	PN	Pn	01 44 33.0	+0.1
KK31	Karatay Array	6.67	1		Pn	01 44 33.0	+0.1
KKAR	Karatay Array	6.67	1	PN	Pn	01 44 33.1	+0.2
KKAR	Karatay Array	6.67	1		Pn	01 44 33.1	+0.2
EKS2	Erkin-Say	6.74	22	P	Pn	01 44 34.4	+0.4
	SNR=21						
AAK	Ala-Archa	6.95	26	P	Pn	01 44 37.1	+0.4
	comp=E,6.3nm,0.3s,baz=200,slow=6.3,SNR=103						
AAK				S	S	01 45 52.8	-3.0
	comp=E,4.8nm,0.3s,baz=6.2,slow=22,SNR=32						
AAK	Ala-Archa	6.95	26	P	Pn	01 44 37.1	+0.4
	SNR=39						
AAK	Ala-Archa	6.95	26	⇓P	Pn	01 44 36.2	-0.5
	comp=E,11nm,0.5s						
AAK				⇑S	S	01 45 52.6	-3.2
	comp=E,99nm,0.7s						
AAK	Ala-Archa	6.95	26	*ce*PN	Pn	01 44 37.2	+0.5
AAK				pmax	pmax		
	comp=Z,25nm,0.5s						
AAK	Ala-Archa	6.95	26	Pn	Pn	01 44 36.7	-0.1
AAK	Ala-Archa	6.95	26	P	Pn	01 44 37.1	+0.4
AAK				S	S	01 45 54.1	-1.7
HRA	Herat	6.98	255	Pn	Pn	01 44 37.7	+0.4
BHK	Bhakra	7.05	133	*e*S	S	01 45 54.0	-4.0
KBK	Karagaybulak	7.13	28	P	Pn	01 44 39.8	+0.7
	SNR=11						
ULHL	Ulahol	7.35	36	P	Pn	01 44 42.2	+0.3
	SNR=16						
CHMS	Chumysh	7.36	26	P	Pn	01 44 42.0	+0.1
	SNR=11						
USP	Ospenovka	7.52	23	P	Pn	01 44 43.2	-0.7
	SNR=9.2						
TKM2	Tokmak 2	7.61	30	P	Pn	01 44 45.5	+0.2
	SNR=39						
TKM2	Tokmak 2	7.61	30	⇓P	Pn	01 44 45.4	+0.1
	comp=Z,14nm,0.5s						
TKM2				⇑S	S	01 46 08.0	-3.5
	comp=Z,32nm,0.8s						
TKM2	Tokmak 2	7.61	30	PN	Pn	01 44 45.4	+0.1
TKM2				S	S	01 46 08.0	-3.5
SMLA	Simla	7.71	131	*e*P	Pn	01 44 47.4	+1.0
SMLA				*e*S	S	01 46 10.1	-3.3
SMLA				IAML		01 46 12.8	
	comp=N,173nm,0.7s						
MTBS	Maitube	8.13	33	*e*P	Pn	01 44 52.2	+0.2
	baz=33						
MTBS	Maitube	8.13	33	*e*PN	Pn	01 44 52.1	+0.1
IZV	Izvestkoviy	8.14	34	Lg	Lg	01 46 20.0	
	comp=N,11nm,0.3s						
TNSS	Tian-Shan	8.29	35	*e*P	Pn	01 44 54.4	0.0
	baz=35						
TNSS	Tian-Shan	8.29	35	P	Pn	01 44 54.9	+0.5
	comp=N,24nm,0.3s						
TNSS	Tian-Shan	8.29	35	*e*PN	Pn	01 44 54.3	0.0
AAA	Alma-Ata	8.41	34	*e*P	Pn	01 44 55.9	+0.3
	comp=N,14nm,0.8s,baz=34						
AAA	Alma-Ata	8.41	34	*e*PN	Pn	01 44 55.8	+0.2
AAA				pmax	pmax		
	comp=Z,14nm,0.8s						
MDOK	Medeo	8.44	35	*e*P	Pn	01 44 55.9	-0.2
	baz=35						
MDOK	Medeo	8.44	35	⇑P	Pn	01 44 56.5	+0.5
	comp=Z,16nm,0.7s						
MDOK	Medeo	8.44	35	*e*PN	Pn	01 44 55.8	-0.2
KOTS	Kotyrbulak	8.52	35	P	Pn	01 44 57.9	+0.8
	comp=Z,78nm,0.5s						
KUU	Kurty	8.72	29	*e*P	Pn	01 44 58.2	-1.3
	baz=30						
KUU	Kurty	8.72	29	*e*PN	Pn	01 44 58.2	-1.3
CHKK	Chushkaly	8.96	32	*e*P	Pn	01 45 01.4	-1.2
	baz=32						
CHKK	Chushkaly	8.96	32	*e*PN	Pn	01 45 01.4	-1.2
BTLS	Baital	9.03	17	P	Pn	01 45 05.7	+2.2
	comp=Z,2.1nm,0.4s						
SATY	Saty	9.03	40	*e*P	Pn	01 45 03.2	-0.5
	baz=40						
SATY	Saty	9.03	40	P	Pn	01 45 03.6	-0.1
	comp=Z,5.8nm,0.8s						
SATY	Saty	9.03	40	*e*PN	Pn	01 45 03.2	-0.5
KURS	Kuram	9.22	38	P	Pn	01 45 07.2	+1.2
	comp=Z,10nm,0.3s						
UZB	Uzynbulak	9.42	42	*e*P	Pn	01 45 08.4	-0.3
	baz=42						
UZB	Uzynbulak	9.42	42	P	Pn	01 45 08.9	+0.2
	comp=Z,7.0nm,0.3s						
UZB	Uzynbulak	9.42	42	*e*P	Pn	01 45 08.4	-0.3
KPKS	Kokpek	9.46	39	*e*P	Pn	01 45 09.3	0.0
	baz=40						
KPKS	Kokpek	9.46	39	*e*P	Pn	01 45 09.2	0.0
ARXS	Arharly	9.61	34	P	Pn	01 45 11.1	-0.1
	comp=Z,12nm,0.5s						
SHLS	Shalkode	9.67	43	*e*P	Pn	01 45 14.6	+2.6
	baz=44						
SHLS	Shalkode	9.67	43	*e*P	Pn	01 45 14.5	+2.6
AYAN	Aya Nagar	9.73	143	*e*S	S	01 46 57.3	-4.5
PDGK	Podgornoye	9.80	43	P	Pn	01 45 12.4	-1.2
	comp=Z,2.1nm,0.5s						
PDGK	Podgornoye	9.80	43	⇑P	Pn	01 45 13.5	-0.1
	comp=Z,3.4nm,0.7s						
PDGK	Podgornoye	9.80	43	P	Pn	01 45 13.5	-0.1
SONA	Sohna	9.90	144	*e*S	S	01 46 59.3	-6.6
GEYT	Alibeck	9.94	282	P	Pn	01 45 14.0	-1.4
	comp=Z,1.6nm,0.3s,baz=104,slow=12,SNR=22						
GEYT				S	S	01 47 02.2	-4.5
	comp=Z,0.5nm,0.3s,baz=8.9,slow=10,SNR=2.2						
GEYT	Alibeck	9.94	282	Pn	Pn	01 45 13.8	-1.6
GYA0B	ALIBECK ARRAY	9.94	282	⇑P	Pn	01 45 13.9	-1.4
GYA0B				⇑S	S	01 47 02.1	-4.6
GYA0B	ALIBECK ARRAY	9.94	282	Pn	Pn	01 45 13.7	-1.7
DJR	Jarkent	10.64	39	P	Pn	01 45 26.0	+1.6
	comp=Z,4.3nm,0.3s						
KAPS	Kapalarasan	11.13	35	P	Pn	01 45 31.0	+0.3
	comp=Z,4.0nm,0.3s						
MAKZ	Makanchi	13.48	36	⇑P	Pn	01 46 00.4	+0.2
	comp=Z,13nm,0.6s						
MAKZ	Makanchi	13.48	36	P	Pn	01 46 00.3	0.0
MAKZ	Makanchi	13.48	36	Pn	Pn	01 46 00.3	0.0
MK31	Makanchi Array	13.62	37	⇓P	Pn	01 46 02.0	0.0
	comp=Z,5.8nm,0.7s,baz=228,slow=7.0,SNR=50						
MK31	Makanchi Array	13.62	37	*ce*P	Pn	01 46 02.1	+0.1
MK31	Makanchi Array	13.62	37		Pn	01 46 01.7	-0.3
MKAR	Makanchi Array	13.62	37	P	Pn	01 46 01.9	-0.1
	comp=Z,0.7nm,0.3s,baz=220,slow=16,SNR=43						
MKAR	Makanchi Array	13.62	37	*i* P	Pn	01 46 02.0	0.0
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MKAR	Makanchi Array	13.62	37	Pn	Pn	01 46 01.4	-0.6
DANN	Dangsing	13.84	122	*e*P	Pn	01 46 05.5	+0.4
	comp=Z,17nm,0.4s						
BHPL	Bhopal	14.47	153	*e*P	P	01 46 16.7	+2.9
BHPL				*e*S	S	01 48 45.3	-8.0
GKN	Gorkha	14.66	121	*e*P	Pn	01 46 15.3	+0.2
	comp=Z,34nm,0.3s						
AB31	Akbulak array	14.93	332	⇓P	Pn	01 46 16.3	-1.7
	comp=Z,1.0nm,0.4s,baz=157,slow=10,SNR=34						
AB31	Akbulak array	14.93	332	P	Pn	01 46 16.3	-1.7
ABKAR	Akbulak array	14.93	332	Pn	Pn	01 46 15.3	-2.7
WMQ	Urumqi	15.12	55	P	Pn	01 46 20.0	-0.4
WMQ				pmax	pmax		
	comp=Z,20nm,1.0s						
WMQ	Urumqi	15.12	55	Pn	Pn	01 46 20.0	-0.4
DMN	Daman	15.23	121	*e*P	P	01 46 22.7	+0.2
	comp=Z,20nm,0.5s						
KKN	Kakani	15.24	120	*e*P	P	01 46 23.3	+0.8
	comp=Z,63nm,0.5s						
KURBB	Kurchatov Arra	15.35	20	P	Pn	01 46 21.8	-1.2
	comp=Z,0.3nm,0.3s,baz=212,slow=8.8,SNR=20						
KURBB	Kurchatov Arra	15.35	20	⇓P	Pn	01 46 22.4	-0.6
	comp=Z,2.2nm,0.4s						
KURBB	Kurchatov Arra	15.35	20	P	Pn	01 46 22.4	-0.6
ZSN	Zaisan	15.36	40	*e*P	Pn	01 46 23.1	-0.2
	baz=40						
ZSN	Zaisan	15.36	40	*e*P	Pn	01 46 23.1	-0.2
PKIN	Phulchoki	15.45	121	*e*P	P	01 46 26.0	+1.1
	comp=Z,53nm,0.6s						
KURK	Kurchatov	15.45	20	*ce*P	Pn	01 46 24.2	-0.1
KURK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KURK	Kurchatov	15.45	20		Pn	01 46 22.4	-1.9
PKI	Pulchoki	15.46	121	*e*P	P	01 46 25.6	+0.5
	comp=Z,68nm,0.6s						
GUN	Gumba	15.58	119	*e*P	P	01 46 26.5	0.0
SEM	Semipalatinsk	15.67	24	*e*P	P	01 46 26.8	-0.4
	baz=24						
SEM	Semipalatinsk	15.67	24	*e*P	P	01 46 26.7	-0.4
BANOM	Banah	15.97	233	P	Pn	01 46 31.9	+1.0
BVAR	Borovoye Array	16.60	360	P	Pn	01 46 38.8	+0.8
	comp=Z,0.4nm,0.3s,baz=153,slow=11,SNR=10						
AKTO	Aktyubinsk	16.62	331	P	Pn	01 46 38.5	+0.1
	comp=Z,0.8nm,0.3s,baz=141,slow=9.9,SNR=30						
AKTO	Aktyubinsk	16.62	331	⇑P	P	01 46 36.2	-1.1
BRVK	Borovoye	16.63	360	⇓P	Pn	01 46 38.4	-0.1
	comp=Z,2.1nm,0.9s						
BRVK	Borovoye	16.63	360	*i* P	P	01 46 37.9	+0.5
BRVK	Borovoye	16.63	360	P	Pn	01 46 38.8	+0.4
WSAR	Wadi Sarin	16.64	221	P	Pn	01 46 40.2	+1.4
	comp=Z,0.4nm,0.3s,baz=75,slow=6.9,SNR=5.0						
RAMN	Ramite	16.68	120	*e*P	Pn	01 46 39.3	-0.2
	comp=Z,48nm,0.6s						
ASHO	Ashiyiah	17.01	231	P	Pn	01 46 44.5	+1.2
	SNR=6.4						
LKRN	Lenkeran, Azer	17.31	284	P	Pn	01 46 46.8	+0.2
DGZ	Jazzator, Alta	18.12	38	*i* P	Pn	01 46 55.7	-0.5
DGZ				pmax	pmax		
	comp=Z,12nm,0.6s						
LSA	Lhasa	18.60	105	P	Pn	01 47 01.7	-0.7
LSA				pmax	pmax		
	comp=Z,7.0nm,0.5s						
LSA	Lhasa	18.60	105	P	Pn	01 47 01.7	-0.7
LSA				IAmb	IAmb	01 47 05.4	
	comp=Z,6.9nm,0.5s						
SEKA	Sheki	18.70	292	P	Pn	01 47 01.8	-1.2
MNGR	Mingechevir, A	18.74	290	P	Pn	01 47 02.3	-1.0
MZWR	Madinat Zayed	19.05	233	P	Pn	01 47 07.3	+0.1
ZKTA	Zakatala	19.19	293	P	Pn	01 47 08.2	-0.5
NAX	Nakhchivan	19.88	285	P	P	01 47 14.5	+1.7
ZAA0	Zalesovo Array	20.18	25	⇑P	P	01 47 16.2	+0.5
	comp=Z,1.1nm,0.9s						
ZAA0	Zalesovo Array	20.18	25	P	P	01 47 15.6	-0.1
ZAA0				IAmb	IAmb	01 47 17.1	
	comp=Z,4.3nm,0.8s						
ZALV	Zalesovo Beam	20.18	25	P	P	01 47 16.4	+0.6
	comp=Z,4.5nm,0.3s,baz=214,slow=10,SNR=41						
ZALV	Zalesovo Beam	20.18	25	P	P	01 47 15.6	-0.1
SLWR	Sila	20.29	238	P	P	01 47 18.9	+1.6
GNI	Garni	20.48	288	P	P	01 47 20.4	+1.1
	comp=Z,8.4nm,0.8s,baz=23,slow=7.7,SNR=6.7						
GNI	Garni	20.48	288	*ce*P	Pn	01 47 22.2	-2.4
GNI				pmax	pmax		
	comp=Z,11nm,1.3s						
GNI	Garni	20.48	288	P	P	01 47 19.8	+0.5
GNI				IAmb	IAmb	01 47 23.6	
	comp=Z,13nm,1.0s						
SHL	Shillong	21.30	115	P	P	01 47 29.7	+1.6
SHL				pmax	pmax		
	comp=Z,10.0nm,0.4s						
SHL	Shillong	21.30	115	P	P	01 47 29.7	+1.6
ARU	Arti	21.56	342	P	P	01 47 31.0	+0.8
	comp=Z,0.8nm,0.4s,baz=119,slow=9.2,SNR=6.4						
ARU	Arti	21.56	342	*c i*P	P	01 47 31.4	+1.2
ARU						01 48 11.7	
ARU				S	S	01 51 17.2	+2.0
ARU				pmax	pmax		
	comp=Z,12nm,1.4s						
ARU	Arti	21.56	342	P	P	01 47 30.9	+0.7
ARU				IAmb	IAmb	01 47 33.2	
	comp=Z,13nm,1.3s						
GEVA	Gevas	21.81	283	P	P	01 47 32.5	-0.6
KBZ	Khabaz	22.23	298	P	P	01 47 37.1	+0.3

	comp=Z,0.9nm,0.7s,baz=145,slow=22,SNR=1.5						
BELG	Belogornoye	22.66	322	P	P	01 47 41.5	+0.9
	comp=Z,9.8nm,0.5s,baz=24,slow=0.2,SNR=9.7						
DOK	Doka	22.82	223	P	P	01 47 43.7	+1.2
DMTO	DMTO	23.12	220	P	P	01 47 46.3	+1.1
WHFO	Wadi Hawf	23.59	223	P	P	01 47 50.2	+0.8
	SNR=25						
RBK	Rabkut	23.69	222	P	P	01 47 51.3	+0.9
ABTO	Aybut	24.30	223	P	P	01 47 56.7	+0.7
	SNR=36						
RAYN	Ar Rayn	25.05	246	P	P	01 48 03.1	+0.4
RAYN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
RAYN	Ar Rayn	25.05	246	P	P	01 48 03.1	+0.4
RAYN				IAmb	IAmb	01 48 05.4	
	comp=Z,3.9nm,0.9s						
KIRV	Kirov	26.11	335	P	P	01 48 12.7	+0.9
	comp=Z,7.4nm,0.5s,baz=110,slow=4.8,SNR=3.1						
SONM	Songino Array	28.76	55	P	P	01 48 37.7	+2.0
	comp=Z,1.0nm,0.5s,baz=262,slow=9.3,SNR=8.8						
SONM	Songino Array	28.76	55	IAmb	IAmb	01 48 38.5	
	comp=Z,0.7nm,0.8s						
OBN	Obninsk	29.69	320	⇑*e*P	P	01 48 44.5	+0.9
OBN				*PP	pP	01 49 28.0	+2.8
OBN						01 51 39.0	
OBN				S	S	01 53 25.0	+1.0
OBN				pmax	pmax		
	comp=Z,34nm,2.0s						
NRIK	Noril'sk	34.28	11	*i* P	P	01 49 24.0	+0.6
FINES	FINESS Array B	37.29	326	P	P	01 49 49.8	+0.8
	comp=Z,2.2nm,0.7s,baz=119,slow=8.7,SNR=11						
VYHS	Vyhne	39.22	304	*e*P	P	01 50 06.4	+1.1
VYHS	Vyhne	39.22	304	*e*P	P	01 50 06.4	+1.1
ARCES	ARCESS Array B	41.04	338	P	P	01 50 21.1	+1.1
	comp=Z,2.0nm,0.4s,baz=112,slow=7.4,SNR=18						
ARCES	ARCESS Array B	41.04	338	IAmb	IAmb	01 50 27.0	
	comp=Z,26nm,1.4s						
NORES	NORESS Array B	43.97	323	P	P	01 50 43.7	+0.1
NB2	NORSAR Subarra	44.16	323	P	P	01 50 45.6	+0.4
	comp=Z,1.5nm,0.9s,baz=97,slow=7.9						
NOA	NORSAR Array B	44.16	323	P	P	01 50 45.1	-0.1
	comp=Z,2.0nm,0.8s,baz=98,slow=7.9,SNR=5.3						
YAK	Yakutsk	44.30	35	*i* P	P	01 50 47.6	+1.4
YAK				pmax	pmax		
	comp=Z,8.0nm,0.5s						
KLR	Kul'dur	45.56	54	P	P	01 50 57.7	+1.3
	comp=Z,0.5nm,0.4s,baz=286,slow=13,SNR=1.8						
KMBO	Kilima Mbogo	48.44	227	P	P	01 51 20.9	+1.6
	comp=Z,1.5nm,0.6s,baz=42,slow=14,SNR=5.2						
KMBO	Kilima Mbogo	48.44	227	*ce*P	P	01 51 20.2	+0.9
KMBO				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ESDC	Sonseca Array	57.08	298	P	P	01 52 22.1	0.0
	comp=Z,0.8nm,1.0s,baz=57,slow=7.0,SNR=2.0						
TORD	Torodi Ar. Bea	65.25	268	P	P	01 53 16.1	-1.0
	comp=Z,1.5nm,0.4s,baz=49,slow=6.1,SNR=18						
BOSA	Boshof	77.39	220	P	P	01 54 30.2	+0.6
	comp=Z,3.4nm,1.1s,baz=356,slow=4.8,SNR=4.0						
YKA	Yellowknife Ar	81.34	2	P	P	01 54 50.8	+0.5
	comp=Z,0.3nm,0.5s,baz=356,slow=4.9,SNR=8.1						
YKA				pP	pP	01 55 38.8	-1.3
	comp=Z,0.3nm,0.7s,baz=353,slow=5.8,SNR=3.3						
YKA	Yellowknife Ar	81.34	2	*ce*P	P	01 54 51.5	+1.2
WRA	Warramunga Arr	82.34	122	P	P	01 54 55.2	-1.0
	comp=Z,0.2nm,0.4s,baz=315,slow=4.9,SNR=1.6						
ASAR	Alice Springs	84.59	125	P	P	01 55 07.0	-0.6
	comp=Z,0.2nm,0.3s,baz=322,slow=5.4,SNR=1.7						
ASAR	Alice Springs	84.59	125	P	P	01 55 07.0	-0.6

*IDC **07** 01:48:52.8±2.3, 7°.71S×119°.50E, h276^{km}±20^{km}, mb2.8/4, mb1 2.9/7, mb1mx2.7/51, mbtmp3.5/7, Error ellipse: s-maj=56.8km s-min=13.3km az=53.0*

ISC 07 01:48:50.0±1.2**, 7°.8S**±0°.2×**119°.2E**±0°.2**, h250**^{km}**, n7, σ1^{s}88**/10**, mb3.1**/4**, Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	Baumata	4.98	119	P	Pn	01 50 08.7	+3.1
	3.5nm,0.3s,baz=169,slow=1.5,SNR=2.0						
BATI				S	S	01 51 05.5	-0.4
	13nm,0.3s,baz=352,slow=3.6,SNR=5.2						
FITZ	Fitzroy Crossi	11.98	149	P	P	01 51 35.7	-0.7
	0.2nm,0.3s,baz=341,slow=10,SNR=7.1						
FITZ				S	S	01 53 49.0	+2.0
	0.2nm,0.3s,baz=252,slow=21,SNR=2.8						
WRA	Warramunga Arr	18.97	131	P	Pn	01 52 54.8	-2.3
	0.2nm,0.3s,baz=304,slow=12,SNR=11						
WRA				S	S	01 56 13.2	-2.0
	0.1nm,0.3s,baz=310,slow=21,SNR=2.3						
ASAR	Alice Springs	21.13	140	P	P	01 53 14.8	-1.2
	0.3nm,0.4s,baz=316,slow=8.8,SNR=7.6						
SONM	Songino Array	56.55	350	P	P	01 58 07.2	+0.5
	0.4nm,0.8s,baz=166,slow=7.1,SNR=2.7						
MKAR	Makanchi Array	63.51	333	P	P	01 58 53.7	-0.1
	0.1nm,0.3s,baz=144,slow=6.7,SNR=4.8						
ZALV	Zalesovo Beam	68.02	339	P	P	01 59 22.0	-0.3
	0.3nm,0.3s,baz=133,slow=4.6,SNR=2.6						

*BGR **07** 01:56:19.0±0.9, 41°.01N×19°.96E, h10^{km}, Error ellipse: s-maj=26.7km s-min=12.2km az=53.0*

*THE **07** 01:56:20.7, 41°.99N×20°.12E, h0^{km}±3^{km}, ML4.5/10, Error ellipse: s-maj=5.9km s-min=0.8km az=323.0*

*IDC **07** 01:56:20.2±0.4, 41°.82N×20°.21E, h0^{km}, mb4.3/27, mb1 4.3/42, mb1mx4.3/55, mbtmp4.2/42, ML4.1/13, MS3.6/29, Ms1 3.6/29, ms1mx3.5/57, Error ellipse: s-maj=8.9km s-min=8.1km az=169.0*

*TIR **07** 01:56:21.9, 41°.92N×20°.29E, h10^{km}±1^{km}, Md4.8, Ml4.8*

*SKO **07** 01:56:21.6, 41°.85N×20°.21E, h15^{km}*

*MOS **07** 01:56:21.4±1.0, 41°.86N×20°.12E, h16^{km}, mb4.6/25, Error ellipse: s-maj=3.4km s-min=2.4km az=95.4*

*LDG **07** 01:56:21.2±0.1, 41°.92N×20°.15E, h2^{km}, Ml4.6/31, Error ellipse: s-maj=3.5km s-min=2.4km az=33.0*

*PDG **07** 01:56:22.0±0.5, 41°.87N×20°.16E, h13^{km}, MD4.4/13, ML4.3/13, Error ellipse: s-maj=0.3km s-min=0.4km az=0.0*

*MED_RC **07** 01:56:22.0±0.3, 41°.95N×20°.09E, h23^{km}±1^{km}, MW4.5/20, Moment Tensor Solution. Body waves: s1,c1;Mantle waves: s20,c33; Duration: 1^{s}0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.57±.08; $M_{\theta\theta}$-0.29±.05; $M_{\phi\phi}$0.86±.05; $M_{r\theta}$-0.12±.06; $M_{\theta\phi}$0.23±.03; $M_{\phi r}$0.19±.04; Best double couple: $M_0$0.79000×10^{16} NP1:ϕ_s36.00000°, δ44.00000°, λ-53.00000°. NP2:ϕ_s169.00000°, δ56.00000°, λ-121.00000°. Principal axes: T 0.9200, Plg6.0000°, Azm280.0000°; N -0.2600, Plg25.0000°, Azm187.0000°; P -0.6600, Plg64.0000°, Azm23.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=35s.*

*BEO **07** 01:56:22.8±0.2, 41°.90N×20°.26E, h6^{km}±2^{km}, ML4.4/15*

*RHSSO **07** 01:56:22.2±0.6, 41°.89N×20°.24E, h4^{km}±3^{km}, ML4.8/16*

*ROM **07** 01:56:23.2±0.0, 41°.80N×20°.10E, h10^{km}±1^{km}, ML4.9*

*NEIC **07** 01:56:23.4±1.5, 41°.83N±0°.02×20°.15E±0°.04, h21^{km}±4^{km}, mb4.6/41, ML4.9(SKO), ML4.8(TIR), ML4.6/3(BUC), ML4.6(SOF), ML4.6(PDG), Error ellipse: s-maj=5.2km s-min=1.1km az=114.0*

*PRU **07** 01:56:24.8±0.0, 41°.66N×20°.27E, h27^{km}, M4.6*

ISC 07 01:56:23.2±0.8**, 41°.86N**±0°.01×**20°.18E**±0°.02**, h18**^{km}±3^{km}**, n798, σ1^{s}67**/987**, mb4.4**/56**, MS3.6**/20**, 77C-51D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PHP	Peshkopia	0.27	132	P	Pg	01 56 27.8	-1.4
PHP				S	Sg	01 56 32.5	-0.9
PHP	Peshkopia	0.27	132	P	Pg	01 56 27.7	-1.5
	baz=129						
PHP				S	Sg	01 56 32.0	-1.4
	baz=129						
PUK	Puka	0.28	310	P	Pg	01 56 28.0	-1.4
	baz=313						
PUK				S	Sg	01 56 32.4	-1.3
	baz=313						
PUK				AMP			
	comp=N,725nm,0.4s,baz=313						
BCI	Bajram Curri	0.51	351	P	Pg	01 56 32.5	-0.9
	baz=352						
BCI				S	Sg	01 56 40.4	0.0
	baz=352						
BCI				AMP			
	comp=N,325nm,0.4s,baz=352						
TIR	Tirane	0.57	204	P	Pb	01 56 33.6	-0.8
TIR	Tirane	0.57	204	*e*Pg	Pb	01 56 33.4	-1.0
TIR				*e*Sg	Sb	01 56 43.4	+1.3
TIR	Tirane	0.57	204	⇓P	Pb	01 56 33.3	-1.2
TIR				⇑S	Sb	01 56 43.3	+1.2
TIR	Tirane	0.57	204		Pb	01 56 33.4	-1.0
TIR				Sg	Sg	01 56 40.5	-1.5
TIR	Tirane	0.57	204	P	Pb	01 56 33.1	-1.4
	baz=205						
TIR				S	Sg	01 56 41.2	-0.9
	baz=205						
TIR				AMP			
	comp=E,59nm,0.8s,baz=205						
TIR	Tirane	0.57	204	⇓*i*Pg	Pb	01 56 33.1	-1.4
ULC	Ulcinj	0.70	278	P	Pb	01 56 35.1	-1.8
ULC				S	Sb	01 56 46.0	-0.2
ULC	Ulcinj	0.70	278	*i* Pg	Pb	01 56 35.7	-1.1
ULC	Ulcinj	0.70	278	⇑*i*Pg	Pb	01 56 35.0	-1.8
ULC				*i* Sg	Sb	01 56 45.9	-0.2
PVY	Plav	0.75	348	*e*Pg	Pb	01 56 36.0	-1.7
PVY				*i* Sg	Sb	01 56 47.5	-0.1
OHR	Ohrid	0.89	148	*e*P	Pb	01 56 38.6	-1.4
OHR				*e*S	Sb	01 56 51.8	+0.3
OHR	Ohrid	0.89	148	*i* Pg	Pb	01 56 38.0	-2.0
OHR				*i* Sg	Sb	01 56 51.4	-0.1
OHR				*e*Lg	Lg	01 56 52.9	
	comp=E,22µm,0.4s						
OHR				*e*Lg	Lg	01 56 53.2	
	comp=N,27µm,0.4s						
PDG	Podgorica	0.89	310	*e*Pg	Pb	01 56 38.4	-1.6
PDG				*e*Sg	Sg	01 56 52.5	+0.3
PDG	Podgorica	0.89	310	⇑P	Pb	01 56 38.3	-1.7
PDG				⇑S	Sg	01 56 52.4	+0.2
PDG	Podgorica	0.89	310	⇑*i*Pg	Pb	01 56 38.2	-1.7
PDG				*e*Sg	Sb	01 56 51.5	0.0
PDG	Podgorica	0.89	310		Pb	01 56 38.2	-1.7
PDG	Podgorica	0.89	310		Sg	01 56 52.4	+0.2
PDG	Podgorica	0.89	310	⇑*i*Pg	Pb	01 56 38.4	-1.7
PDG				*i* Sg	Sg	01 56 52.4	+0.3
TTG	Podgorica	0.89	310	P	Pb	01 56 38.2	-1.7
TTG				S	Sb	01 56 52.0	+0.6
TTG	Podgorica	0.89	310	⇑*i*Pg	Pb	01 56 38.2	-1.7
TTG				*i* Sg	Sb	01 56 52.1	+0.6
SKO	Skopje	0.95	83	*e*Pg	Pb	01 56 39.5	-1.5
SKO				*e*Sg	Sb	01 56 51.2	-2.1
SKO	Skopje	0.95	83	⇑*i*Pg	Pb	01 56 39.5	-1.5
SKO				*i* Sg	Sb	01 56 53.0	-0.3
BEY	Berane	1.03	348	*i* Pg	Pb	01 56 41.3	-1.2
IVA	Berane	1.03	348	⇑*i*Pg	Pb	01 56 41.2	-1.2
IVA				*i* Sg	Sn	01 56 57.1	+0.4
BUM	Brajici-Budva	1.05	295	*e*Pg	Pb	01 56 41.4	-1.4
BUM				*i* Sg	Sg	01 56 57.6	+0.3
KOME	Kolasin	1.10	334	⇑*i*Pg	Pb	01 56 42.2	-1.5
KOME				*i* Sg	Sg	01 56 59.5	+0.5
CEME	Cevo	1.16	307	⇑*i*Pg	Pn	01 56 42.8	-1.7
CEME				*i* Sg	Sg	01 57 01.3	+0.6
NKME	Niksic	1.28	315	⇑*i*Pg	Pn	01 56 44.7	-1.4
NKME				*i* Sg	Sg	01 57 05.3	+0.7
NKY	Niksic	1.29	318	P	Pn	01 56 45.2	-1.2
NKY				S	Sg	01 57 05.0	0.0
NKY	Niksic	1.29	318	⇑*i*Pg	Pn	01 56 45.2	-1.2
NKY				*i* Sg	Sg	01 57 05.9	+0.9
KBN	Korca	1.32	159	P	Pb	01 56 47.7	+0.2
KBN				S	Sg	01 57 09.5	+3.5
KBN	Korca	1.32	159	P	Pb	01 56 47.7	+0.2
KBN				S	Sg	01 57 06.3	+0.3
KBN	Korca	1.32	159	P	Pb	01 56 47.4	-0.1
	baz=159						
KBN				S	Sg	01 57 06.3	+0.3
	baz=159						
HCY	Herceg Novi	1.38	296	P	Pn	01 56 47.0	-0.5
HCY				S	Sg	01 57 08.0	+0.2
HCY	Herceg Novi	1.38	296	*e*Pg	Pn	01 56 47.2	-0.3
HCY				*e*Sg	Sb	01 57 06.8	+1.2
HCY	Herceg Novi	1.38	296	⇑*i*Pg	Pn	01 56 47.0	-0.5
HCY				*i* Sg	Sg	01 57 08.8	+1.0
FNA	Florina	1.41	140	P	Pn	01 56 48.6	+0.7
FNA				S	Sg	01 57 09.9	+1.2
	comp=N,21µm,1.3s						
FNA	Florina	1.41	140	P	Pn	01 56 48.2	+0.3
FNA				S	Sn	01 57 06.3	+0.3
FNA	Florina	1.41	140	P	Pn	01 56 47.2	-0.7
FNA	Florina	1.41	140	Pn	Pn	01 56 47.1	-0.7
FNA	Florina	1.41	140	⇑*i*Pg	Pn	01 56 47.0	-0.9
FNA				*i* Sg	Sg	01 57 08.0	-0.7
VLO	Vlora	1.48	200	P	Pb	01 56 50.3	+0.2
VLO				S	Sg	01 57 10.9	-0.2
VLO	Vlora	1.48	200	P	Pb	01 56 50.4	+0.2
	baz=201						
VLO				S	Sg	01 57 10.9	-0.2
	baz=201						
BARS	Barje	1.54	51	*e*Pn	Pg	01 57 03.2	+10
BARS				*e*Sn	Sg	01 57 35.7	+23
PLE	Pljevlja	1.58	339	P	Pn	01 56 50.7	+0.4
PLE				S	Sg	01 57 13.0	-1.1
PLE	Pljevlja	1.58	339	⇑*i*Pg	Pn	01 56 50.7	+0.4
PLE				*i* Sg	Sg	01 57 13.4	-0.7
NEST	Nestorio	1.59	155	P	Pb	01 56 52.1	+0.1
NEST				S	Sg	01 57 14.7	+0.2
	comp=N,9µm,0.6s						
BRY	Bratogost	1.59	311	P	Pn	01 56 50.5	-0.1
BRY	Bratogost	1.59	311	⇑*i*Pn	Pn	01 56 50.3	-0.3
BRY				*e*Sn	Sb	01 57 12.5	+0.5
BRY	Bratogost	1.59	311	⇑*i*Pn	Pn	01 56 50.7	+0.1
BRY				*i* Sn	Sb	01 57 13.5	+1.5
TREB	Trebinje	1.60	303	*e*Pg	Pb	01 56 51.6	-0.5
TREB				*e*Sg	Sg	01 57 14.7	-0.1
TREB	Trebinje	1.60	303	*e*Pn	Pn	01 56 50.9	+0.4
TREB				*e*Sn	Sb	01 57 13.1	+1.1
UPM	Unac-Piva	1.64	325	*e*Pn	Pn	01 56 51.6	+0.4
UPM				*e*Sn	Sb	01 57 13.6	+0.4
UPM	Unac-Piva	1.64	325	⇑*i*Pn	Pn	01 56 51.5	+0.4
UPM				*i* Sn	Sg	01 57 14.8	-1.2
DBRK	Dubrovnik	1.71	299	*e*Pn	Pn	01 56 52.1	+0.1
DBRK				Sn	Sg	01 57 18.1	-0.1
IVAS	Ivanjica	1.71	359	*e*Pg	Pn	01 56 52.8	+0.7
IVAS				*e*Sg	Sb	01 57 16.7	+1.4
LSK	Leskovik	1.74	169	P	Pb	01 56 54.3	-0.3
LSK				S	Sg	01 57 19.5	+0.2
	comp=N,15µm,0.7s						
LSK	Leskovik	1.74	169	P	Pb	01 56 54.7	0.0
	baz=169						
LSK				S	Sg	01 57 19.2	-0.1
	baz=169						
PENT	Pentalofos	1.82	156	P	Pn	01 56 54.6	+1.0
PENT				S	Sg	01 57 21.0	-0.8
	comp=N,7µm,0.8s						
RUDO	Rudo	1.85	342	*e*Pn	Pn	01 56 54.9	+0.9
RUDO				*e*Sn	Sb	01 57 18.4	-0.8
GRG	Griva	1.90	118	P	Pn	01 56 55.5	+0.8
GRG				S	Sb	01 57 22.5	+1.7
	comp=N,8µm,0.8s						
GRG	Griva	1.90	118	P	Pn	01 56 54.9	+0.2
GRG	Griva	1.90	118	*i* Pn	Pn	01 56 55.3	+0.6
KZN	Kozani	1.97	142	P	Pn	01 56 57.0	+1.4
KZN				S	Sb	01 57 24.4	+1.7
	comp=N,9µm,0.6s						
SRN	Sarande	1.99	184	P	Pb	01 56 57.6	-1.1
SRN				S	Sb	01 57 25.0	+1.9
	comp=N,4µm,0.8s						
SRN	Sarande	1.99	184	P	Pb	01 56 58.7	0.0
	baz=184						
SRN				S	Sg	01 57 26.3	-0.8
	baz=184						
GRUS	Gruza	2.06	11	*e*Pn	Pn	01 56 57.4	+0.5
GRUS	Gruza	2.06	11	⇑P	Pn	01 56 57.3	+0.5
GRUS				⇑S	Sn	01 57 21.0	-1.1
GRUS	Gruza	2.06	11		Pn	01 56 57.3	+0.5
GRUS					Sn	01 57 21.0	-1.1
BBLS	Lazići	2.08	344	*e*Pn	Pn	01 56 58.9	+1.7
BBLS				*e*Sg	Sg	01 57 28.9	-1.2
BBLS	Lazići	2.08	344	⇓*i*Pn	Pn	01 56 58.3	+1.1
BBLS				*e*Sn	Sn	01 57 23.4	+0.8
STON	Ston	2.09	300	*e*Pn	Pb	01 56 59.2	-1.3
STON				*e*Sg	Sg	01 57 31.6	+1.1
STON	Ston	2.09	300	*e*Pn	Pn	01 56 57.3	+0.1
STON				Sn	Sg	01 57 30.1	-0.4
STON	Ston	2.09	300	*e*Pn	Pn	01 56 58.1	+0.9
STON				*e*Sn	Sb	01 57 24.9	-1.2
BOVS	Bovan	2.10	32	*e*Pn	Pn	01 56 57.0	-0.4
BOVS	Bovan	2.10	32	⇑P	Pn	01 56 57.8	+0.5
BOVS	Bovan	2.10	32		Pn	01 56 57.8	+0.5
KPRO	Kipourio	2.11	154	P	Pb	01 56 59.5	-1.4
KPRO				S	Sb	01 57 28.6	+1.9
	comp=N,8µm,0.7s						
KNT	Kendrikon	2.16	108	P	Pn	01 56 58.8	+0.6
KNT				S	Sb	01 57 28.3	+0.1
	comp=N,4µm,0.9s						
KNT	Kendrikon	2.16	108	P	Pn	01 56 58.5	+0.3
KNT				S	Sn	01 57 22.9	-1.7
KNT	Kendrikon	2.16	108	*i* Pn	Pn	01 56 58.6	+0.4
KEK	Kerkira	2.17	188	P	Pn	01 56 59.5	+1.2
SCTE	Santa Cesarea	2.21	216		Pn	01 56 59.0	+0.1
DIVS	Divibare	2.24	357	*e*Pg	Pn	01 57 00.2	+0.8
DIVS				*e*Sg	Sb	01 57 32.5	+2.1
DIVS	Divibare	2.24	357	*e*Pn	Pn	01 56 59.3	0.0
DIVS				*e*Sn	Sn	01 57 27.3	+0.8
DIVS	Divibare	2.24	357	Pn	Pn	01 57 00.1	+0.8
JAN	Janina	2.26	167	P	Pb	01 57 02.0	-1.5
JAN				S	Sb	01 57 32.4	+1.3
	comp=N,5µm,0.7s						
JAN	Janina	2.26	167	P	Pb	01 57 02.0	-1.5
ZAPS	Zavoj	2.30	51	*e*Pn	Pn	01 57 01.2	+1.1
ZAPS				*e*Sn	Sn	01 57 27.4	-0.6
IGT	Igoumenitsa	2.33	177	P	Pn	01 57 02.5	+1.9
IGT	Igoumenitsa	2.33	177	P	Pn	01 57 02.5	+1.9
IGT	Igoumenitsa	2.33	177	*i* Pn	Pn	01 57 02.3	+1.7
TRUS	Trudelj	2.37	4	*e*Pn	Pn	01 57 01.5	+0.5
TRUS				*e*Sn	Sn	01 57 31.6	+2.0
VTS	Vitosha	2.39	71	*e*Pn	Pn	01 57 02.2	+0.6
VTS	Vitosha	2.39	71	⇓P	Pn	01 57 02.2	+0.6
VTS				⇓S	Sn	01 57 31.2	+0.7
VTS	Vitosha	2.39	71	P	Pn	01 57 02.2	+0.6
VTS						01 57 31.2	
VTS	Vitosha	2.39	71		Pn	01 57 02.2	+0.6
VTS					Sn	01 57 31.2	+0.7
VTS	Vitosha	2.39	71	*i* Pn	Pn	01 57 02.1	+0.6
HAPS	Han Pijesak,Bl	2.40	338	*e*Pn	Pn	01 57 02.4	+0.8
HAPS				*e*Sn	Sn	01 57 32.1	+1.6
HAPS	Han Pijesak,Bl	2.40	338	*e*Pn	Pn	01 57 02.1	+0.5
HAPS				*e*Sn	Sn	01 57 31.6	+1.1
THE	Thessaloniki	2.44	119	P	Pn	01 57 02.7	+0.7
THE	Thessaloniki	2.44	119	P	Pn	01 57 02.7	+0.7
THE	Thessaloniki	2.44	119	*i* Pn	Pn	01 57 02.4	+0.4
ZAGS	Zajecar	2.47	37	*e*Pn	Pn	01 57 02.6	+0.2
LIT	Litokhoron	2.48	134	P	Pn	01 57 03.5	+0.8
LIT	Litokhoron	2.48	134	P	Pn	01 57 03.5	+0.8
HORT	Hortiatis	2.54	119	P	Pn	01 57 03.5	0.0
HORT	Hortiatis	2.54	119	P	Pn	01 57 03.9	+0.4
BLKB	Belogradchik	2.55	45	⇑S	Sn	01 57 35.2	+1.1
BLKB	Belogradchik	2.55	45		Sn	01 57 35.2	+1.1
SOH	Sokhos	2.61	112	P	Pn	01 57 05.3	+0.8
SOH	Sokhos	2.61	112	P	Pn	01 57 05.3	+0.8
SOH	Sokhos	2.61	112	*i* Pn	Pn	01 57 05.2	+0.8
MMB	Musomiste	2.67	95	P	Pn	01 57 06.7	+1.4
SRS	Serrai	2.67	105	P	Pn	01 57 06.1	+0.8
SRS	Serrai	2.67	105	P	Pn	01 57 06.1	+0.8
SRS	Serrai	2.67	105	*i* Pn	Pn	01 57 06.0	+0.8
THL	Klokotos Trika	2.69	148	P	Pn	01 57 06.9	+1.5
MAKA	Makarska	2.73	302	*i* Pn	Pn	01 57 07.3	+1.3
MAKA				Sn	Sb	01 57 41.8	-2.7
LRSO	Larissa Observ	2.76	142	P	Pn	01 57 07.6	+1.1
RICI	Ricice	2.77	307	*i* Pn	Pn	01 57 08.3	+1.7
RICI				Sn	Sb	01 57 47.9	+2.1
KUBS	Kucevo	2.77	23	*e*Pn	Pn	01 57 05.9	-0.7
KUBS				*e*Sn	Sn	01 57 39.8	+0.2
NVR	Nevrokopi	2.81	99	P	Pn	01 57 08.3	+1.1
MATE	Matera	2.88	246	⇑P	Pn	01 57 07.7	-0.4
MATE	Matera	2.88	246		Pn	01 57 07.7	-0.4
PLG	Polygyros	2.88	120	P	Pn	01 57 09.2	+1.0
BEO	Beograd	2.95	4	P	Pn	01 57 08.4	-0.7
HVAR	Hvar	3.05	297	*e*Pn	Pn	01 57 11.1	+0.6
HVAR				Sn	Sn	01 57 48.7	+2.2
LKD2	Lefkada island	3.09	173	P	Pn	01 57 11.9	+0.8
LKD2				S	Sb	01 57 51.6	-3.4
MDVR	Moldovita	3.12	21	⇑P	Pn	01 57 11.4	-0.1
MDVR				⇓S	Sn	01 57 48.8	+0.4
MDVR	Moldovita	3.12	21		Pn	01 57 11.4	-0.1
MDVR					Sn	01 57 48.8	+0.4
PUNG	Punghina	3.15	39	⇓P	Pn	01 57 12.5	+0.7
PUNG	Punghina	3.15	39		Pn	01 57 12.5	+0.7
BAIL	Bailesti	3.17	46	⇓P	Pn	01 57 11.8	-0.3
BAIL				⇑S	Sn	01 57 51.4	+2.0
BAIL	Bailesti	3.17	46		Pn	01 57 11.8	-0.3
BAIL					Sn	01 57 51.4	+2.0
NYDR	Nydri-Lefkada	3.17	173	P	Pn	01 57 13.2	+1.1
NYDR				S	Sn	01 57 53.2	+3.8
EVR	Evrytania	3.20	156	P	Pn	01 57 14.6	+2.0
MAKR	Makrakomi, Fth	3.21	152	P	Pn	01 57 14.4	+1.7
OUR	Ouranopolis	3.26	117	P	Pn	01 57 14.0	+0.7
OUR	Ouranopolis	3.26	117	P	Pn	01 57 13.5	+0.2
OUR	Ouranopolis	3.26	117	P	Pn	01 57 14.0	+0.7
EVGI	Lefkada island	3.26	173	P	Pn	01 57 14.2	+0.9
AGG	Agios Georgios	3.28	149	P	Pn	01 57 14.8	+1.1
AGG	Agios Georgios	3.28	149	P	Pn	01 57 15.6	+2.0
AGG	Agios Georgios	3.28	149	P	Pn	01 57 14.7	+1.1
AGG	Agios Georgios	3.28	149	Pn	Pn	01 57 14.7	+1.1
DJES	Djerdap	3.28	31	*e*Pn	Pn	01 57 14.4	+0.8
DJES	Djerdap	3.28	31	⇓P	Pn	01 57 14.5	+0.9
DJES				⇓S	Sn	01 57 51.9	-0.3
DJES	Djerdap	3.28	31		Pn	01 57 14.5	+0.9
DJES					Sn	01 57 51.9	-0.3
PAIG	Paliouri	3.29	125	P	Pn	01 57 14.4	+0.7
FRGS	Fruska Gora	3.30	356	*e*Pn	Pn	01 57 14.5	+0.5
FRGS				*e*Sn	Sn	01 57 53.5	+0.8
FRGS	Fruska Gora	3.30	356	⇑P	Pn	01 57 14.6	+0.7
FRGS				⇑S	Sn	01 57 53.7	+0.9
FRGS	Fruska Gora	3.30	356	⇓*i*Pn	Pn	01 57 14.4	+0.5
FRGS				*e*Sn	Sn	01 57 53.5	+0.8
FRGS	Fruska Gora	3.30	356		Pn	01 57 14.6	+0.7
FRGS					Sn	01 57 53.7	+0.9
SGRT	San Giovanni R	3.31	270	Pn	Pn	01 57 13.7	-0.4
RMGR	Halanga-Turnu	3.35	32	⇑P	Pn	01 57 14.8	+0.3
RMGR	Halanga-Turnu	3.35	32		Pn	01 57 14.8	+0.3
PDO	Prodromos	3.35	166	P	Pn	01 57 16.2	+1.6
KAVA	Kavala	3.38	103	P	Pn	01 57 16.1	+1.2
PLD	Plovdiv	3.38	84	P	Pn	01 57 15.4	+0.4
PLD	Plovdiv	3.38	84	P	Pn	01 57 16.9	+1.9
PLD	Plovdiv	3.38	84	*i* Pn	Pn	01 57 16.4	+1.4
XOR	Xorichti	3.39	136	P	Pn	01 57 15.7	+0.6
RZN	Rozhen	3.40	91	P	Pn	01 57 18.2	+2.8
RZN				S	Sn	01 57 56.0	+0.6
MGRS	Mrkonjic Grad	3.41	319	*e*Pn	Pn	01 57 16.3	+0.9
MGRS				*e*Sn	Sn	01 57 56.9	+1.5
FSK	Fiskardo	3.41	175	P	Pn	01 57 16.3	+0.9
HERR	Herculane	3.43	28	⇑P	Pn	01 57 16.0	+0.3
HERR				⇑S	Sn	01 57 56.1	+0.3
HERR	Herculane	3.43	28		Pn	01 57 16.0	+0.3
HERR					Sn	01 57 56.1	+0.3
NEO	Neokhori	3.45	137	P	Pn	01 57 16.6	+0.6
KIJV	Kijevo	3.50	309	*e*Pn	Pn	01 57 18.1	+1.5
SRE	Strehaia	3.57	37	⇓P	Pn	01 57 18.5	+1.0
SRE	Strehaia	3.57	37	P	Pn	01 57 18.5	+1.0
SRE	Strehaia	3.57	37		Pn	01 57 18.5	+1.0
BANR	Banloc	3.59	11	⇓P	Pn	01 57 18.7	+0.9
BANR	Banloc	3.59	11		Pn	01 57 18.7	+0.9
KEF5	Kardakata, Kep	3.59	176	P	Pn	01 57 18.2	+0.3
KEF4	Livadi, Kephal	3.61	177	P	Pn	01 57 20.2	+2.1
BLY	Banja Luka	3.62	324	*e*Pn	Pn	01 57 18.8	+0.6
BLY				*e*Sn	Sn	01 58 01.7	+1.3
PLVB	Pleven	3.62	64	⇓P	Pn	01 57 19.6	+1.4
PLVB	Pleven	3.62	64		Pn	01 57 19.6	+1.4
DMLN	Damoulianata-K	3.62	178	P	Pn	01 57 19.0	+0.7
AXAR	Agios Charalam	3.63	148	P	Pn	01 57 19.7	+1.3
THAS	Thassos island	3.65	109	P	Pn	01 57 19.1	+0.4
KEF3	Kipouria, Keph	3.66	178	P	Pn	01 57 19.2	+0.4
VLS	Valsamata	3.70	175	P	Pn	01 57 19.7	+0.4
SERG	Sergoula	3.74	157	P	Pn	01 57 21.4	+1.5
TIP	Timpagrande	3.74	225	⇑P	Pn	01 57 19.5	-0.4
TIP	Timpagrande	3.74	225		Pn	01 57 19.2	-0.7
VLAD	Vladila	3.77	54	⇓P	Pn	01 57 21.9	+1.6
VLAD	Vladila	3.77	54		Pn	01 57 21.9	+1.6
SMIA	Simia	3.78	141	P	Pn	01 57 21.2	+0.8
KALE	Kalithea	3.78	156	P	Pn	01 57 22.8	+2.2
TRIZ	Trizonia	3.79	157	P	Pn	01 57 21.9	+1.4
ZIRJ	Zirje	3.79	300	*e*Pn	Pn	01 57 21.3	+0.8
ATAL	Atalanti	3.84	145	P	Pn	01 57 22.5	+1.2
MORI	Morici	3.84	303	*e*Pn	Pn	01 57 22.8	+1.5
LKR	Lokris	3.87	145	P	Pn	01 57 22.7	+1.0
LAKA	Lakka	3.88	158	P	Pn	01 57 23.9	+2.1
DSF	Desfina	3.89	152	P	Pn	01 57 23.2	+1.1
ALIK	Aliki, Aigiali	3.89	157	P	Pn	01 57 23.1	+1.1

BZS	Buzias	3.89	15	⇓P	Pn	01 57 21.9	-0.2
BZS				⇓S	Sn	01 58 07.6	+0.4
BZS	Buzias	3.89	15	P	Pn	01 57 21.8	-0.2
BZS				S	Sn	01 58 07.6	+0.4
BZS	Buzias	3.89	15		Pn	01 57 21.9	-0.2
BZS					Sn	01 58 07.6	+0.4
KDZ	Kurdzhali	3.93	91	*e*P	Pn	01 57 21.6	-0.9
KDZ	Kurdzhali	3.93	91	P	Pn	01 57 22.5	0.0
RLS	Riolos of Patr	3.93	165	P	Pn	01 57 24.6	+2.1
TIM	Timisoara	3.94	11	⇑P	Pn	01 57 23.4	+0.7
TIM	Timisoara	3.94	11	P	Pn	01 57 23.4	+0.7
TIM	Timisoara	3.94	11		Pn	01 57 23.4	+0.7
DIM	Dimitrovgrad	4.00	86	P	Pn	01 57 25.3	+1.8
GZR	Gura Zlata	4.00	27	⇑P	Pn	01 57 23.7	+0.1
GZR				⇑S	Sn	01 58 10.7	+0.7
GZR	Gura Zlata	4.00	27	P	Pn	01 57 23.7	+0.1
GZR	Gura Zlata	4.00	27		Pn	01 57 23.7	+0.1
GZR					Sn	01 58 10.7	+0.7
PRIJ	Prijedor	4.00	322	*e*Pn	Pn	01 57 24.1	+0.6
PRIJ				*e*Sn	Sn	01 58 10.6	+0.7
DRO	Drossia	4.08	163	P	Pn	01 57 26.8	+2.2
RDO	Rodhopi	4.09	98	P	Pn	01 57 25.6	+0.9
RDO	Rodhopi	4.09	98	P	Pn	01 57 25.7	+1.0
KLV	Kalavryta, Ach	4.11	158	P	Pn	01 57 27.6	+2.6
UDBI	Udbina	4.18	311	*i* Pn	Pn	01 57 28.8	+2.8
ZIMR		4.22	63	⇑P	Pn	01 57 28.5	+2.0
ZIMR		4.22	63	P	Pn	01 57 28.5	+2.0
ZIMR		4.22	63		Pn	01 57 28.5	+2.0
LIA	Limnos Island	4.27	116	P	Pn	01 57 27.9	+0.7
THAL	Thalero	4.27	153	P	Pn	01 57 29.4	+2.2
PAOL	Paolisi	4.30	261	Pn	Pn	01 57 27.2	-0.4
DUGI	Dugi Otok	4.32	301	*i* Pn	Pn	01 57 28.8	+1.0
LTK	Loutraki	4.39	150	P	Pn	01 57 30.1	+1.2
KYMI	Kymi, Euboea I	4.41	136	P	Pn	01 57 29.9	+0.8
VILL	Villia	4.41	146	P	Pn	01 57 30.3	+1.1
LOT	Lotru	4.43	35	⇑P	Pn	01 57 30.0	+0.5
LOT				⇓S	Sn	01 58 20.4	-0.3
LOT	Lotru	4.43	35	P	Pn	01 57 30.3	+0.8
LOT	Lotru	4.43	35		Pn	01 57 30.0	+0.5
LOT					Sn	01 58 20.4	-0.3
DEV	Deva	4.48	25	⇑P	Pn	01 57 31.1	+1.1
DEV	Deva	4.48	25	P	Pn	01 57 31.1	+1.1
DEV	Deva	4.48	25		Pn	01 57 31.1	+1.1
EREA	Eretria	4.49	139	P	Pn	01 57 31.5	+1.3
MORH	Mrgy, Hungar	4.49	346	⇑P	Pn	01 57 30.8	+0.7
MORH				⇓S	Sn	01 58 20.8	-1.0
MORH	Mrgy, Hungar	4.49	346	*e*Pn	Pn	01 57 30.8	+0.7
MORH				*e*Sn	Sn	01 58 21.3	-0.5
MORH	Mrgy, Hungar	4.49	346		Pn	01 57 30.8	+0.7
MORH					Sn	01 58 20.8	-1.0
MOSL	Moslavina	4.49	328	*e*Pn	Pn	01 57 31.9	+1.6
AMBH	Ambrzfalva	4.50	5	⇑P	Pn	01 57 31.4	+1.1
AMBH				⇑S	Sn	01 58 22.9	+0.7
AMBH	Ambrzfalva	4.50	5		Pn	01 57 31.4	+1.1
AMBH					Sn	01 58 22.9	+0.7
ALN	Alexandroupoli	4.52	100	P	Pn	01 57 31.7	+1.1
ALN	Alexandroupoli	4.52	100	P	Pn	01 57 31.9	+1.3
ALN	Alexandroupoli	4.52	100	P	Pn	01 57 30.4	-0.2
ALN	Alexandroupoli	4.52	100	Pn	Pn	01 57 30.4	-0.2
SIRR	Siria	4.53	13	⇑P	Pn	01 57 31.1	+0.3
SIRR	Siria	4.53	13		Pn	01 57 31.1	+0.3
STFAR	Stefanesti-Arg	4.60	48	⇑P	Pn	01 57 33.5	+1.7
STFAR	Stefanesti-Arg	4.60	48		Pn	01 57 33.5	+1.7
GADA	Gvkgeada	4.64	109	P	Pn	01 57 33.0	+0.7
GADA	Gvkgeada	4.64	109	*e*P	Pn	01 57 33.2	+0.9
ENEZ	Enez	4.64	102	P	Pn	01 57 32.6	+0.3
ENEZ	Enez	4.64	102	*e*P	Pn	01 57 32.9	+0.6
INTR	Introdacqua	4.68	274		Pn	01 57 32.7	-0.2
NVLJ	Novalja	4.72	307	*i* Pn	Pn	01 57 34.5	+1.1
ATH	Athens Observa	4.75	144	P	Pn	01 57 36.2	+2.5
PTL	Penteli	4.75	142	P	Pn	01 57 35.0	+1.2
DION	Dionisos Attik	4.76	141	P	Pn	01 57 35.3	+1.4
ARR	Arges	4.77	41	⇓P	Pn	01 57 35.4	+1.3
ARR	Arges	4.77	41		Pn	01 57 35.4	+1.3
ATHU	Athens Univers	4.78	143	P	Pn	01 57 35.3	+1.1
SGRR	Singureni	4.86	59	⇓P	Pn	01 57 36.7	+1.4
SGRR	Singureni	4.86	59		Pn	01 57 36.7	+1.4
ITM	Ithomi	4.87	163	Pn	Pn	01 57 35.4	-0.1
CEL	Celeste	4.87	224	Pn	Pn	01 57 34.1	-1.5
VLY	Voula,Athens	4.88	144	P	Pn	01 57 36.8	+1.2
MTUR	Matau	4.89	45	⇓P	Pn	01 57 36.8	+1.0
MTUR	Matau	4.89	45	P	Pn	01 57 36.8	+1.0
MTUR	Matau	4.89	45		Pn	01 57 36.8	+1.0
BOZC	Bozcaada	4.89	112	*e*P	Pn	01 57 36.9	+1.1
EDRB	Edirne	4.91	88	P	Pn	01 57 36.9	+1.0
EDRB	Edirne	4.91	88	*e*P	Pn	01 57 36.2	+0.3
ERIK	Erikli-Kesan	4.92	102	*e*P	Pn	01 57 37.2	+1.1
BUC1	Bucharest	4.95	58	⇑P	Pn	01 57 35.8	-0.8
BUC1	Bucharest	4.95	58	P	Pn	01 57 35.8	-0.8
BUC1	Bucharest	4.95	58		Pn	01 57 35.8	-0.8
RAZG	Razgrad	4.97	68	⇓P	Pn	01 57 37.6	+0.8
RAZG	Razgrad	4.97	68		Pn	01 57 37.6	+0.8
GELI	Tayfur-Gelibol	4.98	105	*e*P	Pn	01 57 38.3	+1.4
ZAG	Zagreb	4.99	324	P	Pn	01 57 39.2	+2.2
ZAG	Zagreb	4.99	324	*i* Pn	Pn	01 57 39.2	+2.2
ZAG	Zagreb	4.99	324	*e*Pn	Pn	01 57 37.1	+0.1
VOIR		5.03	43	⇑P	Pn	01 57 38.9	+1.2
VOIR		5.03	43	P	Pn	01 57 38.9	+1.2
VOIR		5.03	43		Pn	01 57 38.9	+1.2
KARY	Karystos	5.04	138	P	Pn	01 57 38.8	+1.1
KALN	Kalnik	5.04	329	*e*Pn	Pn	01 57 39.7	+1.9
PTJ	Puntijarka	5.06	324	*e*Pn	Pn	01 57 40.0	+2.0
AQU	L'Aquila	5.06	278	P	Pn	01 57 38.2	+0.1
AQU	L'Aquila	5.06	278	⇑*i*Pn	Pn	01 57 38.8	+0.7
AQU				*e*Sn	Sn	01 58 37.3	+1.2
AQU	L'Aquila	5.06	278		Pn	01 57 38.2	+0.1
OZLJ	Ozalj	5.07	319	*i* Pn	Pn	01 57 40.0	+1.9
SIGR	SIGRI	5.07	120	*e*P	Pn	01 57 38.9	+0.7
EZN	Ezine	5.09	112	*e*P	Pn	01 57 39.7	+1.3
BOJS	Bojanci	5.10	317	*i* Pn	Pn	01 57 40.6	+2.1
BOJS				*e*Sn	Sn	01 58 36.8	0.0
LPK	Lapseki	5.19	104	*e*P	Pn	01 57 41.3	+1.4
BEHE	Becsehely	5.21	333	*e*Pn	Pn	01 57 40.3	+0.2
BEHE				*e*Sn	Sn	01 58 39.2	-0.6
CRES	Cresnjev	5.23	321	*e*Pn	Pn	01 57 41.1	+0.8
CRES				*e*Sn	Sn	01 58 40.2	+0.1
DRGR		5.25	19	⇓P	Pn	01 57 40.8	+0.1
DRGR		5.25	19	P	Pn	01 57 40.8	+0.1
DRGR		5.25	19		Pn	01 57 40.8	+0.1
SULR		5.25	56	⇓P	Pn	01 57 42.4	+1.7
SULR		5.25	56		Pn	01 57 42.4	+1.7
PRK	Paraskevi	5.33	117	P	Pn	01 57 44.2	+2.5
RIY	Rijeka	5.39	312	*e*Pn	Pn	01 57 44.0	+1.5
RIY	Rijeka	5.39	312	⇑*i*Pn	Pn	01 57 43.6	+1.0
RIY				*e*Sn	Sn	01 58 43.9	-0.2
RKY	Sarkoy-Tekirda	5.41	100	*e*P	Pn	01 57 44.7	+1.8
CJR	Cluj-Napoca	5.43	26	⇑P	Pn	01 57 44.8	+1.5
CJR	Cluj-Napoca	5.43	26	P	Pn	01 57 44.8	+1.5
CJR	Cluj-Napoca	5.43	26		Pn	01 57 44.8	+1.5
MAR4	Marsite Statio	5.47	99	*e*P	Pn	01 57 44.9	+1.1
GZKV	Gazikoy-Tekird	5.50	99	*e*P	Pn	01 57 45.9	+1.8
LEHL	Lehliu	5.51	60	⇑P	Pn	01 57 45.9	+1.7
LEHL	Lehliu	5.51	60		Pn	01 57 46.0	+1.7
MLR	Muntele Rosu	5.54	47	Pn	Pn	01 57 46.5	+1.8
	comp=N,9.6nm,0.3s,baz=256,slow=5.0,SNR=46						
MLR				Sn	Sn	01 58 48.6	+0.7
	comp=N,7.0nm,0.3s,baz=137,slow=23,SNR=7.2						
MLR				Lg	Lg	01 59 18.1	
	comp=N,3.6nm,0.3s,baz=162,slow=17,SNR=1.2						
MLR				LR	LR	02 00 23.8	
	comp=N,1μm,18.1s,baz=236,slow=44						
MLR	Muntele Rosu	5.54	47	⇑P	Pn	01 57 46.5	+1.8
MLR	Muntele Rosu	5.54	47	Pn	Pn	01 57 46.3	+1.6
DOPR	Dopca	5.57	41	⇑P	Pn	01 57 46.4	+1.3
DOPR	Dopca	5.57	41		Pn	01 57 46.4	+1.3
KRBG	Karabiga-Canak	5.58	103	*e*P	Pn	01 57 46.7	+1.6
LTVH	Ltavrtes, Hu	5.66	12	⇓P	Pn	01 57 47.5	+1.3
LTVH				⇑S	Sn	01 58 50.7	+0.1
LTVH	Ltavrtes, Hu	5.66	12		Pn	01 57 47.5	+1.3
LTVH					Sn	01 58 50.7	+0.1
BUD	Budapest	5.68	352	P	Pn	01 57 47.8	+1.3
BUD				pmax	pmax		
	comp=Z,169nm,0.8s						
CEY	Cerknica	5.68	315	*e*Pn	Pn	01 57 47.5	+0.9
CEY				*e*Sn	Sn	01 58 51.0	-0.4
CHOS	Chios island	5.69	126	P	Pn	01 57 48.3	+1.5
CHOS	Chios island	5.69	126	*e*P	Pn	01 57 47.7	+0.9
NEHR	Nehoiu	5.69	49	⇓P	Pn	01 57 48.3	+1.5
NEHR	Nehoiu	5.69	49		Pn	01 57 48.3	+1.5
MRMT	Marmara Adasi	5.74	100	*e*P	Pn	01 57 48.7	+1.3
SKDS	Skadanscina	5.79	312	*i* Pn	Pn	01 57 48.7	+0.6
SKDS				*i* Sn	Sn	01 58 53.7	-0.2
SKDS				IAML		01 59 42.1	
	comp=Z,355nm,0.6s						
MURB	Monte Urbino	5.82	286		Pn	01 57 48.8	+0.3
LJU	Ljubljana	5.84	318	⇑*i*Pn	Pn	01 57 49.5	+0.8
LJU				*e*Sn	Sn	01 58 54.0	-1.1
DKL	Dikili	5.84	116	*e*P	Pn	01 57 50.9	+2.1
OZUR		5.86	42	⇑P	Pn	01 57 50.1	+1.1
OZUR		5.86	42		Pn	01 57 50.1	+1.1
AMRR	Amara	5.91	60	⇓P	Pn	01 57 51.3	+1.7
AMRR	Amara	5.91	60	P	Pn	01 57 51.3	+1.7
AMRR	Amara	5.91	60		Pn	01 57 51.3	+1.7
KTHR	Kythira	6.01	158	P	Pn	01 57 54.6	+3.4
TRI	Trieste	6.02	312	P	Pn	01 57 51.5	+0.2
TRI	Trieste	6.02	312	Pn	Pn	01 57 51.5	+0.2
ICOR	Ion Corvin	6.03	66	⇓P	Pn	01 57 52.9	+1.6
ICOR	Ion Corvin	6.03	66		Pn	01 57 52.9	+1.6
SRO2	Moca	6.03	348	*e*SN	Sn	01 59 03.1	+3.2
SRO2				*e*LG	Lg	01 59 09.2	
URLA	Izmir	6.04	123	*e*P	Pn	01 57 52.6	+1.1
PSZ	Piszkesteto	6.06	358	⇓P	Pn	01 57 52.3	+0.5
PSZ	Piszkesteto	6.06	358	P	Pn	01 57 52.0	+0.2
PSZ	Piszkesteto	6.06	358	Pn	Pn	01 57 52.0	+0.2
PSZ	Piszkesteto	6.06	358		Pn	01 57 52.3	+0.5
SLVT	Silivri	6.06	93	*e*P	Pn	01 57 53.7	+1.9
SOKA	Soboth	6.06	324	*e*Pn	Pn	01 57 53.3	+1.4
	comp=Z,32nm,0.4s,SNR=20						
SOKA				*e*Sn	Sn	01 59 02.3	+1.5
	comp=Z,38nm,0.4s						
SRO	Srobarova	6.09	348	*e*SN	Sn	01 59 04.6	+3.2
SRO				*e*LG	Lg	01 59 10.4	
PLOR	Plostina	6.15	47	⇓P	Pn	01 57 54.5	+1.5
PLOR	Plostina	6.15	47	P	Pn	01 57 54.5	+1.5
PLOR	Plostina	6.15	47		Pn	01 57 54.5	+1.5
OBKA	Obir	6.16	321	*i* Pn	Pn	01 57 54.9	+1.7
	comp=Z,38nm,0.5s,SNR=13						
PSN	Preselentsi	6.17	70	P	Pn	01 57 55.0	+1.8
PSN				S	Sn	01 59 03.0	-0.3
JOSR	Joseni	6.17	37	⇑P	Pn	01 57 54.3	+0.9
JOSR	Joseni	6.17	37		Pn	01 57 54.3	+0.9
VRI	Vrincioaia	6.20	48	⇓P	Pn	01 57 55.2	+1.5
VRI	Vrincioaia	6.20	48	*e*P	Pn	01 57 55.5	+1.8
VRI	Vrincioaia	6.20	48	P	Pn	01 57 55.2	+1.5
VRI	Vrincioaia	6.20	48		Pn	01 57 55.2	+1.5
VAE	Valguarnera	6.24	227	Pn	Pn	01 57 54.1	-0.2
	comp=Z,0.8nm,0.3s,baz=168,slow=18,SNR=2.4						
VAE				Sn	Sn	01 59 06.1	+0.9
	comp=Z,1.0nm,0.3s,baz=38,slow=13,SNR=2.3						
LATE	Laterza	6.26	280		Pn	01 57 53.9	-0.7
BMR	Baia Mare	6.27	21	⇑P	Pn	01 57 56.0	+1.3
BMR	Baia Mare	6.27	21	P	Pn	01 57 56.2	+1.5
BMR				pmax	pmax		
	comp=Z,45nm,0.6s						
BMR	Baia Mare	6.27	21		Pn	01 57 56.0	+1.3
CTKS	Kestanelik-??a	6.28	93	*e*P	Pn	01 57 55.8	+1.0
BLCB	Balcova	6.31	121	*e*P	Pn	01 57 57.3	+2.1
ARSA	Arzberg	6.33	330	*i* Pn	Pn	01 57 57.8	+2.3
	comp=Z,42nm,0.3s,SNR=15						
ARSA				*e*Sn	Sn	01 59 08.7	+1.5
	comp=Z,88nm,0.6s						
APE	Apeiranthos	6.33	137	⇑P	Pn	01 57 56.8	+1.3
APE	Apeiranthos	6.33	137	*i* P	Pn	01 57 56.5	+0.9
APE	Apeiranthos	6.33	137		Pn	01 57 56.8	+1.3
SOP	Sopron	6.36	337	P	Pn	01 57 59.2	+3.3
SOP				pmax	pmax		
	comp=Z,59nm,0.5s						
KCTX	Karacabey (Bur	6.39	102	*e*P	Pn	01 57 57.7	+1.4
MFTR	Murfatlar	6.47	66	⇓P	Pn	01 57 58.5	+1.1
MFTR	Murfatlar	6.47	66		Pn	01 57 58.5	+1.1
BGKT	Bogazkoy	6.49	93	*e*P	Pn	01 57 58.5	+0.8
CORL	Corleone	6.61	235	Pn	Pn	01 57 59.4	+0.1
BIZ	Bicaz	6.62	38	⇑P	Pn	01 58 01.4	+2.0
BIZ	Bicaz	6.62	38		Pn	01 58 01.4	+2.0
KECS	Kecovo	6.62	2	*e*P	Pn	01 58 01.2	+1.7
KECS				*e*		01 59 13.8	
KECS				MLR	MLR		
	comp=Z,100nm,0.9s						
KECS	Kecovo	6.62	2	*e*PN	Pn	01 58 01.2	+1.7
KECS				*e*SN	Sn	01 59 13.8	-0.7
KECS				*e*LG	Lg	01 59 32.0	
CFR	Carcaliu	6.67	58	⇑P	Pn	01 58 00.9	+0.8
CFR	Carcaliu	6.67	58	P	Pn	01 58 00.9	+0.8
CFR	Carcaliu	6.67	58		Pn	01 58 00.9	+0.8
ARMT	Armutlu	6.68	98	*e*P	Pn	01 58 01.3	+1.0
MYKA	Terra Mystica	6.69	318	*e*Pn	Pn	01 58 01.7	+1.3
	comp=Z,48nm,0.5s,SNR=16						
MYKA				*e*Sn	Sn	01 59 17.8	+1.6
	comp=Z,30nm,0.5s						
GHRR		6.70	49	⇑P	Pn	01 58 02.3	+1.8
GHRR		6.70	49		Pn	01 58 02.3	+1.8
ZST	Bratislava	6.70	342	*e*P	Pn	01 58 03.2	+2.7
ZST				*e*		01 59 14.7	
ZST				MLR	MLR		
	comp=Z,200nm,0.5s						
ZST	Bratislava	6.70	342	*e*PN	Pn	01 58 03.2	+2.7
ZST				*e*SN	Sn	01 59 14.7	-1.5
ZST				*e*LG	Lg	01 59 20.4	
VYHS	Vyhne	6.70	352	*e*P	Pn	01 58 02.4	+1.9
VYHS				*e*		01 59 16.9	
VYHS	Vyhne	6.70	352	*e*PN	Pn	01 58 02.4	+1.9
VYHS				*e*SN	Sn	01 59 16.9	+0.6
ISK	Istanbul-Kandi	6.72	94	*e*P	Pn	01 58 01.5	+0.6
KAVV	Kandilli-Istan	6.72	94	*e*P	Pn	01 58 01.7	+0.8
BURAR	Bucovina Array	6.78	30		Pn	01 58 03.6	+1.9
CONA	Conrad Observa	6.79	335	*i* Pn	Pn	01 58 03.2	+1.3
	comp=Z,8.3nm,0.3s						
CONA				*e*Sn	Sn	01 59 20.2	+1.5
	comp=Z,113nm,0.8s						
MODS	Modra-Piesok	6.82	344	*e*P	Pn	01 58 03.8	+1.5
MODS				*e*		01 59 18.9	
MODS				MLR	MLR		
	comp=Z,200nm,1.1s						
MODS	Modra-Piesok	6.82	344	*e*PN	Pn	01 58 03.8	+1.5
MODS				*e*SN	Sn	01 59 18.9	-0.5
MODS				*e*LG	Lg	01 59 23.5	
TRML	Termal-Yalova	6.90	97	*e*P	Pn	01 58 03.9	+0.6
SMOL	Smolenice	6.93	345	*e*P	Pn	01 58 06.8	+3.1
SMOL				*e*		01 59 22.5	
SMOL				MLR	MLR		
	comp=Z,100nm,0.8s						
SMOL	Smolenice	6.93	345	*e*PN	Pn	01 58 06.8	+3.1
SMOL				*e*SN	Sn	01 59 22.5	+0.6
SMOL				*e*LG	Lg	01 59 42.7	
UZH	Uzhgorod	6.93	12	⇓*i*P	Pn	01 58 04.4	+0.7
UZH				*i* S	Sn	01 59 22.5	+0.5
UZH				MLR	MLR		
	comp=Z,100nm,16.0s						
STAL	STALIGIAL	6.94	312		Pn	01 58 04.2	+0.3
YLV	Yalova	7.06	98	*e*P	Pn	01 58 06.3	+0.8
CRVS	Cervenica-Dubn	7.10	7	*e*P	Pn	01 58 07.9	+1.9
CRVS				*e*		01 59 26.6	
CRVS	Cervenica-Dubn	7.10	7	*e*PN	Pn	01 58 07.8	+1.8
CRVS				*e*SN	Sn	01 59 26.6	+0.5
TLCR		7.10	59	⇑P	Pn	01 58 07.4	+1.4
TLCR		7.10	59	P	Pn	01 58 07.4	+1.4
TLCR		7.10	59		Pn	01 58 07.4	+1.4
KBA	Koelnbreinsper	7.14	319	*i* Pn	Pn	01 58 08.5	+1.7
	comp=Z,95nm,0.5s,SNR=28						
KBA				*e*Sn	Sn	01 59 28.3	+0.8
	comp=Z,31nm,0.4s						
KBA	Koelnbreinsper	7.14	319	P	Pn	01 58 08.6	+1.8
KBA				pmax	pmax		
	comp=Z,156nm,0.7s						
SILT	Sile	7.14	93	*e*P	Pn	01 58 07.7	+1.1
JAVC	Velka Javorina	7.21	347	*e*PN	Pn	01 58 09.7	+2.0
JAVC				*e*SN	Sn	01 59 34.2	+5.1
HRT	Hereke	7.22	95	*e*P	Pn	01 58 08.9	+1.1
KOLS	Kolonicke sedl	7.22	11	*e*P	Pn	01 58 09.2	+1.5
KOLS				*e*		01 59 26.8	
KOLS	Kolonicke sedl	7.22	11	*e*PN	Pn	01 58 09.2	+1.5
KOLS				*e*SN	Sn	01 59 26.8	-2.4
MANT	Manisa	7.25	115	Pn	Pn	01 58 09.6	+1.3
SIMA	Simav-Kutahya	7.27	110	*e*P	Pn	01 58 09.3	+0.9
LANS	Liptovska Anna	7.30	356	*e*P	Pn	01 58 11.5	+2.6
LANS				*e*		01 59 30.2	
LANS	Liptovska Anna	7.30	356	*e*PN	Pn	01 58 11.5	+2.6
LANS				*e*SN	Sn	01 59 30.2	-1.1
LANS				*e*LG	Lg	01 59 42.0	
KULA	Kula-Manisa	7.31	114	*e*P	Pn	01 58 10.9	+1.9
MOA	Molln	7.31	327	*i* Pn	Pn	01 58 11.9	+3.0
	comp=Z,18nm,0.3s,SNR=13						
MOA				*i* Sn	Sn	01 59 33.0	+1.6
	comp=Z,43nm,0.3s						
KSV	Kosov	7.32	27	P	Pn	01 58 12.1	+3.0
ABTA	Abfaltersbach	7.35	314	*i* Pn	Pn	01 58 10.1	+0.6
	comp=Z,77nm,0.4s,SNR=22						
ABTA				*e*Sn	Sn	01 59 33.4	+0.9
	comp=Z,113nm,0.7s						
ADVT	Abdulvahap	7.36	98	*e*P	Pn	01 58 11.1	+1.5
CTI	Castel Tesino	7.44	307	P	Pn	01 58 10.6	-0.2
CTI	Castel Tesino	7.44	307	Pn	Pn	01 58 10.6	-0.2
TVSB	Tavsanli	7.46	106	*e*P	Pn	01 58 12.3	+1.2
IDI	Anoyia	7.53	149	Pn	Pn	01 58 11.4	-0.7
	comp=Z,1.5nm,0.3s,baz=185,slow=12,SNR=14						
IDI				Sn	Sn	01 59 31.3	-5.7
	comp=Z,2.4nm,0.3s,baz=242,slow=19,SNR=1.6						
IDI				LR	LR	02 01 14.5	
	comp=Z,331nm,18.9s,baz=346,slow=39						
NIE	Niedzica	7.56	1	*e*P	Pn	01 58 15.5	+3.2
NIE				*e*S	Sn	01 59 42.2	+4.7
NIE	Niedzica	7.56	1	P	Pn	01 58 15.6	+3.2
NIE				pmax	pmax		
	comp=Z,25nm,0.8s						
KRUC	Moravsky	7.67	341	*e*PN	Pn	01 58 15.9	+2.0
KRUC				*e*SN	Sn	01 59 41.3	+1.0
KRUC	Moravsky	7.67	341	P	Pn	01 58 17.0	+3.1
KRUC				pmax	pmax		
	comp=Z,21nm,0.9s						
VRAC	Vranov	7.86	343	Pn	Pn	01 58 19.1	+2.7
	comp=Z,0.9nm,0.3s,baz=180,slow=12,SNR=9.8						
VRAC				Sn	Sn	01 59 42.5	-2.3
	comp=Z,1.2nm,0.3s,baz=142,slow=12,SNR=1.8						
VRAC	Vranov	7.86	343	*e*PN	Pn	01 58 18.2	+1.8
VRAC				*e*SN	Sn	01 59 46.8	+2.0
KWP	Kalwaria Pacla	7.97	12	*e*P	Pn	01 58 21.2	+3.2
KWP	Kalwaria Pacla	7.97	12	P	Pn	01 58 19.9	+1.9
KWP	Kalwaria Pacla	7.97	12		Pn	01 58 19.9	+1.9
MILM	Milestii Mici	7.99	48	⇑P	Pn	01 58 19.0	+0.8
MILM	Milestii Mici	7.99	48		Pn	01 58 19.0	+0.8
CKRC	Cesky Krumlov	8.09	331	*e*PN	Pn	01 58 22.6	+3.0
CKRC				*e*SN	Sn	01 59 50.6	+0.1
OKC	Ostrava-Krasne	8.10	351	*e*SN	Sn	01 59 50.1	-0.6
MORC	Moravsky Berou	8.12	348	*e*PN	Pn	01 58 22.9	+2.8
MORC				*e*SN	Sn	01 59 53.3	+1.9
MORC	Moravsky Berou	8.12	348	P	Pn	01 58 23.3	+3.2
MORC				pmax	pmax		
	comp=Z,15nm,0.9s						
TREC	Trest	8.12	338	*e*P	Pn	01 58 22.8	+2.7
TREC				*e*		01 59 51.4	
TREC	Trest	8.12	338	*e*PN	Pn	01 58 22.8	+2.7
TREC				*e*SN	Sn	01 59 51.4	0.0
WTTA	Wattenberg	8.14	314	*e*Pn	Pn	01 58 21.3	+0.8
	comp=Z,51nm,0.3s,SNR=28						
WTTA				*e*Sn	Sn	01 59 52.3	+0.3
	comp=Z,114nm,0.7s						
WTTA	Wattenberg	8.14	314	P	Pn	01 58 22.4	+1.9
WTTA				pmax	pmax		
	comp=Z,90nm,0.6s						
WATA	Walderalm	8.22	315	*e*Pn	Pn	01 58 23.2	+1.7
	comp=Z,28nm,0.3s,SNR=15						
WATA				*e*Sn	Sn	01 59 54.4	+0.5
	comp=Z,44nm,0.4s						
PGF	Pioggiola	8.32	278	*e*Pn	Pn	01 58 22.6	-0.4
PGF				*e*Sn	Sn	01 59 48.2	-8.3
	comp=Z,13nm,0.6s						
PGF	Pioggiola	8.32	278	P	Pn	01 58 23.8	+0.8
PGF				pmax	pmax		
	comp=Z,107nm,1.2s						
GEC2	GERESS Array S	8.33	329	Pn	Pn	01 58 25.1	+2.0
GEC2	GERESS Array S	8.33	329	*e*Pn	Pn	01 58 25.1	+2.0
GEC2				*e*Sn	Sn	01 59 58.6	+1.9
GERES	GERESS Array B	8.33	329	Pn	Pn	01 58 25.3	+2.2
	comp=Z,2.6nm,0.3s,baz=146,slow=14,SNR=34						
GERES				Sn	Sn	01 59 57.8	+1.1
	comp=Z,3.0nm,0.3s,baz=143,slow=25,SNR=4.3						
GERES				LR	LR	02 01 19.7	
	comp=Z,94nm,20.0s,baz=148,slow=36						
GERES	GERESS Array B	8.33	329		Pn	01 58 24.7	+1.6
SQTA	Sankt Quirin	8.35	313	*e*Pn	Pn	01 58 25.0	+1.7
	comp=Z,75nm,0.5s,SNR=28						
SQTA				*i* Sn	Sn	01 59 58.1	+1.1
	comp=Z,58nm,0.5s						
OJC	Ojcow	8.36	358	*e*P	Pn	01 58 27.7	+4.4
OJC				*e*S	Sn	02 00 00.1	+2.9
LVV	L'vov	8.40	17	*e*P	Pn	01 58 24.9	+1.1
LVV				*e*S	Sn	01 59 59.9	+1.8
MDUB	Mudurnu	8.43	96	Pn	Pn	01 58 25.3	+0.9
MOTA	Moosalm	8.48	313	*i* Pn	Pn	01 58 26.4	+1.4
	comp=Z,80nm,0.6s,SNR=31						
MOTA				*e*Sn	Sn	02 00 02.2	+1.9
	comp=Z,35nm,0.5s						
FETA	Feichten	8.50	311	*e*Pn	Pn	01 58 25.9	+0.6
	comp=Z,30nm,0.5s,SNR=14						
FETA				*e*Sn	Sn	02 00 00.4	-0.4
	comp=Z,21nm,0.6s						
SORM	Soroca	8.53	40	⇑P	Pn	01 58 26.0	+0.4
SORM	Soroca	8.53	40	P	Pn	01 58 26.1	+0.4
SORM	Soroca	8.53	40		Pn	01 58 26.1	+0.4
KRLC	Kraliky	8.54	345	*e*P	Pn	01 58 28.6	+2.7
KRLC	Kraliky	8.54	345	*e*PN	Pn	01 58 28.6	+2.7
KHC	Kasperske Hory	8.62	330	*ce*P	Pn	01 58 28.9	+2.0
KHC				pmax	pmax		
	comp=Z,79nm,1.3s						
KHC	Kasperske Hory	8.62	330	*e*PN	Pn	01 58 29.1	+2.2
KHC				*e*SN	Sn	02 00 05.0	+1.5
KHC				*e*x	x	02 00 20.5	
KHC				AMS	AMS	02 02 00.0	
	comp=Z,800nm,15.4s						
RETA	Reutte	8.75	313	*i* Pn	Pn	01 58 30.1	+1.4
	comp=Z,8.3nm,0.3s,SNR=8.3						
RETA				*i* Sn	Sn	02 00 08.9	+2.1
	comp=Z,44nm,0.5s						
DAVOX	Davos/Dischmat	8.86	307	Pn	Pn	01 58 31.7	+1.3
	comp=Z,9.9nm,0.3s,baz=112,slow=9.8,SNR=128						
DAVOX				Sn	Sn	02 00 09.2	-0.7
	comp=Z,5.4nm,0.3s,baz=304,slow=20,SNR=6.1						
DAVOX				LR	LR	02 03 03.2	
	comp=Z,177nm,20.4s,baz=116,slow=45						
DPC	Dobruska-Polom	8.90	344	*e*P	Pn	01 58 33.5	+2.8
DPC				*e*		02 00 11.1	
DPC	Dobruska-Polom	8.90	344	*e*PN	Pn	01 58 33.5	+2.8
DPC				*e*SN	Sn	02 00 11.1	+0.6
WET	Wettzell	8.90	327	P	Pn	01 58 32.0	+1.3
WET				pmax	pmax		
	comp=Z,24nm,0.7s						
WET	Wettzell	8.90	327	*e*Pn	Pn	01 58 34.6	+3.8
WET				*e*Sn	Sn	02 00 10.7	+0.2
FUR	Furstenfeldbru	8.91	318	P	Pn	01 58 32.2	+1.3
FUR				pmax	pmax		
	comp=Z,64nm,0.7s						
FUR	Furstenfeldbru	8.91	318	*e*Pn	Pn	01 58 31.8	+0.9
FUR				*e*Sn	Sn	02 00 10.0	-0.7
PBCC	Pribram	8.93	333	*e*PN	Pn	01 58 33.9	+2.7
PRU	Pruhonice	9.02	336	*e*P	Pn	01 58 36.2	+3.8
PRU				MLR	MLR		
	comp=Z,700nm,12.2s						
PRU	Pruhonice	9.02	336	*e*PN	Pn	01 58 36.2	+3.8
PRU				AMS	AMS	02 02 20.0	
	comp=Z,700nm,12.2s						
OSTC	Ostas	9.12	344	*e*PN	Pn	01 58 37.0	+3.3
DAVA	Damuels	9.13	310	*e*Pn	Pn	01 58 34.8	+0.9
	comp=Z,26nm,0.5s						
DAVA				*e*Sn	Sn	02 00 16.3	+0.1
	comp=Z,56nm,0.6s						
UBR	Ueberruh	9.22	313	*e*Pn	Pn	01 58 35.8	+0.7
UBR				*e*Sn	Sn	02 00 14.8	-3.6
AKAS	Kas	9.24	124	Pn	Pn	01 58 36.4	+0.8
KSP	Ksiaz	9.37	345	*e*S	Sn	02 00 26.1	+4.0
KSP	Ksiaz	9.37	345	P	Pn	01 58 40.6	+3.4
KSP				pmax	pmax		
	comp=Z,16nm,1.9s						
KSP	Ksiaz	9.37	345	*e*P	Pn	01 58 40.4	+3.2
PVCC	Panska Ves	9.49	338	*e*P	Pn	01 58 41.8	+2.9
PVCC	Panska Ves	9.49	338	*e*PN	Pn	01 58 41.8	+2.9
SAOF	Saorge	9.50	287	P	Pn	01 58 40.0	+1.0
SAOF				pmax	pmax		
	comp=Z,43nm,0.7s						
SBF	Sospel	9.57	286	*e*Pn	Pn	01 58 39.3	-0.6
SBF				*e*Sn	Sn	02 00 19.7	-7.3
	comp=Z,94nm,0.9s						
SBF	Sospel	9.57	286	P	Pn	01 58 40.2	+0.3
GRB1	Grafenberg Arr	9.60	325	P	Pn	01 58 42.5	+2.1
GRB1				pmax	pmax		
	comp=Z,65nm,0.8s						
ROTZ	Rotzenmuhle	9.66	328	*e*Pn	Pn	01 58 44.4	+3.3

ROTZ				*e*Sn	**Sn**	**02 00 28.4**	**-0.7**
MANZ	**Manzenberg**	**9.87**	**328**	*e*Pn	**Pn**	**01 58 47.5**	**+3.4**
MANZ				*e*Sn	**Sn**	**02 00 34.9**	**+0.5**
NKC	**Novy Kostel**	**9.94**	**330**	*e*P	**Pn**	**01 58 48.1**	**+3.1**
NKC	**Novy Kostel**	**9.94**	**330**	*e*PN	**Pn**	**01 58 48.1**	**+3.1**
BRG	**Berggiesshubel**	**9.98**	**337**	Pn	**Pn**	**01 58 47.0**	**+1.5**
BRG				Amp		01 58 59.1	
	comp=Z,5.2nm,0.7s						
BRG				*e*x	x	01 59 08.9	
BRG				*e*x	x	01 59 33.9	
BRG				*e*x	x	02 00 08.2	
BRG				*e*x	x	02 01 06.4	
BRG				Amp		02 01 10.2	
	comp=Z,22nm,1.1s						
BRG				Amp		02 02 07.0	
	comp=N,0.9nm,8.5s						
BRG				Amp		02 02 14.0	
	comp=E,1.1nm,16.3s						
BRG				Amp		02 03 05.0	
	comp=Z,0.7nm,5.4s						
GRFO	**Grafenberg**	**10.01**	**324**	P	**Pn**	**01 58 46.2**	**+0.3**
GRFO	**Grafenberg**	**10.01**	**324**		**Pn**	**01 58 46.2**	**+0.3**
FRF	**La Foret Royal**	**10.10**	**284**	*e*Pn	**Pn**	**01 58 46.6**	**-0.6**
FRF				*e*Sn	**Sn**	**02 00 32.5**	**-7.5**
	comp=Z,327nm,1.8s						
SLE	**Schleitheim**	**10.18**	**309**	P	**Pn**	**01 58 47.9**	**-0.4**
SLE				pmax	pmax		
	comp=Z,35nm,0.8s						
MBDF	**Montbardon**	**10.18**	**291**	*e*Pn	**Pn**	**01 58 46.6**	**-1.8**
MBDF				*e*Sn	Sn	02 00 33.1	-9.1
	comp=Z,52nm,0.8s						
MBDF	**Montbardon**	**10.18**	**291**	P	**Pn**	**01 58 47.3**	**-1.1**
LMR	**La Mourre**	**10.19**	**283**	*e*P	**Pn**	**01 58 49.9**	**+1.6**
LMR				*e*Sn	**Sn**	**02 00 35.7**	**-6.3**
	comp=Z,7.6nm,0.4s						
SENIN	**Lac Senin/Sane**	**10.29**	**300**	Pn	**Pn**	**01 58 49.4**	**-0.6**
BNI	**Bardonecchia**	**10.32**	**293**	P	**Pn**	**01 58 49.5**	**-0.8**
BNI	**Bardonecchia**	**10.32**	**293**	Pn	**Pn**	**01 58 49.5**	**-0.8**
STU	**Stuttgart**	**10.36**	**316**	P	**Pn**	**01 58 51.4**	**+0.7**
STU				pmax	pmax		
	comp=Z,47nm,0.8s						
LPG	**La Plagne**	**10.38**	**295**	*e*Pn	**Pn**	**01 58 49.5**	**-1.8**
LPG				*e*Sn	**Sn**	**02 00 39.7**	**-7.5**
	comp=Z,67nm,0.6s						
LPG	**La Plagne**	**10.38**	**295**	*e*P	**Pn**	**01 58 49.7**	**-1.6**
LPL	**La Plagne**	**10.40**	**295**	*e*Pn	**Pn**	**01 58 49.8**	**-1.6**
LPL				*e*Sn	Sn	02 00 35.7	-12
	comp=Z,80nm,0.7s						
LPL	**La Plagne**	**10.40**	**295**	*e*P	**Pn**	**01 58 49.2**	**-2.2**
KEST	**Kesra**	**10.43**	**238**	Pn	**Pn**	**01 58 53.5**	**+1.7**
	comp=Z,0.1nm,0.3s,baz=302,slow=11,SNR=2.4						
KEST				LR	LR	02 03 50.8	
	comp=Z,512nm,19.9s,baz=354,slow=43						
BR131	**Keskin Array S**	**10.43**	**97**	*i* P	**Pn**	**01 58 52.8**	**+0.9**
BR131	**Keskin Array S**	**10.43**	**97**		**Pn**	**01 58 52.4**	**+0.5**
BRTR	**Keskin Array B**	**10.43**	**97**	Pn	**Pn**	**01 58 53.6**	**+1.7**
	comp=Z,0.9nm,0.3s,baz=178,slow=16,SNR=13						
BRTR	**Keskin Array B**	**10.43**	**97**	*i* P	**Pn**	**01 58 53.5**	**+1.7**
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.4s						
BRTR	**Keskin Array B**	**10.43**	**97**	Pn	**Pn**	**01 58 51.8**	**-0.1**
BFO	**Black Forest**	**10.57**	**312**	P	**Pn**	**01 58 53.2**	**-0.5**
BFO	**Black Forest**	**10.57**	**312**	Pn	**Pn**	**01 58 53.2**	**-0.5**
BFO	**Black Forest**	**10.57**	**312**	*e*Pn	**Pn**	**01 58 53.2**	**-0.5**
BFO				*e*Sn	**Sn**	**02 00 45.7**	**-5.9**
CLL	**Collm**	**10.65**	**335**	*e*Pn	**Pn**	**01 58 57.0**	**+2.3**
CLL				*e*Sn	Sn	02 00 34.0	-19
CLL				*e*Sb		02 01 19.0	
CLL				*e*Sg		02 02 20.0	
CLL	**Collm**	**10.65**	**335**	*e*P	**Pn**	**01 58 57.0**	**+2.3**
CLL	**Collm**	**10.65**	**335**	Pn	**Pn**	**01 58 55.8**	**+1.1**
CLL	**Collm**	**10.65**	**335**	*e*Pn	**Pn**	**01 58 57.7**	**+3.0**
AKASG	**Malin Array Be**	**10.82**	**32**	Pn	**Pn**	**01 58 55.9**	**-1.1**
	comp=Z,0.9nm,0.3s,baz=222,slow=12,SNR=9.0						
AKASG	**Malin Array Be**	**10.82**	**32**	*i* P	**Pn**	**01 58 58.2**	**+1.2**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKASG	**Malin Array Be**	**10.82**	**32**	Pn	**Pn**	**01 58 57.4**	**+0.4**
AKBB	**Malin Array Si**	**10.82**	**32**	*i* P	**Pn**	**01 58 58.4**	**+1.4**
ORIF	**Oris-en-Rattie**	**10.84**	**291**	*e*Pn	**Pn**	**01 58 55.8**	**-1.6**
ORIF	**Oris-en-Rattie**	**10.84**	**291**	*e*P	**Pn**	**01 59 00.4**	**+3.0**
ORIF				*e*Sn	**Sn**	**02 00 51.9**	**-6.4**
	comp=Z,49nm,0.8s						
ORIF	**Oris-en-Rattie**	**10.84**	**291**	P	**Pn**	**01 58 57.9**	**+0.5**
ORIF				pmax	pmax		
	comp=Z,22nm,0.6s						
SMRF	**Simiane la Rot**	**10.91**	**286**	*e*P	**Pn**	**01 58 58.5**	**+0.1**
SMRF				*e*Sn	Sn	02 00 51.1	-8.9
	comp=Z,688nm,2.3s						
HINF	**Hinteralfeld**	**11.17**	**307**	*e*Pn	**Pn**	**01 59 00.0**	**-1.8**
HINF	**Hinteralfeld**	**11.17**	**307**	*e*P	**Pn**	**01 59 04.1**	**+2.3**
HINF				*e*Sn	**Sn**	**02 00 58.5**	**-7.7**
	comp=Z,46nm,0.6s						
HINF	**Hinteralfeld**	**11.17**	**307**	P	**Pn**	**01 59 00.7**	**-1.1**
CDF	**Champ du Feu**	**11.21**	**310**	*e*Pn	**Pn**	**01 59 00.4**	**-2.0**
CDF	**Champ du Feu**	**11.21**	**310**	*e*P	**Pn**	**01 59 05.7**	**+3.2**
CDF				*e*Sn	**Sn**	**02 01 00.5**	**-6.8**
	comp=Z,32nm,0.8s						
HAU	**Haudompre**	**11.56**	**307**	*e*Pn	**Pn**	**01 59 06.3**	**-0.9**
HAU	**Haudompre**	**11.56**	**307**	*e*P	**Pn**	**01 59 09.6**	**+2.5**
HAU				*e*Sn	**Sn**	**02 01 08.6**	**-7.0**
	comp=Z,55nm,0.7s						
HAU	**Haudompre**	**11.56**	**307**	P	**Pn**	**01 59 06.2**	**-0.9**
TNS	**Taunus Mts**	**11.66**	**320**	P	**Pn**	**01 59 08.9**	**+0.3**
TNS				pmax	pmax		
	comp=Z,25nm,0.7s						
TNS	**Taunus Mts**	**11.66**	**320**	*e*Pn	**Pn**	**01 59 08.8**	**+0.3**
TNS				*e*Sn	**Sn**	**02 01 16.2**	**-2.0**
VIVF	**Saint-Julien-l**	**11.68**	**290**	*e*Pn	**Pn**	**01 59 06.3**	**-2.5**
VIVF				*e*Sn	Sn	02 01 09.2	-9.4
	comp=Z,8.4nm,0.5s						
VIVF	**Saint-Julien-l**	**11.68**	**290**	P	**Pn**	**01 59 06.2**	**-2.5**
LASF	**Ste Croix**	**12.16**	**286**	*e*P	**Pn**	**01 59 16.7**	**+1.3**
LASF				*e*Sn	Sn	02 01 20.7	-10
	comp=Z,1.9nm,0.5s						
PAGF	**Fort de Pagny**	**12.18**	**308**	*e*Pn	**Pn**	**01 59 15.5**	**-0.1**
PAGF				*e*Sn	Sn	02 01 19.8	-11
	comp=Z,32nm,0.8s						
SUW	**Suwalki**	**12.32**	**8**	*e*P	**Pn**	**01 59 19.4**	**+1.9**
SUW	**Suwalki**	**12.32**	**8**	P	**Pn**	**01 59 17.7**	**+0.2**
SUW	**Suwalki**	**12.32**	**8**		**Pn**	**01 59 17.7**	**+0.2**
SFTF	**Sexfontaines**	**12.43**	**306**	*e*Pn	**Pn**	**01 59 18.9**	**-0.2**
	baz=130						
SFTF				*e*Sn	Sn	02 01 27.5	-10
	comp=Z,123nm,1.5s						
MEZF	**Maizieres J'vi**	**12.55**	**307**	*e*Pn	**Pn**	**01 59 19.1**	**-1.6**
	baz=123						
MEZF				*e*Sn	Sn	02 01 27.7	-12
	comp=Z,67nm,1.3s						
SAVF	**Savonnieres en**	**12.56**	**308**	*e*Sn	**Sn**	**02 01 31.5**	**-8.7**
	comp=Z,296nm,2.3s						
SMF	**Signal de Mont**	**12.64**	**298**	*e*Pn	**Pn**	**01 59 19.5**	**-2.5**
SMF	**Signal de Mont**	**12.64**	**298**	*e*P	**Pn**	**01 59 24.1**	**+2.1**
SMF				*e*Sn	**Sn**	**02 01 34.2**	**-8.0**
	comp=Z,58nm,0.8s						
LOR	**Lormes**	**12.82**	**300**	*e*Pn	**Pn**	**01 59 22.2**	**-2.2**
	baz=112						
LOR	**Lormes**	**12.82**	**300**	*e*P	**Pn**	**01 59 26.6**	**+2.2**
LOR				*e*Sn	Sn	02 01 35.7	-11
	comp=Z,26nm,0.4s						
LOR	**Lormes**	**12.82**	**300**	P	**Pn**	**01 59 23.0**	**-1.4**
ANN	**Anapa**	**12.90**	**71**	*e*P	**Pn**	**01 59 22.1**	**-3.4**
ANN				pmax	pmax		
	comp=Z,85nm,1.3s						
SSF	**Saint Saulge**	**12.98**	**299**	*e*Pn	**Pn**	**01 59 24.6**	**-2.0**
SSF	**Saint Saulge**	**12.98**	**299**	*e*P	**Pn**	**01 59 29.4**	**+2.8**
SSF				*e*Sn	**Sn**	**02 01 42.3**	**-8.2**
	comp=Z,24nm,0.6s						
AVF	**Avril sur Loir**	**13.01**	**298**	*e*Pn	**Pn**	**01 59 24.3**	**-2.6**
AVF				*e*Sn	Sn	02 01 40.7	-10
	comp=Z,21nm,0.8s						
MEM	**Membach**	**13.12**	**317**	*d*Pn	**Pn**	**01 59 30.5**	**+2.0**
MEM				*d*PbPb	**PbPb**	**02 00 13.3**	**+1.7**
BGF	**Bois d'Agland**	**13.28**	**297**	*e*Pn	**Pn**	**01 59 28.4**	**-2.3**
BGF	**Bois d'Agland**	**13.28**	**297**	*e*P	**Pn**	**01 59 33.0**	**+2.3**
BGF				*e*Sn	Sn	02 01 46.8	-11
	comp=Z,36nm,0.7s						
MTLF	**Montolieu**	**13.31**	**282**	*e*P	**Pn**	**01 59 32.2**	**+1.1**
BCLA	**Clavier**	**13.38**	**315**	*d*Pn	**Pn**	**01 59 33.8**	**+1.8**
BCLA				*d*x	x	01 59 59.7	
BCLA				*d*PbPb	**PbPb**	**02 00 17.9**	**+1.9**
BCLA				*d*PgPg	P	02 00 40.0	+59
GIVF	**Givet**	**13.46**	**313**	*e*Pn	**Pn**	**01 59 30.2**	**-2.9**
GIVF				*e*Sn	Sn	02 01 51.2	-11
	comp=Z,44nm,1.2s						
BGES	**Gesves**	**13.47**	**314**	*d*Pn	**Pn**	**01 59 35.4**	**+2.2**
DOU	**Dourbes**	**13.59**	**313**	*d*Pn	**Pn**	**01 59 35.9**	**+1.1**
DOU				*d*PnPn	**P**	**01 59 43.7**	**0.0**
DOU				*d*x	x	02 00 05.7	
DOU				*d*PbPb	**PbPb**	**02 00 24.1**	**+4.6**
BMRD	**Maredsous**	**13.60**	**314**	*d*Pn	**Pn**	**01 59 37.5**	**+2.5**
BMRD				*d*PnPn	**P**	**01 59 45.3**	**+1.4**
BMRD				*d*x	x	02 00 05.1	
BMRD				*d*PbPb	**PbPb**	**02 00 22.6**	**+2.9**
HYF	**Humbligny**	**13.61**	**299**	*e*Pn	**Pn**	**01 59 33.3**	**-1.8**
MNK	**Minsk**	**13.64**	**19**	*i* P	**Pn**	**01 59 33.5**	**-2.0**
	comp=E,2.0nm,0.8s						
MNK				*i* P	**Pn**	**01 59 33.5**	**-2.0**
	comp=N,7.0nm,0.8s						
MNK				*i* P	**Pn**	**01 59 33.5**	**-2.0**
	comp=Z,7.0nm,0.8s						
MNK				*i* PP	**PnPn**	**01 59 41.4**	**-1.9**
MNK				*i* S	**Sn**	**02 02 03.8**	**-2.6**
MNK				*i* SS	**SnSn**	**02 02 19.4**	**+0.7**
MNK				*i* LQ	LQ	02 03 43.6	
MNK				*i* LR	LR	02 04 21.1	
MNK				*i* LRM	MLR	02 05 00.1	
	comp=Z,146nm,16.6s						
MNK				*i* LRM	MLR	02 05 03.8	
	comp=E,12nm,16.6s						
MNK				*i* LRM	MLR	02 05 03.8	
	comp=N,192nm,16.6s						
TCF	**Toulx Ste Croi**	**13.65**	**295**	*e*Sn	Sn	02 01 56.4	-10
	comp=N,28nm,0.9s						
NACGM	**Naroch**	**13.76**	**16**	*i* P	**Pn**	**01 59 38.9**	**+1.8**
NACGM				*i* P	**Pn**	**01 59 38.9**	**+1.8**
NACGM				*i* P	**Pn**	**01 59 38.9**	**+1.8**
NACGM				*i* S	**Sn**	**02 02 15.1**	**+5.8**
NACGM				*i* SS	S	02 02 48.1	+16
NACGM				*i* LQ	LQ	02 03 42.4	
NACGM				*i* LR	LR	02 04 47.0	
BAIF	**Baives**	**13.78**	**312**	*e*Sn	Sn	02 01 59.2	-11
	comp=N,91nm,1.7s						
PABE	**Paberze**	**13.88**	**9**	*e*P	**Pn**	**01 59 39.8**	**+1.1**
RJF	**Les Rejaudoux**	**13.95**	**291**	*e*P	**Pn**	**01 59 40.4**	**+0.6**
RJF	**Les Rejaudoux**	**13.95**	**291**	P	**Pn**	**01 59 38.7**	**-1.1**
GAZ	**Gaziantep**	**13.96**	**104**	Pn	**Pn**	**01 59 40.5**	**+0.5**
IIGN	**Ignalina**	**14.07**	**14**	*e*P	**Pn**	**01 59 41.7**	**+0.3**
IIGN				IAmb	IAmb	01 59 50.8	
	comp=Z,9.1nm,0.5s						
IDID	**Didziasalis**	**14.13**	**16**	*e*P	**Pn**	**01 59 41.0**	**-1.2**
PBUR	**Paburge**	**14.22**	**4**	*e*P	**Pn**	**01 59 42.2**	**-1.2**
PBUR				IAmb	IAmb	01 59 56.4	
	comp=Z,62nm,0.9s						
ISAL	**Salakas**	**14.26**	**14**	*e*P	**Pn**	**01 59 43.1**	**-0.9**
ISAL				IAmb	IAmb	01 59 52.8	
	comp=Z,17nm,0.2s						
LFF	**La Frestale**	**14.46**	**289**	*e*P	**Pn**	**01 59 49.0**	**+2.3**
SOC	**Sochi**	**14.47**	**77**	*e*P	**Pn**	**01 59 45.6**	**-1.3**
SOC				*e*S	**Sn**	**02 02 25.4**	**-1.3**
SOC				MLR	MLR		
	comp=Z,60nm,13.0s						
MMAI	**Mount Meron Ar**	**14.96**	**121**	Pn	**Pn**	**01 59 54.4**	**+0.7**
	comp=Z,2.3nm,0.3s,baz=313,slow=11,SNR=21						
MMAI				LR	LR	02 06 32.0	
	comp=Z,215nm,19.8s,baz=335,slow=41						
MFF	**Saint Martin d**	**15.31**	**295**	*e*P	**Pn**	**01 59 58.8**	**+0.7**
ETSF	**Etsaut**	**15.36**	**281**	*e*Pn	**Pn**	**01 59 56.8**	**-2.1**
LDF	**La Druitiere**	**15.78**	**302**	*e*Pn	**Pn**	**02 00 00.1**	**-4.2**
LDF				*e*Sn	Sn	02 02 45.9	-13
	comp=Z,366nm,2.2s						
VSR	**Storozhevoye**	**16.03**	**48**	*e*P	**Pn**	**02 00 08.9**	**+1.5**
VSR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
FLN	**La Foliniere**	**16.06**	**302**	*e*Pn	**Pn**	**02 00 07.5**	**-0.3**
FLN				*e*Sn	Sn	02 02 52.6	-13
	comp=Z,145nm,1.5s						
GRR	**Gorron**	**16.19**	**301**	*e*Pn	**Pn**	**02 00 07.6**	**-1.9**
MARD	**Mardin**	**16.51**	**99**	Pn	**Pn**	**02 00 13.3**	**-0.5**
MARD				IAmb	IAmb	02 00 27.4	
	comp=Z,86nm,1.6s						
LPSR	**Galich'ya Gora**	**16.61**	**43**	*e*P	**Pn**	**02 00 15.8**	**+1.0**
LPSR				pmax	pmax		
	comp=Z,20nm,0.9s						
KIV	**Kislovodsk**	**16.62**	**75**	*e*P	**Pn**	**02 00 16.2**	**+1.1**
KIV				pmax	pmax		
	comp=Z,21nm,1.1s						
KIV				MLR	MLR		
	comp=Z,93nm,13.0s						
KIV	**Kislovodsk**	**16.62**	**75**	Pn	**Pn**	**02 00 14.1**	**-1.1**
KBZ	**Khabaz**	**16.78**	**76**	Pn	**P**	**02 00 20.0**	**+0.9**
	comp=Z,0.1nm,0.3s,baz=61,slow=6.8,SNR=4.6						
KBZ	**Khabaz**	**16.78**	**76**	*ce*P	**P**	**02 00 19.5**	**+0.4**
KBZ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GOF	**Gofitskoye**	**16.90**	**71**	⇑*e*P	**P**	**02 00 27.2**	**+6.7**
GOF				pmax	pmax		
	comp=Z,24nm,1.1s						
MTSE	**Matsula**	**17.02**	**6**	*e*P	Pn	02 00 12.6	-7.4
EIL	**Elat**	**17.05**	**131**	Pn	**Pn**	**02 00 21.0**	**+0.4**
	comp=Z,0.3nm,0.3s,baz=6.1,slow=8.0,SNR=4.7						
OBN	**Obninsk**	**17.08**	**34**	LR	LR	02 06 49.9	
	comp=Z,46nm,18.7s,baz=200,slow=37						
OBN	**Obninsk**	**17.08**	**34**	⇓*e*P	**Pn**	**02 00 20.8**	**+0.1**
OBN				pmax	pmax		
	comp=Z,7.0nm,0.7s						
OBN				MLR	MLR		
	comp=Z,156nm,16.0s						
VSU	**Vasula**	**17.12**	**12**	*e*P	**P**	**02 00 23.9**	**+1.1**
VSU				*e*		02 00 23.9	
VSU	**Vasula**	**17.12**	**12**	*i* P	**P**	**02 00 23.8**	**+0.9**
VSU				pmax	pmax		
	comp=Z,99nm,0.9s						
ONI	**Oni**	**17.25**	**80**	P	**P**	**02 00 28.5**	**+4.0**
SGMF	**Saint Gilles**	**17.25**	**299**	*e*Pn	**Pn**	**02 00 23.3**	**+0.4**
VRH	**Novokhopyorsk**	**17.47**	**50**	*e*P	**Pn**	**02 00 25.9**	**+0.3**
VRH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ZEI	**Tsey**	**17.56**	**79**	*e*P	**P**	**02 00 29.7**	**+1.6**
ZEI				pmax	pmax		
	comp=Z,11nm,1.2s						
QUIF	**Quistinic**	**17.58**	**298**	*e*P	**P**	**02 00 28.4**	**+0.5**
ROSF	**Rostrenen**	**17.74**	**299**	*e*Pn	**Pn**	**02 00 27.4**	**-1.6**
MOS	**Moscow**	**17.95**	**33**	*e*P	P	02 00 43.3	+11
UPP	**Uppsala**	**18.09**	**356**	*e*P	**Pn**	**02 00 32.4**	**-0.7**
ESDC	**Sonseca Array**	**18.40**	**271**	P	**Pn**	**02 00 37.8**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=65,slow=12,SNR=12						
ESDC				LR	LR	02 09 04.5	
	comp=Z,192nm,18.2s,baz=65,slow=42						
GNI	**Garni**	**18.61**	**87**	P	**Pn**	**02 00 40.6**	**+0.7**
	comp=Z,1.3nm,0.3s,baz=305,slow=4.0,SNR=14						
GNI				LR	LR	02 08 02.3	
	comp=Z,71nm,18.4s,baz=299,slow=38						
GNI	**Garni**	**18.61**	**87**	*ce*P	**Pn**	**02 00 40.2**	**+0.3**
GNI				pmax	pmax		
	comp=Z,8.0nm,0.8s						
GNI	**Garni**	**18.61**	**87**		**P**	**02 00 39.1**	**-0.4**
GNI	**Garni**	**18.61**	**87**	P	**Pn**	**02 00 41.8**	**+1.9**
HFS	**Hagfors**	**18.73**	**350**	P	**P**	**02 00 40.7**	**+0.2**
	comp=Z,1.5nm,0.3s,baz=159,slow=13,SNR=42						
GROC	**Groznyy**	**18.91**	**77**	*e*P	**P**	**02 00 41.1**	**-1.6**
GROC				pmax	pmax		
	comp=Z,3.0nm,0.3s						
PUL	**Pulkovo**	**19.00**	**16**	*i* P	**Pn**	**02 00 44.6**	**+0.3**
PUL				pmax	pmax		
	comp=Z,49nm,0.7s						
LGD	**Lagodekhi**	**19.40**	**81**	P	**Pn**	**02 00 51.4**	**+2.1**
NAX	**Nakhchivan**	**19.42**	**90**	P	**Pn**	**02 00 51.2**	**+1.6**
NC602	**NORSAR Array S**	**19.62**	**347**	P	**P**	**02 00 50.4**	**+0.1**
NORES	**NORESS Array B**	**19.62**	**347**	P	**Pn**	**02 00 54.7**	**+3.0**
NORES				pmax	pmax		
	comp=Z,5.0nm,0.4s						
GANJ	**Ganja**	**19.68**	**85**	P	**Pn**	**02 00 53.6**	**+1.0**
ZKTA	**Zakatala**	**19.71**	**82**	P	**Pn**	**02 00 54.8**	**+1.8**
NAO01	**NORSAR Array S**	**19.83**	**347**	P	**P**	**02 00 53.0**	**+0.3**
FINES	**FINESS Array B**	**19.93**	**8**	P	**P**	**02 00 53.6**	**-0.1**
	comp=Z,1.9nm,0.3s,baz=185,slow=10,SNR=99						
FINES				PcP	**PcP**	**02 05 08.7**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=202,slow=2.1,SNR=4.7						
FINES				LR	LR	02 09 18.2	
	comp=Z,270nm,18.2s,baz=210,slow=39						
FINES	**FINESS Array B**	**19.93**	**8**	P	**P**	**02 00 53.3**	**-0.4**
FIA1	**FINESS Array S**	**19.93**	**8**	P	**P**	**02 00 53.1**	**-0.6**
FIA1				IAmb	IAmb	02 00 54.3	
	comp=Z,41nm,1.1s						
NC405	**NORSAR Array S**	**19.95**	**348**	P	**P**	**02 00 53.4**	**-0.6**
NB201	**NORSAR Array S**	**19.96**	**347**	P	**P**	**02 00 54.0**	**0.0**
NB2	**NORSAR Subarra**	**19.96**	**347**	P	**P**	**02 00 53.9**	**-0.2**
	comp=Z,4.7nm,0.6s,baz=162,slow=11						
NOA	**NORSAR Array B**	**19.96**	**347**	P	**P**	**02 00 54.0**	**-0.1**
	comp=Z,0.5nm,0.4s,baz=158,slow=9.6,SNR=25						
NOA				LR	LR	02 08 38.3	
	comp=Z,71nm,21.9s,baz=170,slow=37						
NC303	**NORSAR Array S**	**20.11**	**348**	P	**P**	**02 00 55.4**	**-0.3**
SEKA	**Sheki**	**20.21**	**83**	P	Pn	02 01 00.2	+1.2
MNGR	**Mingechevir, A**	**20.22**	**84**	P	Pn	02 01 00.2	+1.3
NC204	**NORSAR Array S**	**20.26**	**347**	P	**P**	**02 00 57.5**	**+0.1**
NC204				IAmb	IAmb	02 01 03.9	
	comp=Z,49nm,1.1s						
EKA	**Eskdalemuir Ar**	**20.36**	**319**	P	**P**	**02 00 58.0**	**-0.4**
	comp=Z,4.0nm,0.4s,baz=118,slow=8.9,SNR=50						
EKA	**Eskdalemuir Ar**	**20.36**	**319**	P	**P**	**02 00 58.0**	**-0.4**
ESK	**Eskdalemuir**	**20.37**	**319**	P	**P**	**02 00 59.0**	**+0.5**
ESK				pmax	pmax		
	comp=Z,98nm,1.9s						
ESK	**Eskdalemuir**	**20.37**	**319**	P	**P**	**02 00 59.0**	**+0.5**
ESK				IAmb	IAmb	02 01 02.4	
	comp=Z,98nm,1.9s						
BELG	**Belogornoye**	**21.31**	**51**	P	**P**	**02 01 08.6**	**-0.1**
	comp=Z,14nm,0.8s,baz=5.8,slow=2.5,SNR=18						
BELG				PcP	**PcP**	**02 05 11.4**	**-1.0**
	comp=Z,3.5nm,0.8s,baz=40,slow=1.2,SNR=4.6						
BELG				LR	LR	02 09 46.6	
	comp=Z,185nm,20.1s,baz=305,slow=38						
BELG	**Belogornoye**	**21.31**	**51**	*i* P	**P**	**02 01 08.9**	**+0.2**
BELG				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MDT	**Midelt**	**21.62**	**253**	P	**P**	**02 01 11.9**	**-0.3**
	comp=Z,4.0nm,0.9s,baz=84,slow=12,SNR=5.9						
MDT				LR	LR	02 08 57.5	
	comp=Z,125nm,21.2s,baz=58,slow=35						
LKRN	**Lenkeran, Azer**	**22.00**	**89**	P	**P**	**02 01 19.4**	**+3.2**
KLMR	**Klimovskoe**	**22.36**	**25**	*e*P	**P**	**02 01 17.8**	**-2.1**
KLMR				pmax	pmax		
	comp=Z,25nm,1.1s						
KLMR	**Klimovskoe**	**22.36**	**25**	*e*P	**P**	**02 01 17.8**	**-2.1**
KLMR				AMP		02 01 29.4	
	comp=Z,25nm,1.1s						
TAM	**Tamanrasset**	**22.63**	**217**	P	**P**	**02 01 23.5**	**+0.2**
TAM				pmax	pmax		
	comp=Z,9.0nm,1.2s						
TAM	**Tamanrasset**	**22.63**	**217**	P	**P**	**02 01 23.4**	**+0.2**
TMCR	**Tamitsa**	**24.61**	**19**	*e*P	**P**	**02 01 40.2**	**-1.7**
TMCR				pmax	pmax		
	comp=Z,27nm,0.8s						
KIRV	**Kirov**	**24.80**	**38**	LR	LR	02 12 23.0	
	comp=Z,132nm,20.1s,baz=236,slow=39						
KIRV	**Kirov**	**24.80**	**38**	*ce*P	**P**	**02 01 44.1**	**+0.4**
RST	**Umm Al-Ruwaisa**	**24.93**	**111**	*e*P		02 01 44.4	
MIB	**Mutribah**	**24.99**	**110**	*e*P		02 01 45.3	
AKTO	**Aktyubinsk**	**27.33**	**59**	P	**P**	**02 02 05.9**	**-0.8**
	comp=Z,2.1nm,0.6s,baz=310,slow=4.9,SNR=6.6						
AKTO				LR	LR	02 14 25.2	
	comp=Z,173nm,20.9s,baz=265,slow=40						
ARCES	**ARCESS Array B**	**27.88**	**4**	P	**P**	**02 02 10.1**	**-1.3**
	comp=Z,2.2nm,0.6s,baz=185,slow=8.5,SNR=18						
ARCES				PcP	**PcP**	**02 05 25.5**	**-1.1**
	comp=Z,3.8nm,0.9s,baz=176,slow=1.4,SNR=4.2						
ARCES				LR	LR	02 13 28.4	
	comp=Z,123nm,18.2s,baz=205,slow=37						
AB31	**Akbulak array**	**28.54**	**61**	⇑*e*P	**P**	**02 02 17.4**	**-0.2**
AB31				pmax	pmax		
	comp=Z,2.0nm,0.4s						
ABKAR	**Akbulak array**	**28.54**	**61**	P	**P**	**02 02 17.0**	**-0.6**
ABKAR				IAmb	IAmb	02 02 18.0	
	comp=Z,3.6nm,0.5s						
ARU	**Arti**	**28.59**	**46**	P	**P**	**02 02 17.3**	**-0.6**
	comp=Z,0.8nm,0.5s,baz=225,slow=8.5,SNR=5.8						
ARU				LR	LR	02 14 01.2	
	comp=Z,163nm,19.4s,baz=250,slow=37						
ARU	**Arti**	**28.59**	**46**	*d i*P	**P**	**02 02 17.0**	**-0.9**
ARU						02 03 05.2	
ARU				S	**S**	**02 07 04.5**	**-0.5**
ARU				pmax	pmax		
	comp=Z,15nm,1.7s						
ARU	**Arti**	**28.59**	**46**	P	**P**	**02 02 17.7**	**-0.2**
ARU				IAmb	IAmb	02 02 51.2	
	comp=Z,20nm,1.5s						
GEYT	**Alibeck**	**29.21**	**85**	P	**P**	**02 02 23.4**	**-0.3**
	comp=Z,4.6nm,0.5s,baz=273,slow=5.5,SNR=15						
GEYT	**Alibeck**	**29.21**	**85**	IAmb	IAmb	02 02 24.1	
	comp=Z,4.6nm,0.5s						
GYA0B	**ALIBECK ARRAY**	**29.21**	**85**	P	**P**	**02 02 22.9**	**-0.8**
GYA0B				IAmb	IAmb	02 02 24.1	
	comp=Z,6.3nm,0.6s						
SVE	**Sverdlovsk**	**29.79**	**46**	*e*P	**P**	**02 02 28.8**	**+0.2**
TOA0	**Torodi Ar. Sit**	**32.82**	**215**	P	**P**	**02 02 55.6**	**+0.1**
TOA0				IAmb	IAmb	02 03 02.0	
	comp=Z,8.3nm,1.1s						
TORD	**Torodi Ar. Bea**	**32.82**	**215**	P	**P**	**02 02 56.4**	**+0.9**
	comp=Z,5.4nm,1.0s,baz=16,slow=8.7,SNR=12						
TORD				LR	LR	02 19 02.3	
	comp=Z,125nm,18.5s,baz=20,slow=42						
TORD	**Torodi Ar. Bea**	**32.82**	**215**	P	**P**	**02 02 55.6**	**+0.1**
TORD				IAmb	IAmb	02 03 02.0	
	comp=Z,6.3nm,1.1s						
MDH	**Madha**	**34.03**	**108**	P	**P**	**02 03 05.4**	**-0.7**
HATD	**Hatta, Dubai**	**34.21**	**108**	P	**P**	**02 03 06.8**	**-0.8**
ASHO	**Ashiyiah**	**34.24**	**109**	P	**P**	**02 03 06.5**	**-1.5**
	SNR=19						
ALNE	**Al Ain**	**34.42**	**110**	P	**P**	**02 03 08.6**	**-0.9**
	SNR=5.8						
SOHO	**SOHO**	**34.92**	**109**	P	**P**	**02 03 12.7**	**-1.2**
BRVK	**Borovoye**	**34.99**	**54**	*ce*P	**P**	**02 03 15.0**	**+0.9**
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.6s						
BRVK	**Borovoye**	**34.99**	**54**	P	**P**	**02 03 14.5**	**+0.4**
ARQ	**Araqi**	**35.42**	**110**	P	**P**	**02 03 17.0**	**-1.2**
	SNR=30						
ARQ				P	**P**	**02 03 17.0**	**-1.2**
	SNR=30						
HOQ	**Hoqain**	**35.82**	**109**	P	**P**	**02 03 19.7**	**-1.9**
BSY	**Bisya**	**36.28**	**110**	P	**P**	**02 03 23.9**	**-1.6**
SPITS	**Spitsbergen Ar**	**36.46**	**359**	P	**P**	**02 03 26.2**	**-0.3**
	comp=Z,3.9nm,0.6s,baz=153,slow=10,SNR=9.1						
SPITS				PcP	**PcP**	**02 05 49.7**	**-0.2**
	comp=Z,15nm,1.0s,baz=165,slow=6.0,SNR=7.1						
IUG	**Iuzhnay**	**36.62**	**72**	*e*P	**P**	**02 03 28.1**	**-0.3**
	baz=72						
IUG	**Iuzhnay**	**36.62**	**72**	*e*P	**P**	**02 03 28.0**	**-0.3**
SMDO	**Samad**	**36.68**	**109**	P	**P**	**02 03 27.7**	**-1.3**
KKAR	**Karatay Array**	**36.69**	**71**	P	**P**	**02 03 28.7**	**-0.1**
KKAR	**Karatay Array**	**36.69**	**71**	P	**P**	**02 03 28.7**	**-0.1**
BRZS	**Berezniki**	**36.75**	**59**	*e*P	**P**	**02 03 28.4**	**-0.9**
	baz=59						
BRZS	**Berezniki**	**36.75**	**59**	*e*P	**P**	**02 03 28.3**	**-0.9**
WSAR	**Wadi Sarin**	**36.98**	**108**	P	**P**	**02 03 29.9**	**-1.6**
	comp=Z,4.1nm,0.8s,baz=288,slow=9.6,SNR=2.2						
JMDO	**Jabal Madar**	**37.16**	**110**	P	**P**	**02 03 31.8**	**-1.2**
WHFO	**Wadi Hawf**	**37.28**	**120**	P	**P**	**02 03 32.4**	**-1.6**
ABTO	**Aybut**	**37.39**	**121**	P	**P**	**02 03 33.8**	**-1.2**
MHTO	**MHTO**	**37.97**	**111**	P	**P**	**02 03 38.5**	**-1.3**
MHTO				P	**P**	**02 03 38.5**	**-1.3**
DMTO	**DMTO**	**38.19**	**118**	P	**P**	**02 03 40.0**	**-1.7**
	SNR=6.7						
DQM	**DQM**	**38.39**	**113**	P	**P**	**02 03 42.3**	**-1.1**
BTLS	**Baital**	**38.64**	**67**	*e*P	**P**	**02 03 45.2**	**0.0**
	baz=66						
BTLS	**Baital**	**38.64**	**67**	*e*P	**P**	**02 03 45.2**	**0.0**
SGDS	**Sogindy**	**39.48**	**69**	*e*P	**P**	**02 03 52.7**	**+0.3**
	baz=69						
SGDS	**Sogindy**	**39.48**	**69**	*e*P	**P**	**02 03 52.6**	**+0.3**
AAK	**Ala-Archa**	**39.63**	**70**	*ce*P	**P**	**02 03 54.8**	**+1.1**
AAK				pmax	pmax		
	comp=Z,17nm,1.7s						
AAK	**Ala-Archa**	**39.63**	**70**	P	**P**	**02 03 54.9**	**+1.1**
KURK	**Kurchatov**	**40.38**	**57**	*ce*P	**P**	**02 04 00.3**	**+0.6**
KURK				pmax	pmax		
	comp=Z,5.0nm,1.7s						
KURK	**Kurchatov**	**40.38**	**57**	P	**P**	**02 04 01.6**	**+1.9**
KUU	**Kurty**	**40.53**	**68**	*e*P	**P**	**02 04 01.2**	**+0.1**
	comp=Z,5.8nm,0.8s,baz=68						
KUU	**Kurty**	**40.53**	**68**	*e*P	**P**	**02 04 01.2**	**+0.1**
KUU				pmax	pmax		
	comp=Z,6.0nm,0.8s						
CHKK	**Chushkaly**	**40.99**	**67**	*e*P	**P**	**02 04 04.8**	**-0.1**
	baz=67						
CHKK	**Chushkaly**	**40.99**	**67**	*e*P	**P**	**02 04 04.8**	**-0.1**
AAA	**Alma-Ata**	**41.14**	**68**	*e*P	**P**	**02 04 07.1**	**+0.9**
	comp=Z,8.6nm,0.5s,baz=68						
AAA	**Alma-Ata**	**41.14**	**68**	*e*P	**P**	**02 04 07.0**	**+0.9**
AAA				pmax	pmax		
	comp=Z,9.0nm,0.5s						

TNSS	Tian-Shan	41.22	69	*e*P	P	02 04 06.8	-0.4
	baz=68						
TNSS	Tian-Shan	41.22	69	*e*P	P	02 04 06.8	-0.4
MDOK	Medeo	41.25	68	*e*P	P	02 04 07.1	-0.1
	baz=68						
MDOK	Medeo	41.25	68	*e*P	P	02 04 07.0	-0.1
SEM	Semipalatinsk	41.46	57	*e*P	P	02 04 08.7	-0.2
	baz=57						
SEM	Semipalatinsk	41.46	57	*e*P	P	02 04 08.7	-0.2
DBIC	Dimbokro	41.50	219	P	P	02 04 08.7	-0.5
	comp=Z,4.7nm,0.9s,baz=19,slow=9.6,SNR=4.3						
DBIC				LR	LR	02 23 57.0	
	comp=Z,77nm,19.1s,baz=15,slow=40						
DBIC	Dimbokro	41.50	219	IAmb	IAmb	02 04 34.7	
	comp=Z,11nm,1.1s						
TDK	Taldyqorghan	41.62	65	*e*P	P	02 04 09.7	-0.4
	baz=65						
TDK	Taldyqorghan	41.62	65	*e*P	P	02 04 09.6	-0.4
KSH	Kashi	41.74	74	P	P	02 04 12.6	+1.4
KSH				pmax	pmax		
	comp=Z,4.0nm,0.3s						
KSH				pmax	pmax		
	comp=Z,180nm,5.3s						
SATY	Saty	42.22	68	*e*P	P	02 04 15.1	0.0
	baz=68						
SATY	Saty	42.22	68	*e*P	P	02 04 15.0	0.0
KPKS	Kokpek	42.28	67	*e*P	P	02 04 15.2	-0.4
	baz=67						
KPKS	Kokpek	42.28	67	*e*P	P	02 04 15.1	-0.4
PDGK	Podgornoye	42.88	67	*i* P	P	02 04 20.2	-0.3
PDGK				pmax	pmax		
	comp=Z,9.0nm,1.0s						
SHLS	Shalkode	42.92	68	*e*P	P	02 04 22.9	+2.2
	comp=Z,2.5nm,0.5s,baz=67						
SHLS	Shalkode	42.92	68	*e*P	P	02 04 22.9	+2.2
SHLS				pmax	pmax		
	comp=Z,2.0nm,0.5s						
MAKZ	Makanchi	43.48	62	P	P	02 04 23.6	-1.5
MAKZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MAKZ	Makanchi	43.48	62	P	P	02 04 23.6	-1.5
ZAA0	Zalesovo Array	43.50	51	P	P	02 04 25.0	-0.1
ZAA0				IAmb	IAmb	02 04 25.9	
	comp=Z,6.7nm,0.9s						
ZALV	Zalesovo Beam	43.50	51	P	P	02 04 25.1	-0.1
	comp=Z,6.9nm,0.6s,baz=282,slow=8.3,SNR=29						
ZALV				LR	LR	02 24 27.4	
	comp=Z,142nm,20.8s,baz=278,slow=39						
ZALV	Zalesovo Beam	43.50	51	P	P	02 04 24.9	-0.1
NRIK	Noril'sk	43.65	28	P	P	02 04 26.8	+0.7
	comp=Z,2.4nm,0.4s,baz=285,slow=1.4,SNR=5.0						
NRIK				LR	LR	02 24 06.9	
	comp=Z,80nm,20.7s,baz=272,slow=38						
NRIK	Noril'sk	43.65	28	P	P	02 04 27.1	+1.0
NRIK				IAmb	IAmb	02 04 37.5	
	comp=Z,7.0nm,1.1s						
MK31	Makanchi Array	43.69	62	*ce*P	P	02 04 26.9	+0.1
MKAR	Makanchi Array	43.69	62	P	P	02 04 26.9	+0.1
	comp=Z,2.8nm,0.4s,baz=282,slow=7.5,SNR=80						
MKAR				PcP	PcP	02 06 13.1	-0.5
	comp=Z,1.7nm,0.6s,baz=279,slow=3.0,SNR=5.9						
MKAR				LR	LR	02 24 38.6	
	comp=Z,117nm,19.3s,baz=284,slow=39						
MKAR	Makanchi Array	43.69	62	P	P	02 04 26.6	-0.1
ZSN	Zaisan	45.17	60	*e*P	P	02 04 37.6	-1.0
	baz=60						
ZSN	Zaisan	45.17	60	*e*P	P	02 04 37.6	-1.0
DGZ	Jazzator, Alta	46.12	56	*i* P	P	02 04 46.8	+0.5
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.5s						
WMQ	Urumqi	48.28	64	*e*P	P	02 05 03.8	+0.7
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,89nm,5.7s						
WMQ				LR	LR		
	comp=N,380nm,6.7s						
WMQ				LR	LR		
	comp=E,220nm,5.3s						
WMQ				LR	LR		
	comp=Z,43nm,19.9s						
TULEG	Thule	49.50	342	P	P	02 05 12.5	+0.6
TULEG				IAmb	IAmb	02 05 48.7	
	comp=Z,8.0nm,1.0s						
TLY	Talaya	55.03	49	*ce*P	P	02 05 54.7	+1.4
TLY				pmax	pmax		
	comp=Z,5.0nm,0.6s						
TLY	Talaya	55.03	49	P	P	02 05 53.1	-0.2
TLY				IAmb	IAmb	02 05 55.4	
	comp=Z,6.7nm,0.7s						
TIXI	Tiksi	56.30	21	*i* P	P	02 06 01.9	-0.2
SONM	Songino Array	58.37	52	P	P	02 06 17.2	-0.1
	comp=Z,1.0nm,0.5s,baz=284,slow=7.9,SNR=15						
SONM				LR	LR	02 33 41.7	
	comp=Z,143nm,20.7s,baz=333,slow=38						
SONM	Songino Array	58.37	52	P	P	02 06 17.4	+0.2
SONM				pmax	pmax		
	comp=Z,2.0nm,1.0s						
SONM	Songino Array	58.37	52	P	P	02 06 17.4	+0.2
GTA	Gaotai	58.37	64	*e*P	P	02 06 17.3	-0.1
GTA				pP	pP	02 06 21.9	-1.6
GTA				sP	sP	02 06 24.6	-1.3
GTA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,60nm,5.0s						
GTA				LR	LR		
	comp=N,110nm,15.3s						
GTA				LR	LR		
	comp=E,110nm,17.5s						
GTA				LR	LR		
	comp=Z,110nm,15.6s						
ULN	Ulaanbaatar	58.74	52	*i* P	P	02 06 20.2	+0.3
ULN				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ULN	Ulaanbaatar	58.74	52	P	P	02 06 19.9	0.0
ULN				IAmb	IAmb	02 06 48.0	
	comp=Z,2.5nm,1.0s						
LZH	Lanzhou	62.83	65	*e*P	P	02 06 48.2	+0.3
LZH				pP	pP	02 06 51.9	-2.3
LZH				sP	sP	02 06 55.2	-1.3
LZH				pmax	pmax		
	comp=Z,14nm,1.3s						
HHC	Hu-ho-hao-te	65.20	57	*e*P	P	02 07 06.0	+2.7
HHC				pmax	pmax		
	comp=Z,12nm,0.8s						
HHC				pmax	pmax		
	comp=Z,180nm,6.6s						
CMAR	Chiang Mai Arr	69.68	83	P	P	02 07 29.9	-1.9
	comp=Z,1.1nm,0.4s,baz=311,slow=7.6,SNR=7.1						
CMAR	Chiang Mai Arr	69.68	83	P	P	02 07 30.5	-1.3
CMAR	Chiang Mai Arr	69.68	83	P	P	02 07 30.5	-1.3
YKA	Yellowknife Ar	69.84	339	P	P	02 07 32.1	0.0
	comp=Z,1.2nm,0.7s,baz=40,slow=5.7,SNR=23						
YKA				LR	LR	02 39 54.4	
	comp=Z,23nm,19.6s,baz=0.0,slow=37						
BOSA	Boshof	70.28	175	P	P	02 07 36.0	+0.8
	comp=Z,1.7nm,0.5s,baz=354,slow=6.9,SNR=12						
BOSA				LR	LR	02 41 07.0	
	comp=Z,43nm,19.3s,baz=354,slow=38						
COLD	Coldfoot	70.99	356	P	P	02 07 40.6	+1.6
COLD				IAmb	IAmb	02 09 35.2	
	comp=Z,4.0nm,0.6s						
KLR	Kul'dur	71.21	40	*ce*P	P	02 07 40.0	-0.8
KLR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
IMAR	Indian Mountai	72.38	357	P	P	02 07 48.0	+0.5
ULM	Lac du Bonnet	72.59	323	P	P	02 07 48.8	-0.2
	comp=Z,2.8nm,0.5s,baz=29,slow=6.0,SNR=8.4						
ULM	Lac du Bonnet	72.59	323	*i* P	P	02 07 48.2	-0.8
ULM	Lac du Bonnet	72.59	323	IAmb	IAmb	02 07 49.9	
	comp=Z,4.3nm,0.8s						
IL31		73.22	354	P	P	02 07 52.4	-0.1
IL31				IAmb	IAmb	02 10 21.6	
	comp=Z,19nm,2.0s						
ILAR	Eielson Array	73.22	354	P	P	02 07 52.8	+0.3
	comp=Z,0.8nm,0.6s,baz=358,slow=4.6,SNR=18						
BCAR	Beaver Creek A	74.42	352	P	P	02 08 00.4	+0.8
USRK	Ussuriysk Ar.	74.80	44	P	P	02 08 01.9	-0.2
	comp=Z,0.7nm,0.5s,baz=342,slow=9.1,SNR=3.3						
USRK				LR	LR	02 44 22.6	
	comp=Z,152nm,18.1s,baz=315,slow=38						
USRK	Ussuriysk Ar.	74.80	44	P	P	02 08 01.7	-0.3
CAST	Castle Rocks	74.88	356	P	P	02 08 01.9	-0.4
NJ2	Nanjing	75.20	60	*e*P	P	02 08 04.9	+0.3
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
KSRS	Korea Array	77.21	51	P	P	02 08 15.6	-0.3
	comp=Z,1.1nm,0.4s,baz=321,slow=5.0,SNR=5.3						
KSRS				LR	LR	02 47 37.4	
	comp=Z,46nm,18.1s,baz=317,slow=40						
YSS	Yuzh-Sakhalins	77.95	36	*ce*P	P	02 08 20.1	+0.3
YSS				pmax	pmax		
	comp=Z,7.0nm,0.6s						
YSS	Yuzh-Sakhalins	77.95	36	P	P	02 08 19.6	-0.2
PCRV	Puerto La Cruz	79.44	274	LR	LR	02 38 47.4	
	comp=Z,241nm,21.9s,slow=32						
PSI	Prapat	79.76	95	LR	LR	02 45 50.9	
	comp=Z,13nm,18.5s,baz=90,slow=37						
EGMT	Eagleton	80.16	329	P	P	02 08 32.6	+0.5
EGMT				IAmb	IAmb	02 08 34.3	
	comp=Z,8.9nm,0.8s						
MJAR	Matsushiro Arr	83.60	46	P	P	02 08 50.1	-0.2
	comp=Z,1.5nm,0.6s,baz=313,slow=8.7,SNR=2.1						
PD31	Pinedale Array	84.36	325	IAmb	IAmb	02 09 05.0	
	comp=Z,2.5nm,0.9s						
PDAR	Pinedale Array	84.36	325	P	P	02 08 54.5	+0.1
	comp=Z,0.9nm,0.6s,baz=56,slow=5.9,SNR=11						
PDAR	Pinedale Array	84.36	325	P	P	02 08 53.9	-0.5
BDFB	Brasilia	84.88	244	P	P	02 08 57.2	+0.2
	comp=Z,3.2nm,0.7s,baz=85,slow=4.8,SNR=4.3						
HAWA	Hanford	85.09	333	P	P	02 08 57.7	0.0
TXAR	Lajitas Array	92.25	313	P	P	02 09 33.1	+0.9
	comp=Z,0.7nm,0.8s,baz=50,slow=2.0,SNR=5.6						
TXAR	Lajitas Array	92.25	313	P	P	02 09 35.4	+3.2
WRA	Warramunga Arr	120.87	90	PKP	PKPdf	02 15 12.8	-1.7
	comp=Z,1.2nm,0.7s,baz=332,slow=2.0,SNR=12						
WRA	Warramunga Arr	120.87	90		PKPdf	02 15 13.0	-1.5
WRAB	Tennant Creek	120.87	90	*c i*PKIKP	PKPdf	02 15 13.5	-1.0
WRAB				pmax	pmax		
	comp=Z,6.0nm,1.7s						
ASAR	Alice Springs	122.75	94	PKP	PKPdf	02 15 16.8	-1.3
	comp=Z,3.4nm,0.5s,baz=315,slow=1.6,SNR=42						
ASAR	Alice Springs	122.75	94		PKPdf	02 15 15.7	-2.3
STKA	Stephens Creek	132.90	98	PKP	PKPdf	02 15 35.7	-1.4
	comp=Z,0.8nm,0.4s,baz=340,slow=10,SNR=4.4						

LJU 07 01:57:26.0, 46°.01N×14°.32E, h9km, ML0.7, 1C-1D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRNS	Crni Vrh	0.08	329	⇓*i*Pg	Pg	01 57 28.5	+0.2
CRNS				*i* Sg	Sg	01 57 30.0	+0.1
CRNS				IAML		01 57 30.5	
	comp=Z,11nm,0.1s						
GBAS	Gorenja Brezov	0.11	132	⇑*i*Pg	Pg	01 57 28.6	0.0
GBAS				*i* Sg	Sg	01 57 30.5	0.0
GBAS				IAML		01 57 30.6	
	comp=Z,22nm,0.1s						
LJU	Ljubljana	0.15	77	*i* Pg	Pg	01 57 29.4	+0.3
LJU				*i* Sg	Sg	01 57 31.7	+0.3
LJU				IAML		01 57 31.9	
	comp=Z,3.0nm,0.1s						
JAVS	Javornik	0.21	237	*i* Sg	Sg	01 57 34.1	+0.7
JAVS				IAML		01 57 34.3	
	comp=Z,2.2nm,0.1s						
VNDS	Vrh nad Dolski	0.28	71	*i* Pg	Pg	01 57 31.8	+0.2
MOZS	Mozjanca	0.30	16	*i* Pg	Pg	01 57 32.3	+0.4
VOJS	Vojsko	0.31	274	*i* Pg	Pg	01 57 32.2	0.0
GORS	Gorjuse	0.38	324	*i* Pg	Pg	01 57 33.3	-0.3
GORS				*i* Sg	Sg	01 57 39.0	+0.4
GORS				IAML		01 57 40.0	
	comp=Z,4.7nm,0.1s						

IDC 07 02:04:52.0±1.7, 15°.17S×173°.61W, h0km, mb3.8/7, mb1 4.1/7, mb1mx3.9/24, mbtmp3.8/7, MS3.4/1, Ms1 3.4/1, ms1mx2.7/38, Error ellipse: s-maj=103.9km s-min=21.8km az=147.0

ISC 07 02:04:56.6±1.5, 15°.1S±0°.5×173°.7W±0°.4, h30km, n10, σ0s.47/9, mb3.6/7, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPZ	Rata Peaks	31.33	202	LR	LR	02 21 39.2	
	comp=Z,73nm,20.6s,baz=173,slow=32						
STKA	Stephens Creek	43.96	240	P	P	02 13 01.5	+0.2
	0.8nm,0.4s,baz=114,slow=12,SNR=1.7						
WRA	Warramunga Arr	49.67	257	P	P	02 13 45.8	-0.3
	0.4nm,0.4s,baz=96,slow=6.7,SNR=24						
ASAR	Alice Springs	49.96	252	P	P	02 13 48.0	-0.4
	2.5nm,0.6s,baz=87,slow=8.2,SNR=47						
TXAR	Lajitas Array	80.67	56	P	P	02 17 07.4	+0.2
	0.7nm,1.1s,baz=207,slow=5.2,SNR=3.9						
PDAR	Pinedale Array	82.23	42	P	P	02 17 15.1	-0.3
	0.4nm,0.8s,baz=267,slow=2.7,SNR=3.8						
ILAR	Eielson Array	82.24	11	P	P	02 17 14.3	-0.3
	0.4nm,0.8s,baz=237,slow=7.0,SNR=5.2						
YKA	Yellowknife Ar	89.95	23	P	P	02 17 52.8	+0.1
	0.2nm,0.8s,baz=230,slow=4.8,SNR=2.2						
BRTR	Keskin Array B	145.80	321	PKPbc	PKPab	02 24 34.7	+0.9
	0.6nm,0.4s,baz=305,slow=37,SNR=2.4						
GERES	GERESS Array B	145.85	351	PKPbc	PKPbc	02 24 33.2	+0.1
	0.6nm,0.7s,baz=7.6,slow=3.0,SNR=2.7						

FUNV 07 02:12:27.5, 8°.21N×72°.08W, h14km, MW3.0
RSNC 07 02:12:27.5±1.6, 8°.36N×72°.13W, h4km±8km, ML1.8

ISC 07 02:12:24.6±1.3, 8°.30N±0°.04×72°.12W±0°.03, h5km±11km, n13, σ1s.04/23, Venezuela

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PAMC	Pamplona, Colo	1.11	211	*e*P	Pn	02 12 47.8	+0.5
PAMC				*e*S	Sn	02 13 04.0	+0.8
PAMC				*i*		02 13 09.2	
	comp=Z,15nm,0.2s						
OCAC	Ocana	1.19	267	*e*P	Pn	02 12 48.4	+0.3
OCAC				*e*S	Sb	02 13 03.8	+0.3
OCAC				*i*		02 13 08.8	
	comp=Z,23nm,0.3s						
SOCV	Socops	1.25	90	*e*P	Pn	02 12 49.5	+0.9
SOCV				*e*S	Sn	02 13 06.0	+0.2
SOCV	Socops	1.25	90	*e*P	Pn	02 12 49.7	+1.1
SOCV				*e*S	Sn	02 13 06.0	+0.2
SDV	Santo Domingo	1.58	68	*e*P	Pg	02 12 55.5	+0.6
SDV				*e*S	Sg	02 13 15.5	+0.1
SDV				*i*		02 13 19.2	
	comp=Z,17nm,0.4s						
SDV	Santo Domingo	1.58	68	*e*P	Pg	02 12 55.0	+0.1
SDV				*e*S	Sg	02 13 15.6	+0.1
MCQV	Machiques	1.79	347	*e*P	Pg	02 12 58.7	-0.2
MCQV				*e*S	Sg	02 13 22.2	+0.1
BRRC	Barranca, Sant	1.98	233	*e*P	Pg	02 13 02.2	-0.3
BARC	Barichara	2.00	212	*e*P	Pg	02 13 02.6	-0.3
BARC				*i*		02 13 33.8	
	comp=Z,4.6nm,0.4s						
SMLC	San Martn de	2.00	285	*e*P	Pb	02 13 00.5	-0.9
SMLC				*e*S	Sn	02 13 25.4	+1.0
CURV	Curarigua	2.73	51	*e*P	Pn	02 13 10.4	+1.4
CURV				*e*S	Sn	02 13 42.8	+0.3
MAPV	Macapo	3.92	67	*e*S	Sn	02 14 09.6	-2.3
BAUV	El Baul	4.08	81	*e*P	Pn	02 13 28.0	+0.4
BAUV				*e*S	Sn	02 14 13.0	-2.7

RHSSO 07 02:12:26.2±0.6, 41°.91N×20°.32E, h4km±3km, ML3.5/13
THE 07 02:12:27.9, 42°.05N×20°.24E, h0km±1km, ML2.9/6, Error ellipse: s-maj=2.2km s-min=0.9km az=323.0
TIR 07 02:12:27.9, 41°.98N×20°.22E, h5km±1km, Md3.6, Ml3.5
SKO 07 02:12:27.9, 41°.97N×20°.19E, h33km
PDG 07 02:12:28.1±0.3, 42°.00N×20°.18E, h15km, MD3.4/6, ML3.3/13, Error ellipse: s-maj=0.4km s-min=0.6km az=0.0
BEO 07 02:12:28.5±0.2, 42°.01N×20°.17E, h5km±3km, ML3.0/14
PRU 07 02:12:31.8±0.0, 41°.74N×20°.25E, h42km

ISC 07 02:12:28.4±0.9, 41°.99N±0°.01×20°.20E±0°.02, h10km±8km, n151, σ1s.01/220, 22C-10D, Albania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PUK	Puka	0.24	284	P	Pg	02 12 33.3	0.0
	baz=286						
PUK				S	Sg	02 12 37.6	+1.0
	baz=286						
PUK				AMP			
	comp=E,81nm,0.4s,baz=286						
PHP	Peshkopia	0.35	149	P	Pg	02 12 35.2	-0.1
PHP				S	Sb	02 12 41.1	-1.2
PHP	Peshkopia	0.35	149	P	Pg	02 12 35.0	-0.3
	baz=150						
PHP				S	Sg	02 12 40.3	+0.3
	baz=150						
BCI	Bajram Curri	0.39	345	P	Pg	02 12 36.5	+0.4
	baz=344						
BCI				S	Sb	02 12 42.6	-1.0
	baz=344						
PVY	Plav	0.64	344	⇑*i*Pg	Pg	02 12 39.8	-0.9
PVY				*i* Sg	Sg	02 12 49.6	+0.5
TIR	Tirane	0.69	202	P	Pg	02 12 41.4	-0.2
TIR				S	Sn	02 12 53.9	-1.0
TIR	Tirane	0.69	202	*e*Pg	Pg	02 12 41.3	-0.3
TIR				*e*Sg	Sb	02 12 51.9	0.0
TIR	Tirane	0.69	202	⇓P	Pg	02 12 41.1	-0.5
TIR				⇑S	Sg	02 12 50.9	+0.3
TIR	Tirane	0.69	202	P	Pg	02 12 41.6	-0.1
	baz=204						
TIR				S	Sb	02 12 52.0	0.0
	baz=204						
TIR	Tirane	0.69	202	*i* Pg	Pg	02 12 41.1	-0.5
ULC	Ulcinj	0.71	269	*i* Pg	Pg	02 12 41.1	-1.1
ULC	Ulcinj	0.71	269	*e*Pg	Pg	02 12 41.0	-1.1
ULC				*i* Sg	Sg	02 12 52.3	+0.8
PDG	Podgorica	0.83	303	*e*Pg	Pg	02 12 43.1	-1.4
PDG				*e*Sg	Sg	02 12 54.3	-1.0
PDG	Podgorica	0.83	303	⇑P	Pg	02 12 42.9	-1.5
PDG				⇑S	Sb	02 12 56.3	+0.2
PDG	Podgorica	0.83	303	⇑*i*Pg	Pg	02 12 42.9	-1.5
PDG				*e*Sg	Sb	02 12 56.2	0.0
PDG	Podgorica	0.83	303	⇑*i*Pg	Pg	02 12 43.0	-1.5
PDG				*i* Sg	Sb	02 12 56.6	+0.4
TTG	Podgorica	0.83	303	⇑*i*Pg	Pg	02 12 43.0	-1.4
TTG				*i* Sg	Sb	02 12 56.4	+0.2
BEY	Berane	0.92	346	*i* Pg	Pg	02 12 45.7	-0.3
IVA	Berane	0.92	346	⇑*i*Pg	Pg	02 12 44.8	-1.2
IVA				*i* Sg	Sb	02 12 59.0	+0.3
SKO	Skopje	0.92	90	*e*Pg	Pg	02 12 45.6	-0.5
SKO				*e*Sg	Sg	02 12 57.8	-0.4
SKO	Skopje	0.92	90	⇓*i*Pg	Pg	02 12 45.7	-0.5
SKO				*i* Sg	Sb	02 12 59.2	+0.4
OHR	Ohrid	0.98	153	⇓*i*Pg	Pg	02 12 46.2	-1.1
OHR				*i* Sg	Sb	02 13 00.7	+0.1
OHR				*e*Lg	Lg	02 13 02.5	
	comp=E,804nm,0.8s						
OHR				*e*Lg	Lg	02 13 02.6	
	comp=N,675nm,0.5s						
KOME	Kolasin	1.00	330	*e*Pg	Pg	02 12 46.5	-1.2
KOME				*i* Sg	Sb	02 13 01.9	+0.7
BUM	Brajici-Budva	1.02	288	*e*Pg	Pg	02 12 47.0	-1.1
BUM				*i* Sg	Sb	02 13 02.9	+1.1
CEME	Cevo	1.11	301	*e*Pg	Pg	02 12 47.8	-1.8
CEME				*i* Sg	Sb	02 13 05.2	+1.0
NKME	Niksic	1.21	311	*e*Pg	Pg	02 12 49.6	-2.0
NKME				*i* Sg	Sn	02 13 09.1	+1.2
NKY	Niksic	1.22	313	*e*Pg	Pg	02 12 49.9	-1.9
NKY				*i* Sg	Sn	02 13 09.5	+1.3
HCY	Herceg Novi	1.35	291	⇓*i*Pg	Pn	02 12 52.2	-1.1
HCY				*e*Sg	Sn	02 13 12.7	+1.4
HCY	Herceg Novi	1.35	291	*e*Pg	Pn	02 12 52.3	-1.1
HCY				*i* Sg	Sn	02 13 13.5	+2.2
KBN	Korca	1.43	162	P	Pg	02 12 55.6	-0.2
KBN				S	Sn	02 13 16.4	+3.0
KBN	Korca	1.43	162	P	Pg	02 12 55.6	-0.2
	baz=162						
KBN				S	Sn	02 13 15.3	+2.0
	baz=162						
BARS	Barje	1.46	55	*e*Pn	Pg	02 13 08.3	+12
BARS				*e*Sg	Sg	02 13 48.5	+33
PLE	Pljevlja	1.47	336	*e*Pg	Pn	02 12 55.3	+0.2
PLE				*i* Sg	Sg	02 13 16.5	+0.8
FNA	Florina	1.49	143	P	Pn	02 12 55.1	-0.2
FNA				S	Sg	02 13 17.2	+0.9
	comp=N,692nm,0.3s						
FNA	Florina	1.49	143	*i* Pg	Pn	02 12 54.9	-0.4
BRY	Bratogost	1.53	307	*e*Pn	Pn	02 12 55.3	-0.7
BRY				*e*Sn	Sg	02 13 17.8	+0.1
BRY	Bratogost	1.53	307	⇓*i*Pg	Pn	02 12 55.3	-0.7
BRY				*i* Sg	Sg	02 13 18.0	+0.3
UPM	Unac-Piva	1.55	322	⇓*i*Pn	Pn	02 12 56.0	-0.2
UPM				*e*Sn	Sg	02 13 18.1	-0.1
UPM	Unac-Piva	1.55	322	*e*Pg	Pn	02 12 56.1	-0.2
UPM				*i* Sg	Sg	02 13 18.4	+0.2
TREB	Trebinje	1.56	299	*e*Pg	Pn	02 12 56.3	+0.2
TREB				*e*Sg	Sn	02 13 16.6	+0.2
TREB	Trebinje	1.56	299	⇓*i*Pn	Pn	02 12 55.6	-0.5
TREB				*e*Sn	Sg	02 13 18.2	-0.2
IVAS	Ivanjica	1.59	359	*e*Pg	Pn	02 12 56.8	+0.1
IVAS				*e*Sg	Sb	02 13 18.7	+0.6
DBRK	Dubrovnik	1.67	295	*e*Pn	Pn	02 12 56.9	-0.8
DBRK				Sn	Sg	02 13 22.2	+0.2
NEST	Nestorio	1.69	158	P	Pn	02 12 58.6	+0.5
NEST				S	Sg	02 13 21.8	-1.1
	comp=N,182nm,0.7s						
RUDO	Rudo	1.74	340	*e*Pn	Pn	02 12 58.0	-0.7
RUDO				*e*Sn	Sb	02 13 22.5	+0.1
LSK	Leskovik	1.86	171	P	Pb	02 13 01.7	-0.8
LSK				S	Sg	02 13 27.9	-0.2
	comp=N,320nm,0.7s						
LSK	Leskovik	1.86	171	P	Pg	02 13 02.8	-1.2
	baz=170						
LSK				S	Sg	02 13 29.9	+1.8
	baz=170						
PENT	Pentalofos	1.92	158	P	Pb	02 13 02.7	-0.9
GRUS	Gruza	1.94	11	*e*Pn	Pn	02 13 01.3	-0.1
GRUS	Gruza	1.94	11	⇑P	Pn	02 13 01.5	+0.1
GRUS				⇑S	Sn	02 13 26.1	+0.3
GRG	Griva	1.95	121	P	Pn	02 13 02.1	+0.6
GRG				S	Sb	02 13 28.4	+0.1
	comp=N,198nm,0.8s						
GRG	Griva	1.95	121	*i* Pn	Pn	02 13 02.0	+0.4
BBLS	Lazići	1.97	343	*e*Pg	Pn	02 13 02.6	+0.7
BBLS				*e*Sg	Sb	02 13 29.4	+0.4
BBLS	Lazići	1.97	343	*e*Pn	Pn	02 13 01.8	-0.1
BBLS				*e*Sn	Sn	02 13 27.7	+1.0
BOVS	Bovan	1.98	33	*e*Pn	Pn	02 13 01.9	-0.1
STON	Ston	2.05	296	*e*Pn	Pn	02 13 03.3	+0.3
STON				*e*Sg	Sb	02 13 31.9	+0.6
STON	Ston	2.05	296	*e*Pn	Pn	02 13 02.6	-0.3
STON	Ston	2.05	296	*e*Pn	Pn	02 13 03.2	+0.3
STON				*e*Sn	Sn	02 13 30.2	+1.6
KZN	Kozani	2.05	144	P	Pn	02 13 03.4	+0.4
KZN				S	Sb	02 13 31.8	+0.4
	comp=N,218nm,0.6s						
SRN	Sarande	2.11	184	P	Pg	02 13 15.6	+6.8
	baz=185						
DIVS	Divibare	2.12	356	*e*Pg	Pb	02 13 06.6	-0.3
DIVS	Divibare	2.12	356	*e*Pn	Pn	02 13 03.7	-0.2
DIVS				*e*Sn	Sn	02 13 30.6	+0.2
KNT	Kendrikon	2.18	111	P	Pn	02 13 05.1	+0.3
KNT	Kendrikon	2.18	111	*i* Pn	Pn	02 13 05.1	+0.3
ZAPS	Zavoj	2.21	54	*e*Pn	Pn	02 13 06.0	+0.9
KPRO	Kipourio	2.21	156	P	Pn	02 13 06.4	+1.2
TRUS	Trudelj	2.24	4	*e*Pn	Pn	02 13 07.0	+1.4
HAPS	Han Pijesak,Bl	2.29	337	*e*Pn	Pn	02 13 06.5	+0.1
HAPS				*e*Sg	Sb	02 13 39.2	+0.9
HAPS	Han Pijesak,Bl	2.29	337	*e*Pn	Pn	02 13 06.3	-0.1
HAPS				*e*Sn	Sn	02 13 36.4	+1.7
KEK	Kerkira	2.29	188	P	Pn	02 13 06.8	+0.6
KEK				S	Sb	02 13 37.9	-0.3
	comp=N,105nm,1.0s						
VTS	Vitosha	2.34	73	*e*Pn	Pn	02 13 07.5	+0.5
VTS	Vitosha	2.34	73	⇑P	Pn	02 13 07.7	+0.7
VTS	Vitosha	2.34	73	*i* Pn	Pn	02 13 07.7	+0.7
ZAGS	Zajecar	2.36	39	*e*Pn	Pn	02 13 08.1	+0.9
ZAGS				*e*Sg	Sg	02 13 42.5	-1.6
JAN	Janina	2.38	168	P	Pn	02 13 08.7	+1.2
BLKB	Belogradchik	2.45	47	⇓S	Sn	02 13 39.1	+0.7
IGT	Igoumenitsa	2.45	178	P	Pn	02 13 09.9	+1.4
THE	Thessaloniki	2.48	122	P	Pn	02 13 09.4	+0.6
THE	Thessaloniki	2.48	122	*i* Pn	Pn	02 13 09.2	+0.4
LIT	Litokhoron	2.56	137	P	Pn	02 13 10.5	+0.6
HORT	Hortiatis	2.59	121	P	Pn	02 13 10.6	+0.2
SOH	Sokhos	2.64	115	P	Pn	02 13 11.0	-0.1
SOH	Sokhos	2.64	115	*i* Pn	Pn	02 13 11.8	+0.8
MAKA	Makarska	2.68	300	*e*Pn	Pn	02 13 12.7	+1.1
SRS	Serrai	2.69	108	P	Pn	02 13 12.4	+0.7
SRS				S	Sn	02 13 46.4	+2.1
SRS	Serrai	2.69	108	*i* Pn	Pn	02 13 12.3	+0.7
RICI	Ricice	2.72	305	*e*Pn	Pn	02 13 13.7	+1.6
THL	Klokotos Trika	2.78	150	P	Pn	02 13 14.3	+1.3

NVR	Nevrokopi	2.81	102	P	Pn	02 13 14.3	+0.8
PLG	Polygyros	2.93	122	P	Pn	02 13 16.0	+0.9
MATE	Matera	2.95	244	⇑P	Pn	02 13 14.7	-0.6
MDVR	Moldovita	3.00	21	⇑P	Pn	02 13 16.3	+0.2
HVAR	Hvar	3.02	295	*e*Pn	Pn	02 13 16.3	+0.1
FRGS	Fruska Gora	3.18	355	*e*Pn	Pn	02 13 18.8	+0.3
FRGS	Fruska Gora	3.18	355	⇑P	Pn	02 13 18.9	+0.3
FRGS				⇑S	Sn	02 13 56.6	+0.1
FRGS	Fruska Gora	3.18	355	*e*Pn	Pn	02 13 17.7	-0.8
FRGS				*e*Sn	Sn	02 13 57.0	+0.4
EVR	Evrytania	3.30	158	P	Pn	02 13 21.4	+1.2
HERR	Herculane	3.31	28	⇑P	Pn	02 13 20.8	+0.5
MAKR	Makrakomi, Fth	3.31	153	P	Pn	02 13 21.2	+0.9
MGRS	Mrkonjic Grad	3.33	318	*e*Pn	Pn	02 13 20.7	+0.1
MGRS				*e*Sn	Sn	02 14 01.3	+1.1
PAIG	Paliouri	3.34	127	P	Pn	02 13 21.1	+0.4
AGG	Agios Georgios	3.38	151	P	Pn	02 13 21.7	+0.5
KAVA	Kavala	3.39	106	P	Pn	02 13 22.1	+0.8
KIJV	Kijevo	3.44	307	*i* Pn	Pn	02 13 21.8	-0.3
PDO	Prodromos	3.46	167	P	Pn	02 13 23.6	+1.2
XOR	Xorichti	3.47	138	P	Pn	02 13 22.8	+0.4
NEO	Neokhori	3.53	138	P	Pn	02 13 23.2	-0.1
BLY	Banja Luka	3.53	322	*e*Pn	Pn	02 13 24.0	+0.7
BLY				*e*Sn	Sn	02 14 06.2	+1.1
PLVB	Pleven	3.55	65	⇑P	Pn	02 13 24.9	+1.4
ZIRJ	Zirje	3.75	298	*e*Pn	Pn	02 13 27.3	+1.1
BZS	Buzias	3.77	15	⇑P	Pn	02 13 26.6	+0.1
MORI	Morici	3.80	301	*e*Pn	Pn	02 13 26.8	-0.1
SMIA	Simia	3.86	143	P	Pn	02 13 28.0	+0.2
GZR	Gura Zlata	3.88	28	⇑P	Pn	02 13 28.5	+0.3
LAKA	Lakka	3.98	159	P	Pn	02 13 30.5	+1.0
DSF	Desfina	3.99	153	P	Pn	02 13 30.6	+1.0
RDO	Rodhopi	4.09	100	P	Pn	02 13 31.8	+0.9
DRO	Drossia	4.19	163	P	Pn	02 13 34.1	+1.7
KLV	Kalavryta, Ach	4.21	159	P	Pn	02 13 34.7	+2.0
DUGI	Dugi Otok	4.27	300	*e*Pn	Pn	02 13 33.6	+0.1
SMTH	Samothraki Isl	4.29	109	P	Pn	02 13 33.6	-0.2
MORH	Mrgy, Hungar	4.38	346	*e*Pn	Pn	02 13 34.7	-0.1
MORH				*e*Sn	Sn	02 14 25.1	-0.8
MOSL	Moslavina	4.40	327	*e*Pn	Pn	02 13 36.5	+1.2
SIRR	Siria	4.41	13	⇓P	Pn	02 13 35.3	-0.1
ARR	Arges	4.66	42	⇑P	Pn	02 13 40.1	+1.2
NVLJ	Novalja	4.67	305	*e*Pn	Pn	02 13 39.9	+1.0
DION	Dionisos Attik	4.84	143	P	Pn	02 13 42.0	+0.7
VOIR		4.92	44	⇑P	Pn	02 13 43.6	+1.1
AQU	L'Aquila	5.07	276	*e*Pn	Pn	02 13 43.5	-0.9
AQU				*e*Sn	Sn	02 14 41.8	-1.2
KRND	KRANIDI	5.13	153	P	Pn	02 13 46.5	+1.3
DRGR		5.13	20	⇑P	Pn	02 13 45.2	-0.2
CRES	Cresnjev	5.15	320	*e*Pn	Pn	02 13 45.1	-0.4
CRES				*e*Sn	Sn	02 14 43.7	-1.2
CEY	Cerknica	5.61	314	*e*Pn	Pn	02 13 51.5	-0.4
CEY				*e*Sn	Sn	02 14 54.8	-1.6
LJU	Ljubljana	5.76	317	*e*Pn	Pn	02 13 53.5	-0.4
LJU				*e*Sn	Sn	02 14 58.7	-1.4
PSZ	Piszkesteto	5.94	358	⇓P	Pn	02 13 56.7	+0.3
SOKA	Soboth	5.98	323	*e*Pn	Pn	02 13 59.0	+2.0
	comp=N,2.8nm,0.4s						
SOKA				*e*Sn	Sn	02 15 05.9	+0.4
	comp=N,3.0nm,0.5s						
OBKA	Obir	6.08	320	*i* Pn	Pn	02 14 01.0	+2.7
	comp=N,1.3nm,0.2s						
OBKA				*e*Sn	Sn	02 15 10.2	+2.3
	comp=N,3.1nm,0.4s						
ARSA	Arzberg	6.23	329	*i* Pn	Pn	02 14 02.5	+2.1
	comp=N,3.0nm,0.4s						
ARSA				*i* Sn	Sn	02 15 11.8	+0.1
	comp=N,6.3nm,0.7s						
VYHS	Vyhne	6.58	352	*e*SN	Sn	02 15 19.1	-1.1
CONA	Conrad Observa	6.69	334	*e*Pn	Pn	02 14 09.3	+2.5
	comp=N,0.7nm,0.4s						
CONA				*i* Sn	Sn	02 15 23.4	+0.4
	comp=N,3.7nm,0.5s						
MODS	Modra-Piesok	6.71	343	*e*SN	Sn	02 15 22.5	-1.0
KBA	Koelnbreinsper	7.06	318	*e*Pn	Pn	02 14 14.5	+2.6
	comp=N,2.1nm,0.4s						
MOA	Molln	7.22	326	*e*Pn	Pn	02 14 15.5	+1.5
	comp=N,0.8nm,0.2s						
MOA				*i* Sn	Sn	02 15 37.3	+1.3
	comp=N,3.0nm,0.4s						
ABTA	Abfaltersbach	7.28	313	*e*Pn	Pn	02 14 16.0	+1.1
	comp=N,0.6nm,0.1s,SNR=5.0						
CKRC	Cesky Krumlov	7.99	331	*e*SN	Sn	02 15 54.3	-0.6
WTTA	Wattenberg	8.07	314	*i* Pn	Pn	02 14 27.1	+1.4
	comp=N,1.6nm,0.2s						
WATA	Walderalm	8.15	314	*i* Pn	Pn	02 14 27.7	+0.9
	comp=N,1.5nm,0.2s						
SQTA	Sankt Quirin	8.28	312	*i* Pn	Pn	02 14 31.0	+2.4
	comp=N,1.1nm,0.2s						
SQTA				*e*Sn	Sn	02 16 02.1	-0.1
	comp=N,1.5nm,0.3s						
MOTA	Moosalm	8.41	313	*e*Pn	Pn	02 14 32.7	+2.3
	comp=N,1.6nm,0.3s						
KRLC	Kraliky	8.43	345	*e*SN	Sn	02 16 06.0	+0.2
KHC	Kasperske Hory	8.52	329	*e*PN	Pn	02 14 34.9	+3.1
KHC				*e*SN	Sn	02 16 07.1	-0.9

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*SJA **07** 02:29:58.2±0.6, 27°.96S×66°.67W, h189^{km}±3^{km}, ML4.3, MW4.2*

*NEIC **07** 02:29:58.5±1.7, 27°.97S±0°.06×66°.56W±0°.10, h159^{km}±4^{km}, Error ellipse: s-maj=12.4km s-min=8.5km az=88.0*

*IDC **07** 02:29:59.7±1.9, 27°.89S×66°.46W, h160^{km}±17^{km}, mb4.1/11, mb1 4.1/16, mb1mx3.9/29, mbtmp4.5/16, Error ellipse: s-maj=17.0km s-min=12.9km az=91.0*

*GUC **07** 02:30:01.6±0.3, 27°.92S×66°.90W, h182^{km}±11^{km}, ML5.2*

*VAO **07** 02:30:02.4±0.5, 27°.72S×66°.48W, h180^{km}±5^{km}, mb4.5*

ISC 07 02:29:59.3±0.6, **27°.94S**±0°.03×**66°.71W**±0°.04, **h172**^{km}±5^{km}, **n184**, σ1^{s}.**34**/216, **mb4.4**/15, **7C-3D, Catamarca Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CYA	Choya	0.95	122	*e*P	Pn	02 30 26.5	+0.7
CYA				*e*S	Sn	02 30 47.9	+1.6
ACLC	CERRO LA CRUZ	1.50	188	*e*P	Pn	02 30 31.5	+0.7
ACLC				*e*S	Sn	02 30 55.9	+0.7
ACLC				IAML		02 30 57.0	
	comp=Z,2µm,1.0s						
AHML	Horco Molle	1.68	47	*e*P	Pn	02 30 32.9	+0.5
AHML				*e*S	Sn	02 30 57.9	-0.1
FSA	Cafayete	1.93	20	*e*P	Pn	02 30 36.8	+1.4
FSA				*e*S	Sn	02 31 04.0	+0.9
AC02	Maricunga	2.41	296	⇓*i*P	Pn	02 30 43.2	+2.1
AC02				*e*S	Sn	02 31 15.4	+2.0
AC02	Maricunga	2.41	296		Pn	02 30 43.2	+2.1
APLL	PUNTA DE LOS L	2.46	176	*e*P	Pn	02 30 41.2	+0.1
ACDV	Cuesta del Vie	3.07	223	*e*P	Pn	02 30 49.8	+1.2
GO03	Copiap	3.14	275	⇑*i*P	Pn	02 30 50.4	+0.9
GO03				*i* S	Sn	02 31 27.8	-0.6
GO03				IAML		02 31 29.1	
	comp=N,3µm,0.7s						
GO03	Copiap	3.14	275		Pn	02 30 50.4	+0.9
GO03	Copiap	3.14	275	*e*P	Pn	02 30 50.5	+1.1
GO03				*e*S	Sn	02 31 28.2	-0.2
AC05	El Transito	3.27	253	⇑*i*P	Pn	02 30 52.3	+1.3
AC05				*i* S	Sn	02 31 32.1	+0.8
AC05				IAML		02 31 32.7	
	comp=N,4µm,0.6s						
AC05	El Transito	3.27	253		Pn	02 30 52.2	+1.3
AROD	Rodeo	3.29	227	*e*P	Pn	02 30 52.6	+1.2
AROD				*e*S	Sn	02 31 34.1	+2.1
ACCO	Cerro Coronel	3.35	217	*e*P	Pn	02 30 52.7	+0.5
ACCO				*e*S	Sn	02 31 33.9	+0.4
ACCO				IAML		02 31 34.6	
	comp=Z,442nm,0.5s						
SLA	San Lorenzo	3.38	19	*e*P	Pn	02 30 54.4	+1.8
SLA				*e*S	Sn	02 31 36.8	+2.9
SLA				IAML		02 31 39.2	
	comp=Z,220nm,0.8s						
CO01	Juntas del Tor	3.60	235	⇑*i*P	Pn	02 30 56.9	+1.6
CO01				*i* S	Sn	02 31 39.8	+0.9
CO01	Juntas del Tor	3.60	235	Pn	Pn	02 30 56.5	+1.2
LCO	Las Campanas	3.67	252	Pn	Pn	02 30 56.7	+0.4
GO02	Mina Guanaco	3.78	316	⇓*i*P	Pn	02 30 59.9	+2.1
GO02				*e*S	Sn	02 31 44.1	+0.9
GO02	Mina Guanaco	3.78	316	Pn	Pn	02 30 59.5	+1.7
TCA	Tanti	3.86	152	*e*P	Pn	02 30 58.0	-0.4
TCA				*e*S	Sn	02 31 41.3	-3.3
TCA				IAML		02 31 42.1	
	comp=Z,455nm,0.7s						
AC04	Llanos de Chal	3.87	265	⇑*i*P	Pn	02 30 58.5	+0.1
AC04				*i* S	Sn	02 31 42.3	-2.4
AC04	Llanos de Chal	3.87	265	Pn	Pn	02 30 58.5	+0.1
AC01	Pan de Azucar	3.90	296	⇓*e*P	Pn	02 30 59.4	+0.5
AC01				*e*S	Sn	02 31 42.9	-2.5
AC01	Pan de Azucar	3.90	296	Pn	Pn	02 30 59.5	+0.5
AZAP	Zapla	3.98	22	*e*P	Pn	02 31 01.3	+1.1
AZAP				IAML		02 32 19.8	
	comp=Z,390nm,1.3s						
ZON	Zonda	3.98	205		Pn	02 30 59.8	-0.3
ZON	Zonda	3.98	205	*e*P	Pn	02 31 00.0	0.0
ZON				*e*S	Sn	02 31 46.5	-1.0
ZON				IAML		02 31 47.7	
	comp=Z,262nm,0.6s						
GO04	Tololo Observa	4.22	237	⇑*i*P	Pn	02 31 03.1	-0.1
GO04				*e*S	Sn	02 31 52.5	-0.6
GO04	Tololo Observa	4.22	237	Pn	Pn	02 31 02.9	-0.3
GO04	Tololo Observa	4.22	237	*e*P	Pn	02 31 03.4	+0.2
GO04				*e*S	Sn	02 31 53.4	+0.3
ASTB	Santa Barbara	4.46	28	*e*P	Pn	02 31 07.6	+1.3
CO03	El Pedregal	4.52	229	⇑*i*P	Pn	02 31 06.9	0.0
CO03				*i* S	Sn	02 32 00.1	+0.2
CO03	El Pedregal	4.52	229	Pn	Pn	02 31 07.0	0.0
MRA	San Martin	4.55	169	*e*P	Pn	02 31 06.8	-0.5
MRA				*e*S	Sn	02 31 58.2	-2.5
MRA				IAML		02 32 13.8	
	comp=Z,273nm,0.5s						
PB14	IPOC Station P	4.67	314	*e*P	Pn	02 31 10.4	+1.1
PB14				*e*S	Sn	02 32 02.6	-1.3
PB14	IPOC Station P	4.67	314	Pn	Pn	02 31 10.2	+1.0
PB14	IPOC Station P	4.67	314	*e*P	Pn	02 31 10.4	+1.1
PB14				*e*S	Sn	02 32 05.2	+1.3
PB14				IAML		02 32 10.5	
	comp=Z,112nm,0.8s						
HJA	Humahuaca	4.85	14	*e*P	Pn	02 31 13.2	+1.6
AUSP	Uspallata	4.86	208	*e*P	Pn	02 31 11.6	0.0
AUSP				*e*S	Sn	02 32 08.7	+0.5
CO02	Combarbal	4.96	228	⇑*i*P	Pn	02 31 11.7	-1.0
CO02				*i* S	Sn	02 32 09.0	-1.1
CO02	Combarbal	4.96	228		Pn	02 31 11.8	-0.9
PB15	IPOC Station P	5.33	331		Pn	02 31 18.6	+0.9
PB15	IPOC Station P	5.33	331	*e*P	Pn	02 31 19.2	+1.6
PB15				*e*S	Sn	02 32 18.6	-0.4
PB15				IAML		02 32 23.4	
	comp=Z,398nm,0.2s						
PB10	IPOC Station P	5.60	321	Pn	Pn	02 31 21.1	0.0
PB10	IPOC Station P	5.60	321	*e*P	Pn	02 31 21.9	+0.8
LVC	Limon Verde	5.66	339	P	Pn	02 31 23.4	+1.1
	comp=Z,12nm,0.3s,baz=157,slow=11,SNR=70						
LVC				S	Sn	02 32 24.7	-2.5
	comp=Z,28nm,0.3s,baz=271,slow=22,SNR=33						
LVC	Limon Verde	5.66	339	Pn	Pn	02 31 22.8	+0.5
LVC	Limon Verde	5.66	339	*e*P	Pn	02 31 22.9	+0.7
PB06	IPOC Station P	5.82	333		Pn	02 31 25.0	+0.9
PB06	IPOC Station P	5.82	333	*e*P	Pn	02 31 25.0	+0.9
PB06				*e*S	Sn	02 32 28.3	-2.2
PB06				IAML		02 32 40.3	
	comp=Z,77nm,1.0s						
YJA	Yavi	5.84	11	*e*P	Pn	02 31 27.0	+2.4
VA03	San Esteban	5.84	214	*e*P	Pn	02 31 24.1	-0.2
VA03	San Esteban	5.84	214		Pn	02 31 23.9	-0.3
PB05	IPOC Station P	5.96	327	*e*P	Pn	02 31 26.7	+0.7
PB05				*e*S	Sn	02 32 32.3	-1.7
PB05				IAML		02 32 43.3	
	comp=Z,52nm,0.4s						
PEL	Peldehue	6.22	212	Pn	Pn	02 31 28.4	-0.8
PEL	Peldehue	6.22	212	*e*P	Pn	02 31 28.7	-0.5
PEL				*e*S	Sn	02 32 38.2	-1.6
ROC1	El Roble	6.25	215		Pn	02 31 28.1	-1.6
PB04	IPOC Station P	6.39	330	*e*P	Pn	02 31 31.8	+0.2
PB04				*e*S	Sn	02 32 40.8	-3.3
PB04				IAML		02 32 51.4	
	comp=Z,77nm,0.5s						
MT05	Renca	6.45	212		Pn	02 31 31.5	-0.7
PB09	IPOC Station P	6.53	339		Pn	02 31 34.0	+0.5
MT02	Curacav	6.54	215		Pn	02 31 31.5	-1.8
RFA	San Rafael	6.98	192	*e*P	Pn	02 31 38.6	-0.6
RFA				*e*S	Sn	02 32 52.7	-5.2
RFA				IAML		02 32 55.8	
	comp=Z,178nm,0.5s						
LAMA	Las Malvinas	7.30	196	*e*P	Pn	02 31 42.2	-1.1
PATCX	Punta Patache	7.75	335		Pn	02 31 48.0	-1.5
PUMA	Malargue	7.89	197	*e*P	Pn	02 31 50.8	-0.4
TA01	Diego Aracena	7.99	336		Pn	02 31 50.8	-1.8
PB08	IPOC Station P	8.07	343		Pn	02 31 53.4	-0.7
EDS3	Malargue	8.14	196	*e*P	Pn	02 31 54.2	-0.4
CPUP	Villa Florida	8.51	81	P	Pn	02 31 57.0	-2.4
	comp=Z,0.5nm,0.3s,baz=268,slow=12,SNR=21						
CPUP	Villa Florida	8.51	81		Pn	02 31 56.0	-3.4
CPUP	Villa Florida	8.51	81	*e*P	Pn	02 31 57.6	-1.8
PSGCX	Pisagua	8.87	339		Pn	02 32 03.9	-0.4
ITQB	Itaqui	9.02	103	*e*P	Pn	02 32 06.5	+0.5
MNMC	Minye Minye	9.15	343	Pn	Pn	02 32 08.8	+0.6
BI02	San Fabin de	9.52	203	Pn	Pn	02 32 10.9	-1.8
LPAZ	La Paz	11.67	353	P	Pn	02 32 41.1	-0.3
	comp=Z,2.9nm,0.3s,baz=162,slow=7.2,SNR=54						
LPAZ				S	Sn	02 34 46.4	-4.8
	comp=Z,0.1nm,0.3s,baz=251,slow=24,SNR=1.6						
LPAZ	La Paz	11.67	353	*e*P	Pn	02 32 41.1	-0.3
LC01	Cunco	11.75	200		Pn	02 32 40.1	-1.6
CPSB	Cacapava Do Su	11.86	105	*e*P	Pn	02 32 45.0	+1.9
PLTB	Pedras Altas	12.00	112	*e*P	Pn	02 32 47.6	+2.6
AQDB	Aquidauana	12.49	56	*e*P	Pn	02 32 50.7	-0.6
ITAB	Concordia	12.95	90	*e*P	Pn	02 32 56.1	-1.1
SIV	San Ignacio	12.98	25	P	Pn	02 32 57.2	-0.5
	comp=Z,1.7nm,0.3s,baz=220,slow=13,SNR=94						
PLCA	Paso Flores	13.15	193	P	P	02 33 02.2	-1.3
	comp=Z,0.3nm,0.3s,baz=22,slow=15,SNR=8.4						
PLCA	Paso Flores	13.15	193	Pn	Pn	02 32 57.5	-2.2
PLCA	Paso Flores	13.15	193	*e*P	P	02 33 05.2	+1.7
PTGB	Pitanga	13.52	80	*e*P	Pn	02 33 04.5	+0.1
TRCB	Terra Rica	13.71	71	*e*P	Pn	02 33 06.4	-0.5
CNLB	Canela	14.00	99	*e*P	Pn	02 33 11.9	+1.5
PP1B	Ponte de Pedra	14.98	49	*e*P	Pn	02 33 22.5	-0.2
PCMB	Pacaembu	15.38	69	*e*P	Pn	02 33 27.1	-0.4
VILB	Vilhena	16.10	23	*e*P	Pn	02 33 35.5	-0.9
FRTB	Fartura	16.12	77	*e*P	Pn	02 33 36.8	+0.3
ITRB	Iturama	17.04	65	*e*P	P	02 33 46.4	-0.3
PET01	Itanhaem-SP	17.83	83	*e*P	P	02 33 55.4	+0.2
BB19B	Bebedouro	17.89	72	*e*P	P	02 33 56.0	0.0
ETMB	Extrema	18.03	2	*e*P	Pn	02 33 59.0	-0.4
ARAG	Araguaiana, MT	18.40	52	*e*P	P	02 34 01.8	+0.2
VAO	Valinhos	18.49	79	*e*P	P	02 34 03.1	+0.6
SAML	Samuel	19.18	11	P	P	02 34 10.0	+0.1
SAML				IAmb	IAmb	02 34 15.6	
	comp=Z,19nm,0.9s						
PARB	Paraibuna	19.55	81	*e*P	P	02 34 13.7	-0.3
IPMB	Ipameri, GO	19.68	64	*e*P	P	02 34 15.1	-0.4
CZSB	Cruzeiro do Su	20.88	343	*e*P	Pn	02 34 29.6	-3.8
BSCB	Bom Sucesso	21.11	76	*e*P	P	02 34 30.4	-0.3
MAN01	Angra dos Reis	21.15	81	*e*P	P	02 34 30.6	-0.4
BDFB	Brasilia	21.20	59	P	P	02 34 30.9	-0.9
	comp=Z,25nm,0.7s,baz=232,slow=9.2,SNR=38						
BDFB	Brasilia	21.20	59	P	P	02 34 29.9	-1.9
BDFB				IAmb	IAmb	02 34 31.6	
	comp=Z,31nm,0.9s						
SNDB	Serra Nova Dou	21.46	45	*e*P	P	02 34 32.2	-2.1
DUB01	Friburgo-RJ	22.79	81	*e*P	P	02 34 47.4	-0.1
PEXB	Peixe	23.34	51	*e*P	P	02 34 51.9	-0.5
NPGB	Novo Progresso	23.40	29	*e*P	P	02 34 51.0	-1.8
JANB	Januaria	24.41	63	*e*P	P	02 35 01.2	-1.0
SJMB	Sao Joao De Ma	25.13	74	*e*P	P	02 35 07.3	-1.3
MACA	Manacapuru-AM	25.30	14	*e*P	P	02 35 11.3	+1.2
BSFB	Barra de Sao F	25.37	75	*e*P	P	02 35 09.9	-0.8
SDBA	SAO DESIDERIO	25.57	57	*e*P	P	02 35 11.5	-1.2
ITTB	Itaituba	25.66	26	*e*P	P	02 35 12.0	-1.5
SMTB	Santa Maria do	26.18	47	*e*P	P	02 35 17.8	-0.3
NAN01	Guarapari, ES	26.42	73	*e*P	P	02 35 20.9	+0.7
PRPB	Parauapebas	26.93	40	*e*P	P	02 35 23.8	-1.1
PTGA	Pitinga	27.81	15	P	P	02 35 33.0	+0.4
	comp=Z,13nm,0.5s,baz=202,slow=10,SNR=46						
PTGA	Pitinga	27.81	15	P	P	02 35 32.6	-0.1
PTGA	Pitinga	27.81	15	*e*P	P	02 35 32.9	+0.2
MALB	Monte Alegre	28.54	27	*e*P	P	02 35 39.7	+0.6
MCPB	Macapa, AP	30.81	30	*e*P	P	02 35 58.8	-0.3
TMAB	Tom-Au,PA,Br	31.03	38	*e*P	P	02 36 00.5	-0.5
BBAC	Balboa, Cauca	31.46	340	*e*P	P	02 36 08.1	+3.0
PCON	Cinco Dias	31.50	341	*e*P	P	02 36 05.1	-0.7
ROSB	Rosrio	32.94	45	*e*P	P	02 36 17.6	-0.1
CHIC	Chingaza	33.08	347	*e*P	P	02 36 18.9	-0.4
NBPS	Pedro II - PI	33.56	50	*e*P	P	02 36 23.1	-0.2
PLMC	San Jos del P	33.93	343	*e*P	P	02 36 26.2	-0.2
GUY2C	Guyana, Caldas	34.01	344	*e*P	P	02 36 28.2	+0.7
RUSC	La Rusia	34.19	349	*e*P	P	02 36 30.1	+1.0
CBOC	Ciudad Bolivar	34.78	344	*e*P	P	02 36 33.3	-0.5
PTBC	PUERTO BERRIO,	35.08	347	*e*P	P	02 36 34.7	-1.5
MDP	Montagnes des	35.54	25	P	P	02 36 40.2	+0.1
	comp=Z,19nm,0.9s,baz=192,slow=12,SNR=17						
NBPA	Parau_RN	35.72	57	*e*P	P	02 36 41.9	+0.2
RCBR	Riachuelo	36.58	59	P	P	02 36 48.9	-0.1
	comp=Z,5.5nm,0.9s,baz=138,slow=5.8,SNR=1.5						
RCBR	Riachuelo	36.58	59	IAmb	IAmb	02 36 56.4	
	comp=Z,16nm,1.2s						
SMLC	San Martn de	37.21	348	*e*P	P	02 36 52.0	-2.2
MTO3	Montecristo	47.47	330	P	P	02 38 18.5	+1.2
MTO3				IAmb	IAmb	02 38 20.4	
	comp=Z,22nm,0.9s						
BELA	Belgrano 2	52.12	172	P	P	02 38 51.1	-0.3
VNA3	Neumayer Olymp	53.37	160	P	P	02 39 02.4	+1.7
VNA2	Neumayer--Watz	53.95	160	P	P	02 39 05.9	+1.1
	baz=284,slow=7.9						
SNAA	Sanae	55.57	160	P	P	02 39 17.2	+0.6
SNAA	Sanae	55.57	160	P	P	02 39 17.5	+1.0
	comp=Z,6.5nm,0.6s,baz=279,slow=8.4,SNR=42						
SNAA	Sanae	55.57	160	P	P	02 39 16.8	+0.2
257A	Skidaway Islan	61.12	346	P	P	02 39 56.5	+1.2
QSPA	South Pole Qui	62.28	180	P	P	02 40 03.2	+0.3
JCT	Junction City	66.13	329	P	P	02 40 29.4	+1.1
TXAR	Lajitas Array	67.03	325	P	P	02 40 35.8	+1.7
	comp=Z,0.1nm,0.4s,baz=144,slow=8.7,SNR=3.9						
DBIC	Dimbokro	68.85	70	P	P	02 40 45.0	-0.7
	comp=Z,3.4nm,0.7s,baz=228,slow=7.6,SNR=4.4						
VNDA	Vanda	70.88	190	P	P	02 40 59.5	+2.5
	comp=Z,7.1nm,1.1s,baz=54,slow=4.5,SNR=1.6						
109C	Camp Elliot, M	77.13	318	P	P	02 41 31.6	-2.3
109C				IAmb	IAmb	02 41 34.3	
	comp=Z,8.5nm,1.1s						
TOA0	Torodi Ar. Sit	77.77	68	P	P	02 41 37.2	-0.6
TOA0				IAmb	IAmb	02 41 40.5	
	comp=Z,4.5nm,0.8s						
TORD	Torodi Ar. Bea	77.77	68	P	P	02 41 37.5	-0.4
	comp=Z,3.6nm,0.7s,baz=260,slow=5.3,SNR=14						
TORD	Torodi Ar. Bea	77.77	68	P	P	02 41 37.1	-0.7
BOSA	Boshof	78.73	116	P	P	02 41 43.8	+0.6
	comp=Z,4.0nm,0.8s,baz=251,slow=4.2,SNR=8.6						
BOSA	Boshof	78.73	116	P	P	02 41 43.5	+0.3
PDAR	Pinedale Array	80.65	330	P	P	02 41 54.6	+1.5
	comp=Z,0.5nm,0.6s,baz=122,slow=8.5,SNR=5.5						
ESDC	Sonseca Array	89.06	43	P	P	02 42 36.5	+1.5
	comp=Z,0.3nm,0.6s,baz=231,slow=3.8,SNR=1.7						
ASAR	Alice Springs	124.98	203	PKP	PKiKP	02 48 40.6	+0.6
	comp=Z,2.9nm,0.7s,baz=133,slow=1.8,SNR=36						
WRA	Warramunga Arr	128.23	205	PKP	PKiKP	02 48 47.1	+0.5
	comp=Z,2.9nm,0.6s,baz=169,slow=1.7,SNR=46						
FITZ	Fitzroy Crossi	132.70	196	PKP	PKiKP	02 48 56.0	+0.4
	comp=Z,1.7nm,0.6s,baz=198,slow=6.1,SNR=11						
LEM	Lembang	145.01	170	PKPbc	PKiKP	02 49 18.8	-2.2
	comp=Z,33nm,0.5s,baz=12,slow=22,SNR=4.9						
NIL	Nilore	145.29	70	PKPbc	PKPab	02 49 17.7	+0.3
KURBB	Kurchatov Arra	145.31	40	PKPbc	PKiKP	02 49 18.6	-1.7
	comp=Z,3.5nm,0.9s,baz=302,slow=3.6,SNR=15						
KURK	Kurchatov	145.32	39	PKPbc	PKiKP	02 49 18.4	-1.9
AAK	Ala-Archa	145.42	55	PKPbc	PKiKP	02 49 19.3	-1.7
KAPI	Kappang	146.65	192	PKPbc	PKiKP	02 49 23.5	-0.6
	comp=Z,10nm,0.7s,baz=0.1,slow=5.3,SNR=6.5						
ZAA0	Zalesovo Array	146.68	31	PKPbc	PKPab	02 49 20.7	-1.3
ZALV	Zalesovo Beam	146.68	31	PKPbc	PKiKP	02 49 21.9	-1.1
	comp=Z,2.2nm,0.4s,baz=309,slow=3.4,SNR=8.2						
ZALV				pPKPbc	pPKPab	02 50 07.0	+0.8
	comp=Z,3.3nm,0.7s,baz=297,slow=4.3,SNR=4.3						
ZALV	Zalesovo Beam	146.68	31		PKPab	02 49 20.7	-1.2
KSH	Kashi	147.10	60	PKPbc	PKPab	02 49 22.3	-2.0
MK31	Makanchi Array	149.28	44	PKPbc	PKiKP	02 49 27.7	-1.0
MKAR	Makanchi Array	149.28	44	PKPbc	PKiKP	02 49 29.2	+0.5
	comp=Z,2.6nm,0.7s,baz=290,slow=2.9,SNR=15						
MKAR				pPKPbc	pPKPbc	02 50 12.9	+0.3
	comp=Z,1.5nm,0.6s,baz=302,slow=2.7,SNR=3.7						
MKAR	Makanchi Array	149.28	44		PKiKP	02 49 28.1	-0.6
JKA	Kamikawa-asahi	151.52	312		PKiKP	02 49 35.3	+2.0
ASAJ	Asahikawa	151.52	312	PKPbc	PKiKP	02 49 35.3	+2.0
	comp=Z,1.1nm,0.3s,baz=33,slow=3.5,SNR=3.8						
KLR	Kul'dur	154.43	331	PKPbc	PKiKP	02 49 40.1	+1.0
	comp=Z,0.3nm,0.3s,baz=26,slow=6.7,SNR=4.1						
SONM	Songino Array	159.42	13	PKP	PKPdf	02 49 39.2	+2.0
	comp=Z,1.4nm,1.2s,baz=129,slow=2.1,SNR=4.9						

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*IDC **07** 02:41:42.6±3.2, 36°.85N×71°.49E, h78^{km}±26^{km}, mb3.4/9, mb1 3.6/15, mb1mx3.3/55, mbtmp3.8/15, Error ellipse: s-maj=23.8km s-min=18.7km az=172.0*

*NNC **07** 02:41:46.1±0.9, 37°.17N×71°.14E, h99^{km}±13^{km}, mb3.5, mpv4.0, Error ellipse: s-maj=8.9km s-min=5.5km az=159.0*

ISC 07 02:41:44.7±0.6, **36°.95N**±0°.05×**71°.30E**±0°.06, **h106**^{km}, **n46**, σ1^{s}.**83**/54, **mb3.5**/9, **11C-6D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	5.49	19	P	Pn	02 43 04.4	-0.1
	SNR=77						
THN	Thein Dam	5.79	140	*e*P	Pn	02 43 09.5	+1.3
THN				*e*S	Sn	02 44 12.5	-0.7
UCH	Uchtor	5.82	24	P	Pn	02 43 09.8	+0.8
	SNR=15						
EKS2	Erkin-Say	6.01	18	P	Pn	02 43 11.4	+0.2
	SNR=32						
KK31	Karatay Array	6.17	355	⇓P	Pn	02 43 12.3	-1.0
	0.7nm,0.2s,baz=175,slow=12,SNR=236						
KK31				⇑S	Sn	02 44 18.7	-3.8
	6.8nm,0.3s						
AAK	Ala-Archa	6.19	22	P	Pn	02 43 13.9	+0.2
	5.2nm,0.3s,baz=184,slow=5.4,SNR=93						
AAK				S	Sn	02 44 21.5	-1.6
	2.1nm,0.3s,baz=319,slow=22,SNR=9.3						
AAK	Ala-Archa	6.19	22	P	Pn	02 43 13.9	+0.2
	SNR=40						
AAK	Ala-Archa	6.19	22	⇑P	Pn	02 43 13.7	0.0
	14nm,0.5s						
AAK				⇑S	Sn	02 44 20.9	-2.2
	38nm,0.9s						
DHRM	DHARAMSHALA	6.24	137	*e*P	Pn	02 43 14.6	+0.1
DHRM				*e*S	Sn	02 44 19.8	-4.8
DHRM				IAML		02 44 24.9	
	comp=E,324nm,0.5s						
DHRM				IAML		02 44 25.0	
	comp=N,274nm,0.1s						
KBK	Karagaybulak	6.35	25	P	Pn	02 43 17.2	+1.3
	SNR=8.7						
ULHL	Ulahol	6.52	34	P	Pn	02 43 19.0	+0.8
	SNR=9.6						
CHMS	Chumysh	6.59	23	P	Pn	02 43 19.6	+0.5
	SNR=9.0						
USP	Ospenovka	6.77	20	P	Pn	02 43 21.3	-0.1
	SNR=7.8						
TKM2	Tokmak 2	6.81	28	P	Pn	02 43 23.1	+0.9
	SNR=8.5						
TKM2	Tokmak 2	6.81	28	⇓P	Pn	02 43 22.1	-0.1
	comp=N,21nm,1.1s						
TKM2				⇑S	Sn	02 44 36.9	-1.4
	comp=N,22nm,1.1s						
SGDS	Sogindy	6.97	20	Lg	Lg	02 44 36.6	
	comp=N,9.0nm,0.8s						
TNSS	Tian-Shan	7.46	34	P	Pn	02 43 30.8	-0.4
	comp=N,2.0nm,0.2s						
SMLA	Simla	7.58	138	*e*P	Pn	02 43 32.9	+0.5
SMLA				*e*S	Sn	02 44 50.2	-6.4
SMLA				IAML		02 44 56.1	
	comp=N,154nm,0.4s						
SMLA				IAML		02 44 56.7	
	comp=E,153nm,0.5s						
MDOK	Medeo	7.61	34	⇑P	Pn	02 43 33.7	+0.7
	comp=E,4.5nm,0.6s						
CHKK	Chushkaly	8.14	30	P	Pn	02 43 40.2	+0.1
	comp=E,4.5nm,0.5s						
BTLS	Baital	8.34	14	P	Pn	02 43 41.7	-1.1
ARXS	Arharly	8.79	32	P	Pn	02 43 47.5	-1.3
	comp=E,6.4nm,0.8s						
PDGK	Podgornoye	8.94	42	⇓P	Pn	02 43 50.1	-0.8
	comp=E,5.0nm,1.1s						
GEYT	Alibeck	10.53	279	P	Pn	02 44 11.7	-0.9
	comp=E,0.7nm,0.3s,baz=102,slow=14,SNR=8.6						
GEYT				S	Sn	02 46 03.9	-4.6
	comp=E,1.0nm,0.3s,baz=99,slow=18,SNR=2.2						
GYA0B	ALIBECK ARRAY	10.53	279	⇑P	Pn	02 44 11.5	-1.1
GYA0B				⇑S	Sn	02 46 05.6	-2.9
MAKZ	Makanchi	12.65	36	⇓P	Pn	02 44 40.6	-0.1
	comp=E,1.8nm,0.9s						

MK31	Makanchi Array	12.78	36	P	Pn	02 44 41.4	-1.1
	comp=E,0.9nm,0.7s,baz=223,slow=13,SNR=9.6						
MKAR	Makanchi Array	12.78	36	P	Pn	02 44 41.7	-0.8
	comp=E,0.1nm,0.3s,baz=227,slow=14,SNR=14						
KURBB	Kurchatov Arra	14.62	19	P	Pn	02 45 05.1	-1.0
	comp=E,0.0nm,0.3s,baz=209,slow=11,SNR=5.9						
KURBB	Kurchatov Arra	14.62	19	⇑P	Pn	02 45 06.2	+0.1
	comp=E,3.3nm,0.8s						
BHPL	Bhopal	14.65	157	*e*x	P	02 45 11.9	+1.8
BHPL				*e*S	Sn	02 47 35.3	-13
AB31	Akbulak array	14.81	330	⇑P	Pn	02 45 06.5	-2.2
	comp=E,2.8nm,0.8s,baz=139,slow=12,SNR=32						
AB31				⇓S	Sn	02 47 41.4	-11
	comp=E,2.3nm,0.7s						
BRVK	Borovoye	16.12	358	⇑P	Pn	02 45 24.9	0.0
	comp=E,2.0nm,0.7s						
AKTO	Aktyubinsk	16.52	329	P	Pn	02 45 29.9	+0.1
	comp=E,0.4nm,0.3s,baz=136,slow=13,SNR=9.8						
AKTO	Aktyubinsk	16.52	329	⇓P	Pn	02 45 28.5	-1.3
	comp=E,5.1nm,0.8s						
ZAA0	Zalesovo Array	19.41	25	⇑P	P	02 46 02.8	+0.5
	comp=E,0.7nm,0.9s						
ZALV	Zalesovo Beam	19.41	25	P	P	02 46 02.0	-0.2
	comp=E,0.5nm,0.3s,baz=226,slow=10,SNR=7.1						
SONM	Songino Array	27.88	56	P	P	02 47 26.0	+1.4
	comp=E,0.4nm,0.6s,baz=266,slow=8.7,SNR=3.3						
FINES	FINESS Array B	37.25	326	P	P	02 48 47.6	+2.0
	comp=E,1.1nm,0.5s,baz=116,slow=9.4,SNR=8.1						
ARCES	ARCESS Array B	40.82	337	P	P	02 49 17.5	+2.1
	comp=E,2.1nm,0.7s,baz=100,slow=10,SNR=1.4						
NOA	NORSAR Array B	44.17	323	P	P	02 49 44.6	+2.0
	comp=E,1.0nm,0.8s,baz=97,slow=7.7,SNR=3.6						
TORD	Torodi Ar. Bea	65.97	269	P	P	02 52 23.0	+3.1
	comp=E,0.5nm,0.7s,baz=50,slow=4.5,SNR=2.2						
ILAR	Eielson Array	74.28	16	P	P	02 53 10.2	+0.3
	comp=E,0.3nm,0.9s,baz=325,slow=4.4,SNR=2.7						
YKA	Yellowknife Ar	80.78	3	P	P	02 53 47.7	+1.6
	comp=E,0.8nm,0.7s,baz=354,slow=5.2,SNR=13						
WRA	Warramunga Arr	82.02	122	P	P	02 53 52.9	-0.4
	comp=E,0.2nm,0.4s,baz=325,slow=4.7,SNR=4.9						
ASAR	Alice Springs	84.31	125	P	P	02 54 04.5	-0.5
	comp=E,0.1nm,0.3s,baz=311,slow=5.1,SNR=5.7						

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*IDC **07** 02:44:19.1±3.5, 34°.29N×135°.70E, h77^{km}±65^{km}, mb3.2/1, mb1 3.3/4, mb1mx3.0/42, mbtmp3.3/4, ML2.9/3, Error ellipse: s-maj=78.2km s-min=27.8km az=158.0*
*JMA **07** 02:44:19.0±0.1, 34°.31N×135°.69E, h68^{km}±1^{km}, M3.0*
ISC 07 02:44:18.8±1.1**, 34°.30N**±0°.04×**135°.68E**±0°.03**, h67**^{km}±7^{km}**, n19, σ0^{s}.48**/33**, Near south coast of western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JWY	Kouya	0.11	223	P	Pn	02 44 29.4	+0.5
JWY				S	Sn	02 44 36.5	+0.4
JNTK	Naratenkawa	0.17	99	P	Pn	02 44 29.2	+0.1
JNTK				S	Sn	02 44 36.7	+0.2
JHE	Heguri	0.35	0	P	Pn	02 44 30.3	+0.2
JHE				S	Sn	02 44 38.5	+0.1
JTNC	Tanabenakahech	0.48	187	P	Pn	02 44 31.3	+0.1
JTNC				S	Sn	02 44 40.1	-0.2
JKN2	Miekihoku	0.49	97	P	Pn	02 44 31.5	+0.2
JKN2				S	Sn	02 44 40.4	0.0
JWM	Minabe	0.52	211	P	Pn	02 44 31.6	0.0
JWM				S	Sn	02 44 40.5	-0.5
JAWN	Awajishima-nag	0.67	286	P	Pn	02 44 33.4	+0.2
JAWN				S	Sn	02 44 44.1	+0.3
TSUJ	Tsu 2	0.73	56	P	Pn	02 44 33.9	0.0
TSUJ				S	Sn	02 44 44.8	-0.2
JIE	Ise	0.85	83	P	Pn	02 44 35.5	+0.2
JIE				S	Sn	02 44 47.3	-0.2
JKS	Kasai	0.97	315	P	Pn	02 44 37.0	+0.2
JKS				S	Sn	02 44 49.8	-0.3
JWT	Wachi	1.01	347	P	Pn	02 44 37.4	+0.1
JWT				S	Sn	02 44 50.7	-0.3
TTO1	TONANKAI O.B.S	1.14	126	P	Pn	02 44 38.9	+0.3
JAI	Aioi	1.14	244	P	Pn	02 44 39.1	+0.2
JAI				S	Sn	02 44 54.0	0.0
TTO2	TONANKAI O.B.S	1.25	116	P	Pn	02 44 40.5	+0.4
TTO2				S	Sn	02 44 57.6	+1.5
MAT	Matsushiro	3.04	42	P	Pn	02 45 04.8	+0.2
MAT				*e*S	Sn	02 45 39.9	0.0
MJAR	Matsushiro Arr	3.04	42	P	Pn	02 45 05.0	+0.4
	0.4nm,0.3s,baz=239,slow=7.6,SNR=9.7						
JNU	Nakatsue	4.17	255	P	Pn	02 45 20.4	+0.4
	1.3nm,0.3s,baz=40,slow=7.6,SNR=5.5						
KSRS	Korea Array	7.04	299	P	Pn	02 46 00.4	+1.2
	0.4nm,0.3s,baz=118,slow=14,SNR=4.8						
WRA	Warramunga Arr	53.95	182	P	P	02 53 34.9	-0.8
	0.3nm,0.5s,baz=356,slow=7.9,SNR=9.5						

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*IDC **07** 03:02:37.5±1.1, 30°.33N×140°.47E, h120^{km}±11^{km}, mb3.0/7, mb1 3.2/11, mb1mx3.1/38, mbtmp3.5/11, Error ellipse: s-maj=33.8km s-min=8.9km az=75.0*
ISC 07 03:02:36.2±0.8**, 30°.33N**±0°.07×**140°.4E**±0°.2**, h98**^{km}**, n11, σ2^{s}.01**/13**, mb3.4**/6**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ	Hachijo jima 2	2.83	349	P	Pn	03 03 23.2	+3.6
	16nm,0.3s,baz=161,slow=23,SNR=7.2						
JHJ				S	Sn	03 03 55.1	+2.1
	10nm,0.3s,baz=88,slow=23,SNR=1.4						
JCJ	Chichijima	3.58	154	P	Pn	03 03 32.2	+2.6
	15nm,0.3s,baz=77,slow=22,SNR=7.9						
JCJ				S	Sn	03 04 12.6	+1.6
	10.0nm,0.3s,baz=303,slow=20,SNR=1.6						
MJAR	Matsushiro Arr	6.46	344	P	Pn	03 04 11.2	+2.4
	0.2nm,0.3s,baz=161,slow=10,SNR=6.2						
ASAJ	Asahikawa	13.87	7	P	Pn	03 05 47.5	-0.9
	0.6nm,0.3s,baz=197,slow=19,SNR=4.2						
KLR	Kul'dur	19.99	343	P	P	03 07 00.2	-0.6
	0.8nm,0.5s,baz=125,slow=12,SNR=1.7						
MKAR	Makanchi Array	47.26	307	P	P	03 10 59.3	-0.2
	0.1nm,0.3s,baz=82,slow=10,SNR=2.0						
WRA	Warramunga Arr	50.33	187	P	P	03 11 21.6	-1.5
	0.2nm,0.4s,baz=5.1,slow=7.6,SNR=12						
ASAR	Alice Springs	54.06	187	P	P	03 11 49.8	-1.0
	0.2nm,0.4s,baz=1.1,slow=5.5,SNR=5.9						
ILAR	Eielson Array	55.65	30	P	P	03 12 01.1	-0.6
	0.2nm,0.8s,baz=251,slow=5.6,SNR=1.6						
YKA	Yellowknife Ar	70.04	29	P	P	03 13 36.1	-1.0
	0.2nm,0.7s,baz=303,slow=5.7,SNR=1.9						
FINES	FINESS Array B	74.37	333	P	P	03 14 01.4	-1.5
	1.6nm,0.9s,baz=57,slow=7.0,SNR=6.7						

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*IDC **07** 03:16:27.7±1.7, 2°.44N×96°.22E, h0^{km}, mb3.9/6, mb1 4.0/7, mb1mx3.6/55, mbtmp3.9/7, ML3.7/2, MS2.6/2, Ms1 2.7/2, ms1mx2.4/39, Error ellipse: s-maj=54.6km s-min=20.2km az=54.0*
ISC 07 03:16:33.2±1.6**, 2°.5N**±0°.2×**96°.3E**±0°.2**, h35**^{km}**, n15, σ0^{s}.68**/8**, mb3.9**/6**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSI	Prapat	2.63	83	Pn	Pn	03 17 13.6	+0.3
	1.4nm,0.3s,baz=360,slow=2.9,SNR=5.6						
CMAR	Chiang Mai Arr	16.08	9	Pn	Pn	03 20 17.1	+0.3
	0.4nm,0.3s,baz=197,slow=11,SNR=4.1						
CMAR				LR	LR	03 27 47.7	
	comp=Z,14nm,19.0s,baz=215,slow=42						
KAPI	Kappang	24.57	108	LR	LR	03 31 38.2	
	comp=Z,20nm,18.6s,baz=225,slow=37						
H08S2	Diego Garcia H	25.81	247	T	T	03 48 35.3	
	baz=68,slow=76,SNR=12						
H08S3	Diego Garcia H	25.81	247	T	T	03 48 43.9	
	baz=68,slow=76,SNR=44						
H08S1	Diego Carcia H	25.82	247	T	T	03 48 44.9	
	baz=68,slow=76,SNR=6.8						
H01W3	Cape Leeuwin H	40.77	157	T	T	04 07 34.5	
	baz=333,slow=76,SNR=19						
H01W2	Cape Leeuwin H	40.78	157	T	T	04 07 35.4	
	baz=333,slow=76,SNR=19						
H01W1	Cape Leeuwin H	40.78	157	T	T	04 07 35.6	
	baz=333,slow=76,SNR=14						
WRA	Warramunga Arr	43.47	123	P	P	03 24 33.1	-0.3
	0.3nm,0.5s,baz=299,slow=9.2,SNR=8.1						
ASAR	Alice Springs	44.88	128	P	P	03 24 44.5	-0.1
	0.4nm,0.4s,baz=299,slow=7.8,SNR=6.4						
MKAR	Makanchi Array	45.79	347	P	P	03 24 51.4	-0.1
	0.8nm,0.4s,baz=164,slow=8.7,SNR=28						
SONM	Songino Array	46.01	9	P	P	03 24 52.4	-0.9
	0.6nm,0.4s,baz=189,slow=9.9,SNR=7.3						
ZALV	Zalesovo Beam	52.16	351	P	P	03 25 39.6	-0.5
	0.5nm,0.3s,baz=188,slow=7.3,SNR=3.1						
ARCES	ARCESS Array B	81.03	340	P	P	03 28 45.2	+1.0
	6.8nm,1.1s,baz=74,slow=6.7,SNR=2.1						

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*IDC **07** 03:18:45.1±1.4, 21°.38N×144°.24E, h0^{km}, mb3.5/8, mb1 3.7/8, mb1mx3.5/52, mbtmp3.6/8, Error ellipse: s-maj=53.1km s-min=22.6km az=83.0*
ISC 07 03:18:50.2±1.2**, 21°.4N**±0°.2×**144°.2E**±0°.3**, h33**^{km}**, n14, σ1^{s}.30**/8**, mb3.5**/8**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSRS	Korea Array	21.32	322	P	P	03 23 33.1	-1.2
	1.1nm,0.5s,baz=146,slow=9.5,SNR=2.8						
H11N1	WAKE ISLAND Hy	21.35	90	T	T	03 46 14.9	
	baz=323,slow=28,SNR=6.9						
H11N2	WAKE ISLAND Hy	21.35	90	T	T	03 46 15.6	
	baz=323,slow=28,SNR=6.0						
H11N3	WAKE ISLAND Hy	21.36	90	T	T	03 46 21.8	
	baz=323,slow=28,SNR=6.0						
H11S3	WAKE ISLAND Hy	21.37	94	T	T	03 46 21.9	
	baz=282,slow=75,SNR=37						
H11S1	WAKE ISLAND Hy	21.38	94	T	T	03 46 21.6	
	baz=282,slow=75,SNR=40						
H11S2	WAKE ISLAND Hy	21.38	94	T	T	03 46 21.6	
	baz=282,slow=75,SNR=38						
KLR	Kul'dur	29.50	343	P	P	03 24 51.2	-0.1
	1.6nm,0.6s,baz=160,slow=7.2,SNR=6.4						
SONM	Songino Array	40.17	320	P	P	03 26 23.1	-0.2
	0.3nm,0.4s,baz=131,slow=6.1,SNR=2.2						
WRA	Warramunga Arr	42.17	194	P	P	03 26 40.4	+0.5
	0.3nm,1.1s,baz=11,slow=9.3,SNR=1.3						
ASAR	Alice Springs	45.87	193	P	P	03 27 08.4	-1.1
	0.1nm,0.3s,baz=24,slow=9.5,SNR=2.2						
MKAR	Makanchi Array	55.59	313	P	P	03 28 22.6	0.0
	0.3nm,0.6s,baz=100,slow=9.1,SNR=3.8						
YKA	Yellowknife Ar	76.31	28	P	P	03 30 34.7	-0.8
	0.1nm,0.4s,baz=297,slow=4.7,SNR=2.4						
FINES	FINESS Array B	83.86	335	P	P	03 31 18.5	+2.2
	2.7nm,1.0s,baz=12,slow=2.7,SNR=4.8						

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*SKO **07** 03:30:59.9, 41°.77N×19°.05E, h287^{km}*
*PDG **07** 03:31:16.8±0.1, 41°.99N×20°.22E, h14^{km}, ML2.3/13, Error ellipse: s-maj=0.1km s-min=0.1km az=0.0*
*TIR **07** 03:31:16.7, 42°.00N×20°.25E, h6^{km}±15^{km}, Md2.7, Ml2.3*
*RHSSO **07** 03:31:16.0±0.8, 42°.04N×20°.38E, h4^{km}±4^{km}, ML2.4/6*
*BEO **07** 03:31:17.9±0.3, 42°.02N×20°.26E, h0^{km}, ML2.0/8*
ISC 07 03:31:16.2±1.1**, 42°.01N**±0°.02×**20°.31E**±0°.03**, h8**^{km}±9^{km}**, n48, σ0^{s}.78**/89**, 6C-5D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PUK	Puka	0.31	276	P	Pg	03 31 22.3	-0.1
	baz=281						
PUK				S	Sg	03 31 26.9	+0.4
	baz=281						
PUK				AMP			
	comp=N,4.9nm,0.1s,baz=281						
PHP	Peshkopia	0.34	163	P	Pb	03 31 23.9	-0.6
	baz=155						
PHP				S	Sb	03 31 29.1	-1.0
	baz=155						
PHP				AMP			
	comp=N,2.0nm,0.2s,baz=155						
BCI	Bajram Curri	0.40	334	P	Pb	03 31 25.0	-0.6
	baz=340						
BCI				S	Sb	03 31 30.9	-0.9
	baz=340						
BCI				AMP			
	comp=N,1.5nm,0.5s,baz=340						
BCI	Bajram Curri	0.40	334	P	Pb	03 31 25.0	-0.6
	baz=339						
BCI				S	Sb	03 31 30.7	-1.1
	baz=339						
PVY	Plav	0.64	336	⇓*i*Pg	Pg	03 31 28.7	+0.1
PVY				*i* Sg	Sb	03 31 39.2	+0.3
TIR	Tirane	0.74	207	*e*Pg	Pg	03 31 30.5	+0.1
TIR				*e*Sg	Sb	03 31 41.9	+0.3
TIR	Tirane	0.74	207	P	Pb	03 31 30.8	-0.6
	baz=205						
TIR				S	Sb	03 31 41.9	+0.3
	baz=205						
ULC	Ulcinj	0.79	267	*i* Pg	Pg	03 31 31.0	-0.5
ULC	Ulcinj	0.79	267	⇓*i*Pg	Pg	03 31 30.3	-1.2
ULC				*i* Sg	Sg	03 31 41.8	0.0
SKO	Skopje	0.84	92	*e*Pg	Pn	03 31 34.0	-0.4
SKO				*e*Sg	Sn	03 31 45.6	-1.4
PDG	Podgorica	0.89	299	*e*Pg	Pg	03 31 32.1	-1.2
PDG				*e*Sg	Sg	03 31 44.3	-0.5
PDG	Podgorica	0.89	299	⇑*i*Pg	Pg	03 31 32.3	-1.0
PDG				*e*Sg	Sg	03 31 45.3	+0.5
PDG	Podgorica	0.89	299	*i* Pg	Pg	03 31 32.4	-0.9
PDG				*i* Sg	Sb	03 31 45.7	-0.1
TTG	Podgorica	0.89	299	⇑*i*Pg	Pg	03 31 32.4	-0.9
TTG				*i* Sg	Sb	03 31 45.7	-0.1
BEY	Berane	0.91	341	*i* Pg	Pb	03 31 34.4	0.0
IVA	Berane	0.91	341	*e*Pg	Pg	03 31 33.9	+0.1
IVA				*i* Sg	Sn	03 31 48.4	-0.5
OHR	Ohrid	0.97	157	*i* Pg	Pb	03 31 34.9	-0.4
OHR				*i* Sg	Sn	03 31 49.5	-0.7
OHR				*e*Lg	Lg	03 31 50.9	
	comp=E,80nm,0.9s						
OHR				*e*Lg	Lg	03 31 51.1	
	comp=N,18nm,0.2s						
KOME	Kolasin	1.02	325	*e*Pg	Pg	03 31 35.2	-0.7
KOME				*i* Sg	Sn	03 31 51.4	-0.2
BUM	Brajici-Budva	1.09	286	⇓*i*Pg	Pg	03 31 35.9	-1.2
BUM				*i* Sg	Sb	03 31 52.4	+0.6
CEME	Cevo	1.16	298	*e*Pg	Pg	03 31 37.2	-1.3
CEME				*i* Sg	Sn	03 31 55.0	+0.1
NKME	Niksic	1.26	307	*e*Pg	Pn	03 31 39.3	-0.8
NKME				*i* Sg	Sn	03 31 58.6	+1.4
NKY	Niksic	1.26	310	⇑*i*Pg	Pn	03 31 39.5	-0.7
NKY				*i* Sg	Sn	03 31 59.2	+1.8
HCY	Herceg Novi	1.42	289	⇑*i*Pg	Pn	03 31 41.7	-0.6
HCY				*e*Sg	Sg	03 32 02.7	+1.0
HCY	Herceg Novi	1.42	289	⇑*i*Pg	Pn	03 31 42.0	-0.3
HCY				*i* Sg	Sg	03 32 02.7	+1.0
KBN	Korca	1.43	165	P	Pg	03 31 44.3	+0.6
	baz=163						
FNA	Florina	1.47	146	*i* Pg	Pb	03 31 43.7	-0.1
FNA				*i* Sg	Sg	03 32 04.8	+1.5
PLE	Pljevlja	1.48	333	⇓*i*Pg	Pb	03 31 44.1	0.0
PLE				*i* Sg	Sg	03 32 05.8	+1.9
IVAS	Ivanjica	1.57	356	*e*Pg	Pb	03 31 45.1	-0.4
IVAS				*e*Sg	Sg	03 32 07.6	+0.9
UPM	Unac-Piva	1.58	320	*e*Pn	Pn	03 31 44.8	+0.1
UPM				*e*Sn	Sb	03 32 06.4	+0.4
UPM	Unac-Piva	1.58	320	⇑*i*Pg	Pn	03 31 45.0	+0.3
UPM				*i* Sg	Sg	03 32 07.6	+0.6
BRY	Bratogost	1.58	305	*e*Pn	Pn	03 31 44.9	+0.2
BRY				*e*Sn	Sb	03 32 06.5	+0.5
BRY	Bratogost	1.58	305	⇓*i*Pg	Pn	03 31 44.8	+0.1
BRY				*i* Sg	Sg	03 32 07.2	+0.1
TREB	Trebinje	1.61	297	*e*Pg	Pb	03 31 46.1	-0.1
TREB				*e*Sg	Sg	03 32 08.6	+0.5
TREB	Trebinje	1.61	297	*e*Pn	Pb	03 31 45.7	-0.5
TREB				*e*Sn	Sb	03 32 07.4	+0.7
DBRK	Dubrovnik	1.73	293	*e*Pn	Pn	03 31 46.2	-0.4
DBRK				Sn	Sg	03 32 12.3	+0.5
RUDO	Rudo	1.75	337	*e*Pn	Pn	03 31 46.9	0.0
RUDO				*e*Sn	Sn	03 32 09.4	+0.1
GRUS	Gruza	1.90	9	*e*Pn	Pg	03 31 53.0	+0.3
BBLS	Lazići	1.97	341	*e*Pn	Pn	03 31 50.4	+0.4
BBLS				*e*Sn	Sn	03 32 15.1	+0.2
DIVS	Divibare	2.10	354	*e*Pn	Pb	03 31 55.2	+0.6
DIVS	Divibare	2.10	354	*e*Pn	Pn	03 31 51.5	-0.3
DIVS				*e*Sn	Sn	03 32 17.7	-0.4
STON	Ston	2.11	295	*e*Pn	Pb	03 31 53.8	-0.9
STON				*e*Sg	Sg	03 32 24.3	+0.2
STON	Ston	2.11	295	*i* Pn	Pn	03 31 52.5	+0.7
STON				Sn	Sg	03 32 24.2	+0.2
STON	Ston	2.11	295	*e*Pn	Pn	03 31 52.9	+1.1
STON				*e*Sn	Sn	03 32 19.2	+1.0
HAPS	Han Pijesak,Bl	2.30	335	*e*Pn	Pb	03 31 56.6	-1.4
HAPS				*e*Sg	Sg	03 32 28.5	-1.6
HAPS	Han Pijesak,Bl	2.30	335	*e*Pn	Pn	03 31 54.5	0.0
HAPS				*e*Sn	Sn	03 32 23.3	+0.2
MAKA	Makarska	2.74	299	*i* Pn	Pn	03 32 02.0	+1.6
RICI	Ricice	2.77	303	*i* Pn	Pn	03 32 02.7	+1.8
RICI				Sn	Sb	03 32 41.0	+0.9
HVAR	Hvar	3.08	294	*e*Pn	Pn	03 32 05.3	+0.2

DDA 07 03:33:06.8, 36°.95N×28°.03E, h7^{km}±1^{km}, ML1.7, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TURN	Turunc	0.24	135	*i* P	Pg	03 33 12.0	+0.4
TURN				*i* S	Sg	03 33 15.8	+0.9
TURN				IAML		03 33 16.0	
	comp=E,117nm,0.2s						
TURN				IAML		03 33 16.0	
	comp=N,152nm,0.3s						
MULA	Mugla, Merkez-	0.38	37	*i* P	Pg	03 33 14.2	-0.1
MULA				*i* S	Sg	03 33 20.4	+1.0
MULA				IAML		03 33 21.0	
	comp=E,74nm,0.1s						
BDRM	Kayabasi	0.48	284	*i* P	Pg	03 33 16.7	+0.6
BDRM				*i* S	Sb	03 33 24.0	-1.0
BDRM				IAML		03 33 26.0	
	comp=N,39nm,0.4s						
DALY	Dalyan (Mula)	0.52	105	*i* P	Pb	03 33 18.5	+0.3
DALY				*i* S	Sb	03 33 25.1	-0.8
TAVA	DENIZLI_Tavas	0.87	54	*i* P	Pg	03 33 23.4	-0.2
TAVA				*i* S	Sg	03 33 34.5	-0.4
TAVA				IAML		03 33 40.0	
	comp=E,22nm,1.6s						
TAVA				IAML		03 33 57.0	
	comp=N,24nm,3.3s						
GCAM	G?zelcaml?	0.98	320	*i* P	Pg	03 33 25.3	-0.4
GCAM				*i* S	Sg	03 33 37.2	-1.3
GCAM				IAML		03 33 45.0	
	comp=N,34nm,0.9s						
GCAM				IAML		03 33 46.0	
	comp=E,20nm,0.5s						

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*NIED **07** 03:36:31.5, 35°.86N×137°.90E, h8^{km}, MW3.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}0.13; $M_{\theta\theta}$0.91; $M_{\phi\phi}$-1.05; $M_{r\theta}$-0.05; $M_{\theta\phi}$-0.53; $M_{\phi r}$0.28; Fault plane solution: $M_0$1.15000×10^{14} NP1: ϕ_s149.00000°, δ88.00000°, λ-13.00000°. NP2: ϕ_s240.00000°, δ77.00000°, λ-178.00000°.*
JMA 07 03:36:31.4, 35°.86N×137°.90E, h8^{km}, M3.6, 1C-4D Broadband fault plane solution: P waves. NP1: ϕ_s241.00000°**,** δ69.00000°**,** λ168.00000°. **NP2:** ϕ_s336.00000°**,** δ79.00000°**,** λ22.00000°. **Principal axes:** T Plg23.0000°**,** Azm200.0000°**;** N Plg66.0000°**,** Azm1.0000°**;** P Plg7.0000°**,** Azm107.0000°**; Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNT	Takato	0.19	86	⇓P	Pg	03 36 35.5	+0.1
JNT				S	Sg	03 36 38.3	+0.1
JNY	Yasuok	0.50	184	⇑P	Pg	03 36 41.1	0.0
JNY				S	Sg	03 36 48.0	+0.3
JYN	Shimob	0.64	124	⇓P	Pg	03 36 44.0	+0.3
JYN				S	Sg	03 36 52.9	+0.9
MAT	Matsushiro	0.72	20	P	Pg	03 36 45.0	-0.4
MAT				S	Sg	03 36 54.5	-0.3
MAT	Matsushiro	0.72	20	P	Pg	03 36 45.0	-0.4
MAT				S	Sg	03 36 54.6	-0.2
JRY	Ryogami san	0.83	79	⇓P	Pg	03 36 46.9	-0.4
JRY				S	Sg	03 36 57.5	-0.6
SHZ3	Shizuoka 3	0.83	162	P	Pg	03 36 46.9	-0.5
SHZ3				S	Sg	03 36 58.0	-0.2
JTT	Ttatey	0.87	329	P	Pg	03 36 48.4	+0.2
JYTA	Yamagatataniai	0.98	255	⇓P	Pg	03 36 49.8	-0.5
JYTA				S	Sg	03 37 02.6	-0.5

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*IDC **07** 04:12:40.2±1.0, 12°.24N×143°.94E, h0^{km}, mb3.6/6, mb1 3.9/6, mb1mx3.6/35, mbtmp3.6/6, MS2.7/1, Ms1 2.9/1, ms1mx2.4/35 Error ellipse: s-maj=49.2km s-min=17.7km az=115.0*
ISC 07 04:12:44.2±1.0**, 12°.2N**±0°.2×**144°.0E**±0°.3**, h26**^{km}**, n8, σ0^{s}.84**/8**, mb3.6**/6**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	1.62	33	Pn	Pn	04 13 10.8	-0.3
	49nm,0.3s,baz=190,slow=6.4,SNR=14						
GUMO				Sn	Sn	04 13 31.2	+0.1
	78nm,0.3s,baz=156,slow=22,SNR=8.0						
GUMO				LR	LR	04 13 33.5	
	comp=Z,98nm,19.2s,baz=244,slow=33						
WRA	Warramunga Arr	33.34	197	P	P	04 19 20.6	+0.3
	0.7nm,0.8s,baz=20,slow=9.5,SNR=5.3						
ASAR	Alice Springs	37.00	195	P	P	04 19 51.3	-0.5
	0.6nm,0.9s,baz=7.7,slow=5.4,SNR=5.0						
CMAR	Chiang Mai Arr	43.77	284	LR	LR	04 39 18.3	
	comp=Z,8.1nm,18.6s,baz=200,slow=36						
MKAR	Makanchi Array	61.87	317	P	P	04 23 01.7	+0.4
	0.3nm,0.7s,baz=100,slow=8.7,SNR=2.9						
ILAR	Eielson Array	70.17	25	P	P	04 23 53.7	-0.6
	0.3nm,0.4s,baz=247,slow=5.8,SNR=9.2						
YKA	Yellowknife Ar	84.47	27	P	P	04 25 15.8	+1.4
	0.2nm,0.6s,baz=290,slow=4.4,SNR=4.4						
FINES	FINESS Array B	92.02	335	P	P	04 25 49.9	-0.8
	1.3nm,0.8s,baz=354,slow=5.7,SNR=4.0						

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*IDC **07** 04:45:11.8±3.2, 10°.33S×161°.52E, h76^{km}±23^{km}, mb3.4/4, mb1 3.6/5, mb1mx3.4/31, mbtmp3.8/5, MS3.1/2, Ms1 3.1/2, ms1mx2.7/20, Error ellipse: s-maj=40.8km s-min=20.9km az=56.0*
ISC 07 04:45:10.5±1.5**, 10°.3S**±0°.2×**161°.6E**±0°.2**, h61**^{km}**, n13, σ1^{s}.20**/7**, mb3.4**/4**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	1.83	296	P	Pn	04 45 40.0	+0.3
	236nm,0.3s,baz=187,slow=9.8,SNR=20						
HNR				S	Sn	04 46 03.0	+1.2
	193nm,0.3s,baz=172,slow=17,SNR=6.5						
HNR				LR	LR	04 46 33.2	
	comp=Z,198nm,19.5s,baz=32,slow=46						
DZM	Mont Dzumac	12.63	159	P	Pn	04 48 08.5	+1.0
	0.9nm,0.3s,baz=30,slow=9.7,SNR=18						
DZM				LR	LR	04 52 32.7	
	comp=Z,84nm,18.6s,baz=3.0,slow=35						
WRA	Warramunga Arr	27.99	247	P	P	04 50 54.7	-1.1
	0.5nm,0.6s,baz=74,slow=9.9,SNR=2.1						
H11S2	WAKE ISLAND Hy	29.00	10	T	T	05 21 06.4	
	baz=183,slow=74,SNR=21						
H11S3	WAKE ISLAND Hy	29.00	10	T	T	05 20 34.7	
	SNR=16						
H11S1	WAKE ISLAND Hy	29.02	10	T	T	05 21 29.7	
	baz=146,slow=74,SNR=18						
ASAR	Alice Springs	29.59	240	P	P	04 51 08.8	-1.3
	0.2nm,0.5s,baz=79,slow=11,SNR=2.2						
H11N1	WAKE ISLAND Hy	30.23	10	T	T	05 21 58.4	
	baz=192,slow=75,SNR=17						
H11N3	WAKE ISLAND Hy	30.24	10	T	T	05 21 55.7	
	baz=192,slow=75,SNR=15						
H11N2	WAKE ISLAND Hy	30.25	10	T	T	05 21 55.5	
	baz=192,slow=75,SNR=17						
KSRS	Korea Array	57.00	328	LR	LR	05 19 04.5	
	comp=Z,15nm,18.1s,baz=0.0,slow=36						
SONM	Songino Array	75.66	325	P	P	04 56 48.8	-0.5
	1.0nm,0.7s,baz=138,slow=5.3,SNR=7.9						
MKAR	Makanchi Array	90.18	318	P	P	04 58 04.3	0.0
	0.1nm,0.4s,baz=99,slow=3.5,SNR=4.8						

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*IDC **07** 05:26:27.2±0.8, 1°.87N×126°.19E, h0^{km}, mb4.2/9, mb1 4.3/10, mb1mx3.9/34, mbtmp4.1/10, ML4.1/1, MS3.1/1, Ms1 3.1/1, ms1mx2.4/38, Error ellipse: s-maj=72.4km s-min=15.6km az=71.0*
*NEIC **07** 05:26:31±2.4, 2°.04N±0°.10×126°.52E±0°.10, h35^{km}±2^{km}, mb4.3/13, Error ellipse: s-maj=21.3km s-min=9.4km az=45.0*
*DJA **07** 05:26:31.3±0.4, 2°N±4°×12°6E±°, h10^{km}, M4.3/10, mb4.5/2, mB4.6/2, MLv4.1/10, Mw(mB)3.8/2*
ISC 07 05:26:33.2±0.6**, 1°.89N**±0°.06×**126°.41E**±0°.08**, h47**^{km}**, n41, σ1^{s}.33**/42**, mb4.2**/15**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.47	139		Pn	05 26 55.3	-1.9

TNTI				Sn	Sn	05 27 14.1	-1.1
TNTI	Ternate	1.47	139	P	Pn	05 26 57.1	-0.1
SGSI	Sangihe	1.99	334	P	Pn	05 27 06.4	+2.0
SGSI	Sangihe	1.99	334	P	Pn	05 27 05.7	+1.3
KMSI	Cibinong	2.76	242	P	Pn	05 27 15.4	+0.5
GTOI	Gorontalo	3.62	250	P	Pn	05 27 27.1	+0.4
SANI	Sanana	3.94	186	P	Pn	05 27 30.0	-1.1
LUWI	Luwuk	4.66	231	Pn	Pn	05 27 42.8	+1.8
MRSI	Marisa	4.68	253	P	Pn	05 27 43.4	+2.1
APSI	Ampana	5.51	240	P	Pn	05 27 56.3	+3.6
TOLI2	Tolitoli	5.68	262	Pn	Pn	05 27 54.5	-0.5
MYLDM	Lahad Datu	8.54	293	Pn	Pn	05 28 33.2	-1.1
MTKI	Muara Teweh, K	11.85	256	P	Pn	05 29 19.1	-0.5
MTN	Manton Dam	15.37	162	Pn	Pn	05 30 07.9	+0.8
MTN				IAmb	IAmb	05 30 14.0	
	comp=Z,14nm,1.4s						
FITZ	Fitzroy Crossi	19.88	182	P	P	05 31 00.2	-0.4
	comp=Z,0.4nm,0.3s,baz=16,slow=11,SNR=15						
FITZ	Fitzroy Crossi	19.88	182	P	P	05 31 01.2	+0.6
YULB	Yu-li	21.94	347	P	P	05 31 18.9	-3.9
YULB				IAmb	IAmb	05 31 21.1	
	comp=Z,28nm,1.1s						
WB0	Warramunga Arr	22.91	160	P	P	05 31 32.7	-0.5
WB0				IAmb	IAmb	05 31 39.0	
	comp=Z,20nm,1.4s						
WRAB	Tennant Creek	23.05	161	P	P	05 31 33.2	-1.5
WRAB				IAmb	IAmb	05 31 39.1	
	comp=Z,8.4nm,1.0s						
WRA	Warramunga Arr	23.05	161	P	P	05 31 34.3	-0.4
	comp=Z,4.4nm,0.5s,baz=339,slow=11,SNR=54						
WR0	Warramunga Arr	23.14	160	P	P	05 31 34.9	-0.6
WR0				IAmb	IAmb	05 31 41.4	
	comp=Z,5.5nm,0.7s						
AS31	Alice Springs	26.43	164	P	P	05 32 06.1	+0.4
ASAR	Alice Springs	26.43	164	P	P	05 32 06.5	+0.7
	comp=Z,1.1nm,0.4s,baz=344,slow=8.1,SNR=36						
ASAR				PcP	PcP	05 35 32.1	+1.7
	comp=Z,0.3nm,0.5s,baz=341,slow=2.1,SNR=4.2						
ASAR	Alice Springs	26.43	164	P	P	05 32 04.3	-1.4
FORT	Forrest	32.53	177	P	P	05 32 59.0	-0.7
BBOO	Buckleboo	35.70	166	P	P	05 33 27.6	+0.3
STKA	Stephens Creek	36.55	158	P	P	05 33 35.2	+0.7
	comp=Z,1.2nm,0.3s,baz=353,slow=6.6,SNR=5.6						
STKA	Stephens Creek	36.55	158	P	P	05 33 34.3	-0.2
USRK	Ussuriysk Ar.	42.42	6	LR	LR	05 51 15.0	
	comp=Z,23nm,21.4s,baz=1.9,slow=35						
SONM	Songino Array	48.93	342	P	P	05 35 15.7	+0.9
	comp=Z,0.7nm,0.6s,baz=154,slow=8.4,SNR=3.9						
MK31	Makanchi Array	58.88	326	P	P	05 36 27.2	-0.2
MK31				IAmb	IAmb	05 36 28.9	
	comp=Z,1.5nm,1.0s						
MKAR	Makanchi Array	58.88	326	P	P	05 36 27.4	+0.1
	comp=Z,1.3nm,0.4s,baz=120,slow=7.4,SNR=48						
MKAR	Makanchi Array	58.88	326	P	P	05 36 27.1	-0.2
ZALV	Zalesovo Beam	62.08	334	P	P	05 36 48.3	-0.6
	comp=Z,0.4nm,0.3s,baz=131,slow=8.0,SNR=2.5						
KURK	Kurchatov	63.12	328		P	05 36 55.5	-0.4
KURK				IAmb	IAmb	05 37 01.2	
	comp=Z,2.6nm,0.5s						
SOCY	Socotra	72.42	282	P	P	05 37 53.8	-1.6
ABKAR	Akbulak array	73.37	321	P	P	05 37 59.9	-0.3
ILAR	Eielson Array	86.89	25	P	P	05 39 14.5	+1.7
	comp=Z,0.2nm,0.6s,baz=241,slow=5.6,SNR=1.4						
ARCES	ARCESS Array B	92.05	340	P	P	05 39 37.0	+0.1
	comp=Z,3.1nm,0.9s,baz=90,slow=5.4,SNR=1.5						
FINES	FINESS Array B	93.29	332	P	P	05 39 42.3	-0.4
	comp=Z,1.8nm,0.9s,baz=11,slow=1.9,SNR=1.4						
TORD	Torodi Ar. Bea	123.16	287	PKP	PKiKP	05 45 26.8	+0.8
	comp=Z,0.9nm,0.7s,baz=37,slow=1.6,SNR=4.7						

WEL 07 05:29:34.3±0.9**, 34°S**±16°×**17°9E**±2°5**, h317**^{km}±17^{km}**, M3.7**/24**, mB4.1**/6**, MLv4.1**/24**, Mw(mB)3.2**/6**, Error ellipse: s-maj=0.0km s-min=0.0km az=120.1, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	3.70	191	P	Pn	05 30 36.6	-1.6
MXZ				S	S	05 31 27.7	-1.6
WMGZ	Waiomatatini S	3.93	189	P	Pn	05 30 41.0	+0.4
WMGZ				S	S	05 31 34.6	+0.7
HAZ	Te Kaha	3.99	197	P	Pn	05 30 41.5	+0.3
HAZ				S	S	05 31 34.7	-0.3
PKGZ	Pakihiroa	4.05	193	P	Pn	05 30 42.0	0.0
PKGZ				S	S	05 31 36.2	-0.1
PUZ	Puketiti	4.20	191	P	Pn	05 30 44.0	+0.4
PUZ				S	S	05 31 38.4	-0.8
RUGZ	Raukumara Rang	4.21	197	P	Pn	05 30 43.7	-0.1
RUGZ				S	S	05 31 39.7	+0.1
TWGZ	Tauwhareparae	4.35	193	S	S	05 31 44.0	+1.8
MWZ	Matawai	4.60	197	P	Pn	05 30 48.3	+0.3
MWZ				S	S	05 31 47.2	0.0
CNGZ	Carnagh Statio	4.61	190	P	Pn	05 30 49.1	+1.1
TKGZ	Te Karaka	4.63	194	P	Pn	05 30 48.3	+0.1
TKGZ				S	S	05 31 48.8	+1.0
URZ	Urewera	4.64	201	P	Pn	05 30 48.7	+0.3
URZ				S	S	05 31 49.2	+1.2
RIGZ	Rimuhau	4.91	194	P	Pn	05 30 52.0	+0.6
RIGZ				S	S	05 31 54.7	+1.2
MUGZ	Murupara	4.95	203	P	Pn	05 30 51.3	-0.5
MUGZ				S	S	05 31 57.5	+3.2
RTZ	Ruatahuna	5.01	201	P	Pn	05 30 52.6	0.0
NMHZ	Naumai	5.51	200	P	Pn	05 30 58.9	+0.6
NMHZ				S	S	05 32 08.9	+2.8
ARHZ	Aropaoanui	5.61	198	P	Pn	05 31 00.0	+0.6
BKZ	Black Stump Fm	5.67	202	P	Pn	05 31 00.6	+0.4
KWHZ	Kaweka Forest	5.92	202	P	Pn	05 31 03.6	+0.4
OTVZ	Oturere	5.95	208	P	Pn	05 31 04.5	+0.9
BHHZ	Black Hill Sta	6.10	204	P	Pn	05 31 04.9	-0.3
WNVZ	Wahianoa	6.12	207	P	Pn	05 31 06.3	+0.7
MOVZ	Moawhango	6.13	206	P	Pn	05 31 05.3	-0.4
MOVZ				S	S	05 32 17.0	-2.4
KRHZ	Kereru	6.14	201	P	Pn	05 31 05.2	-0.5
KRHZ				S	S	05 32 18.7	-0.8
KAHZ	Kahuranaki	6.14	197	P	Pn	05 31 05.7	0.0
KAHZ				S	S	05 32 19.2	-0.4
PXZ	Pawanui	6.37	197	P	Pn	05 31 08.3	0.0
PXZ				S	S	05 32 26.3	+1.8
PNHZ	Pukenui	6.44	201	P	Pn	05 31 08.8	-0.5
DVHZ	Dannevirke	6.81	200	P	Pn	05 31 12.9	-0.7
BFZ	Birch Farm	7.14	199	P	Pn	05 31 17.2	-0.4
MRZ	Mangatainoka R	7.32	202	P	Pn	05 31 18.8	-0.9
TIWZ	Tintock	7.33	200	P	Pn	05 31 19.9	0.0
HOWZ	Holdsworth Sta	7.55	202	P	Pn	05 31 21.7	-0.8

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*IDC **07** 05:47:33.0±3.4, 24°.89N×127°.90E, h0^{km}, mb3.6/5, mb1 3.8/5, mb1mx3.5/33, mbtmp3.6/5, Error ellipse: s-maj=174.0km s-min=21.1km az=66.0*

*JMA **07** 05:47:36.7±0.3, 25°.22N×128°.10E, h81^{km}±5^{km}, M3.6*

ISC 07 05:47:33.5±1.8**, 25°.05N**±0°.05×**128°.18E**±0°.04**, h17**^{km}±11^{km}**, n24,** σ1^{s}.**89**/37**, mb3.6**/5**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JJT3	Tamagusuku3	1.15	342	P	Pg	05 47 55.6	-0.2
JJT3				S	Sg	05 48 09.8	-1.1
JNTH	Nagotoyohara	1.47	354	P	Pn	05 47 59.5	+0.2
JNTH				*e*S	Sn	05 48 15.9	-2.3
JAGN	Aguni-jima	1.75	331	P	Pn	05 48 03.9	+0.8
JAGN				S	Sn	05 48 24.3	-0.8
JOW	Kunigami	1.78	3	P	Pn	05 48 04.0	+0.5
JOW				*e*S	Sn	05 48 23.4	-2.4
JKE	Kume jima 2	1.79	316	P	Pn	05 48 04.0	+0.3
JYRO	Yoronjima	1.98	7	P	Pn	05 48 06.4	+0.1
JYRO				*e*S	Sn	05 48 28.1	-2.7
JOKE	Okinoerabujima	2.33	8	P	Pn	05 48 11.8	+0.7
JOKE				S	Sn	05 48 37.0	-2.4
JMJ2	Miyako jima3	2.61	264	S	Sn	05 48 45.3	-0.9
JIRB	Irabujima	2.74	266	*e*S	Sn	05 48 47.4	-2.1
JTK	Tokunoshima	2.81	14	P	Pn	05 48 18.6	+0.9
JTK				*e*S	Sn	05 48 48.8	-2.5
JMZ	Minamidaito 2	2.85	74	P	Pn	05 48 17.7	-0.5
JMZ				*e*S	Sn	05 48 49.7	-2.5
JKDJ	Kitadaitoujima	2.95	72	P	Pn	05 48 19.2	-0.4
JKDJ				S	Sn	05 48 52.0	-2.7
JTJ	Tarama	3.19	263	S	Sn	05 48 57.2	-3.3
JAMN	Amaminishikomi	3.31	15	P	Pn	05 48 26.1	+1.6
JAMN				S	Sn	05 49 00.6	-2.8
JISG	Ishigakijimahi	3.55	263	P	Pn	05 48 27.6	-0.2
JAM	Amami Oshima	3.58	20	P	Pn	05 48 29.7	+1.4
JAM				*e*S	Sn	05 49 07.0	-3.3
JZK	Kikaishima	3.63	26	P	Pn	05 48 30.6	+1.7
JIJ	Ishigaki jima	3.74	260	P	Pn	05 48 30.4	0.0
JIJ				*e*S	Sn	05 49 11.0	-3.0
JKRS	Kuro-shima	3.88	259	P	Pn	05 48 32.4	0.0
JKRS				*e*S	Sn	05 49 14.4	-3.2
MKAR	Makanchi Array	42.30	313	P	P	05 55 27.2	+1.0
	0.5nm,0.4s,baz=98,slow=11,SNR=16						
FITZ	Fitzroy Crossi	42.95	184	P	P	05 55 32.5	+0.8
	1.2nm,0.8s,baz=352,slow=5.5,SNR=5.7						
ZALV	Zalesovo Beam	43.17	324	P	P	05 55 35.5	+2.4
	0.5nm,0.4s,baz=104,slow=9.0,SNR=2.5						
WRA	Warramunga Arr	45.12	172	P	P	05 55 50.2	+1.1
	0.5nm,0.6s,baz=353,slow=8.7,SNR=5.8						
ASAR	Alice Springs	48.74	173	P	P	05 56 18.5	+1.0
	0.3nm,0.6s,baz=1.3,slow=15,SNR=7.2						

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*IDC **07** 06:02:06.5±1.0, 39°.29N×143°.78E, h0^{km}, mb3.7/11, mb1 3.8/15, mb1mx3.7/36, mbtmp3.7/15, ML3.1/4, MS3.3/2, Ms1 3.3/2, ms1mx2.5/39, Error ellipse: s-maj=24.6km s-min=19.3km az=89.0*

*JMA **07** 06:02:07.8±0.2, 39°.39N×143°.79E, h30^{km}, M4.0*

*NIED **07** 06:02:07.9, 39°.39N×143°.79E, h30^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}5.43; $M_{\theta\theta}$0.54; $M_{\phi\phi}$-5.97; $M_{r\theta}$-0.62; $M_{\theta\phi}$-0.58; $M_{\phi r}$1.55; Fault plane solution: $M_0$5.97000×10^{14} NP1: ϕ_s357.00000°, δ53.00000°, λ80.00000°. NP2: ϕ_s194.00000°, δ38.00000°, λ103.00000°.*

*NEIC **07** 06:02:11.5±1.8, 39°.32N±0°.07×143°.8E±0°.1, h32^{km}±8^{km}, mb4.1/6 Error ellipse: s-maj=14.1km s-min=9.2km az=115.0*

ISC 07 06:02:08.8±0.7**, 39°.38N**±0°.05×**143°.70E**±0°.07**, h11**^{km}**, n55,** σ1^{s}.**22**/56**, mb3.8**/14**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MIYJ	Miyakonagasawa	1.47	278	P	Pn	06 02 34.0	-1.2
JTH	Tanohata	1.52	292	P	Pn	06 02 34.7	-1.2
JTH				*e*S	Sn	06 02 54.4	-1.3
OFUJ	Ofunato	1.60	260	P	Pn	06 02 36.0	-1.0
OFUJ				*e*S	Sn	06 02 56.5	-1.2
JOM	Ohasama	1.86	274	P	Pn	06 02 40.1	-0.5
JOM				*e*S	Sn	06 03 03.7	-0.5
JANG	Nango	1.95	301	P	Pn	06 02 40.2	-1.6
JMK	Ichinoseki	1.97	258	P	Pn	06 02 41.5	-0.6
JYK	Kaneyama	2.63	261	P	Pn	06 02 51.1	-0.2
ERM	Erimo	2.66	351	Pn	Pn	06 02 52.8	+1.2
JMM	Marumori	2.73	237		Pn	06 02 51.9	-0.6
JNBK	Urakawa-nobuka	2.98	346	P	Pn	06 02 56.3	+0.3
JNBK				*e*S	Sn	06 03 31.2	-0.6
JKB	Kayabe	3.22	322	*e*S	Sn	06 03 36.0	-1.6
JFT	Otama	3.23	236	P	Pn	06 02 58.9	-0.5
JCH	Churui	3.24	356	*e*S	Sn	06 03 35.8	-2.3
JAW	Awa shima	3.59	256	P	Pn	06 03 04.7	+0.3
JAK	Akkeshi	3.69	11	*e*S	Sn	06 03 46.4	-2.8
JEW	Eniwo	3.85	335	Pn	Pn	06 03 10.1	+2.2
JYT	Yasato	4.20	222		Pn	06 03 11.7	-1.0
JSD	Sado	4.46	254	Pn	Pn	06 03 16.0	-0.3
JKA	Kamikawa-asahi	4.80	351	Pn	Pn	06 03 22.5	+1.5
ASAJ	Asahikawa	4.80	351	Pn	Pn	06 03 21.6	+0.6
	1.6nm,0.3s,baz=217,slow=15,SNR=7.9						
ASAJ				Sn	Sn	06 04 15.2	-1.4
	0.7nm,0.3s,baz=19,slow=27,SNR=1.6						
MAJO	Matsushiro	5.18	239		Pn	06 03 27.5	+1.3
MAT	Matsushiro	5.18	239	P	Pn	06 03 27.2	+0.9
MAT				*e*S	Sn	06 04 26.6	+0.6
MJAR	Matsushiro Arr	5.18	239	Pn	Pn	06 03 26.9	+0.6
	0.8nm,0.3s,baz=38,slow=12,SNR=53						
MJAR	Matsushiro Arr	5.18	239		Pn	06 03 27.4	+1.2
JGF	Kuroka	6.29	235		Pn	06 03 42.6	+1.0
JHJ	Hachijo jima 2	7.00	208	Sn	Sn	06 05 00.9	-10
	8.0nm,0.3s,baz=84,slow=20,SNR=1.5						
JWT	Wachi	7.77	241	Pn	Pn	06 04 03.4	+1.6
USRK	Ussuriysk Ar.	9.98	303	Pn	Pn	06 04 34.3	+2.3
	baz=102,slow=11,SNR=4.4						
USRK	Ussuriysk Ar.	9.98	303	Pn	Pn	06 04 34.0	+1.9
KSRS	Korea Array	12.52	266	Pn	Pn	06 05 09.8	+2.9
	0.3nm,0.3s,baz=84,slow=11,SNR=4.1						
KSRS				LR	LR	06 09 23.6	
	comp=Z,27nm,18.9s,baz=105,slow=35						
KLR	Kul'dur	13.03	323	Pn	Pn	06 05 13.7	0.0
	0.1nm,0.3s,baz=139,slow=12,SNR=2.5						
SEY	Seymchan	24.16	10	P	P	06 07 24.1	-0.5
	0.5nm,0.3s,baz=218,slow=19,SNR=1.7						
H11N2	WAKE ISLAND Hy	27.98	128	T	T	06 37 32.5	
	baz=318,slow=75						
H11N1	WAKE ISLAND Hy	27.99	128	T	T	06 37 30.3	
	baz=318,slow=75						
H11N3	WAKE ISLAND Hy	28.00	128	T	T	06 37 33.1	
	baz=318,slow=75						
SONM	Songino Array	28.07	300	P	P	06 08 00.8	+0.5
	0.7nm,0.6s,baz=96,slow=8.5,SNR=6.9						
SONM	Songino Array	28.07	300	P	P	06 08 00.6	+0.3
ZAA0	Zalesovo Array	41.71	310	P	P	06 09 56.6	-0.8
ZAA0				IAmb	IAmb	06 10 11.5	
	comp=Z,1.9nm,0.6s						
ZALV	Zalesovo Beam	41.71	310	P	P	06 09 57.3	-0.1
	comp=Z,2.1nm,0.5s,baz=81,slow=9.6,SNR=7.7						
ZALV	Zalesovo Beam	41.71	310	P	P	06 09 57.9	+0.5
MK31	Makanchi Array	44.44	300	P	P	06 10 20.7	+1.1
MK31				IAmb	IAmb	06 10 29.4	
	comp=Z,2.1nm,0.9s						
MKAR	Makanchi Array	44.44	300	P	P	06 10 19.1	-0.5
	comp=Z,1.0nm,0.7s,baz=81,slow=9.2,SNR=11						
MKAR	Makanchi Array	44.44	300	P	P	06 10 18.8	-0.8
SCM	Sheep Creek Mo	46.51	38	P	P	06 10 36.5	+0.6
ABKAR	Akbulak array	57.81	310	P	P	06 12 00.1	0.0
WB0	Warramunga Arr	59.48	190	P	P	06 12 10.7	-1.1
WR0	Warramunga Arr	59.65	190	P	P	06 12 11.9	-1.0
WR0				IAmb	IAmb	06 12 18.6	
	comp=Z,2.2nm,1.1s						
WRA	Warramunga Arr	59.66	190	P	P	06 12 11.1	-2.0
	comp=Z,0.4nm,0.5s,baz=8.3,slow=7.2,SNR=6.0						
YKA	Yellowknife Ar	60.88	31	P	P	06 12 21.4	+0.5
	comp=Z,0.1nm,0.6s,baz=304,slow=5.9,SNR=2.1						
ASAR	Alice Springs	63.38	190	P	P	06 12 37.9	-0.3
	comp=Z,0.3nm,0.8s,baz=355,slow=4.6,SNR=2.4						
FINES	FINESS Array B	67.57	333	P	P	06 13 05.1	+0.2
	comp=Z,1.3nm,0.8s,baz=327,slow=9.9,SNR=1.3						
NOA	NORSAR Array B	72.70	338	P	P	06 13 38.0	+1.5
	comp=Z,0.8nm,0.7s,baz=38,slow=6.0,SNR=1.6						
AKASG	Malin Array Be	73.53	323	P	P	06 13 40.5	-0.9
	comp=Z,0.3nm,0.4s,baz=38,slow=6.1,SNR=2.2						
PDAR	Pinedale Array	74.75	47	P	P	06 13 48.9	-0.1
	comp=Z,0.1nm,0.3s,baz=341,slow=1.9,SNR=1.9						
RPZ	Rata Peaks	86.33	160	LR	LR	06 48 46.9	
	comp=Z,63nm,20.5s,baz=50,slow=32						

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*NNC **07** 06:02:49.9±0.5, 43°.39N×74°.20E, h4^{km}±3^{km}, mb2.7, mpv3.0, Error ellipse: s-maj=3.1km s-min=2.5km az=141.0*

*KNET **07** 06:02:50.4±0.3, 43°.37N×74°.23E, h24^{km}±3^{km}, ml1.7, Error ellipse: s-maj=2.3km s-min=1.5km az=154.0*

*SOME **07** 06:02:50.1, 43°.43N×74°.18E, h15^{km}*

ISC 07 06:02:51.1±0.9**, 43°.36N**±0°.03×**74°.23E**±0°.02**, h18**^{km}±7^{km}**, n42,** σ1^{s}.**23**/75**, 13C-7D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
USP	Ospenovka	0.21	115	⇑P	Pg	06 02 56.5	+0.1
	57nm,0.1s,SNR=47						
USP				⇑S	Sg	06 03 00.9	+1.0
	95nm,0.2s						
SGDS	Sogindy	0.30	72	P	Pg	06 02 57.2	-0.5
	47nm,0.1s						
SGDS				S	Sg	06 03 02.1	-0.2
	134nm,0.1s						
CHMS	Chumysh	0.52	133	⇑P	Pb	06 03 01.6	-0.1
	7.9nm,0.1s,SNR=18						
CHMS				⇑S	Sb	06 03 09.6	+0.7
	44nm,0.1s						
AAK	Ala-Archa	0.75	165	⇑P	Pb	06 03 05.6	0.0
	3.2nm,0.1s,SNR=20						
AAK				⇑S	Sb	06 03 16.9	+1.4
	26nm,0.2s						
AAK	Ala-Archa	0.75	165	⇓P	Pb	06 03 05.6	0.0
	0.6nm,0.2s						
AAK				⇓S	Sb	06 03 16.8	+1.3
	13nm,0.4s						
EKS2	Erkin-Say	0.77	206	P	Pb	06 03 05.5	-0.5
	5.0nm,0.1s,SNR=34						
EKS2				⇑S	Sb	06 03 17.0	+0.8
	6.2nm,0.1s						
KBK	Karagaybulak	0.88	143	⇑P	Pb	06 03 07.8	-0.1
	3.2nm,0.1s,SNR=12						
KBK				⇑S	Sb	06 03 21.0	+1.7
	26nm,0.2s						
MRKS	Merke	0.96	231	*e*P	Pg	06 03 08.0	-1.8
	2.6nm,0.1s						
MRKS				*e*S	Sg	06 03 20.8	-1.7
	13nm,0.1s						
MRKS	Merke	0.96	231	P	Pg	06 03 08.1	-1.7
	2.2nm,0.1s						
MRKS				S	Sg	06 03 20.8	-1.7
	14nm,0.1s						
TKM2	Tokmak 2	1.09	113	⇑P	Pg	06 03 10.9	-1.4
	3.3nm,0.1s,SNR=52						
TKM2				⇓S	Sb	06 03 26.4	+0.9
	25nm,0.1s						
TKM2	Tokmak 2	1.09	113	⇑P	Pg	06 03 10.8	-1.4
	0.6nm,0.3s						
TKM2				⇑S	Sb	06 03 26.3	+0.9
	6.9nm,0.2s						
KRBS	Karabastau	1.10	72	*e*P	Pb	06 03 11.1	-0.5
	2.9nm,0.1s						
KRBS				*e*S	Sg	06 03 25.5	-1.4
	22nm,0.1s						
KRBS	Karabastau	1.10	72	P	Pb	06 03 10.8	-0.8
	3.5nm,0.1s						
KRBS				S	Sg	06 03 25.3	-1.6
	22nm,0.1s						
DGS	Degeres	1.13	95	*e*P	Pb	06 03 11.6	-0.6
	5.4nm,0.1s						
DGS				*e*S	Sg	06 03 26.9	-0.9
	7.7nm,0.2s						
DGS	Degeres	1.13	95	P	Pb	06 03 11.6	-0.6
	5.4nm,0.1s						
DGS				S	Sg	06 03 26.7	-1.1
	10nm,0.2s						
UCH	Uchtor	1.15	170	⇓P	Pb	06 03 12.6	-0.1
	3.0nm,0.2s,SNR=18						
UCH				⇓S	Sn	06 03 28.9	+0.8
	17nm,0.2s						
AML	Almayashu	1.29	198	⇓P	Pb	06 03 14.7	-0.3
	7.8nm,0.1s,SNR=6.9						
KST	Kastek	1.30	103	*e*P	Pn	06 03 14.9	+0.5
	4.9nm,0.1s						
KST				*e*S	Sg	06 03 33.1	-0.2
	6.3nm,0.3s						
KST	Kastek	1.30	103	P	Pn	06 03 15.0	+0.5
	5.3nm,0.2s						
KST				S	Sg	06 03 33.1	-0.2
	6.8nm,0.3s						
MTBS	Maitube	1.62	97	*e*P	Pb	06 03 20.8	+0.3
	2.4nm,0.0s						
MTBS				*e*S	Sg	06 03 42.6	-0.8
	7.0nm,0.1s						
MTBS	Maitube	1.62	97	P	Pb	06 03 20.8	+0.3
	2.4nm,0.0s						
MTBS				S	Sg	06 03 42.6	-0.8
	6.9nm,0.2s						
BTLS	Baital	1.69	355	*e*P	Pn	06 03 20.1	+0.5
	2.0nm,0.1s						
BTLS				*e*S	Sn	06 03 40.9	+0.2
	9.7nm,0.2s						
BTLS	Baital	1.69	355	P	Pn	06 03 19.6	-0.1
	2.7nm,0.2s						
BTLS				S	Sn	06 03 40.7	-0.1
	9.9nm,0.1s						
IZV	Izvestkoviy	1.77	100	*e*P	Pb	06 03 23.5	+0.4
	2.4nm,0.1s						
IZV				*e*S	Sg	06 03 47.4	-0.8
	9.0nm,0.1s						
IZV	Izvestkoviy	1.77	100	P	Pb	06 03 23.5	+0.4
	2.4nm,0.1s						
IZV				S	Sg	06 03 47.3	-0.8
	9.0nm,0.1s						
KTBS	Karatobe	1.81	78	*e*P	Pb	06 03 23.3	-0.5
	0.9nm,0.2s						
KTBS				*e*S	Sb	06 03 46.7	+0.5
	12nm,0.3s						
KTBS	Karatobe	1.81	78	P	Pb	06 03 23.3	-0.5
	1.4nm,0.2s						
KTBS				S	Sb	06 03 46.7	+0.5
	11nm,0.3s						
TNSS	Tian-Shan	2.01	98	*e*P	Pb	06 03 27.7	+0.4
	1.3nm,0.1s						
TNSS				*e*S	Sg	06 03 55.0	-0.9
	4.6nm,0.2s						
TNSS	Tian-Shan	2.01	98	Pg	Pb	06 03 27.7	+0.4
	1.3nm,0.1s						
TNSS				Lg	Lg	06 03 55.0	
	4.6nm,0.2s						
CHKK	Chushkaly	2.06	75	*e*P	Pb	06 03 28.1	+0.2
	2.2nm,0.1s						
CHKK				*e*S	Sb	06 03 55.2	+2.0
	15nm,0.1s						
CHKK	Chushkaly	2.06	75	Pg	Pb	06 03 28.1	+0.2
	2.2nm,0.1s						
CHKK				Lg	Lg	06 03 55.2	
	15nm,0.1s						
MDOK	Medeo	2.06	94	*e*P	Pb	06 03 28.6	+0.5
	1.6nm,0.2s						
MDOK				*e*S	Sg	06 03 56.1	-1.5
	4.6nm,0.3s						
MDOK	Medeo	2.06	94	Pg	Pb	06 03 28.6	+0.5
	1.6nm,0.2s						
MDOK				Lg	Lg	06 03 56.1	
	4.6nm,0.3s						
KK31	Karatay Array	2.73	266	⇑Pg	Pb	06 03 40.4	+1.0
	0.3nm,0.3s,baz=82,slow=17,SNR=7.4						
KK31				⇓Lg	Lg	06 04 14.5	
	1.2nm,0.4s						
ARXS	Arharly	2.74	71	*e*P	Pb	06 03 40.8	+1.3
	2.1nm,0.5s						
ARXS				*e*S	Sg	06 04 16.7	-2.4
	5.0nm,0.2s						
ARXS	Arharly	2.74	71	Pg	Pb	06 03 40.8	+1.3
	2.1nm,0.5s						
ARXS				Lg	Lg	06 04 16.7	
	5.0nm,0.2s						
MNBS	Baschi	3.10	75	*e*P	Pb	06 03 47.6	+1.8
	0.6nm,0.1s						
MNBS				*e*S	Sg	06 04 28.4	-2.4
	5.6nm,0.2s						
MNBS	Baschi	3.10	75	Pg	Pb	06 03 47.6	+1.8
	0.6nm,0.1s						
MNBS				Lg	Lg	06 04 28.4	
	5.6nm,0.2s						
IUG	Iuzhnay	3.32	250	*e*P	Pg	06 03 53.9	-0.9
	1.5nm,0.1s						
IUG				*e*S	Sg	06 04 39.0	+1.2
	4.4nm,0.4s						
IUG	Iuzhnay	3.32	250	Pg	Pb	06 03 50.6	+1.1
	2.2nm,0.0s						
IUG				Lg	Lg	06 04 33.7	
	3.0nm,0.1s						
KAPS	Kapalarasan	4.15	61	*e*P	Pb	06 04 06.0	+2.4
	0.3nm,0.2s						
KAPS				*e*S	Sg	06 04 59.6	-4.7
	2.7nm,0.4s						
KAPS	Kapalarasan	4.15	61	Pg	Pb	06 04 06.0	+2.4
	0.3nm,0.2s						
KAPS				Lg	Lg	06 04 59.6	
	2.5nm,0.3s						

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*MOS **07** 06:19:04.8±1.0, 35°.70N×140°.09E, h76^{km}, mb4.6/20, Error ellipse: s-maj=12.6km s-min=5.4km az=125.6*

*NEIC **07** 06:19:06.0±1.6, 35°.79N±0°.05×140°.15E±0°.07, h67^{km}±6^{km}, mb4.5/14, Mwr4.3/13, Error ellipse: s-maj=8.3km s-min=6.7km az=118.0*

*JMA **07** 06:19:06.0±0.1, 35°.79N×140°.07E, h64^{km}±1^{km}, M3.8 Broadband fault plane solution: P waves. NP1: ϕ_s191.00000°, δ24.00000°, λ97.00000°. NP2: ϕ_s4.00000°, δ66.00000°, λ87.00000°. Principal axes: T Plg69.0000°, Azm268.0000°; N Plg3.0000°, Azm5.0000°; P Plg21.0000°, Azm96.0000°;*

JMA Felt II J1.

*NEIC **07** 06:19:06, 35°.80N×140°.16E, h70^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}2.72; $M_{\theta\theta}$-0.35; $M_{\phi\phi}$-2.36; $M_{r\theta}$0.28; $M_{\theta\phi}$1.02; $M_{\phi r}$1.88; Fault plane solution: $M_0$3.35000×10^{15} NP1: ϕ_s142.25000°, δ31.57000°, λ62.55000°. NP2: ϕ_s353.62000°, δ62.31000°, λ105.82000°. Principal axes: T 3.4289, Plg69.0000°, Azm295.0000°; N -0.1711, Plg14.0000°, Azm166.0000°; P -3.2577, Plg16.0000°, Azm72.0000°;*

*NIED **07** 06:19:06.0, 35°.79N×140°.07E, h64^{km}, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.89; $M_{\theta\theta}$-0.09; $M_{\phi\phi}$-1.80; $M_{r\theta}$0.12; $M_{\theta\phi}$0.26; $M_{\phi r}$1.91; Fault plane solution: $M_0$2.67000×10^{15} NP1: ϕ_s360.00000°, δ68.00000°, λ96.00000°. NP2: ϕ_s164.00000°, δ23.00000°, λ75.00000°.*

*IDC **07** 06:19:07.0±1.3, 35°.62N×140°.01E, h81^{km}±10^{km}, mb3.9/23, mb1 4.0/28, mb1mx3.8/48, mbtmp4.2/28, MS2.9/4, Ms1 2.9/4, ms1mx2.7/36 Error ellipse: s-maj=17.0km s-min=6.9km az=67.0*

ISC 07 06:19:05.7±0.6**, 35°.71N**±0°.04×**140°.17E**±0°.05**, h70**^{km}±4^{km}**, n166,** $\sigma 1^{s}$**.58**/182**, mb4.4**/47**, 16C-8D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSMT	**Sammumatsuo**	**0.24**	**106**	⇑P	**Pn**	**06 19 17.5**	**+1.0**
JIHU	**Itakohorinouch**	**0.39**	**48**	⇑P	**Pn**	**06 19 17.6**	**0.0**
JYT	**Yasato**	**0.52**	**2**	⇑P	**Pn**	**06 19 17.7**	**-1.1**
JYT				S	**Sn**	**06 19 26.3**	**-2.0**
JYT	**Yasato**	**0.52**	**2**	Pn	**Pn**	**06 19 17.7**	**-1.1**
JYT				Sn	**Sn**	**06 19 26.4**	**-1.9**
JAG	**Ashikaga**	**0.92**	**321**	⇓P	**Pn**	**06 19 22.2**	**-1.1**
BSO3	**Boso 3**	**0.95**	**163**	⇑P	**Pn**	**06 19 23.9**	**+0.6**
BSO3				S	**Sn**	**06 19 38.9**	**+2.5**
JOD2	**Odawara 2**	**0.99**	**244**	⇓P	**Pn**	**06 19 23.5**	**-0.6**
JOD2				S	**Sn**	**06 19 36.3**	**-1.5**
JRY	**Ryogami san**	**1.07**	**287**	⇓P	**Pn**	**06 19 24.9**	**-0.3**
JIM2	**Oshima 3**	**1.16**	**212**	⇓P	**Pn**	**06 19 25.4**	**-0.9**
JIM2				S	**Sn**	**06 19 40.4**	**-1.2**
JKT	**Katashina**	**1.29**	**325**	⇓P	**Pn**	**06 19 27.0**	**-1.1**
MJAR	**Matsushiro Arr**	**1.79**	**298**	P	**Pn**	**06 19 34.0**	**-0.6**
	24nm,0.3s,baz=101,slow=13,SNR=705						
MJAR				S	**Sn**	**06 19 56.5**	**0.0**
	14nm,0.3s,baz=128,slow=17,SNR=4.1						
MJAR				LR	LR	06 20 13.7	
	comp=Z,368nm,18.9s,baz=115,slow=40						
MJAR	**Matsushiro Arr**	**1.79**	**298**		**Pn**	**06 19 33.2**	**-1.4**
MAJO	**Matsushiro**	**1.79**	**298**	d *i*P	**Pn**	**06 19 34.3**	**-0.3**
MAJO	**Matsushiro**	**1.79**	**298**		**Pn**	**06 19 34.5**	**-0.1**
MAT	**Matsushiro**	**1.79**	**298**	P	**Pn**	**06 19 34.3**	**-0.3**
MAT				*e*S	**Sn**	**06 19 53.7**	**-2.9**
MJB9	**Matsu-Tunnel**	**1.80**	**298**	Pn	**Pn**	**06 19 34.8**	**+0.1**
JSG	**Sagara**	**1.92**	**238**		**Pn**	**06 19 38.6**	**+2.3**
JSG				Sn	**Sn**	**06 20 02.1**	**+2.5**
JMM	**Marumori**	**2.21**	**13**		**Pn**	**06 19 41.0**	**+0.8**
JGF	**Kuroka**	**2.29**	**268**		**Pn**	**06 19 42.4**	**+1.0**
INU	**Inuyama**	**2.60**	**263**	Pn	**Pn**	**06 19 45.6**	**+0.2**
JHJ	**Hachijo jima 2**	**2.60**	**187**	P	**Pn**	**06 19 46.2**	**+0.6**
	85nm,0.3s,baz=52,slow=22,SNR=19						
JHJ				S	**Sn**	**06 20 15.4**	**-0.7**
	72nm,0.3s,baz=234,slow=23,SNR=8.4						
JHJ				LR	LR	06 20 45.6	
	comp=Z,236nm,18.5s,baz=89,slow=39						
JHJ2	**Mitsune**	**2.61**	**187**	Pn	**Pn**	**06 19 47.1**	**+1.5**
JSD	**Sado**	**2.78**	**327**	Pn	**Pn**	**06 19 47.8**	**-0.2**
JWT	**Wachi**	**3.91**	**265**	Pn	**Pn**	**06 20 03.8**	**+0.4**
JTM	**Tenmabayashi**	**5.12**	**8**	Pn	**Pn**	**06 20 20.6**	**+0.7**
JMN	**Monobe**	**5.54**	**251**	Pn	**Pn**	**06 20 26.4**	**+0.7**
JHS	**Saijyo**	**5.81**	**265**		**Pn**	**06 20 30.4**	**+1.1**
ERM	**Erimo**	**6.71**	**19**	*i*P	**Pn**	**06 20 41.7**	**+0.1**
ERM	**Erimo**	**6.71**	**19**	Pn	**Pn**	**06 20 40.8**	**-0.8**
JEW	**Eniwo**	**7.19**	**8**	Pn	**Pn**	**06 20 48.0**	**-0.1**
JNU	**Nakatsue**	**8.10**	**254**	P	**Pn**	**06 20 60.0**	**-0.7**
	0.8nm,0.3s,baz=31,slow=18,SNR=2.4						
ASAJ	**Asahikawa**	**8.60**	**12**	P	**Pn**	**06 21 04.5**	**-2.9**
	1.9nm,0.3s,baz=221,slow=8.0,SNR=8.8						
ASAJ				S	**Sn**	**06 22 34.0**	**-8.8**
	0.7nm,0.3s,baz=25,slow=21,SNR=1.7						
ASAJ				LR	LR	06 25 11.4	
	comp=Z,42nm,18.8s,baz=145,slow=42						
JCJ	**Chichijima**	**8.76**	**168**	P	**Pn**	**06 21 05.3**	**-4.3**
	7.8nm,0.3s,baz=243,slow=20,SNR=3.8						
JCJ				S	**Sn**	**06 22 41.2**	**-5.5**
	15nm,0.3s,baz=288,slow=22,SNR=2.0						
NMR	**Nemuro--Hokkai**	**8.77**	**28**	*e*P	**Pn**	**06 21 06.1**	**-3.6**
GRPR	**Tuman**	**9.33**	**26**	P	**Pn**	**06 21 14.5**	**-2.8**
TEY	**Ternei**	**9.71**	**345**	⇑*e*P	Pn	06 21 14.2	-8.2
TEY				pmax	pmax		
	comp=Z,10.0nm,1.4s						
KSRS	**Korea Array**	**10.00**	**284**	P	**Pn**	**06 21 28.0**	**+1.5**
	comp=Z,0.8nm,0.3s,baz=98,slow=14,SNR=14						
KSRS				LR	LR	06 25 09.2	
	comp=Z,140nm,18.6s,baz=112,slow=36						
USRK	**Ussuriysk Ar.**	**10.55**	**326**	P	**Pn**	**06 21 35.7**	**+1.8**
	baz=148,slow=13,SNR=11						
USA0B	**Ussuriysk Arra**	**10.55**	**326**	*i*P	**Pn**	**06 21 34.2**	**+0.3**
USA0B	**Ussuriysk Arra**	**10.55**	**326**		**Pn**	**06 21 35.7**	**+1.8**
YSS	**Yuzh-Sakhalins**	**11.40**	**9**	⇓*e*P	**Pn**	**06 21 43.4**	**-2.2**
YSS				*e*S	**Sn**	**06 23 49.6**	**-1.5**
YSS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
JOW	**Kunigami**	**13.47**	**232**	P	**Pn**	**06 22 13.5**	**-0.3**
	baz=90,slow=13,SNR=0.9						
CN2	**Changchun**	**13.90**	**310**	*e*P	**P**	**06 22 21.4**	**-3.9**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KLR	**Kul'dur**	**14.86**	**338**	P	**Pn**	**06 22 28.6**	**-3.2**
	comp=Z,0.2nm,0.3s,baz=151,slow=13,SNR=5.0						
KLR	**Kul'dur**	**14.86**	**338**	*i*P	**Pn**	**06 22 31.7**	**-0.1**
KLR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ZEA	**Zeya**	**20.17**	**337**	*e*P	**P**	**06 23 34.4**	**+0.1**
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
TPUB	**Ta-pu**	**20.98**	**239**	P	**P**	**06 23 42.5**	**-0.7**
PETK	**Petropavlovsk-**	**21.34**	**30**	LR	LR	06 31 35.1	
	comp=Z,25nm,18.9s,baz=199,slow=35						
HHC	**Hu-ho-hao-te**	**22.98**	**292**	*e*P	**P**	**06 24 03.3**	**-1.3**
HHC				pmax	pmax		
	comp=Z,11nm,0.7s						
HHC				pmax	pmax		
	comp=Z,68nm,6.6s						
MA2	**Magadan**	**24.86**	**13**	c*e*P	**P**	**06 24 21.8**	**+0.4**
MA2				pmax	pmax		
	comp=Z,12nm,1.7s						
YAK	**Yakutsk**	**27.16**	**349**	P	**P**	**06 24 42.6**	**+0.5**
	comp=Z,9.8nm,0.4s,baz=281,slow=2.5,SNR=1.8						
YAK	**Yakutsk**	**27.16**	**349**	*e*P	**P**	**06 24 42.9**	**+0.8**
YAK				*e**PP	**pP**	**06 24 59.2**	**+0.4**
YAK				*e*		06 28 03.1	
YAK				*e*S	**S**	**06 29 17.0**	**+1.6**
YAK				*e**SS	**sS**	**06 29 49.7**	**+5.7**
YAK				*e*SS	**SnSn**	**06 30 33.2**	**+3.9**
YAK				*e*		06 35 28.2	
YAK				pmax	pmax		
	comp=Z,16nm,0.9s						
YAK				pmax	pmax		
	comp=N,9.0nm,1.2s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.2s						
YAK				smax	smax		
	comp=E,68nm,3.5s						
YAK				smax	smax		
	comp=N,34nm,3.2s						
SONM	**Songino Array**	**27.73**	**306**	P	**P**	**06 24 46.0**	**-1.6**
	comp=N,1.3nm,0.7s,baz=111,slow=10,SNR=10.0						
SONM				PcP	**PcP**	**06 28 03.5**	**+0.8**
	comp=N,0.6nm,0.6s,baz=138,slow=2.7,SNR=4.8						
SONM	**Songino Array**	**27.73**	**306**	P	**P**	**06 24 46.4**	**-1.2**
SONM				pmax	pmax		
	comp=Z,1.0nm,1.0s						
SONM	**Songino Array**	**27.73**	**306**	P	**P**	**06 24 46.4**	**-1.2**
BOD	**Bodaibo**	**28.14**	**330**	*e*P	**P**	**06 24 50.1**	**-0.9**
BOD				pmax	pmax		
	comp=Z,6.0nm,0.9s						
H11N2	**WAKE ISLAND Hy**	**28.39**	**117**	T	T	06 54 51.2	
	baz=308,slow=75,SNR=28						
H11N1	**WAKE ISLAND Hy**	**28.39**	**117**	T	T	06 54 46.0	
	baz=308,slow=75,SNR=31						
H11N3	**WAKE ISLAND Hy**	**28.41**	**117**	T	T	06 54 46.1	
	baz=308,slow=75,SNR=30						
H11S1	**WAKE ISLAND Hy**	**29.04**	**119**	T	T	06 55 07.4	
	baz=317,slow=74						
H11S3	**WAKE ISLAND Hy**	**29.04**	**119**	T	T	06 55 09.7	
	baz=317,slow=74						
H11S2	**WAKE ISLAND Hy**	**29.05**	**119**	T	T	06 55 08.4	
	baz=317,SNR=14						
LZH	**Lanzhou**	**29.32**	**282**	*e*P	P	06 25 09.2	+7.3
LZH				pP	pP	06 25 17.6	-1.1
LZH				sP	sP	06 25 22.4	-4.5
LZH				pmax	pmax		
	comp=Z,16nm,1.0s						
TLY	**Talaya**	**30.47**	**313**	*i*P	**P**	**06 25 12.5**	**+0.8**
TLY				pmax	pmax		
	comp=Z,2.0nm,0.8s						
GTA	**Gaotai**	**32.02**	**289**	P	**P**	**06 25 26.5**	**+0.9**
GTA				pP	pP	06 25 41.3	-1.1
GTA				sP	sP	06 25 51.4	+0.8
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KMI	**Kunming**	**33.78**	**262**	⇑P	**P**	**06 25 43.6**	**+2.4**
KMI				S	**S**	**06 31 00.5**	**+0.4**
KMI				sS	sS	06 31 34.4	+5.4
KMI				pmax	pmax		
	comp=Z,12nm,0.9s						
KMI				pmax	pmax		
	comp=Z,79nm,6.7s						
KMI				LR	LR		
	comp=N,670nm,13.5s						
KMI				LR	LR		
	comp=E,440nm,14.3s						
KMI				LR	LR		
	comp=Z,270nm,12.0s						
TIXI	**Tiksi**	**36.49**	**354**	*i*P	**P**	**06 26 04.5**	**+0.8**
CMAR	**Chiang Mai Arr**	**40.19**	**256**	P	**P**	**06 26 33.2**	**-2.2**
	comp=Z,0.7nm,0.3s,baz=112,slow=36,SNR=1.1						
DGZ	**Jazzator, Alta**	**40.37**	**307**	*i*P	**P**	**06 26 37.6**	**+0.9**
DGZ				pmax	pmax		
	comp=Z,9.0nm,0.7s						
WMQ	**Urumqi**	**40.56**	**298**	*e*P	**P**	**06 26 39.9**	**+1.7**
WMQ				pmax	pmax		
	comp=Z,14nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,140nm,6.7s						
WMQ				LR	LR		
	comp=N,620nm,28.8s						
WMQ				LR	LR		
	comp=E,1µm,28.9s						
WMQ				LR	LR		
	comp=Z,44nm,19.1s						
ZAA0	**Zalesovo Array**	**42.08**	**313**	P	**P**	**06 26 50.2**	**-0.3**
ZAA0				IAmb	IAmb	06 26 52.6	
	comp=Z,7.8nm,1.1s						
ZALV	**Zalesovo Beam**	**42.08**	**313**	P	**P**	**06 26 49.7**	**-0.7**
	comp=Z,3.4nm,0.5s,baz=91,slow=6.1,SNR=17						
ZALV				PcP	**PcP**	**06 28 43.9**	**0.0**
	comp=Z,2.3nm,0.6s,baz=107,slow=2.1,SNR=6.9						
ZALV	**Zalesovo Beam**	**42.08**	**313**	P	**P**	**06 26 50.3**	**-0.1**
ZALV	**Zalesovo Beam**	**42.08**	**313**	P	**P**	**06 26 50.3**	**-0.1**
ZSN	**Zaisan**	**42.17**	**304**	*e*P	**P**	**06 26 51.2**	**-0.1**
	comp=Z,4.2nm,1.4s,baz=304						
ZSN	**Zaisan**	**42.17**	**304**	*e*P	**P**	**06 26 51.2**	**-0.1**
ZSN				pmax	pmax		
	comp=Z,4.0nm,1.4s						
MK31	**Makanchi Array**	**43.98**	**303**	c*e*P	**P**	**06 27 05.9**	**-0.1**
MK31	**Makanchi Array**	**43.98**	**303**	P	**P**	**06 27 06.2**	**+0.2**
MK31				IAmb	IAmb	06 27 06.8	
	comp=Z,5.9nm,1.0s						
MKAR	**Makanchi Array**	**43.98**	**303**	P	**P**	**06 27 06.1**	**+0.1**
	comp=Z,3.6nm,0.7s,baz=89,slow=10,SNR=46						
MKAR				PcP	**PcP**	**06 28 50.4**	**-0.1**
	comp=Z,0.4nm,0.7s,baz=63,slow=5.7,SNR=4.0						
NRIK	**Noril'sk**	**44.06**	**336**	P	**P**	**06 27 06.3**	**+0.1**
	comp=Z,3.9nm,0.8s,baz=104,slow=13,SNR=4.1						
NRIK	**Noril'sk**	**44.06**	**336**	c*e*P	**P**	**06 27 06.4**	**+0.2**
NRIK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MAKZ	**Makanchi**	**44.20**	**303**	P	**P**	**06 27 08.2**	**+0.5**
MAKZ				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MAKZ	**Makanchi**	**44.20**	**303**	P	**P**	**06 27 08.2**	**+0.5**
MAKZ				IAmb	IAmb	06 27 08.6	
	comp=Z,5.8nm,0.8s						
SEM	**Semipalatinsk**	**44.96**	**308**	*e*P	**P**	**06 27 12.5**	**-1.5**
	comp=Z,3.3nm,1.0s,baz=308						
SEM	**Semipalatinsk**	**44.96**	**308**	*e*P	**P**	**06 27 12.4**	**-1.5**
SEM				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KURK	**Kurchatov**	**45.97**	**309**	P	**P**	**06 27 21.7**	**+0.1**
KURK						06 28 57.1	
KURK	**Kurchatov**	**45.97**	**309**	P	**P**	**06 27 21.4**	**-0.2**
KURBB	**Kurchatov Arra**	**46.04**	**309**	P	**P**	**06 27 21.6**	**-0.5**
	comp=Z,5.1nm,0.5s,baz=83,slow=7.7,SNR=45						
KURBB				PcP	**PcP**	**06 28 57.1**	**-0.4**
	comp=Z,0.6nm,0.7s,baz=80,slow=3.3,SNR=4.6						
SHLS	**Shalkode**	**46.57**	**299**	*e*P	**P**	**06 27 23.6**	**-3.0**
	baz=298						
SHLS	**Shalkode**	**46.57**	**299**	*e*P	**P**	**06 27 23.6**	**-3.0**
UZB	**Uzynbulak**	**46.89**	**299**	*e*P	**P**	**06 27 28.6**	**-0.6**
	baz=299						
UZB	**Uzynbulak**	**46.89**	**299**	*e*P	**P**	**06 27 28.5**	**-0.6**
KPKS	**Kokpek**	**47.06**	**299**	*e*P	**P**	**06 27 29.7**	**-0.8**
	baz=299						
KPKS	**Kokpek**	**47.06**	**299**	*e*P	**P**	**06 27 29.6**	**-0.8**
CHKK	**Chushkaly**	**48.18**	**300**	*e*P	**P**	**06 27 38.4**	**-0.6**
	baz=300						
CHKK	**Chushkaly**	**48.18**	**300**	*e*P	**P**	**06 27 38.3**	**-0.6**
MDOK	**Medeo**	**48.30**	**299**	*e*P	**P**	**06 27 40.0**	**0.0**
	baz=299						
MDOK	**Medeo**	**48.30**	**299**	*e*P	**P**	**06 27 40.0**	**0.0**
TNSS	**Tian-Shan**	**48.40**	**299**	*e*P	**P**	**06 27 41.3**	**+0.2**
	baz=299						
TNSS	**Tian-Shan**	**48.40**	**299**	*e*P	**P**	**06 27 41.3**	**+0.2**
KUU	**Kurty**	**48.63**	**300**	*e*P	**P**	**06 27 41.4**	**-1.0**
	comp=Z,3.5nm,1.3s,baz=300						
KUU	**Kurty**	**48.63**	**300**	*e*P	**P**	**06 27 41.4**	**-1.0**
KUU				pmax	pmax		
	comp=Z,4.0nm,1.3s						
MTBS	**Maitube**	**48.74**	**299**	*e*P	**P**	**06 27 42.2**	**-1.2**
	baz=299						
MTBS	**Maitube**	**48.74**	**299**	*e*P	**P**	**06 27 42.2**	**-1.2**
BTLS	**Baital**	**49.96**	**302**	*e*P	**P**	**06 27 51.7**	**-0.9**
	baz=302						
BTLS	**Baital**	**49.96**	**302**	*e*P	**P**	**06 27 51.6**	**-0.9**
KSH	**Kashi**	**50.04**	**295**	P	**P**	**06 27 55.6**	**+2.2**
KSH				pP	pP	06 28 10.5	-0.6
KSH				PP	**PP**	**06 29 53.6**	**+4.8**
KSH				pmax	pmax		
	comp=Z,7.0nm,1.4s						
KSH				pmax	pmax		
	comp=Z,140nm,5.6s						
AAK	**Ala-Archa**	**50.24**	**299**	P	**P**	**06 27 54.0**	**-0.9**
	comp=Z,1.2nm,0.4s,baz=153,slow=2.1,SNR=4.9						
AAK	**Ala-Archa**	**50.24**	**299**	c*e*P	**P**	**06 27 55.6**	**+0.7**
AAK				pmax	pmax		
	comp=Z,11nm,1.3s						
AAK	**Ala-Archa**	**50.24**	**299**	P	**P**	**06 27 54.8**	**-0.1**
BVAR	**Borovoye Array**	**50.73**	**313**	P	**P**	**06 27 59.5**	**+1.3**
	comp=Z,0.5nm,0.4s,baz=230,slow=29,SNR=6.7						
BVAR				PcP	**PcP**	**06 29 14.7**	**+0.3**
	comp=Z,0.6nm,0.5s,baz=76,slow=6.3,SNR=2.7						
BRVK	**Borovoye**	**50.79**	**313**	c*e*P	**P**	**06 28 00.8**	**+2.2**
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
ILAR	**Eielson Array**	**51.15**	**32**	P	**P**	**06 28 02.4**	**+1.2**
	comp=Z,0.7nm,0.9s,baz=266,slow=6.2,SNR=6.1						
DZA	**Taraz**	**52.41**	**300**	*e*P	**P**	**06 28 10.4**	**-0.5**
	baz=300						
DZA	**Taraz**	**52.41**	**300**	*e*P	**P**	**06 28 10.4**	**-0.5**
KK31	**Karatay Array**	**52.93**	**301**	P	**P**	**06 28 14.5**	**-0.3**
KK31				pmax	pmax		
	comp=Z,9.0nm,1.3s						
KK31	**Karatay Array**	**52.93**	**301**	P	**P**	**06 28 14.5**	**-0.3**
KK31				IAmb	IAmb	06 28 18.4	
	comp=Z,9.0nm,1.2s						
KKAR	**Karatay Array**	**52.93**	**301**	P	**P**	**06 28 13.8**	**-0.9**
KKAR				pmax	pmax		
	comp=Z,9.0nm,1.3s						
KKAR	**Karatay Array**	**52.93**	**301**	P	**P**	**06 28 13.8**	**-0.9**
KKAR				IAmb	IAmb	06 28 18.4	
	comp=Z,9.0nm,1.2s						
IUG	**Iuzhnay**	**53.55**	**300**	*e*P	**P**	**06 28 19.2**	**-0.3**
	comp=Z,3.2nm,1.0s,baz=300						
IUG	**Iuzhnay**	**53.55**	**300**	*e*P	**P**	**06 28 19.1**	**-0.3**
IUG				pmax	pmax		
	comp=Z,3.0nm,1.0s						
FITZ	**Fitzroy Crossi**	**55.26**	**197**	P	**P**	**06 28 32.5**	**+0.8**
FITZ				IAmb	IAmb	06 28 33.1	
	comp=Z,5.9nm,0.8s						
WR0	**Warramunga Arr**	**55.62**	**186**	P	**P**	**06 28 34.3**	**-0.1**
WR0				IAmb	IAmb	06 28 35.6	
	comp=Z,5.3nm,0.8s						
WRA	**Warramunga Arr**	**55.62**	**187**	P	**P**	**06 28 34.2**	**-0.2**
	comp=Z,2.8nm,0.4s,baz=1.4,slow=7.6,SNR=89						
WRA	**Warramunga Arr**	**55.62**	**187**	P	**P**	**06 28 34.8**	**+0.4**
WRA	**Warramunga Arr**	**55.62**	**187**	P	**P**	**06 28 34.8**	**+0.4**
ARU	**Arti**	**56.69**	**319**	P	**P**	**06 28 41.1**	**-0.6**
	comp=Z,1.9nm,0.2s,baz=22,slow=2.9,SNR=11						
ARU	**Arti**	**56.69**	**319**	c *i*P	**P**	**06 28 41.1**	**-0.6**
ARU				S	**S**	**06 36 29.8**	**+1.1**
ARU				SS	**SS**	**06 40 12.9**	**-3.8**
ARU				pmax	pmax		
	comp=Z,6.0nm,0.7s						
AB02	**Akbulak array**	**58.02**	**310**	P	**P**	**06 28 51.2**	**0.0**
ABKAR	**Akbulak array**	**58.03**	**310**	P	**P**	**06 28 51.2**	**0.0**
AKTO	**Aktyubinsk**	**58.82**	**312**	P	**P**	**06 28 56.5**	**-0.2**
	comp=Z,1.9nm,0.6s,baz=67,slow=9.6,SNR=6.9						
AS31	**Alice Springs**	**59.35**	**187**	P	**P**	**06 29 01.1**	**+0.5**
ASAR	**Alice Springs**	**59.35**	**187**	P	**P**	**06 29 00.7**	**+0.1**
	comp=Z,0.5nm,0.4s,baz=14,slow=12,SNR=19						
ASAR	**Alice Springs**	**59.35**	**187**	P	**P**	**06 29 02.2**	**+1.7**
KIRV	**Kirov**	**60.70**	**323**	c*e*P	**P**	**06 29 09.9**	**+0.5**
ARCES	**ARCESS Array B**	**64.88**	**339**	P	**P**	**06 29 37.0**	**0.0**
	comp=Z,3.0nm,0.8s,baz=42,slow=4.5,SNR=7.4						
YKA	**Yellowknife Ar**	**65.45**	**30**	P	**P**	**06 29 41.6**	**+0.7**
	comp=Z,0.5nm,0.8s,baz=304,slow=6.1,SNR=6.8						
YKA	**Yellowknife Ar**	**65.45**	**30**	c*e*P	**P**	**06 29 40.2**	**-0.7**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
OBN	**Obninsk**	**68.55**	**323**	⇓*e*P	**P**	**06 30 01.1**	**+0.5**
OBN						06 30 26.0	
OBN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
OBN				MLR	MLR		
	comp=Z,230nm,15.0s						
FINES	**FINESS Array B**	**69.52**	**332**	P	**P**	**06 30 06.2**	**-0.3**
	comp=Z,3.6nm,0.6s,baz=100,slow=5.9,SNR=25						
FINES	**FINESS Array B**	**69.52**	**332**	c*e*P	**P**	**06 30 06.1**	**-0.4**
FINES				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KBZ	**Khabaz**	**71.00**	**310**	P	**P**	**06 30 15.1**	**-0.7**
	comp=Z,3.9nm,0.9s,baz=273,slow=1.9,SNR=5.3						
KBZ	**Khabaz**	**71.00**	**310**	*i*P	**P**	**06 30 16.4**	**+0.6**
KBZ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KIV	**Kislovodsk**	**71.01**	**311**	*e*P	**P**	**06 30 17.2**	**+1.1**
KIV				pmax	pmax		
	comp=Z,17nm,0.9s						
AKASG	**Malin Array Be**	**74.73**	**322**	P	**P**	**06 30 37.4**	**-0.4**
	comp=Z,3.0nm,0.4s,baz=48,slow=6.0,SNR=19						
AKASG	**Malin Array Be**	**74.73**	**322**	P	**P**	**06 30 37.7**	**-0.1**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.6s						
AKASG	**Malin Array Be**	**74.73**	**322**	P	**P**	**06 30 37.7**	**-0.1**
AKBB	**Malin Array Si**	**74.73**	**322**	c*e*P	**P**	**06 30 39.0**	**+1.2**
KIEV	**Kiev**	**74.74**	**322**	P	**P**	**06 30 37.0**	**-0.8**
NB2	**NORSAR Subarra**	**75.01**	**337**	P	**P**	**06 30 39.2**	**-0.1**
	comp=Z,4.0nm,0.7s,baz=41,slow=5.9						
NOA	**NORSAR Array B**	**75.01**	**337**	P	**P**	**06 30 39.5**	**+0.2**
	comp=Z,2.1nm,0.6s,baz=40,slow=5.8,SNR=6.7						
KMPD	**K-Podol'skiy**	**77.47**	**321**	P	**P**	**06 30 53.0**	**-0.4**
KOLS	**Kolonicke sedl**	**79.30**	**324**	*e*P	**P**	**06 31 04.0**	**+0.5**
KOLS	**Kolonicke sedl**	**79.30**	**324**	*e*P	**P**	**06 31 04.0**	**+0.5**
PDAR	**Pinedale Array**	**79.31**	**45**	P	**P**	**06 31 05.0**	**+0.9**
	comp=Z,0.4nm,0.5s,baz=0.5,slow=1.0,SNR=6.3						
CRVS	**Cervenica-Dubn**	**79.71**	**324**	*e*P	**P**	**06 31 07.7**	**+1.9**
CRVS	**Cervenica-Dubn**	**79.71**	**324**	*e*P	**P**	**06 31 07.7**	**+1.9**
CLL	**Collm**	**81.74**	**330**	*e*P	**P**	**06 31 16.0**	**-0.5**
CLL				LmV		07 01 00.0	
	comp=Z,200nm,19.5s						
CLL	**Collm**	**81.74**	**330**	*e*P	**P**	**06 31 16.0**	**-0.5**
GERES	**GERESS Array B**	**83.30**	**328**	P	**P**	**06 31 24.6**	**-0.2**
	comp=Z,0.8nm,0.6s,baz=38,slow=6.8,SNR=5.2						
TXAR	**Lajitas Array**	**91.73**	**52**	P	**P**	**06 32 07.4**	**+1.5**
	comp=Z,0.3nm,0.6s,baz=308,slow=3.6,SNR=6.1						
TORD	**Torodi Ar. Bea**	**117.53**	**313**	PKP	**PKPdf**	**06 37 42.8**	**-1.3**
	comp=Z,0.8nm,0.5s,baz=14,slow=2.1,SNR=4.1						
KOWA	**Kowa**	**119.65**	**319**	PKP	**PKiKP**	**06 37 48.3**	**0.0**
	comp=Z,0.7nm,0.3s,baz=17,slow=6.3,SNR=4.1						
NVL	**N'lazarevskaya**	**135.69**	**202**	*e*PKIKP	**PKiKP**	**06 38 19.5**	**+1.0**
NVL				pmax	pmax		
	comp=Z,7.0nm,0.6s						
LPAZ	**La Paz**	**148.23**	**60**	PKPbc	**PKPbc**	**06 38 45.7**	**+0.7**
	comp=Z,1.4nm,0.8s,baz=160,slow=1.5,SNR=6.1						
SIV	**San Ignacio**	**152.71**	**49**	PKPbc	**PKPbc**	**06 38 54.0**	**-1.0**
	comp=Z,0.7nm,0.5s,baz=88,slow=3.5,SNR=4.0						

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*IDC **07** 06:22:00.6±1.1, 21°.25S×68°.02W, h121^{km}±19^{km}, mb3.6/1, mb1 3.0/3, mb1mx2.9/32, mbtmp3.4/3, Error ellipse: s-maj=44.6km s-min=11.9km az=103.0*

*GUC **07** 06:22:01.2±0.6, 21°.18S×68°.46W, h137^{km}±4^{km}, ML3.2*

ISC 07 06:22:00.5±1.0**, 21°.17S**±0°.04×**68°.48W**±0°.09**, h137**^{km}±10^{km}**, n19,** $\sigma 1^{s}$**.09**/33**, 4C-6D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.95**	**229**	⇑*i*P	**Pn**	**06 22 24.5**	**+0.7**
PB09				*i*S	**Sn**	**06 22 42.5**	**+1.0**
PB09				IAML		06 22 44.9	
	comp=E,214nm,0.5s						
PB01	**IPOC Station P**	**0.95**	**277**	⇓*i*P	**Pn**	**06 22 23.7**	**0.0**
PB01				*i*S	**Sn**	**06 22 41.2**	**-0.1**
PB01				IAML		06 22 43.2	
	comp=E,531nm,0.2s						
PB08	**IPOC Station P**	**1.20**	**328**	⇓*i*P	**Pn**	**06 22 27.1**	**+0.7**
PB08				*i*S	**Sn**	**06 22 47.0**	**+0.9**
PB08				IAML		06 22 48.0	
	comp=E,146nm,0.2s						
PB07	**IPOC Station P**	**1.43**	**247**	⇑*i*P	**Pn**	**06 22 28.7**	**+0.3**
PB07				*i*S	**Sn**	**06 22 49.7**	**0.0**
PB07				IAML		06 22 50.9	
	comp=N,521nm,0.3s						
LVC	**Limon Verde**	**1.49**	**196**	P	**Pn**	**06 22 29.8**	**+0.4**
	comp=N,15nm,0.3s,baz=26,slow=9.4,SNR=120						
LVC				S	**Sn**	**06 22 51.4**	**0.0**
	comp=N,13nm,0.3s,baz=119,slow=21,SNR=34						
LVC	**Limon Verde**	**1.49**	**196**	*e*P	**Pn**	**06 22 29.8**	**+0.4**
LVC				*i*S	**Sn**	**06 22 51.5**	**0.0**
HMBC	**Humberstone**	**1.59**	**304**	⇓*i*P	**Pn**	**06 22 30.2**	**0.0**
HMBC				*i*S	**Sn**	**06 22 52.7**	**-0.2**
HMBC				IAML		06 22 54.2	
	comp=E,435nm,0.4s						
PATCX	**Punta Patache**	**1.60**	**282**	⇓*i*P	**Pn**	**06 22 30.7**	**+0.4**
PATCX				*i*S	**Sn**	**06 22 53.0**	**-0.1**
PATCX				IAML		06 22 54.4	
	comp=N,645nm,0.3s						
TA01	**Diego Aracena**	**1.70**	**290**	⇓*i*P	**Pn**	**06 22 31.3**	**0.0**
TA01				*i*S	**Sn**	**06 22 54.5**	**-0.4**
TA01				IAML		06 22 56.4	
	comp=E,352nm,0.3s						
TA02	**Huaiquique**	**1.79**	**300**	*e*P	**Pn**	**06 22 32.5**	**+0.2**
TA02				*e*S	**Sn**	**06 22 56.2**	**-0.4**
PB06	**IPOC Station P**	**1.84**	**213**	⇑*i*P	**Pn**	**06 22 33.4**	**+0.3**
PB06				*i*S	**Sn**	**06 22 58.0**	**-0.1**
PB06				IAML		06 23 00.2	
	comp=E,193nm,0.3s						
PB04	**IPOC Station P**	**1.94**	**233**	⇑*i*P	**Pn**	**06 22 34.5**	**+0.2**
PB04				*i*S	**Sn**	**06 22 59.5**	**-0.6**
PB04				IAML		06 23 02.4	
	comp=E,121nm,0.3s						
PSGC	**Pisagua**	**2.20**	**315**	⇓*i*P	**Pn**	**06 22 36.8**	**-0.6**
PSGC				IAML		06 23 08.7	
	comp=E,66nm,0.3s						
MNMC	**Minye Minye**	**2.28**	**332**	*e*P	**Pn**	**06 22 39.1**	**+0.5**
MNMC				*i*S	**Sn**	**06 23 08.5**	**+0.7**
MNMC				IAML		06 23 09.1	
	comp=E,429nm,0.5s						
PB05	**IPOC Station P**	**2.32**	**223**	*e*P	**Pn**	**06 22 38.8**	**0.0**
PB05				IAML		06 23 09.8	
	comp=N,46nm,0.4s						
LPAZ	**La Paz**	**4.87**	**4**	P	**Pn**	**06 23 14.0**	**+1.5**
	comp=N,0.2nm,0.3s,baz=174,slow=9.2,SNR=8.8						
LPAZ				S	**Sn**	**06 24 10.0**	**+1.6**
	comp=N,0.2nm,0.3s,baz=85,slow=20,SNR=1.7						
SIV	**San Ignacio**	**8.71**	**55**	P	**Pn**	**06 23 58.8**	**-4.7**
	comp=N,0.4nm,0.3s,baz=239,slow=13,SNR=3.6						
TORD	**Torodi Ar. Bea**	**76.86**	**70**	P	**P**	**06 33 37.5**	**-0.4**
	comp=N,1.6nm,1.1s,baz=238,slow=5.2,SNR=2.1						
MKAR	**Makanchi Array**	**145.13**	**36**	PKP	**PKPdf**	**06 41 23.2**	**+1.5**
	comp=N,0.3nm,0.8s,baz=306,slow=3.4,SNR=2.8						

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*IDC **07** 06:27:18.3±0.6, 32°.93N×83°.39E, h0^{km}, mb4.1/23, mb1 4.3/26, mb1mx4.2/45, mbtmp4.1/26, ML3.6/3, MS3.7/25, Ms1 3.7/25, ms1mx3.6/48, Error ellipse: s-maj=17.0km s-min=12.5km az=39.0*

*NDI **07** 06:27:18.3±3.2, 33°.24N×83°.35E, h10^{km}, mb4.4, ML3.9, mb4.3(NEIC)*

*NEIC **07** 06:27:19.4±1.3, 32°.92N±0°.10×83°.42E±0°.10, h10^{km}±1^{km},* *mb4.3/11, Error ellipse: s-maj=17.7km s-min=12.1km az=211.0*

BJI ***07*** *06:27:21.3±0.0, 33°.03N×83°.51E, h7^{km}, mB4.7/14, mb4.3/26, Ms4.3/21, Ms7 4.0/22*

ISC 07 06:27:19.6±0.4**, 32°.87N**±0°.04×**83°.41E**±0°.04**, h10**^{km}**, n133, σ2^{s}05**/119**, mb4.3**/32**, MS3.6**/26**, 1C-1D, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDI	Dehra Dun	5.23	242	*e*x	Pg	06 28 59.7	-0.1
SMLA	Simla	5.58	254	*e*P	Pn	06 28 43.0	+0.3
SMLA				IAML		06 30 05.8	
	comp=E,146nm,0.5s						
SMLA				IAML		06 30 06.7	
	comp=N,120nm,1.4s						
DHRM	DHARAMSHALA	6.04	266	*e*P	Pn	06 28 47.3	-1.9
DHRM				IAML		06 30 16.9	
	comp=E,151nm,2.4s						
DHRM				IAML		06 30 27.3	
	comp=N,130nm,0.9s						
NDI	New Delhi	6.77	234	*e*P	Pn	06 29 05.0	+6.0
NDI				*e*S	Sn	06 30 20.0	+3.8
LSA	Lhasa	7.33	113	Pn	Pn	06 29 12.4	+5.2
LSA				Sn	Sn	06 30 37.7	+6.9
LSA				Sg	Sg	06 31 07.6	-7.6
LSA				LR	LR		
	comp=N,1µm,5.7s						
LSA				LR	LR		
	comp=N,2µm,5.7s						
LSA				LR	LR		
	comp=N,1µm,5.7s						
LSA	Lhasa	7.33	113	Pn	Pn	06 29 09.1	+1.8
NIL	Nilore	8.55	278		Pn	06 29 24.6	+1.1
KSH	Kashi	8.95	320	P	Pn	06 29 29.5	+0.4
KSH				S	Sn	06 31 08.4	-1.6
KSH				pmax	pmax		
	comp=N,15nm,1.4s						
KSH				pmax	pmax		
	comp=N,390nm,4.3s						
KSH				LR	LR		
	comp=N,2µm,8.7s						
KSH				LR	LR		
	comp=N,860nm,14.6s						
BOK	Bokaro	9.30	166	*e*P	Pn	06 29 35.5	+1.8
BOK				*e*S	Sn	06 31 18.7	+0.2
GUWA	GUWAHATI	9.81	131	*e*P	Pn	06 29 44.5	+3.8
GUWA				*e*S	Sn	06 31 28.1	-2.8
SHL	Shillong	10.37	132	*e*P	Pn	06 29 48.4	-0.2
SHL				*e*P	Pn	06 29 48.5	-0.2
SHL				*e*S	Sn	06 31 40.4	-4.7
SHL				IAML		06 31 42.5	
	comp=E,73nm,1.4s						
SHL	Shillong	10.37	132	Pn	Pn	06 29 48.5	-0.2
SHLS	Shalkode	10.73	344	*e*P	Pn	06 29 52.3	-1.2
	comp=E,18nm,0.9s						
SATY	Saty	10.91	340	*e*P	Pn	06 29 58.5	+2.6
	comp=E,5.6nm,0.8s						
BHPL	Bhopal	10.95	210	*e*P	Pn	06 29 45.5	-11
BHPL				*e*S	Sn	06 31 54.1	-4.9
ULHL	Ulahol	10.95	331	P	Pn	06 29 59.3	+2.7
	SNR=14						
KPKS	Kokpek	11.21	342	*e*P	Pn	06 29 59.5	-0.5
	comp=E,21nm,0.9s						
TNSS	Tian-Shan	11.36	335	*e*P	Pn	06 30 03.1	+0.8
	comp=E,74nm,0.7s						
MDOK	Medeo	11.43	336	*e*P	Pn	06 30 03.3	+0.2
WMQ	Urumqi	11.44	16	*e*P	Pn	06 30 02.3	-0.8
WMQ	Urumqi	11.44	16	Pn	Pn	06 30 03.5	+0.4
MTBS	Maitube	11.63	334	*e*P	Pn	06 30 03.2	-2.5
UCH	Uchtor	11.71	326	P	Pn	06 30 08.4	+1.3
	SNR=24						
TKM2	Tokmak 2	11.78	331	P	Pn	06 30 09.8	+1.9
	SNR=14						
AAK	Ala-Archa	12.03	327	Pn	Pn	06 30 13.1	+1.9
	comp=E,0.2nm,0.3s,baz=147,slow=14,SNR=9.2						
AAK				LR	LR	06 34 59.9	
	comp=E,396nm,18.7s,baz=142,slow=39						
AAK	Ala-Archa	12.03	327	P	Pn	06 30 14.5	+3.3
	SNR=5.8						
AAK	Ala-Archa	12.03	327	Pn	Pn	06 30 13.6	+2.3
AML	Almayashu	12.04	323	P	Pn	06 30 14.3	+2.7
	SNR=11						
CHKK	Chushkaly	12.07	337	*e*P	Pn	06 30 12.2	+0.6
KBL	Kabul	12.08	282	Pn	Pn	06 30 12.4	+0.3
NGP	Nagpur	12.30	199	*e*P	Pn	06 30 16.0	+1.1
NGP				*e*x	x	06 32 23.5	
KUU	Kurty	12.32	335	*e*P	Pn	06 30 15.0	-0.1
	comp=E,4.7nm,1.0s						
EKS2	Erkin-Say	12.39	325	P	Pn	06 30 19.8	+3.7
	SNR=9.3						
MK31	Makanchi Array	13.94	357		Pn	06 30 36.2	-0.9
MKAR	Makanchi Array	13.94	357	Pn	Pn	06 30 36.2	-0.9
	comp=E,0.6nm,0.3s,baz=182,slow=14,SNR=50						
MKAR				LR	LR	06 37 03.2	
	comp=E,398nm,19.2s,baz=186,slow=42						
MAKZ	Makanchi	13.97	356	Pn	Pn	06 30 36.6	-1.0
IUG	Iuzhnay	14.08	315	*e*P	Pn	06 30 35.8	-3.4
BTLS	Baital	14.16	332	*e*P	Pn	06 30 39.1	-1.1
KK31	Karatay Array	14.40	319		Pn	06 30 42.5	-1.0
KKAR	Karatay Array	14.40	319	Pn	Pn	06 30 44.2	+0.6
KKAR	Karatay Array	14.40	319		Pn	06 30 42.1	-1.5
ZSN	Zaisan	14.61	4	*e*P	Pn	06 30 43.3	-3.0
GTA	Gaotai	14.77	59	P	Pn	06 30 48.1	-0.5
GTA				pP	P	06 30 53.0	-1.7
GTA				sP		06 30 56.8	
GTA				S	Sn	06 33 33.3	+1.0
GTA				pmax	pmax		
	comp=E,2.0nm,1.0s						
GTA				pmax	pmax		
	comp=E,34nm,5.3s						
GTA				LR	LR		
	comp=E,1µm,16.0s						
GTA				LR	LR		
	comp=E,400nm,14.2s						
GTA				LR	LR		
	comp=E,460nm,13.1s						
HYB	Hyderabad	16.00	197	*i* P	Pn	06 31 02.0	-2.8
HYB	Hyderabad	16.00	197	*e*x	x	06 30 51.1	
HYB				*e*P	Pn	06 31 01.2	-3.7
HYB				IAmb	IAmb	06 31 04.3	
	comp=Z,17nm,0.5s						
HYB				*e*S	Sn	06 33 51.4	-11
POO	Poona	16.66	213	*e*P	P	06 31 16.3	+0.6
LZH	Lanzhou	17.15	74	*e*P	P	06 31 24.1	+2.9
LZH				pmax	pmax		
	comp=Z,18nm,1.1s						
LZH				LR	LR		
	comp=Z,340nm,11.1s						
LZH				LR	LR		
	comp=Z,340nm,12.7s						
CD2	Chengdu	17.39	91	*e*P	Pn	06 31 21.4	-1.0
CD2				S	Sn	06 34 32.6	-3.5
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				LR	LR		
	comp=Z,720nm,7.6s						
CD2				LR	LR		
	comp=Z,610nm,8.6s						
CD2				LR	LR		
	comp=Z,610nm,8.8s						
HRA	Herat	17.70	281		Pn	06 31 25.9	-0.5
KURBB	Kurchatov Arra	18.10	350	P	Pn	06 31 29.2	-1.8
	comp=Z,0.2nm,0.3s,baz=170,slow=11,SNR=37						
KURK	Kurchatov	18.18	350		Pn	06 31 30.2	-1.8
KURK				IAmb	IAmb	06 31 34.3	
	comp=Z,23nm,1.1s						
KMI	Kunming	18.57	110	⇑P	Pn	06 31 38.8	+1.6
KMI				pP	sP	06 31 43.3	+0.2
KMI				sP	pP	06 31 45.7	+4.6
KMI				PP	PnPn	06 31 53.0	+4.1
KMI				pmax	pmax		
	comp=Z,17nm,0.9s						
KMI				LR	LR		
	comp=Z,670nm,13.4s						
KMI				LR	LR		
	comp=Z,440nm,13.9s						
KMI				LR	LR		
	comp=Z,270nm,11.7s						
MHMT	Maesarieng	19.61	135	P	Pn	06 31 52.1	+2.6
CM33	Chiang Mai Arr	19.74	131	P	Pn	06 31 51.0	-0.1
CHTO	Chiang Mai	19.75	131	P	P	06 31 48.2	-1.5
CHTO				IAmb	IAmb	06 31 56.8	
	comp=Z,8.3nm,0.6s						
CMMT	Chiang Mai	19.75	131	P	P	06 31 50.2	+0.4
	comp=Z,7.0nm,1.1s						
CM32	Chiang Mai Arr	19.80	132	P	Pn	06 31 55.0	+3.2
CM34	Chiang Mai Arr	19.85	131	P	Pn	06 31 55.0	+2.6
PAYA	Payao	19.95	128	P	Pn	06 31 59.0	+5.4
	comp=Z,8µmcomp=Z,157nm,0.7s						
CM35	Chiang Mai Arr	19.98	131	P	Pn	06 31 55.0	+1.1
CM15	Chiang Mai Arr	20.00	132	P	Pn	06 32 03.0	+8.8
CM31	Chiang Mai Arr	20.01	132	P	Pn	06 32 07.6	+13
CMAR	Chiang Mai Arr	20.01	132	P	P	06 31 53.2	+0.6
	comp=Z,3.0nm,0.5s,baz=311,slow=11,SNR=14						
CMAR				LR	LR	06 40 02.5	
	comp=Z,261nm,19.1s,baz=3.0,slow=38						
CMAR	Chiang Mai Arr	20.01	132	P	P	06 31 53.4	+0.8
CM13	Chiang Mai Arr	20.01	132	P	Pn	06 31 56.3	+1.9
	comp=Z,142nmcomp=Z,16nm,0.9s						
CM02	Chiang Mai Arr	20.03	132	P	Pn	06 31 57.0	+2.5
	comp=Z,137nmcomp=Z,19nm,1.0s						
CM01	Chiang Mai Arr	20.05	132	P	Pn	06 31 57.2	+2.5
	comp=Z,21nm,1.0s						
CM09	Chiang Mai Arr	20.05	132	P	Pn	06 31 58.0	+3.2
	comp=Z,14nm,0.8s						
CM05	Chiang Mai Arr	20.05	132	P	Pn	06 31 54.6	-0.2
	comp=Z,103nmcomp=Z,14nm,0.9s						
CM36	Chiang Mai Arr	20.06	132	P	Pn	06 31 57.0	+2.1
CM04	Chiang Mai Arr	20.07	132	P	Pn	06 31 55.2	+0.2
	comp=Z,12nm,0.8s						
LAMP	Lampang	20.40	130	P	Pn	06 32 08.0	+9.2
ZAA0	Zalesovo Array	21.10	2	P	P	06 32 03.8	-0.3
ZAA0				IAmb	IAmb	06 32 07.5	
	comp=Z,19nm,0.9s						
ZALV	Zalesovo Beam	21.10	2	P	P	06 32 03.0	-1.1
	comp=Z,12nm,0.8s,baz=188,slow=11,SNR=31						
ZALV				LR	LR	06 41 36.5	
	comp=Z,186nm,19.9s,baz=200,slow=41						
ZALV	Zalesovo Beam	21.10	2	P	P	06 32 03.4	-0.7
GYA	Guiyang	21.17	101	⇓P	P	06 32 06.5	+1.3
GYA				pP	sP	06 32 15.2	+3.8
GYA				S	S	06 36 03.1	+2.3
GYA				pmax	pmax		
	comp=Z,29nm,1.0s						
GYA				LR	LR		
	comp=Z,360nm,8.5s						
GYA				LR	LR		
	comp=Z,420nm,17.3s						
SUKH	Sukhothai	21.17	132	P	P	06 32 14.2	+9.1
GEYT	Alibeck	21.20	291	P	P	06 32 04.3	-1.2
	comp=Z,3.9nm,0.9s,baz=180,slow=13,SNR=3.5						
GEYT				LR	LR	06 41 28.8	
	comp=Z,99nm,18.6s,baz=70,slow=40						
XAN	Xi'an	21.30	80	P	P	06 32 05.7	-0.8
XAN				pP	pP	06 32 11.4	+0.6
XAN				pmax	pmax		
	comp=Z,7.0nm,1.2s						
UTTA	Uttaradit	21.56	130	P	P	06 32 11.9	+2.6
	comp=Z,12nm,0.9s						
PHIT	Phitsanulok	21.88	131	P	P	06 32 14.9	+2.1
	comp=Z,2µmcomp=Z,62nm,0.9s						
BVAR	Borovoye Array	22.22	339	P	P	06 32 15.5	-0.7
	comp=Z,1.0nm,0.7s,baz=148,slow=12,SNR=6.1						
BRVK	Borovoye	22.28	339	P	P	06 32 16.2	-0.7
BRVK				IAmb	IAmb	06 32 27.7	
	comp=Z,11nm,0.9s						
UTHA	Uthaitani	22.55	136	P	P	06 32 22.0	+2.1
	comp=Z,32nm,0.9s						
SONM	Songino Array	22.91	43	P	P	06 32 24.7	+1.1
	comp=Z,2.3nm,0.9s,baz=231,slow=9.8,SNR=16						
SONM	Songino Array	22.91	43	P	P	06 32 22.7	-0.9
ULN	Ulaanbaatar	23.30	43	P	P	06 32 26.9	-0.9
ULN				IAmb	IAmb	06 32 34.8	
	comp=Z,5.5nm,1.1s						
CHAI	Chaiyaphum	23.84	131	P	P	06 32 35.6	+2.5
ABKAR	Akbulak array	23.96	320	P	P	06 32 33.4	-0.6
SRAK	Srakaew	25.31	134	P	P	06 32 58.0	+12
AKTO	Aktyubinsk	25.65	321	P	P	06 32 49.4	0.0
	comp=Z,6.0nm,0.8s,baz=122,slow=8.2,SNR=17						
BJT	Baijiatuau	27.19	65	P	P	06 33 02.8	-0.6
BJI	Beijing	27.20	65	P	P	06 33 05.1	+1.7
QIZ	Qiongzhong	27.38	114	P	P	06 33 04.7	-0.5
QIZ				S	S	06 37 45.3	-0.1
QIZ				pmax	pmax		
	comp=Z,24nm,2.0s						
QIZ				LR	LR		
	comp=Z,220nm,8.0s						
QIZ				LR	LR		
	comp=Z,190nm,10.0s						
KBZ	Khabaz	33.29	301	LR	LR	06 48 53.1	
	comp=Z,146nm,21.1s,baz=86,slow=39						
KSRS	Korea Array	36.42	70	P	P	06 34 24.4	+0.1
	comp=Z,2.8nm,0.9s,baz=272,slow=8.9,SNR=5.6						
KSRS				LR	LR	06 51 15.2	
	comp=Z,103nm,18.9s,baz=292,slow=40						
NRIK	Noril'sk	36.59	2	P	P	06 34 25.7	+0.2
	comp=Z,3.0nm,0.6s,baz=170,slow=6.0,SNR=4.4						
NRIK				LR	LR	06 50 02.4	
	comp=Z,117nm,19.9s,baz=221,slow=37						
USRK	Ussuriysk Ar.	39.13	59	P	P	06 34 48.6	+1.4
	comp=Z,1.1nm,0.6s,baz=246,slow=11,SNR=4.4						
JOW	Kunigami	39.15	87	LR	LR	06 53 05.4	
	comp=Z,158nm,21.2s,baz=260,slow=40						
JNU	Nakatsue	39.54	76	LR	LR	06 52 46.8	
	comp=Z,89nm,20.5s,baz=314,slow=39						
BRTR	Keskin Array B	40.27	294	LR	LR	06 54 34.7	
	comp=Z,37nm,18.7s,baz=60,slow=41						
AKASG	Malin Array Be	43.12	311	P	P	06 35 19.3	-0.6
	comp=Z,1.3nm,0.6s,baz=82,slow=7.3,SNR=1.6						
AKASG				LR	LR	06 56 04.8	
	comp=Z,195nm,18.6s,baz=325,slow=40						
MJAR	Matsushiro Arr	44.69	69	P	P	06 35 31.4	-1.4
	comp=Z,2.4nm,0.7s,baz=280,slow=9.2,SNR=2.4						
MJAR				LR	LR	06 54 32.1	
	comp=Z,45nm,19.6s,baz=60,slow=36						
FINES	FINESS Array B	46.22	326	P	P	06 35 44.2	-0.3
	comp=Z,4.0nm,0.8s,baz=100,slow=7.3,SNR=9.5						
FINES				LR	LR	06 56 54.1	
	comp=Z,228nm,19.7s,baz=65,slow=38						
FINES	FINESS Array B	46.22	326	P	P	06 35 44.6	+0.1
JHJ	Hachijo jima 2	46.77	74	LR	LR	06 56 50.0	
	comp=Z,3µm,22.0s,baz=142,slow=38						
ARCES	ARCESS Array B	48.48	337	P	P	06 36 02.2	+0.1
	comp=Z,6.3nm,0.8s,baz=90,slow=9.9,SNR=9.7						
GERES	GERESS Array B	53.25	309	P	P	06 36 38.4	0.0
	comp=Z,0.5nm,0.7s,baz=65,slow=6.9,SNR=2.6						
NB2	NORSAR Subarra	53.34	325	P	P	06 36 38.3	-0.5
	comp=Z,25nm,1.4s,baz=87,slow=7.4						
NOA	NORSAR Array B	53.34	325	P	P	06 36 37.9	-0.9
	comp=Z,2.1nm,0.7s,baz=86,slow=7.2,SNR=5.0						
NOA				LR	LR	07 00 16.9	
	comp=Z,126nm,19.7s,baz=345,slow=37						
KMBO	Kilima Mbogo	55.09	242	LR	LR	06 59 49.5	
	comp=Z,46nm,20.4s,baz=91,slow=35						
GUMO	Guam	58.86	94	LR	LR	07 02 18.2	
	comp=Z,28nm,20.7s,baz=122,slow=36						
KEST	Kesra	59.87	295	LR	LR	07 09 11.4	
	comp=Z,30nm,19.0s,baz=305,slow=42						
ESDC	Sonseca Array	68.09	304	P	P	06 38 19.2	-0.5
	comp=Z,1.2nm,0.8s,baz=46,slow=5.8,SNR=5.6						
WB0	Warramunga Arr	71.49	130	P	P	06 38 40.9	+0.1
WRA	Warramunga Arr	71.58	130	P	P	06 38 41.7	+0.4
	comp=Z,1.9nm,0.6s,baz=325,slow=6.2,SNR=46						
WRA				LR	LR	07 12 50.0	
	comp=Z,20nm,22.0s,baz=175,slow=38						
AS31	Alice Springs	74.02	133	P	P	06 38 55.0	-0.7
ASAR	Alice Springs	74.02	133	P	P	06 38 56.0	+0.3
	comp=Z,1.6nm,0.6s,baz=315,slow=5.8,SNR=35						
ASAR	Alice Springs	74.02	133	P	P	06 38 55.8	0.0
IL31		75.07	20	P	P	06 39 01.4	+0.2
IL31				IAmb	IAmb	06 39 14.7	
	comp=Z,3.1nm,0.9s						
ILAR	Eielson Array	75.07	20	P	P	06 39 01.1	-0.1
	comp=Z,2.0nm,0.8s,baz=307,slow=4.7,SNR=20						
ILAR	Eielson Array	75.07	20	P	P	06 39 01.0	-0.2
TORD	Torodi Ar. Bea	76.10	277	P	P	06 39 07.2	-0.8
	comp=Z,1.1nm,0.7s,baz=39,slow=6.1,SNR=2.8						
TORD				LR	LR	07 15 02.0	
	comp=Z,34nm,20.7s,baz=320,slow=38						
KDAK	Kodiak Island	78.23	27	LR	LR	07 17 59.5	
	comp=Z,80nm,18.4s,baz=47,slow=39						
KOWA	Kowa	80.16	281	P	P	06 39 31.2	+0.7
	comp=Z,1.9nm,0.7s,baz=32,slow=9.6,SNR=4.6						
BOSA	Boshof	82.35	229	P	P	06 39 43.5	+1.6
	comp=Z,2.0nm,0.6s,baz=58,slow=4.0,SNR=8.8						
YKA	Yellowknife Ar	83.87	8	P	P	06 39 48.2	-1.0
	comp=Z,1.6nm,0.7s,baz=346,slow=4.8,SNR=31						
YKA				LR	LR	07 21 28.8	
	comp=Z,27nm,18.9s,baz=0.0,slow=39						
STKA	Stephens Creek	84.63	133	LR	LR	07 24 55.2	
	comp=Z,56nm,19.8s,baz=15,slow=41						
DLBC	Dease Lake	84.84	17	LR	LR	07 21 31.4	
	comp=Z,59nm,18.4s,baz=294,slow=38						
DBIC	Dimbokro	84.98	275	LR	LR	07 21 33.9	
	comp=Z,61nm,18.1s,baz=39,slow=38						
TXAR	Lajitas Array	117.78	7	PKP	PKiKP	06 46 08.8	+2.1
	comp=Z,0.1nm,0.4s,baz=5.2,slow=2.0,SNR=2.2						
CPUP	Villa Florida	145.40	270	PKPbc	PKPab	06 46 59.0	+0.8
	comp=Z,2.2nm,0.8s,baz=42,slow=9.9,SNR=2.6						
LPAZ	La Paz	149.44	296	PKPbc	PKPbc	06 47 09.7	-0.7
	comp=Z,0.5nm,0.7s,baz=135,slow=20,SNR=1.8						

MEX 07 06:34:22.8±1.3**, 17°.73N**×**95°.55W, h22**^{km}±22^{km}**, MD4.0, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.90	135	*i* P	Pb	06 34 36.9	-2.8
CMIG				*i* S	Sb	06 34 48.0	-3.2
OXBJ	Oaxaca	1.31	240	*i* P	Pn	06 34 42.8	-3.1
OXBJ				*i* S	Sn	06 34 58.5	-4.3
VHO	Vista Hermosa	1.31	240	*i* P	Pn	06 34 42.9	-3.1
VHO				*i* S	Sn	06 34 58.6	-4.3
TOIG	Toxpalan	1.49	284	*i* P	Pn	06 34 45.5	-2.9
TPIG	Tehuac#an	1.86	292	*i* P	Pn	06 34 50.6	-2.9
YOIG	Yosondua	2.10	246	*i* P	Pn	06 34 55.2	-1.7
YOIG				*e*S	Sn	06 35 19.3	-3.3
HLIG	Huajuapan de L	2.15	273	*e*P	Pn	06 34 55.4	-2.2
HLIG				*i* S	Sn	06 35 20.3	-3.4
PEIG	Puerto Escondi	2.31	222	*i* P	Pn	06 34 55.8	-3.8
PEIG				*e*S	Sn	06 35 23.1	-4.2
FTIG	Fresnillo de T	2.47	274	*i* P	Pn	06 34 59.9	-2.0
FTIG				*i* S	Sn	06 35 28.1	-3.3
PNIG	Pinotepa	2.81	242	*i* P	Pn	06 35 02.2	-4.2
TEIG	Tepich	7.31	69	*i* P	Pn	06 36 04.2	-4.1

IDC ***07*** *06:34:44.3±2.3, 28°.11S×177°.39W, h0^{km}, mb3.7/3, mb1 3.8/3, mb1mx3.6/30, mbtmp3.7/3, MS3.4/4, Ms1 3.4/4, ms1mx3.0/34, Error ellipse: s-maj=61.6km s-min=22.2km az=102.0*

NEIC ***07*** *06:34:49.2±0.9, 28°.22S±0°.09×177°.2W±0°.1, h41^{km}±10^{km}, mb4.2/7, Error ellipse: s-maj=19.5km s-min=11.4km az=108.0*

ISC 07 06:34:48.9±1.4**, 28°.22S**±0°.09×**177°.2W**±0°.2**, h35**^{km}**, n29, σ0^{s}87**/17**, mb4.0**/6**, MS3.2**/5**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.21	211	Pn	Pn	06 35 09.4	+0.1
	408nm,0.3s,baz=111,slow=4.4,SNR=31						
RAO				Sn	Sn	06 35 25.0	+0.5
	4µm,0.3s,baz=174,slow=23,SNR=28						
RAO				LR	LR	06 35 35.8	
	comp=Z,583nm,19.2s,baz=140,slow=42						
RAO	Raoul Island	1.21	211		Sn	06 35 25.0	+0.5
MSVF	Nonsavu	11.32	336	LR	LR	06 41 22.9	
	comp=Z,298nm,19.5s,baz=179,slow=36						
MSVF	Nonsavu	11.32	336	Pn	Pn	06 37 28.4	+0.1
BKZ	Black Stump Fm	12.11	204	Pn	Pn	06 37 38.8	-0.2
TUWZ	Tuamarina	15.04	207	Pn	Pn	06 38 18.1	-0.7
THZ	Tophouse	15.74	208	Pn	Pn	06 38 26.0	-2.0
THZ				IAmb	IAmb	06 38 42.9	
	comp=Z,35nm,1.2s						
DZM	Mont Dzumac	16.02	289	*e*LR	LR	06 42 40.3	
	comp=Z,213nm,25.1s						
KHZ	Kahutara	16.04	206	Pn	Pn	06 38 31.9	+0.2
KHZ				IAmb	IAmb	06 38 32.5	
	comp=Z,38nm,0.8s						
TBI	Tubuai	25.41	85	*e*LR	LR	06 46 16.2	
	comp=Z,103nm,28.2s						
TBI	Tubuai	25.41	85	*e*T	T	07 05 42.8	
	comp=Z,7.5nm,0.4s						
PAE	Paea	27.46	73	*e*T	T	07 08 27.7	
	comp=Z,5.1nm,0.3s						
PPT2	Papeete2	27.49	73	*e*LR	LR	06 47 21.0	
	comp=Z,87nm,25.2s						
PPT2	Papeete2	27.49	73	*e*T	T	07 08 31.1	
	comp=Z,2.1nm,0.3s						
PPT	Papeete	27.50	73	LR	LR	06 48 14.5	
	comp=Z,33nm,20.1s,baz=272,slow=29						
TVO	Taravao	27.68	74	*e*T	T	07 08 43.2	
	comp=Z,0.8nm,0.3s						
VAH	Vaihoa	30.26	71	*e*T	T	07 11 59.7	
	comp=Z,7.4nm,0.2s						
STKA	Stephens Creek	35.70	254	P	P	06 41 45.1	+0.9
STKA				IAmb	IAmb	06 41 54.4	
	comp=Z,1.7nm,1.3s						
PMG	Port Moresby	38.37	292	LR	LR	06 55 12.3	
	comp=Z,48nm,20.6s,baz=204,slow=32						
AS31	Alice Springs	43.97	264	P	P	06 42 52.4	-0.6
ASAR	Alice Springs	43.97	264	P	P	06 42 52.5	-0.5
	comp=Z,0.3nm,0.7s,baz=98,slow=7.1,SNR=5.3						
WB2	Warramunga Arr	44.76	270	P	P	06 42 58.7	-0.6
WB2				IAmb	IAmb	06 43 13.6	
	comp=Z,3.8nm,1.0s						
WRA	Warramunga Arr	44.77	270	P	P	06 42 58.3	-1.1
	comp=Z,0.7nm,0.8s,baz=107,slow=7.9,SNR=4.6						
WB0	Warramunga Arr	44.78	270	P	P	06 42 58.8	-0.7
WB0				IAmb	IAmb	06 43 16.9	
	comp=Z,3.1nm,1.0s						
QSPA	South Pole Qui	61.88	180	P	P	06 45 04.8	+0.1
PETK	Petropavlovsk-	83.89	345	P	P	06 47 15.6	+0.9
	comp=Z,2.4nm,1.0s,baz=116,slow=3.4,SNR=1.5						
KLR	Kul'dur	89.52	329	LR	LR	07 27 45.5	
	comp=Z,21nm,18.1s,baz=24,slow=36						
FINES	FINESS Array B	143.33	341	PKhKP	PKPpre	06 54 09.8	
	comp=Z,5.7nm,1.1s,baz=335,slow=8.4,SNR=2.6						
AKASG	Malin Array Be	149.95	326	PKPbc	PKPbc	06 54 34.2	-1.0
	comp=Z,0.3nm,0.5s,baz=44,slow=3.8,SNR=1.8						

DJA ***07*** *06:56:34.8±2.0, 7°N±17°×12°6E±°, h169^{km}±19^{km}, M4.7/8, mB5.0/6, mb4.8/8, MLv5.0/7, Mw(mB)4.3/6*

MAN ***07*** *06:56:36.4, 6°.34N×126°.19E, h129^{km}, mb4.7, ML3.6, MS3.5*

IDC ***07*** *06:56:39.1±0.6, 6°.37N×125°.99E, h134^{km}±5^{km}, mb3.7/16, mb1 3.8/16, mb1mx3.6/47, mbtmp4.0/16, MS2.7/1, Ms1 2.9/1, ms1mx2.3/34, Error ellipse: s-maj=34.0km s-min=10.3km az=81.0*

NEIC ***07*** *06:56:39.7±1.6, 6°.38N±0°.05×125°.9E±0°.2, h137^{km}±9^{km}, mb4.3/12, Error ellipse: s-maj=25.4km s-min=6.2km az=100.0*

ISC 07 06:56:39.2±0.6**, 6°.47N**±0°.05×**126°.14E**±0°.07**, h134**^{km}±5^{km}**, n65, σ1^{s}37**/72**, mb4.1**/21**, 2C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATI	Mati	0.49	14	*e*P	Pn	06 56 57.6	-1.0
MATI				*e*S	Sn	06 57 13.3	-0.1
DDMP	Don Marcelino,	0.56	230	*e*P	Pn	06 56 57.2	-1.9
DDMP				*e*S	Sn	06 57 12.8	-1.3
DAV	Davao City (W)	0.82	317	P	Pn	06 57 01.3	+0.4
	957nm,0.3s,baz=108,slow=1.7,SNR=89						
DAV				S	Sn	06 57 18.0	+0.7
	1µm,0.3s,baz=135,slow=23,SNR=52						
KCP	Kidapawan	1.17	297	⇑*i*P	Pn	06 57 04.2	-0.1
KCP				*i* S	Sn	06 57 23.1	0.0
SKMP	Bagumbayan, Su	1.59	272	*e*P	Pn	06 57 06.1	-2.5
SKMP				*e*S	Sn	06 57 29.2	-1.8
BUKP	Musuan	1.76	323	*e*P	Pn	06 57 10.2	-0.5
BUKP				*e*S	Sn	06 57 35.0	+0.3
CGP	Cagayan de Oro	2.44	324	⇑*e*P	Pn	06 57 18.8	-0.1
CGP				*i* S	Sn	06 57 50.4	+1.1
BUTP	Butuan	2.54	348	*e*P	Pn	06 57 20.4	+0.3
SGSI	Sangihe	2.83	192	P	Pn	06 57 23.6	-0.3
PAGZ	Pagadian	3.06	297	*e*P	Pn	06 57 25.1	-1.7
GLSP	General Luna,	3.29	360	*e*P	Pn	06 57 28.6	-1.2
GLSP				*e*S	Sn	06 58 04.5	-4.5
MSLP	Maasin	3.86	341	*e*P	Pn	06 57 36.1	-1.1
MSLP				*e*S	Sn	06 58 18.0	-4.2
LLP	Lapu-Lapu	4.39	331	⇓*e*P	Pn	06 57 44.0	-0.2
LLP				*e*S	Sn	06 58 32.1	-2.6
CNOP	Candoni, Negro	4.81	314	*e*P	Pn	06 57 49.5	-0.4
TNTI	Ternate	5.79	168	Pn	Pn	06 58 01.7	-1.3
TNTI	Ternate	5.79	168	P	Pn	06 58 01.6	-1.4
	1.3nm379nm,0.9s						
KMSI	Cibinong	6.24	200	P	Pn	06 58 09.5	+0.4
	1.1nm218nm,0.8s						
GTOI	Gorontalo	6.58	208	P	Pn	06 58 13.2	-0.5
	0.2nm663nm23nm,0.8s						
MRSI	Marisa	7.28	215	P	Pn	06 58 23.5	+0.5
	0.6nm1µm78nm,0.5s						
PVCP	Virac	7.35	345	*e*P	Pn	06 58 23.3	-0.6

TOLI2	**Tolitoli**	**7.54**	**225**	Pn	**Pn**	**06 58 24.9**	**-1.7**
LUWI	**Luwuk**	**8.19**	**204**	P	Pn	06 58 44.4	+9.2
SANI	**Sanana**	**8.46**	**181**	P	**Pn**	**06 58 35.4**	**-3.6**
	5µm298nm,0.8s						
APSI	**Ampana**	**8.59**	**212**	P	**Pn**	**06 58 41.3**	**+0.6**
	498nm38nm,1.1s						
NLAI	**Namlea**	**9.69**	**174**	P	**Pn**	**06 58 53.2**	**-2.2**
SOEI	**Soe**	**16.23**	**187**		**Pn**	**07 00 19.6**	**-0.2**
MTN	**Manton Dam**	**19.82**	**166**	P	**P**	**07 00 58.7**	**-0.8**
MTN				IAmb	IAmb	07 01 11.0	
	comp=Z,30nm,1.4s						
JOW	**Kunigami**	**20.35**	**5**	P	**P**	**07 01 05.3**	**+0.1**
	comp=Z,3.3nm,0.3s,baz=193,slow=10,SNR=4.5						
FITZ	**Fitzroy Crossi**	**24.42**	**181**	P	**P**	**07 01 44.9**	**-0.6**
	comp=Z,2.1nm,0.7s,baz=12,slow=7.7,SNR=6.2						
FITZ	**Fitzroy Crossi**	**24.42**	**181**	P	**P**	**07 01 45.6**	**+0.2**
WB0	**Warramunga Arr**	**27.31**	**163**	P	**P**	**07 02 10.8**	**-0.8**
WB0				IAmb	IAmb	07 02 20.9	
	comp=Z,11nm,1.5s						
WRA	**Warramunga Arr**	**27.46**	**163**	P	**P**	**07 02 11.8**	**-1.1**
	comp=Z,0.4nm,0.4s,baz=340,slow=8.4,SNR=10						
WB2	**Warramunga Arr**	**27.46**	**163**	P	**P**	**07 02 12.4**	**-0.6**
WB2				IAmb	IAmb	07 02 39.2	
	comp=Z,7.1nm,1.2s						
CMAR	**Chiang Mai Arr**	**29.05**	**297**	LR	LR	07 14 38.4	
	comp=Z,15nm,19.5s,baz=80,slow=37						
KSRS	**Korea Array**	**30.89**	**3**	P	**P**	**07 02 44.1**	**+1.1**
	comp=Z,0.9nm,0.7s,baz=182,slow=9.1,SNR=2.7						
AS31	**Alice Springs**	**30.89**	**166**	P	**P**	**07 02 43.5**	**+0.2**
ASAR	**Alice Springs**	**30.90**	**166**	P	**P**	**07 02 43.0**	**-0.4**
	comp=Z,1.3nm,0.6s,baz=343,slow=7.1,SNR=22						
ASAR				PcP	**PcP**	**07 05 36.7**	**-0.3**
	comp=Z,1.0nm,0.6s,baz=355,slow=2.9,SNR=7.5						
ASAR	**Alice Springs**	**30.90**	**166**	P	**P**	**07 02 43.3**	**-0.1**
MJAR	**Matsushiro Arr**	**31.90**	**19**	pP	pP	07 03 19.9	-1.1
	comp=Z,3.8nm,0.3s,baz=232,slow=6.5,SNR=8.6						
BBOO	**Buckleboo**	**40.19**	**167**	P	**P**	**07 04 02.4**	**-0.1**
STKA	**Stephens Creek**	**40.88**	**160**	P	**P**	**07 04 06.7**	**-1.6**
	comp=Z,4.2nm,0.8s,baz=333,slow=8.0,SNR=12						
STKA	**Stephens Creek**	**40.88**	**160**	P	**P**	**07 04 09.2**	**+0.9**
H11S3	**WAKE ISLAND Hy**	**41.25**	**69**	T	T	07 48 22.6	
	baz=259,slow=74						
H11S1	**WAKE ISLAND Hy**	**41.26**	**69**	T	T	07 48 26.2	
	baz=259						
H11S2	**WAKE ISLAND Hy**	**41.26**	**69**	T	T	07 48 29.0	
	baz=259,slow=74						
KLR	**Kul'dur**	**42.88**	**5**	P	**P**	**07 04 24.7**	**+0.5**
	comp=Z,1.8nm,0.6s,baz=206,slow=5.7,SNR=12						
SONM	**Songino Array**	**44.53**	**341**	P	**P**	**07 04 36.3**	**-1.4**
	comp=Z,0.2nm,0.3s,baz=134,slow=8.3,SNR=3.9						
SONM				PcP	**PcP**	**07 06 18.5**	**-0.1**
	comp=Z,0.5nm,0.7s,baz=135,slow=0.6,SNR=3.0						
PETK	**Petropavlovsk-**	**53.14**	**23**	P	**P**	**07 05 44.4**	**+1.3**
	comp=Z,2.8nm,1.1s,baz=98,slow=6.1,SNR=1.8						
PETK	**Petropavlovsk-**	**53.14**	**23**	P	**P**	**07 05 44.2**	**+1.1**
MKAR	**Makanchi Array**	**54.99**	**324**	P	**P**	**07 05 56.6**	**-0.1**
	comp=Z,0.3nm,0.4s,baz=125,slow=8.3,SNR=1.5						
MKAR				pP	**pP**	**07 06 28.8**	**+0.7**
	comp=Z,1.9nm,0.8s,baz=115,slow=8.6,SNR=4.7						
MKAR				ScP	**ScP**	**07 10 41.0**	**-2.1**
	comp=Z,0.3nm,0.8s,baz=94,slow=5.8,SNR=2.9						
ZALV	**Zalesovo Beam**	**57.90**	**333**	P	**P**	**07 06 17.7**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=122,slow=4.6,SNR=1.7						
SEY	**Seymchan**	**59.52**	**14**	P	**P**	**07 06 29.8**	**+1.6**
	comp=Z,0.9nm,0.3s,baz=212,slow=2.1,SNR=5.0						
NRIK	**Noril'sk**	**67.65**	**346**	P	**P**	**07 07 22.9**	**+1.5**
	comp=Z,1.6nm,0.6s,baz=124,slow=7.7,SNR=3.9						
IMAR	**Indian Mountai**	**80.10**	**24**	P	**P**	**07 08 35.1**	**+1.2**
TRF	**Thorofare Moun**	**81.37**	**27**	P	**P**	**07 08 41.9**	**+0.9**
TRF				IAmb	IAmb	07 08 42.8	
	comp=Z,10nm,1.1s						
MDM	**Murphy Dome**	**82.33**	**25**	P	**P**	**07 08 47.6**	**+1.8**
MDM				IAmb	IAmb	07 08 51.7	
	comp=Z,3.5nm,0.8s						
WRH	**Wood River Hil**	**82.38**	**26**	P	**P**	**07 08 46.7**	**+0.7**
WRH				IAmb	IAmb	07 08 48.0	
	comp=Z,6.9nm,1.0s						
ILAR	**Eielson Array**	**82.90**	**26**	P	**P**	**07 08 48.3**	**-0.5**
	comp=Z,2.5nm,0.8s,baz=235,slow=5.7,SNR=27						
RIDG	**Independent Ri**	**83.81**	**27**	P	**P**	**07 08 54.2**	**+0.7**
INK	**Inuvik**	**87.84**	**21**	P	**P**	**07 09 13.1**	**0.0**
	comp=Z,1.4nm,0.9s,baz=282,slow=8.1,SNR=3.7						
YKA	**Yellowknife Ar**	**97.26**	**24**	P	**P**	**07 09 57.0**	**+0.3**
	comp=Z,1.1nm,0.8s,baz=303,slow=4.1,SNR=20						
TXAR	**Lajitas Array**	**120.36**	**51**	PKP	**PKPdf**	**07 15 16.0**	**+0.4**
	comp=Z,0.3nm,0.7s,baz=297,slow=0.4,SNR=4.6						
TORD	**Torodi Ar. Bea**	**121.48**	**290**	PKP	**PKPdf**	**07 15 16.3**	**-1.6**
	comp=Z,1.0nm,0.7s,baz=80,slow=1.5,SNR=4.8						
PLCA	**Paso Flores**	**142.76**	**159**	PKhKP	PKPpre	07 15 53.4	
	comp=Z,2.2nm,0.9s,baz=180,slow=5.1,SNR=3.6						
LPAZ	**La Paz**	**162.96**	**126**	PKPab	**PKPab**	**07 17 18.7**	**+1.3**
	comp=Z,1.3nm,0.9s,baz=236,slow=3.7,SNR=4.9						

*NNC **07** 07:16:23.4±0.8, 50°.00N×78°.57E, h0^{km}, mb3.0, mpv2.5, Error ellipse: s-maj=18.5km s-min=2.4km az=78.0, Suspected Mining explosion.*

*IDC **07** 07:16:24.8±1.2, 50°.07N×78°.73E, h0^{km}, mb1 2.8/2, mb1mx2.7/49, mbtmp2.8/2, ML2.5/1, Error ellipse: s-maj=17.2km s-min=6.7km az=67.0*

ISC 07 07:16:24.3±2.0**, 50°.01N**±0°.07×**78°.5E**±0°.3**, h0^{km}, n15, σ0ˢ.77**/27**, 19C-4D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR07	**Kurchatov Arra**	**0.57**	**359**	⇑P	**Pg**	**07 16 34.7**	**-0.6**
KUR07				⇑S	**Sg**	**07 16 43.6**	**+0.9**
KUR06	**Kurchatov Arra**	**0.59**	**359**	⇑P	**Pg**	**07 16 35.1**	**-0.6**
KUR06				⇑S	**Sg**	**07 16 44.2**	**+0.8**
KUR14	**Kurchatov Arra**	**0.61**	**3**	⇑P	**Pg**	**07 16 35.2**	**-0.7**
KUR14				⇓S	**Sg**	**07 16 43.6**	**-0.2**
KUR15	**Kurchatov Arra**	**0.61**	**1**	⇑P	**Pg**	**07 16 35.1**	**-0.9**
KUR15				⇑S	**Sg**	**07 16 44.5**	**+0.6**
KURBB	**Kurchatov Arra**	**0.61**	**360**	Pg	**Pg**	**07 16 35.5**	**-0.6**
	1.6nm,0.3s,baz=167,slow=18,SNR=58						
KURBB				Lg	Lg	07 16 44.9	
	2.6nm,0.3s,baz=178,slow=28,SNR=24						
KURBB	**Kurchatov Arra**	**0.61**	**360**	⇑P	**Pg**	**07 16 35.4**	**-0.6**
KURBB				⇑S	**Sg**	**07 16 44.4**	**+0.4**
	73nm,0.5s						
KUR16	**Kurchatov Arra**	**0.62**	**358**	⇑P	**Pg**	**07 16 35.5**	**-0.6**
KUR16				⇑S	**Sg**	**07 16 44.8**	**+0.7**
KUR17	**Kurchatov Arra**	**0.62**	**356**	⇑P	**Pg**	**07 16 35.7**	**-0.6**
KUR17				⇑S	**Sg**	**07 16 45.1**	**+0.8**
KUR05	**Kurchatov Arra**	**0.63**	**360**	⇑P	**Pg**	**07 16 35.7**	**-0.7**
KUR05				⇑S	**Sg**	**07 16 44.8**	**+0.1**
KUR04	**Kurchatov Arra**	**0.65**	**0**	⇑P	**Pg**	**07 16 35.9**	**-0.9**
KUR04				⇑S	**Sg**	**07 16 45.3**	**0.0**
MAKZ	**Makanchi**	**3.94**	**143**	⇓Pn	**Pn**	**07 17 26.9**	**+0.9**
	1.1nm,0.7s						
MAKZ				⇑Pg	**Pb**	**07 17 36.0**	**+1.4**
	2.7nm,0.8s						
MAKZ				⇓Lg	Lg	07 18 26.0	
	8.6nm,0.6s						
MK31	**Makanchi Array**	**4.07**	**141**	⇓Pn	**Pn**	**07 17 27.5**	**-0.3**
	0.1nm,0.2s,baz=322,slow=9.7,SNR=2.9						
MK31				⇑Pg	**Pb**	**07 17 35.6**	**-1.3**
	0.3nm,0.3s,baz=331,slow=13,SNR=7.8						
MK31				Lg	Lg	07 18 31.3	
	8.1nm,0.6s,baz=331,slow=27,SNR=13						
MKAR	**Makanchi Array**	**4.07**	**141**	Pn	**Pn**	**07 17 27.4**	**-0.4**
	baz=334,slow=11,SNR=1.6						
MKAR				Pg	**Pb**	**07 17 36.0**	**-0.9**
	0.4nm,0.3s,baz=320,slow=14,SNR=7.0						
MKAR				Sn	**Sn**	**07 18 16.9**	**+0.7**
	0.3nm,0.3s,baz=327,slow=13,SNR=2.3						
MKAR				Lg	Lg	07 18 29.0	
	1.7nm,0.3s,baz=332,slow=25,SNR=17						
I46RU	**ZALESOVO INFRA**	**5.53**	**42**	*i*		07 47 50.0	
	baz=225,slow=319,SNR=5.5						
ZALV	**Zalesovo Beam**	**5.53**	**42**	Pn	**Pn**	**07 17 48.3**	**+0.4**
	0.7nm,0.3s,baz=242,slow=14,SNR=5.3						
ZALV				Lg	Lg	07 19 13.8	
	0.7nm,0.3s,baz=213,slow=34,SNR=2.5						

*IDC **07** 07:18:37.4±1.0, 55°.83N×164°.89E, h0^{km}, mb3.3/5, mb1 3.7/7, mb1mx3.4/46, mbtmp3.4/7, ML3.2/2, Error ellipse: s-maj=95.6km s-min=12.3km az=148.0*

*KRSC **07** 07:18:37.4±1.1, 56°.12N×164°.58E, h50^{km}±19^{km}, ML3.9*

ISC 07 07:18:36.7±1.7**, 56°.13N**±0°.05×**164°.54E**±0°.04**, h1**^{km}±11^{km}**, n33, σ1ˢ.41**/40**, mb3.3**/5**, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.96**	**276**	*e*P	**Pg**	**07 18 54.8**	**-0.3**
KBTR				*e*S	**Sg**	**07 19 07.3**	**-0.3**
KBG	**Krutoberegovo**	**1.03**	**278**	*e*P	**Pb**	**07 18 55.9**	**-1.4**
KBG				*e*S	**Sg**	**07 19 09.8**	**+0.1**
BKI	**Bering**	**1.23**	**138**	*e*P	**Pn**	**07 19 00.3**	**-0.7**
BKI				*e*S	**Sb**	**07 19 16.0**	**-1.1**
SMKR	**Semkarok**	**1.77**	**286**	*e*P	**Pn**	**07 19 08.7**	**+0.2**
SMKR				*e*S	**Sn**	**07 19 30.6**	**-1.0**
BDR	**Baidarnaya**	**1.90**	**285**	*e*P	**Pn**	**07 19 10.8**	**+0.4**
BDR				*e*S	**Sn**	**07 19 34.4**	**-0.6**
SRKR	**Sorokina**	**1.95**	**287**	*e*P	**Pn**	**07 19 11.0**	**+0.1**
KLY	**Klyuchi**	**2.18**	**277**	*e*P	**Pn**	**07 19 13.0**	**-1.0**
KLY				*e*S	**Sn**	**07 19 37.7**	**-3.9**
KMNR	**Kamenistaya**	**2.45**	**263**	*e*P	**Pn**	**07 19 19.2**	**+1.4**
TUMD	**Tumrok D**	**2.52**	**250**	*e*P	**Pn**	**07 19 19.2**	**+0.5**
TUMD				*e*S	**Sn**	**07 19 48.7**	**-1.4**
KZV	**Kizimen**	**2.61**	**249**	*e*P	**Pn**	**07 19 21.1**	**+1.0**
KOZ	**Kozyrevsk**	**2.61**	**270**	*e*P	**Pn**	**07 19 22.4**	**+2.4**
TUMR	**Tumrok**	**2.62**	**253**	*e*P	**Pn**	**07 19 21.3**	**+1.0**
SRDR	**Sredinnyy**	**2.70**	**276**	*e*P	**Pn**	**07 19 23.0**	**+1.8**
OSSR	**Ossora**	**3.23**	**346**	*e*P	**Pn**	**07 19 29.2**	**+0.7**
OSSR				*e*S	**Sn**	**07 20 05.0**	**-2.6**
ESO	**Esso**	**3.28**	**269**	*e*P	**Pn**	**07 19 31.0**	**+1.8**
SPN	**Mys Shipunski**	**4.01**	**223**	*e*P	**Pn**	**07 19 38.1**	**-1.1**
SMAR	**Somma**	**4.39**	**232**	*e*P	**Pn**	**07 19 44.9**	**+0.3**
KRX	**Arik**	**4.39**	**233**	*e*P	**Pn**	**07 19 45.8**	**+1.2**
AVH	**Avacha**	**4.42**	**232**	*e*P	**Pn**	**07 19 45.7**	**+0.8**
UGLR	**Uglovaya**	**4.42**	**231**	*e*P	**Pn**	**07 19 45.2**	**+0.3**
KOK	**Koryaka**	**4.45**	**233**	*e*P	**Pn**	**07 19 46.6**	**+1.3**
PETK	**Petropavlovsk-**	**4.99**	**236**	Pn	**Pn**	**07 19 53.3**	**+0.6**
	0.4nm,0.3s,baz=81,slow=18,SNR=7.7						
PETK				Sn	**Sn**	**07 20 52.3**	**+1.3**
	0.2nm,0.3s,baz=81,slow=18,SNR=1.5						
GRL	**Gorelyy**	**5.21**	**229**	*e*P	**Pn**	**07 19 57.4**	**+1.7**
MTVR	**Mutnovka**	**5.21**	**228**	*e*P	**Pn**	**07 19 56.5**	**+0.7**
ASAJ	**Asahikawa**	**18.40**	**238**	P	**P**	**07 22 55.3**	**+2.3**
	0.4nm,0.3s,baz=5.8,slow=26,SNR=1.5						
ASAJ				S	**S**	**07 26 21.4**	**-2.4**
	0.5nm,0.3s,baz=123,slow=29,SNR=1.2						
ILAR	**Eielson Array**	**24.86**	**50**	P	**P**	**07 24 01.3**	**+1.0**
	0.2nm,0.5s,baz=272,slow=10,SNR=4.6						
H11N2	**WAKE ISLAND Hy**	**36.38**	**176**	T	T	08 04 33.6	
	baz=357,slow=76,SNR=14						
H11N3	**WAKE ISLAND Hy**	**36.40**	**176**	T	T	08 04 35.9	
	baz=357,slow=76,SNR=48						
H11N1	**WAKE ISLAND Hy**	**36.40**	**176**	T	T	08 04 35.3	
	baz=357,slow=76,SNR=54						
YKA	**Yellowknife Ar**	**39.19**	**47**	P	**P**	**07 26 06.7**	**+1.0**
	0.2nm,0.5s,baz=300,slow=7.6,SNR=3.6						
PDAR	**Pinedale Array**	**53.84**	**65**	P	**P**	**07 28 01.7**	**+0.5**
	0.3nm,0.7s,baz=274,slow=5.3,SNR=2.8						
TXAR	**Lajitas Array**	**67.14**	**71**	P	**P**	**07 29 32.9**	**+0.9**
	0.2nm,0.6s,baz=316,slow=5.1,SNR=4.7						
WRA	**Warramunga Arr**	**79.96**	**209**	P	**P**	**07 30 46.6**	**-0.6**
	0.2nm,0.5s,baz=14,slow=5.9,SNR=1.3						

*REY **07** 07:20:27.5, 64°.66N×17°.36W, h0^{km}*

*IDC **07** 07:20:28.8±1.2, 64°.53N×17°.66W, h0^{km}, mb3.4/7, mb1 3.7/8, mb1mx3.4/44, mbtmp3.4/8, ML4.0/1, MS3.3/1, Ms1 3.3/1, ms1mx2.5/30, Error ellipse: s-maj=37.5km s-min=12.5km az=9.0*

ISC 07 07:20:28.3±0.6**, 64°.65N**±0°.02×**17°.35W**±0°.03**, h10^{km}, n39, σ1ˢ.95**/45**, mb3.5**/7**, Iceland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDJK	**Dyngjujokull**	**0.15**	**162**	P	**Pg**	**07 20 31.3**	**-0.5**
	baz=161						
IDJK				S	**Sg**	**07 20 34.2**	**-0.1**
	baz=161						
IVON	**Vonarskard**	**0.18**	**277**	P	**Pg**	**07 20 31.4**	**-0.8**
	baz=276						
IURH	**Urdarhals**	**0.19**	**26**	P	**Pg**	**07 20 31.7**	**-0.7**
	baz=29						
IHAM	**Hamarinn**	**0.27**	**230**	P	**Pb**	**07 20 33.4**	**-1.9**
	baz=229						
IHUS	**Husbondi**	**0.38**	**201**	P	**Pb**	**07 20 35.2**	**-2.1**
	baz=200						
IHUS				S	**Sb**	**07 20 41.1**	**-2.1**
	baz=200						
IVOT	**Vottur**	**0.39**	**169**	P	**Pb**	**07 20 35.4**	**-1.9**
	baz=169						
IVOT				S	**Sb**	**07 20 41.4**	**-2.0**
	baz=169						
THOR	**Thorvaldshraun**	**0.40**	**45**	P	**Pb**	**07 20 35.6**	**-1.9**
	baz=46						
IKRE	**Kreppuhraun**	**0.43**	**72**	P	**Pb**	**07 20 36.2**	**-1.9**
	baz=73						
IKRE				S	**Sb**	**07 20 43.0**	**-1.7**
	baz=73						
ISKR	**Skrokkalda**	**0.46**	**259**	P	**Pb**	**07 20 36.3**	**-2.2**
	baz=258						
IASK	**Askja**	**0.50**	**36**	P	**Pb**	**07 20 37.1**	**-2.1**
	baz=37						
IJOK	**Jokulheimar**	**0.51**	**229**	P	**Pg**	**07 20 36.2**	**-2.0**
	baz=228						
IMKO	**Mokollar**	**0.54**	**52**	P	**Pg**	**07 20 37.8**	**-1.1**
	baz=53						
IKSK	**Karasker**	**0.62**	**142**	P	**Pg**	**07 20 39.3**	**-1.1**
	baz=142						
IIEY	**Innrieyrar**	**0.65**	**212**	P	**Pb**	**07 20 39.8**	**-2.0**
	baz=211						
IIEY				S	**Sb**	**07 20 49.5**	**-1.5**
	baz=211						
ISVA	**Svartarkot**	**0.69**	**3**	S	**Sb**	**07 20 50.0**	**-2.0**
	baz=3.7						
IVSH	**V-Sauoahnukur**	**0.71**	**77**	P	**Pg**	**07 20 40.9**	**-1.2**
	baz=77						
IVSH				S	**Sb**	**07 20 51.0**	**-1.7**
	baz=77						
IKAL	**Kalfafell**	**0.72**	**192**	P	**Pb**	**07 20 41.0**	**-2.0**
	baz=192						
IVAT	**Vatnsfell**	**0.83**	**236**	P	**Pb**	**07 20 43.0**	**-1.8**
	baz=236						
IFAG	**Fagurholsmyri**	**0.84**	**159**	P	**Pg**	**07 20 42.5**	**-1.9**
	baz=158						
IFAG				S	**Sb**	**07 20 54.7**	**-1.4**
	baz=158						
IADA	**Aoalbol**	**0.84**	**63**	P	**Pg**	**07 20 42.9**	**-1.6**
	baz=64						
IMEL	**Melhnausar**	**0.97**	**17**	P	**Pg**	**07 20 45.1**	**-1.8**
	baz=18						
IREN	**Reynihlio**	**1.02**	**10**	P	**Pg**	**07 20 45.7**	**-2.2**
	baz=11						
ISNB	**Snabyli**	**1.08**	**212**	P	**Pg**	**07 20 47.1**	**-1.8**
	baz=212						
IKVO	**Krokottuvotn**	**1.08**	**10**	P	**Pg**	**07 20 47.1**	**-2.1**
	baz=10						
IGRS	**Grimsstaoir**	**1.12**	**27**	P	**Pb**	**07 20 47.3**	**-2.4**
	baz=27						
IRJU	**Rjupnafell**	**1.19**	**210**	P	**Pb**	**07 20 49.1**	**-1.8**
	baz=210						
IGHA	**Grjothals**	**1.23**	**13**	P	**Pn**	**07 20 49.2**	**-2.4**
	baz=14						
ISKI	**Skildingahlsh**	**1.23**	**6**	P	**Pn**	**07 20 49.1**	**-2.5**
	baz=6.4						
BORG	**Borgarnes**	**1.71**	**275**	Pg	**Pn**	**07 20 57.0**	**-1.1**
	12nm,0.3s,baz=100,slow=8.0,SNR=34						
BORG				Lg	Lg	07 21 19.8	
	4.4nm,0.3s,baz=14,slow=19,SNR=7.9						
SCO	**Scoresbysund**	**6.12**	**345**	*e*	**Pn**	**07 21 55.6**	**-2.9**
	baz=166,slow=8.6						
SCO				*i* P	**Pn**	**07 22 00.5**	**+1.9**
SCO				*i* S	**Sn**	**07 23 11.5**	**+3.0**
SCO				IAML		07 23 22.7	
	comp=Z,0.7nm,0.4s						
EKA	**Eskdalemuir Ar**	**11.70**	**136**	Pn	**Pn**	**07 23 16.2**	**+1.1**
	baz=325,slow=13,SNR=6.3						
FRB	**Frobisher Bay**	**21.82**	**291**	LR	LR	07 33 59.7	
	comp=Z,67nm,18.7s,baz=6.5,slow=37						
GERES	**GERESS Array B**	**22.89**	**119**	P	**P**	**07 25 35.3**	**+3.4**
	comp=Z,0.5nm,0.7s,baz=352,slow=13,SNR=3.6						
YKA	**Yellowknife Ar**	**39.27**	**313**	P	**P**	**07 27 58.1**	**+1.6**
	comp=Z,0.3nm,0.9s,baz=52,slow=8.1,SNR=3.7						
ILAR	**Eielson Array**	**45.73**	**333**	P	P	07 28 52.3	+3.3
	comp=Z,1.1nm,1.1s,baz=6.3,slow=2.9,SNR=5.0						
MKAR	**Makanchi Array**	**52.68**	**58**	P	P	07 29 45.7	+3.3
	comp=Z,0.3nm,0.7s,baz=318,slow=1.9,SNR=4.4						
PDAR	**Pinedale Array**	**53.24**	**293**	P	**P**	**07 29 48.0**	**+1.1**
	comp=Z,0.4nm,0.7s,baz=68,slow=5.6,SNR=5.0						
SONM	**Songino Array**	**59.61**	**41**	P	**P**	**07 30 34.2**	**+2.2**
	comp=Z,0.5nm,0.9s,baz=311,slow=6.6,SNR=2.9						
NVAR	**Mina Array Bea**	**60.37**	**297**	P	**P**	**07 30 38.9**	**+1.5**
	comp=Z,0.7nm,0.8s,baz=35,slow=8.1,SNR=2.0						

IDC 07 07:57:31.5±2.5**, 17°.03S**×**179°.04W, h525**^{km}±19^{km}**, mb2.7**/4**, mb1 3.0**/5**, mb1mx2.8**/35**, mbtmp3.5**/5**, Error ellipse: s-maj=125.3km s-min=25.7km az=151.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**2.87**	**255**	P	P	07 58 43.8	0.0
	1.2nm,0.3s,baz=128,slow=14,SNR=13						
MSVF				S	S	07 59 39.2	-3.3
	0.1nm,0.3s,baz=37,slow=23,SNR=1.1						
WRA	**Warramunga Arr**	**44.21**	**259**	P	P	08 04 53.3	-0.8
	0.4nm,1.1s,baz=91,slow=7.0,SNR=1.9						
ASAR	**Alice Springs**	**44.46**	**253**	P	P	08 04 56.1	+0.1
	0.8nm,0.4s,baz=89,slow=8.1,SNR=28						
ILAR	**Eielson Array**	**85.17**	**13**	P	P	08 09 11.8	+0.2
	0.2nm,0.4s,baz=224,slow=5.6,SNR=4.5						
TXAR	**Lajitas Array**	**86.03**	**58**	P	P	08 09 16.6	-0.2
	0.2nm,0.8s,baz=251,slow=5.6,SNR=2.3						

IDC 07 08:10:11.8±4.2**, 4°.63S**×**151°.74E, h0^{km}, mb2.9**/2**, mb1 3.3**/2**, mb1mx3.1**/30**, mbtmp3.0**/2**, Error ellipse: s-maj=171.6km s-min=53.7km az=118.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.78**	**227**	P	P	08 15 15.6	-0.6
	0.1nm,0.3s,baz=51,slow=9.8,SNR=4.5						
ASAR	**Alice Springs**	**25.58**	**221**	P	P	08 15 43.4	+0.5
	0.2nm,0.4s,baz=57,slow=8.8,SNR=6.1						
TORD	**Torodi Ar. Bea**	**149.25**	**288**	PKPbc	PKPbc	08 30 03.0	-0.6
	0.3nm,0.5s,baz=77,slow=2.2,SNR=1.8						

IDC 07 08:18:06.0±1.4**, 15°.33S**×**173°.44W, h0^{km}, mb3.7**/4**, mb1 4.0**/4**, mb1mx3.7**/25**, mbtmp3.7**/4**, MS3.3**/1**, Ms1 3.3**/1**, ms1mx2.6**/26**, Error ellipse: s-maj=56.4km s-min=29.9km az=147.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**8.51**	**253**	LR	LR	08 23 17.1	
	comp=Z,192nm,19.5s,baz=178,slow=37						
URZ	**Urewera**	**24.32**	**198**	P	P	08 23 25.1	-0.2
	4.3nm,0.6s,baz=127,slow=2.9,SNR=6.0						
URZ				S	S	08 27 32.0	-13
	7.3nm,1.0s,baz=25,slow=11,SNR=1.9						
H11S2	**WAKE ISLAND Hy**	**38.89**	**329**	T	T	09 05 57.4	
	baz=146,slow=76,SNR=7.9						
H11S3	**WAKE ISLAND Hy**	**38.90**	**329**	T	T	09 05 58.6	
	baz=146,slow=76,SNR=6.7						
H11S1	**WAKE ISLAND Hy**	**38.90**	**329**	T	T	09 05 58.8	
	baz=146,slow=76,SNR=7.1						
WRA	**Warramunga Arr**	**49.82**	**257**	P	P	08 27 00.3	-0.9
	0.1nm,0.5s,baz=91,slow=6.8,SNR=6.4						
ASAR	**Alice Springs**	**50.10**	**252**	P	P	08 27 03.9	+0.6
	0.7nm,0.8s,baz=86,slow=8.3,SNR=11						
TXAR	**Lajitas Array**	**80.60**	**56**	P	P	08 30 21.1	+0.1
	0.9nm,1.0s,baz=231,slow=5.7,SNR=6.0						

KRSC 07 08:33:40.5±1.8**, 49°.80N**×**156°.95E, h9**^{km}±30^{km}**, ML4.0, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.04**	**329**	*e*P	Pg	08 33 59.3	-1.1
SKR				*e*S	Sg	08 34 12.1	-1.7
PAU	**Pauzhetka**	**1.68**	**357**	*e*P	Pn	08 34 10.5	+0.6
PAU				*e*S	Sb	08 34 32.1	-0.4
KDTR	**Khodutka, Kamc**	**2.14**	**19**	*e*P	Pn	08 34 17.2	+1.0
KDTR				*e*S	Sb	08 34 44.7	-1.2
MTVR	**Mutnovka**	**2.80**	**16**	*e*P	Pn	08 34 27.6	+2.1
RUS	**Russkaya**	**2.82**	**20**	*e*P	Pn	08 34 27.9	+2.3
RUS				*e*S	Sb	08 35 02.8	-2.6
GRL	**Gorelyy**	**2.85**	**14**	*e*P	Pn	08 34 28.4	+2.3
KRMR	**Karymshinskiy**	**3.13**	**13**	*e*P	Pb	08 34 33.9	-2.2
KRMR				*e*S	Sb	08 35 12.7	-1.6
DALK	**Dalny**	**3.43**	**19**	*e*P	Pn	08 34 36.6	+2.6
UGLR	**Uglovaya**	**3.61**	**18**	*e*P	Pn	08 34 39.6	+3.0
AVH	**Avacha**	**3.65**	**17**	*e*P	Pb	08 34 41.3	-3.8
KOK	**Koryaka**	**3.66**	**16**	*e*P	Pn	08 34 40.6	+3.4
SMAR	**Somma**	**3.66**	**18**	*e*P	Pn	08 34 41.0	+3.7
KRER	**Koryakskii**	**3.69**	**17**	*e*P	Pb	08 34 42.0	-3.8
KRX	**Arik**	**3.72**	**16**	*e*P	Pn	08 34 41.8	+3.7
KRX				*e*S	Sb	08 35 27.4	-4.2
SPN	**Mys Shipunski**	**3.82**	**29**	*e*P	Pn	08 34 41.6	+2.2
SPN				*e*S	Sn	08 35 26.7	+2.3
KZV	**Kizimen**	**5.70**	**20**	*e*P	Pn	08 35 09.0	+3.7

*IDC **07** 08:35:27.5±3.0, 21°.22S×177°.15W, h278^{km}±27^{km}, mb3.0/5, mb1 3.3/7, mb1mx3.2/22, mbtmp3.8/7, Error ellipse: s-maj=30.6km s-min=22.8km az=120.0*

ISC 07 08:35:24.2±1.1**, 21°.5S**±0°.1×**176°.9W**±0°.2**, h250^{km}, n8, σ1ˢ.57**/10**, mb3.1**/5**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.04**	**307**	P	**Pn**	**08 36 53.0**	**+0.1**
	1.1nm,0.3s,baz=49,slow=20,SNR=5.7						
DZM	**Mont Dzumac**	**15.49**	**265**	P	**Pn**	**08 38 52.5**	**+2.0**
	0.3nm,0.3s,baz=78,slow=21,SNR=5.7						
URZ	**Urewera**	**17.52**	**196**	P	**Pn**	**08 39 14.4**	**+0.4**
	2.3nm,0.3s,baz=349,slow=1.8,SNR=17						
URZ				S	**S**	**08 42 19.4**	**-1.0**
	0.5nm,0.3s,baz=348,slow=18,SNR=2.2						
STKA	**Stephens Creek**	**38.32**	**245**	P	**P**	**08 42 21.5**	**+0.4**
	1.3nm,0.6s,baz=90,slow=11,SNR=5.5						
ASAR	**Alice Springs**	**45.31**	**257**	P	**P**	**08 43 17.1**	**-0.7**
	0.6nm,0.6s,baz=100,slow=8.1,SNR=14						
ASAR				PcP	**PcP**	**08 44 52.8**	**-0.1**
	0.2nm,0.6s,baz=111,slow=5.2,SNR=1.7						
WRA	**Warramunga Arr**	**45.50**	**263**	P	**P**	**08 43 17.4**	**-1.8**
	0.5nm,0.7s,baz=95,slow=8.0,SNR=4.7						
TXAR	**Lajitas Array**	**86.71**	**57**	P	**P**	**08 47 42.3**	**+2.0**
	0.2nm,0.8s,baz=251,slow=5.6,SNR=2.6						
ILAR	**Eielson Array**	**89.02**	**12**	P	**P**	**08 47 48.2**	**-2.0**
	0.2nm,0.5s,baz=227,slow=5.8,SNR=5.4						

*IDC **07** 08:45:23.1±1.8, 20°.09S×177°.88W, h451^{km}±18^{km}, mb3.3/7, mb1 3.5/10, mb1mx3.3/25, mbtmp4.0/10, Error ellipse: s-maj=22.3km s-min=13.2km az=139.0*

ISC 07 08:45:22.8±0.8**, 20°.1S**±0°.1×**177°.9W**±0°.1**, h450^{km}, n11, σ1ˢ.02**/13**, mb3.4**/7**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.51**	**300**	P	**P**	**08 46 41.8**	**-1.0**
	2.2nm,0.3s,baz=102,slow=23,SNR=13						
DZM	**Mont Dzumac**	**14.78**	**260**	P	**P**	**08 48 33.2**	**+1.4**
	0.0nm,0.3s,baz=241,slow=22,SNR=0.9						
URZ	**Urewera**	**18.64**	**192**	P	**P**	**08 49 09.7**	**-1.8**
	0.2nm,0.3s,baz=337,slow=21,SNR=0.9						
URZ				S	**S**	**08 52 18.8**	**+0.3**
	0.1nm,0.3s,baz=33,slow=6.0,SNR=1.6						
STKA	**Stephens Creek**	**38.09**	**244**	P	**P**	**08 52 02.6**	**+0.9**
	2.7nm,0.5s,baz=90,slow=11,SNR=20						
ASAR	**Alice Springs**	**44.74**	**256**	P	**P**	**08 52 55.1**	**+0.1**
	6.3nm,0.6s,baz=96,slow=8.2,SNR=125						
ASAR				S	**S**	**08 58 57.5**	**-0.7**
	0.5nm,0.8s,baz=93,slow=16,SNR=4.8						
WRA	**Warramunga Arr**	**44.79**	**262**	P	**P**	**08 52 55.0**	**-0.3**
	1.1nm,0.3s,baz=97,slow=7.4,SNR=39						
NVAR	**Mina Array Bea**	**80.63**	**43**	P	**P**	**08 56 48.1**	**+0.2**
	0.4nm,0.6s,baz=243,slow=9.7,SNR=2.4						
TXAR	**Lajitas Array**	**86.72**	**57**	P	**P**	**08 57 19.5**	**+1.2**
	0.5nm,0.6s,baz=216,slow=6.9,SNR=9.3						
ILAR	**Eielson Array**	**87.87**	**13**	P	**P**	**08 57 21.9**	**-1.0**
	0.4nm,0.8s,baz=235,slow=5.0,SNR=4.8						
PDAR	**Pinedale Array**	**88.57**	**43**	P	**P**	**08 57 27.3**	**+0.4**
	0.4nm,0.7s,baz=240,slow=7.2,SNR=3.1						
GERES	**GERESS Array B**	**149.83**	**345**	PKPbc	**PKPbc**	**09 04 20.7**	**-0.5**
	0.8nm,0.8s,baz=350,slow=1.6,SNR=5.7						

*TRN **07** 08:54:54.5, 11°.01N×62°.26W, h13^{km}, MD3.7*

*FUNV **07** 08:54:54.6, 10°.84N×62°.20W, h23^{km}, MW3.0*

ISC 07 08:54:54.4±1.5**, 10°.93N**±0°.03×**62°.34W**±0°.03**, h27**^{km}±16^{km}**, n36, σ1ˢ.59**/57**, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRUV	Carupano	0.92	254	*e*P	Pn	08 55 13.1	+1.7
CRUV				*e*S	Sn	08 55 26.6	+2.8
TRN	Trinidad (W)	0.96	107	*e*P	Pn	08 55 13.2	+1.2
TRN				*e*S	Sn	08 55 24.8	0.0
TPP	Pointe-a-Pierr	1.06	125	*e*P	Pn	08 55 15.1	+1.6
TPP				*e*S	Sn	08 55 30.0	+2.6
TBH	Brigand Hill	1.33	109	*e*P	Pb	08 55 17.8	-0.8
TBH				*e*S	Sb	08 55 36.2	+1.0
GRGR	Grenville	1.37	29	*e*P	Pn	08 55 18.3	+0.6
GRGR				*e*S	Sn	08 55 35.7	+0.6
GRGR	Grenville	1.37	29	*e*P	Pn	08 55 18.1	+0.3
GRGR				*e*S	Sb	08 55 36.1	-0.4
TPR	Prospect	1.56	80	*e*P	Pn	08 55 20.8	+0.5
TPR				*e*S	Sn	08 55 39.9	+0.4
GCMP	Grenada, Carri	1.79	30	*e*P	Pn	08 55 23.8	+0.4
GCMP				*e*S	Sn	08 55 45.3	+0.1
PCRV	Puerto La Cruz	2.38	252	*e*P	Pn	08 55 32.9	+1.2
PCRV				*e*S	Sn	08 56 00.4	+0.4
SVOC	Richmond Hill,	2.47	26	*e*P	Pn	08 55 33.5	+0.7
SVB	Belmont	2.56	24	*e*P	Pn	08 55 34.2	+0.1
SVB				*e*S	Sn	08 56 03.3	-1.1
SVV	Soufriere Volc	2.62	25	*e*	Pn	08 55 32.8	-2.1
SVV	Soufriere Volc	2.62	25	*e*P	Pn	08 55 35.3	+0.4
SVV				*e*S	Sn	08 56 06.0	+0.2
RIOV	Rio Grande	2.89	170	*e*P	Pn	08 55 37.3	-1.3
RIOV				*e*S	Sn	08 56 08.3	-4.3
MCLT	Moule a Chique	3.08	26	*e*P	Pn	08 55 41.6	+0.3
MCLT				*e*S	Sn	08 56 17.7	+0.5
SLB	Belfond	3.15	24	*e*P	Pn	08 55 43.9	+1.7
SLB				*e*S	Sn	08 56 17.9	-1.1
SLBI	Saint Lucia, B	3.35	23	*e*P	Pn	08 55 45.3	+0.4
SLBI				*e*S	Sn	08 56 23.0	-0.9
MPOM	Morne Pois Mar	3.78	22	*e*P	Pn	08 55 51.2	+0.3
MPOM				*e*S	Sn	08 56 34.3	-0.2
BIRV	Birongo	3.89	264	*e*P	Pn	08 55 54.2	+1.8
BIRV				*e*S	Sn	08 56 36.9	-0.3
FDF	Fort de France	3.95	17	*e*P	Pn	08 55 53.6	+0.3
FDF				*e*S	Sn	08 56 38.0	-0.8
ILAM	Ilet Lapin Mar	4.08	20	*e*P	Pn	08 55 56.4	+1.4
DSLB	Salisbury	4.57	11	*e*P	Pn	08 56 03.2	+1.4
DSLB	Salisbury	4.57	11	*e*S	Sn	08 56 52.7	-1.3
TDBA	Terre de Bas,	4.94	8	*e*P	Pn	08 56 08.2	+1.4
TBG	Guadaloupe-3	4.94	8	*e*P	Pn	08 56 07.9	+1.1
TBG	Guadaloupe-3	4.94	8	*e*	Pn	08 56 09.3	+2.5
MAGL	Barre de l'ile	5.09	12	*e*P	Pn	08 56 11.0	+2.1
TURV	Turiamo	5.43	265	*e*P	Pn	08 56 14.4	+0.9
TURV				*e*S	Sn	08 57 14.0	-1.1
ABD	La Joyeuse, An	5.57	8	*e*P	Pn	08 56 18.1	+2.6
BAUV	El Baul	5.95	251	*e*P	Pn	08 56 19.9	-0.9
BAUV				*e*S	Sn	08 57 24.6	-3.5
BPA	Boggy Peak	6.10	4	*e*P	Pn	08 56 24.8	+2.0
BPA	Boggy Peak	6.10	4	*e*S	Sn	08 57 31.6	-0.1
ANBD	Bethesda, Anti	6.11	5	*e*P	Pn	08 56 24.4	+1.5
SKI	Saint Kitts	6.38	357	*e*	Pn	08 56 28.2	+1.6
CDVI	St. Croix	7.18	341	*e*P	Pn	08 56 38.2	+0.6
MONV	Montecano	7.55	278	*e*P	Pn	08 56 42.7	-0.1
MONV				*e*S	Sn	08 58 02.9	-4.6

IDC 07 09:29:34.0±4.8**, 32°.77N**×**83°.57E, h0^{km}, mb3.3**/4**, mb1 3.5**/6**, mb1mx3.2**/45**, mbtmp3.3**/6**, ML2.7**/2**, Error ellipse: s-maj=231.2km s-min=25.3km az=71.0, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	14.04	356	Pn	Pn	09 32 51.6	-2.6
	0.0nm,0.3s,baz=186,slow=14,SNR=5.2						
KURBB	Kurchatov Arra	18.23	350	P	Pn	09 33 47.6	-0.6
	0.0nm,0.3s,baz=170,slow=11,SNR=5.1						
ZALV	Zalesovo Beam	21.19	2	P	P	09 34 22.6	+1.8
	0.9nm,0.7s,baz=184,slow=10,SNR=4.8						
WRA	Warramunga Arr	71.42	130	P	P	09 40 54.9	-1.4
	0.1nm,0.3s,baz=325,slow=6.1,SNR=1.6						
ASAR	Alice Springs	73.86	133	P	P	09 41 12.2	+1.4
	0.2nm,0.8s,baz=322,slow=6.4,SNR=1.9						
YKA	Yellowknife Ar	83.95	8	P	P	09 42 05.4	-0.3
	0.1nm,0.5s,baz=347,slow=5.1,SNR=1.5						

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*IDC **07** 10:24:07.7±8.4, 21°.71S×172°.60W, h0^{km}, mb4.1/4, mb1 4.3/4, mb1mx3.8/24, mbtmp4.1/4, MS4.1/2, Ms1 4.1/2, ms1mx2.9/28, Error ellipse: s-maj=216.3km s-min=46.9km az=32.0*

*NEIC **07** 10:24:10.2±1.3, 21°.8S±0°.2×172°.7W±0°.2, h10^{km}±1^{km}, mb4.5/20, Error ellipse: s-maj=36.9km s-min=13.0km az=131.0*

ISC 07 10:24:10.3±0.8**, 21°.8S**±0°.2×**172°.7W**±0°.2**, h10^{km}, n28, σ1^{s}17**/26**, mb4.5**/13**, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	3.76	43	Pn	Pn	10 25 07.6	-0.8
RAO	Raoul Island	8.77	212	Pn	Pn	10 26 16.1	-1.1
DZM	Mont Dzumac	19.38	265	LR	LR	10 34 39.5	
	comp=Z,710nm,21.8s,baz=211,slow=32						
LHI	Lord Howe Isla	26.97	243	P	P	10 29 51.9	-0.4
ARMA	Armidale	33.07	248	P	P	10 30 45.0	-1.4
ARMA				IAmb	IAmb	10 31 13.1	
	comp=Z,11nm,1.3s						
EIDS	Eidsvold	33.34	257	P	P	10 30 47.0	-1.8
CAN	Canberra	36.02	240	P	P	10 31 12.0	+0.1
CAN				IAmb	IAmb	10 31 15.5	
	comp=Z,16nm,1.3s						
CTAO	Charters Tower	38.33	265	P	P	10 31 31.6	0.0
TOO	Toolangi	39.24	237	P	P	10 31 39.4	+0.3
TOO				IAmb	IAmb	10 31 57.1	
	comp=Z,6.5nm,1.1s						
STKA	Stephens Creek	41.75	246	P	P	10 31 58.8	-1.2
	comp=Z,0.8nm,0.3s,baz=89,slow=6.1,SNR=5.4						
STKA	Stephens Creek	41.75	246	P	P	10 31 58.7	-1.2
COEN	Coen	42.63	273	P	P	10 32 05.9	-1.4
COEN				IAmb	IAmb	10 32 06.0	
	comp=Z,4.8nm,1.1s						
BBOO	Buckleboo	46.46	245	P	P	10 32 36.2	-1.4
AS31	Alice Springs	49.07	257	P	P	10 32 57.8	-0.3
ASAR	Alice Springs	49.07	257	P	P	10 32 57.7	-0.4
	comp=Z,2.0nm,0.5s,baz=99,slow=7.1,SNR=59						
WR0	Warramunga Arr	49.16	262	P	P	10 32 58.6	-0.1
WR0				IAmb	IAmb	10 32 59.0	
	comp=Z,2.6nm,0.5s						
WB0	Warramunga Arr	49.34	262	P	P	10 33 00.3	+0.1
WB0				IAmb	IAmb	10 33 00.8	
	comp=Z,6.5nm,0.7s						
WB2	Warramunga Arr	49.34	262	P	P	10 33 00.1	0.0
WB2				IAmb	IAmb	10 33 00.7	
	comp=Z,6.4nm,0.7s						
WRAB	Tennant Creek	49.34	262	P	P	10 33 00.1	-0.1
WRAB				IAmb	IAmb	10 33 00.7	
	comp=Z,4.7nm,0.8s						
WRA	Warramunga Arr	49.35	262	P	P	10 33 00.2	0.0
	comp=Z,4.5nm,0.6s,baz=96,slow=8.4,SNR=122						
WRA	Warramunga Arr	49.35	262	P	P	10 32 59.7	-0.6
FORT	Forrest	53.36	247	P	P	10 33 29.9	-0.2
FITZ	Fitzroy Crossi	57.78	262	P	P	10 34 04.8	+2.7
FITZ				IAmb	IAmb	10 34 06.0	
	comp=Z,2.6nm,0.8s						
MORW	Morawa	63.92	247	P	P	10 34 46.8	+3.0
QSPA	South Pole Qui	68.24	180	P	P	10 35 10.9	-0.2
	comp=Z,0.6nm,0.8s,baz=40,slow=7.9,SNR=2.0						
QSPA	South Pole Qui	68.24	180	P	P	10 35 11.0	-0.1
VCNR	Virginia City	78.44	39	P	P	10 36 12.2	+0.5
PDAR	Pinedale Array	86.60	41	LR	LR	11 08 06.8	
	comp=Z,78nm,19.2s,baz=324,slow=30						

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*IDC **07** 10:35:51.6±4.8, 5°.50S×153°.76E, h53^{km}±41^{km}, mb3.8/10, mb1 3.9/11, mb1mx3.7/43, mbtmp4.1/11, ML2.0/1, MS3.5/2, Ms1 3.5/2, ms1mx2.7/27, Error ellipse: s-maj=28.3km s-min=19.2km az=38.0*

*NEIC **07** 10:35:52.5±1.4, 5°.33S±0°.09×153°.8E±0°.1, h71^{km}±5^{km}, mb4.1/11, Error ellipse: s-maj=17.1km s-min=12.2km az=70.0*

ISC 07 10:35:53.2±0.6**, 5°.43S**±0°.08×**153°.77E**±0°.09**, h74^{km}, n34, σ1^{s}00**/36**, mb4.0**/13**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	2.02	308		Pn	10 36 25.0	-0.2
PMG	Port Moresby	7.65	239	P	Pn	10 37 39.7	-2.4
	1.2nm,0.3s,baz=51,slow=14,SNR=4.0						
PMG				S	Sn	10 39 05.9	-1.4
	0.8nm,0.3s,baz=70,slow=12,SNR=2.3						
PMG	Port Moresby	7.65	239	Pn	Pn	10 37 41.5	-0.5
PATS	Pohnpei	13.00	20	Pn	Pn	10 38 52.7	-2.3
DZM	Mont Dzumac	20.59	145	P	P	10 40 25.9	-0.6
	5.4nm,0.5s,baz=204,slow=17,SNR=9.5						
DZM				LR	LR	10 47 54.3	
	comp=Z,146nm,18.8s,baz=187,slow=35						
DZM	Mont Dzumac	20.59	145	P	P	10 40 27.0	+0.5
DZM				IAmb	IAmb	10 40 53.1	
	comp=Z,23nm,1.2s						
SIJI	Sorong	22.91	281	P	P	10 40 51.9	+0.6
	comp=Z,4.9nm,0.6s,baz=241,slow=22,SNR=1.9						
WR0	Warramunga Arr	23.63	231	P	P	10 40 58.7	+0.8
WR0				IAmb	IAmb	10 41 10.6	
	comp=Z,8.4nm,1.4s						
WB0	Warramunga Arr	23.63	231	P	P	10 40 58.6	+0.7
WB0				IAmb	IAmb	10 41 09.8	
	comp=Z,7.8nm,1.4s						
WC3	Warramunga Arr	23.76	231	P	P	10 40 59.2	+0.1
WRAB	Tennant Creek	23.76	231	P	P	10 40 57.8	-1.3
WB2	Warramunga Arr	23.77	231	P	P	10 40 59.6	+0.5
WB2				IAmb	IAmb	10 41 02.6	
	comp=Z,11nm,1.5s						
WRA	Warramunga Arr	23.77	231	P	P	10 40 59.0	-0.2
	comp=Z,0.6nm,0.5s,baz=56,slow=9.7,SNR=12						
WRA				PcP	PcP	10 44 42.0	+0.8
	comp=Z,0.7nm,0.6s,baz=59,slow=2.1,SNR=8.6						
ARMA	Armidale	24.94	184	P	P	10 41 10.1	+0.4
ARMA				IAmb	IAmb	10 41 14.0	
	comp=Z,9.4nm,1.1s						
ASAR	Alice Springs	26.36	225	P	P	10 41 22.3	-0.4
	comp=Z,0.3nm,0.5s,baz=57,slow=8.7,SNR=10						
ASAR				PcP	PcP	10 44 47.6	+0.6
	comp=Z,0.9nm,0.7s,baz=66,slow=2.4,SNR=11						
H11S3	WAKE ISLAND Hy	26.97	28	T	T	11 09 38.7	
	baz=208,slow=76,SNR=22						
H11S2	WAKE ISLAND Hy	26.98	28	T	T	11 09 39.1	
	baz=208,slow=76,SNR=34						
H11S1	WAKE ISLAND Hy	26.99	28	T	T	11 09 42.3	
	baz=208,slow=76,SNR=24						
FITZ	Fitzroy Crossi	30.22	243	P	P	10 41 56.6	-0.4
	comp=Z,1.7nm,0.5s,baz=63,slow=8.6,SNR=15						
FITZ	Fitzroy Crossi	30.22	243	P	P	10 41 56.8	-0.2
FITZ				IAmb	IAmb	10 41 57.4	
	comp=Z,2.6nm,0.6s						
URZ	Urewera	38.96	150	P	P	10 43 12.5	+0.4
	comp=Z,10nm,0.9s,baz=344,slow=18,SNR=2.8						
CMAR	Chiang Mai Arr	59.02	295	P	P	10 45 47.5	+1.6
	comp=Z,2.3nm,0.4s,baz=117,slow=4.9,SNR=12						
SONM	Songino Array	67.37	328	P	P	10 46 41.8	+1.0
	comp=Z,0.3nm,0.5s,baz=129,slow=7.1,SNR=2.2						
SONM				PcP	PcP	10 47 08.8	+1.0
	comp=Z,0.2nm,0.4s,baz=134,slow=6.2,SNR=2.2						
SUCK	Suckling Hills	81.40	27	P	P	10 48 00.8	-1.0
MKAR	Makanchi Array	81.43	319	P	P	10 48 03.0	+0.8
	comp=Z,0.9nm,0.6s,baz=104,slow=6.0,SNR=6.8						
MKAR	Makanchi Array	81.43	319	P	P	10 48 01.7	-0.6
ZALV	Zalesovo Beam	82.21	326	P	P	10 48 06.0	-0.1
	comp=Z,0.6nm,0.4s,baz=109,slow=6.0,SNR=2.9						
ZALV	Zalesovo Beam	82.21	326	P	P	10 48 03.9	-2.2
QSPA	South Pole Qui	84.53	180	P	P	10 48 19.0	+0.9
KKAR	Karatay Array	88.76	313	P	P	10 48 39.5	+0.5
NVAR	Mina Array Bea	91.72	52	LR	LR	11 26 02.7	
	comp=Z,17nm,19.2s,baz=246,slow=33						
LPIG	La Paz	97.59	66	P	Pdif	10 49 21.2	+1.1
	comp=Z,8.9nm,0.3s,baz=142,slow=3.2,SNR=2.5						
TORD	Torodi Ar. Bea	151.42	288	PKPbc	PKPbc	10 55 39.8	+0.1
	comp=Z,1.0nm,0.7s,baz=36,slow=2.8,SNR=2.7						
TORD				PKPab	PKPab	10 55 48.9	+0.8
	comp=Z,0.8nm,0.7s,baz=64,slow=3.2,SNR=5.4						
TORD	Torodi Ar. Bea	151.42	288	PKPdf	PKPdf	10 55 33.0	-0.5
TORD				PKPbc	PKiKP	10 55 40.0	-0.2
TORD					PKPab	10 55 49.0	+0.9

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*IDC **07** 10:43:46.9±1.0, 52°.55N×169°.20W, h0^{km}, mb3.7/15, mb1 3.9/17, mb1mx3.8/45, mbtmp3.7/17, ML3.3/2, Error ellipse: s-maj=29.3km s-min=15.3km az=173.0*

*AEIC **07** 10:43:52±1.7, 52°.5N±0°.1×169°.02W±0°.06, h36^{km}±10^{km}, ML3.6, Error ellipse: s-maj=17.2km s-min=4.5km az=172.0*

*NEIC **07** 10:43:54.6±1.8, 53°.0N±0°.4×169°.3W±0°.3, h44^{km}±30^{km}, Error ellipse: s-maj=56.4km s-min=5.9km az=157.0*

ISC 07 10:43:52.1±0.8**, 52°.7N**±0°.1×**169°.10W**±0°.07**, h33^{km}, n51, σ1^{s}21**/45**, mb3.7**/15**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIKH	Nikolski High	0.35	26		Pn	10 44 02.7	+1.8
OKSP	Okmok Steeple	0.77	39		Pn	10 44 08.0	+1.2
OKSO	Okmok South	0.90	39		Pn	10 44 09.1	+0.6
OKFG	Magazine Ridge	1.04	43		Pn	10 44 11.1	+0.8
MAPS	Pakushin South	1.73	48		Pn	10 44 21.2	+1.3
MGOD	Makushin Gods	1.76	49		Pn	10 44 21.6	+1.3
MREP	Makushin Rep't	1.83	50		Pn	10 44 22.5	+1.3
MSW	Makushin Switc	1.88	47		Pn	10 44 23.5	+1.6
MNAT	Makushin Natee	1.90	49		Pn	10 44 23.8	+1.6
UNV	Unalaska Valle	1.96	52		Pn	10 44 23.7	+0.7
AKMO	Akutan Morgan	2.34	51		Pn	10 44 30.1	+1.8
AKBBA	Akutan Broad B	2.38	52		Pn	10 44 31.1	+2.2
AKV	Akutan Volcano	2.38	51		Pn	10 44 30.6	+1.7
AKGG	Akutan Green G	2.42	49		Pn	10 44 31.0	+1.7
AHB	Akutan Harbor	2.45	52		Pn	10 44 31.8	+2.0
AKUT	Akutan	2.48	52		Pn	10 44 30.4	+0.3
ATKA	Atka Island	3.15	264		Pn	10 44 39.6	+0.2
WESP	Westdahl Peak	3.19	53		Pn	10 44 42.1	+2.0
GSTD	Great Sitkin T	4.36	265		Pn	10 44 57.0	+0.9
ADK	Adak	4.72	264	Pn	Pn	10 45 01.5	+0.6
AMKA	Amchitka	7.27	264	Pn	Pn	10 45 37.3	+1.4
CHIR	Chirikof Islan	8.51	63	Pn	Pn	10 45 52.0	-0.9
OHAK	Old Harbor	10.17	57	Pn	Pn	10 46 15.8	+0.1
KDAK	Kodiak Island	10.73	55	Pn	Pn	10 46 22.6	-0.7
	0.8nm,0.3s,baz=258,slow=4.5,SNR=17						
KDAK				Sn	Sn	10 48 19.6	-2.4
	0.1nm,0.3s,baz=156,slow=22,SNR=1.1						
KDAK	Kodiak Island	10.73	55		Pn	10 46 23.6	+0.4
ILAR	Eielson Array	16.62	35	Pn	Pn	10 47 41.9	-0.3
	0.1nm,0.3s,baz=234,slow=11,SNR=3.8						
PETK	Petropavlovsk-	19.94	285	P	P	10 48 18.5	-2.5
	0.5nm,0.3s,baz=82,slow=14,SNR=6.3						
SEY	Seymchan	22.59	312	P	P	10 48 49.1	-0.4
	0.6nm,0.4s,baz=103,slow=9.2,SNR=4.0						
INK	Inuvik	23.01	34	P	P	10 48 53.5	-0.3
	1.2nm,0.6s,baz=251,slow=6.5,SNR=3.6						
YKA	Yellowknife Ar	29.93	49	P	P	10 49 56.7	+0.1
	0.7nm,0.6s,baz=271,slow=6.9,SNR=18						
YKA				PP	PnPn	10 50 54.8	+1.4
	0.3nm,0.6s,baz=274,slow=6.8,SNR=3.0						
H11N2	WAKE ISLAND Hy	37.78	219	T	T	11 31 36.9	
	baz=24,slow=76,SNR=14						
H11N3	WAKE ISLAND Hy	37.79	219	T	T	11 31 23.5	
	baz=24,slow=76,SNR=28						
H11N1	WAKE ISLAND Hy	37.80	219	T	T	11 31 25.4	
	baz=24,slow=76,SNR=17						
H11S1	WAKE ISLAND Hy	38.97	218	T	T	11 32 51.2	
	baz=23,slow=76,SNR=159						
H11S2	WAKE ISLAND Hy	38.99	218	T	T	11 32 43.3	
	baz=23,slow=76,SNR=95						
H11S3	WAKE ISLAND Hy	38.99	218	T	T	11 32 43.5	
	baz=23,slow=76,SNR=69						
USRK	Ussuriysk Ar.	38.99	282	P	P	10 51 14.9	-0.1
	0.6nm,0.8s,baz=176,slow=28,SNR=1.8						
PDAR	Pinedale Array	40.19	80	P	P	10 51 26.0	+0.6
	0.4nm,0.6s,baz=306,slow=3.9,SNR=4.5						
KSRS	Korea Array	45.53	277	P	P	10 52 08.8	+0.5
	0.6nm,0.6s,baz=50,slow=6.9,SNR=2.0						
SONM	Songino Array	51.29	301	P	P	10 52 53.3	+0.5
	0.3nm,0.5s,baz=58,slow=5.8,SNR=3.6						
TXAR	Lajitas Array	52.58	89	P	P	10 53 02.4	-0.2
	0.3nm,0.5s,baz=309,slow=5.4,SNR=4.8						
TXAR				PcP	PcP	10 54 12.6	+0.2
	0.2nm,0.4s,baz=320,slow=3.9,SNR=1.9						
ZALV	Zalesovo Beam	57.32	318	P	P	10 53 35.5	-0.9
	1.5nm,0.4s,baz=54,slow=7.3,SNR=3.6						
MKAR	Makanchi Array	63.72	313	P	P	10 54 19.8	-0.4
	0.8nm,1.0s,baz=53,slow=6.0,SNR=3.8						
FINES	FINESS Array B	65.60	352	P	P	10 54 32.8	+0.7
	1.9nm,0.8s,baz=2.8,slow=8.6,SNR=4.1						
AKASG	Malin Array Be	75.85	348	P	P	10 55 34.6	0.0
	0.3nm,0.3s,baz=12,slow=5.4,SNR=3.6						
CMAR	Chiang Mai Arr	76.71	283	P	P	10 55 39.8	-0.2
	0.4nm,0.4s,baz=26,slow=5.0,SNR=4.5						
ESDC	Sonseca Array	87.14	11	P	P	10 56 35.5	+1.0
	0.7nm,0.6s,baz=348,slow=4.8,SNR=3.0						
ASAR	Alice Springs	90.71	230	P	P	10 56 50.4	-0.9
	0.3nm,0.8s,baz=26,slow=4.9,SNR=4.4						
H03N2	Juan Fernandez	115.88	112	T	T	13 09 09.7	
	baz=311						
H03N1	Juan Fernandez	115.89	112	T	T	13 09 11.3	
	baz=311						
H03N3	Juan Fernandez	115.90	112	T	T	13 09 04.0	
	baz=311						

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*NEIC **07** 10:44:05.7±1.7, 18°.23N±0°.04×101°.15W±0°.04, h69^{km}±4^{km}, Error ellipse: s-maj=6.8km s-min=5.2km az=154.0*

*MEX **07** 10:44:07.2±0.9, 18°.25N×101°.09W, h63^{km}±9^{km}, MD4.0*

*IDC **07** 10:44:12.3±3.7, 18°.58N×100°.66W, h114^{km}±32^{km}, mb3.4/8, mb1 3.6/11, mb1mx3.5/39, mbtmp3.7/11, MS3.3/1, Ms1 3.3/1, ms1mx2.5/25, Error ellipse: s-maj=41.4km s-min=15.9km az=49.0*

ISC 07 10:44:05.4±0.7**, 18°.23N**±0°.03×**101°.13W**±0°.03**, h68^{km}**±7^{km}**, n59, σ1^{s}57**/80**, mb3.9**/11**, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZIIG	Zihuatanejo	0.69	207	*i* P	Pn	10 44 20.3	+0.2
ZIIG				*i* S	Sn	10 44 31.4	+0.5
ZIIG	Zihuatanejo	0.69	207	*i* P	Pn	10 44 20.3	+0.2
ZIIG				*i* S	Sn	10 44 31.4	+0.5
ZIIG	Zihuatanejo	0.69	207		Pn	10 44 20.3	+0.2
ZIIG					Sn	10 44 31.4	+0.5
ARIG	Puente Sto Nin	0.75	86	*i* P	Pn	10 44 20.1	-0.6
ARIG				*i* S	Sn	10 44 30.9	-1.2
ARIG	Puente Sto Nin	0.75	86	*e*P	Pn	10 44 20.1	-0.6
ARIG				*e*S	Sn	10 44 30.9	-1.2
ARIG	Puente Sto Nin	0.75	86		Pn	10 44 20.1	-0.6
ARIG					Sn	10 44 30.9	-1.2
CAIG	El Cayaco	1.44	145	*i* P	Pn	10 44 29.6	+0.1
CAIG				*i* S	Sn	10 44 44.0	-3.5
CAIG	El Cayaco	1.44	145	*i* P	Pn	10 44 29.6	+0.1
CAIG				*i* S	Sn	10 44 46.9	-0.6
CAIG	El Cayaco	1.44	145		Pn	10 44 29.6	+0.1
CAIG					Sn	10 44 44.0	-3.5
MOIG	Morelia	1.44	358	*i* P	Pn	10 44 29.6	-0.2
MOIG				*i* S	Sn	10 44 46.6	-1.5
MOIG	Morelia	1.44	358	*i* P	Pn	10 44 29.6	-0.2
MOIG				*i* S	Sn	10 44 46.6	-1.5
MOIG	Morelia	1.44	358		Pn	10 44 29.6	-0.2
MEIG	Mezcala	1.47	102	*i* P	Pn	10 44 30.7	+0.7
MEIG	Mezcala	1.47	102	*e*P	Pn	10 44 29.6	-0.4
MEIG				*i* S	Sn	10 44 46.7	-1.8
MEIG	Mezcala	1.47	102		Pn	10 44 30.7	+0.7
URUA	Uruapan	1.48	323	*i* P	Pn	10 44 31.0	+0.7
URUA				*e*S	Sn	10 44 49.5	+0.5
PLIG	Platanillo	1.56	84	*i* P	Pn	10 44 32.3	+1.1
PLIG	Platanillo	1.56	84	*e*P	Pn	10 44 31.2	0.0
PLIG				*i* S	Sn	10 44 49.3	-1.3
PLIG	Platanillo	1.56	84		Pn	10 44 32.3	+1.1
MMIG	Aquila	2.10	272	*i* P	Pn	10 44 38.7	+0.2
MMIG				*i* S	Sn	10 44 58.0	-5.6
MMIG	Aquila	2.10	272	*i* P	Pn	10 44 38.7	+0.2
MMIG				*i* S	Sn	10 45 03.9	+0.3
MMIG	Aquila	2.10	272		Pn	10 44 38.7	+0.2
MMIG					Sn	10 44 58.0	-5.6
UNM	Universidad Na	2.15	59		Pn	10 44 39.6	+0.2
CRIG	Cruz Grande	2.42	128	*i* P	Pn	10 44 43.2	+0.5
CRIG	Cruz Grande	2.42	128	*i* P	Pn	10 44 43.2	+0.5
CRIG				*e*S	Sn	10 45 09.1	-2.2
TLIG	Tlapa	2.53	105	*i* P	Pn	10 44 45.9	+1.6
TLIG				*i* S	Sn	10 45 11.5	-2.7
TLIG	Tlapa	2.53	105	*i* P	Pn	10 44 45.9	+1.6
TLIG				*i* S	Sn	10 45 11.5	-2.7
TLIG	Tlapa	2.53	105		Pn	10 44 45.7	+1.3
ZAIG	Zacatecas	4.71	344	Pn	Pn	10 45 14.9	+0.6
CMIG	Matias Romero	6.06	100	P	Pn	10 45 34.5	+2.0
	0.9nm,0.3s,baz=263,slow=12,SNR=29						
CMIG				S	Sn	10 46 39.6	-1.0
	2.1nm,0.3s,baz=138,slow=13,SNR=5.4						
TXAR	Lajitas Array	11.29	349	P	Pn	10 46 46.5	+2.4
	0.1nm,0.3s,baz=158,slow=15,SNR=5.2						
TXAR	Lajitas Array	11.29	349	Pn	Pn	10 46 45.0	+0.9
ETX02	Prairie Street	14.91	23	Pn	Pn	10 47 33.8	+1.4
319A	Douglas	15.03	332	Pn	Pn	10 47 33.7	-0.3
MSTX	Muleshoe	15.74	355		Pn	10 47 43.5	+0.3
MSTX				IAmb	IAmb	10 48 06.4	
	comp=Z,8.4nm,1.1s						
Z38A	Mt. Pleasant	15.95	19	Pn	Pn	10 47 46.2	+0.5
AMTX	Amarillo	16.60	358		Pn	10 47 53.7	-0.1
AMTX				IAmb	IAmb	10 47 55.1	
	comp=Z,15nm,1.2s						
ANMO	Albuquerque	17.31	345	P	P	10 48 05.5	+2.1
	comp=Z,0.1nm,0.3s,baz=154,slow=12,SNR=8.8						
ANMO				LR	LR	10 55 18.8	
	comp=Z,84nm,18.6s,baz=134,slow=39						
ANMO	Albuquerque	17.31	345	P	P	10 48 05.0	+1.7
PIX	Pinacate	17.34	322	P	P	10 48 03.6	+0.3
OK030	Cody Creek RV	18.05	11	P	Pn	10 48 12.3	+0.8
TUL1	Leonard	18.24	14	P	P	10 48 12.9	-0.4
TUL1				IAmb	IAmb	10 48 14.1	
	comp=Z,8.7nm,0.9s						
Y45A	Yeager Farm, C	18.71	31	P	Pn	10 48 19.6	0.0
SDCO	Great Sand Dun	19.82	350	P	Pn	10 48 32.7	-0.3
PLAL	Pickwick Lake	20.33	32	P	P	10 48 35.5	-0.7
PLAL				IAmb	IAmb	10 48 41.2	
	comp=Z,2.3nm,0.7s						
S39A	Bolivar	20.56	18	P	P	10 48 38.4	-0.2
S39A				IAmb	IAmb	10 48 42.4	
	comp=Z,5.7nm,0.8s						
R40A	Maddies Statio	21.44	19	P	P	10 48 48.0	+0.1
R40A				IAmb	IAmb	10 48 48.8	
	comp=Z,2.2nm,0.6s						
SRU	San Rafael Swe	22.35	340	P	P	10 48 59.7	+1.7
SRU				IAmb	IAmb	10 49 00.6	
	comp=Z,3.5nm,0.7s						
TKL	Tuckaleechee C	23.19	38	P	P	10 49 04.1	-2.4
	comp=Z,0.7nm,0.3s,baz=230,slow=7.9,SNR=4.5						
TKL	Tuckaleechee C	23.19	38	P	P	10 49 04.3	-2.2
TKL				IAmb	IAmb	10 49 12.4	
	comp=Z,7.8nm,1.3s						
T50A	Nancy	23.57	34	P	P	10 49 08.0	-2.0
T50A				IAmb	IAmb	10 49 20.6	
	comp=Z,9.5nm,1.5s						
NVAR	Mina Array Bea	25.09	327	P	P	10 49 26.3	+2.3
	comp=Z,2.8nm,0.6s,baz=148,slow=11,SNR=13						
PDAR	Pinedale Array	25.48	345	P	P	10 49 28.1	+0.5
	comp=Z,2.1nm,0.8s,baz=153,slow=10.0,SNR=14						
ULM	Lac du Bonnet	32.22	6	P	P	10 50 25.6	-1.5
	comp=Z,0.8nm,0.4s,baz=212,slow=9.0,SNR=3.2						
YKA	Yellowknife Ar	45.21	351	P	P	10 52 15.2	-0.2
	comp=Z,0.6nm,0.8s,baz=156,slow=7.9,SNR=6.0						
SIV	San Ignacio	52.08	128	P	P	10 53 09.9	+1.0
	comp=Z,0.5nm,0.5s,baz=277,slow=16,SNR=2.3						
INK	Inuvik	54.05	346	P	P	10 53 22.1	-0.5
	comp=Z,1.4nm,0.8s,baz=113,slow=7.7,SNR=1.3						
ILAR	Eielson Array	55.59	338	P	P	10 53 34.8	+1.0
	comp=Z,1.0nm,0.9s,baz=153,slow=6.6,SNR=9.8						
WRA	Warramunga Arr	127.75	259	PKP	PKiKP	11 03 05.7	+1.1
	comp=Z,0.5nm,0.7s,baz=84,slow=1.9,SNR=5.7						

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*IDC **07** 11:09:08.7±2.1, 7°.21S×129°.36E, h141^{km}±23^{km}, mb3.3/4, mb1 3.4/9, mb1mx3.3/35, mbtmp3.8/9, MS2.7/2, Ms1 2.7/2, ms1mx2.4/21, Error ellipse: s-maj=25.7km s-min=19.1km az=110.0*

*NEIC **07** 11:09:09.5±1.6, 7°.08S±0°.06×129°.27E±0°.09, h170^{km}±8^{km}, mb4.2/6, Error ellipse: s-maj=13.8km s-min=7.4km az=69.0*

ISC 07 11:09:08.7±0.6**, 7°.23S**±0°.05×**129°.40E**±0°.06**, h170^{km}, n29, σ3^{s}14**/34**, mb3.7**/7**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	2.02	112	Pn	Pn	11 09 48.0	+2.6
SAUI					Sn	11 10 12.4	-1.3
FAKI	Fak Fak	5.13	34		Pn	11 10 23.1	-1.2
FAKI				Sn	Sn	11 11 18.9	-4.7
SOEI	Soe	5.67	243		Pn	11 10 32.7	+1.3
MTN	Manton Dam	5.83	163		Pn	11 10 35.9	+2.4
BATI	Baumata	6.40	242	P	Pn	11 10 42.1	+1.1
	22nm,0.3s,baz=104,slow=4.3,SNR=11						
BATI				S	Sn	11 11 51.1	-2.4
	3.9nm,0.3s,baz=43,slow=22,SNR=1.6						
BATI				LR	LR	11 12 51.0	
	comp=Z,61nm,18.7s,baz=202,slow=35						
SIJI	Sorong	6.58	16	P	Pn	11 10 42.6	-0.8
	1.5nm,0.3s,baz=32,slow=14,SNR=12						

SIJI				S	Sn	11 11 51.4	-6.6
	1.8nm,0.3s,baz=252,slow=23,SNR=2.1						
KAPI	Kappang	9.85	282	LR	LR	11 15 35.1	
	comp=Z,39nm,19.9s,baz=287,slow=39						
FITZ	Fitzroy Crossi	11.41	198	P	Pn	11 11 47.2	+0.3
	0.5nm,0.3s,baz=19,slow=14,SNR=24						
FITZ				S	Sn	11 13 45.9	-7.5
	1.1nm,0.3s,baz=69,slow=21,SNR=9.5						
FITZ	Fitzroy Crossi	11.41	198		Pn	11 11 47.5	+0.6
WB0	Warramunga Arr	13.37	159		P	11 12 14.5	-1.1
WRAB	Tennant Creek	13.51	160	Pn	P	11 12 17.5	+0.4
WRA	Warramunga Arr	13.52	160	P	P	11 12 14.7	-2.5
	0.6nm,0.3s,baz=346,slow=13,SNR=24						
WRA				S	Sn	11 14 37.5	-6.6
	1.1nm,0.3s,baz=327,slow=23,SNR=11						
WRA	Warramunga Arr	13.52	160		P	11 12 16.6	-0.6
WB2	Warramunga Arr	13.52	160	Pn	P	11 12 16.1	-1.1
WR0	Warramunga Arr	13.60	159	Pn	P	11 12 18.0	-0.2
ASAR	Alice Springs	16.91	166	P	Pn	11 12 58.1	+2.6
	0.1nm,0.3s,baz=346,slow=11,SNR=3.0						
ASAR				S	S	11 15 56.2	-6.1
	0.1nm,0.3s,baz=336,slow=18,SNR=2.0						
ASAR	Alice Springs	16.91	166	P	Pn	11 13 00.5	+5.0
SANVU	Saraoutou	37.90	106	P	P	11 16 13.2	+3.4
CMAR	Chiang Mai Arr	39.43	311	P	P	11 16 25.1	+2.7
	0.5nm,0.3s,baz=140,slow=5.9,SNR=4.6						
JNU	Nakatsue	40.15	2	P	P	11 16 28.3	+0.1
SONM	Songino Array	58.47	342	P	P	11 18 50.7	+3.7
	0.3nm,0.5s,baz=160,slow=9.0,SNR=2.0						
MKAR	Makanchi Array	68.09	327	P	P	11 19 52.6	+2.5
	0.3nm,0.4s,baz=115,slow=8.1,SNR=5.1						
MKAR	Makanchi Array	68.09	327	P	P	11 19 49.7	-0.4
KBL	Kabul	70.46	310	P	P	11 20 04.2	-1.0
KBL				IAmb	IAmb	11 20 33.9	
	comp=Z,2.2nm,0.6s						
ZALV	Zalesovo Beam	71.53	334	P	P	11 20 13.0	+2.1
	comp=Z,0.4nm,0.4s,baz=126,slow=7.4,SNR=2.2						
ZALV	Zalesovo Beam	71.53	334	P	P	11 20 10.8	-0.1
KURK	Kurchatov	72.41	329	P	P	11 20 16.1	-0.1
MAW	Mawson	74.52	201	P	P	11 20 29.2	+0.9
MAW				IAmb	IAmb	11 20 29.7	
	comp=Z,14nm,1.4s						
QSPA	South Pole Qui	82.75	180	P	P	11 21 16.0	+2.5
QSPA				IAmb	IAmb	11 21 36.1	
	comp=Z,4.5nm,1.3s						

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*IDC **07** 11:28:46.0±2.2, 24°.45N×109°.38W, h0^{km}, mb3.3/2, mb1 3.7/5, mb1mx3.5/35, mbtmp3.4/5, ML3.4/3, MS3.1/7, Ms1 3.1/7, ms1mx3.0/18, Error ellipse: s-maj=46.3km s-min=9.8km az=145.0*

*MEX **07** 11:28:50.1±0.7, 24°.76N×109°.60W, h16^{km}±10^{km}, MD4.1*

ISC 07 11:28:47.7±0.8**, 24°.75N**±0°.05×**109°.58W**±0°.04**, h10^{km}, n22, σ2^{s}18**/21**, MS3.0**/3**, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPIG	La Paz	0.93	226	Pg	Pg	11 29 04.5	-1.0
	124nm,0.3s,baz=25,slow=2.9,SNR=104						
LPIG				Lg	Lg	11 29 15.6	
	679nm,0.3s,baz=180,slow=22,SNR=16						
LPIG				LR	LR	11 29 32.2	
	comp=Z,139nm,19.3s,baz=50,slow=51						
LPIG	La Paz	0.93	226	*i*P	Pg	11 29 04.6	-1.0
LPIG				*i*S	Sg	11 29 15.3	-2.3
TSIG	Topolobambo	0.98	30	*i*P	Pg	11 29 05.2	-1.3
TSIG				*i*S	Sg	11 29 16.9	-2.4
SSIG	Sanalona	2.22	88	*e*P	Pn	11 29 23.0	-1.6
SSIG				*i*S	Sn	11 29 48.9	-3.2
CSIG	Choix	2.34	28	*i*P	Pn	11 29 25.2	-1.1
CSIG				*i*S	Sn	11 29 52.5	-2.7
SRIG	Santa Rosalia	3.50	317	*e*P	Pn	11 29 41.0	-1.3
SRIG				*i*S	Sn	11 30 20.7	-3.1
PDIG	Papasquiaro	3.81	85	*e*P	Pn	11 29 47.3	+0.6
PDIG				*i*S	Sn	11 30 31.4	-0.3
HPIG		4.14	57	*i*P	Pn	11 29 51.6	+0.3
TXAR	Lajitas Array	6.97	48	Pn	Pn	11 30 30.0	-0.1
	0.3nm,0.3s,baz=216,slow=15,SNR=18						
TXAR				Sn	Sn	11 31 47.0	-2.5
	1.0nm,0.3s,baz=232,slow=25,SNR=8.6						
TXAR				LR	LR	11 32 29.5	
	comp=Z,38nm,18.0s,baz=0.0,slow=32						
TXAR				Lg	Lg	11 32 30.8	
	0.6nm,0.3s,baz=229,slow=26,SNR=3.5						
ANMO	Albuquerque	10.52	14	Pn	Pn	11 31 22.2	+3.5
	0.1nm,0.3s,baz=193,slow=13,SNR=12						
ANMO				LR	LR	11 35 44.1	
	comp=Z,116nm,18.1s,baz=177,slow=39						
NVAR	Mina Array Bea	15.52	334	Pn	P	11 32 34.3	+3.0
	0.2nm,0.3s,baz=153,slow=12,SNR=2.9						
CMIG	Matias Romero	15.69	116	LR	LR	11 38 41.1	
	comp=Z,121nm,18.7s,baz=284,slow=39						
PDAR	Pinedale Array	17.97	0	LR	LR	11 40 07.4	
	comp=Z,49nm,19.3s,baz=120,slow=37						
TEIG	Tepich	20.19	99	LR	LR	11 43 03.4	
	comp=Z,68nm,18.1s,slow=43						
NEW	Newport	24.21	348	LR	LR	11 44 09.2	
	comp=Z,105nm,18.0s,baz=74,slow=38						
TKL	Tuckaleechee C	24.74	58	LR	LR	11 45 54.0	
	comp=Z,31nm,19.3s,baz=264,slow=42						
YKA	Yellowknife Ar	37.88	356	P	P	11 36 06.7	+2.0
	0.4nm,0.9s,baz=174,slow=8.0,SNR=2.7						
ILAR	Eielson Array	46.68	339	P	P	11 37 18.7	+2.4
	0.5nm,1.0s,baz=152,slow=7.9,SNR=3.1						
H03N2	Juan Fernandez	64.81	152	T	T	12 49 52.2	
	baz=331,slow=78,SNR=18						
H03N1	Juan Fernandez	64.81	152	T	T	12 49 54.2	
	baz=331,slow=78,SNR=18						
H03N3	Juan Fernandez	64.82	152	T	T	12 49 52.3	
	baz=331,slow=78,SNR=15						
WRA	Warramunga Arr	121.15	261	PKP	PKPdf	11 47 41.2	-0.3
	0.2nm,0.8s,baz=80,slow=0.9,SNR=1.4						

IDC 07 11:38:18.9±41.0**, 30°.32S**×**177°.55W, h0^{km}, mb3.7**/3**, mb1 3.8**/3**, mb1mx3.6**/24**, mbtmp3.7**/3**, Error ellipse: s-maj=744.6km s-min=186.4km az=98.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	34.88	257	P	P	11 45 11.4	-0.7
	0.3nm,0.3s,baz=88,slow=6.0,SNR=3.0						
ASAR	Alice Springs	43.50	267	P	P	11 46 24.3	-0.1
	0.2nm,0.3s,baz=97,slow=7.6,SNR=5.1						
WRA	Warramunga Arr	44.48	272	P	P	11 46 32.5	+0.2
	0.3nm,0.3s,baz=110,slow=8.1,SNR=10						

IDC 07 11:39:07.8±1.5**, 0°.87S**×**137°.28E, h0^{km}, mb3.7**/3**, mb1 3.9**/4**, mb1mx3.5**/30**, mbtmp3.7**/4**, ML3.5**/1**, Error ellipse: s-maj=62.3km s-min=24.7km az=88.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	19.17	188	P	P	11 43 33.0	-0.1
	0.1nm,0.3s,baz=9.4,slow=12,SNR=20						
ASAR	Alice Springs	22.89	188	P	P	11 44 13.5	+0.1
	1.8nm,0.8s,baz=17,slow=11,SNR=24						
MKAR	Makanchi Array	67.47	322	P	P	11 50 06.3	+0.6
	0.6nm,0.5s,baz=112,slow=7.9,SNR=9.2						
ILAR	Eielson Array	84.77	25	P	P	11 51 42.7	-1.1
	0.3nm,0.7s,baz=258,slow=4.8,SNR=2.9						

IDC 07 11:46:50.1±1.3**, 28°.15N**×**105°.07E, h0^{km}, mb3.5**/3**, mb1 3.6**/5**, mb1mx3.4**/39**, mbtmp3.4**/5**, ML3.5**/2**, Error ellipse: s-maj=51.2km s-min=23.2km az=68.0, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	11.16	212	Pn	Pn	11 49 31.7	+0.6
	0.2nm,0.3s,baz=26,slow=13,SNR=1.4						
SONM	Songino Array	19.68	3	P	Pn	11 51 22.1	-0.1
	0.1nm,0.3s,baz=181,slow=12,SNR=3.8						
MKAR	Makanchi Array	25.79	322	P	P	11 52 22.1	-0.7
	0.4nm,0.5s,baz=122,slow=7.3,SNR=5.5						
WRA	Warramunga Arr	55.56	146	P	P	11 56 27.3	-0.2
	0.4nm,0.7s,baz=336,slow=8.5,SNR=6.7						
ASAR	Alice Springs	58.54	149	P	P	11 56 48.6	0.0
	0.6nm,0.7s,baz=333,slow=6.7,SNR=7.2						

IDC 07 12:03:34.5±3.7**, 4°.99S**×**151°.54E, h0^{km}, mb3.4**/3**, mb1 3.6**/4**, mb1mx3.3**/46**, mbtmp3.5**/4**, ML1.6**/1**, Error ellipse: s-maj=126.2km s-min=47.9km az=120.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	6.18	224	Pn	Pn	12 05 06.9	-0.3
	0.8nm,0.3s,baz=29,slow=19,SNR=2.1						
PMG				Sn	Sn	12 06 17.6	-1.0
	0.5nm,0.3s,baz=299,slow=19,SNR=1.5						
WRA	Warramunga Arr	22.39	227	P	P	12 08 34.2	-0.6
	0.2nm,0.4s,baz=50,slow=9.9,SNR=6.1						
ASAR	Alice Springs	25.18	221	P	P	12 09 02.2	+0.2
	0.3nm,0.5s,baz=58,slow=9.0,SNR=9.7						
FITZ	Fitzroy Crossi	28.47	241	P	P	12 09 32.1	+0.5
	1.2nm,0.8s,baz=45,slow=7.1,SNR=2.2						
TORD	Torodi Ar. Bea	149.17	287	PKPbc	PKPbc	12 23 25.5	-0.7
	0.2nm,0.5s,baz=93,slow=2.0,SNR=1.9						

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*IDC **07** 12:11:14.3±0.8, 14°.08N×91°.84W, h0^{km}, mb4.2/11, mb1 4.5/13, mb1mx4.2/36, mbtmp4.2/13, ML4.2/2, MS3.6/7, Ms1 3.6/7, ms1mx3.3/25, Error ellipse: s-maj=34.2km s-min=15.6km az=50.0*

*NEIC **07** 12:11:20.7±2.5, 13°.98N±0°.08×92°.18W±0°.07, h47^{km}±7^{km}, mb4.5/118, Error ellipse: s-maj=13.1km s-min=8.3km az=216.0*

*UCR **07** 12:11:20.0±1.4, 13°.87N×92°.07W, h21^{km}±9^{km}, ML3.9, mb4.5(NEIC)*

*SNET **07** 12:11:20.0±1.4, 13°.87N×92°.06W, h21^{km}±8^{km}, ML4.2*

*GCG **07** 12:11:26.5±0.6, 14°.13N×91°.74W, h19^{km}±7^{km}, MD4.5*

ISC 07 12:11:21.1±1.1**, 14°.01N**±0°.07×**92°.13W**±0°.06**, h52^{km}**±10^{km}**, n193, σ1^{s}22**/203**, mb4.5**/50**, MS3.6**/7**, 2C-2D, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RTAL	Retalhuleu	0.66	39	⇓*e*P	Pn	12 11 34.1	-0.4
RTAL				*e*S	Sn	12 11 44.2	+0.1
RTAL	Retalhuleu	0.66	39	Pn	Pn	12 11 34.1	-0.4
FUG	Fuego 3	1.32	70	*i*P	Pn	12 11 43.7	+0.4
FUG				*e*S	Sn	12 11 57.5	-2.4
HUEH	Huehuetenango	1.44	25	⇓*e*P	Pn	12 11 46.0	+0.9
HUEH				*e*S	Sn	12 12 08.1	+5.2
HUEH	Huehuetenango	1.44	25	Pn	Pn	12 11 45.9	+0.9
PCG	Pacaya	1.52	75	*e*P	Pn	12 11 47.2	+1.0
NBG	Las Nubes	1.82	71	*i*P	Pn	12 11 52.4	+2.2
CCIG	Comitan	2.26	360		Pn	12 11 57.8	+1.6
RTR	El Retiro	2.41	92	*e*P	Pn	12 11 58.0	-0.3
RTR	El Retiro	2.41	92	*e*P	Pn	12 11 58.0	-0.3
CEVE	Cerro Verde	2.44	94	*e*P	Pn	12 11 57.7	-0.9
CEVE				*e*S	Sn	12 12 28.6	+1.2
CEVE				IAML		12 12 45.3	
	comp=Z,3μm,0.4s						
CEVE	Cerro Verde	2.44	94	*e*P	Pn	12 11 57.7	-0.9
CEVE				*e*S	Sn	12 12 28.6	+1.2
CEVE				IAML		12 12 45.3	
	comp=Z,3μm,0.4s						
SNJE	San Jose	2.45	93	*e*P	Pn	12 11 58.2	-0.6
SNJE	San Jose	2.45	93	*e*P	Pn	12 11 58.2	-0.6
MRL	Marmol	2.59	65	*e*P	Pn	12 12 02.8	+2.1
MRL				*e*S	Sn	12 12 30.8	-0.4
JAYA	Jayaque - finc	2.62	97	*e*P	Pn	12 12 00.2	-0.9
JAYA	Jayaque - finc	2.62	97	*e*P	Pn	12 12 00.2	-0.9
TACO	Tacachico	2.69	90	⇑*e*P	Pn	12 12 01.8	-0.1
TACO				IAML		12 12 42.7	
	comp=Z,387nm,0.5s						
TACO	Tacachico	2.69	90	⇑*e*P	Pn	12 12 01.8	-0.1
TACO				IAML		12 12 42.7	
	comp=Z,387nm,0.5s						
PMON	Piamonte	2.75	96	*e*P	Pn	12 12 02.2	-0.6
PMON	Piamonte	2.75	96	*e*P	Pn	12 12 02.2	-0.6
ESQI	Esquipulas	2.75	78	*e*P	Pn	12 12 03.5	+0.6
ESQI	Esquipulas	2.75	78	Pn	Pn	12 12 03.6	+0.8
SNET	Serv Nac Est T	2.83	96		Pn	12 12 04.2	+0.3
LFRS	El Faro	3.00	97	*e*P	Pn	12 12 06.4	+0.1
LFRS				*e*S	Sn	12 12 42.0	+0.9
LFRS	El Faro	3.00	97	*e*P	Pn	12 12 06.4	+0.1
LFRS				*e*S	Sn	12 12 42.0	+0.9
LLGN	La Laguna	3.09	87	*e*P	Pn	12 12 07.0	-0.5
LLGN	La Laguna	3.09	87	*e*P	Pn	12 12 07.0	-0.5
COEG	Centro de Oper	3.17	97	*e*P	Pn	12 12 08.7	+0.1
COEG				IAML		12 13 03.4	
	comp=Z,748nm,0.5s						
COEG	Centro de Oper	3.17	97	*e*P	Pn	12 12 08.7	+0.1
COEG				IAML		12 13 03.4	
	comp=Z,748nm,0.5s						
PQSS	Presa 15 de Se	3.48	96	*e*P	Pn	12 12 12.5	-0.3
COEB	Comit de Eme	3.53	98	*e*P	Pn	12 12 13.1	-0.4
COEB				IAML		12 13 14.4	
	comp=Z,440nm,0.4s						
COEB	Comit de Eme	3.53	98	*e*P	Pn	12 12 13.1	-0.4
COEB				IAML		12 13 14.4	
	comp=Z,440nm,0.4s						
TECA	Tecapa	3.56	98	*e*P	Pn	12 12 13.2	-0.8
TECA	Tecapa	3.56	98	*e*P	Pn	12 12 13.2	-0.8
PETF	Flores	3.62	37	*e*P	Pn	12 12 16.8	+2.1
PETF	Flores	3.62	37		Pn	12 12 17.1	+2.4
CMIG	Matias Romero	4.06	319	Pn	Pn	12 12 17.7	-3.0
	comp=Z,6.7nm,0.3s,baz=149,slow=13,SNR=102						
CMIG				Sn	Sn	12 13 05.4	-1.6
	comp=Z,38nm,0.3s,baz=77,slow=22,SNR=7.7						
CMIG	Matias Romero	4.06	319		Pn	12 12 17.9	-2.8
TGUH	Tegucigalpa,Un	4.71	89	Pn	Pn	12 12 30.4	+0.6
CRIN	San Cristobal	5.11	104	Pn	Pn	12 12 34.8	-0.4
ACON	Acoyapa	7.07	106		Pn	12 13 02.2	+0.1
TLIG	Tlapa	7.14	301	Pn	Pn	12 13 03.0	0.0
TEIG	Tepich	7.19	30	Pn	Pn	12 13 03.9	+0.2
ESPN	Las Esperanzas	7.83	102		Pn	12 13 13.4	+0.9
JTS	Las Juntas de	7.93	117	Pn	Pn	12 13 15.8	+2.0
MOIG	Morelia	10.35	304		Pn	12 13 49.0	+1.9
HKT	Hockley	16.23	348	Pn	Pn	12 15 06.2	+0.6
342A	Flagon Creek P	17.29	359	P	Pn	12 15 18.9	+0.1
342A				IAmb	IAmb	12 15 25.9	
	comp=Z,38nm,1.4s						
GTBY	Guantanamo Bay	17.30	68	P	Pn	12 15 18.2	-0.9
GTBY				IAmb	IAmb	12 15 51.0	
	comp=Z,110nm,1.6s						
344A	Westbrook Farm	17.41	4	P	Pn	12 15 18.7	-1.6
435B	Jarrell	17.43	344	P	Pn	12 15 18.2	-2.5
656A	Willston	17.68	29	P	Pn	12 15 22.9	-0.8
BRAL	Brewton	17.70	14	P	Pn	12 15 22.9	-1.1
BRAL				IAmb	IAmb	12 15 30.1	
	comp=Z,45nm,1.1s						
NATX	Nacogdoches	17.82	353	P	P	12 15 24.0	-1.6
NATX				IAmb	IAmb	12 15 29.5	
	comp=Z,45nm,1.5s						
JCT	Junction City	17.86	338	P	Pn	12 15 26.4	+0.5
ETX02	Prairie Street	17.94	354	P	Pn	12 15 27.3	+0.4
VBMS	Vicksburg	18.19	4	P	Pn	12 15 29.7	-0.1
VBMS				IAmb	IAmb	12 15 53.6	
	comp=Z,22nm,0.8s						
352A	Blakely	18.60	20	P	Pn	12 15 35.5	+0.6
143A	Socs Landing,	18.62	2	P	P	12 15 32.7	-1.6
143A				IAmb	IAmb	12 15 42.7	
	comp=Z,36nm,1.4s						
TX31	Lajitas Ar. Si	18.62	327	Pn	Pn	12 15 36.3	+1.0
TX32	Lajitas Array	18.62	327	P	P	12 15 33.6	-1.0
TXAR	Lajitas Array	18.62	327	P	Pn	12 15 36.1	+0.9
	comp=Z,0.3nm,0.3s,baz=156,slow=11,SNR=39						
TXAR				PcP	PcP	12 20 01.7	-0.1
	comp=Z,0.0nm,0.3s,baz=163,slow=3.4,SNR=2.8						
H06E1	SOCORRO T-PHAS	18.65	287	T	T	12 34 33.6	
	SNR=53						
Z38A	Mt. Pleasant	19.34	353	P	P	12 15 41.9	-0.3
Z38A				IAmb	IAmb	12 15 48.2	
	comp=Z,70nm,1.6s						
Z47A	Carrollton	19.46	10	P	Pn	12 15 44.2	-0.9
Z47A				IAmb	IAmb	12 15 46.2	
	comp=Z,28nm,0.7s						
LRAL	Lakeview Retre	19.51	13	P	Pn	12 15 45.2	-0.5
WLAR	White Oak Lake	19.61	358	P	Pn	12 15 46.5	-0.4
WLAR				IAmb	IAmb	12 15 53.9	
	comp=Z,26nm,0.9s						
ABTX	Abilene, Hawle	19.76	341	P	P	12 15 47.5	+0.7
152A	Waverly Hall	19.77	19	P	P	12 15 45.4	-1.5
152A				IAmb	IAmb	12 15 54.2	
	comp=Z,50nm,1.6s						
ROSC	El Rosal	19.77	116	P	Pn	12 15 50.7	+1.3
	comp=Z,1.8nm,0.3s,baz=270,slow=20,SNR=5.4						
ROSC	El Rosal	19.77	116	P	Pn	12 15 48.5	-0.8
ROSC				IAmb	IAmb	12 15 51.5	
	comp=Z,14nm,0.7s						
Z35A	Perchaven, San	19.79	347	P	P	12 15 46.8	-0.4
Z35A				IAmb	IAmb	12 15 55.4	
	comp=Z,22nm,1.1s						
Y45A	Yeager Farm, C	19.91	6	P	P	12 15 48.6	+0.2
Y45A				IAmb	IAmb	12 15 59.8	
	comp=Z,28nm,1.2s						
MIAR	Mount Ida	20.49	357	P	P	12 15 55.3	+0.6
X37A	Clayton	20.70	352	P	P	12 15 57.2	+0.2
X37A				IAmb	IAmb	12 16 07.1	
	comp=Z,16nm,0.9s						
GOGA	Godfrey	20.86	21	P	P	12 15 59.3	+0.5
X48A	Hartselle	20.87	12	P	P	12 15 58.4	-0.4
Y52A	Lilburn	21.08	19	P	P	12 16 02.3	+1.2
Y52A				IAmb	IAmb	12 16 23.0	
	comp=Z,14nm,0.8s						
CLNB	Carlsbad	21.11	331	P	P	12 16 02.7	+1.2
PLAL	Pickwick Lake	21.20	9	P	P	12 16 02.6	+0.3
PLAL				IAmb	IAmb	12 16 27.0	
	comp=Z,32nm,1.9s						
FPAL	Fort Paine	21.27	15	P	P	12 16 04.2	+1.0
FPAL				IAmb	IAmb	12 16 25.3	
	comp=Z,19nm,1.0s						
GDL2	Guadalupe Moun	21.29	330	P	P	12 16 05.0	+1.5
MNTX	Cornudas Mount	21.39	328	P	P	12 16 04.7	+0.2
W35A	Tecumseh	21.48	349	P	P	12 16 04.6	-0.8
WMOK	Wichita Mounta	21.50	345	P	P	12 16 05.8	+0.2
SDV	Santo Domingo	21.66	101	P	P	12 16 05.6	-2.1
	comp=Z,2.8nm,0.4s,baz=282,slow=8.8,SNR=4.9						
FNO	Franklin	21.68	348	P	P	12 16 07.3	-0.3
CPRX	Cap Rock	21.75	333	P	P	12 16 07.1	-1.3
SWET	Sewanee	21.84	14	P	P	12 16 08.9	-0.4
LCAR	Lake Charles	21.98	2	P	P	12 16 09.8	-0.9
OK025	Westminster Rd	21.99	349	P	P	12 16 09.5	-1.3
TUL1	Leonard	22.06	352	P	P	12 16 11.9	+0.3
MSTX	Muleshoe	22.09	336	P	P	12 16 11.4	-0.8
MSTX				IAmb	IAmb	12 16 13.3	
	comp=Z,15nm,0.5s						
BCOK	Bluff Creek, N	22.11	348	P	P	12 16 10.9	-1.2
V48A	Smith Brothers	22.16	11	P	P	12 16 11.5	-1.1
V48A				IAmb	IAmb	12 16 13.6	
	comp=Z,13nm,0.8s						
OK029	Liberty Lake	22.22	348	P	P	12 16 11.4	-1.9
OK030	Cody Creek RV	22.22	350	P	P	12 16 11.9	-1.4
OK030				IAmb	IAmb	12 16 13.1	
	comp=Z,20nm,0.5s						
HHAR	Hobbs	22.24	356	P	P	12 16 13.2	-0.3
OK031	S. Brethren Rd	22.26	350	P	P	12 16 12.6	-1.2
OK031				IAmb	IAmb	12 16 13.5	
	comp=Z,18nm,0.6s						
WVT	Waverly	22.36	9	P	P	12 16 13.7	-1.2
CPCT	Cooper Cave	22.42	16	P	P	12 16 15.1	-0.4
CPCT				IAmb	IAmb	12 16 27.4	
	comp=Z,23nm,1.4s						
AMTX	Amarillo	22.50	339	P	P	12 16 16.3	-0.2
PBMO	Poplar Bluff	22.73	4	P	P	12 16 17.6	-1.1
V51A	Loudon	22.80	16	P	P	12 16 19.1	-0.4
V51A				IAmb	IAmb	12 16 56.7	
	comp=Z,36nm,1.6s						
TKL	Tuckaleechee C	22.83	18	P	P	12 16 19.1	-0.7
	comp=Z,3.6nm,0.5s,baz=183,slow=13,SNR=8.6						
T42A	Van Buren	22.95	2	P	P	12 16 19.6	-1.4
T42A				IAmb	IAmb	12 17 01.1	
	comp=Z,26nm,1.9s						
U49A	Red Boiling Sp	23.12	13	P	P	12 16 21.8	-0.9
U49A				IAmb	IAmb	12 16 23.4	
	comp=Z,14nm,1.1s						
T45A	Paducah	23.13	7	P	P	12 16 23.1	+0.4
V53A	Saluda	23.14	20	P	P	12 16 23.1	+0.2
V53A				IAmb	IAmb	12 16 33.1	
	comp=Z,62nm,2.0s						
T35A	Sooner Cattle	23.15	351	P	P	12 16 22.2	-0.8
T35A				IAmb	IAmb	12 16 23.4	
	comp=Z,13nm,0.8s						
T47A	Sharon Grove	23.32	10	P	P	12 16 23.8	-0.8
T47A				IAmb	IAmb	12 16 24.4	
	comp=Z,14nm,0.9s						
121A	Cookes Peak, D	23.33	325	P	P	12 16 22.5	-2.5
319A	Douglas	23.38	321	P	P	12 16 24.7	-0.7
S39A	Bolivar	23.61	358	P	P	12 16 25.9	-1.4
S39A				IAmb	IAmb	12 16 47.5	
	comp=Z,37nm,1.6s						
S44A	Carbondale	23.73	6	P	P	12 16 27.8	-0.6
S44A				IAmb	IAmb	12 16 29.7	
	comp=Z,27nm,0.8s						
SIUC	Southern Illin	23.75	6	P	P	12 16 28.3	-0.4
SIUC				IAmb	IAmb	12 16 29.9	
	comp=Z,28nm,0.8s						
T50A	Nancy	23.82	15	P	P	12 16 28.6	-0.8
T50A				IAmb	IAmb	12 16 31.9	
	comp=Z,39nm,1.9s						
V55A	Taylorsville	23.86	22	P	P	12 16 29.1	-0.6
V55A				IAmb	IAmb	12 16 45.7	
	comp=Z,14nm,1.2s						
BNM	Barren Site	23.98	329	P	P	12 16 32.0	+0.9
Y22D	IRIS PASSCAL I	24.06	329	P	P	12 16 34.7	+3.0
Y22D				IAmb	IAmb	12 16 40.0	
	comp=Z,20nm,0.8s						
USIN	University of	24.19	9	P	P	12 16 31.8	-0.8
U54A	Nelsons Funny	24.24	21	P	P	12 16 33.8	+0.5
ANMO	Albuquerque	24.53	331	P	P	12 16 36.5	+0.4
	comp=Z,5.2nm,1.0s,baz=145,slow=11,SNR=18						
ANMO	Albuquerque	24.53	331	P	P	12 16 36.0	-0.1
WCI	Wyandotte Cave	24.67	11	P	P	12 16 36.1	-0.9
WCI				IAmb	IAmb	12 16 37.5	
	comp=Z,23nm,0.8s						
S51A	Beattyville	24.73	16	P	P	12 16 36.5	-1.1
S51A				IAmb	IAmb	12 17 00.8	
	comp=Z,60nm,1.9s						
BLO	Bloomington	25.55	10	IAmb	IAmb	12 16 45.2	
	comp=Z,8.5nm,0.6s						
P46A	Rosedale	25.88	9	P	P	12 16 47.3	-0.6
P46A				IAmb	IAmb	12 16 48.0	
	comp=Z,13nm,0.7s						
Q51A	Peebles	26.10	16	P	P	12 16 49.7	-0.3
Q51A				IAmb	IAmb	12 16 49.9	
	comp=Z,11nm,0.8s						
Q52A	Bidwell	26.34	18	P	P	12 16 51.3	-0.9
Q52A				IAmb	IAmb	12 16 53.2	
	comp=Z,12nm,0.6s						
SDCO	Great Sand Dun	26.47	336	P	P	12 16 54.2	+0.5
SFIN	Lafayette	26.64	9	P	P	12 16 54.2	-0.7
SFIN				IAmb	IAmb	12 16 54.4	
	comp=Z,7.7nm,0.5s						
X16A	Lo Mia Camp, P	26.80	323	P	P	12 16 56.4	-0.2
Q54A	Coxs Mills	26.80	20	P	P	12 16 56.2	-0.1
Q54A				IAmb	IAmb	12 17 01.4	
	comp=Z,15nm,1.2s						
ACSO	Alum Creek Sta	27.33	15	P	P	12 16 59.0	-2.1
ACSO				IAmb	IAmb	12 17 01.2	
	comp=Z,6.8nm,0.7s						
MVCO	Mesa Verde	27.33	331	P	P	12 17 01.8	+0.3
MVCO				IAmb	IAmb	12 17 04.5	
	comp=Z,12nm,1.1s						
PV13	Radium Mtn., P	28.25	331	P	P	12 17 11.3	+1.7
PV03	Paradox Valley	28.34	331	P	P	12 17 09.4	-1.0
PV03				IAmb	IAmb	12 17 13.4	
	comp=Z,11nm,1.0s						
PV18	Skein Mesa, Pa	28.36	331	P	P	12 17 09.7	-0.9
PV18				IAmb	IAmb	12 17 13.5	
	comp=Z,15nm,1.1s						
KNB	Kanab	29.43	325	P	P	12 17 20.6	+0.6
MTPU	Mount Pierson	29.83	327	P	P	12 17 26.8	+2.9
CCUT	Cedar City	30.11	325	P	P	12 17 29.2	+3.0
P17A	Butcher Ranch,	30.20	331	P	P	12 17 27.5	+0.7
MPU	Maple Canyon	31.05	330	P	P	12 17 36.7	+2.3
RSSD	Black Hills	31.69	344	P	P	12 17 40.2	+0.2
TCUT	Toone Canyon	31.81	332	P	P	12 17 41.2	+0.1
PDAR	Pinedale Array	32.36	336	P	P	12 17 46.5	+0.5
	comp=Z,0.6nm,0.5s,baz=138,slow=9.4,SNR=6.6						
PDAR				PcP	PcP	12 20 35.0	+2.2
	comp=Z,0.4nm,0.6s,baz=153,slow=6.6,SNR=5.3						
PDAR				LR	LR	12 32 52.2	
	comp=Z,63nm,19.0s,baz=134,slow=40						
REDW	Red Top Meadow	33.38	335	P	P	12 17 56.2	+1.4
ELK	Elko	33.42	327	P	P	12 17 56.1	+1.0
SNOW	Snow King Moun	33.43	335	P	P	12 17 55.8	+0.6
LOHW	Long Hollow	33.49	335	P	P	12 17 56.2	+0.5
LOHW				IAmb	IAmb	12 17 57.5	
	comp=Z,4.7nm,0.8s						
NVAR	Mina Array Bea	33.59	321	P	P	12 17 59.0	+2.3
	comp=Z,3.5nm,0.7s,baz=133,slow=8.4,SNR=24						
NVAR				PcP	PcP	12 20 37.9	+1.7
	comp=Z,1.2nm,0.7s,baz=130,slow=4.9,SNR=5.2						

```
NVAR                                 LR      LR        12 33 21.5
      comp=Z,119nm,18.1s,baz=132,slow=40
NVAR  Mina Array Bea    33.59 321    P       P         12 17 58.4 +1.7
PTGA  Pitinga           35.05 112    P       P         12 18 09.3  0.0
PTGA                                 IAmb    IAmb      12 18 10.8
      comp=Z,7.7nm,0.8s
HLID  Hailey            35.11 331    P       P         12 18 11.3 +1.6
HLID                                 IAmb    IAmb      12 18 11.8
      comp=Z,11nm,1.4s
MCMT  McKenzie Canyo    35.41 334    P       P         12 18 14.9 +2.5
DLMT  Dillon            35.74 335    P       P         12 18 16.9 +1.8
DLMT                                 IAmb    IAmb      12 18 18.0
      comp=Z,13nm,1.4s
ULM   Lac du Bonnet     36.27 356    P       P         12 18 18.5 -0.8
      comp=Z,1.5nm,0.6s,baz=152,slow=5.4,SNR=4.4
ULM                                  LR      LR        12 35 23.2
      comp=Z,121nm,18.1s,baz=99,slow=40
EGMT  Eagleton          36.94 340    P       P         12 18 26.1 +0.9
EGMT                                 IAmb    IAmb      12 18 27.0
      comp=Z,4.9nm,0.7s
F10A  Beach Ranch, E    38.24 331    P       P         12 18 36.2 -0.1
F10A                                 IAmb    IAmb      12 18 42.3
      comp=Z,12nm,0.8s
LPAZ  La Paz            38.32 141    LR      LR        12 33 50.1
      comp=Z,45nm,18.9s,baz=316,slow=36
PB16  IPOC Station P    39.12 145    P       P         12 18 46.3 +1.9
HAWA  Hanford           39.64 330    P       P         12 18 49.0 +1.1
BATG  Bathurst New B    39.66  28    P       P         12 18 46.7 -1.2
SIV   San Ignacio       42.78 133    P       P         12 19 13.4 -0.6
      comp=Z,2.4nm,0.7s,baz=324,slow=6.0,SNR=12
SIV                                  PcP     PcP       12 21 05.7 +0.9
      comp=Z,1.2nm,0.6s,baz=294,slow=5.3,SNR=2.2
FCC   Fort Churchill    44.70 359    P       P         12 19 29.2 +0.5
FCC                                  IAmb    IAmb      12 20 05.4
      comp=Z,16nm,1.9s
DRLN  Deer Lake         45.16  32    P       P         12 19 30.9 -1.7
YKA   Yellowknife Ar    50.99 347    P       P         12 20 17.0 -0.4
      comp=Z,6.9nm,0.7s,baz=147,slow=8.0,SNR=115
YKA                                  PcP     PcP       12 21 33.4 +0.5
      comp=Z,1.6nm,0.8s,baz=141,slow=4.5,SNR=14
YKA                                  LR      LR        12 44 06.2
      comp=Z,54nm,18.2s,baz=0.0,slow=39
DLBC  Dease Lake        52.60 336    P       P         12 20 32.2 +2.6
RCBR  Riachuelo         59.16 106    P       P         12 21 18.1 +0.9
GLB   Gilahina Butte    59.99 334    P       P         12 21 24.2 +2.0
INK   Inuvik            60.40 344    P       P         12 21 25.4 +0.7
DOT   Dot Lake          61.16 336    P       P         12 21 31.1 +1.0
PAX   Paxson            61.40 335    P       P         12 21 32.8 +1.1
IL31                    62.78 337    P       P         12 21 41.1 +0.2
ILAR  Eielson Array     62.78 337    P       P         12 21 41.2 +0.3
      comp=Z,1.7nm,0.9s,baz=137,slow=4.7,SNR=10
ILAR                                 LR      LR        12 50 09.2
      comp=Z,44nm,18.1s,baz=83,slow=37
ILAR  Eielson Array     62.78 337    P       P         12 21 41.7 +0.8
RND   Reindeer          62.97 335    P       P         12 21 43.1 +0.9
BMAR  Burnt Mountain    63.24 340    P       P         12 21 45.4 +1.4
TRF   Thorofare Moun    63.58 335    P       P         12 21 47.7 +1.3
PPT   Papeete           64.79 243    LR      LR        12 43 20.1
      comp=Z,56nm,20.5s,baz=138,slow=30
TTA   Tatalina          65.84 333    P       P         12 22 01.4 +0.4
ESK   Eskdalemuir       78.00  36    P       P         12 23 12.7 -1.3
ESDC  Sonseca Array     79.81  52    P       P         12 23 21.6 -2.6
      comp=Z,1.3nm,0.9s,baz=262,slow=6.1,SNR=5.0
ARCES ARCESS Array B    86.17  18    P       P         12 23 55.3 -1.1
      comp=Z,4.2nm,1.0s,baz=279,slow=7.2,SNR=4.4
ARCES ARCESS Array B    86.17  18    P       P         12 23 56.1 -0.3
MKAR  Makanchi Array   119.27   4    PKP     PKiKP     12 30 04.4 -0.5
      comp=Z,0.2nm,0.6s,baz=325,slow=3.7,SNR=2.9
BOSA  Boshof           120.47 115    PKP     PKiKP     12 30 07.6 -0.1
      comp=Z,1.2nm,0.6s,baz=234,slow=1.8,SNR=5.0
BOSA  Boshof           120.47 115            PKiKP     12 30 08.1 +0.3
WRA   Warramunga Arr   135.28 256    PKP     PKPdf     12 30 36.1 +0.2
      comp=Z,0.4nm,0.7s,baz=92,slow=1.2,SNR=6.7
ASAR  Alice Springs    135.55 250    PKhKP   PKPpre    12 30 30.2
      comp=Z,0.1nm,0.6s,baz=127,slow=3.4,SNR=1.6
ASAR                                 PKP     PKPdf     12 30 35.9 -0.5
      comp=Z,0.3nm,0.7s,baz=107,slow=2.2,SNR=4.1
CMAR  Chiang Mai Arr   145.94 341    PKPbc   PKPab     12 30 56.4  0.0
      comp=Z,9.1nm,0.7s,baz=335,slow=3.3,SNR=48
```

IDC 07 12:22:02.7±8.1**, 1°.48N×96°.54W, h0^{km}, mb3.4**/4**, mb1 3.8**/4**, mb1mx3.6**/20**, mbtmp3.4**/4**, Error ellipse: s-maj=376.3km s-min=140.0km az=90.0, West of Galapagos Islands**

```
Code  Station Name       Δ°   AZ°    Phase ID          Time      Res
                                     Op      ISC       h  m  s   ISC
TXAR  Lajitas Array     28.52 347    P       P         12 28 00.5 +0.3
      0.4nm,0.9s,baz=174,slow=10.0,SNR=4.3
H03N2 Juan Fernandez    38.50 156    T       T         13 11 07.6
      baz=333,slow=77,SNR=6.4
H03N1 Juan Fernandez    38.51 156    T       T         13 11 08.4
      baz=333,slow=77,SNR=11
H03N3 Juan Fernandez    38.51 156    T       T         13 11 14.6
      baz=333,slow=77,SNR=10
PDAR  Pinedale Array    42.73 346    P       P         12 30 01.5 -0.5
      0.3nm,0.7s,baz=150,slow=9.2,SNR=2.5
YKA   Yellowknife Ar    62.35 351    P       P         12 32 26.8  0.0
      0.1nm,0.4s,baz=157,slow=6.9,SNR=3.4
ILAR  Eielson Array     72.75 340    P       P         12 33 32.5  0.0
      1.1nm,0.8s,baz=146,slow=4.9,SNR=14
H11S2 WAKE ISLAND Hy    95.94 289    T       T         14 21 17.3
      baz=86,slow=75,SNR=11
H11S1 WAKE ISLAND Hy    95.94 289    T       T         14 21 16.0
      baz=86,slow=75,SNR=9.5
H11S3 WAKE ISLAND Hy    95.96 289    T       T         14 21 19.2
      baz=86,slow=75,SNR=7.1
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*RHSSO **07** 12:45:56.9±0.8, 42°.34N×19°.54E, h8^{km}±3^{km}, ML2.3/6*
*PDG **07** 12:45:57.7±0.1, 42°.37N×19°.45E, h19^{km}, MD2.3/1, ML2.0/13, Error ellipse: s-maj=0.1km s-min=0.1km az=0.0*
*TIR **07** 12:45:58.0, 42°.39N×19°.48E, h5^{km}±11^{km}, Md2.5, Ml2.4*
*BEO **07** 12:45:58.9±0.3, 42°.43N×19°.45E, h11^{km}±4^{km}, ML2.0/8*
ISC 07 12:45:58.2±0.9**, 42°.39N**±0°.02×**19°.44E**±0°.02**, h19^{km}**±2^{km}**, n55, σ0^{s}.96**/100**, 18C-9D, Northwestern Balkan Peninsula**

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Code  Station Name       Δ°   AZ°    Phase ID          Time      Res
                                     Op      ISC       h  m  s   ISC
PDG   Podgorica          0.14 286   ePg      Pg        12 46 02.2 -0.2
PDG                                 eSg      Sg        12 46 05.6 +0.4
PDG   Podgorica          0.14 286  ⇑P        Pg        12 46 02.0 -0.4
PDG                                ⇓S        Sg        12 46 04.8 -0.4
PDG   Podgorica          0.14 286⇑iPg        Pg        12 46 02.0 -0.4
PDG                                 eSg      Sg        12 46 05.7 +0.5
TTG   Podgorica          0.14 286⇑iPg        Pg        12 46 02.1 -0.3
TTG                                 i Sg     Sg        12 46 05.7 +0.5
BUM   Brajici-Budva      0.41 258⇓iPg        Pg        12 46 06.0 -0.8
BUM                                 i Sg     Sb        12 46 13.1  0.0
CEME  Cevo               0.41 292   ePg      Pg        12 46 06.3 -0.5
CEME                                i Sg     Sb        12 46 13.2 +0.1
PVY   Plav               0.44  62⇑iPg        Pg        12 46 06.3 -0.9
PVY                                 i Sg     Sb        12 46 13.8  0.0
ULC   Ulcinj             0.45 199   ePg      Pg        12 46 06.2 -1.3
ULC                                 i Sg     Sb        12 46 13.6 -0.5
KOME  Kolasin            0.46   7   ePg      Pg        12 46 07.3 -0.4
KOME                                i Sg     Sb        12 46 15.3 +0.8
BCI   Bajram Curri       0.47  93    P       Pg        12 46 07.1 -0.7
      baz=93
BCI                                  S       Sb        12 46 14.0 -0.5
      baz=93
BCI                                  AMP
      comp=N,1.8nm,0.5s,baz=93
PUK   Puka               0.49 136    P       Pg        12 46 06.8 -1.3
      baz=138
PUK                                  S       Sb        12 46 14.9 -0.1
      baz=138
NKME  Niksic             0.52 317   ePg      Pb        12 46 08.1 -0.7
NKME                                i Sg     Sg        12 46 17.2 +1.4
NKY   Niksic             0.53 322   ePg      Pb        12 46 08.6 -0.5
NKY                                 i Sg     Sg        12 46 17.4 +1.1
IVA   Berane             0.59  35⇓iPg        Pb        12 46 09.2 -0.7
IVA                                 i Sg     Sg        12 46 18.7 +0.8
HCY   Herceg Novi        0.70 275⇓iPg        Pb        12 46 10.9 -1.0
HCY                                 eSg      Sn        12 46 22.3 -1.2
HCY   Herceg Novi        0.70 275⇑iPg        Pb        12 46 11.2 -0.7
HCY                                 i Sg     Sn        12 46 22.8 -0.7
BRY   Bratogost          0.84 308⇓iPg        Pb        12 46 13.7 -0.5
BRY                                 eSg      Sn        12 46 26.6 -0.5
BRY   Bratogost          0.84 308⇑iPg        Pb        12 46 13.8 -0.5
BRY                                 i Sg     Sn        12 46 27.5 +0.4
TREB  Trebinje           0.87 292   ePg      Pn        12 46 16.0 +0.5
TREB                                eSg      Sn        12 46 27.1 -0.5
TREB  Trebinje           0.87 292⇓iPg        Pb        12 46 14.4 -0.3
TREB                                eSg      Sn        12 46 27.6  0.0
UPM   Unac-Piva          0.90 334⇓iPg        Pb        12 46 15.1 -0.4
UPM                                 eSg      Sg        12 46 28.3 +0.5
UPM   Unac-Piva          0.90 334⇓iPg        Pb        12 46 15.0 -0.4
UPM                                 i Sg     Sn        12 46 29.7 +0.9
PLE   Pljevlja           0.94 358⇑iPg        Pb        12 46 15.7 -0.3
PLE                                 i Sg     Sn        12 46 30.9 +1.3
DBRK  Dubrovnik          0.99 287   ePg      Pb        12 46 15.6 -1.2
DBRK                                 Sg      Sn        12 46 30.5 -0.3
PHP   Peshkopia          1.03 133    P       Pg        12 46 18.1 -0.1
      baz=134
PHP                                  S       Sg        12 46 33.0 +1.3
      baz=134
TIR   Tirane             1.09 163   ePg      Pg        12 46 19.0 -0.3
TIR                                 eSg      Sg        12 46 34.3 +0.6
TIR   Tirane             1.09 163  ⇑P        Pg        12 46 19.1 -0.3
TIR                                ⇑S        Sg        12 46 35.9 +2.2
RUDO  Rudo               1.23 358   ePg      Pn        12 46 19.7 -0.8
RUDO                                eSg      Sg        12 46 37.7 -0.3
IVAS  Ivanjica           1.29  24   ePg      Pb        12 46 22.2 +0.1
IVAS                                eSg      Sb        12 46 38.8 +0.4
STON  Ston               1.37 291   ePg      Pb        12 46 22.9 -0.4
STON                                eSg      Sb        12 46 41.3 +0.9
STON  Ston               1.37 291   ePn      Pn        12 46 21.8 -0.6
STON                                 Sn      Sg        12 46 42.7 +0.2
STON  Ston               1.37 291   ePg      Pn        12 46 22.3 -0.1
STON                                eSg      Sg        12 46 43.1 +0.6
BBLS  Lazi&#263;i        1.47 359   ePg      Pb        12 46 25.7 +0.6
BBLS                                eSg      Sg        12 46 45.1 -0.9
BBLS  Lazi&#263;i        1.47 359   ePn      Pb        12 46 24.3 -0.8
BBLS                                eSn      Sg        12 46 45.0 -0.9
OHR   Ohrid              1.64 141   i Pn     Pg        12 46 29.8  0.0
HAPS  Han Pijesak,Bl     1.73 348   ePg      Pb        12 46 28.9 -0.6
HAPS                                eSg      Sb        12 46 52.6 +1.6
HAPS  Han Pijesak,Bl     1.73 348   ePn      Pb        12 46 28.5 -1.0
HAPS                                eSn      Sb        12 46 51.5 +0.6
DIVS  Divibare           1.75  13   ePn      Pn        12 46 27.7 -0.1
DIVS                                eSg      Sb        12 46 52.2 +0.6
DIVS  Divibare           1.75  13⇓iPn        Pn        12 46 27.7 -0.1
DIVS                                eSn      Sb        12 46 51.0 -0.6
GRUS  Gruza              1.77  32   ePn      Pb        12 46 29.5 -0.5
GRUS  Gruza              1.77  32  ⇑P        Pn        12 46 26.9 -0.9
GRUS                               ⇑S        Sn        12 46 49.4 -0.4
MAKA  Makarska           1.99 298   ePn      Pb        12 46 32.8 -1.1
MAKA                                 Sn      Sb        12 46 59.2 +0.9
RICI  Ricice             2.02 304   i Pn     Pb        12 46 33.7 -0.7
RICI                                 Sn      Sb        12 47 00.7 +1.5
HVAR  Hvar               2.34 291   i Pn     Pn        12 46 37.0 +1.3
BLKB  Belogradchik       2.67  62  ⇑S        Sn        12 47 12.8 +0.6
KIJV  Kijevo             2.74 307   ePn      Pb        12 46 44.0 -2.6
KIJV                                 Sn      Sb        12 47 17.7 -2.3
VTS   Vitosha            2.82  84  ⇑P        Pn        12 46 43.1 +0.6
VTS                                ⇑S        Sn        12 47 17.3 +1.3
MDVR  Moldovita          2.91  34  ⇑P        Pn        12 46 42.8 -0.8
MDVR                               ⇑S        Sn        12 47 17.9  0.0
ZIRJ  Zirje              3.06 296   ePn      Pn        12 46 47.1 +1.6
MORI  Morici             3.10 300   i Pn     Pn        12 46 47.5 +1.3
UDBI  Udbina             3.42 310   ePn      Pn        12 46 54.0 +3.3
DUGI  Dugi Otok          3.58 298   ePn      Pn        12 46 54.5 +1.8
BZS   Buzias             3.59  25  ⇑P        Pn        12 46 52.5 -0.4
BZS                                ⇑S        Sn        12 47 34.2 -0.5
MOSL  Moslavina          3.76 330   ePn      Pn        12 46 57.3 +2.1
NVLJ  Novalja            3.97 305   ePn      Pn        12 46 59.5 +1.4
```

ROM 07 12:47:05.1±0.1**, 38°.106N**±0°.004×**15°.121E**±0°.005**, h9^{km}, ML2.5**/16**, 8C-1D, Error ellipse: s-maj=0.4km s-min=0.3km az=4.0, Sicily**

```
Code  Station Name       Δ°   AZ°    Phase ID          Time      Res
                                     Op      ISC       h  m  s   ISC
NOV   Novara             0.08 171  ⇓P        Pg        12 47 07.7 +0.4
NOV                                  S       Sg        12 47 09.5 +0.6
NOV                                  AML     AML
      comp=N,13950μm,0.2s
NOV                                  AML     AML
      comp=E,9655μm,0.3s
MCSR  Castroreale        0.11 112  ⇑P        Pg        12 47 08.1 +0.3
MCSR                                 S       Sg        12 47 10.0 +0.3
MCSR                                 AML     AML
      comp=E,11500μm,0.2s
MCSR                                 AML     AML
      comp=N,14300μm,0.2s
AIO   Antillo            0.16 147  ⇑P        Pg        12 47 09.1 +0.5
AIO                                  S       Sg        12 47 11.9 +0.9
AIO                                  AML     AML
      comp=E,1795μm,0.3s
AIO                                  AML     AML
      comp=N,2285μm,0.2s
MILZ  Milazzo            0.19  28  ⇑P        Pg        12 47 09.8 +0.7
MILZ                                 S       Sg        12 47 12.9 +1.2
MILZ                                 AML     AML
      comp=N,2025μm,0.3s
MILZ                                 AML     AML
      comp=E,1850μm,1.1s
MPNC  Port Mandanici     0.19  78  ⇑P        Pg        12 47 09.7 +0.7
MPNC                                 S       Sg        12 47 12.8 +1.2
MPNC                                 AML     AML
      comp=E,2470μm,0.3s
MPNC                                 AML     AML
      comp=N,2520μm,0.8s
MUCR  Ucria              0.20 252  ⇑P        Pg        12 47 09.7 +0.3
MUCR                                 S       Sg        12 47 13.0 +0.8
MUCR                                 AML     AML
      comp=E,674μm,0.3s
MUCR                                 AML     AML
      comp=N,1078μm,0.4s
VPL   Vulcano Piano      0.29 338  ⇑P        Pg        12 47 11.7 +0.7
VPL                                  S       Sb        12 47 17.7  0.0
VPL                                  AML     AML
      comp=E,4535μm,1.2s
VPL                                  AML     AML
      comp=N,4750μm,1.3s
EMSG  Monte Spagnolo     0.32 205    P       Pb        12 47 12.8 -0.3
EMSG                                 AML     AML
      comp=N,1345μm,0.5s
EMSG                                 AML     AML
      comp=E,984μm,0.3s
EPZF  Pizzo Felice       0.35 217    P       Pb        12 47 13.7  0.0
MNO   Monte Soro         0.38 243    P       Pg        12 47 13.3 +0.7
MNO                                  AML     AML
      comp=N,382μm,1.4s
MNO                                  AML     AML
      comp=E,480μm,0.4s
MSFR  San Fratello       0.42 260  ⇑P        Pg        12 47 13.7 +0.2
MSFR                                 S       Sb        12 47 20.3 -1.1
MTTG  Motta San Giov     0.46 103  ⇑P        Pg        12 47 14.5 +0.3
MTTG                                 S       Sb        12 47 22.0 -0.5
MTTG                                 AML     AML
      comp=E,222μm,0.7s
MTTG                                 AML     AML
      comp=N,238μm,0.5s
MSCL  Scilla             0.54  76    P       Pg        12 47 16.1 +0.5
MSCL                                 AML     AML
      comp=N,330μm,0.7s
MSCL                                 AML     AML
      comp=E,347μm,0.4s
GMB   Gambarie           0.56  83    P       Pg        12 47 16.2 +0.2
GMB                                  AML     AML
      comp=N,828μm,0.4s
GMB                                  AML     AML
      comp=E,742μm,1.5s
CEL   Celeste            0.63  76    P       Pg        12 47 17.3  0.0
IACL  Alicudi            0.74 306    P       Pg        12 47 19.2 -0.1
IACL                                 AML     AML
      comp=N,450μm,1.6s
IACL                                 AML     AML
      comp=E,648μm,1.0s
SOI   Samo               0.74  92    P       Pg        12 47 18.9 -0.5
JOPP  Joppolo            0.78  50    P       Pg        12 47 20.5 +0.2
PETRA Petralia Sopra     0.84 251    P       Pb        12 47 21.9 -0.2
PETRA                                AML     AML
      comp=N,162μm,1.0s
PETRA                                AML     AML
      comp=E,150μm,1.5s
GIB   Gibilmanna         0.87 263    P       Pg        12 47 22.1 +0.2
SSY   Sortino            0.95 182    P       Pg        12 47 23.3 -0.1
SSY                                  AML     AML
      comp=N,280μm,0.5s
SSY                                  AML     AML
      comp=E,206μm,1.2s
MEU   Monte Lauro        1.01 189    P       Pg        12 47 24.5 -0.1
MEU                                  AML     AML
      comp=E,149μm,1.5s
MEU                                  AML     AML
      comp=N,160μm,0.6s
HAVL  Avola              1.14 180    P       Pg        12 47 26.5 -0.6
HAVL                                 AML     AML
      comp=N,189μm,1.2s
HAVL                                 AML     AML
      comp=E,200μm,0.6s
USI   Ustica             1.64 292    S       Sg        12 47 59.0 +1.1
MTSN  Montesano sull     2.21  13    S       Sg        12 48 17.0 +0.8
```

IDC 07 12:54:30.3±4.1**, 12°.83S×168°.15E, h0^{km}, mb3.4**/4**, mb1 3.7**/4**, mb1mx3.5**/23**, mbtmp3.4**/4**, Error ellipse: s-maj=157.1km s-min=33.3km az=137.0, Santa Cruz Islands region**

```
Code  Station Name       Δ°   AZ°    Phase ID          Time      Res
                                     Op      ISC       h  m  s   ISC
WRA   Warramunga Arr    33.15 253    P       P         13 01 07.8 -0.9
      0.3nm,0.8s,baz=83,slow=8.9,SNR=4.8
ASAR  Alice Springs     34.17 247    P       P         13 01 18.0 +0.4
      0.4nm,0.6s,baz=68,slow=10,SNR=9.6
SONM  Songino Array     81.49 323    P       P         13 06 50.5 +0.8
      0.3nm,0.6s,baz=132,slow=4.0,SNR=2.1
ILAR  Eielson Array     84.46  18    P       P         13 07 04.1 -0.4
      0.2nm,0.6s,baz=238,slow=5.2,SNR=4.3
```

IDC 07 12:55:22.6±3.2**, 14°.41N×91°.64W, h0^{km}, mb3.7**/2**, mb1 3.9**/4**, mb1mx3.6**/32**, mbtmp3.5**/4**, ML3.2**/2**, MS3.5**/1**, Ms1 3.5**/1**, ms1mx2.5**/39**, Error ellipse: s-maj=109.1km s-min=48.5km az=36.0, Guatemala**

```
Code  Station Name       Δ°   AZ°    Phase ID          Time      Res
                                     Op      ISC       h  m  s   ISC
CMIG  Matias Romero      4.11 311    Pn      Pn        12 56 24.7 -2.1
      0.8nm,0.3s,baz=130,slow=11,SNR=9.7
CMIG                                 Sn      Sn        12 57 13.1 -2.5
      4.9nm,0.3s,baz=75,slow=20,SNR=6.2
TXAR  Lajitas Array     18.56 325    P       Pn        12 59 42.8 +1.4
      0.0nm,0.3s,baz=136,slow=12,SNR=6.1
H06E1 SOCORRO T-PHAS18.99 286        T       T         13 18 48.6
NVAR  Mina Array Bea    33.58 320    P       P         13 02 05.3 +0.5
      0.6nm,0.7s,baz=130,slow=8.4,SNR=4.5
YKA   Yellowknife Ar    50.72 346    P       P         13 04 23.4 -0.4
      0.9nm,0.7s,baz=148,slow=8.0,SNR=17
YKA                                  PcP     PcP       13 05 39.8 -1.2
      0.2nm,0.8s,baz=143,slow=3.3,SNR=3.8
FRB   Frobisher Bay     51.84  13    LR      LR        13 29 52.1
      comp=Z,45nm,18.4s,baz=32,slow=40
CMAR  Chiang Mai Arr   145.72 342    PKPbc   PKPdf     13 15 04.2 +0.1
      1.2nm,0.8s,baz=335,slow=3.0,SNR=8.9
```

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*IDC **07** 12:55:31.5±3.1, 36°.47N×141°.22E, h0^{km}, mb3.4/3, mb1 3.6/4, mb1mx3.3/32, mbtmp3.4/4, ML2.9/1, Error ellipse: s-maj=76.1km s-min=34.5km az=54.0*
*JMA **07** 12:55:40.2±0.1, 36°.36N×140°.77E, h53^{km}±1^{km}, M3.5*
JMA Felt I J1.
ISC 07 12:55:39.9±1.1**, 36°.39N**±0°.05×**140°.83E**±0°.08**, h52^{km}**±7^{km}**, n19, σ0^{s}.58**/21**, mb3.2**/3**, Near east coast of eastern Honshu**

```
Code  Station Name       Δ°   AZ°    Phase ID          Time      Res
                                     Op      ISC       h  m  s   ISC
JHYU  Hitachinakayam     0.20 255    P       Pn        12 55 48.6 +0.1
JHYU                                 S       Sn        12 55 54.6  0.0
JHO   Hitachi            0.30 316    P       Pn        12 55 49.6 +0.3
JHO                                  S       Sn        12 55 56.1 +0.1
JIHU  Itakohorinouch     0.49 210    P       Pn        12 55 51.6 +0.4
JIHU                                 S       Sn        12 55 58.9 -0.4
JYT   Yasato             0.54 252    P       Pn        12 55 51.5 -0.2
JYT                                  S       Sn        12 55 59.4 -0.9
ONAJ  Iwakimizuishiy     0.71 358    P       Pn        12 55 54.1 +0.2
JSMT  Sammumatsuo        0.81 203    P       Pn        12 55 55.5 +0.4
JSMT                                 S       Sn        12 56 07.1 +0.8
JFK   Kawauchi           0.97   2    P       Pn        12 55 57.4 +0.1
JAG   Ashikaga           1.11 272    P       Pn        12 55 59.2  0.0
JAG                                  S       Sn        12 56 13.0 -0.5
MJAR  Matsushiro Arr     2.12 275    Pn      Pn        12 56 12.5 -0.4
      2.8nm,0.3s,baz=98,slow=9.3,SNR=171
MJAR                                 Sn      Sn        12 56 39.2 +1.1
      2.2nm,0.3s,baz=82,slow=8.7,SNR=5.7
MAT   Matsushiro         2.12 275    P       Pn        12 56 13.3 +0.4
MAT                                  S       Sn        12 56 39.3 +1.2
SONM  Songino Array     27.76 305    P       P         13 01 23.7  0.0
      0.5nm,0.8s,baz=107,slow=9.4,SNR=3.3
H11N2 WAKE ISLAND Hy    28.23 119    T       T         13 31 27.4
      baz=313,slow=75,SNR=10
H11N1 WAKE ISLAND Hy    28.24 119    T       T         13 31 27.3
      baz=313,slow=75,SNR=12
H11N3 WAKE ISLAND Hy    28.25 119    T       T         13 31 26.1
      baz=313,slow=75,SNR=11
H11S1 WAKE ISLAND Hy    28.92 121    T       T         13 32 20.0
      baz=314,slow=75,SNR=26
H11S3 WAKE ISLAND Hy    28.92 121    T       T         13 32 14.9
      baz=314,slow=75,SNR=16
H11S2 WAKE ISLAND Hy    28.93 121    T       T         13 32 21.7
      baz=314,slow=75,SNR=14
MKAR  Makanchi Array    44.07 303    P       P         13 03 42.7 +0.1
      0.3nm,0.6s,baz=86,slow=9.1,SNR=2.1
WRA   Warramunga Arr    56.36 187    P       P         13 05 15.2 -0.6
      0.5nm,0.9s,baz=1.4,slow=7.8,SNR=3.1
```

IDC 07 12:55:53.1±4.5**, 5°.30S×152°.96E, h0^{km}, mb3.1**/2**, mb1 3.4**/2**, mb1mx3.2**/22**, mbtmp3.1**/2**, Error ellipse: s-maj=219.1km s-min=54.3km az=123.0, New Britain region**

```
Code  Station Name       Δ°   AZ°    Phase ID          Time      Res
                                     Op      ISC       h  m  s   ISC
WRA   Warramunga Arr    23.24 230    P       P         13 01 02.5 +0.2
      0.4nm,0.8s,baz=54,slow=10.0,SNR=2.9
ASAR  Alice Springs     25.89 223    P       P         13 01 26.8 -0.3
      0.3nm,0.7s,baz=64,slow=7.9,SNR=4.8
TORD  Torodi Ar. Bea   150.62 287    PKPbc   PKPbc     13 15 48.0 -0.2
      0.3nm,0.6s,baz=73,slow=2.8,SNR=1.7
```

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*MEX **07** 13:09:51.8±1.1, 13°.86N×93°.58W, h25^{km}, MD4.3*
*IDC **07** 13:09:51.5±2.3, 14°.28N×93°.14W, h0^{km}, mb3.7/8, mb1 4.0/10, mb1mx3.9/42, mbtmp3.8/10, ML3.9/2, MS2.9/4, Ms1 2.9/4, ms1mx2.6/36, Error ellipse: s-maj=58.7km s-min=33.4km az=38.0*
*NEIC **07** 13:09:53.6±2.8, 14°.18N±0°.04×93°.53W±0°.05, h25^{km}±8^{km}, mb4.3/21, Md4.2/23(MEX), Error ellipse: s-maj=7.2km s-min=6.0km az=119.0*
*GCG **07** 13:09:54.8±0.5, 14°.30N×93°.41W, h35^{km}±999^{km}, MD4.0*
ISC 07 13:09:51.5±0.9**, 13°.94N**±0°.07×**93°.66W**±0°.04**, h22^{km}, n59, σ2^{s}.14**/68**, mb4.2**/15**, Off coast of Chiapas**

```
Code  Station Name       Δ°   AZ°    Phase ID          Time      Res
                                     Op      ISC       h  m  s   ISC
THIG                     1.66  54   i P      Pn        13 10 17.3 -2.0
THIG                                i S      Sn        13 10 37.0 -3.0
THIG                     1.66  54            Pn        13 10 17.3 -2.0
THIG                                         Sn        13 10 38.0 -1.9
PCIG                     1.81  13   i P      Pn        13 10 19.6 -1.8
PCIG                                i S      Sn        13 10 41.5 -2.2
PCIG                     1.81  13            Pn        13 10 19.6 -1.8
RTAL  Retalhuleu         1.99  73    Pn      Pn        13 10 22.1 -1.9
HUEH  Huehuetenango      2.50  56    Pn      Pn        13 10 30.6 -0.5
CCIG  Comitan            2.76  32    Pn      Pn        13 10 35.5 +0.8
FUG   Fuego 3            2.78  79   eP       Pn        13 10 33.6 -1.3
FUG                                 eS       Sn        13 11 04.1 -3.8
TGIG                     2.87  10   i P      Pn        13 10 36.5 +0.4
TGIG                                i S      Sn        13 11 06.6 -3.4
TGIG                     2.87  10            Pn        13 10 36.5 +0.4
TGIG                                         Sn        13 11 09.5 -0.6
HUIG  Huatulco           2.99 308   i P      Pn        13 10 37.0 -0.7
HUIG                                i S      Sn        13 11 06.8 -6.1
HUIG  Huatulco           2.99 308            Pn        13 10 37.0 -0.7
PCG   Pacaya             2.99  81   eP       Pn        13 10 37.1 -0.8
PCG                                 eS       Sn        13 11 10.2 -3.0
NBG   Las Nubes          3.27  78   eP       Pn        13 10 41.2 -0.6
CMIG  Matias Romero      3.35 339    Pn      Pn        13 10 42.3 -0.3
      14nm,0.3s,baz=143,slow=11,SNR=152
CMIG                                 Sn      Sn        13 11 19.1 -2.7
      24nm,0.3s,baz=110,slow=6.1,SNR=18
CMIG                                 LR      LR        13 12 08.4
```

```
             comp=Z,146nm,21.9s,baz=92,slow=42
CMIG   Matias Romero      3.35 339 i P    Pn     13 10 42.6 -0.1
CMIG                               i S    Sn     13 11 19.2 -2.7
PEIG   Puerto Escondi     3.95 302 i P    Pn     13 10 50.9  0.0
PEIG                               i S    Sn     13 11 30.9 -5.7
MRL    Marmol             4.01  73 eP     Pn     13 10 50.5 -1.4
PETF   Flores             4.70  50  Pn    Pn     13 11 00.7 -0.5
YOIG   Yosondua           4.74 308 eP     Pn     13 11 04.5 +2.4
YOIG                               i S    Sn     13 11 54.8 -1.8
PNIG   Pinotepa           4.96 300 i P    Pn     13 11 04.4 -0.4
PNIG                               eS     Sn     13 11 55.1 -6.4
PNIG   Pinotepa           4.96 300        Pn     13 11 04.4 -0.4
TLIG   Tlapa              5.95 308  Pn    Pn     13 11 20.5 +2.1
TEIG   Tepich             8.10  39  LR    LR     13 14 58.0
             comp=Z,50nm,20.1s,slow=41
TEIG   Tepich             8.10  39  Pn    Pn     13 11 45.9 -2.0
JCT    Junction City     17.41 342        Pn     13 13 52.5 -0.7
TXAR   Lajitas Array     17.91 330  P     P      13 14 02.4 +2.5
             0.1nm,0.3s,baz=151,slow=14,SNR=15
TXAR   Lajitas Array     17.91 330  P     P      13 14 00.9 +0.9
ABTX   Abilene, Hawle    19.39 345        P      13 14 17.2 +1.1
ABTX                                IAmb  IAmb   13 14 19.1
             comp=Z,16nm,1.0s
Z47A   Carrollton        19.84  14  P     P      13 14 18.8 -2.2
Z47A                                IAmb  IAmb   13 14 23.2
             comp=Z,10nm,0.7s
MIAR   Mount Ida         20.52   0  P     P      13 14 26.1 -2.2
X37A   Clayton           20.62 356  P     P      13 14 29.6 +0.1
X37A                                IAmb  IAmb   13 14 36.0
             comp=Z,22nm,1.1s
MNTX   Cornudas Mount    20.69 331  P     P      13 14 28.2 -2.1
WMOK   Wichita Mounta    21.22 348  P     P      13 14 36.8 +0.8
WMOK                                IAmb  IAmb   13 14 38.3
             comp=Z,8.1nm,0.8s
FCAR   Ozark Folk Cen    21.90   3  P     P      13 14 45.0 +1.7
FCAR                                IAmb  IAmb   13 14 45.9
             comp=Z,7.7nm,0.7s
AMTX   Amarillo          22.08 342  P     P      13 14 46.5 +1.3
AMTX                                IAmb  IAmb   13 14 47.9
             comp=Z,14nm,0.6s
LCAR   Lake Charles      22.16   5  P     P      13 14 44.2 -1.7
QUOK   Quay              22.31 353  P     P      13 14 46.8 -0.8
T35A   Sooner Cattle     23.03 354  P     P      13 14 53.5 -1.7
T35A                                IAmb  IAmb   13 14 56.6
             comp=Z,8.8nm,0.8s
TKL    Tuckaleechee C    23.39  21  P     P      13 14 58.0 -0.8
             comp=Z,2.9nm,0.8s,baz=180,slow=8.1,SNR=2.4
S39A   Bolivar           23.66   1  P     P      13 15 00.8 -0.7
ANMO   Albuquerque       23.90 333  P     P      13 15 07.8 +3.8
             comp=Z,0.6nm,0.6s,baz=139,slow=12,SNR=2.8
CCM    Cathedral Cave    24.12   5  P     P      13 15 04.6 -1.2
CCM                                 IAmb  IAmb   13 15 06.2
             comp=Z,10nm,0.6s
R40A   Maddies Statio    24.29   3  P     P      13 15 06.4 -0.9
R40A                                IAmb  IAmb   13 15 07.4
             comp=Z,6.7nm,0.7s
R32A   Long Quarter,     24.80 351  P     P      13 15 12.8 +0.8
P40A   Paris             25.53   3  P     P      13 15 17.5 -1.1
SJG    San Juan          26.75  77  LR    LR     13 24 25.9
             comp=Z,37nm,22.0s,baz=268,slow=33
PFO    Pinyon Flats O    28.50 317  LR    LR     13 26 37.0
             comp=Z,53nm,21.0s,baz=196,slow=35
ECSD   EROS Data Cent    29.80 356  P     P      13 15 56.8 -0.1
SPMN   Marine on St.     31.20   1  P     P      13 16 07.9 -1.2
PDAR   Pinedale Array    31.84 338  P     P      13 16 17.3 +2.2
             comp=Z,0.3nm,0.7s,baz=139,slow=9.0,SNR=2.4
NVAR   Mina Array Bea    32.73 323  P     P      13 16 28.2 +5.2
             comp=Z,0.6nm,0.8s,baz=146,slow=8.4,SNR=4.3
ULM    Lac du Bonnet     36.26 358  P     P      13 16 52.2 -0.9
             comp=Z,4.8nm,0.8s,baz=176,slow=9.0,SNR=10
ULM    Lac du Bonnet     36.26 358  P     P      13 16 52.0 -1.1
ULM                                 IAmb  IAmb   13 17 00.4
             comp=Z,4.9nm,1.5s
FCC    Fort Churchill    44.75 360  P     P      13 18 03.1 +0.1
FCC                                 IAmb  IAmb   13 18 04.2
             comp=Z,5.6nm,0.8s
YKA    Yellowknife Ar    50.73 348  P     P      13 18 51.1 +1.6
             comp=Z,2.5nm,0.9s,baz=148,slow=7.9,SNR=32
ILAR   Eielson Array     62.27 337  P     P      13 20 14.2 +2.5
             comp=Z,0.1nm,0.5s,baz=124,slow=4.5,SNR=3.2
TORD   Torodi Ar. Bea    91.95  76  P     P      13 23 01.0 +1.7
             comp=Z,0.5nm,0.8s,baz=306,slow=3.4,SNR=2.8
CMAR   Chiang Mai Arr   145.50 339  PKPbc PKPab  13 29 29.9 +0.8
             comp=Z,1.7nm,0.9s,baz=338,slow=3.6,SNR=8.5
```

NEIC ***07*** *13:19:44.4±2.0, 2°.1N±0°.1×127°.5E±0°.1, h76km±10km, mb4.7/24, Error ellipse: s-maj=21.3km s-min=13.6km az=70.0*

DJA ***07*** *13:19:45.5±0.9, 2°N±4°×12°7E±°, h17km±11km, M4.8/11, mb5.0/4, mB5.6/3, MLv4.7/11, Mw(mB)5.1/3*

IDC ***07*** *13:19:45.9±0.7, 2°.01N×127°.43E, h91km±6km, mb4.0/20, mb1 4.0/22, mb1mx3.9/45, mbtmp4.3/22, MS3.1/12, Ms1 3.1/12, ms1mx2.9/51, Error ellipse: s-maj=19.7km s-min=9.3km az=79.0*

ISC 07 13:19:47.5±0.4**, 2°.00N**±0°.04×**127°.32E**±0°.07**, h112**km**, n93, σ1s.91**/103**, mb4.5**/38**, 2D, Halmahera**

```
Code   Station Name        Δ°  AZ°  Phase ID     Time       Res
                                    Op    ISC    h  m  s    ISC
TNTI   Ternate            1.22 178  Pn    Pn     13 20 08.2 -3.0
TNTI   Ternate            1.22 178  P     Pn     13 20 08.9 -2.3
TNTI                                S     Sn     13 20 28.3 -0.9
SGSI   Sangihe            2.46 313  P     Pn     13 20 22.4 -4.0
KMSI   Cibinong           3.63 247  P     Pn     13 20 41.6 -0.3
SANI   Sanana             4.24 198  P     Pn     13 20 48.1 -2.0
DDMP   Don Marcelino,     4.38 339 eP     Pn     13 20 47.0 -5.1
DDMP                               eS     Sn     13 21 35.4 -6.8
GTOI   Gorontalo          4.52 253  P     Pn     13 20 54.4 +0.5
SIJI   Sorong             4.86 126  P     Pn     13 20 57.0 -1.5
             2.4nm,0.3s,baz=198,slow=19,SNR=6.3
SIJI                                S     Sn     13 21 49.2 -4.6
             2.0nm,0.3s,baz=247,slow=23,SNR=1.7
SIJI                                LR    LR     13 22 51.3
             comp=Z,176nm,21.2s,baz=116,slow=39
MATI   Mati               5.03 348 eP     Pn     13 20 54.6 -6.2
MATI                               eS     Sn     13 22 00.0 +2.2
NLAI   Namlea             5.21 182  P     Pn     13 21 03.5 +0.3
             0.7nm3µm65nm,0.5s
SKMP   Bagumbayan, Su     5.28 328 eP     Pn     13 20 59.6 -4.5
SKMP                               eS     Sn     13 21 57.9 -5.9
DAV    Davao City (W)     5.33 341  S     Sn     13 22 03.4 -1.7
             57nm,0.3s,baz=240,slow=20,SNR=5.5
KCP    Kidapawan          5.45 336⇓eP     Pn     13 21 05.4 -1.1
KCP                                i S    Sn     13 22 10.6 +2.5
LUWI   Luwuk              5.46 236  Pn    Pn     13 21 05.5 -1.1
LUWI   Luwuk              5.46 236  P     Pn     13 21 08.2 +1.6
             2.2nm9µm148nm,0.5s
MSAI   Masohi             5.54 163  P     Pn     13 21 11.8 +4.0
BUKP   Musuan             6.26 339 eP     Pn     13 21 15.5 -2.0
BUKP                               eS     Sn     13 22 24.3 -3.5
TOLI2  Tolitoli           6.60 262  Pn    Pn     13 21 20.9 -1.1
CGP    Cagayan de Oro     6.93 338⇓eP     Pn     13 21 31.6 +5.2
PAGZ   Pagadian           7.01 326 eP     Pn     13 21 24.3 -3.3
PAGZ                               eS     Sn     13 22 37.6 -8.3
KAPI   Kappang           10.28 227  P     Pn     13 22 11.9 -0.1
             5.9nm,0.3s,baz=39,slow=11,SNR=8.6
KAPI                                S     Sn     13 24 04.8 -0.6
             4.8nm,0.3s,baz=112,slow=19,SNR=7.9
KAPI                                LR    LR     13 26 47.3
             comp=Z,61nm,20.4s,baz=60,slow=41
KAPI   Kappang           10.28 227  Pn    Pn     13 22 10.4 -1.6
BATI   Baumata           12.66 197  P     P      13 22 47.5 -3.0
             2.9nm,0.3s,baz=306,slow=0.4,SNR=7.8
BATI                                LR    LR     13 28 08.9
             comp=Z,116nm,18.6s,baz=354,slow=40
MTN    Manton Dam        15.22 166  Pn    Pn     13 23 15.1 -1.4
FITZ   Fitzroy Crossi    20.04 185  P     P      13 24 11.5 -0.3
             6.6nm,0.8s,baz=32,slow=11,SNR=15
FITZ                                LR    LR     13 31 08.4
             comp=Z,41nm,21.5s,baz=50,slow=34
FITZ   Fitzroy Crossi    20.04 185  P     P      13 24 12.3 +0.5
YULB   Yu-li             22.05 345  P     P      13 24 30.5 -2.8
YULB                                IAmb  IAmb   13 24 36.7
             comp=Z,13nm,0.6s
TPUB   Ta-pu             22.15 343  P     P      13 24 34.1 -0.2
TPUB                                IAmb  IAmb   13 24 36.1
             comp=Z,44nm,1.0s
SSLB   Suanglung         22.52 345  P     P      13 24 37.4 -0.7
SSLB                                IAmb  IAmb   13 24 41.2
             comp=Z,26nm,0.9s
WB0    Warramunga Arr    22.72 163  P     P      13 24 39.8 -0.3
WRA    Warramunga Arr    22.86 163  P     P      13 24 41.1 -0.5
             comp=Z,2.5nm,0.4s,baz=340,slow=10,SNR=54
WRA                                 LR    LR     13 34 12.9
             comp=Z,68nm,19.8s,baz=355,slow=38
WRA    Warramunga Arr    22.86 163  P     P      13 24 40.8 -0.7
WB2    Warramunga Arr    22.87 163  P     P      13 24 41.4 -0.2
WB2                                 IAmb  IAmb   13 24 49.4
             comp=Z,11nm,0.7s
WR0    Warramunga Arr    22.94 162  P     P      13 24 42.3  0.0
YHNB   Yeheng            23.26 346  P     P      13 24 45.6 +0.3
YHNB                                IAmb  IAmb   13 24 46.8
             comp=Z,37nm,0.7s
JOW    Kunigami          24.71   2  P     P      13 24 58.9 +0.6
             comp=Z,11nm,0.8s,baz=158,slow=6.4,SNR=7.4
JOW                                 LR    LR     13 38 45.5
             comp=Z,22nm,18.5s,baz=70,slow=46
ASAR   Alice Springs     26.30 166  P     P      13 25 13.2 +0.3
             comp=Z,0.8nm,0.3s,baz=344,slow=7.1,SNR=27
ASAR                                pP    pP     13 25 32.9 -4.4
             comp=Z,2.9nm,0.6s,baz=345,slow=12,SNR=8.8
ASAR                                PcP   PcP    13 28 38.0 +1.6
             comp=Z,0.3nm,0.4s,baz=347,slow=2.9,SNR=2.6
ASAR                                S     S      13 29 37.9 +0.3
             comp=Z,0.4nm,0.7s,baz=350,slow=21,SNR=2.9
ASAR                                ScP   ScP    13 32 09.1 +2.9
             comp=Z,0.3nm,0.5s,baz=350,slow=2.6,SNR=6.6
JCJ    Chichijima        28.74  28  LR    LR     13 34 35.1
             comp=Z,33nm,20.4s,baz=213,slow=31
CMAR   Chiang Mai Arr    32.27 302  P     P      13 26 06.8 +1.0
             comp=Z,0.9nm,0.7s,baz=119,slow=7.6,SNR=9.8
CMAR                                pP    pP     13 26 26.4 -3.5
             comp=Z,0.4nm,0.3s,baz=116,slow=6.1,SNR=1.9
CMAR                                LR    LR     13 39 39.3
             comp=Z,14nm,20.2s,baz=260,slow=37
JHJ    Hachijo jima 2    33.09  19  LR    LR     13 36 41.9
             comp=Z,33nm,21.1s,baz=118,slow=31
KSRS   Korea Array       35.29   1  P     P      13 26 32.0 +0.4
             comp=Z,1.3nm,0.5s,baz=176,slow=10.0,SNR=7.9
KSRS                                LR    LR     13 41 48.3
             comp=Z,22nm,20.4s,baz=345,slow=38
MAJO   Matsushiro        35.82  15  P     P      13 26 34.5 -1.7
MAJO                                IAmb  IAmb   13 26 36.8
             comp=Z,12nm,0.8s
MAT    Matsushiro        35.82  15  P     P      13 26 34.6 -1.6
MJAR   Matsushiro Arr    35.82  15  P     P      13 26 34.8 -1.4
             comp=Z,6.3nm,0.7s,baz=183,slow=9.5,SNR=26
MJAR                                LR    LR     13 39 07.5
             comp=Z,33nm,21.2s,baz=315,slow=32
MJAR   Matsushiro Arr    35.82  15  P     P      13 26 34.2 -2.0
NWAO   Narrogin (SRO)    36.02 195  P     P      13 26 39.4 +1.4
             comp=Z,3.6nm,0.8s,baz=354,slow=9.2,SNR=1.5
STKA   Stephens Creek    36.31 159  P     P      13 26 40.7 +0.2
             comp=Z,0.8nm,0.3s,baz=7.3,slow=6.2,SNR=10
JSD    Sado              37.24  14  P     P      13 26 47.1 -1.2
BJT    Baijiatuau        39.18 346  P     P      13 27 05.1 +0.7
CN2    Changchun         41.66 358 eP     P      13 27 26.8 +2.0
CN2                                 pmax  pmax
             comp=Z,10.0nm,0.6s
ASAJ   Asahikawa         44.08  16  P     P      13 27 45.0 +0.7
             comp=Z,2.8nm,0.5s,baz=252,slow=7.9,SNR=9.1
KLR    Kul'dur           47.21   4  P     P      13 28 09.2 +0.3
             comp=Z,1.5nm,0.5s,baz=218,slow=5.0,SNR=7.7
SONM   Songino Array     49.12 341  P     P      13 28 25.2 +1.3
             comp=Z,4.3nm,0.8s,baz=155,slow=8.6,SNR=22
SONM                                PcP   PcP    13 29 47.3 +1.6
             comp=Z,0.7nm,0.6s,baz=151,slow=3.3,SNR=1.9
SONM                                ScP   ScP    13 33 32.1 +1.4
             comp=Z,0.3nm,0.5s,baz=156,slow=1.4,SNR=1.8
SONM   Songino Array     49.12 341  P     P      13 28 25.3 +1.5
PETK   Petropavlovsk-    56.81  21  P     P      13 29 20.6 +0.6
             comp=Z,4.4nm,0.8s,baz=184,slow=5.9,SNR=4.8
ZSN    Zaisan            58.27 327 eP     P      13 29 31.4 +0.9
             comp=Z,3.6nm,1.2s,baz=327
ZSN                                eS     S      13 37 34.3 +10
             baz=327
SHLS   Shalkode          59.05 321 eP     P      13 29 35.5 -0.5
             comp=Z,5.2nm,0.8s,baz=321
MK31   Makanchi Array    59.31 326  P     P      13 29 39.4 +1.8
MK31                                IAmb  IAmb   13 29 39.8
             comp=Z,6.5nm,0.6s
MKAR   Makanchi Array    59.31 326  P     P      13 29 39.5 +1.8
             comp=Z,8.2nm,0.4s,baz=117,slow=8.0,SNR=250
MKAR                                pP    pP     13 30 00.9 -3.1
             comp=Z,1.5nm,0.5s,baz=122,slow=8.7,SNR=2.5
MKAR                                ScP   ScP    13 34 18.3 +3.1
             comp=Z,0.3nm,0.7s,baz=126,slow=3.7,SNR=2.8
UZB    Uzynbulak         59.33 321 eP     P      13 29 39.6 +1.7
             comp=Z,3.9nm,0.9s,baz=320
MAKZ   Makanchi          59.49 325  P     P      13 29 40.7 +1.8
SATY   Saty              59.67 320 eP     P      13 29 42.1 +1.8
             comp=Z,6.5nm,0.9s,baz=320
KSH    Kashi             59.68 316  P     P      13 29 43.1 +2.6
KSH                                 pmax  pmax
             comp=Z,26nm,1.3s
KSH                                 pmax  pmax
             comp=Z,1µm,6.4s
KPKS   Kokpek            59.70 321 eP     P      13 29 41.9 +1.4
             comp=Z,7.5nm,0.8s,baz=321
YAK    Yakutsk           59.91   1  P     P      13 29 41.5 +0.1
MDOK   Medeo             60.60 320 eP     P      13 29 47.7 +1.1
             baz=320
TNSS   Tian-Shan         60.60 320 eP     P      13 29 48.9 +1.9
             baz=320
TDK    Taldyqorghan      60.64 322 eP     P      13 29 48.3 +1.6
             comp=Z,5.3nm,0.7s,baz=322
AAA    Alma-Ata          60.70 320 eP     P      13 29 49.1 +1.8
             baz=320
CHKK   Chushkaly         60.96 320 eP     P      13 29 50.1 +1.1
             baz=320
MTBS   Maitube           60.98 319 eP     P      13 29 49.1 -0.1
             baz=320
KUU    Kurty             61.40 320 eP     P      13 29 53.0 +1.1
             comp=Z,16nm,1.4s,baz=320
AAK    Ala-Archa         62.03 318  P     P      13 29 57.8 +1.4
ZALV   Zalesovo Beam     62.39 333  P     P      13 29 58.2  0.0
             comp=Z,0.9nm,0.6s,baz=102,slow=6.1,SNR=5.5
ZALV                                pP    pP     13 30 23.3 -1.6
             comp=Z,2.2nm,0.6s,baz=116,slow=6.8,SNR=5.8
SEM    Semipalatinsk     62.48 328 eP     P      13 30 00.1 +0.9
             baz=328
BTLS   Baital            63.38 321 eP     P      13 30 06.0 +1.0
             baz=320
KURK   Kurchatov         63.51 328  P     P      13 30 07.3 +1.5
DZA    Taraz             64.26 317 eP     P      13 30 11.6 +0.6
             baz=317
IUG    Iuzhnay           64.87 316 eP     P      13 30 16.0 +1.0
             baz=316
KKAR   Karatay Array     64.90 317  P     P      13 30 15.8 +0.7
BRVK   Borovoye          69.16 327  P     P      13 30 42.8 +1.0
BRVK                                IAmb  IAmb   13 30 43.8
             comp=Z,5.1nm,0.8s
TIXI   Tiksi             69.56   1  P     P      13 30 44.1 +0.2
TIXI                                IAmb  IAmb   13 30 44.4
             comp=Z,3.3nm,0.4s
NRIK   Noril'sk          72.24 346  P     P      13 31 01.1 +1.0
             comp=Z,4.0nm,0.5s,baz=123,slow=6.6,SNR=9.7
NRIK   Noril'sk          72.24 346  P     P      13 31 00.6 +0.5
NRIK                                IAmb  IAmb   13 31 01.8
             comp=Z,4.4nm,0.7s
GEYT   Alibeck           72.44 309  P     P      13 31 04.0 +2.0
             comp=Z,1.4nm,0.5s,baz=134,slow=8.3,SNR=2.8
GNI    Garni             83.04 310  LR    LR     14 14 24.3
             comp=Z,49nm,18.1s,baz=23,slow=39
IMAR   Indian Mountai    83.67  24  P     P      13 32 05.5 +2.0
COLD   Coldfoot          85.25  23  P     P      13 32 12.8 +1.5
COLD                                IAmb  IAmb   13 32 15.2
             comp=Z,3.4nm,0.7s
ILAR   Eielson Array     86.40  25  P     P      13 32 17.1  0.0
             comp=Z,0.4nm,0.5s,baz=240,slow=5.6,SNR=8.1
ARCES  ARCESS Array B    92.27 340  P     P      13 32 44.4 -0.2
             comp=Z,2.5nm,0.7s,baz=354,slow=3.7,SNR=4.2
FINES  FINESS Array B    93.63 332  P     P      13 32 50.6 -0.3
             comp=Z,5.8nm,1.1s,baz=54,slow=7.1,SNR=5.5
YKA    Yellowknife Ar   100.82  25  P     Pdif   13 33 24.1 +0.7
             comp=Z,0.2nm,0.7s,baz=296,slow=4.3,SNR=3.8
TXAR   Lajitas Array    122.17  53  PKP   PKiKP  13 38 31.3 +1.2
             comp=Z,0.2nm,0.7s,baz=345,slow=3.2,SNR=2.8
```

IDC ***07*** *13:33:26.8±1.1, 27°.32N×140°.25E, h332km±11km, mb3.1/13, mb1 3.2/17, mb1mx3.0/57, mbtmp3.8/17, Error ellipse: s-maj=22.9km s-min=12.1km az=77.0*

JMA ***07*** *13:33:28.5, 27°.68N×140°.97E, h333km±1km, M3.9*

ISC 07 13:33:27.6±0.7**, 27°.53N**±0°.08×**140°.9E**±0°.1**, h350**km**, n27, σ2s.06**/35**, mb3.2**/13**, Bonin Islands region**

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Code   Station Name        Δ°  AZ°  Phase ID     Time       Res
                                    Op    ISC    h  m  s    ISC
CBIJ   Chichi jima        1.27 110  P     Pn     13 34 13.6 -0.9
CBIJ                                S     S      13 34 48.9 -3.2
JCJ    Chichijima         1.27 110  P     Pn     13 34 13.8 -0.8
             47nm,0.3s,baz=253,slow=14,SNR=27
JCJ                                 S     S      13 34 48.6 -3.6
             83nm,0.3s,baz=287,slow=19,SNR=17
JHH2   Haha-jima-NKT2     1.48 127  P     Pn     13 34 15.1 -0.6
JHH2                               eS     S      13 34 51.7 -2.5
JHJ    Hachijo jima 2     5.65 351  P     Pn     13 34 55.5 +1.2
             5.6nm,0.3s,baz=90,slow=20,SNR=1.5
JHJ                                 S     S      13 36 02.3 -2.2
             12nm,0.3s,baz=66,slow=20,SNR=7.2
JOD2   Odawara 2          7.86 349  P     Pn     13 35 20.2 +0.3
JHU    Hanno              8.40 351  P     Pn     13 35 26.7 +0.3
JRY    Ryogami san        8.62 349  P     Pn     13 35 29.3 +0.3
JAG    Ashikaga           8.95 353  P     Pn     13 35 33.2 +0.4
JHO    Hitachi            9.06 359  P     Pn     13 35 34.1 -0.1
JHO                                 S     S      13 37 12.6 -5.1
MJAR   Matsushiro Arr     9.26 347  P     Pn     13 35 36.0 -0.6
             0.1nm,0.3s,baz=150,slow=12,SNR=1.7
MJAR                                S     S      13 37 20.4 -1.8
             0.1nm,0.3s,baz=160,slow=19,SNR=2.1
JFK    Kawauchi           9.81   0  S     S      13 37 29.6 -4.7
KSRS   Korea Array       14.71 316  P     Pn     13 36 41.2 +0.3
             0.3nm,0.3s,baz=132,slow=12,SNR=8.8
ASAJ   Asahikawa         16.61   4  P     Pn     13 37 04.3 +1.4
             0.2nm,0.3s,baz=222,slow=15,SNR=1.6
USRK   Ussuriysk Ar.     18.10 339  P     P      13 37 16.3 +0.9
             baz=134,slow=11,SNR=7.2
KLR    Kul'dur           22.78 344  P     P      13 38 02.4 +1.8
             0.8nm,0.5s,baz=182,slow=7.7,SNR=3.3
SONM   Songino Array     33.58 316  P     P      13 39 35.2 -0.8
             0.3nm,0.3s,baz=128,slow=9.2,SNR=4.8
WRA    Warramunga Arr    47.61 188  P     P      13 41 28.6 -1.0
             1.1nm,0.3s,baz=5.6,slow=7.6,SNR=54
WRA                                 ScP   ScP    13 46 13.6 +0.5
             0.5nm,0.8s,baz=3.7,slow=4.0,SNR=2.3
ZALV   Zalesovo Beam     48.38 319  P     P      13 41 33.8 -1.3
             0.3nm,0.4s,baz=104,slow=11,SNR=2.4
MKAR   Makanchi Array    49.28 309  P     P      13 41 39.9 -2.1
             0.1nm,0.3s,baz=86,slow=11,SNR=5.4
MKAR                                ScP   ScP    13 46 20.8 +0.7
             0.7nm,0.8s,baz=102,slow=5.4,SNR=3.6
ASAR   Alice Springs     51.34 188  P     P      13 41 56.4 -1.1
             0.1nm,0.3s,baz=1.1,slow=4.7,SNR=1.4
NRIK   Noril'sk          51.81 339  P     P      13 42 01.1 +0.7
             3.5nm,0.7s,baz=99,slow=11,SNR=7.0
KURBB  Kurchatov Arra    51.89 314  P     P      13 42 00.2 -1.0
             0.6nm,0.5s,baz=90,slow=7.1,SNR=8.5
BVAR   Borovoye Array    56.92 317  P     P      13 42 36.3 -0.8
             0.3nm,0.3s,baz=70,slow=13,SNR=5.7
ILAR   Eielson Array     57.91  29  P     P      13 42 47.1 +3.4
             0.2nm,0.6s,baz=240,slow=6.6,SNR=4.6
YKA    Yellowknife Ar    72.33  28  P     P      13 44 19.1 +3.6
             0.4nm,0.5s,baz=296,slow=5.3,SNR=7.1
ARCES  ARCESS Array B    72.74 341  P     P      13 44 19.4 +1.6
             1.2nm,0.5s,baz=72,slow=7.8,SNR=7.6
FINES  FINESS Array B    77.03 333  P     P      13 44 43.1 +0.8
             1.3nm,0.3s,baz=69,slow=4.9,SNR=26
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IDC ***07*** *13:35:09.4±0.9, 12°.12N×142°.38E, h0km, mb3.8/7, mb1 4.1/8, mb1mx3.6/57, mbtmp3.9/8, ML4.2/1, MS2.7/2, Ms1 2.7/2, ms1mx2.4/51, Error ellipse: s-maj=47.5km s-min=20.0km az=110.0*

ISC 07 13:35:14.9±0.9**, 12°.1N**±0°.2×**142°.6E**±0°.2**, h35**km**, n16, σ1s.64**/9**, mb3.8**/7**, South of Mariana Islands**

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Code   Station Name        Δ°  AZ°  Phase ID     Time       Res
                                    Op    ISC    h  m  s    ISC
GUMO   Guam               2.64  55  Pn    Pn     13 35 55.2 +0.3
             35nm,0.3s,baz=216,slow=14,SNR=12
GUMO                                Sn    Sn     13 36 24.1 -1.6
             37nm,0.3s,baz=180,slow=20,SNR=6.0
SIJI   Sorong            17.13 222  LR    LR     13 44 54.2
             comp=Z,22nm,21.0s,baz=50,slow=34
H11S3  WAKE ISLAND Hy    24.04  72  T     T      14 05 08.7
             baz=252
H11S1  WAKE ISLAND Hy    24.05  72  T     T      14 05 05.1
             baz=252
H11S2  WAKE ISLAND Hy    24.05  72  T     T      14 05 05.4
             baz=252
H11N1  WAKE ISLAND Hy    24.50  69  T     T      14 05 43.2
             baz=255
H11N2  WAKE ISLAND Hy    24.51  69  T     T      14 05 43.8
             baz=255
H11N3  WAKE ISLAND Hy    24.52  69  T     T      14 05 44.2
             baz=255
MJAR   Matsushiro Arr    24.68 351  P     P      13 40 30.1 -2.4
             0.8nm,0.8s,baz=145,slow=8.9,SNR=1.6
KSRS   Korea Array       28.50 335  LR    LR     13 51 44.0
             comp=Z,15nm,18.1s,baz=65,slow=35
WRA    Warramunga Arr    32.86 194  P     P      13 41 44.2 -1.4
             1.0nm,0.8s,baz=18,slow=9.6,SNR=6.2
ASAR   Alice Springs     36.55 194  P     P      13 42 16.8 -0.7
             0.4nm,0.6s,baz=16,slow=11,SNR=6.3
ILAR   Eielson Array     70.85  25  P     P      13 46 27.9  0.0
             0.9nm,0.6s,baz=248,slow=6.2,SNR=22
YKA    Yellowknife Ar    85.18  27  P     P      13 47 48.6 +1.2
             0.4nm,0.7s,baz=287,slow=4.5,SNR=7.1
NVAR   Mina Array Bea    89.55  51  P     P      13 48 11.2 +1.9
             0.6nm,0.7s,baz=260,slow=5.2,SNR=4.5
FINES  FINESS Array B    91.59 335  P     P      13 48 18.5 +0.5
             2.4nm,1.0s,baz=72,slow=4.5,SNR=1.3
```

IDC ***07*** *13:40:43.3±2.6, 36°.38N×70°.75E, h164km±23km, mb3.5/13, mb1 3.6/19, mb1mx3.3/62, mbtmp4.0/19, Error ellipse: s-maj=18.7km s-min=14.1km az=33.0*

NNC ***07*** *13:40:46.9±2.4, 36°.84N×70°.60E, h128km±43km, mb3.5, mpv4.0, Error ellipse: s-maj=22.6km s-min=11.2km az=159.0*

ISC 07 13:40:42.3±0.6**, 36°.48N**±0°.05×**70°.80E**±0°.06**, h150**km**, n48, σ1s.79**/61**, mb3.8**/12**, 5C-7D, Hindu Kush region**

```
Code   Station Name        Δ°  AZ°  Phase ID     Time       Res
                                    Op    ISC    h  m  s    ISC
THN    Thein Dam          5.72 133 eP     Pn     13 42 06.5 +1.2
THN                                eS     Sn     13 43 09.0 -1.2
AML    Almayashu          6.08  21  P     Pn     13 42 11.7 +1.4
             SNR=83
DHRM   DHARAMSHALA        6.20 131 eP     Pn     13 42 13.1 +1.2
DHRM                               eS     Sn     13 43 20.6 -1.4
DHRM                                IAML         13 43 22.5
             comp=E,134nm,0.3s
DHRM                                IAML         13 43 24.6
             comp=N,166nm,0.6s
UCH    Uchtor             6.42  25  P     Pn     13 42 16.5 +1.5
             SNR=16
EKS2   Erkin-Say          6.59  20  P     Pn     13 42 18.4 +1.5
             SNR=9.2
KK31   Karatay Array      6.62 358 ⇓P     Pn     13 42 18.4 +1.2
             comp=N,19nm,0.6s,baz=184,slow=15,SNR=86
KK31                               ⇑S     Sn     13 43 27.8 -3.8
             comp=N,12nm,0.5s
AAK    Ala-Archa          6.78  24  P     Pn     13 42 21.0 +1.5
             comp=N,2.7nm,0.3s,baz=168,slow=6.3,SNR=44
AAK                                 S     Sn     13 43 33.3 -2.4
             comp=N,1.4nm,0.3s,baz=345,slow=20,SNR=12
AAK    Ala-Archa          6.78  24  P     Pn     13 42 21.1 +1.6
             SNR=9.1
AAK    Ala-Archa          6.78  24 ⇓P     Pn     13 42 21.1 +1.6
             comp=N,4.4nm,0.7s
AAK                                ⇑S     Sn     13 43 33.1 -2.6
             comp=N,43nm,1.1s
KBK    Karagaybulak       6.95  26  P     Pn     13 42 23.7 +1.9
             SNR=6.0
CHMS   Chumysh            7.19  24  P     Pn     13 42 26.1 +1.3
             SNR=5.5
USP    Ospenovka          7.35  22  P     Pn     13 42 27.8 +0.8
             SNR=7.6
TKM2   Tokmak 2           7.42  28  P     Pn     13 42 29.3 +1.2
             SNR=11
TKM2   Tokmak 2           7.42  28 ⇑P     Pn     13 42 29.1 +1.0
             comp=N,5.1nm,0.8s
TKM2                               ⇓S     Sn     13 43 49.6 -1.5
             comp=N,8.5nm,0.8s
SMLA   Simla              7.52 133 eP     Pn     13 42 30.1 +0.9
SMLA                               eS     Sn     13 43 52.5 -0.7
SMLA                                IAML         13 43 53.8
             comp=E,99nm,0.1s
SMLA                                IAML         13 43 57.6
             comp=N,80nm,0.5s
DDI    Dehra Dun          8.63 133 eP     Pn     13 42 44.8 +0.6
AYAN   Aya Nagar          9.60 144 eP     Pn     13 42 57.2 +0.2
AYAN                               eS     Sn     13 44 38.6 -4.6
```

GEYT	Alibeck	10.22	282	P	Pn	13 43 05.6	+0.4
	comp=N,0.7nm,0.3s,baz=104,slow=8.1,SNR=6.0						
GEYT				S	Sn	13 45 00.0	+1.8
	comp=N,1.1nm,0.3s,baz=81,slow=24,SNR=4.6						
GYA0B	ALIBECK ARRAY	10.22	282	⇓P	Pn	13 43 04.5	-0.6
GYA0B				⇓S	Sn	13 44 59.2	+0.9
MAKZ	Makanchi	13.27	35	⇑P	P	13 43 48.6	-0.5
	comp=N,5.3nm,0.6s						
MK31	Makanchi Array	13.41	36	P	P	13 43 50.2	-0.4
	comp=N,2.7nm,0.7s,baz=210,slow=9.3,SNR=26						
MKAR	Makanchi Array	13.41	36	P	Pn	13 43 48.7	+2.2
	comp=N,0.3nm,0.3s,baz=210,slow=9.5,SNR=30						
DANN	Dangsing	13.61	123	eP	Pn	13 43 48.6	-1.0
	comp=N,28nm,0.3s						
GKN	Gorkha	14.43	122	eP	Pn	13 43 58.7	-1.1
	comp=N,32nm,0.3s						
DMN	Daman	15.00	122	eP	Pn	13 44 05.7	-1.3
	comp=N,27nm,0.5s						
KKN	Kakani	15.01	121	eP	Pn	13 44 05.9	-1.1
	comp=N,42nm,0.6s						
AB31	Akbulak array	15.03	332	⇓P	Pn	13 44 06.6	-0.2
	comp=N,2.4nm,0.5s,baz=144,slow=12,SNR=58						
AB31				⇑S	Sn	13 46 49.3	-4.3
	comp=N,2.7nm,0.7s,baz=164,slow=20,SNR=6.9						
KURBB	Kurchatov Arra	15.20	19	P	Pn	13 44 10.0	+1.0
	comp=N,0.1nm,0.3s,baz=209,slow=13,SNR=4.3						
PKIN	Phulchoki	15.22	122	eP	Pn	13 44 07.9	-1.8
	comp=N,43nm,0.6s						
PKI	Pulchoki	15.23	122	eP	Pn	13 44 08.0	-1.9
	comp=N,46nm,0.5s						
GUN	Gumba	15.35	120	eP	Pn	13 44 10.1	-1.3
	comp=N,18nm,0.3s						
RAMN	Ramite	16.44	121	eP	Pn	13 44 22.8	-1.9
	comp=N,37nm,0.4s						
BVAR	Borovoye Array	16.55	359	P	Pn	13 44 26.7	+1.2
	comp=N,0.2nm,0.3s,baz=179,slow=15,SNR=5.1						
AKTO	Aktyubinsk	16.72	331	P	Pn	13 44 29.0	+1.4
	comp=N,0.4nm,0.3s,baz=144,slow=7.8,SNR=18						
AKTO				S	S	13 47 29.8	-3.5
	comp=N,0.2nm,0.3s,baz=165,slow=20,SNR=2.0						
AKTO	Aktyubinsk	16.72	331	⇓P	Pn	13 44 29.2	+1.6
	comp=N,8.0nm,0.9s						
ZALV	Zalesovo Beam	20.00	25	P	P	13 45 03.2	+0.2
	comp=N,6.4nm,0.5s,baz=223,slow=11,SNR=35						
ZALV				sP	sP	13 45 55.0	+5.3
	comp=N,1.2nm,0.4s,baz=220,slow=11,SNR=1.8						
SONM	Songino Array	28.48	55	P	P	13 46 24.5	+1.1
	comp=N,0.4nm,0.7s,baz=271,slow=10,SNR=3.5						
CMAR	Chiang Mai Arr	30.59	118	P	P	13 46 43.6	+1.5
	comp=N,0.8nm,0.8s,baz=308,slow=8.6,SNR=6.2						
NRIK	Noril'sk	34.18	10	P	P	13 47 13.8	+1.1
	comp=N,0.9nm,0.4s,baz=212,slow=10,SNR=3.6						
FINES	FINESS Array B	37.41	326	P	P	13 47 40.4	0.0
	comp=N,3.6nm,1.0s,baz=113,slow=4.4,SNR=5.6						
ARCES	ARCESS Array B	41.10	338	P	P	13 48 11.9	+1.0
	comp=N,3.9nm,1.0s,baz=117,slow=7.2,SNR=7.4						
NOA	NORSAR Array B	44.30	323	P	P	13 48 37.5	+0.6
	comp=N,1.8nm,0.9s,baz=98,slow=4.8,SNR=3.6						
TORD	Torodi Ar. Bea	65.55	269	P	P	13 51 09.1	-1.0
	comp=N,1.0nm,0.5s,baz=44,slow=4.5,SNR=7.0						
INK	Inuvik	73.95	9	P	P	13 52 00.2	-0.4
	comp=N,0.5nm,0.4s,baz=311,slow=4.4,SNR=5.6						
ILAR	Eielson Array	74.85	16	P	P	13 52 05.5	-0.4
	comp=N,0.7nm,0.9s,baz=308,slow=4.4,SNR=5.1						
YKA	Yellowknife Ar	81.28	3	P	P	13 52 41.6	+0.3
	comp=N,0.3nm,0.4s,baz=0.2,slow=5.3,SNR=15						
WRA	Warramunga Arr	82.12	122	P	P	13 52 44.9	-1.4
	comp=N,1.2nm,0.5s,baz=324,slow=5.0,SNR=34						
ASAR	Alice Springs	84.38	125	P	P	13 52 56.6	-1.3
	comp=N,1.2nm,0.6s,baz=306,slow=4.6,SNR=22						

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*WEL **07** 13:41:00, 43.°06S×171.°28E, h5^{km}, ML3.7, Mw3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14} Nm; M_{rr}2.57; $M_{\theta\theta}$-1.48; $M_{\phi\phi}$-1.09; $M_{r\theta}$-5.60; $M_{\theta\phi}$-2.37; $M_{\phi r}$-2.42; Fault plane solution: $M_0$6.90000×10^{14} NP1: ϕ_s22.00000°, δ17.00000°, λ48.00000°. NP2: ϕ_s246.00000°, δ77.00000°, λ102.00000°. Principal axes: T -72.3000, Plg56.0000°, Azm171.0000°; N 65.6300, Plg11.0000°, Azm63.0000°; P 6.6800, Plg31.0000°, Azm326.0000°;*

WEL 07 13:41:52.4±0.3**, 43°S**±3°×**17°1E**±°**, h5^{km}, M3.7**/13**, ML3.8**/13**, MLv3.7**/13 **Error ellipse: s-maj=0.0km s-min=0.0km az=145.4, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
INZ	Inchbonnie	0.34	22	P	Pg	13 41 59.4	+0.3
INZ				S	Sg	13 42 03.7	+0.2
WVZ	Waitaha Valley	0.39	265	P	Pg	13 42 00.7	+0.8
WVZ				S	Sg	13 42 05.7	+0.7
OXZ	Oxford	0.63	117	P	Pg	13 42 05.0	+0.5
RPZ	Rata Peaks	0.69	193	P	Pg	13 42 06.2	+0.5
RPZ				S	Sg	13 42 15.5	+0.9
LTZ	Lake Taylor	0.78	71	P	Pg	13 42 07.9	+0.5
LTZ				S	Sg	13 42 18.3	+0.8
FOZ	Fox Glacier	1.17	245	P	Pg	13 42 14.7	-0.1
MQZ	McQueen's Vall	1.21	124	P	Pg	13 42 14.9	-0.6
TMZ	Timaru	1.35	188	P	Pn	13 42 17.3	-0.6
DSZ	Denniston Nort	1.36	17	P	Pn	13 42 18.0	0.0
DSZ				S	Sb	13 42 35.6	-0.4
OKCZ	Okains Bay	1.47	118	P	Pn	13 42 19.0	-0.6
LBZ	Lake Benmore	1.55	210	P	Pn	13 42 20.6	-0.2
THZ	Tophouse	1.76	44	P	Pn	13 42 23.6	-0.1
THZ				S	Sb	13 42 48.1	+0.4
KHZ	Kahutara	1.79	70	P	Pn	13 42 23.6	-0.2
ODZ	Otahua Downs	2.05	192	P	Pn	13 42 26.8	-0.7
ODZ				S	Sn	13 42 52.2	-1.3
JCZ	Jackson Bay	2.08	239	P	Pn	13 42 28.3	+0.3
BSWZ	Blackbirch Sta	2.34	56	P	Pn	13 42 32.1	+0.5
NNZ	Nelson	2.41	41	P	Pn	13 42 32.5	+0.1
QRZ	Quartz Range	2.41	23	P	Pn	13 42 32.6	+0.1
QRZ				S	Sn	13 43 00.9	-1.4
WKZ	Wanaka	2.41	222	P	Pn	13 42 31.7	-0.9
CMWZ	Cape Campbell	2.54	60	P	Pg	13 42 40.3	-0.7
TUWZ	Tuamarina	2.56	52	P	Pn	13 42 35.1	+0.6
EAZ	Earnscleugh	2.60	212	P	Pn	13 42 33.7	-1.4
TCW	Tory Channel	2.89	52	P	Pn	13 42 39.5	+0.4
MSZ	Milford Sound	2.92	235	P	Pn	13 42 39.3	0.0
DUWZ	D'Urville Isla	2.99	42	P	Pn	13 42 41.6	+1.2
TUZ	Tuapeka	3.14	201	P	Pn	13 42 41.9	-0.5
MLZ	Mavora Lakes	3.24	223	P	Pn	13 42 43.3	-0.7
CAW	Cannon Point	3.43	57	P	Pn	13 42 45.3	-1.1
KIW	Kapiti Island	3.48	52	P	Pn	13 42 46.6	-0.6
PAWZ	Paruwai Farm	3.51	63	P	Pn	13 42 47.2	-0.4
OGWZ	Otaki Gorge	3.66	54	P	Pn	13 42 48.7	-1.0
MTW	Mount Morrison	3.67	61	P	Pn	13 42 48.0	-1.8
WHZ	Wether Hill Ro	3.71	219	P	Pn	13 42 48.8	-1.5
SYZ	Scrubby Hill	3.81	203	P	Pn	13 42 51.2	-0.4
HOWZ	Holdsworth Sta	3.82	57	P	Pn	13 42 55.5	+3.6
MRZ	Mangatainoka R	4.00	55	P	Pn	13 42 52.9	-1.4
NMEZ	Namu Road	4.13	29	P	Pn	13 42 57.9	+1.9
NBEZ	Newall Road No	4.25	28	P	Pn	13 42 59.0	+1.2
KHEZ	Kahui Hut	4.28	30	P	Pn	13 42 59.6	+1.3
PREZ	Palmer Road	4.29	31	P	Pn	13 43 00.2	+1.8
WAZ	Wanganui	4.31	42	P	Pn	13 43 00.4	+1.8
NEZ	North Egmont	4.33	30	P	Pn	13 43 00.4	+1.4
PKE	Pukeiti	4.36	29	P	Pn	13 43 00.6	+1.3
BFZ	Birch Farm	4.40	59	P	Pn	13 42 58.2	-1.7
DREZ	Durham Road	4.44	31	P	Pn	13 43 01.6	+1.2
TSZ	Takapari Road	4.61	51	P	Pn	13 43 01.2	-1.6
VRZ	Vera Road	4.72	35	P	Pn	13 43 05.6	+1.3
PKVZ	Pokaka	4.85	41	P	Pn	13 43 08.5	+2.4
WNVZ	Wahianoa	4.95	43	P	Pn	13 43 09.3	+1.9
FWVZ	Far West T-bar	4.98	42	P	Pn	13 43 11.0	+3.0
TUVZ	Tukino	5.02	43	P	Pn	13 43 10.6	+2.1
NGZ	Ngauruhoe	5.06	42	P	Pn	13 43 12.4	+3.3
BHHZ	Black Hill Sta	5.07	47	P	Pn	13 43 09.4	+0.3
TWVZ	Taurewa	5.07	40	P	Pn	13 43 11.6	+2.6
OTVZ	Oturere	5.11	42	P	Pn	13 43 09.5	-0.1
WTVZ	West Tongariro	5.11	41	P	Pn	13 43 12.8	+3.2
KRVZ	Karewarewa	5.15	41	P	Pn	13 43 13.5	+3.3
ETVZ	East Tongariro	5.15	42	P	Pn	13 43 12.5	+2.2
TMVZ	Te Maari	5.16	42	P	Pn	13 43 12.6	+2.3
HIZ	Hauiti	5.28	32	P	Pn	13 43 12.3	+0.4
RATZ	Rangitukua	5.39	41	P	Pn	13 43 17.8	+4.3
BKZ	Black Stump Fm	5.53	47	P	Pn	13 43 15.6	+0.2
TLZ	Tolley Road	5.72	36	P	Pn	13 43 18.6	+0.7
TOZ	Tahuroa Road	6.21	33	P	Pn	13 43 25.2	+0.5
AWAZ	Awhitu Peninsu	6.51	25	P	Pn	13 43 29.9	+1.1
URZ	Urewera	6.52	45	P	Pn	13 43 28.9	-0.1
WTAZ	Waiatarua	6.61	24	P	Pn	13 43 31.7	+1.5
ETAZ	East Tamaki Re	6.70	26	P	Pn	13 43 32.7	+1.3
WIAZ	Waiheke Island	6.91	27	P	Pn	13 43 35.4	+1.0

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*ANF **07** 14:05:57.2±0.2, 33.°30N×116.°29W, h12^{km}, ML3.3/26, Error ellipse: s-maj=1.7km s-min=1.4km az=90.0*

*NEIC **07** 14:05:57.9±1.4, 33.°299N±0.°009×116.°287W±0.°010, h3^{km}±7^{km}, Error ellipse: s-maj=1.3km s-min=1.2km az=206.0*

*SCEDC **07** 14:05:58.3, 33.°30N×116.°28W, h14^{km}*

*PAS **07** 14:05:58.3±1.2, 33.°299N±0.°008×116.°282W±0.°010, h14^{km}±2^{km}, ML3.3/196, ML3.1/36(NEIC), Error ellipse: s-maj=1.3km s-min=1.2km az=152.0*

ISC 07 14:05:57.5±0.8**, 33.°30N**±0.°01×**116.°29W**±0.°01**, h19^{km}**±6^{km}**, n115, σ0^{s}83**/185**, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BORC	Borrego Spring	0.11	252		Pb	14 06 01.3	+2.4
BORC					Sg	14 06 03.3	-0.8
SLH	Sleepy Hollow	0.11	166		Pb	14 06 01.3	+2.4
SLH					Sg	14 06 03.6	-0.4
SALN	Salton City	0.25	95		Pb	14 06 03.6	+0.3
SALN					Sb	14 06 07.9	+0.8
MATG	Mataguay Scout	0.32	251		Pb	14 06 04.5	-0.1
MATG					Sb	14 06 09.3	-0.1
FRD	Ford Ranch, An	0.33	306		Pb	14 06 04.8	0.0
FRD					Sb	14 06 09.4	-0.2
XPFO	Pion Flat	0.34	335		Pb	14 06 04.8	-0.3
XPFO					Sg	14 06 09.2	-0.6
PFO	Pinyon Flats O	0.34	335	P	Pg	14 06 04.4	-0.4
	baz=155,SNR=892						
PFO	Pinyon Flats O	0.34	335	Pg	Pg	14 06 04.6	-0.2
PFO				IAML		14 06 09.7	
	2μm,0.2s						
PFO	Pinyon Flats O	0.34	335		Sg	14 06 09.7	-0.2
PMD	Palm Desert	0.35	348		Pb	14 06 04.9	-0.3
PMD					Sg	14 06 09.5	-0.6
SNDA	J Saunders Pla	0.37	312		Pb	14 06 05.5	-0.1
SNDA					Sb	14 06 11.1	0.0
BZNA	Buzz No.'s Pla	0.37	301		Pb	14 06 05.7	0.0
BZNA					Sb	14 06 10.8	-0.3
DNR	Dunn Ranch,Anz	0.39	313		Pb	14 06 06.1	+0.1
DNR					Sb	14 06 12.1	+0.3
CBKC	Canebrake	0.40	176		Pg	14 06 05.7	-0.2
MONP2	Monument Peak	0.43	195	P	Pg	14 06 06.2	-0.1
	baz=16,SNR=333						
MONP2				S	Sg	14 06 12.1	-0.3
	baz=16						
MONP2	Monument Peak	0.43	195		Pb	14 06 06.6	-0.1
MONP2					Sg	14 06 12.1	-0.3
CTCC	Cactus City	0.43	35		Pb	14 06 06.5	-0.1
CTCC					Sb	14 06 12.8	0.0
ERRC	Elmore Ranch	0.43	115		Pb	14 06 07.2	+0.7
CRY	Cary Ranch	0.46	305		Pb	14 06 07.2	+0.1
CRY					Sb	14 06 13.3	-0.3
PLM	Palomar	0.48	276		Pb	14 06 07.7	+0.1
PLM					Sb	14 06 14.3	-0.1
GVDA	Garner Valley	0.49	319		Pb	14 06 07.4	-0.1
GVDA					Sg	14 06 14.0	-0.1
CRR	Carrizo Plain	0.49	147		Pb	14 06 07.7	+0.1
CRR					Sb	14 06 15.1	+0.7
CTW	Cottonwood Mou	0.51	43		Pg	14 06 07.6	-0.2
CTW					Sb	14 06 15.0	+0.1
SUP	Superstition M	0.52	132		Pb	14 06 08.2	+0.2
SUP					Sb	14 06 15.2	0.0
SWSC	Sam W. Stewart	0.54	131	P	Pg	14 06 08.3	-0.1
	baz=311,SNR=457						
SWSC				S	Sb	14 06 16.1	+0.4
	baz=311						
SWSC	Sam W. Stewart	0.54	131		Pb	14 06 08.4	+0.1
SWSC					Sb	14 06 15.9	+0.2
FRK	Frink	0.55	80		Pg	14 06 08.4	-0.2
DPP	Dos Picos Cty	0.63	241		Pb	14 06 09.8	0.0
DPP					Sg	14 06 18.1	-0.3
HWB	Hans Werner Br	0.63	244		Pb	14 06 09.8	0.0
HWB					Sb	14 06 18.5	+0.3
EW2	E Wide Canyon	0.64	351		Pb	14 06 10.4	+0.3
EW2					Sb	14 06 18.8	+0.1
HAY	Hayfield	0.65	51		Pb	14 06 10.8	+0.6
HAY					Sb	14 06 19.9	+1.2
WEMD	Westmorland, C	0.65	114		Pb	14 06 10.3	+0.2
COK2	Cook Ranch 2	0.65	134		Pb	14 06 10.4	+0.3
COK2					Sb	14 06 20.8	+2.0
POB	Polly Butte	0.65	306		Pb	14 06 10.6	+0.2
POB					Sb	14 06 19.1	+0.1
IKP	In-Ko-Pah, Jac	0.67	167	P	Pb	14 06 10.8	+0.2
	baz=348,SNR=134						
IKP				S	Sb	14 06 19.6	+0.2
	baz=348						
IKP	In-Ko-Pah, Jac	0.67	167		Pb	14 06 10.8	+0.2
IKP					Sb	14 06 19.7	+0.2
DEVC	Devers	0.68	339		Pb	14 06 11.2	+0.5
DEVC					Sg	14 06 19.6	-0.3
DGR	Domenigoni Val	0.69	300		Pb	14 06 11.1	+0.1
DGR					Sg	14 06 20.1	-0.4
BACC	Bachelor Mtn.	0.70	296		Pb	14 06 11.2	+0.1
BACC					Sg	14 06 20.3	-0.4
BAR	Barrett	0.70	208	Pg	Pg	14 06 11.1	-0.2
BAR	Barrett	0.70	208		Sg	14 06 20.4	-0.3
WESC	Westside Schoo	0.72	139		Pg	14 06 11.2	-0.4
WESC					Sn	14 06 22.9	-0.2
RMX	La Rumorosa	0.72	166		Pn	14 06 12.8	0.0
RMX					Sb	14 06 22.9	+1.8
RMX	La Rumorosa	0.72	166	IAML		14 06 23.5	
	comp=N,1μm,0.2s						
HMTC	Hemet	0.72	304		Pb	14 06 11.5	0.0
HMTC					Sg	14 06 21.0	-0.4
YUH	Yuha Desert	0.72	155		Pg	14 06 11.2	-0.5
YUH					Sb	14 06 21.3	+0.4
BELC	Belle Mtn. Jos	0.74	19	P	Pb	14 06 11.9	+0.1
	baz=199,SNR=235						
BELC				S	Sb	14 06 22.0	+0.4
	baz=199						
BELC	Belle Mtn. Jos	0.74	19		Pb	14 06 11.9	+0.1
BELC					Sb	14 06 22.1	+0.6
BLAC	Blackrock camp	0.77	354		Pb	14 06 12.4	0.0
BLAC					Sb	14 06 23.1	+0.6
BC3	Big Chuckawall	0.78	63	P	Pg	14 06 12.5	-0.3
	baz=243,SNR=144						
BC3				S	Sg	14 06 22.9	-0.4
	baz=243						
BC3	Big Chuckawall	0.78	63		Pg	14 06 12.6	-0.3
BC3					Sg	14 06 22.7	-0.5
TKX	Tecate	0.78	200		Pg	14 06 12.5	-0.3
TKX				IAML		14 06 24.5	
	comp=E,1μm,0.2s						
TKX				IAML		14 06 24.7	
	comp=N,950nm,0.3s						
TKX	Tecate	0.78	200		Sg	14 06 22.5	-0.7
SDRC	San Diego Road	0.79	224		Pg	14 06 12.5	-0.4
SDRC					Sg	14 06 22.8	-0.7
109C	Camp Elliot, M	0.80	239	P	Pg	14 06 12.8	-0.4
	baz=59,SNR=48						
109C				S	Sg	14 06 23.2	-0.7
	baz=59						
109C	Camp Elliot, M	0.80	239	Pg	Pg	14 06 12.8	-0.4
CPE	Camp Elliot	0.80	239		Pg	14 06 12.8	-0.4
CPE					Sg	14 06 23.2	-0.6
GORC	Green Oak Ranc	0.80	260		Pg	14 06 12.8	-0.4
GORC					Sg	14 06 23.3	-0.6
SGL	Mount Signal	0.81	144		Pg	14 06 12.3	-0.9
SGL					Sb	14 06 24.1	+0.7
MURC	Murrieta	0.81	292	P	Pg	14 06 13.1	-0.4
	baz=111,SNR=171						
MURC				S	Sg	14 06 23.9	-0.4
	baz=111						
MURC	Murrieta	0.81	292		Pb	14 06 13.3	+0.2
MURC					Sb	14 06 24.6	+0.8
TPC	Twentynine Pal	0.82	14		Pg	14 06 13.1	-0.5
TPC					Sb	14 06 24.6	+0.6
SNR	Schaffner Ranc	0.84	121		Pg	14 06 13.1	-0.8
BBSC	Beaumont Base	0.84	317		Pb	14 06 14.2	+0.5
OLP	Otay Lakes Par	0.88	218		Pg	14 06 14.1	-0.6
OLP					Sg	14 06 25.4	-0.9
PEC	Perris	0.94	309		Pb	14 06 15.4	+0.2
PEC					Sb	14 06 27.8	+0.6
GTM	Goat Mountain	0.99	357		Pb	14 06 16.4	+0.3
GTM					Sb	14 06 29.5	+0.7
CFT	Crafton Hills	1.00	317		Pn	14 06 16.9	+0.3
ELS	Elsinore Mount	1.01	290		Pb	14 06 16.4	-0.1
ELS					Sg	14 06 29.6	-0.9
TJX	Tijuana	1.02	219		Pg	14 06 16.9	-0.4
SME	Santa Rosa Min	1.03	300		Pb	14 06 16.8	0.0
SME					Sg	14 06 30.0	-1.1
CBX	Cerro Bola	1.04	198		Pb	14 06 17.1	+0.1
CBX				IAML		14 06 32.4	
	comp=N,387nm,0.4s						
SVD	Seven Oaks Dam	1.05	320		Pg	14 06 17.6	-0.3
SVD					Sg	14 06 31.3	-0.4
COA	Coachella	1.07	114		Pb	14 06 16.2	-1.3
BBRC	Big Bear Solar	1.09	331	P	Pn	14 06 18.4	+0.4
	baz=151,SNR=20						
BBRC				S	Sg	14 06 33.1	-0.1
	baz=151						
BBRC	Big Bear Solar	1.09	331		Pn	14 06 18.4	+0.4
BBRC					Sg	14 06 32.7	-0.5
RSBC	Riverside Bore	1.09	308		Pg	14 06 18.3	-0.5
RSBC	Riverside Bore	1.09	308		Sb	14 06 32.1	+0.3
RSBC	Riverside Bore	1.09	308		Sb	14 06 32.2	+0.4
BTL	Butler Peak	1.12	328		Pn	14 06 19.2	+0.7
RVR	Riverside	1.14	307		Pb	14 06 18.8	+0.2
RVR					Sb	14 06 33.3	+0.3
RUN	Ruthven	1.15	106		Pb	14 06 17.2	-1.5
GLA	Glamis	1.25	101	P	Pn	14 06 18.8	-1.2
	baz=282,SNR=55						
GLA	Glamis	1.25	101		Pn	14 06 18.9	-1.2
GLA				IAML		14 06 51.0	
	comp=E,262nm,0.5s						
MLSC	Mira Loma	1.27	304		Pg	14 06 21.6	-0.5
IRM	Iron Mountain	1.28	48	P	Pn	14 06 19.8	-0.6
	baz=228,SNR=91						
IRM				S	Sb	14 06 37.7	+0.6
	baz=228						
IRM	Iron Mountain	1.28	48		Pg	14 06 21.6	-0.7
IRM					Sb	14 06 37.5	+0.4
ESJX	Sierra Juarez	1.33	167		Pn	14 06 20.9	-0.3
ESJX				IAML		14 06 40.3	
	comp=E,427nm,0.2s						
ESJX				IAML		14 06 41.5	
	comp=N,353nm,0.4s						
SS2	San Sevaine	1.35	312		Pg	14 06 23.0	-0.7
CCX	Cicese	1.47	193		Pn	14 06 23.6	+0.7
CCX				IAML		14 06 48.2	
	comp=E,247nm,0.3s						
CCX				IAML		14 06 48.7	
	comp=N,235nm,0.4s						
BFSC	Mount Baldy Ra	1.48	310	Pb	Pb	14 06 24.5	+0.1
	baz=129,SNR=66						
BFSC				Sb	Sb	14 06 43.6	+0.8
	baz=129						
SSK	Sunset Peak	1.48	308		Pb	14 06 24.9	+0.4
PSRC	Puddingstone R	1.49	302		Pb	14 06 24.7	+0.1
HEC	Hector,Ludlow	1.52	359	Pb	Pb	14 06 25.9	+0.7
	baz=178						
GMRC	Granite Mounta	1.57	19	Pn	Pn	14 06 24.2	-0.3
	baz=199						
GMRC				Pb	Pg	14 06 26.8	-0.9
	baz=199,SNR=94						
GMRC				Sb	Sg	14 06 47.2	-1.0
	baz=199						
RRX	Edison Barstow	1.68	340	Pg	Pg	14 06 29.2	-0.5
	baz=159						
RRX				Sb	Sg	14 06 50.5	-1.1
	baz=159						
FMP	Fort Macarthur	1.73	284	Pb	Pb	14 06 27.9	-0.6
	baz=103						
MWC	Mount Wilson	1.74	302		Pb	14 06 29.0	+0.1
MWC				IAML		14 06 52.5	
	comp=N,216nm,0.6s						
MWC				IAML		14 06 53.6	
	comp=E,224nm,0.4s						
PASC	Pasadena Art C	1.80	299		Pb	14 06 29.7	-0.2
SCI2	San Clemente I	1.92	261	Pb	Pb	14 06 31.0	-1.0
	baz=80						
SCI2				S	Sn	14 06 54.6	+1.7
	baz=80						
DECC	Green Verdugo	1.95	300	Pb	Pb	14 06 32.9	+0.5
	baz=119,SNR=7.4						
DECC				Sb	Sb	14 06 57.9	+1.5
	baz=119						
NEE2	Needles Airpor	2.01	43	Pb	Pb	14 06 34.6	+1.1
	baz=224,SNR=11						
NEE2				Sb	Sg	14 07 00.4	-1.9
	baz=224						
GSC	Goldstone, Bar	2.04	348	Sb	Sg	14 07 02.7	-0.5
	baz=168						
EDW2	Edwards Air Fo	2.12	318	Pb	Pb	14 06 36.2	+0.9
	baz=138,SNR=23						
EDW2				Sb	Sg	14 07 03.8	-1.9
	baz=138						
OSI	Osito Audit: C	2.41	304	Sb	Sg	14 07 12.5	-2.6
	baz=122						
SHOC	Shoshone, Teco	2.59	0	Pb	Pg	14 06 45.4	-1.8
	baz=180,SNR=38						
SHOC				Sb	Sg	14 07 19.0	-1.8
	baz=180						
W13A	Hualapai Mount	2.68	47	Pn	Pn	14 06 40.7	+0.8
W13A				IAML		14 07 22.0	
	comp=E,54nm,0.5s						
W13A				IAML		14 07 22.1	
	comp=N,54nm,0.9s						
ARVC	Arvin	2.78	312	Pb	Pb	14 06 48.3	+1.6
	baz=130						
ARVC				Sb	Sg	14 07 24.0	-3.0
	baz=130						
MPMC	Manual Prospec	2.92	341	Sb	Sg	14 07 29.7	-1.8
	baz=160						
ISA	Isabella, Lake	2.97	323	Pb	Pb	14 06 51.8	+2.0
	baz=142,SNR=12						
ISA				Sb	Sg	14 07 29.7	-3.1
	baz=142						
SHPR	Sheep Range	3.33	16	Pn	Pn	14 06 50.1	+1.4
X16A	Lo Mia Camp, P	4.18	73	Pn	Pn	14 07 01.1	+0.7
LCMT	Little Creek M	4.46	33		Pn	14 07 05.3	+1.0
U15A	North Rim	4.53	45	Pn	Pn	14 07 06.9	+1.6
U15A				IAML		14 08 20.1	
	comp=E,19nm,3.4s						
U15A				IAML		14 08 26.6	
	comp=N,19nm,1.1s						
KNB	Kanab	4.67	36	Pn	Pn	14 07 09.0	+1.9

IDC 07 14:06:35.1±2.5**, 6.°88S**×**127.°44E, h0^{km}, mb3.3**/1**, mb1 3.8**/3**, mb1mx3.3**/40**, mbtmp3.6**/3**, ML3.8**/2**, Error ellipse: s-maj=294.6km s-min=32.5km az=64.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.61	153	Pn	Pn	14 10 02.0	-1.2
	0.5nm,0.3s,baz=330,slow=14,SNR=20						
WRA				Sn	Sn	14 12 36.2	-10
	0.5nm,0.3s,baz=328,slow=23,SNR=9.4						
ASAR	Alice Springs	17.81	160	P	P	14 10 45.1	-0.2
	0.4nm,0.3s,baz=340,slow=11,SNR=53						
ASAR				S	Sn	14 13 55.6	-8.1
	0.1nm,0.3s,baz=345,slow=24,SNR=5.4						
MKAR	Makanchi Array	66.76	328	P	P	14 17 28.4	0.0
	0.2nm,0.6s,baz=134,slow=8.3,SNR=2.1						

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*IDC **07** 14:24:10.3±0.8, 26.°46N×103.°28E, h0^{km}, mb3.8/11, mb1 3.9/12, mb1mx3.7/46, mbtmp3.8/12, ML4.1/1, MS3.1/1, Ms1 3.1/1, ms1mx2.6/48, Error ellipse: s-maj=33.2km s-min=16.4km az=65.0*

ISC 07 14:24:15.5±0.8**, 26.°4N**±0.°1×**103.°3E**±0.°2**, h35^{km}, n13, σ1^{s}14**/13**, mb3.8**/12**, 1C, Yunnan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	8.90	208	Pn	Pn	14 26 21.5	-0.1
	0.6nm,0.3s,baz=22,slow=12,SNR=9.6						
CMAR				Lg	Lg	14 28 50.5	
	0.6nm,0.3s,baz=34,slow=29,SNR=1.6						
SONM	Songino Array	21.50	6	P	P	14 29 01.2	-0.1
	1.9nm,1.0s,baz=189,slow=10,SNR=9.5						
SONM				LR	LR	14 39 02.6	
	comp=Z,53nm,18.7s,baz=264,slow=42						
MKAR	Makanchi Array	26.27	326	P	P	14 29 47.9	+0.5
	0.4nm,0.7s,baz=144,slow=10,SNR=5.7						
ZALV	Zalesovo Beam	30.71	338	P	P	14 30 26.8	-0.1
	1.4nm,0.7s,baz=150,slow=12,SNR=7.7						
GEYT	Alibeck	39.58	298	P	P	14 31 42.8	-0.7
	1.7nm,0.7s,baz=91,slow=7.2,SNR=2.6						
AB31	Akbulak array	40.40	316	⇑P	P	14 31 52.4	+2.4
	1.0nm,0.8s,baz=102,slow=8.8,SNR=5.0						
WRA	Warramunga Arr	55.06	144	P	P	14 33 44.0	+0.1

	1.4nm,0.7s,baz=331,slow=8.5,SNR=17						
ASAR	Alice Springs	57.93	147	P	P	14 34 04.8	+0.5
	0.3nm,0.5s,baz=327,slow=7.1,SNR=14						
AKASG	Malin Array Be	60.13	315	P	P	14 34 17.5	-1.8
	0.6nm,0.4s,baz=74,slow=6.4,SNR=2.7						
FINES	FINESS Array B	61.09	328	P	P	14 34 25.8	+0.1
	4.0nm,0.9s,baz=96,slow=5.7,SNR=2.1						
ARCES	ARCESS Array B	61.24	337	P	P	14 34 26.2	-0.5
	4.2nm,0.9s,baz=89,slow=7.4,SNR=2.0						
ILAR	Eielson Array	74.35	25	P	P	14 35 48.1	-1.1
	0.1nm,0.4s,baz=295,slow=4.0,SNR=2.0						
YKA	Yellowknife Ar	86.35	17	P	P	14 36 54.9	+1.2
	0.4nm,0.8s,baz=340,slow=4.9,SNR=8.2						

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*IDC **07** 14:30:38.3±2.4, 35°.81N×140°.42E, h68^{km}±19^{km}, mb3.4/6, mb1 3.5/9, mb1mx3.2/36, mbtmp3.7/9, MS3.4/2, Ms1 3.4/2, ms1mx2.6/33, Error ellipse: s-maj=38.0km s-min=15.8km az=75.0*

*JMA **07** 14:30:39.8±0.2, 35°.80N×140°.08E, h65^{km}±2^{km}, M3.2 Broadband fault plane solution: P waves. NP1: φs195.00000°, δ19.00000°, λ98.00000°. NP2:φs6.00000°, δ71.00000°, λ87.00000°. Principal axes: T Plg64.0000°, Azm271.0000°; N Plg3.0000°, Azm7.0000°; P Plg26.0000°, Azm98.0000°;*

ISC 07 14:30:39.4±0.8**, 35°.81N**±0°.05×**140°.15E**±0°.05**, h73**^{km}±7^{km}**, n29, σ1^{s}79**/33**, mb3.7**/6**, 3C-4D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSMT	Sammumatsuo	0.30	124	⇑P	Pn	14 30 51.5	+0.7
JSMT				eS	Sn	14 31 01.5	+2.3
TOK	Tokyo	0.34	249	P	Pn	14 30 51.6	+0.5
TOK				eS	Sn	14 31 01.0	+1.4
JIHU	Itakohorinouch	0.35	63	⇑P	Pn	14 30 51.6	+0.4
JIHU				eS	Sn	14 31 00.9	+1.1
JAG	Ashikaga	0.83	318	⇓P	Pn	14 30 55.9	-0.1
JOD2	Odawara 2	1.02	238	⇓P	Pn	14 30 57.3	-1.0
JOD2				eS	Sn	14 31 10.1	-2.3
JRY	Ryogami san	1.03	282	⇓P	Pn	14 30 58.7	+0.3
BSO3	Boso 3	1.05	163	⇑P	Pn	14 30 57.9	-0.5
JKT	Katashina	1.20	323	P	Pn	14 31 00.8	+0.2
JIM2	Oshima 3	1.24	208	P	Pn	14 30 59.7	-1.4
JIM2				eS	Sn	14 31 14.5	-2.8
JFNN	Fujinakano	1.34	243	P	Pn	14 31 01.8	-0.6
JFNN				eS	Sn	14 31 18.3	-1.3
JYN	Shimob	1.34	257	⇓P	Pn	14 31 02.0	-0.4
MJAR	Matsushiro Arr	1.73	296	P	Pn	14 31 07.8	+0.3
	5.7nm,0.3s,baz=99,slow=14,SNR=401						
MJAR				S	Sn	14 31 29.1	+0.3
	2.7nm,0.3s,baz=89,slow=25,SNR=4.0						
MAT	Matsushiro	1.73	296	P	Pn	14 31 08.0	+0.5
MAT				eS	Sn	14 31 29.1	+0.3
JHJ	Hachijo jima 2	2.70	186	P	Pn	14 31 20.0	-0.6
	32nm,0.3s,baz=320,slow=22,SNR=21						
JHJ				S	Sn	14 31 48.8	-3.4
	42nm,0.3s,baz=105,slow=20,SNR=6.6						
ASAJ	Asahikawa	8.51	12	P	Pn	14 32 38.6	-1.2
	0.5nm,0.3s,baz=216,slow=15,SNR=12						
ASAJ				S	Sn	14 34 08.2	-6.0
	0.1nm,0.3s,baz=143,slow=20,SNR=2.1						
KSRS	Korea Array	9.96	283	P	Pn	14 33 03.1	+3.5
	0.2nm,0.3s,baz=95,slow=14,SNR=4.2						
H11N2	WAKE ISLAND Hy	28.45	117	T	T	15 06 08.4	
	baz=308,slow=75,SNR=8.1						
H11N1	WAKE ISLAND Hy	28.46	117	T	T	15 06 16.5	
	baz=308,slow=75,SNR=6.9						
H11N3	WAKE ISLAND Hy	28.47	117	T	T	15 06 04.5	
	baz=308,slow=75,SNR=6.7						
H11S1	WAKE ISLAND Hy	29.11	119	T	T	15 06 32.0	
	baz=308,slow=74						
H11S3	WAKE ISLAND Hy	29.11	119	T	T	15 06 29.0	
	baz=308,slow=74						
H11S2	WAKE ISLAND Hy	29.12	119	T	T	15 06 42.6	
	baz=308						
ZALV	Zalesovo Beam	42.00	313	P	P	14 38 24.1	+0.9
	0.7nm,0.5s,baz=82,slow=10,SNR=3.8						
ZALV				PcP	PcP	14 40 17.7	+0.7
	0.5nm,0.6s,baz=105,slow=4.9,SNR=2.3						
MKAR	Makanchi Array	43.91	303	P	P	14 38 39.8	+0.9
	0.2nm,0.5s,baz=86,slow=8.2,SNR=4.6						
MKAR				LR	LR	14 59 23.8	
	comp=Z,75nm,18.8s,baz=310,slow=39						
KAPI	Kappang	44.89	209	LR	LR	14 57 34.1	
	comp=Z,20nm,20.1s,baz=82,slow=36						
WRA	Warramunga Arr	55.72	187	P	P	14 40 07.7	-0.8
	0.8nm,0.6s,baz=1.1,slow=7.6,SNR=22						
ASAR	Alice Springs	59.45	187	P	P	14 40 34.5	-0.2
	0.2nm,0.6s,baz=16,slow=10,SNR=11						
FINES	FINESS Array B	69.42	332	P	P	14 41 38.6	-0.7
	1.4nm,0.9s,baz=89,slow=5.7,SNR=3.4						
AKASG	Malin Array Be	74.63	322	P	P	14 42 10.6	-0.1
	0.3nm,0.3s,baz=47,slow=5.5,SNR=4.0						

IDC 07 14:51:12.5±1.6**, 2°.83S**×**130°.05E, h0**^{km}**, mb3.2**/2**, mb1 3.4**/4**, mb1mx3.3**/40**, mbtmp3.2**/4**, ML2.9**/2**, MS3.2**/1**, Ms1 3.1**/1**, ms1mx2.4**/19**, Error ellipse: s-maj=55.5km s-min=25.1km az=90.0, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	2.30	32	Pn	Pn	14 51 51.9	+0.2
	2.5nm,0.3s,baz=233,slow=20,SNR=20						
SIJI				Sn	Sn	14 52 19.2	-1.6
	3.6nm,0.3s,baz=198,slow=23,SNR=8.8						
WRA	Warramunga Arr	17.52	166	P	Pn	14 55 17.1	-1.3
	0.0nm,0.3s,baz=350,slow=13,SNR=1.9						
WRA				S	Sn	14 58 22.6	-12
	0.0nm,0.3s,baz=350,slow=24,SNR=2.7						
ASAR	Alice Springs	21.05	170	P	P	14 55 59.0	+0.7
	0.6nm,0.5s,baz=348,slow=11,SNR=23						
STKA	Stephens Creek	30.87	161	LR	LR	15 12 50.2	
	comp=Z,40nm,19.4s,baz=18,slow=42						
MKAR	Makanchi Array	64.81	326	P	P	15 01 53.1	-0.2
	0.2nm,0.8s,baz=126,slow=7.3,SNR=2.2						

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*IDC **07** 14:53:55.4±1.8, 31°.76S×177°.55W, h0^{km}, mb3.8/4, mb1 4.0/5, mb1mx3.8/35, mbtmp3.9/5, ML2.8/1, Error ellipse: s-maj=41.5km s-min=33.6km az=85.0*

*NEIC **07** 14:53:55.8±1.9, 32°.3S±0°.1×176°.9W±0°.1, h35^{km}±2^{km}, mb4.4/13, Error ellipse: s-maj=22.0km s-min=15.4km az=133.0*

ISC 07 14:53:56.3±1.0**, 32°.1S**±0°.1×**177°.0W**±0°.1**, h35**^{km}**, n25, σ2^{s}05**/26**, mb4.3**/10**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	6.67	214	Pn	Pn	14 55 28.1	-3.7
URZ	Urewera	7.80	217	Pn	Pn	14 55 50.1	+2.8
	0.1nm,0.3s,baz=45,slow=19,SNR=3.0						
URZ				Sn	Sn	14 57 19.8	+5.5
	2.0nm,0.3s,baz=19,slow=23,SNR=11						
URZ	Urewera	7.80	217	Pn	Pn	14 55 45.9	-1.4
HIZ	Hauiti	9.22	224	Pn	Pn	14 56 05.8	-1.0
PLWZ	Palliser	11.29	211	Pn	Pn	14 56 34.6	-0.5
NIUE	Niue	14.46	28	Pn	Pn	14 57 19.5	+1.0
DCZ	Deep Cove	18.13	218	Pn	Pn	14 58 00.4	-4.8
RAR	Rarotonga	18.81	59	P	P	14 58 12.3	-0.6
LHI	Lord Howe Isla	20.36	265	P	P	14 58 27.6	-2.2
SANVU	Saraoutou	21.98	315	P	P	14 58 47.6	+0.3
TOO	Toolangi	31.13	249	P	P	15 00 12.1	+0.4
TOO				IAmb	IAmb	15 00 29.0	
	comp=Z,10nm,1.4s						
BBOO	Buckleboo	39.37	256	P	P	15 01 23.4	+0.8
BBOO				IAmb	IAmb	15 01 26.2	
	comp=Z,12nm,1.1s						
COEN	Coen	40.59	287		P	15 01 32.9	0.0
AS31	Alice Springs	43.91	268	P	P	15 01 60.0	+0.1
ASAR	Alice Springs	43.91	268	P	P	15 02 00.2	+0.3
	comp=Z,1.1nm,0.7s,baz=107,slow=7.5,SNR=15						
ASAR				PcP	PcP	15 03 48.5	+2.9
	comp=Z,0.4nm,0.9s,baz=114,slow=4.2,SNR=2.3						
ASAR	Alice Springs	43.91	268	P	P	15 02 00.4	+0.6
WR0	Warramunga Arr	44.87	273	P	P	15 02 07.2	-0.3
WR0				IAmb	IAmb	15 02 11.8	
	comp=Z,6.3nm,1.2s						
WB2	Warramunga Arr	45.04	273	P	P	15 02 08.7	-0.2
WB2				IAmb	IAmb	15 02 10.6	
	comp=Z,8.9nm,1.3s						
WRAB	Tennant Creek	45.04	273	P	P	15 02 08.6	-0.3
WRAB				IAmb	IAmb	15 02 09.9	
	comp=Z,3.5nm,0.8s						
WRA	Warramunga Arr	45.05	273	P	P	15 02 08.9	0.0
	comp=Z,2.2nm,0.7s,baz=114,slow=7.6,SNR=25						
WRA	Warramunga Arr	45.05	273	P	P	15 02 08.8	-0.2
WB0	Warramunga Arr	45.08	274	P	P	15 02 09.0	-0.2
WB0				IAmb	IAmb	15 02 10.9	
	comp=Z,4.9nm,1.0s						
FITZ	Fitzroy Crossi	53.24	271	P	P	15 03 12.7	+1.1
	comp=Z,0.7nm,0.6s,baz=111,slow=8.6,SNR=2.0						
QSPA	South Pole Qui	57.99	180	P	P	15 03 52.4	+7.1
	comp=Z,1.0nm,1.1s,baz=41,slow=2.7,SNR=2.9						
FINES	FINESS Array B	147.06	340	PKPbc	PKiKP	15 13 36.9	-0.2
	comp=Z,2.7nm,0.8s,baz=45,slow=2.2,SNR=6.0						

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*IDC **07** 14:54:09.4±15.0, 12°.07S×167°.53E, h297^{km}±146^{km}, mb3.2/6, mb1 3.4/6, mb1mx3.1/40, mbtmp3.9/6, MS3.1/1, Ms1 3.1/1, ms1mx2.5/13, Error ellipse: s-maj=60.2km s-min=30.9km az=82.0*

ISC 07 14:54:11.6±1.2**, 12°.1S**±0°.2×**167°.5E**±0°.3**, h317**^{km}**, n8, σ0^{s}98**/7**, mb3.7**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	30.91	226	P	P	15 00 00.8	+1.1
	0.8nm,0.4s,baz=48,slow=11,SNR=7.4						
WRA	Warramunga Arr	32.74	252	P	P	15 00 14.7	-1.1
	0.6nm,1.1s,baz=79,slow=8.4,SNR=2.0						
ASAR	Alice Springs	33.87	245	P	P	15 00 24.7	-0.8
	0.2nm,0.6s,baz=71,slow=9.7,SNR=6.6						
TGY	Tagaytay City	52.93	298	LR	LR	15 25 24.7	
	comp=Z,20nm,20.5s,baz=359,slow=35						
QSPA	South Pole Qui	77.95	180	P	P	15 05 34.6	-0.3
	2.4nm,0.8s,baz=307,slow=1.1,SNR=7.8						
ILAR	Eielson Array	83.95	18	P	P	15 06 05.8	-0.3
	1.1nm,0.7s,baz=238,slow=5.2,SNR=15						
MKAR	Makanchi Array	95.41	317	P	P	15 07 01.3	+0.8
	0.5nm,0.5s,baz=90,slow=4.8,SNR=8.9						
FINES	FINESS Array B	123.32	339	PKP	PKPdf	15 12 30.5	-0.2
	1.5nm,0.7s,baz=101,slow=1.4,SNR=1.4						

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*ARE **07** 14:57:04±5.0, 12°.9S±0°.2×74°.0W±0°.1, h90^{km}±9^{km}, ML4.3, mb3.9/3(NEIC), Error ellipse: s-maj=0.0km s-min=0.0km az=104.0*

*NEIC **07** 14:57:04.9±0.7, 12°.7S±0°.1×73°.9W±0°.1, h103^{km}±24^{km}, Error ellipse: s-maj=24.0km s-min=8.9km az=214.0*

*IDC **07** 14:57:05.4±2.1, 12°.73S×73°.89W, h75^{km}±23^{km}, mb3.0/1, mb1 3.6/5, mb1mx3.3/38, mbtmp3.8/5, Error ellipse: s-maj=36.2km s-min=16.8km az=22.0*

ISC 07 14:57:05.2±0.8**, 12°.77S**±0°.09×**73°.91W**±0°.09**, h100**^{km}**, n13, σ1^{s}38**/15**, Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	Nana	2.97	285	P	Pn	14 57 50.6	+0.1
	25nm,0.3s,baz=107,slow=12,SNR=25						
NNA				S	Sn	14 58 25.9	+0.4
	25nm,0.3s,baz=46,slow=22,SNR=5.9						
LPAZ	La Paz	6.60	123	P	Pn	14 58 41.3	+1.0
	0.4nm,0.3s,baz=300,slow=11,SNR=11						
LPAZ	La Paz	6.60	123		Pn	14 58 40.9	+0.6
PB16	IPOC Station P	6.98	143	Pn	Pn	14 58 47.1	+1.7
ATAH	Atahualpa	7.13	321	P	Pn	14 58 47.5	+0.3
	0.9nm,0.3s,baz=126,slow=7.1,SNR=7.9						
ATAH				S	Sn	15 00 06.2	-0.7
	0.2nm,0.3s,baz=73,slow=19,SNR=1.5						
PSGCX	Pisagua	7.71	152	Pn	Pn	14 58 55.9	+1.0
SAML	Samuel	11.20	71	Pn	Pn	14 59 40.9	-1.3
LCO	Las Campanas	16.44	170	Pn	Pn	15 00 47.3	-2.9
LCO				IAmb	IAmb	15 01 01.2	
	comp=Z,7.6nm,1.2s						
PTGA	Pitinga	18.28	50	P	Pn	15 01 12.2	-0.2
	comp=Z,0.3nm,0.3s,baz=230,slow=16,SNR=2.2						
PAYG	Puerto Ayora	20.19	305	P	P	15 01 31.1	-1.0
PAYG				IAmb	IAmb	15 01 36.5	
	comp=Z,31nm,0.8s						
CPUP	Villa Florida	20.61	133	P	P	15 01 36.5	0.0
CPUP				IAmb	IAmb	15 01 48.1	
	comp=Z,5.0nm,1.3s						
YKA	Yellowknife Ar	81.43	342	P	P	15 09 12.8	+2.1
	comp=Z,0.1nm,0.3s,baz=133,slow=5.7,SNR=5.2						
SONM	Songino Array	145.04	360	PKPbc	PKiKP	15 16 34.0	-1.0
	comp=Z,0.6nm,0.5s,baz=350,slow=2.5,SNR=5.3						

IDC 07 15:13:09.2±4.6**, 24°.41N**×**94°.63E, h82**^{km}±42^{km}**, mb2.8**/3**, mb1 3.0**/4**, mb1mx2.8**/44**, mbtmp3.0**/4**, ML2.8**/1**, Error ellipse: s-maj=138.6km s-min=25.1km az=60.0, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	7.16	145	P	Pn	15 14 51.3	0.0
	0.1nm,0.3s,baz=318,slow=14,SNR=1.7						
MKAR	Makanchi Array	24.43	339	P	P	15 18 20.0	0.0
	0.1nm,0.4s,baz=152,slow=9.6,SNR=4.3						
WRA	Warramunga Arr	58.64	135	P	P	15 22 57.6	-0.4
	0.3nm,0.5s,baz=326,slow=7.5,SNR=4.6						
ASAR	Alice Springs	61.12	138	P	P	15 23 15.3	+0.3
	0.2nm,0.5s,baz=320,slow=7.1,SNR=6.7						

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*IDC **07** 15:37:26.3±2.1, 7°.42S×127°.08E, h0^{km}, mb3.3/1, mb1 3.8/5, mb1mx3.6/31, mbtmp3.6/5, ML3.6/4, Error ellipse: s-maj=53.1km s-min=29.0km az=75.0*

*DJA **07** 15:37:28.2±5.5, 7°S±18°×12°7E±4°5, h10^{km}, M3.7/6, mb3.8/2, MLv3.6/6*

ISC 07 15:37:26.7±1.4**, 7°.60S**±0°.10×**127°.0E**±0°.1**, h10**^{km}**, n10, σ2^{s}72**/14**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	3.47	232	P	Pn	15 38 21.8	+0.9
BATI	Baumata	4.22	232	Pn	Pn	15 38 33.2	+2.1
	7.0nm,0.3s,baz=82,slow=4.1,SNR=5.4						
BATI				Sn	Sn	15 39 21.2	+0.7
	baz=195,slow=20,SNR=1.0						
BATI	Baumata	4.22	232	P	Pn	15 38 32.1	+1.0
MMRI	Maumere	4.86	257	P	Pn	15 38 38.4	-1.5
EDFI	Ende, Flores	5.41	257	P	Pn	15 38 45.9	-1.7
	0.0nm4.0nm,0.9s						
BSSI	Bau Bau, Buton	6.66	282	P	Pn	15 39 01.5	-3.2
FITZ	Fitzroy Crossi	10.52	187	Pn	Pn	15 40 00.5	+2.9
	0.2nm,0.3s,baz=359,slow=9.7,SNR=8.3						
FITZ				Sn	Sn	15 41 52.8	-2.9
	0.5nm,0.3s,baz=172,slow=19,SNR=7.3						
WRA	Warramunga Arr	14.16	151	Pn	Pn	15 40 50.0	+2.5
	0.3nm,0.3s,baz=336,slow=9.1,SNR=24						
WRA				Sn	Sn	15 43 21.4	-3.4
	0.4nm,0.3s,baz=329,slow=24,SNR=7.8						
ASAR	Alice Springs	17.28	158	P	P	15 41 31.9	+2.1
	0.2nm,0.3s,baz=340,slow=12,SNR=16						
ASAR				S	Sn	15 44 36.1	-4.5
	0.1nm,0.3s,baz=319,slow=21,SNR=2.1						
MKAR	Makanchi Array	67.16	328	P	P	15 48 21.4	+0.5
	0.2nm,0.5s,baz=132,slow=8.3,SNR=2.7						

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*TRN **07** 16:07:03.1, 10°.69N×63°.03W, h76^{km}, MD3.7*

*FUNV **07** 16:07:05.2, 10°.89N×62°.79W, h2^{km}, MW3.0*

ISC 07 16:07:05.1±1.4**, 10°.85N**±0°.03×**62°.80W**±0°.03**, h13**^{km}±10^{km}**, n24, σ1^{s}08**/40**, 1C, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRUV	Carupano	0.46	248	⇑eP	Pg	16 07 14.0	-0.3
CRUV				eS	Sg	16 07 20.6	+0.1
TRN	Trinidad (W)	1.39	98	eP	Pn	16 07 30.1	0.0
TRN				eS	Sb	16 07 49.4	+0.9
TPP	Pointe-a-Pierr	1.43	112	eP	Pn	16 07 29.9	-0.8
TPP				eS	Sn	16 07 49.8	+0.5
GRGR	Grenville	1.70	41	eP	Pn	16 07 34.2	-0.3
GRGR				eS	Sb	16 07 57.7	+0.1
GRGR	Grenville	1.70	41	eP	Pn	16 07 34.2	-0.3
GRGR				eS	Sn	16 07 56.5	+0.3
TBH	Brigand Hill	1.74	102	eP	Pn	16 07 34.2	-0.9
ORIV	Oritupano	1.86	199	eP	Pb	16 07 39.1	0.0
ORIV				eS	Sb	16 08 02.3	0.0
PCRV	Puerto La Cruz	1.93	250	eP	Pn	16 07 38.6	+1.0
PCRV				eS	Sn	16 08 03.0	+1.3
TPR	Prospect	2.01	80	eP	Pn	16 07 38.0	-0.8
TPR				eS	Sn	16 08 04.8	+0.9
BOT	Bacolet	2.07	81	eP	Pn	16 07 39.0	-0.5
GCMP	Grenada, Carri	2.11	39	eP	Pn	16 07 40.3	+0.2
GCMP				eS	Sn	16 08 07.1	+0.8
SVB	Belmont	2.85	32	eP	Pn	16 07 51.0	+0.7
SVB				eS	Sn	16 08 24.5	+0.1
SVV	Soufriere Volc	2.90	32	eP	Pn	16 07 50.9	-0.2
RIOV	Rio Grande	2.93	161	eP	Pn	16 07 53.1	+1.7
RIOV				eS	Sn	16 08 27.2	+0.8
MCLT	Moule a Chique	3.38	32	eP	Pn	16 07 57.3	-0.2
MCLT				eS	Sn	16 08 37.2	-0.3
SLB	Belfond	3.42	30	eP	Pn	16 07 58.8	+0.6
BIRV	Birongo	3.43	264	eP	Pn	16 07 59.3	+1.1
BIRV				eS	Sn	16 08 38.0	-0.8
SLCP	Castries, St.	3.61	29	e	Pn	16 08 02.6	+1.9
SLBI	Saint Lucia, B	3.63	29	e	Pn	16 07 59.7	-1.3
SLBI	Saint Lucia, B	3.63	29	eP	Pn	16 07 59.7	-1.3
SLBI				eS	Sn	16 08 43.3	-0.3
TACV	Tcata	4.22	261	eP	Pn	16 08 09.7	+0.6
LUEV	Luepa	5.14	165	eP	Pn	16 08 22.4	+0.4
LUEV				eS	Sn	16 09 19.0	-2.4
BAUV	El Baul	5.50	250	eP	Pn	16 08 27.3	+0.6
BAUV				eS	Sn	16 09 26.1	-3.8
MAPV	Macapo	5.66	260	eP	Pn	16 08 29.1	+0.1

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*IDC **07** 16:18:27.8±8.6, 36°.57N×141°.71E, h0^{km}, mb3.5/2, mb1 3.4/4, mb1mx3.2/46, mbtmp3.4/4, ML2.6/2, MS3.1/1, Ms1 3.1/1, ms1mx2.3/35, Error ellipse: s-maj=141.7km s-min=42.2km az=133.0*

*JMA **07** 16:18:27.0±0.3, 36°.21N×141°.84E, h58^{km}, M2.7*

ISC 07 16:18:24.1±1.8**, 36°.20N**±0°.05×**142°.0E**±0°.1**, h23**^{km}**, n14, σ1^{s}31**/11**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHO	Hitachi	1.20	290	P	Pn	16 18 46.1	+0.6
JFK	Kawauchi	1.46	323	P	Pb	16 18 50.4	-0.2
BSO1	Boso 1	1.74	208	P	Pb	16 18 54.9	-0.1
BSO3	Boso 3	1.83	221	eS	Sb	16 19 17.4	-1.8
JFT	Otama	1.86	316	P	Pb	16 18 56.6	-0.8
JMM	Marumori	1.91	331	P	Pb	16 18 57.4	-0.9
JAG	Ashikaga	2.04	277	P	Pn	16 18 58.4	+1.3
JRY	Ryogami san	2.49	267	P	Pn	16 19 04.6	+1.3
MJAR	Matsushiro Arr	3.05	278	Pn	Pn	16 19 13.1	+2.1
	0.3nm,0.3s,baz=89,slow=16,SNR=38						
JHJ	Hachijo jima 2	3.56	211	Sn	Sn	16 19 58.8	-0.5
	24nm,0.3s,baz=75,slow=22,SNR=6.8						
ASAJ	Asahikawa	7.92	3	Pn	Pn	16 20 18.7	+0.8
	0.2nm,0.3s,baz=208,slow=15,SNR=1.7						
KLR	Kul'dur	15.01	333	LR	LR	16 27 11.9	
	comp=Z,70nm,18.4s,baz=346,slow=36						
SONM	Songino Array	28.63	305	P	P	16 24 23.1	+4.2
	0.5nm,0.9s,baz=100,slow=7.5,SNR=4.6						
MKAR	Makanchi Array	44.94	303	P	P	16 26 41.4	+4.2
	0.2nm,0.7s,baz=94,slow=7.4,SNR=4.2						

WEL 07 16:21:54.9, 38°.6S±0°.9×**17°8E**±°**, h20**^{km}±1^{km}**, M3.9**/24**, ML4.2**/24**, MLv3.9**/24**, Error ellipse: s-maj=0.0km s-min=0.0km az=69.2, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RIGZ	Rimuhau	0.15	226	P	Pb	16 21 59.8	-0.5
RIGZ				S	Sb	16 22 04.5	+0.4
TKGZ	Te Karaka	0.17	347	P	Pb	16 21 59.8	-0.4
TKGZ				S	Sb	16 22 04.3	+0.3
CNGZ	Carnagh Statio	0.27	64	P	Pn	16 22 02.6	-1.1
PRGZ	Paritu Road	0.32	182	P	Pb	16 22 02.8	+1.0
RAGZ	Rawiri	0.39	286	P	Pb	16 22 03.4	+0.3
RAGZ				S	Sb	16 22 10.0	+1.4
MWZ	Matawai	0.40	313	P	Pb	16 22 03.3	+0.2
TWGZ	Tauwhareparae	0.43	9	P	Pb	16 22 04.7	+1.0
KNZ	Kokohu	0.45	203	P	Pb	16 22 04.8	+0.7
KNZ				S	Sn	16 22 13.9	+0.2
SNGZ	Shannon Statio	0.47	248	P	Pb	16 22 05.1	+0.7
MHGZ	Mahia Peninsul	0.55	179	P	Pb	16 22 06.6	+0.7
PUZ	Puketiti	0.60	28	P	Pb	16 22 07.2	+0.4
PUZ				S	Sn	16 22 17.5	0.0
RUGZ	Raukumara Rang	0.66	345	P	Pb	16 22 07.9	+0.1
RUGZ				S	Sn	16 22 18.0	-1.0
WHHZ	Waihua	0.70	227	P	Pn	16 22 09.1	-0.5
RAHZ	Arahi	0.71	244	P	Pb	16 22 09.0	+0.5
RAHZ				S	Sn	16 22 21.7	+1.7
URZ	Urewera	0.71	299	P	Pb	16 22 08.6	+0.2
RTZ	Ruatahuna	0.72	269	P	Pb	16 22 09.0	+0.3
PKGZ	Pakihiroa	0.73	11	P	Pn	16 22 09.5	-0.6
HAZ	Te Kaha	0.85	354	P	Pb	16 22 10.8	-0.1
MTHZ	Maungataniwha	0.86	253	P	Pb	16 22 11.2	+0.1
WMGZ	Waiomatatini S	0.88	28	P	Pb	16 22 11.6	+0.1
MUGZ	Murupara	0.89	278	P	Pb	16 22 11.8	+0.2
ARHZ	Aropaoanui	0.96	227	P	Pn	16 22 13.2	0.0
NMHZ	Naumai	0.98	240	P	Pb	16 22 13.1	-0.2
EDRZ	Edgecumbe	1.04	298	P	Pn	16 22 14.3	0.0
WHRZ	Whale Island	1.04	316	P	Pn	16 22 14.6	+0.3
MXZ	Matakaoa Point	1.09	17	P	Pn	16 22 14.4	-0.5
RRRZ	Republican Roa	1.12	283	P	Pb	16 22 15.4	0.0
MARZ	Manawahe	1.14	302	P	Pn	16 22 15.6	-0.1
TARZ	Mount Tarawera	1.15	288	P	Pb	16 22 16.1	0.0
MRHZ	Matea Rd	1.18	258	P	Pn	16 22 15.8	-0.4
PRRZ	Plateau Road	1.18	275	P	Pn	16 22 15.9	-0.4
WIZ	White Island	1.21	332	P	Pb	16 22 17.6	+0.5
MKRZ	Makatiti	1.22	292	P	Pb	16 22 17.3	+0.1
ALRZ	Allen Road	1.22	271	P	Pn	16 22 16.5	-0.2
WSRZ	White Island S	1.22	332	P	Pb	16 22 18.4	+1.2
CKHZ	Cape Kidnapper	1.23	211	P	Pb	16 22 18.4	+1.0
BKZ	Black Stump Fm	1.23	242	P	Pn	16 22 16.4	-0.5
MCHZ	McNeill Hill	1.26	228	P	Pn	16 22 16.7	-0.6
HLRZ	Highlands Stat	1.26	286	P	Pb	16 22 17.8	-0.2
HRRZ	Handcock Road	1.28	279	P	Pb	16 22 18.0	-0.3
OMRZ	Omania	1.30	292	P	Pn	16 22 17.7	-0.1
OPRZ	Ohinepanea	1.30	305	P	Pn	16 22 17.2	-0.7
HSRZ	Hossack Road	1.33	282	P	Pn	16 22 18.5	+0.2
LIRZ	Lichensteins R	1.33	296	P	Pn	16 22 18.2	-0.1
UTU	Utuhina	1.40	287	P	Pb	16 22 20.6	+0.2
KWHZ	Kaweka Forest	1.41	234	P	Pn	16 22 18.7	-0.8
KARZ	Kaharoa	1.42	294	P	Pn	16 22 19.2	-0.3
GRRZ	Galatos Road	1.43	280	P	Pn	16 22 19.8	+0.2
KAHZ	Kahuranaki	1.43	213	P	Pn	16 22 18.2	-1.5
NGRZ	Ngongotaha	1.43	290	P	Pn	16 22 20.1	+0.3
HATZ	Hinemaiaia	1.44	258	P	Pn	16 22 19.5	-0.3
WHTZ	Whakaora	1.52	267	P	Pb	16 22 24.1	+1.8
TGRZ	Tauranga	1.56	304	P	Pn	16 22 20.7	-0.7
KRHZ	Kereru	1.58	228	P	Pn	16 22 20.5	-1.2
KUTZ	Kaahu Road	1.63	273	P	Pn	16 22 22.1	-0.3
PXZ	Pawanui	1.64	209	P	Pn	16 22 20.5	-1.9
RITZ	Rihia Road	1.64	256	P	Pb	16 22 23.8	-0.6
BHHZ	Black Hill Sta	1.68	238	P	Pn	16 22 22.4	-0.7
RATZ	Rangitukua	1.68	260	P	Pn	16 22 23.9	+0.8
WATZ	Wairara	1.70	266	P	Pn	16 22 23.1	-0.3
KMRZ	Kaimai	1.72	296	P	Pb	16 22 28.0	+2.3
KATZ	Kakaramea	1.76	257	P	Pb	16 22 26.3	-0.2
TMVZ	Te Maari	1.79	253	P	Pn	16 22 24.8	+0.2
ETVZ	East Tongariro	1.79	252	P	Pn	16 22 24.5	-0.1
KRVZ	Karewarewa	1.83	254	P	Pn	16 22 24.7	-0.5
OTVZ	Oturere	1.83	252	P	Pn	16 22 25.4	+0.1
WPHZ	Waipukurau	1.84	217	P	Pn	16 22 23.4	-1.9
MOVZ	Moawhango	1.85	244	P	Pn	16 22 26.4	+0.9
PNHZ	Pukenui	1.86	225	P	Pn	16 22 23.8	-1.7
MYRZ	Mayor Island	1.86	315	P	Pn	16 22 25.0	-0.5
TUVZ	Tukino	1.87	249	P	Pn	16 22 26.3	+0.5
TLZ	Tolley Road	1.87	278	P	Pn	16 22 25.5	-0.3
WTVZ	West Tongariro	1.87	253	P	Pb	16 22 27.2	-1.2
NGZ	Ngauruhoe	1.88	252	P	Pn	16 22 27.0	+1.0
WHVZ	Whangaehu Hut	1.92	249	P	Pb	16 22 29.4	0.0
PRHZ	Porangahau	1.93	210	P	Pn	16 22 27.8	+1.3
WNVZ	Wahianoa	1.93	247	P	Pn	16 22 26.5	-0.2
DRZ	Dome Shelter	1.94	249	P	Pb	16 22 33.3	+3.6
FWVZ	Far West T-bar	1.94	250	P	Pn	16 22 28.0	+1.1
TWVZ	Taurewa	1.98	256	P	Pn	16 22 28.3	+1.1
MTVZ	Mangateitei	2.04	247	P	Pn	16 22 28.9	+0.8
TOZ	Tahuroa Road	2.08	294	P	Pn	16 22 28.0	-0.5
TSZ	Takapari Road	2.09	225	P	Pn	16 22 26.6	-2.1
PKVZ	Pokaka	2.10	250	P	Pn	16 22 29.3	+0.3
DVHZ	Dannevirke	2.16	218	P	Pn	16 22 27.6	-2.1
HIZ	Hauiti	2.39	271	P	Pn	16 22 33.0	+0.2
PRWZ	Pori Road	2.45	217	P	Pn	16 22 31.8	-1.9
VRZ	Vera Road	2.50	257	P	Pn	16 22 34.8	+0.4
KUZ	Kuaotunu	2.53	316	P	Pn	16 22 34.0	-0.8
WAZ	Wanganui	2.54	242	P	Pn	16 22 35.8	+0.9
MKAZ	Moumakai	2.63	304	P	Pn	16 22 35.8	-0.3

TIWZ	**Tintock**	**2.67**	**215**	P	Pn	16 22 35.4	-1.3
WIAZ	**Waiheke Island**	**2.84**	**309**	P	Pn	16 22 39.3	+0.3
ETAZ	**East Tamaki Re**	**2.87**	**304**	P	Pn	16 22 39.9	+0.5
AWAZ	**Awhitu Peninsu**	**3.00**	**300**	P	Pn	16 22 41.6	+0.4
MBAZ	**Motutapu North**	**3.00**	**307**	P	Pn	16 22 41.7	+0.4
PREZ	**Palmer Road**	**3.00**	**255**	P	Pn	16 22 43.1	+1.8
NEZ	**North Egmont**	**3.04**	**256**	P	Pn	16 22 43.0	+1.2
GRZ	**Great Barrier**	**3.05**	**320**	P	Pn	16 22 41.6	-0.3
KHEZ	**Kahui Hut**	**3.10**	**256**	P	Pn	16 22 43.9	+1.1
PKE	**Pukeiti**	**3.11**	**258**	P	Pn	16 22 43.8	+1.1
RVAZ	**Riverhead Bore**	**3.21**	**304**	P	Pn	16 22 44.5	+0.4
KIW	**Kapiti Island**	**3.22**	**225**	P	Pn	16 22 42.2	-2.1
DUWZ	**D'Urville Isla**	**3.77**	**233**	P	Pn	16 22 49.5	-2.4
WCZ	**Waipu Caves**	**3.89**	**312**	P	Pn	16 22 53.3	0.0
OUZ	**Omahuta**	**4.83**	**313**	P	Pn	16 23 07.1	+0.8
CTZ	**Chatham Island**	**6.59**	**143**	P	Pn	16 23 29.6	-0.9

IDC ***07*** *16:26:46.6±1.1, 10°.14N×139°.29E, h0^{km}, mb3.5/6, mb1 3.8/6, mb1mx3.5/40, mbtmp3.5/6, Error ellipse: s-maj=38.4km s-min=24.0km az=88.0*

ISC 07 16:26:52.4±1.0**, 10°.2N**±0°.1×**139°.2E**±0°.2**, h35**^{km}**, n13,** σ**1^s.43**/7**, mb3.6**/6**, Western Caroline Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	**Jayapura**	**12.74**	**173**	Pn	**Pn**	**16 29 52.4**	**+1.2**
	0.9nm,0.3s,baz=336,slow=17,SNR=1.1						
H11S3	**WAKE ISLAND Hy**	**27.86**	**70**	T	T	17 01 29.2	
	baz=256,slow=75,SNR=35						
H11S1	**WAKE ISLAND Hy**	**27.88**	**70**	T	T	17 01 30.4	
	baz=256,slow=75,SNR=28						
H11S2	**WAKE ISLAND Hy**	**27.88**	**70**	T	T	17 01 30.4	
	baz=256,slow=75,SNR=56						
H11N1	**WAKE ISLAND Hy**	**28.35**	**67**	T	T	17 02 05.5	
	baz=254,slow=75,SNR=36						
H11N2	**WAKE ISLAND Hy**	**28.36**	**67**	T	T	17 02 08.0	
	baz=254,slow=75,SNR=20						
H11N3	**WAKE ISLAND Hy**	**28.37**	**67**	T	T	17 02 03.0	
	baz=254,slow=75,SNR=20						
WRA	**Warramunga Arr**	**30.34**	**189**	P	**P**	**16 32 59.9**	**-1.1**
	0.2nm,0.6s,baz=9.5,slow=10.0,SNR=1.7						
ASAR	**Alice Springs**	**34.07**	**189**	P	**P**	**16 33 31.9**	**-1.7**
	0.4nm,0.5s,baz=19,slow=12,SNR=18						
CMAR	**Chiang Mai Arr**	**39.76**	**287**	P	**P**	**16 34 23.3**	**+1.2**
	1.0nm,0.8s,baz=87,slow=6.8,SNR=11						
MKAR	**Makanchi Array**	**60.17**	**318**	P	**P**	**16 36 55.8**	**-0.9**
	0.5nm,0.8s,baz=98,slow=8.7,SNR=5.4						
ILAR	**Eielson Array**	**73.98**	**25**	P	**P**	**16 38 23.9**	**-0.2**
	0.3nm,0.7s,baz=262,slow=6.8,SNR=2.8						
YKA	**Yellowknife Ar**	**88.37**	**26**	P	**P**	**16 39 41.1**	**+0.6**
	0.2nm,0.6s,baz=288,slow=3.8,SNR=4.3						

BJI ***07*** *16:40:04.9±0.0, 43°.50N×135°.84E, h367^{km}, mB4.8/28, mb4.7/47*

MOS ***07*** *16:40:05.7±1.0, 43°.59N×135°.75E, h350^{km}, mb4.7/54, Error ellipse: s-maj=5.7km s-min=4.0km az=116.5*

SKHL ***07*** *16:40:05.9±0.6, 43°.53N×135°.82E, h354^{km}±2^{km}, mb5.1/20, mbv5.3/4, msh5.2/7, msha5.2/10*

IDC ***07*** *16:40:06.6±0.6, 43°.58N×135°.72E, h346^{km}±6^{km}, mb4.0/26, mb1 4.2/33, mb1mx4.1/45, mbtmp4.7/33, Error ellipse: s-maj=8.1km s-min=7.1km az=119.0*

NEIC ***07*** *16:40:06.8±2.0, 43°.52N±0°.07×135°.78E±0°.08, h350^{km}±6^{km}, mb4.6/96, Error ellipse: s-maj=10.3km s-min=7.5km az=156.0*

BGR ***07*** *16:40:07.2±0.0, 44°.51N×136°.63E, h300^{km}, mb5.1*

JMA ***07*** *16:40:07.5±0.4, 43°.36N×136°.09E, h361^{km}, M4.7*

NIED ***07*** *16:40:07.5, 43°.36N×136°.09E, h361^{km}, MW4.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.30; $M_{\theta\theta}$1.20; $M_{\phi\phi}$0.10; $M_{r\theta}$-0.08; $M_{\theta\phi}$-1.84; $M_{\phi r}$-0.90; Fault plane solution: $M_0$2.36000×10^{16} NP1: ϕ_s340.00000°, δ65.00000°, λ-41.00000°. NP2:ϕ_s91.00000°, δ53.00000°, λ-148.00000°.*

ISC 07 16:40:05.3±0.4**, 43°.53N**±0°.03×**135°.84E**±0°.04**, h339**^{km}±4^{km}**, n565,** σ**1^s.38**/612**, mb4.6**/171**, 44C-39D, Fault plane solution: NP1:**ϕ_s320.43634°**,** δ65.60140°**,** λ-68.95131°. **NP2:**ϕ_s97.46352°**,** δ31.79614°**,** λ-128.37280°. **Principal axes:** T Plg17.9928°**,** Azm34.9491°**;** N Plg19.0920°**,** Azm131.4036°**;** P Plg63.2633°**,** Azm264.8042°**; Primorye**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TEY	**Ternei**	**1.60**	**20**	⇓*i*P	**Pn**	**16 40 55.5**	**+2.7**
TEY				*e*		16 41 33.5	
TEY				pmax	pmax		
	comp=E,80nm,0.3s						
TEY				pmax	pmax		
	comp=N,220nm,0.4s						
TEY				pmax	pmax		
	comp=Z,570nm,0.4s						
TEY				pmax	pmax		
	comp=E,2μm,1.7s						
TEY				pmax	pmax		
	comp=N,1μm,2.1s						
TEY				pmax	pmax		
	comp=E,600nm,1.1s						
TEY				pmax	pmax		
	comp=N,1μm,0.9s						
TEY				pmax	pmax		
	comp=Z,370nm,0.9s						
TEY	**Ternei**	**1.60**	**20**	⇓*i*P	**Pn**	**16 40 55.5**	**+2.7**
TEY				AMB	AMB	16 40 55.7	
	comp=Z,450nm,0.5s						
TEY				*e*S	**S**	**16 41 33.6**	**+2.7**
TEY				A	A	16 41 34.2	
	comp=Z,3μm,2.5s						
TEY				A	A	16 41 34.2	
	comp=Z,4μm,2.5s						
TEY				A	A	16 41 34.4	
	comp=Z,1μm,0.9s						
TEY				A	A	16 41 34.4	
	comp=Z,660nm,0.9s						
GRTR	**Gornotajezhnoj**	**2.68**	**275**	⇑*i*P	**Pn**	**16 41 03.0**	**+2.1**
GRTR				AMB	AMB	16 41 03.8	
	comp=Z,273nm,0.7s						
GRTR				*i* S	**S**	**16 41 47.7**	**+2.1**
GRTR				A	A	16 41 49.1	
	comp=Z,1μm,2.6s						
GRTR				A	A	16 41 49.1	
	comp=Z,1μm,2.6s						
GRTR				A	A	16 41 49.2	
	comp=Z,100nm,1.3s						
GRTR				A	A	16 41 49.2	
	comp=Z,135nm,1.3s						
USA0B	**Ussuriysk Arra**	**2.86**	**285**	P	**Pn**	**16 41 04.3**	**+1.8**
USA0B	**Ussuriysk Arra**	**2.86**	**285**		**Pn**	**16 41 04.3**	**+1.8**
USRK	**Ussuriysk Ar.**	**2.86**	**285**	P	**Pn**	**16 41 04.3**	**+1.8**
	baz=92,slow=9.6,SNR=755						
USRK				S	**S**	**16 41 50.6**	**+2.1**
	baz=103,slow=16,SNR=4.9						
JOSM	**Okushiri--Mats**	**3.04**	**117**	P	**Pn**	**16 41 06.0**	**+1.8**
JHST	**Hiyamasetana**	**3.17**	**109**	P	**Pn**	**16 41 07.5**	**+2.2**
MSHR	**Mys Shultsa**	**3.56**	**256**	*c i*P	**Pn**	**16 41 11.3**	**+2.2**
JOMM	**Oshimamatsumae**	**3.68**	**122**	P	**Pn**	**16 41 12.1**	**+1.8**
JEW	**Eniwo**	**4.16**	**98**	P	**Pn**	**16 41 17.1**	**+1.8**
JEW	**Eniwo**	**4.16**	**98**	Pn	**Pn**	**16 41 17.8**	**+2.5**
JKB	**Kayabe**	**4.17**	**111**	P	**Pn**	**16 41 16.9**	**+1.6**
JHR	**Hokuryu**	**4.28**	**85**	P	**Pn**	**16 41 18.9**	**+2.4**
JHR				*e*S	**S**	**16 42 14.4**	**+0.5**
JOT	**Ohata**	**4.41**	**117**	P	**Pn**	**16 41 19.2**	**+1.2**
MDJ	**Mudanjiang**	**4.63**	**286**	P	**Pn**	**16 41 21.5**	**+1.3**
MDJ				pP		16 41 27.3	
MDJ				S	**S**	**16 42 23.6**	**+2.9**
MDJ				pmax	pmax		
	comp=Z,19nm,1.6s						
MDJ				pmax	pmax		
	comp=Z,430nm,3.6s						
MDJ	**Mudanjiang**	**4.63**	**286**	Pn	**Pn**	**16 41 22.6**	**+2.4**
JWK2	**Keihoku**	**4.69**	**66**	P	**Pn**	**16 41 24.1**	**+3.2**
JWK2				*e*S	**S**	**16 42 24.5**	**+2.5**
JTM	**Tenmabayashi**	**4.76**	**123**	Pn	**Pn**	**16 41 22.8**	**+1.0**
ASAJ	**Asahikawa**	**4.93**	**81**	P	**Pn**	**16 41 25.5**	**+2.0**
	comp=Z,20nm,0.3s,baz=267,slow=11,SNR=304						
ASAJ				S	**S**	**16 42 27.7**	**+1.0**
	comp=Z,4.4nm,0.3s,baz=185,slow=12,SNR=8.9						
JKA	**Kamikawa-asahi**	**4.93**	**81**	Pn	**Pn**	**16 41 25.4**	**+1.9**
KHBR	**Khabarovsk**	**4.97**	**354**	⇑*i*P	**Pn**	**16 41 26.6**	**+2.7**
KHBR				AMB	AMB	16 41 27.3	
	comp=Z,117nm,0.6s						
ERM	**Erimo**	**5.60**	**103**	*ce*P	**Pn**	**16 41 32.2**	**+1.1**
ERM				pmax	pmax		
	comp=Z,632nm,0.5s						
ERM	**Erimo**	**5.60**	**103**	Pn	**Pn**	**16 41 32.2**	**+1.1**
ERM	**Erimo**	**5.60**	**103**	*e*P	**Pn**	**16 41 32.2**	**+1.1**
JSD	**Sado**	**5.79**	**161**	Pn	**Pn**	**16 41 35.0**	**+1.6**
JTKR	**Abashiri--Toko**	**5.86**	**83**	P	**Pn**	**16 41 35.5**	**+1.4**
JTKR				*e*S	**S**	**16 42 45.0**	**-1.0**
YSS	**Yuzh-Sakhalins**	**5.96**	**53**	α*i*P	**Pn**	**16 41 37.1**	**+1.9**
YSS				*i* S	**S**	**16 42 48.7**	**+0.7**
YSS				pmax	pmax		
	comp=Z,400nm,2.0s						
YSS				pmax	pmax		
	comp=Z,130nm,1.0s						
YSS				smax	smax		
	comp=N,2μm,4.5s						
YSS				MLR	MLR		
	comp=Z,700nm,15.0s						
YSS	**Yuzh-Sakhalins**	**5.96**	**53**	Pn	**Pn**	**16 41 37.2**	**+2.1**
YSS	**Yuzh-Sakhalins**	**5.96**	**53**	⇑*i*P	**Pn**	**16 41 37.0**	**+1.9**
YSS				AMB	AMB	16 41 38.0	
	comp=Z,400nm,2.0s						
YSS				AMB	AMB	16 41 38.2	
	comp=Z,130nm,1.0s						
YSS				*i* S	**S**	**16 42 48.0**	**0.0**
YSS				A	A	16 42 49.5	
	comp=Z,2μm,4.5s						
JMK	**Ichinoseki**	**6.12**	**137**	P	**Pn**	**16 41 36.6**	**-0.5**
JMK				*e*S	**S**	**16 42 47.8**	**-3.6**
KLR	**Kul'dur**	**6.36**	**335**	P	**Pn**	**16 41 40.2**	**+0.5**
	comp=Z,2.7nm,0.3s,baz=156,slow=9.5,SNR=63						
KLR				S	**S**	**16 42 56.5**	**+0.1**
	comp=Z,0.5nm,0.3s,baz=174,slow=19,SNR=16						
KLR	**Kul'dur**	**6.36**	**335**	*i* P	**Pn**	**16 41 40.8**	**+1.1**
KLR	**Kul'dur**	**6.36**	**335**	*e*P	**Pn**	**16 41 40.8**	**+1.1**
KLR				*e*S	**S**	**16 42 56.5**	**+0.1**
JMM	**Marumori**	**6.80**	**145**		**Pn**	**16 41 43.9**	**-1.1**
UGL	**Uglegorsk**	**7.03**	**36**	⇑*i*P	**Pn**	**16 41 49.9**	**+2.4**
UGL				pmax	pmax		
	comp=N,111nm,0.9s						
UGL				pmax	pmax		
	comp=E,200nm,1.0s						
UGL				pmax	pmax		
	comp=Z,357nm,1.1s						
UGL	**Uglegorsk**	**7.03**	**36**	⇑*i*P	**Pn**	**16 41 50.1**	**+2.6**
UGL				AMB	AMB	16 41 50.8	
	comp=Z,1μm,2.0s						
UGL				AMB	AMB	16 41 51.0	
	comp=Z,357nm,1.1s						
UGL				*e*S	**S**	**16 43 11.3**	**+0.7**
UGL				A	A	16 43 13.0	
	comp=Z,1μm,5.0s						
UGL				A	A	16 43 13.0	
	comp=Z,1μm,5.0s						
NMR	**Nemuro--Hokkai**	**7.20**	**88**	⇑*i*P	**Pn**	**16 41 49.2**	**-0.5**
NMR				*i* S	**S**	**16 43 07.0**	**-7.5**
NMR	**Nemuro--Hokkai**	**7.20**	**88**	⇑*i*P	**Pn**	**16 41 49.3**	**-0.4**
GRPR	**Tuman**	**7.21**	**83**	*c i*P	**Pn**	**16 41 51.4**	**+1.6**
GRPR				*i* S	**S**	**16 43 11.6**	**-3.1**
GRPR				pmax	pmax		
	comp=Z,191nm,1.1s						
GRPR				pmax	pmax		
	comp=E,92nm,0.3s						
GRPR				pmax	pmax		
	comp=Z,121nm,0.3s						
GRPR	**Tuman**	**7.21**	**83**	*i* P	**Pn**	**16 41 51.4**	**+1.6**
GRPR				AMB	AMB	16 41 54.4	
	comp=Z,191nm,1.1s						
GRPR				AMB	AMB	16 41 55.2	
	comp=Z,121nm,0.3s						
MJB9	**Matsu-Tunnel**	**7.21**	**165**		**Pn**	**16 41 46.5**	**-3.4**
MAJO	**Matsushiro**	**7.21**	**165**	*i* P	**Pn**	**16 41 52.1**	**+2.1**
MAJO	**Matsushiro**	**7.21**	**165**	Pn	**Pn**	**16 41 51.2**	**+1.2**
MAJO	**Matsushiro**	**7.21**	**165**	*e*P	**Pn**	**16 41 52.1**	**+2.1**
MAT	**Matsushiro**	**7.21**	**165**	P	**Pn**	**16 41 50.8**	**+0.8**
MAT				*e*S	**S**	**16 43 13.3**	**-1.8**
NEM2	**Nemuro 2**	**7.21**	**88**	P	**Pn**	**16 41 49.4**	**-0.4**
MJAR	**Matsushiro Arr**	**7.21**	**165**	P	**Pn**	**16 41 51.6**	**+1.5**
	comp=Z,0.7nm,0.3s,baz=357,slow=8.3,SNR=67						
MJAR	**Matsushiro Arr**	**7.21**	**165**		**Pn**	**16 41 53.4**	**+3.4**
GRNR	**Gornyy**	**7.25**	**3**	⇓*i*P	**Pn**	**16 41 52.6**	**+2.4**
GRNR				*e*S	**S**	**16 43 17.1**	**+1.6**
GRNR				pmax	pmax		
	comp=E,7.0nm,0.7s						
GRNR				pmax	pmax		
	comp=Z,50nm,0.7s						
GRNR				pmax	pmax		
	comp=N,30nm,1.0s						
GRNR				smax	smax		
	comp=N,4.0nm,0.7s						
GRNR				MLR	MLR		
	comp=E,120nm,14.0s						
GRNR	**Gornyy**	**7.25**	**3**	⇑*i*P	**Pn**	**16 41 51.9**	**+1.7**
GRNR				AMB	AMB	16 41 52.8	
	comp=E,49nm,0.6s						
GRNR				AMB	AMB	16 41 52.9	
	comp=E,250nm,2.4s						
GRNR				*e*S	**S**	**16 43 16.2**	**+0.7**
YUK	**Yuzh-Kuril'sk**	**7.27**	**83**	*d i*P	**Pn**	**16 41 51.8**	**+1.3**
YUK				*i* S	**S**	**16 43 11.0**	**-5.1**
YUK				pmax	pmax		
	comp=E,41nm,0.6s						
YUK				pmax	pmax		
	comp=Z,195nm,0.6s						
YUK				pmax	pmax		
	comp=N,86nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**7.27**	**83**	*e*P	**Pn**	**16 41 52.1**	**+1.6**
YUK				AMB	AMB	16 41 54.0	
	comp=N,195nm,0.6s						
YUK				*e*S	**S**	**16 43 13.6**	**-2.5**
YUK				A	A	16 43 14.6	
	comp=N,5μm,2.6s						
YUK				A	A	16 43 14.6	
	comp=N,830nm,2.6s						
CN2	**Changchun**	**7.54**	**276**	*e*P	**Pn**	**16 41 55.0**	**+1.3**
CN2				*e*sP		16 43 03.0	
CN2				*e*S	**S**	**16 43 20.7**	**-1.2**
CN2				pmax	pmax		
	comp=N,20nm,0.7s						
CN2				pmax	pmax		
	comp=N,300nm,3.0s						
JRY	**Ryogami san**	**7.87**	**162**	P	**Pn**	**16 41 58.4**	**+0.6**
JRY				*e*S	**S**	**16 43 26.2**	**-3.2**
JGF	**Kuroka**	**8.01**	**171**	Pn	**P**	**16 42 02.5**	**-0.6**
JYT	**Yasato**	**8.03**	**154**		**Pn**	**16 41 57.4**	**-2.2**
INU	**Inuyama**	**8.22**	**173**		**Pn**	**16 42 03.0**	**+1.0**
JWT	**Wachi**	**8.24**	**182**	Pn	**P**	**16 42 04.3**	**-1.3**
KS19	**Wonju Array Si**	**8.55**	**228**		**P**	**16 42 07.9**	**-1.1**
KSRS	**Korea Array**	**8.55**	**227**	P	**P**	**16 42 08.2**	**-0.8**
	comp=N,3.2nm,0.3s,baz=46,slow=11,SNR=112						
KSAR	**Wonju Array Be**	**8.58**	**228**	P	**Pn**	**16 42 07.6**	**+1.4**
KSAR	**Wonju Array Be**	**8.58**	**228**		**Pn**	**16 42 07.6**	**+1.4**
TYV	**Tymovskoe**	**8.68**	**30**	*e*P	**P**	**16 42 09.8**	**-0.4**
TYV				*e*S	**S**	**16 43 48.0**	**+1.4**
TYV				pmax	pmax		
	comp=Z,500nm,2.1s						
TYV				pmax	pmax		
	comp=Z,200nm,0.8s						
TYV				smax	smax		
	comp=N,18nm,1.5s						
TYV	**Tymovskoe**	**8.68**	**30**	*e*P	**P**	**16 42 08.8**	**-1.4**
TYV				AMB	AMB	16 42 10.8	
	comp=N,199nm,0.8s						
TYV				*e*S	**S**	**16 43 45.3**	**-1.3**
JHS	**Saijyo**	**8.78**	**195**	P	**P**	**16 42 11.2**	**-0.5**
JHS	**Saijyo**	**8.78**	**195**	Pn	**P**	**16 42 11.4**	**-0.3**
KUR	**Kuril'sk**	**8.78**	**75**	⇓*i*P	**P**	**16 42 11.3**	**-0.2**
KUR				*i* S	**S**	**16 43 49.0**	**-0.1**
KUR				pmax	pmax		
	comp=E,20nm,0.5s						
KUR				pmax	pmax		
	comp=Z,41nm,0.5s						
KUR				pmax	pmax		
	comp=N,23nm,0.6s						
KUR				pmax	pmax		
	comp=Z,184nm,1.7s						
KUR	**Kuril'sk**	**8.78**	**75**	*e*P	**P**	**16 42 10.2**	**-1.3**
KUR				AMB	AMB	16 42 16.0	
	comp=Z,35nm,0.5s						
KUR				*e*S	**S**	**16 43 47.0**	**-2.1**
KUR				A	A	16 43 48.0	
	comp=Z,2μm,3.0s						
KUR				A	A	16 43 48.0	
	comp=Z,680nm,3.0s						
KUR				A	A	16 43 50.0	
	comp=Z,55nm,1.2s						
KUR				A	A	16 43 50.0	
	comp=Z,27nm,1.2s						
INCN	**Inchon**	**9.25**	**232**	P	**P**	**16 42 16.6**	**-0.3**
INCN	**Inchon**	**9.25**	**232**		**P**	**16 42 16.6**	**-0.3**
TJN	**Taejon**	**9.66**	**225**	*ce*P	**P**	**16 42 21.5**	**+0.1**
EKMR	**Ekimchan**	**9.74**	**350**	*e*P	**Pn**	**16 42 20.9**	**+1.1**
EKMR				AMB	AMB	16 42 23.5	
	comp=Z,29nm,0.8s						
JMN	**Monobe**	**9.91**	**190**		**P**	**16 42 24.4**	**+0.2**
NKL	**Nikolayevsk**	**10.15**	**17**	⇑*i*P	**P**	**16 42 26.3**	**-0.2**
NKL				AMB	AMB	16 42 27.1	
	comp=Z,132nm,1.1s						
JTU	**Tsushima**	**10.29**	**211**	P	**P**	**16 42 29.0**	**+0.6**
JHJ	**Hachijo jima 2**	**10.85**	**162**	P	**Pn**	**16 42 32.1**	**-1.4**
	comp=Z,20nm,0.3s,baz=319,slow=20,SNR=3.1						
JHJ				S	S	16 44 26.0	-9.2
	comp=Z,259nm,0.3s,baz=72,slow=20,SNR=12						
JHJ2	**Mitsune**	**10.86**	**162**	Pn	**Pn**	**16 42 33.4**	**-0.2**
JTO	**Tosashimizu**	**10.92**	**194**	P	**P**	**16 42 35.6**	**+0.2**
OKH	**Okha**	**11.07**	**23**	*de*P	**P**	**16 42 37.4**	**+0.7**
OKH				*e*S	**S**	**16 44 31.2**	**-8.4**
OKH				pmax	pmax		
	comp=Z,300nm,14.9s						
OKH				smax	smax		
	comp=N,300nm,7.8s						
OKH				smax	smax		
	comp=E,300nm,11.2s						
OKH				MLR	MLR		
	comp=E,200nm,14.0s						
OKH				MLR	MLR		
	comp=N,300nm,6.0s						
OKH	**Okha**	**11.07**	**23**	*e*P	**P**	**16 42 39.1**	**+2.4**
OKH				AMB	AMB	16 42 40.9	
	comp=N,270nm,0.5s						
OKH				*e*S	**S**	**16 44 41.7**	**+2.1**
OKH				A	A	16 44 47.2	
	comp=N,47nm,0.9s						
OKH				A	A	16 44 47.2	
	comp=N,68nm,0.9s						
OKH				A	A	16 44 51.0	
	comp=N,770nm,4.0s						
OKH				A	A	16 44 51.0	
	comp=N,480nm,4.0s						
JNU	**Nakatsue**	**11.10**	**202**	P	**P**	**16 42 37.4**	**0.0**
	comp=N,4.0nm,0.3s,baz=36,slow=9.0,SNR=52						
JNU	**Nakatsue**	**11.10**	**202**		**P**	**16 42 38.4**	**+0.9**
ZEA	**Zeya**	**11.68**	**334**	*d i*P	**P**	**16 42 44.8**	**+1.3**
ZEA				*i* S	**S**	**16 44 49.1**	**-4.1**
ZEA				pmax	pmax		
	comp=N,70nm,0.8s						
ZEA				pmax	pmax		
	comp=E,40nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,140nm,0.8s						
ZEA				smax	smax		
	comp=N,400nm,5.3s						
ZEA				smax	smax		
	comp=E,700nm,4.4s						
ZEA				smax	smax		
	comp=E,40nm,1.4s						
BMKR	**Bomnak**	**12.08**	**340**	*e*P	**P**	**16 42 48.6**	**+0.6**
BMKR				AMB	AMB	16 42 50.0	
	comp=E,37nm,0.4s						
KROS	**Kirovskiy**	**12.35**	**335**	⇓*i*P	**Pn**	**16 42 51.8**	**+0.7**
KROS				AMB	AMB	16 42 54.2	
	comp=E,26nm,0.4s						
HIA	**Hailar**	**12.49**	**303**	P	**P**	**16 42 52.6**	**-0.1**
HIA	**Hailar**	**12.49**	**303**		**P**	**16 42 52.6**	**-0.1**
JSU	**Suzuyama**	**12.74**	**201**	P	**P**	**16 42 55.0**	**-0.6**
BJI	**Beijing**	**15.07**	**263**	P	**P**	**16 43 22.1**	**+1.0**
BJI				pmax	pmax		
	comp=E,62nm,0.7s						
BJT	**Baijiatuau**	**15.09**	**263**	P	**P**	**16 43 22.0**	**+0.8**
BJT				pmax	pmax		
	comp=Z,46nm,0.7s						
BJT	**Baijiatuau**	**15.09**	**263**	P	**P**	**16 43 22.0**	**+0.8**
SKR	**Severo-Kuril's**	**15.52**	**55**	*ce*P	**P**	**16 43 26.5**	**+0.7**
CIT	**Chita**	**17.16**	**307**	*e*P	**P**	**16 43 43.2**	**-0.5**
CIT				*e*		16 46 41.6	
CIT				pmax	pmax		
	comp=Z,91nm,1.1s						
JCJ	**Chichijima**	**17.19**	**161**	P	**P**	**16 43 43.3**	**-0.9**
	comp=Z,15nm,0.3s,baz=291,slow=14,SNR=6.8						
JCJ				S	**S**	**16 46 42.8**	**-2.9**
	comp=Z,100nm,0.3s,baz=271,slow=22,SNR=16						
JCJ	**Chichijima**	**17.19**	**161**	P	**P**	**16 43 43.1**	**-1.1**
PEA0B	**Petropavlovsk-**	**17.35**	**49**	*i* P	**P**	**16 43 45.9**	**+0.3**
PEA0B	**Petropavlovsk-**	**17.35**	**49**	P	**P**	**16 43 46.8**	**+1.2**
PEA0B				IAmb	IAmb	16 44 01.2	
	comp=Z,36nm,0.9s						
PETK	**Petropavlovsk-**	**17.35**	**49**	P	**P**	**16 43 45.8**	**+0.2**
	comp=Z,0.6nm,0.3s,baz=228,slow=6.5,SNR=20						
PETK	**Petropavlovsk-**	**17.35**	**49**	P	**P**	**16 43 46.0**	**+0.4**
PETK	**Petropavlovsk-**	**17.35**	**49**	P	**P**	**16 43 46.0**	**+0.4**
JOW	**Kunigami**	**17.76**	**203**	P	**P**	**16 43 49.5**	**-0.7**
	comp=Z,1.2nm,0.3s,baz=101,slow=21,SNR=6.7						
PET	**Petropavlovsk**	**17.84**	**50**	*e*P	**P**	**16 43 51.6**	**+0.8**
PET				pmax	pmax		
	comp=Z,36nm,1.0s						
PET				MLR	MLR		
	comp=Z,300nm,14.0s						
PET	**Petropavlovsk**	**17.84**	**50**	*e*P	**P**	**16 43 51.0**	**+0.2**
MA2	**Magadan**	**18.48**	**24**	P	**P**	**16 43 57.8**	**+0.3**
	baz=214,slow=6.2						
MA2	**Magadan**	**18.48**	**24**	*ce*P	**P**	**16 43 57.5**	**0.0**
MA2				pmax	pmax		
	comp=Z,180nm,0.7s						
MA2	**Magadan**	**18.48**	**24**	P	**P**	**16 43 58.0**	**+0.5**
MA2	**Magadan**	**18.48**	**24**	*e*P	**P**	**16 43 57.5**	**0.0**
YAK	**Yakutsk**	**18.89**	**351**	P	**P**	**16 44 02.1**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=151,slow=4.3,SNR=6.1						
YAK				S	**S**	**16 47 14.9**	**-3.0**
	comp=Z,0.0nm,0.3s,baz=93,slow=17,SNR=19						
YAK	**Yakutsk**	**18.89**	**351**	*e*P	**P**	**16 43 59.3**	**-2.4**
YAK				*e*S	**S**	**16 47 13.2**	**-4.7**
YAK				pmax	pmax		
	comp=Z,12nm,1.3s						
YAK				pmax	pmax		
	comp=N,8.0nm,1.2s						
YAK				smax	smax		
	comp=E,216nm,1.9s						
YAK				smax	smax		
	comp=N,116nm,1.6s						
YAK	**Yakutsk**	**18.89**	**351**	P	**P**	**16 44 00.9**	**-0.8**
BTO	**Baotou**	**19.36**	**270**	*e*P	**P**	**16 44 07.0**	**-0.3**
BOD	**Bodaibo**	**19.77**	**324**	*e*P	**P**	**16 44 08.4**	**-2.8**
BOD				pmax	pmax		
	comp=Z,35nm,0.9s						
ULN	**Ulaanbaatar**	**20.51**	**292**	*ce*P	**P**	**16 44 17.6**	**-1.1**
ULN				pmax	pmax		
	comp=Z,98nm,1.7s						
ULN	**Ulaanbaatar**	**20.51**	**292**	P	**P**	**16 44 18.7**	**+0.1**
ULN	**Ulaanbaatar**	**20.51**	**292**	P	**P**	**16 44 18.3**	**-0.4**
ULN	**Ulaanbaatar**	**20.51**	**292**	*e*P	**P**	**16 44 17.6**	**-1.1**
SONM	**Songino Array**	**20.95**	**292**	P	**P**	**16 44 22.4**	**-0.3**
	comp=Z,24nm,1.0s,baz=95,slow=7.3,SNR=120						
SONM				PcP	**PcP**	**16 48 15.5**	**+0.2**
	comp=Z,1.4nm,0.7s,baz=153,slow=3.7,SNR=4.0						
SONM				ScP	**ScP**	**16 51 18.4**	**-0.7**
	comp=Z,1.3nm,0.8s,baz=130,slow=2.7,SNR=7.6						
SONM	**Songino Array**	**20.95**	**292**	P	**P**	**16 44 22.3**	**-0.3**
SEY	**Seymchan**	**21.68**	**21**	P	**P**	**16 44 29.3**	**+0.3**
	comp=Z,16nm,0.8s,baz=204,slow=6.9,SNR=45						
SEY				S	**S**	**16 48 04.2**	**-0.2**
	comp=Z,1.0nm,0.7s,baz=197,slow=19,SNR=1.4						
SEY	**Seymchan**	**21.68**	**21**	*i* P	**P**	**16 44 28.5**	**-0.5**
SEY	**Seymchan**	**21.68**	**21**	*e*P	**P**	**16 44 28.5**	**-0.5**
TATO	**Taipei**	**21.93**	**217**	P	**P**	**16 44 34.1**	**+2.5**
XAN	**Xi'an**	**22.94**	**255**	P	**P**	**16 44 39.7**	**-1.1**
XAN				pmax	pmax		
	comp=Z,12nm,0.7s						
XAN				pmax	pmax		
	comp=Z,250nm,7.1s						
TLY	**Talaya**	**23.03**	**302**	P	**P**	**16 44 41.2**	**-0.3**
	comp=Z,14nm,0.6s,baz=103,slow=5.2,SNR=34						
TLY	**Talaya**	**23.03**	**302**	*e*P	**P**	**16 44 41.4**	**0.0**
TLY				pmax	pmax		
	comp=Z,80nm,1.1s						
TLY	**Talaya**	**23.03**	**302**	P	**P**	**16 44 41.2**	**-0.3**
TLY				IAmb	IAmb	16 44 43.3	
	comp=Z,20nm,0.7s						
TLY	**Talaya**	**23.03**	**302**	P	**P**	**16 44 41.4**	**0.0**
TLY	**Talaya**	**23.03**	**302**	*e*P	**P**	**16 44 40.5**	**-0.9**
ZAK	**Zakamensk**	**23.12**	**299**	*e*P	**P**	**16 44 40.9**	**-1.4**
ZAK				pmax	pmax		

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      comp=Z,19nm,1.1s
SSLB  Suanglung        23.20 217   P      P      16 44 43.5 +0.3
SSLB                               IAmb   IAmb   16 44 45.4
      comp=Z,26nm,1.1s
TPUB  Ta-pu            23.76 217   P      P      16 44 48.8 +0.5
TPUB                               IAmb   IAmb   16 44 51.6
      comp=Z,34nm,0.9s
MOY   Mondy            24.67 302  eP      P      16 44 55.5 -0.8
MOY                                pmax   pmax
      comp=Z,33nm,1.8s
ENH   Enshi            24.76 246   P      P      16 44 56.2 -1.0
ENH                                IAmb   IAmb   16 44 59.8
      comp=Z,14nm,0.6s
LZH   Lanzhou          25.56 264  eP      P      16 45 04.7 +0.2
LZH                                pmax   pmax
      comp=Z,23nm,1.3s
GTA   Gaotai           27.17 274 ⇓P      P      16 45 18.8 +0.1
GTA                                ScP    ScP    16 51 35.9 -0.6
GTA                                ScS    ScS    16 55 26.6 -1.9
GTA                                pmax   pmax
      comp=Z,26nm,1.1s
GTA                                pmax   pmax
      comp=Z,180nm,5.9s
GTA                                LR     LR
      comp=Z,170nm,15.6s
GTA                                LR     LR
      comp=Z,320nm,17.1s
GTA                                LR     LR
      comp=Z,300nm,16.0s
TIXI  Tiksi            28.40 355   P      P      16 45 28.1 -0.8
TIXI                               pmax   pmax
      comp=Z,7.0nm,0.6s
TIXI  Tiksi            28.40 355   P      P      16 45 28.1 -0.8
AMKA  Amchitka         30.05  59   P      P      16 45 44.3 +0.6
DGZ   Jazzator, Alta   33.34 298d iP      P      16 46 12.6 +0.2
DGZ                                pmax   pmax
      comp=Z,44nm,0.9s
WMQ   Urumqi           34.43 288   P      P      16 46 22.5 +0.8
WMQ                                pmax   pmax
      comp=Z,20nm,0.8s
WMQ   Urumqi           34.43 288   P      P      16 46 22.5 +0.8
WMQ                                IAmb   IAmb   16 46 23.7
      comp=Z,20nm,0.8s
ZALV  Zalesovo Beam    34.51 306   P      P      16 46 21.8 -0.4
      comp=Z,19nm,0.6s,baz=83,slow=8.6,SNR=83
ZALV                               PcP    PcP    16 48 48.7 +0.4
      comp=Z,9.0nm,0.6s,baz=96,slow=2.1,SNR=21
ZALV                               ScP    ScP    16 51 59.6 -0.9
      comp=Z,12nm,0.7s,baz=87,slow=3.3,SNR=37
ZSN   Zaisan           35.42 295  eP      P      16 46 28.7 -1.3
      comp=Z,9.2nm,0.7s,baz=294
ZSN   Zaisan           35.42 295  eP      P      16 46 28.7 -1.3
ZSN                                pmax   pmax
      comp=Z,9.0nm,0.7s
NRIK  Noril'sk         35.57 333   P      P      16 46 30.2 -0.8
      comp=Z,3.7nm,0.7s,baz=176,slow=5.7,SNR=11
NRIK                               S      S      16 51 38.0 -2.7
      comp=Z,1.0nm,0.4s,baz=205,slow=22,SNR=2.6
NRIK  Noril'sk         35.57 333c eP      P      16 46 30.5 -0.4
NRIK                               pmax   pmax
      comp=Z,20nm,2.6s
NRIK  Noril'sk         35.57 333   P      P      16 46 29.4 -1.5
MK31  Makanchi Array   37.29 294  iP      P      16 46 45.3 -0.4
MK31                               pmax   pmax
      comp=Z,25nm,0.6s
MK31  Makanchi Array   37.29 294   P      P      16 46 45.3 -0.4
MK31                               IAmb   IAmb   16 46 46.2
      comp=Z,23nm,0.8s
MKAR  Makanchi Array   37.29 294   P      P      16 46 45.1 -0.6
      comp=Z,18nm,0.6s,baz=84,slow=9.6,SNR=258
MKAR                               PcP    PcP    16 48 56.4 -0.5
      comp=Z,1.7nm,0.6s,baz=85,slow=1.4,SNR=4.1
MKAR                               ScP    ScP    16 52 10.1 -0.9
      comp=Z,1.4nm,0.7s,baz=75,slow=4.2,SNR=8.1
MKAR  Makanchi Array   37.29 294  iP      P      16 46 45.0 -0.7
MKAR                               pmax   pmax
      comp=Z,18nm,0.6s
MKAR  Makanchi Array   37.29 294   P      P      16 46 45.5 -0.2
MKAR                               PcP    PcP    16 48 57.1 +0.2
MKAR  Makanchi Array   37.29 294  eP      P      16 46 45.0 -0.7
MAKZ  Makanchi         37.49 294   P      P      16 46 47.1 -0.3
MAKZ                               pmax   pmax
      comp=Z,35nm,0.8s
MAKZ  Makanchi         37.49 294   P      P      16 46 47.1 -0.3
MAKZ                               IAmb   IAmb   16 46 48.0
      comp=Z,35nm,0.8s
LSA   Lhasa            37.98 264  iP      P      16 46 53.0 +0.8
      SNR=9.4
LSA   Lhasa            37.98 264   P      P      16 46 53.2 +1.0
LSA                                pmax   pmax
      comp=Z,8.0nm,0.6s
LSA   Lhasa            37.98 264   P      P      16 46 53.2 +1.0
KURK  Kurchatov        38.73 301  iP      P      16 46 56.5 -1.0
KURK                               pmax   pmax
      comp=Z,31nm,1.2s
KURK  Kurchatov        38.73 301   P      P      16 46 57.0 -0.5
KURK                               IAmb   IAmb   16 46 57.9
      comp=Z,30nm,1.0s
KURK  Kurchatov        38.73 301   P      P      16 46 57.0 -0.5
KURK  Kurchatov        38.73 301  eP      P      16 46 56.5 -1.0
CMAR  Chiang Mai Arr   39.82 243   P      P      16 47 06.3 -0.5
      comp=Z,1.9nm,0.6s,baz=35,slow=6.2,SNR=11
CMAR                               PcP    PcP    16 49 06.0 +0.8
      comp=Z,1.4nm,0.7s,baz=15,slow=1.8,SNR=6.8
CMAR                               ScP    ScP    16 52 20.6 -0.5
      comp=Z,0.7nm,0.7s,baz=12,slow=3.8,SNR=5.2
CMAR  Chiang Mai Arr   39.82 243  iP      P      16 47 06.8  0.0
CMAR                               pmax   pmax
      comp=Z,2.0nm,0.6s
CMAR  Chiang Mai Arr   39.82 243   PcP    PcP    16 49 05.1 -0.1
SHL   Shillong         39.87 258   P      P      16 47 06.4 -1.0
SHL                                pmax   pmax
      comp=Z,23nm,0.6s
SHL   Shillong         39.87 258   P      P      16 47 06.4 -1.0
SHL                                IAmb   IAmb   16 47 08.4
      comp=Z,23nm,0.6s
SHL   Shillong         39.87 258   P      P      16 47 06.7 -0.7
PDGK  Podgornoye       40.24 290  iP      P      16 47 09.5 -0.6
PDGK                               pmax   pmax
      comp=Z,8.0nm,0.6s
SHLS  Shalkode         40.32 290  eP      P      16 47 08.0 -2.8
      comp=Z,11nm,0.6s,baz=289
SHLS  Shalkode         40.32 290  eP      P      16 47 07.9 -2.8
SHLS                               pmax   pmax
      comp=Z,11nm,0.6s
TDK   Taldyqorghan     40.41 293  eP      P      16 47 10.8 -0.6
      comp=Z,44nm,0.9s,baz=293
TDK   Taldyqorghan     40.41 293  eP      P      16 47 10.7 -0.6
TDK                                pmax   pmax
      comp=Z,44nm,0.9s
UZB   Uzynbulak        40.62 290  eP      P      16 47 11.5 -1.8
      baz=290
UZB   Uzynbulak        40.62 290  eP      P      16 47 11.4 -1.8
KPKS  Kokpek           40.74 290  eP      P      16 47 12.5 -1.7
      baz=290
KPKS  Kokpek           40.74 290  eP      P      16 47 12.4 -1.7
SATY  Saty             41.07 290  eP      P      16 47 15.5 -1.4
      baz=290
SATY  Saty             41.07 290  eP      P      16 47 15.5 -1.4
MYLDM Lahad Datu       41.15 207   P      P      16 47 16.1 -1.5
CHKK  Chushkaly        41.75 292  eP      P      16 47 20.9 -1.3
      baz=292
CHKK  Chushkaly        41.75 292  eP      P      16 47 20.9 -1.3
TAPN  Taplejung        41.80 264  eP      P      16 47 23.6 +0.5
      comp=Z,70nm,0.5s
MDOK  Medeo            41.96 291  eP      P      16 47 23.1 -1.0
      baz=290
MDOK  Medeo            41.96 291  eP      P      16 47 23.0 -1.0
AAA   Alma-Ata         42.04 291  eP      P      16 47 24.4 -0.2
      comp=Z,16nm,0.6s,baz=291
AAA   Alma-Ata         42.04 291  eP      P      16 47 24.3 -0.2
AAA                                pmax   pmax
      comp=Z,16nm,0.6s
TNSS  Tian-Shan        42.08 290  eP      P      16 47 24.8 -0.6
      baz=290
TNSS  Tian-Shan        42.08 290  eP      P      16 47 24.7 -0.6
ODAN  Odare            42.32 263  eP      P      16 47 28.0 +0.8
      comp=Z,41nm,0.5s
MTBS  Maitube          42.40 291  eP      P      16 47 27.3 -0.1
      baz=291
MTBS  Maitube          42.40 291  eP      P      16 47 27.3 -0.1
TTA   Tatalina         42.77  39   P      P      16 47 29.6 -0.5
TTA                                pmax   pmax
      comp=Z,5.0nm,0.9s
TTA   Tatalina         42.77  39   P      P      16 47 29.6 -0.5
GUN   Gumba            42.80 266  eP      P      16 47 31.0 -0.2
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      comp=Z,149nm,0.5s
RAMN  Ramite           42.84 264  eP      P      16 47 30.8 -0.6
      comp=Z,88nm,0.6s
TKM2  Tokmak 2         43.04 291   P      P      16 47 33.2 +0.4
      SNR=105
TKM2  Tokmak 2         43.04 291  iP      P      16 47 33.1 +0.4
TKM2                               pmax   pmax
      comp=Z,25nm,0.4s
BRVK  Borovoye         43.21 307  iP      P      16 47 33.2 -0.4
BRVK                               pmax   pmax
      comp=Z,18nm,0.8s
BRVK  Borovoye         43.21 307   P      P      16 47 33.8 +0.2
BRVK  Borovoye         43.21 307   P      P      16 47 33.9 +0.2
BRVK  Borovoye         43.21 307  eP      P      16 47 33.2 -0.4
BTLS  Baital           43.30 294  eP      P      16 47 33.4 -1.2
      baz=294
BTLS  Baital           43.30 294  eP      P      16 47 33.3 -1.2
KKN   Kakani           43.31 266  eP      P      16 47 34.7 -0.3
      comp=Z,115nm,0.6s
PKI   Pulchoki         43.34 266  eP      P      16 47 34.9 -0.5
      comp=Z,64nm,0.6s
PKIN  Phulchoki        43.35 266  eP      P      16 47 34.9 -0.5
      comp=Z,54nm,0.6s
IMAR  Indian Mountai   43.45  34   P      P      16 47 36.6 +1.2
SGDS  Sogindy          43.49 292  eP      P      16 47 35.4 -0.7
      baz=292
SGDS  Sogindy          43.49 292  eP      P      16 47 35.4 -0.7
DMN   Daman            43.54 266  eP      P      16 47 36.7 -0.2
      comp=Z,47nm,0.6s
KBK   Karagaybulak     43.58 291   P      P      16 47 37.3 +0.3
      SNR=86
CHMS  Chumysh          43.58 291   P      P      16 47 36.8 -0.1
      SNR=8.2
USP   Ospenovka        43.65 292   P      P      16 47 36.9 -0.4
      SNR=20
GKN   Gorkha           43.65 267  eP      P      16 47 37.2 -0.5
      comp=Z,120nm,0.6s
AAK   Ala-Archa        43.90 291   P      P      16 47 39.4 -0.1
      SNR=18
AAK   Ala-Archa        43.90 291  iP      P      16 47 39.6 +0.1
      SNR=25
AAK                               iP      P      16 47 40.5 +1.0
      SNR=10
AAK   Ala-Archa        43.90 291  iP      P      16 47 38.7 -0.8
AAK                                pmax   pmax
      comp=Z,29nm,0.8s
AAK   Ala-Archa        43.90 291   P      P      16 47 39.5 +0.1
AAK   Ala-Archa        43.90 291   P      P      16 47 39.6 +0.1
AAK   Ala-Archa        43.90 291  eP      P      16 47 38.7 -0.8
UCH   Uchtor           44.05 290   P      P      16 47 41.6 +0.6
      SNR=8.3
DANN  Dangsing         44.09 268  eP      P      16 47 41.5 +0.2
      comp=Z,748nm,0.6s
KSH   Kashi            44.16 286   P      P      16 47 45.4 +3.9
KSH                                pP     pP     16 48 55.8 +6.2
KSH                                pmax   pmax
      comp=Z,27nm,0.9s
KSH                                pmax   pmax
      comp=Z,450nm,7.7s
EKS2  Erkin-Say        44.38 291   P      P      16 47 43.1 -0.1
      SNR=27
PPLA  Purkeypile       44.51  38   P      P      16 47 46.6 +2.7
AML   Almayashu        44.64 291   P      P      16 47 46.0 +0.4
      SNR=19
COLD  Coldfoot         44.73  32   P      P      16 47 46.8 +1.4
BPAW  Bear Paw Mtn.    44.84  37   P      P      16 47 47.1 +0.7
KTH   Kantishna Hill   44.96  37   P      P      16 47 49.6 +2.2
OHAK  Old Harbor       45.13  46   P      P      16 47 50.1 +1.5
OHAK                               IAmb   IAmb   16 47 50.7
      comp=Z,44nm,0.8s
KDAK  Kodiak Island    45.36  46   P      P      16 47 52.0 +1.6
KDAK                               pmax   pmax
      comp=Z,34nm,0.8s
KDAK  Kodiak Island    45.36  46   P      P      16 47 52.0 +1.6
KDAK                               IAmb   IAmb   16 47 52.5
      comp=Z,34nm,0.8s
SUA   Susitna One      45.44  40   P      P      16 47 52.9 +1.7
SUA                                IAmb   IAmb   16 47 53.2
      comp=Z,26nm,0.6s
BWN   Browne           45.49  36   P      P      16 47 54.3 +2.9
BRLK  Bradley Lake     45.75  43   P      P      16 47 55.0 +1.5
BRLK                               IAmb   IAmb   16 47 57.0
      comp=Z,41nm,0.8s
MDM   Murphy Dome      45.87  35   P      P      16 47 56.4 +2.0
MDM                                IAmb   IAmb   16 47 57.7
      comp=Z,34nm,0.9s
LUWI  Luwuk            45.90 198   P      P      16 47 58.6 +3.5
      comp=Z,38nm,0.8s
RND   Reindeer         45.90  37   P      P      16 47 56.1 +1.4
RND                                pmax   pmax
      comp=Z,31nm,0.9s
RND   Reindeer         45.90  37   P      P      16 47 56.1 +1.4
RND                                IAmb   IAmb   16 47 58.3
      comp=Z,31nm,0.9s
DZA   Taraz            45.93 293  eP      P      16 47 55.1 -0.1
      comp=Z,19nm,0.6s,baz=292
DZA   Taraz            45.93 293  eP      P      16 47 55.1 -0.1
DZA                                pmax   pmax
      comp=Z,19nm,0.6s
SBUM  Sibu             45.98 214   P      P      16 47 57.6 +1.8
SBUM                               IAmb   IAmb   16 48 00.1
      comp=Z,17nm,0.6s
WRH   Wood River Hil   46.02  36   P      P      16 47 57.3 +1.8
WRH                                IAmb   IAmb   16 47 59.1
      comp=Z,24nm,0.9s
COLA  College          46.05  35c iP      P      16 47 57.0 +1.4
COLA                               pmax   pmax
      comp=Z,57nm,0.8s
CCB   Clear Creek Bu   46.11  35   P      P      16 47 57.7 +1.6
PMR   Palmer           46.16  40   P      P      16 47 58.0 +1.4
PMR                                pmax   pmax
      comp=Z,25nm,0.8s
PMR   Palmer           46.16  40   P      P      16 47 58.0 +1.4
PMR                                IAmb   IAmb   16 47 58.8
      comp=Z,25nm,0.8s
POKR  Poker Plat Res   46.17  35   P      P      16 47 59.0 +2.3
SEW   Seward           46.37  42   P      P      16 47 60.0 +1.8
KK31  Karatay Array    46.40 293   P      P      16 47 58.6 -0.1
KK31                               pmax   pmax
      comp=Z,17nm,0.7s
KK31  Karatay Array    46.40 293   P      P      16 47 58.6 -0.1
KKAR  Karatay Array    46.40 293   P      P      16 47 58.7  0.0
KKAR                               pmax   pmax
      comp=Z,17nm,0.7s
KKAR  Karatay Array    46.40 293   P      P      16 47 58.7  0.0
IL31                   46.47  35   P      P      16 48 00.2 +1.3
IL31                               IAmb   IAmb   16 48 01.4
      comp=Z,24nm,0.6s
IL31                               PcP    PcP    16 49 30.2 +3.1
ILAR  Eielson Array    46.47  35   P      P      16 48 00.1 +1.1
      comp=Z,20nm,0.6s,baz=269,slow=5.8,SNR=218
ILAR  Eielson Array    46.47  35   P      P      16 48 00.2 +1.3
ILAR                                             16 49 28.3
ILAR  Eielson Array    46.47  35   P      P      16 48 00.2 +1.3
ILAR                               PcP    PcP    16 49 28.3 +1.2
BMAR  Burnt Mountain   46.85  31   P      P      16 48 04.3 +2.4
IUG   Iuzhnay          47.12 292  eP      P      16 48 03.8 -0.6
      baz=292
IUG   Iuzhnay          47.12 292  eP      P      16 48 03.7 -0.6
M24K  Tolsona, Glenn   47.40  39   IAmb   IAmb   16 48 09.7
      comp=Z,40nm,0.8s
SVE   Sverdlovsk       47.51 314⇑eP      P      16 48 07.9 +0.9
SVE                               eS      S      16 54 35.6 +0.5
SVE                                pmax   pmax
      comp=Z,60nm,0.9s
RIDG  Independent Ri   47.57  36   IAmb   IAmb   16 48 09.3
      comp=Z,24nm,0.8s
KLU   Klutina          47.68  39   IAmb   IAmb   16 48 11.2
      comp=Z,21nm,0.7s
DOT   Dot Lake         47.94  36   IAmb   IAmb   16 48 12.5
      comp=Z,26nm,0.7s
BNDI  Bandanaira       48.13 188   P      P      16 48 15.6 +3.4
      comp=Z,60nm,1.1s
N25K  Chitina, Valde   48.26  39   IAmb   IAmb   16 48 16.9
      comp=Z,18nm,0.7s
ARU   Arti             48.73 314d iP      P      16 48 16.3 +0.1
ARU                                              16 50 08.2
ARU                                S      S      16 54 53.2 +1.2
ARU                                pmax   pmax
      comp=Z,96nm,1.8s
ARU   Arti             48.73 314   P      P      16 48 16.4 +0.2
ARU                                IAmb   IAmb   16 48 17.7
      comp=Z,35nm,0.8s
ARU   Arti             48.73 314  eP      P      16 48 16.0 -0.2
NIL   Nilore           48.86 281   P      P      16 48 18.5 +0.9
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NIL                                pmax   pmax
      comp=Z,33nm,0.9s
NIL   Nilore           48.86 281   P      P      16 48 18.5 +0.9
NIL                                IAmb   IAmb   16 48 18.9
      comp=Z,33nm,0.8s
VRDI  Verde Repeater   48.90  39   IAmb   IAmb   16 48 20.7
      comp=Z,16nm,0.7s
MCARA McCarthy VSAT    49.04  39   IAmb   IAmb   16 48 22.0
      comp=Z,21nm,0.7s
BCAR  Beaver Creek A   49.08  37   P      P      16 48 20.6 +1.7
CRQM  Cirque           49.19  40   IAmb   IAmb   16 48 23.0
      comp=Z,26nm,0.8s
TGL   Tana Glacier     49.33  40   IAmb   IAmb   16 48 23.8
      comp=Z,32nm,0.8s
BALM  Baldy            49.47  39   IAmb   IAmb   16 48 25.5
      comp=Z,22nm,0.7s
EPYK  Eagle Plains     50.12  32   IAmb   IAmb   16 48 29.3
      comp=Z,26nm,0.8s
ABKAR Akbulak array    50.61 305   P      P      16 48 30.6 +0.2
ABKAR Akbulak array    50.61 305   IAmb   IAmb   16 48 31.6
      comp=Z,44nm,0.8s
INK   Inuvik           50.65  29   P      P      16 48 31.1 +0.8
      comp=Z,5.6nm,0.4s,baz=300,slow=7.4,SNR=29
KBL   Kabul            51.40 284   P      P      16 48 35.6 -1.1
KBL                                pmax   pmax
      comp=Z,20nm,0.8s
KBL   Kabul            51.40 284   P      P      16 48 35.6 -1.1
KBL                                IAmb   IAmb   16 48 37.0
      comp=Z,20nm,0.8s
KBL   Kabul            51.40 284   P      P      16 48 36.4 -0.3
      SNR=9.8
KIRV  Kirov            52.52 319  iP      P      16 48 44.5 +0.3
C36M  Paulatuk         53.38  26   IAmb   IAmb   16 48 52.6
      comp=Z,27nm,0.7s
SOEI  Soe              54.07 194   P      P      16 48 56.4 +0.3
KLMR  Klimovskoe       55.99 324  eP      P      16 49 06.8 -2.2
KLMR                               pmax   pmax
      comp=Z,48nm,1.3s
KLMR  Klimovskoe       55.99 324  eP      P      16 49 06.8 -2.2
KLMR                               AMP           16 49 09.7
      comp=Z,48nm,1.3s
BELG  Belogornoye      56.20 313  iP      P      16 49 10.3 -0.3
BELG                               pmax   pmax
      comp=Z,10.0nm,0.9s
HRA   Herat            56.24 287   IAmb   IAmb   16 49 12.7
      comp=Z,21nm,0.8s
ARCES ARCESS Array B   56.38 337   P      P      16 49 11.1 -0.6
      comp=Z,2.8nm,0.6s,baz=51,slow=3.9,SNR=7.1
GEYT  Alibeck          57.15 293   P      P      16 49 17.7 +0.2
      comp=Z,22nm,0.8s,baz=29,slow=3.4,SNR=33
GEYT  Alibeck          57.15 293   P      P      16 49 17.7 +0.2
POO   Poona            57.26 265  eP      P      16 49 17.0 -1.5
RES   Resolute Bay     57.36  14   PcP    PcP    16 50 12.3 +4.3
MOS   Moscow           59.52 319  eP      P      16 49 31.6 -1.8
MOS                                pmax   pmax
      comp=Z,40nm,0.9s
VRH   Novokhopyorsk    59.96 314  eP      P      16 49 35.4 -1.0
VRH                                pmax   pmax
      comp=Z,30nm,0.7s
YKA   Yellowknife Ar   60.34  30   P      P      16 49 39.6 +0.8
      comp=Z,2.9nm,0.6s,baz=313,slow=5.9,SNR=86
OBN   Obninsk          60.37 319⇓eP      P      16 49 38.1 -1.0
OBN                               e              16 50 21.1
OBN                                S      S      16 57 28.0 +2.0
OBN                                pmax   pmax
      comp=Z,21nm,0.8s
OBN   Obninsk          60.37 319  eP      P      16 49 38.4 -0.7
LPSR  Galich'ya Gora   60.62 316  eP      P      16 49 40.1 -0.8
LPSR                               pmax   pmax
      comp=Z,30nm,0.8s
FIA1  FINESS Array S   61.07 329   P      P      16 49 43.5 -0.1
FIA1                               PcP    PcP    16 50 22.6 -0.4
FINES FINESS Array B   61.07 329   P      P      16 49 43.8 +0.1
      comp=Z,37nm,0.7s,baz=46,slow=8.4,SNR=93
FINES FINESS Array B   61.07 329   P      P      16 49 43.9 +0.2
VSR   Storozhevoye     61.28 315  eP      P      16 49 44.9 -0.4
VSR                                pmax   pmax
      comp=Z,40nm,0.8s
VORD  Divnogorie       61.36 314  eP      P      16 49 45.4 -0.4
VORD                               pmax   pmax
      comp=Z,10.0nm,0.7s
LGD   Lagodekhi        62.62 303   P      P      16 49 55.1 +0.8
GOF   Gofitskoye       62.67 307⇓iP      P      16 49 55.3 +0.7
GOF                                pmax   pmax
      comp=Z,78nm,0.7s
VSU   Vasula           62.69 326  eP      P      16 49 54.8 +0.4
VSU   Vasula           62.69 326  iP      P      16 49 54.4  0.0
VSU                                pmax   pmax
      comp=Z,70nm,0.9s
WRAB  Tennant Creek    63.16 182  iP      P      16 49 57.4 -0.6
WRAB                               pmax   pmax
      comp=Z,3.0nm,1.0s
WRA   Warramunga Arr   63.17 182   P      P      16 49 58.4 +0.3
      comp=Z,2.6nm,0.6s,baz=358,slow=7.2,SNR=60
WRA   Warramunga Arr   63.17 182   P      P      16 49 58.2 +0.1
NCK   Nalchik          63.25 305  iP      P      16 49 58.0 -0.4
NCK                                pmax   pmax
      comp=Z,13nm,0.8s
ZEI   Tsey             63.48 305  eP      P      16 49 59.1 -1.1
ZEI                                pmax   pmax
      comp=Z,9.0nm,0.9s
KIV   Kislovodsk       63.52 306  iP      P      16 50 01.4 +1.1
      SNR=11
KIV   Kislovodsk       63.52 306  eP      P      16 50 00.2 -0.1
KIV                                pmax   pmax
      comp=Z,165nm,1.1s
KIV   Kislovodsk       63.52 306   P      P      16 50 01.8 +1.6
KBZ   Khabaz           63.53 306   P      P      16 50 00.9 +0.8
      comp=Z,11nm,0.7s,baz=33,slow=5.9,SNR=24
KBZ   Khabaz           63.53 306  iP      P      16 50 00.3 +0.2
KBZ                                pmax   pmax
      comp=Z,11nm,0.9s
MTSE  Matsula          63.70 327  eP      P      16 49 58.0 -2.9
NEY   Neytrino         63.91 306  iP      P      16 50 02.3 -0.6
NEY                                pmax   pmax
      comp=Z,4.0nm,0.7s
GNI   Garni            64.52 302  iP      P      16 50 05.5 -1.4
GNI                                pmax   pmax
      comp=Z,11nm,1.0s
IDID  Didziasalis      64.72 323  eP      P      16 50 08.2 +0.6
MNK   Minsk            64.74 322  iP      P      16 50 07.9 +0.1
      comp=E,6.0nm,1.4s
MNK                               iP      P      16 50 07.9 +0.1
      comp=N,27nm,1.0s
MNK                               iP      P      16 50 07.9 +0.1
      comp=Z,57nm,0.9s
MNK                               ipP     pP     16 51 24.2 +2.1
MNK                               iPP     PP     16 52 36.2 +1.7
MNK                               iPPP    PPP    16 54 15.8
MNK                               iS      S      16 58 20.7 +0.5
MNK                               iSS     SS     17 02 09.7  -28
MNK                               iSSS    SSS    17 05 59.5
MNK                               iLR     LR     17 16 55.0
MNK                               iLRM    MLR    17 21 39.5
      comp=E,42nm,20.4s
MNK                               iLRM    MLR    17 21 39.5
      comp=N,361nm,16.8s
MNK                               iLRM    MLR    17 21 39.5
      comp=Z,157nm,8.5s
ISAL  Salakas          64.81 324  eP      P      16 50 08.9 +0.7
IIGN  Ignalina         64.92 324  eP      P      16 50 09.6 +0.7
NACGM Naroch           64.97 323  iP      P      16 50 09.8 +0.6
NACGM                             iP      P      16 50 09.8 +0.6
NACGM                             iP      P      16 50 09.8 +0.6
NACGM                             ipP     pP     16 51 17.5 -6.0
NACGM                             iPP     PP     16 52 32.5 -4.0
NACGM                             iPPP    PPP    16 54 07.0
NACGM                             iS      S      16 58 23.6 +0.7
NACGM                             isS     sS     17 00 33.7 +1.1
NACGM                             iSS     SS     17 02 54.7  +14
NACGM                             iSSS    SSS    17 06 08.0
BANOM Banah            65.33 283  iP      P      16 50 12.6 +0.5
      SNR=10
BANOM Banah            65.33 283   P      P      16 50 12.6 +0.5
SHME  Shamm            65.37 283  iP      P      16 50 12.5 +0.3
      SNR=20
SHME  Shamm            65.37 283   P      P      16 50 12.2  0.0
JLN   Jalan Bani Buh   65.45 278   P      P      16 50 13.8 +1.0
WBK   Wadi Bani Khal   65.48 278   P      P      16 50 14.5 +1.5
BIDO  Bidbid           65.51 280   P      P      16 50 15.1 +1.9
MDH   Madha            65.72 282   P      P      16 50 15.9 +1.4
MASF  Masafi           65.77 283   P      P      16 50 15.4 +0.5
PABE  Paberze          65.78 325  eP      P      16 50 14.8 +0.5
MSFE  Esma-Masafi      65.78 283   P      P      16 50 15.4 +0.4
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SMDO	Samad	65.86	279	P	P	16 50 16.7	+1.2
UOSS	Minazif	66.00	282	*i* P	P	16 50 16.8	+0.5
	SNR=12						
UOSS	Minazif	66.00	282	P	P	16 50 16.8	+0.5
UOSS	Minazif	66.00	282	P	P	16 50 16.9	+0.5
HOQ	Hoqain	66.06	280	P	P	16 50 17.4	+0.7
	SNR=6.5						
HATD	Hatta, Dubai	66.13	282	*i* P	P	16 50 17.8	+0.7
	SNR=18						
HATD	Hatta, Dubai	66.13	282	P	P	16 50 17.9	+0.8
	SNR=5.3						
JMDO	Jabal Madar	66.25	279	P	P	16 50 18.9	+1.0
ASHO	Ashiyiah	66.27	282	*i* P	P	16 50 18.6	+0.6
	SNR=16						
ASHO	Ashiyiah	66.27	282	P	P	16 50 18.6	+0.6
	SNR=6.2						
SOHO	SOHO	66.27	281	*i* P	P	16 50 18.5	+0.5
	SNR=12						
SOHO	SOHO	66.27	281	P	P	16 50 18.5	+0.5
NAZ	Nazwa, Dubai	66.36	283	P	P	16 50 19.0	+0.5
NB2	NORSAR Subarra	66.52	334	P	P	16 50 18.7	-0.3
	comp=Z,6.1nm,0.7s,baz=39,slow=6.5						
NOA	NORSAR Array B	66.52	334	P	P	16 50 18.6	-0.4
	comp=Z,8.3nm,0.7s,baz=39,slow=6.2,SNR=23						
FAQ	Al Faqa, Dubai	66.56	282	*i* P	P	16 50 19.9	+0.1
	SNR=7.1						
FAQ	Al Faqa, Dubai	66.56	282	P	P	16 50 20.1	+0.2
AKASG	Malin Array Be	66.58	318	P	P	16 50 19.4	0.0
	comp=Z,11nm,0.5s,baz=46,slow=6.1,SNR=69						
AKASG	Malin Array Be	66.58	318	P	P	16 50 19.8	+0.3
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.8s						
AKASG	Malin Array Be	66.58	318	P	P	16 50 19.8	+0.3
NORES	NORESS Array B	66.65	334	P	P	16 50 19.5	-0.2
NORES				pmax	pmax		
	comp=Z,1.0nm,0.2s						
BSY	Bisya	66.66	280	P	P	16 50 21.7	+1.1
	SNR=5.3						
ARQ	Araqi	66.78	281	P	P	16 50 22.0	+0.7
ASUD	Al Ashush, Dub	66.82	282	*i* P	P	16 50 22.0	+0.6
	SNR=8.7						
ASUD	Al Ashush, Dub	66.82	282	P	P	16 50 22.2	+0.8
ALNE	Al Ain	66.88	282	*i* P	P	16 50 22.0	+0.1
	SNR=8.3						
ALNE	Al Ain	66.88	282	P	P	16 50 22.4	+0.5
	SNR=5.6						
AS31	Alice Springs	66.89	182	P	P	16 50 22.6	+0.9
ASAR	Alice Springs	66.89	182	P	P	16 50 22.8	+1.0
	comp=Z,3.2nm,0.6s,baz=356,slow=6.0,SNR=92						
MHTO	MHTO	67.22	278	P	P	16 50 25.0	+1.1
	SNR=10						
UMZA	Um Al Zommool	68.14	281	P	P	16 50 29.6	0.0
DQM	DQM	68.20	277	P	P	16 50 30.5	+0.4
SORM	Soroca	68.70	317	⇑P	P	16 50 32.7	0.0
SORM	Soroca	68.70	317	P	P	16 50 32.6	0.0
KVT	Kavak	69.16	307	P	P	16 50 37.1	+1.4
MILM	Milestii Mici	69.28	316	⇑P	P	16 50 36.1	-0.2
MALT	Malatya	69.52	304	P	P	16 50 39.4	+1.4
VASR	Vaslui	69.99	316	⇑P	P	16 50 41.4	+0.8
KWP	Kalwaria Pacla	70.39	321	*e*P	P	16 50 44.0	+1.1
KWP	Kalwaria Pacla	70.39	321	P	P	16 50 44.5	+1.6
TLCR		70.45	314	⇑P	P	16 50 43.8	+0.5
TLCR		70.45	314	P	P	16 50 43.8	+0.5
FFC	Flin Flon	70.47	31	P	P	16 50 44.6	+1.3
FFC				pmax	pmax		
	comp=Z,7.0nm,0.8s						
FFC	Flin Flon	70.47	31	P	P	16 50 44.6	+1.3
BUR08	Bucovina Ar. S	70.59	318	P	P	16 50 44.6	+0.3
BUR08				IAmb	IAmb	16 50 45.7	
	comp=Z,15nm,0.8s						
BURAR	Bucovina Array	70.60	318	⇓P	P	16 50 45.0	+0.6
BURAR	Bucovina Array	70.60	318	P	P	16 50 44.9	+0.6
BURAR	Bucovina Array	70.60	318	P	P	16 50 44.8	+0.4
BIZ	Bicaz	70.63	317	⇑P	P	16 50 45.5	+1.0
TESR	Tescani	70.65	316	⇑P	P	16 50 45.2	+0.6
CFR	Carcaliu	70.81	314	⇑P	P	16 50 45.9	+0.4
CFR	Carcaliu	70.81	314	P	P	16 50 45.8	+0.4
SHAO	Shalim	70.81	277	P	P	16 50 47.0	+1.1
TPGR	Topolog	70.88	314	⇑P	P	16 50 45.4	-0.6
KOLS	Kolonicke sedl	71.08	320	*e*P	P	16 50 47.8	+0.7
KOLS				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KOLS	Kolonicke sedl	71.08	320	*e*P	P	16 50 47.8	+0.7
OJC	Ojcow	71.28	322	*e*P	P	16 50 49.3	+1.0
OJC	Ojcow	71.28	322	P	P	16 50 49.1	+0.8
OJC				pmax	pmax		
	comp=Z,43nm,0.7s						
OJC	Ojcow	71.28	322	P	P	16 50 49.1	+0.8
BR131	Keskin Array S	71.44	307	P	P	16 50 49.8	+0.3
BR131				pmax	pmax		
	comp=Z,13nm,0.8s						
BR131	Keskin Array S	71.44	307	P	P	16 50 49.8	+0.3
BR131				IAmb	IAmb	16 50 50.9	
	comp=Z,12nm,0.8s						
BRTR	Keskin Array B	71.44	307	P	P	16 50 49.9	+0.4
	comp=Z,6.8nm,0.8s,baz=77,slow=4.3,SNR=20						
BRTR	Keskin Array B	71.44	307	P	P	16 50 50.1	+0.6
BRTR	Keskin Array B	71.44	307	P	P	16 50 50.1	+0.6
CRVS	Cervenica-Dubn	71.48	321	*e*P	P	16 50 50.6	+1.2
CRVS				pmax	pmax		
	comp=Z,11nm,0.8s						
CRVS	Cervenica-Dubn	71.48	321	*e*P	P	16 50 50.6	+1.2
DMTO	DMTO	71.50	277	P	P	16 50 50.1	+0.2
DOK	Doka	71.50	278	P	P	16 50 50.1	+0.1
	SNR=8.3						
NIE	Niedzica	71.64	322	*e*P	P	16 50 51.9	+1.5
NIE	Niedzica	71.64	322	P	P	16 50 51.8	+1.4
DOPR	Dopca	71.66	316	⇑P	P	16 50 52.2	+1.6
CEI	Carei	71.88	319	⇓P	P	16 50 52.9	+1.1
CJR	Cluj-Napoca	72.02	318	⇓P	P	16 50 54.4	+1.6
EGMT	Eagleton	72.13	40	P	P	16 50 54.9	+1.5
VOIR		72.20	316	⇑P	P	16 50 55.1	+1.2
VOIR		72.20	316	P	P	16 50 55.0	+1.2
WHFO	Wadi Hawf	72.21	278	P	P	16 50 53.9	-0.4
KSP	Ksiaz	72.34	325	*e*P	P	16 50 55.4	+0.9
KSP	Ksiaz	72.34	325	P	P	16 50 55.7	+1.3
MORC	Moravsky Berou	72.60	323	⇓P	P	16 50 57.1	+1.0
MORC	Moravsky Berou	72.60	323	*e*P	P	16 50 57.1	+1.0
MORC	Moravsky Berou	72.60	323	P	P	16 50 57.0	+1.0
DPC	Dobruska-Polom	72.69	324	*e*P	P	16 50 57.8	+1.2
DPC	Dobruska-Polom	72.69	324	*e*P	P	16 50 57.8	+1.2
KRLC	Kraliky	72.70	324	*e*P	P	16 50 57.7	+1.0
KRLC	Kraliky	72.70	324	*e*P	P	16 50 57.7	+1.0
UPC	Upice	72.71	325	*e*P	P	16 50 57.7	+1.1
UPC	Upice	72.71	325	*e*P	P	16 50 57.7	+1.1
PSZ	Piszkesteto	72.91	321	⇓P	P	16 50 59.3	+1.4
ABTO	Aybut	72.92	278	P	P	16 50 58.4	0.0
PAHR	Pah Rah Range	72.93	51	IAmb	IAmb	16 51 00.7	
	comp=Z,8.2nm,0.7s						
VYHS	Vyhne	72.97	322	*e*P	P	16 50 59.5	+1.3
VYHS	Vyhne	72.97	322	*e*P	P	16 50 59.5	+1.3
COPA	Copaceanca	73.03	315	⇑P	P	16 50 58.8	+0.2
JAVC	Velka Javorina	73.22	323	*e*P	P	16 51 01.7	+2.0
FLTG	Flechtingen	73.23	328	*e*P	P	16 51 00.1	+0.5
	comp=Z,25nm,0.8s,baz=37,slow=5.7						
SIRR	Siria	73.28	319	⇓P	P	16 51 01.1	+1.0
BRG	Berggiesshubel	73.29	326	P	P	16 51 00.9	+1.0
BRG	Berggiesshubel	73.29	326	*i* P	P	16 51 01.0	+1.0
BRG				Amp		16 51 01.7	
	comp=Z,12nm,0.9s						
PVCC	Panska Ves	73.30	325	*e*P	P	16 51 01.0	+1.0
PVCC	Panska Ves	73.30	325	*e*P	P	16 51 01.0	+1.0
CLL	Collm	73.34	327	*i* P	P	16 51 00.7	+0.5
	comp=Z,18nm,0.8s						
CLL				*e*PcP	PcP	16 51 12.0	-2.6
CLL	Collm	73.34	327	*i* P	P	16 51 00.7	+0.5
CLL				*e*		16 51 12.0	
CLL				pmax	pmax		
	comp=Z,18nm,0.8s						
CLL	Collm	73.34	327	P	P	16 51 00.2	-0.1
CLL	Collm	73.34	327	*e*P	P	16 51 00.9	+0.7
	comp=Z,18nm,0.8s,baz=37,slow=5.7						
VRAC	Vranov	73.36	323	⇑P	P	16 51 01.9	+1.5
VRAC	Vranov	73.36	323	*e*P	P	16 51 01.6	+1.2
VRAC	Vranov	73.36	323	P	P	16 51 01.9	+1.5
GZR	Gura Zlata	73.36	317	⇓P	P	16 51 01.2	+0.5
FBE	Freiberg	73.49	326	*e*P	P	16 51 02.4	+1.3
	comp=Z,17nm,0.8s,baz=37,slow=5.7						
SMOL	Smolenice	73.59	322	*e*P	P	16 51 03.4	+1.6
SMOL				pmax	pmax		
	comp=Z,6.0nm,0.8s						
SMOL	Smolenice	73.59	322	*e*P	P	16 51 03.4	+1.6
KRUC	Moravsky	73.63	323	*e*P	P	16 51 03.0	+1.0
SRO	Srobarova	73.71	321	*e*P	P	16 51 04.1	+1.6
SRO				pmax	pmax		
	comp=Z,14nm,0.7s						
SRO	Srobarova	73.71	321	*e*P	P	16 51 04.1	+1.6
SRO2	Moca	73.71	321	*e*P	P	16 51 02.9	+0.4
SRO2				pmax	pmax		
	comp=Z,19nm,1.5s						
SRO2	Moca	73.71	321	*e*P	P	16 51 02.9	+0.4
PRU	Pruhonice	73.72	325	*e*P	P	16 51 03.6	+1.1
PRU	Pruhonice	73.72	325	*e*P	P	16 51 03.6	+1.1
MODS	Modra-Piesok	73.76	322	*e*P	P	16 51 03.3	+0.5
MODS				pmax	pmax		
	comp=Z,9.0nm,1.0s						
MODS	Modra-Piesok	73.76	322	*e*P	P	16 51 03.3	+0.5
BZS	Buzias	73.77	318	⇓P	P	16 51 03.2	+0.3
BZS	Buzias	73.77	318	P	P	16 51 03.0	+0.1
BZS				pmax	pmax		
	comp=Z,34nm,1.7s						
TREC	Trest	73.85	324	*e*P	P	16 51 04.4	+1.1
TREC	Trest	73.85	324	*e*P	P	16 51 04.4	+1.1
PLVB	Pleven	73.86	315	⇑P	P	16 51 03.9	+0.5
NEUB	Neuenburg	73.90	327	*e*P	P	16 51 04.2	+0.8
	comp=Z,28nm,0.9s,baz=37,slow=5.7						
CLZ	Clausthal	73.95	328	*e*P	P	16 51 05.0	+1.2
	comp=Z,18nm,0.9s,baz=37,slow=5.7						
PBCC	Pribram	74.18	325	*e*P	P	16 51 05.9	+0.8
TANN	Tannenbergstha	74.25	326	*e*P	P	16 51 06.6	+1.0
	baz=37,slow=5.7						
WERD	Werda	74.28	326	*e*P	P	16 51 06.7	+1.0
	comp=Z,6.3nm,1.0s,baz=37,slow=5.7						
PLN	Plauen	74.31	326	*e*P	P	16 51 06.9	+1.0
	baz=37,slow=5.7						
MDVR	Moldovita	74.33	318	⇑P	P	16 51 06.5	+0.4
GUNZ	Gunzen	74.34	326	*e*P	P	16 51 07.3	+1.3
	baz=37,slow=5.7						
GTTG	Gottingen	74.34	328	*e*P	P	16 51 07.0	+1.0
	comp=Z,15nm,0.9s,baz=37,slow=5.7						
NKC	Novy Kostel	74.39	326	*e*P	P	16 51 07.1	+0.7
NKC	Novy Kostel	74.39	326	*e*P	P	16 51 07.1	+0.7
NVAR	Mina Array Bea	74.41	52	P	P	16 51 08.5	+1.5
	comp=Z,9.0nm,0.6s,baz=299,slow=5.3,SNR=84						
NVAR	Mina Array Bea	74.41	52	P	P	16 51 08.8	+1.8
RAYN	Ar Rayn	74.42	288	*i* P	P	16 51 07.1	+0.1
	SNR=14						
RAYN	Ar Rayn	74.42	288	P	P	16 51 06.5	-0.5
RAYN				pmax	pmax		
	comp=Z,7.0nm,0.7s						
RAYN	Ar Rayn	74.42	288	P	P	16 51 06.5	-0.5
RAYN				IAmb	IAmb	16 51 08.3	
	comp=Z,7.4nm,0.7s						
NV11	Mina Array Sit	74.50	52	IAmb	IAmb	16 51 10.0	
	comp=Z,6.0nm,0.7s						
IBBN	Ibbenburen	74.56	330	*e*P	P	16 51 08.0	+0.8
	comp=Z,21nm,0.9s,baz=37,slow=5.7						
SOP	Sopron	74.60	322	P	P	16 51 09.6	+2.1
SOP				pmax	pmax		
	comp=Z,61nm,1.2s						
CKRC	Cesky Krumlov	74.71	324	*e*P	P	16 51 09.1	+0.9
CONA	Conrad Observa	74.72	323	*e*P	P	16 51 09.9	+1.5
	comp=Z,12nm,0.8s,SNR=13						
MANZ	Manzenberg	74.72	326	*e*P	P	16 51 09.4	+1.1
	baz=37,slow=5.7						
PLD	Plovdiv	74.73	314	P	P	16 51 10.8	+2.4
PLD				pmax	pmax		
	comp=Z,426nm,3.4s						
KHC	Kasperske Hory	74.78	325	*i* P	P	16 51 09.1	+0.5
KHC				pmax	pmax		
	comp=Z,23nm,0.9s						
KHC	Kasperske Hory	74.78	325	*e*P	P	16 51 09.2	+0.6
KHC	Kasperske Hory	74.78	325	P	P	16 51 09.8	+1.2
KHC				IAmb	IAmb	16 51 10.6	
	comp=Z,12nm,0.7s						
ROTZ	Rotzenmuhle	74.85	326	*e*P	P	16 51 10.4	+1.5
	comp=Z,10nm,0.9s,baz=37,slow=5.7						
UBBA	Unterbreizbach	74.90	328	*e*P	P	16 51 10.1	+1.0
	baz=37,slow=5.7						
GEC2	GERESS Array S	74.95	325	P	P	16 51 09.7	+0.1
GEC2	GERESS Array S	74.95	325	*e*P	P	16 51 10.5	+0.9
	comp=Z,6.2nm,0.8s,baz=37,slow=5.7						
GERES	GERESS Array B	74.95	325	P	P	16 51 10.2	+0.5
	comp=Z,4.9nm,0.7s,baz=38,slow=5.7,SNR=42						
WET	Wettzell	75.06	325	P	P	16 51 11.4	+1.2
WET	Wettzell	75.06	325	*e*P	P	16 51 11.5	+1.3
	comp=Z,15nm,1.1s,baz=37,slow=5.7						
VTS	Vitosha	75.12	315	⇑P	P	16 51 12.2	+1.3
VTS	Vitosha	75.12	315	P	P	16 51 12.0	+1.2
VTS				pmax	pmax		
	comp=Z,28nm,0.8s						
KASTN	Kahler Asten	75.20	329	*e*P	P	16 51 11.8	+0.8
	baz=37,slow=5.7						
STKA	Stephens Creek	75.23	175	P	P	16 51 12.7	+1.6
	comp=Z,3.4nm,0.5s,baz=296,slow=2.1,SNR=6.9						
GRF	Grafenberg Arr	75.31	326	P	P	16 51 13.2	+1.6
GRF	Grafenberg Arr	75.31	326	*e*P	P	16 51 13.2	+1.6
	comp=Z,32nm,0.8s,baz=37,slow=5.7						
GRFO	Grafenberg	75.31	326	P	P	16 51 13.3	+1.7
ARSA	Arzberg	75.38	323	*i* P	P	16 51 13.2	+1.1
	comp=Z,5.4nm,0.8s						
BUG	Bochum--Univer	75.43	330	*e*P	P	16 51 13.0	+0.8
	comp=Z,23nm,1.1s,baz=37,slow=5.7						
MOA	Molln	75.47	324	*i* P	P	16 51 13.4	+0.8
	comp=Z,5.2nm,0.8s						
EKA	Eskdalemuir Ar	75.54	337	P	P	16 51 12.6	-0.2
ELL	Elmali	75.61	307	P	P	16 51 14.8	+1.2
SOCY	Socotra	75.83	273	P	P	16 51 14.3	-0.9
TNS	Taunus Mts	75.98	328	*e*P	P	16 51 16.3	+0.9
	comp=Z,8.0nm,0.9s,baz=37,slow=5.7						
SRS	Serrai	76.02	314	P	P	16 51 16.4	+0.7
SRS				pmax	pmax		
	comp=Z,18nm,0.9s						
BW06	Boulder Array	76.03	44	P	P	16 51 17.2	+1.1
BW06				IAmb	IAmb	16 51 18.2	
	comp=Z,7.7nm,0.8s						
PD31	Pinedale Array	76.03	44	P	P	16 51 17.7	+1.6
PD31				IAmb	IAmb	16 51 18.2	
	comp=Z,6.7nm,0.8s						
PDAR	Pinedale Array	76.03	44	P	P	16 51 17.5	+1.4
	comp=Z,6.3nm,0.7s,baz=338,slow=1.6,SNR=66						
PDAR	Pinedale Array	76.03	44	P	P	16 51 16.8	+0.7
SOKA	Soboth	76.04	322	*e*P	P	16 51 16.9	+1.0
	comp=Z,16nm,0.9s,SNR=9.8						
AHRW	Bad Neuenahr-A	76.24	329	*e*P	P	16 51 17.8	+1.0
	comp=Z,18nm,0.9s,baz=37,slow=5.7						
ULM	Lac du Bonnet	76.30	31	P	P	16 51 16.8	-0.3
	comp=Z,5.6nm,0.6s,baz=330,slow=5.8,SNR=18						
ULM	Lac du Bonnet	76.30	31	P	P	16 51 17.3	+0.2
ULM	Lac du Bonnet	76.30	31	P	P	16 51 17.3	+0.2
OBKA	Obir	76.38	323	*e*P	P	16 51 17.9	+0.2
	comp=Z,7.0nm,0.9s						
KBA	Koelnbreinsper	76.47	324	P	P	16 51 18.6	+0.3
	comp=Z,16nm,0.9s,SNR=12						
FUR	Furstenfeldbru	76.49	325	*e*P	P	16 51 19.5	+1.3
	comp=Z,22nm,1.1s,baz=37,slow=5.7						
MYKA	Terra Mystica	76.69	323	*e*P	P	16 51 20.0	+0.5
	comp=Z,9.4nm,1.0s						
WATA	Walderalm	77.02	325	*i* P	P	16 51 22.6	+1.2
	comp=Z,8.0nm,0.6s						
WTTA	Wattenberg	77.05	325	*e*P	P	16 51 22.6	+1.1
	comp=Z,12nm,0.8s,SNR=5.5						
ABTA	Abfaltersbach	77.08	324	*e*P	P	16 51 22.9	+1.3
	comp=Z,6.0nm,1.0s						
MOTA	Moosalm	77.21	325	*e*P	P	16 51 23.5	+1.1
	comp=Z,12nm,0.8s,SNR=7.7						
RETA	Reutte	77.24	325	*i* P	P	16 51 23.6	+1.2
	comp=Z,14nm,0.9s						
SQTA	Sankt Quirin	77.26	325	*e*P	P	16 51 23.7	+1.0
	comp=Z,7.9nm,1.0s						
WLF	Walferdange	77.30	329	*e*P	P	16 51 23.4	+0.7
	baz=37,slow=5.7						
BFO	Black Forest	77.55	327	*e*P	P	16 51 25.0	+0.9
	comp=Z,22nm,1.2s,baz=37,slow=5.7						
FETA	Feichten	77.62	325	*e*P	P	16 51 23.9	-0.8
	comp=Z,8.1nm,0.9s						
RSSD	Black Hills	77.69	40	P	P	16 51 25.0	-0.2
RSSD				pmax	pmax		
	comp=Z,6.0nm,0.8s						
RSSD	Black Hills	77.69	40	P	P	16 51 25.0	-0.2
RSSD				IAmb	IAmb	16 51 27.2	
	comp=Z,5.7nm,0.8s						
DAVA	Damuels	77.76	326	*i* P	P	16 51 26.4	+1.0
	comp=Z,11nm,0.8s						
CDF	Champ du Feu	77.89	328	*e*P	P	16 51 26.0	0.0
CDF				pmax	pmax		
	comp=Z,11nm,1.0s						
ECH	Echery	78.10	328	IAmb	IAmb	16 51 27.9	
	comp=Z,9.7nm,0.8s						
HINF	Hinteralfeld	78.54	328	*e*P	P	16 51 29.0	-0.5
HINF				pmax	pmax		
	comp=Z,5.0nm,0.9s						
HAU	Haudompre	78.58	328	*e*P	P	16 51 29.3	-0.4
HAU				pmax	pmax		
	comp=Z,9.0nm,0.8s						
LOR	Lormes	80.14	329	*e*P	P	16 51 37.6	-0.5
LOR				pmax	pmax		
	comp=Z,14nm,0.8s						
LPL	La Plagne	80.47	326	*e*P	P	16 51 40.1	0.0
LPL				pmax	pmax		
	comp=Z,15nm,0.8s						
LPG	La Plagne	80.48	326	*e*P	P	16 51 40.3	0.0
LPG				pmax	pmax		
	comp=Z,17nm,0.8s						
VIVF	Saint-Julien-l	81.84	327	*e*P	P	16 51 46.9	-0.1
VIVF				pmax	pmax		
	comp=Z,99nm,2.2s						
EPF	Esparros	85.05	329	*e*P	P	16 52 02.9	-0.4
EPF				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ETSF	Etsaut	85.50	329	*e*P	P	16 52 06.1	+0.6
ETSF				pmax	pmax		
	comp=Z,9.0nm,0.7s						
TXAR	Lajitas Array	89.30	49	P	P	16 52 25.1	+1.3
	comp=Z,0.7nm,0.6s,baz=266,slow=2.6,SNR=6.1						
ESDC	Sonseca Array	89.56	330	P	P	16 52 24.6	-0.2
	comp=Z,1.1nm,0.6s,baz=16,slow=4.8,SNR=8.4						
TORD	Torodi Ar. Bea	109.77	312	PP	PP	16 58 31.1	-2.6
	comp=Z,2.6nm,1.0s,baz=34,slow=5.5,SNR=6.8						
DBIC	Dimbokro	118.67	314	PKP	PKPdf	16 58 13.2	-0.4
	comp=Z,2.0nm,0.8s,baz=59,slow=3.8,SNR=2.0						
SDV	Santo Domingo	122.55	32	*e*P	PKiKP	16 58 24.9	+3.4
OTAV	Otavalo	126.73	45	*e*P	PKiKP	16 58 33.2	+3.0
BELA	Belgrano 2	145.33	184	PKPdf	PKPbc	16 59 02.4	+0.3
SNAA	Sanae	145.47	202	P	PKPbc	16 59 02.8	+0.1
SNAA	Sanae	145.47	202	PKP2	PKPbc	16 59 03.0	+0.3
SNAA	Sanae	145.47	202		PKPbc	16 59 03.0	+0.3
LPAZ	La Paz	146.05	44	PKPbc	PKPbc	16 59 06.8	+0.1
	comp=Z,0.8nm,0.5s,baz=333,slow=4.5,SNR=3.5						
VNA2	Neumayer--Watz	147.11	201	P	PKPbc	16 59 07.3	0.0
VNA3	Neumayer Olymp	147.49	200	P	PKPbc	16 59 08.0	-0.3

JMA 07 16:40:43.4, 39°.21N×140°.76E, h7^{km}±1^{km}, M0.4, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JRG	Rokugo	0.21	332	P	Pg	16 40 48.0	+0.4
JRG				*e*S	Sg	16 40 51.3	+0.8
JYK	Kaneyama	0.43	227	P	Pg	16 40 51.8	+0.1
JYK				S	Sg	16 40 57.6	+0.3

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*IDC **07** 17:16:03.9±28.0, 2°.49N×123°.24E, h0^{km}, mb3.7/4, mb1 3.9/4, mb1mx3.3/48, mbtmp3.7/4, Error ellipse: s-maj=479.7km s-min=120.6km az=139.0*

*NEIC **07** 17:16:41.8±2.7, 0°.9N±0°.1×123°.2E±0°.1, h269^{km}±9^{km}, mb4.1/11, Error ellipse: s-maj=22.9km s-min=12.5km az=62.0*

*DJA **07** 17:16:46.7±0.6, 0°S±5°×12°2E±°, h254^{km}±5^{km}, M3.3/7, mb3.6/1, MLv3.1/7*

ISC 07 17:16:44.7±0.9**, 0°.06N**±0°.09×**122°.05E**±0°.07**, h270**^{km}±7^{km}**, n27, σ1^{s}.27**/31**, mb3.9**/7**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRSI	Marisa	0.43	345	P	Pn	17 17 20.5	+0.7
MRSI				S	S	17 17 46.6	-0.9
APSI	Ampana	1.04	203	P	Pn	17 17 23.4	+1.3
APSI				S	S	17 17 50.9	-0.9
GTOI	Gorontalo	1.12	59	P	Pn	17 17 23.9	+1.4
GTOI				S	S	17 17 52.5	+0.1
LUWI	Luwuk	1.31	147	Pn	Pn	17 17 24.7	+1.0
LUWI	Luwuk	1.31	147	P	Pn	17 17 24.3	+0.6
LUWI				S	S	17 17 52.8	-1.7
TOLI2	Tolitoli	1.65	309		Pn	17 17 27.9	+1.9
KMSI	Cibinong	2.00	75	P	Pn	17 17 28.7	-0.1
KMSI				S	S	17 18 04.7	+0.9
MPSI	Mapaga	2.17	277	P	Pn	17 17 32.0	+1.6
MPSI				S	S	17 18 06.2	-0.4
SANI	Sanana	4.46	118	P	Pn	17 17 54.2	-0.6
MYLDM	Lahad Datu	6.20	325	Pn	Pn	17 18 13.1	-2.7
BATI	Baumata	10.32	171	Pn	Pn	17 19 07.6	+0.4
	1.5nm,0.3s,baz=324,slow=19,SNR=4.3						
MTN	Manton Dam	15.67	145	Pn	Pn	17 20 11.8	-0.4
MTN				IAmb	IAmb	17 20 14.6	
	comp=Z,15nm,1.1s						
CISI	Cisompet, Garu	16.09	242	P	Pn	17 20 33.1	+16
FITZ	Fitzroy Crossi	18.39	169	P	Pn	17 20 43.1	-0.8
	comp=Z,1.7nm,0.8s,baz=5.2,slow=11,SNR=3.6						
FITZ	Fitzroy Crossi	18.39	169	P	Pn	17 20 45.0	+1.0
FITZ				IAmb	IAmb	17 21 15.7	
	comp=Z,5.8nm,1.4s						
WB0	Warramunga Arr	23.12	149	P	P	17 21 27.4	0.0
WB0				IAmb	IAmb	17 21 58.0	
	comp=Z,5.8nm,1.4s						
WRA	Warramunga Arr	23.24	150	P	P	17 21 28.1	-0.4
	comp=Z,1.6nm,0.5s,baz=338,slow=9.0,SNR=27						
WRA	Warramunga Arr	23.24	150	P	P	17 21 26.8	-1.7
WB2	Warramunga Arr	23.25	149	P	P	17 21 27.8	-0.8
WB2				IAmb	IAmb	17 21 43.5	
	comp=Z,7.5nm,1.4s						
WR0	Warramunga Arr	23.36	149	P	P	17 21 29.4	-0.1
WR0				IAmb	IAmb	17 21 38.3	
	comp=Z,10.0nm,1.6s						
AS31	Alice Springs	26.24	155	P	P	17 21 53.7	-1.9
ASAR	Alice Springs	26.24	155	P	P	17 21 56.3	+0.7
	comp=Z,0.7nm,0.5s,baz=344,slow=14,SNR=27						
ASAR	Alice Springs	26.24	155	P	P	17 21 53.4	-2.2
STKA	Stephens Creek	36.75	152	P	P	17 23 28.1	+1.2
	comp=Z,1.7nm,0.8s,baz=329,slow=13,SNR=3.8						
STKA	Stephens Creek	36.75	152	P	P	17 23 25.9	-0.9
INU	Inuyama	37.78	20	P	P	17 23 22.8	-13
INU				IAmb	IAmb	17 23 25.9	
	comp=Z,18nm,1.4s						
VNDA	Vanda	80.44	172	P	P	17 28 27.3	+1.3

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*IDC **07** 17:21:54.9±1.4, 10°.41S×123°.71E, h26^{km}±13^{km}, mb3.5/1, mb1 3.3/4, mb1mx3.1/45, mbtmp3.3/4, ML2.9/3, Error ellipse: s-maj=96.6km s-min=21.0km az=68.0*

*DJA **07** 17:21:57.1±0.6, 10°S±6°×12°4E±°, h10^{km}, M3.2/7, mb3.8/2, MLv2.9/7*

ISC 07 17:21:52.0±0.8**, 10°.56S**±0°.05×**123°.64E**±0°.07**, h10**^{km}**, n10, σ2^{s}.52**/17**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	0.35	4	LR	LR	17 21 45.4	
	comp=Z,87nm,18.9s,baz=337,slow=47						
BATI				Pg	Pb	17 22 00.9	+0.6
	272nm,0.3s,baz=229,slow=3.9,SNR=256						
BATI				Lg	Lg	17 22 06.3	
	417nm,0.3s,baz=233,slow=20,SNR=12						
BATI	Baumata	0.35	4	P	Pb	17 22 00.9	+0.6
BATI				S	Sb	17 22 05.1	-0.8
SOEI	Soe	1.01	38	P	Pn	17 22 15.8	+3.5
SOEI				S	Sn	17 22 26.5	-0.1
MMRI	Maumere	2.35	324	P	Pn	17 22 30.3	-0.4
MMRI				S	Sn	17 22 57.3	-2.4
EDFI	Ende, Flores	2.63	313	P	Pn	17 22 35.7	+1.1
EDFI				S	Sn	17 23 04.8	-1.8
PLAI	Plampang	6.03	286	P	Pn	17 23 23.2	+1.9
FITZ	Fitzroy Crossi	7.75	166	Pn	Pn	17 23 48.0	+3.1
	0.1nm,0.3s,baz=351,slow=11,SNR=7.4						
FITZ				Sn	Sn	17 25 12.6	-0.1
	0.5nm,0.3s,baz=329,slow=19,SNR=5.8						
WRA	Warramunga Arr	13.91	133	Pn	Pn	17 25 10.1	+0.8
	0.1nm,0.3s,baz=310,slow=15,SNR=2.4						
WRA				Sn	Sn	17 27 38.5	-5.5
	0.2nm,0.3s,baz=296,slow=24,SNR=6.9						
ASAR	Alice Springs	16.30	144	Pn	Pn	17 25 42.8	+1.5
	0.1nm,0.3s,baz=316,slow=12,SNR=8.4						
ASAR				Sn	Sn	17 28 38.1	-4.2
	0.1nm,0.3s,baz=310,slow=21,SNR=2.8						
MKAR	Makanchi Array	67.98	331	P	P	17 32 51.1	-0.2
	0.5nm,0.7s,baz=133,slow=6.3,SNR=1.7						

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*BJI **07** 17:25:45.7±0.0, 36°.99N×71°.52E, h101^{km}, mB4.7/16, mb4.4/23*

MOS ***07*** *17:25:47.7±0.9, 37.°03N×71.°54E, h122^{km}, mb4.0/11, Error ellipse: s-maj=8.2km s-min=4.0km az=76.4*

IDC ***07*** *17:25:48.5±0.9, 36.°89N×71.°47E, h123^{km}±7^{km}, mb3.6/13, mb1 3.8/20, mb1mx3.5/56, mbtmp4.1/20, Error ellipse: s-maj=16.6km s-min=12.8km az=32.0*

NEIC ***07*** *17:25:48.7±2.5, 37.°00N±0.°05×71.°42E±0.°08, h127^{km}±5^{km}, mb4.2/16, Error ellipse: s-maj=10.6km s-min=6.6km az=58.0*

NNC ***07*** *17:25:54.1±1.6, 37.°40N×71.°55E, h143^{km}±17^{km}, mb3.7, mpv4.6, Error ellipse: s-maj=14.0km s-min=9.5km az=8.0*

ISC 07 17:25:47.0±0.4**, 37.°01N**±0.°04×**71.°56E**±0.°04**, h106^{km}, n161,** σ**2.^{s}47**/177**, mb4.0**/23**, 16C-6D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBL	**Kabul**	3.21	220	PN	Pn	17 26 38.4	+2.6
KBL						17 27 16.4	
KBL	**Kabul**	3.21	220	Pn	Pn	17 26 38.4	+2.6
KBL				Sn	Sn	17 27 16.4	+2.8
NIL	**Nilore**	3.63	157	Pn	Pn	17 26 44.0	+2.7
NIL				Sn	Sn	17 27 25.6	+2.3
KSH	**Kashi**	4.28	53	P	Pn	17 26 48.6	-1.5
KSH				S	Sn	17 27 31.3	-7.7
KSH				pmax	pmax		
	comp=Z,35nm,0.3s						
KSH				pmax	pmax		
	comp=Z,660nm,7.4s						
KSH				LR	LR		
	comp=Z,670nm,7.0s						
TAS	**Tashkent**	4.65	338	PN	Pn	17 26 57.7	+2.6
TAS	**Tashkent**	4.65	338	Pn	Pn	17 26 57.6	+2.6
IUG	**Iuzhnay**	5.26	347	*e*P	Pn	17 27 05.3	+1.9
	baz=348						
IUG	**Iuzhnay**	5.26	347	*e*PN	Pn	17 27 05.2	+1.9
AML	**Almayashu**	5.37	17	P	Pn	17 27 07.9	+2.8
	SNR=259						
UCH	**Uchtor**	5.68	23	P	Pn	17 27 12.2	+2.8
	SNR=77						
THN	**Thein Dam**	5.71	142	*e*P	Pn	17 27 10.5	+1.2
THN				*e*S	Sn	17 28 09.5	-4.0
DZA	**Taraz**	5.88	358	*e*P	Pn	17 27 13.4	+1.8
	baz=359						
DZA	**Taraz**	5.88	358	*e*PN	Pn	17 27 13.3	+1.8
EKS2	**Erkin-Say**	5.89	16	P	Pn	17 27 14.9	+3.0
	SNR=132						
AAK	**Ala-Archa**	6.05	21	P	Pn	17 27 16.7	+2.6
	24nm,0.3s,baz=186,slow=6.1,SNR=635						
AAK				S	Sn	17 28 24.3	+2.2
	4.9nm,0.3s,baz=315,slow=20,SNR=10						
AAK	**Ala-Archa**	6.05	21	P	Pn	17 27 17.2	+3.1
	SNR=173						
AAK	**Ala-Archa**	6.05	21	⇓P	Pn	17 27 17.3	+3.1
	79nm,0.6s						
AAK				⇓S	Sn	17 28 22.2	+0.1
	103nm,0.8s						
AAK	**Ala-Archa**	6.05	21	*i* PN	Pn	17 27 17.2	+3.1
AAK				pmax	pmax		
	comp=Z,79nm,0.6s						
AAK	**Ala-Archa**	6.05	21	Pn	Pn	17 27 17.2	+3.1
KK31	**Karatay Array**	6.14	353	P	Pn	17 27 17.2	+2.2
	comp=Z,57nm,0.3s,baz=179,slow=14,SNR=662						
KK31				⇑S	Sn	17 28 22.6	-1.3
	comp=Z,13nm,0.3s						
KK31	**Karatay Array**	6.14	353	PN	Pn	17 27 17.3	+2.2
KK31	**Karatay Array**	6.14	353		Pn	17 27 17.3	+2.2
KKAR	**Karatay Array**	6.14	353	PN	Pn	17 27 17.0	+1.9
KKAR	**Karatay Array**	6.14	353		Pn	17 27 17.4	+2.3
KKAR	**Karatay Array**	6.14	353	Pn	Pn	17 27 17.0	+1.9
DHRM	**DHARAMSHALA**	6.15	139	*e*P	Pn	17 27 15.0	-0.6
DHRM				*e*S	Sn	17 28 20.0	-4.6
DHRM				IAML		17 28 23.2	
	comp=E,902nm,0.7s						
DHRM				IAML		17 28 23.6	
	comp=N,663nm,0.0s						
BRLS	**Borolday**	6.15	348	*e*P	Pn	17 27 13.8	-1.6
	comp=N,22nm,0.8s,baz=347						
BRLS	**Borolday**	6.15	348	*e*PN	Pn	17 27 13.8	-1.6
BRLS				pmax	pmax		
	comp=Z,22nm,0.8s						
KBK	**Karagaybulak**	6.21	24	P	Pn	17 27 19.4	+3.1
	SNR=42						
ULHL	**Ulahol**	6.35	33	P	Pn	17 27 21.2	+3.0
	SNR=22						
CHMS	**Chumysh**	6.46	21	P	Pn	17 27 22.4	+2.8
	SNR=102						
USP	**Ospenovka**	6.64	19	P	Pn	17 27 24.3	+2.3
	SNR=32						
TKM2	**Tokmak 2**	6.66	26	P	Pn	17 27 25.2	+2.8
	SNR=112						
TKM2	**Tokmak 2**	6.66	26	⇑P	Pn	17 27 25.4	+2.9
	comp=Z,43nm,0.6s						
TKM2	**Tokmak 2**	6.66	26	*i* PN	Pn	17 27 25.3	+2.8
TKM2				pmax	pmax		
	comp=Z,43nm,0.6s						
SGDS	**Sogindy**	6.84	19	*e*P	Pn	17 27 25.9	+1.1
	comp=Z,9.1nm,0.8s,baz=19						
SGDS	**Sogindy**	6.84	19	*e*PN	Pn	17 27 25.8	+1.0
SGDS				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MTBS	**Maitube**	7.16	30	*e*P	Pn	17 27 31.7	+2.6
	baz=30						
MTBS	**Maitube**	7.16	30	*e*PN	Pn	17 27 31.6	+2.6
TNSS	**Tian-Shan**	7.30	33	*e*P	Pn	17 27 32.9	+1.6
	baz=33						
TNSS	**Tian-Shan**	7.30	33	*e*PN	Pn	17 27 32.8	+1.6
AAA	**Alma-Ata**	7.42	32	*e*P	Pn	17 27 35.2	+2.5
	comp=Z,24nm,1.0s,baz=32						
AAA	**Alma-Ata**	7.42	32	*e*PN	Pn	17 27 35.1	+2.5
AAA				pmax	pmax		
	comp=Z,24nm,1.0s						
MDOK	**Medeo**	7.44	33	*e*P	Pn	17 27 35.6	+2.7
	baz=33						
MDOK	**Medeo**	7.44	33	⇑P	Pn	17 27 35.8	+2.9
	comp=Z,12nm,0.6s						
MDOK	**Medeo**	7.44	33	*e*PN	Pn	17 27 35.6	+2.7
KNDC	**Almaty**	7.45	32	⇑P	Pn	17 27 36.9	+3.9
	comp=Z,42nm,0.8s						
KNDC				⇓S	Sn	17 28 55.8	-0.1
SMLA	**Simla**	7.49	140	*e*P	Pn	17 27 33.6	+0.2
SMLA				*e*S	Sn	17 28 47.9	-8.9
SMLA				IAML		17 28 53.9	
	comp=N,353nm,0.0s						
SMLA				IAML		17 28 54.9	
	comp=E,388nm,0.6s						
CHKK	**Chushkaly**	7.99	29	*e*P	Pn	17 27 41.4	+1.1
	baz=30						
CHKK	**Chushkaly**	7.99	29	*e*PN	Pn	17 27 41.3	+1.1
SATY	**Saty**	8.00	39	*e*P	Pn	17 27 41.9	+1.4
	baz=39						
SATY	**Saty**	8.00	39	*e*PN	Pn	17 27 41.9	+1.4
HRA	**Herat**	8.02	254	Pn	Pn	17 27 40.3	-0.6
BTLS	**Baital**	8.24	12	*e*P	Pn	17 27 44.7	+1.1
	comp=E,2.7nm,0.7s,baz=13						
BTLS	**Baital**	8.24	12	*e*PN	Pn	17 27 44.7	+1.1
BTLS				pmax	pmax		
	comp=Z,3.0nm,0.7s						
UZB	**Uzynbulak**	8.38	41	*e*P	Pn	17 27 47.5	+1.8
	baz=41						
UZB	**Uzynbulak**	8.38	41	*e*PN	Pn	17 27 47.4	+1.8
KPKS	**Kokpek**	8.43	38	*e*P	Pn	17 27 48.1	+1.7
	comp=Z,4.0nm,0.7s,baz=38						
KPKS	**Kokpek**	8.43	38	*e*PN	Pn	17 27 48.1	+1.7
KPKS				pmax	pmax		
	comp=Z,4.0nm,0.7s						
DDI	**Dehra Dun**	8.59	139	*e*P	Pn	17 27 48.8	+0.3
DDI				*e*S	Sn	17 29 14.1	-10
DDI				IAML		17 29 23.4	
	comp=N,363nm,0.2s						
DDI				IAML		17 29 24.4	
	comp=E,341nm,0.0s						
SHLS	**Shalkode**	8.62	42	*e*P	Pn	17 27 53.7	+4.8
	baz=44						
SHLS	**Shalkode**	8.62	42	*e*PN	Pn	17 27 53.6	+4.8
PDGK	**Podgornoye**	8.75	41	⇑P	Pn	17 27 52.7	+2.0
	comp=E,2.6nm,0.6s						
PDGK				⇑S	Sn	17 29 28.2	+0.7
	comp=E,22nm,1.1s						
PDGK	**Podgornoye**	8.75	41	*i* PN	Pn	17 27 52.7	+2.0
PDGK				pmax	pmax		
	comp=Z,3.0nm,0.5s						
TDK	**Taldyqorghan**	9.51	31	*e*P	Pn	17 28 01.9	+1.0
	comp=Z,15nm,0.9s,baz=31						
TDK	**Taldyqorghan**	9.51	31	*e*P	Pn	17 28 01.8	+1.0
TDK				pmax	pmax		
	comp=Z,15nm,0.9s						
NDI	**New Delhi**	9.57	149	*e*P	Pn	17 28 01.0	-0.8
NDI				*e*S	Sn	17 29 41.0	-6.4
GEYT	**Alibeck**	10.73	279	P	Pn	17 28 16.1	-1.4
	comp=Z,2.4nm,0.3s,baz=124,slow=9.8,SNR=14						
GEYT				S	Sn	17 30 10.3	-5.3
	comp=Z,6.6nm,0.3s,baz=100,slow=16,SNR=12						
GEYT	**Alibeck**	10.73	279		Pn	17 28 16.1	-1.4
GEYT					Sn	17 30 10.9	-4.7
GYA0B	**ALIBECK ARRAY**	10.73	279	Pn	Pn	17 28 15.6	-1.9
GYA0B					Sn	17 30 09.3	-6.3
MAKZ	**Makanchi**	12.47	35	⇑P	Pn	17 28 41.5	+0.9
	comp=Z,7.1nm,1.4s						
MAKZ	**Makanchi**	12.47	35	P	Pn	17 28 41.6	+0.9
MAKZ	**Makanchi**	12.47	35	Pn	Pn	17 28 41.6	+0.9
MK31	**Makanchi Array**	12.61	36	⇑P	Pn	17 28 42.9	+0.4
	comp=Z,3.7nm,0.9s,baz=223,slow=12,SNR=32						
MK31	**Makanchi Array**	12.61	36	*i* P	Pn	17 28 42.9	+0.4
MK31				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MK31	**Makanchi Array**	12.61	36		Pn	17 28 44.0	+1.5
MKAR	**Makanchi Array**	12.61	36	P	Pn	17 28 43.6	+1.1
	comp=Z,0.2nm,0.3s,baz=221,slow=12,SNR=26						
MKAR	**Makanchi Array**	12.61	36	*i* P	Pn	17 28 44.0	+1.5
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
DANN	**Dangsing**	13.41	127	*e*P	Pn	17 28 49.6	-3.7
	comp=Z,39nm,0.4s						
WMQ	**Urumqi**	14.03	56	*e*P	P	17 29 04.1	-1.4
WMQ	**Urumqi**	14.03	56	P	P	17 29 03.9	-1.6
WMQ	**Urumqi**	14.03	56	Pn	P	17 29 03.9	-1.6
GKN	**Gorkha**	14.21	125	*e*P	Pn	17 29 00.0	-3.6
	comp=Z,44nm,0.4s						
KURBB	**Kurchatov Arra**	14.49	18	P	P	17 29 08.8	-1.7
	comp=Z,0.1nm,0.3s,baz=206,slow=10,SNR=5.7						
KURK	**Kurchatov**	14.60	18	⇑P	Pn	17 29 09.3	+1.1
	comp=Z,4.9nm,0.9s						
KURK	**Kurchatov**	14.60	18	*i* P	Pn	17 29 09.1	+0.9
KURK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KURK	**Kurchatov**	14.60	18	Pn	Pn	17 29 07.7	-0.5
BHPL	**Bhopal**	14.63	158	*e*P	Pn	17 29 07.1	-1.7
BHPL				*e*S	Sn	17 31 39.6	-11
SEM	**Semipalatinsk**	14.77	22	*e*P	Pn	17 29 11.8	+1.2
	baz=22						
SEM	**Semipalatinsk**	14.77	22	*e*P	Pn	17 29 11.8	+1.2
KKN	**Kakani**	14.78	125	*e*P	Pn	17 29 07.3	-3.5
	comp=Z,20nm,0.5s						
DMN	**Daman**	14.79	125	*e*P	Pn	17 29 07.3	-3.7
	comp=Z,17nm,0.4s						
AB31	**Akbulak array**	14.87	329	P	Pn	17 29 12.1	+0.5
	comp=Z,3.0nm,0.3s,baz=137,slow=13,SNR=222						
AB31				⇓S	Sn	17 31 45.2	-10
	comp=Z,10nm,0.8s						
AB31	**Akbulak array**	14.87	329	⇑*e*P	Pn	17 29 12.0	+0.5
AB31				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ABKAR	**Akbulak array**	14.87	329	Pn	Pn	17 29 10.8	-0.8
ABKAR	**Akbulak array**	14.87	329	Pn	Pn	17 29 10.8	-0.8
PKIN	**Phulchoki**	15.00	125	*e*P	Pn	17 29 10.2	-3.5
	comp=Z,28nm,0.5s						
PKI	**Pulchoki**	15.01	125	*e*P	Pn	17 29 10.1	-3.8
GUN	**Gumba**	15.10	123	*e*P	Pn	17 29 10.9	-4.1
	comp=Z,53nm,0.8s						
BVAR	**Borovoye Array**	16.03	357	P	Pn	17 29 26.5	+0.3
	comp=Z,0.6nm,0.3s,baz=168,slow=12,SNR=16						
BRVK	**Borovoye**	16.07	357	⇑P	P	17 29 27.6	-0.4
	comp=Z,11nm,1.0s						
BRVK	**Borovoye**	16.07	357	*i* P	P	17 29 27.5	-0.4
BRVK				pmax	pmax		
	comp=Z,11nm,1.0s						
BRVK	**Borovoye**	16.07	357	Pn	Pn	17 29 26.6	0.0
BRVK				IAmb	IAmb	17 29 31.4	
	comp=Z,12nm,1.2s						
RAMN	**Ramite**	16.21	124	*e*P	Pn	17 29 23.6	-5.2
AKTO	**Aktyubinsk**	16.57	328	P	Pn	17 29 32.9	+0.1
	comp=Z,1.0nm,0.3s,baz=139,slow=11,SNR=34						
AKTO				S	Sn	17 32 26.8	-10
	comp=Z,0.2nm,0.3s,baz=194,slow=14,SNR=3.3						
DGZ	**Jazzator, Alta**	17.10	37	*i* P	P	17 29 39.5	0.0
LSA	**Lhasa**	17.90	108	P	Pn	17 29 50.7	+1.1
LSA				pmax	pmax		
	comp=Z,7.0nm,0.7s						
LSA	**Lhasa**	17.90	108		Pn	17 29 50.7	+1.1
LSA				IAmb	IAmb	17 29 53.9	
	comp=Z,6.8nm,0.7s						
ZAA0	**Zalesovo Array**	19.26	24	⇓P	Pn	17 30 04.3	-0.7
	comp=Z,1.4nm,0.7s						
ZAA0	**Zalesovo Array**	19.26	24	P	P	17 30 03.1	+0.2
ZAA0				IAmb	IAmb	17 30 06.3	
	comp=Z,8.0nm,0.7s						
ZALV	**Zalesovo Beam**	19.26	24	P	Pn	17 30 04.1	-0.9
	comp=Z,1.5nm,0.3s,baz=225,slow=9.3,SNR=34						
ZALV	**Zalesovo Beam**	19.26	24	*i* P	Pn	17 30 04.5	-0.5
ZALV				pmax	pmax		
	comp=Z,6.0nm,0.4s						
ZALV	**Zalesovo Beam**	19.26	24	P	P	17 30 03.6	+0.6
HYB	**Hyderabad**	20.47	161	*i* P	Pn	17 30 19.0	-0.5
SHL	**Shillong**	20.73	118	P	P	17 30 20.0	+0.7
SHL				pmax	pmax		
	comp=Z,9.0nm,1.0s						
SHL	**Shillong**	20.73	118	P	P	17 30 20.0	+0.7
SHL				IAmb	IAmb	17 30 20.8	
	comp=Z,8.7nm,1.0s						
SVE	**Sverdlovsk**	21.13	343	*e*P	P	17 30 24.7	+1.7
GNI	**Garni**	21.17	287	*i* P	P	17 30 24.3	+0.4
GNI				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ARU	**Arti**	21.30	340	P	P	17 30 25.6	+0.7
	comp=Z,0.7nm,0.2s,baz=176,slow=13,SNR=2.1						
ARU	**Arti**	21.30	340	*d i*P	P	17 30 25.0	+0.1
ARU						17 30 55.2	
ARU				S	S	17 34 15.7	+0.4
ARU				pmax	pmax		
	comp=Z,26nm,2.7s						
ARU	**Arti**	21.30	340	IAmb	IAmb	17 30 35.8	
	comp=Z,18nm,1.3s						
NCK	**Nalchik**	22.24	296	*i* P	P	17 30 36.1	+1.1
NCK				pmax	pmax		
	comp=Z,8.0nm,1.3s						
GTA	**Gaotai**	22.29	75	⇑P	P	17 30 38.2	+2.5
GTA				pmax	pmax		
	comp=Z,18nm,0.8s						
KBZ	**Khabaz**	22.77	296	*i* P	P	17 30 39.7	-0.7
KBZ				pmax	pmax		
	comp=Z,4.0nm,1.1s						
BELG	**Belogornoye**	22.78	320	P	P	17 30 41.0	+0.7
	comp=Z,11nm,0.9s,baz=148,slow=1.5,SNR=3.8						
BELG	**Belogornoye**	22.78	320	*i* P	P	17 30 40.6	+0.3
BELG				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KIV	**Kislovodsk**	22.96	297	*e*P	P	17 30 41.5	-0.8
KIV				pmax	pmax		
	comp=Z,29nm,1.0s						
MOY	**Mondy**	25.42	45	*e*P	P	17 31 07.2	+2.5
LZH	**Lanzhou**	25.89	82	*e*P	P	17 31 02.1	-7.0
LZH				pP	pP	17 31 28.9	-4.9
LZH				sP	sP	17 31 43.6	-3.1
LZH				pmax	pmax		
	comp=Z,14nm,1.0s						
SONM	**Songino Array**	27.67	56	P	P	17 31 26.7	+1.8
	comp=Z,2.0nm,0.7s,baz=255,slow=9.1,SNR=22						
SONM	**Songino Array**	27.67	56	P	P	17 31 27.0	+2.0
SONM				pmax	pmax		
	comp=Z,2.0nm,0.8s						
SONM	**Songino Array**	27.67	56	P	P	17 31 27.0	+2.0
ULN	**Ulaanbaatar**	28.11	56	*ce*P	P	17 31 29.6	+0.7
ULN				pmax	pmax		
	comp=Z,6.0nm,2.5s						
ULN	**Ulaanbaatar**	28.11	56	P	P	17 31 30.1	+1.2
CM31	**Chiang Mai Arr**	30.31	120	P	P	17 31 49.7	+1.2
CM31				IAmb	IAmb	17 32 31.1	
	comp=Z,7.8nm,1.6s						
CMAR	**Chiang Mai Arr**	30.31	120	P	P	17 31 49.4	+1.0
	comp=Z,0.8nm,0.8s,baz=304,slow=8.5,SNR=9.6						
CMAR	**Chiang Mai Arr**	30.31	120	*ce*P	P	17 31 50.0	+1.6
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
CMAR	**Chiang Mai Arr**	30.31	120	P	P	17 31 48.7	+0.3
ANTO	**Ankara**	30.34	287	P	P	17 31 46.5	-2.1
ANTO	**Ankara**	30.34	287	P	P	17 31 46.5	-2.1
HHC	**Hu-ho-hao-te**	31.16	70	*e*P	P	17 31 58.0	+2.1
HHC				pmax	pmax		
	comp=Z,13nm,0.8s						
HHC				pmax	pmax		
	comp=Z,230nm,6.6s						
NRIK	**Noril'sk**	33.54	10	P	P	17 32 17.6	+1.4
	comp=Z,0.9nm,0.4s,baz=188,slow=7.1,SNR=4.7						
NRIK	**Noril'sk**	33.54	10	*ce*P	P	17 32 17.4	+1.2
NRIK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
NRIK	**Noril'sk**	33.54	10	P	P	17 32 17.0	+0.9
NRIK				IAmb	IAmb	17 32 32.0	
	comp=Z,6.0nm,1.3s						
FINES	**FINESS Array B**	37.31	326	P	P	17 32 48.7	+0.2
	comp=Z,1.6nm,0.6s,baz=116,slow=8.7,SNR=11						
FINES				pP	pP	17 33 15.1	+1.6
	comp=Z,1.4nm,0.7s,baz=126,slow=14,SNR=1.5						
ARCES	**ARCESS Array B**	40.85	337	P	P	17 33 20.2	+2.3
	comp=Z,3.8nm,0.9s,baz=123,slow=9.9,SNR=1.6						
ARCES	**ARCESS Array B**	40.85	337	P	P	17 33 15.7	-2.1
YAK	**Yakutsk**	43.29	36	*ce*P	P	17 33 37.2	-0.5
YAK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
YAK	**Yakutsk**	43.29	36	P	P	17 33 37.4	-0.3
NOA	**NORSAR Array B**	44.24	323	P	P	17 33 46.1	+0.6
	comp=Z,0.6nm,0.6s,baz=54,slow=9.3,SNR=1.4						
KSAR	**Wonju Array Be**	44.26	72	P	P	17 33 48.2	+2.3
KSAR	**Wonju Array Be**	44.26	72	P	P	17 33 48.2	+2.3
KLR	**Kul'dur**	44.48	54	*i* P	P	17 33 46.6	-0.9
KLR				pmax	pmax		
	comp=Z,2.0nm,1.2s						
USA0B	**Ussuriysk Arra**	45.52	61	*i* P	P	17 33 55.5	-0.3
JMM	**Marumori**	53.77	67	P	P	17 34 58.6	+0.2
ESDC	**Sonseca Array**	57.62	298	P	P	17 35 26.7	+0.7
	comp=Z,0.6nm,0.6s,baz=57,slow=7.4,SNR=6.9						
ESDC				pP	pP	17 35 56.1	+3.5
	comp=Z,1.5nm,0.9s,baz=55,slow=8.1,SNR=5.2						
TORD	**Torodi Ar. Bea**	66.18	269	P	P	17 36 21.7	-1.9
	comp=Z,0.3nm,0.5s,baz=48,slow=5.1,SNR=5.3						
YKA	**Yellowknife Ar**	80.71	3	P	P	17 37 48.5	+0.5
	comp=Z,1.0nm,0.8s,baz=357,slow=5.2,SNR=20						
YKA				pP	pP	17 38 19.9	+3.5
	comp=Z,0.5nm,0.6s,baz=0.4,slow=4.9,SNR=3.5						
WRA	**Warramunga Arr**	81.88	122	P	P	17 37 53.7	-1.0
	comp=Z,1.5nm,0.7s,baz=325,slow=5.0,SNR=27						
WRA	**Warramunga Arr**	81.88	122	*i* P	P	17 37 54.0	-0.8
WRA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ASAR	**Alice Springs**	84.18	125	P	P	17 38 05.5	-1.0
	comp=Z,1.6nm,0.7s,baz=311,slow=5.0,SNR=40						

IDC 07 17:32:34.4±1.5**, 28.°09N**×**128.°64E, h148^{km}**±11^{km}**, mb2.8**/3**, mb1 3.0**/4**, mb1mx2.7**/37**, mbtmp3.3**/4**, Error ellipse: s-maj=35.8km s-min=21.9km az=89.0, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOW	**Kunigami**	1.29	195	P	Pn	17 33 02.7	+1.0
	1.4nm,0.3s,baz=16,slow=18,SNR=10						
JOW				S	Sn	17 33 22.4	-0.2
	1.5nm,0.3s,baz=360,slow=19,SNR=9.1						
MJAR	**Matsushiro Arr**	11.68	41	P	Pn	17 35 15.6	-0.9
	0.1nm,0.3s,baz=162,slow=15,SNR=5.5						
MKAR	**Makanchi Array**	40.60	310	P	P	17 39 59.5	-0.1
	0.3nm,0.7s,baz=106,slow=8.8,SNR=4.0						
WRA	**Warramunga Arr**	48.06	173	P	P	17 40 57.2	-1.8
	0.3nm,0.8s,baz=342,slow=9.0,SNR=3.5						
ASAR	**Alice Springs**	51.70	174	P	P	17 41 27.7	+1.2
	0.3nm,0.9s,baz=342,slow=6.9,SNR=4.1						

IDC 07 17:42:34.4±3.0**, 11.°05S**×**122.°82E, h0^{km}, mb3.0**/1**, mb1 3.2**/3**, mb1mx3.0**/33**, mbtmp3.0**/3**, ML2.7**/2**, Error ellipse: s-maj=261.5km s-min=35.4km az=51.0, South of Timor**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	14.18	130	Pn	Pn	17 45 54.7	-2.0
	0.0nm,0.3s,baz=303,slow=12,SNR=1.5						
WRA				Sn	Sn	17 48 23.0	-12
	0.1nm,0.3s,baz=308,slow=24,SNR=2.0						
ASAR	**Alice Springs**	16.40	141	Pn	P	17 46 27.9	-1.2
	0.1nm,0.3s,baz=316,slow=12,SNR=5.2						
ASAR				Sn	Sn	17 49 22.5	-6.4
	0.0nm,0.3s,baz=309,slow=21,SNR=2.7						
MKAR	**Makanchi Array**	68.02	331	P	P	17 53 35.6	0.0
	0.1nm,0.5s,baz=136,slow=7.5,SNR=1.7						

TAP ***07*** *17:47:13.3, 21.°81N×120.°59E, h44^{km}, ML4.5, C*

JMA ***07*** *17:47:14.2±0.4, 21.°82N×120.°67E, h42^{km}, M4.4*

IDC ***07*** *17:47:15.6±0.6, 21.°83N×120.°73E, h40^{km}±4^{km}, mb4.0/24, mb1 4.1/26, mb1mx3.9/41, mbtmp4.2/26, ML3.5/2, MS3.6/12, Ms1 3.6/12, ms1mx3.3/43, Error ellipse: s-maj=14.8km s-min=10.1km az=74.0*

NEIC ***07*** *17:47:15.6±2.5, 21.°89N±0.°05×120.°56E±0.°07, h34^{km}±4^{km}, mb4.8/67, ML5.3(TAP), Error ellipse: s-maj=9.5km s-min=7.0km az=112.0*

ISC 07 17:47:15.5±0.4**, 21.°83N**±0.°03×**120.°56E**±0.°02**, h34^{km}**±1^{km}**, h35^{km}:pP-P, n301,** σ**1.^{s}26**/347**, mb4.5**/60**, MS3.7**/13**, 16C-9D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNW	**Nanwan**	0.22	53	⇑*i*P	Pn	17 47 21.5	0.0
	baz=55						
SNW				*i* S	Sb	17 47 27.0	-0.1
	baz=55						
HEN	**Hengchun**	0.24	43	⇑*i*P	Pn	17 47 21.8	-0.3
	baz=46						
HEN				*i* S	Sb	17 47 28.2	+0.6
	baz=46						
TWK1	**Hengchun**	0.26	63	⇑*i*P	Pn	17 47 21.7	-0.7
	baz=53						
TWK1				*i* S	Sb	17 47 27.7	-0.2
	baz=53						
TWKBT	**Hengchun**	0.26	64	⇑*i*P	Pn	17 47 21.7	-0.9
	baz=52						
TWKBT				*i* S	Sb	17 47 27.9	0.0
	baz=52						
TSEB	**Hengchuen, Pin**	0.32	77	⇑*i*P	Pb	17 47 22.2	-1.5
	baz=70						
TSEB				*i* S	Sn	17 47 28.7	-0.1
	baz=70						
SLIU	**Shizi**	0.45	30	⇑*i*P	Pb	17 47 24.4	-0.9
	baz=26						
SLIU				*i* S	Sb	17 47 31.6	-0.6
	baz=26						
SCZT	**Fangliau**	0.55	6	⇓*i*P	Pn	17 47 25.7	-1.1
	baz=4.0						
SCZT				S	Sb	17 47 32.9	-1.8
	baz=4.0						
TWP	**Hsiaoliuchiu**	0.55	341	P	Pn	17 47 26.6	-0.3
	baz=328						
TWP				*e*S	Sn	17 47 36.5	+1.7
	baz=328						
WLCH	**Liuqiu**	0.55	342	⇓*i*P	Pn	17 47 26.7	-0.1
	baz=329						
WLCH				*e*S	Sn	17 47 36.1	+1.3
	baz=329						
TAW	**Tawu**	0.61	31	⇑*i*P	Pn	17 47 26.7	-1.0
	baz=22						
TAW				*i* S	Sn	17 47 35.6	-0.8
	baz=22						
EAST	**Anshuo**	0.61	26	⇑*i*P	Pn	17 47 26.8	-1.0
	baz=24						
EAST				S	Sb	17 47 35.7	-0.9
	baz=24						
SSPT	**Xinbi**	0.65	1	*i* P	Pn	17 47 27.6	-0.7
	baz=5.0						
SSPT				*i* S	Sb	17 47 38.1	+0.5
	baz=5.0						
KAU	**Kaohsiung**	0.77	342	*e*P	Pn	17 47 28.6	-1.4
	baz=342						
MASBT	**Mashibuluo**	0.78	5	⇓*i*P	Pn	17 47 28.8	-1.3
	baz=3.0						
MASBT				*e*S	Sn	17 47 38.7	-1.9
	baz=3.0						
TSPT	**Pingtung City**	0.85	356	*e*P	Pn	17 47 30.8	-0.2
	baz=355						
TSPT				*e*S	Sb	17 47 43.3	+0.3
	baz=355						
ECL	**Taimali**	0.85	25	⇑*i*P	Pn	17 47 29.8	-1.2
	baz=19						
ECL				*e*S	Sn	17 47 40.7	-1.6
	baz=19						
TSMG	**Majia**	0.88	5	⇓P	Pn	17 47 30.2	-1.2

	baz=4.0						
TSMG				*e*S	**Sn**	**17 47 41.5**	**-1.5**
	baz=4.0						
SGLT	**Jiouru**	**0.90**	**356**	⇓*i*P	**Pn**	**17 47 31.6**	**-0.1**
	baz=355						
SGLT				*e*S	**Sb**	**17 47 45.6**	**+1.3**
	baz=355						
SSD	**Sandimen**	**0.92**	**4**	⇓*i*P	**Pn**	**17 47 30.7**	**-1.2**
	baz=3.0						
SSD				*e*S	**Sn**	**17 47 42.8**	**-1.2**
	baz=3.0						
LAY	**Lan-yu**	**0.94**	**77**	⇑P	**Pn**	**17 47 30.1**	**-2.3**
	baz=66						
SNJT	**Kaohsiung City**	**0.94**	**347**	*e*P	**Pn**	**17 47 31.3**	**-1.1**
	baz=334						
TWM1	**Shoushan**	**1.00**	**353**	*e*P	**Pn**	**17 47 32.7**	**-0.5**
	baz=352						
SCST	**Cishan**	**1.05**	**357**	*e*P	**Pn**	**17 47 31.6**	**-2.2**
	baz=356						
TTN	**Taitung**	**1.07**	**30**	*e*P	**Pn**	**17 47 33.9**	**-0.2**
	baz=39						
TWG	**Pinlang**	**1.10**	**26**	*e*P	**Pn**	**17 47 33.0**	**-1.5**
	baz=34						
TWG	**Pinlang**	**1.10**	**26**		**Pn**	**17 47 32.9**	**-1.5**
TWG				Sn	**Sn**	**17 47 47.5**	**-0.9**
TWGBT	**Beinan**	**1.10**	**26**	*e*P	**Pn**	**17 47 32.9**	**-1.6**
	baz=34						
SLGT	**Liugui**	**1.16**	**4**	P	**Pn**	**17 47 34.5**	**-0.9**
	baz=3.0						
SLGT				*e*S	**Sn**	**17 47 49.5**	**-0.6**
	baz=3.0						
LDUT	**Ludao**	**1.19**	**45**	*e*P	**Pn**	**17 47 33.7**	**-2.1**
	baz=43						
LDUT				*e*S	**Sn**	**17 47 48.9**	**-1.8**
	baz=43						
LONT	**Longtian**	**1.20**	**26**	*e*P	**Pn**	**17 47 34.7**	**-1.2**
	baz=33						
TAI1	**Yung-k'ang**	**1.25**	**346**	*e*S	**Sn**	**17 47 50.9**	**-1.1**
	baz=345						
SGST	**Jiashian**	**1.25**	**1**	*e*P	**Pn**	**17 47 34.6**	**-1.9**
CHN3	**Shinhua**	**1.25**	**352**	*e*P	**Pn**	**17 47 37.1**	**+0.4**
	baz=338						
EDH	**Donghe**	**1.33**	**31**	⇑*e*P	**Pn**	**17 47 36.6**	**-1.0**
	baz=30						
EDH				*e*S	**Sn**	**17 47 53.3**	**-0.9**
	baz=30						
STYT	**Tauyuan**	**1.34**	**8**	P	**Pn**	**17 47 36.8**	**-1.1**
	baz=357						
CHN1	**Nanshi**	**1.35**	**359**	*e*P	**Pn**	**17 47 36.9**	**-1.1**
	baz=358						
CHN1				*e*S	**Sn**	**17 47 54.1**	**-0.7**
	baz=358						
SCLT	**Jiali**	**1.38**	**346**	*e*P	**Pn**	**17 47 37.0**	**-1.4**
	baz=346						
SCLT				*e*S	**Sn**	**17 47 54.6**	**-0.9**
	baz=346						
SNST	**Tainan City**	**1.39**	**358**	*e*P	**Pn**	**17 47 37.3**	**-1.1**
	baz=357						
SNST				*e*S	**Sn**	**17 47 53.8**	**-1.8**
	baz=357						
WTP	**Ta-pu**	**1.41**	**2**	*e*P	**Pn**	**17 47 37.7**	**-1.2**
	baz=1.0						
WTP				*e*S	**Sn**	**17 47 54.9**	**-1.5**
	baz=1.0						
ELDTW	**Lidau**	**1.42**	**17**	*e*P	**Pn**	**17 47 38.5**	**-0.5**
	baz=28						
TWK	**Hsinying**	**1.43**	**357**	*e*P	**Pn**	**17 47 38.0**	**-1.1**
	baz=357						
TWK				*e*S	**Sn**	**17 47 55.3**	**-1.6**
	baz=357						
TPUB	**Ta-pu**	**1.47**	**3**	⇓*i*P	**Pn**	**17 47 38.2**	**-1.4**
	baz=2.0						
TPUB				*e*S	**Sn**	**17 47 56.0**	**-1.6**
	baz=2.0						
TPUB	**Ta-pu**	**1.47**	**3**		**Pn**	**17 47 37.8**	**-1.8**
CHKT	**Chengkung**	**1.47**	**30**	*e*P	**Pn**	**17 47 38.9**	**-0.7**
	baz=40						
CHKT				*e*S	**Sn**	**17 47 56.7**	**-0.9**
	baz=40						
CHN4	**Tsaushan**	**1.52**	**1**	*e*P	**Pn**	**17 47 39.0**	**-1.2**
	baz=348						
FULB	**Fuli**	**1.52**	**26**	*e*P	**Pn**	**17 47 40.0**	**-0.3**
	baz=34						
FULB				*e*S	**Sn**	**17 47 57.8**	**-1.3**
	baz=34						
CHN8	**Yiju**	**1.54**	**348**	*e*P	**Pn**	**17 47 39.0**	**-1.6**
	baz=348						
CHN8				*e*S	**Sn**	**17 47 58.5**	**-1.0**
	baz=348						
ICHU	**Yijhu**	**1.55**	**350**	*e*P	**Pn**	**17 47 39.1**	**-1.5**
	baz=350						
WDGT	**Dungji**	**1.65**	**330**	*e*P	**Pn**	**17 47 39.7**	**-2.4**
	baz=330						
WDGT				*e*S	**Sn**	**17 47 59.1**	**-3.0**
	baz=330						
WLGB	**Puzi**	**1.66**	**352**	*e*P	**Pn**	**17 47 39.7**	**-2.5**
	baz=351						
WLGB				*e*S	**Sn**	**17 48 01.2**	**-1.1**
	baz=351						
TWF1	**Yuli**	**1.66**	**24**	*e*P	**Pn**	**17 47 42.8**	**+0.5**
	baz=36						
TWF1				*e*S	**Sn**	**17 48 02.8**	**+0.4**
	baz=36						
CHY	**Chiayi**	**1.67**	**356**	*e*P	**Pn**	**17 47 40.7**	**-1.6**
	baz=355						
CHY				*e*S	**Sn**	**17 48 01.0**	**-1.5**
	baz=355						
EYUL	**Yuli**	**1.67**	**25**	*e*P	**Pn**	**17 47 42.7**	**+0.3**
	baz=30						
ALS	**Alishan**	**1.69**	**8**	*e*P	**Pn**	**17 47 42.2**	**-0.7**
	baz=356						
YUS	**Yu-Shan**	**1.69**	**12**	*e*P	**Pn**	**17 47 42.7**	**-0.4**
YULB	**Yu-li**	**1.70**	**24**		**Pn**	**17 47 41.6**	**-1.2**
VCHM	**Qimei**	**1.73**	**323**	*e*P	**Pn**	**17 47 40.6**	**-2.5**
	baz=334						
CHN5	**Tsauling**	**1.76**	**4**	*e*P	**Pn**	**17 47 42.8**	**-1.0**
	baz=352						
EHY	**Hungye**	**1.81**	**23**	*e*P	**Pn**	**17 47 43.9**	**-0.4**
	baz=34						
WSF	**Szhu**	**1.83**	**350**	*e*P	**Pn**	**17 47 42.8**	**-1.8**
	baz=350						
WSF				*e*S	**Sn**	**17 48 04.7**	**-1.8**
	baz=350						
HGSD	**Ruisui**	**1.84**	**26**	*e*P	**Pn**	**17 47 44.9**	**+0.2**
	baz=37						
HGSD				*e*S	**Sn**	**17 48 08.1**	**+1.3**
	baz=37						
WGK	**Gukeng**	**1.85**	**0**	*e*P	**Pn**	**17 47 43.7**	**-1.1**
	baz=350						
WGK				*e*S	**Sn**	**17 48 06.0**	**-1.1**
	baz=350						
WDLH	**Douliu**	**1.85**	**359**	*e*P	**Pn**	**17 47 43.6**	**-1.3**
	baz=349						
WDLH				*e*S	**Sn**	**17 48 06.0**	**-1.1**
	baz=349						
WTK	**Tuku**	**1.86**	**355**	*e*P	**Pn**	**17 47 43.4**	**-1.5**
	baz=355						
WTK				*e*S	**Sn**	**17 48 05.6**	**-1.6**
	baz=355						
WHYT	**Xinyi Township**	**1.88**	**8**	*e*P	**Pn**	**17 47 44.4**	**-0.9**
	baz=356						
PHUB	**P'eng-hu**	**1.91**	**332**	*e*P	**Pn**	**17 47 43.4**	**-2.2**
	baz=331						
PNG	**Penghu**	**1.96**	**332**	*e*P	**Pn**	**17 47 43.9**	**-2.4**
	baz=332						
SSLB	**Suanglung**	**1.98**	**10**	*e*P	**Pn**	**17 47 45.8**	**-0.9**
	baz=10.0						
SSLB				*e*S	**Sn**	**17 48 09.3**	**-1.1**
	baz=10.0						
SSLB	**Suanglung**	**1.98**	**10**		**Pn**	**17 47 45.8**	**-0.9**
VWDT	**VWDT**	**1.99**	**16**	*e*P	**Pn**	**17 47 46.6**	**-0.2**
	baz=3.0						
WJS	**Zhushan**	**1.99**	**4**	*e*P	**Pn**	**17 47 45.4**	**-1.4**
	baz=353						
EGFH	**Guangfu**	**2.00**	**23**	*e*P	**Pn**	**17 47 46.4**	**-0.5**
	baz=23						
WNT	**Mingjian**	**2.04**	**3**	*e*P	**Pn**	**17 47 46.2**	**-1.3**
	baz=3.0						
WNT				*e*S	**Sn**	**17 48 10.8**	**-1.1**
	baz=3.0						
RLNB	**Erlin**	**2.06**	**355**	*e*P	**Pn**	**17 47 46.3**	**-1.4**
	baz=354						
SMLT	**Sun Moon Lake**	**2.07**	**9**	*e*P	**Pn**	**17 47 47.3**	**-0.7**
	baz=356						
WNT1	**Nantou City**	**2.07**	**3**	*e*P	**Pn**	**17 47 45.8**	**-2.1**
	baz=2.0						
TYC	**Yuchr**	**2.08**	**8**	*e*P	**Pn**	**17 47 47.4**	**-0.7**
	baz=356						
TYC				*e*S	**Sn**	**17 48 12.1**	**-0.7**
	baz=356						
ESL	**Shilin**	**2.13**	**22**	*e*P	**Pn**	**17 47 48.1**	**-0.7**
	baz=32						
ESL				*e*S	**Sn**	**17 48 11.3**	**-2.7**
	baz=32						
WPL	**Puli Township**	**2.21**	**9**	*e*P	**Pn**	**17 47 48.9**	**-0.9**
	baz=357						
DPDB	**Guoxing**	**2.22**	**9**	*e*P	**Pn**	**17 47 49.1**	**-0.9**
	baz=357						
WCHH	**Zhanghua**	**2.24**	**360**	*e*P	**Pn**	**17 47 48.9**	**-1.3**
	baz=359						
CHGB	**Renai**	**2.29**	**14**	*e*P	**Pn**	**17 47 50.5**	**-0.6**
	baz=2.0						
TCU	**Taichung**	**2.31**	**3**	*e*P	**Pn**	**17 47 50.3**	**-0.9**
	baz=2.0						
WHF	**Hehuan Shan**	**2.40**	**16**	*e*P	**Pn**	**17 47 53.0**	**+0.2**
	baz=28						
TWD	**Chiawan**	**2.44**	**23**	*e*P	**Pn**	**17 47 52.5**	**-0.3**
	baz=22						
WHP	**Taichung City**	**2.46**	**8**	*e*P	**Pn**	**17 47 52.8**	**-0.6**
	baz=358						
TDCB	**Techi**	**2.48**	**13**	*e*P	**Pn**	**17 47 53.2**	**-0.4**
	baz=2.0						
TWT	**Tachien**	**2.48**	**13**	*e*P	**Pn**	**17 47 53.2**	**-0.5**
	baz=2.0						
FUSS	**Fushou**	**2.49**	**15**	*e*P	**Pn**	**17 47 53.8**	**-0.1**
	baz=3.0						
WDJ	**Dajia District**	**2.51**	**2**	*e*P	**Pn**	**17 47 53.2**	**-0.7**
	baz=1.0						
ETLH	**Xiulin Townshi**	**2.52**	**20**	*e*P	**Pn**	**17 47 54.0**	**-0.1**
	baz=32						
TWQ1	**Liyutan**	**2.52**	**4**	*e*P	**Pn**	**17 47 53.6**	**-0.4**
	baz=354						
NACB	**Ninganchiao**	**2.52**	**22**	*e*P	**Pn**	**17 47 54.0**	**-0.1**
	baz=21						
NACB	**Ninganchiao**	**2.52**	**22**		**Pn**	**17 47 54.5**	**+0.4**
NSY	**Sanyi**	**2.58**	**4**	*e*P	**Pn**	**17 47 54.7**	**-0.2**
	baz=354						
NNSB	**Datong**	**2.70**	**16**	*e*P	**Pn**	**17 47 55.3**	**-1.3**
	baz=3.0						
NNSH	**Datong**	**2.70**	**16**	*e*P	**Pn**	**17 47 55.0**	**-1.6**
	baz=4.0						
NMLH	**Miaoli**	**2.71**	**4**	*e*P	**Pn**	**17 47 56.5**	**-0.1**
	baz=354						
NNS	**Nan Shan**	**2.71**	**16**	*e*P	**Pn**	**17 47 55.4**	**-1.3**
	baz=3.0						
ENA	**Nanau**	**2.81**	**23**	*e*P	**Pn**	**17 47 57.9**	**-0.1**
	baz=22						
NSTT	**Nanjuang**	**2.82**	**8**	*e*P	**Pn**	**17 47 57.5**	**-0.7**
	baz=355						
LIOB	**Emei**	**2.84**	**8**	*e*P	**Pn**	**17 47 57.6**	**-0.8**
	baz=356						
NDT	**Datong Townshi**	**2.90**	**17**	*e*P	**Pn**	**17 47 60.0**	**+0.7**
	baz=29						
YHNB	**Yeheng**	**2.93**	**15**		**Pn**	**17 47 59.3**	**-0.4**
NSK	**Sanguang**	**2.93**	**14**	*e*P	**Pn**	**17 48 00.8**	**+1.1**
	baz=14						
ENTT	**Nioudou**	**2.95**	**18**	*e*P	**Pn**	**17 47 58.1**	**-1.9**
	baz=28						
TWC	**Suao**	**3.01**	**23**	*e*P	**Pn**	**17 48 02.0**	**+1.2**
	baz=23						
TWE	**Neicheng**	**3.06**	**19**	*e*P	**Pn**	**17 48 02.2**	**+0.8**
	baz=30						
NWLT	**Wulai**	**3.06**	**16**	*e*P	**Pn**	**17 48 02.6**	**+1.1**
	baz=3.0						
NTC	**Toucheng**	**3.23**	**21**	*e*P	**Pn**	**17 48 02.6**	**-1.2**
	baz=21						
KNM	**Kinmen**	**3.24**	**323**	*e*P	**Pn**	**17 48 03.0**	**-0.8**
	baz=321						
TATO	**Taipei**	**3.25**	**15**	Pn	**Pn**	**17 48 04.5**	**+0.4**
TWA	**Mucha**	**3.28**	**16**	*e*P	**Pn**	**17 48 05.5**	**+1.1**
	baz=3.0						
KNMB	**Chin-men Tao**	**3.30**	**323**	*e*P	**Pn**	**17 48 03.3**	**-1.4**
	baz=323						
KNMB	**Chin-men Tao**	**3.30**	**323**	Pn	**Pn**	**17 48 03.3**	**-1.4**
VWUC	**VWUC**	**3.31**	**342**	*e*P	**Pn**	**17 48 03.2**	**-1.6**
	baz=342						
TIPB	**Shuangxi**	**3.34**	**20**	*e*P	**Pn**	**17 48 05.3**	**0.0**
	baz=29						
JYNG	**Yonagunijimaku**	**3.41**	**40**	P	**Pn**	**17 48 06.9**	**+0.6**
JYNG				S	**Sn**	**17 48 45.2**	**-0.4**
ANP	**Anpu**	**3.46**	**15**	*e*P	**Pn**	**17 48 06.1**	**-0.9**
	baz=3.0						
YOJ	**Yonaguni jima**	**3.46**	**40**	P	**Pn**	**17 48 07.4**	**+0.4**
YOJ				*e*S	**Sn**	**17 48 46.8**	**+0.1**
YOJ	**Yonaguni jima**	**3.46**	**40**		**Pn**	**17 48 07.4**	**+0.4**
PTMZ	**Houxiangcun**	**3.46**	**338**	*e*P	**Pn**	**17 48 05.3**	**-1.7**
	baz=338						
QZH	**Quanzhou**	**3.59**	**330**	⇑*i*Pn	**Pn**	**17 48 07.3**	**-1.4**
QZH				Sn	**Sn**	**17 48 45.6**	**-4.3**
QZH				LR	LR		
	comp=N,780nm,15.6s						
QZH				LR	LR		
	comp=E,460nm,16.1s						
QZH				LR	LR		
	comp=Z,660nm,16.6s						
HATJ	**Hateruma jima**	**3.72**	**53**	P	**Pn**	**17 48 09.6**	**-1.0**
HATJ				S	**Sn**	**17 48 50.7**	**-2.6**
PTTC	**Pingtan**	**3.73**	**349**	*e*P	**Pn**	**17 48 08.0**	**-2.6**
	baz=349						
VDOS	**Pratas Island**	**3.74**	**253**	*e*P	**Pn**	**17 48 09.6**	**-1.2**
	baz=252						
IRIF	**Iriomote-Funau**	**3.84**	**49**	P	**Pn**	**17 48 11.9**	**-0.3**
IRIF				*e*S	**Sn**	**17 48 54.9**	**-1.2**
AXDP	**Jialang**	**3.88**	**323**	*e*P	**Pn**	**17 48 11.5**	**-1.2**
	baz=323						
JKRS	**Kuro-shima**	**3.98**	**52**	P	**Pn**	**17 48 13.8**	**-0.3**
JKRS				*e*S	**Sn**	**17 48 57.7**	**-1.9**
JIJ	**Ishigaki jima**	**4.15**	**52**	P	**Pn**	**17 48 15.9**	**-0.6**
JIJ				S	**Sn**	**17 49 00.7**	**-3.2**
SZP	**Santa**	**4.26**	**181**	Pn	**Pn**	**17 48 19.1**	**+1.2**
MATB	**Ma-tsu**	**4.34**	**353**	*e*P	**Pn**	**17 48 16.4**	**-2.7**
	baz=1.0						
MSUT	**Lienchiang**	**4.36**	**352**	*e*P	**Pn**	**17 48 17.2**	**-2.1**
	baz=1.0						
JISG	**Ishigakijimahi**	**4.41**	**51**	P	**Pn**	**17 48 19.1**	**-0.9**
JISG				S	**Sn**	**17 49 08.0**	**-2.2**
MHZQ	**Yeshan**	**4.48**	**342**	*e*P	**Pn**	**17 48 18.7**	**-2.3**
	baz=342						
JTJ	**Tarama**	**4.73**	**53**	P	**Pn**	**17 48 23.8**	**-0.6**
JTJ				S	**Sn**	**17 49 16.7**	**-1.3**
LYJJ	**Jianjiangzhen**	**4.76**	**351**	*e*P	**Pn**	**17 48 22.4**	**-2.4**
	baz=351						
JIRB	**Irabujima**	**5.19**	**54**	P	**Pn**	**17 48 30.1**	**-0.6**
JIRB				*e*S	**Sn**	**17 49 26.5**	**-2.8**
JMJ2	**Miyako jima3**	**5.26**	**56**	P	**Pn**	**17 48 31.1**	**-0.5**
JMJ2				S	**Sn**	**17 49 28.7**	**-2.4**
JMJ	**Miyako jima 2**	**5.27**	**55**	*e*P	**Pn**	**17 48 30.2**	**-1.7**
	baz=56						
JIKM	**Ikemajima**	**5.30**	**54**	P	**Pn**	**17 48 31.8**	**-0.4**
JIKM				*e*S	**Sn**	**17 49 29.8**	**-2.2**
JOGS	**Gusukube**	**5.33**	**56**	P	**Pn**	**17 48 32.3**	**-0.3**
JOGS				*e*S	**Sn**	**17 49 31.7**	**-1.1**
JOW	**Kunigami**	**8.62**	**53**	Pn	**Pn**	**17 49 15.1**	**-2.8**
	1.6nm,0.3s,baz=265,slow=11,SNR=6.0						
NJ2	**Nanjing**	**10.30**	**352**	*e*P	**Pn**	**17 49 40.3**	**-0.5**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
QIZ	**Qiongzhong**	**10.43**	**256**	P	**Pn**	**17 49 42.1**	**-0.6**
QIZ				S	**Sn**	**17 51 40.0**	**+1.7**
QIZ				LR	LR		
	comp=N,280nm,6.9s						
QIZ				LR	LR		
	comp=E,450nm,14.7s						
QIZ				LR	LR		
	comp=Z,530nm,14.7s						
QIZ	**Qiongzhong**	**10.43**	**256**	Pn	**Pn**	**17 49 42.0**	**-0.6**
JMZ	**Minamidaito 2**	**10.54**	**66**	Pn	**Pn**	**17 49 41.0**	**-3.2**
GYA	**Guiyang**	**13.49**	**293**	*e*P	**Pn**	**17 50 24.4**	**-0.3**
GYA				S	**Sn**	**17 52 52.5**	**-1.1**
GYA				pmax	pmax		
	comp=Z,6.0nm,1.7s						
GYA				pmax	pmax		
	comp=Z,120nm,8.5s						
GYA				LR	LR		
	comp=N,270nm,16.0s						
GYA				LR	LR		
	comp=E,460nm,15.4s						
GYA				LR	LR		
	comp=Z,310nm,17.9s						
JNU	**Nakatsue**	**14.49**	**37**	LR	LR	17 56 04.7	
	comp=Z,108nm,19.6s,baz=232,slow=37						
XAN	**Xi'an**	**15.91**	**322**	P	**P**	**17 51 01.8**	**+1.6**
XAN				pmax	pmax		
	comp=Z,10.0nm,1.4s						
KMI	**Kunming**	**16.67**	**285**	⇑P	**P**	**17 51 08.4**	**-0.5**
KMI				PP	**sP**	**17 51 22.2**	**+0.3**
KMI				pmax	pmax		
	comp=Z,8.0nm,1.3s						
KSRS	**Korea Array**	**16.83**	**21**	Pn	**Pn**	**17 51 08.8**	**+0.3**
	0.1nm,0.3s,baz=190,slow=11,SNR=3.0						
KSRS				LR	LR	17 58 45.0	
	comp=Z,180nm,18.3s,baz=202,slow=41						
CD2	**Chengdu**	**17.55**	**305**	*e*P	**Pn**	**17 51 18.0**	**+0.5**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
INU	**Inuyama**	**19.72**	**43**	P	**P**	**17 51 39.5**	**-2.6**
JGF	**Kuroka**	**20.09**	**43**	P	**P**	**17 51 44.8**	**-1.4**
CM34	**Chiang Mai Arr**	**20.29**	**265**	P	Pn	17 51 54.0	+3.3
CM35	**Chiang Mai Arr**	**20.32**	**265**	P	Pn	17 51 51.0	0.0
LZH	**Lanzhou**	**20.35**	**318**	*e*P	Pn	17 51 51.4	+0.1
LZH				pP	pP	17 51 58.9	+0.9
LZH				sP	sP	17 52 03.2	+0.9
LZH				pmax	pmax		
	comp=Z,15nm,1.1s						
JCJ	**Chichijima**	**20.36**	**71**	P	**P**	**17 51 48.9**	**-0.3**
	34nm,0.4s,baz=262,slow=18,SNR=5.1						
JCJ				LR	LR	17 58 16.1	
	comp=Z,57nm,20.9s,baz=276,slow=33						
JCJ	**Chichijima**	**20.36**	**71**	P	**P**	**17 51 49.2**	**0.0**
CM36	**Chiang Mai Arr**	**20.41**	**265**	P	Pn	17 51 55.0	+2.9
HHC	**Hu-ho-hao-te**	**20.44**	**340**	*e*P	Pn	17 51 52.1	-0.2
HHC				pmax	pmax		
	comp=Z,18nm,0.8s						
HHC				pmax	pmax		
	comp=Z,110nm,6.6s						
HHC				LR	LR		
	comp=N,320nm,14.2s						
HHC				LR	LR		
	comp=E,430nm,9.5s						
HHC				LR	LR		
	comp=Z,370nm,14.6s						
CM33	**Chiang Mai Arr**	**20.49**	**265**	P	Pn	17 51 55.0	+2.1
CMMT	**Chiang Mai**	**20.49**	**265**	P	Pn	17 51 55.0	+2.0
CHTO	**Chiang Mai**	**20.49**	**265**		**P**	**17 51 50.8**	**+0.1**
CM09	**Chiang Mai Arr**	**20.53**	**264**	P	Pn	17 51 55.5	+2.1
CM04	**Chiang Mai Arr**	**20.55**	**264**	P	Pn	17 51 54.0	+0.3
CM01	**Chiang Mai Arr**	**20.56**	**264**	P	Pn	17 51 57.7	+3.9
CM31	**Chiang Mai Arr**	**20.57**	**264**	P	Pn	17 51 56.9	+3.0
CM31	**Chiang Mai Arr**	**20.57**	**264**	P	**P**	**17 51 51.2**	**-0.3**
CMAR	**Chiang Mai Arr**	**20.57**	**264**	P	Pn	17 51 53.5	-0.3
	2.4nm,0.8s,baz=73,slow=9.1,SNR=22						
CMAR				LR	LR	18 00 35.2	
	comp=Z,138nm,18.6s,baz=131,slow=39						
CMAR	**Chiang Mai Arr**	**20.57**	**264**	P	**P**	**17 51 50.5**	**-1.0**
CM02	**Chiang Mai Arr**	**20.57**	**264**	P	Pn	17 51 54.8	+0.8
CM05	**Chiang Mai Arr**	**20.58**	**264**	P	Pn	17 51 55.1	+1.1
CM15	**Chiang Mai Arr**	**20.59**	**264**	P	Pn	17 51 55.0	+0.9
TOLI2	**Tolitoli**	**20.59**	**179**	P	Pn	17 51 53.5	-0.7
CM13	**Chiang Mai Arr**	**20.61**	**264**	P	Pn	17 51 54.0	-0.4
BTO	**Baotou**	**20.75**	**337**	*e*P	Pn	17 51 58.4	+2.5
GTOI	**Gorontalo**	**21.20**	**173**	P	**P**	**17 51 57.8**	**-0.5**
	14nm,0.7s						
MJAR	**Matsushiro Arr**	**21.22**	**42**	P	**P**	**17 51 57.2**	**-1.2**
	1.0nm,0.8s,baz=214,slow=9.5,SNR=5.4						
MJAR				LR	LR	18 01 11.4	
	comp=Z,100nm,18.3s,baz=215,slow=40						
CN2	**Changchun**	**22.29**	**9**	*e*P	**P**	**17 52 10.5**	**+0.7**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
APSI	**Ampana**	**22.62**	**177**	P	**P**	**17 52 14.1**	**+0.5**
	19nm,1.1s						
USRK	**Ussuriysk Ar.**	**24.23**	**20**	P	**P**	**17 52 27.6**	**-1.5**
	3.0nm,0.8s,baz=190,slow=7.7,SNR=4.1						
SIJI	**Sorong**	**24.86**	**154**	P	**P**	**17 52 33.5**	**-1.5**
	5.8nm,0.7s,baz=43,slow=6.3,SNR=4.2						
GTA	**Gaotai**	**24.92**	**319**	*e*P	**P**	**17 52 36.3**	**+0.7**
GTA				pP	pP	17 52 44.5	-0.6
GTA				sP	sP	17 52 48.5	-0.6
GTA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,130nm,5.8s						
GTA				LR	LR		
	comp=N,240nm,16.7s						
GTA				LR	LR		
	comp=E,250nm,14.5s						
GTA				LR	LR		
	comp=Z,280nm,16.4s						
NLAI	**Namlea**	**25.72**	**165**	P	**P**	**17 52 42.8**	**0.0**
	2µm26nm,0.9s						
SHL	**Shillong**	**26.50**	**284**	P	**P**	**17 52 50.4**	**+0.3**
KAPI	**Kappang**	**26.69**	**182**	P	**P**	**17 52 52.0**	**+0.4**
	2.4nm,0.6s,baz=58,slow=19,SNR=1.5						
LSA	**Lhasa**	**27.57**	**293**	P	**P**	**17 53 00.5**	**+0.5**
JEM	**Erimo**	**27.66**	**38**	P	P	17 53 11.0	+11
JEM				IAmb	IAmb	17 53 14.0	
	comp=Z,24nm,1.1s						
ULN	**Ulaanbaatar**	**28.16**	**341**	P	**P**	**17 53 04.6**	**-0.1**
SONM	**Songino Array**	**28.34**	**340**	P	**P**	**17 53 05.8**	**-0.4**
	comp=Z,0.8nm,0.6s,baz=162,slow=11,SNR=8.0						
SONM				pP	**sP**	**17 53 18.1**	**-1.7**
	comp=Z,1.5nm,0.8s,baz=158,slow=11,SNR=6.8						
SONM				PcP	**PcP**	**17 56 17.4**	**-1.1**
	comp=Z,0.5nm,1.0s,baz=191,slow=2.3,SNR=1.7						
SONM				LR	LR	18 05 47.3	
	comp=Z,216nm,19.1s,baz=154,slow=39						
SONM	**Songino Array**	**28.34**	**340**	P	**P**	**17 53 05.9**	**-0.3**
ASAJ	**Asahikawa**	**28.74**	**34**	P	**P**	**17 53 10.2**	**+0.5**
	comp=Z,3.8nm,0.7s,baz=246,slow=9.8,SNR=5.7						
ASAJ				LR	LR	18 04 58.5	
	comp=Z,74nm,18.1s,baz=245,slow=37						
JKA	**Kamikawa-asahi**	**28.75**	**34**	P	**P**	**17 53 10.2**	**+0.5**
JKA	**Kamikawa-asahi**	**28.75**	**34**	IAmb	IAmb	17 53 23.5	
	comp=Z,58nm,1.8s						
EDFI	**Ende, Flores**	**30.41**	**178**	P	**P**	**17 53 23.5**	**-1.3**
	comp=Z,6.4nm,0.9s						
TLY	**Talaya**	**32.57**	**340**	LR	LR	18 08 46.9	
	comp=Z,135nm,18.8s,baz=149,slow=40						
WMQ	**Urumqi**	**34.92**	**317**	*e*P	**P**	**17 54 06.3**	**+2.2**
WMQ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,270nm,6.9s						
WMQ				LR	LR		
	comp=Z,570nm,29.1s						
WMQ				LR	LR		
	comp=Z,1µm,29.2s						
WMQ				LR	LR		
	comp=Z,130nm,18.5s						
ZSN	**Zaisan**	**38.40**	**320**	*e*P	**P**	**17 54 33.8**	**+0.2**
	baz=320						
MK31	**Makanchi Array**	**39.66**	**318**	P	**P**	**17 54 44.7**	**+0.5**
MKAR	**Makanchi Array**	**39.66**	**318**	P	**P**	**17 54 44.8**	**+0.6**
	comp=Z,2.7nm,0.6s,baz=110,slow=9.5,SNR=44						
MKAR				pP	**pP**	**17 54 54.5**	**+0.5**
	comp=Z,1.9nm,0.8s,baz=112,slow=9.8,SNR=8.5						
MKAR				sP	**sP**	**17 55 02.5**	**+4.6**
	comp=Z,1.3nm,0.8s,baz=112,slow=9.4,SNR=4.1						
MKAR				PcP	**PcP**	**17 56 50.7**	**+0.1**
	comp=Z,0.7nm,0.7s,baz=91,slow=5.3,SNR=4.0						
MKAR	**Makanchi Array**	**39.66**	**318**	P	**P**	**17 54 44.0**	**-0.2**
MAKZ	**Makanchi**	**39.86**	**318**	P	**P**	**17 54 46.4**	**+0.5**
YAK	**Yakutsk**	**40.67**	**7**	P	**P**	**17 54 51.2**	**-1.0**
	comp=Z,2.9nm,0.5s,baz=168,slow=2.4,SNR=5.6						
YAK				pP	**pP**	**17 55 01.4**	**-0.6**
	comp=Z,3.1nm,0.5s,baz=149,slow=2.0,SNR=2.9						
YAK				LR	LR	18 13 57.4	
	comp=Z,171nm,18.0s,baz=250,slow=39						
YAK	**Yakutsk**	**40.67**	**7**	P	**P**	**17 54 51.2**	**-1.0**
YAK				IAmb	IAmb	17 55 02.0	
	comp=Z,6.9nm,0.6s						
KPKS	**Kokpek**	**40.79**	**312**	*e*P	**P**	**17 54 52.7**	**-0.9**
	baz=312						
SATY	**Saty**	**40.86**	**311**	*e*P	**P**	**17 54 54.7**	**+0.4**
	baz=311						
MDOK	**Medeo**	**41.84**	**311**	*e*P	**P**	**17 55 03.0**	**+0.6**
	baz=310						
TNSS	**Tian-Shan**	**41.87**	**311**	*e*P	**P**	**17 55 03.3**	**+0.4**
	baz=310						
ZAA0	**Zalesovo Array**	**41.93**	**329**	P	**P**	**17 55 02.7**	**-0.1**
ZAA0				IAmb	IAmb	17 55 03.6	
	comp=Z,8.8nm,0.7s						
ZALV	**Zalesovo Beam**	**41.93**	**329**	P	**P**	**17 55 02.8**	**0.0**
	comp=Z,9.9nm,0.7s,baz=118,slow=7.7,SNR=46						
ZALV				PcP	**PcP**	**17 56 56.8**	**-0.9**
	comp=Z,0.7nm,0.6s,baz=104,slow=6.3,SNR=2.7						
PETK	**Petropavlovsk-**	**42.14**	**33**	LR	LR	18 13 33.7	
	comp=Z,38nm,18.5s,baz=231,slow=38						
SEM	**Semipalatinsk**	**42.48**	**322**	*e*P	**P**	**17 55 07.3**	**-0.3**
	baz=322						

NIL	Nilore	43.16	296	P	P	17 55 13.5	+0.4
NIL				IAmb	IAmb	17 55 14.8	
	comp=Z,8.5nm,0.9s						
H11N1	WAKE ISLAND Hy	43.25	84	T	T	18 41 07.5	
	baz=282,slow=74,SNR=12						
H11N2	WAKE ISLAND Hy	43.25	84	T	T	18 41 07.0	
	baz=282,slow=74,SNR=14						
H11N3	WAKE ISLAND Hy	43.27	84	T	T	18 41 08.2	
	baz=282,slow=74,SNR=13						
H11S3	WAKE ISLAND Hy	43.31	86	T	T	18 41 12.4	
	baz=283,slow=74,SNR=37						
H11S1	WAKE ISLAND Hy	43.32	86	T	T	18 41 13.0	
	baz=283,slow=74,SNR=16						
H11S2	WAKE ISLAND Hy	43.33	86	T	T	18 41 13.9	
	baz=283,slow=74,SNR=12						
WB0	Warramunga Arr	43.50	161	P	P	17 55 14.4	-1.4
WB0				IAmb	IAmb	17 55 15.1	
	comp=Z,6.4nm,0.7s						
KURK	Kurchatov	43.55	322	P	P	17 55 16.5	+0.6
WRA	Warramunga Arr	43.65	161	P	P	17 55 15.4	-1.5
	comp=Z,7.3nm,0.7s,baz=344,slow=8.9,SNR=56						
WRA				pP	pP	17 55 25.8	-1.0
	comp=Z,2.3nm,0.5s,baz=344,slow=9.0,SNR=6.5						
WRA				PcP	PcP	17 57 03.2	-0.7
	comp=Z,0.4nm,0.7s,baz=350,slow=3.9,SNR=1.9						
WRA	Warramunga Arr	43.65	161	P	P	17 55 14.6	-2.4
WB2	Warramunga Arr	43.65	161	P	P	17 55 15.7	-1.3
WB2				IAmb	IAmb	17 55 16.4	
	comp=Z,11nm,0.7s						
WR0	Warramunga Arr	43.72	161	P	P	17 55 16.4	-1.2
WR0				IAmb	IAmb	17 55 16.9	
	comp=Z,10nm,0.7s						
GIRL	Giralia	44.63	188	P	P	17 55 25.1	+0.3
SEY	Seymchan	46.38	19	P	P	17 55 37.3	-0.9
	comp=Z,0.6nm,0.5s,baz=201,slow=14,SNR=4.7						
KK31	Karatay Array	46.47	309	P	P	17 55 40.4	+1.0
KK31				IAmb	IAmb	17 55 40.6	
	comp=Z,7.6nm,1.4s						
KK31				PcP	PcP	17 57 13.2	-0.3
KKAR	Karatay Array	46.47	309	P	P	17 55 40.5	+1.2
KKAR				IAmb	IAmb	17 55 40.6	
	comp=Z,7.6nm,1.4s						
KKAR	Karatay Array	46.47	309	P	P	17 55 40.2	+0.9
KKAR				PcP	PcP	17 57 14.0	+0.5
IUG	Iuzhnay	46.65	308	*e*P	P	17 55 41.7	+0.8
	baz=308						
KBL	Kabul	46.69	297	P	P	17 55 42.9	+1.5
KBL				IAmb	IAmb	17 55 43.8	
	comp=Z,5.8nm,1.1s						
KBL				PcP	PcP	17 57 13.9	-0.8
AS31	Alice Springs	47.05	163	P	P	17 55 43.3	-0.6
AS31				PcP	PcP	17 57 15.1	-0.6
ASAR	Alice Springs	47.05	163	P	P	17 55 43.0	-0.9
	comp=Z,1.5nm,0.4s,baz=341,slow=6.9,SNR=52						
ASAR				PcP	PcP	17 57 15.1	-0.6
	comp=Z,0.5nm,0.8s,baz=335,slow=3.1,SNR=2.4						
ASAR	Alice Springs	47.05	163	P	P	17 55 42.8	-1.2
ASAR				PcP	PcP	17 57 13.9	-1.9
BRVK	Borovoye	49.22	322	P	P	17 56 00.9	+0.5
BRVK				IAmb	IAmb	17 56 01.9	
	comp=Z,6.3nm,0.6s						
HNR	Honiara	49.58	125	LR	LR	18 16 23.0	
	comp=Z,31nm,19.5s,baz=346,slow=35						
NRIK	Noril'sk	51.53	346	P	P	17 56 16.1	-1.5
	comp=Z,1.2nm,0.3s,baz=134,slow=7.0,SNR=10						
NRIK	Noril'sk	51.53	346	P	P	17 56 17.0	-0.6
NRIK				IAmb	IAmb	17 56 18.4	
	comp=Z,6.6nm,0.8s						
HRA	Herat	52.31	297	P	P	17 56 22.6	-1.6
AMKA	Amchitka	53.83	42	P	P	17 56 36.3	+1.4
ABKAR	Akbulak array	54.69	316	P	P	17 56 41.4	+0.2
ABKAR				PcP	PcP	17 57 43.5	-0.2
ABKAR	Akbulak array	54.69	316	P	P	17 56 41.9	+0.7
ABKAR				IAmb	IAmb	17 56 43.0	
	comp=Z,9.8nm,1.5s						
GEYT	Alibeck	55.51	302	P	P	17 56 49.1	+1.6
	comp=Z,3.8nm,0.8s,baz=151,slow=3.4,SNR=6.2						
GEYT	Alibeck	55.51	302	P	P	17 56 48.3	+0.9
GYA0B	ALIBECK ARRAY	55.51	302	P	P	17 56 47.7	+0.3
GYA0B				IAmb	IAmb	17 56 50.2	
	comp=Z,5.7nm,0.9s						
MIDW	Midway	56.09	70	P	P	17 56 53.0	+1.5
BBOO	Buckleboo	56.31	164	P	P	17 56 52.7	-0.2
BBOO				IAmb	IAmb	17 56 53.4	
	comp=Z,13nm,0.8s						
ARU	Arti	56.65	324	P	P	17 56 55.4	+0.3
ARU				IAmb	IAmb	17 56 56.0	
	comp=Z,7.9nm,1.1s						
STKA	Stephens Creek	57.07	159	P	P	17 56 57.5	-0.9
	comp=Z,2.9nm,0.6s,baz=325,slow=6.5,SNR=7.6						
STKA	Stephens Creek	57.07	159	P	P	17 56 57.9	-0.5
ATKA	Atka Island	57.94	41	P	P	17 57 05.9	+1.6
ARMA	Armidale	59.92	149	P	P	17 57 19.5	+1.1
ARMA				IAmb	IAmb	17 57 36.7	
	comp=Z,13nm,1.4s						
NIKH	Nikolski High	61.24	41	P	P	17 57 29.0	+2.0
TOO	Toolangi	63.58	158	P	P	17 57 43.8	+1.0
TOO				IAmb	IAmb	17 57 44.2	
	comp=Z,6.4nm,0.8s						
KBZ	Khabaz	66.51	309	P	P	17 58 01.1	-0.8
	comp=Z,3.7nm,0.8s,baz=182,slow=7.5,SNR=5.0						
TTA	Tatalina	67.83	29	P	P	17 58 08.8	-1.2
TTA				IAmb	IAmb	17 58 17.6	
	comp=Z,17nm,1.7s						
MARD	Mardin	69.23	303	P	P	17 58 20.0	+0.6
MARD				IAmb	IAmb	17 58 21.3	
	comp=Z,11nm,0.9s						
CAST	Castle Rocks	69.55	29	P	P	17 58 20.5	-0.2
PPLA	Purkeypile	69.57	29	P	P	17 58 20.6	-0.4
SUA	Susitna One	70.46	31	P	P	17 58 26.4	0.0
BWN	Browne	70.58	28	P	P	17 58 24.1	-2.8
BWN				IAmb	IAmb	17 58 26.3	
	comp=Z,13nm,0.6s						
BRLK	Bradley Lake	70.69	32	P	P	17 58 27.5	-0.3
MDM	Murphy Dome	70.96	27	P	P	17 58 29.0	-0.3
MDM				IAmb	IAmb	17 58 35.9	
	comp=Z,18nm,1.8s						
RND	Reindeer	70.98	28	P	P	17 58 28.4	-1.2
RND				IAmb	IAmb	17 58 57.2	
	comp=Z,7.7nm,1.2s						
ILAR	Eielson Array	71.56	27	P	P	17 58 31.0	-1.9
	comp=Z,0.3nm,0.6s,baz=268,slow=4.5,SNR=7.0						
ILAR				pP	pP	17 58 44.5	+1.0
	comp=Z,0.2nm,0.5s,baz=284,slow=5.5,SNR=2.4						
ILAR	Eielson Array	71.56	27	P	P	17 58 33.4	+0.4
SPA1	Spitsbergen Ar	71.65	348	P	P	17 58 37.0	+3.8
SPA3	Spitsbergen Ar	71.66	348	P	P	17 58 34.0	+0.7
SCM	Sheep Creek Mo	71.99	30	P	P	17 58 35.0	-0.6
RIDG	Independent Ri	72.66	28	P	P	17 58 38.5	-1.1
RIDG				IAmb	IAmb	17 58 48.5	
	comp=Z,34nm,1.8s						
KLU	Klutina	72.72	30	P	P	17 58 39.6	-0.4
DOT	Dot Lake	73.03	28	P	P	17 58 40.8	-0.9
DOT				IAmb	IAmb	17 58 58.3	
	comp=Z,15nm,1.6s						
FIA1	FINESS Array S	73.18	330	P	P	17 58 40.7	-1.9
FINES	FINESS Array B	73.18	330	P	P	17 58 42.1	-0.5
	comp=Z,3.3nm,0.9s,baz=45,slow=5.7,SNR=6.6						
FINES	FINESS Array B	73.18	330	P	P	17 58 42.3	-0.3
N25K	Chitina, Valde	73.31	30	P	P	17 58 43.2	-0.3
GLB	Gilahina Butte	73.72	30	P	P	17 58 45.3	-0.6
GLB				IAmb	IAmb	17 58 55.8	
	comp=Z,27nm,1.7s						
VRDI	Verde Repeater	73.94	30	P	P	17 58 46.4	-1.0
VRDI				IAmb	IAmb	17 59 10.8	
	comp=Z,29nm,1.4s						
CRQM	Cirque	74.22	30	P	P	17 58 52.4	+3.4
AKASG	Malin Array Be	74.25	319	P	P	17 58 48.0	-1.1
	comp=Z,0.5nm,0.5s,baz=57,slow=5.9,SNR=3.7						
CTGM	Chitina Glacie	75.00	30	P	P	17 58 53.4	0.0
CTGM				IAmb	IAmb	17 59 22.0	
	comp=Z,23nm,1.4s						
INK	Inuvik	75.61	22	P	P	17 58 55.6	-1.0
HYT	Haines Junctio	76.81	29	P	P	17 59 03.8	0.0
HYT				IAmb	IAmb	17 59 11.6	
	comp=Z,18nm,1.5s						
VRI	Vrincioaia	77.23	314	⇑P	P	17 59 07.3	+1.1
PLOR	Plostina	77.28	314	⇓P	P	17 59 08.0	+1.4
BURAR	Bucovina Array	77.66	316	⇑P	P	17 59 09.2	+0.5
BURAR	Bucovina Array	77.66	316	P	P	17 59 09.5	+0.8
BUR08	Bucovina Ar. S	77.66	316	P	P	17 59 09.5	+0.8
BUR08				IAmb	IAmb	17 59 33.4	
	comp=Z,17nm,1.8s						
MLR	Muntele Rosu	77.87	314	⇓P	P	17 59 10.5	+0.5
WHY	Whitehorse	78.07	29	P	P	17 59 10.5	-0.2
WHY				IAmb	IAmb	17 59 36.2	
	comp=Z,18nm,1.6s						
NOA	NORSAR Array B	80.03	332	LR	LR	18 36 40.6	
	comp=Z,145nm,19.5s,baz=355,slow=37						
VTS	Vitosha	80.68	312	⇑P	P	17 59 26.6	+1.2
VTS	Vitosha	80.68	312	P	P	17 59 26.0	+0.6
VTS				IAmb	IAmb	17 59 27.2	
	comp=Z,8.1nm,0.9s						
ITM	Ithomi	83.62	307	P	P	17 59 39.7	-1.1
KMBO	Kilima Mbogo	84.20	266	P	P	17 59 45.1	+0.8
	comp=Z,1.6nm,0.6s,baz=61,slow=8.5,SNR=4.3						
GERES	GERESS Array B	84.29	321	P	P	17 59 44.0	0.0
	comp=Z,1.7nm,0.8s,baz=49,slow=4.1,SNR=8.1						
GERES	GERESS Array B	84.29	321	P	P	17 59 44.1	+0.1
YKA	Yellowknife Ar	85.36	22	P	P	17 59 48.6	-0.4
	comp=Z,1.4nm,0.8s,baz=321,slow=4.1,SNR=23						

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*TUL **07** 18:40:49.5±1.8, 36°.26N±0°.01×97°.28W±0°.02, h5^{km}±6^{km}, ML3.8, mb_Lg3.9/167(NEIC), Mwr3.9/51(NEIC), Error ellipse: s-maj=2.5km s-min=1.7km az=74.0*

*NEIC **07** 18:40:49.6±1.8, 36°.27N±0°.01×97°.282W±0°.008, h4^{km}±6^{km}, Error ellipse: s-maj=1.8km s-min=0.8km az=159.0*

*NEIC **07** 18:40:49.5, 36°.26N×97°.28W, h4^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}0.59; $M_{\theta\theta}$5.25; $M_{\phi\phi}$-5.84; $M_{r\theta}$-2.68; $M_{\theta\phi}$5.53; $M_{\phi r}$0.50; Fault plane solution: $M_0$8.31000×10^{14} NP1:ϕ_s201.71000°, δ70.98000°, λ174.78000°. NP2:ϕ_s293.42000°, δ85.06000°, λ19.10000°. Principal axes: T 8.2378, Plg17.0000°, Azm159.0000°; N 0.1466, Plg70.0000°, Azm307.0000°; P -8.3844, Plg10.0000°, Azm66.0000°;*

*ANF **07** 18:40:50.3±0.3, 36°.26N×97°.23W, h5^{km}, ML4.9/17 Error ellipse: s-maj=3.4km s-min=2.1km az=179.0*

*IDC **07** 18:40:52.0±2.6, 36°.27N×97°.37W, h16^{km}±19^{km}, mb3.4/2, mb1 3.8/9, mb1mx3.6/42, mbtmp3.6/9, ML3.5/7, MS3.2/10, Ms1 3.2/10, ms1mx3.0/33, Error ellipse: s-maj=11.8km s-min=9.8km az=159.0*

ISC 07 18:40:49.4±1.0, **36°.28N**±0°.02×**97°.29W**±0°.02, **h4**^{km}±8^{km}, **n229,** σ1^{s}**89**/235, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QUOK	Quay	0.48	102		Pg	18 40 59.0	+0.3
QUOK				Sg	Sg	18 41 05.5	+0.5
OK031	S. Brethren Rd	0.49	131		Pg	18 40 59.0	+0.2
OK031				Sg	Sg	18 41 05.6	+0.5
OK029	Liberty Lake	0.49	195		Pg	18 40 59.0	+0.1
OK029				Sg	Sg	18 41 05.9	+0.6
OK030	Cody Creek RV	0.54	130		Pg	18 40 59.9	+0.1
OK030				Sg	Sg	18 41 07.1	+0.3
CROK	Carrier	0.60	293		Pg	18 41 01.5	+0.5
CROK				Sg	Sg	18 41 10.2	+1.4
BCOK	Bluff Creek, N	0.67	203		Pg	18 41 02.2	0.0
BCOK				Sg	Sg	18 41 11.5	+0.6
OK025	Westminster Rd	0.69	183		Pg	18 41 02.8	+0.1
OK025				Sg	Sg	18 41 12.2	+0.5
OK009	Oakdale Elemen	0.70	189	Pg	Pg	18 41 02.9	+0.1
OK009				Sg	Sg	18 41 12.7	+0.8
KAN13	South Haven SW	0.75	349		Pg	18 41 04.4	+0.6
KAN13				Sg	Sg	18 41 15.2	+1.6
OKCFA	Oklahoma City	0.87	189		Pg	18 41 06.0	0.0
KAN14	Manchester OK	0.87	322		Pg	18 41 06.5	+0.4
KAN14				Sg	Sg	18 41 18.6	+1.2
OKCSW	OKLAHOMA CITY	0.88	188		Pg	18 41 06.2	0.0
OKCSW				Sg	Sg	18 41 18.4	+0.8
T35A	Sooner Cattle	0.90	44		Pg	18 41 06.9	+0.3
T35A				Sg	Sg	18 41 19.1	+0.9
T35B	Sooner Cattle	0.90	44	P		18 41 06.7	
	baz=223						
T35B				S		18 41 19.1	
	baz=223						
KAN01	Argonia South	0.95	337		Pg	18 41 08.1	+0.4
KAN05	Bluff City Nor	0.95	331		Pg	18 41 08.0	+0.3
FNO	Franklin	1.02	185		Pg	18 41 09.0	0.0
KAN10	Anthony SW Sta	1.06	323		Pg	18 41 10.1	+0.3
KAN10				Sg	Sg	18 41 24.4	+0.8
KAN08	Anthony NE Sta	1.09	330		Pg	18 41 10.5	+0.1
KAN12	Harper NE Stat	1.17	331		Pg	18 41 12.0	+0.2
W35A	Tecumseh	1.17	163		Pg	18 41 10.7	-1.1
TUL1	Leonard	1.27	106	P	Pg	18 41 12.6	-1.1
	baz=287,SNR=88						
TUL1				S	Sg	18 41 29.6	-0.6
	baz=287						
TUL1	Leonard	1.27	106		Pg	18 41 12.6	-1.1
TUL1	Leonard	1.27	106	P		18 41 12.5	
	baz=287						
TUL1				S		18 41 29.8	
	baz=287						
U32A	Winter Ranch,	1.38	275		Pn	18 41 15.3	-0.2
U32A	Winter Ranch,	1.38	275	P		18 41 15.2	
	baz=94						
U32A				S		18 41 34.4	
	baz=94						
WMOK	Wichita Mounta	1.96	219	P	Pn	18 41 23.9	+0.5
	baz=38,SNR=434						
WMOK				S	Sb	18 41 50.8	+0.5
	baz=38						
WMOK	Wichita Mounta	1.96	219		Pn	18 41 24.1	+0.7
WMOK				IAmb_Lg		18 41 51.1	
	comp=Z,650nm,1.1s						
WMOK	Wichita Mounta	1.96	219	P		18 41 24.2	
	baz=38,SNR=266						
WMOK				S		18 41 50.5	
	baz=38						
X37A	Clayton	2.30	136		Pn	18 41 28.8	+0.7
X37A	Clayton	2.30	136	P		18 41 28.6	
	baz=318						
X37A				S		18 42 01.1	
	baz=318						
U38A	Gravette	2.35	85		Pn	18 41 29.7	+0.9
U38A	Gravette	2.35	85	P		18 41 30.1	
	baz=266,SNR=54						
R32A	Long Quarter,	2.42	333		Pn	18 41 31.1	+1.3
R32A				IAmb_Lg		18 42 09.9	
	comp=Z,589nm,0.8s						
R32A	Long Quarter,	2.42	333	P		18 41 31.2	
	baz=152,SNR=129						
R32A				S		18 42 01.7	
	baz=152						
HHAR	Hobbs	2.71	89		Pn	18 41 34.4	+0.6
KSU1	Kansas State U	2.87	11	P	Pn	18 41 37.4	+1.5
	baz=191,SNR=55						
KSU1				Sb	Sb	18 42 19.9	+3.2
	baz=191						
KSU1	Kansas State U	2.87	11		Pn	18 41 37.2	+1.2
KSU1				IAmb_Lg		18 42 28.0	
	comp=Z,368nm,0.9s						
KSU1	Kansas State U	2.87	11	P		18 41 37.5	
	baz=191,SNR=31						
KSU1				Sb		18 42 19.8	
	baz=191						
Z35A	Perchaven, San	2.94	179		Pn	18 41 37.8	+0.9
Z35A	Perchaven, San	2.94	179	P		18 41 37.9	
	baz=360						
W39A	Magazine	3.05	110	P	Pn	18 41 39.1	+0.7
	baz=292,SNR=22						
W39A				Sb	Sb	18 42 24.6	+2.8
	baz=292						
W39A	Magazine	3.05	110		Pn	18 41 39.1	+0.7
W39A				IAmb_Lg		18 42 30.7	
	comp=Z,564nm,0.9s						
W39A	Magazine	3.05	110	P		18 41 39.2	
	baz=292,SNR=10						
CBKS	Cedar Bluff	3.19	323	P	Pn	18 41 41.1	+0.7
	baz=142,SNR=9.2						
CBKS	Cedar Bluff	3.19	323		Pn	18 41 41.5	+1.1
CBKS	Cedar Bluff	3.19	323	P		18 41 41.1	
	baz=142,SNR=24						
S39A	Bolivar	3.48	65		Pn	18 41 45.1	+0.8
S39A	Bolivar	3.48	65	P		18 41 45.3	
	baz=247,SNR=45						
MIAR	Mount Ida	3.49	119	P	Pn	18 41 45.4	+0.9
	baz=301,SNR=11						
MIAR				S	Sn	18 42 27.4	+1.1
	baz=301						
MIAR	Mount Ida	3.49	119		Pn	18 41 44.4	-0.1
MIAR				IAmb_Lg		18 42 46.8	
	comp=Z,248nm,0.7s						
MIAR	Mount Ida	3.49	119	P		18 41 45.4	
	baz=301,SNR=21						
Z38A	Mt. Pleasant	3.56	147		Pn	18 41 45.7	+0.3
Z38A				IAmb_Lg		18 42 48.8	
	comp=Z,247nm,0.8s						
U40A	Yellville	3.59	87	P	Pn	18 41 46.0	+0.2
	baz=270,SNR=31						
U40A	Yellville	3.59	87		Pn	18 41 46.0	+0.2
U40A				IAmb_Lg		18 42 44.9	
	comp=Z,251nm,0.7s						
U40A	Yellville	3.59	87	P		18 41 46.0	
	baz=270,SNR=50						
U40A				P		18 41 46.0	
	baz=270,SNR=50						
AMTX	Amarillo	3.84	250	Pn	Pn	18 41 50.4	+1.1
	baz=68						
AMTX				Pb	Pb	18 41 58.2	+0.5
	baz=68						
AMTX				Sb	Sb	18 42 49.0	+4.5
	baz=68						
AMTX	Amarillo	3.84	250		Pn	18 41 50.6	+1.3
AMTX				IAmb_Lg		18 42 55.4	
	comp=Z,380nm,0.8s						
AMTX	Amarillo	3.84	250	P		18 41 50.7	
	baz=68,SNR=16						
X40A	Basin Creek Fa	4.06	115	P	Pn	18 41 53.1	+0.9
	baz=297,SNR=7.7						
X40A				S	Sn	18 42 41.7	+1.6
	baz=297						
X40A	Basin Creek Fa	4.06	115		Pn	18 41 52.9	+0.6
X40A				IAmb_Lg		18 43 06.0	
	comp=Z,285nm,0.7s						
X40A	Basin Creek Fa	4.06	115	P		18 41 53.4	
	baz=297,SNR=14						
X40A				P		18 41 53.4	
	baz=297,SNR=14						
ABTX	Abilene, Hawle	4.13	209	Sb	Sb	18 42 57.6	+4.8
	baz=28						
ABTX	Abilene, Hawle	4.13	209		Pn	18 41 54.0	+0.7
MGMO	Mountain Grove	4.13	76		Pn	18 41 54.0	+0.7
MGMO				IAmb_Lg		18 43 01.1	
	comp=Z,214nm,0.8s						
WHAR	Wooly Hollow	4.19	102		Pn	18 41 54.6	+0.6
WHAR				IAmb_Lg		18 43 02.7	
	comp=Z,322nm,0.8s						
FCAR	Ozark Folk Cen	4.20	94		Pn	18 41 54.8	+0.6
W41B	Gary Mavity, V	4.25	104	Pn	Pn	18 41 55.3	+0.4
	baz=286,SNR=17						
W41B				Pb	Pb	18 42 04.7	0.0
	baz=286						
W41B				Sn	Sn	18 42 44.9	0.0
	baz=286						
W41B				Sb	Sb	18 43 01.2	+4.9
	baz=286						
W41B	Gary Mavity, V	4.25	104	P		18 41 55.3	
	baz=286,SNR=16						
WHTX	Lake Whitney,	4.28	182	Pn	Pn	18 41 56.0	+0.8
	baz=1.9						
WHTX				Pb	Pb	18 42 06.0	+0.9
	baz=1.9						
WHTX				Sn	Sn	18 42 47.5	+2.0
	baz=1.9						
WHTX				Sb	Sb	18 43 01.3	+4.2
	baz=1.9						
WHTX	Lake Whitney,	4.28	182		Pn	18 41 56.0	+0.8
WHTX				IAmb_Lg		18 43 15.4	
	comp=Z,193nm,1.2s						
WHTX	Lake Whitney,	4.28	182	P		18 41 55.7	
	baz=1.9,SNR=10						
WLAR	White Oak Lake	4.29	126		Pn	18 41 55.8	+0.3
WLAR				IAmb_Lg		18 43 07.8	
	comp=Z,264nm,0.8s						
237A	Washetta, Mont	4.44	163		Pn	18 41 57.4	-0.1
237A	Washetta, Mont	4.44	163	P		18 41 57.4	
	baz=344						
N33B	J Bar K, Exete	4.46	358	P		18 41 58.5	
	baz=178,SNR=6.9						
N33A	J Bar K, Exete	4.46	358		Pn	18 41 58.4	+0.6
P38A	Dawn	4.47	40		Pn	18 41 57.5	-0.5
P38A				IAmb_Lg		18 43 13.4	
	comp=Z,333nm,0.8s						
R40A	Maddies Statio	4.48	62		Pn	18 41 58.4	+0.2
R40A				IAmb_Lg		18 43 10.3	
	comp=Z,182nm,1.0s						
R40A	Maddies Statio	4.48	62	P		18 41 58.9	
	baz=244,SNR=25						
N35A	Tabor	4.76	15		Pn	18 42 02.2	+0.3
Z41A	Richland Creek	4.77	128	P	Pn	18 42 02.2	+0.2
	baz=310						
Z41A				S	Sn	18 42 57.7	0.0
	baz=310						
LCAR	Lake Charles	4.97	91		Pn	18 42 05.5	+0.7
LCAR				IAmb_Lg		18 43 26.8	
	comp=Z,244nm,0.7s						
NATX	Nacogdoches	5.01	153	Pn	Pn	18 42 05.7	+0.4
KSCO	Kaye Shedlock’	5.04	304	P	Pn	18 42 07.5	+1.7
	baz=121						
KSCO				Sb	Sg	18 43 26.6	-4.6
	baz=121						
KSCO	Kaye Shedlock’	5.04	304		Pn	18 42 07.5	+1.7
KSCO				IAmb_Lg		18 43 40.1	
	comp=Z,259nm,0.8s						
T42A	Van Buren	5.04	80		Pn	18 42 04.8	-0.9
T42A				IAmb_Lg		18 43 41.8	
	comp=Z,158nm,0.9s						
T42A	Van Buren	5.04	80	P		18 42 05.7	
	baz=263,SNR=14						
MSTX	Muleshoe	5.04	244	P	Pn	18 42 07.5	+1.5
	baz=61						
CCAR	Cane Creek	5.10	116	Pn	Pn	18 42 07.0	+0.4
CCAR				IAmb_Lg		18 43 38.1	
	comp=Z,238nm,1.1s						
CCM	Cathedral Cave	5.15	68	P	Pn	18 42 07.6	+0.4
	baz=251						
CCM	Cathedral Cave	5.15	68	Pn	Pn	18 42 07.3	+0.1
CCM	Cathedral Cave	5.15	68	P		18 42 07.3	
	baz=251,SNR=9.7						
BGNE	Belgrade	5.17	353	P	Pn	18 42 07.6	+0.1
	baz=172,SNR=8.5						
BGNE				S	Sn	18 43 06.5	-1.2
	baz=172						
BGNE	Belgrade	5.17	353		Pn	18 42 07.6	+0.1
BGNE	Belgrade	5.17	353	P		18 42 07.7	
	baz=172,SNR=17						
P40A	Paris	5.27	50		Pn	18 42 09.4	+0.5
P40A				IAmb_Lg		18 43 37.4	
	comp=Z,201nm,0.8s						
435B	Jarrell	5.48	183	S	Sn	18 43 14.1	-1.3
	baz=2.6						
435B	Jarrell	5.48	183	Pn	Pn	18 42 12.5	+0.7
435B				IAmb_Lg		18 43 56.9	
	comp=Z,238nm,0.8s						
N38A	Joes South For	5.52	34		Pn	18 42 13.3	+0.9
X43A	Marvell	5.52	107	Sb	Sg	18 43 41.3	-5.4
	baz=290						
PBMO	Poplar Bluff	5.55	83	Pn	Pn	18 42 13.5	+0.7
PBMO				IAmb_Lg		18 43 52.0	
	comp=Z,145nm,0.7s						
LPAR	Lepanto	5.71	95	Pn	Pn	18 42 15.2	+0.2
L34A	Svendsen Farm,	5.73	7	Pn	Pn	18 42 15.3	+0.1
FVM	French Village	5.75	71		Pn	18 42 15.0	-0.5
FVM				IAmb_Lg		18 43 55.0	
	comp=Z,234nm,1.0s						
T25A	Trinidad	5.78	281	P	Pn	18 42 16.7	+0.5
	baz=97,SNR=6.3						
T25A				Sn	Sn	18 43 21.1	-2.0
	baz=97						
T25A				Sb	Sg	18 43 49.8	-5.4
	baz=97						
OGNE	Ogallala	5.96	323	P	Pn	18 42 20.2	+1.8
	baz=140,SNR=8.2						
OGNE				Sb	Sb	18 43 53.6	+8.0
	baz=140						
OGNE	Ogallala	5.96	323		Pn	18 42 19.1	+0.6
OGNE				IAmb_Lg		18 44 13.7	
	comp=Z,223nm,0.7s						
OGNE	Ogallala	5.96	323	P		18 42 19.5	
	baz=140,SNR=18						
143A	Socs Landing,	6.03	125	IAmb_Lg		18 44 13.3	
	comp=Z,142nm,0.8s						
SLM	Saint Louis	6.09	65		Pn	18 42 20.1	-0.1
SLM				IAmb_Lg		18 44 04.1	
	comp=Z,200nm,1.1s						
MET	Memphis--Engin	6.10	99	Pn	Pn	18 42 20.1	-0.2
MET				IAmb_Lg		18 44 15.1	
	comp=Z,259nm,0.8s						
JCT	Junction City	6.15	201	P	Pn	18 42 22.4	+1.4
	baz=19						
JCT	Junction City	6.15	201	Pn	Pn	18 42 20.8	-0.3
PENMO	Penman	6.19	86	Pn	Pn	18 42 20.4	-1.1
CPRX	Cap Rock	6.31	241	Pn	Pn	18 42 24.2	+0.8

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LNXT  Lenox              6.31  89  Pn       Pn     18 42 24.2 +1.0
HENM  Henderson Moun     6.32  84  Pn       Pn     18 42 24.2 +0.9
HKT   Hockley            6.42 169  IAmb_Lg         18 44 27.0
      comp=Z,17nm,1.1s
K31A  O'Neill            6.44 350  Pn       Pn     18 42 25.1 +0.1
SCIA  State Center       6.46  28  P        Pn     18 42 25.9 +0.7
      baz=210
SCIA                               S        Sn     18 43 37.8 -1.5
      baz=210
SCIA  State Center       6.46  28           Pn     18 42 25.6 +0.4
GLAT  Glass              6.47  88  Pn       Pn     18 42 26.2 +0.9
441A  DeRidder           6.49 147  Pn       Pn     18 42 27.4 +1.8
HICK  Hickman            6.51  85  Pn       Pn     18 42 25.3 -0.6
S44A  Carbondale         6.59  75           Pn     18 42 26.8 -0.2
S44A                               IAmb_Lg         18 44 33.2
      comp=Z,187nm,0.8s
SIUC  Southern Illin     6.62  75           Pn     18 42 26.1 -1.4
SIUC                               IAmb_Lg         18 44 21.3
      comp=Z,209nm,0.7s
OXF   Oxford             6.67 103  S        Sn     18 43 43.0 -1.7
      baz=288
OXF   Oxford             6.67 103           Pn     18 42 26.9 -1.3
OXF                                IAmb_Lg         18 44 25.5
      comp=Z,178nm,0.8s
W45A  Hickory Valley     6.69  97  IAmb_Lg         18 44 25.7
      comp=Z,224nm,0.9s
N41A  Harden Midland     6.71  47           Pn     18 42 29.0 +0.3
SDCO  Great Sand Dun     6.73 285  P        Pn     18 42 31.6 +2.3
      baz=100,SNR=15
SDCO                               Sb       Sg     18 44 19.2 -6.3
      baz=100
SDCO  Great Sand Dun     6.73 285           Pn     18 42 29.6 +0.4
Q24A  Divide             6.79 296  P        Pn     18 42 31.8 +1.8
      baz=111
Q24A                               Sb       Sg     18 44 20.7 -6.7
      baz=111
Y45A  Yeager Farm, C     6.79 108  Pn       Pn     18 42 27.8 -2.0
Y45A                               IAmb_Lg         18 44 37.9
      comp=Z,121nm,0.8s
P43A  Skaggs, Pawnee     7.00  59           Pn     18 42 31.9 -0.8
P43A                               IAmb_Lg         18 44 36.4
      comp=Z,206nm,0.8s
P43A  Skaggs, Pawnee     7.00  59  P               18 42 32.7
      baz=244,SNR=9.3
Q44A  Meyer Farm, Va     7.08  66           Pn     18 42 33.7  0.0
Q44A                               IAmb_Lg         18 44 47.1
      comp=Z,215nm,1.0s
Q44A  Meyer Farm, Va     7.08  66  P               18 42 34.4
      baz=251,SNR=5.7
GDL2  Guadalupe Moun     7.13 237           Pn     18 42 34.8 +0.3
735A  Kenedy             7.41 184  IAmb_Lg         18 45 00.8
      comp=Z,98nm,0.9s
ISCO  Idaho Springs      7.45 301  P        Pn     18 42 40.2 +1.1
      baz=116,SNR=7.5
ISCO                               Sb       Sg     18 44 41.5 -7.0
      baz=116
ISCO  Idaho Springs      7.45 301           Pn     18 42 40.2 +1.1
ISCO                               IAmb_Lg         18 44 57.0
      comp=Z,155nm,0.8s
ECSD  EROS Data Cent     7.47   4  P        Pn     18 42 38.5 -0.6
      baz=184,SNR=17
ECSD  EROS Data Cent     7.47   4           Pn     18 42 38.6 -0.5
ECSD                               IAmb_Lg         18 44 50.1
      comp=Z,104nm,0.8s
ECSD  EROS Data Cent     7.47   4  P               18 42 38.4
      baz=184,SNR=55
ANMO  Albuquerque        7.58 263  Pn       Pn     18 42 41.7 +0.9
      comp=Z,0.2nm,0.3s,baz=94,slow=14,SNR=2.9
ANMO                               Pg       Pb     18 43 08.9 +7.3
      comp=Z,1.0nm,0.3s,baz=64,slow=20,SNR=4.1
ANMO                               Lg       Lg     18 44 44.3
      comp=Z,4.2nm,0.3s,baz=29,slow=19,SNR=6.9
ANMO                               LR       LR     18 45 54.6
      comp=Z,232nm,19.0s,baz=68,slow=40
ANMO  Albuquerque        7.58 263  Pn       Pn     18 42 41.2 +0.3
HDIL  Hopedale           7.59  53  P        Pn     18 42 41.3 +0.5
      baz=238,SNR=5.6
HDIL                               S        Sn     18 44 04.6 -2.7
      baz=238
HDIL  Hopedale           7.59  53           Pn     18 42 39.9 -0.9
PLAL  Pickwick Lake      7.62  97           Pn     18 42 40.8 -0.4
PLAL                               IAmb_Lg         18 44 53.8
      comp=Z,118nm,1.1s
WVT   Waverly            7.65  88  Pn       Pn     18 42 40.1 -1.5
146A  Union              7.71 116  IAmb_Lg         18 45 12.0
      comp=Z,127nm,1.2s
S22A  4UR Ranch, Cre     7.77 284  Sb       Sg     18 44 51.6 -7.2
      baz=98
USIN  University of      7.87  75  IAmb_Lg         18 45 00.5
      comp=Z,168nm,1.1s
BNM   Barren Site        7.93 257           Pn     18 42 46.0 +0.4
O44A  Mansfield          7.95  58           Pn     18 42 45.9 +0.2
O44A                               IAmb_Lg         18 45 08.1
      comp=Z,163nm,0.8s
PHWY  Pilot Hill         8.11 311  IAmb_Lg         18 45 08.1
      comp=Z,123nm,0.8s
MNTX  Cornudas Mount     8.12 238  P        Pn     18 42 47.9 -0.2
      baz=54,SNR=8.0
MNTX                               S        Sn     18 44 16.4 -3.9
      baz=54
MNTX  Cornudas Mount     8.12 238           Pn     18 42 47.8 -0.3
833A  Chaparral WMA,     8.12 193  Sb       Sg     18 45 02.0 -8.3
      baz=12
LENM  Lemitar            8.20 258           Pn     18 42 49.4 +0.1
SMCO  Snowmass           8.20 294           Pn     18 42 50.6 +1.1
SMCO                               IAmb_Lg         18 45 30.3
      comp=Z,105nm,0.9s
L42A  Oliver, Polo       8.23  44           Pn     18 42 49.5  0.0
V48A  Smith Brothers     8.50  91  IAmb_Lg         18 45 30.1
      comp=Z,77nm,0.8s
JFWS  Jewell Farm        8.57  37  P        Pn     18 42 54.8 +0.5
      baz=221
JFWS  Jewell Farm        8.57  37           Pn     18 42 53.9 -0.3
JFWS                               IAmb_Lg         18 45 27.1
      comp=Z,148nm,0.7s
P46A  Rosedale           8.64  64  IAmb_Lg         18 45 19.8
      comp=Z,136nm,1.0s
TX31  Lajitas Ar. Si     8.75 220           Pn     18 42 56.8  0.0
TX32  Lajitas Array      8.75 220           Pn     18 42 56.3 -0.6
TXAR  Lajitas Array      8.75 220  Pn       Pn     18 42 55.2 -1.7
      comp=Z,0.3nm,0.3s,baz=48,slow=11,SNR=17
TXAR                               Pg       Pg     18 43 18.5  -19
      comp=Z,1.0nm,0.3s,baz=38,slow=12,SNR=5.8
TXAR                               Lg       Lg     18 45 23.4
      comp=Z,3.2nm,0.3s,baz=47,slow=28,SNR=12
TXAR  Lajitas Array      8.75 220           Pn     18 42 56.7 -0.2
CLTN  Cedars of Leba     8.87  88  IAmb_Lg         18 45 43.5
      comp=Z,80nm,1.1s
WCI   Wyandotte Cave     8.98  74  P        Pn     18 43 01.4 +1.5
      baz=261
WCI                                S        Sn     18 44 40.6 -0.9
      baz=261
WCI   Wyandotte Cave     8.98  74           Pn     18 42 60.0  0.0
WCI                                IAmb_Lg         18 45 36.1
      comp=Z,101nm,0.8s
SFIN  Lafayette          9.00  60  IAmb_Lg         18 45 39.1
      comp=Z,94nm,0.7s
BLO   Bloomington        9.01  68           Pn     18 43 01.2 +1.0
MVCO  Mesa Verde         9.04 279  Pn       Pn     18 43 03.4 +2.5
MVCO                               IAmb_Lg         18 45 41.6
      comp=Z,83nm,0.9s
LRAL  Lakeview Retre     9.08 108  S        Sn     18 44 40.0 -3.8
      baz=294
LRAL  Lakeview Retre     9.08 108  Pn       Pn     18 43 00.4 -0.8
I40A  Norwalk            9.16  32           Pn     18 43 02.2 -0.1
I40A                               IAmb_Lg         18 46 00.9
      comp=Z,84nm,0.9s
HQIL  Hanson Quary C     9.18  50  IAmb_Lg         18 45 52.5
      comp=Z,110nm,0.9s
PV01  Paradox Valley     9.19 285  IAmb_Lg         18 45 54.3
      comp=Z,95nm,1.2s
Y49A  Blount Mountai     9.24 102  IAmb_Lg         18 45 41.8
      comp=Z,102nm,1.2s
U49A  Red Boiling Sp     9.29  85  IAmb_Lg         18 45 44.0
      comp=Z,81nm,1.2s
SWET  Sewanee            9.30  93  IAmb_Lg         18 45 52.6
      comp=Z,68nm,0.9s
PV02  Paradox Valley     9.33 285  IAmb_Lg         18 45 56.6
      comp=Z,83nm,1.0s
RSSD  Black Hills        9.38 329  P        Pn     18 43 06.8 +1.3
      baz=144
RSSD  Black Hills        9.38 329           Pn     18 43 06.3 +0.8
RSSD                               IAmb_Lg         18 46 14.0
      comp=Z,79nm,0.8s
PV13  Radium Mtn., P     9.39 285  IAmb_Lg         18 45 55.9
      comp=Z,89nm,0.9s
PV12  Saucer Basin,      9.39 286  Pn       Pn     18 43 05.7  0.0
PV12                               IAmb_Lg         18 46 05.1
      comp=Z,105nm,0.9s
PV03  Paradox Valley     9.42 286  IAmb_Lg         18 46 05.0
      comp=Z,94nm,1.2s
RWWY  Rawlins            9.42 308  IAmb_Lg         18 46 04.3
      comp=Z,104nm,0.8s
121A  Cookes Peak, D     9.44 250  IAmb_Lg         18 46 12.8
      comp=Z,87nm,1.2s
O20A  White River Ci     9.44 297  IAmb_Lg         18 46 07.0
      comp=Z,116nm,1.2s
K43A  Burlington         9.44  44  Pn       Pn     18 43 05.7 -0.5
K43A                               IAmb_Lg         18 46 12.1
      comp=Z,144nm,0.8s
PV11  David Mesa, Pa     9.45 286  Pn       Pn     18 43 06.8 +0.3
PV11                               IAmb_Lg         18 45 58.5
      comp=Z,129nm,0.9s
PV17  East Wray Mesa     9.51 286  IAmb_Lg         18 46 18.3
      comp=Z,66nm,1.2s
PV20  West Nyswonger     9.53 286  IAmb_Lg         18 46 06.7
      comp=Z,108nm,1.3s
K22A  Casper             9.56 315  IAmb_Lg         18 46 04.7
      comp=Z,122nm,0.8s
SPMN  Marine on St.      9.56  19  S        Sn     18 44 52.8 -2.9
      baz=202
SPMN  Marine on St.      9.56  19           Pn     18 43 07.1 -0.7
SPMN                               IAmb_Lg         18 46 03.4
      comp=Z,113nm,0.9s
PV23  Carpenter Ridg     9.58 287  IAmb_Lg         18 46 08.6
      comp=Z,102nm,0.9s
F33A  5 Mile Ranch,      9.59   4           Pn     18 43 07.2 -1.0
PV05  Paradox Valley     9.59 284  IAmb_Lg         18 45 56.4
      comp=Z,131nm,1.3s
W50A  Signal Mountai     9.80  93  IAmb_Lg         18 46 07.6
      comp=Z,97nm,0.8s
P48A  Milroy             9.91  68           Pn     18 43 11.0 -1.5
P48A                               IAmb_Lg         18 46 06.3
      comp=Z,75nm,0.9s
BRAL  Brewton            9.93 118           Pn     18 43 13.8 +0.9
I42A  Draeger Farm,      9.95  38  Pn       Pn     18 43 12.2 -0.8
I42A                               IAmb_Lg         18 46 13.8
      comp=Z,104nm,0.9s
F36A  Milaca             9.99  15  Pn       Pn     18 43 11.3 -2.4
F36A                               IAmb_Lg         18 46 04.0
      comp=Z,91nm,0.9s
N47A  Urbana            10.18  60  Pn       Pn     18 43 16.0 -0.2
CPCT  Cooper Cave       10.40  91  Pn       Pn     18 43 18.6 -0.8
G40A  Rib Lake          10.47  29  Pn       Pn     18 43 19.8 -0.4
V51A  Loudon            10.49  89  Pn       Pn     18 43 20.2 -0.3
R50A  Paris             10.53  75  Pn       Pn     18 43 20.3 -0.7
O49A  Covington         10.91  65  Pn       Pn     18 43 25.7 -0.7
H43A  Windswept, Lux    10.94  39  Pn       Pn     18 43 26.3 -0.3
TKL   Tuckaleechee C    10.98  89  Pn       Pn     18 43 29.5 +2.3
      comp=Z,0.3nm,0.3s,baz=312,slow=14,SNR=1.4
TKL                                Sn       Sn     18 45 28.8 -1.6
      comp=Z,0.4nm,0.3s,baz=18,slow=20,SNR=3.7
TKL                                Lg       Lg     18 46 31.8
      comp=Z,2.1nm,0.3s,baz=0.0,slow=20,SNR=14
TKL                                LR       LR     18 46 54.5
      comp=Z,45nm,20.7s,baz=18,slow=33
S51A  Beattyville       11.05  79           Pn     18 43 27.2 -0.9
E38A  The Farm, Brul    11.18  21  Pn       Pn     18 43 28.9 -1.1
N49A  Columbus Grove    11.26  62  Pn       Pn     18 43 29.1 -1.9
Q51A  Peebles           11.39  72  Pn       Pn     18 43 33.1 +0.2
BW06  Boulder Array     11.47 308  Pn       Pn     18 43 33.3 -0.9
PD31  Pinedale Array    11.47 308           Pn     18 43 31.5 -2.7
PDAR  Pinedale Array    11.47 308  Pn       Pn     18 43 34.3 +0.2
      comp=Z,0.2nm,0.3s,baz=119,slow=15,SNR=7.6
PDAR                               Pg              18 44 17.3
      comp=Z,0.5nm,0.3s,baz=113,slow=15,SNR=4.6
PDAR                               Lg       Lg     18 46 49.0
      comp=Z,1.0nm,0.3s,baz=109,slow=27,SNR=5.4
PDAR                               LR       LR     18 47 58.0
      comp=Z,57nm,21.1s,baz=122,slow=37
L48A  N Adams           11.48  57           Pn     18 43 32.2 -1.8
F42A  Maple Grove Fa    11.72  33  Pn       Pn     18 43 37.2 -0.1
ACSO  Alum Creek Sta    11.92  66           Pn     18 43 38.0 -2.2
AGMN  Agassiz Nation    12.06   5  P        Pn     18 43 39.2 -2.7
      baz=186
AGMN  Agassiz Nation    12.06   5           Pn     18 43 38.5 -3.5
Q52A  Bidwell           12.21  73  Pn       Pn     18 43 43.5 -0.6
B35A  Bob, Littlefor    12.36  11           Pn     18 43 43.3 -2.8
R53A  Hurricane         12.39  76           Pn     18 43 46.1 -0.4
EYMN  Ely               12.43  18  Pn       Pn     18 43 44.5 -2.5
P52A  Corning           12.43  70  Pn       Pn     18 43 46.0 -1.1
N51A  Ashland           12.56  64           Pn     18 43 48.0 -0.8
D41A  Chassel           12.59  28  Pn       Pn     18 43 47.5 -1.7
Q53A  Leroy             12.78  74  P        Pn     18 43 51.4 -0.4
      baz=263
S54A  Dingess, Beckl    12.86  78  Pn       Pn     18 43 53.3 +0.3
JSC   Jenkinsville      13.25  94           Pn     18 43 56.8 -1.5
ULM   Lac du Bonnet     14.01   4  Pn       Pn     18 44 03.9 -4.6
      comp=Z,0.8nm,0.3s,baz=185,slow=12,SNR=13
ULM                                Sn       Sn     18 46 32.4  -12
      comp=Z,0.8nm,0.3s,baz=233,slow=20,SNR=3.0
ULM                                Lg       Lg     18 48 04.2
      comp=Z,0.4nm,0.3s,baz=263,slow=11,SNR=7.5
EGMT  Eagleton          14.92 326  Pn       Pn     18 44 19.0 -2.1
M55A  Ridgway           15.33  65           Pn     18 44 22.1 -4.4
M56A  Emporium          15.76  65  Pn       Pn     18 44 27.2 -5.0
SSPA  Standing Stone    15.81  68  Pn       Pn     18 44 28.8 -3.9
SADO  Sadowa            16.18  53  Pn       Pn     18 44 36.8 -0.7
      comp=Z,0.1nm,0.3s,baz=266,slow=16,SNR=2.1
SADO                               Lg       Lg     18 49 12.4
      comp=Z,0.6nm,0.3s,baz=342,slow=20,SNR=4.2
SADO                               LR       LR     18 51 00.8
      comp=Z,103nm,21.1s,baz=312,slow=38
LPIG  La Paz            16.52 226  LR       LR     18 51 11.8
      comp=Z,66nm,20.2s,baz=30,slow=38
NVAR  Mina Array Bea    16.84 284  Pn       P      18 44 48.4 -0.1
      comp=Z,0.1nm,0.3s,baz=93,slow=9.6,SNR=2.6
F10A  Beach Ranch, E    17.83 309  P        Pn     18 44 59.3 +0.9
TEIG  Tepich            17.84 151  LR       LR     18 52 59.0
      comp=Z,58nm,18.7s,slow=41
FFC   Flin Flon         18.73 352  P        P      18 45 09.8 +0.9
NEW   Newport           18.88 316  LR       LR     18 53 26.8
      comp=Z,122nm,20.3s,baz=78,slow=40
CMIG  Matias Romero     19.23 173  LR       LR     18 54 51.0
      comp=Z,29nm,18.0s,baz=358,slow=44
BBB   Bella Bella       26.94 316  LR       LR     18 57 30.4
      comp=Z,71nm,18.4s,baz=37,slow=37
YKA   Yellowknife Ar    28.37 343  P        P      18 46 44.6 +0.3
      comp=Z,0.3nm,0.7s,baz=137,slow=9.4,SNR=4.4
DLBC  Dease Lake        30.85 326  LR       LR     19 00 20.3
      comp=Z,120nm,19.2s,baz=350,slow=38
ILAR  Eielson Array     40.82 330  P        P      18 48 33.9 +2.2
      comp=Z,1.0nm,0.6s,baz=107,slow=7.1,SNR=11
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*NEIC **07** 18:40:54.4±1.7, 17°.83S±0°.08×168°.75E±0°.09, h228^{km}±4^{km}, mb4.8/26, Error ellipse: s-maj=12.9km s-min=10.3km az=129.0*

*IDC **07** 18:40:55.8±1.7, 17°.90S×168°.79E, h243^{km}±21^{km}, mb3.7/11, mb1 3.9/13, mb1mx3.7/31, mbtmp4.3/13, Error ellipse: s-maj=33.3km s-min=11.6km az=145.0*

ISC 07 18:40:56.1±0.5, **17°.92S**±0°.08×**168°.83E**±0°.08, **h250**^{km}, **n59**, σ1^{s}**04**/58, **mb4.5**/20, **1C, Vanuatu Islands**

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Code  Station Name        Δ°   AZ°   Phase ID         Time      Res
                                   Op       ISC     h  m  s    ISC
SANVU Saraoutou          2.91 327           Pn     18 41 43.2 -4.4
DZM   Mont Dzumac        4.70 208  P        Pn     18 42 06.3 -1.9
      13nm,0.3s,baz=61,slow=7.2,SNR=63
DZM                                S        S      18 43 05.8 +0.1
      5.1nm,0.3s,baz=5.7,slow=10,SNR=3.4
DZM   Mont Dzumac        4.70 208           Pn     18 42 05.8 -2.5
MSVF  Nonsavu            8.79  90  P        Pn     18 42 59.2 -0.3
      1.8nm,0.3s,baz=259,slow=11,SNR=28
MSVF  Nonsavu            8.79  90           Pn     18 42 59.4 -0.1
HNR   Honiara           12.07 313  Pn       Pn     18 43 36.0 -4.6
FUNA  Funafuti          13.75  49  P        P      18 44 02.3 +0.2
OUZ   Omahuta           17.74 167  P        P      18 44 46.2 +0.4
OUZ                                IAmb     IAmb   18 44 55.3
      comp=Z,66nm,1.8s
EIDS  Eidsvold          18.07 243  P        P      18 44 49.2 -0.3
EIDS                               IAmb     IAmb   18 45 00.3
      comp=Z,36nm,1.6s
TARA  Tarawa            19.58  12  P        P      18 45 01.3 -4.4
ARMA  Armidale          19.99 228  P        P      18 45 11.1 +1.0
ARMA                               IAmb     IAmb   18 45 38.2
      comp=Z,33nm,1.8s
NIUE  Niue              20.18  97  P        P      18 45 13.3 +1.2
CTAO  Charters Tower    21.45 261  P        P      18 45 25.4 +0.3
CTAO                               IAmb     IAmb   18 45 28.1
      comp=Z,97nm,1.9s
BKZ   Black Stump Fm    22.19 164  P        P      18 45 32.5 +0.7
BKZ                                IAmb     IAmb   18 46 27.0
      comp=Z,41nm,1.5s
COEN  Coen              24.97 275  P        P      18 45 57.6 +0.4
STKA  Stephens Creek    28.24 235  P        P      18 46 27.4 +1.2
      comp=Z,3.7nm,0.5s,baz=68,slow=7.8,SNR=15
STKA  Stephens Creek    28.24 235  P        P      18 46 26.6 +0.4
WR0   Warramunga Arr    32.46 261  P        P      18 47 02.8 -0.7
WB0   Warramunga Arr    32.61 261  P        P      18 47 04.2 -0.5
WB2   Warramunga Arr    32.64 261  P        P      18 47 04.3 -0.7
WRA   Warramunga Arr    32.65 261  P        P      18 47 04.3 -0.8
      comp=Z,1.3nm,0.5s,baz=80,slow=6.1,SNR=46
WRA   Warramunga Arr    32.65 261  P        P      18 47 03.4 -1.7
BBOO  Buckleboo         32.95 237  P        P      18 47 08.2 +0.6
BBOO                               IAmb     IAmb   18 48 10.6
      comp=Z,26nm,1.6s
AS31  Alice Springs     33.09 254  P        P      18 47 08.2 -0.6
AS31                               IAmb     IAmb   18 47 09.5
      comp=Z,6.8nm,0.5s
ASAR  Alice Springs     33.09 254  P        P      18 47 08.9 +0.1
      comp=Z,10nm,0.5s,baz=84,slow=8.6,SNR=404
ASAR                               S        S      18 52 09.0 -0.2
      comp=Z,0.5nm,0.9s,baz=84,slow=18,SNR=4.0
ASAR  Alice Springs     33.09 254  P        P      18 47 08.1 -0.8
MTN   Manton Dam        36.65 272  P        P      18 47 40.3 +1.0
MTN                                IAmb     IAmb   18 47 57.8
      comp=Z,17nm,1.3s
FORT  Forrest           39.07 243  P        P      18 47 59.6 +0.3
FORT                               IAmb     IAmb   18 48 14.8
      comp=Z,21nm,1.0s
FITZ  Fitzroy Crossi    41.00 263  P        P      18 48 15.8 +0.6
MJAR  Matsushiro Arr    61.41 332  P        P      18 50 45.9 -0.2
      comp=Z,4.2nm,0.8s,baz=163,slow=7.3,SNR=12
MJAR  Matsushiro Arr    61.41 332  P        P      18 50 45.5 -0.6
MAJO  Matsushiro        61.41 332  P        P      18 50 46.4 +0.4
MAJO                               IAmb     IAmb   18 51 26.6
      comp=Z,38nm,1.8s
MJB9  Matsu-Tunnel      61.42 332  P        P      18 50 45.8 -0.3
JSD   Sado              62.64 333  P        P      18 50 54.9 +0.8
JSD                                IAmb     IAmb   18 52 45.0
      comp=Z,44nm,1.4s
JTM   Tenmabayashi      63.85 337  P        P      18 51 01.8 -0.2
JKA   Kamikawa-asahi    66.24 340  P        P      18 51 18.2 +0.9
JKA                                IAmb     IAmb   18 52 08.5
      comp=Z,36nm,1.3s
PEA0B Petropavlovsk-    71.39 353  P        P      18 51 48.7 -0.1
PEA0B                              IAmb     IAmb   18 51 51.4
      comp=Z,61nm,1.6s
PETK  Petropavlovsk-    71.39 353  P        P      18 51 49.5 +0.8
      comp=Z,1.2nm,0.5s,baz=131,slow=7.5,SNR=8.8
PETK  Petropavlovsk-    71.39 353  P        P      18 51 48.6 -0.1
CMAR  Chiang Mai Arr    77.61 294  P        P      18 52 27.4 +2.1
      comp=Z,0.5nm,0.9s,baz=138,slow=5.6,SNR=3.0
SONM  Songino Array     85.94 323  P        P      18 53 08.7 +0.6
      comp=Z,1.0nm,0.7s,baz=156,slow=6.4,SNR=8.9
SONM  Songino Array     85.94 323  P        P      18 53 08.1 -0.1
SYO   Syowa Base        86.08 196⇑ePcP      P      18 53 07.6 -0.7
YBH   Yreka Blue Hor    86.63  44  P        P      18 53 13.1 +1.5
      comp=Z,1.1nm,0.5s,baz=243,slow=11,SNR=1.9
YBH   Yreka Blue Hor    86.63  44  P        P      18 53 12.4 +0.9
NVAR  Mina Array Bea    88.23  49  P        P      18 53 20.4 +1.0
      comp=Z,0.2nm,0.4s,baz=248,slow=4.8,SNR=1.8
ILAR  Eielson Array     89.10  17  P        P      18 53 21.4 -1.2
      comp=Z,0.9nm,0.7s,baz=240,slow=4.7,SNR=9.1
YKA   Yellowknife Ar    99.68  27  P        Pdif   18 54 11.5 +0.6
      comp=Z,0.6nm,0.6s,baz=245,slow=4.1,SNR=10
MKAR  Makanchi Array   100.53 316  P        Pdif   18 54 16.6 +1.5
      comp=Z,0.2nm,0.6s,baz=101,slow=5.1,SNR=2.4
ARCES ARCESS Array B   123.70 345  PKP      PKPdf  18 59 22.4 -1.0
      comp=Z,8.4nm,1.0s,baz=41,slow=2.9,SNR=3.6
SOKA  Soboth           144.09 329  i P      PKPab  19 00 00.9 +0.5
      comp=Z,1.3nm,0.5s
OBKA  Obir             144.45 329  eP       PKPab  19 00 01.0 -0.7
      comp=Z,2.0nm,0.7s
KBA   Koelnbreinsper   144.62 331  eP       PKPab  19 00 02.1 -0.3
      comp=Z,2.6nm,0.7s
MYKA  Terra Mystica    144.80 330  i P      PKPbc  19 00 02.6 -0.3
      comp=Z,1.3nm,0.3s
ABTA  Abfaltersbach    145.25 331  i P      PKPdf  19 00 04.5 +0.4
      comp=Z,4.6nm,0.9s
WTTA  Wattenberg       145.25 332  i P      PKPdf  19 00 04.2  0.0
      comp=Z,0.9nm,0.5s
MOTA  Moosalm          145.43 333  i P      PKPdf  19 00 04.8 +0.4
      comp=Z,0.8nm,0.5s
SQTA  Sankt Quirin     145.47 333  i P      PKPbc  19 00 05.3 +0.3
      comp=Z,1.8nm,0.6s
FETA  Feichten         145.84 333  eP       PKPbc  19 00 06.0 -0.1
      comp=Z,2.5nm,0.6s
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*NIC **07** 18:45:36.9±0.0, 35°.26N×32°.24E, h22^{km}, Ml2.8/6*

*ISK **07** 18:45:37.7, 35°.26N×32°.33E, h13^{km}, ML2.3/10*

*DDA **07** 18:45:37.6, 35°.36N×32°.16E, h8^{km}±1^{km}, ML1.6*

ISC 07 18:45:38.2±1.1, **35°.30N**±0°.03×**32°.33E**±0°.05, **h9**^{km}±9^{km}, **n22**, σ1^{s}**17**/36, **Cyprus region**

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Code  Station Name        Δ°   AZ°   Phase ID         Time      Res
                                   Op       ISC     h  m  s    ISC
ALFC  Alefka             0.26 123  P        Pg     18 45 44.3 +0.8
ALFC                               S        Sg     18 45 49.1 +2.2
ALFC                               AML      AML    18 45 49.2
      4.4nm,0.1s
ALFC                               AML      AML    18 45 49.2
      4.4nm,0.1s
ALFC                               AML      AML    18 45 49.3
      6.7nm,0.2s
ALFC                               AML      AML    18 45 49.3
      6.7nm,0.2s
AKMS  Akamas             0.28 180  P        Pg     18 45 43.4 -0.4
AKMS                               S        Sg     18 45 47.5 -0.1
AKMS                               AML      AML    18 45 48.3
      1.8nm,0.2s
AKMS                               AML      AML    18 45 48.3
      1.8nm,0.2s
AKMS                               AML      AML    18 45 48.9
      2.6nm,0.1s
AKMS                               AML      AML    18 45 48.9
      2.6nm,0.1s
LEF   Lefka              0.49 111  PG       Pg     18 45 46.9 -0.8
LEF                                SG       Sg     18 45 53.7 -0.5
AKDN  Akdeniz- Kıbrı     0.52  90  PG       Pb     18 45 49.3 -0.1
NATA  Nata               0.55 159  P        Pg     18 45 47.5 -1.4
NATA                               S        Sg     18 45 56.5 +0.3
NATA                               AML      AML    18 45 58.1
      3.6nm,0.7s
NATA                               AML      AML    18 45 58.1
      3.6nm,0.7s
NATA                               AML      AML    18 45 59.6
      6.4nm,0.3s
NATA                               AML      AML    18 45 59.6
      6.4nm,0.3s
SZAC  Souni              0.70 140  P        Pg     18 45 50.6 -1.2
SZAC                               S        Sg     18 46 01.6 +0.6
SZAC                               AML      AML    18 46 01.9
      1.7nm,0.4s
SZAC                               AML      AML    18 46 01.9
      1.7nm,0.4s
SZAC                               AML      AML    18 46 02.4
      1.8nm,0.3s
SZAC                               AML      AML    18 46 02.4
      1.8nm,0.3s
CSS   Mathiatis          0.88 112  PG       Pg     18 45 54.5 -0.7
CSS                                SG       Sb     18 46 07.8 +0.2
CSS   Mathiatis          0.88 112  P        Pg     18 45 54.7 -0.5
CSS                                AML      AML    18 46 08.5
      0.1nm,0.3s
CSS                                AML      AML    18 46 12.2
      0.2nm,0.5s
ASGA  Asgata             0.91 124  P        Pg     18 45 54.5 -1.2
ASGA                               S        Sb     18 46 08.2 -0.1
ASGA                               AML      AML    18 46 10.2
      1.0nm,0.3s
ASGA                               AML      AML    18 46 10.2
      1.0nm,0.3s
GAZI  Gazipasa           0.94 359  PG       Pg     18 45 56.8 +0.6
GAZI                               SG       Sb     18 46 10.8 +1.7
GAZI  Gazipasa           0.94 359  i P      Pg     18 45 55.9 -0.3
GAZI                               IAML            18 46 13.0
      comp=N,31nm,0.4s
TEKE  Tekeli-Mersin      1.05  37  PN       Pb     18 45 58.5 -0.1
TEKE                               SN       Sn     18 46 14.6 +0.7
BERE  Bereket-Mersin     1.27  34  PN       Pb     18 46 01.6 -0.8
BERE                               SN       Sn     18 46 20.1 +0.6
AKKU  Akkuyu-Mersin      1.31  49  PN       Pb     18 46 02.2 -0.8
AKKU                               SN       Sn     18 46 20.7 +0.5
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ERMK	**Ermenek**	1.42	19	*i* P	Pb	18 46 04.9	0.0
ERMK				IAML		18 46 31.0	
	comp=N,10nm,0.3s						
IKL	**Isikli**	1.45	49	PN	Pn	18 46 05.1	+0.6
IKL				SN	Sn	18 46 23.7	+0.2
TEVE	**Tevekalti-Mers**	1.45	38	PN	Pn	18 46 05.2	+0.6
KEBE	**Keben-Mersin**	1.60	44	PN	Pb	18 46 07.3	-0.7
KEPZ	**Antalya-Kepez**	1.71	340	*i* P	Pn	18 46 07.3	-0.8
KEPZ				*i* S	Sn	18 46 30.5	+0.4
KEPZ				IAML		18 46 39.0	
	comp=E,7.9nm,0.4s						
KEPZ				IAML		18 46 40.0	
	comp=N,11nm,0.3s						
KIZK	**Mersin**	1.89	51	PN	Pn	18 46 10.7	+0.2
KKBE	**Karaman, Kazim**	1.98	14	*i* P	Pb	18 46 14.1	-0.4
KKBE				*i* S	Sg	18 46 41.8	0.0
KKBE				IAML		18 46 43.0	
	comp=E,8.3nm,0.6s						
KKBE				IAML		18 46 50.0	
	comp=N,5.9nm,0.5s						
KERG	**Konya-Eregli**	2.56	34	*i* P	Pn	18 46 21.9	+1.9
KERG				*i* S	Sg	18 46 56.0	-4.5

ROM ***07*** *18:46:21.4±0.3, 44°.53N±0°.01×6°.67E±0°.02, h7^{km}±1^{km}, ML2.0/6, Error ellipse: s-maj=1.5km s-min=0.7km az=217.0*

STR ***07*** *18:46:22.4±0.2, 45°N±1°×°±°, h8^{km}, MLv2.0/6, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/alpes_taup-2.11 preliminary*

LDG ***07*** *18:46:22.6±0.1, 44°.55N×6°.70E, h2^{km}, Md2.5/2, Ml2.4/19, Error ellipse: s-maj=1.3km s-min=0.9km az=72.0*

ISC 07 18:46:23.0±0.9**, 44°.55N**±0°.01×**6°.75E**±0°.02**, h18**^{km}±2^{km}**, n64,** σ**1**^{s}**47**/116**, 1C, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OGAG	**Argentiere**	0.17	239	Pg	Pb	18 46 27.6	+0.6
OGAG				Sg	Sg	18 46 31.7	+0.9
MBDF	**Montbardon**	0.18	5	*e*Pg	Pb	18 46 26.6	-0.8
MBDF				*e*Sg	Sb	18 46 29.8	-0.4
	90nm,0.2s						
PZZ	**Stroppo**	0.27	98	P	Pg	18 46 28.7	-0.4
PZZ				S	Sg	18 46 33.6	+0.3
PZZ	**Stroppo**	0.27	98	P	Pg	18 46 28.7	-0.4
PZZ				S	Sg	18 46 33.5	+0.3
PZZ				AML	AML		
	comp=N,1265µm,0.6s						
PZZ				AML	AML		
	comp=E,1350µm,0.1s						
ISO	**Isola**	0.42	149	Pg	Pg	18 46 30.7	-0.9
ISO				Sg	Sg	18 46 36.4	-1.1
BNI	**Bardonecchia**	0.51	355	P	Pg	18 46 32.4	-0.9
BNI				S	Sg	18 46 40.1	-0.1
BNI				AML	AML		
	comp=E,81µm,0.5s						
BNI				AML	AML		
	comp=N,82µm,0.4s						
STV	**Sant Anna di V**	0.51	126	P	Pg	18 46 32.9	-0.4
STV				S	Sg	18 46 40.2	-0.1
STV	**Sant Anna di V**	0.51	126	P	Pg	18 46 32.9	-0.4
STV				S	Sg	18 46 40.1	-0.1
STV				AML	AML		
	comp=N,151µm,0.6s						
STV				AML	AML		
	comp=E,155µm,0.5s						
OGDI	**Digne**	0.54	217	Pg	Pg	18 46 33.5	-0.3
OGDI				Sg	Sg	18 46 40.7	-0.4
OGMO	**Fort Saint-Gob**	0.67	356	Pg	Pb	18 46 35.3	-0.7
OGMO				Sg	Sb	18 46 44.5	-0.5
RSP	**Reno Superiore**	0.71	31	P	Pb	18 46 36.7	0.0
RSP				S	Sb	18 46 46.9	+0.7
RSP	**Reno Superiore**	0.71	31	P	Pb	18 46 36.8	0.0
RSP				S	Sg	18 46 47.7	+1.3
RSP				AML	AML		
	comp=E,95µm,1.5s						
RSP				AML	AML		
	comp=N,113µm,1.2s						
RSP				AML	AML		
	comp=E,96µm,1.3s						
RSP				AML	AML		
	comp=N,83µm,0.5s						
RSP				AML	AML		
	comp=N,83µm,0.5s						
RSP				AML	AML		
	comp=E,96µm,1.3s						
ORIF	**Oris-en-Rattie**	0.72	301	*e*Pg	Pb	18 46 35.0	-2.0
ORIF				*e*Sg	Sb	18 46 43.8	-2.8
	comp=E,27nm,0.2s						
ORIF	**Oris-en-Rattie**	0.72	301	Pg	Pb	18 46 35.1	-2.0
ORIF				Sg	Sb	18 46 44.4	-2.2
ORIF	**Oris-en-Rattie**	0.72	301	P	Pb	18 46 35.1	-2.0
ORIF				S	Sb	18 46 44.5	-2.2
TURF	**col de Turini**	0.73	141	Pg	Pb	18 46 36.9	-0.4
TURF				Sg	Sb	18 46 47.1	+0.1
BLAF	**les Blancs**	0.78	221	Pg	Pb	18 46 36.9	-1.0
BLAF				Sg	Sb	18 46 47.7	-0.5
GDM	**Grand'Maison**	0.80	326	Pg	Pb	18 46 37.0	-1.4
GDM				Sg	Sb	18 46 47.2	-1.7
CALF	**Calern**	0.80	171	Pg	Pb	18 46 38.0	-0.4
CALF				Sg	Sb	18 46 48.4	-0.5
SAOF	**Saorge**	0.81	134	Pg	Pb	18 46 38.3	-0.1
SAOF				Sg	Sb	18 46 48.9	-0.1
SAOF	**Saorge**	0.81	134	⇑P	Pb	18 46 38.4	-0.1
SAOF				S	Sb	18 46 49.2	+0.2
SAOF	**Saorge**	0.81	134	AML	AML		
	comp=N,114µm,0.2s						
SAOF				AML	AML		
	comp=E,107µm,1.6s						
SBF	**Sospel**	0.84	144	*e*Pg	Pb	18 46 38.8	-0.3
SBF				*e*Sg	Sb	18 46 49.7	-0.4
	comp=E,37nm,0.3s						
ESCA	**l'Escarene**	0.84	147	Pg	Pb	18 46 38.9	-0.1
ESCA				Sg	Sb	18 46 50.9	+0.8
MGRO	**Montegrosso**	0.91	123	P	Pb	18 46 40.5	+0.1
MGRO				S	Sb	18 46 52.4	+0.2
MGRO	**Montegrosso**	0.91	123	P	Pb	18 46 40.4	+0.1
MGRO				S	Sb	18 46 53.2	+1.0
MGRO				AML	AML		
	comp=N,90µm,1.6s						
MGRO				AML	AML		
	comp=E,98µm,1.6s						
LPG	**La Plagne**	0.95	0	*e*Pg	Pb	18 46 40.8	-0.3
LPG				*e*Sg	Sb	18 46 53.4	-0.1
	comp=E,18nm,0.3s						
LSD	**Lago del Serru**	0.95	17	P	Pb	18 46 40.6	-0.5
LSD				S	Sb	18 46 53.7	+0.2
LSD				AML	AML		
	comp=E,65µm,0.2s						
LSD				AML	AML		
	comp=N,46µm,0.6s						
LPL	**La Plagne**	0.97	359	*e*Pg	Pb	18 46 41.1	-0.3
LPL				*e*Sg	Sb	18 46 53.9	-0.1
	comp=N,15nm,0.2s						
FRF	**La Foret Royal**	0.99	184	*e*Pg	Pb	18 46 41.0	-0.5
FRF				*e*Sg	Sb	18 46 53.8	-0.3
	comp=N,28nm,0.2s						
SMRF	**Simiane la Rot**	1.02	236	*e*Pg	Pb	18 46 41.7	-0.3
SMRF				*e*Sg	Sb	18 46 55.2	+0.2
	comp=N,19nm,0.2s						
BSTF	**la Bastide-des**	1.03	230	Pg	Pn	18 46 43.0	+0.4
BSTF				Sg	Sg	18 46 57.9	+1.3
IMI	**Imperia**	1.04	127	P	Pb	18 46 42.6	+0.2
IMI				S	Sb	18 46 55.8	0.0
RUSF	**Rustrel**	1.09	237	Pg	Pb	18 46 43.1	-0.2
RUSF				Sg	Sb	18 46 57.6	+0.5
RSL	**Roselend**	1.15	356	Pg	Pn	18 46 44.7	+0.4
ARTF	**Artigues**	1.17	216	Pg	Pn	18 46 44.5	0.0
ARTF				Sg	Sn	18 47 00.6	+0.6
TRAV	**Traversella**	1.20	36	P	Pn	18 46 44.8	-0.1
TRAV				S	Sb	18 47 00.9	+0.5
CIRO	**Champorcher**	1.21	29	P	Pn	18 46 45.7	+0.5
CIRO				S	Sb	18 47 01.0	+0.3
LMR	**La Mourre**	1.22	188	*e*Pg	Pn	18 46 45.5	+0.4
LMR				*e*Sg	Sn	18 47 01.9	+0.7
	comp=N,30nm,0.2s						
OGSM	**Saint Maurice**	1.30	325	Pn	Pn	18 46 46.8	+0.5
OGSM				Sn	Sn	18 47 03.6	+0.5
VIVF	**Saint-Julien-l**	1.51	283	*e*Pn	Pn	18 46 49.0	-0.1
VIVF				*e*Sn	Sn	18 47 08.6	+0.2
	comp=N,4.2nm,0.2s						
OG35	**Corcelles**	1.71	331	Pn	Pn	18 46 53.1	+1.1
CABF	**La Chapelle**	2.12	348	*e*Pn	Pn	18 46 57.3	-0.2
CABF	**La Chapelle**	2.12	348	*e*P	Pn	18 46 59.4	+1.9
CABF	**La Chapelle**	2.12	348	*e*Pg	Pb	18 47 01.8	+1.0
CABF				*e*Sg	Sb	18 47 29.2	+2.4
	comp=N,1.5nm,0.2s						
CHMF	**Charmoille**	2.70	359	Pn	Pn	18 47 06.3	+0.8
SMF	**Signal de Mont**	2.93	317	*e*Pn	Pn	18 47 07.4	-1.2
SMF	**Signal de Mont**	2.93	317	*e*P	Pn	18 47 09.7	+1.1
SMF	**Signal de Mont**	2.93	317	*e*Pg	Pb	18 47 16.2	+1.6
SMF				*e*Sn	Sn	18 47 40.1	-3.2
	comp=N,2.0nm,0.3s						
SMF				*e*Sg	Sb	18 47 53.0	+3.0
	comp=N,2.4nm,0.3s						
AVF	**Avril sur Loir**	3.27	315	*e*Pn	Pn	18 47 12.7	-0.6
AVF	**Avril sur Loir**	3.27	315	*e*P	Pn	18 47 15.3	+2.0
AVF	**Avril sur Loir**	3.27	315	*e*Pg	Pb	18 47 21.8	+1.4
AVF				*e*Sg	Sb	18 48 03.4	+3.5
	comp=N,1.1nm,0.4s						
HINF	**Hinteralfeld**	3.27	1	*e*Pn	Pn	18 47 13.0	-0.4
HINF	**Hinteralfeld**	3.27	1	*e*P	Pn	18 47 15.6	+2.2
HINF				*e*Sn	Sn	18 47 50.0	-1.8
HINF				*e*Sg	Sg	18 48 05.5	-2.6
	comp=N,1.0nm,0.3s						
SSF	**Saint Saulge**	3.39	319	*e*P	Pn	18 47 16.2	+1.3
SSF				*e*Sn	Sn	18 47 52.4	-2.2
	comp=N,0.8nm,0.3s						
SSF				*e*Sg	Sb	18 48 07.3	+4.1
	comp=N,2.0nm,0.4s						
LOR	**Lormes**	3.39	325	*e*Pn	Pn	18 47 14.5	-0.4
	baz=137						
LOR	**Lormes**	3.39	325	*e*P	Pn	18 47 17.2	+2.3
	baz=144						
LOR				*e*Sn	Sn	18 47 52.1	-2.5
LOR				*e*Sg	Sb	18 48 07.7	+4.4
	comp=N,1.5nm,0.3s						
BGF	**Bois d'Agland**	3.40	308	*e*Pn	Pn	18 47 14.1	-1.0
BGF	**Bois d'Agland**	3.40	308	*e*P	Pn	18 47 16.3	+1.2
BGF	**Bois d'Agland**	3.40	308	*e*Pg	Pb	18 47 25.2	+2.6
BGF				*e*Sn	Sn	18 47 52.4	-2.5
	comp=N,4.2nm,0.5s						
BGF				*e*Sg	Sb	18 48 07.8	+4.2
	comp=N,1.7nm,0.2s						
HAU	**Haudompre**	3.47	356	*e*Pn	Pn	18 47 16.0	-0.1
HAU	**Haudompre**	3.47	356	*e*Pg	Pb	18 47 27.0	+3.1
HAU				*e*Sn	Sn	18 47 54.7	-2.0
	comp=N,8.4nm,0.5s						
TCF	**Toulx Ste Croi**	3.64	300	*e*Pn	Pn	18 47 18.2	-0.2
TCF	**Toulx Ste Croi**	3.64	300	*e*P	Pn	18 47 20.8	+2.4
TCF				*e*Sn	Sn	18 47 57.3	-3.5
	comp=N,0.7nm,0.3s						

FUNV ***07*** *18:49:14.4, 10°.36N×62°.86W, h3^{km}, MW3.0*

TRN ***07*** *18:49:18.9, 10°.66N×62°.80W, h3^{km}, MD3.6*

ISC 07 18:49:15.3±1.2**, 10°.41N**±0°.05×**62°.95W**±0°.03**, h13**^{km}±10^{km}**, n18,** σ**1**^{s}**17**/22**, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRUV	**Carupano**	0.38	313	*e*P	Pg	18 49 22.5	-0.6
CRUV				*e*S	Sg	18 49 28.0	-0.3
ORIV	**Oritupano**	1.41	199	*e*P	Pn	18 49 40.1	-0.7
ORIV				*e*S	Sn	18 49 59.2	0.0
TPP	**Pointe-a-Pierr**	1.48	94	*e*P	Pb	18 49 44.5	+1.8
TRN	**Trinidad (W)**	1.54	81	*e*P	Pg	18 49 44.5	-0.4
TRN	**Trinidad (W)**	1.54	81	*e*	Pg	18 49 45.8	+0.9
TRN	**Trinidad (W)**	1.54	81	*e*P	Pg	18 49 45.8	+0.9
PCRV	**Puerto La Cruz**	1.68	262	*e*P	Pn	18 49 45.1	+0.6
PCRV				*e*S	Sn	18 50 07.3	+1.4
TBH	**Brigand Hill**	1.85	88	*e*P	Pg	18 49 50.1	-0.8
GRGR	**Grenville**	2.13	36	*e*P	Pn	18 49 52.2	+1.5
GRGR				*e*S	Sn	18 50 15.6	-1.5
GRGR	**Grenville**	2.13	36	*e*P	Pn	18 49 50.1	-0.6
GRGR				*e*S	Sn	18 50 16.8	-0.3
BOT	**Bacolet**	2.32	71	*e*P	Pb	18 49 56.0	-1.0
GCMP	**Grenada, Carri**	2.54	36	*e*P	Pn	18 49 57.5	+1.1
GCMP				*e*S	Sn	18 50 26.6	-0.7
RIOV	**Rio Grande**	2.58	154	*e*P	Pn	18 49 54.9	-2.1
RIOV				*e*S	Sn	18 50 25.4	-2.8
BIRV	**Birongo**	3.27	271	*e*P	Pn	18 50 06.8	+0.4
BIRV				*e*S	Sn	18 50 44.7	-0.4
SVB	**Belmont**	3.29	30	*e*	Pn	18 50 01.6	-5.1
LUEV	**Luepa**	4.77	162	*e*P	Pn	18 50 24.9	-2.3
LUEV				*e*S	Sn	18 51 17.3	-5.3
TURV	**Turiamo**	4.81	271	*e*P	Pn	18 50 27.7	+0.2
BAUV	**El Baul**	5.23	254	*e*P	Pn	18 50 33.1	-0.2
BAUV				*e*S	Sn	18 51 30.9	-2.7

BJI ***07*** *18:53:24.1±0.0, 3°.76S×135°.75E, h64^{km}, mB5.3/31, mb4.9/53, Ms4.7/12, Ms7 4.4/10*

IDC ***07*** *18:53:24.8±0.6, 3°.46S×135°.66E, h40^{km}±4^{km}, mb4.4/17, mb1 4.5/22, mb1mx4.4/33, mbtmp4.6/22, ML4.5/4, MS3.9/17, Ms1 3.9/17, ms1mx3.7/31, Error ellipse: s-maj=15.3km s-min=10.5km az=59.0*

DJA ***07*** *18:53:25.7±0.3, 3°S±2°×13°6E±°, h39^{km}±3^{km}, M4.8/60, mB5.3/25, mb5.0/60, MLv5.2/12, Mw(mB)4.7/25*

NEIC ***07*** *18:53:25.5±1.6, 3°.44S±0°.07×135°.62E±0°.06, h43^{km}±4^{km}, mb5.2/118, Error ellipse: s-maj=10.2km s-min=9.2km az=209.0*

GCMT ***07*** *18:53:27.5±0.3, 3°.43S±0°.02×135°.76E±0°.03, h36^{km}±1^{km}, MW4.9/58, Moment Tensor Solution. s25,c28; s58,c84; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.84±.19; $M_{\theta\theta}$-2.62±.11; $M_{\phi\phi}$0.78±.13; $M_{r\theta}$0.31±.11; $M_{\theta\phi}$-0.06±.07; $M_{\phi r}$-1.01±.13; Best double couple: $M_0$2.55500×10^{16} NP1:ϕ_s241.00000°, δ49.00000°, λ47.00000°. NP2: ϕ_s116.00000°, δ56.00000°, λ128.00000°. Principal axes: T 2.4690, Plg59.0000°, Azm84.0000°; N 0.1790, Plg31.0000°, Azm273.0000°; P -2.6410, Plg4.0000°, Azm180.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 07 18:53:25.1±0.4**, 3°.48S**±0°.04×**135°.65E**±0°.04**, h36**^{km}±1^{km}**, n357,** σ**1**^{s}**42**/350**, mb5.0**/103**, MS4.0**/17**, 3C-2D, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRPI	**Serui, Papua**	1.71	20	P	Pn	18 53 50.8	-1.6
BAKI	**Biak**	2.32	11	P	Pn	18 54 00.4	-0.4
SMPI	**Sarmi**	3.40	64	P	Pn	18 54 17.4	+1.8
FAKI	**Fak Fak**	3.44	279	Pn	Pn	18 54 16.4	+0.1
FAKI	**Fak Fak**	3.44	279	P	Pn	18 54 16.5	+0.3
GENI	**Genyem**	4.60	79	P	Pn	18 54 34.4	+2.3
SIJI	**Sorong**	5.09	301	Pn	Pn	18 54 37.5	-1.5
	60nm,0.3s,baz=89,slow=11,SNR=330						
SIJI				Sn	Sn	18 55 33.9	-2.7
	171nm,0.3s,baz=108,slow=20,SNR=14						
SIJI				LR	LR	18 57 27.6	
	comp=Z,1µm,18.6s,baz=134,slow=48						
SWI	**Sorong**	5.10	301	P	Pn	18 54 38.7	-0.3
	4.5nm12µm791nm,0.7s						
JAY	**Jayapura**	5.14	79	Pn	Pn	18 54 40.0	+0.4
	6.2nm,0.3s,baz=224,slow=11,SNR=19						
JAY				Sn	Sn	18 55 38.7	+1.0
	baz=221,slow=4.9,SNR=1.0						
JAY	**Jayapura**	5.14	79	P	Pn	18 54 41.6	+2.0
	0.4nm955nm63nm,0.7s						
BNDI	**Bandanaira**	5.82	260	P	Pn	18 54 49.0	0.0
	6.0nm6µm567nm,1.2s						
SAUI	**Saumlaki**	6.22	224	Pn	Pn	18 54 55.9	+1.5
SAUI	**Saumlaki**	6.22	224	P	Pn	18 54 55.2	+0.7
	1.9nm3µm240nm,0.9s						
MSAI	**Masohi**	6.71	271	P	Pn	18 55 01.2	0.0
	0.3nm48nm,0.5s						
MMPI	**Merauke**	6.83	137	P	Pn	18 55 05.9	+3.1
	4.0nm676nm,0.7s						
NLAI	**Namlea**	8.54	271	P	Pn	18 55 24.5	-1.8
	76nm,0.6s						
TNTI	**Ternate**	9.30	297	Pn	Pn	18 55 37.2	+0.5
TNTI	**Ternate**	9.30	297	P	Pn	18 55 37.7	+1.0
	38nm,0.8s						
KDU	**Kakadu**	9.67	199	P	Pn	18 55 41.3	-0.4
	baz=9.6,SNR=122						
KDU				S	Sn	18 57 25.3	-3.9
	baz=9.6						
SANI	**Sanana**	9.76	278	P	Pn	18 55 41.8	-1.2
	1µm120nm,0.9s						
MTN	**Manton Dam**	10.32	205	P	Pn	18 55 51.8	+1.1
	baz=10,SNR=11						
MTN				S	Sn	18 57 37.0	-8.1
	baz=10						
MTN	**Manton Dam**	10.32	205	Pn	Pn	18 55 51.4	+0.7
MANU	**Manus Island**	11.79	83	Pn	Pn	18 56 10.4	-0.5
KMSI	**Cibinong**	12.34	289	P	Pn	18 56 18.9	+0.5
	71nm,0.7s						
COEN	**Coen**	12.79	145	Pn	Pn	18 56 23.9	-0.5
PMG	**Port Moresby**	12.86	118	Pn	Pn	18 56 27.0	+1.6
	2.9nm,0.3s,baz=306,slow=9.7,SNR=14						
PMG				Sn	Sn	18 58 43.0	-4.4
	0.5nm,0.3s,baz=208,slow=19,SNR=1.0						
PMG				LR	LR	19 03 27.2	
	comp=Z,594nm,19.5s,baz=268,slow=47						
PMG	**Port Moresby**	12.86	118	Pn	Pn	18 56 25.3	-0.2
SOEI	**Soe**	12.91	241	Pn	Pn	18 56 25.8	-0.4
SOEI	**Soe**	12.91	241	P	Pn	18 56 25.8	-0.4
	3µm529nm,0.9s						
LUWI	**Luwuk**	13.09	280	Pn	Pn	18 56 25.9	-2.8
LUWI	**Luwuk**	13.09	280	P	Pn	18 56 28.8	+0.1
	1µm95nm,0.9s						
GTOI	**Gorontalo**	13.28	288	P	Pn	18 56 33.5	+2.3
	434nm35nm,0.9s						
BATI	**Baumata**	13.64	240	Pn	Pn	18 56 35.1	-1.1
	21nm,0.3s,baz=90,slow=6.1,SNR=72						
BATI				Sn	Sn	18 59 02.8	-3.8
	3.9nm,0.3s,baz=52,slow=24,SNR=4.2						
BATI	**Baumata**	13.64	240	P	Pn	18 56 35.5	-0.7
	1µm166nm,1.0s						
KNRA	**Kununurra**	13.88	209	Pn	Pn	18 56 43.4	+4.0
APSI	**Ampana**	14.22	280	P	Pn	18 56 44.5	+0.4
	974nm109nm,1.0s						
MRSI	**Marisa**	14.26	286	P	Pn	18 56 44.3	-0.3
	44nm,1.0s						
MMRI	**Maumere**	14.28	248	Pn	Pn	18 56 45.0	+0.1
MMRI	**Maumere**	14.28	248	P	Pn	18 56 45.1	+0.1
	45nm,0.9s						
DAV	**Davao City (W)**	14.52	316	LR	LR	19 03 16.1	
	comp=Z,178nm,18.3s,baz=152,slow=41						
EDFI	**Ende, Flores**	14.83	249	P	Pn	18 56 53.3	+0.9
	21nm,0.8s						
BSSI	**Bau Bau, Buton**	15.33	260	P	Pn	18 56 59.8	+0.8
	19nm,1.0s						
BNSI	**Bone**	15.53	266	P	Pn	18 57 01.9	+0.3
	21nm,0.9s						
TOLI2	**Tolitoli**	15.55	287	Pn	Pn	18 57 01.6	-0.2
BKSI	**Bulukumba**	15.59	263	P	Pn	18 57 00.4	-1.9
	256nm15nm,0.8s						
SPSI	**Sidrap Palu**	15.86	268	P	Pn	18 57 05.5	-0.2
	411nm28nm,1.3s						
KAPI	**Kappang**	15.93	264	Pn	Pn	18 57 05.3	-1.3
	0.9nm,0.3s,baz=107,slow=9.4,SNR=1.4						
KAPI	**Kappang**	15.93	264	Pn	Pn	18 57 04.7	-2.0
MPSI	**Mapaga**	16.19	283	P	Pn	18 57 10.5	+0.4
	540nm27nm,1.1s						
WB0	**Warramunga Arr**	16.23	184	Pn	Pn	18 57 06.5	-4.1
WB0				IAmb	IAmb	18 57 16.0	
	comp=Z,255nm,0.9s						
WRAB	**Tennant Creek**	16.40	184		Pn	18 57 09.0	-3.7
WRAB				IAmb	IAmb	18 57 18.0	
	comp=Z,278nm,0.8s						
WB2	**Warramunga Arr**	16.41	184	Pn	Pn	18 57 08.4	-4.4
WB2				IAmb	IAmb	18 57 18.2	
	comp=Z,311nm,0.9s						
WRA	**Warramunga Arr**	16.41	184	Pn	Pn	18 57 09.1	-3.7
	comp=Z,2.2nm,0.3s,baz=3.9,slow=13,SNR=115						
WRA				Sn	Sn	19 00 04.3	-10
	comp=Z,1.9nm,0.3s,baz=5.2,slow=22,SNR=5.1						
WRA				LR	LR	19 03 58.8	
	comp=Z,1µm,20.5s,baz=0.0,slow=39						
WRA	**Warramunga Arr**	16.41	184		Pn	18 57 08.0	-4.8
WR0	**Warramunga Arr**	16.41	184	Pn	Pn	18 57 09.0	-3.8
WR0				IAmb	IAmb	18 57 18.1	
	comp=Z,220nm,0.8s						
RABL	**Rabaul**	16.49	93	P	Pn	18 57 14.5	+0.6
RABL				IAmb	IAmb	18 57 20.9	
	comp=Z,221nm,1.1s						
WBSI	**Waikabubak, Su**	17.27	248	P	Pn	18 57 24.1	+0.5
	comp=Z,64nm,0.8s						
FITZ	**Fitzroy Crossi**	17.52	213	P	Pn	18 57 24.8	-1.9
	baz=18,SNR=62						
FITZ	**Fitzroy Crossi**	17.52	213	P	Pn	18 57 25.3	-1.4
	comp=Z,1.4nm,0.3s,baz=26,slow=9.6,SNR=65						
FITZ				Sn	Sn	19 00 25.8	-15
	comp=Z,1.9nm,0.3s,baz=119,slow=19,SNR=4.6						
FITZ				LR	LR	19 04 57.7	
	comp=Z,548nm,20.7s,baz=31,slow=40						
FITZ	**Fitzroy Crossi**	17.52	213		Pn	18 57 25.9	-0.8
CNOP	**Candoni, Negro**	18.52	316	*e*P	Pn	18 57 45.8	+6.8
PLAI	**Plampang**	18.54	253	P	P	18 57 37.6	-1.2
	comp=Z,35nm,1.0s						
BKB	**Balikpapan**	18.87	276	P	P	18 57 44.6	+2.2
GUIM	**Jordan**	19.12	317	*e*P	Pn	18 57 58.2	+12
MYLDM	**Lahad Datu**	19.17	297	P	P	18 57 47.6	+1.8
MYLDM				IAmb	IAmb	18 58 07.7	
	comp=Z,94nm,1.1s						
GUMO	**Guam**	19.27	28	LR	LR	19 05 35.6	
	comp=Z,136nm,20.2s,baz=254,slow=38						
KBKI	**Kotabaru**	19.45	270	P	P	18 57 49.2	+0.4
	comp=Z,27nm,0.8s						
CTAO	**Charters Tower**	19.48	149	P	P	18 57 50.4	+1.3
CTAO				IAmb	IAmb	18 57 56.5	
	comp=Z,91nm,1.0s						
AS31	**Alice Springs**	20.13	185		P	18 57 57.6	+1.3
AS31				IAmb	IAmb	18 58 00.7	
	comp=Z,64nm,0.7s						
ASAR	**Alice Springs**	20.14	185	P	P	18 57 57.0	+0.7
	comp=Z,171nm,0.8s,baz=8.9,slow=11,SNR=465						
ASAR				S	S	19 01 32.9	-7.7
	comp=Z,7.9nm,0.7s,baz=2.3,slow=27,SNR=3.5						
ASAR				LR	LR	19 06 14.9	
	comp=Z,2µm,18.6s,baz=9.0,slow=38						
ASAR	**Alice Springs**	20.14	185		P	18 57 57.2	+0.9
BBKI	**Banjar Baru**	20.77	269	P	P	18 58 04.3	+1.1
	comp=Z,52nm,1.3s						
SRBI	**Singaraja**	20.84	256	P	P	18 58 03.3	-0.6
	comp=Z,49nm,1.2s						
MTKI	**Muara Teweh, K**	20.89	276	P	P	18 58 02.8	-1.7
	comp=Z,1µmcomp=Z,24nm,1.4s						
SJMP	**San Jose**	21.43	318	*e*P	P	18 58 13.4	+3.1
BATP	**Bataraza**	21.58	305	*e*P	P	18 58 22.5	+11
KKM	**Kota Kinabalu**	21.59	296	P	P	18 58 12.6	+0.5
BOAC	**Boac**	21.70	321	*e*P	P	18 58 16.4	+3.2
BUSP	**Coron**	21.74	315	*e*P	P	18 58 23.0	+9.5
ENPP	**El Nido**	21.76	312	*e*P	P	18 58 20.1	+6.3
JCNP	**Jose Panganiba**	21.83	324	*e*P	P	18 58 12.0	-2.6
KMMI	**Kalianget**	21.88	260	P	P	18 58 16.6	+1.5
	comp=Z,93nm,1.5s						
LQP	**Lukban**	22.39	322	⇓*e*P	P	18 58 19.4	-1.4
POLP	**Polilio Island**	22.63	323	*e*P	P	18 58 22.7	-0.3
TGY	**Tagaytay City**	22.76	320	*e*P	P	18 58 14.3	-10
LUBP	**Lubang**	22.94	319	*e*P	P	18 58 26.7	+0.3
PSA00	**Pilbara Seismi**	23.65	219	P	P	18 58 33.7	+0.4
PSA00				IAmb	IAmb	18 58 50.1	
	comp=Z,61nm,0.9s						
PSA00	**Pilbara Seismi**	23.65	219	P	P	18 58 33.3	0.0
PSA00				IAmb	IAmb	18 58 49.7	
	comp=Z,28nm,1.0s						
PBKI	**Pangkalan Bun**	23.96	271	P	P	18 58 36.1	-0.2
	comp=Z,111nm,0.9s						
SBUM	**Sibu**	24.15	284		P	18 58 39.3	+1.2
SBUM				IAmb	IAmb	18 58 51.1	
	comp=Z,46nm,1.0s						
QLP	**Quilpie**	24.40	161	P	P	18 58 41.7	+1.5
	baz=24,SNR=43						
STKI	**Sintang**	24.41	278	P	P	18 58 40.0	-0.5
CAUP	**Cauayan**	24.46	326	*e*P	P	18 58 43.5	+2.7
SMPP	**San Manuel, Pa**	24.49	323	*e*P	P	18 58 42.2	+1.0
PATS	**Pohnpei**	24.84	66	P	P	18 58 45.2	+0.9
HNR	**Honiara**	24.84	105	P	P	18 58 43.7	-0.7
	comp=Z,92nm,0.6s,baz=240,slow=4.4,SNR=5.4						
HNR	**Honiara**	24.84	105	P	P	18 58 44.6	+0.2
HNR				IAmb	IAmb	18 58 48.1	
	comp=Z,104nm,0.8s						
UGM	**Wanagama**	25.38	259	P	P	18 58 48.4	-0.9
UGM				IAmb	IAmb	18 59 24.3	
	comp=Z,200nm,1.7s						
KSM	**Kuching**	25.80	281		P	18 58 55.1	+2.0
KSM				IAmb	IAmb	18 59 06.6	
	comp=Z,58nm,1.0s						
RMQ	**Roma**	26.09	152	P	P	18 58 59.0	+3.3
	baz=26,SNR=4.2						
EIDS	**Eidsvold**	26.34	147	P	P	18 58 59.9	+2.1
CISI	**Cisompet, Garu**	27.99	260	P	P	18 59 10.8	-2.1
CISI				IAmb	IAmb	19 00 13.6	
	comp=Z,51nm,1.2s						
FORT	**Forrest**	28.08	194	P	P	18 59 14.4	+1.0
	baz=28,SNR=30						

FORT	Forrest	28.08	194	P	P	18 59 14.4	+1.0
FORT				IAmb	IAmb	18 59 55.4	
	comp=Z,85nm,0.8s						
LEM	Lembang	28.11	262	LR	LR	19 12 41.9	
	comp=Z,120nm,19.5s,baz=312,slow=41						
GIRL	Giralia	28.17	226	P	P	18 59 15.6	+1.4
STKA	Stephens Creek	28.79	169	P	P	18 59 20.1	+0.3
	baz=29,SNR=52						
STKA	Stephens Creek	28.79	169	P	P	18 59 18.9	-0.9
	comp=Z,18nm,0.7s,baz=338,slow=9.4,SNR=51						
STKA				LR	LR	19 11 45.7	
	comp=Z,597nm,20.6s,baz=349,slow=38						
STKA	Stephens Creek	28.79	169	P	P	18 59 20.1	+0.3
BBOO	Buckleboo	29.18	179	P	P	18 59 23.7	+0.5
	baz=29,SNR=14						
BBOO	Buckleboo	29.18	179	P	P	18 59 23.1	0.0
BBOO				IAmb	IAmb	18 59 53.6	
	comp=Z,31nm,1.0s						
CMSA	Cobar Meteorol	29.46	162	P	P	18 59 26.2	+0.5
	baz=30,SNR=9.3						
HTT	Hallett	29.95	175	P	P	18 59 30.9	+0.9
	baz=30,SNR=9.3						
KMBL	Kambalda	30.62	204	P	P	18 59 36.9	+1.0
	baz=31,SNR=6.7						
ARMA	Armidale	30.76	152	P	P	18 59 36.2	-1.1
JOW	Kunigami	30.97	347	LR	LR	19 10 21.4	
	comp=Z,168nm,19.4s,baz=144,slow=33						
JCJ	Chichijima	31.05	11	LR	LR	19 09 16.3	
	comp=Z,174nm,21.4s,baz=202,slow=31						
MYKOM	Kota Tinggi	32.21	279	P	P	18 59 56.8	+6.5
MYKOM				IAmb	IAmb	19 00 02.9	
	comp=Z,30nm,1.0s						
KLBR	Kellerberrin	32.64	209	P	P	18 59 54.9	+1.1
	baz=33,SNR=5.2						
SANVU	Saraoutou	33.26	113		P	19 00 00.6	+1.3
SANVU				IAmb	IAmb	19 00 03.2	
	comp=Z,34nm,0.9s						
ARPS	Mount Arapiles	33.61	171	P	P	19 00 03.6	+1.5
	baz=34,SNR=33						
QIZ	Qiongzhong	33.84	312	P	P	19 00 03.7	-0.7
QIZ				IAmb	IAmb	19 01 12.7	
	comp=Z,89nm,1.6s						
NWAO	Narrogin (SRO)	33.99	208	P	P	19 00 08.7	+3.3
NWAO				IAmb	IAmb	19 00 08.8	
	comp=Z,91nm,1.9s						
CAN	Canberra	34.01	160	P	P	19 00 07.0	+1.3
CAN				IAmb	IAmb	19 00 41.0	
	comp=Z,43nm,1.9s						
SDSI	Sungai Dareh	34.29	273	P	P	19 00 08.6	+0.3
	comp=Z,9.5nm,1.2s						
BKNI	Bangkinang	34.80	276	P	P	19 00 12.1	-0.6
BKNI	Bangkinang	34.80	276	P	P	19 00 12.7	0.0
	comp=Z,946nmcomp=Z,104nm,1.0s						
TOO	Toolangi	35.10	166	P	P	19 00 17.5	+2.4
	baz=35,SNR=4.8						
TOO	Toolangi	35.10	166	P	P	19 00 16.1	+1.0
DZM	Mont Dzumac	35.12	124	P	P	19 00 14.5	-1.1
	comp=Z,11nm,1.0s,baz=333,slow=4.6,SNR=3.8						
DZM	Mont Dzumac	35.12	124	*e*LR	LR	19 09 46.4	
	comp=Z,369nm,24.7s						
DZM	Mont Dzumac	35.12	124	P	P	19 00 15.8	+0.3
IPM	Ipoh	35.49	283		P	19 00 18.6	-0.1
KULM	Kulim	36.03	284	P	P	19 00 22.7	-0.6
KULM				IAmb	IAmb	19 00 38.4	
	comp=Z,59nm,1.8s						
MNSI	Mandailing Nat	36.30	276	P	P	19 00 24.6	-1.1
	comp=Z,12nm,0.7s						
JNU	Nakatsue	36.69	353	P	P	19 00 26.9	-1.7
	comp=Z,30nm,1.2s,baz=211,slow=17,SNR=4.8						
JNU	Nakatsue	36.69	353	P	P	19 00 27.9	-0.8
JNU				IAmb	IAmb	19 01 33.1	
	comp=Z,87nm,1.6s						
JMN	Monobe	37.05	358	P	P	19 00 31.3	-0.4
JMN				IAmb	IAmb	19 01 35.5	
	comp=Z,78nm,1.7s						
TARA	Tarawa	37.56	83	P	P	19 00 36.3	-0.1
TRTT	Trang	37.59	288	P	P	19 00 37.1	+0.4
	comp=Z,23nm,0.9s						
GSI	Gunungsitoli	38.35	276		P	19 00 41.9	-1.2
GSI				IAmb	IAmb	19 00 53.7	
	comp=Z,48nm,1.2s						
GSI	Gunungsitoli	38.35	276	P	P	19 00 42.4	-0.7
	comp=Z,39nm,1.1s						
JHS	Saijyo	38.35	357	P	P	19 00 42.2	-0.6
JWT	Wachi	38.56	360		P	19 00 43.9	-0.6
INU	Inuyama	38.65	2	P	P	19 00 45.4	+0.2
NJ2	Nanjing	38.78	337	*e*P	P	19 00 48.2	+1.9
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.5s						
PHET	Kaeng Krachan	39.30	295	P	P	19 00 52.0	+1.0
	comp=Z,333nmcomp=Z,28nm,1.0s						
MJAR	Matsushiro Arr	39.89	3	P	P	19 00 53.2	-2.4
	comp=Z,3.5nm,0.7s,baz=180,slow=8.7,SNR=15						
MJAR				PcP	PcP	19 03 00.7	-0.1
	comp=Z,3.2nm,0.8s,baz=193,slow=3.1,SNR=6.4						
MJAR				LR	LR	19 14 33.4	
	comp=Z,175nm,21.1s,baz=50,slow=32						
MJAR	Matsushiro Arr	39.89	3	P	P	19 00 53.9	-1.7
MJAR					PcP	19 03 00.8	-0.1
MAJO	Matsushiro	39.89	3	P	P	19 00 54.4	-1.1
MAT	Matsushiro	39.89	3	P	P	19 00 53.5	-2.1
MAT				*e*S	S	19 06 45.8	-12
MJB9	Matsu-Tunnel	39.89	3		PcP	19 02 60.0	-0.9
UTHA	Uthaitani	40.52	299	P	P	19 01 02.3	+1.2
	comp=Z,13nm,0.8s						
GYA	Guiyang	40.89	318	*e*P	P	19 01 03.3	-0.8
GYA				pmax	pmax		
	comp=Z,6.0nm,1.2s						
KSAR	Wonju Array Be	41.35	351	P	P	19 01 07.0	-0.5
KSAR					PcP	19 03 04.8	-0.7
KSRS	Korea Array	41.36	351	P	P	19 01 05.3	-2.3
	comp=Z,3.2nm,0.8s,baz=168,slow=11,SNR=6.4						
KSRS				pP	pP	19 01 18.2	0.0
	comp=Z,4.8nm,1.0s,baz=167,slow=9.4,SNR=6.1						
KSRS				PcP	PcP	19 03 05.6	+0.1
	comp=Z,3.7nm,0.9s,baz=178,slow=3.4,SNR=6.9						
JMM	Marumori	41.42	6	P	P	19 01 08.0	-0.1
JMM				IAmb	IAmb	19 01 13.6	
	comp=Z,25nm,0.8s						
ENH	Enshi	41.86	325	P	P	19 01 10.6	-1.3
CM04	Chiang Mai Arr	42.16	302	P	P	19 01 15.2	+0.6
	comp=Z,57nmcomp=Z,7.3nm,1.0s						
CM09	Chiang Mai Arr	42.17	302	P	P	19 01 15.0	+0.4
	comp=Z,52nmcomp=Z,6.7nm,1.0s						
CM01	Chiang Mai Arr	42.19	302	P	P	19 01 15.9	+1.1
	comp=Z,54nmcomp=Z,5.4nm,1.0s						
CM05	Chiang Mai Arr	42.19	302	P	P	19 01 15.9	+1.1
	comp=Z,37nmcomp=Z,4.9nm,1.0s						
CM02	Chiang Mai Arr	42.20	302	P	P	19 01 15.8	+0.9
	comp=Z,47nmcomp=Z,6.2nm,1.0s						
CM31	Chiang Mai Arr	42.22	302	P	P	19 01 15.4	+0.4
	comp=Z,2µmcomp=Z,144nm,1.2s						
CM31	Chiang Mai Arr	42.22	302	P	P	19 01 14.4	-0.6
CMAR	Chiang Mai Arr	42.22	302	P	P	19 01 14.7	-0.3
	comp=Z,3.3nm,0.9s,baz=128,slow=6.9,SNR=28						
CMAR				PcP	PcP	19 03 09.2	+0.4
	comp=Z,2.1nm,1.1s,baz=110,slow=1.7,SNR=3.4						
CMAR	Chiang Mai Arr	42.22	302	P	P	19 01 13.7	-1.3
CM15	Chiang Mai Arr	42.23	302	P	P	19 01 15.0	-0.1
	comp=Z,45nmcomp=Z,5.6nm,0.8s						
CM13	Chiang Mai Arr	42.23	302	P	P	19 01 15.6	+0.5
	comp=Z,49nmcomp=Z,5.7nm,1.0s						
CMMT	Chiang Mai	42.38	303	P	P	19 01 15.1	-1.2
	comp=Z,3.4nm,1.0s						
CHTO	Chiang Mai	42.38	303	P	P	19 01 14.9	-1.5
KMI	Kunming	42.77	314	⇑P	P	19 01 20.0	+0.4
KMI				pP	pP	19 01 30.8	+0.6
KMI				pmax	pmax		
	comp=Z,7.0nm,1.2s						
KMI				LR	LR		
	comp=Z,210nm,18.1s						
KMI				LR	LR		
	comp=Z,160nm,15.4s						
KMI	Kunming	42.77	314	P	P	19 01 19.4	-0.2
KMI				IAmb	IAmb	19 01 51.9	
	comp=Z,41nm,1.6s						
FUNA	Funafuti	43.57	99	P	P	19 01 25.7	-0.4
MSVF	Nonsavu	43.88	112	P	P	19 01 28.0	-0.6
	comp=Z,12nm,1.0s,baz=271,slow=6.8,SNR=7.2						
MSVF	Nonsavu	43.88	112	P	P	19 01 29.7	+1.1
JTM	Tenmabayashi	44.34	6	P	P	19 01 31.2	-0.5
XAN	Xi'an	45.03	328	P	P	19 01 37.6	+0.1
XAN				pP	pP	19 01 48.7	+0.5
XAN				pmax	pmax		
	comp=Z,24nm,1.2s						
CD2	Chengdu	45.77	321	*e*P	P	19 01 43.6	+0.2
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
BJT	Baijiatuau	46.84	339	P	P	19 01 51.0	-0.6
BJI	Beijing	46.86	339	P	P	19 01 51.2	-0.5
BJI				pmax	pmax		
	comp=Z,7.0nm,0.6s						
OUZ	Omahuta	47.22	137	P	P	19 01 56.1	+1.4
OUZ				IAmb	IAmb	19 02 21.9	
	comp=Z,70nm,1.8s						
USRK	Ussuriysk Ar.	47.58	356	P	P	19 01 56.3	-0.9
	comp=Z,2.4nm,0.7s,baz=190,slow=7.0,SNR=4.0						
USRK	Ussuriysk Ar.	47.58	356	P	P	19 01 56.2	-1.1
ASAJ	Asahikawa	47.79	7	P	P	19 01 58.1	-0.8
	comp=Z,7.5nm,0.8s,baz=234,slow=9.2,SNR=8.5						
JKA	Kamikawa-asahi	47.79	7	P	P	19 01 58.6	-0.3
JKA				IAmb	IAmb	19 03 12.5	
	comp=Z,57nm,1.5s						
CN2	Changchun	47.96	350	*e*P	P	19 02 03.2	+3.0
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
MDJ	Mudanjiang	48.19	354	P	P	19 02 02.0	0.0
MDJ				pmax	pmax		
	comp=Z,25nm,2.6s						
MDJ				pmax	pmax		
	comp=Z,410nm,3.0s						
MDJ	Mudanjiang	48.19	354	P	P	19 02 01.2	-0.8
HHC	Hu-ho-hao-te	49.31	336	*e*P	P	19 02 11.4	+0.6
HHC				pmax	pmax		
	comp=Z,24nm,1.1s						
HHC				pmax	pmax		
	comp=Z,200nm,7.6s						
LZH	Lanzhou	49.33	326	*e*P	P	19 02 12.0	+0.9
LZH				pP	pP	19 02 23.4	+1.6
LZH				pmax	pmax		
	comp=Z,18nm,1.1s						
BTO	Baotou	49.75	334	*e*P	P	19 02 17.5	+3.3
DCZ	Deep Cove	50.07	151	P	P	19 02 17.0	+0.6
NNZ	Nelson	50.56	143	P	P	19 02 18.9	-1.3
THZ	Tophouse	50.62	144	P	P	19 02 21.6	+0.8
THZ				IAmb	IAmb	19 02 52.3	
	comp=Z,71nm,1.7s						
WHZ	Wether Hill Ro	50.77	151	P	P	19 02 21.8	+0.1
LBZ	Lake Benmore	50.83	148	P	P	19 02 21.7	-0.5
RPZ	Rata Peaks	50.84	147	P	P	19 02 20.7	-1.6
TUWZ	Tuamarina	51.03	143	P	P	19 02 24.4	+0.6
BSWZ	Blackbirch Sta	51.16	144	P	P	19 02 24.8	+0.1
SHL	Shillong	51.30	307	P	P	19 02 25.3	-1.0
SHL				IAmb	IAmb	19 02 26.6	
	comp=Z,18nm,0.8s						
BKZ	Black Stump Fm	51.32	139	P	P	19 02 25.8	-0.2
BKZ				IAmb	IAmb	19 03 02.3	
	comp=Z,40nm,1.5s						
ODZ	Otahua Downs	51.52	149	P	P	19 02 29.2	+1.9
KLR	Kul'dur	52.61	357	P	P	19 02 34.8	-0.5
	comp=Z,3.2nm,0.7s,baz=169,slow=5.0,SNR=8.1						
LSA	Lhasa	53.87	311	P	P	19 02 46.5	+1.0
LSA				pmax	pmax		
	comp=Z,18nm,1.1s						
LSA	Lhasa	53.87	311	P	P	19 02 45.9	+0.4
GTA	Gaotai	53.93	326	⇑P	P	19 02 46.2	+0.8
GTA				pP	pP	19 02 57.5	+1.2
GTA				pmax	pmax		
	comp=Z,21nm,0.9s						
GTA				pmax	pmax		
	comp=Z,130nm,5.9s						
GTA				LR	LR		
	comp=Z,220nm,15.6s						
GTA				LR	LR		
	comp=Z,180nm,14.5s						
GTA				LR	LR		
	comp=Z,290nm,15.3s						
ODAN	Odare	55.49	306	*e*P	P	19 02 57.3	+0.2
RAMN	Ramite	56.17	306	*e*P	P	19 03 02.3	+0.4
	comp=Z,80nm,1.1s						
ULN	Ulaanbaatar	56.94	337		P	19 03 06.7	-0.3
GUN	Gumba	57.15	306	*e*P	P	19 03 09.1	+0.1
	comp=Z,49nm,0.8s						
SONM	Songino Array	57.17	337	P	P	19 03 07.8	-0.7
	comp=Z,1.9nm,0.9s,baz=152,slow=6.9,SNR=10						
SONM				pP	pP	19 03 19.7	+0.1
	comp=Z,1.6nm,0.8s,baz=146,slow=6.8,SNR=5.8						
SONM				PcP	PcP	19 04 02.6	-0.3
	comp=Z,1.5nm,0.8s,baz=148,slow=2.3,SNR=5.2						
SONM				LR	LR	19 26 34.7	
	comp=Z,79nm,21.3s,baz=58,slow=35						
SONM	Songino Array	57.17	337		P	19 03 07.3	-1.2
PKI	Pulchoki	57.39	306	*e*P	P	19 03 10.4	-0.3
PKIN	Phulchoki	57.40	306	*e*P	P	19 03 10.3	-0.4
KKN	Kakani	57.58	306	*e*P	P	19 03 12.0	+0.1
DMN	Daman	57.65	306	*e*P	P	19 03 12.4	-0.1
GKN	Gorkha	58.19	306	*e*P	P	19 03 16.1	0.0
DANN	Dangsing	59.04	306	*e*P	P	19 03 22.2	0.0
	comp=Z,29nm,0.6s						
PEA0B	Petropavlovsk-	59.36	15	P	P	19 03 22.8	-0.7
PETK	Petropavlovsk-	59.36	15	P	P	19 03 23.0	-0.6
	comp=Z,5.1nm,0.8s,baz=179,slow=3.9,SNR=5.2						
PETK				PcP	PcP	19 04 10.5	-0.7
	comp=Z,2.9nm,0.7s,baz=174,slow=1.5,SNR=2.7						
PETK				LR	LR	19 27 03.2	
	comp=Z,22nm,20.7s,baz=194,slow=34						
PETK	Petropavlovsk-	59.36	15	P	P	19 03 24.2	+0.6
HYB	Hyderabad	60.02	292	*i* P	P	19 03 28.0	-0.8
WMQ	Urumqi	63.75	323	*e*P	P	19 03 54.3	+0.8
WMQ				pmax	pmax		
	comp=Z,20nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,400nm,7.1s						
WMQ				LR	LR		
	comp=Z,570nm,28.8s						
WMQ				LR	LR		
	comp=Z,1µm,29.1s						
WMQ				LR	LR		
	comp=Z,120nm,20.7s						
WMQ	Urumqi	63.75	323	P	P	19 03 53.1	-0.4
WMQ				IAmb	IAmb	19 04 08.4	
	comp=Z,41nm,1.1s						
MA2	Magadan	63.99	8	P	P	19 03 54.1	-0.5
MA2				IAmb	IAmb	19 03 56.2	
	comp=Z,38nm,1.9s						
YAK	Yakutsk	65.49	357	P	P	19 04 03.2	-1.1
YAK				IAmb	IAmb	19 04 05.3	
	comp=Z,17nm,0.7s						
ZSN	Zaisan	67.42	325	*e*P	P	19 04 16.8	-0.3
	baz=325						
MK31	Makanchi Array	68.57	324	P	P	19 04 23.9	-0.3
MK31				IAmb	IAmb	19 04 39.1	
	comp=Z,24nm,1.3s						
MKAR	Makanchi Array	68.57	324	P	P	19 04 24.5	+0.2
	comp=Z,6.2nm,0.7s,baz=115,slow=7.9,SNR=79						
MKAR				pP	pP	19 04 35.9	+0.5
	comp=Z,6.2nm,0.5s,baz=111,slow=8.1,SNR=11						
MKAR	Makanchi Array	68.57	324	P	P	19 04 24.1	-0.2
SHLS	Shalkode	68.57	319	*e*P	P	19 04 22.7	-1.8
	comp=Z,3.1nm,0.7s,baz=319						
MAKZ	Makanchi	68.76	324		P	19 04 25.3	-0.2
MAKZ				IAmb	IAmb	19 04 40.2	
	comp=Z,29nm,1.2s						
UZB	Uzynbulak	68.86	319	*e*P	P	19 04 25.9	-0.4
	comp=Z,3.4nm,0.9s,baz=319						
KPKS	Kokpek	69.22	319	*e*P	P	19 04 28.2	-0.3
	comp=Z,4.8nm,1.0s,baz=319						
SATY	Saty	69.22	319	*e*P	P	19 04 28.6	0.0
	comp=Z,4.0nm,0.9s,baz=319						
NIL	Nilore	69.36	308	P	P	19 04 27.9	-1.6
NIL				IAmb	IAmb	19 04 42.1	
	comp=Z,19nm,1.0s						
KSH	Kashi	69.42	315	P	P	19 04 31.3	+1.5
KSH				S	S	19 13 39.2	+4.4
KSH				pmax	pmax		
	comp=Z,6.0nm,1.2s						
KSH				pmax	pmax		
	comp=Z,590nm,6.8s						
TDK	Taldyqorghan	70.08	321	*e*P	P	19 04 33.3	-0.4
	comp=Z,5.9nm,0.9s,baz=321						
MDOK	Medeo	70.16	318	*e*P	P	19 04 34.3	-0.1
	baz=318						
TNSS	Tian-Shan	70.18	318	*e*P	P	19 04 35.1	+0.3
	baz=318						
AAA	Alma-Ata	70.27	318	*e*P	P	19 04 35.3	+0.3
	comp=Z,3.9nm,0.7s,baz=318						
CHKK	Chushkaly	70.50	319	*e*P	P	19 04 35.7	-0.5
	baz=319						
ZAA0	Zalesovo Array	71.10	331	P	P	19 04 37.9	-1.7
ZALV	Zalesovo Beam	71.10	331	P	P	19 04 38.7	-0.9
	comp=Z,8.9nm,0.8s,baz=107,slow=5.1,SNR=35						
ZALV				pP	pP	19 04 50.1	-0.8
	comp=Z,6.4nm,0.8s,baz=124,slow=6.2,SNR=6.5						
ZALV	Zalesovo Beam	71.10	331	P	P	19 04 37.8	-1.8
SEM	Semipalatinsk	71.56	326	*e*P	P	19 04 41.4	-1.5
	baz=326						
AAK	Ala-Archa	71.66	317		P	19 04 43.3	-0.2
KURK	Kurchatov	72.62	326	P	P	19 04 48.0	-0.8
KURK				IAmb	IAmb	19 05 03.6	
	comp=Z,27nm,1.5s						
BTLS	Baital	72.90	319	*e*P	P	19 04 50.1	-0.6
	baz=319						
KBL	Kabul	72.96	308	P	P	19 04 50.1	-1.4
DZA	Taraz	73.92	316	*e*P	P	19 04 56.2	-0.5
	baz=316						
PPT2	Papeete2	74.44	107	*e*LR	LR	19 28 02.4	
	comp=Z,79nm,23.0s						
KK31	Karatay Array	74.56	316	P	P	19 05 00.3	-0.1
KK31				IAmb	IAmb	19 05 15.0	
	comp=Z,31nm,1.9s						
KKAR	Karatay Array	74.56	316	P	P	19 05 00.0	-0.4
KKAR	Karatay Array	74.56	316	P	P	19 05 00.2	-0.3
KKAR				IAmb	IAmb	19 05 15.0	
	comp=Z,31nm,1.9s						
IUG	Iuzhnay	74.57	315	*e*P	P	19 04 59.8	-0.8
	baz=315						
KK09	Karatay Array	74.57	316	P	P	19 05 00.1	-0.5
TBI	Tubuai	74.76	113	*e*LR	LR	19 28 04.7	
	comp=Z,86nm,30.5s						
TIXI	Tiksi	75.12	358	P	P	19 05 01.3	-1.8
VNDA	Vanda	75.30	174	LR	LR	19 36 55.3	
	comp=Z,275nm,21.3s,baz=354,slow=35						
BRVK	Borovoye	78.29	326	P	P	19 05 21.0	-0.4
HRA	Herat	78.36	306	P	P	19 05 21.4	-1.0
SDPT	Sand Point	78.38	32	P	P	19 05 21.7	0.0
NRIK	Noril'sk	79.62	344	P	P	19 05 27.2	-1.1
	comp=Z,4.2nm,0.5s,baz=116,slow=5.5,SNR=10.0						
NRIK	Noril'sk	79.62	344	P	P	19 05 27.4	-0.9
CHGN	Chignik	79.82	31	P	P	19 05 29.9	+0.3
MAW	Mawson	80.27	202	LR	LR	19 38 18.9	
	comp=Z,121nm,18.8s,baz=56,slow=34						
ANM	Nome	80.34	22	P	P	19 05 32.8	+0.5
ANM				IAmb	IAmb	19 05 33.9	
	comp=Z,42nm,1.9s						
CHIR	Chirikof Islan	81.11	32	P	P	19 05 37.0	+0.4
SII	Sitkinak Islan	82.11	32	P	P	19 05 42.7	+0.8
GEYT	Alibeck	82.33	309	P	P	19 05 43.2	-0.3
	comp=Z,5.9nm,0.8s,baz=149,slow=3.1,SNR=12						
GEYT	Alibeck	82.33	309	P	P	19 05 43.0	-0.5
GYA0B	ALIBECK ARRAY	82.33	309	P	P	19 05 42.8	-0.7
GYA0B				IAmb	IAmb	19 05 57.4	
	comp=Z,27nm,1.1s						
GYB4	ALIBECK ARRAY	82.35	309	P	P	19 05 42.9	-0.7
GYB4				IAmb	IAmb	19 05 57.5	
	comp=Z,20nm,1.1s						
SOCY	Socotra	82.60	283	P	P	19 05 44.2	-1.2
SOCY				IAmb	IAmb	19 05 45.3	
	comp=Z,13nm,0.7s						
RDOG	Red Dog Mine	82.91	19	P	P	19 05 46.3	+0.5
RDOG				IAmb	IAmb	19 05 47.5	
	comp=Z,25nm,1.1s						
SVW2	Sparrevohn	82.94	27	P	P	19 05 47.2	+1.1
ABKAR	Akbulak array	83.35	320	P	P	19 05 47.4	-1.1
ABKAR	Akbulak array	83.35	320	P	P	19 05 47.9	-0.6
ABKAR				IAmb	IAmb	19 05 48.9	
	comp=Z,18nm,1.6s						
AB08	Akbulak array	83.35	320	P	P	19 05 47.9	-0.6
AB09	Akbulak array	83.36	320	P	P	19 05 47.9	-0.6
TTA	Tatalina	83.40	25	P	P	19 05 48.7	+0.2
TTA				IAmb	IAmb	19 05 49.8	
	comp=Z,14nm,0.8s						
BRLK	Bradley Lake	84.74	29	P	P	19 05 54.3	-1.0
IMAR	Indian Mountai	85.38	23	P	P	19 05 58.1	-0.2
RC01	Rabbit Creek A	85.64	28	P	P	19 05 59.4	-0.4
	baz=255						
MLY	Manley	86.28	24	P	P	19 06 03.1	+0.2
	baz=254						
QSPA	South Pole Qui	86.47	180	P	P	19 06 04.0	0.0
QSPA				IAmb	IAmb	19 06 05.4	
	comp=Z,17nm,0.9s						
RND	Reindeer	86.64	26	P	P	19 06 03.8	-1.0
MCK	McKinley	86.69	26	P	P	19 06 04.4	-0.5
	baz=255						
NEA2	Nenana	86.85	25	P	P	19 06 05.2	-0.5
	baz=255						
I23K	Minto, Yukon-K	86.87	24	P	P	19 06 05.3	-0.5
	baz=255						
I23K	Minto, Yukon-K	86.87	24	P	P	19 06 05.2	-0.5
SCM	Sheep Creek Mo	86.95	28	P	P	19 06 05.1	-1.3
COLD	Coldfoot	87.10	22	P	P	19 06 06.7	-0.2
	baz=254						
COLD	Coldfoot	87.10	22	P	P	19 06 05.5	-1.3
DHY	Denali Highway	87.21	26	P	P	19 06 06.6	-1.1
WRH	Wood River Hil	87.23	25	P	P	19 06 06.7	-0.8
WRH				IAmb	IAmb	19 06 07.6	
	comp=Z,20nm,0.9s						
CCB	Clear Creek Bu	87.39	25	P	P	19 06 07.4	-0.9
CCB				IAmb	IAmb	19 06 08.1	
	comp=Z,18nm,0.8s						
TCOL	CIGO, UAF Yank	87.42	25	P	P	19 06 07.4	-1.1
	baz=256						
TCOL	CIGO, UAF Yank	87.42	25	P	P	19 06 07.1	-1.3
TCOL				IAmb	IAmb	19 06 08.9	
	comp=Z,11nm,0.8s						
COLA	College	87.43	25	P	P	19 06 07.4	-1.0
COLA				IAmb	IAmb	19 06 08.9	
	comp=Z,11nm,0.8s						
M24K	Tolsona, Glenn	87.54	27	P	P	19 06 08.9	-0.2
	baz=258						
M24K	Tolsona, Glenn	87.54	27	P	P	19 06 08.6	-0.5
HDA	Harding Lake	87.70	25	P	P	19 06 09.7	-0.1
	baz=257						
IL31		87.80	25	P	P	19 06 08.7	-1.6
IL31				IAmb	IAmb	19 06 09.7	
	comp=Z,9.2nm,0.8s						
ILAR	Eielson Array	87.80	25	P	P	19 06 08.3	-2.0
	comp=Z,6.2nm,0.6s,baz=264,slow=4.3,SNR=55						
ILAR				pP	pP	19 06 21.3	-0.6
	comp=Z,2.0nm,0.6s,baz=264,slow=4.2,SNR=3.8						
ILAR				sP	sP	19 06 26.9	+1.0
	comp=Z,2.0nm,0.6s,baz=260,slow=4.4,SNR=3.9						
ILAR				LR	LR	19 39 46.5	
	comp=Z,70nm,20.6s,baz=252,slow=32						
N25K	Chitina, Valde	88.17	28	P	P	19 06 12.4	+0.2
	baz=259						
RIDG	Independent Ri	88.46	26	P	P	19 06 12.9	-0.6
RIDG				IAmb	IAmb	19 06 14.2	
	comp=Z,14nm,1.0s						
DOT	Dot Lake	88.79	26	P	P	19 06 14.4	-0.6
DOT				IAmb	IAmb	19 06 41.1	
	comp=Z,36nm,1.9s						
FYU	Fort Yukon	88.85	23	P	P	19 06 16.3	+1.2
SCRK	Sand Creek	88.88	26	P	P	19 06 15.8	+0.2
	baz=260						
SYO	Syowa Base	88.95	201	⇑*e*PcP	PcP	19 06 19.5	+2.4
SYO	Syowa Base	88.95	201	⇓*e*sP	sP	19 06 34.0	+2.3
BMAR	Burnt Mountain	89.27	22	P	P	19 06 16.8	-0.4
BARN	Barnard Glacie	89.48	29	P	P	19 06 17.6	-0.9
BARN				IAmb	IAmb	19 06 20.1	
	comp=Z,18nm,0.8s						
BCAR	Beaver Creek A	89.71	27	P	P	19 06 19.3	-0.1
RAYN	Ar Rayn	91.51	293	P	P	19 06 26.0	-2.6
RAYN				IAmb	IAmb	19 06 40.5	
	comp=Z,6.8nm,1.1s						
ARCES	ARCESS Array B	100.22	340	P	Pdif	19 07 04.1	-3.1
	comp=Z,7.6nm,0.9s,baz=327,slow=13,SNR=4.5						
YKA	Yellowknife Ar	102.12	27	P	Pdif	19 07 14.7	-1.1
	comp=Z,0.4nm,0.7s,baz=287,slow=4.0,SNR=5.5						
ULM	Lac du Bonnet	116.42	34	PKP	PKPdf	19 12 04.4	-0.7
	comp=Z,0.7nm,0.4s,baz=37,slow=4.3,SNR=3.3						
TXAR	Lajitas Array	118.31	59	PKP	PKPdf	19 12 09.1	-0.4
	comp=Z,0.4nm,0.8s,baz=124,slow=0.5,SNR=3.9						
TXAR				PP	PP	19 13 23.0	-2.7
	comp=Z,0.4nm,1.0s,baz=309,slow=7.9,SNR=3.4						
JCT	Junction City	121.28	56		PKPdf	19 12 14.9	-0.2
S39A	Bolivar	123.82	46	PKPdf	PKPdf	19 12 18.6	-1.2
PLCA	Paso Flores	129.89	154	PKP	PKPdf	19 12 31.5	+0.1
	comp=Z,4.4nm,1.2s,baz=241,slow=6.9,SNR=3.4						
TORD	Torodi Ar. Bea	133.51	285	PKhKP	PKPpre	19 12 33.6	
	comp=Z,0.5nm,0.7s,baz=22,slow=5.1,SNR=3.8						
TORD				PKP	PKPdf	19 12 37.9	-0.9
	comp=Z,1.5nm,0.8s,baz=55,slow=2.7,SNR=5.3						
TORD				pPKP	pPKPdf	19 12 50.2	-0.4
	comp=Z,1.2nm,0.9s,baz=52,slow=1.9,SNR=3.7						
TORD	Torodi Ar. Bea	133.51	285		PKPdf	19 12 37.6	-1.2
NNA	Nana	144.23	116	PKP	PKPab	19 12 55.4	-0.8
	comp=Z,5.3nm,0.3s,baz=247,slow=8.5,SNR=6.9						

NNA	Nana	144.23	116	PKPdf	PKPab	19 12 57.3	+1.0
ATAH	Atahualpa	144.42	107	PKP	PKPab	19 12 56.0	-1.4
	comp=Z,21nm,0.7s,baz=67,slow=7.7,SNR=3.5						
PB07	IPOC Station P	144.61	136		PKPab	19 12 59.3	+1.7
LVC	Limon Verde	144.67	138	PKP	PKPab	19 12 57.9	-0.1
	comp=Z,3.4nm,0.7s,baz=245,slow=3.7,SNR=4.3						
LVC	Limon Verde	144.67	138		PKPab	19 12 58.3	+0.3
OTAV	Otavalo	145.77	95		PKPdf	19 13 01.7	0.0
OTAV	Otavalo	145.77	95	*e*P	PKPdf	19 13 00.3	-1.4
PSGCX	Pisagua	145.82	133		PKPdf	19 13 01.7	+0.6
PB08	IPOC Station P	146.17	135		PKPdf	19 13 03.2	+1.2
MNMC	Minye Minye	146.50	133		PKPdf	19 13 04.2	+1.7
SOTA	Rioblanco	147.75	92	*e*P	PKPdf	19 13 07.1	+2.1
CPUP	Villa Florida	147.81	158	PKPbc	PKPdf	19 13 04.8	+0.7
	comp=Z,20nm,0.9s,baz=223,slow=2.8,SNR=30						
CPUP	Villa Florida	147.81	158		PKPdf	19 13 07.5	+3.3
PCON	Cinco Dias	147.97	91	*e*P	PKPdf	19 13 08.7	+3.2
MARP	Paez Belalcaza	148.44	90	*e*P	PKPdf	19 13 09.8	+3.9
BETC	Betania	148.94	91	*e*P	PKPdf	19 13 05.4	-1.0
ANIL	Santa Ana	149.01	87	*e*P	PKPdf	19 13 05.5	-1.4
GUY2C	Guyana, Caldas	149.03	86	*e*P	PKPdf	19 13 07.3	+0.2
TOLC	Tolima	149.09	87	*e*P	PKPdf	19 13 07.7	+0.7
ORTC	Ortega, Tolima	149.17	88	*e*P	PKPdf	19 13 06.4	-0.4
LPAZ	La Paz	149.36	131	PKPbc	PKPdf	19 13 09.4	+1.7
	comp=Z,10nm,0.9s,baz=235,slow=2.4,SNR=20						
ROSC	El Rosal	150.08	86	PKPbc	PKPbc	19 13 13.6	-0.1
	comp=Z,13nm,0.5s,baz=359,slow=7.1,SNR=5.5						
ROSC	El Rosal	150.08	86	PKPdf	PKPdf	19 13 07.6	-1.1
ROSC					PKPbc	19 13 13.0	-0.6
MACC	Macarena, Meta	150.51	92	*e*P	PKPdf	19 13 12.2	+3.3
CHIC	Chingaza	150.67	87	*e*P	PKPdf	19 13 14.6	+5.0
BARC	Barichara	151.12	83	*e*P	PKPdf	19 13 09.5	-0.5
RUSC	La Rusia	151.27	84	*e*P	PKPdf	19 13 15.7	+5.1
GUVC	San Jose del G	151.75	91	*e*P	PKPdf	19 13 03.6	-7.1
SIV	San Ignacio	154.54	140	PKPbc	PKPbc	19 13 22.1	-1.0
	comp=Z,1.1nm,0.6s,baz=208,slow=7.1,SNR=5.2						

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*IDC **07** 19:30:53.2±2.0, 55°.59S×26°.02W, h0^{km}, mb4.0/2, mb1 4.1/2, mb1mx3.7/25, mbtmp4.0/2, Error ellipse: s-maj=87.5km s-min=46.9km az=7.0*

*NEIC **07** 19:30:54.8±2.5, 55°.6S±0°.1×25°.9W±0°.2, h10^{km}±1^{km}, mb4.5/10, Error ellipse: s-maj=22.0km s-min=15.0km az=51.0*

ISC 07 19:30:58.0±0.7**, 55°.7S**±0°.1×**25°.9W**±0°.1**, h32**^{km}**, n19, σ0^{s}91**/19**, mb4.5**/5**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	Hope Point	6.24	278	Pn	Pn	19 32 27.9	+0.2
VNA1	Neumayer--Stat	16.91	160	P	Pn	19 34 50.8	-1.0
VNA3	Neumayer Olymp	17.14	162	P	Pn	19 34 53.5	-1.2
VNA2	Neumayer--Watz	17.30	159	P	Pn	19 34 56.0	-0.7
	baz=319,slow=14						
SNAA	Sanae	18.82	157	P	Pn	19 35 16.7	+1.3
SNAA	Sanae	18.82	157	P	P	19 35 15.8	+1.1
BELA	Belgrano 2	22.53	185	P	P	19 35 53.4	-1.3
QSPA	South Pole Qui	34.60	180	P	P	19 37 43.1	-0.6
MT02	Curacav	38.35	287	P	P	19 38 15.9	+0.1
MT02				IAmb	IAmb	19 38 30.7	
	comp=Z,15nm,1.2s						
PB07	IPOC Station P	46.96	298	P	P	19 39 26.7	+0.7
PB07				IAmb	IAmb	19 39 43.8	
	comp=Z,4.5nm,0.8s						
VNDA	Vanda	47.00	182	P	P	19 39 26.9	+1.5
LBTB	Lobatse	48.20	72	P	P	19 39 35.2	-0.3
LBTB				IAmb	IAmb	19 39 51.1	
	comp=Z,6.4nm,1.2s						
LPAZ	La Paz	50.74	304	P	P	19 39 54.7	-0.8
	comp=Z,2.0nm,0.6s,baz=145,slow=4.8,SNR=4.8						
LPAZ	La Paz	50.74	304	P	P	19 39 54.2	-1.3
LPAZ				IAmb	IAmb	19 40 11.3	
	comp=Z,3.1nm,0.8s						
TOA0	Torodi Ar. Sit	72.36	28	P	P	19 42 20.9	+0.4
TORD	Torodi Ar. Bea	72.36	28	P	P	19 42 20.7	+0.1
	comp=Z,0.4nm,0.5s,baz=197,slow=6.1,SNR=4.2						
TORD	Torodi Ar. Bea	72.36	28	P	P	19 42 20.4	-0.2
SONM	Songino Array	149.98	85	PKPbc	PKPbc	19 50 44.3	+0.1
	comp=Z,0.6nm,0.6s,baz=210,slow=3.4,SNR=5.6						
ILAR	Eielson Array	150.39	312	PKPbc	PKPbc	19 50 44.6	+0.1
	comp=Z,1.7nm,0.9s,baz=134,slow=1.4,SNR=12						

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*IDC **07** 19:43:14.2±1.5, 8°.12N×72°.20W, h0^{km}, mb3.5/5, mb1 3.9/6, mb1mx3.6/31, mbtmp3.6/6, ML3.5/1, Error ellipse: s-maj=37.5km s-min=13.1km az=165.0*

*FUNV **07** 19:43:19.3, 8°.36N×72°.07W, h2^{km}, MW3.2*

*RSNC **07** 19:43:19.1±1.1, 8°.33N×72°.16W, h4^{km}±10^{km}, ML3.2, Mw3.5*

ISC 07 19:43:18.4±2.1**, 8°.38N**±0°.03×**72°.15W**±0°.03**, h15**^{km}±14^{km}**, n45, σ1^{s}41**/61**, mb3.5**/5**, 1D, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OCAC	Ocana	1.17	263	*e*P	Pn	19 43 39.4	-0.9
OCAC				*e*S	Sb	19 43 54.4	-0.9
OCAC				*i*		19 44 02.1	
	comp=Z,749nm,0.3s						
PAMC	Pamplona, Colo	1.17	208	⇓*e*P	Pn	19 43 38.9	-1.8
PAMC				*e*S	Sb	19 43 53.8	-1.9
PAMC				*i*		19 44 00.5	
	comp=Z,552nm,0.2s						
SDV	Santo Domingo	1.58	71	Pg	Pn	19 43 46.9	+0.8
	comp=Z,56nm,0.3s,baz=251,slow=10,SNR=126						
SDV				Lg	Lg	19 44 07.8	
	comp=Z,352nm,0.3s,baz=354,slow=14,SNR=26						
SDV	Santo Domingo	1.58	71	*e*P	Pn	19 43 46.9	+0.8
SDV				*e*S	Sb	19 44 08.2	+0.9
SDV				*i*		19 44 10.1	
	comp=Z,847nm,0.4s						
SDV	Santo Domingo	1.58	71	*e*P	Pn	19 43 46.8	+0.8
SDV				*e*S	Sb	19 44 08.2	+0.9
MCQV	Machiques	1.70	347	*e*P	Pb	19 43 49.5	+0.1
MCQV				*e*S	Sg	19 44 12.7	-0.6
SMLC	San Martn de	1.95	283	*e*P	Pn	19 43 51.8	+0.9
SMLC				*e*S	Sb	19 44 19.5	+1.8
TAMC	Tame, Arauca	1.96	170	*e*P	Pn	19 43 51.9	+0.7
TAMC				*e*S	Sn	19 44 16.4	+0.8
TAMC				*i*		19 44 22.1	
	comp=Z,389nm,0.2s						
BRRC	Barranca, Sant	2.00	231	*e*P	Pb	19 43 54.3	-0.2
BRRC				*e*S	Sb	19 44 21.1	+1.9
BRRC				*i*		19 44 25.5	
	comp=Z,153nm,0.6s						
BARC	Barichara	2.05	210	*e*P	Pn	19 43 54.3	+1.7
BARC				*e*S	Sn	19 44 20.4	+2.4
BARC				*i*		19 44 25.4	
	comp=Z,254nm,0.5s						
TORV	Torococo	2.23	58	*e*P	Pn	19 43 55.1	+0.2
TORV				*e*S	Sn	19 44 20.4	-1.9
ARGC	Ariguani, Magd	2.54	306	*e*P	Pn	19 44 00.1	+1.0
RUSC	La Rusia	2.64	201	*e*P	Pn	19 44 02.1	+1.3
RUSC				*i*		19 44 41.5	
	comp=Z,75nm,0.3s						
CURV	Curarigua	2.70	53	*e*P	Pn	19 44 02.5	+1.1
CURV				*e*S	Sn	19 44 34.5	+0.6
SANV	Sanarito	2.81	66	*e*P	Pn	19 44 04.0	+1.1
SANV				*e*S	Sn	19 44 35.7	-0.9
PTBC	PUERTO BERRIO,	2.93	232	*e*P	Pn	19 44 04.8	+0.4
PTBC				*i*		19 44 50.2	
	comp=Z,90nm,0.5s						
DABV	Dabajuro	2.93	30	*e*P	Pn	19 44 06.0	+1.5
DABV				*e*S	Sn	19 44 40.1	+0.7
SIQV	Siquisique	3.23	45	*e*P	Pn	19 44 10.1	+1.5
SIQV				*e*S	Sn	19 44 46.0	-0.8
SPBC	San Pablo de B	3.31	215	*e*P	Pn	19 44 11.5	+1.7
SPBC				*i*		19 45 08.9	
	comp=Z,60nm,0.5s						
UREC	San Jos de Ur	3.41	260	*e*P	Pn	19 44 13.3	+2.3
SMRC	Santa Marta, M	3.44	324	*e*P	Pn	19 44 10.8	-0.6
MOTC	Monteria, Cord	3.50	277	*e*P	Pn	19 44 14.9	+2.6
MOTC				*i*		19 45 18.9	
	comp=Z,33nm,0.5s						
NORC	Norcasia	3.89	224	*e*P	Pn	19 44 19.3	+1.6
NORC				*i*		19 45 18.3	
	comp=Z,27nm,0.4s						
MAPV	Macapo	3.92	68	*e*P	Pn	19 44 19.0	+0.9
HELC	Santa Helena	4.00	237	*e*P	Pn	19 44 21.8	+2.3
HELC				*i*		19 45 23.4	
	comp=Z,45nm,0.4s						
CHIC	Chingaza	4.04	203	*e*P	Pn	19 44 21.3	+1.2
BAUV	El Baul	4.10	82	*e*P	Pn	19 44 21.0	+0.4
BAUV				*e*S	Sn	19 45 06.3	-2.0
MONV	Montecano	4.15	31	*e*P	Pn	19 44 21.8	+0.5
GUY2C	Guyana, Caldas	4.47	226	*e*P	Pn	19 44 28.1	+2.0
GUY2C				*i*		19 45 54.3	
	comp=Z,20nm,0.6s						
TURV	Turiamo	4.72	64	*e*P	Pn	19 44 29.1	0.0
TOLC	Tolima	4.91	220	*e*P	Pn	19 44 34.0	+2.0
TOLC				*i*		19 45 53.6	
	comp=Z,14nm,0.6s						
PAYV	Puerto Ayacuch	5.34	123	*e*P	Pn	19 44 36.9	-0.8
TACV	Tcata	5.35	71	*e*P	Pn	19 44 38.1	+0.4
PLMC	San Jos del P	5.36	230	*e*P	Pn	19 44 41.2	+3.2
ORTC	Ortega, Tolima	5.40	215	*e*P	Pn	19 44 38.9	+0.4
MERV	Las Mercedes	5.85	81	*e*P	Pn	19 44 44.4	-0.2
BIRV	Birongo	6.16	70	*e*P	Pn	19 44 49.0	0.0
PCRV	Puerto La Cruz	7.63	76	Pn	Pn	19 45 09.7	+0.6
	comp=Z,0.7nm,0.3s,baz=293,slow=9.8,SNR=2.3						
PCRV				Sn	Sn	19 46 34.6	-0.7
	comp=Z,3.8nm,0.3s,baz=137,slow=18,SNR=9.6						
TXAR	Lajitas Array	36.19	309	P	P	19 50 20.6	-0.2
	comp=Z,0.2nm,0.6s,baz=131,slow=7.9,SNR=3.5						
ULM	Lac du Bonnet	46.17	339	P	P	19 51 41.8	-0.6
	comp=Z,1.8nm,0.9s,baz=169,slow=16,SNR=3.1						
PDAR	Pinedale Array	47.41	323	P	P	19 51 52.8	+0.2
	comp=Z,0.2nm,0.5s,baz=139,slow=12,SNR=2.5						
NVAR	Mina Array Bea	51.10	313	P	P	19 52 20.5	-0.4
	comp=Z,0.2nm,0.3s,baz=102,slow=8.4,SNR=1.6						
YKA	Yellowknife Ar	62.15	339	P	P	19 53 37.8	-0.9
	comp=Z,0.6nm,0.7s,baz=125,slow=7.8,SNR=12						
ASAR	Alice Springs	150.79	236	PKPbc	PKPdf	20 03 08.7	+3.1
	comp=Z,0.2nm,0.6s,baz=89,slow=2.6,SNR=2.3						
WRA	Warramunga Arr	151.91	243	PKPbc	PKPbc	20 03 11.3	-2.5
	comp=Z,0.4nm,0.5s,baz=111,slow=2.4,SNR=6.6						

IDC 07 21:17:11.9±4.8**, 22°.34S**×**174°.83W, h0**^{km}**, mb4.0**/4**, mb1 4.2**/4**, mb1mx3.9**/24**, mbtmp4.0**/4**, Error ellipse: s-maj=200.2km s-min=38.6km az=142.0, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	39.71	247	P	P	21 24 44.7	-1.5
	0.8nm,0.4s,baz=76,slow=11,SNR=4.9						
ASAR	Alice Springs	47.00	258	P	P	21 25 45.2	0.0
	0.6nm,0.4s,baz=88,slow=6.5,SNR=24						
WRA	Warramunga Arr	47.29	263	P	P	21 25 48.2	+0.7
	2.5nm,0.5s,baz=100,slow=8.2,SNR=43						
ILAR	Eielson Array	89.48	12	P	P	21 30 10.3	0.0
	1.6nm,1.3s,baz=228,slow=6.1,SNR=4.1						

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*IDC **07** 21:32:11.2±0.6, 56°.75S×141°.53W, h0^{km}, mb4.5/7, mb1 4.7/7, mb1mx4.4/30, mbtmp4.5/7, MS4.0/8, Ms1 4.0/8, ms1mx3.8/23, Error ellipse: s-maj=71.8km s-min=18.1km az=179.0*

*NEIC **07** 21:32:12.6±1.1, 56°.8S±0°.2×141°.54W±0°.08, h10^{km}±1^{km}, mb4.8/21, Error ellipse: s-maj=33.9km s-min=6.9km az=3.0*

*GCMT **07** 21:32:15.6±0.3, 56°.99S±0°.02×141°.58W±0°.03, h13^{km}±2^{km}, MW4.9/78, Moment Tensor Solution. s15,c15; s78,c98; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.04±.15; $M_{\theta\theta}$2.54±.18; $M_{\phi\phi}$-1.50±.11; $M_{r\theta}$0.45±.34; $M_{\theta\phi}$2.20±.12; $M_{\phi r}$0.19±.28; Best double couple: $M_0$3.01300×10^{16} NP1:ϕ_s21.00000°, δ85.00000°, λ176.00000°. NP2: ϕ_s111.00000°, δ86.00000°, λ5.00000°. Principal axes: T 3.5580, Plg6.0000°, Azm336.0000°; N -1.0920, Plg84.0000°, Azm153.0000°; P -2.4670, Plg0.0000°, Azm246.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 07 21:32:12.5±0.5**, 56°.7S**±0°.1×**141°.50W**±0°.10**, h10**^{km}**, n76, σ0^{s}78**/46**, mb4.8**/17**, MS4.1**/12**, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLWZ	Palliser	31.47	280	P	P	21 38 32.4	-1.6
QSPA	South Pole Qui	33.49	180	P	P	21 38 51.6	-0.1
QSPA				IAmb	IAmb	21 38 54.2	
	comp=Z,13nm,1.1s						
TBI	Tubuai	33.79	347	*e*S	S	21 44 17.5	-0.5
	comp=Z,89nm,31.2s						
TBI				*e*LR	LR	21 47 43.0	
	comp=Z,918nm,28.2s,baz=171						
TBI	Tubuai	33.79	347	*e*T	T	22 13 48.9	
	comp=Z,61nm,0.3s						
MEH	Mehetia	39.04	350	*e*T	T	22 20 33.9	
	comp=Z,27nm,0.2s						
TVO	Taravao	39.26	348	*e*T	T	22 20 50.5	
	comp=Z,1.8nm,0.4s						
PAE	Paea	39.41	348	*e*T	T	22 20 57.2	
	comp=Z,2.2nm,0.3s						
PPT2	Papeete2	39.48	348	*e*S	S	21 45 44.4	-0.7
	comp=Z,102nm,25.0s						
PPT2				*e*LR	LR	21 50 19.7	
	comp=Z,781nm,25.2s,baz=184						
PPT2	Papeete2	39.48	348	*e*T	T	22 21 00.5	
	comp=Z,4.3nm,0.3s						
TIAR	Tiarei	39.49	348	*e*T	T	22 21 00.5	
	comp=Z,2.4nm,0.3s						
PPT	Papeete	39.51	348	LR	LR	21 53 00.5	
	comp=Z,235nm,18.1s,baz=178,slow=32						
VAH	Vaihoa	41.62	351	*e*T	T	22 23 34.3	
	comp=Z,45nm,0.2s						
PLCA	Paso Flores	47.24	102	P	P	21 40 45.6	+0.1
	comp=Z,3.2nm,1.1s,baz=231,slow=6.6,SNR=3.1						
H03S2	Juan Fernandez	47.64	89	T	T	22 32 08.5	
	baz=219,slow=74,SNR=98						
H03S1	Juan Fernandez	47.65	89	T	T	22 32 08.5	
	baz=219,slow=74,SNR=68						
H03S3	Juan Fernandez	47.66	89	T	T	22 32 08.5	
	baz=219,slow=74,SNR=100						
TAOE	Nuku Hiva Isla	47.71	2	*e*LR	LR	21 54 14.1	
	comp=Z,507nm,27.3s						
H03N3	Juan Fernandez	47.93	89	T	T	22 32 23.5	
	baz=222,slow=72,SNR=354						
H03N2	Juan Fernandez	47.94	89	T	T	22 32 36.5	
	baz=222,slow=72,SNR=446						
VNA3	Neumayer Olymp	47.94	161	P	P	21 40 49.7	-0.8
H03N1	Juan Fernandez	47.95	89	T	T	22 32 26.3	
	baz=222,slow=72,SNR=686						
VNA2	Neumayer--Watz	48.61	162	P	P	21 40 54.7	-1.0
VNA1	Neumayer--Stat	48.70	161	P	P	21 40 55.3	-0.9
SNAA	Sanae	48.71	164	P	P	21 40 55.6	-0.9
SNAA	Sanae	48.71	164	P	P	21 40 55.8	-0.7
CAN	Canberra	50.35	264	P	P	21 41 10.8	+1.3
CAN				IAmb	IAmb	21 41 12.3	
	comp=Z,13nm,1.0s						
DZM	Mont Dzumac	51.22	290	*e*LR	LR	21 55 48.4	
	comp=Z,198nm,24.6s						
BO02	Sierra Bellavi	51.42	96	P	P	21 41 17.9	+0.4
BO02				IAmb	IAmb	21 41 18.9	
	comp=Z,18nm,1.1s						
ARMA	Armidale	52.60	270	P	P	21 41 26.0	-0.4
ARMA				IAmb	IAmb	21 41 43.6	
	comp=Z,17nm,1.5s						
ZON	Zonda	55.02	95	P	P	21 41 44.2	+0.2
STKA	Stephens Creek	57.00	261	P	P	21 41 59.2	+1.1
	comp=Z,8.0nm,0.8s,baz=135,slow=6.6,SNR=17						
STKA				LR	LR	22 01 41.2	
	comp=Z,163nm,20.8s,baz=185,slow=31						
STKA	Stephens Creek	57.00	261	P	P	21 41 58.6	+0.5
BBOO	Buckleboo	59.28	256	P	P	21 42 14.9	+0.8
LVC	Limon Verde	61.88	89	P	P	21 42 32.2	-0.1
LVC				IAmb	IAmb	21 42 35.5	
	comp=Z,5.5nm,0.9s						
CTAO	Charters Tower	63.71	273	P	P	21 42 44.8	+0.7
MNMC	Minye Minye	64.30	86	P	P	21 42 48.5	+0.2
MNMC				IAmb	IAmb	21 43 06.7	
	comp=Z,7.3nm,0.9s						
CPUP	Villa Florida	65.28	101	P	P	21 42 53.5	-0.9
	comp=Z,2.1nm,0.8s,baz=194,slow=18,SNR=4.7						
LPAZ	La Paz	67.41	85	P	P	21 43 09.6	+0.8
	comp=Z,2.6nm,1.0s,baz=248,slow=4.2,SNR=5.8						
LPAZ	La Paz	67.41	85	P	P	21 43 08.8	0.0
AS31	Alice Springs	67.64	261	P	P	21 43 08.6	-1.0
ASAR	Alice Springs	67.64	261	P	P	21 43 08.8	-0.7
	comp=Z,5.9nm,0.8s,baz=140,slow=6.6,SNR=71						
ASAR	Alice Springs	67.64	261	P	P	21 43 08.6	-0.9
H01W1	Cape Leeuwin H	68.75	239	T	T	22 58 43.9	
	baz=144,slow=76,SNR=276						
H01W2	Cape Leeuwin H	68.76	239	T	T	22 58 49.7	
	baz=144,slow=76,SNR=329						
H01W3	Cape Leeuwin H	68.77	239	T	T	22 58 45.1	
	baz=144,slow=76,SNR=359						
WR0	Warramunga Arr	70.27	264	P	P	21 43 25.6	-0.3
WR0				IAmb	IAmb	21 43 26.6	
	comp=Z,10nm,1.2s						
WB2	Warramunga Arr	70.39	263	P	P	21 43 26.2	-0.4
WB2				IAmb	IAmb	21 43 26.8	
	comp=Z,6.0nm,0.8s						
WRA	Warramunga Arr	70.39	263	P	P	21 43 26.0	-0.6
	comp=Z,4.5nm,0.6s,baz=148,slow=5.6,SNR=61						
WRA				LR	LR	22 10 48.5	
	comp=Z,103nm,19.7s,baz=155,slow=33						
WRA	Warramunga Arr	70.39	263	P	P	21 43 25.7	-0.9
WB0	Warramunga Arr	70.50	264	P	P	21 43 26.8	-0.5
WB0				IAmb	IAmb	21 43 27.8	
	comp=Z,7.6nm,0.8s						
PMG	Port Moresby	71.96	281	P	P	21 43 36.5	+0.3
SAML	Samuel	76.16	85	P	P	21 44 00.6	-0.1
FITZ	Fitzroy Crossi	76.63	258	P	P	21 44 03.4	+0.1
MTN	Manton Dam	77.94	265	P	P	21 44 10.2	-0.5
MTN				IAmb	IAmb	21 44 13.6	
	comp=Z,12nm,1.1s						
BDFB	Brasilia	78.99	102	LR	LR	22 16 04.7	
	comp=Z,81nm,18.1s,baz=127,slow=33						
H06S1	SOCORRO T	79.38	29	T	T	23 11 49.9	
	SNR=10.0						
H06E1	SOCORRO T-PHAS	79.43	29	T	T	23 11 57.0	
	SNR=9.5						
ROSC	El Rosal	81.75	68	LR	LR	22 16 07.5	
	comp=Z,72nm,18.3s,baz=359,slow=32						
BATI	Baumata	84.20	260	P	P	21 44 44.5	+0.4
	comp=Z,8.4nm,0.6s,baz=224,slow=2.1,SNR=4.1						
SOEI	Soe	84.25	261	P	P	21 44 44.9	+0.4
BOSA	Boshof	94.31	168	LR	LR	22 25 07.4	
	comp=Z,122nm,18.5s,baz=188,slow=34						
NVAR	Mina Array Bea	96.75	18	LR	LR	22 21 02.1	
	comp=Z,67nm,18.4s,baz=230,slow=30						
DAV	Davao City (W)	97.46	271	LR	LR	22 27 27.5	
	comp=Z,36nm,18.8s,baz=304,slow=34						
H10S3	ASCENSION HYDR	101.43	126	T	T	23 40 07.5	
	baz=207,slow=74,SNR=13						
H10S2	ASCENSION HYDR	101.43	126	T	T	23 40 11.4	
	baz=13,slow=74,SNR=4.4						
H10N3	ASCENSION HYDR	102.48	126	T	T	23 41 16.7	
	baz=206,slow=74,SNR=13						
H10N1	ASCENSION HYDR	102.49	126	T	T	23 41 17.4	
	baz=206,slow=74,SNR=19						
H10N2	ASCENSION HYDR	102.50	126	T	T	23 41 16.7	
	baz=206,slow=74,SNR=14						
ILAR	Eielson Array	121.18	357	PKP	PKPdf	21 51 04.1	+0.2
	comp=Z,1.3nm,0.8s,baz=277,slow=1.2,SNR=11						
ILAR	Eielson Array	121.18	357		PKiKP	21 51 04.5	+0.5
CMAR	Chiang Mai Arr	121.39	255	PKP	PKiKP	21 51 07.3	+1.4
	comp=Z,1.1nm,0.3s,baz=217,slow=1.8,SNR=5.3						
ESDC	Sonseca Array	147.62	103	PKPbc	PKPbc	21 51 56.8	+0.4
	comp=Z,1.3nm,0.9s,baz=236,slow=3.2,SNR=6.0						
ESDC	Sonseca Array	147.62	103		PKPdf	21 51 53.7	+0.1
MKAR	Makanchi Array	151.60	269	PKPbc	PKPbc	21 52 06.1	+0.1
	comp=Z,4.1nm,0.8s,baz=111,slow=2.7,SNR=16						
ZALV	Zalesovo Beam	153.88	284	PKPbc	PKiKP	21 52 12.9	+2.1
	comp=Z,0.5nm,0.5s,baz=137,slow=5.1,SNR=1.5						
ZALV				PKPab	PKPab	21 52 23.1	-1.0
	comp=Z,1.3nm,0.6s,baz=103,slow=2.6,SNR=3.8						
NRIK	Noril'sk	155.22	320	PKPab	PKPab	21 52 29.1	-0.2
	comp=Z,3.1nm,0.7s,baz=117,slow=5.5,SNR=5.5						

ROM 07 21:35:29.7±0.1**, 39°.110N**±0°.005×**16°.497E**±0°.007**, h10**^{km}**, ML2.1**/8**, 2C-1D, Error ellipse: s-maj=0.6km s-min=0.6km az=66.0, Southern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SERS	Sersale	0.17	116	⇑P	Pg	21 35 34.0	+0.7
SERS				S	Sg	21 35 36.9	+1.1
SERS				AML	AML		
	comp=E,2120μm,0.5s						
SERS				AML	AML		
	comp=E,3615μm,0.3s						
SERS				AML	AML		
	comp=N,1745μm,0.5s						
SERS				AML	AML		
	comp=N,3250μm,0.2s						
TIP	Timpagrande	0.21	71	⇓P	Pg	21 35 34.9	+0.7
TIP				S	Sg	21 35 38.6	+1.4
TIP				AML	AML		
	comp=E,884μm,0.3s						
TIP				AML	AML		
	comp=E,1044μm,0.3s						
TIP				AML	AML		
	comp=E,1045μm,0.3s						
TIP				AML	AML		
	comp=N,571μm,0.2s						
TIP				AML	AML		
	comp=N,440μm,0.2s						
TIP				AML	AML		
	comp=E,884μm,0.3s						
SPS2	Spezzano della	0.22	326	P	Pg	21 35 34.8	+0.5
SPS2				S	Sg	21 35 38.9	+1.5
SPS2				AML	AML		
	comp=N,232μm,1.0s						
SPS2				AML	AML		
	comp=E,305μm,0.2s						
CAR1	CAROLEI	0.26	303	P	Pg	21 35 35.7	+0.6
CAR1				S	Sb	21 35 40.7	-0.6
CAR1				AML	AML		
	comp=E,641μm,0.8s						
CAR1				AML	AML		
	comp=E,642μm,0.8s						
CAR1				AML	AML		
	comp=N,506μm,1.0s						
CELI	Celico	0.29	2	⇑P	Pg	21 35 36.2	+0.5
CELI				S	Sb	21 35 41.4	-0.8
LADO	San Nicola del	0.41	65	P	Pg	21 35 38.4	+0.6
PIPA	Pietrapaola	0.45	33	P	Pb	21 35 39.1	-0.6
PIPA				AML	AML		
	comp=N,249μm,1.2s						
PIPA				AML	AML		
	comp=E,270μm,1.2s						
TDS	Terranova Siba	0.56	347	P	Pg	21 35 40.1	-0.5
CET2	Cetraro	0.59	315	P	Pg	21 35 41.4	+0.2
CET2				AML	AML		
	comp=E,312μm,0.8s						
CET2				AML	AML		
	comp=N,349μm,1.3s						
CET2				AML	AML		
	comp=E,312μm,0.8s						
PLAC	Placanica	0.66	184	P	Pg	21 35 42.5	0.0
PLAC				AML	AML		
	comp=N,122μm,0.8s						
PLAC				AML	AML		
	comp=E,128μm,0.9s						
PLAC				AML	AML		
	comp=N,122μm,0.8s						
T0702	Acquaformosa (	0.69	332	P	Pg	21 35 43.0	-0.1
T0702				S	Sb	21 35 53.4	-0.2
JOPP	Joppolo	0.69	224	P	Pg	21 35 43.4	+0.3
JOPP				AML	AML		
	comp=N,148μm,0.8s						
JOPP				AML	AML		
	comp=E,238μm,0.8s						

TIR 07 21:36:16.1, 41°.81N×20°.15E, h6^{km}±1^{km}**, Md2.0, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PHP	Peshkopia	0.25	120	P	Pg	21 36 21.5	+0.4
	baz=120						
PHP				S	Sg	21 36 25.6	+1.1
	baz=120						
PUK	Puka	0.30	320	P	Pg	21 36 22.5	+0.4
	baz=321						
PUK				S	Sg	21 36 27.1	+1.1
	baz=321						
BCI	Bajram Curri	0.56	354	P	Pg	21 36 27.4	+0.5
	baz=354						
BCI				S	Sb	21 36 35.8	-0.8
	baz=354						

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*IDC **07** 21:40:12.2±1.5, 0°.88N×96°.92E, h0^{km}, mb4.1/6, mb1 4.1/8, mb1mx3.7/49, mbtmp4.0/8, ML3.3/1, MS3.3/3, Ms1 3.4/3, ms1mx2.9/39, Error ellipse: s-maj=49.1km s-min=18.3km az=63.0*

*NEIC **07** 21:40:13.2±1.3, 0°.84N±0°.06×96°.89E±0°.05, h10^{km}±1^{km},* *mb4.3/23, Error ellipse: s-maj=12.0km s-min=6.8km az=143.0*

DJA ***07*** *21:40:15.8±0.7, 1°N±4°×9°7E±°, h47^{km}±15^{km}, M4.3/10, mB5.0/2, mb4.7/5, MLv4.0/10, Mw(mB)4.3/2*

ISC 07 21:40:15.6±0.7**, 0°.86N**±0°.06×**96°.96E**±0°.07**, h25^{km}, n75, σ1^{s}.27**/71**, mb4.3**/25**, MS4.1**/3**, 1D, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**0.76**	**55**	Pg	**Pn**	**21 40 30.6**	**-0.1**
GSI					**Sb**	**21 40 39.5**	**-0.6**
GSI	**Gunungsitoli**	**0.76**	**55**	P	**Pn**	**21 40 30.6**	**-0.1**
GSI				S	**Sn**	**21 40 44.4**	**+3.0**
TPTI		**2.39**	**5**	P	**Pn**	**21 40 51.8**	**-1.4**
TPTI				S	**Sn**	**21 41 19.8**	**-1.9**
MNSI	**Mandailing Nat**	**2.62**	**91**	P	**Pn**	**21 40 57.2**	**+0.8**
MNSI				S	**Sn**	**21 41 27.5**	**+0.1**
RPSI	**Rantau Prapat**	**2.68**	**47**		**Pn**	**21 40 57.2**	**0.0**
PSI	**Prapat**	**2.75**	**46**	Pn	**Pn**	**21 40 57.9**	**-0.4**
	4.8nm,0.3s,baz=180,slow=5.5,SNR=21						
PSI				LR	LR	21 42 06.9	
	comp=Z,284nm,20.9s,baz=91,slow=42						
TSI	**Tuntungan**	**3.07**	**31**	P	**Pn**	**21 41 03.5**	**+0.9**
PDSI	**Padang**	**3.92**	**117**	P	**Pn**	**21 41 14.3**	**0.0**
BKNI	**Bangkinang**	**4.12**	**97**	Pn	**Pn**	**21 41 17.4**	**+0.5**
LHMI	**Lhok Sumawe**	**4.34**	**360**	Pn	**Pn**	**21 41 19.7**	**-0.2**
SDSI	**Sungai Dareh**	**4.81**	**112**	P	**Pn**	**21 41 27.4**	**+0.9**
IPM	**Ipoh**	**5.42**	**48**	Pn	**Pn**	**21 41 35.3**	**+0.4**
KULM	**Kulim**	**5.74**	**40**	Pn	**Pn**	**21 41 38.9**	**-0.3**
MNAI	**Manna**	**7.93**	**131**	Pn	**Pn**	**21 42 09.5**	**+0.1**
LWLI	**Liwa**	**9.19**	**130**	P	**Pn**	**21 42 27.5**	**+0.7**
KLSI		**9.53**	**125**	P	**Pn**	**21 42 31.9**	**+0.6**
KSM	**Kuching**	**13.36**	**87**	Pn	**Pn**	**21 43 26.0**	**+2.2**
STKI	**Sintang**	**14.54**	**93**	P	**Pn**	**21 43 38.0**	**-1.9**
UBPT	**Khong Chiam**	**16.61**	**30**	P	**P**	**21 44 08.6**	**-0.6**
UBPT				IAmb	IAmb	21 44 26.4	
	comp=Z,22nm,1.2s						
CM31	**Chiang Mai Arr**	**17.59**	**6**	Pn	**Pn**	**21 44 18.3**	**-0.9**
CMAR	**Chiang Mai Arr**	**17.59**	**6**	P	**Pn**	**21 44 18.1**	**-1.2**
	baz=196,slow=12,SNR=9.4						
CMAR				LR	LR	21 51 40.5	
	comp=Z,42nm,20.4s,baz=207,slow=39						
CHTO	**Chiang Mai**	**17.95**	**6**		**P**	**21 44 23.9**	**0.0**
KKM	**Kota Kinabalu**	**19.89**	**75**	P	**P**	**21 44 46.2**	**+0.6**
SRBI	**Singaraja**	**20.25**	**116**	P	**P**	**21 44 43.4**	**-5.9**
SLVN	**Son La**	**21.45**	**18**	P	**P**	**21 45 02.5**	**+0.3**
SLVN				IAmb	IAmb	21 45 03.9	
	comp=Z,15nm,0.9s						
KMI	**Kunming**	**24.76**	**13**	⇓P	**P**	**21 45 37.1**	**+1.5**
KMI				pP	sP	21 45 44.9	-0.2
KMI				sP	pwP	21 45 48.3	+2.9
KMI				pmax	pmax		
	comp=Z,10.0nm,1.2s						
KMI				LR	LR		
	comp=N,160nm,7.2s						
KMI				LR	LR		
	comp=E,220nm,12.5s						
KMI				LR	LR		
	comp=Z,190nm,9.2s						
KMI	**Kunming**	**24.76**	**13**	P	**P**	**21 45 35.0**	**-0.6**
SHL	**Shillong**	**25.04**	**349**	P	**P**	**21 45 37.9**	**-0.3**
H08S2	**Diego Garcia H**	**25.82**	**250**	T	T	22 12 28.9	
	baz=72,slow=76,SNR=121						
H08S3	**Diego Garcia H**	**25.82**	**251**	T	T	22 12 37.0	
	baz=72,slow=76,SNR=464						
H08S1	**Diego Carcia H**	**25.84**	**250**	T	T	22 12 30.7	
	baz=72,slow=76,SNR=116						
PKI	**Pulchoki**	**28.77**	**338**	*e*P	**P**	**21 46 15.1**	**+3.2**
	comp=Z,9.9nm,0.8s						
PKIN	**Phulchoki**	**28.78**	**338**	*e*P	**P**	**21 46 15.1**	**+3.2**
	comp=Z,8.9nm,0.6s						
GUN	**Gumba**	**28.91**	**339**	*e*P	**P**	**21 46 14.4**	**+1.2**
	comp=Z,25nm,0.8s						
KKN	**Kakani**	**29.02**	**338**	*e*P	**P**	**21 46 16.1**	**+2.1**
	comp=Z,21nm,0.9s						
LSA	**Lhasa**	**29.20**	**350**	P	**P**	**21 46 15.0**	**-0.9**
LSA				IAmb	IAmb	21 46 18.2	
	comp=Z,5.5nm,1.0s						
GKN	**Gorkha**	**29.45**	**337**	*e*P	**P**	**21 46 19.1**	**+1.4**
	comp=Z,12nm,0.8s						
DANN	**Dangsing**	**30.11**	**336**	*e*P	**P**	**21 46 24.1**	**+0.4**
FITZ	**Fitzroy Crossi**	**33.93**	**125**	P	**P**	**21 46 56.6**	**-0.4**
FITZ				IAmb	IAmb	21 47 14.1	
	comp=Z,3.6nm,1.2s						
XAN	**Xi'an**	**34.85**	**18**	P	**P**	**21 47 04.5**	**-0.4**
XAN				pP	pP	21 47 12.4	+0.7
XAN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
GTA	**Gaotai**	**38.45**	**4**	*e*P	**P**	**21 47 35.7**	**+0.1**
GTA				pP	pP	21 47 41.2	-1.3
GTA				sP	pwP	21 47 44.6	-0.6
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,170nm,5.9s						
GTA				LR	LR		
	comp=N,300nm,16.0s						
GTA				LR	LR		
	comp=E,370nm,16.0s						
GTA				LR	LR		
	comp=Z,320nm,17.4s						
H01W3	**Cape Leeuwin H**	**39.03**	**157**	T	T	22 29 03.5	
	baz=333,slow=76,SNR=198						
H01W2	**Cape Leeuwin H**	**39.04**	**157**	T	T	22 29 04.5	
	baz=333,slow=76,SNR=202						
H01W1	**Cape Leeuwin H**	**39.04**	**157**	T	T	22 29 02.9	
	baz=333,slow=76,SNR=187						
HHC	**Hu-ho-hao-te**	**41.95**	**17**	*e*P	**P**	**21 48 05.3**	**+0.8**
HHC				pmax	pmax		
	comp=Z,5.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,110nm,6.6s						
WRA	**Warramunga Arr**	**42.06**	**122**	P	**P**	**21 48 05.6**	**-0.1**
	comp=Z,1.9nm,0.7s,baz=301,slow=9.0,SNR=16						
WRA	**Warramunga Arr**	**42.06**	**122**	P	**P**	**21 48 05.5**	**-0.1**
WB2	**Warramunga Arr**	**42.08**	**122**	P	**P**	**21 48 05.7**	**-0.1**
WB2				IAmb	IAmb	21 48 12.4	
	comp=Z,11nm,1.4s						
WR0	**Warramunga Arr**	**42.24**	**121**	P	**P**	**21 48 07.0**	**-0.2**
ASAR	**Alice Springs**	**43.39**	**127**	P	**P**	**21 48 17.3**	**+0.8**
	comp=Z,1.1nm,0.8s,baz=308,slow=7.7,SNR=8.9						
ASAR	**Alice Springs**	**43.39**	**127**	P	**P**	**21 48 16.6**	**+0.1**
WMQ	**Urumqi**	**43.56**	**350**	*e*P	**P**	**21 48 19.1**	**+1.6**
WMQ	**Urumqi**	**43.56**	**350**	P	**P**	**21 48 17.4**	**-0.2**
WMQ				IAmb	IAmb	21 48 21.2	
	comp=Z,3.8nm,0.6s						
SONM	**Songino Array**	**47.50**	**9**	P	**P**	**21 48 48.4**	**-0.3**
	comp=Z,0.7nm,0.7s,baz=181,slow=9.1,SNR=7.1						
SONM	**Songino Array**	**47.50**	**9**	P	**P**	**21 48 49.3**	**+0.6**
MK31	**Makanchi Array**	**47.51**	**346**	P	**P**	**21 48 49.2**	**+0.5**
MK31				IAmb	IAmb	21 48 49.8	
	comp=Z,1.9nm,0.8s						
MKAR	**Makanchi Array**	**47.51**	**346**	P	**P**	**21 48 49.4**	**+0.7**
	comp=Z,1.9nm,0.5s,baz=162,slow=9.1,SNR=50						
MKAR	**Makanchi Array**	**47.51**	**346**	P	**P**	**21 48 49.2**	**+0.5**
MAKZ	**Makanchi**	**47.60**	**346**	P	**P**	**21 48 49.9**	**+0.5**
MAKZ				IAmb	IAmb	21 49 02.5	
	comp=Z,2.1nm,0.9s						
KK31	**Karatay Array**	**48.25**	**334**	P	**P**	**21 48 54.5**	**0.0**
KK31				IAmb	IAmb	21 49 05.8	
	comp=Z,5.1nm,1.2s						
KKAR	**Karatay Array**	**48.25**	**334**	P	**P**	**21 48 54.9**	**+0.4**
KURK	**Kurchatov**	**52.05**	**345**	P	**P**	**21 49 22.9**	**-0.3**
USRK	**Ussuriysk Ar.**	**53.18**	**31**	P	**P**	**21 49 32.6**	**+0.9**
STKA	**Stephens Creek**	**53.31**	**132**	P	**P**	**21 49 34.5**	**+1.7**
	comp=Z,0.5nm,0.3s,baz=142,slow=1.6,SNR=1.6						
ZAA0	**Zalesovo Array**	**53.85**	**351**	P	**P**	**21 49 36.5**	**+0.2**
ZALV	**Zalesovo Beam**	**53.85**	**351**	P	**P**	**21 49 36.9**	**+0.5**
	comp=Z,6.9nm,0.6s,baz=170,slow=7.0,SNR=28						
ZALV	**Zalesovo Beam**	**53.85**	**351**	P	**P**	**21 49 36.5**	**+0.2**
BRVK	**Borovoye**	**56.55**	**341**	P	**P**	**21 49 55.2**	**-0.6**
BRVK				IAmb	IAmb	21 49 58.1	
	comp=Z,4.5nm,1.4s						
ABKAR	**Akbulak array**	**57.70**	**332**	P	**P**	**21 50 03.2**	**-0.8**
ABKAR	**Akbulak array**	**57.70**	**332**	P	**P**	**21 50 03.4**	**-0.6**
ABKAR				IAmb	IAmb	21 50 06.8	
	comp=Z,2.7nm,1.1s						
YAK	**Yakutsk**	**65.81**	**16**	P	**P**	**21 50 58.3**	**-0.1**
GERES	**GERESS Array B**	**84.91**	**319**	LR	LR	22 37 53.9	
	comp=Z,81nm,18.9s,baz=340,slow=41						
TXAR	**Lajitas Array**	**144.08**	**32**	PKP	PKPbc	21 59 48.5	+0.6
	comp=Z,0.2nm,0.5s,baz=195,slow=1.7,SNR=4.9						
CPUP	**Villa Florida**	**144.59**	**222**	PKP	**PKiKP**	**21 59 54.0**	**-0.6**
	comp=Z,2.1nm,0.8s,baz=201,slow=1.6,SNR=4.2						
CPUP	**Villa Florida**	**144.59**	**222**		**PKPdf**	**21 59 51.5**	**+0.6**

IDC ***07*** *21:41:59.9±2.0, 0°.81N×96°.92E, h0^{km}, mb3.8/4, mb1 3.8/6, mb1mx3.5/49, mbtmp3.7/6, ML3.5/2, Error ellipse: s-maj=56.5km s-min=24.0km az=61.0*

NEIC ***07*** *21:42:01.1±1.3, 0°.8N±0°.1×96°.91E±0°.10, h10^{km}±2^{km}, mb4.1/6, Error ellipse: s-maj=21.9km s-min=13.5km az=213.0*

ISC 07 21:42:03.5±1.6**, 0°.8N**±0°.2×**97°.0E**±0°.2**, h25^{km}, n22, σ0^{s}.62**/16**, mb4.1**/7**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**0.78**	**53**	Pn	**Pn**	**21 42 18.6**	**-0.3**
RPSI	**Rantau Prapat**	**2.70**	**47**	Pn	**Pn**	**21 42 46.0**	**+0.7**
PSI	**Prapat**	**2.77**	**45**	Pn	**Pn**	**21 42 45.8**	**-0.7**
	1.8nm,0.3s,baz=359,slow=3.9,SNR=1.2						
IPM	**Ipoh**	**5.44**	**48**	Pn	**Pn**	**21 43 23.8**	**+0.7**
KULM	**Kulim**	**5.76**	**40**	Pn	**Pn**	**21 43 26.9**	**-0.6**
CMAR	**Chiang Mai Arr**	**17.62**	**6**	P	**P**	**21 46 08.1**	**-0.2**
	0.2nm,0.3s,baz=199,slow=12,SNR=2.0						
SHL	**Shillong**	**25.07**	**349**	P	**P**	**21 47 26.1**	**-0.2**
H08S2	**Diego Garcia H**	**25.81**	**251**	T	T	22 14 19.9	
	baz=72,slow=76,SNR=50						
H08S3	**Diego Garcia H**	**25.81**	**251**	T	T	22 14 21.4	
	baz=72,slow=76,SNR=39						
H08S1	**Diego Carcia H**	**25.83**	**251**	T	T	22 14 22.8	
	baz=72,slow=76,SNR=49						
H01W3	**Cape Leeuwin H**	**39.00**	**157**	T	T	22 30 53.0	
	baz=333,slow=76,SNR=107						
H01W2	**Cape Leeuwin H**	**39.02**	**157**	T	T	22 30 53.9	
	baz=333,slow=76,SNR=107						
H01W1	**Cape Leeuwin H**	**39.02**	**157**	T	T	22 30 56.0	
	baz=333,slow=76,SNR=98						
WB0	**Warramunga Arr**	**42.03**	**121**	P	**P**	**21 49 53.7**	**+0.4**
WRA	**Warramunga Arr**	**42.05**	**121**	P	**P**	**21 49 53.8**	**+0.3**
	0.5nm,0.6s,baz=303,slow=9.0,SNR=5.9						
WB2	**Warramunga Arr**	**42.06**	**121**	P	**P**	**21 49 53.9**	**+0.3**
WB2				IAmb	IAmb	21 50 06.5	
	comp=Z,4.4nm,1.1s						
ASAR	**Alice Springs**	**43.37**	**127**	P	**P**	**21 50 04.4**	**+0.1**
	comp=Z,0.5nm,0.9s,baz=316,slow=7.8,SNR=3.3						
ASAR	**Alice Springs**	**43.37**	**127**	P	**P**	**21 50 02.8**	**-1.4**
MK31	**Makanchi Array**	**47.53**	**346**	P	**P**	**21 50 37.6**	**+0.8**
MK31				IAmb	IAmb	21 50 45.3	
	comp=Z,3.3nm,1.4s						
MKAR	**Makanchi Array**	**47.53**	**346**	P	**P**	**21 50 37.0**	**+0.2**
	comp=Z,1.3nm,0.8s,baz=161,slow=8.7,SNR=4.5						
ZAA0	**Zalesovo Array**	**53.88**	**351**	P	**P**	**21 51 24.5**	**0.0**
ZAA0				IAmb	IAmb	21 51 32.3	
	comp=Z,3.7nm,1.1s						
ZALV	**Zalesovo Beam**	**53.88**	**351**	P	**P**	**21 51 24.8**	**+0.3**
	comp=Z,1.7nm,0.4s,baz=174,slow=6.9,SNR=4.2						

NEIC ***07*** *22:12:15.9±2.2, 10°.03S±0°.08×74°.44W±0°.06, h116^{km}±10^{km}, mb4.0/13, Error ellipse: s-maj=13.6km s-min=5.1km az=147.0*

IDC ***07*** *22:12:16.8±1.5, 10°.00S×74°.60W, h122^{km}±17^{km}, mb3.4/5, mb1 3.6/12, mb1mx3.5/31, mbtmp3.9/12, MS2.2/1, Ms1 2.2/1, ms1mx2.0/21, Error ellipse: s-maj=18.0km s-min=13.1km az=61.0*

ISC 07 22:12:14.9±0.6**, 9°.93S**±0°.06×**74°.48W**±0°.07**, h100^{km}, n32, σ1^{s}.10**/35**, mb4.0**/9**, Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	**Nana**	**3.09**	**228**	P	**Pn**	**22 13 03.1**	**+1.1**
	33nm,0.3s,baz=32,slow=10,SNR=52						
NNA				S	**Sn**	**22 13 38.5**	**+0.3**
	67nm,0.3s,baz=194,slow=19,SNR=20						
NNA				LR	LR	22 13 56.8	
	comp=Z,40nm,20.3s,baz=302,slow=34						
NNA	**Nana**	**3.09**	**228**		**Pn**	**22 13 03.3**	**+1.3**
NNA				Sn	**Sn**	**22 13 38.4**	**+0.2**
ATAH	**Atahualpa**	**4.76**	**305**	P	**Pn**	**22 13 27.2**	**+2.4**
	1.9nm,0.3s,baz=110,slow=1.7,SNR=15						
ATAH				S	**Sn**	**22 14 20.2**	**+1.1**
	3.2nm,0.3s,baz=189,slow=2.9,SNR=5.7						
LPAZ	**La Paz**	**8.84**	**136**	P	**Pn**	**22 14 22.1**	**+1.6**
	0.1nm,0.3s,baz=291,slow=18,SNR=1.4						
SAML	**Samuel**	**11.19**	**86**	Pn	**Pn**	**22 14 52.0**	**+0.1**
LVC	**Limon Verde**	**13.69**	**158**	P	**Pn**	**22 15 25.1**	**-0.2**
	0.1nm,0.3s,baz=354,slow=19,SNR=1.5						
SIV	**San Ignacio**	**14.39**	**116**	P	**Pn**	**22 15 35.0**	**+1.0**
	0.8nm,0.3s,baz=305,slow=10,SNR=16						
PTGA	**Pitinga**	**17.09**	**59**	P	**P**	**22 16 09.8**	**+1.9**
	1.2nm,0.3s,baz=231,slow=18,SNR=16						
PTGA	**Pitinga**	**17.09**	**59**	P	**P**	**22 16 09.4**	**+1.5**
PTGA				IAmb	IAmb	22 16 11.5	
	comp=Z,4.4nm,0.7s						
SDV	**Santo Domingo**	**19.08**	**12**	P	**Pn**	**22 16 31.5**	**-0.4**
	comp=Z,0.9nm,0.3s,baz=225,slow=8.2,SNR=7.0						
SDV	**Santo Domingo**	**19.08**	**12**	P	**Pn**	**22 16 31.4**	**-0.4**
SDV				IAmb	IAmb	22 16 34.0	
	comp=Z,4.7nm,0.6s						
GRGR	**Grenville**	**25.35**	**30**	P	**P**	**22 17 32.0**	**-0.9**
WHAR	**Wooly Hollow**	**48.02**	**340**	P	**P**	**22 20 43.7**	**-0.4**
TXAR	**Lajitas Array**	**48.12**	**325**	P	**P**	**22 20 45.2**	**+0.1**
	comp=Z,0.8nm,0.5s,baz=151,slow=8.8,SNR=19						
TXAR	**Lajitas Array**	**48.12**	**325**	P	**P**	**22 20 45.5**	**+0.4**
TX31	**Lajitas Ar. Si**	**48.12**	**325**	P	**P**	**22 20 45.3**	**+0.2**
TX31				IAmb	IAmb	22 20 45.5	
	comp=Z,2.0nm,0.8s						
T42A	**Van Buren**	**49.25**	**342**	P	**P**	**22 20 51.6**	**-1.8**
MGMO	**Mountain Grove**	**49.72**	**341**	P	**P**	**22 20 56.5**	**-0.6**
SDCO	**Great Sand Dun**	**55.60**	**330**	P	**P**	**22 21 40.3**	**-0.5**
ECSD	**EROS Data Cent**	**57.08**	**341**	P	**P**	**22 21 51.6**	**+0.8**
ECSD				IAmb	IAmb	22 22 05.4	
	comp=Z,1.1nm,0.9s						
PV03	**Paradox Valley**	**57.68**	**328**	P	**P**	**22 21 56.2**	**+0.8**
B35A	**Bob, Littlefor**	**60.48**	**345**	P	**P**	**22 22 12.8**	**-1.4**
B35A				IAmb	IAmb	22 22 15.9	
	comp=Z,2.0nm,1.1s						
PDAR	**Pinedale Array**	**61.45**	**331**	P	**P**	**22 22 20.7**	**-0.5**
	comp=Z,0.3nm,0.8s,baz=119,slow=7.4,SNR=2.1						
R11A	**Troy Canyon, C**	**61.45**	**324**	P	**P**	**22 22 21.6**	**+0.4**
ULM	**Lac du Bonnet**	**62.77**	**345**	P	**P**	**22 22 28.4**	**-1.1**
	comp=Z,1.9nm,0.4s,baz=162,slow=6.6,SNR=8.1						
ULM	**Lac du Bonnet**	**62.77**	**345**	P	**P**	**22 22 28.8**	**-0.8**
ULM				IAmb	IAmb	22 22 29.1	
	comp=Z,2.5nm,0.6s						
YKA	**Yellowknife Ar**	**78.58**	**342**	P	**P**	**22 24 03.9**	**-1.3**
	comp=Z,0.3nm,0.8s,baz=134,slow=6.3,SNR=4.0						
TORD	**Torodi Ar. Bea**	**79.01**	**74**	P	**P**	**22 24 09.7**	**+1.1**
	comp=Z,2.8nm,1.3s,baz=272,slow=5.2,SNR=2.7						
QSPA	**South Pole Qui**	**80.19**	**180**	P	**P**	**22 24 13.4**	**-0.8**
QSPA				IAmb	IAmb	22 24 14.7	
	comp=Z,2.7nm,1.1s						
ASAR	**Alice Springs**	**136.58**	**219**	PKP	**PKPdf**	**22 31 24.4**	**-1.9**
	comp=Z,0.2nm,0.5s,baz=117,slow=2.1,SNR=2.2						
WRA	**Warramunga Arr**	**138.94**	**224**	PKP	**PKPdf**	**22 31 29.5**	**-1.2**
	comp=Z,0.5nm,0.5s,baz=123,slow=2.0,SNR=12						
SONM	**Songino Array**	**142.21**	**359**	PKP	**PKPdf**	**22 31 35.4**	**-0.6**
	comp=Z,0.2nm,0.6s,baz=353,slow=3.6,SNR=1.6						

IDC 07 22:35:47.8±5.3**, 15°.60S**×**178°.06W, h430^{km}**±37^{km}**, mb2.9**/3**, mb1 3.3**/4**, mb1mx2.9**/48**, mbtmp3.8**/4**, Error ellipse: s-maj=299.1km s-min=34.0km az=141.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.29**	**240**	P	P	22 37 04.5	+0.1
	13nm,0.3s,baz=195,slow=23,SNR=82						
WRA	**Warramunga Arr**	**45.42**	**257**	P	P	22 43 25.8	-0.9
	0.2nm,0.7s,baz=95,slow=7.8,SNR=5.2						
ASAR	**Alice Springs**	**45.78**	**252**	P	P	22 43 29.8	+0.3
	4.3nm,0.4s,baz=84,slow=8.4,SNR=88						
ILAR	**Eielson Array**	**83.58**	**13**	P	P	22 47 28.9	-0.1
	0.3nm,0.5s,baz=220,slow=5.4,SNR=4.4						

JMA ***07*** *22:41:05.4±0.3, 21°.78N×120°.47E, h61^{km}±4^{km}, M3.9*

IDC ***07*** *22:41:06.3±1.0, 21°.04N×118°.88E, h0^{km}, mb3.6/6, mb1 3.8/6, mb1mx3.5/45, mbtmp3.6/6, MS2.9/1, Ms1 2.9/1, ms1mx2.5/31, Error ellipse: s-maj=86.1km s-min=19.4km az=67.0*

TAP ***07*** *22:41:07.5, 21°.94N×120°.61E, h45^{km}, ML3.7, D*

ISC 07 22:41:09.2±1.0**, 21°.93N**±0°.05×**120°.55E**±0°.03**, h32^{km}**±6^{km}**, n102, σ1^{s}.23**/188**, mb3.5**/6**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNW	**Nanwan**	**0.19**	**82**	P	**Pn**	**22 41 15.2**	**-0.6**
	baz=96						
SNW				S	**Sb**	**22 41 20.9**	**+1.0**
	baz=96						
HEN	**Hengchun**	**0.19**	**68**	*i* P	**Pn**	**22 41 15.2**	**-0.6**
	baz=77						
HEN				*i* S	**Sb**	**22 41 20.7**	**+0.9**
	baz=77						
TWK1	**Hengchun**	**0.24**	**88**	*i* P	**Pn**	**22 41 15.6**	**-0.9**
	baz=91						
TWK1				*i* S	**Sn**	**22 41 21.5**	**+0.3**
	baz=91						
TWKBT	**Hengchun**	**0.24**	**88**	P	**Pn**	**22 41 15.6**	**-1.0**
	baz=91						
TWKBT				S	**Sn**	**22 41 21.4**	**0.0**
	baz=91						
TSEB	**Hengchuen, Pin**	**0.33**	**96**	*i* P	**Pb**	**22 41 16.4**	**-0.8**
	baz=101						
TSEB				*i* S	**Sn**	**22 41 22.9**	**-0.5**
	baz=101						
SLIU	**Shizi**	**0.36**	**39**	P	**Pb**	**22 41 17.1**	**-0.6**
	baz=33						
SLIU				S	**Sb**	**22 41 23.5**	**-0.1**
	baz=33						
SCZT	**Fangliau**	**0.44**	**9**	P	**Pb**	**22 41 18.1**	**-0.7**
	baz=356						
SCZT				S	**Sb**	**22 41 25.3**	**-0.1**
	baz=356						
WLCH	**Liuqiu**	**0.44**	**339**	P	**Pb**	**22 41 19.1**	**+0.3**
	baz=332						
WLCH				S	**Sn**	**22 41 29.0**	**+2.8**
	baz=332						
TWP	**Hsiaoliuchiu**	**0.45**	**337**	P	**Pb**	**22 41 19.1**	**+0.2**
	baz=320						
TWP				S	**Sn**	**22 41 29.0**	**+2.7**
	baz=320						
EAST	**Anshuo**	**0.53**	**32**	*i* P	**Pn**	**22 41 19.4**	**-1.1**
	baz=28						
EAST				*e*S	**Sn**	**22 41 27.9**	**-0.5**
	baz=28						
TAW	**Tawu**	**0.53**	**37**	P	**Pn**	**22 41 19.5**	**-1.0**
	baz=34						
TAW				S	**Sn**	**22 41 27.4**	**-1.0**
	baz=34						
SSPT	**Xinbi**	**0.55**	**2**	P	**Pn**	**22 41 19.9**	**-0.8**
	baz=1.0						
SSPT				*e*S	**Sn**	**22 41 28.4**	**-0.4**
	baz=1.0						
MASBT	**Mashibuluo**	**0.68**	**7**	*i* P	**Pn**	**22 41 21.3**	**-1.3**
	baz=2.0						
MASBT				S	**Sn**	**22 41 32.7**	**+0.6**
	baz=2.0						
TSPT	**Pingtung City**	**0.74**	**356**	*e*P	**Pn**	**22 41 22.6**	**-0.8**
	baz=342						
TSPT				*e*S	**Sn**	**22 41 33.9**	**+0.3**
	baz=342						
ECL	**Taimali**	**0.76**	**30**	P	**Pn**	**22 41 22.5**	**-1.2**
	baz=27						
ECL				*e*S	**Sn**	**22 41 32.9**	**-1.1**
	baz=27						
TSMG	**Majia**	**0.77**	**7**	P	**Pn**	**22 41 22.5**	**-1.4**
	baz=3.0						
TSMG				S	**Sn**	**22 41 32.5**	**-1.9**
	baz=3.0						
SGLT	**Jiouru**	**0.79**	**356**	P	**Pn**	**22 41 24.4**	**+0.3**
	baz=353						
SGLT				S	**Sn**	**22 41 35.6**	**+0.8**
	baz=353						
SSD	**Sandimen**	**0.81**	**5**	P	**Pn**	**22 41 23.1**	**-1.3**
	baz=2.0						
SSD				S	**Sn**	**22 41 33.9**	**-1.4**
	baz=2.0						
SNJT	**Kaohsiung City**	**0.84**	**346**	*e*P	**Pn**	**22 41 23.4**	**-1.4**
	baz=331						
SNJT				S	**Sn**	**22 41 37.0**	**+0.9**
	baz=331						
TWM1	**Shoushan**	**0.89**	**352**	P	**Pn**	**22 41 25.0**	**-0.6**
	baz=350						
TWM1				*e*S	**Sn**	**22 41 38.5**	**+1.1**
	baz=350						
LAY	**Lan-yu**	**0.94**	**83**	P	**Pn**	**22 41 24.3**	**-1.8**
	baz=75						
LAY				S	**Sn**	**22 41 37.3**	**-1.1**
	baz=75						
SCST	**Cishan**	**0.95**	**357**	*e*P	**Pn**	**22 41 24.3**	**-2.0**
	baz=342						
TTN	**Taitung**	**0.99**	**34**	*e*P	**Pn**	**22 41 25.4**	**-1.4**
	baz=32						
TTN				*e*S	**Sn**	**22 41 38.9**	**-0.7**
	baz=32						
TWG	**Pinlang**	**1.01**	**29**	P	**Pn**	**22 41 26.0**	**-1.1**
	baz=37						
TWG				*e*S	**Sn**	**22 41 40.2**	**+0.1**
	baz=37						
TWGBT	**Beinan**	**1.01**	**29**	*i* P	**Pn**	**22 41 26.0**	**-1.1**
	baz=37						
TWGBT				*e*S	**Sn**	**22 41 37.7**	**-2.5**
	baz=37						
SLGT	**Liugui**	**1.06**	**5**	P	**Pn**	**22 41 27.1**	**-0.7**
	baz=2.0						
SLGT				S	**Sn**	**22 41 41.2**	**-0.3**
	baz=2.0						
LONT	**Longtian**	**1.11**	**29**	P	**Pn**	**22 41 27.4**	**-1.0**
	baz=38						
LONT				*e*S	**Sn**	**22 41 41.0**	**-1.6**
	baz=38						
LDUT	**Ludao**	**1.13**	**49**	*i* P	**Pn**	**22 41 27.3**	**-1.4**
	baz=42						
LDUT				S	**Sn**	**22 41 42.6**	**-0.5**
	baz=42						
SGST	**Jiashian**	**1.14**	**2**	*e*P	**Pn**	**22 41 28.1**	**-0.9**
	baz=360						
SGST				*e*S	**Sn**	**22 41 43.5**	**0.0**
	baz=360						
CHN1	**Nanshi**	**1.25**	**359**	P	**Pn**	**22 41 29.4**	**-1.0**
	baz=345						
CHN1				*e*S	**Sn**	**22 41 44.8**	**-1.3**
	baz=345						
EDH	**Donghe**	**1.25**	**34**	P	**Pn**	**22 41 29.5**	**-0.9**
	baz=32						
EDH				*e*S	**Sn**	**22 41 43.9**	**-2.2**
	baz=32						
SCLT	**Jiali**	**1.28**	**345**	S	**Sn**	**22 41 46.1**	**-0.8**
	baz=343						
WTP	**Ta-pu**	**1.31**	**3**	P	**Pn**	**22 41 30.0**	**-1.2**
	baz=1.0						
WTP				*e*S	**Sn**	**22 41 46.1**	**-1.5**
	baz=1.0						
ELDTW	**Lidau**	**1.32**	**19**	*i* P	**Pn**	**22 41 30.8**	**-0.8**
	baz=9.0						
ELDTW				*e*S	**Sn**	**22 41 47.2**	**-0.9**
	baz=9.0						
TWK	**Hsinying**	**1.33**	**358**	*e*P	**Pn**	**22 41 30.6**	**-1.0**
	baz=356						
TWK				*e*S	**Sn**	**22 41 47.8**	**-0.4**
	baz=356						
TPUB	**Ta-pu**	**1.36**	**3**	P	**Pn**	**22 41 31.0**	**-1.0**
	baz=350						
TPUB				S	**Sn**	**22 41 47.0**	**-2.0**
	baz=350						
CHKT	**Chengkung**	**1.38**	**33**	*e*P	**Pn**	**22 41 32.1**	**-0.1**
	baz=32						
CHKT				*e*S	**Sn**	**22 41 47.8**	**-1.7**
	baz=32						
CHN4	**Tsaushan**	**1.41**	**2**	P	**Pn**	**22 41 31.4**	**-1.2**
	baz=360						
CHN4				*e*S	**Sn**	**22 41 48.8**	**-1.4**
	baz=360						
FULB	**Fuli**	**1.44**	**29**	*e*P	**Pn**	**22 41 32.1**	**-0.9**
	baz=36						
FULB				*e*S	**Sn**	**22 41 49.4**	**-1.4**
	baz=36						
CHN8	**Yiju**	**1.44**	**348**	*e*P	**Pn**	**22 41 32.1**	**-0.9**
	baz=346						
CHN8				S	**Sn**	**22 41 49.0**	**-1.9**
	baz=346						
ICHU	**Yijhu**	**1.44**	**350**	*e*P	**Pn**	**22 41 31.6**	**-1.5**
	baz=338						
ICHU				S	**Sn**	**22 41 49.7**	**-1.2**
	baz=338						
CHY	**Chiayi**	**1.56**	**356**	*e*P	**Pn**	**22 41 31.4**	**-3.4**
	baz=354						
CHY				*e*S	**Sn**	**22 41 53.0**	**-0.8**
	baz=354						
TWF1	**Yuli**	**1.57**	**26**	P	**Pn**	**22 41 34.4**	**-0.5**
	baz=12						

TWF1				S	**Sn**	**22 41 52.8**	**-1.3**
	baz=12						
EYUL	**Yuli**	**1.58**	**27**	*e*P	**Pn**	**22 41 34.1**	**-0.9**
	baz=14						
EYUL				*e*S	**Sn**	**22 41 54.2**	**0.0**
	baz=14						
ALS	**Alishan**	**1.59**	**9**	P	**Pn**	**22 41 34.4**	**-1.0**
	baz=356						
ALS				*e*S	**Sn**	**22 41 54.4**	**-0.5**
	baz=356						
YUS	**Yu-Shan**	**1.59**	**13**	P	**Pn**	**22 41 34.6**	**-0.9**
	baz=2.0						
YUS				*e*S	**Sn**	**22 41 55.5**	**+0.2**
	baz=2.0						
VCHM	**Qimei**	**1.64**	**321**	*e*P	**Pn**	**22 41 34.8**	**-0.9**
	baz=320						
VCHM				S	**Sn**	**22 41 53.0**	**-2.7**
	baz=320						
CHN5	**Tsauling**	**1.66**	**4**	*e*P	**Pn**	**22 41 34.9**	**-1.3**
	baz=351						
CHN5				*e*S	**Sn**	**22 41 55.7**	**-0.7**
	baz=351						
EHY	**Hungye**	**1.72**	**24**	P	**Pn**	**22 41 35.6**	**-1.3**
	baz=35						
EHY				*e*S	**Sn**	**22 41 55.7**	**-2.1**
	baz=35						
WSF	**Szhu**	**1.72**	**350**	*e*P	**Pn**	**22 41 35.2**	**-1.7**
	baz=349						
WSF				S	**Sn**	**22 41 55.5**	**-2.3**
	baz=349						
WGK	**Gukeng**	**1.74**	**0**	P	**Pn**	**22 41 36.0**	**-1.3**
	baz=349						
WGK				S	**Sn**	**22 41 58.2**	**-0.1**
	baz=349						
WDLH	**Douliu**	**1.75**	**360**	P	**Pn**	**22 41 36.0**	**-1.3**
	baz=348						
WDLH				*e*S	**Sn**	**22 41 56.7**	**-1.7**
	baz=348						
HGSD	**Ruisui**	**1.75**	**27**	*e*P	**Pn**	**22 41 36.8**	**-0.5**
	baz=14						
HGSD				*e*S	**Sn**	**22 41 57.7**	**-0.8**
	baz=14						
WTK	**Tuku**	**1.75**	**355**	*e*P	**Pn**	**22 41 35.9**	**-1.5**
	baz=354						
WTK				S	**Sn**	**22 41 56.9**	**-1.7**
	baz=354						
WHYT	**Xinyi Township**	**1.78**	**9**	P	**Pn**	**22 41 36.8**	**-1.0**
	baz=357						
WHYT				S	**Sn**	**22 41 59.0**	**-0.2**
	baz=357						
PHUB	**P'eng-hu**	**1.81**	**330**	*e*P	**Pn**	**22 41 35.6**	**-2.5**
	baz=329						
PHUB				*e*S	**Sn**	**22 41 57.7**	**-2.4**
	baz=329						
PNG	**Penghu**	**1.87**	**331**	*e*P	**Pn**	**22 41 35.6**	**-3.3**
	baz=330						
PNG				S	**Sn**	**22 42 00.4**	**-1.0**
	baz=330						
SSLB	**Suanglung**	**1.88**	**11**	P	**Pn**	**22 41 38.4**	**-0.7**
	baz=10.0						
SSLB				*e*S	**Sn**	**22 42 01.0**	**-0.9**
	baz=10.0						
WJS	**Zhushan**	**1.89**	**5**	P	**Pn**	**22 41 38.0**	**-1.2**
	baz=352						
WJS				S	**Sn**	**22 42 00.6**	**-1.3**
	baz=352						
VWDT	**VWDT**	**1.89**	**17**	*e*P	**Pn**	**22 41 38.7**	**-0.5**
	baz=3.0						
WNT	**Mingjian**	**1.94**	**4**	P	**Pn**	**22 41 38.7**	**-1.2**
	baz=3.0						
WNT				S	**Sn**	**22 42 01.7**	**-1.4**
	baz=3.0						
SMLT	**Sun Moon Lake**	**1.97**	**9**	P	**Pn**	**22 41 39.6**	**-0.8**
	baz=356						
SMLT				*e*S	**Sn**	**22 42 02.4**	**-1.7**
	baz=356						
WNT1	**Nantou City**	**1.97**	**3**	*e*P	**Pn**	**22 41 39.1**	**-1.2**
	baz=2.0						
WNT1				S	**Sn**	**22 42 02.9**	**-1.0**
	baz=2.0						
ESL	**Shilin**	**2.04**	**23**	P	**Pn**	**22 41 41.8**	**+0.5**
	baz=34						
ESL				*e*S	**Sn**	**22 42 03.9**	**-1.9**
	baz=34						
WPL	**Puli Township**	**2.10**	**10**	*e*P	**Pn**	**22 41 41.2**	**-0.9**
	baz=358						
WPL				*e*S	**Sn**	**22 42 06.0**	**-1.2**
	baz=358						
DPDB	**Guoxing**	**2.12**	**9**	*e*P	**Pn**	**22 41 41.0**	**-1.4**
	baz=357						
WCHH	**Zhanghua**	**2.14**	**0**	*e*P	**Pn**	**22 41 41.0**	**-1.6**
	baz=359						
WCHH				S	**Sn**	**22 42 06.2**	**-1.8**
	baz=359						
CHGB	**Renai**	**2.19**	**15**	*e*P	**Pn**	**22 41 43.1**	**-0.5**
	baz=2.0						
TCU	**Taichung**	**2.21**	**3**	*e*P	**Pn**	**22 41 42.4**	**-1.2**
	baz=2.0						
TCU				S	**Sn**	**22 42 08.3**	**-1.5**
	baz=2.0						
WHF	**Hehuan Shan**	**2.30**	**17**	*e*P	**Pn**	**22 41 45.1**	**-0.1**
	baz=16						
WHF				*e*S	**Sn**	**22 42 12.2**	**-0.5**
	baz=16						
WHP	**Taichung City**	**2.36**	**9**	P	**Pn**	**22 41 45.3**	**-0.5**
	baz=8.0						
WHP				S	**Sn**	**22 42 13.2**	**-0.5**
	baz=8.0						
TDCB	**Techi**	**2.38**	**14**	P	**Pn**	**22 41 45.5**	**-0.6**
	baz=3.0						
TDCB				S	**Sn**	**22 42 13.2**	**-1.0**
	baz=3.0						
TWT	**Tachien**	**2.38**	**14**	*e*P	**Pn**	**22 41 46.3**	**+0.1**
	baz=3.0						
TWT				*e*S	**Sn**	**22 42 13.3**	**-1.0**
	baz=3.0						
FUSS	**Fushou**	**2.39**	**15**	P	**Pn**	**22 41 46.0**	**-0.4**
	baz=15						
FUSS				*e*S	**Sn**	**22 42 14.1**	**-0.5**
	baz=15						
WDJ	**Dajia District**	**2.41**	**2**	P	**Pn**	**22 41 44.7**	**-1.6**
	baz=1.0						
WDJ				S	**Sn**	**22 42 14.1**	**-0.5**
	baz=1.0						
TWQ1	**Liyutan**	**2.41**	**5**	P	**Pn**	**22 41 44.9**	**-1.5**
	baz=353						
TWQ1				S	**Sn**	**22 42 14.5**	**-0.4**
	baz=353						
ETLH	**Xiulin Townshi**	**2.42**	**21**	P	**Pn**	**22 41 47.2**	**+0.6**
	baz=10.0						
ETLH				S	**Sn**	**22 42 16.8**	**+1.6**
	baz=10.0						
NACB	**Ninganchiao**	**2.43**	**23**	*e*P	**Pn**	**22 41 44.9**	**-1.7**
	baz=22						
NACB				*e*S	**Sn**	**22 42 12.2**	**-3.1**
	baz=22						
NSY	**Sanyi**	**2.48**	**4**	*e*P	**Pn**	**22 41 47.2**	**-0.1**
	baz=353						
NSY				*e*S	**Sn**	**22 42 16.6**	**+0.1**
	baz=353						
NNSB	**Datong**	**2.60**	**17**	*e*P	**Pn**	**22 41 49.0**	**-0.1**
	baz=16						
NNSB				*e*S	**Sn**	**22 42 18.4**	**-1.3**
	baz=16						
NNSH	**Datong**	**2.60**	**17**	*e*P	**Pn**	**22 41 49.4**	**+0.3**
	baz=16						
NNSH				*e*S	**Sn**	**22 42 18.4**	**-1.3**
	baz=16						
NNS	**Nan Shan**	**2.61**	**17**	P	**Pn**	**22 41 49.1**	**-0.1**
	baz=16						
NNS				S	**Sn**	**22 42 19.7**	**-0.1**
	baz=16						
NSTT	**Nanjuang**	**2.72**	**9**	P	**Pn**	**22 41 49.9**	**-0.7**
	baz=355						
NSTT				S	**Sn**	**22 42 21.9**	**-0.5**
	baz=355						
LIOB	**Emei**	**2.73**	**9**	P	**Pn**	**22 41 50.1**	**-0.7**
	baz=355						
LIOB				*e*S	**Sn**	**22 42 21.5**	**-1.3**
	baz=355						
NDT	**Datong Townshi**	**2.80**	**18**	*e*P	**Pn**	**22 41 53.0**	**+1.3**
	baz=6.0						
NDT				S	**Sn**	**22 42 25.9**	**+1.5**
	baz=6.0						
NSK	**Sanguang**	**2.83**	**15**	*e*P	**Pn**	**22 41 52.5**	**+0.2**
	baz=15						
NSK				*e*S	**Sn**	**22 42 24.8**	**-0.5**
	baz=15						
ENTT	**Nioudou**	**2.85**	**19**	*e*P	**Pn**	**22 41 52.2**	**-0.2**
	baz=31						
ENTT				S	**Sn**	**22 42 25.6**	**-0.2**
	baz=31						
TWC	**Suao**	**2.92**	**24**	*e*P	**Pn**	**22 41 52.6**	**-0.7**
	baz=24						
TWC				*e*S	**Sn**	**22 42 25.6**	**-1.8**
	baz=24						
NWLT	**Wulai**	**2.96**	**17**	*e*P	**Pn**	**22 41 53.6**	**-0.4**
	baz=8.0						
NWLT				*e*S	**Sn**	**22 42 28.2**	**-0.3**
	baz=8.0						
HATJ	**Hateruma jima**	**3.67**	**54**	P	**Pn**	**22 42 03.5**	**-0.2**
HATJ				S	**Sn**	**22 42 44.8**	**-1.1**
IRIF	**Iriomote-Funau**	**3.78**	**50**	P	**Pn**	**22 42 05.2**	**0.0**
JIJ	**Ishigaki jima**	**4.10**	**53**	P	**Pn**	**22 42 09.1**	**-0.5**
JIJ				*e*S	**Sn**	**22 42 54.7**	**-1.7**
JISG	**Ishigakijimahi**	**4.35**	**52**	P	**Pn**	**22 42 12.7**	**-0.4**
JISG				*e*S	**Sn**	**22 43 03.1**	**+0.4**
JTJ	**Tarama**	**4.67**	**54**	P	**Pn**	**22 42 17.3**	**-0.2**
JTJ				*e*S	**Sn**	**22 43 10.3**	**-0.3**
JIRB	**Irabujima**	**5.13**	**55**	P	**Pn**	**22 42 24.1**	**+0.3**
JOW	**Kunigami**	**8.56**	**54**	LR	LR	22 46 51.2	
	comp=Z,70nm,21.8s,baz=190,slow=33						
SONM	**Songino Array**	**28.24**	**340**	P	**P**	**22 47 02.9**	**+3.6**
	0.6nm,0.7s,baz=153,slow=12,SNR=2.3						
MKAR	**Makanchi Array**	**39.58**	**318**	P	**P**	**22 48 37.9**	**+0.4**
	0.2nm,0.6s,baz=113,slow=9.4,SNR=4.2						
ZALV	**Zalesovo Beam**	**41.84**	**329**	P	**P**	**22 48 56.2**	**+0.3**
	0.8nm,0.6s,baz=105,slow=15,SNR=4.6						
WRA	**Warramunga Arr**	**43.75**	**161**	P	**P**	**22 49 10.5**	**-1.3**
	1.3nm,0.6s,baz=343,slow=9.0,SNR=11						
ASAR	**Alice Springs**	**47.15**	**163**	P	**P**	**22 49 38.1**	**-0.6**
	0.7nm,0.6s,baz=338,slow=6.5,SNR=12						
YKA	**Yellowknife Ar**	**85.26**	**22**	P	P	22 53 52.8	+10
	0.1nm,0.5s,baz=312,slow=4.7,SNR=2.4						

KRSC ***07*** *23:27:19.9±1.9, 52°.58N×153°.25E, h561^{km}±28^{km}, ML5.1*
MOS ***07*** *23:27:21.4±0.8, 52°.83N×152°.79E, h532^{km}, mb4.4/26, Error ellipse: s-maj=5.9km s-min=4.6km az=82.7*
NEIC ***07*** *23:27:22.4±1.3, 52°.83N±0°.09×152°.8E±0°.1, h529^{km}±6^{km}, mb4.4/175, Error ellipse: s-maj=14.1km s-min=11.9km az=151.0*
IDC ***07*** *23:27:23.1±0.7, 52°.82N×152°.77E, h539^{km}±8^{km}, mb3.8/41, mb1 3.9/48, mb1mx3.8/65, mbtmp4.7/48, Error ellipse: s-maj=8.0km s-min=6.1km az=148.0*
ISC 07 23:27:22.4±0.4**, 52°.74N**±0°.04×**152°.94E**±0°.04**, h537**^{km}±4^{km}**,**
h535^{km}:pP-P, n740, σ1^{s}19/800**, mb4.3**/193**, 34C-11D,**
Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
APC	**Apacha**	**2.57**	**84**	P	**P**	**23 28 33.3**	**-0.3**
APC				S	**S**	**23 29 31.8**	**0.0**
APC	**Apacha**	**2.57**	**84**	*e*P	**P**	**23 28 33.3**	**-0.3**
APC				*e*S	**S**	**23 29 31.8**	**0.0**
PAU	**Pauzhetka**	**2.71**	**117**	P	**P**	**23 28 34.1**	**-0.4**
PAU	**Pauzhetka**	**2.71**	**117**	*e*P	**P**	**23 28 34.1**	**-0.4**
SKR	**Severo-Kuril's**	**2.86**	**135**	*e*P	**P**	**23 28 34.8**	**-0.6**
SKR				*e*S	**S**	**23 29 32.8**	**-2.1**
SKR				pmax	pmax		
	comp=Z,110nm,0.6s						
SKR				smax	smax		
	comp=E,255nm,0.8s						
SKR				smax	smax		
	comp=N,220nm,0.9s						
SKR	**Severo-Kuril's**	**2.86**	**135**	*e*P	**P**	**23 28 34.6**	**-0.8**
SKR				*e*S	**S**	**23 29 33.4**	**-1.5**
PEA0B	**Petropavlovsk-**	**2.90**	**81**	*ce*P	**P**	**23 28 35.4**	**-0.2**
PEA0B	**Petropavlovsk-**	**2.90**	**81**	P	**P**	**23 28 35.5**	**-0.1**
PETK	**Petropavlovsk-**	**2.90**	**81**	P	**P**	**23 28 35.5**	**-0.2**
	comp=N,26nm,0.3s,baz=262,slow=4.5,SNR=703						
PETK	**Petropavlovsk-**	**2.90**	**81**	P	**P**	**23 28 35.0**	**-0.7**
GRL	**Gorelyy**	**3.13**	**91**	P	**P**	**23 28 37.6**	**+0.4**
GRL				S	**S**	**23 29 38.7**	**+0.3**
GRL	**Gorelyy**	**3.13**	**91**	*e*P	**P**	**23 28 37.6**	**+0.4**
GRL				*e*S	**S**	**23 29 38.7**	**+0.3**
KRMR	**Karymshinskiy**	**3.15**	**86**	P	**P**	**23 28 37.7**	**+0.5**
KRMR	**Karymshinskiy**	**3.15**	**86**	*e*P	**P**	**23 28 37.7**	**+0.5**
GNL	**Ganaly**	**3.15**	**70**	P	**P**	**23 28 37.5**	**+0.2**
GNL	**Ganaly**	**3.15**	**70**	*e*P	**P**	**23 28 37.5**	**+0.2**
MTVR	**Mutnovka**	**3.21**	**93**	P	**P**	**23 28 37.7**	**0.0**
MTVR				S	**S**	**23 29 38.7**	**-0.6**
MTVR	**Mutnovka**	**3.21**	**93**	*e*P	**P**	**23 28 37.7**	**0.0**
MTVR				*e*S	**S**	**23 29 38.7**	**-0.6**
KDTR	**Khodutka, Kamc**	**3.29**	**104**	P	**P**	**23 28 36.6**	**-1.5**
KDTR				S	**S**	**23 29 34.6**	**-5.4**
KDTR	**Khodutka, Kamc**	**3.29**	**104**	*e*P	**P**	**23 28 36.6**	**-1.5**
KDTR				*e*S	**S**	**23 29 34.6**	**-5.4**
RUS	**Russkaya**	**3.41**	**93**	P	**P**	**23 28 37.8**	**-1.1**
RUS				S	**S**	**23 29 38.6**	**-2.9**
RUS	**Russkaya**	**3.41**	**93**	*e*P	**P**	**23 28 37.8**	**-1.1**
RUS				*e*S	**S**	**23 29 38.6**	**-2.9**
PET	**Petropavlovsk**	**3.47**	**83**	*e*P	**P**	**23 28 38.7**	**-0.6**
PET				*e*S	**S**	**23 29 40.7**	**-1.5**
PET				pmax	pmax		
	comp=Z,1μm,0.6s						
PET				smax	smax		
	comp=E,250nm,0.6s						
PET				smax	smax		
	comp=N,270nm,0.5s						
PET	**Petropavlovsk**	**3.47**	**83**	*e*P	**P**	**23 28 38.8**	**-0.6**
PET				*e*S	**S**	**23 29 40.5**	**-1.7**
PET	**Petropavlovsk**	**3.47**	**83**	P	**P**	**23 28 38.6**	**-0.7**
KOK	**Koryaka**	**3.48**	**79**	P	**P**	**23 28 39.7**	**+0.2**
KOK	**Koryaka**	**3.48**	**79**	*e*P	**P**	**23 28 39.7**	**+0.2**
KRX	**Arik**	**3.50**	**78**	P	**P**	**23 28 39.7**	**0.0**
KRX	**Arik**	**3.50**	**78**	*e*P	**P**	**23 28 39.7**	**0.0**
DALK	**Dalny**	**3.53**	**83**	P	**P**	**23 28 39.0**	**-0.7**
DALK				S	**S**	**23 29 41.1**	**-1.9**
DALK	**Dalny**	**3.53**	**83**	*e*P	**P**	**23 28 39.0**	**-0.7**
DALK				*e*S	**S**	**23 29 41.1**	**-1.9**
AVH	**Avacha**	**3.54**	**79**	P	**P**	**23 28 40.0**	**+0.1**
AVH	**Avacha**	**3.54**	**79**	*e*P	**P**	**23 28 40.0**	**+0.1**
KRER	**Koryakskii**	**3.55**	**79**	P	**P**	**23 28 40.0**	**-0.1**
KRER	**Koryakskii**	**3.55**	**79**	*e*P	**P**	**23 28 40.0**	**-0.1**
UGLR	**Uglovaya**	**3.59**	**80**	P	**P**	**23 28 40.2**	**-0.1**
UGLR	**Uglovaya**	**3.59**	**80**	*e*P	**P**	**23 28 40.2**	**-0.1**
NLC	**Nalytchevo**	**3.90**	**81**	P	**P**	**23 28 41.7**	**-0.7**
NLC				S	**S**	**23 29 45.8**	**-2.0**
NLC	**Nalytchevo**	**3.90**	**81**	*e*P	**P**	**23 28 41.7**	**-0.7**
NLC				*e*S	**S**	**23 29 45.8**	**-2.0**
KII	**Karymskiy**	**4.11**	**69**	P	**P**	**23 28 43.9**	**-0.2**
KII	**Karymskiy**	**4.11**	**69**	*e*P	**P**	**23 28 43.9**	**-0.2**
SPN	**Mys Shipunski**	**4.30**	**82**	P	**P**	**23 28 43.8**	**-1.7**
SPN				S	**S**	**23 29 48.7**	**-4.8**
SPN	**Mys Shipunski**	**4.30**	**82**	*e*P	**P**	**23 28 43.8**	**-1.7**
SPN				*e*S	**S**	**23 29 48.7**	**-4.8**
KZV	**Kizimen**	**4.95**	**58**	P	**P**	**23 28 50.9**	**-0.1**
KZV	**Kizimen**	**4.95**	**58**	*e*P	**P**	**23 28 50.9**	**-0.1**
TUMR	**Tumrok**	**4.95**	**56**	P	**P**	**23 28 51.3**	**+0.3**
TUMR	**Tumrok**	**4.95**	**56**	*e*P	**P**	**23 28 51.3**	**+0.3**
TUMR				*e*S	**S**	**23 30 03.3**	**-0.3**
TUMD	**Tumrok D**	**5.05**	**58**	*e*P	**P**	**23 28 51.3**	**-0.3**
KMNR	**Kamenistaya**	**5.24**	**52**	P	**P**	**23 28 53.4**	**0.0**
KMNR	**Kamenistaya**	**5.24**	**52**	*e*P	**P**	**23 28 53.4**	**0.0**
KOZ	**Kozyrevsk**	**5.24**	**48**	P	**P**	**23 28 54.6**	**+1.3**
KOZ	**Kozyrevsk**	**5.24**	**48**	*e*P	**P**	**23 28 54.6**	**+1.3**
SRDR	**Sredinnyy**	**5.33**	**45**	P	**P**	**23 28 54.6**	**+0.5**
SRDR	**Sredinnyy**	**5.33**	**45**	*e*P	**P**	**23 28 54.6**	**+0.5**
BDR	**Baidarnaya**	**6.14**	**48**	P	**P**	**23 29 01.5**	**0.0**
BDR	**Baidarnaya**	**6.14**	**48**	*e*P	**P**	**23 29 01.5**	**0.0**
SRKR	**Sorokina**	**6.17**	**47**	P	**P**	**23 29 01.5**	**-0.3**
SRKR	**Sorokina**	**6.17**	**47**	*e*P	**P**	**23 29 01.5**	**-0.3**
SMKR	**Semkarok**	**6.27**	**49**	P	**P**	**23 29 02.6**	**-0.1**
SMKR	**Semkarok**	**6.27**	**49**	*e*P	**P**	**23 29 02.6**	**-0.1**
TYV	**Tymovskoe**	**6.65**	**258**	*e*P	**P**	**23 29 07.6**	**+1.2**
TYV				*e*S	**S**	**23 30 31.5**	**-0.1**
TYV				pmax	pmax		
	comp=Z,200nm,2.4s						
TYV				pmax	pmax		
	comp=Z,102nm,0.7s						
TYV				smax	smax		
	comp=N,35nm,1.0s						
TYV				smax	smax		
	comp=E,400nm,2.4s						
KBG	**Krutoberegovo**	**6.69**	**54**	P	**P**	**23 29 04.2**	**-2.4**
KBG				S	**S**	**23 30 25.8**	**-6.3**
KBG	**Krutoberegovo**	**6.69**	**54**	*e*P	**P**	**23 29 04.2**	**-2.4**
KBG				*e*S	**S**	**23 30 25.8**	**-6.3**
KBTR	**Krutoberegovo**	**6.72**	**55**	P	**P**	**23 29 04.0**	**-2.9**
KBTR	**Krutoberegovo**	**6.72**	**55**	*e*P	**P**	**23 29 04.0**	**-2.9**
MA2	**Magadan**	**6.96**	**351**	*ce*P	**P**	**23 29 09.0**	**-0.1**
MA2				pmax	pmax		
	comp=Z,6.0nm,0.6s						
MA2	**Magadan**	**6.96**	**351**	P	**P**	**23 29 08.4**	**-0.7**
BKI	**Bering**	**8.07**	**67**	P	**P**	**23 29 21.3**	**+1.1**
BKI				S	**S**	**23 30 54.9**	**-2.1**
BKI	**Bering**	**8.07**	**67**	*e*P	**P**	**23 29 21.3**	**+1.1**
BKI				*e*S	**S**	**23 30 54.9**	**-2.1**
KUR	**Kuril'sk**	**8.22**	**206**	*i* P	**P**	**23 29 21.8**	**-0.1**
YSS	**Yuzh-Sakhalins**	**8.76**	**233**	⇑*e*P	**P**	**23 29 28.4**	**+1.0**
YSS				*e*S	**S**	**23 31 10.3**	**+0.3**
YSS				pmax	pmax		
	comp=Z,30nm,0.6s						
YSS	**Yuzh-Sakhalins**	**8.76**	**233**		**P**	**23 29 27.5**	**+0.2**
YUK	**Yuzh-Kuril'sk**	**9.90**	**211**	*e*P	**P**	**23 29 38.3**	**-0.8**
YUK				*e*S	**S**	**23 31 31.8**	**+0.4**
YUK				pmax	pmax		
	comp=N,36nm,0.3s						
YUK				pmax	pmax		
	comp=E,37nm,0.3s						
YUK				pmax	pmax		
	comp=Z,131nm,0.3s						
GRPR	**Tuman**	**9.96**	**211**	*c i*P	**P**	**23 29 38.8**	**-1.0**
GRPR				*i* S	**S**	**23 31 30.7**	**-2.0**
GRPR				pmax	pmax		
	comp=Z,139nm,0.4s						
GRPR				pmax	pmax		
	comp=E,37nm,0.2s						
SEY	**Seymchan**	**10.22**	**359**	P	**P**	**23 29 42.6**	**+0.5**
	comp=E,4.6nm,0.3s,baz=176,slow=9.0,SNR=80						
SEY				S	**S**	**23 31 36.5**	**-0.6**
	comp=E,0.4nm,0.3s,baz=5.1,slow=21,SNR=6.4						
SEY	**Seymchan**	**10.22**	**359**	*i* P	**P**	**23 29 42.2**	**+0.2**
GRNR	**Gornyy**	**10.43**	**266**	⇑*i*P	**P**	**23 29 45.1**	**+0.6**
GRNR				pmax	pmax		
	comp=E,10.0nm,0.9s						
GRNR				pmax	pmax		
	comp=Z,20nm,0.7s						
GRNR				MLR	MLR		
	comp=N,190nm,14.0s						
GRNR				MLR	MLR		
	comp=E,90nm,14.0s						
NMR	**Nemuro--Hokkai**	**10.54**	**210**	*e*P	**P**	**23 29 41.2**	**-4.5**
NMR				*e*S	S	23 31 34.1	-9.5
JKA	**Kamikawa-asahi**	**11.02**	**223**	P	**P**	**23 29 50.4**	**-0.3**
ASAJ	**Asahikawa**	**11.02**	**223**	P	**P**	**23 29 50.5**	**-0.2**
	comp=E,3.3nm,0.3s,baz=301,slow=3.4,SNR=36						
KMSK	**Kamenskaya**	**12.04**	**31**	P	**P**	**23 30 01.1**	**+0.2**
KMSK	**Kamenskaya**	**12.04**	**31**	*e*P	**P**	**23 30 01.1**	**+0.2**
ERM	**Erimo**	**12.60**	**215**	*i* P	**P**	**23 30 05.1**	**-2.0**
ERM	**Erimo**	**12.60**	**215**	P	**P**	**23 30 05.5**	**-1.6**
SMY	**Shemya**	**12.82**	**82**	P	**P**	**23 30 09.5**	**+0.3**
SMY	**Shemya**	**12.82**	**82**	P	**P**	**23 30 09.5**	**+0.3**
TEY	**Ternei**	**13.21**	**241**	⇓*i*P	**P**	**23 30 14.1**	**+0.8**
TEY				pmax	pmax		
	comp=E,30nm,0.7s						
TEY				pmax	pmax		
	comp=N,40nm,0.8s						
TEY				pmax	pmax		
	comp=Z,70nm,0.7s						
KLR	**Kul'dur**	**13.79**	**264**	P	**P**	**23 30 19.4**	**+0.1**
	comp=Z,4.9nm,0.3s,baz=69,slow=9.2,SNR=165						
KLR				ScP	**ScP**	**23 37 41.9**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=69,slow=4.3,SNR=4.9						
KLR	**Kul'dur**	**13.79**	**264**	*ce*P	**P**	**23 30 18.5**	**-0.9**
ZEA	**Zeya**	**15.39**	**284**	*e*P	**P**	**23 30 34.2**	**-1.6**
ZEA				pmax	pmax		
	comp=E,10.0nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,30nm,1.1s						
YAK	**Yakutsk**	**15.52**	**316**	P	**P**	**23 30 35.1**	**-2.0**
	comp=Z,0.3nm,0.3s,baz=261,slow=0.7,SNR=23						
YAK				S	**S**	**23 33 14.2**	**-2.8**
	comp=Z,0.1nm,0.3s,baz=52,slow=24,SNR=21						
YAK	**Yakutsk**	**15.52**	**316**	*e*P	**P**	**23 30 33.8**	**-3.3**
YAK				*e*S	**S**	**23 33 12.7**	**-4.3**
YAK				pmax	pmax		
	comp=Z,54nm,0.9s						
YAK				pmax	pmax		
	comp=N,10.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,17nm,1.0s						
YAK				smax	smax		
	comp=N,105nm,1.5s						
YAK				smax	smax		
	comp=E,346nm,3.0s						
YAK	**Yakutsk**	**15.52**	**316**	P	**P**	**23 30 34.4**	**-2.7**
AMKA	**Amchitka**	**16.24**	**84**	P	**P**	**23 30 44.0**	**-0.4**
USA0B	**Ussuriysk Arra**	**16.26**	**247**	*i* P	**P**	**23 30 43.1**	**-1.6**
USA0B	**Ussuriysk Arra**	**16.26**	**247**	P	**P**	**23 30 43.5**	**-1.3**
USA0B				IAmb	IAmb	23 30 44.4	
	comp=Z,16nm,1.1s						
USRK	**Ussuriysk Ar.**	**16.26**	**247**	P	**P**	**23 30 43.2**	**-1.5**
	baz=49,slow=8.8,SNR=15						
USRK	**Ussuriysk Ar.**	**16.26**	**247**	P	**P**	**23 30 42.8**	**-2.0**
USRK	**Ussuriysk Ar.**	**16.26**	**247**	P	**P**	**23 30 42.8**	**-2.0**
JMM	**Marumori**	**17.12**	**214**	P	**P**	**23 30 52.5**	**-0.3**
MDJ	**Mudanjiang**	**17.37**	**251**	P	**P**	**23 30 54.2**	**-0.8**
MDJ				S	**S**	**23 33 49.2**	**+0.8**
MDJ				sS		23 34 00.6	
MDJ	**Mudanjiang**	**17.37**	**251**	P	**P**	**23 30 53.6**	**-1.4**
JSD	**Sado**	**17.91**	**221**	P	**P**	**23 31 00.2**	**+0.2**
ADK	**Adak**	**18.53**	**80**	P	**P**	**23 31 06.1**	**+0.6**
ADK				pmax	pmax		
	comp=Z,51nm,1.0s						
ADK	**Adak**	**18.53**	**80**	P	**P**	**23 31 06.1**	**+0.6**
MAJO	**Matsushiro**	**19.23**	**218**	*i* P	**P**	**23 31 11.3**	**-0.8**
MAJO				pmax	pmax		
	comp=Z,59nm,0.7s						
MAJO	**Matsushiro**	**19.23**	**218**	P	**P**	**23 31 12.9**	**+0.8**
MAT	**Matsushiro**	**19.23**	**218**	P	**P**	**23 31 12.4**	**+0.3**
MAT				*e*S	**S**	**23 34 24.0**	**+5.2**
MJAR	**Matsushiro Arr**	**19.23**	**218**	P	**P**	**23 31 12.6**	**+0.5**
	comp=Z,1.3nm,0.3s,baz=16,slow=10.0,SNR=134						
MJAR	**Matsushiro Arr**	**19.23**	**218**	P	**P**	**23 31 12.4**	**+0.3**
MJAR				pmax	pmax		
	comp=Z,26nm,0.7s						
MJAR	**Matsushiro Arr**	**19.23**	**218**	P	**P**	**23 31 12.4**	**+0.3**
ATKA	**Atka Island**	**19.94**	**78**	P	**P**	**23 31 19.8**	**+1.5**
JGF	**Kuroka**	**20.38**	**219**	P	**P**	**23 31 22.9**	**+0.3**
INU	**Inuyama**	**20.73**	**219**	P	**P**	**23 31 25.5**	**-0.2**
HIA	**Hailar**	**21.07**	**274**	*i* P	**P**	**23 31 27.9**	**-0.7**
HIA				pmax	pmax		
	comp=Z,12nm,0.9s						
HIA	**Hailar**	**21.07**	**274**	P	**P**	**23 31 28.1**	**-0.5**
JWT	**Wachi**	**21.44**	**222**	P	**P**	**23 31 32.2**	**+0.2**
TIXI	**Tiksi**	**21.73**	**340**	P	**P**	**23 31 33.8**	**-0.4**
TIXI				pmax	pmax		
	comp=Z,6.0nm,0.7s						
TIXI	**Tiksi**	**21.73**	**340**	P	**P**	**23 31 33.8**	**-0.4**
TIXI				IAmb	IAmb	23 31 34.9	
	comp=Z,5.8nm,0.7s						
BOD	**Bodaibo**	**22.51**	**299**	*e*P	**P**	**23 31 39.6**	**-1.8**
BOD				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KSRS	**Korea Array**	**23.19**	**239**	P	**P**	**23 31 48.0**	**+0.3**
	comp=Z,7.4nm,0.9s,baz=41,slow=9.4,SNR=11						
KSRS	**Korea Array**	**23.19**	**239**	P	**P**	**23 31 48.0**	**+0.3**
ANM	**Nome**	**24.19**	**44**	P	**P**	**23 31 57.5**	**+1.3**
ANM				pmax	pmax		
	comp=Z,7.0nm,0.7s						
ANM	**Nome**	**24.19**	**44**	P	**P**	**23 31 57.5**	**+1.3**
ANM				IAmb	IAmb	23 31 57.9	
	comp=Z,7.3nm,0.7s						
JTU	**Tsushima**	**24.75**	**232**	P	**P**	**23 32 01.7**	**+0.1**
JNU	**Nakatsue**	**25.23**	**228**	P	**P**	**23 32 06.2**	**+0.4**
	comp=Z,9.1nm,0.6s,baz=177,slow=2.9,SNR=7.5						
JNU	**Nakatsue**	**25.23**	**228**	P	**P**	**23 32 06.4**	**+0.6**
JNU				IAmb	IAmb	23 32 10.0	
	comp=Z,12nm,0.8s						
DL2	**Dalian**	**25.59**	**250**	P	**P**	**23 32 09.1**	**+0.2**
DL2				pmax	pmax		
	comp=Z,68nm,0.7s						
BJT	**Baijiatuau**	**28.05**	**258**	P	**P**	**23 32 30.6**	**+0.1**
BJT				pmax	pmax		
	comp=Z,5.0nm,0.7s						
BJT	**Baijiatuau**	**28.05**	**258**	P	**P**	**23 32 30.6**	**+0.1**
BJT				IAmb	IAmb	23 32 31.4	
	comp=Z,5.2nm,0.7s						
TTA	**Tatalina**	**28.25**	**49**	P	**P**	**23 32 33.1**	**+1.1**
TTA				pmax	pmax		
	comp=Z,14nm,0.7s						

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TTA   Tatalina           28.25  49    P      P      23 32 33.1 +1.1
TTA                                   IAmb   IAmb   23 32 33.8
      comp=Z,14nm,0.7s
SVW2  Sparrevohn         28.61  53    P      P      23 32 36.6 +1.5
SVW2                                  IAmb   IAmb   23 32 37.2
      comp=Z,11nm,0.8s
A21K  Barrow             28.79  31    P      P      23 32 36.8 +0.4
      baz=257
IMAR  Indian Mountai     29.18  42    P      P      23 32 40.2 +0.2
ULN   Ulaanbaatar        29.31 279ceP        P      23 32 41.1 -0.5
ULN                                   pmax   pmax
      comp=Z,5.0nm,0.6s
ULN   Ulaanbaatar        29.31 279    P      P      23 32 41.7 +0.1
ULN                                   IAmb   IAmb   23 32 42.6
      comp=Z,5.7nm,0.7s
CHIR  Chirikof Islan     29.62  63    P      P      23 32 44.5 +0.6
SONM  Songino Array      29.72 279    P      P      23 32 45.3 +0.2
      comp=Z,2.1nm,0.5s,baz=65,slow=7.5,SNR=20
SONM                                  PcP    PcP    23 35 30.9 -0.9
      comp=Z,1.8nm,0.6s,baz=82,slow=1.3,SNR=10.0
SONM                                  ScP    ScP    23 38 21.9 -0.9
      comp=Z,4.0nm,0.8s,baz=82,slow=2.5,SNR=21
SONM  Songino Array      29.72 279    P      P      23 32 44.9 -0.2
SONM                                  pmax   pmax
      comp=Z,2.0nm,0.8s
SONM  Songino Array      29.72 279    P      P      23 32 44.9 -0.2
TLY   Talaya             29.75 288    P      P      23 32 44.9 -0.2
      comp=Z,4.6nm,0.7s,baz=78,slow=7.1,SNR=7.5
TLY   Talaya             29.75 288  i P      P      23 32 44.6 -0.6
TLY                                   pmax   pmax
      comp=Z,11nm,1.2s
PPLA  Purkeypile         30.00  49    P      P      23 32 48.8 +1.5
PPLA                                  IAmb   IAmb   23 32 51.7
      comp=Z,11nm,0.7s
RSO   Redoubt South      30.07  53    P      P      23 32 49.3 +1.4
MLY   Manley             30.46  44    P      P      23 32 51.8 +0.7
      baz=274
ZAK   Zakamensk          30.47 286  eP       P      23 32 50.1 -1.4
ZAK                                   pmax   pmax
      comp=Z,11nm,1.2s
KTH   Kantishna Hill     30.50  47    P      P      23 32 52.6 +1.1
KTH                                   IAmb   IAmb   23 32 53.4
      comp=Z,16nm,0.9s
COLD  Coldfoot           30.60  40    P      P      23 32 53.1 +0.9
      baz=271,SNR=14
KDAK  Kodiak Island      30.72  59    P      P      23 32 53.5 +0.2
      comp=Z,16nm,0.5s,baz=342,slow=1.9,SNR=26
KDAK  Kodiak Island      30.72  59    P      P      23 32 53.7 +0.3
TRF   Thorofare Moun     30.80  47    P      P      23 32 55.3 +1.2
TOLK  Toolik Lake Re     30.85  37    P      P      23 32 55.2 +0.7
      baz=269,SNR=14
TOLK  Toolik Lake Re     30.85  37    P      P      23 32 55.1 +0.7
TOLK                                  IAmb   IAmb   23 32 56.0
      comp=Z,23nm,1.1s
CUT   Chulitna           30.94  49    P      P      23 32 56.0 +0.8
      baz=279,SNR=8.9
I23K  Minto, Yukon-K     31.03  44    P      P      23 32 57.2 +1.3
      baz=275,SNR=14
NEA2  Nenana             31.21  45    P      P      23 32 58.3 +0.8
      baz=276,SNR=14
MOY   Mondy              31.29 289  eP       P      23 32 58.7 +0.3
MCK   McKinley           31.36  47    P      P      23 32 59.9 +1.1
      baz=278,SNR=9.6
BTO   Baotou             31.38 265  eP       P      23 33 00.3 +0.9
BTO                                   S      S      23 37 58.0  +29
RC01  Rabbit Creek A     31.41  52    P      P      23 33 00.0 +0.8
      baz=281
O22K  Cooper Landing     31.54  53    P      P      23 33 00.8 +0.5
      baz=282
O22K  Cooper Landing     31.54  53    P      P      23 33 00.6 +0.3
PMR   Palmer             31.61  51    P      P      23 33 02.0 +1.1
PMR                                   pmax   pmax
      comp=Z,11nm,0.7s
PMR   Palmer             31.61  51    P      P      23 33 02.0 +1.1
PMR                                   IAmb   IAmb   23 33 03.4
      comp=Z,11nm,0.7s
WRH   Wood River Hil     31.64  45    P      P      23 33 02.1 +1.0
TCOL  CIGO, UAF Yank     31.69  44    P      P      23 33 02.8 +1.3
      baz=276,SNR=8.4
TCOL  CIGO, UAF Yank     31.69  44    P      P      23 33 02.6 +1.1
COLA  College            31.70  44  i P      P      23 33 01.7 +0.1
COLA                                  pmax   pmax
      comp=Z,25nm,0.9s
CCB   Clear Creek Bu     31.74  45    P      P      23 33 02.7 +0.7
CCB                                   IAmb   IAmb   23 33 03.2
      comp=Z,14nm,0.6s
JOW   Kunigami           31.77 225    P      P      23 33 02.5 -0.3
      comp=Z,32nm,0.7s,baz=351,slow=6.1,SNR=8.5
POKR  Poker Plat Res     31.85  44    P      P      23 33 04.3 +1.4
      baz=276,SNR=17
KNK   Knik Glacier       31.96  51    P      P      23 33 04.6 +0.7
IL31                     32.12  44    P      P      23 33 05.8 +0.6
IL31                                  IAmb   IAmb   23 33 06.6
      comp=Z,19nm,1.0s
ILAR  Eielson Array      32.12  44    P      P      23 33 05.8 +0.6
      comp=Z,13nm,0.6s,baz=283,slow=12,SNR=192
ILAR                                  ScP    ScP    23 38 28.6 -1.7
      comp=Z,1.2nm,0.8s,baz=272,slow=4.0,SNR=7.8
ILAR  Eielson Array      32.12  44    P      P      23 33 05.4 +0.2
ILAR  Eielson Array      32.12  44    P      P      23 33 05.4 +0.2
NJ2   Nanjing            32.12 243⇑iP        P      23 33 05.9 +0.2
NJ2                                   pmax   pmax
      comp=Z,18nm,0.8s
HDA   Harding Lake       32.14  45    P      P      23 33 05.7 +0.3
      baz=278,SNR=9.1
BMAR  Burnt Mountain     32.77  39    P      P      23 33 11.7 +1.0
M24K  Tolsona, Glenn     32.88  49    P      P      23 33 13.0 +1.2
      baz=282
PAX   Paxson             33.03  48    P      P      23 33 14.0 +1.0
PAX                                   pmax   pmax
      comp=Z,9.0nm,1.1s
PAX   Paxson             33.03  48    P      P      23 33 14.0 +1.0
PAX                                   IAmb   IAmb   23 33 21.3
      comp=Z,9.2nm,1.1s
SCRK  Sand Creek         33.49  45    P      P      23 33 17.0  0.0
      baz=281,SNR=25
NRIK  Noril'sk           33.68 324    P      P      23 33 17.9 -0.5
      comp=Z,2.8nm,0.6s,baz=96,slow=9.1,SNR=6.0
NRIK  Noril'sk           33.68 324ceP        P      23 33 17.4 -0.9
NRIK                                  pmax   pmax
      comp=Z,5.0nm,1.0s
NRIK  Noril'sk           33.68 324    P      P      23 33 17.8 -0.5
N25K  Chitina, Valde     33.72  50    P      P      23 33 20.0 +1.1
      baz=284
EGAK  Eagle              34.54  44    P      P      23 33 25.9 +0.3
BCAR  Beaver Creek A     34.65  47    P      P      23 33 27.9 +1.3
BARN  Barnard Glacie     35.23  50    P      P      23 33 33.4 +1.7
CTGM  Chitina Glacie     35.41  50    P      P      23 33 34.6 +1.5
EPYK  Eagle Plains       36.00  40    P      P      23 33 38.7 +1.0
      baz=283
XAN   Xi'an              36.35 257    P      P      23 33 40.6 -0.5
XAN                                   pmax   pmax
      comp=Z,11nm,1.1s
INK   Inuvik             36.76  37    P      P      23 33 44.7 +0.8
      comp=Z,12nm,0.5s,baz=295,slow=7.3,SNR=48
INK                                   PcP    PcP    23 35 51.5 +0.1
      comp=Z,1.7nm,0.4s,baz=265,slow=3.9,SNR=4.8
INK                                   ScP    ScP    23 38 46.5 -0.6
      comp=Z,1.4nm,0.7s,baz=281,slow=5.6,SNR=3.9
INK   Inuvik             36.76  37    P      P      23 33 44.7 +0.8
HYT   Haines Junctio     37.23  49    P      P      23 33 50.1 +2.0
LZH   Lanzhou            37.99 264  eP       P      23 33 55.5 +0.8
LZH                                   pP     pP     23 35 32.2 +4.3
LZH                                   sP     sP     23 36 27.3 -1.4
LZH                                   pmax   pmax
      comp=Z,23nm,1.0s
GTA   Gaotai             38.31 271  ⇓P       P      23 33 57.8 +0.6
GTA                                   pP     pP     23 35 33.8 +3.2
GTA                                   sP     sP     23 36 33.5 +2.3
GTA                                   ScP    ScP    23 38 53.0 -0.7
GTA                                   pmax   pmax
      comp=Z,20nm,1.0s
GTA                                   pmax   pmax
      comp=Z,250nm,7.4s
GTA                                   LR     LR
      comp=N,370nm,15.6s
GTA                                   LR     LR
      comp=E,290nm,15.3s
GTA                                   LR     LR
      comp=Z,320nm,15.3s
WHY   Whitehorse         38.50  49    P      P      23 34 00.5 +2.1
WHY                                   IAmb   IAmb   23 34 01.2
      comp=Z,15nm,0.7s
ENH   Enshi              38.73 252    P      P      23 34 00.1 -0.5
ZAA0  Zalesovo Array     39.26 300    P      P      23 34 03.5 -0.9
ZAA0                                  IAmb   IAmb   23 34 04.5
      comp=Z,8.1nm,0.8s
ZALV  Zalesovo Beam      39.26 300    P      P      23 34 03.7 -0.7
      comp=Z,6.6nm,0.5s,baz=60,slow=6.9,SNR=35
ZALV                                  PcP    PcP    23 35 58.9 -0.7
      comp=Z,1.1nm,0.4s,baz=123,slow=2.5,SNR=4.9
ZALV                                  ScP    ScP    23 38 56.1 -0.7
      comp=Z,0.4nm,0.5s,baz=62,slow=3.5,SNR=3.6
C36M  Paulatuk           39.77  33    P      P      23 34 08.8 +0.5
      baz=290,SNR=9.3
C36M  Paulatuk           39.77  33    P      P      23 34 08.8 +0.5
DGZ   Jazzator, Alta     39.87 293d iP       P      23 34 10.5 +0.9
DGZ                                   pmax   pmax
      comp=Z,11nm,0.8s
ZSN   Zaisan             42.51 291  eP       P      23 34 29.8 -0.6
      baz=291
ZSN   Zaisan             42.51 291  eP       P      23 34 29.7 -0.6
WMQ   Urumqi             42.94 285  eP       P      23 34 34.6 +0.7
WMQ                                   pP     PcP    23 36 13.8 +1.6
WMQ                                   pmax   pmax
      comp=Z,23nm,1.3s
WMQ                                   pmax   pmax
      comp=Z,240nm,5.3s
WMQ                                   LR     LR
      comp=N,750nm,8.5s
WMQ                                   LR     LR
      comp=E,1µm,6.5s
WMQ                                   LR     LR
      comp=Z,30nm,19.1s
WMQ   Urumqi             42.94 285    P      P      23 34 34.3 +0.4
WMQ                                   pmax   pmax
      comp=Z,23nm,0.9s
WMQ   Urumqi             42.94 285    P      P      23 34 34.3 +0.4
WMQ                                   IAmb   IAmb   23 34 35.8
      comp=Z,22nm,0.9s
DIB   Dawson Inlet,      42.99  58    P      P      23 34 36.0 +2.0
DIB                                   IAmb   IAmb   23 34 36.7
      comp=Z,11nm,0.9s
GYA   Guiyang            43.23 251  ⇑P       P      23 34 36.7 +0.2
GYA                                   pmax   pmax
      comp=Z,17nm,0.8s
EUNU  Eureka             43.28  13    P      P      23 34 35.7 -0.3
SZP   Santa              43.34 228    P      P      23 34 37.7 +0.5
SEM   Semipalatinsk      43.45 297  eP       P      23 34 35.8 -2.2
      baz=297
SEM   Semipalatinsk      43.45 297  eP       P      23 34 35.7 -2.2
KURK  Kurchatov          44.16 299  i P      P      23 34 42.5 -0.7
KURK                                  pmax   pmax
      comp=Z,33nm,1.0s
KURK  Kurchatov          44.16 299    P      P      23 34 42.8 -0.3
KURBB Kurchatov Arra     44.26 298    P      P      23 34 43.8 -0.2
      comp=Z,19nm,0.5s,baz=60,slow=7.5,SNR=104
MK31  Makanchi Array     44.33 292  i P      P      23 34 44.3 -0.3
MK31                                  pmax   pmax
      comp=Z,9.0nm,0.5s
MK31  Makanchi Array     44.33 292    P      P      23 34 44.2 -0.4
MK31                                  IAmb   IAmb   23 34 44.8
      comp=Z,9.2nm,0.6s
MKAR  Makanchi Array     44.33 292    P      P      23 34 44.4 -0.2
      comp=Z,11nm,0.6s,baz=62,slow=7.1,SNR=196
MKAR  Makanchi Array     44.33 292    P      P      23 34 44.2 -0.3
MAKZ  Makanchi           44.50 292    P      P      23 34 45.6 -0.3
MAKZ                                  pmax   pmax
      comp=Z,13nm,0.9s
MAKZ  Makanchi           44.50 292    P      P      23 34 45.6 -0.3
MAKZ                                  IAmb   IAmb   23 34 46.5
      comp=Z,13nm,0.8s
RES   Resolute Bay       45.21  20    P      P      23 34 50.5 -0.3
RES                                   pmax   pmax
      comp=Z,8.0nm,1.0s
RES   Resolute Bay       45.21  20    P      P      23 34 50.5 -0.3
YKA   Yellowknife Ar     46.28  40    P      P      23 34 59.8 +0.6
      comp=Z,11nm,0.6s,baz=305,slow=6.8,SNR=228
YKA                                   PcP    PcP    23 36 23.6 +0.2
      comp=Z,1.2nm,0.4s,baz=323,slow=2.8,SNR=13
YKA                                   pP     pP     23 36 39.9 +1.9
      comp=Z,1.8nm,1.1s,baz=300,slow=7.6,SNR=3.6
YKA                                   ScP    ScP    23 39 25.6 +0.3
      comp=Z,2.1nm,0.8s,baz=307,slow=3.5,SNR=22
KMI   Kunming            46.53 254  ⇓P       P      23 35 01.9  0.0
KMI                                   pP     pP     23 36 44.2 +4.0
KMI                                   sP     sP     23 37 37.3 -2.0
KMI                                   pmax   pmax
      comp=Z,13nm,0.9s
KMI   Kunming            46.53 254    P      P      23 35 01.7 -0.2
KMI                                   pmax   pmax
      comp=Z,11nm,0.8s
KMI   Kunming            46.53 254    P      P      23 35 01.7 -0.2
KMI                                   IAmb   IAmb   23 35 02.9
      comp=Z,11nm,0.8s
SPA0  Spitsbergen Ar     46.70 349    P      P      23 35 01.7 -0.4
SPITS Spitsbergen Ar     46.70 349    P      P      23 35 01.2 -0.9
SPITS                                 pmax   pmax
      comp=Z,5.0nm,0.5s
BVAR  Borovoye Array     47.13 305    P      P      23 35 05.1 -0.6
      comp=Z,8.6nm,0.5s,baz=55,slow=17,SNR=48
BRVK  Borovoye           47.16 305ceP        P      23 35 05.8 -0.2
BRVK                                  pmax   pmax
      comp=Z,6.0nm,0.6s
BRVK  Borovoye           47.16 305    P      P      23 35 05.7 -0.2
TDK   Taldyqorghan       47.58 292  eP       P      23 35 08.1 -1.2
      comp=Z,24nm,0.6s,baz=292
TDK   Taldyqorghan       47.58 292  eP       P      23 35 08.9 -0.4
TDK                                   pmax   pmax
      comp=Z,24nm,0.6s
SHLS  Shalkode           48.11 290  eP       P      23 35 11.2 -2.2
      comp=Z,9.7nm,0.7s,baz=289
SHLS  Shalkode           48.11 290  eP       P      23 35 11.2 -2.2
SHLS                                  pmax   pmax
      comp=Z,10.0nm,0.7s
KPKS  Kokpek             48.37 290  eP       P      23 35 15.0 -0.2
      comp=Z,10nm,0.8s,baz=290
KPKS  Kokpek             48.37 290  eP       P      23 35 15.0 -0.2
KPKS                                  pmax   pmax
      comp=Z,10.0nm,0.8s
UZB   Uzynbulak          48.37 290  eP       P      23 35 14.9 -0.5
      baz=290
UZB   Uzynbulak          48.37 290  eP       P      23 35 14.8 -0.5
SATY  Saty               48.78 290  eP       P      23 35 18.4  0.0
      baz=290
SATY  Saty               48.78 290  eP       P      23 35 18.3  0.0
SLVN  Son La             48.79 249    P      P      23 35 18.9 +0.2
SLVN                                  IAmb   IAmb   23 35 20.2
      comp=Z,11nm,0.9s
CHKK  Chushkaly          49.09 292  eP       P      23 35 19.5 -1.0
      baz=292
CHKK  Chushkaly          49.09 292  eP       P      23 35 19.5 -1.0
SVE   Sverdlovsk         49.47 314  eP       P      23 35 22.8 -0.3
SVE                                   pmax   pmax
      comp=Z,16nm,0.8s
MDOK  Medeo              49.49 291  eP       P      23 35 23.1 -0.5
      baz=291
MDOK  Medeo              49.49 291  eP       P      23 35 23.1 -0.5
AAA   Alma-Ata           49.53 291  eP       P      23 35 23.6 -0.3
      comp=Z,5.7nm,0.6s,baz=291
AAA   Alma-Ata           49.53 291  eP       P      23 35 23.5 -0.3
AAA                                   pmax   pmax
      comp=Z,6.0nm,0.6s
MTBS  Maitube            49.86 291  eP       P      23 35 25.9 -0.4
      baz=291
MTBS  Maitube            49.86 291  eP       P      23 35 25.9 -0.4
BTLS  Baital             49.99 295  eP       P      23 35 26.2 -0.9
      baz=295
BTLS  Baital             49.99 295  eP       P      23 35 26.2 -0.9
LSA   Lhasa              50.10 268    P      P      23 35 28.9 +0.2
LSA                                   pmax   pmax
      comp=Z,16nm,0.7s
LSA   Lhasa              50.10 268    P      P      23 35 28.9 +0.2
LSA                                   IAmb   IAmb   23 35 30.8
      comp=Z,16nm,0.7s
TKM2  Tokmak 2           50.46 292    P      P      23 35 54.3  +23
      SNR=6.2
ARU   Arti               50.62 314    P      P      23 35 31.2 -0.4
      comp=Z,6.1nm,0.4s,baz=59,slow=5.5,SNR=13
ARU   Arti               50.62 314c iP       P      23 35 31.0 -0.5
ARU                                   S      S      23 42 07.2 +1.3
ARU                                   SS     SS     23 45 54.0 +5.3
ARU                                   pmax   pmax
      comp=Z,16nm,0.6s
ARU   Arti               50.62 314    P      P      23 35 31.0 -0.5
DAG   Danmarks Havn      50.65 358    P      P      23 35 30.3 -1.1
DAG                                   pmax   pmax
      comp=Z,8.0nm,2.9s
SGDS  Sogindy            50.67 293  eP       P      23 35 31.2 -0.9
      baz=293
SGDS  Sogindy            50.67 293  eP       P      23 35 31.2 -0.9
NLWA  Neilton Lookou     50.84  60    P      P      23 35 35.0 +1.7
USP   Ospenovka          50.86 293    P      P      23 35 34.0 +0.5
      SNR=14
CHMS  Chumysh            50.89 292    P      P      23 35 34.0 +0.3
      SNR=8.0
KBK   Karagaybulak       51.00 292    P      P      23 35 35.0 +0.3
      SNR=8.0
D03D  Eldon              51.16  60    P      P      23 35 37.4 +1.9
      baz=309
B05A  Bryant             51.22  59    P      P      23 35 37.4 +1.4
      baz=309
AAK   Ala-Archa          51.27 292    P      P      23 35 36.9 +0.3
      comp=Z,9.6nm,0.5s,baz=122,slow=4.9,SNR=33
AAK   Ala-Archa          51.27 292    P      P      23 35 36.9 +0.3
      SNR=12
AAK   Ala-Archa          51.27 292  i P      P      23 35 36.6  0.0
AAK                                   pmax   pmax
      comp=Z,25nm,0.9s
AAK   Ala-Archa          51.27 292    P      P      23 35 36.6  0.0
AAK                                   IAmb   IAmb   23 35 37.7
      comp=Z,11nm,0.8s
HMH   Humuʻula Sheep     51.61 110    P      P      23 35 40.4 +0.8
HMH                                   IAmb   IAmb   23 35 41.9
      comp=Z,24nm,0.8s
EKS2  Erkin-Say          51.65 293    P      P      23 35 39.8 +0.4
      SNR=9.8
KEV   Kevo               51.67 339    P      P      23 35 38.0 -0.9
KEV                                   pmax   pmax
      comp=Z,21nm,1.0s
KEV   Kevo               51.67 339    P      P      23 35 38.0 -0.9
KEV                                   IAmb   IAmb   23 36 07.0
      comp=Z,21nm,1.0s
MLH   Mauna Loa          51.75 110    P      P      23 35 41.5 +1.0
MLH                                   IAmb   IAmb   23 35 52.7
      comp=Z,29nm,1.0s
D05A  Enumclaw           51.96  60    P      P      23 35 42.7 +1.4
E04D  Cinebar            52.06  61    P      P      23 35 44.0 +1.9
      baz=310
ARCES ARCESS Array B     52.17 339    P      P      23 35 41.9 -0.7
      comp=Z,3.1nm,0.4s,baz=32,slow=7.5,SNR=23
ARCES ARCESS Array B     52.17 339    P      P      23 35 41.9 -0.7
KSH   Kashi              52.47 288    P      P      23 35 49.1 +3.8
KSH                                   pmax   pmax
      comp=Z,11nm,1.0s
KSH                                   pmax   pmax
      comp=Z,670nm,6.3s
B08A  Colville Reser     52.58  57    P      P      23 35 46.7 +0.9
B08A                                  IAmb   IAmb   23 35 47.8
      comp=Z,15nm,0.9s
SHL   Shillong           52.66 264    P      P      23 35 46.8 -0.1
SHL                                   pmax   pmax
      comp=Z,26nm,0.5s
SHL   Shillong           52.66 264    P      P      23 35 46.8 -0.1
DZA   Taraz              52.87 294  eP       P      23 35 47.3 -0.7
      baz=294
DZA   Taraz              52.87 294  eP       P      23 35 47.3 -0.7
KIRV  Kirov              52.99 320ceP        P      23 35 47.3 -1.2
TMCR  Tamitsa            53.02 330  eP       P      23 35 47.0 -1.6
TMCR                                  pmax   pmax
      comp=Z,16nm,0.9s
KK31  Karatay Array      53.18 295    P      P      23 35 49.6 -0.6
KK31                                  pmax   pmax
      comp=Z,6.0nm,0.8s
KK31  Karatay Array      53.18 295    P      P      23 35 49.6 -0.6
KKAR  Karatay Array      53.18 295    P      P      23 35 49.9 -0.3
KKAR                                  pmax   pmax
      comp=Z,6.0nm,0.8s
KKAR  Karatay Array      53.18 295    P      P      23 35 49.9 -0.3
KKAR  Karatay Array      53.18 295    P      P      23 35 49.8 -0.4
KKAR                                  IAmb   IAmb   23 35 50.7
      comp=Z,6.0nm,0.8s
LAMP  Lampang            53.46 251    P      P      23 35 54.0 +1.6
      comp=Z,24nm,0.9s
LAMP  Lampang            53.46 251    P      P      23 35 54.0 +1.6
      comp=Z,24nm,0.9s
CMMT  Chiang Mai         53.62 252    P      P      23 35 53.2 -0.4
      comp=Z,9.0nm,0.9s
CMMT  Chiang Mai         53.62 252    P      P      23 35 53.2 -0.4
      comp=Z,9.0nm,0.9s
CHTO  Chiang Mai         53.63 252    P      P      23 35 54.1 +0.5
CHTO                                  pmax   pmax
      comp=Z,15nm,1.0s
CHTO  Chiang Mai         53.63 252    P      P      23 35 54.1 +0.5
CHTO                                  IAmb   IAmb   23 35 55.2
      comp=Z,15nm,0.9s
NEW   Newport            53.76  56    P      P      23 35 54.9 +0.7
      baz=311
CM36  Chiang Mai Arr     53.77 252    P      P      23 35 55.0 +0.3
CM36  Chiang Mai Arr     53.77 252    P      P      23 35 55.0 +0.3
CM32  Chiang Mai Arr     53.81 252    P      P      23 35 57.0 +2.1
CM32  Chiang Mai Arr     53.81 252    P      P      23 35 57.0 +2.1
TAPN  Taplejung          53.88 269  eP       P      23 35 56.0 +0.3
      comp=Z,66nm,0.6s
CM09  Chiang Mai Arr     53.89 252    P      P      23 35 57.0 +1.5
      comp=Z,11nm,0.9s
CM09  Chiang Mai Arr     53.89 252    P      P      23 35 57.0 +1.5
      comp=Z,11nm,0.9s
CM31  Chiang Mai Arr     53.91 252    P      P      23 35 56.1 +0.5
CM31                                  IAmb   IAmb   23 35 57.5
      comp=Z,8.2nm,0.6s
CMAR  Chiang Mai Arr     53.91 252    P      P      23 35 56.3 +0.7
      comp=Z,6.8nm,0.8s,baz=23,slow=6.8,SNR=32
CMAR                                  PcP    PcP    23 36 52.9 +0.3
      comp=Z,2.4nm,0.6s,baz=10,slow=3.1,SNR=6.8
CMAR                                  ScP    ScP    23 39 56.7 -2.1
      comp=Z,1.0nm,0.3s,baz=19,slow=4.8,SNR=4.9
CM02  Chiang Mai Arr     53.92 252    P      P      23 35 57.0 +1.3
      comp=Z,14nm,0.9s
CM02  Chiang Mai Arr     53.92 252    P      P      23 35 57.0 +1.3
      comp=Z,14nm,0.9s
CM01  Chiang Mai Arr     53.93 252    P      P      23 35 57.2 +1.5
      comp=Z,134nmcomp=Z,12nm,0.9s
CM01  Chiang Mai Arr     53.93 252    P      P      23 35 57.2 +1.5
      comp=Z,134nmcomp=Z,12nm,0.9s
CM04  Chiang Mai Arr     53.93 252    P      P      23 35 57.1 +1.3
      comp=Z,77nmcomp=Z,11nm,0.9s
CM04  Chiang Mai Arr     53.93 252    P      P      23 35 57.1 +1.3
      comp=Z,77nmcomp=Z,11nm,0.9s
I04A  Tendick Farm,      53.94  63    P      P      23 35 57.0 +1.4
      baz=312
CM05  Chiang Mai Arr     53.95 252    P      P      23 35 57.2 +1.3
      comp=Z,61nmcomp=Z,8.4nm,0.9s
CM05  Chiang Mai Arr     53.95 252    P      P      23 35 57.2 +1.3
      comp=Z,61nmcomp=Z,8.4nm,0.9s
CM13  Chiang Mai Arr     53.96 252    P      P      23 35 57.4 +1.4
      comp=Z,69nmcomp=Z,8.8nm,0.8s
CM13  Chiang Mai Arr     53.96 252    P      P      23 35 57.4 +1.4
      comp=Z,69nmcomp=Z,8.8nm,0.8s
IUG   Iuzhnay            54.08 294  eP       P      23 35 56.5 -0.2
      baz=294
IUG   Iuzhnay            54.08 294  eP       P      23 35 56.5 -0.2
I05D  Terrebonne, OR     54.16  62    P      P      23 35 59.0 +1.9
      baz=312
ODAN  Odare              54.44 269  eP       P      23 35 59.2 -0.3
J04D  Umpqua Nationa     54.47  63    P      P      23 36 02.2 +2.7
      baz=312
GUN   Gumba              54.59 271  eP       P      23 36 00.8 +0.1
      comp=Z,42nm,0.6s
AB31  Akbulak array      54.62 307⇑eP        P      23 35 59.7 -0.5
AB31                                  pmax   pmax
      comp=Z,10.0nm,0.6s
ABKAR Akbulak array      54.62 307    P      P      23 35 59.7 -0.5
ABKAR Akbulak array      54.62 307    P      P      23 35 59.6 -0.5
ABKAR                                 IAmb   IAmb   23 36 00.6
      comp=Z,15nm,0.7s
MHMT  Maesarieng         54.72 253    P      P      23 36 02.3 +1.0
MHMT  Maesarieng         54.72 253    P      P      23 36 02.3 +1.0
AKTO  Aktyubinsk         54.76 309    P      P      23 36 00.6 -0.5
      comp=Z,2.6nm,0.5s,baz=82,slow=15,SNR=11
RAMN  Ramite             54.85 269  eP       P      23 36 02.5 +0.1
      comp=Z,137nm,0.5s
J05D  Fort Rock, OR      54.92  63    P      P      23 36 05.2 +2.6
      baz=312,SNR=12
KLMR  Klimovskoe         54.97 327  eP       P      23 36 00.5 -1.8
KLMR                                  pmax   pmax
      comp=Z,31nm,1.4s
KLMR  Klimovskoe         54.97 327  eP       P      23 36 00.6 -1.8
KLMR                                  AMP           23 36 03.5
      comp=Z,31nm,1.4s
KKN   Kakani             55.04 271  eP       P      23 36 04.1 +0.4
      comp=Z,68nm,0.5s
L04D  Klamath Falls      55.05  64    P      P      23 36 05.4 +1.8
      baz=313
K04D  Chiloquin, OR      55.08  64    P      P      23 36 06.2 +2.6
      baz=313
PKI   Pulchoki           55.12 271  eP       P      23 36 04.6 +0.2
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	comp=Z,67nm,0.8s						
PKIN	Phulchoki	55.13	271	*e*P	P	23 36 04.5	+0.1
	comp=Z,49nm,0.7s						
YBH	Yreka Blue Hor	55.16	65	P	P	23 36 06.1	+1.9
YBH				pmax	pmax		
	comp=Z,6.0nm,0.8s						
YBH	Yreka Blue Hor	55.16	65	P	P	23 36 06.1	+1.9
DMN	Daman	55.28	271	*e*P	P	23 36 05.9	+0.5
	comp=Z,104nm,0.8s						
GKN	Gorkha	55.28	272	*e*P	P	23 36 05.6	+0.3
	comp=Z,63nm,0.8s						
M02C	Callahan	55.31	66	P	P	23 36 07.9	+2.7
	baz=313						
K05A	Summer Lake	55.48	63	P	P	23 36 09.0	+2.4
K05A				IAmb	IAmb	23 36 10.1	
	comp=Z,26nm,1.0s						
JTMT	Jette	55.53	55	P	P	23 36 07.8	+1.1
JTMT				IAmb	IAmb	23 36 09.0	
	comp=Z,11nm,0.7s						
DANN	Dangsing	55.56	273	*e*P	P	23 36 07.9	+0.5
	comp=Z,77nm,0.6s						
N02D	Trinity Center	55.67	66	P	P	23 36 10.4	+2.6
	baz=313						
BMO	Blue Mountains	55.95	59	P	P	23 36 11.0	+1.4
BMO				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BMO	Blue Mountains	55.95	59	P	P	23 36 11.0	+1.4
O02D	Mt. Diablo Mer	56.17	67	P	P	23 36 13.7	+2.5
	baz=314						
FFC	Flin Flon	56.29	42	P	P	23 36 12.2	+0.5
FFC				pmax	pmax		
	comp=Z,14nm,0.7s						
FFC	Flin Flon	56.29	42	P	P	23 36 12.2	+0.5
FFC				IAmb	IAmb	23 36 12.9	
	comp=Z,14nm,0.7s						
MSO	Missoula	56.32	55	P	P	23 36 13.4	+1.2
	baz=313,SNR=9.8						
MSO	Missoula	56.32	55	P	P	23 36 13.2	+1.0
MSO				IAmb	IAmb	23 36 14.3	
	comp=Z,13nm,0.9s						
FCC	Fort Churchill	56.36	35	P	P	23 36 12.1	0.0
FCC				pmax	pmax		
	comp=Z,13nm,0.7s						
FCC	Fort Churchill	56.36	35	P	P	23 36 12.1	0.0
FCC				IAmb	IAmb	23 36 12.8	
	comp=Z,13nm,0.7s						
O03E	Paynes Creek	56.64	66	P	P	23 36 16.0	+1.6
	baz=314						
WVOR	Wild Horse Val	56.90	62	P	P	23 36 18.0	+1.7
WVOR				pmax	pmax		
	comp=Z,14nm,1.0s						
WVOR	Wild Horse Val	56.90	62	P	P	23 36 17.9	+1.7
WVOR				IAmb	IAmb	23 36 19.1	
	comp=Z,14nm,0.9s						
HRY	Holter Researc	57.45	54	P	P	23 36 21.6	+1.7
EGMT	Eagleton	57.55	52	P	P	23 36 21.4	+0.8
	baz=315						
BELG	Belogornoye	58.06	316	P	P	23 36 22.8	-1.0
	comp=Z,15nm,0.8s,baz=123,slow=1.1,SNR=7.2						
BELG	Belogornoye	58.06	316	*i* P	P	23 36 22.4	-1.4
BELG				pmax	pmax		
	comp=Z,4.0nm,1.0s						
NIL	Nilore	58.08	285	P	P	23 36 24.8	+0.5
NIL	Nilore	58.08	285	P	P	23 36 24.8	+0.5
BOZ	Bozeman (W)	58.33	55	P	P	23 36 27.5	+1.5
	baz=315,SNR=16						
BOZ	Bozeman (W)	58.33	55	P	P	23 36 27.3	+1.3
BOZ				pmax	pmax		
	comp=Z,11nm,0.7s						
BOZ	Bozeman (W)	58.33	55	P	P	23 36 27.3	+1.3
BOZ				IAmb	IAmb	23 36 28.3	
	comp=Z,11nm,0.7s						
HLID	Hailey	58.34	59	P	P	23 36 27.9	+1.8
	baz=315,SNR=5.5						
PAHR	Pah Rah Range	58.38	65	P	P	23 36 28.0	+1.6
PAHR				IAmb	IAmb	23 36 29.0	
	comp=Z,17nm,1.1s						
FIA1	FINESS Array S	58.59	333	P	P	23 36 26.5	-0.7
FINES	FINESS Array B	58.60	333	P	P	23 36 26.6	-0.7
	comp=Z,5.3nm,0.5s,baz=38,slow=8.0,SNR=43						
FINES				PcP	PcP	23 37 08.6	-1.7
	comp=Z,2.0nm,0.6s,baz=60,slow=4.6,SNR=5.6						
PNTR	Pine Nut	58.70	65	P	P	23 36 30.3	+1.7
CMB	Columbia Colle	59.00	67	P	P	23 36 32.1	+1.6
CMB				pmax	pmax		
	comp=Z,9.0nm,1.1s						
CMB	Columbia Colle	59.00	67	P	P	23 36 32.1	+1.6
YHH	Holmes Hill	59.30	55	P	P	23 36 34.2	+1.5
H17A	Grant Village	59.71	56	P	P	23 36 38.4	+3.0
	baz=316,SNR=6.0						
DGMT	Dagmar	59.83	49	P	P	23 36 37.0	+1.2
	baz=317						
RLMT	Red Lodge	59.84	54	P	P	23 36 37.9	+1.7
	baz=316						
NVAR	Mina Array Bea	59.88	65	P	P	23 36 38.4	+1.9
	comp=Z,8.1nm,0.8s,baz=300,slow=6.5,SNR=36						
NVAR	Mina Array Bea	59.88	65	P	P	23 36 38.1	+1.5
ELK	Elko	59.90	61	P	P	23 36 38.3	+1.6
ELK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
ELK	Elko	59.90	61	P	P	23 36 38.3	+1.6
KBL	Kabul	59.90	288	P	P	23 36 35.1	-1.6
KBL				pmax	pmax		
	comp=Z,25nm,0.5s						
KBL	Kabul	59.90	288	P	P	23 36 35.1	-1.6
NV11	Mina Array Sit	59.96	65	P	P	23 36 38.8	+1.8
LAO	LASA Array	60.19	51	P	P	23 36 39.6	+1.4
	baz=317						
SBUM	Sibu	60.39	229	P	P	23 36 41.0	+1.2
SBUM				IAmb	IAmb	23 36 42.7	
	comp=Z,21nm,0.7s						
BGU	Big Grassy Mou	60.94	60	P	P	23 36 44.9	+1.5
SMMC	Simmler	61.16	69	P	P	23 36 47.1	+2.3
	baz=316						
VES	Vestal, Richgr	61.30	68	P	P	23 36 46.8	+1.2
	baz=316						
BW06	Boulder Array	61.40	56	P	P	23 36 47.6	+1.1
	baz=317						
PD31	Pinedale Array	61.40	56	P	P	23 36 47.7	+1.2
PDAR	Pinedale Array	61.40	56	P	P	23 36 47.6	+1.1
	comp=Z,6.8nm,0.7s,baz=352,slow=2.2,SNR=23						
GRAC	Grapevine Rang	61.42	66	P	P	23 36 48.7	+2.2
	baz=316,SNR=6.3						
CWC	Cottonwood Cre	61.43	67	P	P	23 36 48.3	+1.6
	baz=316						
R11A	Troy Canyon, C	61.43	64	P	P	23 36 48.2	+1.5
	baz=316,SNR=6.9						
PKM	Mcpherson Peak	61.57	69	P	P	23 36 49.7	+2.1
	baz=317						
DUG	Dugway, Tooele	61.58	60	P	P	23 36 49.6	+2.0
	baz=317,SNR=12						
DUG	Dugway, Tooele	61.58	60	P	P	23 36 49.3	+1.7
DUG				pmax	pmax		
	comp=Z,10.0nm,0.8s						
DUG	Dugway, Tooele	61.58	60	P	P	23 36 49.2	+1.7
DUG				IAmb	IAmb	23 36 50.4	
	comp=Z,10nm,0.8s						
ISA	Isabella, Lake	61.77	68	P	P	23 36 49.8	+1.0
	baz=317						
JLU	Jordanelle	62.00	59	P	P	23 36 51.9	+1.4
MPMC	Manual Prospec	62.03	67	P	P	23 36 52.3	+1.6
	baz=317,SNR=8.3						
TPNV	Topopah Spring	62.08	65	P	P	23 36 52.8	+1.9
	baz=317,SNR=10						
TPNV	Topopah Spring	62.08	65	P	P	23 36 52.5	+1.6
TPNV				pmax	pmax		
	comp=Z,14nm,0.7s						
TPNV	Topopah Spring	62.08	65	P	P	23 36 52.5	+1.6
TPNV				IAmb	IAmb	23 36 53.5	
	comp=Z,14nm,0.7s						
FURC	Furnace Creek,	62.09	66	P	P	23 36 52.9	+2.2
	baz=317,SNR=7.9						
ULM	Lac du Bonnet	62.12	43	P	P	23 36 50.5	-0.2
	comp=Z,3.1nm,0.4s,baz=321,slow=6.6,SNR=15						
LRMC	Laurel Mtn Rad	62.34	67	P	P	23 36 53.9	+1.3
	baz=317						
NC204	NORSAR Array S	62.41	340	P	P	23 36 52.0	-0.5
NB2	NORSAR Subarra	62.53	340	P	P	23 36 52.7	-0.6
	comp=Z,2.1nm,0.5s,baz=25,slow=6.5						
NOA	NORSAR Array B	62.53	340	P	P	23 36 52.5	-0.8
	comp=Z,3.9nm,0.7s,baz=25,slow=6.5,SNR=12						
EDW2	Edwards Air Fo	62.60	68	P	P	23 36 55.8	+1.6
	baz=317,SNR=7.5						
NORES	NORESS Array B	62.74	340	P	P	23 36 54.7	+0.2
NORES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
GSC	Goldstone, Bar	62.96	67	P	P	23 36 58.2	+1.6
	baz=317,SNR=5.3						
SHPR	Sheep Range	63.00	65	P	P	23 36 58.2	+1.3
RDMU	Red Mountain	63.00	58	P	P	23 36 58.1	+1.2
RSSD	Black Hills	63.12	52	P	P	23 36 58.4	+0.8
	baz=319						
BFSC	Mount Baldy Ra	63.26	68	P	P	23 36 59.8	+1.3
	baz=317,SNR=5.1						
MTPU	Mount Pierson	63.49	62	P	P	23 37 02.3	+2.1
GEYT	Alibeck	63.54	298	P	P	23 36 59.9	-0.3
	comp=Z,5.2nm,0.5s,baz=35,slow=3.6,SNR=11						
GEYT	Alibeck	63.54	298	P	P	23 37 00.0	-0.1
GYA0B	ALIBECK ARRAY	63.54	298	P	P	23 37 00.4	+0.3
GYA0B				IAmb	IAmb	23 37 00.9	
	comp=Z,8.0nm,0.6s						
HEC	Hector,Ludlow	63.57	67	P	P	23 37 02.2	+1.8
	baz=318,SNR=11						
AGMN	Agassiz Nation	63.63	44	P	P	23 36 59.9	-0.5
	baz=321						
AGMN	Agassiz Nation	63.63	44	P	P	23 37 00.1	-0.4
MNK	Minsk	63.82	328	*i* P	P	23 37 01.8	+0.2
	comp=E,3.0nm,1.0s						
MNK				*i* P	P	23 37 01.8	+0.2
	comp=N,20nm,1.1s						
MNK				*i* P	P	23 37 01.8	+0.2
	comp=Z,19nm,0.7s						
MNK				*i* pP	pP	23 38 50.3	+1.0
MNK				*i* PP	PP	23 39 31.6	+1.4
MNK				*i* PPP	PPP	23 41 13.9	
MNK				*i* S	S	23 44 57.1	+2.7
MNK				*i* sS	sS	23 48 11.7	+4.8
MNK				*i* SS	SS	23 49 20.0	+5.6
MNK				*i* SSS	SSS	23 52 39.7	
HRA	Herat	63.88	293	P	P	23 37 02.3	-0.3
GMRC	Granite Mounta	63.98	66	P	P	23 37 04.8	+1.7
	baz=318,SNR=10.0						
MURC	Murrieta	63.99	68	P	P	23 37 04.3	+1.2
	baz=318						
O20A	White River Ci	64.00	57	P	P	23 37 04.4	+1.1
	baz=318,SNR=7.7						
O20A	White River Ci	64.00	57	P	P	23 37 04.9	+1.6
O20A				IAmb	IAmb	23 37 05.2	
	comp=Z,15nm,0.7s						
IPM	Ipoh	64.18	241	P	P	23 37 04.9	+0.4
IPM				IAmb	IAmb	23 37 05.2	
	comp=Z,9.5nm,0.8s						
BELC	Belle Mtn. Jos	64.37	67	P	P	23 37 06.4	+0.8
	baz=318,SNR=6.4						
PFO	Pinyon Flats O	64.40	68	P	P	23 37 06.9	+1.1
PFO				pmax	pmax		
	comp=Z,8.0nm,1.1s						
PFO	Pinyon Flats O	64.40	68	P	P	23 37 06.9	+1.1
PFO				IAmb	IAmb	23 37 07.8	
	comp=Z,8.3nm,1.1s						
TPFO	Pinon Flats	64.40	68	P	P	23 37 06.8	+1.0
	baz=318						
IRM	Iron Mountain	64.73	66	P	P	23 37 09.5	+1.7
	baz=318,SNR=8.7						
W13A	Hualapai Mount	64.73	65	P	P	23 37 09.6	+1.6
BC3	Big Chuckawall	64.93	67	P	P	23 37 10.3	+1.2
	baz=318						
PV05	Paradox Valley	65.09	60	P	P	23 37 11.2	+1.0
PV05				IAmb	IAmb	23 37 12.4	
	comp=Z,15nm,0.7s						
PDMCI	Parker Dam,Lak	65.18	66	P	P	23 37 12.1	+1.6
	baz=318,SNR=8.3						
SUSD	Miller	65.25	49	P	P	23 37 11.1	+0.3
	baz=321						
SWSC	Sam W. Stewart	65.26	68	P	P	23 37 12.4	+1.4
	baz=318						
IKP	In-Ko-Pah, Jac	65.31	68	P	P	23 37 12.9	+1.4
	baz=318						
F33A	5 Mile Ranch,	65.35	46	P	P	23 37 11.6	+0.1
F33A				IAmb	IAmb	23 37 11.9	
	comp=Z,7.3nm,0.6s						
ISCO	Idaho Springs	65.59	56	P	P	23 37 14.9	+1.5
	baz=319						
EYMN	Ely	65.71	42	P	P	23 37 13.0	-0.6
	baz=323						
GLA	Glamis	65.73	67	P	P	23 37 15.5	+1.5
	baz=318						
WUAZ	Wupatki	65.79	63	P	P	23 37 16.3	+1.7
	baz=319,SNR=6.0						
ESJX	Sierra Juarez	65.88	69	P	P	23 37 16.6	+1.5
ESJX				IAmb	IAmb	23 37 17.6	
	comp=Z,7.9nm,0.8s						
MVCO	Mesa Verde	66.06	60	P	P	23 37 17.6	+1.3
	baz=319						
OGNE	Ogallala	66.49	53	P	P	23 37 19.7	+0.9
	baz=320,SNR=5.4						
S22A	4UR Ranch, Cre	66.52	58	P	P	23 37 20.9	+1.6
	baz=320,SNR=7.5						
AKASG	Malin Array Be	66.54	325	P	P	23 37 17.5	-1.2
	comp=Z,5.8nm,0.7s,baz=34,slow=6.6,SNR=12						
AKASG	Malin Array Be	66.54	325	P	P	23 37 18.1	-0.6
AKBB	Malin Array Si	66.54	325	*ce*P	P	23 37 15.9	-2.8
AKBB	Malin Array Si	66.54	325	P	P	23 37 17.6	-1.0
AKBB				IAmb	IAmb	23 37 18.5	
	comp=Z,12nm,1.1s						
NCK	Nalchik	66.55	312	*i* P	P	23 37 18.7	-0.2
NCK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KIV	Kislovodsk	66.60	312	P	P	23 37 19.2	-0.2
KIV				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KIV	Kislovodsk	66.60	312	P	P	23 37 19.2	-0.2
LGD	Lagodekhi	66.61	309	P	P	23 37 19.8	+0.5
KBZ	Khabaz	66.68	312	P	P	23 37 19.7	0.0
	comp=Z,7.5nm,0.8s,baz=241,slow=1.2,SNR=14						
KBZ	Khabaz	66.68	312	*ce*P	P	23 37 18.7	-1.0
KBZ				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PSI	Prapat	66.71	242	P	P	23 37 20.5	0.0
	comp=Z,4.7nm,0.6s,baz=0.3,slow=7.3,SNR=4.1						
RPSI	Rantau Prapat	66.80	242	P	P	23 37 20.5	-0.4
ECSD	EROS Data Cent	66.86	48	P	P	23 37 21.1	+0.2
	baz=322,SNR=28						
COEN	Coen	66.96	190	P	P	23 37 22.9	+1.2
SDCO	Great Sand Dun	67.21	57	P	P	23 37 24.6	+1.2
	baz=320,SNR=10						
SDCO	Great Sand Dun	67.21	57	P	P	23 37 24.6	+1.2
SDCO	Great Sand Dun	67.21	57	P		23 37 24.6	
	baz=320,SNR=10						
SPMN	Marine on St.	67.34	44	P	P	23 37 23.5	-0.3
	baz=323						
214A	Organ Pipe Nat	67.67	66	P	P	23 37 27.4	+1.3
	baz=319,SNR=7.7						
214A	Organ Pipe Nat	67.67	66	P	P	23 37 27.2	+1.2
214A				IAmb	IAmb	23 37 28.6	
	comp=Z,12nm,1.1s						
MTN	Manton Dam	67.97	203	P	P	23 37 28.6	+0.8
MTN				IAmb	IAmb	23 37 29.5	
	comp=Z,14nm,0.7s						
BGNE	Belgrade	67.98	50	P	P	23 37 27.9	+0.1
	baz=322						
I37A	Lemond, Waseca	68.05	45	P	P	23 37 28.2	+0.1
AKH	Akhalkalaki	68.23	310	⇑P	P	23 37 31.0	+1.5
T25A	Trinidad	68.23	57	P	P	23 37 30.2	+0.6
	baz=321						
TUC	Tucson	68.53	65	P	P	23 37 32.6	+1.3
	baz=320						
GNI	Garni	68.63	309	P	P	23 37 31.5	-0.4
	comp=Z,4.4nm,0.9s,baz=176,slow=12,SNR=3.1						
GNI	Garni	68.63	309	P	P	23 37 32.6	+0.7
GNI				IAmb	IAmb	23 37 46.2	
	comp=Z,6.7nm,0.8s						
GSI	Gunungsitoli	68.69	242	P	P	23 37 32.6	+0.2
ANMO	Albuquerque	68.85	60	P	P	23 37 34.8	+1.4
	baz=320						
ANMO	Albuquerque	68.85	60	P	P	23 37 34.8	+1.4
ANMO				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ANMO	Albuquerque	68.85	60	P	P	23 37 34.8	+1.4
CBKS	Cedar Bluff	69.26	53	P	P	23 37 35.4	-0.2
	baz=322						
MATQ	Matagami	69.27	32	P	P	23 37 34.6	-0.8
	baz=330						
KMPD	K-Podol'skiy	69.31	325	P	P	23 37 34.0	-1.6
SCIA	State Center	69.83	47	P	P	23 37 39.1	+0.3
	baz=324						
121A	Cookes Peak, D	69.99	63	P	P	23 37 42.1	+1.9
	baz=321						
LSQQ	Lebel-sur-Quev	70.09	32	P	P	23 37 39.5	-0.8
	baz=331						
JFWS	Jewell Farm	70.29	44	P	P	23 37 40.8	-0.8
	baz=325						
KOLS	Kolonicke sedl	70.39	328	*e*P	P	23 37 41.8	-0.3
KOLS	Kolonicke sedl	70.39	328	*e*P	P	23 37 41.8	-0.3
EKA	Eskdalemuir Ar	70.49	346	P	P	23 37 41.5	-1.0
EKA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ESK	Eskdalemuir	70.51	346	P	P	23 37 42.4	-0.2
ESK				pmax	pmax		
	comp=Z,11nm,1.1s						
ESK	Eskdalemuir	70.51	346	P	P	23 37 42.4	-0.2
ESK				IAmb	IAmb	23 38 05.5	
	comp=Z,11nm,1.1s						
KSU1	Kansas State U	70.52	51	P	P	23 37 42.7	-0.3
	baz=323,SNR=6.4						
BUR08	Bucovina Ar. S	70.53	325	P	P	23 37 42.6	-0.5
BUR08				IAmb	IAmb	23 37 43.4	
	comp=Z,6.2nm,0.7s						
BURAR	Bucovina Array	70.55	325	⇑P	P	23 37 42.8	-0.4
BURAR	Bucovina Array	70.55	325	⇑P	P	23 37 42.8	-0.4
BURAR	Bucovina Array	70.55	325	P	P	23 37 42.6	-0.5
VLDQ	Val d'Or	70.76	33	P	P	23 37 43.0	-1.2
VLDQ				IAmb	IAmb	23 37 43.7	
	comp=Z,19nm,0.8s						
BIZ	Bicaz	70.82	325	⇑P	P	23 37 44.1	-0.5
DPC	Dobruska-Polom	70.94	332	*e*P	P	23 37 45.4	+0.1
DPC	Dobruska-Polom	70.94	332	*e*P	P	23 37 45.4	+0.1
CLL	Collm	70.97	335	*i* P	P	23 37 44.6	-0.8
CLL				*e*pP	pP	23 39 34.0	-2.3
CLL	Collm	70.97	335	*i* P	P	23 37 44.6	-0.8
CLL				*e**PP	pP	23 39 34.0	-2.3
CLL	Collm	70.97	335	P	P	23 37 45.0	-0.4
CLL				IAmb	IAmb	23 37 45.3	
	comp=Z,6.9nm,0.6s						
TESR	Tescani	70.99	324	⇑P	P	23 37 45.2	-0.5
LANS	Liptovska Anna	71.08	330	*e*P	P	23 37 47.1	+0.9
LANS				pmax	pmax		
	comp=Z,6.0nm,0.9s						
LANS	Liptovska Anna	71.08	330	*e*P	P	23 37 47.1	+0.9
MORC	Moravsky Berou	71.10	331	⇑P	P	23 37 46.6	+0.3
MORC	Moravsky Berou	71.10	331	P	P	23 37 46.1	-0.2
MORC				pmax	pmax		
	comp=Z,7.0nm,0.7s						
MORC	Moravsky Berou	71.10	331	P	P	23 37 46.0	-0.2
MORC				IAmb	IAmb	23 37 47.2	
	comp=Z,7.1nm,0.7s						
AMTX	Amarillo	71.37	57	P	P	23 37 48.9	+0.7
	baz=322						
AMTX	Amarillo	71.37	57	P		23 37 49.1	
	baz=322,SNR=5.3						
MSTX	Muleshoe	71.53	58	P	P	23 37 49.6	+0.5
	baz=322						
PRU	Pruhonice	71.76	333	*e*P	P	23 37 50.0	-0.1
PRU	Pruhonice	71.76	333	*e*P	P	23 37 50.0	-0.1
VRAC	Vranov	71.80	332	⇓P	P	23 37 50.6	+0.3
VRAC	Vranov	71.80	332	⇓P	P	23 37 50.6	+0.3
CJR	Cluj-Napoca	71.89	326	⇓P	P	23 37 51.2	+0.3
CJR	Cluj-Napoca	71.89	326	⇓P	P	23 37 51.2	+0.3
MNTX	Cornudas Mount	71.92	61	P	P	23 37 52.8	+1.4
	baz=322,SNR=7.3						
DRGR		72.12	327	⇑P	P	23 37 52.1	-0.2
DRGR		72.12	327	⇑P	P	23 37 52.1	-0.2
MLR	Muntele Rosu	72.12	324	⇓P	P	23 37 52.7	+0.3
MLR	Muntele Rosu	72.12	324	P	P	23 37 52.1	-0.3
MLR				pmax	pmax		
	comp=Z,6.0nm,0.6s						
MLR	Muntele Rosu	72.12	324	P	P	23 37 52.1	-0.3
MLR				IAmb	IAmb	23 37 53.4	
	comp=Z,6.1nm,0.6s						
PBCC	Pribram	72.19	333	*e*P	P	23 37 52.5	-0.1
D55A	Sainte-Anne-du	72.37	32	P	P	23 37 53.2	-0.4
	baz=332						
ALGO	Algonquin Park	72.43	35	P	P	23 37 53.0	-1.0
	baz=330						
VOIR		72.49	324	⇑P	P	23 37 54.8	+0.3
VOIR		72.49	324	⇑P	P	23 37 54.8	+0.3
D56A	ZEC Mazanza, M	72.57	32	P	P	23 37 54.5	-0.3
	baz=332						
HDIL	Hopedale	72.64	45	P	P	23 37 55.3	0.0
	baz=326						
E55A	Montcerf-Lytto	72.67	33	P	P	23 37 54.8	-0.6
	baz=332						
ARR	Arges	72.69	325	⇑P	P	23 37 56.3	+0.7
CTAO	Charters Tower	72.75	187	P	P	23 37 57.2	+1.1
CTAO				pmax	pmax		
	comp=Z,24nm,1.2s						
CTAO	Charters Tower	72.75	187	P	P	23 37 57.1	+1.1
CTAO				IAmb	IAmb	23 38 21.2	
	comp=Z,24nm,1.1s						
MARD	Mardin	72.76	309	P	P	23 37 57.1	+0.9
KHC	Kasperske Hory	72.80	333	*ce*P	P	23 37 54.3	-1.9
KHC				pmax	pmax		
	comp=Z,21nm,1.7s						
KHC	Kasperske Hory	72.80	333	*e*P	P	23 37 56.3	+0.1
KHC	Kasperske Hory	72.80	333	P	P	23 37 56.3	+0.1
CKRC	Cesky Krumlov	72.89	333	*e*P	P	23 37 56.4	-0.2
GRA1	Grafenberg Arr	72.91	335	P	P	23 37 56.8	+0.1
GRA1				IAmb	IAmb	23 37 57.8	
	comp=Z,9.2nm,0.7s						
GRF	Grafenberg Arr	72.91	335	P	P	23 37 56.8	+0.1
GRF				pmax	pmax		
	comp=Z,9.0nm,0.7s						
E56A	St. Veronique	72.93	32	P	P	23 37 56.5	-0.3
	baz=332						
WMOK	Wichita Mounta	72.94	55	P	P	23 37 57.9	+0.6
	baz=323,SNR=14						
WMOK	Wichita Mounta	72.94	55	P	P	23 37 57.8	+0.6
WMOK				pmax	pmax		
	comp=Z,9.0nm,0.7s						
WMOK	Wichita Mounta	72.94	55	P	P	23 37 57.8	+0.6
WMOK				IAmb	IAmb	23 37 58.5	
	comp=Z,8.7nm,0.7s						
WMOK	Wichita Mounta	72.94	55	P		23 37 57.9	
	baz=323,SNR=14						
DSB	Dublin	72.98	347	P	P	23 37 57.1	+0.1
GERES	GERESS Array B	73.03	333	P	P	23 37 57.4	-0.1
	comp=Z,2.7nm,0.6s,baz=34,slow=5.7,SNR=22						
GERES	GERESS Array B	73.03	333	P	P	23 37 57.2	-0.3
GERES	GERESS Array B	73.03	333	P	P	23 37 57.2	-0.3
MALT	Malatya	73.04	312	P	P	23 37 58.9	+1.1
D58A	Chemin du LacG	73.12	31	P	P	23 37 57.4	-0.6
	baz=333						
R40A	Maddies Statio	73.18	48	P		23 37 58.4	
	baz=325,SNR=8.9						
S39A	Bolivar	73.19	49	P		23 37 57.8	
	baz=325,SNR=8.7						
I51A	Listowel	73.22	38	P	P	23 37 58.7	0.0
	baz=329						
CONA	Conrad Observa	73.25	331	*i* P	P	23 37 59.6	+0.8
	comp=Z,4.2nm,0.6s						
GZR	Gura Zlata	73.32	326	⇓P	P	23 37 58.5	-0.7
GZR	Gura Zlata	73.32	326	⇓P	P	23 37 58.5	-0.7
E57A	Chemin Saint G	73.33	32	P	P	23 37 58.8	-0.4
	baz=332						
TRQ	Mont Tremblant	73.37	32	P	P	23 37 59.1	-0.4
H53A	Bobcaygeon	73.44	36	P	P	23 37 59.3	-0.6
	baz=330						
TUL1	Leonard	73.47	52	P	P	23 38 00.8	+0.7
	baz=324,SNR=6.3						
TUL1	Leonard	73.47	52	P		23 38 00.8	
	baz=324,SNR=6.3						
L48A	N Adams	73.49	41	P		23 38 00.3	
	baz=328,SNR=7.9						
L48A				P		23 38 00.3	
	baz=328,SNR=7.9						
AAM	Ann Arbor	73.50	40	P	P	23 38 00.3	+0.2
	baz=328						
PALK	Pallekele	73.51	260	P	P	23 38 00.4	-0.3
	comp=Z,7.4nm,0.7s,baz=131,slow=2.1,SNR=5.9						
BZS	Buzias	73.51	327	⇑P	P	23 37 59.8	-0.4
BZS	Buzias	73.51	327	⇑P	P	23 37 59.8	-0.4
E58A	La Victoria	73.64	31	P	P	23 38 00.7	-0.3
	baz=333						
U38A	Gravette	73.71	51	P		23 38 01.6	
	baz=324,SNR=7.6						
SFIN	Lafayette	73.72	44	P	P	23 38 01.1	-0.4
	baz=327						
MOA	Molln	73.78	332	*e*P	P	23 38 02.1	+0.3
	comp=Z,2.9nm,0.7s,SNR=4.3						
CCM	Cathedral Cave	73.84	48	P	P	23 38 02.3	+0.1
	baz=326						
CCM	Cathedral Cave	73.84	48	P	P	23 38 02.3	+0.1
CCM				pmax	pmax		
	comp=Z,5.0nm,0.6s						
CCM	Cathedral Cave	73.84	48	P	P	23 38 02.3	+0.1
D61A	St Aubert, Com	73.85	29	P	P	23 38 01.7	-0.3
	baz=335						

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HERR Herculane       73.89 326 ⇑P    P      23 38 01.7 -0.7
ARSA Arzberg         73.96 331 eP    P      23 38 03.4 +0.6
     comp=Z,2.7nm,0.9s
BRTR Keskin Array B  73.98 316  P    P      23 38 02.9 -0.3
     comp=Z,2.5nm,0.5s,baz=33,slow=2.1,SNR=8.2
WB0  Warramunga Arr  73.98 198  P    P      23 38 03.7 +0.5
WB0                             IAmb IAmb   23 38 04.5
     comp=Z,11nm,0.7s
WR0  Warramunga Arr  74.14 198  P    P      23 38 04.5 +0.5
WR0                             IAmb IAmb   23 38 05.4
     comp=Z,6.2nm,0.7s
WRAB Tennant Creek   74.15 198ceP    P      23 38 03.8 -0.3
WRAB                            pmax pmax
     comp=Z,14nm,1.7s
WRA  Warramunga Arr  74.16 198  P    P      23 38 04.8 +0.7
     comp=Z,8.3nm,0.6s,baz=14,slow=5.9,SNR=68
ABTX Abilene, Hawle  74.19  57  P    P      23 38 05.0 +0.6
     baz=323
MDVR Moldovita       74.21 326 ⇑P    P      23 38 03.6 -0.7
G57A Newington       74.22  33  P    P      23 38 03.7 -0.5
     baz=332
FVM  French Village  74.26  47  P    P      23 38 04.4 -0.2
FVM                             pmax pmax
     comp=Z,13nm,0.6s
FVM  French Village  74.26  47  P    P      23 38 04.3 -0.2
FVM                             IAmb IAmb   23 38 05.2
     comp=Z,13nm,0.6s
F59A Saint Guilaume  74.27  31  P    P      23 38 04.3 -0.1
     baz=333
WSAR Wadi Sarin      74.37 288  P    P      23 38 04.8 -0.6
     comp=Z,4.7nm,1.0s,baz=305,slow=8.9,SNR=5.0
FITZ Fitzroy Crossi  74.41 207  P    P      23 38 05.7 +0.1
     comp=Z,5.3nm,0.9s,baz=13,slow=4.9,SNR=9.2
FITZ Fitzroy Crossi  74.41 207  P    P      23 38 06.1 +0.6
UOSS Minazif         74.44 291  P    P      23 38 05.0 -0.8
UOSS                            IAmb IAmb   23 38 05.7
     comp=Z,12nm,0.7s
E61A Lac Etchemin    74.45  30  P    P      23 38 05.1 -0.5
     baz=334
G58A Ormstown        74.48  32  P    P      23 38 05.0 -0.6
     baz=333
U40A Yellville       74.49  50  P    P      23 38 05.8 -0.1
     baz=325,SNR=17
U40A Yellville       74.49  50  P           23 38 05.9
     baz=325,SNR=17
U40A                            P           23 38 05.9
     baz=325,SNR=17
D63A Stockholm       74.60  28  P    P      23 38 05.6 -0.7
     baz=336
SOKA Soboth          74.62 331 i P   P      23 38 07.0 +0.4
     comp=Z,3.8nm,0.8s
TX32 Lajitas Array   74.69  62  P    P      23 38 08.7 +1.4
TXAR Lajitas Array   74.69  62  P    P      23 38 08.6 +1.3
     comp=Z,4.3nm,0.5s,baz=296,slow=4.3,SNR=66
TXAR                            pP   pP     23 40 02.0 +2.0
     comp=Z,0.4nm,0.6s,baz=313,slow=3.8,SNR=3.5
TXAR Lajitas Array   74.69  62  P    P      23 38 08.5 +1.2
KBA  Koelnbreinsper  74.74 333 i P   P      23 38 08.3 +1.0
     comp=Z,12nm,0.6s
T42A Van Buren       74.75  48  P           23 38 07.3
     baz=326,SNR=9.4
LONY Lake Ozonia     74.78  33  P    P      23 38 06.7 -0.7
     baz=332
LONY Lake Ozonia     74.78  33  P    P      23 38 06.7 -0.7
OBKA Obir            74.92 332 i P   P      23 38 08.6 +0.4
     comp=Z,1.9nm,0.5s
BATG Bathurst New B  74.94  26  P    P      23 38 08.0 -0.3
BATG                            IAmb IAmb   23 38 09.2
     comp=Z,10nm,1.0s
WATA Walderalm       74.99 334 eP    P      23 38 09.2 +0.5
     comp=Z,3.2nm,0.5s
W39A Magazine        75.00  51  P    P      23 38 09.1 +0.3
     baz=325
M52A Chesterland     75.04  39  P    P      23 38 08.6 -0.3
M52A                            IAmb IAmb   23 38 09.7
     comp=Z,17nm,0.8s
WTTA Wattenberg      75.04 334 i P   P      23 38 09.8 +0.7
     comp=Z,7.3nm,0.7s
M52A Chesterland     75.04  39  P           23 38 09.1
     baz=330,SNR=5.2
M52A                            P           23 38 09.1
     baz=330,SNR=5.2
H59A Cadyville       75.05  32  P    P      23 38 07.9 -1.0
     baz=333
ERPA Erie            75.06  38  P    P      23 38 08.8 -0.2
     baz=330
RETA Reutte          75.06 335 i P   P      23 38 09.3 +0.3
     comp=Z,3.3nm,0.9s
MYKA Terra Mystica   75.07 332 i P   P      23 38 09.5 +0.5
     comp=Z,5.4nm,0.9s
H58A Gabriels        75.09  33  P    P      23 38 08.7 -0.4
     baz=333
L53A Girard          75.10  38  P    P      23 38 09.3 +0.1
     baz=330,SNR=5.4
MOTA Moosalm         75.11 334 eP    P      23 38 09.7 +0.3
     comp=Z,11nm,1.1s,SNR=4.7
G61A St-Isidore-de-  75.17  31  P    P      23 38 09.5 -0.1
     baz=334
SQTA Sankt Quirin    75.19 334 i P   P      23 38 10.5 +0.6
     comp=Z,3.5nm,0.6s,SNR=4.5
ABTA Abfaltersbach   75.27 333 i P   P      23 38 10.5 +0.3
     comp=Z,2.9nm,0.6s,SNR=4.9
ECH  Echery          75.28 337  P    P      23 38 10.1 -0.1
ECH                             pmax pmax
     comp=Z,8.0nm,1.1s
ECH  Echery          75.28 337  P    P      23 38 10.1 -0.1
ZOU  Zoufplan        75.32 333  P    P      23 38 09.9 -0.7
M53A WI Miller and   75.39  39  P    P      23 38 10.8 -0.1
     baz=330
M53A WI Miller and   75.39  39  P    P      23 38 10.6 -0.3
M53A                            IAmb IAmb   23 38 11.2
     comp=Z,9.1nm,0.6s
DIVS Divibare        75.39 327  P    P      23 38 10.1 -0.9
DIVS                            IAmb IAmb   23 38 10.6
     comp=Z,7.1nm,0.6s
P49A Miami Univ. Ec  75.41  42  P    P      23 38 10.9 -0.2
     baz=328
DAVA Damuels         75.48 335 i P   P      23 38 12.4 +1.0
     comp=Z,5.1nm,0.8s
FETA Feichten        75.50 334 i P   P      23 38 11.6  0.0
     comp=Z,2.5nm,0.6s
ACSO Alum Creek Sta  75.52  41  P    P      23 38 11.3 -0.3
     baz=329
K56A Middlesex       75.53  36  P    P      23 38 11.2 -0.4
     baz=331
VTS  Vitosha         75.58 324 ⇑P    P      23 38 12.1 -0.1
VTS  Vitosha         75.58 324  P    P      23 38 11.9 -0.2
VTS                             pmax pmax
     comp=Z,8.0nm,0.7s
VTS  Vitosha         75.58 324  P    P      23 38 11.9 -0.2
VTS                             IAmb IAmb   23 38 12.6
     comp=Z,8.2nm,0.7s
F64A Sherman         75.60  28  P    P      23 38 11.5 -0.4
F64A                            IAmb IAmb   23 38 12.3
     comp=Z,11nm,1.1s
MIAR Mount Ida       75.63  51  P    P      23 38 12.8 +0.5
     baz=325,SNR=5.5
MIAR Mount Ida       75.63  51  P           23 38 12.9
     baz=325,SNR=5.5
M54A Oil Creek Stat  75.71  38  P    P      23 38 12.2 -0.5
     baz=330
H61A Lyndonville     75.71  31  P    P      23 38 12.8 +0.2
     baz=334
W41B Gary Mavity, V  75.74  50  P    P      23 38 13.0 +0.1
     baz=326,SNR=13
I59A Olmsteadville   75.74  33  P    P      23 38 12.3 -0.5
     baz=333
W41B Gary Mavity, V  75.74  50  P           23 38 13.5
     baz=326,SNR=13
JCT  Junction City   75.82  58  P    P      23 38 13.9 +0.4
     baz=324
J59A Piesco          75.83  34  P    P      23 38 12.6 -0.6
     baz=333
WCI  Wyandotte Cave  75.86  44  P    P      23 38 13.6 +0.1
     baz=328
WCI  Wyandotte Cave  75.86  44  P    P      23 38 13.5  0.0
WCI                             pmax pmax
     comp=Z,15nm,0.9s
WCI  Wyandotte Cave  75.86  44  P    P      23 38 13.5  0.0
WCI                             IAmb IAmb   23 38 14.3
     comp=Z,15nm,0.9s
WCI  Wyandotte Cave  75.86  44  P           23 38 13.8
     baz=328,SNR=6.5
H62A Milan           75.92  31  P    P      23 38 13.9 +0.1
L56A Greenwood       75.93  36  P    P      23 38 13.2 -0.7
     baz=331
X40A Basin Creek Fa  76.03  51  P    P      23 38 15.2 +0.6
     baz=325
K58A Earlville       76.06  35  P    P      23 38 14.1 -0.5
     baz=332
N54A Moraine State   76.06  39  P    P      23 38 14.3 -0.3
     baz=330
CTI  Castel Tesino   76.15 333  P    P      23 38 14.3 -0.9
CTI                             pmax pmax
     comp=Z,4.0nm,1.0s
CTI  Castel Tesino   76.15 333  P    P      23 38 14.2 -0.9
O53A New Philadelph  76.20  40  P    P      23 38 15.3 -0.1
     baz=330,SNR=5.7
O53A New Philadelph  76.20  40  P    P      23 38 15.1 -0.3
O53A                            IAmb IAmb   23 38 15.9
     comp=Z,12nm,0.8s
M56A Emporium        76.28  37  P    P      23 38 15.2 -0.6
     baz=331
L57A Andrews Acres   76.31  36  P    P      23 38 15.8 -0.2
     baz=332
K59A Cooperstown     76.32  34  P    P      23 38 15.5 -0.5
     baz=333
T47A Sharon Grove    76.55  46  P           23 38 17.7
     baz=328,SNR=5.9
LMN  Caledonia Moun  76.59  26  P    P      23 38 17.1 -0.3
LMN                             IAmb IAmb   23 38 40.8
     comp=Z,15nm,1.1s
L58A Harry Jones Me  76.62  35  P    P      23 38 17.0 -0.7
     baz=332
N56A West Decatur    76.73  37  P    P      23 38 18.2 -0.1
     baz=331
L59A Walton          76.77  35  P    P      23 38 18.0 -0.5
     baz=333
TEOL Teolo           76.78 333  P    P      23 38 18.2 -0.3
TEOL                            IAmb IAmb   23 38 19.6
     comp=Z,13nm,0.7s
M57A Sunshine Farm,  76.79  36  P    P      23 38 18.2 -0.3
     baz=332
WVT  Waverly         76.95  46  P    P      23 38 19.8 +0.2
     baz=327
WVT  Waverly         76.95  46  P    P      23 38 19.8 +0.2
WVT                             pmax pmax
     comp=Z,6.0nm,0.8s
WVT  Waverly         76.95  46  P    P      23 38 19.8 +0.2
WVT  Waverly         76.95  46  P           23 38 19.9
     baz=327,SNR=6.1
M58A Price’s Panora  77.00  36  P    P      23 38 19.2 -0.6
     baz=332
PDG  Podgorica       77.12 327  P    P      23 38 19.7 -0.6
PDG                             IAmb IAmb   23 38 19.9
     comp=Z,10nm,0.6s
N57A Milroy          77.14  37  P    P      23 38 20.1 -0.4
     baz=332
O56A Blue Knob Stat  77.19  38  P    P      23 38 20.3 -0.5
     baz=331
L60A Shokan          77.23  34  P    P      23 38 20.6 -0.4
     baz=333
MCWV Mont Chateau    77.24  39  P    P      23 38 21.0 -0.1
     baz=330
Q53A Leroy           77.28  41  P    P      23 38 21.5 +0.2
     baz=330,SNR=9.4
N58A Sunbury         77.37  36  P    P      23 38 20.6 -1.1
     baz=332
NATX Nacogdoches     77.38  54  P    P      23 38 23.3 +1.4
     baz=325
T50A Nancy           77.49  44  P    P      23 38 22.2 -0.3
T50A                            IAmb IAmb   23 38 23.2
     comp=Z,8.2nm,0.7s
U49A Red Boiling Sp  77.53  45  P           23 38 23.1
     baz=328,SNR=7.1
OXF  Oxford          77.60  48  P    P      23 38 23.4 +0.3
     baz=327
N59A State Game Lan  77.64  36  P    P      23 38 22.4 -0.9
     baz=332
833A Chaparral WMA,  77.76  59  P    P      23 38 25.1 +1.0
     baz=324
P56A Dayton Farm, R  77.76  38  P    P      23 38 24.1 +0.3
     baz=331,SNR=6.7
EIDS Eidsvold        77.80 182  P    P      23 38 25.1 +1.1
PLAL Pickwick Lake   77.81  47  P    P      23 38 23.9 -0.3
AS31 Alice Springs   77.87 198  P    P      23 38 25.8 +1.2
ASAR Alice Springs   77.88 198  P    P      23 38 25.8 +1.2
     comp=Z,8.6nm,0.7s,baz=10,slow=5.4,SNR=141
ASAR Alice Springs   77.88 198  P    P      23 38 25.5 +0.9
ASAR Alice Springs   77.88 198  P    P      23 38 25.5 +0.9
ELL  Elmali          78.06 317  P    P      23 38 25.5 -0.2
ELL                             pmax pmax
     comp=Z,17nm,0.9s
ELL  Elmali          78.06 317  P    P      23 38 25.5 -0.2
ELL                             IAmb IAmb   23 38 25.8
     comp=Z,17nm,0.9s
R54A Victor          78.07  41  P    P      23 38 25.8 +0.2
     baz=330
VLC  Villacollemand  78.24 333  P    P      23 38 26.9 +0.5
VLC                             IAmb IAmb   23 38 40.7
     comp=Z,15nm,1.1s
S54A Dingess, Beckl  78.28  41  P    P      23 38 26.9 +0.2
     baz=330
P58A Pank, Wackersv  78.35  37  P    P      23 38 26.8 -0.2
     baz=332
BNI  Bardonecchia    78.36 336  P    P      23 38 27.5 +0.3
BNI                             pmax pmax
     comp=Z,4.0nm,0.7s
BNI  Bardonecchia    78.36 336  P    P      23 38 27.5 +0.3
TZTN Tazewell        78.44  43  P    P      23 38 27.5 -0.1
     baz=329
OSSC Osservatorio P  78.59 333  P    P      23 38 28.1 -0.2
SSB  Saint Sauveur   78.66 338  P    P      23 38 28.7  0.0
SSB                             pmax pmax
     comp=Z,5.0nm,1.0s
SSB  Saint Sauveur   78.66 338  P    P      23 38 28.7  0.0
Q58A Fox Den Farm,   78.69  38  P    P      23 38 28.8  0.0
     baz=332
S56A Natural Bridge  79.07  40  P    P      23 38 31.0 +0.1
     baz=331
U54A Nelsons Funny   79.17  42  P    P      23 38 31.5 -0.1
     baz=330
SCTE Santa Cesarea   79.50 326  P    P      23 38 32.2 -0.9
S58A Poland Farm, P  79.71  39  P    P      23 38 34.1 -0.1
     baz=332
T57A Hurt            79.78  40  P    P      23 38 34.4 -0.2
     baz=331
U56A King            79.90  41  P    P      23 38 35.6 +0.3
     baz=331
LRAL Lakeview Retre  79.92  48  P    P      23 38 35.1 -0.4
     baz=328,SNR=5.3
T58A Grand View Acr  80.11  40  P    P      23 38 36.2 -0.2
     baz=331
V56A Mocksville      80.32  41  P    P      23 38 38.0 +0.5
     baz=330
V57A Coltrane Farms  80.54  41  P    P      23 38 38.3 -0.4
     baz=331
KMSC Kings Mountain  80.56  42  P    P      23 38 38.7 -0.1
     baz=330
U58A Oxford          80.58  40  P    P      23 38 38.9  0.0
     baz=331
TIP  Timpagrande     80.87 327  P    P      23 38 40.2 -0.2
GOGA Godfrey         81.15  45  P    P      23 38 41.6 -0.3
     baz=329
V59A Middlesex       81.26  40  P    P      23 38 42.4 +0.1
     baz=332
RAYN Ar Rayn         81.50 298  P    P      23 38 43.1 -0.8
RAYN                            pmax pmax
     comp=Z,7.0nm,0.9s
RAYN Ar Rayn         81.50 298  P    P      23 38 43.1 -0.8
W58A Raeford         81.51  41  P    P      23 38 43.7  0.0
     baz=331
V60A Jim Taylor Roa  81.63  39  P    P      23 38 44.3  0.0
     baz=332
STKA Stephens Creek  84.84 190  P    P      23 38 59.2 -0.8
     comp=Z,1.0nm,0.5s,baz=336,slow=8.7,SNR=4.7
ESDC Sonseca Array   85.80 342  P    P      23 39 03.2 -1.7
     comp=Z,0.8nm,0.7s,baz=359,slow=4.0,SNR=12
KEST Kesra           86.36 331  P    P      23 39 07.3 -0.4
     comp=Z,3.7nm,1.0s,baz=312,slow=4.2,SNR=9.7
KEST Kesra           86.36 331  P    P      23 39 07.7  0.0
KEST                            IAmb IAmb   23 39 10.6
     comp=Z,7.2nm,1.1s
DBIC Dimbokro       117.87 335  PKP  PKPdf  23 45 07.2 -0.9
     comp=Z,1.3nm,0.4s,baz=82,slow=1.5,SNR=6.5
BOSA Boshof         134.83 281  PKP  PKPdf  23 45 40.5 +0.4
     comp=Z,1.0nm,0.5s,baz=93,slow=3.5,SNR=4.2
BOSA Boshof         134.83 281  PKIKP PKPdf 23 45 40.2 +0.1
BOSA Boshof         134.83 281       PKPdf  23 45 40.1 +0.1
CPUP Villa Florida  145.23  52  PKPbc PKPbc 23 45 59.6 -0.1
     comp=Z,2.2nm,0.4s,baz=206,slow=5.3,SNR=4.3
BI02 San Fabin de   145.33  80       PKPbc  23 45 59.6 -0.3
PLCA Paso Flores    148.35  85  PKPbc PKiKP 23 46 08.6 -0.4
     comp=Z,8.1nm,0.7s,baz=296,slow=2.8,SNR=20
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IDC ***07*** *23:35:51.9±0.6, 36.°78N×73.°27E, h0^{km}, mb3.9/24, mb1 4.2/31, mb1mx4.0/56, mbtmp4.1/31, ML3.8/7, MS3.6/15, Ms1 3.6/15, ms1mx3.4/44, Error ellipse: s-maj=14.7km s-min=11.6km az=7.0*

BJI ***07*** *23:35:53.5±0.0, 36.°72N×73.°26E, h22^{km}, mB4.8/19, mb4.3/24, ML4.4/3, Ms4.4/14, Ms7 4.1/13*

NNC ***07*** *23:35:56.0±1.2, 36.°51N×73.°01E, h70^{km}±17^{km}, mb4.4, mpv4.5, Error ellipse: s-maj=11.1km s-min=7.9km az=153.0*

MOS ***07*** *23:35:57.8±1.2, 36.°87N×73.°21E, h56^{km}, mb4.4/8, Error ellipse: s-maj=7.3km s-min=3.9km az=82.1*

NEIC ***07*** *23:35:59.4±1.4, 36.°83N±0.°06×73.°24E±0.°08, h49^{km}±6^{km}, mb4.5/36, Error ellipse: s-maj=9.2km s-min=8.8km az=197.0*

ISC 07 23:35:58.1±0.3**, 36.°82N**±0.°03×**73.°21E**±0.°04**, h42^{km}, n247, σ2.^{s}22**/242**, mb4.2**/48**, MS3.7**/12**, 11C-9D, Northwestern Kashmir**

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Code Station Name     Δ°   AZ°    Phase ID       Time      Res
                               Op     ISC      h  m  s    ISC
NIL  Nilore           3.16 179  PN    Pn     23 36 46.6 +1.3
NIL  Nilore           3.16 179  Pn    Pn     23 36 46.6 +1.3
NIL  Nilore           3.16 179  Pn    Pn     23 36 46.8 +1.5
KSH  Kashi            3.47  38  Pg    Pn     23 36 47.0 -2.7
KSH                             Sn    Sn     23 37 23.8 -5.8
KSH                             LR    LR
     comp=Z,3µm,6.8s
KBL  Kabul            4.08 237  PN    Pn     23 36 59.5 +1.4
KBL  Kabul            4.08 237  Pn    Pn     23 36 59.5 +1.4
KBL  Kabul            4.08 237  pPn   Pn     23 37 00.1 +2.0
     SNR=23
THW  Thamme Wali      4.19 197  P     Pn     23 37 01.2 +1.7
THN  Thein Dam        4.84 154 eS     Sn     23 38 04.3 +1.2
THN  Thein Dam        4.84 154 ex     Pn     23 37 13.5 +5.2
DHRM DHARAMSHALA      5.22 150 eP     Pn     23 37 12.4 -1.4
DHRM                           eS     Sn     23 38 13.4 +0.5
DHRM                            IAML         23 38 44.0
     comp=E,637nm,0.4s
DHRM                            IAML         23 38 46.0
     comp=N,663nm,0.6s
AML  Almayashu        5.32   4  P     Pn     23 37 18.6 +3.3
     SNR=13
TAS  Tashkent         5.43 327  PN    Pn     23 37 18.2 +1.6
TAS  Tashkent         5.43 327  Pn    Pn     23 37 18.2 +1.6
UCH  Uchtor           5.50  10  P     Pn     23 37 20.6 +2.7
     SNR=212
EKS2 Erkin-Say        5.86   4  P     Pn     23 37 25.7 +3.2
     SNR=29
IUG  Iuzhnay          5.86 336 eP     Pn     23 37 23.7 +1.2
     comp=N,2.4nm,0.4s,baz=338
IUG  Iuzhnay          5.86 336 ePN    Pn     23 37 23.6 +1.1
IUG                             pmax  pmax
     comp=Z,2.0nm,0.4s
AAK  Ala-Archa        5.90   9  Pn    Pn     23 37 25.9 +2.9
     comp=Z,5.0nm,0.3s,baz=172,slow=5.6,SNR=32
AAK                             Sn    Sn     23 38 24.2 -5.3
     comp=Z,3.4nm,0.3s,baz=222,slow=12,SNR=2.0
AAK                             LR    LR     23 39 45.8
     comp=Z,205nm,20.8s,baz=182,slow=39
AAK  Ala-Archa        5.90   9  P     Pn     23 37 26.0 +2.9
     SNR=41
AAK  Ala-Archa        5.90   9  Pn    Pn     23 37 25.1 +2.1
AAK  Ala-Archa        5.90   9 ⇓P     Pn     23 37 25.2 +2.1
     comp=Z,66nm,0.9s
AAK                            ⇑S     Sn     23 38 36.6 +7.2
     comp=Z,116nm,0.8s
AAK  Ala-Archa        5.90   9 i PN   Pn     23 37 24.2 +1.1
AAK                             pmax  pmax
     comp=Z,67nm,0.9s
AAK  Ala-Archa        5.90   9  Pn    Pn     23 37 25.4 +2.4
ULHL Ulahol           5.91  22  P     Pn     23 37 26.1 +2.8
     SNR=10.0
KBK  Karagaybulak     5.99  12  P     Pn     23 37 27.3 +3.0
     SNR=56
BHK  Bhakra           6.01 153 eP     Pn     23 37 22.8 -1.7
BHK                            eS     Sn     23 38 35.2 +3.2
DZA  Taraz            6.24 347 eP     Pn     23 37 29.2 +1.5
     comp=Z,16nm,0.6s,baz=348
DZA  Taraz            6.24 347 ePN    Pn     23 37 29.1 +1.5
DZA                             pmax  pmax
     comp=Z,15nm,0.6s
CHMS Chumysh          6.29  10  P     Pn     23 37 31.1 +2.8
     SNR=29
TKM2 Tokmak 2         6.37  16  P     Pn     23 37 29.2 -0.3
     SNR=30
TKM2 Tokmak 2         6.37  16 ⇑P     Pn     23 37 31.7 +2.2
     comp=Z,62nm,1.1s
TKM2                           ⇓S     Sn     23 38 47.8 +6.7
     comp=Z,98nm,1.1s
TKM2 Tokmak 2         6.37  16 i PN   Pn     23 37 29.4 -0.2
TKM2                            pmax  pmax
     comp=Z,62nm,1.1s
USP  Ospenovka        6.52   8  P     Pn     23 37 36.2 +4.7
     SNR=8.6
SMLA Simla            6.56 149 eP     Pn     23 37 31.5 -0.5
SMLA                           eS     Sn     23 38 42.0 -3.5
SMLA                            IAML         23 38 47.6
     comp=E,520nm,0.7s
SMLA                            IAML         23 38 48.1
     comp=N,269nm,0.7s
KK06 Karatay Array    6.60 343  Pn    Pn     23 37 33.7 +1.2
KK07 Karatay Array    6.60 343  Pn    Pn     23 37 34.0 +1.5
KK02 Karatay Array    6.61 343  Pn    Pn     23 37 34.1 +1.4
KK31 Karatay Array    6.61 343 ⇑P     Pn     23 37 34.1 +1.4
     comp=N,5.3nm,0.3s,baz=153,slow=12,SNR=127
KK31                           ⇓S     Sn     23 38 50.3 +3.5
     comp=N,41nm,0.6s
KK31 Karatay Array    6.61 343  PN    Pn     23 37 34.3 +1.6
KK31 Karatay Array    6.61 343        Pn     23 37 34.3 +1.6
KKAR Karatay Array    6.61 343  PN    Pn     23 37 34.1 +1.4
KKAR Karatay Array    6.61 343        Pn     23 37 34.1 +1.4
KK03 Karatay Array    6.61 343  Pn    Pn     23 37 33.8 +1.1
KK01 Karatay Array    6.62 343  Pn    Pn     23 37 34.0 +1.2
KK08 Karatay Array    6.62 342  Pn    Pn     23 37 33.9 +1.1
KK04 Karatay Array    6.62 343  Pn    Pn     23 37 33.8 +0.9
KK05 Karatay Array    6.62 343  Pn    Pn     23 37 34.0 +1.1
KK09 Karatay Array    6.63 343  Pn    Pn     23 37 34.2 +1.2
SGDS Sogindy          6.72   9 eP     Pn     23 37 36.0 +1.8
     baz=9.4
SGDS Sogindy          6.72   9 ePN    Pn     23 37 36.0 +1.8
TNSS Tian-Shan        6.85  24 eP     Pn     23 37 38.1 +1.8
     baz=24
TNSS Tian-Shan        6.85  24 ePN    Pn     23 37 38.1 +1.8
AAA  Alma-Ata         6.99  23 eP     Pn     23 37 40.2 +2.2
     comp=N,18nm,1.0s,baz=23
AAA  Alma-Ata         6.99  23 ePN    Pn     23 37 40.1 +2.2
AAA                             pmax  pmax
     comp=Z,18nm,1.0s
MDOK Medeo            6.99  24 eP     Pn     23 37 40.8 +2.7
     baz=24
MDOK Medeo            6.99  24 ⇑P     Pn     23 37 40.5 +2.4
     comp=Z,24nm,1.0s
MDOK Medeo            6.99  24 ePN    Pn     23 37 40.7 +2.7
KNDC Almaty           7.01  23 ⇑P     Pn     23 37 40.5 +2.2
     comp=Z,48nm,0.8s
KNDC Almaty           7.01  23  PN    Pn     23 37 40.5 +2.2
SATY Saty             7.41  31 eP     Pn     23 37 45.4 +1.6
     comp=Z,6.2nm,0.7s,baz=31
SATY Saty             7.41  31 eP     Pn     23 37 45.3 +1.6
SATY                            pmax  pmax
     comp=Z,6.0nm,0.7s
CHKK Chushkaly        7.60  21 eP     Pn     23 37 48.6 +2.3
     baz=21
CHKK Chushkaly        7.60  21 eP     Pn     23 37 48.6 +2.3
DDI  Dehra Dun        7.63 147 eP     Pn     23 37 46.4 -0.5
DDI                            eS     Sn     23 39 10.2 -1.8
DDI                             IAML         23 39 22.4
     comp=E,305nm,1.1s
DDI                             IAML         23 39 25.3
     comp=N,315nm,1.5s
UZB  Uzynbulak        7.74  33 eP     Pn     23 37 49.1 +0.8
     comp=N,5.6nm,1.0s,baz=33
UZB  Uzynbulak        7.74  33 eP     Pn     23 37 49.9 +1.6
UZB                             pmax  pmax
     comp=Z,6.0nm,1.0s
KPKS Kokpek           7.86  31 eP     Pn     23 37 51.7 +1.9
     comp=Z,13nm,0.8s,baz=30
KPKS Kokpek           7.86  31 eP     Pn     23 37 51.7 +1.9
KPKS                            pmax  pmax
     comp=Z,13nm,0.8s
SHLS Shalkode         7.95  35 eP     Pn     23 37 55.3 +4.1
     comp=Z,7.8nm,0.7s,baz=37
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SHLS  Shalkode            7.95  35 eP     Pn     23 37 55.2 +4.1
SHLS                               pmax   pmax
      comp=Z,8.0nm,0.7s
PDGK  Podgornoye          8.09  35 ⇑P     Pn     23 37 54.9 +1.8
      comp=Z,18nm,0.7s
PDGK  Podgornoye          8.09  35 i P    Pn     23 37 54.9 +1.8
PDGK                               pmax   pmax
      comp=Z,18nm,0.7s
BTLS  Baital              8.24   4 eP     Pn     23 37 55.7 +0.7
      comp=Z,2.9nm,0.7s,baz=4.6
BTLS  Baital              8.24   4 eP     Pn     23 37 55.7 +0.7
BTLS                               pmax   pmax
      comp=Z,3.0nm,0.7s
NDI   New Delhi           8.78 156 eP     Pn     23 38 02.5  0.0
NDI                                eS     Sn     23 39 33.5 -6.7
HRA   Herat               9.25 258  Pn    Pn     23 38 09.8 +0.7
MAKZ  Makanchi           11.93  30 ⇓P     Pn     23 38 48.0 +2.5
      comp=Z,10nm,1.0s
MAKZ  Makanchi           11.93  30  P     Pn     23 38 45.9 +0.4
MAKZ  Makanchi           11.93  30  Pn    Pn     23 38 45.9 +0.4
MK31  Makanchi Array     12.05  31 ⇑P     Pn     23 38 48.2 +1.0
      comp=Z,17nm,1.1s,baz=211,slow=14,SNR=29
MK31  Makanchi Array     12.05  31 i P    Pn     23 38 48.1 +1.0
MK31                               pmax   pmax
      comp=Z,17nm,1.1s
MK31  Makanchi Array     12.05  31        Pn     23 38 47.0 -0.1
MKAR  Makanchi Array     12.05  31  Pn    Pn     23 38 48.2 +1.1
      comp=Z,0.2nm,0.3s,baz=215,slow=15,SNR=18
MKAR                               Lg     Lg     23 42 09.2
      comp=Z,0.1nm,0.3s,baz=279,slow=32,SNR=1.2
MKAR                               LR     LR     23 43 40.1
      comp=Z,213nm,18.4s,baz=216,slow=39
MKAR  Makanchi Array     12.05  31 i P    Pn     23 38 48.5 +1.4
MKAR                               pmax   pmax
      comp=Z,8.0nm,1.0s
MKAR  Makanchi Array     12.05  31  Pn    Pn     23 38 48.0 +0.9
GEYT  Alibeck            12.06 280  Pn    Pn     23 38 45.4 -1.9
      comp=Z,1.7nm,0.3s,baz=116,slow=10,SNR=16
GEYT                                Sn    Sn     23 40 59.3 -1.1
      comp=Z,1.4nm,0.3s,baz=326,slow=29,SNR=6.2
GEYT  Alibeck            12.06 280  Pn    Pn     23 38 45.6 -1.8
GYA0B ALIBECK ARRAY      12.06 280 ⇑P     Pn     23 38 45.3 -2.0
GYA0B                              ⇓S     Sn     23 40 54.3 -6.1
GYA0B ALIBECK ARRAY      12.06 280  Pn    Pn     23 38 45.6 -1.7
DANN  Dangsing           12.26 130 eP     Pn     23 38 44.1 -6.2
      comp=Z,34nm,0.4s
DANN  Dangsing           12.26 130 eP     Pn     23 38 44.1 -6.2
      comp=Z,34nm,0.4s
GKN   Gorkha             13.05 129 eP     Pn     23 38 54.5 -6.5
      comp=Z,42nm,0.5s
GKN   Gorkha             13.05 129 eP     Pn     23 38 55.2 -5.8
      comp=Z,42nm,0.5s
WMQ   Urumqi             13.08  53 eP     Pn     23 39 04.8 +3.6
WMQ                                 S     Sn     23 41 29.4 +4.1
WMQ                                 pmax  pmax
      comp=Z,19nm,0.9s
WMQ                                 pmax  pmax
      comp=Z,510nm,6.3s
WMQ                                 LR    LR
      comp=Z,480nm,7.5s
WMQ                                 LR    LR
      comp=Z,740nm,6.5s
WMQ   Urumqi             13.08  53  P     Pn     23 39 00.0 -1.2
WMQ   Urumqi             13.08  53  Pn    Pn     23 39 00.0 -1.2
KKN   Kakani             13.60 128 eP     Pn     23 39 02.0 -6.6
      comp=Z,38nm,0.6s
KKN   Kakani             13.60 128 eP     Pn     23 39 01.8 -6.8
      comp=Z,38nm,0.6s
DMN   Daman              13.62 129 eP     Pn     23 39 02.1 -6.8
      comp=Z,33nm,0.6s
DMN   Daman              13.62 129 eP     Pn     23 39 02.0 -6.9
      comp=Z,33nm,0.6s
PKIN  Phulchoki          13.82 128 eP     Pn     23 39 05.3 -6.4
      comp=Z,49nm,0.7s
PKIN  Phulchoki          13.82 128 eP     Pn     23 39 05.4 -6.3
      comp=Z,49nm,0.7s
PKI   Pulchoki           13.84 128 eP     Pn     23 39 05.1 -6.8
      comp=Z,43nm,0.7s
PKI   Pulchoki           13.84 128 eP     Pn     23 39 05.1 -6.8
      comp=Z,43nm,0.7s
GUN   Gumba              13.90 126 eP     Pn     23 39 06.1 -6.7
      comp=Z,63nm,0.9s
GUN   Gumba              13.90 126 eP     Pn     23 39 05.9 -6.9
      comp=Z,63nm,0.9s
KURBB Kurchatov Arra     14.32  14  Pn    Pn     23 39 16.2 -1.8
      comp=Z,0.1nm,0.3s,baz=203,slow=12,SNR=17
KURBB                               Lg    Lg     23 43 16.9
      baz=198,slow=33,SNR=2.8
KURBB Kurchatov Arra     14.32  14 ⇓P     Pn     23 39 18.9 +0.8
      comp=Z,16nm,0.9s
KURK  Kurchatov          14.43  14 i P    Pn     23 39 17.5 -2.0
KURK                                pmax  pmax
      comp=Z,20nm,0.9s
KURK  Kurchatov          14.43  14        Pn     23 39 17.3 -2.2
RAMN  Ramite             15.03 127 eP     Pn     23 39 18.5 -9.3
RAMN  Ramite             15.03 127 eP     Pn     23 39 18.5 -9.3
ODAN  Odare              15.60 125 eP     Pn     23 39 25.3  -10
AB31  Akbulak array      15.74 326 ⇑P     Pn     23 39 34.6 -2.0
      comp=Z,5.7nm,0.6s,baz=138,slow=12,SNR=54
AB31                               ⇓S     Sn     23 42 20.3  -10
      comp=Z,12nm,0.8s
AB31  Akbulak array      15.74 326  P     Pn     23 39 34.6 -2.0
AB31                                pmax  pmax
      comp=Z,6.0nm,0.5s
ABKAR Akbulak array      15.74 326  Pn    Pn     23 39 34.4 -2.3
ABKAR Akbulak array      15.74 326  Pn    Pn     23 39 34.2 -2.5
BRVK  Borovoye           16.37 354 ⇑P     Pn     23 39 45.1 +0.4
      comp=Z,21nm,1.0s
BRVK  Borovoye           16.37 354 i P    Pn     23 39 44.4 -0.3
BRVK                                pmax  pmax
      comp=Z,21nm,1.0s
BRVK  Borovoye           16.37 354  Pn    Pn     23 39 43.5 -1.2
NGP   Nagpur             16.42 160 eP     Pn     23 39 39.3 -6.2
NGP                                eS     Sn     23 42 30.4  -16
DGZ   Jazzator, Alta     16.49  34 i P    Pn     23 39 47.3 +0.9
LSA   Lhasa              16.59 110  P     Pn     23 39 42.2 -5.9
LSA                                 pmax  pmax
      comp=Z,10.0nm,1.1s
LSA   Lhasa              16.59 110  P     Pn     23 39 47.0 -1.1
LSA                                 pmax  pmax
      comp=Z,4.0nm,0.8s
LSA   Lhasa              16.59 110  Pn    Pn     23 39 47.0 -1.1
BOK   Bokaro             16.96 136 eP     Pn     23 39 52.2 -0.1
AKTO  Aktyubinsk         17.45 326  P     Pn     23 39 58.6 +0.4
      comp=Z,0.9nm,0.3s,baz=123,slow=12,SNR=20
AKTO                                S     Sn     23 42 58.0  -13
      comp=Z,0.1nm,0.3s,baz=172,slow=21,SNR=1.1
AKTO                                LR    LR     23 47 47.7
      comp=Z,159nm,19.0s,baz=318,slow=41
AKTO  Aktyubinsk         17.45 326 ⇓P     Pn     23 39 56.7 -1.5
      comp=Z,20nm,1.0s
BANOM Banah              18.04 238  sPn   Pn     23 40 05.5 -0.1
SHME  Shamm              18.06 238  sP    P      23 40 12.2 +6.3
POO   Poona              18.23 178 eP     P      23 40 06.0 -1.8
WSAR  Wadi Sarin         18.47 227  P     P      23 40 10.1 -0.3
      comp=Z,0.3nm,0.3s,baz=37,slow=9.6,SNR=4.2
UOSS  Minazif            18.75 236  P     Pn     23 40 14.8 +0.5
UOSS  Minazif            18.75 236  sP    Pn     23 40 17.0 +2.7
HATD  Hatta, Dubai       18.88 236  sP    Pn     23 40 20.4 +4.5
ZAA0  Zalesovo Array     18.93  22 ⇓P     P      23 40 14.9 -0.4
      comp=Z,5.0nm,1.0s
ZAA0  Zalesovo Array     18.93  22  P     P      23 40 15.1 -0.2
ZAA0                                IAmb  IAmb   23 40 26.2
      comp=Z,19nm,0.8s
ZALV  Zalesovo Beam      18.93  22  P     P      23 40 15.1 -0.1
      comp=Z,1.1nm,0.3s,baz=210,slow=11,SNR=67
ZALV                                LR    LR     23 46 52.7
      comp=Z,163nm,18.3s,baz=268,slow=35
FAQ   Al Faqa, Dubai     19.30 236  sPn   Pn     23 40 27.9 +7.1
SHL   Shillong           19.48 120  P     P      23 40 21.2 -0.5
SHL                                 pmax  pmax
      comp=Z,15nm,1.0s
SHL   Shillong           19.48 120        P      23 40 21.2 -0.5
HYB   Hyderabad          19.89 165 i P    P      23 40 25.0 -1.0
HYB                                eS     Sn     23 44 12.0 +1.3
GTA   Gaotai             21.07  75 ⇑P     P      23 40 38.1 -0.7
GTA                                 pP    pP     23 40 42.1 -8.4
GTA                                 sP    sP     23 40 45.0  -11
GTA                                 pmax  pmax
      comp=Z,9.0nm,0.9s
GTA                                 LR    LR
      comp=Z,370nm,15.6s
GTA                                 LR    LR
      comp=Z,300nm,16.0s
GTA                                 LR    LR
      comp=Z,330nm,14.5s
SVE   Sverdlovsk         21.72 341 eP     P      23 40 43.5 -1.9
GROC  Groznyy            21.89 295 eP     P      23 40 41.8 -5.5
GROC                               e*PP   pP     23 40 57.8 -1.1
GROC                               e             23 41 07.5
GROC                                pmax  pmax
      comp=Z,28nm,1.4s
ARU   Arti               21.96 338  P     P      23 40 47.5 -0.5
      comp=Z,1.6nm,0.6s,baz=191,slow=3.6,SNR=5.4
ARU                                 LR    LR     23 49 10.3
      comp=Z,123nm,18.7s,baz=224,slow=36
ARU   Arti               21.96 338  P     P      23 40 46.1 -1.9
ARU                                              23 41 09.4
ARU                                 S     S      23 44 45.2 -2.7
ARU                                 SS    SnSn   23 45 15.8 +0.3
ARU   Arti               21.96 338  P     P      23 40 48.2 +0.2
ARU                                 IAmb  IAmb   23 41 00.8
      comp=Z,27nm,1.4s
GNI   Garni              22.49 287  P     P      23 40 53.2 -0.8
      comp=Z,2.3nm,0.6s,baz=177,slow=7.9,SNR=2.6
GNI   Garni              22.49 287 i P    P      23 40 51.2 -2.8
GNI                                 pmax  pmax
      comp=Z,33nm,1.5s
GNI   Garni              22.49 287  P     P      23 40 53.7 -0.4
NCK   Nalchik            23.51 296 i P    P      23 41 00.7 -3.5
NCK                                 pmax  pmax
      comp=Z,11nm,0.9s
BELG  Belogornoye        23.79 319  P     P      23 41 06.6  0.0
      comp=Z,7.8nm,1.0s,baz=356,slow=22,SNR=2.1
BELG                                LR    LR     23 50 57.1
      comp=Z,245nm,21.1s,baz=338,slow=38
KBZ   Khabaz             24.04 296  P     P      23 41 10.0 +0.9
      comp=Z,3.2nm,1.0s,baz=28,slow=6.5,SNR=3.7
KBZ   Khabaz             24.04 296 i P    P      23 41 06.9 -2.2
KBZ                                 pmax  pmax
      comp=Z,4.0nm,1.0s
KVAR  Kislovodsk Arr     24.21 297  P     P      23 41 11.4 +0.6
      comp=Z,3.1nm,0.9s,baz=251,slow=12,SNR=1.5
KIV   Kislovodsk         24.22 297 eP     P      23 41 06.7 -4.2
KIV                                 pmax  pmax
      comp=Z,20nm,1.1s
LZH   Lanzhou            24.61  82 eP     P      23 41 14.4 -0.2
LZH                                 pP    pP     23 41 19.7 -7.4
LZH                                 sP    sP     23 41 23.5 -9.1
LZH                                 pmax  pmax
      comp=Z,12nm,1.3s
ZAK   Zakamensk          25.45  48 eP     P      23 41 21.5 -0.5
ZAK                                 pmax  pmax
      comp=Z,8.0nm,0.9s
CD2   Chengdu            25.98  94 eP     P      23 41 28.0 +1.1
TLY   Talaya             26.15  46  LR    LR     23 52 36.0
      comp=Z,220nm,18.5s,baz=242,slow=38
SONM  Songino Array      26.70  55  P     P      23 41 32.9 -0.5
      comp=Z,1.8nm,0.8s,baz=253,slow=9.3,SNR=12
SONM                                LR    LR     23 52 54.9
      comp=Z,141nm,19.2s,baz=238,slow=38
SONM  Songino Array      26.70  55  P     P      23 41 34.0 +0.7
SONM                                pmax  pmax
      comp=Z,3.0nm,1.0s
SONM  Songino Array      26.70  55  P     P      23 41 34.0 +0.7
KIRV  Kirov              26.76 332 i P    P      23 41 31.9 -1.7
ULN   Ulaanbaatar        27.14  55 eP     P      23 41 36.4 -0.9
ULN                                 pmax  pmax
      comp=Z,2.0nm,0.9s
RAYN  Ar Rayn            27.26 249  P     P      23 41 40.9 +2.4
RAYN                                pmax  pmax
      comp=Z,4.0nm,1.0s
RAYN  Ar Rayn            27.26 249  P     P      23 41 40.9 +2.4
CHTO  Chiang Mai         28.84 121  P     P      23 41 54.3 +1.8
CHTO                                pmax  pmax
      comp=Z,10.0nm,1.5s
CHTO  Chiang Mai         28.84 121  P     P      23 41 54.3 +1.8
CMAR  Chiang Mai Arr     29.08 122  P     P      23 41 55.1 +0.4
      comp=Z,1.2nm,0.4s,baz=307,slow=10,SNR=7.9
CMAR                                LR    LR     23 55 06.5
      comp=Z,69nm,18.2s,baz=10.0,slow=40
CMAR  Chiang Mai Arr     29.08 122  P     P      23 41 56.5 +1.8
CMAR  Chiang Mai Arr     29.08 122  P     P      23 41 56.5 +1.8
BR131 Keskin Array S     31.03 288  P     P      23 42 12.5 +0.6
BR131                               pmax  pmax
      comp=Z,12nm,1.2s
BR131 Keskin Array S     31.03 288  P     P      23 42 12.5 +0.6
BR131                               IAmb  IAmb   23 42 25.4
      comp=Z,12nm,1.2s
BRTR  Keskin Array B     31.03 288  P     P      23 42 12.5 +0.6
      comp=Z,1.2nm,0.8s,baz=141,slow=40,SNR=2.1
BRTR  Keskin Array B     31.03 288  P     P      23 42 14.2 +2.2
BRTR  Keskin Array B     31.03 288  P     P      23 42 14.2 +2.2
NRIK  Noril'sk           33.52   9 i P    P      23 42 31.8 -1.4
NRIK                                pmax  pmax
      comp=Z,6.0nm,1.0s
NRIK  Noril'sk           33.52   9  P     P      23 42 34.5 +1.3
NRIK                                IAmb  IAmb   23 42 45.2
      comp=Z,8.0nm,1.1s
AKASG Malin Array Be     34.14 308  P     P      23 42 39.9 +1.1
      comp=Z,0.6nm,0.5s,baz=107,slow=9.5,SNR=3.0
AKASG Malin Array Be     34.14 308  P     P      23 42 39.7 +0.9
ELL   Elmali             34.46 283  P     P      23 42 43.5 +1.6
ELL                                 pmax  pmax
      comp=Z,31nm,1.0s
ELL   Elmali             34.46 283  P     P      23 42 43.5 +1.6
ATD   Arta Tunnel        37.14 235  P     P      23 43 07.1 +2.2
FIA1  FINESS Array S     38.22 325  P     P      23 43 14.5 +0.9
FINES FINESS Array B     38.22 325  P     P      23 43 13.8 +0.2
      comp=Z,1.5nm,0.6s,baz=120,slow=8.5,SNR=7.0
FINES FINESS Array B     38.22 325  P     P      23 43 14.1 +0.6
FINES FINESS Array B     38.22 325  P     P      23 43 14.1 +0.6
ARCES ARCESS Array B     41.54 337  P     P      23 43 39.8 -1.2
      comp=Z,4.6nm,0.9s,baz=107,slow=7.8,SNR=7.4
ARCES ARCESS Array B     41.54 337  P     P      23 43 41.7 +0.7
ARCES                               pmax  pmax
      comp=Z,27nm,1.4s
ARCES ARCESS Array B     41.54 337  P     P      23 43 41.7 +0.7
GSI   Gunungsitoli       41.90 142  P     P      23 43 43.9 -0.7
      comp=Z,20nm,1.6s
KSRS  Korea Array        43.10  72  P     P      23 43 51.2 -2.9
      comp=Z,2.8nm,1.0s,baz=271,slow=9.8,SNR=4.1
KSRS                                LR    LR     00 03 56.0
      comp=Z,86nm,18.4s,baz=315,slow=39
KLR   Kul'dur            43.52  54  P     P      23 43 57.2 -0.2
      comp=Z,1.7nm,0.6s,baz=275,slow=8.3,SNR=9.0
TIXI  Tiksi              44.82  22  P     P      23 44 08.1 +0.7
TIXI                                pmax  pmax
      comp=Z,4.0nm,0.7s
TIXI  Tiksi              44.82  22  P     P      23 44 08.1 +0.7
TIXI                                IAmb  IAmb   23 44 13.1
      comp=Z,4.4nm,0.7s
NB2   NORSAR Subarra     45.20 323  P     P      23 44 10.4 -0.3
      comp=Z,2.9nm,0.8s,baz=93,slow=7.9
NOA   NORSAR Array B     45.20 323  P     P      23 44 10.3 -0.3
      comp=Z,1.3nm,0.5s,baz=23,slow=6.0,SNR=2.2
NOA                                 LR    LR     00 04 54.5
      comp=Z,97nm,21.1s,baz=0.0,slow=38
NC204 NORSAR Array S     45.43 323        P      23 44 13.4 +0.9
JNU   Nakatsue           46.80  77  LR    LR     00 07 46.6
      comp=Z,120nm,18.2s,baz=347,slow=41
KMBO  Kilima Mbogo       50.37 230  P     P      23 44 52.2 +0.7
      comp=Z,0.5nm,0.3s,baz=66,slow=21,SNR=1.6
KEST  Kesra              50.61 289  P     P      23 44 53.7 +0.7
      comp=Z,1.9nm,0.6s,baz=5.3,slow=22,SNR=0.7
KEST  Kesra              50.61 289  P     P      23 44 53.7 +0.7
MJAR  Matsushiro Arr     51.19  70  P     P      23 44 56.9 -0.3
      comp=Z,1.9nm,0.8s,baz=291,slow=8.4,SNR=4.7
MJAR                                LR    LR     00 06 59.9
      comp=Z,37nm,18.6s,baz=315,slow=36
MBAR  Mbarara            54.15 236  P     P      23 45 20.5 +1.1
MBAR                                pmax  pmax
      comp=Z,6.0nm,0.7s
MBAR  Mbarara            54.15 236  P     P      23 45 20.5 +1.1
MBAR                                IAmb  IAmb   23 45 29.2
      comp=Z,5.6nm,0.7s
DAG   Danmarks Havn      54.93 344 i P    P      23 45 27.1 +3.1
DAG   Danmarks Havn      54.93 344 eP     P      23 45 27.1 +3.1
DAG   Danmarks Havn      54.93 344 eP     P      23 45 27.2 +3.1
PETK  Petropavlovsk-     58.50  45  LR    LR     00 11 30.1
      comp=Z,58nm,18.2s,baz=281,slow=37
ESDC  Sonseca Array      58.87 298  P     P      23 45 52.1 -0.6
      comp=Z,1.5nm,0.7s,baz=55,slow=7.1,SNR=15
ESDC  Sonseca Array      58.87 298  P     P      23 45 54.5 +1.8
SUMG  Summit             61.33 341  P     P      23 46 10.5 +1.1
SUMG                                pmax  pmax
      comp=Z,4.0nm,0.7s
SUMG  Summit             61.33 341  P     P      23 46 10.5 +1.1
SUMG                                IAmb  IAmb   23 46 15.9
      comp=Z,4.2nm,0.7s
LSZ   Lusaka             66.97 228  P     P      23 46 46.6 -0.1
LSZ                                 pmax  pmax
      comp=Z,3.0nm,1.0s
LSZ   Lusaka             66.97 228  P     P      23 46 46.6 -0.1
LSZ                                 IAmb  IAmb   23 47 04.1
      comp=Z,3.3nm,1.0s
TORD  Torodi Ar. Bea     67.50 270  P     P      23 46 50.1  0.0
      comp=Z,1.4nm,0.7s,baz=50,slow=5.5,SNR=4.4
TORD  Torodi Ar. Bea     67.50 270  P     P      23 46 49.9 -0.1
TOLK  Toolik Lake Re     70.16  15  P     P      23 47 06.7 +0.8
TOLK                                IAmb  IAmb   23 47 15.3
      comp=Z,4.9nm,0.8s
KOWA  Kowa               71.32 274  P     P      23 47 14.1 +0.3
KOWA                                IAmb  IAmb   23 47 18.8
      comp=Z,15nm,1.4s
IMAR  Indian Mountai     71.33  18  P     P      23 47 12.6 -0.3
BMAR  Burnt Mountain     72.21  14  P     P      23 47 18.8 +0.5
INK   Inuvik             73.30  10  P     P      23 47 24.5 -0.1
      comp=Z,1.0nm,0.5s,baz=38,slow=11,SNR=4.8
INK   Inuvik             73.30  10  P     P      23 47 25.2 +0.6
INK                                 pmax  pmax
      comp=Z,8.0nm,1.4s
INK   Inuvik             73.30  10  P     P      23 47 25.2 +0.6
INK                                 IAmb  IAmb   23 47 35.1
      comp=Z,8.1nm,1.4s
ILAR  Eielson Array      73.98  17  P     P      23 47 28.1 -0.6
      comp=Z,1.0nm,0.9s,baz=310,slow=4.8,SNR=10
ILAR  Eielson Array      73.98  17  P     P      23 47 29.3 +0.6
ILAR  Eielson Array      73.98  17  P     P      23 47 29.3 +0.6
DHY   Denali Highway     75.30  18  P     P      23 47 36.6  0.0
DHY                                 IAmb  IAmb   23 47 48.1
      comp=Z,3.4nm,0.7s
LBTB  Lobatse            76.11 224  P     P      23 47 41.2 -0.5
LBTB                                pmax  pmax
      comp=Z,9.0nm,1.1s
LBTB  Lobatse            76.11 224  P     P      23 47 41.1 -0.5
LBTB                                IAmb  IAmb   23 47 48.0
      comp=Z,8.6nm,1.1s
SCM   Sheep Creek Mo     76.36  19  P     P      23 47 42.5 -0.1
SCM                                 pmax  pmax
      comp=Z,35nm,1.3s
SCM   Sheep Creek Mo     76.36  19  P     P      23 47 42.5 -0.1
BOSA  Boshof             79.14 222  LR    LR     00 24 59.3
      comp=Z,26nm,18.3s,baz=5.5,slow=37
HYT   Haines Junctio     79.51  15  P     P      23 48 01.4 +1.3
HYT                                 IAmb  IAmb   23 48 05.1
      comp=Z,12nm,1.2s
WB0   Warramunga Arr     80.58 123  P     P      23 48 06.1 -0.2
WB0                                 IAmb  IAmb   23 48 14.2
      comp=Z,3.4nm,0.9s
WRA   Warramunga Arr     80.67 123  P     P      23 48 06.3 -0.5
      comp=Z,0.8nm,0.8s,baz=324,slow=5.0,SNR=12
WRA   Warramunga Arr     80.67 123  P     P      23 48 08.0 +1.2
WRA                                 pmax  pmax
      comp=Z,1.0nm,1.4s
WRA   Warramunga Arr     80.67 123  P     P      23 48 08.0 +1.2
WB2   Warramunga Arr     80.68 123  P     P      23 48 06.4 -0.4
WB2                                 IAmb  IAmb   23 48 13.8
      comp=Z,4.8nm,1.0s
YKA   Yellowknife Ar     80.83   4  P     P      23 48 06.9 -0.2
      comp=Z,1.2nm,0.6s,baz=357,slow=5.3,SNR=24
ASAR  Alice Springs      83.00 126  P     P      23 48 18.6 -0.4
      comp=Z,1.3nm,0.7s,baz=316,slow=4.9,SNR=15
ASAR  Alice Springs      83.00 126  P     P      23 48 19.4 +0.4
ASAR  Alice Springs      83.00 126  P     P      23 48 19.4 +0.4
GCMT  Greycliff          97.73   2        pP     23 49 45.4 +2.5
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JMA 08 00:34:45.5±0.2**,37°.88N×143°.59E,h47km,M3.5,Off east coast of Honshu**

```
Code  Station Name        Δ°   AZ°   Phase ID          Time      Res
                                     Op    ISC       h  m  s    ISC
JIKH  Ishinomakikobu     1.73 285    P     Pn     00 35 14.0 +0.9
JIKH                                eS     Sn     00 35 34.9 +0.9
JIO   Ouri               1.86 289    P     Pn     00 35 15.8 +1.0
JIO                                  S     Sn     00 35 38.1 +1.0
JKMT  Kesennumamotoy     1.91 300    P     Pn     00 35 16.5 +1.0
JKMT                                 S     Sn     00 35 39.3 +1.0
OFUJ  Ofunato            1.93 309    P     Pn     00 35 16.7 +0.9
JMK   Ichinoseki         2.15 301    P     Pn     00 35 20.2 +1.4
JMK                                 eS     Sn     00 35 46.0 +1.8
JOM   Ohasama            2.40 312    P     Pn     00 35 23.8 +1.5
JOM                                 eS     Sn     00 35 52.7 +2.2
JFT   Otama              2.61 263    P     Pn     00 35 26.7 +1.6
JFT                                 eS     Sn     00 35 57.6 +2.0
JYK   Kaneyama           2.74 293    P     Pn     00 35 29.0 +2.0
JYK                                 eS     Sn     00 36 01.7 +2.8
JAG   Ashikaga           3.61 248    P     Pn     00 35 39.6 +0.7
BSO1  Boso 1             3.85 214   eS     Sn     00 36 24.7 -0.7
JOT   Ohata              4.01 331    P     Pn     00 35 46.5 +2.1
JOT                                 eS     Sn     00 36 30.4 +0.3
JRY   Ryogami san        4.19 245    P     Pn     00 35 47.6 +0.7
JOD2  Odawara 2          4.47 236   eS     Sn     00 36 39.5 -1.9
MAT   Matsushiro         4.50 254    P     Pn     00 35 53.9 +2.8
MAT                                 eS     Sn     00 36 44.0 +1.8
JCH   Churui             4.73 358    P     Pn     00 35 54.2 -0.1
JCH                                 eS     Sn     00 36 45.8 -2.0
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NOU ***08*** *00:35:46.9,24°.24S×178°.95W,h441km,mb4.7,South of Fiji Islands*

NEIC ***08*** *00:35:47.6±2.1,24°.24S±0°.07×179°.4W±0°.1,h416km±6km, mb4.6/64,Error ellipse: s-maj=15.4km s-min=9.0km az=107.0*

IDC ***08*** *00:35:48.0±1.1,24°.30S×179°.46W,h418km±10km, mb3.9/24,mb1 4.0/25,mb1mx3.9/47,mbtmp4.7/25,Error ellipse: s-maj=12.9km s-min=9.1km az=105.0*

ISC 08 00:35:47.1±0.3**,24°.30S**±0°.04×**179°.31W**±0°.06**,h416km, n227,**σ1ˢ.**53**/253**,mb4.4**/51**,20C-8D,South of Fiji Islands**

```
Code  Station Name        Δ°   AZ°   Phase ID          Time      Res
                                     Op    ISC       h  m  s    ISC
RIZ   Raoul Island       5.07 166    P     P      00 37 12.3 +1.9
RIZ                                  S     S      00 38 21.4 +2.9
RAO   Raoul Island       5.08 166    P     P      00 37 12.4 +1.9
      1μm,0.3s,baz=79,slow=8.6,SNR=40
RAO                                  S     S      00 38 17.6 -1.1
      607nm,0.3s,baz=304,slow=4.5,SNR=5.1
RAO   Raoul Island       5.08 166    P     P      00 37 12.2 +1.7
RAO   Raoul Island       5.08 166    P     P      00 37 12.3 +1.9
      3μm,0.4s
GLKZ  Green Lake         5.09 166    P     P      00 37 12.1 +1.6
GLKZ                                 S     S      00 38 22.1 +3.3
MSVF  Nonsavu            6.99 339    P     P      00 37 31.4 -0.1
      15nm,0.3s,baz=172,slow=13,SNR=56
MSVF                                 S     S      00 38 55.8 -0.4
      baz=103,slow=13,SNR=15
MSVF  Nonsavu            6.99 339          P      00 37 31.6  0.0
MSVF  Nonsavu            6.99 339    P     P      00 37 31.7 +0.1
      160nm,0.9s
NIUE  Niue              10.15  61          P      00 38 06.1 -0.2
PINNC Pines Island,     12.27 275    P     P      00 38 31.8 +2.3
OUZ   Omahuta           12.49 208    P     P      00 38 35.2 +3.5
OUZ   Omahuta           12.49 208    P     P      00 38 35.0 +3.2
GRZ   Great Barrier     12.73 200    P     P      00 38 36.5 +2.1
WCZ   Waipu Caves       12.82 204    P     P      00 38 38.7 +3.3
OUENC Ouen Island, N    12.86 276    P     P      00 38 38.1 +2.2
YATNC Mamie plateau,    12.89 277    P     P      00 38 38.5 +2.2
KUZ   Kuaotunu          13.12 198    P     P      00 38 40.9 +2.4
ONTNC Ouen Toro         13.23 276    P     P      00 38 42.4 +2.4
DZM   Mont Dzumac       13.29 277    P     P      00 38 42.9 +2.2
      7.2nm,0.3s,baz=87,slow=17,SNR=40
DZM   Mont Dzumac       13.29 277   eP     P      00 38 42.4 +1.7
      328nm,1.1s
DZM   Mont Dzumac       13.29 277          P      00 38 42.8 +2.1
DZM   Mont Dzumac       13.29 277    P     P      00 38 43.0 +2.2
WIAZ  Waiheke Island    13.33 200    P     P      00 38 43.3 +2.4
MXZ   Matakaoa Point    13.37 188    P     P      00 38 40.5 -0.8
MXZ                                  S     S      00 41 02.0 -3.3
DVP   Devils Point      13.38 297    P     P      00 38 45.5 +3.9
      438μm,0.8s
NOUC  Port Laguerre     13.41 277    P     P      00 38 44.4 +2.5
EPAZ  Eden Park BICE    13.53 201    P     P      00 38 46.1 +3.0
ETAZ  East Tamaki Re    13.54 200    P     P      00 38 46.3 +3.1
MKAZ  Moumakai          13.61 199    P     P      00 38 45.7 +1.8
WMGZ  Waiomatatini S    13.61 188    P     P      00 38 42.8 -1.1
WMGZ                                 S     S      00 41 08.1 -2.0
HAZ   Te Kaha           13.64 190    P     P      00 38 44.6 +0.4
HAZ                                  S     S      00 41 07.3 -3.3
PKGZ  Pakihiroa         13.72 189    P     P      00 38 43.1 -2.1
PKGZ                                 S     S      00 41 08.6 -3.8
AWAZ  Awhitu Peninsu    13.73 201    P     P      00 38 47.1 +1.8
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RUGZ	Raukumara Rang	13.86	190	P	P	00 38 46.1	-0.7
RUGZ				S	S	00 41 11.9	-3.4
WHRZ	Whale Island	13.88	192	P	P	00 38 48.8	+2.0
PUZ	Puketiti	13.88	188	P	P	00 38 46.3	-0.5
PUZ				S	S	00 41 11.5	-4.0
TWGZ	Tauwhareparae	14.02	189	P	P	00 38 47.9	-0.6
TWGZ				S	S	00 41 15.9	-2.4
URZ	Urewera	14.24	192	P	P	00 38 48.1	-2.6
	46nm,0.3s,baz=284,slow=2.2,SNR=66						
URZ				S	S	00 41 22.9	+0.3
	25nm,0.3s,baz=244,slow=22,SNR=14						
URZ	Urewera	14.24	192	P	P	00 38 48.2	-2.6
MWZ	Matawai	14.24	190	P	P	00 38 49.3	-1.5
TKGZ	Te Karaka	14.30	189	P	P	00 38 49.0	-2.3
TKGZ				S	S	00 41 18.1	-5.6
SANVU	Saraoutou	15.43	302	P	P	00 39 03.2	-0.7
SANVU	Saraoutou	15.43	302	P	P	00 39 05.8	+1.9
KOUNC	Koumac, New Ca	15.62	281	P	P	00 39 09.5	+3.7
	55nm,1.1s						
BFZ	Birch Farm	16.75	192	P	P	00 39 17.3	-0.3
BHW	Baring Head	17.73	194	P	P	00 39 27.4	-0.7
QRZ	Quartz Range	17.84	201	P	P	00 39 28.3	-0.9
NNZ	Nelson	17.94	198	P	P	00 39 29.3	-0.9
TUWZ	Tuamarina	17.98	197	P	P	00 39 30.5	-0.2
RAR	Rarotonga	18.28	84	P	P	00 39 32.9	-1.1
	0.8nm,0.3s,baz=178,slow=5.3,SNR=3.8						
RAR	Rarotonga	18.28	84	P	P	00 39 33.9	-0.2
RAR				IAmb	IAmb	00 39 38.1	
	comp=Z,20nm,0.9s						
THZ	Tophouse	18.58	199	P	P	00 39 37.0	0.0
THZ				IAmb	IAmb	00 39 38.2	
	comp=Z,32nm,0.8s						
KHZ	Kahutara	19.01	196	P	P	00 39 40.3	-0.8
KHZ				IAmb	IAmb	00 39 43.7	
	comp=Z,43nm,1.1s						
LTZ	Lake Taylor	19.70	199	P	P	00 39 46.3	-1.4
LTZ				IAmb	IAmb	00 39 48.8	
	comp=Z,30nm,0.8s						
LHI	Lord Howe Isla	20.40	245	P	P	00 39 55.6	+1.5
RPZ	Rata Peaks	20.91	200	P	P	00 39 57.7	-1.1
	comp=Z,20nm,0.7s,baz=8.3,slow=2.9,SNR=14						
RPZ				S	S	00 43 23.7	-0.1
	comp=Z,5.6nm,0.6s,baz=27,slow=12,SNR=1.8						
KNTN	Kanton	22.63	20	P	P	00 40 12.7	-1.9
ARMA	Armidale	26.47	250	P	P	00 40 49.1	+0.2
EIDS	Eidsvold	26.87	261	P	P	00 40 52.3	0.0
CAN	Canberra	29.49	241	P	P	00 41 15.5	+0.2
CTAO	Charters Tower	32.11	271	P	P	00 41 38.1	-0.1
CTAO				IAmb	IAmb	00 41 39.2	
	comp=Z,31nm,0.6s						
TOO	Toolangi	32.76	238	P	P	00 41 44.3	+0.7
STKA	Stephens Creek	35.16	249	P	P	00 42 03.6	-0.4
	comp=Z,8.5nm,0.5s,baz=97,slow=11,SNR=38						
STKA				PcP	PcP	00 44 24.4	-0.1
	comp=Z,2.7nm,0.6s,baz=78,slow=3.8,SNR=5.0						
STKA	Stephens Creek	35.16	249	P	P	00 42 03.9	-0.2
PMG	Port Moresby	35.22	289	P	P	00 42 04.3	-0.4
	comp=Z,31nm,0.7s,baz=93,slow=5.8,SNR=14						
PMG	Port Moresby	35.22	289	P	P	00 42 03.9	-0.9
PMG				IAmb	IAmb	00 42 04.8	
	comp=Z,28nm,0.7s						
PMG	Port Moresby	35.22	289	P	P	00 42 04.4	-0.4
	comp=Z,41nm,0.9s						
COEN	Coen	36.80	279	P	P	00 42 17.8	-0.2
COEN				IAmb	IAmb	00 42 18.9	
	comp=Z,9.5nm,0.5s						
BBOO	Buckleboo	39.87	247	P	P	00 42 42.1	-0.8
AS31	Alice Springs	42.59	261	P	P	00 43 04.0	-0.9
ASAR	Alice Springs	42.59	261	P	P	00 43 04.2	-0.8
	comp=Z,3.1nm,0.5s,baz=94,slow=7.2,SNR=54						
ASAR				PcP	PcP	00 44 47.5	-0.8
	comp=Z,1.4nm,0.7s,baz=104,slow=5.1,SNR=5.0						
ASAR				ScP	ScP	00 48 00.4	+1.5
	comp=Z,2.6nm,0.9s,baz=118,slow=4.2,SNR=9.2						
ASAR				S	S	00 48 52.1	-4.3
	comp=Z,1.2nm,1.0s,baz=99,slow=16,SNR=6.1						
ASAR	Alice Springs	42.59	261	P	P	00 43 03.6	-1.3
WR0	Warramunga Arr	42.82	266	P	P	00 43 05.2	-1.5
WRA	Warramunga Arr	43.01	266	P	P	00 43 07.0	-1.3
	comp=Z,4.4nm,0.4s,baz=96,slow=8.4,SNR=193						
WRA				PcP	PcP	00 44 50.1	+0.3
	comp=Z,2.3nm,0.7s,baz=103,slow=3.2,SNR=6.4						
WRA				ScP	ScP	00 48 03.0	+2.4
	comp=Z,4.4nm,0.9s,baz=99,slow=3.7,SNR=14						
WRA				S	S	00 48 58.0	-4.4
	comp=Z,2.9nm,0.9s,baz=104,slow=14,SNR=12						
WRA	Warramunga Arr	43.01	266	P	P	00 43 06.5	-1.7
WAKE	Wake Island	45.43	341	P	P	00 43 26.4	-0.6
FORT	Forrest	46.76	250	P	P	00 43 35.7	-1.5
FORT				IAmb	IAmb	00 43 36.6	
	comp=Z,23nm,0.6s						
MTN	Manton Dam	48.11	274	P	P	00 43 46.3	-1.3
FITZ	Fitzroy Crossi	51.43	266	P	P	00 44 11.5	-0.7
SIJI	Sorong	53.16	288	P	P	00 44 25.5	+0.7
	comp=Z,4.2nm,0.4s,baz=74,slow=19,SNR=2.9						
VNDA	Vanda	54.03	185	P	P	00 44 32.3	+2.3
	comp=Z,3.7nm,0.8s,baz=15,slow=7.0,SNR=6.7						
VNDA	Vanda	54.03	185	P	P	00 44 32.2	+2.1
MORW	Morawa	57.33	250	P	P	00 44 52.8	-1.2
CASY	Casey	60.02	206	P	P	00 45 11.5	-0.1
CASY				IAmb	IAmb	00 45 22.0	
	comp=Z,25nm,0.9s						
GIRL	Giralia	60.44	257	P	P	00 45 14.9	-0.2
GIRL				IAmb	IAmb	00 45 15.4	
	comp=Z,42nm,1.1s						
QSPA	South Pole Qui	65.78	180	P	P	00 45 50.5	+1.3
QSPA				IAmb	IAmb	00 45 52.9	
	comp=Z,13nm,1.0s						
UGM	Wanagama	68.74	271	P	P	00 46 07.8	-0.5
XMIS	Christmas Isla	72.20	266	P	P	00 46 28.2	-0.7
JGF	Kuroka	72.32	324	P	P	00 46 28.8	-0.3
JGF				IAmb	IAmb	00 46 31.3	
	comp=Z,6.2nm,0.7s						
MJAR	Matsushiro Arr	72.59	325	P	P	00 46 30.6	0.0
	comp=Z,5.7nm,0.8s,baz=159,slow=5.9,SNR=17						
MJAR	Matsushiro Arr	72.59	325	P	P	00 46 30.7	0.0
MAJO	Matsushiro	72.59	325	P	P	00 46 31.0	+0.4
MAJO				IAmb	IAmb	00 46 41.6	
	comp=Z,11nm,1.1s						
MAT	Matsushiro	72.59	325	P	P	00 46 30.6	-0.1
JMN	Monobe	72.89	321	P	P	00 46 33.1	+0.6
JMN				IAmb	IAmb	00 46 34.2	
	comp=Z,13nm,0.8s						
JWT	Wachi	73.15	323	P	P	00 46 34.5	+0.5
JWT				IAmb	IAmb	00 46 35.3	
	comp=Z,14nm,0.7s						
JSU	Suzuyama	73.40	317	P	P	00 46 35.9	+0.4
JHS	Saijyo	74.24	321	P	P	00 46 40.5	+0.3
JHS				IAmb	IAmb	00 46 41.8	
	comp=Z,15nm,0.8s						
JTM	Tenmabayashi	74.50	330	P	P	00 46 42.3	+0.8
ADK	Adak	75.89	2	P	P	00 46 48.6	-0.4
BELA	Belgrano 2	75.96	173	P	P	00 46 49.8	+0.6
JKA	Kamikawa-asahi	76.51	333	P	P	00 46 54.4	+1.7
JKA				IAmb	IAmb	00 46 55.9	
	comp=Z,18nm,0.8s						
ASAJ	Asahikawa	76.51	333	P	P	00 46 54.5	+1.8
	comp=Z,15nm,0.8s,baz=205,slow=7.7,SNR=9.8						
MAW	Mawson	77.59	200	P	P	00 46 60.0	+1.6
	comp=Z,14nm,0.6s,baz=146,slow=9.9,SNR=2.4						
MAW	Mawson	77.59	200	P	P	00 46 59.6	+1.2
MAW				IAmb	IAmb	00 47 04.3	
	comp=Z,5.7nm,1.1s						
KSRS	Korea Array	78.96	320	P	P	00 47 06.6	+0.4
	comp=Z,3.9nm,0.7s,baz=140,slow=6.0,SNR=9.4						
KSAR	Wonju Array Be	78.97	320	P	P	00 47 07.3	+1.0
PEA0B	Petropavlovsk-	79.64	346	P	P	00 47 09.4	-0.1
PEA0B				IAmb	IAmb	00 47 10.7	
	comp=Z,16nm,0.8s						
PETK	Petropavlovsk-	79.64	346	P	P	00 47 09.6	+0.1
	comp=Z,7.4nm,0.6s,baz=111,slow=6.5,SNR=30						
PETK	Petropavlovsk-	79.64	346	P	P	00 47 09.5	0.0
NJ2	Nanjing	81.40	311	*e*P	P	00 47 20.1	+0.9
NJ2				pmax	pmax		
	comp=Z,19nm,0.6s						
USA0B	Ussuriysk Arra	81.44	327	P	P	00 47 20.1	+0.9
USA0B				IAmb	IAmb	00 47 36.0	
	comp=Z,6.6nm,0.9s						
USRK	Ussuriysk Ar.	81.44	327	P	P	00 47 20.4	+1.2
	comp=Z,7.6nm,0.8s,baz=115,slow=2.9,SNR=10						
HOPS	Hopland Field	82.03	41	P	P	00 47 23.7	+1.4
HOPS				IAmb	IAmb	00 47 26.5	
	comp=Z,8.0nm,0.9s						
ISA	Isabella, Lake	82.85	46	P	P	00 47 28.2	+1.5
ISA				IAmb	IAmb	00 47 28.7	
	comp=Z,4.4nm,0.8s						
CMB	Columbia Colle	83.06	43	P	P	00 47 28.5	+0.8
CMB				IAmb	IAmb	00 47 29.8	
	comp=Z,4.8nm,0.9s						
YBH	Yreka Blue Hor	84.00	39	P	P	00 47 33.9	+1.6
	comp=Z,3.3nm,0.9s,baz=207,slow=2.7,SNR=7.3						
SNAA	Sanae	84.25	179	P	P	00 47 33.4	+0.2
SNAA	Sanae	84.25	179	P	P	00 47 33.3	+0.2
VNA3	Neumayer Olymp	84.44	177	P	P	00 47 34.3	+0.2
CN2	Changchun	84.59	323	*e*P	P	00 47 35.4	+0.4
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
NVAR	Mina Array Bea	84.61	44	P	P	00 47 36.5	+0.9
	comp=Z,1.5nm,0.8s,baz=224,slow=7.8,SNR=9.2						
NVAR	Mina Array Bea	84.61	44	P	P	00 47 36.2	+0.7
VNA2	Neumayer--Watz	84.86	177	P	P	00 47 35.4	-0.7
	baz=184,slow=3.7						
VNA1	Neumayer--Stat	85.10	177	P	P	00 47 34.9	-2.3
KLR	Kul'dur	85.19	330	P	P	00 47 38.8	+0.9
	comp=Z,2.8nm,0.8s,baz=117,slow=1.8,SNR=7.1						
MOD	Modoc Plateau	85.50	40	P	P	00 47 40.8	+1.0
MOD				IAmb	IAmb	00 47 42.6	
	comp=Z,6.4nm,0.9s						
H04A	Detroit Lake	86.19	37	P	P	00 47 43.3	+0.5
H04A				IAmb	IAmb	00 47 49.0	
	comp=Z,4.6nm,0.9s						
LHMI	Lhok Sumawe	86.45	277	P	P	00 47 43.0	-1.8
CNPM	China Poot	86.67	14	P	P	00 47 45.0	+0.2
MA2	Magadan	87.13	345	P	P	00 47 47.4	+0.4
	comp=Z,5.2nm,0.7s,baz=134,slow=8.7,SNR=4.9						
MA2	Magadan	87.13	345	P	P	00 47 47.5	+0.6
MA2				IAmb	IAmb	00 47 48.5	
	comp=Z,8.1nm,0.8s						
I07A	Izee	87.31	39	P	P	00 47 49.3	+1.0
BBB	Bella Bella	88.31	29	P	P	00 47 53.9	+1.3
	comp=Z,8.3nm,0.9s,baz=3.0,slow=0.4,SNR=6.5						
BBB	Bella Bella	88.31	29	P	P	00 47 53.7	+1.1
BBB				IAmb	IAmb	00 47 58.1	
	comp=Z,17nm,1.1s						
MTPU	Mount Pierson	88.35	47	P	P	00 47 55.4	+1.8
HAWA	Hanford	88.71	37	P	P	00 47 55.9	+1.2
HAWA				IAmb	IAmb	00 47 57.0	
	comp=Z,14nm,1.1s						
TTA	Tatalina	88.89	10	P	P	00 47 55.3	+0.1
TTA				IAmb	IAmb	00 47 55.7	
	comp=Z,4.7nm,1.0s						
KNK	Knik Glacier	88.97	14	P	P	00 47 55.8	+0.3
KNK				IAmb	IAmb	00 47 56.5	
	comp=Z,9.4nm,0.8s						
BMO	Blue Mountains	89.03	39	P	P	00 47 57.3	+1.0
XAN	Xi'an	89.48	308	P	P	00 48 00.0	+1.3
XAN				pP	PcP	00 48 07.5	+7.8
XAN				pmax	pmax		
	comp=Z,10.0nm,0.8s						
SEY	Seymchan	89.80	347	P	P	00 47 59.4	+0.1
	comp=Z,3.8nm,0.6s,baz=158,slow=4.3,SNR=11						
KMI	Kunming	90.01	298	⇓P	P	00 47 59.4	-2.1
KMI				pmax	pmax		
	comp=Z,13nm,0.5s						
TXAR	Lajitas Array	90.11	58	P	P	00 48 03.6	+1.8
	comp=Z,0.6nm,0.6s,baz=213,slow=6.1,SNR=11						
CMAR	Chiang Mai Arr	90.26	290	P	P	00 48 03.0	+0.4
	comp=Z,1.2nm,0.4s,baz=138,slow=3.0,SNR=9.3						
CMAR	Chiang Mai Arr	90.26	290	P	P	00 48 04.0	+1.5
ANMO	Albuquerque	90.71	52	P	P	00 48 05.7	+1.2
	comp=Z,0.8nm,0.6s,baz=211,slow=5.0,SNR=4.2						
HHC	Hu-ho-hao-te	91.15	315	*e*P	P	00 48 03.8	-2.5
HHC				pmax	pmax		
	comp=Z,4.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,250nm,7.6s						
ILAR	Eielson Array	92.28	13	P	P	00 48 09.9	-0.8
	comp=Z,0.9nm,0.6s,baz=228,slow=5.1,SNR=15						
PDAR	Pinedale Array	92.54	44	P	P	00 48 13.0	+0.2
	comp=Z,1.7nm,0.9s,baz=212,slow=4.1,SNR=11						
PDAR	Pinedale Array	92.54	44	P	P	00 48 12.2	-0.6
LZH	Lanzhou	94.12	308	*e*P	P	00 48 21.7	+1.6
LZH				pP	pP	00 49 54.3	-0.6
LZH				sP	sP	00 50 47.0	+10
LZH				pmax	pmax		
	comp=Z,12nm,1.0s						
YKA	Yellowknife Ar	100.46	25	P	Pdif	00 48 47.9	+0.2
	comp=Z,0.1nm,0.5s,baz=228,slow=4.1,SNR=2.3						
YKA				PP	PP	00 52 57.2	-3.7
	comp=Z,0.4nm,0.9s,baz=234,slow=7.1,SNR=5.7						
ZALV	Zalesovo Beam	112.66	320	PKiKP	PKiKP	00 53 33.3	-1.4
	comp=Z,0.6nm,0.4s,baz=127,slow=4.8,SNR=3.2						
MKAR	Makanchi Array	112.89	312	PKiKP	PKiKP	00 53 34.0	-1.5
	comp=Z,0.4nm,0.5s,baz=217,slow=1.4,SNR=16						
KKAR	Karatay Array	120.61	307		PKPdf	00 53 49.9	-0.5
GEYT	Alibeck	129.72	300	SKPbc	SKPab	00 56 49.1	-1.5
	comp=Z,1.1nm,0.5s,baz=8.4,slow=3.9,SNR=3.7						
ARCES	ARCESS Array B	132.41	348	PKP	PKPdf	00 54 11.1	-1.0
	comp=Z,5.3nm,0.8s,baz=42,slow=2.0,SNR=4.3						
ARCES				SKPbc	SKPbc	00 56 57.3	-1.9
	comp=Z,5.2nm,0.9s,baz=51,slow=4.7,SNR=3.8						
KMBO	Kilima Mbogo	136.44	240	PKhKP	PKPpre	00 54 12.3	
	comp=Z,0.8nm,0.2s,baz=90,slow=6.1,SNR=2.3						
KMBO				SKPbc	SKPbc	00 57 15.4	+1.2
	comp=Z,2.4nm,0.9s,baz=63,slow=6.8,SNR=5.0						
FINES	FINESS Array B	139.03	342	PKhKP	PKPpre	00 54 14.7	
	comp=Z,3.5nm,1.0s,baz=1.3,slow=8.2,SNR=4.8						
FINES				PKP	PKPdf	00 54 25.4	+0.9
	comp=Z,4.6nm,1.0s,baz=52,slow=3.1,SNR=5.0						
FINES				SKPbc	SKPbc	00 57 19.9	+0.2
	comp=Z,2.1nm,0.6s,baz=39,slow=3.6,SNR=6.7						
FINES	FINESS Array B	139.03	342		PKPdf	00 54 25.5	+1.0
NB2	NORSAR Subarra	142.57	352	PKP	PKPdf	00 54 27.4	-3.7
	comp=Z,2.0nm,0.6s,baz=14,slow=3.2						
NOA	NORSAR Array B	142.57	352	PKhKP	PKPpre	00 54 27.2	
	comp=Z,3.0nm,0.7s,baz=22,slow=3.8,SNR=6.7						
MARD	Mardin	143.47	300	PKPdf	PKPbc	00 54 32.1	+0.5
IDID	Didziasalis	143.55	335	*e*P	PKPab	00 54 31.1	+0.1
IIGN	Ignalina	143.72	335	*e*P	PKPab	00 54 31.3	-0.3
PABE	Paberze	144.43	337	*e*P	PKPbc	00 54 33.9	0.0
AKASG	Malin Array Be	145.65	327	PKPbc	PKPdf	00 54 36.9	+0.2
	comp=Z,1.8nm,0.3s,baz=44,slow=4.2,SNR=19						
AKASG				SKPbc	SKPbc	00 57 36.5	+0.1
	comp=Z,1.2nm,0.5s,baz=47,slow=2.9,SNR=5.5						
AKASG	Malin Array Be	145.65	327	PKPdf	PKPdf	00 54 36.6	0.0
AKBB	Malin Array Si	145.65	327		PKPdf	00 54 37.1	+0.5
SUW	Suwalki	145.89	336	*e*P	PKPdf	00 54 31.8	-5.2
SUW	Suwalki	145.89	336		PKPbc	00 54 38.4	0.0
GAZ	Gaziantep	146.30	301		PKPbc	00 54 40.2	-0.1
MILM	Milestii Mici	148.17	322	⇑P	PKPbc	00 54 44.2	-0.6
BR131	Keskin Array S	148.32	307	PKPbc	PKPbc	00 54 44.9	-0.8
BR131					PKPab	00 54 50.8	+0.5
BRTR	Keskin Array B	148.32	307	PKPbc	PKPbc	00 54 45.4	-0.3
	comp=Z,2.4nm,0.8s,baz=140,slow=3.9,SNR=6.2						
BRTR				PKPab	PKPab	00 54 50.2	0.0
	comp=Z,4.2nm,0.6s,baz=97,slow=3.1,SNR=12						
BRTR	Keskin Array B	148.32	307		PKPbc	00 54 44.9	-0.8
BRTR				PKPab	PKPab	00 54 50.8	+0.5
VASR	Vaslui	148.90	323	⇑P	PKPab	00 54 52.9	+0.7
TLCR		149.14	319	⇑P	PKPbc	00 54 47.2	-0.1
CFR	Carcaliu	149.54	320	⇑P	PKPbc	00 54 48.1	-0.1
TPGR	Topolog	149.56	319	⇑P	PKiKP	00 54 49.4	+0.2
BIZ	Bicaz	149.63	324	⇓P	PKPbc	00 54 49.0	+0.6
BUR08	Bucovina Ar. S	149.64	326		PKiKP	00 54 49.8	+0.4
BURAR	Bucovina Array	149.66	326	⇓P	PKiKP	00 54 49.7	+0.3
BURAR	Bucovina Array	149.66	326		PKiKP	00 54 49.8	+0.4
VRI	Vrincioaia	149.95	322	⇑P	PKPab	00 54 56.9	+0.3
PLOR	Plostina	150.01	322	⇑P	PKiKP	00 54 51.5	+1.4
KOLS	Kolonicke sedl	150.13	331	*e*PKP	PKiKP	00 54 50.6	+0.4
ARCR	ARCALIA	150.44	326	⇓P	PKPbc	00 54 50.0	-0.3
CRVS	Cervenica-Dubn	150.51	332	*e*PKP	PKPbc	00 54 50.7	+0.3
MLR	Muntele Rosu	150.62	322	⇑P	PKPbc	00 54 51.2	+0.3
DOPR	Dopca	150.63	324	⇑P	PKPbc	00 54 51.1	+0.2
SECR		150.82	321	⇑P	PKPbc	00 54 51.3	0.0
CJR	Cluj-Napoca	151.08	326	⇑P	PKPbc	00 54 52.2	+0.3
VOIR		151.15	323	⇑P	PKPbc	00 54 52.0	-0.1
LANS	Liptovska Anna	151.15	334	*e*PKP	PKiKP	00 54 53.2	+0.9
OSTC	Ostas	151.16	339	⇑*e*PKP	PKPbc	00 54 51.8	-0.1
UPC	Upice	151.27	339	⇑*e*PKP	PKPbc	00 54 52.0	-0.1
DPC	Dobruska-Polom	151.30	339	⇑*e*PKP	PKPbc	00 54 52.1	-0.2
MORC	Moravsky Berou	151.37	337	⇓P	PKPbc	00 54 52.2	-0.2
ARR	Arges	151.42	323	⇓P	PKiKP	00 54 53.8	+0.8
CLL	Collm	151.42	344	*i* PKPbc	PKPbc	00 54 52.6	+0.2
	comp=Z,7.0nm,0.6s						
CLL				*i* PKPab	PKPab	00 55 02.4	-0.1
CLL				*e*pPKPab	pPKPab	00 56 36.0	-2.6
CLL	Collm	151.42	344		PKiKP	00 54 52.9	+0.2
DRGR		151.47	327	⇓P	PKPbc	00 54 52.8	0.0
BRG	Berggiesshubel	151.56	342	*i* PKP	PKPbc	00 54 52.8	+0.1
BRG				Amp		00 54 54.5	
	comp=Z,7.8nm,0.7s						
VYHS	Vyhne	151.93	334	*e*PKP	PKPdf	00 54 49.1	+2.3
VRAC	Vranov	152.10	337	*e*PKP	PKPab	00 55 05.5	0.0
KRUC	Moravsky	152.38	337	*e*PKP	PKPab	00 55 06.4	-0.2
GZR	Gura Zlata	152.39	325	⇑P	PKPbc	00 54 54.2	-0.6
BZS	Buzias	152.83	327	⇑P	PKPbc	00 54 55.1	-0.6
HERR	Herculane	152.93	325	⇑P	PKPbc	00 54 55.5	-0.4
KHC	Kasperske Hory	153.23	341	⇑*e*PKP	PKPbc	00 54 55.9	-0.7
CKRC	Cesky Krumlov	153.28	340	⇑*e*PKP	PKPbc	00 54 55.6	-1.0
GERES	GERESS Array B	153.45	341	PKPbc	PKPbc	00 54 56.7	-0.4
	comp=Z,0.6nm,0.7s,baz=23,slow=5.3,SNR=2.9						
GERES				PKPab	PKPab	00 55 10.4	-0.8
	comp=Z,0.2nm,0.3s,baz=48,slow=5.8,SNR=2.4						
GERES	GERESS Array B	153.45	341		PKPbc	00 54 56.5	-0.6
CONA	Conrad Observa	153.53	337	*e*P	PKPab	00 55 12.3	+0.7
	comp=Z,7.8nm,1.0s						
VTS	Vitosha	153.91	320	⇓P	PKPab	00 55 14.8	+1.3
VTS	Vitosha	153.91	320		PKPab	00 55 14.9	+1.3
MOA	Molln	154.15	339	*e*P	PKPab	00 55 15.1	+0.9
	comp=Z,9.2nm,1.6s						
WATA	Walderalm	155.43	342	*e*P	PKPab	00 55 19.5	-0.4
	comp=Z,3.3nm,0.8s						
WTTA	Wattenberg	155.48	342	*e*P	PKPab	00 55 19.8	-0.3
	comp=Z,5.3nm,1.1s						
RETA	Reutte	155.51	343	*e*P	PKPab	00 55 19.3	-0.8
	comp=Z,1.1nm,0.5s						
MOTA	Moosalm	155.55	343	*e*P	PKPab	00 55 20.7	+0.3
	comp=Z,9.3nm,1.6s						
ABTA	Abfaltersbach	155.68	340	*e*P	PKPab	00 55 18.8	-2.1
	comp=Z,9.6nm,2.0s						
DAVA	Damuels	155.92	345	*e*P	PKPab	00 55 21.6	-0.5
	comp=Z,2.2nm,0.6s						
ESDC	Sonseca Array	164.18	13	PKPab	PKPab	00 55 57.8	-0.3
	comp=Z,2.7nm,1.1s,baz=334,slow=4.2,SNR=7.8						
TORD	Torodi Ar. Bea	168.86	185	PKP	PKPdf	00 55 05.3	-0.7
	comp=Z,0.5nm,0.7s,baz=153,slow=0.6,SNR=2.2						
TORD				PKPab	PKPab	00 56 19.4	+0.2
	comp=Z,0.9nm,0.6s,baz=172,slow=4.5,SNR=6.5						
TORD	Torodi Ar. Bea	168.86	185		PKPab	00 56 19.3	+0.1

IDC ***08*** *00:50:50.6±2.5, 36°.99N×140°.99E, h0^{km}, mb3.2/2, mb1 3.4/3, mb1mx3.2/51, mbtmp3.2/3, ML2.2/1, Error ellipse: s-maj=42.2km s-min=28.9km az=55.0*

JMA ***08*** *00:50:53.7, 37°.01N×140°.77E, h11^{km}±1^{km}, M3.2 Broadband fault plane solution: P waves. NP1: ϕ_s218.00000°, δ43.00000°, λ-107.00000°. NP2: ϕ_s61.00000°, δ49.00000°, λ-75.00000°. Principal axes: T Plg3.0000°, Azm140.0000°; N Plg12.0000°, Azm231.0000°; P Plg78.0000°, Azm36.0000°;*

JMA Felt I J1.

ISC 08 00:50:52.9±1.2**, 37°.00N**±0°.04×**140°.86E**±0°.06**, h11**^{km}±6^{km}**, n18, σ0^{s}.99**/21**, 8C, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.11	335	⇑P	Pg	00 50 56.2	+0.5
ONAJ				*e*S	Sg	00 50 58.3	+0.5
JFFD	Fukushimafurud	0.25	291	⇑P	Pg	00 50 57.8	-0.2
JFFD				*e*S	Sg	00 51 00.6	-0.9
JFK	Kawauchi	0.36	2	⇑P	Pb	00 51 00.9	-0.5
JFK				*e*S	Sb	00 51 06.0	-1.1
JHO	Hitachi	0.45	210	⇑P	Pb	00 51 01.9	-1.0
JHO				S	Sg	00 51 07.6	-0.1
JFT	Otama	0.66	321	⇑P	Pg	00 51 05.7	0.0
JFT				S	Sg	00 51 14.3	0.0
JSB	Shiboa	0.75	268	⇑P	Pb	00 51 07.5	-0.5
JSB				S	Sg	00 51 17.2	+0.1
JMM	Marumori	0.86	357	⇑P	Pb	00 51 09.6	-0.3
JFY	Yanaizu	1.00	294	⇑P	Pg	00 51 11.5	-0.7
JFY				S	Sg	00 51 23.8	-1.4
MJAR	Matsushiro Arr	2.17	259	Pn	Pn	00 51 30.1	+1.1
	0.7nm,0.3s,baz=80,slow=15,SNR=34						
MJAR				Sn	Sn	00 51 57.4	+1.4
	1.5nm,0.3s,baz=77,slow=30,SNR=11						
MAT	Matsushiro	2.17	259	P	Pn	00 51 30.4	+1.4
MAT				S	Sn	00 51 58.2	+2.2
H11N2	WAKE ISLAND Hy	28.52	120	T	T	01 26 36.5	
	baz=312,slow=74,SNR=23						
H11N1	WAKE ISLAND Hy	28.52	120	T	T	01 26 37.2	
	baz=312,slow=74,SNR=38						
H11N3	WAKE ISLAND Hy	28.54	120	T	T	01 26 35.1	
	baz=312,slow=74,SNR=25						
H11S1	WAKE ISLAND Hy	29.22	122	T	T	01 27 30.9	
	baz=314,slow=76,SNR=16						
H11S3	WAKE ISLAND Hy	29.22	122	T	T	01 27 30.9	
	baz=314,slow=76,SNR=11						
H11S2	WAKE ISLAND Hy	29.24	122	T	T	01 27 30.2	
	baz=314,slow=76,SNR=9.7						
MKAR	Makanchi Array	43.76	302	P	P	00 58 58.0	-0.3
	0.2nm,0.6s,baz=89,slow=9.8,SNR=1.9						
WRA	Warramunga Arr	56.97	187	P	P	01 00 37.9	-0.6
	0.3nm,0.6s,baz=4.4,slow=7.4,SNR=5.8						

IDC ***08*** *01:24:26.4±2.0, 17°.32S×168°.18E, h0^{km}, mb4.0/4, mb1 4.3/5, mb1mx3.9/24, mbtmp4.0/5, ML4.1/1, MS3.6/8, Ms1 3.6/8, ms1mx3.2/35, Error ellipse: s-maj=54.7km s-min=27.1km az=118.0*

NEIC ***08*** *01:24:30.3±1.0, 17°.23S±0°.05×168°.3E±0°.1, h35^{km}±2^{km}, mb4.5/12, Error ellipse: s-maj=21.3km s-min=8.4km az=87.0*

NOU ***08*** *01:24:33.6, 17°.88S×168°.21E, h0^{km}, MLv4.4, Vanuatu Islands*

ISC 08 01:24:26.5±0.7**, 17°.29S**±0°.05×**168°.3E**±0°.1**, h10**^{km}**, n41, σ1^{s}.38**/35**, mb4.4**/9**, MS3.4**/7**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
DVP	Devils Point	0.45	196	P	Pb	01 24 36.8	+0.2
SANVU	Saraoutou	2.12	330		Pn	01 25 01.0	-1.0
YATNC	Mamie plateau,	4.93	196	P	Pn	01 25 40.6	-0.1
KOUNC	Koumac, New Ca	5.01	229	P	Pn	01 25 43.9	+2.2
DZM	Mont Dzumac	5.07	200	Pn	Pn	01 25 42.8	0.0
	7.4nm,0.3s,baz=141,slow=19,SNR=81						
DZM				Sn	Sn	01 26 42.6	+1.1
	7.6nm,0.3s,baz=342,slow=23,SNR=12						
DZM	Mont Dzumac	5.07	200	*e*Pn	Pn	01 25 43.6	+0.9
	24nm,0.3s						
DZM				*e*Sn	Sn	01 26 35.5	-6.0
	59nm,0.3s						
DZM	Mont Dzumac	5.07	200		Pn	01 25 42.9	+0.2
DZM	Mont Dzumac	5.07	200	P	Pn	01 25 42.8	0.0
NOUC	Port Laguerre	5.15	201	P	Pn	01 25 43.8	+0.1
OUENC	Ouen Island, N	5.29	195	P	Pn	01 25 45.0	-0.6
ONTNC	Ouen Toro	5.29	199	P	Pn	01 25 45.8	+0.2
PINNC	Pines Island,	5.36	189	P	Pn	01 25 47.1	+0.5
MSVF	Nonsavu	9.30	94	LR	LR	01 29 29.9	
	comp=Z,649nm,18.1s,baz=265,slow=32						
HNR	Honiara	11.28	313	LR	LR	01 30 49.0	
	comp=Z,144nm,19.5s,baz=332,slow=34						
ARMA	Armidale	20.06	226	P	P	01 28 59.7	-0.4
NIUE	Niue	20.75	98	P	P	01 29 08.5	+0.9
CTAO	Charters Tower	21.08	259	P	P	01 29 11.3	+0.1
CTAO				IAmb	IAmb	01 29 56.3	
	comp=Z,78nm,1.8s						
URZ	Urewera	22.27	161	LR	LR	01 36 21.4	
	comp=Z,154nm,20.5s,baz=31,slow=32						
LTZ	Lake Taylor	25.63	173	P	P	01 29 55.3	-0.9
RPZ	Rata Peaks	26.45	176	LR	LR	01 39 35.3	
	comp=Z,202nm,18.9s,baz=339,slow=34						
STKA	Stephens Creek	28.21	234	LR	LR	01 41 22.5	
	comp=Z,101nm,19.6s,baz=29,slow=36						
STKA	Stephens Creek	28.21	234	P	P	01 30 20.2	+0.7
WB0	Warramunga Arr	32.23	260	P	P	01 30 55.2	-0.1
WB0				IAmb	IAmb	01 32 03.6	
	comp=Z,6.3nm,1.2s						
WB2	Warramunga Arr	32.26	260	P	P	01 30 55.2	-0.4
WB2				IAmb	IAmb	01 31 51.0	
	comp=Z,18nm,1.8s						
WRA	Warramunga Arr	32.27	260	P	P	01 30 55.7	0.0
	comp=Z,1.6nm,1.0s,baz=89,slow=8.5,SNR=12						
WRA				LR	LR	01 43 07.5	
	comp=Z,62nm,19.2s,baz=50,slow=35						
WRA	Warramunga Arr	32.27	260	IAmb	IAmb	01 30 56.2	
	comp=Z,0.3nm,1.1s						
AS31	Alice Springs	32.80	253	P	P	01 31 00.1	-0.2
AS31				IAmb	IAmb	01 31 00.9	
	comp=Z,2.6nm,0.6s						
ASAR	Alice Springs	32.80	253	P	P	01 31 00.5	+0.2
	comp=Z,6.1nm,0.6s,baz=80,slow=8.8,SNR=95						

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ASAR                                LR      LR         01 43 51.9
      comp=Z,179nm,19.1s,baz=81,slow=36
PPT2  Papeete2           40.12  97  eLR     LR         01 43 26.8
      comp=Z,80nm,22.5s
PPT   Papeete            40.12  97  LR      LR         01 46 52.4
      comp=Z,50nm,19.2s,baz=354,slow=33
FITZ  Fitzroy Crossi     40.60 262  P       P          01 32 06.8  0.0
FITZ                                IAmb    IAmb       01 32 08.3
      comp=Z,6.9nm,0.9s
QSPA  South Pole Qui     72.75 180  P       P          01 35 55.5 +0.6
BILL  Bilibino           85.10 359  P       P          01 37 00.7 -1.4
SONM  Songino Array      85.14 323  P       P          01 37 05.0 +2.0
      comp=Z,1.0nm,0.9s,baz=134,slow=6.4,SNR=4.8
SONM  Songino Array      85.14 323  P       P          01 37 04.1 +1.1
ILAR  Eielson Array      88.64  18  P       P          01 37 20.9 +1.4
      comp=Z,0.3nm,0.7s,baz=208,slow=5.1,SNR=4.4
ABTA  Abfaltersbach     144.46 331  eP      PKPdf      01 44 03.1 -0.2
      comp=Z,1.1nm,0.5s
WTTA  Wattenberg        144.47 332  eP      PKPab      01 44 00.1 -1.6
      comp=Z,0.3nm,0.2s
MOTA  Moosalm           144.64 333  i P     PKPab      01 44 01.6 -0.7
      comp=Z,0.7nm,0.5s
RETA  Reutte            144.68 333  eP      PKPab      01 44 01.8 -0.6
      comp=Z,0.9nm,0.5s
FETA  Feichten          145.05 333  eP      PKPbc      01 44 03.4 -0.4
      comp=Z,1.6nm,0.6s
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*IASPEI **08** 01:40:10.9±0.9, 46°.48N±0°.02×13°.42E±0°.02, h9^{km}±4^{km}, Error ellipse: s-maj=2.8km s-min=2.2km az=179.9, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*LJU **08** 01:40:10.4, 46°.49N×13°.42E, h13^{km}, ML1.8*

*VIE **08** 01:40:10.3±0.1, 46°.46N×13°.40E, h12^{km}, mb1.7/9, ml2.6/11, Error ellipse: s-maj=1.5km s-min=1.0km az=21.0 8 km SE of Pontebba*

*ROM **08** 01:40:10.7±0.1, 46°.479N±0°.007×13°.39E±0°.01, h7^{km}, ML2.4/9, Error ellipse: s-maj=0.9km s-min=0.6km az=128.0*

*PRU **08** 01:40:11.6±0.0, 46°.51N×13°.42E, h2^{km}*

ISC 08 01:40:10.9±0.8**, 46°.49N**±0°.01×**13°.42E**±0°.01**, h10**^{km}±4^{km}**, n77, σ0^{s}.79**/137**, 15C-3D, Austria**

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Code  Station Name         Δ°   AZ°   Phase ID            Time     Res
                                      Op      ISC       h  m  s    ISC
LSR   Lussari             0.07 101⇑ ePg     Pg         01 40 13.2 -0.1
LSR                                 eSg     Sg         01 40 14.8 -0.2
ACOM  Acomizza, Ital      0.09  47⇑ ePg     Pg         01 40 13.5  0.0
ACOM                                eSg     Sg         01 40 15.5 +0.2
ACOM  Acomizza, Ital      0.09  47 ⇑P       Pg         01 40 13.5  0.0
ACOM                                S       Sg         01 40 15.5 +0.2
ACOM                                AML     AML
      comp=E,3145µm,0.3s
ACOM                                AML     AML
      comp=N,3065µm,0.4s
PTCC  Patocco-Chiusa      0.10 210  P       Pg         01 40 13.1 -0.4
PTCC                                S       Sg         01 40 14.6 -0.8
PRED  Cave del Predi      0.11 116⇑ ePg     Pg         01 40 13.6 -0.1
PRED                                eSg     Sg         01 40 15.6  0.0
PLRO  Paularo             0.20 287⇑ ePg     Pg         01 40 15.0 -0.1
PLRO                                eSg     Sg         01 40 18.5 +0.4
MYKA  Terra Mystica       0.20  47  i Pg    Pg         01 40 15.6 +0.4
      comp=N,13nm,0.1s,SNR=124
MYKA                                eSg     Sg         01 40 18.9 +0.8
      comp=N,58nm,0.1s
ROBS  Robic               0.25 166⇓ iPg     Pg         01 40 15.9 -0.1
ROBS                                i Sg    Sg         01 40 20.0 +0.5
ROBS                                IAML               01 40 20.3
      comp=Z,138nm,0.1s
VINO  Villanova           0.25 203⇑ ePg     Pg         01 40 16.1 +0.1
VINO                                eSg     Sg         01 40 19.8 +0.3
VINO  Villanova           0.25 203  P       Pg         01 40 16.1 +0.1
VINO                                S       Sg         01 40 20.0 +0.5
VINO                                AML     AML
      comp=N,668µm,0.3s
VINO                                AML     AML
      comp=E,954µm,0.5s
BOO   Bordano             0.28 233⇑ ePg     Pg         01 40 16.2 -0.3
BOO                                 eSg     Sg         01 40 20.6 +0.3
BAD   Bernadia            0.28 206⇓ ePg     Pg         01 40 16.5 -0.1
BAD                                 eSg     Sg         01 40 20.7 +0.3
GEPF  Gemona              0.29 223  P       Pg         01 40 16.5 -0.3
GEPF                                S       Sg         01 40 21.2 +0.6
GEPF                                AML     AML
      comp=E,498µm,0.3s
GEPF                                AML     AML
      comp=N,994µm,0.5s
FUSE  Fusea               0.30 256⇑ ePg     Pg         01 40 16.7 -0.2
FUSE                                eSg     Sg         01 40 21.3 +0.3
ZOU   Zoufplan            0.32 282⇑ ePg     Pg         01 40 17.2 -0.1
ZOU                                 eSg     Sg         01 40 22.2 +0.6
CADS  Cadrg               0.34 140  i Pg    Pg         01 40 17.5 -0.2
CADS                                i Sg    Sg         01 40 22.9 +0.7
CADS                                IAML               01 40 23.1
      comp=Z,114nm,0.1s
BUA   Buia                0.34 218⇓ ePg     Pg         01 40 17.6 -0.1
BUA                                 eSg     Sg         01 40 22.7 +0.5
DRE   Drenchia            0.35 154⇑ ePg     Pg         01 40 17.7 -0.2
COLI  Coloredo            0.36 185⇑ ePg     Pg         01 40 17.8 -0.2
COLI                                eSg     Sg         01 40 23.2 +0.5
CLUD  Cludinico           0.38 265⇑ ePg     Pg         01 40 17.9 -0.4
CLUD                                eSg     Sg         01 40 24.0 +0.7
MPRI  Monte Prat          0.39 231⇑ ePg     Pg         01 40 18.2 -0.4
MPRI                                eSg     Sg         01 40 24.4 +0.6
GORS  Gorjuse             0.43 113  i Pg    Pg         01 40 19.1 -0.3
GORS                                eSg     Sb         01 40 26.1 -1.2
GORS                                IAML               01 40 27.6
      comp=Z,54nm,0.2s
FVI   Forni Avoltri       0.46 284  P       Pg         01 40 19.6 -0.3
FVI                                 S       Sg         01 40 26.4 +0.6
FVI                                 AML     AML
      comp=N,572µm,0.2s
FVI                                 AML     AML
      comp=E,884µm,0.5s
SABO  M.te Sabotino       0.53 166⇑ ePg     Pg         01 40 21.1  0.0
SABO                                eSg     Sb         01 40 29.0 -0.8
SABO  M.te Sabotino       0.53 166  P       Pg         01 40 20.9 -0.1
SABO                                S       Sb         01 40 29.8 -0.1
SABO                                AML     AML
      comp=N,507µm,0.5s
SABO                                AML     AML
      comp=E,642µm,0.4s
CSMI  Casera Mimoias      0.53 273⇑ ePg     Pg         01 40 21.2 -0.1
CSMI                                eSg     Sg         01 40 28.9 +0.6
STAL  STALIGIAL           0.55 245  P       Pg         01 40 20.7 -0.8
STAL                                S       Sb         01 40 29.4 -1.0
STAL                                AML     AML
      comp=E,287µm,1.0s
STAL                                AML     AML
      comp=N,478µm,0.9s
STAL                                AML     AML
      comp=E,334µm,0.9s
STAL                                AML     AML
      comp=N,296µm,0.3s
VOJS  Vojsko              0.56 145  i Pg    Pg         01 40 21.4 -0.4
VOJS                                i Sg    Sb         01 40 30.3 -0.6
VOJS                                IAML               01 40 30.8
      comp=Z,24nm,0.2s
KBA   Koelnbreinsper      0.59 355  ePg     Pg         01 40 22.6 +0.2
      comp=Z,1.1nm,0.1s
KBA                                 eSg     Sg         01 40 30.6 +0.4
      comp=Z,7.8nm,0.1s,SNR=8.2
ABTA  Abfaltersbach       0.68 293  ePg     Pg         01 40 23.6 -0.4
      comp=Z,1.1nm,0.1s,SNR=26
ABTA                                eSg     Sg         01 40 33.1 +0.1
      comp=Z,66nm,0.2s
CIMO  Cimolais            0.70 256  ePg     Pg         01 40 24.0 -0.5
CRNS  Crni Vrh            0.71 125  ePg     Pg         01 40 24.3 -0.3
CRNS                                eSg     Sb         01 40 35.4 +0.2
CRNS                                IAML               01 40 37.5
      comp=Z,27nm,0.2s
MOZS  Mozjanca            0.73 105  i Pg    Pg         01 40 25.1 +0.1
MOZS                                eSg     Sn         01 40 36.8 -1.8
MOZS                                IAML               01 40 39.6
      comp=Z,13nm,0.2s
JAVS  Javornik            0.74 143  i Pg    Pg         01 40 24.5 -0.8
JAVS                                i Sg    Sb         01 40 36.3  0.0
JAVS                                IAML               01 40 36.5
      comp=Z,21nm,0.3s
OBKA  Obir                0.78  88  ePg     Pg         01 40 25.8 -0.1
      comp=Z,3.6nm,0.1s,SNR=20
OBKA                                eSg     Sb         01 40 36.6 -0.6
      comp=Z,28nm,0.2s
POLC  Polcenigo           0.79 234  P       Pb         01 40 26.1 -0.6
POLC                                S       Sn         01 40 38.5 -1.5
TRI   Trieste             0.82 163  ePg     Pg         01 40 26.2 -0.4
TRI   Trieste             0.82 163  P       Pg         01 40 25.2 -1.4
TRI                                 S       Sb         01 40 38.6 +0.4
LJU   Ljubljana           0.89 120  ePg     Pb         01 40 28.0 -0.3
LJU                                 IAML               01 40 45.2
      comp=Z,10nm,0.1s
LJU   Ljubljana           0.89 120  P       Pg         01 40 27.9 -0.1
LJU                                 AML     AML
      comp=E,249µm,1.4s
LJU                                 AML     AML
      comp=N,314µm,0.9s
GBAS  Gorenja Brezov      0.90 128  ePg     Pg         01 40 27.5 -0.7
GBAS                                eSg     Sb         01 40 40.9 +0.2
GBAS                                IAML               01 40 44.2
      comp=Z,18nm,0.3s
VNDS  Vrh nad Dolski      0.97 113  ePg     Pb         01 40 29.4 -0.3
VNDS                                eSg     Sn         01 40 43.5 -0.9
VNDS                                IAML               01 40 47.2
      comp=Z,26nm,0.4s
CEY   Cerknica            1.02 137  ePg     Pb         01 40 29.8 -0.9
CEY                                 eSg     Sn         01 40 45.5 -0.3
CEY                                 IAML               01 40 48.3
      comp=Z,11nm,0.2s
SKDS  Skadanscina         1.03 156  i Pg    Pb         01 40 29.5 -1.4
SKDS                                i Sg    Sn         01 40 45.4 -0.6
SKDS                                IAML               01 40 52.2
      comp=Z,8.1nm,0.1s
RISI  Rein                1.03 297  P       Pg         01 40 30.1 -0.6
RISI                                S       Sg         01 40 43.8 -0.4
RISI                                AML     AML
      comp=N,360µm,1.5s
RISI                                AML     AML
      comp=E,325µm,0.3s
SOKA  Soboth              1.12  80  ePg     Pb         01 40 32.0 -0.5
      comp=E,3.6nm,0.2s,SNR=21
SOKA                                Sg      Sb         01 40 46.9 -0.4
      comp=E,5.8nm,0.3s
PDKS  Podkum              1.17 111  ePg     Pn         01 40 33.0 -0.4
PDKS                                eSg     Sn         01 40 50.2 +0.8
PDKS                                IAML               01 40 53.8
      comp=Z,10nm,0.2s
PERS  Pernice             1.18  82  ePg     Pb         01 40 32.8 -0.5
PERS                                eSg     Sn         01 40 49.1 -0.5
PERS                                IAML               01 40 55.2
      comp=Z,11nm,0.2s
VISS  Visnje              1.20 124  ePg     Pb         01 40 33.5 -0.2
VISS                                eSg     Sn         01 40 51.1 +1.0
VISS                                IAML               01 40 54.0
      comp=Z,9.0nm,0.2s
RIY   Rijeka              1.38 147  i Pn    Pg         01 40 38.0 +0.6
RIY                                 Sn      Sg         01 40 58.6 +3.3
WTTA  Wattenberg          1.45 303  ePg     Pb         01 40 38.0 -0.1
      comp=Z,3.3nm,0.2s,SNR=15
WTTA                                eSn     Sg         01 40 57.3 -0.3
      comp=Z,14nm,0.3s,SNR=5.1
WTTA  Wattenberg          1.45 303  P       Pb         01 40 37.9 -0.2
ABSI  Aberstueckl         1.47 280  P       Pb         01 40 38.0 -0.4
ABSI                                AML     AML
      comp=N,188µm,1.6s
ABSI                                AML     AML
      comp=E,193µm,0.4s
MOA   Molln               1.48  23  ePg     Pg         01 40 39.9 +0.7
      comp=E,1.0nm,0.1s
MOA                                 eSg     Sg         01 41 00.8 +2.5
      comp=E,12nm,0.3s,SNR=6.4
WATA  Walderalm           1.52 304  ePg     Pb         01 40 39.3 -0.1
      comp=E,1.7nm,0.2s,SNR=9.1
WATA                                Sg      Sg         01 40 59.4 -0.5
      comp=E,11nm,0.2s,SNR=4.8
BOJS  Bojanci             1.61 127  P       Pb         01 40 40.5 -0.2
ARSA  Arzberg             1.63  61  ePn     Pb         01 40 41.0  0.0
      comp=E,0.5nm,0.2s
ARSA                                Sn      Sn         01 41 00.5 -0.2
      comp=E,0.7nm,0.2s
OZLJ  Ozalj               1.67 121  ePn     Pb         01 40 41.4 -0.3
OZLJ                                Sn      Sg         01 41 04.7 +0.1
SQTA  Sankt Quirin        1.69 296  ePg     Pb         01 40 41.9 -0.2
      comp=E,2.6nm,0.2s,SNR=11
SQTA                                Sn      Sb         01 41 03.4  0.0
      comp=E,5.2nm,0.3s
MOTA  Moosalm             1.81 299  ePg     Pg         01 40 45.2 -0.3
      comp=E,0.9nm,0.1s
MOTA                                Sg      Sg         01 41 09.7 +0.8
      comp=E,4.9nm,0.2s
PTJ   Puntijarka          1.86 107  ePn     Pg         01 40 46.0 -0.6
FETA  Feichten            1.93 287  Pg      Pb         01 40 45.9 -0.3
      comp=E,1.2nm,0.3s
FETA                                Sg      Sg         01 41 11.8 -1.0
      comp=E,2.2nm,0.4s
MOSI  Grossmontoni        1.99 275  P       Pg         01 40 47.8 -1.2
MOSI                                AML     AML
      comp=N,132µm,0.7s
MOSI                                AML     AML
      comp=E,125µm,0.9s
MAGA  Magasa              2.07 251  P       Pb         01 40 49.2 +0.6
RETA  Reutte              2.08 300  Pg      Pb         01 40 48.8 +0.1
      comp=E,0.5nm,0.1s
RETA                                Sg      Sg         01 41 18.4 +0.8
      comp=E,5.8nm,0.5s
NVLJ  Novalja             2.18 152  ePn     Pg         01 40 51.8 -0.9
NVLJ                                Sn      Sb         01 41 17.8 +0.4
CONA  Conrad Observa      2.20  48  ePn     Pb         01 40 48.9 -1.9
      comp=E,0.2nm,0.2s
CONA                                Sn      Sb         01 41 17.7 -0.4
      comp=E,4.3nm,0.6s
CKRC  Cesky Krumlov       2.41  14  eSG     Sg         01 41 27.8 -0.4
DAVA  Damuels             2.56 289  Sg      Sg         01 41 33.8 +0.8
      comp=E,8.1nm,0.5s
UDBI  Udbina              2.56 139  ePn     Pb         01 40 55.3 -1.7
UDBI                                Sn      Sb         01 41 27.9 -0.6
KHC   Kasperske Hory      2.65   2  ePN     Pn         01 40 54.9 +1.3
KHC                                 eSN     Sn         01 41 27.4 +1.6
KHC                                 eSG     Sg         01 41 35.5 -0.3
DUGI  Dugi Otok           2.75 155  ePn     Pn         01 40 57.1 +2.0
ZIRJ  Zirje               3.24 150  ePn     Pn         01 41 04.1 +2.3
PRU   Pruhonice           3.58  12  eSG     Sg         01 42 05.3 -0.5
DPC   Dobruska-Polom      4.32  25  eSN     Sn         01 42 07.1  0.0
DPC                                 eSG     Sg         01 42 27.6 -1.9
UPC   Upice               4.37  22  eSG     Sg         01 42 29.6 -1.6
OSTC  Ostas               4.47  23  eSG     Sg         01 42 32.8 -1.6
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*PRE **08** 02:00:00.7±1.2, 26°.98S×26°.79E, h2^{km}, ML3.3*

*IDC **08** 02:00:02.4±3.0, 26°.91S×26°.81E, h0^{km}, mb3.6/2, mb1 3.7/3, mb1mx3.4/36, mbtmp3.6/3, ML3.5/1, Error ellipse: s-maj=76.0km s-min=20.0km az=111.0*

ISC 08 02:00:02.0±1.2**, 26°.98S**±0°.04×**26°.84E**±0°.05**, h16**^{km}±9^{km}**, n19, σ1^{s}.96**/37**, South Africa**

```
Code  Station Name         Δ°   AZ°   Phase ID            Time     Res
                                      Op      ISC       h  m  s    ISC
PRYS  Parys               0.47  83  eP      Pg         02 00 10.6 -0.9
PRYS                                eS      Sg         02 00 18.1 +0.3
PRYS                                AML     AML        02 00 24.1
      comp=Z,814nm,0.5s
WDLM  Western Deep L      0.76  43  eP      Pb         02 00 16.4 -0.5
WDLM                                eS      Sg         02 00 26.4 -0.6
WDLM                                AML     AML        02 00 34.8
      comp=Z,1µm,0.2s
KSR   Koster              1.12   3  eP      Pb         02 00 23.0 -0.2
KSR                                 eS      Sb         02 00 37.3 -0.3
KSR                                 AML     AML        02 00 41.7
      comp=N,5µm,0.9s
BOSA  Boshof              2.15 220  Pn      Pb         02 00 40.0 -0.6
      comp=N,9.7nm,0.3s,baz=40,slow=12,SNR=255
BOSA                                Pg      Pg         02 00 42.9 -0.4
      comp=N,10.0nm,0.3s,baz=40,slow=18,SNR=87
BOSA                                Sn      Sb         02 01 07.6 +0.4
      comp=N,27nm,0.3s,baz=311,slow=18,SNR=21
BOSA  Boshof              2.15 220  eP      Pn         02 00 38.5 +1.2
BOSA                                eS      Sn         02 01 05.5 +1.8
BOSA                                AML     AML        02 01 20.8
      comp=Z,158nm,0.6s
LBTB  Lobatse             2.25 330  eP      Pn         02 00 39.7 +0.9
LBTB                                eS      Sn         02 01 07.6 +1.3
LBTB                                AML     AML        02 01 11.3
      comp=N,605nm,0.5s
UPI   Upington            5.14 253  eP      Pn         02 01 18.1 -0.3
UPI                                 eS      Sn         02 02 16.6 -0.9
UPI                                 AML     AML        02 02 47.6
      comp=Z,37nm,0.5s
MOPA  Mopani              5.38  51  eP      Pn         02 01 22.4 +0.8
MOPA                                eS      Sn         02 02 22.9 -0.3
MOPA                                AML     AML        02 02 53.6
      comp=Z,43nm,0.5s
MSNA  Messina             5.45  33  eP      Pn         02 01 22.7 +0.1
MSNA                                eS      Sn         02 02 22.8 -2.1
MSNA                                AML     AML        02 02 54.6
      comp=Z,30nm,0.4s
KEIM  Keimoes             5.48 250  eP      Pn         02 01 23.5 +0.5
KEIM                                eS      Sn         02 02 23.4 -2.3
KEIM                                AML     AML        02 02 54.9
      comp=Z,50nm,0.9s
SOE   Somerset East       5.82 191  eP      Pn         02 01 28.9 +1.2
SOE                                 eS      Sn         02 02 33.6 -0.5
SOE                                 AML     AML        02 03 16.8
      comp=Z,27nm,0.6s
GRAN  Grantham            6.68 216  eP      Pn         02 01 40.5 +0.9
GRAN                                eS      Sn         02 02 52.8 -2.6
GRAN                                AML     AML        02 03 04.9
      comp=Z,12nm,0.4s
ROSN  Rosenhof            7.37 195  eP      Pn         02 01 50.6 +1.7
ROSN                                eS      Sn         02 03 09.5 -2.8
ROSN                                AML     AML        02 03 15.8
      comp=Z,43nm,0.6s
KROM  Kromhout            7.39 194  eP      Pn         02 01 50.6 +1.4
KROM                                eS      Sn         02 03 10.0 -2.7
KROM                                AML     AML        02 03 15.6
      comp=Z,50nm,0.5s
CVNA  Calvinia            7.64 232  eP      Pn         02 01 53.5 +0.8
CVNA                                eS      Sn         02 03 15.5 -3.5
CVNA                                AML     AML        02 04 04.8
      comp=Z,49nm,0.5s
AUSN  Aus                 9.46 269  eP      Pn         02 02 19.5 +1.7
AUSN                                eS      Sn         02 03 59.2 -4.7
AUSN                                AML     AML        02 03 59.8
      comp=Z,7.4nm,0.3s
ELIM  Elim                9.74 217  eP      Pn         02 02 23.4 +2.0
ELIM                                eS      Sn         02 04 05.7 -4.8
ELIM                                AML     AML        02 05 21.8
      comp=Z,17nm,0.6s
TORD  Torodi Ar. Bea     46.77 325  P       P          02 08 32.9 +2.0
      comp=Z,0.4nm,0.3s,baz=151,slow=6.8,SNR=4.8
ESDC  Sonseca Array      72.27 335  P       P          02 11 29.1 +2.7
      comp=Z,0.2nm,0.5s,baz=162,slow=8.2,SNR=5.2
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*IDC **08** 02:03:38.3±1.0, 37°.81N×143°.94E, h0^{km}, mb3.4/5, mb1 3.7/7, mb1mx3.5/43, mbtmp3.5/7, ML3.6/2, Error ellipse: s-maj=29.4km s-min=20.7km az=112.0*

*JMA **08** 02:03:42.3±0.2, 37°.95N×143°.73E, h46^{km}, M4.1*

*NIED **08** 02:03:42.4, 37°.95N×143°.73E, h46^{km}, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-3.17; $M_{\theta\theta}$1.39; $M_{\phi\phi}$1.78; $M_{r\theta}$0.69; $M_{\theta\phi}$1.18; $M_{\phi r}$-0.21; Fault plane solution: $M_0$3.05000×10^{14} NP1: ϕ_s231.00000°, δ49.00000°, λ-76.00000°. NP2: ϕ_s31.00000°, δ43.00000°, λ-105.00000°.*

ISC 08 02:03:41.6±3.2**, 37°.95N**±0°.04×**143°.82E**±0°.06**, h27**^{km}±25^{km}**, n24, σ1^{s}.53**/31**, mb3.5**/5**, Off east coast of Honshu**

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Code  Station Name         Δ°   AZ°   Phase ID            Time     Res
                                      Op      ISC       h  m  s    ISC
JIKH  Ishinomakikobu      1.89 282  P       Pn         02 04 12.0 -0.1
JIKH                                eS      Sn         02 04 33.3 -1.8
JIO   Ouri                2.01 285  P       Pn         02 04 13.9 +0.1
JIO                                 eS      Sn         02 04 37.0 -1.0
OFUJ  Ofunato             2.03 304  P       Pn         02 04 14.2 +0.1
OFUJ                                eS      Sn         02 04 37.8 -0.7
JKMT  Kesennumamotoy      2.03 296  P       Pn         02 04 14.2 +0.1
JKMT                                S       Sn         02 04 37.9 -0.7
JMK   Ichinoseki          2.27 297  P       Pn         02 04 17.9 +0.5
JMK                                 S       Sn         02 04 43.8 -0.7
JOM   Ohasama             2.49 308  P       Pn         02 04 21.1 +0.7
JOM                                 S       Sn         02 04 50.1 +0.1
JFT   Otama               2.79 262  P       Pn         02 04 25.2 +0.6
JFT                                 S       Sn         02 04 56.5 -1.0
JYK   Kaneyama            2.88 291  P       Pn         02 04 26.7 +0.9
JYK                                 eS      Sn         02 05 00.3 +0.7
JANG  Nango               3.01 324  P       Pn         02 04 27.7 +0.1
JANG                                eS      Sn         02 05 02.5 -0.2
JAG   Ashikaga            3.81 248  P       Pn         02 04 38.3 -0.2
JOT   Ohata               4.04 329  P       Pn         02 04 43.1 +1.4
JRY   Ryogami san         4.38 245  P       Pn         02 04 46.2 -0.3
JRY                                 eS      Sn         02 05 32.4 -4.3
JKB   Kayabe              4.48 332  eS      Sn         02 05 36.7 -2.2
JOD2  Odawara 2           4.66 236  S       Sn         02 05 39.1 -4.3
JCH   Churui              4.67 356  P       Pn         02 04 50.5 +0.1
JCH                                 eS      Sn         02 05 41.2 -2.5
MJAR  Matsushiro Arr      4.69 254  Pn      Pn         02 04 52.0 +1.3
      0.3nm,0.3s,baz=90,slow=16,SNR=19
MJAR                                Sn      Sn         02 05 45.5 +1.2
      0.3nm,0.3s,baz=356,slow=14,SNR=5.6
MAT   Matsushiro          4.69 254  P       Pn         02 04 52.3 +1.6
MAT                                 S       Sn         02 05 44.5 +0.2
JHJ   Hachijo jima 2      5.84 216  Sn      Sn         02 06 04.7 -7.7
      14nm,0.3s,baz=81,slow=19,SNR=3.7
ASAJ  Asahikawa           6.23 352  Pn      Pn         02 05 12.8 +1.0
      3.3nm,0.3s,baz=200,slow=8.5,SNR=21
ASAJ                                Sn      Sn         02 06 19.2 -2.8
      0.6nm,0.3s,baz=296,slow=18,SNR=2.6
MKAR  Makanchi Array     45.26 302  P       P          02 11 58.5 +1.8
      0.2nm,0.8s,baz=78,slow=10,SNR=2.9
ILAR  Eielson Array      47.69  33  P       P          02 12 17.1 +1.6
      0.5nm,0.8s,baz=269,slow=6.6,SNR=4.4
WRA   Warramunga Arr     58.27 190  P       P          02 13 33.6 -0.3
      1.9nm,0.8s,baz=12,slow=7.2,SNR=10
ASAR  Alice Springs      61.99 190  P       P          02 13 59.4  0.0
      0.4nm,0.9s,baz=11,slow=6.7,SNR=5.6
YKA   Yellowknife Ar     62.05  31  P       P          02 14 00.5 +1.2
      0.1nm,0.5s,baz=308,slow=6.5,SNR=2.3
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*WEL **08** 02:33:17.8±1.0, 38°S±8°×18°0E±°, h33^{km}, M3.6/24, ML3.8/24, MLv3.6/24, Error ellipse: s-maj=0.0km s-min=0.0km az=28.5*

*IDC **08** 02:33:18.6±2.9, 36°.87S×179°.00E, h0^{km}, mb3.9/3, mb1 4.2/4, mb1mx3.9/33, mbtmp4.0/4, ML3.8/1, Error ellipse: s-maj=68.6km s-min=31.2km az=127.0*

ISC 08 02:33:14.1±3.6**, 37°.64S**±0°.08×**179°.96E**±0°.08**, h10**^{km}±22^{km}**, n73, σ1^{s}.22**/80**, mb3.8**/3**, Off east coast of North Island**

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Code  Station Name         Δ°   AZ°   Phase ID            Time     Res
                                      Op      ISC       h  m  s    ISC
WMGZ  Waiomatatini S      1.24 261  P       Pb         02 33 38.1 +0.5
MXZ   Matakaoa Point      1.32 273  P       Pn         02 33 38.2 -0.3
MXZ                                 S       Sb         02 33 54.0 -1.8
PUZ   Puketiti            1.42 252  P       Pb         02 33 41.0 +0.4
PUZ                                 S       Sn         02 33 58.6  0.0
PKGZ  Pakihiroa           1.51 260  P       Pn         02 33 41.5 +0.3
CNGZ  Carnagh Statio      1.62 238  P       Pn         02 33 43.4 +0.7
HAZ   Te Kaha             1.73 266  P       Pn         02 33 44.8 +0.6
RUGZ  Raukumara Rang      1.84 259  P       Pn         02 33 46.4 +0.6
TKGZ  Te Karaka           1.85 244  P       Pn         02 33 47.1 +1.3
TKGZ                                S       Sn         02 34 09.2  0.0
RIGZ  Rimuhau             2.03 238  P       Pn         02 33 49.8 +1.4
RIGZ                                S       Sn         02 34 14.4 +0.6
MWZ   Matawai             2.04 250  P       Pn         02 33 49.3 +0.8
MWZ                                 S       Sn         02 34 13.5 -0.6
PRGZ  Paritu Road         2.08 231  P       Pb         02 33 50.8 -1.1
MHGZ  Mahia Peninsul      2.21 226  P       Pn         02 33 52.5 +1.8
KNZ   Kokohu              2.27 232  P       Pn         02 33 53.0 +1.5
URZ   Urewera             2.34 254  Pn      Pn         02 33 53.8 +1.3
      36nm,0.3s,baz=247,slow=2.4,SNR=92
URZ                                 Sn      Sn         02 34 20.8 -0.5
      22nm,0.3s,baz=334,slow=22,SNR=14
URZ   Urewera             2.34 254  P       Pn         02 33 53.8 +1.3
WHRZ  Whale Island        2.38 264  P       Pn         02 33 54.2 +1.1
RTZ   Ruatahuna           2.54 247  P       Pn         02 33 56.9 +1.4
WHHZ  Waihua              2.58 235  P       Pn         02 33 57.7 +1.9
EDRZ  Edgecumbe           2.59 259  P       Pn         02 33 57.1 +1.0
RAHZ  Arahi               2.60 240  P       Pn         02 33 57.6 +1.4
MUGZ  Murupara            2.65 251  P       Pn         02 33 57.9 +1.1
OPRZ  Ohinepanea          2.71 265  P       Pn         02 33 57.8 +0.2
MTHZ  Maungataniwha       2.74 243  P       Pn         02 33 59.3 +1.2
TARZ  Mount Tarawera      2.80 257  P       Pn         02 34 00.0 +1.1
ARHZ  Aropaoanui          2.83 234  P       Pn         02 34 01.1 +1.8
NMHZ  Naumai              2.87 239  P       Pn         02 34 01.4 +1.4
KARZ  Kaharoa             2.97 262  P       Pn         02 34 01.7 +0.4
MRHZ  Matea Rd            3.03 246  P       Pn         02 34 03.1 +1.0
```

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BKZ	Black Stump Fm	3.12	240	P	Pn	02 34 04.5	+1.1
MCHZ	McNeill Hill	3.13	234	P	Pn	02 34 05.0	+1.6
KAHZ	Kahuranaki	3.23	227	P	Pn	02 34 05.8	+0.9
KWHZ	Kaweka Forest	3.30	236	P	Pn	02 34 06.8	+1.0
PXZ	Pawanui	3.40	224	P	Pn	02 34 07.5	+0.4
KRHZ	Kereru	3.45	234	P	Pn	02 34 08.8	+1.0
RITZ	Rihia Road	3.49	246	P	Pn	02 34 09.7	+1.3
KUZ	Kuaotunu	3.50	284	P	Pn	02 34 07.9	-0.6
TOZ	Tahuroa Road	3.54	267	P	Pn	02 34 09.1	+0.1
BHHZ	Black Hill Sta	3.57	238	P	Pn	02 34 10.4	+0.8
KATZ	Kakaramea	3.61	247	P	Pn	02 34 11.3	+1.2
TMVZ	Te Maari	3.66	245	P	Pn	02 34 11.4	+0.6
ETVZ	East Tongariro	3.66	245	P	Pn	02 34 11.5	+0.7
WPHZ	Waipukurau	3.66	228	P	Pn	02 34 11.1	+0.3
PRHZ	Porangahau	3.69	224	P	Pn	02 34 11.0	-0.1
KRVZ	Karewarewa	3.69	246	P	Pn	02 34 12.0	+0.8
OTVZ	Oturere	3.70	244	P	Pn	02 34 11.9	+0.5
PNHZ	Pukenui	3.71	231	P	Pn	02 34 11.8	+0.3
MOVZ	Moawhango	3.74	241	P	Pn	02 34 13.6	+1.7
NGZ	Ngauruhoe	3.75	245	P	Pn	02 34 12.7	+0.6
WNVZ	Wahianoa	3.81	243	P	Pn	02 34 13.4	+0.4
FWVZ	Far West T-bar	3.82	244	P	Pn	02 34 14.0	+0.9
MKAZ	Moumakai	3.86	277	P	Pn	02 34 13.3	-0.2
GRZ	Great Barrier	3.87	290	P	Pn	02 34 13.1	-0.5
DVHZ	Dannevirke	3.97	227	P	Pn	02 34 14.9	-0.1
ETAZ	East Tamaki Re	4.07	278	P	Pn	02 34 16.7	+0.3
HIZ	Hauiti	4.12	256	P	Pn	02 34 18.5	+1.4
BFZ	Birch Farm	4.19	222	P	Pn	02 34 17.1	-0.9
PRWZ	Pori Road	4.25	226	P	Pn	02 34 19.4	+0.5
POWZ	Post Office Ro	4.27	229	P	Pn	02 34 19.8	+0.8
WAZ	Wanganui	4.43	240	P	Pn	02 34 23.6	+2.3
MRZ	Mangatainoka R	4.55	227	P	Pn	02 34 22.4	-0.6
HOWZ	Holdsworth Sta	4.74	225	P	Pn	02 34 25.0	-0.6
WCZ	Waipu Caves	4.82	289	P	Pn	02 34 27.0	+0.3
PREZ	Palmer Road	4.86	248	P	Pn	02 34 30.1	+2.9
OGWZ	Otaki Gorge	4.89	228	P	Pn	02 34 26.9	-0.6
KHEZ	Kahui Hut	4.95	249	P	Pn	02 34 30.9	+2.4
CAW	Cannon Point	5.13	226	P	Pn	02 34 30.2	-0.8
OUZ	Omahuta	5.67	293	P	Pn	02 34 39.1	+0.7
QRZ	Quartz Range	6.59	239	P	Pn	02 34 49.9	-1.0
CTZ	Chatham Island	6.62	158	P	Pn	02 34 55.2	+3.9
CTZ				S	Sn	02 36 04.6	-2.1
ASAR	Alice Springs	41.60	276	P	P	02 41 01.8	-0.5
	1.5nm,0.7s,baz=121,slow=8.0,SNR=25						
WRA	Warramunga Arr	43.24	281	P	P	02 41 14.6	-1.1
	0.8nm,0.4s,baz=120,slow=7.9,SNR=18						
FITZ	Fitzroy Crossi	51.09	277	P	P	02 42 16.4	-0.5
	2.0nm,0.9s,baz=111,slow=8.6,SNR=6.2						
FINES	FINESS Array B	151.15	334	PKPbc	PKiKP	02 53 09.8	+2.7
	13nm,1.2s,baz=87,slow=5.7,SNR=3.2						

VAO ***08*** *02:37:27.2±1.1, 9°.84S×76°.16W, h10km, mb4.5*

IDC ***08*** *02:37:49.1±1.6, 9°.12S×75°.19W, h147km±27km, mb3.6/2, mb1 3.4/7, mb1mx3.2/31, mbtmp3.9/7, MS2.3/1, Ms1 2.3/1, ms1mx2.0/26, Error ellipse: s-maj=39.8km s-min=16.4km az=49.0*

ISC 08 02:37:48.4±0.7, **9°.23S**±0°.07×**75°.15W**±0°.08, **h150**km, **n20**, σ**2s.33**/22, **Central Peru**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NNA	Nana	3.20	211	P	Pn	02 38 39.2	+0.7
	3.7nm,0.3s,baz=63,slow=3.0,SNR=8.4						
NNA				S	Sn	02 39 16.3	-0.9
	61nm,0.3s,baz=162,slow=20,SNR=32						
ATAH	Atahualpa	3.83	303	P	Pn	02 38 47.6	+0.7
	7.7nm,0.3s,baz=77,slow=2.8,SNR=108						
ATAH				S	Sn	02 39 30.7	-1.5
	15nm,0.3s,baz=310,slow=10,SNR=7.6						
ATAH				LR	LR	02 39 58.8	
	comp=Z,47nm,20.9s,baz=44,slow=35						
ETMB	Extrema	8.83	94	*e*P	Pn	02 39 49.7	-3.3
LPAZ	La Paz	9.80	136	P	Pn	02 40 09.6	+3.2
	0.1nm,0.3s,baz=315,slow=7.1,SNR=2.5						
SAML	Samuel	11.82	90	*e*P	Pn	02 40 28.2	-4.2
VILB	Vilhena	15.13	105	*e*P	Pn	02 41 12.1	-2.5
SIV	San Ignacio	15.29	117	P	P	02 41 17.9	-0.1
	0.7nm,0.3s,baz=307,slow=12,SNR=17						
MACA	Manacapuru-AM	15.59	68	*e*P	Pn	02 41 21.4	+1.1
PTGA	Pitinga	17.31	62	P	P	02 41 40.9	+0.6
	1.3nm,0.3s,baz=249,slow=16,SNR=14						
SDV	Santo Domingo	18.55	14	*e*P	P	02 41 53.0	-1.1
NPGB	Novo Progresso	19.71	85	*e*P	P	02 42 08.4	+1.9
ITTB	Itaituba	19.87	77	*e*P	P	02 42 09.8	+1.6
MALB	Monte Alegre	22.03	72	*e*P	P	02 42 34.7	+3.6
SNDB	Serra Nova Dou	23.60	99	*e*P	P	02 42 47.5	+1.6
MCPB	Macapa, AP	24.62	70	*e*P	P	02 42 58.7	+3.5
TRCB	Terra Rica	25.45	125	*e*P	P	02 43 00.1	-2.6
PTGB	Pitanga	26.85	128	*e*P	P	02 43 12.4	-2.9
DBIC	Dimbokro	71.80	80	P	P	02 48 56.7	+1.4
	1.6nm,0.6s,baz=243,slow=9.0,SNR=3.4						
TORD	Torodi Ar. Bea	79.46	75	P	P	02 49 39.6	+0.7
	0.6nm,0.6s,baz=245,slow=4.5,SNR=3.0						
WRA	Warramunga Arr	138.97	225	PKP	PKiKP	02 57 01.1	+0.8
	0.3nm,0.5s,baz=132,slow=2.0,SNR=3.8						

IDC ***08*** *02:53:40.8±4.0, 37°.78N×138°.62E, h247km±53km, mb2.8/2, mb1 2.8/2, mb1mx2.6/39, mbtmp3.4/2, Error ellipse: s-maj=116.1km s-min=106.8km az=52.0*

JMA ***08*** *02:53:40.8±0.2, 38°.04N×138°.47E, h227km±2km, M2.9*

ISC 08 02:53:40.7±1.1, **38°.02N**±0°.07×**138°.49E**±0°.08, **h228**km±10km, **n21**, σ**0s.51**/29, **Near west coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JSD	Sado	0.18	276	P	Pn	02 54 10.1	-0.1
JIZZ	Izumozaki	0.52	160	P	Pn	02 54 11.9	+0.8
JNS	Sasagawa	0.69	107	P	Pn	02 54 11.9	+0.2
JSZ	Suzu	1.06	238	P	Pn	02 54 13.6	-0.1
MAT	Matsushiro	1.49	189	P	Pn	02 54 16.7	-0.2
MAT				S	S	02 54 44.9	-0.2
MAT	Matsushiro	1.49	189	P	Pn	02 54 17.0	+0.1
MAT				*e*S	S	02 54 45.3	+0.2
MJAR	Matsushiro Arr	1.49	189	P	Pn	02 54 17.4	+0.5
	0.5nm,0.3s,baz=12,slow=7.0,SNR=43						
JFT	Otama	1.55	108	P	Pn	02 54 18.0	+0.7
JNG	Nsakai	1.64	191	P	Pn	02 54 18.3	+0.1
JYK	Kaneyama	1.72	58	P	Pn	02 54 19.1	+0.4
JYK				*e*S	S	02 54 48.1	-0.3
JAG	Ashikaga	1.77	154	P	Pn	02 54 19.5	+0.3
JMM	Marumori	1.83	94	P	Pn	02 54 20.1	+0.4
JMM				*e*S	S	02 54 50.0	-0.1
JFK	Kawauchi	2.00	108	P	Pn	02 54 21.5	+0.1
JFK				*e*S	S	02 54 52.1	-1.0
JRY	Ryogami san	2.02	170	P	Pn	02 54 21.7	+0.1
JRY				*e*S	S	02 54 53.9	+0.3
JRG	Rokugo	2.17	50	P	Pn	02 54 23.4	+0.5
JMK	Ichinoseki	2.34	66	P	Pn	02 54 24.9	+0.3
JYN	Shimob	2.52	179	P	Pn	02 54 26.3	-0.4
JYN				*e*S	S	02 55 02.3	-0.3
JOM	Ohasama	2.63	56	P	Pn	02 54 28.0	+0.3
JOM				*e*S	S	02 55 03.1	-1.4
JIW	Iwasaki	2.83	24	P	Pn	02 54 30.2	+0.4
SONM	Songino Array	25.30	303	P	P	02 58 47.0	+0.6
	0.5nm,0.5s,baz=114,slow=9.6,SNR=5.1						
MKAR	Makanchi Array	41.62	301	P	P	03 01 06.1	-0.3
	0.3nm,0.7s,baz=93,slow=7.6,SNR=3.6						

IDC ***08*** *03:10:30.7±1.1, 28°.43N×105°.29E, h0km, mb3.6/4, mb1 3.8/6, mb1mx3.4/51, mbtmp3.5/6, ML4.0/2, MS3.1/1, Ms1 3.1/1, ms1mx2.5/44, Error ellipse: s-maj=45.6km s-min=20.6km az=72.0*

ISC 08 03:10:35.7±1.0, **28°.5N**±0°.1×**105°.2E**±0°.2, **h35**km, **n7**, σ**0s.74**/6, **mb3.6**/4, **Sichuan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	11.51	211	Pn	Pn	03 13 17.7	+0.1
	1.1nm,0.3s,baz=26,slow=10,SNR=4.6						
SONM	Songino Array	19.37	2	P	Pn	03 14 59.1	-0.6
	0.1nm,0.3s,baz=188,slow=12,SNR=4.7						
JNU	Nakatsue	22.48	72	LR	LR	03 25 30.5	
	comp=Z,46nm,19.3s,baz=354,slow=40						
MKAR	Makanchi Array	25.65	322	P	P	03 16 01.8	-0.3
	0.8nm,0.8s,baz=126,slow=11,SNR=8.5						
WRA	Warramunga Arr	55.73	146	P	P	03 20 08.5	-0.5
	0.5nm,0.5s,baz=337,slow=8.3,SNR=11						
ASAR	Alice Springs	58.72	149	P	P	03 20 30.1	-0.1
	0.5nm,0.5s,baz=332,slow=7.0,SNR=15						
YKA	Yellowknife Ar	83.92	17	P	P	03 23 02.7	+1.0
	0.1nm,0.4s,baz=331,slow=4.7,SNR=3.3						

NOU ***08*** *03:21:35.6, 34°.03S×179°.79W, h353km, MLv4.6, South of Kermadec Islands*

WEL 08 03:22:27.9±0.8, **37°S**±6°×**17°7E**±°, **h148**km±7km, **M2.9**/30, **MLv2.9**/30, **Error ellipse: s-maj=0.0km s-min=0.0km az=45.2, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HAZ	Te Kaha	0.79	156	P	Pn	03 22 50.5	-0.3
HAZ				S	Sn	03 23 09.2	+0.8
WHRZ	Whale Island	0.88	201	P	Pn	03 22 52.1	+0.6
MXZ	Matakaoa Point	0.91	126	P	Pn	03 22 52.2	+0.4
MXZ				S	Sn	03 23 12.7	+2.7
RUGZ	Raukumara Rang	0.96	165	P	Pn	03 22 51.5	-0.8
RUGZ				S	Sn	03 23 10.6	-0.4
PKGZ	Pakihiroa	1.02	147	P	Pn	03 22 53.0	+0.2
MARZ	Manawahe	1.10	210	P	Pn	03 22 53.7	+0.3
MARZ				S	Sn	03 23 13.3	+0.4
WMGZ	Waiomatatini S	1.14	134	P	Pn	03 22 53.9	+0.2
WMGZ				S	Sn	03 23 14.2	+0.7
TWGZ	Tauwhareparae	1.24	157	P	Pn	03 22 55.2	+0.5
TWGZ				S	Sn	03 23 16.9	+1.6
URZ	Urewera	1.24	189	P	Pn	03 22 54.5	-0.1
PUZ	Puketiti	1.25	146	P	Pn	03 22 54.9	+0.1
PUZ				S	Sn	03 23 15.2	-0.3
MWZ	Matawai	1.30	175	P	Pn	03 22 55.4	0.0
MWZ				S	Sn	03 23 15.6	-0.8
KARZ	Kaharoa	1.33	222	P	Pn	03 22 55.9	+0.3
KUZ	Kuaotunu	1.35	282	P	Pn	03 22 55.2	-0.6
TKGZ	Te Karaka	1.45	165	P	Pn	03 22 56.8	0.0
TKGZ				S	Sn	03 23 19.2	+0.2
RAGZ	Rawiri	1.46	179	P	Pn	03 22 57.4	+0.5
MUGZ	Murupara	1.52	198	P	Pn	03 22 57.6	+0.1
CNGZ	Carnagh Statio	1.59	156	P	Pn	03 22 58.8	+0.5
RTZ	Ruatahuna	1.61	191	P	Pn	03 22 58.3	-0.2
TOZ	Tahuroa Road	1.64	244	P	Pn	03 22 59.4	+0.6
GRRZ	Galatos Road	1.65	217	P	Pn	03 22 59.8	+0.8
PRRZ	Plateau Road	1.66	208	P	Pn	03 22 59.4	+0.4
RIGZ	Rimuhau	1.70	170	P	Pn	03 22 59.1	-0.4
RIGZ				S	Sn	03 23 24.0	+0.2
GRZ	Great Barrier	1.73	296	P	Pn	03 22 59.2	-0.6
SNGZ	Shannon Statio	1.75	181	P	Pn	03 22 59.8	-0.2
SNGZ				S	Sn	03 23 25.4	+0.7
MKAZ	Moumakai	1.77	267	P	Pn	03 23 00.5	+0.3
WIAZ	Waiheke Island	1.81	277	P	Pn	03 23 00.8	+0.1
MTHZ	Maungataniwha	1.86	193	P	Pn	03 23 01.9	+0.5
RAHZ	Arahi	1.89	187	P	Pn	03 23 01.6	-0.1
KUTZ	Kaahu Road	1.90	220	P	Pn	03 23 01.2	-0.6
PRGZ	Paritu Road	1.93	168	P	Pn	03 23 02.1	0.0
MRHZ	Matea Rd	1.95	202	P	Pn	03 23 02.2	-0.2
KNZ	Kokohu	2.00	173	P	Pn	03 23 02.4	-0.4
MBAZ	Motutapu North	2.00	277	P	Pn	03 23 03.1	+0.3
WHHZ	Waihua	2.04	183	P	Pn	03 23 03.1	-0.3
NMHZ	Naumai	2.11	192	P	Pn	03 23 04.3	+0.1
WATZ	Wairara	2.12	217	P	Pn	03 23 05.1	+0.9
MHGZ	Mahia Peninsul	2.16	169	P	Pn	03 23 04.2	-0.5
BKZ	Black Stump Fm	2.24	198	P	Pn	03 23 05.1	-0.7
ARHZ	Aropaoanui	2.25	187	P	Pn	03 23 05.6	-0.2
RITZ	Rihia Road	2.28	211	P	Pn	03 23 06.9	+0.7
KATZ	Kakaramea	2.35	214	P	Pn	03 23 08.2	+1.0
TMVZ	Te Maari	2.46	212	P	Pn	03 23 08.9	+0.4
MCHZ	McNeill Hill	2.46	192	P	Pn	03 23 08.3	-0.2
KRVZ	Karewarewa	2.47	213	P	Pn	03 23 09.2	+0.6
ETVZ	East Tongariro	2.47	211	P	Pn	03 23 08.8	+0.1
HIZ	Hauiti	2.48	233	P	Pn	03 23 09.6	+1.0
KWHZ	Kaweka Forest	2.50	197	P	Pn	03 23 08.2	-0.8
WTVZ	West Tongariro	2.51	214	P	Pn	03 23 09.9	+0.8
OTVZ	Oturere	2.52	212	P	Pn	03 23 09.4	+0.1
TWVZ	Taurewa	2.54	216	P	Pn	03 23 10.0	+0.5
NGZ	Ngauruhoe	2.55	213	P	Pn	03 23 10.1	+0.4
FWVZ	Far West T-bar	2.64	212	P	Pn	03 23 11.0	+0.1
WHVZ	Whangaehu Hut	2.65	211	P	Pn	03 23 10.8	-0.2
BHHZ	Black Hill Sta	2.66	202	P	Pn	03 23 09.9	-1.1
WCZ	Waipu Caves	2.67	293	P	Pn	03 23 10.2	-0.8
WNVZ	Wahianoa	2.68	211	P	Pn	03 23 11.0	-0.3
MOVZ	Moawhango	2.69	208	P	Pn	03 23 10.3	-1.0
KRHZ	Kereru	2.72	196	P	Pn	03 23 10.2	-1.4
PKVZ	Pokaka	2.76	215	P	Pn	03 23 12.4	+0.2
KAHZ	Kahuranaki	2.78	188	P	Pn	03 23 11.3	-1.1
PNHZ	Pukenui	3.02	197	P	Pn	03 23 13.5	-1.9
PXZ	Pawanui	3.02	187	P	Pn	03 23 13.9	-1.4
WPHZ	Waipukurau	3.11	193	P	Pn	03 23 14.6	-1.9
PRHZ	Porangahau	3.28	190	P	Pn	03 23 16.9	-1.8
WAZ	Wanganui	3.30	214	P	Pn	03 23 18.9	0.0
DVHZ	Dannevirke	3.39	196	P	Pn	03 23 17.7	-2.5
NEZ	North Egmont	3.41	228	P	Pn	03 23 22.5	+2.0
ANWZ	Angora Road	3.49	191	P	Pn	03 23 19.4	-2.0
PRWZ	Pori Road	3.68	197	P	Pn	03 23 21.8	-2.1
BFZ	Birch Farm	3.75	193	P	Pn	03 23 21.9	-2.8
MRZ	Mangatainoka R	3.88	201	P	Pn	03 23 23.6	-2.9
TIWZ	Tintock	3.91	197	P	Pn	03 23 24.4	-2.6
HOWZ	Holdsworth Sta	4.12	200	P	Pn	03 23 26.3	-3.4
OGWZ	Otaki Gorge	4.15	204	P	Pn	03 23 27.0	-3.0
TMWZ	Te Maipa	4.23	195	P	Pn	03 23 27.8	-3.3
KIW	Kapiti Island	4.28	206	P	Pn	03 23 28.5	-3.2
MTW	Mount Morrison	4.37	199	P	Pn	03 23 29.2	-3.7
CAW	Cannon Point	4.45	203	P	Pn	03 23 30.6	-3.3
DUWZ	D'Urville Isla	4.62	214	P	Pn	03 23 33.5	-2.8
TCW	Tory Channel	4.81	209	P	Pn	03 23 35.2	-3.6
PLWZ	Palliser	4.82	199	P	Pn	03 23 34.6	-4.3
TUWZ	Tuamarina	5.13	210	P	Pn	03 23 39.3	-3.7
NNZ	Nelson	5.20	215	P	Pn	03 23 40.6	-3.3
QRZ	Quartz Range	5.35	223	P	Pn	03 23 42.2	-3.6
BSWZ	Blackbirch Sta	5.40	209	P	Pn	03 23 43.6	-2.9
KHZ	Kahutara	6.13	208	P	Pn	03 23 52.2	-4.0
DSZ	Denniston Nort	6.38	221	P	Pn	03 23 55.3	-4.3
INZ	Inchbonnie	7.28	217	P	Pn	03 24 09.0	-2.6
MQZ	McQueen's Vall	7.57	207	P	Pn	03 24 09.2	-6.2
TMZ	Timaru	8.79	211	P	Pn	03 24 26.5	-5.2
ODZ	Otahua Downs	9.47	210	P	Pn	03 24 35.7	-5.1

IDC ***08*** *03:31:27.4±9.2, 52°.04N×179°.64E, h121km±100km, mb2.9/4, mb1 3.4/6, mb1mx3.1/43, mbtmp3.6/6, ML3.6/2, Error ellipse: s-maj=78.7km s-min=38.9km az=153.0*

NEIC ***08*** *03:31:31.6±0.5, 52°.0N±0°.3×179°.3E±0°.1, h215km±4km, Error ellipse: s-maj=38.9km s-min=11.0km az=188.0*

AEIC ***08*** *03:31:32±0.4, 52°.0N±0°.2×179°.3E±0°.1, h210km±6km, ML3.1, Error ellipse: s-maj=36.5km s-min=11.4km az=190.0*

ISC 08 03:31:33.4±1.0, **52°.2N**±0°.2×**179°.33E**±0°.07, **h195**km±13km, **n16**, σ**0s.70**/16, **mb3.1**/4, **Rat Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CEAP	Semis' Anvil P	0.27	146		Pn	03 31 59.7	+0.4
CESW	Semis' Southwe	0.35	156		Pn	03 31 59.5	0.0
LSPA	Little Sitkin	0.54	240		Pn	03 32 00.2	+0.1
LSSA	Little Sitkin	0.58	242		Pn	03 32 00.6	+0.3
AMKA	Amchitka	0.85	181		Pn	03 32 01.0	-0.7
TASE	Tanaga Southea	1.67	102		Pn	03 32 08.3	-0.1
KIMD	Kanaga Island	2.17	101		Pn	03 32 12.6	-0.7
ADK	Adak	2.48	96		Pn	03 32 16.1	-0.7
GSTD	Great Sitkin T	2.79	92		Pn	03 32 20.2	-0.2
SMY	Shemya	3.24	281		Pn	03 32 24.9	-0.6
PETK	Petropavlovsk-	13.15	282	P	Pn	03 34 32.6	-0.2
	0.2nm,0.3s,baz=104,slow=16,SNR=4.3						
KDAK	Kodiak Island	16.97	60	P	P	03 35 16.7	-1.2
	1.7nm,0.3s,baz=311,slow=9.3,SNR=13						
ILAR	Eielson Array	21.34	41	P	P	03 36 04.2	-0.7
	0.6nm,0.7s,baz=246,slow=8.4,SNR=6.8						
YKA	Yellowknife Ar	35.49	47	P	P	03 38 11.6	+0.6
	0.3nm,0.6s,baz=281,slow=7.7,SNR=7.4						
NVAR	Mina Array Bea	44.59	82	P	P	03 39 27.4	+1.1
	0.2nm,0.5s,baz=294,slow=8.6,SNR=2.9						
TXAR	Lajitas Array	59.66	80	P	P	03 41 17.2	0.0
	0.2nm,0.5s,baz=304,slow=4.5,SNR=4.2						

PRE ***08*** *03:34:06.9±1.0, 26°.98S×26°.78E, h2km, ML3.0*

IDC ***08*** *03:34:08.7±1.8, 26°.90S×26°.76E, h0km, mb3.6/2, mb1 3.9/7, mb1mx3.6/32, mbtmp3.8/7, ML3.7/4, Error ellipse: s-maj=31.3km s-min=13.7km az=94.0*

ISC 08 03:34:08.1±1.1, **26°.96S**±0°.03×**26°.80E**±0°.04, **h16**km±8km, **n24**, σ**1s.92**/45, **South Africa**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PRYS	Parys	0.50	86	*e*P	Pg	03 34 17.3	-0.8
PRYS				*e*S	Sg	03 34 24.5	-0.3
PRYS				AML	AML	03 34 45.9	
	comp=Z,130nm,0.3s						
WDLM	Western Deep L	0.77	46	*e*P	Pg	03 34 22.5	-0.6
WDLM				*e*S	Sg	03 34 32.6	-0.7
WDLM				AML	AML	03 34 41.0	
	comp=Z,374nm,0.2s						
KSR	Koster	1.11	4	*e*P	Pg	03 34 28.5	-1.1
KSR				*e*S	Sb	03 34 43.7	+0.4
KSR				AML	AML	03 34 59.3	
	comp=Z,456nm,0.4s						
BOSA	Boshof	2.14	219	Pn	Pb	03 34 46.2	-0.4
	comp=Z,12nm,0.3s,baz=41,slow=12,SNR=332						
BOSA				Pg	Pg	03 34 48.6	-0.6
	comp=Z,13nm,0.3s,baz=40,slow=18,SNR=95						
BOSA				Sn	Sb	03 35 13.8	+0.8
	comp=Z,40nm,0.3s,baz=311,slow=18,SNR=24						
BOSA	Boshof	2.14	219	*e*P	Pn	03 34 44.2	+0.9
BOSA				*e*S	Sn	03 35 11.0	+1.3
BOSA				AML	AML	03 35 27.0	
	comp=Z,188nm,0.6s						
LBTB	Lobatse	2.22	330	Pn	Pb	03 34 47.4	-0.6
	comp=Z,20nm,0.3s,baz=153,slow=13,SNR=268						
LBTB				Lg	Lg	03 35 16.4	
	comp=Z,68nm,0.3s,baz=51,slow=22,SNR=65						
LBTB	Lobatse	2.22	330	*e*P	Pn	03 34 46.1	+1.6
LBTB				*e*S	Sn	03 35 13.7	+2.1
LBTB				AML	AML	03 35 18.4	
	comp=Z,181nm,0.2s						
HVD	Gariep Dam	3.81	197	*e*P	Pn	03 35 07.7	+1.4
HVD				*e*S	Sn	03 35 51.0	+0.2
HVD				AML	AML	03 36 27.4	
	comp=Z,48nm,0.5s						
POGA	Pongola	4.39	96	*e*P	Pn	03 35 15.4	+1.4
POGA				*e*S	Sn	03 36 05.4	+0.5
POGA				AML	AML	03 36 26.2	
	comp=Z,161nm,0.4s						
UPI	Upington	5.12	253	*e*P	Pn	03 35 25.0	+0.8
UPI				*e*S	Sn	03 36 22.3	-0.8
UPI				AML	AML	03 37 01.5	
	comp=Z,20nm,0.8s						
MOPA	Mopani	5.39	51	*e*P	Pn	03 35 29.3	+1.3
MOPA				*e*S	Sn	03 36 29.7	0.0
MOPA				AML	AML	03 36 56.7	
	comp=Z,42nm,0.7s						
MSNA	Messina	5.45	33	*e*P	Pn	03 35 29.6	+0.8
MSNA				*e*S	Sn	03 36 29.3	-1.9
MSNA				AML	AML	03 37 29.0	
	comp=Z,19nm,0.7s						
KEIM	Keimoes	5.45	250	*e*P	Pn	03 35 30.0	+1.2
KEIM				*e*S	Sn	03 36 30.3	-1.0
KEIM				AML	AML	03 37 03.8	
	comp=Z,43nm,0.4s						
SOE	Somerset East	5.83	190	*e*P	Pn	03 35 35.4	+1.4
SOE				*e*S	Sn	03 36 38.4	-2.2
SOE				AML	AML	03 37 22.9	
	comp=Z,30nm,0.6s						
GRAN	Grantham	6.68	216	*e*P	Pn	03 35 46.5	+0.9
GRAN				*e*S	Sn	03 36 58.9	-2.6
GRAN				AML	AML	03 37 14.0	
	comp=Z,14nm,0.6s						
MATP	Matopo	6.69	14	Pn	Pn	03 35 47.6	+1.7
	comp=Z,1.8nm,0.3s,baz=191,slow=13,SNR=31						
MATP				Lg	Lg	03 37 31.1	
	comp=Z,5.9nm,0.3s,baz=261,slow=12,SNR=6.9						
ROSN	Rosenhof	7.38	195	*e*P	Pn	03 35 56.3	+1.1
ROSN				*e*S	Sn	03 37 16.1	-2.5
ROSN				AML	AML	03 37 23.2	
	comp=Z,55nm,0.3s						
SUR	Sutherland	7.50	223	Pn	Pn	03 35 59.7	+2.6
	comp=Z,2.1nm,0.3s,baz=55,slow=8.9,SNR=34						
SUR				Sn	Sn	03 37 22.1	+0.1
	comp=Z,2.0nm,0.3s,baz=188,slow=21,SNR=6.6						
SUR				Lg	Lg	03 38 03.3	
	comp=Z,7.5nm,0.3s,baz=138,slow=21,SNR=7.3						
CVNA	Calvinia	7.62	232	*e*P	Pn	03 35 59.2	+0.6
CVNA				*e*S	Sn	03 37 21.8	-3.1
CVNA				AML	AML	03 38 14.9	
	comp=Z,44nm,0.4s						
AUSN	Aus	9.42	269	*e*P	Pn	03 36 24.7	+1.2
AUSN				*e*S	Sn	03 38 04.8	-4.4
AUSN				AML	AML	03 38 05.9	
	comp=Z,8.5nm,0.3s						
ELIM	Elim	9.73	217	*e*P	Pn	03 36 28.3	+0.8
ELIM				*e*S	Sn	03 38 11.6	-5.0
ELIM				AML	AML	03 38 33.2	
	comp=Z,4.5nm,0.5s						
TSUM	Tsumeb	11.47	310	Pn	Pn	03 36 52.2	+0.7
	comp=Z,0.7nm,0.3s,baz=122,slow=11,SNR=7.0						
TSUM				Sn	Sn	03 38 54.6	-4.8
	comp=Z,0.4nm,0.3s,baz=90,slow=19,SNR=2.2						
TSUM				Lg	Lg	03 40 01.9	
	comp=Z,0.5nm,0.3s,baz=204,slow=18,SNR=5.2						
TORD	Torodi Ar. Bea	46.74	325	P	P	03 42 39.0	+2.2
	comp=Z,0.6nm,0.6s,baz=137,slow=6.0,SNR=5.9						
ESDC	Sonseca Array	72.23	336	P	P	03 45 35.1	+2.6
	comp=Z,0.3nm,0.6s,baz=158,slow=5.6,SNR=4.1						

IDC 08 03:45:20.0±7.0, **14°.02S**×**174°.59W**, **h0**km, **mb3.8**/2, **mb1 4.1**/2, **mb1mx3.5**/37, **mbtmp3.8**/2, **Error ellipse: s-maj=371.9km s-min=102.0km az=148.0, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	49.06	256	P	P	03 54 09.1	-0.2
	0.2nm,0.5s,baz=91,slow=6.6,SNR=7.6						
ASAR	Alice Springs	49.46	251	P	P	03 54 12.4	-0.1
	2.8nm,0.5s,baz=84,slow=7.9,SNR=70						
AKASG	Malin Array Be	138.63	337	PKP	PKPdf	04 04 47.7	-0.2
	0.3nm,0.4s,baz=63,slow=2.3,SNR=2.7						

NEIC ***08*** *03:55:14.6±1.0, 3°.87S±0°.06×142°.85E±0°.04, h50km±10km, mb4.2/11, Error ellipse: s-maj=9.7km s-min=4.6km az=150.0*

IDC ***08*** *03:55:14.8±1.9, 3°.96S×142°.86E, h53km±18km, mb3.8/8, mb1 3.9/11, mb1mx3.7/30, mbtmp4.0/11, ML3.7/2, MS3.1/6, Ms1 3.1/6, ms1mx2.8/35, Error ellipse: s-maj=22.3km s-min=10.6km az=57.0*

ISC 08 03:55:14.5±0.7, **3°.90S**±0°.08×**142°.86E**±0°.09, **h50**km, **n29**, σ**0s.99**/29, **mb4.1**/11, **Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JAY	Jayapura	2.56	303	P	Pn	03 55 53.6	+0.1
	2.3nm,0.3s,baz=162,slow=9.5,SNR=8.1						
JAY				S	Sn	03 56 25.1	+1.7
	5.7nm,0.3s,baz=109,slow=22,SNR=4.4						
JAY				LR	LR	03 57 12.4	
	comp=Z,248nm,20.2s,baz=80,slow=46						
PMG	Port Moresby	6.94	142	P	Pn	03 56 54.9	+1.3
	2.1nm,0.3s,baz=342,slow=5.6,SNR=5.8						
PMG				S	Sn	03 58 12.0	+0.8
	1.0nm,0.3s,baz=283,slow=19,SNR=2.2						
PMG				LR	LR	04 00 16.6	
	comp=Z,153nm,19.4s,baz=352,slow=44						
PMG	Port Moresby	6.94	142		Pn	03 56 54.1	+0.5
SIJI	Sorong	11.97	284	LR	LR	04 02 57.8	
	comp=Z,71nm,18.4s,baz=262,slow=39						
MTN	Manton Dam	14.60	232	Pn	Pn	03 58 38.0	-0.3
WB0	Warramunga Arr	17.80	207		Pn	03 59 18.1	-0.6
WR0	Warramunga Arr	17.90	206	P	Pn	03 59 19.7	-0.3
WR0				IAmb	IAmb	03 59 27.9	
	comp=Z,14nm,1.4s						
WB2	Warramunga Arr	17.97	207	P	P	03 59 20.3	-0.6
WB2				IAmb	IAmb	03 59 25.1	
	comp=Z,4.2nm,0.7s						
WRA	Warramunga Arr	17.98	207	P	P	03 59 20.4	-0.6
	comp=Z,0.5nm,0.3s,baz=26,slow=12,SNR=17						
WRA				LR	LR	04 06 45.7	
	comp=Z,44nm,20.4s,baz=105,slow=38						
SOEI	Soe	19.35	252	P	P	03 59 36.3	+0.2
AS31	Alice Springs	21.46	203	P	P	03 59 59.5	+0.6
ASAR	Alice Springs	21.47	203	P	P	03 59 58.8	-0.2
	comp=Z,0.9nm,0.6s,baz=30,slow=12,SNR=10						
ASAR	Alice Springs	21.47	203	P	P	03 59 59.2	+0.3
FITZ	Fitzroy Crossi	21.98	229	P	P	04 00 04.4	0.0
	comp=Z,2.9nm,0.4s,baz=34,slow=13,SNR=30						

FITZ				LR	LR	04 08 59.8	
	comp=Z,47nm,20.4s,baz=78,slow=38						
FITZ	**Fitzroy Crossi**	**21.98**	**229**	P	**P**	**04 00 05.5**	**+1.0**
FITZ				IAmb	IAmb	04 00 08.2	
	comp=Z,9.9nm,1.2s						
STKA	**Stephens Creek**	**27.85**	**182**	P	**P**	**04 00 57.4**	**-2.1**
	comp=Z,1.2nm,0.6s,baz=352,slow=14,SNR=2.2						
DZM	**Mont Dzumac**	**29.14**	**130**	LR	LR	04 11 34.5	
	comp=Z,65nm,18.3s,baz=26,slow=34						
FORT	**Forrest**	**30.16**	**206**	P	**P**	**04 01 21.0**	**+1.0**
MORW	**Morawa**	**35.69**	**223**	P	**P**	**04 02 08.2**	**-0.1**
PETK	**Petropavlovsk-**	**58.16**	**10**	P	**P**	**04 05 03.2**	**+0.1**
	comp=Z,1.6nm,0.8s,baz=174,slow=7.7,SNR=5.1						
LSA	**Lhasa**	**59.70**	**308**	P	**P**	**04 05 12.1**	**-2.7**
LSA				IAmb	IAmb	04 05 39.3	
	comp=Z,3.3nm,0.5s						
MK31	**Makanchi Array**	**73.28**	**321**	P	**P**	**04 06 41.4**	**+0.7**
MK31				IAmb	IAmb	04 06 43.1	
	comp=Z,2.3nm,0.9s						
MKAR	**Makanchi Array**	**73.28**	**321**	P	**P**	**04 06 42.0**	**+1.3**
	comp=Z,3.5nm,0.8s,baz=104,slow=7.9,SNR=38						
MKAR	**Makanchi Array**	**73.28**	**321**	P	**P**	**04 06 41.0**	**+0.2**
ZALV	**Zalesovo Beam**	**75.07**	**329**	P	**P**	**04 06 51.4**	**+0.4**
	comp=Z,1.4nm,0.5s,baz=124,slow=6.4,SNR=7.4						
ZALV	**Zalesovo Beam**	**75.07**	**329**	P	**P**	**04 06 51.0**	**+0.1**
NIL	**Nilore**	**75.36**	**306**	P	**P**	**04 06 53.4**	**+0.3**
NIL				IAmb	IAmb	04 06 55.4	
	comp=Z,5.6nm,1.0s						
NRIK	**Noril'sk**	**82.05**	**343**	P	**P**	**04 07 30.1**	**+1.1**
	comp=Z,3.6nm,0.7s,baz=132,slow=4.2,SNR=7.6						
ILAR	**Eielson Array**	**85.22**	**24**	P	**P**	**04 07 44.3**	**-1.1**
	comp=Z,0.5nm,0.5s,baz=261,slow=4.6,SNR=16						

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*TUL **08** 04:03:37.6±0.9, 36°.94N±0°.04×97°.62W±0°.03, h4km±6km, ML3.2, mb_Lg3.1/76(NEIC), Error ellipse: s-maj=5.9km s-min=3.0km az=156.0*

*NEIC **08** 04:03:38.0±1.0, 36°.94N±0°.03×97°.61W±0°.02, h5km±1km, Error ellipse: s-maj=4.7km s-min=3.0km az=15.0*

*ANF **08** 04:03:38.2±0.7, 36°.93N×97°.63W, h5km, ML3.8/8, Error ellipse: s-maj=7.4km s-min=6.6km az=84.0*

ISC 08 04:03:38.5±0.8**, 36°.93N**±0°.03×**97°.61W**±0°.02**, h10km, n88, σ0s.72**/81**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAN13	**South Haven SW**	**0.14**	**51**		**Pg**	**04 03 40.8**	**-0.9**
KAN01	**Argonia South**	**0.26**	**333**		**Pg**	**04 03 42.9**	**-0.9**
KAN05	**Bluff City Nor**	**0.28**	**312**		**Pg**	**04 03 43.2**	**-1.0**
KAN14	**Manchester OK**	**0.28**	**277**		**Pg**	**04 03 43.2**	**-1.0**
KAN08	**Anthony NE Sta**	**0.41**	**317**		**Pg**	**04 03 45.7**	**-1.0**
KAN10	**Anthony SW Sta**	**0.43**	**297**		**Pg**	**04 03 46.2**	**-0.8**
CROK	**Carrier**	**0.51**	**215**		**Pg**	**04 03 48.1**	**-0.5**
T35A	**Sooner Cattle**	**0.88**	**90**		**Pg**	**04 03 54.5**	**-1.0**
T35B	**Sooner Cattle**	**0.88**	**90**	P		04 03 54.5	
	baz=272						
T35B				S		04 04 06.4	
	baz=272						
QUOK	**Quay**	**1.05**	**136**		**Pg**	**04 03 57.9**	**-0.8**
OK029	**Liberty Lake**	**1.13**	**173**		**Pb**	**04 03 59.4**	**-0.8**
OK031	**S. Brethren Rd**	**1.15**	**147**		**Pb**	**04 03 59.7**	**-0.9**
OK030	**Cody Creek RV**	**1.20**	**146**		**Pb**	**04 04 00.6**	**-0.8**
U32A	**Winter Ranch,**	**1.24**	**244**	Pg	**Pn**	**04 04 00.9**	**-1.1**
U32A	**Winter Ranch,**	**1.24**	**244**	P		04 04 01.1	
	baz=63						
U32A				S		04 04 17.9	
	baz=63						
BCOK	**Bluff Creek, N**	**1.27**	**180**		**Pn**	**04 04 01.8**	**-0.5**
OK025	**Westminster Rd**	**1.36**	**170**	Pn	**Pn**	**04 04 03.5**	**-0.1**
OKCFA	**Oklahoma City**	**1.51**	**175**		**Pn**	**04 04 05.6**	**-0.1**
OKCSW	**OKLAHOMA CITY**	**1.52**	**175**		**Pn**	**04 04 06.1**	**+0.3**
FNO	**Franklin**	**1.67**	**174**		**Pn**	**04 04 08.4**	**+0.5**
R32A	**Long Quarter,**	**1.73**	**330**		**Pn**	**04 04 08.9**	**+0.2**
R32A	**Long Quarter,**	**1.73**	**330**	P		04 04 09.1	
	baz=149						
R32A				S		04 04 31.7	
	baz=149						
TUL1	**Leonard**	**1.79**	**124**	P	**Pn**	**04 04 10.1**	**+0.7**
	baz=306						
TUL1				S	**Sb**	**04 04 34.0**	**+0.3**
	baz=306						
TUL1	**Leonard**	**1.79**	**124**		**Pn**	**04 04 09.9**	**+0.5**
TUL1	**Leonard**	**1.79**	**124**	P		04 04 10.2	
	baz=306						
TUL1				S		04 04 34.3	
	baz=306						
W35A	**Tecumseh**	**1.87**	**161**		**Pn**	**04 04 10.9**	**+0.3**
KSU1	**Kansas State U**	**2.31**	**20**	P	**Pn**	**04 04 17.0**	**+0.3**
	baz=201						
KSU1				S	**Sn**	**04 04 46.6**	**+1.4**
	baz=201						
KSU1	**Kansas State U**	**2.31**	**20**	Pn	**Pn**	**04 04 16.5**	**-0.2**
KSU1	**Kansas State U**	**2.31**	**20**	P		04 04 16.5	
	baz=201						
KSU1				S		04 04 46.5	
	baz=201						
WMOK	**Wichita Mounta**	**2.38**	**204**	P	**Pn**	**04 04 17.6**	**0.0**
	baz=23						
WMOK				S	**Sn**	**04 04 48.4**	**+1.5**
	baz=23						
WMOK	**Wichita Mounta**	**2.38**	**204**		**Pn**	**04 04 17.6**	**0.0**
WMOK				IAmb_Lg		04 04 53.0	
	comp=Z,48nm,1.0s						
WMOK	**Wichita Mounta**	**2.38**	**204**	P		04 04 17.9	
	baz=23						
CBKS	**Cedar Bluff**	**2.52**	**319**	P	**Pn**	**04 04 20.0**	**+0.4**
	baz=138						
CBKS				S	**Sn**	**04 04 51.8**	**+1.3**
	baz=138						
CBKS	**Cedar Bluff**	**2.52**	**319**		**Pn**	**04 04 20.5**	**+0.9**
CBKS	**Cedar Bluff**	**2.52**	**319**	S		04 04 55.5	
	baz=138						
U38A	**Gravette**	**2.64**	**100**		**Pn**	**04 04 21.7**	**+0.5**
X37A	**Clayton**	**2.96**	**141**	Pn	**Pn**	**04 04 25.7**	**+0.2**
X37A				IAmb_Lg		04 05 15.6	
	comp=Z,50nm,0.8s						
X37A	**Clayton**	**2.96**	**141**	P		04 04 26.1	
	baz=323						
HHAR	**Hobbs**	**3.03**	**101**		**Pn**	**04 04 27.5**	**+1.0**
S39A	**Bolivar**	**3.51**	**76**	Pn	**Pn**	**04 04 34.1**	**+1.1**
S39A				IAmb_Lg		04 05 35.8	
	comp=Z,37nm,0.7s						
W39A	**Magazine**	**3.55**	**118**	P	**Pn**	**04 04 34.6**	**+0.9**
	baz=300						
W39A				S	**Sn**	**04 05 16.5**	**+0.8**
	baz=300						
W39A	**Magazine**	**3.55**	**118**	Pn	**Pn**	**04 04 34.4**	**+0.7**
W39A				IAmb_Lg		04 05 31.5	
	comp=Z,48nm,0.7s						
Z35A	**Perchaven, San**	**3.60**	**175**		**Pn**	**04 04 33.8**	**-0.6**
Z35A					LR	04 05 33.3	
N33A	**J Bar K, Exete**	**3.81**	**2**	Pn	**Pn**	**04 04 37.2**	**-0.1**
N33A				IAmb_Lg		04 05 38.3	
	comp=Z,37nm,0.8s						
U40A	**Yellville**	**3.87**	**97**	P	**Pn**	**04 04 38.6**	**+0.5**
	baz=280						
U40A				S	**Sn**	**04 05 24.6**	**+1.0**
	baz=280						
U40A	**Yellville**	**3.87**	**97**		**Pn**	**04 04 39.2**	**+1.1**
U40A	**Yellville**	**3.87**	**97**	P		04 04 39.5	
	baz=280						
U40A				P		04 04 39.5	
	baz=280						
AMTX	**Amarillo**	**3.88**	**240**	P	**Pn**	**04 04 38.6**	**+0.3**
	baz=57						
AMTX				S	**Sn**	**04 05 25.0**	**+1.1**
	baz=57						
AMTX	**Amarillo**	**3.88**	**240**		**Sb**	**04 05 35.5**	**+1.4**
AMTX				IAmb_Lg		04 05 45.5	
	comp=Z,51nm,1.1s						
MIAR	**Mount Ida**	**4.05**	**125**	P	**Pn**	**04 04 41.3**	**+0.7**
	baz=307						
MIAR				S	**Sn**	**04 05 29.1**	**+1.0**
	baz=307						
MIAR	**Mount Ida**	**4.05**	**125**	Pn	**Pn**	**04 04 40.2**	**-0.4**
MIAR				IAmb_Lg		04 05 56.4	
	comp=Z,32nm,0.8s						
P38A	**Dawn**	**4.19**	**49**	Pn	**Pn**	**04 04 42.5**	**-0.1**
P38A				IAmb_Lg		04 05 50.8	
	comp=Z,55nm,0.7s						
N35A	**Tabor**	**4.22**	**21**	Pn	**Pn**	**04 04 42.8**	**-0.1**
Z38A	**Mt. Pleasant**	**4.25**	**149**	Pn	**Pn**	**04 04 43.4**	**+0.2**
MGMO	**Mountain Grove**	**4.28**	**85**		**Pn**	**04 04 43.5**	**-0.3**
MGMO				IAmb_Lg		04 05 53.1	
	comp=Z,34nm,0.8s						
R40A	**Maddies Statio**	**4.46**	**71**	Pn	**Pn**	**04 04 46.5**	**+0.4**
R40A				IAmb_Lg		04 06 04.4	
	comp=Z,30nm,0.7s						
KSCO	**Kaye Shedlock'**	**4.47**	**299**	Pn	**Pn**	**04 04 46.7**	**+0.1**
KSCO	**Kaye Shedlock'**	**4.47**	**299**	P		04 04 46.8	
	baz=116						
BGNE	**Belgrade**	**4.50**	**355**	Pn	**Pn**	**04 04 45.2**	**-1.5**
BGNE					LR	04 06 00.5	
FCAR	**Ozark Folk Cen**	**4.55**	**101**	Pn	**Pn**	**04 04 47.2**	**-0.1**
FCAR					**Sb**	**04 05 52.6**	**-0.6**
FCAR				IAmb_Lg		04 05 59.4	
	comp=Z,35nm,0.8s						
X40A	**Basin Creek Fa**	**4.59**	**121**	Pn	**Pn**	**04 04 48.1**	**+0.1**
ABTX	**Abilene, Hawle**	**4.60**	**202**	Pn	**Pn**	**04 04 48.9**	**+0.7**
ABTX					LR	04 06 03.6	
WHAR	**Wooly Hollow**	**4.61**	**109**	Pn	**Pn**	**04 04 48.1**	**-0.2**
WLAR	**White Oak Lake**	**4.90**	**130**	Pn	**Pn**	**04 04 53.2**	**+1.0**
WLAR				IAmb_Lg		04 06 23.2	
	comp=Z,23nm,0.8s						
WHTX	**Lake Whitney,**	**4.92**	**178**	Pn	**Pn**	**04 04 52.9**	**+0.3**
P40A	**Paris**	**5.10**	**58**	Pn	**Pn**	**04 04 55.0**	**+0.1**
P40A					**Sb**	**04 06 09.2**	**+0.2**
P40A				IAmb_Lg		04 06 25.3	
	comp=Z,33nm,0.8s						
L34A	**Svendsen Farm,**	**5.12**	**10**	Pn	**Pn**	**04 04 56.2**	**+0.8**
L34A				IAmb_Lg		04 06 29.2	
	comp=Z,46nm,0.9s						
MSTX	**Muleshoe**	**5.14**	**237**	Pn	**Pn**	**04 04 56.0**	**+0.4**
MSTX					Lg	04 06 24.4	
N38A	**Joes South For**	**5.16**	**40**	Pn	**Pn**	**04 04 56.8**	**+1.0**
N38A				IAmb_Lg		04 06 29.6	
	comp=Z,48nm,0.7s						
CCM	**Cathedral Cave**	**5.19**	**76**	Pn	**Pn**	**04 04 56.3**	**+0.1**
CCM				IAmb_Lg		04 06 29.8	
	comp=Z,37nm,1.0s						
T42A	**Van Buren**	**5.22**	**87**	Pn	**Pn**	**04 04 57.5**	**+0.8**
T42A				IAmb_Lg		04 06 21.5	
	comp=Z,20nm,0.7s						
LCAR	**Lake Charles**	**5.27**	**97**	Pn	**Pn**	**04 04 58.0**	**+0.6**
OGNE	**Ogallala**	**5.29**	**321**	Pn	**Pn**	**04 04 58.5**	**+0.8**
OGNE				IAmb_Lg		04 06 32.1	
	comp=Z,25nm,0.9s						
K31A	**O'Neill**	**5.76**	**352**	IAmb_Lg		04 06 44.6	
	comp=Z,37nm,0.7s						
PBMO	**Poplar Bluff**	**5.76**	**89**	Pn	**Pn**	**04 05 04.6**	**+0.5**
PBMO					**Sb**	**04 06 28.0**	**-0.2**
PBMO				IAmb_Lg		04 06 43.9	
	comp=Z,39nm,0.8s						
HBAR	**Harrisburg**	**5.79**	**102**	IAmb_Lg		04 06 51.6	
	comp=Z,38nm,0.8s						
FVM	**French Village**	**5.82**	**77**	Pn	**Pn**	**04 05 05.0**	**+0.2**
FVM				IAmb_Lg		04 06 43.6	
	comp=Z,23nm,0.8s						
SLM	**Saint Louis**	**6.09**	**71**	IAmb_Lg		04 06 48.5	
	comp=Z,21nm,0.8s						
435B	**Jarrell**	**6.13**	**180**		**Pn**	**04 05 08.8**	**-0.3**
435B				IAmb_Lg		04 07 06.7	
	comp=Z,34nm,1.1s						
SDCO	**Great Sand Dun**	**6.34**	**280**	Pn	**Pn**	**04 05 12.5**	**+0.3**
N41A	**Harden Midland**	**6.49**	**52**	IAmb_Lg		04 07 07.5	
	comp=Z,29nm,0.8s						
143A	**Socs Landing,**	**6.62**	**128**	IAmb_Lg		04 07 24.1	
	comp=Z,18nm,0.8s						
JCT	**Junction City**	**6.68**	**196**	IAmb_Lg		04 07 24.8	
	comp=Z,19nm,0.8s						
ECSD	**EROS Data Cent**	**6.84**	**6**	Pn	**Pn**	**04 05 18.6**	**-0.4**
ISCO	**Idaho Springs**	**6.91**	**297**	Pn	**Pn**	**04 05 20.1**	**0.0**
P43A	**Skaggs, Pawnee**	**6.92**	**64**	Pn	**Pn**	**04 05 20.5**	**+0.5**
W45A	**Hickory Valley**	**7.05**	**102**	IAmb_Lg		04 07 29.2	
	comp=Z,28nm,0.8s						
ANMO	**Albuquerque**	**7.44**	**257**	IAmb_Lg		04 07 38.2	
	comp=Z,6.1nm,0.8s						
ANMO				IAmb_Lg		04 07 38.2	
	comp=Z,6.2nm,0.8s						
SUSD	**Miller**	**7.58**	**353**	IAmb_Lg		04 07 43.6	
	comp=Z,19nm,0.9s						
WVT	**Waverly**	**7.92**	**93**	IAmb_Lg		04 08 04.3	
	comp=Z,7.3nm,0.7s						
L42A	**Oliver, Polo**	**7.97**	**48**	IAmb_Lg		04 07 52.0	
	comp=Z,29nm,1.0s						
T47A	**Sharon Grove**	**8.41**	**86**	IAmb_Lg		04 08 13.0	
	comp=Z,18nm,1.0s						
RSSD	**Black Hills**	**8.69**	**328**	IAmb_Lg		04 08 29.3	
	comp=Z,6.5nm,0.8s						
V48A	**Smith Brothers**	**8.79**	**95**	IAmb_Lg		04 08 27.6	
	comp=Z,15nm,1.1s						
K22A	**Casper**	**8.93**	**313**	IAmb_Lg		04 08 28.0	
	comp=Z,17nm,1.1s						
BLO	**Bloomington**	**9.03**	**72**	IAmb_Lg		04 08 48.3	
	comp=Z,14nm,0.8s						
WCI	**Wyandotte Cave**	**9.08**	**78**	IAmb_Lg		04 08 39.4	
	comp=Z,12nm,0.8s						
CLTN	**Cedars of Leba**	**9.12**	**92**	IAmb_Lg		04 08 26.6	
	comp=Z,11nm,1.0s						

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*SJA **08** 04:05:30.9±0.6, 36°.00S×73°.03W, h10km, ML4.0, MW3.9*

*NEIC **08** 04:05:34.6±1.7, 36°.31S±0°.06×72°.66W±0°.08, h48km±11km, Error ellipse: s-maj=10.0km s-min=7.9km az=115.0*

*GUC **08** 04:05:34.4±0.7, 36°.33S×72°.70W, h47km±7km, ML4.3*

*IDC **08** 04:05:35.1±1.0, 36°.34S×72°.61W, h46km±7km, mb3.6/4, mb1 4.0/6, mb1mx3.7/27, mbtmp3.8/6, ML3.8/2, MS3.3/7, Ms1 3.3/7, ms1mx3.0/27, Error ellipse: s-maj=36.1km s-min=22.3km az=97.0*

ISC 08 04:05:34.7±0.7**, 36°.31S**±0°.04×**72°.76W**±0°.07**, h50km, n70, σ1s.19**/73**, mb3.8**/3**, MS3.2**/5**, 1C-4D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BI03	**Tigo**	**0.57**	**202**	⇓ *i*P	**Pn**	**04 05 46.5**	**-0.4**
BI03				*i* S	**Sn**	**04 05 54.4**	**-1.3**
BI03				IAML		04 05 56.2	
	comp=E,96µm,0.4s						
BI03	**Tigo**	**0.57**	**202**		**Pn**	**04 05 46.5**	**-0.4**
LAJA	**Laja**	**0.97**	**178**	*i* P	**Pn**	**04 05 51.5**	**-0.5**
LAJA				*e*P	**Sn**	**04 06 03.5**	**-1.3**
BI02	**San Fabin de**	**1.25**	**107**	⇓ *i*P	**Pn**	**04 05 54.9**	**-1.0**
BI02				*e*S	**Sn**	**04 06 10.3**	**-1.3**
BI02				IAML		04 06 11.7	
	comp=N,5µm,0.3s						
BI02	**San Fabin de**	**1.25**	**107**		**Pn**	**04 05 54.8**	**-1.0**
BO03	**Pichilemu**	**1.92**	**20**	*i* P	**Pn**	**04 06 04.5**	**-0.4**
BO03				IAML		04 06 40.5	
	comp=N,2µm,0.3s						
BO02	**Sierra Bellavi**	**2.21**	**47**	⇓ *i*P	**Pn**	**04 06 08.6**	**-0.4**
BO02				IAML		04 06 49.1	
	comp=N,3µm,0.3s						
BO02	**Sierra Bellavi**	**2.21**	**47**	Pn	**Pn**	**04 06 08.6**	**-0.4**
LC01	**Cunco**	**2.68**	**165**	*e*P	**Pn**	**04 06 14.5**	**-0.8**
LC01				IAML		04 06 59.1	
	comp=E,455nm,0.7s						
LC01	**Cunco**	**2.68**	**165**	Pn	**Pn**	**04 06 14.6**	**-0.8**
EDS3	**Malargue**	**2.77**	**80**	*i* P	**Pn**	**04 06 20.8**	**+4.0**
VA05	**Santo Domingo**	**2.81**	**20**	*e*P	**Pn**	**04 06 15.9**	**-1.2**
VA05				IAML		04 07 08.5	
	comp=E,762nm,0.4s						
MT09	**Talagante**	**2.91**	**30**	*e*P	**Pn**	**04 06 18.6**	**-0.2**
MT09				IAML		04 07 11.3	
	comp=N,1µm,0.6s						
LMEL	**Las Melosas**	**3.23**	**41**	*e*P	**Pn**	**04 06 22.9**	**-0.2**
LMEL				IAML		04 07 19.5	
	comp=N,1µm,0.5s						
MT02	**Curacav**	**3.32**	**24**	*i* P	**Pn**	**04 06 23.2**	**-1.0**
MT02				IAML		04 07 22.4	
	comp=E,248nm,0.4s						
MT02	**Curacav**	**3.32**	**24**		**Pn**	**04 06 23.0**	**-1.2**
MT05	**Renca**	**3.35**	**30**		**Pn**	**04 06 24.6**	**-0.1**
MT03	**Universidad Ad**	**3.36**	**34**	⇑ *i*P	**Pn**	**04 06 24.8**	**-0.1**
MT03				IAML		04 07 23.0	
	comp=N,710nm,0.3s						
PEL	**Peldehue**	**3.59**	**29**	Pn	**Pn**	**04 06 27.4**	**-0.5**
PEL	**Peldehue**	**3.59**	**29**	*i* P	**Pn**	**04 06 27.7**	**-0.2**
ROC1	**El Roble**	**3.62**	**24**	*i* P	**Pn**	**04 06 28.2**	**-0.4**
ROC1				*e*S	**Sn**	**04 07 09.8**	**-0.4**
ROCH	**El Roble**	**3.63**	**24**	*i* P	**Pn**	**04 06 28.0**	**-0.5**
VA03	**San Esteban**	**3.98**	**28**	*e*P	**Pn**	**04 06 33.0**	**-0.3**
VA03	**San Esteban**	**3.98**	**28**		**Pn**	**04 06 32.8**	**-0.5**
PLCA	**Paso Flores**	**4.74**	**159**	P	**Pn**	**04 06 44.6**	**+0.8**
	comp=N,1.3nm,0.3s,baz=328,slow=11,SNR=27						
PLCA				S	Sn	04 07 50.1	+13
	baz=255,slow=20,SNR=1.1						
PLCA				LR	LR	04 08 34.5	
	comp=N,119nm,19.9s,baz=343,slow=38						
PLCA	**Paso Flores**	**4.74**	**159**	*e*P	**Pn**	**04 06 44.6**	**+0.8**
PLCA	**Paso Flores**	**4.74**	**159**		**Pn**	**04 06 44.0**	**+0.2**
AUSP	**Uspallata**	**4.94**	**35**	*i* P	**Pn**	**04 06 47.6**	**+0.9**
AUSP				*i* S	**Sn**	**04 07 44.8**	**+2.2**
CO02	**Combarbal**	**5.30**	**17**		**Pn**	**04 06 50.8**	**-0.6**
H03S1	**Juan Fernandez**	**5.61**	**294**	T	T	04 12 37.9	
	baz=113,slow=76,SNR=156						
H03S3	**Juan Fernandez**	**5.62**	**294**	T	T	04 12 39.2	
	baz=113,slow=76,SNR=221						
H03S2	**Juan Fernandez**	**5.63**	**294**	T	T	04 12 38.0	
	baz=113,slow=76,SNR=248						
VA04	**Juan Fernndez**	**5.65**	**296**	Pn	**Pn**	**04 06 57.3**	**+1.2**
RTCV	**Cerro Valdivia**	**5.65**	**39**	*i* P	**Pn**	**04 06 56.1**	**-0.1**
CO03	**El Pedregal**	**5.72**	**18**	Pn	**Pn**	**04 06 56.8**	**-0.4**
ZON	**Zonda**	**5.84**	**37**		**Pn**	**04 06 58.5**	**-0.3**
ZON	**Zonda**	**5.84**	**37**	*i* P	**Pn**	**04 06 58.8**	**+0.1**
LL01	**San Ignacio de**	**6.07**	**178**		**Pn**	**04 07 01.8**	**0.0**
RTLL	**Cerro Villicun**	**6.11**	**37**	*i* P	**Pn**	**04 07 02.3**	**-0.3**
RTLL				*e*S	**Sn**	**04 08 10.3**	**-0.9**
RTLL				IAML		04 08 12.8	
	comp=Z,45nm,0.6s						
GO04	**Tololo Observa**	**6.34**	**16**	Pn	**Pn**	**04 07 04.4**	**-1.3**
GO04	**Tololo Observa**	**6.34**	**16**	*i* P	**Pn**	**04 07 04.8**	**-0.9**
GO04				*e*S	**Sn**	**04 08 14.4**	**-2.6**
ACCO	**Cerro Coronel**	**6.49**	**29**	*i* P	**Pn**	**04 07 07.5**	**-0.4**
CO01	**Juntas del Tor**	**6.70**	**20**		**Pn**	**04 07 10.2**	**-0.6**
AROD	**Rodeo**	**6.71**	**25**	*i* P	**Pn**	**04 07 11.3**	**+0.3**
GO07	**Milladeo Hill,**	**6.83**	**186**	Pn	**Pn**	**04 07 13.1**	**+0.9**
LCO	**Las Campanas**	**7.48**	**14**	Pn	**Pn**	**04 07 20.2**	**-1.3**
AC05	**El Transito**	**7.74**	**16**		**Pn**	**04 07 23.8**	**-1.2**
APLL	**PUNTA DE LOS L**	**7.87**	**43**	⇓ *i*P	**Pn**	**04 07 24.1**	**-2.5**
AC04	**Llanos de Chal**	**8.21**	**10**		**Pn**	**04 07 29.3**	**-1.8**
TCA	**Tanti**	**8.41**	**56**	*i* P	**Pn**	**04 07 32.8**	**-1.2**
ACLC	**CERRO LA CRUZ**	**8.42**	**37**	*i* P	**Pn**	**04 07 31.1**	**-3.2**
VCA	**Vinchina**	**8.47**	**28**	*i* P	**Pn**	**04 07 33.0**	**-2.0**
CYA	**Choya**	**9.80**	**39**	*i* P	Pn	04 07 48.1	-5.0
PB14	**IPOC Station P**	**11.82**	**11**	Pn	**Pn**	**04 08 20.9**	**0.0**
LVC	**Limon Verde**	**14.05**	**15**	P	**Pn**	**04 08 51.1**	**-0.4**
	comp=Z,0.4nm,0.3s,baz=156,slow=10.0,SNR=1.6						
PB09	**IPOC Station P**	**14.78**	**13**	Pn	**Pn**	**04 08 59.5**	**-1.4**
PB01	**IPOC Station P**	**15.48**	**12**		**Pn**	**04 09 09.1**	**-0.8**
PB01				IAmb	IAmb	04 09 15.9	
	comp=Z,15nm,0.9s						
PATCX	**Punta Patache**	**15.60**	**9**	Pn	**Pn**	**04 09 10.6**	**-0.8**
PATCX				IAmb	IAmb	04 09 35.2	
	comp=Z,7.2nm,0.8s						
TA01	**Diego Aracena**	**15.85**	**9**	Pn	**Pn**	**04 09 13.4**	**-1.0**
TA01				IAmb	IAmb	04 09 23.5	
	comp=Z,9.8nm,1.0s						
CPUP	**Villa Florida**	**16.50**	**57**	LR	LR	04 16 33.5	
	comp=Z,84nm,18.1s,baz=236,slow=40						
LPAZ	**La Paz**	**20.36**	**13**	P	Pn	04 10 09.8	-0.3
	comp=Z,2.7nm,0.6s,baz=192,slow=4.3,SNR=11						
LPAZ	**La Paz**	**20.36**	**13**	P	**P**	**04 10 06.8**	**-1.0**
SIV	**San Ignacio**	**22.75**	**30**	P	**P**	**04 10 32.0**	**-0.8**
	comp=Z,3.1nm,0.7s,baz=228,slow=11,SNR=17						
SIV				pP	**pP**	**04 10 44.6**	**0.0**
	comp=Z,1.7nm,0.6s,baz=171,slow=7.2,SNR=4.6						
SIV				LR	LR	04 21 35.6	
	comp=Z,41nm,19.0s,baz=206,slow=42						
NNA	**Nana**	**24.50**	**350**	LR	LR	04 18 36.2	
	comp=Z,24nm,18.3s,baz=156,slow=32						
BDFB	**Brasilia**	**30.15**	**53**	LR	LR	04 25 18.5	
	comp=Z,64nm,20.5s,baz=151,slow=39						
TXAR	**Lajitas Array**	**71.47**	**332**	P	**P**	**04 16 51.6**	**+1.6**
	comp=Z,0.7nm,0.7s,baz=150,slow=8.6,SNR=9.5						
TXAR				pP	**pP**	**04 17 04.4**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=153,slow=9.2,SNR=6.6						
TXAR				LR	LR	04 43 44.1	
	comp=Z,103nm,21.1s,baz=0.0,slow=32						
NVAR	**Mina Array Bea**	**85.45**	**326**	P	**P**	**04 18 08.3**	**+1.3**
	comp=Z,0.5nm,0.7s,baz=135,slow=5.8,SNR=5.6						
NVAR				pP	**pP**	**04 18 23.1**	**+1.5**
	comp=Z,0.4nm,0.7s,baz=137,slow=6.0,SNR=3.4						
ELK	**Elko**	**86.03**	**329**	LR	LR	04 53 48.0	
	comp=Z,28nm,18.8s,baz=104,slow=34						
WRA	**Warramunga Arr**	**118.46**	**209**	PKP	**PKiKP**	**04 24 16.8**	**-0.5**
	comp=Z,0.1nm,0.4s,baz=156,slow=1.6,SNR=1.3						
WRA				pPKP	**pPKPdf**	**04 24 30.2**	**-2.3**
	comp=Z,0.2nm,0.5s,baz=150,slow=1.7,SNR=1.6						
MKAR	**Makanchi Array**	**158.68**	**53**	PKP	**PKPdf**	**04 25 27.3**	**+0.9**
	comp=Z,0.1nm,0.5s,baz=282,slow=1.3,SNR=1.7						
MKAR				pPKP	**pPKPdf**	**04 25 40.9**	**-0.8**
	comp=Z,0.5nm,0.8s,baz=315,slow=0.6,SNR=3.2						

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*IDC **08** 04:40:31.5±0.7, 32°.27N×107°.26W, h0km, mb3.4/2, mb1 3.7/8, mb1mx3.6/35, mbtmp3.4/8, ML3.2/6, MS3.1/4, Ms1 3.1/4, ms1mx2.8/20, Error ellipse: s-maj=15.3km s-min=6.4km az=48.0*

*NEIC **08** 04:40:31.4±1.0, 32°.24N±0°.05×107°.28W±0°.05, h4km±7km, ML4.0/32, Mwr3.9/28, Error ellipse: s-maj=7.4km s-min=5.3km az=204.0*

*ANF **08** 04:40:31.2±0.4, 32°.21N×107°.29W, h4km, ML4.4/11, Error ellipse: s-maj=5.1km s-min=2.8km az=17.0*

*NEIC **08** 04:40:32.2, 32°.27N×107°.30W, h7km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-7.94; $M_{\theta\theta}$0.04; $M_{\phi\phi}$7.90; $M_{r\theta}$3.79; $M_{\theta\phi}$0.19; $M_{\phi r}$-3.37; Fault plane solution: $M_0$9.41000×10^{14} NP1:ϕ_s339.81000°, δ60.08000°, λ-112.23000°. NP2:ϕ_s199.15000°, δ36.65000°, λ-56.67000°. Principal axes: T 8.6261, Plg12.0000°, Azm86.0000°; N 1.4008, Plg19.0000°, Azm351.0000°; P -10.0269, Plg67.0000°, Azm207.0000°;*

ISC 08 04:40:32.3±0.7**, 32°.20N**±0°.04×**107°.31W**±0°.03**, h10km, n92, σ1s.60**/106**, New Mexico**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
121A	**Cookes Peak, D**	**0.52**	**310**	P	**Pg**	**04 40 41.3**	**-1.3**
	baz=125						
121A				S	**Sg**	**04 40 48.5**	**-1.0**
	baz=125						
121A	**Cookes Peak, D**	**0.52**	**310**	Pg	**Pg**	**04 40 41.2**	**-1.3**
121A				Sg	**Sg**	**04 40 48.4**	**-1.1**
121A				IAML		04 40 55.5	
	comp=E,6µm,0.7s						
121A	**Cookes Peak, D**	**0.52**	**310**	P		04 40 41.3	
	baz=125,SNR=1000						
121A				S		04 40 48.4	
	baz=125						
KIDD	**KIDD Seismic O**	**0.80**	**122**	P		04 40 47.0	
	baz=305						
KIDD				S		04 40 58.2	
	baz=305						
MNTX	**Cornudas Mount**	**1.71**	**106**	P	**Pn**	**04 41 00.9**	**-1.3**
	baz=289						
MNTX				S	**Sn**	**04 41 24.2**	**+0.1**
	baz=289						
MNTX	**Cornudas Mount**	**1.71**	**106**	Pn	**Pn**	**04 41 00.8**	**-1.3**
MNTX	**Cornudas Mount**	**1.71**	**106**	P		04 41 00.9	
	baz=289,SNR=466						
Y22A	**Socorro**	**1.76**	**9**	P		04 41 01.3	
	baz=189						
319A	**Douglas**	**1.87**	**245**	Pn	**Pn**	**04 41 04.3**	**-0.1**
Y22D	**IRIS PASSCAL I**	**1.90**	**10**	P	**Pn**	**04 41 03.9**	**-1.0**
	baz=189						
Y22D				Sb	**Sg**	**04 41 31.1**	**-2.3**
	baz=189						
Y22D	**IRIS PASSCAL I**	**1.90**	**10**		**Pn**	**04 41 03.9**	**-1.0**
Y22D				IAML		04 41 41.9	
	comp=N,2µm,0.7s						
Y22D	**IRIS PASSCAL I**	**1.90**	**10**	P		04 41 03.9	
	baz=189,SNR=52						
Y22D				Sb		04 41 31.2	
	baz=189						
LENM	**Lemitar**	**1.98**	**8**		**Pn**	**04 41 02.8**	**-3.3**
BNM	**Barren Site**	**2.03**	**16**	Pn	**Pn**	**04 41 05.2**	**-1.6**
GDL2	**Guadalupe Moun**	**2.50**	**89**		**Pn**	**04 41 12.4**	**-0.7**
ANMO	**Albuquerque**	**2.83**	**14**	Pn	**Pn**	**04 41 17.1**	**-0.7**
	comp=N,1.5nm,0.3s,baz=190,slow=18,SNR=39						
ANMO				Lg	Lg	04 41 57.5	
	comp=N,14nm,0.3s,baz=346,slow=2.3,SNR=5.9						
ANMO				LR	LR	04 42 08.9	
	comp=N,16nm,20.3s,baz=157,slow=35						
ANMO	**Albuquerque**	**2.83**	**14**	P	**Pn**	**04 41 17.0**	**-0.8**
	baz=194						
ANMO				Sb	**Sb**	**04 41 58.0**	**+0.2**
	baz=194						
ANMO	**Albuquerque**	**2.83**	**14**	Pn	**Pn**	**04 41 17.4**	**-0.3**
ANMO	**Albuquerque**	**2.83**	**14**	P		04 41 17.1	
	baz=194,SNR=80						
CLNB	**Carlsbad**	**2.91**	**88**		**Pn**	**04 41 19.1**	**+0.4**
TUC	**Tucson**	**2.95**	**273**	P	**Pn**	**04 41 18.5**	**-0.7**

	baz=90						
TUC				Sb	Sg	04 42 04.6	-2.4
	baz=90						
TUC	Tucson	2.95	273		Pn	04 41 19.6	+0.4
TUC	Tucson	2.95	273	IAML		04 42 06.4	
	comp=N,250nm,0.7s						
X18A	Snowflake	3.21	317	Pn	Pn	04 41 23.0	+0.1
X18A				IAML		04 42 12.4	
	comp=N,689nm,0.8s						
W18A	Petrified Fore	3.55	326	Pn	Pn	04 41 27.8	+0.1
	baz=144						
W18A				Pb	Pb	04 41 37.1	+1.9
	baz=144,SNR=59						
W18A				Sb	Sg	04 42 21.6	-4.6
	baz=144						
W18A	Petrified Fore	3.55	326		Pn	04 41 27.7	+0.1
W18A				IAML		04 42 27.2	
	comp=E,457nm,0.9s						
W18A				IAML		04 42 28.2	
	comp=N,448nm,1.1s						
X16A	Lo Mia Camp, P	4.11	304	Pn	Pn	04 41 35.6	+0.3
X16A				IAML		04 42 50.0	
	comp=N,182nm,1.0s						
X16A				IAML		04 42 57.6	
	comp=E,145nm,1.2s						
MSTX	Muleshoe	4.20	64	P	Pn	04 41 36.1	-0.4
	baz=247						
MSTX				Sb	Sg	04 42 41.8	-5.3
	baz=247						
MSTX	Muleshoe	4.20	64	Pn	Pn	04 41 36.2	-0.2
MSTX	Muleshoe	4.20	64	P		04 41 36.1	
	baz=247,SNR=13						
MSTX				S		04 42 41.3	
	baz=247						
TX31	Lajitas Ar. Si	4.24	131		Pn	04 41 37.2	+0.2
TX31	Lajitas Ar. Si	4.24	131	P		04 41 37.3	
	baz=314						
TX32	Lajitas Array	4.24	131		Pn	04 41 37.4	+0.3
TXAR	Lajitas Array	4.24	131	Pn	Pn	04 41 37.4	+0.3
	comp=E,1.9nm,0.3s,baz=293,slow=13,SNR=220						
TXAR				Pg	Pb	04 41 47.6	+0.6
	comp=E,9.2nm,0.3s,baz=316,slow=15,SNR=49						
TXAR				Sn	Sn	04 42 26.7	0.0
	comp=E,8.6nm,0.3s,baz=312,slow=19,SNR=5.3						
TXAR				Lg	Lg	04 42 44.6	
	comp=E,22nm,0.3s,baz=308,slow=26,SNR=13						
HSIG		4.46	226		Pn	04 41 40.4	+0.4
214A	Organ Pipe Nat	4.68	269	P	Pn	04 41 42.9	-0.1
	baz=85,SNR=61						
214A	Organ Pipe Nat	4.68	269	Pn	Pn	04 41 43.1	+0.1
214A				IAML		04 43 08.7	
	comp=E,118nm,0.9s						
214A				IAML		04 43 11.5	
	comp=N,82nm,1.4s						
WUAZ	Wupatki	4.73	315	Pn	Pn	04 41 44.4	+0.5
	baz=133						
WUAZ				Pg	Pg	04 42 00.1	-2.9
	baz=133,SNR=23						
WUAZ				Sb	Sg	04 42 58.2	-6.1
	baz=133						
WUAZ	Wupatki	4.73	315	Pn	Pn	04 41 44.4	+0.5
MVCO	Mesa Verde	5.10	349	P	Pn	04 41 48.8	-0.2
	baz=168,SNR=11						
MVCO				Sb	Sb	04 43 07.9	+4.9
	baz=168						
MVCO	Mesa Verde	5.10	349	Pn	Pn	04 41 48.8	-0.2
MVCO				IAML		04 43 24.3	
	comp=N,123nm,1.1s						
MVCO				IAML		04 43 29.2	
	comp=N,128nm,1.0s						
PIX	Pinacate	5.27	265	Pn	Pn	04 41 50.4	-0.7
PIX				IAML		04 43 23.4	
	comp=E,61nm,1.2s						
PIX				IAML		04 43 31.9	
	comp=N,46nm,1.5s						
AMTX	Amarillo	5.41	59	P	Pn	04 41 52.7	-0.4
	baz=242						
AMTX	Amarillo	5.41	59	Pn	Pn	04 41 52.4	-0.7
AMTX	Amarillo	5.41	59	P		04 41 52.7	
	baz=242,SNR=5.2						
HPIG		5.44	164		Pn	04 41 53.4	-0.2
T25A	Trinidad	5.48	25	Pn	Pn	04 41 54.5	+0.3
	baz=206,SNR=19						
T25A				Pb	Pb	04 42 09.8	+1.6
	baz=206						
T25A				Sb	Sb	04 43 18.8	+4.8
	baz=206						
S22A	4UR Ranch, Cre	5.55	4	Pg	Pg	04 42 16.7	-1.9
	baz=184,SNR=12						
SDCO	Great Sand Dun	5.73	15	P	Pn	04 41 58.9	+1.2
	baz=195						
SDCO	Great Sand Dun	5.73	15	Pn	Pn	04 41 56.4	-1.3
U15A	North Rim	5.90	317	Pn	Pn	04 41 59.4	-0.6
PV01	Paradox Valley	6.01	350		Pn	04 42 00.4	-1.2
PV05	Paradox Valley	6.05	346	Pn	Pn	04 42 02.0	0.0
PV13	Radium Mtn., P	6.08	349		Pn	04 42 01.9	-0.4
W13A	Hualapai Mount	6.20	300		Pn	04 42 03.9	-0.2
PV15	Paradox Valley	6.21	351	Pn	Pn	04 42 03.4	-0.8
GLA	Glamis	6.40	280		Pn	04 42 06.6	-0.1
ABTX	Abilene, Hawle	6.50	84	P	Pn	04 42 07.7	-0.3
	baz=269,SNR=5.4						
ABTX	Abilene, Hawle	6.50	84		Pn	04 42 07.3	-0.7
ABTX	Abilene, Hawle	6.50	84	P		04 42 07.5	
	baz=269						
KNB	Kanab	6.62	318	Pn	Pn	04 42 09.9	+0.1
JCT	Junction City	6.65	103	Pn	Pn	04 42 10.7	+0.6
PKCU	Pink Cliffs	6.66	323	Pn	Pn	04 42 09.8	-0.7
IRM	Iron Mountain	6.85	289	P	Pn	04 42 13.5	+0.6
	baz=104,SNR=25						
LCMT	Little Creek M	6.86	316	Pn	Pn	04 42 12.5	-0.5
SMCO	Snowmass	6.97	2	Pn	Pn	04 42 13.6	-1.2
BC3	Big Chuckawall	7.00	284	P	Pn	04 42 14.7	-0.2
	baz=100,SNR=13						
MTPU	Mount Pierson	7.07	327	Pn	Pn	04 42 15.7	-0.4
SZCU	Shurtz Canyon	7.18	320	Pn	Pn	04 42 17.5	0.0
CCUT	Cedar City	7.30	319	Pn	Pn	04 42 18.7	-0.5
ESJX	Sierra Juarez	7.33	271	Pn	Pn	04 42 19.6	0.0
SRU	San Rafael Swe	7.38	340	Pn	Pn	04 42 19.6	-0.6
GMRC	Granite Mounta	7.44	293	P	Pn	04 42 21.0	0.0
	baz=108,SNR=8.3						
GMRC				S	Sn	04 43 44.6	-0.9
	baz=108						
MSU	Marysvale	7.45	329	Pn	Pn	04 42 20.7	-0.6
MVU	Marysvale	7.46	329	Pn	Pn	04 42 20.3	-1.0
BELC	Belle Mtn. Jos	7.51	286	P	Pn	04 42 22.2	+0.2
	baz=101,SNR=7.6						
BELC				S	Sn	04 43 46.0	-1.3
	baz=101						
TCRU	Three Creeks R	7.65	328	Pn	Pn	04 42 23.9	-0.1
ISCO	Idaho Springs	7.71	10	S	Sn	04 43 56.2	+3.7
	baz=191						
ISCO	Idaho Springs	7.71	10	Pn	Pn	04 42 23.9	-0.9
MONP2	Monument Peak	7.73	278	P	Pn	04 42 25.4	+0.4
	baz=92						
TMUT	Trail Mountain	7.76	337	Pn	Pn	04 42 24.6	-1.0
P17A	Butcher Ranch,	7.78	340	Pn	Pn	04 42 25.1	-0.6
SHPR	Sheep Range	7.78	306		Pn	04 42 25.5	-0.3
PFO	Pinyon Flats O	7.82	283	Pn	Pn	04 42 26.1	-0.2
	comp=N,0.5nm,0.3s,baz=95,slow=15,SNR=5.5						
PFO				Sn	Sn	04 43 51.9	-3.1
	comp=N,0.3nm,0.3s,baz=18,slow=20,SNR=2.1						
PFO				Lg	Lg	04 44 38.3	
	comp=N,0.3nm,0.3s,baz=160,slow=21,SNR=4.1						
PFO	Pinyon Flats O	7.82	283	P	Pn	04 42 26.1	-0.2
	baz=98						
O20A	White River Ci	7.96	355	Pn	Pn	04 42 27.0	-1.1
PRN	Pahroc Range	8.22	311	Pn	Pn	04 42 31.7	0.0
PSUT	Pine Spring	8.28	322	Pn	Pn	04 42 32.6	0.0
LPIG	La Paz	8.49	199	LR	LR	04 45 52.1	
	comp=N,59nm,20.6s,baz=16,slow=37						
MPU	Maple Canyon	8.55	337	Pn	Pn	04 42 34.6	-1.7
RDMU	Red Mountain	8.55	348	Pn	Pn	04 42 36.0	-0.4
NLU	North Lily Min	8.65	335	Pn	Pn	04 42 36.9	-0.8
TPNV	Topopah Spring	8.76	305	Pn	Pn	04 42 38.9	-0.3
MPMC	Manual Prospec	9.28	297	P	Pn	04 42 47.6	+1.3
	baz=111						
ELK	Elko	10.65	325	Pg	Pn	04 43 50.9	+46
	comp=N,0.0nm,0.3s,baz=166,slow=8.5,SNR=6.1						
ELK				Lg	Lg	04 46 04.4	
	comp=N,0.1nm,0.3s,baz=29,slow=19,SNR=2.0						
PDAR	Pinedale Array	10.70	351	Pn	Pn	04 43 07.5	+1.7
	comp=N,0.1nm,0.3s,baz=156,slow=12,SNR=2.9						
PDAR				Pg		04 43 53.5	
	comp=N,0.1nm,0.3s,baz=172,slow=14,SNR=4.3						
PDAR				Lg	Lg	04 46 04.1	
	comp=N,0.1nm,0.3s,baz=161,slow=21,SNR=2.1						
NVAR	Mina Array Bea	10.92	308	Pn	Pn	04 43 12.7	+3.8
	comp=N,0.0nm,0.3s,baz=131,slow=14,SNR=5.1						
NVAR				Pg		04 43 52.5	
	comp=N,0.1nm,0.3s,baz=124,slow=14,SNR=3.7						
NVAR				LR	LR	04 47 35.1	
	comp=N,106nm,19.9s,baz=162,slow=39						
TKL	Tuckaleechee C	19.82	74	LR	LR	04 52 51.4	
	comp=N,108nm,19.1s,baz=328,slow=38						
ULM	Lac du Bonnet	19.94	22	P	Pn	04 45 04.5	-1.4
	comp=N,0.1nm,0.3s,baz=201,slow=15,SNR=3.2						
SADO	Sadowa	25.23	52	LR	LR	04 56 35.6	
	comp=N,53nm,19.7s,baz=78,slow=38						
YKA	Yellowknife Ar	30.67	353	P	P	04 46 45.8	-0.9
	comp=N,0.5nm,0.9s,baz=163,slow=8.9,SNR=4.6						
ILAR	Eielson Array	40.61	335	P	P	04 48 14.1	+2.2
	comp=N,0.6nm,0.9s,baz=107,slow=7.3,SNR=5.8						

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*ANF **08** 04:41:38.7±0.6,36°.27N×97°.22W,h5^{km},ML4.1/7,Error ellipse: s-maj=8.4km s-min=5.2km az=8.0*

*TUL **08** 04:41:38.7±1.1,36°.26N±0°.01×97°.26W±0°.02,h6^{km}±7^{km}, ML3.3,mb_Lg3.4/103(NEIC),Error ellipse: s-maj=2.7km s-min=1.7km az=68.0*

*NEIC **08** 04:41:38.9±1.0,36°.258N±0°.006×97°.27W±0°.02,h5^{km}±7^{km}, Error ellipse: s-maj=2.8km s-min=0.5km az=73.0*

ISC 08 04:41:38.9±1.1,**36°.26N**±0°.02×**97°.26W**±0°.02,**h6**^{km}±10^{km}, **n106,σ0ˢ.55**/96,**Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QUOK	Quay	0.46	101		Pg	04 41 47.9	+0.2
QUOK				Sg	Sg	04 41 54.0	+0.4
OK031	S. Brethren Rd	0.46	132		Pg	04 41 47.9	+0.1
OK031				Sg	Sg	04 41 54.0	+0.2
OK029	Liberty Lake	0.49	199		Pg	04 41 48.3	0.0
OK029				Sg	Sg	04 41 54.8	+0.1
OK030	Cody Creek RV	0.51	131		Pg	04 41 48.8	+0.1
OK030				Sg	Sg	04 41 55.7	+0.4
CROK	Carrier	0.63	293		Pg	04 41 50.9	-0.1
CROK				Sg	Sg	04 41 59.6	+0.4
BCOK	Bluff Creek, N	0.67	205		Pg	04 41 51.3	-0.4
BCOK				Sg	Sg	04 42 00.6	+0.2
OK025	Westminster Rd	0.68	185		Pg	04 41 51.8	-0.2
OK025				Sg	Sg	04 42 01.2	+0.4
KAN13	South Haven SW	0.77	347		Pg	04 41 53.5	-0.1
KAN13				Sg	Sg	04 42 04.0	+0.3
OKCFA	Oklahoma City	0.86	190		Pg	04 41 55.0	-0.4
OKCSW	OKLAHOMA CITY	0.87	190		Pg	04 41 55.1	-0.4
OKCSW				Sg	Sg	04 42 07.0	+0.3
T35A	Sooner Cattle	0.89	43		Pg	04 41 55.6	-0.3
T35B	Sooner Cattle	0.89	43	P		04 41 55.7	
	baz=223,SNR=407						
KAN14	Manchester OK	0.89	321		Pg	04 41 55.7	-0.3
KAN01	Argonia South	0.97	336		Pg	04 41 57.2	-0.4
KAN05	Bluff City Nor	0.98	330		Pg	04 41 57.3	-0.3
FNO	Franklin	1.01	186		Pg	04 41 57.9	-0.3
KAN10	Anthony SW Sta	1.09	322		Pg	04 41 59.4	-0.4
KAN08	Anthony NE Sta	1.12	330		Pg	04 41 59.8	-0.5
KAN12	Harper NE Stat	1.19	330		Pg	04 42 01.1	-0.5
TUL1	Leonard	1.24	106	P	Pg	04 42 01.4	-1.2
	baz=287						
TUL1				S	Sg	04 42 18.2	-0.6
	baz=287						
TUL1	Leonard	1.24	106		Pg	04 42 01.0	-1.6
TUL1	Leonard	1.24	106	P		04 42 01.1	
	baz=287,SNR=272						
TUL1				S		04 42 18.0	
	baz=287						
U32A	Winter Ranch,	1.41	275		Pn	04 42 04.6	-0.6
U32A	Winter Ranch,	1.41	275	P		04 42 04.6	
	baz=94						
U32A				S		04 42 23.9	
	baz=94						
WMOK	Wichita Mounta	1.96	220	P	Pn	04 42 12.9	+0.2
	baz=39						
WMOK				S	Sb	04 42 39.2	-0.6
	baz=39						
WMOK	Wichita Mounta	1.96	220		Pn	04 42 12.9	+0.2
WMOK	Wichita Mounta	1.96	220	P		04 42 13.0	
	baz=39,SNR=137						
WMOK				S		04 42 39.8	
	baz=39						
X37A	Clayton	2.27	137		Pn	04 42 17.4	+0.4
X37A	Clayton	2.27	137	P		04 42 17.4	
	baz=318						
X37A				S		04 42 49.8	
	baz=318						
U38A	Gravette	2.33	85		Pn	04 42 18.3	+0.5
U38A	Gravette	2.33	85	P		04 42 18.8	
	baz=266						
R32A	Long Quarter,	2.45	332		Pn	04 42 18.9	-0.5
R32A	Long Quarter,	2.45	332	P		04 42 19.8	
	baz=152						
HHAR	Hobbs	2.68	89		Pn	04 42 23.6	+0.9
KSU1	Kansas State U	2.88	10	P	Pn	04 42 25.3	-0.1
	baz=190						
KSU1	Kansas State U	2.88	10	Pn	Pn	04 42 26.0	+0.7
KSU1				IAmb_Lg		04 43 13.7	
	comp=Z,99nm,0.7s						
KSU1	Kansas State U	2.88	10	Sb		04 43 09.0	
	baz=190						
Z35A	Perchaven, San	2.92	180		Pn	04 42 25.9	0.0
Z35A	Perchaven, San	2.92	180	P		04 42 26.6	
	baz=360,SNR=7.2						
W39A	Magazine	3.02	110	P	Pn	04 42 27.8	+0.5
	baz=292						
W39A				S	Sn	04 43 04.7	+0.8
	baz=292						
W39A	Magazine	3.02	110		Pn	04 42 27.5	+0.2
W39A				IAmb_Lg		04 43 18.8	
	comp=Z,170nm,0.8s						
W39A	Magazine	3.02	110	P		04 42 27.5	
	baz=292						
CBKS	Cedar Bluff	3.22	323	P	Pn	04 42 29.9	-0.2
	baz=142						
CBKS				S	Sn	04 43 09.4	+0.7
	baz=142						
CBKS	Cedar Bluff	3.22	323		Pn	04 42 30.3	+0.3
CBKS				IAmb_Lg		04 43 28.3	
	comp=Z,98nm,0.8s						
CBKS	Cedar Bluff	3.22	323	P		04 42 30.2	
	baz=142,SNR=11						
S39A	Bolivar	3.46	65		Pn	04 42 33.9	+0.5
S39A				IAmb_Lg		04 43 34.6	
	comp=Z,66nm,0.8s						
S39A	Bolivar	3.46	65	P		04 42 33.9	
	baz=247,SNR=36						
MIAR	Mount Ida	3.46	119	P	Pn	04 42 33.5	+0.2
	baz=301						
MIAR				S	Sn	04 43 15.3	+0.6
	baz=301						
MIAR	Mount Ida	3.46	119		Pn	04 42 33.7	+0.4
MIAR				IAmb_Lg		04 43 34.7	
	comp=Z,89nm,0.7s						
MIAR	Mount Ida	3.46	119	P		04 42 33.8	
	baz=301,SNR=47						
Z38A	Mt. Pleasant	3.53	147	Pn	Pn	04 42 34.5	+0.2
U40A	Yellville	3.56	87	P	Pn	04 42 35.0	+0.2
	baz=270						
U40A				S	Sn	04 43 18.0	+0.8
	baz=270						
U40A	Yellville	3.56	87		Pn	04 42 35.6	+0.8
U40A	Yellville	3.56	87	P		04 42 34.7	
	baz=270,SNR=63						
U40A				P		04 42 34.7	
	baz=270,SNR=63						
X40A	Basin Creek Fa	4.03	115	Pn	Pn	04 42 41.6	+0.5
X40A				IAmb_Lg		04 43 52.8	
	comp=Z,100nm,0.7s						
MGMO	Mountain Grove	4.11	76		Pn	04 42 42.5	+0.2
MGMO				IAmb_Lg		04 43 54.2	
	comp=Z,58nm,0.8s						
WHAR	Wooly Hollow	4.16	102		Pn	04 42 43.4	+0.5
WHAR				IAmb_Lg		04 43 51.5	
	comp=Z,88nm,0.7s						
FCAR	Ozark Folk Cen	4.18	94	Pn	Pn	04 42 44.0	+0.9
W41B	Gary Mavity, V	4.22	103	P		04 42 43.7	
	baz=286,SNR=20						
WHTX	Lake Whitney,	4.26	182	Pn	Pn	04 42 44.2	-0.2
WLAR	White Oak Lake	4.27	126		Pn	04 42 44.1	-0.2
WLAR				IAmb_Lg		04 43 51.9	
	comp=Z,56nm,0.8s						
237A	Washetta, Mont	4.42	164	Pn	Pn	04 42 46.3	-0.1
237A					Sn	04 43 36.5	-1.8
237A	Washetta, Mont	4.42	164	P		04 42 46.3	
	baz=345						
P38A	Dawn	4.47	40	Pn	Pn	04 42 47.7	+0.6
R40A	Maddies Statio	4.47	62	IAmb_Lg		04 43 58.1	
	comp=Z,50nm,0.7s						
R40A	Maddies Statio	4.47	62	P		04 42 47.2	
	baz=244,SNR=34						
N33A	J Bar K, Exete	4.47	358	Pn	Pn	04 42 47.1	-0.1
N33A				IAmb_Lg		04 44 10.8	
	comp=Z,95nm,0.8s						
N35A	Tabor	4.76	15	Pn	Pn	04 42 51.2	-0.1
LCAR	Lake Charles	4.95	90		Pn	04 42 54.3	+0.6
LCAR				IAmb_Lg		04 44 15.8	
	comp=Z,93nm,0.9s						
T42A	Van Buren	5.02	79		Pn	04 42 55.0	+0.3
T42A				IAmb_Lg		04 44 19.0	
	comp=Z,61nm,0.8s						
T42A	Van Buren	5.02	79	P		04 42 54.7	
	baz=263,SNR=14						
KSCO	Kaye Shedlock'	5.07	304		Pn	04 42 54.8	-0.7
KSCO				IAmb_Lg		04 44 20.2	
	comp=Z,54nm,0.7s						
CCAR	Cane Creek	5.07	116	Pn	Pn	04 42 56.5	+1.0
CCAR				IAmb_Lg		04 44 32.6	
	comp=Z,92nm,0.8s						
CCM	Cathedral Cave	5.13	68	Pn	Pn	04 42 56.3	+0.1
CCM				IAmb_Lg		04 44 25.5	
	comp=Z,45nm,0.8s						
BGNE	Belgrade	5.18	353	Pn	Pn	04 42 56.3	-0.7
BGNE	Belgrade	5.18	353	P		04 42 56.8	
	baz=172,SNR=5.5						
P40A	Paris	5.26	50	Pn	Pn	04 42 58.9	+0.9
435B	Jarrell	5.47	183	Pn	Pn	04 43 01.4	+0.4
435B					LR	04 44 34.3	
435B				IAmb_Lg		04 44 42.1	
	comp=Z,65nm,0.8s						
N38A	Joes South For	5.51	34	Pn	Pn	04 43 01.7	+0.1
N38A				IAmb_Lg		04 44 37.9	
	comp=Z,57nm,0.7s						
N38A	Joes South For	5.51	34	P		04 43 02.2	
	baz=216,SNR=6.5						
PBMO	Poplar Bluff	5.53	83	Pn	Pn	04 43 02.4	+0.7
PBMO				IAmb_Lg		04 44 34.1	
	comp=Z,87nm,0.8s						
FVM	French Village	5.73	71	Pn	Pn	04 43 04.4	-0.1
L34A	Svendsen Farm,	5.74	7	Pn	Pn	04 43 05.0	+0.4
OGNE	Ogallala	5.98	323	Pn	Pn	04 43 08.2	+0.1
OGNE				IAmb_Lg		04 44 54.6	
	comp=Z,43nm,0.7s						
143A	Socs Landing,	6.00	125	IAmb_Lg		04 45 05.2	
	comp=Z,50nm,0.9s						
JCT	Junction City	6.15	201	Pn	Pn	04 43 10.4	+0.1
SCIA	State Center	6.45	28	Pn	Pn	04 43 14.1	-0.4
SCIA				IAmb_Lg		04 45 18.0	
	comp=Z,68nm,0.7s						
K31A	O'Neill	6.46	350	Pn	Pn	04 43 14.7	+0.2
K31A					LR	04 45 02.8	
S44A	Carbondale	6.57	75	Pn	Pn	04 43 15.8	-0.2
OXF	Oxford	6.65	103	Pn	Pn	04 43 17.3	+0.2
OXF				IAmb_Lg		04 45 13.9	
	comp=Z,70nm,0.7s						
W45A	Hickory Valley	6.66	97	Pn	Pn	04 43 18.0	+0.7
N41A	Harden Midland	6.70	47	Pn	Pn	04 43 17.5	-0.3
N41A					LR	04 45 07.9	
SDCO	Great Sand Dun	6.76	285	IAmb_Lg		04 45 18.2	
	comp=Z,39nm,1.1s						
Y45A	Yeager Farm, C	6.77	108	IAmb_Lg		04 45 27.1	
	comp=Z,37nm,0.7s						
T45A	Paducah	6.97	81	Pn	Pn	04 43 22.5	+1.0
P43A	Skaggs, Pawnee	6.98	59	Pn	Pn	04 43 21.5	-0.2
P43A					LR	04 45 16.3	
P43A				IAmb_Lg		04 45 22.3	
	comp=Z,40nm,0.8s						
Q44A	Meyer Farm, Va	7.06	66	IAmb_Lg		04 45 32.0	
	comp=Z,41nm,0.8s						
K38A	Parkersburg	7.26	27	Pn	Pn	04 43 26.1	+0.6
K38A				IAmb_Lg		04 45 37.8	
	comp=Z,61nm,0.8s						
ECSD	EROS Data Cent	7.48	4		Pn	04 43 27.5	-1.0
HDIL	Hopedale	7.58	53	Pn	Pn	04 43 29.0	-0.9
HDIL				IAmb_Lg		04 45 44.9	
	comp=Z,44nm,0.8s						
PLAL	Pickwick Lake	7.59	97	Pn	Pn	04 43 30.3	+0.2
PLAL					LR	04 45 36.1	
PLAL				IAmb_Lg		04 45 43.7	
	comp=Z,29nm,0.9s						
146A	Union	7.68	116	IAmb_Lg		04 46 04.9	
	comp=Z,29nm,1.0s						
USIN	University of	7.85	75	IAmb_Lg		04 45 49.4	
	comp=Z,51nm,1.0s						
O44A	Mansfield	7.94	58	IAmb_Lg		04 46 03.3	
	comp=Z,27nm,0.8s						
T47A	Sharon Grove	8.20	82	Pn	Pn	04 43 39.1	+0.7
T47A					LR	04 45 54.6	
T47A				IAmb_Lg		04 46 11.8	
	comp=Z,44nm,0.8s						
L42A	Oliver, Polo	8.22	44	IAmb_Lg		04 46 07.5	
	comp=Z,30nm,0.9s						
SUSD	Miller	8.27	352	IAmb_Lg		04 46 02.9	
	comp=Z,54nm,1.2s						
I37A	Lemond, Waseca	8.29	20	IAmb_Lg		04 46 09.4	
	comp=Z,27nm,0.8s						
V48A	Smith Brothers	8.48	90	IAmb_Lg		04 46 08.5	
	comp=Z,37nm,0.9s						
X48A	Hartselle	8.54	99	IAmb_Lg		04 46 08.9	
	comp=Z,27nm,0.8s						
JFWS	Jewell Farm	8.57	37	Pn	Pn	04 43 43.1	-0.3
P46A	Rosedale	8.62	64	IAmb_Lg		04 46 23.0	
	comp=Z,29nm,0.8s						
CLTN	Cedars of Leba	8.84	88	IAmb_Lg		04 46 21.8	
	comp=Z,24nm,1.0s						
WCI	Wyandotte Cave	8.96	74	Pn	Pn	04 43 48.5	-0.4
WCI					LR	04 46 19.3	
SFIN	Lafayette	8.98	60	IAmb_Lg		04 46 24.3	
	comp=Z,26nm,0.7s						
BLO	Bloomington	8.99	68	IAmb_Lg		04 46 35.5	
	comp=Z,43nm,0.7s						
I40A	Norwalk	9.16	32	Pn	Pn	04 43 51.2	-0.3
I40A				IAmb_Lg		04 46 43.0	
	comp=Z,28nm,1.1s						
HQIL	Hanson Quary C	9.17	50	IAmb_Lg		04 46 27.3	
	comp=Z,32nm,1.1s						
SWET	Sewanee	9.27	93	IAmb_Lg		04 46 46.6	
	comp=Z,21nm,0.7s						
K43A	Burlington	9.43	44	IAmb_Lg		04 47 03.8	
	comp=Z,35nm,1.0s						
K22A	Casper	9.59	315	IAmb_Lg		04 47 09.2	
	comp=Z,25nm,1.1s						
F33A	5 Mile Ranch,	9.60	4	IAmb_Lg		04 46 56.4	
	comp=Z,21nm,1.0s						
FPAL	Fort Paine	9.66	97	IAmb_Lg		04 46 54.2	
	comp=Z,21nm,0.8s						
W50A	Signal Mountai	9.77	93	IAmb_Lg		04 46 53.0	
	comp=Z,36nm,1.0s						
P48A	Milroy	9.89	68	IAmb_Lg		04 46 56.6	
	comp=Z,20nm,0.8s						
I42A	Draeger Farm,	9.94	37	IAmb_Lg		04 47 04.0	
	comp=Z,18nm,1.0s						

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*MOS **08** 05:28:55.6±1.8,35°.37N×22°.60E,h10^{km},mb4.4/18,Error ellipse: s-maj=6.8km s-min=4.0km az=65.2*

*IDC **08** 05:28:56.3±0.5,35°.53N×22°.89E,h0^{km},mb4.3/28, mb1 4.2/34,mb1mx4.1/68,mbtmp4.2/34,ML3.9/6,MS3.4/9, Ms1 3.4/9,ms1mx3.1/54,Error ellipse: s-maj=13.3km s-min=11.1km az=150.0*

*BEO **08** 05:28:57.8±3.1,35°.07N×22°.46E,h71^{km}±2^{km},ML4.4/10*

*THE **08** 05:28:59.9,35°.35N×22°.59E,h0^{km}±1^{km},ML4.1/8,Error ellipse: s-maj=2.0km s-min=0.6km az=223.0*

*ATH **08** 05:29:01.1,35°.41N×22°.68E,h12^{km}±6^{km},ML4.1/7,Error ellipse: s-maj=7.3km s-min=1.9km az=41.0*

*ISK **08** 05:29:02.1,35°.48N×22°.80E,h87^{km},ML4.0/18*

*NEIC **08** 05:29:03.6±2.2,35°.53N±0°.05×22°.71E±0°.07,h55^{km}±6^{km}, mb4.3/20,ML4.1(THE),Error ellipse: s-maj=8.3km s-min=6.8km az=80.0*

*HLW **08** 05:29:03.2,35°.62N×23°.67E,h15^{km}±16^{km},Md4.2*

ISC 08 05:29:01.3±0.7,**35°.46N**±0°.04×**22°.58E**±0°.04,**h41**^{km}±6^{km}, **n357,σ2ˢ.39**/391,**mb4.3**/53,**MS3.2**/4,**17C-12D,Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTHR	Kythira	0.87	23	P	Pn	05 29 17.9	+0.7

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KTHR                             S     Sn    05 29 32.4 +3.7
      13µm,0.5s
KTHA  Kythira Island    0.89  26 P     Pn    05 29 18.1 +0.7
KTHA                             S     Sn    05 29 31.2 +2.1
KTHA                             AML   AML   05 29 34.0
      comp=E,58075µm,0.9s
KTHA                             AML   AML   05 29 38.8
      comp=N,18568µm,0.6s
KTHA  Kythira Island    0.89  26 P     Pn    05 29 18.3 +0.9
KTHA                             S     Sn    05 29 33.1 +4.0
      comp=N,19µm,0.7s
IMMV  Iera Moni Meta    1.14  89 P     Pn    05 29 21.4 +0.6
IMMV                             S     Sn    05 29 35.3  0.0
IMMV                             AML   AML   05 29 43.9
      comp=N,26950µm,0.5s
IMMV                             AML   AML   05 29 45.5
      comp=E,24976µm,0.5s
IMMV  Iera Moni Meta    1.14  89 P     Pn    05 29 22.4 +1.6
IMMV                             S     Sn    05 29 37.6 +2.4
      comp=E,13µm,0.5s
IMMV  Iera Moni Meta    1.14  89 PG    Pn    05 29 22.2 +1.4
IMMV                             SG    Sn    05 29 36.5 +1.3
MNVA  Monemvasia        1.28  17 P     Pn    05 29 25.1 +2.4
MNVA                             AML   AML   05 29 48.5
      comp=E,11119µm,0.8s
MNVA                             AML   AML   05 29 50.9
      comp=N,9582µm,1.3s
VLI   Veliai            1.29  13 P     Pn    05 29 25.2 +2.3
VLI   Veliai            1.29  13 P     Pn    05 29 25.5 +2.6
VLI                              S     Sn    05 29 46.1 +7.1
VAM   Vamos             1.32  92 P     Pn    05 29 24.6 +1.3
VAM                              AML   AML   05 29 53.4
      comp=E,18395µm,1.0s
VAM                              AML   AML   05 29 57.7
      comp=N,20714µm,0.7s
VAM   Vamos             1.32  92 P     Pn    05 29 24.7 +1.4
VAM                              S     Sn    05 29 43.9 +4.2
      comp=N,10µm,0.8s
VAM   Vamos             1.32  92 P     Pn    05 29 24.7 +1.4
GVD   Gavdhos           1.38 116 P     Pn    05 29 25.1 +1.0
GVD                              AML   AML   05 29 55.8
      comp=N,12917µm,0.7s
GVD                              AML   AML   05 29 57.2
      comp=E,16595µm,0.5s
GVD   Gavdhos           1.38 116 P     Pn    05 29 24.9 +0.9
GVD   Gavdhos           1.38 116 PN    Pn    05 29 25.2 +1.2
GVDS  Gavdos            1.38 116 P     Pn    05 29 24.8 +0.8
GVDS  Gavdos            1.38 116 PN    Pn    05 29 24.8 +0.8
ITM   Ithomi            1.80 343 P     Pn    05 29 33.1 +3.2
ITM   Ithomi            1.80 343 PN    Pn    05 29 33.4 +3.5
ITM   Ithomi            1.80 343       Pn    05 29 33.8 +3.9
SIVA  Sivas             1.87 103 P     Pn    05 29 32.3 +1.5
SIVA                             AML   AML   05 30 15.2
      comp=E,14882µm,0.7s
SIVA                             AML   AML   05 30 18.6
      comp=N,7715µm,0.7s
SIVA  Sivas             1.87 103 P     Pn    05 29 32.1 +1.2
IDI   Anoyia            1.89  94 Pn    Pn    05 29 32.6 +1.4
      comp=N,112nm,0.3s,baz=260,slow=8.2,SNR=618
IDI                              Sn    Sn    05 30 03.8  +10
      comp=N,110nm,0.3s,baz=27,slow=22,SNR=6.2
IDI   Anoyia            1.89  94 P     Pn    05 29 32.5 +1.4
IDI                              AML   AML   05 30 13.5
      comp=E,3159µm,0.6s
IDI                              AML   AML   05 30 14.4
      comp=N,5552µm,0.9s
IDI   Anoyia            1.89  94 P     Pn    05 29 32.7 +1.5
KRND  KRANIDI           1.98  13 P     Pn    05 29 35.4 +3.1
KRND                             S     Sn    05 30 03.5 +7.7
      comp=N,3µm,0.9s
IACM  Heraklion         2.04  94 P     Pn    05 29 35.1 +2.0
KSTL  Kastelli Herak    2.04  94 P     Pn    05 29 37.4 +4.3
HRKL  Herakleio         2.06  93 P     Pn    05 29 35.5 +2.1
HRKL  Herakleio         2.06  93 PN    Pn    05 29 34.2 +0.8
AMT   Artemida-Makis    2.19 341 P     Pn    05 29 38.5 +3.3
LAST  Lasithi           2.39  96 P     Pn    05 29 39.7 +1.7
THR5  Thira Island,     2.44  66 P     Pn    05 29 39.3 +0.7
SAP3  Santorini-Thir    2.44  66 P     Pn    05 29 39.4 +0.7
SNT5  Nea Kammeni, S    2.47  67 P     Pn    05 29 39.5 +0.5
THR3  Thira Island,     2.48  67 P     Pn    05 29 39.7 +0.6
NPS   Neapolis          2.48  94 P     Pn    05 29 40.5 +1.2
NPS   Neapolis          2.48  94 P     Pn    05 29 40.8 +1.5
SANT  Santorini         2.51  68 P     Pn    05 29 39.9 +0.3
SANT  Santorini         2.51  68 ⇑P    Pn    05 29 39.8 +0.3
SANT                             ⇓S    Sn    05 30 08.0 -0.9
SANT  Santorini         2.51  68 PN    Pn    05 29 39.9 +0.3
SANT  Santorini         2.51  68 Pn    Pn    05 29 39.6  0.0
THR8  Santorini-Mono    2.53  67 P     Pn    05 29 40.1 +0.2
LOUT  Loutraki          2.55   7 P     Pn    05 29 43.6 +3.5
THAL  Thalero           2.58   1 P     Pn    05 29 44.1 +3.6
LTK   Loutraki          2.58   7 P     Pn    05 29 43.3 +2.7
VLY   Voula,Athens      2.58  22 P     Pn    05 29 42.0 +1.4
DRO   Drossia           2.59 345 P     Pn    05 29 44.4 +3.7
KLV   Kalavryta, Ach    2.61 352 P     Pn    05 29 45.1 +4.1
ATH   Athens Observa    2.67  20 P     Pn    05 29 45.4 +3.6
ATH                              S     Sn    05 30 21.0 +8.1
      comp=N,1µm,1.1s
ATHU  Athens Univers    2.68  21 P     Pn    05 29 45.3 +3.3
RLS   Riolos of Patr    2.75 341 P     Pn    05 29 46.6 +3.7
VILL  Villia            2.77  12 P     Pn    05 29 47.0 +3.8
LAKA  Lakka             2.82 350 P     Pn    05 29 47.5 +3.6
ALIK  Aliki, Aigiali    2.82 352 P     Pn    05 29 44.9 +1.0
DION  Dionisos Attik    2.83  22 P     Pn    05 29 45.4 +1.3
APE   Apeiranthos       2.87  55 P     Pn    05 29 44.7 +0.1
APE   Apeiranthos       2.87  55 ⇑P    Pn    05 29 44.7 +0.1
APE                              ⇓S    Sn    05 30 15.8 -2.2
APE   Apeiranthos       2.87  55 PN    Pn    05 29 44.8 +0.1
APE   Apeiranthos       2.87  55 i P   Pn    05 29 44.7 +0.1
STIA  Sitia Lasithi     2.88  94 P     Pn    05 29 46.0 +1.3
TRIZ  Trizonia          2.93 352 P     Pn    05 29 46.7 +1.3
KALE  Kalithea          2.95 353 P     Pn    05 29 50.1 +4.4
KARY  Karystos          2.97  30 P     Pn    05 29 48.1 +2.2
SERG  Sergoula          2.98 352 P     Pn    05 29 49.6 +3.5
ZKR   Zakros            2.99  95 P     Pn    05 29 48.1 +1.9
ZKR   Zakros            2.99  95 PN    Pn    05 29 47.1 +0.9
PSDA  Pessada-Kefalo    3.10 329 P     Pn    05 29 49.8 +2.1
EREA  Eretria           3.15  20 P     Pn    05 29 51.7 +3.3
EREA                             S     Sn    05 30 31.8 +7.0
LKR   Lokris            3.21   6 P     Pn    05 29 51.0 +1.8
ATAL  Atalanti          3.25   6 P     Pn    05 29 51.7 +1.9
KEF3  Kipouria, Keph    3.28 327 P     Pn    05 29 52.0 +1.9
KEF5  Kardakata, Kep    3.29 330 P     Pn    05 29 52.4 +2.1
KEF4  Livadi, Kephal    3.29 329 P     Pn    05 29 52.5 +2.2
AXAR  Agios Charalam    3.30   1 P     Pn    05 29 53.6 +3.1
PDO   Prodromos         3.33 341 P     Pn    05 29 54.2 +3.3
SMIA  Simia             3.45   8 P     Pn    05 29 55.1 +2.5
EVGI  Lefkada island    3.52 335 P     Pn    05 29 56.0 +2.6
AGG   Agios Georgios    3.56 357 P     Pn    05 29 57.0 +2.9
MAKR  Makrakomi, Fth    3.57 354 P     Pn    05 29 57.8 +3.6
MAKR                             S     Sn    05 30 42.1 +7.0
      comp=N,688nm,1.0s
NYDR  Nydri-Lefkada     3.58 336 P     Pn    05 29 56.4 +2.1
KARP  Karpathos         3.73  87 P     Pn    05 29 56.6 +0.1
KARP  Karpathos         3.73  87 PN    Pn    05 29 56.6 +0.1
KARP  Karpathos         3.73  87 Pn    Pn    05 29 56.6 +0.1
KOSK  Kos Island        3.79  69 PN    Pn    05 29 57.6 +0.5
NEO   Neokhori          3.88   7 P     Pn    05 30 00.7 +2.3
BODT  Bodrum            4.14  66 PN    Pn    05 30 01.5 -0.5
URLA  Izmir             4.33  47 PN    Pn    05 30 04.2 -0.4
JAN   Janina            4.41 342 P     Pn    05 30 07.7 +1.9
JAN   Janina            4.41 342 P     Pn    05 30 08.8 +3.0
SLUM  Salum             4.52 150 P     Pn    05 30 08.0 +0.8
      baz=162
SLUM                             S     Sn    05 30 55.3 -3.3
      baz=162
ARG   Arkhangelos       4.57  79 P     Pn    05 30 08.3 +0.4
ARG   Arkhangelos       4.57  79 PN    Pn    05 30 08.2 +0.4
ARG                              SN    Sn    05 30 56.2 -3.4
ARG   Arkhangelos       4.57  79 P     Pn    05 30 09.0 +1.2
MLSB  Milas             4.57  65 PN    Pn    05 30 08.4 +0.4
KPRO  Kipourio          4.59 348 P     Pn    05 30 11.3 +3.0
BLCB  Balcova           4.62  49 PN    Pn    05 30 08.9 +0.4
TURN  Turunc            4.77  72 PN    Pn    05 30 10.8 +0.2
PENT  Pentalofos        4.87 347 P     Pn    05 30 15.2 +3.1
YER   Yerkesik          4.90  68 P     Pn    05 30 13.8 +1.3
YER   Yerkesik          4.90  68 PN    Pn    05 30 12.6 +0.1
YER   Yerkesik          4.90  68 P     Pn    05 30 16.0 +3.5
AYDB  Zeytinkoy-Aydi    4.94  58 PN    Pn    05 30 13.0  0.0
LSK   Leskovik          4.94 342 P     Pn    05 30 15.5 +2.4
DKL   Dikili            4.99  42 PN    Pn    05 30 14.1 +0.5
DALY  Dalyan (Mula)     5.10  73 PN    Pn    05 30 15.2 +0.1
FETY  Fethiye           5.40  76 PN    Pn    05 30 18.6 -0.7
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FNA   Florina           5.40 350 P     Pn    05 30 21.1 +1.7
FNA                              S     Sn    05 31 25.8 +5.5
      comp=N,230nm,0.7s
SCTE  Santa Cesarea     5.64 326 Pn    Pn    05 30 23.1 +0.5
MANT  Manisa            5.66  56       Pn    05 30 24.6 +1.5
AKAS  Kas               5.76  80 PN    Pn    05 30 22.9 -1.4
AKAS  Kas               5.76  80 Pn    Pn    05 30 22.9 -1.4
OHR   Ohrid             5.82 347 P     Pn    05 30 29.3 +4.2
OHR   Ohrid             5.82 347 i Pn  Pn    05 30 26.8 +1.8
VAY   Valandovo         5.86 360 i Pn  Pn    05 30 26.9 +1.3
TIP   Timpagrande       5.95 310 ⇑P    Pn    05 30 28.0 +1.1
TIP   Timpagrande       5.95 310 Pn    Pn    05 30 28.6 +1.8
CEL   Celeste           6.05 300 Pn    Pn    05 30 30.2 +2.0
ELL   Elmali            6.07  76 P     Pn    05 30 29.7 +1.1
ELL   Elmali            6.07  76 Pn    Pn    05 30 29.7 +1.1
TIR   Tirane            6.26 341 ePn   Pn    05 30 31.5 +0.4
TIR                              eSn   Sn    05 31 37.0 -4.3
TIR   Tirane            6.26 341 ⇑P    Pn    05 30 30.6 -0.5
TIR   Tirane            6.26 341 P     Pn    05 30 33.0 +2.0
TIR   Tirane            6.26 341       Pn    05 30 33.0 +2.0
EDC   Edincik           6.42  39 P     Pn    05 30 36.0 +2.7
SKO   Skopje            6.57 353 ePn   Pn    05 30 36.2 +0.9
SKO                              eSn   Sn    05 31 46.3 -2.6
SKO   Skopje            6.57 353 i Pn  Pn    05 30 36.8 +1.5
SWA2                    6.65 158 P     Pn    05 30 37.0 +0.5
      baz=166
BCK   Bucak             6.75  70 P     Pn    05 30 39.7 +1.7
TVSB  Tavsanli          6.77  52 PN    Pn    05 30 38.2  0.0
ISP   Isparta           6.80  67 P     Pn    05 30 39.3 +0.6
ISP   Isparta           6.80  67 Pn    Pn    05 30 39.3 +0.6
PLD   Plovdiv           6.84  13 ePn   Pn    05 30 38.9 -0.2
RAFF  Raffo Rosso       6.87 287 Pn    Pn    05 30 40.6 +1.2
VAE   Valguarnera       6.89 289 Pn    Pn    05 30 43.5 +3.7
      comp=N,1.3nm,0.3s,baz=274,slow=2.5,SNR=4.2
VAE                              Sn    Sn    05 31 55.5 -1.3
      comp=N,3.4nm,0.3s,baz=0.0,slow=7.1,SNR=3.5
MATE  Matera            6.96 320 ⇓P    Pn    05 30 40.9 +0.3
VTS   Vitosha           7.17   4 ⇑P    Pn    05 30 43.7  0.0
VTS   Vitosha           7.17   4 P     Pn    05 30 44.8 +1.1
VTS   Vitosha           7.17   4 Pn    Pn    05 30 44.8 +1.1
PDG   Podgorica         7.43 341 ePn   Pn    05 30 46.2 -0.9
PDG                              eSn   Sn    05 32 06.3 -3.8
PDG   Podgorica         7.43 341 ePn   Pn    05 30 44.3 -2.8
HCY   Herceg Novi       7.67 337 ePn   Pn    05 30 48.2 -2.3
ZAPS  Zavoj             7.81   0 ePn   Pn    05 30 52.8 +0.5
CORL  Corleone          7.84 291 Pn    Pn    05 30 56.4 +3.6
TREB  Trebinje          7.96 337 ePn   Pn    05 30 53.5 -0.9
TREB                             eSn   Sn    05 32 17.9 -5.3
TREB  Trebinje          7.96 337 ePn   Pn    05 30 52.7 -1.7
DBRK  Dubrovnik         7.99 336 ePn   Pn    05 30 52.3 -2.4
DBRK                             Sn    Sn    05 32 14.5 -9.2
BRY   Bratogost         8.07 338 ePn   Pn    05 30 55.1 -0.9
PLVB  Pleven            8.07  11 ⇓P    Pn    05 30 55.8 -0.2
UPM   Unac-Piva         8.24 341 ePn   Pn    05 30 57.6 -0.9
SGRT  San Giovanni R    8.26 322 Pn    Pn    05 30 59.6 +1.0
STON  Ston              8.32 334 ePn   Pn    05 30 57.8 -1.5
STON                             eSn   Sn    05 32 26.5 -5.4
STON  Ston              8.32 334 ePn   Pn    05 30 56.6 -2.7
STON                             Sn    Sn    05 32 22.2  -10
STON  Ston              8.32 334 ePn   Pn    05 30 55.8 -3.5
IVAS  Ivanjica          8.32 348 ePn   Pn    05 30 58.5 -1.0
IVAS                             eSn   Sn    05 32 27.0 -5.1
ZAGS  Zajecar           8.35 358 ePn   Pn    05 30 59.9 +0.2
PAOL  Paolisi           8.41 314 Pn    Pn    05 31 03.0 +2.4
RUDO  Rudo              8.52 344 ePn   Pn    05 31 01.2 -0.9
GRUS  Gruza             8.54 351 ePn   Pn    05 31 01.8 -0.6
GRUS                             eSn   Sn    05 32 31.3 -6.1
GRUS  Gruza             8.54 351 ⇑P    Pn    05 31 01.6 -0.8
BBLS  Lazi&#263;i       8.75 345 ePn   Pn    05 31 05.1 -0.2
BBLS                             eSn   Sn    05 32 36.6 -6.0
BBLS  Lazi&#263;i       8.75 345 ePn   Pn    05 31 04.2 -1.1
CSS   Mathiatis         8.81  90 Pn    Pn    05 31 02.5 -3.6
DIVS  Divibare          8.86 348 ePn   Pn    05 31 05.9 -0.9
DIVS                             eSn   Sn    05 32 39.7 -5.6
DIVS  Divibare          8.86 348 ePn   Pn    05 31 01.8 -5.0
DIVS  Divibare          8.86 348 Pn    Pn    05 31 05.8 -1.0
MAKA  Makarska          8.93 333 ePn   Pn    05 31 06.7 -1.0
MAKA                             Sn    Sn    05 32 39.5 -7.3
HVAR  Hvar              9.05 330 ePn   Pn    05 31 08.4 -1.0
HAPS  Han Pijesak,Bl    9.06 343 ePn   Pn    05 31 06.3 -3.3
HAPS  Han Pijesak,Bl    9.06 343 ePn   Pn    05 31 07.5 -2.1
HAPS                             eSn   Sn    05 32 43.3 -7.0
HAPS  Han Pijesak,Bl    9.06 343 ePn   Pn    05 31 06.6 -3.0
RICI  Ricice            9.06 334 ePn   Pn    05 31 07.9 -1.6
RICI                             Sn    Sn    05 32 43.6 -6.6
MDVR  Moldovita         9.34 356 ⇑P    Pn    05 31 13.1 -0.2
TEKS  Tekeris           9.38 346 ePn   Pn    05 31 13.0 -0.9
TEKS                             eSn   Sn    05 32 50.7 -7.3
TEKS  Tekeris           9.38 346 ePn   Pn    05 31 12.8 -1.1
INTR  Introdacqua       9.42 317 Pn    Pn    05 31 16.8 +2.3
KOT   Kottamia          9.54 123 P     Pn    05 31 13.4 -2.8
      baz=127
HFRF  Wahat Farafira    9.62 148 P     Pn    05 31 16.2 -1.0
      baz=153
GLL   Jalalah           9.68 125 P     Pn    05 31 15.5 -2.6
      baz=129
BR131 Keskin Array S    9.75  61 P     Pn    05 31 21.8 +2.7
BR131 Keskin Array S    9.75  61 Pn    Pn    05 31 21.8 +2.7
BRTR  Keskin Array B    9.75  61 Pn    Pn    05 31 19.9 +0.8
      comp=N,0.7nm,0.3s,baz=237,slow=16,SNR=18
BRTR  Keskin Array B    9.75  61 P     Pn    05 31 21.1 +2.0
BRTR  Keskin Array B    9.75  61 Pn    Pn    05 31 21.1 +2.0
KIJV  Kijevo            9.77 333 ePn   Pn    05 31 18.5 -0.8
ZIRJ  Zirje             9.78 329 ePn   Pn    05 31 18.1 -1.2
ZIRJ                             Sn    Sn    05 32 59.7 -8.1
MGRS  Mrkonjic Grad     9.89 336 ePn   Pn    05 31 19.9 -1.0
FRGS  Fruska Gora       9.92 349 Pn    Pn    05 31 19.9 -1.3
FRGS  Fruska Gora       9.92 349 ePn   Pn    05 31 18.7 -2.5
GZR   Gura Zlata        9.93   1 ⇓P    Pn    05 31 22.0 +0.6
MORI  Morici            9.93 330 ePn   Pn    05 31 20.6 -0.7
ARR   Arges            10.02   8 ⇑P    Pn    05 31 22.2 -0.5
NBNS  Bani Suef        10.05 130 P     Pn    05 31 21.2 -1.9
      baz=135
VOIR                   10.14  10 ⇓P    Pn    05 31 24.5 +0.1
VOIR                   10.14  10 P     Pn    05 31 24.5 +0.1
BLY   Banja Luka       10.16 338 Pn    Pn    05 31 24.5  0.0
BLY                              Sn    Sn    05 33 09.5 -7.5
BLY   Banja Luka       10.16 338 ePn   Pn    05 31 21.7 -2.8
BZS   Buzias           10.18 356 ⇓P    Pn    05 31 23.6 -1.1
BZS   Buzias           10.18 356 P     Pn    05 31 28.4 +3.7
BZS                              pmax  pmax
      comp=Z,26nm,1.4s
MLR   Muntele Rosu     10.34  13 Pn    Pn    05 31 31.5 +4.3
      comp=Z,0.3nm,0.3s,baz=221,slow=9.3,SNR=2.4
MLR                              LR    LR    05 35 48.7
      comp=Z,440nm,21.3s,baz=183,slow=40
MLR   Muntele Rosu     10.34  13 ⇑P    Pn    05 31 26.4 -0.8
UDBI  Udbina           10.46 332 ePn   Pn    05 31 28.9 +0.3
DOPR  Dopca            10.71  11 ⇓P    Pn    05 31 31.4 -0.7
KEST  Kesra            10.78 275 LR    LR    05 36 28.3
      comp=Z,89nm,18.2s,baz=296,slow=41
PLOR  Plostina         10.83  15 ⇓P    Pn    05 31 34.1 +0.3
PLOR  Plostina         10.83  15 P     Pn    05 31 34.0 +0.3
NVLJ  Novalja          10.84 329 ePn   Pn    05 31 33.4 -0.5
VRI   Vrincioaia       10.86  16 ⇓P    Pn    05 31 34.2 +0.1
VRI   Vrincioaia       10.86  16 P     Pn    05 31 34.2 +0.1
MMAI  Mount Meron Ar   10.89  99 Pn    Pn    05 31 30.0 -4.6
      comp=Z,6.7nm,0.3s,baz=279,slow=11,SNR=10
MMAI                             Sn    Sn    05 33 24.4  -11
      comp=Z,3.1nm,0.3s,baz=302,slow=17,SNR=3.4
MORH  Mrgy, Hungar     11.15 346 ePn   Pn    05 31 34.2 -3.9
GRB   Gharib           11.24 127 P     Pn    05 31 36.6 -2.9
      baz=131
DRGR                   11.32   0 ⇑P    Pn    05 31 40.2 -0.3
DRGR                   11.32   0 P     Pn    05 31 42.7 +2.2
DRGR                             pmax  pmax
      comp=Z,99nm,1.8s
BOJS  Bojanci          11.48 333 ePn   Pn    05 31 41.3 -1.2
BOJS                             eSn   Sn    05 33 41.2 -8.1
BOJS                             IAML        05 34 59.8
      comp=Z,2µm,7.0s
CRES  Cresnjev         11.68 335 ePn   Pn    05 31 44.0 -1.4
CRES                             eSn   Sn    05 33 45.3 -9.0
CRES  Cresnjev         11.68 335 ePn   Pn    05 31 43.4 -1.9
BIZ   Bicaz            11.77  12 ⇓P    Pn    05 31 45.2 -1.4
TR2   Tor 2            11.79 124 P     Pn    05 31 43.5 -3.5
      baz=127
BEHE  Becsehely        11.84 340 ePn   Pn    05 31 47.5  0.0
EIL   Elat             11.92 115 Pn    Pn    05 31 45.6 -3.0
      comp=Z,2.3nm,0.3s,baz=247,slow=2.3,SNR=14
EIL                              Sn    Sn    05 33 49.8  -11
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      comp=Z,2.5nm,0.3s,baz=20,slow=17,SNR=4.9
GAZ   Gaziantep        11.93  77       Pn    05 31 47.5 -1.3
CEY   Cerknica         11.99 331 ePn   Pn    05 31 47.8 -1.8
GROS  Grobnik          12.22 336 ePn   Pn    05 31 51.0 -1.7
BUR08 Bucovina Ar. S   12.33   8 Pn    Pn    05 31 56.2 +1.9
SOKA  Soboth           12.57 335 ePn   Pn    05 31 55.7 -1.8
      comp=Z,0.7nm,0.3s
SOKA                             eSn   Sn    05 34 06.3  -10
      comp=Z,2.6nm,0.5s
OBKA  Obir             12.59 334 ePn   Pn    05 31 56.8 -1.0
      comp=Z,2.0nm,0.7s
ARSA  Arzberg          12.91 338 ePn   Pn    05 32 00.9 -1.3
      comp=Z,1.2nm,0.5s
CTI   Castel Tesino    13.43 325 P     Pn    05 32 11.7 +2.4
CTI   Castel Tesino    13.43 325       Pn    05 32 11.7 +2.4
KOLS  Kolonicke sedl   13.47 359 eP    P     05 32 18.1 -0.1
KOLS  Kolonicke sedl   13.47 359 eP    P     05 32 18.1 -0.1
ABTA  Abfaltersbach    13.58 329 ePn   Pn    05 32 10.9 -0.4
      comp=Z,2.1nm,0.7s
MOA   Molln            13.84 336 ePn   Pn    05 32 14.6 -0.3
      comp=Z,0.9nm,0.5s
WTTA  Wattenberg       14.36 329 ePn   Pn    05 32 22.7 +0.7
      comp=Z,1.1nm,0.4s
WTTA                             eSn   Sn    05 34 54.2 -5.7
      comp=Z,3.6nm,0.5s
WATA  Walderalm        14.44 329 ePn   Pn    05 32 24.9 +1.9
      comp=Z,0.8nm,0.4s
WATA                             eSn   Sn    05 34 55.4 -6.5
      comp=Z,2.0nm,0.4s
SQTA  Sankt Quirin     14.51 328 eP    P     05 32 30.7 +0.8
      comp=Z,2.0nm,0.4s
MOTA  Moosalm          14.65 328 ePn   P     05 32 31.3 -0.2
      comp=Z,5.5nm,0.9s
MOTA                             Sn    Sn    05 35 03.5 -3.5
      comp=Z,2.5nm,0.6s
CKRC  Cesky Krumlov    14.68 338 eP    P     05 32 34.0 +2.3
MARD  Mardin           14.78  77 Pn    Pn    05 32 27.4 -0.2
DAVOX Davos/Dischmat   14.80 324 Pn    Pn    05 32 29.8 +1.9
      comp=Z,0.1nm,0.3s,baz=311,slow=20,SNR=3.0
DAVOX                            Sn    Sn    05 35 05.5 -5.2
      comp=Z,0.1nm,0.3s,baz=336,slow=20,SNR=3.5
KOPT  Kop Dagi         14.88  67 Pn    Pn    05 32 30.2 +1.0
GERES GERESS Array B   14.90 337 Pn    Pn    05 32 28.5 -0.6
      comp=Z,0.2nm,0.3s,baz=164,slow=11,SNR=3.9
GERES                            Sn    Sn    05 35 06.4 -6.4
      comp=Z,0.2nm,0.3s,baz=157,slow=24,SNR=4.4
GERES                            LR    LR    05 40 19.7
      comp=Z,240nm,18.1s,baz=146,slow=46
RETA  Reutte           14.91 327 i Pn  P     05 32 33.8 -0.5
      comp=Z,1.2nm,0.4s
DAVA  Damuels          15.16 325 ePn   P     05 32 37.2 +0.1
      comp=Z,2.3nm,0.6s
KHC   Kasperske Hory   15.19 337ceP    P     05 32 39.7 +2.4
KHC                              pmax  pmax
      comp=Z,15nm,1.0s
KHC   Kasperske Hory   15.19 337 eP    P     05 32 39.6 +2.3
KHC                              epP   pwP   05 32 54.0 +3.2
KHC   Kasperske Hory   15.19 337       P     05 32 36.7 -0.6
SOC   Sochi            15.49  53 eP    Pn    05 32 34.7 -2.1
SOC                              e           05 35 24.8
SOC                              MLR   MLR
      comp=Z,41nm,14.0s
PBCC  Pribram          15.55 339 epP   pP    05 32 52.1 +1.8
DPC   Dobruska-Polom   15.57 345 eP    P     05 32 44.4 +2.9
DPC   Dobruska-Polom   15.57 345 eP    P     05 32 44.4 +2.9
PRU   Pruhonice        15.66 340 eP    P     05 32 42.7 +0.2
PRU   Pruhonice        15.66 340 eP    P     05 32 42.7 +0.2
AKASG Malin Array Be   15.98  15 Pn    Pn    05 32 40.1 -2.9
      comp=Z,2.8nm,0.3s,baz=196,slow=9.9,SNR=11
AKBB  Malin Array Si   15.98  15ceP    P     05 32 46.1 +0.1
GEVA  Gevas            16.63  74 Pn    Pn    05 32 51.7 +0.2
CLL   Collm            17.28 339 eP    P     05 33 03.0 +2.6
CLL                              epP   sP    05 33 13.0 -1.2
CLL                              esP   pwP   05 33 21.0 +7.0
CLL   Collm            17.28 339 eP    P     05 33 06.0 +5.6
KIV   Kislovodsk       17.61  55 eP    Pn    05 33 02.7 -0.9
KIV                              pmax  pmax
      comp=Z,38nm,1.0s
KIV   Kislovodsk       17.61  55 P     P     05 33 05.3 +1.0
KIV                              IAmb  IAmb  05 33 05.6
      comp=Z,11nm,0.6s
KVAR  Kislovodsk Arr   17.62  55 P     P     05 33 05.6 +1.3
      baz=270,slow=20,SNR=4.7
KBZ   Khabaz           17.67  56 P     Pn    05 33 03.9 -0.4
      comp=Z,0.5nm,0.3s,baz=246,slow=8.0,SNR=16
KBZ                              LR    LR    05 41 21.5
      comp=Z,136nm,18.7s,baz=265,slow=43
KBZ   Khabaz           17.67  56ceP    P     05 33 04.9 +0.1
NCK   Nalchik          18.07  57 i P   Pn    05 33 08.1 -1.0
GNI   Garni            18.11  68 LR    LR    05 41 03.4
      comp=Z,104nm,19.4s,baz=279,slow=41
GNI   Garni            18.11  68 i P   Pn    05 33 08.1 -1.8
MNK   Minsk            19.40   9 i P   P     05 33 23.3 -0.4
      comp=E,5.0nm,1.6s
MNK                              i P   P     05 33 23.3 -0.4
      comp=N,14nm,1.1s
MNK                              i P   P     05 33 23.3 -0.4
      comp=Z,8.0nm,0.9s
MNK                              i S   S     05 36 58.7 -2.0
MNK                              i PcP PcP   05 37 40.4 -3.5
MNK                              i LQ  LQ    05 39 22.6
MNK                              i LR  LR    05 40 51.6
MNK                              i ScP ScP   05 41 08.0 -8.5
MNK                              i LRM MLR   05 42 24.0
      comp=Z,217nm,10.2s
MNK                              i LRM MLR   05 42 26.4
      comp=N,284nm,11.2s
MNK                              i LRM MLR   05 42 36.8
      comp=E,24nm,12.2s
LGD   Lagodekhi        19.52  64 P     Pn    05 33 27.0 +0.4
VORD  Divnogorie       19.64  33 eP    Pn    05 33 28.9 +1.0
VORD                             pmax  pmax
      comp=Z,9.0nm,0.5s
VSR   Storozhevoye     19.77  32 eP    P     05 33 27.1 -0.6
VSR                              pmax  pmax
      comp=Z,10.0nm,0.4s
LPSR  Galich'ya Gora   20.70  29 eP    P     05 33 37.3 -0.5
LPSR                             pmax  pmax
      comp=Z,10.0nm,0.6s
VRH   Novokhopyorsk    20.91  35 eP    Pn    05 33 43.0 +0.1
VRH                              pmax  pmax
      comp=Z,10.0nm,0.8s
ESBB  Sonseca Array    21.43 289 P     P     05 33 48.5 +2.6
ESBB                             IAmb  IAmb  05 34 03.2
      comp=Z,7.7nm,1.3s
ESDC  Sonseca Array    21.43 289 P     P     05 33 48.1 +2.2
      comp=Z,1.8nm,0.8s,baz=87,slow=11,SNR=8.7
ESDC                             LR    LR    05 42 08.8
      comp=Z,50nm,18.6s,baz=300,slow=37
OBN   Obninsk          21.90  22 eP    P     05 33 50.7  0.0
OBN                              e           05 37 41.3
OBN                              pmax  pmax
      comp=Z,13nm,1.7s
MDT   Midelt           22.64 271 P     P     05 34 01.7 +2.8
      comp=Z,2.3nm,0.9s,baz=82,slow=7.3,SNR=5.5
MDT                              LR    LR    05 44 39.0
      comp=Z,71nm,18.4s,baz=82,slow=41
MOS   Moscow           22.75  22 eP    P     05 34 05.2 +5.4
BELG  Belogornoye      24.55  39 LR    LR    05 44 23.5
      comp=Z,70nm,18.9s,baz=311,slow=38
BELG  Belogornoye      24.55  39c iP   P     05 34 15.7 -1.2
BELG                             pmax  pmax
      comp=Z,5.0nm,0.9s
HFS   Hagfors          25.36 350 P     P     05 34 24.2  0.0
      comp=Z,4.2nm,0.7s,baz=155,slow=11,SNR=16
FINES FINESS Array B   26.10   4 P     P     05 34 30.1 -0.9
      comp=Z,2.0nm,0.6s,baz=168,slow=9.4,SNR=8.7
FINES                            PcP   PcP   05 37 58.0 +0.5
      comp=Z,5.7nm,1.1s,baz=186,slow=2.5,SNR=7.0
NORES NORESS Array B   26.27 348 P     P     05 34 34.7 +2.2
NORES                            pmax  pmax
      comp=Z,1.0nm,0.3s
EKA   Eskdalemuir Ar   26.60 326 P     P     05 34 36.8 +1.3
      comp=Z,5.5nm,0.9s,baz=124,slow=8.7,SNR=7.6
NOA   NORSAR Array B   26.62 348 P     P     05 34 35.7  0.0
      comp=Z,0.5nm,0.5s,baz=158,slow=10,SNR=4.5
GEYT  Alibeck          28.50  74 P     P     05 34 52.0 -0.8
      comp=Z,1.8nm,0.5s,baz=298,slow=7.7,SNR=4.0
KIRV  Kirov            29.13  29 P     P     05 34 56.2 -1.9
      comp=Z,11nm,0.5s,baz=133,slow=2.0,SNR=3.8
TOA0  Torodi Ar. Sit   29.13 226 P     P     05 35 01.3 +2.8
TORD  Torodi Ar. Bea   29.13 226 P     P     05 35 01.0 +2.5
      comp=Z,0.8nm,0.4s,baz=36,slow=9.6,SNR=10.0
TORD  Torodi Ar. Bea   29.13 226 P     P     05 35 01.4 +3.0
AKTO  Aktyubinsk       29.61  49 P     P     05 35 00.8 -1.7
      comp=Z,2.8nm,0.6s,baz=263,slow=7.5,SNR=12
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KOWA	**Kowa**	**31.71**	**236**	P	**P**	**05 35 23.7**	**+2.4**
	comp=Z,0.6nm,0.4s,baz=26,slow=9.6,SNR=2.6						
ARU	**Arti**	**32.09**	**38**	P	**P**	**05 35 22.1**	**-2.2**
	comp=Z,0.9nm,0.3s,baz=252,slow=7.4,SNR=7.5						
ARU	**Arti**	**32.09**	**38**	*d i*P	**P**	**05 35 22.6**	**-1.6**
ARU						05 36 28.9	
ARU				pmax	pmax		
	comp=Z,18nm,2.0s						
ARU	**Arti**	**32.09**	**38**	P	**P**	**05 35 22.8**	**-1.4**
ARU				IAmb	IAmb	05 35 23.9	
	comp=Z,6.3nm,0.9s						
SVE	**Sverdlovsk**	**33.30**	**38**	*e*P	**P**	**05 35 33.4**	**-1.4**
SVE				pmax	pmax		
	comp=Z,12nm,0.7s						
ARCES	**ARCESS Array B**	**34.17**	**2**	P	**P**	**05 35 41.5**	**-0.7**
	comp=Z,4.0nm,0.8s,baz=185,slow=8.1,SNR=6.7						
ARCES				LR	LR	05 51 15.3	
	comp=Z,204nm,20.4s,baz=250,slow=39						
KK31	**Karatay Array**	**37.45**	**63**	P	**P**	**05 36 10.7**	**0.0**
KK31				pmax	pmax		
	comp=Z,5.0nm,0.5s						
KK31	**Karatay Array**	**37.45**	**63**	P	**P**	**05 36 10.7**	**0.0**
KKAR	**Karatay Array**	**37.45**	**63**	P	**P**	**05 36 10.4**	**-0.3**
KKAR						05 36 11.0	
KKAR				pmax	pmax		
	comp=Z,4.0nm,0.5s						
KKAR	**Karatay Array**	**37.45**	**63**	P	**P**	**05 36 11.0**	**+0.3**
KKAR	**Karatay Array**	**37.45**	**63**	P	**P**	**05 36 10.4**	**-0.3**
BRVK	**Borovoye**	**37.62**	**47**	*ce*P	**P**	**05 36 10.0**	**-1.9**
BRVK				pmax	pmax		
	comp=Z,9.0nm,2.5s						
KBL	**Kabul**	**37.80**	**78**	P	**P**	**05 36 15.3**	**+1.4**
KBL				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KBL	**Kabul**	**37.80**	**78**	P	**P**	**05 36 15.3**	**+1.4**
KBL				IAmb	IAmb	05 36 15.8	
	comp=Z,3.5nm,0.6s						
DBIC	**Dimbokro**	**38.16**	**228**	P	**P**	**05 36 19.2**	**+2.4**
	comp=Z,2.9nm,0.8s,baz=20,slow=7.8,SNR=5.8						
DBIC	**Dimbokro**	**38.16**	**228**	P	**P**	**05 36 19.5**	**+2.7**
DBIC				pmax	pmax		
	comp=Z,18nm,1.5s						
DBIC	**Dimbokro**	**38.16**	**228**	P	**P**	**05 36 19.5**	**+2.7**
AAK	**Ala-Archa**	**40.41**	**64**	*i* P	**P**	**05 36 33.5**	**-2.2**
AAK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
NIL	**Nilore**	**41.40**	**77**	P	**P**	**05 36 44.6**	**+0.9**
NIL				pmax	pmax		
	comp=Z,26nm,1.1s						
NIL	**Nilore**	**41.40**	**77**	P	**P**	**05 36 44.6**	**+0.9**
KURBB	**Kurchatov Arra**	**42.58**	**51**	P	**P**	**05 36 51.9**	**-1.2**
	comp=Z,4.8nm,0.5s,baz=274,slow=8.6,SNR=57						
KURK	**Kurchatov**	**42.63**	**51**	P	**P**	**05 36 52.5**	**-1.0**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KURK	**Kurchatov**	**42.63**	**51**	P	**P**	**05 36 52.5**	**-1.0**
KURK				IAmb	IAmb	05 36 52.9	
	comp=Z,3.3nm,0.6s						
SPITS	**Spitsbergen Ar**	**42.91**	**358**	P	**P**	**05 36 56.1**	**+0.7**
	comp=Z,5.5nm,0.7s,baz=145,slow=10,SNR=16						
MAKZ	**Makanchi**	**45.15**	**56**	IAmb	IAmb	05 37 13.2	
	comp=Z,1.7nm,0.6s						
MAKZ				P	**P**	**05 37 13.3**	**-0.5**
MK31	**Makanchi Array**	**45.37**	**56**	*ce*P	**P**	**05 37 14.2**	**-1.3**
MK31	**Makanchi Array**	**45.37**	**56**	P	**P**	**05 37 14.7**	**-0.9**
MKAR	**Makanchi Array**	**45.37**	**56**	P	**P**	**05 37 14.6**	**-1.0**
	comp=Z,4.6nm,0.5s,baz=271,slow=7.8,SNR=81						
MKAR				PcP	**PcP**	**05 38 55.8**	**+1.4**
	comp=Z,0.8nm,0.5s,baz=274,slow=2.8,SNR=2.7						
MKAR	**Makanchi Array**	**45.37**	**56**	P	**P**	**05 37 14.9**	**-0.6**
MKAR	**Makanchi Array**	**45.37**	**56**	P	**P**	**05 37 14.9**	**-0.6**
ZAA0	**Zalesovo Array**	**46.32**	**46**	P	**P**	**05 37 21.6**	**-1.3**
ZAA0				IAmb	IAmb	05 37 22.8	
	comp=Z,4.8nm,0.8s						
ZALV	**Zalesovo Beam**	**46.32**	**46**	P	**P**	**05 37 21.7**	**-1.2**
	comp=Z,4.8nm,0.3s,baz=271,slow=7.8,SNR=20						
ZALV	**Zalesovo Beam**	**46.32**	**46**	P	**P**	**05 37 21.9**	**-1.0**
ZALV	**Zalesovo Beam**	**46.32**	**46**	P	**P**	**05 37 21.9**	**-1.0**
DGZ	**Jazzator, Alta**	**48.36**	**52**	*i* P	**P**	**05 37 36.5**	**-2.5**
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.7s						
DANN	**Dangsing**	**51.70**	**80**	*e*P	**P**	**05 38 04.7**	**-0.1**
	comp=Z,28nm,0.5s						
GKN	**Gorkha**	**52.55**	**80**	*e*P	**P**	**05 38 10.4**	**-0.6**
	comp=Z,9.9nm,0.3s						
DMN	**Daman**	**53.09**	**80**	*e*P	**P**	**05 38 14.7**	**-0.4**
	comp=Z,16nm,0.4s						
KKN	**Kakani**	**53.16**	**80**	*e*P	**P**	**05 38 14.5**	**-1.0**
PKIN	**Phulchoki**	**53.34**	**80**	*e*P	**P**	**05 38 16.3**	**-0.7**
	comp=Z,5.2nm,0.3s						
PKI	**Pulchoki**	**53.35**	**80**	*e*P	**P**	**05 38 16.4**	**-0.7**
	comp=Z,7.3nm,0.3s						
GUN	**Gumba**	**53.59**	**79**	*e*P	**P**	**05 38 18.3**	**-0.6**
	comp=Z,14nm,0.4s						
ZAK	**Zakamensk**	**58.12**	**48**	*e*P	P	05 38 41.6	-9.1
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
SONM	**Songino Array**	**60.92**	**50**	P	**P**	**05 39 09.5**	**-0.5**
	comp=Z,2.0nm,0.5s,baz=283,slow=7.3,SNR=22						
SONM	**Songino Array**	**60.92**	**50**	P	**P**	**05 39 10.2**	**+0.2**
SONM				pmax	pmax		
	comp=Z,4.0nm,1.2s						
SONM	**Songino Array**	**60.92**	**50**	P	**P**	**05 39 10.2**	**+0.2**
ULN	**Ulaanbaatar**	**61.32**	**50**	*ce*P	**P**	**05 39 11.7**	**-1.1**
ULN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ULN	**Ulaanbaatar**	**61.32**	**50**	P	**P**	**05 39 12.7**	**-0.1**
TIXI	**Tiksi**	**61.62**	**20**	P	**P**	**05 39 14.2**	**0.0**
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.8s						
TIXI	**Tiksi**	**61.62**	**20**	P	**P**	**05 39 14.2**	**0.0**
BOSA	**Boshof**	**63.78**	**177**	P	**P**	**05 39 31.0**	**+1.8**
	comp=Z,1.9nm,0.5s,baz=2.7,slow=7.0,SNR=10						
BOSA	**Boshof**	**63.78**	**177**	IAmb	IAmb	05 39 35.1	
	comp=Z,5.5nm,1.1s						
YAK	**Yakutsk**	**66.66**	**29**	*i* P	**P**	**05 39 45.8**	**-1.6**
YAK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**68.62**	**82**	P	**P**	**05 39 59.5**	**-1.0**
	comp=Z,0.9nm,0.3s,baz=303,slow=8.0,SNR=7.1						
SEY	**Seymchan**	**74.07**	**21**	P	**P**	**05 40 33.2**	**+0.6**
	comp=Z,0.9nm,0.5s,baz=348,slow=4.6,SNR=6.3						
KLR	**Kul'dur**	**74.91**	**40**	P	**P**	**05 40 37.6**	**-0.1**
	comp=Z,2.4nm,0.6s,baz=287,slow=6.0,SNR=9.5						
KLR	**Kul'dur**	**74.91**	**40**	*i* P	**P**	**05 40 36.4**	**-1.4**
KLR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
YKA	**Yellowknife Ar**	**76.50**	**341**	P	**P**	**05 40 48.0**	**+1.4**
	comp=Z,0.9nm,0.6s,baz=39,slow=5.7,SNR=22						
YKA	**Yellowknife Ar**	**76.50**	**341**	*i* P	**P**	**05 40 48.0**	**+1.4**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
USRK	**Ussuriysk Ar.**	**78.10**	**44**	P	**P**	**05 40 55.1**	**-0.9**
	comp=Z,4.2nm,0.7s,baz=294,slow=3.9,SNR=11						
ULM	**Lac du Bonnet**	**78.87**	**325**	P	**P**	**05 41 01.6**	**+1.6**
	comp=Z,1.6nm,0.7s,baz=48,slow=6.6,SNR=3.7						
KSRS	**Korea Array**	**79.76**	**51**	P	**P**	**05 41 05.2**	**+0.1**
	comp=Z,2.0nm,0.5s,baz=315,slow=4.5,SNR=11						
ILAR	**Eielson Array**	**79.76**	**355**	P	**P**	**05 41 05.8**	**+1.2**
	comp=Z,0.8nm,0.8s,baz=0.2,slow=3.8,SNR=5.8						
LRM	**Limekiln Ridge**	**89.49**	**330**	P	**P**	**05 41 54.1**	**-0.3**
WRA	**Warramunga Arr**	**118.72**	**95**	PKP	**PKPdf**	**05 47 44.2**	**-1.1**
	comp=Z,0.3nm,0.6s,baz=315,slow=1.5,SNR=5.3						
ASAR	**Alice Springs**	**120.18**	**99**	PKP	**PKiKP**	**05 47 48.6**	**+0.4**
	comp=Z,0.3nm,0.6s,baz=304,slow=1.2,SNR=7.7						

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*IDC **08** 05:32:20.4±1.2, 34°.01S×48°.28E, h0^{km}, mb3.5/4, mb1 3.7/4, mb1mx3.4/49, mbtmp3.5/4, Error ellipse: s-maj=101.8km s-min=24.3km az=21.0*

ISC 08 05:32:22.1±1.3**, 33°.9S**±0°.7×**48°.3E**±0°.3**, h10**^{km}**, n6,** σ**0**^{s}**.67**/6**,**
mb3.5/3**, South Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOSA	**Boshof**	**20.40**	**279**	P	**P**	**05 36 59.6**	**+0.3**
	2.6nm,1.0s,baz=110,slow=12,SNR=2.8						
TORD	**Torodi Ar. Bea**	**64.45**	**308**	P	**P**	**05 42 58.3**	**-0.7**
	0.3nm,0.4s,baz=138,slow=6.7,SNR=2.8						
ASAR	**Alice Springs**	**73.72**	**108**	P	**P**	**05 43 56.3**	**-0.4**
	0.2nm,0.5s,baz=239,slow=5.7,SNR=6.4						
WRA	**Warramunga Arr**	**75.96**	**105**	P	**P**	**05 44 09.7**	**0.0**
	0.3nm,0.7s,baz=254,slow=7.4,SNR=4.3						
ILAR	**Eielson Array**	**147.69**	**12**	PKPbc	**PKPbc**	**05 52 06.8**	**+0.7**
	0.4nm,0.7s,baz=322,slow=4.5,SNR=6.1						
YKA	**Yellowknife Ar**	**149.37**	**344**	PKPbc	**PKPbc**	**05 52 10.8**	**+0.4**

0.1nm,0.5s,baz=46,slow=2.4,SNR=6.7

IDC 08 05:44:19.7±7.0**, 25°.31S**×**178°.28W, h0**^{km}**, mb3.6**/2**, mb1 3.9**/2**, mb1mx3.5**/32**, mbtmp3.6**/2**, Error ellipse: s-maj=317.1km s-min=59.0km az=152.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**43.36**	**262**	P	P	05 52 23.6	-0.5
	0.4nm,0.4s,baz=93,slow=6.9,SNR=16						
WRA	**Warramunga Arr**	**43.88**	**267**	P	P	05 52 28.5	+0.2
	0.4nm,0.4s,baz=106,slow=7.5,SNR=5.6						
AKASG	**Malin Array Be**	**147.00**	**327**	PKPbc	PKPbc	06 04 03.5	-0.7
	0.5nm,0.4s,baz=45,slow=3.7,SNR=6.3						

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*JMA **08** 05:52:31.4±0.2, 25°.05N×124°.23E, h5^{km}±4^{km}, M3.9*
*NIED **08** 05:52:31.5, 25°.05N×124°.23E, h5^{km}, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-3.28; $M_{\theta\theta}$-0.12; $M_{\phi\phi}$3.40; $M_{r\theta}$1.09; $M_{\theta\phi}$0.28; $M_{\phi r}$-0.08; Fault plane solution: $M_0$3.52000×10^{15} NP1: ϕ_s201.00000°, δ48.00000°, λ-66.00000°. NP2: ϕ_s348.00000°, δ48.00000°, λ-114.00000°.*
*IDC **08** 05:52:32.4±0.9, 24°.78N×124°.22E, h0^{km}, mb3.7/8, mb1 3.9/10, mb1mx3.6/47, mbtmp3.7/10, ML2.7/2, MS3.5/12, Ms1 3.5/12, ms1mx3.2/45 Error ellipse: s-maj=25.5km s-min=19.7km az=96.0*
*NEIC **08** 05:52:36.5±1.6, 24°.8N±0°.1×124°.2E±0°.1, h36^{km}±10^{km}, mb4.2/6, Error ellipse: s-maj=16.6km s-min=15.7km az=99.0*

ISC 08 05:52:33.6±1.3**, 24°.87N**±0°.05×**124°.28E**±0°.03**, h11**^{km}±8^{km}**,**
n45, σ**1**^{s}**.15**/46**, mb3.9**/11**, MS3.3**/8**, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JISG	**Ishigakijimahi**	**0.28**	**175**	P	**Pb**	**05 52 40.6**	**0.0**
JISG				S	**Sb**	**05 52 46.8**	**+1.5**
JTJ	**Tarama**	**0.44**	**120**	P	**Pg**	**05 52 42.8**	**+0.5**
JTJ				S	**Sb**	**05 52 51.0**	**+0.9**
JIJ	**Ishigaki jima**	**0.52**	**194**	P	**Pb**	**05 52 44.4**	**-0.3**
JIJ				S	**Sn**	**05 52 53.9**	**-1.9**
JKRS	**Kuro-shima**	**0.67**	**202**	P	**Pb**	**05 52 47.5**	**+0.1**
JKRS				*e*S	**Sn**	**05 52 59.5**	**-0.1**
IRIF	**Iriomote-Funau**	**0.73**	**224**	P	**Pg**	**05 52 47.7**	**0.0**
IRIF				*e*S	**Sg**	**05 52 58.2**	**+1.0**
JIRB	**Irabujima**	**0.81**	**92**	P	**Pg**	**05 52 48.5**	**-0.8**
JIRB				*e*S	**Sg**	**05 52 59.8**	**-0.1**
JIKM	**Ikemajima**	**0.88**	**86**	P	**Pb**	**05 52 49.7**	**-1.2**
JIKM				S	**Sg**	**05 53 02.2**	**+0.2**
HATJ	**Hateruma jima**	**0.91**	**208**	P	**Pb**	**05 52 51.6**	**+0.1**
HATJ				*e*S	**Sn**	**05 53 05.8**	**+0.2**
JMJ2	**Miyako jima3**	**0.96**	**97**	P	**Pb**	**05 52 51.4**	**-0.9**
JMJ2				*e*S	**Sn**	**05 53 05.9**	**-0.8**
JOGS	**Gusukube**	**1.03**	**96**	P	**Pb**	**05 52 52.9**	**-0.5**
YOJ	**Yonaguni jima**	**1.22**	**251**	P	**Pn**	**05 52 54.2**	**-2.5**
YOJ	**Yonaguni jima**	**1.22**	**251**	Pn	**Pn**	**05 52 53.7**	**-3.0**
JYNG	**Yonagunijimaku**	**1.28**	**252**	P	**Pn**	**05 52 55.1**	**-2.4**
TATO	**Taipei**	**2.54**	**273**	Pn	**Pn**	**05 53 15.8**	**+1.0**
NACB	**Ninganchiao**	**2.54**	**255**		**Pn**	**05 53 13.8**	**-1.0**
YHNB	**Yeheng**	**2.65**	**266**	Pn	**Pn**	**05 53 15.6**	**-0.8**
YULB	**Yu-li**	**3.10**	**242**	Pn	**Pn**	**05 53 21.2**	**-1.3**
SSLB	**Suanglung**	**3.22**	**251**		**Pn**	**05 53 24.2**	**-0.1**
TWG	**Pinlang**	**3.57**	**236**	Pn	**Pn**	**05 53 27.8**	**-1.3**
TPUB	**Ta-pu**	**3.68**	**246**		**Pn**	**05 53 30.9**	**+0.3**
JOW	**Kunigami**	**4.10**	**61**	Pn	**Pn**	**05 53 36.6**	**+0.4**
	1.1nm,0.3s,baz=240,slow=16,SNR=2.0						
JOW				LR	LR	05 55 10.4	
	comp=Z,726nm,18.9s,baz=262,slow=38						
JNU	**Nakatsue**	**10.05**	**34**	LR	LR	05 58 41.6	
	comp=Z,219nm,20.4s,baz=184,slow=36						
JCJ	**Chichijima**	**16.25**	**78**	LR	LR	06 01 24.9	
	comp=Z,214nm,21.4s,baz=166,slow=33						
MJAR	**Matsushiro Arr**	**16.68**	**42**	Pn	**P**	**05 56 30.1**	**+0.3**
	0.0nm,0.3s,baz=234,slow=10.0,SNR=3.0						
MJAR				LR	LR	06 03 02.1	
	comp=Z,115nm,19.0s,baz=220,slow=38						
GUMO	**Guam**	**22.41**	**116**	LR	LR	06 05 14.8	
	comp=Z,71nm,20.6s,baz=316,slow=34						
CHTO	**Chiang Mai**	**24.26**	**261**	P	**P**	**05 57 50.2**	**-0.8**
CHTO				IAmb	IAmb	05 58 01.5	
	comp=Z,4.8nm,1.0s						
CMAR	**Chiang Mai Arr**	**24.38**	**260**	P	**P**	**05 57 52.8**	**+0.7**
	comp=Z,1.2nm,0.3s,baz=58,slow=8.0,SNR=5.9						
CMAR				LR	LR	06 06 53.9	
	comp=Z,107nm,20.4s,baz=118,slow=36						
HIA	**Hailar**	**24.62**	**353**	P	**P**	**05 57 55.0**	**+1.0**
HIA				IAmb	IAmb	05 57 59.0	
	comp=Z,6.1nm,0.9s						
KLR	**Kul'dur**	**25.02**	**12**	P	**P**	**05 57 58.7**	**+1.1**
	comp=Z,1.8nm,0.9s,baz=235,slow=1.4,SNR=3.6						
SIJI	**Sorong**	**26.46**	**164**	LR	LR	06 08 22.3	
	comp=Z,30nm,19.7s,baz=58,slow=36						
ULN	**Ulaanbaatar**	**26.70**	**334**	P	**P**	**05 58 13.7**	**+0.7**
ULN				IAmb	IAmb	05 58 19.8	
	comp=Z,8.3nm,1.1s						
SONM	**Songino Array**	**26.95**	**333**	P	**P**	**05 58 16.3**	**+1.1**
	comp=Z,3.6nm,1.2s,baz=155,slow=9.0,SNR=8.1						
SONM				LR	LR	06 09 57.3	
	comp=Z,75nm,19.6s,baz=178,slow=39						
SONM	**Songino Array**	**26.95**	**333**	P	**P**	**05 58 13.8**	**-1.4**
PETK	**Petropavlovsk-**	**37.75**	**33**	LR	LR	06 14 38.1	
	comp=Z,39nm,21.9s,baz=239,slow=35						
MKAR	**Makanchi Array**	**39.85**	**314**	P	**P**	**06 00 05.8**	**-1.5**
	comp=Z,0.5nm,0.8s,baz=92,slow=10,SNR=3.0						
MKAR				LR	LR	06 15 57.3	
	comp=Z,81nm,19.3s,baz=94,slow=35						
MKAR	**Makanchi Array**	**39.85**	**314**	P	**P**	**06 00 06.9**	**-0.4**
ZALV	**Zalesovo Beam**	**41.25**	**325**	LR	LR	06 20 23.5	
	comp=Z,61nm,18.9s,baz=206,slow=40						
WRA	**Warramunga Arr**	**45.60**	**167**	P	**P**	**06 00 53.2**	**-0.8**
	comp=Z,2.7nm,0.9s,baz=348,slow=8.1,SNR=11						
WRA	**Warramunga Arr**	**45.60**	**167**	IAmb	IAmb	06 01 00.4	
	comp=Z,0.3nm,0.9s						
ASAR	**Alice Springs**	**49.14**	**168**	P	**P**	**06 01 21.6**	**0.0**
	comp=Z,0.3nm,0.6s,baz=351,slow=8.3,SNR=3.0						
ABKAR	**Akbulak array**	**55.00**	**314**	P	**P**	**06 02 04.2**	**-0.8**
A21K	**Barrow**	**63.18**	**21**	P	**P**	**06 03 01.3**	**-0.1**
ILAR	**Eielson Array**	**67.31**	**28**	P	**P**	**06 03 29.3**	**+1.0**
	comp=Z,0.2nm,0.7s,baz=249,slow=7.6,SNR=1.3						
NOA	**NORSAR Array B**	**78.93**	**333**	LR	LR	06 43 33.9	
	comp=Z,98nm,19.7s,baz=340,slow=39						
YKA	**Yellowknife Ar**	**81.23**	**24**	P	**P**	**06 04 51.5**	**+2.1**
	comp=Z,0.9nm,0.8s,baz=311,slow=4.5,SNR=11						

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*NEIC **08** 06:04:15.4±1.6, 22°.64S±0°.04×70°.45W±0°.05, h37^{km}±7^{km}, Error ellipse: s-maj=7.3km s-min=3.9km az=123.0*
*GUC **08** 06:04:16.2±0.7, 22°.65S×70°.40W, h42^{km}±2^{km}, ML4.1*
*IDC **08** 06:04:20.2±2.1, 22°.49S×70°.21W, h75^{km}±18^{km}, mb3.6/8, mb1 3.8/12, mb1mx3.7/35, mbtmp3.9/12, MS3.1/6, Ms1 3.1/6, ms1mx2.9/26, Error ellipse: s-maj=27.0km s-min=18.7km az=55.0*

ISC 08 06:04:14.5±1.3**, 22°.62S**±0°.03×**70°.46W**±0°.05**, h27**^{km}±10^{km}**,**
n79, σ**1**^{s}**.16**/78**, mb3.9**/8**, 3C-8D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB05	**IPOC Station P**	**0.34**	**135**	⇑*i*P	**Pn**	**06 04 24.2**	**+0.4**
PB05				*i* S	**Sn**	**06 04 30.1**	**+0.3**
PB05				IAML		06 04 30.4	
	comp=N,45μm,0.2s						
PB04	**IPOC Station P**	**0.40**	**46**	⇑*i*P	**Pn**	**06 04 25.1**	**+0.4**
PB04				*i* S	**Sn**	**06 04 31.9**	**+0.4**
PB04				IAML		06 04 32.4	
	comp=N,65μm,0.4s						
PB04	**IPOC Station P**	**0.40**	**46**		**Pn**	**06 04 25.1**	**+0.4**
PB04				Sn	**Sn**	**06 04 31.8**	**+0.3**
PB06	**IPOC Station P**	**0.82**	**96**	⇓*i*P	**Pb**	**06 04 30.6**	**+0.2**
PB06				*i* S	**Sn**	**06 04 41.2**	**-0.7**
PB06				IAML		06 04 42.6	
	comp=E,12μm,0.1s						
PB06	**IPOC Station P**	**0.82**	**96**		**Pb**	**06 04 30.6**	**+0.2**
PB06				Sn	**Sn**	**06 04 41.1**	**-0.7**
PB10	**IPOC Station P**	**0.90**	**186**	⇓*i*P	**Pb**	**06 04 31.5**	**0.0**
PB10				*e*S	**Sb**	**06 04 43.1**	**-0.1**
PB10				IAML		06 04 49.4	
	comp=N,5μm,0.4s						
PB10	**IPOC Station P**	**0.90**	**186**	Pn	**Pb**	**06 04 31.6**	**0.0**
PB07	**IPOC Station P**	**1.03**	**31**	⇓*i*P	**Pn**	**06 04 34.0**	**+0.6**
PB07				*e*S	**Sn**	**06 04 47.6**	**+0.6**
PB07				IAML		06 04 49.2	
	comp=N,8μm,0.5s						
PB07	**IPOC Station P**	**1.03**	**31**		**Pn**	**06 04 34.0**	**+0.6**
PB07				Sn	**Sn**	**06 04 47.5**	**+0.5**
PB15	**IPOC Station P**	**1.09**	**123**	*e*P	**Pb**	**06 04 34.5**	**-0.3**
PB15				*e*S	**Sb**	**06 04 48.1**	**-0.7**
PB15	**IPOC Station P**	**1.09**	**123**		**Pb**	**06 04 34.5**	**-0.3**
PB09	**IPOC Station P**	**1.39**	**54**	⇓*i*P	**Pb**	**06 04 39.5**	**-0.5**
PB09				IAML		06 05 05.7	
	comp=N,3μm,0.4s						
PB09	**IPOC Station P**	**1.39**	**54**		**Pb**	**06 04 39.5**	**-0.5**
LVC	**Limon Verde**	**1.43**	**90**	P	**Pb**	**06 04 40.2**	**-0.6**
	comp=N,313nm,0.3s,baz=348,slow=1.8,SNR=2427						
LVC				S	**Sb**	**06 04 58.1**	**-0.6**
	comp=N,976nm,0.3s,baz=71,slow=17,SNR=26						
LVC				LR	LR	06 05 29.0	
	comp=N,559nm,20.6s,baz=234,slow=57						
LVC	**Limon Verde**	**1.43**	**90**	*e*P	**Pb**	**06 04 40.2**	**-0.6**
LVC				*e*S	**Sb**	**06 04 57.8**	**-1.0**
PB01	**IPOC Station P**	**1.81**	**30**	⇓*i*P	**Pn**	**06 04 45.0**	**+1.0**
PB01				IAML		06 05 11.9	
	comp=E,2μm,0.6s						
PB01	**IPOC Station P**	**1.81**	**30**		**Pn**	**06 04 45.0**	**+1.0**
PATCX	**Punta Patache**	**1.81**	**9**	⇓*i*P	**Pn**	**06 04 44.0**	**+0.1**
PATCX				IAML		06 05 16.6	
	comp=N,1μm,0.5s						
PATCX	**Punta Patache**	**1.81**	**9**		**Pn**	**06 04 44.2**	**+0.2**
PB14	**IPOC Station P**	**2.00**	**179**	⇓*i*P	**Pn**	**06 04 46.7**	**-0.1**
PB14				IAML		06 05 23.0	
	comp=E,681nm,0.7s						
PB14	**IPOC Station P**	**2.00**	**179**	Pn	**Pn**	**06 04 46.8**	**-0.1**
TA01	**Diego Aracena**	**2.06**	**7**	⇓*i*P	**Pn**	**06 04 47.2**	**-0.1**
TA01	**Diego Aracena**	**2.06**	**7**	Pn	**Pn**	**06 04 47.2**	**-0.1**
HMBC	**Humberstone**	**2.38**	**13**	*i* P	**Pn**	**06 04 52.0**	**0.0**
HMBC				IAML		06 05 33.7	
	comp=E,1μm,0.5s						
GO02	**Mina Guanaco**	**2.66**	**163**	⇑*i*P	**Pn**	**06 04 57.0**	**+1.1**
GO02				IAML		06 05 43.8	
	comp=N,2μm,0.4s						
GO02	**Mina Guanaco**	**2.66**	**163**	Pn	**Pn**	**06 04 56.4**	**+0.5**
PB08	**IPOC Station P**	**2.75**	**27**	*e*P	**Pn**	**06 04 58.5**	**+1.4**
PB08				IAML		06 05 47.8	
	comp=N,936nm,0.6s						
PB08	**IPOC Station P**	**2.75**	**27**		**Pn**	**06 04 58.5**	**+1.4**
PSGC	**Pisagua**	**3.02**	**6**	*i* P	**Pn**	**06 05 00.4**	**-0.3**
PSGC				IAML		06 05 58.5	
	comp=N,371nm,0.7s						
PSGCX	**Pisagua**	**3.02**	**6**	Pn	**Pn**	**06 05 00.5**	**-0.2**
AC01	**Pan de Azucar**	**3.52**	**182**	*e*P	**Pn**	**06 05 06.1**	**-1.4**
AC01				IAML		06 06 09.6	
	comp=N,389nm,0.3s						
AC01	**Pan de Azucar**	**3.52**	**182**	Pn	**Pn**	**06 05 06.2**	**-1.2**
MNMC	**Minye Minye**	**3.56**	**13**	*e*P	**Pn**	**06 05 09.0**	**+0.7**
MNMC				IAML		06 06 22.7	
	comp=E,841nm,0.3s						
MNMC	**Minye Minye**	**3.56**	**13**	Pn	**Pn**	**06 05 09.1**	**+0.9**
AC02	**Maricunga**	**4.37**	**164**	*i* P	**Pn**	**06 05 21.1**	**+1.5**
AC02	**Maricunga**	**4.37**	**164**	Pn	**Pn**	**06 05 21.1**	**+1.5**
GO03	**Copiap**	**4.96**	**178**		**Pn**	**06 05 27.1**	**-0.3**
AC04	**Llanos de Chal**	**5.59**	**186**	Pn	**Pn**	**06 05 32.7**	**-3.2**
AC05	**El Transito**	**6.20**	**178**		**Pn**	**06 05 43.9**	**-0.5**
LCO	**Las Campanas**	**6.37**	**182**	Pn	**Pn**	**06 05 46.6**	**-0.3**
LPAZ	**La Paz**	**6.67**	**20**	P	**Pn**	**06 05 54.7**	**+3.4**
	comp=E,1.6nm,0.3s,baz=168,slow=3.4,SNR=38						
LPAZ				LR	LR	06 09 18.3	
	comp=E,80nm,19.3s,baz=214,slow=46						
LPAZ	**La Paz**	**6.67**	**20**	Pn	**Pn**	**06 05 54.6**	**+3.3**
CO01	**Juntas del Tor**	**7.34**	**178**	Pn	**Pn**	**06 06 02.1**	**+2.0**
GO04	**Tololo Observa**	**7.53**	**182**	Pn	**Pn**	**06 06 02.7**	**-0.1**
CO03	**El Pedregal**	**8.19**	**181**	Pn	**Pn**	**06 06 10.9**	**-0.9**
MT02	**Curacav**	**10.62**	**183**	Pn	**Pn**	**06 06 44.0**	**-0.9**
SIV	**San Ignacio**	**11.04**	**55**	P	**Pn**	**06 06 50.3**	**-0.5**
	comp=E,0.9nm,0.3s,baz=249,slow=13,SNR=18						
NNA	**Nana**	**12.20**	**329**	LR	LR	06 11 01.9	
	comp=E,62nm,18.6s,baz=160,slow=33						
CPUP	**Villa Florida**	**12.52**	**110**	P	**Pn**	**06 07 13.8**	**+2.9**
	comp=E,0.1nm,0.3s,baz=305,slow=14,SNR=4.4						
CPUP				LR	LR	06 12 40.3	
	comp=E,99nm,18.5s,baz=279,slow=40						
CPUP	**Villa Florida**	**12.52**	**110**		**Pn**	**06 07 09.0**	**-1.8**
H03N1	**Juan Fernandez**	**13.11**	**213**	T	T	06 20 44.7	
	baz=38,slow=72,SNR=420						
H03N2	**Juan Fernandez**	**13.12**	**213**	T	T	06 20 45.8	
	baz=38,slow=72,SNR=564						
H03N3	**Juan Fernandez**	**13.13**	**213**	T	T	06 20 44.8	
	baz=38,slow=72,SNR=374						
PLCA	**Paso Flores**	**18.06**	**180**	P	**P**	**06 08 27.9**	**+4.1**
	comp=E,0.1nm,0.3s,baz=32,slow=13,SNR=2.5						
PLCA				LR	LR	06 15 11.1	
	comp=E,70nm,19.4s,baz=346,slow=36						
BDFB	**Brasilia**	**22.30**	**76**	P	**P**	**06 09 09.4**	**-0.7**
	comp=E,2.2nm,0.8s,baz=251,slow=10,SNR=4.1						
BDFB				LR	LR	06 18 48.6	
	comp=E,81nm,20.6s,baz=109,slow=39						
BDFB	**Brasilia**	**22.30**	**76**	P	**P**	**06 09 10.2**	**+0.1**
BDFB				IAmb	IAmb	06 09 28.1	
	comp=Z,4.1nm,1.1s						
PTGA	**Pitinga**	**24.03**	**27**	P	**P**	**06 09 26.1**	**-1.3**
	comp=Z,2.5nm,0.4s,baz=143,slow=23,SNR=11						
PTGA	**Pitinga**	**24.03**	**27**	P	**P**	**06 09 26.8**	**-0.6**
PTGA				IAmb	IAmb	06 09 51.9	
	comp=Z,4.2nm,0.8s						
ROSC	**El Rosal**	**27.55**	**352**	LR	LR	06 21 04.1	
	comp=Z,44nm,19.3s,baz=56,slow=37						
PAYG	**Puerto Ayora**	**29.11**	**316**	P	**P**	**06 10 12.4**	**-0.8**
RCBR	**Riachuelo**	**37.28**	**69**	P	**P**	**06 11 23.9**	**-0.6**
TEIG	**Tepich**	**46.00**	**336**	P	**P**	**06 12 35.7**	**+0.1**
	comp=Z,7.9nm,0.9s						
H06E1	**SOCORRO T-PHAS**	**57.07**	**313**	T	T	07 15 47.9	
	SNR=23						
TXAR	**Lajitas Array**	**60.74**	**327**	P	**P**	**06 14 24.4**	**+0.3**
	comp=Z,0.5nm,0.6s,baz=142,slow=9.8,SNR=4.9						
PDAR	**Pinedale Array**	**74.37**	**331**	P	**P**	**06 15 50.6**	**+0.6**
	comp=Z,0.2nm,0.5s,baz=134,slow=7.7,SNR=3.0						
ELK	**Elko**	**75.54**	**326**	P	**P**	**06 15 57.9**	**+1.0**
	comp=Z,0.4nm,0.4s,baz=111,slow=8.6,SNR=2.8						
TORD	**Torodi Ar. Bea**	**79.08**	**71**	P	**P**	**06 16 15.6**	**-1.4**
	comp=Z,0.6nm,0.4s,baz=254,slow=5.0,SNR=6.3						
YKA	**Yellowknife Ar**	**91.76**	**341**	P	**P**	**06 17 18.3**	**-0.9**
	comp=Z,0.6nm,0.7s,baz=133,slow=5.0,SNR=12						
H11S2	**WAKE ISLAND Hy**	**126.58**	**277**	T	T	08 42 45.5	
	baz=105,slow=75,SNR=86						
H11S1	**WAKE ISLAND Hy**	**126.59**	**277**	T	T	08 42 50.2	
	baz=105,slow=75,SNR=70						
H11S3	**WAKE ISLAND Hy**	**126.60**	**277**	T	T	08 42 54.8	
	baz=105,slow=75,SNR=59						
H11N3	**WAKE ISLAND Hy**	**126.70**	**278**	T	T	08 42 51.3	
	baz=104,slow=74,SNR=73						
H11N2	**WAKE ISLAND Hy**	**126.72**	**278**	T	T	08 42 49.6	
	baz=104,slow=74,SNR=65						
H11N1	**WAKE ISLAND Hy**	**126.72**	**278**	T	T	08 42 50.6	
	baz=104,slow=74,SNR=50						
ASAR	**Alice Springs**	**128.25**	**209**	PKP	**PKPdf**	**06 23 18.2**	**-1.0**
	comp=Z,0.6nm,0.8s,baz=142,slow=1.6,SNR=5.9						
WRA	**Warramunga Arr**	**131.26**	**212**	PKP	**PKPdf**	**06 23 24.7**	**-0.3**
	comp=Z,0.3nm,0.5s,baz=155,slow=1.8,SNR=5.8						
ZALV	**Zalesovo Beam**	**143.56**	**25**	PKP	PKPbc	06 23 44.7	+0.9
	comp=Z,0.4nm,0.3s,baz=251,slow=4.4,SNR=2.2						
MKAR	**Makanchi Array**	**147.37**	**36**	PKPbc	**PKPdf**	**06 23 53.7**	**+0.4**
	comp=Z,1.0nm,0.7s,baz=324,slow=2.7,SNR=11						
MKAR	**Makanchi Array**	**147.37**	**36**		**PKPdf**	**06 23 53.4**	**+0.1**
MKAR				PKPbc	**PKPbc**	**06 23 56.0**	**+0.2**

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*IDC **08** 06:06:16.8±1.1, 6°.92S×154°.79E, h0^{km}, mb3.8/8, mb1 4.1/8, mb1mx3.8/36, mbtmp3.8/8, MS3.1/2, Ms1 3.0/2, ms1mx2.6/36, Error ellipse: s-maj=50.7km s-min=21.6km az=123.0*

ISC 08 06:06:22.8±1.0**, 7°.1S**±0°.2×**155°.0E**±0°.2**, h41**^{km}**, n11,**
σ**1**^{s}**.31**/10**, mb3.8**/9**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.47**	**116**	LR	LR	06 10 08.6	
	comp=Z,150nm,19.4s,baz=254,slow=41						
WRA	**Warramunga Arr**	**23.75**	**235**	P	**P**	**06 11 29.9**	**-1.7**
	2.6nm,0.8s,baz=60,slow=9.9,SNR=9.2						
ASAR	**Alice Springs**	**26.10**	**228**	P	**P**	**06 11 52.0**	**-0.9**
	0.6nm,0.7s,baz=58,slow=8.9,SNR=7.6						
STKA	**Stephens Creek**	**27.66**	**205**	P	**P**	**06 12 08.0**	**+1.2**
	1.5nm,0.7s,baz=21,slow=18,SNR=3.0						
STKA				LR	LR	06 22 35.5	
	comp=Z,41nm,19.2s,baz=25,slow=35						

CMAR	Chiang Mai Arr	60.77	296	P	P	06 16 33.0	+2.0
	1.4nm,0.3s,baz=123,slow=4.4,SNR=4.4						
SONM	Songino Array	69.37	327	P	P	06 17 25.3	-1.1
	0.5nm,0.5s,baz=150,slow=6.0,SNR=4.9						
MKAR	Makanchi Array	83.43	319	P	P	06 18 46.2	+0.2
	0.5nm,0.6s,baz=91,slow=6.1,SNR=7.2						
ILAR	Eielson Array	83.45	21	P	P	06 18 44.9	-0.9
	0.2nm,0.4s,baz=235,slow=5.0,SNR=6.1						
NVAR	Mina Array Bea	91.79	52	P	P	06 19 27.3	+0.4
	0.3nm,0.6s,baz=246,slow=7.8,SNR=2.4						
YKA	Yellowknife Ar	96.41	28	P	P	06 19 47.7	+0.5
	0.6nm,0.6s,baz=266,slow=4.0,SNR=8.0						
TORD	Torodi Ar. Bea	153.00	285	PKPbc	PKPbc	06 26 16.0	-0.9
	0.7nm,0.7s,baz=29,slow=3.3,SNR=2.5						

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*IDC **08** 06:11:07.6±3.9, 19°.55N×109°.12W, h0^{km}, mb3.4/5, mb1 3.9/9, mb1mx3.7/39, mbtmp3.6/9, ML3.3/4, MS3.2/7, Ms1 3.2/7, ms1mx3.0/24, Error ellipse: s-maj=66.3km s-min=39.4km az=31.0*

*MEX **08** 06:11:10.2±0.6, 19°.41N×109°.04W, h16^{km}, MD4.0*

ISC 08 06:11:10.0±0.9, 19°.4N±0°.1×109°.18W±0°.07, h26^{km}, n23, σ1^{s}.45/16, mb3.4/4, MS3.4/3, Revilla Gigedo Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H06E		1.77	249	*i* P	Pn	06 11 38.8	-0.2
H06E				*i* S	Sn	06 11 59.9	-0.8
H06E1	SOCORRO T-PHAS	1.78	249	T	T	06 13 52.2	
	SNR=896						
H06N1	SOCORRO T-PHAS	1.80	252	T	T	06 13 44.0	
	SNR=27						
H06N	Isla Socorro	1.81	252	*i* P	Pn	06 11 38.7	-0.7
H06N				*i* S	Sn	06 12 01.0	-0.5
H06S1	SOCORRO T	1.82	248	T	T	06 13 45.8	
	SNR=77						
H06S		1.82	248	*i* P	Pn	06 11 39.3	-0.4
H06S				*i* S	Sn	06 12 00.9	-1.1
ANIG	Ahuacatlan	4.66	69	*i* P	Pn	06 12 15.7	-3.1
LPIG	La Paz	4.77	347	Pn	Pn	06 12 17.9	-2.3
	2.8nm,0.3s,baz=236,slow=20,SNR=7.3						
LPIG				LR	LR	06 13 35.3	
	comp=Z,110nm,20.4s,baz=128,slow=32						
TXAR	Lajitas Array	11.06	26	Pn	Pn	06 13 46.1	-0.6
	0.1nm,0.3s,baz=198,slow=14,SNR=15						
CMIG	Matias Romero	13.77	97	Pn	Pn	06 14 25.3	+1.6
	0.3nm,0.3s,baz=294,slow=11,SNR=3.6						
CMIG				LR	LR	06 19 26.0	
	comp=Z,78nm,19.1s,baz=274,slow=36						
PFO	Pinyon Flats O	15.55	337	LR	LR	06 20 14.0	
	comp=Z,133nm,18.3s,baz=160,slow=35						
ANMO	Albuquerque	15.64	8	Pn	Pn	06 14 50.0	+1.1
	0.0nm,0.3s,baz=217,slow=10,SNR=3.1						
ANMO				LR	LR	06 20 29.5	
	comp=Z,80nm,20.3s,baz=186,slow=36						
NVAR	Mina Array Bea	20.53	339	P	P	06 15 48.4	+1.8
	2.6nm,0.9s,baz=167,slow=14,SNR=11						
ELK	Elko	21.87	348	P	P	06 16 02.1	+1.0
	1.4nm,0.9s,baz=187,slow=9.4,SNR=6.1						
PDAR	Pinedale Array	23.27	359	P	P	06 16 15.8	-0.1
	0.6nm,0.7s,baz=152,slow=9.9,SNR=6.5						
YBH	Yreka Blue Hor	25.04	336	LR	LR	06 26 23.2	
	comp=Z,34nm,18.9s,baz=24,slow=37						
YKA	Yellowknife Ar	43.19	356	P	P	06 19 07.6	-0.9
	0.5nm,0.8s,baz=168,slow=8.0,SNR=8.8						
ILAR	Eielson Array	51.78	341	P	P	06 20 15.8	+0.6
	0.5nm,0.8s,baz=152,slow=6.4,SNR=6.1						
PPT	Papeete	54.10	230	LR	LR	06 38 32.6	
	comp=Z,54nm,18.3s,baz=287,slow=30						
MDP	Montagnes des	56.80	97	LR	LR	06 46 05.6	
	comp=Z,28nm,18.3s,baz=56,slow=37						
H03N2	Juan Fernandez	59.98	151	T	T	07 26 37.1	
	baz=329,slow=77,SNR=24						
H03N1	Juan Fernandez	59.99	151	T	T	07 26 33.1	
	baz=329,slow=77,SNR=31						
H03N3	Juan Fernandez	59.99	151	T	T	07 26 36.7	
	baz=329,slow=77,SNR=35						

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*KRNET **08** 07:31:20.1±0.1, 41°.36N×69°.62E, h9^{km}, mb2.5*

ISC 08 07:31:20.0±1.7, 41°.4N±0°.1×69°.66E±0°.07, h1^{km}±27^{km}, n6, σ1^{s}.57/12, 10C-2D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAS	Tashkent	0.28	262	⇑*i*P	Pg	07 31 25.1	-0.2
	baz=63						
TAS				⇑*i*S	Sg	07 31 28.3	-0.6
	baz=63						
TRKS	Terek-Say	1.13	81	⇓*i*P	Pn	07 31 42.6	-0.5
	baz=84						
TRKS				⇓*i*S	Sn	07 31 58.8	-0.5
	baz=84						
BTK	Batken	1.58	146	⇑*e*P	Pg	07 31 50.2	0.0
	baz=45						
BTK				⇑*i*S	Sg	07 32 11.7	+1.1
	baz=45						
KK31	Karatay Array	1.85	20	⇑P	Pb	07 31 54.8	+0.2
	0.5nm,0.3s,baz=208,slow=16,SNR=20						
KK31				⇑S	Sb	07 32 18.4	+0.2
	1.9nm,0.3s,baz=203,slow=29,SNR=24						
MNAS	Manas	2.40	61	⇑*i*P	Pb	07 32 03.2	-0.9
	baz=61						
MNAS				⇑*i*S	Sb	07 32 34.8	+0.5
	baz=61						
AML	Almayashu	3.12	74	⇑*e*P	Pn	07 32 13.3	+2.7
	baz=74						
AML				⇑*i*S	Sb	07 32 52.0	-3.1
	baz=74						

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*FUNV **08** 07:32:15.2, 9°.24N×70°.12W, h1^{km}, MW3.0*

ISC 08 07:32:15.4±1.1, 9°.25N±0°.03×70°.10W±0°.03, h6^{km}±10^{km}, n21, σ1^{s}.06/32, 1C-1D, Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TORV	Torococo	0.34	337	⇓*i*P	Pb	07 32 23.4	-0.6
TORV				*e*S	Sg	07 32 27.5	+0.9
SANV	Sanarito	0.61	65	⇑*e*P	Pg	07 32 27.6	+0.5
SANV				*e*S	Sg	07 32 36.5	+1.4
SDV	Santo Domingo	0.64	236	*e*P	Pg	07 32 27.4	-0.4
SDV				*e*S	Sg	07 32 34.0	-2.1
SDV	Santo Domingo	0.64	236	*e*P	Pg	07 32 27.0	-0.7
SDV				*e*S	Sg	07 32 36.2	+0.1
CURV	Curarigua	0.78	10	*e*P	Pg	07 32 30.1	-0.2
CURV				*e*S	Sg	07 32 41.7	+1.3
SIQV	Siquisique	1.42	11	*e*P	Pn	07 32 41.8	-0.1
SIQV				*e*S	Sn	07 33 01.1	+0.1
MAPV	Macapo	1.72	70	*e*P	Pn	07 32 46.2	+0.3
MAPV				*e*S	Sn	07 33 08.4	+0.1
DABV	Dabajuro	1.75	342	*e*P	Pn	07 32 46.2	-0.1
DABV				*e*S	Sn	07 33 09.3	+0.3
BAUV	El Baul	2.05	98	*e*P	Pn	07 32 50.7	+0.2
BAUV				*e*S	Sn	07 33 16.8	+0.3
ELOV	Elorza	2.31	165	*e*P	Pn	07 32 54.4	+0.4
ELOV	Elorza	2.31	165	*e*P	Pn	07 32 54.4	+0.4
TURV	Turiamo	2.52	62	*e*P	Pn	07 32 57.0	-0.1
MONV	Montecano	2.70	3	*e*P	Pn	07 32 59.3	-0.1
MONV				*e*S	Sn	07 33 31.4	-1.0
URIC	Uribia, Colomb	3.07	323	*e*P	Pn	07 33 04.1	-0.5
TACV	Tcata	3.15	73	*e*P	Pn	07 33 05.4	-0.3
TACV				*e*S	Sn	07 33 42.4	-1.3
PAMC	Pamplona, Colo	3.20	234	*e*P	Pn	07 33 08.3	+1.6
TAMC	Tame, Arauca	3.26	211	*e*P	Pg	07 33 16.9	-1.0
MERV	Las Mercedes	3.75	90	*e*P	Pn	07 33 13.3	-0.6
SMLC	San Martn de	3.95	264	*e*P	Pn	07 33 18.0	+1.4
BRRC	Barranca, Sant	4.16	240	*e*P	Pn	07 33 22.0	+2.4
RUSC	La Rusia	4.46	222	*e*P	Pn	07 33 26.5	+2.5

IDC 08 07:37:01.9±5.5, 7°.36S×155°.32E, h0^{km}, mb3.3/3, mb1 3.5/3, mb1mx3.4/26, mbtmp3.3/3, Error ellipse: s-maj=169.1km s-min=41.5km az=116.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.88	236	P	P	07 42 17.4	0.0
	0.7nm,0.8s,baz=60,slow=9.2,SNR=3.5						
ASAR	Alice Springs	26.18	229	P	P	07 42 37.9	-0.5
	0.2nm,0.6s,baz=53,slow=9.7,SNR=2.9						
MKAR	Makanchi Array	83.89	319	P	P	07 49 34.2	+0.4
	0.4nm,0.8s,baz=99,slow=7.6,SNR=4.0						

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*KOLA **08** 07:48:52.3, 67°.68N×33°.75E, h0^{km}, ML2.4, Khibiny, mines Kirovsk, Yukspor*

*HEL **08** 07:48:52.7±0.1, 67°.73N×33°.67E, h0^{km}, ML1.8, Explosion*

*NAO **08** 07:48:52.3±1.2, 67°.67N×33°.73E, ML2.7*

ISC 08 07:48:51.6±0.9, 67°.66N±0°.04×33°.77E±0°.04, h0^{km}, n30, σ1^{s}.61/51, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APA	Apatity	0.16	238	P	Pg	07 48 55.5	+0.8
APA				S	Sg	07 48 57.7	+0.9
APZ9	Apatity	0.16	238	Pg	Pg	07 48 55.4	+0.7
APZ9				Lg	Lg	07 48 57.8	
APZ9	Apatity	0.16	238	Pg	Pg	07 48 55.4	+0.7
APZ9				Sg	Sg	07 48 57.8	+1.0
APA0	Apatity Array	0.30	261	Pg	Pg	07 48 57.8	+0.4
	baz=84,slow=16						
APA0				Lg	Lg	07 49 01.9	
	baz=80,slow=28						
APA0				Rg	Rg	07 49 03.6	
	baz=79,slow=37						
APA0	Apatity Array	0.30	261	Pg	Pg	07 48 57.8	+0.4
	baz=84,slow=16						
APA0				Sg	Sg	07 49 01.9	+0.7
	baz=80,slow=28						
APA0	Apatity Array	0.30	261	P	Pg	07 48 57.7	+0.4
APA0				S	Sg	07 49 01.6	+0.4
LVZ	Lovozero	0.41	54	*e*P	Pg	07 48 60.0	+0.4
LVZ				*e*S	Sg	07 49 05.4	+0.5
VRF	Varrio	1.59	275	*e*S	Sn	07 49 40.1	-2.1
OLKF	Oulanka, Finla	2.18	234	*e*PG	Pb	07 49 32.0	+0.2
KU6	Riekki	2.24	225	*e*P	Pn	07 49 31.1	+1.2
KU6				*e*SB	Sb	07 50 01.2	+0.1
KU6				MSG		07 50 02.6	
	comp=Z,4.1nm,0.2s						
MSF	Maaselka	2.56	229	*e*P	Pn	07 49 36.2	+1.9
MSF				*e*SB	Sb	07 50 10.4	0.0
SGF	Sodankyl	2.79	269	*e*P	Pn	07 49 37.7	+0.3
SGF				*e*SG	Sb	07 50 16.4	-0.4
SGF				MSG		07 50 21.7	
	comp=Z,2.4nm,0.1s						
RNF	Rovaniemi	3.21	254	*e*P	Pn	07 49 43.4	+0.2
KEV	Kevo	3.25	314	*e*P	Pn	07 49 43.9	+0.3
KEV				*e*SG	Sb	07 50 30.3	+0.3
ARA0	ARCESS Array S	3.57	306	Pn	Pn	07 49 48.5	+0.3
	baz=122,slow=16						
ARA0				Pg	Pb	07 49 57.0	+1.5
	baz=122,slow=16						
ARA0				Sn	Sn	07 50 30.6	-0.3
	baz=118,slow=28						
ARA0				Lg	Lg	07 50 41.0	
	baz=111,slow=37						
ARA0	ARCESS Array S	3.57	306	Pn	Pn	07 49 48.5	+0.3
	baz=122,slow=16						
ARA0				Pg	Pb	07 49 57.0	+1.5
	baz=122,slow=16						
ARA0				Sn	Sn	07 50 30.6	-0.3
	baz=118,slow=28						
ARA0				Sg	Sb	07 50 41.0	+1.7
	baz=111,slow=37						
ARA0				IAML		07 50 46.8	
	comp=Z,14nm,0.6s						
ARA0	ARCESS Array S	3.57	306	*e*P	Pn	07 49 48.4	+0.3
TOF	Tornio	4.05	251	*e*S	Sn	07 50 41.3	-1.4
TOF				MSG		07 51 03.8	
	comp=Z,2.0nm,0.2s						
KTK1	Kautokeino	4.13	294	Pn	Pn	07 49 56.8	+0.9
KTK1				Sn	Sn	07 50 44.1	-0.8
KTK1				Lg	Lg	07 50 58.0	
KTK1	Kautokeino	4.13	294	*e*P	Pn	07 49 57.3	+1.4
KTK1				*e*S	Sn	07 50 44.5	-0.4
KTK1				IAML		07 51 04.2	
	comp=Z,12nm,0.6s						
LANU	Lannavaara	4.48	280	*e*SG	Sb	07 51 08.8	+3.3
HAMF	Hammerfest	4.69	314	*e*P	Pn	07 50 04.4	+1.0
HAMF				*e*S	Sn	07 50 56.0	-2.4
HAMF				IAML		07 51 19.6	
	comp=Z,20nm,0.5s						
KIF	Kilpisjarvi	4.99	292	Pn	Pn	07 50 07.2	-0.4
KIF				Sn	Sn	07 51 03.8	-2.1
KIF	Kilpisjarvi	4.99	292	*e*P	Pn	07 50 07.2	-0.4
KIF				*e*S	Sn	07 51 01.5	-4.4
TRO	Tromso	5.77	297	*e*P	Pn	07 50 18.2	0.0
TRO				*e*S	Sn	07 51 21.6	-3.4
TRO				IAML		07 51 48.5	
	comp=Z,4.8nm,1.1s						
SALU	Saltoluokta	5.86	274	*e*P	Pn	07 50 18.4	-1.1
SALU				*e*S	Sn	07 51 23.6	-3.8
FIA0	FINESS Array S	7.06	212	Sn	Sn	07 51 54.0	-2.8
	baz=48,slow=22						
FIA0				Lg	Lg	07 52 26.8	
	baz=18,slow=28						
FIA0	FINESS Array S	7.06	212	Sn	Sn	07 51 54.0	-2.8
	baz=48,slow=22						
SPA0	Spitsbergen Ar	11.65	342	Pn	Pn	07 51 36.4	-2.5
	baz=138,slow=12						
SPA0	Spitsbergen Ar	11.65	342	Pn	Pn	07 51 36.4	-2.5
	baz=138,slow=12						

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*ANF **08** 07:58:31.4±1.2, 32°.05N×116°.20W, h2^{km}, ML2.7/11, Error ellipse: s-maj=9.3km s-min=6.2km az=21.0*

*SCEDC **08** 07:58:33.9, 32°.09N×116°.23W, h3^{km}*

*PAS **08** 07:58:33.9±2.1, 32°.09N±0°.01×116°.23W±0°.01, h3^{km}±6^{km}, Error ellipse: s-maj=2.4km s-min=1.0km az=139.0*

*NEIC **08** 07:58:33.6±1.8, 32°.091N±0°.006×116°.24W±0°.01, h11^{km}±3^{km}, Error ellipse: s-maj=1.9km s-min=0.5km az=66.0*

*ECX **08** 07:58:34.3±0.8, 32°.08N×116°.22W, h10^{km}±10^{km}, MD2.6, ML2.8, Fault plane solution: NP1:ϕ_s344.90000°, δ75.52000°, λ-26.57000°.*

ISC 08 07:58:33.1±0.9, 32°.06N±0°.02×116°.22W±0°.02, h13^{km}±8^{km}, n93, σ0^{s}.91/153, 3C-10D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESJX	Sierra Juarez	0.24	104		Pg	07 58 39.1	+0.8
SJX	San Joaquin	0.37	143	⇓*i*P	Pg	07 58 39.2	-1.4
SJX				*e*S	Sg	07 58 42.8	-2.8
CCX	Cicese	0.42	243		Pg	07 58 42.3	+0.8
CCX					Sg	07 58 48.5	+1.4
CCX				IAML		07 58 48.8	
	comp=N,383nm,0.4s						
CCX	Cicese	0.42	243	⇑*i*P	Pg	07 58 42.4	+0.8
CCX				*e*S	Sg	07 58 48.6	+1.4
CBX	Cerro Bola	0.45	304		Pg	07 58 42.6	+0.6
CBX					Sg	07 58 49.0	+0.8
CBX				IAML		07 58 49.9	
	comp=E,361nm,0.6s						
CBX				IAML		07 58 51.5	
	comp=N,276nm,0.6s						
CBX	Cerro Bola	0.45	304	⇓*e*P	Pg	07 58 42.7	+0.6
CBX				*e*S	Sg	07 58 49.0	+0.8
CBX				IAML		07 58 50.3	
	comp=E,822nm,0.7s						
TJIG	Tijuana	0.53	314	*e*P	Pg	07 58 43.5	-0.1
TJIG				*e*S	Sg	07 58 50.7	0.0
RMX	La Rumorosa	0.55	13		Pg	07 58 43.6	-0.4
RMX					Sg	07 58 50.2	-1.1
RMX				IAML		07 58 51.0	
	comp=N,914nm,0.3s						
RMX	La Rumorosa	0.55	13	⇑*e*P	Pg	07 58 43.6	-0.4
IKP	In-Ko-Pah, Jac	0.59	9	P	Pg	07 58 44.8	0.0
	baz=191,SNR=33						
IKP				S	Sg	07 58 52.5	-0.1
	baz=191						
IKP	In-Ko-Pah, Jac	0.59	9		Pg	07 58 44.9	+0.1
IKP					Sg	07 58 52.8	+0.1
IKP	In-Ko-Pah, Jac	0.59	9	⇓*i*P	Pg	07 58 44.9	+0.1
IKP				*e*S	Sg	07 58 52.6	-0.1
TKX	Tecate	0.60	327		Pg	07 58 44.6	-0.3
TKX					Sg	07 58 52.5	-0.3
TKX				IAML		07 58 53.4	
	comp=N,849nm,0.2s						
TKX	Tecate	0.60	327	*e*P	Pg	07 58 44.6	-0.3
TKX				*e*S	Sg	07 58 52.5	-0.3
YUH	Yuha Desert	0.64	23		Pg	07 58 45.5	0.0
YUH					Sg	07 58 53.7	-0.2
SGL	Mount Signal	0.72	36		Pg	07 58 47.2	+0.1
SGL					Sg	07 58 57.0	+0.4
BAR	Barrett	0.72	328		Pg	07 58 46.6	-0.6
BAR				IAML		07 58 56.6	
	comp=N,550nm,0.2s						
BAR				IAML		07 58 56.9	
	comp=E,357nm,0.1s						
BAR	Barrett	0.72	328	⇓*e*P	Pg	07 58 46.6	-0.6
BAR				*e*S	Sg	07 58 56.1	-0.7
BAR				⇓*e*		07 58 56.6	
BAR				IAML		07 58 56.6	
	comp=N,534nm,0.1s						
BAR				IAML		07 58 56.9	
	comp=E,373nm,0.1s						
BAR				⇓*e*		07 58 56.9	
SVX	San Vicente	0.73	182	*e*P	Pg	07 58 47.4	+0.1
SVX				*e*S	Sg	07 58 57.2	+0.2
VTX	Valle De La Tr	0.77	151	⇓*i*P	Pg	07 58 48.1	+0.1
VTX				*e*S	Sg	07 58 58.4	+0.4
WESC	Westside Schoo	0.81	31		Pg	07 58 49.0	+0.2
OLP	Otay Lakes Par	0.81	312		Pg	07 58 48.3	-0.5
OLP					Sg	07 58 58.8	-0.6
OLP	Otay Lakes Par	0.81	312	⇓*e*P	Pg	07 58 48.3	-0.5
OLP				*e*S	Sg	07 58 58.8	-0.6
TJX	Tijuana	0.83	303		Pg	07 58 49.4	+0.1
TJX					Sg	07 59 00.4	+0.2
TJX				IAML		07 59 07.0	
	comp=N,209nm,0.7s						
TJX				IAML		07 59 08.9	
	comp=E,222nm,0.8s						
TJX	Tijuana	0.83	303	*e*P	Pg	07 58 49.4	+0.1
CBKC	Canebrake	0.83	358		Pg	07 58 49.3	0.0
MONP2	Monument Peak	0.84	348	P	Pg	07 58 48.8	-0.8
	baz=169,SNR=22						
MONP2				S	Sg	07 58 59.9	-0.7
	baz=169						
MONP2	Monument Peak	0.84	348		Pg	07 58 49.0	-0.5
MONP2					Sg	07 59 00.0	-0.6
MONP2	Monument Peak	0.84	348	⇓*i*P	Pg	07 58 49.0	-0.5
MONP2				*e*S	Sg	07 58 59.9	-0.7
CRR	Carrizo Plain	0.85	14		Pg	07 58 49.5	-0.1
CRR					Sg	07 59 01.1	+0.4
CPBX	Cerro Prieto	0.85	65		Pg	07 58 50.0	+0.4
CPBX	Cerro Prieto	0.85	65	*e*P	Pg	07 58 50.1	+0.4
COK2	Cook Ranch 2	0.89	28		Pg	07 58 50.8	+0.5
COK2					Sb	07 59 03.2	+1.0
SDRC	San Diego Road	0.91	318		Pg	07 58 49.8	-0.9
SDRC					Sg	07 59 01.3	-1.2
SDRC	San Diego Road	0.91	318	⇓*e*P	Pg	07 58 49.8	-0.9
SDRC				*e*S	Sg	07 59 01.3	-1.2
SWSC	Sam W. Stewart	0.95	22	P	Pg	07 58 51.2	-0.3
	baz=203,SNR=29						
SWSC				S	Sg	07 59 03.7	-0.1
	baz=203						
SWSC	Sam W. Stewart	0.95	22		Pg	07 58 51.2	-0.3
SWSC					Sg	07 59 03.9	-0.1
SWSC	Sam W. Stewart	0.95	22	*e*P	Pg	07 58 51.5	0.0
SWSC				*e*S	Sg	07 59 03.8	-0.1
DREC	Desert Rsrch C	0.99	41		Pg	07 58 52.4	+0.2
SALX	Saltillo	0.99	69	⇑*e*P	Pn	07 58 55.4	+2.6
GUVIX	Guadalupe Vict	1.00	76		Sb	07 59 07.2	+1.8
SNR	Schaffner Ranc	1.04	40		Pg	07 58 53.0	-0.1
SNR					Sb	07 59 07.7	+1.2
ERRC	Elmore Ranch	1.10	18		Pb	07 58 55.0	+0.9
ERRC					Sn	07 59 10.4	+1.0
109C	Camp Elliot, M	1.11	318	P	Pb	07 58 52.9	-1.3
	baz=137,SNR=18						
109C				S	Sg	07 59 07.2	-1.9
	baz=137						
109C	Camp Elliot, M	1.11	318		Pb	07 58 53.1	-1.2
109C				IAML		07 59 07.8	
	comp=E,282nm,0.2s						
CPE	Camp Elliot	1.11	318		Pb	07 58 53.1	-1.1
CPE					Sg	07 59 07.7	-1.4
WEMD	Westmorland, C	1.11	29		Sn	07 59 10.9	+1.2
DPP	Dos Picos Cty	1.11	327		Pb	07 58 53.0	-1.3
DPP					Sg	07 59 07.7	-1.4
SLH	Sleepy Hollow	1.13	359		Pb	07 58 54.3	-0.3
SLH					Sg	07 59 09.3	-0.2
HWB	Hans Werner Br	1.15	327		Pb	07 58 53.6	-1.3
HWB					Sb	07 59 08.6	-1.1
ECBX	El Chinero	1.16	120	*e*P	Pb	07 58 54.2	-0.8
ECBX				*e*P	Pb	07 58 54.3	-0.8
ECBX				*e*S	Sb	07 59 09.4	-0.5
MATG	Mataguay Scout	1.19	343		Pb	07 58 54.6	-1.0
MATG					Sb	07 59 10.2	-0.8
SPIG	San Pedro Mart	1.20	147	*e*P	Pb	07 58 55.5	-0.5
SPX	San Pedro Mart	1.21	148		Pb	07 58 55.8	-0.3
SPX					Sb	07 59 11.8	0.0
SPX	San Pedro Mart	1.21	148	*e*P	Pb	07 58 55.6	-0.5
SPX				*e*S	Sb	07 59 11.5	-0.3
BORC	Borrego Spring	1.21	352		Pb	07 58 54.9	-1.1
COA	Coachella	1.22	49		Pn	07 58 55.2	-0.8
EMSC	East Mesa	1.24	57		Pn	07 58 55.5	-0.8
GORC	Green Oak Ranc	1.38	322		Pn	07 58 57.6	-0.6
GORC					Sb	07 59 15.4	-1.0
PLM	Palomar	1.40	337		Pn	07 58 58.0	-0.5
FRD	Ford Ranch, An	1.46	347		Pn	07 59 00.1	+0.7
FRD					Sn	07 59 18.9	+0.4
FRD	Ford Ranch, An	1.46	347		Pn	07 59 00.1	+0.7
BZNA	Buzz No.'s Pla	1.47	345		Pn	07 58 59.6	0.0
BZNA					Sn	07 59 19.3	+0.5
SNDA	J Saunders Pla	1.52	348		Pn	07 59 00.7	+0.4
SNDA					Sn	07 59 21.2	+1.2
GLA	Glamis	1.54	50	P	Pn	07 58 59.4	-0.9
	baz=231,SNR=12						
GLA				S	Sn	07 59 17.9	-2.3
	baz=231						
GLA	Glamis	1.54	50		Pn	07 58 59.4	-0.9
DNR	Dunn Ranch,Anz	1.54	347		Pn	07 59 02.0	+1.5
DNR					Sb	07 59 22.7	+1.6
SFX	San Felipe	1.55	131	Pn	Pb	07 59 02.7	+0.9
SFX				IAML		07 59 23.7	
	comp=N,59nm,0.5s						
SFX				IAML		07 59 27.1	
	comp=E,60nm,0.6s						
XPFO	Pion Flat	1.56	353		Pn	07 59 00.4	-0.3
XPFO					Sn	07 59 21.9	+1.1
PFO	Pinyon Flats O	1.56	353	Pn	Pn	07 59 00.4	-0.4
	baz=173,SNR=13						
PFO				Pb	Pb	07 59 02.1	+0.1
	baz=173						
PFO				S	Sn	07 59 21.8	+0.9
	baz=173						
PFO	Pinyon Flats O	1.56	353		Pn	07 59 00.3	-0.4
PFO	Pinyon Flats O	1.56	353		Pn	07 59 02.0	+1.2
PFO					Sn	07 59 22.0	+1.1
CRY	Cary Ranch	1.56	344		Pn	07 59 01.6	+0.8
CRY					Sn	07 59 21.8	+0.9
PMD	Palm Desert	1.59	355		Pn	07 59 00.6	-0.4
PMD					Sn	07 59 22.5	+1.1
CTW	Cottonwood Mou	1.64	10		Pn	07 59 00.9	-0.8
BACC	Bachelor Mtn.	1.69	336		Pn	07 59 02.7	+0.2
BC3	Big Chuckawall	1.71	22	P	Pn	07 59 02.4	-0.4
	baz=203						
BC3				S	Sn	07 59 22.7	-2.1
	baz=203						
DGR	Domenigoni Val	1.72	337		Pn	07 59 03.3	+0.4
POB	Polly Butte	1.72	340		Pn	07 59 03.8	+0.8
MURC	Murrieta	1.74	332	Pb	Pn	07 59 03.6	+0.4
	baz=152,SNR=14						
MURC				S	Sn	07 59 26.3	+1.1
	baz=152						
HMTC	Hemet	1.77	338		Pn	07 59 01.5	-2.0
ELS	Elsinore Mount	1.88	328		Pn	07 59 05.7	+0.6
DEVC	Devers	1.89	351		Pn	07 59 06.2	+0.9
BELC	Belle Mtn. Jos	1.94	5	P	Pn	07 59 05.5	-0.5
	baz=186,SNR=8.4						
BELC				S	Sb	07 59 33.2	+0.5
	baz=186						
SME	Santa Rosa Min	2.00	332		Pn	07 59 07.5	+0.8
TPC	Twentynine Pal	2.04	4		Pb	07 59 11.0	+0.9
BBRC	Big Bear Solar	2.27	345	P	Pn	07 59 11.5	+0.8
	baz=165						
BBRC				Sb	Sb	07 59 43.2	+0.9
	baz=165						
BTL	Butler Peak	2.29	344		Pn	07 59 12.0	+1.1
BFSC	Mount Baldy Ra	2.48	331	P	Pn	07 59 14.0	+0.6
	baz=150						
BFSC				Sb	Sb	07 59 48.2	-0.1
	baz=150						
MWC	Mount Wilson	2.65	325	Pn	Pn	07 59 16.1	+0.4
MWC					Pb	07 59 16.3	-4.3
MWC				IAML		07 59 59.7	
	comp=N,16nm,0.6s						

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MWC				IAML		08 00 20.0	
	comp=E,16nm,3.5s						
GMRC	**Granite Mounta**	**2.75**	**10**	Sb	**Sb**	**07 59 58.9**	**+2.8**
	baz=190						
214A	**Organ Pipe Nat**	**2.90**	**91**	P	**Pn**	**07 59 18.6**	**-0.5**
	baz=274						
214A				S	**Sn**	**07 59 52.5**	**-1.3**
	baz=274						
GSC	**Goldstone, Bar**	**3.27**	**352**		**Pn**	**07 59 24.8**	**+0.6**
GSC				IAML		07 59 52.8	
	comp=E,17nm,4.7s						
GSC				IAML		08 00 25.7	
	comp=N,13nm,4.5s						

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*IDC **08** 08:38:35.9±1.5, 10°.08S×118°.37E, h0^{km}, mb3.7/4, mb1 4.0/8, mb1mx3.8/31, mbtmp3.9/8, ML3.8/4, MS2.5/3, Ms1 2.5/3, ms1mx2.3/39, Error ellipse: s-maj=51.2km s-min=19.0km az=50.0*

*DJA **08** 08:38:44.0±1.1, 10°S±9°×11°9E±°, h15^{km}±7^{km}, M3.9/8, MLv3.9/8*

ISC 08 08:38:41.8±0.9, **10°.02S**±0°.07×**118°.78E**±0°.06, **h35^{km}, n18,** σ**2^{s}.43**/20, **mb3.9**/3, **South of Sumbawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WBSI	**Waikabubak, Su**	**0.71**	**58**	P	**Pn**	**08 38 56.1**	**+0.7**
WBSI				S	**Sn**	**08 39 05.4**	**+0.2**
WSI	**Waingapu**	**1.54**	**77**	P	**Pn**	**08 39 09.2**	**+2.5**
PLAI	**Plampang**	**1.54**	**320**	P	**Pn**	**08 39 08.8**	**+2.0**
BASI	**Baing, Sumba**	**1.78**	**97**	P	**Pn**	**08 39 14.4**	**+4.3**
TWSI	**Taliwang, Sumb**	**2.26**	**304**	P	**Pn**	**08 39 20.1**	**+3.3**
EDFI	**Ende, Flores**	**3.14**	**67**	P	**Pn**	**08 39 30.7**	**+1.8**
MMRI	**Maumere**	**3.68**	**68**	P	**Pn**	**08 39 39.0**	**+2.7**
SRBI	**Singaraja**	**4.01**	**298**	P	Pn	08 39 47.3	+6.5
BSSI	**Bau Bau, Buton**	**4.21**	**24**	P	**Pn**	**08 39 45.4**	**+1.9**
BATI	**Baumata**	**4.81**	**93**	Pn	**Pn**	**08 39 54.3**	**+2.4**
	4.0nm,0.3s,baz=207,slow=2.3,SNR=4.6						
BATI				Sn	**Sn**	**08 40 46.4**	**-0.1**
	5.4nm,0.3s,baz=270,slow=20,SNR=1.6						
KAPI	**Kappang**	**5.06**	**11**	Pn	**Pn**	**08 39 57.3**	**+2.0**
	2.3nm,0.3s,baz=214,slow=4.4,SNR=7.4						
KAPI				Sn	**Sn**	**08 40 52.3**	**-0.3**
	9.6nm,0.3s,baz=323,slow=20,SNR=6.2						
KAPI				LR	LR	08 42 10.2	
	comp=Z,33nm,21.6s,baz=192,slow=41						
FITZ	**Fitzroy Crossi**	**10.43**	**141**	Pn	**Pn**	**08 41 10.0**	**+1.0**
	1.0nm,0.3s,baz=332,slow=10,SNR=19						
FITZ				Sn	**Sn**	**08 42 59.2**	**-5.4**
	0.6nm,0.3s,baz=186,slow=16,SNR=6.3						
FITZ				LR	LR	08 45 00.9	
	comp=Z,27nm,20.6s,baz=292,slow=36						
WRA	**Warramunga Arr**	**17.96**	**125**	P	**P**	**08 42 49.7**	**+0.4**
	0.3nm,0.3s,baz=300,slow=12,SNR=10						
DAV	**Davao City (W)**	**18.28**	**22**	LR	LR	08 50 30.3	
	comp=Z,26nm,18.6s,baz=104,slow=39						
ASAR	**Alice Springs**	**19.82**	**135**	P	**Pn**	**08 43 12.2**	**+0.8**
	1.4nm,0.8s,baz=315,slow=11,SNR=16						
SONM	**Songino Array**	**58.64**	**350**	P	**P**	**08 48 34.5**	**-1.1**
	0.4nm,0.4s,baz=167,slow=8.2,SNR=6.6						
MKAR	**Makanchi Array**	**65.26**	**333**	P	**P**	**08 49 19.0**	**-1.0**
	0.5nm,0.5s,baz=159,slow=6.8,SNR=13						
ZALV	**Zalesovo Beam**	**69.91**	**339**	P	**P**	**08 49 47.5**	**-1.7**
	0.6nm,0.3s,baz=164,slow=6.8,SNR=3.4						

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*IDC **08** 08:39:15.6±2.7, 35°.26N×136°.99E, h239^{km}±66^{km}, mb2.7/3, mb1 3.0/3, mb1mx2.7/38, mbtmp3.3/3, MS2.8/1, Ms1 2.8/1, ms1mx2.6/4, Error ellipse: s-maj=146.2km s-min=24.8km az=59.0*

*JMA **08** 08:39:16.9±0.3, 35°.59N×137°.38E, h254^{km}±3^{km}, M2.9*

ISC 08 08:39:16.1±1.1, **35°.5N**±0°.1×**137°.4E**±0°.2, **h261**^{km}±12^{km}, **n13,** σ**0^{s}.47**/13, **mb2.9**/3, **Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JGF	**Kuroka**	**0.07**	**4**	P	**Pn**	**08 39 49.4**	**-0.1**
JYN	**Shimob**	**0.97**	**91**	P	**Pn**	**08 39 52.4**	**+0.2**
JNG	**Nsakai**	**1.07**	**34**	P	**Pn**	**08 39 52.7**	**0.0**
MAT	**Matsushiro**	**1.23**	**34**	P	**Pn**	**08 39 53.7**	**+0.1**
MJAR	**Matsushiro Arr**	**1.23**	**34**	P	**Pn**	**08 39 53.9**	**+0.3**
	0.2nm,0.3s,baz=203,slow=7.7,SNR=14						
JRY	**Ryogami san**	**1.35**	**68**	P	**Pn**	**08 39 54.8**	**+0.4**
JRY				*e*S	**S**	**08 40 24.3**	**-0.4**
JOD2	**Odawara 2**	**1.44**	**100**	P	**Pn**	**08 39 55.8**	**+0.8**
JAG	**Ashikaga**	**1.93**	**62**	P	**Pn**	**08 39 58.4**	**-0.4**
JSD	**Sado**	**2.61**	**16**	P	**Pn**	**08 40 05.2**	**+0.1**
PETK	**Petropavlovsk-**	**22.69**	**33**	LR	LR	08 53 06.0	
	comp=Z,25nm,19.3s,baz=258,slow=36						
MKAR	**Makanchi Array**	**42.16**	**303**	P	**P**	**08 46 43.6**	**+0.4**
	0.2nm,0.5s,baz=84,slow=9.8,SNR=4.9						
WRA	**Warramunga Arr**	**55.24**	**183**	P	**P**	**08 48 21.6**	**-0.8**
	0.2nm,0.3s,baz=0.2,slow=7.6,SNR=5.7						
ASAR	**Alice Springs**	**58.96**	**184**	P	**P**	**08 48 48.5**	**+0.1**
	0.2nm,0.6s,baz=359,slow=5.7,SNR=3.3						

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*SKO **08** 08:43:55.5, 40°.93N×22°.23E, h15^{km}*

*ATH **08** 08:43:56.6, 40°.92N×22°.23E, h10^{km}±2^{km}, ML2.3/15, Error ellipse: s-maj=2.5km s-min=0.8km az=7.0*

*THE **08** 08:43:56.4, 40°.95N×22°.22E, h0^{km}±1^{km}, ML2.4/9, Error ellipse: s-maj=1.4km s-min=0.4km az=332.0*

*SOF **08** 08:43:57.1, 40°.92N×22°.31E, h18^{km}, MD2.8*

*BEO **08** 08:43:58.3±0.6, 41°.01N×22°.22E, h0^{km}, ML2.2/7*

ISC 08 08:43:56.4±0.9, **40°.93N**±0°.02×**22°.23E**±0°.02, **h8**^{km}±7^{km}, **n62,** σ**0^{s}.70**/94, **4D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GRG	**Griva**	**0.14**	**80**	P	**Pg**	**08 43 59.4**	**0.0**
GRG				S	**Sg**	**08 44 01.3**	**-0.1**
	5µm,0.2s						
GRG	**Griva**	**0.14**	**80**	⇓*i*Pg	**Pg**	**08 43 59.4**	**0.0**
GRG				*i* Sg	**Sg**	**08 44 01.5**	**+0.1**
VAY	**Valandovo**	**0.47**	**34**	*e*Pg	**Pg**	**08 44 05.4**	**-0.1**
VAY				*e*Sg	**Sg**	**08 44 10.8**	**-0.8**
VAY	**Valandovo**	**0.47**	**34**	*i* Pg	**Pg**	**08 44 05.5**	**+0.1**
VAY				*i* Sg	**Sg**	**08 44 12.2**	**+0.6**
VAY				*e*Lg	Lg	08 44 12.4	
	comp=E,347nm,0.4s						
KNT	**Kendrikon**	**0.56**	**65**	P	**Pg**	**08 44 07.3**	**+0.1**
KNT				S	**Sg**	**08 44 15.5**	**+0.9**
KNT				AML	AML	08 44 16.1	
	comp=E,947µm,0.2s						
KNT				AML	AML	08 44 16.6	
	comp=N,1472µm,0.3s						
KNT	**Kendrikon**	**0.56**	**65**	P	**Pg**	**08 44 07.5**	**+0.3**
KNT				S	**Sg**	**08 44 15.4**	**+0.9**
	comp=N,610nm,0.2s						
KNT	**Kendrikon**	**0.56**	**65**	⇓*i*Pg	**Pg**	**08 44 07.3**	**+0.1**
KNT				*i* Sg	**Sg**	**08 44 15.3**	**+0.8**
THE	**Thessaloniki**	**0.64**	**118**	P	**Pg**	**08 44 08.4**	**-0.2**
THE				S	**Sg**	**08 44 16.7**	**-0.2**
THE				AML	AML	08 44 21.4	
	comp=E,349µm,0.2s						
THE				AML	AML	08 44 23.5	
	comp=N,691µm,0.5s						
THE	**Thessaloniki**	**0.64**	**118**	P	**Pg**	**08 44 08.5**	**-0.2**
THE				S	**Sb**	**08 44 18.6**	**-0.2**
THE	**Thessaloniki**	**0.64**	**118**	*i* Pg	**Pg**	**08 44 08.4**	**-0.2**
THE				*i* Sg	**Sg**	**08 44 16.7**	**-0.2**
FNA	**Florina**	**0.66**	**257**	P	**Pg**	**08 44 09.0**	**-0.1**
FNA				S	**Sg**	**08 44 17.8**	**0.0**
FNA				AML	AML	08 44 27.2	
	comp=E,671µm,0.3s						
FNA				AML	AML	08 44 27.5	
	comp=N,646µm,0.4s						
FNA	**Florina**	**0.66**	**257**	P	**Pg**	**08 44 09.2**	**0.0**
FNA				S	**Sg**	**08 44 18.4**	**+0.6**
	comp=N,252nm,0.4s						
FNA	**Florina**	**0.66**	**257**	*i* Pg	**Pg**	**08 44 08.9**	**-0.3**
KZN	**Kozani**	**0.71**	**209**	P	**Pg**	**08 44 09.8**	**-0.4**
KZN				S	**Sb**	**08 44 20.4**	**-0.8**
KZN				AML	AML	08 44 24.6	
	comp=N,347µm,0.5s						
KZN				AML	AML	08 44 25.7	
	comp=E,1005µm,0.7s						
KZN	**Kozani**	**0.71**	**209**	P	**Pg**	**08 44 09.8**	**-0.4**
KZN				S	**Sb**	**08 44 21.1**	**-0.1**
	comp=E,332nm,0.6s						
HORT	**Hortiatis**	**0.74**	**116**	P	**Pg**	**08 44 10.0**	**-0.7**
HORT				AML	AML	08 44 27.4	
	comp=E,391µm,0.6s						
HORT				AML	AML	08 44 27.7	
	comp=N,588µm,0.5s						
HORT	**Hortiatis**	**0.74**	**116**	P	**Pg**	**08 44 10.5**	**-0.2**
HORT				S	**Sb**	**08 44 22.1**	**+0.1**
	comp=N,242nm,0.5s						
LIT	**Litokhoron**	**0.85**	**166**	P	**Pg**	**08 44 12.4**	**-0.5**
LIT				AML	AML	08 44 30.1	
	comp=E,290µm,0.2s						
LIT				AML	AML	08 44 31.8	
	comp=N,229µm,0.3s						
LIT	**Litokhoron**	**0.85**	**166**	P	**Pg**	**08 44 12.3**	**-0.5**
SOH	**Sokhos**	**0.86**	**97**	P	**Pg**	**08 44 12.6**	**-0.4**
SOH				S	**Sb**	**08 44 24.8**	**-0.6**
SOH				AML	AML	08 44 30.7	
	comp=E,1367µm,0.4s						
SOH				AML	AML	08 44 33.7	
	comp=N,832µm,0.4s						
SOH	**Sokhos**	**0.86**	**97**	P	**Pg**	**08 44 12.8**	**-0.2**
SOH				S	**Sb**	**08 44 25.9**	**+0.5**
	comp=N,348nm,0.4s						
SOH	**Sokhos**	**0.86**	**97**	⇓*i*Pg	**Pg**	**08 44 12.7**	**-0.3**
SOH				*i* Sg	**Sb**	**08 44 25.0**	**-0.4**
NEST	**Nestorio**	**1.03**	**240**	P	**Pg**	**08 44 15.8**	**-0.5**
NEST				AML	AML	08 44 35.2	
	comp=N,280µm,0.7s						
NEST				AML	AML	08 44 39.4	
	comp=E,348µm,0.4s						
NEST	**Nestorio**	**1.03**	**240**	P	**Pg**	**08 44 15.8**	**-0.5**
SRS	**Serrai**	**1.05**	**79**	P	**Pg**	**08 44 15.7**	**-0.8**
SRS				AML	AML	08 44 32.8	
	comp=E,217µm,0.5s						
SRS				AML	AML	08 44 35.0	
	comp=N,273µm,0.8s						
SRS	**Serrai**	**1.05**	**79**	P	**Pg**	**08 44 15.7**	**-0.8**
SRS				S	**Sn**	**08 44 31.6**	**-0.7**
SRS	**Serrai**	**1.05**	**79**	*i* Pg	**Pg**	**08 44 15.6**	**-0.9**
SRS				*i* Sg	**Sg**	**08 44 30.2**	**0.0**
PLG	**Polygyros**	**1.08**	**121**	P	**Pg**	**08 44 17.0**	**-0.1**
PLG				AML	AML	08 44 35.5	
	comp=E,332µm,0.4s						
PLG				AML	AML	08 44 36.0	
	comp=N,511µm,0.4s						
PLG	**Polygyros**	**1.08**	**121**	P	**Pg**	**08 44 17.1**	**-0.1**
PLG				S	**Sn**	**08 44 33.0**	**-0.1**
OHR	**Ohrid**	**1.09**	**280**	*i* Pg	**Pb**	**08 44 17.0**	**-0.7**
OHR				*i* Sg	**Sb**	**08 44 32.5**	**+0.4**
OHR				*e*Lg	Lg	08 44 32.7	
	comp=N,111nm,0.6s						
PENT	**Pentalofos**	**1.11**	**229**	P	**Pb**	**08 44 17.5**	**-0.4**
PENT				AML	AML	08 44 44.3	
	comp=N,236µm,0.4s						
PENT				AML	AML	08 44 45.4	
	comp=E,213µm,0.8s						
KKB	**Krupnik**	**1.13**	**34**	*i* P	**Pb**	**08 44 18.2**	**-0.1**
KPRO	**Kipourio**	**1.18**	**214**	P	**Pb**	**08 44 18.7**	**-0.4**
KPRO				AML	AML	08 44 45.4	
	comp=E,409µm,0.5s						
KPRO				AML	AML	08 44 48.6	
	comp=N,280µm,0.7s						
KPRO	**Kipourio**	**1.18**	**214**	P	**Pb**	**08 44 18.7**	**-0.4**
SKO	**Skopje**	**1.20**	**331**	*e*Pg	**Pb**	**08 44 18.3**	**-1.0**
SKO				*e*Sg	**Sb**	**08 44 34.5**	**-0.5**
SKO	**Skopje**	**1.20**	**331**	⇓*i*Pg	**Pb**	**08 44 18.5**	**-0.8**
SKO				*i* Sg	**Sb**	**08 44 34.8**	**-0.2**
SKO				*e*Lg	Lg	08 44 35.2	
	comp=N,6.0nm,0.5s						
NVR	**Nevrokopi**	**1.30**	**71**	P	**Pn**	**08 44 20.5**	**-0.5**
NVR				AML	AML	08 44 39.0	
	comp=E,118µm,0.5s						
NVR				AML	AML	08 44 46.7	
	comp=N,161µm,0.8s						
NVR	**Nevrokopi**	**1.30**	**71**	P	**Pn**	**08 44 20.6**	**-0.4**
NVR				S	**Sg**	**08 44 39.1**	**+0.8**
	comp=N,70nm,0.5s						
MMB	**Musomiste**	**1.31**	**59**	*i* P	**Pn**	**08 44 20.5**	**-0.5**
THL	**Klokotos Trika**	**1.38**	**187**	P	**Pb**	**08 44 22.2**	**-0.2**
THL				AML	AML	08 44 45.3	
	comp=E,183µm,0.5s						
THL				AML	AML	08 44 53.3	
	comp=N,165µm,0.9s						
THL	**Klokotos Trika**	**1.38**	**187**	P	**Pg**	**08 44 22.7**	**-0.1**
THL				S	**Sg**	**08 44 42.5**	**+1.9**
OUR	**Ouranopolis**	**1.46**	**114**	P	**Pb**	**08 44 23.7**	**-0.2**
OUR				AML	AML	08 44 48.7	
	comp=N,416µm,0.4s						
OUR				AML	AML	08 44 50.1	
	comp=E,406µm,0.5s						
OUR	**Ouranopolis**	**1.46**	**114**	P	**Pb**	**08 44 23.5**	**-0.4**
OUR				S	**Sg**	**08 44 44.7**	**+1.3**
	comp=E,205nm,0.4s						
LSK	**Leskovik**	**1.47**	**238**	P	**Pb**	**08 44 24.0**	**0.0**
PAIG	**Paliouri**	**1.50**	**132**	P	**Pn**	**08 44 23.3**	**-0.3**
PAIG	**Paliouri**	**1.50**	**132**	P	**Pn**	**08 44 23.7**	**+0.1**
PAIG				S	**Sg**	**08 44 44.5**	**0.0**
	comp=E,165nm,0.7s						
KAVA	**Kavala**	**1.73**	**87**	P	**Pn**	**08 44 27.4**	**+0.6**
KAVA	**Kavala**	**1.73**	**87**	P	**Pn**	**08 44 27.4**	**+0.6**
VTS	**Vitosha**	**1.84**	**24**	*e*Pg	**Pn**	**08 44 29.4**	**+0.9**
VTS				*e*Sg	**Sb**	**08 44 54.0**	**+0.2**
VTS	**Vitosha**	**1.84**	**24**	*i* P	**Pn**	**08 44 29.3**	**+0.8**
AGG	**Agios Georgios**	**1.91**	**178**	P	**Pn**	**08 44 29.5**	**+0.2**
THAS	**Thassos island**	**1.92**	**99**	P	**Pn**	**08 44 29.9**	**+0.5**
THAS	**Thassos island**	**1.92**	**99**	P	**Pn**	**08 44 29.9**	**+0.5**
RZN	**Rozhen**	**2.02**	**67**	*i* P	**Pn**	**08 44 31.4**	**+0.4**
PLD	**Plovdiv**	**2.20**	**57**	*e*Pn	**Pb**	**08 44 36.1**	**-0.3**
PLD				*e*Sn	**Sb**	**08 45 04.0**	**+0.2**
ZAPS	**Zavoj**	**2.36**	**7**	*e*Pn	**Pb**	**08 44 37.6**	**-1.6**
ZAPS				*e*Sn	**Sn**	**08 45 06.2**	**+1.5**
PDG	**Podgorica**	**2.68**	**305**	*e*Pn	**Pn**	**08 44 41.9**	**+2.0**
PDG				*e*Sn	**Sb**	**08 45 15.2**	**-2.5**
BLKB	**Belogradchik**	**2.71**	**7**	*e*Pn	**Pn**	**08 44 41.8**	**+1.5**
ZAGS	**Zajecar**	**2.88**	**0**	*e*Pn	**Pn**	**08 44 43.0**	**+0.4**
ALN	**Alexandroupoli**	**2.89**	**89**	P	**Pn**	**08 44 43.4**	**+0.6**
TREB	**Trebinje**	**3.40**	**303**	*e*Pn	**Pn**	**08 44 51.3**	**+1.5**
DUGI	**Dugi Otok**	**6.12**	**302**	Sg	**Sg**	**08 47 11.9**	**-0.9**

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*NEIC **08** 09:29:04.6±1.2, 34°.32S±0°.04×70°.1W±0°.1, h10^{km}±2^{km}, Error ellipse: s-maj=14.2km s-min=5.7km az=258.0*

*SJA **08** 09:29:05.9±0.6, 34°.60S×70°.35W, h26^{km}±3^{km}, ML3.8, MW4.1*

*GUC **08** 09:29:06.1±0.6, 34°.32S×70°.23W, h19^{km}±2^{km}, ML4.0*

*IDC **08** 09:29:13.7±2.8, 34°.29S×69°.87W, h57^{km}±27^{km}, mb3.5/4, mb1 3.8/9, mb1mx3.6/28, mbtmp3.7/9, ML3.5/5, MS3.0/3, Ms1 3.0/3, ms1mx2.8/12, Error ellipse: s-maj=37.8km s-min=24.8km az=102.0*

ISC 08 09:29:04.9±1.2, **34°.31S**±0°.02×**70°.20W**±0°.03, **h0**^{km}±9^{km}, **n65,** σ**1^{s}.88**/74, **mb3.9**/4, **8C-4D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LMEL	**Las Melosas**	**0.47**	**360**	⇓*i*P	**Pg**	**09 29 14.7**	**+0.9**
LMEL				*i* S	**Sb**	**09 29 21.4**	**-2.2**
LMEL				IAML		09 29 21.9	
	comp=N,10µm,0.2s						
BO02	**Sierra Bellavi**	**0.68**	**225**	⇓*i*P	**Pg**	**09 29 18.4**	**+0.6**
BO02				*i* S	**Sg**	**09 29 27.8**	**+1.2**
BO02				IAML		09 29 28.2	
	comp=E,34µm,0.3s						
BO02	**Sierra Bellavi**	**0.68**	**225**	Pg	**Pg**	**09 29 18.5**	**+0.6**
MT09	**Talagante**	**0.84**	**309**	⇑*i*P	**Pg**	**09 29 21.4**	**+0.3**
MT09				*i* S	**Sg**	**09 29 33.0**	**+0.9**
MT09				IAML		09 29 34.5	
	comp=N,6µm,0.2s						
MT03	**Universidad Ad**	**0.86**	**343**	⇓*i*P	**Pg**	**09 29 21.9**	**+0.6**
MT03				*i* S	**Sb**	**09 29 33.8**	**-1.0**
MT03				IAML		09 29 34.4	
	comp=E,11µm,0.4s						
FSR	**Penalolen**	**0.88**	**342**	⇑*i*P	**Pb**	**09 29 23.3**	**+0.3**
FSR				*i* S	**Sb**	**09 29 35.5**	**+0.2**
COIS	**El Sosneado**	**0.94**	**148**	*e*P	**Pg**	**09 29 21.9**	**-1.0**
MT05	**Renca**	**1.02**	**334**	⇑*i*P	**Pg**	**09 29 24.9**	**+0.4**
MT05				*i* S	**Sb**	**09 29 39.3**	**-0.2**
MT05				IAML		09 29 40.6	
	comp=N,24µm,0.3s						
MT05	**Renca**	**1.02**	**334**		**Pg**	**09 29 25.0**	**+0.5**
LAMA	**Las Malvinas**	**1.02**	**127**	*e*P	**Pn**	**09 29 25.3**	**-1.3**
LAMA				*e*S	**Sn**	**09 29 39.1**	**-2.6**
PEL	**Peldehue**	**1.23**	**341**	⇑*i*P	**Pb**	**09 29 28.5**	**-0.6**
PEL				*i* S	**Sb**	**09 29 45.4**	**-0.2**
PEL				IAML		09 29 46.1	
	comp=N,7µm,0.3s						
PEL	**Peldehue**	**1.23**	**341**		**Pb**	**09 29 28.6**	**-0.5**
MT02	**Curacav**	**1.31**	**323**	⇑*i*P	**Pn**	**09 29 29.2**	**-1.3**
MT02				*i* S	**Sb**	**09 29 46.7**	**-1.0**
MT02				IAML		09 29 51.0	
	comp=E,2µm,0.5s						
MT02	**Curacav**	**1.31**	**323**		**Pn**	**09 29 29.3**	**-1.2**
PUMA	**Malargue**	**1.33**	**153**	*e*P	**Pg**	**09 29 31.2**	**+0.8**
PUMA				*e*S	Sn	09 29 56.9	+7.6
VA05	**Santo Domingo**	**1.34**	**299**	⇑*i*P	**Pn**	**09 29 29.9**	**-1.0**
VA05				*i* S	**Sb**	**09 29 48.1**	**-0.6**
VA05				IAML		09 29 50.9	
	comp=N,13µm,0.3s						
BO03	**Pichilemu**	**1.47**	**262**	⇑*i*P	**Pn**	**09 29 31.6**	**-1.0**
BO03				*i* S	**Sn**	**09 29 51.1**	**-1.4**
BO03				IAML		09 29 53.1	
	comp=N,2µm,0.3s						
ROCH	**El Roble**	**1.50**	**333**	⇓*i*P	**Pn**	**09 29 32.6**	**-0.6**
ROCH				*i* S	**Sn**	**09 29 53.0**	**-0.6**
ROCH				IAML		09 29 56.9	
	comp=N,5µm,0.3s						
RFA	**San Rafael**	**1.50**	**108**	*e*P	**Pg**	**09 29 34.0**	**+0.3**
RFA				*e*S	**Sg**	**09 29 54.8**	**+1.6**
RFA				*e*S	**Sn**	**09 29 56.9**	**+3.3**
VA03	**San Esteban**	**1.57**	**349**	⇑*i*P	**Pb**	**09 29 34.4**	**-0.5**
VA03				*i* S	**Sg**	**09 29 55.4**	**-0.1**
VA03				IAML		09 29 57.4	
	comp=E,3µm,0.3s						
VA03	**San Esteban**	**1.57**	**349**		**Pn**	**09 29 32.4**	**-1.7**
AUSP	**Uspallata**	**2.19**	**18**	*e*P	**Pg**	**09 29 46.8**	**-0.2**
AUSP				*e*S	**Sg**	**09 30 19.8**	**+4.3**
BI02	**San Fabin de**	**2.50**	**200**	IAML		09 30 34.4	
	comp=E,489nm,0.6s						
BI02	**San Fabin de**	**2.50**	**200**	Pn	**Pn**	**09 29 45.1**	**-1.9**
RTCV	**Cerro Valdivia**	**2.81**	**30**	*e*P	**Pb**	**09 29 55.7**	**-0.4**
RTCV				IAML		09 30 54.4	
	comp=Z,153nm,3.5s						
ZON	**Zonda**	**3.04**	**25**		**Pn**	**09 29 53.2**	**-1.1**
ZON	**Zonda**	**3.04**	**25**	*e*P	**Pb**	**09 30 00.7**	**+0.7**
ZON				*e*S	**Sg**	**09 30 45.0**	**+2.3**
CO02	**Combarbal**	**3.17**	**348**		**Pn**	**09 29 54.9**	**-1.4**
RTLL	**Cerro Villicun**	**3.31**	**27**	*e*P	**Pb**	**09 30 03.5**	**-1.1**
RTLL				*e*S	**Sg**	**09 30 57.0**	**+5.6**
RTLL				IAML		09 30 58.9	
	comp=Z,100nm,0.7s						
BI03	**Tigo**	**3.42**	**222**		**Pn**	**09 29 58.6**	**-0.8**
CO03	**El Pedregal**	**3.49**	**353**	Pn	**Pn**	**09 29 59.9**	**-0.6**
ACCO	**Cerro Coronel**	**3.84**	**15**	*e*P	**Pb**	**09 30 10.8**	**-2.9**
ACCO				*e*S	**Sg**	**09 31 04.9**	**-3.3**
ACCO				IAML		09 31 08.8	
	comp=Z,107nm,0.8s						
GO04	**Tololo Observa**	**4.16**	**353**		**Pn**	**09 30 07.9**	**-2.0**
GO04	**Tololo Observa**	**4.16**	**353**	*e*P	**Pb**	**09 30 14.7**	**-4.4**
GO04				*e*S	**Sb**	**09 31 08.7**	**-1.3**
ACDV	**Cuesta del Vie**	**4.23**	**13**	*e*P	**Pb**	**09 30 16.3**	**-4.0**
ACDV				IAML		09 31 42.1	
	comp=Z,68nm,0.6s						
CO01	**Juntas del Tor**	**4.33**	**1**		**Pn**	**09 30 11.3**	**-0.8**
LC01	**Cunco**	**4.77**	**196**	Pn	**Pn**	**09 30 16.3**	**-1.7**
LCO	**Las Campanas**	**5.30**	**355**	Pn	**Pn**	**09 30 24.5**	**-1.1**
AC05	**El Transito**	**5.46**	**359**		**Pn**	**09 30 25.4**	**-2.2**
TCA	**Tanti**	**5.58**	**59**	*e*P	Pn	09 30 33.1	+3.9
TCA				*e*S	**Sg**	**09 31 59.2**	**-4.9**
TCA				IAML		09 32 10.1	
	comp=Z,55nm,0.9s						
ACLC	**CERRO LA CRUZ**	**5.60**	**30**	*e*P	Pn	09 30 34.4	+4.7
ACLC				IAML		09 32 16.1	
	comp=Z,32nm,0.6s						
VCA	**Vinchina**	**5.82**	**18**	*e*P	Pn	09 30 38.2	+5.6
VCA				IAML		09 32 30.1	
	comp=Z,64nm,0.8s						
AC04	**Llanos de Chal**	**6.14**	**353**	Pn	**Pn**	**09 30 35.2**	**-1.6**
PLCA	**Paso Flores**	**6.41**	**182**	P	Pn	09 30 46.5	+5.8
	comp=Z,0.2nm,0.3s,baz=350,slow=12,SNR=10.0						
PLCA				LR	LR	09 33 24.1	
	comp=Z,208nm,18.4s,baz=6.5,slow=39						
PLCA	**Paso Flores**	**6.41**	**182**		**Pn**	**09 30 39.5**	**-1.2**
CYA	**Choya**	**6.96**	**34**	*e*P	Pn	09 30 54.6	+6.4
H03S1	**Juan Fernandez**	**7.24**	**271**	T	T	09 37 01.7	
	baz=101,slow=75,SNR=99						
H03S3	**Juan Fernandez**	**7.24**	**271**	T	T	09 37 00.4	
	baz=101,slow=75,SNR=90						
H03S2	**Juan Fernandez**	**7.25**	**271**	T	T	09 37 03.9	
	baz=101,slow=75,SNR=95						
H03N1	**Juan Fernandez**	**7.29**	**274**	T	T	09 38 10.2	
	baz=87,slow=73,SNR=50						
H03N3	**Juan Fernandez**	**7.30**	**274**	T	T	09 38 11.3	
	baz=87,slow=73,SNR=69						
H03N2	**Juan Fernandez**	**7.31**	**274**	T	T	09 38 09.9	
	baz=87,slow=73,SNR=22						
AC02	**Maricunga**	**7.51**	**7**	Pn	**Pn**	**09 30 55.2**	**-0.9**
GO02	**Mina Guanaco**	**9.14**	**3**	Pn	**Pn**	**09 31 17.2**	**-1.1**
LVC	**Limon Verde**	**11.72**	**6**	P	**Pn**	**09 31 56.8**	**+3.1**
	comp=Z,0.2nm,0.3s,baz=156,slow=12,SNR=2.6						
LVC				LR	LR	09 36 38.2	
	comp=Z,52nm,21.3s,baz=212,slow=38						
CPUP	**Villa Florida**	**13.66**	**58**	P	**Pn**	**09 32 20.4**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=218,slow=19,SNR=2.6						
CPUP				LR	LR	09 38 09.7	
	comp=Z,44nm,19.6s,baz=229,slow=40						
MNMC	**Minye Minye**	**15.13**	**2**		**Pn**	**09 32 37.3**	**-2.9**
MNMC				IAmb	IAmb	09 33 04.6	
	comp=Z,7.3nm,0.9s						
LPAZ	**La Paz**	**18.05**	**6**	P	**P**	**09 33 20.3**	**+2.0**
	comp=Z,0.1nm,0.3s,baz=143,slow=8.7,SNR=4.8						
LPAZ	**La Paz**	**18.05**	**6**	P	**Pn**	**09 33 16.1**	**-1.7**
LPAZ				IAmb	IAmb	09 33 22.5	
	comp=Z,3.0nm,0.9s						
SIV	**San Ignacio**	**20.01**	**26**	P	**Pn**	**09 33 41.5**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=230,slow=12,SNR=9.5						
TXAR	**Lajitas Array**	**70.77**	**329**	P	**P**	**09 40 24.6**	**+1.5**
	comp=Z,0.8nm,0.5s,baz=155,slow=8.9,SNR=20						
TORD	**Torodi Ar. Bea**	**82.89**	**69**	P	**P**	**09 41 31.0**	**-0.8**
	comp=Z,0.4nm,0.5s,baz=228,slow=5.6,SNR=2.6						
PDAR	**Pinedale Array**	**84.74**	**332**	P	**P**	**09 41 41.8**	**+0.8**
	comp=Z,0.3nm,0.6s,baz=116,slow=3.4,SNR=3.8						
NVAR	**Mina Array Bea**	**85.02**	**324**	P	**P**	**09 41 44.6**	**+2.2**
	comp=Z,0.7nm,1.0s,baz=128,slow=5.8,SNR=3.3						
ZALV	**Zalesovo Beam**	**153.65**	**34**	PKPbc	**PKiKP**	**09 49 04.8**	**-0.4**
	comp=Z,0.5nm,0.5s,baz=6.9,slow=4.9,SNR=3.6						

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*IDC **08** 09:34:57.1±0.8, 20°.33S×172°.43E, h0^{km}, mb4.1/13, mb1 4.3/16, mb1mx4.2/38, mbtmp4.1/16, ML4.0/3, MS3.5/19, Ms1 3.5/19, ms1mx3.3/43, Error ellipse: s-maj=31.5km s-min=16.2km az=151.0*

ISC 08 09:35:02.2±0.6, **20°.4S**±0°.1×**172°.5E**±0°.1, **h35^{km}, n80,** σ**0^{s}.70**/57, **mb4.2**/13, **MS3.6**/16, **9C-6D, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YATNC	**Mamie plateau,**	**5.47**	**251**	P	**Pn**	**09 36 21.1**	**-0.2**
OUENC	**Ouen Island, N**	**5.63**	**248**	P	**Pn**	**09 36 24.1**	**+0.7**
DZM	**Mont Dzumac**	**5.88**	**253**	Pn	**Pn**	**09 36 26.5**	**-0.4**
	2.2nm,0.3s,baz=152,slow=19,SNR=21						
DZM				LR	LR	09 38 20.5	
	comp=Z,451nm,21.2s,baz=102,slow=35						
DZM	**Mont Dzumac**	**5.88**	**253**	*e*Pn	**Pn**	**09 36 28.4**	**+1.5**
	6.6nm,0.3s						
DZM				*e*LR	LR	09 37 46.5	
	comp=Z,917nm,26.1s						
DZM	**Mont Dzumac**	**5.88**	**253**	P	**Pn**	**09 36 27.8**	**+0.9**
MSVF	**Nonsavu**	**5.89**	**64**	Pn	**Pn**	**09 36 26.7**	**-0.5**
	0.3nm,0.3s,baz=268,slow=10.0,SNR=4.2						
MSVF				LR	LR	09 38 26.0	
	comp=Z,828nm,18.2s,baz=239,slow=35						
ONTNC	**Ouen Toro**	**5.93**	**250**	P	**Pn**	**09 36 27.9**	**+0.3**
NOUC	**Port Laguerre**	**6.01**	**253**	P	**Pn**	**09 36 29.6**	**+1.0**
HNR	**Honiara**	**16.29**	**310**	LR	LR	09 44 11.1	
	comp=Z,148nm,18.5s,baz=126,slow=34						
URZ	**Urewera**	**18.24**	**168**	P	**Pn**	**09 39 12.9**	**+0.3**
	0.3nm,0.3s,baz=1.3,slow=6.7,SNR=5.9						
URZ				LR	LR	09 45 01.3	
	comp=Z,157nm,20.3s,baz=31,slow=33						
RAR	**Rarotonga**	**25.93**	**97**	LR	LR	09 49 04.8	
	comp=Z,40nm,19.2s,baz=258,slow=33						
PMG	**Port Moresby**	**26.76**	**290**	LR	LR	09 49 26.0	
	comp=Z,118nm,20.0s,baz=136,slow=33						
STKA	**Stephens Creek**	**29.89**	**241**	P	**P**	**09 41 05.5**	**-1.2**
	1.8nm,0.9s,baz=74,slow=14,SNR=2.9						
STKA				LR	LR	09 52 41.8	
	comp=Z,50nm,18.3s,baz=56,slow=36						
TBI	**Tubuai**	**35.37**	**102**	*e*LR	LR	09 51 23.2	
	comp=Z,234nm,29.2s						

WRA	Warramunga Arr	35.76	264	P	P	09 41 56.3	-1.8
	0.3nm,0.7s,baz=95,slow=8.4,SNR=3.0						
WRA				LR	LR	09 56 32.0	
	comp=Z,130nm,18.2s,baz=90,slow=36						
ASAR	Alice Springs	35.84	258	P	P	09 41 58.8	-0.1
	0.9nm,0.9s,baz=77,slow=8.3,SNR=8.3						
ASAR				LR	LR	09 55 37.8	
	comp=Z,110nm,20.4s,baz=98,slow=35						
PPT	Papeete	35.94	92	LR	LR	09 54 55.5	
	comp=Z,24nm,18.3s,baz=259,slow=33						
GUMO	Guam	43.34	319	LR	LR	09 58 43.3	
	comp=Z,109nm,20.0s,baz=112,slow=33						
FITZ	Fitzroy Crossi	44.17	265	P	P	09 43 08.3	+0.4
	2.6nm,1.0s,baz=107,slow=11,SNR=3.0						
FITZ				LR	LR	10 01 01.7	
	comp=Z,100nm,19.5s,baz=102,slow=36						
BATI	Baumata	48.01	275	LR	LR	10 03 30.4	
	comp=Z,122nm,19.5s,baz=150,slow=36						
NWAO	Narrogin (SRO)	50.42	244	LR	LR	10 03 47.7	
	comp=Z,68nm,21.2s,baz=284,slow=34						
MJAR	Matsushiro Arr	65.24	330	LR	LR	10 09 23.0	
	comp=Z,22nm,21.7s,baz=125,slow=32						
PETK	Petropavlovsk-	74.32	351	P	P	09 46 34.9	-0.9
	5.1nm,0.9s,baz=133,slow=5.5,SNR=8.0						
KLR	Kul'dur	78.22	334	P	P	09 46 58.9	+0.9
	1.5nm,0.6s,baz=131,slow=5.3,SNR=6.1						
CMAR	Chiang Mai Arr	81.77	293	P	P	09 47 18.6	+0.7
	0.6nm,0.3s,baz=122,slow=2.3,SNR=4.9						
SEY	Seymchan	84.56	351	P	P	09 47 31.6	+0.4
	2.9nm,0.7s,baz=142,slow=12,SNR=8.1						
LPIG	La Paz	87.19	63	LR	LR	10 18 33.7	
	comp=Z,21nm,19.5s,baz=288,slow=30						
NVAR	Mina Array Bea	87.31	47	P	P	09 47 46.6	+0.8
	2.0nm,1.0s,baz=223,slow=8.3,SNR=11						
SONM	Songino Array	90.00	322	P	P	09 47 58.6	+0.5
	0.6nm,0.7s,baz=129,slow=3.9,SNR=4.6						
ILAR	Eielson Array	90.46	16	P	P	09 47 58.7	-1.0
	1.1nm,0.7s,baz=239,slow=5.2,SNR=8.6						
PALK	Pallekele	94.16	276	LR	LR	10 35 23.8	
	comp=Z,28nm,19.2s,baz=231,slow=38						
ANMO	Albuquerque	94.46	54	LR	LR	10 22 01.9	
	comp=Z,16nm,19.1s,baz=334,slow=30						
TXAR	Lajitas Array	94.65	61	P	P	09 48 21.2	+1.1
	0.9nm,0.8s,baz=220,slow=5.3,SNR=11						
PDAR	Pinedale Array	95.18	46	P	P	09 48 21.9	-0.5
	0.2nm,0.6s,baz=256,slow=4.4,SNR=3.9						
CMIG	Matias Romero	98.19	75	LR	LR	10 23 30.9	
	comp=Z,29nm,20.2s,baz=231,slow=30						
BISRR	Bisoca	142.33	320	⇓P	PKiKP	09 54 43.8	+10
RAZG	Razgrad	143.43	317	⇑P	PKiKP	09 54 44.9	+8.4
ARR	Arges	143.68	321	⇓P	PKPbc	09 54 31.6	+0.5
DRGR		143.97	324	⇑P	PKPbc	09 54 31.7	-0.2
OSTC	Ostas	144.55	334	eP	PKPdf	09 54 34.6	-0.3
OSTC				ex	x	09 54 45.5	
MORC	Moravsky Berou	144.56	332	⇓P	PKPbc	09 54 34.0	+0.4
MORC	Moravsky Berou	144.56	332	ePKP	PKPbc	09 54 34.0	+0.3
DPC	Dobruska-Polom	144.66	333	eP	PKPbc	09 54 34.5	+0.5
DPC				ex	x	09 54 41.2	
UPC	Upice	144.67	334	eP	PKPbc	09 54 34.4	+0.5
UPC				ex	x	09 54 40.3	
KRLC	Kraliky	144.68	333	eP	PKPbc	09 54 34.2	+0.2
KRLC				ex	x	09 54 41.0	
PLVB	Pleven	144.72	318	⇑P	PKPdf	09 54 35.3	0.0
GZR	Gura Zlata	144.75	322	⇑P	PKPbc	09 54 34.8	+0.4
SIRR	Siria	144.86	324	⇓P	PKPdf	09 54 35.6	0.0
VYHS	Vyhne	144.88	329	eP	PKPdf	09 54 35.4	-0.1
EKA	Eskdalemuir Ar	144.97	356	PKP	PKPab	09 54 34.1	-0.6
	3.9nm,0.8s,baz=1.4,slow=2.4,SNR=9.4						
JAVC	Velka Javorina	145.17	331	ePKP	PKPdf	09 54 37.3	+1.2
CLL	Collm	145.21	337	⇓iPKP	PKPdf	09 54 35.8	-0.1
	comp=Z,20nm,0.8s						
CLL				i		09 54 42.6	
	comp=Z,12nm,0.9s						
CLL				e		09 54 47.0	
BRG	Berggiesshubel	145.21	336	i P	PKPdf	09 54 36.2	+0.3
BRG				Amp		09 54 37.1	
	comp=Z,28nm,1.0s						
BRG				ex	x	09 54 43.1	
BRG				Amp		09 54 44.2	
	comp=Z,15nm,1.3s						
BRG				ex	x	09 54 48.9	
BRG				Amp		09 54 49.9	
	comp=Z,23nm,1.4s						
BZS	Buzias	145.28	323	⇓P	PKPdf	09 54 36.7	+0.4
VRAC	Vranov	145.33	332	⇑P	PKPdf	09 54 36.9	+0.7
VRAC	Vranov	145.33	332	ePKP	PKPdf	09 54 36.8	+0.6
VRAC				e		09 54 43.5	
SMOL	Smolenice	145.53	330	eP	PKPab	09 54 38.1	+1.1
KRUC	Moravsky	145.60	332	ePKP	PKPab	09 54 37.3	+0.1
KRUC				e		09 54 43.9	
PRU	Pruhonice	145.68	335	eP	PKPbc	09 54 37.0	-0.1
MODS	Modra-Piesok	145.70	330	eP	PKPbc	09 54 37.4	+0.1
MDVR	Moldovita	145.72	322	⇑P	PKPbc	09 54 37.3	-0.2
PBCC	Pribram	146.13	335	eP	PKPab	09 54 38.9	-0.3
MORH	Mrgy, Hungar	146.51	326	⇑P	PKPbc	09 54 40.2	+0.4
FRGS	Fruska Gora	146.57	324	⇑P	PKPbc	09 54 40.5	+0.5
CONA	Conrad Observa	146.67	331	eP	PKPab	09 54 41.0	-0.5
	comp=Z,6.3nm,1.0s						
CKRC	Cesky Krumlov	146.68	333	eP	PKPbc	09 54 40.3	+0.1
CKRC				ex	x	09 54 46.8	
KHC	Kasperske Hory	146.74	334	eP	PKPdf	09 54 39.4	+0.7
KHC				ex	x	09 54 47.6	
GERES	GERESS Array B	146.91	334	PKPbc	PKPbc	09 54 40.9	-0.1
	comp=Z,4.4nm,0.7s,baz=29,slow=2.7,SNR=26						
ARSA	Arzberg	147.33	330	eP	PKPbc	09 54 42.7	+0.5
	comp=Z,0.7nm,0.3s						
MOA	Molln	147.44	332	eP	PKPbc	09 54 42.5	+0.1
	comp=Z,0.9nm,0.5s						
SOKA	Soboth	147.97	330	eP	PKPbc	09 54 43.5	-0.5
	comp=Z,1.6nm,0.6s						
PDG	Podgorica	148.54	320	⇑P	PKPbc	09 54 44.4	-1.0
MYKA	Terra Mystica	148.65	331	i P	PKPbc	09 54 44.8	-0.9
	comp=Z,1.9nm,0.6s						
WATA	Walderalm	148.98	334	eP	PKPbc	09 54 45.8	-0.8
	comp=Z,2.7nm,0.7s						
WTTA	Wattenberg	149.01	334	eP	PKPbc	09 54 46.4	-0.4
	comp=Z,3.4nm,0.6s,SNR=5.7						
ABTA	Abfaltersbach	149.05	333	i P	PKPbc	09 54 45.6	-1.2
	comp=Z,2.6nm,0.7s						
MOTA	Moosalm	149.16	335	eP	PKPbc	09 54 46.6	-0.5
	comp=Z,7.7nm,0.8s						
RETA	Reutte	149.18	335	eP	PKPbc	09 54 46.6	-0.5
	comp=Z,7.9nm,1.4s						
SQTA	Sankt Quirin	149.22	335	eP	PKPbc	09 54 47.1	-0.1
	comp=Z,8.1nm,0.7s,SNR=6.2						
FETA	Feichten	149.57	335	eP	PKPbc	09 54 48.1	-0.1
	comp=Z,5.2nm,0.9s,SNR=7.7						

IDC 08 09:35:24.5±2.0, 0°.52N×126°.49E, h0^{km}, mb3.1/3, mb1 3.3/3, mb1mx3.2/44, mbtmp3.1/3, MS3.1/2, Ms1 3.1/2, ms1mx2.5/18, Error ellipse: s-maj=177.2km s-min=25.5km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.74	160	P	P	09 40 17.2	-0.5
	0.4nm,0.7s,baz=338,slow=11,SNR=5.2						
ASAR	Alice Springs	25.09	164	P	P	09 40 51.5	+0.3
	0.2nm,0.5s,baz=343,slow=11,SNR=6.6						
PSI	Prapat	27.65	275	LR	LR	09 52 50.2	
	comp=Z,38nm,20.5s,baz=185,slow=38						
JCJ	Chichijima	30.42	28	LR	LR	09 53 40.5	
	comp=Z,33nm,19.0s,baz=114,slow=36						
MKAR	Makanchi Array	60.06	326	P	P	09 45 33.4	-0.1
	0.2nm,0.6s,baz=126,slow=7.3,SNR=3.1						

IDC 08 09:35:54.5±28.0, 17°.37S×174°.14W, h0^{km}, mb4.2/4, mb1 4.3/4, mb1mx3.9/39, mbtmp4.2/4, Error ellipse: s-maj=564.9km s-min=151.4km az=87.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	42.46	242	P	P	09 43 52.2	+0.8
	1.2nm,0.5s,baz=60,slow=9.8,SNR=5.6						
WRA	Warramunga Arr	48.73	258	P	P	09 44 41.0	-0.4
	1.3nm,0.3s,baz=98,slow=7.3,SNR=42						
ASAR	Alice Springs	48.85	254	P	P	09 44 41.8	-0.4
	2.8nm,0.7s,baz=90,slow=7.6,SNR=48						
FITZ	Fitzroy Crossi	57.13	259	P	P	09 45 43.2	-0.2
	1.9nm,0.8s,baz=126,slow=4.4,SNR=5.0						

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*THE **08** 09:36:24.6, 36°.83N×30°.26E, h0^{km}±3^{km}, ML3.6/2, Error ellipse: s-maj=9.9km s-min=1.2km az=106.0*
*ISK **08** 09:36:24.5, 37°.18N×30°.04E, h5^{km}, ML3.7/25*
*DDA **08** 09:36:25.3, 37°.18N×30°.05E, h4^{km}±2^{km}, MW3.9*
*NIC **08** 09:36:31.1±0.0, 36°.89N×29°.95E, h18^{km}±2^{km}, Ml3.9/3*
*IDC **08** 09:36:33.1±1.6, 37°.09N×30°.32E, h60^{km}±17^{km}, mb3.6/8, mb1 3.8/13, mb1mx3.6/50, mbtmp3.9/13, MS3.1/9, Ms1 3.1/9, ms1mx2.8/59, Error ellipse: s-maj=16.6km s-min=11.4km az=133.0*
ISC 08 09:36:25.8±1.1, 37°.16N±0°.02×30°.05E±0°.02, h3^{km}±8^{km}, n132, σ1^{s}45/158, mb3.7/8, MS3.2/4, 14C-5D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KORT	Korkueli	0.28	123	PG	Pg	09 36 31.6	+0.2
KORT	Korkueli	0.28	123	i P	Pg	09 36 31.6	+0.2
KORT				i S	Sg	09 36 34.9	-0.2
GOLH	Golhisar	0.40	282	i P	Pg	09 36 33.5	-0.1
GOLH				i S	Sg	09 36 40.1	+1.3
ELL	Elmali	0.42	196	PG	Pg	09 36 33.9	-0.1
ELL	Elmali	0.42	196	P	Pg	09 36 34.0	-0.1
ELL				S	Sg	09 36 38.7	-0.8
BUCA	Burdur, Bucak-	0.44	67	i P	Pg	09 36 33.8	-0.5
BUCA				i S	Sg	09 36 40.6	+0.6
BCK	Bucak	0.52	54	PG	Pg	09 36 35.7	-0.2
BRDR	BURDUR-Merkez	0.54	1	i P	Pg	09 36 35.4	-0.8
BRDR				i S	Sg	09 36 42.8	-0.4
ANTB	Antalya	0.54	118	PG	Pb	09 36 36.9	-1.1
CAEL	Denizli, Camel	0.59	267	i P	Pg	09 36 36.8	-0.4
KEMT	Kemer-ANTALYA	0.68	144	PG	Pb	09 36 39.9	-0.5
BASM	Basmaki-Afyon	0.76	360	PG	Pg	09 36 40.2	-0.3
BASM				SG	Sg	09 36 51.4	+1.1
ISP	Isparta	0.76	29	PG	Pg	09 36 39.5	-1.0
ISP				SG	Sg	09 36 51.6	+1.2
AKUM	Antalya-Kumluc	0.86	164	i P	Pn	09 36 43.4	-1.5
FETY	Fethiye	0.94	236	P	Pg	09 36 42.5	-1.3
TAVA	DENIZLI_Tavas	0.96	289	i P	Pg	09 36 43.0	-1.3
AKAS	Kas	0.99	201	PG	Pb	09 36 45.1	-0.6
AKAS	Kas	0.99	201	i P	Pn	09 36 45.6	-1.1
BAGO	Egridir - ISPA	1.02	35	i P	Pg	09 36 44.4	-1.0
BAGO				i S	Sg	09 36 56.4	-2.1
KZIL	AFYON_Kizioren	1.10	4	i P	Pg	09 36 45.6	-1.3
DALY	Dalyan (Mula)	1.17	254	PN	Pg	09 36 47.5	-0.8
DALY	Dalyan (Mula)	1.17	254	i P	Pg	09 36 48.1	-0.2
DALY				i S	Sn	09 37 06.2	+0.7
KHL	Karahalli	1.24	340	PN	Pg	09 36 48.9	-0.7
KEPZ	Antalya-Kepez	1.27	101	i P	Pg	09 36 49.5	-0.6
KHAL	Karahalli	1.29	340	i P	Pg	09 36 50.3	-0.3
KHAL				i S	Sb	09 37 08.4	+0.6
MULA	Mugla, Merkez-	1.39	275	i P	Pn	09 36 52.3	+0.2
MULA				i S	Sn	09 37 11.7	+0.7
SEDI	Konya, Seydise	1.39	77	i P	Pb	09 36 52.5	0.0
SEDI				i S	Sn	09 37 12.9	+1.8
YER	Yerkesik	1.42	270	P	Pb	09 36 52.9	0.0
YER				S	Sn	09 37 14.2	+2.5
YER	Yerkesik	1.42	270	PN	Pn	09 36 52.6	+0.1
SHUT	Suhut-Afyon	1.45	16	PN	Pn	09 36 52.6	-0.4
YVAC	Isparta, Yalva	1.46	40	i P	Pn	09 36 53.0	-0.1
YVAC				i S	Sn	09 37 13.4	+0.6
TURN	Turunc	1.50	256	PN	Pn	09 36 53.6	0.0
TURN	Turunc	1.50	256	i P	Pb	09 36 53.9	-0.4
MRSB	Marmaris-Mugla	1.55	254	PN	Pn	09 36 54.2	-0.2
DOGA	KONYA_Doganhis	1.59	53	i P	Pg	09 36 56.7	+0.3
AFYO	Afyonkarahisar	1.64	7	i P	Pn	09 36 56.1	+0.5
KULA	Kula-Manisa	1.75	321	P	Pg	09 36 59.5	+0.1
KULA				S	Sg	09 37 27.2	+5.2
KULA	Kula-Manisa	1.75	321	PN	Pn	09 36 56.8	-0.3
USAK	Uak-Merkez	1.76	333	i P	Pn	09 36 56.9	-0.4
USAK				i S	Sn	09 37 19.3	-0.9
MANT	Manisa	1.78	319	i P	Pn	09 36 57.3	-0.4
MANT				i S	Sn	09 37 18.8	-2.2
ARG	Arkhangelos	1.81	239	P	Pn	09 36 56.4	-1.5
ARG				S	Sn	09 37 20.6	-0.8
ARG	Arkhangelos	1.81	239	PN	Pn	09 36 58.3	+0.4
ARG	Arkhangelos	1.81	239	⇑P	Pb	09 36 58.8	-0.8
AYDB	Zeytinkoy-Aydi	1.89	295	PN	Pn	09 36 59.0	-0.1
AYDB				SN	Sn	09 37 24.1	+0.6
KMER	Konya-Meram	1.94	71	i P	Pb	09 37 01.6	-0.3
KMER				i S	Sb	09 37 26.9	+0.4
DATC	Datca-Mugla	1.96	259	PN	Pn	09 37 00.2	+0.3
SHAP	Saphane-Kutahy	1.98	341	PN	Pn	09 37 00.4	+0.1
GDZ	Gediz	1.98	347	i P	Pn	09 36 58.8	-1.6
KONT	Konya--Tatoy	2.00	66	PN	Pn	09 37 01.0	+0.5
KONT	Konya--Tatoy	2.00	66	i P	Pb	09 37 02.0	-0.7
KONT				i S	Sn	09 37 23.8	-2.2
GAZI	Gazipasa	2.04	116	PN	Pb	09 37 01.9	-1.6
GAZI	Gazipasa	2.04	116	i P	Pb	09 37 02.6	-0.8
BDRM	Kayabasi	2.09	268	i P	Pn	09 37 02.9	+1.2
SIMA	Simav-Kutahya	2.10	337	PN	Pn	09 37 01.1	-0.9
LADK	Ladik-KONYA	2.11	60	PN	Pn	09 37 02.4	+0.3
KDHN	Kadinhani	2.13	50	i P	Pn	09 37 03.0	+0.7
KDHN				i S	Sn	09 37 29.5	+0.2
DEMI	Demirci	2.16	331	i P	Pn	09 37 01.8	-1.0
BODT	Bodrum	2.19	268	P	Pn	09 37 03.6	+0.4
BODT				S	Sb	09 37 33.5	-0.3
BODT	Bodrum	2.19	268	PN	Pn	09 37 03.7	+0.5
DDIM	Aydin, Didim	2.26	278	i P	Pn	09 37 05.4	+1.3
KKBE	Karaman, Kazim	2.31	88	i P	Pb	09 37 07.3	-0.8
TVSB	Tavsanli	2.34	349	PN	Pn	09 37 04.7	-0.5
CIFT	Cifteler, Eski	2.34	20	PN	Pn	09 37 05.3	+0.1
ANDZ	Kutahya, Merke	2.35	357	i P	Pn	09 37 05.6	+0.1
NISR	Nisiros	2.41	258	P	Pn	09 37 05.5	-0.6
NISR				S	Sn	09 37 36.6	+0.5
AKHS	Akhisar	2.47	315	i P	Pn	09 37 06.7	-0.2
ALIN	Konya, Altinte	2.51	62	i P	Pn	09 37 08.2	+0.6
AUSIV	SIVRIHISAR	2.56	27	PN	Pn	09 37 09.1	+0.8
SVRH	Sivrihisar-ESK	2.56	26	PN	Pn	09 37 09.1	+0.8
SMG	Samos	2.62	283	P	Pn	09 37 09.7	+0.7
SMG				S	Sb	09 37 44.6	-1.4
	298nm,0.5s						
TEKE	Tekeli-Mersin	2.66	111	PN	Pn	09 37 10.8	+1.2
BERE	Bereket-Mersin	2.67	107	PN	Pn	09 37 10.8	+1.0
BLCB	Balcova	2.68	298	P	Pn	09 37 10.8	+0.9
BORA	Eskisehir	2.74	6	i P	Pn	09 37 11.0	+0.2
DURS	Dursunbey	2.74	334	i P	Pn	09 37 10.5	-0.2
TEVE	Tevekalti-Mers	2.81	104	PN	Pn	09 37 12.8	+1.0
AKMS	Akamas	2.82	138	P	Pn	09 37 13.2	+1.3
AKMS				AML	AML	09 38 03.6	
	1.1nm,1.0s						
AKMS				AML	AML	09 38 06.2	
	1.5nm,1.0s						
KARP	Karpathos	2.83	236	⇑P	Pn	09 37 12.7	+0.7
ALFC	Alefka	2.87	133	⇑P	Pb	09 37 14.8	-2.9
ALFC				AML	AML	09 37 53.9	
	0.6nm,1.2s						
ALFC				AML	AML	09 37 58.0	
	0.9nm,0.8s						
SRCK	Saricakaya, Es	2.92	9	i P	Pn	09 37 12.5	-0.6
AUMIH	MIHALICIK	2.93	22	i P	Pb	09 37 16.9	-1.8
ZEDA	zmir-Bergama	2.96	308	i P	Pn	09 37 13.8	0.0
KKUL	Konya-Kulu	3.02	47	i P	Pn	09 37 15.8	+1.2
LEF	Lefka	3.07	131	⇑P	Pn	09 37 17.3	+2.1
NATA	Nata	3.13	139	P	Pn	09 37 18.2	+2.2
KERG	Konya-Eregli	3.26	84	i P	Pb	09 37 22.1	-2.3
SZAC	Souni	3.32	135	⇑P	Pn	09 37 21.1	+2.5
SZAC				AML	AML	09 38 19.3	
	1.1nm,1.2s						
SZAC				AML	AML	09 38 20.6	
	0.8nm,0.9s						
KIZK	Mersin	3.35	100	i P	Pb	09 37 23.3	-2.6
CHOS	Chios island	3.40	292	P	Pn	09 37 21.1	+1.3
CSS	Mathiatis	3.44	129	⇑P	Pn	09 37 22.8	+2.4
ASGA	Asgata	3.51	131	P	Pn	09 37 24.0	+2.8
MVOU	Mavrovouni	3.60	125	⇑P	Pn	09 37 25.2	+2.7
APE	Apeiranthos	3.62	270	P	Pn	09 37 23.9	+1.1
APE	Apeiranthos	3.62	270	⇓S	Sn	09 38 07.9	+2.0
PRK	Paraskevi	3.64	306	P	Pn	09 37 24.8	+1.8
PRK				S	Sb	09 38 12.8	-2.4
	232nm,0.7s						
STIA	Sitia Lasithi	3.75	240	P	Pn	09 37 22.0	-2.6
BRTR	Keskin Array B	3.81	47	P	Pn	09 37 26.4	+0.9
	1.6nm,0.3s,baz=228,slow=18,SNR=22						
BRTR				S	Sn	09 38 11.7	+0.8
	2.1nm,0.3s,baz=213,slow=27,SNR=9.7						
BRTR				LR	LR	09 39 28.5	
	comp=Z,85nm,21.2s,baz=220,slow=47						
SIGR	SIGRI	3.89	303	P	Pn	09 37 28.8	+2.3
CDAG	Cicekdag	4.19	53	i P	Pn	09 37 31.4	+0.6
KDZE	Karadeniz Ereo	4.29	14	⇑P	Pn	09 37 35.4	+3.4
OSC2	CSNet OBS 4	4.46	155	P	Pn	09 37 35.5	+1.2
IDI	Anoyia	4.57	247	P	Pb	09 37 42.0	-4.8
	4.7nm,0.3s,baz=60,slow=15,SNR=16						
IDI				S	Sn	09 38 28.9	-0.7
	5.9nm,0.3s,baz=97,slow=18,SNR=6.0						
IDI				LR	LR	09 39 53.2	
	comp=Z,151nm,18.5s,baz=82,slow=42						
IDI	Anoyia	4.57	247	P	Pn	09 37 34.7	-1.2
IDI				S	Sn	09 38 29.3	-0.3
ENEZ	Enez	4.69	321	P	Pn	09 37 40.4	+2.9
LIA	Limnos Island	4.70	307	P	Pn	09 37 39.0	+1.4
ALN	Alexandroupoli	4.87	321	P	Pn	09 37 41.9	+2.0
MMAI	Mount Meron Ar	6.02	132	P	Pn	09 37 57.3	+1.4
	9.2nm,0.3s,baz=310,slow=12,SNR=16						
MMAI				S	Sn	09 39 06.3	+1.0
	baz=312,slow=31,SNR=1.9						
VTS	Vitosha	7.56	318	⇑P	Pn	09 38 20.2	+3.1
EIL	Elat	8.51	150	P	Pn	09 38 31.3	+1.3
	2.0nm,0.3s,baz=324,slow=15,SNR=7.0						
EIL				S	Sn	09 40 05.1	-1.5
	0.3nm,0.3s,baz=49,slow=20,SNR=2.0						
EIL				LR	LR	09 42 04.4	
	comp=Z,48nm,21.5s,baz=306,slow=40						
BISRR	Bisoca	8.75	344	⇑P	Pn	09 38 35.8	+2.5
MLR	Muntele Rosu	8.88	341	⇓P	Pn	09 38 36.5	+1.4
VRI	Vrincioaia	9.05	345	⇓P	Pn	09 38 39.6	+2.3
PLOR	Plostina	9.05	345	⇑P	Pn	09 38 39.1	+1.8
VOIR		9.09	337	⇑P	Pn	09 38 39.5	+1.6
DOPR	Dopca	9.47	340	⇑P	Pn	09 38 45.0	+1.9
GZR	Gura Zlata	9.88	329	⇑P	Pn	09 38 49.6	+0.8
MDVR	Moldovita	9.88	323	⇓P	Pn	09 38 50.5	+1.7
DRGR		11.06	333	⇓P	Pn	09 39 05.6	+0.7
GNI	Garni	11.87	71	LR	LR	09 44 45.2	
	comp=Z,125nm,19.4s,baz=272,slow=42						
GERES	GERESS Array B	16.68	320	P	P	09 40 23.9	+1.0
	0.2nm,0.3s,baz=119,slow=10,SNR=3.8						
DAVOX	Davos/Dischmat	17.77	309	LR	LR	09 48 32.5	
	comp=Z,139nm,18.3s,baz=68,slow=40						
AKTO	Aktyubinsk	23.99	48	P	P	09 41 39.4	-2.0
	1.2nm,0.7s,baz=240,slow=8.1,SNR=3.2						
FINES	FINESS Array B	24.44	355	P	P	09 41 45.0	-0.5
	4.8nm,0.8s,baz=153,slow=13,SNR=3.9						
KIRV	Kirov	24.89	24	LR	LR	09 53 51.1	
	comp=Z,105nm,20.5s,baz=302,slow=42						
ESDC	Sonseca Array	26.68	286	P	P	09 42 10.0	+3.9
	1.3nm,0.8s,baz=75,slow=10.0,SNR=7.0						
ARU	Arti	27.11	36	LR	LR	09 55 41.9	
	comp=Z,43nm,20.7s,baz=294,slow=42						
TORD	Torodi Ar. Bea	34.84	234	P	P	09 43 19.4	+1.3
	1.7nm,0.6s,baz=32,slow=9.7,SNR=8.2						
TORD				LR	LR	09 58 45.5	
	comp=Z,28nm,18.8s,baz=325,slow=38						
MKAR	Makanchi Array	39.36	59	P	P	09 43 56.6	+0.2
	1.2nm,0.6s,baz=289,slow=7.4,SNR=9.6						
ZALV	Zalesovo Beam	40.75	48	P	P	09 44 08.8	+1.0
	0.8nm,0.5s,baz=260,slow=8.9,SNR=5.8						
SONM	Songino Array	55.14	53	P	P	09 45 57.8	-1.7
	0.2nm,0.4s,baz=289,slow=7.7,SNR=3.4						
CMAR	Chiang Mai Arr	62.46	87	P	P	09 46 47.9	-2.8
	1.2nm,0.4s,baz=294,slow=6.8,SNR=4.2						
PDAR	Pinedale Array	92.36	331	LR	LR	10 38 20.8	
	comp=Z,15nm,18.5s,baz=330,slow=40						

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*UCR **08** 10:50:02.3±1.8, 8°.35N×83°.08W, h13^{km}±5^{km}, MW3.7*
*UPA **08** 10:50:02.0±2.2, 8°.42N×82°.99W, h8^{km}±10^{km}, MW4.3*
ISC 08 10:50:02.0±1.1, 8°.34N±0°.05×83°.02W±0°.03, h26^{km}±6^{km}, n42, σ1^{s}37/51, 3C-5D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CCOL	Caracol de Cor	0.08	36	eP	Pb	10 50 05.9	-0.8
CCOL				eS	Sb	10 50 10.2	+0.3
SBAR3	San Bartolo, C	0.14	99	⇑iP	Pb	10 50 06.9	-0.3
PIRO	Carate, Puerto	0.32	282	⇓eP	Pb	10 50 08.4	-0.9
PIRO	Carate, Puerto	0.32	282	eP	Pb	10 50 08.3	-1.0
EDSV	San Vito	0.48	6	eP	Pb	10 50 11.4	-0.6
EDSV				eS	Sn	10 50 19.7	-1.2
BRU2	Volcan	0.56	36	⇓iP	Pb	10 50 12.6	-0.7
BRU2				eS	Sb	10 50 21.2	+0.2
BRU2	Volcan	0.56	36	eP	Pb	10 50 12.6	-0.7
PEDE3	Pedregal, Chir	0.60	86	⇑iP	Pb	10 50 13.3	-0.6
PEDE3				eS	Sb	10 50 21.4	-0.6
LOCO3	Loma Colorada,	0.60	83	eP	Pb	10 50 13.3	-0.7
LOCO3				eS	Sb	10 50 20.4	-1.7
RIOS	Rincon, Osa	0.60	306	eP	Pb	10 50 12.6	-1.4
BCO2	Palmira	0.62	52	⇓iP	Pb	10 50 13.6	-0.8
LOMA3	Las Lomas, Chi	0.63	82	eP	Pb	10 50 13.7	-0.8
CHIR3	Chiriqui UPA,	0.69	85	eP	Pb	10 50 14.4	-0.9
POTG	Potrero Grande	0.71	352	eP	Pb	10 50 15.0	-0.9
LNBQ3	Los Naranjos,	0.73	52	eP	Pb	10 50 15.0	-1.2
GUAL3	Gualaca, Chiri	0.74	75	⇓eP	Pb	10 50 15.2	-1.1
EDPN	Palmar Norte	0.75	325	eP	Pb	10 50 15.3	-1.1
EDPN				eS	Sb	10 50 26.7	+0.3
PSOM3	Paja de Sombre	0.77	64	⇓iP	Pb	10 50 15.6	-1.3
EDBA	Buenos Aires	0.85	343	eP	Pb	10 50 17.6	-0.7
DRK0	Durika	0.94	347	⇑iP	Pb	10 50 18.5	-1.4
DRK0				eS	Sn	10 50 31.9	-0.5
DRK0	Durika	0.94	347	eP	Pb	10 50 18.5	-1.4
CHGR2	Aguacate	1.05	56	eP	Pn	10 50 20.0	-1.0
EDLM	Las Mercedes	1.09	329	eP	Pn	10 50 20.9	-0.7
CNI2	El Empalme, Bo	1.21	27	eP	Pn	10 50 22.9	-0.3
CNI2				eS	Sb	10 50 38.9	-0.5
PEZE	Perez Zeledon,	1.22	328	eP	Pn	10 50 22.8	-0.7
EDDO	Dominical	1.23	318	eP	Pn	10 50 23.1	-0.4
RGM0	Gandoca	1.31	18	eS	Sb	10 50 47.3	+5.0
CDM	Cerro de Muert	1.41	329	eP	Pn	10 50 26.0	-0.4
RIMA	Rio Macho	1.64	330	eP	Pn	10 50 29.0	-0.4
LCR2	La Lucha 2	1.70	325	eP	Pn	10 50 31.1	+1.0
CVTR	Volcan Turrial	1.82	337	eP	Pn	10 50 33.2	+1.2
GMAL	Guarumal, Vera	1.86	108	eP	Pn	10 50 31.6	-0.6
HDC	Heredia	1.97	327	eP	Pn	10 50 35.5	+1.7
HDC	Heredia	1.97	327	eP	Pb	10 50 35.7	-1.6
JACO	JACO, Garabito	2.08	309	eP	Pn	10 50 35.0	-0.3
CACAO	El Cacao, Vera	2.36	115	eP	Pn	10 50 39.8	+0.7
PNME	Penonome	2.67	87	eP	Pn	10 50 45.7	+2.3
ARE1	Arenal 1	2.69	322	eP	Pn	10 50 46.4	+2.7
JTS	Las Juntas de	2.72	316	eP	Pn	10 50 45.1	+1.2
JTS				eS	Sn	10 51 16.6	+0.6
AZU	Azuero	2.78	101	eP	Pn	10 50 47.0	+2.2
GRZA	Playa Garza	3.02	301	eP	Pn	10 50 48.6	+0.5
CUI	Cuipilapa	3.12	318	eP	Pn	10 50 52.2	+2.6

IDC 08 11:09:19.7±2.9, 10°.16S×118°.88E, h0^{km}, mb3.5/2, mb1 3.4/4, mb1mx3.3/24, mbtmp3.3/4, ML2.9/2, Error ellipse: s-maj=165.8km s-min=25.9km az=52.0, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	17.80	125	P	Pn	11 13 28.0	-1.1
	0.1nm,0.3s,baz=299,slow=14,SNR=2.6						
ASAR	Alice Springs	19.64	135	P	Pn	11 13 51.2	-0.3
	0.0nm,0.3s,baz=311,slow=10,SNR=6.7						
SONM	Songino Array	58.80	350	P	P	11 19 20.2	+0.3
	0.2nm,0.4s,baz=172,slow=8.2,SNR=3.8						
MKAR	Makanchi Array	65.44	333	P	P	11 20 04.0	-0.5
	0.4nm,0.6s,baz=146,slow=6.1,SNR=5.9						

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*JMA **08** 11:24:44.8±0.2, 23°.89N×122°.29E, h15^{km}±4^{km}*
*TAP **08** 11:24:45.6, 23°.96N×122°.29E, h28^{km}±1^{km}, ML2.8, D*
ISC 08 11:24:45.0±1.3, 23°.92N±0°.02×122°.29E±0°.02, h21^{km}±4^{km}, n66, σ0^{s}50/129, 1D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWD	Chiawan	0.66	285	P	Pb	11 24 57.8	0.0
	baz=281						
TWD				S	Sb	11 25 06.8	+0.3
	baz=281						
NACB	Ninganchiao	0.69	292	P	Pb	11 24 58.2	-0.1
	baz=276						
NACB				S	Sb	11 25 07.5	+0.1
	baz=276						
ENA	Nanau	0.72	316	eP	Pb	11 24 58.8	0.0
	baz=313						
ESL	Shilin	0.79	263	P	Pb	11 24 59.6	-0.4
	baz=252						
ESL				S	Sb	11 25 09.8	-0.5
	baz=252						
ETLH	Xiulin Townshi	0.80	292	i P	Pb	11 24 59.9	-0.3
	baz=277						
ETLH				S	Sb	11 25 11.2	+0.7
	baz=277						

TWC	**Suao** baz=327	**0.80**	**330**	*e*P	**Pb**	**11 24 59.3**	**-0.9**
TWC	baz=327			*e*S	**Sb**	**11 25 09.6**	**-1.0**
YOJ	**Yonaguni jima**	**0.85**	**50**	*e*S	**Sn**	**11 25 13.7**	**+0.1**
HGSD	**Ruisui** baz=240	**0.90**	**242**	*e*P	**Pb**	**11 25 01.5**	**-0.4**
HGSD	baz=240			*e*S	**Sb**	**11 25 13.2**	**-0.2**
WHF	**Hehuan Shan** baz=269	**0.97**	**284**	*i* P	**Pb**	**11 25 02.8**	**-0.5**
WHF	baz=269			*e*S	**Sb**	**11 25 15.5**	**-0.3**
NNSB	**Datong** baz=288	**0.97**	**302**	P	**Pb**	**11 25 03.1**	**-0.2**
NNSB	baz=288			*e*S	**Sb**	**11 25 15.9**	**+0.2**
NNSH	**Datong** baz=288	**0.97**	**302**	P	**Pb**	**11 25 03.1**	**-0.2**
NNSH	baz=288			S	**Sb**	**11 25 15.9**	**+0.2**
EHY	**Hungye** baz=258	**0.98**	**246**	*e*P	**Pb**	**11 25 03.1**	**-0.1**
EHY	baz=258			*e*S	**Sb**	**11 25 15.8**	**+0.1**
ENTT	**Nioudou** baz=314	**0.98**	**318**	P	**Pb**	**11 25 03.3**	**0.0**
ENTT	baz=314			*e*S	**Sb**	**11 25 15.6**	**-0.2**
TWE	**Neicheng** baz=322	**0.98**	**325**	*e*P	**Pb**	**11 25 03.4**	**+0.1**
TWE	baz=322			*e*S	**Sb**	**11 25 15.0**	**-0.9**
NDT	**Datong Townshi** baz=311	**0.99**	**314**	P	**Pb**	**11 25 03.4**	**0.0**
NDT	baz=311			*e*S	**Sb**	**11 25 16.0**	**+0.1**
NNS	**Nan Shan** baz=289	**0.99**	**302**	P	**Pb**	**11 25 03.3**	**-0.2**
NNS	baz=289			S	**Sn**	**11 25 17.0**	**-0.2**
FUSS	**Fushou** baz=286	**1.01**	**289**	P	**Pb**	**11 25 03.8**	**-0.2**
FUSS	baz=286			S	**Sb**	**11 25 17.1**	**+0.2**
NTC	**Toucheng** baz=345	**1.02**	**336**	*e*P	**Pb**	**11 25 03.6**	**-0.5**
NTC	baz=345			*e*S	**Sb**	**11 25 17.2**	**+0.1**
CHGB	**Renai** baz=264	**1.03**	**278**	⇓*i*P	**Pb**	**11 25 04.0**	**-0.3**
CHGB	baz=264			*e*S	**Sb**	**11 25 17.1**	**-0.4**
YULB	**Yu-li** baz=254	**1.05**	**240**	P	**Pn**	**11 25 04.2**	**-0.3**
YULB	baz=254			S	**Sb**	**11 25 18.0**	**+0.2**
EYUL	**Yuli** baz=236	**1.06**	**238**	*e*P	**Pn**	**11 25 04.3**	**-0.3**
EYUL	baz=236			*e*S	**Sn**	**11 25 19.0**	**+0.4**
VWDT	**VWDT** baz=259	**1.07**	**262**	P	**Pn**	**11 25 04.7**	**0.0**
VWDT	baz=259			*e*S	**Sb**	**11 25 17.8**	**-0.4**
TWF1	**Yuli** baz=226	**1.07**	**239**	*e*P	**Pn**	**11 25 04.8**	**0.0**
TWF1	baz=226			*e*S	**Sb**	**11 25 18.3**	**0.0**
TWT	**Tachien** baz=274	**1.07**	**288**	*e*P	**Pb**	**11 25 05.3**	**+0.3**
TWT	baz=274			*e*S	**Sn**	**11 25 19.7**	**+0.4**
TDCB	**Techi** baz=275	**1.09**	**288**	P	**Pn**	**11 25 05.2**	**0.0**
TDCB	baz=275			*e*S	**Sb**	**11 25 19.3**	**+0.3**
NWLT	**Wulai** baz=317	**1.12**	**320**	*e*P	**Pn**	**11 25 05.5**	**0.0**
NWLT	baz=317			*e*S	**Sn**	**11 25 20.4**	**+0.1**
YHNB	**Yeheng** baz=309	**1.12**	**312**	P	**Pn**	**11 25 05.4**	**-0.2**
YHNB	baz=309			*e*S	**Sn**	**11 25 20.3**	**-0.2**
TIPB	**Shuangxi** baz=335	**1.13**	**338**	*e*P	**Pn**	**11 25 05.5**	**-0.1**
TIPB	baz=335			*e*S	**Sb**	**11 25 19.3**	**-1.0**
NSK	**Sanguang** baz=309	**1.14**	**312**	P	**Pn**	**11 25 05.5**	**-0.3**
NSK	baz=309			S	**Sb**	**11 25 20.1**	**-0.3**
FULB	**Fuli** baz=219	**1.16**	**232**	*e*P	**Pn**	**11 25 05.8**	**-0.3**
FULB	baz=219			*e*S	**Sb**	**11 25 20.8**	**-0.2**
WPL	**Puli Township** baz=264	**1.23**	**275**	*e*P	**Pn**	**11 25 07.0**	**+0.1**
WPL	baz=264			*e*S	**Sn**	**11 25 22.3**	**-0.6**
SSLB	**Suanglung** baz=262	**1.23**	**264**	*e*P	**Pn**	**11 25 06.8**	**-0.3**
SSLB	baz=262			*e*S	**Sn**	**11 25 22.4**	**-0.6**
NWF	**Wu-fen Shan** baz=335	**1.24**	**338**	*e*P	**Pn**	**11 25 07.1**	**-0.1**
NWF	baz=335			*e*S	**Sn**	**11 25 23.0**	**-0.4**
TWA	**Mucha** baz=325	**1.24**	**329**	*e*P	**Pn**	**11 25 07.2**	**0.0**
TWA	baz=325			*e*S	**Sn**	**11 25 22.8**	**-0.5**
WFSB	**Wu-fen Shan** baz=350	**1.24**	**338**	*e*P	**Pn**	**11 25 07.0**	**-0.1**
WFSB	baz=350			*e*S	**Sn**	**11 25 23.0**	**-0.2**
NHDH	**Xindian Distri** baz=324	**1.25**	**326**	*e*P	**Pb**	**11 25 08.0**	**0.0**
NHDH	baz=324			*e*S	**Sn**	**11 25 23.5**	**-0.1**
SMLT	**Sun Moon Lake** baz=266	**1.27**	**269**	*e*P	**Pn**	**11 25 07.8**	**+0.1**
SMLT	baz=266			*e*S	**Sn**	**11 25 24.1**	**-0.1**
WHP	**Taichung City** baz=273	**1.28**	**287**	*e*P	**Pn**	**11 25 08.1**	**+0.4**
WHP	baz=273			*e*S	**Sb**	**11 25 24.6**	**0.0**
TATO	**Taipei** baz=322	**1.28**	**325**	*e*P	**Pb**	**11 25 08.3**	**-0.1**
TATO	baz=322			*e*S	**Sb**	**11 25 24.6**	**+0.1**
YUS	**Yu-Shan** baz=249	**1.30**	**251**	*e*P	**Pn**	**11 25 08.9**	**+0.5**
YUS	baz=249			*e*S	**Sn**	**11 25 24.9**	**-0.5**
TYC	**Yuchr** baz=267	**1.31**	**270**	*e*P	**Pn**	**11 25 08.6**	**+0.5**
TYC	baz=267			*e*S	**Sn**	**11 25 25.2**	**+0.2**
LIOB	**Emei** baz=287	**1.37**	**302**	P	**Pb**	**11 25 10.4**	**+0.4**
LIOB	baz=287			*e*S	**Sb**	**11 25 28.1**	**+1.0**
ELDTW	**Lidau** baz=237	**1.38**	**239**	*e*P	**Pn**	**11 25 09.1**	**0.0**
ELDTW	baz=237			*e*S	**Sn**	**11 25 25.9**	**-0.8**
NSTT	**Nanjuang** baz=287	**1.38**	**301**	*e*P	**Pb**	**11 25 10.5**	**+0.5**
NSTT	baz=287			*e*S	**Sb**	**11 25 27.7**	**+0.5**
IRIF	**Iriomote-Funau**	**1.38**	**72**	*e*S	**Sb**	**11 25 27.5**	**+0.3**
YM10	**YM10** baz=329	**1.40**	**332**	*e*P	**Pn**	**11 25 09.4**	**0.0**
YM10	baz=329			*e*S	**Sn**	**11 25 26.7**	**-0.6**
YM05	**YM05** baz=328	**1.41**	**332**	*e*P	**Pn**	**11 25 09.5**	**0.0**
YM05	baz=328			*e*S	**Sn**	**11 25 27.4**	**-0.1**
YM04	**YM04** baz=328	**1.41**	**331**	*e*P	**Pn**	**11 25 09.2**	**-0.4**
YM04	baz=328			*e*S	**Sn**	**11 25 27.3**	**-0.2**
ALS	**Alishan** baz=252	**1.42**	**254**	*e*P	**Pb**	**11 25 11.0**	**0.0**
ALS	baz=252			*e*S	**Sn**	**11 25 27.4**	**-0.7**
WJS	**Zhushan** baz=264	**1.43**	**267**	*e*P	**Pb**	**11 25 11.4**	**+0.4**
WJS	baz=264			*e*S	**Sb**	**11 25 30.1**	**+1.3**
TWQ1	**Liyutan** baz=284	**1.45**	**288**	*e*P	**Pn**	**11 25 10.7**	**+0.6**
TWQ1	baz=284			*e*S	**Sn**	**11 25 28.6**	**+0.1**
LONT	**Longtian** baz=239	**1.47**	**227**	*e*P	**Pn**	**11 25 09.7**	**-0.5**
LONT	baz=239			*e*S	**Sn**	**11 25 28.5**	**-0.3**
WNT	**Mingjian** baz=266	**1.47**	**269**	*e*P	**Pb**	**11 25 12.4**	**+0.7**
WNT	baz=266			*e*S	**Sb**	**11 25 31.4**	**+1.5**
SBCB	**Hsinchu** baz=302	**1.48**	**307**	*e*P	**Pn**	**11 25 10.6**	**+0.2**
SBCB	baz=302			*e*S	**Sn**	**11 25 29.1**	**+0.1**
CHN5	**Tsauling** baz=247	**1.51**	**258**	*e*P	**Pb**	**11 25 12.5**	**+0.1**
CHN5	baz=247			*e*S	**Sb**	**11 25 31.5**	**+0.3**
TWGBT	**Beinan** baz=237	**1.56**	**226**	*e*P	**Pn**	**11 25 10.1**	**-1.5**
TWGBT	baz=237			*e*S	**Sn**	**11 25 30.9**	**-0.2**
STYT	**Tauyuan** baz=232	**1.59**	**242**	*e*P	**Pb**	**11 25 13.2**	**-0.5**
STYT	baz=232			*e*S	**Sb**	**11 25 33.6**	**+0.1**
JKRS	**Kuro-shima**	**1.60**	**78**	P	**Pb**	**11 25 14.4**	**+0.5**
JKRS				S	**Sb**	**11 25 34.9**	**+1.2**
TPUB	**Ta-pu** baz=247	**1.64**	**248**	*e*P	**Pb**	**11 25 14.8**	**+0.2**
TPUB	baz=247			*e*S	**Sb**	**11 25 35.2**	**+0.3**
CHN4	**Tsaushan** baz=249	**1.66**	**251**	*e*P	**Pb**	**11 25 14.6**	**-0.2**
CHN4	baz=249			*e*S	**Sb**	**11 25 35.4**	**+0.2**
WTP	**Ta-pu** baz=246	**1.68**	**247**	*e*P	**Pn**	**11 25 14.3**	**+1.2**
WTP	baz=246			*e*S	**Sb**	**11 25 35.5**	**-0.4**
JIJ	**Ishigaki jima**	**1.75**	**75**	P	**Pb**	**11 25 15.8**	**-0.6**
JIJ				S	**Sb**	**11 25 38.3**	**+0.4**
WTK	**Tuku** baz=261	**1.76**	**263**	*e*P	**Pb**	**11 25 16.4**	**-0.2**
WTK	baz=261			*e*S	**Sb**	**11 25 39.0**	**+0.9**
SLGT	**Liugui** baz=230	**1.77**	**239**	*e*P	**Pb**	**11 25 16.0**	**-0.8**
SLGT	baz=230			*e*S	**Sb**	**11 25 38.1**	**-0.4**
CHN1	**Nanshi** baz=245	**1.77**	**246**	*e*P	**Pn**	**11 25 15.8**	**+1.3**
CHN1	baz=245			*e*S	**Sb**	**11 25 38.0**	**-0.7**
TWK	**Hsinying** baz=248	**1.78**	**249**	*e*P	**Pn**	**11 25 15.6**	**+1.1**
TWK	baz=248			*e*S	**Sn**	**11 25 37.4**	**+0.9**

JMA ***08*** *11:27:30.5±0.2, 23°.88N×122°.29E, h13^{km}±4^{km}, M2.4*
TAP ***08*** *11:27:31.0, 23°.98N×122°.33E, h27^{km}, ML2.8, C*
ISC 08 11:27:31.3±1.1**, 23°.94N**±0°.03×**122°.27E**±0°.02**, h24**^{km}±13^{km}**,**
n62, σ0^{s}.48/87**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HWA	**Hwalien** baz=257	**0.61**	**274**	*e*P	**Pb**	**11 27 43.2**	**-0.2**
TWD	**Chiawan** baz=278	**0.64**	**283**	*e*P	**Pb**	**11 27 43.5**	**-0.3**
TWD	baz=278			S	**Sb**	**11 27 53.3**	**+1.0**
NACB	**Ninganchiao** baz=273	**0.66**	**291**	P	**Pb**	**11 27 44.0**	**-0.3**
NACB	baz=273			*e*S	**Sn**	**11 27 54.5**	**-0.4**
ENA	**Nanau** baz=316	**0.69**	**315**	*e*P	**Pb**	**11 27 44.9**	**+0.2**
ETLH	**Xiulin Townshi** baz=274	**0.77**	**290**	P	**Pb**	**11 27 45.7**	**-0.5**
ETLH	baz=274			*e*S	**Sb**	**11 27 57.1**	**+0.9**
TWC	**Suao** baz=331	**0.77**	**330**	P	**Pb**	**11 27 45.1**	**-1.0**
ESL	**Shilin** baz=250	**0.78**	**261**	*e*P	**Pb**	**11 27 45.5**	**-0.7**
ESL	baz=250			S	**Sb**	**11 27 56.9**	**+0.5**
YOJ	**Yonaguni jima**	**0.85**	**52**	P	**Pb**	**11 27 46.9**	**-0.6**
YOJ				*e*S	**Sn**	**11 27 59.3**	**-0.3**
HGSD	**Ruisui** baz=240	**0.90**	**240**	*e*P	**Pb**	**11 27 48.1**	**0.0**
HGSD	baz=240			*e*S	**Sb**	**11 28 00.1**	**+0.3**
WHF	**Hehuan Shan** baz=267	**0.94**	**283**	P	**Pb**	**11 27 48.6**	**-0.7**
WHF	baz=267			S	**Sn**	**11 28 02.3**	**-0.2**
NNSB	**Datong** baz=285	**0.95**	**301**	*e*P	**Pb**	**11 27 48.8**	**-0.3**
NNSB	baz=285			*e*S	**Sn**	**11 28 02.4**	**+0.2**
NNSH	**Datong** baz=286	**0.95**	**301**	*e*P	**Pb**	**11 27 48.9**	**-0.2**
NNSH	baz=286			*e*S	**Sn**	**11 28 02.2**	**+0.1**
ENTT	**Nioudou** baz=300	**0.95**	**317**	P	**Pb**	**11 27 48.9**	**-0.2**
TWE	**Neicheng** baz=320	**0.96**	**325**	P	**Pb**	**11 27 48.8**	**-0.4**
TWE	baz=320			*e*S	**Sn**	**11 28 02.2**	**+0.1**
NDT	**Datong Townshi** baz=309	**0.96**	**314**	P	**Pb**	**11 27 49.1**	**-0.2**
NNS	**Nan Shan** baz=285	**0.96**	**301**	P	**Pb**	**11 27 49.0**	**-0.4**
NNS	baz=285			*e*S	**Sn**	**11 28 02.6**	**+0.1**
EHY	**Hungye** baz=258	**0.97**	**244**	*e*P	**Pb**	**11 27 49.4**	**-0.1**
EHY	baz=258			*e*S	**Sb**	**11 28 02.2**	**+0.3**
FUSS	**Fushou** baz=284	**0.99**	**288**	P	**Pb**	**11 27 49.6**	**-0.4**
FUSS	baz=284			S	**Sn**	**11 28 03.5**	**+0.1**
CHGB	**Renai** baz=263	**1.01**	**277**	*e*P	**Pb**	**11 27 49.8**	**-0.5**
YULB	**Yu-li** baz=255	**1.05**	**239**	P	**Pn**	**11 27 50.0**	**-0.5**
YULB	baz=255			*e*S	**Sb**	**11 28 03.9**	**-0.1**
VWDT	**VWDT** baz=252	**1.05**	**260**	*e*P	**Pn**	**11 27 50.4**	**-0.1**
EYUL	**Yuli** baz=236	**1.05**	**236**	P	**Pn**	**11 27 50.2**	**-0.4**
EYUL	baz=236			S	**Sn**	**11 28 04.8**	**+0.3**
TDCB	**Techi** baz=274	**1.06**	**287**	*e*P	**Pn**	**11 27 50.7**	**-0.2**
TWF1	**Yuli** baz=226	**1.07**	**237**	P	**Pn**	**11 27 50.3**	**-0.5**
TWF1	baz=226			S	**Sn**	**11 28 04.9**	**0.0**
NWLT	**Wulai** baz=315	**1.09**	**320**	P	**Pn**	**11 27 51.1**	**-0.1**
NWLT	baz=315			*e*S	**Sn**	**11 28 06.0**	**+0.5**
TIPB	**Shuangxi** baz=333	**1.11**	**339**	P	**Pn**	**11 27 51.1**	**-0.3**
TIPB	baz=333			*e*S	**Sb**	**11 28 05.3**	**-0.6**
NSK	**Sanguang** baz=308	**1.11**	**312**	P	**Pn**	**11 27 51.3**	**-0.2**
FULB	**Fuli** baz=231	**1.16**	**231**	P	**Pn**	**11 27 51.5**	**-0.6**
NWF	**Wu-fen Shan** baz=333	**1.21**	**338**	P	**Pn**	**11 27 52.6**	**-0.3**
NWF	baz=333			S	**Sb**	**11 28 09.1**	**+0.1**
WFSB	**Wu-fen Shan** baz=333	**1.21**	**338**	*e*P	**Pn**	**11 27 52.6**	**-0.2**
WFSB	baz=333			*e*S	**Sb**	**11 28 09.0**	**+0.1**
SSLB	**Suanglung** baz=262	**1.22**	**263**	*e*P	**Pn**	**11 27 53.0**	**+0.1**
NHDH	**Xindian Distri** baz=322	**1.23**	**326**	P	**Pb**	**11 27 53.6**	**-0.3**
DPDB	**Guoxing** baz=272	**1.23**	**275**	*e*P	**Pn**	**11 27 53.4**	**+0.2**
SMLT	**Sun Moon Lake** baz=256	**1.26**	**268**	*e*P	**Pn**	**11 27 53.4**	**-0.1**
WHP	**Taichung City** baz=273	**1.26**	**286**	*e*P	**Pb**	**11 27 54.3**	**-0.2**
TYC	**Yuchr** baz=267	**1.30**	**269**	P	**Pn**	**11 27 54.1**	**+0.2**
EDH	**Donghe** baz=224	**1.31**	**223**	*e*P	**Pn**	**11 27 53.6**	**-0.5**
LIOB	**Emei** baz=298	**1.35**	**302**	*e*P	**Pb**	**11 27 56.0**	**+0.1**
ELDTW	**Lidau** baz=237	**1.37**	**237**	*e*P	**Pn**	**11 27 54.7**	**-0.4**
IRIF	**Iriomote-Funau**	**1.39**	**73**	P	**Pb**	**11 27 56.2**	**-0.4**
IRIF				S	**Sb**	**11 28 14.1**	**+0.2**
HATJ	**Hateruma jima**	**1.41**	**85**	P	**Pb**	**11 27 56.7**	**-0.2**
HATJ				*e*S	**Sb**	**11 28 14.6**	**+0.2**
ALS	**Alishan** baz=252	**1.41**	**253**	*e*P	**Pn**	**11 27 55.9**	**+0.1**
ANP	**Anpu** baz=327	**1.42**	**331**	*e*P	**Pn**	**11 27 55.9**	**+0.1**
WJS	**Zhushan** baz=264	**1.42**	**266**	*e*P	**Pn**	**11 27 56.2**	**+0.6**
LONT	**Longtian** baz=239	**1.47**	**226**	*e*P	**Pn**	**11 27 56.1**	**-0.2**
CHN5	**Tsauling** baz=256	**1.50**	**257**	*e*P	**Pb**	**11 27 58.3**	**-0.2**
TWGBT	**Beinan** baz=226	**1.56**	**225**	*e*P	**Pn**	**11 27 57.2**	**-0.4**
WDLH	**Douliu** baz=260	**1.61**	**261**	*e*P	**Pb**	**11 27 59.5**	**-0.9**
JKRS	**Kuro-shima**	**1.61**	**79**	P	**Pb**	**11 28 00.3**	**-0.1**
JKRS				S	**Sb**	**11 28 21.4**	**+1.0**
TPUB	**Ta-pu** baz=247	**1.64**	**247**	*e*P	**Pb**	**11 27 59.9**	**-1.0**
CHN4	**Tsaushan** baz=249	**1.65**	**250**	*e*P	**Pb**	**11 28 00.6**	**-0.5**
WTP	**Ta-pu** baz=235	**1.67**	**246**	*e*P	**Pb**	**11 28 01.3**	**-0.1**
WTK	**Tuku** baz=261	**1.74**	**262**	*e*P	**Pb**	**11 28 02.5**	**-0.2**
JIJ	**Ishigaki jima**	**1.76**	**76**	P	**Pn**	**11 28 00.6**	**+0.3**
JIJ				S	**Sn**	**11 28 22.5**	**+0.5**
SLGT	**Liugui** baz=229	**1.77**	**238**	*e*P	**Pb**	**11 28 01.8**	**-1.2**
CHN1	**Nanshi** baz=245	**1.77**	**245**	*e*P	**Pb**	**11 28 01.8**	**-1.3**
TWK	**Hsinying** baz=248	**1.77**	**248**	*e*P	**Pn**	**11 28 01.4**	**+0.9**
TSMG	**Majia** baz=223	**1.94**	**231**	*e*P	**Pn**	**11 28 03.8**	**+1.1**
JISG	**Ishigakijimahi**	**1.97**	**70**	P	**Pn**	**11 28 02.8**	**-0.4**
JISG				*e*S	**Sn**	**11 28 27.2**	**+0.1**
MASBT	**Mashibuluo** baz=222	**2.00**	**229**	*e*P	**Pn**	**11 28 04.0**	**+0.3**
EAST	**Anshuo** baz=222	**2.03**	**221**	*e*P	**Pn**	**11 28 04.8**	**+0.8**
SLIU	**Shizi** baz=220	**2.19**	**219**	*e*P	**Pn**	**11 28 06.4**	**+0.2**

STR ***08*** *11:51:17.8±0.8, 46°N±2°×°±°, h8^{km}, MLv1.9/7,*
smi:scs/0.6/LOCSAT earthModelID
smi:scs/0.6/alpes_taup-2.11 preliminary
ZUR ***08*** *11:51:17.7, 45°.60N×6°.95E, h2^{km}±2^{km}, MLh1.8/14, Error*
ellipse: s-maj=4.2km s-min=0.9km az=224.0
ROM ***08*** *11:51:17.2±0.2, 45°.59N±0°.02×6°.97E±0°.03, h14^{km}±4^{km},*
ML1.8/2, Error ellipse: s-maj=2.1km s-min=1.4km
az=132.0
GEN ***08*** *11:51:17.3, 45°.61N×6°.94E, h3^{km}±2^{km}, Ml1.9*
LDG ***08*** *11:51:17.4±0.0, 45°.60N×6°.96E, h2^{km}, Md2.4/2, Ml2.6/18,*
Error ellipse: s-maj=0.8km s-min=0.6km az=97.0
ISC 08 11:51:17.6±0.8**, 45°.60N**±0°.01×**6°.94E**±0°.02**, h13**^{km}±5^{km}**,**
n66, σ1^{s}.11/120**, 19C, France**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPG	**La Plagne**	**0.17**	**233**	*e*Pg	**Pg**	**11 51 21.3**	**-0.5**
LPG	298nm,0.2s			*e*Sg	**Sg**	**11 51 23.7**	**-0.9**
LPL	**La Plagne**	**0.17**	**241**	*e*Pg	**Pg**	**11 51 21.2**	**-0.5**
LPL	142nm,0.3s			*e*Sg	**Sg**	**11 51 23.6**	**-1.0**
LSD	**Lago del Serru** 0.3nm,SNR=12	**0.19**	**136**	⇑Pg	**Pg**	**11 51 21.8**	**-0.3**
LSD				⇑Pg	**Pg**	**11 51 21.8**	**-0.3**
LSD				Sg	**Sg**	**11 51 24.5**	**-0.7**
LSD	**Lago del Serru**	**0.19**	**136**	P	**Pg**	**11 51 21.8**	**-0.3**
LSD				S	**Sg**	**11 51 24.5**	**-0.7**
LSD	**Lago del Serru**	**0.19**	**136**	P	**Pg**	**11 51 21.8**	**-0.3**
LSD				S	**Sg**	**11 51 24.5**	**-0.7**
RSL	**Roselend** 0.1nm,SNR=2.8	**0.24**	**292**	⇑Pg	**Pg**	**11 51 22.3**	**-0.5**
RSL				⇑Pg	**Pg**	**11 51 22.3**	**-0.5**
RSL	**Roselend**	**0.24**	**292**	Pg	**Pg**	**11 51 22.4**	**-0.4**
RSL				Sg	**Sg**	**11 51 25.8**	**-0.6**
OGMO	**Fort Saint-Gob**	**0.43**	**205**	Pg	**Pg**	**11 51 26.0**	**-0.2**
OGMO				Sg	**Sg**	**11 51 31.4**	**-0.5**
SEMOS	**Emosson Stauma** 0.1nm,SNR=1.0	**0.47**	**359**	⇑Pg	**Pg**	**11 51 26.5**	**-0.4**
SEMOS				⇑Pg	**Pg**	**11 51 26.5**	**-0.4**
OGSI	**Sixt** 0.1nm,SNR=1.2	**0.48**	**344**	⇑Pg	**Pg**	**11 51 26.6**	**-0.6**
OGSI				⇑Pg	**Pg**	**11 51 26.6**	**-0.6**
OGSI				Sg	**Sg**	**11 51 32.8**	**-0.9**
SALAN	**Lac Salanfe** 0.1nm,SNR=1.9	**0.55**	**2**	⇑Pg	**Pg**	**11 51 28.0**	**-0.4**
SALAN				⇑Pg	**Pg**	**11 51 28.0**	**-0.4**
SALAN				Sg	**Sg**	**11 51 35.0**	**-0.7**
TRAV	**Traversella**	**0.57**	**98**	⇑Pg	**Pg**	**11 51 28.5**	**-0.3**
TRAV	0.1nm,SNR=2.3			⇑Pg	**Pg**	**11 51 28.5**	**-0.3**
TRAV				Sg	**Sg**	**11 51 35.6**	**-0.8**
TRAV	**Traversella**	**0.57**	**98**	P	**Pg**	**11 51 28.5**	**-0.3**
TRAV				S	**Sg**	**11 51 35.6**	**-0.8**
TRAV	**Traversella**	**0.57**	**98**	P	**Pg**	**11 51 28.5**	**-0.3**
TRAV				S	**Sg**	**11 51 35.6**	**-0.8**
TRAV	comp=E,130μm,0.2s			AML	AML		
TRAV	comp=N,149μm,1.3s			AML	AML		
TRAV	comp=E,130μm,0.2s			AML	AML		
BNI	**Bardonecchia**	**0.58**	**199**	⇑Pg	**Pg**	**11 51 28.5**	**-0.4**
BNI				Sg	**Sg**	**11 51 36.0**	**-0.7**
BNI	**Bardonecchia**	**0.58**	**199**	P	**Pg**	**11 51 28.5**	**-0.4**
BNI				S	**Sg**	**11 51 35.9**	**-0.7**
DIX	**Grande Dixence**	**0.58**	**34**	⇑Pg	**Pg**	**11 51 28.5**	**-0.6**
DIX	comp=E,0.2nm,SNR=4.0			⇑Pg	**Pg**	**11 51 28.5**	**-0.6**
DIX				Sg	**Sg**	**11 51 35.9**	**-0.9**
DIX	**Grande Dixence**	**0.58**	**34**	P	**Pg**	**11 51 28.5**	**-0.6**
DIX				S	**Sg**	**11 51 35.9**	**-0.9**
DIX	comp=E,94μm,0.2s			AML	AML		
DIX	comp=N,116μm,0.2s			AML	AML		
DIX	comp=N,116μm,0.2s			AML	AML		
GRYON	**Gryon**	**0.66**	**10**	⇑Pg	**Pg**	**11 51 30.2**	**-0.4**
GRYON	comp=N,0.3nm,SNR=0.5			⇑Pg	**Pg**	**11 51 30.2**	**-0.4**
GDM	**Grand'Maison**	**0.70**	**236**	Pg	**Pg**	**11 51 30.9**	**-0.4**
GDM				Sg	**Sg**	**11 51 40.9**	**+0.3**
SATI	**Passo dei Sala**	**0.70**	**67**	P	**Pg**	**11 51 31.3**	**0.0**
SATI				S	**Sg**	**11 51 40.0**	**-0.7**
AIGLE	**Aigle**	**0.74**	**1**	⇑Pg	**Pg**	**11 51 31.6**	**-0.4**
AIGLE	comp=N,0.1nm,SNR=1.0			⇑Pg	**Pg**	**11 51 31.6**	**-0.4**
VANNI	**Vissoie, Val d** comp=N,0.1nm,SNR=1.2	**0.76**	**37**	Pg	**Pg**	**11 51 31.8**	**-0.6**
VANNI				Pg	**Pg**	**11 51 31.8**	**-0.6**
SENIN	**Lac Senin/Sane**	**0.80**	**18**	Pg	**Pg**	**11 51 32.7**	**-0.5**
SENIN				Pg	**Pg**	**11 51 32.7**	**-0.5**

	comp=N,0.1nm,SNR=1.5						
MMK	Mattmark	0.84	57	P	Pg	11 51 33.1	-0.9
MMK				S	Sg	11 51 43.4	-1.7
OGSM	Saint Maurice	0.87	271	Pg	Pb	11 51 34.8	+0.2
OGSM				Sg	Sg	11 51 46.4	+0.4
MBDF	Montbardon	0.88	188	ePg	Pg	11 51 34.1	-0.5
MBDF				eSg	Sg	11 51 45.9	-0.3
	comp=N,24nm,0.2s						
ORIF	Oris-en-Rattie	1.01	228	ePg	Pg	11 51 36.7	-0.4
ORIF	Oris-en-Rattie	1.01	228	eP	Pg	11 51 36.9	-0.2
ORIF				eSg	Sg	11 51 49.9	-0.4
	comp=N,25nm,0.4s						
ORIF	Oris-en-Rattie	1.01	228	Pg	Pg	11 51 36.7	-0.4
ORIF				Sg	Sg	11 51 50.0	-0.4
ORIF	Oris-en-Rattie	1.01	228	P	Pg	11 51 36.7	-0.4
ORIF				S	Sg	11 51 49.9	-0.4
OG35	Corcelles	1.06	295	Pg	Pb	11 51 38.2	+0.4
OG35				Sg	Sg	11 51 52.0	+0.2
PZZ	Stroppo	1.10	174	P	Pg	11 51 38.2	-0.6
PZZ				S	Sg	11 51 52.2	-0.9
CABF	La Chapelle	1.17	330	ePn	Pg	11 51 39.4	-0.8
CABF	La Chapelle	1.17	330	eP	Pn	11 51 41.1	+1.3
CABF				eSn	Sg	11 51 54.7	-0.8
	comp=N,20nm,0.3s						
OGAG	Argentiere	1.18	194	Pg	Pg	11 51 34.0	-6.3
OGAG				Sg	Sg	11 51 45.1	-11
VARE	Varese	1.31	78	AML	AML		
	comp=E,114µm,0.9s						
VARE				AML	AML		
	comp=E,115µm,0.9s						
VARE				AML	AML		
	comp=N,444µm,0.6s						
ISO	Isola	1.42	177	Pg	Pg	11 51 44.7	-0.2
VIVF	Saint-Julien-l	1.77	246	ePn	Pn	11 51 47.5	-0.4
VIVF	Saint-Julien-l	1.77	246	ePg	Pg	11 51 51.0	-0.5
VIVF				eSg	Sb	11 52 13.2	+1.2
	comp=N,7.2nm,0.3s						
SBF	Sospel	1.77	168	ePn	Pn	11 51 47.5	-0.5
SBF	Sospel	1.77	168	ePg	Pb	11 51 50.5	+0.5
SBF				eSg	Sb	11 52 13.5	+1.4
	comp=N,24nm,0.4s						
SMRF	Simiane la Rot	1.89	211	ePn	Pn	11 51 49.4	-0.3
SMRF	Simiane la Rot	1.89	211	ePg	Pb	11 51 52.5	+0.5
SMRF				eSg	Sg	11 52 18.0	-0.4
	comp=N,2.0nm,0.3s						
FRF	La Foret Royal	2.05	186	ePg	Pb	11 51 55.4	+0.7
FRF				eSn	Sn	11 52 15.8	-1.4
FRF				eSg	Sg	11 52 22.5	-0.9
	comp=N,12nm,0.4s						
HINF	Hinteralfeld	2.22	358	ePn	Pn	11 51 53.6	-0.6
HINF	Hinteralfeld	2.22	358	ePg	Pb	11 51 58.7	+1.1
HINF				eSn	Sn	11 52 19.6	-1.9
HINF				eSg	Sb	11 52 27.1	+2.1
	comp=N,3.3nm,0.2s						
LMR	La Mourre	2.29	188	ePn	Pn	11 51 54.6	-0.4
LMR	La Mourre	2.29	188	ePg	Pb	11 51 59.9	+1.2
LMR				eSg	Sb	11 52 29.3	+2.4
	comp=N,3.7nm,0.2s						
SMF	Signal de Mont	2.40	297	ePn	Pn	11 51 55.9	-0.7
SMF	Signal de Mont	2.40	297	ePg	Pb	11 52 01.8	+1.2
SMF				eSn	Sn	11 52 24.1	-1.7
SMF				eSg	Sg	11 52 32.9	-1.7
	comp=N,13nm,0.3s						
HAU	Haudompre	2.44	351	ePn	Pn	11 51 56.7	-0.5
HAU	Haudompre	2.44	351	ePg	Pb	11 52 02.9	+1.5
HAU				eSn	Sn	11 52 25.2	-1.7
	comp=N,4.4nm,0.3s						
LOR	Lormes	2.71	309	ePn	Pn	11 52 00.7	-0.1
	baz=129						
LOR	Lormes	2.71	309	ePg	Pg	11 52 08.3	-1.2
LOR				eSg	Sg	11 52 42.4	-2.2
	comp=N,3.6nm,0.3s						
AVF	Avril sur Loir	2.76	297	ePg	Pg	11 52 09.4	-1.1
AVF				eSn	Sn	11 52 33.1	-1.7
AVF				eSg	Sb	11 52 43.7	+3.1
	comp=N,3.2nm,0.3s						
SSF	Saint Saulge	2.79	303	ePn	Pn	11 52 01.3	-0.7
SSF	Saint Saulge	2.79	303	eP	Pn	11 52 04.1	+2.1
SSF	Saint Saulge	2.79	303	ePg	Pb	11 52 09.3	+1.9
SSF				eSn	Sn	11 52 33.6	-2.0
SSF				eSg	Sb	11 52 44.7	+3.2
	comp=N,3.7nm,0.4s						
CDF	Champ du Feu	2.82	5	ePg	Pb	11 52 09.8	+1.9
SFTF	Sexfontaines	2.92	334	ePg	Pb	11 52 11.6	+2.2
BGF	Bois d'Agland	3.01	290	ePn	Pn	11 52 04.0	-0.9
BGF	Bois d'Agland	3.01	290	eP	Pn	11 52 06.6	+1.7
BGF	Bois d'Agland	3.01	290	ePg	Pb	11 52 13.1	+2.1
BGF				eSg	Sg	11 52 52.1	-2.1
	comp=N,9.7nm,0.4s						
MEZF	Maizieres J'vi	3.18	337	ePg	Pb	11 52 16.3	+2.4
MEZF				eSn	Sn	11 52 42.8	-2.2
	comp=N,6.2nm,0.5s						
TCF	Toulx Ste Croi	3.37	283	ePg	Pg	11 52 20.1	-2.1

IDC ***08*** *12:18:36.3±1.8, 13°.52S×166°.65E, h0^{km}, mb3.7/5, mb1 3.9/6, mb1mx3.6/41, mbtmp3.6/6, ML3.0/1, MS3.6/3, Ms1 3.6/3, ms1mx3.0/27, Error ellipse: s-maj=51.9km s-min=31.8km az=122.0*

ISC 08 12:18:41.9±1.3**, 13°.6S**±0°.1×**166°.7E**±0°.3**, h39**^{km}**, n8, σ1^{s}.13**/7**, mb3.6**/5**, MS3.3**/3**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	8.42	182	Pn	Pn	12 20 42.2	+0.7
	0.2nm,0.3s,baz=13,slow=23,SNR=1.0						
DZM				Sn	Sn	12 22 15.0	-0.4
	0.3nm,0.3s,baz=142,slow=17,SNR=1.4						
WRA	Warramunga Arr	31.57	254	P	P	12 25 00.5	-0.5
	0.3nm,0.6s,baz=86,slow=9.6,SNR=2.0						
WRA				LR	LR	12 37 35.4	
	comp=Z,38nm,18.2s,baz=145,slow=36						
ASAR	Alice Springs	32.56	247	P	P	12 25 08.6	-1.1
	0.3nm,0.5s,baz=75,slow=9.2,SNR=9.7						
ASAJ	Asahikawa	61.50	340	LR	LR	12 48 44.8	
	comp=Z,328nm,21.3s,baz=146,slow=30						
CMAR	Chiang Mai Arr	73.98	294	P	P	12 30 15.4	+1.5
	0.5nm,0.4s,baz=134,slow=3.9,SNR=2.0						
ILAR	Eielson Array	85.64	18	P	P	12 31 15.3	-0.8
	0.2nm,0.5s,baz=244,slow=5.4,SNR=5.1						
DLBC	Dease Lake	88.22	28	LR	LR	13 07 02.7	
	comp=Z,11nm,18.3s,baz=290,slow=33						
MKAR	Makanchi Array	96.00	317	P	P	12 32 05.0	-0.1
	0.3nm,0.7s,baz=97,slow=7.6,SNR=4.4						

IDC ***08*** *12:19:41.2±2.5, 14°.74N×91°.90W, h22^{km}±14^{km}, mb4.2/17, mb1 4.4/19, mb1mx4.2/43, mbtmp4.4/19, ML4.6/2, MS3.2/10, Ms1 3.2/10, ms1mx3.0/31, Error ellipse: s-maj=31.7km s-min=10.6km az=53.0*

MEX ***08*** *12:19:46.6±2.9, 14°.41N×92°.63W, h80^{km}, MD4.5*

SNET ***08*** *12:19:48.6±1.6, 14°.30N×92°.18W, h40^{km}±816^{km}, ML4.3*

UCR ***08*** *12:19:48.6±1.4, 14°.35N×92°.44W, h40^{km}, ML4.0, mb4.6(NEIC)*

NEIC ***08*** *12:19:49.1±3.3, 14°.65N±0°.07×92°.45W±0°.07, h86^{km}±6^{km}, Error ellipse: s-maj=11.8km s-min=7.8km az=221.0*

GCG ***08*** *12:19:51.4±0.5, 14°.12N×92°.23W, h36^{km}±858^{km}, MD4.4*

ISC 08 12:19:46.3±0.7**, 14°.50N**±0°.05×**92°.53W**±0°.04**, h70**^{km}±6^{km}**, n435, σ1^{s}.69**/467**, mb4.6**/80**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		0.48	32	i P	Pn	12 19 59.7	+0.8
THIG				i S	Sn	12 20 10.2	+2.0
THIG		0.48	32		Pn	12 19 59.7	+0.8
THIG					Sn	12 20 10.2	+2.0
RTAL	Retalhuleu	0.81	88		Pn	12 20 02.9	+0.4
PCIG		1.38	331	i P	Pn	12 20 10.1	+0.4
PCIG				i S	Sn	12 20 27.4	+0.3
PCIG		1.38	331		Pn	12 20 10.1	+0.4
PCIG					Sn	12 20 27.4	+0.3
FUG	Fuego 3	1.63	91	i P	Pn	12 20 14.7	+1.4
FUG				eS	Sn	12 20 32.9	-0.7
CCIG	Comitan	1.82	12	eP	Pn	12 20 17.8	+2.1
CCIG				i S	Sn	12 20 41.8	+3.9
CCIG	Comitan	1.82	12		Pn	12 20 17.8	+2.1
CCIG	Comitan	1.82	12		Sn	12 20 44.9	+7.0
PCG	Pacaya	1.86	93	i P	Pn	12 20 18.2	+1.8
PCG				eS	Sn	12 20 39.1	-0.1
NBG	Las Nubes	2.12	87	eP	Pn	12 20 22.2	+2.5
TGBT	Tuxtla Gutierr	2.33	347	i P	Pn	12 20 23.2	+0.8
TGBT				eS	Sn	12 20 43.1	-6.9
TGIG		2.34	346	eP	Pn	12 20 23.2	+0.6
TGIG				i S	Sn	12 20 51.1	+0.7
TGIG		2.34	346		Pn	12 20 23.2	+0.6
TGIG					Sn	12 20 51.1	+0.7
MRL	Marmol	2.81	78	eP	Pn	12 20 31.2	+2.0
MRL				eS	Sn	12 21 04.8	+2.6
CEVE	Cerro Verde	2.89	103	eP	Pn	12 20 31.8	+1.4
CEVE				eS	Sn	12 21 05.9	+1.7
CEVE				IAML		12 21 15.7	
	comp=Z,4µm,0.4s						
CEVE	Cerro Verde	2.89	103	eP	Pn	12 20 31.8	+1.4
CEVE				eS	Sn	12 21 05.9	+1.7
CEVE				IAML		12 21 15.7	
	comp=Z,4µm,0.4s						
ESQI	Esquipulas	3.09	88		Pn	12 20 33.5	+0.6
JAYA	Jayaque - finc	3.10	105	eP	Pn	12 20 33.9	+0.8
JAYA				eS	Sn	12 21 08.8	-0.3
JAYA				IAML		12 21 11.4	
	comp=Z,1µm,0.5s						
JAYA	Jayaque - finc	3.10	105	eP	Pn	12 20 33.9	+0.8
JAYA				eS	Sn	12 21 08.8	-0.3
JAYA				IAML		12 21 11.4	
	comp=Z,1µm,0.5s						
CEDA	San Andres	3.12	102	eP	Pn	12 20 34.4	+1.2
CEDA				eS	Sn	12 21 09.6	+0.3
CEDA	San Andres	3.12	102	eP	Pn	12 20 34.4	+1.2
CEDA				eS	Sn	12 21 09.6	+0.3
TACO	Tacachico	3.12	99	eP	Pn	12 20 33.5	+0.3
TACO				eS	Sn	12 21 10.3	+0.9
TACO				IAML		12 21 18.3	
	comp=Z,337nm,0.6s						
TACO	Tacachico	3.12	99	eP	Pn	12 20 33.5	+0.3
TACO				eS	Sn	12 21 10.3	+0.9
TACO				IAML		12 21 18.3	
	comp=Z,337nm,0.6s						
LALI	Alcalda de L	3.27	107	eP	Pn	12 20 36.4	+1.1
LALI				eS	Sn	12 21 13.2	+0.2
LALI				IAML		12 21 15.7	
	comp=Z,530nm,0.3s						
LALI	Alcalda de L	3.27	107	eP	Pn	12 20 36.4	+1.1
LALI				eS	Sn	12 21 13.2	+0.2
LALI				IAML		12 21 15.7	
	comp=Z,530nm,0.3s						
UEES	Universidad Ev	3.28	103	eP	Pn	12 20 36.8	+1.3
UEES				eS	Sn	12 21 14.3	+0.8
UEES				IAML		12 21 19.8	
	comp=Z,1µm,0.5s						
UEES	Universidad Ev	3.28	103	eP	Pn	12 20 36.8	+1.3
UEES				eS	Sn	12 21 14.3	+0.8
UEES				IAML		12 21 19.8	
	comp=Z,1µm,0.5s						
SNET	Serv Nac Est T	3.30	104		Pn	12 20 35.5	-0.1
CMIG	Matias Romero	3.44	319	Pn	Pn	12 20 38.5	+1.0
	comp=Z,22nm,0.3s,baz=140,slow=12,SNR=225						
CMIG				Sn	Sn	12 21 17.4	+0.3
	comp=Z,120nm,0.3s,baz=299,slow=21,SNR=10						
CMIG				Lg	Lg	12 21 33.5	
	comp=Z,220nm,0.3s,baz=172,slow=19,SNR=8.9						
CMIG				LR	LR	12 21 38.8	
	comp=Z,178nm,19.1s,baz=140,slow=32						
CMIG	Matias Romero	3.44	319	eP	Pn	12 20 38.1	+0.7
CMIG				i S	Sn	12 21 16.2	-0.9
CMIG	Matias Romero	3.44	319		Pn	12 20 38.1	+0.7
CMIG					Sn	12 21 16.2	-0.9
PETF	Flores	3.52	46		Pn	12 20 39.7	+1.2
COEG	Centro de Oper	3.65	103	eP	Pn	12 20 41.5	+1.1
COEG				eS	Sn	12 21 23.4	+1.1
COEG				IAML		12 21 37.1	
	comp=Z,715nm,0.4s						
COEG	Centro de Oper	3.65	103	eP	Pn	12 20 41.5	+1.1
COEG				eS	Sn	12 21 23.4	+1.1
COEG				IAML		12 21 37.1	
	comp=Z,715nm,0.4s						
HUIG	Huatulco	3.68	291	i P	Pn	12 20 40.0	-0.8
HUIG				i S	Sn	12 21 16.5	-6.5
HUIG	Huatulco	3.68	291		Pn	12 20 40.0	-0.8
HUIG					Sn	12 21 16.5	-6.5
PQSS	Presa 15 de Se	3.95	102	eP	Pn	12 20 45.2	+0.7
COEB	Comit de Eme	4.01	104	eP	Pn	12 20 45.5	+0.1
COEB				eS	Sn	12 21 30.5	-0.6
COEB				IAML		12 21 39.7	
	comp=Z,437nm,0.4s						
COEB	Comit de Eme	4.01	104	eP	Pn	12 20 45.5	+0.1
COEB				eS	Sn	12 21 30.5	-0.6
COEB				IAML		12 21 39.7	
	comp=Z,437nm,0.4s						
PEIG	Puerto Escondi	4.70	289	i P	Pn	12 20 54.5	-0.3
PEIG				i S	Sn	12 21 40.8	-7.3
VHO	Vista Hermosa	4.79	303	eP	Pn	12 20 57.7	+1.5
VHO				i S	Sn	12 21 49.0	-1.6
TGUH	Tegucigalpa,Un	5.11	94	Pn	Pn	12 21 00.9	+0.4
YOIG	Yosondua	5.37	297	eP	Pn	12 21 00.9	-3.3
CRIN	San Cristobal	5.62	108		Pn	12 21 08.4	+1.1
TOIG	Toxpalan	5.64	310	eP	Pn	12 21 09.3	+1.6
TLIG	Tlapa	6.56	299	Pn	Pn	12 21 23.0	+2.7
TEIG	Tepich	7.00	35	Pn	Pn	12 21 26.3	+0.2
TEIG	Tepich	7.00	35	i P	Pn	12 21 26.0	-0.1
TEIG				i S	Sn	12 22 40.4	-3.8
ACON	Acoyapa	7.59	108		Pn	12 21 34.1	-0.2
JTS	Las Juntas de	8.50	119		Pn	12 21 49.1	+2.3
MOIG	Morelia	9.75	303	Pn	Pn	12 22 08.1	+4.0
ZAIG	Zacatecas	12.57	312	Pn	Pn	12 22 45.2	+2.5
833A	Chaparral WMA,	15.16	336	P	Pn	12 23 18.0	+1.5
	baz=153,SNR=10.0						
HKT	Hockley	15.68	349	Pn	Pn	12 23 21.9	-1.1
342A	Flagon Creek P	16.80	1	P	P	12 23 37.9	-0.3
342A				IAmb	IAmb	12 23 39.0	
	comp=Z,32nm,0.9s						
435B	Jarrell	16.86	345	P	P	12 23 39.4	+0.5
	baz=162						
435B	Jarrell	16.86	345	P	P	12 23 38.8	-0.2
344A	Westbrook Farm	16.96	5	P	Pn	12 23 39.2	+0.2
344A				IAmb	IAmb	12 23 43.1	
	comp=Z,44nm,0.9s						
346A	Big Creek Wild	17.05	9	P	P	12 23 41.6	+0.7
346A				IAmb	IAmb	12 23 45.8	
	comp=Z,44nm,0.8s						
JCT	Junction City	17.26	338	P	P	12 23 44.3	+1.0
	baz=155,SNR=7.7						
JCT	Junction City	17.26	338	P	P	12 23 44.1	+0.7
NATX	Nacogdoches	17.30	354	P	P	12 23 44.0	+0.3
	baz=172						
NATX	Nacogdoches	17.30	354	P	P	12 23 44.0	+0.3
BRAL	Brewton	17.34	16	P	P	12 23 45.4	+1.2
	baz=197						
HPIG		17.42	317	P	P	12 23 47.3	+1.9
DBBC	Dabeiba	17.66	113	eP	Pn	12 23 50.0	+2.1
VBMS	Vicksburg	17.74	6	P	Pn	12 23 49.4	+0.8
	baz=186						
VBMS	Vicksburg	17.74	6	P	Pn	12 23 49.0	+0.5
WHTX	Lake Whitney,	17.99	346	P	Pn	12 23 51.9	+0.3
	baz=164						
WHTX	Lake Whitney,	17.99	346	P	P	12 23 51.6	+0.3
WHTX				IAmb	IAmb	12 24 32.5	
	comp=Z,35nm,1.2s						
TXAR	Lajitas Array	18.00	327	P	Pn	12 23 53.6	+1.6
	comp=Z,0.8nm,0.3s,baz=154,slow=8.6,SNR=34						
TXAR				ScP	ScP	12 32 01.3	+8.2
	comp=Z,0.0nm,0.3s,baz=134,slow=5.4,SNR=6.0						
TXAR	Lajitas Array	18.00	327	P	Pn	12 23 54.3	+2.3
TX31	Lajitas Ar. Si	18.00	327	P	Pn	12 23 54.3	+2.3
TX32	Lajitas Array	18.00	327	P	Pn	12 23 54.3	+2.3
143A	Socs Landing,	18.16	3	P	Pn	12 23 53.2	-0.4
143A				IAmb	IAmb	12 23 56.9	
	comp=Z,34nm,0.9s						
352A	Blakely	18.28	21	P	Pn	12 23 55.5	+0.2
352A				IAmb	IAmb	12 23 57.0	
	comp=Z,40nm,0.8s						
250A	Grady	18.32	17	P	P	12 23 54.2	-0.7
146A	Union	18.34	9	P	P	12 23 54.5	-0.6
146A				IAmb	IAmb	12 23 58.6	
	comp=Z,50nm,0.9s						
PLMC	San Jos del P	18.62	119	eP	P	12 23 59.6	+1.1
Z41A	Richland Creek	18.68	359	P	Pn	12 24 00.9	+1.0
	baz=178						
Z38A	Mt. Pleasant	18.81	354	P	Pn	12 24 02.1	+0.6
Z38A				IAmb	IAmb	12 24 06.6	
	comp=Z,36nm,1.2s						
Z47A	Carrollton	19.06	12	P	P	12 24 02.9	-0.1
Z47A				IAmb	IAmb	12 24 05.8	
	comp=Z,30nm,0.7s						
YOTC	Yotoco, Valle	19.07	122	eP	P	12 24 05.1	+1.7
WLAR	White Oak Lake	19.11	359		Pn	12 24 05.0	-0.1
WLAR				IAmb	IAmb	12 24 18.3	
	comp=Z,55nm,1.3s						
LRAL	Lakeview Retre	19.13	14	P	Pn	12 24 04.6	-0.7
	baz=196,SNR=17						
LRAL	Lakeview Retre	19.13	14	P	P	12 24 03.9	+0.1
LRAL				IAmb	IAmb	12 24 05.3	
	comp=Z,23nm,0.8s						
ABTX	Abilene, Hawle	19.18	341	P	Pn	12 24 05.6	-0.3
	baz=158,SNR=7.5						
ABTX	Abilene, Hawle	19.18	341	P	Pn	12 24 05.9	0.0
ABTX				IAmb	IAmb	12 24 07.0	
	comp=Z,14nm,0.6s						
Z35A	Perchaven, San	19.24	348	P	Pn	12 24 07.2	+0.6
Z35A				IAmb	IAmb	12 24 11.5	
	comp=Z,27nm,0.9s						
GUY2C	Guyana, Caldas	19.24	117	eP	P	12 24 07.8	+2.1
CCAR	Cane Creek	19.35	2	P	Pn	12 24 08.0	+0.1
CCAR				IAmb	IAmb	12 24 10.1	
	comp=Z,36nm,0.9s						
152A	Waverly Hall	19.44	20	P	P	12 24 07.6	+0.4
152A				IAmb	IAmb	12 24 09.0	
	comp=Z,20nm,0.7s						
NORC	Norcasia	19.51	115	eP	P	12 24 07.6	-0.6
BBAC	Balboa, Cauca	19.53	128	eP	P	12 24 10.6	+2.0
ANIL	Santa Ana	19.58	119	eP	P	12 24 11.8	+2.5
TOLC	Tolima	19.60	118	eP	Pn	12 24 12.4	+1.0
POPC	Popayan, Colom	19.65	126	eP	P	12 24 11.6	+1.8
OTAV	Otavalo	19.86	134	P	P	12 24 13.3	+0.9
Z51A	Franklin	19.89	18	P	P	12 24 12.3	+0.1
SOTA	Rioblanco	19.95	127	eP	Pn	12 24 17.0	+1.3
GCUF	Volcan Galeras	19.98	130	eP	P	12 24 15.0	+1.3
MIAR	Mount Ida	19.99	357	P	P	12 24 12.7	-0.4
	baz=176,SNR=19						
MIAR	Mount Ida	19.99	357	P	P	12 24 12.1	-1.0
MIAR				IAmb	IAmb	12 24 18.6	
	comp=Z,24nm,0.9s						
X43A	Marvell	19.99	4	P	Pn	12 24 17.3	+1.8
	baz=184,SNR=8.8						
PCON	Cinco Dias	20.00	126	eP	P	12 24 15.9	+1.9
ORTC	Ortega, Tolima	20.02	120	eP	P	12 24 15.0	+1.3
MARP	Paez Belalcaza	20.04	124	eP	P	12 24 16.6	+2.4
Y49A	Blount Mountai	20.06	15	P	P	12 24 14.0	0.0
Y49A				IAmb	IAmb	12 24 15.0	
	comp=Z,20nm,0.8s						
OXF	Oxford	20.13	8	P	P	12 24 15.1	+0.4
	baz=188,SNR=9.2						
OXF	Oxford	20.13	8	P	Pn	12 24 15.8	-1.2
SPBC	San Pablo de B	20.17	114	eP	P	12 24 16.3	+0.9
X37A	Clayton	20.17	353	P	P	12 24 15.3	+0.1
X37A				IAmb	IAmb	12 24 22.2	
	comp=Z,21nm,0.9s						
ROSC	El Rosal	20.33	116	P	P	12 24 20.2	+2.7
	comp=Z,1.5nm,0.3s,baz=88,slow=3.6,SNR=12						
ROSC				LR	LR	12 32 04.9	
	comp=Z,55nm,18.9s,baz=274,slow=37						
ROSC	El Rosal	20.33	116	P	P	12 24 20.0	+2.5
ROSC				IAmb	IAmb	12 24 24.7	
	comp=Z,43nm,1.1s						
ROSC	El Rosal	20.33	116	eP	Pn	12 24 20.8	+0.7
X48A	Hartselle	20.48	13	P	P	12 24 18.1	-0.4
X48A				IAmb	IAmb	12 24 19.2	
	comp=Z,20nm,0.7s						
CLNB	Carlsbad	20.50	332	P	Pn	12 24 21.1	-0.5
BETC	Betania	20.55	123	eP	P	12 24 18.7	-0.7
GOGA	Godfrey	20.55	22	P	P	12 24 18.9	-0.3
	baz=205,SNR=9.1						
GOGA	Godfrey	20.55	22	P	P	12 24 18.7	-0.6
GOGA				IAmb	IAmb	12 24 21.0	
	comp=Z,15nm,0.8s						
BARC	Barichara	20.56	110	eP	P	12 24 20.2	+0.4
W41B	Gary Mavity, V	20.59	1	P	Pn	12 24 21.1	-1.4
	baz=180,SNR=6.8						
W39A	Magazine	20.64	357	P	P	12 24 20.4	+0.2
	baz=176						
W39A	Magazine	20.64	357	P	P	12 24 21.4	+1.2
GDL2	Guadalupe Moun	20.67	330	P	Pn	12 24 23.5	-0.2
WHAR	Wooly Hollow	20.71	1	P	P	12 24 20.9	0.0
PAMC	Pamplona, Colo	20.72	108	eP	P	12 24 19.0	-2.8
Y52A	Lilburn	20.75	20	P	P	12 24 21.9	+0.4
Y52A				IAmb	IAmb	12 24 36.4	
	comp=Z,17nm,0.7s						
MNTX	Cornudas Mount	20.77	328	P	P	12 24 23.4	+1.7
	baz=142,SNR=27						
MNTX	Cornudas Mount	20.77	328	P	P	12 24 23.7	+2.0
MNTX				IAmb	IAmb	12 24 25.0	
	comp=Z,17nm,0.9s						
PLAL	Pickwick Lake	20.79	10	P	P	12 24 21.0	-0.8
W45A	Hickory Valley	20.79	8	P	P	12 24 22.5	+0.7
FPAL	Fort Paine	20.91	16	P	P	12 24 22.4	-0.8
FPAL				IAmb	IAmb	12 24 23.8	
	comp=Z,34nm,0.8s						
WMOK	Wichita Mounta	20.93	345	P	P	12 24 23.8	+0.5
	baz=162						
WMOK	Wichita Mounta	20.93	345	P	P	12 24 23.6	+0.3
RUSC	La Rusia	20.94	112	eP	P	12 24 25.0	+0.8
CHIC	Chingaza	20.95	116	eP	P	12 24 25.9	+1.8
FLOC	Florencia	21.04	126	eP	P	12 24 26.6	+1.9
FNO	Franklin	21.13	349	P	P	12 24 25.7	+0.2
OKCFA	Oklahoma City	21.30	349	P	P	12 24 26.5	-0.8
OKCFA				IAmb	IAmb	12 24 32.8	
	comp=Z,26nm,0.9s						
FCAR	Ozark Folk Cen	21.31	1	P	P	12 24 27.2	-0.1
OK025	Westminster Rd	21.44	349	P	P	12 24 27.7	-1.0
SWET	Sewanee	21.47	15	P	P	12 24 27.9	-1.2
SWET				IAmb	IAmb	12 24 29.5	
	comp=Z,28nm,0.8s						
MSTX	Muleshoe	21.49	336	P	P	12 24 30.5	+1.0
	baz=151,SNR=11						
MSTX	Muleshoe	21.49	336	P	P	12 24 30.3	+0.8
LCAR	Lake Charles	21.52	3	P	P	12 24 28.5	-1.1
LCAR				IAmb	IAmb	12 24 36.0	
	comp=Z,13nm,0.7s						
TUL1	Leonard	21.52	353	P	P	12 24 28.6	-1.0
	baz=171,SNR=10						
TUL1	Leonard	21.52	353	P	P	12 24 28.3	-1.4
TUL1				IAmb	IAmb	12 24 31.0	
	comp=Z,17nm,0.8s						
BCOK	Bluff Creek, N	21.56	349	P	P	12 24 28.7	-1.3
W50A	Signal Mountai	21.62	16	P	P	12 24 29.6	-1.1
W50A				IAmb	IAmb	12 24 31.5	
	comp=Z,14nm,0.8s						
OK029	Liberty Lake	21.67	349	P	P	12 24 29.3	-1.9
OK030	Cody Creek RV	21.68	351	P	P	12 24 30.0	-1.3
OK031	S. Brethren Rd	21.71	351	P	P	12 24 30.0	-1.7
OK031				IAmb	IAmb	12 24 30.7	
	comp=Z,22nm,0.6s						
HHAR	Hobbs	21.73	357	P	P	12 24 31.8	-0.2
V48A	Smith Brothers	21.77	13	P	P	12 24 31.3	-0.9
V48A				IAmb	IAmb	12 24 33.6	
	comp=Z,27nm,1.2s						
U40A	Yellville	21.77	359	P	P	12 24 32.3	0.0
	baz=179,SNR=9.1						
U40A	Yellville	21.77	359	P	P	12 24 31.8	-0.5
QUOK	Quay	21.91	351	P	P	12 24 31.5	-2.2
AMTX	Amarillo	21.91	339	P	P	12 24 34.3	+0.4
	baz=155						
AMTX	Amarillo	21.91	339	P	P	12 24 33.6	-0.3
U38A	Gravette	21.92	356	P	P	12 24 33.1	-0.8
W52A	Murphy	21.92	19	P	P	12 24 32.7	-1.3
WVT	Waverly	21.95	10	P	P	12 24 32.5	-1.7
	baz=192						
WVT	Waverly	21.95	10	P	P	12 24 32.6	-1.6
CPCT	Cooper Cave	22.07	18	P	P	12 24 34.1	-1.5
CPCT				IAmb	IAmb	12 24 36.2	
	comp=Z,18nm,0.7s						
SDV	Santo Domingo	22.14	102	P	P	12 24 33.4	-3.4
	comp=Z,19nm,0.6s,baz=294,slow=6.2,SNR=22						
SDV				LR	LR	12 33 12.6	
	comp=Z,66nm,21.2s,baz=279,slow=38						
SDV	Santo Domingo	22.14	102	P	P	12 24 36.3	-0.5
SDV				IAmb	IAmb	12 24 38.9	
	comp=Z,20nm,0.6s						
SDV	Santo Domingo	22.14	102	eP	P	12 24 38.0	+1.3
MACC	Macarena, Meta	22.16	122	eP	P	12 24 36.4	-0.2
CLTN	Cedars of Leba	22.21	13	P	P	12 24 35.9	-1.2
CLTN				IAmb	IAmb	12 24 37.9	
	comp=Z,20nm,0.9s						
PBMO	Poplar Bluff	22.27	4	P	P	12 24 36.2	-1.5
V51A	Loudon	22.45	18	P	P	12 24 38.8	-0.8
V51A				IAmb	IAmb	12 25 08.4	
	comp=Z,14nm,1.0s						
CROK	Carrier	22.45	348	P	P	12 24 37.6	-2.1
T42A	Van Buren	22.48	3	P	P	12 24 38.7	-1.2
TKL	Tuckaleechee C	22.49	19	P	P	12 24 38.7	-1.4

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      comp=Z,12nm,0.8s,baz=188,slow=13,SNR=12
TKL                                LR     LR      12 34 33.6
      comp=Z,50nm,18.6s,baz=231,slow=40
TKL   Tuckaleechee C    22.49  19  P      P       12 24 39.0 -1.0
TKL                                IAmb   IAmb    12 24 41.1
      comp=Z,27nm,1.1s
PTGC  Puerto Gaitan,    22.55 115 eP      P       12 24 40.6 -0.3
MGMO  Mountain Grove    22.57   1  P      P       12 24 39.7 -1.2
PTLC  Puerto Leguiza    22.59 128 eP      P       12 24 42.6 +1.3
T35A  Sooner Cattle     22.61 352  P      P       12 24 38.6 -2.7
T45A  Paducah           22.70   8  P      P       12 24 41.0 -1.2
121A  Cookes Peak, D    22.71 325  P      P       12 24 44.7 +2.1
      baz=138,SNR=12
121A  Cookes Peak, D    22.71 325  P      P       12 24 44.4 +1.8
121A                               IAmb   IAmb    12 25 02.7
      comp=Z,28nm,0.9s
V52A  Sevierville       22.72  19  P      P       12 24 40.7 -1.8
V52A                               IAmb   IAmb    12 24 43.0
      comp=Z,33nm,0.9s
U49A  Red Boiling Sp    22.74  14  P      P       12 24 40.6 -2.1
319A  Douglas           22.76 320  P      P       12 24 43.5 +0.5
319A                               IAmb   IAmb    12 25 11.4
      comp=Z,17nm,0.9s
V53A  Saluda            22.82  21  P      P       12 24 42.9 -0.6
V53A                               IAmb   IAmb    12 25 10.4
      comp=Z,12nm,0.8s
KAN13 South Haven SW    22.86 350  P      P       12 24 41.5 -2.4
KAN13                              IAmb   IAmb    12 24 42.7
      comp=Z,15nm,0.7s
KMSC  Kings Mountain    22.90  24  P      P       12 24 43.5 -0.8
      baz=208,SNR=6.3
KMSC  Kings Mountain    22.90  24  P      P       12 24 42.9 -1.4
KMSC                               IAmb   IAmb    12 24 44.3
      comp=Z,18nm,0.8s
T47A  Sharon Grove      22.92  11  P      P       12 24 42.5 -1.9
KAN01 Argonia South     23.04 349  P      P       12 24 43.9 -1.8
KAN01                              IAmb   IAmb    12 24 45.0
      comp=Z,21nm,0.8s
S39A  Bolivar           23.11 358  P      P       12 24 43.8 -2.6
S39A                               IAmb   IAmb    12 24 46.8
      comp=Z,29nm,1.2s
W56A  Indian Trail      23.20  26  P      P       12 24 46.1 -1.1
      baz=210
S44A  Carbondale        23.29   7  P      P       12 24 46.9 -1.2
SIUC  Southern Illin    23.31   7  P      P       12 24 46.5 -1.8
BNM   Barren Site       23.36 329  P      P       12 24 51.0 +2.0
TZTN  Tazewell          23.38  18  P      P       12 24 48.2 -0.7
      baz=202,SNR=13
TZTN  Tazewell          23.38  18  P      P       12 24 46.9 -2.1
Y22D  IRIS PASSCAL I    23.44 329  P      P       12 24 53.5 +3.7
      baz=142,SNR=5.1
Y22D  IRIS PASSCAL I    23.44 329  P      P       12 24 52.0 +2.2
T50A  Nancy             23.46  16  P      P       12 24 48.1 -1.6
CCM   Cathedral Cave    23.49   3  P      P       12 24 47.5 -2.5
      baz=183
CCM   Cathedral Cave    23.49   3  P      P       12 24 47.0 -3.0
CCM                                IAmb   IAmb    12 24 50.6
      comp=Z,11nm,0.8s
V55A  Taylorsville      23.56  23  P      P       12 24 49.2 -1.4
V55A                               IAmb   IAmb    12 24 50.8
      comp=Z,16nm,0.8s
R40A  Maddies Statio    23.70   1  P      P       12 24 49.1 -2.8
USIN  University of     23.77  10  P      P       12 24 50.7 -1.8
V56A  Mocksville        23.81  25  P      P       12 24 51.6 -1.3
      baz=210,SNR=6.0
ANMO  Albuquerque       23.92 331  P      P       12 24 55.9 +1.8
      comp=Z,9.9nm,0.7s,baz=150,slow=11,SNR=37
ANMO  Albuquerque       23.92 331  P      P       12 24 56.4 +2.3
      baz=144
ANMO  Albuquerque       23.92 331  P      P       12 24 55.3 +1.2
U54A  Nelsons Funny     23.93  22  P      P       12 24 52.5 -1.5
      baz=206
SLM   Saint Louis       24.13   4  P      P       12 24 54.1 -1.5
SLM                                IAmb   IAmb    12 24 56.4
      comp=Z,24nm,0.8s
V57A  Coltrane Farms    24.18  26  P      P       12 24 54.5 -1.7
      baz=211,SNR=7.7
WCI   Wyandotte Cave    24.28  12  P      P       12 24 55.5 -1.5
      baz=194
WCI   Wyandotte Cave    24.28  12  P      P       12 24 56.2 -0.8
U56A  King              24.32  24  P      P       12 24 56.7 -0.8
      baz=209,SNR=5.6
U56A  King              24.32  24  P      P       12 24 55.9 -1.6
U56A                               IAmb   IAmb    12 24 57.8
      comp=Z,22nm,0.9s
TUC   Tucson            24.33 320  P      P       12 25 00.9 +3.2
      baz=132
TUC   Tucson            24.33 320  P      P       12 25 00.6 +2.9
S51A  Beattyville       24.38  17  P      P       12 24 56.3 -1.7
S51A                               IAmb   IAmb    12 24 58.7
      comp=Z,22nm,0.8s
R32A  Long Quarter,     24.45 348  P      P       12 24 57.3 -1.3
R32A                               IAmb   IAmb    12 25 00.1
      comp=Z,19nm,0.7s
Q44A  Meyer Farm, Va    24.51   7  P      P       12 24 58.0 -1.1
Q44A                               IAmb   IAmb    12 25 00.5
      comp=Z,25nm,0.8s
R49A  Shelbyville       24.58  14  P      P       12 24 57.7 -2.1
R49A                               IAmb   IAmb    12 25 00.0
      comp=Z,18nm,0.8s
KSU1  Kansas State U    24.77 352  P      P       12 25 00.6 -1.0
      baz=170
KSU1  Kansas State U    24.77 352  P      P       12 24 59.8 -1.7
R50A  Paris             24.78  16  P      P       12 25 00.4 -1.2
R50A                               IAmb   IAmb    12 25 02.4
      comp=Z,19nm,0.8s
U57A  Blanch            24.83  26  P      P       12 25 01.0 -1.1
      baz=211
T25A  Trinidad          24.91 337  P      P       12 25 04.9 +1.8
      baz=151,SNR=24
P40A  Paris             24.94   1  P      P       12 25 00.6 -2.5
CBKS  Cedar Bluff       25.05 347  P      P       12 25 05.0 +0.9
      baz=163
CBKS  Cedar Bluff       25.05 347  P      P       12 25 02.7 -1.4
CBKS                               IAmb   IAmb    12 25 06.2
      comp=Z,17nm,0.8s
P38A  Dawn              25.05 358  P      P       12 25 02.1 -2.0
T56A  Rocky Mt          25.05  24  P      P       12 25 02.6 -1.5
      baz=209
BLO   Bloomington       25.14  11  P      P       12 25 02.9 -2.0
BLO                                IAmb   IAmb    12 25 06.1
      comp=Z,21nm,0.8s
S54A  Dingess, Beckl    25.26  21  P      P       12 25 04.4 -1.6
      baz=206
T57A  Hurt              25.34  25  P      P       12 25 05.8 -1.0
      baz=211
X18A  Snowflake         25.40 325  P      P       12 25 09.2 +1.7
P46A  Rosedale          25.46  10  P      P       12 25 06.5 -1.3
SJG   San Juan          25.56  78  LR     LR      12 34 10.8
      comp=Z,46nm,18.4s,baz=270,slow=35
P48A  Milroy            25.64  13  P      P       12 25 06.6 -2.8
P48A                               IAmb   IAmb    12 25 10.1
      comp=Z,19nm,0.7s
ATAH  Atahualpa         25.66 146  P      P       12 25 09.9 -0.3
      comp=Z,11nm,0.7s,baz=325,slow=11,SNR=4.8
Q51A  Peebles           25.74  17  P      P       12 25 09.3 -1.1
SDCO  Great Sand Dun    25.86 336  P      P       12 25 13.7 +1.8
      baz=150,SNR=10
SDCO  Great Sand Dun    25.86 336  P      P       12 25 13.1 +1.3
KSCO  Kaye Shedlock’    25.99 342  P      P       12 25 13.5 +0.7
      baz=157
KSCO  Kaye Shedlock’    25.99 342  P      P       12 25 13.1 +0.3
KSCO                               IAmb   IAmb    12 25 13.9
      comp=Z,12nm,0.8s
Q52A  Bidwell           26.00  18  P      P       12 25 11.3 -1.3
Q52A                               IAmb   IAmb    12 25 15.4
      comp=Z,27nm,1.1s
HDIL  Hopedale          26.12   6  P      P       12 25 11.6 -2.2
      baz=187
Q53A  Leroy             26.14  20  P      P       12 25 12.8 -1.2
      baz=204
X16A  Lo Mia Camp, P    26.18 323  P      P       12 25 16.4 +1.8
N38A  Joes South For    26.21 359  P      P       12 25 12.5 -2.1
N38A                               IAmb   IAmb    12 25 14.1
      comp=Z,24nm,1.1s
SFIN  Lafayette         26.22   9  P      P       12 25 13.4 -1.3
      baz=192,SNR=5.0
SFIN  Lafayette         26.22   9  P      P       12 25 13.7 -1.0
SFIN                               IAmb   IAmb    12 25 14.2
      comp=Z,14nm,0.7s
P51A  Williamsport      26.25  17  P      P       12 25 14.4 -0.5
S22A  4UR Ranch, Cre    26.41 334  P      P       12 25 19.0 +2.2
      baz=147,SNR=20
P52A  Corning           26.66  18  P      P       12 25 17.0 -1.6
      baz=202
MVCO  Mesa Verde        26.72 331  P      P       12 25 22.4 +2.9
      baz=143,SNR=29
MVCO  Mesa Verde        26.72 331  P      P       12 25 21.7 +2.2
R58B  Mineral           26.74  26  P      P       12 25 18.0 -1.4
      baz=213
R57A  Stanardsville     26.75  25  P      P       12 25 18.0 -1.4
      baz=211
WUAZ  Wupatki           26.92 324  P      P       12 25 23.3 +2.1
      baz=136
WUAZ  Wupatki           26.92 324  P      P       12 25 22.0 +0.8
Q56A  Snyder Ridge,     27.13  23  P      P       12 25 22.1 -0.8
      baz=209
R59A  King George, V    27.27  27  P      P       12 25 23.9 -0.2
      baz=214
PV01  Paradox Valley    27.50 332  P      P       12 25 27.9 +1.4
PV01                               IAmb   IAmb    12 25 30.9
      comp=Z,31nm,1.8s
PCRV  Puerto La Cruz    27.57  96  P      P       12 25 23.7 -3.5
      comp=Z,2.9nm,0.5s,baz=14,slow=13,SNR=1.4
PV13  Radium Mtn., P    27.64 332  P      P       12 25 29.4 +1.7
PV13                               IAmb   IAmb    12 25 31.7
      comp=Z,26nm,1.2s
PV02  Paradox Valley    27.64 332  P      P       12 25 28.7 +1.0
PV02                               IAmb   IAmb    12 25 32.0
      comp=Z,20nm,1.2s
ISCO  Idaho Springs     27.70 338  P      P       12 25 31.7 +3.4
      baz=151,SNR=5.0
ISCO  Idaho Springs     27.70 338  P      P       12 25 29.5 +1.2
PV18  Skein Mesa, Pa    27.75 332  P      P       12 25 30.1 +1.5
PV18                               IAmb   IAmb    12 25 32.5
      comp=Z,27nm,1.2s
P57A  Homestead Farm    27.97  24  P      P       12 25 29.7 -0.7
      baz=211
N54A  Moraine State     28.54  20  P      P       12 25 34.1 -1.4
      baz=206
P59A  Jarrettsville     28.74  26  P      P       12 25 36.3 -0.8
      baz=214
KNB   Kanab             28.81 325  P      P       12 25 39.8 +1.7
KNB                                IAmb   IAmb    12 25 51.4
      comp=Z,18nm,1.9s
O20A  White River Ci    29.01 335  P      P       12 25 41.9 +2.0
      baz=147
O20A  White River Ci    29.01 335  P      P       12 25 41.0 +1.1
SRU   San Rafael Swe    29.20 330  P      P       12 25 43.8 +2.3
MTPU  Mount Pierson     29.21 327  P      P       12 25 43.1 +1.2
ECSD  EROS Data Cent    29.35 354  P      P       12 25 40.6 -2.0
ECSD                               IAmb   IAmb    12 26 45.2
      comp=Z,20nm,1.9s
SZCU  Shurtz Canyon     29.37 325  P      P       12 25 43.9 +0.8
CCUT  Cedar City        29.49 325  P      P       12 25 46.1 +1.9
MSU   Marysvale         29.56 328  P      P       12 25 46.4 +1.6
CZSB  Cruzeiro do Su    29.57 137 eP      P       12 25 45.8 +1.0
MVU   Marysvale         29.57 328  P      P       12 25 47.5 +2.6
MVU                                IAmb   IAmb    12 25 49.0
      comp=Z,15nm,0.9s
P17A  Butcher Ranch,    29.59 331  P      P       12 25 46.5 +1.6
P17A                               IAmb   IAmb    12 25 49.0
      comp=Z,20nm,1.6s
TMUT  Trail Mountain    29.67 330  P      P       12 25 47.4 +1.5
SHPR  Sheep Range       29.82 321  P      P       12 25 49.4 +2.4
M57A  Sunshine Farm,    29.91  24  P      P       12 25 45.7 -1.8
      baz=211
M58A  Price’s Panora    30.20  24  P      P       12 25 48.6 -1.6
      baz=212
PSUT  Pine Spring       30.47 326  P      P       12 25 54.8 +2.0
K22A  Casper            30.54 339  P      P       12 25 54.5 +1.2
      baz=152
SPMN  Marine on St.     30.63 360  P      P       12 25 53.5 -0.4
      baz=179
JLU   Jordanelle        30.81 331  P      P       12 25 57.8 +2.0
MPMC  Manual Prospec    30.99 318  P      P       12 25 59.5 +2.1
      baz=127
K56A  Middlesex         31.01  22  P      P       12 25 55.6 -1.7
      baz=209
L58A  Harry Jones Me    31.01  25  P      P       12 25 56.0 -1.3
      baz=212
BINY  Binghamton        31.09  24  P      P       12 25 56.5 -1.5
      baz=212
DUG   Dugway, Tooele    31.15 329  P      P       12 26 01.3 +2.6
      baz=139
TCUT  Toone Canyon      31.20 332  P      P       12 26 00.4 +1.1
TCUT                               IAmb   IAmb    12 26 02.6
      comp=Z,19nm,1.2s
R11A  Troy Canyon, C    31.30 324  P      P       12 26 02.7 +2.5
      baz=133
L59A  Walton            31.46  25  P      P       12 26 00.2 -1.1
      baz=214
GRAC  Grapevine Rang    31.49 320  P      P       12 26 04.7 +3.1
      baz=128
K58A  Earlville         31.70  24  P      P       12 26 01.1 -2.2
      baz=212
BW06  Boulder Array     31.76 336  P      P       12 26 05.2 +1.0
      baz=147
PDAR  Pinedale Array    31.76 336  P      P       12 26 05.0 +0.8
      comp=Z,1.4nm,0.9s,baz=142,slow=7.5,SNR=9.1
PDAR                               PcP    PcP     12 28 53.5 -0.6
      comp=Z,0.3nm,0.5s,baz=157,slow=4.9,SNR=2.1
PDAR                               ScP    ScP     12 32 37.9 +6.4
      comp=Z,1.0nm,1.1s,baz=120,slow=6.4,SNR=4.3
PDAR                               LR     LR      12 41 10.6
      comp=Z,34nm,18.2s,baz=140,slow=41
PDAR  Pinedale Array    31.76 336  P      P       12 26 04.7 +0.6
TPH   Tonopah           32.09 322  P      P       12 26 08.1 +1.1
H53A  Bobcaygeon        32.24  19  P      P       12 26 06.2 -1.9
      baz=206
HVU   Hansel Valley     32.35 331  P      P       12 26 11.4 +2.2
HVU                                IAmb   IAmb    12 26 12.5
      comp=Z,22nm,1.6s
AHID  Auburn Hatcher    32.39 334  P      P       12 26 10.4 +0.8
AHID                               IAmb   IAmb    12 26 11.4
      comp=Z,6.9nm,0.9s
ECR   Eagle Creek       32.74 334  P      P       12 26 13.8 +1.1
REDW  Red Top Meadow    32.78 335  P      P       12 26 13.8 +0.7
ELK   Elko              32.80 327  P      P       12 26 14.9 +1.6
ELK                                IAmb   IAmb    12 26 17.3
      comp=Z,5.5nm,0.7s
SNOW  Snow King Moun    32.82 335  P      P       12 26 14.8 +1.4
NV11  Mina Array Sit    32.88 321  P      P       12 26 15.1 +1.2
NV11                               IAmb   IAmb    12 26 20.2
      comp=Z,12nm,1.4s
LOHW  Long Hollow       32.89 335  P      P       12 26 15.2 +1.2
LOHW                               IAmb   IAmb    12 26 16.2
      comp=Z,9.0nm,0.9s
NVAR  Mina Array Bea    32.97 321  P      P       12 26 17.2 +2.5
      comp=Z,6.3nm,0.7s,baz=129,slow=8.5,SNR=45
NVAR                               PcP    PcP     12 28 58.3 +0.8
      comp=Z,0.9nm,0.8s,baz=149,slow=3.7,SNR=4.3
NVAR                               ScP    ScP     12 32 43.1 +7.4
      comp=Z,0.2nm,0.5s,baz=133,slow=4.0,SNR=2.9
NVAR                               LR     LR      12 39 49.5
      comp=Z,71nm,19.8s,baz=74,slow=36
NVAR  Mina Array Bea    32.97 321  P      P       12 26 16.8 +2.0
LHV   Little Huntoon    32.98 321  P      P       12 26 16.9 +2.4
LHV                                IAmb   IAmb    12 26 20.3
      comp=Z,6.3nm,0.6s
MOOW  Moose Ponds       33.06 335  P      P       12 26 15.5  0.0
H17A  Grant Village     33.53 336  P      P       12 26 18.2 -1.4
H17A                               IAmb   IAmb    12 26 24.9
      comp=Z,7.1nm,1.1s
LONY  Lake Ozonia       33.68  23  P      P       12 26 18.7 -1.9
      baz=212
YMR   Madison River     33.91 336  P      P       12 26 24.6 +1.7
YMR                                IAmb   IAmb    12 26 25.7
      comp=Z,8.2nm,0.9s
YHH   Holmes Hill       33.97 336  P      P       12 26 24.0 +0.6
YHH                                IAmb   IAmb    12 26 25.9
      comp=Z,7.2nm,1.5s
HLID  Hailey            34.50 331  P      P       12 26 30.1 +2.2
      baz=140,SNR=9.8
HLID  Hailey            34.50 331  P      P       12 26 29.5 +1.6
HLID                               IAmb   IAmb    12 26 33.9
      comp=Z,6.8nm,1.1s
BCYI  Bear Canyon       34.63 333  P      P       12 26 30.4 +1.3
MCMT  McKenzie Canyo    34.81 334  P      P       12 26 31.8 +1.2
BOZ   Bozeman (W)       34.94 336  P      P       12 26 33.3 +1.5
      baz=146
MFID  Camas Ranch       35.06 330  P      P       12 26 34.5 +1.8
BEKR  Beckworth         35.11 321  P      P       12 26 35.2 +1.9
BEKR                               IAmb   IAmb    12 26 40.0
      comp=Z,5.9nm,1.0s
DLMT  Dillon            35.13 335  P      P       12 26 34.0 +0.6
DLMT                               IAmb   IAmb    12 26 36.9
      comp=Z,12nm,1.3s
E56A  St. Veronique     35.16  21  P      P       12 26 31.3 -2.0
      baz=210
DGMT  Dagmar            35.22 347  P      P       12 26 33.4 -0.5
      baz=160
D55A  Sainte-Anne-du    35.42  20  P      P       12 26 33.3 -2.2
      baz=209
ETMB  Extrema           35.56 131 eP      P       12 26 36.6 -0.5
PTGA  Pitinga           35.60 112  P      P       12 26 34.7 -2.8
      comp=Z,19nm,0.6s,baz=301,slow=9.9,SNR=38
PTGA  Pitinga           35.60 112  P      P       12 26 36.6 -0.9
PTGA  Pitinga           35.60 112 eP      P       12 26 36.6 -0.9
ULM   Lac du Bonnet     35.76 356  P      P       12 26 35.1 -3.3
      comp=Z,1.4nm,0.6s,baz=136,slow=7.8,SNR=4.2
ULM                                LR     LR      12 43 39.0
      comp=Z,50nm,18.1s,baz=151,slow=40
WVOR  Wild Horse Val    35.80 326  P      P       12 26 40.9 +1.8
WVOR                               IAmb   IAmb    12 26 43.3
      comp=Z,11nm,0.9s
HRY   Holter Researc    35.95 337  P      P       12 26 40.8 +0.5
MACA  Manacapuru-AM     36.11 117 eP      P       12 26 41.0 -0.8
EGMT  Eagleton          36.35 340  P      P       12 26 44.8 +1.1
      baz=151
MOD   Modoc Plateau     36.37 324  P      P       12 26 43.8 -0.2
MOD                                IAmb   IAmb    12 26 47.4
      comp=Z,4.1nm,0.8s
D58A  Chemin du LacG    36.40  23  P      P       12 26 42.0 -2.0
      baz=213
LATQ  La Tuque          36.68  23  P      P       12 26 44.6 -1.8
      baz=213
BMO   Blue Mountains    36.84 330  P      P       12 26 48.6 +0.7
BMO                                IAmb   IAmb    12 26 50.4
      comp=Z,6.7nm,1.0s
MSO   Missoula          36.87 335  P      P       12 26 49.1 +1.0
      baz=144
MATQ  Matagami          37.21  16  P      P       12 26 48.5 -2.3
      baz=204
SAML  Samuel            37.28 127 eP      P       12 26 50.1 -1.7
I07A  Izee              37.39 327  P      P       12 26 54.1 +1.5
I07A                               IAmb   IAmb    12 26 55.9
      comp=Z,12nm,1.2s
F10A  Beach Ranch, E    37.63 331  P      P       12 26 55.3 +0.7
PINE  Pine Mountain     37.96 326  P      P       12 26 59.8 +2.3
J04D  Umpqua Nationa    38.25 324  P      P       12 27 03.4 +3.5
      baz=129
LPAZ  La Paz            38.94 141  P      P       12 27 05.6 -0.8
      comp=Z,2.1nm,0.6s,baz=314,slow=6.2,SNR=8.0
LPAZ                               LR     LR      12 42 43.4
      comp=Z,22nm,20.3s,baz=302,slow=36
LPAZ  La Paz            38.94 141  P      P       12 27 06.0 -0.4
LPAZ  La Paz            38.94 141 eP      P       12 27 04.4 -2.0
G05D  Wamic, OR         39.13 327  P      P       12 27 10.6 +3.5
      baz=132
H04A  Detroit Lake      39.22 326  P      P       12 27 09.6 +1.7
I03D  Drain, OR         39.24 324  P      P       12 27 11.5 +3.6
      baz=128
NEW   Newport           39.33 334  P      P       12 27 09.4 +0.7
      baz=140
H04D  Lebanon           39.42 325  P      P       12 27 11.8 +2.4
      baz=130
C09A  Chrisman Ranch    39.48 333  P      P       12 27 10.1 +0.2
C09A                               IAmb   IAmb    12 27 12.2
      comp=Z,13nm,1.1s
F05D  White Salmon      39.64 328  P      P       12 27 14.4 +3.1
      baz=132
MNMC  Minye Minye       40.33 145  P      P       12 27 16.9 -0.7
ITTB  Itaituba          41.01 114 eP      P       12 27 21.3 -1.7
MALB  Monte Alegre      41.23 110 eP      P       12 27 23.8 -1.0
VILB  Vilhena           42.06 129 eP      P       12 27 30.4 -1.2
NPGB  Novo Progresso    42.63 118 eP      P       12 27 34.4 -1.8
MCPB  Macapa, AP        42.67 107 eP      P       12 27 35.0 -1.5
LVC   Limon Verde       43.53 147 eP      P       12 27 45.2 +1.4
PRPB  Parauapebas       47.08 113 eP      P       12 28 09.7 -1.9
SNDB  Serra Nova Dou    48.59 121 eP      P       12 28 22.8 -0.4
PP1B  Ponte de Pedra    48.95 129 eP      P       12 28 25.4 -0.5
SMTB  Santa Maria do    50.25 115 eP      P       12 28 34.6 -1.3
YKA   Yellowknife Ar    50.43 347  P      P       12 28 36.0 -0.6
      comp=Z,6.1nm,0.6s,baz=147,slow=7.7,SNR=196
YKA                                ScP    ScP     12 33 47.1 +3.2
      comp=Z,0.3nm,0.7s,baz=136,slow=5.1,SNR=6.1
YKA                                LR     LR      12 53 46.3
      comp=Z,32nm,18.3s,baz=0.0,slow=41
PEXB  Peixe             51.17 119 eP      P       12 28 42.0 -0.9
CPUP  Villa Florida     53.09 140  P      P       12 28 54.5 -2.4
      comp=Z,2.8nm,0.7s,baz=336,slow=5.6,SNR=9.4
CPUP  Villa Florida     53.09 140 eP      P       12 28 58.7 +1.8
BDFB  Brasilia          53.22 123  P      P       12 28 56.4 -1.7
      comp=Z,6.1nm,0.9s,baz=299,slow=5.8,SNR=6.7
ITRB  Iturama           53.63 128 eP      P       12 29 00.8 -0.2
NBPS  Pedro II - PI     54.00 106 eP      P       12 29 03.9  0.0
SDBA  SAO DESIDERIO     54.22 117 eP      P       12 29 04.2 -1.2
IPMB  Ipameri, GO       54.32 125 eP      P       12 29 05.9 -0.2
NBMO  Morrinhos-CE      54.93 105 eP      P       12 29 09.8 -0.8
PTGB  Pitanga           55.48 134 eP      P       12 29 12.0 -2.4
BB19B Bebedouro         55.82 128 eP      P       12 29 15.6 -1.3
ITQB  Itaqui            55.92 142 eP      P       12 29 15.9 -1.4
JANB  Januaria          55.99 120 eP      P       12 29 17.2 -1.0
FRTB  Fartura           56.40 131 eP      P       12 29 19.8 -1.1
ITAB  Concordia         57.07 137 eP      P       12 29 23.7 -1.8
VAO   Valinhos          58.12 129 eP      P       12 29 32.1 -1.0
DIAM  Diamantina, MG    58.14 123 eP      P       12 29 32.6 -0.8
CPSB  Cacapava Do Su    58.38 140 eP      P       12 29 33.3 -1.5
NBPA  Parau_RN          58.51 106 eP      P       12 29 35.7 -0.3
PLCA  Paso Flores       58.61 161  P      P       12 29 35.8 -0.4
      comp=Z,3.7nm,1.0s,baz=325,slow=4.7,SNR=5.0
BSCB  Bom Sucesso       58.68 126 eP      P       12 29 36.7 -0.3
NBLI  Livramento-PB     59.24 108 eP      P       12 29 40.3 -0.8
BCAR  Beaver Creek A    59.38 336  P      P       12 29 41.6 +0.4
GDU01 Guandu, BA        59.44 116 eP      P       12 29 41.1 -1.2
RCBR  Riachuelo         59.67 106 eP      P       12 29 43.1 -0.9
N25K  Chitina, Valde    59.80 334  P      P       12 29 46.5 +2.3
      baz=118
INK   Inuvik            59.82 344  P      P       12 29 44.3 +0.3
      comp=Z,4.0nm,0.7s,baz=112,slow=8.5,SNR=12
INK   Inuvik            59.82 344  P      P       12 29 44.8 +0.7
INK                                IAmb   IAmb    12 29 45.4
      comp=Z,5.0nm,0.8s
RES   Resolute Bay      60.20 359  P      P       12 29 43.8 -2.8
      comp=Z,0.4nm,0.5s,baz=166,slow=6.9,SNR=5.0
MAN01 Angra dos Reis    60.32 127 eP      P       12 29 47.3 -1.0
M24K  Tolsona, Glenn    60.69 334  P      P       12 29 49.5 -0.8
BSFB  Barra de Sao F    60.73 122 eP      P       12 29 49.7 -1.3
NBRF  Rio Formoso -     61.40 108 eP      P       12 29 55.5 -0.2
CAM01 Campos-RJ         61.58 125 eP      P       12 29 56.1 -0.6
ALF01 Guarapari-ES      61.71 123 eP      P       12 29 57.2 -0.4
IL31                    62.19 337  P      P       12 30 00.2 +0.1
ILAR  Eielson Array     62.19 337  P      P       12 30 01.3 +1.1
      comp=Z,1.9nm,0.7s,baz=110,slow=6.5,SNR=35
ILAR  Eielson Array     62.19 337  P      P       12 30 01.4 +1.2
RND   Reindeer          62.37 335  P      P       12 30 02.8 +1.3
MCK   McKinley          62.53 335  P      P       12 30 04.2 +1.7
      baz=114
POKR  Poker Plat Res    62.55 337  P      P       12 30 04.2 +1.5
      baz=116
TCOL  CIGO, UAF Yank    62.60 337  P      P       12 30 04.3 +1.4
      baz=116
BMAR  Burnt Mountain    62.65 340  P      P       12 30 03.9 +0.6
RSO   Redoubt South     62.98 331  P      P       12 30 06.8 +1.0
I23K  Minto, Yukon-K    63.30 337  P      P       12 30 08.2 +0.7
      baz=115,SNR=8.2
I23K  Minto, Yukon-K    63.30 337  P      P       12 30 08.3 +0.8
I23K                               IAmb   IAmb    12 32 04.4
      comp=Z,7.3nm,0.8s
MLY   Manley            63.78 336  P      P       12 30 12.1 +1.3
      baz=113
COLD  Coldfoot          64.48 339  P      P       12 30 16.7 +1.4
      baz=115
ESDC  Sonseca Array     79.81  52  P      P       12 31 44.1 -3.3
      comp=Z,1.0nm,0.9s,baz=292,slow=7.5,SNR=4.2
DBIC  Dimbokro          86.11  84  P      P       12 32 17.2 -3.2
      comp=Z,2.5nm,0.7s,baz=204,slow=3.3,SNR=3.8
BOSA  Boshof           121.03 115  PKP    PKPdf   12 38 30.5 -1.2
      comp=Z,2.5nm,0.8s,baz=174,slow=4.3,SNR=4.1
WRA   Warramunga Arr   135.02 256  PKP    PKPdf   12 38 58.3 -0.1
      comp=Z,0.7nm,0.7s,baz=88,slow=2.4,SNR=8.2
ASAR  Alice Springs    135.34 251  PKhKP  PKPpre  12 38 50.0
      comp=Z,0.3nm,0.8s,baz=90,slow=4.7,SNR=2.4
ASAR                               PKP    PKPdf   12 38 58.7 -0.3
      comp=Z,0.4nm,0.7s,baz=115,slow=1.9,SNR=4.9
CMAR  Chiang Mai Arr   145.36 341  PKPbc  PKPbc   12 39 17.1  0.0
      comp=Z,1.9nm,0.7s,baz=338,slow=2.7,SNR=15
CMAR  Chiang Mai Arr   145.36 341         PKPbc   12 39 16.6 -0.4
```

WEL 08 12:45:23.9±0.9**, 33˚S**±19˚×**18˚0W**±3˚1**, h324**km±23km**,**
M4.0/20**, mB4.5**/7**, ML4.2**/6**, MLv4.3**/20**, Mw(mB)3.6**/7**,**
Error ellipse: s-maj=0.0km s-min=0.0km az=119.2,
South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	4.82	197	P	Pn	12 46 39.6	-0.6
MXZ				S	S	12 47 41.2	-0.5
WMGZ	Waiomatatini S	5.04	195	P	Pn	12 46 44.0	+1.4
WMGZ				S	S	12 47 47.8	+1.6
HAZ	Te Kaha	5.14	201	P	Pn	12 46 43.5	-0.3
HAZ				S	S	12 47 47.3	-1.1
PKGZ	Pakihiroa	5.18	198	P	Pn	12 46 44.5	+0.1
PKGZ				S	S	12 47 50.2	+0.8
PUZ	Puketiti	5.32	195	P	Pn	12 46 46.9	+1.0
PUZ				S	S	12 47 52.4	+0.4
RUGZ	Raukumara Rang	5.37	201	P	Pn	12 46 46.7	+0.1
RUGZ				S	S	12 47 51.9	-1.3
MWZ	Matawai	5.75	200	P	Pn	12 46 49.5	-1.4
MWZ				S	S	12 48 00.9	-0.3
TKGZ	Te Karaka	5.76	198	P	Pn	12 46 51.1	+0.2
TKGZ				S	S	12 48 04.7	+3.4
URZ	Urewera	5.81	204	P	Pn	12 46 51.2	-0.3
URZ				S	S	12 48 02.2	-0.2
RIGZ	Rimuhau	6.04	197	P	Pn	12 46 55.1	+0.9
RIGZ				S	S	12 48 08.1	+0.8
MUGZ	Murupara	6.13	205	P	Pn	12 46 55.2	0.0
MUGZ				S	S	12 48 08.3	-0.8
RTZ	Ruatahuna	6.18	203	P	Pn	12 46 55.0	-0.9
SNGZ	Shannon Statio	6.22	200	P	Pn	12 46 56.8	+0.5
SNGZ				S	S	12 48 11.5	+0.3
MTHZ	Maungataniwha	6.44	203	P	Pn	12 46 59.1	+0.1
MTHZ				S	S	12 48 19.2	+3.2
MRHZ	Matea Rd	6.57	206	P	Pn	12 47 00.5	0.0
BKZ	Black Stump Fm	6.84	204	P	Pn	12 47 04.0	+0.3
HIZ	Hauiti	6.97	216	P	Pn	12 47 08.8	+3.5
OTVZ	Oturere	7.14	209	P	Pn	12 47 07.8	+0.3
BHHZ	Black Hill Sta	7.28	205	P	Pn	12 47 08.8	-0.2
KAHZ	Kahuranaki	7.29	200	P	Pn	12 47 09.3	+0.1
KRHZ	Kereru	7.31	203	P	Pn	12 47 08.7	-0.6
KRHZ				S	S	12 48 35.4	+0.5
PXZ	Pawanui	7.52	199	P	Pn	12 47 06.2	-5.6
PNHZ	Pukenui	7.61	203	P	Pn	12 47 12.3	-0.6
PNHZ				S	S	12 48 41.4	-0.1
TSZ	Takapari Road	7.82	204	P	Pn	12 47 14.3	-1.1
TSZ				S	S	12 48 47.1	+1.0
BFZ	Birch Farm	8.30	200	P	Pn	12 47 21.1	0.0
MRZ	Mangatainoka R	8.49	204	P	Pn	12 47 22.6	-0.8
OGWZ	Otaki Gorge	8.77	205	P	Pn	12 47 25.8	-1.0

BJI ***08*** *12:46:40.0±0.0, 43°.34N×147°.34E, h43^{km}, mB5.0/40, mb4.8/61, Ms4.5/13, Ms7 4.3/10*
MOS ***08*** *12:46:41.6±0.8, 43°.38N×147°.33E, h53^{km}, mb5.1/96, Error ellipse: s-maj=6.1km s-min=4.0km az=120.3*
SKHL ***08*** *12:46:42.7±0.8, 43°.30N×147°.40E, h62^{km}±7^{km}, mb5.0/20*
JMA ***08*** *12:46:42.0±0.2, 43°.30N×147°.29E, h34^{km}, M4.5*
JMA Felt I J1.
NIED ***08*** *12:46:42.0, 43°.30N×147°.29E, h34^{km}, MW4.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$8.17; M$_{\theta\theta}$-2.47; M$_{\phi\phi}$-5.70; M$_{r\theta}$4.21; M$_{\theta\phi}$-3.93; M$_{\phi r}$1.77; Fault plane solution: M$_0$9.42000×10^{15} NP1:φ$_s$49.00000°, δ59.00000°, λ106.00000°. NP2:φ$_s$200.00000°, δ34.00000°, λ66.00000°.*
NEIC ***08*** *12:46:43.4±1.2, 43°.39N±0°.08×147°.3E±0°.1, h56^{km}±6^{km}, mb4.9/183, ML4.5(JMA) Error ellipse: s-maj=12.3km s-min=10.6km az=129.0*
IDC ***08*** *12:46:44.4±0.4, 43°.44N×147°.28E, h60^{km}±3^{km}, mb4.5/27, mb1 4.5/34, mb1mx4.5/40, mbtmp4.7/34, MS3.5/26, Ms1 3.5/26, ms1mx3.3/51, Error ellipse: s-maj=11.2km s-min=8.0km az=163.0*
BGR ***08*** *12:46:47.7±0.0, 43°.71N×145°.33E, h33^{km}, mb4.9*
ISC 08 12:46:42.5±0.4, **43°.37N**±0°.04×**147°.36E**±0°.04, **h49**^{km}±2^{km}, **h49**^{km}**:pP-P, n786,** σ1^{s}.**15**/839, **mb4.9**/214, **MS3.8**/29, **50C-49D, Fault plane solution: NP1:**φ$_s$177.53264°, δ20.73114°, λ36.09966°. **NP2:**φ$_s$53.23908°, δ77.96179°, λ107.00453°. **Principal axes:** T Plg53.9788°, Azm343.8265°; N Plg16.6196°, Azm229.5896°; P Plg30.9203°, Azm129.2906°; **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	Nemuro 2	1.18	270	P	Pn	12 47 02.0	-0.6
NEM2				eS	Sn	12 47 16.5	-1.0
NMR	Nemuro--Hokkai	1.19	271	⇓iPN	Pn	12 47 02.1	-0.6
NMR				i S	Sn	12 47 16.5	-1.3
NMR	Nemuro--Hokkai	1.19	271	i P	Pn	12 47 02.3	-0.4
NMR				i S	Sn	12 47 16.8	-1.0
YUK	Yuzh-Kuril'sk	1.28	302	d iPN	Pn	12 47 03.7	-0.2
YUK				i S	Sn	12 47 20.0	+0.1
YUK				pmax	pmax		
	comp=Z,6μm,0.5s						
YUK				pmax	pmax		
	comp=N,2μm,0.4s						
YUK				pmax	pmax		
	comp=E,4μm,0.4s						
YUK				pmax	pmax		
	comp=Z,12μm,1.1s						
YUK				smax	smax		
	comp=N,16μm,0.5s						
YUK				smax	smax		
	comp=E,11μm,0.6s						
YUK				smax	smax		
	comp=N,16μm,1.2s						
YUK				smax	smax		
	comp=E,12μm,1.2s						
YUK	Yuzh-Kuril'sk	1.28	302	i P	Pn	12 47 03.7	-0.2
YUK				AMB	AMB	12 47 07.0	
	comp=E,6μm,0.6s						
YUK				i S	Sn	12 47 19.1	-0.8
YUK				A	A	12 47 22.0	
	comp=E,16μm,0.6s						
YUK				A	A	12 47 22.0	
	comp=E,11μm,0.6s						
GRPR	Tuman	1.31	299	c iPN	Pn	12 47 03.5	-0.9
GRPR				i S	Sn	12 47 19.8	-0.9
GRPR				pmax	pmax		
	comp=Z,11μm,0.3s						
GRPR				pmax	pmax		
	comp=N,3μm,0.1s						
GRPR				pmax	pmax		
	comp=E,2μm,0.2s						
GRPR				smax	smax		
	comp=N,30μm,0.5s						
GRPR				smax	smax		
	comp=E,6μm,0.2s						
GRPR	Tuman	1.31	299	i P	Pn	12 47 03.0	-1.4
GRPR				AMB	AMB	12 47 05.0	
	comp=E,10μm,0.5s						
GRPR				i S	Sn	12 47 19.0	-1.7
GRPR				A	A	12 47 22.0	
	comp=E,30μm,0.5s						
GRPR				A	A	12 47 22.0	
	comp=E,6μm,0.5s						
JKHN	Kushirohamanak	1.63	261	P	Pn	12 47 08.8	+0.1
JKHN				eS	Sn	12 47 28.1	-0.5
JRA	Rausu	1.72	290	P	Pn	12 47 10.2	+0.2
JRA				eS	Sn	12 47 30.9	+0.1
JNSB	Nemuroshibetsu	1.76	284	P	Pn	12 47 10.7	+0.2
JNSB				eS	Sn	12 47 31.9	+0.2
KUR	Kuril'sk	1.90	11	d iPN	Pn	12 47 12.9	+0.5
KUR				i S	Sn	12 47 34.5	-0.6
KUR				pmax	pmax		
	comp=Z,559nm,0.4s						
KUR				pmax	pmax		
	comp=E,173nm,0.2s						
KUR				pmax	pmax		
	comp=N,227nm,0.3s						
KUR				smax	smax		
	comp=N,4μm,1.2s						
KUR				smax	smax		
	comp=E,3μm,0.6s						
KUR				smax	smax		
	comp=N,2μm,0.3s						
KUR				smax	smax		
	comp=E,4μm,0.3s						
KUR	Kuril'sk	1.90	11	i P	Pn	12 47 13.0	+0.5
KUR				AMB	AMB	12 47 22.2	
	comp=E,1μm,0.5s						
KUR				i S	Sn	12 47 35.0	-0.1
KUR				A	A	12 47 36.0	
	comp=E,3μm,0.4s						
KUR				A	A	12 47 36.0	
	comp=E,4μm,0.4s						
JNK	Nakash	1.94	277	P	Pn	12 47 12.6	-0.3
JNK				eS	Sn	12 47 35.0	-1.0
JAK	Akkeshi	1.98	260	P	Pn	12 47 13.2	-0.3
JAK				eS	Sn	12 47 36.0	-1.2
JTKR	Abashiri--Toko	2.58	285	P	Pn	12 47 22.8	+1.1
JTKR				eS	Sn	12 47 52.4	+0.7
JAR	Ashorobuto	2.62	270	P	Pn	12 47 22.6	+0.3
JAR				eS	Sn	12 47 52.3	-0.6
JOB	Onbets	2.62	261	P	Pn	12 47 22.4	+0.1
JOB				eS	Sn	12 47 51.5	-1.4
JMP	Maruseppu	2.97	284	P	Pn	12 47 28.4	+1.3
JMP				eS	Sn	12 48 02.9	+1.4
JCH	Churui	3.03	257	P	Pn	12 47 27.7	-0.2
JCH				eS	Sn	12 48 01.6	-1.3
HRK	Horoka	3.08	273	eP	Pn	12 47 29.9	+1.2
HRK				eS	Sn	12 48 04.8	+0.4
MYR	Moyori	3.19	252	eP	Pn	12 47 30.8	+0.8
JEM	Erimo	3.38	248	P	Pn	12 47 34.2	+1.5
JEM				eS	Sn	12 48 11.8	+0.3
JEM	Erimo	3.38	248		Pn	12 47 34.7	+2.0
ERM	Erimo	3.38	248	d ePN	Pn	12 47 34.5	+1.8
ERM	Erimo	3.38	248	Pn	Pn	12 47 34.6	+2.0
ERM	Erimo	3.38	248	eP	Pn	12 47 33.8	+1.1
JKK2	Kamakawa 2	3.39	280	P	Pn	12 47 34.4	+1.6
JFR	Furan	3.49	268	P	Pn	12 47 35.1	+0.9
JFR				eS	Sn	12 48 14.0	-0.2
JKA	Kamikawa-asahi	3.53	284	Pn	Pn	12 47 35.9	+1.1
JKA	Kamikawa-asahi	3.53	284	eP	Pn	12 47 36.6	+1.8
ASAJ	Asahikawa	3.53	284	P	Pn	12 47 36.6	+1.8
	comp=E,26nm,0.3s,baz=88,slow=6.9,SNR=316						
ASAJ				S	Sn	12 48 15.8	+0.5
	comp=E,34nm,0.3s,baz=240,slow=2.3,SNR=1.8						
ASAJ	Asahikawa	3.53	284	P	Pn	12 47 36.5	+1.7
JNBK	Urakawa-nobuka	3.56	254	P	Pn	12 47 35.0	-0.1
JSE	Soyaes	3.79	296	P	Pn	12 47 39.4	+1.2
JEW	Eniwo	4.36	265	Pn	Pn	12 47 47.4	+1.2
YSS	Yuzh-Sakhalins	4.84	319	⇓iPN	Pn	12 47 54.3	+1.6
YSS				eS	Sn	12 48 48.3	+0.8
YSS				pmax	pmax		
	comp=Z,190nm,0.6s						
YSS				smax	smax		
	comp=E,120nm,1.0s						
YSS				smax	smax		
	comp=N,90nm,0.9s						
YSS				MLR	MLR		
	comp=Z,1μm,15.0s						
YSS	Yuzh-Sakhalins	4.84	319	Pn	Pn	12 47 53.2	+0.4
YSS	Yuzh-Sakhalins	4.84	319	i P	Pn	12 47 54.3	+1.6
YSS				AMB	AMB	12 47 54.9	
	comp=Z,190nm,0.6s						
YSS				eS	Sn	12 48 47.5	0.0
JTM	Tenmabayashi	5.35	243	Pn	Pn	12 48 00.9	+1.2
UGL	Uglegorsk	6.79	329	ePN	Pn	12 48 24.3	+4.9
UGL				S	Sn	12 49 39.6	+4.3
UGL				pmax	pmax		
	comp=Z,44nm,0.9s						
UGL				smax	smax		
	comp=N,113nm,1.1s						
UGL	Uglegorsk	6.79	329	eP	Pn	12 48 22.0	+2.6
UGL				AMB	AMB	12 48 24.3	
	comp=N,40nm,0.5s						
JMM	Marumori	7.42	224		Pn	12 48 27.6	-0.5
TEY	Ternei	7.91	286	eP	Pn	12 48 36.0	+1.3
TEY				AMB	AMB	12 48 45.6	
	comp=N,10.0nm,0.7s						
TYV	Tymovskoe	8.15	339	ePN	Pn	12 48 48.5	+10
TYV				pmax	pmax		
	comp=Z,12nm,0.5s						
TYV	Tymovskoe	8.15	339	eP	Pn	12 48 39.8	+1.7
TYV				AMB	AMB	12 48 49.4	
	comp=Z,12nm,0.5s						
TYV				eS	Sn	12 50 08.9	+0.1
SKR	Severo-Kuril's	9.44	36	ePN	Pn	12 48 54.5	-1.2
SKR				MLR	MLR		
	comp=Z,200nm,18.0s						
SKR	Severo-Kuril's	9.44	36	eP	Pn	12 48 54.5	-1.2
SKR				AMB	AMB	12 49 08.3	
	comp=Z,40nm,0.8s						
SKR				eS	Sn	12 50 36.3	-4.1
MAJO	Matsushiro	9.79	229	PN	Pn	12 49 01.9	+1.4
MAJO	Matsushiro	9.79	229		Pn	12 49 01.9	+1.4
MAT	Matsushiro	9.79	229	P	Pn	12 49 00.5	0.0
MAT				eS	Sn	12 50 48.6	-0.4
MJAR	Matsushiro Arr	9.79	229	P	Pn	12 49 00.7	+0.1
	comp=Z,0.1nm,0.3s,baz=29,slow=13,SNR=10.0						
MJAR	Matsushiro Arr	9.79	229	PN	Pn	12 49 01.4	+0.9
MJAR	Matsushiro Arr	9.79	229		Pn	12 49 01.4	+0.9
PAU	Pauzhetka	10.32	35	eP	Pn	12 49 06.0	-1.7
PAU				AMB	AMB	12 49 11.6	
	comp=Z,40nm,0.6s						
PAU				eS	Sn	12 50 56.4	-5.4
PAU				A	A	12 51 02.4	
	comp=Z,80nm,0.4s						
PAU				A	A	12 51 02.4	
	comp=Z,60nm,0.4s						
GRNR	Gornyy	10.50	319	⇓iPN	Pn	12 49 13.4	+3.1
GRNR				pmax	pmax		
	comp=N,9.0nm,0.6s						
GRNR				pmax	pmax		
	comp=E,9.0nm,0.6s						
GRNR				pmax	pmax		
	comp=Z,9.0nm,0.6s						
GRNR				MLR	MLR		
	comp=N,220nm,14.0s						
GRNR	Gornyy	10.50	319	eP	Pn	12 49 13.4	+3.1
GRNR				AMB	AMB	12 49 14.6	
	comp=N,9.0nm,0.6s						
OKH	Okha	10.60	346	eP	Pn	12 49 13.8	+2.3
OKH				AMB	AMB	12 49 16.4	
	comp=N,30nm,0.4s						
NKL	Nikolayevsk	10.75	338	eP	Pn	12 49 15.3	+1.8
NKL				AMB	AMB	12 49 19.0	
	comp=N,60nm,0.7s						
JGF	Kuroka	10.94	228	Pn	Pn	12 49 18.5	+2.1
USA0B	Ussuriysk Arra	11.15	280	⇓ePN	Pn	12 49 21.2	+2.1
USRK	Ussuriysk Ar.	11.15	280	P	Pn	12 49 19.8	+0.7
	baz=80,slow=12,SNR=7.5						
PEA0B	Petropavlovsk-	11.92	32	⇑ePN	Pn	12 49 27.9	-1.7
PEA0B	Petropavlovsk-	11.92	32		Pn	12 49 28.9	-0.7
PETK	Petropavlovsk-	11.92	32	P	Pn	12 49 28.0	-1.7
	comp=N,1.1nm,0.3s,baz=193,slow=9.9,SNR=48						
PETK				LR	LR	12 54 06.1	
	comp=N,194nm,21.4s,baz=193,slow=37						
PETK	Petropavlovsk-	11.92	32	PN	Pn	12 49 27.1	-2.5
PETK	Petropavlovsk-	11.92	32		Pn	12 49 27.1	-2.5
KLR	Kul'dur	12.28	304	P	Pn	12 49 35.6	+1.1
	comp=N,0.2nm,0.3s,baz=117,slow=18,SNR=4.6						
KLR				PcP	PcP	12 55 14.3	+0.9
	comp=N,0.2nm,0.3s,baz=119,slow=2.3,SNR=4.4						
KLR	Kul'dur	12.28	304	⇑ePN	Pn	12 49 36.5	+2.0
KLR				pmax	pmax		
	comp=Z,19nm,1.4s						
KLR	Kul'dur	12.28	304	eP	Pn	12 49 34.2	-0.3
MDJ	Mudanjiang	12.86	282	P	Pn	12 49 42.2	-0.2
MDJ				pmax	pmax		
	comp=Z,17nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,410nm,4.6s						
EKMR	Ekimchan	13.63	320	eP	Pn	12 49 51.0	-2.0
EKMR				AMB	AMB	12 50 03.0	
	comp=Z,12nm,0.8s						
CN2	Changchun	15.88	279	eP	Pn	12 50 19.9	-2.7
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KSRS	Korea Array	15.93	255	P	Pn	12 50 23.8	+0.7
	comp=Z,0.3nm,0.3s,baz=55,slow=13,SNR=6.9						
KSRS				LR	LR	12 56 18.2	
	comp=Z,154nm,20.2s,baz=82,slow=36						
KSRS	Korea Array	15.93	255	eP	Pn	12 50 23.8	+0.7
MA2	Magadan	16.37	6	P	Pn	12 50 27.3	-1.2
	comp=Z,0.5nm,0.3s,baz=177,slow=8.5,SNR=12						
MA2				LR	LR	12 56 33.8	
	comp=Z,227nm,20.1s,baz=224,slow=36						
MA2	Magadan	16.37	6	d iP	Pn	12 50 27.2	-1.4
MA2				pmax	pmax		
	comp=Z,34nm,1.9s						
MA2	Magadan	16.37	6	P	Pn	12 50 28.3	-0.2
MA2	Magadan	16.37	6	eP	Pn	12 50 27.2	-1.4
JNU	Nakatsue	16.47	237	LR	LR	12 57 03.5	
	comp=Z,208nm,18.7s,baz=37,slow=38						
BMKR	Bomnak	16.56	320	eP	Pn	12 50 30.0	-1.1
BMKR				AMB	AMB	12 50 46.2	
	comp=Z,6.0nm,0.5s						
ZEA	Zeya	16.82	315	eP	Pn	12 50 34.9	+0.6
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ZEA	Zeya	16.82	315	eP	Pn	12 50 33.6	-0.7
ZEA				AMB	AMB	12 50 46.7	
	comp=Z,10.0nm,0.8s						
KROS	Kirovskiy	17.32	317	eP	Pn	12 50 39.0	-1.5
KROS				AMB	AMB	12 50 41.4	
	comp=Z,4.0nm,0.4s						
SEY	Seymchan	19.82	7	P	P	12 51 07.1	-1.5
	comp=Z,0.4nm,0.3s,baz=190,slow=8.0,SNR=24						
SEY	Seymchan	19.82	7	⇓iP	P	12 51 08.4	-0.2
DL2	Dalian	19.86	266	P	Pn	12 51 11.1	-0.1
DL2				pmax	pmax		
	comp=Z,35nm,1.1s						
HIA	Hailar	19.90	297	P	P	12 51 07.6	-2.2
HIA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
HIA	Hailar	19.90	297	P	P	12 51 07.6	-2.2
YAK	Yakutsk	21.41	337	P	P	12 51 24.0	-1.8
	comp=Z,11nm,0.5s,baz=153,slow=1.5,SNR=10						
YAK	Yakutsk	21.41	337	eP	P	12 51 23.3	-2.5
YAK				e		12 51 48.7	
YAK				eS	S	12 55 12.8	-7.7
YAK				e*SS	Sn	12 55 30.2	-0.2
YAK				eSS	SnSn	12 55 51.4	+5.4
YAK				pmax	pmax		
	comp=Z,20nm,0.8s						
YAK				pmax	pmax		
	comp=N,14nm,1.4s						
YAK				pmax	pmax		
	comp=E,11nm,1.4s						
YAK				pmax	pmax		
	comp=Z,232nm,4.1s						
YAK				pmax	pmax		
	comp=E,217nm,4.3s						
YAK				pmax	pmax		
	comp=N,81nm,3.2s						
YAK				smax	smax		
	comp=E,195nm,4.8s						
YAK				smax	smax		
	comp=N,117nm,2.2s						
YAK	Yakutsk	21.41	337	P	P	12 51 23.6	-2.2
YAK				IAmb	IAmb	12 51 29.9	
	comp=Z,27nm,0.7s						
BJI	Beijing	23.45	273	P	P	12 51 46.7	-0.6
BJI				pmax	pmax		
	comp=Z,7.0nm,0.6s						
NJ2	Nanjing	25.10	253	eP	P	12 52 02.8	+0.3
NJ2				pP	pwP	12 52 15.9	-1.2
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
BOD	Bodaibo	25.31	317	eP	P	12 52 00.6	-3.6
BOD				pmax	pmax		
	comp=Z,5.0nm,1.5s						
HHC	Hu-ho-hao-te	26.55	277	eP	P	12 52 17.1	+1.4
HHC				pmax	pmax		
	comp=Z,17nm,0.8s						
HHC				pmax	pmax		
	comp=Z,140nm,7.6s						
BTO	Baotou	27.74	277	eP	P	12 52 30.0	+3.6
ULN	Ulaanbaatar	28.32	293	c iP	P	12 52 32.2	+0.7
ULN				pmax	pmax		
	comp=Z,45nm,1.3s						
ULN	Ulaanbaatar	28.32	293	P	P	12 52 32.5	+1.0
ULN				IAmb	IAmb	12 52 33.3	
	comp=Z,28nm,0.8s						
ULN	Ulaanbaatar	28.32	293	eP	P	12 52 32.2	+0.7
H11N2	WAKE ISLAND Hy	28.71	139	T	T	13 23 23.3	
	baz=330,slow=75,SNR=941						
H11N1	WAKE ISLAND Hy	28.72	139	T	T	13 23 24.9	
	baz=330,slow=75,SNR=687						
H11N3	WAKE ISLAND Hy	28.73	139	T	T	13 23 26.0	
	baz=330,slow=75,SNR=644						
SONM	Songino Array	28.76	293	P	P	12 52 36.2	+0.8
	comp=Z,22nm,0.7s,baz=86,slow=8.4,SNR=167						
SONM				PcP	PcP	12 55 44.7	+0.3
	comp=Z,1.4nm,0.8s,baz=121,slow=2.2,SNR=3.8						
SONM	Songino Array	28.76	293	P	P	12 52 35.9	+0.5
H11S1	WAKE ISLAND Hy	29.67	141	T	T	13 24 36.8	
	baz=331,slow=76,SNR=1004						
H11S3	WAKE ISLAND Hy	29.68	141	T	T	13 24 41.0	
	baz=331,slow=76,SNR=626						
H11S2	WAKE ISLAND Hy	29.69	141	T	T	13 24 39.2	
	baz=331,slow=76,SNR=749						
TLY	Talaya	30.28	301	P	P	12 52 49.3	+0.6
	comp=Z,0.9nm,0.4s,baz=355,slow=7.9,SNR=4.2						
TLY				PcP	PcP	12 55 48.9	+0.9
	comp=Z,0.7nm,0.2s,baz=263,slow=20,SNR=4.3						
TLY				LR	LR	13 05 26.4	
	comp=Z,138nm,19.1s,baz=88,slow=37						
TLY	Talaya	30.28	301	eP	P	12 52 49.5	+0.8
TLY				pmax	pmax		
	comp=Z,8.0nm,0.9s						
TLY				MLR	MLR		
	comp=Z,351nm,15.0s						
TLY	Talaya	30.28	301	eP	P	12 52 49.5	+0.8
ZAK	Zakamensk	30.57	299	eP	P	12 52 50.1	-1.3
ZAK				e		12 55 48.7	
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MOY	Mondy	31.93	302	eP	P	12 53 03.7	+0.4
ANM	Nome	33.81	35	P	P	12 53 20.5	+1.0
ANM				pmax	pmax		
	comp=Z,32nm,1.2s						
ANM	Nome	33.81	35	P	P	12 53 20.4	+1.0
ANM				IAmb	IAmb	12 53 22.2	
	comp=Z,32nm,1.2s						
LZH	Lanzhou	33.94	273	⇑P	P	12 53 21.9	+0.8
LZH				pP	pwP	12 53 35.1	-0.5
LZH				sP	sP	12 53 41.2	+2.1
LZH				PP	PnPn	12 54 32.7	-2.5
LZH				pmax	pmax		
	comp=Z,31nm,1.2s						
LZH				pmax	pmax		
	comp=Z,160nm,5.5s						
GTA	Gaotai	35.51	280	⇑P	P	12 53 35.2	+0.6
GTA				pP	pP	12 53 47.6	+0.7
GTA				sP	sP	12 53 52.5	0.0
GTA				PcP	PcP	12 56 03.9	+1.0
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,120nm,4.8s						
GTA				LR	LR		
	comp=Z,67nm,13.1s						
GTA				LR	LR		
	comp=Z,110nm,13.8s						
RDOG	Red Dog Mine	35.78	29	P	P	12 53 36.7	+0.3
RDOG				IAmb	IAmb	12 53 37.9	
	comp=Z,11nm,1.0s						
CD2	Chengdu	36.52	265	eP	P	12 53 42.0	-1.2
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
GYA	Guiyang	36.98	256	eP	P	12 53 46.1	-1.1
GYA				pP	pP	12 53 56.7	-2.7
GYA				pmax	pmax		
	comp=Z,5.0nm,1.3s						
A21K	Barrow	38.83	25	P	P	12 54 02.4	+0.4
	baz=255,SNR=25						
A21K	Barrow	38.83	25	P	P	12 54 01.6	-0.4
IMAR	Indian Mountai	38.88	34	P	P	12 54 03.9	+1.3
RSO	Redoubt South	39.14	43	P	P	12 54 06.6	+1.5
KDAK	Kodiak Island	39.40	47	P	P	12 54 06.8	-0.2
	comp=Z,18nm,0.8s,baz=286,slow=7.5,SNR=7.7						
NRIK	Noril'sk	39.66	331	P	P	12 54 07.6	-1.5
	comp=Z,1.7nm,0.4s,baz=210,slow=23,SNR=2.9						
NRIK	Noril'sk	39.66	331	⇓eP	P	12 54 08.5	-0.6
NRIK				pmax	pmax		
	comp=Z,8.0nm,2.9s						
KTH	Kantishna Hill	39.96	38	P	P	12 54 12.8	+1.1
KTH				IAmb	IAmb	12 54 14.2	
	comp=Z,23nm,0.9s						
MLY	Manley	40.06	36	P	P	12 54 14.2	+1.6
	baz=268,SNR=5.5						
SUA	Susitna One	40.08	41	P	P	12 54 12.4	-0.4
SUA				IAmb	IAmb	12 54 17.8	
	comp=Z,24nm,1.2s						
COLD	Coldfoot	40.39	32	P	P	12 54 16.3	+1.1
	baz=266,SNR=34						
RC01	Rabbit Creek A	40.59	42	P	P	12 54 17.3	+0.4
	baz=274						
KMI	Kunming	40.59	258	⇑P	P	12 54 17.8	+0.2
KMI				pP	pwP	12 54 31.7	-1.3
KMI				sP	sP	12 54 36.5	+1.1
KMI				pmax	pmax		
	comp=Z,11nm,1.0s						

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O22K  Cooper Landing    40.63  43    P     P      12 54 17.6 +0.3
      baz=274
I23K  Minto, Yukon-K    40.65  35    P     P      12 54 18.4 +1.1
      baz=269,SNR=7.4
I23K  Minto, Yukon-K    40.65  35    P     P      12 54 18.1 +0.8
DGZ   Jazzator, Alta    40.74 301⇑iP    P      12 54 19.8 +1.3
DGZ                                  pmax  pmax
      comp=Z,14nm,1.1s
NEA2  Nenana            40.77  36    P     P      12 54 19.6 +1.2
      baz=270
MCK   McKinley          40.84  38    P     P      12 54 19.6 +0.6
      baz=271
RND   Reindeer          40.89  38    P     P      12 54 20.2 +0.8
RND                                  pmax  pmax
      comp=Z,43nm,1.9s
RND   Reindeer          40.89  38    P     P      12 54 20.2 +0.8
RND                                  IAmb  IAmb   12 55 02.3
      comp=Z,43nm,1.9s
DAV   Davao City (W)    40.91 214    LR    LR     13 09 48.9
      comp=Z,55nm,19.4s,baz=5.5,slow=34
MDM   Murphy Dome       41.13  36    P     P      12 54 22.8 +1.4
MDM                                  IAmb  IAmb   12 54 23.4
      comp=Z,14nm,0.6s
WRH   Wood River Hil    41.20  36    P     P      12 54 22.7 +0.9
SML   Sawmill           41.21  41    P     P      12 54 22.7 +0.7
SML                                  pmax  pmax
      comp=Z,38nm,0.9s
SML   Sawmill           41.21  41    P     P      12 54 22.7 +0.7
TCOL  CIGO, UAF Yank    41.29  36    P     P      12 54 23.8 +1.2
      baz=271
TCOL  CIGO, UAF Yank    41.29  36    P     P      12 54 23.3 +0.8
TCOL                                 IAmb  IAmb   12 54 24.7
      comp=Z,19nm,1.1s
COLA  College           41.29  36 ceP    P      12 54 23.8 +1.2
COLA                                 pmax  pmax
      comp=Z,36nm,2.3s
COLA  College           41.29  36    P     P      12 54 23.6 +1.1
COLA                                 IAmb  IAmb   12 54 24.8
      comp=Z,20nm,1.1s
CCB   Clear Creek Bu    41.32  36    P     P      12 54 23.1 +0.3
CCB                                  IAmb  IAmb   12 54 26.2
      comp=Z,50nm,2.0s
ZAA0  Zalesovo Array    41.35 307    P     P      12 54 22.6 -0.6
ZALV  Zalesovo Beam     41.35 307    P     P      12 54 23.2  0.0
      comp=Z,7.7nm,0.7s,baz=76,slow=6.4,SNR=22
ZALV                                 PcP   PcP    12 56 21.0 +0.3
      comp=Z,3.4nm,0.6s,baz=86,slow=2.3,SNR=8.7
ZALV                                 pPcP         12 56 36.7
      comp=Z,10nm,0.7s,baz=80,slow=2.8,SNR=17
ZALV  Zalesovo Beam     41.35 307    P     P      12 54 22.5 -0.7
POKR  Poker Plat Res    41.46  35    P     P      12 54 25.6 +1.6
      baz=271,SNR=22
POKR  Poker Plat Res    41.46  35    P     P      12 54 24.7 +0.7
DHY   Denali Highway    41.57  39    P     P      12 54 25.6 +0.5
HDA   Harding Lake      41.69  37    P     P      12 54 26.0  0.0
      baz=272,SNR=11
HDA   Harding Lake      41.69  37    P     P      12 54 25.9  0.0
HDA                                  IAmb  IAmb   12 54 27.1
      comp=Z,14nm,0.6s
IL31                    41.71  36    P     P      12 54 25.8 -0.2
ILAR  Eielson Array     41.71  36    P     P      12 54 26.4 +0.3
      comp=Z,5.5nm,0.8s,baz=256,slow=4.9,SNR=77
ILAR                                 pP    pwP    12 54 41.5 -0.2
      comp=Z,3.0nm,0.6s,baz=270,slow=9.7,SNR=6.1
M24K  Tolsona, Glenn    42.20  40    P     P      12 54 31.5 +1.3
      baz=276
PRP   Porcupine Dome    42.25  35    P     P      12 54 29.8 -0.8
PRP                                  IAmb  IAmb   12 54 32.8
      comp=Z,18nm,0.6s
FYU   Fort Yukon        42.34  33    P     P      12 54 32.8 +1.7
WMQ   Urumqi            42.38 292    P     P      12 54 33.0 +1.1
WMQ                                  pP    pP     12 54 43.0 -1.6
WMQ                                  pmax  pmax
      comp=Z,25nm,0.7s
WMQ                                  pmax  pmax
      comp=Z,130nm,5.1s
WMQ   Urumqi            42.38 292    P     P      12 54 32.3 +0.4
WMQ                                  pmax  pmax
      comp=Z,15nm,0.5s
WMQ   Urumqi            42.38 292    P     P      12 54 32.3 +0.4
WMQ                                  IAmb  IAmb   12 54 35.7
      comp=Z,15nm,0.5s
KLU   Klutina           42.38  41    P     P      12 54 32.4 +0.7
KLU                                  IAmb  IAmb   12 54 33.6
      comp=Z,17nm,0.7s
BMAR  Burnt Mountain    42.58  32    P     P      12 54 35.2 +2.1
RIDG  Independent Ri    42.66  37    P     P      12 54 33.5 -0.3
SCRK  Sand Creek        43.02  37    P     P      12 54 37.4 +0.5
      baz=275,SNR=11
ZSN   Zaisan            43.02 298   eP     P      12 54 36.8 -0.2
      baz=298
ZSN   Zaisan            43.02 298   eP     P      12 54 36.8 -0.2
CRQM  Cirque            43.82  42    P     P      12 54 44.2 +0.7
BCAR  Beaver Creek A    44.10  38    P     P      12 54 47.1 +1.6
EGAK  Eagle             44.15  36    P     P      12 54 45.4 -0.4
EGAK                                 IAmb  IAmb   12 55 08.1
      comp=Z,45nm,1.7s
BALM  Baldy             44.16  41    P     P      12 54 46.8 +0.8
BALM                                 IAmb  IAmb   12 54 48.1
      comp=Z,18nm,0.8s
BARN  Barnard Glacie    44.48  41    P     P      12 54 49.2 +0.5
BARN                                 IAmb  IAmb   12 54 51.0
      comp=Z,15nm,0.9s
CTGM  Chitina Glacie    44.66  41    P     P      12 54 50.5 +0.5
MK31  Makanchi Array    44.90 298  i P     P      12 54 52.5 +0.5
MK31                                 pmax  pmax
      comp=Z,8.0nm,0.5s
MK31  Makanchi Array    44.90 298    P     P      12 54 52.1 +0.1
MK31                                 IAmb  IAmb   12 54 54.4
      comp=Z,12nm,0.8s
MKAR  Makanchi Array    44.90 298    P     P      12 54 52.5 +0.5
      comp=Z,9.8nm,0.6s,baz=81,slow=8.7,SNR=136
MKAR  Makanchi Array    44.90 298    P     P      12 54 51.9 -0.2
MKAR  Makanchi Array    44.90 298   eP     P      12 54 52.5 +0.5
SEM   Semipalatinsk     44.98 303   eP     P      12 54 51.7 -1.2
      comp=Z,8.7nm,0.8s,baz=304
SEM   Semipalatinsk     44.98 303   eP     P      12 54 51.6 -1.2
SEM                                  pmax  pmax
      comp=Z,9.0nm,0.8s
MAKZ  Makanchi          45.10 298    P     P      12 54 53.7 +0.1
MAKZ                                 pmax  pmax
      comp=Z,14nm,0.8s
MAKZ  Makanchi          45.10 298    P     P      12 54 53.7 +0.1
MAKZ                                 IAmb  IAmb   12 54 56.1
      comp=Z,14nm,0.8s
EPYK  Eagle Plains      45.76  33    P     P      12 55 00.0 +1.4
      baz=279
EPYK  Eagle Plains      45.76  33    P     P      12 55 00.1 +1.5
KURK  Kurchatov         45.87 304d iP    P      12 55 00.0 +0.4
KURK                                 pmax  pmax
      comp=Z,15nm,1.1s
KURK  Kurchatov         45.87 304    P     P      12 54 59.1 -0.5
KURK                                 IAmb  IAmb   12 55 00.7
      comp=Z,13nm,1.0s
KURK  Kurchatov         45.87 304   eP     P      12 55 00.0 +0.4
SIJI  Sorong            46.35 203    LR    LR     13 10 47.2
      comp=Z,41nm,21.6s,baz=45,slow=31
LSA   Lhasa             46.36 272    P     P      12 55 05.2 +0.9
LSA                                  pmax  pmax
      comp=Z,10.0nm,0.8s
LSA   Lhasa             46.36 272    P     P      12 55 05.2 +0.9
LSA                                  IAmb  IAmb   12 55 06.5
      comp=Z,10.0nm,0.8s
HYT   Haines Junctio    46.52  41    P     P      12 55 05.8 +1.1
INK   Inuvik            46.66  30    P     P      12 55 06.7 +1.2
      comp=Z,21nm,0.8s,baz=286,slow=7.2,SNR=65
INK   Inuvik            46.66  30    P     P      12 55 06.1 +0.6
CMMT  Chiang Mai        47.33 255    P     P      12 55 25.4  +14
      comp=Z,6.7nm,0.9s
CM36  Chiang Mai Arr    47.42 254    P     P      12 55 27.0  +15
CMAR  Chiang Mai Arr    47.57 254    P     P      12 55 14.2 +1.0
      comp=Z,0.7nm,0.6s,baz=41,slow=6.8,SNR=5.3
CMAR                                 pP    pwP    12 55 28.6 -0.3
      comp=Z,3.1nm,0.7s,baz=42,slow=7.3,SNR=12
CMAR                                 PcP   PcP    12 56 43.9 +1.3
      comp=Z,0.8nm,0.3s,baz=17,slow=2.6,SNR=6.2
CMAR                                 LR    LR     13 15 19.0
      comp=Z,45nm,20.9s,baz=61,slow=36
CMAR  Chiang Mai Arr    47.57 254    P     P      12 55 13.5 +0.2
GTOI  Gorontalo         47.79 214    P     P      12 55 13.3 -1.6
      comp=Z,6.5nm,1.0s
PDGK  Podgornoye        48.06 295  i P     P      12 55 17.0  0.0
PDGK                                 pmax  pmax
      comp=Z,13nm,1.1s
TDK   Taldyqorghan      48.09 297   eP     P      12 55 17.2 +0.2
      comp=Z,25nm,0.8s,baz=297
TDK   Taldyqorghan      48.09 297   eP     P      12 55 17.2 +0.2
TDK                                  pmax  pmax
      comp=Z,25nm,0.8s
SHLS  Shalkode          48.16 294   eP     P      12 55 15.4 -2.4
      comp=Z,11nm,0.8s,baz=294
SHLS  Shalkode          48.16 294   eP     P      12 55 15.3 -2.4
SHLS                                 pmax  pmax
      comp=Z,11nm,0.8s
SHL   Shillong          48.17 267    P     P      12 55 17.9 -0.2
SHL                                  pmax  pmax
      comp=Z,13nm,1.0s
SHL   Shillong          48.17 267    P     P      12 55 17.9 -0.2
SHL                                  IAmb  IAmb   12 55 18.7
      comp=Z,13nm,1.0s
MRSI  Marisa            48.37 215    P     P      12 55 17.2 -2.2
      comp=Z,19nm,1.0s
UZB   Uzynbulak         48.45 295   eP     P      12 55 19.9 -0.1
      comp=Z,4.1nm,0.8s,baz=295
UZB   Uzynbulak         48.45 295   eP     P      12 55 19.9 -0.1
UZB                                  pmax  pmax
      comp=Z,4.0nm,0.8s
KPKS  Kokpek            48.54 295   eP     P      12 55 20.8 +0.1
      comp=Z,19nm,1.1s,baz=295
KPKS  Kokpek            48.54 295   eP     P      12 55 20.7 +0.1
KPKS                                 pmax  pmax
      comp=Z,19nm,1.1s
SATY  Saty              48.90 295   eP     P      12 55 23.5  0.0
      comp=Z,4.2nm,0.7s,baz=295
SATY  Saty              48.90 295   eP     P      12 55 23.4  0.0
SATY                                 pmax  pmax
      comp=Z,4.0nm,0.7s
SANI  Sanana            49.13 209    P     P      12 55 24.0 -1.2
      comp=Z,12nm,1.1s
MSAI  Masohi            49.38 205    P     P      12 55 24.9 -2.3
CHKK  Chushkaly         49.49 296   eP     P      12 55 27.6 -0.2
      baz=296
CHKK  Chushkaly         49.49 296   eP     P      12 55 27.5 -0.2
C36M  Paulatuk          49.74  28    P     P      12 55 30.2 +0.9
      baz=287,SNR=18
C36M  Paulatuk          49.74  28    P     P      12 55 28.8 -0.5
MDOK  Medeo             49.75 295   eP     P      12 55 30.0 +0.1
      baz=296
MDOK  Medeo             49.75 295   eP     P      12 55 30.0 +0.1
AAA   Alma-Ata          49.82 296   eP     P      12 55 31.1 +0.7
      comp=Z,18nm,1.1s,baz=296
AAA   Alma-Ata          49.82 296   eP     P      12 55 31.0 +0.7
AAA                                  pmax  pmax
      comp=Z,18nm,1.1s
AAA   Alma-Ata          49.82 296   eP     P      12 55 31.0 +0.7
TNSS  Tian-Shan         49.87 295   eP     P      12 55 31.5 +0.3
      baz=295
TNSS  Tian-Shan         49.87 295   eP     P      12 55 31.5 +0.3
KUU   Kurty             49.90 297   eP     P      12 55 30.3 -0.6
      comp=Z,14nm,0.8s,baz=297
KUU   Kurty             49.90 297   eP     P      12 55 30.3 -0.6
KUU                                  pmax  pmax
      comp=Z,14nm,0.8s
BRVK  Borovoye          49.91 310⇓iP    P      12 55 31.3 +0.5
BRVK                                 pmax  pmax
      comp=Z,8.0nm,0.8s
BRVK  Borovoye          49.91 310    P     P      12 55 30.3 -0.5
BRVK                                 IAmb  IAmb   12 55 32.0
      comp=Z,7.8nm,0.9s
BRVK  Borovoye          49.91 310   eP     P      12 55 31.3 +0.5
MTBS  Maitube           50.17 296   eP     P      12 55 33.6 +0.6
      baz=296
MTBS  Maitube           50.17 296   eP     P      12 55 33.6 +0.6
ULHL  Ulahol            50.69 295    P     P      12 55 37.7 +0.6
      SNR=7.5
TKM2  Tokmak 2          50.81 296    P     P      12 55 39.1 +1.0
      SNR=31
TKM2  Tokmak 2          50.81 296  i P     P      12 55 38.8 +0.8
TKM2                                 pmax  pmax
      comp=Z,26nm,1.1s
DLBC  Dease Lake        50.86  42    P     P      12 55 39.8 +1.8
      comp=Z,6.4nm,0.9s,baz=281,slow=6.1,SNR=12
DLBC                                 pP    pwP    12 55 54.6 +0.8
      comp=Z,4.0nm,0.7s,baz=254,slow=3.9,SNR=3.2
DLBC                                 LR    LR     13 17 53.2
      comp=Z,20nm,18.9s,baz=279,slow=37
BTLS  Baital            50.88 299   eP     P      12 55 37.7 -0.5
      comp=Z,4.1nm,0.6s,baz=299
BTLS  Baital            50.88 299   eP     P      12 55 37.7 -0.5
BTLS                                 pmax  pmax
      comp=Z,4.0nm,0.6s
SGDS  Sogindy           51.20 297   eP     P      12 55 41.1 +0.3
      comp=Z,4.4nm,0.6s,baz=297
SGDS  Sogindy           51.20 297   eP     P      12 55 41.1 +0.3
SGDS                                 pmax  pmax
      comp=Z,4.0nm,0.6s
KBK   Karagaybulak      51.35 296    P     P      12 55 43.0 +0.9
      SNR=18
USP   Ospenovka         51.37 297    P     P      12 55 42.8 +0.7
      SNR=24
AAK   Ala-Archa         51.66 296    P     P      12 55 44.9 +0.6
      SNR=13
AAK   Ala-Archa         51.66 296 ceP    P      12 55 44.7 +0.3
AAK                                  pmax  pmax
      comp=Z,50nm,1.3s
AAK   Ala-Archa         51.66 296    P     P      12 55 44.6 +0.3
AAK                                  IAmb  IAmb   12 55 46.5
      comp=Z,9.5nm,0.8s
AAK   Ala-Archa         51.66 296   eP     P      12 55 44.7 +0.3
EKS2  Erkin-Say         52.12 296    P     P      12 55 48.2 +0.5
      SNR=24
KSH   Kashi             52.14 292    P     P      12 55 51.9 +3.9
KSH                                  pP    sP     12 56 05.2 -1.5
KSH                                  PP    PP     12 57 51.9 +5.5
KSH                                  S     S      13 03 09.9 +1.2
KSH                                  pmax  pmax
      comp=Z,9.0nm,1.2s
KSH                                  pmax  pmax
      comp=Z,540nm,6.0s
AML   Almayashu         52.42 296    P     P      12 55 51.4 +1.1
      SNR=13
EUNU  Eureka            53.21  10    P     P      12 55 54.7 -0.5
EUNU                                 IAmb  IAmb   12 55 55.8
      comp=Z,13nm,0.7s
SVE   Sverdlovsk        53.52 317⇑eP    P      12 55 58.1 +0.4
SVE                                  pmax  pmax
      comp=Z,17nm,0.9s
SVE   Sverdlovsk        53.52 317   eP     P      12 55 58.1 +0.4
DZA   Taraz             53.60 298   eP     P      12 55 58.6 +0.1
      comp=Z,5.6nm,0.8s,baz=298
DZA   Taraz             53.60 298   eP     P      12 55 58.6 +0.1
DZA                                  pmax  pmax
      comp=Z,6.0nm,0.8s
KK31  Karatay Array     54.03 298    P     P      12 56 02.1 +0.4
KK31                                 pmax  pmax
      comp=Z,14nm,0.7s
KK31  Karatay Array     54.03 298    P     P      12 56 02.1 +0.4
KK31                                 IAmb  IAmb   12 56 02.7
      comp=Z,14nm,0.7s
KKAR  Karatay Array     54.03 298    P     P      12 56 01.4 -0.2
KKAR                                 pmax  pmax
      comp=Z,14nm,0.7s
KKAR  Karatay Array     54.03 298    P     P      12 56 01.4 -0.2
KKAR                                 IAmb  IAmb   12 56 02.7
      comp=Z,14nm,0.7s
KKAR  Karatay Array     54.03 298    P     P      12 56 01.9 +0.3
ARU   Arti              54.73 317d iP    P      12 56 06.2 -0.3
ARU                                  S     S      13 03 44.7 +1.7
ARU                                  SS    SS     13 07 24.5 -1.4
ARU                                  pmax  pmax
      comp=Z,14nm,0.7s
ARU   Arti              54.73 317    P     P      12 56 06.2 -0.3
ARU   Arti              54.73 317   eP     P      12 56 06.1 -0.4
IUG   Iuzhnay           54.80 297   eP     P      12 56 07.5 +0.1
      comp=Z,6.1nm,1.2s,baz=297
IUG   Iuzhnay           54.80 297   eP     P      12 56 07.5 +0.1
IUG                                  pmax  pmax
      comp=Z,6.0nm,1.2s
HOPEN Hopen             55.01 346   eP     P      12 56 08.1 -0.1
SPA0  Spitsbergen Ar    55.19 349   eP     P      12 56 09.3 -0.2
SPITS Spitsbergen Ar    55.19 349    P     P      12 56 08.7 -0.8
SPITS                                pmax  pmax
      comp=Z,3.0nm,0.4s
RES   Resolute Bay      55.29  17    P     P      12 56 09.8 -0.4
      comp=Z,24nm,0.7s,baz=322,slow=7.4,SNR=124
RES   Resolute Bay      55.29  17    P     P      12 56 10.0 -0.2
RES                                  pmax  pmax
      comp=Z,26nm,0.7s
RES   Resolute Bay      55.29  17    P     P      12 56 10.0 -0.2
YKA   Yellowknife Ar    56.03  34    P     P      12 56 16.3 +0.6
      comp=Z,8.4nm,0.7s,baz=300,slow=5.8,SNR=175
YKA                                  pP    pwP    12 56 31.5 -0.4
      comp=Z,2.6nm,0.6s,baz=302,slow=6.3,SNR=6.0
NIL   Nilore            57.05 287    P     P      12 56 23.9 +0.4
NIL                                  pmax  pmax
      comp=Z,21nm,0.7s
NIL   Nilore            57.05 287    P     P      12 56 23.9 +0.4
AB31  Akbulak array     57.42 309  i P     P      12 56 26.0 +0.2
AB31                                 pmax  pmax
      comp=Z,4.0nm,0.4s
ABKAR Akbulak array     57.42 309    P     P      12 56 25.2 -0.6
ABKAR Akbulak array     57.42 309    P     P      12 56 25.8  0.0
KIRV  Kirov             57.99 322⇓eP    P      12 56 29.2 -0.4
TULEG Thule             58.18   9    P     P      12 56 29.5 -1.2
APA   Apatity           58.79 336⇑iP    P      12 56 51.7  +17
APA                                  pmax  pmax
      comp=Z,19nm,1.1s
APA                                  MLR   MLR
      comp=Z,2µm,16.0s
PSI   Prapat            58.90 241    LR    LR     13 22 55.9
      comp=Z,22nm,18.7s,baz=66,slow=37
TMCR  Tamitsa           59.38 331   eP     P      12 56 38.1 -1.1
TMCR                                 pmax  pmax
      comp=Z,16nm,1.3s
KBL   Kabul             59.46 290    P     P      12 56 39.6 -1.0
KBL                                  pmax  pmax
      comp=Z,12nm,0.9s
KBL   Kabul             59.46 290    P     P      12 56 39.5 -1.0
KBL                                  IAmb  IAmb   12 56 40.6
      comp=Z,12nm,0.8s
D03D  Eldon             59.53  52    P     P      12 56 42.0 +1.5
      baz=302
ARA0  ARCESS Array S    59.66 340   eP     P      12 56 41.4 +0.4
ARCES ARCESS Array B    59.66 340    P     P      12 56 41.1  0.0
      comp=Z,2.1nm,0.3s,baz=46,slow=7.0,SNR=26
ARCES                                PcP   PcP    12 57 27.7  0.0
      comp=Z,8.3nm,1.1s,baz=56,slow=4.9,SNR=1.6
ARCES                                LR    LR     13 25 56.4
      comp=Z,94nm,19.1s,baz=270,slow=40
ARCES ARCESS Array B    59.66 340    P     P      12 56 41.2 +0.1
ARCES                                pmax  pmax
      comp=Z,79nm,1.9s
ARCES ARCESS Array B    59.66 340    P     P      12 56 41.2 +0.1
B05A  Bryant            59.70  51    P     P      12 56 42.8 +1.1
      baz=302
DAG   Danmarks Havn     59.81 356  i P     P      12 56 41.5 -0.5
      comp=Z,10nm,0.9s
DAG   Danmarks Havn     59.81 356  i P     P      12 56 41.5 -0.5
DAG                                  pmax  pmax
      comp=Z,11nm,0.9s
DAG   Danmarks Havn     59.81 356  i P     P      12 56 41.6 -0.5
DAG                                  IAmb  IAmb   12 56 42.2
      comp=Z,10nm,0.9s
KTK1  Kautokeino        60.60 340   eP     P      12 56 47.4 -0.1
KLMR  Klimovskoe        60.84 328   eP     P      12 56 47.7 -1.5
KLMR                                 pmax  pmax
      comp=Z,30nm,0.9s
KLMR  Klimovskoe        60.84 328   eP     P      12 56 47.8 -1.5
KLMR                                 AMP          12 56 49.5
      comp=Z,30nm,0.9s
TRO   Tromso            61.17 342   eP     P      12 56 51.0 -0.3
B08A  Colville Reser    61.20  49    P     P      12 56 52.3 +0.3
LEM   Lembang           61.57 226    LR    LR     13 24 47.0
      comp=Z,12nm,18.1s,baz=86,slow=37
C09A  Chrisman Ranch    62.10  50    P     P      12 56 58.2 +0.2
C09A                                 IAmb  IAmb   12 56 59.5
      comp=Z,5.7nm,0.8s
F07A  Phinny Hill Vi    62.25  52    P     P      12 56 59.1 +0.2
F07A                                 IAmb  IAmb   12 57 19.4
      comp=Z,11nm,0.8s
BELG  Belogornoye       62.28 317⇑iP    P      12 56 59.1  0.0
BELG                                 pmax  pmax
      comp=Z,6.0nm,0.8s
DBG   Daneborg          62.32 356  i P     P      12 56 58.5 -0.5
DBG                                  IAmb  IAmb   12 56 59.5
      comp=Z,7.5nm,0.7s
NEW   Newport           62.47  49    LR    LR     13 28 47.9
      comp=Z,26nm,18.2s,baz=309,slow=40
NEW   Newport           62.47  49    P     P      12 57 01.3 +0.8
      baz=305
NEW   Newport           62.47  49    P     P      12 57 00.4 -0.1
NEW                                  pmax  pmax
      comp=Z,8.0nm,1.1s
NEW   Newport           62.47  49    P     P      12 57 00.4 -0.1
NEW                                  IAmb  IAmb   12 57 19.8
      comp=Z,8.0nm,1.1s
L04D  Klamath Falls     62.94  57    P     P      12 57 05.3 +1.5
      baz=305
J05D  Fort Rock, OR     62.97  55    P     P      12 57 05.8 +1.7
      baz=305
UPNV  Upernavik         63.00   8  i P     P      12 57 02.6 -1.0
UPNV                                 IAmb  IAmb   12 57 03.8
      comp=Z,13nm,0.7s
N02D  Trinity Center    63.41  58    P     P      12 57 08.8 +1.8
      baz=306
M04C  Macdoel           63.48  57    P     P      12 57 08.9 +1.5
      baz=306
FAUS  Fauske            63.77 341   eP     P      12 57 08.8  0.0
WR0   Warramunga Arr    64.11 193    P     P      12 57 11.0 -0.4
WRAB  Tennant Creek     64.11 194⇑eP    P      12 57 11.0 -0.5
WRAB                                 pmax  pmax
      comp=Z,5.0nm,0.8s
WRA   Warramunga Arr    64.12 194    P     P      12 57 11.1 -0.5
      comp=Z,4.1nm,0.7s,baz=13,slow=6.7,SNR=38
WRA                                  pP    pwP    12 57 28.8 +0.5
      comp=Z,2.5nm,0.7s,baz=7.6,slow=6.7,SNR=6.4
WRA                                  LR    LR     13 22 46.6
      comp=Z,8.6nm,21.9s,baz=300,slow=34
WRA   Warramunga Arr    64.12 194    P     P      12 57 10.5 -1.0
HRA   Herat             64.15 294    P     P      12 57 11.9 -0.2
HRA                                  IAmb  IAmb   12 57 13.5
      comp=Z,13nm,0.7s
SUMG  Summit            64.29   2  i P     P      12 57 13.2 +0.7
      comp=Z,77nm,0.7s
SUMG  Summit            64.29   2  i P     P      12 57 13.2 +0.7
SUMG                                 pmax  pmax
      comp=Z,77nm,0.7s
SUMG  Summit            64.29   2    P     P      12 57 12.9 +0.4
SUMG  Summit            64.29   2  i P     P      12 57 13.3 +0.7
SUMG                                 IAmb  IAmb   12 57 13.8
      comp=Z,77nm,0.7s
JTMT  Jette             64.32  48    P     P      12 57 13.4 +0.5
O03E  Paynes Creek      64.37  58    P     P      12 57 13.4 +0.2
      baz=306
GEYT  Alibeck           64.76 299    P     P      12 57 16.1 +0.4
      comp=Z,8.5nm,0.6s,baz=14,slow=3.1,SNR=15
GEYT                                 LR    LR     13 28 06.3
      comp=Z,106nm,18.9s,baz=230,slow=38
GEYT  Alibeck           64.76 299    P     P      12 57 15.9 +0.1
GYA0B ALIBECK ARRAY     64.76 299    P     P      12 57 16.3 +0.5
GYA0B                                IAmb  IAmb   12 57 17.0
      comp=Z,21nm,1.2s
MOS   Moscow            64.85 324   eP     P      12 57 13.7 -2.2
WVOR  Wild Horse Val    65.02  55    P     P      12 57 18.6 +1.1
WVOR                                 pmax  pmax
      comp=Z,9.0nm,2.1s
MSO   Missoula          65.06  48    P     P      12 57 18.0 +0.4
      baz=308
MSO   Missoula          65.06  48    P     P      12 57 17.9 +0.3
FINES FINESS Array B    65.28 333    P     P      12 57 18.4 -0.3
      comp=Z,24nm,0.7s,baz=44,slow=8.0,SNR=90
FINES                                pP    pP     12 57 34.3 +1.9
      comp=Z,6.9nm,0.6s,baz=63,slow=6.8,SNR=2.9
FINES                                LR    LR     13 27 24.3
      comp=Z,55nm,19.8s,baz=288,slow=37
FINES FINESS Array B    65.28 333  i P     P      12 57 18.3 -0.4
FINES                                pmax  pmax
      comp=Z,24nm,0.7s
FINES FINESS Array B    65.28 333    P     P      12 57 18.8 +0.1
BEKR  Beckworth         65.51  58    P     P      12 57 21.6 +0.9
BEKR                                 IAmb  IAmb   12 57 22.6
      comp=Z,7.9nm,0.9s
OBN   Obninsk           65.71 324⇑iP    P      12 57 21.7 +0.2
OBN                                 e*PP   pP     12 57 35.5 +0.3
OBN                                 e*SP   sP     12 57 40.6 -0.2
OBN                                 e             12 57 50.3
OBN                                 e             12 59 46.5
OBN                                 ePPP   PPP    13 01 20.3
OBN                                 eS     S      13 06 05.5 +1.8
OBN                                 eSS    SS     13 10 20.6 +2.9
OBN                                  pmax  pmax
      comp=Z,44nm,1.4s
OBN                                  MLR   MLR
      comp=Z,135nm,16.0s
OBN   Obninsk           65.71 324   eP     P      12 57 22.2 +0.7
VRH   Novokhopyorsk     65.91 318   eP     P      12 57 22.1 -0.8
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VRH				pmax	pmax		
	comp=Z,30nm,0.7s						
FFC	**Flin Flon**	**65.92**	**36**	P	**P**	**12 57 23.0**	**+0.1**
FFC				pmax	pmax		
	comp=Z,17nm,0.8s						
FFC	**Flin Flon**	**65.92**	**36**	P	**P**	**12 57 23.0**	**+0.1**
FFC				IAmb	IAmb	12 57 24.5	
	comp=Z,17nm,0.8s						
SCO	**Scoresbysund**	**66.20**	**356**	*i* P	**P**	**12 57 25.2**	**+0.8**
SCO	**Scoresbysund**	**66.20**	**356**	*i* P	**P**	**12 57 25.2**	**+0.8**
SCO	**Scoresbysund**	**66.20**	**356**	P	**P**	**12 57 24.1**	**-0.3**
SCO				IAmb	IAmb	12 58 02.2	
	comp=Z,36nm,1.9s						
SCO	**Scoresbysund**	**66.20**	**356**	*i* P	**P**	**12 57 25.2**	**+0.8**
PAHR	**Pah Rah Range**	**66.21**	**57**	P	**P**	**12 57 26.3**	**+1.1**
PAHR				IAmb	IAmb	12 57 27.2	
	comp=Z,9.8nm,1.0s						
HRY	**Holter Researc**	**66.27**	**48**	P	**P**	**12 57 26.2**	**+0.7**
FCC	**Fort Churchill**	**66.28**	**30**	P	**P**	**12 57 25.5**	**+0.4**
FCC				pmax	pmax		
	comp=Z,13nm,0.6s						
FCC	**Fort Churchill**	**66.28**	**30**	P	**P**	**12 57 25.5**	**+0.4**
FCC				IAmb	IAmb	12 57 25.7	
	comp=Z,13nm,0.6s						
VCNR	**Virginia City**	**66.29**	**58**	P	**P**	**12 57 26.8**	**+1.0**
VCNR				IAmb	IAmb	12 57 28.0	
	comp=Z,9.2nm,0.8s						
LPSR	**Galich'ya Gora**	**66.32**	**321**	*e*P	**P**	**12 57 23.2**	**-2.3**
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
LRM	**Limekiln Ridge**	**66.49**	**49**	P	**P**	**12 57 28.3**	**+1.2**
EGMT	**Eagleton**	**66.55**	**46**	P	**P**	**12 57 28.1**	**+0.9**
	baz=309,SNR=7.8						
EGMT	**Eagleton**	**66.55**	**46**	P	**P**	**12 57 27.6**	**+0.4**
EGMT				IAmb	IAmb	12 57 28.4	
	comp=Z,9.2nm,0.7s						
DLMT	**Dillon**	**66.70**	**49**	P	**P**	**12 57 28.3**	**0.0**
HLID	**Hailey**	**66.80**	**52**	P	**P**	**12 57 29.8**	**+0.9**
	baz=308						
HLID	**Hailey**	**66.80**	**52**	P	**P**	**12 57 29.2**	**+0.3**
NSS	**Namsos**	**66.89**	**341**	*e*P	**P**	**12 57 28.9**	**0.0**
BOZ	**Bozeman (W)**	**67.08**	**48**	P	**P**	**12 57 31.4**	**+0.7**
	baz=309,SNR=16						
BOZ	**Bozeman (W)**	**67.08**	**48**	P	**P**	**12 57 31.8**	**+1.1**
BOZ				pmax	pmax		
	comp=Z,8.0nm,0.7s						
BOZ	**Bozeman (W)**	**67.08**	**48**	P	**P**	**12 57 31.8**	**+1.1**
BOZ				IAmb	IAmb	12 57 32.4	
	comp=Z,8.2nm,0.7s						
VSR	**Storozhevoye**	**67.12**	**320**	*e*P	**P**	**12 57 29.5**	**-1.1**
VSR				pmax	pmax		
	comp=Z,20nm,0.6s						
VORD	**Divnogorie**	**67.23**	**319**	*e*P	**P**	**12 57 30.3**	**-1.0**
VORD				pmax	pmax		
	comp=Z,10.0nm,0.6s						
VSU	**Vasula**	**67.24**	**331**	*e*P	**P**	**12 57 31.4**	**+0.2**
VSU	**Vasula**	**67.24**	**331**	⇓*i*P	**P**	**12 57 31.5**	**+0.2**
VSU				pmax	pmax		
	comp=Z,84nm,0.8s						
RYN	**Ryan**	**67.39**	**58**	P	**P**	**12 57 33.7**	**+0.9**
RYN				IAmb	IAmb	12 57 34.9	
	comp=Z,8.3nm,0.9s						
LHV	**Little Huntoon**	**67.64**	**58**	P	**P**	**12 57 35.5**	**+1.4**
LHV				IAmb	IAmb	12 57 37.0	
	comp=Z,20nm,0.9s						
NVAR	**Mina Array Bea**	**67.65**	**58**	P	**P**	**12 57 35.7**	**+1.2**
	comp=Z,7.6nm,0.7s,baz=285,slow=6.5,SNR=68						
NVAR				pP	**sP**	**12 57 53.2**	**+0.4**
	comp=Z,5.2nm,0.8s,baz=284,slow=7.0,SNR=10						
NVAR	**Mina Array Bea**	**67.65**	**58**	P	**P**	**12 57 35.3**	**+0.8**
MDPB	**Devils Postpil**	**67.66**	**59**	P	**P**	**12 57 35.0**	**+0.3**
ICESG	**Greenland Ices**	**67.74**	**3**	⇑*i*P	**P**	**12 57 35.2**	**+0.5**
ICESG				IAmb	IAmb	12 57 35.9	
	comp=Z,42nm,0.9s						
NV11	**Mina Array Sit**	**67.74**	**58**	P	**P**	**12 57 35.4**	**+0.4**
YHL	**Hebgen Lake**	**67.80**	**49**	P	**P**	**12 57 35.7**	**+0.3**
AS31	**Alice Springs**	**67.84**	**193**	P	**P**	**12 57 35.5**	**0.0**
ASAR	**Alice Springs**	**67.84**	**193**	P	**P**	**12 57 36.1**	**+0.7**
	comp=Z,2.2nm,0.7s,baz=9.8,slow=6.2,SNR=34						
ASAR				pP	**sP**	**12 57 53.6**	**-0.1**
	comp=Z,1.3nm,0.7s,baz=12,slow=5.5,SNR=4.8						
ASAR	**Alice Springs**	**67.84**	**193**	P	**P**	**12 57 35.5**	**+0.1**
YHB	**Horse Butte**	**67.85**	**49**	P	**P**	**12 57 36.4**	**+0.7**
YHH	**Holmes Hill**	**68.02**	**49**	P	**P**	**12 57 38.0**	**+1.2**
ELK	**Elko**	**68.07**	**54**	LR	LR	13 21 49.8	
	comp=Z,26nm,21.7s,baz=324,slow=31						
MTSE	**Matsula**	**68.08**	**332**	*e*P	**P**	**12 57 33.1**	**-3.4**
PALK	**Pallekele**	**68.12**	**259**	LR	LR	13 29 39.2	
	comp=Z,29nm,19.8s,baz=148,slow=38						
H17A	**Grant Village**	**68.42**	**49**	P	**P**	**12 57 41.9**	**+2.6**
	baz=310,SNR=5.8						
H17A	**Grant Village**	**68.42**	**49**	P	**P**	**12 57 41.0**	**+1.7**
H17A				IAmb	IAmb	12 57 42.8	
	comp=Z,10nm,1.1s						
TPH	**Tonopah**	**68.54**	**58**	P	**P**	**12 57 40.2**	**+0.1**
TPH				pmax	pmax		
	comp=Z,51nm,0.8s						
TPH	**Tonopah**	**68.54**	**58**	P	**P**	**12 57 40.2**	**+0.1**
RLMT	**Red Lodge**	**68.67**	**48**	P	**P**	**12 57 41.3**	**+0.6**
	baz=310						
RLMT	**Red Lodge**	**68.67**	**48**	P	**P**	**12 57 41.5**	**+0.8**
RLMT				IAmb	IAmb	12 58 42.9	
	comp=Z,18nm,1.9s						
MOOW	**Moose Ponds**	**68.74**	**50**	P	**P**	**12 57 41.4**	**+0.1**
VES	**Vestal, Richgr**	**68.77**	**60**	P	**P**	**12 57 41.6**	**+0.4**
	baz=309						
HVU	**Hansel Valley**	**68.85**	**52**	P	**P**	**12 57 42.4**	**+0.5**
HVU				pmax	pmax		
	comp=Z,4.0nm,0.8s						
HVU	**Hansel Valley**	**68.85**	**52**	P	**P**	**12 57 42.4**	**+0.5**
LOHW	**Long Hollow**	**68.91**	**50**	P	**P**	**12 57 43.4**	**+1.1**
REDW	**Red Top Meadow**	**68.93**	**50**	P	**P**	**12 57 42.6**	**+0.1**
CWC	**Cottonwood Cre**	**69.03**	**59**	P	**P**	**12 57 44.0**	**+0.9**
	baz=309						
DGMT	**Dagmar**	**69.07**	**43**	P	**P**	**12 57 43.7**	**+0.7**
	baz=312						
DGMT	**Dagmar**	**69.07**	**43**	P	**P**	**12 57 43.1**	**+0.1**
DGMT				IAmb	IAmb	12 57 44.4	
	comp=Z,17nm,0.8s						
SFJD	**Kangerlussuaq**	**69.11**	**7**	*i* P	**P**	**12 57 42.8**	**0.0**
SFJD	**Kangerlussuaq**	**69.11**	**7**	*i* P	**P**	**12 57 42.8**	**0.0**
SFJD	**Kangerlussuaq**	**69.11**	**7**	*i* P	**P**	**12 57 42.8**	**0.0**
GRAC	**Grapevine Rang**	**69.12**	**59**	P	**P**	**12 57 44.9**	**+1.3**
	baz=309						
UPP	**Uppsala**	**69.18**	**335**	*e*P	**P**	**12 57 42.7**	**-0.6**
GOF	**Gofitskoye**	**69.22**	**313**	⇑*i*P	**P**	**12 57 44.7**	**+0.8**
GOF				pmax	pmax		
	comp=Z,72nm,0.6s						
LAO	**LASA Array**	**69.24**	**45**	P	**P**	**12 57 45.4**	**+1.3**
	baz=312						
LAO	**LASA Array**	**69.24**	**45**	P	**P**	**12 57 44.2**	**+0.1**
ISA	**Isabella, Lake**	**69.27**	**60**	P	**P**	**12 57 44.6**	**+0.2**
	baz=309						
R11A	**Troy Canyon, C**	**69.37**	**56**	P	**P**	**12 57 46.1**	**+0.9**
	baz=310,SNR=11						
R11A	**Troy Canyon, C**	**69.37**	**56**	P	**P**	**12 57 45.5**	**+0.4**
ARVC	**Arvin**	**69.38**	**61**	P	**P**	**12 57 45.7**	**+0.6**
	baz=309						
SEKA	**Sheki**	**69.39**	**307**	P	**P**	**12 57 45.0**	**-0.1**
ZKTA	**Zakatala**	**69.45**	**308**	P	**P**	**12 57 46.1**	**+0.7**
LGD	**Lagodekhi**	**69.54**	**308**	P	**P**	**12 57 46.6**	**+0.6**
IDID	**Didziasalis**	**69.57**	**328**	*e*P	**P**	**12 57 46.1**	**+0.3**
ISAL	**Salakas**	**69.61**	**329**	*e*P	**P**	**12 57 46.4**	**+0.3**
MPMC	**Manual Prospec**	**69.64**	**59**	P	**P**	**12 57 47.8**	**+0.9**
	baz=309,SNR=9.7						
DOMB	**Dombas**	**69.70**	**340**	*e*P	**P**	**12 57 46.7**	**+0.1**
MNK	**Minsk**	**69.73**	**327**	*i* P	**P**	**12 57 45.9**	**-1.0**
	comp=E,5.0nm,1.6s						
MNK				*i* P	**P**	**12 57 45.9**	**-1.0**
	comp=N,20nm,1.0s						
MNK				*i* P	**P**	**12 57 45.9**	**-1.0**
	comp=Z,34nm,1.0s						
MNK				*i* PcP	**PcP**	**12 58 08.3**	**-1.0**
MNK				*i* PP	**PP**	**13 00 20.1**	**-0.8**
MNK				*i* PPP	PPP	13 02 01.6	
MNK				*i* S	**S**	**13 06 49.2**	**-2.6**
MNK				*i* SS	**SS**	**13 11 20.6**	**+0.9**
MNK				*i* SSS	SSS	13 14 38.5	
MNK				*i* LQ	LQ	13 23 33.9	
MNK				*i* LR	LR	13 28 52.0	
MNK				*i* LRM	MLR	13 30 26.9	
	comp=N,427nm,21.3s						
MNK				*i* LRM	MLR	13 30 35.3	
	comp=Z,92nm,14.2s						
MNK				*i* LRM	MLR	13 30 39.8	
	comp=E,38nm,20.6s						
MNGR	**Mingechevir, A**	**69.74**	**307**	P	**P**	**12 57 47.8**	**+0.7**
IIGN	**Ignalina**	**69.74**	**329**	*e*P	**P**	**12 57 46.4**	**-0.5**
OSI	**Osito Audit: C**	**69.77**	**61**	P	**P**	**12 57 48.8**	**+1.3**
	baz=309						
FURC	**Furnace Creek,**	**69.77**	**59**	P	**P**	**12 57 48.8**	**+1.4**
	baz=310,SNR=17						
NC405	**NORSAR Array S**	**69.82**	**339**	P	**P**	**12 57 47.3**	**-0.1**
DUG	**Dugway, Tooele**	**69.85**	**54**	P	**P**	**12 57 49.2**	**+1.1**
	baz=310,SNR=6.1						
DUG	**Dugway, Tooele**	**69.85**	**54**	P	**P**	**12 57 48.2**	**+0.2**
DUG				pmax	pmax		
	comp=Z,4.0nm,0.8s						
DUG	**Dugway, Tooele**	**69.85**	**54**	P	**P**	**12 57 48.2**	**+0.2**
TPNV	**Topopah Spring**	**69.85**	**58**	P	**P**	**12 57 49.3**	**+1.1**
	baz=310,SNR=11						
TPNV	**Topopah Spring**	**69.85**	**58**	P	**P**	**12 57 48.3**	**+0.1**
TPNV				pmax	pmax		
	comp=Z,11nm,1.0s						
TPNV	**Topopah Spring**	**69.85**	**58**	P	**P**	**12 57 48.3**	**+0.1**
TPNV				IAmb	IAmb	12 57 50.2	
	comp=Z,11nm,0.9s						
NACGM	**Naroch**	**69.86**	**328**	*i* P	**P**	**12 57 47.8**	**+0.1**
NACGM				*i* P	**P**	**12 57 47.8**	**+0.1**
NACGM				*i* P	**P**	**12 57 47.8**	**+0.1**
NACGM				*i* PcP	**sP**	**12 58 07.2**	**+0.2**
NACGM				*i* PP	PP	13 00 12.9	-9.1
NACGM				*i* PPP	PPP	13 02 10.4	
NACGM				*i* S	**S**	**13 07 00.7**	**+7.4**
NACGM				*i* PS	**PnS**	**13 07 34.7**	**+10**
NACGM				*i* SS	**SS**	**13 11 23.0**	**+1.3**
NACGM				*i* SSS	SSS	13 14 19.0	
NACGM				*i* LQ	LQ	13 22 34.7	
NACGM				*i* LR	LR	13 26 40.6	
LRMC	**Laurel Mtn Rad**	**69.88**	**60**	P	**P**	**12 57 49.3**	**+1.0**
	baz=310						
NC204	**NORSAR Array S**	**69.93**	**339**	P	**P**	**12 57 48.0**	**0.0**
NCK	**Nalchik**	**69.94**	**311**	⇓*e*P	**P**	**12 57 49.7**	**+1.3**
NCK				pmax	pmax		
	comp=Z,13nm,0.2s						
NB201	**NORSAR Array S**	**69.99**	**339**	P	**P**	**12 57 47.6**	**-0.7**
NB2	**NORSAR Subarra**	**70.02**	**339**	P	**P**	**12 57 48.6**	**0.0**
	comp=Z,10.0nm,0.5s,baz=31,slow=6.5						
NB2	**NORSAR Subarra**	**70.02**	**339**	P	**P**	**12 57 48.6**	**0.0**
	baz=31,slow=6.5						
NOA	**NORSAR Array B**	**70.02**	**339**	P	**P**	**12 57 48.6**	**0.0**
	comp=Z,30nm,1.0s,baz=38,slow=5.8,SNR=78						
NOA				LR	LR	13 31 37.7	
	comp=Z,56nm,20.3s,baz=10.0,slow=38						
BW06	**Boulder Array**	**70.04**	**50**	P	**P**	**12 57 49.7**	**+0.4**
	baz=311,SNR=7.1						
BW06	**Boulder Array**	**70.04**	**50**	P	**P**	**12 57 49.2**	**-0.1**
PD31	**Pinedale Array**	**70.04**	**50**	P	**P**	**12 57 49.1**	**-0.2**
PDAR	**Pinedale Array**	**70.04**	**50**	P	**P**	**12 57 49.8**	**+0.5**
	comp=Z,2.7nm,0.6s,baz=127,slow=0.1,SNR=42						
PDAR				pP	**pwP**	**12 58 06.6**	**+0.6**
	comp=Z,1.8nm,0.6s,baz=286,slow=1.6,SNR=5.8						
PDAR				LR	LR	13 26 31.8	
	comp=Z,13nm,21.0s,baz=353,slow=34						
PDAR	**Pinedale Array**	**70.04**	**50**	P	**P**	**12 57 48.9**	**-0.4**
LKRN	**Lenkeran, Azer**	**70.06**	**305**	P	**P**	**12 57 49.9**	**+0.7**
EDW2	**Edwards Air Fo**	**70.06**	**61**	P	**P**	**12 57 50.5**	**+1.1**
	baz=310,SNR=7.7						
KIV	**Kislovodsk**	**70.13**	**312**	*e*P	**P**	**12 57 50.4**	**+0.7**
KIV				pmax	pmax		
	comp=Z,132nm,1.0s						
KIV				MLR	MLR		
	comp=Z,260nm,18.0s						
KIV	**Kislovodsk**	**70.13**	**312**	P	**P**	**12 57 50.7**	**+1.0**
KIV	**Kislovodsk**	**70.13**	**312**	*e*P	**P**	**12 57 50.4**	**+0.7**
NBO00	**NORSAR Array S**	**70.14**	**339**	P	**P**	**12 57 49.0**	**-0.3**
KBZ	**Khabaz**	**70.17**	**312**	P	**P**	**12 57 51.0**	**+1.3**
	comp=Z,22nm,0.8s,baz=72,slow=4.2,SNR=53						
KBZ				LR	LR	13 30 42.9	
	comp=Z,106nm,21.4s,baz=52,slow=38						
KBZ	**Khabaz**	**70.17**	**312***c*	*i*P	**P**	**12 57 50.8**	**+1.1**
KBZ				pmax	pmax		
	comp=Z,24nm,0.8s						
KBZ	**Khabaz**	**70.17**	**312**	*e*P	**P**	**12 57 50.8**	**+1.1**
NC602	**NORSAR Array S**	**70.19**	**339**	*e*P	**P**	**12 57 49.1**	**-0.4**
NORES	**NORESS Array B**	**70.19**	**339**	P	**P**	**12 57 49.2**	**-0.4**
NORES				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ZEI	**Tsey**	**70.24**	**310**	*e*P	**P**	**12 57 49.8**	**-0.7**
ZEI				pmax	pmax		
	comp=Z,18nm,1.0s						
DECC	**Green Verdugo**	**70.24**	**61**	P	**P**	**12 57 51.5**	**+1.1**
	baz=310						
GANJ	**Ganja**	**70.26**	**307**	P	**P**	**12 57 51.0**	**+0.6**
NAO01	**NORSAR Array S**	**70.27**	**339**	P	**P**	**12 57 49.9**	**-0.2**
PRN	**Pahroc Range**	**70.29**	**57**	P	**P**	**12 57 51.5**	**+0.7**
JLU	**Jordanelle**	**70.38**	**52**	P	**P**	**12 57 52.0**	**+0.6**
NLU	**North Lily Min**	**70.43**	**53**	P	**P**	**12 57 52.0**	**+0.3**
PABE	**Paberze**	**70.47**	**330**	*e*P	**P**	**12 57 50.5**	**-0.8**
SHOC	**Shoshone, Teco**	**70.50**	**59**	P	**P**	**12 57 53.1**	**+1.2**
	baz=310,SNR=5.5						
GSC	**Goldstone, Bar**	**70.55**	**60**	P	**P**	**12 57 53.4**	**+1.1**
	baz=310,SNR=7.0						
GSC	**Goldstone, Bar**	**70.55**	**60**	P	**P**	**12 57 53.3**	**+0.9**
GSC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
GSC	**Goldstone, Bar**	**70.55**	**60**	P	**P**	**12 57 53.3**	**+0.9**
NEY	**Neytrino**	**70.58**	**311**	⇓*i*P	**P**	**12 57 54.2**	**+1.7**
NEY				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ONI	**Oni**	**70.61**	**311**	P	**P**	**12 57 54.3**	**+1.7**
MPU	**Maple Canyon**	**70.65**	**53**	P	**P**	**12 57 53.6**	**+0.6**
BFSC	**Mount Baldy Ra**	**70.69**	**61**	P	**P**	**12 57 54.3**	**+1.0**
	baz=310,SNR=5.7						
SHPR	**Sheep Range**	**70.80**	**58**	P	**P**	**12 57 54.9**	**+0.9**
KZRT	**Kazreti**	**70.88**	**309**	P	**P**	**12 57 55.6**	**+1.4**
SKAR	**Skarslia**	**71.06**	**340**	*e*P	**P**	**12 57 55.4**	**+0.4**
OSL	**Oslo**	**71.08**	**339**	*e*P	**P**	**12 57 55.1**	**+0.1**
BBRC	**Big Bear Solar**	**71.14**	**61**	P	**P**	**12 57 57.0**	**+0.9**
	baz=310,SNR=7.0						
HEC	**Hector,Ludlow**	**71.15**	**60**	P	**P**	**12 57 57.1**	**+1.1**
	baz=310,SNR=12						
HYA	**Hoyanger**	**71.15**	**341**	*e*P	**P**	**12 57 55.8**	**+0.4**
CCUT	**Cedar City**	**71.23**	**56**	P	**P**	**12 57 57.4**	**+0.8**
MVU	**Marysvale**	**71.30**	**55**	P	**P**	**12 57 57.8**	**+0.8**
MVU				IAmb	IAmb	12 58 09.2	
	comp=Z,27nm,1.4s						
SZCU	**Shurtz Canyon**	**71.36**	**56**	P	**P**	**12 57 57.9**	**+0.5**
TMUT	**Trail Mountain**	**71.37**	**53**	P	**P**	**12 57 58.2**	**+0.7**
AKH	**Akhalkalaki**	**71.37**	**310**	P	**P**	**12 57 59.6**	**+2.2**
MURC	**Murrieta**	**71.39**	**61**	P	**P**	**12 57 58.2**	**+0.8**
	baz=310						
BGD	**Bogdanovka**	**71.41**	**309**	P	**P**	**12 58 01.6**	**+4.0**
GNI	**Garni**	**71.50**	**308**	⇑*e*P	**P**	**12 58 01.0**	**+2.9**
P17A	**Butcher Ranch,**	**71.53**	**53**	P	**P**	**12 57 58.7**	**+0.4**
GMRC	**Granite Mounta**	**71.60**	**59**	P	**P**	**12 57 59.9**	**+1.1**
	baz=310,SNR=12						
MTPU	**Mount Pierson**	**71.61**	**55**	P	**P**	**12 58 00.7**	**+1.6**
KONO	**Kongsberg**	**71.62**	**339**	*e*P	**P**	**12 57 58.6**	**+0.3**
LCMT	**Little Creek M**	**71.65**	**56**	P	**P**	**12 57 59.9**	**+0.9**
NAX	**Nakhchivan**	**71.70**	**307**	P	**P**	**12 57 59.8**	**+0.5**
ULM	**Lac du Bonnet**	**71.71**	**37**	P	**P**	**12 57 58.8**	**-0.2**
	comp=Z,5.3nm,0.7s,baz=326,slow=6.4,SNR=12						
ULM				pP	**pwP**	**12 58 14.8**	**-0.6**
	comp=Z,2.5nm,0.7s,baz=332,slow=8.5,SNR=3.2						
ULM	**Lac du Bonnet**	**71.71**	**37**	P	**P**	**12 57 59.0**	**0.0**
ULM				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ULM	**Lac du Bonnet**	**71.71**	**37**	P	**P**	**12 57 59.0**	**0.0**
MDND	**Maddock**	**71.73**	**41**	P	**P**	**12 57 59.4**	**+0.2**
	baz=315						
MDND	**Maddock**	**71.73**	**41**	P	**P**	**12 57 59.4**	**+0.2**
MDND				IAmb	IAmb	12 58 00.8	
	comp=Z,22nm,0.9s						
K22A	**Casper**	**71.79**	**48**	P	**P**	**12 58 00.2**	**+0.4**
	baz=313						
K22A	**Casper**	**71.79**	**48**	P	**P**	**12 57 59.8**	**-0.1**
PFO	**Pinyon Flats O**	**71.85**	**61**	LR	LR	13 24 17.9	
	comp=Z,26nm,20.8s,baz=316,slow=31						
PFO	**Pinyon Flats O**	**71.85**	**61**	P	**P**	**12 58 00.9**	**+0.6**
	baz=310						
PFO	**Pinyon Flats O**	**71.85**	**61**	P	**P**	**12 58 00.5**	**+0.2**
PFO				pmax	pmax		
	comp=Z,5.0nm,0.9s						
PFO	**Pinyon Flats O**	**71.85**	**61**	P	**P**	**12 58 00.5**	**+0.2**
TPFO	**Pinon Flats**	**71.86**	**61**	P	**P**	**12 58 00.9**	**+0.6**
	baz=310						
SRU	**San Rafael Swe**	**71.89**	**53**	P	**P**	**12 58 00.6**	**+0.1**
SRU				pmax	pmax		
	comp=Z,11nm,1.1s						
SRU	**San Rafael Swe**	**71.89**	**53**	P	**P**	**12 58 00.6**	**+0.1**
BELC	**Belle Mtn. Jos**	**71.89**	**60**	P	**P**	**12 58 00.8**	**+0.3**
	baz=310,SNR=6.9						
KNB	**Kanab**	**71.90**	**56**	P	**P**	**12 58 01.8**	**+1.2**
KNB				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KNB	**Kanab**	**71.90**	**56**	P	**P**	**12 58 01.8**	**+1.2**
109C	**Camp Elliot, M**	**71.90**	**62**	P	**P**	**12 58 01.4**	**+1.0**
	baz=310						
AKASG	**Malin Array Be**	**71.98**	**324**	P	**P**	**12 58 00.4**	**-0.2**
	comp=Z,23nm,0.7s,baz=39,slow=6.1,SNR=65						
AKASG	**Malin Array Be**	**71.98**	**324**	P	**P**	**12 57 59.8**	**-0.8**
AKBB	**Malin Array Si**	**71.98**	**324**	P	**P**	**12 58 00.3**	**-0.3**
AKBB				pmax	pmax		
	comp=Z,25nm,0.7s						
AKBB	**Malin Array Si**	**71.98**	**324**	P	**P**	**12 58 00.3**	**-0.3**
KIEV	**Kiev**	**71.99**	**324**	P	**P**	**12 57 59.0**	**-1.6**
BER	**Bergen**	**72.04**	**341**	*e*P	**P**	**12 58 01.1**	**+0.4**
RSSD	**Black Hills**	**72.11**	**46**	P	**P**	**12 58 02.2**	**+0.3**
	baz=314						
RSSD	**Black Hills**	**72.11**	**46**	P	**P**	**12 58 01.6**	**-0.2**
RSSD				pmax	pmax		
	comp=Z,19nm,1.5s						
RSSD	**Black Hills**	**72.11**	**46**	P	**P**	**12 58 01.6**	**-0.2**
RSSD				IAmb	IAmb	12 58 03.0	
	comp=Z,19nm,1.5s						
ODD1	**Odda**	**72.15**	**340**	*e*P	**P**	**12 58 01.9**	**+0.4**
ANN	**Anapa**	**72.33**	**315**	*e*P	P	12 57 57.8	-5.0
ANN				*e**PP	pP	12 58 14.1	-2.0
ANN				*e*S	**S**	**13 07 15.3**	**-6.9**
ANN				pmax	pmax		
	comp=Z,87nm,1.3s						
IRM	**Iron Mountain**	**72.33**	**60**	P	**P**	**12 58 04.1**	**+1.1**
	baz=311,SNR=9.6						
MONP2	**Monument Peak**	**72.34**	**61**	P	**P**	**12 58 04.1**	**+0.8**
	baz=311						
BC3	**Big Chuckawall**	**72.46**	**60**	P	**P**	**12 58 04.7**	**+0.8**
	baz=311,SNR=6.3						
O20A	**White River Ci**	**72.52**	**51**	P	**P**	**12 58 04.8**	**+0.5**
	baz=312						
U15A	**North Rim**	**72.61**	**56**	P	**P**	**12 58 05.6**	**+0.6**
BLS5	**Blasjo**	**72.62**	**340**	*e*P	**P**	**12 58 04.7**	**+0.4**
IKP	**In-Ko-Pah, Jac**	**72.70**	**61**	P	**P**	**12 58 06.1**	**+0.8**
	baz=311						
SWSC	**Sam W. Stewart**	**72.70**	**61**	P	**P**	**12 58 06.0**	**+0.8**
	baz=311						
PDMCI	**Parker Dam,Lak**	**72.86**	**59**	P	**P**	**12 58 07.2**	**+1.1**
	baz=311,SNR=7.5						
AGMN	**Agassiz Nation**	**73.14**	**39**	P	**P**	**12 58 07.1**	**-0.5**
	baz=317						
AGMN	**Agassiz Nation**	**73.14**	**39**	P	**P**	**12 58 07.1**	**-0.5**
AGMN				IAmb	IAmb	12 58 08.2	
	comp=Z,20nm,1.3s						
PV23	**Carpenter Ridg**	**73.21**	**53**	P	**P**	**12 58 08.9**	**+0.4**
PV23				IAmb	IAmb	12 58 10.4	
	comp=Z,15nm,1.3s						
ESJX	**Sierra Juarez**	**73.22**	**62**	P	**P**	**12 58 08.2**	**-0.3**
GLA	**Glamis**	**73.25**	**60**	P	**P**	**12 58 09.7**	**+1.1**
	baz=311						
PV14	**Lion Creek, Pa**	**73.26**	**53**	P	**P**	**12 58 09.0**	**+0.3**
PV14				IAmb	IAmb	12 58 10.6	
	comp=Z,26nm,1.5s						
PV22	**Blue Mesa, Par**	**73.29**	**53**	P	**P**	**12 58 09.4**	**+0.6**
N23A	**Red Feather La**	**73.30**	**49**	P	**P**	**12 58 10.2**	**+1.3**
	baz=313						
SNART	**Snartemo**	**73.38**	**339**	*e*P	**P**	**12 58 09.0**	**+0.3**
PV18	**Skein Mesa, Pa**	**73.41**	**53**	P	**P**	**12 58 09.8**	**+0.2**
PV18				IAmb	IAmb	12 58 11.5	
	comp=Z,19nm,1.2s						
WSAR	**Wadi Sarin**	**73.54**	**286**	LR	LR	13 35 30.9	
	comp=Z,33nm,18.9s,baz=124,slow=40						
GEVA	**Gevas**	**73.70**	**307**	P	**P**	**12 58 12.0**	**+0.8**
GEVA				IAmb	IAmb	12 58 13.4	
	comp=Z,10nm,0.7s						
WUAZ	**Wupatki**	**73.77**	**56**	P	**P**	**12 58 13.1**	**+1.4**
	baz=312,SNR=5.3						
WUAZ	**Wupatki**	**73.77**	**56**	P	**P**	**12 58 12.8**	**+1.1**
B35A	**Bob, Littlefor**	**74.06**	**37**	P	**P**	**12 58 12.7**	**-0.2**
SORM	**Soroca**	**74.27**	**323**	⇓P	**P**	**12 58 13.8**	**-0.4**
SORM	**Soroca**	**74.27**	**323**	P	**P**	**12 58 13.7**	**-0.4**
MVCO	**Mesa Verde**	**74.35**	**54**	P	**P**	**12 58 15.8**	**+0.6**
	baz=313						
MVCO	**Mesa Verde**	**74.35**	**54**	P	**P**	**12 58 15.6**	**+0.5**
MVCO				IAmb	IAmb	12 58 34.2	
	comp=Z,31nm,1.9s						
X16A	**Lo Mia Camp, P**	**74.46**	**57**	P	**P**	**12 58 16.5**	**+0.8**
SUSD	**Miller**	**74.48**	**43**	P	**P**	**12 58 15.4**	**-0.1**
	baz=316						
S22A	**4UR Ranch, Cre**	**74.95**	**52**	P	**P**	**12 58 20.3**	**+1.6**
	baz=314						
214A	**Organ Pipe Nat**	**75.25**	**60**	P	**P**	**12 58 20.8**	**+0.6**
	baz=312						
EYMN	**Ely**	**75.35**	**36**	P	**P**	**12 58 20.6**	**+0.1**
	baz=320						
OGNE	**Ogallala**	**75.39**	**47**	P	**P**	**12 58 20.3**	**-0.6**
	baz=315						
KWP	**Kalwaria Pacla**	**75.51**	**326**	P	**P**	**12 58 21.3**	**0.0**
KWP				pmax	pmax		
	comp=Z,41nm,1.0s						
KWP	**Kalwaria Pacla**	**75.51**	**326**	P	**P**	**12 58 21.3**	**0.0**
VASR	**Vaslui**	**75.64**	**322**	⇑P	**P**	**12 58 22.8**	**+0.7**
MARD	**Mardin**	**75.70**	**308**	P	**P**	**12 58 23.1**	**+0.4**
BIR	**Birlad**	**76.00**	**322**	⇓P	**P**	**12 58 25.5**	**+1.4**
BUR08	**Bucovina Ar. S**	**76.02**	**324**	P	**P**	**12 58 24.7**	**+0.3**
BUR08				IAmb	IAmb	12 58 25.8	
	comp=Z,12nm,0.8s						
BURAR	**Bucovina Array**	**76.03**	**324**	⇓P	**P**	**12 58 25.2**	**+0.7**
BURAR	**Bucovina Array**	**76.03**	**324**	P	**P**	**12 58 25.2**	**+0.7**
BURAR	**Bucovina Array**	**76.03**	**324**	P	**P**	**12 58 24.0**	**-0.5**
ECSD	**EROS Data Cent**	**76.15**	**42**	P	**P**	**12 58 24.9**	**-0.2**
	baz=318						
ECSD	**EROS Data Cent**	**76.15**	**42**	P	**P**	**12 58 25.2**	**+0.1**
ECSD				IAmb	IAmb	12 58 26.1	
	comp=Z,18nm,1.4s						
BIZ	**Bicaz**	**76.17**	**323**	⇓P	**P**	**12 58 26.1**	**+1.0**
VARL	**Varlezi**	**76.18**	**321**	⇑P	**P**	**12 58 25.9**	**+0.8**
OJC	**Ojcow**	**76.19**	**328**	P	**P**	**12 58 25.7**	**+0.5**
OJC				pmax	pmax		
	comp=Z,29nm,1.1s						
OJC	**Ojcow**	**76.19**	**328**	P	**P**	**12 58 25.7**	**+0.5**
KOLS	**Kolonicke sedl**	**76.24**	**326**	*e*P	**P**	**12 58 25.9**	**+0.4**
KOLS				pmax	pmax		
	comp=Z,17nm,1.6s						
KOLS	**Kolonicke sedl**	**76.24**	**326**	*e*P	**P**	**12 58 25.9**	**+0.4**
TESR	**Tescani**	**76.25**	**322**	⇑P	**P**	**12 58 25.5**	**-0.1**
TLCR		**76.27**	**320**	⇑P	**P**	**12 58 26.2**	**+0.5**
TLCR		**76.27**	**320**	P	**P**	**12 58 26.2**	**+0.5**
TUC	**Tucson**	**76.28**	**59**	P	**P**	**12 58 27.4**	**+1.3**
	baz=313						
TUC	**Tucson**	**76.28**	**59**	P	**P**	**12 58 27.4**	**+1.3**
TUC				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MALT	**Malatya**	**76.33**	**310**	P	**P**	**12 58 28.1**	**+1.8**
UZH	**Uzhgorod**	**76.47**	**326**	⇑*i*P	**P**	**12 58 28.2**	**+1.5**
UZH				*e*		12 58 44.7	
UZH				*e*		12 58 47.6	
CRVS	**Cervenica-Dubn**	**76.59**	**327**	*e*P	**P**	**12 58 28.1**	**+0.6**
CRVS				pmax	pmax		
	comp=Z,13nm,0.9s						
CRVS	**Cervenica-Dubn**	**76.59**	**327**	*e*P	**P**	**12 58 28.1**	**+0.6**
CFR	**Carcaliu**	**76.59**	**321**	⇓P	**P**	**12 58 28.2**	**+0.6**
CFR	**Carcaliu**	**76.59**	**321**	P	**P**	**12 58 28.1**	**+0.6**
NIE	**Niedzica**	**76.64**	**328**	P	**P**	**12 58 29.1**	**+1.3**
TPGR	**Topolog**	**76.70**	**320**	⇑P	**P**	**12 58 28.7**	**+0.5**
VRI	**Vrincioaia**	**76.71**	**322**	⇑P	**P**	**12 58 28.9**	**+0.7**
VRI	**Vrincioaia**	**76.71**	**322**	P	**P**	**12 58 29.0**	**+0.7**
VRI				pmax	pmax		
	comp=Z,13nm,1.3s						
PLOR	**Plostina**	**76.76**	**322**	⇑P	**P**	**12 58 29.3**	**+0.8**
PLOR	**Plostina**	**76.76**	**322**	P	**P**	**12 58 29.3**	**+0.8**
T25A	**Trinidad**	**76.76**	**51**	P	**P**	**12 58 29.7**	**+0.8**
	baz=315						
KSP	**Ksiaz**	**76.97**	**331**	P	**P**	**12 58 30.3**	**+0.7**
HARR	**Harsova**	**77.06**	**320**	⇓P	**P**	**12 58 31.0**	**+0.8**
HARR	**Harsova**	**77.06**	**320**	P	**P**	**12 58 30.9**	**+0.8**
BGNE	**Belgrade**	**77.09**	**45**	P	**P**	**12 58 30.3**	**-0.2**
	baz=317						
ANMO	**Albuquerque**	**77.10**	**54**	P	**P**	**12 58 31.9**	**+1.1**
	baz=314						
ANMO	**Albuquerque**	**77.10**	**54**	⇑*e*P	**P**	**12 58 32.0**	**+1.1**
ANMO				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ANMO	**Albuquerque**	**77.10**	**54**	P	**P**	**12 58 31.0**	**+0.1**

TLBR	Topalu	77.11	320	⇑P	P	12 58 31.6	+1.2
LANS	Liptovska Anna	77.17	328	eP	P	12 58 32.0	+1.2
LANS				pmax	pmax		
	comp=Z,8.0nm,0.8s						
LANS	Liptovska Anna	77.17	328	eP	P	12 58 32.0	+1.2
DOPR	Dopca	77.23	323	⇓P	P	12 58 32.6	+1.5
MLR	Muntele Rosu	77.35	322	⇓P	P	12 58 33.5	+1.5
MLR	Muntele Rosu	77.35	322	P	P	12 58 33.4	+1.5
DPC	Dobruska-Polom	77.37	330	eP	P	12 58 32.1	+0.2
DPC				e		12 58 46.1	
DPC	Dobruska-Polom	77.37	330	eP	P	12 58 32.1	+0.2
DPC				epP	pP	12 58 46.1	+0.4
MORC	Moravsky Berou	77.40	329	⇓P	P	12 58 33.0	+1.0
MORC	Moravsky Berou	77.40	329	eP	P	12 58 32.5	+0.5
MORC	Moravsky Berou	77.40	329	P	P	12 58 32.3	+0.3
MORC				pmax	pmax		
	comp=Z,15nm,1.0s						
MORC	Moravsky Berou	77.40	329	P	P	12 58 32.3	+0.3
MORC				IAmb	IAmb	12 58 33.8	
	comp=Z,15nm,1.0s						
KRLC	Kraliky	77.43	330	eP	P	12 58 32.1	-0.1
KRLC	Kraliky	77.43	330	eP	P	12 58 32.1	-0.1
I37A	Lemond, Waseca	77.48	40	P	P	12 58 32.7	+0.1
ICOR	Ion Corvin	77.55	320	⇓P	P	12 58 34.4	+1.5
CLL	Collm	77.72	333	⇑iP	P	12 58 33.7	-0.1
	comp=Z,23nm,1.0s						
CLL				ePcP	PcP	12 58 45.0	+1.3
CLL				epP	pwP	12 58 50.0	+2.4
CLL	Collm	77.72	333	⇑iP	P	12 58 33.7	-0.1
CLL				e*PP	pP	12 58 47.0	-0.6
CLL				pmax	pmax		
	comp=Z,23nm,1.0s						
CLL	Collm	77.72	333	P	P	12 58 32.8	-1.0
CLL				IAmb	IAmb	12 58 34.5	
	comp=Z,20nm,0.9s						
DRGR		77.75	325	⇓P	P	12 58 34.7	+0.6
DRGR		77.75	325	P	P	12 58 34.6	+0.6
BRG	Berggiesshubel	77.77	332	eP	P	12 58 34.2	+0.2
BRG				Amp		12 58 35.8	
	comp=Z,14nm,1.4s						
VOIR		77.79	322	⇑P	P	12 58 35.0	+0.6
VOIR		77.79	322	P	P	12 58 34.9	+0.6
319A	Douglas	77.86	58	P	P	12 58 35.5	+0.5
319A				IAmb	IAmb	12 58 37.1	
	comp=Z,13nm,0.9s						
BR131	Keskin Array S	77.92	314	P	P	12 58 35.2	-0.1
BR131				pmax	pmax		
	comp=Z,8.0nm,0.7s						
BR131	Keskin Array S	77.92	314	P	P	12 58 35.2	-0.1
BR131				IAmb	IAmb	12 58 36.7	
	comp=Z,7.7nm,0.7s						
BRTR	Keskin Array B	77.92	314	P	P	12 58 35.8	+0.5
	comp=Z,4.9nm,0.7s,baz=85,slow=3.6,SNR=16						
BRTR				LR	LR	13 38 58.4	
	comp=Z,26nm,18.6s,baz=24,slow=40						
BRTR	Keskin Array B	77.92	314	P	P	12 58 35.4	+0.1
121A	Cookes Peak, D	77.98	57	P	P	12 58 37.3	+1.5
	baz=314						
121A	Cookes Peak, D	77.98	57	P	P	12 58 36.8	+1.1
121A				IAmb	IAmb	12 58 38.2	
	comp=Z,8.3nm,0.9s						
ARR	Arges	78.03	323	⇓P	P	12 58 37.4	+1.7
JAVC	Velka Javorina	78.10	329	eP	P	12 58 37.2	+1.2
VRAC	Vranov	78.13	330	⇑P	P	12 58 37.1	+0.9
VRAC	Vranov	78.13	330	eP	P	12 58 36.7	+0.6
VRAC				e		12 58 50.3	
VRAC	Vranov	78.13	330	P	P	12 58 37.0	+0.9
PRU	Pruhonice	78.31	331	eP	P	12 58 37.2	+0.2
PRU				e		12 58 50.9	
PRU	Pruhonice	78.31	331	eP	P	12 58 37.2	+0.2
PRU				epP	pP	12 58 50.9	0.0
KRUC	Moravsky	78.41	330	eP	P	12 58 38.0	+0.4
KRUC				e		12 58 51.4	
EKA	Eskdalemuir Ar	78.53	343	P	P	12 58 38.0	-0.2
EKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
SIRR	Siria	78.60	325	⇑P	P	12 58 39.0	+0.3
MODS	Modra-Piesok	78.65	329	eP	P	12 58 39.4	+0.4
MODS				pmax	pmax		
	comp=Z,14nm,1.2s						
MODS	Modra-Piesok	78.65	329	eP	P	12 58 39.4	+0.4
PBCC	Pribram	78.75	331	eP	P	12 58 39.6	+0.1
PBCC				epP	pP	12 58 54.0	+0.6
GZR	Gura Zlata	78.82	324	⇓P	P	12 58 40.5	+0.4
MATQ	Matagami	79.26	28	P	P	12 58 41.8	-0.4
	baz=328						
KHC	Kasperske Hory	79.37	331	ceP	P	12 58 43.4	+0.5
KHC				pmax	pmax		
	comp=Z,37nm,1.3s						
KHC	Kasperske Hory	79.37	331	eP	P	12 58 43.5	+0.5
KHC				epP	pP	12 58 56.5	-0.4
KHC	Kasperske Hory	79.37	331	P	P	12 58 42.6	-0.3
KHC				IAmb	IAmb	12 58 44.4	
	comp=Z,10nm,0.8s						
CKRC	Cesky Krumlov	79.37	331	eP	P	12 58 42.5	-0.4
HERR	Herculane	79.39	324	⇓P	P	12 58 43.2	+0.2
CONA	Conrad Observa	79.55	329	eP	P	12 58 44.5	+0.5
	comp=Z,2.0nm,0.5s						
GERES	GERESS Array B	79.57	331	P	P	12 58 44.1	0.0
	comp=Z,2.1nm,0.7s,baz=15,slow=5.8,SNR=5.9						
PLVB	Pleven	79.58	321	⇑P	P	12 58 44.0	-0.2
KSU1	Kansas State U	79.58	45	P	P	12 58 43.6	-0.6
	baz=318						
GRF	Grafenberg Arr	79.70	333	eP	P	12 58 45.3	+0.7
	comp=Z,16nm,1.2s,baz=30,slow=4.7						
AMTX	Amarillo	79.92	51	P	P	12 58 46.9	+0.7
	baz=316						
AMTX	Amarillo	79.92	51	P	P	12 58 46.0	-0.2
MNTX	Cornudas Mount	80.02	56	P	P	12 58 47.7	+1.0
	baz=315						
MNTX	Cornudas Mount	80.02	56	P	P	12 58 46.6	-0.1
LSQQ	Lebel-sur-Quev	80.08	28	P	P	12 58 46.4	-0.3
	baz=329						
MOA	Molln	80.20	330	eP	P	12 58 47.9	+0.4
	comp=Z,2.9nm,0.7s						
EDC	Edincik	80.40	318	P	P	12 58 50.1	+1.5
MEM	Membach	80.53	336	dP	P	12 58 48.8	-0.3
	comp=Z,16nm,2.1s						
VLDQ	Val d'Or	80.73	29	P	P	12 58 49.5	-0.7
VLDQ				IAmb	IAmb	12 58 49.9	
	comp=Z,11nm,0.9s						
VTS	Vitosha	80.82	322	⇑P	P	12 58 51.8	+0.8
VTS	Vitosha	80.82	322	P	P	12 58 51.6	+0.6
VTS				pmax	pmax		
	comp=Z,16nm,0.9s						
VTS	Vitosha	80.82	322	P	P	12 58 51.5	+0.6
VTS				IAmb	IAmb	12 58 52.8	
	comp=Z,16nm,0.9s						
ALN	Alexandroupoli	80.86	319	P	P	12 58 51.4	+0.4
ALN				pmax	pmax		
	comp=Z,17nm,1.0s						
ALN	Alexandroupoli	80.86	319	P	P	12 58 51.4	+0.4
ALN				IAmb	IAmb	12 58 52.5	
	comp=Z,18nm,1.0s						
SOKA	Soboth	80.90	329	eP	P	12 58 51.5	+0.2
	comp=Z,4.1nm,0.7s,SNR=8.4						
GROS	Grobnik	80.91	329	iP	P	12 58 51.2	-0.1
PERS	Pernice	80.91	329	iP	P	12 58 51.4	+0.1
BMRD	Maredsous	81.17	337	dP	P	12 58 51.3	-1.2
KBA	Koelnbreinsper	81.19	330	eP	P	12 58 53.8	+0.9
	comp=Z,4.3nm,0.6s						
OBKA	Obir	81.23	329	eP	P	12 58 53.0	0.0
	comp=Z,4.5nm,0.7s						
GOLS	Golise	81.24	328	eP	P	12 58 52.9	-0.1
T35A	Sooner Cattle	81.27	47	P	P	12 58 53.5	+0.2
T35A				IAmb	IAmb	12 58 54.6	
	comp=Z,12nm,0.9s						
MYKA	Terra Mystica	81.46	330	eP	P	12 58 54.0	-0.2
	comp=Z,2.4nm,0.5s						
BAIF	Baives	81.55	337	eP	P	12 58 56.2	+1.7
BAIF				pmax	pmax		
	comp=Z,32nm,1.6s						
WATA	Walderalm	81.60	331	eP	P	12 58 55.3	+0.2
	comp=Z,5.8nm,0.6s,SNR=5.9						
WTTA	Wattenberg	81.64	331	eP	P	12 58 55.8	+0.5
	comp=Z,3.3nm,0.5s,SNR=7.2						
WMOK	Wichita Mounta	81.65	50	P	P	12 58 56.3	+0.9
	baz=318						
RETA	Reutte	81.75	332	eP	P	12 58 56.0	+0.2
	comp=Z,14nm,1.3s						
MOTA	Moosalm	81.76	332	eP	P	12 58 56.2	+0.3
	comp=Z,8.4nm,0.8s,SNR=5.9						
OK025	Westminster Rd	81.82	48	P	P	12 58 55.7	-0.5
OK025				IAmb	IAmb	12 58 57.6	
	comp=Z,19nm,1.0s						
SQTA	Sankt Quirin	81.83	332	eP	P	12 58 56.4	+0.2
	comp=Z,4.7nm,0.7s						
FNO	Franklin	82.03	48	P	P	12 58 58.2	+0.9
HDIL	Hopedale	82.08	40	P	P	12 58 57.5	-0.1
	baz=322						
CDF	Champ du Feu	82.09	334	eP	P	12 58 57.1	-0.5
CDF				pmax	pmax		
	comp=Z,10.0nm,1.1s						
FETA	Feichten	82.17	332	eP	P	12 58 58.2	+0.1
	comp=Z,2.8nm,0.9s,SNR=4.9						
S39A	Bolivar	82.34	44	P	P	12 58 58.4	-0.5
TUL1	Leonard	82.40	47	P	P	12 58 59.8	+0.5
	baz=319						
R40A	Maddies Statio	82.41	43	P	P	12 58 58.6	-0.7
R40A				IAmb	IAmb	12 58 59.6	
	comp=Z,6.5nm,0.6s						
D56A	ZEC Mazanza, M	82.57	28	P	P	12 58 60.0	0.0
	baz=331						
TX31	Lajitas Ar. Si	82.73	56	P	P	12 59 02.2	+1.0
TX32	Lajitas Array	82.73	56	P	P	12 59 02.0	+0.8
TX32				IAmb	IAmb	12 59 03.1	
	comp=Z,11nm,0.9s						
TXAR	Lajitas Array	82.73	56	P	P	12 59 02.1	+0.9
	comp=Z,9.4nm,0.7s,baz=300,slow=4.0,SNR=36						
TXAR				pP	sP	12 59 19.6	-0.2
	comp=Z,3.7nm,0.6s,baz=294,slow=3.9,SNR=5.9						
TXAR	Lajitas Array	82.73	56	P	P	12 59 01.2	-0.1
HAU	Haudompre	82.74	335	eP	P	12 59 00.3	-0.6
HAU				pmax	pmax		
	comp=Z,20nm,1.4s						
HINF	Hinteralfeld	82.75	334	eP	P	12 59 00.0	-0.9
HINF				pmax	pmax		
	comp=Z,37nm,2.0s						
E56A	St. Veronique	82.91	28	P	P	12 59 01.1	-0.6
	baz=330						
CCM	Cathedral Cave	83.10	43	P	P	12 59 03.0	+0.1
	baz=321						
HPIG		83.21	59	P	P	12 59 03.7	-0.2
HPIG				IAmb	IAmb	12 59 05.6	
	comp=Z,23nm,1.6s						
E57A	Chemin Saint G	83.33	27	P	P	12 59 03.1	-0.9
	baz=331						
U40A	Yellville	83.60	45	P	P	12 59 05.5	0.0
	baz=321						
U40A	Yellville	83.60	45	P	P	12 59 05.5	0.0
U40A				IAmb	IAmb	12 59 07.2	
	comp=Z,25nm,1.4s						
E58A	La Victoria	83.66	27	P	P	12 59 05.0	-0.6
	baz=332						
PPT2	Papeete2	83.71	121	eLR	LR	13 25 16.2	
	comp=Z,177nm,31.5s						
PPT2	Papeete2	83.71	121	eT	T	14 31 28.6	
	comp=Z,2.3nm,0.3s						
P46A	Rosedale	83.80	39	P	P	12 59 05.9	-0.5
D61A	St Aubert, Com	83.90	25	P	P	12 59 06.5	-0.3
	baz=334						
D60A	Saint Jean D'O	83.93	25	P	P	12 59 06.6	-0.3
	baz=333						
FLN	La Foliniere	84.00	339	eP	P	12 59 07.1	-0.2
FLN				pmax	pmax		
	comp=Z,102nm,1.8s						
W39A	Magazine	84.01	46	P	P	12 59 08.2	+0.6
	baz=320						
CABF	La Chapelle	84.06	334	eP	P	12 59 07.3	-0.5
CABF				pmax	pmax		
	comp=Z,18nm,1.2s						
LOR	Lormes	84.16	336	eP	P	12 59 07.6	-0.5
LOR				pmax	pmax		
	comp=Z,14nm,1.0s						
JCT	Junction City	84.20	53	P	P	12 59 09.5	+0.7
	baz=318						
JCT	Junction City	84.20	53	P	P	12 59 09.1	+0.4
JCT				pmax	pmax		
	comp=Z,19nm,0.8s						
JCT	Junction City	84.20	53	P	P	12 59 09.1	+0.4
FCAR	Ozark Folk Cen	84.34	45	P	P	12 59 08.3	-1.0
FCAR				IAmb	IAmb	12 59 10.6	
	comp=Z,28nm,1.6s						
GRR	Gorron	84.44	339	eP	P	12 59 09.4	-0.1
GRR				pmax	pmax		
	comp=Z,119nm,1.9s						
G58A	Ormstown	84.47	28	P	P	12 59 09.5	-0.2
	baz=331						
MIAR	Mount Ida	84.62	46	P	P	12 59 11.3	+0.6
	baz=320						
MIAR	Mount Ida	84.62	46	P	P	12 59 10.9	+0.2
MIAR				pmax	pmax		
	comp=Z,11nm,1.0s						
MIAR	Mount Ida	84.62	46	P	P	12 59 10.9	+0.2
MIAR				IAmb	IAmb	12 59 12.2	
	comp=Z,11nm,0.9s						
WHAR	Wooly Hollow	84.72	45	P	P	12 59 11.2	0.0
WHAR				IAmb	IAmb	12 59 12.2	
	comp=Z,20nm,1.1s						
AVF	Avril sur Loir	84.74	336	eP	P	12 59 10.7	-0.3
AVF				pmax	pmax		
	comp=Z,44nm,1.7s						
MURB	Monte Urbino	84.74	329	P	P	12 59 11.4	+0.1
F61A	St Evariste	84.75	26	P	P	12 59 11.4	+0.3
	baz=333						
LPL	La Plagne	84.83	333	eP	P	12 59 11.8	0.0
LPL				pmax	pmax		
	comp=Z,5.0nm,0.7s						
W41B	Gary Mavity, V	84.83	45	P	P	12 59 11.9	+0.2
	baz=321						
LPG	La Plagne	84.84	333	eP	P	12 59 11.9	-0.1
LPG				pmax	pmax		
	comp=Z,4.0nm,0.5s						
ERPA	Erie	84.86	33	P	P	12 59 11.6	-0.1
	baz=328						
MEH	Mehetia	84.87	120	eT	T	14 32 54.9	
	comp=Z,11nm,0.3s						
L53A	Girard	84.89	34	P	P	12 59 12.3	+0.4
	baz=327						
SGMF	Saint Gilles	85.00	340	eP	P	12 59 12.4	+0.1
SGMF				pmax	pmax		
	comp=Z,26nm,0.9s						
P49A	Miami Univ. Ec	85.00	38	P	P	12 59 12.6	+0.1
	baz=325						
X40A	Basin Creek Fa	85.05	46	P	P	12 59 13.6	+0.8
	baz=321						
G61A	St-Isidore-de-	85.19	26	P	P	12 59 14.0	+0.6
	baz=333						
WCI	Wyandotte Cave	85.34	40	P	P	12 59 14.8	+0.5
	baz=324						
QUIF	Quistinic	85.46	341	eP	P	12 59 15.1	+0.5
QUIF				pmax	pmax		
	comp=Z,68nm,1.6s						
M54A	Oil Creek Stat	85.50	33	P	P	12 59 15.4	+0.3
	baz=328						
TCF	Toulx Ste Croi	85.53	337	eP	P	12 59 15.0	-0.1
TCF				pmax	pmax		
	comp=Z,8.0nm,1.0s						
G62A	West of Eustis	85.57	26	P	P	12 59 15.4	+0.1
	baz=333						
J59A	Piesco	85.78	29	P	P	12 59 16.0	-0.3
	baz=331						
L56A	Greenwood	85.80	32	P	P	12 59 16.3	-0.2
	baz=329						
N54A	Moraine State	85.83	34	P	P	12 59 16.6	-0.1
	baz=328						
O53A	New Philadelph	85.93	35	P	P	12 59 17.3	+0.1
	baz=327						
Q51A	Peebles	86.02	37	P	P	12 59 17.9	+0.3
P52A	Corning	86.05	36	P	P	12 59 17.7	0.0
	baz=326						
M56A	Emporium	86.11	33	P	P	12 59 18.3	+0.3
	baz=329						
K59A	Cooperstown	86.26	30	P	P	12 59 18.7	-0.1
	baz=331						
WVT	Waverly	86.29	42	P	P	12 59 19.3	+0.3
	baz=323						
L58A	Harry Jones Me	86.52	31	P	P	12 59 20.0	0.0
	baz=330						
RJF	Les Rejaudoux	86.62	337	eP	P	12 59 20.5	0.0
RJF				pmax	pmax		
	comp=Z,42nm,1.5s						
M57A	Sunshine Farm,	86.65	32	P	P	12 59 21.1	+0.4
	baz=329						
OXF	Oxford	86.80	44	P	P	12 59 21.1	-0.3
	baz=322						
OXF	Oxford	86.80	44	P	P	12 59 21.2	-0.3
OXF				pmax	pmax		
	comp=Z,42nm,1.3s						
OXF	Oxford	86.80	44	P	P	12 59 21.2	-0.3
HKT	Hockley	86.88	51	⇓eP	P	12 59 22.9	+1.0
HKT				pmax	pmax		
	comp=Z,8.0nm,1.5s						
Q53A	Leroy	86.95	36	P	P	12 59 21.6	-0.6
	baz=327						
N57A	Milroy	86.98	32	P	P	12 59 22.6	+0.3
	baz=329						
O56A	Blue Knob Stat	87.00	33	P	P	12 59 22.7	+0.3
	baz=328						
N58A	Sunbury	87.24	32	P	P	12 59 24.0	+0.5
	baz=330						
Y45A	Yeager Farm, C	87.24	44	P	P	12 59 24.1	+0.5
N59A	State Game Lan	87.53	31	P	P	12 59 23.0	-1.9
	baz=330						
P56A	Dayton Farm, R	87.53	34	P	P	12 59 24.6	-0.4
	baz=328						
SWET	Sewanee	87.94	41	P	P	12 59 27.1	0.0
TBI	Tubuai	88.12	125	eLR	LR	13 27 27.8	
	comp=Z,91nm,28.0s						
146A	Union	88.46	45	P	P	12 59 30.6	+1.1
TKL	Tuckaleechee C	88.60	39	P	P	12 59 30.0	-0.1
TKL				pmax	pmax		
	comp=Z,25nm,1.5s						
TKL	Tuckaleechee C	88.60	39	P	P	12 59 30.0	-0.1
ETSF	Etsaut	89.43	337	eP	P	12 59 33.3	-0.6
ETSF				pmax	pmax		
	comp=Z,46nm,1.6s						
BG3	Lake Jocassee	89.54	39	P	P	12 59 35.3	+0.8
BG3				IAmb	IAmb	12 59 35.6	
	comp=Z,4.8nm,0.8s						
KMSC	Kings Mountain	90.14	38	P	P	12 59 37.4	0.0
	baz=327						
250A	Grady	90.40	43	P	P	12 59 39.6	+1.0
KEST	Kesra	92.48	327	LR	LR	13 44 47.3	
	comp=Z,76nm,21.2s,baz=340,slow=38						
ESDC	Sonseca Array	93.37	338	P	P	12 59 51.9	-0.4
	comp=Z,1.6nm,0.7s,baz=13,slow=3.7,SNR=11						
ESDC				LR	LR	13 47 20.0	
	comp=Z,34nm,18.7s,baz=30,slow=39						
TORD	Torodi Ar. Bea	115.59	322	PKP	PKiKP	13 05 18.6	-0.9
	comp=Z,0.7nm,0.5s,baz=22,slow=1.7,SNR=6.4						
TORD	Torodi Ar. Bea	115.59	322		PKiKP	13 05 18.1	-1.3
NVL	N'lazarevskaya	144.89	204	ePKIKP	PKPab	13 06 11.6	-0.3
NVL				pmax	pmax		
	comp=Z,13nm,0.9s						
SNAA	Sanae	148.13	197	PKPdf	PKPbc	13 06 21.5	0.0
BDFB	Brasilia	149.41	30	PKPbc	PKPbc	13 06 26.5	+0.1
	comp=Z,12nm,0.7s,baz=56,slow=11,SNR=3.1						
VNA2	Neumayer--Watz	149.66	196	PKPbc	PKiKP	13 06 25.9	-0.3
VNA3	Neumayer Olymp	149.84	195	PKPbc	PKPbc	13 06 25.7	-0.1
VNA1	Neumayer--Stat	150.06	196	PKPbc	PKiKP	13 06 27.5	+0.5
PLCA	Paso Flores	151.88	98	PKPbc	PKiKP	13 06 31.8	-0.1
	comp=Z,2.5nm,0.9s,baz=322,slow=2.2,SNR=5.6						
PLCA	Paso Flores	151.88	98	PKIKP	PKPbc	13 06 31.4	-0.2
PLCA	Paso Flores	151.88	98		PKPbc	13 06 31.4	-0.2

SKHL ***08*** *12:55:32.4±0.4, 43.°10N×141.°30E, h157km±4km, mb4.7/8, msha5.3/3*
MOS ***08*** *12:55:32.8±0.8, 43.°09N×141.°39E, h176km, mb4.0/1, Error ellipse: s-maj=15.3km s-min=11.0km az=66.4*
IDC ***08*** *12:55:33.9±1.3, 43.°13N×141.°44E, h168km±9km, mb3.4/7, mb1 3.4/10, mb1mx3.1/36, mbtmp3.8/10, Error ellipse: s-maj=31.2km s-min=17.7km az=132.0*
JMA ***08*** *12:55:33.8±0.1, 43.°06N×141.°36E, h165km±1km, M3.1*
ISC 08 12:55:33.5±0.7**, 43.°06N**±0.°05×**141.°37E**±0.°04**, h167**km±5km**, n49, σ0.s93**/72**, mb3.6**/7**, 2D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JISS	Ishikarishitsu	0.22	10	P	Pn	12 55 56.2	+0.4
JISS				eS	Sn	12 56 13.1	+0.1
JEW	Eniwo	0.23	165	P	Pn	12 55 56.2	+0.3
JEW				eS	Sn	12 56 13.0	0.0
JIAM	Iburiatsuma	0.60	137	P	Pn	12 55 57.6	+0.4
JIAM				eS	Sn	12 56 15.9	+0.5
JNB	Noboribetsu	0.64	202	P	Pn	12 55 57.5	0.0
JNB				eS	Sn	12 56 15.9	+0.1
JHR	Hokuryu	0.73	21	P	Pn	12 55 58.6	+0.6
JHR				eS	Sn	12 56 17.4	+0.5
JFR	Furan	0.90	83	P	Pn	12 55 59.0	-0.1
JFR				eS	Sn	12 56 18.1	-0.8
JKB	Kayabe	1.20	192	P	Pn	12 56 01.7	+0.2
JKB				eS	Sn	12 56 22.9	-0.2
JNBK	Urakawa-nobuka	1.28	127	P	Pn	12 56 02.7	+0.4
JNBK				eS	Sn	12 56 25.6	+1.2
JKK2	Kamakawa 2	1.29	51	P	Pn	12 56 02.5	+0.2
JKK2				eS	Sn	12 56 23.7	-1.0
JYG	Yagishiri	1.37	2	P	Pn	12 56 03.0	0.0
ASAJ	Asahikawa	1.38	40	P	Pn	12 56 03.3	+0.2
	60nm,0.3s,baz=221,slow=13,SNR=859						
ASAJ				S	Sn	12 56 25.2	-1.0
	18nm,0.3s,baz=56,slow=30,SNR=34						
JKA	Kamikawa-asahi	1.38	40	eP	Pn	12 56 03.3	+0.1
JCH	Churui	1.53	106	P	Pn	12 56 03.9	-0.8
JCH				eS	Sn	12 56 26.2	-2.5
MYR	Moyori	1.61	118	iP	Pn	12 56 05.1	-0.3
ERM	Erimo	1.69	128	iP	Pn	12 56 06.0	-0.2
JOT	Ohata	1.69	188	P	Pn	12 56 06.5	+0.2
JOSM	Okushiri--Mats	1.71	236	P	Pn	12 56 06.4	0.0
JAR	Ashorobuto	1.77	82	P	Pn	12 56 07.4	+0.3
JAR				eS	Sn	12 56 32.8	-0.3
JTKR	Abashiri--Toko	2.06	63	P	Pn	12 56 10.8	+0.5
JTKR				eS	Sn	12 56 38.7	-0.1
JSE	Soyaes	2.09	24	P	Pn	12 56 10.9	+0.3
JWK2	Keihoku	2.29	9	P	Pn	12 56 13.7	+0.8
NMR	Nemuro--Hokkai	3.20	83	d iPN	Pn	12 56 23.1	-0.9
NMR				iS	Sn	12 56 59.8	-3.5
NMR	Nemuro--Hokkai	3.20	83	iP	Pn	12 56 23.1	-0.9
GRPR	Tuman	3.34	72	ePN	Pn	12 56 25.9	+0.2
GRPR				eS	Sn	12 57 06.6	+0.3
GRPR				pmax	pmax		
	comp=Z,115nm,0.4s						
GRPR				pmax	pmax		
	comp=E,49nm,0.3s						
GRPR				smax	smax		
	comp=E,51nm,0.2s						
GRPR				smax	smax		
	comp=N,168nm,0.3s						
GRPR	Tuman	3.34	72	eP	Pn	12 56 25.0	-0.7
GRPR				AMB	AMB	12 56 27.0	
	comp=N,115nm,0.4s						
GRPR				eS	Sn	12 57 06.0	-0.3
GRPR				A	A	12 57 12.0	
	comp=N,168nm,0.3s						
GRPR				A	A	12 57 12.0	
	comp=N,51nm,0.3s						
YUK	Yuzh-Kuril'sk	3.41	72	PN	Pn	12 56 27.6	+1.0
YUK				eS	Sn	12 57 10.8	+2.9
YUK				smax	smax		
	comp=E,128nm,0.4s						
YUK				smax	smax		
	comp=N,71nm,0.3s						
YUK	Yuzh-Kuril'sk	3.41	72	eP	Pn	12 56 26.6	0.0
YUK				AMB	AMB	12 56 27.5	
	comp=N,460nm,0.7s						
YUK				eS	Sn	12 57 09.9	+2.0
YUK				A	A	12 57 15.0	
	comp=N,71nm,0.4s						
YUK				A	A	12 57 15.0	
	comp=N,128nm,0.4s						
TEY	Ternei	3.96	302	eP	Pn	12 56 33.5	-0.1
TEY				AMB	AMB	12 56 36.1	
	comp=N,20nm,0.9s						
TEY				eS	Sn	12 57 19.7	-0.8
YSS	Yuzh-Sakhalins	4.02	14	⇓iPN	Pn	12 56 34.9	+0.6
YSS				eS	Sn	12 57 20.9	-0.9
YSS				pmax	pmax		
	comp=Z,50nm,0.5s						
YSS	Yuzh-Sakhalins	4.02	14	iP	Pn	12 56 34.0	-0.3
YSS				AMB	AMB	12 56 35.0	
	comp=Z,50nm,0.5s						
YSS				eS	Sn	12 57 21.8	0.0
KUR	Kuril'sk	5.16	63	ePN	Pn	12 56 50.0	+0.9
KUR				eS	Sn	12 57 50.6	+2.2
KUR				pmax	pmax		
	comp=Z,30nm,0.4s						
KUR				smax	smax		
	comp=N,36nm,0.5s						
KUR				smax	smax		
	comp=E,26nm,0.5s						
KUR	Kuril'sk	5.16	63	eP	Pn	12 56 49.8	+0.7
KUR				AMB	AMB	12 56 51.0	
	comp=E,30nm,0.4s						

KUR				*e*S	**Sn**	**12 57 50.0**	**+1.6**
KUR				A	A	12 57 51.0	
	comp=E,56nm,0.5s						
KUR				A	A	12 57 51.0	
	comp=E,36nm,0.5s						
MJAR	**Matsushiro Arr**	**6.95**	**202**	P	**Pn**	**12 57 13.8**	**+0.9**
	comp=E,0.2nm,0.3s,baz=23,slow=15,SNR=11						
MJAR	**Matsushiro Arr**	**6.95**	**202**	*e*P	**Pn**	**12 57 13.8**	**+0.9**
KLR	**Kul'dur**	**9.09**	**316**	P	**Pn**	**12 57 40.3**	**-0.7**
	comp=E,0.1nm,0.3s,baz=133,slow=14,SNR=5.4						
KLR	**Kul'dur**	**9.09**	**316**	*e*P	**Pn**	**12 57 40.3**	**-0.7**
PETK	**Petropavlovsk-**	**14.80**	**42**	P	**Pn**	**12 58 54.0**	**-0.5**
	comp=E,0.1nm,0.3s,baz=178,slow=9.8,SNR=7.5						
PETK	**Petropavlovsk-**	**14.80**	**42**	P	**Pn**	**12 58 54.0**	**-0.5**
SEY	**Seymchan**	**20.92**	**14**	P	**P**	**13 00 01.9**	**-0.7**
	comp=E,0.5nm,0.3s,baz=208,slow=9.7,SNR=6.0						
SEY	**Seymchan**	**20.92**	**14**	*e*P	**P**	**13 00 01.9**	**-0.7**
SONM	**Songino Array**	**24.86**	**293**	P	**P**	**13 00 41.6**	**+1.0**
	comp=E,1.5nm,0.8s,baz=84,slow=9.2,SNR=6.5						
ZALV	**Zalesovo Beam**	**38.04**	**307**	P	**P**	**13 02 36.0**	**+0.7**
	comp=E,1.3nm,0.3s,baz=90,slow=8.3,SNR=8.0						
ZALV	**Zalesovo Beam**	**38.04**	**307**	P	**P**	**13 02 36.0**	**+0.7**
MKAR	**Makanchi Array**	**41.14**	**296**	P	**P**	**13 03 01.5**	**+0.4**
	comp=E,0.4nm,0.5s,baz=83,slow=15,SNR=11						
MKAR	**Makanchi Array**	**41.14**	**296**	*e*P	**P**	**13 03 01.5**	**+0.4**
RES	**Resolute Bay**	**56.79**	**15**	P	**P**	**13 04 59.4**	**-0.1**
	comp=E,0.3nm,0.4s,baz=72,slow=23,SNR=2.0						
FINES	**FINESS Array B**	**63.50**	**331**	P	**P**	**13 05 45.1**	**-0.2**
	comp=E,2.4nm,0.5s,baz=54,slow=7.1,SNR=20						
NB2	**NORSAR Subarra**	**68.64**	**336**	P	**P**	**13 06 18.1**	**0.0**
	comp=Z,0.2nm,0.3s,baz=33,slow=6.5						
AKASG	**Malin Array Be**	**69.55**	**321**	P	**P**	**13 06 23.9**	**0.0**
	comp=Z,0.7nm,0.3s,baz=44,slow=6.7,SNR=6.0						

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*JMA **08** 13:05:53.9±0.2, 23°.97N×122°.41E, h15^{km}±4^{km}, M2.6*
*TAP **08** 13:05:54.5, 24°.01N×122°.44E, h34^{km}±1^{km}, ML2.8, C*
ISC 08 13:05:54.0±1.1**, 23°.96N**±0°.03×**122°.41E**±0°.02**, h26**^{km}±13^{km}**,**
n66, σ0^{s}.69/101**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.69**	**45**	P	**Pb**	**13 06 07.1**	**-0.3**
JYNG				*e*S	**Sb**	**13 06 16.4**	**-0.1**
YOJ	**Yonaguni jima**	**0.74**	**48**	P	**Pb**	**13 06 07.8**	**-0.4**
YOJ				*e*S	**Sb**	**13 06 17.1**	**-0.8**
HWA	**Hwalien**	**0.74**	**271**	*e*P	**Pb**	**13 06 08.0**	**-0.3**
	baz=255						
TWD	**Chiawan**	**0.76**	**279**	*e*P	**Pn**	**13 06 08.5**	**-0.5**
	baz=275						
ENA	**Nanau**	**0.77**	**307**	P	**Pn**	**13 06 08.8**	**-0.3**
	baz=312						
ENA				*e*S	**Sb**	**13 06 19.3**	**+0.4**
	baz=312						
NACB	**Ninganchiao**	**0.78**	**286**	P	**Pn**	**13 06 08.6**	**-0.6**
	baz=269						
NACB				*e*S	**Sb**	**13 06 19.7**	**+0.6**
	baz=269						
TWC	**Suao**	**0.82**	**321**	P	**Pn**	**13 06 09.2**	**-0.7**
	baz=318						
TWC				*e*S	**Sb**	**13 06 19.8**	**-0.6**
	baz=318						
ETLH	**Xiulin Townshi**	**0.89**	**286**	P	**Pn**	**13 06 10.5**	**-0.4**
	baz=271						
ETLH				*e*S	**Sb**	**13 06 22.4**	**+0.1**
	baz=271						
ESL	**Shilin**	**0.91**	**261**	*e*P	**Pn**	**13 06 10.6**	**-0.5**
	baz=249						
ESL				S	**Sn**	**13 06 23.1**	**-0.3**
	baz=249						
TWE	**Neicheng**	**1.02**	**318**	*e*P	**Pb**	**13 06 13.0**	**+0.1**
	baz=315						
TWE				S	**Sb**	**13 06 26.0**	**+0.1**
	baz=315						
HGSD	**Ruisui**	**1.02**	**243**	*e*P	**Pn**	**13 06 12.2**	**-0.5**
	baz=241						
ENTT	**Nioudou**	**1.03**	**311**	*e*P	**Pb**	**13 06 13.2**	**+0.1**
	baz=295						
ENTT				S	**Sb**	**13 06 26.8**	**+0.6**
	baz=295						
NTC	**Toucheng**	**1.03**	**329**	*e*P	**Pb**	**13 06 13.4**	**+0.2**
	baz=326						
NTC				S	**Sb**	**13 06 27.0**	**+0.5**
	baz=326						
NDT	**Datong Townshi**	**1.04**	**308**	*e*P	**Pb**	**13 06 14.0**	**+0.6**
	baz=292						
NDT				S	**Sb**	**13 06 26.9**	**+0.2**
	baz=292						
NNSB	**Datong**	**1.05**	**296**	P	**Pn**	**13 06 13.2**	**+0.1**
	baz=282						
NNSB				*e*S	**Sb**	**13 06 27.2**	**+0.2**
	baz=282						
NNSH	**Datong**	**1.05**	**296**	P	**Pn**	**13 06 13.2**	**0.0**
	baz=283						
NNSH				S	**Sb**	**13 06 27.1**	**+0.1**
	baz=283						
NNS	**Nan Shan**	**1.06**	**297**	*e*P	**Pn**	**13 06 13.3**	**-0.1**
	baz=282						
NNS				S	**Sb**	**13 06 27.4**	**+0.1**
	baz=282						
WHF	**Hehuan Shan**	**1.07**	**280**	P	**Pn**	**13 06 13.5**	**-0.1**
	baz=266						
WHF				*e*S	**Sn**	**13 06 27.3**	**-0.6**
	baz=266						
EHY	**Hungye**	**1.10**	**246**	P	**Pn**	**13 06 13.7**	**0.0**
	baz=256						
EHY				*e*S	**Sn**	**13 06 28.1**	**+0.1**
	baz=256						
FUSS	**Fushou**	**1.11**	**285**	*e*P	**Pb**	**13 06 14.5**	**-0.1**
	baz=281						
FUSS				*e*S	**Sb**	**13 06 28.9**	**+0.2**
	baz=281						
CHGB	**Renai**	**1.14**	**275**	*e*P	**Pn**	**13 06 14.6**	**+0.1**
	baz=262						
CHGB				*e*S	**Sb**	**13 06 29.8**	**+0.2**
	baz=262						
TIPB	**Shuangxi**	**1.14**	**332**	P	**Pn**	**13 06 14.4**	**+0.2**
	baz=330						
TIPB				S	**Sb**	**13 06 29.5**	**0.0**
	baz=330						
NWLT	**Wulai**	**1.16**	**314**	*e*P	**Pb**	**13 06 15.3**	**-0.1**
	baz=311						
NWLT				*e*S	**Sb**	**13 06 30.0**	**-0.1**
	baz=311						
EYUL	**Yuli**	**1.18**	**239**	P	**Pn**	**13 06 14.9**	**+0.1**
	baz=236						
EYUL				*e*S	**Sn**	**13 06 30.3**	**+0.3**
	baz=236						
TDCB	**Techi**	**1.18**	**284**	*e*S	**Sn**	**13 06 30.2**	**-0.1**
	baz=271						
VWDT	**VWDT**	**1.18**	**260**	*e*P	**Pn**	**13 06 15.3**	**+0.4**
	baz=257						
VWDT				*e*S	**Sn**	**13 06 30.6**	**+0.5**
	baz=257						
TWF1	**Yuli**	**1.19**	**240**	P	**Pn**	**13 06 15.2**	**+0.2**
	baz=227						
TWF1				S	**Sn**	**13 06 30.7**	**+0.3**
	baz=227						
NSK	**Sanguang**	**1.20**	**307**	P	**Pb**	**13 06 15.6**	**-0.5**
	baz=291						
NWF	**Wu-fen Shan**	**1.24**	**333**	P	**Pn**	**13 06 15.9**	**+0.1**
	baz=330						
WFSB	**Wu-fen Shan**	**1.24**	**333**	*e*P	**Pn**	**13 06 15.9**	**+0.2**
	baz=330						
IRIF	**Iriomote-Funau**	**1.26**	**73**	P	**Pb**	**13 06 17.4**	**+0.4**
IRIF				S	**Sb**	**13 06 33.5**	**+0.7**
TWA	**Mucha**	**1.26**	**323**	*e*P	**Pb**	**13 06 16.5**	**-0.7**
	baz=337						
HATJ	**Hateruma jima**	**1.27**	**86**	S	**Sb**	**13 06 34.2**	**+0.9**
FULB	**Fuli**	**1.28**	**234**	*e*P	**Pn**	**13 06 15.9**	**-0.3**
	baz=221						
FULB				*e*S	**Sn**	**13 06 33.2**	**+0.7**
	baz=221						
TATO	**Taipei**	**1.31**	**320**	*e*P	**Pn**	**13 06 17.1**	**+0.4**
	baz=317						
TATO				*e*S	**Sn**	**13 06 33.4**	**0.0**
	baz=317						
SSLB	**Suanglung**	**1.35**	**263**	*e*P	**Pn**	**13 06 17.6**	**+0.5**
	baz=261						
WHP	**Taichung City**	**1.38**	**283**	*e*P	**Pb**	**13 06 19.8**	**+0.6**
	baz=272						
SMLT	**Sun Moon Lake**	**1.39**	**267**	*e*P	**Pn**	**13 06 18.6**	**+0.8**
	baz=265						
EDH	**Donghe**	**1.42**	**226**	*e*P	**Pn**	**13 06 18.2**	**+0.1**
	baz=216						
EDH				*e*S	**Sn**	**13 06 34.0**	**-1.9**
	baz=216						
YM05	**YM05**	**1.42**	**327**	*e*P	**Pb**	**13 06 19.0**	**-0.9**
	baz=325						
TYC	**Yuchr**	**1.43**	**268**	*e*P	**Pn**	**13 06 19.1**	**+0.9**
	baz=266						
LIOB	**Emei**	**1.45**	**298**	*e*P	**Pb**	**13 06 20.3**	**+0.1**
	baz=295						
NSTT	**Nanjuang**	**1.45**	**298**	*e*P	**Pn**	**13 06 18.8**	**+0.3**
	baz=294						
NSTT				*e*S	**Sb**	**13 06 37.7**	**-0.7**
	baz=294						
JKRS	**Kuro-shima**	**1.48**	**79**	P	**Pb**	**13 06 21.8**	**+0.9**
JKRS				*e*S	**Sb**	**13 06 40.8**	**+1.5**
ELDTW	**Lidau**	**1.50**	**239**	*e*P	**Pn**	**13 06 19.1**	**-0.1**
	baz=236						
ELDTW				*e*S	**Sn**	**13 06 37.2**	**-0.8**
	baz=236						
ALS	**Alishan**	**1.54**	**253**	*e*P	**Pn**	**13 06 21.2**	**+1.1**
	baz=250						
ALS				*e*S	**Sn**	**13 06 40.7**	**+1.3**
	baz=250						
WJS	**Zhushan**	**1.55**	**265**	*e*P	**Pn**	**13 06 20.8**	**+0.9**
	baz=263						
LONT	**Longtian**	**1.58**	**229**	*e*P	**Pn**	**13 06 20.3**	**0.0**
	baz=239						
LONT				*e*S	**Sn**	**13 06 40.4**	**+0.4**
	baz=239						
JIJ	**Ishigaki jima**	**1.63**	**75**	P	**Pb**	**13 06 22.4**	**-1.0**
JIJ				*e*S	**Sb**	**13 06 42.9**	**-0.6**
CHN5	**Tsauling**	**1.63**	**257**	*e*P	**Pb**	**13 06 23.1**	**-0.3**
	baz=245						
CHN5				*e*S	**Sb**	**13 06 43.8**	**+0.1**
	baz=245						
TWGBT	**Beinan**	**1.67**	**227**	P	**Pn**	**13 06 22.0**	**+0.3**
	baz=236						
TWG	**Pinlang**	**1.68**	**228**	*e*P	**Pn**	**13 06 22.0**	**+0.4**
	baz=236						
STYT	**Tauyuan**	**1.72**	**243**	*e*P	**Pn**	**13 06 23.4**	**+1.2**
	baz=231						
WDLH	**Douliu**	**1.74**	**261**	*e*P	**Pn**	**13 06 24.0**	**+1.5**
	baz=260						
TPUB	**Ta-pu**	**1.77**	**248**	*e*P	**Pb**	**13 06 24.7**	**-1.0**
	baz=247						
CHN4	**Tsaushan**	**1.78**	**250**	*e*P	**Pb**	**13 06 25.3**	**-0.6**
	baz=249						
WTP	**Ta-pu**	**1.80**	**247**	*e*P	**Pb**	**13 06 25.5**	**-0.8**
	baz=236						
JISG	**Ishigakijimahi**	**1.84**	**70**	P	**Pb**	**13 06 25.8**	**-1.1**
JISG				*e*S	**Sb**	**13 06 48.5**	**-1.0**
WTK	**Tuku**	**1.88**	**262**	*e*P	**Pb**	**13 06 26.8**	**-0.8**
	baz=250						
SLGT	**Liugui**	**1.89**	**240**	*e*P	**Pn**	**13 06 25.9**	**+1.3**
	baz=230						
CHN1	**Nanshi**	**1.90**	**246**	*e*P	**Pb**	**13 06 27.0**	**-0.9**
	baz=245						
SGST	**Jiashian**	**1.90**	**243**	*e*P	**Pn**	**13 06 26.4**	**+1.8**
	baz=233						
TWK	**Hsinying**	**1.90**	**249**	*e*P	**Pb**	**13 06 26.9**	**-1.1**
	baz=247						
MASBT	**Mashibuluo**	**2.12**	**231**	*e*P	**Pn**	**13 06 29.0**	**+1.2**
	baz=223						
EAST	**Anshuo**	**2.13**	**223**	*e*P	**Pn**	**13 06 29.3**	**+1.3**
	baz=221						
SCZT	**Fangliau**	**2.29**	**227**	*e*P	**Pb**	**13 06 33.1**	**-1.5**
	baz=225						

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*IDC **08** 13:22:23.8±0.7, 15°.26S×173°.17W, h0^{km}, mb4.2/13, mb1 4.4/14, mb1mx4.2/33, mbtmp4.2/14, ML3.3/1, MS3.8/20, Ms1 3.8/20, ms1mx3.6/28, Error ellipse: s-maj=29.6km s-min=15.1km az=137.0*
*NEIC **08** 13:22:25.2±2.1, 15°.2S±0°.1×173°.2W±0°.1, h10^{km}±1^{km}, mb4.7/26, Error ellipse: s-maj=19.7km s-min=14.4km az=46.0*
ISC 08 13:22:27.9±0.5**, 15°.22S**±0°.09×**173°.15W**±0°.08**, h29**^{km}**,**
n106, σ1^{s}.70/78**, mb4.5**/23**, MS3.8**/20**, 1C, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	**Niue**	**4.92**	**142**		**Pn**	**13 23 38.1**	**-1.8**
MSVF	**Nonsavu**	**8.80**	**252**	LR	LR	13 27 38.0	
	comp=Z,637nm,20.4s,baz=70,slow=36						
FUNA	**Funafuti**	**10.01**	**311**	Pn	**Pn**	**13 24 47.0**	**-2.9**
KNTN	**Kanton**	**12.45**	**7**	Pn	Pn	13 25 17.2	-5.9
RAR	**Rarotonga**	**14.04**	**117**	Pn	**Pn**	**13 25 41.9**	**-2.9**
	1.4nm,0.3s,baz=231,slow=13,SNR=3.0						
RAR				Sn	Sn	13 28 07.2	-12
	1.0nm,0.3s,baz=346,slow=21,SNR=1.6						
RAR				LR	LR	13 29 38.5	
	comp=Z,131nm,19.5s,baz=288,slow=31						
SANVU	**Saraoutou**	**18.95**	**267**	P	**P**	**13 26 45.0**	**-1.8**
DZM	**Mont Dzumac**	**20.49**	**248**	P	**P**	**13 27 04.4**	**+0.7**
	3.9nm,0.7s,baz=70,slow=18,SNR=1.4						
DZM				LR	LR	13 33 41.8	
	comp=Z,270nm,20.1s,baz=37,slow=33						
DZM	**Mont Dzumac**	**20.49**	**248**	*e*P	Pn	13 27 08.2	+2.2
	76nm,1.4s						
DZM				*e*LR	LR	13 32 05.5	
	comp=Z,407nm,26.6s						
DZM	**Mont Dzumac**	**20.49**	**248**	IAmb	IAmb	13 27 31.7	
	comp=Z,62nm,1.5s						
PAE	**Paea**	**22.73**	**99**	*e*T	T	13 50 42.8	
	comp=Z,3.0nm,0.3s						
PPT2	**Papeete2**	**22.73**	**99**	*e*T	T	13 50 45.0	
	comp=Z,3.8nm,0.3s						
TIAR	**Tiarei**	**22.95**	**99**	*e*T	T	13 50 49.0	
	comp=Z,2.1nm,0.3s						
TVO	**Taravao**	**23.05**	**100**	*e*T	T	13 50 50.9	
	comp=Z,1.3nm,0.3s						
OUZ	**Omahuta**	**23.20**	**208**	P	**P**	**13 27 33.2**	**+0.8**
OUZ				IAmb	IAmb	13 27 36.8	
	comp=Z,30nm,1.2s						
MXZ	**Matakaoa Point**	**23.51**	**197**	P	**P**	**13 27 36.6**	**+1.2**
MXZ				IAmb	IAmb	13 27 43.1	
	comp=Z,37nm,1.0s						
TBI	**Tubuai**	**23.75**	**114**	*e*LR	LR	13 33 16.2	
	comp=Z,194nm,27.5s						
TBI	**Tubuai**	**23.75**	**114**	*e*T	T	13 51 56.7	
	comp=Z,7.3nm,0.3s						
HAZ	**Te Kaha**	**23.84**	**198**	P	**P**	**13 27 41.0**	**+2.4**
RUGZ	**Raukumara Rang**	**24.07**	**198**	P	**P**	**13 27 45.2**	**+4.4**
MARZ	**Manawahe**	**24.40**	**200**	P	P	13 27 54.5	+11
MWZ	**Matawai**	**24.45**	**198**	P	**P**	**13 27 47.0**	**+2.7**
URZ	**Urewera**	**24.51**	**199**	P	**P**	**13 27 45.0**	**+0.2**
	comp=Z,14nm,0.7s,baz=52,slow=2.4,SNR=14						
URZ				LR	LR	13 36 07.0	
	comp=Z,319nm,19.0s,baz=31,slow=34						
URZ	**Urewera**	**24.51**	**199**	P	**P**	**13 27 44.7**	**-0.1**
URZ				IAmb	IAmb	13 27 53.0	
	comp=Z,20nm,0.8s						
URZ	**Urewera**	**24.51**	**199**	P	**P**	**13 27 45.7**	**+1.0**
KMRZ	**Kaimai**	**24.52**	**201**	P	**P**	**13 27 49.0**	**+4.1**
TOZ	**Tahuroa Road**	**24.57**	**202**	P	**P**	**13 27 48.6**	**+3.2**
VAH	**Vaihoa**	**24.62**	**93**	*e*T	T	13 52 57.8	
	comp=Z,4.7nm,0.3s						
TLZ	**Tolley Road**	**25.09**	**201**	P	**P**	**13 27 54.2**	**+4.1**
MTHZ	**Maungataniwha**	**25.14**	**199**	P	**P**	**13 27 56.3**	**+5.8**
HIZ	**Hauiti**	**25.50**	**202**	P	**P**	**13 27 58.6**	**+4.8**
BKZ	**Black Stump Fm**	**25.53**	**199**	P	**P**	**13 27 53.5**	**-0.6**
BKZ				IAmb	IAmb	13 28 00.1	
	comp=Z,16nm,1.2s						
BKZ	**Black Stump Fm**	**25.53**	**199**	P	**P**	**13 27 53.9**	**-0.2**
TMVZ	**Te Maari**	**25.74**	**200**	P	**P**	**13 27 57.1**	**+1.1**
ETVZ	**East Tongariro**	**25.76**	**200**	P	**P**	**13 27 57.9**	**+1.7**
OTVZ	**Oturere**	**25.80**	**200**	P	**P**	**13 27 57.6**	**+0.9**
BHHZ	**Black Hill Sta**	**25.96**	**199**	P	**P**	**13 27 59.0**	**+0.9**
WNVZ	**Wahianoa**	**25.97**	**200**	P	**P**	**13 27 59.9**	**+1.7**
KAHZ	**Kahuranaki**	**26.00**	**198**	P	**P**	**13 28 01.3**	**+3.0**
HNR	**Honiara**	**26.89**	**279**	LR	LR	13 37 02.8	
	comp=Z,38nm,20.8s,baz=119,slow=33						
THZ	**Tophouse**	**29.07**	**202**	P	**P**	**13 28 25.5**	**-0.3**
THZ				IAmb	IAmb	13 28 32.6	
	comp=Z,33nm,1.3s						
RPZ	**Rata Peaks**	**31.44**	**202**	P	**P**	**13 28 47.0**	**+0.3**
	comp=Z,4.6nm,0.6s,baz=349,slow=8.2,SNR=2.1						
RPZ				LR	LR	13 40 27.2	
	comp=Z,306nm,22.0s,baz=266,slow=34						
TAOE	**Nuku Hiva Isla**	**32.86**	**83**	*e*LR	LR	13 37 33.3	
	comp=Z,74nm,24.5s						
TAOE	**Nuku Hiva Isla**	**32.86**	**83**	*e*T	T	14 03 23.3	
	comp=Z,22nm,0.2s						
WHZ	**Wether Hill Ro**	**34.46**	**204**	P	**P**	**13 29 13.7**	**+0.7**
ARMA	**Armidale**	**35.64**	**239**	P	**P**	**13 29 21.9**	**-1.7**
ARMA				IAmb	IAmb	13 29 41.1	
	comp=Z,11nm,1.4s						
CTA	**Charters Tower**	**38.92**	**257**	P	**P**	**13 29 51.1**	**-0.3**
	comp=Z,3.1nm,0.8s,baz=134,slow=20,SNR=1.6						
H11S2	**WAKE ISLAND Hy**	**38.93**	**329**	T	T	14 11 23.4	
	baz=145,slow=75,SNR=20						
H11S3	**WAKE ISLAND Hy**	**38.95**	**329**	T	T	14 11 09.4	
	baz=145,slow=75,SNR=19						
H11S1	**WAKE ISLAND Hy**	**38.95**	**329**	T	T	14 11 23.1	
	baz=145,slow=75,SNR=18						
H11N3	**WAKE ISLAND Hy**	**39.87**	**330**	T	T	14 12 30.8	
	baz=149,slow=76,SNR=18						
H11N1	**WAKE ISLAND Hy**	**39.88**	**330**	T	T	14 12 22.9	
	baz=149,slow=76,SNR=20						
H11N2	**WAKE ISLAND Hy**	**39.89**	**330**	T	T	14 12 32.2	
	baz=149,slow=76,SNR=14						
COEN	**Coen**	**42.23**	**266**	P	**P**	**13 30 19.4**	**+0.5**
COEN				IAmb	IAmb	13 30 31.5	
	comp=Z,11nm,1.3s						
TOO	**Toolangi**	**42.77**	**231**	P	**P**	**13 30 23.7**	**+0.7**
TOO				IAmb	IAmb	13 30 25.2	
	comp=Z,8.5nm,0.9s						
STKA	**Stephens Creek**	**44.34**	**240**	P	**P**	**13 30 34.9**	**-0.7**
	comp=Z,3.2nm,0.5s,baz=108,slow=12,SNR=8.4						
STKA				LR	LR	13 46 19.1	
	comp=Z,56nm,20.9s,baz=32,slow=32						
STKA	**Stephens Creek**	**44.34**	**240**	P	**P**	**13 30 35.4**	**-0.2**
BBOO	**Buckleboo**	**49.11**	**240**	P	**P**	**13 31 12.5**	**-0.5**
WR0	**Warramunga Arr**	**49.93**	**257**	P	**P**	**13 31 19.4**	**-0.1**
WR0				IAmb	IAmb	13 31 30.4	
	comp=Z,5.7nm,1.1s						
WB0	**Warramunga Arr**	**50.08**	**257**	P	**P**	**13 31 20.0**	**-0.6**
WB2	**Warramunga Arr**	**50.11**	**257**	P	**P**	**13 31 19.8**	**-1.0**
WRA	**Warramunga Arr**	**50.12**	**257**	P	**P**	**13 31 20.6**	**-0.3**
	comp=Z,1.4nm,0.5s,baz=92,slow=6.9,SNR=53						
WRA	**Warramunga Arr**	**50.12**	**257**	P	**P**	**13 31 19.5**	**-1.4**
AS31	**Alice Springs**	**50.39**	**252**	P	**P**	**13 31 22.2**	**-0.8**
ASAR	**Alice Springs**	**50.40**	**252**	P	**P**	**13 31 22.1**	**-0.8**
	comp=Z,2.6nm,0.4s,baz=88,slow=7.8,SNR=86						
ASAR				LR	LR	13 50 45.8	
	comp=Z,96nm,21.6s,baz=90,slow=34						
ASAR	**Alice Springs**	**50.40**	**252**	P	**P**	**13 31 21.6**	**-1.4**
FORT	**Forrest**	**55.71**	**243**	P	**P**	**13 32 01.2**	**-0.8**
MJAR	**Matsushiro Arr**	**68.96**	**320**	LR	LR	13 58 24.9	
	comp=Z,41nm,21.5s,baz=105,slow=31						
PETK	**Petropavlovsk-**	**72.53**	**342**	P	**P**	**13 33 53.0**	**+1.1**
	comp=Z,3.9nm,0.8s,baz=140,slow=12,SNR=6.4						
PETK				LR	LR	14 01 43.6	
	comp=Z,29nm,19.3s,baz=151,slow=32						
PETK	**Petropavlovsk-**	**72.53**	**342**	P	**P**	**13 33 53.0**	**+1.1**
NVAR	**Mina Array Bea**	**74.03**	**42**	P	**P**	**13 34 01.8**	**+0.4**
	comp=Z,1.1nm,0.8s,baz=225,slow=8.6,SNR=8.1						
NVAR				LR	LR	13 58 39.1	
	comp=Z,109nm,21.2s,baz=216,slow=29						
NVAR	**Mina Array Bea**	**74.03**	**42**	P	**P**	**13 34 01.1**	**-0.3**
QSPA	**South Pole Qui**	**74.83**	**180**	P	**P**	**13 34 07.7**	**+2.3**
QSPA				IAmb	IAmb	13 34 09.0	
	comp=Z,17nm,1.1s						
KSRS	**Korea Array**	**76.20**	**315**	LR	LR	14 01 02.4	
	comp=Z,47nm,20.3s,baz=74,slow=30						
USRK	**Ussuriysk Ar.**	**77.38**	**323**	LR	LR	14 01 18.7	
	comp=Z,67nm,21.8s,baz=145,slow=30						
SCM	**Sheep Creek Mo**	**79.47**	**12**	P	**P**	**13 34 32.2**	**+0.9**
N25K	**Chitina, Valde**	**79.85**	**13**	P	**P**	**13 34 32.9**	**-0.5**
N25K				IAmb	IAmb	13 34 37.4	
	comp=Z,21nm,1.4s						
TXAR	**Lajitas Array**	**80.31**	**56**	P	**P**	**13 34 38.2**	**+1.5**
	comp=Z,0.4nm,0.8s,baz=233,slow=4.4,SNR=4.7						
TXAR	**Lajitas Array**	**80.31**	**56**	P	**P**	**13 34 36.8**	**+0.1**
CCB	**Clear Creek Bu**	**81.94**	**11**	P	**P**	**13 34 44.9**	**+0.5**
CCB				IAmb	IAmb	13 34 47.9	
	comp=Z,5.5nm,0.8s						
PDAR	**Pinedale Array**	**81.97**	**42**	P	**P**	**13 34 46.0**	**+0.6**
	comp=Z,0.4nm,0.7s,baz=215,slow=5.2,SNR=5.4						
PDAR				LR	LR	14 06 30.4	
	comp=Z,74nm,19.2s,baz=295,slow=32						
TCOL	**CIGO, UAF Yank**	**82.14**	**11**	P	**P**	**13 34 45.8**	**+0.4**
COLA	**College**	**82.14**	**11**	P	**P**	**13 34 45.9**	**+0.5**
ILAR	**Eielson Array**	**82.22**	**11**	P	**P**	**13 34 45.6**	**-0.3**
	comp=Z,1.0nm,0.7s,baz=229,slow=6.3,SNR=11						
ILAR				LR	LR	14 03 41.4	
	comp=Z,71nm,20.1s,baz=206,slow=30						
ILAR	**Eielson Array**	**82.22**	**11**	P	**P**	**13 34 43.9**	**-2.0**
BMAR	**Burnt Mountain**	**85.03**	**11**	P	**P**	**13 35 01.6**	**+1.3**
MAW	**Mawson**	**88.04**	**199**	LR	LR	14 11 09.1	
	comp=Z,76nm,21.9s,baz=64,slow=33						
PLCA	**Paso Flores**	**89.45**	**132**	LR	LR	14 06 28.6	
	comp=Z,32nm,20.9s,baz=214,slow=30						
YKA	**Yellowknife Ar**	**89.84**	**23**	P	**P**	**13 35 24.2**	**+0.7**
	comp=Z,0.7nm,0.7s,baz=233,slow=3.9,SNR=12						
YKA				LR	LR	14 08 53.4	
	comp=Z,65nm,20.7s,baz=0.0,slow=31						
SYO	**Syowa Base**	**92.82**	**191**⇑	*e*P	**P**	**13 35 37.7**	**+0.3**
ULM	**Lac du Bonnet**	**93.64**	**39**	LR	LR	14 10 58.5	
	comp=Z,89nm,19.4s,baz=258,slow=31						
SONM	**Songino Array**	**94.87**	**318**	LR	LR	14 12 24.1	
	comp=Z,46nm,20.6s,baz=234,slow=32						
TSUM	**Tsumeb**	**144.20**	**198**		**PKPdf**	**13 42 02.3**	**+0.2**
KRLC	**Kraliky**	**144.31**	**349**	*e*PKP	**PKiKP**	**13 42 05.9**	**+1.1**
KHC	**Kasperske Hory**	**145.73**	**352**	*e*PKP	**PKPab**	**13 42 05.3**	**+0.9**
KHC				*e*x	x	13 42 14.7	
KHC	**Kasperske Hory**	**145.73**	**352**		**PKPab**	**13 42 04.6**	**+0.2**
CKRC	**Cesky Krumlov**	**145.94**	**351**	*e*PKP	**PKPab**	**13 42 05.3**	**+0.1**
GERES	**GERESS Array B**	**146.00**	**352**	PKPbc	**PKPab**	**13 42 06.4**	**+0.9**
	comp=Z,1.4nm,0.7s,baz=35,slow=4.9,SNR=7.9						
GERES	**GERESS Array B**	**146.00**	**352**	PKPbc	**PKPab**	**13 42 06.0**	**+0.5**
BRTR	**Keskin Array B**	**146.17**	**321**	PKPbc	**PKPab**	**13 42 07.5**	**+1.0**
	comp=Z,2.3nm,0.6s,baz=165,slow=1.2,SNR=7.9						
BRTR	**Keskin Array B**	**146.17**	**321**		**PKPbc**	**13 42 06.0**	**+0.1**
CONA	**Conrad Observa**	**146.54**	**349**	*e*P	**PKiKP**	**13 42 08.7**	**-0.9**
	comp=Z,2.5nm,0.7s						
MOA	**Molln**	**146.89**	**351**	*e*P	**PKPab**	**13 42 09.2**	**+0.4**
	comp=Z,8.7nm,1.4s						
WATA	**Walderalm**	**147.74**	**354**	*i* P	**PKiKP**	**13 42 11.5**	**-0.6**
	comp=Z,3.7nm,0.8s						
SOKA	**Soboth**	**147.90**	**349**	*e*P	**PKiKP**	**13 42 11.6**	**-0.8**
	comp=Z,5.9nm,1.1s						
OBKA	**Obir**	**148.15**	**350**	*e*P	**PKPab**	**13 42 13.9**	**-0.1**
	comp=Z,7.3nm,1.1s						
ABTA	**Abfaltersbach**	**148.21**	**353**	*e*P	**PKPbc**	**13 42 12.1**	**+0.8**
	comp=Z,5.9nm,1.1s						

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*IDC **08** 13:59:53.3±1.8, 5°.74S×130°.81E, h0^{km}, mb3.9/1, mb1 3.7/5, mb1mx3.5/42, mbtmp3.6/5, ML3.4/4, Error ellipse: s-maj=81.0km s-min=24.0km az=85.0*
*NEIC **08** 13:59:57.6±1.9, 5°.79S±0°.07×130°.80E±0°.08, h38^{km}±13^{km}, mb4.0/5, Error ellipse: s-maj=13.7km s-min=6.5km az=52.0*
ISC 08 13:59:56.8±0.7**, 5°.77S**±0°.05×**130°.8E**±0°.1**, h35**^{km}**, n21,**
σ1^{s}.97/25**, mb3.9**/3**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.26**	**167**	Pn	**Pn**	**14 00 30.3**	**-1.4**
FAKI	**Fak Fak**	**3.18**	**27**	Pn	**Pn**	**14 00 45.1**	**+0.7**
SIJI	**Sorong**	**4.89**	**5**	Pn	**Pn**	**14 01 07.8**	**-0.1**
	0.8nm,0.3s,baz=107,slow=23,SNR=20						
SIJI				Sn	**Sn**	**14 01 59.2**	**-4.1**
	3.1nm,0.3s,baz=175,slow=22,SNR=12						
MTN	**Manton Dam**	**7.04**	**177**	Pn	**Pn**	**14 01 41.4**	**+4.0**
FITZ	**Fitzroy Crossi**	**13.25**	**202**	Pn	**Pn**	**14 03 02.7**	**+0.1**
	0.3nm,0.3s,baz=31,slow=11,SNR=20						
FITZ				Sn	**Sn**	**14 05 26.1**	**-2.7**
	0.1nm,0.3s,baz=305,slow=20,SNR=1.4						
WB0	**Warramunga Arr**	**14.35**	**166**	Pn	**Pn**	**14 03 17.4**	**-0.2**
WRA	**Warramunga Arr**	**14.51**	**167**	Pn	**Pn**	**14 03 18.9**	**-0.8**
	0.1nm,0.3s,baz=349,slow=14,SNR=8.1						
WRA				Sn	**Sn**	**14 05 54.9**	**-4.5**
	0.1nm,0.3s,baz=332,slow=22,SNR=3.2						
WRA	**Warramunga Arr**	**14.51**	**167**		**Pn**	**14 03 19.1**	**-0.6**
WB2	**Warramunga Arr**	**14.51**	**167**	Pn	**Pn**	**14 03 19.6**	**-0.2**
WR0	**Warramunga Arr**	**14.57**	**166**	Pn	**Pn**	**14 03 21.0**	**+0.4**
COEN	**Coen**	**14.65**	**125**	Pn	**Pn**	**14 03 22.6**	**+0.8**
AS31	**Alice Springs**	**18.05**	**171**		**Pn**	**14 04 05.6**	**+0.6**
ASAR	**Alice Springs**	**18.05**	**171**	P	**P**	**14 04 07.5**	**+2.4**
	0.1nm,0.3s,baz=350,slow=13,SNR=18						
ASAR				S	**Sn**	**14 07 23.1**	**-2.4**
	0.1nm,0.3s,baz=7.0,slow=32,SNR=1.9						
CTAO	**Charters Tower**	**20.70**	**135**	P	**P**	**14 04 34.1**	**0.0**
CTAO				IAmb	IAmb	14 04 35.6	
	comp=Z,23nm,1.2s						
NWAO	**Narrogin (SRO)**	**29.83**	**203**	P	**P**	**14 06 00.1**	**-0.7**
USRK	**Ussuriysk Ar.**	**49.75**	**1**	P	**P**	**14 08 47.5**	**+1.7**
MK31	**Makanchi Array**	**67.64**	**326**	P	**P**	**14 10 51.4**	**+1.1**
MK31				IAmb	IAmb	14 10 52.6	
	comp=Z,0.7nm,0.8s						
MKAR	**Makanchi Array**	**67.64**	**326**	P	**P**	**14 10 52.0**	**+1.7**

	comp=Z,0.8nm,0.6s,baz=121,slow=7.6,SNR=12						
MKAR	Makanchi Array	67.64	326	P	P	14 10 51.5	+1.2
KKAR	Karatay Array	72.95	318	P	P	14 11 23.1	+0.2
KKAR	Karatay Array	72.95	318	P	P	14 11 23.1	+0.2
KKAR				IAmb	IAmb	14 11 25.2	
	comp=Z,0.9nm,0.6s						

IDC ***08*** *14:05:31.8±0.8, 30°.16N×139°.15E, h393^{km}±9^{km}, mb3.3/16, mb1 3.4/24, mb1mx3.3/46, mbtmp4.1/24, Error ellipse: s-maj=13.5km s-min=9.6km az=73.0*

JMA ***08*** *14:05:32.6±0.1, 30°.32N×139°.62E, h408^{km}, M3.9*

ISC 08 14:05:32.2±0.6**, 30°.19N**±0°.06×**139°.18E**±0°.08**, h400**^{km}**, n38,** σ**1^{s}67**/48**, mb3.5**/17**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2	2.96	10	P	Pn	14 06 37.1	+2.1
	8.1nm,0.3s,baz=240,slow=20,SNR=1.3						
JHJ				S	S	14 07 24.0	-2.0
	22nm,0.3s,baz=90,slow=20,SNR=2.0						
CBIJ	Chichi jima	4.06	139	P	Pn	14 06 44.8	-0.2
CBIJ				*e*S	S	14 07 40.9	-3.0
JCJ	Chichijima	4.06	139	P	Pn	14 06 44.7	-0.3
	104nm,0.3s,baz=272,slow=23,SNR=72						
JCJ				S	S	14 07 41.1	-2.8
	194nm,0.3s,baz=280,slow=22,SNR=19						
JIE	Ise	4.68	334	P	Pn	14 06 53.1	+2.3
JOD2	Odawara 2	5.06	359	P	Pn	14 06 55.2	+0.5
JNY	Yasuok	5.27	348	P	Pn	14 06 58.4	+1.4
JAO	Obara	5.31	343	P	Pn	14 06 59.2	+1.8
JHU	Hanno	5.64	1	P	Pn	14 07 00.7	-0.2
JRY	Ryogami san	5.81	358	P	Pn	14 07 03.1	+0.4
JYT	Yasato	6.08	8	P	Pn	14 07 04.7	-0.8
JYT				S	S	14 08 16.1	-5.6
JAG	Ashikaga	6.22	2	P	Pn	14 07 06.0	-1.1
MJAR	Matsushiro Arr	6.38	353	P	Pn	14 07 08.5	-0.5
	0.3nm,0.3s,baz=170,slow=11,SNR=31						
MJAR				S	S	14 08 25.1	-2.8
	0.1nm,0.3s,baz=142,slow=18,SNR=3.6						
MAT	Matsushiro	6.38	353	P	Pn	14 07 08.6	-0.3
MAT				S	S	14 08 23.1	-4.8
JHO	Hitachi	6.51	10	P	Pn	14 07 09.7	-0.6
JFK	Kawauchi	7.29	11	P	Pn	14 07 19.3	+0.2
JNU	Nakatsue	7.65	295	P	P	14 07 23.8	+0.1
	0.3nm,0.3s,baz=127,slow=15,SNR=2.2						
JOW	Kunigami	10.16	253	P	P	14 07 51.6	+0.1
	9.9nm,0.3s,baz=310,slow=17,SNR=2.9						
JOW				S	S	14 09 45.0	-1.5
	2.8nm,0.3s,baz=162,slow=20,SNR=1.5						
KSRS	Korea Array	11.83	311	P	Pn	14 08 10.8	-0.4
	0.6nm,0.3s,baz=124,slow=10,SNR=18						
ASAJ	Asahikawa	14.16	10	P	P	14 08 36.9	+1.5
	0.5nm,0.3s,baz=212,slow=12,SNR=7.0						
USRK	Ussuriysk Ar.	15.10	340	P	P	14 08 45.7	+0.1
	baz=170,slow=13,SNR=2.6						
KLR	Kul'dur	19.83	346	P	P	14 09 35.9	+1.1
	0.3nm,0.3s,baz=155,slow=7.3,SNR=15						
PETK	Petropavlovsk-	26.60	25	P	P	14 10 38.8	+3.0
	2.1nm,0.9s,baz=269,slow=2.9,SNR=4.0						
SONM	Songino Array	30.66	314	P	P	14 11 11.8	+0.1
	0.8nm,0.4s,baz=120,slow=8.0,SNR=8.7						
CMAR	Chiang Mai Arr	38.29	262	P	P	14 12 16.2	-0.2
	0.9nm,0.6s,baz=57,slow=6.8,SNR=11						
ZALV	Zalesovo Beam	45.42	318	P	P	14 13 12.8	-0.1
	0.6nm,0.4s,baz=99,slow=6.3,SNR=6.3						
ZALV				PcP	PcP	14 14 43.5	-0.6
	1.4nm,0.9s,baz=138,slow=5.0,SNR=4.4						
MKAR	Makanchi Array	46.48	307	P	P	14 13 20.9	-0.3
	1.3nm,0.5s,baz=93,slow=9.4,SNR=18						
MKAR				PcP	PcP	14 14 47.9	-0.2
	0.4nm,0.5s,baz=74,slow=9.3,SNR=4.9						
MKAR				ScP	ScP	14 18 00.7	-1.9
	0.2nm,0.5s,baz=87,slow=4.3,SNR=2.2						
NRIK	Noril'sk	48.81	338	P	P	14 13 38.8	+0.5
	3.2nm,0.6s,baz=123,slow=8.4,SNR=6.4						
WRA	Warramunga Arr	50.06	186	P	P	14 13 49.0	+0.7
	0.8nm,0.6s,baz=2.5,slow=7.7,SNR=11						
ASAR	Alice Springs	53.79	186	P	P	14 14 16.1	+0.6
	0.3nm,0.4s,baz=22,slow=11,SNR=9.6						
ILAR	Eielson Array	56.30	30	P	P	14 14 33.0	+0.3
	0.4nm,0.8s,baz=262,slow=5.1,SNR=5.4						
INK	Inuvik	61.34	25	P	P	14 15 08.1	+1.3
	0.5nm,0.4s,baz=314,slow=5.6,SNR=6.1						
ARCES	ARCESS Array B	69.75	340	P	P	14 16 00.6	+0.6
	4.9nm,0.8s,baz=318,slow=1.6,SNR=4.6						
YKA	Yellowknife Ar	70.68	28	P	P	14 16 06.6	+1.1
	0.3nm,0.8s,baz=298,slow=5.3,SNR=3.8						
KBZ	Khabaz	73.98	311	P	P	14 16 25.2	0.0
	3.1nm,0.8s,baz=149,slow=1.4,SNR=8.9						
FINES	FINESS Array B	74.00	333	P	P	14 16 25.3	+0.3
	3.8nm,0.9s,baz=67,slow=5.3,SNR=7.4						
AKASG	Malin Array Be	78.56	322	P	P	14 16 50.0	-0.5
	0.6nm,0.3s,baz=52,slow=5.1,SNR=5.5						
NOA	NORSAR Array B	79.75	337	P	P	14 16 56.4	-0.4
	0.9nm,0.7s,baz=90,slow=4.0,SNR=2.5						
BRTR	Keskin Array B	81.97	311	P	P	14 17 09.4	+0.5
	2.0nm,0.8s,baz=108,slow=4.0,SNR=6.3						

JMA ***08*** *14:25:08.8±0.1, 41°.42N×140°.75E, h115^{km}±1^{km}, M2.2*

IDC ***08*** *14:25:09.8±2.4, 41°.60N×140°.34E, h81^{km}±31^{km}, mb2.9/2, mb1 2.9/4, mb1mx2.7/57, mbtmp3.1/4, Error ellipse: s-maj=40.5km s-min=19.8km az=108.0*

ISC 08 14:25:10.5±1.0**, 41°.43N**±0°.04×**140°.76E**±0°.06**, h105**^{km}±7^{km}**, n20,** σ**1^{s}05**/27**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOT	Ohata	0.22	102	P	Pn	14 25 25.0	-0.4
JSR	Shiriuchi	0.27	291	P	Pn	14 25 24.9	-0.7
JSR				*e*S	Sn	14 25 37.2	+0.3
JSI2	Shiura 2	0.45	215	P	Pn	14 25 26.1	-0.5
JAHD	Aomorihigashid	0.47	110	P	Pn	14 25 26.0	-0.6
JAHD				*e*S	Sn	14 25 39.5	+0.8
JKB	Kayabe	0.50	24	P	Pn	14 25 26.6	-0.3
JTM	Tenmabayashi	0.68	160	P	Pn	14 25 27.6	-0.7
JTM				*e*S	Sn	14 25 41.9	+0.3
JYM2	Yakumo 2	0.74	337	P	Pn	14 25 28.3	-0.5
JYM2				*e*S	Sn	14 25 43.3	+0.7
JIW	Iwasaki	1.01	214	P	Pn	14 25 30.6	-0.9
JNB	Noboribetsu	1.06	11	P	Pn	14 25 31.1	-0.9
JOSM	Okushiri--Mats	1.16	305	P	Pn	14 25 31.7	-1.3
JANG	Nango	1.20	151	P	Pn	14 25 32.1	-1.5
JANG				S	Sn	14 25 50.2	-0.8
JAH	Hinai	1.24	184	P	Pn	14 25 33.3	-0.7
JIAM	Iburiatsuma	1.47	36	P	Pn	14 25 36.8	+0.1
JEW	Eniwo	1.50	20	P	Pn	14 25 36.7	-0.3
JNBK	Urakawa-nobuka	1.72	60	P	Pn	14 25 38.9	-0.8
JOM	Ohasama	2.00	168	P	Pn	14 25 42.2	-1.1
JOM				*e*S	Sn	14 26 07.4	-0.8
ASAJ	Asahikawa	3.01	26	P	Pn	14 25 55.1	-1.4
	0.8nm,0.3s,baz=214,slow=14,SNR=19						
ASAJ				S	Sn	14 26 31.1	-0.8
	0.4nm,0.3s,baz=100,slow=18,SNR=2.0						
MJAR	Matsushiro Arr	5.27	203	P	Pn	14 26 26.7	-0.2
	0.1nm,0.3s,baz=23,slow=15,SNR=1.8						
MKAR	Makanchi Array	41.48	298	P	P	14 32 45.5	-1.4
	0.2nm,0.5s,baz=61,slow=7.1,SNR=5.2						
ASAR	Alice Springs	65.08	187	P	P	14 35 42.6	+2.9
	0.2nm,0.6s,baz=11,slow=5.9,SNR=4.6						

IDC ***08*** *14:33:29.7±1.2, 30°.31S×177°.48W, h0^{km}, mb4.1/6, mb1 4.3/8, mb1mx4.0/43, mbtmp4.1/8, ML3.7/2, MS3.1/2, Ms1 3.1/2, ms1mx2.7/38, Error ellipse: s-maj=28.1km s-min=21.4km az=99.0*

NEIC ***08*** *14:33:32.1±1.1, 30°.32S±0°.09×177°.6W±0°.2, h16^{km}±8^{km}, mb4.5/14, Error ellipse: s-maj=25.8km s-min=12.8km az=89.0*

ISC 08 14:33:34.3±1.0**, 30°.35S**±0°.07×**177°.6W**±0°.2**, h33**^{km}**, n29,** σ**1^{s}36**/30**, mb4.4**/13**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.12	347	Pn	Pn	14 33 53.1	-0.6
	463nm,0.3s,baz=46,slow=6.9,SNR=15						
RAO				Sn	Sn	14 34 05.7	-2.4
	2μm,0.3s,baz=90,slow=20,SNR=10						
RAO				LR	LR	14 34 08.3	
	comp=Z,400nm,19.7s,baz=84,slow=34						
RAO	Raoul Island	1.12	347		Pn	14 33 52.9	-0.8
URZ	Urewera	9.00	207	Pn	Pn	14 35 41.5	-0.5
	0.4nm,0.3s,baz=336,slow=20,SNR=1.1						
URZ				Sn	Sn	14 37 19.1	-3.1
	1.7nm,0.3s,baz=113,slow=16,SNR=2.9						
URZ	Urewera	9.00	207	Pn	Pn	14 35 39.5	-2.5
THZ	Tophouse	13.71	211	Pn	Pn	14 36 44.7	-1.7
RPZ	Rata Peaks	16.09	211	Pn	Pn	14 37 17.4	-0.5
	0.4nm,0.3s,baz=24,slow=20,SNR=1.8						
ODZ	Otahua Downs	17.32	209	P	P	14 37 34.5	-0.1
RAR	Rarotonga	18.46	65	LR	LR	14 42 30.3	
	comp=Z,53nm,21.6s,baz=266,slow=30						
ARMA	Armidale	26.48	262	P	P	14 39 08.7	0.0
ARMA				IAmb	IAmb	14 39 31.5	
	comp=Z,8.1nm,1.2s						
CAN	Canberra	28.39	251	P	P	14 39 27.2	+1.5
CTA	Charters Tower	34.10	279	P	P	14 40 18.3	+2.2
	comp=Z,4.0nm,0.5s,baz=100,slow=12,SNR=12						
CTAO	Charters Tower	34.10	279	P	P	14 40 18.5	+2.4
STKA	Stephens Creek	34.80	257	P	P	14 40 24.0	+2.0
	comp=Z,2.1nm,0.5s,baz=107,slow=12,SNR=8.8						
STKA				LR	LR	14 52 54.3	
	comp=Z,36nm,19.3s,baz=29,slow=33						
STKA	Stephens Creek	34.80	257	IAmb	IAmb	14 40 30.1	
	comp=Z,0.9nm,0.9s						
BBOO	Buckleboo	39.28	254	P	P	14 41 00.1	-0.1
BBOO				IAmb	IAmb	14 41 28.9	
	comp=Z,20nm,1.3s						
AS31	Alice Springs	43.43	267	P	P	14 41 34.5	+0.3
ASAR	Alice Springs	43.43	267	P	P	14 41 34.6	+0.3
	comp=Z,1.0nm,0.4s,baz=106,slow=7.3,SNR=48						
ASAR				PcP	PcP	14 43 21.9	-0.4
	comp=Z,0.2nm,0.5s,baz=116,slow=3.9,SNR=1.4						
WR0	Warramunga Arr	44.23	272	P	P	14 41 41.5	+0.8
WR0				IAmb	IAmb	14 41 58.5	
	comp=Z,5.8nm,1.2s						
WB2	Warramunga Arr	44.40	272	P	P	14 41 42.0	-0.1
WB2				IAmb	IAmb	14 41 44.3	
	comp=Z,6.9nm,0.6s						
WRAB	Tennant Creek	44.41	272	P	P	14 41 42.5	+0.4
WRAB				IAmb	IAmb	14 41 44.3	
	comp=Z,5.8nm,0.7s						
WRA	Warramunga Arr	44.41	272	P	P	14 41 42.9	+0.7
	comp=Z,5.4nm,0.5s,baz=110,slow=8.1,SNR=74						
WRA	Warramunga Arr	44.41	272	P	P	14 41 41.9	-0.3
WB0	Warramunga Arr	44.43	272	P	P	14 41 42.2	-0.1
WB0				IAmb	IAmb	14 41 43.7	
	comp=Z,5.3nm,0.6s						
MTN	Manton Dam	50.29	279		PcP	14 43 46.0	-0.6
FITZ	Fitzroy Crossi	52.67	270	P	P	14 42 46.2	+0.5
FITZ				IAmb	IAmb	14 43 15.3	
	comp=Z,5.1nm,1.2s						
QSPA	South Pole Qui	59.76	180	P	P	14 43 38.0	+2.2
	comp=Z,0.6nm,0.6s,baz=126,slow=2.2,SNR=2.3						
TXAR	Lajitas Array	92.10	57	P	P	14 46 40.0	-0.5
	comp=Z,0.2nm,0.9s,baz=78,slow=16,SNR=1.5						
FINES	FINESS Array B	145.21	340	PKPbc	PKPab	14 53 07.4	-0.1
	comp=Z,1.8nm,0.4s,baz=66,slow=3.5,SNR=17						
AKASG	Malin Array Be	151.45	323	PKPbc	PKiKP	14 53 24.5	-0.3
	comp=Z,0.4nm,0.4s,baz=49,slow=2.6,SNR=4.4						

BJI ***08*** *14:44:32.7±0.0, 36°.51N×70°.91E, h210^{km}, mB4.5/3, mb4.2/9*

IDC ***08*** *14:44:32.4±2.7, 36°.33N×70°.98E, h184^{km}±24^{km}, mb3.4/15, mb1 3.4/21, mb1mx3.2/69, mbtmp3.9/21, MS3.9/1, Ms1 3.9/1, ms1mx2.5/39, Error ellipse: s-maj=20.0km s-min=14.0km az=19.0*

NEIC ***08*** *14:44:35.0±1.6, 36°.56N±0°.08×71°.0E±0°.1, h201^{km}±6^{km}, mb4.0/14, Error ellipse: s-maj=14.0km s-min=10.8km az=76.0*

NNC ***08*** *14:44:39.6±2.7, 36°.99N×70°.96E, h214^{km}±34^{km}, mb2.9, mpv4.0, Error ellipse: s-maj=26.8km s-min=18.6km az=175.0*

ISC 08 14:44:33.8±0.5**, 36°.57N**±0°.06×**70°.98E**±0°.05**, h188**^{km}**, n81,** σ**1^{s}17**/85**, mb3.8**/20**, 3C-6D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	Kabul	2.56	219	Pn	Pn	14 45 20.3	+2.3
NIL	Nilore	3.46	147	Pn	Pn	14 45 30.0	+1.6
KSH	Kashi	4.92	52	P	Pn	14 45 44.2	-2.7
KSH				S	Sn	14 46 35.2	-9.3
KSH				pmax	pmax		
	comp=Z,210nm,0.3s						
KSH				pmax	pmax		
	comp=Z,150nm,4.5s						
KSH				LR	LR		
	comp=N,140nm,5.5s						
KSH				LR	LR		
	comp=E,290nm,9.5s						
KSH				LR	LR		
	comp=Z,260nm,11.6s						
AML	Almayashu	5.94	20	P	Pn	14 46 01.6	+1.2
	SNR=36						
UCH	Uchtor	6.28	25	P	Pn	14 46 06.1	+1.2
	SNR=36						
EKS2	Erkin-Say	6.46	19	P	Pn	14 46 08.4	+1.5
	SNR=11						
KK31	Karatay Array	6.54	357	⇑P	Pn	14 46 08.6	+0.8
	2.5nm,0.4s,baz=184,slow=13,SNR=40						
KK31				⇓S	Sn	14 47 18.8	-3.5
	13nm,0.5s,baz=190,slow=25,SNR=4.9						
KK31	Karatay Array	6.54	357		Pn	14 46 08.4	+0.6
KKAR	Karatay Array	6.54	357		Pn	14 46 08.4	+0.6
KKAR	Karatay Array	6.54	357	Pn	Pn	14 46 08.2	+0.3
AAK	Ala-Archa	6.64	23	P	Pn	14 46 10.7	+1.4
	2.7nm,0.3s,baz=172,slow=5.0,SNR=45						
AAK				S	Sn	14 47 23.6	-1.3
	1.5nm,0.3s,baz=29,slow=23,SNR=18						
AAK	Ala-Archa	6.64	23	P	Pn	14 46 11.1	+1.8
	SNR=14						
AAK	Ala-Archa	6.64	23	⇓P	Pn	14 46 10.7	+1.4
	6.0nm,0.5s						
AAK				⇑S	Sn	14 47 23.8	-1.0
	13nm,0.6s						
AAK	Ala-Archa	6.64	23	Pn	Pn	14 46 10.3	+1.0
KBK	Karagaybulak	6.81	26	P	Pn	14 46 14.0	+2.5
	SNR=9.6						
CHMS	Chumysh	7.05	23	P	Pn	14 46 16.3	+1.8
	SNR=7.5						
USP	Ospenovka	7.22	21	P	Pn	14 46 17.9	+1.2
	SNR=6.1						
TKM2	Tokmak 2	7.27	28	P	Pn	14 46 19.2	+1.6
	SNR=24						
TKM2	Tokmak 2	7.27	28	⇓P	Pn	14 46 18.6	+1.0
	19nm,0.7s						
TKM2				⇓S	Sn	14 47 38.0	-1.9
	3.7nm,0.6s						
HRA	Herat	7.45	256	Pn	Pn	14 46 21.1	+1.1
GEYT	Alibeck	10.35	281	P	Pn	14 46 57.0	-0.6
	0.6nm,0.3s,baz=114,slow=8.9,SNR=5.9						
GEYT				S	Sn	14 48 50.5	-2.4
	0.4nm,0.3s,baz=122,slow=44,SNR=2.4						
GEYT	Alibeck	10.35	281	Pn	Pn	14 46 58.7	+1.1
GYA0B	ALIBECK ARRAY	10.35	281	Pn	Pn	14 46 57.4	-0.3
MAKZ	Makanchi	13.11	35	Pn	Pn	14 47 32.8	-0.1
MK31	Makanchi Array	13.25	36	⇓P	Pn	14 47 34.7	0.0
	0.2nm,0.4s,baz=215,slow=11,SNR=8.6						
MK31	Makanchi Array	13.25	36		Pn	14 47 34.8	+0.2
MKAR	Makanchi Array	13.25	36	P	Pn	14 47 35.1	+0.4
	0.1nm,0.3s,baz=222,slow=14,SNR=5.8						
MKAR	Makanchi Array	13.25	36	Pn	Pn	14 47 34.4	-0.2
DANN	Dangsing	13.54	124	*e*P	Pn	14 47 38.6	-0.1
	6.8nm,0.4s						
GKN	Gorkha	14.35	123	*e*P	Pn	14 47 49.1	+0.4
	13nm,0.5s						
WMQ	Urumqi	14.67	55	*e*P	P	14 47 54.8	+1.1
KKN	Kakani	14.93	122	*e*P	Pn	14 47 56.6	+0.8
	14nm,0.5s						
AB31	Akbulak array	15.02	331	P	Pn	14 47 56.0	-0.5
	1.9nm,0.7s,baz=141,slow=11,SNR=20						
ABKAR	Akbulak array	15.02	331	Pn	Pn	14 47 56.1	-0.4
ABKAR	Akbulak array	15.02	331	Pn	Pn	14 47 55.1	-1.4
ABKAR				IAmb	IAmb	14 47 59.7	
	comp=Z,2.7nm,0.8s						
KURBB	Kurchatov Arra	15.06	19	P	Pn	14 47 58.0	+1.0
	comp=Z,0.1nm,0.3s,baz=208,slow=10.0,SNR=6.6						
PKIN	Phulchoki	15.14	122	*e*P	Pn	14 47 58.9	+0.4
	comp=Z,6.3nm,0.5s						
PKI	Pulchoki	15.15	122	*e*P	Pn	14 47 59.2	+0.5
	comp=Z,12nm,0.6s						
KURK	Kurchatov	15.17	19		Pn	14 47 58.9	+0.5
GUN	Gumba	15.27	120	*e*P	Pn	14 48 00.7	+0.6
	comp=Z,5.1nm,0.4s						
RAMN	Ramite	16.36	121	*e*P	P	14 48 13.3	+0.5
	comp=Z,8.1nm,0.5s						
BVAR	Borovoye Array	16.46	359	P	Pn	14 48 14.9	+0.9
	comp=Z,0.6nm,0.3s,baz=168,slow=15,SNR=9.9						
BRVK	Borovoye	16.50	359		Pn	14 48 14.7	+0.3
AKTO	Aktyubinsk	16.71	330	P	Pn	14 48 17.4	+0.4
	comp=Z,1.1nm,0.3s,baz=140,slow=10,SNR=21						
AKTO	Aktyubinsk	16.71	330	⇑P	Pn	14 48 17.4	+0.4
	comp=Z,5.9nm,0.7s						
TAPN	Taplejung	16.89	118	*e*P	Pn	14 48 20.2	+0.5
	comp=Z,6.0nm,0.6s						
ODAN	Odare	16.97	120	*e*P	Pn	14 48 20.8	+0.3
	comp=Z,4.0nm,0.5s						
ZAA0	Zalesovo Array	19.86	25	P	P	14 48 50.7	+0.5
ZAA0				IAmb	IAmb	14 48 51.9	
	comp=Z,2.2nm,0.7s						
ZALV	Zalesovo Beam	19.86	25	P	P	14 48 51.0	+0.8
	comp=Z,2.4nm,0.5s,baz=221,slow=12,SNR=12						
ZALV	Zalesovo Beam	19.86	25	P	P	14 48 50.6	+0.4
ARU	Arti	21.56	341	P	P	14 49 09.0	+0.7
	comp=Z,0.5nm,0.4s,baz=131,slow=6.5,SNR=3.6						
ARU	Arti	21.56	341	P	P	14 49 08.3	+0.1
ARU				IAmb	IAmb	14 49 11.5	
	comp=Z,3.6nm,0.9s						
BELG	Belogornoye	22.83	321	P	P	14 49 21.6	+1.3
	comp=Z,3.3nm,0.4s,baz=70,slow=15,SNR=2.4						
LZH	Lanzhou	26.41	81	*e*P	P	14 49 54.4	+1.2
LZH				pmax	pmax		
	comp=Z,11nm,1.0s						
LZH				pmax	pmax		
	comp=Z,68nm,5.4s						
SONM	Songino Array	28.31	55	P	P	14 50 11.1	+1.3
	comp=Z,0.3nm,0.7s,baz=90,slow=2.9,SNR=2.1						
KMI	Kunming	29.43	104	⇓P	P	14 50 17.4	-2.7
KMI				pmax	pmax		
	comp=Z,16nm,0.8s						
HHC	Hu-ho-hao-te	31.76	70	*e*P	P	14 50 41.7	+1.5
HHC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,84nm,7.6s						
AKASG	Malin Array Be	32.89	309	P	P	14 50 51.2	+1.3
	comp=Z,0.4nm,0.5s,baz=105,slow=9.1,SNR=2.6						
SANT	Santorini	36.34	284	P	P	14 51 19.2	-0.5
FIA1	FINESS Array S	37.42	326	P	P	14 51 29.1	+0.7
FINES	FINESS Array B	37.42	326	P	P	14 51 29.2	+0.9
	comp=Z,3.4nm,0.8s,baz=131,slow=8.9,SNR=10						
ARCES	ARCESS Array B	41.08	338	P	P	14 51 59.4	+0.8
	comp=Z,1.5nm,0.5s,baz=99,slow=7.5,SNR=9.4						
ARCES	ARCESS Array B	41.08	338	P	P	14 51 58.6	+0.1
HFS	Hagfors	43.00	322	P	P	14 52 14.7	+0.5
	comp=Z,11nm,1.1s,baz=112,slow=11,SNR=7.6						
NC303	NORSAR Array S	44.26	323	P	P	14 52 24.9	+0.7
NB201	NORSAR Array S	44.28	323	P	P	14 52 25.0	+0.6
NB2	NORSAR Subarra	44.32	323	P	P	14 52 24.6	-0.1
	comp=Z,2.3nm,0.6s,baz=95,slow=7.9						
NOA	NORSAR Array B	44.32	323	P	P	14 52 24.7	-0.1
	comp=Z,0.9nm,0.5s,baz=108,slow=8.0,SNR=4.1						
NBO00	NORSAR Array S	44.53	323	P	P	14 52 26.6	+0.3
NC204	NORSAR Array S	44.56	323	P	P	14 52 27.2	+0.6
NC204				IAmb	IAmb	14 52 36.2	
	comp=Z,42nm,1.4s						
JHJ	Hachijo jima 2	55.47	72	LR	LR	15 19 40.2	
	comp=Z,106nm,21.1s,baz=124,slow=38						
TORD	Torodi Ar. Bea	65.70	269	P	P	14 54 56.7	-1.8
	comp=Z,0.5nm,0.6s,baz=64,slow=5.0,SNR=5.7						
A21K	Barrow	67.25	15	P	P	14 55 08.0	+0.7
A21K				IAmb	IAmb	14 55 32.4	
	comp=Z,6.2nm,1.5s						
C36M	Paulatuk	73.81	6	P	P	14 55 47.3	+0.3
C36M				IAmb	IAmb	14 56 04.5	
	comp=Z,3.2nm,1.4s						
INK	Inuvik	73.84	9	P	P	14 55 47.9	+0.6
	comp=Z,0.9nm,0.5s,baz=317,slow=8.5,SNR=5.3						
INK	Inuvik	73.84	9	P	P	14 55 48.1	+0.9
INK				IAmb	IAmb	14 55 48.8	
	comp=Z,1.3nm,0.6s						
BPAW	Bear Paw Mtn.	74.33	18	P	P	14 55 49.0	-1.3
ILAR	Eielson Array	74.72	16	P	P	14 55 51.7	-0.7
	comp=Z,0.2nm,0.4s,baz=319,slow=5.5,SNR=2.0						
YKA	Yellowknife Ar	81.18	3	P	P	14 56 28.0	+0.1
	comp=Z,0.5nm,0.4s,baz=358,slow=5.2,SNR=15						
WRA	Warramunga Arr	82.04	122	P	P	14 56 31.6	-1.5
	comp=Z,0.4nm,0.5s,baz=324,slow=4.9,SNR=14						
ASAR	Alice Springs	84.31	125	P	P	14 56 43.1	-1.5
	comp=Z,0.5nm,0.5s,baz=311,slow=4.8,SNR=17						

IDC ***08*** *15:09:04.3±0.4, 2°.58S×119°.33E, h0^{km}, mb4.6/33, mb1 4.6/34, mb1mx4.6/47, mbtmp4.6/34, ML4.8/2, MS4.8/36, Ms1 4.7/36, ms1mx4.7/43, Error ellipse: s-maj=15.3km s-min=9.6km az=60.0*

GCMT ***08*** *15:09:06.9±0.1, 2°.36S±0°.01×119°.46E±0°.01, h18^{km}, MW5.5/148, Moment Tensor Solution. s119,c198; s148,c288; Duration: 1^{s}4 Moment tensor: Scale 10^{17} Nm; M_{rr}-1.00±.03; $M_{\theta\theta}$2.50±.03; $M_{\phi\phi}$-1.49±.03; $M_{r\theta}$1.49±.09; $M_{\theta\phi}$-0.36±.02; $M_{\phi r}$-0.54±.08; Best double couple: $M_0$2.52000×10^{17} NP1:ϕ_s52.00000°, δ43.00000°, λ-159.00000°. NP2:ϕ_s307.00000°, δ76.00000°, λ-49.00000°. Principal axes: T 3.1080, Plg21.0000°, Azm7.0000°; N -1.1670, Plg39.0000°, Azm115.0000°; P -1.9320, Plg44.0000°, Azm256.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

DJA ***08*** *15:09:06.4±0.1, 2°S±1°×11°9E±°, h10^{km}, M5.2/73, mB5.7/57, mb5.3/73, MLv5.7/34, Mw(mB)5.2/57, MwMwp5.2/30, Mwp5.5/30*

NEIC ***08*** *15:09:08, 2°.37S×119°.48E, h16^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-0.92; $M_{\theta\theta}$2.54; $M_{\phi\phi}$-1.62; $M_{r\theta}$1.00; $M_{\theta\phi}$-0.37; $M_{\phi r}$-0.52; Fault plane solution: $M_0$2.52000×10^{17} NP1:ϕ_s50.00000°, δ57.00000°, λ-169.00000°. NP2:ϕ_s314.00000°, δ81.00000°, λ-33.00000°. Principal axes: T 2.8605, Plg16.0000°, Azm7.0000°; N -0.9578, Plg56.0000°, Azm120.0000°; P -1.9027, Plg30.0000°, Azm267.0000°;*

NEIC ***08*** *15:09:08.9, 2°.44S×119°.38E, h23^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.23; $M_{\theta\theta}$2.94; $M_{\phi\phi}$-3.18; $M_{r\theta}$0.44; $M_{\theta\phi}$-0.78; $M_{\phi r}$-0.26; Fault plane solution: $M_0$3.20000×10^{17} NP1:ϕ_s51.86000°, δ81.11000°, λ175.75000°. NP2:ϕ_s142.52000°, δ85.80000°, λ8.92000°. Principal axes: T 3.1170, Plg9.0000°, Azm7.0000°; N 0.1681, Plg80.0000°, Azm168.0000°; P -3.2851, Plg3.0000°, Azm277.0000°;*

NEIC ***08*** *15:09:08.9±1.4, 2°.43S±0°.05×119°.37E±0°.06, h37^{km}±5^{km}, mb5.2/65, Ms_20 5.0/163, Mwb5.6/24, Mwc5.5(GCMT) Error ellipse: s-maj=9.1km s-min=7.4km az=60.0*

KLM ***08*** *15:09:10, 2°.34S×119°.41E, h39^{km}, mb5.2*

ISC 08 15:09:08.6±0.5**, 2°.49S**±0°.03×**119°.45E**±0°.04**, h30**^{km}±3^{km}**, n474,** σ**2^{s}04**/429**, mb5.0**/121**, MS5.0**/134**, 2C-4D, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TTSI	Tana Toraja	0.66	146	P	Pb	15 09 18.4	-3.4
TTSI				S	Sb	15 09 29.5	-1.2
SPSI	Sidrap Palu	1.50	168	P	Pn	15 09 32.6	-1.0
BNSI	Bone	2.01	161	P	Pn	15 09 41.0	+0.4
KAPI	Kappang	2.52	173	Pn	Pn	15 09 49.0	+1.3
	196nm,0.3s,baz=333,slow=11,SNR=258						
KAPI				LR	LR	15 10 17.9	
	comp=Z,13μm,20.5s,baz=24,slow=30						
KAPI				Sn	Sb	15 10 23.6	-0.4
	1μm,0.3s,baz=94,slow=20,SNR=9.3						
KAPI	Kappang	2.52	173	Pn	Pn	15 09 48.1	+0.4
APSI	Ampana	2.70	55	P	Pn	15 09 49.1	-1.0
BKB	Balikpapan	2.83	296	Pn	Pn	15 09 51.5	-0.3
BKB	Balikpapan	2.83	296	P	Pn	15 09 51.3	-0.5
BKB				S	Sn	15 10 26.0	+1.0
MPSI	Mapaga	2.84	9	P	Pn	15 09 49.2	-2.9
BKSI	Bulukumba	2.89	167	P	Pn	15 09 54.1	+1.4
KBKI	Kotabaru	3.37	256	P	Pn	15 09 57.3	-2.1
KDI	Kendari	3.49	115	P	Pn	15 10 02.2	+1.3
LUWI	Luwuk	3.62	67	Pn	Pn	15 10 01.1	-1.7
LUWI	Luwuk	3.62	67	P	Pn	15 10 03.2	+0.4
BSSI	Bau Bau, Buton	3.77	164	P	Pn	15 10 06.1	+1.2
TOLI2	Tolitoli	3.82	20	Pn	Pn	15 10 04.7	-0.8
MRSI	Marisa	3.86	40	P	Pn	15 10 03.4	-2.7
BBKI	Banjar Baru	4.70	258	P	Pn	15 10 16.5	-1.1
GTOI	Gorontalo	4.73	49	P	Pn	15 10 16.4	-1.6
MTKI	Muara Teweh, K	4.80	289	P	Pn	15 10 17.6	-1.4
KMSI	Cibinong	5.46	56	P	Pn	15 10 28.6	+0.5
	13nm535nm17μm2μm,0.7s						
PLAI	Plampang	6.51	195	P	Pn	15 10 42.1	-0.4
	2.9nm30μm6μm314nm,0.8s						

SANI	**Sanana**	**6.55**	**86**	P	**Pn**	**15 10 40.8**	**-2.3**
	1.6nm8µm2µm166nm,0.7s						
EDFI	**Ende, Flores**	**6.61**	**160**	P	**Pn**	**15 10 46.9**	**+3.0**
	0.3nm13µm2µm52nm,0.6s						
MMRI	**Maumere**	**6.71**	**156**	Pn	**Pn**	**15 10 47.6**	**+2.4**
MMRI	**Maumere**	**6.71**	**156**	P	**Pn**	**15 10 46.9**	**+1.7**
	1.1nm16µm5µm326nm,0.9s						
TWSI	**Taliwang, Sumb**	**6.71**	**202**	P	**Pn**	**15 10 44.6**	**-0.7**
	1.7nm15µm2µm86nm,0.6s						
SRBI	**Singaraja**	**6.97**	**217**	P	**Pn**	**15 10 48.9**	**0.0**
	1.5nm18µm4µm248nm,0.6s						
KMMI	**Kalianget**	**7.09**	**230**	P	**Pn**	**15 10 53.0**	**+2.5**
	4.8nm11µm8µm199nm,0.8s						
WSI	**Waingapu**	**7.18**	**173**	P	**Pn**	**15 10 55.6**	**+3.9**
	5.8nm22µm1µm,1.4s						
DNP	**Denpasar**	**7.45**	**214**	P	**Pn**	**15 10 57.7**	**+2.3**
	4.7nm19µm31µm571nm,0.8s						
MYLDM	**Lahad Datu**	**7.68**	**353**	Pn	**Pn**	**15 10 56.1**	**-2.5**
NLAI	**Namlea**	**7.68**	**96**	P	**Pn**	**15 11 00.8**	**+2.2**
	0.4nm108nm,0.8s						
SPMM	**Sapulut**	**7.75**	**337**	P	**Pn**	**15 11 00.0**	**+0.5**
BASI	**Baing, Sumba**	**7.76**	**172**	P	**Pn**	**15 10 59.4**	**-0.3**
	2.0nm17µm6µm344nm,0.9s						
PBKI	**Pangkalan Bun**	**7.77**	**268**	P	**Pn**	**15 10 58.0**	**-1.9**
	5.6nm6µm468nm,0.8s						
JAGI	**Jajag, Banyuwa**	**7.94**	**221**		**Pn**	**15 11 01.2**	**-0.9**
JAGI	**Jajag, Banyuwa**	**7.94**	**221**	P	**Pn**	**15 11 03.0**	**+0.8**
	1.0nm13µm3µm256nm,0.9s						
TNTI	**Ternate**	**8.55**	**68**	Pn	**Pn**	**15 11 09.9**	**-0.7**
TNTI	**Ternate**	**8.55**	**68**	P	**Pn**	**15 11 12.6**	**+2.0**
	2µm1µm81nm,0.9s						
SOEI	**Soe**	**8.66**	**147**	Pn	**Pn**	**15 11 14.3**	**+2.1**
SOEI	**Soe**	**8.66**	**147**	P	**Pn**	**15 11 14.2**	**+2.1**
	9µm5µm315nm,1.8s						
BATI	**Baumata**	**8.73**	**152**	Pn	**Pn**	**15 11 17.7**	**+4.6**
	2.6nm,0.3s,baz=282,slow=2.1,SNR=8.0						
BATI				LR	LR	15 14 52.0	
	comp=Z,9µm,19.6s,baz=348,slow=40						
BATI	**Baumata**	**8.73**	**152**	P	**Pn**	**15 11 17.5**	**+4.4**
	5µm2µm114nm,1.1s						
SBUM	**Sibu**	**8.73**	**304**	Pn	**Pn**	**15 11 12.1**	**-1.0**
SBUM	**Sibu**	**8.73**	**304**	P	**Pn**	**15 11 12.0**	**-1.1**
KKM	**Kota Kinabalu**	**9.07**	**339**	Pn	**Pn**	**15 11 16.6**	**-1.1**
MSAI	**Masohi**	**9.51**	**95**	P	**Pn**	**15 11 26.4**	**+2.7**
	765nm28nm,0.7s						
KSM	**Kuching**	**9.95**	**293**	Pn	**Pn**	**15 11 27.5**	**-2.2**
KSM	**Kuching**	**9.95**	**293**	P	**Pn**	**15 11 29.0**	**-0.7**
UGM	**Wanagama**	**10.39**	**238**	P	**Pn**	**15 11 34.8**	**-1.0**
	6µm220nm,1.2s						
BNDI	**Bandanaira**	**10.63**	**101**	P	**Pn**	**15 11 41.9**	**+2.8**
	7µm7µm428nm,1.2s						
DAV	**Davao City (W)**	**11.30**	**33**	Pn	Pn	15 11 52.8	+4.5
	34nm,0.3s,baz=154,slow=2.3,SNR=4.5						
DAV				Sn	**Sn**	**15 13 51.9**	**-1.7**
	50nm,0.3s,baz=67,slow=13,SNR=1.7						
DAV				LR	LR	15 16 54.4	
	comp=Z,4µm,18.2s,baz=171,slow=41						
TPI	**Tanjungpandan**	**11.79**	**268**	P	**Pn**	**15 11 55.2**	**+0.3**
	2µm119nm,1.5s						
SIJI	**Sorong**	**11.92**	**82**	Pn	**Pn**	**15 11 57.9**	**+1.1**
	2.6nm,0.3s,baz=263,slow=8.4,SNR=7.7						
SIJI				Sn	**Sn**	**15 14 04.0**	**-4.9**
	0.4nm,0.3s,baz=340,slow=23,SNR=1.1						
LEM	**Lembang**	**12.55**	**250**	Pn	**Pn**	**15 12 08.2**	**+2.7**
	1.8nm,0.3s,baz=30,slow=11,SNR=7.2						
LEM				LR	LR	15 16 53.5	
	comp=Z,7µm,19.2s,baz=87,slow=38						
CISI	**Cisompet, Garu**	**12.63**	**246**	Pn	**Pn**	**15 12 05.3**	**-1.2**
CISI	**Cisompet, Garu**	**12.63**	**246**	P	**Pn**	**15 12 08.6**	**+2.1**
	5µm5µm252nm,1.3s						
FAKI	**Fak Fak**	**12.79**	**92**	Pn	**Pn**	**15 12 10.4**	**+1.7**
FAKI	**Fak Fak**	**12.79**	**92**	P	**Pn**	**15 12 10.8**	**+2.1**
	5µm2µm86nm,1.3s						
SAUI	**Saumlaki**	**13.00**	**115**		**Pn**	**15 12 13.6**	**+2.1**
CBJI	**Citeko**	**13.15**	**252**	P	**Pn**	**15 12 15.2**	**+1.7**
	7µm372nm,1.9s						
DBJI	**Dramaga**	**13.28**	**252**	P	**Pn**	**15 12 17.6**	**+2.2**
	4µm132nm,2.1s						
BLSI	**Bandar Lampung**	**14.45**	**258**	P	**Pn**	**15 12 31.4**	**0.0**
	3µm186nm,1.5s						
PMBI	**Palembang**	**14.67**	**268**	P	**Pn**	**15 12 36.7**	**+2.5**
	314nm,0.5s						
KLSI		**14.85**	**261**	P	**Pn**	**15 12 36.8**	**+0.1**
	909nm54nm,1.5s						
KASI	**Kota Agung**	**15.21**	**258**	P	**Pn**	**15 12 42.0**	**+0.4**
	4µm4µm290nm,1.3s						
MDSI	**Maura Dua**	**15.37**	**262**	P	**Pn**	**15 12 43.0**	**-0.6**
	2µm99nm,1.4s						
MTN	**Manton Dam**	**15.48**	**132**	P	**P**	**15 12 48.6**	**-0.5**
	baz=16,SNR=4.7						
MTN	**Manton Dam**	**15.48**	**132**		**P**	**15 12 48.7**	**-0.5**
LWLI	**Liwa**	**15.56**	**260**	P	**Pn**	**15 12 45.8**	**-0.4**
	6µm152nm,1.4s						
JMBI	**JAMBI**	**15.82**	**273**	P	**Pn**	**15 12 50.2**	**+0.8**
	3µm110nm,0.9s						
LHSI	**Lahat**	**15.96**	**265**	P	**Pn**	**15 12 51.6**	**+0.4**
	4µm330nm,1.0s						
MYKOM	**Kota Tinggi**	**16.16**	**285**	Pn	**Pn**	**15 12 52.7**	**-1.1**
MYKOM				IAmb	IAmb	15 12 59.1	
	comp=Z,170nm,1.2s						
KDU	**Kakadu**	**16.40**	**129**	P	**P**	**15 12 58.5**	**-0.9**
	baz=16,SNR=7.8						
TGY	**Tagaytay City**	**16.55**	**5**	Pn	**P**	**15 13 00.7**	**-0.5**
	comp=Z,9.3nm,0.3s,baz=296,slow=18,SNR=1.1						
MNAI	**Manna**	**16.57**	**263**	P	**P**	**15 13 00.8**	**-0.5**
	comp=Z,7µmcomp=Z,498nm,1.9s						
FITZ	**Fitzroy Crossi**	**16.66**	**159**	P	**P**	**15 13 02.3**	**+0.1**
	baz=17,SNR=13						
FITZ	**Fitzroy Crossi**	**16.66**	**159**	Pn	**P**	**15 13 02.4**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=352,slow=3.7,SNR=4.0						
FITZ				LR	LR	15 21 19.1	
	comp=Z,4µm,18.7s,baz=344,slow=44						
FITZ	**Fitzroy Crossi**	**16.66**	**159**		**P**	**15 13 02.2**	**-0.1**
KSI	**Kapahiang**	**16.87**	**266**	P	**Pn**	**15 13 03.0**	**+0.1**
	comp=Z,5µmcomp=Z,264nm,0.8s						
SDSI	**Sungai Dareh**	**18.08**	**275**	P	**Pn**	**15 13 17.6**	**-0.2**
	comp=Z,3µmcomp=Z,61nm,2.2s						
BKNI	**Bangkinang**	**18.61**	**278**	P	**P**	**15 13 22.6**	**-1.4**
BKNI				IAmb	IAmb	15 13 33.4	
	comp=Z,250nm,1.3s						
BKNI	**Bangkinang**	**18.61**	**278**	P	**Pn**	**15 13 24.5**	**+0.1**
	comp=Z,5µmcomp=Z,5µmcomp=Z,167nm,1.1s						
PSA00	**Pilbara Seismi**	**18.97**	**179**	P	**Pn**	**15 13 29.7**	**+1.1**
PSA00	**Pilbara Seismi**	**18.97**	**179**	P	**Pn**	**15 13 29.9**	**+1.3**
PSA00				IAmb	IAmb	15 13 34.8	
	comp=Z,128nm,1.2s						
PDSI	**Padang**	**19.04**	**274**	P	**P**	**15 13 28.7**	**0.0**
	comp=Z,3µmcomp=Z,2µmcomp=Z,48nm,1.1s						
IPM	**Ipoh**	**19.67**	**291**	P	**P**	**15 13 34.9**	**-0.6**
IPM	**Ipoh**	**19.67**	**291**	P	**Pn**	**15 13 37.0**	**0.0**
MNSI	**Mandailing Nat**	**20.13**	**279**	P	**P**	**15 13 40.3**	**-0.2**
	comp=Z,3µmcomp=Z,145nm,1.1s						
KULM	**Kulim**	**20.31**	**292**	P	**P**	**15 13 41.3**	**-1.2**
KULM				IAmb	IAmb	15 13 53.3	
	comp=Z,145nm,1.2s						
KULM	**Kulim**	**20.31**	**292**	P	Pn	15 13 44.0	-0.6
GIRL	**Giralia**	**20.66**	**194**	P	Pn	15 13 50.6	+2.0
	baz=21,SNR=3.1						
RPSI	**Rantau Prapat**	**21.15**	**284**	P	**P**	**15 13 52.1**	**+0.5**
PSI	**Prapat**	**21.18**	**284**	P	**P**	**15 13 52.1**	**+0.1**
	comp=Z,60nm,1.0s,baz=179,slow=2.2,SNR=40						
JAY	**Jayapura**	**21.24**	**91**	P	**P**	**15 13 56.1**	**+3.6**
	comp=Z,15nm,0.8s,baz=186,slow=9.2,SNR=2.3						
JAY				LR	LR	15 25 12.2	
	comp=Z,1µm,20.3s,baz=282,slow=45						
GSI	**Gunungsitoli**	**22.19**	**280**	P	**P**	**15 14 01.4**	**-1.3**
GSI				IAmb	IAmb	15 14 22.0	
	comp=Z,161nm,1.2s						
GSI				IAMs_20	IAMs_20	15 23 41.4	
	comp=Z,6µm,18.0s						
GSI	**Gunungsitoli**	**22.19**	**280**	P	**P**	**15 14 00.7**	**-2.1**
	comp=Z,3µmcomp=Z,3µmcomp=Z,115nm,0.8s						
TRTT	**Trang**	**22.22**	**298**	P	**P**	**15 14 04.5**	**+1.5**
	comp=Z,2µmcomp=Z,87nm,1.4s						
UBPT	**Khong Chiam**	**22.43**	**322**	P	**P**	**15 14 11.4**	**+6.2**
	comp=Z,31nm,1.3s						
WB0	**Warramunga Arr**	**22.54**	**141**	P	**P**	**15 14 05.0**	**-1.5**
WB0				IAmb	IAmb	15 14 15.9	
	comp=Z,76nm,0.9s						
WRA	**Warramunga Arr**	**22.64**	**141**	P	**P**	**15 14 06.3**	**-1.2**
	comp=Z,34nm,0.8s,baz=315,slow=12,SNR=70						
WRA				PcP	**PcP**	**15 18 01.3**	**+1.4**
	comp=Z,1.2nm,0.9s,baz=333,slow=1.7,SNR=1.7						
WRA				LR	LR	15 25 29.4	
	comp=Z,3µm,18.3s,baz=305,slow=44						
WRA	**Warramunga Arr**	**22.64**	**141**	P	**P**	**15 14 04.9**	**-2.6**
WRAB	**Tennant Creek**	**22.64**	**141**	P	**P**	**15 14 05.1**	**-2.4**
WB2	**Warramunga Arr**	**22.64**	**141**	P	**P**	**15 14 06.2**	**-1.4**
	baz=23						
WB2	**Warramunga Arr**	**22.64**	**141**	P	**P**	**15 14 05.1**	**-2.4**
WR0	**Warramunga Arr**	**22.78**	**141**	P	**P**	**15 14 07.3**	**-1.7**
WR0				IAmb	IAmb	15 14 22.0	
	comp=Z,111nm,0.9s						
TPTI		**22.98**	**284**	P	**P**	**15 14 10.5**	**-0.6**
	comp=Z,2µmcomp=Z,39nm,0.8s						
QIZ	**Qiongzhong**	**23.38**	**337**	P	**P**	**15 14 14.2**	**-0.8**
QIZ				pP	**sP**	**15 14 25.2**	**-1.9**
QIZ				S	**S**	**15 18 25.8**	**-0.5**
QIZ				sS	**sS**	**15 18 42.6**	**+2.2**
QIZ				pmax	pmax		
	comp=Z,250nm,6.7s						
QIZ				LR	LR		
	comp=Z,2µm,13.7s						
QIZ				LR	LR		
	comp=Z,1µm,15.3s						
QIZ				LR	LR		
	comp=Z,2µm,21.1s						
QIZ	**Qiongzhong**	**23.38**	**337**	P	**P**	**15 14 13.5**	**-1.6**
QIZ				IAmb	IAmb	15 14 25.1	
	comp=Z,94nm,1.3s						
LHMI	**Lhok Sumawe**	**23.75**	**289**	P	**P**	**15 14 17.5**	**-1.2**
LHMI	**Lhok Sumawe**	**23.75**	**289**	P	**P**	**15 14 17.8**	**-0.9**
	comp=Z,4µmcomp=Z,4µmcomp=Z,296nm,0.9s						
SRAK	**Srakaew**	**23.80**	**314**	P	**P**	**15 14 15.8**	**-3.4**
	comp=Z,4µmcomp=Z,470nm,1.2s						
MEEK	**Meekatharra**	**24.02**	**182**	P	**P**	**15 14 20.8**	**-0.4**
	baz=24,SNR=40						
PHET	**Kaeng Krachan**	**24.93**	**308**	P	**P**	**15 14 32.1**	**+2.6**
	comp=Z,707nmcomp=Z,80nm,1.0s						
CHAI	**Chaiyaphum**	**25.14**	**317**	P	**P**	**15 14 33.0**	**+1.6**
	comp=Z,1µmcomp=Z,182nm,0.9s						
AS31	**Alice Springs**	**25.28**	**148**	P	**P**	**15 14 31.4**	**-1.3**
ASAR	**Alice Springs**	**25.28**	**148**	P	**P**	**15 14 32.3**	**-0.3**
	comp=Z,8.0nm,0.7s,baz=317,slow=7.6,SNR=39						
ASAR				PcP	**PcP**	**15 18 07.2**	**+1.6**
	comp=Z,3.3nm,0.7s,baz=343,slow=1.7,SNR=6.5						
ASAR				LR	LR	15 26 09.2	
	comp=Z,2µm,18.9s,baz=321,slow=41						
ASAR	**Alice Springs**	**25.28**	**148**	P	**P**	**15 14 31.1**	**-1.5**
TPUB	**Ta-pu**	**25.66**	**3**	P	**P**	**15 14 34.6**	**-1.5**
TPUB				IAmb	IAmb	15 14 56.4	
	comp=Z,87nm,1.0s						
YULB	**Yu-li**	**25.79**	**4**	P	**P**	**15 14 36.2**	**-1.0**
YULB				IAmb	IAmb	15 14 48.0	
	comp=Z,46nm,0.9s						
NONG	**Nongkai**	**25.98**	**322**	P	**P**	**15 14 42.7**	**+3.6**
	comp=Z,66nm,1.1s						
SSLB	**Suanglung**	**26.16**	**3**	IAMs_20	IAMs_20	15 26 09.5	
	comp=Z,3µm,20.0s						
NACB	**Ninganchiao**	**26.59**	**4**	P	**P**	**15 14 43.0**	**-1.4**
NACB				IAmb	IAmb	15 15 09.1	
	comp=Z,50nm,1.1s						
QIS	**Mount Isa**	**26.63**	**134**	P	**P**	**15 14 44.3**	**-0.6**
	baz=27,SNR=8.8						
MORW	**Morawa**	**26.63**	**187**	P	**P**	**15 14 44.8**	**+0.1**
	baz=27,SNR=9.2						
MORW	**Morawa**	**26.63**	**187**	P	**P**	**15 14 44.4**	**-0.3**
UTHA	**Uthaitani**	**26.71**	**313**	P	**P**	**15 14 49.1**	**+3.5**
	comp=Z,229nmcomp=Z,26nm,1.0s						
YHNB	**Yeheng**	**27.06**	**4**	P	**P**	**15 14 47.5**	**-1.3**
PHIT	**Phitsanulok**	**27.11**	**317**	P	P	15 14 59.0	+10
QZH	**Quanzhou**	**27.28**	**358**	⇓*i*P	P	15 15 00.8	+10
QZH				S	S	15 19 46.3	+18
QZH				LR	LR		
	comp=N,2µm,18.0s						
QZH				LR	LR		
	comp=E,910nm,16.1s						
QZH				LR	LR		
	comp=Z,2µm,18.6s						
UTTA	**Uttaradit**	**27.41**	**318**	P	**P**	**15 14 58.6**	**+6.7**
	comp=Z,291nmcomp=Z,35nm,1.1s						
BLDU	**Ballidu**	**28.09**	**185**	P	**P**	**15 14 60.0**	**+2.1**
	baz=28,SNR=4.7						
SLVN	**Son La**	**28.14**	**328**	P	**P**	**15 14 55.8**	**-2.8**
PMG	**Port Moresby**	**28.39**	**105**	P	**P**	**15 15 01.2**	**+0.5**
	comp=Z,24nm,1.0s,baz=311,slow=11,SNR=6.8						
PMG	**Port Moresby**	**28.39**	**105**	P	**P**	**15 15 00.1**	**-0.7**
PMG				IAmb	IAmb	15 15 11.5	
	comp=Z,73nm,1.1s						
PMG	**Port Moresby**	**28.39**	**105**	P	**P**	**15 15 02.5**	**+1.8**
LAMP	**Lampang**	**28.57**	**318**	P	P	15 15 13.5	+11
CM04	**Chiang Mai Arr**	**28.93**	**317**	P	**P**	**15 15 09.0**	**+3.5**
	comp=Z,135nmcomp=Z,15nm,1.0s						
CM36	**Chiang Mai Arr**	**28.93**	**317**	P	P	15 15 12.0	+6.5
CM09	**Chiang Mai Arr**	**28.95**	**317**	P	P	15 15 11.4	+5.7
	comp=Z,141nmcomp=Z,19nm,0.9s						
CM05	**Chiang Mai Arr**	**28.96**	**317**	P	P	15 15 11.0	+5.3
	comp=Z,119nmcomp=Z,11nm,0.9s						
CM01	**Chiang Mai Arr**	**28.96**	**317**	P	**P**	**15 15 09.8**	**+4.1**
	comp=Z,169nmcomp=Z,14nm,0.9s						
CM02	**Chiang Mai Arr**	**28.98**	**317**	P	P	15 15 11.0	+5.1
	comp=Z,124nmcomp=Z,17nm,1.2s						
CM13	**Chiang Mai Arr**	**29.00**	**317**	P	**P**	**15 15 10.0**	**+3.9**
	comp=Z,108nmcomp=Z,16nm,1.0s						
CM31	**Chiang Mai Arr**	**29.00**	**317**	P	P	15 15 15.2	+9.2
	comp=Z,427nm,1.0s						
CMAR	**Chiang Mai Arr**	**29.00**	**317**	P	**P**	**15 15 06.8**	**+0.7**
	comp=Z,2.4nm,0.8s,baz=143,slow=7.2,SNR=14						
CMAR				PcP	**PcP**	**15 18 16.0**	**+1.5**
	comp=Z,0.9nm,0.7s,baz=165,slow=3.7,SNR=2.1						
CMAR				PKiKP	**PKiKP**	**15 25 51.0**	**+2.0**
	comp=Z,0.5nm,0.3s,baz=119,slow=1.1,SNR=5.3						
CMAR	**Chiang Mai Arr**	**29.00**	**317**	P	**P**	**15 15 04.4**	**-1.7**
CM35	**Chiang Mai Arr**	**29.01**	**317**	P	P	15 15 12.0	+5.8
CM15	**Chiang Mai Arr**	**29.01**	**317**	P	**P**	**15 15 10.0**	**+3.8**
	comp=Z,108nmcomp=Z,14nm,0.9s						
CM34	**Chiang Mai Arr**	**29.13**	**318**	P	P	15 15 12.0	+4.7
CM32	**Chiang Mai Arr**	**29.20**	**317**	P	P	15 15 17.0	+9.1
CMMT	**Chiang Mai**	**29.24**	**317**	P	P	15 15 13.3	+5.1
	comp=Z,235nmcomp=Z,11nm,1.1s						
CHTO	**Chiang Mai**	**29.24**	**317**	IAMs_20	IAMs_20	15 28 07.0	
	comp=Z,4µm,22.0s						
CM33	**Chiang Mai Arr**	**29.24**	**317**	P	**P**	**15 15 12.0**	**+3.7**
FORT	**Forrest**	**29.29**	**165**	P	**P**	**15 15 07.5**	**-1.0**
FORT				IAmb	IAmb	15 15 29.3	
	comp=Z,50nm,1.0s						
FORT				IAMs_20	IAMs_20	15 27 57.0	
	comp=Z,3µm,18.0s						
MHMT	**Maesarieng**	**29.51**	**315**	P	**P**	**15 15 12.4**	**+1.8**
GUMO	**Guam**	**29.85**	**57**	LR	LR	15 27 08.8	
	comp=Z,739nm,20.5s,baz=241,slow=36						
PBA	**Port Blair**	**30.04**	**298**	IAMs_20	IAMs_20	15 28 11.2	
	comp=Z,2µm,20.0s						
NWAO	**Narrogin (SRO)**	**30.35**	**184**	P	**P**	**15 15 19.2**	**+1.3**
	baz=31,SNR=5.6						
NWAO	**Narrogin (SRO)**	**30.35**	**184**	P	**P**	**15 15 15.5**	**-2.4**
	comp=Z,7.0nm,0.6s,baz=7.2,slow=8.3,SNR=8.5						
NWAO				LR	LR	15 28 05.4	
	comp=Z,2µm,21.6s,baz=346,slow=38						
NWAO	**Narrogin (SRO)**	**30.35**	**184**	P	**P**	**15 15 15.5**	**-2.4**
NWAO				IAmb	IAmb	15 15 28.7	
	comp=Z,32nm,0.9s						
JOW	**Kunigami**	**30.37**	**16**	LR	LR	15 26 39.7	
	comp=Z,3µm,22.0s,baz=166,slow=35						
JOW	**Kunigami**	**30.37**	**16**	P	**P**	**15 15 16.2**	**-1.9**
GYA	**Guiyang**	**31.32**	**338**	⇓P	**P**	**15 15 28.6**	**+1.9**
GYA				pP	sP	15 15 38.5	-0.6
GYA				sP	pP	15 15 44.4	+9.0
GYA				S	**S**	**15 20 34.4**	**+2.3**
GYA				pmax	pmax		
	comp=Z,17nm,0.8s						
GYA				pmax	pmax		
	comp=Z,220nm,3.9s						
GYA				LR	LR		
	comp=Z,2µm,19.7s						
GYA				LR	LR		
	comp=Z,2µm,20.2s						
GYA				LR	LR		
	comp=Z,2µm,17.5s						
CTA	**Charters Tower**	**31.48**	**126**	P	**P**	**15 15 28.9**	**+0.9**
	comp=Z,11nm,1.1s,baz=283,slow=13,SNR=3.1						
KMI	**Kunming**	**31.88**	**330**	⇓P	**P**	**15 15 35.6**	**+3.9**
KMI				pP	sP	15 15 43.7	-0.4
KMI				sP	pP	15 15 48.5	+8.0
KMI				S	**S**	**15 20 45.5**	**+4.5**
KMI				sS	sS	15 21 02.6	+7.3
KMI				SS	**SnSn**	**15 22 33.5**	**+3.0**
KMI				pmax	pmax		
	comp=Z,30nm,1.1s						
KMI				pmax	pmax		
	comp=Z,180nm,3.5s						
KMI				LR	LR		
	comp=Z,1µm,19.4s						
KMI				LR	LR		
	comp=Z,3µm,19.0s						
KMI				LR	LR		
	comp=Z,2µm,18.3s						
RABL	**Rabaul**	**32.70**	**94**	P	**P**	**15 15 38.2**	**-0.7**
RABL				IAmb	IAmb	15 16 07.5	
	comp=Z,48nm,1.1s						
SSE	**Sheshan**	**33.44**	**3**	P	**P**	**15 15 45.1**	**+0.1**
SSE				S	**S**	**15 21 04.1**	**-0.6**
SSE				pmax	pmax		
	comp=Z,6.0nm,0.9s						
SSE				pmax	pmax		
	comp=Z,210nm,6.2s						
SSE				LR	LR		
	comp=Z,520nm,19.5s						
SSE				LR	LR		
	comp=Z,550nm,23.9s						
QLP	**Quilpie**	**33.75**	**137**	P	**P**	**15 15 47.8**	**-0.1**
	baz=34,SNR=18						
ENH	**Enshi**	**33.94**	**344**	P	**P**	**15 15 48.8**	**-0.6**
ENH				IAmb	IAmb	15 15 59.1	
	comp=Z,39nm,1.0s						
ENH				IAMs_20	IAMs_20	15 27 32.9	
	comp=Z,2µm,21.0s						
BBOO	**Buckleboo**	**33.95**	**154**	P	**P**	**15 15 49.6**	**+0.1**
	baz=34,SNR=5.6						
BBOO	**Buckleboo**	**33.95**	**154**	P	**P**	**15 15 48.8**	**-0.8**
BBOO				IAmb	IAmb	15 16 10.9	
	comp=Z,33nm,1.1s						
BBOO				IAMs_20	IAMs_20	15 31 46.7	
	comp=Z,2µm,19.0s						
NJ2	**Nanjing**	**34.36**	**359**	⇓P	**P**	**15 15 55.3**	**+2.3**
NJ2				pP	**sP**	**15 16 04.4**	**-1.2**
NJ2				sP	pP	15 16 09.3	+7.4
NJ2				S	**S**	**15 21 23.3**	**+4.4**
NJ2				sS	**sS**	**15 21 37.0**	**+3.6**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,470nm,3.5s						
NJ2				LR	LR		
	comp=Z,1µm,17.1s						
NJ2				LR	LR		
	comp=Z,790nm,13.3s						
NJ2				LR	LR		
	comp=Z,1µm,22.7s						
HTT	**Hallett**	**35.77**	**152**	P	**P**	**15 16 05.7**	**+0.4**
	baz=36,SNR=16						
STKA	**Stephens Creek**	**35.91**	**147**	P	**P**	**15 16 06.2**	**-0.3**
	baz=36,SNR=17						
STKA	**Stephens Creek**	**35.91**	**147**	P	**P**	**15 16 06.0**	**-0.4**
	comp=Z,16nm,0.9s,baz=313,slow=10,SNR=23						
STKA				PcP	**PcP**	**15 18 35.0**	**+1.8**
	comp=Z,4.4nm,0.9s,baz=346,slow=4.2,SNR=1.5						
STKA				LR	LR	15 32 04.4	
	comp=Z,2µm,19.5s,baz=318,slow=38						
STKA	**Stephens Creek**	**35.91**	**147**	P	**P**	**15 16 06.0**	**-0.4**
CD2	**Chengdu**	**36.43**	**337**	P	**P**	**15 16 11.7**	**+0.8**
CD2				PP	**PP**	**15 17 39.4**	**+5.2**
CD2				S	**S**	**15 21 50.0**	**-0.9**
CD2				sS	sS	15 22 11.3	+6.1
CD2				pmax	pmax		
	comp=Z,70nm,0.6s						
CD2				LR	LR		
	comp=Z,2µm,17.2s						
CD2				LR	LR		
	comp=Z,4µm,17.2s						
CD2				LR	LR		
	comp=Z,2µm,18.1s						
JCJ	**Chichijima**	**36.69**	**35**	P	**P**	**15 16 15.4**	**+2.3**
	comp=Z,30nm,0.5s,baz=288,slow=20,SNR=1.4						
XAN	**Xi'an**	**37.66**	**346**	P	**P**	**15 16 21.5**	**+0.1**
XAN				pP	sP	15 16 34.0	+0.2
XAN				PP	**PP**	**15 17 47.8**	**0.0**
XAN				PcP	**PcP**	**15 18 37.4**	**-1.1**
XAN				S	**S**	**15 22 09.0**	**-0.6**
XAN				pmax	pmax		
	comp=Z,11nm,1.1s						
XAN				pmax	pmax		
	comp=Z,300nm,4.6s						
XAN				LR	LR		
	comp=Z,2µm,19.1s						
XAN				LR	LR		
	comp=Z,3µm,20.1s						
XAN				LR	LR		
	comp=Z,3µm,20.6s						
JTU	**Tsushima**	**37.99**	**13**	P	**P**	**15 16 24.0**	**-0.1**
CMSA	**Cobar Meteorol**	**38.04**	**142**	P	**P**	**15 16 25.6**	**+1.1**
	baz=38,SNR=14						
JMN	**Monobe**	**38.51**	**19**	IAMs_20	IAMs_20	15 29 58.4	
	comp=Z,3µm,19.0s						
TIA	**Tai'an**	**38.56**	**357**	P	**P**	**15 16 29.9**	**+1.0**
TIA				S	**S**	**15 22 23.7**	**+0.6**
TIA				pmax	pmax		
	comp=Z,7.0nm,0.6s						
TIA				pmax	pmax		
	comp=Z,200nm,4.5s						
TIA				LR	LR		
	comp=Z,800nm,13.5s						
TIA				LR	LR		
	comp=Z,600nm,9.3s						
TIA				LR	LR		
	comp=Z,1µm,22.8s						
SHL	**Shillong**	**38.61**	**318**	*e*P	**P**	**15 16 29.2**	**-0.4**
SHL				IAmb	IAmb	15 16 37.3	
	comp=Z,22nm,1.0s						
PALK	**Pallekele**	**39.86**	**284**	P	**P**	**15 16 39.9**	**-0.2**
	comp=Z,13nm,0.9s,baz=198,slow=9.1,SNR=3.7						
PALK				LR	LR	15 33 59.7	
	comp=Z,2µm,19.3s,baz=220,slow=38						
ARPS	**Mount Arapiles**	**39.87**	**152**	P	**P**	**15 16 40.4**	**+0.5**
	baz=40,SNR=7.6						
KSAR	**Wonju Array Be**	**40.50**	**10**	P	**P**	**15 16 42.9**	**-2.0**
KSRS	**Korea Array**	**40.52**	**10**	P	**P**	**15 16 44.8**	**-0.3**
	comp=Z,2.1nm,0.8s,baz=188,slow=9.9,SNR=6.4						
KSRS				LR	LR	15 35 44.0	
	comp=Z,855nm,19.2s,baz=198,slow=39						
TIY	**Taiyuan**	**40.53**	**351**	*e*P	**P**	**15 16 46.3**	**+1.0**
TIY				PP	**PnPn**	**15 18 23.6**	**+0.6**
TIY				S	**S**	**15 22 53.5**	**+0.8**
TIY				pmax	pmax		
	comp=Z,210nm,9.6s						
TIY				LR	LR		
	comp=Z,750nm,15.6s						
TIY				LR	LR		
	comp=Z,1µm,18.3s						
TIY				LR	LR		
	comp=Z,860nm,18.4s						
HNR	**Honiara**	**40.84**	**101**	P	**P**	**15 16 49.7**	**+1.6**
	comp=Z,87nm,0.9s,baz=160,slow=11,SNR=3.7						
HNR	**Honiara**	**40.84**	**101**	P	**P**	**15 16 50.7**	**+2.6**
	comp=Z,193nm,1.0s						
LZH	**Lanzhou**	**41.05**	**341**	*e*P	**P**	**15 16 52.0**	**+2.2**
LZH				pP	sP	15 17 04.9	+2.6
LZH				S	**S**	**15 22 56.5**	**-4.2**
LZH				pmax	pmax		
	comp=Z,46nm,1.3s						
LZH				pmax	pmax		
	comp=Z,220nm,5.5s						
LZH				LR	LR		
	comp=Z,1µm,14.6s						
LZH				LR	LR		
	comp=Z,2µm,16.8s						
LZH				LR	LR		
	comp=Z,1µm,16.3s						
ARMA	**Armidale**	**41.22**	**136**	P	**P**	**15 16 52.0**	**+0.8**
	baz=41,SNR=4.2						
ARMA	**Armidale**	**41.22**	**136**	P	**P**	**15 16 51.2**	**0.0**
ARMA				IAMs_20	IAMs_20	15 36 48.6	
	comp=Z,2µm,18.0s						
DL2	**Dalian**	**41.24**	**3**	*e*P	**P**	**15 16 51.1**	**+0.1**
DL2				S	**S**	**15 23 01.7**	**-1.4**
DL2				sS	**sS**	**15 23 18.5**	**+0.8**
DL2				pmax	pmax		
	comp=Z,47nm,0.9s						
DL2				pmax	pmax		
	comp=Z,310nm,5.6s						
DL2				LR	LR		
	comp=Z,1µm,18.9s						
DL2				LR	LR		
	comp=Z,940nm,19.3s						
DL2				LR	LR		
	comp=Z,1µm,19.1s						
YNG	**Young**	**41.59**	**143**	P	**P**	**15 16 54.6**	**+0.6**
	baz=42,SNR=8.9						
BOK	**Bokaro**	**41.82**	**311**	*e*P	**P**	**15 16 56.8**	**+0.8**

BOK				IAmb	IAmb	15 16 58.2	
	comp=Z,30nm,1.6s						
MDRS	**Chennai**	**41.87**	**293**	*e*P	**P**	**15 16 54.3**	**-2.2**
MDRS				IAmb	IAmb	15 16 58.5	
	comp=Z,26nm,0.5s						
LSA	**Lhasa**	**41.92**	**322**	P	**P**	**15 16 58.4**	**+1.0**
LSA				S	**S**	**15 23 09.3**	**-5.1**
LSA				pmax	pmax		
	comp=Z,36nm,1.1s						
LSA				LR	LR		
	comp=Z,4µm,22.8s						
LSA				LR	LR		
	comp=Z,8µm,22.8s						
LSA	**Lhasa**	**41.92**	**322**	*i* P	**P**	**15 16 58.7**	**+1.4**
	SNR=10						
LSA	**Lhasa**	**41.92**	**322**	P	**P**	**15 16 55.6**	**-1.8**
TOO	**Toolangi**	**42.32**	**149**	IAMs_20	IAMs_20	15 35 09.3	
	comp=Z,3µm,22.0s						
BJT	**Baijiatuau**	**42.41**	**356**	P	**P**	**15 16 59.8**	**-0.8**
BJI	**Beijing**	**42.43**	**356**	P	**P**	**15 17 01.0**	**+0.2**
BJI				S	**S**	**15 23 21.7**	**+1.1**
BJI				pmax	pmax		
	comp=Z,13nm,0.9s						
BJI				LR	LR		
	comp=Z,590nm,13.5s						
BJI				LR	LR		
	comp=Z,970nm,19.4s						
BJI				LR	LR		
	comp=Z,730nm,28.4s						
ODAN	**Odare**	**42.52**	**315**	*e*P	**P**	**15 17 02.6**	**+0.5**
	comp=Z,52nm,0.8s						
MJAR	**Matsushiro Arr**	**42.59**	**23**	P	**P**	**15 17 03.7**	**+1.6**
	comp=Z,3.2nm,0.9s,baz=197,slow=8.0,SNR=5.4						
MJAR				LR	LR	15 33 06.0	
	comp=Z,1µm,21.2s,baz=200,slow=34						
MJB9	**Matsu-Tunnel**	**42.59**	**22**	IAMs_20	IAMs_20	15 31 47.4	
	comp=Z,3µm,22.0s						
TAPN	**Taplejung**	**42.61**	**316**	*e*P	**P**	**15 17 03.2**	**+0.4**
	comp=Z,68nm,0.7s						
CAN	**Canberra**	**42.65**	**143**	P	**P**	**15 17 03.1**	**+0.4**
CAN				IAmb	IAmb	15 17 14.6	
	comp=Z,65nm,1.2s						
CAN				IAMs_20	IAMs_20	15 36 57.1	
	comp=Z,2µm,19.0s						
JYT	**Yasato**	**43.11**	**25**	P	**P**	**15 17 06.9**	**+0.5**
JYT				IAMs_20	IAMs_20	15 32 36.4	
	comp=Z,2µm,18.0s						
RAMN	**Ramite**	**43.13**	**315**	*e*P	**P**	**15 17 07.1**	**+0.1**
	comp=Z,141nm,1.1s						
HHC	**Hu-ho-hao-te**	**43.73**	**351**	*e*P	**P**	**15 17 15.1**	**+3.7**
HHC				sP	sP	15 17 30.7	+6.5
HHC				PP	**PcP**	**15 18 59.0**	**+0.9**
HHC				S	**S**	**15 23 41.3**	**+1.3**
HHC				SS	**SS**	**15 26 47.8**	**-8.5**
HHC				pmax	pmax		
	comp=Z,16nm,0.9s						
HHC				pmax	pmax		
	comp=Z,170nm,6.6s						
HHC				LR	LR		
	comp=Z,1µm,21.0s						
HHC				LR	LR		
	comp=Z,610nm,19.0s						
HHC				LR	LR		
	comp=Z,2µm,21.6s						
BTO	**Baotou**	**43.75**	**350**	*e*P	**P**	**15 17 14.3**	**+2.7**
GUN	**Gumba**	**44.23**	**315**	*e*P	**P**	**15 17 16.1**	**+0.2**
	comp=Z,130nm,0.8s						
PKI	**Pulchoki**	**44.35**	**315**	*e*P	**P**	**15 17 16.5**	**-0.4**
	comp=Z,82nm,1.0s						
PKIN	**Phulchoki**	**44.37**	**315**	*e*P	**P**	**15 17 16.8**	**-0.2**
	comp=Z,48nm,0.7s						
KKN	**Kakani**	**44.58**	**315**	*e*P	**P**	**15 17 18.6**	**0.0**
	comp=Z,104nm,1.2s						
DMN	**Daman**	**44.59**	**315**	*e*P	**P**	**15 17 18.7**	**0.0**
	comp=Z,125nm,1.0s						
HYB	**Hyderabad**	**44.91**	**298**	*i* P	**P**	**15 17 21.0**	**-0.2**
HYB	**Hyderabad**	**44.91**	**298**	*e*x	x	15 17 27.8	
HYB				IAmb	IAmb	15 17 30.1	
	comp=Z,71nm,1.5s						
GKN	**Gorkha**	**45.16**	**315**	*e*P	**P**	**15 17 22.8**	**-0.3**
	comp=Z,67nm,0.7s						
GTA	**Gaotai**	**45.44**	**339**	P	**P**	**15 17 26.2**	**+1.1**
GTA				pP	sP	15 17 36.3	-1.4
GTA				sP	pP	15 17 40.3	+6.2
GTA				S	**S**	**15 24 04.9**	**0.0**
GTA				ScS	**ScS**	**15 27 17.4**	**-2.5**
GTA				pmax	pmax		
	comp=Z,11nm,0.8s						
GTA				pmax	pmax		
	comp=Z,98nm,4.9s						
GTA				LR	LR		
	comp=Z,650nm,22.9s						
GTA				LR	LR		
	comp=Z,2µm,19.3s						
GTA				LR	LR		
	comp=Z,1µm,21.8s						
DANN	**Dangsing**	**45.99**	**314**	*e*P	**P**	**15 17 29.4**	**-0.5**
	comp=Z,139nm,0.7s						
CN2	**Changchun**	**46.40**	**6**	*e*P	P	15 17 42.9	+10
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,900nm,16.0s						
CN2				LR	LR		
	comp=E,800nm,16.0s						
CN2				LR	LR		
	comp=Z,900nm,18.0s						
JTM	**Tenmabayashi**	**47.38**	**22**	IAMs_20	IAMs_20	15 35 15.4	
	comp=Z,2µm,21.0s						
MDJ	**Mudanjiang**	**47.77**	**10**	P	**P**	**15 17 43.2**	**+0.1**
MDJ				pP	sP	15 17 55.0	-0.9
MDJ				sP	pP	15 18 00.0	+7.8
MDJ				S	**S**	**15 24 38.8**	**+1.1**
MDJ				pmax	pmax		
	comp=Z,18nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,250nm,4.4s						
MDJ				LR	LR		
	comp=Z,1µm,27.1s						
MDJ				LR	LR		
	comp=Z,1µm,19.9s						
MDJ				LR	LR		
	comp=Z,2µm,28.5s						
MDJ	**Mudanjiang**	**47.77**	**10**	IAMs_20	IAMs_20	15 36 02.9	
	comp=Z,1µm,22.0s						
USRK	**Ussuriysk Ar.**	**47.82**	**12**	P	**P**	**15 17 41.8**	**-1.8**
	comp=Z,2.2nm,0.6s,baz=197,slow=8.8,SNR=2.5						
USRK				LR	LR	15 39 36.7	
	comp=Z,292nm,18.1s,baz=173,slow=38						
USRK	**Ussuriysk Ar.**	**47.82**	**12**	P	**P**	**15 17 41.9**	**-1.6**
BHPL	**Bhopal**	**48.26**	**304**	*e*P	**P**	**15 17 46.2**	**-1.2**
BHPL				IAmb	IAmb	15 17 47.4	
	comp=Z,19nm,0.5s						
GOA	**Goa**	**48.53**	**293**	*e*P	**P**	**15 17 48.3**	**-1.2**
GOA				IAmb	IAmb	15 17 50.5	
	comp=Z,41nm,0.9s						
SANVU	**Saraoutou**	**48.77**	**108**	P	**P**	**15 17 52.2**	**+0.9**
ERM	**Erimo**	**49.24**	**23**	IAMs_20	IAMs_20	15 38 43.5	
	comp=Z,2µm,21.0s						
JEM	**Erimo**	**49.24**	**23**	IAMs_20	IAMs_20	15 39 04.3	
	comp=Z,2µm,19.0s						
POO	**Poona**	**49.49**	**297**	*e*P	**P**	**15 17 54.0**	**-2.9**
DZM	**Mont Dzumac**	**49.59**	**117**	P	**P**	**15 17 59.3**	**+1.6**
	comp=Z,13nm,0.9s,baz=299,slow=19,SNR=2.3						
DZM	**Mont Dzumac**	**49.59**	**117**	*e*S	**S**	**15 25 06.2**	**+1.8**
	comp=Z,882nm,27.1s						
DZM				*e*LQ	LQ	15 30 03.1	
	comp=Z,5µm,33.2s						
DZM				*e*LR	LR	15 32 08.4	
	comp=Z,2µm,28.4s						
ASAJ	**Asahikawa**	**50.82**	**21**	P	**P**	**15 18 08.3**	**+1.8**
	comp=Z,12nm,1.0s,baz=225,slow=5.7,SNR=2.6						
ULN	**Ulaanbaatar**	**51.31**	**349**	P	**P**	**15 18 09.8**	**-0.4**
SONM	**Songino Array**	**51.40**	**349**	P	**P**	**15 18 10.7**	**-0.2**
	comp=Z,10nm,0.8s,baz=170,slow=8.0,SNR=32						
SONM				LR	LR	15 41 24.7	
	comp=Z,1µm,21.9s,baz=170,slow=38						
SONM	**Songino Array**	**51.40**	**349**	P	**P**	**15 18 10.2**	**-0.8**
SMLA	**Simla**	**52.29**	**313**	*e*P	**P**	**15 18 18.4**	**+0.8**
KLR	**Kul'dur**	**52.61**	**10**	P	**P**	**15 18 21.1**	**+1.3**
	comp=Z,1.9nm,0.9s,baz=226,slow=4.5,SNR=6.9						
DHRM	**DHARAMSHALA**	**53.51**	**314**	*e*P	**P**	**15 18 26.4**	**-0.6**
DHRM				IAmb	IAmb	15 18 33.9	
	comp=Z,101nm,0.5s						
WMQ	**Urumqi**	**54.19**	**332**	*e*P	**P**	**15 18 33.3**	**+1.8**
WMQ				pP	sP	15 18 43.3	-0.9
WMQ				sP	pP	15 18 46.7	+6.0
WMQ				S	**S**	**15 26 09.1**	**+2.2**
WMQ				pmax	pmax		
	comp=Z,26nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,340nm,5.7s						
WMQ				LR	LR		
	comp=Z,2µm,22.1s						
WMQ				LR	LR		
	comp=Z,2µm,23.1s						
WMQ				LR	LR		
	comp=Z,1µm,22.9s						
WMQ	**Urumqi**	**54.19**	**332**	P	**P**	**15 18 30.5**	**-1.0**
WMQ				IAmb	IAmb	15 18 40.8	
	comp=Z,15nm,0.7s						
TLY	**Talaya**	**55.62**	**348**	LR	LR	15 46 17.7	
	comp=Z,439nm,18.2s,baz=145,slow=40						
NIL	**Nilore**	**56.42**	**314**	P	**P**	**15 18 46.1**	**-1.7**
NIL				IAmb	IAmb	15 18 54.7	
	comp=Z,24nm,0.8s						
NIL	**Nilore**	**56.42**	**314**	IAMs_20	IAMs_20	15 47 10.6	
	comp=Z,1µm,21.0s						
KSH	**Kashi**	**57.76**	**321**	P	**P**	**15 18 58.2**	**+0.9**
KSH				pP	sP	15 19 12.0	+1.9
KSH				S	**S**	**15 26 52.0**	**-2.7**
KSH				pmax	pmax		
	comp=Z,12nm,0.9s						
KSH				pmax	pmax		
	comp=Z,340nm,4.3s						
KSH				LR	LR		
	comp=Z,2µm,11.5s						
KSH				LR	LR		
	comp=Z,940nm,12.5s						
KSH				LR	LR		
	comp=Z,4µm,21.2s						
SHLS	**Shalkode**	**57.95**	**326**	*e*P	**P**	**15 18 56.6**	**-1.9**
	baz=327						
SHLS				*e*S	**S**	**15 26 58.9**	**+1.9**
	baz=327						
UZB	**Uzynbulak**	**58.18**	**326**	*e*P	**P**	**15 18 59.4**	**-0.8**
	baz=326						
UZB				*e*S	**S**	**15 27 05.1**	**+5.0**
	baz=326						
ZSN	**Zaisan**	**58.23**	**333**	*e*P	**P**	**15 19 00.5**	**+0.3**
	baz=333						
SATY	**Saty**	**58.47**	**326**	*e*P	**P**	**15 19 02.1**	**-0.1**
	comp=Z,5.7nm,0.7s,baz=326						
SATY				*e*S	**S**	**15 27 09.0**	**+5.1**
	baz=326						
KPKS	**Kokpek**	**58.58**	**326**	*e*P	**P**	**15 19 02.3**	**-0.6**
	comp=Z,10nm,1.2s,baz=326						
MK31	**Makanchi Array**	**58.96**	**331**	P	**P**	**15 19 04.3**	**-1.1**
MK31				IAmb	IAmb	15 19 20.7	
	comp=Z,20nm,0.9s						
MKAR	**Makanchi Array**	**58.96**	**331**	P	**P**	**15 19 05.5**	**+0.2**
	comp=Z,6.9nm,0.7s,baz=133,slow=7.6,SNR=48						
MKAR				LR	LR	15 47 36.3	
	comp=Z,668nm,20.7s,baz=134,slow=39						
MKAR				PKP2bc		15 48 55.6	
	comp=Z,0.5nm,0.8s,baz=328,slow=4.3,SNR=4.1						
MKAR	**Makanchi Array**	**58.96**	**331**	P	**P**	**15 19 04.3**	**-1.1**
MAKZ	**Makanchi**	**59.12**	**331**	P	**P**	**15 19 06.0**	**-0.5**
TNSS	**Tian-Shan**	**59.29**	**325**	*e*P	**P**	**15 19 07.8**	**-0.4**
	baz=325						
MDOK	**Medeo**	**59.31**	**325**	*e*P	**P**	**15 19 07.4**	**-0.6**
	baz=325						
MDOK				*e*S	**S**	**15 27 19.5**	**+4.7**
	baz=325						
MSVF	**Nonsavu**	**59.39**	**109**	LR	LR	15 45 59.0	
	comp=Z,459nm,18.4s,baz=260,slow=37						
MSVF	**Nonsavu**	**59.39**	**109**	P	**P**	**15 19 08.7**	**-0.3**
MSVF				IAmb	IAmb	15 19 20.1	
	comp=Z,26nm,1.4s						
AAA	**Alma-Ata**	**59.41**	**325**	*e*P	**P**	**15 19 08.6**	**-0.1**
	comp=Z,3.6nm,0.6s,baz=325						
AAA				*e*S	**S**	**15 27 21.2**	**+5.3**
	baz=325						
TDK	**Taldyqorghan**	**59.72**	**327**	*e*P	**P**	**15 19 10.9**	**+0.2**
	baz=327						
TDK				*e*S	**S**	**15 27 25.4**	**+5.6**
	baz=327						
CHKK	**Chushkaly**	**59.77**	**326**	*e*P	**P**	**15 19 10.9**	**-0.2**
	baz=326						
KBL	**Kabul**	**59.91**	**313**	P	**P**	**15 19 10.9**	**-1.6**
KBL				IAMs_20	IAMs_20	15 49 34.4	
	comp=Z,928nm,20.0s						
KUU	**Kurty**	**60.17**	**325**	*e*P	**P**	**15 19 13.6**	**-0.2**
	comp=Z,16nm,1.3s,baz=325						
KUU				*e*S	**S**	**15 27 30.8**	**+5.3**
	baz=325						
AAK	**Ala-Archa**	**60.49**	**323**	*i* P	**P**	**15 19 16.1**	**-0.1**
	SNR=18						
AAK	**Ala-Archa**	**60.49**	**323**	P	**P**	**15 19 15.0**	**-1.2**
AAK				IAmb	IAmb	15 19 27.9	
	comp=Z,18nm,0.8s						
AAK				IAMs_20	IAMs_20	15 48 58.4	
	comp=Z,1µm,22.0s						
SGDS	**Sogindy**	**60.89**	**324**	*i* P	**P**	**15 19 18.9**	**+0.2**
	baz=324						
SGDS				*e*S	**S**	**15 27 40.2**	**+5.3**
	baz=324						
RPZ	**Rata Peaks**	**61.34**	**140**	P	**P**	**15 19 21.4**	**-0.4**
	comp=Z,34nm,1.0s,baz=133,slow=1.6,SNR=6.7						
RPZ				LR	LR	15 46 59.0	
	comp=Z,1µm,19.9s,baz=276,slow=37						
RPZ	**Rata Peaks**	**61.34**	**140**	P	**P**	**15 19 20.9**	**-0.8**
BTLS	**Baital**	**62.17**	**325**	*e*P	**P**	**15 19 26.4**	**-0.9**
	comp=Z,4.7nm,1.4s,baz=325						
SEM	**Semipalatinsk**	**62.47**	**333**	*e*P	**P**	**15 19 28.3**	**-1.2**
	comp=Z,6.8nm,1.0s,baz=333						
DZA	**Taraz**	**62.55**	**322**	*i* P	**P**	**15 19 29.5**	**-0.4**
	baz=322						
DZA				*e*S	**S**	**15 28 00.8**	**+4.9**
	baz=322						
IUG	**Iuzhnay**	**62.97**	**321**	*e*P	**P**	**15 19 32.5**	**-0.3**
	comp=Z,14nm,1.9s,baz=321						
IUG				*e*S	**S**	**15 28 05.9**	**+4.6**
	baz=321						
KK31	**Karatay Array**	**63.17**	**322**	P	**P**	**15 19 32.8**	**-1.3**
KK31				IAmb	IAmb	15 19 45.9	
	comp=Z,14nm,1.1s						
KKAR	**Karatay Array**	**63.17**	**322**	P	**P**	**15 19 32.6**	**-1.4**
KKAR				IAmb	IAmb	15 19 45.9	
	comp=Z,14nm,1.1s						
ZAA0	**Zalesovo Array**	**63.19**	**338**	P	**P**	**15 19 32.8**	**-1.0**
ZALV	**Zalesovo Beam**	**63.19**	**338**	P	**P**	**15 19 32.6**	**-1.2**
	comp=Z,21nm,0.8s,baz=128,slow=4.6,SNR=28						
ZALV				PKP2bc		15 48 41.4	
	comp=Z,1.0nm,0.9s,baz=294,slow=3.9,SNR=4.4						
ZALV				LR	LR	15 51 21.1	
	comp=Z,564nm,18.3s,baz=152,slow=40						
BKZ	**Black Stump Fm**	**63.28**	**133**	P	**P**	**15 19 33.1**	**-1.8**
KURBB	**Kurchatov Arra**	**63.41**	**332**	PKP2bc		15 48 40.4	
	comp=Z,0.4nm,0.8s,baz=305,slow=3.3,SNR=4.2						
URZ	**Urewera**	**63.43**	**132**	P	**P**	**15 19 34.6**	**-1.3**
	comp=Z,3.8nm,0.6s,baz=306,slow=8.7,SNR=1.7						
URZ				LR	LR	15 49 59.5	
	comp=Z,1µm,18.2s,baz=222,slow=39						
KURK	**Kurchatov**	**63.43**	**332**	P	**P**	**15 19 34.0**	**-1.5**
KURK	**Kurchatov**	**63.43**	**332**	IAMs_20	IAMs_20	15 52 20.2	
	comp=Z,1µm,22.0s						
PEA0B	**Petropavlovsk-**	**63.99**	**25**	IAMs_20	IAMs_20	15 44 05.8	
	comp=Z,913nm,22.0s						
PETK	**Petropavlovsk-**	**63.99**	**25**	P	**P**	**15 19 41.7**	**+2.5**
	comp=Z,2.2nm,0.8s,baz=222,slow=7.6,SNR=2.4						
PETK				LR	LR	15 45 15.1	
	comp=Z,568nm,22.0s,baz=223,slow=34						
WSAR	**Wadi Sarin**	**64.46**	**297**	P	**P**	**15 19 46.4**	**+3.4**
	comp=Z,15nm,1.0s,baz=110,slow=7.5,SNR=4.2						
HRA	**Herat**	**64.96**	**310**	P	**P**	**15 19 44.5**	**-1.7**
SOHO	**SOHO**	**66.54**	**298**	P	**P**	**15 19 54.0**	**-2.3**
MA2	**Magadan**	**66.60**	**17**	P	**P**	**15 19 56.5**	**+0.5**
	comp=Z,0.7nm,0.3s,baz=183,slow=13,SNR=1.6						
MA2	**Magadan**	**66.60**	**17**	IAMs_20	IAMs_20	15 47 07.2	
	comp=Z,703nm,21.0s						
SOCY	**Socotra**	**66.63**	**284**	P	**P**	**15 19 55.3**	**-1.9**
SOCY				IAmb	IAmb	15 20 11.0	
	comp=Z,30nm,1.1s						
UOSS	**Minazif**	**67.03**	**298**	P	**P**	**15 19 56.4**	**-3.1**
HATD	**Hatta, Dubai**	**67.07**	**298**	*i* P	**P**	**15 19 57.7**	**-2.0**
	SNR=7.3						
BANOM	**Banah**	**67.19**	**299**	P	**P**	**15 20 00.4**	**-0.1**
ALNE	**Al Ain**	**67.22**	**297**	*i* P	**P**	**15 19 59.4**	**-1.3**
	SNR=6.8						
SHME	**Shamm**	**67.36**	**299**	P	**P**	**15 20 01.3**	**-0.3**
NAZ	**Nazwa, Dubai**	**67.52**	**298**	P	**P**	**15 20 00.4**	**-2.2**
FAQ	**Al Faqa, Dubai**	**67.52**	**298**	*i* P	**P**	**15 20 00.7**	**-1.8**
	SNR=5.6						
ASUD	**Al Ashush, Dub**	**67.73**	**298**	*i* P	**P**	**15 20 02.2**	**-1.6**
	SNR=6.9						
AJN	**Ajban**	**68.02**	**298**	*i* P	**P**	**15 20 03.5**	**-2.2**
	SNR=5.1						
BRVK	**Borovoye**	**68.91**	**331**	P	**P**	**15 20 09.4**	**-1.2**
BRVK				IAmb	IAmb	15 20 35.8	
	comp=Z,20nm,0.9s						
BRVK				IAMs_20	IAMs_20	15 56 00.1	
	comp=Z,1µm,21.0s						
GEYT	**Alibeck**	**69.35**	**312**	P	**P**	**15 20 13.8**	**0.0**
	comp=Z,2.0nm,0.7s,baz=29,slow=3.3,SNR=6.8						
GEYT				LR	LR	15 56 35.1	
	comp=Z,969nm,20.3s,baz=125,slow=41						
GEYT	**Alibeck**	**69.35**	**312**	P	**P**	**15 20 12.5**	**-1.3**
GYA0B	**ALIBECK ARRAY**	**69.35**	**312**	P	**P**	**15 20 12.6**	**-1.3**
GYA0B				IAmb	IAmb	15 20 24.3	
	comp=Z,44nm,1.4s						
GYA0B				IAMs_20	IAMs_20	15 55 41.3	
	comp=Z,1µm,21.0s						
SEY	**Seymchan**	**69.81**	**15**	P	**P**	**15 20 16.5**	**+0.5**
	comp=Z,1.2nm,0.5s,baz=216,slow=8.7,SNR=2.7						
ABKAR	**Akbulak array**	**72.57**	**324**	P	**P**	**15 20 30.5**	**-2.5**
ABKAR				IAmb	IAmb	15 20 44.5	
	comp=Z,33nm,1.1s						
ABKAR	**Akbulak array**	**72.57**	**324**	P	**P**	**15 20 30.5**	**-2.5**
TIXI	**Tiksi**	**74.26**	**3**	IAMs_20	IAMs_20	15 56 50.7	
	comp=Z,591nm,21.0s						
NRIK	**Noril'sk**	**74.89**	**349**	P	**P**	**15 20 45.6**	**-0.7**
	comp=Z,5.5nm,0.8s,baz=114,slow=2.7,SNR=6.2						
NRIK				LR	LR	15 56 55.5	
	comp=Z,356nm,18.3s,baz=153,slow=38						
NRIK	**Noril'sk**	**74.89**	**349**	P	**P**	**15 20 45.1**	**-1.2**
NRIK				IAMs_20	IAMs_20	15 56 45.2	
	comp=Z,551nm,20.0s						
MAW	**Mawson**	**75.48**	**199**	LR	LR	15 53 41.6	
	comp=Z,520nm,18.1s,baz=62,slow=36						
DAMY	**Dhamar**	**76.19**	**286**	IAMs_20	IAMs_20	15 54 21.5	
	comp=Z,678nm,20.0s						
RAYN	**Ar Rayn**	**76.32**	**295**	P	**P**	**15 20 52.6**	**-2.9**
ARU	**Arti**	**76.46**	**330**	P	**P**	**15 20 53.7**	**-1.8**
ARU				IAmb	IAmb	15 21 14.1	
	comp=Z,20nm,0.9s						
ATD	**Arta Tunnel**	**77.39**	**282**	IAMs_20	IAMs_20	15 53 24.3	
	comp=Z,604nm,21.0s						
VNDA	**Vanda**	**78.31**	**171**	P	**P**	**15 21 07.2**	**+1.7**
	comp=Z,4.9nm,0.9s,baz=333,slow=6.2,SNR=1.8						
VNDA				LR	LR	15 55 12.1	
	comp=Z,381nm,19.9s,baz=332,slow=35						
GEVA	**Gevas**	**80.89**	**309**	IAMs_20	IAMs_20	16 04 13.8	
	comp=Z,576nm,20.0s						
FURI	**Furi**	**81.27**	**279**	IAMs_20	IAMs_20	15 58 05.3	
	comp=Z,828nm,19.0s						
KBZ	**Khabaz**	**82.03**	**315**	P	**P**	**15 21 26.1**	**0.0**
	comp=Z,1.5nm,0.9s,baz=239,slow=4.9,SNR=3.5						
KBZ				LR	LR	16 05 08.4	
	comp=Z,280nm,19.4s,baz=96,slow=41						
KMBO	**Kilima Mbogo**	**82.16**	**269**	P	**P**	**15 21 27.2**	**-0.6**
	comp=Z,1.5nm,0.5s,baz=162,slow=7.5,SNR=4.5						
KMBO				LR	LR	15 55 21.9	
	comp=Z,1µm,20.0s,baz=96,slow=34						
KIV	**Kislovodsk**	**82.22**	**315**	IAMs_20	IAMs_20	16 01 38.7	
	comp=Z,556nm,21.0s						
SYO	**Syowa Base**	**84.05**	**201**⇑	*e*P	**P**	**15 21 36.0**	**-0.1**
SYO	**Syowa Base**	**84.05**	**201**⇑	*e*pP	pP	15 21 48.2	+2.5
KLMR	**Klimovskoe**	**87.26**	**331**	*e*P	**P**	**15 21 52.8**	**+0.6**
KLMR				AMP		15 21 56.3	
	comp=Z,27nm,1.3s						
KLMR				LQ	LQ	15 56 29.9	
KLMR				LQ	LQ	15 56 29.9	
KLMR				LR	LR	16 03 30.1	
QSPA	**South Pole Qui**	**87.46**	**180**	P	**P**	**15 21 52.3**	**-1.0**
	comp=Z,2.8nm,0.9s,baz=279,slow=1.7,SNR=10.0						
QSPA	**South Pole Qui**	**87.46**	**180**	P	**P**	**15 21 52.3**	**-1.0**
BRTR	**Keskin Array B**	**88.35**	**310**	P	**P**	**15 21 58.5**	**+0.4**
	comp=Z,1.4nm,0.7s,baz=190,slow=6.2,SNR=5.3						
BRTR				LR	LR	16 07 32.8	
	comp=Z,158nm,20.2s,baz=93,slow=40						
BRTR	**Keskin Array B**	**88.35**	**310**	P	**P**	**15 21 55.2**	**-2.9**
MBAR	**Mbarara**	**88.69**	**269**	P	**P**	**15 21 57.5**	**-2.8**
MBAR				IAmb	IAmb	15 22 09.7	
	comp=Z,15nm,1.1s						
MBAR	**Mbarara**	**88.69**	**269**	IAMs_20	IAMs_20	15 56 28.1	
	comp=Z,779nm,22.0s						
TBI	**Tubuai**	**90.03**	**113**	*e*S	**S**	**15 32 53.8**	**-4.0**
	comp=Z,317nm,24.2s						
TBI	**Tubuai**	**90.03**	**113**	*e*LQ	LQ	15 47 03.8	
	comp=Z,1µm,34.5s						
TBI				*e*LR	LR	15 50 53.3	
	comp=Z,344nm,31.5s						
PPT2	**Papeete2**	**90.19**	**108**	*e*S	**S**	**15 32 57.4**	**-2.2**
	comp=Z,377nm,23.2s						
PPT2	**Papeete2**	**90.19**	**108**	*e*LQ	LQ	15 47 15.9	
	comp=Z,1µm,34.0s						
PPT2				*e*LR	LR	15 50 58.3	
	comp=Z,893nm,29.2s						
PPT	**Papeete**	**90.19**	**107**	LR	LR	16 01 16.7	
	comp=Z,130nm,18.4s,baz=262,slow=35						
ISP	**Isparta**	**90.66**	**308**	IAMs_20	IAMs_20	16 10 18.8	
	comp=Z,505nm,21.0s						
AKASG	**Malin Array Be**	**92.05**	**320**	P	**P**	**15 22 15.3**	**+0.4**
	comp=Z,1.5nm,0.8s,baz=82,slow=4.3,SNR=4.3						
AKASG				LR	LR	16 10 19.5	
	comp=Z,586nm,21.1s,baz=90,slow=40						
BOSA	**Boshof**	**92.50**	**241**	LR	LR	15 59 44.1	
	comp=Z,1µm,19.3s,baz=104,slow=33						
BWN	**Browne**	**92.70**	**26**	IAMs_20	IAMs_20	16 11 32.9	
	comp=Z,760nm,20.0s						
KNK	**Knik Glacier**	**93.18**	**29**	IAMs_20	IAMs_20	15 53 13.9	
	comp=Z,753nm,20.0s						
ARCES	**ARCESS Array B**	**93.70**	**339**	LR	LR	16 09 28.6	
	comp=Z,480nm,20.5s,baz=120,slow=39						
FINES	**FINESS Array B**	**93.79**	**331**	P	**P**	**15 22 22.7**	**0.0**
	comp=Z,2.7nm,0.8s,baz=129,slow=2.0,SNR=1.1						
ILAR	**Eielson Array**	**93.81**	**25**	P	**P**	**15 22 20.4**	**-2.3**
	comp=Z,0.2nm,0.5s,baz=282,slow=4.2,SNR=2.0						
ILAR				LR	LR	16 04 56.5	
	comp=Z,142nm,21.6s,baz=290,slow=36						
INK	**Inuvik**	**98.56**	**21**	IAMs_20	IAMs_20	16 09 08.4	
	comp=Z,448nm,21.0s						
VNA2	**Neumayer--Watz**	**98.98**	**195**	Pdiff	P	15 22 38.4	-7.7
VNA1	**Neumayer--Stat**	**99.38**	**196**	Pdiff	**Pdif**	**15 22 39.4**	**-8.5**
VNA3	**Neumayer Olymp**	**99.38**	**195**	Pdiff	**Pdif**	**15 22 36.7**	**-11**
TAOE	**Nuku Hiva Isla**	**99.89**	**99**	*e*PP	**PP**	**15 26 57.7**	**+1.0**
	comp=Z,56nm,26.1s						
TAOE	**Nuku Hiva Isla**	**99.89**	**99**	*e*PS	PS	15 35 54.3	-1.9
	comp=Z,149nm,30.9s						
TAOE				*e*SS	SS	15 41 15.2	-2.4
	comp=Z,275nm,28.8s						
TAOE	**Nuku Hiva Isla**	**99.89**	**99**	*e*LR	LR	15 55 31.9	
	comp=Z,404nm,23.4s						
SCTE	**Santa Cesarea**	**100.00**	**310**	IAMs_20	IAMs_20	16 14 03.6	
	comp=Z,392nm,19.0s						
TSUM	**Tsumeb**	**100.37**	**250**	IAMs_20	IAMs_20	16 04 07.8	
	comp=Z,699nm,20.0s						
C36M	**Paulatuk**	**101.44**	**19**	IAMs_20	IAMs_20	16 04 30.4	
	comp=Z,395nm,18.0s						
EUNU	**Eureka**	**101.47**	**4**	IAMs_20	IAMs_20	16 03 40.9	
	comp=Z,688nm,21.0s						
CLL	**Collm**	**102.19**	**322**	*e*(Pdif)		15 23 04.0	
CLL				*e*PP	**PP**	**15 27 11.0**	**-1.8**
CLL				*e*PKiKP	**PKiKP**	**15 27 21.0**	**-1.9**
CLL				*e*SS	SS	15 41 30.0	-17
AQU	**L'Aquila**	**103.51**	**313**	IAMs_20	IAMs_20	16 17 45.3	
	comp=Z,323nm,21.0s						
TEOL	**Teolo**	**104.22**	**316**	IAMs_20	IAMs_20	15 55 07.7	
	comp=Z,308nm,18.0s						
MSSA	**Maissana**	**105.93**	**315**	IAMs_20	IAMs_20	16 19 42.2	
	comp=Z,540nm,20.0s						
YKA	**Yellowknife Ar**	**108.09**	**23**	PKiKP	**PKiKP**	**15 27 32.3**	**-1.1**
	comp=Z,0.5nm,0.5s,baz=330,slow=1.2,SNR=6.2						
YKA				PKKPbc	**PKKPbc**	**15 38 47.8**	**-0.1**
	comp=Z,0.2nm,0.7s,baz=104,slow=3.0,SNR=2.9						
TAM	**Tamanrasset**	**112.99**	**294**	IAMs_20	IAMs_20	16 17 48.7	
	comp=Z,461nm,21.0s						
CART	**Cartagena**	**115.37**	**311**	IAMs_20	IAMs_20	16 27 07.3	
	comp=Z,303nm,22.0s						
MSO	**Missoula**	**116.14**	**38**		**PKiKP**	**15 27 49.2**	**-0.1**
NVAR	**Mina Array Bea**	**116.45**	**48**	PKP	**PKiKP**	**15 27 51.2**	**+0.8**
	comp=Z,1.1nm,0.7s,baz=254,slow=4.1,SNR=9.5						
NVAR	**Mina Array Bea**	**116.45**	**48**	PKPdf	**PKPdf**	**15 27 48.1**	**-2.3**
ES19	**SONSECA Array**	**116.82**	**314**	IAMs_20	IAMs_20	16 21 45.4	
	comp=Z,341nm,20.0s						
ES18	**SONSECA Array**	**116.85**	**314**	IAMs_20	IAMs_20	16 25 54.2	
	comp=Z,411nm,20.0s						

TOC3	Torodi Ar. Sit	117.55	283	IAMs_20	IAMs_20	16 22 21.6	
	comp=Z,519nm,20.0s						
TOB3	Torodi Ar. Sit	117.57	283	IAMs_20	IAMs_20	16 22 22.0	
	comp=Z,503nm,20.0s						
TOC4	Torodi Ar. Sit	117.57	283	IAMs_20	IAMs_20	16 15 53.2	
	comp=Z,519nm,21.0s						
TOA0	Torodi Ar. Sit	117.58	283	IAMs_20	IAMs_20	16 15 31.2	
	comp=Z,510nm,21.0s						
TORD	Torodi Ar. Bea	117.58	283	PKP	PKPdf	15 27 52.8	0.0
	comp=Z,1.8nm,0.6s,baz=70,slow=1.7,SNR=9.9						
TORD	Torodi Ar. Bea	117.58	283		PKPdf	15 27 50.8	-2.1
TOA3	Torodi Ar. Sit	117.58	283	IAMs_20	IAMs_20	16 22 21.3	
	comp=Z,474nm,20.0s						
TOB4	Torodi Ar. Sit	117.59	283	IAMs_20	IAMs_20	16 20 37.5	
	comp=Z,472nm,20.0s						
TOB5	Torodi Ar. Sit	117.59	283	IAMs_20	IAMs_20	16 20 38.6	
	comp=Z,505nm,20.0s						
TOC7	Torodi Ar. Sit	117.59	283	IAMs_20	IAMs_20	16 16 03.6	
	comp=Z,511nm,21.0s						
TOC5	Torodi Ar. Sit	117.60	283	IAMs_20	IAMs_20	16 16 02.8	
	comp=Z,547nm,20.0s						
DLMT	Dillon	117.64	39	IAMs_20	IAMs_20	16 12 24.0	
	comp=Z,383nm,21.0s						
ELK	Elko	117.83	45	PKP	PKiKP	15 27 54.1	+1.1
	comp=Z,3.3nm,1.0s,baz=328,slow=2.2,SNR=6.9						
EGMT	Eagleton	118.05	35	IAMs_20	IAMs_20	16 11 45.4	
	comp=Z,398nm,21.0s						
FCC	Fort Churchill	118.09	19	IAMs_20	IAMs_20	16 24 23.3	
	comp=Z,404nm,19.0s						
HVU	Hansel Valley	119.11	43		PKPdf	15 27 55.3	0.0
PFO	Pinyon Flats O	119.42	53	PKP	PKPdf	15 27 55.9	-0.2
	comp=Z,1.1nm,0.6s,baz=59,slow=5.9,SNR=1.7						
REDW	Red Top Meadow	119.67	40	PKPdf	PKPdf	15 27 56.1	-0.4
TCRU	Three Creeks R	120.65	46		PKPdf	15 27 57.8	-0.7
PDAR	Pinedale Array	120.78	40	PKP	PKPdf	15 27 58.5	-0.1
	comp=Z,2.3nm,0.9s,baz=95,slow=1.7,SNR=8.9						
PDAR				PKKPbc	PKKPbc	15 38 03.5	-0.7
	comp=Z,0.5nm,0.7s,baz=108,slow=4.8,SNR=4.1						
PDAR	Pinedale Array	120.78	40	PKPdf	PKPdf	15 27 57.6	-1.0
SPX	San Pedro Mart	121.00	55	IAMs_20	IAMs_20	16 17 42.6	
	comp=Z,486nm,21.0s						
O20A	White River Ci	122.91	42	PKPdf	PKPdf	15 28 02.0	-0.7
RSSD	Black Hills	123.51	36	PKPdf	PKPdf	15 28 03.0	-0.8
ULM	Lac du Bonnet	123.81	27	PKP	PKPdf	15 28 03.3	-0.6
	comp=Z,4.7nm,0.8s,baz=356,slow=4.3,SNR=3.7						
ULM				SKPbc	SKPbc	15 31 13.7	
	comp=Z,1.7nm,0.8s,baz=333,slow=4.5,SNR=3.0						
PHWY	Pilot Hill	124.16	40	IAMs_20	IAMs_20	16 12 57.9	
	comp=Z,426nm,22.0s						
KIC	Kosan Boka	124.25	276	*e*PKP2	PKiKP	15 28 07.4	+1.4
	comp=Z,12nm,1.0s						
TIC	Toumodi	124.52	276	*e*PKP2	PKiKP	15 28 08.0	+1.4
LIC	Lamto	124.53	276	*e*PKP2	PKiKP	15 28 08.7	+2.1
	comp=Z,22nm,1.2s						
SUSD	Miller	126.22	33	IAMs_20	IAMs_20	16 17 08.4	
	comp=Z,427nm,22.0s						
ANMO	Albuquerque	126.56	47	PKP	PKiKP	15 28 10.4	0.0
	comp=Z,2.3nm,0.8s,baz=229,slow=2.9,SNR=3.2						
F33A	5 Mile Ranch,	126.71	31	PKPdf	PKPdf	15 28 09.0	-0.6
ECSD	EROS Data Cent	127.97	33	PKPdf	PKPdf	15 28 11.5	-0.5
F36A	Milaca	128.07	29	PKPdf	PKPdf	15 28 11.6	-0.6
I40A	Norwalk	130.92	29	IAMs_20	IAMs_20	16 18 12.9	
	comp=Z,379nm,21.0s						
KSU1	Kansas State U	130.96	37	PKPdf	PKPdf	15 28 17.7	-0.2
TXAR	Lajitas Array	131.14	52	SKPbc	SKPab	15 31 43.5	+1.8
	comp=Z,0.4nm,0.7s,baz=250,slow=1.8,SNR=4.2						
OK029	Liberty Lake	132.43	41	IAMs_20	IAMs_20	16 29 18.9	
	comp=Z,356nm,19.0s						
OKCFA	Oklahoma City	132.65	42	IAMs_20	IAMs_20	16 31 37.9	
	comp=Z,286nm,18.0s						
S39A	Bolivar	133.84	37		PKPdf	15 28 22.5	-0.8
U38A	Gravette	134.01	39		PKPdf	15 28 22.7	-1.0
R40A	Maddies Statio	134.06	35	PKPdf	PKPdf	15 28 22.9	-0.8
HHAR	Hobbs	134.38	38		PKPdf	15 28 23.8	-0.6
WHTX	Lake Whitney,	134.56	46	IAMs_20	IAMs_20	16 34 07.0	
	comp=Z,359nm,19.0s						
CCM	Cathedral Cave	134.81	35	PKPdf	PKPdf	15 28 24.2	-0.9
SADO	Sadowa	134.81	19	PKP	PKiKP	15 28 27.4	+1.1
	comp=Z,4.2nm,0.6s,baz=292,slow=5.6,SNR=5.7						
SLM	Saint Louis	134.96	33	IAMs_20	IAMs_20	16 27 23.6	
	comp=Z,380nm,21.0s						
U40A	Yellville	135.00	38	PKPdf	PKPdf	15 28 25.0	-0.5
PLVO	Plevna	135.20	17	IAMs_20	IAMs_20	16 23 33.5	
	comp=Z,437nm,22.0s						
N47A	Urbana	135.56	27	IAMs_20	IAMs_20	16 18 37.5	
	comp=Z,363nm,20.0s						
ACSO	Alum Creek Sta	137.29	26	IAMs_20	IAMs_20	16 28 12.0	
	comp=Z,425nm,20.0s						
P53A	Whipple	138.58	25		PKPdf	15 28 29.5	-2.6
PLAL	Pickwick Lake	138.78	35	PKPdf	PKPdf	15 28 30.5	-2.0
T50A	Nancy	139.00	30		PKPdf	15 28 30.6	-2.3
MCWV	Mont Chateau	139.06	23	IAMs_20	IAMs_20	16 42 58.5	
	comp=Z,329nm,19.0s						
X48A	Hartselle	139.75	35	IAMs_20	IAMs_20	16 30 30.6	
	comp=Z,344nm,21.0s						
Z47A	Carrollton	140.03	37	IAMs_20	IAMs_20	16 29 42.6	
	comp=Z,411nm,22.0s						
FPAL	Fort Paine	140.49	33	IAMs_20	IAMs_20	16 30 58.9	
	comp=Z,339nm,21.0s						
TKL	Tuckaleechee C	140.60	30	PKhKP	PKPpre	15 28 32.5	
	comp=Z,3.1nm,0.7s,baz=164,slow=9.2,SNR=4.3						
Y52A	Lilburn	141.84	32	IAMs_20	IAMs_20	16 35 01.5	
	comp=Z,335nm,19.0s						
GOGA	Godfrey	142.50	32	PKPdf	PKPdf	15 28 38.1	-1.2
CMIG	Matias Romero	143.29	64	PKP	PKPdf	15 28 41.8	+0.7
	comp=Z,3.2nm,0.8s,baz=303,slow=3.2,SNR=5.7						
154A	Montrose	143.31	33	IAMs_20	IAMs_20	16 29 06.5	
	comp=Z,282nm,20.0s						
AUSP	Uspallata	144.47	167	*i* P	PKPdf	15 28 42.7	-0.6
RTCV	Cerro Valdivia	145.00	168	*i* P	PKPdf	15 28 43.8	0.0
CO02	Combarbal	145.05	164		PKPbc	15 28 42.6	-0.8
ZON	Zonda	145.28	168		PKPbc	15 28 43.6	-0.5
CO03	El Pedregal	145.47	165	PKPdf	PKPbc	15 28 44.0	-0.8
RTLL	Cerro Villicun	145.53	168	*i* P	PKPab	15 28 45.9	+0.8
ACCO	Cerro Coronel	146.12	167	*i* P	PKPab	15 28 48.1	+0.5
AROD	Rodeo	146.43	166	*i* P	PKPab	15 28 49.2	+0.4
CO01	Juntas del Tor	146.45	165		PKPdf	15 28 46.7	0.0
LCO	Las Campanas	147.20	163	PKPbc	PKPbc	15 28 49.7	-0.5
AC05	El Transito	147.48	164		PKPbc	15 28 50.2	-0.5
ACLC	CERRO LA CRUZ	147.68	170	*i* P	PKPbc	15 28 50.8	-0.5
TEIG	Tepich	147.71	55	PKPbc	PKPbc	15 28 51.6	+0.2
VCA	Vinchina	148.09	167	*i* P	PKPbc	15 28 53.1	+0.7
CYA	Choya	148.83	171	*i* P	PKPbc	15 28 54.7	+0.4
ESQI	Esquipulas	149.16	65	IAMs_20	IAMs_20	16 27 06.2	
	comp=Z,288nm,20.0s						
MTO3	Montecristo	149.20	66	IAMs_20	IAMs_20	16 47 44.2	
	comp=Z,172nm,19.0s						
AC02	Maricunga	149.69	165		PKPbc	15 28 56.0	-1.1
ALF01	Guarapari-ES	149.91	219	*e*P	PKPbc	15 28 57.5	+0.5
MAN01	Angra dos Reis	150.05	212	*e*P	PKPbc	15 28 57.5	+0.1
VAS01	Vassouras-RJ	150.24	213	*e*P	PKiKP	15 28 58.9	+0.3
PET01	Itanhaem-SP	150.41	205	*e*P	PKiKP	15 28 59.1	+0.1
PARB	Paraibuna	150.49	209	*e*P	PKPbc	15 28 58.4	-0.1
GO02	Mina Guanaco	151.15	163		PKPbc	15 28 59.2	-1.1
CPUP	Villa Florida	151.18	186	PKP	PKPdf	15 28 53.5	-0.5
	comp=Z,2.1nm,0.4s,baz=157,slow=0.2,SNR=3.5						
CPUP				PKPbc	PKPbc	15 28 59.8	-0.1
	comp=Z,6.0nm,0.7s,baz=173,slow=2.4,SNR=8.6						
CPUP	Villa Florida	151.18	186		PKPbc	15 28 59.2	-0.7
BSFB	Barra de Sao F	151.28	222	*e*P	PKPbc	15 28 60.0	-0.4
NAN01	Guarapari, ES	151.48	224	*e*P	PKPbc	15 28 58.4	-2.4
SJMB	Sao Joao De Ma	151.59	221	*e*P	PKPbc	15 28 58.7	-2.3
RCLB	Rio Claro- Sao	152.17	207	*e*P	PKPbc	15 28 59.8	-2.5
NBRF	Rio Formoso -	152.33	246	*e*P	PKPbc	15 29 01.2	-1.7
GDU01	Guandu, BA	153.69	232	*e*P	PKPdf	15 29 01.9	+3.9
ACON	Acoyapa	153.85	68	IAMs_20	IAMs_20	16 21 48.7	
	comp=Z,172nm,20.0s						
ESPN	Las Esperanzas	154.58	67	IAMs_20	IAMs_20	16 32 43.8	
	comp=Z,185nm,20.0s						
BDFB	Brasilia	158.13	214	PKP	PKPdf	15 29 04.8	+0.7
	comp=Z,1.9nm,0.7s,baz=54,slow=19,SNR=1.8						
BDFB				PKPab	PKPab	15 29 37.7	+0.2
	comp=Z,2.1nm,0.6s,baz=140,slow=7.4,SNR=2.4						
LPAZ	La Paz	159.89	158	PKP	PKPdf	15 29 07.3	+0.6
	comp=Z,1.3nm,0.9s,baz=354,slow=5.1,SNR=5.0						
LPAZ				PKPab	PKPab	15 29 45.2	-0.5
	comp=Z,1.7nm,0.7s,baz=297,slow=1.1,SNR=4.3						
OTAV	Otavalo	161.97	97	*e*P	PKPdf	15 29 10.8	+1.9
PRPB	Parauapebas	166.25	231	*e*P	PKPdf	15 29 17.3	+5.1
SDV	Santo Domingo	168.13	57	*e*P	PKPdf	15 29 18.2	+4.4
MACA	Manacapuru-AM	174.38	179	*e*P	PKPdf	15 29 22.3	+5.6

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*CRAAG **08** 15:21:08.6, 35°.92N×2°.21E, Ml3.3*

*MDD **08** 15:21:10.9±0.8, 35°.93N×2°.22E, h6^{km}±10^{km}, mb4.0/13, Error ellipse: s-maj=14.1km s-min=6.1km az=156.0, PRXIMO*

ISC 08 15:21:10.4±1.2**, 35°.93N**±0°.07×**2°.24E**±0°.04**, h16^{km}, n24,** σ**0^{s}.99**/32**, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EMHD	Djebel Mahouad	0.64	64	P	Pg	15 21 23.0	0.0
EMHD	Djebel Mahouad	0.64	64	P	Pg	15 21 23.0	0.0
EBNR	Beni Rached	0.68	303	P	Pg	15 21 23.2	-0.6
ECHA	Ech Chlef	0.74	288	P	Pg	15 21 24.4	-0.5
ECHF	Ech Chlef	0.77	288	P	Pg	15 21 24.4	-1.0
EANR	'Ain N'Sour	0.93	272	P	Pb	15 21 27.5	-0.6
EANR	'Ain N'Sour	0.93	272	P	Pb	15 21 27.5	-0.6
ETRT	Tiaret	0.93	235	P	Pb	15 21 28.3	0.0
ETRT	Tiaret	0.93	235	P	Pb	15 21 28.3	0.0
OKGL	Djebel Kef Gue	1.30	275	P	Pn	15 21 33.0	-0.9
	38nm,0.2s,SNR=7.9						
OKGL				S	Sg	15 21 53.9	+1.4
	22nm,0.1s,SNR=7.9						
EIBI	Ibiza	3.18	347	P	Pn	15 22 00.3	+0.5
	9.8nm,0.3s,SNR=9.4						
EIBI				S	Sn	15 22 36.1	-1.3
	6.0nm,0.2s,SNR=7.9						
EBEN2	Beniarda presa	3.36	326	P	Pn	15 22 02.9	+0.6
	2.5nm,0.1s,SNR=7.9						
EMUR	La Murta	3.38	305	P	Pn	15 22 02.2	-0.4
	2.5nm,0.4s,SNR=6.3						
EMUR				S	Sn	15 22 42.7	+0.2
	0.3nm,0.2s,SNR=7.9						
ETOS	Mallorca	3.86	7	P	Pn	15 22 08.6	-0.5
	2.1nm,0.2s,SNR=7.9						
ETOS				S	Sn	15 22 53.4	-0.8
	1.9nm,0.3s,SNR=7.9						
ETOB	Tobarra	4.06	313	P	Pn	15 22 13.0	+1.0
	1.3nm,0.2s,SNR=14						
ETOB				S	Sn	15 23 01.4	+2.2
	0.7nm,0.2s,SNR=7.9						
EBER	Berja	4.25	285	P	Pn	15 22 13.7	-0.9
	3.1nm,0.2s,SNR=4.6						
SESP	Santiago Espad	4.41	301	P	Pn	15 22 18.2	+1.3
	3.9nm,0.2s,SNR=7.9						
SESP				S	Sn	15 23 08.9	+0.9
	0.8nm,0.1s,SNR=7.9						
ECHE	Chera	4.46	326	P	Pn	15 22 18.3	+1.0
	1.2nm,0.3s,SNR=7.9						
EQES	Quesada	4.65	295	P	Pn	15 22 21.6	+1.4
	1.2nm,0.2s,SNR=9.6						
EQES				S	Sn	15 23 15.5	+1.6
	0.3nm,0.1s,SNR=7.9						
EQUE	Quentar	4.75	287	P	Pn	15 22 22.0	+0.6
	2.1nm,0.2s,SNR=12						
ELGU	Los Guajares,	4.83	283	P	Pn	15 22 21.7	-0.8
	3.6nm,0.2s,SNR=7.9						
EMOS	Mosqueruela	4.92	335	P	Pn	15 22 24.8	+1.0
	1.1nm,0.1s,SNR=16						
EMOS				S	Sn	15 23 18.8	-1.7
	0.8nm,0.2s,SNR=7.9						
PAB	San Pablo	6.35	307	P	Pn	15 22 43.3	-0.1
	0.4nm,0.2s,SNR=7.9						
ECAB	El Cabril	6.50	292	P	Pn	15 22 45.0	-0.4
	0.9nm,0.3s,SNR=6.0						

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*WEL **08** 15:22:00, 35°.10S×179°.97W, h201^{km}, ML5.4, Mw5.3, Moment Tensor Solution. s4 Moment tensor: Scale 10^{17} Nm; M$_{rr}$0.12; M$_{θθ}$-0.61; M$_{φφ}$0.49; M$_{rθ}$-0.26; M$_{θφ}$-0.71; M$_{φr}$0.53; Fault plane solution: M$_0$1.07000×10^{17} NP1: φ$_s$285.00000°, δ70.00000°, λ158.00000°. NP2: φ$_s$23.00000°, δ70.00000°, λ22.00000°. Principal axes: T 11704.3400, Plg29.0000°, Azm244.0000°; N -9602.2700, Plg61.0000°, Azm64.0000°; P -2102.0700, Plg0.0000°, Azm334.0000°;*

*WEL **08** 15:22:07.6±0.5, 34°S±3°×18°0E±°, h169^{km}±15^{km}, M5.8/53, mB6.1/22, MLv6.0/53, Mw(mB)5.8/22 Error ellipse: s-maj=0.0km s-min=0.0km az=109.2*

*NOU **08** 15:22:10.0, 34°.47S×179°.47E, h215^{km}, mb4.7, South of Kermadec Islands*

*IDC **08** 15:22:10.0±0.5, 34°.11S×179°.06E, h209^{km}±3^{km}, mb4.3/22, mb1 4.5/26, mb1mx4.3/40, mbtmp4.9/26, Error ellipse: s-maj=9.3km s-min=8.3km az=159.0*

*NEIC **08** 15:22:10.1±2.5, 34°.10S±0°.09×179°.1E±0°.1, h212^{km}±5^{km}, mb4.9/23, Error ellipse: s-maj=14.4km s-min=12.7km az=64.0*

*GCMT **08** 15:22:11.1±0.3, 34°.07S±0°.02×179°.48E±0°.02, h222^{km}±2^{km}, MW5.2/99, Moment Tensor Solution. s41,c43; s99,c130; Duration: 1^{s}.0 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.31±.03; M$_{θθ}$0.41±.03; M$_{φφ}$-0.10±.03; M$_{rθ}$-0.24±.02; M$_{θφ}$-0.57±.03; M$_{φr}$0.62±.02; Best double couple: M$_0$0.94100×10^{17} NP1:φ$_s$263.00000°, δ39.00000°, λ-161.00000°. NP2:φ$_s$157.00000°, δ78.00000°, λ-52.00000°. Principal axes: T 1.0170, Plg24.0000°, Azm219.0000°; N -0.1530, Plg37.0000°, Azm328.0000°; P -0.8650, Plg44.0000°, Azm104.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 08 15:22:10.6±0.5**, 34°.33S**±0°.05×**179°.27E**±0°.05**, h218^{km}**±3^{km}**, h218^{km}:pP-P, n372,** σ**1^{s}.83**/363**, mb4.8**/41**, 1C-1D, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	3.32	193	Pn	Pn	15 23 03.5	-1.3
MXZ	Matakaoa Point	3.32	193	P	Pn	15 23 03.6	-1.2
MXZ				S	S	15 23 44.9	-2.3
WMGZ	Waiomatatini S	3.55	191	P	Pn	15 23 06.9	-0.6
WSRZ	White Island S	3.60	208	P	Pn	15 23 10.6	+2.3
WIZ	White Island	3.61	207	P	Pn	15 23 09.5	+1.3
HAZ	Te Kaha	3.62	199	P	Pn	15 23 07.0	-1.4
GRZ	Great Barrier	3.66	237	P	Pn	15 23 09.8	+0.9
PKGZ	Pakihiroa	3.68	195	P	Pn	15 23 08.1	-1.1
KUZ	Kuaotunu	3.77	229	P	Pn	15 23 11.5	+1.3
PUZ	Puketiti	3.82	192	P	Pn	15 23 09.5	-1.3
PUZ				S	S	15 23 57.1	-1.0
MYRZ	Mayor Island	3.84	219	P	Pn	15 23 12.8	+1.8
RUGZ	Raukumara Rang	3.85	199	P	Pn	15 23 09.9	-1.4
TWGZ	Tauwhareparae	3.98	195	P	Pn	15 23 11.8	-1.0
WHRZ	Whale Island	3.98	207	P	Pn	15 23 12.8	+0.1
OPRZ	Ohinepanea	4.14	211	P	Pn	15 23 14.6	-0.1
WIAZ	Waiheke Island	4.17	233	P	Pn	15 23 16.8	+1.7
TGRZ	Tauranga	4.17	215	P	Pn	15 23 15.7	+0.6
MARZ	Manawahe	4.21	209	P	Pn	15 23 15.4	-0.1
CNGZ	Carnagh Statio	4.23	191	P	Pn	15 23 14.5	-1.3
MWZ	Matawai	4.23	199	P	Pn	15 23 14.4	-1.5
MWZ				S	S	15 24 06.0	-1.3
TKGZ	Te Karaka	4.26	195	P	Pn	15 23 14.5	-1.6
TKGZ				S	S	15 24 05.6	-2.1
EDRZ	Edgecumbe	4.29	208	P	Pn	15 23 16.3	-0.3
URZ	Urewera	4.29	203	P	Pn	15 23 15.5	-1.0
	192nm,0.3s,baz=247,slow=3.5,SNR=551						
URZ				S	S	15 24 06.9	-1.5
	578nm,0.3s,baz=275,slow=23,SNR=16						
URZ	Urewera	4.29	203	Pn	Pn	15 23 14.8	-1.8
URZ	Urewera	4.29	203	P	Pn	15 23 14.6	-1.9
URZ				S	S	15 24 07.4	-1.0
MKAZ	Moumakai	4.34	229	P	Pn	15 23 18.8	+1.6
WCZ	Waipu Caves	4.34	247	P	Pn	15 23 18.0	+0.8
LIRZ	Lichensteins R	4.34	212	P	Pn	15 23 18.2	+1.0
RAGZ	Rawiri	4.42	199	P	Pn	15 23 17.0	-1.2
RAGZ				S	S	15 24 10.5	-0.9
KARZ	Kaharoa	4.42	213	P	Pn	15 23 18.3	+0.1
KMRZ	Kaimai	4.42	217	P	Pn	15 23 18.9	+0.7
MKRZ	Makatiti	4.42	210	P	Pn	15 23 20.4	+2.1
OMRZ	Omania	4.43	211	P	Pn	15 23 18.5	+0.1
TARZ	Mount Tarawera	4.49	209	P	Pn	15 23 19.5	+0.4
RIGZ	Rimuhau	4.53	195	P	Pn	15 23 17.6	-2.0
TOZ	Tahuroa Road	4.56	221	P	Pn	15 23 21.5	+1.6
HLRZ	Highlands Stat	4.57	210	P	Pn	15 23 20.1	0.0
UTU	Utuhina	4.57	212	P	Pn	15 23 21.0	+1.0
RRRZ	Republican Roa	4.58	208	P	Pn	15 23 19.5	-0.6
MUGZ	Murupara	4.60	205	P	Pn	15 23 18.7	-1.7
RTZ	Ruatahuna	4.66	203	P	Pn	15 23 19.0	-2.2
HSRZ	Hossack Road	4.66	211	P	Pn	15 23 21.8	+0.6
SNGZ	Shannon Statio	4.70	199	P	Pn	15 23 19.7	-2.0
SNGZ				S	S	15 24 16.7	-1.1
HRRZ	Handcock Road	4.71	210	P	Pn	15 23 21.6	-0.2
PRGZ	Paritu Road	4.71	193	P	Pn	15 23 19.5	-2.3
OUZ	Omahuta	4.75	258	P	Pn	15 23 21.9	-0.4
PRRZ	Plateau Road	4.76	208	P	Pn	15 23 21.5	-0.9
ALRZ	Allen Road	4.83	208	P	Pn	15 23 22.4	-0.9
KNZ	Kokohu	4.85	195	P	Pn	15 23 21.0	-2.5
KNZ				S	S	15 24 16.5	-4.5
WPRZ	Whakapapatarin	4.87	210	P	Pn	15 23 23.4	-0.4
RAHZ	Arahi	4.90	200	P	Pn	15 23 22.1	-2.1
MTHZ	Maungataniwha	4.92	203	P	Pn	15 23 22.1	-2.3
KUTZ	Kaahu Road	4.99	213	P	Pn	15 23 25.6	+0.3
TLZ	Tolley Road	5.00	216	P	Pn	15 23 25.9	+0.5
WHHZ	Waihua	5.01	198	P	Pn	15 23 23.4	-2.1
MRHZ	Matea Rd	5.04	206	P	Pn	15 23 23.9	-2.1
WHTZ	Whakaora	5.08	211	P	Pn	15 23 26.7	+0.3
NMHZ	Naumai	5.15	202	P	Pn	15 23 25.6	-1.8
NMHZ				S	S	15 24 28.9	+0.9
WATZ	Wairara	5.21	212	P	Pn	15 23 27.6	-0.5
HATZ	Hinemaiaia	5.22	208	P	Pn	15 23 26.4	-1.7
ARHZ	Aropaoanui	5.25	200	P	Pn	15 23 26.1	-2.4
ARHZ				S	S	15 24 28.9	-1.2
BKZ	Black Stump Fm	5.31	204	Pn	Pn	15 23 26.3	-3.1
BKZ	Black Stump Fm	5.31	204	P	Pn	15 23 27.0	-2.4
RATZ	Rangitukua	5.33	211	P	Pn	15 23 29.0	-0.5
RITZ	Rihia Road	5.39	210	P	Pn	15 23 29.1	-1.2
KATZ	Kakaramea	5.45	211	P	Pn	15 23 32.2	+1.0
HIZ	Hauiti	5.48	219	P	Pn	15 23 32.7	+1.2
MCHZ	McNeill Hill	5.50	201	P	Pn	15 23 29.2	-2.5
KWHZ	Kaweka Forest	5.57	203	P	Pn	15 23 30.3	-2.4
KRVZ	Karewarewa	5.58	210	P	Pn	15 23 32.1	-0.7
ETVZ	East Tongariro	5.58	210	P	Pn	15 23 30.9	-2.0
GLKZ	Green Lake	5.59	26	P	Pn	15 23 24.8	-8.1
GLKZ				S	S	15 24 25.7	-12
CKHZ	Cape Kidnapper	5.60	198	P	Pn	15 23 30.4	-2.5
RAO	Raoul Island	5.60	26	P	Pn	15 23 29.6	-3.5
	89nm,0.3s,baz=239,slow=22,SNR=5.3						
RAO				S	S	15 24 27.7	-11
	383nm,0.3s,baz=59,slow=23,SNR=5.3						
RIZ	Raoul Island	5.60	26	S	S	15 24 28.1	-10
WTVZ	West Tongariro	5.61	211	P	Pn	15 23 31.5	-1.8
OTVZ	Oturere	5.62	210	P	Pn	15 23 31.3	-2.1
TWVZ	Taurewa	5.64	212	P	Pn	15 23 32.3	-1.3
NGZ	Ngauruhoe	5.66	210	P	Pn	15 23 32.2	-1.7
TUVZ	Tukino	5.72	209	P	Pn	15 23 32.3	-2.3
FWVZ	Far West T-bar	5.75	210	P	Pn	15 23 32.7	-2.4
BHHZ	Black Hill Sta	5.75	206	P	Pn	15 23 31.9	-3.1
WHVZ	Whangaehu Hut	5.75	210	P	Pn	15 23 33.5	-1.7
DRZ	Dome Shelter	5.76	210	P	Pn	15 23 34.9	-0.4
KAHZ	Kahuranaki	5.78	199	P	Pn	15 23 32.4	-2.8
KAHZ				S	S	15 24 40.6	-1.8
KRHZ	Kereru	5.79	203	P	Pn	15 23 32.1	-3.3
WNVZ	Wahianoa	5.79	210	P	Pn	15 23 33.1	-2.4
MOVZ	Moawhango	5.80	208	P	Pn	15 23 32.2	-3.3
PKVZ	Pokaka	5.86	211	P	Pn	15 23 34.7	-1.6
MTVZ	Mangateitei	5.89	210	P	Pn	15 23 35.3	-1.4
VRZ	Vera Road	6.00	216	P	Pn	15 23 37.8	-0.2
PXZ	Pawanui	6.00	198	P	Pn	15 23 34.2	-3.9
PNHZ	Pukenui	6.09	203	P	Pn	15 23 35.7	-3.5
WPHZ	Waipukurau	6.15	201	P	Pn	15 23 36.3	-3.6
MHEZ	Mangahewa	6.18	219	P	Pn	15 23 43.9	+3.6
PRHZ	Porangahau	6.28	199	P	Pn	15 23 38.3	-3.4
TSZ	Takapari Road	6.29	204	P	Pn	15 23 37.8	-4.1
DREZ	Durham Road	6.33	219	P	Pn	15 23 42.8	+0.6
WAZ	Wanganui	6.40	211	P	Pn	15 23 40.8	-2.5
LREZ	Lake Rotokare	6.43	216	P	Pn	15 23 43.4	-0.2
NEZ	North Egmont	6.44	219	P	Pn	15 23 44.7	+0.9
PKE	Pukeiti	6.44	220	P	Pn	15 23 45.0	+1.2
DVHZ	Dannevirke	6.45	202	P	Pn	15 23 39.7	-4.1
PREZ	Palmer Road	6.46	218	P	Pn	15 23 44.4	+0.3
KHEZ	Kahui Hut	6.50	219	P	Pn	15 23 44.8	+0.3
ANWZ	Angora Road	6.51	199	P	Pn	15 23 41.4	-3.1
NBEZ	Newall Road No	6.56	220	P	Pn	15 23 45.8	+0.6
OHWZ	Ohakea	6.66	207	P	Pn	15 23 44.9	-1.6
POWZ	Post Office Ro	6.66	204	P	Pn	15 23 43.1	-3.4
NMEZ	Namu Road	6.66	219	P	Pn	15 23 46.6	+0.1
PRWZ	Pori Road	6.74	202	P	Pn	15 23 43.9	-3.7
BFZ	Birch Farm	6.78	200	Pn	Pn	15 23 43.5	-4.5
BFZ	Birch Farm	6.78	200	P	Pn	15 23 43.7	-4.3
MRZ	Mangatainoka R	6.96	204	P	Pn	15 23 45.5	-5.0
TIWZ	Tintock	6.97	202	P	Pn	15 23 47.1	-3.4
CPWZ	Castlepoint	7.00	199	P	Pn	15 23 47.8	-3.1
HOWZ	Holdsworth Sta	7.20	203	P	Pn	15 23 48.5	-5.0
OGWZ	Otaki Gorge	7.24	205	P	Pn	15 23 49.4	-4.6
TMWZ	Te Maipa	7.27	201	P	Pn	15 23 49.8	-4.6
KIW	Kapiti Island	7.38	207	P	Pn	15 23 50.8	-4.9
MTW	Mount Morrison	7.44	203	P	Pn	15 23 51.4	-5.1
CAW	Cannon Point	7.54	205	P	Pn	15 23 52.9	-4.9
TRWZ	Traveller	7.60	201	P	Pn	15 23 54.0	-4.6
PAWZ	Paruwai Farm	7.66	202	P	Pn	15 23 54.3	-5.2
MSWZ	Moikau Station	7.75	203		Pn	15 23 54.7	-5.8
MSWZ	Moikau Station	7.75	203	P	Pn	15 23 55.4	-5.2
WEL	Wellington	7.80	206	P	Pn	15 23 56.6	-4.5
SNZO	South Karori	7.84	206	Pn	Pn	15 23 56.1	-5.6
BHW	Baring Head	7.87	205		Pn	15 23 56.2	-5.8
BHW	Baring Head	7.87	205	P	Pn	15 23 56.9	-5.2
PLWZ	Palliser	7.89	203		Pn	15 23 56.4	-6.0
PLWZ	Palliser	7.89	203	P	Pn	15 23 57.2	-5.1
TUWZ	Tuamarina	8.24	209		Pn	15 24 01.2	-5.6
NNZ	Nelson	8.30	212	Pn	Pn	15 24 02.0	-5.7
QRZ	Quartz Range	8.40	218	Pn	Pn	15 24 04.0	-4.9
CMWZ	Cape Campbell	8.41	207	P	Pn	15 24 05.7	-3.3
BSWZ	Blackbirch Sta	8.51	208		Pn	15 24 05.0	-5.3
THZ	Tophouse	8.95	212	Pn	Pn	15 24 10.5	-5.6
KHZ	Kahutara	9.24	207	Pn	Pn	15 24 13.8	-5.9
CTZ	Chatham Island	9.92	162	P	Pn	15 24 31.1	+2.7
CTZ				S	S	15 26 17.3	-2.3
LTZ	Lake Taylor	10.05	211	Pn	Pn	15 24 24.7	-5.5
OKCZ	Okains Bay	10.54	205	P	Pn	15 24 31.1	-5.3
OXZ	Oxford	10.60	210		Pn	15 24 30.2	-6.9
MQZ	McQueen's Vall	10.68	207		Pn	15 24 31.1	-7.0
RPZ	Rata Peaks	11.33	212	P	Pn	15 24 41.2	-5.3
	19nm,0.3s,baz=336,slow=1.1,SNR=86						
RPZ				S	S	15 26 40.5	-11
	12nm,0.3s,baz=314,slow=23,SNR=7.4						
RPZ	Rata Peaks	11.33	212	Pn	Pn	15 24 40.7	-5.8
FOZ	Fox Glacier	11.76	216		Pn	15 24 45.9	-6.0
LBZ	Lake Benmore	12.25	212	Pn	Pn	15 24 52.1	-5.9
WKZ	Wanaka	13.12	214		Pn	15 25 03.1	-5.8
HHSZ	Highcliff Hill	13.30	207	P	Pn	15 25 08.6	-2.5
TUZ	Tuapeka	13.74	209	P	Pn	15 25 13.8	-2.7
OUENC	Ouen Island, N	16.12	314	P	Pn	15 25 46.8	+1.2
MSVF	Nonsavu	16.57	356	P	P	15 25 48.8	-1.0
	3.8nm,0.3s,baz=200,slow=5.6,SNR=49						
MSVF	Nonsavu	16.57	356	P	P	15 25 48.5	-1.3
MSVF				IAmb	IAmb	15 25 52.0	
	comp=Z,66nm,0.8s						
MSVF	Nonsavu	16.57	356	P	P	15 25 49.5	-0.3
DZM	Mont Dzumac	16.62	314	P	P	15 25 48.1	-2.3
	comp=Z,0.1nm,0.3s,baz=163,slow=19,SNR=2.6						
DZM	Mont Dzumac	16.62	314	*e*P	Pn	15 25 52.2	+0.5
	comp=Z,96nm,1.4s						
DZM	Mont Dzumac	16.62	314	P	P	15 25 48.0	-2.3
DZM				IAmb	IAmb	15 26 05.5	
	comp=Z,67nm,1.4s						
NIUE	Niue	17.98	35	P	P	15 26 03.0	-2.0
SANVU	Saraoutou	21.72	327	P	P	15 26 42.2	-2.5
SANVU				IAmb	IAmb	15 26 59.5	
	comp=Z,44nm,0.9s						
SANVU	Saraoutou	21.72	327	P	P	15 26 46.9	+2.2
RAR	Rarotonga	22.63	60	P	P	15 26 54.5	+1.4
	comp=Z,44nm,0.9s,baz=223,slow=5.8,SNR=7.0						
ARMA	Armidale	23.64	272	P	P	15 26 59.8	-2.6
ARMA				IAmb	IAmb	15 27 06.2	
	comp=Z,54nm,1.4s						
EIDS	Eidsvold	25.96	283	P	P	15 27 21.4	-1.9
EIDS				IAmb	IAmb	15 27 25.3	
	comp=Z,45nm,1.5s						
TAU	Tasmania Unive	26.27	241	P	P	15 27 26.0	+0.3
TAU				IAmb	IAmb	15 27 44.3	
	comp=Z,32nm,1.4s						
TBI	Tubuai	29.39	76	*e*P	P	15 27 53.3	-0.3
	comp=Z,145nm,1.1s						
STKA	Stephens Creek	31.54	264	P	P	15 28 13.3	+0.8
	comp=Z,5.8nm,1.0s,baz=158,slow=11,SNR=5.5						
PAE	Paea	32.38	67	*e*P	P	15 28 20.7	+0.8
	comp=Z,20nm,1.4s						
PPTF	Pamatai, Papee	32.43	67	P	P	15 28 22.4	+1.9
PPTF				IAmb	IAmb	15 28 27.0	
	comp=Z,44nm,1.0s						
PPT	Papeete	32.44	67	P	P	15 28 21.1	+0.7
	comp=Z,35nm,0.9s,baz=320,slow=23,SNR=2.7						
CTA	Charters Tower	32.45	287	P	P	15 28 21.4	+0.9
	comp=Z,11nm,0.6s,baz=117,slow=9.2,SNR=15						
TVO	Taravao	32.55	68	*e*P	P	15 28 22.5	+1.0
	comp=Z,28nm,1.3s						

TIAR	Tiarei	32.62	67	eP	P	15 28 23.0	+1.0
	comp=Z,24nm,0.8s						
MEH	Mehetia	33.41	69	eP	P	15 28 29.3	+0.4
	comp=Z,28nm,1.0s						
VAH	Vaihoa	35.34	66	eP	P	15 28 45.8	+0.5
	comp=Z,104nm,1.0s						
BBOO	Buckleboo	35.84	260	P	P	15 28 50.0	+0.4
BBOO				IAmb	IAmb	15 28 53.9	
	comp=Z,27nm,1.2s						
COEN	Coen	38.40	293	P	P	15 29 11.5	+0.4
ASAR	Alice Springs	40.78	273	P	P	15 29 30.3	-0.6
	comp=Z,7.8nm,0.6s,baz=113,slow=7.6,SNR=70						
ASAR				pP	pP	15 30 13.3	-2.4
	comp=Z,7.6nm,0.9s,baz=115,slow=7.9,SNR=2.3						
ASAR				S	S	15 35 23.9	-1.3
	comp=Z,3.3nm,1.0s,baz=117,slow=16,SNR=11						
ASAR	Alice Springs	40.78	273	P	P	15 29 29.9	-0.9
WRA	Warramunga Arr	42.14	278	P	P	15 29 41.0	-0.8
	comp=Z,14nm,1.0s,baz=118,slow=7.6,SNR=38						
WRA				pP	pP	15 30 25.8	-1.2
	comp=Z,9.4nm,1.0s,baz=120,slow=7.5,SNR=2.3						
WRA				S	S	15 35 42.5	-2.7
	comp=Z,3.1nm,1.1s,baz=115,slow=14,SNR=5.7						
FORT	Forrest	42.94	260	P	P	15 29 47.3	-0.8
FORT				IAmb	IAmb	15 29 51.7	
	comp=Z,32nm,1.2s						
SBA	Scott Base	43.96	184	P	P	15 29 59.8	+4.2
VNDA	Vanda	43.97	185	P	P	15 29 59.0	+3.3
	comp=Z,12nm,0.9s,baz=356,slow=8.8,SNR=6.6						
VNDA	Vanda	43.97	185	P	P	15 29 58.8	+3.1
MTN	Manton Dam	48.50	284	P	P	15 30 30.4	-1.4
FITZ	Fitzroy Crossi	50.20	275	P	P	15 30 43.9	-0.7
	comp=Z,5.3nm,1.1s,baz=53,slow=3.4,SNR=8.6						
FITZ				pP	pP	15 31 30.8	-0.6
	comp=Z,17nm,1.0s,baz=102,slow=9.0,SNR=4.7						
NWAO	Narrogin (SRO)	50.95	253	P	P	15 30 51.2	+1.2
	comp=Z,2.3nm,0.5s,baz=133,slow=12,SNR=1.0						
MORW	Morawa	53.30	257	P	P	15 31 05.8	-1.5
QSPA	South Pole Qui	55.79	180	P	P	15 31 27.9	+3.1
	comp=Z,123nm,0.9s,baz=29,slow=2.0,SNR=244						
SIJI	Sorong	55.80	296	P	P	15 31 22.2	-3.2
	comp=Z,3.2nm,0.3s,baz=118,slow=13,SNR=13						
BATI	Baumata	56.02	282	P	P	15 31 22.1	-4.8
	comp=Z,9.8nm,0.4s,baz=151,slow=1.7,SNR=9.1						
GIRL	Giralia	57.48	263	P	P	15 31 37.3	+0.1
SANI	Sanana	59.04	291	P	P	15 31 46.4	-1.6
	comp=Z,13nm,1.0s						
RPN	Rapa Nui	60.66	104	P	P	15 32 00.3	+1.4
	comp=Z,15nm,0.5s,baz=249,slow=4.9,SNR=1.9						
RPN	Rapa Nui	60.66	104	IAmb	IAmb	15 32 04.2	
	comp=Z,52nm,1.0s						
BELA	Belgrano 2	66.20	173	P	P	15 32 35.5	+1.2
MAW	Mawson	67.82	202	P	P	15 32 46.2	+1.6
	comp=Z,31nm,1.0s,baz=149,slow=4.7,SNR=10						
SYO	Syowa Base	72.76	194	⇑iP	P	15 33 14.8	+0.3
SYO	Syowa Base	72.76	194	⇓ePcP	PcP	15 33 31.0	+0.5
GO09	Cerro Castillo	74.17	142	P	P	15 33 25.3	+2.2
GO09				IAmb	IAmb	15 33 39.4	
	comp=Z,42nm,1.3s						
SNAA	Sanae	74.28	179	P	P	15 33 24.6	+1.2
VNA3	Neumayer Olymp	74.53	177	P	P	15 33 26.1	+1.3
VNA2	Neumayer--Watz	74.93	178	P	P	15 33 28.7	+1.6
	baz=171,slow=6.3						
VNA2	Neumayer--Watz	74.93	178	PP	PP	15 36 16.7	-0.5
VNA1	Neumayer--Stat	75.18	177	P	P	15 33 29.8	+1.3
JMN	Monobe	79.98	323	P	P	15 33 55.2	-0.4
H03S2	Juan Fernandez	80.20	124	T	T	17 02 47.7	
	baz=233,slow=74,SNR=13						
H03S1	Juan Fernandez	80.21	124	T	T	17 02 52.0	
	baz=233,slow=74,SNR=14						
H03S3	Juan Fernandez	80.21	124	T	T	17 02 46.8	
	baz=233,slow=74,SNR=13						
H03N3	Juan Fernandez	80.42	124	T	T	17 03 03.7	
	baz=238,slow=72,SNR=22						
H03N2	Juan Fernandez	80.42	124	T	T	17 03 08.7	
	baz=238,slow=72,SNR=27						
H03N1	Juan Fernandez	80.43	124	T	T	17 03 02.4	
	baz=238,slow=72,SNR=25						
PLCA	Paso Flores	81.49	134	P	P	15 34 06.5	+2.8
	comp=Z,18nm,0.9s,baz=237,slow=4.9,SNR=27						
NJ2	Nanjing	87.11	312	eP	P	15 34 32.6	+0.9
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PETK	Petropavlovsk-	89.08	347	P	P	15 34 39.8	-0.7
	comp=Z,13nm,0.8s,baz=123,slow=5.5,SNR=18						
PKM	Mcpherson Peak	89.37	46	P	P	15 34 44.8	+2.2
	baz=226						
109C	Camp Elliot, M	89.66	49	P	P	15 34 45.7	+2.0
	baz=228						
MURC	Murrieta	90.08	48	P	P	15 34 47.7	+2.0
	baz=228						
MONP2	Monument Peak	90.09	49	P	P	15 34 48.3	+2.3
	baz=228,SNR=8.6						
IKP	In-Ko-Pah, Jac	90.13	50	P	P	15 34 48.0	+2.0
	baz=228,SNR=6.3						
BFSC	Mount Baldy Ra	90.23	48	P	P	15 34 48.0	+1.5
	baz=228,SNR=12						
EDW2	Edwards Air Fo	90.45	47	P	P	15 34 48.9	+1.4
	baz=227,SNR=11						
VES	Vestal, Richgr	90.45	46	P	P	15 34 48.2	+0.8
	baz=227						
SWSC	Sam W. Stewart	90.52	50	P	P	15 34 50.1	+2.4
	baz=229,SNR=5.1						
PFO	Pinyon Flats O	90.55	49	P	P	15 34 49.7	+1.7
	comp=Z,5.8nm,0.9s,baz=286,slow=3.1,SNR=6.5						
PFO	Pinyon Flats O	90.55	49	P	P	15 34 49.9	+2.0
	baz=228						
ISA	Isabella, Lake	90.70	46	P	P	15 34 49.9	+1.3
	baz=227,SNR=8.4						
LRMC	Laurel Mtn Rad	91.05	47	P	P	15 34 51.6	+1.3
	baz=228,SNR=9.6						
BELC	Belle Mtn. Jos	91.09	49	P	P	15 34 52.8	+2.2
	baz=228,SNR=8.9						
GLA	Glamis	91.20	50	P	P	15 34 53.5	+2.6
	baz=229,SNR=5.5						
BC3	Big Chuckawall	91.20	49	P	P	15 34 53.4	+2.4
	baz=229,SNR=10						
O02D	Mt. Diablo Mer	91.39	41	P	P	15 34 52.8	+1.1
	baz=225,SNR=7.5						
HEC	Hector,Ludlow	91.43	48	P	P	15 34 53.5	+1.5
	baz=228,SNR=7.2						
CWC	Cottonwood Cre	91.46	46	P	P	15 34 53.2	+1.0
	baz=227						
GSC	Goldstone, Bar	91.46	47	P	P	15 34 53.7	+1.6
	baz=228,SNR=6.0						
MPMC	Manual Prospec	91.55	46	P	P	15 34 54.2	+1.5
	baz=228						
IRM	Iron Mountain	91.72	49	P	P	15 34 55.2	+1.9
	baz=229,SNR=11						
214A	Organ Pipe Nat	91.79	52	P	P	15 34 56.0	+2.3
	baz=230						
GMRC	Granite Mounta	91.82	48	P	P	15 34 55.9	+2.1
	baz=229						
N02D	Trinity Center	92.00	40	P	P	15 34 55.9	+1.4
	baz=225						
O03E	Paynes Creek	92.00	41	P	P	15 34 55.3	+0.7
	baz=225						
SHOC	Shoshone, Teco	92.18	47	P	P	15 34 57.1	+1.8
	baz=228,SNR=5.3						
FURC	Furnace Creek,	92.20	46	P	P	15 34 56.8	+1.5
	baz=228						
M02C	Callahan	92.22	40	P	P	15 34 57.1	+1.6
	baz=225						
GRAC	Grapevine Rang	92.25	46	P	P	15 34 57.6	+1.8
	baz=228,SNR=5.5						
PDMCI	Parker Dam,Lak	92.45	49	P	P	15 34 58.8	+2.2
	baz=230						
YBH	Yreka Blue Hor	92.54	39	P	P	15 34 57.5	+0.6
	comp=Z,4.6nm,0.9s,baz=115,slow=3.2,SNR=5.5						
YBH	Yreka Blue Hor	92.54	39	IAmb	IAmb	15 34 59.1	
	comp=Z,9.1nm,1.1s						
CMAR	Chiang Mai Arr	92.56	291	P	P	15 34 58.0	+0.5
	comp=Z,0.2nm,0.3s,baz=143,slow=2.3,SNR=2.2						
CMAR				pP	pP	15 35 48.7	-1.4
	comp=Z,1.2nm,0.7s,baz=143,slow=3.7,SNR=6.6						
NVAR	Mina Array Bea	92.67	44	P	P	15 34 59.0	+1.1
	comp=Z,6.2nm,0.9s,baz=220,slow=8.3,SNR=29						
TPNV	Topopah Spring	92.89	46	P	P	15 35 00.2	+1.4
	baz=228						
J01E	Myrtle Point	92.93	38	P	P	15 35 00.3	+1.7
	baz=224						
M04C	Macdoel	93.03	40	P	P	15 35 00.8	+1.5
	baz=225						
L04D	Klamath Falls	93.09	39	P	P	15 35 00.7	+1.1
	baz=225						
TUC	Tucson	93.34	53	P	P	15 35 03.3	+2.4
	baz=231						
I04A	Tendick Farm,	94.15	38	P	P	15 35 05.3	+1.0
	baz=225						
R11A	Troy Canyon, C	94.21	46	P	P	15 35 05.4	+0.6
	baz=229						
J05D	Fort Rock, OR	94.40	39	P	P	15 35 06.4	+0.9
	baz=226						
WUAZ	Wupatki	94.97	50	P	P	15 35 10.5	+2.1
	baz=231						
ELK	Elko	95.98	44	P	P	15 35 11.6	-1.3
	comp=Z,1.6nm,0.9s,baz=229,slow=7.4,SNR=4.7						
CD2	Chengdu	96.26	303	eP	P	15 35 15.0	+0.8
TXAR	Lajitas Array	96.42	59	P	P	15 35 14.8	-0.3
	comp=Z,0.9nm,0.9s,baz=214,slow=6.0,SNR=6.9						
MNTX	Cornudas Mount	96.61	56	P	P	15 35 17.0	+1.2
	baz=234						
HHC	Hu-ho-hao-te	97.33	315	eP	Pdif	15 35 19.5	+0.6
HHC				pmax	pmax		
	comp=Z,8.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,200nm,7.6s						
ANMO	Albuquerque	97.81	53	Pdiff	Pdif	15 35 23.1	+1.8
	baz=234						
HLID	Hailey	98.27	42	Pdiff	Pdif	15 35 24.2	+1.1
	baz=230						
LPAZ	La Paz	98.56	116	P	Pdif	15 35 28.0	+2.3
	comp=Z,1.5nm,0.7s,baz=244,slow=1.3,SNR=6.4						
LPAZ	La Paz	98.56	116	IAmb	IAmb	15 35 28.2	
	comp=Z,2.8nm,1.0s						
LZH	Lanzhou	99.24	307	eP	Pdif	15 35 30.5	+2.9
LZH				pP	pP	15 36 08.7	-12
LZH				sP	sP	15 36 37.4	-5.4
LZH				PP	PP	15 39 41.2	+7.4
LZH				pmax	pmax		
	comp=Z,17nm,1.1s						
LZH				pmax	pmax		
	comp=Z,98nm,5.0s						
CPUP	Villa Florida	99.27	131	P	Pdif	15 35 29.8	+1.9
	comp=Z,1.1nm,0.9s,baz=205,slow=6.8,SNR=2.2						
PDAR	Pinedale Array	100.55	45	P	Pdif	15 35 34.0	+0.6
	comp=Z,0.8nm,0.9s,baz=197,slow=4.6,SNR=6.0						
SONM	Songino Array	104.52	318	PKiKP	PKiKP	15 40 06.6	+1.1
	comp=Z,0.5nm,0.9s,baz=155,slow=4.8,SNR=2.4						
SONM				PKKPbc	PKKPbc	15 51 37.0	+0.7
	comp=Z,0.8nm,0.9s,baz=318,slow=4.2,SNR=4.8						
YKA	Yellowknife Ar	109.98	27	PKiKP	PKiKP	15 40 14.0	-1.0
	comp=Z,0.2nm,0.5s,baz=236,slow=1.1,SNR=5.5						
YKA				PP	PP	15 40 49.8	-2.6
	comp=Z,0.4nm,1.0s,baz=238,slow=3.5,SNR=1.9						
YKA				PKKPbc	PKKPbc	15 51 18.6	-1.0
	comp=Z,0.4nm,1.0s,baz=57,slow=5.1,SNR=3.7						
WCI	Wyandotte Cave	113.35	59	P	PKiKP	15 40 22.3	+0.1
	baz=244						
WMQ	Urumqi	113.82	308	eP	PKiKP	15 40 23.1	0.0
WMQ				pmax	pmax		
	comp=Z,95nm,5.1s						
O53A	New Philadelph	117.78	59	P	PKPdf	15 40 30.7	0.0
	baz=247						
T57A	Hurt	117.92	63	P	PKiKP	15 40 31.3	+0.2
	baz=247						
MKAR	Makanchi Array	118.49	309	PKP	PKPdf	15 40 30.1	-1.8
	comp=Z,1.4nm,0.9s,baz=109,slow=3.3,SNR=7.1						
MKAR				pPKP	pPKPdf	15 41 26.5	-0.7
	comp=Z,0.7nm,0.9s,baz=56,slow=2.2,SNR=3.1						
MKAR				PP	sPKPdf	15 41 50.6	+1.5
	comp=Z,0.5nm,0.8s,baz=119,slow=1.5,SNR=3.7						
MKAR				PKKPbc	PKKPbc	15 50 50.4	+0.4
	comp=Z,0.5nm,0.5s,baz=288,slow=2.9,SNR=7.2						
N54A	Moraine State	118.91	58	P	PKiKP	15 40 33.2	+0.3
	baz=248						
SHLS	Shalkode	119.06	304	ePKP	PKPdf	15 40 29.7	-3.5
	baz=305						
L53A	Girard	119.08	57	P	PKPdf	15 40 33.0	-0.2
	baz=249						
ZALV	Zalesovo Beam	119.39	317	PKP	PKPdf	15 40 32.1	-1.3
	comp=Z,0.6nm,0.5s,baz=163,slow=1.5,SNR=2.6						
O56A	Blue Knob Stat	119.66	59	P	PKPdf	15 40 34.5	+0.1
	baz=249						
KPKS	Kokpek	119.70	305	ePKP	PKPdf	15 40 32.2	-2.3
	baz=305						
SATY	Saty	119.75	304	ePKP	PKPdf	15 40 32.6	-2.0
	baz=304						
O57A	Amberson	120.31	60	P	PKPdf	15 40 34.4	-1.2
	baz=249						
M56A	Emporium	120.37	58	P	PKPdf	15 40 35.6	-0.1
	baz=250						
N57A	Milroy	120.56	59	P	PKPdf	15 40 35.7	-0.3
	baz=250						
O58A	Lewisberry	120.78	60	P	PKiKP	15 40 36.9	+0.3
	baz=249						
SADO	Sadowa	120.83	54	PKP	PKPdf	15 40 35.6	-0.8
	comp=Z,5.3nm,0.6s,baz=8.7,slow=2.0,SNR=3.8						
SEM	Semipalatinsk	120.96	313	ePKP	PKPdf	15 40 33.8	-2.9
	baz=313						
L56A	Greenwood	121.03	58	P	PKiKP	15 40 37.2	+0.1
	baz=250						
M57A	Sunshine Farm,	121.06	59	P	PKiKP	15 40 37.7	+0.6
	baz=250						
KUU	Kurty	121.45	304	ePKP	PKPdf	15 40 35.1	-2.6
	baz=304						
L57A	Andrews Acres	121.48	58	P	PKiKP	15 40 38.3	+0.3
	baz=251						
KURK	Kurchatov	122.05	313		PKPdf	15 40 37.3	-1.2
KURBB	Kurchatov Arra	122.07	312	PKP	PKPdf	15 40 37.3	-1.3
	comp=Z,1.9nm,0.6s,baz=108,slow=2.1,SNR=11						
KURBB				PKKPbc	PKKPbc	15 50 37.8	+1.0
	comp=Z,0.8nm,0.8s,baz=292,slow=4.5,SNR=6.0						
L58A	Harry Jones Me	122.20	58	P	PKPdf	15 40 39.1	-0.1
	baz=251						
NRIK	Noril'sk	122.25	335	PKP	PKPdf	15 40 36.6	-1.8
	comp=Z,0.9nm,0.4s,baz=101,slow=5.2,SNR=2.3						
AAK	Ala-Archa	122.32	302	PKP	PKPdf	15 40 38.0	-1.6
	comp=Z,0.3nm,0.2s,baz=132,slow=12,SNR=2.4						
M59A	Waymart	122.33	59	P	PKiKP	15 40 39.7	0.0
	baz=251						
M60A	Port Jervis	122.83	59	P	PKPdf	15 40 40.6	+0.2
	baz=251						
I57A	Carthage	122.93	56	P	PKPdf	15 40 40.5	0.0
	baz=252						
MATQ	Matagami	123.29	49	P	PKPdf	15 40 40.0	-1.0
	baz=255						
I58A	Old Forge	123.33	57	P	PKPdf	15 40 40.9	-0.4
	baz=253						
L60A	Shokan	123.33	59	P	PKPdf	15 40 41.4	+0.1
	baz=252						
BTLS	Baital	123.37	305	i PKP	PKPdf	15 40 39.5	-1.8
	baz=305						
E55A	Montcerf-Lytto	123.40	53	P	PKPdf	15 40 40.8	-0.5
	baz=254						
LSQQ	Lebel-sur-Quev	123.52	50	P	PKPdf	15 40 40.5	-0.9
	baz=255						
L61A	Hillsdale 1, H	123.87	59	P	PKPdf	15 40 42.2	-0.2
	baz=252						
LONY	Lake Ozonia	123.87	56	P	PKPdf	15 40 42.5	+0.2
	baz=253						
D55A	Sainte-Anne-du	123.95	53	P	PKPdf	15 40 41.7	-0.7
	baz=254						
H58A	Gabriels	124.09	56	P	PKPdf	15 40 42.8	+0.1
	baz=254						
E56A	St. Veronique	124.11	53	P	PKPdf	15 40 42.0	-0.7
	baz=254						
J60A	Lant Hill Farm	124.28	58	P	PKPdf	15 40 42.9	-0.1
	baz=253						
G58A	Ormstown	124.38	55	P	PKPdf	15 40 42.8	-0.4
	baz=254						
D56A	ZEC Mazanza, M	124.43	53	P	PKPdf	15 40 42.7	-0.5
	baz=255						
I60A	Shoreham	124.54	57	P	PKPdf	15 40 43.8	0.0
	baz=254						
E57A	Chemin Saint G	124.66	54	P	PKPdf	15 40 43.5	-0.2
	baz=255						
J61A	Chester	124.91	58	P	PKPdf	15 40 44.0	-0.3
	baz=254						
H60A	Morristown	125.15	56	P	PKPdf	15 40 44.8	+0.1
	baz=254						
E58A	La Victoria	125.23	54	P	PKPdf	15 40 44.8	0.0
	baz=255						
I61A	Oroboro, Fairl	125.31	57	P	PKiKP	15 40 45.6	+0.2
	baz=254						
IUG	Iuzhnay	125.32	301	ePKP	PKPdf	15 40 42.5	-2.8
	baz=301						
J62A	Henniker	125.40	58	P	PKiKP	15 40 46.2	+0.6
	baz=254						
K63A	Dunstable	125.45	59	P	PKiKP	15 40 45.8	+0.1
	baz=254						
G60A	Masonville	125.54	56	P	PKPdf	15 40 45.7	+0.2
	baz=255						
LBNH	Lisbon	125.59	57	P	PKiKP	15 40 46.2	+0.2
	baz=255						
H61A	Lyndonville	125.67	56	P	PKiKP	15 40 46.1	0.0
	baz=255						
D58A	Chemin du LacG	125.68	53	P	PKPdf	15 40 45.4	-0.2
	baz=256						
L64A	Middleborough	125.72	60	P	PKiKP	15 40 46.2	-0.1
	baz=254						
LATQ	La Tuque	125.81	53	P	PKiKP	15 40 46.2	-0.1
	baz=256						
I62A	Tamworth	125.91	57	P	PKPdf	15 40 46.3	+0.1
	baz=255						
J63A	Strafford	125.93	58	P	PKiKP	15 40 46.7	0.0
	baz=254						
F60A	Warwick	126.02	55	P	PKPdf	15 40 46.5	+0.2
	baz=256						
G61A	St-Isidore-de-	126.14	56	P	PKiKP	15 40 47.2	+0.2
	baz=256						
H62A	Milan	126.22	57	P	PKiKP	15 40 47.7	+0.4
	baz=255						
E60A	Ste Agathe de	126.46	54	P	PKPdf	15 40 47.3	+0.2
	baz=256						
I63A	Otisfield	126.48	57	P	PKiKP	15 40 48.2	+0.5
	baz=255						
F61A	St Evariste	126.67	55	P	PKiKP	15 40 48.2	+0.1
	baz=256						
G62A	West of Eustis	126.81	56	P	PKiKP	15 40 48.3	-0.1
	baz=256						
D60A	Saint Jean D'O	126.94	54	P	PKPdf	15 40 47.7	-0.3
	baz=257						
E61A	Lac Etchemin	127.12	54	P	PKPdf	15 40 48.7	+0.2
	baz=257						
D61A	St Aubert, Com	127.49	54	P	PKPdf	15 40 49.1	+0.1
	baz=258						
H64A	Troy	127.57	57	P	PKPdf	15 40 49.7	+0.4
	baz=256						
PKME	Peaks-Kenny Pk	127.67	56	P	PKiKP	15 40 50.0	0.0
	baz=257						
F63A	Nahmakanta, Br	127.90	56	P	PKPdf	15 40 49.5	-0.4
	baz=257						
G64A	Maxfield	128.03	56	P	PKPdf	15 40 50.0	-0.2
	baz=257						
E63A	Oxbow	128.51	55	P	PKPdf	15 40 51.3	+0.3
	baz=258						
D63A	Stockholm	128.85	54	P	PKPdf	15 40 51.9	+0.3
	baz=259						
E64A	Bridgewater	128.91	55	P	PKPdf	15 40 52.3	+0.5
	baz=259						
SPITS	Spitsbergen Ar	135.43	355	PKP	PKPdf	15 41 03.5	+0.2
	comp=Z,11nm,1.0s,baz=336,slow=3.2,SNR=2.5						
ARCES	ARCESS Array B	141.87	345	PKhKP	PKPpre	15 41 10.3	
	comp=Z,4.9nm,1.0s,baz=12,slow=4.6,SNR=1.7						
KLMR	Klimovskoe	143.01	328	ePKPdf	PKPdf	15 41 15.9	-1.5
KLMR				AMP		15 41 19.0	
	comp=Z,27nm,1.5s						
KBZ	Khabaz	145.18	299	PKP	PKPdf	15 41 21.2	-0.5
	comp=Z,3.3nm,0.9s,baz=154,slow=3.3,SNR=5.2						
FINES	FINESS Array B	147.91	336	PKPbc	PKPbc	15 41 27.7	-1.4
	comp=Z,17nm,0.9s,baz=34,slow=4.2,SNR=26						
FINES				pPKPbc	pPKPbc	15 42 22.8	-1.1
	comp=Z,6.7nm,0.8s,baz=50,slow=3.4,SNR=4.2						
IDID	Didziasalis	151.69	326	eP	PKPbc	15 41 37.4	-1.0
LIC	Lamto	151.75	171	ePKIKP	PKiKP	15 41 40.2	0.0
	comp=Z,90nm,1.0s						
ISAL	Salakas	151.81	327	eP	PKPbc	15 41 38.1	-0.6
IIGN	Ignalina	151.90	327	eP	PKPbc	15 41 37.9	-1.0
NACGM	Naroch	151.91	325	i PKP	PKPbc	15 41 38.3	-0.6
NACGM				i PKP	PKPbc	15 41 38.3	-0.6
NACGM				i PKP	PKPbc	15 41 38.3	-0.6
NACGM				i Pb	PKiKP	15 41 40.1	+0.8
	comp=Z,31nm,1.1s						
NACGM				i pPKP	sPKPab	15 43 14.6	+10
NACGM				i sPKP		15 43 49.0	
NACGM				i PP	PP	15 45 32.3	+10
NACGM				i SKS	SKSdf	15 48 30.1	+12
NACGM				i PPP	PPP	15 48 52.0	
NACGM				i SKKS	SKKSac	15 51 14.6	-36
NACGM				i PPS	PPS	15 59 00.1	
NACGM				i SSS	SSS	16 10 08.2	
KIC	Kosan Boka	151.92	172	ePKIKP	PKPbc	15 41 40.2	-0.1
	comp=Z,65nm,1.0s						
BRTR	Keskin Array B	152.15	291	PKPbc	PKPbc	15 41 39.4	-0.8
	comp=Z,2.3nm,0.8s,baz=159,slow=3.8,SNR=7.0						
BRTR				pPKPbc	pPKPbc	15 42 32.3	-2.8
	comp=Z,4.5nm,0.9s,baz=186,slow=2.5,SNR=5.9						
TIC	Toumodi	152.16	171	ePKIKP	PKPbc	15 41 40.4	-0.4
NB2	NORSAR Subarra	152.19	348	PKP	PKPbc	15 41 38.8	-0.7
	comp=Z,1.2nm,0.5s,baz=14,slow=2.5						
NB2	NORSAR Subarra	152.19	348	PKP	pPKPbc	15 42 33.8	-0.4
	comp=Z,35nm,1.7s,baz=18,slow=4.0						
NOA	NORSAR Array B	152.19	348	PKPbc	PKPbc	15 41 38.1	-1.4
	comp=Z,4.4nm,0.9s,baz=33,slow=2.1,SNR=7.5						
NOA				PKPab	PKPab	15 41 47.9	-2.2
	comp=Z,2.3nm,0.9s,baz=27,slow=4.0,SNR=4.5						
DBIC	Dimbokro	152.21	171	PKPbc	PKiKP	15 41 41.7	+0.6
	comp=Z,8.4nm,0.8s,baz=187,slow=2.2,SNR=9.1						
DBIC				PKPab	PKPab	15 41 52.5	+1.1
	comp=Z,15nm,0.9s,baz=162,slow=4.8,SNR=12						
DBIC	Dimbokro	152.21	171		PKiKP	15 41 41.1	0.0
DBIC				PKPab	PKPab	15 41 52.0	+0.7
AKASG	Malin Array Be	152.78	316	PKPbc	PKPbc	15 41 40.0	-1.1
	comp=Z,1.0nm,0.4s,baz=60,slow=2.5,SNR=9.0						
AKASG				pPKPbc	pPKPbc	15 42 34.3	-1.8
	comp=Z,2.6nm,0.7s,baz=58,slow=2.4,SNR=3.9						
TORD	Torodi Ar. Bea	158.79	187	PKP	PKPdf	15 41 41.5	-1.3
	comp=Z,2.1nm,1.0s,baz=344,slow=1.2,SNR=5.8						
TORD				PKPab	PKPab	15 42 19.4	-0.1
	comp=Z,14nm,1.1s,baz=178,slow=2.9,SNR=24						
GERES	GERESS Array B	161.97	328	PKPab	PKPab	15 42 31.1	-1.7
	comp=Z,0.2nm,0.3s,baz=20,slow=4.3,SNR=4.0						

IDC 08 15:26:38.2±7.2, 55.49S×127.79W, h0km, mb3.8/4, mb1 4.1/4, mb1mx3.9/38, mbtmp3.8/4, Error ellipse: s-maj=498.0km s-min=42.7km az=138.0, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H03S2	Juan Fernandez	39.88	78	T	T	16 16 56.6	
	baz=220,slow=74,SNR=23						
H03S1	Juan Fernandez	39.89	78	T	T	16 16 57.8	
	baz=220,slow=74,SNR=22						
H03S3	Juan Fernandez	39.90	78	T	T	16 16 57.8	
	baz=220,slow=74,SNR=21						
H03N3	Juan Fernandez	40.17	77	T	T	16 17 19.5	
	baz=224,slow=72,SNR=49						
H03N2	Juan Fernandez	40.18	77	T	T	16 17 18.2	
	baz=224,slow=72,SNR=45						
H03N1	Juan Fernandez	40.19	77	T	T	16 17 13.5	
	baz=224,slow=72,SNR=60						
ASAR	Alice Springs	75.35	250	P	P	15 38 23.7	+0.3
	0.6nm,0.9s,baz=141,slow=6.0,SNR=2.7						
H01W1	Cape Leeuwin H	75.63	228	T	T	17 02 18.4	
	baz=148,slow=76,SNR=12						
H01W2	Cape Leeuwin H	75.63	228	T	T	17 02 15.6	
	baz=148,slow=76,SNR=11						
H01W3	Cape Leeuwin H	75.64	228	T	T	17 02 15.0	
	baz=148,slow=76,SNR=11						
WRA	Warramunga Arr	78.14	252	P	P	15 38 38.6	-0.6
	0.5nm,0.6s,baz=145,slow=5.0,SNR=4.8						
FITZ	Fitzroy Crossi	84.29	246	P	P	15 39 12.7	+0.9
	1.9nm,0.8s,baz=137,slow=4.1,SNR=2.5						
TXAR	Lajitas Array	86.97	21	P	P	15 39 24.8	-0.1
	0.6nm,1.1s,baz=194,slow=9.2,SNR=2.6						
H11N3	WAKE ISLAND Hy	92.96	301	T	T	17 23 11.3	
	baz=146						
H11N1	WAKE ISLAND Hy	92.97	301	T	T	17 23 15.2	
	baz=146						
H11N2	WAKE ISLAND Hy	92.98	301	T	T	17 23 14.0	
	baz=146						
ILAR	Eielson Array	120.82	351	PKP	PKPdf	15 45 29.9	-0.7
	0.3nm,0.8s,baz=196,slow=2.4,SNR=2.2						
SONM	Songino Array	146.30	280	PKPbc	PKPab	15 46 20.6	-0.2
	1.2nm,1.0s,baz=126,slow=4.3,SNR=4.5						
MKAR	Makanchi Array	159.36	258	PKPab	PKPab	15 47 13.3	-1.9
	0.4nm,0.9s,baz=110,slow=4.7,SNR=2.1						

IDC 08 15:40:32.0±11.0, 2.09N×128.34E, h170km±113km, mb3.2/6, mb1 3.3/6, mb1mx3.0/35, mbtmp3.6/6, Error ellipse: s-maj=100.8km s-min=19.7km az=62.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	20.24	187	P	P	15 44 53.4	-0.8
	0.5nm,0.5s,baz=15,slow=12,SNR=1.2						
WRA	Warramunga Arr	22.67	165	P	P	15 45 19.4	+0.2

	1.1nm,0.5s,baz=347,slow=11,SNR=43						
ASAR	Alice Springs	26.17	168	P	P	15 45 50.5	-0.3
	0.4nm,0.5s,baz=349,slow=7.8,SNR=22						
ASAR				PcP	PcP	15 49 12.7	-0.9
	0.1nm,0.6s,baz=0.0,slow=0.9,SNR=1.1						
STKA	Stephens Creek	36.05	161	P	P	15 47 17.7	+0.5
	1.2nm,0.4s,baz=326,slow=9.6,SNR=11						
MKAR	Makanchi Array	59.81	325	P	P	15 50 19.5	+0.1
	0.3nm,0.4s,baz=121,slow=8.3,SNR=10						
KURBB	Kurchatov Arra	63.98	327	P	P	15 50 46.9	-0.2
	0.4nm,0.5s,baz=128,slow=5.8,SNR=7.2						

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*IDC **08** 15:54:05.8±1.4, 23°.17S×170°.16E, h0^{km}, mb4.1/7, mb1 4.2/8, mb1mx4.0/22, mbtmp4.0/8, ML4.0/1, Error ellipse: s-maj=51.6km s-min=24.6km az=149.0*

*NEIC **08** 15:54:09.7±2.0, 23°.1S±0°.1×170°.0E±0°.1, h21^{km}±5^{km}, mb4.6/12, Error ellipse: s-maj=19.5km s-min=14.6km az=49.0*

ISC 08 15:54:09.9±0.6**, 23°.1S**±0°.1×**169°.99E**±0°.10**, h25**^{km}**, n53, σ0ˢ.90**/54**, mb4.2**/13**, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	3.43	286	Pn	Pn	15 55 01.8	0.0
	12nm,0.3s,baz=72,slow=5.3,SNR=280						
DZM				Sn	Sn	15 55 40.4	-1.3
	13nm,0.3s,baz=135,slow=22,SNR=8.3						
DZM	Mont Dzumac	3.43	286		Pn	15 55 01.4	-0.5
OUZ	Omahuta	12.51	166	Pn	Pn	15 57 05.7	-0.6
ARMA	Armidale	17.95	242	Pn	Pn	15 58 16.1	-1.8
STKA	Stephens Creek	26.61	245	P	P	15 59 48.1	+1.6
	1.6nm,0.8s,baz=92,slow=9.2,SNR=3.9						
AS31	Alice Springs	33.08	262	P	P	16 00 44.5	+0.5
WR0	Warramunga Arr	33.08	269	P	P	16 00 44.5	+0.6
WR0				IAmb	IAmb	16 00 48.9	
	comp=Z,11nm,1.5s						
ASAR	Alice Springs	33.08	262	P	P	16 00 44.4	+0.4
	comp=Z,1.5nm,0.8s,baz=80,slow=9.0,SNR=24						
WB0	Warramunga Arr	33.25	269	P	P	16 00 44.2	-1.2
WB0				IAmb	IAmb	16 01 11.9	
	comp=Z,6.3nm,1.4s						
WRA	Warramunga Arr	33.27	268	P	P	16 00 44.9	-0.7
	comp=Z,0.2nm,0.5s,baz=99,slow=8.2,SNR=6.3						
FORT	Forrest	37.99	249	P	P	16 01 26.6	+0.6
FORT				IAmb	IAmb	16 01 27.2	
	comp=Z,24nm,0.8s						
MTN	Manton Dam	38.23	279	P	P	16 01 28.2	0.0
MTN				IAmb	IAmb	16 01 55.1	
	comp=Z,25nm,1.4s						
FITZ	Fitzroy Crossi	41.70	268	P	P	16 01 57.7	+0.8
FITZ				IAmb	IAmb	16 02 15.9	
	comp=Z,5.5nm,1.1s						
CASY	Casey	56.93	205	P	P	16 03 53.7	+1.1
MAJO	Matsushiro	66.46	332	P	P	16 04 58.0	+0.8
QSPA	South Pole Qui	67.00	180	P	P	16 05 00.5	0.0
QSPA				IAmb	IAmb	16 05 01.8	
	comp=Z,9.3nm,1.1s						
PETK	Petropavlovsk-	76.61	352	P	P	16 05 58.6	+0.6
	comp=Z,0.4nm,0.5s,baz=139,slow=8.2,SNR=8.7						
CMAR	Chiang Mai Arr	80.72	295	P	P	16 06 23.8	+2.3
	comp=Z,2.3nm,0.8s,baz=132,slow=4.2,SNR=16						
CMAR	Chiang Mai Arr	80.72	295	P	P	16 06 22.4	+0.9
SONM	Songino Array	90.69	323	P	P	16 07 11.3	+0.8
	comp=Z,2.2nm,0.9s,baz=148,slow=4.2,SNR=11						
SONM	Songino Array	90.69	323	P	P	16 07 11.2	+0.7
ILAR	Eielson Array	93.67	17	P	P	16 07 22.1	-1.6
	comp=Z,0.8nm,0.9s,baz=230,slow=5.3,SNR=6.4						
ARCES	ARCESS Array B	128.93	345	PKP	PKPdf	16 13 13.3	-1.4
	comp=Z,5.3nm,0.9s,baz=90,slow=0.9,SNR=5.8						
ARCES	ARCESS Array B	128.93	345		PKiKP	16 13 15.2	-0.2
MORC	Moravsky Berou	145.69	328	*e*PKP	PKPab	16 13 47.6	+0.8
DPC	Dobruska-Polom	145.89	330	*e*PKP	PKPab	16 13 48.3	+0.8
UPC	Upice	145.93	330	*e*PKP	PKPab	16 13 48.2	+0.6
JAVC	Velka Javorina	146.22	327	*e*PKP	PKiKP	16 13 50.6	-0.7
VRAC	Vranov	146.47	328	PKPbc	PKPab	16 13 50.1	+0.4
	comp=Z,4.3nm,0.8s,baz=122,slow=3.9,SNR=3.6						
VRAC	Vranov	146.47	328	*e*PKP	PKPab	16 13 50.1	+0.4
CLL	Collm	146.66	333	*e*PKPbc	PKPab	16 13 50.0	-0.3
KRUC	Moravsky	146.73	328	*e*PKP	PKPab	16 13 50.7	0.0
PRU	Pruhonice	146.97	331	*e*PKP	PKPab	16 13 50.6	-1.0
PBCC	Pribram	147.43	331	*e*PKP	PKPbc	16 13 51.0	-0.5
NKC	Novy Kostel	147.70	333	*e*PKP	PKiKP	16 13 53.1	-1.1
CONA	Conrad Observa	147.75	327	*e*P	PKiKP	16 13 53.8	-0.7
	comp=Z,5.9nm,1.0s						
CKRC	Cesky Krumlov	147.90	329	*e*PKP	PKiKP	16 13 53.4	-1.3
KHC	Kasperske Hory	148.02	330	*e*PKP	PKiKP	16 13 53.7	-1.3
GERES	GERESS Array B	148.16	330	PKPbc	PKPbc	16 13 53.8	+0.2
	comp=Z,3.2nm,0.8s,baz=45,slow=2.1,SNR=18						
GERES	GERESS Array B	148.16	330		PKiKP	16 13 54.0	-1.3
MOA	Molln	148.59	328	*e*P	PKiKP	16 13 55.4	-0.8
	comp=Z,5.1nm,1.0s						
SOKA	Soboth	148.99	326	*e*P	PKiKP	16 13 56.1	-1.0
	comp=Z,3.6nm,0.9s						
KBA	Koelnbreinsper	149.58	328	*e*P	PKPbc	16 13 56.9	-0.5
	comp=Z,8.9nm,1.1s						
MYKA	Terra Mystica	149.74	327	*e*P	PKPbc	16 13 57.4	-0.2
	comp=Z,11nm,1.0s,SNR=4.0						
ABTA	Abfaltersbach	150.22	328	*e*P	PKiKP	16 13 58.7	-0.9
	comp=Z,5.1nm,0.7s,SNR=6.5						
WATA	Walderalm	150.24	330	*i* P	PKiKP	16 13 59.2	-0.5
	comp=Z,10nm,1.1s						
WTTA	Wattenberg	150.26	330	*e*P	PKiKP	16 13 59.6	-0.3
	comp=Z,11nm,0.9s						
MOTA	Moosalm	150.45	330	*e*P	PKiKP	16 13 59.5	-0.7
	comp=Z,13nm,0.9s,SNR=8.1						
SQTA	Sankt Quirin	150.50	330	*e*P	PKiKP	16 13 59.8	-0.4
	comp=Z,4.5nm,0.5s,SNR=6.5						
RETA	Reutte	150.50	331	*e*P	PKiKP	16 13 60.0	-0.2
	comp=Z,6.9nm,1.2s						
FETA	Feichten	150.86	330	*e*P	PKiKP	16 14 01.2	+0.1
	comp=Z,10.0nm,1.0s						
DAVOX	Davos/Dischmat	151.43	331	PKPbc	PKiKP	16 14 02.6	+0.3
	baz=62,slow=8.7						
TORD	Torodi Ar. Bea	165.14	230	PKPab	PKPab	16 15 08.9	-0.9
	comp=Z,0.8nm,0.9s,baz=85,slow=1.6,SNR=3.6						

WEL 08 15:54:46.3±0.6**, 35°S**±7°×**18°0E**±1°2**, h283**^{km}±7^{km}**, M3.8**/49**, mB4.5**/13**, MLv4.1**/49**, Mw(mB)3.6**/13**, Error ellipse: s-maj=0.0km s-min=0.0km az=114.1, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	2.88	206	P	Pn	15 55 38.4	-1.3
MXZ				S	S	15 56 22.4	+0.2
WMGZ	Waiomatatini S	3.08	203	P	Pn	15 55 42.0	+0.3
WMGZ				S	S	15 56 26.8	+1.1
PKGZ	Pakihiroa	3.25	207	P	Pn	15 55 43.4	-0.2
PKGZ				S	S	15 56 28.5	-0.8
HAZ	Te Kaha	3.26	211	P	Pn	15 55 42.7	-0.8
HAZ				S	S	15 56 27.8	-1.3
PUZ	Puketiti	3.36	203	P	Pn	15 55 44.9	+0.3
PUZ				S	S	15 56 30.2	-0.9
RUGZ	Raukumara Rang	3.48	211	P	Pn	15 55 45.6	-0.4
RUGZ				S	S	15 56 32.3	-1.4
TWGZ	Tauwhareparae	3.55	205	P	Pn	15 55 47.2	+0.5
TWGZ				S	S	15 56 36.7	+1.9
CNGZ	Carnagh Statio	3.75	201	P	Pn	15 55 50.0	+1.2
TKGZ	Te Karaka	3.83	205	P	Pn	15 55 49.7	+0.1
TKGZ				S	S	15 56 40.4	+0.1
KUZ	Kuaotunu	3.83	241	P	Pn	15 55 46.4	-3.3
MWZ	Matawai	3.85	209	P	Pn	15 55 49.9	-0.2
MWZ				S	S	15 56 40.1	-0.9
OPRZ	Ohinepanea	3.94	223	P	Pn	15 55 49.9	-1.0
URZ	Urewera	3.97	214	P	Pn	15 55 50.2	-1.0
URZ				S	S	15 56 43.8	+0.6
MARZ	Manawahe	3.97	220	P	Pn	15 55 52.3	+0.9
TGRZ	Tauranga	4.02	226	P	Pn	15 55 52.1	+0.2
RIGZ	Rimuhau	4.10	204	P	Pn	15 55 53.0	+0.3
RIGZ				S	S	15 56 47.1	+1.2
PRGZ	Paritu Road	4.25	202	P	Pn	15 55 55.0	+0.5
KMRZ	Kaimai	4.29	227	P	Pn	15 55 55.5	+0.5
MUGZ	Murupara	4.30	215	P	Pn	15 55 54.1	-0.9
MUGZ				S	S	15 56 51.3	+1.2
SNGZ	Shannon Statio	4.32	208	P	Pn	15 55 55.3	+0.1
SNGZ				S	S	15 56 51.8	+1.5
RTZ	Ruatahuna	4.32	212	P	Pn	15 55 54.4	-1.0
RTZ				S	S	15 56 50.2	-0.4
KNZ	Kokohu	4.41	203	S	S	15 56 51.9	-0.4
MHGZ	Mahia Peninsul	4.46	200	P	Pn	15 55 57.8	+1.0
TOZ	Tahuroa Road	4.49	231	P	Pn	15 55 58.0	+0.8
PRRZ	Plateau Road	4.50	218	P	Pn	15 55 57.0	-0.3
RAHZ	Arahi	4.53	209	P	Pn	15 55 57.9	+0.2
RAHZ				S	S	15 56 55.5	+0.6
ALRZ	Allen Road	4.58	218	P	Pn	15 55 59.3	+1.1
MTHZ	Maungataniwha	4.58	212	P	Pn	15 55 58.3	+0.1
MTHZ				S	S	15 56 57.2	+1.4
WHHZ	Waihua	4.61	207	P	Pn	15 56 00.4	+1.8
WHHZ				S	S	15 57 00.0	+3.5
NMHZ	Naumai	4.80	210	P	Pn	15 56 01.3	+0.5
NMHZ				S	S	15 57 02.9	+2.4
TLZ	Tolley Road	4.85	225	P	Pn	15 56 02.8	+1.4
ARHZ	Aropaoanui	4.87	208	P	Pn	15 56 01.3	-0.3
ARHZ				S	S	15 57 03.3	+1.5
HATZ	Hinemaiaia	4.96	217	P	Pn	15 56 03.5	+0.8
BKZ	Black Stump Fm	4.99	212	P	Pn	15 56 02.6	-0.4
BKZ				S	S	15 57 04.9	+0.3
WATZ	Wairara	5.00	221	P	Pn	15 56 04.6	+1.4
KWHZ	Kaweka Forest	5.23	211	P	Pn	15 56 07.3	+1.4
HIZ	Hauiti	5.38	228	P	Pn	15 56 08.1	+0.5
KAHZ	Kahuranaki	5.38	206	P	Pn	15 56 07.7	0.0
OTVZ	Oturere	5.38	218	P	Pn	15 56 06.8	-1.0
NGZ	Ngauruhoe	5.42	218	P	Pn	15 56 08.7	+0.4
BHHZ	Black Hill Sta	5.45	213	P	Pn	15 56 08.2	-0.3
BHHZ				S	S	15 57 14.7	+0.2
TUVZ	Tukino	5.46	217	P	Pn	15 56 09.0	+0.2
FWVZ	Far West T-bar	5.50	218	P	Pn	15 56 09.4	0.0
MOVZ	Moawhango	5.52	216	P	Pn	15 56 09.2	-0.2
MOVZ				S	S	15 57 16.8	+0.6
WNVZ	Wahianoa	5.54	217	P	Pn	15 56 09.2	-0.5
PXZ	Pawanui	5.59	205	P	Pn	15 56 09.9	-0.2
PXZ				S	S	15 57 17.6	+0.1
PKVZ	Pokaka	5.64	219	P	Pn	15 56 11.8	+1.0
PNHZ	Pukenui	5.74	210	P	Pn	15 56 11.2	-0.8
PNHZ				S	S	15 57 18.6	-2.3
WPHZ	Waipukurau	5.77	208	P	Pn	15 56 13.3	+0.9
WPHZ				S	S	15 57 23.6	+2.1
VRZ	Vera Road	5.84	223	P	Pn	15 56 14.7	+1.5
TSZ	Takapari Road	5.96	211	P	Pn	15 56 11.6	-3.1
DVHZ	Dannevirke	6.08	208	S	S	15 57 26.6	-1.7
WAZ	Wanganui	6.17	218	P	Pn	15 56 17.4	+0.3
POWZ	Post Office Ro	6.32	210	P	Pn	15 56 20.3	+1.3
PREZ	Palmer Road	6.33	225	P	Pn	15 56 20.9	+1.8
PRWZ	Pori Road	6.38	208	P	Pn	15 56 20.9	+1.2
PRWZ				S	S	15 57 33.9	-1.0
BFZ	Birch Farm	6.38	206	P	Pn	15 56 20.2	+0.4
BFZ				S	S	15 57 34.3	-0.8
TIWZ	Tintock	6.60	208	P	Pn	15 56 23.1	+0.7
MRZ	Mangatainoka R	6.62	210	P	Pn	15 56 21.5	-1.2
HOWZ	Holdsworth Sta	6.85	209	P	Pn	15 56 24.1	-1.4
TMWZ	Te Maipa	6.89	206	P	Pn	15 56 26.6	+0.7
OGWZ	Otaki Gorge	6.92	211	P	Pn	15 56 24.8	-1.5
KIW	Kapiti Island	7.07	212	P	Pn	15 56 26.4	-1.8
MTW	Mount Morrison	7.08	208	P	Pn	15 56 27.1	-1.1
CAW	Cannon Point	7.21	211	P	Pn	15 56 29.1	-0.7
TRWZ	Traveller	7.21	206	P	Pn	15 56 29.8	-0.2
MSWZ	Moikau Station	7.40	208	P	Pn	15 56 31.9	-0.3
PLWZ	Palliser	7.53	208	P	Pn	15 56 33.4	-0.4
TUWZ	Tuamarina	7.97	214	P	Pn	15 56 37.3	-1.9

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*IDC **08** 16:28:30.2±2.2, 5°.35S×147°.11E, h183^{km}±22^{km}, mb3.7/9, mb1 3.9/13, mb1mx3.7/47, mbtmp4.3/13, Error ellipse: s-maj=18.9km s-min=15.8km az=79.0*

*NEIC **08** 16:28:31.9±0.9, 5°.42S±0°.07×147°.01E±0°.03, h195^{km}±8^{km}, mb4.6/26, Error ellipse: s-maj=10.3km s-min=4.1km az=167.0*

*DJA **08** 16:28:32.3±0.4, 6°S±4°×14°7E±°, h174^{km}±6^{km}, M4.4/7, mB4.7/2, mb4.4/7, MLv4.4/3, Mw(mB)3.9/2*

ISC 08 16:28:32.0±0.5**, 5°.49S**±0°.05×**147°.02E**±0°.08**, h195**^{km}**, n55, σ1ˢ.15**/59**, mb4.6**/24**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANU	Manus Island	3.44	6	Pn	Pn	16 29 26.4	-0.3
PMG	Port Moresby	3.89	178	P	Pn	16 29 31.8	-0.5
	45nm,0.3s,baz=30,slow=5.4,SNR=134						
PMG				S	Sn	16 30 17.0	-2.7
	63nm,0.3s,baz=282,slow=19,SNR=13						
PMG	Port Moresby	3.89	178	Pn	Pn	16 29 31.6	-0.7
RABL	Rabaul	5.28	76	Pn	Pn	16 29 49.5	-0.5
JAY	Jayapura	6.96	295	P	Pn	16 30 10.2	-1.6
	1.4nm,0.3s,baz=182,slow=7.7,SNR=6.0						
COEN	Coen	9.23	204	Pn	Pn	16 30 42.0	+0.6
CTA	Charters Tower	14.53	183	P	P	16 31 50.2	+0.2
	0.1nm,0.3s,baz=356,slow=16,SNR=2.9						
CTAO	Charters Tower	14.53	183	P	P	16 31 51.2	+1.1
MTN	Manton Dam	17.30	244		P	16 32 20.7	+0.1
MTN				IAmb	IAmb	16 32 22.3	
	comp=Z,20nm,0.8s						
WB0	Warramunga Arr	18.77	220	P	P	16 32 36.7	+0.1
WB0				IAmb	IAmb	16 32 42.4	
	comp=Z,21nm,0.7s						
WR0	Warramunga Arr	18.82	219	P	P	16 32 37.8	+0.6
WRAB	Tennant Creek	18.92	220	P	P	16 32 38.5	+0.3
WC3	Warramunga Arr	18.93	219	P	P	16 32 39.0	+0.7
WB2	Warramunga Arr	18.93	220	P	P	16 32 38.8	+0.5
WRA	Warramunga Arr	18.94	220	P	P	16 32 39.2	+0.8
	comp=Z,3.7nm,0.3s,baz=37,slow=12,SNR=195						
WRA				S	S	16 35 59.8	-3.5
	comp=Z,0.2nm,0.3s,baz=40,slow=20,SNR=14						
WRA	Warramunga Arr	18.94	220	P	P	16 32 37.9	-0.6
EIDS	Eidsvold	20.14	169	P	P	16 32 52.7	+1.4
AS31	Alice Springs	22.05	214	P	P	16 33 11.8	+0.5
ASAR	Alice Springs	22.05	214	P	P	16 33 12.2	+0.9
	comp=Z,25nm,0.8s,baz=46,slow=7.9,SNR=183						
ASAR				S	S	16 37 00.4	+0.1
	comp=Z,5.7nm,0.8s,baz=22,slow=24,SNR=8.5						
ASAR	Alice Springs	22.05	214	P	P	16 33 11.6	+0.4
SANVU	Saraoutou	22.15	118	P	P	16 33 12.2	0.0
SANVU				IAmb	IAmb	16 33 34.3	
	comp=Z,20nm,1.0s						
SOEI	Soe	22.94	258	P	P	16 33 20.1	+0.4
BATI	Baumata	23.60	257	P	P	16 33 26.9	+1.4
	comp=Z,6.6nm,0.6s,baz=244,slow=4.3,SNR=4.0						
FITZ	Fitzroy Crossi	24.36	237	P	P	16 33 32.2	0.0
	comp=Z,13nm,0.6s,baz=56,slow=5.2,SNR=32						
FITZ	Fitzroy Crossi	24.36	237	P	P	16 33 32.3	0.0
FITZ				IAmb	IAmb	16 33 35.3	
	comp=Z,15nm,0.7s						
DZM	Mont Dzumac	24.99	133	P	P	16 33 37.7	-0.4
	comp=Z,6.2nm,0.6s,baz=153,slow=15,SNR=8.3						
DZM	Mont Dzumac	24.99	133	P	P	16 33 38.3	+0.2
DZM				IAmb	IAmb	16 33 46.0	
	comp=Z,25nm,1.2s						
ARMA	Armidale	25.17	171	P	P	16 33 40.1	+0.5
ARMA				IAmb	IAmb	16 33 41.7	
	comp=Z,11nm,0.9s						
STKA	Stephens Creek	26.74	190	P	P	16 34 05.0	+12
	comp=Z,15nm,0.7s,baz=353,slow=9.1,SNR=30						
PSAD2	Pilbara Seismi	30.72	236	P	P	16 34 28.9	0.0
PSAD2				IAmb	IAmb	16 34 49.7	
	comp=Z,13nm,1.1s						
PSAC2	Pilbara Seismi	30.74	236	P	P	16 34 29.0	-0.2
PSAC2				IAmb	IAmb	16 34 29.0	
	comp=Z,10nm,1.1s						
PSAD1	Pilbara Seismi	30.75	236	P	P	16 34 29.4	+0.2
PSAD1				IAmb	IAmb	16 34 56.2	
	comp=Z,21nm,1.4s						
PSAA2	Pilbara Seismi	30.79	236	P	P	16 34 29.6	0.0
PSAA2				IAmb	IAmb	16 34 41.5	
	comp=Z,18nm,1.4s						
PSAB1	Pilbara Seismi	30.81	236	P	P	16 34 30.0	+0.2
OUZ	Omahuta	38.41	144	P	P	16 35 35.6	+0.9
JMN	Monobe	40.94	343	P	P	16 35 56.2	+0.6
QRZ	Quartz Range	41.95	151	P	P	16 36 05.4	+1.7
QRZ				IAmb	IAmb	16 36 08.6	
	comp=Z,23nm,1.0s						
TUWZ	Tuamarina	43.10	150	P	P	16 36 13.3	+0.4
BSWZ	Blackbirch Sta	43.29	150	P	P	16 36 14.9	+0.5
LBZ	Lake Benmore	43.74	156	P	P	16 36 18.5	+0.5
LBZ				IAmb	IAmb	16 36 41.8	
	comp=Z,25nm,1.0s						
WHZ	Wether Hill Ro	44.16	159	P	P	16 36 21.9	+0.6
NJ2	Nanjing	45.97	326	*e*P	P	16 36 37.5	+1.8
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
KSRS	Korea Array	46.29	339	P	P	16 36 36.3	-1.8
	comp=Z,1.4nm,0.8s,baz=151,slow=6.3,SNR=2.8						
HHC	Hu-ho-hao-te	56.42	328	*e*P	P	16 37 54.7	+1.3
HHC				pmax	pmax		
	comp=Z,9.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,170nm,6.6s						
LZH	Lanzhou	57.84	319	*e*P	P	16 38 06.5	+2.9
LZH				pP	PcP	16 38 59.9	+6.0
LZH				sP	sP	16 39 20.5	+12
LZH				pmax	pmax		
	comp=Z,18nm,1.1s						
LZH				pmax	pmax		
	comp=Z,86nm,5.0s						
PETK	Petropavlovsk-	59.07	7	P	P	16 38 10.0	-1.5
	comp=Z,1.4nm,0.8s,baz=179,slow=5.8,SNR=2.2						
SONM	Songino Array	63.97	331	P	P	16 38 44.4	-0.2
	comp=Z,0.2nm,0.3s,baz=151,slow=6.3,SNR=2.4						
SONM				pP	pP	16 39 28.8	-0.5
	comp=Z,0.6nm,0.9s,baz=122,slow=1.6,SNR=3.1						
SONM	Songino Array	63.97	331	P	P	16 38 45.8	+1.2
VNDA	Vanda	72.42	177	P	P	16 39 37.0	+0.6
WMQ	Urumqi	72.42	319	*e*P	P	16 39 39.3	+2.2
WMQ				pmax	pmax		
	comp=Z,15nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,220nm,4.9s						
MKAR	Makanchi Array	77.12	320	P	P	16 40 03.5	-0.5
	comp=Z,0.2nm,0.6s,baz=126,slow=4.4,SNR=1.8						
MKAR				pP	pP	16 40 48.6	-1.9
	comp=Z,1.0nm,0.9s,baz=121,slow=6.9,SNR=3.3						
ZALV	Zalesovo Beam	78.60	328	P	P	16 40 10.6	-1.3
	comp=Z,0.4nm,0.4s,baz=89,slow=5.9,SNR=1.6						
KSH	Kashi	79.06	312	P	P	16 40 16.5	+1.6
KSH				pP	pP	16 41 02.0	+0.5
KSH				pmax	pmax		
	comp=Z,12nm,1.9s						
KSH				pmax	pmax		
	comp=Z,200nm,5.2s						
ILAR	Eielson Array	85.01	23	P	P	16 40 43.7	-1.4
	comp=Z,0.7nm,0.5s,baz=249,slow=4.8,SNR=4.9						
TORD	Torodi Ar. Bea	144.99	285	PKPbc	PKPbc	16 47 46.0	-0.8
	comp=Z,0.4nm,0.7s,baz=74,slow=5.0,SNR=2.8						

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*IDC **08** 16:29:49.0±0.9, 35°.17N×141°.80E, h0^{km}, mb3.6/10, mb1 3.8/14, mb1mx3.6/56, mbtmp3.7/14, ML3.8/2, MS3.6/5, Ms1 3.6/5, ms1mx3.0/40, Error ellipse: s-maj=23.6km s-min=17.2km az=87.0*

*NEIC **08** 16:29:51.9±1.7, 35°.21N±0°.06×141°.9E±0°.1, h23^{km}±6^{km}, mb4.6/6, Error ellipse: s-maj=14.5km s-min=8.6km az=102.0*

*JMA **08** 16:29:51.8±0.3, 35°.18N×141°.82E, h57^{km}±4^{km}, M3.3*

ISC 08 16:29:52.1±0.7**, 35°.13N**±0°.05×**141°.84E**±0°.07**, h29**^{km}**, n52, σ1ˢ.51**/41**, mb3.6**/13**, MS3.7**/3**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	Boso 1	0.86	236	P	Pb	16 30 08.0	0.0
BSO1				*e*X		16 30 18.6	
CHOJ	Chosi	0.98	306	P	Pb	16 30 08.9	-1.6
BSO3	Boso 3	1.14	254	P	Pb	16 30 12.2	-0.8
JSMT	Sammumatsuo	1.25	294	P	Pb	16 30 13.4	-1.6
JKUC	kamogawauchiur	1.35	272	P	Pb	16 30 14.5	-2.1
JIHU	Itakohorinouch	1.36	308	P	Pb	16 30 14.8	-2.0
JYT	Yasato	1.73	310	P	Pn	16 30 19.1	-1.1
JYT	Yasato	1.73	310	Pn	Pn	16 30 19.3	-0.9
JOD2	Odawara 2	2.26	274	P	Pn	16 30 25.9	-1.6
JAG	Ashikaga	2.33	304	P	Pn	16 30 28.2	-0.3
JHJ2	Mitsune	2.62	220	Pn	Pb	16 30 34.1	-4.2
JHJ	Hachijo jima 2	2.64	221	Pn	Pb	16 30 33.5	-5.1
	14nm,0.3s,baz=59,slow=19,SNR=1.5						
JHJ				Sn	Sn	16 31 03.1	-0.5
	38nm,0.3s,baz=319,slow=23,SNR=5.6						
JMM	Marumori	2.86	343	Pn	Pn	16 30 34.7	-1.0
MJAR	Matsushiro Arr	3.27	297	Pn	Pn	16 30 42.1	+0.7
	0.4nm,0.3s,baz=102,slow=7.0,SNR=35						
MJAR				LR	LR	16 32 04.4	
	comp=Z,341nm,19.6s,baz=135,slow=42						
MAJO	Matsushiro	3.27	297		Pn	16 30 42.5	+1.1
MAT	Matsushiro	3.27	297	P	Pn	16 30 42.0	+0.6
MAT				*e*S	Sn	16 31 18.5	-0.9
JGF	Kuroka	3.69	279		Pn	16 30 48.7	+1.5
INU	Inuyama	3.96	275	Pn	Pn	16 30 52.4	+1.6
JWT	Wachi	5.28	273	Pn	Pn	16 31 10.0	+1.1
JTM	Tenmabayashi	5.68	354	Pn	Pn	16 31 14.3	-0.2
ERM	Erimo	6.95	8	Pn	Pn	16 31 30.6	-1.3
JEW	Eniwo	7.70	358	Pn	Pn	16 31 42.9	+0.7
JCJ	Chichijima	8.02	178	Sn	Sn	16 33 14.0	-2.3
	6.7nm,0.3s,baz=266,slow=20,SNR=1.8						
JKA	Kamikawa-asahi	8.99	3	Pn	Pn	16 31 58.0	-1.9
ASAJ	Asahikawa	8.99	3	Pn	Pn	16 31 58.1	-1.8
	1.8nm,0.3s,baz=207,slow=9.5,SNR=27						
ASAJ				Sn	Sn	16 33 37.8	-2.3
	1.0nm,0.3s,baz=101,slow=28,SNR=6.6						
KSRS	Korea Array	11.47	286	LR	LR	16 37 08.9	
	comp=Z,256nm,20.6s,baz=66,slow=38						
USRK	Ussuriysk Ar.	11.81	323	Pn	Pn	16 32 39.5	+1.0
	baz=123,slow=11,SNR=4.9						
KLR	Kul'dur	15.93	335	Pn	Pn	16 33 31.6	-2.4
	0.1nm,0.3s,baz=8.8,slow=14,SNR=2.1						
H11N2	WAKE ISLAND Hy	26.91	118	T	T	17 04 04.5	
	baz=310						
H11N1	WAKE ISLAND Hy	26.92	118	T	T	17 04 04.7	
	baz=310						
H11N3	WAKE ISLAND Hy	26.93	118	T	T	17 04 07.6	
	baz=310						
H11S1	WAKE ISLAND Hy	27.57	120	T	T	17 04 51.0	
	baz=312,slow=75,SNR=5.4						
H11S3	WAKE ISLAND Hy	27.57	121	T	T	17 04 47.1	
	baz=312,slow=75,SNR=3.4						
H11S2	WAKE ISLAND Hy	27.58	120	T	T	17 04 50.2	
	baz=312,slow=75,SNR=4.0						
TGY	Tagaytay City	28.16	227	P	P	16 35 42.3	+0.3
	52nm,0.4s,baz=157,slow=13,SNR=2.0						
SONM	Songino Array	29.17	307	P	P	16 35 52.0	+1.2
	0.9nm,0.8s,baz=101,slow=7.2,SNR=6.2						
SONM				LR	LR	16 48 51.9	
	comp=Z,78nm,18.5s,baz=284,slow=39						
SONM	Songino Array	29.17	307	P	P	16 35 51.7	+0.9
CMAR	Chiang Mai Arr	41.39	258	P	P	16 37 35.3	-0.7
	0.1nm,0.3s,baz=48,slow=7.3,SNR=1.8						
ZALV	Zalesovo Beam	43.47	314	P	P	16 37 52.1	-0.2
	0.5nm,0.4s,baz=107,slow=14,SNR=2.1						
MKAR	Makanchi Array	45.44	304	P	P	16 38 09.2	+0.9
	0.5nm,0.7s,baz=92,slow=9.3,SNR=5.3						
SUA	Susitna One	49.18	36	P	P	16 38 39.8	+2.5
SUA				IAmb	IAmb	16 38 42.2	
	comp=Z,20nm,0.8s						
ILAR	Eielson Array	50.92	32	P	P	16 38 52.7	+2.4
	comp=Z,0.7nm,1.1s,baz=246,slow=6.8,SNR=2.4						
WRA	Warramunga Arr	55.23	189	P	P	16 39 24.7	+2.2
	comp=Z,0.7nm,0.6s,baz=4.5,slow=7.8,SNR=3.0						
ASAR	Alice Springs	58.96	188	P	P	16 39 52.4	+3.5
	comp=Z,0.3nm,0.7s,baz=1.2,slow=6.5,SNR=1.8						
ABKAR	Akbulak array	59.44	311	P	P	16 39 52.3	+0.4
STKA	Stephens Creek	66.66	180	P	P	16 40 40.3	+0.4
	comp=Z,3.3nm,0.8s,baz=235,slow=4.8,SNR=4.2						
STKA	Stephens Creek	66.66	180	IAmb	IAmb	16 40 43.7	
	comp=Z,2.2nm,1.3s						
NVAR	Mina Array Bea	75.85	53	P	P	16 41 36.8	+0.9
	comp=Z,0.1nm,0.4s,baz=296,slow=6.8,SNR=2.0						
AKASG	Malin Array Be	76.01	323	P	P	16 41 37.5	+1.2
	comp=Z,0.7nm,0.6s,baz=48,slow=5.8,SNR=5.0						
AKBB	Malin Array Si	76.01	323	P	P	16 41 37.6	+1.2
AKBB				IAmb	IAmb	16 41 49.8	
	comp=Z,7.4nm,1.5s						
NOA	NORSAR Array B	76.07	338	LR	LR	17 19 49.2	
	comp=Z,38nm,18.9s,baz=280,slow=40						
PDAR	Pinedale Array	78.75	45	LR	LR	17 13 10.7	
	comp=Z,113nm,21.2s,baz=114,slow=33						

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*MOS **08** 16:34:32.4±0.0, 42°.40N×46°.54E, h19^{km}, MPVA3.5*

*DRS **08** 16:34:33.5±0.0, 42°.40N×46°.52E, h16^{km}, ML2.3/8*

*NORS **08** 16:34:33.0±0.0, 42°.42N×46°.59E, h21^{km}, MPVA3.4*

ISC 08 16:34:33.1±0.9**, 42°.42N**±0°.03×**46°.56E**±0°.03**, h15**^{km}±7^{km}**, n17, σ1ˢ.11**/34**, 1C-15D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
XNZR	Khunzakh	0.17	42	*e*Pg	Pg	16 34 37.7	+0.2
XNZR				*e*Sg	Sg	16 34 41.3	+1.0
BTLR	Botlikh	0.35	315	⇓*e*Pg	Pg	16 34 40.0	-0.4
	70nm,0.1s						
BTLR				⇓*i*Sg	Sg	16 34 45.2	0.0
	161nm,0.4s						
ARKR	Arakani	0.37	60	⇑*i*Pg	Pg	16 34 40.7	-0.1
	126nm,0.4s						
ARKR				⇓*e*Sg	Sg	16 34 46.5	+0.5
	294nm,0.2s						

KRNR	**Karanay**	**0.48**	**32**	⇓*i*Pg	**Pg**	**16 34 42.5**	**-0.4**
	28nm,0.2s						
KRNR				⇓*e*Sg	**Sg**	**16 34 49.6**	**+0.3**
	200nm,0.3s						
BUJR	**Buynaksk**	**0.58**	**45**	⇓*i*Pg	**Pb**	**16 34 44.7**	**-0.3**
	36nm,0.4s						
BUJR				⇓*e*Sg	**Sg**	**16 34 53.2**	**+1.0**
	323nm,0.5s						
DVE	**Vedeno**	**0.62**	**330**	*i* Pg	**Pb**	**16 34 45.1**	**-0.7**
DVE				*i* Sg	**Sg**	**16 34 54.2**	**+0.4**
LGD	**Lagodekhi**	**0.63**	**202**	P	**Pb**	**16 34 44.3**	**-1.5**
LGD				S	**Sb**	**16 34 52.9**	**-1.5**
DBC	**Dubki**	**0.63**	**19**	⇓*e*Pg	**Pb**	**16 34 45.2**	**-0.8**
	30nm,0.5s						
DBC				⇓*e*Sg	**Sg**	**16 34 54.7**	**+0.6**
	36nm,0.5s						
SGKR	**Sergokala**	**0.82**	**87**	⇓*e*Pg	**Pb**	**16 34 48.7**	**-0.3**
	49nm,0.5s						
SGKR				⇓*e*Sg	**Sg**	**16 35 00.8**	**+0.9**
	70nm,0.8s						
URKR	**Urkarakh**	**0.84**	**107**	⇓*i*Pg	**Pb**	**16 34 49.0**	**-0.5**
	35nm,0.2s						
URKR				⇓*i*Sg	**Sn**	**16 35 01.6**	**-1.0**
	52nm,0.2s						
GROC	**Groznyy**	**0.96**	**325**	*e*Pg	**Pg**	**16 34 52.4**	**+0.6**
GROC				*e*Sg	**Sn**	**16 35 05.8**	**+0.4**
DDFL	**Dedoflistskaro**	**1.03**	**199**	P	**Pg**	**16 34 54.5**	**+1.5**
DDFL				S	**Sn**	**16 35 11.3**	**+4.1**
AKT	**Akhty**	**1.28**	**137**	⇓*i*Pg	**Pn**	**16 34 56.0**	**-0.6**
	14nm,0.5s						
AKT				⇓*e*Sg	**Sg**	**16 35 13.8**	**-0.8**
	35nm,0.3s						
PNSH	**Pansheti**	**1.45**	**279**	P	**Pn**	**16 34 58.4**	**-0.6**
PNSH				S	**Sb**	**16 35 18.4**	**+0.2**
LACR	**Lac**	**1.71**	**284**	*e*Pg	**Pn**	**16 35 02.9**	**+0.4**
LACR				*e*Sg	**Sb**	**16 35 26.1**	**+0.3**
ZEI	**Tsey**	**1.99**	**282**	*e*Pg	**Pb**	**16 35 08.1**	**-1.1**
ZEI				*e*Sg	**Sb**	**16 35 33.8**	**-0.1**
DMNI	**Dmanisi**	**2.08**	**239**	P	**Pb**	**16 35 08.8**	**-1.7**
DMNI				S	**Sb**	**16 35 35.9**	**-0.2**

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*NEIC **08** 16:35:01.1±1.7, 52°.54N±0°.09×175°.87W±0°.08, h174^{km}±3^{km}, mb4.3/103, ML4.1/47(AEIC), Error ellipse: s-maj=13.7km s-min=5.6km az=158.0, confirmed*

*AEIC **08** 16:35:02±2.2, 52°.2N±0°.1×175°.70W±0°.08, h175^{km}±4^{km}, Error ellipse: s-maj=18.5km s-min=6.0km az=167.0, confirmed*

*IDC **08** 16:35:03.2±1.6, 52°.72N×175°.92W, h195^{km}±15^{km}, mb3.7/23, mb1 3.8/26, mb1mx3.6/52, mbtmp4.2/26, Error ellipse: s-maj=17.7km s-min=7.0km az=178.0*

ISC 08 16:35:00.1±0.4**, 52°.61N**±0°.08×**175°.88W**±0°.04**, h165**^{km}**, n280, **σ1^{s}**28**/291**, mb4.3**/67**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSTR	**Great Sitkin T**	**0.53**	**192**	Pn	**Pn**	**16 35 24.9**	**+1.6**
GSMY	**Great Sitkin M**	**0.58**	**191**		**Pn**	**16 35 25.2**	**+1.7**
GSTD	**Great Sitkin T**	**0.58**	**197**		**Pn**	**16 35 25.0**	**+1.4**
GSTD					**Sn**	**16 35 43.4**	**+1.8**
GSIG	**Igitkin Island**	**0.63**	**183**		**Pn**	**16 35 25.3**	**+1.5**
ADAG	**Mount Adagdak**	**0.77**	**216**		**Pn**	**16 35 26.4**	**+1.7**
ADK	**Adak**	**0.88**	**215**		**Sn**	**16 35 45.6**	**+0.9**
ADK	**Adak**	**0.88**	**215**	Pn	**Pn**	**16 35 26.6**	**+1.2**
KOWE	**Korovin West**	**1.02**	**103**		**Pn**	**16 35 28.0**	**+1.5**
KINC	**Kanaga Island**	**1.03**	**229**		**Pn**	**16 35 28.2**	**+1.8**
KICM	**Kanaga Island**	**1.07**	**230**		**Pn**	**16 35 28.8**	**+2.0**
KIKV	**Kanaga Island**	**1.08**	**228**		**Pn**	**16 35 28.5**	**+1.6**
ATKA	**Atka Island**	**1.11**	**111**		**Pn**	**16 35 27.6**	**+0.5**
ATKA					**Sn**	**16 35 49.1**	**+1.3**
KOFP	**Korovin Flat P**	**1.14**	**107**		**Pn**	**16 35 28.6**	**+1.2**
KIMD	**Kanaga Island**	**1.19**	**225**		**Pn**	**16 35 29.1**	**+1.2**
KIMD					**Sn**	**16 35 50.0**	**+0.8**
TAFP	**Tanaga Falls P**	**1.48**	**242**		**Pn**	**16 35 32.4**	**+1.8**
TASE	**Tanaga Southea**	**1.54**	**241**		**Pn**	**16 35 33.1**	**+1.8**
GALAA	**Gareloi Lava P**	**1.98**	**246**		**Pn**	**16 35 37.7**	**+1.9**
CERAA	**Semis' Rag'd T**	**2.82**	**257**		**Pn**	**16 35 48.1**	**+2.4**
CESW	**Semis' Southwe**	**2.89**	**258**		**Pn**	**16 35 48.6**	**+2.0**
AMKA	**Amchitka**	**3.23**	**249**		**Sn**	**16 36 29.3**	**-0.9**
AMKA	**Amchitka**	**3.23**	**249**	Pn	**Pn**	**16 35 52.0**	**+1.2**
LSPA	**Little Sitkin**	**3.47**	**261**		**Pn**	**16 35 57.2**	**+3.3**
NIKH	**Nikolski High**	**4.28**	**82**		**Pn**	**16 36 05.1**	**+0.9**
NIKH					**Sn**	**16 36 52.9**	**-1.4**
OKSO	**Okmok South**	**4.72**	**78**		**Pn**	**16 36 10.8**	**+0.8**
MAPS	**Pakushin South**	**5.50**	**74**		**Pn**	**16 36 22.0**	**+1.8**
MAPS					**Sn**	**16 37 23.8**	**+0.7**
MGOD	**Makushin Gods**	**5.54**	**74**		**Pn**	**16 36 22.2**	**+1.5**
MGOD					**Sn**	**16 37 24.8**	**+0.8**
MSW	**Makushin Switc**	**5.61**	**73**		**Pn**	**16 36 23.3**	**+1.7**
MREP	**Makushin Rep't**	**5.62**	**74**		**Pn**	**16 36 23.3**	**+1.5**
MNAT	**Makushin Natee**	**5.66**	**73**		**Pn**	**16 36 24.1**	**+1.8**
MNAT					**Sn**	**16 37 28.3**	**+1.4**
UNV	**Unalaska Valle**	**5.76**	**74**		**Pn**	**16 36 25.3**	**+1.7**
UNV					**Sn**	**16 37 30.4**	**+1.3**
AKMO	**Akutan Morgan**	**6.09**	**72**		**Pn**	**16 36 30.0**	**+2.0**
AHB	**Akutan Harbor**	**6.21**	**72**		**Pn**	**16 36 31.2**	**+1.7**
SSBA	**Shishaldin**	**7.31**	**68**		**Pn**	**16 36 46.5**	**+2.4**
BRPK	**Brown Peak**	**7.50**	**69**		**Pn**	**16 36 48.6**	**+2.0**
FALS	**False Pass**	**7.72**	**68**		**Pn**	**16 36 51.6**	**+2.1**
DT1	**Dutton Round H**	**8.42**	**67**		**Pn**	**16 36 59.8**	**+1.1**
SDPT	**Sand Point**	**9.48**	**67**		**Pn**	**16 37 12.4**	**-0.3**
CHIR	**Chirikof Islan**	**12.27**	**67**	Pn	**Pn**	**16 37 47.9**	**-1.3**
ANM	**Nome**	**13.15**	**20**	Pn	**Pn**	**16 38 03.0**	**+2.7**
SII	**Sitkinak Islan**	**13.17**	**64**	Pn	**Pn**	**16 37 58.7**	**-1.9**
KDAK	**Kodiak Island**	**14.24**	**59**	P	**Pn**	**16 38 12.2**	**-1.8**
	11nm,0.3s,baz=304,slow=2.2,SNR=107						
KDAK				S	**Sn**	**16 40 47.6**	**-4.4**
	0.2nm,0.3s,baz=240,slow=20,SNR=1.1						
RSO	**Redoubt South**	**14.91**	**49**	Pn	**Pn**	**16 38 21.1**	**-1.6**
CNPM	**China Poot**	**15.34**	**53**		**Pn**	**16 38 28.5**	**+0.9**
BRLK	**Bradley Lake**	**15.57**	**53**		**Pn**	**16 38 31.3**	**+0.8**
PEA0B	**Petropavlovsk-**	**15.94**	**282**		**P**	**16 38 37.0**	**+1.6**
PEA0B				IAmb	IAmb	16 38 51.1	
	comp=Z,24nm,1.3s						
PETK	**Petropavlovsk-**	**15.94**	**282**	P	**P**	**16 38 36.8**	**+1.4**
	comp=Z,0.1nm,0.3s,baz=92,slow=13,SNR=3.3						
O22K	**Cooper Landing**	**16.34**	**51**	P	**Pn**	**16 38 41.6**	**+1.8**
	baz=252						
RC01	**Rabbit Creek A**	**16.52**	**49**	P	**P**	**16 38 42.7**	**+1.0**
	baz=250						
KNK	**Knik Glacier**	**17.21**	**48**	P	**Pn**	**16 38 51.9**	**+1.6**
TRF	**Thorofare Moun**	**17.22**	**41**	P	**Pn**	**16 38 51.7**	**+1.1**
TRF				IAmb	IAmb	16 38 56.6	
	comp=Z,30nm,1.2s						
MLY	**Manley**	**17.84**	**36**	P	**Pn**	**16 38 59.1**	**+1.4**
	baz=238						
HIN	**Hinchinbrook I**	**17.86**	**53**	P	**P**	**16 38 57.9**	**+1.5**
BWN	**Browne**	**17.88**	**39**	P	**P**	**16 38 58.8**	**+2.2**
MCK	**McKinley**	**17.89**	**41**	P	**P**	**16 38 57.8**	**+1.1**
	baz=244						
DHY	**Denali Highway**	**18.26**	**44**	P	**P**	**16 39 01.8**	**+0.9**
DHY				IAmb	IAmb	16 39 02.8	
	comp=Z,14nm,0.7s						
I23K	**Minto, Yukon-K**	**18.39**	**37**	P	**P**	**16 39 03.8**	**+1.7**
	baz=239						
M24K	**Tolsona, Glenn**	**18.46**	**47**	P	**Pn**	**16 39 06.7**	**+1.6**
	baz=252						
M24K	**Tolsona, Glenn**	**18.46**	**47**	P	**P**	**16 39 04.8**	**+1.9**
MDM	**Murphy Dome**	**18.72**	**38**	P	**P**	**16 39 07.2**	**+1.5**
MDM				IAmb	IAmb	16 39 12.7	
	comp=Z,13nm,0.8s						
CCB	**Clear Creek Bu**	**18.74**	**39**	P	**P**	**16 39 05.8**	**0.0**
RAGM	**Ragged Mountai**	**18.75**	**53**	P	**P**	**16 39 08.1**	**+2.1**
HDA	**Harding Lake**	**18.97**	**40**	P	**P**	**16 39 09.3**	**+1.0**
	baz=245						
HDA	**Harding Lake**	**18.97**	**40**	P	**P**	**16 39 09.2**	**+0.8**
HDA				IAmb	IAmb	16 39 34.3	
	comp=Z,15nm,1.3s						
N25K	**Chitina, Valde**	**19.04**	**50**	P	**Pn**	**16 39 13.8**	**+1.9**
	baz=256						
N25K	**Chitina, Valde**	**19.04**	**50**	P	**Pn**	**16 39 12.7**	**+0.8**
N25K				IAmb	IAmb	16 39 14.5	
	comp=Z,13nm,0.6s						
POKR	**Poker Plat Res**	**19.09**	**38**	P	**P**	**16 39 11.5**	**+1.8**
	baz=242						
POKR	**Poker Plat Res**	**19.09**	**38**	P	**P**	**16 39 12.0**	**+2.3**
IL31		**19.15**	**39**	P	**P**	**16 39 11.2**	**+1.0**
ILAR	**Eielson Array**	**19.15**	**39**	P	**P**	**16 39 09.6**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=238,slow=10.0,SNR=20						
ILAR				ScP	**ScP**	**16 46 43.0**	**-3.5**
	comp=Z,0.1nm,0.3s,baz=259,slow=3.8,SNR=11						
ILAR	**Eielson Array**	**19.15**	**39**	P	**P**	**16 39 11.0**	**+0.7**
IL18	**Eielson Array**	**19.18**	**39**	P	**P**	**16 39 11.8**	**+1.1**
COLD	**Coldfoot**	**19.27**	**31**	P	**Pn**	**16 39 16.6**	**+2.2**
	baz=233						
GLB	**Gilahina Butte**	**19.37**	**50**	P	**P**	**16 39 14.4**	**+1.6**
GLB				IAmb	IAmb	16 39 18.9	
	comp=Z,24nm,1.4s						
VRDI	**Verde Repeater**	**19.50**	**51**	P	**P**	**16 39 16.4**	**+2.1**
VRDI				IAmb	IAmb	16 39 36.0	
	comp=Z,16nm,1.2s						
RIDG	**Independent Ri**	**19.56**	**43**	P	**P**	**16 39 15.6**	**+0.7**
RIDG				IAmb	IAmb	16 39 30.5	
	comp=Z,10nm,0.8s						
SEY	**Seymchan**	**19.61**	**314**	P	**P**	**16 39 17.9**	**+2.7**
	comp=Z,0.3nm,0.3s,baz=81,slow=22,SNR=18						
SEY				ScP	**ScP**	**16 46 44.3**	**-3.3**
	comp=Z,0.1nm,0.3s,baz=113,slow=5.0,SNR=9.8						
MA2	**Magadan**	**19.70**	**304**	P	**P**	**16 39 17.8**	**+1.5**
	comp=Z,0.3nm,0.3s,baz=108,slow=11,SNR=4.5						
SCRK	**Sand Creek**	**20.00**	**43**	P	**P**	**16 39 20.1**	**+0.5**
	baz=250						
BARN	**Barnard Glacie**	**20.32**	**52**	P	**P**	**16 39 24.7**	**+1.5**
BARN				IAmb	IAmb	16 39 27.8	
	comp=Z,23nm,1.4s						
CTGM	**Chitina Glacie**	**20.46**	**52**	P	**P**	**16 39 25.9**	**+1.2**
CTGM				IAmb	IAmb	16 39 42.8	
	comp=Z,16nm,1.1s						
A21K	**Barrow**	**20.65**	**18**	P	**P**	**16 39 27.7**	**+1.5**
	baz=215						
HYT	**Haines Junctio**	**22.31**	**53**	P	**P**	**16 39 44.5**	**+0.7**
HYT				IAmb	IAmb	16 39 57.6	
	comp=Z,13nm,1.3s						
WRAK	**Wrangell Islan**	**25.23**	**64**	P	**P**	**16 40 10.9**	**+0.6**
ASAJ	**Asahikawa**	**28.52**	**269**	P	**P**	**16 40 40.8**	**+1.0**
	comp=Z,9.3nm,1.1s,baz=63,slow=24,SNR=6.8						
YAK	**Yakutsk**	**29.99**	**310**	P	**P**	**16 40 51.9**	**-0.7**
	comp=Z,2.5nm,0.3s,baz=144,slow=2.0,SNR=4.8						
YAK	**Yakutsk**	**29.99**	**310**	IAmb	IAmb	16 40 53.1	
	comp=Z,7.1nm,0.8s						
KLR	**Kul'dur**	**32.59**	**285**	P	**P**	**16 41 14.9**	**-0.6**
	comp=Z,3.3nm,0.5s,baz=72,slow=7.6,SNR=25						
YKA	**Yellowknife Ar**	**33.06**	**48**	P	**P**	**16 41 19.1**	**-0.4**
	comp=Z,1.0nm,0.7s,baz=281,slow=7.6,SNR=14						
YKA				ScP	**ScP**	**16 47 23.3**	**-3.8**
	comp=Z,0.1nm,0.6s,baz=288,slow=2.8,SNR=2.2						
JMM	**Marumori**	**33.33**	**261**	P	**P**	**16 41 22.1**	**+0.1**
D03D	**Eldon**	**33.62**	**77**	P	**P**	**16 41 25.9**	**+1.5**
	baz=299						
B05A	**Bryant**	**33.86**	**75**	P	**P**	**16 41 27.8**	**+1.3**
	baz=298						
E04D	**Cinebar**	**34.41**	**78**	P	**P**	**16 41 33.2**	**+2.0**
	baz=300						
USRK	**Ussuriysk Ar.**	**34.93**	**277**	P	**P**	**16 41 34.6**	**-1.1**
	comp=Z,0.7nm,0.6s,baz=57,slow=11,SNR=5.7						
H04A	**Detroit Lake**	**35.61**	**81**	P	**P**	**16 41 43.0**	**+1.4**
MAJO	**Matsushiro**	**35.76**	**262**	P	**P**	**16 41 43.6**	**+0.6**
MAT	**Matsushiro**	**35.76**	**262**	P	**P**	**16 41 43.5**	**+0.5**
MJAR	**Matsushiro Arr**	**35.76**	**262**	P	**P**	**16 41 43.7**	**+0.8**
	comp=Z,7.0nm,0.8s,baz=42,slow=6.5,SNR=18						
MJAR	**Matsushiro Arr**	**35.76**	**262**	P	**P**	**16 41 43.5**	**+0.5**
G05D	**Wamic, OR**	**35.83**	**79**	P	**P**	**16 41 44.8**	**+1.3**
	baz=302						
I04A	**Tendick Farm,**	**35.96**	**82**	P	**P**	**16 41 46.0**	**+1.4**
	baz=303						
L02E	**Cave Junction**	**36.16**	**85**	P	**P**	**16 41 48.1**	**+1.8**
	baz=305						
HUMO	**Hull Mountain**	**36.29**	**84**	P	**P**	**16 41 48.5**	**+1.1**
HUMO				IAmb	IAmb	16 42 03.7	
	comp=Z,9.0nm,1.4s						
I05D	**Terrebonne, OR**	**36.30**	**81**	P	**P**	**16 41 49.0**	**+1.5**
	baz=303						
NEW	**Newport**	**36.77**	**73**	P	**P**	**16 41 51.4**	**-0.1**
	comp=Z,3.1nm,0.4s,baz=293,slow=8.5,SNR=14						
NEW	**Newport**	**36.77**	**73**	P	**P**	**16 41 51.6**	**+0.1**
	baz=299						
JGF	**Kuroka**	**36.90**	**261**	P	**P**	**16 41 53.5**	**+0.9**
L04D	**Klamath Falls**	**36.91**	**84**	P	**P**	**16 41 53.9**	**+1.1**
	baz=305						
YBH	**Yreka Blue Hor**	**36.94**	**85**	P	**P**	**16 41 55.0**	**+1.9**
	comp=Z,7.1nm,0.8s,baz=329,slow=6.3,SNR=13						
YBH	**Yreka Blue Hor**	**36.94**	**85**	P	**P**	**16 41 55.0**	**+1.9**
YBH				IAmb	IAmb	16 41 55.9	
	comp=Z,10nm,0.9s						
J05D	**Fort Rock, OR**	**36.95**	**82**	P	**P**	**16 41 54.9**	**+1.7**
	baz=304						
G08A	**Pilot Rock**	**37.22**	**78**	P	**P**	**16 41 55.6**	**+0.3**
N02D	**Trinity Center**	**37.39**	**86**	P	**P**	**16 41 58.2**	**+1.3**
	baz=306						
M04C	**Macdoel**	**37.44**	**85**	P	**P**	**16 41 59.1**	**+1.8**
	baz=306,SNR=5.1						
K05A	**Summer Lake**	**37.47**	**83**	P	**P**	**16 41 59.5**	**+1.9**
K05A				IAmb	IAmb	16 42 00.1	
	comp=Z,7.8nm,0.9s						
I07A	**Izee**	**37.55**	**80**	P	**P**	**16 41 58.9**	**+0.8**
I07A				IAmb	IAmb	16 41 60.0	
	comp=Z,5.6nm,0.7s						
WDC	**Whiskeytown Da**	**37.73**	**87**	P	**P**	**16 42 00.5**	**+0.9**
WDC				IAmb	IAmb	16 42 02.0	
	comp=Z,4.4nm,0.8s						
O02D	**Mt. Diablo Mer**	**37.82**	**87**	P	**P**	**16 42 02.5**	**+2.1**
	baz=307						
F10A	**Beach Ranch, E**	**37.88**	**76**	P	**P**	**16 42 00.8**	**0.0**
WALA	**Waterton Lakes**	**38.23**	**70**	P	**P**	**16 42 04.3**	**+0.5**
WALA				IAmb	IAmb	16 42 30.9	
	comp=Z,3.6nm,0.7s						
JWT	**Wachi**	**38.29**	**263**	P	**P**	**16 42 04.7**	**+0.4**
MOD	**Modoc Plateau**	**38.31**	**83**	P	**P**	**16 42 06.0**	**+1.4**
MOD				IAmb	IAmb	16 42 06.6	
	comp=Z,6.4nm,0.7s						
O03E	**Paynes Creek**	**38.35**	**87**	P	**P**	**16 42 05.8**	**+0.9**
	baz=307						
HOPS	**Hopland Field**	**38.38**	**89**	P	**P**	**16 42 06.2**	**+1.3**
BMO	**Blue Mountains**	**38.44**	**77**	P	**P**	**16 42 05.9**	**+0.4**
JTMT	**Jette**	**38.68**	**72**	P	**P**	**16 42 07.2**	**-0.3**
JTMT				IAmb	IAmb	16 42 16.0	
	comp=Z,6.3nm,1.3s						
ORV	**Oroville**	**38.99**	**87**	P	**P**	**16 42 10.0**	**-0.1**
MSO	**Missoula**	**39.36**	**73**	P	**P**	**16 42 12.9**	**-0.2**
	baz=302						
BEKR	**Beckworth**	**39.49**	**86**	P	**P**	**16 42 15.1**	**+0.7**
JHS	**Saijyo**	**39.87**	**265**	P	**P**	**16 42 18.8**	**+1.4**
PAHR	**Pah Rah Range**	**40.18**	**86**	P	**P**	**16 42 20.8**	**+0.7**
PAHR				IAmb	IAmb	16 42 21.5	
	comp=Z,4.9nm,0.7s						
PNTR	**Pine Nut**	**40.43**	**86**	P	**P**	**16 42 23.4**	**+1.1**
PNTR				IAmb	IAmb	16 42 24.4	
	comp=Z,14nm,0.9s						
CMB	**Columbia Colle**	**40.62**	**88**	P	**P**	**16 42 24.4**	**+0.9**
HLID	**Hailey**	**40.88**	**77**	P	**P**	**16 42 26.4**	**+0.6**
	baz=305,SNR=7.5						
BOZ	**Bozeman (W)**	**41.38**	**73**	P	**P**	**16 42 29.5**	**-0.3**
	baz=304						
BOZ	**Bozeman (W)**	**41.38**	**73**	P	**P**	**16 42 29.8**	**0.0**
RYN	**Ryan**	**41.38**	**86**	P	**P**	**16 42 30.5**	**+0.6**
KSRS	**Korea Array**	**41.42**	**272**	P	**P**	**16 42 31.1**	**+1.1**
	comp=Z,1.6nm,0.8s,baz=55,slow=8.0,SNR=3.4						
NVAR	**Mina Array Bea**	**41.63**	**86**	P	**P**	**16 42 33.0**	**+1.0**
	comp=Z,2.9nm,0.7s,baz=297,slow=7.3,SNR=16						
NVAR				ScP	**ScP**	**16 47 56.6**	**-3.4**
	comp=Z,0.6nm,0.6s,baz=292,slow=4.7,SNR=4.8						
MDPB	**Devils Postpil**	**41.67**	**88**	P	**P**	**16 42 33.5**	**+1.0**
MDPB				IAmb	IAmb	16 42 34.6	
	comp=Z,5.5nm,0.8s						
OMMB	**Old Mammoth Mi**	**41.73**	**88**	P	**P**	**16 42 34.0**	**+1.0**
OMMB				IAmb	IAmb	16 42 35.1	
	comp=Z,8.4nm,1.2s						
QLMT	**Earthquake Lak**	**41.92**	**74**	P	**P**	**16 42 33.9**	**-0.4**
YHL	**Hebgen Lake**	**42.05**	**74**	P	**P**	**16 42 34.7**	**-0.8**
ELK	**Elko**	**42.06**	**81**	P	**P**	**16 42 36.5**	**+1.0**
	comp=Z,3.6nm,0.7s,baz=307,slow=9.8,SNR=20						
ELK	**Elko**	**42.06**	**81**	P	**P**	**16 42 35.1**	**-0.4**
PAGB	**Antelope Grade**	**42.19**	**91**	P	**P**	**16 42 37.1**	**+0.7**
PAGB				IAmb	IAmb	16 42 41.0	
	comp=Z,14nm,1.2s						
JNU	**Nakatsue**	**42.50**	**264**	P	**P**	**16 42 39.5**	**+0.6**
TPH	**Tonopah**	**42.52**	**86**	P	**P**	**16 42 40.1**	**+0.9**
H17A	**Grant Village**	**42.67**	**74**	P	**P**	**16 42 41.8**	**+1.4**
	baz=305						
VES	**Vestal, Richgr**	**42.83**	**90**	P	**P**	**16 42 42.1**	**+0.6**
	baz=311						
HVU	**Hansel Valley**	**42.91**	**78**	P	**P**	**16 42 42.4**	**+0.2**
MOOW	**Moose Ponds**	**42.95**	**75**	P	**P**	**16 42 41.3**	**-1.3**
RLMT	**Red Lodge**	**43.02**	**72**	P	**P**	**16 42 43.6**	**+0.5**
	baz=305						
CWC	**Cottonwood Cre**	**43.05**	**88**	P	**P**	**16 42 44.4**	**+0.9**
	baz=311						
GRAC	**Grapevine Rang**	**43.12**	**87**	P	**P**	**16 42 44.8**	**+1.0**
	baz=310						
BGU	**Big Grassy Mou**	**43.27**	**80**	P	**P**	**16 42 46.1**	**+0.9**
ISA	**Isabella, Lake**	**43.32**	**89**	P	**P**	**16 42 45.4**	**-0.1**
	baz=312						
ISA	**Isabella, Lake**	**43.32**	**89**	P	**P**	**16 42 45.6**	**+0.1**
R11A	**Troy Canyon, C**	**43.34**	**84**	P	**P**	**16 42 46.3**	**+0.6**
	baz=309,SNR=9.7						
R11A	**Troy Canyon, C**	**43.34**	**84**	P	**P**	**16 42 46.0**	**+0.2**
R11A				IAmb	IAmb	16 42 47.1	
	comp=Z,7.2nm,1.2s						
MPMC	**Manual Prospec**	**43.66**	**88**	P	**P**	**16 42 47.7**	**-0.7**
	baz=311						
FURC	**Furnace Creek,**	**43.77**	**87**	P	**P**	**16 42 50.0**	**+1.0**
	baz=311						
TPNV	**Topopah Spring**	**43.83**	**86**	P	**P**	**16 42 50.7**	**+1.0**
	baz=310,SNR=13						
TPNV	**Topopah Spring**	**43.83**	**86**	P	**P**	**16 42 50.1**	**+0.4**
TPNV				IAmb	IAmb	16 42 51.4	
	comp=Z,9.7nm,0.8s						
DUG	**Dugway, Tooele**	**43.85**	**80**	P	**P**	**16 42 50.5**	**+0.7**
	baz=308,SNR=7.6						
DUG	**Dugway, Tooele**	**43.85**	**80**	P	**P**	**16 42 50.0**	**+0.1**
DUG				IAmb	IAmb	16 42 51.9	
	comp=Z,12nm,1.2s						
LRMC	**Laurel Mtn Rad**	**43.92**	**89**	P	**P**	**16 42 50.6**	**+0.1**
	baz=312						
EDW2	**Edwards Air Fo**	**44.13**	**90**	P	**P**	**16 42 52.2**	**+0.3**
	baz=312						
BW06	**Boulder Array**	**44.23**	**75**	P	**P**	**16 42 52.6**	**-0.2**
	baz=307,SNR=8.8						
PDAR	**Pinedale Array**	**44.23**	**75**	P	**P**	**16 42 52.6**	**-0.3**
	comp=Z,5.2nm,0.7s,baz=309,slow=3.4,SNR=48						
PRN	**Pahroc Range**	**44.26**	**85**	P	**P**	**16 42 53.5**	**+0.4**
PRN				IAmb	IAmb	16 42 54.9	
	comp=Z,7.8nm,0.8s						
PSUT	**Pine Spring**	**44.27**	**83**	P	**P**	**16 42 52.8**	**-0.4**
SHOC	**Shoshone, Teco**	**44.50**	**88**	P	**P**	**16 42 53.2**	**-1.6**
	baz=311						
GSC	**Goldstone, Bar**	**44.58**	**89**	P	**P**	**16 42 56.3**	**+0.7**
	baz=312,SNR=10						
BFSC	**Mount Baldy Ra**	**44.77**	**90**	P	**P**	**16 42 57.8**	**+0.7**
	baz=313						
HEC	**Hector,Ludlow**	**45.18**	**89**	P	**P**	**16 43 00.9**	**+0.6**
	baz=312						
CCUT	**Cedar City**	**45.20**	**84**	P	**P**	**16 43 00.6**	**+0.1**
RDMU	**Red Mountain**	**45.56**	**78**	P	**P**	**16 43 03.2**	**-0.3**
MTPU	**Mount Pierson**	**45.59**	**82**	P	**P**	**16 43 04.6**	**+0.7**
GMRC	**Granite Mounta**	**45.62**	**88**	P	**P**	**16 43 04.4**	**+0.5**
	baz=312,SNR=5.7						
KNB	**Kanab**	**45.87**	**84**	P	**P**	**16 43 06.6**	**+0.7**
PKCU	**Pink Cliffs**	**45.90**	**83**	P	**P**	**16 43 06.8**	**+0.6**
PFO	**Pinyon Flats O**	**45.92**	**90**	P	**P**	**16 43 05.3**	**-0.9**
	comp=Z,1.9nm,0.7s,baz=358,slow=5.8,SNR=4.2						
PFO	**Pinyon Flats O**	**45.92**	**90**	P	**P**	**16 43 06.3**	**+0.1**
	baz=313						
PFO	**Pinyon Flats O**	**45.92**	**90**	P	**P**	**16 43 06.4**	**+0.1**
XPFO	**Pion Flat**	**45.93**	**90**	P	**P**	**16 43 06.3**	**0.0**
BELC	**Belle Mtn. Jos**	**45.94**	**89**	P	**P**	**16 43 06.4**	**+0.1**
	baz=313						
IRM	**Iron Mountain**	**46.35**	**88**	P	**P**	**16 43 10.0**	**+0.5**
	baz=313						
BC3	**Big Chuckawall**	**46.51**	**89**	P	**P**	**16 43 10.3**	**-0.4**
	baz=313						
U15A	**North Rim**	**46.58**	**84**	P	**P**	**16 43 11.8**	**+0.3**
U15A				IAmb	IAmb	16 43 13.2	
	comp=Z,8.5nm,0.9s						
O20A	**White River Ci**	**46.62**	**77**	P	**P**	**16 43 11.5**	**-0.2**
	baz=309,SNR=9.5						
O20A	**White River Ci**	**46.62**	**77**	P	**P**	**16 43 11.4**	**-0.3**
O20A				IAmb	IAmb	16 43 12.2	
	comp=Z,10nm,0.7s						
PDMCI	**Parker Dam,Lak**	**46.87**	**88**	P	**P**	**16 43 14.0**	**+0.6**
	baz=313						
PV10	**Paradox Valley**	**47.27**	**80**	P	**P**	**16 43 16.8**	**0.0**
PV10				IAmb	IAmb	16 43 18.3	
	comp=Z,8.4nm,0.7s						
PV22	**Blue Mesa, Par**	**47.32**	**79**	P	**P**	**16 43 16.7**	**-0.4**
PV22				IAmb	IAmb	16 43 18.7	
	comp=Z,8.0nm,0.7s						
ULN	**Ulaanbaatar**	**47.33**	**297**	P	**P**	**16 43 16.4**	**-0.5**
ESJX	**Sierra Juarez**	**47.34**	**91**	P	**P**	**16 43 17.0**	**-0.3**
PV19	**Morning Glory**	**47.35**	**80**	P	**P**	**16 43 16.9**	**-0.5**
PV19				IAmb	IAmb	16 43 18.3	
	comp=Z,6.2nm,0.6s						
PV18	**Skein Mesa, Pa**	**47.43**	**80**	P	**P**	**16 43 17.4**	**-0.6**
PV18				IAmb	IAmb	16 43 18.7	
	comp=Z,12nm,0.7s						
PV02	**Paradox Valley**	**47.56**	**80**	P	**P**	**16 43 18.7**	**-0.3**
PV02				IAmb	IAmb	16 43 19.7	
	comp=Z,12nm,0.7s						
PV15	**Paradox Valley**	**47.63**	**79**	P	**P**	**16 43 18.9**	**-0.6**
PV15				IAmb	IAmb	16 43 22.3	
	comp=Z,4.6nm,0.6s						
SONM	**Songino Array**	**47.70**	**297**	P	**P**	**16 43 20.1**	**+0.3**
	comp=Z,1.4nm,0.6s,baz=50,slow=7.6,SNR=12						
SONM				ScP	**ScP**	**16 48 20.6**	**-4.1**
	comp=Z,0.8nm,0.9s,baz=64,slow=3.4,SNR=4.8						
SONM	**Songino Array**	**47.70**	**297**	P	**P**	**16 43 19.8**	**0.0**
WUAZ	**Wupatki**	**47.74**	**84**	P	**P**	**16 43 21.0**	**+0.7**
	baz=312,SNR=5.1						
WUAZ	**Wupatki**	**47.74**	**84**	P	**P**	**16 43 20.6**	**+0.3**
WUAZ				IAmb	IAmb	16 43 21.9	
	comp=Z,6.4nm,0.9s						
SPX	**San Pedro Mart**	**48.31**	**92**	P	**P**	**16 43 23.4**	**-1.6**
MVCO	**Mesa Verde**	**48.35**	**80**	P	**P**	**16 43 25.2**	**+0.1**
	baz=311						
MVCO	**Mesa Verde**	**48.35**	**80**	P	**P**	**16 43 24.7**	**-0.4**
MVCO				IAmb	IAmb	16 43 26.5	
	comp=Z,9.6nm,1.4s						
W18A	**Petrified Fore**	**49.00**	**83**	P	**P**	**16 43 30.7**	**+0.7**
	baz=312						
S22A	**4UR Ranch, Cre**	**49.00**	**79**	P	**P**	**16 43 30.5**	**+0.4**
	baz=311						
HHC	**Hu-ho-hao-te**	**49.08**	**287**	*e*P	**P**	**16 43 32.5**	**+2.1**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,250nm,6.6s						
SPA1	**Spitsbergen Ar**	**49.26**	**357**	P	**P**	**16 43 31.9**	**+0.7**
214A	**Organ Pipe Nat**	**49.29**	**89**	P	**P**	**16 43 32.3**	**+0.3**
	baz=314						
214A	**Organ Pipe Nat**	**49.29**	**89**	P	**P**	**16 43 32.2**	**+0.2**
SDCO	**Great Sand Dun**	**49.80**	**78**	P	**P**	**16 43 36.5**	**+0.3**
	baz=311,SNR=5.4						
SDCO	**Great Sand Dun**	**49.80**	**78**	P	**P**	**16 43 35.8**	**-0.3**
TUC	**Tucson**	**50.28**	**87**	P	**P**	**16 43 40.1**	**+0.5**
	baz=314						
TUC	**Tucson**	**50.28**	**87**	P	**P**	**16 43 39.2**	**-0.4**
T25A	**Trinidad**	**50.85**	**78**	P	**P**	**16 43 44.2**	**+0.2**
	baz=312,SNR=7.3						
FRB	**Frobisher Bay**	**51.02**	**33**	P	**P**	**16 43 43.6**	**-0.9**
	comp=Z,3.0nm,0.6s,baz=307,slow=9.3,SNR=6.7						
121A	**Cookes Peak, D**	**51.95**	**84**	P	**P**	**16 43 52.7**	**+0.6**
	baz=314						
MNTX	**Cornudas Mount**	**53.98**	**83**	P	**P**	**16 44 07.1**	**+0.2**
	baz=315,SNR=6.7						
MNTX	**Cornudas Mount**	**53.98**	**83**	P	**P**	**16 44 06.3**	**-0.5**
MNTX				IAmb	IAmb	16 44 08.6	
	comp=Z,4.5nm,0.9s						
ZALV	**Zalesovo Beam**	**54.48**	**314**	P	**P**	**16 44 09.2**	**-0.8**
	comp=Z,0.3nm,0.4s,baz=25,slow=11,SNR=2.2						
WMOK	**Wichita Mounta**	**55.82**	**76**	P	**P**	**16 44 18.9**	**-1.1**
	baz=314						
TXAR	**Lajitas Array**	**56.70**	**84**	P	**P**	**16 44 26.1**	**-0.2**
	comp=Z,1.8nm,0.6s,baz=302,slow=5.2,SNR=23						
TXAR	**Lajitas Array**	**56.70**	**84**	P	**P**	**16 44 25.6**	**-0.7**
LZH	**Lanzhou**	**56.76**	**287**	*e*P	**P**	**16 44 29.2**	**+2.4**
LZH				pP	pwP	16 45 07.6	-0.9
LZH				sP	sP	16 45 31.1	+10
LZH				PP	**PP**	**16 46 36.4**	**+2.0**
LZH				pmax	pmax		
	comp=Z,10.0nm,1.1s						
LZH				pmax	pmax		
	comp=Z,230nm,4.9s						
GTA	**Gaotai**	**56.77**	**293**	P	**P**	**16 44 26.0**	**-0.8**
GTA				pP	pP	16 45 06.1	+2.6
GTA				sP	sP	16 45 25.8	+4.6
GTA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
ABTX	**Abilene, Hawle**	**56.79**	**78**	P	**P**	**16 44 26.4**	**-0.4**
ARB5	**ARCESS Array S**	**57.16**	**351**	P	**P**	**16 44 30.1**	**+1.2**
ARCES	**ARCESS Array B**	**57.16**	**351**	P	**P**	**16 44 29.5**	**+0.6**
	comp=Z,5.8nm,0.9s,baz=23,slow=7.2,SNR=1.9						
X37A	**Clayton**	**57.94**	**74**	P	**P**	**16 44 34.2**	**-0.6**
X37A				IAmb	IAmb	16 44 35.0	
	comp=Z,4.9nm,0.6s						

U40A	Yellville	58.16	71	P	P	16 44 34.3	-2.1
	baz=315						
WHTX	Lake Whitney,	58.54	77	P	P	16 44 38.5	-0.5
	baz=316						
MIAR	Mount Ida	59.01	73	P	P	16 44 41.6	-0.7
	baz=315						
MIAR	Mount Ida	59.01	73	P	P	16 44 41.5	-0.7
MIAR				IAmb	IAmb	16 44 42.2	
	comp=Z,3.2nm,0.7s						
W41B	Gary Mavity, V	59.34	71	P	P	16 44 42.9	-1.6
	baz=315						
KURK	Kurchatov	59.46	315	P	P	16 44 44.7	-0.4
KURK				IAmb	IAmb	16 44 45.3	
	comp=Z,2.3nm,0.6s						
H53A	Bobcaygeon	60.06	55	P	P	16 44 51.6	+2.3
	baz=316						
WMQ	Urumqi	60.17	304	eP	P	16 44 52.6	+2.5
MKAR	Makanchi Array	60.66	310	P	P	16 44 52.5	-0.8
	comp=Z,0.7nm,0.6s,baz=46,slow=6.1,SNR=8.6						
MKAR	Makanchi Array	60.66	310	P	P	16 44 52.4	-1.0
L56A	Greenwood	62.34	56	P	P	16 45 04.0	-0.7
	baz=317						
L56A	Greenwood	62.34	56	P	P	16 45 04.0	-0.7
L56A				IAmb	IAmb	16 45 25.1	
	comp=Z,10nm,1.4s						
M57A	Sunshine Farm,	63.15	57	P	P	16 45 09.6	-0.4
H62A	Milan	63.66	50	P	P	16 45 12.4	-0.9
AAK	Ala-Archa	67.44	311	P	P	16 45 37.9	+0.1
AB05	Akbulak array	68.00	324	P	P	16 45 41.0	0.0
AB06	Akbulak array	68.01	324	P	P	16 45 41.0	0.0
AB02	Akbulak array	68.02	324	P	P	16 45 40.8	-0.3
AB01	Akbulak array	68.02	324	P	P	16 45 40.5	-0.5
KK09	Karatay Array	68.84	314	P	P	16 45 45.8	-0.5
KKAR	Karatay Array	68.86	314	P	P	16 45 45.9	-0.5
KSH	Kashi	69.19	308	P	P	16 45 52.2	+3.6
KSH				pmax	pmax		
	comp=Z,3.0nm,0.5s						
KSH				pmax	pmax		
	comp=Z,170nm,6.0s						
FAKI	Fak Fak	70.37	237	P	P	16 45 56.1	+0.1
TAPN	Taplejung	72.45	292	eP	P	16 46 08.1	-0.6
	comp=Z,7.3nm,0.5s						
TAPN	Taplejung	72.45	292	eP	P	16 46 08.1	-0.6
	comp=Z,7.3nm,0.5s						
CMAR	Chiang Mai Arr	72.66	278	P	P	16 46 08.9	-0.7
	comp=Z,0.8nm,0.6s,baz=25,slow=6.8,SNR=10						
CMAR	Chiang Mai Arr	72.66	278	P	P	16 46 09.1	-0.6
GUN	Gumba	73.04	294	eP	P	16 46 11.9	-0.4
	comp=Z,9.4nm,0.5s						
GUN	Gumba	73.04	294	eP	P	16 46 11.8	-0.5
	comp=Z,9.4nm,0.5s						
RAMN	Ramite	73.38	293	eP	P	16 46 13.5	-0.6
	comp=Z,12nm,0.5s						
RAMN	Ramite	73.38	293	eP	P	16 46 13.5	-0.6
	comp=Z,12nm,0.5s						
KKN	Kakani	73.47	294	eP	P	16 46 14.5	-0.2
KKN	Kakani	73.47	294	eP	P	16 46 14.4	-0.2
	comp=Z,6.1nm,0.6s						
PKI	Pulchoki	73.57	294	eP	P	16 46 14.5	-0.8
	comp=Z,1.9nm,0.4s						
PKIN	Phulchoki	73.57	294	eP	P	16 46 15.2	-0.1
	comp=Z,3.3nm,0.4s						
PKIN	Phulchoki	73.57	294	eP	P	16 46 15.2	-0.1
	comp=Z,3.3nm,0.4s						
GKN	Gorkha	73.66	295	eP	P	16 46 15.0	-0.7
	comp=Z,8.8nm,0.7s						
GKN	Gorkha	73.66	295	eP	P	16 46 15.0	-0.7
	comp=Z,8.8nm,0.7s						
DMN	Daman	73.71	294	eP	P	16 46 14.7	-1.3
DMN	Daman	73.71	294	eP	P	16 46 15.1	-0.9
DANN	Dangsing	73.88	296	eP	P	16 46 16.6	-0.5
	comp=Z,14nm,0.7s						
DANN	Dangsing	73.88	296	eP	P	16 46 16.6	-0.5
	comp=Z,14nm,0.7s						
AKASG	Malin Array Be	74.90	344	P	P	16 46 20.5	-1.7
	comp=Z,0.4nm,0.4s,baz=17,slow=6.4,SNR=2.6						
WRA	Warramunga Arr	84.17	226	P	P	16 47 11.4	-1.1
	comp=Z,1.0nm,0.7s,baz=37,slow=6.2,SNR=8.1						
ASAR	Alice Springs	87.63	225	P	P	16 47 28.9	-0.6
	comp=Z,1.5nm,0.8s,baz=22,slow=5.1,SNR=24						
H03N2	Juan Fernandez	119.76	107	T	T	19 05 17.7	
	baz=317,slow=78,SNR=5.1						
H03N1	Juan Fernandez	119.77	107	T	T	19 05 19.1	
	baz=317,slow=78,SNR=6.5						
H03N3	Juan Fernandez	119.77	107	T	T	19 05 18.3	
	baz=317,slow=78,SNR=7.8						

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*IDC **08** 16:56:14.7±3.0, 10.°57S×161.°40E, h74^{km}±20^{km}, mb3.2/4, mb1 3.4/5, mb1mx3.2/36, mbtmp3.6/5, Error ellipse: s-maj=36.8km s-min=19.7km az=60.0*

ISC 08 16:56:14.4±1.7**, 10.°6S**±0.°2×**161.°3E**±0.°2**, h61**^{km}**, n6, σ1.^{s}35**/7**, mb3.3**/4**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	1.80	311	P	Pn	16 56 43.3	+0.1
	42nm,0.3s,baz=159,slow=5.9,SNR=24						
HNR				S	Sn	16 57 06.8	+1.7
	307nm,0.3s,baz=202,slow=21,SNR=16						
HNR				LR	LR	16 57 17.4	
	comp=Z,52nm,20.1s,baz=136,slow=34						
DZM	Mont Dzumac	12.39	157	P	Pn	16 59 09.3	+1.2
	0.3nm,0.3s,baz=32,slow=10,SNR=15						
WRA	Warramunga Arr	27.59	247	P	P	17 01 56.9	+0.7
	0.5nm,0.7s,baz=77,slow=9.1,SNR=3.9						
ASAR	Alice Springs	29.16	240	P	P	17 02 09.0	-1.1
	0.1nm,0.4s,baz=62,slow=10.0,SNR=4.1						
FITZ	Fitzroy Crossi	35.31	254	P	P	17 03 04.0	0.0
	0.6nm,0.4s,baz=90,slow=8.1,SNR=3.3						
SONM	Songino Array	75.81	325	P	P	17 07 53.0	-1.1
	0.4nm,0.8s,baz=126,slow=7.3,SNR=3.5						

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*IDC **08** 17:02:38.2±1.5, 3.°09S×138.°32E, h0^{km}, mb3.4/2, mb1 3.7/4, mb1mx3.4/23, mbtmp3.6/4, ML3.7/2, Error ellipse: s-maj=35.7km s-min=28.8km az=110.0*

*DJA **08** 17:02:44.9±0.4, 3°S±3°×13°9E±°, h93^{km}±8^{km}, M4.0/6, mb4.2/4, MLv3.9/6*

ISC 08 17:02:44.6±0.9**, 3.°16S**±0.°07×**138.°58E**±0.°06**, h62**^{km}**, n11, σ1.^{s}62**/14**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMPI	Sarmi	1.17	6	P	Pn	17 03 06.0	+1.0
GENI	Genyem	1.69	70	P	Pn	17 03 13.5	+1.7
JAY	Jayapura	2.22	73	Pn	Pn	17 03 19.7	+0.6
	15nm,0.3s,baz=233,slow=7.4,SNR=53						
JAY				Sn	Sn	17 03 43.8	-1.7
	13nm,0.3s,baz=296,slow=19,SNR=5.8						
JAY	Jayapura	2.22	73	P	Pn	17 03 19.7	+0.6
SRPI	Serui, Papua	2.67	299	P	Pn	17 03 26.0	+0.8
SRPI				S	Sn	17 03 55.2	-1.1
BAKI	Biak	3.15	308	P	Pn	17 03 32.1	+0.3
MMPI	Merauke	5.57	161	P	Pn	17 04 07.1	+2.2
	2.3nm622nm,1.0s						
SIJI	Sorong	7.65	287	Pn	Pn	17 04 33.9	+0.4
	1.5nm,0.3s,baz=281,slow=23,SNR=17						
WRA	Warramunga Arr	17.18	194	P	Pn	17 06 40.5	0.0
	0.3nm,0.3s,baz=15,slow=13,SNR=18						
WRA				S	Sn	17 09 36.2	-15
	0.0nm,0.3s,baz=16,slow=22,SNR=2.5						
ASAR	Alice Springs	20.88	192	P	P	17 07 21.9	+0.2
	0.5nm,0.5s,baz=15,slow=9.7,SNR=18						
ASAR				S	S	17 11 07.6	-3.6
	0.7nm,0.9s,baz=9.1,slow=26,SNR=3.9						
MKAR	Makanchi Array	70.07	323	P	P	17 13 51.0	+0.8
	0.8nm,0.9s,baz=125,slow=7.7,SNR=6.1						

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*RSNC **08** 17:04:43.7±1.3, 7.°02N×72.°17W, h4^{km}±7^{km}, ML3.4, Mw3.5*

*IDC **08** 17:04:46.6±2.1, 7.°03N×72.°07W, h58^{km}±20^{km}, mb3.4/4, mb1 3.7/7, mb1mx3.4/31, mbtmp3.8/7, ML2.7/3, Error ellipse: s-maj=27.6km s-min=19.7km az=110.0*

ISC 08 17:04:41.1±1.4**, 7.°06N**±0.°04×**72.°06W**±0.°03**, h11**^{km}±10^{km}**, n29, σ1.^{s}44**/40**, mb3.7**/4**, 3D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TAMC	Tame, Arauca	0.67	157	eP	Pb	17 04 55.7	+0.8
TAMC				eS	Sb	17 05 05.5	+1.2
TAMC				i		17 05 06.0	
	comp=Z,2µm,0.2s						
PAMC	Pamplona, Colo	0.69	294	⇓iP	Pg	17 04 54.6	-0.1
PAMC				eS	Sg	17 05 02.8	-1.1
PAMC				i		17 05 03.7	
	comp=Z,1µm,0.3s						
BARC	Barichara	1.21	248	⇓iP	Pn	17 05 03.1	-1.0
BARC				eS	Sb	17 05 17.7	-2.2
BARC				i		17 05 23.6	
	comp=Z,1µm,0.2s						
RUSC	La Rusia	1.54	221	eP	Pn	17 05 09.2	+0.2
RUSC				eS	Sn	17 05 27.8	-1.4
RUSC				i		17 05 31.7	
	comp=Z,314nm,0.3s						
BRRC	Barranca, Sant	1.64	272	⇓iP	Pb	17 05 11.8	+0.4
BRRC				eS	Sn	17 05 32.2	+1.2
BRRC				i		17 05 39.0	
	comp=Z,274nm,0.4s						
OCAC	Ocana	1.71	313	eP	Pb	17 05 13.4	+0.6
OCAC				eS	Sb	17 05 35.3	+0.9
SDV	Santo Domingo	2.30	38	P	Pb	17 05 22.8	0.0
	comp=Z,25nm,0.3s,baz=190,slow=3.3,SNR=40						
SDV				S	Sg	17 05 53.3	-1.9
	comp=Z,78nm,0.3s,baz=29,slow=14,SNR=13						
SDV	Santo Domingo	2.30	38	eP	Pb	17 05 22.3	-0.5
PTBC	PUERTO BERRIO,	2.44	258	eP	Pn	17 05 21.5	+0.6
PTBC				i		17 05 56.6	
	comp=Z,627nm,0.6s						
SPBC	San Pablo de B	2.44	235	eP	Pn	17 05 22.7	+1.7
SPBC				eS	Sn	17 05 52.8	+1.8
SPBC				i		17 05 58.1	
	comp=Z,297nm,0.3s						
SMLC	San Martn de	2.64	311	eP	Pn	17 05 24.8	+1.1
PTGC	Puerto Gaitan,	2.84	182	eP	Pn	17 05 27.0	+0.5
PTGC				i		17 06 13.9	
	comp=Z,324nm,0.3s						
CHIC	Chingaza	2.93	215	eP	Pn	17 05 28.8	+0.7
CHIC				i		17 06 22.0	
	comp=Z,62nm,0.4s						
ROSC	El Rosal	3.15	226	P	Pn	17 05 34.4	+3.3
	comp=Z,5.1nm,0.3s,baz=115,slow=19,SNR=6.2						
ROSC				S	Sb	17 06 14.5	-1.4
	comp=Z,12nm,0.3s,baz=356,slow=20,SNR=4.0						
UREC	San Jos de Ur	3.51	282	eP	Pn	17 05 37.6	+1.9
HELC	Santa Helena	3.55	256	eP	Pn	17 05 37.4	+0.8
GUY2C	Guyana, Caldas	3.76	241	eP	Pn	17 05 41.0	+1.4
MOTC	Monteria, Cord	3.96	296	eP	Pn	17 05 43.6	+1.7
TOLC	Tolima	4.07	233	eP	Pn	17 05 44.4	+0.8
TOLC				eS	Sn	17 06 30.4	-1.1
TOLC				i		17 06 51.3	
	comp=Z,39nm,0.6s						
ANIL	Santa Ana	4.19	233	eP	Pn	17 05 46.8	+1.5
ORTC	Ortega, Tolima	4.45	226	eP	Pn	17 05 49.1	+0.4
PLMC	San Jos del P	4.71	243	eP	Pn	17 05 54.4	+2.1
PCRV	Puerto La Cruz	7.97	67	P	Pn	17 06 39.4	+2.4
	comp=Z,0.7nm,0.3s,baz=266,slow=7.9,SNR=1.2						
PCRV				S	Sn	17 08 05.6	-1.7
	comp=Z,0.7nm,0.3s,baz=256,slow=8.3,SNR=2.5						
LPAZ	La Paz	23.52	171	P	P	17 09 51.9	-0.2
	comp=Z,0.9nm,0.6s,baz=339,slow=8.5,SNR=4.1						
SIV	San Ignacio	25.35	155	P	P	17 10 08.0	-0.5
	comp=Z,0.6nm,0.6s,baz=297,slow=9.0,SNR=2.4						
YKA	Yellowknife Ar	63.41	339	P	P	17 15 10.0	-0.6
	comp=Z,0.6nm,0.7s,baz=126,slow=7.5,SNR=11						
DBIC	Dimbokro	66.67	86	P	P	17 15 33.1	+0.5
	comp=Z,1.1nm,0.4s,baz=259,slow=5.2,SNR=1.8						
ASAR	Alice Springs	150.10	234	PKPbc	PKPbc	17 24 30.8	-2.2
	comp=Z,0.3nm,0.8s,baz=117,slow=3.2,SNR=5.5						
WRA	Warramunga Arr	151.37	241	PKPbc	PKPbc	17 24 34.3	-1.7
	comp=Z,0.3nm,0.6s,baz=105,slow=3.1,SNR=2.0						

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*NEIC **08** 17:30:46.3±1.5, 20.°5S±0.°1×177.°8W±0.°2, h475^{km}±13^{km}, mb4.0/13, Error ellipse: s-maj=23.7km s-min=15.6km az=72.0*

*IDC **08** 17:30:46.2±2.1, 20.°83S×177.°72W, h477^{km}±21^{km}, mb3.4/9, mb1 3.6/11, mb1mx3.4/42, mbtmp4.2/11, Error ellipse: s-maj=23.0km s-min=13.9km az=116.0*

ISC 08 17:30:48.4±0.7**, 20.°7S**±0.°1×**177.°9W**±0.°1**, h500**^{km}**, n31, σ1.^{s}18**/32**, mb4.0**/15**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	4.80	307	P	P	17 32 11.8	-2.0
	2.3nm,0.3s,baz=234,slow=21,SNR=22						
MSVF	Nonsavu	4.80	307	P	P	17 32 11.5	-2.3
NIUE	Niue	7.68	79	P	P	17 32 35.9	-5.7
URZ	Urewera	18.05	193	P	P	17 34 27.5	-1.5
	1.2nm,0.3s,baz=38,slow=12,SNR=4.3						
URZ				S	S	17 37 26.4	-2.7
	0.2nm,0.3s,baz=12,slow=14,SNR=3.5						
EIDS	Eidsvold	28.88	255	P	P	17 36 07.0	+0.9
EIDS				IAmb	IAmb	17 36 20.0	
	comp=Z,7.6nm,1.1s						
ARMA	Armidale	29.07	244	P	P	17 36 09.6	+1.7
CTA	Charters Tower	33.55	265	P	P	17 36 47.0	+0.6
	comp=Z,3.0nm,0.4s,baz=96,slow=11,SNR=8.3						
CTAO	Charters Tower	33.55	265	P	P	17 36 46.7	+0.3
PMG	Port Moresby	35.46	283	P	P	17 37 02.7	+0.3
TOO	Toolangi	35.86	234	P	P	17 37 06.0	+0.5
TOO				IAmb	IAmb	17 37 12.9	
	comp=Z,8.3nm,1.1s						
STKA	Stephens Creek	37.79	244	P	P	17 37 22.6	+1.2
	comp=Z,5.2nm,0.7s,baz=84,slow=11,SNR=8.6						
STKA	Stephens Creek	37.79	244	P	P	17 37 22.4	+0.9
BBOO	Buckleboo	42.55	244	P	P	17 38 00.2	+0.6
AS31	Alice Springs	44.56	257	P	P	17 38 15.7	+0.2
ASAR	Alice Springs	44.56	257	P	P	17 38 15.6	+0.1
	comp=Z,4.5nm,0.5s,baz=90,slow=8.3,SNR=136						
ASAR				PcP	PcP	17 39 48.8	+0.8
	comp=Z,1.0nm,0.5s,baz=102,slow=4.0,SNR=10						
ASAR	Alice Springs	44.56	257	P	P	17 38 15.3	-0.1
WB0	Warramunga Arr	44.64	262	P	P	17 38 15.7	-0.4
WB0				IAmb	IAmb	17 38 17.0	
	comp=Z,5.8nm,1.1s						
WB2	Warramunga Arr	44.65	262	P	P	17 38 15.9	-0.3
WB2				IAmb	IAmb	17 38 17.5	
	comp=Z,3.2nm,0.7s						
WRAB	Tennant Creek	44.65	262	P	P	17 38 16.0	-0.2
WRAB				IAmb	IAmb	17 38 16.1	
	comp=Z,4.3nm,1.1s						
WRA	Warramunga Arr	44.66	262	P	P	17 38 15.9	-0.4
	comp=Z,1.1nm,0.3s,baz=97,slow=7.5,SNR=57						
WRA	Warramunga Arr	44.66	262	P	P	17 38 16.1	-0.2
QSPA	South Pole Qui	69.40	180	P	P	17 41 06.7	+1.3
QSPA				IAmb	IAmb	17 41 07.4	
	comp=Z,2.7nm,0.7s						
PETK	Petropavlovsk-	76.45	345	P	P	17 41 46.3	+0.4
	comp=Z,3.4nm,1.0s,baz=130,slow=8.3,SNR=2.6						
PETK	Petropavlovsk-	76.45	345	P	P	17 41 45.9	0.0
NVAR	Mina Array Bea	81.09	43	P	P	17 42 12.1	+0.8
	comp=Z,0.3nm,0.4s,baz=232,slow=9.3,SNR=3.6						
TXAR	Lajitas Array	87.08	57	P	P	17 42 41.4	+0.4
	comp=Z,0.3nm,0.5s,baz=243,slow=6.0,SNR=1.9						
ILAR	Eielson Array	88.46	13	P	P	17 42 45.4	-1.0
	comp=Z,0.2nm,0.4s,baz=218,slow=5.2,SNR=6.6						
CMAR	Chiang Mai Arr	90.25	290	P	P	17 42 57.6	+1.8
	comp=Z,1.6nm,0.8s,baz=123,slow=2.8,SNR=14						
AKASG	Malin Array Be	143.20	331	PKP	PKPdf	17 49 22.7	-2.3
	comp=Z,0.2nm,0.4s,baz=42,slow=4.4,SNR=11						
EKA	Eskdalemuir Ar	145.16	5	PKPbc	PKPdf	17 49 27.5	-0.7
	comp=Z,2.4nm,0.9s,baz=347,slow=2.9,SNR=2.5						
MMAI	Mount Meron Ar	147.97	300	PKPbc	PKiKP	17 49 39.6	+0.6
	comp=Z,1.1nm,0.4s,baz=56,slow=3.6,SNR=5.1						

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*IDC **08** 17:32:16.8±0.6, 44.°67N×124.°16E, h0^{km}, mb4.0/19, mb1 4.1/22, mb1mx3.9/57, mbtmp3.9/22, ML2.6/2, MS3.4/15, Ms1 3.4/15, ms1mx3.2/44, Error ellipse: s-maj=13.2km s-min=11.7km az=6.0*

*MOS **08** 17:32:17.4±1.0, 44.°73N×124.°07E, h15^{km}, mb4.6/13, Error ellipse: s-maj=9.5km s-min=6.7km az=114.6*

*BJI **08** 17:32:18.2±0.0, 44.°70N×124.°00E, h10^{km}, mB4.6/18, mb4.2/19, ML4.6/17, Ms4.3/24, Ms7 4.1/22*

*NEIC **08** 17:32:19.0±1.9, 44.°72N±0.°08×124.°0E±0.°1, h17^{km}±3^{km}, mb4.5/12, Error ellipse: s-maj=15.4km s-min=10.9km az=118.0*

ISC 08 17:32:18.6±0.4**, 44.°74N**±0.°04×**124.°07E**±0.°05**, h10**^{km}**, n118, σ1.^{s}43**/121**, mb4.3**/36**, MS3.4**/10**, 9C-9D, Northeastern China**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CN2	Changchun	1.36	133	Pg	Pn	17 32 42.0	-1.7
CN2				Sg	Sb	17 32 59.2	-2.5
CN2				smax	smax		
	comp=N,28µm,0.8s						
CN2				smax	smax		
	comp=E,18µm,0.8s						
SNY	Shenyang	2.93	187	Pn	Pn	17 33 03.5	-1.7
SNY				⇑Pg	Pg	17 33 14.4	-0.3
SNY				Sn	Sn	17 33 37.6	-2.8
SNY				Sg	Sb	17 33 48.3	+1.6
SNY				smax	smax		
	comp=N,1µm,0.5s						
SNY				smax	smax		
	comp=E,2µm,0.5s						
MDJ	Mudanjiang	3.94	90		Pn	17 33 18.5	-0.6
HIA	Hailar	5.41	328	⇑eP	Pn	17 33 39.1	-0.2
USA0B	Ussuriysk Arra	5.70	93	⇓eP	Pn	17 33 42.9	-0.3
USA0B	Ussuriysk Arra	5.70	93	Pn	Pn	17 33 43.8	+0.6
USRK	Ussuriysk Ar.	5.70	93	Pn	Pn	17 33 41.9	-1.3
	baz=265,slow=16,SNR=9.6						
USRK				Pg	Pb	17 33 59.9	+1.9
	baz=281,slow=17,SNR=16						
USRK				Lg	Lg	17 35 16.9	
	baz=288,slow=31,SNR=11						
USRK	Ussuriysk Ar.	5.70	93	P	Pn	17 33 46.1	+2.9
USRK	Ussuriysk Ar.	5.70	93	Pn	Pn	17 33 46.1	+2.9
DL2	Dalian	6.10	198	Pn	Pn	17 33 50.4	+1.6
DL2				Sn	Sn	17 35 00.5	+1.8
DL2				Sg	Sg	17 35 35.6	+1.1
DL2				smax	smax		
	comp=N,270nm,0.6s						
DL2				smax	smax		
	comp=E,360nm,0.7s						
DL2				LR	LR		
	comp=N,920nm,4.2s						
DL2				LR	LR		
	comp=E,570nm,4.2s						
DL2				LR	LR		
	comp=Z,750nm,7.5s						
KLR	Kul'dur	6.91	47	Pn	Pn	17 33 59.8	-0.1
	3.9nm,0.3s,baz=232,slow=12,SNR=50						
KLR				Lg	Lg	17 35 55.7	
	12nm,0.3s,baz=308,slow=14,SNR=6.9						
KLR				LR	LR	17 36 06.9	
	comp=Z,64nm,20.5s,baz=222,slow=33						
KLR	Kul'dur	6.91	47	⇑eP	Pn	17 34 00.2	+0.3
BJI	Beijing	7.49	234	Pn	Pn	17 34 08.4	+0.6
BJI				Sg	Sg	17 36 15.0	-3.9
BJI				smax	smax		
	comp=N,320nm,1.0s						
BJI				smax	smax		
	comp=E,250nm,1.2s						
KS19	Wonju Array Si	7.78	157	Pn	Pn	17 34 12.6	+0.8
KSAR	Wonju Array Be	7.84	157	P	Pn	17 34 12.8	+0.2
KSAR	Wonju Array Be	7.84	157	Pn	Pn	17 34 12.8	+0.2
KSRS	Korea Array	7.84	157	Pn	Pn	17 34 12.6	0.0
	0.5nm,0.3s,baz=343,slow=13,SNR=13						
KSRS				Lg	Lg	17 36 23.9	
	17nm,0.3s,baz=339,slow=30,SNR=17						
KSRS				LR	LR	17 37 40.8	
	comp=Z,95nm,20.2s,baz=5.0,slow=42						
ZEA	Zeya	9.24	12	eP	Pn	17 34 31.9	0.0
ZEA				eS	Sn	17 36 12.1	-3.7
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ZEA				smax	smax		
	comp=N,10.0nm,0.7s						
ZEA				smax	smax		
	comp=E,10.0nm,0.9s						
ZEA				smax	smax		
	comp=E,100nm,3.8s						
ZEA				MLR	MLR		
	comp=N,1µm,9.0s						
ZEA				MLR	MLR		
	comp=Z,900nm,6.0s						
ULN	Ulaanbaatar	12.18	291	⇑eP	Pn	17 35 09.6	-2.5
SONM	Songino Array	12.61	290	Pn	Pn	17 35 14.6	-3.4
	comp=Z,0.1nm,0.3s,baz=108,slow=13,SNR=3.8						
SONM				Sn	Sn	17 37 30.0	-8.5
	comp=Z,0.3nm,0.3s,baz=98,slow=19,SNR=8.6						
SONM				Lg	Lg	17 38 53.9	
	comp=Z,0.7nm,0.3s,baz=99,slow=25,SNR=2.6						
SONM				LR	LR	17 40 37.4	
	comp=Z,443nm,18.0s,baz=88,slow=39						
SONM	Songino Array	12.61	290	eP	Pn	17 35 18.4	+0.4
JNU	Nakatsue	12.75	153	Lg	Lg	17 39 01.9	
	comp=Z,0.2nm,0.3s,baz=168,slow=9.3,SNR=2.4						
ASAJ	Asahikawa	13.26	86	LR	LR	17 40 42.2	
	comp=Z,247nm,18.8s,baz=348,slow=38						
MJAR	Matsushiro Arr	13.49	122	LR	LR	17 40 09.7	
	comp=Z,150nm,18.5s,baz=310,slow=35						
TLY	Talaya	15.25	304	Lg	Lg	17 40 23.9	
	comp=Z,0.0nm,0.3s,baz=191,slow=12,SNR=6.1						
TLY				LR	LR	17 42 31.4	
	comp=Z,198nm,18.3s,baz=108,slow=40						
LZH	Lanzhou	17.62	248	eP	Pn	17 36 22.7	-1.6
LZH				pP	P	17 36 26.2	+0.9
LZH				sP	pP	17 36 28.5	+0.3
LZH				pmax	pmax		
	comp=Z,19nm,1.0s						
LZH				pmax	pmax		
	comp=Z,78nm,5.4s						
LZH				LR	LR		
	comp=Z,650nm,11.6s						
LZH				LR	LR		
	comp=Z,330nm,12.8s						
YAK	Yakutsk	17.63	9	Lg	Lg	17 41 37.5	
	comp=Z,0.1nm,0.3s,baz=220,slow=7.9,SNR=1.8						
YAK				LR	LR	17 43 45.9	
	comp=Z,235nm,18.0s,baz=219,slow=39						
YAK	Yakutsk	17.63	9	⇑eP	Pn	17 36 23.7	-0.4
GTA	Gaotai	18.74	262	P	Pn	17 36 38.7	+0.7
GTA				pP	sP	17 36 42.3	+0.5
GTA				sP	pP	17 36 44.8	+4.3
GTA				pmax	pmax		
	comp=Z,150nm,5.3s						
GTA				LR	LR		
	comp=Z,290nm,8.4s						
GTA				LR	LR		
	comp=Z,380nm,12.0s						
GTA				LR	LR		
	comp=Z,500nm,13.0s						
MA2	Magadan	21.90	38	P	P	17 37 11.2	-0.3
	comp=Z,1.4nm,0.4s,baz=192,slow=9.3,SNR=4.6						
MA2	Magadan	21.90	38	⇑eP	P	17 37 11.0	-0.5
MA2				pmax	pmax		
	comp=Z,18nm,3.5s						
SKR	Severo-Kuril's	22.25	63	eP	P	17 37 24.5	+9.1
SKR				pmax	pmax		
	comp=Z,33nm,1.2s						
SKR				MLR	MLR		
	comp=Z,200nm,11.0s						
GYA	Guiyang	23.00	223	eP	P	17 37 24.7	+1.1
GYA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GYA				LR	LR		
	comp=Z,390nm,12.4s						
GYA				LR	LR		
	comp=Z,300nm,14.4s						
PEA0B	Petropavlovsk-	23.45	57	P	P	17 37 28.2	+0.3
PEA0B				pmax	pmax		
	comp=Z,19nm,1.1s						
PEA0B	Petropavlovsk-	23.45	57	P	P	17 37 28.2	+0.3
PEA0B				IAmb	IAmb	17 37 29.5	
	comp=Z,19nm,1.1s						
PETK	Petropavlovsk-	23.45	57	LR	LR	17 47 21.6	
	comp=Z,143nm,19.8s,baz=102,slow=39						
PETK	Petropavlovsk-	23.45	57	P	P	17 37 27.8	-0.1
PETK	Petropavlovsk-	23.45	57	P	P	17 37 27.8	-0.1
SEY	Seymchan	24.39	32	P	P	17 37 36.8	+0.1
	comp=Z,1.3nm,0.7s,baz=66,slow=23,SNR=8.4						
SEY	Seymchan	24.39	32	⇑eP	P	17 37 37.6	+0.9
DGZ	Jazzator, Alta	25.20	294	⇓iP	P	17 37 46.7	+2.4
DGZ				pmax	pmax		
	comp=Z,7.0nm,0.9s						
WMQ	Urumqi	25.92	281	eP	P	17 37 49.9	-1.0
ZALV	Zalesovo Beam	26.87	304	P	P	17 37 60.0	+0.8
	comp=Z,0.9nm,0.6s,baz=97,slow=8.1,SNR=4.9						
ZALV				LR	LR	17 49 25.1	
	comp=Z,80nm,21.0s,baz=326,slow=38						
ZALV	Zalesovo Beam	26.87	304	eP	P	17 37 59.6	+0.4
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ZALV	Zalesovo Beam	26.87	304	P	P	17 37 55.6	-3.6
ZSN	Zaisan	27.12	290	eP	P	17 38 02.9	+1.2
	baz=290						
ZSN	Zaisan	27.12	290	eP	P	17 38 02.8	+1.2
QIZ	Qiongzhong	28.25	209	P	P	17 38 09.7	-2.1
QIZ				S	S	17 42 57.6	-0.2
QIZ				LR	LR		

	comp=Z,150nm,4.2s						
QIZ				LR	LR		
	comp=Z,290nm,5.9s						
QIZ				LR	LR		
	comp=Z,260nm,8.8s						
MK31	Makanchi Array	28.97	289	⇓eP	P	17 38 18.9	+0.8
MKAR	Makanchi Array	28.97	289	P	P	17 38 19.3	+1.2
	comp=Z,1.0nm,0.8s,baz=89,slow=9.4,SNR=11						
MKAR				PcP	PcP	17 41 26.1	-0.5
	comp=Z,0.2nm,0.7s,baz=54,slow=3.2,SNR=4.4						
MKAR				LR	LR	17 50 44.4	
	comp=Z,169nm,18.1s,baz=48,slow=38						
MKAR	Makanchi Array	28.97	289	eP	P	17 38 19.0	+0.9
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
MKAR	Makanchi Array	28.97	289	P	P	17 38 17.7	-0.4
TGY	Tagaytay City	30.65	186	LR	LR	17 52 22.0	
	comp=Z,82nm,19.9s,baz=173,slow=39						
KURK	Kurchatov	30.76	298	⇓eP	P	17 38 34.7	+0.9
KURK				pmax	pmax		
	comp=Z,12nm,2.3s						
NRIK	Noril'sk	30.78	336	P	P	17 38 34.4	+0.5
	comp=Z,1.7nm,0.4s,baz=122,slow=9.9,SNR=4.6						
NRIK	Noril'sk	30.78	336	eP	P	17 38 34.9	+1.0
NRIK				pmax	pmax		
	comp=Z,2.0nm,0.4s						
UZB	Uzynbulak	32.16	283	eP	P	17 38 46.6	+0.1
	baz=283						
UZB	Uzynbulak	32.16	283	eP	P	17 38 46.6	+0.1
SATY	Saty	32.62	283	eP	P	17 38 50.8	+0.4
	baz=284						
SATY	Saty	32.62	283	eP	P	17 38 50.8	+0.4
CHKK	Chushkaly	33.34	285	eP	P	17 38 57.4	+0.7
	baz=286						
CHKK	Chushkaly	33.34	285	eP	P	17 38 57.3	+0.7
MDOK	Medeo	33.52	284	eP	P	17 38 58.8	+0.4
	baz=284						
MDOK	Medeo	33.52	284	eP	P	17 38 58.7	+0.4
CMAR	Chiang Mai Arr	33.57	227	P	P	17 38 59.4	+0.6
	comp=Z,0.1nm,0.3s,baz=23,slow=8.5,SNR=4.3						
CMAR				LR	LR	17 54 26.5	
	comp=Z,39nm,18.2s,baz=41,slow=40						
CMAR	Chiang Mai Arr	33.57	227	eP	P	17 39 02.5	+3.7
TNSS	Tian-Shan	33.63	284	eP	P	17 39 00.3	+0.7
	baz=284						
TNSS	Tian-Shan	33.63	284	eP	P	17 39 00.3	+0.7
KUU	Kurty	33.77	286	eP	P	17 38 59.4	-1.0
	comp=Z,2.5nm,1.0s,baz=286						
KUU	Kurty	33.77	286	eP	P	17 38 59.4	-1.0
KUU				pmax	pmax		
	comp=Z,2.0nm,1.0s						
AAK	Ala-Archa	35.47	285	P	P	17 39 15.5	+0.3
	comp=Z,1.8nm,0.7s,baz=108,slow=4.8,SNR=11						
AAK	Ala-Archa	35.47	285	⇓eP	P	17 39 15.9	+0.7
AAK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
BVAR	Borovoye Array	35.51	303	P	P	17 39 15.9	+0.7
	comp=Z,1.1nm,0.7s,baz=58,slow=18,SNR=9.1						
BRVK	Borovoye	35.57	303	⇓eP	P	17 39 16.2	+0.5
BRVK	Borovoye	35.57	303	P	P	17 39 15.1	-0.7
KKAR	Karatay Array	38.03	287	P	P	17 39 37.5	+0.6
KKAR	Karatay Array	38.03	287	P	P	17 39 37.5	+0.6
ARU	Arti	41.63	310	P	P	17 40 06.8	+0.2
	baz=85,slow=11						
ARU	Arti	41.63	310	d iP	P	17 40 07.2	+0.6
ARU				S	S	17 46 25.6	+2.9
ARU				pmax	pmax		
	comp=Z,31nm,3.3s						
ABKAR	Akbulak array	42.80	300	P	P	17 40 16.4	+0.2
ABKAR				IAmb	IAmb	17 40 20.1	
	comp=Z,3.3nm,1.1s						
ABKAR	Akbulak array	42.80	300	P	P	17 40 15.6	-0.7
ILAR	Eielson Array	50.29	34	P	P	17 41 14.1	-0.7
	comp=Z,0.9nm,0.7s,baz=285,slow=7.6,SNR=14						
ILAR	Eielson Array	50.29	34	P	P	17 41 13.8	-1.0
INK	Inuvik	53.54	27	P	P	17 41 39.1	+0.2
	comp=Z,3.5nm,0.8s,baz=318,slow=7.8,SNR=11						
INK				LR	LR	18 06 35.7	
	comp=Z,29nm,20.7s,baz=228,slow=38						
INK	Inuvik	53.54	27	P	P	17 41 38.2	-0.7
INK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
INK	Inuvik	53.54	27	P	P	17 41 38.2	-0.7
INK				IAmb	IAmb	17 41 40.1	
	comp=Z,3.5nm,0.8s						
OBN	Obninsk	53.70	315	eP	P	17 41 40.1	-0.1
OBN				e		17 42 47.4	
OBN				e		17 43 42.2	
OBN				pmax	pmax		
	comp=Z,7.0nm,1.1s						
FINES	FINESS Array B	55.42	325	P	P	17 41 53.6	+1.0
	comp=Z,2.8nm,0.7s,baz=63,slow=8.8,SNR=7.9						
FINES	FINESS Array B	55.42	325	P	P	17 41 52.5	-0.1
FINES	FINESS Array B	55.42	325	P	P	17 41 52.5	-0.1
KBZ	Khabaz	55.77	300	⇓eP	P	17 41 57.3	+1.9
KBZ				pmax	pmax		
	comp=Z,4.0nm,1.4s						
KIV	Kislovodsk	55.78	300	eP	P	17 41 54.5	-1.2
KIV				pmax	pmax		
	comp=Z,15nm,0.9s						
AKASG	Malin Array Be	59.79	313	P	P	17 42 23.8	+0.2
	comp=Z,5.4nm,0.7s,baz=48,slow=7.5,SNR=21						
AKASG				LR	LR	18 09 05.3	
	comp=Z,55nm,18.7s,baz=250,slow=37						
AKBB	Malin Array Si	59.79	313	⇓eP	P	17 42 24.1	+0.5
AKBB				pmax	pmax		
	comp=Z,20nm,2.0s						
AKBB	Malin Array Si	59.79	313	P	P	17 42 22.4	-1.3
AKBB				IAmb	IAmb	17 42 24.1	
	comp=Z,2.4nm,0.6s						
HFS	Hagfors	61.11	328	P	P	17 42 32.2	-0.3
	comp=Z,1.9nm,0.6s,baz=106,slow=9.1,SNR=4.3						
NB2	NORSAR Subarra	61.44	329	P	P	17 42 34.5	-0.2
	comp=Z,1.1nm,0.8s,baz=48,slow=6.9						
NOA	NORSAR Array B	61.44	329	P	P	17 42 35.0	+0.2
	comp=Z,1.7nm,0.8s,baz=53,slow=7.0,SNR=5.7						
NOA	NORSAR Array B	61.44	329	eP	P	17 42 34.6	-0.2
YKA	Yellowknife Ar	63.31	26	P	P	17 42 46.4	-0.8
	comp=Z,0.6nm,0.7s,baz=320,slow=6.3,SNR=14						
BRTR	Keskin Array B	63.74	301	LR	LR	18 11 51.8	
	comp=Z,19nm,20.6s,baz=48,slow=37						
WB0	Warramunga Arr	64.88	169	P	P	17 42 55.6	-2.3
WB0				IAmb	IAmb	17 42 59.2	
	comp=Z,3.4nm,1.0s						
WRAB	Tennant Creek	65.04	169	⇑eP	P	17 42 59.6	+0.7
WRAB				pmax	pmax		
	comp=Z,9.0nm,2.5s						
WRA	Warramunga Arr	65.05	169	P	P	17 42 57.4	-1.6
	comp=Z,2.4nm,0.9s,baz=351,slow=7.2,SNR=12						
WRA	Warramunga Arr	65.05	169	eP	P	17 42 59.6	+0.6
WRA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
WRA	Warramunga Arr	65.05	169	P	P	17 42 56.9	-2.1
WB2	Warramunga Arr	65.05	169	P	P	17 42 55.9	-3.1
WB2				IAmb	IAmb	17 42 57.7	
	comp=Z,3.6nm,0.8s						
WR0	Warramunga Arr	65.09	169	P	P	17 42 55.3	-4.0
BBB	Bella Bella	65.26	40	P	P	17 42 58.1	-2.0
CLL	Collm	67.34	321	iP	P	17 43 14.2	+0.8
	comp=Z,5.0nm,0.8s						
CLL	Collm	67.34	321	iP	P	17 43 14.2	+0.8
CLL				pmax	pmax		
	comp=Z,5.0nm,0.8s						
AS31	Alice Springs	68.66	170	P	P	17 43 20.6	-1.4
ASAR	Alice Springs	68.66	170	P	P	17 43 20.6	-1.4
	comp=Z,0.5nm,0.7s,baz=355,slow=6.5,SNR=6.4						
NVAR	Mina Array Bea	79.94	45	P	P	17 44 28.4	+0.3
	comp=Z,0.3nm,0.4s,baz=316,slow=5.1,SNR=3.2						
U15A	North Rim	84.47	42	P	P	17 44 54.0	+2.1
U15A				IAmb	IAmb	17 44 54.1	
	comp=Z,3.6nm,0.9s						
MBAR	Mbarara	92.79	272	ceP	P	17 45 33.9	+2.2
MBAR				pmax	pmax		
	comp=Z,4.0nm,2.5s						
TXAR	Lajitas Array	94.40	40	P	P	17 45 39.7	+0.8
	comp=Z,0.2nm,0.3s,baz=316,slow=5.0,SNR=3.9						
LPAZ	La Paz	149.83	24	PKPbc	PKPbc	17 52 08.8	-1.0
	comp=Z,1.5nm,1.0s,baz=8.3,slow=7.8,SNR=4.1						

PRU ***08*** *17:40:03.6±0.0, 41°.73N×21°.23E, h10^{km}*
IDC ***08*** *17:40:03.9±0.8, 41°.90N×21°.00E, h0^{km}, mb3.6/9, mb1 3.9/17, mb1mx3.7/48, mbtmp3.8/17, ML3.5/8, MS2.9/2, Ms1 2.9/2, ms1mx2.3/44, Error ellipse: s-maj=14.0km s-min=10.5km az=30.0*
SKO ***08*** *17:40:04.4, 41°.89N×21°.01E, h18^{km}*
SOF ***08*** *17:40:04.5, 41°.93N×21°.13E, h1^{km}, MD3.8*
PDG ***08*** *17:40:04.3±0.2, 41°.96N×21°.00E, h3^{km}, MD3.9/10, ML3.8/12, Error ellipse: s-maj=0.4km s-min=0.3km az=90.0*
THE ***08*** *17:40:04.7, 42°.02N×21°.00E, h2^{km}±1^{km}, ML3.6/7, Error ellipse: s-maj=2.1km s-min=0.6km az=339.0*
LDG ***08*** *17:40:05.1±0.1, 41°.94N×21°.00E, h2^{km}, Ml3.9/10, Error ellipse: s-maj=3.3km s-min=2.1km az=25.0*
BEO ***08*** *17:40:05.2±0.2, 41°.98N×21°.02E, h0^{km}, ML3.5/17*
ISC 08 17:40:04.6±1.0, **41°.94N**±0°.02×**21°.04E**±0°.02, **h8**^{km}±7^{km}, **n276,** σ1^{s}**71**/349, **mb3.7**/7, **41C-14D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKO	Skopje	0.30	85	ePg	Pb	17 40 11.4	-0.9
SKO				eSg	Sg	17 40 15.3	+0.6
SKO	Skopje	0.30	85	⇑iPg	Pb	17 40 11.4	-0.9
SKO				i Sg	Sb	17 40 16.5	-1.0
SKO				eLg	Lg	17 40 16.6	
	comp=E,1μm,0.3s						
PHP	Peshkopia	0.51	240	P	Pg	17 40 13.8	-0.8
OHR	Ohrid	0.85	192	i Pg	Pg	17 40 20.5	-0.5
OHR				i Sg	Sb	17 40 33.0	-0.2
OHR				eLg	Lg	17 40 34.7	
	comp=N,4μm,0.5s						
PVY	Plav	1.03	309	ePg	Pg	17 40 22.8	-1.6
PVY				i Sg	Sb	17 40 38.6	+0.1
BARS	Barje	1.05	33	ePn	Pn	17 40 41.8	+16
TIR	Tirane	1.06	236	P	Pb	17 40 24.6	-0.6
TIR				S	Sn	17 40 40.4	-0.3
TIR	Tirane	1.06	236	ePg	Pg	17 40 24.3	-0.7
TIR				eSg	Sb	17 40 39.3	+0.1
TIR	Tirane	1.06	236	⇑P	Pb	17 40 24.6	-0.6
TIR				⇑S	Sb	17 40 39.1	-0.1
TIR	Tirane	1.06	236	i Pg	Pb	17 40 24.5	-0.7
FNA	Florina	1.19	167	P	Pb	17 40 27.2	-0.2
FNA				S	Sn	17 40 46.9	+2.9
FNA	Florina	1.19	167	P	Pg	17 40 26.7	-0.7
FNA				S	Sn	17 40 43.6	-0.3
FNA	Florina	1.19	167	⇑iPg	Pg	17 40 26.7	-0.7
FNA				i Sg	Sn	17 40 43.6	-0.3
BEY	Berane	1.25	318	⇑ePg	Pg	17 40 27.2	-1.5
IVA	Berane	1.25	318	ePg	Pg	17 40 27.1	-1.6
IVA				i Sg	Sn	17 40 46.4	+0.7
VAY	Valandovo	1.31	118	ePg	Pg	17 40 29.0	-0.7
VAY				eSg	Sn	17 40 47.7	+0.9
VAY	Valandovo	1.31	118	i Pg	Pg	17 40 28.9	-0.9
VAY				i Sg	Sn	17 40 47.8	+0.9
VAY				eLg	Lg	17 40 49.1	
	comp=E,1μm,0.5s						
KBN	Korca	1.33	188	P	Pn	17 40 29.8	+0.2
KBN				S	Sn	17 40 50.8	+3.2
ULC	Ulcinj	1.34	271	i Pg	Pg	17 40 28.7	-1.5
ULC	Ulcinj	1.34	271	ePg	Pg	17 40 28.7	-1.5
ULC				i Sg	Sn	17 40 48.9	+1.3
PDG	Podgorica	1.41	291	ePg	Pn	17 40 29.5	-1.1
PDG				eSg	Sg	17 40 48.9	-1.0
PDG	Podgorica	1.41	291	⇑P	Pn	17 40 30.0	-0.5
PDG				⇑S	Sg	17 40 48.8	-1.1
PDG	Podgorica	1.41	291	⇑iPn	Pn	17 40 29.0	-1.6
PDG	Podgorica	1.41	291	i Pn	Pn	17 40 29.4	-1.1
PDG				i Sn	Sn	17 40 51.8	+2.5
TTG	Podgorica	1.41	291	ePg	Pn	17 40 29.5	-1.1
TTG				i Sg	Sn	17 40 51.3	+2.0
GRG	Griva	1.43	133	P	Pb	17 40 31.7	+0.3
GRG				S	Sn	17 40 52.9	+3.1
	comp=E,2μm,0.6s						
GRG	Griva	1.43	133	P	Pn	17 40 30.4	-0.4
GRG				S	Sn	17 40 50.4	+0.6
GRG	Griva	1.43	133	i Pn	Pg	17 40 31.2	-0.8
KOME	Kolasin	1.45	309	⇓iPg	Pn	17 40 30.4	-0.8
KOME				i Sg	Sn	17 40 52.5	+2.1
NEST	Nestorio	1.53	180	P	Pb	17 40 32.8	-0.5
NEST				S	Sg	17 40 55.4	+1.6
	comp=E,2μm,0.8s						
KKB	Krupnik	1.53	92	P	Pg	17 40 33.8	-0.2
KNT	Kendrikon	1.60	119	P	Pb	17 40 34.1	-0.4
KNT				S	Sg	17 40 56.1	0.0
	comp=E,898nm,0.5s						
KNT	Kendrikon	1.60	119	P	Pn	17 40 32.9	-0.3
KNT	Kendrikon	1.60	119	i Pn	Pb	17 40 34.0	-0.4
BUM	Brajici-Budva	1.63	283	⇑iPn	Pn	17 40 34.0	+0.3
BUM				i Sn	Sg	17 40 58.7	+1.6
CEME	Cevo	1.68	292	⇓iPn	Pn	17 40 34.2	-0.2
CEME				i Sn	Sg	17 40 59.9	+1.2
KZN	Kozani	1.73	161	P	Pg	17 40 36.7	-1.1
KZN				S	Sg	17 40 59.9	-0.3
	comp=E,2μm,0.5s						
NKY	Niksic	1.74	301	⇓iPn	Pn	17 40 36.0	+0.7
NKY				i Sn	Sg	17 41 01.0	+0.3
NKME	Niksic	1.75	299	ePn	Pn	17 40 35.9	+0.6
NKME				i Sn	Sg	17 41 01.4	+0.6
PENT	Pentalofos	1.75	177	P	Pg	17 40 37.4	-0.8
PENT				S	Sg	17 41 01.7	+0.9
	comp=E,942nm,0.5s						
IVAS	Ivanjica	1.76	339	ePg	Pn	17 40 35.4	0.0
IVAS				eSn	Sg	17 41 00.7	-0.4
BOVS	Bovan	1.76	16	ePn	Pn	17 40 35.8	+0.4
BOVS	Bovan	1.76	16	⇑P	Pn	17 40 35.9	+0.5
VTS	Vitosha	1.77	67	ePg	Pb	17 40 36.9	-0.5
VTS	Vitosha	1.77	67	⇓P	Pb	17 40 37.2	-0.2
VTS	Vitosha	1.77	67	i P	Pb	17 40 36.8	-0.6
VTS	Vitosha	1.77	67	i Pn	Pb	17 40 36.7	-0.6
VTS				i Sn	Sg	17 41 01.4	+0.1
ZAPS	Zavoj	1.78	41	ePn	Pb	17 40 37.2	-0.3
ZAPS				eSn	Sb	17 41 00.3	+0.4
LSK	Leskovik	1.82	191	P	Pg	17 40 38.4	-1.2
PLE	Pljevlja	1.84	319	ePn	Pn	17 40 37.7	+1.0
PLE				i Sn	Sg	17 41 03.4	-0.4
VLO	Vlora	1.88	219	P	Pn	17 40 37.0	0.0
HCY	Herceg Novi	1.95	286	ePn	Pn	17 40 39.1	+1.0
HCY	Herceg Novi	1.95	286	ePn	Pn	17 40 39.2	+1.1
HCY				i Sn	Sg	17 41 06.4	-1.0
GRUS	Gruza	1.96	353	ePn	Pn	17 40 38.5	+0.4
GRUS				eSg	Sb	17 41 06.2	+1.1
THE	Thessaloniki	1.96	131	P	Pn	17 40 39.2	+1.1
THE	Thessaloniki	1.96	131	⇓iPn	Pn	17 40 38.9	+0.8
KPRO	Kipourio	2.00	173	P	Pb	17 40 41.0	-0.3
UPM	Unac-Piva	2.01	309	ePn	Pn	17 40 40.3	+1.2
UPM	Unac-Piva	2.01	309	ePn	Pn	17 40 40.2	+1.2
UPM				i Sn	Sb	17 41 07.9	+1.0
MMB	Musomiste	2.04	99	P	Pb	17 40 40.8	-1.2
HORT	Hortiatis	2.06	130	P	Pn	17 40 40.6	+1.0
HORT	Hortiatis	2.06	130	eP	Pn	17 40 39.2	-0.4
ZAGS	Zajecar	2.06	25	ePn	Pn	17 40 41.0	+1.4
RUDO	Rudo	2.07	324	ePn	Pn	17 40 39.1	-0.6
SOH	Sokhos	2.07	122	P	Pn	17 40 41.1	+1.3
SOH	Sokhos	2.07	122	⇓iPn	Pn	17 40 40.9	+1.1
BRY	Bratogost	2.08	298	ePn	Pn	17 40 41.3	+1.3
BRY	Bratogost	2.08	298	⇑iPn	Pn	17 40 40.8	+0.8
BRY				i Sn	Sb	17 41 09.5	+0.7
SRS	Serrai	2.09	112	P	Pn	17 40 41.0	+1.0
SRS	Serrai	2.09	112	⇑iPn	Pn	17 40 40.9	+1.0
TREB	Trebinje	2.13	292	ePn	Pb	17 40 43.1	-0.5
TREB				eSn	Sn	17 41 08.8	+1.5
TREB	Trebinje	2.13	292	ePn	Pb	17 40 43.2	-0.3
LIT	Litokhoron	2.15	149	P	Pb	17 40 42.2	-1.5
LIT	Litokhoron	2.15	149	⇑iPn	Pn	17 40 42.0	+1.2
NVR	Nevrokopi	2.20	105	P	Pn	17 40 42.8	+1.3
NVR				S	Sb	17 41 11.2	-0.9
SRN	Sarande	2.21	201	P	Pn	17 40 42.9	+1.4
DBRK	Dubrovnik	2.26	290	ePn	Pn	17 40 43.6	+1.3
DBRK				Sn	Sg	17 41 16.3	-1.0
BBLS	Lazići	2.26	329	ePn	Pn	17 40 43.0	+0.6
BBLS	Lazići	2.26	329	⇑iPn	Pn	17 40 42.7	+0.3
DIVS	Divibare	2.29	341	ePn	Pn	17 40 42.8	+0.1
DIVS	Divibare	2.29	341	⇑iPn	Pn	17 40 42.6	-0.1
JAN	Janina	2.29	184	P	Pn	17 40 44.1	+1.4
JAN				S	Sb	17 41 15.1	+0.4
	comp=E,468nm,0.4s						
PGB	Panagyurishte	2.40	74	P	Pb	17 40 48.2	+0.1
PLG	Polygyros	2.40	130	P	Pn	17 40 45.9	+1.6
KEK	Kerkira	2.42	203	P	Pn	17 40 46.1	+1.6
MPEP	Malo Peshtene	2.44	54	P	Pg	17 40 51.6	+0.1
THL	Klokotos Trika	2.49	162	P	Pn	17 40 47.2	+1.8
HAPS	Han Pijesak,BI	2.63	325	ePn	Pn	17 40 47.0	-0.5
HAPS	Han Pijesak,BI	2.63	325	ePn	Pn	17 40 47.0	-0.5
STON	Ston	2.64	292	ePn	Pn	17 40 48.8	+1.4
STON				eSn	Sn	17 41 22.0	+2.4
STON	Ston	2.64	292	ePn	Pn	17 40 48.3	+0.9
STON				Sn	Sn	17 41 21.9	+2.3
STON	Ston	2.64	292	⇑iPn	Pn	17 40 47.9	+0.5
PLD	Plovdiv	2.74	85	eP	Pn	17 40 49.1	+0.3
PLD	Plovdiv	2.74	85	P	Pg	17 40 56.5	-0.6
OUR	Ouranopolis	2.75	125	P	Pn	17 40 50.3	+1.4
OUR	Ouranopolis	2.75	125	eP	Pn	17 40 49.3	+0.4
RZN	Rozhen	2.76	94	P	Pn	17 40 51.3	+1.9
KAVA	Kavala	2.78	109	P	Pn	17 40 50.9	+1.5
TEKS	Tekeris	2.83	338	ePn	Pn	17 40 50.6	+0.5
TEKS	Tekeris	2.83	338	ePn	Pn	17 40 50.3	+0.2
PAIG	Paliouri	2.84	134	P	Pn	17 40 51.6	+1.3
PAIG				S	Sb	17 41 28.1	-2.4
	comp=E,258nm,0.7s						
MDVR	Moldovita	2.88	10	⇓P	Pn	17 40 51.2	+0.3
PLVB	Pleven	3.01	60	⇑P	Pn	17 40 55.5	+2.9
MAKR	Makrakomi, Fth	3.04	164	P	Pn	17 40 55.5	+2.4
MAKR				S	Sn	17 41 32.9	+3.1
XOR	Xorichti	3.05	147	P	Pn	17 40 54.0	+0.8
AGG	Agios Georgios	3.08	161	P	Pn	17 40 55.3	+1.7
AGG	Agios Georgios	3.08	161	eP	Pn	17 40 54.4	+0.8
EVR	Evrytania	3.08	169	P	Pn	17 40 55.6	+1.9
EVR				S	Sn	17 41 34.2	+3.4
THAS	Thassos island	3.08	114	P	Pn	17 40 54.4	+0.8
HERR	Herculane	3.10	18	⇑P	Pn	17 40 55.1	+1.2
VLAD	Vladila	3.21	49	⇓P	Pn	17 40 58.3	+2.9
NYDR	Nydri-Lefkada	3.24	185	P	Pn	17 40 57.2	+1.5
MAKA	Makarska	3.25	296	ePn	Pn	17 40 57.0	+1.1
RICI	Ricice	3.27	300	i Pn	Pn	17 40 58.2	+2.1
RICI				Sn	Sn	17 41 38.4	+3.2
KDZ	Kurdzhali	3.29	94	eP	Pn	17 40 55.5	-0.9
EVGI	Lefkada island	3.33	185	P	Pn	17 40 58.5	+1.5
FRGS	Fruska Gora	3.33	345	ePn	Pn	17 40 57.3	+0.2
FRGS	Fruska Gora	3.33	345	⇑P	Pn	17 40 57.2	+0.1
FRGS	Fruska Gora	3.33	345	ePn	Pn	17 40 57.0	-0.1
PDO	Prodromos	3.34	178	P	Pn	17 40 59.3	+2.1
AXAR	Agios Charalam	3.41	158	P	Pn	17 41 00.1	+2.0
BANR	Banloc	3.44	1	⇑P	Pn	17 40 59.9	+1.4
RDO	Rodhopi	3.47	102	P	Pn	17 41 00.6	+1.7
RDO	Rodhopi	3.47	102	eP	Pn	17 40 59.5	+0.6
SMIA	Simia	3.48	151	P	Pn	17 41 00.4	+1.3
MATE	Matera	3.51	250	⇑P	Pn	17 41 00.7	+1.2
HVAR	Hvar	3.60	292	i Pn	Pn	17 41 02.0	+1.2
HVAR				Sn	Sn	17 41 44.9	+1.4
SERG	Sergoula	3.61	167	P	Pn	17 41 02.6	+1.7
LKR	Lokris	3.62	155	P	Pn	17 41 02.6	+1.7
GZR	Gura Zlata	3.67	20	⇑P	Pn	17 41 02.9	+1.1
KEF5	Kardakata, Kep	3.69	187	P	Pn	17 41 03.1	+1.2
BZS	Buzias	3.69	6	⇑P	Pn	17 41 03.0	+1.0
BZS	Buzias	3.69	6	eP	Pn	17 41 01.9	-0.1
SMTH	Samothraki Isl	3.70	112	P	Pn	17 41 02.9	+0.8
DSF	Desfina	3.71	162	P	Pn	17 41 03.6	+1.3
KEF4	Livadi, Kephal	3.71	187	P	Pn	17 41 03.9	+1.7
DMLN	Damoulianata-K	3.74	188	P	Pn	17 41 03.7	+1.1
LIA	Limnos Island	3.75	122	P	Pn	17 41 03.8	+1.1
MGRS	Mrkonjic Grad	3.80	312	ePn	Pn	17 41 05.6	+2.1
HUMR	Humele	3.87	47	⇓P	Pn	17 41 06.3	+1.9
ALN	Alexandroupoli	3.91	104	P	Pn	17 41 06.3	+1.3
ALN	Alexandroupoli	3.91	104	eP	Pn	17 41 05.9	+0.9
BLY	Banja Luka	3.97	316	⇑iPn	Pn	17 41 06.9	+1.1
KIJV	Kijevo	3.97	303	i Pn	Pn	17 41 08.8	+2.9
KIJV				Sn	Sn	17 41 55.6	+3.0
DRO	Drossia	4.02	172	P	Pn	17 41 08.8	+2.3
LOT	Lotru	4.02	29	⇑P	Pn	17 41 09.4	+2.8
LOT	Lotru	4.02	29	eP	Pn	17 41 06.8	+0.2
ENEZ	Enez	4.04	106	eP	Pn	17 41 06.8	+0.1
GADA	Gvkgeada	4.07	114	eP	Pn	17 41 07.4	+0.2
DEV	Deva	4.16	18	⇑P	Pn	17 41 10.3	+1.8
EDRB	Edirne	4.26	89	eP	Pn	17 41 10.5	+0.7
TIP	Timpagrande	4.27	231	⇑P	Pn	17 41 10.7	+0.7
ARR	Arges	4.30	36	⇑P	Pn	17 41 12.2	+1.7
ERIK	Erikli-Kesan	4.32	105	eP	Pn	17 41 11.3	+0.8
ZIRJ	Zirje	4.32	295	ePn	Pn	17 41 12.0	+1.4
ZIRJ				Sn	Sn	17 42 02.4	+1.3
BOZC	Bozcaada	4.34	117	eP	Pn	17 41 11.5	+0.6
MORI	Morici	4.36	298	i Pn	Pn	17 41 12.9	+1.7
GELI	Tayfur-Gelibol	4.39	109	eP	Pn	17 41 11.9	+0.4
EZN	Ezine	4.53	116	eP	Pn	17 41 14.5	+1.0
VOIR		4.54	38	⇓P	Pn	17 41 16.4	+2.6
SIGR	SIGRI	4.57	125	eP	Pn	17 41 14.6	+0.5
LPK	Lapseki	4.60	108	eP	Pn	17 41 15.3	+0.9
MORH	Mrgy, Hungar	4.60	339	⇑P	Pn	17 41 14.6	+0.1
MORH	Mrgy, Hungar	4.60	339	⇑iPn	Pn	17 41 14.3	-0.2
UDBI	Udbina	4.64	306	ePn	Pn	17 41 15.0	0.0
RKY	Sarkoy-Tekirda	4.79	103	eP	Pn	17 41 18.3	+1.1
ITM	Ithomi	4.81	171	eP	Pn	17 41 18.0	+0.7
DUGI	Dugi Otok	4.84	297	i Pn	Pn	17 41 19.1	+1.3
MAR6	Marsite Statio	4.85	103	eP	Pn	17 41 18.9	+1.0
GZKV	Gazikoy-Tekird	4.88	102	eP	Pn	17 41 18.4	+0.1
KRBG	Karabiga-Canak	4.97	106	eP	Pn	17 41 20.5	+0.9
DRGR		4.99	13	⇑P	Pn	17 41 20.7	+0.8
MLR	Muntele Rosu	5.02	43	Pn	Pn	17 41 23.0	+2.7
	comp=E,2.2nm,0.3s,baz=226,slow=14,SNR=22						
MLR				Sn	Sn	17 42 20.2	+1.6
	comp=E,2.1nm,0.3s,baz=252,slow=14,SNR=5.3						
MLR	Muntele Rosu	5.02	43	⇑P	Pn	17 41 23.3	+2.9
MLR	Muntele Rosu	5.02	43	eP	Pn	17 41 20.9	+0.5
DOPR	Dopca	5.10	37	⇓P	Pn	17 41 23.3	+1.9
ISR	Istrita	5.11	50	⇓P	Pn	17 41 24.1	+2.6
MRMT	Marmara Adasi	5.12	103	eP	Pn	17 41 21.7	0.0
NVLJ	Novalja	5.21	302	ePn	Pn	17 41 24.1	+1.4
NVLJ				Sn	Sn	17 42 24.1	+1.1
DKL	Dikili	5.32	121	eP	Pn	17 41 25.8	+1.5
ICOR	Ion Corvin	5.41	64	⇑P	Pn	17 41 28.2	+2.6
OZLJ	Ozalj	5.45	314	ePn	Pn	17 41 24.6	-1.4
BEHE	Becsehely	5.46	327	ePn	Pn	17 41 29.5	+3.2
BISRR	Bisoca	5.46	47	⇑P	Pn	17 41 29.5	+3.2
URLA	Izmir	5.56	128	eP	Pn	17 41 28.5	+0.8
CRES	Cresnjev	5.59	316	⇑iPn	Pn	17 41 28.1	0.0
PLOR	Plostina	5.63	44	⇑P	Pn	17 41 31.2	+2.6
CTKS	Kestanelik-??a	5.65	95	eP	Pn	17 41 29.5	+0.7
VRI	Vrincioaia	5.68	44	⇓P	Pn	17 41 32.2	+2.9
AQU	L'Aquila	5.69	277	ePn	Pn	17 41 25.8	-3.7
HARR	Harsova	5.73	59	⇑P	Pn	17 41 31.9	+1.9
RIY	Rijeka	5.83	308	ePn	Pn	17 41 32.9	+1.5
RIY	Rijeka	5.83	308	ePn	Pn	17 41 32.8	+1.5
GROS	Grobnik	6.02	321	i Pn	Pn	17 41 34.2	+0.2
GROS				eSn	Sn	17 42 37.6	-5.5
PSZ	Piszkesteto	6.03	353	⇑P	Pn	17 41 34.8	+0.7
ARMT	Armutlu	6.06	101	eP	Pn	17 41 35.7	+1.2
CFR	Carcaliu	6.09	56	⇑P	Pn	17 41 37.6	+2.7
CEY	Cerknica	6.10	311	ePn	Pn	17 41 36.8	+1.7
SRO2	Moca	6.11	343	ePN	Pn	17 41 35.9	+0.7
SRO2				eSN	Sn	17 42 44.5	-0.8
SRO2				eLG	Lg	17 42 51.6	
LJU	Ljubljana	6.23	313	ePn	Pn	17 41 39.0	+2.2
PERS	Pernice	6.33	320	ePn	Pn	17 41 38.5	+0.3
JAVS	Javornik	6.40	310	ePn	Pn	17 41 40.9	+1.7
JAVS				eSn	Sn	17 42 51.7	-0.7
JAVS				IAML		17 43 38.3	
	comp=Z,222nm,1.9s						
SOKA	Soboth	6.40	320	ePn	Pn	17 41 39.4	+0.2
	comp=Z,5.4nm,0.4s						
SOKA				eSn	Sn	17 42 49.4	-3.0
	comp=Z,4.9nm,0.4s						
BURAR	Bucovina Array	6.40	26	⇑P	Pn	17 41 41.8	+2.5
TLCR		6.51	58	⇓P	Pn	17 41 43.4	+2.7
OBKA	Obir	6.52	317	ePn	Pn	17 41 42.0	+1.1
	comp=Z,5.5nm,0.3s						
OBKA				Pg	Pg	17 42 07.0	-2.5
	comp=Z,22nm,0.7s						
KECS	Kecovo	6.55	357	ePN	Pn	17 41 42.7	+1.5
ARSA	Arzberg	6.60	325	ePn	Pn	17 41 42.4	+0.4
	comp=Z,5.0nm,0.3s						
ARSA				eSn	Sn	17 42 54.3	-3.1
	comp=Z,4.5nm,0.4s						
VYHS	Vyhne	6.73	347	ePN	Pn	17 41 44.9	+1.2
VYHS				eSN	Sn	17 42 57.6	-2.9
ZST	Bratislava	6.84	337	ePN	Pn	17 41 46.8	+1.6
ZST				eSN	Sn	17 43 02.5	-0.7
ROBS	Robic	6.91	311	ePn	Pn	17 41 47.5	+1.2
MODS	Modra-Piesok	6.96	339	ePN	Pn	17 41 47.4	+0.6
MODS				eSN	Sn	17 43 01.7	-4.4
CRVS	Cervenica-Dubn	6.96	2	ePN	Pn	17 41 48.3	+1.4
CONA	Conrad Observa	7.02	330	ePn	Pn	17 41 48.7	+1.0
	comp=Z,1.7nm,0.4s						
KOLS	Kolonicke sedl	7.04	7	ePN	Pn	17 41 49.9	+1.9
MYKA	Terra Mystica	7.08	314	ePn	Pn	17 41 48.9	+0.4
	comp=Z,5.7nm,0.4s						

IDI	Anoyia	7.30	154	Pn	Pn	17 41 52.8	+1.2
	comp=Z,0.8nm,0.3s,baz=191,slow=2.0,SNR=6.0						
IDI				Sn	Sn	17 43 13.1	-1.5
	baz=349,slow=16,SNR=1.0						
KBA	Koelnbreinsper	7.52	316	*e*Pn	Pn	17 41 57.3	+2.6
	comp=Z,4.7nm,0.4s						
MOA	Molln	7.61	323	*i* Pn	Pn	17 41 56.5	+0.7
	comp=Z,1.9nm,0.3s						
MOA				*e*Sn	Sn	17 43 19.8	-2.4
	comp=Z,3.9nm,0.3s						
ABTA	Abfaltersbach	7.77	311	*e*Pn	Pn	17 41 59.0	+0.9
	comp=Z,8.0nm,0.4s,SNR=8.3						
KRUC	Moravsky	7.83	337	*e*PN	Pn	17 41 58.9	+0.2
VRAC	Vranov	7.99	339	Pn	Pn	17 42 02.8	+1.8
	comp=Z,0.4nm,0.3s,baz=172,slow=12,SNR=7.0						
VRAC	Vranov	7.99	339	⇑P	Pn	17 42 02.0	+0.9
VRAC	Vranov	7.99	339	*e*PN	Pn	17 42 02.4	+1.4
CKRC	Cesky Krumlov	8.34	328	*e*PN	Pn	17 42 06.8	+1.0
WTTA	Wattenberg	8.55	312	*e*Pn	Pn	17 42 09.6	+0.7
	comp=Z,2.4nm,0.2s						
WTTA				*e*Sn	Sn	17 43 46.3	+0.6
	comp=Z,14nm,0.6s						
GERES	GERESS Array B	8.61	326	Pn	Pn	17 42 11.2	+1.6
	comp=Z,0.3nm,0.3s,baz=146,slow=14,SNR=8.9						
WATA	Walderalm	8.63	312	*e*Pn	Pn	17 42 12.2	+2.3
	comp=Z,12nm,0.7s,SNR=6.9						
WATA				Sn	Sn	17 43 49.3	+1.9
	comp=Z,5.4nm,0.5s						
SQTA	Sankt Quirin	8.77	310	*e*Pn	Pn	17 42 13.7	+1.9
	comp=Z,6.5nm,0.3s						
SQTA				*e*Sn	Sn	17 43 51.4	+0.5
	comp=Z,6.7nm,0.6s						
KHC	Kasperske Hory	8.89	327	*e*PN	Pn	17 42 14.8	+1.5
KHC				*e*SN	Sn	17 43 53.5	-0.1
MOTA	Moosalm	8.90	311	*e*Pn	Pn	17 42 15.0	+1.4
	comp=Z,7.7nm,0.6s						
MOTA				*e*Sn	Sn	17 43 54.6	+0.5
	comp=Z,7.5nm,0.7s						
FETA	Feichten	8.94	308	*e*Pn	Pn	17 42 15.9	+1.7
	comp=Z,3.1nm,0.4s						
PGF	Pioggiola	8.95	278	*e*Pn	Pn	17 42 13.3	-0.9
PGF	Pioggiola	8.95	278	*e*P	Pn	17 42 17.6	+3.4
DPC	Dobruska-Polom	9.02	340	*e*PN	Pn	17 42 16.6	+1.5
RETA	Reutte	9.17	311	*e*Pn	Pn	17 42 18.7	+1.4
	comp=Z,3.8nm,0.6s						
DAVOX	Davos/Dischmat	9.34	305	Pn	Pn	17 42 20.9	+1.3
	comp=Z,2.7nm,0.3s,baz=114,slow=15,SNR=22						
DAVOX				Sn	Sn	17 44 05.5	+0.6
	comp=Z,0.6nm,0.3s,baz=316,slow=20,SNR=4.0						
DAVOX				LR	LR	17 46 25.0	
	comp=Z,72nm,19.4s,baz=93,slow=41						
DAVA	Damuels	9.58	308	*e*Pn	Pn	17 42 24.8	+2.0
	comp=Z,5.1nm,0.6s						
BRTR	Keskin Array B	9.81	99	Pn	Pn	17 42 27.8	+1.7
	comp=Z,0.5nm,0.3s,baz=175,slow=16,SNR=10.0						
SBF	Sospel	10.16	285	*e*Pn	Pn	17 42 29.9	-0.9
FRF	La Foret Royal	10.71	284	*e*Pn	Pn	17 42 37.6	-0.6
FRF	La Foret Royal	10.71	284	*e*P	Pn	17 42 41.8	+3.6
MBDF	Montbardon	10.76	290	*e*Pn	Pn	17 42 38.5	-0.5
MBDF				*e*Sn	Sn	17 44 32.7	-7.0
	comp=Z,2.3nm,0.6s						
LMR	La Mourre	10.79	282	*e*Pn	Pn	17 42 38.4	-1.0
LMR	La Mourre	10.79	282	*e*P	Pn	17 42 43.0	+3.6
LPG	La Plagne	10.93	294	*e*Pn	Pn	17 42 40.9	-0.6
LPG				*e*Sn	Sn	17 44 35.9	-8.2
	comp=Z,11nm,0.7s						
LPL	La Plagne	10.95	294	*e*Pn	Pn	17 42 40.8	-0.9
LPL				*e*Sn	Sn	17 44 35.2	-9.2
	comp=Z,7.2nm,0.5s						
ORIF	Oris-en-Rattie	11.41	290	*e*Pn	Pn	17 42 48.4	+0.4
ORIF				*e*Sn	Sn	17 44 46.4	-9.3
	comp=Z,1.7nm,0.4s						
SMRF	Simiane la Rot	11.51	285	*e*Pn	Pn	17 42 49.2	-0.1
HINF	Hinteralfeld	11.64	305	*e*Pn	Pn	17 42 50.8	-0.2
HINF				*e*Sn	Sn	17 44 53.1	-8.0
	comp=Z,1.1nm,0.4s						
CDF	Champ du Feu	11.66	308	*e*Pn	Pn	17 42 50.6	-0.7
CABF	La Chapelle	11.68	299	*e*Pn	Pn	17 42 50.9	-0.7
HAU	Haudompre	12.03	305	*e*Pn	Pn	17 42 55.3	-1.0
VIVF	Saint-Julien-l	12.25	289	*e*Pn	Pn	17 42 59.3	-0.1
SFTF	Sexfontaines	12.91	304	*e*Sn	Sn	17 45 25.4	-6.8
	comp=Z,75nm,1.5s						
MEZF	Maizieres J'vi	13.02	306	*e*Pn	Pn	17 43 08.4	-1.4
SMF	Signal de Mont	13.18	297	*e*Pn	Pn	17 43 10.7	-1.3
SMF	Signal de Mont	13.18	297	*e*P	Pn	17 43 15.7	+3.7
SMF				*e*Sn	Sn	17 45 31.7	-7.0
	comp=Z,203nm,2.4s						
LOR	Lormes	13.34	299	*e*Pn	Pn	17 43 13.4	-0.8
	baz=112						
LOR				*e*Sn	Sn	17 45 33.9	-8.7
	comp=Z,4.4nm,0.5s						
SSF	Saint Saulge	13.51	298	*e*Pn	Pn	17 43 15.3	-1.2
AVF	Avril sur Loir	13.54	297	*e*Pn	Pn	17 43 15.7	-1.2
BGF	Bois d'Agland	13.82	296	*e*Pn	Pn	17 43 19.1	-1.7
LDF	La Druitiere	16.28	301	*e*P	P	17 43 56.3	-0.3
FLN	La Foliniere	16.56	302	*e*P	P	17 44 00.1	+0.5
	baz=121						
HFS	Hagfors	18.77	349	P	Pn	17 44 25.9	+1.6
	comp=Z,0.2nm,0.3s,baz=133,slow=10,SNR=4.6						
FINES	FINESS Array B	19.77	7	P	P	17 44 35.4	+0.6
	comp=Z,0.1nm,0.3s,baz=213,slow=15,SNR=2.9						
NOA	NORSAR Array B	20.03	346	P	P	17 44 39.0	+1.2
	comp=Z,0.7nm,0.6s,baz=160,slow=10,SNR=3.3						
NOA				LR	LR	17 52 45.0	
	comp=Z,27nm,20.2s,baz=0.0,slow=38						
EKA	Eskdalemuir Ar	20.72	319	P	P	17 44 45.3	+0.1
	comp=Z,1.9nm,0.5s,baz=111,slow=9.9,SNR=24						
TORD	Torodi Ar. Bea	33.26	216	P	P	17 46 43.1	+0.7
	comp=Z,0.7nm,0.5s,baz=21,slow=9.1,SNR=4.9						
ZALV	Zalesovo Beam	42.95	51	P	P	17 48 05.1	+1.4
	comp=Z,1.5nm,0.6s,baz=284,slow=8.5,SNR=7.7						
MKAR	Makanchi Array	43.08	62	P	P	17 48 06.7	+1.6
	comp=Z,0.7nm,0.5s,baz=279,slow=7.9,SNR=19						
SONM	Songino Array	57.81	53	P	P	17 49 58.2	+1.7
	comp=Z,0.4nm,0.5s,baz=286,slow=6.1,SNR=3.9						
SEY	Seymchan	68.49	22	P	P	17 51 07.8	+1.0
	comp=Z,0.7nm,0.6s,baz=72,slow=20,SNR=2.7						
CMAR	Chiang Mai Arr	69.03	84	P	P	17 51 10.6	-0.4
	comp=Z,0.1nm,0.4s,baz=329,slow=6.4,SNR=1.8						
YKA	Yellowknife Ar	69.99	340	P	P	17 51 16.0	-0.2
	comp=Z,0.1nm,0.4s,baz=39,slow=5.6,SNR=2.8						
ASAR	Alice Springs	122.12	94	PKP	PKPdf	17 58 58.5	-1.5
	comp=Z,0.3nm,0.6s,baz=296,slow=1.6,SNR=6.6						

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*NEIC **08** 17:44:10.3±2.0, 58°.0S±0°.1×25°.5W±0°.1, h52^{km}±8^{km}, mb4.6/14, Error ellipse: s-maj=20.7km s-min=5.6km az=209.0*

*IDC **08** 17:44:11.0±0.6, 58°.00S×25°.58W, h52^{km}±5^{km}, mb4.2/11, mb1 4.2/12, mb1mx4.1/24, mbtmp4.4/12, MS3.4/6, Ms1 3.4/6, ms1mx3.1/21, Error ellipse: s-maj=20.8km s-min=16.3km az=52.0*

ISC 08 17:44:10.5±0.4**, 57°.96S**±0°.09×**25°.5W**±0°.1**, h49**^{km}**, n52, σ0^{s}.83**/49**, mb4.5**/18**, MS3.4**/4**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	7.16	296	Pn	Pn	17 45 52.4	0.0
VNA1	Neumayer--Stat	14.68	157	P	Pn	17 47 34.4	-0.3
VNA3	Neumayer Olymp	14.88	160	P	Pn	17 47 36.8	-0.6
VNA2	Neumayer--Watz	15.07	157	P	Pn	17 47 39.6	-0.3
	baz=324,slow=14						
SNAA	Sanae	16.62	155	P	Pn	17 48 00.1	+0.3
SNAA	Sanae	16.62	155	P	Pn	17 48 00.0	+0.3
	1.3nm,0.3s,baz=330,slow=17,SNR=52						
SNAA				S	Sn	17 50 50.8	-12
	0.1nm,0.3s,baz=328,slow=19,SNR=2.9						
SNAA				LR	LR	17 52 52.6	
	comp=Z,112nm,19.2s,baz=3.0,slow=31						
SNAA	Sanae	16.62	155	P	Pn	17 48 00.2	+0.5
PMSA	Palmer Station	19.42	233	LR	LR	17 54 42.3	
	comp=Z,188nm,19.4s,baz=94,slow=33						
QSPA	South Pole Qui	32.29	180	P	P	17 50 35.5	+1.2
QSPA				IAmb	IAmb	17 50 36.2	
	comp=Z,15nm,1.4s						
PLCA	Paso Flores	33.26	281	P	P	17 50 43.1	+0.1
	comp=Z,1.5nm,0.8s,baz=101,slow=2.9,SNR=5.1						
PLCA				LR	LR	18 03 16.7	
	comp=Z,54nm,19.4s,baz=160,slow=34						
PLCA	Paso Flores	33.26	281	P	P	17 50 42.6	-0.3
PLCA				IAmb	IAmb	17 50 51.4	
	comp=Z,14nm,1.4s						
CPUP	Villa Florida	38.76	311	P	P	17 51 30.1	+0.2
	comp=Z,1.8nm,0.5s,baz=146,slow=4.8,SNR=5.6						
CPUP				pP	pP	17 51 43.8	+1.8
	comp=Z,3.4nm,0.5s,baz=310,slow=2.8,SNR=4.5						
VNDA	Vanda	44.70	182	P	P	17 52 18.2	+0.3
	comp=Z,4.5nm,0.8s,baz=181,slow=7.7,SNR=4.5						
BDFB	Brasilia	45.48	329	P	P	17 52 24.9	+0.1
	comp=Z,4.1nm,0.7s,baz=160,slow=10,SNR=6.5						
BDFB				LR	LR	18 08 37.2	
	comp=Z,42nm,19.6s,baz=165,slow=32						
BDFB	Brasilia	45.48	329	IAmb	IAmb	17 52 27.1	
	comp=Z,12nm,1.2s						
BOSA	Boshof	45.61	72	LR	LR	18 07 27.7	
	comp=Z,59nm,22.0s,baz=173,slow=31						
BOSA	Boshof	45.61	72	P	P	17 52 24.7	-1.2
BOSA				IAmb	IAmb	17 52 36.2	
	comp=Z,13nm,1.5s						
LBTB	Lobatse	48.74	70	P	P	17 52 50.5	+0.3
	comp=Z,2.3nm,0.8s,baz=207,slow=8.6,SNR=2.8						
PB08	IPOC Station P	49.30	301	P	P	17 52 53.3	-1.6
PB08				IAmb	IAmb	17 53 08.5	
	comp=Z,11nm,1.5s						
H10S2	ASCENSION HYDR	49.60	14	T	T	18 47 23.7	
	baz=32,slow=74,SNR=5.4						
H10S3	ASCENSION HYDR	49.60	14	T	T	18 47 19.0	
	baz=188,slow=74,SNR=7.7						
H10N1	ASCENSION HYDR	50.72	14	T	T	18 48 54.8	
	baz=192,slow=71,SNR=3.8						
H10N3	ASCENSION HYDR	50.72	14	T	T	18 48 54.9	
	baz=192,slow=71,SNR=5.8						
H10N2	ASCENSION HYDR	50.73	14	T	T	18 48 56.0	
	baz=192,slow=71,SNR=6.6						
LPAZ	La Paz	52.23	305	P	P	17 53 16.4	-0.8
	comp=Z,1.8nm,0.7s,baz=151,slow=5.7,SNR=8.5						
LPAZ	La Paz	52.23	305	P	P	17 53 14.6	-2.6
RCBR	Riachuelo	52.63	347	P	P	17 53 18.8	-0.7
SAML	Samuel	56.80	314	P	P	17 53 49.1	-0.4
SAML				IAmb	IAmb	17 53 50.4	
	comp=Z,4.7nm,0.6s						
LIC	Lamto	66.09	22	*e*P	P	17 54 52.4	+0.2
	comp=Z,17nm,0.8s						
KIC	Kosan Boka	66.28	23	*e*P	P	17 54 53.7	+0.2
	comp=Z,17nm,0.9s						
TIC	Toumodi	66.50	22	*e*P	P	17 54 55.1	+0.2
DBIC	Dimbokro	66.55	22	P	P	17 54 55.7	+0.5
	comp=Z,6.0nm,0.8s,baz=155,slow=9.9,SNR=6.3						
DBIC				LR	LR	18 16 33.5	
	comp=Z,26nm,20.7s,baz=154,slow=29						
DBIC	Dimbokro	66.55	22	P	P	17 54 55.3	+0.1
TOA0	Torodi Ar. Sit	74.30	28	P	P	17 55 43.3	+0.9
TOA0				IAmb	IAmb	17 55 43.8	
	comp=Z,6.2nm,0.9s						
TORD	Torodi Ar. Bea	74.30	28	P	P	17 55 43.2	+0.8
	comp=Z,6.0nm,0.8s,baz=197,slow=6.3,SNR=25						
TORD				pP	PcP	17 55 57.8	+0.8
	comp=Z,3.3nm,0.6s,baz=200,slow=6.4,SNR=7.9						
TORD	Torodi Ar. Bea	74.30	28	P	P	17 55 42.7	+0.3
PCRV	Puerto La Cruz	75.01	320	P	P	17 55 46.6	0.0
	comp=Z,9.9nm,0.7s,baz=174,slow=6.9						
STKA	Stephens Creek	89.86	169	P	P	17 57 03.6	-0.2
	comp=Z,1.7nm,0.8s,baz=186,slow=9.0,SNR=3.6						
ASAR	Alice Springs	96.88	161	P	P	17 57 35.0	-1.3
	comp=Z,1.2nm,0.8s,baz=184,slow=3.9,SNR=14						
AS31	Alice Springs	96.89	161	P	P	17 57 35.5	-0.9
PDAR	Pinedale Array	122.12	300	PKP	PKPdf	18 02 58.3	-0.7
	comp=Z,0.5nm,0.7s,baz=157,slow=4.9,SNR=4.0						
PDAR				pPKP	pPKPdf	18 03 13.5	+0.7
	comp=Z,0.3nm,0.5s,baz=134,slow=3.9,SNR=3.1						
NVAR	Mina Array Bea	122.96	291	PKP	PKiKP	18 03 00.9	-0.1
	comp=Z,0.7nm,0.8s,baz=142,slow=4.6,SNR=2.1						
ELK	Elko	123.24	295	PKP	PKiKP	18 03 01.6	+0.2
	comp=Z,0.3nm,0.5s,baz=236,slow=3.6,SNR=3.6						
CMAR	Chiang Mai Arr	123.54	110	PKP	PKPdf	18 03 02.1	-0.1
	comp=Z,1.3nm,0.8s,baz=232,slow=3.8,SNR=14						
FINES	FINESS Array B	125.65	28	PKP	PKPdf	18 03 04.5	-0.3
	comp=Z,7.5nm,1.0s,baz=117,slow=2.1,SNR=9.4						
ARCES	ARCESS Array B	132.38	22	PKP	PKPdf	18 03 17.3	-0.1
	comp=Z,7.0nm,1.0s,baz=239,slow=0.5,SNR=2.3						
MKAR	Makanchi Array	136.61	72	PKP	PKiKP	18 03 27.0	-0.8
	comp=Z,0.4nm,0.8s,baz=250,slow=3.5,SNR=4.5						
YKA	Yellowknife Ar	138.20	316	PKP	PKPdf	18 03 28.6	+0.2
	comp=Z,2.0nm,0.7s,baz=121,slow=3.0,SNR=30						
YKA				pPKP	pPKPdf	18 03 44.1	+1.9
	comp=Z,3.4nm,0.8s,baz=121,slow=2.9,SNR=14						
INK	Inuvik	147.86	318	PKPbc	PKPbc	18 03 48.3	0.0
	comp=Z,12nm,0.9s,baz=78,slow=2.5,SNR=36						
INK	Inuvik	147.86	318	PKPbc	PKPbc	18 03 48.4	+0.1
SONM	Songino Array	149.89	88	PKPbc	PKPbc	18 03 53.9	-0.4
	comp=Z,2.6nm,0.4s,baz=220,slow=3.6,SNR=26						
ILAR	Eielson Array	152.05	309	PKPbc	PKiKP	18 03 59.0	+0.1
	comp=Z,12nm,0.9s,baz=141,slow=2.0,SNR=73						
ILAR				pPKPbc	pPKPbc	18 04 14.2	+1.8
	comp=Z,7.9nm,0.9s,baz=132,slow=3.2,SNR=11						

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*MEX **08** 17:53:17.7±0.3, 30°.55N×105°.05W, h20^{km}, MD4.0*

*NEIC **08** 17:53:20.3±1.8, 32°.27N±0°.05×107°.22W±0°.04, h5^{km}±2^{km}, ML3.0/22, Error ellipse: s-maj=7.9km s-min=5.1km az=10.0*

ISC 08 17:53:19.9±0.9**, 32°.31N**±0°.04×**107°.26W**±0°.04**, h10**^{km}**, n23, σ1^{s}.36**/26**, New Mexico**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
121A	Cookes Peak, D	0.49	297		Pg	17 53 30.6	+1.0
121A				Sg	Sg	17 53 37.6	+1.5
121A				IAML		17 53 41.8	
	comp=E,558nm,0.5s						
MNTX	Cornudas Mount	1.71	110		Pb	17 53 50.4	-1.0
MNTX				Sn	Sb	17 54 12.3	-0.7
Y22D	IRIS PASSCAL I	1.78	9		Pn	17 53 52.4	+1.6
Y22D				IAML		17 54 21.8	
	comp=N,206nm,0.5s						
Y22D				IAML		17 54 25.1	
	comp=E,227nm,0.5s						
LENM	Lemitar	1.86	7	Pn	Pn	17 53 52.5	+0.4
BNM	Barren Site	1.91	16	Pn	Pb	17 53 55.3	+0.4
319A	Douglas	1.96	242		Pn	17 53 53.9	+0.6
CGIG		2.04	198	*e*P	Pn	17 53 55.4	+1.1
	baz=85,slow=4.8						
CGIG				*e*S	Sg	17 54 24.9	-0.4
CGIG		2.04	198		Pn	17 53 55.4	+1.1
GDL2	Guadalupe Moun	2.46	92	Pn	Pn	17 54 01.8	+1.7
ANMO	Albuquerque	2.71	14		Pn	17 54 02.8	-0.9
CPRX	Cap Rock	2.95	75	Pn	Pb	17 54 10.5	-2.2
TUC	Tucson	2.98	271		Pn	17 54 08.3	+1.0
TUC				IAML		17 54 55.2	
	comp=E,26nm,0.5s						
TUC				IAML		17 54 55.3	
	comp=E,28nm,0.5s						
MSTX	Muleshoe	4.11	65		Pn	17 54 24.1	+1.2
TX31	Lajitas Ar. Si	4.29	133	Pn	Pn	17 54 27.1	+1.8
TX32	Lajitas Array	4.29	133		Pn	17 54 27.0	+1.8
TXAR	Lajitas Array	4.29	133		Pn	17 54 27.7	+2.4
WUAZ	Wupatki	4.68	314	Pg	Pg	17 54 48.0	-1.5
WUAZ				IAML		17 55 55.6	
	comp=E,29nm,0.6s						
214A	Organ Pipe Nat	4.72	267	Pn	Pn	17 54 32.3	+1.1
214A				IAML		17 55 53.5	
	comp=N,7.4nm,0.4s						
214A				IAML		17 55 56.1	
	comp=E,11nm,0.6s						
MVCO	Mesa Verde	4.99	349	Pg	Pg	17 54 56.4	+0.9
MVCO				IAML		17 55 40.8	
	comp=E,13nm,4.3s						
MVCO				IAML		17 56 15.9	
	comp=E,13nm,2.1s						
PIX	Pinacate	5.32	264	Pn	Pn	17 54 38.4	-1.0
PIX				IAML		17 56 12.9	
	comp=E,5.0nm,0.5s						
PIX				IAML		17 56 16.9	
	comp=N,6.3nm,2.7s						
HPIG		5.54	165	Pn	Pn	17 54 42.5	-0.1
SDCO	Great Sand Dun	5.61	14	Pn	Pn	17 54 44.6	+0.9
U15A	North Rim	5.84	316	Pg	Pg	17 55 10.0	-1.8

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*HLW **08** 18:20:40.4, 36°.77N×31°.14E, h12^{km}±31^{km}, Md4.8, Ml3.5*

*ISK **08** 18:20:40.3, 36°.91N×31°.41E, h148^{km}±1^{km}, ML3.1/28*

*NIC **08** 18:20:41.6±0.0, 37°.01N×31°.85E, h4^{km}±2^{km}, Ml3.4/2*

*DDA **08** 18:20:43.0, 37°.00N×31°.47E, h125^{km}±2^{km}, ML2.9*

ISC 08 18:20:40.1±1.4**, 36°.91N**±0°.05×**31°.45E**±0°.03**, h151**^{km}±9^{km}**, n82, σ1^{s}.22**/109**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEPZ	Antalya-Kepez	0.12	95	*i* P	Pn	18 21 01.0	+0.6
KEPZ				*i* S	Sn	18 21 15.0	-0.8
KEPZ				IAML		18 21 16.0	
	comp=N,552nm,0.2s						
ALAN	Alanya-ANTALYA	0.58	127	PG	Pn	18 21 02.7	+0.7
ALAN				SG	Sn	18 21 18.4	-0.2
SEDI	Konya, Seydise	0.59	24	*i* P	Pn	18 21 02.3	+0.2
SEDI				IAML		18 21 14.0	
	comp=N,134nm,1.2s						
SEDI				*i* S	Sn	18 21 18.1	-1.0
ANTB	Antalya	0.64	269	PG	Pn	18 21 02.5	+0.2
ANTB				SG	Sn	18 21 18.4	-0.7
KEMT	Kemer-ANTALYA	0.78	247	PG	Pn	18 21 03.4	+0.2
BUCA	Burdur, Bucak-	0.83	300	*i* P	Pn	18 21 04.2	+0.6
BUCA				*i* S	Sn	18 21 20.8	-0.8
BCK	Bucak	0.88	309	PG	Pn	18 21 03.9	-0.2
KORT	Korkueli	0.89	276	PG	Pn	18 21 04.5	+0.3
KORT	Korkueli	0.89	276	*i* P	Pn	18 21 05.8	+1.7
KORT				*i* S	Sn	18 21 23.5	+1.0
KORT				IAML		18 21 25.0	
	comp=E,195nm,0.7s						
GAZI	Gazipasa	0.97	134	PG	Pn	18 21 05.4	+0.7
GAZI	Gazipasa	0.97	134	*i* P	Pn	18 21 03.8	-1.0
GAZI				*i* S	Sn	18 21 23.3	-0.2
GAZI				IAML		18 21 24.0	
	comp=E,461nm,0.4s						
GAZI				IAML		18 21 25.0	
	comp=N,374nm,0.5s						
KMER	Konya-Meram	1.12	40	*i* P	Pn	18 21 07.2	+1.0
ISP	Isparta	1.17	321	PN	Pn	18 21 06.7	+0.1
BAGO	Egridir - ISPA	1.20	334	*i* P	Pn	18 21 07.2	+0.4
BAGO				*i* S	Sn	18 21 23.8	-3.5
ERMK	Ermenek	1.20	103	*i* P	Pn	18 21 08.4	+1.4
ERMK				*i* S	Sn	18 21 27.9	+0.4
ERMK				IAML		18 21 29.0	
	comp=N,267nm,0.4s						
ERMK				IAML		18 21 30.0	
	comp=E,236nm,0.4s						
DOGA	KONYA_Doganhis	1.20	8	*i* P	Pn	18 21 07.5	+0.6
KKBE	Karaman, Kazim	1.23	75	*i* P	Pn	18 21 08.6	+1.5
KKBE				*i* S	Sn	18 21 26.0	-1.7
ELL	Elmali	1.25	263	PN	Pn	18 21 07.8	+0.5
ELL	Elmali	1.25	263	P	Pn	18 21 09.7	+2.4
ELL				S	Sn	18 21 31.9	+3.8
KONT	Konya--Tatoy	1.26	35	PN	Pn	18 21 08.3	+1.0
KONT	Konya--Tatoy	1.26	35	*i* P	Pn	18 21 08.4	+1.1
BRDR	BURDUR-Merkez	1.36	306	*i* P	Pn	18 21 09.0	+0.7
YVAC	Isparta, Yalva	1.37	353	*i* P	Pn	18 21 08.6	+0.2
YVAC				*i* S	Sn	18 21 28.4	-1.9
LADK	Ladik-KONYA	1.48	29	PN	Pn	18 21 10.4	+0.8
BASM	Basmaki-Afyon	1.50	312	PN	Pn	18 21 10.0	+0.2
BERE	Bereket-Mersin	1.53	111	PN	Pn	18 21 11.2	+1.0
TEKE	Tekeli-Mersin	1.54	119	PN	Pn	18 21 11.3	+1.1
GOLH	Golhisar	1.55	283	*i* P	Pn	18 21 11.4	+1.1
GOLH				*i* S	Sn	18 21 33.3	-0.2
GOLH				IAML		18 21 36.0	
	comp=E,91nm,0.2s						
GOLH				IAML		18 21 38.0	
	comp=N,77nm,0.3s						
AKAS	Kas	1.64	246	PN	Pn	18 21 11.5	+0.2
KDHN	Kadinhani	1.69	18	*i* P	Pn	18 21 11.9	+0.1
KZIL	AFYON_Kizioren	1.70	323	*i* P	Pn	18 21 11.5	-0.5
KZIL				*i* S	Sn	18 21 34.9	-1.6
KZIL				IAML		18 21 36.0	
	comp=N,59nm,0.5s						
KZIL				IAML		18 21 36.0	
	comp=E,74nm,0.5s						
CAEL	Denizli, Camel	1.72	278	*i* P	Pn	18 21 13.6	+1.3
CAEL				*i* S	Sn	18 21 37.9	+1.0
CAEL				IAML		18 21 50.0	
	comp=E,172nm,0.6s						
OREN	Orenkoy-Mersin	1.76	113	PN	Pn	18 21 13.5	+1.0
ALIN	Konya, Altinte	1.79	39	*i* P	Pn	18 21 12.7	-0.3
SHUT	Suhut-Afyon	1.79	337	PN	Pn	18 21 13.4	+0.5
TEPK	Tepekoy-MERSIN	1.82	112	PN	Pn	18 21 14.3	+1.1
AKKU	Akkuyu-Mersin	1.85	113	PN	Pn	18 21 14.7	+1.2
AKK2	Akkuyu-Mersin	1.86	114	PN	Pn	18 21 14.7	+1.1
KEBE	Keben-Mersin	1.88	104	PN	Pn	18 21 14.7	+0.8
YESI	Yesilovacik-Me	1.90	111	PN	Pn	18 21 15.1	+1.0
IKL	Isikli	1.92	110	PN	Pn	18 21 15.4	+1.1
FETY	Fethiye	1.92	262	PN	Pn	18 21 14.5	+0.1
TISA	Tisan-Mersin	1.94	112	PN	Pn	18 21 15.6	+1.0
ALFC	Alefka	1.98	152	P	Pn	18 21 15.4	+0.2
ALFC				S	Sn	18 21 40.4	-1.6
ALFC				AML	AML	18 21 44.0	
	comp=E,0.8nm,0.2s						
ALFC				AML	AML	18 21 44.0	
	comp=E,0.8nm,0.2s						
ALFC				AML	AML	18 21 45.2	
	comp=E,0.7nm,0.3s						
ALFC				AML	AML	18 21 45.2	
	comp=E,0.7nm,0.3s						
AKMS	Akamas	2.02	159	P	Pn	18 21 16.3	+0.8
AKMS				S	Sn	18 21 42.9	+0.1
AKMS				AML	AML	18 21 45.6	
	comp=E,1.0nm,0.4s						
AKMS				AML	AML	18 21 45.6	
	comp=E,1.0nm,0.4s						
AKMS				AML	AML	18 21 46.2	
	comp=E,0.8nm,0.4s						
AKMS				AML	AML	18 21 46.2	
	comp=E,0.8nm,0.4s						
AKDN	Akdeniz- Kıbrı	2.02	142	PN	Pn	18 21 16.4	+0.9
SILI	Silifke-Mersin	2.06	105	PN	Pn	18 21 16.9	+1.0
TAVA	DENIZLI_Tavas	2.10	286	*i* P	Pn	18 21 17.4	+0.8
TAVA				*i* S	Sn	18 21 42.4	-2.2
KHAL	Karahalli	2.13	314	*i* P	Pn	18 21 17.1	+0.2
LEF	Lefka	2.13	146	PN	Pn	18 21 16.8	0.0
KIZK	Mersin	2.21	100	PN	Pn	18 21 18.9	+1.3
KIZK	Mersin	2.21	100	*i* P	Pn	18 21 18.7	+1.0
KIZK				*i* S	Sn	18 21 46.1	-0.4
KIZK				IAML		18 21 49.0	
	comp=N,62nm,0.5s						
DALY	Dalyan (Mula)	2.25	268	PN	Pn	18 21 18.5	+0.4
DALY	Dalyan (Mula)	2.25	268	*i* P	Pn	18 21 20.9	+2.7
DALY				*i* S	Sn	18 21 47.3	-0.1
DALY				IAML		18 21 48.0	
	comp=E,68nm,0.4s						
DALY				IAML		18 21 48.0	
	comp=N,60nm,0.6s						
NATA	Nata	2.31	157	P	Pn	18 21 20.4	+1.3
ATHAL	Athalassa	2.37	138	P	Pn	18 21 20.6	+1.0
ATHAL				S	Sn	18 21 49.4	-0.6
SZAC	Souni	2.44	151	P	Pn	18 21 22.3	+1.6
CIFT	Cifteler, Eski	2.46	353	PN	Pn	18 21 21.1	+0.2
CIFT	Cifteler, Eski	2.46	353	*i* P	Pn	18 21 21.0	+0.1
CSS	Mathiatis	2.47	141	PN	Pn	18 21 21.1	+0.2
CSS	Mathiatis	2.47	141	P	Pn	18 21 21.2	+0.2
CSS				S	Sn	18 21 51.0	-1.4
AKIN	Akıncılar- Kıb	2.50	139	PN	Pn	18 21 21.8	+0.6
MULA	Mugla, Merkez-	2.53	279	*i* P	Pn	18 21 23.0	+1.4
MULA				*i* S	Sn	18 21 52.5	-1.2
MULA				IAML		18 22 13.0	
	comp=Z,41nm,2.2s						
SVRH	Sivrihisar-ESK	2.53	1	PN	Pn	18 21 22.1	+0.4
YER	Yerkesik	2.55	276	PN	Pn	18 21 21.9	0.0
ASGA	Asgata	2.57	145	P	Pn	18 21 23.6	+1.4
TURN	Turunc	2.58	268	PN	Pn	18 21 22.9	+0.7
TURN	Turunc	2.58	268	*i* P	Pn	18 21 22.8	+0.7
TURN				*i* S	Sn	18 21 54.4	-0.2
TURN				IAML		18 21 55.0	
	comp=N,64nm,0.2s						
MVOU	Mavrovouni	2.59	136	P	Pn	18 21 22.2	-0.1
MVOU				S	Sn	18 21 53.4	-1.5
EREN	Erenkoy	2.59	121	PN	Pn	18 21 23.6	+1.2
SGAZ	Eskisehir, Sey	2.66	350	*i* P	Pn	18 21 23.3	+0.1
KULA	Kula-Manisa	2.73	307	PN	Pn	18 21 24.6	+0.4
ARG	Arkhangelos	2.77	256	PN	Pn	18 21 24.8	+0.3
MANT	Manisa	2.79	305	*i* P	Pn	18 21 24.9	-0.1
OSC1	CSNet OBS 1	3.41	182	P	Pn	18 21 33.4	+0.7
OSC1				S	Sn	18 22 12.1	-1.3
GLL	Jalalah	7.32	178	P	Pn	18 22 24.7	+0.2
	baz=175						
SLUM	Salum	7.48	226	P	Pn	18 22 26.8	+0.3
	baz=226						
SLUM				AMP		18 23 00.0	
	baz=226						
SLUM				S	Sn	18 23 42.7	-7.4
	baz=226						
RYAN	Fayoum	7.87	188	P	Pn	18 22 32.7	+0.9
	baz=186						
RYAN				S	Sn	18 23 54.7	-4.9
	baz=186						
NBNS	Bani Suef	8.27	181	P	Pn	18 22 38.2	+1.1

	baz=179						
HKAT	Jabal Katrina	8.63	165	P	Pn	18 22 45.5	+3.3
	baz=162						
SWA2		9.15	215	P	Pn	18 22 49.5	+0.6
	baz=215						
HFRF	Wahat Farafira	10.09	196	P	Pn	18 23 01.1	-0.2
	baz=195						

IDC 08 18:30:53.0±58.0, 56°.33S×145°.53E, h0^{km}, mb3.8/3, mb1 4.0/3, mb1mx3.8/28, mbtmp3.8/3, MS3.5/8, Ms1 3.5/8, ms1mx3.2/21, Error ellipse: s-maj=988.0km s-min=229.8km az=155.0, West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPZ	Rata Peaks	20.55	63	LR	LR	18 41 37.9	
	comp=Z,297nm,18.4s,baz=244,slow=31						
VNDA	Vanda	22.04	171	LR	LR	18 43 40.3	
	comp=Z,70nm,20.6s,baz=350,slow=35						
STKA	Stephens Creek	24.60	352	P	P	18 36 15.3	+0.6
	3.4nm,0.9s,baz=198,slow=6.4,SNR=4.3						
STKA				LR	LR	18 44 11.8	
	comp=Z,79nm,18.1s,baz=206,slow=32						
URZ	Urewera	27.66	63	LR	LR	18 45 58.0	
	comp=Z,152nm,20.7s,baz=211,slow=33						
H01W1	Cape Leeuwin H	30.25	302	T	T	19 09 41.0	
	baz=142,slow=75,SNR=23						
H01W2	Cape Leeuwin H	30.25	302	T	T	19 09 35.1	
	baz=142,slow=75,SNR=19						
H01W3	Cape Leeuwin H	30.27	302	T	T	19 09 35.0	
	baz=142,slow=75,SNR=21						
ASAR	Alice Springs	33.73	341	P	P	18 37 35.0	-0.9
	0.6nm,0.8s,baz=168,slow=9.5,SNR=8.4						
WRA	Warramunga Arr	37.29	342	P	P	18 38 06.8	+0.3
	1.8nm,0.7s,baz=165,slow=7.7,SNR=13						
MAW	Mawson	37.40	219	LR	LR	18 53 01.1	
	comp=Z,109nm,19.4s,baz=98,slow=36						
PLCA	Paso Flores	78.59	153	LR	LR	19 13 37.2	
	comp=Z,20nm,18.1s,baz=162,slow=33						
BOSA	Boshof	81.44	230	LR	LR	19 13 36.5	
	comp=Z,12nm,19.9s,baz=178,slow=32						
CMAR	Chiang Mai Arr	84.15	316	LR	LR	19 20 53.5	
	comp=Z,16nm,18.9s,baz=190,slow=36						

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*BGR **08** 18:30:58.9±0.0, 20°.86S×175°.76W, h33^{km}*

*NOU **08** 18:31:50.1, 20°.55S×178°.57W, h314^{km}, mb4.4, Fiji Islands Region*

*NEIC **08** 18:31:57.0±1.1, 20°.4S±0°.1×177°.6W±0°.1, h540^{km}±9^{km}, mb4.8/26, Error ellipse: s-maj=21.2km s-min=19.4km az=157.0*

*IDC **08** 18:31:59.2±1.4, 20°.41S×177°.78W, h550^{km}±15^{km}, mb3.9/22, mb1 4.0/25, mb1mx3.9/39, mbtmp4.7/25, Error ellipse: s-maj=16.8km s-min=9.5km az=145.0*

ISC 08 18:31:58.5±0.4, 20°.45S±0°.08×177°.67W±0°.07, h550^{km}, n195, σ1^{s}.02/205, mb4.7/57, 25C-12D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.87	303	P	P	18 33 26.0	-1.4
	15nm,0.3s,baz=173,slow=7.7,SNR=90						
MSVF	Nonsavu	4.87	303	P	P	18 33 25.3	-2.1
NIUE	Niue	7.41	81	P	P	18 33 48.2	-2.4
NIUE	Niue	7.41	81	P	P	18 33 48.1	-2.4
	256nm,0.9s						
DZM	Mont Dzumac	14.90	261	P	P	18 35 06.3	-0.8
	0.7nm,0.3s,baz=89,slow=18,SNR=3.3						
DZM	Mont Dzumac	14.90	261	eP	P	18 35 10.0	+2.9
	5.1nm,0.2s						
DZM				eLR	LR	18 48 19.5	
	comp=Z,240nm,25.7s						
KOUNC	Koumac, New Ca	16.91	267	P	P	18 35 28.1	+1.6
	55nm,0.9s						
MKAZ	Moumakai	17.73	199	P	P	18 35 34.8	+1.0
AWAZ	Awhitu Peninsu	17.86	200	P	P	18 35 37.2	+2.3
MWZ	Matawai	18.30	192	P	P	18 35 39.1	+0.1
URZ	Urewera	18.31	193	P	P	18 35 38.0	-1.1
	1.8nm,0.3s,baz=8.8,slow=5.8,SNR=7.1						
URZ				S	S	18 38 35.1	-3.4
	0.7nm,0.3s,baz=114,slow=20,SNR=2.1						
URZ	Urewera	18.31	193	P	P	18 35 37.2	-1.8
URZ				IAmb	IAmb	18 35 39.5	
	comp=Z,14nm,0.6s						
URZ	Urewera	18.31	193	P	P	18 35 37.7	-1.4
CNGZ	Carnagh Statio	18.32	190	P	P	18 35 40.9	+1.8
EIDS	Eidsvold	29.16	254	P	P	18 37 15.9	0.0
EIDS				IAmb	IAmb	18 37 16.5	
	comp=Z,15nm,0.6s						
ARMA	Armidale	29.37	244	P	P	18 37 17.8	+0.1
CTA	Charters Tower	33.81	264	P	P	18 37 55.7	+0.1
	comp=Z,48nm,0.5s,baz=90,slow=11,SNR=115						
PMG	Port Moresby	35.64	283	P	P	18 38 08.2	-2.7
PMG				IAmb	IAmb	18 38 11.4	
	comp=Z,23nm,0.9s						
PMG	Port Moresby	35.64	283	P	P	18 38 10.8	-0.1
	comp=Z,28nm,0.8s						
COEN	Coen	37.89	273	P	P	18 38 29.4	+0.1
STKA	Stephens Creek	38.09	244	P	P	18 38 31.4	+0.6
	comp=Z,10.0nm,0.5s,baz=95,slow=11,SNR=34						
STKA				PcP	PcP	18 40 31.9	+0.4
	comp=Z,1.6nm,0.5s,baz=130,slow=3.8,SNR=3.3						
STKA	Stephens Creek	38.09	244	P	P	18 38 30.4	-0.4
BBOO	Buckleboo	42.85	243	P	P	18 39 08.7	0.0
BBOO				IAmb	IAmb	18 39 09.2	
	comp=Z,25nm,0.6s						
WR0	Warramunga Arr	44.73	262	P	P	18 39 22.8	-0.7
WR0				IAmb	IAmb	18 39 24.4	
	comp=Z,22nm,0.8s						
AS31	Alice Springs	44.83	257	P	P	18 39 24.0	-0.2
AS31				IAmb	IAmb	18 39 25.0	
	comp=Z,14nm,0.7s						
ASAR	Alice Springs	44.84	257	P	P	18 39 24.2	-0.1
	comp=Z,57nm,0.8s,baz=89,slow=7.6,SNR=929						
ASAR				PcP	PcP	18 40 54.9	+0.6
	comp=Z,4.9nm,0.7s,baz=96,slow=4.6,SNR=6.0						
ASAR				S	S	18 45 21.4	-0.7
	comp=Z,4.4nm,0.8s,baz=93,slow=15,SNR=21						
ASAR	Alice Springs	44.84	257	P	P	18 39 23.6	-0.6
WB0	Warramunga Arr	44.90	262	P	P	18 39 24.3	-0.5
WB2	Warramunga Arr	44.91	262	P	P	18 39 24.4	-0.5
WRAB	Tennant Creek	44.91	262	P	P	18 39 23.9	-0.9
WRA	Warramunga Arr	44.92	262	P	P	18 39 24.4	-0.5
	comp=Z,28nm,0.6s,baz=98,slow=7.9,SNR=211						
WRA				S	S	18 45 20.0	-3.3
	comp=Z,0.8nm,0.9s,baz=98,slow=11,SNR=3.5						
WRA	Warramunga Arr	44.92	262	P	P	18 39 24.1	-0.8
MTN	Manton Dam	49.48	270	P	P	18 39 58.5	-0.6
FORT	Forrest	49.60	247	P	P	18 39 59.8	-0.1
FITZ	Fitzroy Crossi	53.34	262	P	P	18 40 27.2	+0.1
	comp=Z,14nm,0.4s,baz=95,slow=4.4,SNR=166						
FITZ	Fitzroy Crossi	53.34	262	P	P	18 40 27.3	+0.2
FITZ				IAmb	IAmb	18 40 28.0	
	comp=Z,17nm,0.5s						
SWI	Sorong	53.54	285	P	P	18 40 28.6	+0.1
	comp=Z,128nm,0.8s						
NLAI	Namlea	56.40	280	P	P	18 40 48.9	+0.4
	comp=Z,2μmcomp=Z,29nm,0.6s						
SOEI	Soe	56.81	272	P	P	18 40 52.3	+0.8
SOEI	Soe	56.81	272	P	P	18 40 52.5	+1.0
	comp=Z,2μmcomp=Z,158nm,0.9s						
BATI	Baumata	57.24	271	P	P	18 40 55.3	+1.0
	comp=Z,34nm,0.9s						
SANI	Sanana	57.88	281	P	P	18 40 58.2	-0.4
	comp=Z,42nm,0.8s						
PSA00	Pilbara Seismi	57.98	257	P	P	18 40 58.7	-0.5
PSA00				IAmb	IAmb	18 40 59.8	
	comp=Z,39nm,0.7s						
NWAO	Narrogin (SRO)	58.67	243	P	P	18 41 03.9	+0.2
	comp=Z,8.4nm,0.8s,baz=170,slow=6.2,SNR=3.8						
MMRI	Maumere	59.06	272	P	P	18 41 06.0	-0.5
MMRI				IAmb	IAmb	18 41 07.5	
	comp=Z,36nm,0.7s						
MMRI	Maumere	59.06	272	P	P	18 41 06.7	+0.1
MORW	Morawa	60.14	248	P	P	18 41 13.4	-0.1
TOLI2	Tolitoli	63.90	282	P	P	18 41 38.0	-0.2
TOLI2				IAmb	IAmb	18 41 38.8	
	comp=Z,16nm,0.8s						
JHJ	Hachijo jima 2	67.00	322	P	P	18 41 56.9	-0.2
	comp=Z,91nm,0.4s,baz=65,slow=19,SNR=4.3						
MJAR	Matsushiro Arr	70.36	323	P	P	18 42 17.0	-0.4
	comp=Z,11nm,0.5s,baz=159,slow=6.0,SNR=44						
MJAR	Matsushiro Arr	70.36	323	P	P	18 42 16.9	-0.5
MAT	Matsushiro	70.36	323	P	P	18 42 17.0	-0.3
JNU	Nakatsue	72.46	316	P	P	18 42 28.9	-0.8
	comp=Z,12nm,0.9s,baz=157,slow=7.7,SNR=2.3						
ASAJ	Asahikawa	73.84	331	P	P	18 42 38.9	+1.6
	comp=Z,12nm,0.7s,baz=183,slow=33,SNR=8.6						
NACB	Ninganchiao	73.91	304	P	P	18 42 37.2	-0.9
NACB				IAmb	IAmb	18 42 38.2	
	comp=Z,40nm,0.9s						
PETK	Petropavlovsk-	76.31	345	P	P	18 42 50.4	-0.4
	comp=Z,4.1nm,0.6s,baz=117,slow=6.9,SNR=16						
KSRS	Korea Array	77.06	318	P	P	18 42 56.2	+0.9
	comp=Z,2.8nm,0.8s,baz=129,slow=5.8,SNR=7.5						
USRK	Ussuriysk Ar.	79.10	326	P	P	18 43 07.3	+1.2
	comp=Z,7.8nm,0.8s,baz=156,slow=2.3,SNR=9.3						
USRK	Ussuriysk Ar.	79.10	326	P	P	18 43 07.5	+1.4
NJ2	Nanjing	80.09	310	eP	P	18 43 12.8	+1.2
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NVAR	Mina Array Bea	80.78	43	P	P	18 43 16.4	+1.0
	comp=Z,1.8nm,0.7s,baz=228,slow=9.4,SNR=7.5						
KLR	Kul'dur	82.65	329	P	P	18 43 25.1	+0.8
	comp=Z,1.8nm,0.8s,baz=16,slow=2.5,SNR=5.4						
SEY	Seymchan	86.40	347	P	P	18 43 42.5	+0.2
	comp=Z,6.1nm,0.7s,baz=159,slow=8.6,SNR=4.6						
RND	Reindeer	86.58	13	P	P	18 43 42.8	-0.5
RND				IAmb	IAmb	18 43 43.8	
	comp=Z,9.0nm,0.8s						
TXAR	Lajitas Array	86.77	57	P	P	18 43 47.0	+2.0
	comp=Z,1.7nm,0.6s,baz=216,slow=6.1,SNR=16						
TXAR				pP	pP	18 45 45.1	+1.2
	comp=Z,0.2nm,0.3s,baz=220,slow=3.3,SNR=4.3						
SYO	Syowa Base	86.84	193	⇓ePcP	PcP	18 43 47.6	+1.6
GYA	Guiyang	86.90	300	eP	P	18 43 46.6	+0.9
GYA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
SNAA	Sanae	88.05	178	P	P	18 43 50.8	+0.6
MDM	Murphy Dome	88.09	12	P	P	18 43 48.2	-2.1
VNA3	Neumayer Olymp	88.17	176	P	P	18 43 51.3	+0.6
IL31		88.20	13	P	P	18 43 50.1	-0.6
ILAR	Eielson Array	88.20	13	P	P	18 43 50.0	-0.7
	comp=Z,1.9nm,0.5s,baz=220,slow=5.9,SNR=30						
XAN	Xi'an	88.35	307	P	P	18 43 53.0	+0.8
XAN				sP	sP	18 46 42.8	-4.0
XAN				pmax	pmax		
	comp=Z,16nm,0.9s						
VNA2	Neumayer--Watz	88.61	177	P	P	18 43 53.1	+0.3
	baz=200,slow=4.4						
PHIT	Phitsanulok	88.63	289	P	P	18 43 56.7	+2.9
	comp=Z,39nm,1.2s						
PDAR	Pinedale Array	88.71	43	P	P	18 43 54.6	+0.6
	comp=Z,1.5nm,0.6s,baz=217,slow=3.0,SNR=16						
VNA1	Neumayer--Stat	88.84	176	P	P	18 43 54.5	+0.7
SUKH	Sukhothai	89.43	289	P	P	18 44 01.7	+4.2
	comp=Z,15nm,0.6s						
HHC	Hu-ho-hao-te	89.54	314	eP	P	18 43 57.9	+0.2
HHC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,130nm,6.6s						
KMI	Kunming	89.61	297	⇑P	P	18 43 56.7	-1.8
KMI				pmax	pmax		
	comp=Z,7.0nm,0.9s						
LAMP	Lampang	89.81	290	P	P	18 44 01.0	+1.7
	comp=Z,250nmcomp=Z,30nm,0.8s						
CM35	Chiang Mai Arr	90.29	290	P	P	18 44 03.0	+1.5
CM04	Chiang Mai Arr	90.34	289	P	P	18 44 03.8	+2.0
	comp=Z,71nmcomp=Z,11nm,0.9s						
CM09	Chiang Mai Arr	90.35	289	P	P	18 44 04.0	+2.2
	comp=Z,83nmcomp=Z,9.3nm,1.0s						
CM01	Chiang Mai Arr	90.37	289	P	P	18 44 04.2	+2.3
	comp=Z,59nmcomp=Z,8.0nm,0.9s						
CM05	Chiang Mai Arr	90.37	289	P	P	18 44 04.0	+2.1
	comp=Z,6.2nm,0.9s						
CM02	Chiang Mai Arr	90.38	289	P	P	18 44 04.2	+2.3
	comp=Z,63nmcomp=Z,8.2nm,0.9s						
CM31	Chiang Mai Arr	90.39	289	P	P	18 44 04.0	+2.0
	comp=Z,192nm,1.1s						
CMAR	Chiang Mai Arr	90.39	289	P	P	18 44 03.6	+1.6
	comp=Z,4.3nm,0.8s,baz=110,slow=2.9,SNR=37						
CM15	Chiang Mai Arr	90.41	289	P	P	18 44 03.9	+1.8
	comp=Z,55nmcomp=Z,6.5nm,1.0s						
CM13	Chiang Mai Arr	90.41	289	P	P	18 44 04.0	+1.9
	comp=Z,59nmcomp=Z,7.8nm,1.0s						
CMMT	Chiang Mai	90.52	290	P	P	18 44 03.0	+0.5
	comp=Z,7.0nm,0.8s						
CD2	Chengdu	91.03	303	eP	P	18 44 05.0	+0.3
LZH	Lanzhou	92.99	307	eP	P	18 44 14.0	+0.2
LZH				pmax	pmax		
	comp=Z,19nm,1.0s						
LZH				pmax	pmax		
	comp=Z,69nm,5.0s						
INK	Inuvik	94.14	15	P	P	18 44 16.9	-1.1
	comp=Z,1.0nm,0.7s,baz=194,slow=4.2,SNR=3.9						
SONM	Songino Array	95.92	319	P	P	18 44 26.3	-0.4
	comp=Z,0.3nm,0.6s,baz=119,slow=3.3,SNR=2.4						
YKA	Yellowknife Ar	96.34	25	P	P	18 44 27.6	-0.5
	comp=Z,0.3nm,0.8s,baz=233,slow=4.0,SNR=3.9						
GTA	Gaotai	97.19	309	eP	P	18 44 33.9	+1.3
GTA				pmax	pmax		
	comp=Z,1.0nm,1.2s						
ZALV	Zalesovo Beam	110.65	321	PKiKP	PKiKP	18 49 27.8	-0.8
	comp=Z,1.3nm,0.5s,baz=170,slow=1.2,SNR=8.8						
MKAR	Makanchi Array	111.39	313	PKiKP	PKiKP	18 49 29.7	-0.6
	comp=Z,0.9nm,0.5s,baz=224,slow=0.6,SNR=18						
TDK	Taldyqorghan	113.89	311	ePKiKP	PKiKP	18 49 35.0	-0.2
	baz=311						
MDOK	Medeo	114.69	309	ePKP	PKPdf	18 49 35.8	-1.1
	baz=309						
BTLS	Baital	116.97	311	ePKP	PKPdf	18 49 40.4	-0.6
	baz=311						
IUG	Iuzhnay	119.80	308	ePKP	PKPdf	18 49 45.5	-1.2
	baz=308						
BOSA	Boshof	126.43	205	PKP	PKiKP	18 50 01.2	+0.7
	comp=Z,3.2nm,1.0s,baz=153,slow=3.0,SNR=4.3						
ARCES	ARCESS Array B	128.93	350	PKP	PKPdf	18 50 03.1	-0.2
	comp=Z,4.3nm,0.7s,baz=32,slow=1.9,SNR=9.6						
FINES	FINESS Array B	135.81	344	PKhKP	PKPpre	18 50 08.4	
	comp=Z,3.1nm,0.9s,baz=107,slow=1.5,SNR=3.4						
FINES				PKP	PKPdf	18 50 15.2	-1.2
	comp=Z,4.3nm,1.0s,baz=89,slow=3.3,SNR=8.7						
MARD	Mardin	142.68	305	PKPdf	PKPdf	18 50 28.2	-1.6
AKASG	Malin Array Be	143.12	331	PKhKP	PKPpre	18 50 27.0	
	comp=Z,18nm,0.6s,baz=43,slow=4.5,SNR=59						
AKASG	Malin Array Be	143.12	331	PKPdf	PKPab	18 50 27.4	-0.2
AKBB	Malin Array Si	143.12	331	PKPdf	PKPab	18 50 27.4	-0.3
BSEG	Bad Segeberg	146.02	352	ePKPbc	PKPbc	18 50 37.5	+0.7
	baz=13,slow=2.5						
BR131	Keskin Array S	147.04	313		PKPbc	18 50 40.2	0.0
BRTR	Keskin Array B	147.04	313	PKPbc	PKPbc	18 50 40.3	0.0
	comp=Z,4.9nm,0.7s,baz=128,slow=3.8,SNR=13						
BRTR	Keskin Array B	147.04	313		PKPbc	18 50 40.5	+0.2
OJC	Ojcow	147.23	339	ePKP	PKPbc	18 50 40.5	+0.3
BIZ	Bicaz	147.25	329	⇑P	PKiKP	18 50 41.7	-0.4
KOLS	Kolonicke sedl	147.40	335	ePKP	PKPbc	18 50 41.4	+0.7
KOLS				e		18 50 44.9	
CFR	Carcaliu	147.43	325	⇓P	PKPbc	18 50 41.4	+0.6
FLTG	Flechtingen	147.44	350	ePKPbc	PKPbc	18 50 41.1	+0.4
	baz=13,slow=2.5						
TPGR	Topolog	147.48	324	⇑P	PKPbc	18 50 41.8	+0.7
VRI	Vrincioaia	147.70	327	⇑P	PKPbc	18 50 41.7	+0.2
ASSE	Asse, Remlinge	147.72	350	ePKPbc	PKPbc	18 50 42.0	+0.8
	baz=13,slow=2.5						
KSP	Ksiaz	147.74	343	ePKP	PKiKP	18 50 42.3	-0.6
HARR	Harsova	147.85	325	⇓P	PKiKP	18 50 43.0	-0.3
OSTC	Ostas	148.02	343	⇑ePKP	PKiKP	18 50 43.0	-0.5
CLZ	Clausthal	148.05	351	ePKPbc	PKiKP	18 50 43.2	-0.4
	baz=13,slow=2.5						
CLL	Collm	148.09	347	⇓iPKPbc	PKPbc	18 50 42.8	+0.5
	comp=Z,21nm,0.9s						
CLL				epPKPbc	pPKPbc	18 52 48.0	-0.8
CLL	Collm	148.09	347		PKPbc	18 50 42.7	+0.4
CLL	Collm	148.09	347	ePKPbc	PKPbc	18 50 43.0	+0.7
	baz=13,slow=2.5						
UPC	Upice	148.12	343	⇑ePKP	PKPbc	18 50 42.5	+0.1
DPC	Dobruska-Polom	148.17	343	⇑ePKP	PKPbc	18 50 42.9	+0.2
DPC				ePKPAB	PKPab	18 50 48.2	+0.5
LANS	Liptovska Anna	148.25	338	ePKP	PKiKP	18 50 44.4	+0.3
BRG	Berggiesshubel	148.29	346	i PKP	PKPbc	18 50 43.5	+0.6
BRG				Amp		18 50 44.3	
	comp=Z,9.4nm,0.9s						
BRG				ex	x	18 50 48.1	
BRG				Amp		18 50 48.7	
	comp=Z,5.6nm,0.9s						
BRG	Berggiesshubel	148.29	346	ePKPbc	PKiKP	18 50 43.7	-0.4
	baz=13,slow=2.5						
DOPR	Dopca	148.29	329	⇑P	PKiKP	18 50 44.3	0.0
KRLC	Kraliky	148.29	342	⇑ePKP	PKPbc	18 50 43.1	+0.1
KRLC				ePKPAB	PKPab	18 50 48.3	+0.1
MORC	Moravsky Berou	148.33	341	⇑P	PKiKP	18 50 44.0	-0.3
MORC	Moravsky Berou	148.33	341	ePKP	PKiKP	18 50 43.8	-0.5
MLR	Muntele Rosu	148.35	328	⇑P	PKiKP	18 50 44.8	+0.2
FBE	Freiberg	148.38	347	ePKPbc	PKiKP	18 50 44.3	+0.1
	baz=13,slow=2.5						
PVCC	Panska Ves	148.47	345	⇑ePKP	PKPbc	18 50 43.7	+0.4
VOIR		148.84	328	⇑P	PKPbc	18 50 44.9	+0.4
KASTN	Kahler Asten	148.94	353	ePKPbc	PKiKP	18 50 45.3	-0.1
	baz=13,slow=2.5						
PRU	Pruhonice	148.97	345	⇑ePKP	PKPbc	18 50 44.4	-0.2
VYHS	Vyhne	149.03	338	ePKP	PKiKP	18 50 45.4	-0.3
VYHS				e		18 50 51.9	
VRAC	Vranov	149.03	342	⇓P	PKPbc	18 50 44.7	0.0
VRAC	Vranov	149.03	342	ePKP	PKiKP	18 50 45.5	-0.2
VRAC				e		18 50 51.7	
PLN	Plauen	149.04	348	ePKPbc	PKiKP	18 50 45.5	-0.1
	baz=13,slow=2.5						
TANN	Tannenbergstha	149.04	347	ePKPbc	PKiKP	18 50 45.6	-0.1
	baz=13,slow=2.5						
WERD	Werda	149.04	348	ePKPbc	PKiKP	18 50 45.6	-0.1
	baz=13,slow=2.5						
ARR	Arges	149.09	329	⇑P	PKiKP	18 50 46.6	+0.6
UBBA	Unterbreizbach	149.10	351	ePKPbc	PKiKP	18 50 45.3	-0.3
	baz=13,slow=2.5						
JAVC	Velka Javorina	149.10	340	ePKP	PKiKP	18 50 46.5	+0.6
KOLL	Kolacno	149.11	339	ePKP	PKiKP	18 50 45.9	+0.1
GUNZ	Gunzen	149.12	347	ePKPbc	PKiKP	18 50 46.0	+0.1
	baz=13,slow=2.5						
WERN	Wernitzgruen	149.18	347	ePKPbc	PKiKP	18 50 46.2	+0.2
	baz=13,slow=2.5						
NKC	Novy Kostel	149.22	347	⇑ePKP	PKPbc	18 50 45.7	+0.5
KRUC	Moravsky	149.31	342	ePKP	PKPbc	18 50 45.8	+0.4
KRUC				e		18 50 52.6	
PBCC	Pribram	149.39	345	⇑ePKP	PKPbc	18 50 45.6	0.0
HUMR	Humele	149.52	327	⇑P	PKPbc	18 50 46.1	+0.1
MANZ	Manzenberg	149.52	348	ePKPbc	PKiKP	18 50 46.8	+0.1
	baz=13,slow=2.5						
MODS	Modra-Piesok	149.65	340	ePKP	PKPbc	18 50 46.1	-0.2
ROTZ	Rotzenmuhle	149.71	347	ePKPbc	PKiKP	18 50 47.2	+0.1
	baz=13,slow=2.5						
MEM	Membach	149.77	355	dPKiKP	PKPbc	18 50 46.7	+0.3
BTNL	Ternell	149.78	355	dPKiKP	PKPbc	18 50 46.8	+0.2
TNS	Taunus Mts	149.90	352	ePKPbc	PKiKP	18 50 47.6	+0.2
	baz=13,slow=2.5						
GZR	Gura Zlata	149.95	331	⇑P	PKPbc	18 50 47.3	+0.2
KHC	Kasperske Hory	150.00	345	⇑ePKP	PKPbc	18 50 47.2	+0.1
KHC				ePKPAB	PKPab	18 50 55.4	+0.1
CKRC	Cesky Krumlov	150.11	344	⇑ePKP	PKPbc	18 50 47.7	+0.4
CKRC				ePKPAB	PKPab	18 50 55.4	-0.3
BMRD	Maredsous	150.15	357	dPKiKP	PKPbc	18 50 47.6	+0.2
GERES	GERESS Array B	150.24	345	PKP	PKPdf	18 50 43.0	+1.0
	comp=Z,0.3nm,0.6s,baz=264,slow=1.3,SNR=3.6						
GERES				PKPbc	PKiKP	18 50 48.2	-0.1
	comp=Z,2.9nm,0.7s,baz=48,slow=2.0,SNR=20						
GERES	GERESS Array B	150.24	345		PKPbc	18 50 47.7	0.0
BZS	Buzias	150.30	332	⇑P	PKiKP	18 50 48.3	0.0
DOU	Dourbes	150.37	357	dPKPdf	PKPdf	18 50 40.8	-1.2
DOU				dPKiKP	PKiKP	18 50 48.5	+0.1
CONA	Conrad Observa	150.49	341	eP	PKiKP	18 50 49.0	+0.2
	comp=Z,3.4nm,0.5s						
PLVB	Pleven	150.50	326	⇑P	PKiKP	18 50 48.9	0.0
HERR	Herculane	150.51	330	⇑P	PKiKP	18 50 48.7	-0.1
WLF	Walferdange	150.69	355	dPKiKP	PKiKP	18 50 49.4	+0.3
WLF	Walferdange	150.69	355	ePKPbc	PKiKP	18 50 49.9	+0.8
	baz=13,slow=2.5						
MOA	Molln	151.01	343	eP	PKPbc	18 50 49.6	+0.1
	comp=Z,1.8nm,0.6s						
MORH	Mrgy, Hungar	151.03	336	⇑P	PKiKP	18 50 49.9	0.0
STU	Stuttgart	151.21	351	ePKPbc	PKiKP	18 50 50.6	+0.4
	baz=13,slow=2.5						
VTS	Vitosha	151.76	326	⇓P	PKiKP	18 50 51.9	+0.2
BFO	Black Forest	151.77	352	ePKPbc	PKiKP	18 50 51.6	+0.2
	baz=13,slow=2.5						
SOKA	Soboth	151.86	341	eP	PKPbc	18 50 51.0	-0.5
	comp=Z,3.4nm,0.8s						
WATA	Walderalm	152.15	346	eP	PKPbc	18 50 51.8	-0.3
	comp=Z,2.1nm,0.5s						
RETA	Reutte	152.18	348	eP	PKPbc	18 50 52.1	0.0
	comp=Z,1.1nm,0.5s						
WTTA	Wattenberg	152.21	346	i P	PKPbc	18 50 52.4	0.0
	comp=Z,2.8nm,0.4s						
MOTA	Moosalm	152.24	347	eP	PKPbc	18 50 52.5	+0.1
	comp=Z,5.7nm,1.0s						
MYKA	Terra Mystica	152.30	343	eP	PKPbc	18 50 51.8	-0.7
	comp=Z,3.8nm,0.7s						
SQTA	Sankt Quirin	152.34	347	i P	PKPbc	18 50 52.2	-0.3
	comp=Z,3.1nm,0.6s						
ABTA	Abfaltersbach	152.49	345	eP	PKPbc	18 50 52.3	-0.6
	comp=Z,7.3nm,0.8s						
ESDC	Sonseca Array	160.09	14	PKPab	PKPab	18 51 38.3	-0.6
	comp=Z,0.8nm,1.0s,baz=338,slow=5.5,SNR=2.8						
TORD	Torodi Ar. Bea	172.71	175	PKP	PKPdf	18 51 05.2	-0.3
	comp=Z,2.2nm,0.9s,baz=354,slow=0.6,SNR=8.1						
TORD				PKPab	PKPab	18 52 35.7	+0.8
	comp=Z,0.4nm,0.6s,baz=174,slow=2.7,SNR=2.7						

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*JMA **08** 18:35:45.7±0.1, 23°.93N×121°.66E, h31^{km}±1^{km}, M3.0*

*TAP **08** 18:35:46.3, 23°.96N×121°.64E, h30^{km}, ML3.5, C*

ISC 08 18:35:46.3±0.9, 23°.95N±0°.02×121°.66E±0°.02, h30^{km}±3^{km}, n105, σ0^{s}.93/202, 1C-1D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HWA	Hwalien	0.06	302	i P	Pb	18 35 51.7	+0.3
	baz=289						
HWA				eS	Sb	18 35 55.8	+0.9
	baz=289						
TWD	Chiawan	0.14	337	⇑iP	Pb	18 35 51.8	-0.2
	baz=343						
TWD				i S	Sn	18 35 56.0	+0.1
	baz=343						
NACB	Ninganchiao	0.23	346	P	Pb	18 35 52.5	-0.4
	baz=341						
NACB				S	Sb	18 35 57.3	-0.1
	baz=341						
ESL	Shilin	0.24	237	i P	Pb	18 35 52.7	-0.3
	baz=240						
ESL				S	Sn	18 35 58.5	+0.9
	baz=240						
ETLH	Xiulin Townshi	0.30	328	P	Pb	18 35 53.3	-0.6
	baz=328						
ETLH				S	Sb	18 35 59.0	-0.2
	baz=328						
WHF	Hehuan Shan	0.41	299	⇓iP	Pb	18 35 55.1	-0.6
	baz=290						
WHF				i S	Sb	18 36 01.9	-0.2
	baz=290						
CHGB	Renai	0.46	284	P	Pb	18 35 55.9	-0.4
	baz=276						
CHGB				S	Sb	18 36 02.9	-0.1
	baz=276						
FUSS	Fushou	0.48	308	P	Pb	18 35 56.4	-0.3
	baz=312						
FUSS				S	Sb	18 36 03.5	-0.3
	baz=312						
ENA	Nanau	0.49	9	i P	Pb	18 35 56.4	-0.2
	baz=19						
ENA				i S	Sn	18 36 04.5	-0.3
	baz=19						
HGSD	Ruisui	0.50	205	P	Pn	18 35 57.5	0.0
	baz=213						
HGSD				eS	Sn	18 36 05.6	+0.5
	baz=213						
VWDT	VWDT	0.51	248	P	Pn	18 35 56.9	-0.7
	baz=237						
VWDT				S	Sb	18 36 04.1	-0.1
	baz=237						
EHY	Hungye	0.54	215	i P	Pb	18 35 56.6	-0.7
	baz=212						
EHY				S	Sn	18 36 05.2	-0.8
	baz=212						
TWT	Tachien	0.54	305	i P	Pn	18 35 57.4	-0.8
	baz=303						
TWT				i S	Sb	18 36 05.0	-0.1
	baz=303						
NNSB	Datong	0.54	332	P	Pb	18 35 57.0	-0.6
	baz=327						
NNSB				S	Sb	18 36 04.5	-0.7
	baz=327						
NNSH	Datong	0.54	332	i P	Pb	18 35 57.0	-0.5
	baz=332						
NNSH				i S	Sb	18 36 04.3	-0.9
	baz=332						
TDCB	Techi	0.55	304	P	Pb	18 35 57.5	-0.2
	baz=303						

TDCB				S	**Sb**	**18 36 04.9**	**-0.5**
	baz=303						
NNS	**Nan Shan**	**0.56**	**332**	*i* P	**Pb**	**18 35 57.1**	**-0.7**
	baz=333						
NNS				*i* S	**Sb**	**18 36 05.0**	**-0.6**
	baz=333						
WPL	**Puli Township**	**0.64**	**276**	P	**Pb**	**18 35 58.7**	**-0.4**
	baz=274						
WPL				*e*S	**Sn**	**18 36 08.0**	**-0.7**
	baz=274						
SSLB	**Suanglung**	**0.66**	**256**	P	**Pb**	**18 35 58.8**	**-0.7**
	baz=258						
SSLB				S	**Sb**	**18 36 08.0**	**-0.5**
	baz=258						
NDT	**Datong Townshi**	**0.67**	**349**	*i* P	**Pb**	**18 35 59.0**	**-0.5**
	baz=339						
NDT				*i* S	**Sb**	**18 36 08.1**	**-0.5**
	baz=339						
EYUL	**Yuli**	**0.67**	**208**	P	**Pb**	**18 35 59.1**	**-0.5**
	baz=217						
DPDB	**Guoxing**	**0.68**	**278**	P	**Pn**	**18 35 59.4**	**-0.5**
	baz=275						
DPDB				*e*S	**Sb**	**18 36 08.6**	**-0.2**
	baz=275						
TWF1	**Yuli**	**0.68**	**209**	*i* P	**Pb**	**18 35 58.5**	**-1.2**
	baz=217						
TWF1				S	**Sb**	**18 36 08.5**	**-0.3**
	baz=217						
TWC	**Suao**	**0.68**	**15**	*i* P	**Pn**	**18 35 59.6**	**-0.4**
	baz=18						
TWC				S	**Sn**	**18 36 09.4**	**-0.2**
	baz=18						
ENTT	**Nioudou**	**0.70**	**353**	*i* P	**Pb**	**18 35 59.4**	**-0.7**
	baz=355						
ENTT				S	**Sb**	**18 36 08.9**	**-0.4**
	baz=355						
SMLT	**Sun Moon Lake**	**0.70**	**265**	*i* P	**Pb**	**18 35 59.6**	**-0.4**
	baz=262						
SMLT				*i* S	**Sb**	**18 36 09.1**	**-0.3**
	baz=262						
WHP	**Taichung City**	**0.73**	**297**	*i* P	**Pn**	**18 36 00.3**	**-0.4**
	baz=302						
WHP				*i* S	**Sn**	**18 36 10.1**	**-0.8**
	baz=302						
TYC	**Yuchr**	**0.73**	**267**	*i* P	**Pn**	**18 36 00.1**	**-0.6**
	baz=265						
TYC				S	**Sb**	**18 36 09.5**	**-0.9**
	baz=265						
TWE	**Neicheng**	**0.77**	**1**	*i* P	**Pn**	**18 36 00.6**	**-0.6**
	baz=356						
TWE				*e*S	**Sn**	**18 36 11.7**	**-0.1**
	baz=356						
NSK	**Sanguang**	**0.78**	**339**	*i* P	**Pn**	**18 36 00.6**	**-0.7**
	baz=340						
NSK				*i* S	**Sb**	**18 36 10.7**	**-1.0**
	baz=340						
WHYT	**Xinyi Township**	**0.78**	**251**	*i* P	**Pb**	**18 36 01.7**	**+0.3**
	baz=251						
WHYT				S	**Sn**	**18 36 11.8**	**-0.2**
	baz=251						
YUS	**Yu-Shan**	**0.79**	**235**	*i* P	**Pb**	**18 36 01.8**	**-0.1**
	baz=232						
YUS				*i* S	**Sb**	**18 36 11.8**	**-0.7**
	baz=232						
FULB	**Fuli**	**0.82**	**204**	*i* P	**Pb**	**18 36 01.7**	**-0.3**
	baz=214						
FULB				*i* S	**Sn**	**18 36 14.0**	**+1.0**
	baz=214						
ILA	**Ilan**	**0.82**	**6**	*e*S	**Sn**	**18 36 13.8**	**+0.8**
	baz=355						
NWLT	**Wulai**	**0.84**	**350**	*i* P	**Pn**	**18 36 01.5**	**-0.7**
	baz=344						
NWLT				*i* S	**Sb**	**18 36 12.2**	**-1.3**
	baz=344						
WJS	**Zhushan**	**0.86**	**262**	*i* P	**Pb**	**18 36 03.6**	**+0.8**
	baz=260						
WJS				S	**Sb**	**18 36 15.3**	**+1.4**
	baz=260						
CHKT	**Chengkung**	**0.89**	**198**	*i* P	**Pb**	**18 36 02.8**	**-0.3**
	baz=182						
CHKT				S	**Sb**	**18 36 15.6**	**+1.0**
	baz=182						
ALS	**Alishan**	**0.89**	**241**	*i* P	**Pb**	**18 36 03.5**	**0.0**
	baz=229						
ALS				S	**Sb**	**18 36 15.3**	**+0.1**
	baz=229						
WNT	**Mingjian**	**0.89**	**266**	*i* P	**Pb**	**18 36 03.7**	**+0.4**
	baz=263						
WNT				*i* S	**Sb**	**18 36 15.9**	**+1.0**
	baz=263						
WNT1	**Nantou City**	**0.90**	**268**	P	**Pb**	**18 36 04.4**	**+1.0**
	baz=265						
WNT1				S	**Sb**	**18 36 16.8**	**+1.8**
	baz=265						
NSTT	**Nanjuang**	**0.91**	**319**	*i* P	**Pb**	**18 36 03.5**	**-0.1**
	baz=318						
NSTT				*i* S	**Sb**	**18 36 15.0**	**-0.3**
	baz=318						
LIOB	**Emei**	**0.91**	**320**	*i* P	**Pb**	**18 36 03.8**	**+0.2**
	baz=319						
LIOB				*e*S	**Sb**	**18 36 15.5**	**0.0**
	baz=319						
NTC	**Toucheng**	**0.92**	**10**	P	**Pb**	**18 36 04.4**	**+0.7**
	baz=358						
NTC				*e*S	**Sb**	**18 36 16.8**	**+1.2**
	baz=358						
TCU	**Taichung**	**0.92**	**283**	*i* P	**Pb**	**18 36 04.1**	**+0.4**
	baz=281						
TCU				*i* S	**Sb**	**18 36 17.4**	**+1.8**
	baz=281						
NSY	**Sanyi**	**0.94**	**300**	*i* P	**Pb**	**18 36 04.7**	**+0.6**
	baz=298						
NSY				*i* S	**Sb**	**18 36 18.3**	**+1.9**
	baz=298						
ELDTW	**Lidau**	**0.96**	**218**	*i* P	**Pn**	**18 36 03.0**	**-0.8**
	baz=210						
ELDTW				S	**Sn**	**18 36 15.7**	**-0.8**
	baz=210						
CHN5	**Tsauling**	**0.96**	**249**	*i* P	**Pb**	**18 36 04.9**	**+0.4**
	baz=247						
CHN5				*i* S	**Sb**	**18 36 18.4**	**+1.4**
	baz=247						
NMLH	**Miaoli**	**0.99**	**307**	P	**Pb**	**18 36 05.7**	**+0.9**
	baz=305						
NMLH				S	**Sb**	**18 36 18.8**	**+1.2**
	baz=305						
WDJ	**Dajia District**	**1.01**	**293**	P	**Pb**	**18 36 05.9**	**+0.6**
	baz=292						
WDJ				S	**Sb**	**18 36 20.0**	**+1.8**
	baz=292						
HSN1	**Hsinchu**	**1.01**	**325**	P	**Pb**	**18 36 06.2**	**+0.9**
	baz=323						
HSN1				S	**Sb**	**18 36 21.2**	**+2.9**
	baz=323						
WCHH	**Zhanghua**	**1.01**	**278**	*i* P	**Pb**	**18 36 06.0**	**+0.6**
	baz=275						
WCHH				S	**Sb**	**18 36 20.0**	**+1.7**
	baz=275						
NHDH	**Xindian Distri**	**1.02**	**353**	*i* P	**Pb**	**18 36 04.9**	**-0.5**
	baz=354						
NHDH				S	**Sb**	**18 36 18.4**	**-0.1**
	baz=354						
EDH	**Donghe**	**1.02**	**199**	P	**Pn**	**18 36 04.1**	**-0.5**
	baz=210						
EDH				S	**Sb**	**18 36 19.0**	**+0.4**
	baz=210						
TIPB	**Shuangxi**	**1.03**	**8**	*i* P	**Pb**	**18 36 05.3**	**-0.4**
	baz=359						
TIPB				*e*S	**Sn**	**18 36 17.7**	**-0.6**
	baz=359						
TWA	**Mucha**	**1.03**	**356**	*i* P	**Pb**	**18 36 05.0**	**-0.7**
	baz=346						
TWA				S	**Sb**	**18 36 18.9**	**+0.1**
	baz=346						
TATO	**Taipei**	**1.04**	**351**	P	**Pb**	**18 36 05.7**	**0.0**
	baz=353						
TATO				S	**Sb**	**18 36 18.9**	**0.0**
	baz=353						
WGK	**Gukeng**	**1.04**	**256**	*i* P	**Pb**	**18 36 05.8**	**+0.1**
	baz=253						
WGK				*e*S	**Sb**	**18 36 20.8**	**+1.8**
	baz=253						
SBCB	**Hsinchu**	**1.04**	**324**	P	**Pb**	**18 36 06.5**	**+0.7**
	baz=322						
SBCB				S	**Sb**	**18 36 21.3**	**+2.2**
	baz=322						
WDLH	**Douliu**	**1.06**	**256**	*i* P	**Pb**	**18 36 06.3**	**+0.2**
	baz=254						
WDLH				*i* S	**Sb**	**18 36 21.1**	**+1.6**
	baz=254						
HSN	**Hsinchu**	**1.06**	**324**	*i* P	**Pb**	**18 36 06.3**	**+0.3**
	baz=325						
HSN				*i* S	**Sb**	**18 36 21.3**	**+1.7**
	baz=325						
TAP	**Taipei**	**1.10**	**353**	*e*P	**Pb**	**18 36 06.2**	**-0.5**
	baz=354						
TAP				*i* S	**Sb**	**18 36 20.5**	**-0.2**
	baz=354						
NTY	**Taoyuan**	**1.10**	**343**	P	**Pb**	**18 36 07.0**	**+0.2**
	baz=354						
NTY				S	**Sb**	**18 36 22.2**	**+1.4**
	baz=354						
TWB1	**Santiao Chiao**	**1.10**	**16**	P	**Pb**	**18 36 06.0**	**-0.8**
	baz=33						
TWB1				*e*S	**Sb**	**18 36 22.8**	**+2.0**
	baz=33						
NCUH	**Zhongli**	**1.10**	**337**	*i* P	**Pb**	**18 36 06.7**	**-0.2**
	baz=336						
NCUH				*i* S	**Sb**	**18 36 21.6**	**+0.7**
	baz=336						
NCU	**National Centr**	**1.11**	**337**	P	**Pb**	**18 36 06.9**	**0.0**
	baz=336						
NCU				*i* S	**Sb**	**18 36 22.1**	**+1.1**
	baz=336						
NWF	**Wu-fen Shan**	**1.12**	**6**	*i* P	**Pb**	**18 36 06.7**	**-0.6**
	baz=354						
NWF				S	**Sb**	**18 36 22.5**	**+0.9**
	baz=354						
WFSB	**Wu-fen Shan**	**1.12**	**6**	P	**Pb**	**18 36 06.7**	**-0.5**
	baz=354						
WFSB				*e*S	**Sb**	**18 36 21.6**	**0.0**
	baz=354						
STYT	**Tauyuan**	**1.14**	**227**	*i* P	**Pb**	**18 36 07.2**	**-0.2**
	baz=220						
STYT				S	**Sb**	**18 36 22.7**	**+0.8**
	baz=220						
TPUB	**Ta-pu**	**1.14**	**236**	P	**Pb**	**18 36 07.8**	**+0.3**
	baz=226						
TPUB				S	**Sb**	**18 36 23.1**	**+1.1**
	baz=226						
CHN4	**Tsaushan**	**1.14**	**239**	*i* P	**Pb**	**18 36 07.7**	**+0.2**
	baz=228						
CHN4				*i* S	**Sb**	**18 36 24.1**	**+2.1**
	baz=228						
LONT	**Longtian**	**1.14**	**205**	P	**Pn**	**18 36 04.8**	**-1.6**
	baz=190						
CHN2	**Minshiung**	**1.16**	**249**	*i* P	**Pb**	**18 36 08.8**	**+1.0**
	baz=247						
CHN2				S	**Sb**	**18 36 25.1**	**+2.6**
	baz=247						
TWS1	**Kuangyinshan**	**1.17**	**349**	*i* P	**Pb**	**18 36 07.8**	**-0.2**
	baz=2.0						
TWS1				*i* S	**Sb**	**18 36 23.8**	**+1.0**
	baz=2.0						
WTP	**Ta-pu**	**1.18**	**234**	*i* P	**Pb**	**18 36 08.4**	**+0.1**
	baz=232						
WTP				S	**Sb**	**18 36 24.6**	**+1.4**
	baz=232						
RLNB	**Erlin**	**1.19**	**268**	P	**Pb**	**18 36 08.2**	**0.0**
	baz=278						
RLNB				S	**Sb**	**18 36 24.3**	**+1.0**
	baz=278						
WTK	**Tuku**	**1.19**	**258**	P	**Pb**	**18 36 08.9**	**+0.6**
	baz=256						
WTK				S	**Sb**	**18 36 24.6**	**+1.3**
	baz=256						
TNOU	**National Taiwa**	**1.20**	**5**	*e*P	**Pb**	**18 36 08.8**	**+0.2**
	baz=350						
CHY	**Chiayi**	**1.22**	**249**	P	**Pb**	**18 36 08.3**	**-0.4**
	baz=247						
CHY				S	**Sb**	**18 36 25.5**	**+1.4**
	baz=247						
NTST	**Danshui**	**1.23**	**351**	*i* P	**Pb**	**18 36 07.8**	**-1.1**
	baz=352						
NTST				*i* S	**Sb**	**18 36 25.2**	**+0.7**
	baz=352						
ANP	**Anpu**	**1.24**	**354**	*i* P	**Pb**	**18 36 08.2**	**-1.0**
	baz=355						
TWG	**Pinlang**	**1.24**	**206**	*i* P	**Pn**	**18 36 06.2**	**-1.5**
	baz=205						
TWG				*e*S	**Sn**	**18 36 21.4**	**-2.0**
	baz=205						
TWGBT	**Beinan**	**1.24**	**205**	P	**Pn**	**18 36 06.2**	**-1.5**
	baz=205						
TWGBT				*e*S	**Sn**	**18 36 22.4**	**-1.0**
	baz=205						
TWK	**Hsinying**	**1.27**	**238**	*i* P	**Pb**	**18 36 09.5**	**-0.2**
	baz=225						
TWK				*i* S	**Sb**	**18 36 26.8**	**+1.1**
	baz=225						
TTN	**Taitung**	**1.28**	**202**	*e*S	**Sb**	**18 36 25.2**	**-0.6**
	baz=201						
LDUT	**Ludao**	**1.28**	**188**	*e*P	**Pn**	**18 36 07.6**	**-0.6**
	baz=178						
LDUT				S	**Sn**	**18 36 24.2**	**-0.1**
	baz=178						
CHN1	**Nanshi**	**1.28**	**234**	*i* P	**Pb**	**18 36 10.0**	**+0.1**
	baz=232						
CHN1				*i* S	**Sb**	**18 36 27.5**	**+1.4**
	baz=232						
SNST	**Tainan City**	**1.29**	**236**	*i* P	**Pb**	**18 36 09.7**	**-0.3**
	baz=234						
SNST				S	**Sb**	**18 36 27.8**	**+1.7**
	baz=234						
SGST	**Jiashian**	**1.31**	**229**	*i* P	**Pn**	**18 36 09.0**	**+0.3**
	baz=227						
SGST				S	**Sb**	**18 36 27.7**	**+1.0**
	baz=227						
SLGT	**Liugui**	**1.33**	**225**	*i* P	**Pb**	**18 36 10.9**	**+0.3**
	baz=224						
SLGT				S	**Sb**	**18 36 29.1**	**+1.8**
	baz=224						
WLGB	**Puzi**	**1.33**	**250**	P	**Pb**	**18 36 09.4**	**-1.2**
	baz=234						
WLGB				S	**Sb**	**18 36 28.2**	**+0.9**
	baz=234						
WSF	**Szhu**	**1.35**	**257**	*i* P	**Pb**	**18 36 10.5**	**-0.6**
	baz=255						
WSF				*i* S	**Sb**	**18 36 29.7**	**+1.8**
	baz=255						
ICHU	**Yijhu**	**1.39**	**246**	P	**Pb**	**18 36 11.3**	**-0.4**
	baz=244						
ICHU				S	**Sb**	**18 36 29.6**	**+0.5**
	baz=244						
CHN8	**Yiju**	**1.46**	**246**	*i* P	**Pb**	**18 36 11.8**	**-1.0**
	baz=244						
CHN8				*i* S	**Sb**	**18 36 32.4**	**+1.4**
	baz=244						
CHN3	**Shinhua**	**1.47**	**234**	*e*S	**Sb**	**18 36 34.4**	**+3.1**
	baz=233						
ECL	**Taimali**	**1.49**	**206**	*i* P	**Pn**	**18 36 09.8**	**-1.3**
	baz=195						
ECL				*e*S	**Sn**	**18 36 28.3**	**-1.2**
	baz=195						
SCST	**Cishan**	**1.50**	**226**	*e*P	**Pb**	**18 36 13.8**	**+0.2**
	baz=225						
SCST				S	**Sb**	**18 36 34.2**	**+2.0**
	baz=225						
SSD	**Sandimen**	**1.52**	**218**	*i* P	**Pb**	**18 36 13.1**	**-0.8**
	baz=218						
SSD				S	**Sb**	**18 36 32.7**	**-0.1**
	baz=218						
SCLT	**Jiali**	**1.55**	**241**	*e*P	**Pb**	**18 36 13.1**	**-1.3**
	baz=239						
SCLT				S	**Sb**	**18 36 34.2**	**+0.6**
	baz=239						
TSMG	**Majia**	**1.55**	**217**	P	**Pb**	**18 36 14.1**	**-0.3**
	baz=218						
TSMG				S	**Sb**	**18 36 34.5**	**+0.9**
	baz=218						
IRIF	**Iriomote-Funau**	**1.93**	**78**	P	**Pn**	**18 36 18.0**	**+0.8**
IRIF				S	**Sn**	**18 36 41.3**	**+0.8**
HATJ	**Hateruma jima**	**1.97**	**86**	*e*S	**Sn**	**18 36 41.6**	**+0.3**
JKRS	**Kuro-shima**	**2.17**	**82**	P	**Pn**	**18 36 20.4**	**0.0**
JKRS				S	**Sn**	**18 36 47.0**	**+0.7**
JIJ	**Ishigaki jima**	**2.31**	**79**	P	**Pn**	**18 36 22.5**	**+0.2**
JIJ				S	**Sn**	**18 36 48.9**	**-0.8**
JISG	**Ishigakijimahi**	**2.50**	**75**	P	**Pn**	**18 36 25.2**	**+0.2**
JISG				S	**Sn**	**18 36 54.1**	**-0.5**
JTJ	**Tarama**	**2.86**	**75**	P	**Pn**	**18 36 30.8**	**+0.8**
JTJ				*e*S	**Sn**	**18 37 04.4**	**+1.0**

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*IDC **08** 19:00:44.8±1.0, 44°.43N×114°.01W, h0^{km}, mb1 3.5/4, mb1mx3.2/55, mbtmp3.1/4, ML3.2/4, Error ellipse: s-maj=15.1km s-min=10.5km az=39.0*

*ANF **08** 19:00:45.5±0.7, 44°.38N×114°.18W, h5^{km}, ML3.5/8, Error ellipse: s-maj=13.8km s-min=5.3km az=107.0*

*BUT **08** 19:00:46±3.1, 44°.35N±0°.04×114°.05W±0°.05, h14^{km}±6^{km}, Md3.7, ML3.3/68(NEIC), Error ellipse: s-maj=6.7km s-min=4.1km az=136.0*

*NEIC **08** 19:00:46.6±1.7, 44°.39N±0°.04×114°.08W±0°.04, h5^{km}±2^{km}, Error ellipse: s-maj=7.5km s-min=3.0km az=139.0*

ISC 08 19:00:45.2±1.3**, 44°.39N**±0°.03×**114°.04W**±0°.03**, h1**^{km}±13^{km}**, n55, **σ1^{s}**44**/61**, Western Idaho**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BCYI	**Bear Canyon**	**0.46**	**99**		**Pg**	**19 00 54.8**	**+0.8**
HLID	**Hailey**	**0.87**	**198**	P	**Pg**	**19 01 01.8**	**0.0**
	baz=18						
HLID				S	**Sg**	**19 01 12.8**	**-0.2**
	baz=18						
HLID	**Hailey**	**0.87**	**198**		**Pg**	**19 01 01.6**	**-0.2**
HLID				Sg	**Sg**	**19 01 12.4**	**-0.6**
HLID				IAML		19 01 14.2	
	1μm,0.2s						
HLID				IAML		19 01 15.0	
	1μm,0.2s						
MCMT	**McKenzie Canyo**	**0.96**	**62**		**Pb**	**19 01 04.3**	**-0.3**
DLMT	**Dillon**	**1.42**	**46**		**Pb**	**19 01 12.6**	**+0.1**
DLMT					**Sg**	**19 01 32.7**	**+2.1**
DLMT				IAML		19 01 34.6	
	618nm,0.3s						
MFID	**Camas Ranch**	**1.62**	**234**	Pn	**Pb**	**19 01 15.1**	**-0.8**
MFID				Sn	**Sg**	**19 01 37.2**	**+0.1**
LRM	**Limekiln Ridge**	**1.82**	**38**		**Pn**	**19 01 18.0**	**+0.1**
QLMT	**Earthquake Lak**	**1.92**	**76**		**Pn**	**19 01 19.4**	**+0.3**
YHB	**Horse Butte**	**2.06**	**79**		**Pb**	**19 01 22.6**	**-0.9**
YHL	**Hebgen Lake**	**2.09**	**76**		**Pb**	**19 01 23.1**	**-0.9**
BOZ	**Bozeman (W)**	**2.09**	**54**	P	**Pn**	**19 01 22.5**	**+1.0**
	baz=235						
BOZ				S	**Sb**	**19 01 50.9**	**+0.3**
	baz=235						
BOZ	**Bozeman (W)**	**2.09**	**54**		**Pn**	**19 01 21.9**	**+0.5**
BOZ				IAML		19 01 53.5	
	265nm,0.3s						
YMR	**Madison River**	**2.22**	**82**		**Pb**	**19 01 25.0**	**-1.1**
YHH	**Holmes Hill**	**2.31**	**79**		**Pb**	**19 01 26.4**	**-1.4**
YPP	**Pitchstone Pla**	**2.32**	**92**		**Pb**	**19 01 26.4**	**-1.6**
YPP				IAML		19 01 59.0	
	comp=E,118nm,1.1s						
YPP				IAML		19 02 01.0	
	comp=N,113nm,0.3s						
ECR	**Eagle Creek**	**2.35**	**124**		**Pb**	**19 01 26.9**	**-1.4**
BMO	**Blue Mountains**	**2.38**	**282**	Pn	**Pn**	**19 01 25.6**	**+0.3**
BMO				IAML		19 02 02.0	
	comp=N,96nm,0.7s						
MSO	**Missoula**	**2.44**	**2**	P	**Pn**	**19 01 26.4**	**+0.1**
	baz=182						
MSO				S	**Sn**	**19 01 57.6**	**+0.9**
	baz=182						
MSO	**Missoula**	**2.44**	**2**		**Pn**	**19 01 26.1**	**-0.1**
MSO				IAML		19 02 05.1	
	comp=N,122nm,0.5s						
MSO				IAML		19 02 05.4	
	comp=N,113nm,0.4s						
MOOW	**Moose Ponds**	**2.46**	**104**		**Pn**	**19 01 27.8**	**+1.3**
H17A	**Grant Village**	**2.48**	**89**	P	**Pn**	**19 01 28.2**	**+1.2**
	baz=270						
H17A	**Grant Village**	**2.48**	**89**	Pn	**Pn**	**19 01 28.1**	**+1.2**
REDW	**Red Top Meadow**	**2.52**	**113**		**Pn**	**19 01 27.9**	**+0.5**
REDW				IAML		19 02 04.3	
	comp=N,97nm,0.6s						
REDW				IAML		19 02 08.0	
	comp=N,88nm,0.5s						
SNOW	**Snow King Moun**	**2.55**	**110**		**Pb**	**19 01 30.8**	**-1.0**
SNOW				IAML		19 02 10.7	
	comp=N,88nm,1.0s						
SNOW				IAML		19 02 17.1	
	comp=N,119nm,0.9s						
LOHW	**Long Hollow**	**2.60**	**106**		**Pn**	**19 01 30.0**	**+1.6**
LKWY	**Lake**	**2.61**	**85**		**Pb**	**19 01 31.3**	**-1.6**
LKWY				IAML		19 02 14.4	
	comp=N,82nm,0.7s						
LKWY				IAML		19 02 14.5	
	comp=N,137nm,0.6s						
AHID	**Auburn Hatcher**	**2.68**	**126**		**Pn**	**19 01 30.7**	**+1.1**
AHID				IAML		19 02 16.6	
	comp=N,134nm,0.6s						
AHID				IAML		19 02 21.2	
	comp=E,82nm,0.8s						
F10A	**Beach Ranch, E**	**2.76**	**306**		**Pn**	**19 01 30.6**	**+0.1**
F10A				IAML		19 02 16.8	
	comp=E,102nm,0.3s						
F10A				IAML		19 02 20.2	
	comp=N,123nm,0.3s						
HVU	**Hansel Valley**	**2.77**	**160**		**Pb**	**19 01 32.9**	**-2.6**
HRY	**Holter Researc**	**2.79**	**33**		**Pn**	**19 01 31.0**	**-0.1**
YNE	**Yellowstone No**	**2.94**	**76**		**Pn**	**19 01 34.6**	**+1.4**
YNE				IAML		19 02 20.7	
	comp=E,136nm,0.5s						
SPUT	**South Promonto**	**3.29**	**159**		**Pn**	**19 01 39.7**	**+1.7**
JTMT	**Jette**	**3.36**	**357**	Pn	**Pn**	**19 01 39.6**	**+0.7**
JTMT				IAML		19 02 33.7	
	comp=E,54nm,0.8s						
JTMT				IAML		19 02 40.4	
	comp=N,51nm,0.5s						
GCMT	**Greycliff**	**3.40**	**64**	Pn	**Pn**	**19 01 39.7**	**+0.3**
RLMT	**Red Lodge**	**3.48**	**76**	P	**Pn**	**19 01 42.0**	**+1.4**
	baz=259						
RLMT	**Red Lodge**	**3.48**	**76**		**Pn**	**19 01 40.4**	**-0.2**
RLMT				IAML		19 02 37.2	
	comp=N,89nm,0.7s						
RLMT				IAML		19 02 38.9	
	comp=N,94nm,0.3s						
G08A	**Pilot Rock**	**3.62**	**286**		**Pn**	**19 01 43.0**	**+0.7**
G08A				IAML		19 02 41.8	
	comp=N,34nm,1.1s						
BW06	**Boulder Array**	**3.64**	**115**	P	**Pn**	**19 01 44.5**	**+1.7**
	baz=298						
BW06	**Boulder Array**	**3.64**	**115**		**Pb**	**19 01 47.2**	**-3.2**
PD31	**Pinedale Array**	**3.64**	**115**		**Pn**	**19 01 45.0**	**+2.3**
PDAR	**Pinedale Array**	**3.64**	**115**	Pn	**Pn**	**19 01 45.8**	**+3.0**
	comp=N,1.1nm,0.3s,baz=307,slow=12,SNR=18						
PDAR				Lg	Lg	19 02 38.3	
	comp=N,0.8nm,0.3s,baz=316,slow=23,SNR=6.0						
PDAR	**Pinedale Array**	**3.64**	**115**		**Pb**	**19 01 46.6**	**-3.7**
ELK	**Elko**	**3.75**	**194**	Pn	**Pn**	**19 01 45.7**	**+1.4**
	comp=N,1.7nm,0.3s,baz=3.5,slow=12,SNR=19						
ELK				Lg	Lg	19 02 39.1	
	comp=N,6.8nm,0.3s,baz=147,slow=9.9,SNR=15						
ELK	**Elko**	**3.75**	**194**		**Pn**	**19 01 45.4**	**+1.1**
ELK				IAML		19 02 45.5	
	comp=N,35nm,0.6s						
WVOR	**Wild Horse Val**	**3.88**	**241**		**Pn**	**19 01 46.8**	**+0.9**
WVOR				IAML		19 02 54.7	
	comp=N,29nm,0.9s						
I07A	**Izee**	**3.94**	**267**	Pn	**Pn**	**19 01 47.6**	**+0.8**
I07A				IAML		19 03 00.4	
	comp=N,30nm,1.3s						
CTU	**Camp Tracy**	**4.06**	**155**		**Pn**	**19 01 51.2**	**+2.6**
DUG	**Dugway, Tooele**	**4.29**	**167**	P	**Pn**	**19 01 53.0**	**+1.3**
	baz=348						
NEW	**Newport**	**4.43**	**332**	Pn	**Pn**	**19 01 54.1**	**+0.7**
	comp=N,0.6nm,0.3s,baz=148,slow=16,SNR=6.8						
NEW				Lg	Lg	19 02 56.5	
	comp=N,0.8nm,0.3s,baz=258,slow=14,SNR=4.9						
NEW	**Newport**	**4.43**	**332**	P	**Pn**	**19 01 53.7**	**+0.3**
	baz=150						
NEW	**Newport**	**4.43**	**332**	Pn	**Pn**	**19 01 54.0**	**+0.6**
NEW				IAML		19 03 16.6	
	comp=N,20nm,0.8s						
NEW				IAML		19 03 16.7	
	comp=N,36nm,1.2s						
EGMT	**Eagleton**	**4.70**	**38**	Pn	**Pn**	**19 01 57.6**	**+0.4**
PINE	**Pine Mountain**	**5.01**	**266**	Pn	**Pn**	**19 02 05.2**	**+3.6**
PINE				IAML		19 04 52.8	
	comp=N,32nm,4.6s						
PINE				IAML		19 04 59.7	
	comp=E,21nm,4.4s						
NVAR	**Mina Array Bea**	**6.76**	**210**	Pg	**Pb**	**19 02 43.9**	**+0.4**
	comp=E,0.4nm,0.3s,baz=24,slow=17,SNR=3.0						
NVAR				Lg	Lg	19 04 14.8	
	comp=E,0.6nm,0.3s,baz=43,slow=22,SNR=3.6						
YKA	**Yellowknife Ar**	**18.14**	**359**	P	**Pn**	**19 04 56.0**	**-2.0**
	comp=E,0.0nm,0.3s,baz=174,slow=12,SNR=4.4						

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*IDC **08** 19:12:28.0±24.0, 30°.60S×180°.00E, h259^{km}±234^{km}, mb2.8/2, mb1 3.2/3, mb1mx3.1/42, mbtmp3.7/3, ML4.4/1, Error ellipse: s-maj=278.5km s-min=54.7km az=13.0*

ISC 08 19:12:37.0±6.0**, 31°.0S**±0°.4×**178°.6E**±0°.7**, h250^{km}, n14, σ1^{s}.01**/13**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HAZ	**Te Kaha**	**6.79**	**185**	P	**Pn**	**19 14 16.2**	**+1.3**
WMGZ	**Waiomatatini S**	**6.83**	**181**	P	**Pn**	**19 14 17.1**	**+1.8**
PKGZ	**Pakihiroa**	**6.91**	**183**	P	**Pn**	**19 14 15.9**	**-0.6**
URZ	**Urewera**	**7.36**	**189**	P	**Pn**	**19 14 21.2**	**-0.9**
	4.9nm,0.3s,baz=271,slow=3.6,SNR=35						
URZ				S	S	19 15 42.2	-4.4
	1.7nm,0.3s,baz=245,slow=22,SNR=8.4						
URZ	**Urewera**	**7.36**	**189**	P	**Pn**	**19 14 21.3**	**-0.9**
MWZ	**Matawai**	**7.39**	**186**	P	**Pn**	**19 14 22.4**	**-0.1**
CNGZ	**Carnagh Statio**	**7.50**	**182**	P	**Pn**	**19 14 22.9**	**-0.9**
MUGZ	**Murupara**	**7.63**	**191**	P	**Pn**	**19 14 26.6**	**+1.1**
MTHZ	**Maungataniwha**	**7.98**	**190**	P	**Pn**	**19 14 30.0**	**-0.1**
MHGZ	**Mahia Peninsul**	**8.18**	**184**	P	**Pn**	**19 14 31.2**	**-1.2**
NMHZ	**Naumai**	**8.23**	**190**	P	**Pn**	**19 14 33.4**	**+0.3**
ASAR	**Alice Springs**	**40.13**	**269**	P	**P**	**19 19 49.0**	**-0.1**
	0.2nm,0.6s,baz=108,slow=7.9,SNR=5.1						
WRA	**Warramunga Arr**	**41.18**	**275**	P	**P**	**19 19 57.5**	**0.0**
	0.3nm,0.3s,baz=111,slow=8.1,SNR=6.8						
FINES	**FINESS Array B**	**144.60**	**337**	PKP	PKPbc	19 31 32.5	-10
	3.5nm,1.0s,baz=25,slow=4.6,SNR=3.8						

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*IDC **08** 19:13:31.4±2.1, 20°.51S×178°.20W, h590^{km}±21^{km}, mb3.3/10, mb1 3.3/12, mb1mx3.1/47, mbtmp4.3/12, Error ellipse: s-maj=28.8km s-min=17.9km az=130.0*

*NEIC **08** 19:13:32.9±2.3, 20°.2S±0°.1×178°.5W±0°.2, h596^{km}±10^{km}, mb4.1/19, Error ellipse: s-maj=23.5km s-min=15.6km az=95.0*

ISC 08 19:13:31.8±0.8**, 20°.3S**±0°.1×**178°.4W**±0°.1**, h587^{km}, n38, σ1^{s}.30**/38**, mb3.9**/19**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.24**	**306**	P	**P**	**19 14 59.7**	**+1.5**
	4.0nm,0.3s,baz=135,slow=6.4,SNR=18						
MSVF	**Nonsavu**	**4.24**	**306**	P	**P**	**19 14 59.0**	**+0.8**
OUZ	**Omahuta**	**16.47**	**204**	P	**P**	**19 16 55.9**	**+2.0**
OUZ				IAmb	IAmb	19 16 57.4	
	comp=Z,18nm,0.8s						
URZ	**Urewera**	**18.32**	**191**	P	**P**	**19 17 08.6**	**-2.2**
	comp=Z,2.2nm,0.3s,baz=270,slow=1.4,SNR=6.5						
URZ	**Urewera**	**18.32**	**191**	P	**P**	**19 17 09.7**	**-1.0**
NNZ	**Nelson**	**22.00**	**197**	P	**P**	**19 17 43.6**	**-0.3**
LHI	**Lord Howe Isla**	**23.12**	**237**	P	**P**	**19 17 54.2**	**+0.2**
ARMA	**Armidale**	**28.84**	**244**	P	**P**	**19 18 43.0**	**-1.5**
ARMA				IAmb	IAmb	19 18 43.8	
	comp=Z,1.9nm,0.8s						
CTA	**Charters Tower**	**33.16**	**264**	P	**P**	**19 19 21.9**	**+0.6**
	comp=Z,1.4nm,0.3s,baz=90,slow=11,SNR=8.3						
CTAO	**Charters Tower**	**33.16**	**264**	P	**P**	**19 19 19.7**	**-1.6**
CTAO				IAmb	IAmb	19 19 37.4	
	comp=Z,8.7nm,1.1s						
TOO	**Toolangi**	**35.74**	**233**	P	**P**	**19 19 42.0**	**-0.5**
TOO				IAmb	IAmb	19 19 43.6	
	comp=Z,6.4nm,0.9s						
COEN	**Coen**	**37.22**	**274**	P	**P**	**19 19 52.7**	**-2.2**
COEN				IAmb	IAmb	19 19 56.4	
	comp=Z,3.2nm,0.9s						
STKA	**Stephens Creek**	**37.56**	**244**	P	**P**	**19 19 58.1**	**+0.6**
	comp=Z,1.4nm,0.9s,baz=82,slow=12,SNR=4.3						
STKA	**Stephens Creek**	**37.56**	**244**	P	**P**	**19 19 55.6**	**-1.9**
BBOO	**Buckleboo**	**42.33**	**243**	P	**P**	**19 20 35.6**	**+0.2**
BBOO				IAmb	IAmb	19 20 54.3	
	comp=Z,9.4nm,1.1s						
JAY	**Jayapura**	**43.65**	**289**	P	**P**	**19 20 47.0**	**+1.0**
	comp=Z,11nm,0.5s,baz=153,slow=3.8,SNR=9.2						
WR0	**Warramunga Arr**	**44.09**	**262**	P	**P**	**19 20 49.4**	**0.0**
AS31	**Alice Springs**	**44.22**	**257**	P	**P**	**19 20 50.6**	**+0.2**
ASAR	**Alice Springs**	**44.22**	**257**	P	**P**	**19 20 50.7**	**+0.3**
	comp=Z,0.7nm,0.7s,baz=87,slow=8.1,SNR=14						
ASAR	**Alice Springs**	**44.22**	**257**	P	**P**	**19 20 49.3**	**-1.1**
WB0	**Warramunga Arr**	**44.26**	**262**	P	**P**	**19 20 50.3**	**-0.4**
WB0				IAmb	IAmb	19 21 07.3	
	comp=Z,2.6nm,1.0s						
WB2	**Warramunga Arr**	**44.27**	**262**	P	**P**	**19 20 50.2**	**-0.5**
WB2				IAmb	IAmb	19 20 56.6	
	comp=Z,5.7nm,1.1s						
WRA	**Warramunga Arr**	**44.28**	**262**	P	**P**	**19 20 50.7**	**-0.1**
	comp=Z,0.7nm,0.3s,baz=97,slow=5.1,SNR=19						
MLOA	**Mauna Loa Obse**	**45.45**	**31**	P	**P**	**19 20 59.7**	**-0.5**
MTN	**Manton Dam**	**48.81**	**271**	P	**P**	**19 21 20.8**	**-4.1**
MTN				IAmb	IAmb	19 21 26.1	
	comp=Z,8.1nm,0.9s						
FITZ	**Fitzroy Crossi**	**52.71**	**262**	P	**P**	**19 21 53.6**	**+0.5**
	comp=Z,2.4nm,1.0s,baz=4.8,slow=12,SNR=3.3						
FITZ	**Fitzroy Crossi**	**52.71**	**262**	P	**P**	**19 21 53.6**	**+0.5**
SIJI	**Sorong**	**52.84**	**285**	P	**P**	**19 21 54.8**	**+0.6**
	comp=Z,11nm,0.7s,baz=94,slow=7.4,SNR=5.9						
QSPA	**South Pole Qui**	**69.77**	**180**	P	**P**	**19 23 45.1**	**+1.3**
QSPA				IAmb	IAmb	19 23 45.8	
	comp=Z,3.9nm,0.8s						
PEA0B	**Petropavlovsk-**	**75.98**	**345**	P	**P**	**19 24 18.9**	**-0.3**
PEA0B				IAmb	IAmb	19 24 32.3	
	comp=Z,10nm,1.1s						
PETK	**Petropavlovsk-**	**75.98**	**345**	P	**P**	**19 24 20.1**	**+0.9**
	comp=Z,3.0nm,0.8s,baz=134,slow=9.7,SNR=6.2						
PETK	**Petropavlovsk-**	**75.98**	**345**	P	**P**	**19 24 19.8**	**+0.6**
SEY	**Seymchan**	**86.10**	**347**	P	**P**	**19 25 11.9**	**+1.1**
	comp=Z,0.6nm,0.6s,baz=179,slow=6.8,SNR=14						
ILAR	**Eielson Array**	**88.19**	**13**	P	**P**	**19 25 20.7**	**0.0**
	comp=Z,0.5nm,0.4s,baz=217,slow=5.6,SNR=9.4						
ILAR	**Eielson Array**	**88.19**	**13**	P	**P**	**19 25 20.4**	**-0.3**
AKASG	**Malin Array Be**	**142.66**	**331**	PKP	**PKPdf**	**19 31 56.1**	**-2.7**
	comp=Z,0.9nm,0.6s,baz=42,slow=4.1,SNR=9.5						
CLL	**Collm**	**147.78**	**347**	*i* PKPbc	**PKiKP**	**19 32 12.1**	**-0.5**
GERES	**GERESS Array B**	**149.91**	**344**	PKPbc	**PKPbc**	**19 32 16.6**	**0.0**
	comp=Z,0.5nm,0.7s,baz=57,slow=3.6,SNR=3.6						

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*IDC **08** 19:41:35.3±1.4, 31°.62N×49°.87E, h0^{km}, mb3.8/7, mb1 3.9/11, mb1mx3.5/47, mbtmp3.9/11, ML3.6/4, Error ellipse: s-maj=28.4km s-min=20.6km az=157.0*

*TEH **08** 19:41:37.5, 31°.67N×50°.02E, h9^{km}, ML3.8*

*THR **08** 19:41:40.5±0.3, 31°.76N×50°.04E, h15^{km}±5^{km}, ML3.5*

ISC 08 19:41:38.7±0.7**, 31°.55N**±0°.04×**49°.95E**±0°.04**, h26^{km}, n59, σ1^{s}.70**/61**, mb3.8**/6**, 5C-2D, Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AMIS	**Naft Sefid**	**0.57**	**282**	*e*Pg	**Pb**	**19 41 49.7**	**-0.5**
AMIS				*e*		19 42 02.7	
	comp=Z,99nm,0.2s						
ABEH	**Behbahan**	**0.98**	**164**	*e*Pg	**Pn**	**19 41 58.1**	**+1.2**
ABEH				*e*		19 42 21.9	
	comp=Z,99nm,0.4s						
SHK1	**Shahrekord**	**1.11**	**46**	*e*Pg	**Pn**	**19 41 56.2**	**-2.7**
AHWZ	**Ahwaz**	**1.13**	**259**	*e*Pg	**Pb**	**19 42 01.5**	**+1.9**
IPIR	**Pirpir**	**1.39**	**35**	*e*Pg	**Pn**	**19 42 02.0**	**-0.7**
IPIR				*e*		19 42 23.6	
	comp=Z,99nm,0.6s						
KLNJ	**Kolanjah**	**1.51**	**111**	*e*		19 42 40.3	
	comp=Z,99nm,0.7s						
KLNJ				*e*Pn	**Pn**	**19 42 05.5**	**+1.1**
IGAR	**Gharneh**	**1.98**	**64**	*e*Pn	**Pn**	**19 42 12.1**	**+1.4**
IRAM	**Ramesheh**	**2.09**	**82**	*e*Pn	**Pn**	**19 42 13.8**	**+1.5**
KHMZ	**Khomeyn**	**2.18**	**0**	*e*Pn	**Pn**	**19 42 15.5**	**+1.9**
KHMZ	**Khomeyn**	**2.18**	**0**	*e*Pn	**Pn**	**19 42 15.5**	**+1.9**
IKLH	**Kolahrood**	**2.24**	**38**	*e*Pn	**Pn**	**19 42 15.8**	**+1.4**
IKLH				*e*		19 42 53.2	
	comp=Z,99nm,0.6s						
IKMR	**Kamar-syah**	**2.37**	**326**	*e*Pn	**Pn**	**19 42 17.4**	**+1.6**
IKMR				*e*		19 42 58.9	
	comp=Z,99nm,0.6s						
KAZ1	**Kazerun**	**2.41**	**142**	*e*Pn	**Pn**	**19 42 19.9**	**+3.3**
KAZ1				*e*		19 43 15.9	
	comp=Z,99nm,0.4s						
IZEF	**Zefreh**	**2.43**	**56**	*e*Pn	**Pn**	**19 42 18.1**	**+1.2**
DHL1	**Dehloran**	**2.53**	**297**	*e*Pn	**Pn**	**19 42 20.3**	**+2.2**
IKFM	**Kafar-mosalman**	**2.65**	**319**	*e*Pn	**Pn**	**19 42 21.5**	**+1.8**
IDOB	**Doab**	**2.68**	**327**	*e*Pn	**Pn**	**19 42 21.8**	**+1.4**
NASN	**Na'in**	**2.73**	**62**	*e*Pn	**Pn**	**19 42 23.9**	**+2.7**
NASN				*e*S	**Sn**	**19 42 55.5**	**+2.0**
NASN	**Na'in**	**2.73**	**62**	*e*Pn	**Pn**	**19 42 23.9**	**+2.7**
UMR	**Umm Al-Rimmam**	**2.77**	**225**	*e*P		19 42 23.4	
MIB	**Mutribah**	**2.84**	**233**	*e*P		19 42 24.8	
HSAM	**Samen**	**2.88**	**337**	*e*Pn	**Pn**	**19 42 24.5**	**+1.2**
HSAM				*e*		19 42 32.8	
	comp=Z,99nm,0.3s						
SHI	**Shiraz**	**2.92**	**130**	*e*Pn	**Pn**	**19 42 26.8**	**+3.2**
SHI				*e*		19 43 31.4	
	comp=Z,99nm,0.5s						
ASAO	**Ashtian**	**2.99**	**1**	*e*Pn	**Pn**	**19 42 26.9**	**+2.2**
ASAO				*e*Sg	**Sb**	**19 43 07.6**	**-0.1**
ASAO	**Ashtian**	**2.99**	**1**	*e*Pn	**Pn**	**19 42 26.9**	**+2.2**
KRSH	**Karshahi**	**3.04**	**37**	*e*Pn	**Pn**	**19 42 26.3**	**+1.0**
KBD	**Kabd**	**3.06**	**220**	*e*P		19 42 27.9	
GHVR	**GHOM**	**3.13**	**21**	*e*Sg	**Sb**	**19 43 10.8**	**-0.8**
GHVR				IAML		19 43 18.4	
	comp=N,100nm,0.8s						
RST	**Umm Al-Ruwaisa**	**3.26**	**232**	*e*P		19 42 30.5	
HAGD	**Aghdareh**	**3.33**	**349**	*e*Pn	**Pn**	**19 42 30.8**	**+1.4**
HAGD				*e*		19 43 30.2	
	comp=Z,99nm,0.4s						
RDF	**Al-Radifah**	**3.34**	**219**	*e*P		19 42 32.1	
ANAR	**Anarak**	**3.59**	**62**	*e*Pn	**Pn**	**19 42 34.4**	**+1.5**
KER	**Kermanshah**	**3.69**	**321**	*e*Pn	**Pn**	**19 42 35.4**	**+1.2**
IRAZ	**Razeghan**	**3.84**	**360**	*e*Pn	**Pn**	**19 42 37.4**	**+1.0**
IGHG	**Ghaleghazi**	**3.97**	**315**	*e*Pn	**Pn**	**19 42 39.3**	**+1.2**
IGHG				*e*		19 43 57.7	
	comp=Z,99nm,0.6s						
QABG	**Abgarm-Qazvin**	**4.16**	**356**	*e*Pn	**Pn**	**19 42 40.6**	**-0.1**
IDHR	**Dehrash**	**4.33**	**317**	*e*Pn	**Pn**	**19 42 43.9**	**+0.8**
IDHR				*e*		19 43 37.5	
	comp=Z,99nm,0.3s						
DAMV	**Damavand**	**4.41**	**22**	*e*Sg	**Sb**	**19 43 50.5**	**+2.2**
ILAS	**Lasjerd**	**4.58**	**33**	*e*Pn	**Pn**	**19 42 47.8**	**+1.3**
IFIR	**Firoozkooh**	**4.71**	**29**	*e*Pn	**Pn**	**19 42 49.1**	**+0.8**
QALM	**Alamut, Qazvin**	**4.91**	**7**	*e*Pn	**Pn**	**19 42 51.4**	**+0.4**
IPRN	**Peran**	**5.09**	**22**	*e*Pn	**Pn**	**19 42 54.4**	**+1.0**
IANJ	**Anjilo**	**5.12**	**39**	*e*Pn	**Pn**	**19 42 54.9**	**+0.9**
TPRV	**Parvadeh(Tabas**	**5.89**	**74**	*e*Pn	**Pn**	**19 43 06.1**	**+1.6**
TNSJ	**Nastanj**	**6.11**	**65**	*e*Pn	**Pn**	**19 43 08.4**	**+1.0**
TKDS	**Koohdasht(Taba**	**6.40**	**69**	*e*Pn	**Pn**	**19 43 12.5**	**+1.1**
GEYT	**Alibeck**	**9.26**	**44**	Pn	**Pn**	**19 43 52.0**	**+1.5**
	comp=Z,0.5nm,0.3s,baz=233,slow=17,SNR=5.9						
WSAR	**Wadi Sarin**	**11.31**	**135**	Pn	**Pn**	**19 44 18.2**	**-0.5**
	comp=Z,0.7nm,0.3s,baz=8.1,slow=7.1,SNR=8.2						
WSAR				Sn	**Sn**	**19 46 18.6**	**-5.7**
	comp=Z,0.5nm,0.3s,baz=65,slow=19,SNR=3.6						
EIL	**Elat**	**13.05**	**266**	Pn	**Pn**	**19 44 40.7**	**-1.7**
	comp=Z,0.3nm,0.3s,baz=54,slow=10,SNR=3.0						
AKTO	**Aktyubinsk**	**19.80**	**15**	P	**P**	**19 46 07.0**	**0.0**
	comp=Z,0.1nm,0.3s,baz=240,slow=8.1,SNR=2.9						
BELG	**Belogornoye**	**20.90**	**356**	P	**P**	**19 46 17.6**	**-1.3**
	comp=Z,5.1nm,0.9s,baz=352,slow=4.8,SNR=3.4						
IDI	**Anoyia**	**21.23**	**287**	P	**P**	**19 46 23.9**	**+1.2**
	comp=Z,11nm,0.8s,baz=157,slow=12,SNR=3.2						
CFR	**Carcaliu**	**21.77**	**315**	⇑P	**P**	**19 46 27.9**	**-0.4**
VOIR		**23.79**	**313**	⇑P	**P**	**19 46 50.4**	**+1.0**
AKASG	**Malin Array Be**	**24.55**	**327**	P	**P**	**19 46 54.9**	**-1.2**
	comp=Z,0.6nm,0.3s,baz=133,slow=9.0,SNR=7.8						
BURAR	**Bucovina Array**	**24.76**	**317**	⇑P	**P**	**19 46 57.4**	**-0.8**
GZR	**Gura Zlata**	**25.22**	**311**	⇑P	**P**	**19 47 01.2**	**-1.2**
BMR	**Baia Mare**	**25.79**	**316**	⇑P	**P**	**19 47 06.4**	**-1.1**
DRGR		**25.86**	**314**	⇓P	**P**	**19 47 08.9**	**+0.7**
AMBH	**Ambrzfalva**	**26.92**	**312**	⇓P	P	19 47 05.8	-12
MKAR	**Makanchi Array**	**29.09**	**49**	P	**P**	**19 47 37.9**	**+0.8**
	comp=Z,0.2nm,0.6s,baz=246,slow=9.4,SNR=3.9						
FINES	**FINESS Array B**	**33.72**	**339**	P	**P**	**19 48 16.5**	**-1.0**
	comp=Z,3.5nm,0.9s,baz=161,slow=12,SNR=4.9						
ARCES	**ARCESS Array B**	**40.47**	**347**	P	**P**	**19 49 14.5**	**-0.3**
	comp=Z,2.5nm,1.1s,baz=145,slow=5.5,SNR=2.9						
TORD	**Torodi Ar. Bea**	**47.82**	**259**	P	**P**	**19 50 14.6**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=59,slow=8.2,SNR=3.6						

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*IDC **08** 19:50:02.5±1.5, 31°.61N×49°.98E, h0^{km}, mb3.9/7, mb1 3.9/10, mb1mx3.5/43, mbtmp3.9/10, ML3.5/3, MS3.0/3, Ms1 3.0/3, ms1mx2.4/52, Error ellipse: s-maj=27.8km s-min=23.5km az=166.0*

*TEH **08** 19:50:04.7, 31°.64N×50°.04E, h8^{km}, ML3.7*

*THR **08** 19:50:05.7±0.6, 31°.60N×50°.01E, h14^{km}±6^{km}, ML3.4*

*OMAN **08** 19:50:12.1, 30°.86N×50°.06E, h10^{km}, mb5.3/15, ms2.6/2*

ISC 08 19:50:05.6±0.6**, 31°.45N**±0°.04×**49°.99E**±0°.04**, h26^{km}, n87, σ1^{s}.97**/100**, mb3.9**/7**, 2C-4D, Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AMIS	**Naft Sefid**	**0.64**	**290**	*e*Pg	**Pb**	**19 50 17.4**	**-0.8**
AMIS				*e*		19 50 37.5	
	comp=Z,99nm,0.6s						
ABEH	**Behbahan**	**0.87**	**165**	*e*Pg	**Pn**	**19 50 25.6**	**+3.3**
ABEH				*e*		19 50 49.7	
	comp=Z,99nm,0.5s						
AHWZ	**Ahwaz**	**1.16**	**265**	*e*Pg	**Pb**	**19 50 28.1**	**+1.1**
SHK1	**Shahrekord**	**1.16**	**41**	*e*Pg	**Pn**	**19 50 24.0**	**-2.5**
KLNJ	**Kolanjah**	**1.44**	**107**	*e*Pg	**Pn**	**19 50 32.0**	**+1.6**
KLNJ				*e*		19 51 08.0	
	comp=Z,99nm,0.8s						
IPIR	**Pirpir**	**1.45**	**32**	*e*Pg	**Pn**	**19 50 29.6**	**-0.9**
IPIR				*e*		19 50 51.3	
	comp=Z,99nm,0.7s						
IGAR	**Gharneh**	**1.99**	**61**	*e*Pn	**Pn**	**19 50 39.7**	**+1.9**
IGAR				*e*		19 50 51.1	
	comp=Z,99nm,0.2s						
IRAM	**Ramesheh**	**2.07**	**79**	*e*Pg	**Pb**	**19 50 42.6**	**-0.1**
KHMZ	**Khomeyn**	**2.29**	**359**	*e*Pn	**Pn**	**19 50 43.2**	**+1.3**
KHMZ	**Khomeyn**	**2.29**	**359**	*e*Pn	**Pn**	**19 50 43.2**	**+1.3**
IKLH	**Kolahrood**	**2.30**	**35**	*e*Pn	**Pn**	**19 50 43.5**	**+1.3**
IKLH				*e*		19 51 19.9	
	comp=Z,99nm,0.4s						
KAZ1	**Kazerun**	**2.31**	**141**	*e*Pn	**Pb**	**19 50 46.8**	**+0.2**
IZEF	**Zefreh**	**2.46**	**53**	*e*Pn	**Pn**	**19 50 46.0**	**+1.7**
IKMR	**Kamar-syah**	**2.47**	**327**	*e*Pn	**Pn**	**19 50 44.9**	**+0.6**
IKMR				*e*		19 51 32.7	
	comp=Z,99nm,0.7s						
DHL1	**Dehloran**	**2.61**	**299**	*e*Pn	**Pn**	**19 50 48.7**	**+2.6**
UMR	**Umm Al-Rimmam**	**2.72**	**227**	*e*P		19 50 51.9	
NASN	**Na'in**	**2.75**	**60**	*e*Pn	**Pn**	**19 50 50.3**	**+2.0**
NASN				*e*S	**Sn**	**19 51 23.1**	**+2.3**
NASN	**Na'in**	**2.75**	**60**	*e*Pn	**Pn**	**19 50 50.3**	**+2.0**
IKFM	**Kafar-mosalman**	**2.75**	**319**	*e*Pn	**Pn**	**19 50 49.0**	**+0.9**
IDOB	**Doab**	**2.79**	**327**	*e*Pn	**Pn**	**19 50 48.4**	**-0.5**
AHBU	**AHRAM**	**2.81**	**156**	*e*Pn	**Pb**	**19 50 54.0**	**-1.1**
MIB	**Mutribah**	**2.81**	**235**	*e*P		19 50 53.0	
SHI	**Shiraz**	**2.82**	**129**	*e*Pn	**Pb**	**19 50 54.1**	**-1.4**
SHI				*e*		19 51 59.2	
	comp=Z,99nm,0.6s						
HSAM	**Samen**	**3.00**	**337**	*e*Pn	**Pn**	**19 50 52.7**	**+1.0**
HSAM				*e*		19 51 00.6	
	comp=Z,99nm,0.4s						
KBD	**Kabd**	**3.01**	**222**	*e*P		19 50 56.0	
ASAO	**Ashtian**	**3.10**	**1**	*e*Pn	**Pn**	**19 50 54.5**	**+1.4**
ASAO				*e*Sg	**Sb**	**19 51 37.7**	**+0.1**
ASAO	**Ashtian**	**3.10**	**1**	*e*Pn	**Pn**	**19 50 54.5**	**+1.4**
KRSH	**Karshahi**	**3.10**	**35**	*e*Pn	**Pn**	**19 50 54.6**	**+1.5**
GHVR	**GHOM**	**3.22**	**20**	*e*Sg	**Sb**	**19 51 41.2**	**+0.2**
RST	**Umm Al-Ruwaisa**	**3.23**	**234**	*e*P		19 50 58.4	
RDF	**Al-Radifah**	**3.28**	**221**	*e*P		19 50 59.9	
HAGD	**Aghdareh**	**3.44**	**348**	*e*Pn	**Pn**	**19 50 57.6**	**-0.2**
HAGD				*e*		19 51 58.8	
	comp=Z,99nm,0.7s						
ANAR	**Anarak**	**3.61**	**60**	*e*Pn	**Pn**	**19 51 01.9**	**+1.8**
KER	**Kermanshah**	**3.79**	**321**	*e*Pn	**Pn**	**19 51 02.6**	**+0.1**
IRAZ	**Razeghan**	**3.95**	**359**	*e*Pn	**Pn**	**19 51 05.5**	**+0.7**
IGHG	**Ghaleghazi**	**4.07**	**316**	*e*Pn	**Pn**	**19 51 06.5**	**+0.1**
IGHG				*e*		19 52 25.6	
	comp=Z,99nm,0.6s						
QABG	**Abgarm-Qazvin**	**4.27**	**356**	*e*Pn	**Pn**	**19 51 08.3**	**-0.8**
IDHR	**Dehrash**	**4.44**	**318**	*e*Pn	**Pn**	**19 51 11.5**	**+0.1**
DAMV	**Damavand**	**4.49**	**21**	*e*Pn	**Pn**	**19 51 13.0**	**+0.8**
DAMV	**Damavand**	**4.49**	**21**	*e*Pn	**Pn**	**19 51 13.0**	**+0.8**
THKV	**Tehran--Karaj**	**4.52**	**9**	IAML		19 52 38.9	
	comp=N,29nm,0.6s						
ILAS	**Lasjerd**	**4.65**	**32**	*e*Pn	**Pn**	**19 51 15.7**	**+1.3**
IFIR	**Firoozkooh**	**4.78**	**28**	*e*Pn	**Pn**	**19 51 17.7**	**+1.5**
QALM	**Alamut, Qazvin**	**5.00**	**6**	*e*Pn	**Pn**	**19 51 18.8**	**-0.5**
ISHM	**Shahmirzad**	**5.15**	**31**	*e*Pn	**Pn**	**19 51 21.6**	**+0.3**
IPRN	**Peran**	**5.17**	**22**	*e*Pn	**Pn**	**19 51 22.0**	**+0.6**
IANJ	**Anjilo**	**5.18**	**38**	*e*Pn	**Pn**	**19 51 22.4**	**+0.7**
TPRV	**Parvadeh(Tabas**	**5.89**	**73**	*e*Pn	**Pn**	**19 51 33.6**	**+2.3**
TNSJ	**Nastanj**	**6.12**	**64**	*e*Pn	**Pn**	**19 51 36.4**	**+1.9**
TKDS	**Koohdasht(Taba**	**6.40**	**68**	*e*Pn	**Pn**	**19 51 40.0**	**+1.6**
SLWR	**Sila**	**7.50**	**168**	P	**Pn**	**19 51 57.2**	**+3.8**
SLWR				S	**Sn**	**19 53 20.7**	**+3.1**
SHME	**Shamm**	**7.62**	**133**	P	**Pn**	**19 51 56.4**	**+1.4**
SHME				S	**Sn**	**19 53 19.3**	**-1.2**
BANOM	**Banah**	**7.81**	**133**	P	**Pn**	**19 51 59.2**	**+1.5**
	SNR=10						
BANOM				S	**Sn**	**19 53 24.7**	**-0.5**
MASF	**Masafi**	**8.13**	**137**	P	**Pn**	**19 52 03.8**	**+1.8**
MASF				S	**Sn**	**19 53 32.0**	**-1.2**
NAZ	**Nazwa, Dubai**	**8.15**	**141**	P	**Pn**	**19 52 03.6**	**+1.4**
NAZ				S	**Sn**	**19 53 32.6**	**-0.9**
MDH	**Madha**	**8.27**	**136**	P	**Pn**	**19 52 06.2**	**+2.3**
MDH				S	**Sn**	**19 53 33.9**	**-2.6**
ASUD	**Al Ashush, Dub**	**8.27**	**144**	P	**Pn**	**19 52 06.6**	**+2.7**
FAQ	**Al Faqa, Dubai**	**8.31**	**142**	P	**Pn**	**19 52 08.9**	**+4.5**
FAQ				S	**Sn**	**19 53 37.2**	**-0.3**
MZWR	**Madinat Zayed**	**8.39**	**155**	P	**Pn**	**19 52 08.8**	**+3.2**
UOSS	**Minazif**	**8.48**	**138**	P	**Pn**	**19 52 08.7**	**+1.8**
UOSS				S	**Sn**	**19 53 40.8**	**-1.0**
ASHO	**Ashiyiah**	**8.61**	**140**	P	**Pn**	**19 52 10.4**	**+1.8**
ASHO				S	**Sn**	**19 53 44.5**	**-0.3**
GEYT	**Alibeck**	**9.30**	**44**	Pn	**Pn**	**19 52 19.6**	**+1.5**
	comp=N,0.4nm,0.3s,baz=237,slow=10,SNR=5.3						
SOHO	**SOHO**	**9.30**	**140**	P	**Pn**	**19 52 18.7**	**+0.6**
SOHO				S	**Sn**	**19 54 01.7**	**-0.2**
GNI	**Garni**	**9.67**	**335**	LR	LR	19 56 38.1	
	comp=N,69nm,18.1s,baz=194,slow=42						
ARQ	**Araqi**	**9.94**	**143**	P	**Pn**	**19 52 31.1**	**+4.2**
ARQ				S	**Sn**	**19 54 18.2**	**+0.5**
HOQ	**Hoqain**	**10.17**	**139**	P	**Pn**	**19 52 31.4**	**+1.3**
BSY	**Bisya**	**10.78**	**142**	P	**Pn**	**19 52 41.7**	**+3.3**
	SNR=6.4						
SMDO	**Samad**	**11.00**	**137**	S	**Sn**	**19 54 41.9**	**-1.9**
WSAR	**Wadi Sarin**	**11.21**	**135**	Pn	**Pn**	**19 52 45.1**	**+0.9**
	comp=N,0.9nm,0.3s,baz=350,slow=10,SNR=10						
WSAR				Sn	**Sn**	**19 54 45.0**	**-3.8**
	comp=N,0.6nm,0.3s,baz=77,slow=14,SNR=3.8						
MHTO	**MHTO**	**12.63**	**144**	P	**Pn**	**19 53 06.0**	**+2.3**
	SNR=6.0						
EIL	**Elat**	**13.08**	**266**	LR	LR	19 58 51.6	
	comp=N,30nm,18.3s,baz=82,slow=40						
DOK	**Doka**	**13.31**	**163**	P	**Pn**	**19 53 14.6**	**+1.7**
	SNR=14						
DOK				S	**Sn**	**19 55 35.4**	**-4.7**
WHFO	**Wadi Hawf**	**13.90**	**165**	P	**Pn**	**19 53 21.8**	**+0.8**
	SNR=7.2						
SHAO	**Shalim**	**14.31**	**158**	P	**Pn**	**19 53 27.2**	**+0.6**
	SNR=7.9						
ABTO	**Aybut**	**14.35**	**167**	P	**Pn**	**19 53 27.3**	**+0.1**
	SNR=6.6						
ABTO				S	**Sn**	**19 56 01.5**	**-4.1**
DMTO	**DMTO**	**14.39**	**161**	P	**Pn**	**19 53 27.7**	**0.0**
	SNR=15						
DMTO				S	**Sn**	**19 55 59.1**	**-7.4**
BRTR	**Keskin Array B**	**15.64**	**306**	Pn	**Pn**	**19 53 45.2**	**+0.8**
	comp=N,0.1nm,0.3s,baz=130,slow=13,SNR=2.9						
AKTO	**Aktyubinsk**	**19.89**	**15**	P	**P**	**19 54 34.5**	**-0.5**
	comp=N,0.1nm,0.3s,baz=187,slow=15,SNR=2.9						
BELG	**Belogornoye**	**21.00**	**356**	P	**P**	**19 54 45.4**	**-1.5**
	comp=N,6.1nm,0.7s,baz=345,slow=7.1,SNR=3.9						
IDI	**Anoyia**	**21.29**	**287**	P	**P**	**19 54 51.1**	**+0.8**
	comp=N,14nm,0.9s,baz=16,slow=7.4,SNR=2.8						
CFR	**Carcaliu**	**21.86**	**315**	⇓P	**P**	**19 54 55.7**	**-0.6**
VOIR		**23.89**	**313**	⇓P	**P**	**19 55 17.2**	**-0.1**
DOPR	**Dopca**	**23.93**	**314**	⇓P	**P**	**19 55 15.8**	**-1.7**
AKASG	**Malin Array Be**	**24.65**	**327**	P	**P**	**19 55 22.3**	**-1.7**
	comp=N,1.4nm,0.6s,baz=132,slow=9.3,SNR=9.9						
BURAR	**Bucovina Array**	**24.86**	**318**	⇓P	**P**	**19 55 21.1**	**-4.9**
GZR	**Gura Zlata**	**25.32**	**311**	⇑P	**P**	**19 55 31.3**	**+1.1**
DRGR		**25.96**	**314**	⇑P	**P**	**19 55 36.9**	**+0.9**
MKAR	**Makanchi Array**	**29.12**	**49**	P	**P**	**19 56 04.5**	**+0.1**
	comp=N,0.2nm,0.4s,baz=243,slow=9.4,SNR=4.1						
FINES	**FINESS Array B**	**33.83**	**340**	P	**P**	**19 56 44.9**	**-0.6**
	comp=N,0.6nm,0.3s,baz=132,slow=9.1,SNR=4.9						
ARCES	**ARCESS Array B**	**40.58**	**347**	P	**P**	**19 57 42.0**	**-0.7**
	comp=N,4.1nm,1.1s,baz=167,slow=5.4,SNR=3.1						
TORD	**Torodi Ar. Bea**	**47.84**	**259**	P	**P**	**19 58 42.4**	**+0.9**
	comp=N,0.9nm,1.0s,baz=56,slow=8.2,SNR=3.7						
NWAO	**Narrogin (SRO)**	**90.16**	**129**	LR	LR	20 43 40.7	
	comp=N,17nm,19.2s,baz=248,slow=36						

IDC 08 19:51:51.1±632.0**, 48°.29N**×**39°.58E, h0^{km}, Error ellipse: s-maj=247.7km s-min=161.2km az=17.0, Ukraine-Moldova-Southwestern Russia region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASON**	**8.56**	**351**	*i*		20 42 10.0	
	baz=168,slow=331,SNR=1.9						
I31KZ	**AKTYUBINSK INF**	**12.22**	**73**	*i*		21 06 20.0	
	baz=266,slow=326,SNR=3.4						
I46RU	**ZALESOVO INFRA**	**28.56**	**61**	*i*		22 49 10.0	
	baz=276,slow=299,SNR=3.9						

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*ROM **08** 19:53:01.0±0.1, 43°.436N±0°.006×13°.527E±0°.010, h15^{km}±1^{km}, ML2.5/18, Error ellipse: s-maj=0.7km s-min=0.5km az=348.0*

ISC 08 19:53:01.4±0.8**, 43°.42N**±0°.02×**13°.53E**±0°.02**, h16^{km}**±5^{km}**, n38, σ0^{s}.96**/61**, 1C-6D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PP3	**Marolino**	**0.07**	**128**	P	**Pg**	**19 53 04.2**	**-0.3**
PP3				S	**Sg**	**19 53 06.8**	**+0.3**
PP3				AML	AML		
	comp=E,11375µm,0.2s						
PP3				AML	AML		
	comp=N,16050µm,0.7s						
PP3				AML	AML		
	comp=E,10295µm,0.2s						
PP3				AML	AML		
	comp=E,11335µm,0.2s						
PP3				AML	AML		
	comp=N,16100µm,0.7s						
PP3				AML	AML		
	comp=E,10290µm,0.2s						
PP3				AML	AML		
	comp=N,16950µm,0.7s						
PP3				AML	AML		
	comp=E,11345µm,0.2s						
PP3				AML	AML		
	comp=N,16050µm,0.7s						
PP3				AML	AML		
	comp=N,16900µm,0.7s						
PP3				AML	AML		
	comp=N,16050µm,0.7s						
PP3				AML	AML		
	comp=E,10300µm,0.2s						
PP3				AML	AML		
	comp=N,16900µm,0.7s						
AOI	**Ancona**	**0.14**	**22**	⇓P	**Pg**	**19 53 04.7**	**-0.6**
AOI				S	**Sb**	**19 53 07.9**	**-0.6**
AOI				AML	AML		
	comp=E,4945µm,0.3s						
AOI				AML	AML		
	comp=N,8235µm,0.1s						
AOI				AML	AML		
	comp=N,8230µm,0.1s						
CIMA	**Civitanova Mar**	**0.15**	**139**	P	**Pb**	**19 53 05.6**	**-0.3**
CIMA				AML	AML		
	comp=E,3020µm,0.4s						
CIMA				AML	AML		
	comp=N,2000µm,0.3s						
CIMA				AML	AML		
	comp=E,3015µm,0.4s						
CIMA				AML	AML		
	comp=N,2320µm,1.3s						
CIMA				AML	AML		
	comp=E,3020µm,0.4s						
TRE1	**Treia**	**0.20**	**235**	⇑P	**Pb**	**19 53 06.1**	**-0.5**
TRE1				S	**Sb**	**19 53 09.7**	**-0.4**
TRE1				AML	AML		
	comp=E,5450µm,0.3s						
TRE1				AML	AML		
	comp=N,2600µm,0.6s						
CING	**Cingoli**	**0.25**	**259**	P	**Pg**	**19 53 06.3**	**-0.6**
CING				S	**Sg**	**19 53 10.4**	**-0.3**
CING				AML	AML		
	comp=N,1940µm,0.2s						
CING				AML	AML		
	comp=E,2060µm,1.2s						
MNTP	**Montappone**	**0.29**	**189**	P	**Pg**	**19 53 07.5**	**-0.1**
MNTP				S	**Sb**	**19 53 13.0**	**+0.2**
MNTP				AML	AML		
	comp=E,4200µm,1.4s						
MNTP				AML	AML		
	comp=N,3470µm,0.7s						
MNTP				AML	AML		
	comp=N,3470µm,0.7s						

EL6	Elcito	0.33	254	P	Pg	19 53 07.6	-0.7
EL6				S	Sg	19 53 12.9	0.0
SENI	Senigallia	0.36	323	⇓P	Pb	19 53 09.0	-0.4
GAG1	Gagliole	0.39	242	P	Pg	19 53 08.6	-0.7
CSP1	Cessapalombo	0.41	216	P	Pg	19 53 09.0	-0.7
CSP1				S	Sb	19 53 16.0	-0.4
ARVD	Arcevia	0.44	280	P	Pg	19 53 09.6	-0.6
ARVD				S	Sb	19 53 16.6	-0.4
ARVD				AML	AML		
	comp=E,460µm,0.3s						
ARVD				AML	AML		
	comp=N,624µm,0.5s						
COR1	Corinaldo	0.44	299	P	Pb	19 53 10.3	-0.5
SNTG	Esanatoglia	0.46	249	⇓P	Pg	19 53 09.9	-0.8
SNTG				S	Sb	19 53 17.2	-0.6
SNTG				AML	AML		
	comp=E,176µm,1.5s						
SNTG				AML	AML		
	comp=E,176µm,1.5s						
SNTG				AML	AML		
	comp=N,448µm,0.3s						
OFFI	Offida	0.50	167	P	Pb	19 53 12.2	+0.4
OFFI				AML	AML		
	comp=N,988µm,0.6s						
OFFI				AML	AML		
	comp=E,946µm,1.4s						
OFFI				AML	AML		
	comp=N,992µm,0.6s						
FDMO	Fiordimonte	0.50	220	P	Pg	19 53 10.6	-0.8
FDMO				S	Sg	19 53 18.5	+0.3
FOSV	Fossato di Vic	0.58	257	P	Pg	19 53 11.9	-0.9
FOSV				S	Sb	19 53 21.1	0.0
FOSV				AML	AML		
	comp=N,242µm,0.2s						
FOSV				AML	AML		
	comp=E,264µm,0.2s						
FOSV				AML	AML		
	comp=N,242µm,0.2s						
FRON	Frontone	0.59	280	P	Pg	19 53 12.5	-0.7
FRON				S	Sb	19 53 21.9	+0.3
FRON				AML	AML		
	comp=E,492µm,0.6s						
FRON				AML	AML		
	comp=N,623µm,0.6s						
FRON				AML	AML		
	comp=N,624µm,0.6s						
FRON				AML	AML		
	comp=E,491µm,0.6s						
FSSB	Fossombrone	0.61	296	⇓P	Pg	19 53 12.7	-0.7
FSSB				AML	AML		
	comp=E,368µm,1.1s						
FSSB				AML	AML		
	comp=N,432µm,0.3s						
CESI	CESI - Serrava	0.62	228	⇓P	Pg	19 53 12.7	-0.9
CESI				S	Sb	19 53 22.7	+0.3
CESI				AML	AML		
	comp=N,95µm,0.2s						
CESI				AML	AML		
	comp=E,120µm,1.3s						
CESI				AML	AML		
	comp=N,95µm,0.2s						
AQT1	Arquata del Tr	0.67	195	P	Pg	19 53 13.7	-0.8
AQT1				S	Sb	19 53 24.3	+0.4
NARO	Abbazia di Nar	0.72	286	⇓P	Pg	19 53 14.6	-0.8
NARO				S	Sb	19 53 25.7	+0.5
NARO				AML	AML		
	comp=E,110µm,1.5s						
NARO				AML	AML		
	comp=N,150µm,0.9s						
NARO				AML	AML		
	comp=E,110µm,1.5s						
NARO				AML	AML		
	comp=N,150µm,0.9s						
TERO	Teramo	0.80	176	P	Pg	19 53 16.2	-0.8
TERO				AML	AML		
	comp=E,162µm,0.3s						
TERO				AML	AML		
	comp=N,130µm,1.0s						
SMA1	SAN MARTINO	0.80	190	P	Pg	19 53 15.9	-1.2
SMA1				S	Sb	19 53 28.7	+0.9
ATVO	AVT- Monte Val	0.82	268	P	Pg	19 53 16.4	-1.0
ATVO				S	Sb	19 53 28.9	+0.7
ATVO				AML	AML		
	comp=E,186µm,0.8s						
ATVO				AML	AML		
	comp=E,187µm,0.8s						
ATVO				AML	AML		
	comp=N,259µm,0.6s						
CAMP	Campotosto	0.89	186	P	Pb	19 53 17.6	-0.9
CAMP				S	Sn	19 53 31.7	-0.3
LNSS	Leonessa	0.90	204	P	Pb	19 53 17.4	-1.2
LNSS				S	Sn	19 53 31.5	-0.7
LNSS				AML	AML		
	comp=E,296µm,0.2s						
LNSS				AML	AML		
	comp=E,296µm,0.2s						
LNSS				AML	AML		
	comp=N,380µm,0.9s						
RM33	Pellescritta (	0.94	194	P	Pb	19 53 18.4	-1.1
RM33				S	Sn	19 53 33.0	-0.3
RM33				AML	AML		
	comp=E,292µm,0.2s						
RM33				AML	AML		
	comp=E,292µm,0.2s						
RM33				AML	AML		
	comp=N,210µm,1.0s						
ARRO	Arrone	1.01	214	P	Pb	19 53 19.7	-0.9
DUGI	Dugi Otok	1.24	62	*e*Pg	Pg	19 53 25.2	-0.2
DUGI				Sg	Sg	19 53 41.7	0.0
NVLJ	Novalja	1.50	40	*e*Pn	Pb	19 53 28.5	-0.3
NVLJ				Sn	Sg	19 53 48.5	-1.1
MORI	Morici	1.64	74	*e*Pn	Pg	19 53 31.9	-1.1
MORI				Sn	Sg	19 53 53.9	-0.3
RIY	Rijeka	2.02	19	*e*Pn	Pn	19 53 35.8	+1.0
RIY				Sn	Sb	19 54 01.3	-1.4
PTRJ	Pietraroja	2.19	160	AML	AML		
	comp=N,958µm,0.4s						
PTRJ				AML	AML		
	comp=E,472µm,1.4s						
OBKA	Obir	3.17	13	*e*Pn	Pn	19 53 52.1	+1.4
	comp=E,0.2nm,0.2s						
ABTA	Abfaltersbach	3.40	348	*e*Pn	Pn	19 53 55.3	+1.4
	comp=E,1.1nm,0.1s						
FETA	Feichten	4.11	332	*e*Pn	Pn	19 54 07.9	+4.3
	comp=E,0.1nm,0.2s						
SQTA	Sankt Quirin	4.14	337	*e*Pn	Pn	19 54 05.2	+1.2
	comp=E,1.1nm,0.4s						
WATA	Walderalm	4.15	341	*e*Pn	Pn	19 54 05.9	+1.7
	comp=E,0.7nm,0.2s						

IDC 08 20:13:19.2±2.1**,50°.03N**×**114°.88W,h0**^{km}**,mb2.6**/1**,**
mb1 3.5/3**,mb1mx3.1**/63**,mbtmp3.1**/3**,ML3.3**/2**,MS2.8**/1**,**
Ms1 2.8/1**,ms1mx2.2**/9**,Error ellipse: s-maj=40.4km**
s-min=9.5km az=115.0,Alberta

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEW	Newport	2.30	221	Pn	Pb	20 14 00.2	-1.4
	3.7nm,0.3s,baz=35,slow=7.8,SNR=41						
NEW				Lg	Lg	20 14 30.5	
	4.0nm,0.3s,baz=97,slow=16,SNR=5.0						
I56US	NEWPORT INFRAS	2.30	221	*i*		20 27 40.0	
	baz=37,slow=328,SNR=2.9						
I10CA	LAC DU BONNET	12.10	82	*i*		21 21 50.0	
	baz=271,slow=333,SNR=1.0						
YKA	Yellowknife Ar	12.49	1	Pn	Pn	20 16 13.8	-4.2
	0.2nm,0.3s,baz=176,slow=13,SNR=13						
YKA				Sn	Sn	20 18 23.0	-15
	0.1nm,0.3s,baz=176,slow=23,SNR=3.6						
YKA				Lg	Lg	20 19 45.8	
	baz=173,slow=28,SNR=3.7						
ILAR	Eielson Array	22.35	323	P	P	20 18 18.8	+0.5
	0.1nm,0.6s,baz=106,slow=9.5,SNR=2.4						
TXAR	Lajitas Array	22.35	153	LR	LR	20 26 41.2	
	comp=Z,23nm,20.4s,baz=0.0,slow=36						

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*IDC **08** 20:32:17.7±1.3, 14°.84N×147°.19E, h0^{km}, mb3.6/9,*
mb1 3.8/10, mb1mx3.6/51, mbtmp3.7/10, ML3.8/1, MS3.2/1,
Ms1 3.2/1, ms1mx2.4/44, Error ellipse: s-maj=35.3km
s-min=18.9km az=103.0

*NEIC **08** 20:32:20.5±0.7, 14°.66N±0°.09×147°.31E±0°.04, h37^{km}±9^{km},*
mb4.4/5, Error ellipse: s-maj=12.8km s-min=4.7km
az=186.0

ISC 08 20:32:21.0±0.8**,14°.73N**±0°.08×**147°.35E**±0°.09**,h35**^{km}**,n27,**
σ**1^s.40**/21**,mb3.9**/11**,Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANA2	Anatahan	2.25	316	Pn	Pn	20 32 55.7	-0.1
GUMO	Guam	2.66	245	Pn	Pn	20 33 01.3	-0.1
	18nm,0.3s,baz=46,slow=17,SNR=2.5						
GUMO				Sn	Sn	20 33 33.0	+0.6
	32nm,0.3s,baz=343,slow=19,SNR=2.4						
GUMO	Guam	2.66	245		Pn	20 32 59.8	-1.6
PATS	Pohnpei	13.32	125	Pn	Pn	20 35 26.3	-1.4
H11S3	WAKE ISLAND Hy	18.91	76	T	T	20 56 21.8	
	baz=262						
H11S1	WAKE ISLAND Hy	18.92	76	T	T	20 56 24.9	
	baz=262						
H11S2	WAKE ISLAND Hy	18.92	76	T	T	20 56 12.1	
	baz=262						
H11N1	WAKE ISLAND Hy	19.31	72	T	T	20 56 45.8	
	baz=258						
H11N2	WAKE ISLAND Hy	19.32	72	T	T	20 56 44.8	
	baz=258						
H11N3	WAKE ISLAND Hy	19.33	72	T	T	20 56 46.7	
	baz=258						
NACB	Ninganchiao	26.00	295	P	P	20 37 48.8	-2.0
NACB				IAmb	IAmb	20 37 51.4	
	comp=Z,15nm,1.0s						
BATI	Baumata	34.13	225	LR	LR	20 55 38.5	
	comp=Z,32nm,18.1s,baz=102,slow=41						
KLR	Kul'dur	36.71	343	P	P	20 39 24.4	-0.2
	comp=Z,1.2nm,0.7s,baz=141,slow=7.9,SNR=4.2						
WRA	Warramunga Arr	36.75	201	P	P	20 39 27.3	+1.9
	comp=Z,0.4nm,0.8s,baz=24,slow=8.7,SNR=2.9						
FITZ	Fitzroy Crossi	39.01	214	P	P	20 39 46.0	+1.6
	comp=Z,0.6nm,0.7s,baz=20,slow=12,SNR=1.0						
ASAR	Alice Springs	40.36	199	P	P	20 39 57.6	+1.9
	comp=Z,0.2nm,0.6s,baz=19,slow=8.8,SNR=1.9						
ASAR	Alice Springs	40.36	199	P	P	20 39 54.7	-1.0
CMAR	Chiang Mai Arr	46.43	282	P	P	20 40 45.5	+0.7
	comp=Z,0.9nm,0.7s,baz=81,slow=6.0,SNR=7.0						
SONM	Songino Array	47.23	323	P	P	20 40 51.0	+0.3
	comp=Z,0.8nm,0.6s,baz=134,slow=8.5,SNR=7.5						
SONM	Songino Array	47.23	323	P	P	20 40 50.2	-0.5
ZALV	Zalesovo Beam	62.12	324	P	P	20 42 39.1	+0.7
	comp=Z,0.4nm,0.3s,baz=117,slow=5.0,SNR=2.2						
MK31	Makanchi Array	62.36	315	P	P	20 42 40.9	+0.7
MKAR	Makanchi Array	62.36	315	P	P	20 42 41.1	+0.9
	comp=Z,1.2nm,0.6s,baz=90,slow=7.8,SNR=22						
MAKZ	Makanchi	62.57	315	P	P	20 42 41.0	-0.6
MAKZ				IAmb	IAmb	20 42 45.1	
	comp=Z,2.2nm,0.8s						
KURK	Kurchatov	65.28	319	P	P	20 42 58.8	-0.5
ABKAR	Akbulak array	77.31	318	P	P	20 44 09.7	-2.3
YKA	Yellowknife Ar	80.74	28	P	P	20 44 33.1	+2.5
	comp=Z,0.3nm,0.8s,baz=284,slow=5.0,SNR=2.9						

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*IDC **08** 20:39:09.5±0.8, 2°.55S×139°.94E, h0^{km}, mb3.9/7,*
mb1 4.2/8, mb1mx3.9/36, mbtmp4.0/8, ML4.4/1, MS3.0/8,
Ms1 3.0/8, ms1mx2.8/38, Error ellipse: s-maj=14.6km
s-min=8.9km az=169.0

*DJA **08** 20:39:13.8±0.5, 3°S±6°×14°0E±°, h27^{km}±3^{km}, M4.2/7,*
mb4.4/7, MLv4.2/4

ISC 08 20:39:13.9±1.0**,2°.66S**±0°.08×**140°.19E**±0°.06**,h35**^{km}±4^{km}**,**
n29,σ**2^s.01**/24**,mb3.9**/6**,MS2.7**/5**,Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GENI	Genyem	0.07	340	P	Pb	20 39 19.2	-0.6
GENI				S	Sb	20 39 24.0	+0.1
JAY	Jayapura	0.53	74	Pg	Pn	20 39 24.9	-0.2
	503nm,0.3s,baz=240,slow=10,SNR=1485						
JAY				Lg	Lg	20 39 34.5	
	baz=90,slow=18						
JAY				LR	LR	20 40 01.7	
	comp=Z,2µm,19.4s,baz=338,slow=68						
JAY	Jayapura	0.53	74	P	Pn	20 39 24.8	-0.3
JAY				S	Sn	20 39 34.1	+1.2
WAMI	Wamena	1.91	231	P	Pb	20 39 46.9	-1.4
SRPI	Serui, Papua	4.03	281	P	Pn	20 40 14.1	+0.9
SIJI	Sorong	9.10	281	Pn	Pn	20 41 21.6	-1.3
	0.4nm,0.3s,baz=58,slow=13,SNR=1.4						
SIJI				LR	LR	20 44 54.1	
	comp=Z,78nm,21.9s,baz=78,slow=39						
PMG	Port Moresby	9.63	134	LR	LR	20 46 36.7	
	comp=Z,203nm,18.2s,baz=320,slow=45						
SOEI	Soe	17.32	245	P	P	20 43 15.2	+0.7
	46nm,0.9s						
DAV	Davao City (W)	17.50	304	LR	LR	20 50 09.0	
	comp=Z,43nm,18.3s,baz=110,slow=38						
BATI	Baumata	18.05	245	P	P	20 43 24.9	+2.5
	1.9nm,0.3s,baz=339,slow=1.2,SNR=10						
BATI	Baumata	18.05	245	P	P	20 43 24.6	+2.2
	31nm,0.9s						
WRA	Warramunga Arr	18.10	198	P	P	20 43 24.2	+1.2
	1.3nm,0.3s,baz=18,slow=12,SNR=57						
WRA				S	Sn	20 46 38.4	-5.5
	0.1nm,0.3s,baz=6.5,slow=22,SNR=4.6						
EDFI	Ende, Flores	19.37	251	P	Pn	20 43 39.6	+1.3
KAPI	Kappang	20.53	263	LR	LR	20 52 15.7	
	comp=Z,26nm,19.2s,baz=70,slow=39						
FITZ	Fitzroy Crossi	20.95	222	P	P	20 43 54.4	+0.3
	3.5nm,0.7s,baz=38,slow=13,SNR=10						
FITZ				S	S	20 47 42.9	-2.9
	3.5nm,0.8s,baz=162,slow=12,SNR=3.7						
FITZ				LR	LR	20 52 58.0	
	comp=Z,49nm,20.0s,baz=40,slow=40						
ASAR	Alice Springs	21.75	196	P	P	20 44 04.7	+2.1
	5.3nm,0.6s,baz=29,slow=9.9,SNR=53						
ASAR				S	S	20 48 04.3	+2.8
	1.4nm,0.8s,baz=14,slow=28,SNR=4.1						
STKA	Stephens Creek	29.09	178	P	P	20 45 13.8	+2.5
	1.6nm,0.8s,baz=348,slow=9.5,SNR=3.5						
STKA				LR	LR	20 59 23.1	
	comp=Z,65nm,19.4s,baz=11,slow=42						
H11S3	WAKE ISLAND Hy	33.50	50	T	T	21 21 04.8	
	baz=242,slow=76,SNR=10						
H11S2	WAKE ISLAND Hy	33.51	50	T	T	21 21 06.5	
	baz=242,slow=76,SNR=6.6						
H11S1	WAKE ISLAND Hy	33.52	50	T	T	21 21 02.3	
	baz=242,slow=76,SNR=4.3						
H11N1	WAKE ISLAND Hy	34.38	49	T	T	21 22 08.4	
	baz=234,slow=75,SNR=5.4						
H11N2	WAKE ISLAND Hy	34.40	49	T	T	21 22 09.3	
	baz=234,slow=75,SNR=6.3						
H11N3	WAKE ISLAND Hy	34.40	49	T	T	21 22 15.5	
	baz=234,slow=75,SNR=4.3						
KSRS	Korea Array	41.51	345	LR	LR	21 02 44.5	
	comp=Z,10.0nm,20.2s,baz=195,slow=34						
CMAR	Chiang Mai Arr	45.70	299	P	P	20 47 30.9	-1.1
	1.3nm,0.7s,baz=122,slow=6.1,SNR=9.9						
CMAR				LR	LR	21 05 17.5	
	comp=Z,8.9nm,21.9s,baz=200,slow=34						
MKAR	Makanchi Array	70.66	322	P	P	20 50 25.9	-0.3
	1.2nm,0.7s,baz=110,slow=7.1,SNR=13						
ZALV	Zalesovo Beam	72.64	329	P	P	20 50 37.3	-0.6
	0.4nm,0.4s,baz=103,slow=5.4,SNR=2.3						
ILAR	Eielson Array	85.18	24	P	P	20 51 45.8	-0.6
	0.4nm,0.7s,baz=260,slow=4.3,SNR=5.9						
DBIC	Dimbokro	144.95	278	PKP	PKPab	20 58 47.7	-0.2
	3.2nm,0.5s,baz=51,slow=2.7,SNR=12						

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*IDC **08** 20:53:39.7±1.2, 36°.72N×22°.27E, h0^{km}, mb3.8/8,*
mb1 3.9/10, mb1mx3.6/59, mbtmp3.8/10, ML3.3/2, MS2.5/4,
Ms1 2.5/4, ms1mx2.3/49, Error ellipse: s-maj=26.5km
s-min=20.8km az=46.0

*ATH **08** 20:53:40.7, 36°.28N×21°.95E, h11^{km}±2^{km}, ML3.5/11, Error*
ellipse: s-maj=2.6km s-min=0.8km az=93.0

*THE **08** 20:53:42.9, 36°.40N×22°.02E, h0^{km}±4^{km}, ML3.3/4, Error*
ellipse: s-maj=5.2km s-min=0.8km az=225.0

ISC 08 20:53:42.5±1.4**,36°.38N**±0°.04×**22°.03E**±0°.04**,h15**^{km}±8^{km}**,**
n99,σ**2^s.20**/129**,mb3.9**/8**,Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTHR	Kythira	0.80	98	P	Pg	20 53 58.0	+0.1
ITM	Ithomi	0.80	354	P	Pg	20 53 57.8	-0.3
ITM				S	Sb	20 54 09.4	+0.5
ITM				AML	AML	20 54 12.8	
	comp=N,8434µm,0.3s						
ITM				AML	AML	20 54 13.5	
	comp=E,8865µm,0.3s						
ITM	Ithomi	0.80	354	P	Pg	20 53 58.0	-0.1
ITM				S	Sb	20 54 09.6	+0.7
	comp=E,4µm,0.3s						
VLI	Veliai	0.80	65	P	Pg	20 53 58.2	+0.1
VLI				S	Sn	20 54 10.0	-1.0
VLI				AML	AML	20 54 15.8	
	comp=N,7336µm,0.7s						
VLI				AML	AML	20 54 16.0	
	comp=E,5004µm,1.0s						
VLI	Veliai	0.80	65	P	Pg	20 53 58.2	+0.1
VLI				S	Sn	20 54 09.9	-1.2
	comp=E,3µm,0.8s						
KTHA	Kythira Island	0.84	98	P	Pg	20 53 57.8	-1.0
KTHA				S	Sb	20 54 10.3	+0.3
KTHA				AML	AML	20 54 15.7	
	comp=N,2280µm,0.4s						
KTHA				AML	AML	20 54 16.2	
	comp=E,7266µm,0.7s						
KTHA	Kythira Island	0.84	98	P	Pg	20 53 58.8	0.0
KTHA				S	Sn	20 54 12.6	+0.6
MNVA	Monemvasia	0.87	69	P	Pg	20 53 59.2	-0.1
MNVA				S	Sn	20 54 12.1	-0.5
MNVA				AML	AML	20 54 16.6	
	comp=E,2796µm,0.7s						
MNVA				AML	AML	20 54 16.7	
	comp=N,2794µm,0.7s						
VLX	Vlachokerasia	1.03	16	P	Pb	20 54 01.6	-0.5
VLX				S	Sn	20 54 17.6	+0.9
VLX				AML	AML	20 54 20.7	
	comp=N,8553µm,0.7s						
VLX				AML	AML	20 54 22.9	
	comp=E,6180µm,0.7s						
VLX	Vlachokerasia	1.03	16	P	Pb	20 54 01.6	-0.5
VLX				S	Sn	20 54 17.1	+0.4
AMT	Artemida-Makis	1.18	347	P	Pb	20 54 03.9	-0.7
AMT				S	Sn	20 54 21.2	+0.9
AMT				AML	AML	20 54 26.3	
	comp=E,6760µm,0.3s						
AMT				AML	AML	20 54 29.4	
	comp=N,7803µm,0.3s						
AMT	Artemida-Makis	1.18	347	P	Pb	20 54 04.6	0.0
AMT				S	Sn	20 54 22.9	+2.6
KRND	KRANIDI	1.34	42	P	Pn	20 54 07.2	+0.5
KRND	KRANIDI	1.34	42	P	Pb	20 54 07.5	+0.1
KRND				S	Sg	20 54 27.4	+1.6
YDRA	Hydra	1.50	50	P	Pn	20 54 09.5	+0.6
DRO	Drossia	1.59	351	P	Pn	20 54 11.3	+1.1
DRO				S	Sg	20 54 32.9	-0.8
DRO				AML	AML	20 54 41.5	
	comp=N,3587µm,0.4s						
DRO				AML	AML	20 54 42.9	
	comp=E,1270µm,0.4s						
DRO	Drossia	1.59	351	P	Pn	20 54 11.4	+1.2
DRO				S	Sg	20 54 33.7	0.0
LTHK	Lithakia	1.63	325	P	Pn	20 54 10.8	0.0
LTHK	Lithakia	1.63	325	P	Pn	20 54 11.5	+0.8
LTHK				S	Sb	20 54 34.7	+1.9
KLV	Kalavryta, Ach	1.66	3	P	Pn	20 54 12.2	+1.1
KLV				S	Sg	20 54 35.6	-0.4
KLV				AML	AML	20 54 43.9	
	comp=E,703µm,0.3s						
KLV				AML	AML	20 54 49.5	
	comp=N,601µm,0.8s						
KLV	Kalavryta, Ach	1.66	3	P	Pn	20 54 12.3	+1.1
KLV				S	Sb	20 54 34.5	+0.8
THAL	Thalero	1.73	17	P	Pb	20 54 14.0	0.0
THAL				S	Sg	20 54 37.6	-0.5
THAL				AML	AML	20 54 48.9	
	comp=E,2552µm,0.4s						
THAL				AML	AML	20 54 50.9	
	comp=N,2712µm,0.4s						
THAL	Thalero	1.73	17	P	Pb	20 54 13.7	-0.3
RLS	Riolos of Patr	1.73	345	P	Pn	20 54 13.6	+1.5
RLS				S	Sb	20 54 37.0	+1.3
RLS				AML	AML	20 54 45.3	
	comp=N,1269µm,0.4s						
RLS				AML	AML	20 54 45.9	
	comp=E,761µm,0.3s						
RLS	Riolos of Patr	1.73	345	P	Pn	20 54 13.8	+1.7
RLS				S	Sb	20 54 36.9	+1.3
	comp=E,518nm,0.5s						
LOUT	Loutraki	1.77	25	P	Pb	20 54 15.5	+0.7
LOUT	Loutraki	1.77	25	P	Pb	20 54 14.5	-0.2
LTK	Loutraki	1.80	24	P	Pn	20 54 13.8	+0.7
LTK	Loutraki	1.80	24	P	Pn	20 54 13.7	+0.6
IMMV	Iera Moni Meta	1.83	120	P	Pn	20 54 13.8	+0.4
IMMV	Iera Moni Meta	1.83	120	P	Pn	20 54 14.2	+0.7
VLMS	Volimes, Zakyn	1.85	324	P	Pn	20 54 15.0	+1.2
VLMS				S	Sn	20 54 39.0	+2.1
VLMS				AML	AML	20 54 53.3	
	comp=E,1064µm,0.5s						
VLMS				AML	AML	20 54 55.0	
	comp=N,1596µm,0.5s						
VLMS	Volimes, Zakyn	1.85	324	P	Pn	20 54 15.7	+2.0
LAKA	Lakka	1.86	359	P	Pb	20 54 16.1	0.0
LAKA	Lakka	1.86	359	P	Pb	20 54 16.0	-0.2
LAKA				S	Sg	20 54 40.9	-1.3
ALIK	Aliki, Aigiali	1.88	2	P	Pn	20 54 15.7	+1.6
UPR	University Cam	1.91	354	P	Pn	20 54 16.4	+1.9
TRIZ	Trizonia	1.98	1	P	Pn	20 54 16.4	+0.9
KALE	Kalithea	2.01	2	P	Pn	20 54 17.9	+1.9
VAM	Vamos	2.01	118	P	Pn	20 54 16.3	+0.4
SERG	Sergoula	2.03	1	P	Pb	20 54 19.4	+0.3
SERG	Sergoula	2.03	1	P	Pn	20 54 17.0	+0.8
VLY	Voula,Athens	2.04	43	P	Pn	20 54 16.9	+0.6
VILL	Villia	2.05	29	P	Pn	20 54 17.4	+0.8
DSF	Desfina	2.06	11	P	Pb	20 54 19.5	-0.3
DSF	Desfina	2.06	11	P	Pn	20 54 18.0	+1.3
VIL2	Platees	2.08	28	P	Pn	20 54 18.1	+1.3
PSDA	Pessada-Kefalo	2.08	327	P	Pn	20 54 18.2	+1.3
PSDA				S	Sb	20 54 46.6	+1.0
ATHU	Athens Univers	2.11	41	P	Pn	20 54 18.1	+0.8
ATHU	Athens Univers	2.11	41	P	Pn	20 54 18.6	+1.2
KEF5	Kardakata, Kep	2.27	327	P	Pn	20 54 21.0	+1.6
KEF4	Livadi, Kephal	2.27	326	P	Pn	20 54 21.3	+1.8
DION	Dionisos Attik	2.27	41	P	Pn	20 54 20.1	+0.5
PDO	Prodromos	2.31	343	P	Pn	20 54 22.5	+2.4
PDO	Prodromos	2.31	343	P	Pn	20 54 21.9	+1.8
FSK	Fiskardo	2.38	331	P	Pn	20 54 23.2	+2.2
LKR	Lokris	2.39	18	P	Pn	20 54 22.9	+1.7
AXAR	Agios Charalam	2.43	12	P	Pn	20 54 22.8	+1.0
ATAL	Atalanti	2.44	19	P	Pn	20 54 23.8	+2.0
EVGI	Lefkada island	2.49	334	P	Pn	20 54 24.9	+2.4
KARY	Karystos	2.53	49	P	Pn	20 54 23.4	+0.3
EREA	Eretria	2.54	36	P	Pn	20 54 25.4	+2.2
NYDR	Nydri-Lefkada	2.56	336	P	Pn	20 54 25.3	+1.9
NYDR	Nydri-Lefkada	2.56	336	P	Pn	20 54 24.9	+1.5
IDI	Anoyia	2.57	114	Pn	Pn	20 54 23.5	-0.2
	comp=N,2.4nm,0.3s,baz=302,slow=19,SNR=23						
IDI				Sn	Sn	20 54 56.2	+1.5
	comp=N,8.0nm,0.3s,baz=310,slow=18,SNR=6.0						
IDI				LR	LR	20 55 46.8	
	comp=N,59nm,19.4s,baz=272,slow=50						
IDI	Anoyia	2.57	114	P	Pn	20 54 24.6	+1.0
MAKR	Makrakomi, Fth	2.63	2	P	Pn	20 54 26.0	+1.5
LKD2	Lefkada island	2.64	336	P	Pn	20 54 26.3	+1.7
AGG	Agios Georgios	2.65	5	P	Pn	20 54 26.5	+1.8
SMIA	Simia	2.66	20	P	Pn	20 54 25.9	+1.0
NPS	Neapolis	3.12	110	P	Pn	20 54 32.8	+1.6
THL	Klokotos Trika	3.18	360	P	Pn	20 54 33.3	+1.3
JAN	Janina	3.40	344	P	Pn	20 54 36.4	+1.3
LIT	Litokhoron	3.73	5	P	Pn	20 54 41.8	+2.2
CHOS	Chios island	3.78	57	P	Pn	20 54 41.7	+1.4
SRN	Sarande	3.84	336	P	Pn	20 54 42.2	+1.1
KZN	Kozani	3.92	357	P	Pn	20 54 44.0	+1.7
NEST	Nestorio	4.10	349	P	Pn	20 54 46.6	+1.8
FNA	Florina	4.42	354	P	Pn	20 54 51.0	+1.8
FNA				S	Sn	20 55 44.3	+3.8
	comp=N,50nm,0.5s						
OHR	Ohrid	4.82	349	*i* Pn	Pn	20 54 56.1	+1.5
STON	Ston	7.29	334	*e*Pn	Pn	20 55 24.4	-4.0
STON				Sn	Sn	20 56 42.8	-8.1
HVAR	Hvar	8.03	329	*e*Pn	Pn	20 55 35.4	-3.2
HVAR				Sn	Sn	20 57 00.7	-8.5
RICI	Ricice	8.04	334	*e*Pn	Pn	20 55 35.4	-3.3
RICI				Sn	Sn	20 57 03.6	-5.8
KIJV	Kijevo	8.74	332	*e*Pn	Pn	20 55 45.9	-2.6
KIJV				Sn	Sn	20 57 20.4	-6.4
MORI	Morici	8.90	329	*e*Pn	Pn	20 55 49.0	-1.6
MORI				Sn	Sn	20 57 22.5	-8.1
BRTR	Keskin Array B	9.74	66	LR	LR	20 59 39.7	
	comp=N,17nm,18.1s,baz=280,slow=38						

NVLJ	Novalja	9.82	329	ePn	Pn	20 56 01.0	-2.1
NVLJ				Sn	Sn	20 57 44.0	-9.1
MMAI	Mount Meron Ar	11.51	103	Pn	Pn	20 56 23.9	-2.5
	comp=N,0.5nm,0.3s,baz=285,slow=11,SNR=2.4						
GNI	Garni	18.22	71	LR	LR	21 05 59.2	
	comp=N,27nm,20.2s,baz=300,slow=41						
MNK	Minsk	18.57	11	iP	Pn	20 58 03.2	+4.3
	comp=E,2.0nm,1.0s						
MNK				iP	Pn	20 58 03.2	+4.3
	comp=N,8.0nm,0.9s						
MNK				iP	Pn	20 58 03.2	+4.3
	comp=Z,8.0nm,1.6s						
MNK				iPP	PnPn	20 58 15.4	+4.7
MNK				iPPP	PPP	20 58 23.2	
MNK				iS	S	21 01 33.3	+3.4
MNK				iSS	SnSn	21 01 48.7	+8.7
MNK				iSSS	SSS	21 02 01.6	
MNK				iPcP	PcP	21 02 31.5	+4.0
MNK				iLQ	LQ	21 03 37.2	
MNK				iLR	LR	21 05 02.3	
MNK				iLRM	MLR	21 05 58.1	
	comp=N,46nm,8.6s						
MNK				iLRM	MLR	21 06 00.2	
	comp=Z,76nm,13.4s						
MNK				iLRM	MLR	21 06 02.7	
	comp=E,7.0nm,10.3s						
MDT	Midelt	22.19	269	LR	LR	21 08 18.3	
	comp=E,18nm,18.6s,baz=72,slow=39						
BELG	Belogornoye	24.12	40	P	P	20 58 54.0	-3.6
	comp=E,5.5nm,0.6s,baz=300,slow=4.4,SNR=2.5						
HFS	Hagfors	24.37	350	P	P	20 58 56.6	-3.2
	comp=E,5.3nm,1.0s,baz=146,slow=14,SNR=4.7						
FINES	FINESS Array B	25.21	5	P	P	20 59 04.3	-3.1
	comp=E,7.6nm,1.1s,baz=184,slow=8.8,SNR=4.3						
TORD	Torodi Ar. Bea	29.47	223	P	P	20 59 49.2	+3.1
	comp=E,0.5nm,0.9s,baz=52,slow=8.3,SNR=1.9						
MKAR	Makanchi Array	45.24	57	P	P	21 01 55.9	-3.2
	comp=E,0.3nm,0.3s,baz=271,slow=8.4,SNR=13						
ZALV	Zalesovo Beam	46.01	47	P	P	21 02 01.7	-3.5
	comp=E,0.7nm,0.4s,baz=270,slow=7.6,SNR=4.1						
CMAR	Chiang Mai Arr	68.94	82	P	P	21 04 44.4	-2.9
	comp=E,0.5nm,0.6s,baz=302,slow=7.0,SNR=6.0						
YKA	Yellowknife Ar	75.48	341	P	P	21 05 23.6	-2.1
	comp=E,0.2nm,0.6s,baz=45,slow=6.2,SNR=2.2						

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*IDC **08** 21:20:15.6±1.7, 22.°17S×179.°51W, h591^{km}±16^{km}, mb3.2/5, mb1 3.4/8, mb1mx3.1/27, mbtmp4.2/8, Error ellipse: s-maj=30.5km s-min=15.9km az=149.0*

*NEIC **08** 21:20:15.9±1.5, 22.°0S±0.°1×179.°5W±0.°1, h604^{km}±8^{km}, mb4.1/19, Error ellipse: s-maj=23.3km s-min=10.2km az=49.0*

ISC 08 21:20:15.4±0.7**, 22.°12S**±0.°09×**179.°5W**±0.°1**, h592**^{km}**, n49, σ1^{s}10**/53**, mb4.0**/14**, 5C, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.93	332	P	P	21 21 47.6	+0.2
	3.9nm,0.3s,baz=270,slow=20,SNR=22						
MSVF	Nonsavu	4.93	332	P	P	21 21 47.3	-0.1
DZM	Mont Dzumac	13.01	268	P	P	21 23 05.0	+0.5
	0.4nm,0.3s,baz=283,slow=8.9,SNR=3.3						
DZM	Mont Dzumac	13.01	268	P	P	21 23 04.8	+0.3
OUZ	Omahuta	14.37	203	P	P	21 23 20.0	+2.3
URZ	Urewera	16.34	189	P	P	21 23 35.6	-0.4
	1.6nm,0.3s,baz=296,slow=3.8,SNR=7.3						
URZ				S	S	21 26 15.4	-4.0
	0.3nm,0.3s,baz=44,slow=13,SNR=1.4						
URZ	Urewera	16.34	189	P	P	21 23 35.2	-0.8
URZ				IAmb	IAmb	21 23 37.2	
	comp=Z,10nm,0.9s						
BKZ	Black Stump Fm	17.32	190	P	P	21 23 45.6	+0.5
BKZ				IAmb	IAmb	21 23 47.5	
	comp=Z,5.9nm,0.8s						
BHW	Baring Head	19.80	193	P	P	21 24 08.3	+0.9
ARMA	Armidale	27.10	246	P	P	21 25 13.1	+0.6
ARMA				IAmb	IAmb	21 25 15.7	
	comp=Z,2.5nm,0.6s						
CTAO	Charters Tower	31.95	267	P	P	21 25 53.4	-0.9
COEN	Coen	36.31	276	P	P	21 26 28.8	-1.9
COEN				IAmb	IAmb	21 26 49.4	
	comp=Z,5.7nm,1.1s						
BBOO	Buckleboo	40.56	245	P	P	21 27 05.7	+0.9
ASAR	Alice Springs	42.78	259	P	P	21 27 23.3	+0.9
	comp=Z,2.4nm,0.6s,baz=96,slow=8.1,SNR=32						
ASAR				PcP	PcP	21 29 00.5	+0.5
	comp=Z,0.9nm,0.6s,baz=106,slow=4.0,SNR=7.9						
ASAR				S	S	21 33 04.8	0.0
	comp=Z,0.6nm,0.8s,baz=90,slow=16,SNR=4.1						
ASAR	Alice Springs	42.78	259	P	P	21 27 22.9	+0.5
WR0	Warramunga Arr	42.80	264	P	P	21 27 22.9	+0.2
WR0				IAmb	IAmb	21 27 33.3	
	comp=Z,4.5nm,1.2s						
WB0	Warramunga Arr	42.98	264	P	P	21 27 24.4	+0.4
WB0				IAmb	IAmb	21 27 25.1	
	comp=Z,5.3nm,1.0s						
WB2	Warramunga Arr	42.98	264	P	P	21 27 23.4	-0.6
WRA	Warramunga Arr	42.99	264	P	P	21 27 24.4	+0.3
	comp=Z,0.6nm,0.3s,baz=95,slow=7.8,SNR=43						
WRA				ScP	ScP	21 31 58.7	+2.6
	comp=Z,0.5nm,0.8s,baz=97,slow=3.5,SNR=2.5						
WRA				S	S	21 33 06.9	-1.0
	comp=Z,0.3nm,0.8s,baz=103,slow=11,SNR=2.3						
WRA	Warramunga Arr	42.99	264	P	P	21 27 23.9	-0.2
MTN	Manton Dam	47.78	273	P	P	21 28 00.7	+0.2
MTN				IAmb	IAmb	21 28 03.8	
	comp=Z,11nm,1.1s						
FITZ	Fitzroy Crossi	51.42	264	P	P	21 28 27.3	+0.2
PSA00	Pilbara Seismi	55.93	258	P	P	21 28 58.5	-0.4
PSA00				IAmb	IAmb	21 29 00.8	
	comp=Z,10nm,1.1s						
VNDA	Vanda	56.18	185	P	P	21 29 01.3	+1.7
MMRI	Maumere	57.42	274	P	P	21 29 09.0	-0.1
MMRI				IAmb	IAmb	21 29 15.7	
	comp=Z,18nm,1.1s						
MORW	Morawa	57.91	249	P	P	21 29 12.5	+0.3
TOLI2	Tolitoli	62.57	283	P	P	21 29 41.8	-1.4
TOLI2				IAmb	IAmb	21 29 47.9	
	comp=Z,10nm,1.1s						
QSPA	South Pole Qui	67.95	180	P	P	21 30 14.4	-1.7
SSLB	Suanglung	73.70	305	P	P	21 30 49.4	-0.9
PEA0B	Petropavlovsk-	77.48	346	P	P	21 31 10.2	-0.3
PEA0B				IAmb	IAmb	21 31 35.9	
	comp=Z,13nm,1.1s						
PETK	Petropavlovsk-	77.48	346	P	P	21 31 10.6	+0.1
	comp=Z,3.0nm,0.7s,baz=116,slow=6.8,SNR=5.3						
PETK	Petropavlovsk-	77.48	346	P	P	21 31 09.4	-1.1
CMAR	Chiang Mai Arr	89.33	290	P	P	21 32 12.0	+1.9
	comp=Z,1.9nm,0.8s,baz=130,slow=3.2,SNR=14						
CMAR	Chiang Mai Arr	89.33	290	P	P	21 32 09.9	-0.2
ILAR	Eielson Array	90.21	13	P	P	21 32 12.7	-0.3
	comp=Z,0.2nm,0.5s,baz=215,slow=4.2,SNR=1.8						
MKAR	Makanchi Array	111.27	313	PKiKP	PKiKP	21 37 42.2	-0.5
	comp=Z,0.3nm,0.7s,baz=178,slow=1.2,SNR=2.2						
ARCES	ARCESS Array B	130.24	349	PKP	PKPdf	21 38 18.4	+0.1
	comp=Z,8.8nm,1.2s,baz=32,slow=4.8,SNR=4.0						
FINES	FINESS Array B	136.90	342	PKP	PKPdf	21 38 30.8	-0.3
	comp=Z,1.9nm,0.8s,baz=318,slow=2.6,SNR=4.5						
AKASG	Malin Array Be	143.70	329	PKP	PKPbc	21 38 42.1	-0.6
	comp=Z,1.4nm,0.3s,baz=42,slow=4.4,SNR=16						
AKASG	Malin Array Be	143.70	329		PKPbc	21 38 41.8	-0.9
BRTR	Keskin Array B	146.82	310	PKPbc	PKPbc	21 38 52.3	-0.1
	comp=Z,1.2nm,0.6s,baz=160,slow=3.9,SNR=4.4						
OSTC	Ostas	149.05	340	⇑ePKP	PKiKP	21 38 58.3	0.0
DPC	Dobruska-Polom	149.20	340	⇑ePKP	PKiKP	21 38 58.2	-0.5
CLL	Collm	149.28	345	ePKPbc	PKPbc	21 38 58.0	+0.1
PRU	Pruhonice	150.06	342	⇑ePKP	PKiKP	21 39 00.1	-0.3
KHC	Kasperske Hory	151.11	342	⇑ePKP	PKiKP	21 39 02.6	-0.1
KHC				ePKPAB	PKPab	21 39 12.9	0.0
CKRC	Cesky Krumlov	151.17	341	⇑ePKP	PKiKP	21 39 02.9	+0.1
GERES	GERESS Array B	151.33	342	PKPbc	PKiKP	21 39 03.0	-0.2
	comp=Z,0.5nm,0.4s,baz=25,slow=2.1,SNR=6.1						
GERES	GERESS Array B	151.33	342		PKPdf	21 38 58.9	+2.7

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*SNET **08** 21:32:35.5±0.5, 13.°76N×90.°52W, h83^{km}±4^{km}, ML2.8*

*GCG **08** 21:32:36.8±0.8, 14.°06N×90.°79W, h95^{km}±10^{km}, MD3.1*

ISC 08 21:32:33.8±3.9**, 13.°6N**±0.°2×**90.°6W**±0.°1**, h90**^{km}±28^{km}**, n9, σ0^{s}88**/14**, 1C, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCG	Pacaya	0.76	1	eP	Pn	21 32 52.2	+0.9
PCG				eS	Sn	21 33 04.0	-0.3
FUG	Fuego 3	0.85	346	eP	Pn	21 32 52.4	+0.4
FUG				eS	Sn	21 33 03.7	-2.0
CEVE	Cerro Verde	0.99	78	eP	Pn	21 32 54.0	+0.2
CEVE				eS	Sn	21 33 09.0	+0.3
CEVE				IAML		21 33 11.5	
	comp=Z,413nm,0.2s						
NBG	Las Nubes	1.00	16	eP	Pn	21 32 54.8	+1.0
NBG				eS	Sn	21 33 09.0	+0.3
JAYA	Jayaque - finc	1.15	88	eP	Pn	21 32 55.4	0.0
JAYA				eS	Sn	21 33 10.7	-0.9
LALI	Alcalda de L	1.28	96	eP	Pn	21 32 57.4	+0.6
PMON	Piamonte	1.28	86	eP	Pn	21 32 57.2	+0.2
MRL	Marmol	1.71	32	⇑iP	Pn	21 33 02.1	-0.4
MRL	Marmol	1.71	32	eP	Pn	21 33 03.0	+0.4

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*VAO **08** 21:43:57.5±1.1, 26.°42S×70.°27W, h78^{km}±8^{km}, mb3.8*

*IDC **08** 21:44:02.1±2.7, 25.°84S×69.°08W, h0^{km}, mb4.2/2, mb1 4.2/3, mb1mx3.7/22, mbtmp4.2/3, ML4.1/1, Error ellipse: s-maj=87.7km s-min=57.5km az=72.0*

*NEIC **08** 21:44:18.1±1.6, 24.°91S±0.°01×69.°0W±0.°1, h124^{km}±8^{km}, Error ellipse: s-maj=15.6km s-min=1.6km az=87.0*

*GUC **08** 21:44:18.8±0.6, 24.°92S×69.°04W, h122^{km}±4^{km}, ML4.0*

ISC 08 21:44:18.3±0.7**, 24.°89S**±0.°03×**68.°98W**±0.°07**, h124**^{km}±8^{km}**, n54, σ1^{s}65**/68**, mb3.9**/3**, 6C-7D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO02	Mina Guanaco	0.62	244	⇓iP	Pn	21 44 37.5	-0.3
GO02				iS	Sn	21 44 52.0	-0.6
GO02				IAML		21 44 53.4	
	comp=E,6μm,0.2s						
GO02	Mina Guanaco	0.62	244	Pn	Pn	21 44 37.5	-0.3
GO02				Sn	Sn	21 44 51.9	-0.6
PB14	IPOC Station P	1.32	281	⇓iP	Pn	21 44 44.8	+0.5
PB14				iS	Sn	21 45 03.7	-0.3
PB14				IAML		21 45 06.7	
	comp=E,777nm,0.3s						
PB14	IPOC Station P	1.32	281	Pn	Pn	21 44 44.5	+0.2
PB14				Sn	Sn	21 45 03.7	-0.3
PB15	IPOC Station P	1.73	345	⇓iP	Pn	21 44 49.8	+0.9
PB15				eS	Sn	21 45 12.8	+0.5
PB15	IPOC Station P	1.73	345	Sn	Sn	21 45 12.6	+0.4
AC01	Pan de Azucar	1.93	229	⇑iP	Pn	21 44 50.7	-0.3
AC01				iS	Sn	21 45 15.0	-1.1
AC01	Pan de Azucar	1.93	229	Sn	Sn	21 45 14.8	-1.3
AC02	Maricunga	1.94	184	⇑iP	Pn	21 44 52.2	+0.4
AC02				eS	Sn	21 45 17.1	-0.3
AC02	Maricunga	1.94	184	Pn	Pn	21 44 51.8	+0.1
AC02				Sn	Sn	21 45 17.0	-0.3
PB10	IPOC Station P	1.98	313	⇓iP	Pn	21 44 52.7	+0.9
PB10				iS	Sn	21 45 17.6	+0.2
PB10	IPOC Station P	1.98	313	Pn	Pn	21 44 52.3	+0.5
PB10				Sn	Sn	21 45 17.2	-0.2
PB06	IPOC Station P	2.24	346	⇓iP	Pn	21 44 56.2	+1.1
PB06				iS	Sn	21 45 23.2	-0.2
PB06				IAML		21 45 25.8	
	comp=N,1μm,0.3s						
LVC	Limon Verde	2.27	2	eP	Pn	21 44 56.4	+0.7
LVC				iS	Sn	21 45 23.9	-0.4
LVC	Limon Verde	2.27	2	Pn	Pn	21 44 55.8	+0.1
LVC	Limon Verde	2.27	2	eP	Pn	21 44 56.4	+0.7
PB05	IPOC Station P	2.32	331	⇓iP	Pn	21 44 56.7	+0.6
PB05				iS	Sn	21 45 24.3	-0.6
PB05				IAML		21 45 30.5	
	comp=E,947nm,0.3s						
PB04	IPOC Station P	2.76	337	⇓iP	Pn	21 45 01.9	+0.1
PB04				iS	Sn	21 45 33.6	-1.6
PB04				IAML		21 45 43.3	
	comp=N,466nm,0.3s						
PB03	IPOC Station P	2.92	346	eP	Pn	21 45 04.2	+0.4
PB03				iS	Sn	21 45 37.3	-1.5
PB03				IAML		21 45 40.0	
	comp=N,449nm,0.2s						
GO03	Copiap	2.92	202	⇑iP	Pn	21 45 03.0	-0.8
GO03	Copiap	2.92	202		Pn	21 45 02.7	-1.0
PB09	IPOC Station P	3.09	355	⇑iP	Pn	21 45 07.3	+1.3
PB09				iS	Sn	21 45 37.3	-5.6
PB07	IPOC Station P	3.26	345	eP	Pn	21 45 08.3	0.0
PB07				iS	Sn	21 45 39.0	-7.9
PB07				IAML		21 45 52.4	
	comp=N,201nm,0.4s						
PB02	IPOC Station P	3.65	346	eP	Pn	21 45 13.5	+0.1
AC04	Llanos de Chal	3.80	209	eP	Pn	21 45 12.9	-2.3
AC04	Llanos de Chal	3.80	209	Pn	Pn	21 45 12.9	-2.3
AC05	El Transito	4.10	196	⇑iP	Pn	21 45 18.3	-1.0
AC05				iS	Sn	21 46 04.7	-1.9
AC05	El Transito	4.10	196		Pn	21 45 18.3	-1.0
PATCX	Punta Patache	4.19	345	⇑eP	Pn	21 45 19.1	-1.5
PATCX	Punta Patache	4.19	345	Pn	Pn	21 45 19.7	-0.9
LCO	Las Campanas	4.38	200	Pn	Pn	21 45 21.8	-1.5
TA01	Diego Aracena	4.44	345	Pn	Pn	21 45 22.3	-1.5
PSGCX	Pisagua	5.37	348	Pn	Pn	21 45 34.7	-1.7
PB16	IPOC Station P	6.54	356	Pn	Pn	21 45 52.0	-0.6
LPAZ	La Paz	8.60	5	Pn	Pn	21 46 21.2	+0.8
	comp=N,0.7nm,0.3s,baz=204,slow=6.8,SNR=10						
LPAZ	La Paz	8.60	5	eP	Pn	21 46 21.2	+0.8
CPUP	Villa Florida	10.61	100	eP	Pn	21 46 40.0	-7.0
H03N1	Juan Fernandez	12.16	223	T	T	21 59 21.7	
	baz=43,slow=74,SNR=3.2						
H03N2	Juan Fernandez	12.17	223	T	T	21 59 24.1	
	baz=43						
H03N3	Juan Fernandez	12.17	223	T	T	21 59 33.0	
	baz=43,slow=74						
ETMB	Extrema	15.22	10	eP	P	21 47 51.7	+2.9
PTGB	Pitanga	15.36	93	eP	Pn	21 47 45.1	-3.5
SAML	Samuel	16.79	20	eP	P	21 48 07.4	+1.2
ARAG	Araguaiana, MT	18.50	64	eP	P	21 48 25.2	+0.3
IPMB	Ipameri, GO	20.50	74	eP	P	21 48 46.7	0.0
PEXB	Peixe	23.33	61	eP	P	21 49 15.4	-0.2
ITTB	Itaituba	24.05	34	eP	P	21 49 22.7	+0.6
PTGA	Pitinga	25.55	21	P	P	21 49 36.7	+1.0
PTGA				IAmb	IAmb	21 49 37.8	
	comp=Z,3.8nm,1.1s						
MALB	Monte Alegre	26.95	34	eP	P	21 49 48.7	+0.5
KOWA	Kowa	74.45	66	P	P	21 55 45.5	+2.2
	comp=Z,1.5nm,0.6s,baz=248,slow=5.4,SNR=4.1						
TORD	Torodi Ar. Bea	78.57	70	P	P	21 56 08.2	+1.6
	comp=Z,1.2nm,0.5s,baz=257,slow=5.0,SNR=8.5						
KURBB	Kurchatov Arra	144.16	36	PKP	PKPdf	22 03 39.6	+0.5
	comp=Z,0.3nm,0.8s,baz=290,slow=3.2,SNR=3.2						
ZALV	Zalesovo Beam	145.01	27	PKPbc	PKiKP	22 03 42.5	-1.8
	comp=Z,0.8nm,0.5s,baz=319,slow=4.1,SNR=4.7						
MKAR	Makanchi Array	148.35	39	PKPbc	PKiKP	22 03 52.0	+0.5
	comp=Z,0.4nm,0.6s,baz=310,slow=3.1,SNR=5.0						

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*IDC **08** 22:09:08.7±5.2, 15.°38S×173.°43W, h152^{km}±43^{km}, mb3.6/6, mb1 3.8/7, mb1mx3.5/44, mbtmp4.0/7, MS3.4/14, Ms1 3.4/14, ms1mx3.3/24, Error ellipse: s-maj=48.7km s-min=24.0km az=129.0*

ISC 08 22:09:07.8±1.2**, 15.°4S**±0.°2×**173.°3W**±0.°2**, h150**^{km}**, n29, σ0^{s}69**/10**, mb3.9**/6**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	8.62	253	P	Pn	22 11 10.3	+0.7
	0.3nm,0.3s,baz=79,slow=16,SNR=6.9						
MSVF				LR	LR	22 14 04.8	
	comp=Z,378nm,21.1s,baz=82,slow=35						
RAR	Rarotonga	14.10	116	LR	LR	22 16 03.5	
	comp=Z,111nm,21.7s,baz=282,slow=29						
DZM	Mont Dzumac	20.30	248	LR	LR	22 20 07.7	
	comp=Z,117nm,21.6s,baz=48,slow=33						
DZM	Mont Dzumac	20.30	248	eLR	LR	22 19 01.4	
	comp=Z,115nm,25.1s						
PAE	Paea	22.85	99	eT	T	22 36 04.9	
	1.7nm,0.3s						
PPT2	Papeete2	22.85	99	eLR	LR	22 19 03.0	
	comp=Z,52nm,25.0s						
PPT2	Papeete2	22.85	99	eT	T	22 36 05.9	
	2.7nm,0.3s						
TBI	Tubuai	23.83	113	eT	T	22 37 35.7	
	4.6nm,0.3s						
URZ	Urewera	24.32	199	P	P	22 14 11.9	+0.4
	5.3nm,0.4s,baz=23,slow=6.0,SNR=2.5						
URZ				LR	LR	22 21 44.6	
	comp=Z,63nm,20.4s,baz=31,slow=31						
HNR	Honiara	26.77	280	LR	LR	22 23 17.0	
	comp=Z,82nm,18.5s,baz=44,slow=32						
H11S2	WAKE ISLAND Hy	38.99	329	T	T	22 56 51.9	
	baz=146,slow=76,SNR=22						
H11S3	WAKE ISLAND Hy	39.00	329	T	T	22 56 56.5	
	baz=146,slow=76,SNR=14						
H11S1	WAKE ISLAND Hy	39.01	329	T	T	22 56 57.0	
	baz=146,slow=76,SNR=17						
H11N3	WAKE ISLAND Hy	39.93	330	T	T	22 58 54.5	
	baz=150,slow=76,SNR=4.1						
H11N1	WAKE ISLAND Hy	39.94	330	T	T	22 58 53.9	
	baz=150,slow=76,SNR=4.7						
H11N2	WAKE ISLAND Hy	39.95	330	T	T	22 58 55.7	
	baz=150,slow=76,SNR=4.7						
STKA	Stephens Creek	44.13	240	P	P	22 17 01.2	-0.3
	3.8nm,0.8s,baz=39,slow=7.9,SNR=4.9						
STKA				LR	LR	22 32 54.5	
	comp=Z,34nm,19.6s,baz=207,slow=32						
WRA	Warramunga Arr	49.94	257	P	P	22 17 45.9	-0.9
	0.7nm,0.5s,baz=92,slow=6.9,SNR=35						
WRA				PcP	PcP	22 19 04.5	-0.4
	0.6nm,0.9s,baz=93,slow=3.1,SNR=2.6						
ASAR	Alice Springs	50.21	252	P	P	22 17 48.0	-0.7
	2.1nm,0.5s,baz=87,slow=8.3,SNR=24						
ASAR				LR	LR	22 37 10.4	
	comp=Z,48nm,21.3s,baz=116,slow=34						
MJAR	Matsushiro Arr	68.98	320	LR	LR	22 44 29.3	
	comp=Z,26nm,21.5s,baz=130,slow=31						
PETK	Petropavlovsk-	72.63	342	LR	LR	22 47 48.8	
	comp=Z,19nm,21.3s,baz=196,slow=32						
NVAR	Mina Array Bea	74.24	42	LR	LR	22 45 27.5	
	comp=Z,61nm,20.1s,baz=269,slow=29						
KSRS	Korea Array	76.20	316	LR	LR	22 50 59.2	
	comp=Z,11nm,19.6s,baz=105,slow=33						
TXAR	Lajitas Array	80.52	56	LR	LR	22 50 44.1	
	comp=Z,14nm,19.8s,baz=0.0,slow=31						
PDAR	Pinedale Array	82.18	42	LR	LR	22 50 37.2	
	comp=Z,38nm,18.8s,baz=308,slow=30						
ILAR	Eielson Array	82.40	11	P	P	22 21 12.2	-0.4
	0.4nm,0.6s,baz=227,slow=6.8,SNR=9.2						
ILAR				LR	LR	22 49 32.0	
	comp=Z,42nm,20.5s,baz=186,slow=29						
YKA	Yellowknife Ar	90.03	23	P	P	22 21 50.5	+0.5
	0.3nm,0.7s,baz=233,slow=4.5,SNR=4.3						
GERES	GERESS Array B	146.13	352	PKPbc	PKPab	22 28 31.4	+0.1
	1.3nm,0.7s,baz=20,slow=4.3,SNR=8.7						
BRTR	Keskin Array B	146.19	321	PKPbc	PKPab	22 28 32.8	+0.8
	4.2nm,0.9s,baz=107,slow=1.6,SNR=13						

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*IDC **08** 23:10:24.3±2.3, 36.°02N×140.°49E, h0^{km}, mb3.3/2, mb1 3.5/2, mb1mx3.2/32, mbtmp3.3/2, Error ellipse: s-maj=41.5km s-min=25.2km az=59.0*

*JMA **08** 23:10:30.4±0.1, 35.°99N×140.°21E, h41^{km}±1^{km}, M3.1*

JMA Felt I J1.

ISC 08 23:10:29.4±1.8**, 35.°97N**±0.°06×**140.°15E**±0.°06**, h24**^{km}±16^{km}**, n8, σ0^{s}97**/13**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYT	Yasato	0.26	7	P	Pn	23 10 38.2	+0.4
JYT				S	Sn	23 10 43.5	+0.4
JIHU	Itakohorinouch	0.30	90	P	Pn	23 10 38.5	+0.1
JIHU				S	Sn	23 10 44.9	+0.8
JSMT	Sammumatsuo	0.40	143	P	Pn	23 10 40.2	+0.5
JSMT				S	Sn	23 10 47.7	+1.2
JAG	Ashikaga	0.73	309	P	Pn	23 10 44.6	+0.4
MJAR	Matsushiro Arr	1.67	291	Pn	Pb	23 10 58.5	-1.0
	1.7nm,0.3s,baz=101,slow=14,SNR=50						
MJAR				Sn	Sb	23 11 21.7	+1.5
	1.6nm,0.3s,baz=105,slow=28,SNR=3.2						
MAT	Matsushiro	1.67	291	P	Pb	23 10 58.8	-0.7
MAT				eS	Sn	23 11 18.8	+0.8
MKAR	Makanchi Array	43.83	303	P	P	23 18 33.4	-0.1
	0.4nm,0.9s,baz=80,slow=8.9,SNR=2.1						
WRA	Warramunga Arr	55.88	187	P	P	23 20 04.1	-1.1
	0.2nm,0.5s,baz=360,slow=7.6,SNR=7.1						

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*NEIC **08** 23:24:00.9±1.9, 57.°06N±0.°03×157.°05W±0.°10, h9^{km}±6^{km}, Error ellipse: s-maj=7.8km s-min=3.7km az=107.0*

AEIC 08 23:24:01±2.3**, 57.°10N**±0.°02×**157.°13W**±0.°10**, h13**^{km}±6^{km}**, ML3.0, ML3.6**/12(NEIC)**, Error ellipse: s-maj=8.0km s-min=2.8km az=103.0, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLBL	Peulik Blue Cr	0.63	15		Pg	23 24 13.0	-0.3
PLBL					Sb	23 24 22.6	+0.1
PLK4	Peulik 4	0.68	38		Pb	23 24 15.1	+0.3
PLK3	Peulik 3	0.76	38		Sn	23 24 28.0	-0.7
PLK1	Peulik 1	0.76	22		Pg	23 24 15.0	-0.8
PLK5	Peulik 5	0.92	8		Pb	23 24 19.0	+0.3
KJL	Kejulik	1.27	40		Pn	23 24 24.1	-0.4
CAHL	Cahill	1.38	45		Pn	23 24 25.7	-0.2
CAHL					Sn	23 24 43.9	0.0
VNHG	Veniaminof 1	1.43	233		Pn	23 24 26.0	-0.6
MGLS	Mageik Landsli	1.49	45		Pn	23 24 27.2	-0.2
MGLS					Sb	23 24 47.2	0.0
CHIR	Chirikof Islan	1.53	146		Sn	23 24 46.7	-0.9
CHIR	Chirikof Islan	1.53	146	Pn	Pn	23 24 27.0	-0.9
CHIR				IAML		23 24 49.8	
	comp=E,658nm,0.8s						
KABU	Katmai Buttres	1.54	39		Pn	23 24 28.4	+0.2
KELA	Mount Kelaz	1.54	28		Pn	23 24 28.1	0.0
KABR	Katmai Barrier	1.56	47		Pn	23 24 28.4	0.0
KVTA	Katmai Vly 10	1.62	37		Pn	23 24 29.5	+0.2
SII	Sitkinak Islan	1.71	107		Pn	23 24 29.8	-0.6
SII					Sn	23 24 52.3	+0.2
SII				IAML		23 24 57.9	
	comp=E,1μm,0.6s						
OHAK	Old Harbor	2.10	85		Pn	23 24 35.4	-0.3
KDAK	Kodiak Island	2.55	72	Pn	Pn	23 24 42.4	+0.4
SDPT	Sand Point	2.56	228		Pn	23 24 44.3	+2.2
IVE	Iliamna Volcan	3.64	35		Pn	23 24 57.6	+0.6
CNPM	China Poot	3.95	49		Pn	23 25 02.9	+1.6
CNPM				IAML		23 25 41.2	
	comp=N,77nm,2.6s						
CNPM				IAML		23 26 34.7	
	comp=E,102nm,2.7s						
RSO	Redoubt South	4.07	32	Pn	Pn	23 25 06.3	+3.2
SVW2	Sparrevohn	4.09	11	Pn	Pn	23 25 04.6	+1.4
NCT	North Crescent	4.10	30		Pn	23 25 04.4	+0.9
BRLK	Bradley Lake	4.23	48		Pn	23 25 07.0	+1.8
BRLK				IAML		23 27 01.6	
	comp=E,64nm,2.9s						
BRLK				IAML		23 27 20.0	
	comp=N,59nm,2.9s						
BRSE	Bradley Lake S	4.28	49		Pn	23 25 06.8	+1.0
O22K	Cooper Landing	5.13	46	Pn	Pn	23 25 13.8	-3.7
SUA	Susitna One	5.47	34	Pn	Pn	23 25 24.6	+2.5
SKT	Skwentna	5.67	28	Pn	Pn	23 25 22.3	-2.5
Q23K	Middleton Isla	6.15	63	Pn	Pn	23 25 29.6	-1.7
KNK	Knik Glacier	6.20	42	Pn	Pn	23 25 35.8	+3.7
GHO	Glory Hole Cre	6.28	38	Pn	Pn	23 25 30.3	-3.0
HIN	Hinchinbrook I	6.44	55	Pn	Pn	23 25 36.3	+0.9
SML	Sawmill	6.51	40	Pn	Pn	23 25 34.9	-1.6
SCM	Sheep Creek Mo	6.89	42	Pn	Pn	23 25 44.2	+2.6
KTH	Kantishna Hill	7.17	23	Pn	Pn	23 25 46.4	+1.0
TRF	Thorofare Moun	7.22	25	Pn	Pn	23 25 46.4	+0.1
KLU	Klutina	7.23	48	Pn	Pn	23 25 46.1	-0.2
M24K	Tolsona, Glenn	7.49	43	Pn	Pn	23 25 52.6	+2.8
RND	Reindeer	7.54	30	Pn	Pn	23 25 52.8	+2.2
DHY	Denali Highway	7.72	35	Pn	Pn	23 25 54.3	+1.2
N25K	Chitina, Valde	7.83	50	Pn	Pn	23 25 54.9	+0.4
GLB	Gilahina Butte	8.09	52	Pn	Pn	23 25 59.1	+1.1
ANM	Nome	8.50	335	Pn	Pn	23 26 04.3	+0.8
BALM	Baldy	8.57	56	Pn	Pn	23 26 04.8	+0.1
WRH	Wood River Hil	8.61	27	Pn	Pn	23 26 07.6	+2.5
HDA	Harding Lake	8.86	30	Pn	Pn	23 26 09.7	+1.2
MDM	Murphy Dome	8.98	25	Pn	Pn	23 26 11.1	+0.9
IL31		9.16	29	Pn	Pn	23 26 14.0	+1.4

WEL 08 23:42:13.6±0.8**, 34°S**±11°×**18°0E**±1°9**, h327**^{km}±13^{km}**, M3.9**/24**, mB4.4**/9**, ML4.6**/16**, MLv4.3**/24**, Mw(mB)3.6**/9**, Error ellipse: s-maj=0.0km s-min=0.0km az=114.8, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	3.60	198	P	Pn	23 43 13.1	-3.9
MXZ				S	S	23 44 08.1	+0.1
HAZ	Te Kaha	3.93	203	P	Pn	23 43 18.0	-2.4
HAZ				S	S	23 44 13.4	-0.7
PKGZ	Pakihiroa	3.96	199	P	Pn	23 43 18.8	-2.0
PKGZ				S	S	23 44 15.3	+0.3

CNGZ	Carnagh Statio	4.50	195	P	Pn	23 43 28.9	+2.4
MWZ	Matawai	4.54	202	P	Pn	23 43 25.1	-1.9
MWZ				S	S	23 44 27.4	+1.2
TKGZ	Te Karaka	4.54	199	P	Pn	23 43 28.2	+1.2
TKGZ				S	S	23 44 27.3	+1.1
URZ	Urewera	4.61	206	P	Pn	23 43 26.3	-1.5
URZ				S	S	23 44 28.7	+1.1
MKAZ	Moumakai	4.73	230	P	Pn	23 43 27.9	-1.3
MUGZ	Murupara	4.93	208	P	Pn	23 43 31.7	+0.3
MUGZ				S	S	23 44 35.5	+1.4
RTZ	Ruatahuna	4.98	205	P	Pn	23 43 32.7	+0.8
SNGZ	Shannon Statio	5.01	202	P	Pn	23 43 30.9	-1.3
SNGZ				S	S	23 44 38.1	+2.5
RAHZ	Arahi	5.21	203	P	Pn	23 43 35.8	+1.3
RAHZ				S	S	23 44 40.9	+1.1
WHHZ	Waihua	5.31	201	P	Pn	23 43 37.3	+1.7
WHHZ				S	S	23 44 44.5	+2.6
ARHZ	Aropaoanui	5.56	202	P	Pn	23 43 38.0	-0.4
ARHZ				S	S	23 44 49.3	+2.3
MCHZ	McNeill Hill	5.82	204	P	Pn	23 43 42.4	+1.0
MCHZ				S	S	23 44 54.6	+2.1
HIZ	Hauiti	5.86	220	P	Pn	23 43 45.1	+3.1
KWHZ	Kaweka Forest	5.89	206	P	Pn	23 43 43.4	+1.0
WTVZ	West Tongariro	5.96	212	P	Pn	23 43 44.3	+1.0
OTVZ	Oturere	5.97	212	P	Pn	23 43 44.0	+0.6
TUVZ	Tukino	6.06	211	P	Pn	23 43 44.6	+0.1
KAHZ	Kahuranaki	6.08	201	P	Pn	23 43 43.0	-1.6
KAHZ				S	S	23 45 01.1	+3.0
BHHZ	Black Hill Sta	6.08	208	P	Pn	23 43 44.9	+0.3
FWVZ	Far West T-bar	6.09	212	P	Pn	23 43 45.1	+0.1
WHVZ	Whangaehu Hut	6.10	212	P	Pn	23 43 45.4	+0.4
KRHZ	Kereru	6.11	205	P	Pn	23 43 44.6	-0.3
KRHZ				S	S	23 44 58.2	-0.5
WNVZ	Wahianoa	6.13	211	P	Pn	23 43 45.2	-0.2
MOVZ	Moawhango	6.14	210	P	Pn	23 43 45.2	-0.1
MOVZ				S	S	23 44 58.6	-0.8
PXZ	Pawanui	6.30	200	P	Pn	23 43 47.7	+0.6
PXZ				S	S	23 45 01.9	-0.8
PNHZ	Pukenui	6.41	205	P	Pn	23 43 48.1	-0.3
PNHZ				S	S	23 45 03.6	-1.5
TSZ	Takapari Road	6.62	206	P	Pn	23 43 51.0	+0.1
TSZ				S	S	23 45 09.9	+0.2
BFZ	Birch Farm	7.08	202	P	Pn	23 43 56.8	+0.4
BFZ				S	S	23 45 17.9	-1.9
MRZ	Mangatainoka R	7.29	206	P	Pn	23 43 57.9	-0.9
MRZ				S	S	23 45 20.9	-3.3

IDC 08 23:44:11.9±1.3**, 2°.60S**×**139°.03E, h0^{km}, mb3.5**/3**, mb1 3.8**/4**, mb1mx3.5**/33**, mbtmp3.5**/4**, ML3.8**/1**, MS2.8**/1**, Ms1 2.8**/1**, ms1mx2.3**/22**, Error ellipse: s-maj=26.9km s-min=14.6km az=174.0, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	1.68	87	Pg	Pb	23 44 43.4	-0.3
	4.6nm,0.3s,baz=246,slow=17,SNR=20						
JAY				Lg	Lg	23 45 04.3	
	8.3nm,0.3s,baz=214,slow=18,SNR=5.8						
WRA	Warramunga Arr	17.84	195	P	Pn	23 48 19.8	-2.0
	0.3nm,0.3s,baz=18,slow=13,SNR=18						
WRA				LR	LR	23 55 40.1	
	comp=Z,31nm,20.1s,baz=90,slow=39						
ASAR	Alice Springs	21.52	193	P	P	23 49 03.9	+1.1
	1.1nm,0.6s,baz=17,slow=10.0,SNR=12						
MKAR	Makanchi Array	69.90	322	P	P	23 55 25.3	+0.3
	0.3nm,0.5s,baz=105,slow=7.1,SNR=5.5						
ILAR	Eielson Array	85.60	24	P	P	23 56 51.1	-0.9
	0.2nm,0.7s,baz=248,slow=4.8,SNR=4.5						

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*IDC **08** 23:44:56.7±56.0, 19°.16S×176°.32W, h0^{km}, mb4.0/3, mb1 4.2/3, mb1mx3.8/32, mbtmp4.0/3, Error ellipse: s-maj=1043.0km s-min=175.7km az=82.0*

*NEIC **08** 23:45:08.6±0.9, 19°.2S±0°.2×175°.2W±0°.2, h187^{km}±21^{km}, mb4.3/23, Error ellipse: s-maj=37.2km s-min=4.8km az=218.0*

ISC 08 23:45:09.0±1.1**, 19°.2S**±0°.3×**175°.2W**±0°.1**, h200^{km}, n29, σ0^{s}.82**/28**, mb4.2**/15**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	4.94	90	Pn	Pn	23 46 22.7	0.0
HIZ	Hauiti	21.14	202	P	P	23 49 38.6	+0.1
TUWZ	Tuamarina	24.06	200	P	P	23 50 07.0	+1.1
MLZ	Mavora Lakes	29.59	204	P	P	23 50 54.9	-0.3
TOO	Toolangi	38.84	233	P	P	23 52 14.1	-0.7
TOO				IAmb	IAmb	23 52 23.1	
	comp=Z,5.6nm,0.9s						
COEN	Coen	40.21	271	P	P	23 52 25.4	-1.0
COEN				IAmb	IAmb	23 52 30.7	
	comp=Z,3.5nm,1.1s						
STKA	Stephens Creek	40.78	243	P	P	23 52 31.8	+0.9
	comp=Z,1.1nm,0.5s,baz=54,slow=8.7,SNR=3.4						
STKA	Stephens Creek	40.78	243	P	P	23 52 31.9	+1.1
BBOO	Buckleboo	45.54	243	P	P	23 53 09.3	+0.3
BBOO				IAmb	IAmb	23 53 17.4	
	comp=Z,9.5nm,1.1s						
WR0	Warramunga Arr	47.26	260	P	P	23 53 23.1	+0.6
WC3	Warramunga Arr	47.42	260	P	P	23 53 23.9	+0.2
WB0	Warramunga Arr	47.43	260	P	P	23 53 24.0	+0.2
WB0				IAmb	IAmb	23 53 34.5	
	comp=Z,4.2nm,1.1s						
ASAR	Alice Springs	47.44	255	P	P	23 53 24.9	+1.1
	comp=Z,3.0nm,0.8s,baz=89,slow=8.2,SNR=22						
ASAR	Alice Springs	47.44	255	P	P	23 53 24.5	+0.6
WB2	Warramunga Arr	47.44	260	P	P	23 53 24.5	+0.6
WRAB	Tennant Creek	47.44	260	P	P	23 53 24.6	+0.7
WRA	Warramunga Arr	47.45	260	P	P	23 53 24.9	+0.9
	comp=Z,0.5nm,0.3s,baz=98,slow=8.4,SNR=18						
WRA	Warramunga Arr	47.45	260	IAmb	IAmb	23 53 25.7	
	comp=Z,0.1nm,0.7s						
FORT	Forrest	52.28	246	P	P	23 53 57.9	-2.3
FITZ	Fitzroy Crossi	55.87	261	P	P	23 54 27.5	+1.2
PSAD2	Pilbara Seismi	60.47	256	P	P	23 54 58.3	+0.1
PSAD2				IAmb	IAmb	23 55 03.6	
	comp=Z,8.8nm,1.1s						
PSAC2	Pilbara Seismi	60.54	256	P	P	23 54 58.9	+0.3
PSAC2				IAmb	IAmb	23 55 00.1	
	comp=Z,6.2nm,0.9s						
PSAB2	Pilbara Seismi	60.57	256	P	P	23 54 59.4	+0.5
PSAB2				IAmb	IAmb	23 55 01.0	
	comp=Z,7.3nm,0.9s						
PSAA3	Pilbara Seismi	60.58	256	P	P	23 54 59.3	+0.4
PSAA3				IAmb	IAmb	23 55 11.2	
	comp=Z,9.1nm,1.1s						
PSA00	Pilbara Seismi	60.59	256	P	P	23 54 59.0	+0.1
PSA00				IAmb	IAmb	23 55 16.1	
	comp=Z,9.4nm,1.1s						
PSAA1	Pilbara Seismi	60.59	256	P	P	23 54 59.4	+0.4
PSAA1				IAmb	IAmb	23 55 12.8	
	comp=Z,5.3nm,0.9s						
PSAC3	Pilbara Seismi	60.59	256	P	P	23 54 59.5	+0.5
PSAB1	Pilbara Seismi	60.61	256	P	P	23 54 59.8	+0.7
PSAB1				IAmb	IAmb	23 55 02.6	
	comp=Z,8.1nm,1.1s						
PSAD1	Pilbara Seismi	60.62	256	P	P	23 54 59.4	+0.3
PSAD1				IAmb	IAmb	23 55 10.8	
	comp=Z,9.2nm,1.1s						

MEX 09 00:05:49.6±0.3**, 14°.60N**×**93°.54W, h20^{km}**±690^{km}**, MD3.5, Near coast of Chiapas**

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*IDC **09** 00:33:22.4±1.9, 9°.02N×92°.44E, h0^{km}, mb3.6/5, mb1 3.9/6, mb1mx3.6/33, mbtmp3.6/6, ML4.0/1, MS3.0/5, Ms1 3.0/5, ms1mx2.7/38, Error ellipse: s-maj=72.0km s-min=22.4km az=70.0*

*NEIC **09** 00:33:26.5±2.0, 8°.9N±0°.1×92°.4E±0°.1, h31^{km}±3^{km}, mb4.1/6, Error ellipse: s-maj=23.0km s-min=10.9km az=59.0*

ISC 09 00:33:27.4±0.9**, 9°.08N**±0°.10×**92°.5E**±0°.1**, h31^{km}, n26, σ1^{s}.28**/19**, mb3.8**/8**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBA	Port Blair	2.57	6	*e*P	Pn	00 34 10.1	+3.2
PBA	Port Blair	2.57	6	Pn	Pn	00 34 10.1	+3.1
DGPR	DIGLIPUR	4.09	6	*e*P	Pb	00 34 37.3	-1.5
LHMI	Lhok Sumawe	5.87	130	Pn	Pn	00 34 53.3	+1.1
KULM	Kulim	8.95	114	Pn	Pn	00 35 34.4	-0.2
PSI	Prapat	8.95	134	LR	LR	00 39 23.2	
	comp=Z,144nm,18.3s,baz=275,slow=40						
CMAR	Chiang Mai Arr	11.24	33	Pn	Pn	00 36 07.4	+1.4
	0.3nm,0.3s,baz=232,slow=15,SNR=1.3						
CMAR				LR	LR	00 40 48.6	
	comp=Z,28nm,19.3s,baz=260,slow=40						
PALK	Pallekele	11.79	262	LR	LR	00 40 44.6	
	comp=Z,88nm,18.8s,baz=183,slow=38						
LEM	Lembang	21.86	136	LR	LR	00 46 44.1	
	comp=Z,33nm,18.7s,baz=51,slow=37						
H08S3	Diego Garcia H	25.93	231	T	T	01 06 16.4	
	baz=47						
H08S2	Diego Garcia H	25.93	231	T	T	01 06 26.6	
	baz=47						
H08S1	Diego Carcia H	25.95	231	T	T	01 06 29.1	
	baz=47						
SOCY	Socotra	37.92	278	P	P	00 40 41.8	-0.7
MKAR	Makanchi Array	38.57	349	P	P	00 40 47.1	-0.3
	0.5nm,0.7s,baz=165,slow=9.0,SNR=6.7						
MAKZ	Makanchi	38.64	348	P	P	00 40 47.9	-0.1
KKAR	Karatay Array	38.95	334	P	P	00 40 53.6	+3.0
SONM	Songino Array	40.38	14	P	P	00 41 02.3	-0.3
	0.5nm,0.7s,baz=204,slow=7.8,SNR=4.0						
SONM	Songino Array	40.38	14	P	P	00 41 03.2	+0.6
ZALV	Zalesovo Beam	45.16	354	P	P	00 41 41.5	+0.4
MJAR	Matsushiro Arr	49.60	49	LR	LR	01 03 28.9	
	comp=Z,24nm,18.5s,baz=115,slow=36						
WB0	Warramunga Arr	50.26	125	P	P	00 42 19.5	-1.7
WB0				IAmb	IAmb	00 42 38.4	
	comp=Z,1.5nm,0.8s						
WRA	Warramunga Arr	50.30	125	P	P	00 42 20.4	-1.1
	comp=Z,0.5nm,0.5s,baz=306,slow=8.5,SNR=19						
WRA				PcP	PcP	00 43 41.3	+1.1
	comp=Z,0.5nm,0.6s,baz=317,slow=2.8,SNR=7.1						
WB2	Warramunga Arr	50.31	125	P	P	00 42 20.4	-1.3
WB2				IAmb	IAmb	00 42 22.3	
	comp=Z,1.6nm,0.9s						
WR0	Warramunga Arr	50.48	125	P	P	00 42 21.7	-1.1
WR0				IAmb	IAmb	00 42 28.1	
	comp=Z,4.2nm,1.1s						
ASAR	Alice Springs	51.95	130	P	P	00 42 32.8	-1.1
	comp=Z,0.7nm,0.7s,baz=302,slow=7.7,SNR=7.2						
ASAR				PcP	PcP	00 43 47.1	+0.8
	comp=Z,0.4nm,0.6s,baz=301,slow=2.9,SNR=2.5						
ILAR	Eielson Array	94.25	22	P	P	00 46 42.6	-0.8
	comp=Z,0.3nm,0.9s,baz=308,slow=5.5,SNR=1.7						

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*IDC **09** 00:54:05.7±0.9, 41°.45N×109°.89W, h0^{km}, mb3.2/2, mb1 3.6/5, mb1mx3.3/43, mbtmp3.3/5, ML2.2/2, Error ellipse: s-maj=11.4km s-min=7.3km az=109.0*

*UUSS **09** 00:54:10.9±1.8, 41°.68N±0°.03×109°.89W±0°.05, h-2^{km}±7^{km}, ML3.5/21, ML3.5/140(NEIC), Error ellipse: s-maj=6.1km s-min=3.1km az=120.0*

*ANF **09** 00:54:10.6±0.9, 41°.69N×109°.83W, h1^{km}±7^{km}, ML3.6/15, Error ellipse: s-maj=5.4km s-min=2.6km az=62.0*

*NEIC **09** 00:54:11.6±1.6, 41°.69N±0°.02×109°.93W±0°.05, h1^{km}±7^{km}, Error ellipse: s-maj=5.4km s-min=2.4km az=105.0*

ISC 09 00:54:11.7±0.7**, 41°.72N**±0°.02×**109°.94W**±0°.03**, h10^{km}, n123, σ1^{s}.61**/129**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BMUT	Black Mountain	1.00	285		Pg	00 54 30.7	-0.2
BW06	Boulder Array	1.09	15	P	Pg	00 54 32.1	-0.6
	baz=193						
BW06				S	Sb	00 54 47.7	+0.5
	baz=193						
BW06	Boulder Array	1.09	15		Pg	00 54 32.4	-0.3
BW06				IAML		00 54 53.6	
	396nm,0.8s						
PD31	Pinedale Array	1.09	15		Pg	00 54 32.3	-0.4
PDAR	Pinedale Array	1.09	15	Pg	Pg	00 54 32.9	+0.2
	23nm,0.3s,baz=180,slow=18,SNR=305						
PDAR				Lg	Lg	00 54 48.2	
	29nm,0.3s,baz=188,slow=34,SNR=17						
PDAR	Pinedale Array	1.09	15	Pg	Pg	00 54 32.2	-0.4
LHUT	Little Humpy P	1.15	224		Pg	00 54 33.3	-0.5
RDMU	Red Mountain	1.18	166		Pb	00 54 32.5	-1.8
RDMU				IAML		00 54 52.2	
	comp=E,2μm,0.6s						
RDMU				IAML		00 54 53.9	
	comp=N,1μm,0.4s						
MCU	Monte Cristo P	1.20	258		Pb	00 54 33.9	-0.9
TCUT	Toone Canyon	1.26	242		Pn	00 54 35.3	-0.3
TCUT				IAML		00 54 58.7	
	comp=E,2μm,0.6s						
BSUT	Blindstream Ca	1.33	208		Pn	00 54 35.5	-1.2
AHID	Auburn Hatcher	1.36	321		Pn	00 54 37.5	+0.5
AHID				IAML		00 55 00.7	
	comp=E,742nm,0.4s						
AHID				IAML		00 55 03.8	
	comp=N,707nm,0.4s						
HDU	Hyde Park	1.37	274		Pn	00 54 36.9	-0.2
N16A	Rees Ranch, Co	1.40	234		Pn	00 54 37.4	-0.1
HTU	Hoyt Peak	1.42	223		Pn	00 54 37.4	-0.4
WVUT	Wellsville	1.52	267		Pn	00 54 39.8	+0.7
RCJ	Ross Creek	1.55	228		Pn	00 54 40.0	+0.4
GZU	Grizzly Peak	1.56	260		Pn	00 54 40.1	+0.4
FPU	Francis Peak	1.58	245		Pn	00 54 41.2	+1.0
JLU	Jordanelle	1.59	226		Pn	00 54 40.2	0.0
JLU				IAML		00 55 04.7	
	comp=N,414nm,0.7s						
JLU				IAML		00 55 06.7	
	comp=E,231nm,0.7s						
DAU	Daniels Canyon	1.64	218		Pn	00 54 41.3	+0.4
MLI	Malad Range	1.66	282		Pb	00 54 42.5	-0.1
RBU	Red Butte Cany	1.69	237		Pn	00 54 42.2	+0.7
CTU	Camp Tracy	1.71	234		Pn	00 54 42.5	+0.9
CTU	Camp Tracy	1.71	234	IAML		00 55 10.7	
	comp=E,279nm,0.9s						
ECR	Eagle Creek	1.71	322		Pb	00 54 43.7	+0.3
REDW	Red Top Meadow	1.78	338		Pn	00 54 43.7	+0.9
REDW				IAML		00 55 13.4	
	comp=E,582nm,0.6s						
REDW				IAML		00 55 14.3	
	comp=E,486nm,0.8s						
PTU	Portage	1.80	278		Pb	00 54 44.7	-0.1
SNOW	Snow King Moun	1.85	341		Pb	00 54 45.9	+0.2
SNOW				IAML		00 55 14.8	
	comp=E,493nm,1.0s						
SNOW				IAML		00 55 16.5	
	comp=E,592nm,1.0s						
SPUT	South Promonto	1.93	259		Pn	00 54 46.0	+1.3
SPUT				IAML		00 55 14.5	
	comp=E,349nm,1.0s						
SPUT				IAML		00 55 15.0	
	comp=N,593nm,0.8s						
LOHW	Long Hollow	1.96	346		Pn	00 54 46.6	+1.4
LOHW				IAML		00 55 16.3	
	comp=N,344nm,0.8s						
LOHW				IAML		00 55 17.5	
	comp=N,219nm,0.8s						
O20A	White River Ci	2.04	140	Pb	Pn	00 54 47.5	+1.3
	baz=322						
O20A				Sg	Sb	00 55 15.7	+1.4
	baz=322						
O20A	White River Ci	2.04	140	Pn	Pn	00 54 47.7	+1.4
O20A				IAML		00 55 16.4	
	comp=N,912nm,0.5s						
RWWY	Rawlins	2.04	90		Pn	00 54 46.6	+0.1
RWWY				IAML		00 55 16.6	
	comp=N,544nm,0.9s						
RWWY				IAML		00 55 17.0	
	comp=N,424nm,0.7s						
MOOW	Moose Ponds	2.12	344		Pn	00 54 48.5	+1.1
HVU	Hansel Valley	2.12	273		Pn	00 54 48.3	+0.8
HVU				IAML		00 55 20.6	
	comp=N,499nm,0.4s						
HVU				IAML		00 55 21.1	
	comp=E,646nm,0.3s						
MPU	Maple Canyon	2.13	218		Pn	00 54 48.2	+0.7
MPU				IAML		00 55 19.8	
	comp=E,121nm,0.9s						
MPU				IAML		00 55 20.8	
	comp=N,184nm,0.9s						
P17A	Butcher Ranch,	2.32	195		Pn	00 54 50.4	+0.2
P17A				IAML		00 55 24.1	
	comp=E,394nm,0.8s						
P17A				IAML		00 55 24.3	
	comp=N,353nm,0.6s						
NLU	North Lily Min	2.39	223		Pn	00 54 51.5	+0.3
FLWY	Flagg Ranch	2.43	347		Pn	00 54 53.6	+1.9
FLWY				IAML		00 55 39.5	
	comp=N,108nm,0.9s						
FLWY				IAML		00 55 39.6	
	comp=N,110nm,0.8s						
BGU	Big Grassy Mou	2.46	252		Pn	00 54 53.1	+1.1
TMUT	Trail Mountain	2.60	202	Pn	Pn	00 54 55.6	+1.4
YPP	Pitchstone Pla	2.63	346		Pn	00 54 55.5	+0.9
SRU	San Rafael Swe	2.64	190		Pn	00 54 55.2	+0.6
DUG	Dugway, Tooele	2.65	236	P	Pn	00 54 54.9	+0.2
	baz=55						
DUG				S	Sn	00 55 28.8	+1.8
	baz=55						
DUG	Dugway, Tooele	2.65	236		Pn	00 54 56.3	+1.6
DUG				IAML		00 55 36.6	
	comp=N,76nm,1.1s						
DUG				IAML		00 55 37.1	
	comp=N,120nm,0.8s						
K22A	Casper	2.71	69	Pb	Pn	00 54 57.1	+1.6
	baz=250						
K22A				Sb	Sb	00 55 33.2	-0.4
	baz=250						
K22A	Casper	2.71	69		Pn	00 54 57.0	+1.6
K22A				IAML		00 55 50.8	
	comp=N,260nm,0.8s						
K22A				IAML		00 55 52.1	
	comp=E,335nm,0.9s						
H17A	Grant Village	2.72	350	Pb	Pb	00 54 59.6	-1.1
	baz=169						
H17A				Sb	Sg	00 55 37.7	-1.4
	baz=169						
H17A	Grant Village	2.72	350		Pn	00 54 57.2	+1.5
H17A				IAML		00 55 42.3	
	comp=N,70nm,1.1s						
LKWY	Lake	2.87	353		Pn	00 54 59.3	+1.5
LKWY				IAML		00 55 56.4	
	comp=N,88nm,0.9s						
YMP	Mirror Lake Pl	3.03	357		Pn	00 55 01.5	+1.5
YMP				IAML		00 55 57.4	
	comp=E,75nm,1.2s						
YMR	Madison River	3.05	346		Pn	00 55 01.8	+1.6
YMR				IAML		00 56 06.0	
	comp=N,64nm,1.0s						
YMR				IAML		00 56 06.0	
	comp=E,82nm,0.9s						
YNR	Norris Junctio	3.05	350		Pn	00 55 00.8	+0.6
N23A	Red Feather La	3.12	104	Pb	Pn	00 55 03.1	+1.9
	baz=286						
N23A				Sb	Sb	00 55 45.5	-0.1
	baz=286						
YHH	Holmes Hill	3.14	348		Pn	00 55 01.0	-0.6
YHB	Horse Butte	3.17	344		Pn	00 55 02.0	+0.1
YHL	Hebgen Lake	3.26	344		Pn	00 55 05.4	+2.2
YNE	Yellowstone No	3.29	359		Pn	00 55 04.5	+0.9
YNE				IAML		00 55 56.1	
	comp=E,63nm,0.8s						
PV22	Blue Mesa, Par	3.30	164	Pn	Pn	00 55 05.1	+1.5
QLMT	Earthquake Lak	3.30	341		Pn	00 55 06.3	+2.7
PV23	Carpenter Ridg	3.34	167		Pn	00 55 03.8	-0.4
PHWY	Pilot Hill	3.39	96		Pn	00 55 06.3	+1.3
PHWY				IAML		00 56 06.0	
	comp=E,112nm,0.7s						
SMCO	Snowmass	3.40	137		Pn	00 55 06.0	+0.8
PV10	Paradox Valley	3.41	168		Pn	00 55 07.0	+1.9
PV04	Paradox Valley	3.41	166		Pn	00 55 06.4	+1.3
PV14	Lion Creek, Pa	3.41	168		Pn	00 55 05.7	+0.4
PV07	Paradox Valley	3.42	163		Pn	00 55 07.2	+1.9
PV07				IAML		00 56 05.5	
	comp=N,219nm,0.9s						
PV07				IAML		00 56 07.7	
	comp=E,242nm,1.0s						
RLMT	Red Lodge	3.44	8	Pb	Pb	00 55 11.2	-1.7
	baz=188						
RLMT				Sb	Sb	00 55 58.4	+3.6
	baz=188						
RLMT	Red Lodge	3.44	8		Pn	00 55 07.3	+1.7
RLMT				IAML		00 56 06.6	
	comp=E,69nm,1.0s						
RLMT				IAML		00 56 08.0	
	comp=E,36nm,0.9s						
PV20	West Nyswonger	3.45	167		Pn	00 55 07.4	+1.7
PV19	Morning Glory	3.48	168		Pn	00 55 06.6	+0.5
PV19				IAML		00 56 08.1	
	comp=N,181nm,1.0s						
PV19				IAML		00 56 08.6	
	comp=E,179nm,0.7s						
PV16	Nyswonger Mesa	3.49	167		Pn	00 55 06.7	+0.5
PV12	Saucer Basin,	3.50	165		Pn	00 55 06.2	-0.2
PV11	David Mesa, Pa	3.51	166		Pn	00 55 07.2	+0.6
PV17	East Wray Mesa	3.51	167		Pn	00 55 06.9	+0.3
PV17				IAML		00 56 09.7	
	comp=E,228nm,0.9s						
PV17				IAML		00 56 10.5	
	comp=N,244nm,0.8s						
PV15	Paradox Valley	3.55	161		Pn	00 55 07.0	-0.1
PV18	Skein Mesa, Pa	3.55	167		Pn	00 55 07.8	+0.7
PV18				IAML		00 56 09.1	
	comp=E,180nm,0.7s						
PV18				IAML		00 56 15.9	
	comp=N,207nm,0.8s						
PV03	Paradox Valley	3.56	166		Pn	00 55 08.2	+1.0
PV02	Paradox Valley	3.62	165		Pn	00 55 10.0	+1.9
MSU	Marysvale	3.63	209		Pn	00 55 11.8	+3.6
BCYI	Bear Canyon	3.63	317		Pn	00 55 10.2	+1.9
TCRU	Three Creeks R	3.65	213		Pn	00 55 09.2	+0.7
TCRU				IAML		00 56 07.5	
	comp=N,77nm,1.2s						
TCRU				IAML		00 56 11.6	
	comp=E,93nm,0.8s						
MVU	Marysvale	3.65	209		Pn	00 55 11.1	+2.6
MVU				IAML		00 56 42.5	
	comp=N,183nm,1.4s						
PV13	Radium Mtn., P	3.65	166		Pn	00 55 09.5	+1.0
PV05	Paradox Valley	3.69	170		Pn	00 55 09.6	+0.6
PV01	Paradox Valley	3.73	163		Pn	00 55 09.4	-0.1
PV01				IAML		00 56 15.4	
	comp=E,179nm,0.6s						
MCMT	McKenzie Canyo	3.77	327		Pn	00 55 14.3	+4.2
HLID	Hailey	3.78	301	P	Pn	00 55 12.5	+2.2
	baz=118						
HLID				Sb	Sg	00 56 09.3	-3.8
	baz=118						
HLID	Hailey	3.78	301		Pn	00 55 14.4	+4.1
ISCO	Idaho Springs	3.80	119	Pb	Pn	00 55 14.8	+4.2
	baz=302						
ISCO				Sb	Sb	00 56 06.5	+1.2
	baz=302						
ISCO	Idaho Springs	3.80	119		Pn	00 55 11.7	+1.1
ISCO				IAML		00 56 18.5	
	comp=E,64nm,0.8s						
ISCO				IAML		00 56 19.5	
	comp=E,57nm,0.9s						
MTPU	Mount Pierson	4.05	206		Pn	00 55 16.1	+1.9
MTPU				IAML		00 56 26.2	
	comp=E,45nm,0.9s						
MTPU				IAML		00 56 26.9	
	comp=N,50nm,0.9s						
BOZ	Bozeman (W)	4.07	343	Pb	Pb	00 55 23.8	+0.3
	baz=162						
BOZ	Bozeman (W)	4.07	343		Pn	00 55 15.7	+1.5
GCMT	Greycliff	4.08	3		Pn	00 55 14.4	+0.2
ELK	Elko	4.11	258	Pg	Pn	00 55 19.1	+4.3
	comp=N,0.1nm,0.3s,baz=93,slow=17,SNR=2.2						
ELK				Lg	Lg	00 56 15.3	
	comp=N,1.2nm,0.3s,baz=356,slow=19,SNR=3.2						
ELK	Elko	4.11	258		Pn	00 55 17.0	+2.2
DLMT	Dillon	4.13	333		Pn	00 55 14.0	-0.9
PSUT	Pine Spring	4.37	225		Pn	00 55 19.0	+0.6
PSUT				IAML		00 56 40.1	
	comp=N,19nm,0.9s						
Q24A	Divide	4.58	125	Sb	Sb	00 56 30.7	+3.1
	baz=308						
S22A	4UR Ranch, Cre	4.63	148	Sb	Sb	00 56 30.9	+1.7
	baz=330						
MVCO	Mesa Verde	4.63	166	P	Pn	00 55 22.2	+0.2
	baz=347						
MVCO				Sb	Sb	00 56 32.2	+3.0
	baz=347						
MVCO	Mesa Verde	4.63	166	Pn	Pn	00 55 22.9	+0.8
PKCU	Pink Cliffs	4.64	204		Pn	00 55 24.7	+2.5
PKCU				IAML		00 56 47.6	
	comp=E,65nm,2.0s						
PKCU				IAML		00 57 08.8	
	comp=N,54nm,0.8s						
MFID	Camas Ranch	4.67	293		Pn	00 55 24.7	+2.3
MFID				IAML		00 56 46.2	

	comp=N,15nm,1.2s						
MFID				IAML		00 57 00.8	
	comp=N,15nm,3.8s						
SZCU	**Shurtz Canyon**	**4.78**	**212**	Pn	**Pn**	**00 55 23.0**	**-1.0**
SZCU				IAML		00 56 46.4	
	comp=E,13nm,0.4s						
SZCU				IAML		00 56 48.0	
	comp=N,14nm,0.4s						
CCUT	**Cedar City**	**4.93**	**214**		**Pn**	**00 55 29.1**	**+3.1**
CCUT				IAML		00 57 07.3	
	comp=E,12nm,3.4s						
RSSD	**Black Hills**	**4.96**	**59**	P	**Pn**	**00 55 26.5**	**+0.1**
	baz=242						
RSSD	**Black Hills**	**4.96**	**59**	Pn	**Pn**	**00 55 27.1**	**+0.6**
HRY	**Holter Researc**	**5.18**	**345**	Pn	**Pn**	**00 55 30.1**	**+0.8**
KNB	**Kanab**	**5.20**	**206**	Pn	**Pn**	**00 55 31.0**	**+1.3**
KNB				IAML		00 57 01.0	
	comp=E,28nm,0.9s						
KNB				IAML		00 57 15.6	
	comp=N,29nm,0.9s						
SDCO	**Great Sand Dun**	**5.24**	**138**	P	**Pn**	**00 55 29.9**	**-0.4**
	baz=321						
SDCO				Sb	**Sb**	**00 56 48.7**	**+2.1**
	baz=321						
SDCO	**Great Sand Dun**	**5.24**	**138**		**Pn**	**00 55 30.0**	**-0.4**
SDCO				IAML		00 56 59.7	
	comp=N,20nm,1.0s						
SDCO				IAML		00 57 05.5	
	comp=N,20nm,0.9s						
OGNE	**Ogallala**	**6.00**	**95**	Sb	**Sb**	**00 57 10.4**	**+2.0**
	baz=280						
T25A	**Trinidad**	**6.26**	**135**	Sb	**Sb**	**00 57 17.4**	**+1.4**
	baz=319						
WUAZ	**Wupatki**	**6.29**	**191**	Sb	**Sb**	**00 57 19.2**	**+2.4**
	baz=10						
NVAR	**Mina Array Bea**	**7.20**	**246**	Pg	Pn	00 56 03.0	+5.7
	comp=N,0.2nm,0.3s,baz=64,slow=13,SNR=3.6						
NVAR				Lg	Lg	00 57 49.5	
	comp=N,0.1nm,0.3s,baz=63,slow=30,SNR=1.5						
ANMO	**Albuquerque**	**7.29**	**157**	Pn	Pn	00 55 50.6	-7.9
	comp=N,0.1nm,0.3s,baz=339,slow=14,SNR=2.0						
ANMO				Lg	Lg	00 57 50.2	
	comp=N,0.4nm,0.3s,baz=37,slow=13,SNR=3.1						
ULM	**Lac du Bonnet**	**12.96**	**44**	Pn	Pn	00 57 11.8	-4.1
	comp=N,0.2nm,0.3s,baz=233,slow=12,SNR=5.6						
ULM				Lg	Lg	01 00 53.0	
	comp=N,0.0nm,0.3s,baz=232,slow=19,SNR=1.9						
TXAR	**Lajitas Array**	**13.36**	**156**	Pn	Pn	00 57 15.1	-6.4
	comp=N,0.1nm,0.3s,baz=313,slow=13,SNR=8.9						
TXAR				Pg	P	00 58 04.1	+33
	comp=N,0.4nm,0.3s,baz=326,slow=14,SNR=7.1						
TXAR				Lg	Lg	01 00 59.2	
	comp=N,0.0nm,0.3s,baz=329,slow=27,SNR=1.7						
DLBC	**Dease Lake**	**20.99**	**330**	P	**P**	**00 58 51.2**	**-3.8**
	comp=N,2.0nm,0.4s,baz=137,slow=18,SNR=4.1						
YKA	**Yellowknife Ar**	**21.00**	**354**	P	**P**	**00 58 53.0**	**-2.0**
	comp=N,0.2nm,0.4s,baz=161,slow=11,SNR=3.2						

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*NNC **09** 00:54:41.5±3.2, 36°.06N×78°.71E, h0^{km}, mb3.7, mpv3.4, Error ellipse: s-maj=36.9km s-min=24.1km az=109.0*

ISC 09 00:54:47.9±1.4**, 36°.12N**±0°.09×**78°.7E**±0°.2**, h35**^{km}**, n8, σ2^{s}69**/11**, 4C-6D, Kashmir-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DHRM	**DHARAMSHALA**	**4.36**	**208**	*e*P	**Pn**	**00 55 51.4**	**-0.5**
SMLA	**Simla**	**5.15**	**195**	*e*P	**Pn**	**00 56 04.4**	**+2.0**
MDOK	**Medeo**	**7.15**	**350**	Pn	**Pn**	**00 56 30.0**	**0.0**
	2.5nm,0.9s						
MDOK				Lg	Lg	00 58 29.4	
	13nm,1.1s						
TKM2	**Tokmak 2**	**7.21**	**341**	⇑Pn	**Pn**	**00 56 29.7**	**-1.2**
	0.9nm,0.5s						
TKM2				⇓Lg	Lg	00 58 30.6	
	2.4nm,0.6s						
PDGK	**Podgornoye**	**7.22**	**4**	⇑Pn	**Pn**	**00 56 29.2**	**-1.8**
	2.2nm,0.6s						
PDGK				⇓Sn	**Sn**	**00 57 56.9**	**+5.1**
	5.8nm,0.8s						
PDGK				⇓Lg	Lg	00 58 31.7	
	6.0nm,0.7s						
AAK	**Ala-Archa**	**7.29**	**335**	⇓Pn	**Pn**	**00 56 29.2**	**-2.8**
	0.8nm,0.4s						
AAK				⇓Lg	Lg	00 58 30.0	
	5.1nm,1.1s						
MAKZ	**Makanchi**	**10.95**	**12**	⇓Pn	**Pn**	**00 57 19.1**	**-2.8**
	1.9nm,0.8s						
MAKZ				⇑Sn	**Sn**	**00 59 23.7**	**+0.6**
	1.0nm,0.8s						
MK31	**Makanchi Array**	**10.99**	**13**	Pn	**Pn**	**00 57 20.0**	**-2.5**
	0.5nm,0.6s,baz=196,slow=13,SNR=11						
MK31				⇑Sn	**Sn**	**00 59 25.0**	**+0.8**
	0.8nm,0.6s,baz=197,slow=21,SNR=8.3						

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*IDC **09** 00:57:06.7±1.1, 54°.29S×132°.37W, h0^{km}, mb3.8/4, mb1 4.1/4, mb1mx3.9/29, mbtmp3.8/4, MS3.6/5, Ms1 3.5/5, ms1mx3.3/19, Error ellipse: s-maj=85.6km s-min=30.8km az=172.0*

ISC 09 00:57:08.2±1.0**, 54°.3S**±0°.5×**132°.4W**±0°.2**, h10**^{km}**, n29, σ1^{s}41**/7**, mb3.9**/4**, MS3.6**/7**, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TBI	**Tubuai**	**33.48**	**331**	*e*LR	LR	01 12 51.2	
	comp=Z,132nm,24.8s						
TBI	**Tubuai**	**33.48**	**331**	*e*T	T	01 39 28.2	
	26nm,0.3s						
PPT2	**Papeete2**	**38.99**	**333**	*e*LR	LR	01 15 21.6	
	comp=Z,149nm,25.0s						
PPT	**Papeete**	**39.01**	**333**	LR	LR	01 16 46.2	
	comp=Z,97nm,21.0s,baz=144,slow=30						
VAH	**Vaihoa**	**40.78**	**337**	*e*T	T	01 48 33.5	
	8.9nm,0.2s						
H03S2	**Juan Fernandez**	**42.31**	**83**	T	T	01 49 39.8	
	baz=222,slow=74,SNR=24						
H03S1	**Juan Fernandez**	**42.32**	**83**	T	T	01 49 41.1	
	baz=222,slow=74,SNR=23						
H03S3	**Juan Fernandez**	**42.33**	**83**	T	T	01 49 40.0	
	baz=222,slow=74,SNR=28						
PLCA	**Paso Flores**	**42.53**	**98**	LR	LR	01 17 59.4	
	comp=Z,48nm,19.7s,baz=168,slow=30						
H03N3	**Juan Fernandez**	**42.59**	**83**	T	T	01 49 57.9	
	baz=225,slow=72,SNR=59						
H03N2	**Juan Fernandez**	**42.59**	**83**	T	T	01 49 52.1	
	baz=225,slow=72,SNR=51						
H03N1	**Juan Fernandez**	**42.60**	**83**	T	T	01 49 55.9	
	baz=225,slow=72,SNR=51						
CPUP	**Villa Florida**	**60.46**	**95**	P	**P**	**01 07 19.6**	**+1.6**
	1.4nm,0.9s,baz=234,slow=6.1,SNR=3.3						
CPUP				LR	LR	01 28 55.0	
	comp=Z,41nm,19.5s,baz=210,slow=32						
LPAZ	**La Paz**	**61.95**	**79**	P	**P**	**01 07 26.9**	**-2.1**
	0.9nm,0.6s,baz=208,slow=13,SNR=3.7						
STKA	**Stephens Creek**	**62.58**	**253**	LR	LR	01 30 57.1	
	comp=Z,59nm,18.5s,baz=203,slow=32						
H01W1	**Cape Leeuwin H**	**74.34**	**232**	T	T	02 31 24.9	
	baz=146,slow=76,SNR=5.5						
H01W2	**Cape Leeuwin H**	**74.35**	**232**	T	T	02 31 25.3	
	baz=146,slow=76,SNR=5.0						
H01W3	**Cape Leeuwin H**	**74.36**	**232**	T	T	02 31 26.4	
	baz=146,slow=76,SNR=5.2						
WRA	**Warramunga Arr**	**75.92**	**256**	P	**P**	**01 08 55.1**	**0.0**
	0.5nm,0.8s,baz=138,slow=5.4,SNR=2.6						
WRA				LR	LR	01 40 19.5	
	comp=Z,26nm,18.0s,baz=180,slow=34						
TXAR	**Lajitas Array**	**86.93**	**25**	P	**P**	**01 09 54.0**	**+0.9**
	0.3nm,0.8s,baz=188,slow=5.5,SNR=2.9						
H11S2	**WAKE ISLAND Hy**	**89.15**	**304**	T	T	02 49 26.4	
	baz=148,slow=75,SNR=6.1						
H11S3	**WAKE ISLAND Hy**	**89.16**	**304**	T	T	02 49 28.4	
	baz=148,slow=75,SNR=5.0						
H11S1	**WAKE ISLAND Hy**	**89.17**	**304**	T	T	02 49 26.1	
	baz=148,slow=75,SNR=3.8						
H11N3	**WAKE ISLAND Hy**	**90.10**	**305**	T	T	02 50 29.2	
	baz=148						
H11N1	**WAKE ISLAND Hy**	**90.11**	**305**	T	T	02 50 32.9	
	baz=148						
H11N2	**WAKE ISLAND Hy**	**90.12**	**305**	T	T	02 50 31.0	
	baz=148						
ILAR	**Eielson Array**	**119.29**	**353**	PKP	**PKPdf**	**01 15 56.0**	**-0.1**
	0.4nm,0.7s,baz=186,slow=1.2,SNR=6.1						
SONM	**Songino Array**	**143.46**	**285**	PKP	**PKPdf**	**01 16 41.7**	**-0.5**
	0.3nm,0.6s,baz=107,slow=1.5,SNR=2.5						
MKAR	**Makanchi Array**	**156.90**	**265**	PKPab	**PKPab**	**01 17 33.0**	**-0.1**
	0.4nm,0.8s,baz=104,slow=5.1,SNR=4.3						

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*NEIC **09** 01:12:36.7±1.4, 31°.53N±0°.02×115°.66W±0°.02, h13^{km}±3^{km}, Error ellipse: s-maj=3.8km s-min=1.5km az=49.0*

*PAS **09** 01:12:37.3±1.6, 31°.53N±0°.01×115°.66W±0°.02, h14^{km}±4^{km}, ML3.0/20, ML2.7(ECX), ML2.7/32(NEIC), Error ellipse: s-maj=2.7km s-min=1.8km az=79.0*

*ECX **09** 01:12:37.7±0.9, 31°.52N×115°.66W, h6^{km}±3^{km}, MD2.5, ML2.7*

*MEX **09** 01:12:38.9±0.5, 31°.41N×115°.74W, h10^{km}, MD3.5*

ISC 09 01:12:35.5±1.0**, 31°.52N**±0°.02×**115°.59W**±0°.03**, h14**^{km}±8^{km}**, n40, σ1^{s}08**/61**, 5C-7D, Baja California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VTX	**Valle De La Tr**	**0.21**	**234**	⇑*e*P	**Pb**	**01 12 41.1**	**-0.1**
VTX				*e*S	**Sg**	**01 12 44.0**	**+0.6**
VTX				⇓*e*		01 12 44.3	
VTX				IAML		01 12 44.3	
	comp=N,2µm,0.1s						
VTX				IAML		01 12 44.6	
	comp=E,2µm,0.1s						
VTX				⇓*e*		01 12 44.6	
SJX	**San Joaquin**	**0.40**	**308**	⇓*e*P	**Pn**	**01 12 47.4**	**+0.4**
SJX				*e*S	**Sn**	**01 12 54.6**	**+0.3**
ECBX	**El Chinero**	**0.46**	**95**	⇑*i*P	**Pn**	**01 12 46.1**	**-1.7**
ECBX				*e*S	**Sn**	**01 12 52.9**	**-2.9**
SPIG	**San Pedro Mart**	**0.48**	**167**	*i* P	**Pn**	**01 12 46.8**	**-1.5**
SPIG				*i* S	**Sb**	**01 12 53.8**	**+0.7**
SPIG	**San Pedro Mart**	**0.48**	**167**	*e*P	**Pb**	**01 12 46.6**	**+0.7**
SPIG				*e*S	**Sb**	**01 12 53.6**	**+0.6**
SPX	**San Pedro Mart**	**0.49**	**168**		**Pb**	**01 12 46.8**	**+0.7**
SPX					**Sb**	**01 12 53.7**	**+0.4**
SPX	**San Pedro Mart**	**0.49**	**168**	⇓*i*P	**Pb**	**01 12 46.9**	**+0.7**
SPX				*e*S	**Sb**	**01 12 53.9**	**+0.5**
ESJX	**Sierra Juarez**	**0.58**	**328**		**Pb**	**01 12 47.3**	**-0.2**
ESJX					**Sg**	**01 12 54.6**	**0.0**
ESJX				IAML		01 12 55.5	
	comp=N,726nm,0.1s						
ESJX				IAML		01 12 55.7	
	comp=E,859nm,0.1s						
SVX	**San Vicente**	**0.60**	**252**	⇑*e*P	**Pg**	**01 12 47.4**	**+0.1**
SVX				*e*S	**Sg**	**01 12 54.7**	**-0.5**
SFX	**San Felipe**	**0.79**	**127**		**Pn**	**01 12 52.8**	**+0.6**
SFX					**Sn**	**01 13 03.7**	**-0.2**
SFX				IAML		01 13 05.2	
	comp=N,233nm,0.4s						
SFX				IAML		01 13 06.2	
	comp=E,212nm,0.2s						
SFX	**San Felipe**	**0.79**	**127**	⇑*e*P	**Pn**	**01 12 52.9**	**+0.6**
SFX				*e*S	**Sn**	**01 13 03.8**	**-0.2**
GUVIX	**Guadalupe Vict**	**0.90**	**29**		**Sn**	**01 13 08.4**	**+1.8**
CPBX	**Cerro Prieto**	**0.93**	**15**		**Pn**	**01 12 55.0**	**+0.7**
MBIG	**Mexicali**	**0.95**	**20**	*i* P	**Pn**	**01 12 56.2**	**+1.7**
MBIG				*i* S	**Sn**	**01 13 10.8**	**+3.0**
SQX	**San Quintin**	**0.97**	**195**	⇓*e*P	**Pn**	**01 12 54.5**	**-0.3**
SQX				*e*S	**Sg**	**01 13 07.4**	**+0.5**
CCX	**Cicese**	**0.98**	**291**		**Pb**	**01 12 53.9**	**-0.5**
CCX				IAML		01 13 07.3	
	comp=N,144nm,0.4s						
CCX				IAML		01 13 08.3	
	comp=E,115nm,0.3s						
CCX	**Cicese**	**0.98**	**291**	*e*P	**Pb**	**01 12 54.0**	**-0.5**
SGL	**Mount Signal**	**1.14**	**354**		**Pg**	**01 12 57.2**	**-0.2**
SGL					**Sg**	**01 13 12.7**	**+0.4**
RMX	**La Rumorosa**	**1.16**	**339**		**Pb**	**01 12 56.9**	**-0.7**
RMX				IAML		01 13 13.1	
	comp=N,178nm,0.2s						
RMX				IAML		01 13 13.4	
	comp=E,231nm,0.3s						
RMX	**La Rumorosa**	**1.16**	**339**	*e*P	**Pb**	**01 12 57.0**	**-0.5**
RMX				*e*S	**Sb**	**01 13 10.7**	**-1.9**
CBX	**Cerro Bola**	**1.21**	**311**		**Pg**	**01 12 58.5**	**-0.4**
CBX					**Sb**	**01 13 13.4**	**-0.6**
CBX				IAML		01 13 16.1	
	comp=E,108nm,0.5s						
CBX				IAML		01 13 16.5	
	comp=N,91nm,0.4s						
CBX	**Cerro Bola**	**1.21**	**311**	*e*P	**Pb**	**01 12 58.2**	**-0.1**
CBX				*e*S	**Sb**	**01 13 13.5**	**-0.5**
CBX				⇑*e*		01 13 16.1	
CBX				IAML		01 13 16.1	
	comp=E,209nm,0.3s						
CBX				IAML		01 13 16.5	
	comp=N,176nm,0.2s						
CBX				⇓*e*		01 13 16.5	
IKP	**In-Ko-Pah, Jac**	**1.22**	**339**		**Pg**	**01 12 58.8**	**-0.1**
IKP					**Sn**	**01 13 13.9**	**-0.7**
IKP	**In-Ko-Pah, Jac**	**1.22**	**339**	⇓*e*P	**Pg**	**01 12 58.9**	**-0.1**
TJIG	**Tijuana**	**1.30**	**315**	*i* P	**Pb**	**01 12 59.6**	**-0.2**
TJIG				*i* S	**Sb**	**01 13 15.7**	**-0.7**
TKX	**Tecate**	**1.36**	**321**	Pn	**Pb**	**01 13 00.8**	**-0.1**
COA	**Coachella**	**1.40**	**16**		**Pg**	**01 13 03.7**	**+1.3**
CRR	**Carrizo Plain**	**1.41**	**347**		**Pg**	**01 13 02.2**	**-0.3**
BAR	**Barrett**	**1.48**	**322**	Pn	**Pb**	**01 13 03.0**	**0.0**
BAR				IAML		01 13 22.0	
	comp=N,167nm,0.2s						
BAR				IAML		01 13 23.1	
	comp=E,165nm,0.2s						
BAR	**Barrett**	**1.48**	**322**	*e*P	**Pb**	**01 13 02.7**	**-0.2**
BAR				*e*S	**Sb**	**01 13 21.0**	**-0.7**
MONP2	**Monument Peak**	**1.54**	**333**		**Pg**	**01 13 04.2**	**-1.0**
MONP2					**Sb**	**01 13 23.6**	**0.0**
MONP2	**Monument Peak**	**1.54**	**333**	*e*P	**Pg**	**01 13 04.3**	**-1.0**
TJX	**Tijuana**	**1.59**	**309**	Pn	**Pg**	**01 13 05.6**	**-0.5**
GLA	**Glamis**	**1.66**	**23**	Pn	**Pb**	**01 13 05.7**	**-0.3**
GLA				IAML		01 13 30.8	
	comp=N,51nm,0.3s						
GLA				IAML		01 13 31.0	
	comp=E,77nm,0.3s						
SDRC	**San Diego Road**	**1.67**	**317**	*e*P	**Pb**	**01 13 06.4**	**+0.3**
PIX	**Pinacate**	**1.82**	**88**	Pn	**Pb**	**01 13 07.4**	**-1.1**
109C	**Camp Elliot, M**	**1.88**	**317**	Pn	**Pb**	**01 13 08.9**	**-0.8**
PFO	**Pinyon Flats O**	**2.22**	**341**	Pn	**Pb**	**01 13 14.1**	**-1.4**
214A	**Organ Pipe Nat**	**2.41**	**79**	Pn	**Pb**	**01 13 15.9**	**-2.7**
X16A	**Lo Mia Camp, P**	**4.53**	**49**	Pn	**Pn**	**01 13 47.1**	**+3.2**
X16A				IAML		01 15 08.3	
	comp=E,5.8nm,4.8s						
X16A				IAML		01 16 29.0	
	comp=N,4.5nm,4.7s						

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*IDC **09** 01:12:29.4±0.9, 40°.19N×48°.40E, h0^{km}, mb3.9/12, mb1 4.0/21, mb1mx3.9/44, mbtmp3.9/21, ML3.3/6, MS2.8/10, Ms1 2.7/10, ms1mx2.6/49, Error ellipse: s-maj=16.7km s-min=8.6km az=178.0*

*MOS **09** 01:12:30.8±1.3, 40°.23N×48°.64E, h8^{km}, mb4.4/3, Error ellipse: s-maj=6.8km s-min=4.0km az=128.3*

*NEIC **09** 01:12:32.2±2.6, 40°.30N±0°.08×48°.52E±0°.08, h10^{km}±1^{km}, mb4.0/14, Error ellipse: s-maj=14.2km s-min=11.0km az=174.0*

*AZER **09** 01:12:35.5±0.1, 40°.26N×48°.31E, h46^{km}±1^{km}, ml4.0/35, Error ellipse: s-maj=1.0km s-min=0.9km az=298.0*

*TEH **09** 01:12:36.5, 40°.25N×48°.28E, h40^{km}, ML4.0*

*NNC **09** 01:12:40.1±4.8, 40°.62N×49°.11E, h27^{km}±41^{km}, mb4.1, Error ellipse: s-maj=28.0km s-min=14.6km az=64.0*

ISC 09 01:12:35.5±0.6**, 40°.25N**±0°.02×**48°.35E**±0°.02**, h47**^{km}±6^{km}**, n209, σ2^{s}42**/257**, mb4.2**/18**, 15C-15D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDMR	**Kurdemir**	**0.18**	**316**	P	**Pn**	**01 12 44.2**	**+0.8**
	SNR=1395						
KDMR				S	**Sn**	**01 12 51.6**	**+2.7**
KDMR	**Kurdemir**	**0.18**	**316**	*e*Pg	**Pn**	**01 12 44.2**	**+0.8**
SAAT	**Saatly**	**0.39**	**171**	P	**Pn**	**01 12 46.5**	**+1.2**
	SNR=282						
SAAT				S	**Sn**	**01 12 55.3**	**+3.1**
SAAT	**Saatly**	**0.39**	**171**	*e*Pg	**Pn**	**01 12 46.5**	**+1.2**
ZRD	**Zardab**	**0.51**	**274**	P	**Pn**	**01 12 48.1**	**+1.4**
	SNR=3131						
ZRD				S	**Sn**	**01 12 58.5**	**+3.9**
ZRD	**Zardab**	**0.51**	**274**	*e*Pg	**Pn**	**01 12 48.0**	**+1.4**
GBS	**Qobustan**	**0.54**	**58**	P	**Pn**	**01 12 49.5**	**+2.4**
	SNR=306						
GBS				S	**Sn**	**01 13 01.3**	**+5.9**
GBS	**Qobustan**	**0.54**	**58**	*e*Pg	**Pn**	**01 12 49.5**	**+2.4**
IML	**Ismayilli**	**0.56**	**347**	P	**Pn**	**01 12 47.8**	**+0.4**
	SNR=1808						
IML				S	**Sn**	**01 12 57.2**	**+1.3**
IML	**Ismayilli**	**0.56**	**347**	*e*Pg	**Pn**	**01 12 47.8**	**+0.4**
PQL	**Pirkuli**	**0.57**	**19**	P	**Pn**	**01 12 48.7**	**+1.0**
	SNR=656						
PQL				S	**Sn**	**01 12 58.7**	**+2.3**
PQL	**Pirkuli**	**0.57**	**19**	*e*Pg	**Pn**	**01 12 48.6**	**+1.0**
ALIB	**Äli-Bayra**	**0.58**	**120**	P	**Pn**	**01 12 50.7**	**+3.1**
	SNR=152						
ALIB				S	**Sn**	**01 13 02.0**	**+5.8**
ALIB	**Äli-Bayra**	**0.58**	**120**	*e*Pg	**Pn**	**01 12 50.3**	**+2.7**
ATGJ	**Altiaghaj**	**0.76**	**36**	P	**Pn**	**01 12 52.0**	**+2.0**
	SNR=65						
ATGJ				S	**Sn**	**01 13 04.1**	**+3.5**
ATGJ	**Altiaghaj**	**0.76**	**36**	*e*Pg	**Pn**	**01 12 52.0**	**+2.0**
QBL	**Gabala**	**0.80**	**331**	P	**Pn**	**01 12 51.3**	**+0.8**
	SNR=380						
QBL				S	**Sn**	**01 13 02.8**	**+1.5**
QBL	**Gabala**	**0.80**	**331**	*e*Pg	**Pn**	**01 12 51.2**	**+0.8**
BLQ	**Beylaqan**	**0.80**	**229**	P	**Pn**	**01 12 51.6**	**+1.0**
	SNR=205						
BLQ				S	**Sn**	**01 13 03.4**	**+2.0**
BLQ	**Beylaqan**	**0.80**	**229**	*e*Pg	**Pn**	**01 12 51.5**	**+1.0**
BRDA	**Brd**	**0.89**	**271**	P	**Pn**	**01 12 53.7**	**+2.1**
	SNR=380						
BRDA				S	**Sn**	**01 13 08.4**	**+4.8**
SIZA	**Siyzn**	**0.93**	**27**	P	**Pn**	**01 12 53.7**	**+1.5**
	SNR=655						
SIZA				S	**Sn**	**01 13 07.2**	**+2.7**
SIZA	**Siyzn**	**0.93**	**27**	*e*Pg	**Pn**	**01 12 54.9**	**+2.6**
XNQ	**Khinaliq**	**0.94**	**350**	P	**Pn**	**01 12 53.0**	**+0.5**
	SNR=204						
XNQ				S	**Sn**	**01 13 06.1**	**+1.2**
XNQ	**Khinaliq**	**0.94**	**350**	*e*Pg	**Pn**	**01 12 53.0**	**+0.5**
AGDM	**Agdam**	**0.96**	**262**	P	**Pn**	**01 12 53.7**	**+1.1**
	SNR=48						
AGDM				S	**Sn**	**01 13 07.9**	**+2.7**
GLBA	**Clilabad**	**1.01**	**178**	P	**Pn**	**01 12 54.6**	**+1.4**
	SNR=326						
GLBA				S	**Sn**	**01 13 09.0**	**+2.8**
GLBA	**Clilabad**	**1.01**	**178**	*e*Pg	**Pn**	**01 12 54.6**	**+1.4**
GOBA	**Gobu**	**1.07**	**81**	P	**Pn**	**01 12 57.2**	**+3.1**
	SNR=9.7						
GOBA				S	**Sn**	**01 13 13.0**	**+5.2**
GOBA	**Gobu**	**1.07**	**81**	*e*Pg	**Pn**	**01 12 57.1**	**+3.1**
MNGR	**Mingechevir, A**	**1.10**	**299**	PG	**Pn**	**01 12 55.7**	**+1.3**
MNGR	**Mingechevir, A**	**1.10**	**299**	P	**Pn**	**01 12 55.9**	**+1.4**
	SNR=107						
MNGR				S	**Sn**	**01 13 10.8**	**+2.4**
QUBA	**Quba, Azerbaij**	**1.11**	**6**	P	**Pn**	**01 12 56.5**	**+1.8**
	SNR=80						
QUBA				S	**Sn**	**01 13 12.9**	**+4.0**
QRD	**Qoradiz**	**1.11**	**225**	P	**Pn**	**01 12 55.5**	**+0.8**
	SNR=133						
QRD				S	**Sn**	**01 13 10.4**	**+1.4**
QRD	**Qoradiz**	**1.11**	**225**	*e*Pg	**Pn**	**01 12 55.5**	**+0.8**
QSAR	**Qusar**	**1.27**	**357**	P	**Pn**	**01 12 58.6**	**+1.8**
	SNR=150						
QSAR				S	**Sn**	**01 13 16.1**	**+3.4**
NDR	**Nardaran**	**1.29**	**75**	Pn	**Pn**	**01 12 59.3**	**+2.1**
	SNR=76						
NDR				Sn	**Sn**	**01 13 17.8**	**+4.5**
SEKA	**Sheki**	**1.30**	**318**	PG	**Pn**	**01 12 57.9**	**+0.7**
SEKA	**Sheki**	**1.30**	**318**	P	**Pn**	**01 12 58.0**	**+0.7**
	SNR=237						
SEKA				S	**Sn**	**01 13 15.2**	**+1.7**
AKT	**Akhty**	**1.32**	**339**	*c i*PG	**Pn**	**01 12 58.9**	**+1.3**
AKT				*e*S	**Sn**	**01 13 17.1**	**+3.1**
AKT				pmax	pmax		
	comp=Z,111nm,0.2s						
AKT				smax	smax		
	comp=Z,631nm,0.2s						
YRD	**Yardimli**	**1.33**	**184**	Pn	**Pn**	**01 12 58.9**	**+1.0**
	SNR=1302						
YRD				Sn	**Sn**	**01 13 16.3**	**+1.7**
GALA	**Gala**	**1.39**	**83**	Pn	**Pn**	**01 13 00.2**	**+1.8**
GALA				Sn	**Sn**	**01 13 19.1**	**+3.5**
LKRN	**Lenkeran, Azer**	**1.57**	**168**	PG	**Pn**	**01 13 02.7**	**+1.8**
LKRN	**Lenkeran, Azer**	**1.57**	**168**	Pn	**Pn**	**01 13 01.6**	**+0.7**
	SNR=23						
LKRN				Sn	**Sn**	**01 13 22.7**	**+2.6**
GANJ	**Ganja**	**1.60**	**285**	PN	**Pn**	**01 13 01.5**	**+0.2**
GANJ	**Ganja**	**1.60**	**285**	Pn	**Pn**	**01 13 01.5**	**+0.2**
	SNR=91						
GANJ				Sn	**Sn**	**01 13 21.7**	**+1.0**
LRK	**Lerik**	**1.60**	**180**	Pn	**Pn**	**01 13 02.4**	**+0.8**
	SNR=148						
LRK				Sn	**Sn**	**01 13 22.9**	**+1.7**
ASTR	**Astara**	**1.72**	**168**	Pn	**Pn**	**01 13 03.5**	**+0.5**
	SNR=15						
ASTR				Sn	**Sn**	**01 13 26.5**	**+2.8**
ZKTA	**Zakatala**	**1.91**	**317**	PN	**Pn**	**01 13 07.4**	**+1.9**
ZKTA	**Zakatala**	**1.91**	**317**	Pn	**Pn**	**01 13 07.5**	**+1.9**
	SNR=194						
ZKTA				Sn	**Sn**	**01 13 31.4**	**+3.0**
AHAR	**Ahar**	**2.02**	**210**	*e*		01 13 39.6	
	comp=Z,99nm,0.8s						
AHAR				*e*Pn	**Pn**	**01 13 09.0**	**+1.7**
GDB	**GEDABAY**	**2.03**	**284**	Pn	**Pn**	**01 13 07.7**	**+0.3**
	SNR=636						
GDB				Sn	**Sn**	**01 13 32.9**	**+1.2**
DDFL	**Dedoflistskaro**	**2.07**	**306**	P	**Pn**	**01 13 10.1**	**+2.3**
DDFL	**Dedoflistskaro**	**2.07**	**306**	⇓PN	**Pn**	**01 13 10.1**	**+2.3**
IHRS	**Heris**	**2.18**	**208**	*e*Pn	**Pn**	**01 13 11.3**	**+1.8**
IHRS				*e*		01 13 14.4	
	comp=Z,99nm,0.2s						
LGD	**Lagodekhi**	**2.25**	**316**	P	**Pn**	**01 13 12.4**	**+2.2**
LGD				S	**Sn**	**01 13 39.1**	**+2.4**
LGD	**Lagodekhi**	**2.25**	**316**	PN	**Pn**	**01 13 12.3**	**+2.2**
LGD				S	**Sn**	**01 13 39.1**	**+2.4**
ORD	**Ordubad**	**2.25**	**235**	Pn	**Pn**	**01 13 11.9**	**+1.6**
	SNR=208						
ORD				Sn	**Sn**	**01 13 39.0**	**+2.2**
SBZ	**Shahbuz**	**2.31**	**249**	Pn	**Pn**	**01 13 13.3**	**+2.1**
	SNR=112						
SBZ				Sn	**Sn**	**01 13 42.0**	**+3.4**
QZX	**Qazax, Azerbai**	**2.40**	**291**	Pn	**Pn**	**01 13 13.2**	**+0.8**
	SNR=93						
QZX				Sn	**Sn**	**01 13 42.1**	**+1.5**
NAX	**Nakhchivan**	**2.45**	**245**	PN	**Pn**	**01 13 15.1**	**+2.1**
NAX	**Nakhchivan**	**2.45**	**245**	Pn	**Pn**	**01 13 15.2**	**+2.1**
	SNR=103						
NAX				Sn	**Sn**	**01 13 44.9**	**+3.1**
IMRD	**Marand**	**2.56**	**234**	*e*Pn	**Pn**	**01 13 16.8**	**+2.2**
IMRD				*e*		01 13 18.2	
	comp=Z,99nm,0.3s						
ITBZ	**Tabriz**	**2.64**	**221**	*e*Pn	**Pn**	**01 13 17.5**	**+1.7**
ITBZ				*e*		01 13 18.1	
	comp=Z,99nm,0.4s						
HYR	**Heyderabad**	**2.74**	**260**	Pn	**Pn**	**01 13 19.5**	**+2.5**
HYR				Sn	**Sn**	**01 13 50.0**	**+1.1**
GNI	**Garni**	**2.76**	**269**	Pn	**Pn**	**01 13 20.1**	**+2.7**
	comp=Z,13nm,0.3s,baz=298,slow=23,SNR=118						
GNI				Lg	Lg	01 13 57.1	
	comp=Z,32nm,0.3s,baz=130,slow=21,SNR=7.6						
GNI				LR	LR	01 14 48.5	
	comp=Z,157nm,21.9s,baz=94,slow=50						
GNI	**Garni**	**2.76**	**269**	*e*P	**Pn**	**01 13 20.3**	**+2.9**
GNI	**Garni**	**2.76**	**269**	*de*PN	**Pn**	**01 13 20.0**	**+2.6**
MAK	**Makhachkala**	**2.78**	**347**	*e*PN	**Pn**	**01 13 21.2**	**+3.7**
MAK				*e*		01 13 25.2	
MAK				*e*		01 13 56.3	
MAK				*e*		01 14 02.7	
MAK				pmax	pmax		
	comp=Z,71nm,0.9s						
MAK				smax	smax		
	comp=E,437nm,0.6s						
MAK				smax	smax		
	comp=E,293nm,0.6s						
MAK				MLR	MLR		
	comp=Z,222nm,15.0s						
BTLR	**Botlikh**	**2.89**	**327**	⇑*e*PN	**Pn**	**01 13 22.6**	**+3.5**
BTLR				pmax	pmax		
	comp=Z,19nm,0.3s						
DBC	**Dubki**	**2.99**	**338**	*d i*PN	**Pn**	**01 13 23.4**	**+2.9**
DBC				*e*S	**Sn**	**01 14 01.3**	**+6.1**
DBC				pmax	pmax		
	comp=Z,10.0nm,0.3s						
DBC				smax	smax		
	comp=Z,103nm,0.8s						
BTNK	**Botanikuri**	**3.04**	**299**	P	**Pn**	**01 13 23.1**	**+2.0**
BTNK				S	**Sn**	**01 13 59.1**	**+2.6**
BTNK	**Botanikuri**	**3.04**	**299**	PN	**Pn**	**01 13 23.1**	**+2.0**
BTNK				S	**Sn**	**01 13 59.0**	**+2.6**
TASB	**TASBURUN-IGDIR**	**3.16**	**267**	*e*P	**Pn**	**01 13 25.2**	**+2.4**
DVE	**Vedeno**	**3.18**	**329**	*de*PN	**Pn**	**01 13 26.5**	**+3.5**
DVE				*e*S	**Sn**	**01 14 06.1**	**+6.4**
DVE				pmax	pmax		

	comp=Z,37nm,0.7s						
DVE				smax	smax		
	comp=Z,109nm,1.0s						
DMNI	Dmanisi	3.33	290	P	Pn	01 13 26.1	+0.9
DMNI				S	Sn	01 14 05.9	+2.2
DMNI	Dmanisi	3.33	290	PN	Pn	01 13 26.1	+0.9
DMNI				S	Sn	01 14 05.8	+2.2
GROC	Groznyy	3.52	328	i PN	Pn	01 13 30.0	+2.4
GROC				e		01 13 39.6	
GROC				e		01 14 12.4	
GROC				e		01 14 32.3	
GROC				pmax	pmax		
	comp=Z,25nm,0.2s						
GROC				pmax	pmax		
	comp=Z,36nm,0.8s						
GROC				smax	smax		
	comp=E,78nm,0.4s						
GROC				smax	smax		
	comp=N,114nm,0.4s						
GROC				smax	smax		
	comp=E,88nm,0.4s						
GROC				smax	smax		
	comp=N,68nm,0.6s						
GROC				smax	smax		
	comp=N,133nm,0.9s						
GROC				MLR	MLR		
	comp=Z,70nm,2.0s						
CLDR	Caldiran	3.59	254	eP	Pn	01 13 30.7	+1.8
GUDG	Gudauri	3.66	308	P	Pn	01 13 32.6	+2.9
GUDG				S	Sn	01 14 13.4	+1.7
GUDG	Gudauri	3.66	308	PN	Pn	01 13 32.6	+2.9
GUDG				S	Sn	01 14 13.4	+1.7
PNSH	Pansheti	3.68	312	P	Pn	01 13 31.9	+1.9
PNSH				S	Sn	01 14 13.5	+1.3
PNSH	Pansheti	3.68	312	PN	Pn	01 13 31.9	+1.9
PNSH				S	Sn	01 14 13.5	+1.3
BRNG	Burnasheti	3.69	293	P	Pn	01 13 32.7	+2.6
BGD	Bogdanovka	3.75	287	P	Pn	01 13 35.0	+4.1
BGD	Bogdanovka	3.75	287	PN	Pn	01 13 35.0	+4.1
KMGR	Komgaron	3.83	318	ePN	Pn	01 13 35.6	+3.6
KMGR				pmax	pmax		
	comp=Z,18nm,0.2s						
AKH	Akhalkalaki	3.86	289	P	Pn	01 13 36.6	+4.0
AKH	Akhalkalaki	3.86	289	eP	Pn	01 13 34.7	+2.2
AKH	Akhalkalaki	3.86	289	PN	Pn	01 13 36.5	+4.0
BKRG	Bakuriani	3.95	294	P	Pn	01 13 35.4	+1.6
BKRG	Bakuriani	3.95	294	PN	Pn	01 13 35.3	+1.6
LACR	Lac	3.98	312	d iPN	Pn	01 13 36.2	+2.1
LACR				pmax	pmax		
	comp=Z,22nm,0.3s						
MAHB	Mahabad	4.05	212	ePn	Pn	01 13 37.0	+2.0
MAHB				e		01 13 50.4	
	comp=Z,99nm,0.4s						
IGZV	Ghazvin	4.13	159	ePn	Pn	01 13 37.4	+1.2
IGZV				e		01 14 34.9	
	comp=Z,99nm,0.3s						
AGRB	Hanur-Agry	4.17	262	eP	Pn	01 13 38.9	+2.1
VANB	Van	4.18	248	eP	Pn	01 13 38.6	+1.8
ZEI	Tsey	4.19	309	c ePN	Pn	01 13 39.8	+2.7
ZEI				pmax	pmax		
	comp=Z,16nm,0.6s						
QALM	Alamut, Qazvin	4.22	154	ePn	Pn	01 13 36.4	-1.1
BTKR	Batakoyurt	4.22	319	⇓ePN	Pn	01 13 40.5	+3.2
KORR	Kora	4.28	313	c ePN	Pn	01 13 40.7	+2.6
ONI	Oni	4.36	304	P	Pn	01 13 41.3	+2.1
ONI	Oni	4.36	304	ePN	Pn	01 13 41.2	+2.0
TRKR	Terskaya	4.39	323	⇓ePN	Pn	01 13 42.2	+2.6
TRKR				pmax	pmax		
	comp=Z,48nm,0.3s						
ABS	Abastumani	4.45	292	P	Pn	01 13 49.4	+8.8
ABS	Abastumani	4.45	292	PN	Pn	01 13 49.3	+8.7
GEVA	Gevas	4.54	246	Pn	Pn	01 13 44.9	+3.1
LSNR	Lesken	4.54	313	⇓ePN	Pn	01 13 44.0	+2.3
TKB	Tkibuli	4.55	299	P	Pn	01 13 43.6	+1.8
TKB	Tkibuli	4.55	299	PN	Pn	01 13 43.5	+1.8
AKDM	Akdamar-Van	4.58	247	eP	Pn	01 13 43.8	+1.4
SENK	Senkaya-Erzuru	4.59	276	eP	Pn	01 13 45.3	+2.8
PRTR	Priterechnaya	4.63	320	d iPN	Pn	01 13 45.9	+3.1
PRTR				pmax	pmax		
	comp=Z,34nm,0.4s						
CUKT	Cukurca	4.76	233	eP	Pn	01 13 45.6	+0.7
NCK	Nalchik	4.81	314	⇓ePN	Pn	01 13 49.4	+4.1
KOPR	Koprukoy-ERZUR	4.99	269	eP	Pn	01 13 50.1	+2.2
IRAZ	Razeghan	5.00	165	ePn	Pn	01 13 50.0	+1.9
IPRN	Peran	5.09	141	ePn	Pn	01 13 48.9	-0.4
NEY	Neytrino	5.17	307	⇓ePN	Pn	01 13 51.5	+1.1
CHVG	Ch'k'valeri	5.31	300	eP	Pn	01 13 48.8	-3.4
KBZ	Khabaz	5.35	312	Pn	Pn	01 13 55.1	+2.5
	comp=Z,0.3nm,0.3s,baz=177,slow=1.6,SNR=11						
KBZ				Sn	Sn	01 14 55.3	+2.5
	comp=Z,0.9nm,0.3s,baz=168,slow=19,SNR=5.5						
KBZ				LR	LR	01 15 44.6	
	comp=Z,34nm,18.7s,baz=149,slow=36						
KBZ	Khabaz	5.35	312	⇑eP	Pn	01 13 55.6	+3.0
SIRT	Sirnak	5.36	241	eP	Pn	01 13 53.9	+0.8
HAGD	Aghdareh	5.45	173	ePn	Pn	01 13 56.4	+2.0
KVAR	Kislovodsk Arr	5.60	313	Pn	Pn	01 13 59.8	+3.4
	baz=128,slow=19,SNR=1.2						
KVAR				Sn	Sn	01 15 00.0	+0.6
	baz=126,slow=10,SNR=4.1						
KIV	Kislovodsk	5.61	313	eP	Pn	01 13 57.7	+1.3
KIV	Kislovodsk	5.61	313	eP	Pn	01 13 59.2	+2.8
KIV				eS	Sn	01 15 04.8	+5.3
KIV				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KIV				MLR	MLR		
	comp=Z,20nm,8.0s						
KIV	Kislovodsk	5.61	313	Pn	Pn	01 13 58.8	+2.4
IGLO	Ghaloghah	5.70	129	ePn	Pn	01 13 57.6	-0.2
IDHR	Dehrash	5.75	196	e		01 14 05.2	
	comp=Z,99nm,0.4s						
IDHR				ePn	Pn	01 14 01.5	+3.0
IFIR	Firoozkooh	5.77	141	ePn	Pn	01 14 00.1	+1.3
ILAS	Lasjerd	6.08	142	ePn	Pn	01 14 04.5	+1.5
IMND	Minoodasht	6.27	116	ePn	Pn	01 14 04.8	-0.6
IANJ	Anjilo	6.49	136	ePn	Pn	01 14 09.8	+1.1
GUZR	Guzeripl'	7.17	304	⇓eP	Pn	01 14 22.4	+4.6
IKLH	Kolahrood	7.39	158	ePn	Pn	01 14 22.3	+1.3
GEYT	Alibeck	7.94	104	Pn	Pn	01 14 26.8	-1.5
	comp=Z,6.7nm,0.3s,baz=282,slow=12,SNR=104						
GEYT				Sn	Sn	01 15 50.0	-6.9
	comp=Z,1.4nm,0.3s,baz=264,slow=24,SNR=1.9						
GEYT				LR	LR	01 19 16.1	
	comp=Z,46nm,19.2s,baz=0.0,slow=52						
GEYT	Alibeck	7.94	104	Pn	Pn	01 14 27.1	-1.3
GYA0B	ALIBECK ARRAY	7.94	104	⇓Pn	Pn	01 14 26.0	-2.3
GYA0B				⇑Sn	Sn	01 15 52.4	-4.5
GYA0B	ALIBECK ARRAY	7.94	104	Pn	Pn	01 14 26.8	-1.6
SBZV	Sabzevar	8.24	115	ePn	Pn	01 14 32.2	-0.4
IKRD	Kardeh	9.41	108	ePn	Pn	01 14 47.2	+8.4
BRTR	Keskin Array B	11.30	272	LR	LR	01 20 15.0	
	comp=Z,21nm,20.4s,baz=58,slow=41						
BELG	Belogornoye	12.16	358	Pn	Pn	01 15 24.3	-1.6
	comp=Z,0.9nm,0.3s,baz=196,slow=7.4,SNR=5.7						
BELG				Sn	Sn	01 17 27.6	-12
	comp=Z,0.5nm,0.3s,baz=293,slow=21,SNR=2.7						
AB31	Akbulak array	12.19	39	⇑P	Pn	01 15 23.7	-2.8
	comp=Z,0.4nm,0.4s,baz=215,slow=12,SNR=26						
AB31				⇓S	Sn	01 17 31.7	-9.1
	comp=Z,1.0nm,0.4s,baz=218,slow=21,SNR=3.9						
AB31	Akbulak array	12.19	39	P	Pn	01 15 23.6	-2.8
ABKAR	Akbulak array	12.19	39	Pn	Pn	01 15 24.2	-2.2
ABKAR	Akbulak array	12.19	39	Pn	Pn	01 15 22.9	-3.5
AKTO	Aktyubinsk	12.24	30	Pn	Pn	01 15 24.2	-2.8
	comp=Z,0.7nm,0.3s,baz=208,slow=10,SNR=16						
AKTO				Sn	Sn	01 17 31.3	-11
	comp=Z,1.2nm,0.3s,baz=31,slow=23,SNR=8.7						
AKTO				LR	LR	01 21 22.5	
	comp=Z,19nm,19.0s,baz=276,slow=44						
AKTO	Aktyubinsk	12.24	30	⇑P	Pn	01 15 22.9	-4.0
	comp=Z,2.0nm,0.7s						
AKTO				⇑S	Sn	01 17 31.3	-10
	comp=Z,3.4nm,0.5s						
MMAI	Mount Meron Ar	12.65	239	LR	LR	01 21 21.6	
	comp=Z,55nm,19.3s,baz=30,slow=42						
ELL	Elmali	14.86	262	P	P	01 16 09.9	+2.4
ELL	Elmali	14.86	262	P	P	01 16 09.9	+2.4
EIL	Elat	15.21	230	LR	LR	01 22 04.8	
	comp=Z,28nm,18.8s,baz=334,slow=38						
KK31	Karatay Array	16.80	73	⇑P	Pn	01 16 24.7	-2.6
	comp=Z,2.5nm,0.5s,baz=292,slow=9.5,SNR=28						
KK31				⇑S	Sn	01 19 25.1	-7.8
	comp=Z,2.3nm,0.6s,baz=272,slow=24,SNR=9.9						
KK31	Karatay Array	16.80	73	P	Pn	01 16 25.9	-1.4
KK31				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KK31	Karatay Array	16.80	73		Pn	01 16 25.9	-1.4
KK31				IAmb	IAmb	01 16 30.3	
	comp=Z,4.8nm,0.7s						
KKAR	Karatay Array	16.80	73	P	Pn	01 16 25.8	-1.5
KKAR	Karatay Array	16.80	73	Pn	Pn	01 16 25.8	-1.5
KKAR	Karatay Array	16.80	73	Pn	Pn	01 16 26.1	-1.2
KKAR				IAmb	IAmb	01 16 30.3	
	comp=Z,4.8nm,0.7s						
AKASG	Malin Array Be	16.95	314	Pn	P	01 16 30.4	-0.1
	comp=Z,0.3nm,0.3s,baz=121,slow=11,SNR=2.3						
ARU	Arti	17.52	19	Pn	Pn	01 16 32.8	-3.3
	comp=Z,0.0nm,0.3s,baz=241,slow=6.8,SNR=9.7						
ARU				Sn	Sn	01 19 34.8	-15
	comp=Z,0.0nm,0.3s,baz=267,slow=23,SNR=2.2						
ARU	Arti	17.52	19	P	Pn	01 16 31.8	-4.3
ARU				S	Sn	01 19 41.9	-8.3
ARU	Arti	17.52	19	Pn	Pn	01 16 33.3	-2.8
BURAR	Bucovina Array	18.17	302	P	Pn	01 16 45.5	+1.2
BUR08	Bucovina Ar. S	18.19	302	P	Pn	01 16 45.4	+0.9
SVE	Sverdlovsk	18.43	22	eP	Pn	01 16 47.1	-0.1
BRVK	Borovoye	19.67	42	⇑P	P	01 16 59.5	-0.9
	comp=Z,4.6nm,0.4s						
BRVK	Borovoye	19.67	42	P	P	01 17 00.6	+0.3
BRVK				pmax	pmax		
	comp=Z,10.0nm,0.5s						
BRVK	Borovoye	19.67	42	P	P	01 17 00.6	+0.3
BRVK				IAmb	IAmb	01 17 01.5	
	comp=Z,10.0nm,0.5s						
BVAR	Borovoye Array	19.71	42	P	P	01 17 00.1	-0.6
	comp=Z,2.1nm,0.3s,baz=236,slow=9.0,SNR=43						
AAK	Ala-Archa	19.72	74	P	P	01 17 00.6	-0.5
	comp=Z,0.3nm,0.3s,baz=145,slow=3.3,SNR=8.3						
AAK				LR	LR	01 25 15.7	
	comp=Z,46nm,20.4s,baz=246,slow=39						
AAK	Ala-Archa	19.72	74	P	Pn	01 17 02.1	-0.8
AAK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
AAK	Ala-Archa	19.72	74	P	Pn	01 17 02.1	-0.8
KSH	Kashi	21.18	83	P	P	01 17 15.1	-1.9
KSH				pmax	pmax		
	comp=Z,8.0nm,0.5s						
KSH				pmax	pmax		
	comp=Z,67nm,5.4s						
KURBB	Kurchatov Arra	23.43	54	P	P	01 17 41.6	+1.3
	comp=Z,10nm,0.6s,baz=261,slow=8.9,SNR=45						
KURBB	Kurchatov Arra	23.43	54	⇑P	P	01 17 40.0	-0.2
	comp=Z,7.0nm,0.7s						
KURBB	Kurchatov Arra	23.43	54	P	P	01 17 40.1	-0.2
KURK	Kurchatov	23.51	53	⇓P	P	01 17 41.8	+0.8
	comp=Z,9.3nm,0.7s						
KURK	Kurchatov	23.51	53	P	P	01 17 42.0	+1.0
KURK				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KURK	Kurchatov	23.51	53	P	P	01 17 42.0	+1.0
MAKZ	Makanchi	25.11	64	⇑P	P	01 17 55.7	-0.1
	comp=Z,5.3nm,0.6s						
MAKZ	Makanchi	25.11	64	P	P	01 17 56.9	+1.1
MAKZ				pmax	pmax		
	comp=Z,12nm,1.1s						
MAKZ	Makanchi	25.11	64	P	P	01 17 56.9	+1.1
FIA1	FINESS Array S	25.21	335	P	P	01 17 57.6	+1.2
FINES	FINESS Array B	25.21	335	P	P	01 17 56.0	-0.5
	comp=Z,1.8nm,0.3s,baz=138,slow=10,SNR=31						
FINES	FINESS Array B	25.21	335	P	P	01 17 56.3	-0.1
FINES	FINESS Array B	25.21	335	P	P	01 17 56.3	-0.1
MK31	Makanchi Array	25.33	64	⇑P	P	01 17 58.2	+0.5
	comp=Z,6.1nm,0.7s,baz=266,slow=7.0,SNR=45						
MK31	Makanchi Array	25.33	64	P	P	01 17 58.7	+1.0
MK31				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MK31	Makanchi Array	25.33	64	P	P	01 17 58.7	+1.0
MK31				IAmb	IAmb	01 18 01.4	
	comp=Z,7.5nm,1.0s						
MKAR	Makanchi Array	25.33	64	P	P	01 17 58.3	+0.5
	comp=Z,6.4nm,0.8s,baz=266,slow=8.0,SNR=3.6						
MKAR	Makanchi Array	25.33	64	P	P	01 17 58.6	+0.9
GERES	GERESS Array B	25.96	301	P	P	01 18 04.4	+0.9
	comp=Z,0.3nm,0.6s,baz=105,slow=11,SNR=1.8						
ZAA0	Zalesovo Array	28.00	48	P	P	01 18 21.6	0.0
ZAA0				IAmb	IAmb	01 18 22.2	
	comp=Z,1.5nm,0.5s						
ZALV	Zalesovo Beam	28.00	48	P	P	01 18 21.4	-0.3
	comp=Z,1.3nm,0.4s,baz=259,slow=9.6,SNR=10						
ZALV				LR	LR	01 30 41.6	
	comp=Z,21nm,19.2s,baz=16,slow=39						
BFO	Black Forest	29.49	299	i P	P	01 18 39.0	+4.0
ESDC	Sonseca Array	39.61	287	P	P	01 20 02.1	-0.3
	comp=Z,0.5nm,0.6s,baz=63,slow=8.5,SNR=5.2						
SPITS	Spitsbergen Ar	40.22	350	P	P	01 20 07.4	+0.5
	comp=Z,5.7nm,0.9s,baz=116,slow=9.4,SNR=5.1						
SONM	Songino Array	41.54	60	P	P	01 20 18.9	+0.6
	comp=Z,0.4nm,0.7s,baz=281,slow=9.0,SNR=3.0						
KMBO	Kilima Mbogo	42.41	197	LR	LR	01 38 26.5	
	comp=Z,37nm,18.0s,baz=83,slow=37						
CMAR	Chiang Mai Arr	48.42	101	P	P	01 21 11.6	-1.6
	comp=Z,2.7nm,0.3s,baz=290,slow=8.6,SNR=2.1						
TOA0	Torodi Ar. Sit	48.91	250	P	P	01 21 16.2	-0.7
TOA0				IAmb	IAmb	01 21 20.9	
	comp=Z,2.5nm,1.1s						
TORD	Torodi Ar. Bea	48.91	250	P	P	01 21 16.2	-0.7
	comp=Z,0.5nm,0.5s,baz=66,slow=6.5,SNR=7.7						
TORD	Torodi Ar. Bea	48.91	250	P	P	01 21 16.3	-0.6
BOSA	Boshof	71.80	201	P	P	01 23 53.6	+0.6
BOSA	Boshof	71.80	201	P	P	01 23 53.6	+0.6
ILAR	Eielson Array	74.63	7	P	P	01 24 08.8	-0.5
	comp=Z,0.3nm,0.8s,baz=329,slow=2.9,SNR=4.4						
YKA	Yellowknife Ar	76.69	352	P	P	01 24 21.3	+0.3
	comp=Z,0.2nm,0.5s,baz=13,slow=5.6,SNR=3.0						

ANF ***09*** *01:45:02.2±0.4, 31°.59N×115°.65W, h0^{km}, ML5.6/40, Error ellipse: s-maj=4.9km s-min=2.0km az=24.0*

SCEDC ***09*** *01:45:02.7, 31°.53N×115°.66W, h1^{km}*

NEIC ***09*** *01:45:02, 31°.53N×115°.67W, h14^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-0.63; $M_{\theta\theta}$-1.78; $M_{\phi\phi}$2.41; $M_{r\theta}$0.11; $M_{\theta\phi}$-0.59; $M_{\phi r}$0.14; Fault plane solution: $M_0$2.25000×10^{16} NP1:ϕ_s217.01000°, δ87.54000°, λ-5.65000°. NP2:ϕ_s307.25000°, δ84.35000°, λ-177.53000°. Principal axes: T 2.4992, Plg2.0000°, Azm262.0000°; N -0.6244, Plg84.0000°, Azm14.0000°; P -1.8748, Plg6.0000°, Azm172.0000°;*

BJI ***09*** *01:45:02.0±0.0, 31°.60N×115°.70W, h5^{km}, mb4.8/7, Ms5.0/1*

IDC ***09*** *01:45:02.5±0.6, 31°.53N×115°.54W, h0^{km}, mb4.3/20, mb1 4.5/27, mb1mx4.4/48, mbtmp4.4/27, ML4.1/7, MS4.1/28, Ms1 4.1/28, ms1mx4.0/44, Error ellipse: s-maj=14.4km s-min=7.1km az=54.0*

PAS ***09*** *01:45:02.7±3.0, 31°.53N±0°.02×115°.66W±0°.03, h1^{km}±3^{km}, Mwr4.9/6, mb4.9/177(NEIC), Md4.9/16(MEX), ML5.2/56(NEIC), ML5.2(ECX), Mwr4.8/57(NEIC), Mww4.9(NEIC), Error ellipse: s-maj=0.0km s-min=0.0km az=156.0*

NEIC ***09*** *01:45:02.8, 31°.53N×115°.67W, h14^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-0.26; $M_{\theta\theta}$-2.50; $M_{\phi\phi}$2.76; $M_{r\theta}$0.03; $M_{\theta\phi}$-0.72; $M_{\phi r}$-0.05; Fault plane solution: $M_0$2.74000×10^{16} NP1:ϕ_s127.31000°, δ89.84000°, λ178.85000°. NP2:ϕ_s217.31000°, δ88.85000°, λ0.16000°. Principal axes: T 2.8574, Plg1.0000°, Azm82.0000°; N -0.2584, Plg89.0000°, Azm299.0000°; P -2.5990, Plg1.0000°, Azm172.0000°;*

ECX ***09*** *01:45:03.4±0.5, 31°.52N×115°.66W, h9^{km}±6^{km}, MD4.8, ML5.0, Fault plane solution: NP1:ϕ_s217.00000°, δ89.00000°, λ0.00000°.*

NEIC ***09*** *01:45:03.4±3.4, 31°.53N±0°.02×115°.66W±0°.03, h10^{km}±1^{km}, Error ellipse: s-maj=4.2km s-min=2.9km az=231.0*

MEX ***09*** *01:45:04.3±0.7, 31°.48N×115°.64W, h6^{km}±10^{km}, MD4.9*

GCMT ***09*** *01:45:05.7±0.2, 31°.62N±0°.01×115°.66W±0°.01, h23^{km}±1^{km}, MW5.0/115, Moment Tensor Solution. s43,c50; s115,c168; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.72±.15; $M_{\theta\theta}$-3.52±.12; $M_{\phi\phi}$4.24±.12; $M_{r\theta}$-0.07±.21; $M_{\theta\phi}$-1.49±.10; $M_{\phi r}$-0.69±.17; Best double couple: $M_0$4.20400×10^{16} NP1:ϕ_s124.00000°, δ82.00000°, λ177.00000°. NP2:ϕ_s215.00000°, δ87.00000°, λ8.00000°. Principal axes: T 4.6000, Plg7.0000°, Azm80.0000°; N -0.7900, Plg82.0000°, Azm233.0000°; P -3.8080, Plg4.0000°, Azm349.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***09*** *01:45:07, 31°.53N×115°.67W, h12^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-0.67; $M_{\theta\theta}$-2.43; $M_{\phi\phi}$3.10; $M_{r\theta}$-0.09; $M_{\theta\phi}$-0.78; $M_{\phi r}$-0.39; Fault plane solution: $M_0$2.96000×10^{16} NP1:ϕ_s127.00000°, δ83.00000°, λ179.00000°. NP2:ϕ_s217.00000°, δ89.00000°, λ7.00000°. Principal axes: T 3.2410, Plg5.0000°, Azm82.0000°; N -0.6899, Plg83.0000°, Azm223.0000°; P -2.5512, Plg4.0000°, Azm352.0000°;*

ISC 09 01:45:02.5±1.0**, 31°.54N**±0°.02×**115°.64W**±0°.02**, h2**^{km}±6^{km}**, n620, σ**$1\overset{s}{.}$**52**/657**, mb4.8**/76**, MS4.1**/26**, 9C-13D, Baja California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VTX	Valle De La Tr	0.19	219	i P	Pg	01 45 06.8	+0.5
VTX				eS	Sg	01 45 09.6	+0.9
VTX				e		01 45 10.4	
VTX				IAML		01 45 10.4	
	comp=N,174μm,0.1s						
SJX	San Joaquin	0.35	309	⇓iP	Pn	01 45 13.1	-1.6
SJX				eS	Sb	01 45 20.7	+3.2
SJX				e		01 45 21.8	
SJX				IAML		01 45 21.8	
	comp=E,74μm,0.1s						
ECBX	El Chinero	0.51	98	⇑iP	Pg	01 45 11.8	-0.5
ECBX				eS	Sg	01 45 18.9	0.0
SPIG	San Pedro Mart	0.52	163	i P	Pg	01 45 12.5	+0.1
SPIG				i S	Sg	01 45 19.6	+0.5
SPIG	San Pedro Mart	0.52	163		Pg	01 45 12.5	+0.1
SPIG					Sg	01 45 19.6	+0.5
SPIG	San Pedro Mart	0.52	163	⇓iP	Pg	01 45 12.6	+0.1
SPIG				eS	Sg	01 45 19.3	+0.2
SPX	San Pedro Mart	0.53	163		Pg	01 45 12.6	-0.1
SPX					Sg	01 45 19.6	+0.2
SPX	San Pedro Mart	0.53	163	⇓iP	Pg	01 45 12.6	-0.1
SPX				eS	Sg	01 45 19.7	+0.2
ESJX	Sierra Juarez	0.53	331		Pg	01 45 13.1	+0.3
ESJX				IAML		01 45 23.9	
	comp=E,80μm,1.1s						
ESJX	Sierra Juarez	0.53	331		Sg	01 45 20.7	+1.0
SVX	San Vicente	0.56	248	⇑iP	Pg	01 45 13.1	-0.3
SVX				eS	Sg	01 45 20.3	-0.3
SFX	San Felipe	0.84	126	Pg	Pg	01 45 18.6	-0.1
SFX					Sg	01 45 29.3	-0.3
SFX				IAML		01 45 31.4	
	comp=E,102μm,0.9s						
SFX	San Felipe	0.84	126	⇑eP	Pg	01 45 18.6	-0.1
SFX				IAML		01 45 31.5	
	comp=E,92μm,0.7s						
GUVIX	Guadalupe Vict	0.90	32		Pg	01 45 19.9	+0.1
GUVIX					Sb	01 45 33.0	-0.3
GUVIX	Guadalupe Vict	0.90	32	eP	Pg	01 45 20.2	+0.5
CPBX	Cerro Prieto	0.92	18		Pg	01 45 20.3	+0.1
CPBX				Sg	Sg	01 45 33.3	+1.1
CPBX	Cerro Prieto	0.92	18	⇓eP	Pg	01 45 20.3	+0.1
CCX	Cicese	0.93	291		Pg	01 45 19.8	-0.6
CCX				Sg	Sg	01 45 31.1	-1.4
CCX				IAML		01 45 35.9	
	comp=N,42μm,1.1s						
CCX	Cicese	0.93	291	⇑eP	Pg	01 45 19.7	-0.6
MBIG	Mexicali	0.94	23	eP	Pg	01 45 21.4	+0.7
MBIG				eS	Sg	01 45 33.9	+1.0
MBIG	Mexicali	0.94	23		Pg	01 45 21.4	+0.7
MBIG					Sg	01 45 33.9	+1.0
MBIG	Mexicali	0.94	23	⇓eP	Pg	01 45 21.0	+0.4
SQX	San Quintin	0.98	192	⇓iP	Pg	01 45 20.1	-1.2
SQX				eS	Sg	01 45 32.7	-1.4
SQX				IAML		01 45 38.7	
	comp=N,42μm,0.3s						
CTLX	Tlaxcala, TLX	1.02	24	⇓eP	Pg	01 45 21.6	-0.5
UABX	UABC, Campus M	1.10	9	Pg	Pg	01 45 23.1	-0.6
UABX				Sg	Sg	01 45 38.0	+0.1
UABX	UABC, Campus M	1.10	9	⇓eP	Pg	01 45 23.2	-0.4
SGL	Mount Signal	1.11	356		Pg	01 45 22.9	-0.9
SGL					Sg	01 45 37.9	-0.2
RMX	La Rumorosa	1.12	341		Pg	01 45 22.6	-1.5
RMX				Sg	Sg	01 45 35.8	-2.8
RMX				IAML		01 45 39.0	
	comp=N,88μm,0.9s						
RMX				IAML		01 45 39.0	
	comp=E,59μm,0.4s						
RMX	La Rumorosa	1.12	341	⇓eP	Pg	01 45 22.6	-1.5
YUH	Yuha Desert	1.13	348		Pg	01 45 23.4	-0.8
YUH					Sg	01 45 38.4	-0.4
CBX	Cerro Bola	1.16	312		Sg	01 45 39.5	-0.4
CBX	Cerro Bola	1.16	312		Pg	01 45 24.2	-0.6
CBX	Cerro Bola	1.16	312	IAML		01 45 43.4	
	comp=E,66μm,0.8s						
CBX				IAML		01 45 47.0	
	comp=N,43μm,1.0s						
CBX	Cerro Bola	1.16	312	⇑eP	Pg	01 45 23.9	-0.9
CBX				eS	Sg	01 45 39.5	-0.4
CBX				IAML		01 45 47.2	
	comp=N,78μm,0.9s						
IKP	In-Ko-Pah, Jac	1.18	340	P	Pg	01 45 23.9	-1.2
	baz=161,SNR=1000						
IKP				S	Sg	01 45 39.3	-1.0
	baz=161						
IKP	In-Ko-Pah, Jac	1.18	340		Pg	01 45 24.5	-0.5
IKP					Sg	01 45 39.6	-0.7
IKP	In-Ko-Pah, Jac	1.18	340	⇓eP	Pg	01 45 24.5	-0.5
WESC	Westside Schoo	1.22	356		Pg	01 45 24.7	-1.2
WESC					Sn	01 45 43.3	-0.3
WESC	Westside Schoo	1.22	356	⇓eP	Pg	01 45 24.7	-1.2
TJIG	Tijuana	1.25	316	eP	Pg	01 45 25.3	-1.2
TJIG				i S	Sg	01 45 41.5	-1.2
TJIG	Tijuana	1.25	316		Pg	01 45 25.3	-1.2
TJIG					Sg	01 45 41.5	-1.2
TJIG	Tijuana	1.25	316	⇑eP	Pg	01 45 25.3	-1.2
DREC	Desert Rsrch C	1.27	7		Pn	01 45 25.7	-1.6
DREC					Sg	01 45 43.2	-0.2
DREC	Desert Rsrch C	1.27	7	⇓eP	Pn	01 45 25.7	-1.6
COK2	Cook Ranch 2	1.31	357		Pn	01 45 25.9	-1.9
COK2					Sg	01 45 44.2	-0.3
TKX	Tecate	1.31	322		Pn	01 45 26.4	-1.5
TKX				IAML		01 45 44.2	
	comp=E,49μm,0.5s						
TKX				IAML		01 45 44.6	
	comp=N,44μm,0.4s						
TKX	Tecate	1.31	322		Sg	01 45 43.7	-1.0
EMSC	East Mesa	1.32	25		Pn	01 45 25.9	-2.0
EMSC	East Mesa	1.32	25	eP	Pn	01 45 25.9	-2.0
SNR	Schaffner Ranc	1.33	7		Pn	01 45 26.5	-1.6
CRR	Carrizo Plain	1.37	348		Pn	01 45 26.9	-1.8
CRR					Sb	01 45 45.8	-1.1
YMD	Yuma Desert	1.37	42		Pn	01 45 26.3	-2.4
COA	Coachella	1.39	18		Pn	01 45 26.9	-2.1
SWSC	Sam W. Stewart	1.41	355	P	Pn	01 45 27.1	-2.2
	baz=175,SNR=1000						
SWSC				S	Sb	01 45 47.4	-0.5
	baz=175						
SWSC	Sam W. Stewart	1.41	355		Pn	01 45 27.0	-2.2
SWSC					Sb	01 45 47.9	0.0
SWSC	Sam W. Stewart	1.41	355	⇓eP	Pn	01 45 27.1	-2.2
SUP	Superstition M	1.42	354		Sg	01 45 48.5	+0.4
BAR	Barrett	1.43	323		Pn	01 45 28.4	-1.2
BAR				IAML		01 45 48.2	
	comp=N,28μm,0.8s						
BAR				IAML		01 45 50.0	
	comp=E,35μm,0.6s						
BAR	Barrett	1.43	323		Sb	01 45 47.2	-1.6
CBKC	Canebrake	1.45	339		Pn	01 45 28.8	-1.0
WEMD	Westmorland, C	1.49	2		Pn	01 45 28.7	-1.7
MONP2	Monument Peak	1.50	334	P	Pn	01 45 29.7	-1.0
	baz=154,SNR=1000						
MONP2				S	Sn	01 45 49.6	-1.4
	baz=154						
MONP2	Monument Peak	1.50	334		Pn	01 45 29.7	-1.0
MONP2					Sn	01 45 49.5	-1.4
OLP	Otay Lakes Par	1.53	315		Pn	01 45 30.2	-0.6
OLP					Sn	01 45 49.6	-1.7
RUN	Ruthven	1.53	21		Pn	01 45 28.6	-2.4
TJX	Tijuana	1.54	309		Pn	01 45 30.5	-0.6
TJX				Sn	Sn	01 45 50.7	-0.9
TJX	Tijuana	1.54	309	⇑eP	Pn	01 45 30.2	-0.8
ERRC	Elmore Ranch	1.58	354		Pb	01 45 32.8	+0.4
ERRC					Sg	01 45 54.5	+1.2
SDRC	San Diego Road	1.62	318		Pn	01 45 31.4	-0.8
SDRC					Sn	01 45 52.4	-1.3

GLA	Glamis	1.66	24	P	Pn	01 45 30.5	-2.2
	baz=205,SNR=1000						
GLA				S	Sb	01 45 55.1	-0.1
	baz=205						
GLA	Glamis	1.66	24		Pn	01 45 30.6	-2.2
GLA				IAML		01 45 58.4	
	comp=N,29µm,0.6s						
GLA	Glamis	1.66	24		Sn	01 45 54.8	+0.2
SLH	Sleepy Hollow	1.73	343		Pb	01 45 35.0	0.0
SALN	Salton City	1.76	351		Pn	01 45 32.4	-1.7
DPP	Dos Picos Cty	1.82	323		Pn	01 45 34.9	-0.1
109C	Camp Elliot, M	1.83	318	P	Pn	01 45 33.4	-1.6
	baz=138,SNR=772						
109C				S	Sn	01 45 58.1	-0.7
	baz=138						
109C	Camp Elliot, M	1.83	318	Pn	Pn	01 45 34.1	-0.9
109C				IAML		01 45 59.3	
	comp=N,26µm,0.4s						
CPE	Camp Elliot	1.83	318		Pn	01 45 35.6	+0.6
BORC	Borrego Spring	1.84	339		Pn	01 45 33.6	-1.6
BORC					Pb	01 45 37.3	+0.3
HWB	Hans Werner Br	1.85	323		Pn	01 45 36.0	+0.6
FRK	Frink	1.86	0		Pn	01 45 33.3	-2.1
MATG	Mataguay Scout	1.86	333		Pn	01 45 35.1	-0.4
PIX	Pinacate	1.86	89	Pn	Pn	01 45 32.7	-2.7
PIX	Pinacate	1.86	89	⇑*e*P	Pn	01 45 32.6	-2.9
PLM	Palomar	2.08	331		Pn	01 45 37.6	-1.0
PLM					Pb	01 45 40.1	-1.0
GORC	Green Oak Ranc	2.10	321		Pn	01 45 39.7	+1.0
FRD	Ford Ranch, An	2.11	338		Pn	01 45 37.6	-1.4
FRD					Pb	01 45 41.8	+0.2
FRD	Ford Ranch, An	2.11	338		Pn	01 45 37.5	-1.5
BC3	Big Chuckawall	2.11	4	P	Pn	01 45 37.5	-1.6
	baz=185,SNR=719						
BC3	Big Chuckawall	2.11	4		Pn	01 45 37.5	-1.6
BZNA	Buzz No.'s Pla	2.13	336		Pn	01 45 38.0	-1.3
BZNA					Pb	01 45 41.9	0.0
CTCC	Cactus City	2.13	352		Pn	01 45 37.5	-1.7
CTW	Cottonwood Mou	2.14	355		Pn	01 45 37.5	-1.8
HAY	Hayfield	2.16	359		Pn	01 45 38.1	-1.5
SNDA	J Saunders Pla	2.17	338		Pn	01 45 38.5	-1.3
SNDA					Pb	01 45 42.9	+0.4
I57US	PINON FLAT INF	2.17	342	Pg	Pb	01 45 41.8	-0.8
	baz=171,slow=28,SNR=2.0						
I57US				Lg	Lg	01 46 09.6	
	baz=169,slow=29						
TPFO	Pinon Flats	2.17	342	P	Pn	01 45 38.1	-1.7
	baz=162,SNR=1000						
XPFO	Pion Flat	2.17	342		Pn	01 45 38.3	-1.6
XPFO					Pb	01 45 42.9	+0.2
PFO	Pinyon Flats O	2.18	342	Pn	Pn	01 45 38.4	-1.5
	comp=N,29nm,0.3s,baz=157,slow=13,SNR=233						
PFO				Pg	Pb	01 45 43.1	+0.3
	comp=N,419nm,0.3s,baz=160,slow=13,SNR=301						
PFO				LR	LR	01 46 05.6	
	comp=N,2µm,18.4s,baz=284,slow=28						
PFO				Lg	Lg	01 46 10.7	
	comp=N,2µm,0.3s,baz=186,slow=8.3,SNR=20						
PFO	Pinyon Flats O	2.18	342	P	Pn	01 45 38.2	-1.7
	baz=162,SNR=1000						
PFO				Sb	Sb	01 46 10.3	+0.1
	baz=162						
PFO	Pinyon Flats O	2.18	342	Pn	Pn	01 45 38.0	-1.9
PFO				IAML		01 46 17.0	
	comp=N,8µm,1.2s						
PFO	Pinyon Flats O	2.18	342		Pn	01 45 38.2	-1.7
PFO					Pb	01 45 42.8	0.0
DNR	Dunn Ranch,Anz	2.19	338		Pn	01 45 39.0	-1.1
PMD	Palm Desert	2.19	344		Pn	01 45 38.3	-1.7
PMD					Pb	01 45 43.2	+0.3
CRY	Cary Ranch	2.22	336		Pn	01 45 39.2	-1.3
CRY					Pb	01 45 43.4	0.0
BACC	Bachelor Mtn.	2.38	331		Pn	01 45 41.4	-1.2
BLYC	Blythe	2.40	23		Pn	01 45 41.6	-1.2
POB	Polly Butte	2.40	334		Pn	01 45 41.8	-1.2
DGR	Domenigoni Val	2.40	332		Pn	01 45 41.7	-1.2
MURC	Murrieta	2.44	328	P	Pn	01 45 42.4	-1.0
	baz=148,SNR=732						
MURC				Sb	Sb	01 46 16.7	-1.0
	baz=148						
MURC	Murrieta	2.44	328		Pn	01 45 42.6	-0.8
MURC					Pb	01 45 45.5	-1.6
214A	Organ Pipe Nat	2.45	80	P	Pn	01 45 41.4	-2.2
	baz=261,SNR=1000						
214A	Organ Pipe Nat	2.45	80	*i* P	Pn	01 45 41.2	-2.3
214A				*i* S	Sn	01 46 11.4	-2.7
214A	Organ Pipe Nat	2.45	80	Pn	Pn	01 45 41.3	-2.2
214A				IAML		01 46 12.3	
	comp=E,17µm,0.5s						
214A				IAML		01 46 36.3	
	comp=N,6µm,1.3s						
214A	Organ Pipe Nat	2.45	80		Sn	01 46 11.4	-2.7
HMTC	Hemet	2.45	332		Pn	01 45 42.4	-1.2
HMTC					Pb	01 45 46.8	-0.5
BELC	Belle Mtn. Jos	2.47	353	P	Pn	01 45 42.8	-1.2
	baz=173,SNR=365						
BELC	Belle Mtn. Jos	2.47	353		Pn	01 45 43.0	-1.0
EW2	E Wide Canyon	2.48	345		Pn	01 45 42.8	-1.2
EW2					Pb	01 45 48.7	+0.9
ELS	Elsinore Mount	2.59	325		Pn	01 45 44.8	-0.7
ELS					Pb	01 45 48.8	-0.9
BLAC	Blackrock camp	2.60	346		Pn	01 45 44.6	-1.1
BLAC					Pb	01 45 50.8	+0.9
IRM	Iron Mountain	2.64	9	P	Pn	01 45 45.2	-1.0
	baz=190,SNR=286						
IRM	Iron Mountain	2.64	9		Pn	01 45 45.3	-1.0
GTM	Goat Mountain	2.81	348		Pn	01 45 48.0	-0.6
SCI2	San Clemente I	2.85	301	P	Pn	01 45 47.3	-1.7
	baz=120,SNR=32						
SCI2				S	Sn	01 46 23.0	-0.9
	baz=120						
BBRC	Big Bear Solar	2.92	339	P	Pn	01 45 49.6	-0.6
	baz=158,SNR=80						
BBRC	Big Bear Solar	2.92	339		Pn	01 45 49.8	-0.4
BTL	Butler Peak	2.94	337		Pn	01 45 50.2	-0.4
PDMCI	Parker Dam,Lak	3.03	24	P	Pn	01 45 50.7	-0.8
	baz=205,SNR=154						
SS2	San Sevaine	3.08	330		Pn	01 45 52.1	-0.1
BFSC	Mount Baldy Ra	3.18	328	P	Pn	01 45 52.9	-0.9
	baz=148,SNR=393						
GMRC	Granite Mounta	3.23	360	P	Pn	01 45 53.7	-0.8
	baz=180,SNR=151						
NEE2	Needles Airpor	3.33	15	P	Pn	01 45 55.2	-0.4
	baz=195,SNR=30						
HEC	Hector,Ludlow	3.33	350	P	Pn	01 45 55.2	-0.6
	baz=170,SNR=61						
MWC	Mount Wilson	3.36	323		Pn	01 45 55.8	-0.5
PASC	Pasadena Art C	3.39	321	Pn	Pn	01 45 55.7	-0.7
PASC				IAML		01 46 48.5	
	comp=N,9µm,0.8s						
RRX	Edison Barstow	3.51	342	P	Pn	01 45 57.4	-0.8
	baz=161,SNR=79						
DECC	Green Verdugo	3.53	321	P	Pn	01 45 57.7	-0.7
	baz=140,SNR=40						
DECC				Sb	Sb	01 46 48.8	-0.2
	baz=140						
SNCC	San Nicolas Is	3.70	298	P	Pn	01 45 58.8	-1.9
	baz=117,SNR=5.2						
SNCC				S	Sn	01 46 44.7	-0.3
	baz=117						
SNCC	San Nicolas Is	3.70	298		Pn	01 45 58.6	-2.1
W13A	Hualapai Mount	3.84	22		Pn	01 46 03.1	+0.2
W13A				IAML		01 47 20.1	
	comp=N,2µm,0.9s						
W13A				IAML		01 47 22.8	
	comp=E,2µm,0.7s						
EDW2	Edwards Air Fo	3.87	330	P	Pn	01 46 02.8	-0.3
	baz=149,SNR=31						
EDW2				Sb	Sb	01 46 60.0	+1.0
	baz=149						
GSC	Goldstone, Bar	3.88	346	P	Pn	01 46 02.8	-0.4
	baz=165,SNR=64						
GSC	Goldstone, Bar	3.88	346	Pn	Pn	01 46 02.3	-0.9
GSC				IAML		01 47 17.2	
	comp=E,5µm,1.3s						
GSC				IAML		01 47 23.0	
	comp=N,4µm,1.2s						
OSI	Osito Audit: C	4.01	321	P	Pn	01 46 04.1	-1.0
	baz=139,SNR=21						
OSI				Sb	Sb	01 47 03.3	+0.3
	baz=139						
OSI	Osito Audit: C	4.01	321		Pn	01 46 05.0	-0.1
SCZ2	Santa Cruz Isl	4.16	307	P	Pn	01 46 06.2	-0.9
	baz=125,SNR=14						
TUC	Tucson	4.20	78	P	Pn	01 46 05.6	-2.1
	baz=261						
TUC	Tucson	4.20	78	*i* P	Pn	01 46 05.4	-2.2
TUC	Tucson	4.20	78	Pn	Pn	01 46 05.5	-2.2
LRMC	Laurel Mtn Rad	4.28	337	P	Pn	01 46 08.0	-0.9
	baz=156,SNR=20						
LRMC				Sb	Sb	01 47 12.9	+2.0
	baz=156						
SHOC	Shoshone, Teco	4.38	353	P	Pn	01 46 09.6	-0.5
	baz=173,SNR=45						
ARVC	Arvin	4.46	324	P	Pn	01 46 11.1	-0.1
	baz=143,SNR=56						
SBC	Santa Barbara	4.48	311	P	Pn	01 46 11.3	-0.2
	baz=129						
X16A	Lo Mia Camp, P	4.55	50		Pn	01 46 12.1	-0.5
X16A				IAML		01 47 51.7	
	comp=E,2µm,1.1s						
X16A				IAML		01 47 51.7	
	comp=N,2µm,0.9s						
ISA	Isabella, Lake	4.74	331	P	Pn	01 46 14.8	-0.4
	baz=150,SNR=29						
ISA	Isabella, Lake	4.74	331	Pn	Pn	01 46 14.7	-0.4
ISA				IAML		01 47 42.6	
	comp=N,2µm,1.7s						
ISA				IAML		01 47 42.8	
	comp=E,2µm,1.2s						
MPMC	Manual Prospec	4.76	342	P	Pn	01 46 15.1	-0.4
	baz=161,SNR=43						
HSIG		4.77	121	*e*P	Pn	01 46 14.8	-0.7
HSIG				*i* S	Sn	01 47 06.6	-4.9
HSIG		4.77	121		Pn	01 46 14.8	-0.7
HSIG					Sb	01 47 23.4	-1.4
HSIG		4.77	121	⇑*e*P	Pn	01 46 14.8	-0.7
PKM	Mcpherson Peak	4.83	315	P	Pn	01 46 16.4	-0.1
	baz=133,SNR=14						
SHPR	Sheep Range	4.97	4	Pn	Pn	01 46 19.1	+0.7
SHPR				IAML		01 47 56.0	
	comp=E,913nm,1.8s						
FURC	Furnace Creek,	5.02	349	P	Pn	01 46 18.6	-0.2
	baz=168						
SRIG	Santa Rosalia	5.15	144	*e*P	Pn	01 46 19.4	-1.2
SRIG				*i* S	Sn	01 47 16.8	-3.9
SRIG	Santa Rosalia	5.15	144		Pn	01 46 22.6	+2.0
SRIG	Santa Rosalia	5.15	144		LR	01 47 43.3	
SRIG	Santa Rosalia	5.15	144	IAML		01 47 53.6	
	comp=N,1µm,2.0s						
SRIG				IAML		01 48 01.0	
	comp=E,1µm,1.4s						
VES	Vestal, Richgr	5.16	327	P	Pn	01 46 20.9	+0.1
	baz=146,SNR=33						
SMMC	Simmler	5.24	317	P	Pn	01 46 21.7	-0.1
	baz=135,SNR=34						
SMMC				S	Sn	01 47 22.9	0.0
	baz=135						
CWC	Cottonwood Cre	5.29	338	P	Pn	01 46 22.3	-0.4
	baz=157						
WUAZ	Wupatki	5.33	41	P	Pn	01 46 23.6	+0.3
	baz=223,SNR=366						
WUAZ				S	Sn	01 47 24.7	-0.7
	baz=223						
WUAZ	Wupatki	5.33	41	Pn	Pn	01 46 24.1	+0.8
NZIG	Nacozari, Sono	5.36	101	*e*P	Pn	01 46 22.4	-1.3
NZIG				*e*S	Sn	01 47 22.9	-3.2
TPNV	Topopah Spring	5.42	355	P	Pn	01 46 25.2	+0.7
	baz=175,SNR=148						
TPNV	Topopah Spring	5.42	355		Pn	01 46 25.2	+0.7
319A	Douglas	5.44	90	Pn	Pn	01 46 23.8	-0.9
U15A	North Rim	5.61	29		Pn	01 46 28.6	+1.3
GRAC	Grapevine Rang	5.63	346	P	Pn	01 46 28.1	+0.8
	baz=165,SNR=18						
X18A	Snowflake	5.63	57		Pn	01 46 26.9	-0.6
PAGB	Antelope Grade	5.68	319		Pn	01 46 29.4	+1.5
VOG	Valley Oaks Go	5.69	328	P	Pn	01 46 28.2	+0.1
	baz=146						
LCMT	Little Creek M	5.81	19		Pn	01 46 30.4	+0.6
PRN	Pahroc Range	5.87	5		Pn	01 46 31.4	+0.7
TIN	Tinemaha, Big	5.90	339	P	Pn	01 46 30.4	-0.7
	baz=158,SNR=15						
KNB	Kanab	5.94	22		Pn	01 46 33.0	+1.3
W18A	Petrified Fore	6.09	53	P	Pn	01 46 34.2	+0.4
	baz=236,SNR=576						
W18A	Petrified Fore	6.09	53		Pn	01 46 34.3	+0.4
CCUT	Cedar City	6.28	17		Pn	01 46 37.8	+1.3
PMPB	Monarch Peak	6.34	319		Pn	01 46 38.1	+1.0
SZCU	Shurtz Canyon	6.40	19		Pn	01 46 39.4	+1.4
PKCU	Pink Cliffs	6.50	24		Pn	01 46 41.5	+2.0
MLAC	Mammoth, Mammo	6.62	337	P	Pn	01 46 39.3	-1.8
	baz=156						
TPH	Tonopah	6.65	349		Pn	01 46 41.4	0.0
OMMB	Old Mammoth Mi	6.66	336		Pn	01 46 45.1	+3.3
121A	Cookes Peak, D	6.74	80	P	Pn	01 46 42.0	-0.7
	baz=264,SNR=262						
121A	Cookes Peak, D	6.74	80	Pn	Pn	01 46 41.9	-0.8
R11A	Troy Canyon, C	6.79	0	P	Pn	01 46 44.2	+0.7
	baz=180,SNR=12						
R11A	Troy Canyon, C	6.79	0		Pn	01 46 44.1	+0.7
MTPU	Mount Pierson	7.08	23	Pn	Pn	01 46 50.1	+2.6
SAO	San Andreas Ge	7.09	319		Pn	01 46 46.9	-0.5
LHV	Little Huntoon	7.09	341		Pn	01 46 49.6	+2.3
PSUT	Pine Spring	7.13	11		Pn	01 46 49.0	+0.9
NV11	Mina Array Sit	7.18	344		Pn	01 46 49.8	+1.1
NVAR	Mina Array Bea	7.21	343	Pn	Pn	01 46 50.7	+1.5
	comp=E,1.6nm,0.3s,baz=164,slow=13,SNR=19						
NVAR				Lg	Lg	01 48 50.9	
	baz=161,slow=31,SNR=3.0						
NVAR	Mina Array Bea	7.21	343		Pn	01 46 50.5	+1.4
RYN	Ryan	7.45	342		Pn	01 46 54.6	+2.1
MVU	Marysvale	7.49	21	Pn	Pn	01 46 55.4	+2.3
MSU	Marysvale	7.51	21		Pn	01 46 55.7	+2.4
TCRU	Three Creeks R	7.52	19		Pn	01 46 55.7	+2.2
CMB	Columbia Colle	7.56	330		Pn	01 46 54.5	+0.7
LENM	Lemitar	7.75	68		Pn	01 46 53.5	-3.0
Y22D	IRIS PASSCAL I	7.76	69	P	Pn	01 46 56.2	-0.5
	baz=253,SNR=11						
Y22D	IRIS PASSCAL I	7.76	69		Pn	01 46 56.2	-0.5
BNM	Barren Site	8.02	69		Pn	01 46 59.2	-1.1
MVCO	Mesa Verde	8.17	44	P	Pn	01 47 03.6	+1.2
	baz=228,SNR=128						
MVCO	Mesa Verde	8.17	44	Pn	Pn	01 47 03.7	+1.2
ANMO	Albuquerque	8.41	64	Pn	Pn	01 47 05.2	-0.4
	comp=E,2.7nm,0.3s,baz=248,slow=11,SNR=51						
ANMO				Lg	Lg	01 49 27.5	
	comp=E,0.3nm,0.3s,baz=177,slow=20,SNR=1.2						
ANMO	Albuquerque	8.41	64	P	Pn	01 47 05.3	-0.2
	baz=249						
ANMO	Albuquerque	8.41	64		Pn	01 47 05.4	-0.2
PV05	Paradox Valley	8.45	38	Pn	Pn	01 47 10.3	+4.0
TMUT	Trail Mountain	8.54	24	Pn	Pn	01 47 09.8	+2.2
SRU	San Rafael Swe	8.63	28	Pn	Pn	01 47 10.6	+2.0
PV18	Skein Mesa, Pa	8.68	38	Pn	Pn	01 47 12.3	+3.0
PV10	Paradox Valley	8.71	37	Pn	Pn	01 47 12.2	+2.4
PV02	Paradox Valley	8.74	39	Pn	Pn	01 47 12.8	+2.7
MNTX	Cornudas Mount	8.75	86	P	Pn	01 47 10.2	0.0
	baz=272,SNR=160						
MNTX	Cornudas Mount	8.75	86		Pn	01 47 09.8	-0.4
LPIG	La Paz	8.79	146	Pn	Pn	01 47 11.8	+1.2
	baz=144,slow=3.1,SNR=11						
LPIG				Lg	Lg	01 49 42.0	
	comp=E,6.3nm,0.3s,baz=359,slow=16,SNR=2.5						
LPIG				LR	LR	01 50 32.8	
	comp=E,2µm,21.6s,baz=340,slow=38						
P17A	Butcher Ranch,	8.86	25	Pn	Pn	01 47 14.8	+3.0
NLU	North Lily Min	8.88	18	Pn	Pn	01 47 15.7	+3.6
DUG	Dugway, Tooele	8.94	14	P	Pn	01 47 13.7	+0.9
	baz=196						
DUG	Dugway, Tooele	8.94	14	Pn	Pn	01 47 15.9	+3.1
PV07	Paradox Valley	8.96	38	Pn	Pn	01 47 16.3	+3.2
PV22	Blue Mesa, Par	8.96	37	Pn	Pn	01 47 16.1	+3.0
PV15	Paradox Valley	8.97	39	Pn	Pn	01 47 16.1	+2.7
MPU	Maple Canyon	9.06	20	Pn	Pn	01 47 18.1	+3.5
ELK	Elko	9.19	2	Pn	Pn	01 47 17.7	+1.3
	comp=E,0.7nm,0.3s,baz=190,slow=12,SNR=20						
ELK				Lg	Lg	01 49 54.2	
	comp=E,0.6nm,0.3s,baz=270,slow=16,SNR=2.4						
ELK	Elko	9.19	2	Pn	Pn	01 47 17.5	+1.2
ORV	Oroville	9.31	331	Pn	Pn	01 47 20.9	+3.2
SLBS	Sierra La Lagu	9.31	146	Pn	Pn	01 47 19.5	+1.6
S22A	4UR Ranch, Cre	9.54	47	P	Pn	01 47 22.1	+1.0
	baz=232,SNR=23						
BGU	Big Grassy Mou	9.60	12	Pn	Pn	01 47 24.5	+2.6
GDL2	Guadalupe Moun	9.61	83	Pn	Pn	01 47 22.7	+0.7
JLU	Jordanelle	9.66	19	Pn	Pn	01 47 26.1	+3.3
CTU	Camp Tracy	9.66	18	Pn	Pn	01 47 26.4	+3.7
HPIG		9.85	115	Pn	Pn	01 47 28.1	+2.7
CLNB	Carlsbad	10.03	83	Pn	Pn	01 47 28.9	+1.2
O03E	Paynes Creek	10.06	332	P	Pn	01 47 29.0	+0.9
	baz=149						
SPUT	South Promonto	10.08	14	Pn	Pn	01 47 31.6	+3.1
TCUT	Toone Canyon	10.15	18	Pn	Pn	01 47 33.4	+3.9
RDMU	Red Mountain	10.26	27	Pn	Pn	01 47 33.2	+2.2
SDCO	Great Sand Dun	10.39	51	P	Pn	01 47 33.8	+0.9
	baz=236,SNR=25						
SDCO	Great Sand Dun	10.39	51	Pn	Pn	01 47 34.1	+1.2
SMCO	Snowmass	10.39	40	Pn	Pn	01 47 35.0	+2.0
O20A	White River Ci	10.46	33	P	Pn	01 47 35.9	+2.1
	baz=217						
O20A	White River Ci	10.46	33	Pn	Pn	01 47 37.5	+3.7
HVU	Hansel Valley	10.47	12	Pn	Pn	01 47 36.1	+2.3
TX31	Lajitas Ar. Si	10.57	99		Pn	01 47 36.0	+0.8
TX32	Lajitas Array	10.57	99		Pn	01 47 35.6	+0.5
TXAR	Lajitas Array	10.57	99	Pn	Pn	01 47 35.7	+0.6
	comp=E,14nm,0.3s,baz=282,slow=12,SNR=261						
TXAR				Lg	Lg	01 50 33.9	
	comp=E,0.5nm,0.3s,baz=265,slow=32,SNR=1.9						
TXAR				LR	LR	01 51 37.0	
	comp=E,1µm,18.1s,baz=0.0,slow=38						
T25A	Trinidad	10.83	56	P	Pn	01 47 40.1	+1.3
	baz=242,SNR=20						
MSTX	Muleshoe	11.10	74	P	Pn	01 47 43.7	+1.2
	baz=261,SNR=140						
MSTX	Muleshoe	11.10	74	Pn	Pn	01 47 44.7	+2.2
WVOR	Wild Horse Val	11.13	348	Pn	Pn	01 47 46.7	+3.9
M04C	Macdoel	11.36	336	P	Pn	01 47 47.4	+1.4
	baz=152						
ISCO	Idaho Springs	11.59	42	P	Pn	01 47 50.7	+1.5
	baz=228,SNR=40						
ISCO	Idaho Springs	11.59	42	Pn	Pn	01 47 51.7	+2.5
YBH	Yreka Blue Hor	11.64	333	Pn	Pn	01 47 55.0	+5.2
	comp=E,0.1nm,0.3s,baz=151,slow=9.6,SNR=10						
YBH				Lg	Lg	01 51 05.5	
	baz=246,slow=22,SNR=2.6						
YBH				LR	LR	01 52 27.9	
	comp=E,896nm,21.8s,baz=198,slow=38						
YBH	Yreka Blue Hor	11.64	333	Pn	Pn	01 47 54.3	+4.5
AHID	Auburn Hatcher	11.77	17	Pn	Pn	01 47 55.2	+3.5
MFID	Camas Ranch	11.85	359	Pn	Pn	01 47 56.8	+4.1
L04D	Klamath Falls	11.91	335	P	Pn	01 47 55.1	+1.5
	baz=152,SNR=15						
ECR	Eagle Creek	11.98	15	Pn	Pn	01 47 58.5	+3.9
HLID	Hailey	12.04	4	P	Pn	01 47 57.1	+1.8
	baz=185,SNR=25						
AMTX	Amarillo	12.16	70	P	Pn	01 47 57.5	+0.7
	baz=258						
AMTX	Amarillo	12.16	70	Pn	Pn	01 47 59.1	+2.2
N23A	Red Feather La	12.18	37	P	Pn	01 47 58.0	+0.8
	baz=223,SNR=15						
BW06	Boulder Array	12.21	22	P	Pn	01 47 59.6	+2.0
	baz=205,SNR=18						
BW06	Boulder Array	12.21	22	Pn	Pn	01 48 00.8	+3.2
PD31	Pinedale Array	12.21	22	Pn	Pn	01 48 00.4	+2.8
PDAR	Pinedale Array	12.21	22	Pn	Pn	01 48 00.1	+2.5
	comp=E,0.3nm,0.3s,baz=193,slow=12,SNR=38						
PDAR				Lg	Lg	01 51 27.3	
	comp=E,0.2nm,0.3s,baz=185,slow=29,SNR=1.1						
PDAR				LR	LR	01 53 42.0	
	comp=E,127nm,19.6s,baz=207,slow=43						
PDAR	Pinedale Array	12.21	22	Pn	Pn	01 48 00.9	+3.3
L02E	Cave Junction	12.36	331	P	Pn	01 47 58.6	-0.9
	baz=147						
REDW	Red Top Meadow	12.39	16	Pn	Pn	01 48 03.7	+3.5
HUMO	Hull Mountain	12.49	334	Pn	Pn	01 48 05.6	+4.3
SNOW	Snow King Moun	12.51	17	Pn	Pn	01 48 05.3	+3.5
J05D	Fort Rock, OR	12.53	341	P	Pn	01 48 03.7	+1.7
	baz=158,SNR=8.0						
LOHW	Long Hollow	12.69	17	Pn	Pn	01 48 07.0	+2.7
PHWY	Pilot Hill	12.72	37	Pn	Pn	01 48 08.0	+3.2
MOOW	Moose Ponds	12.79	16	Pn	Pn	01 48 08.9	+3.4
K02D	Willamette Mer	12.84	332	P	Pn	01 48 05.5	-0.6
	baz=148						
BCYI	Bear Canyon	12.87	7		Pn	01 48 11.9	+5.2
I07A	Izee	12.88	347		Pn	01 48 12.6	+5.8
PINE	Pine Mountain	12.93	343		Pn	01 48 12.7	+5.2
KSCO	Kaye Shedlock'	12.98	51	Pn	Pn	01 48 11.0	+2.9
FLWY	Flagg Ranch	13.11	16	Pn	Pn	01 48 13.8	+3.8
K22A	Casper	13.25	31	P	Pn	01 48 12.8	+1.0
	baz=216,SNR=9.4						
K22A	Casper	13.25	31	Pn	Pn	01 48 13.6	+1.8
YPP	Pitchstone Pla	13.27	15	Pn	Pn	01 48 16.2	+4.1
J01E	Myrtle Point	13.33	333	P	Pn	01 48 12.2	-0.6
	baz=148						
I04A	Tendick Farm,	13.35	338	P	Pn	01 48 12.1	-0.9
	baz=154						
BMO	Blue Mountains	13.35	355	Pn	Pn	01 48 16.0	+2.8
H17A	Grant Village	13.44	16	P	Pn	01 48 13.6	-0.8
	baz=199						
H17A	Grant Village	13.44	16	Pn	Pn	01 48 17.9	+3.5
MCMT	McKenzie Canyo	13.45	9	Pn	P	01 48 20.0	-4.2
I05D	Terrebonne, OR	13.54	342	P	Pn	01 48 17.0	+1.4
	baz=159						
I03D	Drain, OR	13.58	336	P	Pn	01 48 14.6	-1.5
	baz=151						
YMR	Madison River	13.61	14	Pn	Pn	01 48 21.3	+4.5
ABTX	Abilene, Hawle	13.61	81	P	Pn	01 48 17.5	+0.9
	baz=270,SNR=35						
ABTX	Abilene, Hawle	13.61	81	Pn	Pn	01 48 17.9	+1.3
JCT	Junction City	13.63	90	P	Pn	01 48 18.3	+1.4
	baz=278,SNR=29						
JCT	Junction City	13.63	90		Pn	01 48 18.7	+1.8
LKWY	Lake	13.64	16	Pn	Pn	01 48 20.8	+3.6
YHB	Horse Butte	13.64	14	Pn	Pn	01 48 21.6	+4.4
QLMT	Earthquake Lak	13.67	13	Pn	Pn	01 48 21.9	+4.2
YNR	Norris Junctio	13.72	15	Pn	P	01 48 23.0	-4.2
YHL	Hebgen Lake	13.74	13	Pn	Pn	01 48 22.6	+4.0
YHH	Holmes Hill	13.75	14	Pn	Pn	01 48 22.6	+3.9
YMP	Mirror Lake Pl	13.86	17	Pn	P	01 48 24.6	-4.3
H04A	Detroit Lake	14.09	340		P	01 48 27.7	-3.4
YNE	Yellowstone No	14.15	17	P	P	01 48 28.5	-3.5
BOZ	Bozeman (W)	14.38	11	P	Pn	01 48 29.5	+2.2
	baz=194						
BOZ	Bozeman (W)	14.38	11	P	P	01 48 32.2	-2.2
G05D	Wamic, OR	14.38	344	P	Pn	01 48 28.9	+1.8
	baz=160						
RLMT	Red Lodge	14.45	18	P	Pn	01 48 29.2	+1.0
	baz=202,SNR=11						
RLMT	Red Lodge	14.45	18	P	P	01 48 31.7	-3.6
833A	Chaparral WMA,	14.45	99	P	Pn	01 48 26.5	-1.6
	baz=287						
F10A	Beach Ranch, E	14.46	356	P	P	01 48 32.2	-3.1
LRM	Limekiln Ridge	14.47	9	P	P	01 48 32.7	-2.9
WMOK	Wichita Mounta	14.48	73	P	Pn	01 48 28.4	-0.2
	baz=262,SNR=41						
WMOK	Wichita Mounta	14.48	73	Pn	Pn	01 48 28.8	+0.3
ZAIG	Zacatecas	14.54	124	P	P	01 48 33.1	-3.4
U32A	Winter Ranch,	14.62	66	Pn	Pn	01 48 32.3	+1.8
F07A	Phinny Hill Vi	14.71	348	P	P	01 48 40.1	+2.2
CBKS	Cedar Bluff	14.88	56	P	Pn	01 48 34.6	+0.6
	baz=246,SNR=11						
CBKS	Cedar Bluff	14.88	56	P	P	01 48 37.9	-2.1
GCMT	Greycliff	14.97	16	P	P	01 48 39.5	-1.5
E09A	Wood Farm, Sta	15.08	353		P	01 48 39.8	-2.3
E09A				IAmb	IAmb	01 48 41.5	
	comp=Z,31nm,1.1s						
HAWA	Hanford	15.13	350	P	P	01 48 40.6	-2.0
HAWA				IAmb	IAmb	01 48 50.0	
	comp=Z,40nm,1.1s						
E08A	Dider Farm, El	15.16	351	P	Pn	01 48 40.0	+2.3
MSO	Missoula	15.32	4	P	Pn	01 48 38.9	-1.0
	baz=186,SNR=31						
MSO	Missoula	15.32	4	P	P	01 48 43.1	-1.8
E07A	Sunnyside	15.35	349	P	P	01 48 44.0	-1.0
HRY	Holter Researc	15.43	10	P	P	01 48 44.8	-1.3
CROK	Carrier	15.45	67	Pn	Pn	01 48 42.2	+0.6
R32A	Long Quarter,	15.47	59	Pn	Pn	01 48 41.7	-0.1
WHTX	Lake Whitney,	15.48	84	P	Pn	01 48 41.4	-0.6
	baz=273,SNR=57						
WHTX	Lake Whitney,	15.48	84	Pn	Pn	01 48 41.6	-0.3
435B	Jarrell	15.48	88	P	Pn	01 48 41.1	-0.9
	baz=277,SNR=6.8						
435B	Jarrell	15.48	88	Pn	Pn	01 48 41.8	-0.2
435B				IAmb	IAmb	01 48 50.4	
	comp=Z,94nm,1.1s						
KAN10	Anthony SW Sta	15.52	64	Pn	Pn	01 48 43.1	+0.6
KAN10				IAmb	IAmb	01 48 50.7	
	comp=Z,48nm,0.9s						
RSSD	Black Hills	15.53	33	P	Pn	01 48 40.7	-2.0
	baz=220						
RSSD	Black Hills	15.53	33		Pn	01 48 42.9	+0.1
BCOK	Bluff Creek, N	15.57	70		Pn	01 48 43.6	+0.4

KAN14	Manchester OK	15.58	65	P	Pn	01 48 43.9	+0.6
Z35A	Perchaven, San	15.63	79	P	Pn	01 48 43.3	-0.6
KAN12	Harper NE Stat	15.64	64	Pn	Pn	01 48 45.8	+1.7
735A	Kenedy	15.65	95	P	Pn	01 48 46.1	+1.9
OKCFA	Oklahoma City	15.66	71	Pn	Pn	01 48 44.1	-0.2
OKCFA				IAmb	IAmb	01 48 52.0	
	comp=Z,46nm,0.9s						
FNO	Franklin	15.68	71	Pn	Pn	01 48 45.3	+0.7
FNO				IAmb	IAmb	01 49 00.5	
	comp=Z,76nm,1.1s						
KAN05	Bluff City Nor	15.69	64	Pn	Pn	01 48 45.3	+0.6
KAN05				IAmb	IAmb	01 49 00.4	
	comp=Z,79nm,1.0s						
D08A	Wollman Farm,	15.70	352	P	Pn	01 48 46.4	+1.6
OK029	Liberty Lake	15.72	69	P	Pn	01 48 45.9	+0.8
OK025	Westminster Rd	15.78	70		Pn	01 48 46.4	+0.5
OK025				IAmb	IAmb	01 48 48.0	
	comp=Z,56nm,1.1s						
KAN01	Argonia South	15.79	64	P	Pn	01 48 46.9	+1.0
KAN01				IAmb	IAmb	01 48 52.4	
	comp=Z,71nm,1.1s						
E04D	Cinebar	15.92	342	P	Pn	01 48 47.2	-0.4
	baz=158,SNR=12						
KAN13	South Haven SW	15.97	65	P	Pn	01 48 49.1	+0.8
KAN13				IAmb	IAmb	01 48 54.4	
	comp=Z,85nm,1.2s						
LTY	Liberty	16.16	348	P	P	01 48 55.2	+1.0
E03A	Lebam	16.18	340	P	P	01 48 56.4	+2.2
JTMT	Jette	16.22	3	P	P	01 48 54.5	-0.4
OK031	S. Brethren Rd	16.24	69	P	Pn	01 48 52.5	+0.7
OK031				IAmb	IAmb	01 48 59.2	
	comp=Z,116nm,1.1s						
OK030	Cody Creek RV	16.28	69	P	Pn	01 48 52.7	+0.4
OK030				IAmb	IAmb	01 48 59.6	
	comp=Z,137nm,1.1s						
C09A	Chrisman Ranch	16.36	354	P	P	01 48 55.0	-1.3
QUOK	Quay	16.39	69	P	Pn	01 48 55.0	+1.3
QUOK				IAmb	IAmb	01 49 14.3	
	comp=Z,90nm,1.1s						
D04E	Lakebay	16.55	343	P	Pn	01 48 54.0	-1.7
	baz=158						
T35A	Sooner Cattle	16.70	66	P	Pn	01 48 58.5	+0.8
T35A				IAmb	IAmb	01 49 07.8	
	comp=Z,102nm,1.4s						
NEW	Newport	16.74	357	Pn	P	01 49 00.7	+0.2
	comp=Z,0.8nm,0.3s,baz=179,slow=12,SNR=63						
NEW				Lg	Lg	01 53 49.9	
	baz=234,slow=23,SNR=1.4						
NEW	Newport	16.74	357	P	Pn	01 48 59.0	+0.8
	baz=176,SNR=45						
NEW	Newport	16.74	357	P	P	01 49 00.4	-0.1
LAO	LASA Array	16.78	23	P	Pn	01 48 59.0	+0.3
	baz=209,SNR=21						
LAO	LASA Array	16.78	23	P	P	01 49 00.5	-0.5
LAO				IAmb	IAmb	01 49 11.5	
	comp=Z,156nm,1.4s						
237A	Washetta, Mont	16.88	83	P	Pn	01 49 00.5	+0.6
237A				IAmb	IAmb	01 49 07.6	
	comp=Z,140nm,1.4s						
D03D	Eldon	16.96	342	P	Pn	01 48 59.8	-1.1
	baz=158						
B08A	Colville Reser	17.03	352	P	P	01 49 04.0	+0.3
EGMT	Eagleton	17.06	14	P	Pn	01 49 01.9	-0.3
	baz=197,SNR=16						
EGMT	Eagleton	17.06	14	P	P	01 49 05.5	+1.3
EGMT				IAmb	IAmb	01 49 17.0	
	comp=Z,90nm,1.4s						
TUL1	Leonard	17.07	70	P	Pn	01 49 02.7	+0.3
	baz=261,SNR=28						
TUL1	Leonard	17.07	70	P	Pn	01 49 02.3	-0.1
TUL1				IAmb	IAmb	01 49 09.1	
	comp=Z,168nm,1.4s						
HKT	Hockley	17.10	90	P	Pn	01 49 03.1	+0.4
BGNE	Belgrade	17.14	50	P	Pn	01 49 02.0	-1.2
	baz=240						
BGNE	Belgrade	17.14	50	P	P	01 49 04.8	-0.2
BGNE				IAmb	IAmb	01 49 10.6	
	comp=Z,120nm,1.2s						
KSU1	Kansas State U	17.25	59	P	Pn	01 49 04.1	-0.5
	baz=250,SNR=32						
KSU1	Kansas State U	17.25	59	P	P	01 49 05.4	-0.7
X37A	Clayton	17.26	74	P	Pn	01 49 05.2	+0.5
K31A	O'Neill	17.40	46	P	P	01 49 07.8	0.0
Z38A	Mt. Pleasant	17.53	79	P	P	01 49 09.4	+0.1
WALA	Waterton Lakes	17.55	4	P	P	01 49 10.6	+1.1
NATX	Nacogdoches	17.87	84	P	Pn	01 49 11.6	-0.6
	baz=275,SNR=6.9						
NATX	Nacogdoches	17.87	84	P	P	01 49 13.1	0.0
NATX				IAmb	IAmb	01 49 30.4	
	comp=Z,183nm,1.4s						
A04D	Lummi Island	17.98	345	P	Pn	01 49 12.5	-1.0
	baz=160						
U38A	Gravette	18.28	69	P	P	01 49 17.7	+0.1
SUSD	Miller	18.36	41	P	P	01 49 19.0	+0.5
	baz=231						
SUSD	Miller	18.36	41	P	P	01 49 19.9	+1.4
L34A	Svendsen Farm,	18.58	51	P	P	01 49 20.4	-0.4
N35A	Tabor	18.59	54	P	Pn	01 49 21.7	+0.5
W39A	Magazine	18.61	73	P	P	01 49 20.6	-0.6
	baz=265,SNR=12						
W39A	Magazine	18.61	73	P	Pn	01 49 21.7	+0.3
HHAR	Hobbs	18.61	69	P	Pn	01 49 21.6	+0.2
MIAR	Mount Ida	18.73	75	P	P	01 49 22.5	-0.1
	baz=267,SNR=34						
MIAR	Mount Ida	18.73	75	P	Pn	01 49 23.1	+0.2
MIAR				IAmb	IAmb	01 49 26.6	
	comp=Z,79nm,1.2s						
E28A	Huff	18.93	33	P	Pn	01 49 26.8	+1.6
E28A				IAmb	IAmb	01 49 40.6	
	comp=Z,58nm,1.1s						
DGMT	Dagmar	19.01	24	P	Pn	01 49 25.9	-0.3
	baz=211						
WLAR	White Oak Lake	19.10	78	P	Pn	01 49 27.2	-0.1
441A	DeRidder	19.23	86	P	Pn	01 49 29.7	+0.7
441A				IAmb	IAmb	01 49 31.3	
	comp=Z,54nm,0.8s						
ECSD	EROS Data Cent	19.32	46	P	Pn	01 49 29.9	0.0
	baz=237,SNR=18						
ECSD	EROS Data Cent	19.32	46	P	Pn	01 49 29.6	-0.3
X40A	Basin Creek Fa	19.34	75	P	Pn	01 49 29.7	-0.6
	baz=268,SNR=14						
X40A	Basin Creek Fa	19.34	75	P	Pn	01 49 30.5	+0.2
S39A	Bolivar	19.35	65	P	P	01 49 29.5	+0.2
S39A				IAmb	IAmb	01 49 36.8	
	comp=Z,70nm,1.4s						
Z41A	Richland Creek	19.36	79	P	P	01 49 28.5	-0.9
	baz=271,SNR=14						
U40A	Yellville	19.49	70	P	P	01 49 29.4	-1.5
	baz=262,SNR=17						
U40A	Yellville	19.49	70	P	P	01 49 31.2	+0.4
P38A	Dawn	19.68	60	P	Pn	01 49 34.0	-0.2
P38A				IAmb	IAmb	01 49 40.3	
	comp=Z,102nm,1.4s						
WHAR	Wooly Hollow	19.84	73	P	P	01 49 34.5	-0.2
WHAR				IAmb	IAmb	01 49 49.0	
	comp=Z,46nm,1.0s						
W41B	Gary Mavity, V	19.86	73	P	P	01 49 35.1	+0.2
	baz=266,SNR=10.0						
342A	Flagon Creek P	19.89	84	P	Pn	01 49 37.0	+0.2
FCAR	Ozark Folk Cen	20.02	71	P	P	01 49 36.8	+0.1
MGMO	Mountain Grove	20.07	67	P	Pn	01 49 38.3	-0.7
MGMO				IAmb	IAmb	01 49 49.9	
	comp=Z,71nm,1.4s						
CCAR	Cane Creek	20.21	77	P	Pn	01 49 40.7	+0.1
N38A	Joes South For	20.27	57	P	Pn	01 49 41.0	-0.2
MDND	Maddock	20.37	32	P	P	01 49 39.8	-0.6
	baz=223						
MDND	Maddock	20.37	32	P	Pn	01 49 42.8	+0.4
MDND				IAmb	IAmb	01 49 57.7	
	comp=Z,56nm,1.1s						
143A	Socs Landing,	20.55	80	P	Pn	01 49 44.1	-0.5
SCIA	State Center	20.68	54	P	Pn	01 49 45.2	-0.9
SCIA				IAmb	IAmb	01 50 03.6	
	comp=Z,100nm,1.2s						
F33A	5 Mile Ranch,	20.71	41	P	P	01 49 44.6	+0.6
P40A	Paris	20.75	61	P	P	01 49 44.8	+0.3
P40A				IAmb	IAmb	01 49 49.0	
	comp=Z,96nm,1.2s						
TLIG	Tlapa	20.81	128	P	P	01 49 45.9	+0.4
LCAR	Lake Charles	20.82	71	P	P	01 49 45.2	-0.2
X43A	Marvell	20.96	75	P	P	01 49 47.5	+0.7
	baz=269,SNR=6.2						
T42A	Van Buren	20.98	68	P	P	01 49 47.1	0.0
T42A				IAmb	IAmb	01 49 48.6	
	comp=Z,40nm,0.8s						
CCM	Cathedral Cave	21.03	65	P	P	01 49 47.0	-0.6
	baz=259						
CCM	Cathedral Cave	21.03	65	P	P	01 49 47.6	0.0
D32A	Dogwood Acres,	21.13	37	P	P	01 49 48.6	0.0
344A	Westbrook Farm	21.23	84	P	P	01 49 51.7	+1.9
K38A	Parkersburg	21.28	52	P	P	01 49 51.0	+0.7
K38A				IAmb	IAmb	01 49 58.1	
	comp=Z,96nm,1.4s						
VBMS	Vicksburg	21.34	82	P	P	01 49 52.1	+1.2
	baz=275,SNR=13						
VBMS	Vicksburg	21.34	82	P	P	01 49 52.0	+1.1
I37A	Lemond, Waseca	21.46	48	P	P	01 49 53.1	+0.9
PBMO	Poplar Bluff	21.48	69	P	P	01 49 52.8	+0.4
PBMO				IAmb	IAmb	01 49 54.4	
	comp=Z,32nm,0.9s						
FVM	French Village	21.66	66	P	P	01 49 54.4	+0.1
N41A	Harden Midland	21.95	58	P	P	01 49 57.9	+0.4
Y45A	Yeager Farm, C	22.07	77	P	P	01 50 01.1	+2.3
OXF	Oxford	22.17	75	P	P	01 50 00.6	+0.7
	baz=270,SNR=10						
OXF	Oxford	22.17	75	P	P	01 49 60.0	+0.1
OXF				IAmb	IAmb	01 50 02.3	
	comp=Z,52nm,1.0s						
HENM	Henderson Moun	22.24	69	P	P	01 50 00.7	+0.1
F36A	Milaca	22.32	44	P	P	01 50 03.0	+1.7
F36A				IAmb	IAmb	01 50 09.6	
	comp=Z,62nm,1.1s						
346A	Big Creek Wild	22.32	83	P	P	01 50 02.9	+1.4
W45A	Hickory Valley	22.37	74	P	P	01 50 02.5	+0.5
SPMN	Marine on St.	22.42	46	P	P	01 50 02.0	-0.4
	baz=240,SNR=5.8						
SPMN	Marine on St.	22.42	46	P	P	01 50 03.2	+0.7
AGMN	Agassiz Nation	22.48	36	P	P	01 50 03.1	0.0
	baz=229,SNR=5.7						
AGMN	Agassiz Nation	22.48	36	P	P	01 50 03.7	+0.6
AGMN				IAmb	IAmb	01 50 16.4	
	comp=Z,36nm,1.3s						
146A	Union	22.53	80	P	P	01 50 04.2	+0.4
SIUC	Southern Illin	22.56	67	P	P	01 50 03.4	-0.6
SIUC				IAmb	IAmb	01 50 16.1	
	comp=Z,37nm,0.9s						
BBB	Bella Bella	22.56	340	P	P	01 50 04.4	+0.5
	comp=Z,16nm,0.9s,baz=226,slow=12,SNR=2.6						
BBB				LR	LR	01 59 53.5	
	comp=Z,686nm,19.4s,baz=171,slow=39						
P43A	Skaggs, Pawnee	22.67	62	P	P	01 50 05.4	+0.2
Q44A	Meyer Farm, Va	22.91	64	P	P	01 50 07.2	-0.5
Q44A				IAmb	IAmb	01 50 25.8	
	comp=Z,45nm,0.9s						
HDIL	Hopedale	23.06	60	P	P	01 50 09.1	-0.2
HDIL				IAmb	IAmb	01 50 27.3	
	comp=Z,40nm,1.1s						
JFWS	Jewell Farm	23.10	53	P	P	01 50 08.7	-1.0
	baz=249						
JFWS	Jewell Farm	23.10	53	P	P	01 50 11.2	+1.6
JFWS				IAmb	IAmb	01 50 30.6	
	comp=Z,29nm,0.9s						
L42A	Oliver, Polo	23.20	56	P	P	01 50 11.1	+0.5
I40A	Norwalk	23.22	51	P	P	01 50 11.4	+0.5
I40A				IAmb	IAmb	01 50 21.2	
	comp=Z,39nm,1.0s						
PLAL	Pickwick Lake	23.27	74	P	P	01 50 11.5	0.0
Z47A	Carrollton	23.32	79	P	P	01 50 12.4	+0.4
WVT	Waverly	23.51	71	P	P	01 50 14.7	+0.8
	baz=267						
WVT	Waverly	23.51	71	P	P	01 50 14.9	+1.0
WVT				IAmb	IAmb	01 50 33.7	
	comp=Z,41nm,0.9s						
O44A	Mansfield	23.57	61	P	P	01 50 14.1	-0.4
O44A				IAmb	IAmb	01 50 31.5	
	comp=Z,30nm,0.8s						
B35A	Bob, Littlefor	23.63	38	P	P	01 50 16.2	+1.3
CMIG	Matias Romero	23.70	123	P	P	01 50 16.3	+0.4
	comp=Z,4.2nm,0.7s,baz=310,slow=13,SNR=11						
ULM	Lac du Bonnet	23.80	33	P	P	01 50 16.8	+0.2
	comp=Z,19nm,1.1s,baz=229,slow=9.5,SNR=14						
ULM				Lg	Lg	01 57 32.6	
	comp=Z,0.7nm,0.4s,baz=168,slow=17,SNR=1.7						
ULM				LR	LR	01 58 59.5	
	comp=Z,360nm,19.0s,baz=230,slow=35						
ULM	Lac du Bonnet	23.80	33	P	P	01 50 18.0	+1.4
ULM				IAmb	IAmb	01 50 22.3	
	comp=Z,29nm,1.1s						
E38A	The Farm, Brul	23.87	44	P	P	01 50 17.8	+0.5
E38A				IAmb	IAmb	01 50 19.6	
	comp=Z,22nm,0.9s						
G40A	Rib Lake	24.07	48	P	P	01 50 19.1	-0.1
G40A				IAmb	IAmb	01 50 32.5	
	comp=Z,50nm,1.5s						
X48A	Hartselle	24.13	75	P	P	01 50 19.2	-0.6
X48A				IAmb	IAmb	01 50 22.2	
	comp=Z,21nm,0.8s						
T47A	Sharon Grove	24.15	69	P	P	01 50 20.5	+0.4
LRAL	Lakeview Retre	24.23	79	P	P	01 50 19.3	-1.5
	baz=274,SNR=20						
LRAL	Lakeview Retre	24.23	79	P	P	01 50 21.6	+0.8
V48A	Smith Brothers	24.32	72		P	01 50 22.2	+0.7
V48A				IAmb	IAmb	01 50 23.6	
	comp=Z,31nm,0.9s						
BRAL	Brewton	24.39	83	P	P	01 50 21.8	-0.5
	baz=278,SNR=13						
BRAL	Brewton	24.39	83	P	P	01 50 23.4	+1.1
SFIN	Lafayette	24.65	61	P	P	01 50 24.8	+0.3
	baz=258						
SFIN	Lafayette	24.65	61	P	P	01 50 26.0	+1.5
SFIN				IAmb	IAmb	01 50 35.3	
	comp=Z,34nm,1.1s						
Y49A	Blount Mountai	24.67	77	P	P	01 50 25.2	+0.4
Y49A				IAmb	IAmb	01 50 27.4	
	comp=Z,37nm,1.2s						
CLTN	Cedars of Leba	24.72	71	P	P	01 50 25.8	+0.6
BLO	Bloomington	24.86	64	P	P	01 50 27.1	+0.6
WCI	Wyandotte Cave	24.92	66	P	P	01 50 25.7	-1.3
	baz=263						
WCI	Wyandotte Cave	24.92	66	P	P	01 50 27.3	+0.3
WCI				IAmb	IAmb	01 50 30.9	
	comp=Z,22nm,0.8s						
250A	Grady	24.95	81	P	P	01 50 28.0	+0.7
SWET	Sewanee	25.03	74	P	P	01 50 27.2	-0.9
SWET				IAmb	IAmb	01 50 30.8	
	comp=Z,28nm,0.9s						
COWI	Conover	25.10	47	P	P	01 50 28.6	0.0
COWI				IAmb	IAmb	01 50 34.5	
	comp=Z,15nm,0.8s						
FFC	Flin Flon	25.14	19	P	P	01 50 29.6	+0.8
FFC				IAmb	IAmb	01 50 43.0	
	comp=Z,39nm,1.5s						
U49A	Red Boiling Sp	25.19	70	P	P	01 50 30.6	+1.2
FPAL	Fort Paine	25.31	75	P	P	01 50 30.7	+0.1
W50A	Signal Mountai	25.54	74	P	P	01 50 32.3	-0.5
W50A				IAmb	IAmb	01 50 36.5	
	comp=Z,29nm,0.9s						
Z51A	Franklin	25.74	78	P	P	01 50 34.9	+0.4
Z51A				IAmb	IAmb	01 50 36.2	
	comp=Z,28nm,0.9s						
R49A	Shelbyville	25.80	66	P	P	01 50 36.2	+1.2
R49A				IAmb	IAmb	01 50 39.0	
	comp=Z,24nm,1.2s						
X51A	Calhoun	25.93	75	P	P	01 50 35.1	-1.1
T50A	Nancy	25.97	69	P	P	01 50 36.4	-0.1
352A	Blakely	26.15	82	P	P	01 50 40.2	+2.0
152A	Waverly Hall	26.18	79	P	P	01 50 38.1	-0.3
152A				IAmb	IAmb	01 50 40.1	
	comp=Z,32nm,1.1s						
CPCT	Cooper Cave	26.19	73	P	P	01 50 38.5	0.0
CPCT				IAmb	IAmb	01 50 43.0	
	comp=Z,29nm,1.2s						
V51A	Loudon	26.32	72	P	P	01 50 39.4	-0.4
V51A				IAmb	IAmb	01 50 41.8	
	comp=Z,28nm,1.1s						
Y52A	Lilburn	26.62	77	P	P	01 50 42.8	+0.3
Y52A				IAmb	IAmb	01 50 44.6	
	comp=Z,26nm,1.0s						
W52A	Murphy	26.68	74	P	P	01 50 43.4	+0.4
W52A				IAmb	IAmb	01 50 45.2	
	comp=Z,24nm,1.5s						
O49A	Covington	26.69	62	P	P	01 50 43.1	+0.1
553A	Crawfordville	26.78	85	P	P	01 50 42.9	-1.0
TKL	Tuckaleechee C	26.80	73	P	P	01 50 43.8	-0.3
	comp=Z,6.7nm,0.6s,baz=214,slow=7.1,SNR=20						
TKL				Lg	Lg	01 59 08.9	
	comp=Z,3.6nm,1.0s,baz=178,slow=8.1,SNR=2.5						
TKL				LR	LR	02 00 40.3	
	comp=Z,379nm,20.1s,baz=267,slow=35						
TKL	Tuckaleechee C	26.80	73	P	P	01 50 43.2	-0.9
TKL				IAmb	IAmb	01 50 51.5	
	comp=Z,25nm,1.1s						
V52A	Sevierville	26.94	72	P	P	01 50 45.0	-0.3
V52A				IAmb	IAmb	01 50 52.9	
	comp=Z,20nm,1.0s						
TZTN	Tazewell	26.98	71	P	P	01 50 46.0	+0.2
	baz=269						
TEIG	Tepich	27.00	108	LR	LR	02 02 40.6	
	comp=Z,532nm,21.8s,slow=39						
GOGA	Godfrey	27.15	77	P	P	01 50 47.0	-0.3
	baz=275,SNR=6.7						
GOGA	Godfrey	27.15	77	P	P	01 50 47.0	-0.3
GOGA				IAmb	IAmb	01 50 48.5	
	comp=Z,22nm,1.1s						
Q51A	Peebles	27.30	65	P	P	01 50 48.3	-0.3
BG3	Lake Jocassee	27.50	74	P	P	01 50 50.5	+0.1
BG3				IAmb	IAmb	01 50 55.5	
	comp=Z,19nm,1.2s						
P51A	Williamsport	27.57	64	P	P	01 50 51.1	+0.2
P51A				IAmb	IAmb	01 50 52.3	
	comp=Z,14nm,0.7s						
V53A	Saluda	27.58	72	P	P	01 50 50.9	-0.2
V53A				IAmb	IAmb	01 50 56.0	
	comp=Z,18nm,1.0s						
ACSO	Alum Creek Sta	27.72	63	P	P	01 50 52.8	+0.5
HODGE	Hodges	28.09	75	P	P	01 50 55.4	-0.3
HODGE				IAmb	IAmb	01 51 04.5	
	comp=Z,25nm,1.3s						
P52A	Corning	28.30	64	P	P	01 50 55.2	-2.3
	baz=264						
P52A	Corning	28.30	64	P	P	01 50 57.5	0.0
P52A				IAmb	IAmb	01 51 13.7	
	comp=Z,18nm,1.2s						
U54A	Nelsons Funny	28.38	71	P	P	01 50 56.2	-2.0
	baz=270						
PAULI	Pauline	28.42	74	P	P	01 50 59.5	+0.9
PAULI				IAmb	IAmb	01 51 01.2	
	comp=Z,14nm,1.0s						
DLBC	Dease Lake	28.63	344	P	P	01 51 00.8	+0.6
	comp=Z,6.7nm,0.8s,baz=181,slow=7.1,SNR=8.6						
DLBC				LR	LR	02 02 20.1	
	comp=Z,913nm,19.0s,baz=154,slow=36						
DLBC	Dease Lake	28.63	344	P	P	01 51 02.2	+1.9
DLBC				IAmb	IAmb	01 51 09.1	
	comp=Z,26nm,1.3s						
Q53A	Leroy	28.70	66	P	P	01 50 59.7	-1.3
	baz=266						
KMSC	Kings Mountain	28.80	73	P	P	01 51 00.7	-1.3
KMSC				IAmb	IAmb	01 51 04.0	
	comp=Z,16nm,1.0s						
V55A	Taylorsville	28.87	72	P	P	01 51 02.5	-0.2
V55A				IAmb	IAmb	01 51 04.7	
	comp=Z,19nm,1.1s						
JSC	Jenkinsville	28.91	75	P	P	01 51 02.4	-0.6
R54A	Victor	29.08	67	P	P	01 51 01.2	-3.2
	baz=267						
M52A	Chesterland	29.13	60	P	P	01 51 04.5	-0.4
M52A				IAmb	IAmb	01 51 06.9	
	comp=Z,20nm,0.8s						
MTO3	Montecristo	29.49	119	P	P	01 51 09.5	+1.1
BLA	Blacksburg	29.50	69	P	P	01 51 05.0	-3.3
	baz=270						
U56A	King	29.54	71	P	P	01 51 08.1	-0.4
U56A				IAmb	IAmb	01 51 11.0	
	comp=Z,17nm,0.9s						
M53A	WI Miller and	29.62	61	P	P	01 51 09.1	-0.1
M53A				IAmb	IAmb	01 51 10.8	
	comp=Z,20nm,1.0s						
M54A	Oil Creek Stat	30.39	61	P	P	01 51 16.6	+0.6
M54A				IAmb	IAmb	01 51 18.9	
	comp=Z,19nm,1.1s						
FCC	Fort Churchill	30.89	22	P	P	01 51 21.2	+1.0
FCC				IAmb	IAmb	01 51 26.9	
	comp=Z,16nm,1.2s						
YKA	Yellowknife Ar	30.97	1	P	P	01 51 21.1	+0.3
	comp=Z,3.5nm,1.1s,baz=178,slow=8.3,SNR=14						
YKA				PcP	PcP	01 54 16.6	-0.3
	comp=Z,0.1nm,0.4s,baz=167,slow=2.9,SNR=2.8						
SADO	Sadowa	31.32	55	LR	LR	02 03 39.0	
	comp=Z,443nm,18.0s,baz=300,slow=36						
N56A	West Decatur	31.35	62	P	P	01 51 23.0	-1.5
	baz=265						
L56A	Greenwood	32.02	60	P	P	01 51 31.2	+0.7
L56A				IAmb	IAmb	01 51 32.5	
	comp=Z,20nm,0.9s						
Q59A	Harwood	32.50	66	P	P	01 51 32.2	-2.3
	baz=269						
VLDQ	Val d'Or	33.27	49	P	P	01 51 39.3	-1.9
VLDQ				IAmb	IAmb	01 51 40.8	
	comp=Z,17nm,1.1s						
INK	Inuvik	38.25	349	P	P	01 52 24.7	+1.0
	comp=Z,13nm,1.1s,baz=148,slow=8.2,SNR=20						
INK	Inuvik	38.25	349	P	P	01 52 24.4	+0.7
INK				IAmb	IAmb	01 52 31.2	
	comp=Z,24nm,1.1s						
IL31		38.45	339	P	P	01 52 26.5	+1.1
ILAR	Eielson Array	38.45	339	P	P	01 52 26.8	+1.4
	comp=Z,5.1nm,1.0s,baz=151,slow=7.7,SNR=25						
ILAR				LR	LR	02 07 56.7	
	comp=Z,183nm,20.4s,baz=148,slow=36						
ILAR	Eielson Array	38.45	339	P	P	01 52 26.6	+1.2
KTH	Kantishna Hill	38.96	336	P	P	01 52 31.1	+1.2
E63A	Oxbow	39.01	54	P	P	01 52 30.9	+0.6
FYU	Fort Yukon	39.28	342	P	P	01 52 34.5	+2.1
FYU				IAmb	IAmb	01 52 39.0	
	comp=Z,31nm,1.2s						
BMAR	Burnt Mountain	39.77	343	P	P	01 52 37.9	+1.4
BATG	Bathurst New B	40.70	53	P	P	01 52 45.0	+0.6
IMAR	Indian Mountai	41.42	338		P	01 52 50.5	+0.5
TOLK	Toolik Lake Re	41.94	342	P	P	01 52 55.9	+1.5
TAOE	Nuku Hiva Isla	46.52	214	*e*LR	LR	02 06 28.7	
	comp=Z,282nm,24.9s						
TAOE	Nuku Hiva Isla	46.52	214	*e*T	T	02 41 53.6	
	comp=Z,21nm,0.2s						
ROSC	El Rosal	46.95	116	LR	LR	02 14 54.1	
	comp=Z,325nm,18.6s,baz=352,slow=38						
OTAV	Otavalo	46.98	124	P	P	01 53 36.3	+0.5
OTAV				IAmb	IAmb	01 53 55.3	
	comp=Z,10nm,1.1s						
SDV	Santo Domingo	47.44	108	P	P	01 53 39.0	-0.1
VAH	Vaihoa	55.73	218	*e*T	T	02 53 23.3	
	comp=Z,3.1nm,0.3s						
ICESG	Greenland Ices	55.94	25	*i* P	P	01 54 44.0	+1.8
ICESG				IAmb	IAmb	01 54 46.9	
	comp=Z,23nm,1.0s						
SUMG	Summit	56.40	21	*i* P	P	01 54 45.3	-0.1
SUMG	Summit	56.40	21	P	P	01 54 45.4	-0.1
SUMG				IAmb	IAmb	01 54 56.5	
	comp=Z,14nm,1.1s						
SUMG	Summit	56.40	21	*i* P	P	01 54 45.3	-0.1
PPT	Papeete	58.70	219	LR	LR	02 14 05.1	
	comp=Z,103nm,20.4s,baz=17,slow=30						
PPT2	Papeete2	58.71	219	*e*S	S	02 03 07.2	-0.6
	comp=Z,177nm,25.0s						
PPT2				*e*LR	LR	02 12 07.6	
	comp=Z,290nm,26.2s						
DAG	Danmarks Havn	61.14	15	*i* P	P	01 55 17.0	-0.9
	comp=Z,1.3nm,0.7s						
DAG	Danmarks Havn	61.14	15	*i* P	P	01 55 17.0	-0.9
DAG				IAmb	IAmb	01 55 18.4	
	comp=Z,1.3nm,0.7s						
PTGA	Pitinga	61.65	110	P	P	01 55 22.5	+0.2
PTGA				IAmb	IAmb	01 55 26.8	
	comp=Z,8.9nm,0.9s						
SEY	Seymchan	63.29	329	P	P	01 55 32.8	+0.3
	comp=Z,0.9nm,0.3s,baz=86,slow=8.8,SNR=4.4						
TBI	Tubuai	63.46	215	*e*LQ	LQ	02 11 42.0	
	comp=Z,475nm,32.0s						
TBI				*e*LR	LR	02 14 29.9	
	comp=Z,148nm,23.5s						
PETK	Petropavlovsk-	63.56	318	P	P	01 55 34.5	+0.1
	comp=Z,2.5nm,0.7s,baz=99,slow=9.3,SNR=3.6						
PETK				LR	LR	02 20 26.9	
	comp=Z,39nm,19.8s,baz=91,slow=33						
MA2	Magadan	65.11	326	P	P	01 55 44.2	-0.3
	comp=Z,2.6nm,0.3s,baz=156,slow=23,SNR=1.8						
LPAZ	La Paz	65.87	129	P	P	01 55 50.0	-0.7
	comp=Z,1.6nm,1.0s,baz=320,slow=7.4,SNR=2.6						
LPAZ				LR	LR	02 23 22.6	
	comp=Z,145nm,21.1s,baz=254,slow=35						
MNMC	Minye Minye	67.00	132	P	P	01 55 57.9	+0.5
PB08	IPOC Station P	68.03	133	P	P	01 56 04.9	+0.9
PB01	IPOC Station P	68.49	134	P	P	01 56 06.0	-0.6
PB01				IAmb	IAmb	01 56 08.8	
	comp=Z,9.7nm,1.0s						
H11N3	WAKE ISLAND Hy	69.55	281	T	T	03 12 23.3	

	baz=64,slow=74,SNR=5.9						
H11N2	**WAKE ISLAND Hy**	**69.56**	**281**	T	T	03 12 31.0	
	baz=64,slow=74,SNR=8.9						
H11N1	**WAKE ISLAND Hy**	**69.57**	**281**	T	T	03 12 27.7	
	baz=64,slow=74,SNR=8.9						
H11S1	**WAKE ISLAND Hy**	**70.28**	**280**	T	T	03 12 56.8	
	baz=62,slow=74,SNR=4.4						
H11S2	**WAKE ISLAND Hy**	**70.28**	**280**	T	T	03 12 54.1	
	baz=62,slow=74,SNR=4.6						
H11S3	**WAKE ISLAND Hy**	**70.30**	**280**	T	T	03 12 54.9	
	baz=62,slow=74,SNR=4.4						
ARCES	**ARCESS Array B**	**75.32**	**13**	LR	LR	02 33 20.2	
	comp=Z,210nm,18.0s,baz=355,slow=38						
NRIK	**Noril'sk**	**77.99**	**352**	P	**P**	**01 57 01.6**	**-0.4**
	comp=Z,3.6nm,0.9s,baz=29,slow=6.1,SNR=6.4						
NRIK				LR	LR	02 34 35.7	
	comp=Z,96nm,19.6s,baz=36,slow=38						
NOA	**NORSAR Array B**	**78.14**	**23**	LR	LR	02 31 23.3	
	comp=Z,129nm,19.7s,baz=350,slow=36						
BDFB	**Brasilia**	**80.00**	**115**	P	**P**	**01 57 13.5**	**-0.5**
	comp=Z,4.7nm,1.1s,baz=337,slow=1.8,SNR=3.9						
BDFB				LR	LR	02 36 26.3	
	comp=Z,128nm,19.5s,baz=291,slow=39						
CPUP	**Villa Florida**	**80.05**	**129**	P	**P**	**01 57 13.3**	**-0.5**
	comp=Z,1.6nm,0.7s,baz=311,slow=5.9,SNR=3.2						
CPUP				LR	LR	02 31 23.8	
	comp=Z,64nm,20.4s,baz=352,slow=35						
MSVF	**Nonsavu**	**80.25**	**242**	LR	LR	02 23 14.1	
	comp=Z,49nm,21.1s,baz=114,slow=28						
FINES	**FINESS Array B**	**82.27**	**17**	P	**P**	**01 57 25.8**	**+0.6**
	comp=Z,5.7nm,0.9s,baz=343,slow=6.0,SNR=5.7						
FINES				LR	LR	02 33 13.7	
	comp=Z,213nm,19.2s,baz=328,slow=35						
FINES	**FINESS Array B**	**82.27**	**17**	P	**P**	**01 57 26.0**	**+0.8**
PLCA	**Paso Flores**	**83.12**	**147**	LR	LR	02 27 13.0	
	comp=Z,102nm,20.3s,baz=313,slow=30						
ESDC	**Sonseca Array**	**84.97**	**46**	P	**P**	**01 57 39.6**	**-0.1**
	comp=Z,0.8nm,0.8s,baz=291,slow=6.2,SNR=4.8						
KLMR	**Klimovskoe**	**85.72**	**12**	*e*P	**P**	**01 57 45.0**	**+2.2**
KLMR				AMP		01 57 49.8	
	comp=Z,19nm,1.2s						
CN2	**Changchun**	**86.55**	**321**	*e*P	**P**	**01 57 46.2**	**-1.1**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.9s						
GERES	**GERESS Array B**	**88.10**	**31**	LR	LR	02 38 05.9	
	comp=Z,160nm,18.6s,baz=324,slow=36						
TLY	**Talaya**	**90.23**	**337**	LR	LR	02 41 37.2	
	comp=Z,73nm,20.5s,baz=2.5,slow=38						
AKASG	**Malin Array Be**	**92.42**	**21**	P	**P**	**01 58 15.7**	**+1.0**
	comp=Z,0.2nm,0.3s,baz=336,slow=4.3,SNR=2.8						
SONM	**Songino Array**	**92.44**	**333**	P	**P**	**01 58 17.4**	**+2.3**
	comp=Z,0.7nm,0.9s,baz=54,slow=7.3,SNR=3.8						
SONM				LR	LR	02 39 11.2	
	comp=Z,68nm,21.1s,baz=47,slow=35						
ZALV	**Zalesovo Beam**	**93.04**	**348**	P	**P**	**01 58 19.4**	**+1.9**
	comp=Z,0.7nm,0.5s,baz=15,slow=6.2,SNR=5.2						
ZALV				LR	LR	02 43 26.1	
	comp=Z,101nm,21.8s,baz=24,slow=38						
HHC	**Hu-ho-hao-te**	**95.79**	**326**	*e*P	**P**	**01 58 31.4**	**+0.8**
HHC				pmax	pmax		
	comp=Z,12nm,1.0s						
WMQ	**Urumqi**	**102.02**	**343**	*e*P	**Pdif**	**01 59 00.2**	**+1.8**
CD2	**Chengdu**	**107.52**	**325**	Pdif	**Pdif**	**01 59 20.5**	**-2.6**
WRA	**Warramunga Arr**	**116.84**	**262**	PKP	**PKPdf**	**02 03 47.8**	**-1.5**
	comp=Z,0.5nm,0.8s,baz=49,slow=2.0,SNR=2.8						
ASAR	**Alice Springs**	**118.78**	**259**	PKP	**PKPdf**	**02 03 51.9**	**-1.0**
	comp=Z,0.4nm,0.7s,baz=90,slow=2.5,SNR=4.2						
VNDA	**Vanda**	**118.94**	**194**	PKPdf	**PKiKP**	**02 03 53.2**	**+1.6**
BOSA	**Boshof**	**146.16**	**95**	PKPbc	**PKPbc**	**02 04 44.5**	**-0.4**
	comp=Z,3.2nm,0.9s,baz=252,slow=3.2,SNR=4.5						
BOSA	**Boshof**	**146.16**	**95**	PKPbc	**PKPbc**	**02 04 44.7**	**-0.2**

NNC 09 01:45:36.8±3.6**,37°.70N×78°.57E,$h0^{km}$,mb3.6,mpv3.2, 5C-5D,Error ellipse: s-maj=25.5km s-min=25.4km az=111.0,Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
MDOK	**Medeo**	**5.58**	**348**	Pg	Pb	01 47 17.9	+2.8
	2.9nm,0.9s						
MDOK				Lg	Lg	01 48 35.2	
	6.4nm,0.6s						
PDGK	**Podgornoye**	**5.67**	**7**	⇓Pn	Pn	01 47 03.0	+0.6
	0.6nm,0.3s						
PDGK				⇓Sn	Sn	01 48 10.9	+2.7
	4.2nm,0.6s						
PDGK				⇓Lg	Lg	01 48 38.0	
	18nm,1.0s						
TKM2	**Tokmak 2**	**5.69**	**337**	Pg	Pb	01 47 18.5	+1.5
	2.1nm,0.9s						
TKM2				⇓Lg	Lg	01 48 41.0	
	4.8nm,1.0s						
AAK	**Ala-Archa**	**5.84**	**329**	⇑Pg	Pb	01 47 23.1	+3.6
	2.8nm,0.9s						
AAK				⇑Lg	Lg	01 48 41.0	
	3.0nm,0.6s						
MAKZ	**Makanchi**	**9.45**	**14**	⇑Pn	Pn	01 47 55.1	+1.0
	1.1nm,0.3s						
MAKZ				⇓Sn	Sn	01 49 39.8	-1.2
	1.7nm,1.1s						
MK31	**Makanchi Array**	**9.50**	**16**	⇑Pn	Pn	01 47 54.9	+0.1
	0.4nm,0.4s,baz=202,slow=12,SNR=18						
MK31				⇑Sn	Sn	01 49 40.7	-1.6
	0.4nm,0.5s,baz=206,slow=27,SNR=4.6						

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*JMA **09** 01:53:20.5±0.1,24°.39N×122°.83E,$h63^{km}\pm1^{km}$,M3.3*
*TAP **09** 01:53:21.3,24°.41N×122°.84E,$h54^{km}$,ML3.6,C*
ISC 09 01:53:21.6±1.2**,24°.39N**±0°.03×**122°.86E**±0°.02**,$h55^{km}$**±7^{km}**,**
n98,$\sigma 1^{s}$**19**/183**,18C-23D,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.10**	**54**	P	**Pn**	**01 53 29.7**	**-0.3**
JYNG				S	**Sn**	**01 53 36.9**	**+0.9**
YOJ	**Yonaguni jima**	**0.16**	**64**	P	**Pn**	**01 53 30.3**	**+0.1**
YOJ				S	**Sn**	**01 53 37.2**	**+0.8**
IRIF	**Iriomote-Funau**	**0.80**	**94**	P	**Pn**	**01 53 36.5**	**-0.3**
IRIF				S	**Sn**	**01 53 48.4**	**+0.5**
HATJ	**Hateruma jima**	**0.93**	**111**	P	**Pn**	**01 53 38.2**	**-0.3**
HATJ				S	**Sn**	**01 53 52.0**	**+1.1**
TWC	**Suao**	**0.94**	**283**	⇑*i*P	**Pn**	**01 53 38.0**	**-0.7**
	baz=283						
TWC				S	**Sn**	**01 53 49.9**	**-1.4**
	baz=283						
TWB1	**Santiao Chiao**	**1.00**	**308**	*e*P	**Pn**	**01 53 39.5**	**+0.1**
	baz=315						
TWB1				*e*S	**Sn**	**01 53 48.6**	**-4.0**
	baz=315						
ENA	**Nanau**	**1.02**	**272**	*e*P	**Pn**	**01 53 39.7**	**+0.1**
	baz=278						
ENA				*e*S	**Sn**	**01 53 53.1**	**+0.1**
	baz=278						
NTC	**Toucheng**	**1.04**	**296**	⇓*e*P	**Pn**	**01 53 39.9**	**-0.1**
	baz=296						
NTC				*e*S	**Sn**	**01 53 53.5**	**-0.1**
	baz=296						
JKRS	**Kuro-shima**	**1.06**	**98**	P	**Pn**	**01 53 40.3**	**0.0**
JKRS				S	**Sn**	**01 53 55.0**	**+0.9**
ILA	**Ilan**	**1.07**	**290**	*e*P	**Pn**	**01 53 40.0**	**-0.4**
	baz=290						
ILA				*e*S	**Sn**	**01 53 54.3**	**-0.1**
	baz=290						
TIPB	**Shuangxi**	**1.10**	**302**	⇓*i*P	**Pn**	**01 53 40.5**	**-0.3**
	baz=301						
TIPB				*e*S	**Sn**	**01 53 53.2**	**-1.9**
	baz=301						
TWE	**Neicheng**	**1.13**	**287**	⇑*i*P	**Pn**	**01 53 40.7**	**-0.4**
	baz=293						
TWE				*e*S	**Sn**	**01 53 54.9**	**-0.9**
	baz=293						
NACB	**Ninganchiao**	**1.17**	**260**	⇓*i*P	**Pn**	**01 53 41.2**	**-0.5**
	baz=259						
NACB				*e*S	**Sn**	**01 53 56.2**	**-0.5**
	baz=259						
JIJ	**Ishigaki jima**	**1.17**	**91**	P	**Pn**	**01 53 41.1**	**-0.7**
JIJ				S	**Sn**	**01 53 56.0**	**-0.8**
NWF	**Wu-fen Shan**	**1.19**	**305**	⇑*e*P	**Pn**	**01 53 41.7**	**-0.3**
	baz=305						
NWF				*e*S	**Sn**	**01 53 57.5**	**+0.3**
	baz=305						
WFSB	**Wu-fen Shan**	**1.19**	**305**	*e*P	**Pn**	**01 53 41.8**	**-0.2**
	baz=305						
WFSB				*e*S	**Sn**	**01 53 57.3**	**+0.2**
	baz=305						
TWD	**Chiawan**	**1.19**	**255**	*e*P	**Pn**	**01 53 41.4**	**-0.5**
	baz=242						
TWD				*e*S	**Sn**	**01 53 56.8**	**-0.4**
	baz=242						
ENTT	**Nioudou**	**1.20**	**282**	⇑P	**Pn**	**01 53 42.8**	**+0.6**
	baz=291						
ENTT				*e*S	**Sn**	**01 53 57.7**	**+0.3**
	baz=291						
NDT	**Datong Townshi**	**1.24**	**280**	⇓*i*P	**Pn**	**01 53 43.4**	**+0.7**
	baz=287						
NDT				*e*S	**Sn**	**01 53 59.2**	**+0.7**
	baz=287						
ETLH	**Xiulin Townshi**	**1.27**	**262**	*e*P	**Pn**	**01 53 42.6**	**-0.5**
	baz=261						
ETLH				*e*S	**Sn**	**01 53 58.8**	**-0.4**
	baz=261						
NWLT	**Wulai**	**1.29**	**288**	⇑P	**Pn**	**01 53 43.9**	**+0.5**
	baz=287						
NWLT				*e*S	**Sn**	**01 53 58.7**	**-1.0**
	baz=287						
TWA	**Mucha**	**1.30**	**297**	*e*P	**Pn**	**01 53 43.4**	**0.0**
	baz=306						
TWA				*e*S	**Sn**	**01 53 59.3**	**-0.5**
	baz=306						
JISG	**Ishigakijimahi**	**1.34**	**81**	P	**Pn**	**01 53 43.2**	**-0.8**
JISG				*e*S	**Sn**	**01 54 00.4**	**-0.4**
NNSB	**Datong**	**1.34**	**272**	⇓P	**Pn**	**01 53 44.1**	**0.0**
	baz=271						
NNSB				*e*S	**Sn**	**01 54 00.9**	**-0.2**
	baz=271						
NNSH	**Datong**	**1.34**	**272**	⇓P	**Pn**	**01 53 44.1**	**0.0**
	baz=271						
NNSH				*e*S	**Sn**	**01 54 00.8**	**-0.3**
	baz=271						
NNS	**Nan Shan**	**1.35**	**272**	⇓P	**Pn**	**01 53 44.2**	**-0.1**
	baz=272						
NNS				*e*S	**Sn**	**01 54 01.7**	**+0.5**
	baz=272						
TATO	**Taipei**	**1.37**	**295**	⇓P	**Pn**	**01 53 44.5**	**+0.1**
	baz=295						
TATO				S	**Sn**	**01 54 01.6**	**0.0**
	baz=295						
NSK	**Sanguang**	**1.39**	**282**	⇓P	**Pn**	**01 53 45.1**	**+0.4**
	baz=282						
NSK				*e*S	**Sn**	**01 54 02.3**	**+0.1**
	baz=282						
ESL	**Shilin**	**1.42**	**246**	⇑P	**Pn**	**01 53 44.3**	**-0.8**
	baz=236						
ESL				*e*S	**Sn**	**01 54 01.9**	**-0.9**
	baz=236						
PCYT	**Pengchaiyu**	**1.42**	**330**	⇑P	**Pn**	**01 53 45.3**	**+0.1**
	baz=321						
WHF	**Hehuan Shan**	**1.47**	**261**	⇓*e*P	**Pn**	**01 53 45.7**	**-0.5**
	baz=260						
WHF				*e*S	**Sn**	**01 54 04.4**	**-0.3**
	baz=260						
FUSS	**Fushou**	**1.48**	**265**	⇑*e*P	**Pn**	**01 53 46.3**	**+0.2**
	baz=264						
FUSS				*e*S	**Sn**	**01 54 04.9**	**+0.4**
	baz=264						
TWS1	**Kuangyinshan**	**1.48**	**299**	*e*P	**Pn**	**01 53 47.0**	**+1.0**
	baz=298						
EGFH	**Guangfu**	**1.49**	**241**	*e*P	**Pn**	**01 53 45.6**	**-0.5**
	baz=240						
EGFH				*e*S	**Sn**	**01 54 04.5**	**0.0**
	baz=240						
TWT	**Tachien**	**1.54**	**265**	*e*P	**Pn**	**01 53 47.4**	**+0.5**
	baz=265						
TWT				*e*S	**Sn**	**01 54 07.2**	**+1.3**
	baz=265						
TDCB	**Techi**	**1.55**	**265**	⇓*e*P	**Pn**	**01 53 47.4**	**+0.4**
	baz=265						
TDCB				*e*S	**Sn**	**01 54 06.1**	**-0.1**
	baz=265						
CHGB	**Renai**	**1.57**	**258**	⇓*e*P	**Pn**	**01 53 47.2**	**-0.2**
	baz=247						
CHGB				*e*S	**Sn**	**01 54 06.6**	**-0.1**
	baz=247						
HGSD	**Ruisui**	**1.59**	**236**	⇑*e*P	**Pn**	**01 53 46.7**	**-0.7**
	baz=235						
HGSD				*e*S	**Sn**	**01 54 06.0**	**-0.8**
	baz=235						
EHY	**Hungye**	**1.66**	**238**	*e*P	**Pn**	**01 53 47.3**	**-1.1**
	baz=248						
EHY				*e*S	**Sn**	**01 54 08.3**	**-0.3**
	baz=248						
VWDT	**VWDT**	**1.69**	**248**	⇓*e*P	**Pn**	**01 53 48.8**	**0.0**
	baz=248						
VWDT				*e*S	**Sn**	**01 54 09.0**	**-0.3**
	baz=248						
LIOB	**Emei**	**1.69**	**279**	*e*P	**Pn**	**01 53 49.8**	**+0.9**
	baz=289						
LIOB				*e*S	**Sn**	**01 54 10.9**	**+1.5**
	baz=289						
JTJ	**Tarama**	**1.70**	**81**	P	**Pn**	**01 53 49.0**	**+0.1**
JTJ				*e*S	**Sn**	**01 54 08.7**	**-0.8**
NSTT	**Nanjuang**	**1.71**	**278**	*e*S	**Sn**	**01 54 11.5**	**+1.8**
	baz=288						
WHP	**Taichung City**	**1.75**	**267**	*e*P	**Pn**	**01 53 50.8**	**+1.2**
	baz=266						
WHP				*e*S	**Sn**	**01 54 11.0**	**+0.2**
	baz=266						
EYUL	**Yuli**	**1.75**	**234**	*e*P	**Pn**	**01 53 49.3**	**-0.3**
	baz=233						
EYUL				*e*S	**Sn**	**01 54 10.6**	**-0.2**
	baz=233						
TWF1	**Yuli**	**1.76**	**234**	⇑*e*P	**Pn**	**01 53 49.4**	**-0.4**
	baz=247						
TWF1				*e*S	**Sn**	**01 54 10.2**	**-0.9**
	baz=247						
WPL	**Puli Township**	**1.77**	**258**	⇑*e*P	**Pn**	**01 53 50.3**	**+0.4**
	baz=250						
WPL				*e*S	**Sn**	**01 54 12.2**	**+0.8**
	baz=250						
DPDB	**Guoxing**	**1.80**	**259**	*e*P	**Pn**	**01 53 51.0**	**+0.7**
	baz=251						
DPDB				*e*S	**Sn**	**01 54 13.9**	**+1.9**
	baz=251						
SSLB	**Suanglung**	**1.84**	**251**	⇓*e*P	**Pn**	**01 53 50.8**	**-0.1**
	baz=251						
SSLB				*e*S	**Sn**	**01 54 12.6**	**-0.4**
	baz=251						
SMLT	**Sun Moon Lake**	**1.86**	**255**	⇑*e*P	**Pn**	**01 53 51.6**	**+0.4**
	baz=254						
SMLT				*e*S	**Sn**	**01 54 15.1**	**+1.6**
	baz=254						
FULB	**Fuli**	**1.86**	**231**	*e*P	**Pn**	**01 53 50.2**	**-0.9**
	baz=230						
FULB				*e*S	**Sn**	**01 54 12.3**	**-1.2**
	baz=230						
CHKT	**Chengkung**	**1.88**	**227**	*e*P	**Pn**	**01 53 50.2**	**-1.1**
	baz=226						
CHKT				*e*S	**Sn**	**01 54 11.5**	**-2.3**
	baz=226						
TYC	**Yuchr**	**1.89**	**255**	⇑*e*P	**Pn**	**01 53 51.9**	**+0.5**
	baz=247						
TYC				*e*S	**Sn**	**01 54 16.2**	**+2.1**
	baz=247						
TWQ1	**Liyutan**	**1.90**	**269**	*e*P	**Pn**	**01 53 51.0**	**-0.6**
	baz=269						
TWQ1				*e*S	**Sn**	**01 54 16.1**	**+1.7**
	baz=269						
YUS	**Yu-Shan**	**1.96**	**243**	⇑*e*P	**Pn**	**01 53 53.1**	**+0.3**
	baz=242						
YUS				*e*S	**Sn**	**01 54 15.9**	**-0.7**
	baz=242						
EDH	**Donghe**	**2.00**	**225**	*e*P	**Pn**	**01 53 52.0**	**-1.0**
	baz=218						
EDH				*e*S	**Sn**	**01 54 15.1**	**-2.0**
	baz=218						
WJS	**Zhushan**	**2.02**	**254**	⇑*e*P	**Pn**	**01 53 55.3**	**+1.9**
	baz=246						
WNT1	**Nantou City**	**2.04**	**257**	*e*S	**Sn**	**01 54 20.5**	**+2.5**
	baz=256						
WNT	**Mingjian**	**2.05**	**256**	*e*P	**Pn**	**01 53 55.1**	**+1.5**
	baz=256						
WNT				*e*S	**Sn**	**01 54 20.3**	**+2.2**
	baz=256						
ELDTW	**Lidau**	**2.07**	**235**	⇓P	**Pn**	**01 53 53.3**	**-0.7**
	baz=234						
ELDTW				*e*S	**Sn**	**01 54 17.0**	**-1.7**
	baz=234						
ALS	**Alishan**	**2.07**	**245**	*e*P	**Pn**	**01 53 54.9**	**+0.6**
	baz=236						
ALS				*e*S	**Sn**	**01 54 20.2**	**+1.2**
	baz=236						
LDUT	**Ludao**	**2.13**	**217**	*e*P	**Pn**	**01 53 53.6**	**-1.2**
	baz=208						
LDUT				*e*S	**Sn**	**01 54 18.2**	**-1.9**
	baz=208						
CHN5	**Tsauling**	**2.14**	**249**	⇓*e*P	**Pn**	**01 53 56.4**	**+1.4**
	baz=248						
CHN5				*e*S	**Sn**	**01 54 22.1**	**+1.6**
	baz=248						
JIRB	**Irabujima**	**2.15**	**78**	*e*S	**Sn**	**01 54 21.4**	**+0.8**
LONT	**Longtian**	**2.17**	**227**	*e*P	**Pn**	**01 53 53.8**	**-1.5**
	baz=237						
LONT				*e*S	**Sn**	**01 54 20.3**	**-0.7**
	baz=237						
JIKM	**Ikemajima**	**2.24**	**76**	P	**Pn**	**01 53 55.9**	**-0.3**
JMJ	**Miyako jima 2**	**2.26**	**79**	*e*S	**Sn**	**01 54 25.5**	**+2.3**
	baz=79						
TWGBT	**Beinan**	**2.26**	**226**	⇓*e*P	**Pn**	**01 53 56.0**	**-0.6**
	baz=236						
TWGBT				*e*S	**Sn**	**01 54 22.0**	**-1.3**
	baz=236						
TWG	**Pinlang**	**2.26**	**227**	⇓*e*P	**Pn**	**01 53 56.0**	**-0.6**
	baz=236						
TWG				*e*S	**Sn**	**01 54 21.8**	**-1.6**
	baz=236						
STYT	**Tauyuan**	**2.28**	**238**	⇑P	**Pn**	**01 53 57.7**	**+0.8**
	baz=237						
STYT				*e*S	**Sn**	**01 54 24.4**	**+0.6**
	baz=237						
TPUB	**Ta-pu**	**2.31**	**242**	⇑*e*P	**Pn**	**01 53 58.8**	**+1.6**
	baz=242						
TPUB				*e*S	**Sn**	**01 54 26.8**	**+2.3**
	baz=242						
CHN4	**Tsaushan**	**2.32**	**244**	⇑*e*P	**Pn**	**01 53 59.0**	**+1.7**
	baz=237						
CHN4				*e*S	**Sn**	**01 54 27.3**	**+2.7**
	baz=237						
WTP	**Ta-pu**	**2.35**	**241**	*e*P	**Pn**	**01 53 59.5**	**+1.7**
	baz=241						
WTP				*e*S	**Sn**	**01 54 27.7**	**+2.2**
	baz=241						
WTK	**Tuku**	**2.36**	**253**	*e*P	**Pn**	**01 53 59.0**	**+1.1**
	baz=253						
WTK				*e*S	**Sn**	**01 54 27.9**	**+2.2**
	baz=253						
TWK	**Hsinying**	**2.44**	**243**	⇓*e*P	**Pn**	**01 54 00.5**	**+1.5**
	baz=242						
TWK				*e*S	**Sn**	**01 54 30.5**	**+2.7**
	baz=242						
CHN1	**Nanshi**	**2.45**	**241**	*e*P	**Pn**	**01 54 01.6**	**+2.4**
	baz=241						
CHN1				*e*S	**Sn**	**01 54 30.8**	**+2.9**
	baz=241						
SNST	**Tainan City**	**2.46**	**242**	*e*P	**Pn**	**01 54 01.0**	**+1.8**
	baz=242						
SNST				*e*S	**Sn**	**01 54 29.9**	**+1.9**
	baz=242						
SGST	**Jiashian**	**2.46**	**238**	*e*P	**Pn**	**01 53 59.5**	**+0.2**
	baz=238						
SGST				*e*S	**Sn**	**01 54 30.3**	**+2.2**
	baz=238						
SLGT	**Liugui**	**2.46**	**236**	*e*P	**Pn**	**01 54 00.6**	**+1.3**
	baz=229						
SLGT				*e*S	**Sn**	**01 54 30.4**	**+2.3**
	baz=229						
ICHU	**Yijhu**	**2.57**	**247**	*e*P	**Pn**	**01 54 02.1**	**+1.3**
	baz=247						
ICHU				*e*S	**Sn**	**01 54 33.6**	**+2.7**
	baz=247						
SSD	**Sandimen**	**2.62**	**232**	⇓*e*P	**Pn**	**01 54 03.2**	**+1.8**
	baz=228						
SSD				*e*S	**Sn**	**01 54 32.4**	**+0.4**
	baz=228						
LAY	**Lan-yu**	**2.63**	**207**	*e*P	**Pn**	**01 54 01.4**	**-0.2**
	baz=206						
LAY				*e*S	**Sn**	**01 54 29.9**	**-2.5**
	baz=206						
TSMG	**Majia**	**2.63**	**231**	*e*P	**Pn**	**01 54 02.1**	**+0.4**
	baz=227						
TSMG				*e*S	**Sn**	**01 54 32.7**	**+0.3**
	baz=227						
SCST	**Cishan**	**2.63**	**236**	*e*P	**Pn**	**01 54 02.2**	**+0.5**
	baz=247						
SCST				*e*S	**Sn**	**01 54 32.7**	**+0.3**
	baz=247						
MASBT	**Mashibuluo**	**2.70**	**229**	⇓*e*P	**Pn**	**01 54 03.5**	**+0.9**
	baz=226						
MASBT				*e*S	**Sn**	**01 54 34.3**	**+0.2**
	baz=226						
TAW	**Tawu**	**2.71**	**222**	*e*S	**Sn**	**01 54 32.6**	**-1.7**
	baz=229						
EAST	**Anshuo**	**2.72**	**223**	⇓*e*P	**Pn**	**01 54 02.9**	**0.0**
	baz=229						
EAST				*e*S	**Sn**	**01 54 33.9**	**-0.7**
	baz=229						
SCZT	**Fangliau**	**2.88**	**226**	*e*P	**Pn**	**01 54 06.8**	**+1.8**
	baz=220						
SCZT				*e*S	**Sn**	**01 54 40.1**	**+1.8**
	baz=220						
SLIU	**Shizi**	**2.88**	**222**	*e*P	**Pn**	**01 54 05.3**	**+0.4**
	baz=228						
SLIU				*e*S	**Sn**	**01 54 37.0**	**-1.3**
	baz=228						
TWKBT	**Hengchun**	**3.08**	**218**	*e*S	**Sn**	**01 54 43.8**	**+0.4**
	baz=223						
TWK1	**Hengchun**	**3.08**	**218**	*e*S	**Sn**	**01 54 43.6**	**+0.1**
	baz=223						
PHUB	**P'eng-hu**	**3.13**	**254**	*e*P	**Pn**	**01 54 08.9**	**+0.5**
	baz=255						
PHUB				*e*S	**Sn**	**01 54 43.9**	**-0.6**
	baz=255						
VWUC	**VWUC**	**3.15**	**282**	*e*P	**Pn**	**01 54 08.1**	**-0.7**
	baz=281						
VWUC				*e*S	**Sn**	**01 54 42.8**	**-2.4**
	baz=281						
PTMZ	**Houxiangcun**	**3.46**	**282**	*e*P	**Pn**	**01 54 12.7**	**-0.3**
	baz=281						
PTMZ				*e*S	**Sn**	**01 54 50.3**	**-2.4**
	baz=281						
LYJJ	**Jianjiangzhen**	**3.53**	**308**	*e*P	**Pn**	**01 54 13.3**	**-0.6**
	baz=299						
KNM	**Kinmen**	**4.03**	**271**	*e*P	**Pn**	**01 54 22.5**	**+1.7**
	baz=270						
KNMB	**Chin-men Tao**	**4.07**	**272**	*e*P	**Pn**	**01 54 20.8**	**-0.6**
	baz=272						
KNMB				*e*S	**Sn**	**01 55 05.7**	**-2.1**
	baz=272						
AXDP	**Jialang**	**4.47**	**277**	⇓*e*P	**Pn**	**01 54 27.4**	**+0.5**
	baz=277						
AXDP				*e*S	**Sn**	**01 55 16.4**	**-1.2**
	baz=277						

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*ISK **09** 02:07:05.9,35°.22N×28°.12E,$h21^{km}$,ML2.8/13*
*NIC **09** 02:07:08.7±0.0,35°.23N×28°.04E,$h49^{km}\pm8^{km}$,Ml2.5/1*
*DDA **09** 02:07:09.5,35°.48N×28°.30E,$h22^{km}\pm2^{km}$,ML2.4*
ISC 09 02:07:08.9±1.6**,35°.29N**±0°.05×**28°.00E**±0°.05**,$h64^{km}$**±22^{km}**,**
n28,$\sigma 1^{s}$**22**/36**,Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.73**	**290**	PG	**Pn**	**02 07 23.1**	**-0.7**
KARP				SG	**Sn**	**02 07 35.3**	**+0.6**
KARP	**Karpathos**	**0.73**	**290**	P	**Pn**	**02 07 23.9**	**+0.2**
KARP				S	**Sn**	**02 07 35.0**	**+0.3**
KARP				AML	AML	02 07 35.6	
	0.9nm,0.6s						
KARP				AML	AML	02 07 35.6	
	0.9nm,0.6s						
KARP				AML	AML	02 07 36.3	
	0.5nm,0.3s						
KARP				AML	AML	02 07 36.3	
	0.5nm,0.3s						
ARG	**Arkhangelos**	**0.93**	**6**	PG	**Pn**	**02 07 25.3**	**-0.8**
ARG				SG	**Sn**	**02 07 39.0**	**+0.1**
ARG	**Arkhangelos**	**0.93**	**6**	P	**Pn**	**02 07 26.6**	**+0.5**
ARG				S	**Sn**	**02 07 40.0**	**+1.1**
ZKR	**Zakros**	**1.47**	**264**	PN	**Pn**	**02 07 33.2**	**-0.1**
TURN	**Turunc**	**1.49**	**8**	PN	**Pn**	**02 07 33.5**	**0.0**
TURN	**Turunc**	**1.49**	**8**	*i* P	**Pn**	**02 07 33.6**	**0.0**
TURN				IAML		02 07 42.0	
	comp=N,44nm,1.1s						
TURN				*i* S	**Sn**	**02 07 52.4**	**+0.3**
TURN				IAML		02 08 13.0	
	comp=E,61nm,1.5s						
FETY	**Fethiye**	**1.60**	**33**	PN	**Pn**	**02 07 34.0**	**-1.0**
AKAS	**Kas**	**1.61**	**54**	PN	**Pn**	**02 07 33.4**	**-1.8**
DALY	**Dalyan (Mula)**	**1.61**	**19**	PN	**Pn**	**02 07 34.2**	**-0.9**
BDRM	**Kayabasi**	**1.82**	**346**	*i* P	**Pn**	**02 07 37.5**	**-0.5**
BDRM				*i* S	**Sn**	**02 07 55.3**	**-4.9**
BDRM				IAML		02 07 56.0	

	comp=N,47nm,2.7s						
BODT	**Bodrum**	**1.85**	**343**	PN	**Pn**	**02 07 38.6**	**+0.2**
YER	**Yerkesik**	**1.85**	**7**	PN	**Pn**	**02 07 38.3**	**-0.1**
MULA	**Mugla, Merkez-**	**1.98**	**7**	*i* P	**Pn**	**02 07 42.5**	**+2.3**
MULA				*i* S	**Sn**	**02 08 05.8**	**+1.9**
MULA				IAML		02 08 13.0	
	comp=E,30nm,1.3s						
MULA				IAML		02 08 25.0	
	comp=N,35nm,2.7s						
ELL	**Elmali**	**2.12**	**46**	PN	**Pn**	**02 07 41.1**	**-1.1**
ELL	**Elmali**	**2.12**	**46**	P	**Pn**	**02 07 43.2**	**+1.0**
TAVA	**DENIZLI_Tavas**	**2.29**	**18**	*i* P	**Pn**	**02 07 44.7**	**+0.3**
GOLH	**Golhisar**	**2.31**	**33**	*i* P	**Pn**	**02 07 45.4**	**+0.7**
GOLH				*i* S	**Sn**	**02 08 13.3**	**+1.2**
GOLH				IAML		02 08 31.0	
	comp=E,54nm,2.4s						
KORT	**Korkueli**	**2.55**	**47**	PN	**Pn**	**02 07 47.2**	**-0.8**
AYDB	**Zeytinkoy-Aydi**	**2.65**	**358**	PN	**Pn**	**02 07 49.9**	**+0.6**
BCK	**Bucak**	**3.01**	**43**	PN	**Pn**	**02 07 53.3**	**-0.9**
OSC1	**CSNet OBS 1**	**3.25**	**123**	S	**Sn**	**02 08 34.8**	**0.0**
NATA	**Nata**	**3.78**	**96**	P	**Pn**	**02 08 04.9**	**+0.2**
SZAC	**Souni**	**4.04**	**96**	S	**Sn**	**02 08 54.8**	**+0.5**
OSC2	**CSNet OBS 4**	**4.17**	**121**	S	**Sn**	**02 08 57.4**	**0.0**
ASGA	**Asgata**	**4.33**	**95**	P	**Pn**	**02 08 12.3**	**0.0**
CSS	**Mathiatis**	**4.38**	**93**	P	**Pn**	**02 08 12.8**	**-0.1**
MVOU	**Mavrovouni**	**4.62**	**92**	P	**Pn**	**02 08 16.3**	**+0.1**

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*IDC **09** 02:14:23.9±11.0, 15°.53S×165°.39E, h0^{km}, mb4.0/4, mb1 4.2/5, mb1mx3.8/42, mbtmp4.1/5, ML4.0/1, Error ellipse: s-maj=197.0km s-min=33.2km az=55.0*

*NOU **09** 02:14:30.2, 15°.85S×167°.24E, h1^{km}, MLv4.6, Vanuatu Islands*

ISC 09 02:14:19.6±1.6, 14°.9S±0°.1×166°.4E±0°.1, h35^{km}, n13, σ2ˢ07/13, mb4.0/4, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**0.90**	**124**	P	**Pn**	**02 14 38.0**	**+2.3**
DVP	**Devils Point**	**3.24**	**149**	P	**Pn**	**02 15 06.1**	**-1.8**
KOUNC	**Koumac, New Ca**	**5.94**	**200**	P	Pn	02 15 52.6	+7.5
	32nm,1.2s						
DZM	**Mont Dzumac**	**7.09**	**180**	Pn	**Pn**	**02 16 02.5**	**+1.6**
	3.3nm,0.3s,baz=312,slow=23,SNR=25						
DZM				Sn	**Sn**	**02 17 18.9**	**-1.5**
	1.6nm,0.3s,baz=43,slow=20,SNR=1.6						
DZM	**Mont Dzumac**	**7.09**	**180**	P	**Pn**	**02 16 02.8**	**+1.8**
	32nm,0.8s						
YATNC	**Mamie plateau,**	**7.09**	**177**	P	**Pn**	**02 16 02.4**	**+1.5**
NOUC	**Port Laguerre**	**7.12**	**181**	P	**Pn**	**02 16 04.3**	**+3.0**
	27nm,1.0s						
ONTNC	**Ouen Toro**	**7.32**	**180**	P	**Pn**	**02 16 06.9**	**+2.8**
OUENC	**Ouen Island, N**	**7.45**	**177**	P	**Pn**	**02 16 07.8**	**+2.1**
STKA	**Stephens Creek**	**28.24**	**229**	P	**P**	**02 20 07.9**	**-1.5**
	2.5nm,0.5s,baz=50,slow=9.9,SNR=7.8						
WRA	**Warramunga Arr**	**30.99**	**256**	P	**P**	**02 20 33.7**	**-0.3**
	0.3nm,0.5s,baz=85,slow=9.0,SNR=4.9						
ASAR	**Alice Springs**	**31.84**	**249**	P	**P**	**02 20 41.0**	**-0.4**
	1.8nm,0.6s,baz=80,slow=8.9,SNR=17						
FITZ	**Fitzroy Crossi**	**39.18**	**260**	P	**P**	**02 21 44.7**	**+0.2**
	1.4nm,0.7s,baz=108,slow=7.7,SNR=8.5						

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*IDC **09** 02:19:56.7±0.7, 1°.45N×118°.96E, h0^{km}, mb4.1/12, mb1 4.3/13, mb1mx4.0/44, mbtmp4.2/13, ML3.8/1, MS3.4/7, Ms1 3.5/7, ms1mx3.1/40, Error ellipse: s-maj=69.9km s-min=12.8km az=63.0*

*DJA **09** 02:19:59.8±0.2, 1°N±2°×11°9E±°, h10^{km}, M4.5/17, mb4.7/7, mB5.0/4, MLv4.5/17, Mw(mB)4.3/4*

*NEIC **09** 02:20:01.0±0.9, 1°.32N±0°.07×118°.81E±0°.06, h26^{km}±3^{km}, mb4.3/13, Error ellipse: s-maj=9.8km s-min=9.2km az=201.0*

ISC 09 02:20:02.3±0.5, 1°.36N±0°.05×118°.79E±0°.05, h35^{km}, n60, σ2ˢ06/63, mb4.3/19, MS3.5/6, 1D, Borneo

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MPSI	**Mapaga**	**1.51**	**132**	P	**Pn**	**02 20 25.2**	**-1.7**
MPSI				S	**Sn**	**02 20 46.8**	**+1.5**
TOLI2	**Tolitoli**	**2.01**	**97**		**Pn**	**02 20 32.4**	**-1.4**
BKB	**Balikpapan**	**3.22**	**216**	Pn	**Pn**	**02 20 47.7**	**-2.8**
BKB	**Balikpapan**	**3.22**	**216**	P	**Pn**	**02 20 48.2**	**-2.2**
BKB				S	**Sn**	**02 21 26.4**	**-1.2**
MRSI	**Marisa**	**3.27**	**106**	P	**Pn**	**02 20 50.6**	**-0.6**
APSI	**Ampana**	**3.65**	**128**	P	**Pn**	**02 20 57.1**	**+0.8**
APSI				S	**Sn**	**02 21 39.8**	**+1.7**
MYLDM	**Lahad Datu**	**3.80**	**356**	Pn	**Pn**	**02 20 58.7**	**+0.2**
GTOI	**Gorontalo**	**4.29**	**100**	P	**Pn**	**02 21 03.3**	**-1.8**
TTSI	**Tana Toraja**	**4.50**	**167**	P	**Pn**	**02 21 08.2**	**+0.1**
MTKI	**Muara Teweh, K**	**4.51**	**240**	P	**Pn**	**02 21 06.8**	**-1.5**
LUWI	**Luwuk**	**4.65**	**121**	P	**Pn**	**02 21 10.2**	**+0.1**
KKM	**Kota Kinabalu**	**5.31**	**331**	Pn	**Pn**	**02 21 19.5**	**+0.2**
KBKI	**Kotabaru**	**5.32**	**209**	P	**Pn**	**02 21 16.6**	**-2.8**
	0.2nm2µm40nm,0.4s						
SPSI	**Sidrap Palu**	**5.38**	**169**	P	**Pn**	**02 21 19.9**	**-0.3**
	0.2nm737nm66nm,0.7s						
BNSI	**Bone**	**5.88**	**167**	P	**Pn**	**02 21 26.7**	**-0.3**
	0.3nm51nm,0.7s						
BBKI	**Banjar Baru**	**6.21**	**219**	P	**Pn**	**02 21 31.0**	**-0.6**
KAPI	**Kappang**	**6.41**	**171**	Pn	**Pn**	**02 21 33.4**	**-0.9**
	2.2nm,0.3s,baz=336,slow=14,SNR=7.6						
KAPI				Sn	**Sn**	**02 22 40.7**	**-5.6**
	2.0nm,0.3s,baz=217,slow=20,SNR=1.5						
KAPI				LR	LR	02 24 33.7	
	comp=Z,210nm,19.6s,baz=139,slow=43						
KAPI	**Kappang**	**6.41**	**171**	Pn	**Pn**	**02 21 34.1**	**-0.2**
SBUM	**Sibu**	**6.65**	**279**	Pn	**Pn**	**02 21 36.7**	**-1.0**
BKSI	**Bulukumba**	**6.77**	**169**	P	**Pn**	**02 21 39.6**	**+0.3**
KCP	**Kidapawan**	**8.42**	**48**	*i* S	**Sn**	**02 23 30.4**	**-5.6**
PMBI	**Palembang**	**14.64**	**253**	P	**P**	**02 23 37.0**	**+4.1**
MTN	**Manton Dam**	**18.69**	**139**	P	**P**	**02 24 17.1**	**-0.7**
MTN				IAmb	IAmb	02 24 19.2	
	comp=Z,19nm,0.6s						
PSI	**Prapat**	**19.90**	**274**	LR	LR	02 32 55.3	
	comp=Z,158nm,19.2s,baz=89,slow=39						
FITZ	**Fitzroy Crossi**	**20.48**	**161**	P	**P**	**02 24 37.0**	**-0.3**
	comp=Z,5.4nm,0.8s,baz=358,slow=7.2,SNR=15						
FITZ	**Fitzroy Crossi**	**20.48**	**161**	P	**P**	**02 24 37.4**	**+0.1**
CMAR	**Chiang Mai Arr**	**25.84**	**312**	P	**P**	**02 25 30.4**	**-0.4**
	comp=Z,1.1nm,0.3s,baz=144,slow=8.3,SNR=2.5						
CMAR				LR	LR	02 37 38.2	
	comp=Z,74nm,18.4s,baz=164,slow=41						
WB0	**Warramunga Arr**	**25.99**	**145**	P	**P**	**02 25 31.0**	**-1.1**
WB0				IAmb	IAmb	02 25 32.1	
	comp=Z,12nm,0.8s						
WRA	**Warramunga Arr**	**26.10**	**145**	P	**P**	**02 25 31.8**	**-1.3**
	comp=Z,11nm,0.8s,baz=330,slow=9.7,SNR=48						
WRA	**Warramunga Arr**	**26.10**	**145**	P	**P**	**02 25 31.5**	**-1.6**
WB2	**Warramunga Arr**	**26.10**	**145**	P	**P**	**02 25 32.0**	**-1.1**
WR0	**Warramunga Arr**	**26.23**	**145**	P	**P**	**02 25 32.7**	**-1.5**
KMI	**Kunming**	**28.25**	**328**	⇓P	**P**	**02 25 55.9**	**+3.3**
KMI				pP	pP	02 25 59.8	-2.8
KMI				sP	sP	02 26 01.6	-5.3
KMI				pmax	pmax		
	comp=Z,23nm,0.5s						
AS31	**Alice Springs**	**28.90**	**150**	P	**P**	**02 25 57.6**	**-0.6**
ASAR	**Alice Springs**	**28.90**	**150**	P	**P**	**02 25 57.7**	**-0.5**
	comp=Z,4.0nm,0.7s,baz=333,slow=8.9,SNR=45						
ASAR				PcP	**PcP**	**02 29 06.7**	**-0.4**
	comp=Z,0.3nm,0.5s,baz=334,slow=2.1,SNR=2.4						
ASAR				LR	LR	02 39 07.2	
	comp=Z,90nm,18.3s,baz=344,slow=40						
LZH	**Lanzhou**	**37.23**	**340**	*e*P	**P**	**02 27 14.1**	**+3.3**
LZH				pP	sP	02 27 25.4	+0.2
LZH				sP	pP	02 27 28.4	+7.5
LZH				PP	**PP**	**02 28 30.4**	**-5.7**
LZH				pmax	pmax		
	comp=Z,10.0nm,1.2s						
LZH				pmax	pmax		
	comp=Z,98nm,5.4s						
BBOO	**Buckleboo**	**37.70**	**156**	P	**P**	**02 27 14.3**	**-0.4**
MJAR	**Matsushiro Arr**	**39.35**	**25**	LR	LR	02 45 17.3	
	comp=Z,29nm,18.4s,baz=245,slow=39						
STKA	**Stephens Creek**	**39.50**	**149**	P	**P**	**02 27 28.9**	**-0.9**
	comp=Z,6.9nm,0.8s,baz=311,slow=9.8,SNR=14						
STKA				LR	LR	02 45 37.8	
	comp=Z,86nm,18.8s,baz=7.7,slow=39						
STKA	**Stephens Creek**	**39.50**	**149**	P	**P**	**02 27 29.9**	**+0.2**
HHC	**Hu-ho-hao-te**	**39.85**	**351**	*e*P	**P**	**02 27 34.4**	**+1.8**
HHC				pmax	pmax		
	comp=Z,8.0nm,1.2s						
HHC				pmax	pmax		
	comp=Z,87nm,5.7s						
GTA	**Gaotai**	**41.64**	**338**	*e*P	**P**	**02 27 48.3**	**+0.8**
GTA				pP	pP	02 27 59.0	+1.2
GTA				sP	sP	02 28 03.8	+1.9
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,50nm,5.4s						
GTA				LR	LR		
	comp=N,120nm,14.2s						
GTA				LR	LR		
	comp=E,110nm,13.8s						
GTA				LR	LR		
	comp=Z,170nm,14.9s						
SONM	**Songino Array**	**47.52**	**349**	P	**P**	**02 28 33.5**	**-0.8**
	comp=Z,0.3nm,0.7s,baz=166,slow=7.5,SNR=2.5						
WMQ	**Urumqi**	**50.51**	**331**	*e*P	**P**	**02 28 59.5**	**+2.3**
MK31	**Makanchi Array**	**55.30**	**330**	P	**P**	**02 29 32.7**	**+0.2**
MK31				IAmb	IAmb	02 29 37.0	
	comp=Z,2.0nm,1.0s						
MKAR	**Makanchi Array**	**55.30**	**330**	P	**P**	**02 29 32.2**	**-0.2**
	comp=Z,1.2nm,0.4s,baz=130,slow=8.2,SNR=16						
MKAR	**Makanchi Array**	**55.30**	**330**	P	**P**	**02 29 32.4**	**-0.1**
MAKZ	**Makanchi**	**55.46**	**330**	P	**P**	**02 29 32.5**	**-1.1**
MAKZ				IAmb	IAmb	02 29 38.1	
	comp=Z,4.2nm,1.2s						
ZALV	**Zalesovo Beam**	**59.39**	**337**	P	**P**	**02 30 00.4**	**-0.7**
	comp=Z,2.3nm,0.6s,baz=138,slow=14,SNR=12						
KURBB	**Kurchatov Arra**	**59.72**	**332**	P	**P**	**02 30 03.1**	**-0.4**
	comp=Z,0.8nm,0.3s,baz=123,slow=6.2,SNR=1.8						
KKAR	**Karatay Array**	**59.77**	**321**	P	**P**	**02 30 04.2**	**+0.2**
KKAR				IAmb	IAmb	02 30 08.1	
	comp=Z,1.5nm,0.9s						
BVAR	**Borovoye Array**	**65.18**	**330**	P	**P**	**02 30 39.8**	**-0.2**
	comp=Z,0.5nm,0.7s,baz=108,slow=7.9,SNR=2.4						
ABKAR	**Akbulak array**	**69.10**	**323**	P	**P**	**02 31 05.2**	**+0.3**
AKTO	**Aktyubinsk**	**70.71**	**324**	P	**P**	**02 31 15.2**	**+0.4**
	comp=Z,0.8nm,0.6s,baz=121,slow=7.7,SNR=2.4						
NRIK	**Noril'sk**	**71.00**	**349**	P	**P**	**02 31 16.0**	**-0.2**
	comp=Z,1.0nm,0.3s,baz=135,slow=2.9,SNR=3.6						
NRIK	**Noril'sk**	**71.00**	**349**	P	**P**	**02 31 16.3**	**+0.1**
NRIK				IAmb	IAmb	02 31 21.5	
	comp=Z,2.9nm,1.1s						
KMBO	**Kilima Mbogo**	**81.56**	**269**	LR	LR	03 06 37.6	
	comp=Z,28nm,18.8s,baz=284,slow=34						
VNA2	**Neumayer--Watz**	**102.49**	**196**	Pdiff	**Pdif**	**02 33 59.3**	**+4.6**
VNA1	**Neumayer--Stat**	**102.89**	**196**	Pdiff	**Pdif**	**02 34 00.1**	**+3.7**
VNA3	**Neumayer Olymp**	**102.91**	**195**	Pdiff	**Pdif**	**02 33 51.9**	**-4.7**

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*ECX **09** 02:21:26.4±0.7, 31°.51N×115°.65W, h8^{km}±13^{km}, MD2.0, ML2.2*

*MEX **09** 02:21:27.6±2.4, 31°.45N×115°.65W, h10^{km}, MD3.6*

ISC 09 02:21:24.1±1.2, 31°.53N±0°.03×115°.59W±0°.04, h14^{km}±10^{km}, n13, σ0ˢ71/24, 5C-3D, Baja California

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VTX	**Valle De La Tr**	**0.22**	**231**	⇑*i*P	**Pb**	**02 21 29.8**	**-0.2**
VTX				*e*S	**Sg**	**02 21 32.7**	**+0.4**
VTX				IAML		02 21 32.9	
	comp=N,920nm,0.1s						
VTX				*e*		02 21 32.9	
SJX	**San Joaquin**	**0.39**	**306**	⇓*i*P	**Pn**	**02 21 36.2**	**+0.7**
SJX				*e*S	**Sn**	**02 21 43.6**	**+0.9**
ECBX	**El Chinero**	**0.46**	**97**	⇑*i*P	**Pn**	**02 21 34.9**	**-1.4**
ECBX				*e*S	**Sb**	**02 21 41.7**	**+1.0**
SPIG	**San Pedro Mart**	**0.49**	**168**	*i* P	**Pn**	**02 21 35.5**	**-1.6**
	baz=322,slow=12						
SPIG				*i* S	**Sb**	**02 21 42.2**	**+0.1**
SPIG	**San Pedro Mart**	**0.49**	**168**	*i* P	**Pb**	**02 21 35.1**	**+0.3**
SPIG				*e*S	**Sb**	**02 21 42.1**	**+0.1**
SPX	**San Pedro Mart**	**0.50**	**168**	⇓*i*P	**Pb**	**02 21 35.6**	**+0.6**
SPX				*e*S	**Sb**	**02 21 42.3**	**0.0**
SPX				IAML		02 21 44.3	
	comp=N,123nm,0.1s						
SPX				⇓*e*		02 21 44.3	
SVX	**San Vicente**	**0.60**	**251**	*e*P	**Pb**	**02 21 36.0**	**-0.4**
SFX	**San Felipe**	**0.80**	**128**	⇑*e*P	**Pn**	**02 21 41.7**	**+0.7**
SFX				*e*S	**Sn**	**02 21 53.0**	**+0.2**
SQX	**San Quintin**	**0.98**	**195**	⇑*e*P	**Pn**	**02 21 43.3**	**-0.2**
SQX				*e*S	**Sg**	**02 21 55.8**	**-0.1**
RMX	**La Rumorosa**	**1.15**	**339**	*e*P	**Pb**	**02 21 45.7**	**-0.2**
RMX				*e*S	**Sb**	**02 21 59.6**	**-1.2**
CBX	**Cerro Bola**	**1.20**	**311**	*e*P	**Pg**	**02 21 47.1**	**-0.2**
CBX				*e*S	**Sb**	**02 22 02.4**	**+0.1**
CBX				⇑*e*		02 22 05.5	
CBX				IAML		02 22 05.5	
	comp=N,72nm,0.4s						
TJIG	**Tijuana**	**1.29**	**315**	*i* P	**Pb**	**02 21 48.4**	**+0.2**
TJIG				*i* S	**Sb**	**02 22 04.6**	**-0.1**
BAR	**Barrett**	**1.47**	**322**	*e*P	**Pb**	**02 21 51.5**	**+0.2**

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*IDC **09** 02:36:26.2±12.0, 12°.44S×167°.01E, h160^{km}±113^{km}, mb3.6/7, mb1 3.8/7, mb1mx3.5/44, mbtmp4.0/7, MS3.1/2, Ms1 3.1/2, ms1mx2.6/26, Error ellipse: s-maj=86.6km s-min=40.3km az=133.0*

*NEIC **09** 02:36:32.7±2.3, 12°.4S±0°.1×166°.89E±0°.08, h211^{km}±8^{km}, mb4.2/14, Error ellipse: s-maj=17.0km s-min=9.5km az=153.0*

ISC 09 02:36:33.6±0.7, 12°.4S±0°.1×166°.9E±0°.1, h220^{km}, n30, σ1ˢ00/29, mb4.0/13, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**3.03**	**174**		**Pn**	**02 37 23.9**	**-0.7**
FUNA	**Funafuti**	**12.70**	**73**	P	**P**	**02 39 30.8**	**+0.9**
RABL	**Rabaul**	**16.70**	**298**	Pn	**P**	**02 40 14.7**	**+0.7**
EIDS	**Eidsvold**	**19.72**	**227**	P	**P**	**02 40 48.3**	**+1.7**
CTA	**Charters Tower**	**21.22**	**246**	P	**P**	**02 41 00.8**	**-1.9**
	1.3nm,0.6s,baz=94,slow=13,SNR=5.1						
CTA				LR	LR	02 47 20.0	
	comp=Z,19nm,19.6s,baz=162,slow=31						
CTAO	**Charters Tower**	**21.22**	**246**	P	**P**	**02 41 02.9**	**+0.3**
CTAO				IAmb	IAmb	02 41 03.5	
	comp=Z,7.8nm,0.8s						
ARMA	**Armidale**	**22.82**	**216**	P	**P**	**02 41 19.5**	**+1.8**
COEN	**Coen**	**23.14**	**264**	P	**P**	**02 41 21.6**	**+0.9**
COEN				IAmb	IAmb	02 41 22.6	
	comp=Z,4.2nm,0.8s						
URZ	**Urewera**	**27.31**	**162**	LR	LR	02 50 48.3	
	comp=Z,103nm,19.6s,baz=211,slow=32						
BKZ	**Black Stump Fm**	**27.98**	**164**	P	**P**	**02 42 04.4**	**+0.4**
BKZ				IAmb	IAmb	02 42 23.4	
	comp=Z,8.4nm,1.2s						
STKA	**Stephens Creek**	**30.27**	**226**	P	**P**	**02 42 23.4**	**-0.9**
	comp=Z,0.8nm,0.4s,baz=46,slow=13,SNR=4.5						
STKA	**Stephens Creek**	**30.27**	**226**	P	**P**	**02 42 25.3**	**+1.1**
WR0	**Warramunga Arr**	**31.92**	**252**	P	**P**	**02 42 38.0**	**-0.8**
WR0				IAmb	IAmb	02 42 49.3	
	comp=Z,5.9nm,1.4s						
WB0	**Warramunga Arr**	**32.03**	**253**	P	**P**	**02 42 39.0**	**-0.8**
WB0				IAmb	IAmb	02 42 57.4	
	comp=Z,4.9nm,1.1s						
WB2	**Warramunga Arr**	**32.09**	**252**	P	**P**	**02 42 39.7**	**-0.7**
WRA	**Warramunga Arr**	**32.10**	**252**	P	**P**	**02 42 39.2**	**-1.3**
	comp=Z,0.3nm,0.4s,baz=83,slow=8.9,SNR=7.8						
WRA	**Warramunga Arr**	**32.10**	**252**	P	**P**	**02 42 39.5**	**-1.0**
ASAR	**Alice Springs**	**33.22**	**246**	P	**P**	**02 42 48.7**	**-1.5**
	comp=Z,1.1nm,0.8s,baz=75,slow=9.4,SNR=11						
ASAR	**Alice Springs**	**33.22**	**246**	P	**P**	**02 42 49.6**	**-0.5**
BBOO	**Buckleboo**	**34.76**	**229**	P	**P**	**02 43 03.6**	**+0.4**
BBOO				IAmb	IAmb	02 43 06.0	
	comp=Z,7.9nm,1.0s						
FITZ	**Fitzroy Crossi**	**40.13**	**257**	P	**P**	**02 43 49.1**	**+0.7**
IL31		**84.45**	**18**	P	**P**	**02 48 41.4**	**+0.3**
IL31				IAmb	IAmb	02 48 41.4	
	comp=Z,4.1nm,0.8s						
ILAR	**Eielson Array**	**84.45**	**18**	P	**P**	**02 48 40.9**	**-0.3**
	comp=Z,2.5nm,0.6s,baz=245,slow=5.1,SNR=50						
ILAR	**Eielson Array**	**84.45**	**18**	P	**P**	**02 48 41.0**	**-0.1**
MKAR	**Makanchi Array**	**95.28**	**317**	P	**P**	**02 49 33.1**	**+0.5**
	comp=Z,0.5nm,0.6s,baz=101,slow=7.5,SNR=1.9						
MKAR	**Makanchi Array**	**95.28**	**317**	P	**P**	**02 49 33.2**	**+0.7**
YKA	**Yellowknife Ar**	**95.67**	**27**	P	**P**	**02 49 32.1**	**-1.7**
	comp=Z,0.2nm,0.5s,baz=257,slow=3.9,SNR=5.1						
ARCES	**ARCESS Array B**	**117.93**	**346**	PKP	**PKiKP**	**02 54 53.3**	**-0.2**
	comp=Z,12nm,1.2s,baz=46,slow=1.9,SNR=12						
ESDC	**Sonseca Array**	**151.67**	**345**	PKPbc	**PKPbc**	**02 56 01.7**	**-0.5**
	comp=Z,2.3nm,1.2s,baz=20,slow=4.2,SNR=4.4						
ESDC	**Sonseca Array**	**151.67**	**345**		**PKPbc**	**02 56 01.9**	**-0.4**

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*BJI **09** 02:40:13.0±0.0, 18°.50N×121°.20E, h69^{km}, mB4.6/17, mb4.2/24, ML4.5/3, Ms4.1/7, Ms7 3.8/6*

*MAN **09** 02:40:15.0, 18°.68N×120°.98E, h46^{km}, mb4.8, ML3.6, MS3.6*

*NEIC **09** 02:40:15.2±2.9, 18°.573N±0°.006×121°.2E±0°.1, h69^{km}±8^{km}, mb4.6/32, Error ellipse: s-maj=16.2km s-min=1.0km az=90.0*

*IDC **09** 02:40:15.8±2.5, 18°.50N×121°.32E, h79^{km}±24^{km}, mb3.8/12, mb1 4.1/16, mb1mx3.7/51, mbtmp4.3/16, MS3.2/8, Ms1 3.2/8, ms1mx2.9/39, Error ellipse: s-maj=23.7km s-min=11.3km az=82.0*

ISC 09 02:40:13.3±0.4, 18°.51N±0°.04×121°.31E±0°.08, h50^{km}, n97, σ1ˢ36/91, mb4.4/28, MS3.1/6, 3C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIPP	**Brgy, Tapao**	**1.00**	**234**	⇓*e*P	**Pn**	**02 40 32.3**	**+1.2**
SIPP				*e*S	Sn	02 40 51.8	+7.7
SZP	**Santa**	**1.26**	**221**		**Pn**	**02 40 36.9**	**+2.4**
BCP	**Baguio City**	**2.19**	**198**	⇑*i*P	Pn	02 40 51.2	+3.7
BCP				*i* S	**Sn**	**02 41 16.1**	**+2.7**
TWG	**Pinlang**	**4.29**	**357**		**Pn**	**02 41 18.1**	**+1.9**
LQP	**Lukban**	**4.38**	**177**	⇑*e*P	Pn	02 41 22.3	+4.8
TGY	**Tagaytay City**	**4.40**	**185**	P	Pn	02 41 22.1	+4.4
	22nm,0.3s,baz=323,slow=5.1,SNR=1.2						
TPUB	**Ta-pu**	**4.81**	**352**	Pn	**Pn**	**02 41 23.2**	**0.0**
YULB	**Yu-li**	**4.86**	**360**		**Pn**	**02 41 25.0**	**+1.1**
SSLB	**Suanglung**	**5.26**	**356**	Pn	**Pn**	**02 41 30.6**	**+1.1**
NACB	**Ninganchiao**	**5.64**	**3**	Pn	**Pn**	**02 41 35.8**	**+1.1**
YHNB	**Yeheng**	**6.13**	**1**	Pn	**Pn**	**02 41 44.3**	**+2.9**
KNMB	**Chin-men Tao**	**6.52**	**336**	Pn	**Pn**	**02 41 44.7**	**-2.0**
JOW	**Kunigami**	**10.48**	**37**	P	**Pn**	**02 42 42.8**	**+1.9**
	6.6nm,0.3s,baz=7.7,slow=29,SNR=4.5						
JOW	**Kunigami**	**10.48**	**37**		**Pn**	**02 42 42.7**	**+1.7**
DAV	**Davao City (W)**	**12.11**	**159**	LR	LR	02 47 14.1	
	comp=Z,66nm,21.4s,baz=354,slow=35						
NJ2	**Nanjing**	**13.66**	**351**	*e*P	**Pn**	**02 43 25.3**	**+0.9**
NJ2				pmax	pmax		
	comp=Z,16nm,0.5s						
GYA	**Guiyang**	**15.67**	**303**	*e*P	**P**	**02 43 58.0**	**+3.7**
GYA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
JNU	**Nakatsue**	**16.89**	**29**	P	**Pn**	**02 44 07.4**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=207,slow=7.3,SNR=2.3						
JNU				LR	LR	02 50 35.2	
	comp=Z,112nm,18.8s,baz=180,slow=37						
JNU	**Nakatsue**	**16.89**	**29**		**P**	**02 44 08.6**	**+0.9**
JNU				IAmb	IAmb	02 44 12.7	
	comp=Z,62nm,1.1s						
TOLI2	**Tolitoli**	**17.30**	**182**	P	**P**	**02 44 12.1**	**-0.2**
MRSI	**Marisa**	**17.93**	**178**	P	**P**	**02 44 20.9**	**+1.6**
	comp=Z,22nm,0.9s						
MPSI	**Mapaga**	**18.11**	**185**	P	**Pn**	**02 44 20.5**	**-0.9**
	comp=Z,618nmcomp=Z,14nm,0.8s						
SBUM	**Sibu**	**18.28**	**210**	P	**Pn**	**02 44 24.3**	**+0.8**
SBUM				IAmb	IAmb	02 44 25.8	
	comp=Z,34nm,1.1s						
KMI	**Kunming**	**18.45**	**294**	⇑P	**Pn**	**02 44 27.4**	**+1.7**
KMI				pmax	pmax		
	comp=Z,23nm,0.7s						
APSI	**Ampana**	**19.30**	**179**	P	**Pn**	**02 44 35.3**	**-0.4**
	comp=Z,20nm,1.0s						
LUWI	**Luwuk**	**19.48**	**176**	P	**Pn**	**02 44 36.4**	**-1.5**
LUWI				IAmb	IAmb	02 44 43.2	
	comp=Z,44nm,0.7s						
LUWI	**Luwuk**	**19.48**	**176**	P	**Pn**	**02 44 37.2**	**-0.7**
	comp=Z,3µmcomp=Z,64nm,1.2s						
JHS	**Saijyo**	**19.48**	**30**	P	**Pn**	**02 44 39.9**	**+2.1**
KSRS	**Korea Array**	**19.74**	**16**	P	**P**	**02 44 39.5**	**+0.6**
	comp=Z,0.6nm,0.3s,baz=203,slow=12,SNR=15						
KSRS				LR	LR	02 53 36.6	
	comp=Z,61nm,18.4s,baz=90,slow=41						
MTKI	**Muara Teweh, K**	**20.34**	**199**	P	**P**	**02 44 44.8**	**-0.8**
	comp=Z,4µmcomp=Z,37nm,1.1s						
JWT	**Wachi**	**20.86**	**34**	P	Pn	02 44 54.6	+0.5
JWT				IAmb	IAmb	02 44 59.8	
	comp=Z,28nm,1.1s						
SANI	**Sanana**	**20.94**	**167**	P	**P**	**02 44 52.0**	**-0.1**
	comp=Z,20nm,1.2s						
CMAR	**Chiang Mai Arr**	**21.22**	**273**	P	**P**	**02 44 55.6**	**+0.5**
	comp=Z,1.2nm,0.4s,baz=94,slow=9.1,SNR=1.5						
INU	**Inuyama**	**21.80**	**37**	P	**P**	**02 45 03.6**	**+2.5**
INU				IAmb	IAmb	02 45 05.3	
	comp=Z,30nm,0.9s						
JGF	**Kuroka**	**22.17**	**37**	P	**P**	**02 45 07.0**	**+1.8**
JGF				IAmb	IAmb	02 45 16.9	
	comp=Z,39nm,1.2s						
BBKI	**Banjar Baru**	**22.75**	**197**	P	**P**	**02 45 11.5**	**+0.1**
LZH	**Lanzhou**	**23.33**	**322**	*e*P	**P**	**02 45 16.2**	**-1.2**
LZH				pP	pP	02 45 30.8	+1.7
LZH				sP	sP	02 45 41.0	+5.8
LZH				PP	**PnPn**	**02 45 44.5**	**-0.6**
LZH				pmax	pmax		
	comp=Z,19nm,1.3s						
LZH				pmax	pmax		
	comp=Z,72nm,5.4s						
KAPI	**Kappang**	**23.43**	**184**	P	**P**	**02 45 16.4**	**-1.8**
	comp=Z,5.3nm,0.3s,baz=90,slow=20,SNR=1.2						
KAPI				LR	LR	02 54 32.0	
	comp=Z,76nm,21.7s,baz=22,slow=37						
HHC	**Hu-ho-hao-te**	**23.79**	**341**	*e*P	**P**	**02 45 20.7**	**-0.8**
HHC				pmax	pmax		
	comp=Z,11nm,1.2s						
HHC				pmax	pmax		
	comp=Z,160nm,5.3s						
FAKI	**Fak Fak**	**23.86**	**152**	P	**P**	**02 45 23.1**	**+0.8**
FAKI				IAmb	IAmb	02 45 42.3	
	comp=Z,17nm,1.1s						
GTA	**Gaotai**	**27.93**	**323**	P	**P**	**02 46 00.0**	**+0.9**
GTA				pP	sP	02 46 16.5	-1.4
GTA				sP	pP	02 46 25.6	+14
GTA				pmax	pmax		
	comp=Z,2.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,40nm,5.1s						
GTA				LR	LR		
	comp=Z,88nm,12.7s						
GTA				LR	LR		
	comp=Z,100nm,14.5s						
LEM	**Lembang**	**28.57**	**209**	LR	LR	02 58 02.6	
	comp=Z,52nm,19.8s,baz=208,slow=37						
SONM	**Songino Array**	**31.68**	**341**	P	**P**	**02 46 31.4**	**-0.7**
	comp=Z,0.8nm,0.6s,baz=157,slow=10,SNR=6.1						
SONM				LR	LR	02 58 59.2	
	comp=Z,43nm,18.9s,baz=159,slow=35						
SONM	**Songino Array**	**31.68**	**341**	P	**P**	**02 46 32.8**	**+0.6**
KLR	**Kul'dur**	**31.78**	**13**	P	**P**	**02 46 32.1**	**-0.7**
	comp=Z,5.4nm,0.8s,baz=233,slow=8.0,SNR=12						
KLR				LR	LR	02 59 46.1	
	comp=Z,40nm,18.3s,baz=240,slow=37						
MTN	**Manton Dam**	**32.63**	**162**	P	**P**	**02 46 38.8**	**-1.8**
MTN				IAmb	IAmb	02 46 39.6	
	comp=Z,10.0nm,1.1s						
FITZ	**Fitzroy Crossi**	**36.63**	**173**	P	**P**	**02 47 13.8**	**-1.2**
FITZ				IAmb	IAmb	02 47 15.4	
	comp=Z,4.6nm,0.8s						
WMQ	**Urumqi**	**37.84**	**319**	*e*P	**P**	**02 47 25.1**	**-0.2**
PSA00	**Pilbara Seismi**	**39.86**	**182**	P	**P**	**02 47 40.9**	**-1.3**
WB0	**Warramunga Arr**	**40.15**	**161**	P	**P**	**02 47 43.1**	**-1.6**
WB0				IAmb	IAmb	02 47 44.1	
	comp=Z,11nm,1.3s						
WRA	**Warramunga Arr**	**40.30**	**161**	P	**P**	**02 47 44.2**	**-1.7**
	comp=Z,1.7nm,0.4s,baz=334,slow=10,SNR=70						
WRA				PcP	**PcP**	**02 49 49.1**	**+0.2**
	comp=Z,1.0nm,0.8s,baz=343,slow=3.4,SNR=5.2						
WRA	**Warramunga Arr**	**40.30**	**161**	P	**P**	**02 47 44.3**	**-1.6**
WB2	**Warramunga Arr**	**40.30**	**161**	P	**P**	**02 47 44.2**	**-1.7**
WR0	**Warramunga Arr**	**40.37**	**161**	P	**P**	**02 47 44.5**	**-2.0**
WR0				IAmb	IAmb	02 47 45.7	
	comp=Z,5.5nm,0.9s						
ZSN	**Zaisan**	**41.43**	**322**	*e*P	**P**	**02 47 53.8**	**-1.2**
	baz=322						
MK31	**Makanchi Array**	**42.62**	**320**	P	**P**	**02 48 04.9**	**+0.1**
MKAR	**Makanchi Array**	**42.62**	**320**	P	**P**	**02 48 04.3**	**-0.5**
	comp=Z,2.9nm,0.8s,baz=113,slow=9.9,SNR=33						
MAKZ	**Makanchi**	**42.82**	**320**	P	**P**	**02 48 06.5**	**+0.1**
SHLS	**Shalkode**	**42.92**	**314**	*e*P	**P**	**02 48 04.2**	**-3.1**
	baz=314						
H11S3	**WAKE ISLAND Hy**	**42.94**	**83**	T	T	03 33 43.2	
	baz=277						
H11S1	**WAKE ISLAND Hy**	**42.95**	**82**	T	T	03 33 37.5	
	baz=277,slow=74						
H11S2	**WAKE ISLAND Hy**	**42.96**	**83**	T	T	03 33 46.2	
	baz=277,slow=74						

KPKS	Kokpek	43.56	314	eP	P	02 48 11.8	-0.7
	baz=314						
SATY	Saty	43.61	314	eP	P	02 48 11.0	-1.9
	baz=314						
AS31	Alice Springs	43.68	163	P	P	02 48 13.2	-0.4
ASAR	Alice Springs	43.69	163	P	P	02 48 12.9	-0.6
	comp=Z,1.7nm,0.4s,baz=344,slow=7.3,SNR=21						
ASAR				PcP	PcP	02 49 58.5	-1.5
	comp=Z,0.6nm,0.7s,baz=348,slow=3.2,SNR=2.0						
ASAR	Alice Springs	43.69	163	P	P	02 48 12.5	-1.0
PETK	Petropavlovsk-	44.58	31	LR	LR	03 07 34.5	
	comp=Z,18nm,20.3s,baz=324,slow=37						
PETK	Petropavlovsk-	44.58	31	P	P	02 48 20.9	+0.5
MDOK	Medeo	44.58	313	eP	P	02 48 20.4	-0.3
	baz=313						
TNSS	Tian-Shan	44.60	313	eP	P	02 48 20.7	-0.5
	baz=313						
CHKK	Chushkaly	44.85	314	eP	P	02 48 21.2	-1.5
	baz=314						
ZALV	Zalesovo Beam	45.13	330	P	P	02 48 23.6	-1.2
	comp=Z,0.9nm,0.6s,baz=126,slow=7.5,SNR=5.2						
ZALV	Zalesovo Beam	45.13	330	P	P	02 48 24.4	-0.3
KUU	Kurty	45.30	314	eP	P	02 48 25.6	-0.7
	comp=Z,3.9nm,1.4s,baz=314						
NIL	Nilore	45.33	299	P	P	02 48 23.8	-2.9
NIL				IAmb	IAmb	02 48 29.2	
	comp=Z,6.5nm,1.1s						
KURK	Kurchatov	46.61	324	P	P	02 48 36.1	-0.3
KURK				IAmb	IAmb	02 48 36.8	
	comp=Z,7.7nm,0.9s						
MORW	Morawa	47.57	186	P	P	02 48 43.6	-0.5
IUG	Iuzhnay	49.28	310	eP	P	02 48 56.3	-1.1
	baz=310						
FORT	Forrest	49.43	172	P	P	02 48 58.0	-0.4
BRLS	Borolday	49.61	311	eP	P	02 48 58.8	-1.0
	comp=Z,8.4nm,0.7s,baz=311						
NWAO	Narrogin (SRO)	51.30	184	P	P	02 49 11.6	-0.8
BBOO	Buckleboo	52.95	164	P	P	02 49 24.4	-0.3
STKA	Stephens Creek	53.74	159	P	P	02 49 30.1	-0.5
	comp=Z,3.0nm,0.8s,baz=329,slow=12,SNR=6.8						
STKA	Stephens Creek	53.74	159	P	P	02 49 30.2	-0.3
NRIK	Noril'sk	54.90	346	P	P	02 49 38.3	-0.2
	comp=Z,3.3nm,0.5s,baz=135,slow=7.2,SNR=6.6						
NRIK	Noril'sk	54.90	346	P	P	02 49 38.6	0.0
NRIK				IAmb	IAmb	02 49 39.2	
	comp=Z,14nm,1.2s						
ABKAR	Akbulak array	57.57	317	P	P	02 49 56.8	-1.1
RDOG	Red Dog Mine	67.66	23	P	P	02 51 02.4	-2.5
RDOG				IAmb	IAmb	02 51 10.3	
	comp=Z,5.4nm,0.5s						
ILAR	Eielson Array	74.20	26	P	P	02 51 43.4	-1.1
	comp=Z,0.4nm,0.9s,baz=275,slow=5.1,SNR=6.0						
ILAR	Eielson Array	74.20	26	P	P	02 51 43.9	-0.6
BMAR	Burnt Mountain	74.64	24	P	P	02 51 48.5	+1.3
EGAK	Eagle	76.59	26	P	P	02 51 58.5	+0.3
EGAK				IAmb	IAmb	02 52 01.9	
	comp=Z,7.0nm,1.1s						
CTGM	Chitina Glacie	77.51	30	P	P	02 52 05.0	+1.2
INK	Inuvik	78.42	21	P	P	02 52 08.2	-0.2
CLL	Collm	86.64	323	eP	P	02 52 53.0	+1.4
YKA	Yellowknife Ar	88.13	23	P	P	02 52 58.3	-0.2
	comp=Z,1.5nm,0.7s,baz=317,slow=3.9,SNR=28						

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*IDC **09** 02:58:09.3±1.4, 62°.25N×150°.60W, h89^{km}±24^{km}, mb3.1/2, mb1 3.2/5, mb1mx3.0/39, mbtmp3.4/5, Error ellipse: s-maj=34.1km s-min=10.3km az=111.0*

*ANF **09** 02:58:10.7±0.5, 62°.30N×150°.92W, h89^{km}±7^{km}, ML3.4/14, Error ellipse: s-maj=6.6km s-min=2.7km az=78.0*

*NEIC **09** 02:58:10.6±0.8, 62°.32N±0°.02×150°.94W±0°.07, h93^{km}±7^{km}, Error ellipse: s-maj=5.3km s-min=2.6km az=113.0*

*AEIC **09** 02:58:11±0.9, 62°.31N±0°.03×150°.94W±0°.07, h88^{km}±2^{km}, ML3.1, Error ellipse: s-maj=4.8km s-min=4.2km az=143.0*

ISC 09 02:58:09.5±1.1**, 62°.31N**±0°.03×**150°.94W**±0°.03**, h99**^{km}±8^{km}**, n128, σ1^{s}.06**/136**, Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CUT	Chulitna	0.33	73	P	Pn	02 58 24.5	+0.4
	baz=254,SNR=142						
CUT				S	Sn	02 58 34.6	-0.4
	baz=254						
CUT	Chulitna	0.33	73		Pn	02 58 24.5	+0.4
CUT					Sn	02 58 35.0	0.0
SKT	Skwentna	0.43	220		Pn	02 58 25.1	+0.3
SKT					Sn	02 58 35.6	-0.5
PPLA	Purkeypile	0.82	316		Pn	02 58 28.8	+0.6
PPLA					Sn	02 58 41.8	-0.4
SUA	Susitna One	0.86	174		Pn	02 58 29.4	+0.9
HUR	Hurricane	0.90	41		Pn	02 58 29.5	+0.7
STLK	Strandline Lak	0.92	208		Pn	02 58 29.8	+0.8
GHO	Glory Hole Cre	1.09	119		Pn	02 58 32.0	+1.0
GHO					Sn	02 58 47.7	+0.6
PMR	Palmer	1.12	129		Pn	02 58 31.5	+0.4
SPCG	Spurr Capps Gl	1.15	207		Pn	02 58 32.4	+0.8
TRF	Thorofare Moun	1.18	14		Pn	02 58 33.0	+0.9
TRF					Sn	02 58 49.1	+0.1
SPCP	Crater Peak Br	1.20	209		Pn	02 58 33.1	+0.9
SPCP					Sn	02 58 49.9	+0.5
WAT1	Susitna Watana	1.22	64		Pn	02 58 33.2	+0.9
SPCN	Chakachatna No	1.24	209		Pn	02 58 33.6	+1.0
KTH	Kantishna Hill	1.25	0		Pn	02 58 33.8	+1.1
WAT2	Susitna Watana	1.27	58		Pn	02 58 33.9	+0.9
WAT2					Sn	02 58 51.1	+0.4
SML	Sawmill	1.33	111		Pn	02 58 34.5	+0.9
SML					Sn	02 58 53.0	+1.1
RC01	Rabbit Creek A	1.35	154	P	Pn	02 58 34.6	+0.7
	baz=336,SNR=13						
RC01				S	Sn	02 58 52.5	+0.2
	baz=336						
RC01	Rabbit Creek A	1.35	154		Pn	02 58 34.4	+0.5
RC01					Sn	02 58 52.5	+0.2
RND	Reindeer	1.46	40	Pn	Pn	02 58 36.2	+1.0
KNK	Knik Glacier	1.48	126	Pn	Pn	02 58 36.3	+0.9
WAT6	Susitna Watana	1.51	78		Pn	02 58 36.8	+0.8
WAT6					Sn	02 58 56.3	+0.3
CAPN	Captain Cook N	1.55	184	P	Pn	02 58 39.0	+2.7
	baz=3.7						
CAPN	Captain Cook N	1.55	184		Pn	02 58 39.2	+2.9
MCK	McKinley	1.69	32	P	Pn	02 58 39.3	+1.2
	baz=214,SNR=35						
MCK				S	Sn	02 59 00.5	+0.6
	baz=214						
MCK	McKinley	1.69	32		Pn	02 58 39.3	+1.2
CHUM	Lake Minchumin	1.70	339		Pn	02 58 39.0	+0.9
CHUM					Sn	02 58 59.6	-0.2
SCM	Sheep Creek Mo	1.77	104	Pn	Pn	02 58 39.6	+0.5
BPAW	Bear Paw Mtn.	1.79	359	Pn	Pn	02 58 40.1	+0.8
BPAW				Sn	Sn	02 59 01.2	-0.9
DHY	Denali Highway	1.81	63	Pn	Pn	02 58 40.9	+1.2
SLKM	Skilak Lake	1.84	169		Pn	02 58 40.8	+0.7
PWL	Port Wells	1.92	138		Pn	02 58 41.4	+0.4
DFR	Drift River	1.92	207		Pn	02 58 42.0	+1.0
O22K	Cooper Landing	1.93	162	P	Pn	02 58 42.1	+1.1
	baz=343						
O22K				S	Sn	02 59 04.3	-0.8
	baz=343						
O22K	Cooper Landing	1.93	162	Pn	Pn	02 58 42.2	+1.1
BWN	Browne	1.98	19	Pn	Pn	02 58 43.1	+1.4
NCT	North Crescent	2.00	209		Pn	02 58 43.3	+1.2
RSO	Redoubt South	2.05	206	Pn	Pn	02 58 44.1	+1.3
RED	Redoubt Volcan	2.10	206		Pn	02 58 44.4	+1.1
M24K	Tolsona, Glenn	2.24	93	P	Pn	02 58 46.5	+1.3
	baz=277						
M24K	Tolsona, Glenn	2.24	93		Pn	02 58 46.6	+1.4
SEW	Seward	2.33	161		Pn	02 58 46.9	+0.6
TT01	Tatalina	2.42	286		Pn	02 58 48.4	+0.9
TTA	Tatalina	2.43	287		Pn	02 58 48.5	+0.9
NEA2	Nenana	2.44	19	P	Pn	02 58 48.4	+0.7
	baz=201,SNR=19						
NEA2	Nenana	2.44	19		Pn	02 58 48.4	+0.7
KLU	Klutina	2.51	107	Pn	Pn	02 58 48.9	+0.2
IVE	Iliamna Volcan	2.51	205		Pn	02 58 49.7	+0.9
WRH	Wood River Hil	2.52	29	Pn	Pn	02 58 49.5	+0.8
BRLK	Bradley Lake	2.56	179	Pn	Pn	02 58 50.7	+1.4
PS11	TAPS Pump St11	2.57	93		Pn	02 58 51.0	+1.5
BRSE	Bradley Lake S	2.58	178		Pn	02 58 50.2	+0.6
PAX	Paxson	2.61	73		Pn	02 58 51.6	+1.5
DIV	Divide	2.73	113		Pn	02 58 51.6	0.0
MLY	Manley	2.73	2	P	Pn	02 58 52.8	+1.2
	baz=182						
MLY	Manley	2.73	2		Pn	02 58 52.5	+0.9
CCB	Clear Creek Bu	2.73	30		Pn	02 58 52.3	+0.8
HDA	Harding Lake	2.77	39	P	Pn	02 58 53.0	+1.0
	baz=222,SNR=62						
HDA	Harding Lake	2.77	39		Pn	02 58 53.0	+1.0
CNPM	China Poot	2.80	183	Pn	Pn	02 58 54.5	+2.0
HIN	Hinchinbrook I	2.87	130		Pn	02 58 54.0	+0.5
PS08	TAPS Pump Stn8	2.91	38		Pn	02 58 54.8	+0.9
TCOL	CIGO, UAF Yank	2.92	27	P	Pn	02 58 54.9	+0.9
	baz=210,SNR=18						
TCOL	CIGO, UAF Yank	2.92	27	Pn	Pn	02 58 55.0	+1.0
COLA	College	2.92	27		Pn	02 58 55.1	+1.1
MDM	Murphy Dome	2.92	23	Pn	Pn	02 58 55.0	+1.0
I23K	Minto, Yukon-K	2.93	13	P	Pn	02 58 55.1	+1.0
	baz=195,SNR=20						
I23K	Minto, Yukon-K	2.93	13		Pn	02 58 55.2	+1.0
EYAK	Cordova Ski Ar	3.06	123		Pn	02 58 56.3	+0.4
IL31		3.06	35		Pn	02 58 56.8	+0.8
ILAR	Eielson Array	3.06	35	P	Pn	02 58 56.8	+0.8
	4.8nm,0.3s,baz=221,slow=14,SNR=180						
ILAR				S	Sn	02 59 30.4	-1.4
	6.5nm,0.3s,baz=215,slow=28,SNR=3.5						
ILAR	Eielson Array	3.06	35	Pn	Pn	02 58 56.4	+0.4
N25K	Chitina, Valde	3.08	101	P	Pn	02 58 56.8	+0.6
	baz=286						
N25K	Chitina, Valde	3.08	101	Pn	Pn	02 58 56.9	+0.6
RIDG	Independent Ri	3.12	60	Pn	Pn	02 58 59.0	+2.1
AUCH	Augustine Cone	3.20	204		Pn	02 58 59.8	+1.9
POKR	Poker Plat Res	3.22	27	P	Pn	02 58 59.0	+0.9
	baz=210,SNR=5.2						
POKR	Poker Plat Res	3.22	27	Pn	Pn	02 58 59.2	+1.1
BMRM	Bremner River	3.31	111		Pn	02 58 59.2	-0.1
DOT	Dot Lake	3.41	64		Pn	02 59 01.5	+0.8
GLB	Gilahina Butte	3.49	101	Pn	Pn	02 59 02.2	+0.5
SCRK	Sand Creek	3.57	59	P	Pn	02 59 04.0	+1.2
	baz=245,SNR=16						
SCRK	Sand Creek	3.57	59		Pn	02 59 04.1	+1.2
RAGM	Ragged Mountai	3.58	120	Pn	Pn	02 59 03.7	+0.8
VRDI	Verde Repeater	3.72	104	Pn	Pn	02 59 05.4	+0.4
MCARA	McCarthy VSAT	3.86	100	Pn	Pn	02 59 07.7	+1.0
IM03		3.89	343		Pn	02 59 08.4	+1.4
IMAR	Indian Mountai	3.89	343	Pn	Pn	02 59 08.5	+1.5
KAIM	Kayak Island	3.96	124	Pn	Pn	02 59 10.2	+2.1
PRP	Porcupine Dome	4.01	34	Pn	Pn	02 59 13.0	+4.2
CRQM	Cirque	4.05	109	Pn	Pn	02 59 10.7	+1.3
PTPK	Patty Peak	4.18	102		Pn	02 59 11.8	+0.6
TGL	Tana Glacier	4.18	108	Pn	Pn	02 59 11.8	+0.7
BC03		4.29	76		Pn	02 59 13.3	+1.0
BCAR	Beaver Creek A	4.29	76	Pn	Pn	02 59 12.8	+0.3
BALM	Baldy	4.29	104	Pn	Pn	02 59 12.9	+0.3
KIAG	Kiagna River	4.33	105		Pn	02 59 13.2	0.0
KULT	Kultieth River	4.47	114		Pn	02 59 15.3	+0.3
BARN	Barnard Glacie	4.59	102	Pn	Pn	02 59 17.7	+1.0
KABU	Katmai Buttres	4.59	210		Pn	02 59 18.4	+1.7
KDAK	Kodiak Island	4.62	191	P	Pn	02 59 17.0	+0.1
	3.7nm,0.3s,baz=22,slow=13,SNR=168						
KDAK				S	Sn	03 00 08.2	-1.2
	3.1nm,0.3s,baz=146,slow=23,SNR=10						
KDAK	Kodiak Island	4.62	191	Pn	Pn	02 59 17.2	+0.3
GRNC	Granite Creek	4.67	106		Pn	02 59 18.1	+0.2
CTGM	Chitina Glacie	4.78	102	Pn	Pn	02 59 20.3	+1.1
YUK2	White River	4.78	92		Pn	02 59 20.1	+0.9
MESA	MESA	4.84	112	Pn	Pn	02 59 21.1	+1.0
FYU	Fort Yukon	4.93	28	Pn	Pn	02 59 22.8	+1.7
COLD	Coldfoot	4.95	3	P	Pn	02 59 22.7	+1.5
	baz=184,SNR=14						
COLD	Coldfoot	4.95	3		Pn	02 59 22.8	+1.5
YUK3	Moose Creek	4.96	92		Pn	02 59 22.6	+0.8
EGAK	Eagle	5.02	56	Pn	Pn	02 59 23.4	+1.1
TABL	Table Mountain	5.07	107	Pn	Pn	02 59 23.8	+0.5
OHAK	Old Harbor	5.24	194	Pn	Pn	02 59 25.5	+0.1
BM03	Burnt Mountain	5.79	25		Pn	02 59 33.9	+1.0
BMAR	Burnt Mountain	5.80	25	Pn	Pn	02 59 34.1	+1.1
SII	Sitkinak Islan	6.00	197	Pn	Pn	02 59 35.5	-0.2
TOLK	Toolik Lake Re	6.38	5	P	Pn	02 59 43.7	+2.9
	baz=186						
TOLK	Toolik Lake Re	6.38	5	Pn	Pn	02 59 44.4	+3.5
HYT	Haines Junctio	6.59	97	Pn	Pn	02 59 44.8	+1.1
ANM	Nome	6.86	296	Pn	Pn	02 59 50.2	+3.0
EPYK	Eagle Plains	7.38	50	P	Pn	02 59 55.8	+1.3
	baz=243						
EPYK	Eagle Plains	7.38	50	Pn	Pn	02 59 56.5	+2.1
WHY	Whitehorse	7.86	95	Pn	Pn	03 00 01.5	+0.5
INK	Inuvik	9.42	43	Pn	Pn	03 00 23.9	+2.0
C36M	Paulatuk	12.96	46	Pn	Pn	03 01 07.8	-1.8
YKA	Yellowknife Ar	16.70	73	P	Pn	03 01 55.5	-1.5
	baz=282,slow=9.2,SNR=1.7						
SONM	Songino Array	54.24	306	P	P	03 07 28.3	+3.6
	0.4nm,0.6s,baz=48,slow=6.4,SNR=3.4						
MKAR	Makanchi Array	63.23	322	P	P	03 08 27.7	+0.8
	0.2nm,0.4s,baz=38,slow=6.5,SNR=5.4						

IDC 09 03:09:04.1±3.6**, 14°.44S**×**167°.35E, h0**^{km}**, mb3.6**/4**, mb1 3.8**/4**, mb1mx3.6**/27**, mbtmp3.6**/4**, Error ellipse: s-maj=171.2km s-min=33.4km az=143.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	31.98	255	P	P	03 15 33.8	+1.5
	0.6nm,1.1s,baz=87,slow=9.6,SNR=1.5						
ASAR	Alice Springs	32.85	249	P	P	03 15 38.8	-1.2
	0.5nm,0.9s,baz=84,slow=9.5,SNR=4.2						
ILAR	Eielson Array	86.22	18	P	P	03 21 47.2	0.0
	0.5nm,0.6s,baz=238,slow=5.2,SNR=8.7						
MKAR	Makanchi Array	97.05	316	P	P	03 22 36.8	-1.3
	0.2nm,0.7s,baz=104,slow=6.1,SNR=1.8						
ARCES	ARCESS Array B	119.99	345	PKP	PKiKP	03 27 56.6	+0.3
	5.5nm,1.0s,baz=33,slow=0.8,SNR=5.6						

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*KNET **09** 03:35:22.6±0.3, 42°.38N×74°.84E, h14^{km}±5^{km}, ml2.6, Error ellipse: s-maj=3.5km s-min=2.2km az=141.0*

*KRNET **09** 03:35:23.6±0.1, 42°.40N×74°.82E, h14^{km}, mb3.4*

*NNC **09** 03:35:24.7±0.5, 42°.47N×74°.82E, h0^{km}, mb3.8, mpv3.6, Error ellipse: s-maj=4.7km s-min=1.1km az=2.0*

*SOME **09** 03:35:24.3, 42°.42N×74°.78E, h20^{km}*

ISC 09 03:35:24.0±1.0**, 42°.40N**±0°.02×**74°.81E**±0°.01**, h6**^{km}±9^{km}**, n84, σ1^{s}.11**/154**, 44C-13D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UCH	Uchtor	0.28	233	⇑iP	Pg	03 35 29.6	+0.1
	baz=34						
UCH				⇑iS	Sg	03 35 33.4	+0.2
	baz=34						
UCH	Uchtor	0.28	233	P	Pg	03 35 29.6	+0.1
	59nm,0.1s,SNR=461						
UCH				⇓S	Sg	03 35 33.4	+0.2
	969nm,0.2s						
KBK	Karagaybulak	0.28	22	⇑iP	Pg	03 35 29.6	+0.1
	baz=20						
KBK				⇑iS	Sg	03 35 33.3	0.0
	baz=20						
KBK	Karagaybulak	0.28	22	P	Pg	03 35 29.7	+0.1
	264nm,0.1s,SNR=715						
KBK				⇑S	Sg	03 35 33.7	+0.4
	986nm,0.1s						
AAK	Ala-Archa	0.34	316	⇑iP	Pg	03 35 30.6	0.0
	baz=15						
AAK				⇑iS	Sg	03 35 35.1	+0.1
	baz=15						
AAK	Ala-Archa	0.34	316	P	Pg	03 35 30.6	0.0
	324nm,0.2s,SNR=764						
AAK				⇑S	Sg	03 35 35.1	+0.1
	514nm,0.2s						
AAK	Ala-Archa	0.34	316	⇑P	Pg	03 35 30.5	0.0
	89nm,0.2s						
AAK				⇓S	Sg	03 35 34.8	-0.2
	238nm,0.3s						
FRU1	Bishkek	0.43	342	⇑iP	Pg	03 35 32.2	-0.2
	baz=41						
FRU1				⇑iS	Sg	03 35 38.8	+0.7
	baz=41						
CHMS	Chumysh	0.60	356	⇑iP	Pg	03 35 35.4	-0.2
	baz=55						
CHMS				⇑iS	Sg	03 35 43.6	+0.1
	baz=55						
CHMS	Chumysh	0.60	356	⇓P	Pg	03 35 35.5	-0.2
	47nm,0.1s,SNR=122						
CHMS				⇑S	Sg	03 35 43.6	+0.1
	352nm,0.1s						
ARLS	Aral	0.64	214	⇑iP	Pg	03 35 36.1	-0.3
	baz=14						
ARLS				⇑iS	Sg	03 35 44.7	-0.1
	baz=14						
TKM2	Tokmak 2	0.78	48	⇑iP	Pg	03 35 38.5	-0.5
	baz=47						
TKM2				⇑iS	Sg	03 35 48.8	-0.4
	baz=47						
TKM2	Tokmak 2	0.78	48	⇓P	Pg	03 35 38.5	-0.5
	26nm,0.1s,SNR=161						
TKM2				⇑S	Sg	03 35 48.7	-0.6
	299nm,0.2s						
TKM2	Tokmak 2	0.78	48	⇓P	Pg	03 35 38.4	-0.7
	5.4nm,0.3s						
TKM2				⇑S	Sg	03 35 48.5	-0.7
	83nm,0.3s						
EKS2	Erkin-Say	0.81	290	⇑iP	Pg	03 35 39.4	-0.1
	baz=89						
EKS2				⇑iS	Sg	03 35 50.9	+0.9
	baz=89						
EKS2	Erkin-Say	0.81	290	P	Pg	03 35 39.3	-0.1
	264nm,0.2s,SNR=951						
EKS2				⇓S	Sb	03 35 51.4	-0.3
	78nm,0.2s						
AML	Almayashu	0.87	253	⇑iP	Pg	03 35 40.4	-0.3
	baz=53						
AML				⇑iS	Sg	03 35 52.5	+0.6
	baz=53						
AML	Almayashu	0.87	253	⇑P	Pg	03 35 40.4	-0.3
	26nm,0.1s,SNR=126						
AML				⇓S	Sg	03 35 52.2	+0.2
	182nm,0.4s						
SGDS	Sogindy	1.06	353	P	Pb	03 35 43.9	-0.9
	25nm,0.1s						
SGDS				S	Sb	03 35 57.6	-1.4
	72nm,0.2s						
KST	Kastek	1.07	52	eP	Pb	03 35 43.9	-1.1
	baz=52						
KST				eS	Sb	03 35 58.1	-1.2
	baz=52						
KST	Kastek	1.07	52	eP	Pb	03 35 43.9	-1.1
	20nm,0.1s						
KST				eS	Sb	03 35 58.0	-1.2
	75nm,0.3s						
KST	Kastek	1.07	52	P	Pb	03 35 43.9	-1.1
	20nm,0.1s						
KST				S	Sb	03 35 58.0	-1.2
	75nm,0.3s						
ULHL	Ulahol	1.07	98	⇑iP	Pb	03 35 43.3	-1.7
	baz=98						
ULHL				⇑iS	Sb	03 35 58.0	-1.4
	baz=98						
ULHL	Ulahol	1.07	98	⇑P	Pb	03 35 43.3	-1.7
	18nm,0.1s,SNR=34						
ULHL				⇑S	Sb	03 35 58.0	-1.4
	42nm,0.1s						
DGS	Degeres	1.10	40	eP	Pb	03 35 44.6	-1.0
	baz=39						
DGS				eS	Sg	03 35 59.2	-0.3
	baz=39						
DGS	Degeres	1.10	40	eP	Pb	03 35 44.6	-1.0
	7.7nm,0.1s						
DGS				eS	Sg	03 35 59.1	-0.3
	69nm,0.2s						
DGS	Degeres	1.10	40	P	Pb	03 35 44.6	-1.0
	7.7nm,0.1s						
DGS				S	Sg	03 35 59.1	-0.3
	69nm,0.2s						
MRKS	Merke	1.22	287	eP	Pn	03 35 46.7	-1.0
	baz=87						
MRKS				eS	Sb	03 36 03.0	-0.6
	baz=87						
MRKS	Merke	1.22	287	eP	Pn	03 35 46.7	-1.0
	40nm,0.1s						
MRKS				eS	Sb	03 36 02.9	-0.6
	71nm,0.1s						
MRKS	Merke	1.22	287	P	Pn	03 35 46.7	-1.0
	40nm,0.1s						
MRKS				S	Sb	03 36 02.9	-0.6
	71nm,0.1s						
MTBS	Maitube	1.40	58	eP	Pb	03 35 49.7	-0.9
	baz=58						
MTBS				eS	Sg	03 36 08.2	-0.8
	baz=58						
MTBS	Maitube	1.40	58	eP	Pb	03 35 49.7	-0.9
	16nm,0.2s						
MTBS				eS	Sg	03 36 08.2	-0.8
	126nm,0.2s						
MTBS	Maitube	1.40	58	P	Pb	03 35 49.7	-0.9
	16nm,0.2s						
MTBS				S	Sg	03 36 08.2	-0.8
	126nm,0.2s						
KRBS	Karabastau	1.45	26	eP	Pb	03 35 50.9	-0.5
	baz=25						
KRBS				eS	Sg	03 36 09.6	-0.9
	baz=25						
KRBS	Karabastau	1.45	26	eP	Pb	03 35 50.9	-0.5
	10nm,0.1s						
KRBS				eS	Sg	03 36 09.6	-0.9
	153nm,0.3s						
KRBS	Karabastau	1.45	26	P	Pb	03 35 50.9	-0.5
	10nm,0.1s						
KRBS				S	Sg	03 36 09.6	-0.9
	153nm,0.3s						
IZV	Izvestkoviy	1.48	64	eP	Pb	03 35 51.6	-0.3
	baz=64						
IZV				eS	Sg	03 36 10.8	-0.6
	baz=64						
IZV	Izvestkoviy	1.48	64	eP	Pb	03 35 51.6	-0.3
	21nm,0.1s						
IZV				eS	Sg	03 36 10.8	-0.6
	69nm,0.2s						
IZV	Izvestkoviy	1.48	64	P	Pb	03 35 51.6	-0.3
	21nm,0.1s						
IZV				S	Sg	03 36 10.8	-0.6
	69nm,0.2s						
TNSS	Tian-Shan	1.70	67	eP	Pb	03 35 55.7	-0.2
	baz=67						
TNSS				eS	Sg	03 36 18.2	-0.5
	baz=67						
TNSS	Tian-Shan	1.70	67	eP	Pb	03 35 55.7	-0.2
	25nm,0.2s						
TNSS				eS	Sg	03 36 18.2	-0.5
	29nm,0.2s						
TNSS	Tian-Shan	1.70	67	P	Pb	03 35 55.7	-0.2
	25nm,0.2s						
TNSS				S	Sg	03 36 18.2	-0.5
	29nm,0.2s						
MNAS	Manas	1.71	274	⇑iP	Pb	03 35 54.9	-0.9
	baz=74						
MNAS				⇑iS	Sg	03 36 18.6	-0.2
	baz=74						
ARSB	Arslanbob	1.73	232	⇑iP	Pb	03 35 56.0	-0.3
	baz=33						
ARSB				⇑iS	Sb	03 36 19.3	+1.0
	baz=33						
KDJ	Kajisay	1.78	98	⇓iP	Pb	03 35 56.5	-0.6
	baz=98						
KDJ				⇓iS	Sg	03 36 20.1	-1.1
	baz=98						
KNDC	Almaty	1.79	62	⇑P	Pb	03 35 57.1	0.0
	27nm,0.4s						
KNDC				⇑S	Sg	03 36 21.6	+0.2
	86nm,0.3s						
MDOK	Medeo	1.82	64	eP	Pb	03 35 57.9	+0.2
	baz=64						
MDOK				eS	Sg	03 36 21.8	-0.6
	baz=64						
MDOK	Medeo	1.82	64	eP	Pb	03 35 57.9	+0.2
	13nm,0.3s						
MDOK				eS	Sg	03 36 21.8	-0.6
	71nm,0.4s						
MDOK	Medeo	1.82	64	P	Pb	03 35 57.1	-0.6
	15nm,0.5s						
MDOK				S	Sg	03 36 21.6	-0.8
	39nm,0.4s						
MDOK	Medeo	1.82	64	Pg	Pb	03 35 57.9	+0.2
	13nm,0.3s						
MDOK				Lg	Lg	03 36 21.8	
	71nm,0.4s						
KUU	Kurty	1.87	36	eP	Pb	03 35 58.2	-0.3
	baz=36						
KUU				eS	Sg	03 36 22.3	-1.8
	baz=36						
KUU	Kurty	1.87	36	eP	Pb	03 35 58.2	-0.3
	38nm,0.3s						
KUU				eS	Sg	03 36 22.3	-1.8
	124nm,0.3s						
KUU	Kurty	1.87	36	P	Pb	03 35 58.2	-0.3
	38nm,0.3s						

KUU	124nm,0.3s			S	**Sg**	**03 36 22.3**	**-1.8**
KOTS	**Kotyrbulak** 32nm,0.3s	**1.89**	**63**	*e*P	**Pb**	**03 35 59.2**	**+0.2**
KOTS	126nm,0.5s			*e*S	**Sg**	**03 36 23.9**	**-0.9**
KOTS	**Kotyrbulak** 32nm,0.3s	**1.89**	**63**	P	**Pb**	**03 35 59.2**	**+0.2**
KOTS	541nm,0.6s			S	**Sg**	**03 36 23.9**	**-0.9**
KTBS	**Karatobe** baz=45	**1.90**	**46**	*e*P	**Pb**	**03 35 59.0**	**-0.1**
KTBS	baz=45			*e*S	**Sg**	**03 36 23.6**	**-1.5**
KTBS	**Karatobe** 13nm,0.3s	**1.90**	**46**	*e*P	**Pb**	**03 35 59.0**	**-0.1**
KTBS	156nm,0.3s			*e*S	**Sg**	**03 36 23.6**	**-1.5**
KTBS	**Karatobe** 13nm,0.3s	**1.90**	**46**	P	**Pb**	**03 35 59.0**	**-0.1**
KTBS	156nm,0.3s			S	**Sg**	**03 36 23.6**	**-1.5**
ANVS	**Anan'yevo** baz=79	**2.15**	**79**	⇑*i*P	**Pb**	**03 36 01.5**	**-1.8**
ANVS	baz=79			⇑*i*S	**Sb**	**03 36 29.1**	**-1.2**
CHKK	**Chushkaly** 7.8nm,0.2s	**2.16**	**47**	*e*P	**Pb**	**03 36 03.6**	**+0.1**
CHKK	151nm,0.2s			*e*S	**Sg**	**03 36 31.6**	**-1.8**
CHKK	**Chushkaly** 7.8nm,0.2s	**2.16**	**47**	Pg	**Pb**	**03 36 03.6**	**+0.1**
CHKK	151nm,0.2s			Lg	Lg	03 36 31.6	
OHH	**Osh** baz=20	**2.41**	**220**	⇑*i*P	**Pn**	**03 36 05.3**	**+1.3**
OHH	baz=20			⇑*i*S	**Sb**	**03 36 35.9**	**-1.8**
KURS	**Kuram** 15nm,0.7s	**2.70**	**65**	*e*P	**Pb**	**03 36 12.9**	**+0.2**
KURS	23nm,0.4s			*e*S	**Sb**	**03 36 47.5**	**+1.4**
KURS	**Kuram** 15nm,0.7s	**2.70**	**65**	Pg	**Pb**	**03 36 12.9**	**+0.2**
KURS	23nm,0.4s			Lg	Lg	03 36 47.5	
BTLS	**Baital** 5.0nm,0.2s	**2.70**	**348**	*e*P	**Pb**	**03 36 13.0**	**+0.3**
BTLS	23nm,0.3s			*e*S	**Sb**	**03 36 47.5**	**+1.4**
BTLS	**Baital** 5.0nm,0.2s	**2.70**	**348**	Pg	**Pb**	**03 36 13.0**	**+0.3**
BTLS	23nm,0.3s			Lg	Lg	03 36 47.5	
SATY	**Saty** 21nm,0.3s	**2.73**	**75**	*e*P	**Pb**	**03 36 13.8**	**+0.6**
SATY	64nm,0.5s			*e*S	**Sg**	**03 36 49.0**	**-2.7**
SATY	**Saty** 21nm,0.3s	**2.73**	**75**	Pg	**Pb**	**03 36 13.8**	**+0.6**
SATY	64nm,0.5s			Lg	Lg	03 36 49.0	
ARXS	**Arharly** 6.6nm,0.3s	**2.86**	**49**	*e*P	**Pb**	**03 36 15.6**	**+0.2**
ARXS	50nm,0.4s			*e*S	**Sb**	**03 36 52.2**	**+1.7**
ARXS	**Arharly** 6.6nm,0.3s	**2.86**	**49**	Pg	**Pb**	**03 36 15.6**	**+0.2**
ARXS	50nm,0.4s			Lg	Lg	03 36 52.2	
KPKS	**Kokpek** 37nm,0.3s	**3.04**	**68**	*e*P	**Pb**	**03 36 19.0**	**+0.5**
KPKS	104nm,0.3s			*e*S	**Sb**	**03 36 58.0**	**+2.1**
MNBS	**Baschi** 5.0nm,0.4s	**3.12**	**56**	*e*P	**Pb**	**03 36 20.5**	**+0.6**
MNBS	68nm,0.2s			*e*S	**Sg**	**03 37 00.5**	**-3.6**
MNBS	**Baschi** 5.0nm,0.4s	**3.12**	**56**	Pg	**Pb**	**03 36 20.5**	**+0.6**
MNBS	68nm,0.2s			Lg	Lg	03 37 00.5	
UZB	**Uzynbulak** 14nm,0.5s	**3.19**	**75**	*e*P	**Pb**	**03 36 20.7**	**-0.4**
UZB	40nm,0.5s			*e*S	**Sb**	**03 37 01.1**	**+0.8**
UZB	**Uzynbulak** 14nm,0.5s	**3.19**	**75**	Pg	**Pb**	**03 36 20.7**	**-0.4**
UZB	40nm,0.5s			Lg	Lg	03 37 01.1	
KK31	**Karatay Array** 1.2nm,0.3s,baz=99,slow=13,SNR=65	**3.24**	**284**	⇓Pg	**Pb**	**03 36 21.6**	**-0.3**
KK31	6.3nm,0.6s,baz=97,slow=30,SNR=7.9			⇑Lg	Lg	03 37 04.3	
SHLS	**Shalkode** 6.5nm,0.2s	**3.51**	**76**	*e*P	**Pg**	**03 36 33.7**	**+2.5**
SHLS	22nm,0.4s			*e*S	**Sg**	**03 37 23.1**	**+6.4**
SHLS	**Shalkode** 6.5nm,0.2s	**3.51**	**76**	Pg	**Pg**	**03 36 33.7**	**+2.5**
SHLS	22nm,0.4s			Lg	Lg	03 37 23.1	
PDGK	**Podgornoye** 1.5nm,0.4s	**3.57**	**73**	Pg	**Pb**	**03 36 28.6**	**+1.1**
PDGK	6.2nm,0.4s			Lg	Lg	03 37 14.3	
PDGK	**Podgornoye** 4.5nm,0.5s	**3.57**	**73**	⇑Pg	**Pb**	**03 36 26.8**	**-0.7**
PDGK	8.7nm,0.6s			⇑Lg	Lg	03 37 13.7	
DJR	**Jarkent** 1.9nm,0.4s	**4.12**	**60**	*e*P	**Pb**	**03 36 37.4**	**+0.6**
DJR	13nm,0.5s			*e*S	**Sb**	**03 37 29.7**	**+2.8**
DJR	**Jarkent** 1.9nm,0.4s	**4.12**	**60**	Pg	**Pb**	**03 36 37.4**	**+0.6**
DJR	13nm,0.5s			Lg	Lg	03 37 29.7	
MAKZ	**Makanchi** 1.0nm,0.7s	**6.75**	**47**	⇓Pn	**Pn**	**03 37 03.3**	**-0.3**
MAKZ	1.1nm,0.7s			⇓Lg	Lg	03 38 53.2	
MK31	**Makanchi Array** 0.3nm,0.4s,baz=227,slow=14,SNR=9.6	**6.92**	**48**	⇑Pn	**Pn**	**03 37 08.5**	**+2.7**
MK31	0.7nm,0.6s,baz=228,slow=21,SNR=7.5			⇑Sn	**Sn**	**03 38 25.3**	**+0.5**
MK31	0.8nm,0.6s			⇓Lg	Lg	03 39 00.5	

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*IDC **09** 04:16:58.4±1.1, 57°.82N×32°.34W, h0^{km}, mb3.6/8, mb1 3.8/8, mb1mx3.6/43, mbtmp3.6/8, MS3.0/3, Ms1 3.0/3, ms1mx2.5/51, Error ellipse: s-maj=36.0km s-min=21.0km az=12.0*

ISC 09 04:17:01.1±1.0**, 57°.8N**±0°.2×**32°.4W**±0°.1**, h18^{km}, n11, σ0ˢ.57**/8**, mb3.7**/8**, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FRB	**Frobisher Bay** comp=Z,55nm,19.6s,baz=228,slow=33	**18.44**	**304**	LR	LR	04 27 04.4	
NOA	**NORSAR Array B** comp=Z,18nm,20.6s,baz=0.0,slow=32	**22.08**	**63**	LR	LR	04 28 33.4	
RES	**Resolute Bay** comp=Z,58nm,20.7s,baz=258,slow=34	**28.37**	**330**	LR	LR	04 32 52.5	
AKASG	**Malin Array Be** 1.7nm,0.9s,baz=304,slow=9.0,SNR=4.6	**35.52**	**74**	P	**P**	**04 23 55.8**	**-0.7**
YKA	**Yellowknife Ar** 0.6nm,0.8s,baz=60,slow=9.8,SNR=6.3	**38.59**	**312**	P	**P**	**04 24 21.8**	**-0.7**
ILAR	**Eielson Array** 0.6nm,0.9s,baz=33,slow=6.5,SNR=6.7	**48.09**	**328**	P	**P**	**04 25 39.7**	**+0.6**
PDAR	**Pinedale Array** 0.6nm,0.8s,baz=64,slow=6.8,SNR=5.2	**48.80**	**287**	P	**P**	**04 25 44.9**	**-0.2**
TORD	**Torodi Ar. Bea** 1.0nm,0.8s,baz=342,slow=8.2,SNR=4.3	**51.47**	**136**	P	**P**	**04 26 05.5**	**+0.2**
TXAR	**Lajitas Array** 0.4nm,1.0s,baz=46,slow=6.5,SNR=2.1	**55.85**	**272**	P	**P**	**04 26 37.5**	**+0.1**
MKAR	**Makanchi Array** 0.6nm,0.7s,baz=339,slow=6.3,SNR=7.8	**62.58**	**45**	P	**P**	**04 27 23.8**	**+0.1**
SONM	**Songino Array** 0.2nm,0.4s,baz=332,slow=8.1,SNR=4.0	**69.32**	**28**	P	**P**	**04 28 07.6**	**+0.4**

NNC 09 04:40:41.5±2.7**, 37°.86N**×**78°.31E, h31^{km}**±**26^{km}, mb3.7, mpv3.2, 7C-3D, Error ellipse: s-maj=32.1km s-min=17.4km az=88.0, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MDOK	**Medeo** 6.6nm,1.0s	**5.39**	**350**	Pg	Pb	04 42 20.7	+5.7
MDOK	4.0nm,0.5s			Lg	Lg	04 43 33.7	
TKM2	**Tokmak 2** 2.9nm,0.8s	**5.47**	**339**	⇑Pg	Pb	04 42 21.1	+4.8
TKM2	2.7nm,0.7s			⇓Lg	Lg	04 43 37.8	
PDGK	**Podgornoye** 1.5nm,0.6s	**5.54**	**9**	⇓Pn	Pn	04 42 02.6	+0.6
PDGK	7.5nm,0.7s			⇓Lg	Lg	04 43 36.6	
AAK	**Ala-Archa** 2.3nm,1.1s	**5.60**	**330**	⇑Pg	Pb	04 42 21.8	+3.3
AAK	3.8nm,1.1s			⇑Lg	Lg	04 43 40.8	
MAKZ	**Makanchi** 1.2nm,0.4s	**9.35**	**16**	⇑Pn	Pn	04 42 54.4	+0.3
MAKZ	1.1nm,0.9s			⇑Sn	Sn	04 44 38.8	+0.7
MK31	**Makanchi Array** 0.2nm,0.3s,baz=202,slow=12,SNR=21	**9.41**	**17**	⇑Pn	Pn	04 42 54.4	-0.5
MK31	0.5nm,0.5s,baz=205,slow=25,SNR=4.8			⇑Sn	Sn	04 44 39.3	-0.2

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*IDC **09** 04:40:44.9±0.9, 22°.84N×118°.88E, h0^{km}, mb3.6/9, mb1 3.8/10, mb1mx3.6/45, mbtmp3.6/10, ML4.7/1, MS2.9/4, Ms1 3.0/4, ms1mx2.6/42, Error ellipse: s-maj=37.1km s-min=19.2km az=64.0*

*BJI **09** 04:40:47.1±0.0, 22°.57N×118°.46E, h5^{km}, mB4.3/5, mb3.9/10, ML4.3/9, Ms4.1/7, Ms7 3.9/6*

ISC 09 04:40:47.9±0.9**, 22°.74N**±0°.08×**118°.54E**±0°.09**, h17^{km}, n21, σ2ˢ.20**/19**, mb3.6**/10**, 2C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
QZH	**Quanzhou**	**2.20**	**1**	⇑*i*Pn	**Pb**	**04 41 26.8**	**-0.4**
QZH				Sn	**Sb**	**04 41 54.5**	**+0.4**
QZH	comp=N,280nm,0.5s			smax	smax		
QZH	comp=E,690nm,0.6s			smax	smax		
MCO	**Taipa Grande**	**4.65**	**263**	P	**Pn**	**04 41 56.0**	**-1.3**
GZH	**Guangzhou**	**4.80**	**275**	Pn	**Pn**	**04 41 57.4**	**-2.0**
GZH				Sn	**Sn**	**04 42 50.2**	**-4.5**
GZH	comp=N,490nm,0.6s			smax	smax		
GZH	comp=E,630nm,0.7s			smax	smax		
QIZ	**Qiongzhong**	**8.93**	**247**	P	**Pn**	**04 42 55.2**	**-0.9**
QIZ				S	**Sn**	**04 44 37.7**	**+1.4**
QIZ	comp=Z,410nm,3.0s			pmax	pmax		
QIZ	comp=E,280nm,7.5s			LR	LR		
QIZ	comp=Z,260nm,9.6s			LR	LR		
GYA	**Guiyang**	**11.42**	**291**	*e*P	Pn	04 43 43.6	+13
GYA				S	Sn	04 46 08.5	+31
GYA	comp=Z,7.0nm,1.0s			pmax	pmax		
GYA	comp=Z,220nm,6.8s			LR	LR		
KMI	**Kunming**	**14.64**	**282**	⇑P	P	04 44 30.3	+10
KMI	comp=Z,9.0nm,1.3s			pmax	pmax		
JNU	**Nakatsue** comp=Z,51nm,21.5s,baz=347,slow=38	**15.02**	**44**	LR	LR	04 50 09.5	
KSRS	**Korea Array** comp=Z,41nm,18.5s,baz=204,slow=41	**16.75**	**27**	LR	LR	04 51 53.9	
CMAR	**Chiang Mai Arr** comp=Z,0.9nm,0.3s,baz=74,slow=6.7,SNR=1.3	**18.83**	**261**	P	**Pn**	**04 45 09.9**	**+2.4**
CMAR	comp=Z,22nm,19.6s,baz=70,slow=36			LR	LR	04 52 09.4	
GTA	**Gaotai**	**23.02**	**321**	*e*P	**P**	**04 45 55.3**	**+3.1**
GTA				pP	sP	04 45 59.5	+0.2
GTA				sP	pP	04 46 02.3	+5.2
GTA	comp=Z,1.0nm,0.7s			pmax	pmax		
SONM	**Songino Array** comp=Z,0.2nm,0.5s,baz=148,slow=8.5,SNR=1.7	**26.86**	**342**	P	**P**	**04 46 26.6**	**-1.2**
WMQ	**Urumqi**	**32.98**	**317**	*e*P	**P**	**04 47 26.4**	**+4.5**
MKAR	**Makanchi Array** comp=Z,1.0nm,0.7s,baz=110,slow=10.0,SNR=7.8	**37.74**	**318**	P	**P**	**04 48 04.0**	**+1.2**
ZALV	**Zalesovo Beam** comp=Z,0.4nm,0.3s,baz=111,slow=7.9,SNR=2.2	**40.19**	**329**	P	**P**	**04 48 22.0**	**-1.2**
AAK	**Ala-Archa** comp=Z,37nm,21.9s,baz=232,slow=36	**41.49**	**309**	LR	LR	05 05 38.3	
KURBB	**Kurchatov Arra** comp=Z,0.8nm,0.7s,baz=127,slow=7.8,SNR=2.6	**41.70**	**322**	P	**P**	**04 48 37.1**	**+1.4**
WRA	**Warramunga Arr** comp=Z,1.7nm,0.7s,baz=342,slow=8.9,SNR=5.8	**45.14**	**159**	P	**P**	**04 49 03.5**	**-0.3**
ASAR	**Alice Springs** comp=Z,1.3nm,0.9s,baz=339,slow=6.7,SNR=6.6	**48.48**	**161**	P	**P**	**04 49 28.9**	**-1.0**
ILAR	**Eielson Array** comp=Z,0.6nm,1.1s,baz=275,slow=4.4,SNR=2.2	**71.60**	**27**	P	**P**	**04 52 07.7**	**-0.4**
AKASG	**Malin Array Be** comp=Z,0.1nm,0.2s,baz=59,slow=6.3,SNR=1.7	**72.33**	**318**	P	**P**	**04 52 13.6**	**+1.0**
YKA	**Yellowknife Ar** comp=Z,0.2nm,0.8s,baz=325,slow=4.2,SNR=3.4	**85.22**	**22**	P	**P**	**04 53 21.0**	**-2.2**

IDC 09 04:47:24.8±3.8**, 10°.50S**×**161°.88E, h0^{km}, mb3.7**/4**, mb1 3.9**/4**, mb1mx3.6**/31**, mbtmp3.7**/4**, MS3.2**/2**, Ms1 3.2**/2**, ms1mx2.7**/29**, Error ellipse: s-maj=128.2km s-min=42.0km az=136.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr** 0.7nm,0.7s,baz=77,slow=9.0,SNR=3.8	**28.15**	**247**	P	P	04 53 19.2	+0.1
WRA	comp=Z,24nm,18.1s,baz=195,slow=34			LR	LR	05 03 21.2	
STKA	**Stephens Creek** comp=Z,85nm,18.6s,baz=203,slow=37	**28.37**	**218**	LR	LR	05 04 48.0	
H11S2	**WAKE ISLAND Hy** baz=188,slow=76,SNR=4.5	**29.19**	**9**	T	T	05 24 38.8	
H11S3	**WAKE ISLAND Hy** baz=188,slow=76,SNR=4.4	**29.20**	**9**	T	T	05 24 36.4	
H11S1	**WAKE ISLAND Hy** baz=188,slow=76,SNR=3.5	**29.21**	**9**	T	T	05 24 40.6	
H11N1	**WAKE ISLAND Hy** baz=189,slow=76	**30.42**	**9**	T	T	05 26 08.0	
H11N3	**WAKE ISLAND Hy** baz=189	**30.43**	**9**	T	T	05 26 06.8	
H11N2	**WAKE ISLAND Hy** baz=189,slow=76	**30.44**	**9**	T	T	05 26 03.7	
SONM	**Songino Array** 0.6nm,0.8s,baz=131,slow=5.0,SNR=3.7	**76.02**	**325**	P	P	04 59 14.5	+0.3
ILAR	**Eielson Array** 0.4nm,1.0s,baz=230,slow=5.6,SNR=1.8	**84.24**	**20**	P	P	04 59 58.2	+0.2
MKAR	**Makanchi Array** 0.1nm,0.4s,baz=101,slow=4.7,SNR=4.3	**90.54**	**317**	P	P	05 00 28.2	-0.7

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*ATH **09** 04:58:03.1, 39°.33N×20°.46E, h12^{km}±4^{km}, ML2.6/2, Error ellipse: s-maj=4.3km s-min=1.5km az=323.0*

*THE **09** 04:58:05.3, 39°.50N×20°.43E, h2^{km}±2^{km}, ML2.1/8, Error ellipse: s-maj=2.1km s-min=0.9km az=331.0*

ISC 09 04:58:02.6±1.4**, 39°.41N**±0°.04×**20°.34E**±0°.03**, h5^{km}**±11^{km}**, n19, σ0ˢ.85**/30**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KASA	**Kassiopi**	**0.46**	**317**	P	**Pb**	**04 58 13.8**	**+0.6**
KASA				S	**Sb**	**04 58 21.9**	**+1.5**
JAN	**Janina**	**0.46**	**58**	P	**Pg**	**04 58 12.1**	**+0.5**
JAN				S	**Sg**	**04 58 17.5**	**-0.1**
JAN	comp=N,3328µm,0.2s			AML	AML	04 58 18.7	
JAN	comp=E,5228µm,0.3s			AML	AML	04 58 18.8	
JAN	**Janina**	**0.46**	**58**	P	**Pg**	**04 58 12.0**	**+0.5**
JAN	comp=E,2µm,0.2s			S	**Sg**	**04 58 17.5**	**-0.1**
KEK	**Kerkira**	**0.52**	**306**	P	**Pb**	**04 58 15.1**	**+0.8**
KEK				S	**Sn**	**04 58 24.6**	**-1.4**
KEK	comp=N,557µm,0.5s			AML	AML	04 58 31.9	
KEK	comp=E,840µm,0.6s			AML	AML	04 58 36.1	
KEK	**Kerkira**	**0.52**	**306**	P	**Pb**	**04 58 15.3**	**+1.1**
KEK	comp=E,355nm,0.6s			S	**Sb**	**04 58 22.6**	**+0.5**
SRN	**Sarande**	**0.54**	**331**	P	**Pb**	**04 58 14.5**	**-0.1**
SRN	comp=E,202nm,0.5s			S	**Sb**	**04 58 22.9**	**+0.3**
NYDR	**Nydri-Lefkada**	**0.75**	**158**	P	**Pg**	**04 58 15.1**	**-1.8**
LSK	**Leskovik**	**0.76**	**15**	P	**Pg**	**04 58 17.0**	**-0.3**
LSK	comp=E,282nm,0.7s			S	**Sb**	**04 58 28.4**	**-0.8**
KPRO	**Kipourio**	**0.96**	**55**	P	**Pb**	**04 58 21.1**	**-0.7**
NEST	**Nestorio**	**1.14**	**28**	P	**Pg**	**04 58 24.2**	**-0.3**
NEST	**Nestorio**	**1.14**	**28**	P	**Pg**	**04 58 24.4**	**-0.1**
NEST	comp=E,98nm,0.5s			S	**Sg**	**04 58 39.5**	**+0.2**
KBN	**Korca**	**1.26**	**16**	P	**Pg**	**04 58 26.0**	**-0.8**
THL	**Klokotos Trika**	**1.30**	**83**	P	**Pb**	**04 58 27.9**	**+0.3**
THL	comp=E,65nm,0.7s			S	**Sn**	**04 58 46.1**	**+0.9**
KZN	**Kozani**	**1.42**	**50**	P	**Pn**	**04 58 28.8**	**-0.3**
KZN	**Kozani**	**1.42**	**50**	P	**Pn**	**04 58 29.1**	**0.0**
KZN	comp=E,82nm,0.4s			S	**Sn**	**04 58 48.7**	**+0.5**
MAKR	**Makrakomi, Fth**	**1.44**	**105**	P	**Pg**	**04 58 31.9**	**+1.6**
FNA	**Florina**	**1.58**	**30**	P	**Pb**	**04 58 32.3**	**-0.1**
FNA	comp=E,72nm,0.5s			S	**Sn**	**04 58 52.0**	**-0.3**
AGG	**Agios Georgios**	**1.59**	**103**	P	**Pg**	**04 58 34.0**	**+0.9**
GRG	**Griva**	**2.21**	**45**	P	**Pb**	**04 58 41.8**	**-1.2**

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*SOME **09** 05:03:01.5, 39°.68N×75°.07E, h10^{km}*

*KRNET **09** 05:03:01.2±0.1, 39°.55N×74°.88E, mb3.4*

*NNC **09** 05:03:06.9±1.8, 39°.87N×74°.87E, h0^{km}, mb3.7, mpv3.3, Error ellipse: s-maj=14.2km s-min=8.3km az=170.0*

ISC 09 05:03:00.9±1.4**, 39°.64N**±0°.07×**75°.09E**±0°.04**, h10^{km}, n44, σ1ˢ.58**/70**, 35C-9D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	**Sufi-Kurgan** baz=94	**1.28**	**287**	⇓*i*P	**Pn**	**05 03 23.3**	**-1.8**
SFK	baz=94			⇓*i*S	**Sb**	**05 03 39.7**	**-2.2**
OHH	**Osh** baz=2.0	**1.98**	**297**	⇑*i*P	**Pn**	**05 03 36.1**	**+1.5**
OHH	baz=2.0			⇑*i*S	**Sb**	**05 04 02.1**	**+0.3**
ARLS	**Aral** baz=50	**2.29**	**345**	⇑*i*P	**Pg**	**05 03 43.4**	**-1.5**
ARLS	baz=50			⇑*i*S	**Sg**	**05 04 14.1**	**-0.6**
ARSB	**Arslanbob** baz=21	**2.33**	**317**	⇑*i*P	**Pb**	**05 03 42.6**	**-0.5**
ARSB	baz=21			⇑*i*S	**Sb**	**05 04 12.4**	**+0.5**
DRK	**Karamyk** baz=69	**2.55**	**267**	⇓*i*P	**Pn**	**05 03 43.7**	**+1.1**
DRK	baz=69			⇓*i*S	**Sn**	**05 04 14.7**	**+0.8**
UCH	**Uchtor** baz=54	**2.62**	**351**	⇑*i*P	**Pb**	**05 03 49.1**	**+0.8**
UCH	baz=54			⇑*i*S	**Sg**	**05 04 22.9**	**-2.3**
UCH	**Uchtor** SNR=27	**2.62**	**351**	P	**Pb**	**05 03 48.2**	**-0.1**
AML	**Almayashu** baz=41	**2.70**	**337**	⇑*i*P	**Pb**	**05 03 50.1**	**+0.4**
AML	baz=41			⇑*i*S	**Sb**	**05 04 24.6**	**+1.6**
AML	**Almayashu** SNR=42	**2.70**	**337**	P	**Pb**	**05 03 49.4**	**-0.2**
ULHL	**Ulahol** baz=21	**2.74**	**18**	⇑*i*P	**Pg**	**05 03 51.0**	**-2.5**
ULHL	baz=21			⇑*i*S	**Sg**	**05 04 26.4**	**-2.7**
ULHL	**Ulahol** SNR=7.5	**2.74**	**18**	P	**Pg**	**05 03 54.7**	**+1.1**
KDJ	**Kajisay** baz=34	**2.95**	**32**	⇑*e*P	**Pb**	**05 03 53.6**	**-0.1**
KDJ	baz=34			⇑*i*S	**Sg**	**05 04 32.2**	**-3.4**
KBK	**Karagaybulak** baz=1.0	**3.01**	**358**	⇑*i*P	**Pb**	**05 03 54.5**	**-0.3**
KBK	baz=1.0			⇑*i*S	**Sb**	**05 04 32.2**	**+0.4**
AAK	**Ala-Archa** baz=55	**3.03**	**352**	⇑*i*P	**Pb**	**05 03 54.6**	**-0.4**
AAK	baz=55			⇑*i*S	**Sb**	**05 04 32.4**	**+0.3**
AAK	**Ala-Archa** SNR=12	**3.03**	**352**	P	**Pg**	**05 03 59.4**	**+0.5**
AAK	**Ala-Archa** 15nm,0.7s	**3.03**	**352**	⇑Pn	**Pb**	**05 03 54.5**	**-0.5**
AAK	31nm,0.8s			⇑Lg	Lg	05 04 37.4	
EKS2	**Erkin-Say** baz=45	**3.18**	**342**	⇑*i*P	**Pb**	**05 03 56.3**	**-1.3**
EKS2	baz=45			⇑*i*S	**Sb**	**05 04 35.7**	**-0.7**
EKS2	**Erkin-Say** SNR=7.6	**3.18**	**342**	P	**Pb**	**05 03 57.5**	**0.0**
TKM2	**Tokmak 2** baz=9.0	**3.30**	**6**	⇑*i*P	**Pb**	**05 03 58.6**	**-1.1**
TKM2	baz=9.0			⇑*i*S	**Sb**	**05 04 39.4**	**-0.6**
TKM2	**Tokmak 2** SNR=17	**3.30**	**6**	P	**Pb**	**05 03 58.6**	**-1.1**
TKM2	**Tokmak 2** 12nm,0.5s	**3.30**	**6**	⇑Pn	**Pb**	**05 03 57.6**	**-2.1**
TKM2	26nm,0.5s			⇑Lg	Lg	05 04 41.7	
BTK	**Batken** baz=80	**3.32**	**279**	⇑*i*P	**Pn**	**05 03 54.6**	**+1.6**
BTK	baz=80			⇑*i*S	**Sn**	**05 04 33.8**	**+1.3**
CHMS	**Chumysh** baz=58	**3.36**	**356**	⇑*i*P	**Pb**	**05 03 59.1**	**-1.6**
CHMS	baz=58			⇑*i*S	**Sb**	**05 04 40.5**	**-1.2**
MRKS	**Merke** 14nm,0.6s	**3.41**	**336**	*e*P	**Pg**	**05 04 04.1**	**-2.1**
MRKS	11nm,0.6s			*e*S	**Sg**	**05 04 50.0**	**-0.3**
MRKS	**Merke** 14nm,0.6s	**3.41**	**336**	Pg	**Pb**	**05 04 02.1**	**+0.7**
MRKS	9.1nm,0.5s			Lg	Lg	05 04 44.1	
MNAS	**Manas** baz=29	**3.45**	**326**	⇓*e*P	**Pb**	**05 03 58.9**	**-3.3**
MNAS	baz=29			⇓*i*S	**Sb**	**05 04 40.8**	**-3.5**
TRKS	**Terek-Say** baz=5.0	**3.55**	**303**	⇑*i*P	**Pn**	**05 03 58.4**	**+2.1**
TRKS	baz=5.0			⇑*i*S	**Sn**	**05 04 38.3**	**-0.1**
TNSS	**Tian-Shan** 2.8nm,0.4s	**3.67**	**22**	*e*P	**Pg**	**05 04 10.3**	**-1.0**
TNSS	7.6nm,0.7s			*e*S	**Sg**	**05 05 00.5**	**+1.7**
TNSS	**Tian-Shan** 2.8nm,0.4s	**3.67**	**22**	Pg	**Pg**	**05 04 11.8**	**+0.5**
TNSS	7.6nm,0.7s			Lg	Lg	05 05 00.5	
MDOK	**Medeo** 2.5nm,0.3s	**3.81**	**22**	*e*P	**Pg**	**05 04 13.1**	**-0.9**
MDOK	12nm,0.9s			*e*S	**Sg**	**05 05 04.7**	**+1.2**
MDOK	**Medeo** 2.2nm,0.7s	**3.81**	**22**	Pg	**Pg**	**05 04 11.9**	**-2.1**
MDOK	12nm,0.6s			Lg	Lg	05 05 02.3	
MDOK	**Medeo** 2.5nm,0.3s	**3.81**	**22**	Pg	**Pg**	**05 04 14.5**	**+0.5**
MDOK	12nm,0.9s			Lg	Lg	05 05 04.7	
SGDS	**Sogindy** 2.1nm,0.4s	**3.82**	**355**	Pg	**Pb**	**05 04 10.7**	**+2.1**
SGDS	7.0nm,0.6s			Lg	Lg	05 04 58.3	
KRBS	**Karabastau** 3.5nm,0.5s	**4.08**	**6**	*e*P	**Pg**	**05 04 17.7**	**-1.3**
KRBS	5.2nm,0.6s			*e*S	**Sg**	**05 05 13.5**	**+1.7**
KRBS	**Karabastau** 3.5nm,0.5s	**4.08**	**6**	Pg	**Pg**	**05 04 18.5**	**-0.5**
KRBS				Lg	Lg	05 05 11.7	

	5.2nm,0.6s						
KUU	Kurty	4.35	12	eP	Pg	05 04 22.4	-1.8
	2.4nm,0.8s						
KUU				eS	Sg	05 05 20.6	0.0
	17nm,0.7s						
KUU	Kurty	4.35	12	Pg	Pg	05 04 23.0	-1.3
	2.4nm,0.8s						
KUU				Lg	Lg	05 05 19.5	
	17nm,0.7s						
UZB	Uzynbulak	4.58	39	Pg	Pg	05 04 29.7	+0.9
	5.9nm,0.3s						
UZB				Lg	Lg	05 05 30.9	
	5.9nm,0.8s						
KK31	Karatay Array	4.88	317	⇑Pn	Pn	05 04 16.9	+2.4
	0.4nm,0.3s,baz=128,slow=13,SNR=13						
KK31				⇓Pg	Pb	05 04 28.6	+2.1
	2.1nm,0.5s,baz=143,slow=17,SNR=18						
KK31				⇑Sn	Sn	05 05 13.5	+2.5
	2.9nm,0.3s						
KK31				⇑Lg	Lg	05 05 36.5	
	9.0nm,0.8s,baz=134,slow=28,SNR=4.5						
PDGK	Podgornoye	4.95	40	⇓Pg	Pg	05 04 32.4	-3.3
	3.0nm,0.8s						
PDGK				⇓Lg	Lg	05 05 41.6	
	9.2nm,0.8s						
ARXS	Arharly	5.00	23	eP	Pg	05 04 34.9	-1.8
	4.6nm,0.7s						
ARXS				eS	Sg	05 05 41.9	+0.4
	7.1nm,1.2s						
ARXS	Arharly	5.00	23	Pg	Pg	05 04 36.2	-0.5
	4.6nm,0.7s						
ARXS				Lg	Lg	05 05 41.9	
	7.1nm,1.2s						
MNBS	Baschi	5.08	28	eP	Pg	05 04 36.6	-1.6
	1.9nm,0.6s						
MNBS				eS	Sg	05 05 46.0	+2.1
	8.7nm,0.8s						
MNBS	Baschi	5.08	28	Pg	Pg	05 04 38.6	+0.4
	1.9nm,0.6s						
MNBS				Lg	Lg	05 05 46.0	
	8.7nm,0.8s						

IDC 09 05:11:20.5±1.4, 5°.33N×145°.87E, h0^{km}, mb3.6/4, mb1 3.8/4, mb1mx3.6/37, mbtmp3.6/4, MS3.1/3, Ms1 3.1/3, ms1mx2.7/25, Error ellipse: s-maj=75.6km s-min=25.0km az=106.0, Eastern Caroline Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	14.70	175	LR	LR	05 19 12.1	
	comp=Z,69nm,19.0s,baz=96,slow=32						
SIJI	Sorong	15.83	248	LR	LR	05 20 01.0	
	comp=Z,61nm,19.4s,baz=221,slow=33						
HNR	Honiara	20.30	136	LR	LR	05 23 30.0	
	comp=Z,64nm,18.8s,baz=277,slow=36						
WRA	Warramunga Arr	27.56	204	P	P	05 17 10.1	+0.6
	1.1nm,0.6s,baz=30,slow=9.9,SNR=11						
ASAR	Alice Springs	31.10	202	P	P	05 17 40.1	-0.8
	0.4nm,0.8s,baz=38,slow=6.3,SNR=5.3						
MKAR	Makanchi Array	68.19	318	P	P	05 22 22.8	-0.2
	0.2nm,0.4s,baz=111,slow=7.9,SNR=2.2						
ILAR	Eielson Array	75.61	24	P	P	05 23 07.3	+0.1
	0.4nm,0.6s,baz=251,slow=5.6,SNR=8.1						

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*STR **09** 05:18:01.2±0.3, 45°N±1°×°±°, h8^{km}, MLv2.3/7, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/alpes_taup-2.11 preliminary*

*ROM **09** 05:18:01.1±0.2, 44°.65N±0°.01×7°.11E±0°.03, h10^{km}±1^{km}, ML2.0/10, Error ellipse: s-maj=2.1km s-min=0.8km az=243.0*

*GEN **09** 05:18:01.5, 44°.67N×7°.14E, h5^{km}±4^{km}, Ml2.0*

*LDG **09** 05:18:01.8±0.1, 44°.67N×7°.17E, h5^{km}, Md2.5/1, Ml2.5/29, Error ellipse: s-maj=1.7km s-min=1.1km az=73.0*

ISC 09 05:18:01.2±0.9, 44°.68N±0°.01×7°.16E±0°.02, h12^{km}±6^{km}, n72, $\sigma 1^{s}.31$/131, 2C, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PZZ	Stroppo	0.17	191	P	Pg	05 18 05.0	-0.1
PZZ				S	Sg	05 18 07.3	-0.7
PZZ	Stroppo	0.17	191	⇑P	Pg	05 18 05.0	-0.1
PZZ				S	Sg	05 18 07.2	-0.7
PZZ				AML	AML		
	comp=N,11450μm,0.5s						
PZZ				AML	AML		
	comp=E,10535μm,0.7s						
MBDF	Montbardon	0.28	281	ePg	Pg	05 18 07.0	-0.1
MBDF				eSg	Sg	05 18 10.6	-0.4
	comp=E,421nm,0.2s						
STV	Sant Anna di V	0.45	165	P	Pg	05 18 10.1	+0.1
STV				S	Sg	05 18 16.0	+0.1
STV	Sant Anna di V	0.45	165	P	Pg	05 18 10.1	+0.1
STV				S	Sg	05 18 16.1	+0.1
STV				AML	AML		
	comp=E,274μm,0.5s						
STV				AML	AML		
	comp=N,182μm,0.9s						
OGAG	Argentiere	0.50	244	Pg	Pg	05 18 10.4	-0.6
OGAG				Sg	Sg	05 18 16.1	-1.5
ISO	Isola	0.50	189	Pg	Pg	05 18 10.9	-0.1
ISO				Sg	Sg	05 18 17.1	-0.5
BNI	Bardonecchia	0.51	318	P	Pg	05 18 11.4	+0.2
BNI				S	Sg	05 18 17.8	-0.2
BNI				AML	AML		
	comp=E,91μm,0.7s						
BNI				AML	AML		
	comp=N,90μm,1.5s						
BNI				AML	AML		
	comp=N,59μm,1.3s						
BNI				AML	AML		
	comp=E,91μm,0.7s						
BNI				AML	AML		
	comp=E,77μm,1.3s						
OGMO	Fort Saint-Gob	0.63	328	Pg	Pg	05 18 12.6	-0.9
OGMO				Sg	Sg	05 18 21.5	-0.3
GBOS	Grotte di Boss	0.65	132	P	Pg	05 18 14.1	+0.2
GBOS				S	Sg	05 18 22.8	+0.4
GBOS	Grotte di Boss	0.65	132	P	Pg	05 18 14.1	+0.2
GBOS				AML	AML		
	comp=E,101μm,1.3s						
GBOS				AML	AML		
	comp=N,94μm,1.3s						
GBOS				AML	AML		
	comp=N,94μm,1.3s						
GBOS				AML	AML		
	comp=E,101μm,1.3s						
MONC	Moncucco Torin	0.67	54	P	Pb	05 18 15.9	+0.9
MONC				AML	AML		
	comp=E,279μm,0.3s						
MONC				AML	AML		
	comp=N,281μm,1.1s						
MONC				AML	AML		
	comp=N,280μm,1.1s						
MONC				AML	AML		
	comp=E,278μm,0.3s						
TURF	col de Turini	0.72	167	Pg	Pg	05 18 15.2	0.0
TURF				Sg	Sg	05 18 24.7	+0.1
SAOF	Saorge	0.74	158	Pg	Pg	05 18 15.5	-0.1
SAOF				Sg	Sg	05 18 25.4	+0.1
SAOF	Saorge	0.74	158	P	Pg	05 18 15.9	+0.3
SAOF				S	Sg	05 18 25.1	-0.3
LSD	Lago del Serru	0.78	359	P	Pg	05 18 16.8	+0.4
LSD				S	Sg	05 18 26.6	-0.1
LSD	Lago del Serru	0.78	359	⇑P	Pg	05 18 16.8	+0.4
LSD				S	Sg	05 18 26.7	-0.1
LSD				AML	AML		
	comp=N,250μm,0.3s						
LSD				AML	AML		
	comp=E,386μm,0.6s						
LSD				AML	AML		
	comp=N,250μm,0.3s						
MGRO	Montegrosso	0.79	144	P	Pg	05 18 16.3	-0.1
MGRO				S	Sg	05 18 26.8	+0.1
MGRO	Montegrosso	0.79	144	P	Pg	05 18 16.3	-0.1
MGRO				S	Sg	05 18 26.9	+0.2
SBF	Sospel	0.84	166	ePg	Pg	05 18 17.0	-0.4
SBF				eSg	Sg	05 18 27.9	-0.4
	comp=N,36nm,0.2s						
OGDI	Digne	0.84	228	Pg	Pn	05 18 19.0	0.0
ESCA	l'Escarene	0.86	170	Pg	Pg	05 18 17.9	+0.1
ESCA				Sg	Sg	05 18 29.2	+0.2
LPG	La Plagne	0.87	341	ePg	Pg	05 18 18.4	+0.3
LPG				eSg	Sg	05 18 30.5	+1.0
	comp=N,32nm,0.2s						
LPL	La Plagne	0.89	340	ePg	Pg	05 18 18.8	+0.3
LPL				eSg	Sg	05 18 30.7	+0.5
	comp=N,30nm,0.3s						
IMI	Imperia	0.93	145	P	Pg	05 18 18.9	-0.2
IMI				S	Sg	05 18 30.6	-0.6
TRAV	Traversella	0.93	26	P	Pg	05 18 18.1	-1.1
TRAV				AML	AML		
	comp=E,96μm,1.5s						
TRAV				AML	AML		
	comp=N,72μm,0.3s						
CALF	Calern	0.94	191	Pg	Pg	05 18 19.4	+0.1
CALF				Sg	Sg	05 18 31.7	+0.2
ORIF	Oris-en-Rattie	0.94	285	ePg	Pg	05 18 19.1	-0.3
ORIF				eSg	Sg	05 18 31.8	0.0
	comp=N,34nm,0.3s						
ORIF	Oris-en-Rattie	0.94	285	Pg	Pg	05 18 19.2	-0.2
ORIF				Sg	Sg	05 18 30.9	-0.8
ORIF	Oris-en-Rattie	0.94	285	P	Pg	05 18 19.1	-0.3
CIRO	Champorcher	0.97	17	P	Pg	05 18 19.3	-0.7
CIRO				S	Sb	05 18 33.7	+0.6
CIRO	Champorcher	0.97	17	P	Pg	05 18 19.1	-0.8
CIRO				AML	AML		
	comp=E,75μm,1.3s						
CIRO				AML	AML		
	comp=N,56μm,0.9s						
FINB	Finale Ligure	0.97	120	P	Pg	05 18 20.1	+0.2
FINB				S	Sg	05 18 32.8	+0.2
FINB				AML	AML		
	comp=E,64μm,1.1s						
FINB				AML	AML		
	comp=N,54μm,1.5s						
PCP	Piancastagn	1.00	97	P	Pg	05 18 20.5	+0.1
PCP				S	Sb	05 18 34.2	+0.5
BLAF	les Blancs	1.08	228	Pg	Pg	05 18 21.9	-0.1
BLAF				Sg	Sb	05 18 36.8	+0.8
RSL	Roselend	1.08	340	Pg	Pg	05 18 22.1	+0.1
RSL				Sg	Sg	05 18 36.5	+0.4
MRGE	Morge	1.10	356	P	Pg	05 18 22.6	+0.3
MRGE				AML	AML		
	comp=N,98μm,0.3s						
MRGE				AML	AML		
	comp=E,78μm,0.6s						
FRF	La Foret Royal	1.18	199	ePn	Pg	05 18 23.2	-0.6
FRF				eSg	Sg	05 18 38.5	-0.6
	comp=E,47nm,0.2s						
MLYF	Mely	1.22	236	Pg	Pn	05 18 25.1	+1.0
MLYF				Sg	Sn	05 18 41.5	+0.9
SATI	Passo dei Sala	1.30	22	P	Pn	05 18 23.9	-1.6
SATI				S	Sg	05 18 27.5	-16
SMRF	Simiane la Rot	1.34	239	eP	Pg	05 18 27.1	+0.2
SMRF				eSg	Sn	05 18 44.6	+1.1
	comp=E,36nm,0.3s						
BSTF	la Bastide-des	1.35	234	Pg	Pg	05 18 28.2	+1.0
BSTF				Sg	Sg	05 18 46.8	+2.1
OGSM	Saint Maurice	1.40	313	Pg	Pg	05 18 29.1	+1.1
OGSM				Sg	Sg	05 18 47.4	+1.2
LMR	La Mourre	1.42	200	ePg	Pn	05 18 27.6	+0.7
LMR				eSg	Sb	05 18 46.0	+0.2
	comp=E,75nm,0.3s						
ARTF	Artigues	1.46	222	Pn	Pn	05 18 28.0	+0.5
ARTF				Pg	Pg	05 18 29.3	0.0
ARTF				Sg	Sg	05 18 48.5	+0.3
MMK	Mattmark	1.49	22	AML	AML		
	comp=N,41μm,1.6s						
MMK				AML	AML		
	comp=E,27μm,1.6s						
VIVF	Saint-Julien-l	1.78	277	ePn	Pn	05 18 31.9	0.0
VIVF	Saint-Julien-l	1.78	277	ePg	Pg	05 18 35.5	+0.1
VIVF				eSn	Sn	05 18 53.7	-0.8
VIVF				eSg	Sg	05 18 58.1	-0.4
	comp=E,5.3nm,0.2s						
MUGIO	Muggio	1.82	46	P	Pn	05 18 32.5	+0.1
CABF	La Chapelle	2.08	339	eP	Pb	05 18 38.8	-0.1
CABF				eSn	Sn	05 19 01.6	-0.3
	comp=E,1.5nm,0.2s						
LASF	Ste Croix	2.44	257	ePn	Pn	05 18 40.9	-0.1
LASF				eSn	Sn	05 19 09.3	-1.6
	comp=E,3.4nm,0.3s						
PGF	Pioggiola	2.51	147	ePn	Pn	05 18 41.3	-0.7
PGF				eSn	Sn	05 19 10.7	-1.9
	comp=E,3.7nm,0.2s						
SMF	Signal de Mont	3.05	311	eP	Pn	05 18 52.4	+3.1
SMF	Signal de Mont	3.05	311	ePg	Pg	05 18 59.3	-0.3
SMF				eSn	Sn	05 19 24.2	-1.6
	comp=E,2.8nm,0.3s						
SMF				eSg	Sg	05 19 37.8	-1.3
	comp=E,1.9nm,0.3s						
HINF	Hinteralfeld	3.15	356	eP	Pn	05 18 52.9	+2.2
HINF				eSn	Sn	05 19 27.1	-1.2
	comp=E,2.6nm,0.3s						
KIZ	Kirchzarten	3.32	9	Pn	Pn	05 18 53.6	+0.6
HAU	Haudompre	3.38	351	eP	Pn	05 18 56.9	+3.1
HAU				eSn	Sn	05 19 32.4	-1.5
	comp=E,7.2nm,0.3s						
HAU				eSg	Sg	05 19 48.1	-1.6
	comp=E,5.2nm,0.4s						
AVF	Avril sur Loir	3.40	310	eP	Pn	05 18 56.4	+2.2
AVF				eSn	Sn	05 19 32.4	-2.1
	comp=E,2.2nm,0.4s						
FETA	Feichten	3.42	45	ePn	Pn	05 18 56.7	+2.1
	comp=E,0.5nm,0.3s						
LOR	Lormes	3.47	320	eP	Pn	05 18 57.8	+2.7
	baz=127						
LOR				eSn	Sn	05 19 34.4	-1.7
	comp=E,0.6nm,0.2s						
LOR				eSg	Sg	05 19 50.9	-1.6
	comp=E,0.8nm,0.3s						
SSF	Saint Saulge	3.50	314	eP	Pn	05 18 58.8	+3.4
SSF				eSn	Sn	05 19 34.5	-2.2
SSF				eSg	Sg	05 19 51.7	-1.7
	comp=E,1.2nm,0.3s						
ECH	Echery	3.54	360	Pn	Pn	05 18 56.9	+0.8
BGF	Bois d'Agland	3.56	303	eP	Pn	05 18 58.6	+2.2
BGF				eSn	Sn	05 19 36.4	-2.1
	comp=E,2.6nm,0.3s						
BGF				eSg	Sg	05 19 54.2	-1.5
	comp=E,6.0nm,0.4s						
CDF	Champ du Feu	3.74	1	eP	Pn	05 19 01.4	+2.6
CDF				eSn	Sn	05 19 40.6	-2.3
	comp=E,1.6nm,0.3s						
MTLF	Montolieu	3.81	251	eP	Pn	05 19 01.9	+2.2
MTLF				eSn	Sn	05 19 42.1	-2.4
	comp=E,1.5nm,0.3s						
SFTF	Sexfontaines	3.82	338	eP	Pn	05 19 03.5	+3.6
SFTF				eSn	Sn	05 19 42.6	-2.2
	comp=E,3.8nm,0.3s						
MOTA	Moosalm	3.83	44	ePn	Pn	05 19 01.6	+1.4
	comp=E,0.4nm,0.1s						
TCF	Toulx Ste Croi	3.84	297	eP	Pn	05 19 02.4	+2.2
TCF				eSn	Sn	05 19 43.0	-2.2
TCF				eSg	Sg	05 20 02.2	-2.2
	comp=E,0.6nm,0.3s						
PAGF	Fort de Pagny	4.00	346	eP	Pn	05 19 05.3	+2.9
FNEB	Nbias	4.07	246	Pn	Pn	05 19 04.3	+1.0
OBKA	Obir	5.50	68	ePn	Pb	05 19 35.9	-1.3
	comp=E,2.0nm,0.6s						
MOA	Molln	5.86	55	ePn	Pn	05 19 32.6	+4.7
	comp=E,0.4nm,0.3s						

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*SEA **09** 05:45:35.2±1.4, 46°.388N±0°.007×122°.21W±0°.02, h1^{km}±6^{km}, ML2.1/22, ML1.9/4(NEIC), Error ellipse: s-maj=1.5km s-min=1.0km az=92.0*

NEIC 09 05:45:35.3±0.8, 46°.399N±0°.010×122°.21W±0°.02, h9^{km}±3^{km}, Error ellipse: s-maj=1.6km s-min=1.4km az=69.0, Washington

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
B201	Coldwater, Mou	0.10	201		Pg	05 45 39.1	+1.2
JRO	Jston Ridge Ob	0.12	182		Pg	05 45 38.0	-0.3
JRO					Sg	05 45 40.2	-0.1
ERK	Elk Rock	0.13	224		Pg	05 45 37.9	-0.4
STD	Studebaker Rid	0.16	183		Pg	05 45 38.7	-0.2
STD					Sg	05 45 41.4	+0.1
B202	Windy Ridge, M	0.16	161		Pg	05 45 38.6	-0.3
B202					Sg	05 45 41.1	-0.2
SOSW	Source of Smit	0.16	162		Pg	05 45 38.7	-0.1
VALT	Mount Saint He	0.18	175		Pg	05 45 39.3	+0.1
VALT					Sg	05 45 42.7	+0.8
ESD	East Dome	0.21	168		Pg	05 45 39.9	+0.3
SHW	Mount Saint He	0.21	185		Pg	05 45 39.8	+0.1
FL2	Flat Top 2	0.22	205		Pg	05 45 39.8	-0.2
HSR	South Ridge	0.23	175		Pg	05 45 40.2	+0.2
B203	Quarry, Mount	0.24	200		Pg	05 45 40.0	-0.2
B203					Sg	05 45 43.7	+0.1
JLK	June Lake	0.26	171		Pg	05 45 40.5	0.0
JLK					Sg	05 45 44.5	+0.5
E04D	Cinebar	0.29	303		Pg	05 45 41.5	+0.4
E04D					Sb	05 45 46.5	-1.3
CDFW	Cedar Flats	0.30	158		Pg	05 45 41.5	0.0
LVP	Lakeview Peak	0.36	203		Pg	05 45 42.3	-0.1
MTMW	Mount Mitchell	0.37	180		Pg	05 45 42.7	0.0
MTMW					Sg	05 45 48.2	+0.6
RVW	Rose Valley	0.45	236		Pg	05 45 43.7	-0.3
LON	Longmire	0.45	38		Pg	05 45 44.2	+0.1
ASR	Mount Adams--S	0.49	120		Pg	05 45 45.0	0.0
RCM	Mount Rainier-	0.55	37		Pg	05 45 46.0	-0.1
WPW	White Pass	0.55	57		Pg	05 45 46.0	0.0
B941	Kapowsin	0.59	359		Pg	05 45 46.3	-0.4
PANH	Panhandle Gap,	0.60	40		Pg	05 45 45.8	-1.2
F04D	Rainier, OR	0.64	241		Pg	05 45 47.6	-0.1
GULW	Guler Mountain	0.64	138		Pg	05 45 47.7	0.0
GHW	Garrison Hill	0.65	356		Pg	05 45 47.4	-0.4
FMW	Mount Fremont	0.65	35		Pg	05 45 47.9	0.0
B023	Clatskanie	0.67	245		Pg	05 45 47.7	-0.5
F05D	White Salmon	0.73	134		Pg	05 45 49.4	-0.1
D05A	Enumclaw	0.80	11	Pg	Pg	05 45 49.8	-1.0
D05A				Sg	Sg	05 46 01.8	+0.5
D05A				IAML		05 46 14.4	
	comp=N,28nm,2.7s						
E03A	Lebam	0.95	279	Pg	Pg	05 45 52.5	-1.0
E03A				Sg	Sg	05 46 06.0	+0.3
E03A				IAML		05 46 14.9	
	comp=E,50nm,0.7s						
HIYU	Hiyu Mountain	1.00	164		Pg	05 45 54.5	-0.1
VLL	Laurance Lake	1.01	158		Pg	05 45 54.4	-0.2
TDH	Tom, Dick, Har	1.15	165		Pg	05 45 56.5	-0.9
TRW	Toppenish Ridg	1.16	95		Pn	05 45 58.0	+0.2
KMOR	Kings Mountain	1.17	230		Pb	05 45 56.2	-1.6
MXC	Moxie City	1.34	82		Pb	05 46 00.7	+0.1
LTY	Liberty	1.36	50	Pn	Pb	05 46 01.0	0.0
LTY				Sg	Sn	05 46 18.9	+0.1
NLWA	Neilton Lookou	1.51	312	Pn	Pn	05 46 02.3	-0.3
NLWA				Sn	Sg	05 46 23.6	-0.2
E07A	Sunnyside	1.64	84	Pn	Pn	05 46 04.1	-0.2
E07A				Sn	Sg	05 46 28.0	+0.1
F07A	Phinny Hill Vi	1.67	107		Pn	05 46 04.8	+0.2
H04A	Detroit Lake	1.71	179	Pn	Pn	05 46 05.7	+0.3
JCW	Jim Creek	1.81	6		Pn	05 46 07.4	+0.8
HAWA	Hanford	1.85	89	Pn	Pb	05 46 08.6	-0.8
COR	Corvallis	1.97	203	Pn	Pn	05 46 09.6	+0.8
I07A	Izee	3.00	139	Pn	Pn	05 46 23.1	-0.1

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*IDC **09** 05:48:08.9±2.2, 31°.54S×177°.57W, h0^{km}, mb4.3/3, mb1 4.4/4, mb1mx4.0/24, mbtmp4.3/4, ML3.4/1, Error ellipse: s-maj=60.2km s-min=31.8km az=128.0*

*NEIC **09** 05:48:17.6±1.0, 31°.53S±0°.09×178°.6W±0°.2, h10^{km}±2^{km}, mb4.5/9, Error ellipse: s-maj=31.2km s-min=11.9km az=109.0*

ISC 09 05:48:11.0±1.8, 31°.53S±0°.10×177°.6W±0°.3, h10^{km}, n22, $\sigma 1^{s}.05$/21, mb4.5/7, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	2.29	352	Pn	Pn	05 48 40.1	-8.7
	136nm,0.3s,baz=26,slow=22,SNR=2.7						
RAO				Sn	Sn	05 49 06.3	-11
	153nm,0.3s,baz=38,slow=22,SNR=2.5						
RAO	Raoul Island	2.29	352	Pn	Pg	05 48 56.2	+1.3
MXZ	Matakaoa Point	6.91	208	Pn	Pn	05 49 52.9	+0.5
URZ	Urewera	8.01	212	Pn	Pn	05 50 05.4	-2.1
	0.5nm,0.3s,baz=255,slow=4.4,SNR=7.1						
URZ				Sn	Sn	05 51 39.9	+1.8
	3.1nm,0.3s,baz=288,slow=23,SNR=11						
URZ	Urewera	8.01	212	Pn	Pn	05 50 09.7	+2.2
BKZ	Black Stump Fm	9.03	211	Pn	Pn	05 50 21.8	+0.3
CTAO	Charters Tower	34.36	281	P	P	05 54 58.2	0.0
STKA	Stephens Creek	34.60	258	P	P	05 54 59.0	-1.2
	0.8nm,0.3s,baz=102,slow=9.3,SNR=2.6						
BBOO	Buckleboo	39.03	255	P	P	05 55 37.6	-0.4
BBOO				IAmb	IAmb	05 55 49.2	
	comp=Z,17nm,1.4s						
AS31	Alice Springs	43.43	268	P	P	05 56 13.9	-0.4
AS31				IAmb	IAmb	05 56 25.4	
	comp=Z,2.5nm,0.4s						
ASAR	Alice Springs	43.43	268	P	P	05 56 14.0	-0.3
	comp=Z,3.9nm,0.7s,baz=105,slow=7.3,SNR=30						
ASAR	Alice Springs	43.43	268	P	P	05 56 13.8	-0.5
WR0	Warramunga Arr	44.34	273	P	P	05 56 21.1	-0.5
WB2	Warramunga Arr	44.51	273	P	P	05 56 22.2	-0.8
WRA	Warramunga Arr	44.52	273	P	P	05 56 22.2	-0.9
	comp=Z,5.5nm,0.7s,baz=111,slow=8.1,SNR=26						
WRA	Warramunga Arr	44.52	273	P	P	05 56 22.3	-0.7
WB0	Warramunga Arr	44.55	273	P	P	05 56 22.6	-0.6
WB0				IAmb	IAmb	05 56 27.8	
	comp=Z,8.8nm,0.9s						
FITZ	Fitzroy Crossi	52.73	271	P	P	05 57 26.1	-0.2
QSPA	South Pole Qui	58.59	180	P	P	05 58 14.4	+6.6
QSPA				IAmb	IAmb	05 58 32.5	
	comp=Z,5.1nm,1.1s						
FINES	FINESS Array B	146.33	340	PKPbc	PKPdf	06 07 50.2	+0.1
	comp=Z,2.7nm,0.6s,baz=46,slow=3.8,SNR=15						
AKASG	Malin Array Be	152.42	322	PKPbc	PKPbc	06 08 06.3	-0.6
	comp=Z,0.6nm,0.4s,baz=42,slow=3.4,SNR=5.7						
AKASG	Malin Array Be	152.42	322		PKiKP	06 08 06.9	-0.4

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*ECX **09** 06:34:45.9±0.7, 31°.52N×115°.66W, h9^{km}±7^{km}, MD2.0, ML2.2*

*MEX **09** 06:34:47.0±0.3, 31°.45N×115°.65W, h10^{km}, MD3.5*

ISC 09 06:34:44.6±1.1, 31°.50N±0°.04×115°.63W±0°.04, h19^{km}±3^{km}, n12, $\sigma 0^{s}.42$/23, 5C, Baja California

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VTX	Valle De La Tr	0.17	229	⇑iP	Pg	06 34 49.5	+0.2
VTX				eS	Sg	06 34 52.3	-0.1
SJX	San Joaquin	0.38	313	⇑eP	Pn	06 34 55.6	+0.5
SJX				eS	Sn	06 35 03.0	+1.0
SJX				⇑e		06 35 03.6	
SJX				IAML		06 35 03.6	
	comp=N,182nm,0.1s						
SPIG	San Pedro Mart	0.48	163	i P	Pb	06 34 55.1	+0.4
	baz=338,slow=9.3						
SPIG				i S	Sb	06 35 01.5	0.0
SPIG	San Pedro Mart	0.48	163	eP	Pb	06 34 54.8	+0.1
SPIG				eS	Sb	06 35 02.0	+0.5
SPX	San Pedro Mart	0.49	163	eP	Pb	06 34 55.1	+0.3
SPX				eS	Sb	06 35 01.9	+0.2
SPX				IAML		06 35 02.5	
	comp=N,181nm,0.1s						
ECBX	El Chinero	0.50	93	⇑iP	Pg	06 34 54.4	-0.3
ECBX				eS	Sg	06 35 01.5	+0.1
SVX	San Vicente	0.56	252	⇑iP	Pb	06 34 55.6	-0.1
SVX				eS	Sb	06 35 02.9	-0.4
SFX	San Felipe	0.81	125	eP	Pn	06 35 01.1	0.0
SFX				eS	Sn	06 35 12.2	-0.5
SQX	San Quintin	0.95	193	eP	Pn	06 35 02.8	-0.2
SQX				eS	Sn	06 35 15.2	-0.8
CBX	Cerro Bola	1.19	313	eP	Pn	06 35 06.6	+0.2
CBX				eS	Sb	06 35 21.8	0.0
CBX				IAML		06 35 22.7	
	comp=N,81nm,0.3s						
CBX				e		06 35 22.7	
TJIG	Tijuana	1.28	317	i P	Pb	06 35 08.0	-0.2
TJIG				i S	Sn	06 35 23.9	-0.4
BAR	Barrett	1.47	323	eP	Pb	06 35 11.0	-0.4

IDC 09 07:04:58.1±2.4, 7°.78S×127°.43E, h0^{km}, mb3.4/1, mb1 3.7/3, mb1mx3.3/44, mbtmp3.5/3, ML3.7/2, Error ellipse: s-maj=295.0km s-min=33.5km az=63.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	13.82	152	Pn	Pn	07 08 14.2	-1.3
	0.3nm,0.3s,baz=328,slow=13,SNR=12						
WRA				Sn	Sn	07 10 36.1	-14
	0.7nm,0.3s,baz=335,slow=20,SNR=12						
ASAR	Alice Springs	16.97	159	Pn	P	07 08 58.4	-0.9

	0.3nm,0.3s,baz=339,slow=9.5,SNR=16						
MKAR	**Makanchi Array**	**67.51**	**328**	P	P	07 15 56.1	0.0
	0.1nm,0.4s,baz=121,slow=7.1,SNR=2.6						

IDC 09 07:11:20.0±3.3**, 12°.69N**×**142°.62E, h102**^{km}±32^{km}**, mb3.3**/6**, mb1 3.5**/7**, mb1mx3.2**/49**, mbtmp3.6**/7**, Error ellipse: s-maj=33.8km s-min=25.4km az=105.0, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**2.36**	**68**	P	Pn	07 11 56.1	-1.2
	9.7nm,0.3s,baz=6.3,slow=17,SNR=2.1						
GUMO				S	Sn	07 12 26.8	+0.9
	13nm,0.3s,baz=28,slow=18,SNR=2.0						
ASAR	**Alice Springs**	**37.13**	**193**	P	P	07 18 21.5	+0.5
	0.2nm,0.6s,baz=22,slow=11,SNR=1.7						
KLR	**Kul'dur**	**37.52**	**348**	P	P	07 18 25.4	+1.4
	1.3nm,0.6s,baz=167,slow=7.8,SNR=6.1						
SONM	**Songino Array**	**46.24**	**327**	P	P	07 19 36.2	+1.1
	0.3nm,0.6s,baz=149,slow=7.2,SNR=3.1						
MKAR	**Makanchi Array**	**60.63**	**317**	P	P	07 21 18.9	-1.3
	1.0nm,0.7s,baz=99,slow=8.1,SNR=10						
ILAR	**Eielson Array**	**70.31**	**25**	P	P	07 22 21.4	-0.9
	0.4nm,0.8s,baz=255,slow=6.0,SNR=5.0						
YKA	**Yellowknife Ar**	**84.65**	**27**	P	P	07 23 42.6	+0.5
	0.5nm,0.8s,baz=286,slow=5.0,SNR=5.5						

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*NEIC **09** 07:17:43.3±1.8, 31°.529N±0°.009×115°.69W±0°.02, h4^{km}±6^{km}, Error ellipse: s-maj=3.3km s-min=0.5km az=65.0*

*PAS **09** 07:17:43.9±2.0, 31°.52N±0°.03×115°.68W±0°.03, h15^{km}±5^{km}, ML3.3/99, ML3.1(ECX), ML3.2/18(NEIC), Error ellipse: s-maj=5.3km s-min=3.1km az=215.0*

*SCEDC **09** 07:17:43.9, 31°.52N×115°.68W, h15^{km}*

*ECX **09** 07:17:44.3±0.7, 31°.51N×115°.67W, h10^{km}±3^{km}, MD2.8, ML3.1, Fault plane solution: NP1:φ$_s$30.00000°, δ90.00000°, λ0.00000°.*

*ANF **09** 07:17:44.7±1.1, 31°.68N×115°.52W, h14^{km}±5^{km}, ML3.0/9, Error ellipse: s-maj=9.5km s-min=3.9km az=25.0*

*MEX **09** 07:17:45.2±0.3, 31°.42N×115°.75W, h5^{km}, MD3.9*

ISC 09 07:17:43.2±0.9**, 31°.53N**±0°.02×**115°.66W**±0°.02**, h11**^{km}±8^{km}**, n100, σ0^s.95**/135**, 5C-7D, Baja California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VTX	**Valle De La Tr**	**0.18**	**218**	⇑*i*P	**Pg**	**07 17 47.5**	**+0.3**
VTX				*e*S	**Sg**	**07 17 50.4**	**+0.4**
SJX	**San Joaquin**	**0.35**	**312**	⇓*i*P	**Pn**	**07 17 54.0**	**-0.2**
SJX				*e*S	**Sb**	**07 18 01.8**	**+4.9**
SJX				IAML		07 18 03.5	
	comp=E,2μm,0.0s						
SPIG	**San Pedro Mart**	**0.51**	**161**	*i* P	**Pg**	**07 17 53.3**	**0.0**
SPIG				*i* S	**Sg**	**07 17 59.9**	**-0.2**
SPIG	**San Pedro Mart**	**0.51**	**161**		**Pg**	**07 17 53.3**	**0.0**
SPIG					**Sg**	**07 17 59.9**	**-0.2**
SPIG	**San Pedro Mart**	**0.51**	**161**	*e*P	**Pg**	**07 17 53.1**	**-0.2**
SPIG				*e*S	**Sg**	**07 18 00.4**	**+0.2**
ECBX	**El Chinero**	**0.52**	**96**	⇑*i*P	**Pg**	**07 17 52.7**	**-0.7**
ECBX				*e*S	**Sg**	**07 17 59.5**	**-0.8**
SPX	**San Pedro Mart**	**0.52**	**162**		**Pg**	**07 17 53.3**	**-0.2**
SPX					**Sg**	**07 18 00.2**	**-0.2**
SPX	**San Pedro Mart**	**0.52**	**162**	IAML		07 18 00.8	
	comp=N,514nm,0.2s						
SPX				IAML		07 18 01.4	
	comp=E,436nm,0.1s						
SPX	**San Pedro Mart**	**0.52**	**162**	⇓*i*P	**Pg**	**07 17 53.3**	**-0.2**
SPX				*e*S	**Sg**	**07 18 00.2**	**-0.2**
SPX				⇓*e*		07 18 00.9	
SPX				IAML		07 18 00.9	
	comp=N,852nm,0.1s						
ESJX	**Sierra Juarez**	**0.53**	**332**		**Pg**	**07 17 53.9**	**+0.2**
ESJX					**Sg**	**07 18 01.3**	**+0.5**
ESJX	**Sierra Juarez**	**0.53**	**332**	IAML		07 18 02.6	
	comp=N,1μm,0.1s						
ESJX				IAML		07 18 03.4	
	comp=E,1μm,0.1s						
SVX	**San Vicente**	**0.55**	**248**	⇑*i*P	**Pg**	**07 17 53.7**	**-0.2**
SVX				*i* S	**Sg**	**07 18 00.9**	**-0.2**
SFX	**San Felipe**	**0.85**	**125**		**Pg**	**07 17 59.4**	**-0.2**
SFX					**Sg**	**07 18 10.3**	**-0.3**
SFX	**San Felipe**	**0.85**	**125**	IAML		07 18 11.7	
	comp=N,851nm,0.4s						
SFX				IAML		07 18 11.8	
	comp=E,685nm,0.5s						
SFX	**San Felipe**	**0.85**	**125**	⇓*e*P	**Pg**	**07 17 59.4**	**-0.2**
SFX				*e*S	**Sg**	**07 18 10.4**	**-0.3**
GUVIX	**Guadalupe Vict**	**0.91**	**33**		**Pg**	**07 18 00.8**	**0.0**
GUVIX					**Sb**	**07 18 14.1**	**+0.9**
GUVIX	**Guadalupe Vict**	**0.91**	**33**	*e*P	**Pg**	**07 18 00.8**	**0.0**
CCX	**Cicese**	**0.92**	**292**		**Pg**	**07 18 00.4**	**-0.6**
CCX					**Sg**	**07 18 12.4**	**-0.6**
CCX	**Cicese**	**0.92**	**292**	IAML		07 18 13.7	
	comp=N,579nm,0.4s						
CCX				IAML		07 18 13.8	
	comp=E,538nm,0.5s						
CCX	**Cicese**	**0.92**	**292**	*e*P	**Pg**	**07 18 00.3**	**-0.7**
CCX				*e*S	**Sg**	**07 18 12.9**	**-0.1**
CPBX	**Cerro Prieto**	**0.93**	**19**		**Pb**	**07 18 02.1**	**+0.7**
MBIG	**Mexicali**	**0.95**	**24**	*i* P	**Pn**	**07 18 03.0**	**+0.5**
MBIG				*i* S	**Sn**	**07 18 17.4**	**+1.3**
MBIG	**Mexicali**	**0.95**	**24**		**Pn**	**07 18 03.0**	**+0.5**
MBIG					**Sn**	**07 18 17.4**	**+1.3**
SQX	**San Quintin**	**0.97**	**191**	*e*P	**Pg**	**07 18 00.8**	**-1.1**
SQX				*e*S	**Sg**	**07 18 13.6**	**-1.0**
UABX	**UABC, Campus M**	**1.11**	**9**		**Sb**	**07 18 19.4**	**+0.5**
UABX	**UABC, Campus M**	**1.11**	**9**		**Pn**	**07 18 05.4**	**+0.7**
SGL	**Mount Signal**	**1.11**	**357**		**Pg**	**07 18 04.1**	**-0.6**
SGL					**Sb**	**07 18 19.1**	**0.0**
RMX	**La Rumorosa**	**1.13**	**342**		**Pg**	**07 18 03.4**	**-1.5**
RMX					**Sg**	**07 18 17.4**	**-2.2**
RMX	**La Rumorosa**	**1.13**	**342**	IAML		07 18 19.4	
	comp=E,604nm,0.4s						
RMX				IAML		07 18 20.1	
	comp=N,520nm,0.4s						
RMX	**La Rumorosa**	**1.13**	**342**	*e*P	**Pg**	**07 18 03.4**	**-1.5**
RMX				*e*S	**Sg**	**07 18 17.5**	**-2.2**
YUH	**Yuha Desert**	**1.14**	**349**		**Pg**	**07 18 04.3**	**-0.8**
YUH					**Sg**	**07 18 19.4**	**-0.4**
CBX	**Cerro Bola**	**1.16**	**313**		**Pg**	**07 18 05.0**	**-0.6**
CBX				Sn	**Sg**	**07 18 20.1**	**-0.5**
CBX	**Cerro Bola**	**1.16**	**313**	⇓*e*P	**Pg**	**07 18 04.7**	**-0.8**
CBX				*e*S	**Sg**	**07 18 20.2**	**-0.4**
CBX				⇓*e*		07 18 25.9	
CBX				IAML		07 18 25.9	
	comp=N,458nm,0.5s						
IKP	**In-Ko-Pah, Jac**	**1.18**	**341**	P	**Pg**	**07 18 05.4**	**-0.5**
	baz=162,SNR=45						
IKP				S	**Sg**	**07 18 20.6**	**-0.6**
	baz=162						
IKP	**In-Ko-Pah, Jac**	**1.18**	**341**		**Pg**	**07 18 05.4**	**-0.5**
IKP					**Sg**	**07 18 20.7**	**-0.6**
IKP	**In-Ko-Pah, Jac**	**1.18**	**341**	⇓*e*P	**Pg**	**07 18 05.4**	**-0.5**
IKP				*e*S	**Sb**	**07 18 21.0**	**+0.1**
WESC	**Westside Schoo**	**1.23**	**357**		**Pb**	**07 18 06.3**	**-0.1**
TJIG	**Tijuana**	**1.25**	**316**	*i* P	**Pb**	**07 18 06.1**	**-0.7**
TJIG				*i* S	**Sg**	**07 18 22.2**	**-1.2**
TJIG	**Tijuana**	**1.25**	**316**		**Pb**	**07 18 06.1**	**-0.7**
TJIG					**Sg**	**07 18 22.2**	**-1.2**
TJIG	**Tijuana**	**1.25**	**316**	*e*P	**Pb**	**07 18 06.0**	**-0.7**
TJIG				*i* S	**Sg**	**07 18 22.5**	**-1.0**
TKX	**Tecate**	**1.31**	**322**		**Pn**	**07 18 07.1**	**-0.4**
TKX					**Sb**	**07 18 24.3**	**-0.5**
TKX				IAML		07 18 24.9	
	comp=E,715nm,0.3s						
TKX				IAML		07 18 25.1	
	comp=N,604nm,0.2s						
EMSC	**East Mesa**	**1.33**	**25**		**Pn**	**07 18 06.8**	**-0.9**
CRR	**Carrizo Plain**	**1.38**	**349**		**Pn**	**07 18 08.8**	**+0.4**
YMD	**Yuma Desert**	**1.39**	**42**		**Pn**	**07 18 07.2**	**-1.3**
SWSC	**Sam W. Stewart**	**1.41**	**355**	P	**Pn**	**07 18 08.2**	**-0.7**
	baz=176,SNR=36						
SWSC	**Sam W. Stewart**	**1.41**	**355**		**Sg**	**07 18 29.2**	**+0.5**
BAR	**Barrett**	**1.43**	**323**	Pn	**Pn**	**07 18 09.2**	**0.0**
BAR	**Barrett**	**1.43**	**323**		**Sb**	**07 18 28.0**	**-0.2**
BAR	**Barrett**	**1.43**	**323**	*e*P	**Pn**	**07 18 09.2**	**0.0**
BAR				*e*S	**Sb**	**07 18 28.0**	**-0.2**
BAR				IAML		07 18 29.5	
	comp=E,217nm,0.2s						
BAR				⇑*e*		07 18 29.5	
CBKC	**Canebrake**	**1.45**	**340**		**Pn**	**07 18 09.8**	**+0.3**
MONP2	**Monument Peak**	**1.50**	**335**	P	**Pn**	**07 18 10.8**	**+0.4**
	baz=155,SNR=51						
MONP2				S	**Sn**	**07 18 30.0**	**0.0**
	baz=155						
MONP2	**Monument Peak**	**1.50**	**335**		**Pn**	**07 18 10.6**	**+0.3**
MONP2					**Sn**	**07 18 30.2**	**+0.3**
MONP2	**Monument Peak**	**1.50**	**335**	*e*P	**Pn**	**07 18 10.9**	**+0.6**
MONP2				*e*S	**Sn**	**07 18 30.3**	**+0.3**
OLP	**Otay Lakes Par**	**1.52**	**315**		**Sn**	**07 18 30.2**	**0.0**
OLP	**Otay Lakes Par**	**1.52**	**315**	*e*P	**Pn**	**07 18 10.8**	**+0.4**
TJX	**Tijuana**	**1.54**	**310**	Pn	**Pn**	**07 18 11.2**	**+0.6**
SDRC	**San Diego Road**	**1.62**	**318**		**Pn**	**07 18 12.4**	**+0.7**
SDRC	**San Diego Road**	**1.62**	**318**	*e*P	**Pn**	**07 18 12.4**	**+0.7**
SDRC				*e*S	**Sn**	**07 18 33.2**	**+0.6**
SDRC				⇑*e*		07 18 33.8	
SDRC				IAML		07 18 33.8	
	comp=E,207nm,0.3s						
GLA	**Glamis**	**1.67**	**25**	P	**Pn**	**07 18 11.4**	**-1.0**
	baz=205,SNR=21						
GLA	**Glamis**	**1.67**	**25**		**Pn**	**07 18 11.5**	**-1.0**
DPP	**Dos Picos Cty**	**1.82**	**324**		**Pn**	**07 18 15.6**	**+1.1**
DPP					**Sb**	**07 18 39.4**	**-0.1**
109C	**Camp Elliot, M**	**1.83**	**318**	P	**Pn**	**07 18 15.4**	**+0.9**
	baz=138,SNR=16						
109C				S	**Sb**	**07 18 39.0**	**-0.5**
	baz=138						
109C	**Camp Elliot, M**	**1.83**	**318**	Pn	**Pn**	**07 18 15.4**	**+0.9**
CPE	**Camp Elliot**	**1.83**	**318**		**Pn**	**07 18 15.5**	**+0.9**
CPE					**Sb**	**07 18 39.0**	**-0.5**
BORC	**Borrego Spring**	**1.85**	**340**		**Pb**	**07 18 17.5**	**+0.5**
HWB	**Hans Werner Br**	**1.85**	**324**		**Pn**	**07 18 16.1**	**+1.2**
HWB					**Sb**	**07 18 40.2**	**-0.1**
MATG	**Mataguay Scout**	**1.86**	**333**		**Pn**	**07 18 15.4**	**+0.3**
PIX	**Pinacate**	**1.88**	**89**	Pn	**Pn**	**07 18 13.5**	**-1.7**
PLM	**Palomar**	**2.08**	**331**		**Pb**	**07 18 20.3**	**-0.8**
GORC	**Green Oak Ranc**	**2.10**	**321**		**Pb**	**07 18 20.2**	**-1.0**
FRD	**Ford Ranch, An**	**2.11**	**338**		**Pb**	**07 18 22.4**	**+0.7**
FRD	**Ford Ranch, An**	**2.11**	**338**		**Pb**	**07 18 22.2**	**+0.6**
BC3	**Big Chuckawall**	**2.12**	**5**	P	**Pn**	**07 18 18.3**	**-0.4**
	baz=185						
BZNA	**Buzz No.'s Pla**	**2.13**	**337**		**Pb**	**07 18 22.5**	**+0.5**
SNDA	**J Saunders Pla**	**2.17**	**338**		**Pb**	**07 18 23.6**	**+1.0**
XPFO	**Pion Flat**	**2.18**	**342**		**Pg**	**07 18 24.5**	**-0.5**
PFO	**Pinyon Flats O**	**2.18**	**342**	P	**Pn**	**07 18 19.3**	**-0.3**
	baz=162,SNR=19						
PFO	**Pinyon Flats O**	**2.18**	**342**	Pn	**Pn**	**07 18 19.2**	**-0.3**
DNR	**Dunn Ranch,Anz**	**2.19**	**338**		**Pg**	**07 18 24.2**	**-1.0**
PMD	**Palm Desert**	**2.20**	**344**		**Pb**	**07 18 24.1**	**+1.1**
CRY	**Cary Ranch**	**2.22**	**336**		**Pb**	**07 18 24.0**	**+0.5**
MURC	**Murrieta**	**2.44**	**328**	P	**Pb**	**07 18 25.8**	**-1.3**
	baz=148,SNR=7.4						
HMTC	**Hemet**	**2.45**	**333**		**Pb**	**07 18 27.4**	**+0.1**
214A	**Organ Pipe Nat**	**2.46**	**79**	P	**Pn**	**07 18 22.3**	**-1.0**
	baz=261,SNR=13						
214A				S	**Sn**	**07 18 51.4**	**-1.9**
	baz=261						
214A	**Organ Pipe Nat**	**2.46**	**79**	Pn	**Pn**	**07 18 22.3**	**-1.0**
MWC	**Mount Wilson**	**3.36**	**324**	Pn	**Pn**	**07 18 37.2**	**+1.4**
PASC	**Pasadena Art C**	**3.38**	**322**	Pn	**Pn**	**07 18 34.4**	**-1.6**
PDE	**Pardee, Santa**	**3.80**	**321**		**Pb**	**07 18 50.1**	**-0.2**
W13A	**Hualapai Mount**	**3.85**	**22**	Pn	**Pn**	**07 18 44.3**	**+1.7**
TUC	**Tucson**	**4.21**	**78**	Pn	**Pn**	**07 18 46.9**	**-0.6**
X16A	**Lo Mia Camp, P**	**4.56**	**50**		**Pn**	**07 18 53.2**	**+0.9**
JRC2	**Joshua Ridge**	**4.79**	**339**		Pn	07 19 01.1	+5.7
WUAZ	**Wupatki**	**5.35**	**41**	Pn	**Pn**	**07 19 03.4**	**+0.3**
U15A	**North Rim**	**5.63**	**29**	Pn	**Pn**	**07 19 08.8**	**+1.7**
X18A	**Snowflake**	**5.65**	**57**	Pn	**Pn**	**07 19 08.6**	**+1.3**
LCMT	**Little Creek M**	**5.82**	**19**	Pn	**Pn**	**07 19 10.3**	**+0.7**
KNB	**Kanab**	**5.95**	**22**	Pn	**Pn**	**07 19 14.0**	**+2.5**
W18A	**Petrified Fore**	**6.11**	**53**		**Pn**	**07 19 15.2**	**+1.5**
CCUT	**Cedar City**	**6.29**	**17**	Pn	**Pn**	**07 19 18.1**	**+2.0**
121A	**Cookes Peak, D**	**6.76**	**79**	Pn	**Pn**	**07 19 23.2**	**+0.7**

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*WEL **09** 07:26:00, 42°.99S×171°.33E, h3^{km}, ML3.6, Mw3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14} Nm; M$_{rr}$0.26; M$_{\theta\theta}$0.35; M$_{\phi\phi}$-0.61; M$_{r\theta}$-1.90; M$_{\theta\phi}$-1.88; M$_{\phi r}$0.76; Fault plane solution: M$_0$2.72000×10^{14} NP1: φ$_s$1.00000°, δ50.00000°, λ12.00000°. NP2:φ$_s$263.00000°, δ80.00000°, λ140.00000°. Principal axes: T 31.7500, Plg35.0000°, Azm214.0000°; N -22.7300, Plg48.0000°, Azm71.0000°; P -9.0100, Plg19.0000°, Azm318.0000°;*

WEL 09 07:26:24.0±0.3**, 43°S**±2°×**17°1E**±°**, h5**^{km}**, M3.6**/14**, ML3.8**/14**, MLv3.6**/14 **Error ellipse: s-maj=0.0km s-min=0.0km az=38.3, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
INZ	**Inchbonnie**	**0.28**	**18**	P	Pg	07 26 29.9	+0.5
INZ				S	Sg	07 26 33.5	+0.5
WVZ	**Waitaha Valley**	**0.44**	**258**	P	Pg	07 26 33.1	+0.5
WVZ				S	Sg	07 26 38.4	0.0
MHCZ	**Mount Hutt**	**0.57**	**162**	P	Pg	07 26 35.5	+0.5
OXZ	**Oxford**	**0.62**	**123**	P	Pg	07 26 36.3	+0.4
OXZ				S	Sg	07 26 44.5	+0.5
LTZ	**Lake Taylor**	**0.72**	**74**	P	Pg	07 26 38.4	+0.6
LTZ				S	Sg	07 26 47.8	+0.5
RPZ	**Rata Peaks**	**0.76**	**195**	P	Pg	07 26 38.8	+0.3
RPZ				S	Sg	07 26 48.8	+0.5
GCSZ	**Gaunt Creek Bo**	**0.80**	**246**	P	Pg	07 26 39.4	-0.1
RACZ	**Rakaia**	**0.95**	**142**	P	Pb	07 26 42.7	-0.3
RACZ				S	Sb	07 26 56.1	+0.3
ARCZ	**Arundel**	**0.97**	**187**	P	Pg	07 26 42.7	+0.1
ARCZ				S	Sg	07 26 55.5	+0.4
AMCZ	**Amberley**	**0.99**	**102**	P	Pn	07 26 44.2	-0.3
WACZ	**Wakanui South**	**1.02**	**159**	P	Pb	07 26 44.2	0.0
WACZ				S	Sb	07 26 57.6	-0.4
MQZ	**McQueen's Vall**	**1.20**	**127**	P	Pg	07 26 46.5	-0.6
MQZ				S	Sg	07 27 01.9	-0.8
FOZ	**Fox Glacier**	**1.23**	**243**	P	Pg	07 26 47.4	-0.3
FOZ				S	Sb	07 27 04.4	+0.4
GVZ	**Greta Valley S**	**1.25**	**90**	P	Pg	07 26 47.9	-0.1
GVZ				S	Sn	07 27 05.8	+0.3
DSZ	**Denniston Nort**	**1.29**	**16**	P	Pn	07 26 48.6	-0.2
DSZ				S	Sg	07 27 05.3	-0.1
TMZ	**Timaru**	**1.42**	**189**	P	Pn	07 26 49.9	-0.6
OKCZ	**Okains Bay**	**1.46**	**121**	P	Pn	07 26 50.6	-0.5
LBZ	**Lake Benmore**	**1.63**	**210**	P	Pn	07 26 53.1	-0.3
THZ	**Tophouse**	**1.69**	**44**	P	Pn	07 26 54.5	+0.2
KHZ	**Kahutara**	**1.73**	**71**	P	Pn	07 26 54.7	0.0
ODZ	**Otahua Downs**	**2.12**	**193**	P	Pn	07 26 59.1	-0.9
JCZ	**Jackson Bay**	**2.15**	**239**	P	Pn	07 27 00.6	0.0
NNZ	**Nelson**	**2.34**	**41**	P	Pn	07 27 04.5	+1.4
QRZ	**Quartz Range**	**2.34**	**23**	P	Pn	07 27 03.6	+0.5
WKZ	**Wanaka**	**2.48**	**221**	P	Pn	07 27 04.3	-0.8
TUWZ	**Tuamarina**	**2.49**	**52**	P	Pn	07 27 07.1	+1.9
EAZ	**Earnscleugh**	**2.67**	**212**	P	Pn	07 27 06.3	-1.5
MSZ	**Milford Sound**	**2.98**	**234**	P	Pn	07 27 12.0	0.0
TUZ	**Tuapeka**	**3.21**	**202**	P	Pn	07 27 14.7	-0.3
MLZ	**Mavora Lakes**	**3.32**	**223**	P	Pn	07 27 16.5	-0.1
KIW	**Kapiti Island**	**3.41**	**53**	P	Pn	07 27 18.2	+0.3
MRZ	**Mangatainoka R**	**3.94**	**55**	P	Pn	07 27 25.4	+0.4
TOZ	**Tahuroa Road**	**6.14**	**33**	P	Pn	07 27 56.3	+1.0

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*MOS **09** 07:59:29.9±0.9, 0°.15N×17°.11W, h10^{km}, mb5.4/62, Error ellipse: s-maj=10.7km s-min=3.9km az=59.2*

*IDC **09** 07:59:30.0±0.5, 0°.16N×17°.09W, h0^{km}, mb5.0/35, mb1 5.1/38, mb1mx5.0/48, mbtmp5.0/38, ML5.3/3, MS4.5/38, Ms1 4.5/38, ms1mx4.5/43, Error ellipse: s-maj=19.0km s-min=10.1km az=145.0*

*BJI **09** 07:59:30.0±0.0, 0°.10N×17°.10W, h10^{km}, mB5.8/5, mb5.5/7, Ms5.5/7, Ms7 5.1/8*

*NEIC **09** 07:59:31.6±1.4, 0°.20N±0°.07×17°.13W±0°.08, h10^{km}±1^{km}, mb5.3/281, Ms_20 4.8/178, Error ellipse: s-maj=14.0km s-min=12.5km az=258.0*

*GCMT **09** 07:59:36.5±0.2, 0°.29N±0°.01×17°.06W±0°.01, h12^{km}, MW5.1/139, Moment Tensor Solution. s63,c83; s139,c220; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$1.54±.11; M$_{\theta\theta}$1.67±.12; M$_{\phi\phi}$-3.21±.10; M$_{r\theta}$-1.42±.33; M$_{\theta\phi}$-4.59±.09; M$_{\phi r}$-3.01±.27; Best double couple: M$_0$5.85400×10^{16} NP1:φ$_s$79.00000°, δ68.00000°, λ-172.00000°. NP2:φ$_s$346.00000°, δ83.00000°, λ-22.00000°. Principal axes: T 4.4870, Plg10.0000°, Azm34.0000°; N 2.7340, Plg67.0000°, Azm148.0000°; P -7.2210, Plg21.0000°, Azm300.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 09 07:59:31.9±0.2**, 0°.18N**±0°.05×**17°.10W**±0°.05**, h13**^{km}**, n856, σ1^s.25**/754**, mb5.2**/270**, MS4.8**/132**, 33C-25D, North of Ascension Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10N2	**ASCENSION HYDR**	**8.37**	**162**	T	T	08 10 31.9	
	baz=341,slow=74,SNR=1932						
H10N3	**ASCENSION HYDR**	**8.37**	**162**	T	T	08 10 32.5	
	baz=341,slow=74,SNR=1655						
H10N1	**ASCENSION HYDR**	**8.38**	**162**	T	T	08 10 33.4	
	baz=341,slow=74,SNR=1894						
ASCN	**Ascension**	**8.51**	**161**		**Pn**	**08 01 34.3**	**-0.6**
H10S3	**ASCENSION HYDR**	**9.39**	**165**	T	T	08 11 53.6	
	baz=344,slow=74,SNR=758						
H10S2	**ASCENSION HYDR**	**9.40**	**165**	T	T	08 11 51.6	
	baz=236,slow=74,SNR=256						
LIC	**Lamto**	**13.46**	**63**	*e*P	**Pn**	**08 02 40.0**	**-2.8**
	32nm,0.2s						
TIC	**Toumodi**	**13.66**	**62**	*e*P	**Pn**	**08 02 42.0**	**-3.5**
KIC	**Kosan Boka**	**13.78**	**63**	*e*P	**Pn**	**08 02 43.5**	**-3.6**
	39nm,0.2s						
DBIC	**Dimbokro**	**13.81**	**62**	Pn	**Pn**	**08 02 45.2**	**-2.3**
	26nm,0.3s,baz=238,slow=13,SNR=182						
DBIC				Sn	Sn	08 05 02.8	-18
	1.3nm,0.3s,baz=35,slow=18,SNR=1.0						
DBIC				LR	LR	08 07 06.9	
	comp=Z,3μm,20.5s,baz=218,slow=33						
DBIC	**Dimbokro**	**13.81**	**62**	Pn	**Pn**	**08 02 44.7**	**-2.9**
MBO	**M'Bour**	**14.12**	**1**	Pn	**Pn**	**08 02 50.5**	**-1.3**
SACV	**Santiago Islan**	**16.05**	**337**	Pn	**Pn**	**08 03 11.6**	**-5.9**
KOWA	**Kowa**	**19.23**	**42**	P	**P**	**08 03 54.6**	**-1.5**
	8.2nm,0.3s,baz=218,slow=9.5,SNR=301						
KOWA				S	Sn	08 07 14.5	-18
	2.5nm,0.3s,baz=44,slow=23,SNR=1.9						
KOWA				LR	LR	08 10 58.8	
	comp=Z,4μm,18.5s,baz=220,slow=36						
KOWA	**Kowa**	**19.23**	**42**	P	**P**	**08 03 54.0**	**-2.1**
KOWA				IAmb	IAmb	08 03 57.3	
	comp=Z,146nm,0.7s						
SHEL	**Horse Pasture**	**19.56**	**146**	P	**P**	**08 04 00.2**	**+0.5**
SHEL				pmax	pmax		
	comp=Z,86nm,0.7s						
SHEL	**Horse Pasture**	**19.56**	**146**	P	**P**	**08 04 00.2**	**+0.5**
SHEL				IAmb	IAmb	08 04 01.8	
	comp=Z,86nm,0.8s						
RCBR	**Riachuelo**	**19.70**	**252**	P	**P**	**08 04 01.1**	**-0.1**
	comp=Z,6.9nm,0.3s,baz=136,slow=9.8,SNR=31						
RCBR				S	S	08 07 27.3	-16
	comp=Z,1.0nm,0.3s,baz=311,slow=0.9,SNR=1.8						
RCBR				LR	LR	08 09 58.8	
	comp=Z,2μm,18.8s,baz=74,slow=32						
RCBR	**Riachuelo**	**19.70**	**252**	P	**Pn**	**08 04 02.2**	**-0.4**
RCBR				IAmb	IAmb	08 04 11.4	
	comp=Z,247nm,2.0s						
RCBR	**Riachuelo**	**19.70**	**252**	*e*P	**Pn**	**08 04 03.1**	**+0.4**
NBRF	**Rio Formoso -**	**20.00**	**243**	*e*P	**P**	**08 04 04.9**	**+0.5**
NBPA	**Parau_RN**	**20.83**	**253**	*e*P	Pn	08 04 15.2	-0.8
NBLI	**Livramento-PB**	**21.17**	**249**	*e*P	**P**	**08 04 17.7**	**+0.5**
TOA0	**Torodi Ar. Sit**	**22.65**	**55**	P	**P**	**08 04 31.6**	**-1.4**
TORD	**Torodi Ar. Bea**	**22.65**	**55**	P	**P**	**08 04 31.6**	**-1.5**
	comp=Z,125nm,0.9s,baz=238,slow=11,SNR=181						
TORD				S	**S**	**08 08 39.0**	**-2.1**
	comp=Z,29nm,0.9s,baz=240,slow=22,SNR=3.7						
TORD				LR	LR	08 12 34.5	
	comp=Z,2μm,20.0s,baz=240,slow=35						
TORD	**Torodi Ar. Bea**	**22.65**	**55**	P	**P**	**08 04 30.1**	**-2.9**
NBMO	**Morrinhos-CE**	**23.19**	**261**	*e*P	**P**	**08 04 39.2**	**+0.5**
NBPS	**Pedro II - PI**	**24.74**	**259**	*e*P	**P**	**08 04 53.6**	**+0.1**
GDU01	**Guandu, BA**	**26.20**	**237**	*e*P	**P**	**08 05 06.4**	**-0.2**
ROSB	**Rosrio**	**27.19**	**263**	*e*P	**P**	**08 05 14.7**	**-0.8**
MACI	**Morro de la Ar**	**27.92**	**1**	P	**P**	**08 05 21.4**	**-0.8**
MACI				IAmb	IAmb	08 06 04.7	
	comp=Z,50nm,0.9s						
NAN01	**Guarapari, ES**	**28.88**	**230**	*e*P	**P**	**08 05 30.8**	**+0.2**
RIB01	**Linhares ES**	**29.96**	**228**	*e*P	**P**	**08 05 42.0**	**+1.8**
BSFB	**Barra de Sao F**	**30.01**	**230**	*e*P	**P**	**08 05 39.4**	**-1.2**
SJMB	**Sao Joao De Ma**	**30.19**	**230**	*e*P	**P**	**08 05 42.4**	**+0.1**
SDBA	**SAO DESIDERIO**	**30.29**	**245**	*e*P	**P**	**08 05 43.2**	**0.0**
JANB	**Januaria**	**30.87**	**239**	*e*P	**P**	**08 05 47.4**	**-0.9**
ALF01	**Guarapari-ES**	**31.00**	**227**	*e*P	**P**	**08 05 50.4**	**+1.0**
TMAB	**Tom-Au,PA,Br**	**31.09**	**265**	*e*P	**P**	**08 05 51.4**	**+1.1**
TAM	**Tamanrasset**	**31.46**	**43**	P	**P**	**08 05 54.7**	**+1.1**
TAM				pmax	pmax		
	comp=Z,29nm,1.0s						
TAM	**Tamanrasset**	**31.46**	**43**	P	**P**	**08 05 54.2**	**+0.6**
TAM				IAmb	IAmb	08 05 56.2	
	comp=Z,29nm,1.0s						
TAM				IAMs_20	IAMs_20	08 17 42.9	
	comp=Z,2μm,20.0s						
SMTB	**Santa Maria do**	**31.67**	**253**	*e*P	**P**	**08 05 56.0**	**+0.6**
DIAM	**Diamantina, MG**	**31.92**	**233**	*e*P	**P**	**08 05 59.0**	**+1.2**
CAM01	**Campos-RJ**	**32.44**	**226**	*e*P	**P**	**08 06 03.4**	**+1.4**
PMOZ	**Porto Moniz, M**	**32.47**	**360**	*e*LR	LR	08 17 51.9	
	comp=Z,323nm,18.0s						
PRPB	**Parauapebas**	**33.26**	**258**	*e*P	**P**	**08 06 09.7**	**+0.3**
PEXB	**Peixe**	**33.29**	**247**	*e*P	**P**	**08 06 10.1**	**+0.5**
VAS01	**Vassouras-RJ**	**34.02**	**227**	*e*P	**P**	**08 06 17.9**	**+2.0**
BSCB	**Bom Sucesso**	**34.27**	**230**	*e*P	**P**	**08 06 18.7**	**+0.6**
BDFB	**Brasilia**	**34.34**	**241**	P	**P**	**08 06 18.9**	**+0.1**
	comp=Z,22nm,0.7s,baz=69,slow=8.7,SNR=31						
BDFB				LR	LR	08 18 13.7	
	comp=Z,815nm,20.0s,baz=95,slow=33						
BDFB	**Brasilia**	**34.34**	**241**	P	**P**	**08 06 18.5**	**-0.3**
BDFB				IAmb	IAmb	08 06 20.1	
	comp=Z,69nm,1.3s						
MAN01	**Angra dos Reis**	**34.75**	**227**	*e*P	**P**	**08 06 20.2**	**-2.1**
MCPB	**Macapa, AP**	**34.96**	**269**	*e*P	**P**	**08 06 24.4**	**+0.2**
ESAR	**Angra dos Reis**	**35.20**	**227**	*e*P	**P**	**08 06 26.7**	**+0.7**
IPMB	**Ipameri, GO**	**35.52**	**238**	*e*P	**P**	**08 06 28.8**	**-0.2**
SNDB	**Serra Nova Dou**	**36.03**	**249**	*e*P	**P**	**08 06 33.4**	**+0.1**
PARB	**Paraibuna**	**36.26**	**228**	*e*P	**P**	**08 06 37.0**	**+1.7**
VAO	**Valinhos**	**37.07**	**230**	*e*P	**P**	**08 06 42.6**	**+0.4**
MALB	**Monte Alegre**	**37.22**	**267**	*e*P	**P**	**08 06 44.1**	**+0.6**
H09W1	**TRISTAN DA CUN**	**37.35**	**174**	T	T	08 46 51.7	
	SNR=4.7						
PSMN	**Pico do Norte,**	**37.38**	**349**	*e*T	T	08 45 50.1	
PSMA	**Santa Maria**	**37.38**	**349**	*e*T	T	08 45 47.9	
ARAG	**Araguaiana, MT**	**37.73**	**244**	*e*P	**P**	**08 06 48.3**	**+0.5**
SPB	**Sao Paulo**	**37.76**	**229**	IAMs_20	IAMs_20	08 19 23.6	
	comp=Z,1μm,20.0s						
SPB	**Sao Paulo**	**37.76**	**229**	*e*P	**P**	**08 06 48.9**	**+1.0**
MORF	**Marmelete**	**37.76**	**11**	*e*P	**P**	**08 06 49.0**	**+1.2**
MORF				AMb	AMB	08 07 19.8	
	comp=Z,97nm,2.4s						
PBDV	**Barranco-do-Ve**	**37.84**	**12**	*e*P	**P**	**08 06 50.7**	**+2.2**
	comp=Z,120nm,1.8s						
PTEO	**Sao Teotonio**	**37.98**	**11**	*e*P	**P**	**08 06 52.0**	**+2.5**
	comp=Z,143nm,1.3s						
PET01	**Itanhaem-SP**	**38.04**	**228**	*e*P	**P**	**08 06 51.2**	**+1.0**
PVAQ	**Vaqueiros**	**38.05**	**12**	*e*P	**P**	**08 06 52.7**	**+2.6**
	comp=Z,78nm,1.3s						
PVAQ	**Vaqueiros**	**38.05**	**12**	*e*LR	LR	08 18 12.0	
	comp=Z,199nm,16.0s						
ITRB	**Iturama**	**38.11**	**237**	*e*P	**P**	**08 06 51.4**	**+0.4**
BART	**Pico Bartolome**	**38.15**	**350**	*e*T	T	08 46 57.2	
CMLA	**Cha da Macela**	**38.20**	**349**	*e*T	T	08 46 50.2	
PNCL	**Nicolau / Gran**	**38.57**	**11**	*e*P	**P**	**08 06 57.1**	**+2.6**
NPGB	**Novo Progresso**	**38.83**	**259**	*e*P	**P**	**08 06 56.3**	**-0.8**
ITTB	**Itaituba**	**38.86**	**263**	*e*P	**P**	**08 06 57.5**	**+0.1**
PBAR	**Barrancos**	**38.93**	**13**	*e*P	**P**	**08 07 00.1**	**+2.5**
TSUM	**Tsumeb**	**39.09**	**121**	P	**P**	**08 06 60.0**	**+0.6**
TSUM				IAmb	IAmb	08 07 01.3	
	comp=Z,61nm,1.1s						
TSUM	**Tsumeb**	**39.09**	**121**	IAMs_20	IAMs_20	08 19 38.6	
	comp=Z,1μm,20.0s						
FRTB	**Fartura**	**39.26**	**231**	*e*P	**P**	**08 07 01.5**	**+0.9**
PID	**Ribeirinha**	**39.41**	**346**	*e*T	T	08 48 13.2	
PCAN	**Candelaria**	**39.51**	**346**	*e*T	T	08 48 26.7	
PICO	**Pico**	**39.53**	**346**	*e*T	T	08 48 21.9	
PMTG	**Montargil**	**39.55**	**11**	*e*P	**P**	**08 07 06.5**	**+3.8**
	comp=Z,42nm,1.5s						
CALA	**Caldeira**	**39.68**	**346**	*e*T	T	08 48 26.7	
PCMB	**Pacaembu**	**39.75**	**235**	*e*P	**P**	**08 07 05.1**	**+0.5**
PMRV	**Marv??o**	**40.06**	**12**	*e*LR	LR	08 19 22.1	
CART	**Cartagena**	**40.08**	**20**	P	**P**	**08 07 06.8**	**-0.3**
CART				IAmb	IAmb	08 07 21.0	
	comp=Z,62nm,1.1s						
PCBR	**Castelo Branco**	**40.44**	**11**	*e*P	**P**	**08 07 13.2**	**+3.1**
PCAS	**Casmilo, Conde**	**40.46**	**10**	*e*P	**P**	**08 07 12.8**	**+2.6**
	comp=Z,89nm,1.4s						
COI	**Coimbra**	**40.62**	**10**	P	**P**	**08 07 13.6**	**+2.0**

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COI                                 IAmb     IAmb     08 07 25.6
      comp=Z,83nm,1.1s
PAB   San Pablo        40.88  15 P        P        08 07 15.4 +1.6
MTE   Manteigas        40.97  11 P        P        08 07 16.7 +2.2
MTE                              IAmb     IAmb     08 07 28.8
      comp=Z,72nm,1.1s
MTE   Manteigas        40.97  11 eP       P        08 07 16.8 +2.2
      comp=Z,72nm,1.1s
MTE   Manteigas        40.97  11 eLR      LR       08 21 06.0
      comp=Z,480nm,16.0s
ESDC  Sonseca Array    41.10  15 P        P        08 07 16.6 +0.9
      comp=Z,5.4nm,0.9s,baz=202,slow=8.9,SNR=16
ESDC                             PP       PnPn     08 08 54.9 -0.2
      comp=Z,6.5nm,0.9s,baz=190,slow=10.0,SNR=6.0
ESDC                             LR       LR       08 25 02.3
      comp=Z,390nm,18.6s,baz=185,slow=37
ESDC  Sonseca Array    41.10  15 P        P        08 07 16.5 +0.9
PP1B  Ponte de Pedra   41.16 243 eP       P        08 07 15.6 -0.8
PVIS  Viseu            41.21  11 eP       P        08 07 18.5 +2.0
      comp=Z,72nm,1.3s
TRCB  Terra Rica       41.43 234 eP       P        08 07 19.2 +0.6
PVRL  Vila Real        41.78  11 eP       P        08 07 24.1 +2.9
MVO   Moncorvo         41.81  11 eLR      LR       08 21 17.8
      comp=Z,285nm,20.0s
PTGB  Pitanga          41.93 231 eP       P        08 07 23.9 +1.2
PTGA  Pitinga          42.88 269 P        P        08 07 30.5  0.0
PTGA                             IAmb     IAmb     08 07 32.2
      comp=Z,69nm,1.1s
PTGA                             IAMs_20  IAMs_20  08 23 16.2
      comp=Z,854nm,19.0s
PTGA  Pitinga          42.88 269 eP       P        08 07 30.6 +0.1
AQDB  Aquidauana       42.97 239 eP       P        08 07 30.7 -0.5
KEST  Kesra            43.09  32 P        P        08 07 33.2 +1.3
      comp=Z,24nm,0.8s,baz=206,slow=4.6,SNR=13
KEST                             LR       LR       08 27 05.8
      comp=Z,1µm,18.6s,baz=184,slow=38
KEST  Kesra            43.09  32 P        P        08 07 33.3 +1.3
KEST                             IAmb     IAmb     08 07 34.7
      comp=Z,38nm,0.9s
ITAB  Concordia        43.31 228 eP       P        08 07 36.0 +2.2
MACA  Manacapuru-AM    43.69 265 eP       P        08 07 37.6 +0.5
VILB  Vilhena          44.67 251 eP       P        08 07 46.0 +1.1
ETSF  Etsaut           45.05  17 eP       P        08 07 49.0 +1.4
ETSF                             pmax     pmax
      comp=Z,18nm,0.9s
EPF   Esparros         45.44  18 eP       P        08 07 52.2 +1.5
EPF                              pmax     pmax
      comp=Z,30nm,1.2s
H05S1 Guadeloupe/Mar   45.51 290 T        T        08 56 18.5
      SNR=20
FDF   Fort de France   45.88 290 P        P        08 07 54.7 +0.2
CPSB  Cacapava Do Su   46.02 225 eP       P        08 07 56.7 +1.3
SIV   San Ignacio      46.27 248 LR       LR       08 26 45.7
      comp=Z,1µm,18.6s,baz=75,slow=35
MTLF  Montolieu        46.32  19 eP       P        08 07 58.1 +0.5
MTLF                             pmax     pmax
      comp=Z,16nm,0.9s
SAML  Samuel           46.78 258 P        P        08 08 02.1 +0.5
CPUP  Villa Florida    46.86 233 P        P        08 08 02.1 +0.1
      comp=Z,8.6nm,0.8s,baz=64,slow=8.6,SNR=22
CPUP                             LR       LR       08 26 45.8
      comp=Z,755nm,18.3s,baz=70,slow=35
CPUP  Villa Florida    46.86 233 P        P        08 08 01.3 -0.7
PLTB  Pedras Altas     46.91 224 eP       P        08 08 04.5 +2.0
LSZ   Lusaka           47.30 111 P        P        08 08 06.1 +0.3
LSZ                              IAmb     IAmb     08 08 07.7
      comp=Z,65nm,1.6s
MBAR  Mbarara          47.84  91c iP      P        08 08 11.9 +1.8
MBAR                             pmax     pmax
      comp=Z,67nm,1.1s
MBAR  Mbarara          47.84  91 P        P        08 08 11.4 +1.3
RJF   Les Rejaudoux    47.86  18 eP       P        08 08 10.5 +1.0
RJF                              pmax     pmax
      comp=Z,19nm,1.1s
LMR   La Mourre        47.88  23 eP       P        08 08 10.7 +1.0
LMR                              pmax     pmax
      comp=Z,76nm,1.4s
ITQB  Itaqui           47.95 228 eP       P        08 08 11.0 +0.5
SUR   Sutherland       48.24 136 P        P        08 08 13.3 +0.4
LBTB  Lobatse          48.28 124 P        P        08 08 13.0 -0.2
VIVF  Saint-Julien-l   48.50  21 eP       P        08 08 15.5 +1.0
VIVF                             pmax     pmax
      comp=Z,13nm,1.0s
SABA  Saba             48.57 293 IAMs_20  IAMs_20  08 22 43.8
      comp=Z,734nm,19.0s
SBF   Sospel           48.69  24 eP       P        08 08 17.0 +0.9
SBF                              pmax     pmax
      comp=Z,49nm,1.2s
ISO   Isola            48.81  23 P        P        08 08 19.4 +2.5
ISO                              pmax     pmax
      comp=Z,15nm,2.1s
TCF   Toulx Ste Croi   48.95  18 eP       P        08 08 19.2 +1.2
TCF                              pmax     pmax
      comp=Z,22nm,1.3s
ORIF  Oris-en-Rattie   48.98  22 eP       P        08 08 19.9 +1.6
ORIF                             pmax     pmax
      comp=Z,37nm,1.4s
MBDF  Montbardon       49.16  22 eP       P        08 08 21.4 +1.7
MBDF                             pmax     pmax
      comp=Z,26nm,0.9s
CASP  Castiglione de   49.29  27 P        P        08 08 21.2 +0.6
CASP                             IAmb     IAmb     08 08 22.4
      comp=Z,28nm,0.9s
BNI   Bardonecchia     49.40  22 P        P        08 08 23.6 +2.1
BNI                              pmax     pmax
      comp=Z,24nm,1.2s
BNI   Bardonecchia     49.40  22 P        P        08 08 23.3 +1.8
LATE  Laterza          49.59  28 P        P        08 08 23.2 +0.3
LATE                             IAmb     IAmb     08 08 46.1
      comp=Z,38nm,1.2s
BOSA  Boshof           49.59 129 P        P        08 08 22.9 -0.4
      comp=Z,41nm,0.9s,baz=302,slow=7.4,SNR=37
BOSA                             LR       LR       08 25 30.0
      comp=Z,478nm,20.4s,baz=306,slow=32
BOSA  Boshof           49.59 129 P        P        08 08 22.7 -0.6
TIP   Timpagrande      49.66  35 P        P        08 08 23.9 +0.3
TIP                              IAmb     IAmb     08 08 25.2
      comp=Z,44nm,0.9s
TIP                              IAMs_20  IAMs_20  08 30 34.7
      comp=Z,727nm,20.0s
AVF   Avril sur Loir   49.76  18 eP       P        08 08 25.2 +1.1
AVF                              pmax     pmax
      comp=Z,15nm,1.2s
LPG   La Plagne        49.80  22 eP       P        08 08 26.5 +1.7
LPG                              pmax     pmax
      comp=Z,27nm,1.0s
LPL   La Plagne        49.81  22 eP       P        08 08 26.4 +1.6
LPL                              pmax     pmax
      comp=Z,17nm,0.8s
ETMB  Extrema          49.87 257 eP       P        08 08 25.6 +0.1
CDVI  St. Croix        50.01 293 P        P        08 08 27.4 +1.0
GRR   Gorron           50.04  14 eP       P        08 08 27.0 +0.8
GRR                              pmax     pmax
      comp=Z,53nm,1.4s
AQU   L'Aquila         50.15  29 P        P        08 08 29.4 +2.1
AQU                              pmax     pmax
      comp=Z,82nm,1.0s
AQU   L'Aquila         50.15  29 P        P        08 08 28.8 +1.5
LOR   Lormes           50.34  18 eP       P        08 08 29.4 +0.9
LOR                              pmax     pmax
      comp=Z,19nm,1.0s
CLF   Chambon-Foret    50.54  17 P        P        08 08 31.3 +1.4
CLF                              IAmb     IAmb     08 08 32.6
      comp=Z,38nm,0.8s
CUPR  Culebra, Puert   50.63 294 P        P        08 08 31.6 +0.4
SENIN Lac Senin/Sane   50.74  22 P        P        08 08 32.7 +0.9
MTP   Monte Pirata     50.82 293 P        P        08 08 33.5 +0.9
CBYP  Canovanas        51.14 293 P        P        08 08 36.0 +0.8
CBYP                             IAmb     IAmb     08 08 49.1
      comp=Z,50nm,1.1s
PDPR  Patillas Dam,    51.23 293 P        P        08 08 36.5 +0.8
GCPR  Guaynabo City    51.36 293 P        P        08 08 37.6 +0.9
GCPR                             IAmb     IAmb     08 08 38.5
      comp=Z,52nm,1.2s
SJG   San Juan         51.37 293 P        P        08 08 36.2 -0.6
SALO  Salr             51.39  25 P        P        08 08 36.9 +0.4
SALO                             IAMs_20  IAMs_20  08 23 06.6
      comp=Z,823nm,18.0s
OBIP  Obispado Ponce   51.77 293 P        P        08 08 39.2 -0.6
OBIP                             IAmb     IAmb     08 08 39.8
      comp=Z,34nm,0.9s
HAU   Haudompre        51.80  20 eP       P        08 08 40.1 +0.6
HAU                              pmax     pmax
      comp=Z,19nm,0.7s
AOPR  Arecibo Observ   51.99 293 P        P        08 08 41.5 +0.1
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AOPR                             IAmb     IAmb     08 08 46.4
      comp=Z,59nm,0.9s
MLPR  Magueyes Islan   52.16 293 P        P        08 08 42.0 -0.6
CTI   Castel Tesino    52.21  25 P        P        08 08 42.6 -0.1
CTI                              pmax     pmax
      comp=Z,23nm,0.9s
CTI   Castel Tesino    52.21  25 P        P        08 08 42.8 +0.2
ECH   Echery           52.26  20 P        P        08 08 43.0  0.0
MPR   Mayaguez         52.31 293 P        P        08 08 44.9 +1.2
MPR                              IAmb     IAmb     08 08 48.6
      comp=Z,55nm,0.9s
DAVA  Damuels          52.49  23 i P      P        08 08 44.9 +0.1
      comp=Z,46nm,0.9s,SNR=14
DAVA                             eP       PP       08 10 41.4 -2.4
      comp=Z,17nm,1.1s
FETA  Feichten         52.61  24 i P      P        08 08 44.9 -0.8
      comp=Z,18nm,0.8s,SNR=6.2
BFO   Black Forest     52.77  21 P        P        08 08 47.2 +0.4
BFO                              IAmb     IAmb     08 08 48.6
      comp=Z,26nm,1.0s
BFO   Black Forest     52.77  21 eP       P        08 08 48.3 +1.5
      comp=Z,30nm,1.0s,baz=215,slow=7.2
STAL  STALIGIAL        52.83  26 P        P        08 08 48.5 +1.3
TRI   Trieste          52.87  27 P        P        08 08 49.3 +1.9
TRI                              pmax     pmax
      comp=Z,61nm,1.2s
TRI   Trieste          52.87  27 P        P        08 08 48.0 +0.6
TRI                              IAmb     IAmb     08 08 49.4
      comp=Z,58nm,1.1s
UBR   Ueberruh         52.90  23 eP       P        08 08 49.1 +1.4
      comp=Z,34nm,1.0s,baz=215,slow=7.2
LPAZ  La Paz           52.91 249 P        P        08 08 48.4 -0.5
      comp=Z,19nm,0.8s,baz=71,slow=6.5,SNR=83
LPAZ                             LR       LR       08 30 31.7
      comp=Z,845nm,18.6s,baz=86,slow=35
LPAZ  La Paz           52.91 249 P        P        08 08 48.2 -0.7
LPAZ                             IAmb     IAmb     08 08 49.7
      comp=Z,22nm,0.8s
LPAZ  La Paz           52.91 249 eP       P        08 08 48.6 -0.4
BAIF  Baives           52.93  17 eP       P        08 08 48.2 +0.4
BAIF                             pmax     pmax
      comp=Z,29nm,1.0s
SQTA  Sankt Quirin     52.96  24 i P      P        08 08 48.5 +0.2
      comp=Z,41nm,1.0s,SNR=12
SQTA                             eP       PP       08 10 46.0 -2.0
      comp=Z,14nm,1.2s
RETA  Reutte           53.00  23 eP       P        08 08 48.7 +0.3
      comp=Z,5.0nm,0.8s
RETA                             eP       PP       08 10 50.3 +2.0
      comp=Z,6.4nm,0.7s
MOTA  Moosalm          53.02  24 eP       P        08 08 48.4 -0.4
      comp=Z,18nm,1.2s
DOU   Dourbes          53.08  17 dP       P        08 08 48.9  0.0
DOU                              dPP      PP       08 10 47.4 -1.4
ABTA  Abfaltersbach    53.13  25 i P      P        08 08 50.6 +1.2
      comp=Z,26nm,1.1s,SNR=6.1
ABTA                             eP       PP       08 10 50.1 +0.6
      comp=Z,19nm,1.7s
WTTA  Wattenberg       53.17  24 i P      P        08 08 49.9 +0.1
      comp=Z,27nm,0.9s,SNR=7.7
ZOU   Zoufplan         53.17  26 P        P        08 08 50.1 +0.2
ZOU                              IAmb     IAmb     08 08 52.1
      comp=Z,28nm,1.1s
BRY   Bratogost        53.18  32 P        P        08 08 54.9 +4.9
WATA  Walderalm        53.20  24 eP       P        08 08 50.2 +0.2
      comp=Z,24nm,1.2s
PDG   Podgorica        53.25  33 P        P        08 08 52.1 +1.8
PDG                              IAmb     IAmb     08 08 53.2
      comp=Z,52nm,1.1s
PDG                              IAMs_20  IAMs_20  08 32 42.9
      comp=Z,791nm,20.0s
CADS  Cadrg            53.25  26 i P      P        08 08 51.3 +1.0
FNA   Florina          53.38  36 P        P        08 08 51.5 +0.1
STU   Stuttgart        53.46  21 P        P        08 08 50.6 -1.2
STU                              IAmb     IAmb     08 08 55.8
      comp=Z,24nm,0.7s
STU   Stuttgart        53.46  21 eP       P        08 08 53.0 +1.2
      comp=Z,31nm,1.1s,baz=215,slow=7.2
LJU   Ljubljana        53.47  27 i P      P        08 08 53.3 +1.5
BGES  Gesves           53.48  18 dP       P        08 08 52.6 +0.8
      comp=Z,13nm,0.9s
MYKA  Terra Mystica    53.52  26 i P      P        08 08 53.5 +1.2
      comp=Z,34nm,1.5s,SNR=5.7
KBA   Koelnbreinsper   53.74  25 eP       P        08 08 54.9 +0.8
      comp=Z,25nm,1.4s
KBA                              eP       PP       08 10 55.2 +0.1
      comp=Z,6.6nm,0.8s
FUR   Furstenfeldbru   53.75  23 eP       P        08 08 55.4 +1.5
      comp=Z,47nm,1.0s,baz=215,slow=7.2
APE   Apeiranthos      53.82  42⇑iP      P        08 08 53.3 -1.4
APE                              pmax     pmax
      comp=Z,102nm,1.7s
OBKA  Obir             53.83  27 eP       P        08 08 57.9 +3.3
      comp=Z,14nm,1.4s
SDV   Santo Domingo    54.00 281 P        P        08 08 56.7 +0.1
SDV                              IAmb     IAmb     08 09 10.9
      comp=Z,24nm,1.1s
SDV   Santo Domingo    54.00 281 eP       P        08 08 56.5 -0.1
SDV   Santo Domingo    54.00 281 eP       P        08 08 57.2 +0.7
SOKA  Soboth           54.18  27 i P      P        08 08 58.1 +0.9
      comp=Z,24nm,1.0s,SNR=6.5
SOKA                             eP       PP       08 10 57.9 -1.0
      comp=Z,7.9nm,1.1s
PERS  Pernice          54.18  27 i P      P        08 08 57.9 +0.7
AHRW  Bad Neuenahr-A   54.23  19 eP       P        08 08 59.9 +2.5
      comp=Z,22nm,0.9s,baz=215,slow=7.2
KMBO  Kilima Mbogo     54.36  92 P        P        08 09 00.9 +1.6
      comp=Z,40nm,1.0s,baz=258,slow=7.6,SNR=50
KMBO                             LR       LR       08 30 31.6
      comp=Z,616nm,18.0s,baz=274,slow=34
TNS   Taunus Mts       54.42  20 eP       P        08 09 00.5 +1.8
      comp=Z,30nm,0.8s,baz=215,slow=7.2
MOA   Molln            54.73  25 eP       P        08 09 00.1 -1.0
      comp=Z,12nm,1.2s
DIVS  Divibare         54.77  32 P        P        08 09 03.1 +1.6
DIVS                             IAmb     IAmb     08 09 04.0
      comp=Z,28nm,0.9s
PB08  IPOC Station P   54.78 245 P        P        08 09 00.9 -1.5
PB08                             IAmb     IAmb     08 09 02.4
      comp=Z,26nm,1.2s
ARSA  Arzberg          54.83  27 eP       P        08 09 02.2 +0.4
      comp=Z,13nm,1.0s
ARSA                             eP       PP       08 11 05.3 +0.5
      comp=Z,7.0nm,0.9s
MNMC  Minye Minye      54.93 246 P        P        08 09 02.1 -1.2
MNMC                             IAmb     IAmb     08 09 03.1
      comp=Z,41nm,1.4s
GRFO  Grafenberg       54.97  22 P        P        08 09 02.0 -0.7
GRF   Grafenberg Arr   54.97  22 eP       P        08 09 04.0 +1.3
      comp=Z,21nm,1.0s,baz=215,slow=7.2
BUG   Bochum--Univer   55.08  18 eP       P        08 09 05.3 +1.9
      comp=Z,28nm,1.0s,baz=215,slow=7.2
WET   Wettzell         55.17  24 eP       P        08 09 05.6 +1.4
      comp=Z,44nm,1.1s,baz=215,slow=7.2
KASTN Kahler Asten     55.24  19 eP       P        08 09 06.4 +1.7
      comp=Z,82nm,2.3s,baz=215,slow=7.2
LVC   Limon Verde      55.24 242 P        P        08 09 04.4 -1.2
LVC                              IAmb     IAmb     08 09 06.2
      comp=Z,77nm,1.8s
LVC   Limon Verde      55.24 242 eP       P        08 09 05.3 -0.4
GEC2  GERESS Array S   55.27  24 P        P        08 09 04.6 -0.4
GEC2  GERESS Array S   55.27  24 eP       P        08 09 06.4 +1.3
      comp=Z,72nm,1.8s,baz=215,slow=7.2
GERES GERESS Array B   55.27  24 P        P        08 09 05.8 +0.7
      comp=Z,7.9nm,0.7s,baz=213,slow=6.4,SNR=24
GERES                            PP       PP       08 11 04.8 -4.0
      comp=Z,14nm,0.8s,baz=211,slow=7.6,SNR=12
GERES                            LR       LR       08 33 48.5
      comp=Z,292nm,18.4s,baz=233,slow=37
GERES GERESS Array B   55.27  24 P        P        08 09 04.8 -0.2
PB09  IPOC Station P   55.30 243 P        P        08 09 05.0 -0.8
PB09                             IAmb     IAmb     08 09 06.6
      comp=Z,32nm,0.9s
PB01  IPOC Station P   55.32 244 P        P        08 09 04.8 -1.1
FRGS  Fruska Gora      55.40  31 ⇓P       P        08 09 05.0 -1.0
ROTZ  Rotzenmuhle      55.41  23 eP       P        08 09 07.1 +1.2
      comp=Z,87nm,2.5s,baz=215,slow=7.2
KHC   Kasperske Hory   55.44  24⇑iP      P        08 09 06.4 +0.2
KHC                              pmax     pmax
      comp=Z,23nm,0.9s
KHC   Kasperske Hory   55.44  24 eP       P        08 09 05.2 -1.0
KHC                              ex       x        08 09 16.0
KHC                              ePP      PP       08 11 07.2 -3.0
KHC                              AMS      AMS      08 36 40.0
      comp=Z,700nm,17.7s
KHC   Kasperske Hory   55.44  24 P        P        08 09 06.5 +0.3
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KHC                              IAmb     IAmb     08 09 10.4
      comp=Z,35nm,1.7s
UBBA  Unterbreizbach   55.46  21 eP       P        08 09 08.2 +2.1
      comp=Z,44nm,1.7s,baz=215,slow=7.2
CONA  Conrad Observa   55.49  26 i P      P        08 09 07.1 +0.5
      comp=Z,21nm,1.1s,SNR=7.6
CONA                             eP       PP       08 11 10.1 -0.6
      comp=Z,20nm,1.3s
CKRC  Cesky Krumlov    55.50  25 eP       P        08 09 07.5 +0.9
CKRC                             AMS      AMS      08 33 50.0
      comp=Z,500nm,16.3s
PSGCX Pisagua          55.53 246 P        P        08 09 05.8 -1.6
MORH  Mrgy, Hungar     55.54  29 ⇓P       P        08 09 06.2 -0.7
MANZ  Manzenberg       55.54  22 eP       P        08 09 08.2 +1.3
      comp=Z,28nm,1.0s,baz=215,slow=7.2
VTS   Vitosha          55.62  35 ⇑P       P        08 09 08.0 +0.3
VTS   Vitosha          55.62  35 P        P        08 09 08.4 +0.7
VTS                              IAmb     IAmb     08 09 10.2
      comp=Z,42nm,0.9s
SOP   Sopron           55.62  27 P        P        08 09 09.5 +2.0
SOP                              pmax     pmax
      comp=Z,38nm,1.2s
PB06  IPOC Station P   55.85 242 P        P        08 09 09.4 -0.4
PB06                             IAmb     IAmb     08 09 10.9
      comp=Z,36nm,0.8s
EZN   Ezine            55.86  40 P        P        08 09 11.1 +1.8
PATCX Punta Patache    55.86 245 P        P        08 09 08.9 -0.9
PB07  IPOC Station P   55.86 243 P        P        08 09 09.3 -0.6
NKC   Novy Kostel      55.87  22 eP       P        08 09 10.9 +1.6
NKC   Novy Kostel      55.87  22 eP       P        08 09 10.9 +1.6
WERN  Wernitzgruen     55.89  22 eP       P        08 09 10.7 +1.2
      comp=Z,18nm,1.2s,baz=215,slow=7.2
PAMC  Pamplona, Colo   55.89 279 eP       P        08 09 11.2 +0.6
PB15  IPOC Station P   55.91 242 P        P        08 09 09.2 -1.0
GUNZ  Gunzen           55.93  22 eP       P        08 09 11.2 +1.5
      comp=Z,21nm,1.2s,baz=215,slow=7.2
PLN   Plauen           55.97  22 eP       P        08 09 11.2 +1.3
      comp=Z,16nm,1.1s,baz=215,slow=7.2
IBBN  Ibbenburen       55.98  18 eP       P        08 09 11.9 +2.0
      comp=Z,90nm,1.6s,baz=215,slow=7.2
CZSB  Cruzeiro do Su   55.99 261 eP       P        08 09 10.1 -0.7
WERD  Werda            55.99  22 eP       P        08 09 11.4 +1.2
      comp=Z,16nm,1.4s,baz=215,slow=7.2
TANN  Tannenbergstha   56.02  22 eP       P        08 09 11.8 +1.4
      comp=Z,29nm,1.2s,baz=215,slow=7.2
PBCC  Pribram          56.05  24 eP       P        08 09 10.7 +0.2
GTTG  Gottingen        56.05  20 eP       P        08 09 12.6 +2.2
      comp=Z,18nm,0.9s,baz=215,slow=7.2
MDVR  Moldovita        56.15  33 ⇑P       P        08 09 11.7 +0.3
RUSC  La Rusia         56.16 277 eP       P        08 09 14.1 +1.6
PLD   Plovdiv          56.17  37 P        P        08 09 13.2 +1.7
PLD                              pmax     pmax
      comp=Z,141nm,1.1s
ZST   Bratislava       56.25  27 eP       P        08 09 13.0 +1.1
ZST                              pmax     pmax
      comp=Z,134nm,1.4s
ZST   Bratislava       56.25  27 eP       P        08 09 13.0 +1.1
PB04  IPOC Station P   56.26 243 P        P        08 09 12.7  0.0
BARC  Barichara        56.31 278 eP       P        08 09 12.2 -1.1
SDDR  Presa de Saban   56.31 293 P        P        08 09 14.6 +1.6
SDDR  Presa de Saban   56.31 293 eP       P        08 08 58.4  -15
NEUB  Neuenburg        56.41  21 eP       P        08 09 14.6 +1.5
      comp=Z,29nm,1.1s,baz=215,slow=7.2
CRJC  Cerrejon, Guaj   56.45 283 eP       P        08 09 11.2 -2.9
MODS  Modra-Piesok     56.45  27 eP       P        08 09 13.3 -0.2
MODS                             pmax     pmax
      comp=Z,27nm,1.1s
MODS  Modra-Piesok     56.45  27 eP       P        08 09 13.3 -0.2
PRU   Pruhonice        56.51  24 AMS      AMS      08 37 40.0
      comp=Z,500nm,17.6s
SRO   Srobarova        56.52  28 eP       P        08 09 15.2 +1.3
SRO   Srobarova        56.52  28 eP       P        08 09 15.1 +1.2
KRUC  Moravsky         56.58  26 eP       P        08 09 14.1 -0.2
HERR  Herculane        56.59  33 ⇓P       P        08 09 13.5 -1.0
GO02  Mina Guanaco     56.60 239 P        P        08 09 15.7 +0.4
BUD   Budapest         56.62  29 P        P        08 09 15.3 +0.7
BUD                              pmax     pmax
      comp=Z,45nm,1.0s
SMOL  Smolenice        56.63  27 eP       P        08 09 15.6 +0.9
SMOL  Smolenice        56.63  27 eP       P        08 09 15.6 +0.9
BZS   Buzias           56.65  32 ⇓P       P        08 09 14.1 -0.7
ELL   Elmali           56.67  45 P        P        08 09 19.3 +4.0
ELL   Elmali           56.67  45 P        P        08 09 15.4 +0.1
CHIC  Chingaza         56.74 275 eP       P        08 09 15.1 -1.4
AC02  Maricunga        56.75 237 P        P        08 09 18.1 +1.6
MACC  Macarena, Meta   56.77 272 eP       P        08 09 14.1 -2.2
FBE   Freiberg         56.77  23 eP       P        08 09 17.2 +1.6
      comp=Z,68nm,1.8s,baz=215,slow=7.2
VRAC  Vranov           56.85  26 P        P        08 09 16.1 -0.1
      comp=Z,16nm,1.0s,baz=220,slow=6.2,SNR=3.9
VRAC                             PP       PP       08 11 19.9 -2.8
      comp=Z,2.7nm,0.3s,baz=230,slow=9.6,SNR=4.1
VRAC  Vranov           56.85  26 ⇑P       P        08 09 16.2 -0.1
VRAC  Vranov           56.85  26 eP       P        08 09 16.1 -0.1
BRRC  Barranca, Sant   56.87 278 eP       P        08 09 12.2 -4.9
PVCC  Panska Ves       56.94  24 eP       P        08 09 17.7 +0.9
PVCC  Panska Ves       56.94  24 eP       P        08 09 17.7 +0.9
CLL   Collm            56.95  22⇑iP      P        08 09 17.1 +0.2
      comp=Z,17nm,1.2s
CLL                              eS       S        08 17 11.0 +0.4
CLL   Collm            56.95  22⇑iP      P        08 09 17.1 +0.2
CLL                              eS       S        08 17 11.0 +0.4
CLL                              pmax     pmax
      comp=Z,17nm,1.2s
CLL   Collm            56.95  22 P        P        08 09 16.8 -0.1
CLL   Collm            56.95  22 eP       P        08 09 18.4 +1.6
      comp=Z,17nm,1.2s,baz=215,slow=7.2
PB10  IPOC Station P   56.95 242 P        P        08 09 17.8 +0.3
PB10                             IAmb     IAmb     08 09 18.6
      comp=Z,26nm,1.0s
BRG   Berggiesshubel   56.96  23 eP       P        08 09 17.1 +0.2
BRG                              Amp               08 09 20.6
      comp=Z,15nm,1.0s
BRG                              ex       x        08 09 45.4
BRG                              Amp               08 09 47.1
      comp=Z,22nm,1.4s
BRG                              ex       x        08 11 22.5
BRG                              Amp               08 11 30.0
      comp=Z,14nm,1.4s
BRG                              ex       x        08 16 07.1
BRG                              Amp               08 16 29.3
      comp=Z,2.7nm,0.7s
BRG                              Amp               08 39 21.0
      comp=E,0.4nm,6.6s
BRG                              Amp               08 39 31.0
      comp=Z,1.2nm,6.8s
BRG                              Amp               08 39 35.0
      comp=N,0.4nm,8.3s
BRG   Berggiesshubel   56.96  23 eP       P        08 09 18.3 +1.3
      comp=N,14nm,1.0s,baz=215,slow=7.2
JAVC  Velka Javorina   56.99  27 eP       P        08 09 18.2 +0.9
SIRR  Siria            57.10  31 ⇓P       P        08 09 19.6 +1.5
GZR   Gura Zlata       57.12  33 ⇑P       P        08 09 18.4 +0.1
FLTG  Flechtingen      57.14  20 eP       P        08 09 19.9 +1.7
      comp=N,18nm,1.2s,baz=215,slow=7.2
PB14  IPOC Station P   57.14 240 P        P        08 09 19.3 +0.1
VYHS  Vyhne            57.26  28 eP       P        08 09 19.7 +0.6
VYHS                             pmax     pmax
      comp=Z,30nm,1.0s
VYHS  Vyhne            57.26  28 eP       P        08 09 19.7 +0.6
VYHS                             ePP      PP       08 11 31.1 +4.7
ROSC  El Rosal         57.33 276 P        P        08 09 21.2 +0.5
      comp=Z,16nm,0.7s,baz=151,slow=20,SNR=17
ROSC                             LR       LR       08 31 01.1
      comp=Z,920nm,21.3s,baz=92,slow=33
ROSC  El Rosal         57.33 276 P        P        08 09 20.5 -0.3
ROSC  El Rosal         57.33 276 eP       P        08 09 18.1 -2.7
PSZ   Piszkesteto      57.35  29 P        P        08 09 20.4 +0.6
PSZ                              IAmb     IAmb     08 09 21.9
      comp=Z,30nm,1.1s
KRLC  Kraliky          57.50  25 eP       P        08 09 21.7 +0.8
KRLC  Kraliky          57.50  25 eP       P        08 09 21.7 +0.8
DPC   Dobruska-Polom   57.52  25 eP       P        08 09 21.2 +0.2
DPC                              e                 08 11 26.0
DPC                              MLR      MLR
      comp=Z,600nm,15.1s
DPC   Dobruska-Polom   57.52  25 eP       P        08 09 21.2 +0.2
DPC                              ex       x        08 09 31.9
DPC                              ePP      PP       08 11 26.0 -2.7
DPC                              AMS      AMS      08 37 30.0
      comp=Z,600nm,15.1s
EIL   Elat             57.54  54 P        P        08 09 22.0 +0.5
      comp=Z,9.8nm,0.9s,baz=356,slow=4.6,SNR=4.9
PTBC  PUERTO BERRIO,   57.57 278 eP       P        08 09 20.0 -2.0
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MORC	Moravsky Berou	57.61	26	⇑P	P	08 09 22.1	+0.4
MORC	Moravsky Berou	57.61	26	eP	P	08 09 21.7	+0.1
MORC	Moravsky Berou	57.61	26	P	P	08 09 22.2	+0.6
MORC				IAmb	IAmb	08 09 23.4	
	comp=Z,26nm,1.1s						
OSTC	Ostas	57.63	25	eP	P	08 09 22.0	+0.3
COPA	Copaceanca	57.69	35	⇓P	P	08 09 22.1	-0.2
LOT	Lotru	57.69	33	⇓P	P	08 09 22.1	-0.3
PTLC	Puerto Leguiza	57.70	270	eP	P	08 09 21.0	-1.9
AC01	Pan de Azucar	57.77	239	P	P	08 09 22.6	-0.6
AC01				IAmb	IAmb	08 09 27.1	
	comp=Z,54nm,1.3s						
HUMR	Humele	57.79	35	⇓P	P	08 09 22.1	-0.9
KSP	Ksiaz	57.88	24	eP	P	08 09 23.4	-0.1
KSP	Ksiaz	57.88	24	P	P	08 09 24.5	+1.0
NORC	Norcasia	57.92	276	eP	P	08 09 23.9	-0.5
GO03	Copiap	57.92	237	P	P	08 09 24.5	+0.2
GO03				IAmb	IAmb	08 09 25.5	
	comp=Z,42nm,0.9s						
DRGR		57.99	31	⇓P	P	08 09 23.3	-1.2
DRGR		57.99	31	P	P	08 09 25.2	+0.8
DRGR				pmax	pmax		
	comp=Z,29nm,1.0s						
LANS	Liptovska Anna	58.02	27	eP	P	08 09 27.6	+3.1
LANS	Liptovska Anna	58.02	27	eP	P	08 09 27.6	+3.1
KECS	Kecovo	58.03	29	eP	P	08 09 25.6	+1.1
KECS				pmax	pmax		
	comp=Z,12nm,1.3s						
KECS	Kecovo	58.03	29	eP	P	08 09 25.6	+1.1
ZON	Zonda	58.06	232	IAmb	IAmb	08 09 30.2	
	comp=Z,73nm,1.8s						
ARR	Arges	58.11	34	⇑P	P	08 09 26.6	+1.3
BSEG	Bad Segeberg	58.17	19	eP	P	08 09 27.1	+1.7
	comp=Z,36nm,0.9s,baz=215,slow=7.2						
RUE	Ruedersdorf	58.17	22	eP	P	08 09 27.3	+1.8
	comp=Z,49nm,1.3s,baz=215,slow=7.2						
ORTC	Ortega, Tolima	58.22	274	eP	P	08 09 24.9	-1.6
TOLC	Tolima	58.32	275	eP	P	08 09 26.5	-1.1
CSS	Mathiatis	58.34	48	IAMs_20	IAMs_20	08 34 04.6	
	comp=Z,667nm,22.0s						
VOIR		58.39	34	⇓P	P	08 09 26.9	-0.3
VOIR		58.39	34	P	P	08 09 26.9	-0.3
GUY2C	Guyana, Caldas	58.39	276	eP	P	08 09 25.9	-2.4
FLOC	Florencia	58.56	272	eP	P	08 09 26.9	-2.1
NIE	Niedzica	58.59	28	eP	P	08 09 29.9	+1.3
HELC	Santa Helena	58.61	277	eP	P	08 09 27.9	-1.8
CO01	Juntas del Tor	58.62	234	IAmb	IAmb	08 09 33.5	
	comp=Z,26nm,0.9s						
UREC	San Jos de Ur	58.72	279	eP	P	08 09 27.9	-2.2
CRVS	Cervenica-Dubn	58.78	29	eP	P	08 09 30.6	+0.7
CRVS				pmax	pmax		
	comp=Z,39nm,1.2s						
CRVS	Cervenica-Dubn	58.78	29	eP	P	08 09 30.6	+0.7
CRVS				ePP	PP	08 11 40.6	+0.6
LCO	Las Campanas	58.78	236	P	P	08 09 29.9	-0.6
LCO				IAmb	IAmb	08 09 31.2	
	comp=Z,23nm,0.8s						
LCO	Las Campanas	58.78	236	IAMs_20	IAMs_20	08 33 12.7	
	comp=Z,890nm,19.0s						
AC04	Llanos de Chal	58.83	237	IAmb	IAmb	08 09 33.7	
	comp=Z,27nm,0.9s						
DOPR	Dopca	58.90	33	⇑P	P	08 09 31.2	+0.5
MLR	Muntele Rosu	58.92	34	P	P	08 09 31.4	+0.4
	comp=Z,44nm,1.1s,baz=201,slow=5.8,SNR=20						
MLR				PP	PP	08 11 41.1	-0.2
	comp=Z,9.9nm,1.0s,baz=246,slow=1.9,SNR=3.3						
MLR	Muntele Rosu	58.92	34	⇓P	P	08 09 30.0	-1.0
OJC	Ojcow	58.93	27	eP	P	08 09 31.4	+0.6
OJC	Ojcow	58.93	27	IAmb	IAmb	08 09 32.5	
	comp=Z,24nm,0.9s						
MOTC	Monteria, Cord	58.94	280	eP	P	08 09 31.8	+0.3
BMR	Baia Mare	58.97	31	P	P	08 09 32.7	+1.5
TRSU	Trosnyk	58.98	30	P	P	08 09 32.1	+0.9
UZH	Uzhgorod	59.00	29	eP	P	08 09 32.3	+1.0
UZH				e		08 09 36.7	
ISR	Istrita	59.03	35	⇓P	P	08 09 32.5	+0.7
ISR	Istrita	59.03	35	P	P	08 09 32.4	+0.7
ARCR	ARCALIA	59.04	32	⇑P	P	08 09 31.6	0.0
CBOC	Ciudad Bolivar	59.07	277	eP	P	08 09 24.9	-7.7
ICOR	Ion Corvin	59.18	36	⇑P	P	08 09 31.8	-0.8
KOLS	Kolonicke sedl	59.20	29	eP	P	08 09 33.4	+0.7
KOLS				pmax	pmax		
	comp=Z,18nm,1.1s						
KOLS	Kolonicke sedl	59.20	29	eP	P	08 09 33.4	+0.7
OZUR		59.20	33	⇑P	P	08 09 33.6	+0.8
PLMC	San Jos del P	59.29	276	eP	P	08 09 32.8	-1.3
YOTC	Yotoco, Valle	59.31	274	eP	P	08 09 31.7	-2.6
PCON	Cinco Dias	59.32	273	eP	P	08 09 34.7	-0.1
MDUB	Mudurnu	59.37	41	P	P	08 09 33.4	-0.8
PLOR	Plostina	59.53	34	⇓P	P	08 09 35.0	-0.1
PLOR	Plostina	59.53	34	P	P	08 09 35.0	-0.1
VRI	Vrincioaia	59.58	34	⇓P	P	08 09 35.7	+0.2
VRI	Vrincioaia	59.58	34	P	P	08 09 35.6	+0.2
BURAR	Bucovina Array	59.83	32	⇑P	P	08 09 38.4	+1.1
BURAR	Bucovina Array	59.83	32	P	P	08 09 38.3	+1.1
BURAR	Bucovina Array	59.83	32	P	P	08 09 37.5	+0.2
BUR08	Bucovina Ar. S	59.84	32	P	P	08 09 38.1	+0.7
BUR08				IAmb	IAmb	08 09 39.5	
	comp=Z,15nm,0.9s						
KWP	Kalwaria Pacla	59.88	29	eP	P	08 09 38.5	+1.1
KWP	Kalwaria Pacla	59.88	29	IAmb	IAmb	08 09 40.2	
	comp=Z,38nm,1.0s						
BIZ	Bicaz	59.89	33	⇓P	P	08 09 37.9	+0.4
TPGR	Topolog	59.97	36	⇑P	P	08 09 38.1	0.0
MUD	Monsted U'grnd	59.98	16	i P	P	08 09 39.0	+1.1
MUD	Monsted U'grnd	59.98	16	i P	P	08 09 39.0	+1.1
MUD	Monsted U'grnd	59.98	16	i P	P	08 09 39.0	+1.1
CFR	Carcaliu	59.98	35	⇑P	P	08 09 37.9	-0.3
VA03	San Esteban	59.99	231	P	P	08 09 39.1	+0.4
GKP	Gorka Klasztor	60.10	23	eP	P	08 09 40.3	+1.5
GKP	Gorka Klasztor	60.10	23	eP	P	08 09 39.4	+0.5
MORS	Morshin	60.13	30	P	P	08 09 40.1	+1.0
KSV	Kosov	60.20	31	P	P	08 09 39.9	+0.3
PEL	Peldehue	60.24	231	P	P	08 09 40.1	-0.1
GCUF	Volcan Galeras	60.25	271	eP	P	08 09 41.5	+0.3
MT05	Renca	60.38	231	P	P	08 09 41.5	+0.3
MT05				IAMs_20	IAMs_20	08 33 16.6	
	comp=Z,927nm,22.0s						
NNA	Nana	60.50	256	LR	LR	08 35 11.1	
	comp=Z,1μm,18.3s,baz=70,slow=35						
NNA	Nana	60.50	256	⇓iP	P	08 09 35.4	-7.0
NNA				pmax	pmax		
	comp=Z,33nm,1.5s						
NNA	Nana	60.50	256	P	P	08 09 42.1	-0.3
NNA				IAmb	IAmb	08 09 42.4	
	comp=Z,19nm,1.1s						
LVV	L'vov	60.65	29	eP	P	08 09 42.5	-0.1
BRTR	Keskin Array B	60.66	43	P	P	08 09 43.8	+0.6
	comp=Z,23nm,0.9s,baz=234,slow=5.9,SNR=58						
BRTR				PcP	PcP	08 10 28.7	+1.4
	comp=Z,8.6nm,0.9s,baz=202,slow=5.3,SNR=4.4						
BRTR				LR	LR	08 38 20.2	
	comp=Z,117nm,20.1s,baz=222,slow=38						
BR131	Keskin Array S	60.66	43c	iP	P	08 09 43.7	+0.6
BR131	Keskin Array S	60.66	43	P	P	08 09 43.8	+0.6
BO02	Sierra Bellavi	60.94	229	P	P	08 09 44.3	-0.8
BO02				IAmb	IAmb	08 09 46.2	
	comp=Z,33nm,0.9s						
KMPD	K-Podol'skiy	61.07	32	P	P	08 09 45.0	-0.6
OTAV	Otavalo	61.35	270	P	P	08 09 47.4	-1.3
OTAV	Otavalo	61.35	270	IAMs_20	IAMs_20	08 33 23.9	
	comp=Z,554nm,20.0s						
OTAV	Otavalo	61.35	270	eP	P	08 09 48.8	+0.1
HORU	Horodok	61.46	31	P	P	08 09 47.3	-0.9
ATAH	Atahualpa	61.56	262	LR	LR	08 35 15.6	
	comp=Z,958nm,20.9s,baz=88,slow=35						
BI02	San Fabin de	62.04	228	P	P	08 09 52.0	-0.5
BI02				IAmb	IAmb	08 09 53.5	
	comp=Z,29nm,1.1s						
GAZ	Gaziantep	62.11	47	P	P	08 09 52.3	-0.6
KONO	Kongsberg	62.85	15	⇑iP	P	08 09 58.6	+1.3
KONO				pmax	pmax		
	comp=Z,26nm,1.2s						
SUW	Suwalki	63.08	25	eP	P	08 09 59.3	+0.4
SUW	Suwalki	63.08	25	eP	P	08 09 58.1	-0.8
SUW	Suwalki	63.08	25	P	P	08 09 58.5	-0.5
PLCA	Paso Flores	63.22	223	P	P	08 09 59.9	-0.3
	comp=Z,2.4nm,0.9s,baz=22,slow=4.4,SNR=9.0						
PLCA				LR	LR	08 33 25.6	
	comp=Z,362nm,21.8s,baz=66,slow=32						
PLCA	Paso Flores	63.22	223	IAmb	IAmb	08 10 01.9	
	comp=Z,36nm,1.7s						
BATG	Bathurst New B	63.30	325	P	P	08 10 00.4	-0.1
BATG				IAmb	IAmb	08 10 05.3	
	comp=Z,28nm,0.9s						
LC01	Cunco	63.38	225	P	P	08 10 00.2	-1.0
BI03	Tigo	63.41	228	P	P	08 10 00.7	-0.8
BI03				IAmb	IAmb	08 10 02.6	
	comp=Z,27nm,0.9s						
MALT	Malatya	63.44	46	P	P	08 10 02.9	+1.1
KIEV	Kiev	63.79	31	P	P	08 10 02.0	-1.7
AKASG	Malin Array Be	63.80	31	P	P	08 10 03.4	-0.3
	comp=Z,30nm,1.0s,baz=235,slow=5.8,SNR=39						
AKASG				LR	LR	08 40 11.9	
	comp=Z,491nm,18.3s,baz=235,slow=38						
AKASG	Malin Array Be	63.80	31	P	P	08 10 03.0	-0.7
AKBB	Malin Array Si	63.80	31c	iP	P	08 10 03.0	-0.7
AKBB				pmax	pmax		
	comp=Z,54nm,0.9s						
AKBB	Malin Array Si	63.80	31	P	P	08 10 03.1	-0.6
G64A	Maxfield	63.87	322	P	P	08 10 03.7	-0.7
	baz=119						
E64A	Bridgewater	63.89	323	P	P	08 10 04.2	-0.2
	baz=120						
NBO00	NORSAR Array S	64.34	15	P	P	08 10 07.6	+0.5
D63A	Stockholm	64.37	324	P	P	08 10 08.4	+0.8
	baz=120						
PABE	Paberze	64.44	24	eP	P	08 10 07.5	-0.4
NB2	NORSAR Subarra	64.46	15	P	P	08 10 08.3	+0.3
	comp=Z,19nm,1.0s,baz=210,slow=6.9						
NB2	NORSAR Subarra	64.46	15	P	P	08 10 08.3	+0.3
	baz=210,slow=6.9						
NOA	NORSAR Array B	64.46	15	P	P	08 10 08.2	+0.3
	comp=Z,6.5nm,0.7s,baz=209,slow=6.6,SNR=21						
NOA				LR	LR	08 40 31.5	
	comp=Z,254nm,18.7s,baz=205,slow=38						
J62A	Henniker	64.89	319	P	P	08 10 11.9	+0.8
	baz=116						
K62A	Royalston	64.93	318	P	P	08 10 12.8	+1.4
	baz=115						
RAYN	Ar Rayn	64.94	64	i P	P	08 10 13.3	+1.5
	SNR=6.6						
RAYN	Ar Rayn	64.94	64	P	P	08 10 11.9	+0.1
RAYN				IAmb	IAmb	08 10 13.9	
	comp=Z,15nm,1.1s						
L61B	Northampton	65.14	318	P	P	08 10 13.7	+1.0
	baz=115						
NACGM	Naroch	65.24	26	i P	P	08 10 11.1	-2.0
NACGM				i P	P	08 10 11.1	-2.0
NACGM				i P	P	08 10 11.1	-2.0
NACGM				i PcP	PcP	08 10 40.1	-5.4
NACGM				i PP	PP	08 12 37.7	+0.9
NACGM				i PPP	PPP	08 14 02.6	
NACGM				i S	S	08 19 00.3	+4.1
NACGM				i PS		08 20 23.5	
NACGM				i SS	SS	08 23 28.9	+20
NACGM				i SSS	SSS	08 26 27.8	
NACGM				i LQ	LQ	08 34 11.5	
NACGM				i LR	LR	08 38 51.1	
IIGN	Ignalina	65.29	26	eP	P	08 10 13.7	+0.3
UPP	Uppsala	65.33	18	eP	P	08 10 13.2	-0.4
ISAL	Salakas	65.39	25	eP	P	08 10 14.3	+0.2
M61A	Granite Spring	65.42	316	P	P	08 10 14.7	+0.1
	baz=113						
J61A	Chester	65.43	319	P	P	08 10 14.4	-0.2
	baz=115						
I61A	Oroboro, Fairl	65.46	319	P	P	08 10 15.6	+0.8
	baz=116						
MNK	Minsk	65.48	27	i P	P	08 10 14.2	-0.4
	comp=E,4.0nm,0.8s						
MNK				i P	P	08 10 14.2	-0.4
	comp=N,29nm,1.1s						
MNK				i P	P	08 10 14.2	-0.4
	comp=Z,44nm,0.8s						
MNK				i PcP	PcP	08 10 46.0	-0.4
MNK				i PP	PP	08 12 38.0	-0.9
MNK				i PPP	PPP	08 14 10.7	
MNK				i S	S	08 19 00.6	+1.5
MNK				i ScS	SKSac	08 20 09.6	-0.1
MNK				i SS	SS	08 23 13.5	+0.7
MNK				i SSS	SSS	08 26 35.8	
MNK				i LQ	LQ	08 34 08.7	
MNK				i LR	LR	08 39 07.4	
MNK				i LRM	MLR	08 41 15.7	
	comp=Z,183nm,17.4s						
MNK				i LRM	MLR	08 41 19.7	
	comp=N,312nm,16.6s						
MNK				i LRM	MLR	08 42 05.3	
	comp=E,51nm,18.1s						
IDID	Didziasalis	65.49	26	eP	P	08 10 15.0	+0.3
V61A	Roper	65.50	310	IAMs_20	IAMs_20	08 33 03.8	
	comp=Z,696nm,20.0s						
OPO	Ambohidratompo	65.76	110	LR	LR	08 37 21.7	
	comp=Z,195nm,18.9s,baz=122,slow=35						
D60A	Saint Jean D'O	65.99	323	P	P	08 10 18.1	0.0
	baz=118						
V60A	Jim Taylor Roa	66.02	309	IAMs_20	IAMs_20	08 34 17.6	
	comp=Z,558nm,20.0s						
H60A	Morristown	66.05	320	P	P	08 10 18.4	-0.2
	baz=116						
I60A	Shoreham	66.13	319	P	P	08 10 20.1	+1.1
	baz=115						
W60A	Pink Hill	66.15	309	P	P	08 10 20.7	+1.4
	baz=108						
Y60A	Bolivia	66.24	307	IAMs_20	IAMs_20	08 33 04.4	
	comp=Z,474nm,20.0s						
060A	Indiantown	66.25	300	IAMs_20	IAMs_20	08 33 00.1	
	comp=Z,586nm,20.0s						
061Z	Ochoppi	66.48	298	IAMs_20	IAMs_20	08 32 07.3	
	comp=Z,488nm,20.0s						
MTSE	Matsula	66.61	22	eP	P	08 10 22.3	+0.5
U59A	Littleton	66.61	310	IAMs_20	IAMs_20	08 38 02.2	
	comp=Z,573nm,19.0s						
H59A	Cadyville	66.72	320	P	P	08 10 23.6	+0.7
	baz=115						
Y59A	Loris	66.76	307	IAMs_20	IAMs_20	08 34 38.1	
	comp=Z,439nm,20.0s						
CBN	Corbin Frederi	66.89	312	IAMs_20	IAMs_20	08 38 23.5	
	comp=Z,502nm,19.0s						
BATM	Batumi	67.01	44	P	P	08 10 25.3	+0.5
G58A	Ormstown	67.17	320	P	P	08 10 25.9	+0.3
	baz=115						
I58A	Old Forge	67.18	318	P	P	08 10 27.0	+1.2
	baz=113						
R58B	Mineral	67.19	312	P	P	08 10 26.2	+0.2
	baz=109						
R58B	Mineral	67.19	312	IAMs_20	IAMs_20	08 33 39.4	
	comp=Z,485nm,20.0s						
U58A	Oxford	67.21	310	P	P	08 10 27.3	+1.2
	baz=108						
P58A	Pank, Wackersv	67.26	313	P	P	08 10 28.5	+2.1
	baz=110						
D58A	Chemin du LacG	67.27	322	P	P	08 10 27.4	+1.1
	baz=116						
K58A	Earlville	67.28	317	P	P	08 10 27.4	+0.9
	baz=112						
N58A	Sunbury	67.31	315	P	P	08 10 27.0	+0.3
	baz=111						
M58A	Price's Panora	67.32	315	P	P	08 10 27.9	+1.1
	baz=111						
DWPF	Disney Wildern	67.42	300	IAMs_20	IAMs_20	08 37 40.8	
	comp=Z,480nm,18.0s						
VSU	Vasula	67.56	23	eP	P	08 10 27.2	-0.7
VSU	Vasula	67.56	23c	iP	P	08 10 27.8	0.0
VSU				pmax	pmax		
	comp=Z,84nm,0.9s						
NHSC	New Hope	67.56	306	IAMs_20	IAMs_20	08 35 04.5	
	comp=Z,530nm,18.0s						
ESPN	Las Esperanzas	67.70	283	P	P	08 10 29.1	-0.4
ESPN				IAmb	IAmb	08 10 31.5	
	comp=Z,40nm,1.2s						
U57A	Blanch	67.82	310	P	P	08 10 29.9	-0.1
	baz=107						
Q57A	Strasburg	67.93	313	P	P	08 10 31.9	+1.2
	baz=109						
T57A	Hurt	67.93	310	IAMs_20	IAMs_20	08 35 54.0	
	comp=Z,520nm,20.0s						
S57A	Dark Hollow, R	67.93	311	IAMs_20	IAMs_20	08 34 22.1	
	comp=Z,485nm,20.0s						
257A	Skidaway Islan	67.97	305	IAMs_20	IAMs_20	08 32 44.3	
	comp=Z,591nm,22.0s						
W57A	Gilead	67.97	308	IAMs_20	IAMs_20	08 34 08.2	
	comp=Z,503nm,21.0s						
V57A	Coltrane Farms	68.01	309	P	P	08 10 30.2	-1.0
	baz=107						
JTS	Las Juntas de	68.19	281	eP	P	08 10 29.0	-3.8
JTS				pmax	pmax		
	comp=Z,32nm,1.8s						
AKH	Akhalkalaki	68.20	45	P	P	08 10 33.3	+0.8
BIRD	Birdtown, Kers	68.20	307	IAMs_20	IAMs_20	08 34 23.3	
	comp=Z,444nm,20.0s						
BGD	Bogdanovka	68.22	45	P	P	08 10 33.7	+1.0
NEY	Neytrino	68.32	43	⇓eP	P	08 10 33.4	+0.2
NEY				pmax	pmax		
	comp=Z,6.0nm,0.8s						
E56A	St. Veronique	68.37	321	P	P	08 10 34.1	+0.9
	baz=114						
P56A	Dayton Farm, R	68.39	313	P	P	08 10 33.5	0.0
	baz=109						
W56A	Indian Trail	68.43	308	P	P	08 10 34.7	+0.9
	baz=106						
O56A	Blue Knob Stat	68.44	314	P	P	08 10 34.7	+0.8
	baz=109						
N56A	West Decatur	68.46	314	P	P	08 10 34.0	0.0
	baz=110						
Q56A	Snyder Ridge,	68.50	312	P	P	08 10 35.0	+0.8
	baz=108						
Q56A	Snyder Ridge,	68.50	312	IAmb	IAmb	08 10 50.5	
	comp=Z,20nm,0.9s						
ACON	Acoyapa	68.53	283	P	P	08 10 35.0	+0.2
T56A	Rocky Mt	68.53	310	P	P	08 10 34.8	+0.3
	baz=107						
KIV	Kislovodsk	68.56	42	P	P	08 10 35.4	+0.8
KIV	Kislovodsk	68.56	42	eP	P	08 10 35.1	+0.5
KIV				pmax	pmax		
	comp=Z,103nm,1.1s						
KIV				MLR	MLR		
	comp=Z,265nm,17.0s						
KIV	Kislovodsk	68.56	42	P	P	08 10 34.8	+0.2
M56A	Emporium	68.57	315	P	P	08 10 35.5	+0.8
	baz=110						
Z56A	Williston	68.58	306	IAMs_20	IAMs_20	08 34 18.5	
	comp=Z,419nm,20.0s						
ONI	Oni	68.58	44	P	P	08 10 34.9	+0.1
U56A	King	68.61	309	IAMs_20	IAMs_20	08 34 40.1	
	comp=Z,577nm,20.0s						
KBZ	Khabaz	68.62	42	P	P	08 10 35.4	+0.5
	comp=Z,38nm,0.9s,baz=253,slow=4.4,SNR=53						
KBZ				LR	LR	08 43 02.1	
	comp=Z,158nm,19.4s,baz=266,slow=38						
KBZ	Khabaz	68.62	42c	iP	P	08 10 35.5	+0.7
KBZ				pmax	pmax		
	comp=Z,45nm,0.9s						
GNI	Garni	68.67	47	P	P	08 10 35.9	+0.4
	comp=Z,31nm,1.0s,baz=5.5,slow=5.5,SNR=7.0						
GNI	Garni	68.67	47	P	P	08 10 36.7	+1.2
GNI	Garni	68.67	47c	iP	P	08 10 36.0	+0.5
GNI				pmax	pmax		
	comp=Z,57nm,1.1s						
GNI	Garni	68.67	47	P	P	08 10 35.5	0.0
KZRT	Kazreti	68.83	45	P	P	08 10 37.5	+1.2
D55A	Sainte-Anne-du	68.84	321	P	P	08 10 36.8	+0.7
	baz=114						
BLA	Blacksburg	68.88	310	IAMs_20	IAMs_20	08 34 40.3	
	comp=Z,526nm,18.0s						
ZEI	Tsey	68.96	44	eP	P	08 10 36.9	-0.4
ZEI				pmax	pmax		
	comp=Z,13nm,1.0s						
KMSC	Kings Mountain	69.02	308	P	P	08 10 38.6	+1.1
	baz=105						
KMSC	Kings Mountain	69.02	308	P	P	08 10 35.9	-1.6
KMSC				IAmb	IAmb	08 10 50.3	
	comp=Z,24nm,1.1s						
KMSC				IAMs_20	IAMs_20	08 37 11.1	
	comp=Z,467nm,19.0s						
V55A	Taylorsville	69.12	309	IAmb	IAmb	08 10 43.5	
	comp=Z,19nm,1.0s						
255A	Hazlehurst	69.15	304	IAMs_20	IAMs_20	08 35 03.7	
	comp=Z,573nm,20.0s						
DELO	Deloro Mine	69.26	318	IAMs_20	IAMs_20	08 33 03.9	
	comp=Z,659nm,20.0s						
FINES	FINESS Array B	69.32	21	P	P	08 10 39.4	+0.6
	comp=Z,20nm,0.8s,baz=200,slow=3.9,SNR=35						
FINES				LR	LR	08 41 35.9	
	comp=Z,271nm,20.1s,baz=234,slow=36						
FINES	FINESS Array B	69.32	21	P	P	08 10 39.2	+0.4
FIA1	FINESS Array S	69.33	21	P	P	08 10 39.3	+0.5
VORD	Divnogorie	69.37	34	eP	P	08 10 38.7	-0.6
VORD				pmax	pmax		
	comp=Z,50nm,1.0s						
VSR	Storozhevoye	69.41	34	eP	P	08 10 38.0	-1.6
VSR				pmax	pmax		
	comp=Z,80nm,1.0s						
R54A	Victor	69.59	311	P	P	08 10 41.4	+0.3
	baz=107						
M54A	Oil Creek Stat	69.63	315	P	P	08 10 43.5	+2.3
	baz=109						
N54A	Moraine State	69.69	314	P	P	08 10 42.4	+0.8
	baz=108						
Q54A	Coxs Mills	69.71	312	IAMs_20	IAMs_20	08 36 46.1	
	comp=Z,543nm,20.0s						
S54A	Dingess, Beckl	69.73	311	P	P	08 10 43.2	+1.3
	baz=106						
S54A	Dingess, Beckl	69.73	311	IAMs_20	IAMs_20	08 33 52.7	
	comp=Z,491nm,19.0s						
U54A	Nelsons Funny	69.77	309	P	P	08 10 44.5	+2.2
	baz=106						
U54A	Nelsons Funny	69.77	309	IAMs_20	IAMs_20	08 34 55.8	
	comp=Z,564nm,20.0s						
G54A	Lake Saint Pet	69.89	319	P	P	08 10 43.3	+0.5
	baz=111						
LPSR	Galich'ya Gora	69.92	33	eP	P	08 10 41.8	-0.9
LPSR				pmax	pmax		
	comp=Z,60nm,0.8s						
OBN	Obninsk	69.95	30	⇑eP	P	08 10 42.3	-0.5
OBN				e		08 11 02.6	
OBN				e		08 13 12.8	
OBN				pmax	pmax		
	comp=Z,43nm,0.9s						
OBN				MLR	MLR		
	comp=Z,477nm,17.0s						
Q53A	Leroy	70.19	312	P	P	08 10 45.9	+1.2
	baz=107						
L53A	Girard	70.20	315	P	P	08 10 45.3	+0.6
	baz=108						
SCO	Scoresbysund	70.26	358	i P	P	08 10 45.6	+1.2
SCO	Scoresbysund	70.26	358	eP	P	08 10 45.6	+1.2
SCO	Scoresbysund	70.26	358	eP	P	08 10 45.6	+1.2
LGD	Lagodekhi	70.29	45	P	P	08 10 45.5	+0.3
GOGA	Godfrey	70.31	306	IAMs_20	IAMs_20	08 34 07.2	
	comp=Z,495nm,22.0s						
V53A	Saluda	70.33	308	IAmb	IAmb	08 10 50.6	
	comp=Z,15nm,0.9s						
O53A	New Philadelph	70.36	313	P	P	08 10 46.7	+1.0
	baz=107						
GROC	Groznyy	70.41	44	eP	P	08 10 45.7	-0.2
GROC				e		08 11 07.3	
GROC				e		08 13 22.0	
GROC				pmax	pmax		
	comp=Z,53nm,1.0s						
VLDQ	Val d'Or	70.50	322	P	P	08 10 46.7	+0.3
VLDQ				IAmb	IAmb	08 11 01.6	
	comp=Z,25nm,1.2s						
SFJD	Kangerlussuaq	70.70	347	P	P	08 10 46.0	-1.2
SFJD				IAmb	IAmb	08 10 55.8	
	comp=Z,18nm,0.8s						
TGUH	Tegucigalpa,Un	70.74	285	P	P	08 10 48.6	0.0
MOS	Moscow	70.78	29	eP	P	08 10 47.1	-0.8
MOS				e		08 11 07.4	
MOS				pmax	pmax		
	comp=Z,102nm,0.8s						
VRH	Novokhopyorsk	70.85	35	eP	P	08 10 47.6	-0.8
VRH				pmax	pmax		
	comp=Z,50nm,1.8s						
P52A	Corning	70.86	312	P	P	08 10 49.3	+0.6
	baz=106						
Y52A	Lilburn	70.89	306	P	P	08 10 49.7	+0.6
Y52A				IAmb	IAmb	08 11 05.1	
	comp=Z,21nm,1.1s						
Y52A				IAMs_20	IAMs_20	08 37 51.8	
	comp=Z,454nm,20.0s						
VNA1	Neumayer--Stat	70.94	177	P	P	08 10 50.1	+1.5
V52A	Sevierville	70.99	308	P	P	08 10 49.4	-0.2
352A	Blakely	71.09	303	P	P	08 10 51.6	+1.2
TZTN	Tazewell	71.12	309	IAMs_20	IAMs_20	08 36 44.6	
	comp=Z,562nm,19.0s						
152A	Waverly Hall	71.17	305	P	P	08 10 52.6	+1.8
152A				IAMs_20	IAMs_20	08 35 58.1	
	comp=Z,462nm,20.0s						
VNA2	Neumayer--Watz	71.27	177	P	P	08 10 51.1	+0.5
	baz=344,slow=7.1						
VNA2	Neumayer--Watz	71.27	177	pP	pP	08 10 54.3	+1.2
I51A	Listowel	71.31	317	P	P	08 10 52.1	+0.7
	baz=109						
S51A	Beattyville	71.43	310	IAmb	IAmb	08 10 57.6	

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      comp=Z,19nm,1.1s
S51A                             IAMs_20   IAMs_20   08 34 32.7
      comp=Z,536nm,21.0s
VNA3  Neumayer Olymp  71.47 177  P         P         08 10 51.8  0.0
V51A  Loudon          71.57 308  IAmb      IAmb      08 11 05.9
      comp=Z,19nm,1.1s
V51A                             IAMs_20   IAMs_20   08 36 07.6
      comp=Z,364nm,19.0s
Q51A  Peebles         71.60 311  IAMs_20   IAMs_20   08 37 44.2
      comp=Z,449nm,20.0s
ACSO  Alum Creek Sta  71.65 313  IAmb      IAmb      08 11 23.3
      comp=Z,31nm,1.3s
ACSO                             IAMs_20   IAMs_20   08 40 09.5
      comp=Z,449nm,19.0s
Z51A  Franklin        71.68 305  IAmb      IAmb      08 10 59.0
      comp=Z,19nm,0.9s
Z51A                             IAMs_20   IAMs_20   08 36 03.6
      comp=Z,617nm,20.0s
X51A  Calhoun         71.69 306  P         P         08 10 55.0 +1.1
X51A                             IAmb      IAmb      08 10 59.1
      comp=Z,28nm,0.8s
X51A                             IAMs_20   IAMs_20   08 38 18.9
      comp=Z,419nm,19.0s
R50A  Paris           72.15 310  P         P         08 10 56.6  0.0
R50A                             IAmb      IAmb      08 11 11.3
      comp=Z,49nm,1.7s
R50A                             IAMs_20   IAMs_20   08 36 22.8
      comp=Z,491nm,18.0s
W50A  Signal Mountai  72.20 307  P         P         08 10 56.6 -0.4
T50A  Nancy           72.24 309  IAMs_20   IAMs_20   08 36 22.2
      comp=Z,596nm,21.0s
FPAL  Fort Paine      72.30 306  P         P         08 10 57.4 -0.2
TEIG  Tepich          72.30 291  LR        LR        08 36 46.0
      comp=Z,212nm,21.1s,slow=31
TEIG  Tepich          72.30 291  P         P         08 10 57.9 +0.1
250A  Grady           72.31 304  IAMs_20   IAMs_20   08 36 30.4
      comp=Z,375nm,18.0s
SNAA  Sanae           72.32 175  P         P         08 10 57.1 +0.2
SNAA  Sanae           72.32 175  LR        LR        08 34 46.0
      comp=Z,216nm,21.0s,baz=358,slow=29
SNAA  Sanae           72.32 175c iP        P         08 10 57.2 +0.2
SNAA                             pmax      pmax
      comp=Z,21nm,1.0s
SNAA  Sanae           72.32 175  P         P         08 10 57.2 +0.2
SNAA                             IAmb      IAmb      08 10 58.7
      comp=Z,18nm,0.9s
SWET  Sewanee         72.70 307  IAmb      IAmb      08 11 04.6
      comp=Z,18nm,1.0s
N49A  Columbus Grove  72.72 313  IAMs_20   IAMs_20   08 42 02.7
      comp=Z,482nm,19.0s
P49A  Miami Univ. Ec  72.76 312  IAMs_20   IAMs_20   08 39 41.8
      comp=Z,506nm,19.0s
MTO3  Montecristo     72.78 285  P         P         08 10 59.1 -1.9
R49A  Shelbyville     72.80 310  IAmb      IAmb      08 11 02.4
      comp=Z,34nm,1.6s
U49A  Red Boiling Sp  72.86 308  P         P         08 11 01.1 +0.2
U49A                             IAmb      IAmb      08 11 05.7
      comp=Z,22nm,1.0s
LRAL  Lakeview Retre  73.12 304  IAMs_20   IAMs_20   08 36 26.8
      comp=Z,511nm,20.0s
PMSA  Palmer Station  73.16 199  LR        LR        08 37 05.4
      comp=Z,215nm,19.6s,baz=360,slow=31
L48A  N Adams         73.17 314  IAmb      IAmb      08 11 16.7
      comp=Z,29nm,0.8s
X48A  Hartselle       73.44 306  IAmb      IAmb      08 11 08.7
      comp=Z,18nm,0.8s
X48A                             IAMs_20   IAMs_20   08 39 32.0
      comp=Z,409nm,20.0s
PETF  Flores          73.47 288  P         P         08 11 04.3 -0.6
PETF                             IAmb      IAmb      08 11 05.5
      comp=Z,30nm,1.0s
V48A  Smith Brothers  73.52 307  P         P         08 11 04.4 -0.4
SUMG  Summit          73.53 353 i P        P         08 11 06.0 +1.4
SUMG  Summit          73.53 353 i P        P         08 11 06.0 +1.4
SUMG  Summit          73.53 353  P         P         08 11 05.1 +0.5
SUMG  Summit          73.53 353 i P        P         08 11 06.0 +1.4
WCI   Wyandotte Cave  73.64 310  IAMs_20   IAMs_20   08 40 18.3
      comp=Z,507nm,20.0s
T47A  Sharon Grove    74.00 308  IAmb      IAmb      08 11 11.9
      comp=Z,23nm,1.1s
BLO   Bloomington     74.03 311  IAMs_20   IAMs_20   08 37 53.6
      comp=Z,588nm,19.0s
Z47A  Carrollton      74.04 304  IAMs_20   IAMs_20   08 37 07.0
      comp=Z,562nm,21.0s
DBG   Daneborg        74.06 359 i P        P         08 11 07.1 -0.1
KLMR  Klimovskoe      74.22  25 eP         P         08 11 03.7 -4.6
KLMR                             pmax      pmax
      comp=Z,60nm,1.3s
KLMR  Klimovskoe      74.22  25 eP         P         08 11 03.7 -4.6
KLMR                             AMP                 08 11 09.2
      comp=Z,60nm,1.3s
KLMR                            ePP        PP        08 13 46.6 -7.5
KLMR                             LQ        LQ        08 38 22.2
KLMR                             LQ        LQ        08 38 22.2
KLMR                             LR        LR        08 41 32.1
KLMR                             AMP                 09 34 14.3
      comp=Z,5.0nm,0.5s
WVT   Waverly         74.40 307  P         P         08 11 10.2 +0.3
WVT                              pmax      pmax
      comp=Z,17nm,0.9s
WVT   Waverly         74.40 307  P         P         08 11 09.6 -0.3
ASHO  Ashiyiah        74.64  65 i P        P         08 11 12.0 +0.4
      SNR=6.3
P46A  Rosedale        74.65 311  P         P         08 11 12.0 +0.7
P46A                             IAmb      IAmb      08 11 15.9
      comp=Z,40nm,1.0s
BELG  Belogornoye     74.69  35  P         P         08 11 11.0 -0.2
      comp=Z,49nm,0.8s,baz=152,slow=1.9,SNR=13
BELG  Belogornoye     74.69  35  P         P         08 11 11.0 -0.2
HATD  Hatta, Dubai    74.73  64 i P        P         08 11 12.3 +0.3
      SNR=8.6
146A  Union           74.75 304  IAmb      IAmb      08 11 27.4
      comp=Z,40nm,0.9s
UOSS  Minazif         74.81  64 i P        P         08 11 12.4  0.0
      SNR=8.4
UOSS  Minazif         74.81  64  P         P         08 11 12.5  0.0
ARCES ARCESS Array B  74.83  14  P         P         08 11 11.8 +0.1
      comp=Z,5.4nm,0.7s,baz=203,slow=2.5,SNR=18
ARCES                            LR        LR        08 45 55.2
      comp=Z,153nm,19.7s,baz=275,slow=37
ARCES ARCESS Array B  74.83  14  P         P         08 11 12.0 +0.3
SOHO  SOHO            75.01  65 i P        P         08 11 14.0 +0.3
      SNR=15
BANOM Banah           75.01  63 i P        P         08 11 13.5 -0.2
      SNR=13
Y45A  Yeager Farm, C  75.36 305  IAmb      IAmb      08 11 19.7
      comp=Z,38nm,1.1s
OXF   Oxford          75.37 306  IAmb      IAmb      08 11 19.2
      comp=Z,37nm,1.1s
OXF                              IAMs_20   IAMs_20   08 37 36.1
      comp=Z,430nm,20.0s
HALT  Halls           75.56 307  IAMs_20   IAMs_20   08 43 09.2
      comp=Z,434nm,20.0s
CCIG  Comitan         75.59 287  P         P         08 11 17.1 -0.3
CCIG                             IAmb      IAmb      08 11 19.2
      comp=Z,29nm,0.8s
APA   Apatity         75.71  18⇓iP         P         08 11 20.8 +4.0
APA                              pmax      pmax
      comp=Z,21nm,1.0s
O44A  Mansfield       75.71 311  IAMs_20   IAMs_20   08 40 52.0
      comp=Z,571nm,20.0s
LNXT  Lenox           75.71 307  IAMs_20   IAMs_20   08 42 50.3
      comp=Z,567nm,21.0s
SIUC  Southern Illin  75.80 309  IAmb      IAmb      08 11 22.0
      comp=Z,22nm,1.1s
SIUC                             IAMs_20   IAMs_20   08 38 53.8
      comp=Z,543nm,20.0s
S44A  Carbondale      75.82 309  IAmb      IAmb      08 11 21.5
      comp=Z,21nm,1.1s
Q44A  Meyer Farm, Va  75.87 310  IAMs_20   IAMs_20   08 39 08.3
      comp=Z,609nm,20.0s
344A  Westbrook Farm  75.97 302  P         P         08 11 19.6 +0.5
344A                             IAmb      IAmb      08 11 34.9
      comp=Z,54nm,1.2s
LVZ   Lovozero        76.28  18 eP         P         08 11 19.3 -0.8
LVZ                              pmax      pmax
      comp=Z,62nm,1.1s
P43A  Skaggs, Pawnee  76.40 311  IAMs_20   IAMs_20   08 38 47.3
      comp=Z,568nm,20.0s
DAG   Danmarks Havn   76.52 360 i P        P         08 11 22.1 +0.9
      comp=Z,11nm,0.8s
DAG   Danmarks Havn   76.52 360 i P        P         08 11 22.1 +0.9
DAG                              pmax      pmax
      comp=Z,11nm,0.8s
DAG   Danmarks Havn   76.52 360 i P        P         08 11 22.2 +0.9
DAG                              IAmb      IAmb      08 11 23.5
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      comp=Z,11nm,0.8s
HBAR  Harrisburg      76.55 306  P         P         08 11 22.4 +0.1
X43A  Marvell         76.57 305  P         P         08 11 23.1 +0.7
      baz=99
PBMO  Poplar Bluff    76.58 308  P         P         08 11 21.1 -1.3
143A  Socs Landing,   76.72 303  P         P         08 11 22.9 -0.4
F42A  Maple Grove Fa  76.72 317  IAMs_20   IAMs_20   08 38 18.5
      comp=Z,442nm,20.0s
FVM   French Village  76.79 309  IAMs_20   IAMs_20   08 39 44.6
      comp=Z,593nm,20.0s
WSAR  Wadi Sarin      76.82  66  P         P         08 11 24.0 -0.1
      comp=Z,29nm,0.9s,baz=284,slow=5.0,SNR=13
LCAR  Lake Charles    77.04 307  P         P         08 11 24.8 -0.2
T42A  Van Buren       77.14 308  P         P         08 11 24.6 -1.0
342A  Flagon Creek P  77.31 302  P         P         08 11 26.3 -0.3
342A                             IAmb      IAmb      08 11 31.5
      comp=Z,33nm,1.1s
CCM   Cathedral Cave  77.44 309  P         P         08 11 26.9 -0.3
CCM                              IAmb      IAmb      08 11 31.3
      comp=Z,19nm,0.8s
CCM   Cathedral Cave  77.44 309  IAMs_20   IAMs_20   08 40 21.8
      comp=Z,464nm,19.0s
W41B  Gary Mavity, V  77.78 306  P         P         08 11 29.1 -0.1
      baz=98
KIRV  Kirov           77.80  29  P         P         08 11 28.0 -0.7
      comp=Z,11nm,0.3s,baz=314,slow=0.6,SNR=8.2
KIRV  Kirov           77.80  29c iP        P         08 11 28.3 -0.4
WHAR  Wooly Hollow    77.83 306  P         P         08 11 28.9 -0.5
WHAR                             IAMs_20   IAMs_20   08 38 40.3
      comp=Z,414nm,21.0s
Z41A  Richland Creek  77.96 304  P         P         08 11 30.7 +0.5
      baz=98
441A  DeRidder        77.97 301  P         P         08 11 30.4 +0.1
MGMO  Mountain Grove  78.09 308  P         P         08 11 30.4 -0.5
MGMO                             IAmb      IAmb      08 11 45.6
      comp=Z,22nm,0.9s
MGMO                             IAMs_20   IAMs_20   08 37 27.2
      comp=Z,406nm,20.0s
X40A  Basin Creek Fa  78.16 305  P         P         08 11 31.4 +0.1
      baz=98
X40A  Basin Creek Fa  78.16 305  IAMs_20   IAMs_20   08 40 24.0
      comp=Z,490nm,20.0s
GEYT  Alibeck         78.25  51  P         P         08 11 31.2 -0.6
      comp=Z,5.3nm,0.8s,baz=260,slow=7.4,SNR=7.7
GEYT                             LR        LR        08 49 10.4
      comp=Z,351nm,19.3s,baz=220,slow=38
GEYT  Alibeck         78.25  51  P         P         08 11 31.9  0.0
GYA0B ALIBECK ARRAY   78.25  51  P         P         08 11 31.7 -0.1
GYA0B                            IAMs_20   IAMs_20   08 48 49.9
      comp=Z,399nm,20.0s
R40A  Maddies Statio  78.27 309  P         P         08 11 32.1 +0.2
R40A                             IAMs_20   IAMs_20   08 42 42.9
      comp=Z,437nm,20.0s
WLAR  White Oak Lake  78.28 304  P         P         08 11 32.1 +0.1
WLAR                             IAmb      IAmb      08 11 36.5
      comp=Z,35nm,1.0s
U40A  Yellville       78.44 307  P         P         08 11 32.7 -0.1
      baz=98
U40A  Yellville       78.44 307  IAmb      IAmb      08 11 48.1
      comp=Z,23nm,0.9s
BELA  Belgrano 2      78.55 184  P         P         08 11 32.9 +0.2
SYO   Syowa Base      78.75 162⇓eP         P         08 11 33.2 -0.6
SYO   Syowa Base      78.75 162⇓ePcP       PcP       08 11 42.3 -0.3
MIAR  Mount Ida       78.77 305  P         P         08 11 34.6 -0.1
MIAR                             IAMs_20   IAMs_20   08 39 51.3
      comp=Z,532nm,22.0s
S39A  Bolivar         79.00 308  P         P         08 11 35.7 -0.2
S39A                             IAmb      IAmb      08 11 50.3
      comp=Z,20nm,0.9s
S39A                             IAMs_20   IAMs_20   08 44 44.3
      comp=Z,442nm,20.0s
W39A  Magazine        79.03 306  P         P         08 11 37.0 +0.9
      baz=98
P38A  Dawn            79.45 310  IAmb      IAmb      08 11 52.7
      comp=Z,22nm,0.8s
U38A  Gravette        79.67 307  P         P         08 11 38.5 -1.1
KBS   Kingsbay        80.09   5 eP         P         08 11 42.4 +1.4
KBS                              pmax      pmax
      comp=Z,48nm,2.5s
AKTO  Aktyubinsk      80.41  39  P         P         08 11 43.3  0.0
      comp=Z,12nm,0.8s,baz=251,slow=3.7,SNR=23
AKTO                             LR        LR        08 50 14.1
      comp=Z,199nm,22.0s,baz=280,slow=38
TUL1  Leonard         80.74 306  P         P         08 11 45.4  0.0
      baz=96
TUL1  Leonard         80.74 306  P         P         08 11 44.7 -0.7
HRA   Herat           81.10  55  IAmb      IAmb      08 11 49.1
      comp=Z,24nm,1.1s
N35A  Tabor           81.22 311  IAmb      IAmb      08 12 02.9
      comp=Z,28nm,1.2s
ABKAR Akbulak array   81.42  40  P         P         08 11 48.2 -0.4
ABKAR                            IAmb      IAmb      08 11 50.2
      comp=Z,22nm,1.1s
T35A  Sooner Cattle   81.43 307  P         P         08 11 49.2 +0.1
T35A                             IAmb      IAmb      08 12 01.2
      comp=Z,28nm,1.1s
QUOK  Quay            81.50 306  IAmb      IAmb      08 14 53.7
      comp=Z,13nm,0.6s
OK030 Cody Creek RV   81.54 306  IAmb      IAmb      08 12 00.6
      comp=Z,33nm,1.3s
OK031 S. Brethren Rd  81.59 306  IAmb      IAmb      08 12 02.1
      comp=Z,26nm,1.0s
Z35A  Perchaven, San  81.67 304  IAmb      IAmb      08 11 55.1
      comp=Z,29nm,0.8s
Z35A                             IAMs_20   IAMs_20   08 43 36.2
      comp=Z,462nm,20.0s
WHTX  Lake Whitney,   81.72 302  P         P         08 11 51.0 +0.3
      baz=95
WHTX  Lake Whitney,   81.72 302  P         P         08 11 49.9 -0.8
435B  Jarrell         81.73 301  P         P         08 11 51.3 +0.5
      baz=95
435B  Jarrell         81.73 301  P         P         08 11 51.1 +0.3
435B                             IAmb      IAmb      08 11 55.6
      comp=Z,23nm,0.8s
ARU   Arti            81.94  33  P         P         08 11 51.7 +0.4
      comp=Z,7.1nm,0.6s,baz=242,slow=4.0,SNR=26
ARU                              LR        LR        08 50 51.7
      comp=Z,333nm,19.5s,baz=224,slow=38
ARU   Arti            81.94  33c iP        P         08 11 51.2 -0.1
ARU                                                  08 14 55.4
ARU                              S         S         08 22 09.4 +4.5
ARU                              SS        SS        08 27 27.2 +3.7
ARU                              pmax      pmax
      comp=Z,49nm,1.1s
ARU   Arti            81.94  33  P         P         08 11 50.6 -0.7
ARU                              IAmb      IAmb      08 11 52.8
      comp=Z,35nm,0.9s
OK025 Westminster Rd  81.95 306  P         P         08 11 51.7 -0.2
OK025                            IAMs_20   IAMs_20   08 40 36.6
      comp=Z,504nm,21.0s
OKCFA Oklahoma City   82.03 306  IAMs_20   IAMs_20   08 42 52.6
      comp=Z,417nm,19.0s
BCOK  Bluff Creek, N  82.18 306  IAmb      IAmb      08 14 55.6
      comp=Z,31nm,0.8s
ECSD  EROS Data Cent  82.30 314  P         P         08 11 53.2 -0.3
AGMN  Agassiz Nation  82.39 319  P         P         08 11 53.6 -0.3
AGMN                             IAmb      IAmb      08 12 08.9
      comp=Z,23nm,0.9s
AGMN                             IAMs_20   IAMs_20   08 44 06.4
      comp=Z,440nm,19.0s
KAN01 Argonia South   82.44 307  P         P         08 11 54.8 +0.4
CROK  Carrier         82.56 307  IAmb      IAmb      08 12 10.6
      comp=Z,36nm,0.9s
ULM   Lac du Bonnet   82.69 321  P         P         08 11 55.5 +0.1
      comp=Z,5.4nm,0.9s,baz=96,slow=5.1,SNR=11
ULM                              LR        LR        08 42 28.4
      comp=Z,263nm,21.6s,baz=98,slow=31
ULM   Lac du Bonnet   82.69 321 eP         P         08 11 53.3 -2.0
WMOK  Wichita Mounta  83.06 305  IAmb      IAmb      08 12 09.9
      comp=Z,18nm,1.1s
FCC   Fort Churchill  83.11 329  P         P         08 11 57.1 -0.2
FCC                              IAmb      IAmb      08 12 12.0
      comp=Z,18nm,1.0s
833A  Chaparral WMA,  83.13 298  P         P         08 11 59.1 +1.0
      baz=94
SVE   Sverdlovsk      83.15  33⇑eP         P         08 11 58.6 +1.0
SVE                              pmax      pmax
      comp=Z,40nm,0.9s
R32A  Long Quarter,   83.31 309  P         P         08 11 58.1 -0.8
JCT   Junction City   83.62 300  P         P         08 12 01.0 +0.4
JCT                              IAmb      IAmb      08 12 05.1
      comp=Z,23nm,1.1s
ABTX  Abilene, Hawle  83.62 303  P         P         08 12 01.5 +0.9
      baz=94
ABTX  Abilene, Hawle  83.62 303  P         P         08 12 00.3 -0.2
ABTX                             IAmb      IAmb      08 12 05.7
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      comp=Z,18nm,0.8s
K31A  O'Neill         83.73 313  P         P         08 12 00.5 -0.5
K31A                             IAMs_20   IAMs_20   08 45 21.2
      comp=Z,505nm,20.0s
CBKS  Cedar Bluff     84.15 309  P         P         08 12 03.7 +0.5
CBKS                             IAmb      IAmb      08 12 18.2
      comp=Z,28nm,1.1s
E28A  Huff            85.46 317  P         P         08 12 08.3 -1.3
ZAIG  Zacatecas       85.75 293  IAmb      IAmb      08 12 25.1
      comp=Z,20nm,1.3s
OGNE  Ogallala        86.05 311  P         P         08 12 13.0 +0.2
OGNE                             IAmb      IAmb      08 12 28.3
      comp=Z,40nm,1.1s
EUNU  Eureka          86.31 351  P         P         08 12 14.7 +1.5
EUNU                             IAmb      IAmb      08 15 28.5
      comp=Z,32nm,2.0s
MSTX  Muleshoe        86.31 304  P         P         08 12 15.1 +0.9
      baz=92
MSTX  Muleshoe        86.31 304  P         P         08 12 14.4 +0.2
MSTX                             IAMs_20   IAMs_20   08 42 36.9
      comp=Z,478nm,22.0s
KSCO  Kaye Shedlock'  86.41 309  P         P         08 12 15.0 +0.4
      baz=93
KSCO  Kaye Shedlock'  86.41 309  P         P         08 12 14.8 +0.1
KSCO                             IAmb      IAmb      08 12 33.1
      comp=Z,17nm,1.0s
RES   Resolute Bay    86.61 345  IAmb      IAmb      08 12 20.8
      comp=Z,11nm,0.8s
KBL   Kabul           86.72  56  P         P         08 12 15.5 -0.8
TX31  Lajitas Ar. Si  86.92 299  P         P         08 12 17.5 +0.3
TX32  Lajitas Array   86.92 299  P         P         08 12 17.4 +0.1
TX32                             IAmb      IAmb      08 12 29.7
      comp=Z,18nm,1.1s
TXAR  Lajitas Array   86.92 299  P         P         08 12 17.9 +0.7
      comp=Z,6.2nm,1.0s,baz=111,slow=5.6,SNR=20
TXAR                             LR        LR        08 48 03.0
      comp=Z,139nm,20.4s,baz=0.0,slow=34
TXAR  Lajitas Array   86.92 299  P         P         08 12 17.5 +0.3
RSSD  Black Hills     87.67 314  P         P         08 12 22.2 +1.4
RSSD                             pmax      pmax
      comp=Z,6.0nm,1.0s
RSSD  Black Hills     87.67 314  P         P         08 12 20.8  0.0
RSSD  Black Hills     87.67 314  IAMs_20   IAMs_20   08 52 57.4
      comp=Z,347nm,19.0s
T25A  Trinidad        87.75 307  P         P         08 12 23.3 +2.0
      baz=92
IUG   Iuzhnay         87.75  48 eP         P         08 12 21.0  0.0
      comp=Z,5.3nm,1.0s,baz=48
IUG   Iuzhnay         87.75  48 eP         P         08 12 21.0  0.0
IUG                              pmax      pmax
      comp=Z,5.0nm,1.0s
DGMT  Dagmar          87.94 318  P         P         08 12 21.7 +0.1
DGMT                             IAmb      IAmb      08 12 42.1
      comp=Z,20nm,1.1s
KKAR  Karatay Array   88.13  47  P         P         08 12 23.0 +0.3
BRVK  Borovoye        88.28  37c iP        P         08 12 23.9 +0.8
BRVK                             pmax      pmax
      comp=Z,16nm,1.1s
BRVK  Borovoye        88.28  37  P         P         08 12 23.8 +0.6
BRVK                             IAmb      IAmb      08 12 25.1
      comp=Z,15nm,1.1s
BVAR  Borovoye Array  88.34  37  P         P         08 12 24.1 +0.6
      comp=Z,3.6nm,0.8s,baz=180,slow=26,SNR=11
Q24A  Divide          88.37 309  P         P         08 12 26.1 +1.7
      baz=91
SDCO  Great Sand Dun  88.63 308  P         P         08 12 25.7 +0.2
SDCO                             IAmb      IAmb      08 12 39.1
      comp=Z,14nm,1.1s
HPIG                  88.64 297  IAmb      IAmb      08 12 31.3
      comp=Z,32nm,1.8s
DZA   Taraz           88.73  47 eP         P         08 12 25.9 +0.4
      comp=Z,12nm,0.9s,baz=47
DZA   Taraz           88.73  47 eP         P         08 12 25.9 +0.4
DZA                              pmax      pmax
      comp=Z,12nm,0.9s
ISCO  Idaho Springs   88.74 310  IAMs_20   IAMs_20   08 50 29.1
      comp=Z,435nm,19.0s
N23A  Red Feather La  89.01 311  P         P         08 12 28.2 +1.0
      baz=91
ANMO  Albuquerque     89.37 305 eP         P         08 12 27.7 -1.3
ANMO                             pmax      pmax
      comp=Z,5.0nm,1.4s
ANMO  Albuquerque     89.37 305  P         P         08 12 29.3 +0.3
S22A  4UR Ranch, Cre  89.68 308  P         P         08 12 31.6 +1.1
      baz=90
BRZS  Berezniki       89.72  40 eP         P         08 12 30.4 +0.3
      comp=Z,4.8nm,1.4s,baz=40
BRZS  Berezniki       89.72  40 eP         P         08 12 30.3 +0.3
BRZS                             pmax      pmax
      comp=Z,5.0nm,1.4s
NIL   Nilore          90.20  57  P         P         08 12 31.8 -0.8
NIL                              IAmb      IAmb      08 12 34.2
      comp=Z,20nm,1.0s
NIL   Nilore          90.20  57  IAMs_20   IAMs_20   08 54 04.8
      comp=Z,343nm,20.0s
QSPA  South Pole Qui  90.24 180  P         P         08 12 32.7 +0.5
AML   Almayashu       90.47  48  P         P         08 12 35.1 +0.9
      SNR=8.2
121A  Cookes Peak, D  90.49 302  P         P         08 12 36.6 +2.4
      baz=90
EKS2  Erkin-Say       90.53  48  P         P         08 12 35.1 +1.0
      SNR=7.5
BTLS  Baital          90.69  45 eP         P         08 12 35.0 +0.3
      baz=45
BTLS  Baital          90.69  45 eP         P         08 12 34.9 +0.3
O20A  White River Ci  90.76 310  P         P         08 12 36.6 +1.2
      baz=89
MVCO  Mesa Verde      91.01 307  P         P         08 12 37.1 +0.5
MVCO                             IAmb      IAmb      08 12 50.3
      comp=Z,21nm,1.5s
PV01  Paradox Valley  91.05 308  P         P         08 12 36.8 -0.1
PV01                             IAmb      IAmb      08 13 05.5
      comp=Z,17nm,1.5s
AAK   Ala-Archa       91.06  48  P         P         08 12 37.0 +0.4
      comp=Z,10nm,0.8s,baz=242,slow=4.5,SNR=28
AAK   Ala-Archa       91.06  48  P         P         08 12 37.7 +1.1
      SNR=16
AAK   Ala-Archa       91.06  48 i P        P         08 12 37.7 +1.1
      SNR=16
AAK   Ala-Archa       91.06  48ceP         P         08 12 37.6 +1.0
AAK                              pmax      pmax
      comp=Z,70nm,1.3s
AAK   Ala-Archa       91.06  48  P         P         08 12 37.4 +0.8
AAK                              IAmb      IAmb      08 12 38.9
      comp=Z,18nm,1.0s
UCH   Uchtor          91.08  48  P         P         08 12 38.0 +0.9
      SNR=7.6
SGDS  Sogindy         91.14  47 eP         P         08 12 36.4 -0.4
      baz=47
SGDS  Sogindy         91.14  47 eP         P         08 12 36.4 -0.4
PV13  Radium Mtn., P  91.25 308  IAmb      IAmb      08 12 59.8
      comp=Z,12nm,1.1s
PV03  Paradox Valley  91.27 308  IAmb      IAmb      08 13 17.2
      comp=Z,18nm,1.5s
PV18  Skein Mesa, Pa  91.32 308  IAMs_20   IAMs_20   08 45 59.3
      comp=Z,398nm,19.0s
PV16  Nyswonger Mesa  91.32 308  P         P         08 12 39.2 +1.2
PV16                             IAmb      IAmb      08 12 51.6
      comp=Z,42nm,1.9s
PV17  East Wray Mesa  91.36 308  IAmb      IAmb      08 13 09.0
      comp=Z,26nm,1.7s
KBK   Karagaybulak    91.39  48  P         P         08 12 39.6 +1.5
      SNR=6.1
PV14  Lion Creek, Pa  91.40 308  IAmb      IAmb      08 12 52.0
      comp=Z,31nm,1.7s
PDAR  Pinedale Array  91.69 313  P         P         08 12 39.8 +0.1
      comp=Z,0.8nm,0.9s,baz=97,slow=6.1,SNR=6.0
PDAR                             PP        PP        08 16 18.6 +0.4
      comp=Z,1.2nm,1.0s,baz=70,slow=8.7,SNR=4.7
PDAR                             LR        LR        08 47 52.0
      comp=Z,232nm,21.6s,baz=115,slow=32
PDAR  Pinedale Array  91.69 313  P         P         08 12 39.4 -0.2
319A  Douglas         91.78 301  IAmb      IAmb      08 12 44.7
      comp=Z,15nm,1.4s
TKM2  Tokmak 2        91.86  47  P         P         08 12 40.9 +0.5
      SNR=6.8
W18A  Petrified Fore  92.06 305  P         P         08 12 43.0 +1.5
      baz=88
KSH   Kashi           92.27  51  P         P         08 12 42.0 -0.2
KSH                              pmax      pmax
      comp=Z,22nm,1.0s
KSH                              pmax      pmax
      comp=Z,310nm,4.6s
KSH                              LR        LR
      comp=Z,430nm,5.8s
KSH                              LR        LR
      comp=Z,700nm,5.6s
```

KSH				LR	LR		
	comp=Z,480nm,7.6s						
ULHL	**Ulahol**	**92.36**	**48**	P	**P**	**08 12 43.8**	**+1.1**
	SNR=9.1						
KUU	**Kurty**	**92.36**	**46**	*e*P	**P**	**08 12 42.4**	**0.0**
	comp=Z,11nm,1.1s,baz=46						
KUU	**Kurty**	**92.36**	**46**	*e*P	**P**	**08 12 42.4**	**0.0**
KUU				pmax	pmax		
	comp=Z,11nm,1.1s						
MTBS	**Maitube**	**92.46**	**47**	*e*P	**P**	**08 12 42.9**	**-0.1**
	baz=47						
MTBS	**Maitube**	**92.46**	**47**	*e*P	**P**	**08 12 42.9**	**-0.1**
REDW	**Red Top Meadow**	**92.62**	**313**	IAmb	IAmb	08 14 52.7	
	comp=Z,22nm,1.9s						
P17A	**Butcher Ranch,**	**92.71**	**309**	P	**P**	**08 12 44.8**	**+0.5**
AAA	**Alma-Ata**	**92.81**	**47**	*e*P	**P**	**08 12 45.1**	**+0.5**
	baz=47						
AAA	**Alma-Ata**	**92.81**	**47**	*e*P	**P**	**08 12 45.1**	**+0.5**
CHKK	**Chushkaly**	**92.83**	**46**	*e*P	**P**	**08 12 45.7**	**+1.1**
	baz=46						
CHKK	**Chushkaly**	**92.83**	**46**	*e*P	**P**	**08 12 45.7**	**+1.1**
TNSS	**Tian-Shan**	**92.85**	**47**	*e*P	**P**	**08 12 45.0**	**-0.2**
	baz=47						
TNSS	**Tian-Shan**	**92.85**	**47**	*e*P	**P**	**08 12 45.0**	**-0.2**
MDOK	**Medeo**	**92.91**	**47**	*e*P	**P**	**08 12 45.0**	**-0.2**
	baz=47						
MDOK	**Medeo**	**92.91**	**47**	*e*P	**P**	**08 12 45.0**	**-0.2**
YKA	**Yellowknife Ar**	**93.32**	**333**	P	**P**	**08 12 47.0**	**+0.6**
	comp=Z,5.4nm,0.8s,baz=86,slow=5.6,SNR=58						
YKA				LR	LR	08 51 05.9	
	comp=Z,107nm,19.2s,baz=0.0,slow=33						
KURBB	**Kurchatov Arra**	**93.45**	**39**	P	**P**	**08 12 48.0**	**+0.7**
	comp=Z,3.2nm,0.9s,baz=282,slow=5.7,SNR=11						
KURBB				PP	**PP**	**08 16 29.4**	**-2.0**
	comp=Z,1.5nm,0.9s,baz=282,slow=7.8,SNR=4.7						
KURK	**Kurchatov**	**93.50**	**39***c*	*i*P	**P**	**08 12 47.9**	**+0.4**
KURK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KURK	**Kurchatov**	**93.50**	**39**	P	**P**	**08 12 48.0**	**+0.6**
TDK	**Taldyqorghan**	**93.78**	**45**	*e*P	**P**	**08 12 49.0**	**0.0**
	comp=Z,9.0nm,0.6s,baz=45						
TDK	**Taldyqorghan**	**93.78**	**45**	*e*P	**P**	**08 12 48.9**	**0.0**
TDK				pmax	pmax		
	comp=Z,9.0nm,0.6s						
SATY	**Saty**	**93.91**	**47**	*e*P	**P**	**08 12 49.5**	**-0.3**
	baz=47						
SATY	**Saty**	**93.91**	**47**	*e*P	**P**	**08 12 49.5**	**-0.3**
KPKS	**Kokpek**	**94.09**	**47**	*e*P	**P**	**08 12 50.0**	**-0.5**
	comp=Z,4.1nm,0.9s,baz=47						
KPKS	**Kokpek**	**94.09**	**47**	*e*P	**P**	**08 12 50.0**	**-0.5**
KPKS				pmax	pmax		
	comp=Z,4.0nm,0.9s						
UZB	**Uzynbulak**	**94.36**	**47**	*e*P	**P**	**08 12 51.2**	**-0.7**
	baz=47						
UZB	**Uzynbulak**	**94.36**	**47**	*e*P	**P**	**08 12 51.1**	**-0.7**
SEM	**Semipalatinsk**	**94.56**	**40**	*e*P	**P**	**08 12 52.8**	**+0.1**
	baz=40						
SEM	**Semipalatinsk**	**94.56**	**40**	*e*P	**P**	**08 12 52.7**	**+0.1**
SHLS	**Shalkode**	**94.68**	**47**	*e*P	**P**	**08 12 54.7**	**+1.4**
	baz=47						
SHLS	**Shalkode**	**94.68**	**47**	*e*P	**P**	**08 12 54.6**	**+1.4**
NRIK	**Noril'sk**	**94.99**	**20**	PP	**PP**	**08 16 44.7**	**+1.8**
	comp=Z,1.3nm,0.5s,baz=333,slow=1.5,SNR=3.9						
NRIK				LR	LR	09 01 11.4	
	comp=Z,94nm,18.1s,baz=260,slow=39						
NRIK	**Noril'sk**	**94.99**	**20**	*e*P	**P**	**08 12 55.1**	**+1.2**
NRIK				pmax	pmax		
	comp=Z,10.0nm,1.6s						
MAKZ	**Makanchi**	**96.09**	**43**	IAMs_20	IAMs_20	09 02 34.6	
	comp=Z,348nm,20.0s						
MK31	**Makanchi Array**	**96.31**	**43**	⇑*i*P	**P**	**08 12 59.1**	**-1.4**
MK31	**Makanchi Array**	**96.31**	**43**	P	**P**	**08 12 60.0**	**-0.5**
MKAR	**Makanchi Array**	**96.31**	**43**	P	**P**	**08 13 00.2**	**-0.3**
	comp=Z,2.9nm,0.9s,baz=277,slow=4.2,SNR=20						
MKAR				PP	**PP**	**08 16 56.9**	**+3.0**
	comp=Z,1.4nm,1.0s,baz=270,slow=6.8,SNR=3.5						
MKAR				LR	LR	09 03 19.9	
	comp=Z,238nm,18.4s,baz=270,slow=40						
MKAR	**Makanchi Array**	**96.31**	**43**	P	**P**	**08 12 59.9**	**-0.6**
ZALV	**Zalesovo Beam**	**96.87**	**36**	LR	LR	09 01 24.8	
	comp=Z,170nm,18.2s,baz=256,slow=38						
BMO	**Blue Mountains**	**97.12**	**315**	P	**P**	**08 13 03.9**	**-0.4**
ZSN	**Zaisan**	**97.96**	**42**	*e*P	Pdif	08 13 08.4	+0.4
	baz=42						
ZSN	**Zaisan**	**97.96**	**42**	*e*P	Pdif	08 13 08.3	+0.3
NVAR	**Mina Array Bea**	**98.67**	**309**	LR	LR	08 58 50.7	
	comp=Z,147nm,18.0s,baz=86,slow=36						
WMQ	**Urumqi**	**100.53**	**45**	*e*P	**Pdif**	**08 13 20.1**	**+0.5**
WMQ				pmax	pmax		
	comp=Z,12nm,1.1s						
WMQ				LR	LR		
	comp=Z,400nm,18.7s						
WMQ				LR	LR		
	comp=Z,130nm,18.7s						
LZH	**Lanzhou**	**114.50**	**50**	*e*PKP	PKPdf	08 18 08.6	-3.9
LZH				LR	LR		
	comp=Z,400nm,17.6s						
LZH				LR	LR		
	comp=Z,590nm,18.0s						
LZH				LR	LR		
	comp=Z,660nm,20.0s						
CHTO	**Chiang Mai**	**114.51**	**69**	IAMs_20	IAMs_20	09 02 33.3	
	comp=Z,220nm,20.0s						
CD2	**Chengdu**	**116.06**	**55**	PKP	**PKPdf**	**08 18 13.9**	**-1.6**
KMI	**Kunming**	**116.73**	**62**	⇓PKP	**PKPdf**	**08 18 16.0**	**-1.2**
IPM	**Ipoh**	**118.02**	**85**	IAMs_20	IAMs_20	08 52 59.2	
	comp=Z,170nm,20.0s						
HHC	**Hu-ho-hao-te**	**118.16**	**42**	*e*PKP	**PKiKP**	**08 18 20.0**	**+0.6**
XAN	**Xi'an**	**119.12**	**50**	PKP	**PKPdf**	**08 18 16.4**	**-4.9**
MA2	**Magadan**	**119.67**	**7**	*i* PKIKP	**PKPdf**	**08 18 21.5**	**0.0**
GYA	**Guiyang**	**119.79**	**59**	*e*PKP	**PKPdf**	**08 18 20.4**	**-2.5**
KLR	**Kul'dur**	**123.97**	**24**	⇓*i*PKIKP	**PKiKP**	**08 18 30.3**	**-0.1**
MDJ	**Mudanjiang**	**126.49**	**29**	PKP	**PKPdf**	**08 18 34.3**	**-0.8**
PETK	**Petropavlovsk-**	**126.72**	**4**	PKP	**PKiKP**	**08 18 35.8**	**+0.1**
	comp=Z,1.6nm,0.3s,baz=137,slow=14,SNR=12						
PETK	**Petropavlovsk-**	**126.72**	**4**		**PKiKP**	**08 18 35.7**	**0.0**
NJ2	**Nanjing**	**127.50**	**48**	*e*PKP	**PKPdf**	**08 18 36.0**	**-1.4**
KKM	**Kota Kinabalu**	**132.99**	**82**	IAMs_20	IAMs_20	09 08 03.0	
	comp=Z,189nm,22.0s						
MJAR	**Matsushiro Arr**	**136.88**	**29**	PKP	**PKiKP**	**08 18 56.5**	**-0.3**
	comp=Z,3.5nm,0.9s,baz=6.6,slow=2.3,SNR=4.1						
BNSI	**Bone**	**137.04**	**96**	PKP	**PKPdf**	**08 18 56.3**	**+0.4**
BNSI				PKP	**PKiKP**	**08 18 57.1**	**-0.6**
STKA	**Stephens Creek**	**142.58**	**149**	PKhKP	PKPpre	08 19 00.3	
	comp=Z,2.5nm,0.9s,baz=42,slow=0.8,SNR=5.5						
ASAR	**Alice Springs**	**143.43**	**132**	PKhKP	PKPpre	08 19 03.2	
	comp=Z,9.0nm,0.7s,baz=221,slow=2.8,SNR=82						
AS31	**Alice Springs**	**143.44**	**132**	PKPdf	PKPab	08 19 03.3	-0.1
WRA	**Warramunga Arr**	**145.82**	**127**	PKPbc	**PKPdf**	**08 19 11.3**	**-0.1**
	comp=Z,21nm,0.9s,baz=251,slow=2.6,SNR=60						
WRA	**Warramunga Arr**	**145.82**	**127**		**PKPdf**	**08 19 11.0**	**-0.4**
WB2	**Warramunga Arr**	**145.83**	**127**	PKPdf	**PKPdf**	**08 19 11.4**	**-0.1**
MTN	**Manton Dam**	**146.08**	**113**		**PKPdf**	**08 19 12.3**	**+0.3**
FAKI	**Fak Fak**	**149.24**	**95**	PKPbc	**PKPbc**	**08 19 22.1**	**+0.5**
FAKI				PKPab	**PKPab**	**08 19 27.0**	**+1.0**
FAKI	**Fak Fak**	**149.24**	**95**	PKP	**PKPbc**	**08 19 19.6**	**-1.9**
FAKI				PKP	**sPKPdf**	**08 19 21.7**	**+0.9**
FAKI				PKP	**PKPab**	**08 19 27.0**	**+1.0**

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*NCEDC **09** 08:15:54.3±2.5, 37°.27N±0°.03×118°.42W±0°.05, h7^{km}±6^{km}, ML3.3/25, ML2.9/12(NEIC), Error ellipse: s-maj=5.5km s-min=4.6km az=64.0*

*REN **09** 08:15:54.3, 37°.26N×118°.45W, h7^{km}*

*ANF **09** 08:15:54.1±0.2, 37°.26N×118°.43W, h5^{km}±1^{km}, ML3.1/16, Error ellipse: s-maj=1.7km s-min=1.5km az=54.0*

*NEIC **09** 08:15:55.1±2.3, 37°.27N±0°.03×118°.39W±0°.03, h5^{km}±8^{km}, Error ellipse: s-maj=4.9km s-min=3.3km az=150.0*

ISC 09 08:15:54.4±1.1**, 37°.28N**±0°.02×**118°.40W**±0°.02**, h3**^{km}±10^{km}**, n75,** σ**0^{s}.95**/90**, California-Nevada border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MTUM	**Tungsten Hills**	**0.15**	**299**		**Pg**	**08 15 57.4**	**0.0**
TIN	**Tinemaha, Big**	**0.26**	**149**	P	**Pg**	**08 15 59.7**	**+0.2**
	baz=320,SNR=210						
TIN				S	**Sg**	**08 16 03.5**	**+0.6**
	baz=320						
MLAC	**Mammoth, Mammo**	**0.49**	**315**	P	**Pg**	**08 16 03.9**	**0.0**
	baz=140,SNR=73						
MLAC				S	**Sg**	**08 16 11.0**	**+0.7**
	baz=140						
MDRNC	**Doe Ridge**	**0.50**	**316**		**Pg**	**08 16 04.2**	**+0.2**
OMMB	**Old Mammoth Mi**	**0.58**	**305**	Pg	**Pg**	**08 16 05.3**	**-0.3**
OMMB				IAML		08 16 13.2	
	comp=E,378nm,0.4s						
OMMB				IAML		08 16 16.4	
	comp=N,493nm,0.3s						
MRDM	**Red Cones**	**0.61**	**301**		**Pg**	**08 16 06.0**	**-0.2**
MDPB	**Devils Postpil**	**0.65**	**303**		**Pg**	**08 16 06.5**	**-0.3**
MDPB				IAML		08 16 15.7	
	comp=N,918nm,0.4s						
MDCM	**Deadman Creek**	**0.67**	**310**		**Pg**	**08 16 07.0**	**-0.2**
HELL	**Mitchell Peak,**	**0.78**	**220**		**Pg**	**08 16 08.8**	**-0.6**
GRAC	**Grapevine Rang**	**0.87**	**109**	P	**Pg**	**08 16 11.3**	**+0.2**
	baz=287,SNR=156						
GRAC				S	**Sg**	**08 16 23.5**	**+1.0**
	baz=287						
CWC	**Cottonwood Cre**	**0.88**	**163**	P	**Pg**	**08 16 10.7**	**-0.4**
	baz=340						
CWC				S	**Sg**	**08 16 22.5**	**0.0**
	baz=340						
LHV	**Little Huntoon**	**0.97**	**355**		**Pg**	**08 16 13.0**	**-0.1**
LHV				IAML		08 16 32.2	
	comp=N,513nm,0.6s						
NVAR	**Mina Array Bea**	**1.15**	**4**		**Pg**	**08 16 15.7**	**-0.7**
NV11	**Mina Array Sit**	**1.17**	**9**		**Pg**	**08 16 16.5**	**-0.3**
TPH	**Tonopah**	**1.23**	**49**		**Pg**	**08 16 17.7**	**-0.2**
VOG	**Valley Oaks Go**	**1.24**	**220**	P	**Pg**	**08 16 17.3**	**-0.8**
	baz=38,SNR=13						
VOG				S	**Sg**	**08 16 33.8**	**-0.4**
	baz=38						
RYN	**Ryan**	**1.35**	**356**		**Pn**	**08 16 19.9**	**-0.4**
MPMC	**Manual Prospec**	**1.42**	**149**	P	**Pn**	**08 16 20.5**	**-0.8**
	baz=328,SNR=43						
MPMC				S	**Sb**	**08 16 39.4**	**-0.8**
	baz=328						
WAKR	**Walker**	**1.47**	**326**		**Pn**	**08 16 22.0**	**0.0**
FURC	**Furnace Creek,**	**1.48**	**123**	Pg	**Pb**	**08 16 22.6**	**+0.2**
	baz=302						
FURC				S	**Sg**	**08 16 42.2**	**+0.5**
	baz=302						
VES	**Vestal, Richgr**	**1.54**	**201**	Pb	**Pn**	**08 16 22.6**	**-0.1**
	baz=20,SNR=59						
VES				S	**Sn**	**08 16 42.7**	**-0.4**
	baz=20						
ISA	**Isabella, Lake**	**1.61**	**182**	Pb	**Pn**	**08 16 23.7**	**-0.1**
	baz=0.8,SNR=62						
ISA				S	**Sn**	**08 16 45.2**	**+0.1**
	baz=0.8						
ISA	**Isabella, Lake**	**1.61**	**182**		**Pn**	**08 16 23.6**	**-0.2**
CMB	**Columbia Colle**	**1.75**	**296**		**Pn**	**08 16 25.8**	**+0.1**
CMB	**Columbia Colle**	**1.75**	**296**	Pn	**Pn**	**08 16 25.6**	**0.0**
TPNV	**Topopah Spring**	**1.75**	**100**	P	**Pn**	**08 16 25.7**	**-0.1**
	baz=281,SNR=153						
TPNV				Sb	**Sg**	**08 16 51.1**	**+0.5**
	baz=281						
TPNV	**Topopah Spring**	**1.75**	**100**		**Pn**	**08 16 26.0**	**+0.2**
LRMC	**Laurel Mtn Rad**	**1.89**	**162**	Sb	**Sg**	**08 16 54.9**	**-0.1**
	baz=341						
PNTR	**Pine Nut**	**2.04**	**333**	Pn	**Pn**	**08 16 30.4**	**+0.6**
PAGB	**Antelope Grade**	**2.15**	**225**		**Pn**	**08 16 31.6**	**+0.6**
ARVC	**Arvin**	**2.18**	**189**	Pb	**Pb**	**08 16 33.4**	**-1.0**
	baz=8.1,SNR=22						
ARVC				Sb	**Sb**	**08 17 02.4**	**+0.6**
	baz=8.1						
PKD	**Bear Valley Ra**	**2.18**	**233**		**Pn**	**08 16 32.0**	**+0.5**
TRAM	**Private Proper**	**2.20**	**224**		**Pn**	**08 16 32.8**	**+0.9**
PMPB	**Monarch Peak**	**2.20**	**242**		**Pn**	**08 16 31.4**	**-0.5**
VCNR	**Virginia City**	**2.24**	**334**	Pn	**Pn**	**08 16 34.1**	**+1.5**
TCHL	**Shandon**	**2.26**	**226**		**Pn**	**08 16 33.8**	**+1.1**
LRV	**Little Rabbit**	**2.27**	**249**		**Pn**	**08 16 33.5**	**+0.7**
BBNM	**San Benito**	**2.28**	**251**		**Pn**	**08 16 33.9**	**+1.0**
TSCN	**Private Proper**	**2.34**	**223**		**Pn**	**08 16 35.1**	**+1.4**
SMMC	**Simmler**	**2.35**	**214**	Pb	**Pn**	**08 16 35.6**	**+1.7**
	baz=32						
SMMC				S	**Sn**	**08 17 03.0**	**-0.2**
	baz=32						
GSC	**Goldstone, Bar**	**2.36**	**146**		**Pn**	**08 16 34.6**	**+0.6**
EDW2	**Edwards Air Fo**	**2.42**	**172**	Pb	**Pb**	**08 16 38.2**	**-0.3**
	baz=351						
EDW2				Sb	**Sb**	**08 17 10.1**	**+1.4**
	baz=351						
HFEM	**San Felipe**	**2.42**	**264**		**Pn**	**08 16 36.2**	**+1.4**
R11A	**Troy Canyon, C**	**2.47**	**64**	Pb	**Pb**	**08 16 39.5**	**-0.1**
	baz=245						
R11A				Sb	**Sg**	**08 17 13.0**	**-0.8**
	baz=245						
R11A	**Troy Canyon, C**	**2.47**	**64**	Pn	**Pb**	**08 16 38.5**	**-1.0**
SAO	**San Andreas Ge**	**2.49**	**259**		**Pn**	**08 16 37.1**	**+1.3**
SCZ	**Santa Cruz**	**2.50**	**255**		**Pn**	**08 16 36.7**	**+0.8**
BJCM	**Johnson Can.**	**2.51**	**254**		**Pn**	**08 16 36.7**	**+0.7**
HSFM	**Saint Francis**	**2.52**	**260**		**Pn**	**08 16 37.9**	**+1.7**
PAHR	**Pah Rah Range**	**2.54**	**343**	Pn	**Pb**	**08 16 39.4**	**-1.3**
RAMR	**Ramage Ranch**	**2.58**	**231**		**Pn**	**08 16 37.8**	**+0.8**
MHC	**Mount Hamilton**	**2.59**	**272**		**Pn**	**08 16 39.0**	**+1.7**
BSMM	**Soledad Missio**	**2.59**	**251**		**Pn**	**08 16 38.0**	**+0.7**
OSI	**Osito Audit: C**	**2.67**	**186**	Pb	**Pb**	**08 16 42.8**	**-0.1**
	baz=4.8						
OSI				Sb	**Sb**	**08 17 17.7**	**+1.6**
	baz=4.8						
OSI	**Osito Audit: C**	**2.67**	**186**	Pn	**Pn**	**08 16 36.7**	**-1.6**
PRN	**Pahroc Range**	**2.67**	**86**		**Pn**	**08 16 38.5**	**+0.1**
SHPR	**Sheep Range**	**2.71**	**106**		**Pn**	**08 16 39.2**	**+0.2**
PAPM	**Alder Peak**	**2.75**	**241**		**Pn**	**08 16 39.9**	**+0.5**
MWC	**Mount Wilson**	**3.06**	**175**	Pn	**Pn**	**08 16 43.9**	**+0.1**
PASC	**Pasadena Art C**	**3.11**	**177**	Pn	**Pn**	**08 16 41.5**	**-2.8**
ORV	**Oroville**	**3.33**	**314**	Pn	**Pn**	**08 16 48.7**	**+1.4**
PSUT	**Pine Spring**	**3.81**	**69**	Pn	**Pn**	**08 16 54.5**	**+0.4**
PFO	**Pinyon Flats O**	**3.99**	**156**	Pn	**Pn**	**08 16 57.0**	**+0.5**
CCUT	**Cedar City**	**4.02**	**85**		**Pn**	**08 16 57.0**	**0.0**
LCMT	**Little Creek M**	**4.13**	**92**		**Pn**	**08 16 58.9**	**+0.5**
GASB	**Alder Springs**	**4.13**	**306**		**Pn**	**08 16 57.2**	**-1.3**
SZCU	**Shurtz Canyon**	**4.24**	**84**	Pn	**Pn**	**08 17 00.9**	**+0.9**
ELK	**Elko**	**4.25**	**34**	Pn	**Pn**	**08 17 01.2**	**+1.0**
KNB	**Kanab**	**4.46**	**92**		**Pn**	**08 17 06.2**	**+3.1**
BAR	**Barrett**	**4.80**	**162**	Pn	**Pn**	**08 17 08.8**	**+1.1**
U15A	**North Rim**	**4.97**	**98**	Pn	**Pn**	**08 17 11.4**	**+1.2**
MTPU	**Mount Pierson**	**4.99**	**79**	Pn	**Pn**	**08 17 10.2**	**-0.3**
MSU	**Marysvale**	**5.07**	**74**	Pn	**Pn**	**08 17 09.8**	**-1.7**
SRU	**San Rafael Swe**	**6.47**	**71**	Pn	**Pn**	**08 17 32.3**	**+1.7**
G08A	**Pilot Rock**	**8.02**	**357**	Pn	**Pn**	**08 17 49.9**	**-1.9**

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*IDC **09** 08:24:01.1±1.5, 48°.88S×121°.56E, h0^{km}, mb4.1/4, mb1 4.3/4, mb1mx3.9/38, mbtmp4.1/4, MS3.7/4, Ms1 3.6/4, ms1mx3.3/21, Error ellipse: s-maj=92.5km s-min=23.5km az=107.0*

ISC 09 08:24:02.8±1.6**, 48°.9S**±0°.3×**121°.5E**±0°.6**, h13**^{km}**, n11,** σ**0^{s}.52**/7**, mb4.1**/4**, MS3.6**/4**, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W1	**Cape Leeuwin H**	**14.98**	**336**	T	T	08 42 49.7	
	baz=160,slow=74,SNR=14						
H01W2	**Cape Leeuwin H**	**14.98**	**336**	T	T	08 42 46.8	
	baz=160,slow=74,SNR=19						
H01W3	**Cape Leeuwin H**	**15.00**	**336**	T	T	08 42 47.9	
	baz=160,slow=74,SNR=14						
STKA	**Stephens Creek**	**22.75**	**49**	P	**P**	**08 29 04.6**	**0.0**
	3.0nm,1.0s,baz=228,slow=14,SNR=3.5						
STKA				LR	LR	08 36 22.0	
	comp=Z,123nm,21.7s,baz=204,slow=33						
ASAR	**Alice Springs**	**27.00**	**26**	P	**P**	**08 29 44.0**	**-0.4**
	4.5nm,1.0s,baz=192,slow=8.5,SNR=16						
ASAR				LR	LR	08 39 12.7	
	comp=Z,231nm,21.3s,baz=208,slow=34						
WRA	**Warramunga Arr**	**30.66**	**24**	P	**P**	**08 30 17.4**	**+0.5**
	3.2nm,1.1s,baz=200,slow=8.8,SNR=5.1						
WRA				LR	LR	08 41 27.8	
	comp=Z,130nm,20.6s,baz=240,slow=34						
VNDA	**Vanda**	**32.60**	**165**	LR	LR	08 43 06.8	
	comp=Z,120nm,18.5s,baz=272,slow=35						
QSPA	**South Pole Qui**	**41.26**	**180**	P	**P**	**08 31 47.5**	**+0.2**
	4.5nm,1.1s,baz=191,slow=0.7,SNR=9.3						
PDAR	**Pinedale Array**	**144.47**	**80**	PKP	**PKPdf**	**08 43 37.9**	**-0.6**
	0.1nm,0.4s,baz=256,slow=3.6,SNR=2.8						
YKA	**Yellowknife Ar**	**146.74**	**45**	PKPbc	**PKPbc**	**08 43 43.5**	**+0.4**
	1.0nm,0.7s,baz=267,slow=1.5,SNR=14						
RES	**Resolute Bay**	**149.91**	**18**	PKPbc	**PKPbc**	**08 43 50.8**	**-0.3**
	1.4nm,0.8s,baz=282,slow=5.2,SNR=7.1						

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*IDC **09** 08:39:22.6±0.6, 2°.30S×119°.58E, h0^{km}, mb4.2/12, mb1 4.3/14, mb1mx4.1/49, mbtmp4.2/14, ML3.7/2, MS3.5/10, Ms1 3.6/10, ms1mx3.3/36, Error ellipse: s-maj=38.1km s-min=12.0km az=62.0*

*DJA **09** 08:39:25.4±0.2, 2°S±2°×11°9E±°, h10^{km}, M4.7/19, mB5.3/3, mb4.6/19, MLv4.7/19, Mw(mB)4.8/3*

*NEIC **09** 08:39:28.6±1.4, 2°.45S±0°.03×119°.46E±0°.07, h49^{km}±9^{km}, mb4.5/19, Error ellipse: s-maj=10.7km s-min=5.0km az=87.0*

ISC 09 08:39:27.7±0.5**, 2°.42S**±0°.05×**119°.44E**±0°.06**, h35**^{km}**, n79,** σ**1^{s}.90**/79**, mb4.5**/30**, MS3.8**/11**, 1C-1D, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TTSI	**Tana Toraja**	**0.72**	**149**	P	**Pn**	**08 39 38.5**	**-2.9**
BNSI	**Bone**	**2.07**	**161**	P	**Pn**	**08 40 01.9**	**+1.9**
KAPI	**Kappang**	**2.59**	**173**	Pn	**Pn**	**08 40 07.3**	**+0.2**
	40nm,0.3s,baz=340,slow=13,SNR=135						
KAPI				Sn	**Sn**	**08 40 42.2**	**+4.8**
	108nm,0.3s,baz=202,slow=21,SNR=8.2						
KAPI	**Kappang**	**2.59**	**173**	Pn	**Pn**	**08 40 07.4**	**+0.2**
KAPI				Sn	**Sn**	**08 40 40.6**	**+3.1**
APSI	**Ampana**	**2.67**	**56**	P	**Pn**	**08 40 09.3**	**+1.1**
BKB	**Balikpapan**	**2.79**	**294**		**Pn**	**08 40 11.3**	**+1.4**
BKB				Sn	**Sn**	**08 40 48.2**	**+5.8**
BKB	**Balikpapan**	**2.79**	**294**	P	**Pn**	**08 40 10.2**	**+0.3**
BKSI	**Bulukumba**	**2.96**	**167**	P	**Pn**	**08 40 12.9**	**+0.7**
KBKI	**Kotabaru**	**3.38**	**255**	P	**Pn**	**08 40 16.8**	**-1.2**
KDI	**Kendari**	**3.52**	**116**	P	**Pn**	**08 40 22.4**	**+2.5**
LUWI	**Luwuk**	**3.60**	**68**	Pn	**Pn**	**08 40 21.3**	**+0.3**
LUWI	**Luwuk**	**3.60**	**68**	P	**Pn**	**08 40 23.3**	**+2.3**
TOLI2	**Tolitoli**	**3.76**	**21**	Pn	**Pn**	**08 40 24.2**	**+1.0**
MRSI	**Marisa**	**3.81**	**41**	P	**Pn**	**08 40 24.0**	**+0.1**
BSSI	**Bau Bau, Buton**	**3.84**	**164**	P	**Pn**	**08 40 26.5**	**+2.2**
GTOI	**Gorontalo**	**4.69**	**50**	P	**Pn**	**08 40 36.3**	**+0.4**
BBKI	**Banjar Baru**	**4.71**	**257**	P	**Pn**	**08 40 35.8**	**-0.5**
MTKI	**Muara Teweh, K**	**4.78**	**288**	P	**Pn**	**08 40 36.5**	**-0.7**
SANI	**Sanana**	**6.55**	**87**	P	**Pn**	**08 41 01.0**	**-0.6**
	0.3nm27nm,1.4s						
PLAI	**Plampang**	**6.58**	**195**	P	**Pn**	**08 41 01.5**	**-0.4**
	0.2nm48nm,1.2s						
EDFI	**Ende, Flores**	**6.67**	**161**	P	**Pn**	**08 41 05.6**	**+2.3**
	0.0nm9.3nm,0.8s						
MYLDM	**Lahad Datu**	**7.61**	**353**	Pn	**Pn**	**08 41 16.9**	**+0.8**
SOEI	**Soe**	**8.72**	**147**	P	**Pn**	**08 41 33.1**	**+1.6**
	1µm76nm,1.4s						
SIJI	**Sorong**	**11.92**	**83**	LR	LR	08 48 13.3	
	comp=Z,164nm,18.5s,baz=112,slow=45						
FITZ	**Fitzroy Crossi**	**16.72**	**159**	Pn	**Pn**	**08 43 20.1**	**+0.8**
	0.1nm,0.3s,baz=312,slow=10,SNR=4.5						
FITZ				LR	LR	08 50 22.4	
	comp=Z,113nm,19.8s,baz=327,slow=39						
FITZ	**Fitzroy Crossi**	**16.72**	**159**	P	**P**	**08 43 21.4**	**+0.1**
RPSI	**Rantau Prapat**	**21.13**	**284**	P	**P**	**08 44 10.1**	**+0.3**
RPSI				IAmb	IAmb	08 44 15.2	
	comp=Z,21nm,0.9s						
RPSI	**Rantau Prapat**	**21.13**	**284**	P	**P**	**08 44 10.2**	**+0.5**
PSI	**Prapat**	**21.16**	**284**	P	**P**	**08 44 10.2**	**+0.1**
	comp=Z,17nm,0.8s,baz=180,slow=2.4,SNR=7.3						
WB0	**Warramunga Arr**	**22.60**	**141**	P	**P**	**08 44 25.2**	**-0.2**
WB0				IAmb	IAmb	08 44 26.5	
	comp=Z,32nm,1.3s						
WRA	**Warramunga Arr**	**22.69**	**141**	P	**P**	**08 44 26.1**	**-0.4**
	comp=Z,9.5nm,1.0s,baz=319,slow=11,SNR=30						
WRA				LR	LR	08 54 51.3	
	comp=Z,61nm,18.3s,baz=195,slow=41						
WRA	**Warramunga Arr**	**22.69**	**141**	P	**P**	**08 44 26.4**	**-0.1**
WB2	**Warramunga Arr**	**22.70**	**141**	P	**P**	**08 44 25.4**	**-1.1**
WB2				IAmb	IAmb	08 44 34.4	
	comp=Z,28nm,1.1s						
WR0	**Warramunga Arr**	**22.83**	**141**	P	**P**	**08 44 26.1**	**-1.8**
WR0				IAmb	IAmb	08 44 32.4	
	comp=Z,18nm,0.8s						
AS31	**Alice Springs**	**25.34**	**148**	P	**P**	**08 44 48.5**	**-3.0**
ASAR	**Alice Springs**	**25.34**	**148**	P	**P**	**08 44 51.2**	**-0.3**
	comp=Z,2.9nm,0.9s,baz=313,slow=5.8,SNR=26						
ASAR				PcP	**PcP**	**08 48 24.6**	**+0.7**
	comp=Z,1.1nm,1.0s,baz=350,slow=2.2,SNR=6.5						
ASAR				LR	LR	08 56 23.0	
	comp=Z,73nm,19.9s,baz=289,slow=40						
ASAR	**Alice Springs**	**25.34**	**148**	P	**P**	**08 44 52.9**	**+1.4**
CMAR	**Chiang Mai Arr**	**28.95**	**317**	P	**P**	**08 45 24.5**	**+0.6**
	comp=Z,1.1nm,0.3s,baz=151,slow=7.9,SNR=1.5						
CMAR				LR	LR	09 00 17.0	
	comp=Z,92nm,18.1s,baz=270,slow=43						
JOW	**Kunigami**	**30.31**	**16**	LR	LR	08 56 45.0	
	comp=Z,175nm,19.9s,baz=283,slow=35						
GYA	**Guiyang**	**31.26**	**338**	⇓P	**P**	**08 45 45.8**	**+1.4**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.3s						
KMI	**Kunming**	**31.82**	**330**	⇑P	**P**	**08 45 52.0**	**+2.5**
KMI				sP	sP	08 46 08.5	+4.5
KMI				pmax	pmax		
	comp=Z,16nm,0.9s						
NJ2	**Nanjing**	**34.29**	**359**	*e*P	**P**	**08 46 11.2**	**+0.5**
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
STKA	**Stephens Creek**	**35.97**	**147**	P	**P**	**08 46 25.6**	**+0.3**
	comp=Z,6.3nm,0.9s,baz=325,slow=10,SNR=9.2						
STKA	**Stephens Creek**	**35.97**	**147**	P	**P**	**08 46 24.4**	**-0.8**
BJI	**Beijing**	**42.36**	**356**	P	**P**	**08 47 19.0**	**+0.5**
BJI				pmax	pmax		
	comp=Z,9.0nm,1.0s						
HHC	**Hu-ho-hao-te**	**43.66**	**351**	*e*P	**P**	**08 47 30.3**	**+1.1**
HHC				pmax	pmax		
	comp=Z,15nm,1.1s						
HHC				pmax	pmax		
	comp=Z,100nm,5.5s						
GTA	**Gaotai**	**45.37**	**339**	P	**P**	**08 47 44.5**	**+1.6**
GTA				pP	sP	08 47 56.0	-1.6
GTA				sP	pP	08 48 01.1	+7.7
GTA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,100nm,6.6s						
GTA				LR	LR		
	comp=N,160nm,17.8s						
GTA				LR	LR		
	comp=E,340nm,20.4s						
GTA				LR	LR		
	comp=Z,180nm,21.4s						
CN2	**Changchun**	**46.33**	**6**	*e*P	P	08 47 58.1	+7.9
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
DZM	**Mont Dzumac**	**49.63**	**117**	LR	LR	09 08 58.0	
	comp=Z,53nm,18.6s,baz=318,slow=36						
ULN	**Ulaanbaatar**	**51.24**	**349**	P	**P**	**08 48 27.6**	**-0.5**
SONM	**Songino Array**	**51.34**	**349**	P	**P**	**08 48 28.9**	**+0.2**
	comp=Z,5.2nm,0.8s,baz=165,slow=8.9,SNR=36						
WMQ	**Urumqi**	**54.13**	**332**	*e*P	**P**	**08 48 50.6**	**+1.2**
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,88nm,4.7s						
WMQ				LR	LR		
	comp=Z,130nm,21.5s						
KSH	**Kashi**	**57.70**	**321**	P	**P**	**08 49 16.1**	**+0.9**
KSH				PcP	**PcP**	**08 50 04.9**	**-3.0**
KSH				pmax	pmax		
	comp=Z,3.0nm,0.5s						
KSH				pmax	pmax		
	comp=Z,310nm,4.6s						
MK31	**Makanchi Array**	**58.89**	**331**	P	**P**	**08 49 23.7**	**+0.5**
MK31				IAmb	IAmb	08 49 36.3	
	comp=Z,4.6nm,1.1s						
MKAR	**Makanchi Array**	**58.89**	**331**	P	**P**	**08 49 23.2**	**0.0**
	comp=Z,3.0nm,0.9s,baz=128,slow=7.9,SNR=23						
MKAR	**Makanchi Array**	**58.89**	**331**	P	**P**	**08 49 24.1**	**+0.9**
MAKZ	**Makanchi**	**59.06**	**331**	P	**P**	**08 49 25.1**	**+0.8**
MAKZ				IAmb	IAmb	08 49 31.1	
	comp=Z,7.3nm,1.3s						
KBL	**Kabul**	**59.87**	**313**	P	**P**	**08 49 29.9**	**-0.5**
AAK	**Ala-Archa**	**60.43**	**323**	P	**P**	**08 49 35.0**	**+0.9**
	comp=Z,1.4nm,0.7s,baz=90,slow=4.2,SNR=5.6						
AAK	**Ala-Archa**	**60.43**	**323**	P	**P**	**08 49 32.9**	**-1.1**
AAK				IAmb	IAmb	08 49 51.1	
	comp=Z,5.4nm,1.2s						
KK31	**Karatay Array**	**63.12**	**322**	P	**P**	**08 49 52.4**	**+0.4**
KK31				IAmb	IAmb	08 50 10.3	
	comp=Z,3.8nm,1.3s						
KKAR	**Karatay Array**	**63.12**	**322**	P	**P**	**08 49 51.6**	**-0.4**
ZAA0	**Zalesovo Array**	**63.12**	**338**	P	**P**	**08 49 50.7**	**-0.9**
ZALV	**Zalesovo Beam**	**63.12**	**338**	P	**P**	**08 49 50.5**	**-1.2**
	comp=Z,5.6nm,0.9s,baz=123,slow=5.5,SNR=17						
ZALV	**Zalesovo Beam**	**63.12**	**338**	P	**P**	**08 49 51.0**	**-0.7**
KURBB	**Kurchatov Arra**	**63.35**	**332**	P	**P**	**08 49 53.6**	**+0.4**
	comp=Z,1.9nm,0.7s,baz=139,slow=6.2,SNR=15						
KURK	**Kurchatov**	**63.37**	**332**	P	**P**	**08 49 53.6**	**+0.2**

BVAR	Borovoye Array	68.77	331	P	P	08 50 26.8	-1.3
	comp=Z,0.4nm,0.5s,baz=215,slow=32,SNR=4.1						
ABKAR	Akbulak array	72.51	324	P	P	08 50 50.6	-0.3
AKTO	Aktyubinsk	74.14	324	P	P	08 51 00.2	-0.3
	comp=Z,2.2nm,0.8s,baz=71,slow=3.7,SNR=5.4						
TIXI	Tiksi	74.19	3	P	P	08 50 58.3	-2.1
TIXI				IAmb	IAmb	08 50 59.3	
	comp=Z,3.1nm,0.8s						
AKASG	Malin Array Be	92.00	320	LR	LR	09 41 21.2	
	comp=Z,28nm,18.4s,baz=25,slow=40						
BOSA	Boshof	92.53	241	LR	LR	09 27 13.6	
	comp=Z,52nm,21.3s,baz=202,slow=31						
MNK	Minsk	92.86	324	iP	P	08 52 31.1	-5.7
	comp=E,2.0nm,0.7s						
MNK				iP	P	08 52 31.1	-5.7
	comp=N,20nm,0.8s						
MNK				iP	P	08 52 31.1	-5.7
	comp=Z,6.0nm,0.6s						
MNK				iPP	PP	08 56 13.1	-6.3
MNK				iPPP	PPP	08 58 13.5	
MNK				iS	SKSac	09 03 01.9	-6.1
MNK				iPS	PS	09 04 51.0	-5.1
MNK				iSS	SS	09 09 30.5	-23
MNK				iSSS	SSS	09 13 29.7	
MNK				iLQ	LQ	09 28 32.1	
MNK				iLR	LR	09 34 14.7	
MNK				iLRM	MLR	09 35 15.2	
	comp=E,8.0nm,10.8s						
MNK				iLRM	MLR	09 35 24.9	
	comp=N,357nm,17.4s						
MNK				iLRM	MLR	09 35 28.6	
	comp=Z,113nm,15.9s						
ARCES	ARCESS Array B	93.64	339	LR	LR	09 39 43.8	
	comp=Z,29nm,18.2s,baz=75,slow=39						
TORD	Torodi Ar. Bea	117.56	283	PKP	PKiKP	08 58 13.0	+2.0
	comp=Z,0.8nm,0.8s,baz=50,slow=2.3,SNR=2.4						
PDAR	Pinedale Array	120.74	40	PKP	PKPdf	08 58 15.6	-1.1
	comp=Z,0.2nm,0.6s,baz=285,slow=4.3,SNR=2.1						
TXAR	Lajitas Array	131.10	52	PKP	PKiKP	08 58 38.3	+0.6
	comp=Z,0.4nm,0.9s,baz=241,slow=2.6,SNR=4.0						
CPUP	Villa Florida	151.25	186	PKPbc	PKiKP	08 59 18.9	+0.1
	comp=Z,1.4nm,0.8s,baz=40,slow=1.8,SNR=3.1						

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*IDC **09** 08:54:53.1±4.2, 5°.09S×152°.74E, h58^{km}±38^{km}, mb3.9/13, mb1 4.1/14, mb1mx3.9/34, mbtmp4.2/14, ML2.3/1, MS3.6/4, Ms1 3.6/4, ms1mx3.0/38, Error ellipse: s-maj=24.3km s-min=20.5km az=109.0*

*NEIC **09** 08:54:53.0±1.4, 5°.04S±0°.07×152°.7E±0°.1, h55^{km}±6^{km}, mb4.6/24, Error ellipse: s-maj=17.7km s-min=9.9km az=91.0*

ISC 09 08:54:52.9±0.6, **5°.03S**±0°.08×**152°.7E**±0°.1, **h55**^{km}, **n56**, σ**0^{s}73**/53, **mb4.3**/25, **MS3.8**/3, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	1.01	325	Pn	Pn	08 55 11.0	+0.1
PMG	Port Moresby	7.04	232	P	Pn	08 56 34.0	+0.6
	2.9nm,0.3s,baz=35,slow=9.1,SNR=14						
PMG				S	Sn	08 57 51.9	-0.2
	1.1nm,0.3s,baz=123,slow=20,SNR=2.4						
PMG	Port Moresby	7.04	232		Pn	08 56 32.4	-1.0
HNR	Honiara	8.38	122	LR	LR	09 00 38.2	
	comp=Z,158nm,19.7s,baz=292,slow=41						
PATS	Pohnpei	13.03	25	Pn	Pn	08 57 54.0	-1.4
DZM	Mont Dzumac	21.52	143	P	P	08 59 37.8	+0.2
	6.0nm,0.7s,baz=301,slow=18,SNR=1.8						
WB0	Warramunga Arr	23.10	229	P	P	08 59 53.5	-0.8
WR0	Warramunga Arr	23.11	228	P	P	08 59 54.7	+0.4
WB2	Warramunga Arr	23.24	229	P	P	08 59 55.8	+0.2
WRA	Warramunga Arr	23.25	229	P	P	08 59 54.3	-1.4
	5.3nm,0.8s,baz=53,slow=9.7,SNR=24						
WRA	Warramunga Arr	23.25	229	P	P	08 59 55.9	+0.2
AS31	Alice Springs	25.94	223	P	P	09 00 20.7	+0.4
ASAR	Alice Springs	25.94	223	P	P	09 00 20.2	-0.1
	1.9nm,0.7s,baz=58,slow=8.7,SNR=22						
ASAR	Alice Springs	25.94	223	P	P	09 00 21.7	+1.4
FITZ	Fitzroy Crossi	29.50	242	P	P	09 00 50.5	-1.6
	1.6nm,0.5s,baz=60,slow=6.6,SNR=12						
FITZ	Fitzroy Crossi	29.50	242	P	P	09 00 51.2	-0.9
USRK	Ussuriysk Ar.	52.44	341	P	P	09 04 00.7	+0.7
	1.0nm,0.4s,baz=151,slow=30,SNR=2.3						
CMAR	Chiang Mai Arr	57.92	295	P	P	09 04 41.1	+1.2
	2.7nm,0.5s,baz=110,slow=5.5,SNR=9.1						
CMAR	Chiang Mai Arr	57.92	295	P	P	09 04 40.3	+0.3
PEA0B	Petropavlovsk-	58.07	4	P	P	09 04 41.1	+0.8
PETK	Petropavlovsk-	58.07	4	P	P	09 04 40.6	+0.3
	2.1nm,0.5s,baz=154,slow=6.5,SNR=13						
PETK	Petropavlovsk-	58.07	4	P	P	09 04 40.8	+0.5
ANM	Nome	76.01	17	P	P	09 06 34.9	+1.0
ANM				IAmb	IAmb	09 06 35.3	
	comp=Z,2.4nm,0.6s						
CNPM	China Poot	77.95	26	P	P	09 06 45.6	+0.6
BRLK	Bradley Lake	78.22	25	P	P	09 06 46.7	+0.2
SKT	Skwentna	79.15	23	P	P	09 06 50.8	-0.8
SKT				IAmb	IAmb	09 07 10.2	
	comp=Z,11nm,1.4s						
SUA	Susitna One	79.19	24	P	P	09 06 51.2	-0.7
SUA				IAmb	IAmb	09 06 52.7	
	comp=Z,5.9nm,0.8s						
RDOG	Red Dog Mine	79.22	16	P	P	09 06 53.2	+1.4
RDOG				IAmb	IAmb	09 06 53.8	
	comp=Z,11nm,0.8s						
GHO	Glory Hole Cre	80.09	24	P	P	09 06 57.0	+0.3
GHO				IAmb	IAmb	09 07 02.8	
	comp=Z,20nm,1.4s						
KTH	Kantishna Hill	80.25	22	P	P	09 06 56.7	-0.8
KTH				IAmb	IAmb	09 07 12.0	
	comp=Z,7.3nm,1.4s						
MK31	Makanchi Array	80.46	319	P	P	09 06 59.0	0.0
MK31				IAmb	IAmb	09 07 13.1	
	comp=Z,5.8nm,0.5s						
MKAR	Makanchi Array	80.46	319	P	P	09 06 59.5	+0.6
	comp=Z,1.1nm,0.8s,baz=100,slow=5.9,SNR=11						
MKAR	Makanchi Array	80.46	319	P	P	09 06 58.6	-0.4
SCM	Sheep Creek Mo	80.78	25	P	P	09 07 00.7	+0.2
KLU	Klutina	81.21	25	P	P	09 07 03.7	+1.0
KLU				IAmb	IAmb	09 07 23.2	
	comp=Z,20nm,1.4s						
ZALV	Zalesovo Beam	81.31	326	P	P	09 07 02.9	-0.4
	comp=Z,1.9nm,0.6s,baz=108,slow=6.0,SNR=8.8						
DHY	Denali Highway	81.37	23	P	P	09 07 03.5	-0.1
DHY				IAmb	IAmb	09 07 06.5	
	comp=Z,3.4nm,0.8s						
M24K	Tolsona, Glenn	81.39	25	P	P	09 07 04.3	+0.6
CCB	Clear Creek Bu	81.99	22	P	P	09 07 05.6	-1.0
CCB				IAmb	IAmb	09 07 06.0	
	comp=Z,1.9nm,0.7s						
IL31		82.39	22	P	P	09 07 07.9	-0.8
ILAR	Eielson Array	82.39	22	P	P	09 07 07.7	-1.1
	comp=Z,1.0nm,0.5s,baz=249,slow=5.2,SNR=20						
BCAR	Beaver Creek A	83.64	25	P	P	09 07 15.4	+0.1
KURK	Kurchatov	83.91	322	P	P	09 07 16.6	-0.3
KURK				IAmb	IAmb	09 07 18.0	
	comp=Z,8.6nm,1.4s						
KURBB	Kurchatov Arra	83.94	322	P	P	09 07 17.4	+0.4
	comp=Z,1.6nm,0.8s,baz=110,slow=4.2,SNR=12						
QSPA	South Pole Qui	84.93	180	P	P	09 07 22.3	+0.3
QSPA				IAmb	IAmb	09 07 29.5	
	comp=Z,9.8nm,1.5s						
NRIK	Noril'sk	86.16	341	P	P	09 07 27.9	+0.1
	comp=Z,3.0nm,0.5s,baz=110,slow=3.3,SNR=7.9						
NRIK	Noril'sk	86.16	341	P	P	09 07 27.9	+0.1
NRIK				IAmb	IAmb	09 07 28.3	
	comp=Z,3.3nm,0.6s						
YBH	Yreka Blue Hor	89.25	48	LR	LR	09 40 22.1	
	comp=Z,34nm,19.1s,baz=286,slow=31						
BVAR	Borovoye Array	89.39	323	P	P	09 07 42.7	-0.9
	comp=Z,1.0nm,0.6s,baz=147,slow=8.5,SNR=6.0						
NVAR	Mina Array Bea	92.27	52	LR	LR	09 44 20.3	
	comp=Z,50nm,18.4s,baz=286,slow=32						
YKA	Yellowknife Ar	95.66	28	LR	LR	09 47 23.2	
	comp=Z,37nm,21.1s,baz=0.0,slow=33						
CLL	Collm	123.02	331	ePKPdf	PKPdf	09 13 43.0	-0.2
TORD	Torodi Ar. Bea	150.32	288	PKPbc	PKPbc	09 14 38.9	-0.2
	comp=Z,5.3nm,0.8s,baz=60,slow=2.3,SNR=21						
TORD	Torodi Ar. Bea	150.32	288		PKPbc	09 14 39.1	0.0
BDFB	Brasilia	150.95	135	PKPbc	PKPbc	09 14 40.9	+0.2
	comp=Z,4.7nm,0.6s,baz=338,slow=1.4,SNR=8.7						
BDFB	Brasilia	150.95	135		PKiKP	09 14 41.8	+0.5

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*IDC **09** 09:22:13.5±3.0, 2°.67N×124°.01E, h316^{km}±32^{km}, mb3.8/13, mb1 3.9/14, mb1mx3.6/48, mbtmp4.5/14, Error ellipse: s-maj=30.2km s-min=9.3km az=79.0*

*NEIC **09** 09:22:14.2±1.6, 2°.78N±0°.05×124°.34E±0°.08, h322^{km}±6^{km}, mb4.5/33, Error ellipse: s-maj=12.4km s-min=6.5km az=71.0*

*DJA **09** 09:22:16.3±0.7, 3°N±4°×12°4E±°, h298^{km}±7^{km}, M4.6/11, mb4.8/2, mB5.2/2, MLv4.4/11, Mw(mB)4.6/2*

ISC 09 09:22:12.5±0.4, **2°.83N**±0°.05×**124°.43E**±0°.06, **h300**^{km}, **n94**, σ**1^{s}55**/104, **mb4.3**/38, **2C**, **Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	1.39	52	P	Pn	09 22 59.3	+4.3
GTOI	Gorontalo	2.60	213	P	Pn	09 23 06.9	+2.5
GTOI				S	S	09 23 48.7	+2.8
MRSI	Marisa	3.41	227	P	Pn	09 23 15.8	+3.4
MRSI				S	S	09 24 03.1	+2.8
TNTI	Ternate	3.58	125	Pn	Pn	09 23 17.0	+2.8
TNTI	Ternate	3.58	125	P	Pn	09 23 17.3	+3.1
TNTI				S	S	09 24 05.0	+1.4
TOLI2	Tolitoli	4.02	245	Pn	Pn	09 23 21.3	+2.4
LUWI	Luwuk	4.19	203	Pn	Pn	09 23 22.3	+1.5
LUWI	Luwuk	4.19	203	P	Pn	09 23 23.4	+2.6
LUWI				S	S	09 24 14.5	-1.1
KCP	Kidapawan	4.20	9	⇑iP	Pn	09 23 24.9	+3.8
APSI	Ampana	4.64	217	P	Pn	09 23 28.4	+2.5
APSI				S	S	09 24 26.6	+1.8
SANI	Sanana	5.09	162	P	Pn	09 23 31.5	+0.4
SANI				S	S	09 24 29.6	-4.7
MYLDM	Lahad Datu	6.36	292	Pn	Pn	09 23 48.6	+2.6
NLAI	Namlea	6.59	156	P	Pn	09 23 51.2	+2.2
SIJI	Sorong	7.76	118	P	Pn	09 24 07.4	+4.2
	4.8nm,0.3s,baz=311,slow=12,SNR=10						
FAKI	Fak Fak	9.68	126	Pn	Pn	09 24 26.8	0.0
SBUM	Sibu	12.20	269		P	09 24 59.1	+0.4
SOEI	Soe	12.50	181	P	P	09 25 02.5	+0.3
BATI	Baumata	12.97	183	P	P	09 25 09.3	+2.0
	24nm,0.3s,baz=324,slow=1.3,SNR=9.3						
JAGI	Jajag, Banyuwa	15.20	222	Pn	Pn	09 25 33.4	+0.1
JAGI				IAmb	IAmb	09 26 02.1	
	comp=Z,29nm,1.0s						
MTN	Manton Dam	16.94	157		P	09 25 52.1	+1.3
YULB	Yu-li	20.66	352	P	P	09 26 29.2	-1.0
YULB				IAmb	IAmb	09 26 29.7	
	comp=Z,37nm,1.2s						
TPUB	Ta-pu	20.68	350	P	P	09 26 30.7	+0.4
FITZ	Fitzroy Crossi	20.83	177	P	P	09 26 30.5	-1.3
	comp=Z,24nm,0.3s,baz=12,slow=7.5,SNR=171						
FITZ	Fitzroy Crossi	20.83	177	P	P	09 26 30.8	-1.0
SSLB	Suanglung	21.10	351	P	P	09 26 34.6	+0.1
SSLB				IAmb	IAmb	09 26 38.3	
	comp=Z,19nm,0.8s						
WB0	Warramunga Arr	24.50	157	P	P	09 27 04.8	-0.5
WRAB	Tennant Creek	24.63	157	P	P	09 27 05.9	-0.5
WRA	Warramunga Arr	24.64	157	P	P	09 27 05.9	-0.6
	comp=Z,24nm,0.4s,baz=338,slow=10,SNR=360						
WRA				PcP	PcP	09 30 33.9	-1.5
	comp=Z,1.0nm,0.5s,baz=321,slow=2.5,SNR=5.2						
WRA	Warramunga Arr	24.64	157	P	P	09 27 05.0	-1.6
WB2	Warramunga Arr	24.64	157	P	P	09 27 06.1	-0.5
PSA00	Pilbara Seismi	24.66	190	P	P	09 27 05.5	-1.2
PSA00				IAmb	IAmb	09 27 06.6	
	comp=Z,19nm,0.8s						
WR0	Warramunga Arr	24.73	157	P	P	09 27 06.7	-0.7
WR0				IAmb	IAmb	09 27 07.5	
	comp=Z,18nm,0.6s						
COEN	Coen	24.98	132	P	P	09 27 09.3	-0.3
PBKT	Sadao Pong	26.80	302	P	P	09 27 24.1	-1.8
PBKT				IAmb	IAmb	09 27 24.5	
	comp=Z,37nm,1.4s						
AS31	Alice Springs	27.91	161	P	P	09 27 35.3	-0.3
ASAR	Alice Springs	27.91	161	P	P	09 27 35.3	-0.4
	comp=Z,6.2nm,0.5s,baz=343,slow=7.4,SNR=144						
ASAR				PcP	PcP	09 30 41.7	-1.3
	comp=Z,1.0nm,0.8s,baz=4.9,slow=3.2,SNR=4.8						
NJ2	Nanjing	29.54	350	eP	P	09 27 51.8	+1.9
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
MORW	Morawa	32.72	194	P	P	09 28 16.6	-1.1
FORT	Forrest	33.60	174	P	P	09 28 24.9	-0.3
FORT				IAmb	IAmb	09 28 25.4	
	comp=Z,29nm,0.6s						
XAN	Xi'an	34.26	337	P	P	09 28 30.9	0.0
XAN				pmax	pmax		
	comp=Z,8.0nm,0.8s						
MJAR	Matsushiro Arr	35.88	19	P	P	09 28 45.5	+0.9
	comp=Z,1.8nm,0.5s,baz=195,slow=10.0,SNR=5.2						
NWAO	Narrogin (SRO)	36.21	190	P	P	09 28 46.7	-0.7
NWAO				IAmb	IAmb	09 28 46.9	
	comp=Z,15nm,1.1s						
BBOO	Buckleboo	37.12	164	P	P	09 28 55.1	+0.1
BBOO				IAmb	IAmb	09 28 55.7	
	comp=Z,13nm,0.7s						
EIDS	Eidsvold	38.13	139	P	P	09 29 02.7	-0.9
EIDS				IAmb	IAmb	09 29 22.5	
	comp=Z,16nm,1.4s						
LZH	Lanzhou	38.17	333	eP	P	09 29 04.2	+0.2
LZH				pP	pwP	09 30 05.3	-3.4
LZH				sP	PnPn	09 30 40.5	-3.6
LZH				pmax	pmax		
	comp=Z,10.0nm,1.3s						
LZH				pmax	pmax		
	comp=Z,180nm,4.3s						
STKA	Stephens Creek	38.18	156	P	P	09 29 04.5	+0.6
	comp=Z,14nm,0.5s,baz=326,slow=8.2,SNR=40						
STKA	Stephens Creek	38.18	156	P	P	09 29 04.4	+0.6
HHC	Hu-ho-hao-te	39.59	345	eP	P	09 29 15.7	+0.2
HHC				pmax	pmax		
	comp=Z,8.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,140nm,5.6s						
HHC				LR	LR		
	comp=N,850nm,22.7s						
HHC				LR	LR		
	comp=E,760nm,21.8s						
HHC				LR	LR		
	comp=Z,150nm,21.8s						
USRK	Ussuriysk Ar.	41.74	8	P	P	09 29 35.3	+2.6
	comp=Z,2.2nm,0.6s,baz=202,slow=6.7,SNR=6.2						
USRK	Ussuriysk Ar.	41.74	8	P	P	09 29 33.8	+1.1
ARMA	Armidale	42.04	144	P	P	09 29 37.4	+1.8
ARMA				IAmb	IAmb	09 29 38.0	
	comp=Z,9.8nm,0.7s						
GTA	Gaotai	42.74	332	⇑P	P	09 29 41.4	+0.4
GTA				pP	pwP	09 30 49.3	+2.5
GTA				sP	PcP	09 31 25.7	-0.9
GTA				pmax	pmax		
	comp=Z,9.0nm,0.7s						
CAN	Canberra	44.39	151	P	P	09 29 56.1	+2.0
CAN				IAmb	IAmb	09 30 14.2	
	comp=Z,38nm,1.3s						
TOO	Toolangi	44.70	156	P	P	09 29 58.1	+1.7
TOO				IAmb	IAmb	09 29 59.0	
	comp=Z,28nm,1.1s						
KLR	Kul'dur	46.65	7	P	P	09 30 12.4	+1.1
	comp=Z,4.1nm,0.6s,baz=181,slow=6.9,SNR=20						
ULN	Ulaanbaatar	47.30	344	P	P	09 30 17.4	+0.8
SONM	Songino Array	47.46	344	P	P	09 30 18.3	+0.5
	comp=Z,4.0nm,0.8s,baz=160,slow=8.9,SNR=22						
SONM	Songino Array	47.46	344	P	P	09 30 17.8	0.0
WMQ	Urumqi	52.17	327	eP	P	09 30 54.4	+1.3
WMQ				pmax	pmax		
	comp=Z,12nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,110nm,5.5s						
ZSN	Zaisan	56.04	329	eP	P	09 31 20.9	+0.2
	baz=329						
SHLS	Shalkode	56.59	322	eP	P	09 31 22.3	-2.5
	comp=Z,3.2nm,1.1s,baz=322						
MKAR	Makanchi Array	57.01	327	PcP	PcP	09 32 16.9	-2.0
	comp=Z,0.8nm,0.5s,baz=138,slow=3.0,SNR=3.7						
KSH	Kashi	57.08	316	P	P	09 31 26.9	-1.4
PETK	Petropavlovsk-	57.14	23	P	P	09 31 29.4	+1.2
	comp=Z,3.5nm,0.9s,baz=280,slow=8.6,SNR=2.8						
MAKZ	Makanchi	57.19	327	P	P	09 31 28.5	-0.2
SATY	Saty	57.20	321	eP	P	09 31 28.4	-0.6
	comp=Z,2.1nm,0.9s,baz=321						
KPKS	Kokpek	57.24	322	eP	P	09 31 28.4	-0.9
	baz=322						
MDOK	Medeo	58.11	321	eP	P	09 31 34.9	-0.5
	baz=321						
TNSS	Tian-Shan	58.11	320	eP	P	09 31 35.1	-0.6
	baz=321						
AAA	Alma-Ata	58.22	321	eP	P	09 31 35.7	-0.3
	baz=321						
TDK	Taldyqorghan	58.22	323	eP	P	09 31 35.2	-0.8
	baz=323						
MTBS	Maitube	58.49	320	eP	P	09 31 36.9	-1.0
	baz=321						
CHKK	Chushkaly	58.49	321	eP	P	09 31 36.3	-1.5
	baz=322						
KUU	Kurty	58.92	321	eP	P	09 31 39.0	-1.7
	comp=Z,4.6nm,0.7s,baz=321						
SEM	Semipalatinsk	60.26	329	eP	P	09 31 47.9	-2.0
	baz=329						
ZALV	Zalesovo Beam	60.37	334	P	P	09 31 49.0	-1.4
	comp=Z,1.9nm,0.7s,baz=110,slow=6.5,SNR=8.6						
ZALV	Zalesovo Beam	60.37	334	P	P	09 31 49.1	-1.2
BTLS	Baital	60.91	321	eP	P	09 31 52.8	-1.4
	baz=322						
KURBB	Kurchatov Arra	61.28	329	P	P	09 31 54.9	-1.6
	comp=Z,6.0nm,0.9s,baz=125,slow=6.1,SNR=27						
LBZ	Lake Benmore	62.26	145	P	P	09 32 03.3	+0.2
IUG	Iuzhnay	62.27	317	eP	P	09 32 02.5	-0.9
	comp=Z,1.4nm,0.6s,baz=317						
KKAR	Karatay Array	62.34	318	P	P	09 32 02.7	-1.0
RPZ	Rata Peaks	62.38	143	P	P	09 32 04.3	+0.4
RPZ				IAmb	IAmb	09 32 15.3	
	comp=Z,36nm,1.3s						
TUWZ	Tuamarina	62.92	140	P	P	09 32 07.1	-0.4
BKZ	Black Stump Fm	63.48	137	P	P	09 32 11.5	+0.2
BKZ				IAmb	IAmb	09 32 14.1	
	comp=Z,14nm,1.1s						
BRVK	Borovoye	66.91	328	P	P	09 32 32.3	-0.5
BRVK				IAmb	IAmb	09 32 33.2	
	comp=Z,6.2nm,0.8s						
NRIK	Noril'sk	70.77	347	P	P	09 32 56.6	+0.5
	comp=Z,4.5nm,0.6s,baz=135,slow=7.3,SNR=13						
NRIK	Noril'sk	70.77	347	IAmb	IAmb	09 32 57.4	
	comp=Z,5.1nm,0.7s						
ABKAR	Akbulak array	71.40	321	P	P	09 32 59.2	-1.2
ABKAR	Akbulak array	71.40	321	IAmb	IAmb	09 32 59.9	
	comp=Z,2.7nm,0.8s						
ARU	Arti	74.47	328	P	P	09 33 16.7	-1.4
	comp=Z,1.6nm,0.5s,baz=109,slow=3.8,SNR=8.1						
MNK	Minsk	91.52	325	iP	P	09 34 44.4	-0.8
	comp=E,2.0nm,0.7s						
MNK				iP	P	09 34 44.4	-0.8
	comp=N,14nm,0.8s						
MNK				iP	P	09 34 44.4	-0.8
	comp=Z,17nm,0.7s						
MNK				ipP	pwP	09 36 00.1	-1.5
MNK				iPP	PP	09 38 27.1	-0.6
MNK				iPPP	PPP	09 40 27.7	
MNK				iS	SKSac	09 44 44.9	-3.5
MNK				isS	sS	09 47 06.1	-17
MNK				iSS	SS	09 51 30.9	-1.3
MNK				iSSS	SSS	09 55 02.2	
MNK				iLRM	MLR	10 17 33.7	
	comp=Z,88nm,21.0s						
MNK				iLRM	MLR	10 17 35.9	
	comp=E,15nm,24.6s						
MNK				iLRM	MLR	10 17 39.5	
	comp=N,319nm,21.0s						
FINES	FINESS Array B	91.53	332	P	P	09 34 43.9	-1.2
	comp=N,0.6nm,0.5s,baz=69,slow=5.5,SNR=6.1						
TXAR	Lajitas Array	123.96	52	PKP	PKPdf	09 40 35.0	-0.9
	comp=N,0.3nm,0.7s,baz=323,slow=1.4,SNR=2.7						

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*IDC **09** 10:02:34.7±1.9, 36°.26N×4°.75W, h79^{km}±24^{km}, mb3.2/5, mb1 3.6/10, mb1mx3.3/51, mbtmp3.6/10, Error ellipse: s-maj=36.5km s-min=13.2km az=98.0*

*LDG **09** 10:02:34.9, 36°.34N×4°.56W, h94^{km}*

*INMG **09** 10:02:35.8±2.1, 36°.34N×4°.50W, h95^{km}±8^{km}, ML3.7, Error ellipse: s-maj=3.1km s-min=3.0km az=71.0*

*NEIC **09** 10:02:35.1±3.2, 36°.37N±0°.05×4°.51W±0°.05, h93^{km}±10^{km}, Error ellipse: s-maj=7.4km s-min=5.4km az=187.0*

*MDD **09** 10:02:36.3±0.4, 36°.35N×4°.50W, h91^{km}±4^{km}, mb4.1/52, Error ellipse: s-maj=3.8km s-min=2.9km az=168.0, PRXIMO*

MDD EMS: II INTENSIDAD MAXIMA.

*IGIL **09** 10:02:36.7, 36°.35N×4°.52W, h93^{km}, ML4.3*

*CNRM **09** 10:02:36.2, 36°.21N×4°.70W, h50^{km}, ml4.0, Hypocentre not reviewed by the ISC*

*SFS **09** 10:02:36.0, 36°.30N×4°.50W, h93^{km}, ML4.0, ALBORAN W.*

ISC 09 10:02:35.5±0.7, **36°.38N**±0°.03×**4°.49W**±0°.02, **h101**^{km}±5^{km}, **n233**, σ**2^{s}73**/406, **mb3.5**/5, **30C-6D**, **Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EMAL	Malaga-Limoner	0.39	8	P	Pn	10 02 50.0	-0.6
EMAL				S	Sn	10 02 59.8	-2.2
EMAL	Malaga-Limoner	0.39	8	P	Pn	10 02 50.0	-0.6
EMAL				S	Sn	10 02 59.8	-2.2
REAL	Reales	0.59	280	P	Pn	10 02 52.3	0.0
REAL				S	Sn	10 03 02.2	-2.6
REAL	Reales	0.59	280	P	Pn	10 02 52.3	0.0
REAL				S	Sn	10 03 02.2	-2.6
EJIF	Jimena Fronter	0.79	276	⇑P	Pn	10 02 53.9	0.0
	SNR=18						
EGOR	Sierra Gorda,	0.79	23	⇑P	Pn	10 02 54.6	+0.5
	218nm,0.3s,SNR=18						
EGOR				S	Sn	10 03 07.9	-0.1
	2µm,0.6s,SNR=7.9						
EGOR	Sierra Gorda,	0.79	23		Pn	10 02 54.6	+0.5
ELGU	Los Guajares,	0.85	55	⇓P	Pn	10 02 53.5	-1.1
	261nm,0.1s,SNR=18						
ELGU				S	Sn	10 03 06.5	-2.4
	2µm,0.2s,SNR=7.9						
ELGU	Los Guajares,	0.85	55		Pn	10 02 53.5	-1.1
ELGU					Sn	10 03 06.5	-2.4
CEU	Ceuta	0.86	236	P	Pn	10 02 53.3	-1.3
CEU				S	Sn	10 03 04.5	-4.3
CEU	Ceuta	0.86	236	P	Pn	10 02 53.3	-1.3
CEU				S	Sn	10 03 04.5	-4.3
ECEU	Ceuta	0.86	236	P	Pn	10 02 54.1	-0.5
	334nm,0.2s,SNR=62						
ECEU				S	Sn	10 03 07.1	-1.8
	513nm,0.1s,SNR=8.0						
ECEU	Ceuta	0.86	236		Pn	10 02 54.5	-0.1
ECEU					Sn	10 03 07.5	-1.4
LIJA	Lijar	0.90	306	P	Pn	10 02 55.9	+0.8
LIJA				S	Sn	10 03 06.5	-3.3
LIJA	Lijar	0.90	306	P	Pn	10 02 55.9	+0.8
LIJA				S	Sn	10 03 06.5	-3.3
ALJ	Aljibe	0.94	279	P	Pn	10 02 56.5	+1.0
ALJ				S	Sn	10 03 11.7	+1.2
ALJ	Aljibe	0.94	279	P	Pn	10 02 56.5	+1.0
ALJ				S	Sn	10 03 11.7	+1.2
EQUE	Quentar	1.18	45	⇑P	Pn	10 02 59.0	+0.8
	123nm,0.2s,SNR=18						
EQUE				S	Sn	10 03 15.1	-0.1
	635nm,0.3s,SNR=8.6						
ESPR	Espera	1.20	294	⇑P	Pn	10 02 58.2	0.0
	115nm,0.2s,SNR=18						
ESPR				S	Sn	10 03 14.3	-1.1
	415nm,0.2s,SNR=19						
ESPR	Espera	1.20	294		Pn	10 02 58.2	0.0
ESPR					Sn	10 03 12.5	-2.9
PVLZ	Peæn de	1.21	173	P	Pn	10 02 57.0	-1.4
PVLZ				S	Sn	10 03 11.8	-3.9
PVLZ	Peæn de	1.21	173	P	Pn	10 02 57.0	-1.4
PVLZ				S	Sn	10 03 11.8	-3.9
EALB	Alboran	1.26	110	P	Pn	10 02 58.2	-0.7
	61nm,0.1s,SNR=4.6						
EALB				S	Sn	10 03 13.9	-2.7
	866nm,0.3s,SNR=17						
EALB	Alboran	1.26	110		Pn	10 02 57.8	-1.1
EALB					Sn	10 03 13.0	-3.6
CNIL	Conil	1.26	270	P	Pn	10 02 60.0	+1.0
CNIL				S	Sn	10 03 16.5	-0.1
CNIL	Conil	1.26	270	P	Pn	10 02 60.0	+1.0
CNIL				S	Sn	10 03 16.5	-0.1
SFS	San Fernando	1.39	274	P	Pn	10 03 00.6	+0.2
SFS				S	Sn	10 03 20.2	+1.0
SFS	San Fernando	1.39	274	P	Pn	10 03 00.6	+0.2
SFS				S	Sn	10 03 20.2	+1.0
SFS	San Fernando	1.39	274	Pn	Pn	10 03 00.5	+0.2
SFS				IAML		10 03 22.4	
	comp=N,1µm,0.8s						
SFS				IAML		10 03 45.0	
	comp=E,811nm,2.0s						
EBER	Berja	1.39	68	⇑P	Pn	10 03 00.3	-0.4
	comp=E,92nm,0.2s,SNR=18						
EBER				S	Sn	10 03 18.2	-1.5

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      comp=E,830nm,0.3s,SNR=17
EBER  Berja             1.39  68       Pn     10 03 00.3  -0.4
EBER                                   Sn     10 03 18.3  -1.4
HORN  Hornachuelos      1.59 338  P           10 03 02.6
GORA  Gorafe            1.60  46 ⇑P    Pn     10 03 04.1  +1.0
      comp=E,392nm,0.2s,SNR=18
GORA                              S    Sn     10 03 23.8  -0.3
      comp=E,1µm,0.2s,SNR=7.9
EMEL  Melilla           1.65 130 ⇓P    Pn     10 03 02.9  -0.8
      comp=E,2µm,0.1s,SNR=18
EMEL                              S    Sn     10 03 22.6  -2.5
      comp=E,2µm,0.3s,SNR=7.1
EMLI  Melilla           1.65 130       Pn     10 03 02.9  -0.8
EMLI                                   Sn     10 03 22.0  -3.1
MELI  Melilla           1.67 130  P    Pn     10 03 03.1  -0.7
      comp=E,312nm,0.1s,SNR=7.9
MELI                              S    Sn     10 03 22.5  -2.9
      comp=E,628nm,0.2s,SNR=7.9
MELI  Melilla           1.67 130  P    Pn     10 03 03.2  -0.7
MELI                              S    Sn     10 03 22.1  -3.3
MELI  Melilla           1.67 130       Pn     10 03 03.1  -0.7
MELI                                   Sn     10 03 22.5  -2.9
GOG   Mont Gurugu       1.68 133  P           10 03 03.2
EADA  Adamuz            1.79 358 ⇑P    Pn     10 03 05.5  +0.1
      comp=E,314nm,0.1s,SNR=18
EADA                              S    Sn     10 03 26.1  -2.1
      comp=E,699nm,0.1s,SNR=22
EADA  Adamuz            1.79 358       Pn     10 03 05.5  +0.1
EADA                                   Sn     10 03 26.4  -1.8
EQES  Quesada           1.82  38 ⇑P    Pn     10 03 06.4  +0.5
      comp=E,164nm,0.1s,SNR=18
EQES                              S    Sn     10 03 28.4  -0.6
      comp=E,221nm,0.1s,SNR=726
EQES  Quesada           1.82  38       Pn     10 03 06.4  +0.5
EQES                                   Sn     10 03 28.5  -0.6
ECAB  El Cabril         1.85 337 ⇑P    Pn     10 03 05.6  -0.6
      comp=E,15nm,0.1s,SNR=18
ECAB                              S    Sn     10 03 26.8  -2.8
      comp=E,306nm,0.1s,SNR=5.9
ECAB  El Cabril         1.85 337       Pn     10 03 05.6  -0.6
ECAB                                   Sn     10 03 26.4  -3.2
ENIJ  Nijar             1.93  71  P    Pn     10 03 07.0  -0.2
      comp=E,61nm,0.2s,SNR=7.9
ENIJ                              S    Sn     10 03 30.7  -0.7
      comp=E,470nm,0.3s,SNR=7.9
ENIJ  Nijar             1.93  71       Pn     10 03 07.0  -0.2
ENIJ                                   Sn     10 03 30.8  -0.7
EMIN  Mina Concepcio    2.23 309 ⇑P    Pn     10 03 10.3  -0.7
      comp=E,95nm,0.1s,SNR=18
EMIN                              S    Sn     10 03 35.0  -3.3
      comp=E,613nm,0.2s,SNR=20
EMIN  Mina Concepcio    2.23 309       Pn     10 03 10.3  -0.7
EMIN                                   Sn     10 03 35.0  -3.3
TAF   Taforalt          2.30 132  P           10 03 12.0
SESP  Santiago Espad    2.33  41 ⇑P    Pn     10 03 12.9  +0.3
      comp=E,322nm,0.1s,SNR=18
SESP                              S    Sn     10 03 39.3  -1.6
      comp=E,490nm,0.2s,SNR=7.9
SESP  Santiago Espad    2.33  41  P           10 03 13.0
SICH  Sidi Chahed       2.37 197  S           10 03 13.0
EGRO  El Granado        2.66 297 ⇑P    Pn     10 03 16.0  -0.7
      comp=E,96nm,0.1s,SNR=18
EGRO                              S    Sn     10 03 44.9  -3.5
      comp=E,168nm,0.1s,SNR=15
EGRO  El Granado        2.66 297       Pn     10 03 16.1  -0.7
EGRO                                   Sn     10 03 44.6  -3.8
LCRM  LCR               2.70 186  P           10 03 16.5
PBAR  Barrancos         2.71 312⇑eP    Pn     10 03 16.8  -0.6
PBAR                              S    Sn     10 03 46.1  -3.5
PBAR                              A    A      10 03 48.8
      comp=E,210nm,0.4s
PVAQ  Vaqueiros         2.78 293       Pn     10 03 17.4  -0.9
PVAQ                              IAML        10 03 48.8
      comp=E,535nm,0.4s
PVAQ                              IAML        10 03 49.2
      comp=N,452nm,0.2s
PVAQ  Vaqueiros         2.78 293⇑eP    Pn     10 03 17.6  -0.7
PVAQ                              S    Sn     10 03 47.6  -3.7
PVAQ                              A    A      10 03 50.0
      comp=N,402nm,0.1s
PVAQ  Vaqueiros         2.78 293  P           10 03 17.1
PVAQ                              S           10 03 49.6
PBDV  Barranco-do-Ve    2.89 288 eP    Pn     10 03 19.3  -0.6
PBDV                              S    Sn     10 03 50.6  -3.4
PBDV                              A    A      10 03 57.3
      comp=N,214nm,0.8s
IFR   Ifrane            2.90 191  P    Pn     10 03 19.0  -1.2
IFR                               S    Sn     10 03 49.8  -4.7
EMUR  La Murta          2.98  60  P    Pn     10 03 20.8  -0.3
      comp=N,55nm,0.4s,SNR=26
EMUR                              S    Sn     10 03 55.3  -0.8
      comp=N,167nm,0.6s,SNR=21
EMUR  La Murta          2.98  60       Pn     10 03 21.2  +0.2
EMUR                                   Sn     10 03 56.4  +0.3
CART  Cartagena         3.04  66  P    Pn     10 03 20.9  -0.9
CART                              S    Sn     10 03 55.4  -2.2
CART  Cartagena         3.04  66  P    Pn     10 03 20.9  -0.9
CART                              S    Sn     10 03 55.4  -2.2
CART  Cartagena         3.04  66       Pn     10 03 20.7  -1.1
RTC   Rabat Centre      3.07 220       Pn     10 03 21.3  -0.9
RTC                                    Sn     10 03 56.2  -2.1
RTC                               IAML        10 04 14.7
      comp=N,130nm,0.8s
PCVE  Castro Verde      3.10 295⇑eP    Pn     10 03 21.9  -0.7
PCVE                              S    Sn     10 03 55.4  -3.6
PCVE                              A    A      10 03 56.5
      comp=N,331nm,0.2s
PBEJ  Beja              3.16 302⇑eP    Pn     10 03 22.8  -0.6
PBEJ                              S    Sn     10 03 56.6  -3.7
PBEJ                              A    A      10 03 58.9
      comp=N,180nm,0.4s
PAB   San Pablo         3.16   2 ⇑P    Pn     10 03 23.4  -0.2
      comp=N,25nm,0.2s,SNR=18
PAB                               S    Sn     10 03 57.5  -3.0
      comp=N,291nm,0.3s,SNR=7.9
PAB   San Pablo         3.16   2       Pn     10 03 23.5   0.0
PAB                               IAML        10 03 58.1
      comp=N,366nm,0.6s
PAB                               IAML        10 04 00.3
      comp=N,126nm,0.6s
PAB   San Pablo         3.16   2       Sn     10 03 57.1  -3.4
ETOB  Tobarra           3.25  45 ⇑P    Pn     10 03 25.0  +0.3
      comp=N,284nm,0.2s,SNR=18
ETOB                              S    Sn     10 04 00.6  -2.2
      comp=N,88nm,0.3s
ETOB  Tobarra           3.25  45       Pn     10 03 25.0  +0.3
ETOB                                   Sn     10 04 00.9  -1.9
ESDC  Sonseca Array     3.32   7  P    Pn     10 03 25.5   0.0
      comp=N,4.3nm,0.3s,baz=188,slow=13,SNR=134
ESDC                              S    Sn     10 04 01.5  -2.7
      comp=N,38nm,0.3s,baz=191,slow=22,SNR=7.0
ESDC  Sonseca Array     3.32   7 ⇑P    Pn     10 03 25.5   0.0
      comp=N,37nm,0.3s,baz=191,slow=13,SNR=18
ESDC                              S    Sn     10 04 01.4  -2.8
      comp=N,175nm,0.3s,baz=189,slow=23,SNR=17
ESDC  Sonseca Array     3.32   7       Sn     10 03 58.3  -5.9
ESDC  Sonseca Array     3.32   7       Pn     10 03 25.2  -0.3
ESBB  Sonseca Array     3.32   7       Pn     10 03 25.5  -0.1
ZHG   ZHG               3.42 212  P           10 03 25.6
MORF  Marmelete         3.46 287 eP    Pn     10 03 26.5  -1.0
MORF                             eS    Sn     10 04 03.1  -4.6
MORF                              AML  AML    10 04 05.5
      comp=N,850nm,0.1s
MORF  Marmelete         3.46 287  P    Pn     10 03 26.5  -1.0
MORF                              S    Sn     10 04 03.1  -4.6
      comp=N,850nm,0.1s
MORF  Marmelete         3.46 287⇑eP    Pn     10 03 26.5  -1.0
MORF                              S    Sn     10 04 03.5  -4.2
MORF                              A    A      10 04 05.7
      comp=N,329nm,0.2s
PESTR Estremoz          3.50 316       Pn     10 03 27.8  -0.2
PESTR Estremoz          3.50 316 eP    Pn     10 03 27.7  -0.2
PESTR                             S    Sn     10 04 05.0  -3.4
PESTR                             A    A      10 04 07.8
      comp=N,82nm,0.3s
PESTR Estremoz          3.50 316  P           10 03 27.9
EVO   Evora             3.53 309  P    Pn     10 03 28.1  -0.3
EVO                               S    Sn     10 04 05.5  -3.8
EVO   Evora             3.53 309  P    Pn     10 03 28.1  -0.3
EVO                               S    Sn     10 04 05.5  -3.8
EVO   Evora             3.53 309  S    Sn     10 04 05.8  -3.4
MDT   Midelt            3.56 182  P    Pn     10 03 27.9  -1.0
      comp=N,11nm,0.3s,baz=345,slow=9.4,SNR=134
MDT                               S    Sn     10 04 05.8  -4.3
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      comp=N,45nm,0.3s,baz=204,slow=20,SNR=16
PFVI  Vila Bisbo        3.56 283 ⇑P    Pn     10 03 27.7  -1.1
      comp=N,50nm,0.2s,SNR=18
PFVI                              S    Sn     10 04 05.4  -4.6
      comp=N,562nm,0.1s,SNR=5.9
PFVI  Vila Bisbo        3.56 283       Pn     10 03 27.9  -0.9
PFVI                                   Sn     10 04 05.4  -4.6
PFVI  Vila Bisbo        3.56 283⇑eP    Pn     10 03 27.7  -1.1
PFVI                              S    Sn     10 04 05.4  -4.6
PFVI                              A    A      10 04 09.0
      comp=N,267nm,0.3s
PFVI  Vila Bisbo        3.56 283  P           10 03 27.6
PFVI                              S           10 04 07.7
PTEO  Sao Teotonio      3.58 290 eP    Pn     10 03 28.7  -0.4
PTEO                              S    Sn     10 04 06.7  -3.8
PTEO                              A    A      10 04 09.2
      comp=N,228nm,0.6s
PNCL  Nicolau / Gran    3.66 299⇑eP    Pn     10 03 29.4  -0.6
PNCL                              S    Sn     10 04 08.1  -4.1
PNCL                              A    A      10 04 10.9
      comp=N,127nm,0.3s
PMRV  Marv??o           3.81 324⇓eP    Pn     10 03 32.2   0.0
PMRV                             eS    Sn     10 04 12.2  -3.8
PMRV                              A    A      10 04 13.7
      comp=N,95nm,0.2s
AFON  Font Roja         3.88  53 ⇑P    Pn     10 03 33.8  +0.6
      comp=N,43nm,0.1s,SNR=18
AFON                              S    Sn     10 04 16.5  -1.4
      comp=N,103nm,0.4s
AFON  Font Roja         3.88  53       Pn     10 03 34.0  +0.8
AFON                                   Sn     10 04 16.4  -1.5
EPLA  Plasencia         3.89 342  P    Pn     10 03 33.5  +0.3
      comp=N,15nm,0.2s,SNR=15
EPLA                              S    Sn     10 04 15.2  -2.6
      comp=N,97nm,0.1s,SNR=6.4
EPLA  Plasencia         3.89 342       Pn     10 03 33.5  +0.3
EPLA                                   Sn     10 04 15.2  -2.6
AVE   Averroes          3.90 219  P    Pn     10 03 32.2  -1.2
AVE                               S    Sn     10 04 12.8  -5.4
PMTG  Montargil         4.00 313⇑eP    Pn     10 03 34.0  -0.6
PMTG                              S    Sn     10 04 16.6  -3.9
PMTG                              A    A      10 04 19.7
      comp=N,62nm,0.3s
UCM   Universidad Co    4.04  14  P    Pn     10 03 35.5  +0.2
UCM                               S    Sn     10 04 18.8  -2.8
UCM   Universidad Co    4.04  14  P    Pn     10 03 35.5  +0.2
UCM                               S    Sn     10 04 18.8  -2.8
EBEN2 Beniarda presa    4.12  55  P    Pn     10 03 36.4  +0.1
      comp=N,40nm,0.2s,SNR=7.9
EBEN2                             S    Sn     10 04 20.1  -3.4
      comp=N,1.0nm,0.4s,SNR=7.9
EBEN2 Beniarda presa    4.12  55       Pn     10 03 36.4  +0.1
EBEN2                                  Sn     10 04 22.4  -1.0
OKGL  Djebel Kef Gue    4.17  93  P    Pn     10 03 37.4  +0.4
      comp=N,24nm,0.2s,SNR=7.9
OKGL                              S    Sn     10 04 23.3  -1.4
      comp=N,175nm,0.4s,SNR=7.9
OKGL  Djebel Kef Gue    4.17  93       Pn     10 03 37.0   0.0
OKGL                                   Sn     10 04 23.9  -0.7
PCBR  Castelo Branco    4.18 327⇓eP    Pn     10 03 37.2  +0.1
PCBR                              S    Sn     10 04 21.6  -3.3
PCBR                              A    A      10 04 22.3
      comp=N,71nm,0.3s
ECHE  Chera             4.25  40 ⇑P    Pn     10 03 38.0   0.0
      comp=N,104nm,0.3s,SNR=18
ECHE                              S    Sn     10 04 22.7  -3.9
      comp=N,45nm,0.2s,SNR=7.9
ECHE  Chera             4.25  40       Pn     10 03 38.0   0.0
ECHE                                   Sn     10 04 21.8  -4.8
GUD   Guadarrama        4.27   3  P    Pn     10 03 38.4   0.0
      comp=N,0.6nm,0.1s,SNR=10
GUD                               S    Sn     10 04 24.0  -3.1
      comp=N,1.6nm,0.1s,SNR=8.0
GUD   Guadarrama        4.27   3       Pn     10 03 38.4   0.0
GUD                                    Sn     10 04 24.2  -3.0
LIS   Lisbon            4.37 304  S    Sn     10 04 26.5  -3.1
LIS                               A    A      10 04 29.8
      comp=N,134nm,0.2s
PMAFR Mafra             4.59 306  P    Pn     10 03 42.4  -0.3
      comp=N,30nm,0.2s,SNR=23
PMAFR                             S    Sn     10 04 30.8  -4.0
      comp=N,103nm,0.2s,SNR=9.7
PMAFR Mafra             4.59 306       Pn     10 03 42.4  -0.3
PMAFR                                  Sn     10 04 33.1  -1.7
PMAFR Mafra             4.59 306 eP    Pn     10 03 42.5  -0.2
PMAFR                             S    Sn     10 04 30.8  -4.0
PMAFR                             A    A      10 04 34.7
      comp=N,134nm,0.3s
PSBE  So Bento          4.62 314⇓eP    Pn     10 03 42.8  -0.3
PSBE                              S    Sn     10 04 31.6  -4.0
PSBE                              A    A      10 04 32.5
      comp=N,28nm,0.3s
MTE   Manteigas         4.67 330  Pn   Pn     10 03 44.3  +0.4
MTE                                    Sn     10 04 34.5  -2.5
MTE                               IAML        10 04 53.6
      comp=N,66nm,0.3s
MTE                               IAML        10 05 19.6
      comp=E,61nm,0.6s
MTE   Manteigas         4.67 330 eP    Pn     10 03 44.1  +0.2
MTE                               S    Sn     10 04 33.3  -3.7
MTE                               A    A      10 05 20.0
      comp=E,77nm,0.6s
ETOR  Torete            4.83  23 ⇑P    Pn     10 03 46.0  +0.1
      comp=E,415nm,0.1s,SNR=18
ETOR                              S    Sn     10 04 36.4  -4.3
      comp=E,310nm,0.2s,SNR=6.1
PCAS  Casmilo, Conde    4.84 321 eP    Pn     10 03 46.0   0.0
PCAS                              S    Sn     10 04 36.3  -4.5
PCAS                              A    A      10 04 48.4
      comp=E,44nm,0.4s
COI   Coimbra           4.91 322  Pn   Pn     10 03 47.2  +0.2
COI                               IAML        10 04 42.4
      comp=N,137nm,0.2s
COI   Coimbra           4.91 322  S    Sn     10 04 38.8  -3.8
COI                               A    A      10 04 53.5
      comp=N,73nm,0.6s
EMOS  Mosqueruela       5.08  37  P    Pn     10 03 50.2  +0.7
      comp=N,68nm,0.4s,SNR=140
EMOS                              S    Sn     10 04 43.3  -3.6
      comp=N,52nm,0.2s,SNR=9.5
EMOS  Mosqueruela       5.08  37       Pn     10 03 50.2  +0.7
EMOS                                   Sn     10 04 44.2  -2.7
PVIS  Viseu             5.08 329 eP    Pn     10 03 49.3  -0.1
PVIS                              S    Sn     10 04 43.5  -3.4
PVIS                              A    A      10 04 47.5
      comp=N,37nm,0.3s
MVO   Moncorvo          5.17 338 ⇑P    Pn     10 03 50.7   0.0
      comp=N,20nm,0.2s,SNR=18
MVO                               S    Sn     10 04 44.9  -4.2
      comp=N,26nm,0.1s
MVO   Moncorvo          5.17 338       Pn     10 03 50.7   0.0
MVO                                    Sn     10 04 45.5  -3.6
MVO   Moncorvo          5.17 338⇑eP    Pn     10 03 50.6   0.0
MVO                               S    Sn     10 04 44.9  -4.2
MVO                               A    A      10 05 10.5
      comp=N,45nm,0.6s
EIBI  Ibiza             5.33  59  P    Pn     10 03 53.4  +0.8
      comp=N,15nm,0.2s,SNR=7.9
EIBI  Ibiza             5.33  59       Pn     10 03 53.4  +0.8
PVRL  Vila Real         5.50 334 eP    Pn     10 03 55.7  +0.7
PVRL                              S    Sn     10 04 53.4  -3.5
PVRL                              A    A      10 04 57.4
      comp=N,78nm,0.1s
POLO  Lamas de Olo      5.61 334 eP    Pn     10 03 57.0  +0.4
POLO                              S    Sn     10 04 56.3  -3.5
POLO                              A    A      10 05 18.9
      comp=N,12nm,0.4s
PBRG  Braganca          5.69 343 eP    Pn     10 03 58.5  +0.9
PBRG                              S    Sn     10 04 57.0  -4.7
PBRG                              A    A      10 05 38.4
      comp=N,21nm,0.7s
OUZM  OUZ               5.77 200  P           10 03 58.3
ECAL  Calabor           5.82 343  P    Pn     10 04 00.5  +1.1
      comp=N,10nm,0.2s,SNR=6.6
ECAL                              S    Sn     10 05 00.7  -4.1
      comp=N,39nm,0.3s,SNR=7.6
ECAL  Calabor           5.82 343       Pn     10 04 00.5  +1.1
ECAL                                   Sn     10 05 00.7  -4.1
ERTA  Horta de San J    5.93  38 ⇓P    Pn     10 04 01.7  +0.9
      comp=N,18nm,0.1s,SNR=18
ERTA                              S    Sn     10 05 03.9  -3.4
      comp=N,23nm,0.3s,SNR=4.8
ERTA  Horta de San J    5.93  38       Pn     10 04 01.8  +0.9
ERTA                                   Sn     10 05 05.2  -2.2
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PCAB  Cabril            5.99 334 eP    Pn     10 04 02.0  +0.3
PCAB                              S    Sn     10 05 04.1  -4.8
PCAB                              A    A      10 05 39.9
      comp=N,29nm,0.8s
ELOB  Lobios            6.14 334  P    Pn     10 04 04.4  +0.6
      comp=N,4.1nm,0.2s,SNR=7.4
ELOB                              S    Sn     10 05 08.7  -3.9
      comp=N,8.9nm,0.1s,SNR=4.0
ELOB  Lobios            6.14 334       Pn     10 04 04.7  +0.9
ELOB                                   Sn     10 05 10.2  -2.5
EAH   EAH               6.34 223  P           10 04 05.2
EPOB  Poblet            6.60  39 ⇑P    Pn     10 04 10.2  +0.3
      comp=N,45nm,0.3s,SNR=18
EPOB                              S    Sn     10 05 19.6  -4.1
      comp=N,6.6nm,0.2s
EPOB  Poblet            6.60  39       Pn     10 04 10.2  +0.3
EPOB                                   Sn     10 05 19.6  -4.1
EZAM  Zamans            6.62 332  P    Pn     10 04 10.5  +0.3
      comp=N,3.0nm,0.1s,SNR=7.9
EZAM                              S    Sn     10 05 19.6  -4.6
      comp=N,2.4nm,0.1s,SNR=7.9
EZAM  Zamans            6.62 332       Pn     10 04 10.9  +0.7
EZAM                                   Sn     10 05 19.6  -4.6
ETOS  Mallorca          6.68  57  P    Pn     10 04 12.1  +1.1
      comp=N,6.2nm,0.3s,SNR=7.9
TTIG  Tnine Tigouga,    6.69 211  P           10 04 08.3
EARA  Aranguren         6.77  19  P    Pn     10 04 14.4  +2.2
      comp=N,6.9nm,0.1s,SNR=7.9
EARA                              S    Sn     10 05 24.7  -3.1
      comp=N,34nm,0.2s,SNR=7.9
EARA  Aranguren         6.77  19       Pn     10 04 14.9  +2.7
EARA                                   Sn     10 05 23.9  -3.8
ELAN  Lanestosa         6.89   6  P    Pn     10 04 15.5  +1.6
      comp=N,6.9nm,0.2s,SNR=14
ELAN                              S    Sn     10 05 26.3  -4.5
      comp=N,14nm,0.4s
ELAN  Lanestosa         6.89   6       Pn     10 04 15.5  +1.6
ELAN                                   Sn     10 05 26.3  -4.5
EARI  Arriondas         6.94 356  P    Pn     10 04 15.3  +0.8
      comp=N,1.9nm,0.1s,SNR=18
EARI                              S    Sn     10 05 27.0  -4.8
      comp=N,25nm,0.5s
EARI  Arriondas         6.94 356       Pn     10 04 15.3  +0.8
EARI                                   Sn     10 05 27.1  -4.8
EORO  Oroz-Betelu       6.95  20  P    Pn     10 04 14.4  -0.3
      comp=N,8.7nm,0.1s,SNR=51
EORO                              S    Sn     10 05 28.4  -3.9
      comp=N,34nm,0.3s,SNR=5.5
EORO  Oroz-Betelu       6.95  20       Pn     10 04 14.4  -0.3
EORO                                   Sn     10 05 30.0  -2.3
EAGO  Agolada(Pontev    6.99 338  P    Pn     10 04 16.5  +1.3
      comp=N,1.8nm,0.1s,SNR=7.9
EAGO                              S    Sn     10 05 28.4  -4.8
      comp=N,2.4nm,0.1s,SNR=7.9
EAGO  Agolada(Pontev    6.99 338       Pn     10 04 16.5  +1.3
EAGO                                   Sn     10 05 28.4  -4.8
ETSF  Etsaut            7.18  24  Pn   Pn     10 04 17.8  -0.1
ETSF                              Sn   Sn     10 05 34.1  -3.8
      comp=N,13nm,0.3s
ETSF  Etsaut            7.18  24 ePn   Pn     10 04 17.8  -0.1
ETSF  Etsaut            7.18  24 eP    Pn     10 04 20.4  +2.5
ETSF                             eSn   Sn     10 05 34.1  -3.8
      comp=N,26nm,0.3s
EPON  Pontenova         7.23 344  P    Pn     10 04 19.9  +1.4
      comp=N,2.8nm,0.2s,SNR=5.7
EPON                              S    Sn     10 05 33.8  -5.3
      comp=N,2.5nm,0.3s,SNR=5.7
EPON  Pontenova         7.23 344       Pn     10 04 19.9  +1.4
EPON                                   Sn     10 05 36.3  -2.7
EMIR  Miracle           7.24  38  P    Pn     10 04 19.7  +1.0
      comp=N,67nm,0.3s,SNR=21
EMIR                              S    Sn     10 05 35.9  -3.4
      comp=N,37nm,0.4s
EMIR  Miracle           7.24  38       Pn     10 04 19.7  +1.0
EMIR                                   Sn     10 05 35.4  -3.8
ECHI  Chisagues Biel    7.25  29  P    Pn     10 04 19.4  +0.5
      comp=N,14nm,0.2s,SNR=7.9
ECHI                              S    Sn     10 05 36.0  -3.5
      comp=N,5.0nm,0.4s,SNR=7.9
ECHI  Chisagues Biel    7.25  29       Pn     10 04 19.4  +0.5
ECHI                                   Sn     10 05 36.0  -3.5
ATE   Arette            7.31  22  P    Pn     10 04 20.3  +0.8
      comp=N,12nm,0.2s,SNR=7.9
ATE                               S    Sn     10 05 37.2  -3.7
      comp=N,18nm,0.2s,SNR=7.9
ATE   Arette            7.31  22       Pn     10 04 20.3  +0.8
ATE                                    Sn     10 05 36.7  -4.2
CSOR  Sort              7.40  34  P    Pn     10 04 22.1  +1.1
      comp=N,9.8nm,0.1s,SNR=40
CSOR                              S    Sn     10 05 39.1  -4.3
      comp=N,36nm,0.4s,SNR=6.0
CSOR  Sort              7.40  34       Pn     10 04 22.1  +1.1
CSOR                                   Sn     10 05 39.1  -4.3
EMAZ  Mazaricos         7.42 334  S    Sn     10 05 38.6  -4.9
      comp=N,2.2nm,0.3s,SNR=4.0
EMAZ  Mazaricos         7.42 334       Sn     10 05 38.9  -4.6
CFON  Fontmartina       7.61  43  P    Pn     10 04 23.8  +0.1
      comp=N,13nm,0.2s,SNR=26
CFON                              S    Sn     10 05 43.9  -4.5
      comp=N,17nm,0.3s,SNR=7.9
CFON  Fontmartina       7.61  43       Pn     10 04 23.8  +0.1
CFON                                   Sn     10 05 43.1  -5.2
EPF   Esparros          7.61  28  P    Pn     10 04 23.5  -0.2
EPF                               S    Sn     10 05 44.7  -3.7
      comp=N,15nm,0.3s
EPF   Esparros          7.61  28 ePn   Pn     10 04 23.5  -0.2
EPF   Esparros          7.61  28 eP    Pn     10 04 26.2  +2.5
EPF                              eSn   Sn     10 05 44.7  -3.7
      comp=N,29nm,0.3s
CLLI  Llivia            7.88  37  P    Pn     10 04 28.5  +1.0
      comp=N,9.5nm,0.2s,SNR=53
CLLI                              S    Sn     10 05 51.0  -4.0
      comp=N,2.0nm,0.3s,SNR=7.0
CLLI  Llivia            7.88  37       Pn     10 04 28.5  +1.0
CLLI                                   Sn     10 05 51.0  -4.0
EJON  La Jonquera       8.33  41  P    Pn     10 04 34.6  +1.2
      comp=N,3.4nm,0.2s,SNR=7.9
EJON  La Jonquera       8.33  41       Pn     10 04 34.6  +1.2
SJAF  Saint Jean de     8.35  41  P    Pn     10 04 34.8  +1.1
      comp=N,3.1nm,0.2s,SNR=7.9
SJAF  Saint Jean de     8.35  41       Pn     10 04 34.8  +1.1
MTLF  Montolieu         8.65  35  P    Pn     10 04 38.7  +0.9
MTLF                              S    Sn     10 06 09.5  -4.1
      comp=N,5.0nm,0.4s
MTLF  Montolieu         8.65  35 eP    Pn     10 04 38.7  +0.9
MTLF                             eSn   Sn     10 06 09.5  -4.1
      comp=N,10.0nm,0.4s
LFF   La Frestale       9.43  23  P    Pn     10 04 50.1  +1.8
LFF                               S    Sn     10 06 27.5  -4.9
      comp=N,6.6nm,0.3s
LFF   La Frestale       9.43  23 eP    Pn     10 04 50.1  +1.8
LFF                              eSn   Sn     10 06 27.5  -4.9
      comp=N,13nm,0.3s
LASF  Ste Croix         9.99  37  P    Pn     10 04 56.7  +0.7
LASF                              S    Sn     10 06 40.4  -5.7
      comp=N,0.8nm,0.3s
LASF  Ste Croix         9.99  37 eP    Pn     10 04 56.7  +0.7
LASF                             eSn   Sn     10 06 40.4  -5.7
      comp=N,1.6nm,0.3s
RJF   Les Rejaudoux    10.01  25  P    Pn     10 04 56.1  -0.1
RJF                               S    Sn     10 06 40.1  -6.4
      comp=N,2.3nm,0.2s
RJF   Les Rejaudoux    10.01  25 eP    Pn     10 04 56.1  -0.1
RJF                              eSn   Sn     10 06 40.1  -6.4
      comp=N,4.6nm,0.2s
MFF   Saint Martin d   10.72  16  P    Pn     10 05 06.6  +0.7
MFF                               S    Sn     10 06 57.4  -6.4
      comp=N,1.1nm,0.2s
MFF   Saint Martin d   10.72  16 eP    Pn     10 05 06.6  +0.7
MFF                              eSn   Sn     10 06 57.4  -6.4
      comp=N,2.1nm,0.2s
SMRF  Simiane la Rot   10.80  42  P    Pn     10 05 10.2  +3.1
SMRF  Simiane la Rot   10.80  42 eP    Pn     10 05 10.2  +3.1
LMR   La Mourre        10.94  47  P    Pn     10 05 12.0  +3.2
LMR                               S    Sn     10 07 03.6  -5.5
      comp=N,1.5nm,0.5s
LMR   La Mourre        10.94  47 eP    Pn     10 05 12.0  +3.2
LMR                              eSn   Sn     10 07 03.6  -5.5
      comp=N,3.0nm,0.5s
VIVF  Saint-Julien-l   10.96  37  P    Pn     10 05 10.8  +1.7
VIVF  Saint-Julien-l   10.96  37 eP    Pn     10 05 10.8  +1.7
TCF   Toulx Ste Croi   11.10  25  P    Pn     10 05 10.8  -0.3
TCF                               S    Sn     10 07 07.3  -5.8
      comp=N,2.0nm,0.3s
TCF   Toulx Ste Croi   11.10  25 ePn   Pn     10 05 10.8  -0.3
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TCF				*e*Sn	Sn	10 07 07.3	-5.8
	comp=N,4.1nm,0.3s						
KEST	Kesra	11.22	89	P	Pn	10 05 16.2	+3.4
	comp=N,0.7nm,0.3s,baz=165,slow=23,SNR=1.4						
BGF	Bois d'Agland	11.56	26	P	Pn	10 05 16.7	-0.5
BGF				S	Sn	10 07 18.3	-5.8
	comp=N,6.6nm,0.4s						
BGF	Bois d'Agland	11.56	26	*e*Pn	Pn	10 05 16.7	-0.5
BGF				*e*Sn	Sn	10 07 18.3	-5.8
	comp=N,13nm,0.4s						
QUIF	Quistinic	11.57	4	P	Pn	10 05 18.8	+1.5
QUIF				S	Sn	10 07 18.0	-6.4
	comp=N,3.8nm,0.4s						
QUIF	Quistinic	11.57	4	*e*P	Pn	10 05 18.8	+1.5
QUIF				*e*Sn	Sn	10 07 18.0	-6.4
	comp=N,7.6nm,0.4s						
ORIF	Oris-en-Rattie	11.60	39	P	Pn	10 05 20.2	+2.3
ORIF	Oris-en-Rattie	11.60	39	*e*P	Pn	10 05 20.2	+2.3
AVF	Avril sur Loir	11.94	27	P	Pn	10 05 22.1	-0.1
AVF				S	Sn	10 07 27.3	-6.0
	comp=N,1.3nm,0.6s						
AVF	Avril sur Loir	11.94	27	*e*Pn	Pn	10 05 22.1	-0.1
AVF				*e*Sn	Sn	10 07 27.3	-6.0
	comp=N,2.6nm,0.6s						
MBDF	Montbardon	11.95	42	P	Pn	10 05 25.7	+3.2
MBDF	Montbardon	11.95	42	*e*P	Pn	10 05 25.7	+3.2
ROSF	Rostrenen	11.98	4	P	Pn	10 05 24.2	+1.4
ROSF				S	Sn	10 07 27.4	-7.0
	comp=N,3.4nm,0.4s						
ROSF	Rostrenen	11.98	4	*e*P	Pn	10 05 24.2	+1.4
ROSF				*e*Sn	Sn	10 07 27.4	-7.0
	comp=N,6.8nm,0.4s						
SMF	Signal de Mont	12.00	29	P	Pn	10 05 23.2	+0.1
SMF	Signal de Mont	12.00	29	*e*Pn	Pn	10 05 23.2	+0.1
PGF	Pioggiola	12.10	55	P	Pn	10 05 27.9	+3.3
PGF				S	Sn	10 07 29.6	-8.0
	comp=N,0.0nm,0.3s						
PGF	Pioggiola	12.10	55	*e*P	Pn	10 05 27.9	+3.3
PGF				*e*Sn	Sn	10 07 29.6	-8.0
	comp=N,1.0nm,0.3s						
SSF	Saint Saulge	12.22	27	P	Pn	10 05 26.0	0.0
SSF				S	Sn	10 07 34.2	-6.1
	comp=N,1.2nm,0.5s						
SSF	Saint Saulge	12.22	27	*e*Pn	Pn	10 05 26.0	0.0
SSF				*e*Sn	Sn	10 07 34.2	-6.1
	comp=N,2.3nm,0.5s						
GRR	Gorron	12.30	11	P	Pn	10 05 28.6	+1.7
GRR				S	Sn	10 07 32.9	-9.1
	comp=N,4.2nm,0.5s						
GRR	Gorron	12.30	11	*e*P	Pn	10 05 28.6	+1.7
GRR				*e*Sn	Sn	10 07 32.9	-9.1
	comp=N,8.4nm,0.5s						
LPG	La Plagne	12.45	40	P	Pn	10 05 33.4	+4.1
LPG	La Plagne	12.45	40	*e*P	Pn	10 05 33.4	+4.1
LOR	Lormes	12.53	27	P	Pn	10 05 30.3	+0.3
LOR	Lormes	12.53	27	*e*Pn	Pn	10 05 30.3	+0.3
LDF	La Druitiere	12.62	13	*e*P	Pn	10 05 33.0	+1.7
LDF				*e*Sn	Sn	10 07 42.7	-7.2
	comp=N,3.2nm,0.5s						
FLN	La Foliniere	12.72	12	P	Pn	10 05 34.2	+1.7
FLN	La Foliniere	12.72	12	*e*P	Pn	10 05 34.2	+1.7
CABF	La Chapelle	12.92	34	P	Pn	10 05 35.6	+0.3
CABF	La Chapelle	12.92	34	*e*Pn	Pn	10 05 35.6	+0.3
SFTF	Sexfontaines	13.75	28	P	Pn	10 05 46.8	+0.8
SFTF	Sexfontaines	13.75	28	*e*Pn	Pn	10 05 46.8	+0.8
GERES	GERESS Array B	18.23	41	P	Pn	10 06 44.5	+2.6
	comp=N,0.2nm,0.3s,baz=227,slow=14,SNR=2.5						
EKA	Eskdalemuir Ar	18.98	2	P	Pn	10 06 51.3	+0.7
	baz=172,slow=10.0,SNR=1.8						
TORD	Torodi Ar. Bea	23.79	165	P	P	10 07 39.2	+0.1
	comp=N,0.2nm,0.6s,baz=345,slow=12,SNR=1.5						
ARCES	ARCESS Array B	37.00	17	P	P	10 09 36.4	+1.6
	comp=N,2.1nm,0.8s,baz=225,slow=8.6,SNR=1.8						
YKA	Yellowknife Ar	66.78	332	P	P	10 13 17.4	+1.6
	comp=N,0.4nm,0.7s,baz=68,slow=7.2,SNR=4.2						
ILAR	Eielson Array	74.96	344	P	P	10 14 07.7	+2.5
	comp=N,0.3nm,0.5s,baz=16,slow=4.3,SNR=5.7						
PDAR	Pinedale Array	75.81	313	P	P	10 14 12.2	+1.3
	comp=N,0.6nm,0.7s,baz=64,slow=6.8,SNR=6.5						
ASAR	Alice Springs	142.09	82	PKhKP	PKPpre	10 21 54.5	
	comp=N,0.1nm,0.3s,baz=350,slow=1.6,SNR=4.1						

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*IDC **09** 10:14:09.9±0.8, 51°.12N×96°.06E, h0^{km}, mb3.8/5, mb1 3.8/9, mb1mx3.5/52, mbtmp3.7/9, ML3.3/4, MS3.2/6, Ms1 3.2/6, ms1mx2.9/40, Error ellipse: s-maj=25.4km s-min=10.4km az=3.0*

*MOS **09** 10:14:09.5±1.5, 51°.55N×95°.92E, h11^{km}, mb4.2/5, Error ellipse: s-maj=11.0km s-min=7.9km az=172.5*

*BJI **09** 10:14:09.5±0.0, 51°.82N×95°.80E, h23^{km}, mB4.3/3, mb3.6/3, Ms3.8/1*

*ASRS **09** 10:14:10.4±0.2, 52°N±1°×9°6E±°, h5^{km}, MLh4.8/17, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/tab confirmed*

ISC 09 10:14:10.5±0.7**, 51°.63N**±0°.03×**95°.93E**±0°.02**, h6**^{km}±5^{km}**, n95, σ2^{s}80**/140**, mb3.9**/11**, MS3.5**/4**, 2C, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TDJR	Todzha	0.78	8	Pg	Pg	10 14 23.7	-1.9
TDJR				Sg	Sg	10 14 33.7	-2.0
KZLR	Kyzyl	0.92	276	Pg	Pb	10 14 26.6	-2.2
KZLR				Sg	Sb	10 14 38.5	-2.9
KZLR	Kyzyl	0.92	276	*e*PG	Pb	10 14 26.7	-2.2
KZLR				*e*S	Sb	10 14 38.5	-2.9
KNGR	Kungurtug, Tuv	1.43	135	Pg	Pn	10 14 36.1	-1.0
KNGR				Sg	Sn	10 14 55.5	-0.8
ARDR	Aradan	1.81	303	Pg	Pn	10 14 41.6	-0.7
ARDR				Sg	Sn	10 15 05.0	-0.7
ORL	Orlik	2.56	68	⇑*i*PN	Pn	10 14 52.5	-0.2
ORL				*e*		10 15 26.4	
ORL				pmax	pmax		
	comp=Z,437nm,0.4s						
ORL				smax	smax		
	comp=N,2µm,0.6s						
BLRR	Bol’shaya Rech	2.57	305	Pg	Pn	10 14 54.6	+1.9
BLRR				Sg	Sb	10 15 27.4	-1.5
DJOS	Djoyskaya Sosn	3.02	295	Pg	Pb	10 15 02.7	-2.0
DJOS				Sg	Sb	10 15 40.4	-1.5
CERR	Cheremushki	3.04	296	Pg	Pb	10 15 03.1	-1.8
CERR				Sg	Sb	10 15 41.6	-0.5
DJO	Djoy, Khakassi	3.12	294	Pg	Pn	10 15 02.3	+2.0
DJO				Sg	Sb	10 15 43.9	-0.8
MOY	Mondy	3.15	87	Pg	Pb	10 15 05.0	-2.0
MOY				Sg	Sb	10 15 46.1	+0.4
MOY	Mondy	3.15	87	*e*PN	Pb	10 15 04.7	-2.3
MOY				*i*		10 15 05.8	
MOY				*e*		10 15 46.1	
ORY	Orie	3.42	352	Pg	Pb	10 15 08.8	-2.7
ORY				Sg	Sb	10 15 50.9	-2.4
ABNR	Abakan	3.45	309	Pg	Pn	10 15 07.6	+2.9
ABNR				Sg	Sb	10 15 53.9	-0.2
TBTR	Tabat	3.46	294	Pn	Pn	10 15 06.5	+1.6
TBTR				Pg	Pb	10 15 10.7	-1.4
TBTR				Sg	Sb	10 15 53.6	-0.6
KTRR	Kuturchin	3.48	343	Pg	Pb	10 15 10.9	-1.5
KTRR				Sg	Sb	10 15 52.8	-2.0
TEL	Teeli	3.64	263	Pg	Pb	10 15 13.5	-1.9
TEL				Sg	Sb	10 16 01.4	+1.6
ARS	Arshan	4.04	83	*e*PN	Pn	10 15 12.8	-0.2
ARS				*e*		10 15 22.1	
ARS				*e*		10 16 13.0	
ARS				pmax	pmax		
	comp=Z,251nm,0.6s						
ARS				smax	smax		
	comp=E,2µm,0.7s						
SHRR	Shira	4.51	312	Pn	Pn	10 15 20.1	+0.8
SHRR				Pg	Pb	10 15 27.3	-2.8
SHRR				Sg	Sb	10 16 26.4	+1.8
LUZB	Luzhba, Kemero	4.74	298	Pn	Pn	10 15 23.0	+0.6
LUZB				Pg	Pb	10 15 33.6	-0.4
LUZB				Sg	Sb	10 16 34.2	+3.0
TLY	Talaya	4.80	86	Pg	Pb	10 15 33.8	-1.2
	comp=E,0.1nm,0.3s,baz=285,slow=12,SNR=13						
TLY				Lg	Lg	10 16 36.3	
	comp=E,0.5nm,0.3s,baz=30,slow=12,SNR=15						
TLY				LR	LR	10 17 21.2	
	comp=E,181nm,20.5s,baz=274,slow=40						
TLY	Talaya	4.80	86	Pg	Pb	10 15 34.8	-0.2
TLY				Sg	Sb	10 16 36.0	+2.9
TLY	Talaya	4.80	86	*i* PN	Pn	10 15 22.8	-0.6
TLY				pmax	pmax		
	comp=Z,9.0nm,0.8s						
ZAK	Zakamensk	4.81	102	Pg	Pb	10 15 34.2	-1.0
ZAK				Sg	Sb	10 16 38.6	+5.3
ZAK	Zakamensk	4.81	102	*e*PN	Pb	10 15 32.6	-2.5
ZAK				*e*		10 16 38.0	
ZAK				pmax	pmax		
	comp=Z,59nm,0.4s						
ZAK				smax	smax		
	comp=N,892nm,1.3s						
SHTK	Zheleznogorsk-	4.91	345	Pg	Pn	10 15 27.7	+3.0
SHTK				Sg	Sb	10 16 28.7	-7.4
GZLN	Zheleznogorsk	4.93	346	Pg	Pb	10 15 37.8	+0.7
GZLN				Sg	Sb	10 16 38.2	+1.5
CUR	Chagan-Uzun	5.04	255	Pn	Pn	10 15 27.5	+0.8
CUR				Pg	Pb	10 15 40.7	+1.6
CUR				Sg	Sb	10 16 43.9	+4.0
TASR	Tashtagol	5.08	286	Pn	Pn	10 15 30.8	+3.6
TASR				Pg	Pb	10 15 41.8	+2.0
TASR				Sg	Sb	10 16 45.8	+4.8
ULGR	Ulagan, Altay	5.12	262	Pg	Pb	10 15 43.8	+3.4
ULGR				Sg	Sb	10 16 47.8	+5.6
IRK	Irkutsk	5.20	80	*e*PN	Pb	10 15 40.2	-1.6
IRK				*e*		10 16 46.6	
IRK				pmax	pmax		
	comp=Z,141nm,0.2s						
IRK				smax	smax		
	comp=E,967nm,0.4s						
ARTR	Artybash	5.38	275	Pn	Pn	10 15 31.4	+0.2
ARTR				Pg	Pb	10 15 47.1	+2.3
ARTR				Sg	Sb	10 16 55.2	+5.6
CHBI	Chibit, Altay	5.48	259	Pn	Pn	10 15 33.5	+0.8
CHBI				Pg	Pb	10 15 50.3	+3.6
CHBI				Sg	Sb	10 17 00.6	+7.9
DGZ	Jazzator, Alta	5.74	254	Pn	Pn	10 15 37.9	+1.6
DGZ				Pg	Pg	10 15 57.2	-3.1
DGZ				Sg	Sg	10 17 11.7	-2.9
DGZ	Jazzator, Alta	5.74	254	*i* PN	Pn	10 15 36.5	+0.2
DGZ				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BRCR	Berchikul'	6.05	315	Pn	Pn	10 15 40.3	-0.2
BRCR				Pg	Pb	10 15 59.4	+3.1
BRCR				Sg	Sb	10 17 13.4	+4.5
ELT	Eltsovka	6.15	289	Pn	Pn	10 15 42.2	+0.5
ELT				Pg	Pb	10 15 59.5	+1.6
ELT				Sg	Sb	10 17 17.4	+5.7
GALT	Gorno-Altaysk,	6.20	277	Pg	Pn	10 15 43.1	+0.6
GALT				Sg	Sb	10 17 22.0	+8.7
POMOR	Pomortsevo, Ku	6.32	300	Pn	Pn	10 15 44.5	+0.3
POMOR				Pg	Pb	10 16 02.9	+2.0
POMOR				Sg	Sb	10 17 24.4	+7.8
BJR4	Bachatsky-4, K	6.42	298	Pg	Pb	10 15 57.4	-5.1
BJR4				Sg	Sb	10 17 28.1	+8.7
BJR3	Bachatsky-3 (S	6.46	298	Pg	Pb	10 16 07.0	+3.9
BJR3				Sg	Sb	10 17 29.8	+9.3
BJR2	Bachatsky-2, K	6.49	298	Pn	Pn	10 15 38.1	-8.4
BJR2				Pg	Pb	10 16 06.4	+2.6
BJR2				Sg	Sg	10 17 31.2	-7.6
TRG	Tyrgan	6.51	76	Sg	Sb	10 17 28.7	+6.7
BJR1	Bachatsky 1, K	6.53	298	Sg	Sb	10 17 31.6	+9.1
SALR	Pechorkino, Sa	6.77	298	Pn	Pn	10 15 46.5	-3.8
SALR				Pg	Pb	10 16 11.2	+2.7
SALR				Sg	Sb	10 17 39.0	+9.5
KEM	Kemerovo	6.95	306	Sg	Sb	10 17 44.7	+10
UKR	Ust'-Kan	7.03	269	Pg	Pb	10 16 18.4	+5.4
UKR				Sg	Sg	10 17 49.6	-6.6
ZALV	Zalesovo Beam	7.13	293	Pn	Pn	10 15 55.8	+0.6
	comp=Z,0.6nm,0.3s,baz=98,slow=11,SNR=6.5						
ZALV				Lg	Lg	10 18 02.1	
	comp=Z,6.3nm,0.3s,baz=121,slow=26,SNR=8.4						
ZALV	Zalesovo Beam	7.13	293	*i* PN	Pn	10 15 58.9	+3.7
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.5s						
OGRR	Ongureny	7.38	70	*e*P	Pn	10 15 58.7	0.0
OGRR				pmax	pmax		
	comp=Z,18nm,0.5s						
SONM	Songino Array	7.77	115	Pg	Pb	10 16 27.7	+2.1
	comp=Z,1.6nm,0.3s,baz=297,slow=18,SNR=35						
SONM				Lg	Lg	10 18 09.0	
	comp=Z,5.2nm,0.3s,baz=303,slow=29,SNR=16						
SONM				LR	LR	10 19 10.5	
	comp=Z,152nm,18.3s,baz=267,slow=40						
KHAR	Kharino, NSO,	8.00	297	Sg	Sg	10 18 20.4	-6.7
ULN	Ulaanbaatar	8.13	113	Pn	Pn	10 16 11.5	+2.4
ULN				Pg	Pb	10 16 35.1	+3.4
ULN				Sg	Sg	10 18 25.3	-6.0
ULN	Ulaanbaatar	8.13	113	*i* P	Pn	10 16 11.2	+2.1
NVSII	Novosibirsk	8.27	298	Pg	Pb	10 16 40.1	+6.2
NVSII				Sg	Sb	10 18 24.2	+12
NVS	Novosibirsk	8.27	298	Sg	Sb	10 18 24.8	+12
ZSN	Zaisan	8.32	244	*e*P	Pn	10 16 11.3	-0.4
	baz=244						
ZSN	Zaisan	8.32	244	*e*P	Pn	10 16 11.2	-0.4
NHES	Novosibirsk, N	8.41	298	Sg	Sg	10 18 30.7	-9.4
BSTK	Bystrovka, Nov	8.52	295	Sg	Sg	10 18 33.6	-10
SEM	Semipalatinsk	9.96	269	*e*P	Pn	10 16 33.6	-0.7
	baz=268						
SEM	Semipalatinsk	9.96	269	*e*P	Pn	10 16 33.5	-0.7
MK31	Makanchi Array	10.14	247	*i* P	Pn	10 16 38.0	+1.4
MKAR	Makanchi Array	10.14	247	Pn	Pn	10 16 36.2	-0.4
	comp=Z,0.2nm,0.3s,baz=74,slow=13,SNR=3.7						
MKAR				Pg		10 17 17.6	
	comp=Z,0.5nm,0.3s,baz=73,slow=15,SNR=4.0						
MKAR				Lg	Lg	10 19 30.1	
	comp=Z,1.0nm,0.3s,baz=62,slow=30,SNR=7.6						
MKAR				LR	LR	10 20 43.7	
	comp=Z,115nm,21.7s,baz=56,slow=39						
KURK	Kurchatov	10.91	272	*i* P	Pn	10 16 48.3	+1.3
KURBB	Kurchatov Arra	10.98	272	Pn	Pn	10 16 48.4	+0.3
	comp=Z,0.1nm,0.3s,baz=76,slow=15,SNR=4.7						
KURBB				Lg	Lg	10 19 53.5	
	comp=Z,0.1nm,0.3s,baz=80,slow=32,SNR=6.4						
SATY	Saty	14.62	241	*e*P	Pn	10 17 38.4	+0.6
	baz=241						
SATY	Saty	14.62	241	*e*P	Pn	10 17 38.3	+0.5
KUU	Kurty	15.24	247	*e*P	Pn	10 17 46.5	+0.3
	baz=247						
KUU	Kurty	15.24	247	*e*P	Pn	10 17 46.4	+0.3
HIA	Hailar	15.34	89	*i* P	Pn	10 17 47.8	+0.4
HIA				pmax	pmax		
	comp=Z,3.0nm,0.3s						
BVAR	Borovoye Array	15.65	285	Pn	Pn	10 17 52.1	+0.6
	comp=Z,0.2nm,0.3s,baz=73,slow=16,SNR=4.2						
BRVK	Borovoye	15.71	285	*i* P	Pn	10 17 53.3	+1.1
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
AAK	Ala-Archa	17.08	247	Pn	Pn	10 18 07.8	-2.1
	comp=Z,0.1nm,0.3s,baz=148,slow=16,SNR=3.7						
AAK				Lg	Lg	10 23 05.8	
	comp=Z,0.1nm,0.3s,baz=224,slow=23,SNR=1.4						
AAK				LR	LR	10 24 56.3	
	comp=Z,119nm,19.1s,baz=46,slow=38						
AAK	Ala-Archa	17.08	247	*i* P	P	10 18 11.0	-0.7
AAK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
NRIK	Noril'sk	18.21	350	*i* P	P	10 18 25.1	+1.3
NRIK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
YAK	Yakutsk	20.94	47	*i* P	P	10 18 53.9	+0.2
ARU	Arti	22.27	297	P	P	10 19 11.0	+3.0
	comp=Z,0.8nm,0.3s,baz=98,slow=6.7,SNR=6.0						
ARU				LR	LR	10 29 21.4	
	comp=Z,61nm,18.9s,baz=160,slow=40						
ARU	Arti	22.27	297*c*	*i*P	P	10 19 09.9	+1.9
ARU						10 19 31.8	
ARU				S	S	10 23 17.1	+4.0
ARU				SS	Sn	10 23 43.5	+19
ARU				pmax	pmax		
	comp=Z,22nm,3.3s						
KLR	Kul'dur	22.80	82	*i* P	P	10 19 15.2	+1.5
KLR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
AKTO	Aktyubinsk	23.70	282	P	P	10 19 21.2	-1.6
	comp=Z,2.5nm,0.6s,baz=84,slow=8.9,SNR=9.4						
TIXI	Tiksi	24.85	24	*i* P	P	10 19 32.2	-1.0
BELG	Belogornoye	29.31	291	*i* P	P	10 20 13.4	0.0
BELG				pmax	pmax		
	comp=Z,1.0nm,0.9s						
OBN	Obninsk	34.66	300	*i* P	P	10 20 58.4	-1.9
OBN				*e*		10 22 19.6	
OBN				*e*S	S	10 26 23.5	-6.5
OBN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
OBN				MLR	MLR		
	comp=Z,80nm,15.0s						
KIV	Kislovodsk	35.88	279	*i* P	P	10 21 08.3	-2.8
KIV				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MNK	Minsk	39.55	302	*i* P	P	10 21 40.6	-1.3
	comp=E,3.0nm,0.9s						
MNK				*i* P	P	10 21 40.6	-1.3
	comp=N,16nm,0.8s						
MNK				*i* P	P	10 21 40.6	-1.3
	comp=Z,7.0nm,0.5s						
MNK				*i* PP	PP	10 23 11.1	-1.3
MNK				*i* PPP	PPP	10 23 33.0	
MNK				*i* S	S	10 27 41.2	-3.2
MNK				*i* SS	SS	10 30 36.4	-2.2
MNK				*i* SSS	SSS	10 30 54.9	
MNK				*i* LR	LR	10 36 24.6	
MNK				*i* LRM	MLR	10 40 45.1	
	comp=N,536nm,21.7s						
MNK				*i* LRM	MLR	10 40 52.7	
	comp=E,87nm,17.4s						
MNK				*i* LRM	MLR	10 41 03.6	
	comp=Z,66nm,19.6s						
AKASG	Malin Array Be	40.52	296	P	P	10 21 52.4	+2.5
	comp=Z,0.7nm,0.5s,baz=58,slow=8.9,SNR=2.9						
NOA	NORSAR Array B	44.68	316	P	P	10 22 28.2	+4.5
	comp=Z,0.7nm,0.7s,baz=55,slow=7.8,SNR=2.3						
PSI	Prapat	48.72	176	LR	LR	10 46 32.4	
	comp=Z,47nm,19.3s,baz=96,slow=40						
CLL	Collm	48.94	304	*e*P	P	10 22 56.0	-1.1
CLL				*e*pP	pP	10 23 00.0	+0.6
CLL	Collm	48.94	304	*e*P	P	10 22 56.0	-1.1
CLL				*e**PP	pP	10 23 00.0	+0.6
COCO	West Island	63.55	179	*i* P	P	10 24 41.2	-0.5
WRA	Warramunga Arr	78.79	143	P	P	10 26 11.5	-2.4
	comp=Z,1.0nm,0.9s,baz=343,slow=6.3,SNR=6.8						
WRA	Warramunga Arr	78.79	143	*i* P	P	10 26 12.3	-1.6
WRA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ASAR	Alice Springs	82.04	145	P	P	10 26 29.2	-2.1
	comp=Z,1.4nm,0.9s,baz=339,slow=5.2,SNR=13						

NNC 09 10:17:30.4±12.0**, 38°.31N**×**73°.88E, h0**^{km}**, mb3.5, mpv3.1, 5C-1D, Error ellipse: s-maj=97.5km s-min=74.8km az=153.0, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	4.35	6	⇑Pn	Pn	10 18 40.4	+2.6
	2.7nm,0.8s						
AAK				⇑Sn	Sn	10 19 31.3	+2.0
	5.1nm,1.0s						
TKM2	Tokmak 2	4.79	15	⇓Pn	Pn	10 18 42.5	-1.5
	1.8nm,0.4s						
TKM2				⇑Sn	Sn	10 19 38.4	-1.8
	3.8nm,0.6s						
KK31	Karatay Array	5.43	333	⇑Pn	Pn	10 18 52.6	0.0
	2.1nm,0.8s,baz=156,slow=13,SNR=4.3						
KK31				⇑Sn	Sn	10 19 57.7	+1.9
	0.5nm,0.5s,baz=163,slow=28						

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*ECX **09** 10:26:26.1±0.7, 31°.52N×115°.66W, h10^{km}±9^{km}, MD2.4, ML2.6*

*MEX **09** 10:26:27.5±2.0, 31°.39N×115°.75W, h11^{km}±65^{km}, MD3.7*

ISC 09 10:26:24.6±1.0**, 31°.46N**±0°.03×**115°.64W**±0°.03**, h24**^{km}±7^{km}**, n15, σ1^{s}02**/30**, 4C-5D, Baja California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VTX	Valle De La Tr	0.14	241	⇑*e*P	Pb	10 26 29.6	+0.1
VTX				*e*S	Sb	10 26 32.6	-0.2
SJX	San Joaquin	0.41	318	⇓*e*P	Pn	10 26 35.8	+0.8
SJX				*e*S	Sn	10 26 43.0	+1.2
SJX				*e*		10 26 43.6	
SJX				IAML		10 26 43.6	
	comp=E,736nm,0.1s						
SPIG	San Pedro Mart	0.44	160	⇓*e*P	Pn	10 26 35.3	-0.5
	baz=316,slow=11						
SPIG				*e*S	Sn	10 26 41.9	-1.2
SPIG	San Pedro Mart	0.44	160	*e*P	Pn	10 26 35.0	-0.8
SPIG				*e*S	Sn	10 26 42.4	-0.7
SPX	San Pedro Mart	0.45	160	⇓*i*P	Pn	10 26 35.3	-0.6
SPX				*e*S	Sn	10 26 42.2	-1.1
SPX				IAML		10 26 42.6	
	comp=N,274nm,0.1s						
SPX				⇓*e*		10 26 42.6	
SPX				IAML		10 26 43.2	
	comp=E,252nm,0.2s						
SPX				*e*		10 26 43.2	
ECBX	El Chinero	0.51	88	⇑*i*P	Pb	10 26 34.5	-0.3
ECBX				*e*S	Sb	10 26 41.3	-0.5
SVX	San Vicente	0.54	256	⇑*i*P	Pb	10 26 35.8	+0.4
SVX				*i* S	Sb	10 26 43.0	+0.3
SFX	San Felipe	0.80	122	*e*P	Pn	10 26 41.1	+0.8
SFX				*e*S	Sn	10 26 52.9	+1.4
SQX	San Quintin	0.90	193	⇓*e*P	Pn	10 26 42.9	+1.1
SQX				*e*S	Sn	10 26 55.5	+1.5
CCX	Cicese	0.96	295	⇑*e*P	Pb	10 26 42.4	-0.2
CCX				*e*S	Sb	10 26 54.9	0.0
MBIG	Mexicali	1.02	22	*e*P	Pb	10 26 44.5	+0.9
MBIG				*i* S	Sn	10 26 59.0	+2.0
RMX	La Rumorosa	1.20	342	*e*P	Pn	10 26 45.3	-0.8
RMX				*e*S	Sn	10 26 58.9	-2.8
CBX	Cerro Bola	1.22	315	*e*P	Pb	10 26 46.5	-0.5
CBX				*e*S	Sn	10 27 01.8	-0.3
CBX				*e*		10 27 02.8	
CBX				IAML		10 27 02.8	
	comp=N,193nm,0.3s						
CBX				IAML		10 27 03.3	
	comp=E,222nm,0.2s						
CBX				*e*		10 27 03.3	
TJIG	Tijuana	1.31	318	*e*P	Pb	10 26 48.0	-0.5
TJIG				*e*S	Sn	10 27 04.0	-0.2
TJIG	Tijuana	1.31	318	*e*P	Pb	10 26 47.9	-0.6
TJIG				*e*S	Sn	10 27 04.1	-0.2

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*NOU **09** 10:27:47.0, 20°.50S×177°.71W, h554^{km}, mb4.4, Fiji Islands Region*

*NEIC **09** 10:27:49.1±1.4, 20°.5S±0°.1×178°.1W±0°.1, h559^{km}±8^{km}, mb4.6/54, Error ellipse: s-maj=18.0km s-min=14.5km az=140.0*

*IDC **09** 10:27:50.0±1.5, 20°.42S×178°.12W, h565^{km}±16^{km}, mb3.8/18, mb1 4.0/19, mb1mx3.8/40, mbtmp4.7/19, Error ellipse: s-maj=16.7km s-min=10.7km az=152.0*

ISC 09 10:27:48.2±0.5**, 20°.52S**±0°.09×**178°.02W**±0°.09**, h550**^{km}**, n98, σ0^{s}89**/97**, mb4.5**/41**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.63	306	P	P	10 29 16.1	+0.9
	1.6nm,0.3s,baz=258,slow=1.9,SNR=9.7						
MSVF	Nonsavu	4.63	306	P	P	10 29 16.5	+1.3
MSVF	Nonsavu	4.63	306	P	P	10 29 16.5	+1.3
DVP	Devils Point	13.33	280	P	P	10 30 42.8	+2.2
	235µm,0.8s						
PINNC	Pines Island,	13.69	259	P	P	10 30 45.0	+0.8
	70nm,1.7s						
DZM	Mont Dzumac	14.57	261	P	P	10 30 53.4	0.0
	1.0nm,0.3s,baz=88,slow=17,SNR=29						
DZM	Mont Dzumac	14.57	261	P	P	10 30 53.5	+0.1
	26nm,1.2s						
SANVU	Saraoutou	14.93	287	P	P	10 30 56.1	-1.0
SANVU	Saraoutou	14.93	287	P	P	10 30 57.9	+0.8
	64nm,0.8s						
OUZ	Omahuta	16.41	205	P	P	10 31 11.6	+0.1
OUZ				IAmb	IAmb	10 31 15.2	
	comp=Z,9.2nm,0.7s						
KOUNC	Koumac, New Ca	16.58	267	P	P	10 31 14.6	+1.4
	comp=Z,57nm,1.3s						
MXZ	Matakaoa Point	17.28	190	P	P	10 31 18.4	-1.0
URZ	Urewera	18.18	192	P	P	10 31 25.8	-1.8
	comp=Z,3.1nm,0.3s,baz=266,slow=2.4,SNR=32						
URZ	Urewera	18.18	192	P	P	10 31 26.0	-1.6
URZ				IAmb	IAmb	10 31 27.5	
	comp=Z,22nm,0.8s						
KNTN	Kanton	18.67	20	P	P	10 31 30.7	-1.8
HIZ	Hauiti	18.96	197	P	P	10 31 34.1	-0.6
BKZ	Black Stump Fm	19.18	193	P	P	10 31 34.9	-1.8
BKZ				IAmb	IAmb	10 31 51.2	
	comp=Z,18nm,1.2s						
TUWZ	Tuamarina	21.94	196	P	P	10 32 01.1	-0.4

THZ	Tophouse	22.53	198	P	P	10 32 06.3	-0.7
THZ				IAmb	IAmb	10 32 14.6	
	comp=Z,40nm,1.3s						
LTZ	Lake Taylor	23.65	198	P	P	10 32 14.4	-2.5
LTZ				IAmb	IAmb	10 32 14.6	
	comp=Z,16nm,1.0s						
OXZ	Oxford	24.22	198	P	P	10 32 20.3	-1.6
RPZ	Rata Peaks	24.87	199	P	P	10 32 29.2	+1.5
	comp=Z,10nm,0.8s,baz=344,slow=7.4,SNR=1.5						
RPZ	Rata Peaks	24.87	199	IAmb	IAmb	10 32 40.5	
	comp=Z,30nm,1.2s						
WHZ	Wether Hill Ro	27.81	201	P	P	10 32 54.7	+1.2
EIDS	Eidsvold	28.83	254	P	P	10 33 02.8	+0.1
EIDS				IAmb	IAmb	10 33 06.4	
	comp=Z,35nm,1.5s						
ARMA	Armidale	29.05	244	P	P	10 33 04.7	+0.1
CTA	Charters Tower	33.47	264	P	P	10 33 42.8	+0.3
	comp=Z,28nm,0.3s,baz=90,slow=10,SNR=91						
CTAO	Charters Tower	33.47	264	P	P	10 33 42.8	+0.3
PMG	Port Moresby	35.33	283	P	P	10 33 57.8	-0.2
	comp=Z,37nm,0.9s,baz=91,slow=4.8,SNR=15						
PMG	Port Moresby	35.33	283	P	P	10 33 58.1	+0.1
TOO	Toolangi	35.87	234	P	P	10 34 02.9	+0.6
TOO				IAmb	IAmb	10 34 04.8	
	comp=Z,21nm,1.4s						
COEN	Coen	37.57	274	P	P	10 34 16.7	+0.2
COEN				IAmb	IAmb	10 34 17.7	
	comp=Z,17nm,0.8s						
STKA	Stephens Creek	37.77	244	P	P	10 34 18.2	+0.4
	comp=Z,4.8nm,0.6s,baz=84,slow=11,SNR=12						
STKA	Stephens Creek	37.77	244	P	P	10 34 18.4	+0.5
BBOO	Buckleboo	42.52	244	P	P	10 34 55.8	-0.1
BBOO				IAmb	IAmb	10 34 56.6	
	comp=Z,14nm,0.5s						
WR0	Warramunga Arr	44.39	262	P	P	10 35 10.2	-0.4
WR0				IAmb	IAmb	10 35 11.6	
	comp=Z,10nm,0.7s						
AS31	Alice Springs	44.50	257	P	P	10 35 11.6	+0.2
AS31				IAmb	IAmb	10 35 12.6	
	comp=Z,18nm,1.2s						
ASAR	Alice Springs	44.50	257	P	P	10 35 11.3	-0.1
	comp=Z,35nm,0.8s,baz=99,slow=7.7,SNR=326						
ASAR				PcP	PcP	10 36 42.4	-0.4
	comp=Z,1.7nm,0.7s,baz=96,slow=3.8,SNR=5.4						
ASAR				S	S	10 41 05.7	-1.4
	comp=Z,3.2nm,0.9s,baz=95,slow=16,SNR=17						
ASAR	Alice Springs	44.50	257	P	P	10 35 11.2	-0.2
ASAR					PcP	10 36 42.6	-0.2
WB0	Warramunga Arr	44.56	262	P	P	10 35 11.5	-0.4
WB0				IAmb	IAmb	10 35 12.1	
	comp=Z,23nm,0.8s						
WB2	Warramunga Arr	44.57	262	P	P	10 35 11.6	-0.3
WB2				IAmb	IAmb	10 35 12.3	
	comp=Z,25nm,0.9s						
WRAB	Tennant Creek	44.57	262	P	P	10 35 11.5	-0.5
WRAB				IAmb	IAmb	10 35 12.2	
	comp=Z,30nm,1.1s						
WRA	Warramunga Arr	44.58	262	P	P	10 35 11.3	-0.7
	comp=Z,12nm,0.7s,baz=96,slow=7.5,SNR=166						
WRA	Warramunga Arr	44.58	262	P	P	10 35 11.5	-0.6
HMH	Humu'ula Sheep	45.57	30	P	P	10 35 19.8	0.0
FORT	Forrest	49.27	247	P	P	10 35 46.3	-0.9
FORT				IAmb	IAmb	10 35 47.6	
	comp=Z,22nm,0.6s						
FAKI	Fak Fak	51.49	283	P	P	10 36 03.3	-0.3
FAKI				IAmb	IAmb	10 36 32.6	
	comp=Z,52nm,1.4s						
FITZ	Fitzroy Crossi	53.01	262	P	P	10 36 14.6	+0.2
	comp=Z,4.5nm,0.6s,baz=108,slow=4.5,SNR=25						
FITZ	Fitzroy Crossi	53.01	262	P	P	10 36 14.6	+0.2
SIJI	Sorong	53.23	285	P	P	10 36 15.8	-0.2
	comp=Z,54nm,0.7s,baz=92,slow=5.8,SNR=26						
PSA00	Pilbara Seismi	57.65	257	P	P	10 36 46.2	-0.4
PSA00				IAmb	IAmb	10 36 47.0	
	comp=Z,18nm,0.7s						
PSA00	Pilbara Seismi	57.65	257	P	P	10 36 45.5	-1.2
PSA00				IAmb	IAmb	10 36 46.1	
	comp=Z,12nm,0.7s						
MORW	Morawa	59.81	248	P	P	10 36 59.9	-1.2
GIRL	Giralia	62.53	255	P	P	10 37 20.1	+1.1
QSPA	South Pole Qui	69.55	180	P	P	10 38 03.2	+1.3
	comp=Z,1.7nm,0.8s,baz=38,slow=0.7,SNR=7.7						
QSPA	South Pole Qui	69.55	180	IAmb	IAmb	10 38 08.0	
	comp=Z,12nm,1.5s						
UGM	Wanagama	69.95	269	P	P	10 38 04.9	-0.3
MJAR	Matsushiro Arr	70.21	324	P	P	10 38 05.8	-0.4
	comp=Z,6.2nm,0.7s,baz=162,slow=5.9,SNR=13						
MJAR	Matsushiro Arr	70.21	324	IAmb	IAmb	10 38 06.7	
	comp=Z,2.5nm,0.6s						
MAJO	Matsushiro	70.22	324	P	P	10 38 06.1	-0.1
MAJO				IAmb	IAmb	10 38 06.6	
	comp=Z,12nm,0.8s						
SSLB	Suanglung	73.97	304	P	P	10 38 27.5	-0.8
SSLB				IAmb	IAmb	10 38 32.2	
	comp=Z,39nm,1.2s						
TPUB	Ta-pu	73.97	303	P	P	10 38 26.8	-1.5
PETK	Petropavlovsk-	76.28	345	P	P	10 38 40.2	-0.2
KSRS	Korea Array	76.89	319	P	P	10 38 44.4	+0.3
	comp=Z,2.0nm,0.6s,baz=121,slow=5.7,SNR=6.7						
USRK	Ussuriysk Ar.	78.97	326	P	P	10 38 55.3	+0.2
	comp=Z,5.8nm,0.8s,baz=141,slow=3.6,SNR=13						
YBH	Yreka Blue Hor	80.31	39	P	P	10 39 03.6	+1.2
BEKR	Beckworth	80.59	41	P	P	10 39 04.3	+0.3
NVAR	Mina Array Bea	81.05	43	P	P	10 39 06.7	+0.3
	comp=Z,3.8nm,0.8s,baz=223,slow=9.5,SNR=10						
CN2	Changchun	82.30	322	*e*P	P	10 39 12.5	+0.1
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
H04A	Detroit Lake	82.45	37	P	P	10 39 14.0	+0.7
H04A				IAmb	IAmb	10 39 36.0	
	comp=Z,17nm,1.4s						
TUC	Tucson	83.00	52	P	P	10 39 16.6	+0.3
I07A	Izee	83.61	38	P	P	10 39 20.0	+0.9
CCUT	Cedar City	83.83	46	P	P	10 39 21.3	+0.7
U15A	North Rim	83.98	48	P	P	10 39 22.4	+1.0
SUA	Susitna One	84.58	13	P	P	10 39 22.9	-0.6
SUA				IAmb	IAmb	10 39 23.9	
	comp=Z,13nm,1.0s						
F10A	Beach Ranch, E	86.03	38	P	P	10 39 30.7	-0.1
F10A				IAmb	IAmb	10 39 31.9	
	comp=Z,11nm,0.8s						
TX31	Lajitas Ar. Si	87.08	57	P	P	10 39 36.8	+0.6
TX31				IAmb	IAmb	10 39 37.9	
	comp=Z,9.2nm,0.8s						
TX32	Lajitas Array	87.08	57	P	P	10 39 36.9	+0.7
TXAR	Lajitas Array	87.08	57	P	P	10 39 37.1	+1.0
	comp=Z,3.2nm,0.9s,baz=217,slow=6.6,SNR=25						
TXAR	Lajitas Array	87.08	57	P	P	10 39 36.5	+0.3
ANMO	Albuquerque	87.43	51	P	P	10 39 38.3	+0.5
	comp=Z,1.7nm,0.9s,baz=203,slow=5.9,SNR=3.8						
MCMT	McKenzie Canyo	87.98	40	P	P	10 39 41.2	+1.0
HDA	Harding Lake	88.00	13	P	P	10 39 39.2	-0.4
HDA				IAmb	IAmb	10 39 39.9	
	comp=Z,5.6nm,0.7s						
XAN	Xi'an	88.13	307	P	P	10 39 41.7	+0.8
XAN				pP	PcP	10 39 48.1	+6.0
XAN				pmax	pmax		
	comp=Z,15nm,1.0s						
ILAR	Eielson Array	88.33	13	P	P	10 39 40.1	-1.0
	comp=Z,1.2nm,0.5s,baz=214,slow=5.4,SNR=24						
PD31	Pinedale Array	88.98	43	P	P	10 39 45.4	+0.4
PDAR	Pinedale Array	88.98	43	P	P	10 39 45.1	+0.2
	comp=Z,1.9nm,0.6s,baz=214,slow=3.5,SNR=24						
PDAR	Pinedale Array	88.98	43	P	P	10 39 45.3	+0.4
YNE	Yellowstone No	89.80	41	P	P	10 39 49.7	+1.0
CMAR	Chiang Mai Arr	90.11	290	P	P	10 39 51.7	+1.3
	comp=Z,4.6nm,1.0s,baz=125,slow=2.8,SNR=25						
CMAR	Chiang Mai Arr	90.11	290	P	P	10 39 50.9	+0.6
MKAR	Makanchi Array	111.20	313	PKiKP	PKiKP	10 45 18.1	-1.6
	comp=Z,0.4nm,0.6s,baz=202,slow=1.2,SNR=5.4						
ARCES	ARCESS Array B	128.93	350	PKP	PKPdf	10 45 52.5	-0.5
	comp=Z,4.6nm,1.0s,baz=32,slow=7.5,SNR=3.7						
AKASG	Malin Array Be	143.02	331	PKhKP	PKPpre	10 46 16.1	
	comp=Z,3.5nm,0.5s,baz=43,slow=4.5,SNR=20						
BRTR	Keskin Array B	146.84	312	PKPbc	PKPdf	10 46 27.7	+1.1
	comp=Z,1.6nm,0.7s,baz=144,slow=5.1,SNR=5.2						
BURAR	Bucovina Array	147.07	331		PKiKP	10 46 31.1	-0.5
CLL	Collm	148.07	347	*i* PKPbc	PKPbc	10 46 31.8	-0.2
	comp=Z,6.0nm,0.7s						
GERES	GERESS Array B	150.21	344	PKPbc	PKPbc	10 46 36.2	-1.2
	comp=Z,0.3nm,0.3s,baz=29,slow=6.3,SNR=3.9						

IDC 09 10:29:10.5±1.8**, 2°.05N**×**127°.74E, h0^{km}, mb3.5**/4**, mb1 3.8**/5**, mb1mx3.6**/33**, mbtmp3.7**/5**, ML4.1**/1**, MS3.3**/1**, Ms1 3.3**/1**, ms1mx2.3**/30**, Error ellipse: s-maj=55.8km s-min=26.8km az=65.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPI	Kappang	10.62	229	Pn	Pn	10 31 45.1	+1.1
	1.4nm,0.3s,baz=2.5,slow=3.2,SNR=5.6						
PMG	Port Moresby	22.45	121	LR	LR	10 44 47.6	
	comp=Z,68nm,18.1s,baz=346,slow=42						
WRA	Warramunga Arr	22.79	164	P	P	10 34 15.0	0.0
	1.0nm,0.4s,baz=343,slow=11,SNR=21						
ASAR	Alice Springs	26.25	167	P	P	10 34 46.9	-0.7
	0.2nm,0.4s,baz=341,slow=7.6,SNR=10.0						
STKA	Stephens Creek	36.21	160	P	P	10 36 15.4	+0.2
	2.8nm,0.9s,baz=337,slow=11,SNR=3.6						
MKAR	Makanchi Array	59.50	325	P	P	10 39 15.7	+0.1
	0.1nm,0.3s,baz=117,slow=8.6,SNR=1.6						

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*ECX **09** 10:39:19.8±0.8, 31°.51N×115°.66W, h12^{km}±5^{km}, MD2.0, ML2.2*

*MEX **09** 10:39:20.7±6.8, 31°.48N×115°.64W, h5^{km}, MD3.6*

ISC 09 10:39:18.3±1.1**, 31°.52N**±0°.03×**115°.63W**±0°.03**, h18**^{km}±3^{km}**, n14, σ0^{s}47**/27**, 8C, Baja California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VTX	Valle De La Tr	0.19	226	⇑*i*P	Pg	10 39 23.3	+0.1
VTX				*e*S	Sg	10 39 26.1	-0.4
VTX				IAML		10 39 26.4	
	comp=N,1µm,0.1s						
SJX	San Joaquin	0.37	310	⇑*i*P	Pn	10 39 29.6	+0.9
SJX				*e*S	Sn	10 39 36.9	+1.4
ECBX	El Chinero	0.49	95	⇑*i*P	Pg	10 39 28.3	0.0
ECBX				*e*S	Sg	10 39 35.2	+0.2
SPIG	San Pedro Mart	0.49	164	⇑*i*P	Pb	10 39 29.0	+0.3
	baz=310,slow=11						
SPIG				*e*S	Sb	10 39 35.9	+0.2
SPIG	San Pedro Mart	0.49	164	*e*P	Pg	10 39 28.6	+0.1
SPIG				*e*S	Sb	10 39 35.8	+0.2
SPX	San Pedro Mart	0.50	164	⇑*e*P	Pb	10 39 29.0	+0.2
SPX				*e*S	Sb	10 39 35.7	-0.2
SPX				IAML		10 39 36.4	
	comp=N,132nm,0.1s						
SPX				⇑*e*		10 39 36.4	
SVX	San Vicente	0.57	250	⇑*i*P	Pb	10 39 29.5	-0.2
SVX				*e*S	Sb	10 39 36.7	-0.6
SFX	San Felipe	0.82	126	*e*P	Pn	10 39 35.0	0.0
SFX				*e*S	Sn	10 39 46.0	-0.6
SFX				IAML		10 39 47.2	
	comp=E,39nm,0.1s						
CCX	Cicese	0.95	292	*e*P	Pb	10 39 36.2	0.0
SQX	San Quintin	0.97	193	*e*P	Pb	10 39 36.7	+0.2
SQX				*e*S	Sg	10 39 49.4	-0.5
RMX	La Rumorosa	1.15	341	*e*P	Pn	10 39 39.2	-0.4
RMX				*e*S	Sb	10 39 53.4	-0.9
CBX	Cerro Bola	1.18	312	*e*P	Pb	10 39 40.5	+0.2
CBX				*e*S	Sn	10 39 55.7	-0.1
CBX				⇑*e*		10 39 56.6	
CBX				IAML		10 39 56.6	
	comp=N,98nm,0.3s						
TJIG	Tijuana	1.27	316	*e*P	Pb	10 39 41.9	+0.1
TJIG				*e*S	Sn	10 39 57.8	-0.1
BAR	Barrett	1.46	323	*e*P	Pb	10 39 44.9	-0.1
BAR				*e*S	Sb	10 40 03.3	+0.2

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*IDC **09** 10:48:51.5±1.2, 35°.75N×140°.92E, h0^{km}, mb3.4/4, mb1 3.6/7, mb1mx3.4/37, mbtmp3.5/7, ML3.1/3, MS2.9/1, Ms1 2.9/1, ms1mx2.3/22, Error ellipse: s-maj=27.8km s-min=20.8km az=80.0*

*JMA **09** 10:48:53.3±0.1, 35°.79N×140°.92E, h13^{km}±1^{km}, M3.8*
JMA Felt II J1.

*NIED **09** 10:48:53.4, 35°.79N×140°.92E, h13^{km}, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$-1.85; M$_{\theta\theta}$-0.40; M$_{\phi\phi}$2.25; M$_{r\theta}$1.28; M$_{\theta\phi}$1.00; M$_{\phi r}$0.95; Fault plane solution: M$_0$2.79000×10^{14} NP1: φ$_s$221.00000°, δ65.00000°, λ-64.00000°. NP2: φ$_s$353.00000°, δ36.00000°, λ-133.00000°.*

ISC 09 10:48:53.2±1.0**, 35°.79N**±0°.03×**140°.91E**±0°.06**, h13**^{km}±6^{km}**, n29, σ0^{s}58**/29**, mb3.4**/4**, 5C, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	0.10	204	⇑P	Pg	10 48 56.3	+0.1
CHOJ				S	Sg	10 48 58.4	+0.2
JIHU	Itakohorinouch	0.35	299	⇑P	Pb	10 49 01.1	-0.3
JIHU				S	Sb	10 49 06.5	-0.4
JSMT	Sammumatsuo	0.40	248	P	Pb	10 49 01.8	-0.4
JSMT				S	Sb	10 49 07.8	-0.4
JHYU	Hitachinakayam	0.60	335	⇑P	Pb	10 49 05.6	-0.1
JHYU				S	Sg	10 49 13.8	+0.7
JCN	Nagara	0.69	237	P	Pb	10 49 07.2	+0.2
JCN				S	Sb	10 49 16.5	+0.1
JYT	Yasato	0.72	307	⇑P	Pg	10 49 06.9	-0.4
JYT				S	Sg	10 49 16.8	0.0
JKUC	kamogawauchiur	0.86	223	P	Pn	10 49 10.1	-0.8
JKUC				S	Sb	10 49 21.7	+0.4
JHO	Hitachi	0.86	342	⇑P	Pg	10 49 09.2	-0.7
JHO				S	Sg	10 49 20.9	-0.3
BSO4	Boso 4	0.93	210	P	Pn	10 49 11.5	-0.3
BSO3	Boso 3	1.04	198	P	Pn	10 49 12.8	-0.4
BSO1	Boso 1	1.14	177	P	Pb	10 49 13.3	-1.1
MJAR	Matsushiro Arr	2.31	290	Pn	Pn	10 49 30.3	-0.6
	1.7nm,0.3s,baz=92,slow=8.6,SNR=71						
MJAR				Sn	Sn	10 49 59.5	+0.3
	1.2nm,0.3s,baz=102,slow=16,SNR=5.6						
MAT	Matsushiro	2.31	290	P	Pn	10 49 30.6	-0.4
MAT				*e*S	Sn	10 49 58.7	-0.6
JHJ	Hachijo jima 2	2.82	200	Pn	Pn	10 49 38.8	+0.7
	4.4nm,0.3s,baz=227,slow=19,SNR=1.1						
ASAJ	Asahikawa	8.41	8	Pn	Pn	10 50 54.6	-0.2
	0.5nm,0.3s,baz=166,slow=6.1,SNR=4.3						
JOW	Kunigami	14.00	234	LR	LR	10 57 25.7	
	comp=Z,45nm,18.3s,baz=324,slow=37						
H11N2	WAKE ISLAND Hy	27.89	118	T	T	11 23 38.1	
	baz=311,slow=75,SNR=74						
H11N1	WAKE ISLAND Hy	27.90	118	T	T	11 23 38.7	
	baz=311,slow=75,SNR=61						
H11N3	WAKE ISLAND Hy	27.91	118	T	T	11 23 39.5	
	baz=311,slow=75,SNR=70						
H11S3	WAKE ISLAND Hy	28.56	120	T	T	11 24 28.9	
	baz=312,slow=75,SNR=144						
H11S1	WAKE ISLAND Hy	28.56	120	T	T	11 24 28.9	
	baz=312,slow=75,SNR=193						
H11S2	WAKE ISLAND Hy	28.57	120	T	T	11 24 30.0	
	baz=312,slow=75,SNR=161						
MKAR	Makanchi Array	44.44	303	P	P	10 57 05.1	+1.3
	0.5nm,0.7s,baz=86,slow=9.4,SNR=5.4						
ILAR	Eielson Array	50.76	32	P	P	10 57 53.4	+0.8
	0.4nm,0.8s,baz=251,slow=8.2,SNR=4.4						
WRA	Warramunga Arr	55.78	187	P	P	10 58 29.3	-0.6
	0.2nm,0.5s,baz=2.3,slow=7.2,SNR=6.2						
ASAR	Alice Springs	59.51	187	P	P	10 58 55.9	-0.2
	0.2nm,0.6s,baz=16,slow=12,SNR=4.3						
H03N2	Juan Fernandez	147.28	98	T	T	13 52 58.8	
	baz=289,slow=76,SNR=9.3						
H03N3	Juan Fernandez	147.29	98	T	T	13 52 59.0	
	baz=289,slow=76,SNR=12						
H03N1	Juan Fernandez	147.30	98	T	T	13 52 57.4	
	baz=289,slow=76,SNR=12						

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*IDC **09** 11:04:34.9±0.8, 2°.02N×97°.28W, h0^{km}, mb4.4/10, mb1 4.7/10, mb1mx4.3/33, mbtmp4.4/10, MS3.9/21, Ms1 3.9/21, ms1mx3.8/30, Error ellipse: s-maj=32.9km s-min=16.0km az=48.0*

*NEIC **09** 11:04:38.9±1.6, 2°.31N±0°.07×96°.9W±0°.1, h10^{km}±1^{km}, mb4.7/101, Error ellipse: s-maj=20.7km s-min=9.9km az=290.0*

ISC 09 11:04:37.6±0.6**, 2°.18N**±0°.08×**97°.09W**±0°.09**, h10**^{km}**, n352, σ1^{s}13**/329**, mb4.7**/54**, MS3.8**/19**, West of Galapagos Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESQI	Esquipulas	14.48	31	Pn	Pn	11 07 59.7	-3.3
CCIG	Comitan	14.84	19	Pn	Pn	11 08 04.7	-3.1
CMIG	Matias Romero	14.97	8	LR	LR	11 12 32.6	
	comp=Z,803nm,20.1s,baz=167,slow=32						
TGUH	Tegucigalpa,Un	15.28	39	Pn	Pn	11 08 10.3	-3.4
TGUH				IAmb	IAmb	11 08 22.0	
	comp=Z,55nm,1.4s						
ACON	Acoyapa	15.30	50		Pn	11 08 12.2	-1.7
ACON				IAmb	IAmb	11 08 21.7	
	comp=Z,32nm,1.2s						
ESPN	Las Esperanzas	16.11	51	Pn	Pn	11 08 21.7	-2.6
PETF	Flores	16.27	25	Pn	Pn	11 08 23.7	-2.8
OTAV	Otavalo	18.73	96	P	Pn	11 08 57.9	+0.3
OTAV	Otavalo	18.73	96	*e*P	Pn	11 08 58.2	+0.6
OTAV	Otavalo	18.73	96	*e*P	Pn	11 08 58.9	+1.3
BBAC	Balboa, Cauca	19.83	90	*e*P	Pn	11 09 09.8	-0.8
TEIG	Tepich	19.89	25	LR	LR	11 16 00.7	
	comp=Z,458nm,18.4s,slow=34						
POPC	Popayan, Colom	20.40	89	*e*P	Pn	11 09 16.4	-0.9
PCON	Cinco Dias	20.68	89	*e*P	Pn	11 09 20.4	-0.5
YOTC	Yotoco, Valle	20.79	85	*e*P	P	11 09 19.3	0.0
ATAH	Atahualpa	20.83	117	LR	LR	11 15 38.3	
	comp=Z,127nm,19.9s,baz=297,slow=32						
PLMC	San Jos del P	20.94	82	*e*P	P	11 09 20.1	-0.9
MARP	Paez Belalcaza	21.12	88	*e*P	P	11 09 24.7	+1.6
ZAIG	Zacatecas	21.14	346		P	11 09 24.2	+1.0
CBOC	Ciudad Bolivar	21.34	80	*e*P	P	11 09 26.1	+0.7
H06E1	SOCORRO T-PHAS	21.35	322	T	T	11 31 14.5	
	SNR=37						
FLOC	Florencia	21.43	91	*e*P	P	11 09 27.8	+1.6
GARC	Garzon, Huila	21.58	90	*e*P	P	11 09 28.6	+0.6
BETC	Betania	21.64	88	*e*P	P	11 09 29.4	+1.0
TOLC	Tolima	21.86	83	*e*P	P	11 09 30.5	-0.6
HELC	Santa Helena	21.87	79	*e*P	P	11 09 33.3	+2.1
RREF	El Recreo	21.87	82	*e*P	P	11 09 36.8	+5.3
ORTC	Ortega, Tolima	21.88	85	*e*P	P	11 09 32.3	+1.3
GUY2C	Guyana, Caldas	21.89	81	*e*P	P	11 09 32.5	+0.9
MOTC	Monteria, Cord	22.30	72	*e*P	P	11 09 35.6	+0.1
PTLC	Puerto Leguiza	22.38	95	*e*P	P	11 09 37.5	+1.2
ROSC	El Rosal	22.88	83	LR	LR	11 17 12.4	
	comp=Z,62nm,18.6s,baz=246,slow=33						
MACC	Macarena, Meta	23.23	90	*e*P	P	11 09 45.7	+0.4
SMLC	San Martn de	23.83	73	*e*P	P	11 09 51.5	+0.4
RUSC	La Rusia	24.23	81	*e*P	P	11 09 55.3	-0.2
OCAC	Ocana	24.41	75	*e*P	P	11 09 57.7	+0.9
GUVC	San Jose del G	24.45	89	*e*P	P	11 09 58.0	+1.1
NNA	Nana	24.56	125	LR	LR	11 17 07.7	
	comp=Z,210nm,21.9s,baz=292,slow=31						
PAMC	Pamplona, Colo	24.83	77	*e*P	P	11 10 00.8	-0.1
LPIG	La Paz	25.26	331	LR	LR	11 17 48.0	
	comp=Z,663nm,18.0s,baz=159,slow=31						
TAMC	Tame, Arauca	25.57	80	*e*P	P	11 10 07.4	+0.3
CRJC	Cerrejon, Guaj	25.58	69	*e*P	P	11 10 06.3	-1.0
CZSB	Cruzeiro do Su	26.24	112	*e*P	P	11 10 14.9	+1.7
SOCV	Socops	26.81	76	*e*P	P	11 10 18.7	+0.4
SDV	Santo Domingo	27.15	75	P	P	11 10 22.5	+1.0
	comp=Z,2.6nm,0.6s,baz=252,slow=11,SNR=6.4						
SDV				LR	LR	11 19 16.2	
	comp=Z,117nm,20.7s,baz=250,slow=32						
SDV	Santo Domingo	27.15	75	P	P	11 10 22.8	+1.2
SDV	Santo Domingo	27.15	75	*e*P	P	11 10 22.9	+1.2
TXAR	Lajitas Array	27.72	348	P	P	11 10 26.1	-0.4
	comp=Z,2.8nm,1.0s,baz=161,slow=12,SNR=13						
TXAR				PcP	PcP	11 13 42.7	-0.6
	comp=Z,1.0nm,1.0s,baz=182,slow=3.4,SNR=4.6						
TXAR				LR	LR	11 20 26.1	
	comp=Z,350nm,18.7s,baz=0.0,slow=34						
TXAR	Lajitas Array	27.72	348	P	P	11 10 27.2	+0.8
TX31	Lajitas Ar. Si	27.72	348	P	P	11 10 27.8	+1.4
TX31				IAmb	IAmb	11 10 28.9	
	comp=Z,25nm,1.3s						
TX32	Lajitas Array	27.72	348	P	P	11 10 27.7	+1.3
JCT	Junction City	28.26	355	P	P	11 10 31.8	+0.6
	baz=174						
JCT	Junction City	28.26	355	P	P	11 10 31.3	+0.1
JCT				IAmb	IAmb	11 10 33.2	
	comp=Z,17nm,1.3s						
WHTX	Lake Whitney,	29.65	359	P	P	11 10 44.3	+0.8
	baz=179						
ABTX	Abilene, Hawle	30.38	356	P	P	11 10 50.6	+0.6
	baz=175						
ABTX	Abilene, Hawle	30.38	356	P	P	11 10 50.2	+0.3
ABTX				IAmb	IAmb	11 10 52.2	
	comp=Z,7.7nm,1.1s						
319A	Douglas	31.24	340	P	P	11 10 59.2	+1.6
319A				IAmb	IAmb	11 11 00.1	
	comp=Z,10nm,1.1s						
121A	Cookes Peak, D	31.82	343	P	P	11 11 04.0	+1.1
	baz=159						
121A	Cookes Peak, D	31.82	343	P	P	11 11 04.6	+1.8
121A				IAmb	IAmb	11 11 05.6	
	comp=Z,6.9nm,0.9s						
MSTX	Muleshoe	32.07	351	P	P	11 11 05.6	+0.6
	baz=169,SNR=5.7						
MSTX	Muleshoe	32.07	351	P	P	11 11 05.5	+0.6
MIAR	Mount Ida	32.37	5	P	P	11 11 07.7	+0.3
	baz=186						
MIAR	Mount Ida	32.37	5	P	P	11 11 07.6	+0.2
MIAR				IAmb	IAmb	11 11 09.5	
	comp=Z,6.7nm,1.1s						
X40A	Basin Creek Fa	32.38	7	P	P	11 11 08.3	+0.8
	baz=188						
WMOK	Wichita Mounta	32.43	357	P	P	11 11 08.8	+0.9
	baz=177						
WMOK	Wichita Mounta	32.43	357	P	P	11 11 07.7	-0.3
TUC	Tucson	32.62	338	P	P	11 11 10.8	+1.1
	baz=154						
AMTX	Amarillo	32.82	353	P	P	11 11 12.9	+1.4
	baz=171						
AMTX	Amarillo	32.82	353	P	P	11 11 12.0	+0.6
OXF	Oxford	32.95	12	P	P	11 11 13.1	+0.6
	baz=194						
ETMB	Extrema	32.98	112	*e*P	P	11 11 13.3	+0.2
W39A	Magazine	32.99	5	P	P	11 11 13.8	+0.9
	baz=186						
BNM	Barren Site	33.03	345	P	P	11 11 15.3	+1.9
214A	Organ Pipe Nat	33.11	335	P	P	11 11 15.4	+1.4
	baz=150						
214A	Organ Pipe Nat	33.11	335	P	P	11 11 14.7	+0.6
214A				IAmb	IAmb	11 11 16.1	
	comp=Z,6.6nm,1.1s						
W41B	Gary Mavity, V	33.13	7	P	P	11 11 15.4	+1.3
	baz=189						
X48A	Hartselle	33.45	15	P	P	11 11 16.6	-0.2
X48A				IAmb	IAmb	11 11 18.0	
	comp=Z,20nm,1.4s						
TUL1	Leonard	33.58	2	P	P	11 11 18.7	+0.7
	baz=182						
GOGA	Godfrey	33.59	21	P	P	11 11 18.2	+0.1
	baz=205						
ANMO	Albuquerque	33.74	346	P	P	11 11 21.0	+1.3
	baz=163						
ANMO	Albuquerque	33.74	346	P	P	11 11 20.1	+0.4
113A	Mohawk Valley,	34.22	335	P	P	11 11 24.2	+0.6
U40A	Yellville	34.23	6	P	P	11 11 24.5	+0.9
	baz=187						
X18A	Snowflake	34.34	341	P	P	11 11 26.8	+1.9
X18A				IAmb	IAmb	11 11 27.8	
	comp=Z,11nm,1.4s						
X16A	Lo Mia Camp, P	34.75	339	P	P	11 11 30.2	+1.7
X16A				IAmb	IAmb	11 11 31.3	
	comp=Z,9.0nm,1.4s						
WVT	Waverly	34.85	13	P	P	11 11 29.1	+0.1
	baz=196						
WVT	Waverly	34.85	13	P	P	11 11 28.5	-0.5
WVT				IAmb	IAmb	11 11 30.2	
	comp=Z,13nm,1.1s						
GLA	Glamis	34.93	333	P	P	11 11 31.2	+1.5
	baz=148						
Z59A	Georgetown, SC	35.12	26	P	P	11 11 31.3	-0.1
	baz=212						
IKP	In-Ko-Pah, Jac	35.18	332	P	P	11 11 33.7	+1.6
	baz=145						
SWSC	Sam W. Stewart	35.28	332	P	P	11 11 34.1	+1.3
	baz=146						
T25A	Trinidad	35.44	350	P	P	11 11 35.3	+1.0
	baz=167,SNR=6.0						
S39A	Bolivar	35.51	5	P	P	11 11 35.0	+0.3
S39A				IAmb	IAmb	11 11 36.7	
	comp=Z,10nm,1.2s						
SAML	Samuel	35.56	109	P	P	11 11 35.2	-0.2
SAML				IAmb	IAmb	11 11 36.3	
	comp=Z,21nm,1.4s						
PDMCI	Parker Dam,Lak	35.70	335	P	P	11 11 37.9	+1.5
	baz=150						
BC3	Big Chuckawall	35.72	333	P	P	11 11 38.1	+1.5
	baz=147						
WUAZ	Wupatki	35.72	340	P	P	11 11 38.0	+1.3
	baz=155,SNR=5.7						
WUAZ	Wupatki	35.72	340	P	P	11 11 38.6	+1.9

WUAZ				IAmb	IAmb	11 11 39.7	
	comp=Z,9.2nm,1.1s						
U49A	**Red Boiling Sp**	**35.73**	**16**	P	**P**	**11 11 35.9**	**-0.6**
U49A				IAmb	IAmb	11 11 37.9	
	comp=Z,28nm,1.5s						
T47A	**Sharon Grove**	**35.84**	**14**	P	**P**	**11 11 38.0**	**+0.5**
T47A				IAmb	IAmb	11 11 39.1	
	comp=Z,13nm,1.1s						
KMSC	**Kings Mountain**	**35.92**	**22**	P	**P**	**11 11 38.8**	**+0.5**
	baz=207						
IRM	**Iron Mountain**	**36.00**	**334**	P	**P**	**11 11 40.6**	**+1.6**
	baz=148						
TPFO	**Pinon Flats**	**36.13**	**332**	P	**P**	**11 11 41.6**	**+1.4**
	baz=146						
PFO	**Pinyon Flats O**	**36.14**	**332**	P	**P**	**11 11 41.6**	**+1.2**
	baz=146						
W56A	**Indian Trail**	**36.20**	**23**	P	**P**	**11 11 41.2**	**+0.5**
	baz=208						
R40A	**Maddies Statio**	**36.21**	**6**	P	**P**	**11 11 40.2**	**-0.5**
R40A				IAmb	IAmb	11 11 42.2	
	comp=Z,19nm,1.2s						
SDCO	**Great Sand Dun**	**36.23**	**349**	P	**P**	**11 11 42.7**	**+1.5**
	baz=165,SNR=6.2						
SDCO	**Great Sand Dun**	**36.23**	**349**	P	**P**	**11 11 42.7**	**+1.5**
BELC	**Belle Mtn. Jos**	**36.25**	**333**	P	**P**	**11 11 42.6**	**+1.3**
	baz=147						
MVCO	**Mesa Verde**	**36.41**	**345**	P	**P**	**11 11 43.4**	**+0.7**
	baz=160,SNR=6.9						
MVCO	**Mesa Verde**	**36.41**	**345**	P	**P**	**11 11 42.6**	**0.0**
MVCO				IAmb	IAmb	11 11 44.9	
	comp=Z,20nm,1.4s						
TZTN	**Tazewell**	**36.41**	**19**	P	**P**	**11 11 43.1**	**+0.7**
	baz=203						
S22A	**4UR Ranch, Cre**	**36.51**	**347**	P	**P**	**11 11 44.9**	**+1.3**
	baz=163						
CBKS	**Cedar Bluff**	**36.54**	**357**	P	**P**	**11 11 44.7**	**+1.2**
	baz=175						
KSU1	**Kansas State U**	**36.75**	**1**	P	**P**	**11 11 45.9**	**+0.6**
	baz=180						
GMRC	**Granite Mounta**	**36.76**	**334**	P	**P**	**11 11 47.0**	**+1.5**
	baz=148						
V56A	**Mocksville**	**36.83**	**23**	P	**P**	**11 11 46.6**	**+0.6**
	baz=208						
LVC	**Limon Verde**	**36.92**	**133**	*e*P	**P**	**11 11 47.9**	**+0.5**
U54A	**Nelsons Funny**	**36.97**	**21**	P	**P**	**11 11 47.6**	**+0.3**
	baz=206						
U54A	**Nelsons Funny**	**36.97**	**21**	P	**P**	**11 11 46.6**	**-0.7**
U54A				IAmb	IAmb	11 11 48.4	
	comp=Z,15nm,1.1s						
KSCO	**Kaye Shedlock’**	**37.00**	**353**	P	**P**	**11 11 48.9**	**+1.3**
	baz=170,SNR=8.1						
KSCO	**Kaye Shedlock’**	**37.00**	**353**	P	**P**	**11 11 49.0**	**+1.4**
HEC	**Hector,Ludlow**	**37.10**	**333**	P	**P**	**11 11 50.0**	**+1.6**
	baz=147						
V57A	**Coltrane Farms**	**37.18**	**24**	P	**P**	**11 11 49.3**	**+0.4**
	baz=209						
WCI	**Wyandotte Cave**	**37.22**	**14**	P	**P**	**11 11 49.9**	**+0.6**
	baz=198						
PTGA	**Pitinga**	**37.23**	**94**	P	**P**	**11 11 49.6**	**-0.1**
	comp=Z,4.1nm,0.7s,baz=286,slow=8.7,SNR=6.1						
PTGA	**Pitinga**	**37.23**	**94**	P	**P**	**11 11 49.4**	**-0.4**
PTGA				IAmb	IAmb	11 11 51.0	
	comp=Z,18nm,1.2s						
PTGA	**Pitinga**	**37.23**	**94**	*e*P	**P**	**11 11 50.3**	**+0.5**
PV01	**Paradox Valley**	**37.30**	**345**	P	**P**	**11 11 52.1**	**+1.8**
U56A	**King**	**37.34**	**22**	P	**P**	**11 11 51.1**	**+0.7**
	baz=208						
P40A	**Paris**	**37.46**	**6**	P	**P**	**11 11 51.0**	**-0.2**
P40A				IAmb	IAmb	11 11 52.6	
	comp=Z,24nm,1.3s						
PV03	**Paradox Valley**	**37.48**	**345**	P	**P**	**11 11 52.4**	**+0.6**
PV12	**Saucer Basin,**	**37.53**	**345**	P	**P**	**11 11 53.8**	**+1.6**
R49A	**Shelbyville**	**37.56**	**15**	P	**P**	**11 11 51.8**	**-0.4**
R49A				IAmb	IAmb	11 11 53.3	
	comp=Z,15nm,1.1s						
PV04	**Paradox Valley**	**37.63**	**345**	P	**P**	**11 11 54.2**	**+1.2**
PV04				IAmb	IAmb	11 11 55.3	
	comp=Z,15nm,1.3s						
GSC	**Goldstone, Bar**	**37.70**	**333**	P	**P**	**11 11 55.3**	**+1.7**
	baz=146						
GSC	**Goldstone, Bar**	**37.70**	**333**	P	**P**	**11 11 52.9**	**-0.7**
GSC				IAmb	IAmb	11 11 56.3	
	comp=Z,12nm,1.4s						
LCMT	**Little Creek M**	**37.72**	**339**	P	**P**	**11 11 55.4**	**+1.7**
U57A	**Blanch**	**37.83**	**24**	P	**P**	**11 11 55.2**	**+0.7**
	baz=210						
EDW2	**Edwards Air Fo**	**37.91**	**331**	P	**P**	**11 11 56.8**	**+1.5**
	baz=144						
SMCO	**Snowmass**	**37.91**	**347**	P	**P**	**11 11 56.7**	**+1.1**
SMCO				IAmb	IAmb	11 12 00.6	
	comp=Z,14nm,1.4s						
T56A	**Rocky Mt**	**38.08**	**22**	P	**P**	**11 11 57.4**	**+0.9**
	baz=208						
ISCO	**Idaho Springs**	**38.24**	**349**	P	**P**	**11 11 59.3**	**+1.0**
	baz=166,SNR=6.3						
ISCO	**Idaho Springs**	**38.24**	**349**	P	**P**	**11 11 59.6**	**+1.4**
CCUT	**Cedar City**	**38.25**	**339**	P	**P**	**11 12 00.8**	**+2.5**
LRMC	**Laurel Mtn Rad**	**38.25**	**332**	P	**P**	**11 11 59.4**	**+1.2**
	baz=145						
MTPU	**Mount Pierson**	**38.28**	**341**	P	**P**	**11 12 01.0**	**+2.3**
S54A	**Dingess, Beckl**	**38.30**	**20**	P	**P**	**11 11 59.2**	**+0.8**
	baz=206						
P46A	**Rosedale**	**38.33**	**12**	P	**P**	**11 11 59.1**	**+0.5**
T57A	**Hurt**	**38.35**	**23**	P	**P**	**11 11 59.0**	**+0.2**
	baz=209						
N38A	**Joes South For**	**38.59**	**5**	P	**P**	**11 12 00.6**	**-0.3**
T58A	**Grand View Acr**	**38.59**	**24**	P	**P**	**11 12 01.2**	**+0.3**
	baz=210						
P48A	**Milroy**	**38.60**	**15**	P	**P**	**11 12 00.7**	**-0.2**
MPMC	**Manual Prospec**	**38.64**	**333**	P	**P**	**11 12 02.9**	**+1.4**
	baz=146						
MVU	**Marysvale**	**38.71**	**341**	P	**P**	**11 12 04.6**	**+2.4**
MVU				IAmb	IAmb	11 12 15.4	
	comp=Z,24nm,1.4s						
ISA	**Isabella, Lake**	**38.77**	**332**	P	**P**	**11 12 03.9**	**+1.4**
	baz=144						
OGNE	**Ogallala**	**38.84**	**354**	P	**P**	**11 12 04.5**	**+1.4**
	baz=172						
OGNE	**Ogallala**	**38.84**	**354**	P	**P**	**11 12 04.0**	**+0.9**
OGNE				IAmb	IAmb	11 12 05.3	
	comp=Z,26nm,1.1s						
HDIL	**Hopedale**	**38.85**	**9**	P	**P**	**11 12 03.8**	**+0.8**
	baz=192						
HDIL	**Hopedale**	**38.85**	**9**	P	**P**	**11 12 03.6**	**+0.6**
Q52A	**Bidwell**	**39.03**	**18**	P	**P**	**11 12 04.5**	**0.0**
BGNE	**Belgrade**	**39.06**	**359**	P	**P**	**11 12 05.2**	**+0.4**
	baz=178						
BGNE	**Belgrade**	**39.06**	**359**	P	**P**	**11 12 04.6**	**-0.2**
SFIN	**Lafayette**	**39.09**	**12**	P	**P**	**11 12 05.7**	**+0.7**
	baz=196						
O20A	**White River Ci**	**39.11**	**346**	P	**P**	**11 12 06.9**	**+1.4**
	baz=162						
O20A	**White River Ci**	**39.11**	**346**	P	**P**	**11 12 06.3**	**+0.8**
TMUT	**Trail Mountain**	**39.12**	**343**	P	**P**	**11 12 07.8**	**+2.2**
S57A	**Dark Hollow, R**	**39.13**	**23**	P	**P**	**11 12 05.6**	**+0.2**
	baz=209						
Q53A	**Leroy**	**39.18**	**19**	P	**P**	**11 12 06.2**	**+0.4**
	baz=205						
VES	**Vestal, Richgr**	**39.21**	**331**	P	**P**	**11 12 07.6**	**+1.5**
	baz=144						
CWC	**Cottonwood Cre**	**39.22**	**333**	P	**P**	**11 12 07.6**	**+1.2**
	baz=145						
H03N2	**Juan Fernandez**	**39.36**	**156**	T	T	11 53 58.8	
	baz=333,slow=77,SNR=87						
N23A	**Red Feather La**	**39.36**	**349**	P	**P**	**11 12 08.6**	**+1.0**
	baz=166,SNR=6.8						
S58A	**Poland Farm, P**	**39.36**	**24**	P	**P**	**11 12 07.7**	**+0.4**
	baz=211						
H03N1	**Juan Fernandez**	**39.37**	**156**	T	T	11 54 00.1	
	baz=333,slow=77,SNR=109						
H03N3	**Juan Fernandez**	**39.37**	**156**	T	T	11 53 57.5	
	baz=333,slow=77,SNR=76						
T60A	**Surry**	**39.52**	**26**	P	**P**	**11 12 08.6**	**0.0**
	baz=213						
VILB	**Vilhena**	**39.58**	**113**	*e*P	**P**	**11 12 09.9**	**+0.3**
PHWY	**Pilot Hill**	**39.67**	**350**	P	**P**	**11 12 11.1**	**+0.9**
P52A	**Corning**	**39.69**	**18**	P	**P**	**11 12 10.3**	**+0.3**
	baz=204						
SCIA	**State Center**	**39.70**	**5**	P	**P**	**11 12 11.3**	**+1.2**
	baz=186						
R57A	**Stanardsville**	**39.77**	**23**	P	**P**	**11 12 10.9**	**+0.2**
	baz=210						
MPU	**Maple Canyon**	**39.91**	**343**	P	**P**	**11 12 12.6**	**+0.5**
SIV	**San Ignacio**	**39.91**	**118**	P	**P**	**11 12 11.9**	**-0.4**
	comp=Z,8.5nm,1.1s,baz=297,slow=9.8,SNR=19						
NLU	**North Lily Min**	**39.99**	**342**	P	**P**	**11 12 13.6**	**+0.8**
K31A	**O'Neill**	**40.29**	**358**	P	**P**	**11 12 15.8**	**+0.8**
K31A				IAmb	IAmb	11 12 22.9	
	comp=Z,19nm,1.1s						
DUG	**Dugway, Tooele**	**40.44**	**341**	P	**P**	**11 12 18.3**	**+1.9**
	baz=155,SNR=6.5						
DUG	**Dugway, Tooele**	**40.44**	**341**	P	**P**	**11 12 17.7**	**+1.3**
S61A	**Accomac**	**40.44**	**27**	P	**P**	**11 12 17.0**	**+0.7**
	baz=214						
P57A	**Homestead Farm**	**40.99**	**23**	P	**P**	**11 12 21.5**	**+0.7**
	baz=210						
JFWS	**Jewell Farm**	**41.01**	**8**	P	**P**	**11 12 21.6**	**+0.6**
	baz=190						
K22A	**Casper**	**41.17**	**349**	P	**P**	**11 12 23.9**	**+1.4**
	baz=165						
BGU	**Big Grassy Mou**	**41.17**	**342**	P	**P**	**11 12 23.8**	**+1.3**
P58A	**Pank, Wackersv**	**41.27**	**23**	P	**P**	**11 12 23.3**	**+0.2**
	baz=211						
ECSD	**EROS Data Cent**	**41.38**	**1**	P	**P**	**11 12 23.8**	**-0.2**
	baz=180,SNR=15						
ECSD	**EROS Data Cent**	**41.38**	**1**	P	**P**	**11 12 24.2**	**+0.2**
ECSD				IAmb	IAmb	11 12 25.0	
	comp=Z,25nm,1.1s						
WAKR	**Walker**	**41.53**	**333**	P	**P**	**11 12 28.3**	**+2.7**
WAKR				IAmb	IAmb	11 12 30.3	
	comp=Z,14nm,1.3s						
N54A	**Moraine State**	**41.58**	**20**	P	**P**	**11 12 25.8**	**+0.1**
	baz=206						
M52A	**Chesterland**	**41.67**	**18**	P	**P**	**11 12 27.1**	**+0.7**
M52A				IAmb	IAmb	11 12 27.5	
	comp=Z,26nm,1.1s						
ELK	**Elko**	**41.75**	**339**	P	**P**	**11 12 29.5**	**+2.1**
ELK				IAmb	IAmb	11 12 30.9	
	comp=Z,14nm,1.4s						
O57A	**Amberson**	**41.77**	**23**	P	**P**	**11 12 27.5**	**+0.3**
	baz=210						
M53A	**WI Miller and**	**41.79**	**19**	P	**P**	**11 12 28.0**	**+0.6**
	baz=205						
ITTB	**Itaituba**	**41.84**	**99**	*e*P	**P**	**11 12 27.1**	**-1.1**
HVU	**Hansel Valley**	**41.87**	**342**	P	**P**	**11 12 29.2**	**+0.9**
BW06	**Boulder Array**	**41.92**	**346**	P	**P**	**11 12 29.0**	**+0.4**
	baz=161,SNR=7.7						
BW06	**Boulder Array**	**41.92**	**346**	P	**P**	**11 12 29.1**	**+0.4**
PD31	**Pinedale Array**	**41.92**	**346**	P	**P**	**11 12 29.1**	**+0.4**
PDAR	**Pinedale Array**	**41.92**	**346**	P	**P**	**11 12 28.9**	**+0.2**
	comp=Z,3.5nm,1.0s,baz=151,slow=6.8,SNR=20						
PDAR				LR	LR	11 29 27.2	
	comp=Z,316nm,18.4s,baz=149,slow=36						
O58A	**Lewisberry**	**41.97**	**23**	P	**P**	**11 12 29.1**	**+0.3**
	baz=211						
SSPA	**Standing Stone**	**42.04**	**22**	P	**P**	**11 12 29.7**	**+0.2**
	baz=209						
SUSD	**Miller**	**42.12**	**358**	P	**P**	**11 12 30.9**	**+0.9**
	baz=177						
SUSD	**Miller**	**42.12**	**358**	P	**P**	**11 12 29.9**	**-0.1**
SUSD				IAmb	IAmb	11 12 31.2	
	comp=Z,21nm,1.1s						
N56A	**West Decatur**	**42.13**	**21**	P	**P**	**11 12 30.7**	**+0.5**
	baz=208						
M54A	**Oil Creek Stat**	**42.18**	**20**	P	**P**	**11 12 30.8**	**+0.2**
	baz=206						
RSSD	**Black Hills**	**42.21**	**353**	P	**P**	**11 12 32.4**	**+1.3**
	baz=169						
RSSD	**Black Hills**	**42.21**	**353**	P	**P**	**11 12 32.0**	**+0.9**
RSSD				IAmb	IAmb	11 12 33.8	
	comp=Z,14nm,1.2s						
L53A	**Girard**	**42.38**	**19**	P	**P**	**11 12 32.7**	**+0.5**
	baz=205						
NPGB	**Novo Progresso**	**42.65**	**103**	*e*P	**P**	**11 12 33.5**	**-1.3**
M56A	**Emporium**	**42.67**	**21**	P	**P**	**11 12 35.3**	**+0.7**
	baz=208						
REDW	**Red Top Meadow**	**42.80**	**345**	P	**P**	**11 12 36.1**	**+0.3**
REDW				IAmb	IAmb	11 12 39.0	
	comp=Z,16nm,1.5s						
SNOW	**Snow King Moun**	**42.87**	**345**	P	**P**	**11 12 36.9**	**+0.5**
M57A	**Sunshine Farm,**	**42.93**	**22**	P	**P**	**11 12 37.0**	**+0.3**
	baz=210						
LOHW	**Long Hollow**	**42.97**	**346**	P	**P**	**11 12 37.7**	**+0.5**
LOHW				IAmb	IAmb	11 12 38.9	
	comp=Z,12nm,1.3s						
MALB	**Monte Alegre**	**43.00**	**95**	*e*P	**P**	**11 12 36.5**	**-1.2**
SPMN	**Marine on St.**	**43.03**	**4**	P	**P**	**11 12 38.3**	**+0.9**
	baz=186						
SPMN	**Marine on St.**	**43.03**	**4**	P	**P**	**11 12 37.3**	**-0.1**
SPMN				IAmb	IAmb	11 12 38.8	
	comp=Z,19nm,1.4s						
MOOW	**Moose Ponds**	**43.13**	**346**	P	**P**	**11 12 39.0**	**+0.4**
M58A	**Price’s Panora**	**43.22**	**23**	P	**P**	**11 12 39.7**	**+0.6**
	baz=211						
N60A	**Cedar Hill Far**	**43.34**	**24**	P	**P**	**11 12 40.4**	**+0.5**
	baz=213						
L56A	**Greenwood**	**43.47**	**21**	P	**P**	**11 12 41.7**	**+0.7**
	baz=209						
L57A	**Andrews Acres**	**43.61**	**22**	P	**P**	**11 12 42.6**	**+0.4**
	baz=210						
F36A	**Milaca**	**43.62**	**4**	P	**P**	**11 12 42.3**	**+0.2**
F36A				IAmb	IAmb	11 12 43.7	
	comp=Z,26nm,1.5s						
I51A	**Listowel**	**43.84**	**17**	P	**P**	**11 12 44.4**	**+0.4**
	baz=203						
M60A	**Port Jervis**	**43.91**	**25**	P	**P**	**11 12 44.6**	**0.0**
	baz=213						
PAL	**Palisades**	**43.95**	**25**	P	**P**	**11 12 45.0**	**+0.1**
	baz=214						
HLID	**Hailey**	**43.99**	**342**	P	**P**	**11 12 46.6**	**+1.1**
	baz=154						
HLID	**Hailey**	**43.99**	**342**	P	**P**	**11 12 47.0**	**+1.5**
L58A	**Harry Jones Me**	**44.03**	**23**	P	**P**	**11 12 46.1**	**+0.5**
	baz=211						
RLMT	**Red Lodge**	**44.09**	**348**	P	**P**	**11 12 47.3**	**+1.0**
	baz=162						
BINY	**Binghamton**	**44.11**	**23**	P	**P**	**11 12 46.3**	**+0.1**
	baz=211						
YNE	**Yellowstone No**	**44.14**	**347**	P	**P**	**11 12 47.1**	**+0.4**
M61A	**Granite Spring**	**44.26**	**25**	P	**P**	**11 12 47.6**	**+0.2**
	baz=214						
YHL	**Hebgen Lake**	**44.28**	**346**	P	**P**	**11 12 49.0**	**+1.1**
QLMT	**Earthquake Lak**	**44.32**	**345**	P	**P**	**11 12 48.6**	**+0.5**
E28A	**Huff**	**44.33**	**356**	P	**P**	**11 12 47.8**	**0.0**
K57A	**Scipio Center**	**44.37**	**22**	P	**P**	**11 12 48.5**	**+0.2**
	baz=210						
BCYI	**Bear Canyon**	**44.37**	**343**	P	**P**	**11 12 50.0**	**+1.5**
E38A	**The Farm, Brul**	**44.51**	**5**	P	**P**	**11 12 49.3**	**0.0**
E38A				IAmb	IAmb	11 12 49.9	
	comp=Z,24nm,1.4s						
MCMT	**McKenzie Canyo**	**44.69**	**344**	P	**P**	**11 12 52.1**	**+1.0**
K58A	**Earlville**	**44.72**	**22**	P	**P**	**11 12 51.2**	**+0.1**
	baz=211						
GCMT	**Greycliff**	**44.81**	**348**	P	**P**	**11 12 52.7**	**+0.8**
LAO	**LASA Array**	**45.04**	**351**	P	**P**	**11 12 54.6**	**+1.0**
	baz=167						
BOZ	**Bozeman (W)**	**45.09**	**346**	P	**P**	**11 12 55.1**	**+1.0**
	baz=159						
M63A	**Gales Ferry**	**45.09**	**27**	P	**P**	**11 12 54.2**	**+0.2**
	baz=216						
DLMT	**Dillon**	**45.12**	**345**	P	**P**	**11 12 55.0**	**+0.7**
DLMT				IAmb	IAmb	11 12 56.3	
	comp=Z,8.6nm,1.2s						
MDND	**Maddock**	**45.54**	**358**	P	**P**	**11 12 58.3**	**+0.8**
	baz=176						
MDND	**Maddock**	**45.54**	**358**	P	**P**	**11 12 57.2**	**-0.3**
M64A	**Tiverton**	**45.59**	**27**	P	**P**	**11 12 57.3**	**-0.6**
	baz=217						
K61A	**Williamstown**	**45.59**	**25**	P	**P**	**11 12 57.4**	**-0.6**
	baz=214						
EYMN	**Ely**	**45.84**	**5**	P	**P**	**11 13 00.1**	**+0.2**
	baz=188						
EYMN	**Ely**	**45.84**	**5**	P	**P**	**11 12 59.8**	**-0.1**
EYMN				IAmb	IAmb	11 13 00.4	
	comp=Z,14nm,1.1s						
AGMN	**Agassiz Nation**	**45.95**	**1**	P	**P**	**11 13 00.4**	**-0.3**
	baz=182,SNR=12						
AGMN	**Agassiz Nation**	**45.95**	**1**	P	**P**	**11 13 00.2**	**-0.5**
L64A	**Middleborough**	**46.06**	**27**	P	**P**	**11 13 01.9**	**+0.2**
	baz=218						
B35A	**Bob, Littlefor**	**46.09**	**3**	P	**P**	**11 13 02.0**	**+0.2**
G54A	**Lake Saint Pet**	**46.17**	**19**	P	**P**	**11 13 03.1**	**+0.6**
	baz=207						
H57A	**Richville**	**46.27**	**21**	P	**P**	**11 13 04.2**	**+0.9**
	baz=210						
AQDB	**Aquidauana**	**46.39**	**121**	*e*P	**P**	**11 13 04.9**	**+0.3**
ALGO	**Algonquin Park**	**46.68**	**18**	P	**P**	**11 13 07.0**	**+0.5**
	baz=206						
LONY	**Lake Ozonia**	**46.71**	**22**	P	**P**	**11 13 06.9**	**+0.1**
	baz=212						
K02D	**Willamette Mer**	**46.81**	**333**	P	**P**	**11 13 08.9**	**+1.2**
	baz=142						
MSO	**Missoula**	**46.83**	**344**	P	**P**	**11 13 09.3**	**+1.5**
	baz=156						
EGMT	**Eagleton**	**46.96**	**348**	P	**P**	**11 13 10.3**	**+1.5**
	baz=162						
G57A	**Newington**	**46.97**	**21**	P	**P**	**11 13 09.4**	**+0.7**
	baz=211						
H59A	**Cadyville**	**47.07**	**23**	P	**P**	**11 13 09.7**	**+0.1**
	baz=213						
I61A	**Oroboro, Fairl**	**47.07**	**25**	P	**P**	**11 13 09.3**	**-0.3**
	baz=215						
I62A	**Tamworth**	**47.39**	**25**	P	**P**	**11 13 12.9**	**+0.8**
	baz=216						
SNDB	**Serra Nova Dou**	**47.63**	**108**	*e*P	**P**	**11 13 14.2**	**-0.1**
CPUP	**Villa Florida**	**47.73**	**129**	P	**P**	**11 13 14.7**	**-0.3**
	comp=Z,5.9nm,1.0s,baz=309,slow=6.0,SNR=7.8						
CPUP				LR	LR	11 32 24.4	
	comp=Z,53nm,21.3s,baz=257,slow=35						
CPUP	**Villa Florida**	**47.73**	**129**	P	**P**	**11 13 15.8**	**+0.8**
CPUP	**Villa Florida**	**47.73**	**129**	*e*P	**P**	**11 13 15.6**	**+0.7**
JTMT	**Jette**	**47.77**	**344**	P	**P**	**11 13 16.2**	**+1.1**
H04D	**Lebanon**	**47.87**	**335**	P	**P**	**11 13 17.5**	**+1.7**
	baz=144						
ULM	**Lac du Bonnet**	**47.90**	**1**	P	**P**	**11 13 15.1**	**-0.8**
	comp=Z,10nm,1.1s,baz=186,slow=7.7,SNR=12						
ULM				LR	LR	11 33 40.3	
	comp=Z,86nm,18.4s,baz=188,slow=36						
ULM	**Lac du Bonnet**	**47.90**	**1**	P	**P**	**11 13 14.9**	**-1.1**
PRPB	**Parauapebas**	**47.93**	**100**	*e*P	**P**	**11 13 16.1**	**-0.7**
I02D	**Swisshome**	**48.01**	**334**	P	**P**	**11 13 18.6**	**+1.7**
	baz=143						
ARAG	**Araguaiana, MT**	**48.16**	**113**	*e*P	**P**	**11 13 18.0**	**-0.5**
F05D	**White Salmon**	**48.48**	**337**	P	**P**	**11 13 22.3**	**+1.8**
	baz=146						
F60A	**Warwick**	**48.85**	**23**	P	**P**	**11 13 23.4**	**+0.1**
	baz=214						
NEW	**Newport**	**49.05**	**342**	P	**P**	**11 13 26.1**	**+1.3**
	baz=153						
NEW	**Newport**	**49.05**	**342**	P	**P**	**11 13 25.4**	**+0.6**
NEW				IAmb	IAmb	11 13 28.7	
	comp=Z,6.9nm,1.4s						
PLCA	**Paso Flores**	**49.10**	**153**	LR	LR	11 29 26.2	
	comp=Z,212nm,20.5s,baz=330,slow=30						
E60A	**Ste Agathe de**	**49.38**	**23**	P	**P**	**11 13 27.5**	**+0.1**
	baz=214						
D58A	**Chemin du LacG**	**49.43**	**22**	P	**P**	**11 13 28.3**	**+0.5**
	baz=212						
LSQQ	**Lebel-sur-Quev**	**49.78**	**17**	P	**P**	**11 13 30.9**	**+0.5**
	baz=206						
E61A	**Lac Etchemin**	**49.81**	**24**	P	**P**	**11 13 31.7**	**+1.0**
	baz=216						
D60A	**Saint Jean D’O**	**50.03**	**23**	P	**P**	**11 13 33.1**	**+0.8**
	baz=215						
PEXB	**Peixe**	**50.50**	**108**	*e*P	**P**	**11 13 37.5**	**+1.0**
SMTB	**Santa Maria do**	**50.54**	**103**	*e*P	**P**	**11 13 38.5**	**+1.7**
PTGB	**Pitanga**	**51.20**	**124**	*e*P	**P**	**11 13 42.5**	**+0.8**
TRQA	**Tornquist**	**51.53**	**145**	*e*P	**P**	**11 13 45.2**	**+1.3**
BDFB	**Brasilia**	**51.65**	**112**	LR	LR	11 34 35.1	
	comp=Z,66nm,20.8s,baz=279,slow=35						
IPMB	**Ipameri, GO**	**52.13**	**115**	*e*P	**P**	**11 13 48.8**	**+0.2**
FRTB	**Fartura**	**52.75**	**122**	*e*P	**P**	**11 13 54.0**	**+0.8**
BB19B	**Bebedouro**	**52.83**	**119**	*e*P	**P**	**11 13 54.6**	**+0.7**
YKA	**Yellowknife Ar**	**61.58**	**351**	P	**P**	**11 14 54.1**	**-0.8**
	comp=Z,3.0nm,1.0s,baz=151,slow=7.2,SNR=28						
YKA				LR	LR	11 41 24.9	
	comp=Z,146nm,18.3s,baz=0.0,slow=36						
N25K	**Chitina, Valde**	**69.15**	**338**	P	**P**	**11 15 45.0**	**+0.9**
	baz=128						
C36M	**Paulatuk**	**69.43**	**350**	P	**P**	**11 15 46.5**	**+0.9**
	baz=151						
EPYK	**Eagle Plains**	**69.83**	**344**	P	**P**	**11 15 49.1**	**+0.9**
	baz=137						
SCRK	**Sand Creek**	**70.42**	**340**	P	**P**	**11 15 52.7**	**+0.8**
	baz=129						
INK	**Inuvik**	**70.49**	**346**	P	**P**	**11 15 52.2**	**+0.1**
	comp=Z,9.3nm,1.1s,baz=129,slow=5.4,SNR=15						
INK	**Inuvik**	**70.49**	**346**	P	**P**	**11 15 53.0**	**+0.9**
NRS	**Narsarsuaq**	**70.52**	**24**	P	**P**	**11 15 53.5**	**+1.2**
SML	**Sawmill**	**70.71**	**337**	P	**P**	**11 15 54.6**	**+0.9**
RC01	**Rabbit Creek A**	**70.87**	**336**	P	**P**	**11 15 55.5**	**+1.0**
	baz=123						
PMSA	**Palmer Station**	**71.05**	**166**	LR	LR	11 39 38.7	
	comp=Z,148nm,19.2s,baz=331,slow=30						
HDA	**Harding Lake**	**71.71**	**340**	P	**P**	**11 16 00.4**	**+0.8**
	baz=126						
RND	**Reindeer**	**71.81**	**338**	P	**P**	**11 16 00.7**	**+0.4**
IL31		**71.90**	**340**	P	**P**	**11 16 00.5**	**-0.2**
ILAR	**Eielson Array**	**71.90**	**340**	P	**P**	**11 16 00.1**	**-0.6**
	comp=Z,6.6nm,1.0s,baz=150,slow=4.1,SNR=32						
ILAR				LR	LR	11 48 18.0	
	comp=Z,84nm,20.4s,baz=134,slow=36						
ILAR	**Eielson Array**	**71.90**	**340**	P	**P**	**11 16 00.9**	**+0.2**
MCK	**McKinley**	**72.03**	**338**	P	**P**	**11 16 02.1**	**+0.5**
	baz=124						
POKR	**Poker Plat Res**	**72.30**	**340**	P	**P**	**11 16 04.1**	**+1.0**
	baz=126						
RES	**Resolute Bay**	**72.43**	**1**	P	**P**	**11 16 03.1**	**-0.6**
RES				IAmb	IAmb	11 16 04.1	
	comp=Z,9.1nm,1.2s						
NEA2	**Nenana**	**72.56**	**339**	P	**P**	**11 16 05.4**	**+0.7**
	baz=124						
I23K	**Minto, Yukon-K**	**72.98**	**340**	P	**P**	**11 16 08.1**	**+0.9**
	baz=124						
MLY	**Manley**	**73.40**	**339**	P	**P**	**11 16 11.0**	**+1.3**
	baz=123						
COLD	**Coldfoot**	**74.43**	**341**	P	**P**	**11 16 16.7**	**+1.0**
	baz=124						
ANM	**Nome**	**78.83**	**336**	P	**P**	**11 16 41.6**	**+1.0**
ANM				IAmb	IAmb	11 16 43.0	
	comp=Z,6.9nm,1.1s						
RDOG	**Red Dog Mine**	**79.11**	**340**	P	**P**	**11 16 42.4**	**+0.3**
RDOG				IAmb	IAmb	11 16 44.7	
	comp=Z,18nm,1.3s						
ESDC	**Sonseca Array**	**91.03**	**50**	LR	LR	11 51 29.1	
	comp=Z,26nm,21.6s,baz=155,slow=31						
QSPA	**South Pole Qui**	**92.20**	**180**	P	**P**	**11 17 45.5**	**-2.0**
VNDA	**Vanda**	**94.51**	**192**	LR	LR	11 52 37.5	
	comp=Z,147nm,18.4s,baz=302,slow=31						
H11N3	**WAKE ISLAND Hy**	**94.92**	**290**	T	T	13 03 16.1	
	baz=86,slow=75,SNR=9.3						
H11N2	**WAKE ISLAND Hy**	**94.93**	**290**	T	T	13 03 17.4	
	baz=86,slow=75,SNR=16						
H11N1	**WAKE ISLAND Hy**	**94.94**	**290**	T	T	13 03 17.2	
	baz=86,slow=75,SNR=15						
H11S2	**WAKE ISLAND Hy**	**95.20**	**289**	T	T	13 03 39.4	
	baz=86,slow=74,SNR=33						
H11S1	**WAKE ISLAND Hy**	**95.20**	**289**	T	T	13 03 38.8	
	baz=86,slow=74,SNR=31						
H11S3	**WAKE ISLAND Hy**	**95.21**	**289**	T	T	13 03 38.5	
	baz=86,slow=74,SNR=20						
NOA	**NORSAR Array B**	**96.88**	**28**	LR	LR	11 58 57.0	
	comp=Z,28nm,21.2s,baz=275,slow=34						
PETK	**Petropavlovsk-**	**97.35**	**324**	LR	LR	11 54 33.2	
	comp=Z,25nm,18.5s,baz=85,slow=31						
ARCES	**ARCESS Array B**	**98.86**	**17**	LR	LR	12 02 59.2	
	comp=Z,46nm,19.9s,baz=235,slow=35						
ZALV	**Zalesovo Beam**	**124.05**	**359**	PKP	**PKPdf**	**11 23 35.8**	**-0.6**
	comp=Z,0.5nm,0.3s,baz=204,slow=3.3,SNR=1.9						
ZALV	**Zalesovo Beam**	**124.05**	**359**		**PKPdf**	**11 23 35.0**	**-1.3**
SONM	**Songino Array**	**126.12**	**341**	PKP	**PKPdf**	**11 23 39.6**	**-1.1**
	comp=Z,1.3nm,1.1s,baz=0.0,slow=1.5,SNR=5.0						
ASAR	**Alice Springs**	**126.28**	**242**	PKP	**PKPdf**	**11 23 38.7**	**-2.9**
	comp=Z,1.2nm,1.1s,baz=113,slow=2.5,SNR=4.1						
WRA	**Warramunga Arr**	**126.80**	**247**	PKP	**PKPdf**	**11 23 39.5**	**-3.1**
	comp=Z,1.2nm,1.0s,baz=90,slow=2.0,SNR=5.3						
WRA	**Warramunga Arr**	**126.80**	**247**		**PKPdf**	**11 23 38.3**	**-4.3**
MKAR	**Makanchi Array**	**131.23**	**1**	PKP	**PKPdf**	**11 23 48.1**	**-2.2**
	comp=Z,1.9nm,1.1s,baz=38,slow=2.2,SNR=9.2						
MKAR	**Makanchi Array**	**131.23**	**1**		**PKPdf**	**11 23 49.8**	**-0.5**
CMAR	**Chiang Mai Arr**	**154.12**	**323**	PKP	**PKPdf**	**11 24 28.3**	**-2.4**
	comp=Z,0.6nm,0.3s,baz=254,slow=1.1,SNR=5.1						
CMAR				PKPbc	**PKiKP**	**11 24 39.2**	**+0.4**
	comp=Z,0.6nm,0.3s,baz=359,slow=0.9,SNR=8.9						
CMAR				PKPab	**PKPab**	**11 24 52.6**	**+0.4**
	comp=Z,2.4nm,1.0s,baz=26,slow=5.2,SNR=9.4						

JMA ***09*** *11:09:57.2±0.1, 37°.16N×141°.35E, h48^{km}±1^{km}, M3.9*
JMA Felt II J1.
NIED ***09*** *11:09:57.3, 37°.16N×141°.35E, h48^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.67; $M_{\theta\theta}$-0.11; $M_{\phi\phi}$-0.56; $M_{r\theta}$0.37; $M_{\theta\phi}$-0.11; $M_{\phi r}$0.69; Fault plane solution: $M_0$1.00000×10^{15} NP1:ϕ_s24.00000°, δ71.00000°, λ97.00000°. NP2:ϕ_s185.00000°, δ20.00000°, λ72.00000°.*
IDC ***09*** *11:09:58.1±1.7, 37°.09N×141°.47E, h54^{km}±16^{km}, mb3.5/15,*

mb1 3.7/21, mb1mx3.7/38, mbtmp3.8/21, ML3.5/5, MS3.0/5, Ms1 3.0/5, ms1mx2.6/35 Error ellipse: s-maj=15.5km s-min=10.3km az=106.0

ISC 09 11:09:54.3±0.9**, 37°.13N**±0°.04×**141°.57E**±0°.08**, h20**^{km}±6^{km}**, n43, σ1^{s}15**/45**, mb3.8**/15**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JFK	Kawauchi	0.61	294	P	Pn	11 10 07.4	-0.4
JFK				S	Sb	11 10 14.6	+0.1
ONAJ	Iwakimizuishiy	0.62	268	P	Pn	11 10 07.8	-0.2
ONAJ				*e*S	Sb	11 10 15.1	+0.2
JFFD	Fukushimafurud	0.81	268	P	Pb	11 10 10.2	+0.5
JFFD				S	Sb	11 10 19.1	-1.1
JMST	Minamisoumatoc	0.81	318	P	Pn	11 10 10.3	-0.3
JMST				S	Sb	11 10 19.6	-0.6
JHO	Hitachi	0.95	238	P	Pb	11 10 12.2	0.0
JHO				S	Sb	11 10 23.0	-1.4
JMM	Marumori	0.96	320	P	Pb	11 10 12.6	+0.2
JMM				S	Sb	11 10 23.6	-1.1
JFT	Otama	1.06	292	P	Pn	11 10 14.2	+0.1
JFT				S	Sb	11 10 26.3	-1.2
JIO	Ouri	1.34	352	P	Pb	11 10 18.7	0.0
JIO				S	Sn	11 10 33.6	-1.4
JOU	Okura	1.43	330	P	Pn	11 10 19.5	+0.3
JFY	Yanaizu	1.52	281	P	Pn	11 10 20.3	0.0
JYS	Shirataka	1.62	313	P	Pn	11 10 22.3	+0.5
MJAR	Matsushiro Arr	2.76	259	P	Pn	11 10 38.3	+0.8
	2.3nm,0.3s,baz=80,slow=15,SNR=75						
MJAR				S	Sn	11 11 11.1	+0.8
	1.5nm,0.3s,baz=191,slow=25,SNR=2.0						
MJAR				LR	LR	11 11 57.8	
	comp=Z,188nm,21.5s,baz=95,slow=45						
MAT	Matsushiro	2.76	259	P	Pn	11 10 38.4	+0.9
MAT				S	Sn	11 11 11.0	+0.8
JHJ	Hachijo jima 2	4.26	201	P	Pn	11 10 59.8	+1.8
	19nm,0.3s,baz=338,slow=19,SNR=7.0						
JHJ				S	Sn	11 11 47.1	0.0
	19nm,0.3s,baz=108,slow=22,SNR=5.6						
ASAJ	Asahikawa	7.03	6	P	Pn	11 11 37.5	+1.5
	1.4nm,0.3s,baz=201,slow=12,SNR=7.4						
ASAJ				S	Sn	11 12 56.8	+1.6
	0.8nm,0.3s,baz=257,slow=27,SNR=1.6						
USRK	Ussuriysk Ar.	10.14	317	P	Pn	11 12 21.1	+2.4
	baz=132,slow=14,SNR=10						
KSRS	Korea Array	10.88	276	P	Pn	11 12 31.9	+3.1
	0.2nm,0.3s,baz=100,slow=13,SNR=3.0						
KSRS				LR	LR	11 16 22.5	
	comp=Z,72nm,19.3s,baz=83,slow=36						
KLR	Kul'dur	14.04	333	P	Pn	11 13 12.9	+0.8
	0.1nm,0.3s,baz=150,slow=20,SNR=1.3						
KLR				LR	LR	11 18 12.6	
	comp=Z,50nm,18.5s,baz=170,slow=35						
SEY	Seymchan	26.68	11	P	P	11 15 32.4	+0.7
	1.0nm,0.7s,baz=292,slow=21,SNR=4.4						
SONM	Songino Array	27.84	304	P	P	11 15 41.7	-0.7
	1.6nm,0.6s,baz=108,slow=9.1,SNR=13						
SONM				LR	LR	11 26 00.4	
	comp=Z,38nm,20.6s,baz=173,slow=35						
H11N2	WAKE ISLAND Hy	28.09	121	T	T	11 45 13.6	
	baz=314,slow=75,SNR=63						
H11N1	WAKE ISLAND Hy	28.09	121	T	T	11 45 13.6	
	baz=314,slow=75,SNR=68						
H11N3	WAKE ISLAND Hy	28.10	121	T	T	11 45 13.6	
	baz=314,slow=75,SNR=59						
H11S1	WAKE ISLAND Hy	28.80	123	T	T	11 46 06.5	
	baz=315,slow=76,SNR=39						
H11S3	WAKE ISLAND Hy	28.80	123	T	T	11 46 06.5	
	baz=315,slow=76,SNR=38						
H11S2	WAKE ISLAND Hy	28.82	123	T	T	11 46 06.5	
	baz=315,slow=76,SNR=32						
TLY	Talaya	30.37	311	LR	LR	11 27 51.8	
	comp=Z,37nm,19.4s,baz=116,slow=35						
CMAR	Chiang Mai Arr	41.64	255	P	P	11 17 40.6	-0.8
	0.6nm,0.3s,baz=49,slow=7.2,SNR=4.5						
ZALV	Zalesovo Beam	41.95	312	P	P	11 17 43.1	-0.4
	1.5nm,0.5s,baz=96,slow=7.4,SNR=8.6						
MKAR	Makanchi Array	44.18	302	P	P	11 18 00.8	-0.8
	1.0nm,0.7s,baz=88,slow=9.3,SNR=13						
ILAR	Eielson Array	49.35	32	P	P	11 18 43.1	+1.3
	1.0nm,0.6s,baz=264,slow=5.7,SNR=15						
INK	Inuvik	54.25	27	P	P	11 19 19.9	+1.6
	0.4nm,0.4s,baz=258,slow=7.9,SNR=2.1						
WRA	Warramunga Arr	57.17	188	P	P	11 19 39.3	-0.5
	0.3nm,0.5s,baz=6.3,slow=7.7,SNR=6.3						
ASAR	Alice Springs	60.90	188	P	P	11 20 04.0	-1.6
	0.4nm,0.8s,baz=0.0,slow=4.6,SNR=2.2						
YKA	Yellowknife Ar	63.66	30	P	P	11 20 23.4	-0.3
	0.2nm,0.6s,baz=307,slow=6.1,SNR=5.0						
FINES	FINESS Array B	68.79	332	P	P	11 20 55.8	-0.8
	1.9nm,0.8s,baz=15,slow=7.9,SNR=3.8						
AKASG	Malin Array Be	74.30	322	P	P	11 21 28.9	-1.1
	1.6nm,0.5s,baz=47,slow=6.2,SNR=7.0						
PDAR	Pinedale Array	77.51	46	P	P	11 21 49.6	+0.8
	0.2nm,0.6s,baz=68,slow=29,SNR=2.4						
GERES	GERESS Array B	82.70	328	P	P	11 22 14.3	-2.2
	0.4nm,0.4s,baz=19,slow=6.2,SNR=2.3						
TXAR	Lajitas Array	89.96	52	P	P	11 22 53.7	+1.1
	0.2nm,0.7s,baz=305,slow=3.2,SNR=1.9						
H03N2	Juan Fernandez	146.91	96	T	T	14 13 48.7	
	baz=291,slow=76,SNR=6.4						
H03N3	Juan Fernandez	146.92	96	T	T	14 13 50.9	
	baz=291,slow=76,SNR=11						
H03N1	Juan Fernandez	146.92	96	T	T	14 13 49.4	
	baz=291,slow=76,SNR=9.7						

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*IDC **09** 11:27:28.2±1.3, 60°.51S×25°.33W, h0^{km}, mb4.1/2, mb1 4.4/3, mb1mx3.9/27, mbtmp4.3/3, ML4.4/1, MS3.3/2, Ms1 3.3/2, ms1mx3.0/17, Error ellipse: s-maj=49.7km s-min=36.6km az=15.0*

*NEIC **09** 11:27:33.2±1.2, 60°.3S±0°.2×25°.5W±0°.4, h30^{km}±6^{km}, mb4.7/14, Error ellipse: s-maj=31.1km s-min=19.2km az=62.0*

ISC 09 11:27:29.8±0.8**, 60°.4S**±0°.1×**25°.2W**±0°.2**, h11**^{km}**, n25, σ1^{s}24**/22**, mb4.7**/9**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNAA	Sanae	14.40	151	P	Pn	11 30 49.9	-3.4
SNAA	Sanae	14.40	151	Pn	Pn	11 30 50.3	-3.0
	1.9nm,0.3s,baz=73,slow=7.4,SNR=92						
SNAA				Sn	Sn	11 33 13.1	-20
	0.1nm,0.3s,baz=284,slow=23,SNR=1.5						
SNAA	Sanae	14.40	151		Pn	11 30 49.7	-3.6
BELA	Belgrano 2	17.86	186	P	Pn	11 31 39.5	+1.7
QSPA	South Pole Qui	29.87	180	P	P	11 33 38.8	+1.8
QSPA				IAmb	IAmb	11 33 40.0	
	comp=Z,15nm,1.2s						
PLCA	Paso Flores	33.95	285	P	P	11 34 12.2	-0.8
	comp=Z,2.8nm,0.8s,baz=129,slow=7.7,SNR=6.1						
PLCA				LR	LR	11 46 22.7	
	comp=Z,56nm,19.7s,baz=161,slow=33						
PLCA	Paso Flores	33.95	285	P	P	11 34 11.8	-1.2
PLCA				IAmb	IAmb	11 34 40.1	
	comp=Z,7.6nm,1.4s						
LC01	Cunco	36.02	285	P	P	11 34 29.7	-1.0
LC01				IAmb	IAmb	11 34 36.9	
	comp=Z,9.9nm,1.3s						
MT02	Curacav	40.25	291	P	P	11 35 06.0	-0.4
CPUP	Villa Florida	40.49	313	LR	LR	11 50 56.2	
	comp=Z,39nm,20.2s,baz=194,slow=35						
CO01	Juntas del Tor	42.53	295	P	P	11 35 25.2	-0.3
CO01				IAmb	IAmb	11 35 27.2	
	comp=Z,8.0nm,0.9s						
AC05	El Transito	43.59	296	P	P	11 35 33.1	-0.7
AC05				IAmb	IAmb	11 35 34.7	
	comp=Z,17nm,0.9s						
AC04	Llanos de Chal	44.49	295	P	P	11 35 40.3	-0.6
AC01	Pan de Azucar	46.05	297	P	P	11 35 52.1	-1.2
PB09	IPOC Station P	49.28	302	P	P	11 36 18.3	-0.3
PB09				IAmb	IAmb	11 36 21.6	
	comp=Z,7.0nm,0.9s						
PB01	IPOC Station P	50.05	302	P	P	11 36 23.9	-0.5
PB01				IAmb	IAmb	11 36 25.6	
	comp=Z,8.1nm,0.9s						
MNMC	Minye Minye	51.80	303	P	P	11 36 37.5	-0.3
MNMC				IAmb	IAmb	11 36 39.1	
	comp=Z,9.1nm,0.7s						
SAML	Samuel	58.59	315	P	P	11 37 25.4	-1.1
TORD	Torodi Ar. Bea	76.37	27	P	P	11 39 19.5	+0.7
	comp=Z,0.7nm,0.5s,baz=200,slow=6.5,SNR=7.9						
TORD	Torodi Ar. Bea	76.37	27	P	P	11 39 19.3	+0.5
B35A	Bob, Littlefor	121.69	313		PKPdf	11 46 22.9	+0.5
YKA	Yellowknife Ar	140.01	314	PKP	PKPdf	11 46 58.4	+1.9
	comp=Z,0.4nm,0.8s,baz=122,slow=3.0,SNR=6.9						
SONM	Songino Array	149.72	92	PKPbc	PKPbc	11 47 18.9	+0.3
	comp=Z,0.1nm,0.4s,baz=220,slow=3.8,SNR=1.3						
ILAR	Eielson Array	153.62	305	PKPbc	PKPbc	11 47 28.1	+1.2
	comp=Z,2.0nm,1.1s,baz=151,slow=2.1,SNR=6.8						
ILAR	Eielson Array	153.62	305		PKPbc	11 47 27.7	+0.8

IDC 09 11:45:55.7±2.9**, 6°.95S**×**129°.94E, h76**^{km}±40^{km}**, mb3.3**/1**, mb1 3.3**/5**, mb1mx3.1**/27**, mbtmp3.4**/5**, ML3.2**/4**, Error ellipse: s-maj=69.4km s-min=23.7km az=92.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	6.19	12	P	Pn	11 47 24.8	+0.2
	0.6nm,0.3s,baz=199,slow=23,SNR=8.6						
SIJI				S	Sn	11 48 27.7	-6.3
	1.7nm,0.3s,baz=288,slow=24,SNR=11						
FITZ	Fitzroy Crossi	11.84	200	P	Pn	11 48 42.9	+1.2
	0.2nm,0.3s,baz=33,slow=9.9,SNR=8.0						
FITZ				S	Sn	11 50 46.3	-5.8
	0.2nm,0.3s,baz=98,slow=7.9,SNR=1.7						
WRA	Warramunga Arr	13.60	162	P	Pn	11 49 04.0	-1.4
	0.1nm,0.3s,baz=344,slow=14,SNR=10						
WRA				S	Sn	11 51 26.0	-9.0
	0.4nm,0.3s,baz=335,slow=22,SNR=10						
ASAR	Alice Springs	17.05	168	P	Pn	11 49 49.6	+0.2
	0.1nm,0.3s,baz=342,slow=8.7,SNR=6.2						
ASAR				S	Sn	11 52 51.4	-7.1
	0.1nm,0.3s,baz=350,slow=27,SNR=2.4						
MKAR	Makanchi Array	68.15	327	P	P	11 56 47.8	-0.1
	0.3nm,0.5s,baz=116,slow=8.0,SNR=5.0						

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*IDC **09** 12:27:01.9±1.5, 36°.12N×136°.97E, h229^{km}±12^{km}, mb2.8/3, mb1 3.1/3, mb1mx2.6/68, mbtmp3.4/3, Error ellipse: s-maj=48.9km s-min=19.4km az=95.0*

*JMA **09** 12:27:03.0±0.1, 36°.09N×137°.45E, h240^{km}±1^{km}, M3.0*

ISC 09 12:27:03.3±1.0**, 36°.09N**±0°.08×**137°.45E**±0°.08**, h237**^{km}±7^{km}**, n18, σ0^{s}40**/26**, mb3.1**/3**, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JGN	Niukaw	0.17	320	P	Pn	12 27 33.9	-0.2
JGN				S	S	12 27 58.1	-0.2
MAT	Matsushiro	0.76	53	P	Pn	12 27 35.7	0.0
MAT				S	S	12 28 00.8	-0.4
MAT	Matsushiro	0.76	53	P	Pn	12 27 35.7	0.0
MAT				S	S	12 28 01.4	+0.2
MJAR	Matsushiro Arr	0.76	53	P	Pn	12 27 35.6	-0.1
	1.4nm,0.3s,baz=230,slow=5.3,SNR=100						
MJAR				S	S	12 28 01.9	+0.7
	0.2nm,0.3s,baz=250,slow=22,SNR=7.8						
JYTA	Yamagatataniai	0.77	230	P	Pn	12 27 35.4	-0.4
JYTA				S	S	12 28 00.9	-0.3
JKG	Kaga	0.93	282	P	Pn	12 27 37.1	+0.6
JYN	Shimob	1.06	123	P	Pn	12 27 37.2	-0.3
JRY	Ryogami san	1.18	93	P	Pn	12 27 38.4	+0.3
JRY				S	S	12 28 05.4	+0.1
JOD2	Odawara 2	1.56	121	P	Pn	12 27 41.4	+0.4
JOD2				S	S	12 28 10.7	+0.3
JAG	Ashikaga	1.65	78	P	Pn	12 27 41.2	-0.4
JIE	Ise	1.80	200	P	Pn	12 27 43.5	+0.5
JWT	Wachi	1.85	245	P	Pn	12 27 43.3	-0.1
JSD	Sado	2.05	18	P	Pn	12 27 45.1	0.0
JNS	Sasagawa	2.28	40	P	Pn	12 27 47.5	+0.1
JWY	Kouya	2.41	220	P	Pn	12 27 49.3	+0.4
JWY				S	S	12 28 24.7	+0.1
ILAR	Eielson Array	51.98	32	P	P	12 35 48.6	+0.6
	0.8nm,1.1s,baz=260,slow=5.4,SNR=4.1						
WRA	Warramunga Arr	55.80	184	P	P	12 36 15.3	-0.8
	0.3nm,0.3s,baz=0.2,slow=7.6,SNR=11						
ASAR	Alice Springs	59.53	184	P	P	12 36 41.5	-0.4
	0.2nm,0.8s,baz=359,slow=5.7,SNR=5.6						

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*IDC **09** 12:50:05.2±3.2, 20°.48S×172°.46E, h40^{km}±29^{km}, mb4.1/13, mb1 4.3/16, mb1mx4.2/31, mbtmp4.3/16, ML4.2/3, MS3.7/23, Ms1 3.7/23, ms1mx3.6/38, Error ellipse: s-maj=30.8km s-min=16.8km az=156.0*

*GCMT **09** 12:50:05.1±0.3, 20°.55S±0°.03×172°.47E±0°.02, h18^{km}±1^{km}, MW4.8/69, Moment Tensor Solution. s26,c31; s69,c93; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.76±.14; $M_{\theta\theta}$0.28±.11; $M_{\phi\phi}$1.48±.10; $M_{r\theta}$-0.57±.25; $M_{\theta\phi}$1.08±.05; $M_{\phi r}$0.82±.18; Best double couple: $M_0$2.20000×10^{16} NP1:ϕ_s54.00000°, δ44.00000°, λ-52.00000°. NP2: ϕ_s187.00000°, δ56.00000°, λ-121.00000°. Principal axes: T 2.1640, Plg7.0000°, Azm298.0000°; N 0.0750, Plg25.0000°, Azm205.0000°; P -2.2360, Plg64.0000°, Azm42.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BJI **09** 12:50:05.0±0.0, 20°.50S×172°.50E, h46^{km}, mB5.3/19, mb4.8/26, Ms5.2/3, Ms7 4.8/3*

*NEIC **09** 12:50:06.1±1.4, 20°.53S±0°.06×172°.47E±0°.06, h48^{km}±6^{km}, mb5.0/42, Error ellipse: s-maj=11.4km s-min=3.6km az=223.0*

ISC 09 12:50:04.7±0.5**, 20°.55S**±0°.09×**172°.51E**±0°.08**, h35**^{km}**, n205, σ0^{s}88**/184**, mb4.8**/37**, MS3.7**/24**, 13C-9D, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	5.86	254	Pn	Pn	12 51 29.5	+0.4
	3.1nm,0.3s,baz=138,slow=18,SNR=28						
DZM	Mont Dzumac	5.86	254	*e*Pn	Pn	12 51 29.8	+0.7
	8.7nm,0.3s						
DZM				*e*LR	LR	12 52 53.8	
	comp=Z,1μm,26.6s						
DZM	Mont Dzumac	5.86	254	Pn	Pn	12 51 29.9	+0.8
MSVF	Nonsavu	5.94	63	Pn	Pn	12 51 30.8	+0.6
	0.6nm,0.3s,baz=256,slow=14,SNR=4.6						
MSVF	Nonsavu	5.94	63	Pn	Pn	12 51 31.9	+1.6
SANVU	Saraoutou	7.16	314	Pn	Pn	12 51 47.9	+1.0
RAO	Raoul Island	12.26	137	LR	LR	12 56 40.8	
	comp=Z,602nm,19.5s,baz=112,slow=32						
HNR	Honiara	16.40	311	LR	LR	12 59 15.6	
	comp=Z,261nm,18.7s,baz=137,slow=34						
HNR	Honiara	16.40	311	P	Pn	12 53 52.2	-0.1
HNR				IAmb	IAmb	12 54 05.8	
	comp=Z,94nm,1.0s						
URZ	Urewera	18.09	168	P	P	12 54 14.7	+1.4
	comp=Z,0.3nm,0.3s,baz=356,slow=8.3,SNR=5.6						
URZ				LR	LR	12 59 32.4	
	comp=Z,367nm,19.9s,baz=30,slow=31						
RPZ	Rata Peaks	23.13	183	LR	LR	13 02 45.0	
	comp=Z,226nm,19.4s,baz=22,slow=33						
RAR	Rarotonga	25.89	96	LR	LR	13 03 27.9	
	comp=Z,146nm,21.1s,baz=275,slow=31						
PMG	Port Moresby	26.84	291	LR	LR	13 04 39.9	
	comp=Z,246nm,19.7s,baz=102,slow=33						
STKA	Stephens Creek	29.84	241	P	P	12 56 09.2	+0.5
	comp=Z,6.1nm,0.8s,baz=97,slow=10,SNR=11						
STKA				LR	LR	13 07 17.0	
	comp=Z,146nm,18.7s,baz=80,slow=35						
STKA	Stephens Creek	29.84	241	P	P	12 56 09.9	+1.1
TBI	Tubuai	35.32	102	*e*LR	LR	13 06 26.0	
	comp=Z,372nm,31.2s						
WB0	Warramunga Arr	35.74	264	P	P	12 57 00.2	-0.3
WRA	Warramunga Arr	35.77	264	P	P	12 56 58.8	-1.8
	comp=Z,1.2nm,1.0s,baz=86,slow=7.7,SNR=4.9						
WRA				LR	LR	13 11 26.5	
	comp=Z,209nm,18.8s,baz=160,slow=36						
AS31	Alice Springs	35.83	258	P	P	12 57 01.2	0.0
ASAR	Alice Springs	35.83	258	P	P	12 57 00.3	-0.9
	comp=Z,1.9nm,0.8s,baz=86,slow=8.3,SNR=15						
ASAR				LR	LR	13 10 41.1	
	comp=Z,129nm,21.0s,baz=97,slow=34						
ASAR	Alice Springs	35.83	258	P	P	12 56 59.9	-1.4
PPT2	Papeete2	35.90	92	*e*LR	LR	13 06 42.8	
	comp=Z,560nm,29.5s						
PPT	Papeete	35.91	92	LR	LR	13 09 54.5	
	comp=Z,61nm,19.6s,baz=274,slow=33						
FITZ	Fitzroy Crossi	44.18	265	P	P	12 58 11.7	+1.1
BATI	Baumata	48.05	275	LR	LR	13 18 54.5	
	comp=Z,192nm,19.3s,baz=150,slow=36						
HMH	Humu'ula Sheep	50.74	40	P	P	12 59 01.6	-0.2
KAPI	Kappang	53.47	279	LR	LR	13 21 50.2	
	comp=Z,46nm,20.4s,baz=80,slow=36						
JCJ	Chichijima	55.73	327	LR	LR	13 18 40.5	
	comp=Z,124nm,20.7s,baz=81,slow=31						
LEM	Lembang	64.15	272	LR	LR	13 29 59.3	
	comp=Z,52nm,18.8s,baz=84,slow=37						
MJAR	Matsushiro Arr	65.38	330	P	P	13 00 43.8	+0.1
	comp=Z,2.0nm,0.8s,baz=176,slow=6.7,SNR=3.3						
MJAR				LR	LR	13 24 06.0	
	comp=Z,33nm,21.8s,baz=115,slow=31						
QSPA	South Pole Qui	69.51	180	P	P	13 01 09.1	-0.5
KSRS	Korea Array	71.35	324	P	P	13 01 21.4	+0.4
	comp=Z,2.0nm,1.1s,baz=70,slow=9.2,SNR=4.3						
KSRS				LR	LR	13 29 49.0	
	comp=Z,22nm,21.9s,baz=168,slow=33						
NJ2	Nanjing	73.30	314	*e*P	P	13 01 34.7	+1.9
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
USRK	Ussuriysk Ar.	74.34	331	LR	LR	13 27 11.3	
	comp=Z,62nm,21.7s,baz=104,slow=30						
PETK	Petropavlovsk-	74.47	351	P	P	13 01 38.4	-0.7
	comp=Z,9.6nm,1.0s,baz=112,slow=6.1,SNR=7.0						
PETK				LR	LR	13 32 01.5	
	comp=Z,40nm,20.5s,baz=161,slow=34						
CN2	Changchun	77.20	327	*e*P	P	13 01 59.8	+4.8
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KMI	Kunming	81.58	301	⇓P	P	13 02 21.7	+2.1
KMI				pmax	pmax		
	comp=Z,8.0nm,1.3s						
CMAR	Chiang Mai Arr	81.85	293	P	P	13 02 21.1	+0.3
	comp=Z,1.8nm,0.8s,baz=137,slow=4.6,SNR=12						
CMAR				LR	LR	13 40 14.0	
	comp=Z,12nm,18.4s,baz=105,slow=37						
CMAR	Chiang Mai Arr	81.85	293	P	P	13 02 21.0	+0.2
CHTO	Chiang Mai	82.00	293	P	P	13 02 21.8	+0.2
HHC	Hu-ho-hao-te	83.23	318	*e*P	P	13 02 28.3	+0.6
HHC				pmax	pmax		
	comp=Z,16nm,1.1s						
HHC				pmax	pmax		
	comp=Z,170nm,5.6s						
CD2	Chengdu	83.48	306	P	P	13 02 28.8	-0.3
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PKM	Mcpherson Peak	84.61	50	P	P	13 02 36.4	+1.5
	baz=240						
O02D	Mt. Diablo Mer	85.26	44	P	P	13 02 39.6	+1.6
	baz=238						
ARVC	Arvin	85.43	50	P	P	13 02 39.7	+0.8
	baz=241						
VES	Vestal, Richgr	85.59	49	P	P	13 02 40.0	+0.3
	baz=241						
CMB	Columbia Colle	85.77	47	P	P	13 02 41.0	+0.5
CMB				IAmb	IAmb	13 02 41.9	
	comp=Z,9.9nm,1.0s						
BFSC	Mount Baldy Ra	85.86	51	P	P	13 02 40.8	-0.4
	baz=242						
M02C	Callahan	85.86	43	P	P	13 02 41.4	+0.4
	baz=238						
MURC	Murrieta	85.90	52	P	P	13 02 41.5	+0.3
	baz=242						
LZH	Lanzhou	85.90	311	*e*P	P	13 02 43.3	+1.9
LZH				pP	pwP	13 02 55.6	+0.1
LZH				sP	sP	13 03 02.0	+6.9
LZH				pmax	pmax		
	comp=Z,14nm,1.0s						
EDW2	Edwards Air Fo	85.92	51	P	P	13 02 41.7	+0.3
	baz=242						
ISA	Isabella, Lake	85.94	50	P	P	13 02 42.4	+0.9
	baz=241						
ISA	Isabella, Lake	85.94	50	P	P	13 02 41.6	+0.2
O03E	Paynes Creek	85.97	44	P	P	13 02 42.0	+0.5
	baz=239						
MONP2	Monument Peak	86.15	53	P	P	13 02 43.6	+0.9
	baz=243						
CAPN	Captain Cook N	86.19	17	P	P	13 02 42.3	+0.4
	baz=214						
IKP	In-Ko-Pah, Jac	86.27	53	P	P	13 02 43.1	-0.1
	baz=243						
LRMC	Laurel Mtn Rad	86.42	50	P	P	13 02 44.6	+0.6
	baz=242						
PFO	Pinyon Flats O	86.45	52	P	P	13 02 43.4	-0.7
	baz=243						
TPFO	Pinon Flats	86.45	52	P	P	13 02 43.1	-0.9
	baz=243						
OMMB	Old Mammoth Mi	86.51	48	P	P	13 02 44.3	-0.2
OMMB				IAmb	IAmb	13 02 45.5	
	comp=Z,8.8nm,1.1s						
CWC	Cottonwood Cre	86.59	49	P	P	13 02 44.2	-0.6
	baz=241						
SWSC	Sam W. Stewart	86.64	53	P	P	13 02 44.7	-0.1
	baz=243						
L04D	Klamath Falls	86.64	42	P	P	13 02 45.6	+0.7
	baz=238						
M04C	Macdoel	86.71	43	P	P	13 02 45.8	+0.6
	baz=239						
I03D	Drain, OR	86.78	41	P	P	13 02 45.8	+0.6
	baz=238						
TIN	Tinemaha, Big	86.78	49	P	P	13 02 46.6	+1.0
	baz=241						
MPMC	Manual Prospec	86.83	50	P	P	13 02 46.3	+0.3
	baz=242						
BELC	Belle Mtn. Jos	86.97	52	P	P	13 02 47.1	+0.5
	baz=243						
GSC	Goldstone, Bar	86.97	51	P	P	13 02 46.9	+0.4
	baz=242						
HEC	Hector,Ludlow	87.10	51	P	P	13 02 47.3	+0.1
	baz=243						
BC3	Big Chuckawall	87.22	53	P	P	13 02 48.4	+0.6
	baz=243						
LPIG	La Paz	87.23	63	LR	LR	13 32 14.4	
	comp=Z,34nm,19.8s,baz=247,slow=29						
GRAC	Grapevine Rang	87.36	49	P	P	13 02 49.0	+0.6
	baz=242						
NVAR	Mina Array Bea	87.39	47	P	P	13 02 48.6	0.0
	comp=Z,2.5nm,0.8s,baz=224,slow=8.7,SNR=9.5						
NVAR	Mina Array Bea	87.39	47	P	P	13 02 48.4	-0.3
GLA	Glamis	87.41	53	P	P	13 02 49.6	+0.9
	baz=244						
GLA	Glamis	87.41	53	P	P	13 02 49.7	+0.9
GLA				IAmb	IAmb	13 02 50.7	
	comp=Z,14nm,0.9s						
NV11	Mina Array Sit	87.49	47	P	P	13 02 48.6	-0.5
NV11				IAmb	IAmb	13 02 50.7	
	comp=Z,11nm,1.2s						
GMRC	Granite Mounta	87.57	52	P	P	13 02 49.9	+0.4
	baz=243						
H04D	Lebanon	87.59	40	P	P	13 02 50.3	+1.1
	baz=238						
IRM	Iron Mountain	87.67	52	P	P	13 02 50.8	+0.9
	baz=243						
113A	Mohawk Valley,	88.09	54	P	P	13 02 52.1	+0.3
TPNV	Topopah Spring	88.13	49	P	P	13 02 52.1	-0.1
TPNV				IAmb	IAmb	13 02 53.7	
	comp=Z,9.8nm,0.9s						
I05D	Terrebonne, OR	88.35	41	P	P	13 02 53.7	+0.8
	baz=239						
VNA3	Neumayer Olymp	88.44	179	P	P	13 02 53.9	+1.0
214A	Organ Pipe Nat	88.47	55	P	P	13 02 54.1	+0.4
	baz=245						
214A	Organ Pipe Nat	88.47	55	P	P	13 02 54.6	+0.9
214A				IAmb	IAmb	13 02 55.0	
	comp=Z,5.9nm,1.0s						
PDMCI	Parker Dam,Lak	88.48	53	P	P	13 02 54.1	+0.4
	baz=244						
VNA2	Neumayer--Watz	88.77	180	P	P	13 02 53.3	-1.2
	baz=184,slow=3.9						
BBB	Bella Bella	88.92	32	LR	LR	13 34 47.0	
	comp=Z,35nm,19.7s,baz=275,slow=30						
RND	Reindeer	88.98	16	P	P	13 02 54.0	-1.4
RND				IAmb	IAmb	13 02 54.8	
	comp=Z,5.0nm,0.9s						
D03D	Eldon	88.98	38	P	P	13 02 56.6	+0.9
	baz=238						
W13A	Hualapai Mount	89.02	52	P	P	13 02 56.0	-0.5
W13A				IAmb	IAmb	13 02 58.3	
	comp=Z,6.3nm,1.2s						
VNA1	Neumayer--Stat	89.04	180	P	P	13 02 56.3	+0.6
WVOR	Wild Horse Val	89.10	44	P	P	13 02 57.2	+0.6
WVOR				IAmb	IAmb	13 02 58.1	
	comp=Z,12nm,1.2s						
PRN	Pahroc Range	89.19	49	P	P	13 02 57.8	+0.7
PRN				IAmb	IAmb	13 02 59.2	
	comp=Z,14nm,1.2s						
B05A	Bryant	89.94	37	P	P	13 03 00.2	+0.1
	baz=238						
F07A	Phinny Hill Vi	90.00	40	P	P	13 03 00.3	-0.2
F07A				IAmb	IAmb	13 03 01.8	
	comp=Z,10nm,1.0s						
SONM	Songino Array	90.13	322	P	P	13 03 00.5	-0.8

	comp=Z,0.5nm,0.3s,baz=139,slow=5.7,SNR=6.5						
SONM				LR	LR	13 42 08.0	
	comp=Z,17nm,19.3s,baz=132,slow=35						
SONM	Songino Array	90.13	322	P	P	13 02 59.8	-1.5
TUC	Tucson	90.18	55	P	P	13 03 02.4	+0.6
TUC				IAmb	IAmb	13 03 03.9	
	comp=Z,6.9nm,1.1s						
GTA	Gaotai	90.27	312	P	P	13 03 03.1	+1.0
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,150nm,5.6s						
GTA				LR	LR		
	comp=Z,72nm,18.9s						
GTA				LR	LR		
	comp=Z,96nm,18.9s						
GTA				LR	LR		
	comp=Z,100nm,17.4s						
HDA	Harding Lake	90.29	16	P	P	13 03 01.3	-0.2
	baz=218						
G08A	Pilot Rock	90.29	41	P	P	13 03 01.9	-0.2
G08A				IAmb	IAmb	13 03 03.3	
	comp=Z,7.4nm,0.8s						
LCMT	Little Creek M	90.31	50	P	P	13 03 02.4	-0.1
E07A	Sunnyside	90.37	40	P	P	13 03 02.3	+0.1
CCUT	Cedar City	90.46	50	P	P	13 03 03.3	+0.1
HAWA	Hanford	90.48	40	P	P	13 03 02.4	-0.4
X16A	Lo Mia Camp, P	90.55	53	P	P	13 03 04.2	+0.6
X16A				IAmb	IAmb	13 03 06.2	
	comp=Z,8.8nm,1.1s						
ELK	Elko	90.56	46	P	P	13 03 04.0	+0.4
ELK				IAmb	IAmb	13 03 04.9	
	comp=Z,9.4nm,1.2s						
IL31		90.59	16	P	P	13 03 00.6	-2.2
IL31				IAmb	IAmb	13 03 02.3	
	comp=Z,3.3nm,0.8s						
ILAR	Eielson Array	90.59	16	P	P	13 03 00.8	-2.0
	comp=Z,2.2nm,0.7s,baz=230,slow=4.9,SNR=26						
ILAR	Eielson Array	90.59	16	P	P	13 02 59.7	-3.2
KNB	Kanab	90.62	51	P	P	13 03 04.3	+0.4
SZCU	Shurtz Canyon	90.68	50	P	P	13 03 04.5	+0.3
BCAR	Beaver Creek A	90.72	19	P	P	13 03 02.3	-1.3
U15A	North Rim	90.76	51	P	P	13 03 05.2	+0.5
E08A	Dider Farm, El	90.82	40	P	P	13 03 04.4	+0.1
319A	Douglas	90.97	57	P	P	13 03 06.0	+0.4
WUAZ	Wupatki	91.05	52	P	P	13 03 06.5	+0.6
PKCU	Pink Cliffs	91.17	50	P	P	13 03 07.7	+1.0
COLD	Coldfoot	91.79	14	P	P	13 03 08.7	+0.4
	baz=215						
W18A	Petrified Fore	92.11	53	P	P	13 03 10.9	+0.1
	baz=246						
EGAK	Eagle	92.18	18	P	P	13 03 09.5	-0.7
HLID	Hailey	92.37	44	P	P	13 03 11.7	-0.1
121A	Cookes Peak, D	92.60	56	P	P	13 03 13.2	+0.1
	baz=247						
MNTX	Cornudas Mount	94.17	58	P	P	13 03 19.8	-0.5
MNTX				IAmb	IAmb	13 03 21.8	
	comp=Z,4.7nm,1.0s						
EPYK	Eagle Plains	94.61	18	P	P	13 03 20.8	-0.7
	baz=227						
TXAR	Lajitas Array	94.70	61	P	P	13 03 23.2	+0.4
	comp=Z,1.8nm,0.8s,baz=211,slow=5.1,SNR=12						
PDAR	Pinedale Array	95.27	46	P	P	13 03 24.3	-1.0
	comp=Z,0.3nm,0.5s,baz=216,slow=4.5,SNR=4.8						
S22A	4UR Ranch, Cre	95.29	52	P	P	13 03 25.8	+0.3
	baz=248						
PLCA	Paso Flores	95.50	137	LR	LR	13 39 07.0	
	comp=Z,27nm,19.5s,baz=176,slow=31						
INK	Inuvik	96.83	18	P	P	13 03 30.1	-1.3
	comp=Z,2.9nm,1.1s,baz=191,slow=4.2,SNR=5.4						
CMIG	Matias Romero	98.20	75	LR	LR	13 39 30.1	
	comp=Z,437nm,19.0s,baz=309,slow=30						
WMQ	Urumqi	100.34	313	*e*P	Pdif	13 03 48.2	+0.3
WMQ				pmax	pmax		
	comp=Z,12nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,140nm,6.3s						
YKA	Yellowknife Ar	100.43	27	P	Pdif	13 03 48.1	+0.5
	comp=Z,0.4nm,0.9s,baz=237,slow=4.2,SNR=3.0						
MKAR	Makanchi Array	104.83	315	Pdiff	Pdif	13 04 08.1	+0.4
	comp=Z,0.2nm,0.6s,baz=96,slow=5.8,SNR=2.2						
FINES	FINESS Array B	132.94	339	PKP	PKPdf	13 09 14.8	-0.9
	comp=Z,1.4nm,0.7s,baz=349,slow=2.8,SNR=2.0						
VARL	Varlezi	141.59	319	⇑P	PKPdf	13 09 31.2	-1.1
BIZ	Bicaz	142.10	322	⇑P	PKPdf	13 09 29.2	-4.0
ARR	Arges	143.80	321	⇑P	PKPdf	13 09 35.0	-1.3
HUMR	Humele	144.04	319	⇑P	PKPbc	13 09 34.6	0.0
DRGR		144.10	324	⇓P	PKPbc	13 09 35.0	+0.2
LOT	Lotru	144.27	321	⇓P	PKPbc	13 09 34.6	-0.8
KSP	Ksiaz	144.44	334	*e*PKP	PKPdf	13 09 36.2	-0.9
OSTC	Ostas	144.69	334	*e*PKP	PKPdf	13 09 36.8	-0.8
MORC	Moravsky Berou	144.70	332	⇑P	PKPab	13 09 35.3	-1.2
MORC	Moravsky Berou	144.70	332	*e*PKP	PKPbc	13 09 36.4	-0.2
CHVC	Chvalec	144.74	334	*e*PKP	PKPdf	13 09 36.6	-1.1
DPC	Dobruska-Polom	144.81	333	*e*PKP	PKPdf	13 09 37.2	-0.7
DPC				*e*x	x	13 09 44.1	
KRLC	Kraliky	144.82	333	*e*PKP	PKPdf	13 09 37.2	-0.7
UPC	Upice	144.82	334	*e*PKP	PKPdf	13 09 37.3	-0.5
PLVB	Pleven	144.84	318	⇓P	PKPdf	13 09 37.7	-0.4
GZR	Gura Zlata	144.88	322	⇑P	PKPab	13 09 36.5	-0.8
PSZ	Piszkesteto	144.88	327	⇑P	PKPab	13 09 36.3	-1.0
SIRR	Siria	145.00	324	⇓P	PKPdf	13 09 38.2	0.0
VYHS	Vyhne	145.01	329	*e*PKP	PKPdf	13 09 38.0	-0.2
KOLL	Kolacno	145.16	329	*e*PKP	PKPdf	13 09 39.5	+1.0
JAVC	Velka Javorina	145.31	330	*e*PKP	PKPdf	13 09 39.9	+1.1
CLL	Collm	145.35	337	⇓*i*PKPbc	PKPdf	13 09 38.3	-0.4
	comp=Z,41nm,0.9s						
CLL				*i* PKiKP	PKiKP	13 09 41.1	-1.5
CLL				*i*		13 09 45.5	
CLL	Collm	145.35	337		PKPdf	13 09 38.0	-0.6
BRG	Berggiesshubel	145.35	336	*i* PKP	PKPdf	13 09 38.6	-0.1
BRG				Amp		13 09 39.8	
	comp=Z,42nm,1.0s						
BRG				*e*x	x	13 09 45.1	
BRG				Amp		13 09 47.0	
	comp=Z,23nm,1.0s						
HERR	Herculane	145.38	321	⇑P	PKPdf	13 09 39.0	+0.1
PVCC	Panska Ves	145.38	335	*e*PKP	PKPdf	13 09 38.8	0.0
BZS	Buzias	145.41	323	⇑P	PKPab	13 09 39.0	-0.1
VRAC	Vranov	145.47	332	⇑P	PKPab	13 09 39.4	+0.2
VRAC	Vranov	145.47	332	*e*PKP	PKPab	13 09 39.0	-0.3
SMOL	Smolenice	145.67	330	*e*PKP	PKPab	13 09 40.6	+0.6
KRUC	Moravsky	145.74	332	*e*PKP	PKPab	13 09 39.9	-0.4
PRU	Pruhonice	145.82	334	*e*PKP	PKPab	13 09 40.1	-0.4
MODS	Modra-Piesok	145.84	330	*e*PKP	PKPab	13 09 40.1	-0.6
MDVR	Moldovita	145.85	322	⇑P	PKPab	13 09 41.4	+0.6
PBCC	Pribram	146.28	335	*e*PKP	PKPab	13 09 41.6	-0.7
NKC	Novy Kostel	146.44	337	*e*PKP	PKPab	13 09 42.5	-0.4
MORH	Mrgy, Hungar	146.65	326	⇑P	PKPab	13 09 42.7	-1.1
FRGS	Fruska Gora	146.70	324	⇑P	PKPab	13 09 43.0	-1.1
CONA	Conrad Observa	146.81	331	*i* P	PKPab	13 09 43.9	-0.7
	comp=Z,10nm,0.9s						
CKRC	Cesky Krumlov	146.82	333	*e*PKP	PKPab	13 09 43.2	-1.2
CKRC				*e*x	x	13 09 49.9	
KHC	Kasperske Hory	146.88	334	*e*PKP	PKPab	13 09 43.5	-1.2
KHC	Kasperske Hory	146.88	334		PKPbc	13 09 42.5	-0.8
GEC2	GERESS Array S	147.06	334		PKPbc	13 09 43.1	-0.8
GERES	GERESS Array B	147.06	334	PKPbc	PKPbc	13 09 43.8	-0.2
	comp=Z,7.8nm,0.7s,baz=29,slow=3.0,SNR=37						
GERES	GERESS Array B	147.06	334		PKPbc	13 09 43.6	-0.3
ARSA	Arzberg	147.47	330	*e*P	PKPbc	13 09 45.2	+0.2
	comp=Z,10nm,1.3s						
MOA	Molln	147.59	332	*e*P	PKPbc	13 09 44.4	-0.9
	comp=Z,4.3nm,0.7s						
SOKA	Soboth	148.12	330	*i* P	PKPbc	13 09 46.4	-0.4
	comp=Z,6.0nm,0.9s						
OBKA	Obir	148.47	330	*e*P	PKPbc	13 09 46.7	-1.1
	comp=Z,11nm,1.1s						
KBA	Koelnbreinsper	148.58	332	*e*P	PKPbc	13 09 47.4	-0.8
	comp=Z,7.7nm,0.8s						
BMRD	Maredsous	148.76	345	*d*PKP	PKPbc	13 09 47.1	-1.1
MYKA	Terra Mystica	148.79	331	*e*P	PKPbc	13 09 47.7	-0.8
	comp=Z,7.4nm,0.8s						
WLF	Walferdange	148.98	343	*d*PKP	PKPdf	13 09 44.9	+0.1
DOU	Dourbes	149.00	345	*d*PKiKP	PKPbc	13 09 48.8	0.0
WATA	Walderalm	149.12	334	*i* P	PKPbc	13 09 49.1	-0.4
	comp=Z,7.6nm,0.6s						
WTTA	Wattenberg	149.15	334	*i* P	PKPbc	13 09 49.4	-0.2
	comp=Z,10nm,0.8s						
ABTA	Abfaltersbach	149.19	333	*i* P	PKPbc	13 09 48.8	-0.8
	comp=Z,9.3nm,0.8s						
MOTA	Moosalm	149.30	335	*i* P	PKPbc	13 09 49.7	-0.3
	comp=Z,18nm,1.1s						
RETA	Reutte	149.32	335	*i* P	PKPbc	13 09 49.6	-0.3
	comp=Z,3.4nm,0.7s						
SQTA	Sankt Quirin	149.36	335	*i* P	PKiKP	13 09 50.0	-1.2
	comp=Z,11nm,0.7s						
FETA	Feichten	149.72	335	*e*P	PKiKP	13 09 51.0	-1.0
	comp=Z,12nm,0.9s						
DAVA	Damuels	149.83	336	*i* P	PKiKP	13 09 51.2	-1.0
	comp=Z,5.2nm,0.7s						
ESDC	Sonseca Array	160.70	352	PKPab	PKPab	13 10 42.6	-0.5
	comp=Z,1.6nm,0.8s,baz=355,slow=4.2,SNR=6.0						
TORD	Torodi Ar. Bea	168.54	231	PKP	PKPdf	13 10 08.0	-0.7
	comp=Z,1.7nm,1.0s,baz=2.0,slow=1.1,SNR=5.8						
TORD	Torodi Ar. Bea	168.54	231		PKPdf	13 10 07.8	-1.0

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*ECX **09** 13:04:08.2±0.6, 31°.51N×115°.67W, h8^{km}±9^{km}, MD2.3, ML2.6*

*MEX **09** 13:04:09.4±24.0, 31°.46N×115°.66W, h10^{km}, MD3.5*

ISC 09 13:04:06.4±1.1**, 31°.52N**±0°.03×**115°.61W**±0°.04**, h15**^{km}±8^{km}**, n15,** σ0^{s}.**41**/29**, 3C-3D, Baja California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VTX	Valle De La Tr	0.20	228	⇑*i*P	Pg	13 04 11.4	+0.3
VTX				*e*S	Sg	13 04 14.1	-0.2
SJX	San Joaquin	0.38	309	⇓*i*P	Pn	13 04 18.0	+0.7
SJX				*e*S	Sn	13 04 25.5	+1.1
SJX				⇓*e*		13 04 25.7	
SJX				IAML		13 04 25.7	
	comp=N,652nm,0.1s						
ECBX	El Chinero	0.48	96	⇑*i*P	Pb	13 04 16.7	+0.2
ECBX				*e*S	Sb	13 04 23.6	+0.1
SPIG	San Pedro Mart	0.49	165	*i* P	Pb	13 04 17.2	+0.2
	baz=113,slow=12						
SPIG				*i* S	Sb	13 04 24.0	-0.1
SPIG	San Pedro Mart	0.49	165	*e*P	Pb	13 04 17.1	+0.1
SPIG				*e*S	Sb	13 04 24.3	+0.1
SPX	San Pedro Mart	0.50	165	⇓*i*P	Pb	13 04 17.2	+0.1
SPX				*e*S	Sb	13 04 24.0	-0.4
SPX				IAML		13 04 24.7	
	comp=N,314nm,0.1s						
SPX				*e*		13 04 24.7	
SVX	San Vicente	0.58	250	⇑*i*P	Pg	13 04 17.7	-0.2
SVX				*e*S	Sg	13 04 25.2	-0.4
SFX	San Felipe	0.81	126	*e*P	Pn	13 04 23.4	0.0
SFX				*e*S	Sn	13 04 34.4	-0.6
CCX	Cicese	0.96	291	*e*P	Pb	13 04 24.7	0.0
CCX				*e*S	Sb	13 04 36.8	-0.5
SQX	San Quintin	0.97	194	*e*P	Pb	13 04 24.8	-0.1
SQX				*e*S	Sb	13 04 37.0	-0.6
RMX	La Rumorosa	1.15	340	*e*P	Pb	13 04 27.5	-0.5
RMX				*e*S	Sb	13 04 41.9	-0.9
CBX	Cerro Bola	1.19	312	*e*P	Pn	13 04 28.7	0.0
CBX				*e*S	Sb	13 04 44.1	+0.1
CBX				IAML		13 04 45.0	
	comp=N,169nm,0.2s						
TJIG	Tijuana	1.28	315	*i* P	Pb	13 04 30.3	0.0
TJIG				*i* S	Sb	13 04 46.3	-0.1
TJIG	Tijuana	1.28	315	*e*P	Pb	13 04 30.2	0.0
TJIG				*e*S	Sb	13 04 46.4	-0.1
BAR	Barrett	1.46	322	*e*P	Pb	13 04 33.2	-0.1

IDC 09 13:29:22.3±2.2**, 6°.28S×151°.94E, h0**^{km}**, mb3.4**/4**, mb1 3.7**/4**, mb1mx3.5**/27**, mbtmp3.4**/4**, Error ellipse: s-maj=126.2km s-min=29.3km az=130.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.84	230	P	P	13 34 15.6	-1.0
	0.2nm,0.5s,baz=56,slow=10,SNR=5.1						
ASAR	Alice Springs	24.49	223	P	P	13 34 42.9	-0.5
	0.4nm,0.6s,baz=52,slow=9.9,SNR=9.0						
FITZ	Fitzroy Crossi	28.21	243	P	P	13 35 19.0	+2.0
	1.1nm,0.7s,baz=50,slow=7.9,SNR=2.0						
ILAR	Eielson Array	83.85	22	P	P	13 41 53.1	-0.3
	0.5nm,0.7s,baz=241,slow=5.2,SNR=5.4						

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*ISU **09** 13:36:52, 40°.23N×72°.67E, h5^{km}, Hypocentre not reviewed by the ISC*

*SOME **09** 13:36:52.9, 40°.28N×72°.75E, h10^{km}*

*KRNET **09** 13:36:52.8±0.1, 40°.24N×72°.69E, h9^{km}, mb3.6*

*NNC **09** 13:36:54.7±1.3, 40°.39N×72°.68E, h0^{km}, mb3.9, mpv3.5, Error ellipse: s-maj=9.8km s-min=6.3km az=2.0*

ISC 09 13:36:55.5±0.8**, 40°.28N**±0°.04×**72°.61E**±0°.02**, h10**^{km}**, n72,** σ**2**^{s}.**33**/111**, 24C-24D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHH	Osh	0.28	29	⇑*i*P	Pg	13 36 58.6	-2.6
	baz=14						
OHH				⇑*i*S	Sg	13 37 03.0	-2.1
	baz=14						
OHH	Osh	0.28	29	*e*P		13 36 58.0	
OHH				*e*S		13 37 01.0	
ANR	Andizhan	0.51	339	*e*P		13 37 05.0	
ANR				*e*S		13 37 14.0	
FRG	Fergana	0.78	306	*e*P		13 37 06.0	
FRG				*e*S		13 37 17.0	
DRK	Karamyk	1.01	218	⇓*i*P	Pg	13 37 12.6	-2.3
	baz=22						
DRK				⇓*i*S	Sg	13 37 26.5	-1.6
	baz=22						
ARSB	Arslanbob	1.08	15	⇓*i*P	Pg	13 37 14.2	-2.1
	baz=11						
ARSB				⇓*i*S	Sg	13 37 29.4	-1.0
	baz=11						
ARSB	Arslanbob	1.08	15	*e*P		13 37 14.0	
ARSB				*e*S		13 37 33.0	
BTK	Batken	1.39	262	⇓*i*P	Pn	13 37 20.0	-1.0
	baz=63						
BTK				⇓*i*S	Sg	13 37 40.5	+0.4
	baz=63						
BTK	Batken	1.39	262	*e*P		13 37 19.0	
BTK				*e*S		13 37 40.0	
TRKS	Terek-Say	1.67	319	⇓*i*P	Pn	13 37 24.5	-0.5
	baz=17						
TRKS				⇓*i*S	Sn	13 37 47.5	+0.9
	baz=17						
AML	Almayashu	2.03	24	⇑*i*P	Pn	13 37 30.8	+0.8
	baz=21						
AML				⇑*i*S	Sb	13 37 58.2	+0.2
	baz=21						
AML	Almayashu	2.03	24	P	Pn	13 37 30.9	+0.8
	SNR=254						
ARLS	Aral	2.05	39	⇑*i*P	Pn	13 37 31.0	+0.9
	baz=37						
ARLS				⇑*i*S	Sb	13 37 58.6	+0.2
	baz=37						
MNAS	Manas	2.21	358	⇑*e*P	Pn	13 37 33.6	+1.3
	baz=57						
MNAS				⇑*i*S	Sb	13 38 03.5	+0.4
	baz=57						
CHMG	Chimgan	2.34	304	*e*P		13 37 38.0	
CHMG				*e*S		13 38 10.0	
UCH	Uchtor	2.42	36	⇓*i*P	Pn	13 37 36.1	+0.6
	baz=34						
UCH				⇓*i*S	Sn	13 38 07.5	+2.0
	baz=34						
UCH	Uchtor	2.42	36	P	Pn	13 37 36.6	+1.0
	SNR=46						
CHRV	Charvak	2.43	305	*e*S		13 38 12.0	
MRKS	Merke	2.51	10	*e*P	Pn	13 37 38.7	+2.3
	76nm,0.7s						
MRKS				*e*S	Sb	13 38 10.9	-0.7
	55nm,0.4s						
MRKS	Merke	2.51	10	Pg	Pn	13 37 37.7	+1.2
	76nm,0.7s						
MRKS				Lg	Lg	13 38 10.8	
	55nm,0.4s						
EKS2	Erkin-Say	2.54	20	⇑*i*P	Pn	13 37 38.0	+1.1
	baz=18						
EKS2				⇑*i*S	Sn	13 38 10.6	+2.7
	baz=18						
EKS2	Erkin-Say	2.54	20	P	Pn	13 37 38.4	+1.5
	SNR=16						
IUG	Iuzhnay	2.69	315	*e*P	Pb	13 37 44.5	+0.6
	2.7nm,0.2s						
IUG				*e*S	Sg	13 38 21.0	-1.1
	122nm,0.4s						
TAS	Tashkent	2.72	294	⇓*i*P	Pn	13 37 41.2	+1.9
	baz=94						
TAS				⇓*i*S	Sb	13 38 16.5	-1.2
	baz=94						
AAK	Ala-Archa	2.75	30	⇑*e*P	Pn	13 37 40.8	+1.0
	baz=29						
AAK				⇑*i*S	Sn	13 38 15.7	+2.5
	baz=29						
AAK	Ala-Archa	2.75	30	P	Pn	13 37 41.5	+1.7
	SNR=43						
AAK	Ala-Archa	2.75	30	⇓Pg	Pn	13 37 41.8	+1.9
	19nm,0.5s						
AAK				⇑Lg	Lg	13 38 20.1	
	42nm,0.6s						
FRU1	Bishkek	2.95	30	⇑*i*P	Pn	13 37 43.6	+1.1
	baz=28						
FRU1				⇑*i*S	Sn	13 38 20.5	+2.5
	baz=28						
KBK	Karagaybulak	2.96	36	⇓*e*P	Pn	13 37 43.5	+0.8
	baz=34						
KBK				⇓*i*S	Sn	13 38 20.3	+2.0
	baz=34						
KBK	Karagaybulak	2.96	36	P	Pn	13 37 44.7	+2.0
	SNR=25						
CHMS	Chumysh	3.16	30	⇓*e*P	Pn	13 37 46.3	+1.0
	baz=29						
CHMS				⇓*i*S	Sn	13 38 25.2	+2.1
	baz=29						
CHMS	Chumysh	3.16	30	P	Pn	13 37 47.7	+2.4
	SNR=7.8						
KK31	Karatay Array	3.23	332	⇓Pg	Pb	13 37 53.1	+0.2
	3.0nm,0.4s,baz=150,slow=17,SNR=15						
KK31				⇑Lg	Lg	13 38 34.9	
	9.5nm,0.4s,baz=148,slow=31,SNR=6.8						
USP	Ospenovka	3.31	25	⇓*i*P	Pn	13 37 48.5	+1.2
	baz=23						
USP				⇓*i*S	Sn	13 38 28.9	+2.2
	baz=23						
USP	Ospenovka	3.31	25	P	Pn	13 37 48.6	+1.2
	SNR=18						
ULHL	Ulahol	3.37	53	⇓*i*P	Pn	13 37 48.8	+0.4
	baz=52						
ULHL				⇓*i*S	Sn	13 38 29.5	+0.9
	baz=52						
ULHL	Ulahol	3.37	53	P	Pn	13 37 48.6	+0.2
	SNR=6.0						
BRLS	Borolday	3.45	324	*e*P	Pb	13 37 55.5	-1.1
	1.7nm,0.4s						
BRLS				*e*S	Sb	13 38 39.9	+1.3
	31nm,0.3s						
TKM2	Tokmak 2	3.46	39	⇓*i*P	Pn	13 37 50.5	+0.8
	baz=38						
TKM2				⇓*e*S	Sn	13 38 32.4	+1.6
	baz=38						
TKM2	Tokmak 2	3.46	39	P	Pn	13 37 51.3	+1.6
	SNR=8.2						
TKM2	Tokmak 2	3.46	39	⇑Pg	Pn	13 37 51.6	+2.0
	3.4nm,0.3s						
TKM2				⇑Lg	Lg	13 38 39.8	
	12nm,0.5s						
SGDS	Sogindy	3.51	25	Pg	Pb	13 37 57.7	0.0
	7.3nm,0.5s						
SGDS				Lg	Lg	13 38 44.1	
	20nm,0.5s						
KST	Kastek	3.74	41	*e*P	Pb	13 38 01.0	-0.6
	5.0nm,0.4s						
KST				*e*S	Sb	13 38 49.6	+2.6
	15nm,0.7s						
KST	Kastek	3.74	41	Pg	Pb	13 38 01.0	-0.6
	5.0nm,0.4s						
KST				Lg	Lg	13 38 49.6	
	15nm,0.7s						
DGS	Degeres	3.79	38	*e*P	Pb	13 38 01.6	-0.9
	9.0nm,0.8s						
DGS				*e*S	Sb	13 38 50.7	+2.2
	18nm,0.6s						
DGS	Degeres	3.79	38	Pg	Pb	13 38 01.6	-0.9
	9.0nm,0.8s						
DGS				Lg	Lg	13 38 50.7	
	18nm,0.6s						
KDJ	Kajisay	3.92	60	⇑*i*P	Pn	13 37 56.1	+0.3
	baz=59						
KDJ				⇑*e*S	Sn	13 38 42.8	+0.9
	baz=59						
MTBS	Maitube	4.04	44	*e*P	Pb	13 38 05.7	-1.0
	5.4nm,0.5s						
MTBS				*e*S	Sb	13 38 58.6	+2.9
	9.8nm,0.7s						
MTBS	Maitube	4.04	44	Pg	Pb	13 38 05.7	-1.0
	5.4nm,0.5s						
MTBS				Lg	Lg	13 38 58.6	
	9.8nm,0.7s						
IZV	Izvestkoviy	4.08	46	*e*P	Pb	13 38 06.9	-0.5
	9.8nm,0.8s						
IZV				*e*S	Sb	13 39 00.9	+4.1
	19nm,0.8s						
IZV	Izvestkoviy	4.08	46	Pg	Pb	13 38 06.9	-0.5
	9.8nm,0.8s						
IZV				Lg	Lg	13 39 00.9	
	19nm,0.8s						
KRBS	Karabastau	4.11	33	*e*P	Pb	13 38 07.8	-0.2
	3.0nm,0.4s						
KRBS				*e*S	Sb	13 39 00.9	+3.2
	16nm,0.6s						
TNSS	Tian-Shan	4.26	48	*e*P	Pb	13 38 10.8	+0.1
	5.2nm,0.5s						
TNSS				*e*S	Sb	13 39 07.4	+5.0
	7.6nm,0.5s						
TNSS	Tian-Shan	4.26	48	Pg	Pb	13 38 10.8	+0.1
	5.2nm,0.5s						
TNSS				Lg	Lg	13 39 07.4	
	7.6nm,0.5s						
MDOK	Medeo	4.40	48	*e*P	Pb	13 38 13.4	+0.5
	8.2nm,0.8s						
MDOK				*e*S	Sb	13 39 11.2	+5.1
	16nm,0.7s						
MDOK	Medeo	4.40	48	Pg	Pb	13 38 12.2	-0.7
	11nm,0.9s						
MDOK				Lg	Lg	13 39 12.4	
	22nm,0.8s						
MDOK	Medeo	4.40	48	Pg	Pb	13 38 13.4	+0.5
	8.2nm,0.8s						
MDOK				Lg	Lg	13 39 11.2	
	16nm,0.7s						
KOTS	Kotyrbulak	4.48	47	*e*P	Pb	13 38 15.3	+1.0
	23nm,0.6s						
KOTS				*e*S	Sg	13 39 14.4	-5.0
	19nm,0.5s						
KOTS	Kotyrbulak	4.48	47	Pg	Pb	13 38 15.3	+1.0
	23nm,0.6s						
KOTS				Lg	Lg	13 39 14.4	
	19nm,0.5s						
ANVS	Anan'yevo	4.55	55	⇑*e*P	Pn	13 38 04.6	+0.1
	baz=54						
ANVS				⇑*i*S	Sn	13 38 58.0	+0.4
	baz=54						
KUU	Kurty	4.56	36	*e*P	Pb	13 38 16.0	+0.4
	1.8nm,0.1s						
KUU				*e*S	Sb	13 39 15.6	+5.1
	12nm,0.9s						
KUU	Kurty	4.56	36	Pg	Pb	13 38 16.0	+0.4
	1.8nm,0.1s						
KUU				Lg	Lg	13 39 15.6	
	12nm,0.9s						
KTBS	Karatobe	4.58	40	*e*P	Pb	13 38 16.4	+0.4
	3.8nm,0.4s						
KTBS				*e*S	Sb	13 39 15.3	+4.1
	24nm,0.5s						
KTBS	Karatobe	4.58	40	Pg	Pb	13 38 16.4	+0.4
	3.8nm,0.4s						
KTBS				Lg	Lg	13 39 15.3	
	24nm,0.5s						
CHKK	Chushkaly	4.84	41	*e*P	Pb	13 38 22.0	+1.7
	2.1nm,0.1s						
CHKK				*e*S	Sg	13 39 25.4	-5.4
	13nm,0.4s						
CHKK	Chushkaly	4.84	41	Pg	Pb	13 38 22.0	+1.7
	2.1nm,0.1s						
CHKK				Lg	Lg	13 39 25.4	
	13nm,0.4s						
BTLS	Baital	4.88	12	*e*P	Pb	13 38 22.0	+1.1
	3.1nm,0.7s						
BTLS				*e*S	Sb	13 39 25.3	+5.6
	2.1nm,0.3s						
BTLS	Baital	4.88	12	Pg	Pb	13 38 22.0	+1.1
	3.1nm,0.7s						
BTLS				Lg	Lg	13 39 25.3	
	2.1nm,0.3s						
SATY	Saty	5.16	55	*e*P	Pb	13 38 27.3	+1.5
	4.7nm,0.7s						
SATY				*e*S	Sg	13 39 34.9	-6.1
	13nm,0.9s						

SATY	Saty	5.16	55	Pg	Pb	13 38 27.3	+1.5
	4.7nm,0.7s						
SATY				Lg	Lg	13 39 34.9	
	13nm,0.9s						
ARXS	Arharly	5.52	43	eP	Pb	13 38 34.2	+2.2
	7.8nm,0.8s						
ARXS				eS	Sg	13 39 46.8	-5.9
	9.3nm,0.5s						
ARXS	Arharly	5.52	43	Pg	Pb	13 38 34.2	+2.2
	7.8nm,0.8s						
ARXS				Lg	Lg	13 39 46.8	
	9.3nm,0.5s						
KPKS	Kokpek	5.54	53	eP	Pb	13 38 34.5	+2.2
	6.7nm,1.1s						
KPKS				eS	Sg	13 39 47.1	-6.3
	15nm,1.1s						
UZB	Uzynbulak	5.59	57	Pg	Pb	13 38 34.6	+1.4
	3.1nm,0.3s						
UZB				Lg	Lg	13 39 47.7	
	6.4nm,0.4s						
MNBS	Baschi	5.74	47	eP	Pb	13 38 37.8	+2.1
	3.0nm,0.8s						
MNBS				eS	Sg	13 39 53.1	-6.6
	7.9nm,0.5s						
MNBS	Baschi	5.74	47	Pg	Pb	13 38 37.8	+2.1
	3.0nm,0.8s						
MNBS				Lg	Lg	13 39 53.1	
	7.9nm,0.5s						
SHLS	Shalkode	5.88	58	Pg	Pg	13 38 45.8	-2.2
	3.0nm,0.5s						
SHLS				Lg	Lg	13 40 06.3	
	19nm,0.7s						
PDGK	Podgornoye	5.98	57	Pg	Pb	13 38 42.5	+2.7
	2.5nm,2.7s						
PDGK				Lg	Lg	13 39 59.3	
	7.4nm,1.0s						
PDGK	Podgornoye	5.98	57	⇑Pg	Pb	13 38 44.2	+4.4
	2.5nm,0.8s						
PDGK				⇑Lg	Lg	13 39 59.0	
	8.8nm,0.8s						

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*NEIC **09** 13:55:48.7±0.6, 6°.4N±0°.2×73°.3W±0°.2, h139^{km}±13^{km}, mb4.3/1, Error ellipse: s-maj=31.4km s-min=11.9km az=129.0*

*IDC **09** 13:55:48.3±1.0, 6°.48N×73°.36W, h129^{km}±13^{km}, mb3.9/2, mb1 4.1/6, mb1mx3.4/30, mbtmp4.4/6, Error ellipse: s-maj=33.5km s-min=13.3km az=129.0*

*RSNC **09** 13:55:49.5±2.2, 6°.58N×73°.53W, h107^{km}±9^{km}, ML3.5, Mw3.7, Fault plane solution: NP1:φs51.00000°, δ58.00000°, λ132.00000°.*

ISC 09 13:55:47.0±0.7**, 6°.58N**±0°.03×**73°.49W**±0°.03**, h123**^{km}±6^{km}**, n57, σ1^{s}.68**/100**, 8C-4D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	Barichara	0.31	88	⇑iP	Pn	13 56 05.8	+1.2
BARC				eS	Sn	13 56 17.6	-0.2
BRRC	Barranca, Sant	0.57	337	⇑iP	Pn	13 56 06.5	+0.8
BRRC				eS	Sn	13 56 19.1	-0.7
BRRC				i		13 56 20.8	
	comp=Z,548nm,0.1s						
RUSC	La Rusia	0.79	149	⇑iP	Pn	13 56 08.8	+0.8
RUSC				eS	Sn	13 56 23.9	+0.2
RUSC				i		13 56 26.0	
	comp=Z,792nm,0.4s						
PTBC	PUERTO BERRIO,	0.96	268	⇓iP	Pn	13 56 08.7	-0.3
PTBC				eS	Sn	13 56 23.2	-2.2
PTBC				i		13 56 24.8	
	comp=Z,808nm,0.6s						
SPBC	San Pablo de B	1.09	212	⇑iP	Pn	13 56 10.8	+0.5
SPBC				eS	Sn	13 56 27.6	-0.3
SPBC				i		13 56 33.0	
	comp=Z,1μm,0.2s						
PAMC	Pamplona, Colo	1.09	46	⇓iP	Pn	13 56 12.1	+1.4
PAMC				eS	Sn	13 56 29.2	+0.7
PAMC				i		13 56 31.4	
	comp=Z,468nm,0.5s						
OCAC	Ocana	1.66	6	⇓iP	Pn	13 56 17.7	+1.0
OCAC				eS	Sn	13 56 40.3	+1.1
OCAC				i		13 56 49.4	
	comp=Z,661nm,0.4s						
TAMC	Tame, Arauca	1.69	95	⇓iP	Pn	13 56 18.6	+1.6
TAMC				i		13 56 19.0	
	comp=Z,550nm,0.4s						
TAMC				eS	Sn	13 56 40.3	+0.5
NORC	Norcasia	1.70	234	⇑iP	Pn	13 56 17.5	+0.4
NORC				eS	Sn	13 56 40.3	+0.3
NORC				i		13 56 42.8	
	comp=Z,642nm,0.2s						
ROSC	El Rosal	1.92	206	P	Pn	13 56 22.1	+2.2
	comp=Z,84nm,0.3s,baz=105,slow=4.2,SNR=68						
ROSC				S	Sn	13 56 46.5	+1.5
	comp=Z,70nm,0.3s,baz=188,slow=22,SNR=13						
ROSC	El Rosal	1.92	206	Pn	Pn	13 56 22.0	+2.0
ROSC	El Rosal	1.92	206	⇑iP	Pn	13 56 22.1	+2.2
ROSC				i		13 56 24.7	
	comp=Z,210nm,0.2s						
ROSC				eS	Sn	13 56 45.9	+0.8
CHIC	Chingaza	1.95	187	eP	Pn	13 56 21.0	+0.5
CHIC				eS	Sn	13 56 46.7	+0.8
CHIC				i		13 56 52.1	
	comp=Z,114nm,0.2s						
HELC	Santa Helena	2.06	259	eP	Pn	13 56 22.8	+1.1
HELC				eS	Sn	13 56 48.6	+0.3
HELC				i		13 56 53.5	
	comp=Z,320nm,0.3s						
SMLC	San Martn de	2.28	345	eP	Pn	13 56 25.3	+1.1
SMLC				eS	Sn	13 56 53.2	+0.6
SMLC				i		13 57 02.4	
	comp=Z,379nm,0.3s						
GUY2C	Guyana, Caldas	2.30	234	⇑eP	Pn	13 56 26.3	+1.5
GUY2C				eS	Sn	13 56 54.3	+0.6
GUY2C				i		13 57 04.0	
	comp=Z,369nm,0.5s						
UREC	San Jos de Ur	2.34	300	eP	Pn	13 56 25.0	+0.1
UREC				eS	Sn	13 56 53.2	-0.8
UREC				i		13 57 01.5	
	comp=Z,319nm,0.2s						
RREF	El Recreo	2.49	228	eP	Pn	13 56 28.9	+1.5
RREF				eS	Sn	13 56 58.9	+0.6
RREF				i		13 57 03.9	
	comp=Z,210nm,0.3s						
CBOC	Ciudad Bolivar	2.61	254	eP	Pn	13 56 29.9	+1.4
CBOC				eS	Sn	13 57 00.8	+0.5
CBOC				i		13 57 04.0	
	comp=Z,150nm,0.5s						
TOLC	Tolima	2.69	223	eP	Pn	13 56 31.2	+1.5
TOLC				eS	Sn	13 57 03.2	+0.7
TOLC				i		13 57 08.4	
	comp=Z,149nm,0.5s						
PTGC	Puerto Gaitan,	2.72	150	eP	Pn	13 56 30.4	+0.5
PTGC				eS	Sn	13 56 59.9	-2.8
PTGC				i		13 57 08.0	
	comp=Z,168nm,0.5s						
ANIL	Santa Ana	2.81	223	eP	Pn	13 56 32.3	+1.0
ANIL				eS	Sn	13 57 06.4	+1.1
SOCV	Socops	3.11	57	eP	Pn	13 56 36.4	+1.4
SOCV				eS	Sn	13 57 11.1	-0.8
ORTC	Ortega, Tolima	3.18	213	eP	Pn	13 56 36.9	+1.1
ORTC				i		13 56 38.6	
	comp=Z,122nm,0.3s						
ORTC				eS	Sn	13 57 14.4	+1.0
PLMC	San Jos del P	3.24	239	eP	Pn	13 56 37.8	+1.2
PLMC				eS	Sn	13 57 11.1	-3.8
PLMC				i		13 57 19.6	
	comp=Z,192nm,0.4s						
ARGC	Ariguani, Magd	3.34	347	eP	Pn	13 56 40.7	+2.8
ARGC				eS	Sn	13 57 19.1	+1.8
ARGC				i		13 57 33.1	
	comp=Z,109nm,0.3s						
SDV	Santo Domingo	3.64	51	P	Pn	13 56 43.9	+1.8
	comp=Z,38nm,0.3s,baz=189,slow=5.4,SNR=72						
SDV				S	Sn	13 57 23.5	-1.2
	comp=Z,34nm,0.3s,baz=265,slow=20,SNR=27						
SDV	Santo Domingo	3.64	51		Pn	13 56 43.5	+1.4
SDV	Santo Domingo	3.64	51	eP	Pn	13 56 43.5	+1.4
SDV				eS	Sn	13 57 23.9	-0.7
SDV				i		13 57 27.2	
	comp=Z,109nm,0.3s						
YOTC	Yotoco, Valle	3.84	228	⇑eP	Pn	13 56 45.4	+0.7
YOTC				eS	Sn	13 57 27.0	-2.2
CVALL	Valledupar, Ce	3.91	3	eP	Pn	13 56 46.1	+0.6
CVALL				eS	Sn	13 57 31.8	+1.0
CVALL				i		13 57 40.5	
	comp=Z,162nm,0.2s						
ELOV	Elorza	4.00	84	eP	Pn	13 56 47.7	+1.0
ELOV				eS	Sn	13 57 32.0	-0.9
PIZC	Pizarro, Choco	4.17	248	eP	Pn	13 56 51.0	+2.1
PIZC				eS	Sn	13 57 37.0	+0.1
PIZC				i		13 57 50.5	
	comp=Z,57nm,0.4s						
PTAC	Punta Ardita,	4.32	278	eP	Pn	13 56 52.2	+1.2
PTAC				i		13 56 54.3	
	comp=Z,106nm,0.3s						
PTAC				eS	Sn	13 57 40.0	-0.6
CAPC	Capurgana	4.34	298	eP	Pn	13 56 50.5	-0.7
CAPC				eS	Sn	13 57 36.0	-4.9
CAPC				i		13 57 40.5	
	comp=Z,39nm,0.4s						
MACC	Macarena, Meta	4.42	185	eP	Pn	13 56 51.9	-0.4
MACC				eS	Sn	13 57 40.0	-3.0
MACC				i		13 57 49.2	
	comp=Z,51nm,0.5s						
MARP	Paez Belalcaza	4.45	214	eP	Pn	13 56 53.8	+0.8
MARP				eS	Sn	13 57 42.0	-2.1
CRJC	Cerrejon, Guaj	4.45	8	eP	Pn	13 56 53.5	+0.7
CRJC				eS	Sn	13 57 44.9	+1.0
CRJC				i		13 57 51.8	
	comp=Z,110nm,0.4s						
SMRC	Santa Marta, M	4.61	351	eP	Pn	13 56 56.7	+1.9
SMRC				eS	Sn	13 57 46.8	-0.8
SMRC				i		13 57 56.7	
	comp=Z,48nm,0.4s						
GARC	Garzon, Huila	4.80	205	eP	Pn	13 56 57.6	0.0
GARC				eS	Sn	13 57 51.0	-1.4
GARC				i		13 57 59.9	
	comp=Z,56nm,0.3s						
PCON	Cinco Dias	5.12	215	eP	Pn	13 57 04.2	+1.9
PCON				eS	Sn	13 57 57.0	-3.6
PCON				i		13 58 10.0	
	comp=Z,14nm,0.4s						
DABV	Dabajuro	5.16	33	eP	Pn	13 57 02.7	+0.6
DABV				eS	Sn	13 57 59.0	-1.6
URIC	Uribia, Colomb	5.30	16	eP	Pn	13 57 04.8	+0.7
URIC				eS	Sn	13 58 00.2	-3.9
URIC				i		13 58 19.3	
	comp=Z,23nm,0.3s						
FLOC	Florencia	5.41	204	eP	Pn	13 57 06.1	+0.5
FLOC				eS	Sn	13 58 02.2	-4.6
FLOC				i		13 58 09.4	
	comp=Z,18nm,0.5s						
BBAC	Balboa, Cauca	5.88	220	eP	Pn	13 57 14.4	+2.4
BBAC				eS	Sn	13 58 16.0	-2.4
BBAC				i		13 58 23.8	
	comp=Z,10nm,0.4s						
BCIP	Isla Barro Col	6.79	293	Pn	Pn	13 57 23.6	-0.6
PCRV	Puerto La Cruz	9.46	67	P	Pn	13 57 59.8	-0.5
	comp=Z,2.0nm,0.3s,baz=242,slow=8.1,SNR=5.3						
PCRV				S	Sn	13 59 41.2	-3.8
	comp=Z,1.2nm,0.3s,baz=351,slow=18,SNR=1.7						
PLCV	Puerto La Cruz	9.50	67		Sn	13 59 41.2	-4.6
GTBY	Guantanamo Bay	13.36	353	Pn	P	13 58 55.9	-1.1
SJG	San Juan	13.52	31	P	Pn	13 58 53.2	-0.7
	comp=Z,4.2nm,0.3s,baz=63,slow=5.3,SNR=3.1						
TEIG	Tepich	19.75	315	P	Pn	14 00 10.3	+0.3
	comp=Z,0.7nm,0.3s,baz=97,slow=8.1,SNR=1.7						
TEIG	Tepich	19.75	315	IAmb	IAmb	14 00 32.4	
	comp=Z,17nm,1.2s						
YKA	Yellowknife Ar	63.36	340	P	P	14 06 04.1	+1.1
	comp=Z,0.9nm,0.6s,baz=129,slow=7.5,SNR=17						
ARCES	ARCESS Array B	87.03	20	P	P	14 08 19.7	+1.3
	comp=Z,3.6nm,1.0s,baz=264,slow=3.5,SNR=1.3						
MKAR	Makanchi Array	122.67	20	PKP	PKiKP	14 14 29.8	+0.9
	comp=Z,0.1nm,0.3s,baz=293,slow=2.7,SNR=5.1						
ASAR	Alice Springs	148.67	234	PKPbc	PKPbc	14 15 20.4	-0.4
	comp=Z,0.3nm,0.9s,baz=119,slow=3.3,SNR=1.8						
WRA	Warramunga Arr	149.90	241	PKPbc	PKPbc	14 15 23.8	-0.1
	comp=Z,0.1nm,0.3s,baz=105,slow=3.2,SNR=5.5						

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*NDI **09** 14:13:00.1±4.1, 9°.80N×93°.22E, h18^{km}±75^{km}, mb4.6, ML4.1, mb4.7(NEIC)*

*BJI **09** 14:13:03.5±0.0, 9°.77N×92°.85E, h51^{km}, mB5.0/36, mb4.8/59, Ms4.3/11, Ms7 4.0/14*

*NEIC **09** 14:13:06.4±1.6, 10°.10N±0°.07×92°.93E±0°.10, h44^{km}±7^{km}, mb4.7/26, Error ellipse: s-maj=14.6km s-min=9.0km az=61.0, confirmed*

*DJA **09** 14:13:07.2±0.7, 10°N±5°×9°3E±°, h47^{km}±7^{km}, M4.7/12, mB5.1/3, mb4.9/12, MLv4.6/1, Mw(mB)4.5/3*

*IDC **09** 14:13:07.3±1.6, 10°.02N×92°.89E, h53^{km}±12^{km}, mb4.1/20, mb1 4.2/23, mb1mx4.0/64, mbtmp4.4/23, ML4.2/3, MS3.7/23, Ms1 3.7/23, ms1mx3.6/43, Error ellipse: s-maj=20.2km s-min=10.6km az=56.0*

ISC 09 14:13:06.4±0.4**, 10°.04N**±0°.05×**92°.90E**±0°.05**, h43**^{km}**, n150, σ1^{s}.56**/138**, mb4.6**/49**, MS3.7**/23**, 2C-1D, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PBA	Port Blair	1.61	355	eP	Pn	14 13 32.4	-0.1
PBA				eS	Sn	14 13 53.5	+1.4
PBA				IAML		14 14 01.6	
	comp=E,3μm,0.8s						
PBA				IAML		14 14 03.1	
	comp=N,1μm,0.0s						
PBA	Port Blair	1.61	355	Pn	Pn	14 13 31.6	-0.8
DGPR	DIGLIPUR	3.12	1	eP	Pn	14 13 55.5	+2.4
DGPR				eS	Sn	14 14 33.3	+4.1
DGPR				IAML		14 14 47.8	
	comp=E,627nm,0.3s						
DGPR				IAML		14 14 49.7	
	comp=N,1μm,1.6s						
PKDT	Phuket	5.78	111	P	Pn	14 14 38.0	+8.3
LHMI	Lhok Sumawe	6.24	140	Pn	Pn	14 14 38.9	+2.9
TRTT	Trang	7.06	108	P	Pn	14 14 48.0	+0.8
	comp=N,0.2nmcomp=N,45nm,0.7s						
PHET	Kaeng Krachan	7.19	66	P	Pn	14 14 53.3	+4.3
	comp=N,0.5nmcomp=N,1μmcomp=N,168nm,0.8s						
PATY	Pattaya	8.32	69	P	Pn	14 15 09.0	+4.5
	comp=N,0.7nmcomp=N,9μmcomp=N,102nm,0.7s						
UTHA	Uthaitani	8.42	49	P	Pn	14 15 10.4	+4.5
	comp=N,374nmcomp=N,50nm,0.7s						
KULM	Kulim	9.01	121	Pn	Pn	14 15 15.0	+0.9
PSI	Prapat	9.35	140	P	Pn	14 15 21.6	+2.7
	comp=N,1.3nm,0.3s,baz=0.1,slow=15,SNR=2.4						
PSI				S	Sn	14 17 05.0	+2.2
	comp=N,0.6nm,0.3s,baz=360,slow=19,SNR=2.4						
PSI				LR	LR	14 19 16.2	
	comp=N,292nm,21.4s,slow=39						
RPSI	Rantau Prapat	9.44	140		Pn	14 15 21.6	+1.7
RPSI					Sn	14 17 05.0	+0.4
MHMT	Maesarieng	9.45	31	P	Pn	14 15 23.2	+3.2
	comp=N,62nm,1.0s						
IPM	Ipoh	9.77	124	Pn	Pn	14 15 25.6	+1.1
SRAK	Srakaew	9.78	65	P	Pn	14 15 37.7	+13
SUKH	Sukhothai	9.87	41	P	Pn	14 15 31.5	+5.6
	comp=N,24nm,0.8s						
PHIT	Phitsanulok	10.19	45	P	Pn	14 15 35.5	+5.3
	comp=N,416nmcomp=N,53nm,0.8s						
CMAR	Chiang Mai Arr	10.21	34	P	Pn	14 15 33.4	+2.9
	comp=N,1.2nm,0.3s,baz=227,slow=14,SNR=72						
CMAR				LR	LR	14 19 34.8	
	comp=N,425nm,21.4s,baz=258,slow=38						
CMMT	Chiang Mai	10.51	33	P	Pn	14 15 37.9	+3.4
	comp=N,199nmcomp=N,16nm,1.1s						
CHAI	Chaiyaphum	10.60	56	P	Pn	14 15 41.0	+5.1
LAMP	Lampang	10.66	37	P	Pn	14 15 42.6	+5.9
	comp=N,291nmcomp=N,32nm,0.8s						
UTTA	Uttaradit	10.67	43	P	Pn	14 15 52.7	+16
PALK	Pallekele	12.37	258	P	Pn	14 15 59.1	-0.9
	comp=N,1.0nm,0.3s,baz=177,slow=13,SNR=5.2						
PALK				S	Sn	14 18 04.7	-12
	comp=N,3.0nm,0.3s,baz=274,slow=21,SNR=14						
PALK				LR	LR	14 20 24.0	
	comp=N,484nm,22.0s,baz=173,slow=35						
SAIH	SAIHA	12.38	0	eP	Pn	14 15 58.6	-1.7
SAIH				IAmb	IAmb	14 16 02.7	
	comp=Z,7.7nm,0.4s						
MDRS	Chennai	12.76	285	eP	Pn	14 16 05.0	-0.4
MDRS				IAmb	IAmb	14 16 07.2	
	comp=Z,108nm,1.2s						
BOK	Bokaro	15.23	335	eP	Pn	14 16 38.0	-0.7
BOK				IAmb	IAmb	14 16 39.2	
	comp=Z,17nm,1.3s						
SLVN	Son La	15.43	42		P	14 16 46.3	+1.1
SLVN				IAmb	IAmb	14 16 48.3	
	comp=Z,40nm,0.9s						
SHL	Shillong	15.47	357	eP	Pn	14 16 38.6	-3.4
KOHI	KOHIMA	15.64	4	eP	Pn	14 16 42.2	-1.9
KOHI				IAmb	IAmb	14 16 44.5	
	comp=Z,83nm,0.5s						
HYB	Hyderabad	15.74	299	i P	Pn	14 16 45.0	-0.3
HYB				eS	Sn	14 19 36.0	-2.9
MOKO	MOKOCHONG	16.27	5	eP	Pn	14 16 50.3	-1.8
MOKO				IAmb	IAmb	14 16 54.9	
	comp=Z,91nm,0.4s						
TEZP	TEZPUR	16.49	360	eP	Pn	14 16 52.6	-2.2
TEZP				IAmb	IAmb	14 16 55.2	
	comp=Z,12nm,0.7s						
ZIRO	ZIRO	17.42	3	eP	Pn	14 17 04.4	-2.2
ZIRO				IAmb	IAmb	14 17 05.2	
	comp=Z,37nm,0.8s						
ODAN	Odare	17.52	343	eP	P	14 17 09.1	+0.5
	comp=Z,57nm,1.2s						
KMI	Kunming	17.68	31	⇑P	P	14 17 14.6	+4.3
KMI				pmax	pmax		
	comp=Z,14nm,0.9s						
KMI				LR	LR		
	comp=N,280nm,21.5s						
KMI				LR	LR		
	comp=E,230nm,21.5s						
KMI				LR	LR		
	comp=Z,340nm,20.9s						
RAMN	Ramite	17.84	341	eP	P	14 17 14.6	+2.5
	comp=Z,28nm,0.6s						
TAPN	Taplejung	17.90	345	eP	P	14 17 13.9	+1.1
	comp=Z,99nm,0.9s						
QIZ	Qiongzhong	18.66	59	P	P	14 17 20.6	-0.4
QIZ				S	Sn	14 20 47.3	-2.3
QIZ				LR	LR		
	comp=Z,270nm,3.6s						
QIZ				LR	LR		
	comp=Z,260nm,7.3s						
PKI	Pulchoki	18.82	339	eP	Pn	14 17 24.6	+0.9
	comp=Z,40nm,0.9s						
PKIN	Phulchoki	18.82	339	eP	Pn	14 17 24.7	+0.9
	comp=Z,42nm,1.1s						
DMN	Daman	18.96	338	eP	Pn	14 17 27.0	+1.6
	comp=Z,53nm,1.0s						
GUN	Gumba	18.97	341	eP	Pn	14 17 26.3	+0.7
	comp=Z,34nm,0.8s						
KKN	Kakani	19.06	339	eP	Pn	14 17 27.2	+0.6
	comp=Z,26nm,0.9s						
GKN	Gorkha	19.49	338	eP	Pn	14 17 31.7	+0.1
	comp=Z,39nm,0.7s						
LSA	Lhasa	19.63	355	P	P	14 17 32.1	+0.1
LSA				pmax	pmax		
	comp=Z,53nm,1.7s						
BHPL	Bhopal	19.78	314	eP	P	14 17 33.9	+0.7
BHPL				IAmb	IAmb	14 17 45.2	
	comp=Z,5.8nm,0.5s						
DANN	Dangsing	20.14	336	eP	Pn	14 17 39.0	-0.4
	comp=Z,49nm,0.7s						
GYA	Guiyang	20.89	37	⇓P	P	14 17 45.9	+0.6
GYA				sP	sP	14 18 02.1	+1.5
GYA				S	S	14 21 30.6	-5.4
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				LR	LR		
	comp=Z,260nm,18.5s						
STKI	Sintang	20.97	117	P	P	14 17 33.5	-13
CD2	Chengdu	23.09	24	P	P	14 18 07.6	-1.0
CD2				pmax	pmax		
	comp=Z,60nm,0.9s						
ENH	Enshi	25.39	35	P	P	14 18 28.8	-1.0
ENH				IAmb	IAmb	14 18 31.2	
	comp=Z,37nm,1.0s						
SMLA	Simla	25.57	327	eP	P	14 18 32.4	+0.8
SMLA				IAmb	IAmb	14 18 46.8	
	comp=Z,28nm,1.6s						
H08S3	Diego Garcia H	26.86	230	T	T	14 46 09.6	
	baz=50,slow=76						
H08S2	Diego Garcia H	26.86	230	T	T	14 46 12.0	
	baz=50,slow=76						
H08S1	Diego Carcia H	26.88	230	T	T	14 46 19.7	
	baz=50,slow=76						
LZH	Lanzhou	27.77	19	eP	P	14 18 52.0	+0.5
LZH				pP	pP	14 19 03.6	+1.0
LZH				sP	sP	14 19 09.7	+2.1
LZH				pmax	pmax		
	comp=Z,26nm,1.0s						
XAN	Xi'an	28.05	29	P	P	14 18 52.4	-1.4
XAN				S	S	14 23 32.3	-3.3
XAN				pmax	pmax		
	comp=Z,20nm,1.0s						
XAN				pmax	pmax		
	comp=Z,270nm,5.3s						
XAN				LR	LR		
	comp=Z,280nm,16.5s						
XAN				LR	LR		
	comp=Z,250nm,19.4s						
XAN				LR	LR		
	comp=Z,440nm,25.5s						
GTA	Gaotai	29.89	11	⇑P	P	14 19 10.8	+0.5
GTA				pP	pP	14 19 21.9	+0.4
GTA				sP	sP	14 19 27.2	+0.7
GTA				pmax	pmax		
	comp=Z,16nm,1.0s						
NJ2	Nanjing	32.49	44	eP	P	14 19 33.4	+0.3
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
KSH	Kashi	33.01	336	P	P	14 19 36.2	-1.5
KSH				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KSH				pmax	pmax		
	comp=Z,320nm,5.2s						
WMQ	Urumqi	33.96	353	eP	P	14 19 47.0	+1.2
WMQ				pmax	pmax		
	comp=Z,14nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,120nm,4.9s						
HHC	Hu-ho-hao-te	34.85	25	eP	P	14 19 53.5	-0.1
HHC				pmax	pmax		
	comp=Z,25nm,1.0s						
HHC				pmax	pmax		
	comp=Z,110nm,5.3s						
SHLS	Shalkode	35.02	343	eP	P	14 19 54.8	-0.2
	comp=Z,3.9nm,0.6s,baz=343						
UZB	Uzynbulak	35.14	342	eP	P	14 19 56.8	+0.7
	baz=342						
SATY	Saty	35.24	341	eP	P	14 19 57.7	+0.7
	comp=Z,6.7nm,0.8s,baz=341						
KPKS	Kokpek	35.53	342	eP	P	14 19 59.8	+0.3
	comp=Z,8.3nm,0.9s,baz=342						
TNSS	Tian-Shan	35.70	340	eP	P	14 20 01.8	+0.5
	baz=339						
MDOK	Medeo	35.78	340	eP	P	14 20 02.5	+0.9
	baz=340						
AAA	Alma-Ata	35.87	340	eP	P	14 20 03.2	+1.0
	baz=340						
TKM2	Tokmak 2	36.08	338	P	P	14 20 05.4	+1.1
	SNR=6.0						
KBK	Karagaybulak	36.09	337	P	P	14 20 06.3	+1.9
	SNR=6.3						
AML	Almayashu	36.14	335	P	P	14 20 06.4	+1.3
	SNR=8.9						
AAK	Ala-Archa	36.25	337	P	P	14 20 06.3	+0.7
	comp=Z,4.9nm,1.0s,baz=182,slow=5.4,SNR=12						
AAK	Ala-Archa	36.25	337	P	P	14 20 07.5	+1.8
	SNR=6.9						
AAK	Ala-Archa	36.25	337	P	P	14 20 06.8	+1.2
AAK				IAmb	IAmb	14 20 08.8	
	comp=Z,8.1nm,1.1s						
BJT	Baijiatuau	36.32	31	P	P	14 20 06.5	+0.4
BJT				IAmb	IAmb	14 20 07.8	
	comp=Z,8.2nm,0.7s						
BJI	Beijing	36.34	31	P	P	14 20 07.1	+0.9
BJI				pmax	pmax		
	comp=Z,11nm,0.7s						
BJI				LR	LR		
	comp=Z,310nm,32.2s						
CHKK	Chushkaly	36.41	340	eP	P	14 20 07.5	+0.6
	baz=340						
EKS2	Erkin-Say	36.55	336	P	P	14 20 10.2	+1.9
	SNR=6.8						
KUU	Kurty	36.66	340	eP	P	14 20 08.6	-0.4
	comp=Z,10nm,1.0s,baz=339						
USP	Ospenovka	36.78	337	P	P	14 20 11.0	+0.9
	SNR=17						
SGDS	Sogindy	36.89	338	eP	P	14 20 11.2	+0.2
	baz=337						
TDK	Taldyqorghan	37.01	343	eP	P	14 20 12.4	+0.5
	baz=342						

MK31	**Makanchi Array**	37.73	348	P	P	14 20 17.6	-0.4
MK31				IAmb	IAmb	14 20 18.7	
	comp=Z,6.0nm,0.8s						
MKAR	**Makanchi Array**	37.73	348	P	P	14 20 17.9	-0.1
	comp=Z,7.7nm,0.7s,baz=167,slow=8.2,SNR=90						
MKAR				PcP	PcP	14 22 34.3	-0.1
	comp=Z,0.5nm,0.6s,baz=210,slow=4.8,SNR=2.2						
MKAR				LR	LR	14 37 57.3	
	comp=Z,62nm,21.3s,baz=152,slow=40						
MKAR	**Makanchi Array**	37.73	348	P	P	14 20 17.7	-0.3
IUG	**Iuzhnay**	37.76	332	*e*P	P	14 20 19.2	+0.8
	baz=331						
DZA	**Taraz**	37.76	334	*e*P	P	14 20 18.9	+0.5
	baz=333						
ZSN	**Zaisan**	37.90	351	*e*P	P	14 20 19.5	+0.1
	comp=Z,5.0nm,0.8s,baz=351						
KK31	**Karatay Array**	38.29	333	P	P	14 20 22.5	-0.3
KKAR	**Karatay Array**	38.29	333	P	P	14 20 22.8	0.0
KKAR	**Karatay Array**	38.29	333	P	P	14 20 22.7	-0.1
BTLS	**Baital**	38.47	338	*e*P	P	14 20 24.4	+0.1
	comp=Z,4.3nm,0.8s,baz=338						
DL2	**Dalian**	38.54	37	P	P	14 20 26.2	+1.3
DL2				pmax	pmax		
	comp=Z,56nm,1.0s						
SONM	**Songino Array**	39.36	14	P	P	14 20 31.8	0.0
	comp=Z,6.3nm,0.8s,baz=202,slow=7.7,SNR=25						
SONM				PcP	PcP	14 22 41.1	+1.5
	comp=Z,1.7nm,0.7s,baz=208,slow=1.0,SNR=4.5						
SONM				LR	LR	14 39 19.6	
	comp=Z,136nm,19.5s,baz=162,slow=40						
ULN	**Ulaanbaatar**	39.55	15	P	P	14 20 32.3	-1.2
SEM	**Semipalatinsk**	41.59	348	*e*P	P	14 20 49.2	-1.1
	baz=348						
KSRS	**Korea Array**	41.69	43	P	P	14 20 50.2	-0.9
	comp=Z,1.6nm,0.5s,baz=243,slow=8.4,SNR=7.8						
KSRS				LR	LR	14 38 00.6	
	comp=Z,65nm,20.3s,baz=262,slow=36						
GEYT	**Alibeck**	41.78	317	P	P	14 20 52.0	+0.1
	comp=Z,2.4nm,0.5s,baz=166,slow=9.0,SNR=4.1						
GEYT				LR	LR	14 39 20.5	
	comp=Z,87nm,22.0s,baz=140,slow=38						
GYA0B	**ALIBECK ARRAY**	41.78	317	P	P	14 20 53.1	+1.2
GYA0B				IAmb	IAmb	14 21 12.4	
	comp=Z,6.6nm,0.8s						
JNU	**Nakatsue**	41.78	51	LR	LR	14 38 36.0	
	comp=Z,125nm,18.1s,baz=206,slow=37						
KURK	**Kurchatov**	42.23	347	P	P	14 20 54.4	-0.9
KURK				IAmb	IAmb	14 20 56.3	
	comp=Z,8.6nm,0.8s						
TLY	**Talaya**	42.44	10	LR	LR	14 41 11.7	
	comp=Z,60nm,20.4s,baz=184,slow=40						
BRZS	**Berezniki**	43.21	341	*e*P	P	14 21 03.2	0.0
	comp=Z,6.7nm,1.0s,baz=341						
CN2	**Changchun**	43.90	34	*e*P	P	14 21 08.7	-0.2
CN2				pmax	pmax		
	comp=Z,20nm,0.9s						
ZALV	**Zalesovo Beam**	44.27	353	P	P	14 21 11.5	-0.2
	comp=Z,3.4nm,0.3s,baz=176,slow=9.2,SNR=25						
BRVK	**Borovoye**	46.62	341	P	P	14 21 30.2	-0.1
BRVK				IAmb	IAmb	14 21 31.0	
	comp=Z,6.9nm,0.8s						
RAYN	**Ar Rayn**	47.10	293	P	P	14 21 36.0	+1.3
RAYN				IAmb	IAmb	14 21 37.8	
	comp=Z,3.2nm,0.7s						
USRK	**Ussuriysk Ar.**	47.92	38	P	P	14 21 40.4	-0.2
	comp=Z,3.2nm,0.8s,baz=253,slow=7.4,SNR=2.6						
USRK				LR	LR	14 42 35.9	
	comp=Z,41nm,20.1s,baz=235,slow=37						
MJAR	**Matsushiro Arr**	48.66	50	LR	LR	14 42 32.2	
	comp=Z,61nm,22.0s,baz=230,slow=36						
ATD	**Arta Tunnel**	49.14	277	LR	LR	14 39 59.4	
	comp=Z,66nm,19.9s,baz=58,slow=33						
AKTO	**Aktyubinsk**	49.47	331	P	P	14 21 52.5	+0.1
	baz=120,slow=16						
WB0	**Warramunga Arr**	50.46	126	P	P	14 21 59.7	-0.7
WRA	**Warramunga Arr**	50.51	126	P	P	14 22 00.1	-0.7
	comp=Z,11nm,0.7s,baz=306,slow=8.5,SNR=115						
WRA				PcP	PcP	14 23 18.2	-0.2
	comp=Z,0.8nm,0.6s,baz=312,slow=3.3,SNR=2.2						
WRA				ScP	ScP	14 27 08.6	-2.6
	comp=Z,0.5nm,0.8s,baz=328,slow=4.0,SNR=5.2						
WRA	**Warramunga Arr**	50.51	126	P	P	14 21 59.7	-1.0
WB2	**Warramunga Arr**	50.52	126	P	P	14 21 60.0	-0.9
WC3	**Warramunga Arr**	50.55	126	P	P	14 22 00.5	-0.5
WR0	**Warramunga Arr**	50.68	126	P	P	14 22 01.4	-0.7
ASAR	**Alice Springs**	52.24	130	P	P	14 22 13.0	-0.7
	comp=Z,8.0nm,0.7s,baz=304,slow=7.0,SNR=196						
ASAR				PcP	PcP	14 23 24.6	-0.2
	comp=Z,1.5nm,0.6s,baz=315,slow=4.0,SNR=6.4						
ASAR				ScP	ScP	14 27 15.9	-2.6
	comp=Z,1.0nm,0.8s,baz=308,slow=4.3,SNR=6.8						
ASAR	**Alice Springs**	52.24	130	P	P	14 22 12.9	-0.8
AS31	**Alice Springs**	52.24	130	P	P	14 22 12.7	-1.0
ARU	**Arti**	53.43	337	P	P	14 22 21.7	-0.2
	comp=Z,0.6nm,0.3s,baz=121,slow=5.9						
KMBO	**Kilima Mbogo**	56.48	262	LR	LR	14 44 03.4	
	comp=Z,82nm,20.1s,baz=91,slow=33						
YAK	**Yakutsk**	58.36	19	P	P	14 22 56.1	-0.9
NRIK	**Noril'sk**	59.34	358	P	P	14 23 03.5	-0.3
	comp=Z,5.8nm,0.7s,baz=142,slow=6.4,SNR=8.8						
NRIK				LR	LR	14 51 49.9	
	comp=Z,57nm,20.0s,baz=227,slow=39						
BRTR	**Keskin Array B**	60.10	310	LR	LR	14 51 44.3	
	comp=Z,36nm,18.5s,baz=104,slow=38						
STKA	**Stephens Creek**	62.48	134	P	P	14 23 25.8	0.0
	comp=Z,3.9nm,0.6s,baz=318,slow=6.2,SNR=10						
STKA				LR	LR	14 54 15.5	
	comp=Z,88nm,18.0s,baz=208,slow=40						
STKA	**Stephens Creek**	62.48	134	P	P	14 23 25.5	-0.2
MA2	**Magadan**	65.44	28	P	P	14 23 44.2	-0.5
MA2				IAmb	IAmb	14 23 46.0	
	comp=Z,13nm,1.0s						
PETK	**Petropavlovsk-**	66.98	36	LR	LR	14 56 26.3	
	comp=Z,33nm,18.0s,baz=267,slow=39						
FINES	**FINESS Array B**	70.24	332	P	P	14 24 14.3	-0.5
	comp=Z,1.1nm,0.6s,baz=94,slow=5.7,SNR=6.1						
FINES	**FINESS Array B**	70.24	332	P	P	14 24 14.0	-0.8
ARCES	**ARCESS Array B**	72.83	340	P	P	14 24 30.1	-0.3
	comp=Z,2.6nm,0.8s,baz=94,slow=4.6,SNR=5.0						
GERES	**GERESS Array B**	75.41	318	P	P	14 24 46.0	0.0
	comp=Z,0.7nm,0.6s,baz=81,slow=6.3,SNR=4.0						
GERES	**GERESS Array B**	75.41	318	P	P	14 24 45.4	-0.6
BOSA	**Boshof**	75.71	237	P	P	14 24 48.2	+0.2
	comp=Z,1.7nm,0.8s,baz=66,slow=5.2,SNR=2.4						
BOSA				LR	LR	14 52 43.0	
	comp=Z,88nm,19.1s,baz=162,slow=31						
BOSA	**Boshof**	75.71	237	IAmb	IAmb	14 25 14.6	
	comp=Z,9.3nm,1.4s						
HFS	**Hagfors**	75.98	330	P	P	14 24 48.3	-0.5
	comp=Z,1.1nm,0.3s,baz=96,slow=6.0,SNR=13						
NOA	**NORSAR Array B**	77.26	330	P	P	14 24 55.0	-1.1
	comp=Z,0.5nm,0.7s,baz=143,slow=1.1,SNR=1.2						
NOA				LR	LR	15 02 50.2	
	comp=Z,41nm,18.1s,baz=265,slow=39						
SPITS	**Spitsbergen Ar**	77.48	348	P	P	14 24 55.9	-1.1
	comp=Z,12nm,1.0s,baz=113,slow=11,SNR=5.8						
TORD	**Torodi Ar. Bea**	88.91	283	LR	LR	15 03 43.6	
	comp=Z,26nm,21.4s,baz=140,slow=34						
IL31		93.21	22	P	P	14 26 14.9	-1.0
IL31				IAmb	IAmb	14 26 37.4	
	comp=Z,8.7nm,1.5s						
ILAR	**Eielson Array**	93.21	22	P	P	14 26 15.1	-1.0
	comp=Z,2.4nm,0.7s,baz=295,slow=4.2,SNR=22						
ILAR				LR	LR	15 13 51.4	
	comp=Z,43nm,19.3s,baz=324,slow=39						
ILAR	**Eielson Array**	93.21	22	P	P	14 26 14.5	-1.6
INK	**Inuvik**	95.26	16	P	P	14 26 24.8	-0.6
INK				IAmb	IAmb	14 26 26.6	
	comp=Z,3.3nm,0.8s						
VNDA	**Vanda**	95.28	168	LR	LR	15 05 45.9	
	comp=Z,135nm,19.8s,baz=303,slow=33						
DBIC	**Dimbokro**	96.43	278	LR	LR	15 07 30.7	
	comp=Z,26nm,21.4s,baz=84,slow=34						
C36M	**Paulatuk**	96.73	12	P	P	14 26 31.4	-0.6
PDAR	**Pinedale Array**	123.58	20	PKP	PKiKP	14 31 59.8	-0.4
	comp=Z,0.7nm,0.8s,baz=164,slow=1.6,SNR=5.4						
TXAR	**Lajitas Array**	137.72	22	PKP	PKiKP	14 32 27.8	-1.1
	comp=Z,0.3nm,0.6s,baz=196,slow=2.6,SNR=3.1						
TXAR				SKP		14 35 57.1	
	comp=Z,1.0nm,1.0s,baz=304,slow=2.1,SNR=5.7						

FUNV ***09*** *14:20:24.7, 10.°85N×62.°18W, h28^{km}, MW3.0*
TRN ***09*** *14:20:24.1, 10.°94N×62.°30W, h65^{km}, MD3.3*
ISC 09 14:20:22.2±1.3**, 10.°87N**±0.°03×**62.°22W**±0.°04**,**
h101^{km}±11^{km}**, n21, σ1^s.45**/38**, 1C, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRN	**Trinidad (W)**	0.84	105	⇑*i*P	Pn	14 20 42.2	+1.2
TRN				*e*S	Sn	14 20 54.2	-0.9
TPP	**Pointe-a-Pierr**	0.94	126	*e*S	Sn	14 20 56.0	-0.9
CRUV	**Carupano**	1.01	259	*e*P	Pn	14 20 44.2	+1.4
CRUV				*e*S	Sn	14 20 56.2	-2.1
TBH	**Brigand Hill**	1.20	109	*e*S	Sn	14 21 03.2	+1.0
GRGR	**Grenville**	1.37	24	*e*P	Pn	14 20 47.4	+0.4
GRGR				*e*S	Sn	14 21 03.6	-2.1
GRGR	**Grenville**	1.37	24	*e*P	Pn	14 20 47.5	+0.5
GRGR				*e*S	Sn	14 21 04.7	-1.1
GCMP	**Grenada, Carri**	1.79	26	*e*P	Pn	14 20 52.4	+0.2
GCMP				*e*S	Sn	14 21 13.5	-1.4
ORIV	**Oritupano**	2.14	213	*e*P	Pn	14 20 57.4	+0.8
ORIV				*e*S	Sn	14 21 22.7	-0.2
PCRV	**Puerto La Cruz**	2.47	254	*e*P	Pn	14 21 02.7	+1.7
PCRV				*e*S	Sn	14 21 29.3	-1.5
SVB	**Belmont**	2.57	22	*e*P	Pn	14 21 03.9	+1.6
SVB				*e*S	Sn	14 21 32.8	-0.3
SVV	**Soufriere Volc**	2.62	22	*e*P	Pn	14 21 04.8	+1.8
RIOV	**Rio Grande**	2.81	172	*e*P	Pn	14 21 06.7	+1.1
RIOV				*e*S	Sn	14 21 37.8	-1.1
MCLT	**Moule a Chique**	3.09	24	*e*P	Pn	14 21 10.2	+1.0
MCLT				*e*S	Sn	14 21 44.6	-0.8
SLB	**Belfond**	3.16	21	*e*S	Sn	14 21 46.8	-0.3
SLBI	**Saint Lucia, B**	3.36	21	*e*P	Pn	14 21 13.7	+0.8
SLBI				*e*S	Sn	14 21 50.3	-1.6
MPOM	**Morne Pois Mar**	3.79	20	*e*P	Pn	14 21 19.6	+0.9
MPOM				*e*S	Sn	14 22 00.8	-1.5
BIM	**Bigot**	3.79	17	*e*P	Pn	14 21 20.2	+1.5
BIM				*e*S	Sn	14 22 00.8	-1.7
BIRV	**Birongo**	4.00	265	*e*P	Pn	14 21 23.4	+2.0
BIRV				*e*S	Sn	14 22 07.3	0.0
TACV	**Tcata**	4.78	262	*e*P	Pn	14 21 33.9	+1.8
TACV				*e*S	Sn	14 22 25.4	-1.0
LUEV	**Luepa**	5.05	171	*e*P	Pn	14 21 36.6	+0.8
LUEV				*e*S	Sn	14 22 30.3	-2.8
BAUV	**El Baul**	6.04	252	*e*P	Pn	14 21 49.9	+0.7
BAUV				*e*S	Sn	14 22 54.0	-3.0

IDC ***09*** *14:43:15.9±5.5, 16.°48S×174.°01W, h0^{km}, mb4.1/4,*
mb1 4.2/4, mb1mx3.8/34, mbtmp4.1/4, Error ellipse:
s-maj=110.1km s-min=50.4km az=66.0
NEIC ***09*** *14:43:23.4±1.4, 16.°8S±0.°2×174.°2W±0.°1, h35^{km}±2^{km},*
mb4.5/9, Error ellipse: s-maj=36.7km s-min=5.1km
az=27.0
ISC 09 14:43:28.4±2.3**, 16.°8S**±0.°4×**173.°8W**±0.°2**, h111**^{km}**, n14,**
σ0^s.67/15**, mb4.3**/7**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	4.33	123		Pn	14 44 31.9	-0.3
URZ	**Urewera**	22.88	199	P	P	14 48 22.9	+0.4
	5.1nm,0.5s,baz=295,slow=4.6,SNR=9.0						
URZ	**Urewera**	22.88	199	P	P	14 48 22.8	+0.4
URZ				IAmb	IAmb	14 48 27.8	
	comp=Z,28nm,1.2s						
BKZ	**Black Stump Fm**	23.90	199	P	P	14 48 31.9	0.0
ARMA	**Armidale**	34.35	240	P	P	14 50 04.7	-0.1
ARMA				IAmb	IAmb	14 50 18.1	
	comp=Z,9.0nm,1.2s						
STKA	**Stephens Creek**	43.06	241	P	P	14 51 17.3	-0.1
	comp=Z,0.7nm,0.5s,baz=83,slow=7.5,SNR=6.1						
STKA	**Stephens Creek**	43.06	241	P	P	14 51 17.7	+0.3
WR0	**Warramunga Arr**	49.01	258	P	P	14 52 04.0	-0.3
WR0				IAmb	IAmb	14 52 30.2	
	comp=Z,5.7nm,1.3s						
WB0	**Warramunga Arr**	49.17	258	P	P	14 52 05.0	-0.4
WB0				IAmb	IAmb	14 52 22.5	
	comp=Z,7.5nm,1.3s						
WB2	**Warramunga Arr**	49.19	258	P	P	14 52 04.9	-0.7
WRA	**Warramunga Arr**	49.20	258	P	P	14 52 04.6	-1.1
	comp=Z,0.4nm,0.4s,baz=95,slow=6.9,SNR=20						
AS31	**Alice Springs**	49.36	253	P	P	14 52 06.5	-0.4
ASAR	**Alice Springs**	49.37	253	P	P	14 52 06.7	-0.2
	comp=Z,5.1nm,0.6s,baz=87,slow=9.1,SNR=147						
ASAR				PcP	PcP	14 53 29.3	+1.4
	comp=Z,0.1nm,0.6s,baz=94,slow=4.0,SNR=1.6						
ASAR	**Alice Springs**	49.37	253	P	P	14 52 06.1	-0.8

JMA ***09*** *15:10:26.3, 24.°07N×121.°81E, h54^{km}±1^{km}, M2.5*
TAP ***09*** *15:10:27.0, 24.°13N×121.°82E, h52^{km}, ML3.3, D*
ISC 09 15:10:27.9±1.2**, 24.°12N**±0.°02×**121.°86E**±0.°02**, h46**^{km}±7^{km}**,**
n78, σ0^s.56/150**, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWD	**Chiawan**	0.25	261	*i* P	Pn	15 10 35.8	-0.3
	baz=255						
TWD				*i* S	Sn	15 10 42.5	+0.5
	baz=255						
NACB	**Ninganchiao**	0.25	283	*e*P	Pn	15 10 35.7	-0.5
	baz=281						
NACB				S	Sn	15 10 42.5	+0.4
	baz=281						
HWA	**Hwalien**	0.27	239	P	Pn	15 10 37.1	+0.7
	baz=230						
HWA				S	Sn	15 10 43.8	+1.4
	baz=230						
ENA	**Nanau**	0.33	340	*i* P	Pn	15 10 36.8	-0.2
	baz=346						
ENA				S	Sn	15 10 44.1	+0.8
	baz=346						
ETLH	**Xiulin Townshi**	0.36	284	*i* P	Pn	15 10 36.7	-0.7
	baz=283						
ETLH				*i* S	Sn	15 10 44.2	+0.1
	baz=283						
TWC	**Suao**	0.49	359	P	Pn	15 10 38.8	0.0
	baz=3.0						
TWC				S	Sn	15 10 47.5	+0.9
	baz=3.0						
ESL	**Shilin**	0.49	233	P	Pn	15 10 37.7	-1.2
	baz=227						
ESL				*e*S	Sn	15 10 46.4	-0.3
	baz=227						
NDS	**Dongshan**	0.53	345	P	Pn	15 10 38.8	-0.6
	baz=348						
NDS				*e*S	Sn	15 10 47.5	0.0
	baz=348						
NNSB	**Datong**	0.54	305	*i* P	Pn	15 10 38.7	-0.8
	baz=306						
NNSB				S	Sn	15 10 47.0	-0.8
	baz=306						
NNSH	**Datong**	0.54	305	*i* P	Pn	15 10 38.7	-0.8
	baz=306						
NNSH				*i* S	Sn	15 10 47.0	-0.8
	baz=306						
WHF	**Hehuan Shan**	0.55	273	P	Pn	15 10 38.9	-1.0
	baz=271						
WHF				*i* S	Sn	15 10 48.0	-0.4
	baz=271						
NNS	**Nan Shan**	0.55	306	P	Pn	15 10 38.9	-0.8
	baz=306						
NNS				S	Sn	15 10 47.6	-0.5
	baz=306						
NDT	**Datong Townshi**	0.58	327	P	Pn	15 10 39.6	-0.4
	baz=328						
NDT				S	Sn	15 10 48.7	+0.1
	baz=328						
FUSS	**Fushou**	0.58	283	*i* P	Pn	15 10 39.5	-0.7
	baz=282						
FUSS				S	Sn	15 10 48.5	-0.5
	baz=282						
ENTT	**Nioudou**	0.59	333	*i* P	Pn	15 10 39.5	-0.6
	baz=335						
ENTT				*i* S	Sn	15 10 49.2	+0.5
	baz=335						
EGFH	**Guangfu**	0.60	222	*e*P	Pn	15 10 39.1	-1.0
	baz=218						
EGFH				*e*S	Sn	15 10 48.6	-0.4
	baz=218						
TWE	**Neicheng**	0.63	344	P	Pn	15 10 40.1	-0.4
	baz=347						
TWE				S	Sn	15 10 49.6	0.0
	baz=347						
CHGB	**Renai**	0.63	265	*i* P	Pn	15 10 40.1	-0.7
	baz=263						
CHGB				S	Sn	15 10 50.0	0.0
	baz=263						
TWT	**Tachien**	0.64	282	*i* P	Pn	15 10 40.5	-0.3
	baz=280						
TWT				S	Sn	15 10 50.2	0.0
	baz=280						
ILA	**Ilan**	0.65	351	*e*P	Pn	15 10 40.5	-0.4
	baz=354						
ILA				*e*S	Sn	15 10 52.2	+2.0
	baz=354						
TDCB	**Techi**	0.66	282	P	Pn	15 10 40.5	-0.5
	baz=281						
TDCB				S	Sn	15 10 49.9	-0.6
	baz=281						
NSK	**Sanguang**	0.72	321	P	Pn	15 10 41.2	-0.6
	baz=322						
NSK				S	Sn	15 10 51.0	-0.9
	baz=322						
NTC	**Toucheng**	0.73	358	P	Pn	15 10 42.0	0.0
NTC				*e*S	Sn	15 10 52.8	+0.7
NWLT	**Wulai**	0.73	334	*i* P	Pn	15 10 41.4	-0.6
	baz=335						
NWLT				S	Sn	15 10 51.9	-0.3
	baz=335						
HGSD	**Ruisui**	0.74	213	P	Pn	15 10 41.5	-0.5
	baz=209						
HGSD				*e*S	Sn	15 10 53.2	+0.9
	baz=209						
VWDT	**VWDT**	0.75	241	*i* P	Pn	15 10 41.4	-0.8
	baz=238						
VWDT				S	Sn	15 10 51.9	-0.6
	baz=238						
EHY	**Hungye**	0.78	219	*e*P	Pn	15 10 42.5	-0.1
	baz=215						
EHY				*e*S	Sn	15 10 53.3	0.0
	baz=215						
WPL	**Puli Township**	0.83	263	*e*P	Pn	15 10 42.6	-0.7
	baz=261						
WPL				*e*S	Sn	15 10 56.4	+1.9
	baz=261						
TIPB	**Shuangxi**	0.85	358	P	Pn	15 10 43.5	-0.1
TIPB				*e*S	Sn	15 10 56.2	+1.2
WHP	**Taichung City**	0.85	281	P	Pn	15 10 43.6	0.0
	baz=280						
WHP				S	Sn	15 10 55.2	+0.1
	baz=280						
DPDB	**Guoxing**	0.86	265	P	Pn	15 10 43.3	-0.4
	baz=263						
DPDB				*e*S	Sn	15 10 55.6	+0.3
	baz=263						
WCS	**Beigang Elemen**	0.87	266	P	Pn	15 10 43.4	-0.4
	baz=264						
WCS				*e*S	Sn	15 10 55.9	+0.5
	baz=264						
SSLB	**Suanglung**	0.89	249	*i* P	Pn	15 10 43.4	-0.7
	baz=246						
TWB1	**Santiao Chiao**	0.90	7	*i* P	Pn	15 10 43.7	-0.4
	baz=10.0						
TWB1				*e*S	Sn	15 10 56.2	+0.3
	baz=10.0						
TWA	**Mucha**	0.90	344	P	Pn	15 10 43.9	-0.3
	baz=345						
TWA				S	Sn	15 10 56.4	+0.4
	baz=345						
NHDH	**Xindian Distri**	0.90	340	*i* P	Pn	15 10 43.9	-0.3
	baz=341						
NHDH				*e*S	Sn	15 10 56.1	+0.1
	baz=341						
SMLT	**Sun Moon Lake**	0.91	255	P	Pn	15 10 43.7	-0.7
	baz=253						
SMLT				*e*S	Sn	15 10 56.6	+0.1
	baz=253						
EYUL	**Yuli**	0.91	213	*e*P	Pn	15 10 44.0	-0.4
	baz=210						
EYUL				S	Sn	15 10 57.1	+0.7
	baz=210						
TATO	**Taipei**	0.92	338	*e*P	Pn	15 10 44.6	+0.2
	baz=340						
TATO				*e*S	Sn	15 10 56.7	+0.1
	baz=340						
TWF1	**Yuli**	0.92	214	P	Pn	15 10 44.0	-0.5
	baz=211						
TWF1				*e*S	Sn	15 10 56.7	0.0
	baz=211						
LIOB	**Emei**	0.93	304	P	Pn	15 10 44.5	-0.1
	baz=304						
NJD	**Zhudong**	0.94	311	*e*P	Pn	15 10 44.6	-0.1
	baz=311						
NJD				*e*S	Sn	15 10 57.5	+0.6
	baz=311						
TYC	**Yuchr**	0.94	257	P	Pn	15 10 44.4	-0.4
	baz=255						
TYC				*e*S	Sn	15 10 57.3	+0.2
	baz=255						
WFSB	**Wu-fen Shan**	0.95	356	P	Pn	15 10 44.6	-0.3
	baz=357						
WFSB				*e*S	Sn	15 10 58.6	+1.2
	baz=357						
WHYT	**Xinyi Township**	1.01	246	P	Pn	15 10 45.9	+0.2
	baz=243						
WHYT				*e*S	Sn	15 10 59.3	+0.4
	baz=243						
TWQ1	**Liyutan**	1.02	283	P	Pn	15 10 45.5	-0.3
	baz=282						
TWQ1				*e*S	Sn	15 10 59.6	+0.6
	baz=282						
JYNG	**Yonagunijimaku**	1.04	71	P	Pn	15 10 45.8	-0.3
JYNG				S	Sn	15 10 59.9	+0.4
YUS	**Yu-Shan**	1.04	233	P	Pn	15 10 45.8	-0.8
	baz=231						
YUS				*e*S	Sn	15 11 00.0	-0.2
	baz=231						
FULB	**Fuli**	1.05	210	P	Pn	15 10 46.0	-0.3
	baz=207						
FULB				*e*S	Sn	15 10 59.9	0.0
	baz=207						
WJS	**Zhushan**	1.08	254	P	Pn	15 10 46.9	+0.3
	baz=252						
WJS				*e*S	Sn	15 11 00.9	+0.5
	baz=252						
WNT1	**Nantou City**	1.10	259	*e*P	Pn	15 10 46.9	0.0
	baz=257						
WNT1				*e*S	Sn	15 11 01.5	+0.5
	baz=257						
YOJ	**Yonaguni jima**	1.10	72	P	Pn	15 10 46.8	-0.1
YOJ				S	Sn	15 11 01.5	+0.5
WNT	**Mingjian**	1.10	258	P	Pn	15 10 47.2	+0.3
	baz=256						
WNT				*e*S	Sn	15 11 01.4	+0.3
	baz=256						
ALS	**Alishan**	1.14	238	P	Pn	15 10 47.6	-0.1
	baz=236						
ALS				*e*S	Sn	15 11 02.2	-0.2
	baz=236						
CHN5	**Tsauling**	1.20	245	P	Pn	15 10 48.3	-0.1
	baz=243						
CHN5				*e*S	Sn	15 11 03.9	+0.3
	baz=243						
ELDTW	**Lidau**	1.21	220	P	Pn	15 10 48.0	-0.4
	baz=217						
ELDTW				*e*S	Sn	15 11 03.8	0.0
	baz=217						
WGK	**Gukeng**	1.27	250	P	Pn	15 10 49.5	+0.3
	baz=248						
WGK				*e*S	Sn	15 11 05.4	+0.4
	baz=248						
STYH	**Taoyuan**	1.37	227	*e*P	Pn	15 10 50.6	0.0
	baz=225						
STYH				*e*S	Sn	15 11 08.0	+0.4
	baz=225						
LONT	**Longtian**	1.38	209	*e*P	Pn	15 10 50.6	-0.1
	baz=207						
LONT				S	Sn	15 11 08.2	+0.4
	baz=207						
STYT	**Tauyuan**	1.39	227	P	Pn	15 10 51.3	+0.4
	baz=225						
STYT				*e*S	Sn	15 11 08.3	+0.2
	baz=225						
CHN4	**Tsaushan**	1.39	237	*e*P	Pn	15 10 51.5	+0.6
	baz=235						
CHN4				*e*S	Sn	15 11 08.5	+0.4
	baz=235						
TPUB	**Ta-pu**	1.39	235	P	Pn	15 10 51.5	+0.6
	baz=232						
RLNB	**Erlin**	1.39	261	*e*P	Pn	15 10 50.5	-0.4
	baz=259						
CHN2	**Minshiung**	1.40	246	*e*P	Pn	15 10 51.1	+0.1
	baz=244						
CHN2				*e*S	Sn	15 11 08.8	+0.6
	baz=244						
WTK	**Tuku**	1.42	253	P	Pn	15 10 51.2	0.0
	baz=251						

WTP	**Ta-pu**	**1.44**	**233**	P	**Pn**	**15 10 52.2**	**+0.6**
	baz=231						
WTP				*e*S	**Sn**	**15 11 09.5**	**+0.2**
	baz=231						
TWGBT	**Beinan**	**1.48**	**209**	*e*P	**Pn**	**15 10 52.0**	**-0.1**
	baz=207						
TWGBT				*e*S	**Sn**	**15 11 10.5**	**+0.2**
	baz=207						
TWG	**Pinlang**	**1.48**	**210**	*e*P	**Pn**	**15 10 52.0**	**-0.1**
	baz=207						
TWG				*e*S	**Sn**	**15 11 10.5**	**+0.2**
	baz=207						
TWK	**Hsinying**	**1.52**	**236**	*e*P	**Pn**	**15 10 53.2**	**+0.5**
	baz=234						
TWK				*e*S	**Sn**	**15 11 11.4**	**+0.1**
	baz=234						
CHN1	**Nanshi**	**1.54**	**233**	P	**Pn**	**15 10 53.7**	**+0.8**
	baz=231						
CHN1				*e*S	**Sn**	**15 11 12.0**	**+0.3**
	baz=231						
IRIF	**Iriomote-Funau**	**1.72**	**82**	P	**Pn**	**15 10 54.9**	**-0.4**
IRIF				S	**Sn**	**15 11 15.6**	**-0.5**
HATJ	**Hateruma jima**	**1.78**	**92**	P	**Pn**	**15 10 56.4**	**+0.3**
TSMG	**Majia**	**1.80**	**219**	*e*P	**Pn**	**15 10 56.5**	**0.0**
	baz=217						
TSMG				*e*S	**Sn**	**15 11 18.1**	**+0.1**
	baz=217						
MASBT	**Mashibuluo**	**1.88**	**217**	P	**Pn**	**15 10 57.8**	**+0.2**
	baz=215						
MASBT				*e*S	**Sn**	**15 11 20.1**	**0.0**
	baz=215						
JKRS	**Kuro-shima**	**1.96**	**86**	P	**Pn**	**15 10 58.7**	**0.0**
JKRS				S	**Sn**	**15 11 22.8**	**+0.7**
JIJ	**Ishigaki jima**	**2.10**	**83**	P	**Pn**	**15 11 00.1**	**-0.4**
JIJ				S	**Sn**	**15 11 24.3**	**-1.1**
JISG	**Ishigakijimahi**	**2.28**	**78**	P	**Pn**	**15 11 02.4**	**-0.7**
JISG				S	**Sn**	**15 11 29.1**	**-0.9**
JTJ	**Tarama**	**2.64**	**78**	P	**Pn**	**15 11 07.9**	**-0.1**
JTJ				S	**Sn**	**15 11 38.4**	**-0.4**

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*MOS **09** 15:14:16.8±3.0, 47°.11N×141°.49E, h10^{km}, mb3.9/1, Error ellipse: s-maj=45.4km s-min=25.2km az=108.7*

MOS Felt (II-III) at Kholmsk.

*SKHL **09** 15:14:20.8±0.3, 47°.00N×142°.00E, h10^{km}, mb4.7/5*

*JMA **09** 15:14:20.8±0.2, 47°.21N×142°.41E, h22^{km}, M3.3*

ISC 09 15:14:20.6±1.2**, 47°.16N**±0°.04×**142°.18E**±0°.08**, h8**^{km}±9^{km}**, n14, σ0^s.96**/18**, 1D, Sakhalin Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHLM	**Kholmsk**	**0.14**	**219**	*i* Pg	**Pg**	**15 14 23.8**	**+0.2**
KHLM				AMB	AMB	15 14 23.9	
	36μm,0.1s						
KHLM				*e*Sg	**Sg**	**15 14 25.0**	**-0.6**
KHLM				A	A	15 14 25.2	
	301μm,0.2s						
KHLM				A	A	15 14 25.2	
	209μm,0.2s						
YSS	**Yuzh-Sakhalins**	**0.45**	**118**	⇓*e*PN	**Pn**	**15 14 32.1**	**-1.3**
YSS				pmax	pmax		
	comp=Z,160nm,0.4s						
YSS	**Yuzh-Sakhalins**	**0.45**	**118**	*e*Pg	**Pn**	**15 14 32.1**	**-1.3**
YSS				AMB	AMB	15 14 32.4	
	comp=Z,400nm,0.1s						
YSS				*e*Sg	**Sb**	**15 14 40.0**	**+2.4**
YSS				A	A	15 14 40.2	
	comp=Z,2μm,0.4s						
YSS				A	A	15 14 40.2	
	comp=Z,1μm,0.4s						
JWK2	**Keihoku**	**1.86**	**186**	P	**Pn**	**15 14 52.8**	**0.0**
JWK2				*e*S	**Sn**	**15 15 16.7**	**+0.2**
UGL	**Uglegorsk**	**1.92**	**358**	*e*P	**Pg**	**15 14 57.8**	**+0.4**
UGL				P	Pb	15 15 02.5	+6.7
	comp=Z,50nm,0.8s						
UGL				*e*S	**Sg**	**15 15 22.2**	**0.0**
UGL				S	Sb	15 15 25.7	+5.8
	comp=Z,50nm,0.6s						
UGL				S	Sb	15 15 25.7	+5.8
	comp=Z,100nm,0.6s						
JSE	**Soyaes**	**2.22**	**173**	P	**Pn**	**15 14 57.6**	**-0.2**
JSE				*e*S	**Sn**	**15 15 24.9**	**-0.6**
JKK2	**Kamakawa 2**	**3.32**	**173**	P	**Pn**	**15 15 13.4**	**+0.5**
JTKR	**Abashiri--Toko**	**3.42**	**159**	P	**Pn**	**15 15 13.8**	**-0.4**
JTKR				*e*S	**Sn**	**15 15 53.7**	**-1.2**
JAR	**Ashorobuto**	**4.03**	**163**	P	**Pn**	**15 15 23.1**	**+0.5**
ERM	**Erimo**	**5.20**	**172**	*i* PN	**Pn**	**15 15 38.0**	**-0.7**
ZEA	**Zeya**	**11.56**	**310**	*e*PN	Pn	15 16 56.6	-9.2
MA2	**Magadan**	**13.43**	**19**	*i* P	P	15 17 33.8	-7.1
MA2				pmax	pmax		
	comp=Z,4.0nm,1.0s						
TLY	**Talaya**	**25.26**	**295**	*i* P	**P**	**15 19 47.3**	**+0.2**
NRIK	**Noril'sk**	**34.55**	**329**	*i* P	**P**	**15 21 08.8**	**-0.4**
NRIK				pmax	pmax		
	comp=Z,2.0nm,1.3s						

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*GCMT **09** 15:14:57.8±0.3, 11°.36S±0°.04×166°.99E±0°.02, h12^{km}, MW4.8/84, Moment Tensor Solution. s15,c18; s84,c114; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.80±.07; $M_{\theta\theta}$0.18±.07; $M_{\phi\phi}$1.62±.05; $M_{r\theta}$-1.09±.35; $M_{\theta\phi}$0.42±.05; $M_{\phi r}$-0.55±.21; Best double couple: $M_0$2.12200×10^{16} NP1:ϕ_s178.00000°,δ35.00000°,λ-123.00000°. NP2: ϕ_s37.00000°,δ61.00000°,λ-69.00000°. Principal axes: T 1.9320, Plg14.0000°, Azm112.0000°; N 0.3770, Plg19.0000°, Azm207.0000°; P -2.3120, Plg67.0000°, Azm347.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **09** 15:14:58.8±1.1, 11°.52S±0°.09×167°.01E±0°.05, h40^{km}±9^{km}, mb4.8/18 Error ellipse: s-maj=12.5km s-min=6.5km az=169.0, confirmed*

*BJI **09** 15:14:58.4±0.0, 11°.00S×167°.23E, h40^{km}, mB5.1/28, mb4.7/42, Ms4.9/7, Ms7 4.5/6*

*IDC **09** 15:15:00.8±3.6, 11°.49S×167°.00E, h51^{km}±31^{km}, mb4.3/16, mb1 4.4/19, mb1mx4.2/41, mbtmp4.5/19, ML2.6/2, MS4.0/25, Ms1 4.0/25, ms1mx3.9/33, Error ellipse: s-maj=22.5km s-min=18.5km az=118.0*

*NOU **09** 15:15:27.3, 13°.02S×165°.96E, h139^{km}, mb4.5, Vanuatu Islands*

ISC 09 15:15:00.8±0.5**, 11°.52S**±0°.07×**166°.94E**±0°.08**, h50**^{km}**, n86, σ2^s.75**/83**, mb4.6**/33**, MS4.0**/28**, 1C, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**3.91**	**176**	Pn	**Pn**	**15 15 55.9**	**-2.5**
HNR	**Honiara**	**7.18**	**286**	P	**Pn**	**15 16 43.7**	**+0.4**
	30nm,0.3s,baz=172,slow=7.6,SNR=11						
HNR				LR	LR	15 19 42.9	
	comp=Z,4μm,18.3s,baz=148,slow=39						
HNR	**Honiara**	**7.18**	**286**	Pn	**Pn**	**15 16 42.4**	**-0.9**
KOUNC	**Koumac, New Ca**	**9.33**	**196**	P	**Pn**	**15 17 15.6**	**+2.9**
	50nm,1.2s						
DZM	**Mont Dzumac**	**10.50**	**183**	P	**Pn**	**15 17 29.5**	**+0.6**
	0.5nm,0.3s,baz=10,slow=22,SNR=1.6						
DZM				LR	LR	15 21 13.2	
	comp=Z,511nm,18.4s,baz=20,slow=35						
DZM	**Mont Dzumac**	**10.50**	**183**	*e*Pn	**Pn**	**15 17 31.5**	**+2.7**
	1.3nm,0.3s						
DZM				*e*LR	LR	15 20 00.9	
	comp=Z,614nm,23.8s						
MSVF	**Nonsavu**	**12.39**	**121**	LR	LR	15 21 37.9	
	comp=Z,3μm,18.3s,baz=272,slow=32						
MSVF	**Nonsavu**	**12.39**	**121**	P	P	15 18 21.7	+16
	32nm,1.2s						
RABL	**Rabaul**	**16.34**	**295**	Pn	**Pn**	**15 18 46.3**	**-0.8**
PMG	**Port Moresby**	**19.56**	**274**	P	**Pn**	**15 19 27.1**	**+0.7**
	0.1nm,0.3s,baz=99,slow=13,SNR=4.7						
PMG				LR	LR	15 26 15.2	
	comp=Z,1μm,21.2s,baz=109,slow=34						
PMG	**Port Moresby**	**19.56**	**274**	P	**P**	**15 19 24.4**	**-0.3**
EIDS	**Eidsvold**	**20.36**	**225**		**P**	**15 19 35.0**	**+1.7**
EIDS				IAmb	IAmb	15 19 40.9	
	comp=Z,105nm,1.3s						
CTA	**Charters Tower**	**21.63**	**244**	P	**P**	**15 19 48.8**	**+1.7**
	comp=Z,12nm,1.0s,baz=64,slow=12,SNR=4.3						
RAO	**Raoul Island**	**22.59**	**144**	LR	LR	15 27 54.4	
	comp=Z,554nm,19.1s,baz=140,slow=34						
ARMA	**Armidale**	**23.57**	**215**	P	**P**	**15 20 07.4**	**+0.3**
ARMA				IAmb	IAmb	15 20 12.5	
	comp=Z,55nm,1.2s						
JAY	**Jayapura**	**27.51**	**287**	LR	LR	15 32 16.4	
	comp=Z,310nm,19.1s,baz=62,slow=38						
JAY	**Jayapura**	**27.51**	**287**	P	**P**	**15 20 44.3**	**+1.4**
	comp=Z,12nm,1.4s						
URZ	**Urewera**	**28.14**	**163**	LR	LR	15 29 39.8	
	comp=Z,229nm,19.9s,baz=31,slow=31						
QRZ	**Quartz Range**	**29.60**	**171**	P	**P**	**15 21 00.6**	**-0.6**
THZ	**Tophouse**	**30.57**	**171**	P	**P**	**15 21 09.2**	**-0.6**
STKA	**Stephens Creek**	**30.92**	**225**	P	**P**	**15 21 13.0**	**0.0**
	comp=Z,6.9nm,1.1s,baz=70,slow=12,SNR=3.7						
STKA				LR	LR	15 32 22.4	
	comp=Z,278nm,21.9s,baz=39,slow=34						
STKA	**Stephens Creek**	**30.92**	**225**	P	**P**	**15 21 11.3**	**-1.7**
LTZ	**Lake Taylor**	**31.49**	**172**	P	**P**	**15 21 16.4**	**-1.5**
WR0	**Warramunga Arr**	**32.24**	**251**	P	**P**	**15 21 24.0**	**-0.8**
WR0				IAmb	IAmb	15 21 28.7	
	comp=Z,10nm,1.1s						
RPZ	**Rata Peaks**	**32.27**	**174**	P	**P**	**15 21 25.2**	**+0.5**
	comp=Z,18nm,1.0s,baz=38,slow=23,SNR=1.5						
RPZ	**Rata Peaks**	**32.27**	**174**	IAmb	IAmb	15 21 30.6	
	comp=Z,39nm,1.2s						
WB0	**Warramunga Arr**	**32.35**	**251**	P	**P**	**15 21 24.5**	**-1.2**
WB0				IAmb	IAmb	15 21 38.2	
	comp=Z,13nm,0.9s						
WB2	**Warramunga Arr**	**32.41**	**251**	P	**P**	**15 21 25.4**	**-0.9**
WB2				IAmb	IAmb	15 21 28.3	
	comp=Z,18nm,1.3s						
WRA	**Warramunga Arr**	**32.43**	**251**	P	**P**	**15 21 25.5**	**-1.0**
	comp=Z,5.7nm,1.1s,baz=81,slow=9.3,SNR=15						
WRA				PcP	**PcP**	**15 24 12.7**	**-0.3**
	comp=Z,0.7nm,0.9s,baz=83,slow=3.2,SNR=3.0						
WRA				LR	LR	15 33 59.1	
	comp=Z,263nm,18.4s,baz=60,slow=35						
GUMO	**Guam**	**33.19**	**318**	LR	LR	15 33 53.6	
	comp=Z,192nm,18.5s,baz=116,slow=34						
AS31	**Alice Springs**	**33.63**	**244**	P	**P**	**15 21 36.2**	**-0.7**
ASAR	**Alice Springs**	**33.63**	**244**	P	**P**	**15 21 36.0**	**-0.9**
	comp=Z,3.6nm,0.8s,baz=76,slow=9.4,SNR=16						
ASAR				PcP	**PcP**	**15 24 16.5**	**+0.1**
	comp=Z,1.5nm,1.1s,baz=85,slow=2.5,SNR=5.9						
ASAR				LR	LR	15 35 00.9	
	comp=Z,290nm,18.1s,baz=77,slow=36						
ASAR	**Alice Springs**	**33.63**	**244**	P	**P**	**15 21 35.6**	**-1.4**
BBOO	**Buckleboo**	**35.37**	**228**	P	**P**	**15 21 51.6**	**-0.3**
BBOO				IAmb	IAmb	15 21 53.9	
	comp=Z,9.2nm,0.8s						
SIJI	**Sorong**	**36.96**	**284**	LR	LR	15 38 46.5	
	comp=Z,311nm,18.6s,baz=108,slow=38						
BNDI	**Bandanaira**	**37.29**	**278**	P	P	15 22 15.7	+7.2
FITZ	**Fitzroy Crossi**	**40.39**	**256**	P	**P**	**15 22 34.7**	**+0.4**
	comp=Z,9.4nm,1.2s,baz=79,slow=9.4,SNR=3.5						
FITZ				LR	LR	15 39 00.7	
	comp=Z,315nm,18.3s,baz=78,slow=36						
FITZ	**Fitzroy Crossi**	**40.39**	**256**	P	**P**	**15 22 34.9**	**+0.5**
TNTI	**Ternate**	**41.17**	**285**	P	**P**	**15 22 40.3**	**-0.5**
TNTI				IAmb	IAmb	15 22 40.8	
	comp=Z,20nm,0.8s						
PPT	**Papeete**	**42.45**	**103**	LR	LR	15 39 54.4	
	comp=Z,155nm,18.0s,baz=270,slow=35						
PPT2	**Papeete2**	**42.45**	**103**	*e*S	**S**	**15 29 17.3**	**+7.3**
	comp=Z,103nm,24.0s						
PPT2				*e*LR	LR	15 34 49.3	
	comp=Z,515nm,26.2s,baz=270						
BATI	**Baumata**	**42.49**	**267**	P	**P**	**15 22 52.5**	**+0.8**
	comp=Z,3.7nm,0.3s,baz=90,slow=12,SNR=2.1						
BATI				LR	LR	15 40 21.8	
	comp=Z,266nm,20.5s,baz=94,slow=36						
TBI	**Tubuai**	**43.07**	**112**	*e*LR	LR	15 35 10.6	
	comp=Z,767nm,29.8s,baz=284						
DAV	**Davao City (W)**	**45.10**	**292**	LR	LR	15 41 49.4	
	comp=Z,132nm,19.6s,baz=119,slow=36						
JCJ	**Chichijima**	**45.29**	**328**	LR	LR	15 40 28.1	
	comp=Z,81nm,19.7s,baz=171,slow=34						
PSA00	**Pilbara Seismi**	**46.08**	**251**	P	**P**	**15 23 20.1**	**-0.2**
PSA00				IAmb	IAmb	15 23 23.3	
	comp=Z,24nm,1.2s						
BKB	**Balikpapan**	**50.68**	**278**	P	**P**	**15 23 53.8**	**-2.0**
TAOE	**Nuku Hiva Isla**	**52.09**	**92**	*e*LR	LR	15 38 47.7	
	comp=Z,266nm,28.9s						
JOW	**Kunigami**	**53.51**	**316**	LR	LR	15 43 07.0	
	comp=Z,109nm,21.8s,baz=126,slow=32						
KSRS	**Korea Array**	**60.93**	**325**	LR	LR	15 51 37.7	
	comp=Z,35nm,18.0s,baz=138,slow=36						
NJ2	**Nanjing**	**63.18**	**315**	*e*P	**P**	**15 25 24.7**	**+0.7**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
USRK	**Ussuriysk Ar.**	**63.90**	**333**	P	**P**	**15 25 28.3**	**-0.1**
	comp=Z,6.4nm,1.0s,baz=125,slow=7.6,SNR=4.1						
USRK				LR	LR	15 49 30.8	
	comp=Z,45nm,21.4s,baz=138,slow=32						
PETK	**Petropavlovsk-**	**64.86**	**354**	P	**P**	**15 25 35.0**	**+0.4**
	comp=Z,8.9nm,1.0s,baz=124,slow=7.2,SNR=4.8						
PETK				LR	LR	15 50 18.3	
	comp=Z,46nm,19.4s,baz=159,slow=33						
NONG	**Nongkai**	**69.48**	**294**	P	**P**	**15 26 06.7**	**+2.2**
BJI	**Beijing**	**69.59**	**321**	P	**P**	**15 26 03.8**	**-1.0**
BJI				S	**S**	**15 35 12.4**	**+3.1**
BJI				SS	**SS**	**15 39 38.4**	**+0.1**
BJI				pmax	pmax		
	comp=Z,4.0nm,0.4s						
BJI				LR	LR		
	comp=Z,110nm,3.9s						
BJI				LR	LR		
	comp=Z,210nm,4.8s						
BJI				LR	LR		
	comp=Z,840nm,27.5s						
GYA	**Guiyang**	**69.65**	**304**	*e*P	**P**	**15 26 06.5**	**+0.8**
GYA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
UTHA	**Uthaitani**	**72.02**	**291**	P	**P**	**15 26 22.5**	**+2.5**
KMI	**Kunming**	**72.37**	**301**	⇑P	**P**	**15 26 23.1**	**+0.8**
KMI				pP	pP	15 26 34.7	-1.4
KMI				sP	PcP	15 26 38.5	-1.5
KMI				pmax	pmax		
	comp=Z,16nm,1.1s						
KMI				LR	LR		
	comp=Z,180nm,11.3s						
KMI				LR	LR		
	comp=Z,120nm,13.7s						
KMI				LR	LR		
	comp=Z,160nm,13.5s						
LAMP	**Lampang**	**72.78**	**294**	P	**P**	**15 26 27.0**	**+2.4**
HHC	**Hu-ho-hao-te**	**72.95**	**319**	*e*P	**P**	**15 26 25.8**	**+0.5**
HHC				pmax	pmax		
	comp=Z,12nm,1.0s						
HHC				pmax	pmax		
	comp=Z,180nm,5.8s						
CM01	**Chiang Mai Arr**	**73.35**	**293**	P	**P**	**15 26 29.4**	**+1.5**
CM05	**Chiang Mai Arr**	**73.36**	**293**	P	**P**	**15 26 29.4**	**+1.4**
CM31	**Chiang Mai Arr**	**73.38**	**293**	P	**P**	**15 26 31.3**	**+3.2**
CMAR	**Chiang Mai Arr**	**73.38**	**293**	P	**P**	**15 26 28.6**	**+0.6**
	comp=Z,5.8nm,0.9s,baz=119,slow=4.4,SNR=24						
CMAR				LR	LR	15 58 37.1	
	comp=Z,30nm,19.3s,baz=179,slow=36						
CM15	**Chiang Mai Arr**	**73.39**	**293**	P	**P**	**15 26 29.6**	**+1.4**
CM13	**Chiang Mai Arr**	**73.40**	**293**	P	**P**	**15 26 29.4**	**+1.1**
CMMT	**Chiang Mai**	**73.48**	**294**	P	**P**	**15 26 28.0**	**-0.7**
CHTO	**Chiang Mai**	**73.49**	**294**	P	**P**	**15 26 28.1**	**-0.7**
CHTO				IAmb	IAmb	15 26 34.1	
	comp=Z,13nm,1.2s						
LZH	**Lanzhou**	**75.94**	**312**	*e*P	**P**	**15 26 43.7**	**+0.9**
LZH				pP	pP	15 26 56.7	+0.1
LZH				sP	sP	15 27 03.5	+1.5
LZH				PP	**PP**	**15 29 32.9**	**-1.1**
LZH				pmax	pmax		
	comp=Z,16nm,1.1s						
LZH				pmax	pmax		
	comp=Z,65nm,4.8s						
SONM	**Songino Array**	**79.74**	**323**	P	**P**	**15 27 03.6**	**0.0**
	comp=Z,1.4nm,0.9s,baz=140,slow=6.5,SNR=6.6						
GTA	**Gaotai**	**80.23**	**314**	P	**P**	**15 27 07.2**	**+0.7**
GTA				pP	pP	15 27 22.0	+1.6
GTA				sP	sP	15 27 28.3	+2.6
GTA				pmax	pmax		
	comp=Z,5.0nm,1.4s						
GTA				pmax	pmax		
	comp=Z,90nm,5.0s						
GTA				LR	LR		
	comp=Z,110nm,16.4s						
GTA				LR	LR		
	comp=Z,95nm,15.6s						
ILAR	**Eielson Array**	**83.60**	**18**	P	**P**	**15 27 22.6**	**-0.9**
	comp=Z,4.9nm,0.9s,baz=244,slow=4.6,SNR=41						
NVAR	**Mina Array Bea**	**85.44**	**49**	P	**P**	**15 27 33.5**	**-0.2**
	comp=Z,1.9nm,0.9s,baz=240,slow=8.4,SNR=5.8						
NVAR				LR	LR	15 58 00.1	
	comp=Z,81nm,18.8s,baz=270,slow=30						
WMQ	**Urumqi**	**90.26**	**315**	*e*P	**P**	**15 27 56.2**	**-0.2**
WMQ				pmax	pmax		
	comp=Z,11nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,140nm,4.5s						
PDAR	**Pinedale Array**	**93.02**	**47**	LR	LR	16 07 53.4	
	comp=Z,33nm,18.8s,baz=302,slow=34						
ZALV	**Zalesovo Beam**	**94.63**	**324**	P	**P**	**15 28 15.6**	**-0.6**
	comp=Z,0.6nm,0.4s,baz=108,slow=4.7,SNR=4.4						
MKAR	**Makanchi Array**	**94.67**	**317**	P	**P**	**15 28 15.8**	**-0.8**
	comp=Z,2.6nm,0.9s,baz=91,slow=6.3,SNR=15						
YKA	**Yellowknife Ar**	**94.86**	**27**	P	**P**	**15 28 15.4**	**-1.7**
	comp=Z,1.8nm,0.8s,baz=252,slow=4.0,SNR=13						
NRIK	**Noril'sk**	**96.98**	**339**	LR	LR	16 10 58.0	
	comp=Z,46nm,20.2s,baz=84,slow=35						
BOSA	**Boshof**	**125.56**	**222**	PKP	**PKiKP**	**15 33 58.6**	**+0.8**
	comp=Z,4.3nm,1.0s,baz=126,slow=9.7,SNR=4.6						
MNK	**Minsk**	**126.37**	**332**	*i* PKP	**PKiKP**	**15 33 59.8**	**+1.4**
	comp=E,1.0nm,0.7s						
MNK				*i* PKP	**PKiKP**	**15 33 59.8**	**+1.4**
	comp=N,14nm,0.7s						
MNK				*i* PKP	**PKiKP**	**15 33 59.8**	**+1.4**
	comp=Z,8.0nm,0.7s						
MNK				*i* PP	**PP**	**15 35 55.5**	**+2.2**
MNK				*i* PPP	PPP	15 38 37.8	
MNK				*i* SKS	**SKSdf**	**15 41 11.6**	**+6.0**
MNK				*i* PS	**PS**	**15 45 42.8**	**-15**
MNK				*i* SS	**SS**	**15 53 01.5**	**+8.3**
MNK				*i* SSS	SSS	15 57 41.5	
MNK				*i* LQ	LQ	16 21 18.5	
MNK				*i* LR	LR	16 26 08.0	
MNK				*i* LRM	MLR	16 29 14.3	
	comp=Z,40nm,13.1s						
MNK				*i* LRM	MLR	16 29 32.0	
	comp=E,7.0nm,15.8s						
MNK				*i* LRM	MLR	16 29 34.6	
	comp=N,105nm,19.0s						
NACGM	**Naroch**	**126.63**	**333**	*i* PKP	**PKPdf**	**15 33 53.5**	**-5.0**
NACGM				*i* PKP	**PKPdf**	**15 33 53.5**	**-5.0**
NACGM				*i* PKP	**PKPdf**	**15 33 53.5**	**-5.0**
NACGM				*i* PP	PP	15 35 37.2	-18
NACGM				*i* SKP		15 37 25.7	
NACGM				*i* PPP	PPP	15 38 15.3	
NACGM				*i* SKS	**SKSdf**	**15 41 04.5**	**-1.6**
NACGM				*i* SS	**SKKSdf**	**15 51 18.5**	**-6.3**
NACGM				*i* SSS	SSS	15 54 38.2	
NACGM				*i* LQ	LQ	16 20 30.9	
NACGM				*i* LR	LR	16 30 00.5	
GERES	**GERESS Array B**	**136.65**	**334**	PKP	**PKPdf**	**15 34 17.2**	**-0.6**
	comp=N,0.5nm,0.6s,baz=60,slow=3.9,SNR=2.7						
ESDC	**Sonseca Array**	**150.82**	**346**	PKPbc	**PKPbc**	**15 34 47.6**	**-0.6**
	comp=N,2.7nm,1.0s,baz=333,slow=2.0,SNR=5.3						
TORD	**Torodi Ar. Bea**	**165.49**	**278**	PKP	**PKPdf**	**15 35 00.8**	**-0.1**
	comp=N,2.7nm,1.0s,baz=357,slow=1.5,SNR=7.5						
TORD	**Torodi Ar. Bea**	**165.49**	**278**		**PKPdf**	**15 34 59.8**	**-1.1**

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*IDC **09** 15:24:23.3±1.0, 1°.83S×134°.64E, h0^{km}, mb3.6/6, mb1 4.1/11, mb1mx3.9/40, mbtmp3.9/11, ML4.1/4, MS3.2/1, Ms1 3.2/1, ms1mx2.6/29, Error ellipse: s-maj=22.0km s-min=16.5km az=48.0*

*DJA **09** 15:24:26.8±1.0, 2°S±3°×13°5E±°, h20^{km}±9^{km}, M4.5/12, mB4.9/6, mb4.6/12, MLv4.6/12, Mw(mB)4.2/6*

*NEIC **09** 15:24:29.2±0.8, 1°.9S±0°.1×134°.59E±0°.10, h34^{km}±10^{km}, mb4.1/13, Error ellipse: s-maj=17.8km s-min=12.3km az=146.0*

ISC 09 15:24:27.8±0.6**, 1°.88S**±0°.06×**134°.61E**±0°.05**, h30**^{km}**, n48, σ1^s.39**/51**, mb3.9**/10**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRPI	**Serui, Papua**	**1.63**	**90**	P	**Pn**	**15 24 53.7**	**-0.8**
SRPI				S	**Sb**	**15 25 18.0**	**+0.5**
BAKI	**Biak**	**1.65**	**66**	P	**Pn**	**15 24 53.4**	**-1.3**
FAKI	**Fak Fak**	**2.58**	**246**	Pn	**Pn**	**15 25 07.7**	**+0.2**
FAKI	**Fak Fak**	**2.58**	**246**	P	**Pn**	**15 25 07.9**	**+0.4**
FAKI				S	**Sn**	**15 25 39.8**	**+2.0**
SIJI	**Sorong**	**3.49**	**287**	Pn	**Pn**	**15 25 18.4**	**-1.6**
	32nm,0.3s,baz=226,slow=21,SNR=161						
SIJI				Sn	**Sn**	**15 25 59.9**	**-0.5**
	31nm,0.3s,baz=148,slow=23,SNR=6.4						
SIJI				Lg	Lg	15 26 14.4	
	88nm,0.3s,baz=133,slow=23,SNR=7.1						
SWI	**Sorong**	**3.50**	**287**	P	**Pn**	**15 25 18.7**	**-1.5**
SWI				S	**Sn**	**15 25 58.4**	**-2.2**
SMPI	**Sarmi**	**4.10**	**92**	P	**Pn**	**15 25 29.3**	**+0.8**
BNDI	**Bandanaira**	**5.38**	**241**	P	**Pn**	**15 25 47.3**	**+1.2**
	1.7nm3μm182nm,0.8s						
GENI	**Genyem**	**5.60**	**97**	P	**Pn**	**15 25 51.2**	**+2.1**
	0.3nm56nm,0.7s						
MSAI	**Masohi**	**5.86**	**255**	P	**Pn**	**15 25 53.2**	**+0.5**
	0.2nm700nm48nm,0.6s						
JAY	**Jayapura**	**6.12**	**96**	Pn	**Pn**	**15 25 54.1**	**-2.3**
	0.3nm,0.3s,baz=237,slow=17,SNR=1.1						
JAY	**Jayapura**	**6.12**	**96**	P	**Pn**	**15 25 58.6**	**+2.2**
	0.1nm14nm,1.4s						
NLAI	**Namlea**	**7.62**	**260**	P	**Pn**	**15 26 17.0**	**+0.1**
	0.2nm2μm36nm,0.5s						
SANI	**Sanana**	**8.62**	**269**	P	**Pn**	**15 26 27.9**	**-2.7**
	480nm19nm,0.8s						
MTN	**Manton Dam**	**11.43**	**197**	Pn	**Pn**	**15 27 09.0**	**-0.1**
LUWI	**Luwuk**	**11.86**	**274**	Pn	**Pn**	**15 27 15.9**	**+0.9**
SOEI	**Soe**	**12.92**	**232**	Pn	**Pn**	**15 27 30.1**	**+0.5**
APSI	**Ampana**	**12.99**	**274**	P	**Pn**	**15 27 29.2**	**-1.3**
	24nm,0.7s						
BATI	**Baumata**	**13.66**	**232**	Pn	**Pn**	**15 27 39.5**	**-0.3**
	1.3nm,0.3s,baz=90,slow=18,SNR=3.6						
BATI				Sn	**Sn**	**15 30 12.6**	**+1.9**
	0.7nm,0.3s,baz=105,slow=20,SNR=1.7						
BATI	**Baumata**	**13.66**	**232**	P	**Pn**	**15 27 38.6**	**-1.1**
	12nm,0.6s						
PMG	**Port Moresby**	**14.55**	**121**	LR	LR	15 35 16.1	
	comp=Z,100nm,20.5s,baz=286,slow=45						
COEN	**Coen**	**14.69**	**145**	Pn	**Pn**	**15 27 51.7**	**-2.0**
BNSI	**Bone**	**14.69**	**260**	P	**Pn**	**15 27 53.3**	**-0.5**
	26nm,1.1s						
RABL	**Rabaul**	**17.68**	**98**		**P**	**15 28 34.2**	**+1.4**
RABL				IAmb	IAmb	15 28 51.9	
	comp=Z,16nm,0.6s						
WB0	**Warramunga Arr**	**17.78**	**181**	P	**P**	**15 28 34.2**	**+0.3**
WRAB	**Tennant Creek**	**17.95**	**181**		**Pn**	**15 28 35.8**	**+0.5**
WRAB				IAmb	IAmb	15 28 50.2	
	comp=Z,12nm,0.9s						
WB2	**Warramunga Arr**	**17.96**	**181**		**Pn**	**15 28 35.4**	**-0.1**
WB2				IAmb	IAmb	15 29 04.8	
	comp=Z,24nm,1.3s						
WRA	**Warramunga Arr**	**17.96**	**181**	P	**Pn**	**15 28 33.6**	**-1.8**
	comp=Z,0.5nm,0.3s,baz=2.9,slow=12,SNR=26						
WRA				S	**Sn**	**15 31 49.7**	**-5.2**
	baz=359,slow=24,SNR=3.4						
WRA	**Warramunga Arr**	**17.96**	**181**	P	**Pn**	**15 28 35.8**	**+0.4**
WR0	**Warramunga Arr**	**17.97**	**180**		**P**	**15 28 36.5**	**+0.6**
FITZ	**Fitzroy Crossi**	**18.37**	**208**	P	**P**	**15 28 40.5**	**+0.2**
	comp=Z,0.6nm,0.3s,baz=33,slow=12,SNR=20						
FITZ				S	Sn	15 31 52.2	-13
	comp=Z,0.3nm,0.3s,baz=144,slow=15,SNR=5.2						
FITZ	**Fitzroy Crossi**	**18.37**	**208**	P	**P**	**15 28 40.5**	**+0.2**
FITZ				IAmb	IAmb	15 28 55.1	
	comp=Z,9.0nm,0.8s						
AS31	**Alice Springs**	**21.67**	**182**	P	**P**	**15 29 16.7**	**+0.5**
AS31				IAmb	IAmb	15 29 30.6	
	comp=Z,5.6nm,0.9s						
ASAR	**Alice Springs**	**21.67**	**182**	P	**P**	**15 29 17.1**	**+0.9**
	comp=Z,4.5nm,0.7s,baz=8.2,slow=12,SNR=94						
ASAR				S	**S**	**15 33 14.0**	**-0.8**
	comp=Z,3.2nm,1.1s,baz=5.5,slow=20,SNR=6.2						
ASAR	**Alice Springs**	**21.67**	**182**	P	**P**	**15 29 16.3**	**+0.1**
PSA00	**Pilbara Seismi**	**24.29**	**215**	P	**P**	**15 29 43.3**	**+0.6**
PSA00				IAmb	IAmb	15 30 00.5	
	comp=Z,7.7nm,0.8s						
KSM	**Kuching**	**24.52**	**278**	P	**P**	**15 29 46.2**	**+1.2**
STKA	**Stephens Creek**	**30.56**	**168**	P	**P**	**15 30 39.3**	**+0.4**
	comp=Z,0.5nm,0.4s,baz=337,slow=13,SNR=4.7						
STKA	**Stephens Creek**	**30.56**	**168**	P	**P**	**15 30 39.5**	**+0.6**
BBOO	**Buckleboo**	**30.80**	**178**	P	**P**	**15 30 41.2**	**+0.2**
NWAO	**Narrogin (SRO)**	**34.93**	**206**	P	**P**	**15 31 18.0**	**+0.9**
CMAR	**Chiang Mai Arr**	**40.49**	**302**	P	**P**	**15 32 04.0**	**-0.3**
	comp=Z,0.4nm,0.3s,baz=128,slow=7.3,SNR=4.4						
HHC	**Hu-ho-hao-te**	**47.43**	**336**	*e*P	P	15 33 07.3	+7.5
HHC				pmax	pmax		
	comp=Z,16nm,1.0s						
HHC				pmax	pmax		
	comp=Z,81nm,5.4s						
GTA	**Gaotai**	**52.03**	**326**	*e*P	P	15 33 44.5	+10

GTA				pP	sP	15 33 47.9	+0.4
GTA				sP	pP	15 33 50.7	+6.8
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
SONM	**Songino Array**	**55.30**	**337**	P	**P**	**15 33 60.0**	**+1.3**
	comp=Z,0.4nm,0.9s,baz=134,slow=6.2,SNR=1.7						
WMQ	**Urumqi**	**61.85**	**323**	*e*P	P	15 34 51.9	+7.5
MKAR	**Makanchi Array**	**66.66**	**324**	P	**P**	**15 35 15.6**	**-0.3**
	comp=Z,0.2nm,0.4s,baz=111,slow=7.5,SNR=3.9						
ILAR	**Eielson Array**	**86.79**	**25**	P	**P**	**15 37 08.5**	**-0.5**
	comp=Z,0.3nm,0.6s,baz=258,slow=4.6,SNR=1.5						

*IDC **09** 15:31:27.9±4.8, 52°.77N×174°.67W, h178^{km}±45^{km}, mb3.3/11, mb1 3.7/14, mb1mx3.4/52, mbtmp4.0/14, MS3.0/1, Ms1 3.0/1, ms1mx2.5/21, Error ellipse: s-maj=27.7km s-min=13.7km az=174.0*

*NEIC **09** 15:31:27.1±1.2, 52°.6N±0°.1×174°.5W±0°.1, h167^{km}±4^{km}, mb4.2/61, ML3.6(AEIC), Error ellipse: s-maj=19.8km s-min=8.1km az=162.0*

*AEIC **09** 15:31:28±3.2, 52°.2N±0°.2×174°.4W±0°.1, h166^{km}±5^{km}, Error ellipse: s-maj=23.5km s-min=8.3km az=164.0*

ISC 09 15:31:26.2±0.6**, 52°.7N**±0°.1×**174°.54W**±0°.05**, h158**^{km}**, n103, σ1^{s}.04**/103**, mb4.0**/24**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOKL	**Mount Kliuchef**	**0.41**	**149**		**Pn**	**15 31 50.2**	**+2.0**
KOFP	**Korovin Flat P**	**0.48**	**145**		**Pn**	**15 31 50.0**	**+1.6**
ATKA	**Atka Island**	**0.51**	**156**		**Pn**	**15 31 49.5**	**+1.0**
GSTR	**Great Sitkin T**	**1.09**	**239**	Pn	**Pn**	**15 31 54.2**	**+1.7**
GSMY	**Great Sitkin M**	**1.12**	**237**		**Pn**	**15 31 54.1**	**+1.4**
GSTD	**Great Sitkin T**	**1.16**	**239**		**Pn**	**15 31 54.6**	**+1.4**
ADK	**Adak**	**1.54**	**240**	Pn	**Pn**	**15 31 58.0**	**+1.4**
KIKV	**Kanaga Island**	**1.80**	**245**		**Pn**	**15 32 01.2**	**+1.7**
KIMD	**Kanaga Island**	**1.89**	**242**		**Pn**	**15 32 02.0**	**+1.5**
TASE	**Tanaga Southea**	**2.31**	**250**		**Pn**	**15 32 07.3**	**+1.9**
NIKH	**Nikolski High**	**3.46**	**83**		**Pn**	**15 32 20.2**	**+0.6**
CESW	**Semis' Southwe**	**3.70**	**260**		**Pn**	**15 32 24.9**	**+2.2**
OKSP	**Okmok Steeple**	**3.82**	**79**		**Pn**	**15 32 25.3**	**+1.0**
AMKA	**Amchitka**	**4.02**	**254**	Pn	**Pn**	**15 32 28.2**	**+1.4**
OKFG	**Magazine Ridge**	**4.07**	**77**		**Pn**	**15 32 28.4**	**+1.0**
MAPS	**Pakushin South**	**4.71**	**73**		**Pn**	**15 32 37.0**	**+1.2**
MGOD	**Makushin Gods**	**4.74**	**73**		**Pn**	**15 32 37.1**	**+0.8**
UNV	**Unalaska Valle**	**4.97**	**73**		**Pn**	**15 32 40.4**	**+1.2**
KDAK	**Kodiak Island**	**13.51**	**59**	P	**Pn**	**15 34 31.1**	**-0.2**
	2.0nm,0.3s,baz=247,slow=15,SNR=36						
SKT	**Skwentna**	**15.45**	**44**	P	**P**	**15 34 58.7**	**+2.3**
SKT				IAmb	IAmb	15 35 01.9	
	comp=Z,15nm,1.1s						
SUA	**Susitna One**	**15.56**	**46**		**P**	**15 34 59.0**	**+1.1**
SUA				IAmb	IAmb	15 35 27.7	
	comp=Z,17nm,1.4s						
KTH	**Kantishna Hill**	**16.45**	**39**	P	**Pn**	**15 35 09.8**	**+2.1**
KTH				IAmb	IAmb	15 35 14.1	
	comp=Z,16nm,1.2s						
GHO	**Glory Hole Cre**	**16.49**	**46**	P	**P**	**15 35 08.8**	**+0.8**
GHO				IAmb	IAmb	15 35 17.5	
	comp=Z,22nm,1.4s						
KNK	**Knik Glacier**	**16.57**	**48**	P	**P**	**15 35 09.6**	**+0.7**
KNK				IAmb	IAmb	15 35 27.6	
	comp=Z,19nm,1.3s						
TRF	**Thorofare Moun**	**16.64**	**40**	P	**Pn**	**15 35 11.3**	**+1.2**
TRF				IAmb	IAmb	15 35 14.3	
	comp=Z,10nm,1.2s						
BPAW	**Bear Paw Mtn.**	**16.71**	**38**	P	**P**	**15 35 10.7**	**+0.3**
BPAW				IAmb	IAmb	15 35 14.6	
	comp=Z,20nm,1.2s						
PETK	**Petropavlovsk-**	**16.72**	**283**	P	**P**	**15 35 09.4**	**-1.2**
	comp=Z,0.0nm,0.3s,baz=92,slow=13,SNR=1.6						
SML	**Sawmill**	**16.76**	**47**	P	**Pn**	**15 35 13.8**	**+2.3**
IMAR	**Indian Mountai**	**16.92**	**30**	P	**Pn**	**15 35 15.2**	**+2.0**
RND	**Reindeer**	**17.19**	**41**	P	**P**	**15 35 16.5**	**+0.7**
SCM	**Sheep Creek Mo**	**17.22**	**47**	P	**P**	**15 35 16.2**	**+0.1**
BWN	**Browne**	**17.32**	**39**	P	**Pn**	**15 35 19.2**	**+1.1**
DHY	**Denali Highway**	**17.66**	**43**	P	**P**	**15 35 22.0**	**+1.1**
DHY				IAmb	IAmb	15 35 25.1	
	comp=Z,17nm,1.2s						
KLU	**Klutina**	**17.75**	**49**	P	**Pn**	**15 35 24.1**	**+0.8**
M24K	**Tolsona, Glenn**	**17.82**	**47**	P	**P**	**15 35 23.1**	**+0.5**
WRH	**Wood River Hil**	**17.99**	**39**	P	**P**	**15 35 24.5**	**+0.2**
MDM	**Murphy Dome**	**18.18**	**37**	P	**P**	**15 35 27.2**	**+0.7**
MDM				IAmb	IAmb	15 35 32.9	
	comp=Z,5.1nm,0.5s						
CCB	**Clear Creek Bu**	**18.18**	**38**	P	**P**	**15 35 26.4**	**0.0**
CCB				IAmb	IAmb	15 35 32.2	
	comp=Z,8.6nm,1.2s						
N25K	**Chitina, Valde**	**18.39**	**49**	P	**P**	**15 35 28.2**	**-0.6**
HDA	**Harding Lake**	**18.40**	**40**	P	**P**	**15 35 29.1**	**+0.2**
IL31		**18.59**	**39**	P	**P**	**15 35 31.2**	**+0.4**
IL31				IAmb	IAmb	15 35 34.5	
	comp=Z,4.8nm,0.5s						
ILAR	**Eielson Array**	**18.59**	**39**	P	**P**	**15 35 30.0**	**-0.9**
	comp=Z,1.2nm,0.3s,baz=231,slow=11,SNR=59						
ILAR	**Eielson Array**	**18.59**	**39**	P	**P**	**15 35 30.5**	**-0.4**
GLB	**Gilahina Butte**	**18.71**	**50**	P	**P**	**15 35 31.4**	**-0.9**
VRDI	**Verde Repeater**	**18.83**	**51**	P	**P**	**15 35 33.0**	**-0.7**
RIDG	**Independent Ri**	**18.97**	**43**	P	**P**	**15 35 36.2**	**+1.1**
RIDG				IAmb	IAmb	15 35 53.7	
	comp=Z,15nm,1.0s						
TGL	**Tana Glacier**	**19.03**	**52**	P	**P**	**15 35 35.4**	**-0.4**
TGL				IAmb	IAmb	15 35 58.8	
	comp=Z,14nm,1.1s						
BALM	**Baldy**	**19.31**	**52**	P	**P**	**15 35 37.9**	**-1.0**
BALM				IAmb	IAmb	15 36 01.9	
	comp=Z,13nm,1.2s						
BCAR	**Beaver Creek A**	**20.05**	**46**	P	**P**	**15 35 47.3**	**+0.5**
BMAR	**Burnt Mountain**	**20.71**	**33**	P	**P**	**15 35 55.1**	**+1.4**
EGAK	**Eagle**	**20.84**	**42**	P	**P**	**15 35 55.8**	**+0.7**
EGAK				IAmb	IAmb	15 35 58.7	
	comp=Z,13nm,1.3s						
HYT	**Haines Junctio**	**21.62**	**53**	P	**P**	**15 36 04.4**	**+0.8**
EPYK	**Eagle Plains**	**23.10**	**39**	P	**P**	**15 36 18.4**	**+0.7**
JIS	**Juneau Island**	**23.17**	**60**	P	**P**	**15 36 18.7**	**+0.4**
INK	**Inuvik**	**24.88**	**35**	P	**P**	**15 36 34.7**	**+1.0**
	comp=Z,0.6nm,0.4s,baz=255,slow=12,SNR=4.1						
INK				LR	LR	15 47 29.8	
	comp=Z,32nm,18.3s,baz=168,slow=39						
INK	**Inuvik**	**24.88**	**35**	IAmb	IAmb	15 36 39.0	
	comp=Z,5.3nm,1.5s						
C36M	**Paulatuk**	**28.46**	**35**	P	**P**	**15 37 06.1**	**+0.3**
YKA	**Yellowknife Ar**	**32.42**	**49**	P	**P**	**15 37 40.5**	**-0.1**
	comp=Z,0.4nm,0.6s,baz=287,slow=6.3,SNR=5.2						
LTY	**Liberty**	**34.38**	**77**	P	**P**	**15 37 58.4**	**+0.5**
LTY				IAmb	IAmb	15 38 22.1	
	comp=Z,9.9nm,1.4s						
KEBM	**Edson Butte**	**34.49**	**86**	P	**P**	**15 37 56.1**	**-2.7**
B08A	**Colville Reser**	**34.64**	**75**	P	**P**	**15 38 00.6**	**+0.6**
B08A				IAmb	IAmb	15 38 01.6	
	comp=Z,4.0nm,0.9s						
JSD	**Sado**	**35.57**	**265**	P	**P**	**15 38 07.7**	**-0.3**
NEW	**Newport**	**35.98**	**73**	P	**P**	**15 38 11.7**	**+0.2**
NEW				IAmb	IAmb	15 38 12.4	
	comp=Z,2.6nm,0.7s						
YBH	**Yreka Blue Hor**	**36.13**	**86**	P	**P**	**15 38 11.3**	**-1.6**
MJAR	**Matsushiro Arr**	**36.57**	**263**	P	**P**	**15 38 16.4**	**-0.2**
	comp=Z,1.6nm,0.7s,baz=57,slow=9.5,SNR=2.2						
MOD	**Modoc Plateau**	**37.49**	**84**	P	**P**	**15 38 25.5**	**+1.0**
JGF	**Kuroka**	**37.71**	**263**	P	**P**	**15 38 27.1**	**+0.8**
MSO	**Missoula**	**38.56**	**74**	P	**P**	**15 38 33.4**	**0.0**
PNTR	**Pine Nut**	**39.62**	**87**	P	**P**	**15 38 43.0**	**+0.7**
LRM	**Limekiln Ridge**	**39.97**	**74**	P	**P**	**15 38 44.9**	**-0.4**
HLID	**Hailey**	**40.08**	**78**	P	**P**	**15 38 46.4**	**+0.3**
WAKR	**Walker**	**40.08**	**88**	P	**P**	**15 38 47.1**	**+0.9**
WAKR				IAmb	IAmb	15 38 53.4	
	comp=Z,8.6nm,1.3s						
BCYI	**Bear Canyon**	**40.25**	**77**	P	**P**	**15 38 47.5**	**0.0**
MCMT	**McKenzie Canyo**	**40.29**	**76**	P	**P**	**15 38 48.0**	**+0.1**
RYN	**Ryan**	**40.56**	**87**	P	**P**	**15 38 50.7**	**+0.7**
RYN				IAmb	IAmb	15 39 15.3	
	comp=Z,7.7nm,1.3s						
BOZ	**Bozeman (W)**	**40.58**	**74**	P	**P**	**15 38 49.6**	**-0.4**
BOZ				IAmb	IAmb	15 38 54.6	
	comp=Z,5.5nm,1.4s						
NVAR	**Mina Array Bea**	**40.82**	**87**	P	**P**	**15 38 53.4**	**+1.2**
	comp=Z,0.9nm,0.6s,baz=300,slow=7.2,SNR=5.7						
NVAR	**Mina Array Bea**	**40.82**	**87**	P	**P**	**15 38 52.3**	**+0.1**
YHH	**Holmes Hill**	**41.49**	**74**	P	**P**	**15 38 57.6**	**-0.1**
YNE	**Yellowstone No**	**41.86**	**74**	P	**P**	**15 38 59.9**	**-0.7**
RLMT	**Red Lodge**	**42.22**	**73**	P	**P**	**15 39 03.3**	**-0.3**
R11A	**Troy Canyon, C**	**42.52**	**85**	P	**P**	**15 39 06.2**	**+0.2**
TPNV	**Topopah Spring**	**43.02**	**87**	P	**P**	**15 39 11.0**	**+1.0**
TPNV				IAmb	IAmb	15 39 11.9	
	comp=Z,6.9nm,1.4s						
BW06	**Boulder Array**	**43.42**	**76**	P	**P**	**15 39 12.9**	**-0.4**
PD31	**Pinedale Array**	**43.42**	**76**	P	**P**	**15 39 12.8**	**-0.5**
PDAR	**Pinedale Array**	**43.42**	**76**	P	**P**	**15 39 13.2**	**-0.1**
	comp=Z,1.9nm,0.6s,baz=315,slow=3.0,SNR=22						
PDAR	**Pinedale Array**	**43.42**	**76**	P	**P**	**15 39 13.0**	**-0.3**
U15A	**North Rim**	**45.76**	**85**	P	**P**	**15 39 32.7**	**+0.8**
U15A				IAmb	IAmb	15 39 33.5	
	comp=Z,3.3nm,0.6s						
PV17	**East Wray Mesa**	**46.57**	**81**	P	**P**	**15 39 37.7**	**-0.4**
PV17				IAmb	IAmb	15 39 38.6	
	comp=Z,3.6nm,0.6s						
PV03	**Paradox Valley**	**46.65**	**81**	P	**P**	**15 39 38.6**	**-0.2**
PV03				IAmb	IAmb	15 39 42.4	
	comp=Z,6.3nm,1.4s						
PV13	**Radium Mtn., P**	**46.73**	**81**	P	**P**	**15 39 39.5**	**0.0**
PV13				IAmb	IAmb	15 39 40.1	
	comp=Z,3.8nm,0.6s						
SDCO	**Great Sand Dun**	**48.99**	**79**	P	**P**	**15 39 57.5**	**+0.6**
BNM	**Barren Site**	**50.72**	**83**	P	**P**	**15 40 10.1**	**+0.2**
TX31	**Lajitas Ar. Si**	**55.89**	**85**	P	**P**	**15 40 47.1**	**-0.4**
TX31				IAmb	IAmb	15 40 48.8	
	comp=Z,1.8nm,0.6s						
TX32	**Lajitas Array**	**55.89**	**85**	P	**P**	**15 40 47.0**	**-0.4**
TXAR	**Lajitas Array**	**55.89**	**85**	P	**P**	**15 40 47.4**	**0.0**
	comp=Z,0.8nm,0.6s,baz=301,slow=5.1,SNR=9.8						
TXAR				PcP	**sP**	**15 41 41.6**	**+0.9**
	comp=Z,0.2nm,0.5s,baz=316,slow=2.5,SNR=3.4						
TXAR	**Lajitas Array**	**55.89**	**85**	P	**P**	**15 40 47.0**	**-0.4**
MKAR	**Makanchi Array**	**61.25**	**310**	P	**P**	**15 41 21.4**	**-2.7**
	comp=Z,0.8nm,0.5s,baz=28,slow=6.5,SNR=1.3						
ABKAR	**Akbulak array**	**68.44**	**325**	P	**P**	**15 42 10.6**	**+0.1**
ABKAR				IAmb	IAmb	15 42 11.9	
	comp=Z,4.2nm,1.4s						
CMAR	**Chiang Mai Arr**	**73.46**	**279**	P	**P**	**15 42 41.0**	**-0.2**
	comp=Z,0.6nm,0.7s,baz=33,slow=6.3,SNR=4.7						
AKASG	**Malin Array Be**	**75.06**	**345**	P	**P**	**15 42 49.1**	**-1.0**
	comp=Z,1.2nm,0.5s,baz=17,slow=6.1,SNR=6.6						
WRA	**Warramunga Arr**	**84.80**	**227**	P	**P**	**15 43 41.2**	**-1.4**
	comp=Z,0.5nm,0.9s,baz=34,slow=5.8,SNR=2.5						
ASAR	**Alice Springs**	**88.25**	**226**	P	**P**	**15 43 59.0**	**-0.3**
	comp=Z,0.6nm,0.8s,baz=21,slow=6.4,SNR=8.1						

*IDC **09** 15:34:46.6±0.8, 56°.72N×169°.03W, h0^{km}, mb4.0/18, mb1 4.2/22, mb1mx4.1/45, mbtmp4.0/22, ML3.4/4, MS3.3/2, Ms1 3.3/2, ms1mx2.7/43, Error ellipse: s-maj=25.5km s-min=11.7km az=178.0*

*NEIC **09** 15:34:47.3±0.9, 56°.65N±0°.06×169°.00W±0°.10, h8^{km}±4^{km}, mb4.5/33, ML3.9/21(AEIC), Error ellipse: s-maj=9.5km s-min=6.4km az=217.0*

*AEIC **09** 15:34:47±2.9, 56°.65N±0°.05×169°.2W±0°.1, h40^{km}±6^{km}, Error ellipse: s-maj=9.3km s-min=5.9km az=57.0*

ISC 09 15:34:47.7±0.4**, 56°.64N**±0°.06×**169°.00W**±0°.05**, h10**^{km}**, n101, σ0^{s}.63**/103**, mb4.2**/31**, Pribilof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPIA	**Saint Paul Isl**	**0.87**	**308**		**Pg**	**15 35 03.6**	**-0.8**
SPIA					**Sg**	**15 35 15.1**	**-0.6**
AKGG	**Akutan Green G**	**2.99**	**144**		**Pn**	**15 35 34.4**	**-0.7**
MSW	**Makushin Switc**	**3.01**	**154**		**Pn**	**15 35 35.3**	**-0.2**
AKRB	**Akutan Reef Bi**	**3.02**	**145**		**Pn**	**15 35 35.4**	**-0.1**
AKMO	**Akutan Morgan**	**3.07**	**145**		**Pn**	**15 35 36.2**	**0.0**
MAPS	**Pakushin South**	**3.08**	**157**		**Pn**	**15 35 36.1**	**-0.2**
MGOD	**Makushin Gods**	**3.10**	**156**		**Pn**	**15 35 35.8**	**-0.9**
UNV	**Unalaska Valle**	**3.15**	**152**		**Pn**	**15 35 36.7**	**-0.5**
UNV					**Sn**	**15 36 13.7**	**-1.1**
OKRE	**Okmok R'deer P**	**3.17**	**171**		**Pn**	**15 35 38.1**	**+0.5**
WECS	**Westdahl Cape**	**3.20**	**130**		**Pn**	**15 35 37.8**	**-0.2**
OKWE	**Okmok W'ng Wal**	**3.21**	**172**		**Pn**	**15 35 36.5**	**-1.6**
WESP	**Westdahl Peak**	**3.25**	**130**		**Pn**	**15 35 38.5**	**-0.2**
OKFG	**Magazine Ridge**	**3.30**	**169**		**Pn**	**15 35 39.2**	**-0.2**
FALS	**False Pass**	**3.63**	**117**		**Pn**	**15 35 43.4**	**-0.5**
NIKH	**Nikolski High**	**3.68**	**179**		**Pn**	**15 35 44.1**	**-0.4**
VNWF	**Veniaminof 8**	**5.26**	**91**		**Pn**	**15 36 05.9**	**-0.5**
KOFP	**Korovin Flat P**	**5.29**	**216**		**Pn**	**15 36 06.7**	**0.0**
ATKA	**Atka Island**	**5.38**	**216**		**Pn**	**15 36 08.2**	**+0.2**
ANM	**Nome**	**8.14**	**11**	Pn	**Pn**	**15 36 44.5**	**-1.3**
SII	**Sitkinak Islan**	**8.18**	**84**	Pn	**Pn**	**15 36 45.6**	**-0.7**
KDAK	**Kodiak Island**	**8.98**	**76**	Pn	**Pn**	**15 36 58.5**	**+1.2**
	0.9nm,0.3s,baz=118,slow=11,SNR=1.7						
KDAK				Sn	**Sn**	**15 38 38.2**	**-0.1**
	baz=48,slow=13,SNR=1.4						
KDAK				LR	LR	15 40 32.3	
	comp=Z,107nm,20.3s,baz=279,slow=38						
CNPM	**China Poot**	**9.83**	**66**	Pn	**Pn**	**15 37 08.9**	**0.0**
BRLK	**Bradley Lake**	**10.05**	**64**	Pn	**Pn**	**15 37 11.7**	**-0.3**
SKT	**Skwentna**	**10.39**	**52**	Pn	**Pn**	**15 37 16.1**	**-0.4**
SUA	**Susitna One**	**10.55**	**55**	Pn	**Pn**	**15 37 18.6**	**-0.2**
GHO	**Glory Hole Cre**	**11.47**	**55**	Pn	**Pn**	**15 37 32.0**	**+0.6**
KNK	**Knik Glacier**	**11.59**	**57**	Pn	**Pn**	**15 37 33.1**	**+0.2**
SML	**Sawmill**	**11.75**	**55**	Pn	**Pn**	**15 37 35.5**	**+0.2**
RND	**Reindeer**	**12.10**	**48**	Pn	**Pn**	**15 37 39.6**	**-0.4**
SCM	**Sheep Creek Mo**	**12.22**	**56**	Pn	**Pn**	**15 37 41.9**	**+0.3**
I23K	**Minto, Yukon-K**	**12.75**	**40**	Pn	**Pn**	**15 37 48.5**	**-0.2**
KLU	**Klutina**	**12.79**	**58**	Pn	**Pn**	**15 37 49.0**	**-0.4**
M24K	**Tolsona, Glenn**	**12.81**	**55**	Pn	**Pn**	**15 37 49.8**	**+0.1**
CCB	**Clear Creek Bu**	**13.07**	**44**	Pn	**Pn**	**15 37 53.1**	**+0.1**
N25K	**Chitina, Valde**	**13.43**	**58**	Pn	**Pn**	**15 37 57.8**	**-0.3**
ILAR	**Eielson Array**	**13.47**	**44**	Pn	**Pn**	**15 37 57.2**	**-1.5**
	0.0nm,0.3s,baz=230,slow=10.0,SNR=2.3						
GLB	**Gilahina Butte**	**13.78**	**59**	Pn	**Pn**	**15 38 00.9**	**-1.9**
VRDI	**Verde Repeater**	**13.91**	**60**	Pn	**Pn**	**15 38 04.9**	**0.0**
CRQM	**Cirque**	**14.01**	**62**	Pn	**Pn**	**15 38 05.8**	**-0.3**
MCARA	**McCarthy VSAT**	**14.14**	**60**	Pn	**Pn**	**15 38 07.8**	**0.0**
TGL	**Tana Glacier**	**14.16**	**62**	P	**P**	**15 38 16.1**	**+0.3**
BALM	**Baldy**	**14.43**	**61**	Pn	**Pn**	**15 38 11.1**	**-0.7**
CTGM	**Chitina Glacie**	**14.91**	**62**	Pn	**Pn**	**15 38 17.8**	**-0.6**
TABL	**Table Mountain**	**14.97**	**64**	Pn	**Pn**	**15 38 18.7**	**-0.6**
BCAR	**Beaver Creek A**	**15.02**	**53**		**Pn**	**15 38 19.2**	**-0.5**
EGAK	**Eagle**	**15.74**	**48**	P	**P**	**15 38 33.4**	**+0.2**
HYT	**Haines Junctio**	**16.77**	**62**	P	**P**	**15 38 44.6**	**-0.1**
EPYK	**Eagle Plains**	**17.99**	**44**		**Pn**	**15 38 57.2**	**-0.3**
WHY	**Whitehorse**	**18.06**	**63**		**Pn**	**15 38 58.2**	**-0.3**
PETK	**Petropavlovsk-**	**19.37**	**274**	P	**Pn**	**15 39 14.4**	**+0.1**
	0.3nm,0.3s,baz=74,slow=13,SNR=5.0						
INK	**Inuvik**	**19.77**	**40**	P	**P**	**15 39 17.9**	**+0.4**
	0.4nm,0.3s,baz=237,slow=8.6,SNR=22						
INK	**Inuvik**	**19.77**	**40**	P	**P**	**15 39 17.6**	**+0.1**
DLBC	**Dease Lake**	**20.80**	**69**	P	**P**	**15 39 29.5**	**+0.7**
	4.7nm,1.0s,baz=306,slow=12,SNR=4.1						
DLBC	**Dease Lake**	**20.80**	**69**	P	**P**	**15 39 29.2**	**+0.4**
DLBC				IAmb	IAmb	15 39 36.1	
	comp=Z,24nm,1.5s						
MA2	**Magadan**	**21.23**	**295**	P	**P**	**15 39 33.5**	**+0.2**
	comp=Z,4.6nm,0.8s,baz=118,slow=8.1,SNR=2.6						
C36M	**Paulatuk**	**23.35**	**39**	P	**P**	**15 39 55.4**	**-0.3**
C36M				IAmb	IAmb	15 39 57.1	
	comp=Z,6.7nm,1.1s						
YKA	**Yellowknife Ar**	**27.43**	**55**	P	**P**	**15 40 33.6**	**+0.5**
	comp=Z,1.7nm,0.8s,baz=281,slow=8.4,SNR=15						
YKA				PcP	**PcP**	**15 43 51.5**	**+0.3**
	comp=Z,0.4nm,0.6s,baz=288,slow=1.9,SNR=5.3						
YAK	**Yakutsk**	**30.67**	**306**	P	**P**	**15 41 01.8**	**-0.1**
	comp=Z,3.8nm,0.4s,baz=295,slow=8.0,SNR=4.1						
YAK	**Yakutsk**	**30.67**	**306**	IAmb	IAmb	15 41 02.2	
	comp=Z,20nm,1.2s						
EUNU	**Eureka**	**33.56**	**18**	P	**P**	**15 41 28.0**	**+0.8**
NVAR	**Mina Array Bea**	**37.74**	**97**	P	**P**	**15 42 05.1**	**+1.4**
	comp=Z,1.3nm,0.8s,baz=294,slow=7.5,SNR=4.5						
PDAR	**Pinedale Array**	**39.58**	**84**	P	**P**	**15 42 18.7**	**-0.3**
	comp=Z,0.2nm,0.5s,baz=295,slow=2.9,SNR=2.5						
SRU	**San Rafael Swe**	**41.55**	**89**	P	**P**	**15 42 35.0**	**-0.3**
ULM	**Lac du Bonnet**	**42.09**	**66**	P	**P**	**15 42 39.0**	**-0.4**
	comp=Z,1.1nm,0.4s,baz=2.1,slow=6.1,SNR=3.1						
X18A	**Snowflake**	**45.18**	**93**	P	**P**	**15 43 05.1**	**+0.4**
X18A				IAmb	IAmb	15 43 06.1	
	comp=Z,4.3nm,0.8s						
SUMG	**Summit**	**46.63**	**18**	P	**P**	**15 43 16.5**	**+0.6**
SUMG				IAmb	IAmb	15 43 19.2	
	comp=Z,8.6nm,1.2s						
ULN	**Ulaanbaatar**	**49.04**	**298**	P	**P**	**15 43 34.5**	**-0.1**
ULN				IAmb	IAmb	15 43 36.1	
	comp=Z,3.5nm,0.9s						
SONM	**Songino Array**	**49.39**	**298**	P	**P**	**15 43 38.4**	**+1.2**
	comp=Z,1.5nm,0.8s,baz=52,slow=7.0,SNR=7.2						
SONM	**Songino Array**	**49.39**	**298**	P	**P**	**15 43 37.3**	**0.0**
MNTX	**Cornudas Mount**	**49.82**	**92**	P	**P**	**15 43 40.6**	**0.0**
MNTX				IAmb	IAmb	15 44 01.2	
	comp=Z,2.5nm,1.1s						
HDIL	**Hopedale**	**52.04**	**72**	P	**P**	**15 43 57.3**	**+0.2**
TX31	**Lajitas Ar. Si**	**52.58**	**92**	P	**P**	**15 44 00.9**	**-0.5**
TX31				IAmb	IAmb	15 44 11.9	
	comp=Z,11nm,1.4s						
TX32	**Lajitas Array**	**52.58**	**92**	P	**P**	**15 44 01.0**	**-0.5**
TX32				IAmb	IAmb	15 44 11.9	
	comp=Z,3.8nm,1.4s						
TXAR	**Lajitas Array**	**52.58**	**92**	P	**P**	**15 44 01.6**	**+0.2**
	comp=Z,1.2nm,0.8s,baz=311,slow=5.5,SNR=10						
TXAR	**Lajitas Array**	**52.58**	**92**	P	**P**	**15 44 00.8**	**-0.6**
DRLN	**Deer Lake**	**60.19**	**45**	P	**P**	**15 44 55.0**	**-0.2**
BRVK	**Borovoye**	**60.38**	**323**	P	**P**	**15 44 56.9**	**+0.4**
BRVK				IAmb	IAmb	15 44 57.9	
	comp=Z,7.8nm,1.1s						
ARU	**Arti**	**60.92**	**332**	P	**P**	**15 44 59.9**	**-0.2**
MKAR	**Makanchi Array**	**61.06**	**312**	P	**P**	**15 45 00.1**	**-1.2**
	comp=Z,0.9nm,1.1s,baz=28,slow=7.2,SNR=3.6						
MAKZ	**Makanchi**	**61.18**	**312**	P	**P**	**15 45 02.2**	**+0.1**
MAKZ				IAmb	IAmb	15 45 12.6	
	comp=Z,2.1nm,1.2s						
FIA1	**FINESS Array S**	**61.66**	**352**	P	**P**	**15 45 04.7**	**-0.3**
FINES	**FINESS Array B**	**61.66**	**352**	P	**P**	**15 45 03.5**	**-1.5**
	comp=Z,2.9nm,0.9s,baz=332,slow=4.7,SNR=3.0						
FINES	**FINESS Array B**	**61.66**	**352**	P	**P**	**15 45 04.5**	**-0.6**
ABKAR	**Akbulak array**	**66.92**	**328**	P	**P**	**15 45 39.8**	**+0.1**
ABKAR				IAmb	IAmb	15 45 41.0	
	comp=Z,4.8nm,0.9s						
AAK	**Ala-Archa**	**67.63**	**314**	P	**P**	**15 45 45.7**	**+1.1**
AAK				IAmb	IAmb	15 45 46.4	
	comp=Z,3.0nm,0.9s						
KK31	**Karatay Array**	**68.76**	**317**	P	**P**	**15 45 51.4**	**-0.1**
KK31				IAmb	IAmb	15 45 52.8	
	comp=Z,4.4nm,0.8s						
KKAR	**Karatay Array**	**68.76**	**317**	P	**P**	**15 45 51.1**	**-0.4**
KKAR	**Karatay Array**	**68.76**	**317**	P	**P**	**15 45 51.2**	**-0.2**
KKAR				IAmb	IAmb	15 45 52.8	
	comp=Z,4.4nm,0.8s						
BBSR	**BB Station**	**70.81**	**60**	P	**P**	**15 46 03.7**	**-0.5**
JAY	**Jayapura**	**71.57**	**234**	LR	LR	16 11 06.3	
	comp=Z,40nm,20.6s,baz=3.5,slow=30						
AKASG	**Malin Array Be**	**71.96**	**348**	P	**P**	**15 46 10.0**	**-0.9**
	comp=Z,3.4nm,0.6s,baz=15,slow=5.9,SNR=15						
AKASG	**Malin Array Be**	**71.96**	**348**	P	**P**	**15 46 09.5**	**-1.3**
AKBB	**Malin Array Si**	**71.96**	**348**	P	**P**	**15 46 10.0**	**-0.9**
AKBB				IAmb	IAmb	15 46 16.6	
	comp=Z,8.9nm,1.1s						
BURAR	**Bucovina Array**	**75.43**	**350**	P	**P**	**15 46 31.2**	**-0.3**
CMAR	**Chiang Mai Arr**	**75.91**	**282**	P	**P**	**15 46 35.0**	**+0.6**
	comp=Z,2.7nm,1.2s,baz=23,slow=6.8,SNR=6.6						
KBZ	**Khabaz**	**76.46**	**337**	P	**P**	**15 46 37.8**	**+0.6**
	comp=Z,4.0nm,1.0s,baz=131,slow=12,SNR=3.2						
GEYT	**Alibeck**	**77.70**	**324**	P	**P**	**15 46 45.4**	**+1.0**
	comp=Z,2.3nm,0.8s,baz=352,slow=6.0,SNR=4.8						
SDDR	**Presa de Saban**	**78.50**	**73**	P	**P**	**15 46 49.3**	**+0.3**
ESDC	**Sonseca Array**	**83.21**	**12**	P	**P**	**15 47 13.9**	**-0.1**
	comp=Z,0.5nm,0.6s,baz=0.6,slow=4.7,SNR=1.9						
WRA	**Warramunga Arr**	**89.83**	**232**	P	**P**	**15 47 47.6**	**+1.2**
	comp=Z,0.7nm,1.0s,baz=35,slow=5.7,SNR=3.0						
ASAR	**Alice Springs**	**93.30**	**230**	P	**P**	**15 48 02.3**	**-0.1**
	comp=Z,0.4nm,0.9s,baz=21,slow=5.6,SNR=2.0						

*SOME **09** 15:37:18.5, 44°.25N×81°.20E, h15^{km}*

*NNC **09** 15:37:18.6±0.8, 44°.31N×81°.21E, h10^{km}±6^{km}, mb4.0, mpv3.6, Error ellipse: s-maj=7.4km s-min=4.0km az=123.0*

ISC 09 15:37:18.3±1.3**, 44°.30N**±0°.03×**81°.19E**±0°.04**, h9**^{km}±10^{km}**, n56, σ1^{s}.80**/86**, 18C-6D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DJR	**Jarkent**	**1.00**	**272**	*e*P	**Pn**	**15 37 39.1**	**+0.5**
	69nm,0.2s						
DJR				*e*S	**Sn**	**15 37 54.1**	**+1.3**
	333nm,0.3s						
DJR	**Jarkent**	**1.00**	**272**	P	**Pn**	**15 37 39.1**	**+0.5**
	69nm,0.2s						
DJR				S	**Sn**	**15 37 54.1**	**+1.3**
	333nm,0.3s						
KTMS	**Ketmen**	**1.04**	**216**	*e*P	**Pg**	**15 37 38.6**	**+0.2**
	9.1nm,0.3s						
KTMS				*e*S	**Sn**	**15 37 53.3**	**-0.6**
	796nm,0.4s						
KTMS	**Ketmen**	**1.04**	**216**	P	**Pg**	**15 37 38.6**	**+0.2**
	9.1nm,0.3s						
KTMS				S	**Sn**	**15 37 53.3**	**-0.6**
	796nm,0.4s						
PDGK	**Podgornoye**	**1.56**	**232**	P	**Pb**	**15 37 47.1**	**-0.3**
	34nm,0.4s						
PDGK				S	**Sg**	**15 38 08.6**	**0.0**
	241nm,0.4s						
PDGK	**Podgornoye**	**1.56**	**232**	⇑Pg	**Pb**	**15 37 47.2**	**-0.3**
	32nm,0.4s						
PDGK				⇑Lg	Lg	15 38 09.1	
	134nm,0.5s						
KAPS	**Kapalarasan**	**1.63**	**308**	*e*P	**Pb**	**15 37 49.0**	**+0.5**
	59nm,0.2s						
KAPS				*e*S	**Sg**	**15 38 11.6**	**+0.8**
	570nm,0.7s						
KAPS	**Kapalarasan**	**1.63**	**308**	P	**Pb**	**15 37 49.0**	**+0.5**
	59nm,0.2s						
KAPS				S	**Sg**	**15 38 11.6**	**+0.8**
	570nm,0.7s						
SHLS	**Shalkode**	**1.69**	**228**	*e*P	**Pn**	**15 37 45.7**	**-2.4**
	228nm,0.2s						
SHLS				*e*S	**Sn**	**15 38 06.0**	**-3.9**
	498nm,0.3s						
SHLS	**Shalkode**	**1.69**	**228**	P	**Pn**	**15 37 45.7**	**-2.4**
	228nm,0.2s						
SHLS				S	**Sn**	**15 38 06.0**	**-3.9**
	498nm,0.3s						
UZB	**Uzynbulak**	**1.95**	**234**	*e*P	**Pn**	**15 37 52.6**	**+1.0**
	45nm,0.3s						
UZB				*e*S	**Sb**	**15 38 18.4**	**0.0**
	250nm,0.4s						
UZB	**Uzynbulak**	**1.95**	**234**	Pg	**Pn**	**15 37 52.6**	**+1.0**
	45nm,0.3s						
UZB				Lg	Lg	15 38 18.4	
	250nm,0.4s						
KPKS	**Kokpek**	**1.99**	**246**	*e*P	**Pb**	**15 37 53.7**	**-1.0**
	98nm,0.2s						
KPKS				*e*S	**Sb**	**15 38 19.6**	**0.0**
	939nm,0.5s						
MNBS	**Baschi**	**2.02**	**265**	*e*P	**Pb**	**15 37 55.0**	**-0.1**
	21nm,0.1s						
MNBS				*e*S	**Sb**	**15 38 22.1**	**+1.8**
	449nm,0.5s						
MNBS	**Baschi**	**2.02**	**265**	Pg	**Pb**	**15 37 55.0**	**-0.1**
	21nm,0.1s						
MNBS				Lg	Lg	15 38 22.1	
	449nm,0.5s						
TDK	**Taldyqorghan**	**2.10**	**290**	*e*P	**Pb**	**15 37 57.2**	**+0.6**
	54nm,0.4s						
TDK				*e*S	**Sg**	**15 38 25.0**	**-0.9**
	96nm,0.6s						
TDK	**Taldyqorghan**	**2.10**	**290**	Pg	**Pb**	**15 37 57.2**	**+0.6**
	54nm,0.4s						
TDK				Lg	Lg	15 38 25.0	
	96nm,0.6s						
KURS	**Kuram**	**2.33**	**251**	*e*P	**Pg**	**15 38 02.1**	**-0.7**
	5.8nm,0.4s						
KURS				*e*S	**Sg**	**15 38 33.8**	**+0.8**
	51nm,0.5s						
KURS	**Kuram**	**2.33**	**251**	Pg	**Pg**	**15 38 02.1**	**-0.7**
	5.8nm,0.4s						
KURS				Lg	Lg	15 38 33.7	
	51nm,0.5s						
SATY	**Saty**	**2.37**	**239**	*e*P	**Pn**	**15 37 58.9**	**+1.5**
	16nm,0.2s						
SATY				*e*S	**Sn**	**15 38 28.0**	**+1.5**
	255nm,0.4s						
SATY	**Saty**	**2.37**	**239**	Pg	**Pn**	**15 37 58.9**	**+1.5**
	16nm,0.2s						
SATY				Lg	Lg	15 38 28.0	
	255nm,0.4s						
ARXS	**Arharly**	**2.42**	**269**	*e*P	**Pb**	**15 38 02.9**	**+1.0**
	46nm,0.3s						
ARXS				*e*S	**Sg**	**15 38 34.6**	**-1.2**
	122nm,0.3s						
ARXS	**Arharly**	**2.42**	**269**	Pg	**Pb**	**15 38 02.9**	**+1.0**
	46nm,0.3s						
ARXS				Lg	Lg	15 38 34.6	
	122nm,0.3s						
MAKZ	**Makanchi**	**2.57**	**12**	⇑Pn	**Pn**	**15 37 59.5**	**-0.6**
	2.0nm,0.7s						
MAKZ				⇑Pg	**Pb**	**15 38 06.1**	**+1.5**
	5.4nm,0.3s						
MAKZ				⇑Lg	Lg	15 38 36.1	
	6.7nm,0.2s						

MK31	**Makanchi Array**	**2.61**	**17**	⇓Pn	**Pn**	**15 37 59.7**	**-1.0**
	0.4nm,0.3s,baz=201,slow=13,SNR=436						
MK31				⇑Pg	**Pg**	**15 38 07.3**	**-1.0**
	9.5nm,0.4s,baz=189,slow=16,SNR=65						
MK31				⇑Lg	Lg	15 38 42.0	
	3.4nm,0.2s,baz=193,slow=27,SNR=8.6						
CHKK	**Chushkaly**	**3.06**	**263**	*e*P	**Pb**	**15 38 13.7**	**+0.9**
	3.3nm,0.2s						
CHKK				*e*S	**Sb**	**15 38 53.2**	**+3.0**
	80nm,0.3s						
CHKK	**Chushkaly**	**3.06**	**263**	Pg	**Pb**	**15 38 13.7**	**+0.9**
	3.3nm,0.2s						
CHKK				Lg	Lg	15 38 53.2	
	80nm,0.3s						
KOTS	**Kotyrbulak**	**3.14**	**252**	*e*P	**Pb**	**15 38 15.2**	**+1.0**
	19nm,0.3s						
KOTS				*e*S	**Sb**	**15 38 55.6**	**+2.9**
	84nm,0.4s						
KOTS	**Kotyrbulak**	**3.14**	**252**	Pg	**Pb**	**15 38 15.3**	**+1.0**
	19nm,0.3s						
KOTS				Lg	Lg	15 38 55.6	
	84nm,0.4s						
MDOK	**Medeo**	**3.21**	**251**	*e*P	**Pb**	**15 38 17.1**	**+1.7**
	18nm,0.5s						
MDOK				*e*S	**Sg**	**15 38 59.3**	**-2.0**
	64nm,0.7s						
MDOK	**Medeo**	**3.21**	**251**	⇑Pg	**Pg**	**15 38 19.3**	**-0.4**
	11nm,0.5s						
MDOK				⇓Lg	Lg	15 38 58.7	
	11nm,0.3s						
MDOK	**Medeo**	**3.21**	**251**	Pg	**Pb**	**15 38 17.1**	**+1.7**
	18nm,0.5s						
MDOK				Lg	Lg	15 38 59.3	
	64nm,0.7s						
KNDC	**Almaty**	**3.24**	**252**	⇑Pg	**Pg**	**15 38 20.7**	**+0.3**
	22nm,0.4s						
KNDC				⇑Lg	Lg	15 38 59.8	
	77nm,0.6s						
TNSS	**Tian-Shan**	**3.32**	**249**	*e*P	**Pg**	**15 38 21.3**	**-0.7**
	12nm,0.3s						
TNSS				*e*S	**Sg**	**15 39 06.1**	**+1.0**
	34nm,0.6s						
TNSS	**Tian-Shan**	**3.32**	**249**	Pg	**Pg**	**15 38 21.3**	**-0.7**
	12nm,0.3s						
TNSS				Lg	Lg	15 39 06.1	
	34nm,0.6s						
KUU	**Kurty**	**3.52**	**265**	*e*P	**Pb**	**15 38 22.7**	**+2.1**
	8.9nm,0.6s						
KUU				*e*S	**Sg**	**15 39 08.8**	**-2.3**
	40nm,0.3s						
KUU	**Kurty**	**3.52**	**265**	Pg	**Pb**	**15 38 22.7**	**+2.1**
	8.9nm,0.6s						
KUU				Lg	Lg	15 39 08.8	
	40nm,0.3s						
IZV	**Izvestkoviy**	**3.55**	**251**	*e*P	**Pg**	**15 38 25.6**	**-0.7**
	9.8nm,0.5s						
IZV				*e*S	**Sg**	**15 39 15.0**	**+2.7**
	51nm,0.8s						
IZV	**Izvestkoviy**	**3.55**	**251**	Pg	**Pg**	**15 38 25.6**	**-0.7**
	9.8nm,0.5s						
IZV				Lg	Lg	15 39 15.0	
	51nm,0.8s						
MTBS	**Maitube**	**3.64**	**253**	*e*P	**Pb**	**15 38 24.2**	**+1.4**
	3.4nm,0.3s						
MTBS				*e*S	**Sg**	**15 39 11.5**	**-3.7**
	33nm,0.3s						
MTBS	**Maitube**	**3.64**	**253**	Pg	**Pb**	**15 38 24.2**	**+1.4**
	3.4nm,0.3s						
MTBS				Lg	Lg	15 39 11.5	
	33nm,0.3s						
KST	**Kastek**	**3.99**	**253**	*e*P	**Pb**	**15 38 31.8**	**+3.0**
	5.3nm,0.6s						
KST				*e*S	**Sg**	**15 39 24.7**	**-1.8**
	24nm,0.8s						
KST	**Kastek**	**3.99**	**253**	Pg	**Pb**	**15 38 31.8**	**+3.0**
	5.3nm,0.6s						
KST				Lg	Lg	15 39 24.7	
	24nm,0.8s						
KRBS	**Karabastau**	**4.02**	**263**	*e*P	**Pb**	**15 38 30.8**	**+1.5**
	3.6nm,0.4s						
KRBS				*e*S	**Sg**	**15 39 23.2**	**-4.2**
	24nm,0.3s						
KRBS	**Karabastau**	**4.02**	**263**	Pg	**Pb**	**15 38 30.8**	**+1.5**
	3.6nm,0.4s						
KRBS				Lg	Lg	15 39 23.2	
	24nm,0.3s						
DGS	**Degeres**	**4.06**	**257**	*e*P	**Pg**	**15 38 33.8**	**-2.3**
	9.2nm,0.3s						
DGS				*e*S	**Sg**	**15 39 27.5**	**-1.1**
	33nm,0.5s						
DGS	**Degeres**	**4.06**	**257**	Pg	**Pg**	**15 38 33.8**	**-2.3**
	9.2nm,0.3s						
DGS				Lg	Lg	15 39 27.5	
	33nm,0.5s						
ZSN	**Zaisan**	**4.07**	**38**	*e*P	**Pb**	**15 38 31.2**	**+1.2**
	5.6nm,0.5s						
ZSN				*e*S	**Sb**	**15 39 23.4**	**+4.2**
	38nm,0.7s						
ZSN	**Zaisan**	**4.07**	**38**	Pg	**Pb**	**15 38 31.2**	**+1.2**
	5.6nm,0.5s						
ZSN				Lg	Lg	15 39 23.4	
	38nm,0.7s						
TKM2	**Tokmak 2**	**4.29**	**253**	⇑Pg	**Pg**	**15 38 41.2**	**+0.9**
	4.9nm,0.5s						
TKM2				⇓Lg	Lg	15 39 35.7	
	16nm,0.4s						
SGDS	**Sogindy**	**4.81**	**262**	Pg	**Pb**	**15 38 46.8**	**+4.0**
	2.4nm,0.6s						
SGDS				Lg	Lg	15 39 50.0	
	7.2nm,0.5s						
AAK	**Ala-Archa**	**5.14**	**253**	⇓Pg	**Pg**	**15 38 55.8**	**-1.0**
	2.5nm,0.5s						
AAK				⇑Lg	Lg	15 40 01.5	
	7.8nm,0.5s						
MRKS	**Merke**	**5.99**	**258**	Pg	**Pg**	**15 39 11.5**	**-1.5**
	2.2nm,0.3s						
MRKS				Lg	Lg	15 40 31.7	
	5.0nm,0.6s						
KURBB	**Kurchatov Arra**	**6.58**	**345**	⇑Pn	**Pn**	**15 38 53.8**	**-1.3**
	0.8nm,0.5s						
KURBB				⇓Sn	**Sn**	**15 40 07.6**	**-2.6**
	3.4nm,0.4s						
KURBB				⇑Lg	Lg	15 40 47.6	
	14nm,0.6s						
KURK	**Kurchatov**	**6.65**	**346**	⇑Pn	**Pn**	**15 38 55.5**	**-0.5**
	0.6nm,0.4s						
KURK				⇑Sn	**Sn**	**15 40 07.6**	**-4.3**
	3.5nm,0.6s						
KURK				⇑Lg	Lg	15 40 45.3	
	5.3nm,0.6s						
KK31	**Karatay Array**	**7.83**	**265**	⇑Pg	Pb	15 39 40.8	+6.8
	0.4nm,0.3s						
KK31				⇓Lg	Lg	15 41 25.8	
	2.1nm,0.6s,baz=73,slow=27,SNR=4.6						

NEIC ***09*** *15:43:25.9±1.4, 38°.83N±0°.02×122°.83W±0°.04, h5^{km}±6^{km}, Error ellipse: s-maj=5.4km s-min=1.8km az=65.0*

NCEDC 09 15:43:25.6±1.8**, 38°.83N**±0°.02×**122°.85W**±0°.03**, h3**^{km}±7^{km}**, ML3.0**/36**, ML3.0**/45(NEIC)**, Error ellipse: s-maj=3.6km s-min=3.1km az=217.0, Northern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GDXM	**Geysers**	**0.05**	**115**		Pg	15 43 26.8	+0.1
GPMM	**Pine Mountain**	**0.08**	**284**		Pg	15 43 27.5	+0.2
GSGM	**Seigler Mounta**	**0.12**	**71**		Pg	15 43 28.5	+0.6
GCRM	**Castle Rock Sp**	**0.12**	**117**		Pg	15 43 28.1	+0.1
HOPS	**Hopland Field**	**0.24**	**314**		Sg	15 43 30.9	-2.5
HOPS	**Hopland Field**	**0.24**	**314**	Pg	Pg	15 43 30.7	+0.5
HOPS	**Hopland Field**	**0.24**	**314**	IAML		15 43 37.4	
	comp=N,8µm,0.8s						
HOPS				IAML		15 43 37.4	
	comp=E,4µm,0.9s						
MNRC	**McLaughlin Min**	**0.32**	**81**		Pg	15 43 32.6	+0.8
FTR	**Fort Ross**	**0.39**	**219**		Pg	15 43 33.9	+0.7
CVS	**Carmenet Viney**	**0.57**	**147**		Pg	15 43 36.8	+0.2
MCCM	**Marconi Confer**	**0.68**	**182**		Sg	15 43 39.7	-7.8
MCCM	**Marconi Confer**	**0.68**	**182**	Pg	Pb	15 43 39.6	-0.6
MCCM	**Marconi Confer**	**0.68**	**182**	IAML		15 43 52.8	
	comp=E,830nm,0.8s						
MCCM				IAML		15 43 57.9	
	comp=N,723nm,0.8s						
GNAM	**Navarro Ridge**	**0.71**	**301**		Pb	15 43 40.2	-0.5
GASB	**Alder Springs**	**0.83**	**7**		Pb	15 43 43.3	+0.4
SUTB	**Sutter Butte**	**0.92**	**64**		Pg	15 43 43.1	-0.2
KCPM	**Cahto Peak**	**1.03**	**327**		Pb	15 43 46.6	+0.4
BL67	**Building 67, L**	**1.06**	**154**		Pg	15 43 46.2	+0.2
VAK	**Adit at Lawren**	**1.06**	**153**		Pg	15 43 45.0	-1.0
BKS	**Berkeley--Byer**	**1.07**	**153**		Pg	15 43 45.9	-0.2
BDM	**Black Diamond**	**1.17**	**138**		Pg	15 43 47.5	-0.5
KBSM	**Bell Springs**	**1.23**	**332**		Pn	15 43 52.1	+2.2
ORV	**Oroville**	**1.27**	**55**		Pg	15 43 48.5	-1.6
ORV	**Oroville**	**1.27**	**55**	Pg	Pg	15 43 48.2	-1.9
AFDM	**Forest Hills D**	**1.47**	**85**		Pn	15 43 51.0	-2.1
JRSC	**Jasper Ridge**	**1.50**	**161**		Pn	15 43 52.0	-1.4
WDC	**Whiskeytown Da**	**1.77**	**8**		Pn	15 43 56.9	-0.3
CMB	**Columbia Colle**	**2.09**	**112**	Pn	Pn	15 44 00.6	-1.1
RUBR	**Rubicon Trail**	**2.11**	**83**		Pn	15 44 02.0	-0.1
RUBR				IAML		15 44 37.7	
	comp=E,116nm,0.7s						
JCC	**Jacoby Creek,**	**2.18**	**336**	Pn	Pn	15 44 02.7	-0.1
JCC				IAML		15 44 34.9	
	comp=E,121nm,3.2s						
JCC				IAML		15 44 55.3	
	comp=N,100nm,3.6s						
BEKR	**Beckworth**	**2.19**	**61**		Pn	15 44 03.0	-0.2
SAO	**San Andreas Ge**	**2.34**	**151**	Pn	Pn	15 44 04.6	-0.4
VCNR	**Virginia City**	**2.53**	**78**		Pn	15 44 07.6	-0.3
VCNR				IAML		15 44 22.5	
	comp=N,42nm,1.3s						
VCNR				IAML		15 44 52.8	
	comp=E,47nm,0.8s						
PNTR	**Pine Nut**	**2.55**	**83**		Pn	15 44 08.3	+0.3
PNTR				IAML		15 44 53.4	
	comp=E,87nm,0.8s						
WAKR	**Walker**	**2.69**	**96**		Pn	15 44 10.4	+0.4
WAKR				IAML		15 44 53.1	
	comp=E,41nm,0.6s						
PMPB	**Monarch Peak**	**3.08**	**147**	Pn	Pn	15 44 14.9	-0.3
MDPB	**Devils Postpil**	**3.20**	**111**		Pn	15 44 17.9	+0.8
MDPB				IAML		15 45 05.8	
	comp=N,52nm,0.8s						
MDPB				IAML		15 45 20.5	
	comp=E,25nm,1.2s						
OMMB	**Old Mammoth Mi**	**3.27**	**111**	Pn	Pn	15 44 19.2	+1.2
OMMB				IAML		15 45 11.4	
	comp=N,22nm,1.5s						
OMMB				IAML		15 45 32.5	
	comp=E,24nm,4.9s						
RYN	**Ryan**	**3.39**	**92**		Pn	15 44 19.9	+0.2
RYN				IAML		15 44 41.3	
	comp=N,23nm,4.5s						
RYN				IAML		15 45 28.1	
	comp=E,22nm,1.7s						
LHV	**Little Huntoon**	**3.46**	**98**		Pn	15 44 20.7	+0.4
LHV				IAML		15 45 25.7	
	comp=E,40nm,0.9s						
LHV				IAML		15 45 30.5	
	comp=N,37nm,1.1s						
NVAR	**Mina Array Bea**	**3.58**	**95**	Pn	Pn	15 44 21.2	-1.1
NV11	**Mina Array Sit**	**3.70**	**95**		Pn	15 44 22.9	-0.9
NV11				IAML		15 45 23.7	
	comp=E,22nm,4.6s						
NV11				IAML		15 45 31.5	
	comp=N,19nm,4.0s						
PAGB	**Antelope Grade**	**3.72**	**145**	Pn	Pn	15 44 22.8	-1.3
ISA	**Isabella, Lake**	**4.71**	**131**	Pn	Pn	15 44 37.2	-0.4
ISA				IAML		15 45 47.5	
	comp=N,11nm,4.9s						
ISA				IAML		15 45 54.5	
	comp=E,14nm,2.8s						
SPR3	**Spring Creek 3**	**6.65**	**86**	Pn	Pn	15 45 03.6	-0.8
CBX	**Cerro Bola**	**8.22**	**140**	Pn	Pn	15 45 25.4	-0.6

IDC ***09*** *16:05:53.5±2.3, 11°.42S×167°.15E, h0^{km}, mb3.7/4, mb1 4.1/5, mb1mx3.7/39, mbtmp3.9/5, ML4.6/1, MS3.4/4, Ms1 3.4/4, ms1mx2.9/26, Error ellipse: s-maj=76.3km s-min=31.2km az=145.0*

NEIC ***09*** *16:06:00.4±1.2, 11°.63S±0°.09×167°.2E±0°.1, h55^{km}±10^{km}, mb4.5/8, Error ellipse: s-maj=16.8km s-min=12.7km az=76.0*

ISC 09 16:05:58.7±0.9**, 11°.6S**±0°.1×**167°.2E**±0°.1**, h35**^{km}**, n19, σ1^{s}.30**/16**, mb3.9**/6**, MS3.4**/3**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**3.81**	**179**		**Pn**	**16 06 56.1**	**+1.1**
HNR	**Honiara**	**7.41**	**286**	Pn	**Pn**	**16 07 42.8**	**-1.6**
	10nm,0.3s,baz=101,slow=16,SNR=1.5						
HNR	**Honiara**	**7.41**	**286**	Pn	**Pn**	**16 07 47.3**	**+2.9**
RABL	**Rabaul**	**16.56**	**295**	Pn	**Pn**	**16 09 49.2**	**+0.7**
RABL				IAmb	IAmb	16 10 10.8	
	comp=Z,15nm,0.5s						
PMG	**Port Moresby**	**19.77**	**274**	LR	LR	16 17 25.0	
	comp=Z,135nm,19.3s,baz=108,slow=35						
KWAJ	**Kwajalein Atol**	**20.29**	**1**		**P**	**16 10 32.7**	**+1.1**
EIDS	**Eidsvold**	**20.45**	**226**	Pn	Pn	16 10 36.0	+0.5
EIDS				IAmb	IAmb	16 10 43.3	
	comp=Z,27nm,1.4s						
RAO	**Raoul Island**	**22.40**	**144**	P	**P**	**16 10 54.1**	**-0.2**
WB0	**Warramunga Arr**	**32.51**	**251**	P	**P**	**16 12 26.0**	**-0.5**
WB0				IAmb	IAmb	16 12 43.3	
	comp=Z,9.4nm,1.4s						
WRA	**Warramunga Arr**	**32.59**	**251**	P	**P**	**16 12 26.8**	**-0.4**
	comp=Z,1.5nm,1.2s,baz=81,slow=8.7,SNR=3.9						
WRA				LR	LR	16 24 51.6	
	comp=Z,32nm,18.1s,baz=160,slow=35						
ASAR	**Alice Springs**	**33.78**	**245**	P	**P**	**16 12 38.6**	**+1.1**
	comp=Z,0.5nm,0.8s,baz=68,slow=9.8,SNR=4.1						
ASAR				LR	LR	16 25 16.1	
	comp=Z,59nm,18.4s,baz=102,slow=34						
MORW	**Morawa**	**50.56**	**242**	P	**P**	**16 14 52.3**	**-1.9**
MORW				IAmb	IAmb	16 15 07.2	
	comp=Z,19nm,1.4s						
CMAR	**Chiang Mai Arr**	**73.60**	**293**	P	**P**	**16 17 28.9**	**-0.1**
	comp=Z,0.6nm,0.8s,baz=110,slow=4.7,SNR=5.6						
CMAR	**Chiang Mai Arr**	**73.60**	**293**	P	**P**	**16 17 28.4**	**-0.6**
CHTO	**Chiang Mai**	**73.71**	**294**	P	**P**	**16 17 28.3**	**-1.3**
IMAR	**Indian Mountai**	**82.60**	**15**	P	**P**	**16 18 17.2**	**-0.6**
ILAR	**Eielson Array**	**83.62**	**18**	P	**P**	**16 18 22.6**	**-0.5**
	comp=Z,1.0nm,0.8s,baz=220,slow=5.5,SNR=12						
BMAR	**Burnt Mountain**	**86.14**	**17**	P	**P**	**16 18 36.3**	**+0.4**
TXAR	**Lajitas Array**	**94.89**	**61**	LR	LR	16 56 03.0	
	comp=Z,17nm,18.8s,baz=0.0,slow=32						

IDC ***09*** *16:40:04.6±1.5, 28°.86N×52°.21E, h0^{km}, mb3.6/7, mb1 3.7/8, mb1mx3.5/46, mbtmp3.7/8, ML3.6/1, MS2.8/1, Ms1 3.0/1, ms1mx2.4/48, Error ellipse: s-maj=33.3km s-min=26.3km az=171.0*

TEH ***09*** *16:40:06.3, 28°.87N×52°.39E, h12^{km}, ML3.9*

THR ***09*** *16:40:08.0±0.3, 29°.09N×52°.29E, h9^{km}±9^{km}, ML3.7*

ISC 09 16:40:06.4±0.7**, 28°.85N**±0°.05×**52°.35E**±0°.04**, h12**^{km}**, n43, σ1^{s}.33**/42**, mb3.7**/7**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
QIR1	**Qir**	**0.72**	**121**	*e*Pg	**Pg**	**16 40 19.9**	**-0.4**
QIR1				*e*		16 40 38.3	
	comp=Z,99nm,0.8s						
SHI	**Shiraz**	**0.81**	**10**	*e*Pg	**Pg**	**16 40 21.2**	**-0.8**
SHI				*e*		16 40 38.5	
	comp=Z,99nm,0.6s						
AHBU	**AHRAM**	**0.92**	**271**	*e*Pg	**Pg**	**16 40 25.4**	**+1.2**
KAZ1	**Kazerun**	**0.99**	**322**	*e*Pg	**Pg**	**16 40 25.1**	**-0.4**
KAZ1				*e*		16 40 54.1	
	comp=Z,99nm,0.5s						
JHRM	**Jahrom**	**1.14**	**107**	*e*Pg	**Pb**	**16 40 28.2**	**+0.2**
JHRM				*e*		16 40 49.7	
	comp=Z,99nm,0.5s						
LMD1	**Lamerd**	**1.67**	**154**	*e*Pn	**Pn**	**16 40 36.8**	**+1.4**
LMD1				*e*		16 41 14.6	
	comp=Z,99nm,0.6s						
LAR1	**LAR**	**2.14**	**123**	*e*Pn	**Pn**	**16 40 43.1**	**+1.1**
LAR1				*e*		16 41 28.0	
	comp=Z,99nm,0.4s						
KLNJ	**Kolanjah**	**2.25**	**343**	*e*Pn	**Pn**	**16 40 44.6**	**+0.8**
KLNJ				*e*		16 41 27.1	
	comp=Z,99nm,0.7s						
ABEH	**Behbahan**	**2.52**	**314**	*e*Pn	**Pn**	**16 40 47.4**	**+0.2**
IRAM	**Ramesheh**	**2.95**	**1**	*e*Pn	**Pn**	**16 40 54.4**	**+1.1**
IMEH	**Mehriz**	**3.21**	**37**	*e*Pn	**Pn**	**16 40 58.6**	**+1.8**
IGAR	**Gharneh**	**3.56**	**356**	*e*Pn	**Pn**	**16 41 03.3**	**+1.7**
BNDS	**Bandar-Abbas**	**3.67**	**112**	*e*Pn	Pn	16 41 09.2	+6.0
SHK1	**Shahrekord**	**3.69**	**340**	*e*Pn	**Pn**	**16 41 03.8**	**+0.3**
ICHK	**Chekchek**	**3.83**	**27**	*e*Pn	**Pn**	**16 41 07.3**	**+2.0**
AMIS	**Naft Sefid**	**3.86**	**317**	*e*Pn	**Pn**	**16 41 07.1**	**+1.5**
KHGB	**Koh Gabri**	**3.91**	**66**	*e*Pn	**Pn**	**16 41 07.3**	**+0.8**
NASN	**Na'in**	**3.96**	**6**	*e*Pn	**Pn**	**16 41 08.2**	**+1.0**
NASN	**Na'in**	**3.96**	**6**	*e*Pn	**Pn**	**16 41 08.2**	**+1.0**
TVBK	**TV Kerman**	**4.02**	**73**	*e*Pn	**Pn**	**16 41 08.9**	**+0.8**
TVBK				*e*		16 42 24.1	
	comp=Z,99nm,0.5s						
IPIR	**Pirpir**	**4.02**	**342**	*e*Pn	**Pn**	**16 41 08.6**	**+0.5**
YZKH	**Yazd**	**4.03**	**28**	*e*Pn	**Pn**	**16 41 09.7**	**+1.7**
YZKH	**Yazd**	**4.03**	**28**	*e*Pn	**Pn**	**16 41 09.7**	**+1.7**
IZEF	**Zefreh**	**4.04**	**360**	*e*Pn	**Pn**	**16 41 10.3**	**+2.0**
UMR	**Umm Al-Rimmam**	**4.11**	**281**	*e*P		16 41 09.8	
RDF	**Al-Radifah**	**4.21**	**272**	*e*P		16 41 11.1	
MIB	**Mutribah**	**4.47**	**284**	*e*P		16 41 15.1	
ANAR	**Anarak**	**4.49**	**15**	*e*Pn	**Pn**	**16 41 16.1**	**+1.7**
IKLH	**Kolahrood**	**4.51**	**352**	*e*Pn	**Pn**	**16 41 15.4**	**+0.7**
RST	**Umm Al-Ruwaisa**	**4.72**	**279**	*e*P		16 41 18.4	
KRSH	**Karshahi**	**5.11**	**358**	*e*Pn	**Pn**	**16 41 24.1**	**+1.2**
KBAM	**BAM**	**5.36**	**85**	*e*Pn	**Pn**	**16 41 28.3**	**+2.0**
KBAM				*e*		16 42 42.6	
	comp=Z,99nm,0.4s						
TPRV	**Parvadeh(Tabas**	**5.59**	**41**	*e*Pn	**Pn**	**16 41 32.0**	**+2.5**
ASAO	**Ashtian**	**6.02**	**341**	*e*Pn	**Pn**	**16 41 36.3**	**+0.8**
ASAO	**Ashtian**	**6.02**	**341**	*e*Pn	**Pn**	**16 41 36.3**	**+0.8**
TKDS	**Koohdasht(Taba**	**6.27**	**40**	*e*Pn	**Pn**	**16 41 40.7**	**+1.9**
DAMV	**Damavand**	**6.77**	**357**	*e*Pn	**Pn**	**16 41 46.5**	**+0.7**
DAMV	**Damavand**	**6.77**	**357**	*e*Pn	**Pn**	**16 41 46.6**	**+0.7**
WSAR	**Wadi Sarin**	**7.95**	**133**	Pn	**Pn**	**16 42 02.0**	**+0.3**
	comp=Z,0.7nm,0.3s,baz=336,slow=13,SNR=6.9						
WSAR				Sn	**Sn**	**16 43 28.6**	**-3.0**
	comp=Z,0.7nm,0.3s,baz=226,slow=18,SNR=1.6						
AKASG	**Malin Array Be**	**27.93**	**328**	P	**P**	**16 45 56.0**	**-0.4**
	comp=Z,0.2nm,0.4s,baz=135,slow=9.1,SNR=2.4						
KURBB	**Kurchatov Arra**	**29.37**	**35**	P	**P**	**16 46 09.8**	**+0.7**
	comp=Z,0.2nm,0.4s,baz=235,slow=9.3,SNR=4.1						
MKAR	**Makanchi Array**	**29.42**	**44**	P	**P**	**16 46 11.6**	**+1.8**
	comp=Z,0.3nm,0.6s,baz=231,slow=11,SNR=5.0						
ZALV	**Zalesovo Beam**	**34.45**	**34**	P	**P**	**16 46 53.4**	**-0.3**
	comp=Z,0.9nm,0.4s,baz=248,slow=11,SNR=4.5						
FINES	**FINESS Array B**	**36.97**	**339**	P	**P**	**16 47 14.2**	**-1.0**
	comp=Z,0.9nm,0.5s,baz=142,slow=12,SNR=4.3						
CMAR	**Chiang Mai Arr**	**43.68**	**93**	LR	LR	17 08 42.1	
	comp=Z,13nm,20.2s,baz=190,slow=39						
TORD	**Torodi Ar. Bea**	**49.43**	**263**	P	**P**	**16 48 56.0**	**-0.6**
	comp=Z,0.7nm,0.7s,baz=59,slow=8.1,SNR=4.7						
YKA	**Yellowknife Ar**	**88.38**	**354**	P	**P**	**16 52 57.8**	**-0.1**
	comp=Z,0.3nm,0.8s,baz=19,slow=5.5,SNR=3.8						

NEIC ***09*** *16:45:29.7±0.5, 1°.71N±0°.07×126°.4E±0°.1, h10^{km}±2^{km}, mb4.6/11, Error ellipse: s-maj=21.1km s-min=12.5km az=273.0*

IDC ***09*** *16:45:32.4±2.2, 1°.29N×125°.97E, h0^{km}, mb3.2/3, mb1 3.4/3, mb1mx3.3/39, mbtmp3.2/3, MS3.8/1, Ms1 3.8/1, ms1mx2.4/22, Error ellipse: s-maj=183.0km s-min=28.0km az=65.0*

ISC 09 16:45:30.7±0.9**, 1°.7N**±0°.1×**126°.4E**±0°.2**, h10**^{km}**, n16, σ1^{s}.52**/15**, mb4.3**/9**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.28**	**134**	Pn	**Pn**	**16 45 54.6**	**0.0**
WB0	**Warramunga Arr**	**22.68**	**160**	P	**P**	**16 50 32.3**	**-0.2**
WRAB	**Tennant Creek**	**22.82**	**161**	P	**P**	**16 50 33.6**	**-0.3**
WRAB				IAmb	IAmb	16 50 45.6	
	comp=Z,18nm,1.7s						
WRA	**Warramunga Arr**	**22.82**	**161**	P	**P**	**16 50 34.6**	**+0.6**
	comp=Z,0.7nm,0.5s,baz=337,slow=11,SNR=8.2						
WRA	**Warramunga Arr**	**22.82**	**161**	P	**P**	**16 50 33.6**	**-0.5**
WB2	**Warramunga Arr**	**22.83**	**161**	P	**P**	**16 50 33.9**	**-0.2**
WB2				IAmb	IAmb	16 51 32.9	
	comp=Z,17nm,1.6s						
WR0	**Warramunga Arr**	**22.91**	**160**	P	**P**	**16 50 34.8**	**-0.1**
WR0				IAmb	IAmb	16 50 50.8	
	comp=Z,13nm,1.5s						
AS31	**Alice Springs**	**26.20**	**164**	P	**P**	**16 51 06.9**	**+1.1**
ASAR	**Alice Springs**	**26.20**	**164**	P	**P**	**16 51 07.5**	**+1.8**
	comp=Z,0.3nm,0.7s,baz=346,slow=11,SNR=7.8						
RPSI	**Rantau Prapat**	**27.52**	**273**	P	**P**	**16 51 16.1**	**-1.7**
RPSI				IAmb	IAmb	16 51 59.6	
	comp=Z,15nm,1.3s						
SRIT	**Nakonsritamara**	**27.59**	**285**	P	**P**	**16 51 16.8**	**-1.6**
CTA	**Charters Tower**	**29.06**	**139**	LR	LR	17 03 26.0	
	comp=Z,206nm,21.3s,baz=144,slow=37						
SSE	**Sheshan**	**29.70**	**351**	P	**P**	**16 51 35.2**	**-1.7**
SSE				IAmb	IAmb	16 52 17.0	
	comp=Z,33nm,1.6s						
JSU	**Suzuyama**	**29.93**	**7**	P	**P**	**16 51 37.8**	**-1.2**
JSU				IAmb	IAmb	16 52 26.6	
	comp=Z,96nm,1.3s						
MKAR	**Makanchi Array**	**59.09**	**326**	P	**P**	**16 55 34.9**	**+3.6**
	comp=Z,0.1nm,0.5s,baz=120,slow=8.7,SNR=1.9						
KHZ	**Kahutara**	**61.02**	**142**	P	**P**	**16 55 44.1**	**-0.4**

JMA ***09*** *16:56:47.8±0.1, 40°.53N×141°.49E, h85^{km}±1^{km}, M3.4 Broadband fault plane solution: P waves. NP1: ϕ_s107.00000°, δ42.00000°, λ165.00000°. NP2: ϕ_s209.00000°, δ80.00000°, λ49.00000°. Principal axes: T Plg41.0000°, Azm81.0000°; N Plg40.0000°, Azm217.0000°; P Plg24.0000°, Azm329.0000°;*

JMA Felt I J1.

IDC ***09*** *16:56:49.1±1.9, 40°.48N×141°.57E, h107^{km}±19^{km}, mb3.3/5, mb1 3.3/8, mb1mx3.1/63, mbtmp3.6/8 Error ellipse: s-maj=30.7km s-min=16.1km az=98.0*

ISC 09 16:56:47.8±0.9**, 40°.51N**±0°.04×**141°.46E**±0°.07**, h84**^{km}±6^{km}**, n22, σ1^{s}.16**/30**, mb3.6**/5**, 5C-5D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JANG	**Nango**	**0.14**	**161**	⇑P	**Pn**	**16 56 59.9**	**0.0**
JANG				S	**Sn**	**16 57 08.7**	**-0.1**
JKEN	**Kujiedanarisaw**	**0.36**	**147**	⇓P	**Pn**	**16 57 01.2**	**+0.3**
JKEN				S	**Sn**	**16 57 11.0**	**+0.4**
JTM	**Tenmabayashi**	**0.41**	**313**	⇑P	**Pn**	**16 57 01.2**	**0.0**
JTM				S	**Sn**	**16 57 11.3**	**+0.1**
JAH	**Hinai**	**0.70**	**243**	⇑P	**Pn**	**16 57 04.2**	**+0.4**
JAH				*e*S	**Sn**	**16 57 16.5**	**+0.8**
JOT	**Ohata**	**0.93**	**341**	⇓P	**Pn**	**16 57 06.4**	**+0.2**
JOT				S	**Sn**	**16 57 20.0**	**0.0**
JOM	**Ohasama**	**1.04**	**187**	⇓P	**Pn**	**16 57 08.2**	**+0.6**
JOM				S	**Sn**	**16 57 23.5**	**+1.1**
JIW	**Iwasaki**	**1.11**	**275**	⇑P	**Pn**	**16 57 08.9**	**+0.5**
JIW				*e*S	**Sn**	**16 57 24.9**	**+1.1**
JRG	**Rokugo**	**1.28**	**210**	⇑P	**Pn**	**16 57 11.5**	**+1.0**
JRG				S	**Sn**	**16 57 29.5**	**+2.0**
JSR	**Shiriuchi**	**1.29**	**323**	P	**Pn**	**16 57 10.7**	**+0.1**
JSR				*e*S	**Sn**	**16 57 28.2**	**+0.5**
JKB	**Kayabe**	**1.42**	**347**	⇓P	**Pn**	**16 57 12.5**	**+0.3**
JKB				S	**Sn**	**16 57 30.7**	**+0.2**
JMK	**Ichinoseki**	**1.56**	**187**	⇓P	**Pn**	**16 57 14.5**	**+0.4**
ASAJ	**Asahikawa**	**3.70**	**13**	P	**Pn**	**16 57 44.1**	**+1.4**
	1.9nm,0.3s,baz=208,slow=13,SNR=21						
ASAJ				S	**Sn**	**16 58 28.2**	**+3.0**
	1.2nm,0.3s,baz=126,slow=32,SNR=1.9						
MJAR	**Matsushiro Arr**	**4.71**	**214**	P	**Pn**	**16 57 58.4**	**+1.9**
	0.1nm,0.3s,baz=21,slow=13,SNR=5.8						
USRK	**Ussuriysk Ar.**	**7.92**	**301**	P	**Pn**	**16 58 42.7**	**+2.5**
	baz=106,slow=15,SNR=8.2						
H11N2	**WAKE ISLAND Hy**	**30.03**	**126**	T	T	17 33 48.8	
	baz=318,slow=75,SNR=18						
H11N1	**WAKE ISLAND Hy**	**30.04**	**126**	T	T	17 33 50.9	
	baz=318,slow=75,SNR=18						
H11N3	**WAKE ISLAND Hy**	**30.05**	**126**	T	T	17 33 48.1	
	baz=318,slow=75,SNR=16						
ZALV	**Zalesovo Beam**	**39.67**	**309**	P	**P**	**17 04 10.6**	**-0.6**
	1.3nm,0.6s,baz=88,slow=9.1,SNR=4.0						
MKAR	**Makanchi Array**	**42.38**	**299**	P	**P**	**17 04 33.5**	**-0.2**
	0.5nm,0.5s,baz=85,slow=8.8,SNR=14						
WRA	**Warramunga Arr**	**60.50**	**188**	P	**P**	**17 06 47.4**	**-1.5**
	0.2nm,0.4s,baz=4.9,slow=7.2,SNR=1.6						
ASAR	**Alice Springs**	**64.23**	**188**	P	**P**	**17 07 12.9**	**-0.9**
	0.2nm,0.8s,baz=2.6,slow=7.1,SNR=1.5						
FINES	**FINESS Array B**	**65.77**	**332**	P	**P**	**17 07 22.6**	**-0.7**
	2.5nm,1.0s,baz=35,slow=5.1,SNR=1.9						

IDC ***09*** *16:56:58.4±2.3, 22°.80N×12°.03W, h0^{km}, mb3.8/4, mb1 3.8/6, mb1mx3.5/48, mbtmp3.8/6, ML3.4/2, Error ellipse: s-maj=62.9km s-min=25.4km az=70.0*

NEIC ***09*** *16:56:59.3±1.9, 22°.7N±0°.1×12°.1W±0°.1, h15^{km}±5^{km}, mb4.4/7, Error ellipse: s-maj=21.5km s-min=11.0km*

az=50.0

ISC 09 16:56:58.8±0.8**, 22°.7N**±0°.1×**12°.2W**±0°.1**, h10km, n18, σ1°.23**/19**, mb4.0**/6**, Mauritania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOWA	Kowa	11.22	135	Pn	Pn	16 59 40.0	+0.5
TOA0	Torodi Ar. Sit	16.23	123	Pn	Pn	17 00 44.2	-2.9
TORD	Torodi Ar. Bea	16.23	123	Pn	Pn	17 00 46.3	-0.9
	0.1nm,0.3s,baz=311,slow=12,SNR=3.6						
TORD				Sn	Sn	17 03 49.8	+2.4
	0.1nm,0.3s,baz=318,slow=19,SNR=2.8						
TORD				Lg	Lg	17 05 33.1	
	0.0nm,0.3s,baz=309,slow=27,SNR=1.6						
TORD	Torodi Ar. Bea	16.23	123		Pn	17 00 46.2	-0.9
DBIC	Dimbokro	17.41	155	P	P	17 01 03.0	-0.3
	0.2nm,0.3s,baz=305,slow=14,SNR=1.7						
DBIC	Dimbokro	17.41	155	P	P	17 01 02.6	-0.7
DBIC				IAmb	IAmb	17 01 04.5	
	comp=Z,24nm,1.7s						
COI	Coimbra	17.75	9	P	Pn	17 01 06.3	+0.2
GERES	GERESS Array B	33.19	32	P	P	17 03 35.8	+0.1
	comp=Z,1.5nm,1.0s,baz=226,slow=7.8,SNR=3.7						
GERES	GERESS Array B	33.19	32	P	P	17 03 35.2	-0.6
HFS	Hagfors	41.59	19	P	P	17 04 45.5	-1.1
	comp=Z,1.6nm,0.7s,baz=218,slow=7.0,SNR=4.1						
FINES	FINESS Array B	46.77	24	P	P	17 05 27.8	-0.4
	comp=Z,1.3nm,0.7s,baz=226,slow=7.7,SNR=4.7						
FINES	FINESS Array B	46.77	24	P	P	17 05 28.1	-0.1
VLDQ	Val d'Or	57.09	314	P	P	17 06 47.4	+2.1
SAML	Samuel	59.02	244	P	P	17 06 58.4	-0.9
SAML				IAmb	IAmb	17 08 58.5	
	comp=Z,8.3nm,1.7s						
MK31	Makanchi Array	76.74	45	P	P	17 08 50.9	+0.3
MK31				IAmb	IAmb	17 09 56.9	
	comp=Z,7.5nm,1.9s						
MKAR	Makanchi Array	76.74	45	P	P	17 08 51.0	+0.5
	comp=Z,0.3nm,0.5s,baz=285,slow=5.7,SNR=9.2						
WRA	Warramunga Arr	148.71	91	PKPbc	PKPbc	17 16 47.3	+0.1
	comp=Z,0.4nm,0.6s,baz=289,slow=2.3,SNR=2.2						
ASAR	Alice Springs	148.83	99	PKPbc	PKiKP	17 16 48.5	-0.4
	comp=Z,0.6nm,0.7s,baz=301,slow=2.5,SNR=3.8						

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*DJA **09** 17:06:04.8±0.3, 2°S±2°×12°0E±°, h10km, M4.2/12, mb4.3/3, MLv4.2/12*

*IDC **09** 17:06:08.8±2.8, 1°.49S×120°.38E, h49km±29km, mb3.3/5, mb1 3.6/7, mb1mx3.3/37, mbtmp3.7/7, ML3.5/2, MS2.6/4, Ms1 2.6/4, ms1mx2.4/28, Error ellipse: s-maj=29.6km s-min=20.3km az=81.0*

ISC 09 17:06:07.6±0.9**, 1°.49S**±0°.06×**120°.23E**±0°.08**, h35km, n23, σ1°.48**/23**, mb3.6**/5**, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APSI	Ampana	1.53	68	P	Pn	17 06 31.8	-0.6
APSI				S	Sn	17 06 54.4	+3.3
TTSI	Tana Toraja	1.60	195	P	Pn	17 06 31.7	-1.7
TTSI				S	Sn	17 06 53.8	+0.9
SPSI	Sidrap Palu	2.50	191	P	Pn	17 06 45.7	-0.2
LUWI	Luwuk	2.58	80	P	Pn	17 06 46.0	-0.9
MRSI	Marisa	2.59	41	P	Pn	17 06 45.4	-1.7
MRSI				S	Sn	17 07 19.2	+1.8
BNSI	Bone	2.90	182	P	Pn	17 06 52.0	+0.7
KDI	Kendari	3.43	136	P	Pn	17 07 14.7	+16
GTOI	Gorontalo	3.49	53	P	Pn	17 07 00.0	+0.6
KAPI	Kappang	3.54	188	P	Pn	17 07 01.1	+1.0
	3.7nm,0.3s,baz=14,slow=12,SNR=8.6						
KAPI				S	Sn	17 07 43.2	+2.5
	2.9nm,0.3s,baz=159,slow=16,SNR=1.7						
KAPI				LR	LR	17 08 17.0	
	comp=Z,34nm,20.4s,baz=72,slow=36						
BKSI	Bulukumba	3.81	182	P	Pn	17 07 04.0	+0.1
KMSI	Cibinong	4.27	61	P	Pn	17 07 12.1	+1.9
KBKI	Kotabaru	4.44	246	P	Pn	17 07 18.5	+6.0
MTKI	Muara Teweh, K	5.36	276	P	Pn	17 07 37.0	+12
SANI	Sanana	5.79	96	P	Pn	17 07 29.8	-1.2
	0.1nm13nm,1.2s						
BATI	Baumata	9.31	159	S	Sn	17 10 02.9	-0.2
	1.3nm,0.3s,baz=318,slow=23,SNR=1.4						
BATI				LR	LR	17 12 25.8	
	comp=Z,88nm,18.7s,baz=180,slow=41						
DAV	Davao City (W)	10.04	32	LR	LR	17 12 38.2	
	comp=Z,26nm,19.2s,baz=136,slow=39						
SIJI	Sorong	11.05	87	P	Pn	17 08 42.4	-0.9
	0.5nm,0.3s,baz=326,slow=8.4,SNR=4.5						
LEM	Lembang	13.65	247	LR	LR	17 16 16.4	
	comp=Z,47nm,19.3s,baz=98,slow=44						
WRA	Warramunga Arr	22.96	144	P	P	17 11 07.4	-1.7
	1.8nm,0.9s,baz=322,slow=11,SNR=14						
ASAR	Alice Springs	25.73	150	P	P	17 11 34.0	-1.0
	0.5nm,0.7s,baz=325,slow=8.7,SNR=9.5						
ASAR				PcP	PcP	17 15 03.0	-1.7
	0.2nm,0.6s,baz=345,slow=2.2,SNR=2.0						
STKA	Stephens Creek	36.34	148	P	P	17 13 08.5	+0.2
	2.1nm,0.8s,baz=338,slow=12,SNR=3.8						
SONM	Songino Array	50.58	348	P	P	17 15 04.0	+1.0
	0.3nm,0.5s,baz=167,slow=9.2,SNR=2.6						
MKAR	Makanchi Array	58.47	330	P	P	17 15 59.5	-0.7
	0.5nm,0.8s,baz=138,slow=8.3,SNR=3.6						

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*NEIC **09** 17:08:04.7±1.5, 17°.6S±0°.2×178°.7W±0°.1, h586km±9km, mb4.3/18, Error ellipse: s-maj=24.8km s-min=19.4km az=180.0*

*IDC **09** 17:08:04.8±1.6, 17°.57S×178°.78W, h574km±15km, mb3.5/14, mb1 3.7/16, mb1mx3.5/33, mbtmp4.4/16, Error ellipse: s-maj=30.6km s-min=13.6km az=151.0*

ISC 09 17:08:06.0±0.6**, 17°.6S**±0°.1×**178°.76W**±0°.09**, h600km, n46, σ1°.37**/51**, mb4.2**/23**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.04	268	P	P	17 09 23.1	-2.4
	7.9nm,0.3s,baz=94,slow=2.8,SNR=118						
MSVF	Nonsavu	3.04	268	P	P	17 09 22.6	-2.9
NIUE	Niue	8.51	101	P	P	17 10 08.3	-1.9
SANVU	Saraoutou	13.64	277	P	P	17 11 00.4	-1.0
DZM	Mont Dzumac	14.60	250	P	P	17 11 11.5	+0.8
	0.7nm,0.3s,baz=283,slow=23,SNR=5.5						
PMG	Port Moresby	34.09	279	P	P	17 14 03.4	+0.8
	19nm,0.8s,baz=89,slow=5.3,SNR=11						
PMG	Port Moresby	34.09	279	P	P	17 14 03.3	+0.8
COEN	Coen	36.77	270	P	P	17 14 24.6	-0.1
COEN				IAmb	IAmb	17 14 26.0	
	comp=Z,7.5nm,0.8s						
TOO	Toolangi	37.08	230	P	P	17 14 26.9	0.0
STKA	Stephens Creek	38.47	241	P	P	17 14 38.7	+0.5
	comp=Z,5.0nm,0.6s,baz=91,slow=11,SNR=12						
STKA	Stephens Creek	38.47	241	P	P	17 14 38.8	+0.5
JAY	Jayapura	42.51	286	P	P	17 15 10.5	-0.1
	comp=Z,14nm,0.8s,baz=176,slow=21,SNR=2.7						
BBOO	Buckleboo	43.24	241	P	P	17 15 15.8	-0.2
BBOO				IAmb	IAmb	17 15 16.8	
	comp=Z,12nm,0.8s						
WR0	Warramunga Arr	44.16	259	P	P	17 15 23.1	-0.2
WB0	Warramunga Arr	44.32	260	P	P	17 15 23.5	-1.0
WB0				IAmb	IAmb	17 15 24.5	
	comp=Z,7.7nm,1.1s						
WB2	Warramunga Arr	44.34	259	P	P	17 15 23.5	-1.2
WB2				IAmb	IAmb	17 15 24.2	
	comp=Z,15nm,1.2s						
WRAB	Tennant Creek	44.34	259	P	P	17 15 23.5	-1.2
WRAB				IAmb	IAmb	17 15 24.7	
	comp=Z,4.9nm,0.7s						
WRA	Warramunga Arr	44.35	259	P	P	17 15 23.8	-1.0
	comp=Z,4.1nm,0.7s,baz=92,slow=6.8,SNR=63						
WRA				PcP	PcP	17 16 56.0	+0.6
	comp=Z,0.6nm,0.6s,baz=98,slow=3.1,SNR=3.3						
WRA				ScP	ScP	17 19 55.5	+4.4
	comp=Z,0.5nm,0.8s,baz=94,slow=3.5,SNR=3.2						
WRA	Warramunga Arr	44.35	259	P	P	17 15 23.6	-1.2
AS31	Alice Springs	44.54	254	P	P	17 15 25.9	-0.3
AS31				IAmb	IAmb	17 15 26.6	
	comp=Z,7.9nm,0.7s						
ASAR	Alice Springs	44.54	254	P	P	17 15 26.1	-0.2
	comp=Z,31nm,0.6s,baz=89,slow=7.7,SNR=730						
ASAR				PcP	PcP	17 16 56.6	+0.5
	comp=Z,1.0nm,0.5s,baz=103,slow=4.0,SNR=6.4						
ASAR				ScP	ScP	17 19 57.0	+5.2
	comp=Z,0.6nm,0.9s,baz=108,slow=4.5,SNR=3.6						
ASAR	Alice Springs	44.54	254	P	P	17 15 25.3	-0.9
MTN	Manton Dam	48.47	268	P	P	17 15 55.3	-0.5
FORT	Forrest	49.82	244	P	P	17 16 04.8	-0.7
SIJI	Sorong	51.85	283	P	P	17 16 20.9	+0.5
	comp=Z,22nm,0.7s,baz=111,slow=7.8,SNR=14						
FITZ	Fitzroy Crossi	52.74	260	P	P	17 16 27.1	+0.3
	comp=Z,2.0nm,0.5s,baz=88,slow=5.1,SNR=7.6						
FITZ	Fitzroy Crossi	52.74	260	P	P	17 16 27.0	+0.3
SOEI	Soe	55.74	270	P	P	17 16 48.1	+0.2
SOEI				IAmb	IAmb	17 16 50.3	
	comp=Z,19nm,0.8s						
PSA00	Pilbara Seismi	57.65	255	P	P	17 16 59.5	-1.3
MORW	Morawa	60.28	246	P	P	17 17 17.3	-0.8
MORW				IAmb	IAmb	17 17 19.1	
	comp=Z,12nm,1.2s						
MJAR	Matsushiro Arr	67.50	323	P	P	17 18 03.6	-0.1
	comp=Z,2.3nm,0.8s,baz=167,slow=6.1,SNR=3.0						
QSPA	South Pole Qui	72.41	180	P	P	17 18 33.0	+0.6
QSPA				IAmb	IAmb	17 18 34.0	
	comp=Z,7.3nm,1.4s						
PETK	Petropavlovsk-	73.34	345	P	P	17 18 37.8	+0.2
	comp=Z,2.2nm,0.7s,baz=119,slow=8.6,SNR=4.4						
PETK	Petropavlovsk-	73.34	345	P	P	17 18 37.3	-0.3
NVAR	Mina Array Bea	79.47	44	P	P	17 19 12.7	+0.9
	comp=Z,0.7nm,0.7s,baz=227,slow=10,SNR=4.0						
ILAR	Eielson Array	85.71	13	P	P	17 19 41.4	-0.7
	comp=Z,0.3nm,0.3s,baz=221,slow=5.4,SNR=9.9						
TXAR	Lajitas Array	86.14	58	P	P	17 19 47.0	+1.8
	comp=Z,0.7nm,0.7s,baz=211,slow=5.5,SNR=11						
PDAR	Pinedale Array	87.39	44	P	P	17 19 51.6	+0.7
	comp=Z,0.4nm,0.5s,baz=210,slow=4.0,SNR=7.8						
CMAR	Chiang Mai Arr	88.48	290	P	P	17 19 57.6	+1.4
	comp=Z,0.8nm,0.7s,baz=104,slow=2.9,SNR=8.9						
MKAR	Makanchi Array	108.71	314	PKiKP	PKiKP	17 25 27.6	-0.2
	comp=Z,0.2nm,0.5s,baz=178,slow=1.2,SNR=5.2						
MKAR	Makanchi Array	108.71	314		PKiKP	17 25 27.4	-0.5
BRTR	Keskin Array B	144.36	315	PKP	PKPab	17 26 35.7	-0.2
	comp=Z,1.7nm,0.8s,baz=103,slow=5.1,SNR=5.0						
BRTR	Keskin Array B	144.36	315		PKPab	17 26 35.2	-0.7
CLL	Collm	145.13	347	*e*PKPbc	PKPab	17 26 38.0	-0.2
GERES	GERESS Array B	147.27	345	PKPbc	PKiKP	17 26 43.9	-1.0
	comp=Z,1.1nm,0.5s,baz=40,slow=2.3,SNR=9.9						
GERES	GERESS Array B	147.27	345	PKPdf	PKPdf	17 26 39.7	-0.1
GERES					PKiKP	17 26 43.7	-1.1

JMA 09 17:19:22.1, 35°.10N×135°.65E, h11km, M2.7, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JWT	Wachi	0.27	312	P	Pg	17 19 27.8	+0.1
JWT				S	Sg	17 19 31.5	+0.1
JHE	Heguri	0.45	176	P	Pg	17 19 30.8	-0.1
JHE				S	Sg	17 19 36.8	0.0
JKS	Kasai	0.67	260	P	Pg	17 19 34.9	-0.2
JKY	Yasaka	0.69	320	P	Pg	17 19 35.3	-0.2
JKY				S	Sg	17 19 44.5	-0.1
TSUJ	Tsu 2	0.74	121	P	Pg	17 19 36.0	-0.5
TSUJ				S	Sg	17 19 45.7	-0.5
JAWN	Awajishima-nag	0.87	225	P	Pg	17 19 38.4	-0.5
JAWN				S	Sg	17 19 50.1	-0.1
MAT	Matsushiro	2.53	55	P	Pn	17 20 03.0	-0.1

IDC 09 17:30:00.2±11.0**, 6°.04S×124°.54E, h549km**±166km**, mb2.6**/3**, mb1 2.8**/6**, mb1mx2.6**/36**, mbtmp3.6**/6**, Error ellipse: s-maj=263.2km s-min=20.4km az=51.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	12.04	175	P	P	17 32 39.5	+0.3
	0.6nm,0.3s,baz=1.8,slow=9.5,SNR=21						
WRA	Warramunga Arr	16.79	146	P	P	17 33 27.7	+0.6
	0.4nm,0.3s,baz=322,slow=11,SNR=25						
ASAR	Alice Springs	19.71	154	P	P	17 33 53.5	-0.3
	0.2nm,0.3s,baz=337,slow=9.1,SNR=24						
STKA	Stephens Creek	30.26	150	P	P	17 35 26.7	-0.2
	1.4nm,0.5s,baz=331,slow=11,SNR=6.2						
CMAR	Chiang Mai Arr	35.06	314	P	P	17 36 07.4	-0.4
	0.3nm,0.6s,baz=140,slow=7.1,SNR=3.1						
MKAR	Makanchi Array	64.54	329	P	P	17 39 43.7	+0.2
	0.2nm,0.5s,baz=140,slow=8.3,SNR=2.5						

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*IDC **09** 17:45:45.5±4.5, 17°.62S×178°.95W, h568km±20km, mb3.2/5, mb1 3.2/7, mb1mx2.9/50, mbtmp4.1/7, Error ellipse: s-maj=122.6km s-min=35.5km az=130.0*

*NEIC **09** 17:45:46.4±1.0, 17°.4S±0°.3×179°.2W±0°.2, h569km±18km, mb4.3/11, Error ellipse: s-maj=47.3km s-min=19.8km az=139.0*

ISC 09 17:45:44.2±2.0**, 17°.4S**±0°.3×**179°.2W**±0°.3**, h539km, n20, σ0°.85**/19**, mb4.1**/11**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	2.70	262	P	P	17 47 01.5	+4.9
	0.6nm,0.3s,baz=107,slow=19,SNR=6.6						
DZM	Mont Dzumac	14.35	249	P	P	17 48 47.5	+0.2
	0.2nm,0.3s,baz=355,slow=16,SNR=2.0						
KNTN	Kanton	16.22	28	P	P	17 49 08.2	+1.9
HNR	Honiara	21.79	288	P	P	17 49 57.4	+0.3
CTA	Charters Tower	32.85	260	P	P	17 51 35.1	+1.4
	5.7nm,1.0s,baz=79,slow=14,SNR=3.0						
STKA	Stephens Creek	38.28	240	P	P	17 52 18.4	-0.3
	1.2nm,0.5s,baz=75,slow=8.6,SNR=5.2						
STKA	Stephens Creek	38.28	240	P	P	17 52 18.3	-0.4
BBOO	Buckleboo	43.06	240	P	P	17 52 56.4	-0.4
BBOO				IAmb	IAmb	17 52 57.1	
	comp=Z,7.4nm,0.9s						
WR0	Warramunga Arr	43.85	259	P	P	17 53 02.6	-0.4
WR0				IAmb	IAmb	17 53 14.6	
	comp=Z,4.1nm,1.2s						
WB0	Warramunga Arr	44.01	259	P	P	17 53 03.7	-0.6
WB0				IAmb	IAmb	17 53 14.1	
	comp=Z,14nm,1.5s						
WB2	Warramunga Arr	44.03	259	P	P	17 53 04.0	-0.4
WB2				IAmb	IAmb	17 53 27.6	
	comp=Z,9.4nm,1.4s						
WRA	Warramunga Arr	44.04	259	P	P	17 53 04.4	-0.1
	comp=Z,0.5nm,0.5s,baz=95,slow=8.0,SNR=15						
WRA	Warramunga Arr	44.04	259	P	P	17 53 04.3	-0.3
AS31	Alice Springs	44.27	254	P	P	17 53 06.7	+0.4
ASAR	Alice Springs	44.27	254	P	P	17 53 06.7	+0.4
	comp=Z,6.3nm,0.6s,baz=87,slow=8.3,SNR=223						
ASAR	Alice Springs	44.27	254	P	P	17 53 06.4	+0.1
FORT	Forrest	49.61	244	P	P	17 53 45.6	-0.8
FORT				IAmb	IAmb	17 53 47.8	
	comp=Z,15nm,1.1s						
PET	Petropavlovsk	72.67	346	P	P	17 56 15.1	-1.9
PET				IAmb	IAmb	17 56 36.0	
	comp=Z,55nm,0.7s						
SEY	Seymchan	83.08	347	P	P	17 57 12.8	0.0
	comp=Z,0.6nm,0.4s,baz=215,slow=12,SNR=1.8						
CLL	Collm	144.77	347	*i* PKiKP	PKiKP	18 04 23.2	-0.4

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*NOU **09** 17:49:58.1, 36°.84S×178°.37E, h218km, MLv4.2, Off E. Coast of N. Island, N.Z.*

WEL 09 17:49:09.4±0.6**, 33°S**±7°×**17°9W**±1°7**, h167km**±14km**, M4.3**/40**, mB4.9**/22**, ML5.1**/7**, MLv4.8**/40**, Mw(mB)4.2**/22**, Error ellipse: s-maj=0.0km s-min=0.0km az=111.5, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	4.09	19	S	Sn	17 50 56.8	-2.8
MXZ	Matakaoa Point	4.77	202	P	Pn	17 50 20.8	+0.7
MXZ				S	Sn	17 51 17.7	+2.3
WMGZ	Waiomatatini S	4.98	200	P	Pn	17 50 25.0	+2.2
WMGZ				S	Sn	17 51 24.5	+4.3
HAZ	Te Kaha	5.13	206	P	Pn	17 50 25.7	+1.0
HAZ				S	Sn	17 51 25.3	+1.6
PKGZ	Pakihiroa	5.14	203	P	Pn	17 50 25.8	+0.8
PKGZ				S	Sn	17 51 27.5	+3.3
PUZ	Puketiti	5.26	201	P	Pn	17 50 29.2	+2.7
PUZ				S	Sn	17 51 29.0	+2.1
RUGZ	Raukumara Rang	5.35	205	P	Pn	17 50 28.2	+0.4
RUGZ				S	Sn	17 51 28.8	-0.4
TWGZ	Tauwhareparae	5.44	202	P	Pn	17 50 30.6	+1.8
TWGZ				S	Sn	17 51 33.4	+2.3
CNGZ	Carnagh Statio	5.66	199	P	Pn	17 50 32.7	+1.0
OPRZ	Ohinepanea	5.72	214	P	Pn	17 50 32.5	+0.1
TKGZ	Te Karaka	5.72	202	P	Pn	17 50 32.3	-0.2
TKGZ				S	Sn	17 51 39.4	+1.7
MWZ	Matawai	5.73	205	P	Pn	17 50 32.5	-0.2
MWZ				S	Sn	17 51 38.6	+0.4
URZ	Urewera	5.82	208	P	Pn	17 50 33.3	-0.6
URZ				S	Sn	17 51 39.8	-0.4
RAGZ	Rawiri	5.92	205	P	Pn	17 50 38.3	+3.1
RIGZ	Rimuhau	5.99	202	P	Pn	17 50 35.4	-0.7
RIGZ				S	Sn	17 51 41.1	-3.2
KMRZ	Kaimai	6.02	218	P	Pn	17 50 39.6	+3.1
MUGZ	Murupara	6.15	209	P	Pn	17 50 38.2	+0.1
MUGZ				S	Sn	17 51 49.5	+1.6
PRGZ	Paritu Road	6.16	200	P	Pn	17 50 38.2	-0.1
PRGZ				S	Sn	17 51 48.8	+0.6
TOZ	Tahuroa Road	6.17	221	P	Pn	17 50 40.9	+2.5
RTZ	Ruatahuna	6.18	207	P	Pn	17 50 38.2	-0.4
RTZ				S	Sn	17 51 48.8	0.0
SNGZ	Shannon Statio	6.20	204	P	Pn	17 50 38.7	-0.2
SNGZ				S	Sn	17 51 49.7	+0.6
KNZ	Kokohu	6.31	201	P	Pn	17 50 41.0	+0.7
KNZ				S	Sn	17 51 49.4	-2.3
PRRZ	Plateau Road	6.33	211	P	Pn	17 50 42.0	+1.5
MHGZ	Mahia Peninsul	6.36	199	P	Pn	17 50 43.9	+2.9
MHGZ				S	Sn	17 51 54.1	+1.1
ALRZ	Allen Road	6.40	211	P	Pn	17 50 43.0	+1.5
RAHZ	Arahi	6.41	205	P	Pn	17 50 41.0	-0.6
RAHZ				S	Sn	17 51 51.4	-2.8
MTHZ	Maungataniwha	6.44	207	P	Pn	17 50 41.7	-0.4
MTHZ				S	Sn	17 51 52.9	-2.1
WHHZ	Waihua	6.50	204	P	Pn	17 50 44.0	+1.2
WHHZ				S	Sn	17 51 55.7	-0.6
ARHZ	Aropaoanui	6.75	204	P	Pn	17 50 45.1	-0.9
ARHZ				S	Sn	17 52 00.0	-2.1
HATZ	Hinemaiaia	6.78	211	P	Pn	17 50 47.4	+0.8
BKZ	Black Stump Fm	6.85	208	P	Pn	17 50 46.0	-1.5
BKZ				S	Sn	17 52 01.6	-3.1
RITZ	Rihia Road	6.96	212	P	Pn	17 50 50.8	+1.9
MCHZ	McNeill Hill	7.01	205	P	Pn	17 50 48.9	-0.7
MCHZ				S	Sn	17 52 06.8	-1.7
KATZ	Kakaramea	7.03	213	P	Pn	17 50 51.9	+2.0
CKHZ	Cape Kidnapper	7.08	203	P	Pn	17 50 51.6	+1.2
CKHZ				S	Sn	17 52 07.0	-3.1
HIZ	Hauiti	7.08	219	P	Pn	17 50 53.3	+2.7
KWHZ	Kaweka Forest	7.10	207	P	Pn	17 50 49.7	-1.1
KWHZ				S	Sn	17 52 09.8	-0.9
TMVZ	Te Maari	7.14	212	P	Pn	17 50 51.5	+0.1
KRVZ	Karewarewa	7.15	213	P	Pn	17 50 52.4	+0.9
WTVZ	West Tongariro	7.19	213	P	Pn	17 50 52.1	0.0
OTVZ	Oturere	7.19	212	P	Pn	17 50 50.9	-1.3
NGZ	Ngauruhoe	7.23	212	P	Pn	17 50 52.1	-0.5
KAHZ	Kahuranaki	7.26	203	P	Pn	17 50 50.6	-2.4
TUVZ	Tukino	7.28	212	P	Pn	17 50 53.4	0.0
BHHZ	Black Hill Sta	7.30	209	P	Pn	17 50 51.7	-1.7
KRHZ	Kereru	7.31	207	P	Pn	17 50 50.5	-3.1
FWVZ	Far West T-bar	7.32	212	P	Pn	17 50 52.7	-1.2
WHVZ	Whangaehu Hut	7.33	212	P	Pn	17 50 53.9	0.0
MOVZ	Moawhango	7.36	211	P	Pn	17 50 53.2	-1.1
WNVZ	Wahianoa	7.36	212	P	Pn	17 50 53.5	-0.8
PKVZ	Pokaka	7.44	213	P	Pn	17 50 55.1	-0.2
MTVZ	Mangateitei	7.46	212	P	Pn	17 50 56.0	+0.4
PXZ	Pawanui	7.48	203	P	Pn	17 50 54.8	-1.0
PRHZ	Porangahau	7.77	203	P	Pn	17 50 56.7	-3.0
DVHZ	Dannevirke	7.96	205	P	Pn	17 51 00.1	-2.1
PKE	Pukeiti	8.04	220	P	Pn	17 51 04.9	+1.6
POWZ	Post Office Ro	8.19	207	P	Pn	17 51 03.9	-1.2

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*SKHL **09** 17:54:06.9±1.1, 48°.50N×155°.60E, h54km±5km, mb4.7/7*

*MOS **09** 17:54:06.6±0.8, 48°.55N×155°.52E, h43km, mb4.3/5, Error ellipse: s-maj=15.6km s-min=4.7km az=71.0*

*KRSC **09** 17:54:09.1±1.6, 48°.91N×156°.38E, h8km±25km, ML4.4*

*NEIC **09** 17:54:11.1±1.9, 48°.9N±0°.1×155°.1E±0°.2, h68km±8km, mb4.3/11, Error ellipse: s-maj=25.2km s-min=12.1km az=130.0*

*IDC **09** 17:54:13.1±2.9, 48°.91N×155°.01E, h85km±26km, mb3.4/7, mb1 3.7/10, mb1mx3.4/56, mbtmp3.9/10, MS3.2/9, Ms1 3.2/9, ms1mx2.9/30, Error ellipse: s-maj=29.5km s-min=18.5km az=129.0*

ISC 09 17:54:06.9±0.8**, 48°.61N**±0°.08×**155°.52E**±0°.09**, h36km, n111, σ2°.14**/114**, mb4.0**/15**, MS3.1**/6**, 1C-1D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	2.12	10	*e*PN	Pn	17 54 40.4	+0.8
SKR				*e*S	Sn	17 55 04.9	+0.3
SKR				pmax	pmax		
	comp=Z,111nm,0.5s						
SKR				smax	smax		
	comp=N,287nm,0.4s						
SKR				smax	smax		
	comp=E,477nm,0.6s						
SKR	Severo-Kuril's	2.12	10	*e*P	Pn	17 54 40.5	+0.8
SKR				*e*S	Sn	17 55 02.9	-1.7
SKR	Severo-Kuril's	2.12	10	*e*P	Pn	17 54 40.4	+0.8
SKR				AMB	AMB	17 54 42.0	
	comp=E,70nm,0.4s						
SKR				*e*S	Sn	17 55 05.0	+0.3
SKR				A	A	17 55 09.0	
	comp=E,290nm,0.3s						
SKR				A	A	17 55 09.0	
	comp=E,380nm,0.3s						
PAU	Pauzhetka	2.98	16	PN	Pn	17 54 54.8	+3.2
PAU	Pauzhetka	2.98	16	*e*P	Pn	17 54 54.8	+3.2
PAU	Pauzhetka	2.98	16	*e*P	Pn	17 54 53.1	+1.5
PAU				AMB	AMB	17 54 55.0	
	comp=E,100nm,0.3s						
PAU				*e*S	Sn	17 55 27.0	+1.0
PAU				A	A	17 55 31.0	
	comp=E,460nm,0.4s						
PAU				A	A	17 55 31.0	
	comp=E,560nm,0.4s						
KDTR	Khodutka, Kamc	3.60	26	PN	Pn	17 55 01.2	+1.1
KDTR	Khodutka, Kamc	3.60	26	*e*P	Pn	17 55 01.2	+1.1
KDTR				S	Sn	17 55 39.5	-1.8
MTVR	Mutnovka	4.24	23	PN	Pn	17 55 10.9	+2.0
MTVR	Mutnovka	4.24	23	*e*P	Pn	17 55 10.9	+2.0
MTVR				*e*S	Sn	17 55 57.2	0.0
GRL	Gorelyy	4.27	21	PN	Pn	17 55 11.9	+2.5
GRL	Gorelyy	4.27	21	*e*P	Pn	17 55 11.9	+2.5
RUS	Russkaya	4.28	25	PN	Pn	17 55 10.2	+0.8
RUS	Russkaya	4.28	25	*e*P	Pn	17 55 10.2	+0.8
RUS				*e*S	Sn	17 55 57.3	-0.7
APC	Apacha	4.45	13	PN	Pn	17 55 15.2	+3.5
APC	Apacha	4.45	13	*e*P	Pn	17 55 15.2	+3.5
KRMR	Karymshinskiy	4.54	20	PN	Pn	17 55 16.3	+3.3
KRMR	Karymshinskiy	4.54	20	*e*P	Pn	17 55 16.3	+3.3
PEA0B	Petropavlovsk-	4.71	16	PN	Pn	17 55 18.4	+3.0
PEA0B	Petropavlovsk-	4.71	16		Pn	17 55 18.4	+3.0
PETK	Petropavlovsk-	4.71	16	P	Pn	17 55 18.4	+3.0
	comp=E,3.8nm,0.3s,baz=184,slow=12,SNR=73						
PETK				LR	LR	17 57 15.1	
	comp=E,125nm,21.0s,baz=230,slow=40						
PETK	Petropavlovsk-	4.71	16	PN	Pn	17 55 17.9	+2.5
PETK	Petropavlovsk-	4.71	16		Pn	17 55 17.9	+2.5
PET	Petropavlovsk	4.85	23	*e*PN	Pn	17 55 19.3	+2.1
PET				*e*S	Sn	17 56 16.1	+4.1
PET				pmax	pmax		
	comp=Z,73nm,0.6s						
PET				smax	smax		
	comp=E,176nm,0.9s						
PET				smax	smax		
	comp=N,112nm,0.7s						
PET				MLR	MLR		
	comp=Z,100nm,13.0s						
PET	Petropavlovsk	4.85	23	*e*P	Pn	17 55 19.1	+1.9
PET	Petropavlovsk	4.85	23		Pn	17 55 18.9	+1.8
PET	Petropavlovsk	4.85	23	*i* P	Pn	17 55 18.7	+1.5
PET				AMB	AMB	17 55 20.7	
	comp=Z,70nm,0.6s						
PET				*e*S	Sn	17 56 12.2	+0.2
PET				A	A	17 56 25.5	
	comp=Z,110nm,0.8s						
PET				A	A	17 56 25.5	
	comp=Z,170nm,0.8s						
DALK	Dalny	4.88	24	PN	Pn	17 55 19.3	+1.7
DALK	Dalny	4.88	24	*e*P	Pn	17 55 19.3	+1.7
DALK				*e*S	Sn	17 56 12.0	-0.8
UGLR	Uglovaya	5.06	23	PN	Pn	17 55 22.5	+2.3
UGLR	Uglovaya	5.06	23	*e*P	Pn	17 55 22.5	+2.3
KOK	Koryaka	5.09	22	PN	Pn	17 55 23.5	+2.9
KOK	Koryaka	5.09	22	*e*P	Pn	17 55 23.5	+2.9
AVH	Avacha	5.09	22	PN	Pn	17 55 23.7	+3.1
AVH	Avacha	5.09	22	*e*P	Pn	17 55 23.7	+3.1
AVH	Avacha	5.09	22	*e*P	Pn	17 55 23.7	+3.1

SMAR	Somma	5.10	23	PN	Pn	17 55 23.2	+2.3
SMAR	Somma	5.10	23	*e*P	Pn	17 55 23.2	+2.3
KRER	Koryakskii	5.13	22	PN	Pn	17 55 23.6	+2.4
KRER	Koryakskii	5.13	22	*e*P	Pn	17 55 23.6	+2.4
KRX	Arik	5.15	21	PN	Pn	17 55 24.6	+3.1
KRX	Arik	5.15	21	*e*P	Pn	17 55 24.6	+3.1
GNL	Ganaly	5.32	16	PN	Pn	17 55 26.6	+2.8
GNL	Ganaly	5.32	16	*e*P	Pn	17 55 26.6	+2.8
SPN	Mys Shipunski	5.32	31	PN	Pn	17 55 25.0	+1.3
SPN	Mys Shipunski	5.32	31	*e*P	Pn	17 55 25.0	+1.3
SPN	Mys Shipunski	5.32	31	*e*P	Pn	17 55 25.0	+1.3
KUR	Kuril'sk	6.23	240	⇓*i*PN	Pn	17 55 39.8	+3.6
KUR				*e*S	Sn	17 56 50.2	+4.1
KUR				pmax	pmax		
	comp=Z,74nm,0.4s						
KUR				pmax	pmax		
	comp=N,22nm,0.3s						
KUR				pmax	pmax		
	comp=E,28nm,0.3s						
KUR				smax	smax		
	comp=N,31nm,0.8s						
KUR				smax	smax		
	comp=E,72nm,0.8s						
KUR	Kuril'sk	6.23	240	*i* P	Pn	17 55 38.0	+1.8
KUR				AMB	AMB	17 55 41.0	
	comp=E,76nm,0.5s						
KUR				*i* S	Sn	17 56 45.7	-0.4
KUR				A	A	17 57 04.1	
	comp=E,130nm,0.6s						
KUR				A	A	17 57 04.1	
	comp=E,170nm,0.6s						
YUK	Yuzh-Kuril'sk	8.10	239	*e*PN	Pn	17 56 03.9	+2.1
YUK				pmax	pmax		
	comp=Z,125nm,0.3s						
YUK				pmax	pmax		
	comp=N,42nm,0.2s						
YUK	Yuzh-Kuril'sk	8.10	239	*e*P	Pn	17 56 03.0	+1.2
YUK				AMB	AMB	17 56 05.0	
	comp=N,33nm,0.5s						
YUK				*e*S	Sn	17 57 31.0	-1.0
GRPR	Tuman	8.18	239	*e*PN	Pn	17 56 04.8	+1.9
GRPR				pmax	pmax		
	comp=N,63nm,0.3s						
GRPR				pmax	pmax		
	comp=Z,94nm,0.3s						
GRPR				pmax	pmax		
	comp=E,50nm,0.1s						
GRPR	Tuman	8.18	239	*e*P	Pn	17 56 04.0	+1.1
GRPR				AMB	AMB	17 56 08.0	
	comp=E,25nm,0.5s						
GRPR				*i* S	Sn	17 57 33.0	-0.9
NMR	Nemuro--Hokkai	8.60	236	⇑*i*PN	Pn	17 56 08.0	-0.6
NMR	Nemuro--Hokkai	8.60	236	*i* P	Pn	17 56 08.5	-0.1
TYV	Tymovskoe	8.64	290	*e*P	Pn	17 56 10.5	+1.4
YSS	Yuzh-Sakhalins	8.76	264	*e*PN	Pn	17 56 13.0	+2.2
YSS	Yuzh-Sakhalins	8.76	264	Pn	Pn	17 56 12.5	+1.6
YSS	Yuzh-Sakhalins	8.76	264	*e*P	Pn	17 56 13.0	+2.2
JKA	Kamikawa-asahi	9.99	248		Pn	17 56 30.8	+3.0
JKA	Kamikawa-asahi	9.99	248	*e*P	Pn	17 56 31.1	+3.3
ASAJ	Asahikawa	10.00	248	P	Pn	17 56 31.1	+3.3
	comp=E,8.4nm,0.3s,baz=77,slow=14,SNR=87						
EKMR	Ekimchan	14.92	296	*e*P	Pn	17 57 33.5	-1.5
EKMR				AMB	AMB	17 57 48.0	
	comp=E,4.0nm,0.5s						
KLR	Kul'dur	15.63	281	P	Pn	17 57 45.2	+1.0
	comp=E,0.1nm,0.3s,baz=78,slow=13,SNR=3.0						
KLR				LR	LR	18 03 26.6	
	comp=E,69nm,19.9s,baz=8.0,slow=36						
KLR	Kul'dur	15.63	281	*e*P	Pn	17 57 45.2	+1.0
MJAR	Matsushiro Arr	17.50	233	LR	LR	18 05 39.4	
	comp=E,36nm,20.1s,baz=105,slow=39						
BMKR	Bomnak	17.58	300	*e*P	Pn	17 58 08.0	-0.8
KSRS	Korea Array	22.92	251	P	P	17 59 07.7	+0.2
	comp=E,2.2nm,0.6s,baz=50,slow=10,SNR=8.5						
KSRS				LR	LR	18 07 24.3	
	comp=E,50nm,20.7s,baz=100,slow=35						
KSRS	Korea Array	22.92	251	*e*P	P	17 59 07.7	+0.2
JNU	Nakatsue	24.07	239	LR	LR	18 07 26.6	
	comp=E,79nm,21.5s,baz=24,slow=33						
H11N2	WAKE ISLAND Hy	30.23	158	T	T	18 32 34.6	
	baz=342,slow=76,SNR=26						
H11N1	WAKE ISLAND Hy	30.25	158	T	T	18 32 36.3	
	baz=342,slow=76,SNR=30						
H11N3	WAKE ISLAND Hy	30.25	158	T	T	18 32 32.9	
	baz=342,slow=76,SNR=17						
JOW	Kunigami	30.34	234	LR	LR	18 12 29.5	
	comp=E,98nm,21.8s,baz=249,slow=36						
H11S1	WAKE ISLAND Hy	31.36	159	T	T	18 33 55.1	
	baz=346,slow=76,SNR=200						
H11S3	WAKE ISLAND Hy	31.37	159	T	T	18 33 54.9	
	baz=346,slow=76,SNR=270						
H11S2	WAKE ISLAND Hy	31.38	159	T	T	18 33 54.6	
	baz=346,slow=76,SNR=182						
SONM	Songino Array	32.29	288	PcP	PcP	18 03 18.2	-1.3
	comp=E,0.3nm,0.6s,baz=90,slow=1.6,SNR=3.6						
SONM				LR	LR	18 13 44.9	
	comp=E,34nm,18.3s,baz=353,slow=37						
INK	Inuvik	39.20	34	P	P	18 01 30.7	-0.2
INK				pmax	pmax		
	comp=Z,4.0nm,1.5s						
INK	Inuvik	39.20	34	P	P	18 01 30.7	-0.2
INK				IAmb	IAmb	18 02 00.1	
	comp=Z,4.3nm,1.5s						
MK31	Makanchi Array	47.54	297	P	P	18 02 35.3	-3.2
MK31				pmax	pmax		
	comp=Z,1.0nm,1.0s						
MK31	Makanchi Array	47.54	297	P	P	18 02 35.3	-3.2
MKAR	Makanchi Array	47.54	297	P	P	18 02 35.6	-2.9
	comp=Z,0.4nm,0.6s,baz=71,slow=8.3,SNR=5.2						
MKAR				PcP	PcP	18 04 05.6	-2.4
	comp=Z,0.3nm,0.8s,baz=70,slow=1.7,SNR=2.3						
MKAR				LR	LR	18 23 06.4	
	comp=Z,50nm,18.1s,baz=358,slow=37						
MKAR	Makanchi Array	47.54	297	P	P	18 02 35.3	-3.2
MAKZ	Makanchi	47.72	297	P	P	18 02 36.7	-3.1
MAKZ				pmax	pmax		
	comp=Z,1.0nm,1.3s						
MAKZ	Makanchi	47.72	297	P	P	18 02 36.7	-3.1
MAKZ				IAmb	IAmb	18 03 03.1	
	comp=Z,1.3nm,1.2s						
YKA	Yellowknife Ar	48.46	38	P	P	18 02 47.8	+2.6
	comp=Z,0.3nm,0.8s,baz=298,slow=6.9,SNR=4.0						
CHTO	Chiang Mai	54.12	257	P	P	18 03 27.9	-0.4
CHTO				pmax	pmax		
	comp=Z,5.0nm,0.9s						
CHTO	Chiang Mai	54.12	257	P	P	18 03 27.9	-0.4
CMAR	Chiang Mai Arr	54.38	257	P	P	18 03 30.6	+0.5
	comp=Z,2.4nm,0.7s,baz=33,slow=7.1,SNR=29						
CMAR				LR	LR	18 27 40.4	
	comp=Z,16nm,18.8s,baz=80,slow=37						
CMAR	Chiang Mai Arr	54.38	257	P	P	18 03 29.9	-0.3
MTN	Manton Dam	64.89	206	P	P	18 04 43.4	+1.0
WB0	Warramunga Arr	70.63	201	P	P	18 05 19.6	+1.1
WB0				IAmb	IAmb	18 05 23.5	
	comp=Z,5.8nm,1.2s						
WR0	Warramunga Arr	70.78	201	P	P	18 05 21.0	+1.6
WR0				IAmb	IAmb	18 05 29.8	
	comp=Z,8.2nm,1.4s						
WRAB	Tennant Creek	70.80	201	P	P	18 05 19.8	+0.3
WRAB				pmax	pmax		
	comp=Z,7.0nm,1.4s						
WRAB	Tennant Creek	70.80	201	P	P	18 05 19.8	+0.3
WRAB				IAmb	IAmb	18 05 23.0	
	comp=Z,6.7nm,1.4s						
WB2	Warramunga Arr	70.81	201	P	P	18 05 20.8	+1.2
WB2				IAmb	IAmb	18 05 31.9	
	comp=Z,5.4nm,1.2s						
WRA	Warramunga Arr	70.81	201	P	P	18 05 20.6	+1.0
	comp=Z,1.1nm,0.7s,baz=14,slow=6.0,SNR=7.2						
WRA	Warramunga Arr	70.81	201	P	P	18 05 21.1	+1.5
WRA	Warramunga Arr	70.81	201	P	P	18 05 21.1	+1.5
AKASG	Malin Array Be	70.89	327	P	P	18 05 16.9	-2.8
	comp=Z,0.3nm,0.5s,baz=33,slow=6.7,SNR=2.7						
AS31	Alice Springs	74.50	201	P	P	18 05 43.1	+1.7
ASAR	Alice Springs	74.50	201	P	P	18 05 43.3	+1.8
	comp=Z,0.6nm,0.5s,baz=12,slow=5.2,SNR=22						
ASAR	Alice Springs	74.50	201	P	P	18 05 43.1	+1.7
BURAR	Bucovina Array	74.91	328	P	P	18 05 42.5	-1.3
H03N2	Juan Fernandez	137.13	90	T	T	20 46 34.6	
	baz=310,slow=77,SNR=11						
H03N1	Juan Fernandez	137.14	90	T	T	20 46 35.9	
	baz=310,slow=77,SNR=9.7						
H03N3	Juan Fernandez	137.14	90	T	T	20 46 31.1	
	baz=310,slow=77,SNR=11						
BOSA	Boshof	137.18	279	PKP	PKPdf	18 13 24.5	-1.6
	comp=Z,1.8nm,0.7s,baz=63,slow=4.5,SNR=5.2						
BOSA	Boshof	137.18	279	PKIKP	PKPdf	18 13 25.1	-1.0
BOSA	Boshof	137.18	279		PKPdf	18 13 25.1	-1.0

*NEIC **09** 18:16:14.5±0.5, 19.°33N±0.°06×155.°36W±0.°01, h19^{km}±1^{km}, Error ellipse: s-maj=8.4km s-min=1.2km az=189.0*

*HVO **09** 18:16:15.5±0.3, 19.°37N±0.°03×155.°34W±0.°01, h13^{km}±1^{km}, ML4.3/36, mb4.5/1(NEIC), ML4.4/42(NEIC), Mwr3.8/4(SLM), Error ellipse: s-maj=4.4km s-min=1.3km az=187.0*

*NEIC **09** 18:16:15.5, 19.°37N×155.°34W, h11^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M$_{rr}$5.52; M$_{\theta\theta}$-1.13; M$_{\phi\phi}$-4.39; M$_{r\theta}$-0.26; M$_{\theta\phi}$-2.35; M$_{\phi r}$1.13; Fault plane solution: M$_0$5.69000×10^{14} NP1:φ$_s$215.00000°, δ41.00000°, λ102.00000°. NP2:φ$_s$20.00000°, δ50.00000°, λ80.00000°. Principal axes: T 5.6910, Plg81.0000°, Azm237.0000°; N -0.0015, Plg8.0000°, Azm26.0000°; P -5.6895, Plg5.0000°, Azm117.0000°;*

*IDC **09** 18:16:15.7±2.5, 19.°59N×155.°35W, h0^{km}, mb3.5/5, mb1 3.8/5, mb1mx3.6/33, mbtmp3.5/5 Error ellipse: s-maj=66.3km s-min=8.9km az=170.0*

ISC 09 18:16:16.4±1.0**, 19.°39N**±0.°05×**155.°37W**±0.°03**, h12**^{km}±6^{km}**, n47, σ1^{s}.03**/39**, mb3.9**/8**, 1C, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRMHI	West Rim	0.07	71		Pg	18 16 18.3	-0.8
SDHHI	Sand Hill	0.07	86		Pg	18 16 18.4	-0.8
UWE	Uwekahuna	0.08	63		Pg	18 16 18.5	-0.7
OBL	Observatory Le	0.08	68		Pg	18 16 18.5	-0.8
OBL				IAML		18 16 21.7	
	comp=N,205µm,0.5s						
NPH	North Pit	0.09	72		Pg	18 16 18.4	-0.9
NPH				IAML		18 16 20.6	
	comp=N,124µm,0.2s						
AIN	Ainahou	0.09	261		Pg	18 16 19.1	-0.3
AIN				IAML		18 16 22.0	
	comp=E,161µm,0.4s						
RIM	Rim	0.09	83		Pg	18 16 18.5	-0.8
RIM				IAML		18 16 20.7	
	comp=E,205µm,0.5s						
RIM				IAML		18 16 20.8	
	comp=N,186µm,0.3s						
UWB	Uwekahuna B	0.09	65		Pg	18 16 18.5	-0.9
UWB				IAML		18 16 20.7	
	comp=E,76µm,0.7s						
KKO	Keanakako`i	0.10	82		Pg	18 16 18.6	-0.9
KKO				IAML		18 16 20.9	
	comp=E,138µm,0.5s						
KKO				IAML		18 16 22.4	
	comp=N,118µm,0.6s						
SBLHI	Steaming Bluff	0.10	66		Pg	18 16 18.6	-0.9
SBLHI				IAML		18 16 20.9	
	comp=E,119µm,0.5s						
BYL	Byron's Ledge	0.10	75		Pg	18 16 18.6	-0.9
BYL				IAML		18 16 21.1	
	comp=E,113µm,0.6s						
HLP	Hilina Pali	0.10	148		Pg	18 16 18.8	-0.7
HATHI	Halema‘uma‘u T	0.11	69		Pg	18 16 18.7	-0.9
HATHI				IAML		18 16 21.4	
	comp=N,112µm,0.4s						
HATHI				IAML		18 16 22.0	
	comp=E,96µm,0.5s						
MLH	Mauna Loa	0.11	350		Pg	18 16 19.2	-0.5
MLH				IAML		18 16 22.4	
	comp=E,79µm,0.2s						
RSD	Rainshed	0.11	47		Pg	18 16 18.8	-0.9
PUH	Pauahi	0.14	94		Pg	18 16 19.1	-1.0
PUH				IAML		18 16 21.7	
	comp=N,76µm,0.5s						
STCH	Steam Cracks	0.23	90		Pg	18 16 20.0	-1.3
MWH	Moku‘aweowe	0.24	295		Pg	18 16 21.2	-0.6
MWH				IAML		18 16 26.6	
	comp=N,39µm,0.4s						
MWH				IAML		18 16 29.2	
	comp=E,36µm,0.5s						
HMH	Humu‘ula Sheep	0.24	333		Pg	18 16 21.5	-0.3
HMH				IAML		18 16 25.9	
	comp=N,72µm,0.3s						
HMH				IAML		18 16 26.0	
	comp=E,49µm,0.3s						
NPOC	North of Pu‘u	0.24	88		Pg	18 16 20.4	-1.3
NPOC				IAML		18 16 24.9	
	comp=N,41µm,0.4s						
MLOA	Mauna Loa Obse	0.25	307		Pg	18 16 21.5	-0.4
JCUZ	Jacuzzi	0.25	90		Pg	18 16 20.6	-1.2
JCUZ				IAML		18 16 25.1	
	comp=E,50µm,0.3s						
KHU	Kahuku	0.27	240		Pg	18 16 21.4	-0.8
POHA	Pohakuloa	0.40	337		Pg	18 16 23.6	-1.0
HUH	Hualalai	0.53	304		Pg	18 16 25.9	-1.1
HUH				IAML		18 16 41.3	
	comp=N,32µm,0.4s						
HUH				IAML		18 16 45.2	
	comp=E,34µm,0.5s						
I59US	HAWAII INFRASO	0.54	293	Pg	Pg	18 16 25.5	-1.6
	baz=131,slow=17						
I59US				Lg	Lg	18 16 32.9	
	baz=137,slow=16						
KHLU	Kahalu`u	0.54	293		Pg	18 16 25.4	-1.6
KKH	Kailua Kona	0.67	294		Pg	18 16 26.9	-2.6
HLK	Haleakala	1.60	329		Pn	18 16 40.5	-4.2
H11N3	WAKE ISLAND Hy	35.50	277	T	T	19 00 22.9	
	baz=83,slow=73						
H11N2	WAKE ISLAND Hy	35.51	277	T	T	19 00 22.8	
	baz=83,slow=73						
H11N1	WAKE ISLAND Hy	35.52	277	T	T	19 00 23.6	
	baz=83,slow=73						
H11S2	WAKE ISLAND Hy	35.84	275	T	T	19 00 46.1	
	baz=82,slow=74,SNR=164						
H11S1	WAKE ISLAND Hy	35.84	275	T	T	19 00 46.4	
	baz=82,slow=74						
H11S3	WAKE ISLAND Hy	35.86	275	T	T	19 00 47.4	
	baz=82						
H02S1	DAWSON INLET T	38.12	22	T	T	19 03 42.6	
	SNR=44						
PDAR	Pinedale Array	44.95	48	P	P	18 24 31.8	+0.2
	comp=E,0.1nm,0.4s,baz=236,slow=7.5,SNR=2.4						
ILAR	Eielson Array	45.71	5	P	P	18 24 36.6	-0.4
	comp=E,0.7nm,0.9s,baz=199,slow=6.6,SNR=4.2						
TXAR	Lajitas Array	47.80	68	P	P	18 24 55.0	+0.9
	comp=E,0.2nm,0.6s,baz=254,slow=6.5,SNR=1.4						
INK	Inuvik	50.80	10	P	P	18 25 15.7	-0.5
	comp=E,1.1nm,0.6s,baz=192,slow=9.3,SNR=3.1						
INK	Inuvik	50.80	10	IAmb	IAmb	18 26 50.3	
	comp=Z,10nm,1.6s						
YKA	Yellowknife Ar	51.38	23	P	P	18 25 20.2	-0.4
	comp=Z,0.1nm,0.3s,baz=229,slow=6.9,SNR=7.1						
HHC	Hu-ho-hao-te	79.83	310	*e*P	P	18 28 24.9	-0.2
HHC				pmax	pmax		
	comp=Z,10.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,120nm,5.5s						
LZH	Lanzhou	87.11	307	*e*P	P	18 29 04.6	+1.9
LZH				pP	PcP	18 29 07.8	+2.9
LZH				sP	sP	18 29 10.5	+1.7
LZH				PP	PP	18 32 26.5	+0.5
LZH				pmax	pmax		
	comp=Z,18nm,1.2s						
LZH				pmax	pmax		
	comp=Z,140nm,4.9s						
KMI	Kunming	92.12	297	⇑P	P	18 29 26.9	+0.4
KMI				pP	sP	18 29 35.5	+2.8
KMI				pmax	pmax		
	comp=Z,9.0nm,1.5s						
WMQ	Urumqi	94.70	320	*e*P	P	18 29 38.2	+0.4
TORD	Torodi Ar. Bea	140.56	37	PKP	PKPdf	18 35 45.6	-1.1
	comp=Z,0.4nm,0.7s,baz=310,slow=1.1,SNR=1.9						

*NEIC **09** 18:35:10.9±1.6, 11.°54S±0.°09×167.°0E±0.°1, h51^{km}±7^{km}, mb4.6/31, Error ellipse: s-maj=15.1km s-min=12.3km az=71.0*

*IDC **09** 18:35:11.2±3.6, 11.°52S×167.°00E, h46^{km}±30^{km}, mb4.2/10, mb1 4.3/13, mb1mx4.1/34, mbtmp4.4/13, ML2.8/2, MS3.9/13, Ms1 3.9/13, ms1mx3.6/25, Error ellipse: s-maj=30.1km s-min=22.4km az=122.0*

ISC 09 18:35:11.4±0.5**, 11.°49S**±0.°09×**166.°91E**±0.°09**, h50**^{km}**, n74, σ1^{s}.12**/67**, mb4.6**/23**, MS3.9**/13**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	Saraoutou	3.95	176	Pn	Pn	18 36 07.5	-2.0
HNR	Honiara	7.15	286	P	Pn	18 36 54.0	+0.5
	28nm,0.3s,baz=101,slow=10.0,SNR=8.7						
HNR				LR	LR	18 39 54.4	
	comp=Z,2µm,18.4s,baz=106,slow=39						
HNR	Honiara	7.15	286		Pn	18 36 54.3	+0.8
DZM	Mont Dzumac	10.54	182	P	Pn	18 37 39.9	-0.1
	0.3nm,0.3s,baz=81,slow=20,SNR=1.1						
DZM				LR	LR	18 41 21.6	
	comp=Z,333nm,19.5s,baz=346,slow=35						
DZM	Mont Dzumac	10.54	182	*e*Pn	Pn	18 37 43.3	+3.4
	2.2nm,0.3s						
DZM				*e*LR	LR	18 40 17.0	
	comp=Z,469nm,24.9s						
DZM	Mont Dzumac	10.54	182		Pn	18 37 38.8	-1.1
MSVF	Nonsavu	12.44	121	LR	LR	18 41 49.6	
	comp=Z,977nm,19.3s,baz=311,slow=32						
PMG	Port Moresby	19.54	274	P	Pn	18 39 37.2	+0.5
	0.3nm,0.3s,baz=33,slow=5.4,SNR=5.5						
PMG	Port Moresby	19.54	274	P	P	18 39 34.9	-0.1
PMG				IAmb	IAmb	18 39 49.6	
	comp=Z,39nm,1.2s						
EIDS	Eidsvold	20.37	225	Pn	Pn	18 39 46.3	-0.2
EIDS				IAmb	IAmb	18 39 48.2	
	comp=Z,21nm,0.7s						
MANU	Manus Island	21.54	294	P	P	18 39 57.2	+0.5
CTA	Charters Tower	21.62	244	P	P	18 39 59.2	+1.7
	comp=Z,7.6nm,1.0s,baz=59,slow=13,SNR=2.5						
CTAO	Charters Tower	21.62	244	P	P	18 39 59.1	+1.5
ARMA	Armidale	23.58	215	P	P	18 40 17.2	-0.7
ARMA				IAmb	IAmb	18 40 43.2	
	comp=Z,32nm,1.2s						
STKA	Stephens Creek	30.93	225	P	P	18 41 24.7	+1.0
	comp=Z,4.0nm,0.7s,baz=42,slow=9.5,SNR=9.9						
STKA				LR	LR	18 52 45.4	
	comp=Z,313nm,21.6s,baz=33,slow=34						
STKA	Stephens Creek	30.93	225	P	P	18 41 24.7	+1.0
WR0	Warramunga Arr	32.23	251	P	P	18 41 34.9	-0.4
TOO	Toolangi	32.31	213	P	P	18 41 34.2	-1.6
TOO				IAmb	IAmb	18 41 57.0	
	comp=Z,9.5nm,1.1s						
WB0	Warramunga Arr	32.34	251	P	P	18 41 35.1	-1.1
WRAB	Tennant Creek	32.40	251	P	P	18 41 35.4	-1.5
WRAB				IAmb	IAmb	18 41 41.6	
	comp=Z,15nm,1.3s						
WB2	Warramunga Arr	32.41	251	P	P	18 41 36.6	-0.3
WB2				IAmb	IAmb	18 41 42.4	
	comp=Z,9.3nm,1.1s						
WRA	Warramunga Arr	32.42	251	P	P	18 41 36.6	-0.3
	comp=Z,2.2nm,0.8s,baz=84,slow=8.8,SNR=17						
WRA				PcP	PcP	18 44 24.1	+0.5
	comp=Z,0.8nm,0.8s,baz=83,slow=3.0,SNR=7.5						
WRA				LR	LR	18 54 11.7	
	comp=Z,218nm,19.2s,baz=120,slow=35						
WRA	Warramunga Arr	32.42	251	P	P	18 41 35.6	-1.4
AS31	Alice Springs	33.63	244	P	P	18 41 46.0	-1.6
ASAR	Alice Springs	33.63	244	P	P	18 41 46.9	-0.7
	comp=Z,2.3nm,0.7s,baz=71,slow=9.8,SNR=32						
ASAR				PcP	PcP	18 44 26.9	0.0
	comp=Z,0.5nm,0.6s,baz=87,slow=2.2,SNR=7.8						
ASAR				LR	LR	18 55 03.7	
	comp=Z,219nm,18.0s,baz=74,slow=35						
ASAR	Alice Springs	33.63	244	P	P	18 41 46.0	-1.6
BBOO	Buckleboo	35.38	228	P	P	18 42 03.0	+0.5
FITZ	Fitzroy Crossi	40.38	256	P	P	18 42 46.1	+1.3
FITZ				IAmb	IAmb	18 42 49.6	
	comp=Z,17nm,1.4s						
FORT	Forrest	40.74	236	P	P	18 42 47.9	+0.2
FORT				IAmb	IAmb	18 42 56.5	
	comp=Z,16nm,0.9s						
PPT	Papeete	42.48	103	LR	LR	18 58 07.9	
	comp=Z,108nm,19.4s,baz=258,slow=32						
PPT2	Papeete2	42.48	103	*e*S	S	18 49 25.2	+4.2
	comp=Z,65nm,25.8s						
PPT2				*e*LR	LR	18 54 50.3	
	comp=Z,336nm,26.5s						
TBI	Tubuai	43.10	112	*e*LR	LR	18 55 12.0	
	comp=Z,405nm,29.8s						
PSA00	Pilbara Seismi	46.07	251	P	P	18 43 31.7	+0.9
PSA00				IAmb	IAmb	18 43 34.0	
	comp=Z,13nm,1.1s						
NWAO	Narrogin (SRO)	50.17	237	P	P	18 44 00.4	-1.9
RKT	Rikitea	56.36	110	*e*LR	LR	19 01 13.9	
	comp=Z,377nm,27.5s						
CMAR	Chiang Mai Arr	73.34	293	P	P	18 46 39.8	+1.3
	comp=Z,3.9nm,0.7s,baz=121,slow=4.6,SNR=39						
CMAR				LR	LR	19 18 56.4	
	comp=Z,19nm,19.6s,baz=188,slow=36						
CMAR	Chiang Mai Arr	73.34	293	P	P	18 46 39.5	+1.0
CHTO	Chiang Mai	73.45	294	P	P	18 46 40.0	+0.9
SII	Sitkinak Islan	75.07	21	P	P	18 46 47.3	-0.5
QSPA	South Pole Qui	78.52	180	P	P	18 47 07.6	+0.3
ANM	Nome	78.68	12	P	P	18 47 06.9	-1.0
SONM	Songino Array	79.70	323	P	P	18 47 15.0	+1.0
	comp=Z,0.6nm,0.6s,baz=135,slow=5.2,SNR=5.9						
SONM	Songino Array	79.70	323	P	P	18 47 13.7	-0.3
IMAR	Indian Mountai	82.54	15	P	P	18 47 28.6	+0.1
WRH	Wood River Hil	82.99	18	P	P	18 47 30.4	-0.5
WRH				IAmb	IAmb	18 47 32.4	
	comp=Z,6.4nm,1.0s						
CCB	Clear Creek Bu	83.20	18	P	P	18 47 31.5	-0.5
CCB				IAmb	IAmb	18 47 33.2	
	comp=Z,4.8nm,0.8s						
HDA	Harding Lake	83.29	18	P	P	18 47 32.4	-0.1
MDM	Murphy Dome	83.30	18	P	P	18 47 32.3	-0.3
MDM				IAmb	IAmb	18 47 33.7	
	comp=Z,6.0nm,0.9s						
IL31		83.57	18	P	P	18 47 33.4	-0.4
IL31				IAmb	IAmb	18 47 36.1	
	comp=Z,6.1nm,0.8s						
ILAR	Eielson Array	83.57	18	P	P	18 47 34.1	+0.2
	comp=Z,3.4nm,0.6s,baz=250,slow=5.0,SNR=36						
ILAR				LR	LR	19 20 52.6	
	comp=Z,40nm,18.6s,baz=232,slow=33						
ILAR	Eielson Array	83.57	18	P	P	18 47 33.5	-0.4
POKR	Poker Plat Res	83.65	18	P	P	18 47 34.2	-0.1
POKR				IAmb	IAmb	18 47 35.5	
	comp=Z,7.5nm,0.9s						
BCAR	Beaver Creek A	84.09	21	P	P	18 47 36.9	+0.2
EGAK	Eagle	85.40	20	P	P	18 47 43.6	+0.5
NVAR	Mina Array Bea	85.43	49	LR	LR	19 17 18.6	
	comp=Z,109nm,21.7s,baz=255,slow=30						
BMAR	Burnt Mountain	86.09	17	P	P	18 47 46.9	+0.3
PALK	Pallekele	87.74	278	LR	LR	19 33 33.5	
	comp=Z,34nm,18.3s,baz=216,slow=40						
PDAR	Pinedale Array	93.01	47	LR	LR	19 24 10.0	
	comp=Z,26nm,18.6s,baz=290,slow=32						
MK31	Makanchi Array	94.63	317	P	P	18 48 26.4	-0.7
MK31				IAmb	IAmb	18 48 28.6	
	comp=Z,2.3nm,1.1s						
MKAR	Makanchi Array	94.63	317	P	P	18 48 27.2	+0.1
	comp=Z,2.0nm,0.7s,baz=96,slow=6.5,SNR=25						
MKAR	Makanchi Array	94.63	317	P	P	18 48 26.4	-0.7
YKA	Yellowknife Ar	94.84	27	P	P	18 48 26.9	-0.7
	comp=Z,0.6nm,0.7s,baz=251,slow=4.1,SNR=10						
TXAR	Lajitas Array	95.03	61	LR	LR	19 23 15.6	
	comp=Z,53nm,21.1s,baz=0.0,slow=30						
NRIK	Noril'sk	96.93	339	P	P	18 48 37.0	0.0
	comp=Z,1.6nm,0.5s,baz=185,slow=5.1,SNR=2.3						
FINES	FINESS Array B	122.60	339	PKP	PKPdf	18 54 00.7	-0.4
	comp=Z,2.4nm,0.9s,baz=190,slow=1.2,SNR=3.9						
FINES	FINESS Array B	122.60	339		PKiKP	18 54 01.3	0.0
BOSA	Boshof	125.57	222	PKP	PKiKP	18 54 08.9	+0.4
	comp=Z,1.4nm,0.6s,baz=356,slow=2.1,SNR=4.3						
BOSA	Boshof	125.57	222		PKPdf	18 54 07.7	-0.4
GERES	GERESS Array B	136.60	334	PKP	PKiKP	18 54 29.7	-0.3
	comp=Z,0.3nm,0.5s,baz=45,slow=1.7,SNR=3.5						
GERES	GERESS Array B	136.60	334		PKPdf	18 54 27.4	-0.9
KEST	Kesra	148.45	324	PKPbc	PKiKP	18 54 53.9	-0.9
	comp=Z,3.7nm,0.8s,baz=57,slow=23,SNR=1.4						
ESDC	Sonseca Array	150.78	345	PKPbc	PKiKP	18 54 58.9	-0.5
	comp=Z,0.7nm,0.8s,baz=11,slow=2.6,SNR=3.0						
TORD	Torodi Ar. Bea	165.46	278	PKP	PKPdf	18 55 09.6	-1.9
	comp=Z,0.6nm,0.9s,baz=287,slow=1.1,SNR=2.1						
TORD	Torodi Ar. Bea	165.46	278		PKPdf	18 55 09.9	-1.5

MEX 09 18:47:52.9±0.3**, 15.°15N×91.°98W, h11**^{km}±9^{km}**, MD3.5, Mexico-Guatemala border region**

*SKO **09** 19:24:15.3, 40.°93N×22.°24E, h15^{km}*
*SOF **09** 19:24:16.7, 40.°91N×22.°38E, h5^{km}, MD2.7*
*ATH **09** 19:24:16.3, 40.°95N×22.°21E, h6^{km}±3^{km}, ML2.3/6, Error ellipse: s-maj=3.2km s-min=0.8km az=175.0*

*THE **09** 19:24:16.4, 40°.93N×22°.23E, h1^{km}±2^{km}, ML2.3/9, Error ellipse: s-maj=2.4km s-min=0.5km az=310.0*

ISC 09 19:24:16.5±1.0**, 40°.93N**±0°.02×**22°.23E**±0°.02**, h6**^{km}±8^{km}**,**
n44, σ0^{s}.59/69**, 1C-7D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GRG	Griva	0.13	77	P	Pg	19 24 19.2	-0.1
GRG				S	Sg	19 24 20.8	-0.3
	5µm,0.3s						
GRG	Griva	0.13	77	⇓*i*Pg	Pg	19 24 19.2	-0.1
GRG				*i* Sg	Sg	19 24 21.8	+0.6
VAY	Valandovo	0.47	33	⇓*i*Pg	Pg	19 24 25.3	-0.3
VAY				*i* Sg	Sg	19 24 32.0	+0.3
VAY				*e*Lg	Lg	19 24 32.2	
	comp=E,310nm,0.4s						
KNT	Kendrikon	0.56	65	P	Pg	19 24 27.2	0.0
KNT				S	Sg	19 24 34.8	+0.4
KNT				AML	AML	19 24 36.0	
	comp=E,801µm,0.2s						
KNT				AML	AML	19 24 36.5	
	comp=N,903µm,0.3s						
KNT	Kendrikon	0.56	65	P	Pg	19 24 27.2	0.0
KNT				S	Sg	19 24 34.8	+0.4
	comp=N,420nm,0.2s						
KNT	Kendrikon	0.56	65	⇓*i*Pg	Pg	19 24 27.1	0.0
KNT				*i* Sg	Sg	19 24 35.0	+0.6
THE	Thessaloniki	0.63	118	P	Pg	19 24 28.1	-0.5
THE				S	Sg	19 24 37.1	+0.3
THE				AML	AML	19 24 43.4	
	comp=E,299µm,0.3s						
THE				AML	AML	19 24 43.6	
	comp=N,525µm,0.5s						
THE	Thessaloniki	0.63	118	P	Pg	19 24 28.1	-0.5
THE				S	Sg	19 24 37.1	+0.3
	comp=N,168nm,0.5s						
THE	Thessaloniki	0.63	118	⇓*i*Pg	Pg	19 24 28.5	-0.1
THE				*i* Sg	Sb	19 24 37.8	-1.2
FNA	Florina	0.66	258	P	Pg	19 24 28.7	-0.5
FNA	Florina	0.66	258	P	Pg	19 24 28.7	-0.5
FNA	Florina	0.66	258	⇓*i*Pg	Pg	19 24 28.7	-0.5
KZN	Kozani	0.71	210	P	Pg	19 24 29.8	-0.3
KZN				S	Sg	19 24 40.4	+1.0
KZN				AML	AML	19 24 44.4	
	comp=N,293µm,0.4s						
KZN				AML	AML	19 24 45.2	
	comp=E,765µm,0.6s						
KZN	Kozani	0.71	210	P	Pg	19 24 29.9	-0.3
KZN				S	Sg	19 24 40.4	+1.0
	comp=E,258nm,0.5s						
HORT	Hortiatis	0.74	116	P	Pg	19 24 30.6	-0.1
HORT				S	Sb	19 24 41.7	-0.5
HORT				AML	AML	19 24 47.2	
	comp=E,446µm,0.7s						
HORT				AML	AML	19 24 47.6	
	comp=N,571µm,0.5s						
HORT	Hortiatis	0.74	116	P	Pg	19 24 30.6	-0.1
HORT				S	Sb	19 24 41.7	-0.5
	comp=N,252nm,0.6s						
STIP	Stip	0.77	358	*i* Pg	Pg	19 24 31.6	+0.4
STIP				*i* Sg	Sb	19 24 43.4	+0.5
STIP				*e*Lg	Lg	19 24 44.4	
	comp=E,34nm,0.4s						
LIT	Litokhoron	0.85	166	P	Pg	19 24 32.0	-0.8
SOH	Sokhos	0.86	97	P	Pg	19 24 32.4	-0.5
SOH				S	Sb	19 24 44.8	-0.8
SOH				AML	AML	19 24 48.3	
	comp=N,611µm,0.5s						
SOH				AML	AML	19 24 50.8	
	comp=E,1131µm,0.4s						
SOH	Sokhos	0.86	97	P	Pg	19 24 32.4	-0.5
SOH				S	Sb	19 24 44.8	-0.8
	comp=E,362nm,0.4s						
SOH	Sokhos	0.86	97	*i* Pg	Pg	19 24 32.4	-0.5
SOH				*i* Sg	Sb	19 24 45.4	-0.2
NEST	Nestorio	1.03	241	P	Pg	19 24 35.5	-0.8
NEST	Nestorio	1.03	241	P	Pg	19 24 35.5	-0.8
SRS	Serrai	1.05	79	P	Pg	19 24 35.6	-1.0
SRS				S	Sg	19 24 50.1	-0.1
SRS	Serrai	1.05	79	P	Pg	19 24 35.6	-1.0
SRS				S	Sb	19 24 51.4	+0.4
	comp=E,115nm,0.7s						
SRS	Serrai	1.05	79	⇓*i*Pg	Pg	19 24 35.4	-1.2
PLG	Polygyros	1.08	120	P	Pg	19 24 37.1	-0.1
PLG				S	Sb	19 24 51.9	0.0
PLG				AML	AML	19 24 55.9	
	comp=N,456µm,0.4s						
PLG				AML	AML	19 24 56.2	
	comp=E,383µm,0.6s						
PLG	Polygyros	1.08	120	P	Pg	19 24 37.1	-0.1
PLG				S	Sb	19 24 51.9	0.0
	comp=E,218nm,0.5s						
OHR	Ohrid	1.10	280	⇑*i*Pg	Pg	19 24 37.5	0.0
OHR				*i* Sg	Sg	19 24 52.2	+0.4
OHR				*e*Lg	Lg	19 24 52.5	
	comp=N,87nm,0.6s						
KKB	Krupnik	1.14	34	*i* P	Pb	19 24 38.3	-0.3
KPRO	Kipourio	1.18	215	P	Pg	19 24 38.4	-0.6
KPRO	Kipourio	1.18	215	P	Pg	19 24 38.4	-0.6
SKO	Skopje	1.20	331	⇓*i*Pg	Pg	19 24 38.3	-1.2
SKO				*i* Sg	Sg	19 24 55.0	-0.1
SKO				*e*Lg	Lg	19 24 56.0	
	comp=E,2.2nm,0.4s						
NVR	Nevrokopi	1.30	71	P	Pn	19 24 40.4	-0.8
NVR				S	Sb	19 24 58.2	-0.2
NVR	Nevrokopi	1.30	71	P	Pn	19 24 40.4	-0.8
NVR				S	Sn	19 25 00.3	+1.3
	comp=E,60nm,0.6s						
MMB	Musomiste	1.31	59	*i* P	Pn	19 24 40.3	-1.0
THL	Klokotos Trika	1.37	187	P	Pn	19 24 42.3	+0.2
THL	Klokotos Trika	1.37	187	P	Pn	19 24 42.3	+0.2
OUR	Ouranopolis	1.46	113	P	Pn	19 24 43.5	+0.2
OUR	Ouranopolis	1.46	113	P	Pn	19 24 43.5	+0.2
PAIG	Paliouri	1.49	132	P	Pn	19 24 43.9	+0.1
PAIG	Paliouri	1.49	132	P	Pn	19 24 43.9	+0.1
VTS	Vitosha	1.85	24	*i* P	Pb	19 24 51.0	+0.2
RZN	Rozhen	2.02	67	*i* P	Pn	19 24 52.3	+1.0

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*NNC **09** 19:35:22.6±0.4, 42°.91N×76°.98E, h8^{km}±2^{km}, mb3.7, mpv3.8, Error ellipse: s-maj=3.5km s-min=1.7km az=169.0*

*SOME **09** 19:35:23.3, 42°.93N×76°.97E, h15^{km}*

*KRNET **09** 19:35:23.2±0.1, 42°.93N×76°.98E, h24^{km}, mb3.8*

*KNET **09** 19:35:24.6±0.4, 42°.90N×76°.83E, h14^{km}±2^{km}, ml2.9, Error ellipse: s-maj=2.9km s-min=2.8km az=51.0*

ISC 09 19:35:23.6±0.9**, 42°.93N**±0°.02×**76°.97E**±0°.01**, h13**^{km}±7^{km}**,**
n100, σ1^{s}.09/183**, 32C-35D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNSS	Tian-Shan	0.11	352	*e*P	Pb	19 35 27.5	-0.4
	baz=46						
TNSS				*e*S	Sb	19 35 30.6	-0.2
	baz=46						
TNSS	Tian-Shan	0.11	352	*e*P	Pb	19 35 27.5	-0.4
	618nm,0.1s						
TNSS				*e*S	Sb	19 35 30.6	-0.2
	4µm,0.2s						
TNSS	Tian-Shan	0.11	352	P	Pb	19 35 27.5	-0.4
	618nm,0.1s						
TNSS				S	Sb	19 35 30.5	-0.2
	4µm,0.2s						
MDOK	Medeo	0.24	14	*e*P	Pg	19 35 28.9	0.0
	baz=11						
MDOK				*e*S	Sg	19 35 33.0	+0.5
	baz=11						
MDOK	Medeo	0.24	14	*e*P	Pg	19 35 28.9	0.0
	157nm,0.2s						
MDOK				*e*S	Sg	19 35 32.9	+0.5
	5µm,0.1s						
MDOK	Medeo	0.24	14	⇓P	Pg	19 35 28.8	-0.1
MDOK				⇓S	Sg	19 35 33.0	+0.5
MDOK	Medeo	0.24	14	Pg	Pg	19 35 28.9	0.0
	157nm,0.2s						
MDOK				Lg	Lg	19 35 32.9	
	5µm,0.1s						
IZV	Izvestkoviy	0.28	293	*e*P	Pg	19 35 29.8	+0.2
	baz=92						
IZV				*e*S	Sb	19 35 34.7	-0.7
	baz=92						
IZV	Izvestkoviy	0.28	293	*e*P	Pg	19 35 29.8	+0.2
	182nm,0.2s						
IZV				*e*S	Sb	19 35 34.7	-0.7
	1µm,0.3s						
IZV	Izvestkoviy	0.28	293	P	Pg	19 35 29.8	+0.2
	182nm,0.2s						
IZV				S	Sb	19 35 34.7	-0.7
	1µm,0.3s						
AAA	Alma-Ata	0.28	352	*e*P	Pb	19 35 30.0	-0.7
	baz=50						
AAA				*e*S	Sb	19 35 34.8	-0.6
	baz=50						
AAA	Alma-Ata	0.28	352	*e*P	Pb	19 35 30.0	-0.7
	662nm,0.1s						
AAA				*e*S	Sb	19 35 34.8	-0.6
	3µm,0.1s						
AAA	Alma-Ata	0.28	352	P	Pb	19 35 30.0	-0.7
	662nm,0.1s						
AAA				S	Sb	19 35 34.8	-0.6
	3µm,0.1s						
KNDC	Almaty	0.29	360	⇑P	Pb	19 35 29.9	-0.8
KNDC				⇑S	Sb	19 35 35.0	-0.6
KOTS	Kotyrbulak	0.33	19	*e*P	Pg	19 35 30.3	0.0
	baz=17						
KOTS				*e*S	Sb	19 35 35.4	-1.2
	baz=17						
KOTS	Kotyrbulak	0.33	19	*e*P	Pg	19 35 30.3	0.0
	332nm,0.2s						
KOTS				*e*S	Sb	19 35 35.4	-1.2
	3µm,0.3s						
KOTS	Kotyrbulak	0.33	19	P	Pg	19 35 30.3	0.0
	332nm,0.2s						
KOTS				S	Sb	19 35 35.4	-1.2
	3µm,0.3s						
MTBS	Maitube	0.44	297	*e*P	Pg	19 35 32.3	-0.1
	baz=97						
MTBS				*e*S	Sg	19 35 38.9	+0.5
	baz=97						
MTBS	Maitube	0.44	297	*e*P	Pg	19 35 32.3	-0.1
	349nm,0.2s						
MTBS				*e*S	Sg	19 35 38.9	+0.5
	1µm,0.2s						
MTBS	Maitube	0.44	297	P	Pg	19 35 32.3	-0.1
	349nm,0.2s						
MTBS				S	Sg	19 35 38.9	+0.5
	1µm,0.2s						
ANVS	Anan'yevo	0.53	105	⇑*i*P	Pg	19 35 33.3	-0.8
	baz=5.0						
ANVS				⇑*i*S	Sg	19 35 40.7	-0.6
	baz=5.0						
KST	Kastek	0.75	279	*e*P	Pg	19 35 37.6	-0.5
	baz=79						
KST				*e*S	Sg	19 35 47.9	0.0
	baz=79						
KST	Kastek	0.75	279	*e*P	Pg	19 35 37.6	-0.5
	70nm,0.1s						
KST				*e*S	Sg	19 35 47.9	0.0
	288nm,0.3s						
KST	Kastek	0.75	279	P	Pg	19 35 37.6	-0.5
	70nm,0.1s						
KST				S	Sg	19 35 47.9	0.0
	288nm,0.3s						
KDJ	Kajisay	0.81	169	⇑*i*P	Pg	19 35 38.4	-0.9
	baz=69						
KDJ				⇑*i*S	Sg	19 35 49.3	-0.7
	baz=69						
KTBS	Karatobe	0.81	345	*e*P	Pg	19 35 38.7	-0.7
	baz=44						
KTBS				*e*S	Sg	19 35 49.6	-0.5
	baz=44						
KTBS	Karatobe	0.81	345	*e*P	Pg	19 35 38.7	-0.7
	142nm,0.1s						
KTBS				*e*S	Sg	19 35 49.5	-0.5
	196nm,0.3s						
KTBS	Karatobe	0.81	345	P	Pg	19 35 38.7	-0.7
	142nm,0.1s						
KTBS				S	Sg	19 35 49.5	-0.5
	196nm,0.3s						
ULHL	Ulahol	0.87	218	⇑*i*P	Pg	19 35 39.6	-0.8
	baz=19						
ULHL				⇑*i*S	Sg	19 35 51.1	-0.6
	baz=19						
ULHL	Ulahol	0.87	218	⇑P	Pg	19 35 39.7	-0.8
	53nm,0.1s,SNR=494						
ULHL				⇑S	Sg	19 35 51.5	-0.2
	450nm,0.2s						
CHKK	Chushkaly	0.93	1	*e*P	Pb	19 35 40.5	-1.0
	baz=1.0						
CHKK				*e*S	Sb	19 35 52.9	-0.9
	baz=1.0						
CHKK	Chushkaly	0.93	1	*e*P	Pb	19 35 40.5	-1.0
	107nm,0.1s						
CHKK				*e*S	Sb	19 35 52.9	-0.9
	380nm,0.2s						
CHKK	Chushkaly	0.93	1	P	Pb	19 35 40.5	-1.0
	107nm,0.1s						
CHKK				S	Sb	19 35 52.9	-0.9
	380nm,0.2s						
DGS	Degeres	0.93	290	*e*P	Pb	19 35 40.7	-1.0
	baz=90						
DGS				*e*S	Sb	19 35 53.4	-0.6
	baz=90						
DGS	Degeres	0.93	290	*e*P	Pb	19 35 40.7	-1.0
	70nm,0.1s						
DGS				*e*S	Sb	19 35 53.4	-0.6
	242nm,0.2s						
DGS	Degeres	0.93	290	P	Pb	19 35 40.7	-1.0
	70nm,0.1s						
DGS				S	Sb	19 35 53.4	-0.6
	242nm,0.2s						
TKM2	Tokmak 2	1.01	270	⇓*i*P	Pb	19 35 42.1	-0.9
	baz=70						
TKM2				⇓*i*S	Sb	19 35 55.6	-0.7
	baz=70						
TKM2	Tokmak 2	1.01	270	⇓P	Pb	19 35 42.2	-0.8
	16nm,0.1s,SNR=21						
TKM2				⇓S	Sg	19 35 56.2	0.0
	262nm,0.1s						
TKM2	Tokmak 2	1.01	270	⇓P	Pb	19 35 42.1	-0.9
	4.6nm,0.3s						
TKM2				⇓S	Sb	19 35 55.7	-0.6
	23nm,0.1s						
KURS	Kuram	1.04	57	*e*P	Pb	19 35 42.3	-1.3
	baz=57						
KURS				*e*S	Sb	19 35 55.9	-1.3
	baz=57						
KURS	Kuram	1.04	57	*e*P	Pb	19 35 42.3	-1.3
	9.5nm,0.2s						
KURS				*e*S	Sb	19 35 55.9	-1.3
	57nm,0.5s						
KURS	Kuram	1.04	57	P	Pb	19 35 42.3	-1.3
	9.5nm,0.2s						
KURS				S	Sb	19 35 55.9	-1.3
	57nm,0.5s						
SATY	Saty	1.06	82	*e*P	Pb	19 35 42.9	-1.1
	baz=82						
SATY				*e*S	Sb	19 35 56.9	-1.0
	baz=82						
SATY	Saty	1.06	82	*e*P	Pb	19 35 42.9	-1.1
	38nm,0.1s						
SATY				*e*S	Sb	19 35 56.9	-1.0
	662nm,0.2s						
SATY	Saty	1.06	82	P	Pb	19 35 42.9	-1.1
	38nm,0.1s						
SATY				S	Sb	19 35 56.9	-1.0
	662nm,0.2s						
KUU	Kurty	1.07	335	*e*P	Pb	19 35 42.9	-1.1
	baz=34						
KUU				*e*S	Sb	19 35 57.5	-0.4
	baz=34						
KUU	Kurty	1.07	335	*e*P	Pb	19 35 42.9	-1.1
	56nm,0.2s						
KUU				*e*S	Sb	19 35 57.5	-0.4
	240nm,0.2s						
KUU	Kurty	1.07	335	P	Pb	19 35 42.9	-1.1
	56nm,0.2s						
KUU				S	Sb	19 35 57.5	-0.4
	240nm,0.2s						
PRZ	Przheval'sk	1.15	112	⇑*i*P	Pb	19 35 44.7	-0.7
	baz=12						
PRZ				⇑*i*S	Sg	19 36 00.0	-0.6
	baz=12						
KRBS	Karabastau	1.22	310	*e*P	Pn	19 35 45.7	-0.7
	baz=9.0						
KRBS				*e*S	Sb	19 36 01.7	-0.5
	baz=9.0						
KRBS	Karabastau	1.22	310	*e*P	Pn	19 35 45.6	-0.7
	92nm,0.2s						
KRBS				*e*S	Sb	19 36 01.7	-0.5
	315nm,0.2s						
KRBS	Karabastau	1.22	310	P	Pn	19 35 45.6	-0.7
	92nm,0.2s						
KRBS				S	Sb	19 36 01.7	-0.5
	315nm,0.2s						
KPKS	Kokpek	1.37	66	*e*P	Pn	19 35 48.0	-0.5
	baz=66						
KPKS				*e*S	Sn	19 36 05.6	-0.9
	baz=66						
KPKS	Kokpek	1.37	66	*e*P	Pn	19 35 48.0	-0.5
	98nm,0.2s						
KPKS				*e*S	Sn	19 36 05.6	-0.9
	310nm,0.3s						
ARXS	Arharly	1.43	26	*e*P	Pb	19 35 49.3	-0.8
	60nm,0.2s						
ARXS				*e*S	Sb	19 36 08.0	-0.4
	281nm,0.2s						
ARXS	Arharly	1.43	26	P	Pb	19 35 49.3	-0.8
	60nm,0.2s						
ARXS				S	Sb	19 36 08.0	-0.4
	281nm,0.2s						
KBK	Karagaybulak	1.51	260	⇓*i*P	Pb	19 35 51.0	-0.6
	baz=60						
KBK				⇓*i*S	Sb	19 36 10.9	+0.1
	baz=60						
KBK	Karagaybulak	1.51	260	⇑P	Pb	19 35 51.3	-0.3
	64nm,0.2s,SNR=83						
KBK				⇓S	Sg	19 36 11.6	-0.6
	186nm,0.2s						
UZB	Uzynbulak	1.52	81	*e*P	Pn	19 35 50.5	-0.2
	baz=81						
UZB				*e*S	Sn	19 36 09.9	-0.5
	baz=81						
UZB	Uzynbulak	1.52	81	*e*P	Pn	19 35 50.5	-0.2
	29nm,0.2s						
UZB				*e*S	Sn	19 36 09.9	-0.5
	192nm,0.1s						
UZB	Uzynbulak	1.52	81	P	Pn	19 35 50.5	-0.1
	29nm,0.2s						
UZB				S	Sb	19 36 09.9	-1.1
	192nm,0.1s						
MNBS	Baschi	1.55	42	*e*P	Pb	19 35 52.0	-0.3
	33nm,0.2s						
MNBS				*e*S	Sg	19 36 12.6	-1.1
	354nm,0.3s						
MNBS	Baschi	1.55	42	P	Pb	19 35 52.1	-0.3
	33nm,0.2s						
MNBS				S	Sg	19 36 12.6	-1.1
	354nm,0.3s						
CHMS	Chumysh	1.63	273	⇓*i*P	Pb	19 35 52.9	-0.6
	baz=73						
CHMS				⇓*i*S	Sb	19 36 14.5	+0.5
	baz=73						
CHMS	Chumysh	1.63	273	⇓P	Pb	19 35 52.9	-0.6
	24nm,0.2s,SNR=36						
CHMS				⇑S	Sb	19 36 14.7	+0.7
	191nm,0.3s						
FRU1	Bishkek	1.72	267	⇓*i*P	Pb	19 35 54.4	-0.7
	baz=68						
FRU1				⇓*i*S	Sb	19 36 17.3	+0.6
	baz=68						
SGDS	Sogindy	1.79	288	P	Pb	19 35 55.4	-0.9
	16nm,0.2s						
SGDS				S	Sb	19 36 18.6	0.0
	94nm,0.2s						
USP	Ospenovka	1.84	281	⇓*i*P	Pb	19 35 56.3	-0.8
	baz=81						
USP				⇓*i*S	Sb	19 36 20.2	+0.1
	baz=81						
USP	Ospenovka	1.84	281	⇓P	Pb	19 35 56.3	-0.8
	20nm,0.1s,SNR=57						
USP				⇑S	Sb	19 36 20.9	+0.8
	84nm,0.1s						
SHLS	Shalkode	1.84	82	*e*P	Pg	19 36 01.8	+2.9
	42nm,0.4s						
SHLS				*e*S	Sg	19 36 29.3	+6.4
	84nm,0.4s						
SHLS	Shalkode	1.84	82	Pg	Pg	19 36 01.8	+2.9
	42nm,0.4s						
SHLS				Lg	Lg	19 36 29.3	
	84nm,0.4s						
AAK	Ala-Archa	1.84	262	⇑*i*P	Pb	19 35 56.4	-0.9
	baz=62						
AAK				⇑*i*S	Sb	19 36 20.5	+0.2
	baz=62						
AAK	Ala-Archa	1.84	262	⇑P	Pb	19 35 56.6	-0.6
	27nm,0.3s,SNR=45						
AAK				⇓S	Sb	19 36 21.1	+0.8
	102nm,0.4s						
AAK	Ala-Archa	1.84	262	⇓Pg	Pb	19 35 56.9	-0.4
	8.9nm,0.3s						
AAK				⇓Lg	Lg	19 36 21.0	
	44nm,0.4s						
PDGK	Podgornoye	1.89	77	P	Pb	19 35 56.5	-1.5
	10.0nm,0.4s						
PDGK				S	Sb	19 36 20.7	-0.9
	40nm,0.3s						
PDGK	Podgornoye	1.89	77	⇑Pg	Pb	19 35 56.4	-1.7
	6.0nm,0.3s						
PDGK				⇓Lg	Lg	19 36 20.6	
	30nm,0.3s						
UCH	Uchtor	1.94	250	⇓*i*P	Pb	19 35 58.0	-1.1
	baz=50						
UCH				⇓*i*S	Sb	19 36 23.0	-0.4
	baz=50						
UCH	Uchtor	1.94	250	⇓P	Pb	19 35 58.9	-0.3
	30nm,0.3s,SNR=77						
ARLS	Aral	2.23	242	⇓*i*P	Pn	19 36 01.7	+1.3
	baz=42						
ARLS				⇓*i*S	Sb	19 36 29.3	-2.1
	baz=42						
TDK	Taldyqorghan	2.32	26	*e*P	Pb	19 36 04.7	-0.6
	18nm,0.4s						
TDK				*e*S	Sb	19 36 34.3	+0.4
	192nm,0.4s						
TDK	Taldyqorghan	2.32	26	Pg	Pb	19 36 04.7	-0.6
	18nm,0.4s						
TDK				Lg	Lg	19 36 34.3	
	192nm,0.4s						
EKS2	Erkin-Say	2.36	265	⇓*i*P	Pn	19 36 03.7	+1.5
	baz=65						
EKS2				⇓*i*S	Sb	19 36 33.0	-2.2
	baz=65						
EKS2	Erkin-Say	2.36	265	⇑P	Pb	19 36 04.6	-1.5
	12nm,0.2s,SNR=25						
DJR	Jarkent	2.48	55	*e*P	Pb	19 36 07.6	-0.5
	5.3nm,0.2s						
DJR				*e*S	Sb	19 36 39.2	+0.6
	63nm,0.3s						
DJR	Jarkent	2.48	55	Pg	Pb	19 36 07.6	-0.5
	5.3nm,0.2s						
DJR				Lg	Lg	19 36 39.3	
	63nm,0.3s						
KTMS	Ketmen	2.53	77	*e*P	Pb	19 36 07.8	-1.2
	2.7nm,0.1s						
KTMS				*e*S	Sb	19 36 39.5	-0.5
	74nm,0.4s						
KTMS	Ketmen	2.53	77	Pg	Pb	19 36 07.8	-1.2
	2.7nm,0.1s						
KTMS				Lg	Lg	19 36 39.5	
	74nm,0.4s						
AML	Almayashu	2.55	253	⇓*e*P	Pn	19 36 06.4	+1.4
	baz=53						
AML				⇓*i*S	Sn	19 36 37.7	+1.6
	baz=53						
MRKS	Merke	2.76	267	*e*P	Pb	19 36 13.5	+0.7
	10nm,0.2s						
MRKS				*e*S	Sg	19 36 49.3	-2.9
	47nm,0.3s						
MRKS	Merke	2.76	267	Pg	Pb	19 36 13.5	+0.7
	10nm,0.2s						
MRKS				Lg	Lg	19 36 49.3	
	47nm,0.3s						
KAPS	Kapalarasan	2.92	35	*e*P	Pb	19 36 15.1	-0.5
	5.5nm,0.4s						
KAPS				*e*S	Sb	19 36 52.0	+0.9
	52nm,0.4s						
KAPS	Kapalarasan	2.92	35	Pg	Pb	19 36 15.1	-0.5
	5.5nm,0.4s						
KAPS				Lg	Lg	19 36 52.0	
	52nm,0.4s						
MNAS	Manas	3.32	264	⇑*e*P	Pn	19 36 16.8	+1.4
	baz=64						
MNAS				⇑*i*S	Sn	19 36 56.0	+1.2
	baz=64						
ARSB	Arslanbob	3.37	243	⇑*i*P	Pn	19 36 17.3	+1.2
	baz=43						
ARSB				⇑*i*S	Sn	19 36 57.1	+1.1
	baz=43						
SFK	Sufi-Kurgan	3.91	223	⇑*i*P	Pn	19 36 25.0	+1.5
	baz=23						

SFK				⇑iS	Sn	19 37 09.8	+0.5
	baz=23						
KK31	Karatay Array	4.74	274	⇑Pg	Pb	19 36 49.9	+3.4
	0.4nm,0.3s,baz=92,slow=15,SNR=8.5						
KK31				⇑Lg	Lg	19 37 51.7	
	5.6nm,0.5s,baz=83,slow=29,SNR=20						
MAKZ	Makanchi	5.27	41	⇓Pn	Pn	19 36 43.3	+1.3
	0.3nm,0.3s						
MAKZ				⇑Lg	Lg	19 38 08.2	
	2.3nm,0.7s						
MK31	Makanchi Array	5.41	43	⇑Pn	Pn	19 36 45.1	+1.2
	0.1nm,0.3s,baz=218,slow=15,SNR=6.4						
MK31				⇑Pg	Pb	19 37 02.0	+4.1
	0.3nm,0.4s,baz=218,slow=12,SNR=6.1						
MK31				⇓Lg	Lg	19 38 12.9	
	1.7nm,0.6s,baz=227,slow=30,SNR=5.7						
KURBB	Kurchatov Arra	7.77	7	⇑Lg	Lg	19 39 30.3	
	7.6nm,0.7s						
KURK	Kurchatov	7.87	8	⇓Lg	Lg	19 39 32.8	
	5.1nm,0.8s						

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*SLM **09** 19:35:47.8±0.9, 36°.87N±0°.01×89°.44W±0°.02, h7^{km}±4^{km}, Md2.7/23, mb_Lg2.5/19(NEIC), Error ellipse: s-maj=1.9km s-min=1.5km az=68.0*

NEIC 09 19:35:47.5±0.7, 36°.87N±0°.01×89°.44W±0°.02, h12^{km}±4^{km}, Error ellipse: s-maj=1.9km s-min=1.5km az=73.0, New Madrid region, Missouri

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHRM	Charleston	0.07	105		Pg	19 35 51.1	+1.2
DWDM	Dogwood	0.08	208		Pg	19 35 51.5	+1.4
HENM	Henderson Moun	0.15	188		Sg	19 35 53.3	-0.3
HENM	Henderson Moun	0.15	188	Pg	Pg	19 35 50.8	-0.2
MATM	Matthews	0.16	234		Pg	19 35 51.2	0.0
EPRM	East Prairie	0.17	155		Pg	19 35 51.1	-0.2
KEWM	Kewanee	0.21	215		Pg	19 35 51.9	0.0
SJMO	Saint John's B	0.24	186		Pg	19 35 52.4	-0.1
COKM	Charter Oak	0.28	235		Pg	19 35 53.2	+0.1
COKM					Sg	19 35 57.3	+0.4
NMMO	New Madrid	0.29	197		Pg	19 35 53.5	0.0
NMMO					Sg	19 35 57.8	+0.3
CATM	Catron	0.30	213		Pg	19 35 53.7	0.0
GUAMO	Guam	0.32	274		Pg	19 35 54.2	+0.3
GUAMO					Sg	19 35 59.0	+0.8
PARMO	Parma	0.32	230		Pg	19 35 54.0	+0.1
PARMO					Sg	19 35 58.6	+0.3
WALK	Watson Lake	0.34	193		Pg	19 35 54.2	0.0
WALK					Sg	19 35 59.1	+0.2
HICK	Hickman	0.37	152		Pg	19 35 54.7	-0.1
HICK					Sg	19 35 59.6	-0.2
MARMO	Marston	0.38	208		Pg	19 35 55.1	0.0
MARMO					Sg	19 36 00.6	+0.3
PENMO	Penman	0.44	200	Pg	Pg	19 35 56.1	-0.1
PENMO	Penman	0.44	200		Sg	19 36 02.2	+0.1
MLDM	Malden	0.45	238		Pg	19 35 56.4	+0.1
CGM3	Cape Girardeau	0.46	338		Pg	19 35 56.8	+0.3
CGM3					Sg	19 36 03.0	+0.4
BRNM	Bernie	0.47	252		Pg	19 35 56.5	-0.1
BRNM					Sg	19 36 03.1	+0.3
PGVM	Portageville	0.47	209		Pg	19 35 56.6	0.0
PGVM					Sg	19 36 03.2	+0.3
FLPT	Flippin	0.47	168		Pg	19 35 56.6	-0.1
FLPT					Sg	19 36 03.4	+0.5
PPLM	Point Pleasant	0.48	194		Pg	19 35 56.7	-0.1
PPLM					Sg	19 36 03.4	+0.2
POBM	Portage Bay	0.49	201		Pg	19 35 57.0	-0.1
POBM					Sg	19 36 04.0	+0.4
TOPM	Tallapoosa	0.49	226		Pg	19 35 57.2	0.0
TOPM					Sg	19 36 04.1	+0.4
WYBT	Wynnburg	0.52	185		Pg	19 35 57.6	-0.1
WYBT					Sg	19 36 05.1	+0.5
BETM	Bethany	0.56	243		Pg	19 35 58.3	-0.1
BETM					Sg	19 36 05.8	+0.1
WADM	Wardell	0.58	210		Pg	19 35 58.6	-0.1
WADM					Sg	19 36 06.5	+0.2
GLAT	Glass	0.61	168		Pg	19 35 59.3	-0.1
GLAT					Sg	19 36 07.0	-0.4
GLST	Glass	0.61	168		Pb	19 35 59.8	-0.3
GLST					Sg	19 36 07.9	+0.4
T45B	Paducah	0.66	77	P		19 35 60.0	
	baz=257,SNR=7.1						
T45B				S		19 36 08.8	
	baz=257						
T45A	Paducah	0.66	77	Pg	Pg	19 35 59.8	-0.4
LNXT	Lenox	0.77	183		Pg	19 36 02.1	-0.2
LNXT	Lenox	0.77	183	P		19 36 02.1	
	baz=3.2						
PBMO	Poplar Bluff	0.80	264		Pg	19 36 02.2	-0.6
PBMO	Poplar Bluff	0.80	264	P		19 36 02.6	
	baz=83						
PBMO				S		19 36 12.8	
	baz=83						
PEBM	Pemiscott Bayo	0.83	204		Pg	19 36 03.2	-0.2
S44A	Carbondale	0.84	10		Pg	19 36 03.4	-0.3
S44A	Carbondale	0.84	10	P		19 36 03.1	
	baz=190						
S44A				S		19 36 14.6	
	baz=190						
SIUC	Southern Illin	0.86	12		Pg	19 36 03.8	-0.3
GNAR	Gosnell	1.01	207		Pb	19 36 06.2	-0.7
T42A	Van Buren	1.33	277		Pn	19 36 11.8	-0.1
T42A	Van Buren	1.33	277	P		19 36 11.5	
	baz=96						
T42A				S		19 36 29.2	
	baz=96						
FVM	French Village	1.36	325		Pn	19 36 12.2	-0.1
FVM	French Village	1.36	325	P		19 36 12.6	
	baz=144						
FVM				S		19 36 30.0	
	baz=144						
WVT	Waverly	1.50	119		Pn	19 36 14.2	0.0
WVT	Waverly	1.50	119	P		19 36 14.1	
	baz=300,SNR=62						
LCAR	Lake Charles	1.59	240		Pn	19 36 16.0	+0.6
LCAR	Lake Charles	1.59	240	P		19 36 16.1	
	baz=59						
HBAR	Harrisburg	1.64	217	S		19 36 39.3	
	baz=36						
W45A	Hickory Valley	1.72	173	P		19 36 17.9	
	baz=353,SNR=8.1						
W45A				S		19 36 40.4	
	baz=353						
W45A	Hickory Valley	1.72	173	Pn	Pn	19 36 16.8	-0.5
W45A					Sb	19 36 40.0	-0.7
EBZ	Ebenezer Churc	1.73	177		Pg	19 36 20.0	-0.6
CCM	Cathedral Cave	1.86	310		Pn	19 36 18.6	-0.6
CCM	Cathedral Cave	1.86	310		Pn	19 36 19.7	+0.5
CCM				IAmb_Lg		19 36 51.3	
	comp=Z,22nm,0.7s						
CCM	Cathedral Cave	1.86	310	P		19 36 20.9	
	baz=129,SNR=33						
SLM	Saint Louis	1.87	341	Pn	Pn	19 36 19.3	0.0
SLM				IAmb_Lg		19 36 48.4	
	comp=Z,29nm,0.8s						
T47A	Sharon Grove	1.88	86	Pn	Pn	19 36 19.0	-0.4
T47A	Sharon Grove	1.88	86	P		19 36 21.0	
	baz=267,SNR=27						
Q44A	Meyer Farm, Va	2.06	9	Pn	Pn	19 36 22.3	+0.4
PLAL	Pickwick Lake	2.19	149		Pn	19 36 23.7	+0.1
MGMO	Mountain Grove	2.28	278		Pn	19 36 25.0	0.0
OXF	Oxford	2.35	179	Pn	Pn	19 36 25.7	-0.2
FCAR	Ozark Folk Cen	2.37	246		Pn	19 36 27.0	+0.7
V48A	Smith Brothers	2.40	117		Pn	19 36 26.5	-0.1
V48A	Smith Brothers	2.40	117	P		19 36 27.9	
	baz=299						
CLTN	Cedars of Leba	2.63	106		Pn	19 36 29.5	-0.2
R40A	Maddies Statio	2.66	303		Pn	19 36 30.6	+0.5
R40A	Maddies Statio	2.66	303	P		19 36 31.9	
	baz=121,SNR=18						
P43A	Skaggs, Pawnee	2.77	359	IAmb_Lg		19 37 15.9	
	comp=Z,16nm,0.8s						
U40A	Yellville	2.79	260	Pn	Pn	19 36 32.2	+0.2
WHAR	Wooly Hollow	2.79	236	Pn	Pn	19 36 33.3	+1.3
WHAR				IAmb_Lg		19 37 14.8	
	comp=Z,11nm,0.7s						
WCI	Wyandotte Cave	2.85	61		Pn	19 36 32.4	-0.4
U49A	Red Boiling Sp	2.97	96		Pn	19 36 34.4	0.0
X48A	Hartselle	3.10	140	Pn	Pn	19 36 35.9	-0.4
S39A	Bolivar	3.20	286		Pn	19 36 37.5	-0.1
BLO	Bloomington	3.26	44	IAmb_Lg		19 37 37.6	
	comp=Z,20nm,0.8s						
P46A	Rosedale	3.26	32	Pn	Pn	19 36 37.8	-0.7
P40A	Paris	3.36	323	Pn	Pn	19 36 40.5	+0.8
W50A	Signal Mountai	3.74	115	Pn	Pn	19 36 44.8	-0.2
Z47A	Carrollton	3.83	162	IAmb_Lg		19 37 49.4	
	comp=Z,17nm,0.7s						
W39A	Magazine	3.89	246	Pn	Pn	19 36 47.4	+0.3
W39A				IAmb_Lg		19 37 49.3	
	comp=Z,10.0nm,0.7s						
MIAR	Mount Ida	4.08	237	IAmb_Lg		19 38 03.8	
	comp=Z,12nm,0.8s						
CPCT	Cooper Cave	4.23	108		Pn	19 36 52.2	+0.5
X37A	Clayton	5.33	246	IAmb_Lg		19 38 40.7	
	comp=Z,13nm,1.2s						
V53A	Saluda	5.49	101	IAmb_Lg		19 38 41.7	
	comp=Z,6.0nm,0.8s						

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*IDC **09** 20:09:34.0±0.8, 6°.79N×73°.01W, h160^{km}±12^{km}, mb3.1/1, mb1 3.7/4, mb1mx3.1/28, mbtmp4.0/4, MS2.6/1, Ms1 2.6/1, ms1mx2.1/14, Error ellipse: s-maj=50.1km s-min=7.4km az=132.0*

*RSNC **09** 20:09:35.4±1.1, 6°.81N×73°.17W, h148^{km}±4^{km}, ML3.5, Mw3.7, Fault plane solution: NP1:φs35.00000°, δ18.00000°, λ11.00000°.*

ISC 09 20:09:33.7±0.9, 6°.83N±0°.03×73°.14W±0°.04, h158^{km}±6^{km}, n41, σ1^{s}.50/72, 4C-3D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	Barichara	0.24	190	⇓iP	Pn	20 09 55.5	+0.1
BARC				eS	Sn	20 10 10.2	-1.8
BARC				i		20 10 13.0	
	comp=Z,1μm,0.3s						
BRRC	Barranca, Sant	0.63	296	⇑iP	Pn	20 09 57.3	+0.6
BRRC				eS	Sn	20 10 14.3	+0.1
BRRC				i		20 10 18.2	
	comp=Z,670nm,0.3s						
PAMC	Pamplona, Colo	0.67	41	⇑iP	Pn	20 09 58.3	+0.8
PAMC				eS	Sn	20 10 15.6	-0.1
PAMC				i		20 10 18.5	
	comp=Z,618nm,0.3s						
RUSC	La Rusia	0.93	176	⇓iP	Pn	20 09 59.4	0.0
RUSC				eS	Sn	20 10 17.4	-1.5
RUSC				i		20 10 19.1	
	comp=Z,516nm,0.3s						
PTBC	PUERTO BERRIO,	1.34	258	eP	Pn	20 10 01.9	-0.5
PTBC				eS	Sn	20 10 23.2	-1.0
PTBC				i		20 10 25.6	
	comp=Z,339nm,0.2s						
TAMC	Tame, Arauca	1.40	106	⇑iP	Pn	20 10 03.9	+1.0
TAMC				i		20 10 24.8	
	comp=Z,197nm,0.3s						
TAMC				eS	Sn	20 10 25.3	0.0
OCAC	Ocana	1.41	353	eP	Pn	20 10 03.5	+0.3
OCAC				eS	Sn	20 10 26.2	+0.3
OCAC				i		20 10 28.9	
	comp=Z,306nm,0.2s						
SPBC	San Pablo de B	1.49	218	eP	Pn	20 10 04.3	+0.3
SPBC				eS	Sn	20 10 26.4	-0.8
SPBC				i		20 10 28.2	
	comp=Z,586nm,0.2s						
NORC	Norcasia	2.13	234	eP	Pn	20 10 11.2	+0.3
NORC				eS	Sn	20 10 39.0	-0.5
NORC				i		20 10 47.1	
	comp=Z,294nm,0.2s						
SMLC	San Martn de	2.17	335	eP	Pn	20 10 11.7	+0.4
SMLC				eS	Sn	20 10 40.1	-0.2
SMLC				i		20 10 44.5	
	comp=Z,441nm,0.1s						
CHIC	Chingaza	2.26	195	⇓eP	Pn	20 10 13.3	+0.5
CHIC				eS	Sn	20 10 42.7	-0.3
CHIC				i		20 10 49.1	
	comp=Z,220nm,0.3s						
ROSC	El Rosal	2.30	211	P	Pn	20 10 15.2	+1.9
	comp=Z,94nm,0.3s,baz=266,slow=17,SNR=200						
ROSC				S	Sn	20 10 45.1	+1.4
	comp=Z,204nm,0.3s,baz=50,slow=23,SNR=20						
ROSC	El Rosal	2.30	211	eP	Pn	20 10 14.8	+1.6
ROSC				eS	Sn	20 10 45.2	+1.5
ROSC				i		20 10 49.9	
	comp=Z,555nm,0.5s						
HELC	Santa Helena	2.46	255	eP	Pn	20 10 16.1	+1.0
HELC				eS	Sn	20 10 46.3	-0.6
HELC				i		20 10 55.6	
	comp=Z,218nm,0.4s						
UREC	San Jos de Ur	2.54	291	eP	Pn	20 10 16.0	+0.2
UREC				eS	Sn	20 10 46.1	-2.2
UREC				i		20 10 55.9	
	comp=Z,168nm,0.2s						
GUY2C	Guyana, Caldas	2.73	234	eP	Pn	20 10 19.4	+0.9
GUY2C				eS	Sn	20 10 53.0	-0.1
GUY2C				i		20 11 01.5	
	comp=Z,226nm,0.4s						
PTGC	Puerto Gaitan,	2.80	159	eP	Pn	20 10 18.7	-0.3
PTGC				eS	Sn	20 10 52.0	-2.0
PTGC				i		20 10 56.8	
	comp=Z,205nm,0.3s						
RREF	El Recreo	2.91	229	eP	Pn	20 10 22.1	+1.1
RREF				eS	Sn	20 10 58.4	+1.0
RREF				i		20 11 02.5	
	comp=Z,228nm,0.3s						
CBOC	Ciudad Bolivar	3.01	252	eP	Pn	20 10 23.1	+1.4
CBOC				eS	Sn	20 10 58.0	-0.9
CBOC				i		20 11 16.5	
	comp=Z,58nm,0.7s						
DBBC	Dabeiba	3.05	274	eP	Pn	20 10 22.8	+0.7
DBBC				eS	Sn	20 10 55.5	-4.2
TOLC	Tolima	3.11	224	eP	Pn	20 10 24.5	+1.4
TOLC				eS	Sn	20 11 00.6	-0.8
TOLC				i		20 11 09.9	
	comp=Z,176nm,0.4s						
MOTC	Monteria, Cord	3.16	308	eP	Pn	20 10 22.6	-0.9
MOTC				eS	Sn	20 11 00.9	-1.1
MOTC				i		20 11 16.0	
	comp=Z,89nm,0.5s						
ARGC	Ariguani, Magd	3.20	340	eP	Pn	20 10 25.5	+1.5
ARGC				eS	Sn	20 11 04.3	+1.3
ARGC				i		20 11 14.4	
	comp=Z,80nm,0.3s						
SDV	Santo Domingo	3.22	50	P	Pn	20 10 25.0	+0.6
	comp=Z,49nm,0.3s,baz=238,slow=11,SNR=100						
SDV				S	Sn	20 11 02.1	-1.5
	comp=Z,23nm,0.3s,baz=56,slow=22,SNR=20						
SDV	Santo Domingo	3.22	50	⇑eP	Pn	20 10 24.9	+0.6
SDV				eS	Sn	20 11 02.1	-1.5
SDV				i		20 11 06.0	
	comp=Z,53nm,0.5s						
ANIL	Santa Ana	3.23	224	eP	Pn	20 10 26.7	+2.0
ANIL				eS	Sn	20 11 06.6	+2.4
ANIL				i		20 11 11.5	
	comp=Z,53nm,0.3s						
ORTC	Ortega, Tolima	3.58	216	eP	Pn	20 10 29.7	+0.8
ORTC				eS	Sn	20 11 11.3	-0.3
ORTC				i		20 11 19.2	
	comp=Z,125nm,0.3s						
PLMC	San Jos del P	3.66	239	eP	Pn	20 10 30.9	+1.0
PLMC				eS	Sn	20 11 13.1	-0.5
PLMC				i		20 11 17.4	
	comp=Z,52nm,0.2s						
YOTC	Yotoco, Valle	4.26	229	eP	Pn	20 10 38.1	+0.3
SMRC	Santa Marta, M	4.44	346	eP	Pn	20 10 40.3	+0.3
SMRC				eS	Sn	20 11 28.0	-3.6
SMRC				i		20 11 32.6	
	comp=Z,56nm,0.3s						
PTAC	Punta Ardita,	4.64	274	eP	Pn	20 10 42.9	+0.3
BETC	Betania	4.71	209	eP	Pn	20 10 43.7	0.0
BETC				eS	Sn	20 11 31.6	-6.6
MARP	Paez Belalcaza	4.85	215	eP	Pn	20 10 46.0	+0.4
GARC	Garzon, Huila	5.17	207	eP	Pn	20 10 49.7	-0.2
GARC				eS	Sn	20 11 46.8	-2.6
GARC				i		20 11 49.2	
	comp=Z,54nm,0.3s						
PCON	Cinco Dias	5.52	216	eP	Pn	20 10 56.0	+1.2
BBAC	Balboa, Cauca	6.29	221	eP	Pn	20 11 06.6	+2.0
BBAC				eS	Sn	20 12 15.0	-0.8
BBAC				i		20 12 22.7	
	comp=Z,8.0nm,0.3s						
PCRV	Puerto La Cruz	9.05	68	P	Pn	20 11 41.4	+0.2
	comp=Z,1.1nm,0.3s,baz=222,slow=6.4,SNR=1.8						
SADO	Sadowa	38.15	353	LR	LR	20 34 43.7	
	comp=Z,8.5nm,18.5s,baz=207,slow=40						
YKA	Yellowknife Ar	63.25	340	P	P	20 19 45.8	+0.7
	comp=Z,0.4nm,0.6s,baz=128,slow=7.3,SNR=6.9						
ASAR	Alice Springs	149.10	234	PKPbc	PKPbc	20 29 04.2	-0.1
	comp=Z,0.3nm,0.5s,baz=117,slow=3.6,SNR=4.7						
WRA	Warramunga Arr	150.32	241	PKPbc	PKPbc	20 29 06.5	-0.8
	comp=Z,0.4nm,0.5s,baz=111,slow=2.4,SNR=6.9						

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*MOS **09** 20:12:10.8±1.2, 43°.88N×146°.85E, h117^{km}, mb4.3/1, Error ellipse: s-maj=32.6km s-min=21.9km az=73.1*

*JMA **09** 20:12:14.4±0.3, 44°.07N×146°.84E, h84^{km}±4^{km}, M3.5*

*SKHL **09** 20:12:14.2±0.5, 44°.10N×146°.80E, h92^{km}±3^{km}, mb4.9/3, msha5.8/3*

ISC 09 20:12:13.1±1.3, 44°.00N±0°.07×146°.91E±0°.08, h89^{km}±10^{km}, n29, σ1^{s}.27/45, 3C, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YUK	Yuzh-Kuril'sk	0.76	273	c iPN	Pn	20 12 30.6	+0.5
YUK				i S	Sn	20 12 42.6	-0.1
YUK				pmax	pmax		
	comp=Z,614μm,0.2s						
YUK				pmax	pmax		
	comp=N,134μm,0.1s						
YUK				pmax	pmax		
	comp=E,169μm,0.1s						
YUK				smax	smax		
	comp=N,2μm,0.2s						
YUK				smax	smax		
	comp=E,2μm,0.2s						
YUK	Yuzh-Kuril'sk	0.76	273	i P	Pn	20 12 30.5	+0.5
YUK				AMB	AMB	20 12 31.0	
	comp=E,1μm,0.3s						
YUK				i S	Sn	20 12 42.3	-0.4
YUK				A	A	20 12 43.0	
	comp=E,2μm,0.3s						
YUK				A	A	20 12 43.0	
	comp=E,2μm,0.3s						
GRPR	Tuman	0.82	270	ePN	Pn	20 12 31.3	+0.5
GRPR				i S	Sn	20 12 43.5	-0.5
GRPR				pmax	pmax		
	comp=Z,601nm,0.3s						
GRPR				pmax	pmax		
	comp=N,356nm,0.2s						
GRPR				pmax	pmax		
	comp=E,222nm,0.2s						
GRPR				smax	smax		
	comp=N,3μm,0.3s						
GRPR				smax	smax		
	comp=E,2μm,0.3s						
GRPR	Tuman	0.82	270	eP	Pn	20 12 31.0	+0.2
GRPR				AMB	AMB	20 12 32.0	
	comp=E,601nm,0.3s						
GRPR				i S	Sn	20 12 44.0	+0.1
GRPR				A	A	20 12 44.0	
	comp=E,3μm,0.3s						
GRPR				A	A	20 12 44.0	
	comp=E,2μm,0.3s						
NEM2	Nemuro 2	1.06	234	P	Pn	20 12 34.5	+1.1
NEM2				eS	Sn	20 12 48.9	+0.3
NMR	Nemuro--Hokkai	1.06	234	⇑iPN	Pn	20 12 34.6	+1.1
NMR				i S	Sn	20 12 49.0	+0.3
NMR	Nemuro--Hokkai	1.06	234	i P	Pn	20 12 34.0	+0.5
NMR				i S	Sn	20 12 49.0	+0.3
JRA	Rausu	1.29	268	P	Pn	20 12 36.9	+0.7
JNSB	Nemuroshibetsu	1.40	261	P	Pn	20 12 38.7	+1.2
KUR	Kuril'sk	1.41	29	c iPN	Pn	20 12 38.9	+1.3
KUR				i S	Sn	20 12 58.7	+2.5
KUR				pmax	pmax		
	comp=N,28μm,0.2s						
KUR				pmax	pmax		
	comp=Z,57μm,0.2s						
KUR				pmax	pmax		
	comp=E,47μm,0.1s						
KUR				smax	smax		
	comp=N,295nm,0.2s						
KUR				smax	smax		
	comp=E,208nm,0.2s						
KUR	Kuril'sk	1.41	29	i P	Pn	20 12 38.0	+0.4
KUR				AMB	AMB	20 12 42.0	
	comp=E,57nm,0.2s						
KUR				i S	Sn	20 12 56.2	0.0
KUR				A	A	20 12 59.0	
	comp=E,295nm,0.2s						
KUR				A	A	20 12 59.0	
	comp=E,261nm,0.2s						
JKHN	Kushirohamanak	1.57	235	P	Pn	20 12 41.0	+1.3
JKHN				eS	Sn	20 13 00.4	+0.6
JNK	Nakash	1.64	256	P	Pn	20 12 41.6	+1.0
JNK				eS	Sn	20 13 01.7	+0.3
JAK	Akkeshi	1.90	239	P	Pn	20 12 45.1	+1.2
JAK				S	Sn	20 13 07.7	+0.3
JTKR	Abashiri--Toko	2.17	270	P	Pn	20 12 48.0	+0.6
JAR	Ashorobuto	2.39	254	P	Pn	20 12 52.1	+1.7
JAR				eS	Sn	20 13 20.6	+1.7
JOB	Onbets	2.49	245	P	Pn	20 12 53.6	+1.8
JOB				eS	Sn	20 13 22.2	+0.7
JMP	Maruseppu	2.56	271	P	Pn	20 12 53.5	+0.8
JCH	Churui	2.94	243	P	Pn	20 12 59.0	+1.3
JKK2	Kamakawa 2	3.01	269	P	Pn	20 13 00.1	+1.4
MYR	Moyori	3.16	238	i P	Pn	20 13 01.9	+1.2
MYR				eS	Sn	20 13 38.2	+0.8
JSE	Soyaes	3.24	289	P	Pn	20 13 02.1	+0.3
ERM	Erimo	3.39	236	i PN	Pn	20 13 00.9	-3.0
ERM	Erimo	3.39	236	eP	Pn	20 13 00.9	-3.0
JNBK	Urakawa-nobuka	3.50	242	P	Pn	20 13 07.2	+1.9
JNBK				eS	Sn	20 13 47.7	+2.1
KLR	Kul'dur	11.66	302	i PN	Pn	20 14 55.4	-0.8
KLR				pmax	pmax		
	comp=Z,2.0nm,1.1s						
KLR	Kul'dur	11.66	302	eP	Pn	20 14 55.0	-1.2
MA2	Magadan	15.78	7	i P	Pn	20 15 48.8	-1.0
MA2				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MA2	Magadan	15.78	7	eP	Pn	20 15 48.8	-1.0

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*NEIC **09** 20:19:22.4±1.3, 11°.9N±0°.2×142°.6E±0°.2, h65^{km}±9^{km}, mb4.2/8, Error ellipse: s-maj=25.6km s-min=19.6km az=127.0*

*IDC **09** 20:19:23.0±2.6, 11°.89N×142°.73E, h72^{km}±26^{km}, mb3.5/10, mb1 3.7/11, mb1mx3.5/46, mbtmp3.8/11, MS2.7/2, Ms1 2.8/2, ms1mx2.4/33, Error ellipse: s-maj=26.8km s-min=16.9km az=112.0*

ISC 09 20:19:20.2±0.8, 11°.9N±0°.1×142°.5E±0°.1, h42^{km}, n26, σ1^{s}.04/26, mb4.0/13, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	2.85	53	P	Pn	20 20 04.9	+1.7
	28nm,0.3s,baz=309,slow=6.9,SNR=15						
GUMO				S	Sn	20 20 35.7	-0.5
	21nm,0.3s,baz=42,slow=23,SNR=1.8						
GUMO	Guam	2.85	53		Pn	20 20 04.6	+1.4
SSLB	Suanglung	23.66	303	P	P	20 24 28.7	+0.6
JNU	Nakatsue	23.68	335	P	P	20 24 28.8	+0.7
	13nm,1.0s,baz=121,slow=4.3,SNR=4.5						
JNU	Nakatsue	23.68	335	P	P	20 24 28.0	-0.1
JNU				IAmb	IAmb	20 24 28.1	
	comp=Z,32nm,1.3s						
KSRS	Korea Array	28.63	335	LR	LR	20 35 07.4	
	comp=Z,14nm,21.2s,baz=355,slow=33						
WB2	Warramunga Arr	32.64	194	P	P	20 25 48.5	+0.2
WB2				IAmb	IAmb	20 26 06.3	
	comp=Z,3.6nm,1.1s						
WRA	Warramunga Arr	32.64	194	P	P	20 25 47.9	-0.5
	comp=Z,0.5nm,0.7s,baz=0.7,slow=10,SNR=4.6						
ASAR	Alice Springs	36.33	193	P	P	20 26 20.8	+0.6
	comp=Z,0.2nm,0.4s,baz=24,slow=11,SNR=6.2						
CMAR	Chiang Mai Arr	42.48	284	P	P	20 27 13.2	+1.5
	comp=Z,0.4nm,0.3s,baz=89,slow=6.7,SNR=1.5						
CMAR				LR	LR	20 44 35.3	
	comp=Z,8.9nm,20.0s,baz=70,slow=35						
SONM	Songino Array	46.85	327	P	P	20 27 47.1	+0.8
	comp=Z,0.3nm,0.4s,baz=148,slow=7.1,SNR=6.6						
SONM	Songino Array	46.85	327	P	P	20 27 45.7	-0.6
MK31	Makanchi Array	61.14	317	P	P	20 29 30.7	+0.2
MK31				IAmb	IAmb	20 29 41.0	
	comp=Z,1.3nm,1.1s						
MKAR	Makanchi Array	61.14	317	P	P	20 29 30.9	+0.5
	comp=Z,0.3nm,0.6s,baz=94,slow=9.1,SNR=6.1						
MKAR	Makanchi Array	61.14	317	P	P	20 29 30.6	+0.1
BRVK	Borovoye	69.92	322	P	P	20 30 26.5	-0.5
BRVK				IAmb	IAmb	20 30 37.5	
	comp=Z,5.4nm,1.4s						
ILAR	Eielson Array	71.08	25	P	P	20 30 32.6	-1.2

	comp=Z,0.7nm,0.7s,baz=255,slow=5.7,SNR=8.6						
ILAR	Eielson Array	71.08	25	P	P	20 30 33.3	-0.6
BMAR	Burnt Mountain	72.55	23	P	P	20 30 44.0	+1.3
ABKAR	Akbulak array	76.26	318	P	P	20 31 04.1	-0.4
ABKAR	Akbulak array	76.26	318	P	P	20 31 04.4	-0.2
YKA	Yellowknife Ar	85.41	27	P	P	20 31 53.0	-0.1
	comp=Z,0.7nm,0.5s,baz=284,slow=4.3,SNR=11						
RES	Resolute Bay	86.72	13	P	P	20 31 58.1	-1.2
	comp=Z,0.7nm,0.5s,baz=331,slow=4.8,SNR=5.5						
RES	Resolute Bay	86.72	13	P	P	20 31 57.9	-1.4
RES				IAmb	IAmb	20 32 08.8	
	comp=Z,1.4nm,1.1s						
FINES	FINESS Array B	91.72	335	P	P	20 32 21.1	-2.0
	comp=Z,2.3nm,0.9s,baz=76,slow=5.9,SNR=7.0						
FINES	FINESS Array B	91.72	335	P	P	20 32 21.3	-1.8

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*TIR **09** 20:35:45.5, 40°.39N×19°.80E, h0^{km}±3^{km}, Md2.9*
*ATH **09** 20:35:46.2, 40°.36N×19°.69E, h8^{km}±4^{km}, ML2.7/5, Error ellipse: s-maj=4.9km s-min=1.3km az=293.0*
*THE **09** 20:35:46.9, 40°.37N×19°.80E, h0^{km}±3^{km}, ML2.4/6, Error ellipse: s-maj=3.4km s-min=1.0km az=334.0*
ISC 09 20:35:46.6±0.9**, 40°.36N**±0°.02×**19°.73E**±0°.02**, h14**^{km}±8^{km}**, n46, σ1^{s}.32**/62**, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLO	Vlora	0.21	302	P	Pg	20 35 51.4	+0.2
VLO				S	Sb	20 35 56.4	+0.4
	7μm,0.2s						
VLO	Vlora	0.21	302	P	Pg	20 35 51.2	0.0
	baz=291						
VLO				S	Sb	20 35 55.9	-0.1
	baz=291						
SRN	Sarande	0.52	156	P	Pg	20 35 55.7	-1.1
SRN				S	Sg	20 36 04.0	+0.3
	315nm,0.5s						
SRN	Sarande	0.52	156	P	Pg	20 35 55.8	-0.9
	baz=162						
SRN				S	Sb	20 36 06.2	+1.4
	baz=162						
KEK	Kerkira	0.65	175	P	Pg	20 35 57.9	-1.2
KEK	Kerkira	0.65	175	P	Pg	20 35 57.9	-1.2
KEK				S	Sb	20 36 09.3	+0.8
	220nm,0.3s						
LSK	Leskovik	0.70	107	P	Pg	20 35 59.0	-1.2
LSK				S	Sg	20 36 08.8	-0.6
	428nm,0.4s						
LSK	Leskovik	0.70	107	P	Pg	20 35 58.1	-2.1
	baz=110						
LSK				S	Sb	20 36 10.3	+0.2
	baz=110						
KBN	Korca	0.85	71	P	Pb	20 36 01.8	-1.4
KBN				S	Sb	20 36 13.4	-1.1
	140nm,0.7s						
TIR	Tirane	1.00	6	P	Pb	20 36 04.8	-0.8
TIR				AML	AML	20 36 27.4	
	comp=E,535μm,0.5s						
TIR				AML	AML	20 36 32.2	
	comp=N,351μm,0.4s						
TIR	Tirane	1.00	6	P	Pb	20 36 04.8	-0.8
TIR	Tirane	1.00	6	P	Pb	20 36 05.0	-0.7
	baz=2.0						
TIR				S	Sn	20 36 20.2	+0.1
	baz=2.0						
TIR	Tirane	1.00	6	*i* Pg	Pb	20 36 05.5	-0.1
SCTE	Santa Cesarea	1.01	254	P	Pb	20 36 04.9	-0.9
SCTE				S	Sb	20 36 18.6	-0.3
NEST	Nestorio	1.01	86	P	Pb	20 36 05.3	-0.6
NEST	Nestorio	1.01	86	P	Pb	20 36 05.3	-0.6
OHR	Ohrid	1.11	47	*i* Pg	Pb	20 36 06.2	-1.4
OHR				*i* Sg	Sn	20 36 27.6	+4.6
OHR				*e*Lg	Lg	20 36 28.4	
	comp=E,75nm,0.6s						
JAN	Janina	1.11	129	P	Pg	20 36 07.8	-0.1
JAN				AML	AML	20 36 28.2	
	comp=N,480μm,0.4s						
JAN				AML	AML	20 36 34.5	
	comp=E,575μm,0.3s						
JAN	Janina	1.11	129	P	Pg	20 36 07.8	-0.1
KPRO	Kipourio	1.31	107	P	Pb	20 36 10.7	-0.4
KPRO				AML	AML	20 36 36.7	
	comp=E,611μm,0.8s						
KPRO				AML	AML	20 36 39.7	
	comp=N,510μm,0.6s						
KPRO	Kipourio	1.31	107	P	Pb	20 36 10.7	-0.4
FNA	Florina	1.33	71	P	Pn	20 36 10.4	-0.4
FNA				S	Sg	20 36 29.5	+0.2
FNA				AML	AML	20 36 35.5	
	comp=E,755μm,0.7s						
FNA				AML	AML	20 36 36.7	
	comp=N,453μm,0.5s						
FNA	Florina	1.33	71	P	Pn	20 36 10.4	-0.4
FNA				S	Sg	20 36 29.5	+0.2
	comp=N,302nm,0.6s						
FNA	Florina	1.33	71	*i* Pg	Pn	20 36 10.4	-0.4
FNA				*i* Sg	Sg	20 36 34.7	+5.4
PHP	Peshkopia	1.43	22	P	Pg	20 36 13.8	-0.3
	baz=20						
PHP				S	Sg	20 36 34.6	+1.9
	baz=20						
KZN	Kozani	1.56	91	P	Pb	20 36 15.6	+0.3
KZN				AML	AML	20 36 42.0	
	comp=N,392μm,0.7s						
KZN				AML	AML	20 36 46.5	
	comp=E,368μm,0.5s						
KZN	Kozani	1.56	91	P	Pb	20 36 15.2	-0.1
ULC	Ulcinj	1.65	347	*i* Pg	Pn	20 36 09.3	-5.8
PUK	Puka	1.69	4	P	Pb	20 36 17.4	-0.1
	baz=2.0						
PUK				S	Sg	20 36 41.9	+1.0
	baz=2.0						
LKD2	Lefkada island	1.72	155	P	Pb	20 36 17.7	-0.3
LKD2	Lefkada island	1.72	155	P	Pb	20 36 17.7	-0.3
NYDR	Nydri-Lefkada	1.80	155	P	Pb	20 36 18.6	-0.8
NYDR	Nydri-Lefkada	1.80	155	P	Pb	20 36 18.6	-0.8
THL	Klokotos Trika	1.93	113	P	Pb	20 36 21.3	-0.2
SKO	Skopje	2.07	38	*i* Pn	Pb	20 36 22.4	-1.4
NOCI	Noci	2.08	283	P	Pn	20 36 22.1	+1.1
STIP	Stip	2.29	53	*i* Pn	Pg	20 36 29.1	-1.3
BEY	Berane	2.52	3	*i* Pn	Pb	20 36 29.4	-2.2
DBRK	Dubrovnik	2.60	333	*e*Pn	Pn	20 36 26.1	-2.1
STON	Ston	2.94	329	*e*Pn	Pn	20 36 30.5	-2.3
RICI	Ricice	3.69	329	*e*Pn	Pn	20 36 42.6	-0.5
RICI				Sn	Sn	20 37 26.6	+0.2
KIJV	Kijevo	4.40	327	*e*Pn	Pn	20 36 53.2	+0.1
ZIRJ	Zirje	4.49	319	*i* Pn	Pn	20 36 53.6	-0.5
MORI	Morici	4.61	321	*e*Pn	Pn	20 36 55.7	-0.1
DUGI	Dugi Otok	5.02	318	*e*Pn	Pn	20 37 01.9	+0.4
NVLJ	Novalja	5.53	321	*e*Pn	Pn	20 37 07.6	-0.9

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*IDC **09** 20:58:05.7±1.0, 30°.68N×99°.43E, h0^{km}, mb3.3/7, mb1 3.5/9, mb1mx3.3/64, mbtmp3.3/9, ML3.0/1, MS2.9/2, Ms1 3.0/2, ms1mx2.6/28, Error ellipse: s-maj=45.2km s-min=17.8km az=65.0*
ISC 09 20:58:06.8±0.9**, 30°.7N**±0°.1×**99°.1E**±0°.1**, h10**^{km}**, n17, σ1^{s}.41**/16**, mb3.3**/6**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TAPN	Taplejung	10.52	255	*e*P	Pn	21 00 37.7	-0.2
	4.2nm,0.3s						
ODAN	Odare	10.96	253	*e*P	Pn	21 00 44.8	+0.8
	8.6nm,0.5s						
RAMN	Ramite	11.58	254	*e*P	Pn	21 00 52.1	-0.4
	6.2nm,0.4s						
GUN	Gumba	11.88	260	*e*P	Pn	21 00 55.6	-1.0
	16nm,0.6s						
CMAR	Chiang Mai Arr	12.15	181	Pn	Pn	21 01 00.7	+0.7
	baz=340,slow=13,SNR=4.4						
CMAR				Pg		21 01 48.5	
	0.1nm,0.3s,baz=347,slow=19,SNR=1.6						
CMAR				LR	LR	21 05 55.7	
	comp=Z,53nm,20.8s,baz=132,slow=39						
PKI	Pulchoki	12.38	259	*e*P	Pn	21 01 02.1	-1.3
	8.8nm,0.4s						
PKIN	Phulchoki	12.38	259	*e*P	Pn	21 01 01.6	-1.8
	8.4nm,0.3s						
KKN	Kakani	12.42	260	*e*P	Pn	21 01 01.8	-2.1
	10nm,0.5s						
DMN	Daman	12.62	260	*e*P	Pn	21 01 05.0	-1.6
	14nm,0.7s						
SONM	Songino Array	18.04	16	P	Pn	21 02 16.1	-1.5
	0.1nm,0.3s,baz=198,slow=13,SNR=1.7						
SONM				LR	LR	21 09 53.4	
	comp=Z,31nm,18.1s,baz=60,slow=39						
MKAR	Makanchi Array	20.71	326	P	Pn	21 02 50.7	+1.2
	0.4nm,0.6s,baz=134,slow=12,SNR=11						
AAK	Ala-Archa	23.00	308	P	P	21 03 14.1	+2.2
	0.2nm,0.3s,baz=149,slow=14,SNR=2.0						
KURBB	Kurchatov Arra	25.18	328	P	P	21 03 32.5	+0.3
	0.2nm,0.4s,baz=148,slow=8.9,SNR=3.6						
ZALV	Zalesovo Beam	25.46	340	P	P	21 03 35.4	+0.7
	0.3nm,0.3s,baz=153,slow=9.7,SNR=1.4						
WRA	Warramunga Arr	60.65	142	P	P	21 08 18.2	+0.1
	0.9nm,0.8s,baz=332,slow=7.4,SNR=5.7						
ASAR	Alice Springs	63.49	144	P	P	21 08 35.5	-1.8
	0.3nm,0.8s,baz=327,slow=6.6,SNR=1.4						
YKA	Yellowknife Ar	83.30	15	P	P	21 10 34.5	+1.1
	0.1nm,0.7s,baz=335,slow=4.2,SNR=2.2						

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*IDC **09** 21:11:30.8±1.1, 21°.35S×68°.53W, h91^{km}±12^{km}, mb3.9/13, mb1 4.0/16, mb1mx3.9/42, mbtmp4.2/16, MS2.6/1, Ms1 2.6/1, ms1mx2.3/28, Error ellipse: s-maj=17.7km s-min=14.1km az=148.0*
*SJA **09** 21:11:31.2±0.6, 21°.51S×68°.73W, h120^{km}±3^{km}, ML4.2, MW4.1*
*NEIC **09** 21:11:31.7±2.2, 21°.48S±0°.04×68°.57W±0°.06, h98^{km}±4^{km}, mb4.4/22, Mwr4.2/29, ML4.3(GUC), Error ellipse: s-maj=7.5km s-min=5.8km az=91.0*
*VAO **09** 21:11:31.4±0.5, 21°.35S×68°.62W, h106^{km}±6^{km}, mb4.5*
*GUC **09** 21:11:32.3±0.5, 21°.51S×68°.76W, h112^{km}±3^{km}, ML4.3*
*NEIC **09** 21:11:32.6, 21°.51S×68°.70W, h107^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$-2.13; M$_{\theta\theta}$-0.18; M$_{\phi\phi}$2.31; M$_{r\theta}$1.12; M$_{\theta\phi}$-0.68; M$_{\phi r}$-1.14; Fault plane solution: M$_{0}$2.83000×10^{15} NP1:φ$_{s}$184.10000°, δ32.31000°, λ-58.55000°. NP2:φ$_{s}$328.21000°, δ62.87000°, λ-108.26000°. Principal axes: T 2.8836, Plg16.0000°, Azm72.0000°; N -0.1182, Plg16.0000°, Azm337.0000°; P -2.7653, Plg67.0000°, Azm204.0000°;*
ISC 09 21:11:31.7±0.6**, 21°.48S**±0°.03×**68°.58W**±0°.05**, h106**^{km}±5^{km}**, n154, σ1^{s}.40**/184**, mb4.3**/17**, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB09	IPOC Station P	0.69	242	*e*P	Pn	21 11 50.5	+0.7
PB09				*i* S	Sn	21 12 03.8	+0.4
PB09				IAML		21 12 06.2	
	comp=E,17μm,0.3s						
PB09	IPOC Station P	0.69	242		Pn	21 11 50.3	+0.5
PB09				Sn	Sn	21 12 03.8	+0.4
PB09	IPOC Station P	0.69	242	*e*P	Pn	21 11 50.5	+0.7
PB09				*e*S	Sn	21 12 04.8	+1.4
PB09				IAML		21 12 04.8	
	comp=Z,13μm,0.7s						
PB01	IPOC Station P	0.95	297	*e*P	Pn	21 11 52.3	+0.2
PB01				*i* S	Sn	21 12 07.5	0.0
PB01				IAML		21 12 09.4	
	comp=E,11μm,0.3s						
PB01	IPOC Station P	0.95	297	Pn	Pn	21 11 52.5	+0.3
PB01				Sn	Sn	21 12 07.1	-0.4
PB01	IPOC Station P	0.95	297	*e*P	Pn	21 11 52.3	+0.2
PB01				*e*S	Sn	21 12 08.0	+0.5
PB01				IAML		21 12 09.0	
	comp=Z,6μm,0.3s						
LVC	Limon Verde	1.17	195	P	Pn	21 11 55.5	+0.7
	comp=Z,575nm,0.3s,baz=36,slow=11,SNR=3900						
LVC				S	Sn	21 12 12.2	0.0
	comp=Z,352nm,0.3s,baz=116,slow=21,SNR=99						
LVC	Limon Verde	1.17	195	Pn	Pn	21 11 55.6	+0.7
LVC				Sn	Sn	21 12 12.6	+0.4
LVC	Limon Verde	1.17	195	*e*P	Pn	21 11 55.5	+0.7
LVC				*e*S	Sn	21 12 13.5	+1.3
LVC	Limon Verde	1.17	195	*e*P	Pn	21 11 55.8	+0.9
PB03	IPOC Station P	1.23	242	*e*P	Pn	21 11 55.1	-0.1
PB03				*i* S	Sn	21 12 12.5	-0.6
PB03	IPOC Station P	1.23	242	*e*P	Pn	21 11 55.1	-0.1
PB03				*e*S	Sn	21 12 12.9	-0.1
PB03				IAML		21 12 14.1	
	comp=Z,4μm,0.2s						
PB02	IPOC Station P	1.23	277	*e*P	Pn	21 11 55.1	-0.1
PB02				*i* S	Sn	21 12 12.7	-0.4
PB02	IPOC Station P	1.23	277	*e*P	Pn	21 11 55.2	-0.1
PB02				*e*S	Sn	21 12 13.0	-0.1
PB02				IAML		21 12 16.1	
	comp=Z,9μm,0.5s						
PB07	IPOC Station P	1.24	258	*e*P	Pn	21 11 55.2	-0.1
PB07				*i* S	Sn	21 12 12.5	-0.8
PB07				IAML		21 12 14.1	
	comp=E,7μm,0.3s						
PB07	IPOC Station P	1.24	258	Pn	Pn	21 11 55.1	-0.3
PB07				Sn	Sn	21 12 12.1	-1.2
PB07	IPOC Station P	1.24	258	*e*P	Pn	21 11 55.3	-0.1
PB07				*e*S	Sn	21 12 13.2	0.0
PB07				IAML		21 12 13.9	
	comp=Z,3μm,0.3s						
PB08	IPOC Station P	1.43	338	*e*P	Pn	21 11 59.7	+1.8
PB08				*i* S	Sn	21 12 20.0	+2.4
PB08	IPOC Station P	1.43	338	Pn	Pn	21 11 59.6	+1.8
PB08				Sn	Sn	21 12 19.7	+2.0
PB08	IPOC Station P	1.43	338	*e*P	Pn	21 11 59.6	+1.8
PB08				*e*S	Sn	21 12 20.6	+3.0
PB08				IAML		21 12 21.4	
	comp=Z,1μm,0.5s						
PB06	IPOC Station P	1.53	217	*e*P	Pn	21 11 59.0	+0.1
PB06				*i* S	Sn	21 12 19.3	-0.1
PB06				IAML		21 12 19.9	
	comp=E,5μm,0.2s						
PB06	IPOC Station P	1.53	217	Pn	Pn	21 11 59.0	+0.1
PB06				Sn	Sn	21 12 18.9	-0.4
PB06	IPOC Station P	1.53	217	*e*P	Pn	21 11 58.9	+0.1
PB06				*e*S	Sn	21 12 19.1	-0.3
PB06				IAML		21 12 19.8	
	comp=Z,2μm,0.3s						
PATCX	Punta Patache	1.60	294	*e*P	Pn	21 11 60.0	+0.3
PATCX				*i* S	Sn	21 12 20.4	-0.4
PATCX	Punta Patache	1.60	294	Pn	Pn	21 11 60.0	+0.3
PATCX				Sn	Sn	21 12 20.1	-0.8
PB04	IPOC Station P	1.69	239	*e*P	Pn	21 12 00.2	-0.5
PB04				*i* S	Sn	21 12 22.0	-0.8
PB04	IPOC Station P	1.69	239	Pn	Pn	21 12 00.3	-0.5
PB04	IPOC Station P	1.69	239	*e*P	Pn	21 12 00.3	-0.5
PB04				*e*S	Sn	21 12 23.0	+0.2
PB04				IAML		21 12 26.4	
	comp=Z,2μm,0.2s						
HMBC	Humberstone	1.71	314	*e*P	Pn	21 12 01.3	+0.3
HMBC				*i* S	Sn	21 12 23.1	0.0
TA01	Diego Aracena	1.75	301	*e*P	Pn	21 12 01.3	0.0
TA01				*i* S	Sn	21 12 23.3	-0.5
TA01				IAML		21 12 30.1	
	comp=E,3μm,0.4s						
TA01	Diego Aracena	1.75	301	Pn	Pn	21 12 01.4	0.0
TA01				Sn	Sn	21 12 22.8	-1.0
TA02	Huaiquique	1.88	309	*e*P	Pn	21 12 03.1	+0.1
PB15	IPOC Station P	1.91	205	Pn	Pn	21 12 04.1	+0.5
PB15	IPOC Station P	1.91	205	*e*P	Pn	21 12 03.9	+0.3
PB15				*e*S	Sn	21 12 29.7	+1.8
PB15				IAML		21 12 31.7	
	comp=Z,5μm,0.2s						
PB05	IPOC Station P	2.03	227	*e*P	Pn	21 12 04.3	-0.8
PB05				*e*S	Sn	21 12 29.5	-1.0
PB05				IAML		21 12 48.2	
	comp=Z,706nm,0.7s						
PSGC	Pisagua	2.36	322	*e*P	Pn	21 12 08.9	-0.5
PSGC				*i* S	Sn	21 12 37.5	-0.6
PSGCX	Pisagua	2.36	322	Pn	Pn	21 12 09.0	-0.4
PSGCX	Pisagua	2.36	322	*e*P	Pn	21 12 08.9	-0.4
PSGCX				*e*S	Sn	21 12 38.3	+0.2
MNMC	Minye Minye	2.52	338	Pn	Pn	21 12 12.9	+1.3
MNMCX	Minye Minye	2.52	338	*e*P	Pn	21 12 12.7	+1.1
MNMCX				*e*S	Sn	21 12 45.7	+3.6
PB10	IPOC Station P	2.73	222	Pn	Pn	21 12 13.6	-0.4
PB10	IPOC Station P	2.73	222	*e*P	Pn	21 11 56.3	-18
PB10				IAML		21 12 56.6	
	comp=Z,404nm,0.4s						
YJA	Yavi	2.94	104	*e*P	Pn	21 12 20.8	+3.6
PB16	IPOC Station P	3.24	344	Pn	Pn	21 12 24.1	+2.7
PB16	IPOC Station P	3.24	344	*e*P	Pn	21 12 23.6	+2.2
PB16				*e*S	Sn	21 12 55.0	-4.7
PB16				IAML		21 13 37.9	
	comp=Z,260nm,0.5s						
PB14	IPOC Station P	3.56	208	Pn	Pn	21 12 24.4	-0.9
PB14	IPOC Station P	3.56	208	*e*P	Pn	21 12 23.0	-2.3
PB14				*e*S	Sn	21 12 55.4	-11
PB14				IAML		21 13 14.0	
	comp=Z,482nm,0.6s						
GO02	Mina Guanaco	3.78	194	Pn	Pn	21 12 27.4	-1.0
SLA	San Lorenzo	4.30	139	*e*P	Pn	21 12 38.8	+3.6
ASTB	Santa Barbara	4.54	124	*e*P	Pn	21 12 40.4	+2.0
AC01	Pan de Azucar	5.00	201	Pn	Pn	21 12 41.9	-2.6
FSA	Cafayete	5.19	153	*e*P	Pn	21 12 50.0	+2.7
FSA				*e*S	Sn	21 13 31.0	-15
AC02	Maricunga	5.36	185	Pn	Pn	21 12 50.5	+0.7
AHML	Horco Molle	6.06	151	*e*P	Pn	21 13 00.8	+1.8
GO03	Copiap	6.27	194	*e*P	Pn	21 12 59.4	-2.4
AC05	El Transito	7.49	191	Pn	Pn	21 13 15.4	-3.0
LCO	Las Campanas	7.74	194	Pn	Pn	21 13 18.0	-3.9
CO01	Juntas del Tor	8.57	189	Pn	Pn	21 13 31.4	-1.8
GO04	Tololo Observa	8.89	193	Pn	Pn	21 13 33.5	-4.0
SIV	San Ignacio	8.96	54	P	Pn	21 13 36.9	-1.5
	comp=Z,7.1nm,0.3s,baz=251,slow=12,SNR=152						
SIV				S	Sn	21 15 11.1	-6.6
	comp=Z,0.4nm,0.3s,baz=292,slow=18,SNR=1.6						
SIV				LR	LR	21 16 39.2	
	comp=Z,35nm,18.8s,baz=245,slow=35						
CO03	El Pedregal	9.51	191	Pn	Pn	21 13 42.6	-3.3
CPUP	Villa Florida	11.37	117	P	Pn	21 14 09.6	-1.3
	comp=Z,0.3nm,0.3s,baz=300,slow=15,SNR=7.6						
CPUP	Villa Florida	11.37	117	Pn	Pn	21 14 11.6	+0.7
CPUP	Villa Florida	11.37	117	*e*P	Pn	21 14 11.8	+0.9
VILB	Vilhena	11.66	45	*e*P	Pn	21 14 14.0	-0.8
MT02	Curacav	11.95	190	Pn	Pn	21 14 16.9	-1.7
AQDB	Aquidauana	12.08	88	*e*P	Pn	21 14 19.6	-0.8
RFA	San Rafael	13.25	180	*e*P	Pn	21 14 34.5	-1.2
BO02	Sierra Bellavi	13.41	188	Pn	Pn	21 14 38.8	+1.0
PP1B	Ponte de Pedra	13.48	76	*e*P	Pn	21 14 37.5	-1.3
TRCB	Terra Rica	14.84	98	*e*P	P	21 14 55.8	-3.5
BI02	San Fabin de	15.31	188	P	P	21 15 02.1	-2.4
PTGB	Pitanga	15.54	105	*e*P	P	21 15 06.9	-0.2
ITAB	Concordia	16.05	114	*e*P	P	21 15 13.3	+0.7
PCMB	Pacaembu	16.12	94	*e*P	P	21 15 12.1	-1.4
CPSB	Cacapava Do Su	16.25	126	*e*P	P	21 15 13.6	-1.4
PLTB	Pedras Altas	16.84	131	*e*P	P	21 15 22.6	+1.1
ARAG	Araguaiana, MT	16.90	73	*e*P	P	21 15 22.9	+0.8
ITRB	Iturama	17.16	87	*e*P	P	21 15 25.3	+0.3
FRTB	Fartura	17.69	100	*e*P	Pn	21 15 31.4	-0.1
BB19B	Bebedouro	18.70	92	*e*P	Pn	21 15 42.1	-1.5
SNDB	Serra Nova Dou	19.05	63	*e*P	P	21 15 45.5	-0.3
NPGB	Novo Progresso	19.21	44	*e*P	P	21 15 46.1	-1.5
PLCA	Paso Flores	19.27	185	P	Pn	21 15 48.6	-1.5
	comp=Z,0.4nm,0.3s,baz=3.0,slow=13,SNR=7.6						
PLCA	Paso Flores	19.27	185	P	Pn	21 15 48.6	-1.5
PLCA	Paso Flores	19.27	185	*e*P	Pn	21 15 48.7	-1.5
IPMB	Ipameri, GO	19.49	83	*e*P	Pn	21 15 50.8	-2.1
PET01	Itanhaem-SP	19.83	102	*e*P	Pn	21 15 55.3	-1.4
VAO	Valinhos	20.07	98	*e*P	Pn	21 15 56.3	-3.3
BDFB	Brasilia	20.34	77	P	P	21 15 59.2	-0.7
	comp=Z,3.8nm,0.5s,baz=268,slow=11,SNR=6.8						
LL01	San Ignacio de	21.09	188	P	P	21 16 07.7	+0.2
LL01				IAmb	IAmb	21 16 09.7	
	comp=Z,13nm,0.7s						
ITTB	Itaituba	21.09	38	*e*P	P	21 16 06.6	-1.3
PARB	Paraibuna	21.31	99	*e*P	P	21 16 10.2	0.0
PEXB	Peixe	21.52	68	*e*P	P	21 16 11.5	-0.9
BSCB	Bom Sucesso	22.20	93	*e*P	P	21 16 19.2	-0.4
PTGA	Pitinga	22.27	23	P	P	21 16 18.5	-1.8
	comp=Z,5.7nm,0.5s,baz=202,slow=13,SNR=13						
PTGA	Pitinga	22.27	23	P	P	21 16 18.8	-1.5
PTGA				IAmb	IAmb	21 16 22.2	
	comp=Z,5.4nm,0.7s						
PTGA	Pitinga	22.27	23	*e*P	P	21 16 18.8	-1.5
VAS01	Vassouras-RJ	23.34	97	*e*P	P	21 16 31.4	+0.6
DIAM	Diamantina, MG	23.63	87	*e*P	P	21 16 33.1	-0.6
PRPB	Parauapebas	23.69	53	*e*P	P	21 16 33.2	-0.8
SMTB	Santa Maria do	23.79	61	*e*P	P	21 16 35.0	0.0
JANB	Januaria	23.90	79	*e*P	P	21 16 34.7	-1.2
MALB	Monte Alegre	23.98	37	*e*P	P	21 16 35.4	-1.2
SDBA	SAO DESIDERIO	24.35	72	*e*P	P	21 16 39.5	-0.5
MCPB	Macapa, AP	26.47	40	*e*P	P	21 16 58.6	-0.5
NAN01	Guarapari, ES	27.02	87	*e*P	P	21 17 04.2	0.0
NBPS	Pedro II - PI	31.33	61	*e*P	P	21 17 42.2	-0.2
RCBR	Riachuelo	35.25	69	P	P	21 18 16.1	-0.3
	comp=Z,19nm,1.0s,baz=330,slow=0.5,SNR=5.2						
RCBR	Riachuelo	35.25	69	P	P	21 18 16.5	0.0
RCBR	Riachuelo	35.25	69	*e*P	P	21 18 15.3	-1.1
TXAR	Lajitas Array	60.78	325	P	P	21 21 31.6	-1.1
	comp=Z,0.3nm,0.6s,baz=151,slow=7.5,SNR=5.0						
TXAR	Lajitas Array	60.78	325	P	P	21 21 32.5	-0.3
SNAA	Sanae	62.20	161	P	P	21 21 42.8	+1.1
S39A	Bolivar	63.29	338	P	P	21 21 49.8	+0.6
R40A	Maddies Statio	63.48	339	P	P	21 21 51.1	+0.6
R40A				IAmb	IAmb	21 21 51.3	
	comp=Z,4.6nm,0.5s						
ANMO	Albuquerque	66.64	327	P	P	21 22 10.7	-0.6
	comp=Z,1.2nm,0.6s,baz=135,slow=5.2,SNR=4.6						
ANMO	Albuquerque	66.64	327	P	P	21 22 12.0	+0.7
SDCO	Great Sand Dun	68.38	329	P	P	21 22 24.1	+1.8
SDCO				IAmb	IAmb	21 22 25.7	
	comp=Z,6.0nm,1.4s						
DBIC	Dimbokro	68.44	73	P	P	21 22 22.4	-0.4
	comp=Z,2.0nm,0.5s,baz=227,slow=8.2,SNR=4.8						
DBIC	Dimbokro	68.44	73	P	P	21 22 22.7	-0.1
DBIC				IAmb	IAmb	21 22 27.8	
	comp=Z,7.9nm,1.1s						
QSPA	South Pole Qui	68.72	180	P	P	21 22 25.5	+1.6
QSPA				IAmb	IAmb	21 22 26.0	
	comp=Z,4.8nm,0.6s						
PFO	Pinyon Flats O	71.29	319	P	P	21 22 39.3	-0.7
	comp=Z,2.5nm,0.7s,baz=164,slow=7.4,SNR=2.0						
PFO	Pinyon Flats O	71.29	319	P	P	21 22 40.3	+0.3
PFO				IAmb	IAmb	21 22 47.2	
	comp=Z,10nm,1.4s						
SRU	San Rafael Swe	71.92	327	P	P	21 22 45.9	+2.2
CCUT	Cedar City	72.27	324	P	P	21 22 48.9	+2.9
PDAR	Pinedale Array	74.24	330	P	P	21 22 58.4	+1.0
	comp=Z,0.4nm,0.6s,baz=131,slow=7.5,SNR=5.3						
PDAR	Pinedale Array	74.24	330	P	P	21 22 58.9	+1.5
SPUT	South Promonto	74.54	327	P	P	21 22 59.8	+0.7
ULM	Lac du Bonnet	75.39	342	P	P	21 23 03.5	0.0
	comp=Z,0.7nm,0.4s,baz=143,slow=9.2,SNR=3.2						
ULM	Lac du Bonnet	75.39	342	P	P	21 23 04.3	+0.8
ULM				IAmb	IAmb	21 23 15.6	
	comp=Z,6.8nm,1.4s						
NVAR	Mina Array Bea	75.66	322	P	P	21 23 07.4	+1.7
	comp=Z,0.8nm,0.8s,baz=156,slow=7.6,SNR=3.8						
NVAR	Mina Array Bea	75.66	322	P	P	21 23 06.7	+1.0
YPP	Pitchstone Pla	75.98	330	P	P	21 23 09.3	+1.9
TOA0	Torodi Ar. Sit	77.06	70	P	P	21 23 14.2	+0.4
TOA0				IAmb	IAmb	21 23 15.7	
	comp=Z,5.0nm,0.8s						
TORD	Torodi Ar. Bea	77.06	70	P	P	21 23 13.7	-0.1
	comp=Z,2.9nm,0.4s,baz=256,slow=5.2,SNR=43						
TORD	Torodi Ar. Bea	77.06	70	P	P	21 23 13.9	+0.2
FCC	Fort Churchill	82.68	347	P	P	21 23 43.9	+0.8
B08A	Colville Reser	83.00	329	P	P	21 23 45.8	+0.7
BOSA	Boshof	83.19	118	P	P	21 23 47.9	+1.1
	comp=Z,3.7nm,1.0s,baz=194,slow=5.7,SNR=3.2						
BOSA	Boshof	83.19	118	P	P	21 23 47.7	+1.0
YKA	Yellowknife Ar	91.27	340	P	P	21 24 25.6	+0.9
	comp=Z,2.0nm,0.6s,baz=129,slow=5.1,SNR=37						
RAO	Raoul Island	95.31	236	LR	LR	21 57 04.3	
	comp=Z,416nm,21.8s,baz=135,slow=29						
ASAR	Alice Springs	130.07	207	PKP	PKiKP	21 30 30.7	-0.1
	comp=Z,1.3nm,0.7s,baz=133,slow=2.0,SNR=12						
PETK	Petropavlovsk-	132.72	324	PKP	PKiKP	21 30 35.1	0.0
	comp=Z,4.3nm,1.0s,baz=90,slow=5.8,SNR=1.5						
PETK	Petropavlovsk-	132.72	324		PKiKP	21 30 36.1	+1.0
WRA	Warramunga Arr	133.13	210	PKP	PKiKP	21 30 36.8	-0.2
	comp=Z,1.1nm,0.6s,baz=156,slow=1.7,SNR=18						
WRA	Warramunga Arr	133.13	210		PKiKP	21 30 36.2	-0.8
KSH	Kashi	144.85	51	PKP	PKPdf	21 30 57.4	+0.7
MAKZ	Makanchi	145.25	36		PKPab	21 30 58.3	+1.2
MKAR	Makanchi Array	145.44	36	PKPbc	PKPab	21 30 58.7	+0.9
	comp=Z,1.7nm,0.7s,baz=312,slow=4.2,SNR=22						
USRK	Ussuriysk Ar.	151.65	328	PKPbc	PKiKP	21 31 14.4	+0.3
	comp=Z,1.4nm,0.6s,baz=233,slow=3.6,SNR=2.7						
SONM	Songino Array	153.39	8	PKPbc	PKiKP	21 31 18.6	+0.8
	comp=Z,0.4nm,0.6s,baz=308,slow=2.1,SNR=4.1						
SONM	Songino Array	153.39	8		PKiKP	21 31 18.5	+0.6

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*ISN **09** 21:12:05.7±1.3, 32°.74N×47°.81E, h15^{km}±8^{km}, ML3.0*
*TEH **09** 21:12:05.9, 32°.73N×47°.82E, h10^{km}, ML3.2*
*KISR **09** 21:12:08.1±0.7, 32°.49N×47°.49E, h11^{km}±999^{km}, ML3.5, Hypocentre not reviewed by the ISC*

ISC 09 21:12:05.6±1.5**, 32°.73N**±0°.03×**47°.79E**±0°.03**, h5**^{km}±13^{km}**,**
n25, σ1^{s}.25/30**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DHL1	Dehloran	0.43	264	*e*Pg	Pg	21 12 14.2	+0.2
DHL1				*e*Sg	Sb	21 12 22.1	-0.5
IKFM	Kafar-mosalman	0.80	3	*e*Pg	Pg	21 12 21.2	+0.3
IKFM				*e*		21 12 40.7	
	comp=Z,99nm,0.3s						
IKMR	Kamar-syah	0.93	32	*e*Pg	Pg	21 12 23.3	-0.1
IKMR				*e*Sg	Sn	21 12 37.2	-1.8
IKMR				*e*		21 12 40.9	
	comp=Z,99nm,0.3s						
IDOB	Doab	1.10	17	*e*Pg	Pn	21 12 27.2	-0.8
AHWZ	Ahwaz	1.57	152	*e*Pg	Pg	21 12 36.1	+0.4
IBDR	Badra	1.61	284	*e*Pg	Pb	21 12 35.0	-0.9
IBDR				*e*Sg	Sb	21 12 57.0	+0.5
IBDR				AML	AML	21 13 06.5	
	comp=N,196nm,0.6s						
IBDR				AML	AML	21 13 07.0	
	comp=E,242nm,0.6s						
HSAM	Samen	1.63	24	*e*Pg	Pg	21 12 37.6	+0.8
HSAM				*e*		21 13 02.7	
	comp=Z,99nm,0.4s						
AMIS	Naft Sefid	1.65	130	*e*Pg	Pg	21 12 36.8	-0.5
AMIS				*e*		21 13 17.8	
	comp=Z,99nm,0.4s						
KER	Kermanshah	1.74	342	*e*Pn	Pb	21 12 38.3	+0.1
IGHG	Ghaleghazi	1.90	328	*e*Pn	Pg	21 12 41.5	-0.5
IGHG				*e*		21 13 21.1	
	comp=Z,99nm,0.7s						
NSR	Nassriya	2.22	220	*e*Pn	Pn	21 12 44.0	+1.0
NSR				*e*Sn	Sn	21 13 10.0	-0.8
NSR				AML	AML	21 13 16.1	
	comp=E,186nm,0.5s						
IDHR	Dehrash	2.29	330	*e*Pn	Pb	21 12 47.1	-0.5
IDHR				*e*		21 12 50.3	
	comp=Z,99nm,0.3s						
IPIR	Pirpir	2.61	90	*e*Pn	Pb	21 12 50.9	-2.2
IPIR				*e*		21 13 38.5	
	comp=Z,99nm,0.5s						
SHK1	Shahrekord	2.64	98	*e*Pn	Pn	21 12 50.4	+1.3
SHK1				*e*		21 13 42.7	
	comp=Z,99nm,0.5s						
BHD	Baghdad	2.92	282	*e*Pn	Pn	21 12 53.0	+0.3
BHD				*e*Sn	Sn	21 13 29.0	+0.9
MIB	Mutribah	2.94	188	*e*P		21 12 54.6	
UMR	Umm Al-Rimmam	3.17	181	*e*P		21 12 58.0	
QAM	Ghamsar	3.22	70	*e*Pn	Pn	21 12 59.0	+1.9
IKLH	Kolahrood	3.23	78	*e*Pn	Pn	21 12 59.1	+1.8
IKLH				*e*		21 13 09.3	
	comp=Z,99nm,0.2s						
RST	Umm Al-Ruwaisa	3.29	192	*e*P		21 12 59.1	
RST				*e*S		21 13 36.9	
QABG	Abgarm-Qazvin	3.32	26	*e*Pn	Pn	21 12 59.3	+0.8
IGAR	Gharneh	3.60	94	*e*Pn	Pn	21 13 03.9	+1.6
KLNJ	Kolanjah	3.66	117	*e*Pn	Pn	21 13 04.4	+1.2
RDF	Al-Radifah	3.80	183	*e*P		21 13 06.2	
RDF				*e*S		21 13 50.7	
RDF				IAML		21 13 55.5	
	comp=Z,98nm,0.3s						
IZEF	Zefreh	3.82	86	*e*Pn	Pn	21 13 07.6	+2.2
KRSH	Karshahi	3.84	70	*e*Pn	Pn	21 13 07.4	+1.9
IRAM	Ramesheh	3.99	102	*e*Pn	Pn	21 13 08.2	+0.5
ANAR	Anarak	5.01	83	*e*Pn	Pn	21 13 23.3	+1.7
ISHM	Shahmirzad	5.49	54	*e*Pn	Pn	21 13 29.9	+1.6

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*INET **09** 21:24:12.0, 12°.21N×87°.54W, h29^{km}, MW4.1*
*UCR **09** 21:24:13.1±0.7, 12°.29N×87°.74W, h21^{km}±4^{km}, ML3.6*
*SNET **09** 21:24:13.0±0.9, 12°.28N×87°.79W, h15^{km}±8^{km}, ML3.6*
ISC 09 21:24:12.3±4.4**, 12°.2N**±0°.2×**87°.6W**±0°.2**, h35**^{km}**, n28,**
σ0^{s}.28/36**, 4C-4D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNCH	Conchagua	1.08	347	*e*P	Pn	21 24 31.1	0.0
CNCH				*e*S	Sn	21 24 45.1	+0.2
CNCH	Conchagua	1.08	347	*e*P	Pn	21 24 31.1	0.0
CNCH				*e*S	Sn	21 24 45.1	+0.2
LCND	La Caada	1.12	345	⇑*e*P	Pn	21 24 31.2	-0.3
LCND				*e*S	Sn	21 24 45.8	0.0
LCND				IAML		21 24 49.4	
	comp=Z,3µm,0.4s						
LCND	La Caada	1.12	345	⇑*e*P	Pn	21 24 31.2	-0.3
LCND				*e*S	Sn	21 24 45.8	0.0
LCND				IAML		21 24 49.4	
	comp=Z,3µm,0.4s						
JUCU	Jucuar¡n	1.21	328	*e*P	Pn	21 24 32.3	-0.6
JUCU				*e*S	Sn	21 24 47.8	-0.3
JUCU				IAML		21 24 53.1	
	comp=Z,2µm,0.3s						
JUCU	Jucuar¡n	1.21	328	*e*P	Pn	21 24 32.3	-0.6
JUCU				*e*S	Sn	21 24 47.8	-0.3
JUCU				IAML		21 24 53.1	
	comp=Z,2µm,0.3s						
VSM	San Miguel	1.38	331	*e*P	Pn	21 24 35.8	+0.5
VSM	San Miguel	1.38	331	*e*P	Pn	21 24 35.8	+0.5
LCY	Lacayo	1.38	330	*e*P	Pn	21 24 35.5	+0.3
LCY	Lacayo	1.38	330	*e*P	Pn	21 24 35.5	+0.3
RANC	El Ranchito	1.39	331	⇓*e*P	Pn	21 24 35.1	-0.2
RANC	El Ranchito	1.39	331	⇓*e*P	Pn	21 24 35.1	-0.2
PACA	Pacayal	1.44	330	*e*P	Pn	21 24 36.3	+0.3
PACA				IAML		21 24 57.8	
	comp=Z,573nm,0.2s						
PACA	Pacayal	1.44	330	*e*P	Pn	21 24 36.3	+0.3
PACA				IAML		21 24 57.8	
	comp=Z,573nm,0.2s						
TECA	Tecapa	1.55	325	*e*P	Pn	21 24 37.4	-0.2
TECA				*e*S	Sn	21 24 56.8	+0.2
TECA	Tecapa	1.55	325	*e*P	Pn	21 24 37.4	-0.2
TECA				*e*S	Sn	21 24 56.8	+0.2
COEB	Comit de Eme	1.57	324	*e*P	Pn	21 24 38.0	+0.2
COEB				IAML		21 24 59.9	
	comp=Z,706nm,0.2s						
COEB	Comit de Eme	1.57	324	*e*P	Pn	21 24 38.0	+0.2
COEB				IAML		21 24 59.9	
	comp=Z,706nm,0.2s						
COEG	Centro de Oper	1.88	318	*e*P	Pn	21 24 41.9	-0.1
COEG	Centro de Oper	1.88	318	*e*P	Pn	21 24 41.9	-0.1
LFRS	El Faro	2.00	314	⇓*i*P	Pn	21 24 43.7	0.0
LFRS	El Faro	2.00	314	⇓*i*P	Pn	21 24 43.7	0.0
BOQS	Boqueron	2.23	313	*e*P	Pn	21 24 47.1	+0.1
BOQS	Boqueron	2.23	313	*e*P	Pn	21 24 47.1	+0.1
PMON	Piamonte	2.24	312	⇑*e*P	Pn	21 24 47.2	+0.1
PMON	Piamonte	2.24	312	⇑*e*P	Pn	21 24 47.2	+0.1
JAYA	Jayaque - finc	2.31	308	*e*P	Pn	21 24 48.0	0.0
JAYA	Jayaque - finc	2.31	308	*e*P	Pn	21 24 48.0	0.0

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*IDC **09** 21:33:56.8±3.1, 53°.41N×167°.45W, h59^{km}±25^{km}, mb3.4/14, mb1 3.7/16, mb1mx3.5/57, mbtmp3.7/16, ML3.7/2, Error ellipse: s-maj=29.2km s-min=15.7km az=177.0*
*AEIC **09** 21:33:57±3.1, 53°.11N±0°.06×167°.26W±0°.07, h18^{km}±5^{km}, ML3.9, mb4.1/28(NEIC), Error ellipse: s-maj=10.0km s-min=5.2km az=156.0*
*NEIC **09** 21:33:58.2±2.3, 53°.15N±0°.09×167°.37W±0°.09, h47^{km}±10^{km}, Error ellipse: s-maj=14.2km s-min=4.1km az=151.0*
ISC 09 21:33:57.8±0.9**, 53°.23N**±0°.09×**167°.51W**±0°.06**, h64**^{km}±6^{km}**,**
n107, σ1^{s}.60/102**, mb3.7**/13**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKFG	Magazine Ridge	0.30	308		Pn	21 34 07.8	-0.6
OKFG					Sn	21 34 16.2	+0.2
OKSO	Okmok South	0.41	289		Pn	21 34 08.9	-0.4
OKSO					Sn	21 34 18.0	+0.4
OKSP	Okmok Steeple	0.47	274		Pn	21 34 10.5	+0.7
MAPS	Pakushin South	0.68	30		Pn	21 34 11.3	-0.7
MGOD	Makushin Gods	0.69	33		Pn	21 34 11.6	-0.6
MGOD					Sn	21 34 22.8	0.0
MREP	Makushin Rep't	0.74	38		Pn	21 34 12.4	-0.5
MSW	Makushin Switc	0.82	32		Pn	21 34 13.7	-0.1
MNAT	Makushin Natee	0.82	36		Pn	21 34 13.7	-0.1
MNAT					Sn	21 34 26.5	+0.9
NIKH	Nikolski High	0.85	253		Pn	21 34 15.0	+0.9
NIKH	Nikolski High	0.85	253		Sn	21 34 28.1	+2.0
UNV	Unalaska Valle	0.86	44		Pn	21 34 13.7	-0.6
UNV	Unalaska Valle	0.86	44		Sn	21 34 26.2	-0.2
AKMO	Akutan Morgan	1.25	45		Pn	21 34 19.2	0.0
AKMO					Sn	21 34 36.4	+1.2
AKRB	Akutan Reef Bi	1.25	43		Pn	21 34 19.5	+0.2
AKRB					Sn	21 34 36.5	+1.2
AKBBA	Akutan Broad B	1.28	46		Pn	21 34 19.7	0.0
AKLV	Akutan Long Va	1.32	44		Pn	21 34 20.2	0.0
AKGG	Akutan Green G	1.33	42		Pn	21 34 19.6	-0.8
AKUT	Akutan	1.38	48		Pn	21 34 20.7	-0.2
AKUT				Sn	Sn	21 34 38.9	+0.6
AKSA	Akutan Strait	1.41	49		Pn	21 34 20.9	-0.5
WESP	Westdahl Peak	2.08	51		Pn	21 34 30.7	+0.2
WEBT	Westdahl Beart	2.13	49		Pn	21 34 31.4	+0.3
FALS	False Pass	2.92	54		Pn	21 34 42.8	+1.1
ATKA	Atka Island	4.19	259	Pn	Pn	21 35 04.0	+4.9
SPIA	Saint Paul Isl	4.26	340	Pn	Pn	21 35 02.3	+2.2
SDPT	Sand Point	4.64	60	Pn	Pn	21 35 05.2	-0.1
ADK	Adak	5.76	260	Pn	Pn	21 35 25.5	+5.0
OHAK	Old Harbor	9.06	58	Pn	Pn	21 36 03.6	-2.0
KDAK	Kodiak Island	9.62	56	P	Pn	21 36 09.8	-3.4
	1.1nm,0.3s,baz=278,slow=7.9,SNR=21						
KDAK				S	Sn	21 37 49.1	-10
	baz=340,slow=14,SNR=1.8						
KDAK	Kodiak Island	9.62	56	Pn	Pn	21 36 11.1	-2.2
GAMB	Gambell	10.80	350	Pn	Pn	21 36 31.8	+2.4
RSO	Redoubt South	10.84	42	Pn	Pn	21 36 33.4	+3.3
CNPM	China Poot	10.99	49	Pn	Pn	21 36 31.0	-1.1
BRLK	Bradley Lake	11.26	48	Pn	Pn	21 36 38.2	+2.4
ANM	Nome	11.43	5	Pn	Pn	21 36 40.0	+2.1
TTA	Tatalina	11.45	27	Pn	Pn	21 36 39.9	+1.5
O22K	Cooper Landing	12.12	46	Pn	Pn	21 36 47.6	+0.2
SUA	Susitna One	12.22	41	Pn	Pn	21 36 48.1	-0.7
SKT	Skwentna	12.23	38	Pn	Pn	21 36 51.8	+2.9
PPLA	Purkeypile	12.60	34	Pn	Pn	21 36 56.9	+2.8
GHO	Glory Hole Cre	13.11	42		Pn	21 36 59.8	-1.3
KNK	Knik Glacier	13.12	44	Pn	Pn	21 37 00.5	-0.5
KTH	Kantishna Hill	13.47	33		Pn	21 37 06.5	+0.7
HIN	Hinchinbrook I	13.52	50	Pn	Pn	21 37 04.5	-1.9
SCM	Sheep Creek Mo	13.79	43		Pn	21 37 06.6	-3.6
EYAK	Cordova Ski Ar	13.92	50	Pn	Pn	21 37 09.8	-1.9
KLU	Klutina	14.23	46	Pn	Pn	21 37 13.9	-2.0
M24K	Tolsona, Glenn	14.40	43	Pn	Pn	21 37 17.3	-0.9
I23K	Minto, Yukon-K	15.06	30	Pn	Pn	21 37 28.2	+1.7
I23K				IAmb	IAmb	21 37 34.7	
	comp=Z,8.2nm,1.2s						
GLB	Gilahina Butte	15.14	48		Pn	21 37 25.3	-2.3
GLB				IAmb	IAmb	21 37 40.6	
	comp=Z,6.1nm,0.8s						
CRQM	Cirque	15.20	51		Pn	21 37 27.4	-1.2
CRQM				IAmb	IAmb	21 37 35.7	
	comp=Z,37nm,1.4s						
VRDI	Verde Repeater	15.22	49	Pn	Pn	21 37 26.7	-2.1
VRDI				IAmb	IAmb	21 37 36.7	
	comp=Z,20nm,1.5s						
CCB	Clear Creek Bu	15.22	34	Pn	Pn	21 37 28.9	+0.3
MDM	Murphy Dome	15.29	32	Pn	Pn	21 37 29.6	+0.1
TGL	Tana Glacier	15.34	51	Pn	Pn	21 37 30.9	+0.6
HDA	Harding Lake	15.37	35	Pn	Pn	21 37 31.0	+0.5
MCARA	McCarthy VSAT	15.47	48	Pn	Pn	21 37 32.0	+0.2
MCARA				IAmb	IAmb	21 37 42.4	
	comp=Z,11nm,0.8s						
IL31		15.61	34	Pn	Pn	21 37 35.2	+1.7
IL31				IAmb	IAmb	21 37 39.8	
	comp=Z,10nm,1.5s						
ILAR	Eielson Array	15.61	34	P	Pn	21 37 31.2	-2.3
	comp=Z,0.2nm,0.3s,baz=236,slow=11,SNR=11						
ILAR	Eielson Array	15.61	34	Pn	Pn	21 37 34.1	+0.5
MENT	Mentasta	15.80	43	Pn	Pn	21 37 36.8	+0.7
MENT				IAmb	IAmb	21 37 54.3	
	comp=Z,5.1nm,0.6s						
BARN	Barnard Glacie	15.98	50	Pn	Pn	21 37 39.1	+0.6
BARN				IAmb	IAmb	21 37 48.1	
	comp=Z,28nm,1.4s						
DOT	Dot Lake	16.00	40	Pn	Pn	21 37 39.0	+0.3
TABL	Table Mountain	16.05	53	Pn	Pn	21 37 39.6	+0.2
TABL				IAmb	IAmb	21 37 47.3	
	comp=Z,14nm,0.9s						
CTGM	Chitina Glacie	16.11	51	Pn	Pn	21 37 40.3	+0.3
CTGM				IAmb	IAmb	21 37 43.8	
	comp=Z,8.8nm,0.8s						
COLD	Coldfoot	16.36	24	Pn	P	21 37 45.0	+0.1
TOLK	Toolik Lake Re	17.62	22	P	P	21 38 01.0	+2.1
HYT	Haines Junctio	17.88	53	P	Pn	21 38 04.0	+2.0
HYT				IAmb	IAmb	21 38 06.7	
	comp=Z,20nm,0.7s						
BMAR	Burnt Mountain	18.03	29		Pn	21 38 04.2	+0.5
WHY	Whitehorse	19.12	54	P	Pn	21 38 17.1	+0.2
EPYK	Eagle Plains	20.04	37	P	P	21 38 23.4	-1.9
EPYK				IAmb	IAmb	21 38 27.6	
	comp=Z,12nm,0.7s						
CRAG	Craig	20.05	70	P	Pn	21 38 26.8	-0.9
CRAG				IAmb	IAmb	21 38 27.1	
	comp=Z,23nm,1.2s						
PEA0B	Petropavlovsk-	20.74	284		Pn	21 38 37.0	+1.1
PETK	Petropavlovsk-	20.74	284	P	P	21 38 33.2	+0.3
	comp=Z,1.7nm,0.3s,baz=90,slow=13,SNR=8.6						
PETK	Petropavlovsk-	20.74	284	P	Pn	21 38 36.6	+0.7
INK	Inuvik	22.01	34	P	P	21 38 42.8	-3.5
	comp=Z,3.9nm,0.6s,baz=245,slow=10,SNR=19						
INK	Inuvik	22.01	34	P	P	21 38 46.1	-0.2
INK				IAmb	IAmb	21 38 46.5	
	comp=Z,4.3nm,0.7s						
SEY	Seymchan	22.94	311	P	P	21 38 55.4	-0.9
	comp=Z,1.0nm,0.3s,baz=110,slow=13,SNR=4.6						
YKA	Yellowknife Ar	28.83	50	P	P	21 39 48.1	-1.5
	comp=Z,0.4nm,0.4s,baz=274,slow=7.8,SNR=9.2						
H11N2	WAKE ISLAND Hy	38.83	220	T	T	22 22 42.0	
	baz=25,slow=76,SNR=102						
H11N3	WAKE ISLAND Hy	38.84	220	T	T	22 22 43.3	
	baz=25,slow=76,SNR=89						
H11N1	WAKE ISLAND Hy	38.85	220	T	T	22 22 45.6	
	baz=25,slow=76,SNR=80						
PDAR	Pinedale Array	39.15	81	P	P	21 41 18.4	-0.8
	comp=Z,0.2nm,0.5s,baz=302,slow=5.2,SNR=2.2						
PDAR	Pinedale Array	39.15	81	P	P	21 41 23.0	+3.7
H11S1	WAKE ISLAND Hy	40.02	220	T	T	22 24 10.0	
	baz=24,slow=76						
H11S2	WAKE ISLAND Hy	40.03	220	T	T	22 24 20.5	
	baz=24,slow=76						
H11S3	WAKE ISLAND Hy	40.03	220	T	T	22 24 24.3	
	baz=24,slow=76						
B35A	Bob, Littlefor	44.98	65	P	P	21 42 08.6	+2.3
I42A	Draeger Farm,	50.36	67	P	P	21 42 50.5	+2.4
E46A	Sault Ste Mari	51.26	62	P	P	21 42 56.7	+1.9
TXAR	Lajitas Array	51.62	91	P	P	21 42 57.5	-0.3
	comp=Z,0.8nm,0.6s,baz=300,slow=5.0,SNR=8.9						
TXAR	Lajitas Array	51.62	91	P	P	21 42 57.7	-0.1
SONM	Songino Array	51.83	301	P	P	21 42 59.7	+0.6
	comp=Z,0.2nm,0.6s,baz=46,slow=4.2,SNR=2.3						
SONM				PcP	PcP	21 44 11.4	+0.1
	comp=Z,0.5nm,0.6s,baz=60,slow=2.7,SNR=4.9						
SONM				ScP	ScP	21 48 02.1	-0.1
	comp=Z,0.3nm,0.6s,baz=49,slow=4.4,SNR=2.5						
L56A	Greenwood	57.69	62	P	P	21 43 44.5	+2.9
M57A	Sunshine Farm,	58.48	62	P	P	21 43 49.4	+2.4
S54A	Dingess, Beckl	58.72	68	P	P	21 43 50.8	+2.0
L59A	Walton	58.97	60	P	P	21 43 54.0	+3.5
BATG	Bathurst New B	59.74	51	P	P	21 43 57.8	+2.2
MKAR	Makanchi Array	64.03	314	P	P	21 44 22.0	-2.4
	comp=Z,0.3nm,0.5s,baz=51,slow=6.0,SNR=5.6						
FINES	FINESS Array B	65.17	353	P	P	21 44 28.9	-2.7
	comp=Z,2.8nm,1.0s,baz=343,slow=2.0,SNR=5.3						
CMAR	Chiang Mai Arr	77.52	284	P	P	21 45 45.9	-0.8
	comp=Z,0.9nm,0.4s,baz=12,slow=5.0,SNR=6.2						
GERES	GERESS Array B	78.30	359	P	P	21 45 49.1	-1.6
	comp=Z,0.2nm,0.4s,baz=15,slow=9.4,SNR=1.9						
ESDC	Sonseca Array	86.38	13	P	P	21 46 32.1	-0.8
	comp=Z,0.4nm,0.7s,baz=343,slow=6.6,SNR=1.6						
WRA	Warramunga Arr	88.42	233	P	P	21 46 42.5	-0.3
	comp=Z,0.5nm,0.7s,baz=39,slow=5.5,SNR=3.4						
ASAR	Alice Springs	91.81	232	P	P	21 46 56.7	-1.9
	comp=Z,0.2nm,0.5s,baz=32,slow=5.5,SNR=1.8						
H03N2	Juan Fernandez	115.20	113	T	T	23 57 51.6	
	baz=322,slow=77,SNR=34						
H03N1	Juan Fernandez	115.21	112	T	T	23 57 56.3	
	baz=322,slow=77,SNR=33						
H03N3	Juan Fernandez	115.22	113	T	T	23 57 52.1	
	baz=322,slow=77,SNR=49						

IDC 09 21:40:25.2±2.9**, 11°.73S**×**167°.20E, h0**^{km}**, mb3.9**/6**,**
mb1 4.1/6**, mb1mx3.8**/33**, mbtmp3.9**/6**, MS3.3**/3**, Ms1 3.3**/3**,**
ms1mx2.9/31**, Error ellipse: s-maj=119.5km**
s-min=28.8km az=143.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	7.48	287	LR	LR	21 45 15.3	
	comp=Z,191nm,18.1s,baz=110,slow=39						
PMG	Port Moresby	19.83	275	LR	LR	21 52 30.3	
	comp=Z,72nm,20.4s,baz=89,slow=37						
WRA	Warramunga Arr	32.60	251	P	P	21 46 58.8	0.0
	0.7nm,1.0s,baz=79,slow=7.6,SNR=2.8						
WRA				LR	LR	21 58 34.1	
	comp=Z,84nm,19.0s,baz=150,slow=33						
ASAR	Alice Springs	33.77	245	P	P	21 47 09.1	0.0
	0.5nm,0.8s,baz=74,slow=9.8,SNR=4.2						
CMAR	Chiang Mai Arr	73.69	293	P	P	21 52 01.7	+0.2
	0.8nm,0.4s,baz=115,slow=4.7,SNR=4.4						
ILAR	Eielson Array	83.71	18	P	P	21 52 56.0	+0.2
	1.5nm,0.7s,baz=244,slow=5.1,SNR=19						
YKA	Yellowknife Ar	94.93	27	P	P	21 53 48.8	-0.4
	0.5nm,0.8s,baz=260,slow=4.1,SNR=5.9						
MKAR	Makanchi Array	94.99	317	P	P	21 53 49.3	-0.6
	0.4nm,0.7s,baz=100,slow=7.4,SNR=5.1						

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*IDC **09** 21:43:01.7±3.3, 40°.61N×143°.66E, h0^{km}, mb3.5/3, mb1 3.7/4, mb1mx3.4/44, mbtmp3.5/4, ML2.9/1, Error ellipse: s-maj=76.6km s-min=34.4km az=70.0*
*JMA **09** 21:43:10.5±0.1, 40°.40N×142°.82E, h29^{km}±2^{km}, M3.8*
ISC 09 21:43:05.7±1.6**, 40°.39N**±0°.04×**143°.02E**±0°.07**, h13**^{km}±10^{km}**,**
n26, σ0^{s}.86/30**, mb3.5**/3**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTH	Tanohata	0.99	243	P	Pg	21 43 26.5	+1.7
JTH				S	Sb	21 43 37.8	0.0
JKEN	Kujiedanarisaw	1.02	260	P	Pg	21 43 26.1	+0.8
JKEN				S	Sb	21 43 37.6	-0.9
JANG	Nango	1.15	270	P	Pg	21 43 28.4	+0.6
JANG				S	Sb	21 43 40.8	-1.5
MIYJ	Miyakonagasawa	1.23	229	P	Pg	21 43 30.2	+0.9
MIYJ				*e*S	Sn	21 43 44.6	-0.4
JKZ	Kuzumaki	1.35	253	P	Pg	21 43 31.9	+0.2
JKZ				S	Sn	21 43 47.3	-1.0
JTM	Tenmabayashi	1.54	286	P	Pb	21 43 34.5	+0.4
JTM				S	Sn	21 43 51.8	-0.9
JOM	Ohasama	1.61	236	P	Pg	21 43 36.4	-0.2
JOM				*e*S	Sn	21 43 54.9	+0.4
JEM	Erimo	1.63	4	P	Pg	21 43 37.6	+0.6
JEM				*e*S	Sg	21 43 57.5	-0.7
JOT	Ohata	1.79	304	P	Pb	21 43 38.2	-0.2
JOT				*e*S	Sn	21 43 58.9	-0.1
JAH	Hinai	1.83	265	P	Pb	21 43 39.3	+0.2
JAH				S	Sn	21 44 00.5	+0.5
JNBK	Urakawa-nobuka	1.90	354	P	Pg	21 43 41.4	-0.8
JNBK				*e*S	Sb	21 44 04.8	+0.9
JMK	Ichinoseki	2.00	225	P	Pg	21 43 42.1	-1.9
JRG	Rokugo	2.08	242	P	Pb	21 43 43.3	-0.1
JKB	Kayabe	2.12	316	P	Pb	21 43 43.2	-0.8
JKB				*e*S	Sn	21 44 07.8	+0.7
JSR	Shiriuchi	2.27	301	P	Pb	21 43 45.6	-1.0
MAT	Matsushiro	5.38	226	P	Pn	21 44 29.8	+4.0
MJAR	Matsushiro Arr	5.38	226	Pn	Pn	21 44 30.1	+4.4
	0.3nm,0.3s,baz=41,slow=11,SNR=19						
SONM	Songino Array	27.13	298	P	P	21 48 49.3	+0.8
	0.3nm,0.5s,baz=89,slow=8.6,SNR=2.8						
H11N2	WAKE ISLAND Hy	29.01	128	T	T	22 20 05.8	
	baz=319						
H11N1	WAKE ISLAND Hy	29.02	128	T	T	22 20 06.4	
	baz=319						
H11N3	WAKE ISLAND Hy	29.03	128	T	T	22 20 08.6	
	baz=319						
H11S1	WAKE ISLAND Hy	29.84	130	T	T	22 21 46.5	
	baz=323						
H11S3	WAKE ISLAND Hy	29.84	130	T	T	22 21 53.3	
	baz=323						
H11S2	WAKE ISLAND Hy	29.86	130	T	T	22 21 48.3	
	baz=323						
MKAR	Makanchi Array	43.48	299	P	P	21 51 09.1	+0.5
	0.5nm,0.6s,baz=81,slow=8.9,SNR=7.1						
WRA	Warramunga Arr	60.56	189	P	P	21 53 16.0	+0.1
	0.4nm,0.9s,baz=7.9,slow=7.1,SNR=1.8						

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*ISK **09** 21:58:12.0, 39°.44N×40°.13E, h3^{km}, ML3.6/30*
*DDA **09** 21:58:12.9, 39°.41N×40°.15E, h10^{km}±3^{km}, ML3.5*
ISC 09 21:58:12.1±1.0**, 39°.41N**±0°.02×**40°.14E**±0°.02**, h7**^{km}±9^{km}**,**
n60, σ1^{s}.59/85**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YEDI	Yedisu-Bingol	0.32	84	PG	Pg	21 58 19.5	+1.1
YEDI				SG	Sb	21 58 24.6	-1.1
ERZN	Erzincan	0.37	299	PG	Pg	21 58 18.9	-0.5
ERZN				SG	Sg	21 58 25.1	+0.9
TNCL	Tunceli-Merkez	0.55	238	*i* P	Pg	21 58 23.7	+1.0
TNCL				*i* S	Sg	21 58 29.1	-0.7
TNCL				IAML		21 58 35.0	
	comp=E,4µm,0.3s						
TNCL				IAML		21 58 41.0	
	comp=N,3µm,0.5s						
KOPT	Kop Dagi	0.67	24	*i* P	Pg	21 58 25.7	+0.6
KOPT				*i* S	Sg	21 58 32.2	-1.6
KARO	Karliova-Bingo	0.71	98	PG	Pg	21 58 26.8	+0.9
KARO				SG	Sb	21 58 37.6	+0.5
KOVA	Elazig, Kovanc	0.74	200	*i* P	Pb	21 58 28.3	+0.8
KOVA				*i* S	Sg	21 58 34.6	-1.5
KOVA				IAML		21 58 40.0	
	comp=N,2µm,0.6s						
KOVA				IAML		21 58 41.0	
	comp=E,3µm,0.8s						
SLHN	Bingol, Solhan	0.82	123	*i* P	Pg	21 58 28.6	+0.7
SLHN				*i* S	Sg	21 58 37.2	-1.4
SLHN				IAML		21 58 47.0	
	comp=E,3µm,0.4s						
BAYB	BAYBURT	0.86	6	*i* P	Pb	21 58 29.4	-0.1
BAYB				*i* S	Sg	21 58 37.9	-1.9
KELT	Kelkit	1.01	318	*i* P	Pb	21 58 32.1	+0.1
KELT				*i* S	Sg	21 58 42.5	-2.0
HANI	Diyarbakir_Han	1.01	168	*i* P	Pn	21 58 33.2	+0.4
HANI				*i* S	Sg	21 58 44.1	-0.5
VRTB	Varto-Mus	1.05	103	PG	Pb	21 58 33.5	+0.7
VRTB	Varto-Mus	1.05	103	*i* P	Pb	21 58 33.1	+0.3
VRTB				*i* S	Sb	21 58 47.1	+0.3
VRTB				IAML		21 59 00.0	
	comp=N,1µm,0.8s						
VRTB				IAML		21 59 10.0	
	comp=E,1µm,0.7s						
REFA	Refahiye_ERZN	1.06	270	*i* P	Pn	21 58 35.1	+1.5
REFA				*i* S	Sb	21 58 47.5	+0.3
KRIK	Erzurum-spir	1.11	33	*i* P	Pb	21 58 34.0	+0.1
KRIK				*i* S	Sg	21 58 47.0	-0.9
MUSM	Mu-Merkez	1.27	122	*i* P	Pg	21 58 36.1	-0.3
MUSM				*i* S	Sg	21 58 48.4	-4.5
ELZG	Elazig	1.28	225	*i* P	Pb	21 58 37.4	+0.8
ELZG				*i* S	Sg	21 58 48.6	-4.6
ELZG				IAML		21 59 02.0	
	comp=E,863nm,0.6s						
KEMA	Kemaliye	1.28	264	*i* P	Pg	21 58 37.5	+0.8
KEMA				*i* S	Sg	21 58 48.7	-4.7
ALUC	Giresun/Alucra	1.41	312	*i* P	Pg	21 58 40.4	+1.2
ALUC				*i* S	Sb	21 58 56.5	-0.6
ARPR	Arapgir-MALATY	1.43	258	PN	Pb	21 58 39.6	+0.3
ARPR				SN	Sg	21 59 00.2	+2.0
KOPR	Koprukoy-ERZUR	1.45	66	PN	Pg	21 58 39.9	0.0
DYBB	Diyarbakir	1.45	180	PN	Pg	21 58 40.8	+0.9
DIYA	Diyarbakir	1.48	181	*i* P	Pg	21 58 42.5	+2.0
DIYA				*i* S	Sn	21 58 55.3	-3.7
DIYA				IAML		21 59 05.0	
	comp=E,897nm,0.4s						
DIYA				IAML		21 59 08.0	
	comp=N,706nm,0.4s						
SVAN	Silvan-Diyarba	1.50	146	PN	Pb	21 58 41.1	+0.7
SVAN	Silvan-Diyarba	1.50	146	*i* P	Pg	21 58 41.6	+0.6
SVAN				*i* S	Sn	21 58 55.5	-3.9
HOMI	Horasan	1.50	64	*i* P	Pg	21 58 42.5	+1.5
HOMI				IAML		21 59 10.0	
	comp=E,803nm,1.6s						
HOMI				IAML		21 59 17.0	
	comp=N,978nm,0.9s						
MACK	Trabzon	1.56	350	*i* P	Pg	21 58 44.3	+2.3
MACK				IAML		21 59 12.0	
	comp=E,660nm,0.8s						
KTUT	Trabzon	1.60	350	PN	Pb	21 58 41.9	-0.2
SUSE	Susehri	1.69	299	*i* P	Pg	21 58 44.4	-0.2
SUSE				*i* S	Sn	21 59 03.0	-1.4

GURO	Guroymak-BITLI	1.71	119	PN	Pn	21 58 43.5	+1.1
MALT	Malatya	1.73	231	PN	Pn	21 58 44.0	+1.3
CHAY	Cayeli-Rize	1.74	15	PN	Pb	21 58 43.7	-0.6
BTMN	Batman	1.75	149	i P	Pb	21 58 45.7	+1.0
BTMN				i S	Sn	21 59 06.7	+1.0
BLIS	Bitlis-Merkez	1.83	122	i P	Pb	21 58 47.0	+1.0
ESPY	Espiye-Giresun	1.86	325	PN	Pb	21 58 45.6	-0.8
CUZAR	Zara_SIVAS	1.89	285	i P	Pg	21 58 48.5	+0.1
CUZAR				i S	Sn	21 59 08.3	-0.9
MLAZ	Malazgirt-MUS	1.89	97	PN	Pb	21 58 46.7	-0.4
SRTM	Siirt_Merkez	1.99	135	i P	Pg	21 58 50.3	+0.1
SRTM				IAML		21 59 30.0	
	comp=N,515nm,0.8s						
DBAD	Bademkaya	2.00	36	i P	Pb	21 58 49.7	+0.7
SENK	Senkaya-Erzuru	2.05	55	PN	Pn	21 58 48.2	+0.9
AKCD	Akcadag	2.06	238	i P	Pb	21 58 49.7	-0.2
AKCD				i S	Sn	21 59 12.9	-0.3
CUKAN	kangal_SIVAS	2.07	268	i P	Pb	21 58 50.3	+0.2
CUKAN				i S	Sn	21 59 12.7	-1.0
MARD	Mardin	2.15	166	i P	Pb	21 58 51.1	-0.3
MARD				IAML		21 59 25.0	
	comp=N,768nm,0.5s						
MARD				IAML		21 59 29.0	
	comp=E,547nm,0.7s						
AGRB	Hanur-Agry	2.21	85	PN	Pn	21 58 51.1	+1.6
URFA	Urfa	2.22	208	PN	Pn	21 58 51.1	+1.7
MIDY	Mardin/Midyat-	2.23	153	i P	Pb	21 58 52.4	-0.4
MIDY				IAML		21 59 30.0	
	comp=E,302nm,0.4s						
MIDY				IAML		21 59 32.0	
	comp=N,303nm,0.8s						
DARE	Darende-Malaty	2.23	249	PN	Pn	21 58 51.3	+1.7
CUGUR	Gurin_SVAS	2.33	254	i P	Pg	21 58 57.2	+0.4
CUGUR				IAML		21 59 37.0	
	comp=E,387nm,0.5s						
CUGUR				IAML		21 59 43.0	
	comp=N,295nm,0.7s						
RSDY	Resadiye-TOKAT	2.38	295	PN	Pn	21 58 52.8	+1.2
PERV	Siirt/Pervari-	2.38	127	i P	Pb	21 58 56.3	+0.9
PERV				IAML		21 59 36.0	
	comp=N,394nm,0.6s						
PERV				IAML		21 59 41.0	
	comp=E,404nm,1.1s						
AKDM	Akdamar-Van	2.47	115	PN	Pn	21 58 55.1	+2.2
KARS	Kars	2.57	61	PN	Pn	21 58 55.8	+1.5
SIRT	Sirnak	2.62	136	PN	Pn	21 58 57.1	+2.1
VANB	Van	2.66	107	PN	Pn	21 58 57.6	+2.1
TOKT	Tokat	2.91	289	PN	Pn	21 59 00.8	+1.8
CLDR	Caldiran	2.94	94	PN	Pn	21 59 01.3	+1.7
SARI	SarD1z-Kayseri	3.07	252	PN	Pn	21 59 03.3	+2.1
KMRS	Kahramanmaras	3.17	234	PN	Pn	21 59 04.4	+1.9
GAZ	Gaziantep	3.21	227	PN	Pn	21 59 05.3	+2.3
TASB	TASBURUN-IGDIR	3.22	78	PN	Pn	21 59 05.2	+2.1
CUKT	Cukurca	3.48	127	PN	Pn	21 59 08.9	+2.1

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*DNK **09** 22:20:06.0±4.5, 80°.12N×4°.01E, h42^{km}±98^{km}, ML3.6*

*GCMT **09** 22:20:07.5±0.3, 79°.44N±0°.05×2°.5E±0°.1, h18^{km}±1^{km}, MW4.8/74, Moment Tensor Solution. s11,c11; s74,c94; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.38±.14; $M_{\theta\theta}$0.13±.09; $M_{\phi\phi}$1.25±.09; $M_{r\theta}$-1.21±.33; $M_{\theta\phi}$0.41±.06; $M_{\phi r}$0.50±.19; Best double couple: $M_0$1.77800×10^{16} NP1:ϕ_s43.00000°, δ49.00000°, λ-48.00000°. NP2: ϕ_s168.00000°, δ56.00000°, λ-128.00000°. Principal axes: T 1.3880, Plg4.0000°, Azm284.0000°; N 0.7780, Plg31.0000°, Azm192.0000°; P -2.1680, Plg59.0000°, Azm21.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **09** 22:20:09.5±2.6, 79°.68N±0°.09×4°.0E±0°.4, h10^{km}±1^{km}, mb4.5/11 Error ellipse: s-maj=15.4km s-min=10.8km az=347.0*

*IDC **09** 22:20:09.6±0.7, 79°.53N×3°.88E, h0^{km}, mb3.7/15, mb1 3.9/20, mb1mx3.8/48, mbtmp3.8/20, ML3.1/4, MS3.6/21, Ms1 3.7/21, ms1mx3.4/49, Error ellipse: s-maj=16.7km s-min=11.6km az=30.0*

*BER **09** 22:20:10.3±3.7, 79°.71N×3°.64E, h24^{km}±39^{km}, ML3.2, ML3.6(DNK), Confirmed Earthquake*

ISC 09 22:20:08.6±0.5, **79°.58N**±0°.06×**2°.86E**±0°.03, **h10**^{km}, **n102**, σ**2^{s}.95**/114, **mb3.8**/19, **MS3.6**/17, **Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBS	Kingsbay	1.82	107	Pn	Pn	22 20 37.2	-2.8
KBS				Sn	Sn	22 20 56.1	-7.0
KBS	Kingsbay	1.82	107		Pn	22 20 37.3	-2.7
KBS	Kingsbay	1.82	107	eP	Pn	22 20 37.1	-2.8
KBS				eS	Sn	22 20 56.3	-6.7
KBS				IAML		22 21 07.2	
	comp=Z,524nm,0.3s						
KBS	Kingsbay	1.82	107	i P	Pn	22 20 37.1	-2.8
KBS				i S	Sn	22 20 56.0	-7.0
BRBA	Barentsburg A	2.69	119	Pn	Pn	22 20 49.5	-2.3
BRBA				Sn	Sn	22 21 18.9	-5.4
BRBA	Barentsburg A	2.69	119	Pn	Pn	22 20 49.5	-2.3
BRBA				Sn	Sn	22 21 18.9	-5.4
SPA3	Spitsbergen Ar	2.97	112		Pn	22 20 53.9	-1.7
SPA0	Spitsbergen Ar	2.97	112	Pn	Pn	22 20 53.7	-2.0
	baz=323,slow=10						
SPA0				Sn	Sn	22 21 24.9	-6.3
	baz=320,slow=28						
SPA0	Spitsbergen Ar	2.97	112		Pn	22 20 53.8	-1.8
SPA0	Spitsbergen Ar	2.97	112	Pn	Pn	22 20 53.7	-2.0
	baz=323,slow=10						
SPA0				Sn	Sn	22 21 24.9	-6.3
	baz=320,slow=28						
SPITS	Spitsbergen Ar	2.97	112	Pn	Pn	22 20 53.6	-2.0
	baz=327,slow=9.0,SNR=4632						
SPITS				Sn	Sn	22 21 24.9	-6.3
	baz=357,slow=11,SNR=2.1						
SPITS				LR	LR	22 22 07.3	
	comp=Z,1µm,19.2s,baz=190,slow=42						
SPA2	Spitsbergen Ar	2.97	112		Pn	22 20 53.9	-1.8
SPB1	Spitsbergen Ar	2.97	111	Pn	Pn	22 20 53.9	-1.8
HSPB	Hornsund (broa	3.65	129	Pn	Pn	22 21 03.0	-2.0
HSPB				Sn	Sn	22 21 42.2	-5.7
HSPB	Hornsund (broa	3.65	129	Pn	Pn	22 21 03.0	-2.0
HSPB				Sn	Sn	22 21 42.2	-5.7
DAG	Danmarks Havn	5.21	248	i P	Pn	22 21 26.7	+0.3
DAG				i S	Sn	22 22 24.6	-1.8
DAG	Danmarks Havn	5.21	248	e	Pn	22 21 26.0	-0.4
	baz=53,slow=16						
DAG				i P	Pn	22 21 26.0	-0.4
DAG				i P	Pn	22 21 26.8	+0.3
DAG				i S	Sn	22 22 24.7	-1.8
DAG				IAML		22 22 27.5	
	comp=Z,49nm,0.3s						
DAG	Danmarks Havn	5.21	248	e	Pn	22 21 26.0	-0.4
	baz=53,slow=16						
DAG				i P	Pn	22 21 26.0	-0.4
DAG				i P	Pn	22 21 26.8	+0.3
DAG				i S	Sn	22 22 24.7	-1.8
DAG				IAML		22 22 27.5	
	comp=Z,49nm,0.3s						
HOPEN	Hopen	5.50	113	Pn	Pn	22 21 27.7	-2.6
HOPEN				Sn	Sn	22 22 25.1	-8.5
HOPEN	Hopen	5.50	113	eP	Pn	22 21 28.0	-2.4
HOPEN				eS	Sn	22 22 24.0	-10
HOPEN				IAML		22 22 27.9	
	comp=Z,79nm,0.2s						
BJO1	Bjornoya	6.23	136	Pn	Pn	22 21 40.5	+0.2
BJO1				Sn	Sn	22 22 46.4	-5.0
BJO1	Bjornoya	6.23	136	eP	Pn	22 21 40.5	+0.2
BJO1				IAML		22 22 44.9	
	comp=Z,19nm,1.0s						
BJO1				eS	Sn	22 22 46.2	-5.2
DBG	Daneborg	7.36	236	Pn	Pn	22 21 56.5	+0.6
DBG				Sn	Sn	22 23 14.2	-5.1
DBG	Daneborg	7.36	236	Pn	Pn	22 21 56.5	+0.6
DBG				Sn	Sn	22 23 14.2	-5.1
DBG				IAML		22 23 19.4	
	comp=Z,57nm,0.4s						
DBG	Daneborg	7.36	236	i P	Pn	22 21 56.3	+0.4
DBG				IAML		22 23 19.4	
	comp=Z,57nm,0.4s						
JMIC	Jan Mayen	9.08	204	Pn	Pn	22 22 20.7	+1.3
	baz=149,slow=3.9,SNR=3.2						
JMIC				Sn	Sn	22 23 56.9	-4.5
	baz=164,slow=18,SNR=1.9						
JMIC	Jan Mayen	9.08	204	Pn	Pn	22 22 20.9	+1.6
SCO	Scoresbysund	11.00	228	i P	Pn	22 22 46.6	+1.0
SCO	Scoresbysund	11.00	228	Pn	Pn	22 22 46.3	+0.7
SCO	Scoresbysund	11.00	228	i P	Pn	22 22 46.6	+1.0
SCO				IAML		22 24 51.4	
	comp=Z,2.5nm,0.3s						
SCO	Scoresbysund	11.00	228	i P	Pn	22 22 46.6	+1.0
SCO				IAML		22 24 51.4	
	comp=Z,2.5nm,0.3s						
KEV	Kevo	11.59	135	Pn	Pn	22 22 53.7	0.0
ARC7	ARCESS Array S	11.60	138		Pn	22 22 56.0	+2.1
ARA0	ARCESS Array S	11.60	138	Pn	Pn	22 22 53.5	-0.5
	baz=344,slow=14						
ARA0	ARCESS Array S	11.60	138	Pn	Pn	22 22 53.5	-0.5
	baz=344,slow=14						
ARCES	ARCESS Array B	11.60	138	Pn	Pn	22 22 52.3	-1.7
	baz=346,slow=11,SNR=14						
ARCES				Sn	Sn	22 24 52.9	-10
	baz=312,slow=23,SNR=2.3						
ARCES	ARCESS Array B	11.60	138	Pn	Pn	22 22 53.6	-0.3
SUMG	Summit	11.82	256	Pn	Pn	22 22 56.6	-0.6
SUMG	Summit	11.82	256	i P	Pn	22 22 56.6	-0.6
SUMG				IAML		22 25 07.5	
	comp=Z,20nm,0.5s						
SUMG	Summit	11.82	256	i P	Pn	22 22 56.6	-0.6
SUMG				IAML		22 25 07.5	
	comp=Z,20nm,0.5s						
KULLO	Kullorsuaq	13.65	281	i P	Pn	22 23 18.2	-3.6
KULLO	Kullorsuaq	13.65	281	i P	Pn	22 23 18.2	-3.6
TULEG	Thule	14.23	295	Pn	Pn	22 23 25.1	-4.5
TULEG	Thule	14.23	295	i P	Pn	22 23 25.1	-4.5
TULEG	Thule	14.23	295	i P	Pn	22 23 25.1	-4.5
EUNU	Eureka	14.37	316	Pn	Pn	22 23 28.9	-2.7
UPNV	Upernavik	14.85	275	i P	Pn	22 23 34.2	-3.9
UPNV				i		22 26 07.9	
UPNV				IAML		22 26 11.7	
	comp=Z,14nm,0.4s						
UPNV	Upernavik	14.85	275	i P	Pn	22 23 34.2	-3.9
UPNV				i		22 26 07.9	
UPNV				IAML		22 26 11.7	
	comp=Z,14nm,0.4s						
NUUG	Nuugaatsiaq	15.33	269	i P	Pn	22 23 39.5	-5.0
NUUG	Nuugaatsiaq	15.33	269	i P	Pn	22 23 39.5	-5.0
SFJD	Kangerlussuaq	18.78	259	P	P	22 24 26.1	-1.4
	comp=Z,3.3nm,0.3s,baz=19,slow=10,SNR=16						
SFJD				LR	LR	22 32 11.2	
	comp=Z,281nm,18.1s,baz=21,slow=38						
SFJD	Kangerlussuaq	18.78	259	i P	P	22 24 25.6	-1.9
SFJD	Kangerlussuaq	18.78	259	P	P	22 24 26.0	-1.5
SFJD				IAmb	IAmb	22 24 28.1	
	comp=Z,13nm,0.6s						
SFJD	Kangerlussuaq	18.78	259	i P	P	22 24 25.6	-1.9
SFJD	Kangerlussuaq	18.78	259	i P	P	22 24 25.6	-1.9
NOA	NORSAR Array B	18.80	167	P	Pn	22 24 29.5	+1.2
	comp=Z,0.0nm,0.3s,baz=352,slow=12,SNR=5.0						
NOA				LR	LR	22 30 37.8	
	comp=Z,59nm,21.4s,baz=5.0,slow=34						
FIA0	FINESS Array S	19.48	145	P	Pn	22 24 36.0	-0.4
	baz=347,slow=14						
FIA0	FINESS Array S	19.48	145	P	Pn	22 24 36.0	-0.4
	baz=347,slow=14						
FINES	FINESS Array B	19.48	145	P	Pn	22 24 37.2	+0.8
	comp=Z,0.2nm,0.3s,baz=351,slow=12,SNR=10						
RES	Resolute Bay	19.71	309	P	Pn	22 24 37.4	-1.7
	comp=Z,0.4nm,0.3s,baz=24,slow=15,SNR=14						
RES	Resolute Bay	19.71	309	P	Pn	22 24 38.0	-1.0
HFS	Hagfors	19.82	164	P	Pn	22 24 40.2	-0.2
	comp=Z,0.2nm,0.3s,baz=14,slow=6.7,SNR=7.9						
HFS				LR	LR	22 30 56.6	
	comp=Z,212nm,18.8s,baz=7.0,slow=33						
HFS	Hagfors	19.82	164	P	Pn	22 24 41.3	+0.9
	baz=349,slow=10						
HFS	Hagfors	19.82	164	P	Pn	22 24 41.3	+0.9
	baz=349,slow=10						
NRIK	Noril'sk	22.29	69	P	P	22 25 06.4	+0.9
	comp=Z,1.3nm,0.3s,baz=350,slow=6.8,SNR=4.3						
NRIK				LR	LR	22 35 16.2	
	comp=Z,155nm,18.0s,baz=348,slow=41						
EKA	Eskdalemuir Ar	24.44	188	P	P	22 25 28.7	+1.8
	comp=Z,2.4nm,0.9s,baz=356,slow=9.2,SNR=3.3						
FRB	Frobisher Bay	24.97	273	P	P	22 25 35.9	+4.3
	comp=Z,1.9nm,0.5s,baz=23,slow=8.5,SNR=11						
CLL	Collm	28.61	167	eP	P	22 26 08.0	+3.5
A21K	Barrow	28.84	346	P	P	22 26 05.9	-0.5
A21K				IAmb	IAmb	22 26 08.0	
	comp=Z,14nm,0.9s						
ARU	Arti	29.00	109	P	P	22 26 08.2	+0.2
	comp=Z,0.5nm,0.5s,baz=14,slow=6.3,SNR=3.5						
ARU				LR	LR	22 38 55.6	
	comp=Z,182nm,21.0s,baz=326,slow=39						
INK	Inuvik	30.25	329	LR	LR	22 40 26.5	
	comp=Z,81nm,19.1s,baz=358,slow=40						
AKASG	Malin Array Be	30.39	146	P	P	22 26 21.6	+1.3
	comp=Z,0.3nm,0.4s,baz=350,slow=9.6,SNR=1.8						
AKASG				LR	LR	22 38 18.6	
	comp=Z,91nm,21.8s,baz=355,slow=36						
AKASG	Malin Array Be	30.39	146	P	P	22 26 21.1	+0.9
GERES	GERESS Array B	31.09	166	P	P	22 26 28.7	+2.0
	comp=Z,1.4nm,0.8s,baz=25,slow=7.3,SNR=6.8						
GERES				LR	LR	22 37 31.6	
	comp=Z,47nm,19.5s,baz=350,slow=34						
GERES	GERESS Array B	31.09	166	P	P	22 26 29.7	+3.1
YKA	Yellowknife Ar	33.71	312	P	P	22 26 54.4	+5.2
	comp=Z,0.2nm,0.4s,baz=356,slow=8.0,SNR=1.8						
YKA				LR	LR	22 40 28.5	
	comp=Z,107nm,19.5s,baz=0.0,slow=36						
ILAR	Eielson Array	34.81	338	P	P	22 27 07.9	+9.1
	comp=Z,0.3nm,0.7s,baz=6.8,slow=8.4,SNR=3.0						
ILAR				PcP	PcP	22 29 33.1	+1.5
	comp=Z,0.3nm,0.6s,baz=323,slow=4.5,SNR=4.8						
ILAR				LR	LR	22 39 34.7	
	comp=Z,53nm,21.2s,baz=356,slow=33						
WRH	Wood River Hil	35.19	339	P	P	22 27 02.4	+0.3
WRH				IAmb	IAmb	22 27 17.2	
	comp=Z,2.7nm,1.2s						
ZALV	Zalesovo Beam	36.08	84	LR	LR	22 44 36.7	
	comp=Z,93nm,19.0s,baz=76,slow=41						
OSSC	Osservatorio P	36.32	170	P	P	22 27 15.5	+3.6
OSSC				IAmb	IAmb	22 27 16.3	
	comp=Z,16nm,1.3s						
ESDC	Sonseca Array	40.11	188	P	P	22 27 46.8	+2.8
	comp=Z,2.3nm,1.1s,baz=356,slow=8.0,SNR=5.9						
MK31	Makanchi Array	42.49	89	P	P	22 28 04.3	+0.9
MKAR	Makanchi Array	42.49	89	P	P	22 28 04.6	+1.2
	comp=Z,0.4nm,0.6s,baz=340,slow=7.0,SNR=6.0						
MKAR				LR	LR	22 50 25.8	
	comp=Z,102nm,19.4s,baz=330,slow=43						
MKAR	Makanchi Array	42.49	89	P	P	22 28 04.3	+0.9
KKAR	Karatay Array	43.93	102	P	P	22 28 16.9	+1.8
KEST	Kesra	44.04	172	P	P	22 28 17.9	+1.9
	comp=Z,5.5nm,1.0s,baz=237,slow=2.9,SNR=4.5						
KEST	Kesra	44.04	172	P	P	22 28 19.4	+3.4
KEST				IAmb	IAmb	22 28 31.4	
	comp=Z,22nm,1.4s						
AAK	Ala-Archa	45.09	99	LR	LR	22 49 49.1	
	comp=Z,176nm,20.0s,baz=348,slow=40						
SONM	Songino Array	45.74	66	P	P	22 28 30.9	+1.3
	comp=Z,0.3nm,0.8s,baz=336,slow=6.2,SNR=2.5						
SONM				LR	LR	22 50 07.9	
	comp=Z,44nm,21.8s,baz=15,slow=39						
SONM	Songino Array	45.74	66	P	P	22 28 30.8	+1.2
GEYT	Alibeck	46.85	117	LR	LR	22 51 32.7	
	comp=Z,65nm,18.3s,baz=285,slow=40						
TKL	Tuckaleechee C	54.59	274	P	P	22 29 38.5	+1.8
NVAR	Mina Array Bea	57.68	307	P	P	22 30 03.3	+4.4
	comp=Z,0.3nm,0.5s,baz=45,slow=6.6,SNR=2.5						
NVAR				LR	LR	22 57 47.7	
	comp=Z,84nm,19.6s,baz=47,slow=39						
TXAR	Lajitas Array	64.28	292	P	P	22 30 45.8	+2.1
	comp=Z,0.3nm,0.7s,baz=49,slow=3.9,SNR=4.3						
TXAR				LR	LR	22 58 39.9	
	comp=Z,84nm,18.0s,baz=0.0,slow=36						
TXAR	Lajitas Array	64.28	292	P	P	22 30 46.5	+2.8
TOA0	Torodi Ar. Sit	66.45	181	P	P	22 31 00.0	+2.3
TORD	Torodi Ar. Bea	66.45	181	P	P	22 30 59.7	+2.0
	comp=Z,1.1nm,0.6s,baz=355,slow=6.2,SNR=15						
TORD	Torodi Ar. Bea	66.45	181	P	P	22 30 59.6	+2.0
CMAR	Chiang Mai Arr	73.08	81	P	P	22 31 39.5	+1.0
	comp=Z,0.9nm,0.3s,baz=337,slow=6.2,SNR=1.4						
CMAR				LR	LR	23 08 57.6	
	comp=Z,51nm,18.5s,baz=354,slow=40						
PSI	Prapat	88.37	84	LR	LR	23 17 54.5	
	comp=Z,42nm,19.5s,baz=312,slow=39						
LEM	Lembang	99.33	77	LR	LR	23 23 16.8	
	comp=Z,35nm,21.8s,baz=276,slow=38						

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*IDC **09** 22:21:55.4±1.4, 17°.67N×148°.31E, h0^{km}, mb3.9/12, mb1 4.0/12, mb1mx3.8/47, mbtmp3.9/12, MS3.8/2, Ms1 3.8/2, ms1mx2.6/41, Error ellipse: s-maj=35.0km s-min=25.6km az=98.0*

*NEIC **09** 22:22:00.1±0.9, 17°.5N±0°.2×148°.3E±0°.1, h35^{km}±8^{km}, mb4.2/8, Error ellipse: s-maj=22.3km s-min=16.4km az=174.0*

ISC 09 22:22:00.1±0.7, **17°.6N**±0°.1×**148°.4E**±0°.1, **h35**^{km}, **n30**, σ**1^{s}.08**/26, **mb4.1**/16, **Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANA2	Anatahan	2.79	245	Pn	Pn	22 22 41.2	-1.2
PATS	Pohnpei	14.42	136	Pn	Pn	22 25 21.1	-0.8
JGF	Kuroka	20.46	334		Pn	22 26 35.7	-1.3
JGF				IAmb	IAmb	22 26 37.7	
	comp=Z,35nm,1.1s						
MJAR	Matsushiro Arr	20.93	337	P	P	22 26 38.2	-1.6
	comp=Z,1.2nm,0.6s,baz=161,slow=12,SNR=2.0						
JHS	Saijyo	22.05	325	P	P	22 26 52.8	+0.9
DAV	Davao City (W)	24.53	248	LR	LR	22 38 59.2	
	comp=Z,27nm,18.5s,baz=198,slow=42						
KSRS	Korea Array	26.75	322	P	P	22 27 36.1	-0.4
	comp=Z,1.4nm,0.6s,baz=145,slow=9.7,SNR=3.0						
USRK	Ussuriysk Ar.	29.93	336	P	P	22 28 03.0	-1.8
	comp=Z,5.2nm,1.1s,baz=156,slow=14,SNR=3.1						
USRK	Ussuriysk Ar.	29.93	336	P	P	22 28 03.2	-1.5
WRA	Warramunga Arr	39.72	201	P	P	22 29 30.7	+1.3
	comp=Z,0.5nm,0.8s,baz=26,slow=9.5,SNR=4.8						
SONM	Songino Array	45.61	321	P	P	22 30 17.3	+0.2
	comp=Z,2.1nm,0.8s,baz=136,slow=7.0,SNR=16						
SONM	Songino Array	45.61	321	P	P	22 30 17.4	+0.3
CMAR	Chiang Mai Arr	46.88	279	P	P	22 30 26.7	-0.6
	comp=Z,1.3nm,0.3s,baz=65,slow=6.7,SNR=8.5						
CMAR	Chiang Mai Arr	46.88	279	P	P	22 30 26.2	-1.1
LSA	Lhasa	53.31	294	P	P	22 31 17.6	+1.0
LSA				IAmb	IAmb	22 31 17.9	
	comp=Z,1.9nm,0.6s						
RAO	Raoul Island	56.80	145	LR	LR	22 51 42.0	
	comp=Z,530nm,18.6s,baz=136,slow=31						
ZALV	Zalesovo Beam	60.45	323	P	P	22 32 05.3	-0.9
	comp=Z,0.6nm,0.3s,baz=94,slow=9.5,SNR=5.2						
MK31	Makanchi Array	61.07	314	P	P	22 32 10.8	+0.2
MK31				IAmb	IAmb	22 32 12.2	
	comp=Z,1.5nm,1.1s						
MKAR	Makanchi Array	61.07	314	P	P	22 32 10.7	+0.1
	comp=Z,0.2nm,0.5s,baz=82,slow=9.9,SNR=4.9						
MKAR	Makanchi Array	61.07	314	P	P	22 32 10.9	+0.3
MAKZ	Makanchi	61.28	314	P	P	22 32 12.2	+0.2
MAKZ				IAmb	IAmb	22 32 13.8	
	comp=Z,1.2nm,0.8s						
NRIK	Noril'sk	63.55	340	P	P	22 32 28.4	+1.7
	comp=Z,1.9nm,0.5s,baz=90,slow=3.0,SNR=2.4						
ILAR	Eielson Array	63.57	26	P	P	22 32 26.5	-0.4
	comp=Z,0.4nm,0.8s,baz=247,slow=8.7,SNR=2.1						
BRVK	Borovoye	69.02	321	P	P	22 33 04.5	+2.5
BRVK				IAmb	IAmb	22 33 05.5	
	comp=Z,3.3nm,0.9s						
KKAR	Karatay Array	69.43	310	P	P	22 33 04.8	0.0
ABKAR	Akbulak array	75.89	318	P	P	22 33 43.3	+0.2
YKA	Yellowknife Ar	77.81	28	P	P	22 33 54.1	+0.5
	comp=Z,0.2nm,0.5s,baz=283,slow=4.9,SNR=2.3						
NVAR	Mina Array Bea	81.85	52	P	P	22 34 30.2	+14
	comp=Z,0.5nm,0.6s,baz=271,slow=5.3,SNR=3.9						
FINES	FINESS Array B	88.96	336	P	P	22 34 50.5	-0.4
	comp=Z,1.9nm,0.9s,baz=59,slow=7.4,SNR=3.9						
FINES	FINESS Array B	88.96	336	P	P	22 34 50.3	-0.6

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*ECX **09** 22:30:55.4±0.6, 31°.52N×115°.66W, h8^{km}±9^{km}, MD1.8, ML2.0*

*MEX **09** 22:30:56.4±2.8, 31°.46N×115°.66W, h7^{km}, MD3.5*

ISC 09 22:30:54.1±0.9, **31°.54N**±0°.03×**115°.63W**±0°.03, **h10**^{km}, **n11**, σ**1^{s}.09**/22, **2C-1D**, **Baja California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VTX	Valle De La Tr	0.20	222	eP	Pg	22 30 58.6	+0.3
VTX				eS	Sg	22 31 01.5	+0.4
SJX	San Joaquin	0.36	309	eP	Pn	22 31 05.0	-0.4
SJX				eS	Sb	22 31 12.6	+4.3
ECBX	El Chinero	0.50	97	⇑ iP	Pg	22 31 03.6	-0.2
ECBX				i S	Sg	22 31 10.6	+0.3
SPIG	San Pedro Mart	0.51	164	⇓ eP	Pg	22 31 04.4	+0.3
	baz=323,slow=14						
SPIG				i S	Sg	22 31 11.2	+0.3
SPIG	San Pedro Mart	0.51	164	eP	Pg	22 31 04.1	-0.1
SPIG				eS	Sg	22 31 11.5	+0.6
SPX	San Pedro Mart	0.52	164	eP	Pg	22 31 04.4	+0.1
SPX				eS	Sg	22 31 11.5	+0.3
SPX				e		22 31 12.2	
SPX				IAML		22 31 12.2	
	comp=N,110nm,0.1s						
SVX	San Vicente	0.57	249	eP	Pg	22 31 05.0	-0.2
SVX				eS	Sg	22 31 12.4	-0.3
SFX	San Felipe	0.83	127	eP	Pg	22 31 10.3	+0.2
SFX				eS	Sb	22 31 21.7	-0.2
SQX	San Quintin	0.98	192	eP	Pg	22 31 12.2	-0.8
SQX				eS	Sg	22 31 25.0	-0.8
CBX	Cerro Bola	1.17	312	eP	Pb	22 31 16.0	-0.5
CBX				eS	Sg	22 31 31.6	-0.2
CBX				⇑ e		22 31 32.8	
CBX				IAML		22 31 32.8	
	comp=E,57nm,0.4s						
TJIG	Tijuana	1.26	315	i P	Pg	22 31 17.7	-0.6
TJIG				i S	Sb	22 31 33.4	-0.8

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*IDC **09** 22:46:26.1±7.6, 36°.03N×69°.43E, h106^{km}±35^{km}, mb3.5/3, mb1 3.3/9, mb1mx3.0/62, mbtmp3.7/9, MS3.5/1, Ms1 3.5/1, ms1mx2.5/50, Error ellipse: s-maj=105.1km s-min=21.1km az=166.0*

*NNC **09** 22:46:27.9±3.5, 36°.38N×69°.17E, h96^{km}±79^{km}, mb3.3, mpv3.7, Error ellipse: s-maj=26.5km s-min=25.4km az=164.0*

ISC 09 22:46:29.5±1.8, **36°.5N**±0°.1×**69°.29E**±0°.08, **h100**^{km}, **n14**, σ**1^{s}.39**/21, **5C-5D**, **Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	6.71	8	⇓ P	Pn	22 48 06.4	+1.1
	1.7nm,0.3s,baz=196,slow=12,SNR=105						
KK31				⇑ S	Sn	22 49 22.1	+1.8
	0.4nm,0.2s,baz=188,slow=22,SNR=4.0						
AAK	Ala-Archa	7.37	31	P	Pn	22 48 14.7	+0.2
	1.9nm,0.3s,baz=208,slow=7.4,SNR=32						
AAK				S	Sn	22 49 35.7	-0.9
	0.2nm,0.3s,baz=260,slow=6.2,SNR=1.4						
AAK	Ala-Archa	7.37	31	⇑ P	Pn	22 48 13.7	-0.8
	3.3nm,0.7s						
AAK				⇓ S	Sn	22 49 38.5	+2.0
	2.0nm,0.6s						
TKM2	Tokmak 2	8.08	35	⇓ P	Pn	22 48 23.0	-1.2
	1.5nm,0.5s						
TKM2				⇑ S	Sn	22 49 55.9	+1.9
	2.3nm,0.8s						
GEYT	Alibeck	9.03	283	P	Pn	22 48 36.7	-0.3
	0.1nm,0.3s,baz=121,slow=14,SNR=1.6						
GEYT				S	Sn	22 50 19.1	+2.2
	0.3nm,0.3s,baz=122,slow=16,SNR=3.3						
MKAR	Makanchi Array	14.17	39	P	Pn	22 49 45.3	-0.2
	0.1nm,0.3s,baz=229,slow=15,SNR=6.1						
AB31	Akbulak array	14.50	335	⇑ P	Pn	22 49 49.0	-0.6
	1.1nm,0.6s						
AB31				⇓ S	Sn	22 52 26.7	-2.5
	0.5nm,0.5s						
KURBB	Kurchatov Arra	15.65	22	P	P	22 50 06.2	0.0
	0.1nm,0.3s,baz=211,slow=10,SNR=11						
AKTO	Aktyubinsk	16.16	333	P	P	22 50 13.4	+1.5
	0.1nm,0.3s,baz=156,slow=10.0,SNR=1.9						
AKTO	Aktyubinsk	16.16	333	⇓ P	P	22 50 11.6	-0.3
	0.5nm,0.5s						
AKTO				⇑ S	Sn	22 53 07.3	-2.3
	1.3nm,0.8s						
BVAR	Borovoye Array	16.59	2	P	P	22 50 16.4	-0.2
	0.4nm,0.3s,baz=144,slow=5.5,SNR=5.8						
ZALV	Zalesovo Beam	20.55	27	P	P	22 50 59.6	-0.3
	2.3nm,0.5s,baz=219,slow=9.1,SNR=6.1						
BELG	Belogornoye	22.08	323	P	P	22 51 16.4	+0.3
	1.6nm,0.4s,baz=114,slow=20,SNR=1.7						
BELG				LR	LR	23 02 14.3	
	comp=Z,112nm,19.1s,baz=143,slow=42						
HFS	Hagfors	42.25	322	P	P	22 54 11.6	-0.9

1.4nm,0.8s,baz=96,slow=13,SNR=1.6

DDA ***09*** *22:52:49.6, 39°.43N×40°.14E, h13^{km}±3^{km}, MW4.3*
ISK ***09*** *22:52:49.5, 39°.42N×40°.15E, h5^{km}, ML4.1/32*
IDC ***09*** *22:52:51.8±0.8, 39°.51N×40°.18E, h0^{km}, mb3.8/16, mb1 3.9/27, mb1mx3.8/66, mbtmp3.8/27, ML3.4/11, MS3.3/18, Ms1 3.3/18, ms1mx3.1/60, Error ellipse: s-maj=15.3km s-min=9.7km az=149.0*
MOS ***09*** *22:52:52.0±1.5, 39°.53N×40°.19E, h10^{km}, mb4.2/15, Error ellipse: s-maj=6.9km s-min=4.7km az=82.8*
NEIC ***09*** *22:52:53.8±2.2, 39°.50N±0°.03×40°.35E±0°.07, h10^{km}±1^{km}, mb4.2/14, ML4.1(ISK), Error ellipse: s-maj=9.0km s-min=4.9km az=112.0*
ISC 09 22:52:52.6±0.4**, 39°.38N**±0°.02×**40°.17E**±0°.01**, h10^{km}, n221, σ2^{s}15**/254**, mb3.9**/40**, MS3.3**/12**, 15C-11D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YEDI	Yedisu-Bingol	0.29	78	PG	Pg	22 52 56.0	-2.6
YEDI				SG	Sg	22 53 01.0	-1.6
ERZN	Erzincan	0.41	301	PG	Pg	22 52 55.4	-5.2
ERZN				SG	Sg	22 53 02.8	-3.2
TNCL	Tunceli-Merkez	0.56	242	⇑iP	Pg	22 53 00.1	-3.4
TNCL				iS	Sg	22 53 09.5	-1.3
ECAT	Cat-ERZURUM	0.66	70	⇓iP	Pg	22 53 02.7	-2.8
ECAT				iS	Sb	22 53 14.4	-1.3
KARO	Karliova-Bingo	0.68	96	PG	Pg	22 53 03.5	-2.4
KARO				SG	Sb	22 53 13.9	-2.5
KOPT	Kop Dagi	0.69	21	⇑iP	Pg	22 53 01.7	-4.3
KOPT				iS	Sg	22 53 15.8	+0.8
KOPT	Kop Dagi	0.69	21	Pg	Pg	22 53 02.3	-3.7
KOVA	Elazig, Kovanc	0.73	203	iP	Pg	22 53 04.2	-2.5
KOVA				iS	Sb	22 53 16.0	-1.5
SLHN	Bingol, Solhan	0.79	122	⇓iP	Pg	22 53 05.4	-2.4
SLHN				iS	Sb	22 53 17.6	-1.6
BAYB	BAYBURT	0.88	4	iP	Pg	22 53 05.8	-3.8
BAYB				iS	Sn	22 53 25.0	+0.7
HANI	Diyarbakir_Han	0.98	169	iP	Pb	22 53 10.3	-1.4
HANI				iS	Sn	22 53 25.5	-0.9
VRTB	Varto-Mus	1.02	102	PG	Pg	22 53 10.0	-2.3
VRTB	Varto-Mus	1.02	102	iP	Pg	22 53 08.6	-3.6
VRTB				iS	Sn	22 53 31.6	+4.0
KELT	Kelkit	1.04	318	iP	Pg	22 53 09.0	-3.7
KELT				iS	Sg	22 53 24.7	-1.6
REFA	Refahiye_ERZN	1.09	271	⇓iP	Pb	22 53 12.1	-1.5
REFA				iS	Sn	22 53 33.6	+4.2
KRIK	Erzurum-spir	1.12	31	iP	Pb	22 53 10.7	-3.5
KRIK				iS	Sn	22 53 31.1	+0.9
MUSM	Mu-Merkez	1.23	122	⇓iP	Pb	22 53 12.2	-3.8
MUSM				iS	Sn	22 53 30.6	-2.2
ELZG	Elazig	1.28	227	iP	Pn	22 53 13.7	-3.0
ELZG				iS	Sb	22 53 32.0	-1.4
KEMA	Kemaliye	1.31	266	iP	Pn	22 53 13.1	-3.9
KEMA				iS	Sg	22 53 36.0	+1.3
DYBB	Diyarbakir	1.42	181	PN	Pb	22 53 17.3	-2.0
KOPR	Koprukoy-ERZUR	1.44	64	PN	Pn	22 53 16.7	-2.2
ALUC	Giresun/Alucra	1.45	312	iP	Pn	22 53 16.4	-2.6
ALUC				iS	Sn	22 53 38.9	+0.8
ARPR	Arapgir-MALATY	1.45	259	PN	Pn	22 53 16.8	-2.3
DIYA	Diyarbakir	1.45	182	⇓iP	Pg	22 53 18.9	-1.7
DIYA				iS	Sg	22 53 41.5	+2.1
SVAN	Silvan-Diyarba	1.47	146	PN	Pb	22 53 17.9	-2.1
SVAN	Silvan-Diyarba	1.47	146	⇓iP	Pb	22 53 18.0	-2.1
SVAN				iS	Sg	22 53 42.3	+2.5
HOMI	Horasan	1.49	63	⇑iP	Pn	22 53 17.4	-2.4
HOMI				iS	Sg	22 53 42.6	+1.9
MACK	Trabzon	1.59	349	iP	Pn	22 53 19.4	-1.5
MACK				iS	Sb	22 53 44.3	+1.9
KTUT	Trabzon	1.64	349	PN	Pn	22 53 19.4	-2.1
GURO	Guroymak-BITLI	1.67	119	PN	Pn	22 53 20.6	-1.4
BTMN	Batman	1.72	150	⇓iP	Pb	22 53 22.2	-2.1
BTMN				iS	Sg	22 53 48.0	+0.2
MALT	Malatya	1.73	233	PN	Pn	22 53 21.3	-1.6
MALT	Malatya	1.73	233	P	Pn	22 53 21.2	-1.6
SUSE	Susehri	1.73	299	⇑iP	Pn	22 53 20.8	-2.0
SUSE				iS	Sb	22 53 47.9	+1.5
CHAY	Cayeli-Rize	1.76	14	PN	Pn	22 53 20.8	-2.3
BLIS	Bitlis-Merkez	1.80	122	⇓iP	Pn	22 53 21.3	-2.5
BLIS				iS	Sg	22 53 50.5	+0.2
EATA	Eleskirt	1.86	74	⇑iP	Pb	22 53 25.1	-1.7
EATA				iS	Sg	22 53 56.0	+3.7
MLAZ	Malazgirt-MUS	1.86	97	PN	Pn	22 53 23.1	-1.6
ESPY	Espiye-Giresun	1.89	325	PN	Pn	22 53 22.9	-2.1
CUZAR	Zara_SIVAS	1.92	286	⇑iP	Pn	22 53 23.8	-1.8
CUZAR				iS	Sg	22 53 55.2	+0.8
MAZI	Mazidag	1.93	173	PN	Pn	22 53 24.5	-1.1
SRTM	Siirt_Merkez	1.95	135	⇓iP	Pn	22 53 25.1	-0.8
SRTM				iS	Sg	22 53 54.5	-0.7
DBAD	Bademkaya	2.01	35	iP	Pn	22 53 25.7	-1.0
DBAD				iS	Sn	22 53 52.5	+0.5
SENK	Senkaya-Erzuru	2.05	54	PN	Pn	22 53 25.4	-1.9
AKCD	Akcadag	2.06	239	iP	Pn	22 53 25.3	-2.1
AKCD				iS	Sg	22 53 58.0	-0.9
ADCV	BITLIS_Adilcev	2.07	105	iP	Pb	22 53 27.5	-2.8
ADCV				iS	Sg	22 53 58.1	-0.9
CUKAN	kangal_SIVAS	2.10	269	iP	Pn	22 53 27.4	-0.6
CUKAN				iS	Sg	22 54 00.8	+0.7
MARD	Mardin	2.12	167	eP	Pb	22 53 29.1	-2.1
MARD				iS	Sg	22 53 56.3	-4.3
MARD	Mardin	2.12	167	Pn	Pn	22 53 27.8	-0.4
AGRB	Hanur-Agry	2.19	84	PN	Pn	22 53 27.6	-1.7
MIDY	Mardin/Midyat-	2.19	154	iP	Pn	22 53 28.0	-1.2
MIDY				iS	Sg	22 53 58.7	-4.4
URFA	Urfa	2.21	209	PN	Pn	22 53 28.1	-1.3
DARE	Darende-Malaty	2.25	250	PN	Pn	22 53 28.4	-1.5
DBOC	Borcka	2.27	30	iP	Pn	22 53 29.5	-0.7
DBOC				iS	Sb	22 54 02.4	+0.5
PERV	Siirt/Pervari-	2.34	127	iP	Pb	22 53 31.5	-3.5
PERV				iS	Sg	22 54 10.2	+2.3
CUGUR	Gurin_SVAS	2.35	255	iP	Pb	22 53 33.4	-1.7
CUGUR				iS	Sb	22 54 05.5	+1.2
KOTA	Agri, Merkez-K	2.38	79	iP	Pn	22 53 32.1	+0.2
KOTA				iS	Sg	22 54 12.2	+3.0
ATAB	Bozova	2.41	218	iP	Pn	22 53 31.5	-0.7
ATAB				iS	Sg	22 54 11.9	+1.9
RSDY	Resadiye-TOKAT	2.41	296	PN	Pn	22 53 29.9	-2.3
AKDM	Akdamar-Van	2.43	115	PN	Pn	22 53 31.6	-0.9
GEVA	Gevas	2.49	114	Pn	Pn	22 53 33.5	+0.1
KARS	Kars	2.56	60	PN	Pn	22 53 32.9	-1.4
SIRT	Sirnak	2.59	136	PN	Pn	22 53 33.9	-0.7
VANB	Van	2.63	106	PN	Pn	22 53 34.7	-0.5
CLDR	Caldiran	2.92	93	PN	Pn	22 53 38.3	-1.0
TOKT	Tokat	2.95	290	PN	Pn	22 53 37.9	-1.6
TOKA	Tokat	3.00	290	Pn	Pn	22 53 41.2	+1.0
SARI	SarD1z-Kayseri	3.08	253	PN	Pn	22 53 40.5	-1.1
KMRS	Kahramanmaras	3.18	235	PN	Pn	22 53 41.9	-0.8
TASB	TASBURUN-IGDIR	3.20	78	PN	Pn	22 53 42.3	-0.7
GAZ	Gaziantep	3.21	228	PN	Pn	22 53 42.5	-0.6
GAZ	Gaziantep	3.21	228	Pn	Pb	22 53 47.6	-2.1
BNN	Bunyan	3.41	262	PN	Pn	22 53 44.9	-1.0
KVT	Kavak	3.59	300	PN	Pn	22 53 47.2	-1.1
KOZT	Kozan	3.90	242	PN	Pn	22 53 52.2	-0.4
SOC	Sochi	4.21	355	eP	Pn	22 53 54.3	-2.6
SOC				e		22 54 41.8	
SOC				pmax	pmax		
	comp=Z,80nm,0.8s						
SOC				MLR	MLR		
	comp=Z,264nm,11.0s						
NEY	Neytrino	4.32	26	iP	Pn	22 54 00.5	+2.0
ZEI	Tsey	4.42	38	eP	Pn	22 54 00.4	+0.5
ZEI				pmax	pmax		
	comp=Z,102nm,1.0s						
KBZ	Khabaz	4.80	24	Pn	Pn	22 54 04.8	-0.2
	comp=Z,0.4nm,0.3s,baz=29,slow=6.3,SNR=8.4						
KBZ				Sn	Sn	22 54 59.9	-0.8
	baz=131,slow=17,SNR=1.1						
KBZ				Lg	Lg	22 55 27.4	
	baz=255,slow=18,SNR=1.4						
KBZ				LR	LR	22 56 14.0	
	comp=Z,466nm,18.8s,baz=182,slow=43						
KBZ	Khabaz	4.80	24	ceP	Pn	22 54 05.8	+0.9
KIV	Kislovodsk	4.95	22	eP	Pn	22 54 07.0	0.0
KIV				pmax	pmax		
	comp=Z,52nm,1.0s						
KIV				MLR	MLR		
	comp=Z,294nm,8.0s						
KIV	Kislovodsk	4.95	22	Pn	Pn	22 54 06.6	-0.4
KVAR	Kislovodsk Arr	4.95	22	Pn	Pn	22 54 07.8	+0.7
	baz=259,slow=19,SNR=4.9						
KVAR				LR	LR	22 56 22.1	
	comp=Z,493nm,18.4s,baz=96,slow=44						
BR131	Keskin Array S	5.06	276	iP	Pn	22 54 10.9	+2.2
BR131	Keskin Array S	5.06	276	Pn	Pn	22 54 10.5	+1.8
BRTR	Keskin Array B	5.06	276	Pn	Pn	22 54 09.9	+1.3
	comp=Z,0.4nm,0.3s,baz=101,slow=13,SNR=8.6						
BRTR				Sn	Sb	22 55 20.4	-1.8
	baz=120,slow=20,SNR=1.0						
BRTR	Keskin Array B	5.06	276	iP	Pn	22 54 11.5	+2.8
BRTR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
GROC	Groznyy	5.70	46	eP	Pn	22 54 14.6	-2.7
GROC				e		22 55 22.5	
GROC				pmax	pmax		
	comp=Z,9.0nm,0.3s						
GROC				smax	smax		
	comp=N,29nm,1.4s						
GROC				smax	smax		
	comp=N,14nm,1.0s						
GROC				MLR	MLR		
	comp=Z,98nm,6.0s						
ANN	Anapa	5.79	340	eP	Pn	22 54 17.8	-0.7
ANN				pmax	pmax		
	comp=Z,29nm,0.8s						
GOF	Gofitskoye	6.06	20	⇑eP	Pn	22 54 27.6	+5.3
MAK	Makhachkala	6.59	55	eP	Pn	22 54 29.5	0.0
MAK				eS	Sn	22 55 48.0	+3.4
MAK				pmax	pmax		
	comp=Z,62nm,1.7s						
MAK				MLR	MLR		
	comp=Z,539nm,14.0s						
MMAI	Mount Meron Ar	7.43	213	Pn	Pn	22 54 45.1	+4.0
	comp=Z,0.5nm,0.3s,baz=52,slow=14,SNR=2.1						
MMAI				Lg	Lg	22 56 51.1	
	comp=Z,0.4nm,0.3s,baz=39,slow=43,SNR=1.7						
MMAI				LR	LR	22 57 03.3	
	comp=Z,40nm,19.8s,baz=20,slow=33						
EIL	Elat	10.60	206	Lg	Lg	22 58 34.5	
	comp=Z,0.1nm,0.3s,baz=36,slow=22,SNR=1.0						
EIL				LR	LR	22 59 06.1	
	comp=Z,57nm,20.3s,baz=26,slow=35						
VSR	Storozhevoye	11.86	357	eP	Pn	22 55 39.5	-2.2
VSR				pmax	pmax		
	comp=Z,9.0nm,1.2s						
VRH	Novokhopyorsk	11.87	5	eP	Pn	22 55 40.6	-1.3
VRH				pmax	pmax		
	comp=Z,20nm,1.7s						
IDI	Anoyia	12.83	256	LR	LR	23 02 10.9	
	comp=Z,60nm,19.7s,baz=58,slow=43						
LPSR	Galich'ya Gora	13.25	357	eP	Pn	22 55 58.1	-2.6
LPSR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KMPD	K-Podol'skiy	13.46	317	P	Pn	22 56 02.0	-1.6
BUR08	Bucovina Ar. S	13.63	312	Pn	Pn	22 56 08.6	+2.6
AKASG	Malin Array Be	13.70	329	Pn	Pn	22 56 05.6	-1.1
	comp=Z,0.6nm,0.3s,baz=138,slow=13,SNR=5.8						
AKASG	Malin Array Be	13.70	329	eP	Pn	22 56 09.3	+2.6
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BELG	Belogornoye	14.00	19	Pn	Pn	22 56 09.7	-1.2
	comp=Z,0.3nm,0.3s,baz=219,slow=5.3,SNR=5.9						
BELG	Belogornoye	14.00	19	iP	Pn	22 56 10.3	-0.6
BELG				pmax	pmax		
	comp=Z,7.0nm,1.0s						
GEYT	Alibeck	14.10	90	Pn	Pn	22 56 13.6	+1.2
	comp=Z,0.3nm,0.3s,baz=269,slow=17,SNR=2.1						
ITM	Ithomi	14.50	267	Pn	P	22 56 21.4	-3.2
OBN	Obninsk	15.93	352	Pn	Pn	22 56 30.7	-5.9
	comp=Z,0.3nm,0.3s,baz=0.0,slow=20,SNR=2.4						
OBN	Obninsk	15.93	352	⇓eP	Pn	22 56 32.4	-4.2
OBN				pmax	pmax		
	comp=Z,25nm,1.3s						
OBN				MLR	MLR		
	comp=Z,72nm,7.0s						
KOLS	Kolonicke sedl	15.97	313	eP	P	22 56 42.9	+2.0
KOLS	Kolonicke sedl	15.97	313	eP	P	22 56 42.9	+2.0
CRVS	Cervenica-Dubn	16.42	312	eP	P	22 56 47.4	+1.5
CRVS	Cervenica-Dubn	16.42	312	eP	P	22 56 47.4	+1.5
RAYN	Ar Rayn	16.44	162	P	Pn	22 56 43.3	-0.2
RAYN				pmax	pmax		
	comp=Z,4.0nm,1.1s						
RAYN	Ar Rayn	16.44	162	Pn	Pn	22 56 43.3	-0.2
AKTO	Aktyubinsk	16.75	43	Pn	Pn	22 56 44.2	-3.0
	comp=Z,0.1nm,0.3s,baz=244,slow=13,SNR=8.7						
AKTO				LR	LR	23 05 00.3	
	comp=Z,138nm,18.4s,baz=244,slow=44						
ABKAR	Akbulak array	17.21	49		Pn	22 56 52.7	-0.3
MNK	Minsk	17.26	335	iP	Pn	22 56 50.7	-2.9
	comp=E,3.0nm,1.3s						
MNK				iP	Pn	22 56 50.7	-2.9
	comp=N,15nm,1.1s						
MNK				iP	Pn	22 56 50.7	-2.9
	comp=Z,5.0nm,1.0s						
MNK				iPP	sP	22 57 00.3	+0.2
MNK				iPPP	PPP	22 57 08.1	
MNK				iS	Sn	23 00 00.1	-5.3
MNK				iSS	S	23 00 15.0	+0.6
MNK				iSSS	SSS	23 00 27.8	
MNK				iLR	LR	23 03 10.1	
MNK				iLRM	MLR	23 04 21.9	
	comp=Z,35nm,9.5s						
MNK				iLRM	MLR	23 04 25.6	
	comp=E,5.0nm,8.6s						
MNK				iLRM	MLR	23 04 26.0	
	comp=N,78nm,10.4s						
NIE	Niedzica	17.34	312	P	P	22 56 57.4	+1.4
NACGM	Naroch	17.95	334	iP	P	22 57 09.7	+7.0
NACGM				iP	P	22 57 09.7	+7.0
NACGM				iP	P	22 57 09.7	+7.0
NACGM				iPP	PnPn	22 57 23.6	+11
NACGM				iPPP	PPP	22 57 31.4	
NACGM				iS	S	23 00 46.8	+18
NACGM				iSS	SnSn	23 01 03.7	+28
NACGM				iSSS	SSS	23 01 21.3	
NACGM				iLQ	LQ	23 02 58.4	
NACGM				iLR	LR	23 04 25.4	
CONA	Conrad Observa	19.49	304	eP	Pn	22 57 21.6	+0.6
	comp=N,18nm,1.4s						
VRAC	Vranov	19.49	308	P	Pn	22 57 21.4	+0.5
	comp=N,0.1nm,0.3s,baz=167,slow=18,SNR=1.8						
KRUC	Moravsky	19.53	307	P	P	22 57 17.8	-2.2
ARSA	Arzberg	19.53	302	eP	Pn	22 57 22.4	+1.0
	comp=N,7.9nm,1.5s						
SOKA	Soboth	19.72	300	iP	Pn	22 57 25.0	+1.3
	comp=N,6.2nm,1.4s						
DPC	Dobruska-Polom	20.06	311	eP	Pn	22 57 32.4	+4.7
DPC	Dobruska-Polom	20.06	311	eP	Pn	22 57 32.4	+4.7
KIRV	Kirov	20.12	14	P	P	22 57 27.2	+0.8
	comp=N,0.4nm,0.3s,baz=18,slow=6.4,SNR=3.0						
KIRV	Kirov	20.12	14	ceP	P	22 57 26.2	-0.2
TREC	Trest	20.17	308	P	Pn	22 57 28.3	-0.6
TREC				pmax	pmax		
	comp=Z,5.0nm,3.0s						
CHVC	Chvalec	20.31	311	eP	Pn	22 57 34.3	+3.6
MOA	Molln	20.50	303	eP	Pn	22 57 32.6	-0.3
	comp=Z,7.6nm,1.1s						
CKRC	Cesky Krumlov	20.75	306	eP	Pn	22 57 35.0	-0.7
ARU	Arti	20.93	29	P	P	22 57 34.8	-0.4
	comp=Z,9.2nm,0.9s,baz=220,slow=9.0,SNR=15						
ARU	Arti	20.93	29	d iP	P	22 57 35.2	0.0
ARU						22 57 51.9	
ARU				S	S	23 01 28.6	+0.3
ARU				SS	SnSn	23 01 45.3	-3.5
ARU				pmax	pmax		
	comp=Z,32nm,1.0s						
ARU	Arti	20.93	29	P	P	22 57 35.8	+0.5
KBA	Koelnbreinsper	20.94	300	eP	P	22 57 37.3	+1.7
	comp=Z,6.7nm,1.0s						
PRU	Pruhonice	20.98	309	eP	P	22 57 37.3	+1.4
PRU	Pruhonice	20.98	309	eP	P	22 57 37.3	+1.4
CORL	Corleone	21.02	274	P	P	22 57 40.8	+4.4
GERES	GERESS Array B	21.14	305	P	P	22 57 36.8	-0.8
	comp=Z,1.6nm,0.9s,baz=139,slow=12,SNR=4.2						
GERES				LR	LR	23 05 21.1	
	comp=Z,32nm,21.6s,baz=116,slow=36						
KHC	Kasperske Hory	21.30	306	ceP	P	22 57 41.1	+1.8
KHC				pmax	pmax		
	comp=Z,14nm,1.3s						
KHC	Kasperske Hory	21.30	306	eP	P	22 57 36.0	-3.3
ABTA	Abfaltersbach	21.43	299	eP	P	22 57 43.1	+2.3
	comp=Z,7.2nm,1.2s						
KLMR	Klimovskoe	21.50	359	eP	P	22 57 39.8	-1.5
KLMR				pmax	pmax		
	comp=Z,59nm,1.3s						
KLMR	Klimovskoe	21.50	359	eP	P	22 57 39.8	-1.5
KLMR				AMP		22 57 46.6	
	comp=Z,59nm,1.3s						
WET	Wettzell	21.74	306	P	P	22 57 43.3	-0.8
WET				pmax	pmax		
	comp=Z,6.0nm,2.2s						
WTTA	Wattenberg	22.11	300	iP	P	22 57 50.7	+2.5
	comp=Z,9.8nm,1.2s						
WATA	Walderalm	22.17	300	iP	P	22 57 50.9	+2.1
	comp=Z,4.6nm,1.0s						
NKC	Novy Kostel	22.34	308	P	P	22 57 51.4	+1.0
NKC				pmax	pmax		
	comp=Z,4.0nm,1.4s						
CLL	Collm	22.37	311	iP	P	22 57 52.6	+1.8
	comp=Z,17nm,1.3s						
CLL	Collm	22.37	311	P	P	22 57 52.8	+2.0
CLL				pmax	pmax		
	comp=Z,14nm,1.2s						
CLL	Collm	22.37	311	P	P	22 57 52.8	+2.0
CLL				IAmb	IAmb	22 57 53.6	
	comp=Z,14nm,1.2s						
SQTA	Sankt Quirin	22.39	300	iP	P	22 57 52.7	+1.6
	comp=Z,5.0nm,1.0s						
MOTA	Moosalm	22.49	300	eP	P	22 57 52.3	+0.1
	comp=Z,5.1nm,1.0s						
IUG	Iuzhnay	22.73	73	eP	P	22 57 55.2	+0.4
	baz=74						
IUG	Iuzhnay	22.73	73	eP	P	22 57 55.2	+0.4
RETA	Reutte	22.74	301	eP	P	22 57 54.9	+0.1
	comp=Z,4.8nm,1.3s						
GRA1	Grafenberg Arr	22.93	306	P	P	22 57 57.4	+0.6
GRA1				IAmb	IAmb	22 58 00.2	
	comp=Z,15nm,1.0s						
GRF	Grafenberg Arr	22.93	306	P	P	22 57 57.4	+0.6
GRF				pmax	pmax		
	comp=Z,15nm,1.0s						
GRFO	Grafenberg	22.93	306	P	P	22 57 58.0	+1.2
GRFO				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GRFO	Grafenberg	22.93	306	P	P	22 57 58.0	+1.2
KK31	Karatay Array	23.05	71	P	P	22 57 57.3	-0.8
KK31				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KK31	Karatay Array	23.05	71	P	P	22 57 57.3	-0.8
KK31				IAmb	IAmb	22 58 07.0	
	comp=Z,6.9nm,1.1s						
KKAR	Karatay Array	23.05	71	P	P	22 57 57.0	-1.1
KKAR				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KKAR	Karatay Array	23.05	71	P	P	22 57 57.1	-0.9
KKAR	Karatay Array	23.05	71	P	P	22 57 57.0	-1.1
KKAR				IAmb	IAmb	22 58 07.0	
	comp=Z,6.9nm,1.1s						
DAVOX	Davos/Dischmat	23.23	298	LR	LR	23 09 57.0	
	comp=Z,54nm,18.2s,baz=69,slow=44						
DAVA	Damuels	23.30	300	iP	P	22 58 01.5	+0.9
	comp=Z,4.3nm,1.1s						
FIA1	FINESS Array S	23.74	343	P	P	22 58 05.5	+0.8
FINES	FINESS Array B	23.74	343	P	P	22 58 05.1	+0.4
	comp=Z,2.9nm,0.6s,baz=156,slow=10,SNR=12						
FINES				LR	LR	23 09 02.6	
	comp=Z,73nm,19.0s,baz=213,slow=41						
FINES	FINESS Array B	23.74	343	P	P	22 58 05.3	+0.6
FINES	FINESS Array B	23.74	343	P	P	22 58 05.3	+0.6
KEST	Kesra	24.65	271	LR	LR	23 09 56.4	
	comp=Z,94nm,18.1s,baz=0.5,slow=42						
BRVK	Borovoye	24.70	46	ceP	P	22 58 15.9	+2.2
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BRVK	Borovoye	24.70	46	P	P	22 58 14.9	+1.2
BRVK				IAmb	IAmb	22 58 22.4	
	comp=Z,11nm,1.3s						
BVAR	Borovoye Array	24.75	47	P	P	22 58 15.4	+1.3
	comp=Z,1.0nm,0.9s,baz=31,slow=38,SNR=3.3						
SUF	Sumiainen	24.86	345	P	P	22 58 16.9	+1.9
SUF				pmax	pmax		
	comp=Z,44nm,2.9s						
SENIN	Lac Senin/Sane	24.95	297	P	P	22 58 19.2	+2.9
SENIN				IAmb	IAmb	22 58 33.5	
	comp=Z,4.6nm,1.1s						
BRZS	Berezniki	25.24	54	eP	P	22 58 18.2	-0.4
	comp=Z,3.1nm,1.0s,baz=55						
BRZS	Berezniki	25.24	54	eP	P	22 58 18.1	-0.5
BRZS				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BTLS	Baital	25.60	66	eP	P	22 58 22.0	+0.1
	comp=Z,2.0nm,1.1s,baz=67						
BTLS	Baital	25.60	66	eP	P	22 58 21.9	+0.1
BTLS				pmax	pmax		
	comp=Z,2.0nm,1.1s						
AAK	Ala-Archa	26.00	72	P	P	22 58 25.5	-0.3
	comp=Z,0.7nm,0.7s,baz=247,slow=12,SNR=2.3						
AAK	Ala-Archa	26.00	72	ceP	P	22 58 28.2	+2.4
AAK				pmax	pmax		
	comp=Z,11nm,1.3s						
HFS	Hagfors	26.58	330	P	P	22 58 30.1	-0.6
	comp=Z,3.1nm,0.8s,baz=109,slow=18,SNR=3.1						
HFS				LR	LR	23 10 25.3	
	comp=Z,86nm,18.0s,baz=49,slow=40						
CHKK	Chushkaly	27.73	69	eP	P	22 58 41.5	+0.3
	baz=69						
CHKK	Chushkaly	27.73	69	eP	P	22 58 41.5	+0.3
TNSS	Tian-Shan	27.76	70	eP	P	22 58 42.8	+0.8
	baz=71						
TNSS	Tian-Shan	27.76	70	eP	P	22 58 42.7	+0.8
NOA	NORSAR Array B	28.11	330	P	P	22 58 44.5	+0.1
	comp=Z,1.3nm,0.9s,baz=125,slow=8.9,SNR=3.3						
NOA				LR	LR	23 12 01.9	
	comp=Z,53nm,19.6s,baz=20,slow=41						
KURBB	Kurchatov Arra	29.05	55	P	P	22 58 52.2	-0.5
	comp=Z,0.6nm,0.9s,baz=264,slow=9.5,SNR=3.5						
KURK	Kurchatov	29.11	54	ceP	P	22 58 54.3	+0.9
KURK				pmax	pmax		
	comp=Z,6.0nm,1.3s						
KURK	Kurchatov	29.11	54	P	P	22 58 53.4	0.0
KURK				IAmb	IAmb	22 59 00.7	
	comp=Z,5.5nm,1.1s						
MKAR	Makanchi Array	31.34	62	P	P	22 59 13.1	0.0
	comp=Z,1.3nm,1.1s,baz=275,slow=5.8,SNR=4.6						
MKAR				LR	LR	23 14 00.8	
	comp=Z,114nm,18.1s,baz=297,slow=41						
MKAR	Makanchi Array	31.34	62	ceP	P	22 59 13.8	+0.7
MKAR				pmax	pmax		
	comp=Z,1.0nm,1.1s						
ZSN	Zaisan	33.07	61	eP	P	22 59 27.8	-0.5
	baz=61						
ZSN	Zaisan	33.07	61	eP	P	22 59 27.8	-0.5
ESDC	Sonseca Array	33.78	285	P	P	22 59 34.6	-0.1
	comp=Z,1.2nm,1.0s,baz=64,slow=8.7,SNR=2.7						
WMQ	Urumqi	35.43	67	eP	P	22 59 50.3	+1.4
NRIK	Noril'sk	39.01	25	P	P	23 00 19.3	+0.5
	comp=Z,7.2nm,0.9s,baz=248,slow=4.6,SNR=13						
NRIK	Noril'sk	39.01	25	ceP	P	23 00 20.1	+1.3
NRIK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
NRIK	Noril'sk	39.01	25	P	P	23 00 19.1	+0.2
TORD	Torodi Ar. Bea	42.79	243	P	P	23 00 52.0	+1.4
	comp=Z,0.7nm,1.0s,baz=46,slow=6.2,SNR=3.4						
TORD				LR	LR	23 23 01.7	
	comp=Z,22nm,22.0s,baz=115,slow=42						
TORD	Torodi Ar. Bea	42.79	243	P	P	23 00 53.0	+2.4
GTA	Gaotai	45.33	70	eP	P	23 01 12.4	+1.5
GTA				pP	sP	23 01 15.4	-0.8
GTA				sP	pP	23 01 18.3	+3.6
SONM	Songino Array	47.35	57	LR	LR	23 23 42.5	
	comp=Z,233nm,19.9s,baz=305,slow=39						
ULN	Ulaanbaatar	47.77	57	iP	P	23 01 30.9	+0.9
ULN				pmax	pmax		
	comp=Z,5.0nm,1.2s						
TIXI	Tiksi	52.77	23	eP	P	23 02 06.5	-0.8
HHC	Hu-ho-hao-te	53.18	64	eP	P	23 02 11.4	+0.5
HHC				pmax	pmax		
	comp=Z,11nm,1.0s						
HHC				pmax	pmax		
	comp=Z,120nm,5.8s						
CMAR	Chiang Mai Arr	54.53	95	P	P	23 02 20.8	-0.2
	comp=Z,0.4nm,0.3s,baz=313,slow=9.6,SNR=5.8						
CMAR	Chiang Mai Arr	54.53	95	iP	P	23 02 22.6	+1.6
CMAR	Chiang Mai Arr	54.53	95	P	P	23 02 21.9	+0.9
ABPO	Ambohimpanom	58.46	172	iP	P	23 02 57.2	+8.3
KLR	Kul'dur	62.41	48	iP	P	23 03 16.3	+0.8
KLR				pmax	pmax		
	comp=Z,3.0nm,1.2s						
SEY	Seymchan	64.67	28	P	P	23 03 30.9	+0.7
	comp=Z,1.6nm,0.6s,baz=315,slow=4.6,SNR=6.2						
SEY	Seymchan	64.67	28	iP	P	23 03 32.2	+2.0
KSRS	Korea Array	65.99	61	LR	LR	23 33 32.6	

	comp=Z,16nm,18.1s,baz=280,slow=37						
PETK	Petropavlovsk-	73.25	34	LR	LR	23 43 37.6	
	comp=Z,27nm,18.7s,baz=285,slow=42						
COCO	West Island	73.51	122	*i* P	P	23 04 29.9	+4.2
ILAR	Eielson Array	76.04	3	P	P	23 04 38.5	-1.2
	comp=Z,0.4nm,0.9s,baz=269,slow=6.1,SNR=1.8						
YKA	Yellowknife Ar	76.46	348	P	P	23 04 42.8	+0.7
	comp=Z,0.9nm,0.9s,baz=22,slow=6.4,SNR=11						
BDFB	Brasilia	98.38	257	LR	LR	23 51 56.5	
	comp=Z,33nm,19.7s,baz=133,slow=36						

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*IDC **09** 22:55:17.8±0.7, 39°.48N×143°.61E, h0^{km}, mb4.0/26, mb1 4.1/31, mb1mx4.0/62, mbtmp4.1/31, ML3.4/5, MS3.2/6, Ms1 3.3/6, ms1mx2.8/52, Error ellipse: s-maj=17.0km s-min=14.0km az=136.0*

*JMA **09** 22:55:20.0±0.2, 39°.53N×143°.60E, h33^{km}, M4.3*

*NIED **09** 22:55:20.0, 39°.53N×143°.60E, h33^{km}, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.40; $M_{\theta\theta}$-0.05; $M_{\phi\phi}$-1.35; $M_{r\theta}$0.27; $M_{\theta\phi}$-0.66; $M_{\phi r}$0.72; Fault plane solution: $M_0$1.70000×10^{15} NP1:ϕ_s21.00000°, δ58.00000°, λ89.00000°. NP2:ϕ_s204.00000°, δ32.00000°, λ92.00000°.*

*NEIC **09** 22:55:23.4±2.2, 39°.55N±0°.06×143°.4E±0°.1, h31^{km}±6^{km}, mb4.3/24 Error ellipse: s-maj=13.8km s-min=8.5km az=110.0*

ISC 09 22:55:20.7±4.5, **39°.53N**±0°.04×**143°.53E**±0°.06, **h16**^{km}±28^{km}, **n109,** σ**1^{s}12**/115, **mb4.3**/46, **MS3.6**/4, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIYJ	Miyakonagasawa	1.32	273	P	Pn	22 55 43.7	-0.8
MIYJ				*e*S	Sb	22 56 01.1	-0.7
JTH	Tanohata	1.35	288	P	Pn	22 55 43.9	-0.9
JTH				*e*S	Sb	22 56 01.9	-0.7
OFUJ	Ofunato	1.51	253	P	Pn	22 55 46.4	-0.7
JKEN	Kujiedanarisaw	1.56	296	P	Pn	22 55 46.6	-1.1
JKEN				*e*S	Sn	22 56 05.4	-2.1
JOM	Ohasama	1.73	269	P	Pn	22 55 50.0	-0.1
JANG	Nango	1.77	299	P	Pn	22 55 49.4	-1.2
JANG				*e*S	Sn	22 56 11.8	-0.9
JMK	Ichinoseki	1.88	253	P	Pn	22 55 51.8	-0.4
JMK				*e*S	Sn	22 56 15.1	-0.5
JIO	Ouri	2.01	238	P	Pn	22 55 53.0	-0.9
JIO				*e*S	Sn	22 56 18.0	-0.7
JRG	Rokugo	2.25	268	P	Pn	22 55 57.3	+0.1
JTM	Tenmabayashi	2.27	305	Pn	Pn	22 55 57.7	+0.3
ERM	Erimo	2.50	354	Pn	Pn	22 55 60.0	-0.7
JYK	Kaneyama	2.54	257	P	Pn	22 56 01.5	+0.3
JYK				*e*S	Sn	22 56 31.9	+0.2
JMM	Marumori	2.71	233		Pn	22 56 02.3	-1.3
JNBK	Urakawa-nobuka	2.81	348	P	Pn	22 56 05.2	+0.2
JNBK				*e*S	Sn	22 56 38.3	-0.2
JKB	Kayabe	3.03	322	P	Pn	22 56 08.4	+0.5
JCH	Churui	3.09	358	P	Pn	22 56 08.1	-0.6
JCH				*e*S	Sn	22 56 43.0	-2.3
JFT	Otama	3.21	232	P	Pn	22 56 09.9	-0.5
JFT				*e*S	Sn	22 56 47.6	-0.7
JEW	Eniwo	3.66	335	Pn	Pn	22 56 17.4	+0.7
JYT	Yasato	4.22	220	Pn	Pn	22 56 22.9	-1.4
ASAJ	Asahikawa	4.64	352	Pn	Pn	22 56 29.4	-0.7
	2.3nm,0.3s,baz=190,slow=6.0,SNR=13						
ASAJ				Sn	Sn	22 57 23.4	-0.2
	2.3nm,0.3s,baz=108,slow=20,SNR=2.2						
JKA	Kamikawa-asahi	4.64	352	Pn	Pn	22 56 31.0	+0.9
MJAR	Matsushiro Arr	5.15	236	Pn	Pn	22 56 38.3	+1.2
	1.0nm,0.3s,baz=37,slow=13,SNR=84						
MJAR				LR	LR	22 58 27.5	
	comp=Z,68nm,18.2s,baz=95,slow=37						
MJAR	Matsushiro Arr	5.15	236		Pn	22 56 36.8	-0.3
MAJO	Matsushiro	5.15	236	Pn	Pn	22 56 38.0	+0.8
MAT	Matsushiro	5.15	236	P	Pn	22 56 38.2	+1.1
MAT				*e*S	Sn	22 57 36.5	+0.3
MJB9	Matsu-Tunnel	5.15	236	Pn	Pn	22 56 39.0	+1.8
JGF	Kuroka	6.28	233	Pn	Pn	22 56 53.1	+0.5
INU	Inuyama	6.65	233	Pn	Pn	22 56 58.8	+1.1
JHJ	Hachijo jima 2	7.07	206	Pn	Pn	22 57 03.4	-0.1
	11nm,0.3s,baz=45,slow=20,SNR=0.9						
JHJ				Sn	Sn	22 58 15.0	-8.5
	18nm,0.3s,baz=69,slow=18,SNR=1.6						
JWT	Wachi	7.73	239	Pn	Pn	22 57 14.5	+1.9
USA0B	Ussuriysk Arra	9.79	302	Pn	Pn	22 57 44.9	+4.1
USRK	Ussuriysk Ar.	9.79	302	Pn	Pn	22 57 43.0	+2.2
	baz=103,slow=12,SNR=20						
USRK	Ussuriysk Ar.	9.79	302	Pn	Pn	22 57 43.6	+2.8
KSRS	Korea Array	12.40	265	Pn	Pn	22 58 16.9	+0.4
	0.2nm,0.3s,baz=78,slow=14,SNR=5.8						
KLR	Kul'dur	12.83	323	Pn	Pn	22 58 19.1	-3.2
	0.1nm,0.3s,baz=134,slow=11,SNR=5.8						
KLR				LR	LR	23 03 29.2	
	comp=Z,113nm,19.4s,baz=78,slow=38						
PETK	Petropavlovsk-	16.70	31	LR	LR	23 06 33.0	
	comp=Z,46nm,18.7s,baz=221,slow=40						
MA2	Magadan	20.59	11	P	Pn	22 59 59.6	-1.4
	5.2nm,0.5s,baz=195,slow=16,SNR=2.7						
SEY	Seymchan	24.04	10	P	P	23 00 35.0	+0.4
	2.7nm,0.7s,baz=176,slow=8.1,SNR=7.1						
YAK	Yakutsk	24.07	344	P	P	23 00 35.7	+0.8
	5.0nm,0.4s,baz=15,slow=2.4,SNR=4.7						
HHC	Hu-ho-hao-te	24.39	283	*e*P	P	23 00 39.5	+1.2
HHC				pmax	pmax		
	comp=Z,16nm,1.1s						
HHC				pmax	pmax		
	comp=Z,130nm,5.1s						
ULN	Ulaanbaatar	27.45	300		P	23 01 05.9	-0.1
ULN				IAmb	IAmb	23 01 06.8	
	comp=Z,4.2nm,0.8s						
SONM	Songino Array	27.89	300	P	P	23 01 10.3	+0.5
	comp=Z,1.5nm,0.6s,baz=101,slow=8.3,SNR=10						
SONM	Songino Array	27.89	300	P	P	23 01 10.5	+0.7
H11N2	WAKE ISLAND Hy	28.17	128	T	T	23 32 16.2	
	baz=318,slow=75,SNR=58						
H11N1	WAKE ISLAND Hy	28.18	128	T	T	23 32 16.8	
	baz=318,slow=75,SNR=40						
H11N3	WAKE ISLAND Hy	28.19	128	T	T	23 32 17.4	
	baz=318,slow=75,SNR=56						
LZH	Lanzhou	31.37	276	*e*P	P	23 01 41.0	+0.2
LZH				pP	pwP	23 01 45.4	-3.0
LZH				sP	sP	23 01 47.8	+1.3
LZH				pmax	pmax		
	comp=Z,15nm,1.1s						
GTA	Gaotai	33.50	284	P	P	23 02 00.0	+0.6
GTA				pP	pwP	23 02 06.3	-0.7
GTA				sP	sP	23 02 09.2	+4.1
GTA				pmax	pmax		
	comp=Z,2.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,140nm,4.8s						
GTA				LR	LR		
	comp=N,100nm,14.5s						
GTA				LR	LR		
	comp=E,200nm,15.6s						
GTA				LR	LR		
	comp=Z,210nm,16.4s						
WMQ	Urumqi	41.26	295	*e*P	P	23 03 06.9	+1.9
ZAA0	Zalesovo Array	41.52	310	P	P	23 03 06.8	-0.2
ZAA0				IAmb	IAmb	23 03 16.9	
	comp=Z,3.5nm,0.8s						
ZALV	Zalesovo Beam	41.52	310	P	P	23 03 06.8	-0.1
	comp=Z,3.3nm,0.5s,baz=86,slow=7.9,SNR=11						
ZALV				LR	LR	23 21 01.8	
	comp=Z,40nm,18.7s,baz=62,slow=37						
ZALV	Zalesovo Beam	41.52	310	P	P	23 03 07.0	0.0
CMAR	Chiang Mai Arr	43.75	254	P	P	23 03 25.4	-0.2
	comp=Z,0.9nm,0.3s,baz=40,slow=6.1,SNR=5.7						
CMAR				LR	LR	23 22 35.1	
	comp=Z,19nm,18.7s,baz=175,slow=37						
MK31	Makanchi Array	44.25	300	P	P	23 03 29.3	0.0
MK31				IAmb	IAmb	23 03 30.1	
	comp=Z,4.0nm,0.8s						
MKAR	Makanchi Array	44.25	300	P	P	23 03 29.1	-0.1
	comp=Z,3.2nm,0.7s,baz=83,slow=9.4,SNR=31						
MKAR	Makanchi Array	44.25	300	P	P	23 03 29.3	0.0
MAKZ	Makanchi	44.46	300	P	P	23 03 30.9	0.0
MAKZ				IAmb	IAmb	23 03 40.9	
	comp=Z,4.6nm,0.8s						
KURK	Kurchatov	45.75	307	P	P	23 03 41.1	+0.1
KURBB	Kurchatov Arra	45.82	306	P	P	23 03 41.4	-0.2
	comp=Z,7.2nm,0.7s,baz=81,slow=8.2,SNR=45						
WRH	Wood River Hil	45.99	34	P	P	23 03 43.7	+0.9
WRH				IAmb	IAmb	23 04 00.4	
	comp=Z,3.5nm,1.2s						
ILAR	Eielson Array	46.50	34	P	P	23 03 46.9	+0.1
	comp=Z,0.6nm,0.7s,baz=264,slow=7.0,SNR=8.0						
ILAR	Eielson Array	46.50	34	P	P	23 03 48.5	+1.7
ODAN	Odare	47.95	272	*e*P	P	23 03 58.9	+0.1
	comp=Z,8.0nm,0.6s						
RAMN	Ramite	48.51	273	*e*P	P	23 04 03.2	0.0
	comp=Z,18nm,0.9s						
GUN	Gumba	48.59	275	*e*P	P	23 04 04.1	+0.2
	comp=Z,24nm,0.7s						
KKN	Kakani	49.11	275	*e*P	P	23 04 08.0	+0.2
	comp=Z,18nm,0.6s						
PKIN	Phulchoki	49.13	274	*e*P	P	23 04 07.6	-0.4
GKN	Gorkha	49.51	275	*e*P	P	23 04 10.8	+0.1
	comp=Z,7.7nm,0.5s						
DANN	Dangsing	50.01	276	*e*P	P	23 04 15.0	+0.3
	comp=Z,37nm,0.6s						
BVAR	Borovoye Array	50.16	311	P	P	23 04 15.0	-0.2
	comp=Z,2.4nm,0.8s,baz=90,slow=8.2,SNR=16						
BRVK	Borovoye	50.21	311	P	P	23 04 15.5	0.0
BRVK				IAmb	IAmb	23 04 16.7	
	comp=Z,5.3nm,0.9s						
AAK	Ala-Archa	50.80	297	P	P	23 04 20.6	+0.2
	comp=Z,0.9nm,0.5s,baz=74,slow=5.2,SNR=5.1						
AAK	Ala-Archa	50.80	297	P	P	23 04 20.9	+0.5
KSH	Kashi	50.94	293	P	P	23 04 24.8	+3.4
KSH				pmax	pmax		
	comp=Z,20nm,2.3s						
KSH				pmax	pmax		
	comp=Z,92nm,5.1s						
HYT	Haines Junctio	51.31	38	P	P	23 04 26.1	+2.3
INK	Inuvik	51.41	28	P	P	23 04 24.8	+0.5
	comp=Z,1.2nm,0.6s,baz=292,slow=12,SNR=4.7						
INK	Inuvik	51.41	28	P	P	23 04 25.0	+0.7
KK31	Karatay Array	53.34	299	P	P	23 04 40.4	+1.3
KKAR	Karatay Array	53.34	299	P	P	23 04 38.3	-0.8
KKAR	Karatay Array	53.34	299	P	P	23 04 40.4	+1.3
KKAR				IAmb	IAmb	23 04 51.7	
	comp=Z,1.4nm,0.8s						
ARU	Arti	55.62	318	P	P	23 04 55.5	+0.2
	comp=Z,2.2nm,0.8s,baz=281,slow=0.7,SNR=8.1						
ARU	Arti	55.62	318	P	P	23 04 56.3	+1.0
ABKAR	Akbulak array	57.62	310	P	P	23 05 09.9	+0.1
ABKAR				IAmb	IAmb	23 05 22.6	
	comp=Z,2.5nm,0.6s						
KBL	Kabul	58.09	290	P	P	23 05 12.2	-1.3
KBL				IAmb	IAmb	23 05 29.1	
	comp=Z,4.0nm,1.0s						
AKTO	Aktyubinsk	58.26	311	P	P	23 05 14.7	+0.4
	comp=Z,1.1nm,0.7s,baz=78,slow=15,SNR=4.9						
WB0	Warramunga Arr	59.60	190	P	P	23 05 21.4	-2.3
WB0				IAmb	IAmb	23 05 29.8	
	comp=Z,5.2nm,1.1s						
WR0	Warramunga Arr	59.77	190	P	P	23 05 23.0	-1.9
RES	Resolute Bay	59.77	15	P	P	23 05 24.7	+0.4
RES				IAmb	IAmb	23 05 44.3	
	comp=Z,4.1nm,1.2s						
WB2	Warramunga Arr	59.78	190	P	P	23 05 24.5	-0.4
WRA	Warramunga Arr	59.78	190	P	P	23 05 23.1	-1.9
	comp=Z,0.5nm,0.6s,baz=7.7,slow=6.8,SNR=6.5						
WRA	Warramunga Arr	59.78	190	P	P	23 05 22.9	-2.0
YKA	Yellowknife Ar	60.82	31	P	P	23 05 30.8	-0.8
	comp=Z,0.5nm,0.8s,baz=304,slow=6.1,SNR=6.4						
BELG	Belogornoye	63.12	317	P	P	23 05 47.3	+0.1
	comp=Z,10nm,0.9s,baz=0.0,slow=3.0,SNR=2.5						
AS31	Alice Springs	63.50	190	P	P	23 05 47.9	-2.2
ASAR	Alice Springs	63.50	190	P	P	23 05 50.5	+0.4
	comp=Z,0.2nm,0.6s,baz=1.9,slow=5.6,SNR=1.9						
FINES	FINESS Array B	67.38	332	P	P	23 06 13.8	-0.9
	comp=Z,2.2nm,0.7s,baz=41,slow=6.1,SNR=5.6						
FINES	FINESS Array B	67.38	332	P	P	23 06 14.8	0.0
KBZ	Khabaz	70.54	311	P	P	23 06 35.9	+1.3
	comp=Z,2.1nm,0.9s,baz=4.0,slow=3.4,SNR=3.6						
NVAR	Mina Array Bea	72.18	55	P	P	23 06 44.7	-0.3
	comp=Z,0.2nm,0.3s,baz=292,slow=5.5,SNR=1.7						
NVAR	Mina Array Bea	72.18	55	P	P	23 06 44.9	0.0
HFS	Hagfors	72.49	336	P	P	23 06 46.4	+0.2
	comp=Z,1.0nm,0.6s,baz=82,slow=11,SNR=4.3						
NB2	NORSAR Subarra	72.52	338	P	P	23 06 46.2	-0.2
	comp=Z,2.2nm,0.8s,baz=38,slow=5.9						
NOA	NORSAR Array B	72.52	338	P	P	23 06 45.5	-0.9
	comp=Z,2.1nm,0.9s,baz=37,slow=6.0,SNR=4.2						
AKASG	Malin Array Be	73.33	323	P	P	23 06 51.0	-0.3
	comp=Z,1.7nm,0.7s,baz=41,slow=6.1,SNR=3.3						
AKBB	Malin Array Si	73.33	323	P	P	23 06 51.3	0.0
AKBB				IAmb	IAmb	23 07 09.8	
	comp=Z,5.3nm,1.2s						
PDAR	Pinedale Array	74.74	47	P	P	23 06 59.7	-0.3
	comp=Z,0.4nm,0.7s,baz=305,slow=3.2,SNR=3.2						
BURAR	Bucovina Array	77.37	322	P	P	23 07 14.7	-0.1
TXAR	Lajitas Array	87.29	54	P	P	23 08 07.4	+0.5
	comp=Z,0.2nm,0.6s,baz=320,slow=2.7,SNR=2.1						
ESDC	Sonseca Array	95.76	335	LR	LR	23 57 56.4	
	comp=Z,48nm,18.9s,baz=10.0,slow=39						

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*JMA **09** 23:04:28.6±0.2, 39°.53N×143°.69E, h31^{km}, M3.7*

*NIED **09** 23:04:28.6, 39°.53N×143°.69E, h31^{km}, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}2.60; $M_{\theta\theta}$-0.21; $M_{\phi\phi}$-2.39; $M_{r\theta}$0.49; $M_{\theta\phi}$-0.40; $M_{\phi r}$0.61; Fault plane solution: $M_0$2.65000×10^{14} NP1:ϕ_s18.00000°, δ53.00000°, λ99.00000°. NP2:ϕ_s183.00000°, δ38.00000°, λ78.00000°.*

*IDC **09** 23:04:34.9±1.6, 39°.89N×142°.49E, h0^{km}, mb3.4/7, mb1 3.5/9, mb1mx3.3/52, mbtmp3.4/9, ML2.8/2 Error ellipse: s-maj=34.8km s-min=23.6km az=100.0*

ISC 09 23:04:28.4±1.3, **39°.55N**±0°.06×**143°.57E**±0°.08, **h11**^{km}**, n27,** σ**1^{s}29**/28, **mb3.4**/7, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIYJ	Miyakonagasawa	1.35	272	P	Pg	23 04 53.4	-1.0
JTH	Tanohata	1.37	287	P	Pb	23 04 53.5	-0.5
JTH				*e*S	Sg	23 05 11.9	-0.6
OFUJ	Ofunato	1.55	253	P	Pb	23 04 56.0	-1.0
JKEN	Kujiedanarisaw	1.57	295	P	Pb	23 04 56.2	-1.3
JOM	Ohasama	1.76	268	P	Pb	23 04 59.7	-1.0
JANG	Nango	1.78	298	P	Pn	23 04 59.1	0.0
JMK	Ichinoseki	1.92	253	P	Pb	23 05 01.4	-2.0
JMK				*e*S	Sn	23 05 25.1	0.0
JIO	Ouri	2.05	238	P	Pn	23 05 02.5	-0.2
JYK	Kaneyama	2.57	257	P	Pn	23 05 11.2	+1.2
JOT	Ohata	2.65	314	P	Pn	23 05 12.0	+0.9
JNBK	Urakawa-nobuka	2.80	347	P	Pn	23 05 14.7	+1.6
JNBK				*e*S	Sn	23 05 48.6	+1.8
JCH	Churui	3.07	357	S	Sn	23 05 52.3	-1.1
JFT	Otama	3.25	232	P	Pn	23 05 19.6	+0.3
JFT				*e*S	Sn	23 05 57.8	-0.1
JAK	Akkeshi	3.55	14	P	Pn	23 05 23.1	-0.3
JAK				*e*S	Sn	23 06 02.4	-2.8
ASAJ	Asahikawa	4.62	351	Pn	Pn	23 05 39.9	+1.7
	0.6nm,0.3s,baz=14,slow=19,SNR=2.4						
ASAJ				Sn	Sn	23 06 30.8	-0.9
	1.0nm,0.3s,baz=48,slow=17,SNR=1.3						
MJAR	Matsushiro Arr	5.19	236	Pn	Pn	23 05 48.0	+2.1
	0.2nm,0.3s,baz=37,slow=13,SNR=13						
MAT	Matsushiro	5.19	236	P	Pn	23 05 47.2	+1.2
SONM	Songino Array	27.91	300	P	P	23 10 19.4	+1.0
	0.3nm,0.5s,baz=108,slow=7.8,SNR=3.1						
H11N2	WAKE ISLAND Hy	28.16	128	T	T	23 41 16.0	
	baz=318,slow=75,SNR=7.1						
H11N1	WAKE ISLAND Hy	28.17	128	T	T	23 41 20.6	
	baz=318,slow=75,SNR=3.1						
H11N3	WAKE ISLAND Hy	28.18	128	T	T	23 41 21.3	
	baz=318,slow=75,SNR=2.0						
ZALV	Zalesovo Beam	41.53	310	P	P	23 12 16.9	+1.4
	0.5nm,0.3s,baz=98,slow=10,SNR=1.8						
MKAR	Makanchi Array	44.27	300	P	P	23 12 39.0	+1.1
	0.5nm,0.6s,baz=84,slow=10,SNR=4.4						
KURBB	Kurchatov Arra	45.83	306	P	P	23 12 51.0	+0.8
	0.8nm,0.5s,baz=82,slow=8.2,SNR=7.1						
BVAR	Borovoye Array	50.17	311	P	P	23 13 24.0	+0.3
	0.2nm,0.5s,baz=47,slow=11,SNR=2.9						
WRA	Warramunga Arr	59.81	190	P	P	23 14 42.8	+9.1
	0.2nm,0.6s,baz=8.5,slow=7.0,SNR=1.6						
YKA	Yellowknife Ar	60.78	31	P	P	23 14 49.7	+10
	0.3nm,0.9s,baz=306,slow=5.5,SNR=2.0						

IDC 09 23:05:05.2±3.0, **3°.23S**×**134°.63E, h0**^{km}**, mb3.4**/2, **mb1 3.7**/4, **mb1mx3.3**/44, **mbtmp3.5**/4, **ML3.3**/2, **Error ellipse: s-maj=99.5km s-min=28.0km az=70.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	4.10	305	Pn	Pn	23 06 08.6	-0.6
	1.3nm,0.3s,baz=228,slow=22,SNR=1.7						
SIJI				Sn	Sn	23 06 53.9	-4.0
	1.3nm,0.3s,baz=255,slow=23,SNR=1.6						
WRA	Warramunga Arr	16.62	181	Pn	P	23 09 01.0	-1.3
	0.1nm,0.3s,baz=0.7,slow=11,SNR=8.3						
ASAR	Alice Springs	20.33	182	P	P	23 09 42.5	-0.6
	1.7nm,0.7s,baz=5.5,slow=10,SNR=16						
MKAR	Makanchi Array	67.76	324	P	P	23 16 05.1	+0.2
	0.2nm,0.5s,baz=111,slow=7.5,SNR=2.9						

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*SNET **09** 23:32:17.5±1.2, 14°.49N×89°.17W, h1^{km}±5^{km}, ML2.9*

*GCG **09** 23:32:20.9±0.9, 15°.36N×90°.17W, h32^{km}±34^{km}, MD3.2*

*MEX **09** 23:33:01.0±0.4, 15°.12N×91°.88W, h14^{km}±2^{km}, MD2.8*

ISC 09 23:32:16.7±1.3, **14°.51N**±0°.06×**89°.24W**±0°.07, **h29**^{km}±6^{km}, **n12,** σ**2^{s}26**/17, **1C, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESQI	Esquipulas	0.11	295	⇑*i*P	Pb	23 32 21.8	-0.4
ESQI				*e*S	Sn	23 32 25.3	-0.6
MTO3	Montecristo	0.17	227	*i* P	Pb	23 32 22.8	0.0
MTO3				*e*S	Sb	23 32 26.6	-0.2
LLGN	La Laguna	0.45	141	*e*P	Pb	23 32 25.9	-0.5
LLGN				*e*S	Sb	23 32 32.4	-0.5
MRL	Marmol	0.71	323	*e*P	Pn	23 32 32.2	+1.1
MRL				*e*S	Sb	23 32 42.2	+1.8
CEVE	Cerro Verde	0.78	209	*e*P	Pn	23 32 34.2	+2.3
CEVE				IAML		23 32 51.5	
	comp=Z,329nm,0.3s						
PMON	Piamonte	0.80	185	*e*P	Pb	23 32 33.9	+1.7
JAYA	Jayaque - finc	0.88	194	*e*P	Pb	23 32 34.9	+1.5
COEG	Centro de Oper	0.95	159	IAML		23 32 54.7	
	comp=Z,348nm,0.3s						
NBG	Las Nubes	1.08	274	*e*P	Pb	23 32 40.4	+3.5
NBG				*e*S	Sn	23 32 49.1	-1.1
PCG	Pacaya	1.33	265	*e*P	Pb	23 32 40.7	-0.5
PCG				*e*S	Sn	23 32 54.9	-1.6
FUG	Fuego 3	1.56	268	*e*P	Pn	23 32 40.9	-1.7
FUG				*e*S	Sn	23 32 56.3	-5.6
LCND	La Caada	1.77	132	IAML		23 33 15.2	
	comp=Z,214nm,0.4s						

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*IDC **09** 23:32:46.4±0.8, 4°.29S×132°.24E, h0^{km}, mb4.0/9, mb1 4.3/13, mb1mx4.1/36, mbtmp4.2/13, ML3.9/4, MS3.4/9, Ms1 3.4/9, ms1mx3.1/35, Error ellipse: s-maj=31.5km s-min=17.3km az=65.0*

*BJI **09** 23:32:46.7±0.0, 4°.48S×132°.58E, h27^{km}, mB4.9/14, mb4.5/28, Ms4.7/1*

*DJA **09** 23:32:47.4±0.2, 4°S±3°×13°3E±°, h10^{km}, M4.9/12, mb4.9/12, mB5.3/6, MLv5.0/10, Mw(mB)4.7/6, MwMwp4.7/1, Mwp5.0/1*

*NEIC **09** 23:32:50.7±2.5, 4°.18S±0°.07×132°.69E±0°.05, h39^{km}±8^{km}, mb4.4/28, Error ellipse: s-maj=10.7km s-min=5.9km az=206.0*

ISC 09 23:32:50.3±0.5, **4°.27S**±0°.05×**132°.63E**±0°.07, **h35**^{km}**, n97,** σ**1^{s}43**/85, **mb4.3**/32, **MS3.3**/6, **Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAKI	Fak Fak	1.39	344		Pn	23 33 11.7	-1.6
FAKI	Fak Fak	1.39	344	P	Pn	23 33 11.7	-1.6
FAKI				S	Sn	23 33 18.9	-12
BNDI	Bandanaira	2.73	265	P	Pn	23 33 32.8	+1.1
SWI	Sorong	3.65	338	P	Pn	23 33 42.5	-1.8
MSAI	Masohi	3.80	284	P	Pn	23 33 46.8	+0.3
SRPI	Serui, Papua	4.32	57	P	Pn	23 33 53.7	+0.1
BAKI	Biak	4.63	49	P	Pn	23 33 58.9	+1.1
NLAI	Namlea	5.61	280	P	Pn	23 34 13.1	+1.8
	0.9nm4μm158nm,0.5s						
SANI	Sanana	6.99	288	P	Pn	23 34 28.4	-1.8
	0.5nm2μm140nm,0.5s						
GENI	Genyem	7.71	78	P	Pn	23 34 44.3	+4.2
MTN	Manton Dam	8.65	190	Pn	Pn	23 34 53.3	+0.2
MTN				Sn	Sn	23 36 29.4	-0.1
SOEI	Soe	9.93	236	Pn	Pn	23 35 12.3	+1.6
SOEI	Soe	9.93	236	P	Pn	23 35 09.7	-1.0
	2μm67nm,0.7s						
LUWI	Luwuk	10.35	288		Pn	23 35 16.1	-0.3
LUWI	Luwuk	10.35	288	P	Pn	23 35 15.3	-1.1
	54nm,0.6s						
APSI	Ampana	11.46	287	P	Pn	23 35 31.9	+0.3
	747nm56nm,0.6s						
MRSI	Marisa	11.67	294	P	Pn	23 35 33.6	-0.9
	24nm,0.6s						
EDFI	Ende, Flores	11.74	247	P	Pn	23 35 34.5	-1.1
	11nm,0.7s						
BKSI	Bulukumba	12.51	265	P	P	23 36 01.5	+4.3
KAPI	Kappang	12.86	266	Pn	Pn	23 35 43.3	-7.4
	2.1nm,0.3s,baz=90,slow=20,SNR=2.9						
COEN	Coen	14.17	133	Pn	Pn	23 36 07.9	-0.8
PMG	Port Moresby	15.30	110	Pn	P	23 36 28.4	+0.2
	2.1nm,0.3s,baz=276,slow=6.1,SNR=9.3						
PMG	Port Moresby	15.30	110	Pn	P	23 36 24.0	-4.2
PMG				IAmb	IAmb	23 36 36.8	
	comp=Z,40nm,1.1s						
PMG	Port Moresby	15.30	110	P	P	23 36 28.2	0.0
FITZ	Fitzroy Crossi	15.35	206	Pn	Pn	23 36 20.8	-3.8
	comp=Z,0.6nm,0.3s,baz=23,slow=8.8,SNR=36						
FITZ				Sn	Sn	23 38 59.0	-15
	comp=Z,3.1nm,0.3s,baz=187,slow=13,SNR=6.6						
FITZ				LR	LR	23 42 59.1	
	comp=Z,110nm,18.5s,baz=26,slow=40						
FITZ	Fitzroy Crossi	15.35	206	Pn	Pn	23 36 22.1	-2.4
PLAI	Plampang	15.43	252	P	Pn	23 36 24.0	-1.6
	comp=Z,34nm,1.1s						
WB0	Warramunga Arr	15.50	174	Pn	Pn	23 36 25.1	-1.3
WB0				IAmb	IAmb	23 36 44.3	
	comp=Z,22nm,1.1s						
WRAB	Tennant Creek	15.66	174		Pn	23 36 26.1	-2.4
WRAB				IAmb	IAmb	23 36 45.2	
	comp=Z,11nm,0.5s						
WRA	Warramunga Arr	15.67	174	Pn	Pn	23 36 25.1	-3.5
	comp=Z,1.0nm,0.3s,baz=356,slow=13,SNR=40						
WRA				Sn	Sn	23 39 08.1	-13
	comp=Z,1.2nm,0.3s,baz=353,slow=24,SNR=5.1						
WRA				LR	LR	23 43 23.6	
	comp=Z,172nm,20.5s,baz=340,slow=41						
WRA	Warramunga Arr	15.67	174		Pn	23 36 25.2	-3.5
WB2	Warramunga Arr	15.67	174	Pn	Pn	23 36 25.8	-2.9
WR0	Warramunga Arr	15.71	173	Pn	Pn	23 36 27.1	-2.1
BKB	Balikpapan	15.99	280	Pn	P	23 36 34.1	-1.9
BKB				IAmb	IAmb	23 36 50.6	
	comp=Z,45nm,0.8s						
BBKI	Banjar Baru	17.77	272	P	P	23 37 12.2	+17
JAGI	Jajag, Banyuwa	18.83	256	P	P	23 37 05.3	-2.0
AS31	Alice Springs	19.32	176		Pn	23 37 13.5	-0.5
ASAR	Alice Springs	19.33	176	P	Pn	23 37 13.4	-0.5
	comp=Z,1.5nm,0.3s,baz=355,slow=11,SNR=43						
ASAR				S	S	23 40 38.3	-11
	comp=Z,0.4nm,0.3s,baz=359,slow=28,SNR=3.9						
ASAR				LR	LR	23 44 47.5	
	comp=Z,155nm,18.0s,baz=354,slow=37						
ASAR	Alice Springs	19.33	176	P	Pn	23 37 13.1	-0.9
CTA	Charters Tower	20.58	141	P	Pn	23 37 29.6	+0.9
	comp=Z,8.9nm,0.7s,baz=321,slow=14,SNR=4.3						
CTAO	Charters Tower	20.58	141	Pn	Pn	23 37 28.2	-0.5
CTAO	Charters Tower	20.58	141		Pn	23 37 28.0	-0.8
CTAO				IAmb	IAmb	23 37 41.0	
	comp=Z,28nm,0.8s						
PSA00	Pilbara Seismi	21.21	215	P	P	23 37 34.5	+1.3
PSA00				IAmb	IAmb	23 37 46.5	
	comp=Z,19nm,0.7s						
PSA00	Pilbara Seismi	21.21	215	P	P	23 37 35.4	+2.2
PSA00				IAmb	IAmb	23 37 46.2	
	comp=Z,13nm,0.9s						
SBUM	Sibu	21.46	288	P	P	23 37 37.5	+1.6
SBUM				IAmb	IAmb	23 37 50.9	
	comp=Z,12nm,0.9s						
GIRL	Giralia	25.51	223	P	P	23 38 17.3	+1.6
FORT	Forrest	26.72	189	P	P	23 38 28.2	+1.7
BBOO	Buckleboo	28.58	174	P	P	23 38 44.2	+1.1
STKA	Stephens Creek	28.73	164	P	P	23 38 47.0	+2.5
	comp=Z,1.1nm,0.4s,baz=324,slow=11,SNR=4.1						
STKA				LR	LR	23 52 31.3	
	comp=Z,111nm,19.6s,baz=344,slow=41						
STKA	Stephens Creek	28.73	164	P	P	23 38 44.9	+0.4
JOW	Kunigami	31.20	352	LR	LR	23 51 55.7	

	comp=Z,58nm,19.6s,baz=33,slow=37						
NJ2	Nanjing	38.42	341	*e*P	P	23 40 10.3	+1.7
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.5s						
CMAR	Chiang Mai Arr	40.15	305	P	P	23 40 22.5	-0.8
	comp=Z,0.9nm,0.3s,baz=140,slow=6.4,SNR=4.4						
MJAR	Matsushiro Arr	40.93	7	P	P	23 40 31.3	+1.8
	comp=Z,0.4nm,0.3s,baz=177,slow=8.5,SNR=1.3						
MJAR				LR	LR	23 55 39.0	
	comp=Z,40nm,20.0s,baz=165,slow=34						
KSRS	Korea Array	41.74	354	LR	LR	23 56 55.5	
	comp=Z,30nm,20.8s,baz=185,slow=35						
XAN	Xi'an	44.19	331	P	P	23 40 55.4	-0.7
XAN				pP	pP	23 41 04.0	-2.0
XAN				pmax	pmax		
	comp=Z,6.0nm,0.7s						
CN2	Changchun	48.28	353	*e*P	P	23 41 33.8	+5.8
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
LZH	Lanzhou	48.35	329	*e*P	P	23 41 30.0	+1.1
LZH				pP	sP	23 41 40.0	-2.9
LZH				sP	pP	23 41 45.7	+6.8
LZH				pmax	pmax		
	comp=Z,13nm,1.1s						
HHC	Hu-ho-hao-te	48.87	339	*e*P	P	23 41 33.9	+1.2
HHC				pmax	pmax		
	comp=Z,7.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,190nm,5.6s						
ASAJ	Asahikawa	48.99	10	LR	LR	00 00 15.6	
	comp=Z,47nm,19.8s,baz=97,slow=34						
GTA	Gaotai	52.95	328	*e*P	P	23 42 03.9	+0.4
GTA				pP	sP	23 42 13.6	-4.0
GTA				sP	pP	23 42 16.9	+3.3
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
KLR	Kul'dur	53.28	359	LR	LR	00 03 22.9	
	comp=Z,13nm,19.1s,baz=111,slow=34						
RAMN	Ramite	54.22	308	*e*P	P	23 42 13.8	+0.6
	comp=Z,13nm,0.6s						
GUN	Gumba	55.23	308	*e*P	P	23 42 21.4	+0.8
	comp=Z,8.1nm,0.6s						
GKN	Gorkha	56.25	308	*e*P	P	23 42 28.0	+0.3
	comp=Z,9.0nm,0.7s						
SONM	Songino Array	56.77	339	P	P	23 42 30.4	-0.6
	comp=Z,0.6nm,1.0s,baz=144,slow=5.2,SNR=2.6						
SONM	Songino Array	56.77	339	P	P	23 42 30.6	-0.4
DANN	Dangsing	57.09	308	*e*P	P	23 42 34.8	+0.9
	comp=Z,14nm,0.9s						
DGAR	Diego Garcia	59.91	264	P	P	23 42 52.1	-1.4
WMQ	Urumqi	62.61	325	*e*P	P	23 43 13.3	+2.0
WMQ				pmax	pmax		
	comp=Z,11nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,110nm,5.1s						
ZSN	Zaisan	66.38	327	*e*P	P	23 43 36.1	+0.4
	baz=327						
SHLS	Shalkode	67.22	321	*e*P	P	23 43 40.0	-1.4
	baz=321						
MK31	Makanchi Array	67.44	325	P	P	23 43 43.0	+0.5
MKAR	Makanchi Array	67.44	325	P	P	23 43 43.5	+1.0
	comp=Z,5.5nm,0.7s,baz=114,slow=7.9,SNR=78						
MKAR	Makanchi Array	67.44	325	P	P	23 43 43.3	+0.7
MAKZ	Makanchi	67.63	325	P	P	23 43 44.2	+0.5
KSH	Kashi	67.84	316	P	P	23 43 47.8	+2.5
KSH				pP	sP	23 43 56.8	-2.9
KSH				PP	PP	23 46 14.9	-0.4
KSH				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KSH				pmax	pmax		
	comp=Z,120nm,8.5s						
SATY	Saty	67.85	320	*e*P	P	23 43 46.1	+0.8
	comp=Z,3.6nm,0.9s,baz=320						
KPKS	Kokpek	67.87	321	*e*P	P	23 43 45.9	+0.5
	comp=Z,3.1nm,1.0s,baz=321						
MDOK	Medeo	68.77	320	*e*P	P	23 43 51.6	+0.4
	baz=320						
TDK	Taldyqorghan	68.81	322	*e*P	P	23 43 51.6	+0.5
	comp=Z,1.8nm,0.5s,baz=322						
CHKK	Chushkaly	69.14	320	*e*P	P	23 43 53.3	+0.1
	baz=320						
KUU	Kurty	69.57	320	*e*P	P	23 43 56.3	+0.4
	comp=Z,3.0nm,0.9s,baz=320						
AAK	Ala-Archa	70.21	318	P	P	23 43 59.8	-0.2
AAK				IAmb	IAmb	23 44 14.8	
	comp=Z,3.3nm,1.1s						
ZAA0	Zalesovo Array	70.35	332	P	P	23 43 59.2	-1.2
ZAA0				IAmb	IAmb	23 44 12.8	
	comp=Z,2.8nm,0.9s						
ZALV	Zalesovo Beam	70.35	332	P	P	23 44 00.2	-0.2
	comp=Z,0.7nm,0.3s,baz=125,slow=9.5,SNR=4.4						
SEM	Semipalatinsk	70.57	327	*e*P	P	23 44 01.4	-0.7
	baz=328						
BTLS	Baital	71.55	320	*e*P	P	23 44 07.9	0.0
	baz=320						
KURK	Kurchatov	71.61	327	P	P	23 44 08.4	+0.3
KURK				IAmb	IAmb	23 44 21.1	
	comp=Z,6.7nm,0.9s						
IUG	Iuzhnay	73.03	316	*e*P	P	23 44 17.2	+0.2
	baz=316						
KK31	Karatay Array	73.07	317	P	P	23 44 17.4	+0.4
KK31				IAmb	IAmb	23 44 33.2	
	comp=Z,3.5nm,1.1s						
KKAR	Karatay Array	73.07	317	P	P	23 44 17.2	+0.1
KKAR	Karatay Array	73.07	317	P	P	23 44 17.4	+0.4
KKAR				IAmb	IAmb	23 44 33.2	
	comp=Z,3.5nm,1.1s						
BRVK	Borovoye	77.27	327	P	P	23 44 40.7	-0.3
BRVK				IAmb	IAmb	23 44 55.8	
	comp=Z,3.8nm,1.0s						
GEYT	Alibeck	80.48	309	P	P	23 44 59.2	+0.2
	comp=Z,0.4nm,0.3s,baz=132,slow=2.1,SNR=1.3						
ILAR	Eielson Array	89.78	25	P	P	23 45 46.3	+1.4
	comp=Z,0.3nm,0.8s,baz=251,slow=5.5,SNR=1.9						
TORD	Torodi Ar. Bea	130.78	284	PKP	PKiKP	23 52 05.8	+6.0
	comp=Z,0.3nm,0.6s,baz=62,slow=2.6,SNR=2.3						

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*IDC **09** 23:48:34.9±2.3, 26°.74N×126°.86E, h135^{km}±22^{km}, mb3.2/5, mb1 3.4/6, mb1mx3.0/38, mbtmp3.6/6, Error ellipse: s-maj=44.4km s-min=16.7km az=79.0*

*JMA **09** 23:48:34.4±0.3, 26°.70N×126°.61E, h119^{km}±3^{km}, M4.0*

ISC 09 23:48:33.8±0.9**, 26°.70N**±0°.09×**126°.62E**±0°.08**, h125**^{km}±7^{km}**, n19, σ0^{s}.82**/31**, mb3.6**/5**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKE	Kume jima 2	0.40	158	P	Pn	23 48 51.9	+0.1
JKE				S	Sn	23 49 05.1	-0.3
JAGN	Aguni-jima	0.57	101	P	Pn	23 48 53.1	+0.4
JAGN				S	Sn	23 49 06.7	-0.3
JJT3	Tamagusuku3	1.18	118	P	Pn	23 48 59.2	+1.1
JJT3				S	Sn	23 49 17.3	+0.8
JIH	Iheya	1.25	74	P	Pn	23 48 59.6	+0.9
JIH				S	Sn	23 49 17.5	-0.2
JNTH	Nagotoyohara	1.27	98	P	Pn	23 48 59.8	+0.8
JNTH				S	Sn	23 49 17.5	-0.6
JOW	Kunigami	1.49	85	P	Pn	23 49 01.7	+0.4
	307nm,0.3s,baz=270,slow=10,SNR=791						
JOW				S	Sn	23 49 20.7	-1.7
	456nm,0.3s,baz=274,slow=27,SNR=35						
JOW	Kunigami	1.49	85	P	Pn	23 49 02.0	+0.6
JOW				S	Sn	23 49 21.6	-0.8
JYRO	Yoronjima	1.67	78	P	Pn	23 49 03.9	+0.4
JYRO				S	Sn	23 49 25.1	-1.0
JOKE	Okinoerabujima	1.86	69	P	Pn	23 49 06.0	+0.2
JOKE				S	Sn	23 49 29.2	-1.1
JIKM	Ikemajima	2.16	215	P	Pn	23 49 09.1	-0.3
JIKM				S	Sn	23 49 35.5	-1.3
JOGS	Gusukube	2.22	210	*e*S	Sn	23 49 38.5	+0.3
JMJ2	Miyako jima3	2.27	211	P	Pn	23 49 10.8	-0.1
JMJ2				S	Sn	23 49 38.4	-0.9
JTK	Tokunoshima	2.34	62	P	Pn	23 49 11.7	0.0
JTK				S	Sn	23 49 39.3	-1.6
JNU	Nakatsue	7.39	29	P	Pn	23 50 20.1	+1.1
	0.8nm,0.3s,baz=192,slow=17,SNR=1.5						
MKAR	Makanchi Array	40.14	312	P	P	23 55 58.1	+0.7
	0.1nm,0.3s,baz=109,slow=7.2,SNR=1.3						
WRA	Warramunga Arr	46.97	170	P	P	23 56 52.0	-0.2
	0.8nm,0.6s,baz=352,slow=8.6,SNR=10						
ASAR	Alice Springs	50.57	171	P	P	23 57 19.6	-0.1
	0.6nm,0.5s,baz=359,slow=14,SNR=12						
STKA	Stephens Creek	59.98	165	P	P	23 58 26.5	-0.5
	1.5nm,0.7s,baz=337,slow=13,SNR=3.3						
YKA	Yellowknife Ar	78.70	25	P	P	00 00 22.1	+0.3
	0.2nm,0.6s,baz=292,slow=5.2,SNR=2.6						

IDC 09 23:48:41.5±1.5**, 27°.12N**×**103°.93E, h0**^{km}**, mb3.3**/4**, mb1 3.5**/4**, mb1mx3.3**/43**, mbtmp3.3**/4**, Error ellipse: s-maj=91.3km s-min=24.7km az=64.0, Yunnan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	Songino Array	20.77	5	P	P	23 53 24.4	+0.3
	0.3nm,0.4s,baz=187,slow=10,SNR=2.6						
MKAR	Makanchi Array	26.01	325	P	P	23 54 16.0	-0.2
	0.5nm,0.7s,baz=133,slow=8.4,SNR=4.8						
WRA	Warramunga Arr	55.29	145	P	P	23 58 17.3	+0.3
	0.6nm,0.7s,baz=334,slow=8.4,SNR=6.4						
ASAR	Alice Springs	58.20	147	P	P	23 58 37.2	-0.5
	0.1nm,0.4s,baz=337,slow=8.1,SNR=1.7						

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*IDC **09** 23:54:27.2±1.0, 30°.77N×142°.17E, h0^{km}, mb3.6/7, mb1 3.8/8, mb1mx3.6/33, mbtmp3.6/8, ML3.1/1, MS3.3/1, Ms1 3.3/1, ms1mx2.3/41, Error ellipse: s-maj=35.9km s-min=20.1km az=85.0*

*NEIC **09** 23:54:30.9±0.8, 30°.8N±0°.1×142°.1E±0°.2, h29^{km}±8^{km}, mb4.2/8, Error ellipse: s-maj=22.0km s-min=17.4km az=79.0*

ISC 09 23:54:30.8±0.9**, 30°.8N**±0°.1×**142°.1E**±0°.1**, h24**^{km}**, n23, σ0^{s}.69**/22**, mb3.9**/11**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	6.57	332	Pn	Pn	23 56 06.1	+0.2
	0.4nm,0.3s,baz=154,slow=11,SNR=18						
MJAR	Matsushiro Arr	6.57	332		Pn	23 56 05.8	-0.1
MAJO	Matsushiro	6.57	332		Pn	23 56 05.3	-0.6
MAT	Matsushiro	6.57	332	P	Pn	23 56 06.4	+0.5
MAT				*e*S	Sn	23 57 19.7	-0.4
JMM	Marumori	7.12	352	Pn	Pn	23 56 12.5	-1.0
JWT	Wachi	7.17	310	Pn	Pn	23 56 13.1	-1.0
SONM	Songino Array	32.07	312	P	P	00 00 56.8	+1.0
	0.4nm,0.6s,baz=122,slow=7.0,SNR=2.9						
SONM	Songino Array	32.07	312	P	P	00 00 55.9	+0.1
MK31	Makanchi Array	48.11	307	P	P	00 03 09.0	+0.4
MKAR	Makanchi Array	48.11	307	P	P	00 03 08.7	+0.1
	0.7nm,0.6s,baz=83,slow=9.1,SNR=13						
MAKZ	Makanchi	48.33	307	P	P	00 03 10.0	-0.3
MAKZ				IAmb	IAmb	00 03 29.8	
	comp=Z,1.8nm,1.4s						
KURK	Kurchatov	50.38	312	P	P	00 03 25.3	-0.5
KURK				IAmb	IAmb	00 03 29.7	
	comp=Z,2.3nm,1.1s						
WB0	Warramunga Arr	50.82	189	P	P	00 03 28.6	-0.8
WR0	Warramunga Arr	50.99	189	P	P	00 03 29.9	-0.8
WR0				IAmb	IAmb	00 03 38.6	
	comp=Z,5.2nm,1.2s						
WB2	Warramunga Arr	51.00	189	P	P	00 03 30.2	-0.6
WB2				IAmb	IAmb	00 03 39.7	
	comp=Z,7.3nm,1.2s						
WRA	Warramunga Arr	51.00	189	P	P	00 03 30.2	-0.6
	comp=Z,0.8nm,0.5s,baz=5.9,slow=7.6,SNR=21						
WRA	Warramunga Arr	51.00	189	IAmb	IAmb	00 03 33.4	
	comp=Z,0.2nm,1.1s						
RSO	Redoubt South	51.56	35	P	P	00 03 34.3	-0.5
ILAR	Eielson Array	54.53	30	P	P	00 03 56.4	+0.1
	comp=Z,0.2nm,0.6s,baz=280,slow=6.3,SNR=4.7						
ASAR	Alice Springs	54.73	189	P	P	00 03 58.9	+0.6
	comp=Z,0.3nm,0.4s,baz=6.6,slow=7.1,SNR=7.1						
INK	Inuvik	59.71	25	LR	LR	00 37 18.7	
	comp=Z,23nm,18.0s,baz=255,slow=43						
YKA	Yellowknife Ar	68.94	29	P	P	00 05 33.5	0.0
	comp=Z,0.1nm,0.4s,baz=273,slow=6.1,SNR=1.5						
FINES	FINESS Array B	74.60	333	P	P	00 06 08.8	+1.4
	comp=Z,1.5nm,0.9s,baz=72,slow=6.0,SNR=3.4						

TAP 09 23:57:52.7, 23°.13N×120°.96E, h3^{km}, ML1.3, 1C, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELDTW	Lidau	0.08	40	*i* P	Pg	23 57 55.1	+0.7
	baz=46						
STYH	Taoyuan	0.17	284	P	Pg	23 57 56.9	+0.8
	baz=284						
STYH				*e*S	Sg	23 57 59.4	+1.0
	baz=284						
STYT	Tauyuan	0.19	281	⇑P	Pg	23 57 57.1	+0.7
	baz=280						
STYT				*e*S	Sg	23 57 59.8	+0.9
	baz=280						
LONT	Longtian	0.27	144	*e*P	Pg	23 57 58.8	+0.9
	baz=144						
LONT				*e*S	Sg	23 58 02.6	+1.1
	baz=144						
FULB	Fuli	0.32	77	*e*P	Pb	23 58 00.1	-0.9
	baz=64						
FULB				*e*S	Sb	23 58 05.1	-1.4
	baz=64						
SLGT	Liugui	0.32	245	*e*P	Pg	23 57 59.8	+1.0
	baz=244						
SLGT				*e*S	Sg	23 58 04.4	+1.4
	baz=244						
TWG	Pinlang	0.32	161	*e*P	Pg	23 57 59.8	+0.9
	baz=160						
TWG				*e*S	Sg	23 58 04.4	+1.3
	baz=160						
TWGBT	Beinan	0.33	160	P	Pg	23 57 59.7	+0.7
	baz=160						
TWGBT				*e*S	Sg	23 58 04.4	+1.1
	baz=160						
WTP	Ta-pu	0.34	290	P	Pb	23 58 00.4	-1.0
	baz=290						
WTP				*e*S	Sb	23 58 05.8	-1.4
	baz=290						
TPUB	Ta-pu	0.35	300	P	Pb	23 58 00.5	-1.0
	baz=313						
TPUB				*e*S	Sb	23 58 05.9	-1.6
	baz=313						
EDH	Donghe	0.35	116	*e*P	Pg	23 58 00.5	+1.0
	baz=124						
EDH				*e*S	Sb	23 58 05.8	-1.7
	baz=124						
TWF1	Yuli	0.38	54	*e*P	Pg	23 58 00.7	+0.7
	baz=67						
EYUL	Yuli	0.40	56	*e*P	Pg	23 58 00.8	+0.4
	baz=57						
CHN4	Tsaushan	0.41	304	*e*P	Pb	23 58 01.8	-0.7
	baz=315						
CHN4				*e*S	Sb	23 58 08.6	-0.5
	baz=315						
ALS	Alishan	0.41	340	P	Pg	23 58 01.4	+0.7
	baz=343						
ALS				*e*S	Sb	23 58 08.0	-1.5
	baz=343						
EHY	Hungye	0.50	41	*e*P	Pg	23 58 02.8	+0.5
	baz=44						
TSMG	Majia	0.51	215	*e*P	Pb	23 58 03.4	-0.9
	baz=206						
TSMG				*e*S	Sg	23 58 08.6	-0.5
	baz=206						
HGSD	Ruisui	0.56	49	*e*P	Pb	23 58 05.1	0.0
	baz=41						
HGSD				*e*S	Sb	23 58 13.5	0.0
	baz=41						
VWDT	VWDT	0.65	15	*e*P	Pg	23 58 05.6	+0.5
	baz=7.0						
WLGB	Puzi	0.70	300	*e*P	Pg	23 58 05.4	-0.8
	baz=300						
SLIU	Shizi	0.92	189	*e*P	Pb	23 58 11.1	-0.1
	baz=179						
SLIU				*e*S	Sb	23 58 24.4	+0.5
	baz=179						

TAP 09 23:57:53.8, 23°.12N×120°.98E, h6^{km}, ML1.4, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELDTW	Lidau	0.08	28	*e*P	Pg	23 57 56.4	+0.5
	baz=32						
ELDTW				S	Sg	23 57 58.1	+0.9
	baz=32						
ELDTW	Lidau	0.08	28	S	Pg	23 57 56.4	+0.6
	baz=46						
STYH	Taoyuan	0.19	285	*e*P	Pg	23 57 58.6	+1.0
	baz=285						
STYH				*e*S	Sg	23 58 01.2	+0.9
	baz=285						
STYT	Tauyuan	0.21	282	P	Pg	23 57 58.9	+0.9
	baz=282						
LONT	Longtian	0.25	146	*e*S	Sb	23 58 04.4	-1.1
	baz=146						
FULB	Fuli	0.30	75	*e*P	Pb	23 58 01.8	+0.1
	baz=74						
FULB				*e*S	Sb	23 58 07.0	+0.1
	baz=74						
TWG	Pinlang	0.31	164	*e*P	Pb	23 58 01.6	-0.1
	baz=162						
TWG				*e*S	Sb	23 58 05.7	-1.3
	baz=162						
TWGBT	Beinan	0.32	162	*e*P	Pb	23 58 01.7	-0.2
	baz=162						
TWGBT				*e*S	Sb	23 58 06.0	-1.2
	baz=162						
SLGT	Liugui	0.33	248	*e*P	Pb	23 58 01.6	-0.5
	baz=247						
SLGT				*e*S	Sb	23 58 06.8	-0.9
	baz=247						
WTP	Ta-pu	0.36	291	*e*P	Pb	23 58 02.1	-0.5
	baz=290						
WTP				*e*S	Sb	23 58 07.8	-0.7
	baz=290						
TPUB	Ta-pu	0.37	300	*e*P	Pb	23 58 02.6	-0.2
	baz=299						
TPUB				*e*S	Sb	23 58 08.0	-0.8
	baz=299						
TWF1	Yuli	0.38	52	P	Pb	23 58 02.5	-0.4
	baz=52						
CHN4	Tsaushan	0.42	303	*e*P	Pb	23 58 03.9	+0.2
	baz=303						
CHN4				*e*S	Sb	23 58 10.3	0.0
	baz=303						
HGSD	Ruisui	0.55	48	*e*P	Pn	23 58 07.1	-1.1
	baz=47						

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*IDC **10** 00:26:22.2±3.1, 32°.92S×178°.51W, h0^{km}, mb3.6/2, mb1 3.9/3, mb1mx3.7/27, mbtmp3.7/3, ML3.7/1, Error ellipse: s-maj=73.6km s-min=47.0km az=125.0*

*NEIC **10** 00:26:26.2±0.6, 33°.35S±0°.09×178°.4W±0°.1, h35^{km}±1^{km}, mb4.2/7, Error ellipse: s-maj=20.1km s-min=8.7km az=316.0*

ISC 10 00:26:26.2±1.1**, 33°.3S**±0°.1×**178°.4W**±0°.2**, h35**^{km}**, n16, σ1^{s}.00**/17**, mb4.1**/6**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	4.01	5	Pn	Pn	00 27 27.2	+2.1
MXZ	Matakaoa Point	5.09	211	Pn	Pn	00 27 37.6	-2.3
URZ	Urewera	6.21	215	Pn	Pn	00 27 56.4	+1.2
	1.5nm,0.3s,baz=343,slow=12,SNR=3.0						
URZ				Sn	Sn	00 29 05.8	+0.8
	0.6nm,0.3s,baz=16,slow=23,SNR=1.9						
URZ	Urewera	6.21	215		Pn	00 27 55.4	+0.2
OUZ	Omahuta	6.95	251	Pn	Pn	00 28 05.8	+0.3
HIZ	Hauiti	7.61	224	Pn	Pn	00 28 15.5	+1.0
EIDS	Eidsvold	27.71	278	P	P	00 32 11.3	0.0
EIDS				IAmb	IAmb	00 32 25.2	
	comp=Z,9.6nm,1.1s						
ASAR	Alice Springs	42.73	270	P	P	00 34 20.3	+0.1
	comp=Z,0.5nm,0.5s,baz=110,slow=7.8,SNR=8.8						
WR0	Warramunga Arr	43.80	275	P	P	00 34 28.6	-0.2
WB2	Warramunga Arr	43.97	275	P	P	00 34 30.0	-0.2
WB2				IAmb	IAmb	00 34 33.2	
	comp=Z,4.4nm,1.1s						
WRA	Warramunga Arr	43.98	275	P	P	00 34 30.5	+0.2
	comp=Z,0.4nm,0.5s,baz=113,slow=8.0,SNR=8.9						
WB0	Warramunga Arr	44.02	276	P	P	00 34 30.3	-0.2
WB0				IAmb	IAmb	00 34 33.1	
	comp=Z,3.0nm,1.0s						
FORT	Forrest	45.09	258	P	P	00 34 38.4	-0.6
VNDA	Vanda	45.23	186	P	P	00 34 38.8	-0.7
VNDA				IAmb	IAmb	00 34 58.6	
	comp=Z,4.1nm,0.8s						
QLMT	Earthquake Lak	98.61	41	P	P	00 40 01.7	+0.2
FINES	FINESS Array B	147.69	338	PKPbc	PKPbc	00 46 06.3	0.0
	comp=Z,1.3nm,0.7s,baz=29,slow=3.2,SNR=6.1						

IDC 10 00:39:21.4±2.3**, 56°.01S**×**26°.87W, h0**^{km}**, mb3.8**/1**, mb1 3.8**/1**, mb1mx3.6**/19**, mbtmp3.8**/1**, Error ellipse: s-maj=123.6km s-min=79.4km az=130.0, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10N1	ASCENSION HYDR	49.03	16	T	T	01 41 25.5	
	baz=196						
H10N3	ASCENSION HYDR	49.03	16	T	T	01 41 07.7	
	baz=196						
H10N2	ASCENSION HYDR	49.05	16	T	T	01 42 17.8	
	baz=196						
TORD	Torodi Ar. Bea	72.94	29	P	P	00 50 52.3	0.0
	0.3nm,0.4s,baz=202,slow=6.3,SNR=8.2						
ILAR	Eielson Array	150.22	312	PKPbc	PKPbc	00 59 12.3	-0.4
	0.2nm,0.6s,baz=90,slow=2.3,SNR=2.3						
SONM	Songino Array	150.55	86	PKPbc	PKPbc	00 59 13.8	-0.3
	0.2nm,0.3s,baz=204,slow=2.8,SNR=2.2						

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*NEIC **10** 00:45:57.8±2.0, 1°.1S±0°.1×139°.91E±0°.04, h35^{km}±2^{km}, mb4.4/17, Error ellipse: s-maj=19.8km s-min=7.1km az=0.0*

*IDC **10** 00:46:03.5±1.3, 2°.13S×139°.70E, h0^{km}, mb3.8/5, mb1 4.1/6, mb1mx3.8/32, mbtmp3.9/6, ML3.9/1, MS3.3/4, Ms1 3.3/4, ms1mx2.9/31, Error ellipse: s-maj=47.3km s-min=24.4km az=95.0*

ISC 10 00:46:02.0±1.6**, 1°.6S**±0°.2×**139°.7E**±0°.1**, h35**^{km}**, n35, σ2^{s}.01**/26**, mb4.2**/11**, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	Fak Fak	7.58	260	Pn	Pn	00 47 50.7	+0.7
COEN	Coen	12.76	165	Pn	Pn	00 49 01.6	+0.5
MTN	Manton Dam	14.05	217	Pn	Pn	00 49 19.5	+0.8
GUMO	Guam	15.92	19	LR	LR	00 56 26.8	
	comp=Z,99nm,18.3s,baz=192,slow=38						
WB0	Warramunga Arr	18.80	196		Pn	00 50 20.3	+0.9
WR0	Warramunga Arr	18.95	195	P	Pn	00 50 20.8	-0.3
WB2	Warramunga Arr	18.98	196	P	Pn	00 50 21.9	+0.4
WB2				IAmb	IAmb	00 50 26.8	
	comp=Z,7.6nm,0.8s						
WRA	Warramunga Arr	18.98	196	P	Pn	00 50 20.7	-0.9
	comp=Z,0.4nm,0.3s,baz=23,slow=12,SNR=17						
WRA				S	Sn	00 53 36.3	-17
	comp=Z,0.0nm,0.3s,baz=15,slow=22,SNR=2.9						
WRA				LR	LR	00 58 06.4	
	comp=Z,113nm,19.0s,baz=10.0,slow=39						
WRA	Warramunga Arr	18.98	196	P	Pn	00 50 20.8	-0.9
WC3	Warramunga Arr	18.99	196	P	Pn	00 50 21.5	-0.2
FITZ	Fitzroy Crossi	21.45	219	P	P	00 50 48.8	+1.3
	comp=Z,3.4nm,0.9s,baz=39,slow=14,SNR=2.7						
FITZ				LR	LR	00 59 59.3	
	comp=Z,120nm,18.5s,baz=64,slow=40						
FITZ	Fitzroy Crossi	21.45	219	P	P	00 50 48.9	+1.4
FITZ				IAmb	IAmb	00 50 56.5	
	comp=Z,8.1nm,1.0s						
AS31	Alice Springs	22.66	194	P	P	00 51 01.4	+1.0
ASAR	Alice Springs	22.66	194	P	P	00 51 00.3	-0.1
	comp=Z,4.8nm,0.8s,baz=28,slow=8.6,SNR=22						
ASAR	Alice Springs	22.66	194	P	P	00 51 01.1	+0.7
EIDS	Eidsvold	26.06	156	P	P	00 51 32.7	+0.3
EIDS				IAmb	IAmb	00 51 49.5	
	comp=Z,10nm,1.0s						
JAGI	Jajag, Banyuwa	26.35	254	P	P	00 51 30.3	-4.9
FORT	Forrest	31.06	200	P	P	00 52 17.5	+0.7
FORT				IAmb	IAmb	00 52 25.6	
	comp=Z,16nm,0.9s						
BBOO	Buckleboo	31.25	186	P	P	00 52 19.0	+0.5
BBOO				IAmb	IAmb	00 52 22.5	
	comp=Z,4.3nm,0.9s						
H11N1	WAKE ISLAND Hy	34.05	50	T	T	01 29 08.7	
	baz=233,slow=75,SNR=10						
H11N2	WAKE ISLAND Hy	34.06	50	T	T	01 29 08.2	
	baz=233,slow=75,SNR=19						
H11N3	WAKE ISLAND Hy	34.07	50	T	T	01 29 10.0	
	baz=233,slow=75,SNR=11						
JHS	Saijyo	36.92	351	P	P	00 53 00.0	-7.7
JHS				IAmb	IAmb	00 53 01.6	
	comp=Z,5.6nm,0.9s						
NWAO	Narrogin (SRO)	37.65	212	P	P	00 53 12.1	-1.9
NWAO				IAmb	IAmb	00 53 31.2	

	comp=Z,7.1nm,1.0s						
CMAR	Chiang Mai Arr	44.77	298	P	P	00 54 22.5	+10
	comp=Z,1.1nm,0.3s,baz=116,slow=6.1,SNR=1.2						
QRZ	Quartz Range	49.04	147	P	P	00 54 42.8	-2.9
MLZ	Mavora Lakes	50.25	154	P	P	00 54 52.8	-2.1
MLZ				IAmb	IAmb	00 54 57.9	
	comp=Z,14nm,1.0s						
RPZ	Rata Peaks	50.35	151	P	P	00 54 54.4	-1.2
MXZ	Matakaoa Point	50.38	140	P	P	00 54 52.8	-3.1
KHZ	Kahutara	50.69	148	P	P	00 54 57.1	-1.0
PETK	Petropavlovsk-	56.55	13	LR	LR	01 15 33.6	
	comp=Z,14nm,21.6s,baz=265,slow=31						
MKAR	Makanchi Array	69.53	322	P	P	00 57 15.9	+8.5
	comp=Z,0.2nm,0.5s,baz=121,slow=5.6,SNR=2.8						
ILAR	Eielson Array	84.40	24	P	P	00 58 39.2	+8.6
	comp=Z,0.3nm,0.6s,baz=271,slow=4.2,SNR=2.3						
DBIC	Dimbokro	144.32	279	PKP	PKiKP	01 05 41.8	+2.6
	comp=Z,3.6nm,1.0s,baz=104,slow=4.2,SNR=3.0						
CPUP	Villa Florida	147.73	150	PKPbc	PKPab	01 05 51.0	+4.9
	comp=Z,1.7nm,0.8s,baz=223,slow=6.3,SNR=3.7						

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*MOS **10** 01:01:49.9±0.7, 44°.35N×148°.58E, h42km, mb4.2/1, Error ellipse: s-maj=30.2km s-min=16.3km az=54.9*
*JMA **10** 01:01:51.7±0.6, 44°.12N×148°.26E, h103km, M3.5*
*SKHL **10** 01:01:51.0±0.6, 44°.60N×148°.00E, h112km±7km, mb4.5/3, msha5.3/3*
*IDC **10** 01:01:54.5±11.0, 44°.97N×148°.05E, h129km±79km, mb3.5/5, mb1 3.6/6, mb1mx3.2/38, mbtmp3.9/6, Error ellipse: s-maj=122.5km s-min=26.5km az=176.0*
ISC 10 01:01:49.0±1.3, **44°.4N**±0°.1×**148°.3E**±0°.1, **h101**km±9km, **n34, σ1s38**/41, **mb3.6**/5, **1C, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	0.86	337	*e*PN	Pn	01 02 08.2	+0.3
KUR				*i* S	Sn	01 02 21.6	-0.5
KUR				pmax	pmax		
	comp=N,29nm,0.1s						
KUR				pmax	pmax		
	comp=Z,129nm,0.1s						
KUR				smax	smax		
	comp=N,353nm,0.3s						
KUR				smax	smax		
	comp=E,311nm,0.2s						
KUR	Kuril'sk	0.86	337	*e*P	Pn	01 02 08.0	+0.1
KUR				AMB	AMB	01 02 09.0	
	comp=E,65nm,0.3s						
KUR				*i* S	Sn	01 02 21.0	-1.1
KUR				A	A	01 02 22.0	
	comp=E,458nm,0.3s						
KUR				A	A	01 02 22.0	
	comp=E,511nm,0.3s						
YUK	Yuzh-Kuril'sk	1.82	258	*e*PN	Pn	01 02 20.3	+1.1
YUK				*i* S	Sn	01 02 42.7	+0.4
YUK				pmax	pmax		
	comp=N,69nm,0.1s						
YUK				pmax	pmax		
	comp=Z,297nm,0.1s						
YUK				smax	smax		
	comp=N,485nm,0.3s						
YUK				smax	smax		
	comp=E,554nm,0.3s						
YUK	Yuzh-Kuril'sk	1.82	258	*e*P	Pn	01 02 20.0	+0.8
YUK				AMB	AMB	01 02 22.0	
	comp=E,150nm,0.3s						
YUK				*i* S	Sn	01 02 42.0	-0.3
YUK				A	A	01 02 43.0	
	comp=E,485nm,0.3s						
YUK				A	A	01 02 43.0	
	comp=E,554nm,0.3s						
GRPR	Tuman	1.89	257	*e*PN	Pn	01 02 21.1	+0.9
GRPR				*i* S	Sn	01 02 43.5	-0.5
GRPR				pmax	pmax		
	comp=Z,131nm,0.2s						
GRPR				pmax	pmax		
	comp=N,70nm,0.1s						
GRPR				pmax	pmax		
	comp=E,48nm,0.1s						
GRPR				smax	smax		
	comp=N,384nm,0.2s						
GRPR				smax	smax		
	comp=E,163nm,0.3s						
GRPR	Tuman	1.89	257	*e*P	Pn	01 02 21.0	+0.9
GRPR				AMB	AMB	01 02 22.0	
	comp=E,130nm,0.3s						
GRPR				*i* S	Sn	01 02 43.0	-1.0
GRPR				A	A	01 02 45.0	
	comp=E,384nm,0.3s						
GRPR				A	A	01 02 45.0	
	comp=E,163nm,0.3s						
NEM2	Nemuro 2	2.16	241	P	Pn	01 02 24.3	+0.7
NEM2				*e*S	Sn	01 02 49.6	-0.4
NMR	Nemuro--Hokkai	2.17	241	⇑*i*PN	Pn	01 02 24.3	+0.6
NMR				*i* S	Sn	01 02 49.6	-0.6
NMR	Nemuro--Hokkai	2.17	241	*i* P	Pn	01 02 24.0	+0.3
NMR				*i* S	Sn	01 02 49.0	-1.2
JRA	Rausu	2.36	259	P	Pn	01 02 28.8	+2.6
JRA				*e*S	Sn	01 02 56.3	+1.5
JNSB	Nemuroshibetsu	2.49	256	P	Pn	01 02 29.7	+1.8
JKHN	Kushirohamanak	2.67	241	*e*S	Sn	01 03 01.0	-1.0
JNK	Nakash	2.74	253	P	Pn	01 02 32.6	+1.3
JAK	Akkeshi	3.00	243	P	Pn	01 02 35.3	+0.6
JAK				*e*S	Sn	01 03 08.7	-1.3
JTKR	Abashiri--Toko	3.22	263	P	Pn	01 02 39.0	+1.5
JAR	Ashorobuto	3.49	252	P	Pn	01 02 43.5	+2.2
JCH	Churui	4.05	245	P	Pn	01 02 50.2	+1.4
JCH				*e*S	Sn	01 03 33.8	-1.3
JKK2	Kamakawa 2	4.06	264	P	Pn	01 02 51.2	+2.3
JKB	Kayabe	5.92	247	P	Pn	01 03 14.7	+0.7
JKB				*e*S	Sn	01 04 16.2	-4.2
PETK	Petropavlovsk-	10.64	32	P	Pn	01 04 18.6	+0.4
	comp=E,0.1nm,0.3s,baz=187,slow=11,SNR=1.4						
H11N2	WAKE ISLAND Hy	29.09	142	T	T	01 38 37.1	
	baz=332,slow=76,SNR=15						
H11N1	WAKE ISLAND Hy	29.11	142	T	T	01 38 42.4	
	baz=332,slow=76,SNR=10						
H11N3	WAKE ISLAND Hy	29.11	142	T	T	01 38 38.4	
	baz=332,slow=76,SNR=8.9						
H11S1	WAKE ISLAND Hy	30.09	143	T	T	01 39 55.0	
	baz=332						
H11S3	WAKE ISLAND Hy	30.09	143	T	T	01 39 59.3	
	baz=332						
H11S2	WAKE ISLAND Hy	30.11	143	T	T	01 39 59.3	
	baz=332						
ILAR	Eielson Array	40.43	37	P	P	01 09 17.3	+0.4
	comp=E,0.6nm,1.0s,baz=275,slow=9.8,SNR=3.1						
MKAR	Makanchi Array	45.02	297	P	P	01 09 53.9	-0.4
	comp=E,0.7nm,0.7s,baz=79,slow=7.9,SNR=5.3						
MKAR	Makanchi Array	45.02	297	*e*P	P	01 09 53.9	-0.4
KURK	Kurchatov	45.85	304	P	P	01 09 59.9	-0.8
KURK	Kurchatov	45.85	304	*e*P	P	01 09 59.9	-0.8
KURBB	Kurchatov Arra	45.94	304	P	P	01 09 59.9	-1.5
	comp=E,0.4nm,0.2s,baz=69,slow=8.1,SNR=1.6						
FINES	FINESS Array B	64.64	333	P	P	01 12 13.9	-1.5
	comp=E,2.1nm,0.8s,baz=57,slow=10,SNR=2.6						
TXAR	Lajitas Array	81.56	57	P	P	01 13 57.2	+1.5
	comp=E,0.2nm,0.5s,baz=301,slow=3.9,SNR=4.2						

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*IDC **10** 01:04:48.4±2.3, 33°.98S×178°.88W, h0km, mb4.1/2, mb1 4.3/4, mb1mx4.0/25, mbtmp4.1/4, ML3.9/2, Error ellipse: s-maj=58.4km s-min=30.8km az=121.0*
*WEL **10** 01:04:52.3±1.1, 34°S±21°×17°8W±2°8, h180km±27km, M4.3/12, mB4.5/3, ML4.6/7, MLv4.3/12, Mw(mB)3.6/3, Error ellipse: s-maj=0.0km s-min=0.0km az=125.7*
ISC 10 01:04:52.4±1.9, **33°.9S**±0°.1×**178°.7W**±0°.3, **h35**km, **n23, σ1s58**/37, **South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	4.35	213	P	Pn	01 05 55.8	-0.1
MXZ				S	Sn	01 06 46.8	+1.5
WMGZ	Waiomatatini S	4.51	210	P	Pn	01 05 58.8	+0.6
WMGZ				S	Sn	01 06 51.5	+2.0
PKGZ	Pakihiroa	4.72	212	P	Pn	01 05 59.8	-1.3
PKGZ				S	Sn	01 06 56.1	+1.5
HAZ	Te Kaha	4.75	216	P	Pn	01 06 02.3	+0.8
HAZ				S	Sn	01 06 58.5	+3.2
RUGZ	Raukumara Rang	4.97	215	P	Pn	01 06 03.5	-1.0
RUGZ				S	Sn	01 07 01.6	+0.8
TWGZ	Tauwhareparae	5.00	211	P	Pn	01 06 02.6	-2.3
TWGZ				S	Sn	01 07 02.7	+1.2
CNGZ	Carnagh Statio	5.17	208	P	Pn	01 06 07.0	-0.2
MWZ	Matawai	5.33	214	P	Pn	01 06 08.1	-1.4
MWZ				S	Sn	01 07 11.4	+1.7
URZ	Urewera	5.47	217	Pn	Pn	01 06 11.0	-0.3
	6.2nm,0.3s,baz=32,slow=3.1,SNR=13						
URZ				Sn	Sn	01 07 11.9	-1.2
	2.6nm,0.3s,baz=112,slow=19,SNR=3.5						
URZ	Urewera	5.47	217	P	Pn	01 06 11.5	+0.1
URZ				S	Sn	01 07 13.5	+0.5
RIGZ	Rimuhau	5.54	210	P	Pn	01 06 12.4	+0.1
RIGZ				S	Sn	01 07 15.9	+1.1
SNGZ	Shannon Statio	5.78	212	P	Pn	01 06 16.3	+0.6
SNGZ				S	Sn	01 07 22.5	+1.7
RAHZ	Arahi	6.01	213	P	Pn	01 06 19.6	+0.9
RAHZ				S	Sn	01 07 26.7	+0.4
MTHZ	Maungataniwha	6.07	215	P	Pn	01 06 20.8	+1.2
MTHZ				S	Sn	01 07 28.2	+0.3
BKZ	Black Stump Fm	6.48	215	P	Pn	01 06 24.5	-0.8
BKZ				S	Sn	01 07 37.3	-0.7
OTVZ	Oturere	6.90	219	P	Pn	01 06 31.7	+0.6
ANWZ	Angora Road	7.55	209	P	Pn	01 06 44.7	+4.8
MRZ	Mangatainoka R	8.10	212	P	Pn	01 06 46.5	-1.0
MRZ				S	Sn	01 08 12.5	-5.2
RPZ	Rata Peaks	12.59	216	Pn	Pn	01 07 45.9	-3.1
	0.5nm,0.3s,baz=68,slow=4.5,SNR=0.7						
RPZ				Sn	Sn	01 09 55.8	-12
	0.3nm,0.3s,baz=288,slow=20,SNR=1.0						
ASAR	Alice Springs	42.43	271	P	P	01 12 44.0	+0.1
	1.6nm,0.6s,baz=114,slow=7.4,SNR=22						
WRA	Warramunga Arr	43.74	276	P	P	01 12 54.5	0.0
	1.8nm,0.5s,baz=117,slow=7.2,SNR=39						
MKAR	Makanchi Array	119.54	309	PKP	PKiKP	01 23 39.5	+1.5
	0.2nm,0.5s,baz=123,slow=0.6,SNR=1.9						
FINES	FINESS Array B	148.21	338	PKPbc	PKiKP	01 24 34.9	-0.6
	1.8nm,0.7s,baz=45,slow=3.4,SNR=10.0						

INET 10 01:20:20.4, 10°.91N×85°.51W, h32km, ML3.6, MW2.7, Costa Rica

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IDC 10 01:24:42.9±16.0, **4°.85S×128°.79E, h196**km±177km, **mb3.5**/1, **mb1 3.5**/4, **mb1mx3.2**/35, **mbtmp4.0**/4, **ML3.7**/3, **MS3.4**/1, **Ms1 3.4**/1, **ms1mx2.6**/24, **Error ellipse: s-maj=123.6km s-min=47.6km az=47.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	13.52	193	P	Pn	01 27 46.9	-0.2
	0.1nm,0.3s,baz=18,slow=9.6,SNR=1.8						
FITZ				S	Sn	01 30 13.7	-4.3
	0.1nm,0.3s,baz=79,slow=19,SNR=2.0						
WRA	Warramunga Arr	15.94	161	P	Pn	01 28 16.8	-0.1
	0.7nm,0.3s,baz=340,slow=12,SNR=26						
WRA				S	S	01 31 01.2	-12
	0.1nm,0.3s,baz=337,slow=21,SNR=2.0						
ASAR	Alice Springs	19.34	166	P	P	01 28 53.6	0.0
	0.6nm,0.3s,baz=344,slow=12,SNR=41						
ASAR				S	S	01 32 10.2	-12
	0.1nm,0.3s,baz=347,slow=23,SNR=6.1						
MSVF	Nonsavu	49.82	109	LR	LR	01 52 23.7	
	comp=Z,44nm,20.6s,baz=222,slow=33						
MKAR	Makanchi Array	65.78	327	P	P	01 35 07.0	0.0
	0.7nm,0.4s,baz=127,slow=7.8,SNR=18						

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*IDC **10** 01:34:51.5±2.5, 10°.47S×161°.26E, h84km±18km, mb3.6/8, mb1 3.9/9, mb1mx3.7/26, mbtmp4.0/9, MS3.1/4, Ms1 3.1/4, ms1mx2.8/25, Error ellipse: s-maj=27.5km s-min=19.3km az=78.0*
ISC 10 01:34:49.3±0.8, **10°.46S**±0°.10×**161°.4E**±0°.1, **h61**km, **n17, σ2s13**/19, **mb3.9**/8, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	1.77	305	P	Pn	01 35 19.2	+1.6
	1µm,0.3s,baz=176,slow=6.1,SNR=191						
HNR				S	Sn	01 35 39.9	+0.7
	1µm,0.3s,baz=154,slow=17,SNR=8.9						
NOUC	Port Laguerre	12.49	159	P	Pn	01 37 47.2	+3.0
DZM	Mont Dzumac	12.51	158	P	Pn	01 37 47.5	+2.8
	5.3nm,0.3s,baz=308,slow=16,SNR=24						
DZM				S	Sn	01 39 59.5	-3.0
	0.7nm,0.3s,baz=306,slow=19,SNR=2.1						
DZM				LR	LR	01 41 39.3	
	comp=Z,115nm,19.9s,baz=264,slow=32						
DZM	Mont Dzumac	12.51	158	P	Pn	01 37 47.8	+3.2
YATNC	Mamie plateau,	12.67	156	P	Pn	01 37 47.9	+1.1
ONTNC	Ouen Toro	12.73	158	P	Pn	01 37 50.8	+3.3
OUENC	Ouen Island, N	12.98	157	P	Pn	01 37 54.1	+3.2
WRA	Warramunga Arr	27.74	247	P	P	01 40 31.4	-0.9
	1.3nm,0.7s,baz=78,slow=8.9,SNR=8.5						
ASAR	Alice Springs	29.33	240	P	P	01 40 44.8	-1.7
	0.4nm,0.7s,baz=70,slow=9.3,SNR=5.0						
ASAR				pP	pwP	01 41 05.2	-1.2
	0.5nm,0.5s,baz=62,slow=10,SNR=3.1						
ASAR				sP	sP	01 41 15.6	+9.0
	0.8nm,0.7s,baz=62,slow=9.6,SNR=3.6						
KSRS	Korea Array	57.08	328	P	P	01 44 29.0	-0.3
	0.9nm,0.5s,baz=156,slow=8.1,SNR=1.8						
KSRS				LR	LR	02 08 40.5	
	comp=Z,15nm,18.2s,baz=86,slow=36						
USRK	Ussuriysk Ar.	60.60	336	P	P	01 44 52.9	-0.7
	3.0nm,0.7s,baz=178,slow=4.2,SNR=4.8						
CMAR	Chiang Mai Arr	68.00	295	LR	LR	02 18 08.4	
	comp=Z,6.7nm,18.1s,baz=290,slow=38						
SONM	Songino Array	75.72	325	P	P	01 46 28.4	-0.1
	1.1nm,0.7s,baz=141,slow=5.2,SNR=6.7						
SONM				pP	pP	01 46 47.0	+1.8
	1.3nm,0.8s,baz=135,slow=6.7,SNR=4.7						
ILAR	Eielson Array	84.36	20	P	P	01 47 13.9	-0.5
	0.5nm,0.6s,baz=256,slow=5.1,SNR=7.3						
MKAR	Makanchi Array	90.20	318	P	P	01 47 41.7	-1.5
	0.3nm,0.5s,baz=99,slow=5.4,SNR=5.8						
ZALV	Zalesovo Beam	90.61	325	LR	LR	02 28 37.1	
	comp=Z,12nm,19.4s,baz=109,slow=36						
YKA	Yellowknife Ar	96.42	28	P	P	01 48 10.8	-0.5
	0.2nm,0.6s,baz=254,slow=4.0,SNR=3.6						

IDC 10 01:50:44.6±2.2, **7°.01S×150°.82E, h0**km, **mb3.6**/4, **mb1 3.9**/4, **mb1mx3.6**/23, **mbtmp3.7**/4, **MS3.9**/1, **Ms1 3.9**/1, **ms1mx2.6**/23, **Error ellipse: s-maj=114.9km s-min=30.3km az=130.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	4.34	236	Sn	Sn	01 52 45.3	+2.0
	2.4nm,0.3s,baz=108,slow=20,SNR=5.6						
WRA	Warramunga Arr	20.52	230	P	P	01 55 24.7	0.0
	1.1nm,0.6s,baz=56,slow=12,SNR=11						
ASAR	Alice Springs	23.20	223	P	P	01 55 53.2	-0.2
	0.3nm,0.4s,baz=52,slow=9.0,SNR=5.0						
FITZ	Fitzroy Crossi	26.90	243	P	P	01 56 27.8	+0.2
	5.0nm,1.2s,baz=78,slow=9.3,SNR=2.4						
DAV	Davao City (W)	28.80	299	LR	LR	02 09 04.2	
	comp=Z,234nm,18.6s,baz=336,slow=38						
ILAR	Eielson Array	84.93	22	P	P	02 03 21.2	-0.1
	0.4nm,0.8s,baz=257,slow=4.9,SNR=2.9						
TORD	Torodi Ar. Bea	149.02	284	PKPbc	PKPbc	02 10 35.5	-0.4
	0.4nm,0.9s,baz=91,slow=3.2,SNR=1.8						

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*IGQ **10** 02:14:09±0.7, 1°S±2°×8°1W±°, h10km*
*NEIC **10** 02:14:10.1±1.9, 0°.89S±0°.09×80°.95W±0°.06, h28km±8km, Error ellipse: s-maj=12.9km s-min=8.6km az=161.0*
*IDC **10** 02:14:15.7±2.9, 0°.96S×80°.99W, h69km±28km, mb3.5/8, mb1 3.8/11, mb1mx3.6/33, mbtmp4.0/11, MS3.2/9, Ms1 3.2/9, ms1mx3.0/27, Error ellipse: s-maj=33.9km s-min=17.7km az=52.0*
ISC 10 02:14:08.3±0.6, **0°.83S**±0°.03×**80°.91W**±0°.05, **h10**km, **n90, σ1s60**/91, **mb3.9**/9, **MS3.3**/5, **Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAB1	Cabo Pasado-Ma	0.66	48	P	Pb	02 14 21.0	-0.9
CABP	Cabo Pasado	0.66	48	P	Pn	02 14 22.0	-1.7
PPLP	Puerto Lpez	0.72	169	P	Pn	02 14 23.0	-1.7
PPLP				S	Sb	02 14 33.0	0.0
JAMA	Jama	0.91	51	P	Pg	02 14 25.0	-0.8
MAG1	Magdalena	1.37	57	P	Pg	02 14 34.0	-0.6
AMIL	Milagro (Trans	1.85	135	P	Pb	02 14 41.0	-1.2
AMIL				S	Sb	02 15 06.0	+0.6
ASDO	Santo Domingo	1.88	72	P	Pn	02 14 40.0	-0.6
MORR	Playas El Morr	1.89	162	P	Pb	02 14 42.0	-0.9
BV15	Puerto Quito-O	1.96	60	P	Pn	02 14 41.0	-0.6
CHSH	Refugio Sur-Vo	2.15	108	P	Pn	02 14 45.0	+0.2
ILLI	Illinizas Sur	2.19	87	P	Pn	02 14 45.0	-0.2
ISPG	Isla Puna-Puer	2.25	161	P	Pb	02 14 48.0	-1.1
SAGO	Sagoatoa	2.27	98	P	Pb	02 14 48.0	-1.8
PAST	Pastocalle	2.27	87	P	Pb	02 14 49.0	-0.8
COHC	Cochancay	2.32	134	P	Pn	02 14 46.0	-0.6
IGUA	Igualata	2.37	106	P	Pb	02 14 49.0	-2.4
GGPT	Toaza - Volcan	2.37	75	P	Pn	02 14 47.0	-0.7
PAC1	Pacto, Paraso	2.38	63	P	Pn	02 14 47.0	-0.7
TERV	Terraza Guagua	2.40	74	P	Pn	02 14 49.0	+0.8
PINO	Pino	2.40	74	P	Pn	02 14 48.0	-0.3
GGP	Refugio Guagua	2.41	74	P	Pn	02 14 48.0	-0.4
CAMI	Rancho Maria	2.41	86	P	Pn	02 14 49.0	+0.7
BNAS	Cotopaxi Volca	2.44	86	P	Pn	02 14 50.0	+1.3
YANA	Yana	2.45	73	P	Pn	02 14 49.0	+0.2
BMOR	Cotopaxi Volca	2.46	88	P	Pn	02 14 50.0	+1.0
BREF	Cotopaxi Volca	2.48	86	P	Pb	02 14 52.0	-1.4
PITA	Cotopaxi Volc	2.50	84	P	Pb	02 14 51.0	-2.6
JUI6	Juive	2.51	104	P	Pn	02 14 51.0	+1.4
VC1	Cotopaxi 1	2.52	86	P	Pn	02 14 51.0	+1.2
BTAM	Cotopaxi Volca	2.52	86	P	Pn	02 14 51.0	+1.1
BMAS	Trigal station	2.52	105	P	Pn	02 14 51.0	+1.2
PIS1	Pisayambo	2.54	95	P	Pb	02 14 53.0	-1.3
RETU	Refugio	2.54	104	P	Pb	02 14 52.0	-2.4
ARRY	Arrayan	2.55	105	P	Pn	02 14 51.0	+0.9
TAMB	Tambo	2.55	87	P	Pg	02 14 57.0	-0.3
RUN5	Runtun	2.56	103	P	Pb	02 14 52.0	-2.5
PULU	Pululahua	2.56	71	P	Pn	02 14 50.0	-0.2
PAT1	Patacocha	2.56	105	P	Pb	02 14 53.0	-1.7
BRUN	Tungurahua Vol	2.57	103	P	Pb	02 14 52.0	-2.7
BULB	Ulba Tungurahu	2.57	104	P	Pn	02 14 52.0	+1.5
PIAT	Ana Tenorio	2.66	94	P	Pn	02 14 53.0	+1.4
ANTG	Antisana-Guama	2.68	83	P	Pn	02 14 53.0	+1.0
OTAV	Otavalo	2.68	67	Pn	Pn	02 14 52.0	0.0
OTAV				Sn	Sn	02 15 26.1	+1.3
ANTM	Antisana-La Mi	2.71	84	P	Pn	02 14 54.0	+1.6
CUSE	Cuicocha Este	2.76	66	P	Pn	02 14 53.0	0.0
ANTS	Antisana-Sarah	2.76	83	P	Pn	02 14 55.0	+1.8
CUIC	Cuicocha-Domo	2.79	66	P	Pn	02 14 53.0	-0.5
CUSW	Cuicocha Oeste	2.79	67	P	Pn	02 14 54.0	+0.5
COTA	Cotacachi	2.82	66	P	Pn	02 14 54.0	0.0
ARNL	Arenillas	2.83	163	P	Pn	02 14 54.0	+0.4
IMBA	Imbabura, San	2.93	68	P	Pn	02 14 57.0	+1.6
URCU	Urcuqui	2.94	65	P	Pn	02 14 56.0	+0.4
ANGU	Angureal	3.03	73	P	Pb	02 15 01.0	-1.8
CAYA	Cayambe	3.06	73	P	Pb	02 15 00.0	-3.2
YAHU	Yahuarcocha	3.08	67	P	Pn	02 14 59.0	+1.5
LNGL	El Angel-Carch	3.30	62	P	Pn	02 15 03.0	+2.4
CHMA	Chilma	3.31	59	P	Pn	02 15 01.0	+0.5
BOSC	San Juan Bosco	3.34	134	P	Pb	02 15 04.0	-3.8
LAV4	Lava4-Reventad	3.37	77	P	Pb	02 15 05.0	-3.3
ECEN	Cerro Negro	3.37	61	P	Pn	02 15 03.0	+1.4
CHL1	Volc¡n Chiles	3.38	61	P	Pn	02 15 03.0	+1.3
CHL2	Volc¡n Chiles	3.41	62	P	Pn	02 15 03.0	+1.0
TULM	Tulcn-Chalpat	3.48	64	P	Pn	02 15 06.0	+2.9
MCRA	Macar, Loja	3.64	165	P	Pn	02 15 05.0	+0.1
ATAH	Atahualpa	6.75	158	P	Pn	02 15 51.7	+3.8
	1.9nm,0.3s,baz=9.7,slow=7.1,SNR=17						
ATAH				S	Sn	02 17 10.2	+5.2
	4.6nm,0.3s,baz=32,slow=10,SNR=4.5						
ATAH				LR	LR	02 17 57.4	
	comp=Z,78nm,19.1s,baz=335,slow=33						
ROSC	El Rosal	8.67	49	P	Pn	02 16 21.1	+6.9
	4.3nm,0.3s,baz=233,slow=15,SNR=9.2						
ROSC				LR	LR	02 19 52.1	
	comp=Z,164nm,18.4s,baz=159,slow=38						
ROSC	El Rosal	8.67	49	Pn	Pn	02 16 15.3	+1.0
PAYG	Puerto Ayora	9.37	271	Pn	Pn	02 16 22.8	-0.8
NNA	Nana	11.80	160	P	Pn	02 16 58.4	+1.5
	1.8nm,0.3s,baz=321,slow=12,SNR=6.4						
NNA				S	Sn	02 19 06.1	-2.6
	4.9nm,0.3s,baz=152,slow=22,SNR=8.2						
NNA				LR	LR	02 21 55.9	
	comp=Z,76nm,19.4s,baz=339,slow=39						
NNA	Nana	11.80	160	Pn	Pn	02 16 55.8	-1.1
NNA				Sn	Sn	02 19 04.7	-4.0
SDV	Santo Domingo	14.07	46	P	P	02 17 37.7	+1.7
	0.7nm,0.3s,baz=253,slow=9.7,SNR=21						
SDV				LR	LR	02 23 54.3	
	comp=Z,82nm,18.2s,baz=236,slow=41						
SDV	Santo Domingo	14.07	46	Pn	Pn	02 17 28.3	+0.2
MTO3	Montecristo	17.29	331	Pn	P	02 18 09.4	-2.4
SAML	Samuel	19.41	115	P	P	02 18 33.4	-1.4
SAML				IAmb	IAmb	02 18 37.8	
	comp=Z,5.3nm,0.8s						
PTGA	Pitinga	20.95	90	P	P	02 18 54.2	+2.6
	comp=Z,1.9nm,0.5s,baz=269,slow=11,SNR=7.1						
PTGA				LR	LR	02 28 38.6	
	comp=Z,27nm,19.1s,baz=286,slow=41						
MNMC	Minye Minye	21.30	149	P	P	02 18 55.5	-0.2
MNMC				IAmb	IAmb	02 19 04.7	
	comp=Z,7.8nm,0.7s						
PB08	IPOC Station P	22.38	150	P	P	02 19 07.4	+0.1
PB08				IAmb	IAmb	02 19 21.6	
	comp=Z,3.5nm,0.8s						
SJG	San Juan	23.78	37	LR	LR	02 30 34.3	
	comp=Z,34nm,18.8s,baz=110,slow=41						
SIV	San Ignacio	24.69	129	P	P	02 19 31.1	+1.2
	comp=Z,1.5nm,0.7s,baz=305,slow=10,SNR=8.3						
SIV				LR	LR	02 30 03.1	
	comp=Z,102nm,20.8s,baz=254,slow=38						
MDP	Montagnes des	28.85	78	LR	LR	02 31 55.1	
	comp=Z,93nm,19.4s,baz=279,slow=37						
CPUP	Villa Florida	34.03	140	LR	LR	02 37 53.0	
	comp=Z,94nm,18.0s,baz=64,slow=42						
BDFB	Brasilia	35.64	116	P	P	02 21 07.2	+0.2
	comp=Z,1.8nm,0.4s,baz=284,slow=8.7,SNR=3.9						
BDFB	Brasilia	35.64	116	P	P	02 21 07.1	+0.2
BDFB				IAmb	IAmb	02 21 10.1	
	comp=Z,2.4nm,0.9s						
TXAR	Lajitas Array	37.05	326	PcP	PcP	02 23 41.5	+1.8
	comp=Z,0.4nm,0.9s,baz=152,slow=4.1,SNR=2.6						
ANMO	Albuquerque	42.87	329	P	P	02 22 08.7	+1.4
	comp=Z,0.3nm,0.5s,baz=121,slow=12,SNR=2.2						
ULM	Lac du Bonnet	52.48	348	P	P	02 23 21.4	+0.1
	comp=Z,0.6nm,0.4s,baz=165,slow=8.7,SNR=2.8						
YKA	Yellowknife Ar	68.07	344	P	P	02 25 07.6	-0.3
	comp=Z,0.3nm,0.6s,baz=133,slow=6.2,SNR=6.9						
INK	Inuvik	77.74	342	P	P	02 26 06.4	+1.3
	comp=Z,1.0nm,0.7s,baz=147,slow=4.1,SNR=4.5						
INK	Inuvik	77.74	342	P	P	02 26 05.0	-0.1
TORD	Torodi Ar. Bea	82.99	77	P	P	02 26 34.2	-0.3
	comp=Z,0.4nm,0.5s,baz=278,slow=6.1,SNR=3.8						

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*DJA **10** 02:50:53.8±0.4, 8°S±3°×12°0E±°, h162km±6km, M3.8/12, MLv3.8/12*
*IDC **10** 02:50:56.0±1.9, 7°.99S×119°.93E, h195km±17km, mb3.2/4, mb1 3.4/7, mb1mx3.2/37, mbtmp3.8/7, Error ellipse: s-maj=54.7km s-min=9.8km az=56.0*
ISC 10 02:50:53.0±0.8, **8°.26S**±0°.05×**119°.52E**±0°.05, **h170**km, **n19, σ1s38**/25, **mb3.4**/3, **Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WSI	Waingapu	1.60	151	P	Sn	02 51 50.4	+0.4
PLAI	Plampang	1.81	252	P	Pn	02 51 27.9	+0.6
PLAI				S	Sn	02 51 53.4	-0.4
EDFI	Ende, Flores	2.21	103	P	Pn	02 51 32.7	+0.9
EDFI				S	Sn	02 52 01.6	-0.2
BASI	Baing, Sumba	2.21	152	P	Pn	02 51 32.7	+1.0
BASI				S	Sn	02 52 03.0	+1.1
BSSI	Bau Bau, Buton	2.32	25	P	Pn	02 51 32.3	-0.7
BSSI				S	Sn	02 52 04.5	+0.4
TWSI	Taliwang, Sumb	2.65	259	P	Pn	02 51 37.3	+0.4
BKSI	Bulukumba	2.98	12	P	Pn	02 51 41.3	+0.3
KAPI	Kappang	3.23	4	P	Pn	02 51 44.7	+0.6
	6.3nm,0.3s,baz=177,slow=8.0,SNR=18						
BNSI	Bone	3.88	9	P	Pn	02 51 53.3	+1.0
SRBI	Singaraja	4.26	272	P	Pn	02 51 57.3	+0.1
SOEI	Soe	4.92	108	P	Pn	02 52 06.9	+1.0
TTSI	Tana Toraja	5.19	3	P	Pn	02 52 16.8	+7.5
JAGI	Jajag, Banyuwa	5.31	267	P	Pn	02 52 10.8	-0.1
FITZ	Fitzroy Crossi	11.45	149	P	Pn	02 53 32.9	+1.3
	1.1nm,0.3s,baz=339,slow=10,SNR=28						
FITZ				S	Sn	02 55 34.0	-4.7
	0.8nm,0.3s,baz=194,slow=18,SNR=3.3						
WRA	Warramunga Arr	18.46	131	P	P	02 54 56.4	+0.4
	0.6nm,0.3s,baz=302,slow=13,SNR=22						
WRA				S	S	02 58 16.0	-1.9
	0.2nm,0.3s,baz=309,slow=25,SNR=7.9						

ASAR	Alice Springs	20.61	140	P	P	02 55 20.4	+1.2
	2.3nm,0.5s,baz=319,slow=10,SNR=38						
ASAR				S	S	02 58 58.9	-1.4
	2.3nm,1.0s,baz=322,slow=21,SNR=11						
STKA	Stephens Creek	31.20	142	P	P	02 56 58.1	+1.8
	1.3nm,0.6s,baz=312,slow=15,SNR=4.9						
SONM	Songino Array	57.05	349	P	P	03 00 20.9	-0.4
	0.3nm,0.5s,baz=174,slow=7.7,SNR=3.6						
MKAR	Makanchi Array	64.04	332	P	P	03 01 07.7	-0.8
	0.3nm,0.6s,baz=156,slow=7.2,SNR=4.0						

REY ***10*** *03:18:54.4, 64°.66N×17°.51W, h8^{km}*
IDC ***10*** *03:18:55.2±0.6, 64°.65N×17°.77W, h0^{km}, mb3.8/15, mb1 4.1/18, mb1mx3.9/38, mbtmp3.9/18, ML2.5/2, MS3.4/16, Ms1 3.4/16, ms1mx3.2/40, Error ellipse: s-maj=21.7km s-min=10.6km az=24.0*
NEIC ***10*** *03:18:56.7±0.6, 64°.55N±0°.07×17°.63W±0°.10, h9^{km}±3^{km}, mb4.6/43, Error ellipse: s-maj=9.9km s-min=5.9km az=189.0*
ISC 10 03:18:56.2±0.6**, 64°.67N**±0°.02×**17°.55W**±0°.02**, h7**^{km}±4^{km}**, n154, $\sigma 2^{s}.15$**/178**, mb4.3**/51**, MS3.2**/12**, 5D, Iceland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IVON	Vonarskard	0.09	271	P	Pg	03 18 57.0	-1.4
	baz=277						
IVON				S	Sg	03 18 59.3	-0.6
	baz=277						
IDJK	Dyngjujokull	0.21	141	P	Pg	03 18 58.5	-2.1
	baz=143						
IHAM	Hamarinn	0.23	212	P	Pg	03 18 58.8	-1.9
	baz=217						
IURH	Urdarhals	0.23	49	P	Pg	03 18 59.0	-1.8
	baz=44						
IURH				S	Sg	03 19 02.8	-1.0
	baz=44						
IGRF	Grimsfjall	0.29	155	P	Pg	03 18 59.8	-2.2
	baz=158						
IGRF				S	Sg	03 19 04.3	-1.6
	baz=158						
IKVE	Kverkfjoll	0.37	89	P	Pg	03 19 01.4	-2.1
	baz=87						
IKVE				S	Sg	03 19 06.7	-1.8
	baz=87						
ISKR	Skrokkalda	0.38	253	P	Pg	03 19 01.8	-1.8
	baz=256						
THOR	Thorvaldshraun	0.46	54	P	Pg	03 19 02.7	-2.3
	baz=52						
THOR				S	Sg	03 19 09.4	-1.6
	baz=52						
IJOK	Jokulheimar	0.46	220	P	Pg	03 19 01.6	-3.5
	baz=222						
IKRE	Kreppuhraun	0.51	77	P	Pg	03 19 03.4	-2.7
	baz=75						
IKRE				S	Sg	03 19 10.6	-2.2
	baz=75						
IASK	Askja	0.54	45	P	Pg	03 19 04.1	-2.6
	baz=43						
IASK				S	Sg	03 19 12.0	-1.8
	baz=43						
IMKO	Mokollar	0.60	59	P	Pg	03 19 05.1	-2.7
	baz=57						
IMKO				S	Sg	03 19 13.6	-2.1
	baz=57						
IIEY	Innrieyrar	0.63	204	P	Pg	03 19 05.9	-2.4
	baz=206						
IIEY				S	Sg	03 19 15.0	-1.5
	baz=206						
ISVA	Svartarkot	0.68	10	P	Pg	03 19 06.8	-2.5
	baz=8.8						
ISVA				S	Sg	03 19 16.6	-1.5
	baz=8.8						
IKSK	Karasker	0.69	137	P	Pg	03 19 06.0	-3.5
	baz=138						
IKSK				S	Sg	03 19 15.8	-2.7
	baz=138						
IKAL	Kalfafell	0.73	185	P	Pg	03 19 07.3	-2.9
	baz=186						
IKAL				S	Sg	03 19 17.9	-1.8
	baz=186						
IVAT	Vatnsfell	0.77	231	P	Pg	03 19 08.5	-2.5
	baz=233						
IVSH	V-Sauoahnukur	0.79	79	P	Pg	03 19 08.0	-3.4
	baz=78						
IVSH				S	Sg	03 19 19.1	-2.6
	baz=78						
IHVE	Hveravellir	0.89	284	P	Pg	03 19 10.1	-3.2
	baz=284						
IHVE				S	Sg	03 19 23.2	-1.5
	baz=284						
IFAG	Fagurholsmyri	0.89	154	P	Pg	03 19 09.8	-3.5
	baz=154						
IADA	Aoalbol	0.91	67	P	Pg	03 19 10.0	-3.7
	baz=66						
IMEL	Melhnausar	0.98	22	P	Pg	03 19 11.5	-3.5
	baz=21						
IMEL				S	Sg	03 19 25.0	-2.6
	baz=21						
IREN	Reynihlio	1.02	15	P	Pg	03 19 12.2	-3.5
	baz=14						
IREN				S	Sg	03 19 25.7	-3.2
	baz=14						
ISNB	Snabyli	1.05	207	P	Pg	03 19 13.1	-3.3
	baz=208						
IKVO	Krokottuvotn	1.08	15	P	Pg	03 19 13.3	-3.7
	baz=14						
IGRS	Grimsstaoir	1.14	31	P	Pg	03 19 14.2	-3.9
	baz=30						
IRJU	Rjupnafell	1.17	205	P	Pg	03 19 15.4	-3.2
	baz=206						
IGYG	Gygjarholskot	1.22	252	P	Pb	03 19 15.8	-3.8
	baz=253						
ISKI	Skildingahlsh	1.22	10	P	Pb	03 19 15.7	-4.0
	baz=9.2						
IGHA	Grjothals	1.23	17	P	Pb	03 19 15.7	-4.2
	baz=16						
IGRA	Granastaoir	1.25	359	P	Pn	03 19 16.1	-4.1
	baz=359						
IHAU	Haukadalur	1.27	237	P	Pn	03 19 16.6	-3.7
	baz=238						
IHVO	Lagu-Hvolar	1.28	207	P	Pn	03 19 17.1	-3.4
	baz=208						
IDIM	Dimmadalss	1.32	11	P	Pn	03 19 17.2	-3.9
	baz=10						
IHLA	Hella	1.33	345	P	Pn	03 19 17.7	-3.5
	baz=344						
IALF	Alftagrof	1.39	212	P	Pn	03 19 18.8	-3.2
	baz=213						
IHED	Heoinshofoi	1.42	4	P	Pn	03 19 18.9	-3.5
	baz=3.2						
IESK	Eystri-Skogar	1.42	217	P	Pn	03 19 19.1	-3.4
	baz=218						
ISAU	Saurbar	1.42	243	P	Pn	03 19 19.0	-3.5
	baz=243						
IBRE	Brettingsstaoi	1.47	354	P	Pn	03 19 19.5	-3.6
	baz=354						
IGIL	Gilhagi	1.50	19	P	Pn	03 19 20.0	-3.5
	baz=18						
ISIG	Siglufjorour	1.57	339	P	Pn	03 19 21.3	-3.3
	baz=339						
BORG	Borgarnes	1.62	274	Pn	Pn	03 19 22.1	-3.1
	32nm,0.3s,baz=98,slow=9.8,SNR=62						
BORG				LR	LR	03 19 33.4	
	comp=Z,165nm,18.4s,baz=72,slow=25						
BORG				Sn	Sb	03 19 46.9	-0.3
	54nm,0.3s,baz=244,slow=23,SNR=16						
IKRO	Krokur	1.66	251	P	Pn	03 19 22.5	-3.2
	baz=252						
ISOL	Solvholt	1.66	245	P	Pn	03 19 22.7	-3.0
	baz=245						
SCO	Scoresbysund	6.08	346	e	Pn	03 20 19.4	-6.9
	baz=170,slow=10						
SCO				i P	Pn	03 20 25.0	-1.3
SCO				i S	Sn	03 21 38.8	+2.8
SCO				IAML		03 21 45.4	
	comp=Z,2.4nm,0.5s						
JMIC	Jan Mayen	7.20	24	LR	LR	03 22 51.6	
	comp=Z,357nm,18.4s,baz=244,slow=33						
EKA	Eskdalemuir Ar	11.78	136	Pn	Pn	03 21 43.5	-1.0
	baz=323,slow=13,SNR=23						
ESK	Eskdalemuir	11.78	136	Pn	Pn	03 21 43.5	-0.9
DAG	Danmarks Havn	12.17	359	i P	Pn	03 21 53.3	+3.7
DAG	Danmarks Havn	12.17	359	i P	Pn	03 21 53.4	+3.7
DSB	Dublin	12.80	148	Pn	Pn	03 21 56.6	-1.8
NOA	NORSAR Array B	13.55	92	Pn	Pn	03 22 07.2	-1.5
	comp=Z,0.0nm,0.3s,baz=300,slow=13,SNR=3.5						
NOA				LR	LR	03 27 21.5	
	comp=Z,75nm,19.4s,baz=10.0,slow=37						
SFJD	Kangerlussuaq	13.64	295	LR	LR	03 26 55.9	
	comp=Z,169nm,19.6s,baz=98,slow=35						
HFS	Hagfors	15.07	93	Pn	P	03 22 35.7	+1.0
	comp=Z,0.1nm,0.3s,baz=327,slow=16,SNR=5.1						
HFS				LR	LR	03 28 47.4	
	comp=Z,50nm,21.7s,baz=298,slow=39						
BMRD	Maredsous	18.58	130	dpPn	Pn	03 23 14.7	+0.9
BMRD				dP	sP	03 23 20.2	+3.2
BSTI	Sart Tilman	18.61	128	dpPn	Pn	03 23 15.7	+1.7
BSTI				dP	sP	03 23 21.8	+4.5
BGES	Gesves	18.61	129	dPn	P	03 23 13.4	-0.5
FINES	FINESS Array B	19.72	79	P	Pn	03 23 27.2	-0.2
	comp=Z,0.1nm,0.3s,baz=304,slow=14,SNR=4.7						
FINES	FINESS Array B	19.72	79	P	Pn	03 23 26.9	-0.6
CLL	Collm	20.73	116	i P	P	03 23 37.6	+0.7
	comp=Z,48nm,2.0s						
CLL				e		03 23 49.0	
ECH	Echery	21.17	129	P	P	03 23 41.6	-0.2
NKC	Novy Kostel	21.37	118	eP	P	03 23 48.7	+4.8
BRG	Berggiesshubel	21.43	115	eP	P	03 23 45.0	+0.4
BRG				Amp		03 23 50.4	
	comp=Z,6.5nm,1.1s						
BFO	Black Forest	21.47	127	P	P	03 23 45.0	-0.1
FRB	Frobisher Bay	21.73	291	P	P	03 23 45.0	-2.6
	comp=Z,1.6nm,0.9s,baz=271,slow=6.7,SNR=3.1						
FRB				LR	LR	03 31 39.0	
	comp=Z,86nm,18.4s,baz=20,slow=35						
PRU	Pruhonice	22.37	116	eP	P	03 23 55.7	+1.1
CHVC	Chvalec	22.49	113	eP	P	03 23 56.9	+1.0
OSTC	Ostas	22.58	113	eP	P	03 23 58.6	+1.7
KHC	Kasperske Hory	22.70	118	eP	P	03 23 57.7	-0.5
KHC	Kasperske Hory	22.70	118	P	P	03 23 58.0	-0.1
KHC				IAmb	IAmb	03 24 05.8	
	comp=Z,36nm,1.9s						
DPC	Dobruska-Polom	22.78	113	eP	P	03 24 00.1	+1.0
DAVA	Damuels	22.90	126	eP	P	03 24 04.4	+4.0
	comp=Z,15nm,1.5s						
GERES	GERESS Array B	22.98	119	P	P	03 24 02.1	+0.9
	comp=Z,1.5nm,0.8s,baz=335,slow=8.6,SNR=7.2						
GERES				LR	LR	03 33 34.6	
	comp=Z,59nm,19.9s,baz=312,slow=38						
GERES	GERESS Array B	22.98	119	P	P	03 24 01.2	+0.1
RETA	Reutte	23.04	125	eP	P	03 24 03.5	+1.7
	comp=Z,18nm,2.0s						
CKRC	Cesky Krumlov	23.23	118	eP	P	03 24 04.9	+1.2
MOTA	Moosalm	23.28	124	eP	P	03 24 06.4	+2.0
	comp=Z,20nm,2.0s						
DAVOX	Davos/Dischmat	23.34	127	P	P	03 24 05.5	+0.5
	comp=Z,1.7nm,0.7s,baz=325,slow=16,SNR=4.1						
SQTA	Sankt Quirin	23.42	124	eP	P	03 24 05.8	0.0
	comp=Z,19nm,2.0s						
FETA	Feichten	23.43	125	eP	P	03 24 07.5	+1.7
	comp=Z,12nm,2.0s						
WATA	Walderalm	23.46	124	eP	P	03 24 05.3	-0.8
	comp=Z,5.6nm,1.0s						
WTTA	Wattenberg	23.54	124	eP	P	03 24 08.8	+1.8
	comp=Z,10nm,1.3s						
EUNU	Eureka	23.66	336	P	P	03 24 08.9	+1.1
EUNU				IAmb	IAmb	03 24 12.8	
	comp=Z,17nm,1.2s						
VRAC	Vranov	23.71	114	P	P	03 24 10.0	+1.5
	comp=Z,3.0nm,0.8s,baz=334,slow=11,SNR=4.2						
VRAC				LR	LR	03 35 11.6	
	comp=Z,87nm,18.7s,baz=358,slow=41						
MORC	Moravsky Berou	23.72	112	P	P	03 24 07.5	-1.0
MORC				IAmb	IAmb	03 24 21.2	
	comp=Z,18nm,1.5s						
OJC	Ojcow	24.28	109	P	P	03 24 12.8	-1.0
OJC				IAmb	IAmb	03 24 16.2	
	comp=Z,45nm,2.0s						
ABTA	Abfaltersbach	24.29	123	eP	P	03 24 14.7	+0.7
	comp=Z,9.0nm,1.5s						
KBA	Koelnbreinsper	24.32	122	eP	P	03 24 16.5	+2.1
	comp=Z,6.3nm,1.1s						
CONA	Conrad Observa	24.55	117	eP	P	03 24 17.9	+1.5
	comp=Z,5.0nm,1.0s						
MNK	Minsk	24.58	93	i P	P	03 24 15.7	-0.8
	comp=E,3.0nm,1.0s						
MNK				i P	P	03 24 15.7	-0.8
	comp=N,6.0nm,0.9s						
MNK				i P	P	03 24 15.7	-0.8
	comp=Z,3.0nm,0.8s						
MNK				i PP	PnPn	03 24 47.5	+0.2
MNK				i PPP	PPP	03 24 55.5	
MNK				i PcP	PcP	03 27 52.1	-1.8
MNK				i S	S	03 28 37.8	+0.4
MNK				i SS	SnSn	03 29 26.2	+4.4
MNK				i SSS	SSS	03 29 39.9	
MNK				i LR	LR	03 33 36.5	
MNK				i LRM	MLR	03 34 44.6	
	comp=E,6.0nm,6.2s						
MNK				i LRM	MLR	03 34 44.6	
	comp=N,28nm,5.8s						
MNK				i LRM	MLR	03 34 44.6	
	comp=Z,19nm,5.1s						
SOKA	Soboth	25.28	120	eP	P	03 24 26.1	+3.2
	comp=Z,4.1nm,1.1s						
KLMR	Klimovskoe	25.62	72	eP	P	03 24 27.0	+1.2
KLMR				AMP		03 24 36.1	
	comp=Z,23nm,1.4s						
PSZ	Piszkesteto	26.14	112	P	P	03 24 30.3	-0.4
ESDC	Sonseca Array	26.27	156	P	P	03 24 32.3	+0.4
	comp=Z,1.6nm,0.8s,baz=354,slow=10.0,SNR=9.7						
ESDC				LR	LR	03 34 11.9	
	comp=Z,59nm,19.4s,baz=345,slow=35						
RES	Resolute Bay	26.45	324	P	P	03 24 33.8	+0.6
	comp=Z,1.5nm,1.0s,baz=99,slow=12,SNR=3.7						
RES	Resolute Bay	26.45	324	P	P	03 24 33.5	+0.3
NRIK	Noril'sk	36.47	35	LR	LR	03 43 00.7	
	comp=Z,45nm,20.1s,baz=286,slow=40						
KBZ	Khabaz	39.14	92	P	P	03 26 26.7	+2.7
	comp=Z,3.4nm,1.0s,baz=246,slow=7.6,SNR=4.4						
TOKA	Tokat	39.19	102	P	P	03 26 24.1	-0.5
YKA	Yellowknife Ar	39.19	313	P	P	03 26 24.0	-0.3
	comp=Z,1.8nm,1.0s,baz=45,slow=8.6,SNR=15						
YKA				PcP	PcP	03 28 32.0	-1.2
	comp=Z,0.7nm,0.9s,baz=48,slow=4.2,SNR=5.0						
TIXI	Tiksi	42.03	15	P	P	03 26 49.7	+2.1
TIXI				IAmb	IAmb	03 26 50.7	
	comp=Z,14nm,1.4s						
TOLK	Toolik Lake Re	42.73	336	P	P	03 26 54.6	+1.2
TOLK				IAmb	IAmb	03 26 56.5	
	comp=Z,14nm,1.2s						
BMAR	Burnt Mountain	42.88	333	P	P	03 26 55.6	+1.0
AGMN	Agassiz Nation	43.10	287	P	P	03 26 56.1	-0.5
BRVK	Borovoye	43.15	62	P	P	03 26 58.1	+1.2
BRVK				IAmb	IAmb	03 27 00.7	
	comp=Z,15nm,1.6s						
F33A	5 Mile Ranch,	45.23	285	P	P	03 27 13.2	-0.5
F33A				IAmb	IAmb	03 27 16.6	
	comp=Z,6.0nm,1.1s						
ILAR	Eielson Array	45.67	332	P	P	03 27 16.9	0.0
	comp=Z,2.4nm,1.1s,baz=28,slow=6.4,SNR=12						
ILAR				PcP	PcP	03 28 55.1	+0.4
	comp=Z,1.3nm,1.0s,baz=353,slow=3.1,SNR=6.1						
ILAR				LR	LR	03 48 52.2	
	comp=Z,30nm,19.0s,baz=342,slow=39						
ILAR	Eielson Array	45.67	332	P	P	03 27 18.3	+1.3
ILAR				PcP	PcP	03 28 55.5	+0.7
MDM	Murphy Dome	45.77	333	P	P	03 27 18.7	+1.0
MDM				IAmb	IAmb	03 27 20.8	
	comp=Z,8.6nm,1.3s						
IMAR	Indian Mountai	45.84	337	P	P	03 27 19.0	+0.7
CNNC	Cliffs of the	46.15	261	P	P	03 27 21.0	0.0
ZALV	Zalesovo Beam	47.65	51	P	P	03 27 32.7	+0.2
	comp=Z,0.5nm,0.4s,baz=338,slow=3.1,SNR=3.6						
KURK	Kurchatov	48.13	58	P	P	03 27 37.1	+0.8
KURK				IAmb	IAmb	03 27 43.8	
	comp=Z,18nm,1.8s						
LAO	LASA Array	48.58	293	P	P	03 27 39.8	-0.1
LAO				IAmb	IAmb	03 27 44.4	
	comp=Z,7.3nm,1.2s						
T47A	Sharon Grove	48.62	270	P	P	03 27 40.4	+0.1
EGMT	Eagleton	48.85	297	P	P	03 27 42.5	+0.5
RLMT	Red Lodge	51.07	295	P	P	03 27 59.4	+0.4
KKAR	Karatay Array	51.29	70	P	P	03 28 01.4	+0.9
BOZ	Bozeman (W)	51.59	297	P	P	03 28 02.3	-0.6
BOZ				IAmb	IAmb	03 28 05.7	
	comp=Z,9.7nm,1.2s						
TIGA	Tifton	51.84	263	P	P	03 28 04.7	-0.1
H17A	Grant Village	52.19	295	P	P	03 28 07.8	+0.3
H17A				IAmb	IAmb	03 28 12.6	
	comp=Z,10nm,1.4s						
MK31	Makanchi Array	52.74	58	P	P	03 28 11.8	+0.5
MKAR	Makanchi Array	52.74	58	P	P	03 28 10.2	-1.1
	comp=Z,1.0nm,0.9s,baz=339,slow=6.5,SNR=7.6						
PD31	Pinedale Array	53.16	293	P	P	03 28 14.4	-0.2
PD31				IAmb	IAmb	03 28 15.8	
	comp=Z,6.5nm,1.1s						
PDAR	Pinedale Array	53.16	293	P	P	03 28 13.8	-0.8
	comp=Z,3.2nm,0.9s,baz=60,slow=7.0,SNR=19						
PDAR				LR	LR	03 49 10.3	
	comp=Z,32nm,19.9s,baz=341,slow=34						
PDAR	Pinedale Array	53.16	293	P	P	03 28 14.2	-0.5
TORD	Torodi Ar. Bea	53.16	156	P	P	03 28 14.1	-0.5
	comp=Z,1.7nm,0.8s,baz=346,slow=7.4,SNR=6.4						
TORD	Torodi Ar. Bea	53.16	156	P	P	03 28 13.9	-0.6
BW06	Boulder Array	53.16	293	P	P	03 28 14.9	+0.2
BW06				IAmb	IAmb	03 28 15.8	
	comp=Z,7.3nm,1.1s						
AAK	Ala-Archa	53.28	67	P	P	03 28 16.2	+0.7
O20A	White River Ci	54.86	290	P	P	03 28 27.3	+0.2
KSH	Kashi	56.52	68	P	P	03 28 42.1	+3.2
KSH				pmax	pmax		
	comp=Z,15nm,1.0s						
KSH				pmax	pmax		
	comp=Z,310nm,6.2s						
SRU	San Rafael Swe	56.65	292	P	P	03 28 40.2	+0.3
PV01	Paradox Valley	56.70	289	P	P	03 28 40.5	+0.2
PV02	Paradox Valley	56.70	290	P	P	03 28 40.4	+0.1
PV02				IAmb	IAmb	03 28 42.7	
	comp=Z,7.7nm,1.0s						
PV03	Paradox Valley	56.71	290	P	P	03 28 40.5	+0.2
PV03				IAmb	IAmb	03 28 42.2	
	comp=Z,7.1nm,1.1s						
PV18	Skein Mesa, Pa	56.74	290	P	P	03 28 40.8	+0.2
PV18				IAmb	IAmb	03 28 42.8	
	comp=Z,8.3nm,1.0s						
TMUT	Trail Mountain	56.76	292	P	P	03 28 41.0	+0.1
PV13	Radium Mtn., P	56.78	290	P	P	03 28 41.1	+0.2
WMQ	Urumqi	57.25	56	eP	P	03 28 48.5	+4.6
MVU	Marysvale	57.84	293	P	P	03 28 48.7	+0.3
NVAR	Mina Array Bea	60.28	297	P	P	03 29 05.3	0.0
	comp=Z,0.4nm,0.7s,baz=55,slow=3.4,SNR=3.2						
NVAR				LR	LR	03 53 35.0	
	comp=Z,108nm,20.3s,baz=230,slow=35						
X16A	Lo Mia Camp, P	61.07	290	P	P	03 29 10.8	+0.1
X16A				IAmb	IAmb	03 29 13.1	
	comp=Z,4.4nm,1.1s						
TXAR	Lajitas Array	62.26	280	P	P	03 29 18.8	+0.1
	comp=Z,1.1nm,0.9s,baz=57,slow=4.6,SNR=8.4						
TXAR				LR	LR	03 55 31.8	
	comp=Z,42nm,19.0s,baz=0.0,slow=35						
319A	Douglas	62.83	286	P	P	03 29 22.5	0.0
GTA	Gaotai	65.31	49	eP	P	03 29 39.5	+0.8
GTA				pP	sP	03 29 44.0	+1.8
GTA				sP	pP	03 29 46.6	+5.4
GTA				pmax	pmax		
	comp=Z,1.0nm,1.2s						
SDV	Santo Domingo	66.81	239	P	P	03 29 47.9	-0.7
SDV				IAmb	IAmb	03 29 50.4	
	comp=Z,5.1nm,0.9s						
HHC	Hu-ho-hao-te	67.52	40	eP	P	03 29 54.2	+1.4
HHC				pmax	pmax		
	comp=Z,11nm,1.1s						
HHC				pmax	pmax		
	comp=Z,120nm,5.6s						
LZH	Lanzhou	69.64	48	eP	P	03 30 03.3	-2.9
LZH				pP	pP	03 30 07.6	-1.1
LZH				sP	sP	03 30 10.5	+0.8
LZH				PP	PP	03 32 43.2	+3.7
LZH				pmax	pmax		
	comp=Z,16nm,1.0s						
LZH				pmax	pmax		
	comp=Z,97nm,4.9s						
KSRS	Korea Array	74.65	28	LR	LR	04 07 16.2	
	comp=Z,12nm,19.6s,baz=344,slow=39						
NJ2	Nanjing	77.75	37	eP	P	03 30 54.9	+1.3
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
BDFB	Brasilia	83.38	209	LR	LR	04 05 03.9	
	comp=Z,33nm,18.2s,baz=115,slow=33						
TGY	Tagaytay City	95.39	40	LR	LR	04 22 07.3	
	comp=Z,62nm,18.2s,baz=302,slow=40						

ISK ***10*** *03:24:53.6, 35°.51N×40°.48E, h5^{km}, ML4.5/23*
IDC ***10*** *03:24:55.4±1.7, 35°.25N×40°.35E, h0^{km}, mb3.6/5, mb1 3.7/6, mb1mx3.5/31, mbtmp3.5/6, ML2.7/1, MS3.0/3, Ms1 3.1/3, ms1mx2.7/26, Error ellipse: s-maj=37.0km s-min=22.9km az=16.0*
DDA ***10*** *03:24:59.6, 35°.85N×40°.42E, h22^{km}±2^{km}, MW4.2*
ISC 10 03:25:01.4±1.1**, 35°.76N**±0°.05×**40°.52E**±0°.03**, h30**^{km}±6^{km}**, n81, $\sigma 2^{s}.48$**/107**, mb3.7**/5**, MS2.7**/3**, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARD	Mardin	1.57	8	i P	Pn	03 25 27.8	+0.5
MARD				i S	Sn	03 25 39.5	-7.2
MARD				IAML		03 25 51.0	
	comp=N,9µm,0.5s						
MARD				IAML		03 25 51.0	
	comp=E,9µm,0.5s						
MIDY	Mardin/Midyat-	1.79	23	i P	Pn	03 25 30.9	+0.6
MIDY				i S	Sn	03 25 45.0	-7.1
MIDY				IAML		03 25 57.0	
	comp=N,3µm,0.7s						
MIDY				IAML		03 26 01.0	
	comp=E,3µm,0.6s						
SANL	SANLIURFA_Merk	1.87	319	i P	Pn	03 25 31.7	+0.3
SANL				i S	Sn	03 25 50.4	-3.7
SANL				IAML		03 25 58.0	
	comp=N,3µm,0.8s						
SANL				IAML		03 26 00.0	
	comp=E,4µm,0.4s						
SURC	SANLIURFA_SURC	1.90	307	i P	Pn	03 25 32.0	+0.1
SURC				i S	Sn	03 25 52.7	-2.2
SURC				IAML		03 26 04.0	
	comp=E,3µm,0.8s						
URFA	Urfa	2.17	321	PN	Pn	03 25 34.6	-0.9
URFA				SN	Sb	03 26 05.0	-1.5
DIYA	Diyarbakir	2.19	352	i P	Pn	03 25 36.3	+0.5
DIYA				i S	Sn	03 25 56.3	-5.5
DIYA				IAML		03 26 14.0	
	comp=E,939nm,0.3s						
DIYA				IAML		03 26 15.0	
	comp=N,588nm,0.4s						
BTMN	Batman	2.21	16	i P	Pn	03 25 37.1	+1.0
BTMN				i S	Sn	03 25 56.0	-6.4
BTMN				IAML		03 26 23.0	
	comp=N,834nm,1.1s						
BTMN				IAML		03 26 26.0	
	comp=E,1µm,1.1s						
SIRN	Sırnak	2.31	41	i P	Pn	03 25 38.1	+0.7
SIRN				i S	Sn	03 25 57.6	-7.3
SIRN				IAML		03 26 12.0	
	comp=N,2µm,0.5s						
SIRN				IAML		03 26 22.0	
	comp=E,2µm,0.7s						
SVAN	Silvan-Diyarba	2.45	13	PN	Pn	03 25 40.1	+0.7
SVAN				SN	Sb	03 26 13.7	-0.9
SVAN	Silvan-Diyarba	2.45	13	i P	Pn	03 25 39.8	+0.4
SVAN				i S	Sn	03 26 06.8	-1.5
SVAN				IAML		03 26 22.0	
	comp=E,439nm,0.6s						
SVAN				IAML		03 26 26.0	
	comp=N,378nm,0.6s						
ATAB	Bozova	2.47	314	i P	Pn	03 25 39.7	0.0
ATAB				i S	Sn	03 26 10.8	+1.9
ATAB				IAML		03 26 21.0	
	comp=E,2µm,0.5s						
ATAB				IAML		03 26 25.0	
	comp=N,1.2nm,0.5s						
SRTM	Siirt_Merkez	2.50	26	i P	Pn	03 25 41.2	+1.2
SRTM				i S	Sn	03 26 01.7	-7.8
SRTM				IAML		03 26 24.0	
	comp=E,1µm,0.6s						
SRTM				IAML		03 26 29.0	
	comp=N,1µm,0.5s						
HANI	Diyarbakir_Han	2.65	358	i P	Pn	03 25 42.8	+0.7
HANI				i S	Sn	03 26 09.7	-3.6
HANI				IAML		03 26 30.0	
	comp=E,438nm,0.5s						
HANI				IAML		03 26 31.0	
	comp=N,537nm,0.6s						
PERV	Siirt/Pervari-	2.72	36	i P	Pn	03 25 44.6	+1.4
PERV				i S	Sn	03 26 14.2	-0.9

PERV				IAML		03 26 34.0	
	comp=N,3µm,0.5s						
PERV				IAML		03 26 34.0	
	comp=E,3µm,0.6s						
GZT	Gaziantep	2.86	305	*i* P	Pn	03 25 44.7	-0.5
GZT				IAML		03 26 35.0	
	comp=E,2µm,0.6s						
GZT				IAML		03 26 39.0	
	comp=N,2µm,0.6s						
CUKT	Cukurca	2.90	58	PN	Pn	03 25 44.9	-0.7
CUKT	Cukurca	2.90	58	*i* P	Pn	03 25 44.9	-0.7
CUKT				*i* S	Sn	03 26 17.2	-2.2
CUKT				IAML		03 26 35.0	
	comp=E,1µm,0.7s						
CUKT				IAML		03 26 39.0	
	comp=N,1µm,0.7s						
BLIS	Bitlis-Merkez	2.94	25	*i* P	Pn	03 25 47.0	+0.8
BLIS				*i* S	Sn	03 26 18.5	-2.1
BLIS				IAML		03 26 36.0	
	comp=E,536nm,1.1s						
BLIS				IAML		03 26 43.0	
	comp=N,394nm,0.5s						
KUZU	Kuzuini	2.96	291	*i* P	Pn	03 25 45.7	-0.7
KUZU				IAML		03 26 41.0	
	comp=N,3µm,0.4s						
KUZU				IAML		03 26 46.0	
	comp=E,2µm,0.4s						
KOVA	Elazig, Kovanc	3.00	349	*i* P	Pn	03 25 47.8	+0.9
KOVA				*i* S	Sn	03 26 19.8	-2.0
KOVA				IAML		03 26 42.0	
	comp=E,358nm,0.5s						
KOVA				IAML		03 26 43.0	
	comp=N,190nm,0.5s						
ELZG	Elazig	3.00	336	*i* P	Pn	03 25 47.9	+0.9
ELZG				*i* S	Sn	03 26 25.5	+3.5
ELZG				IAML		03 26 40.0	
	comp=E,1µm,1.1s						
ELZG				IAML		03 26 41.0	
	comp=N,1µm,0.6s						
GAZ	Gaziantep	3.02	299	PN	Pn	03 25 45.8	-1.4
MALT	Malatya	3.05	327	PN	Pn	03 25 47.6	-0.1
MUSM	Mu-Merkez	3.06	15	*i* P	Pn	03 25 48.4	+0.5
MUSM				*i* S	Sn	03 26 25.5	+1.9
MUSM				IAML		03 26 40.0	
	comp=N,527nm,0.7s						
MUSM				IAML		03 26 41.0	
	comp=E,468nm,0.7s						
HAKT	HAKKARI	3.13	54	*i* P	Pn	03 25 49.4	+0.5
HAKT				*i* S	Sn	03 26 21.6	-3.8
HAKT				IAML		03 26 44.0	
	comp=E,391nm,0.8s						
HAKT				IAML		03 26 45.0	
	comp=N,487nm,1.3s						
KHMN	Narli-Kahraman	3.16	302	PN	Pn	03 25 48.1	-1.0
SLHN	Bingol, Solhan	3.22	7	*i* P	Pn	03 25 50.9	+0.8
SLHN				*i* S	Sn	03 26 28.7	+1.3
SLHN				IAML		03 26 51.0	
	comp=E,699nm,0.6s						
SLHN				IAML		03 26 52.0	
	comp=N,634nm,0.6s						
BNGB	Bingl	3.23	2	PN	Pn	03 25 50.9	+0.8
AKDM	Akdamar-Van	3.23	37	PN	Pn	03 25 50.8	+0.6
AKCD	Akcadag	3.28	321	*i* P	Pn	03 25 50.9	0.0
AKCD				IAML		03 26 54.0	
	comp=E,845nm,0.5s						
AKCD				IAML		03 26 59.0	
	comp=N,1µm,0.4s						
HCB	Kahramanmara	3.31	300	*i* P	Pn	03 25 49.6	-1.6
HCB				IAML		03 26 51.0	
	comp=E,462nm,0.9s						
HCB				IAML		03 26 54.0	
	comp=N,483nm,1.0s						
KAHM	Kahramanmaras,	3.34	303	*i* P	Pn	03 25 50.3	-1.3
KAHM				IAML		03 26 55.0	
	comp=E,525nm,0.7s						
KAHM				IAML		03 27 02.0	
	comp=N,641nm,0.7s						
KMRS	Kahramanmaras	3.39	302	PN	Pn	03 25 51.1	-1.2
TNCL	Tunceli-Merkez	3.44	347	*i* P	Pn	03 25 53.1	0.0
TNCL				*i* S	Sn	03 26 32.9	+0.1
TNCL				IAML		03 26 56.0	
	comp=N,328nm,0.9s						
TNCL				IAML		03 26 59.0	
	comp=E,258nm,0.6s						
VRTB	Varto-Mus	3.48	12	*i* P	Pn	03 25 55.2	+1.6
VRTB				*i* S	Sn	03 26 33.6	-0.2
VRTB				IAML		03 26 59.0	
	comp=E,634nm,1.0s						
VRTB				IAML		03 27 12.0	
	comp=N,660nm,1.3s						
YOVA	Hakkari_Yksek	3.54	58	*i* P	Pn	03 25 55.2	+0.7
YOVA				IAML		03 27 06.0	
	comp=N,154nm,0.7s						
YOVA				IAML		03 27 08.0	
	comp=E,132nm,0.7s						
TAHT	Tahtakopru-Hat	3.56	281	PN	Pn	03 25 52.5	-2.1
KARO	Karliova-Bingo	3.57	7	PN	Pn	03 25 55.9	+1.0
TVAN	Van	3.60	39	*i* P	Pn	03 25 57.7	+2.3
TVAN				IAML		03 27 06.0	
	comp=N,250nm,0.8s						
TVAN				IAML		03 27 12.0	
	comp=E,332nm,1.0s						
VANB	Van	3.64	38	PN	Pn	03 25 54.9	-0.9
YEDI	Yedisu-Bingol	3.67	0	PN	Pn	03 25 57.2	+0.9
DARE	Darende-Malaty	3.71	320	PN	Pn	03 25 56.6	-0.1
MLAZ	Malazgirt-MUS	3.74	25	PN	Pn	03 25 58.0	+0.8
ECAT	Cat-ERZURUM	3.86	5	*i* P	Pn	03 26 00.3	+1.4
ECAT				*i* S	Sn	03 26 43.8	+0.5
ECAT				IAML		03 27 09.0	
	comp=N,46nm,1.0s						
ECAT				IAML		03 27 10.0	
	comp=E,82nm,0.5s						
OZAP	Van, Ozalp-Mer	4.01	43	*i* P	Pn	03 26 02.8	+1.9
OZAP				IAML		03 27 31.0	
	comp=N,113nm,0.9s						
OZAP				IAML		03 27 31.0	
	comp=E,155nm,1.0s						
HWQ	Hawqa	4.03	250	*e*P	Pn	03 26 01.4	+0.3
VMUR	Van-Muradiye	4.04	36	*i* P	Pn	03 26 03.5	+2.2
VMUR				IAML		03 27 15.0	
	comp=N,136nm,0.9s						
VMUR				IAML		03 27 30.0	
	comp=E,148nm,1.4s						
CEYT	Ceyhan	4.05	289	PN	Pn	03 25 59.6	-1.7
KOZT	Kozan	4.15	296	PN	Pn	03 26 01.7	-1.0
SARI	SarD1z-Kayseri	4.21	310	PN	Pn	03 26 03.1	-0.6
KRTS	Karatas	4.24	283	PN	Pn	03 26 02.4	-1.5
KOPT	Kop Dagi	4.25	360	*i* P	Pn	03 26 06.4	+2.0
KOPT				IAML		03 27 26.0	
	comp=E,70nm,0.8s						
KOPT				IAML		03 27 33.0	
	comp=N,72nm,0.8s						
AGRB	Hanur-Agry	4.29	26	PN	Pn	03 26 05.9	+1.2
CUKAN	kangal_SIVAS	4.30	327	*i* P	Pn	03 26 05.0	+0.1
CUKAN				IAML		03 27 24.0	
	comp=E,97nm,1.5s						
CUKAN				IAML		03 27 27.0	
	comp=N,91nm,0.6s						
CLDR	Caldiran	4.33	38	PN	Pn	03 26 05.9	+0.6
CLDR	Caldiran	4.33	38	*i* P	Pn	03 26 06.8	+1.4
CLDR				IAML		03 27 35.0	
	comp=E,73nm,1.4s						
CLDR				IAML		03 27 38.0	
	comp=N,60nm,1.3s						
AKDA	Akdag	4.39	8	*i* P	Pn	03 26 08.4	+2.3
AKDA				IAML		03 27 18.0	
	comp=N,0.1nm,1.0s						
AKDA				IAML		03 27 18.0	
	comp=E,0.1nm,0.8s						
BHL	Bhannes	4.41	247	*e*P	Pn	03 26 05.4	-1.0
HOMI	Horasan	4.42	14	*i* P	Pn	03 26 07.7	+1.1
HOMI				IAML		03 27 35.0	
	comp=N,116nm,1.0s						
HOMI				IAML		03 27 37.0	
	comp=E,228nm,1.3s						
RCY	Rachaya	4.47	241	*e*P	Pn	03 26 08.6	+1.3
KELT	Kelkit	4.50	348	*i* P	Pn	03 26 09.2	+1.6
KELT				IAML		03 27 44.0	
	comp=E,36nm,1.0s						
KELT				IAML		03 27 45.0	
	comp=N,36nm,1.2s						
BAYB	BAYBURT	4.50	357	*i* P	Pn	03 26 09.8	+2.1
BAYB				IAML		03 27 35.0	
	comp=E,24nm,0.7s						
BAYB				IAML		03 27 53.0	
	comp=N,38nm,2.1s						
QRWL	Qaraoun	4.56	242	*e*P	Pn	03 26 09.2	+0.9
DQRL	Deir Qamar	4.56	245	*e*P	Pn	03 26 06.7	-1.7
KRIK	Erzurum-spir	4.58	4	*i* P	Pn	03 26 11.2	+2.4
KRIK				IAML		03 27 45.0	
	comp=E,5.6nm,0.9s						
KRIK				IAML		03 27 53.0	
	comp=N,6.8nm,0.9s						
KARA	Karaisali	4.65	290	PN	Pn	03 26 08.5	-1.1
ALUC	Giresun/Alucra	4.78	344	*i* P	Pn	03 26 12.6	+1.1
ALUC				IAML		03 28 02.0	
	comp=E,103nm,2.3s						
ALUC				IAML		03 28 16.0	
	comp=N,72nm,1.2s						
CMRD	Camardi-Nigde	4.83	295	PN	Pn	03 26 11.3	-0.9
BNN	Bunyan	4.84	311	PN	Pn	03 26 12.3	0.0
DBAD	Bademkaya	5.33	10	*i* P	Pn	03 26 20.9	+1.9
DBAD				IAML		03 27 52.0	
	comp=N,23nm,1.4s						
DBAD				IAML		03 28 02.0	
	comp=E,18nm,0.8s						
MMLI	Mount Malkishu	5.37	233	PN	Pn	03 26 15.4	-4.1
KEBE	Keben-Mersin	5.55	279	PN	Pn	03 26 20.5	-1.5
BRTR	Keskin Array B	6.74	308	Pn	Pn	03 26 39.2	+0.9
	comp=E,0.2nm,0.3s,baz=142,slow=42,SNR=1.5						
BRTR				Pg	Pb	03 27 00.9	+3.1
	comp=E,0.3nm,0.3s,baz=137,slow=17,SNR=5.1						
BRTR				Lg	Lg	03 28 36.8	
	comp=E,0.2nm,0.3s,baz=118,slow=28,SNR=3.0						
BRTR				LR	LR	03 29 30.3	
	comp=E,133nm,18.8s,baz=122,slow=40						
MIB	Mutribah	8.26	134	*e*P		03 26 56.4	
UMR	Umm Al-Rimmam	8.66	134	*e*P		03 27 02.2	
RDF	Al-Radifah	9.04	137	*e*P		03 27 07.7	
MNK	Minsk	20.70	339	*i* P	P	03 29 33.9	-5.0
	comp=E,1.0nm,1.0s						
MNK				*i* P	P	03 29 33.9	-5.0
	comp=N,15nm,1.2s						
MNK				*i* P	P	03 29 33.9	-5.0
	comp=Z,7.0nm,1.0s						
MNK				*i* PP	sP	03 29 51.3	+0.3
MNK				*i* S	S	03 33 21.1	-7.1
MNK				*i* SS	Sn	03 33 41.3	+7.5
MNK				*i* SSS	SSS	03 33 54.9	
MNK				*i* LR	LR	03 37 19.3	
MNK				*i* LRM	MLR	03 38 41.4	
	comp=E,5.0nm,13.2s						
MNK				*i* LRM	MLR	03 38 41.4	
	comp=N,181nm,23.1s						
MNK				*i* LRM	MLR	03 38 41.4	
	comp=Z,59nm,17.0s						
MNK				*i* ScS	ScS	03 41 12.5	+7.4
GERES	GERESS Array B	23.61	312	P	P	03 30 11.0	+1.2
	comp=Z,2.4nm,0.9s,baz=110,slow=10,SNR=8.6						
HFS	Hagfors	29.89	333	P	P	03 31 07.3	+1.2
	comp=Z,1.5nm,0.8s,baz=129,slow=11,SNR=3.8						
NOA	NORSAR Array B	31.41	333	LR	LR	03 46 16.0	
	comp=Z,41nm,18.4s,baz=345,slow=40						
MKAR	Makanchi Array	32.91	57	P	P	03 31 33.9	+1.0
	comp=Z,0.8nm,0.6s,baz=259,slow=7.5,SNR=10						
ZALV	Zalesovo Beam	35.58	45	LR	LR	03 47 01.0	
	comp=Z,12nm,19.0s,baz=37,slow=37						
TORD	Torodi Ar. Bea	41.52	247	P	P	03 32 41.3	-4.8
	comp=Z,0.6nm,0.8s,baz=50,slow=9.5,SNR=2.2						
YKA	Yellowknife Ar	80.06	349	P	P	03 37 11.0	+3.3
	comp=Z,0.2nm,0.6s,baz=36,slow=6.4,SNR=4.1						

SGS **10** *04:01:34.1, 38°.04N×35°.28E, h13^{km}, Ml4.3*
DDA **10** *04:01:54.3, 36°.01N×35°.96E, h24^{km}±1^{km}, MW4.6*
ISK **10** *04:01:54.4, 36°.03N×35°.98E, h12^{km}, ML4.6/34*
MOS **10** *04:01:55.2±1.2, 36°.01N×35°.96E, h12^{km}, mb4.7/49, Error ellipse: s-maj=4.8km s-min=3.5km az=105.1*
IDC **10** *04:01:55.2±0.6, 36°.10N×35°.83E, h0^{km}, mb4.3/23, mb1 4.4/30, mb1mx4.2/49, mbtmp4.3/30, ML3.9/6, MS3.5/20, Ms1 3.5/20, ms1mx3.3/47, Error ellipse: s-maj=12.7km s-min=10.5km az=132.0*
MED_RC **10** *04:01:56.0±1.6, 35°.80N×36°.02E, h10^{km}, MW4.3/15, Moment Tensor Solution.Mantle waves: s15,c16; Duration: 1^s.0 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-0.60±.30; M$_{\theta\theta}$-2.75±.31; M$_{\phi\phi}$3.35±.19; M$_{r\theta}$2.40±1.26; M$_{\theta\phi}$0.77±.26; M$_{\phi r}$-0.11±.75; Best double couple: M$_0$3.91000×10^{15} NP1:φ$_s$327.00000°, δ65.00000°, λ-158.00000°. NP2:φ$_s$228.00000°, δ70.00000°, λ-27.00000°. Principal axes: T 3.4600, Plg3.0000°, Azm278.0000°; N 0.9100, Plg57.0000°, Azm14.0000°; P -4.3700, Plg32.0000°, Azm186.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
HLW **10** *04:01:57.3, 36°.06N×35°.75E, h25^{km}±26^{km}, Md4.5, Ml4.7*
NIC **10** *04:01:57.3±0.0, 36°.06N×35°.93E, h15^{km}±4^{km}, Ml4.7/5*
GRAL **10** *04:01:57.1±0.6, 36°.11N×35°.97E, h9^{km}±7^{km}, MD4.5*
NEIC **10** *04:01:59.3±1.5, 36°.03N±0°.05×35°.89E±0°.05, h28^{km}±4^{km}, Error ellipse: s-maj=8.3km s-min=5.4km az=146.0*
ISC 10 04:01:55.4±1.2**, 36°.03N**±0°.02×**35°.89E**±0°.02**, h0**^{km}±7^{km}**, n410, σ1^s.65**/453**, mb4.5**/88**, MS3.4**/15**, 32C-16D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TAHT	Tahtakopru-Hat	0.42	34	PG	Pg	04 02 02.9	-0.5
TAHT				SG	Sg	04 02 08.5	-0.4
KRTD	Karatas-Adana	0.68	326	PG	Pg	04 02 08.7	+0.2
KRTS	Karatas	0.69	322	PG	Pg	04 02 09.1	+0.5
CEYT	Ceyhan	0.98	353	PG	Pg	04 02 13.9	-0.4
CEYT				SG	Sb	04 02 28.1	-0.8
KUZU	Kuzuini	1.21	52	⇑*i*P	Pg	04 02 17.9	-0.7
KUZU				*i* S	Sg	04 02 33.9	-0.3
DED	Mersin	1.28	317	*i* P	Pg	04 02 18.5	-1.4
DED				*i* S	Sn	04 02 38.8	+0.3
KAMA	Osmaniye	1.31	28	⇑*i*P	Pg	04 02 19.1	-1.5
KAMA				*i* S	Sg	04 02 37.0	-0.6
KARA	Karaisali	1.40	331	PN	Pn	04 02 20.9	-1.3
KOZT	Kozan	1.45	358	PN	Pn	04 02 21.2	-1.7
KOZT				SN	Sg	04 02 40.8	-1.2
KIZK	Mersin	1.48	288	PN	Pn	04 02 22.5	-0.8
KIZK	Mersin	1.48	288	*i* P	Pn	04 02 22.8	-0.6
KIZK				*i* S	Sg	04 02 43.7	+0.5
EREN	Erenkoy	1.49	251	PN	Pn	04 02 22.1	-1.3
EREN	Erenkoy	1.49	251	⇓*i*P	Pn	04 02 23.0	-0.3
EREN				*i* S	Sg	04 02 44.2	+1.0
GULE	Gulek	1.54	325	*i* P	Pn	04 02 22.9	-1.4
GULE				*i* S	Sg	04 02 46.1	+1.1
HCB	Kahramanmara	1.54	32	⇑*i*P	Pn	04 02 22.0	-2.2
HCB				*i* S	Sn	04 02 43.6	-1.4
GAZ	Gaziantep	1.56	43	PN	Pn	04 02 22.2	-2.2
GAZ	Gaziantep	1.56	43	Pn	Pn	04 02 22.6	-1.8
GAZ				Sn	Sg	04 02 45.4	-0.1
GAZ	Gaziantep	1.56	43	P	Pn	04 02 22.8	-1.6
GAZ				S	Sn	04 02 44.0	-1.4
ANDN	Andirin	1.59	13	⇑*i*P	Pn	04 02 23.4	-1.4
ANDN				*i* S	Sn	04 02 45.6	-0.6
SILI	Silifke-Mersin	1.63	283	PN	Pn	04 02 24.6	-0.7
KMRS	Kahramanmaras	1.68	28	PN	Pn	04 02 24.1	-2.0
KHMN	Narli-Kahraman	1.70	36	PN	Pn	04 02 24.4	-1.9
KAHM	Kahramanmaras,	1.72	30	⇑*i*P	Pn	04 02 24.6	-2.1
KAHM				*i* S	Sn	04 02 48.7	-0.8
HWQ	Hawqa	1.75	179	*e*P	Pn	04 02 27.4	+0.4
HWQ				*e*S	Sn	04 02 49.7	-0.4
CMRD	Camardi-Nigde	1.78	336	PN	Pn	04 02 26.7	-0.9
TISA	Tisan-Mersin	1.80	275	PN	Pn	04 02 27.3	-0.4
IKL	Isikli	1.80	277	PN	Pn	04 02 27.1	-0.6
KEBE	Keben-Mersin	1.81	284	PN	Pn	04 02 27.8	-0.1
YESI	Yesilovacik-Me	1.83	276	PN	Pn	04 02 27.8	-0.3
GZT	Gaziantep	1.89	45	⇑*i*P	Pn	04 02 26.7	-2.3
GZT				*i* S	Sg	04 02 55.4	-0.6
AKKU	Akkuyu-Mersin	1.90	275	PN	Pn	04 02 28.5	-0.6
AKK2	Akkuyu-Mersin	1.90	274	PN	Pn	04 02 28.9	-0.2
AKK1	Akkuyu-Mersin	1.91	274	PN	Pn	04 02 28.9	-0.3
GULN	MERSIN_Gulnar	1.91	275	⇓*i*P	Pn	04 02 28.9	-0.3
GULN				*i* S	Sn	04 02 51.2	-2.7
TEPK	Tepekoy-MERSIN	1.91	277	PN	Pn	04 02 28.9	-0.4
SAIM	ADANA	1.95	4	⇑*i*P	Pn	04 02 29.0	-0.9
SAIM				*i* S	Sg	04 02 57.6	-0.4
OREN	Orenkoy-Mersin	1.98	276	PN	Pn	04 02 29.7	-0.4
KERG	Konya-Eregli	1.98	315	*i* P	Pn	04 02 31.2	+0.8
KERG				*i* S	Sb	04 02 57.3	-0.4
YORU	Yoruktepe-Mers	2.02	274	PN	Pn	04 02 30.5	-0.2
TEVE	Tevekalti-Mers	2.02	282	PN	Pn	04 02 29.6	-1.2
MVOU	Mavrovouni	2.10	242	P	Pn	04 02 31.6	-0.3
MVOU				S	Sn	04 02 58.8	+0.1
MVOU				AML	AML	04 03 13.1	
	17nm,1.1s						
MVOU				AML	AML	04 03 13.1	
	17nm,1.1s						
MVOU				AML	AML	04 03 15.8	
	17nm,1.0s						
MVOU				AML	AML	04 03 15.8	
	17nm,1.0s						
YAHY	KAYSERI_Yahyal	2.10	349	⇑*i*P	Pn	04 02 31.4	-0.6
YAHY				*i* S	Sn	04 02 59.2	+0.3
BHL	Bhannes	2.13	185	*e*P	Pn	04 02 32.8	+0.5
BHL				*e*S	Sn	04 02 59.4	-0.1
NIDE	Nigde/Merkez-G	2.16	336	⇑*i*P	Pn	04 02 32.0	-0.8
NIDE				*i* S	Sb	04 03 01.9	-1.0
BEYL	Beirut	2.18	189	*e*P	Pn	04 02 33.2	+0.4
BERE	Bereket-Mersin	2.18	279	PN	Pn	04 02 33.0	-0.1
AKIN	Akıncılar- Kıb	2.22	244	PN	Pn	04 02 32.8	-0.7
TEKE	Tekeli-Mersin	2.25	274	PN	Pn	04 02 32.7	-1.2
NIG	Nigde	2.32	334	PN	Pn	04 02 33.6	-1.4
DQRL	Deir Qamar	2.33	187	*e*P	Pn	04 02 35.5	+0.4
CSS	Mathiatis	2.35	244	PN	Pn	04 02 33.9	-1.3
CSS	Mathiatis	2.35	244	Pn	Pn	04 02 34.3	-1.0
CSS				Sn	Sn	04 03 04.8	0.0
CSS	Mathiatis	2.35	244	P	Pn	04 02 34.2	-1.0
SURC	SANLIURFA_SURC	2.35	68	⇑*i*P	Pn	04 02 33.7	-1.6
SURC				*i* S	Sb	04 03 07.5	-0.7
ATAB	Bozova	2.41	53	⇑*i*P	Pn	04 02 34.6	-1.5
ATAB				*i* S	Sg	04 03 11.9	-0.8
SARI	SarD1z-Kayseri	2.41	10	PN	Pn	04 02 34.9	-1.3
QRWL	Qaraoun	2.48	184	*e*P	Pn	04 02 37.9	+0.8
ERMK	Ermenek	2.48	285	⇓*i*P	Pn	04 02 38.6	+1.3
ERMK				*i* S	Sb	04 03 11.7	-0.5
AKDN	Akdeniz- Kıbrı	2.49	254	PN	Pn	04 02 37.0	-0.2
ASGA	Asgata	2.49	241	P	Pn	04 02 38.3	+1.1
ASGA				AML	AML	04 03 20.6	
	9.8nm,0.8s						
ASGA				AML	AML	04 03 24.2	
	17nm,0.9s						
ELBS	KAHRAMANMARAS	2.50	23	⇑*i*P	Pn	04 02 36.6	-0.8
ELBS				*i* S	Sg	04 03 16.3	+0.7
RCY	Rachaya	2.53	181	*e*P	Pn	04 02 38.8	+0.9
LEF	Lefka	2.61	251	PN	Pn	04 02 38.1	-0.7
KKBE	Karaman, Kazim	2.66	297	*i* P	Pn	04 02 40.3	+0.8
KKBE				*i* S	Sn	04 03 13.1	+0.6
SANL	SANLIURFA_Merk	2.74	65	⇑*i*P	Pn	04 02 39.3	-1.3
SANL				*i* S	Sb	04 03 19.2	-0.1
URFA	Urfa	2.74	58	PN	Pn	04 02 38.4	-2.3
SZAC	Souni	2.77	244	P	Pn	04 02 42.0	+1.0
SZAC				AML	AML	04 03 33.4	
	22nm,0.9s						
SZAC				AML	AML	04 03 37.1	
	12nm,1.0s						
AKCD	Akcadag	2.78	35	⇑*i*P	Pn	04 02 40.5	-0.8
AKCD				*i* S	Sb	04 03 22.4	+1.7
BNN	Bunyan	2.82	359	PN	Pn	04 02 40.4	-1.4
DARE	Darende-Malaty	2.84	26	PN	Pn	04 02 40.6	-1.4
AVNS	Nevsehir-Avano	2.89	344	*i* P	Pn	04 02 43.1	+0.2
AVNS				*i* S	Sb	04 03 22.4	-1.5
CUGUR	Gurin_SVAS	2.90	22	*i* P	Pn	04 02 42.9	-0.2
CUGUR				*i* S	Sg	04 03 29.1	+0.3
GAZI	Gazipasa	2.90	275	PN	Pn	04 02 42.8	-0.1
GAZI	Gazipasa	2.90	275	*i* P	Pn	04 02 43.4	+0.5
GAZI				*i* S	Sn	04 03 17.9	-0.5
NATA	Nata	2.99	246	P	Pn	04 02 45.4	+1.3
NATA				AML	AML	04 03 44.3	
	41nm,0.8s						
NATA				AML	AML	04 03 50.2	
	28nm,1.0s						
MMAI	Mount Meron Ar	3.03	188	Pn	Pn	04 02 45.5	+0.8
	369nm,0.3s,baz=5.9,slow=13,SNR=1055						
MMAI				Sn	Sn	04 03 23.4	+1.6
	280nm,0.3s,baz=12,slow=21,SNR=7.3						
MALT	Malatya	3.05	41	PN	Pn	04 02 43.5	-1.4
MALT	Malatya	3.05	41	P	Pn	04 02 43.6	-1.4
ALAN	Alanya-ANTALYA	3.16	281	PN	Pn	04 02 46.2	-0.2
CUALT	Altinyayla-SIV	3.31	12	*i* P	Pn	04 02 48.6	+0.1
CUALT				*i* S	Sg	04 03 39.5	-2.3
YAYX	Yaylak	3.34	331	PN	Pn	04 02 48.3	-0.7
SIRC	Yozgat	3.35	350	*i* P	Pn	04 02 50.1	+1.0
SIRC				*i* S	Sb	04 03 40.0	+2.8
CUSAR	Sarkisla-SIVAS	3.39	5	*e*P	Pn	04 02 48.9	-0.9
CUSAR				*i* S	Sg	04 03 45.9	+1.4
KONT	Konya--Tatoy	3.42	305	PN	Pn	04 02 50.2	+0.3
SERE	Sereflikochisa	3.45	328	PN	Pn	04 02 50.1	-0.4
ELZG	Elazig	3.48	44	*i* P	Pn	04 02 49.8	-1.2
ELZG				*i* S	Sg	04 03 44.8	-2.6
CUKAN	kangal_SIVAS	3.51	20	*i* P	Pn	04 02 51.1	-0.2
CUKAN				*i* S	Sg	04 03 50.4	+2.2
LADK	Ladik-KONYA	3.56	309	PN	Pn	04 02 51.9	0.0
MMLI	Mount Malkishu	3.60	186	PN	Pn	04 02 52.1	-0.4
MMLI	Mount Malkishu	3.60	186	P	Pn	04 02 53.6	+1.1
ARPR	Arapgir-MALATY	3.62	32	PN	Pn	04 02 51.5	-1.4
KEMA	Kemaliye	3.83	32	*i* P	Pn	04 02 54.7	-1.0
KEMA				*i* S	Sg	04 03 55.0	-3.6
DIYA	Diyarbakir	3.88	60	*i* P	Pn	04 02 55.0	-1.3
DIYA				*i* S	Sg	04 03 57.6	-2.4
DYBB	Diyarbakir	3.90	59	PN	Pn	04 02 55.1	-1.6
AFSR	Afar-Bala (An	4.08	328	PN	Pn	04 02 59.2	+0.1
BR131	Keskin Array S	4.10	335	*i* P	Pn	04 03 01.4	+2.0
BR131	Keskin Array S	4.10	335	Pn	Pn	04 02 59.9	+0.4
BRTR	Keskin Array B	4.10	335	Pn	Pn	04 03 00.5	+1.0
	1.5nm,0.3s,baz=168,slow=13,SNR=29						
BRTR				Sn	Sn	04 03 45.5	-2.6
	4.2nm,0.3s,baz=164,slow=18,SNR=4.2						
BRTR	Keskin Array B	4.10	335	PN	Pn	04 02 59.3	-0.1
BRTR	Keskin Array B	4.10	335	Pn	Pn	04 02 59.6	+0.2
BRTR					Sn	04 03 46.2	-1.9
KOVA	Elazig, Kovanc	4.11	48	*i* P	Pn	04 02 57.7	-1.9
KOVA				*i* S	Sg	04 04 08.0	+0.6
MARD	Mardin	4.13	70	*i* P	Pn	04 02 59.0	-0.8
MARD				*i* S	Sb	04 04 01.1	+1.6
MARD	Mardin	4.13	70	Pn	Pn	04 02 58.8	-1.1
OSC2	CSNet OBS 4	4.20	226	P	Pn	04 03 00.3	-0.4
CORM	Corum	4.26	347	PN	Pn	04 03 01.3	-0.3
TOKA	Tokat	4.31	6	Pn	Pn	04 03 02.1	-0.1
ANTB	Antalya	4.31	283	PN	Pn	04 03 02.8	+0.6
TOKT	Tokat	4.31	7	PN	Pn	04 03 01.6	-0.7
RSDY	Resadiye-TOKAT	4.50	14	PN	Pn	04 03 04.3	-0.6
AMAZ	Amatzia	4.56	191	P	Pn	04 03 07.4	+1.8
ISP	Isparta	4.66	294	P	Pn	04 03 08.8	+1.7
ISP	Isparta	4.66	294	Pn	Pn	04 03 08.8	+1.7
QREAT	Al Qurrayyat	4.73	162	P	Pn	04 03 09.5	+1.5
ELL	Elmali	4.88	280	P	Pn	04 03 11.4	+1.2
ELL	Elmali	4.88	280	Pn	Pn	04 03 11.4	+1.2
ELL	Elmali	4.88	280	P	Pn	04 03 11.7	+1.6
AKAS	Kas	5.09	274		Pn	04 03 14.0	+0.9
KZIT	Kziot	5.26	194	P	Pn	04 03 16.6	+1.3
KZIT				S	Sn	04 04 15.9	-0.7
ILGA	Ilgaz	5.30	342	Pn	Pn	04 03 18.4	+2.4
KOPT	Kop Dagi	5.39	41	Pn	Pn	04 03 17.3	0.0
TRAF	Turaif	5.57	148	S	Sb	04 04 41.6	+0.7
TRAF				P	Pn	04 03 21.3	+1.7
MDUB	Mudurnu	5.77	322	Pn	Pn	04 03 22.0	-0.4
YER	Yerkesik	6.22	282	P	Pn	04 03 30.5	+2.0
EIL	Elat	6.39	187	Pn	Pn	04 03 31.6	+0.8
	9.8nm,0.3s,baz=295,slow=1.9,SNR=40						
EIL				LR	LR	04 06 20.1	
	comp=Z,519nm,21.6s,baz=6.5,slow=41						
SUZ	Suez	6.69	203	P	Pn	04 03 34.3	-0.6
	baz=203						
HHAG	Hagoal	6.85	209	P	Pn	04 03 36.1	-1.0
	baz=208						
HHAG				S	Sn	04 04 48.3	-7.4
	baz=208						
KOT	Kottamia	6.98	210	P	Pn	04 03 38.3	-0.6
	baz=210						
KOT				AMP		04 04 00.0	
	baz=210						
JOFS	JOFS	6.98	160	P	Pn	04 03 41.0	+2.0
HAQS	Haql	7.01	187	P	Pn	04 03 40.0	+0.7
KARP	Karpathos	7.11	269	Pn	Pn	04 03 40.6	-0.1
KARP				Sn	Sn	04 05 01.6	-0.7
GLL	Jalalah	7.33	210	P	Pn	04 03 43.0	-0.8
	baz=209						
HSAF	As Saff	7.36	211	P	Pn	04 03 42.7	-1.5
	baz=210						
HMYD	Mayadein	7.55	216	P	Pn	04 03 45.9	-0.8
	baz=215						
HRDS	Abu Rudays	7.62	197	P	Pn	04 03 47.6	-0.1
	baz=197						
HKAT	Jabal Katrina	7.66	193	P	Pn	04 03 48.0	-0.4
	baz=192						
RSHS		7.76	187	P	Pn	04 03 51.3	+1.7

HNAT	Natroun	7.77	216	P	Pn	04 03 49.0	-0.7
	baz=216						
TR2	Tor 2	7.84	194	P	Pn	04 03 50.9	+0.2
	baz=194						
SOC	Sochi	8.10	20	eP	Pn	04 03 53.4	-0.8
SOC				e		04 05 26.6	
SOC				pmax	pmax		
	comp=Z,14nm,0.5s						
SOC				MLR	MLR		
	comp=Z,570nm,13.0s						
GRB	Gharib	8.17	200	P	Pn	04 03 54.3	-1.0
	baz=199						
ANN	Anapa	8.84	7	eP	Pn	04 04 03.4	-0.9
ANN				pmax	pmax		
	comp=Z,45nm,0.9s						
NEY	Neytrino	8.93	34	i P	Pn	04 04 07.2	+1.5
NEY				pmax	pmax		
	comp=Z,1.0nm,0.9s						
IDI	Anoyia	8.99	268	Pn	Pn	04 04 05.7	-0.8
	comp=Z,5.9nm,0.3s,baz=331,slow=8.2,SNR=15						
IDI				Sn	Sn	04 05 43.3	-5.2
	comp=Z,4.4nm,0.3s,baz=274,slow=22,SNR=5.7						
IDI				LR	LR	04 08 54.7	
	comp=Z,181nm,20.3s,baz=74,slow=47						
HHRG	Al Ghardaqah	9.00	193	P	Pn	04 04 08.3	+1.6
	baz=193						
ALN	Alexandroupoli	9.12	305	P	Pn	04 04 10.8	+2.5
ALN	Alexandroupoli	9.12	305	Pn	Pn	04 04 10.8	+2.5
ZEI	Tsey	9.16	40	eP	Pn	04 04 12.2	+3.3
ZEI				pmax	pmax		
	comp=Z,5.0nm,1.0s						
TAMRE	El Minia	9.33	208	P	Pn	04 04 10.4	-0.8
	baz=208						
KBZ	Khabaz	9.38	33	Pn	Pn	04 04 13.3	+1.6
	comp=Z,0.1nm,0.3s,baz=214,slow=14,SNR=3.5						
KBZ				LR	LR	04 08 15.5	
	comp=Z,309nm,18.4s,baz=226,slow=41						
KBZ	Khabaz	9.38	33	i P	Pn	04 04 13.5	+1.7
KIV	Kislovodsk	9.47	31	eP	Pn	04 04 13.6	+0.5
KIV				pmax	pmax		
	comp=Z,25nm,1.0s						
KIV				MLR	MLR		
	comp=Z,230nm,11.0s						
CFR	Carcaliu	10.87	330	⇓P	Pn	04 04 33.1	+0.9
CFR	Carcaliu	10.87	330	⇓P	Pn	04 04 33.1	+0.9
SRS	Serrai	10.88	302	P	Pn	04 04 35.1	+2.7
SRS				pmax	pmax		
	comp=Z,38nm,1.5s						
AGG	Agios Georgios	11.18	290	P	Pn	04 04 39.0	+2.6
AGG	Agios Georgios	11.18	290	Pn	Pn	04 04 39.0	+2.6
ITM	Ithomi	11.29	280	Pn	Pn	04 04 39.6	+1.7
MAK	Makhachkala	11.32	49	eP	Pn	04 04 38.2	-0.2
MAK				eS	Sn	04 06 45.3	-0.3
MAK				pmax	pmax		
	comp=Z,257nm,1.3s						
MAK				MLR	MLR		
	comp=Z,643nm,3.0s						
GTR	Jabal at Tayr	11.44	205	P	Pn	04 04 39.9	-0.2
	baz=205						
ISR	Istrita	11.52	325	⇑P	Pn	04 04 45.1	+3.9
ISR	Istrita	11.52	325	⇑P	Pn	04 04 45.1	+3.9
BISRR	Bisoca	11.78	327	⇓P	Pn	04 04 48.0	+3.4
VTS	Vitosha	11.80	308	⇓P	Pn	04 04 52.0	+7.0
VTS	Vitosha	11.80	308	P	Pn	04 04 46.1	+1.1
VTS	Vitosha	11.80	308	Pn	Pn	04 04 46.1	+1.1
VRI	Vrincioaia	12.02	328	⇓P	Pn	04 04 50.3	+2.5
VRI	Vrincioaia	12.02	328	⇓P	Pn	04 04 50.3	+2.5
PLOR	Plostina	12.04	327	⇓P	Pn	04 04 49.2	+1.0
PLOR	Plostina	12.04	327	⇓P	Pn	04 04 49.2	+1.0
VOIR		12.48	322	⇓P	Pn	04 04 58.2	+4.0
VOIR		12.48	322	⇓P	Pn	04 04 58.2	+4.0
DOPR	Dopca	12.70	325	⇓P	Pn	04 05 00.9	+3.7
GZR	Gura Zlata	13.64	317	⇑P	Pn	04 05 13.7	+3.6
BURAR	Bucovina Array	14.03	329	⇑P	P	04 05 21.6	-1.9
BURAR	Bucovina Array	14.03	329	⇑P	P	04 05 21.7	-1.9
BUR08	Bucovina Ar. S	14.06	329	Pn	Pn	04 05 18.2	+2.3
BZS	Buzias	14.42	316	⇑P	Pn	04 05 24.0	+3.3
BZS	Buzias	14.42	316	⇑P	Pn	04 05 24.0	+3.3
RAYN	Ar Rayn	14.99	144	P	Pn	04 05 28.3	-0.3
RAYN	Ar Rayn	14.99	144	Pn	Pn	04 05 28.3	-0.3
VORD	Divnogorie	15.13	8	eP	Pn	04 05 32.4	+2.1
VORD				pmax	pmax		
	comp=Z,10.0nm,0.9s						
VSR	Storozhevoye	15.36	8	eP	Pn	04 05 33.4	+0.1
VSR				pmax	pmax		
	comp=Z,20nm,1.3s						
AKASG	Malin Array Be	15.44	344	Pn	P	04 05 37.6	-1.5
	comp=Z,2.4nm,0.3s,baz=162,slow=9.7,SNR=16						
AKASG	Malin Array Be	15.44	344	ceP	P	04 05 37.5	-1.5
AKASG				pmax	pmax		
	comp=Z,12nm,0.6s						
AKASG	Malin Array Be	15.44	344		Pn	04 05 34.9	+0.6
AKBB	Malin Array Si	15.44	344	ceP	P	04 05 38.7	-0.3
AKBB	Malin Array Si	15.44	344		Pn	04 05 35.0	+0.7
AKBB				IAmb	IAmb	04 05 49.2	
	comp=Z,19nm,0.8s						
TIP	Timpagrande	15.49	287	Pn	Pn	04 05 32.5	-2.7
VRH	Novokhopyorsk	15.73	14	eP	Pn	04 05 36.8	-1.4
VRH				pmax	pmax		
	comp=Z,30nm,1.4s						
UZH	Uzhgorod	16.08	326	eP	Pn	04 05 42.5	-0.2
KOLS	Kolonicke sedl	16.31	326	eP	P	04 05 52.1	+3.3
KOLS	Kolonicke sedl	16.31	326	eP	P	04 05 52.1	+3.3
MORH	Mrgy, Hungar	16.47	313	⇓P	P	04 05 53.0	+2.4
KWP	Kalwaria Pacla	16.65	329	P	P	04 05 54.0	+1.5
KWP				pmax	pmax		
	comp=Z,30nm,1.9s						
CRVS	Cervenica-Dubn	16.66	325	eP	P	04 05 55.6	+2.9
CRVS	Cervenica-Dubn	16.66	325	eP	P	04 05 55.6	+2.9
LPSR	Galich'ya Gora	16.71	6	eP	Pn	04 05 51.5	+0.8
LPSR				pmax	pmax		
	comp=Z,30nm,1.2s						
VYHS	Vyhne	17.68	320	eP	P	04 06 07.1	+3.1
VYHS	Vyhne	17.68	320	eP	P	04 06 07.1	+3.1
GEYT	Alibeck	17.85	77	P	P	04 06 06.4	+0.5
	comp=Z,0.8nm,0.3s,baz=255,slow=11,SNR=11						
GEYT				LR	LR	04 14 38.0	
	comp=Z,97nm,19.0s,baz=260,slow=43						
GEYT	Alibeck	17.85	77	P	P	04 06 06.5	+0.5
GYA0B	ALIBECK ARRAY	17.85	77	P	P	04 06 06.5	+0.6
INTR	Introdacqua	18.08	296		P	04 06 08.4	0.0
INTR				IAmb	IAmb	04 06 17.4	
	comp=Z,23nm,0.8s						
BELG	Belogornoye	18.35	23	LR	LR	04 14 13.1	
	comp=Z,117nm,19.9s,baz=329,slow=40						
BELG	Belogornoye	18.35	23	i P	Pn	04 06 08.8	-2.3
BELG				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MODS	Modra-Piesok	18.44	318	eP	P	04 06 15.0	+2.6
MODS	Modra-Piesok	18.44	318	eP	P	04 06 15.0	+2.6
JAVC	Velka Javorina	18.52	319	eP	Pn	04 06 18.1	+4.8
NRCA	Norcia	18.83	298	P	P	04 06 16.8	0.0
ARSA	Arzberg	18.85	313	eP	Pn	04 06 20.2	+2.9
	comp=Z,5.3nm,1.0s						
CONA	Conrad Observa	18.99	315	eP	Pn	04 06 21.4	+2.3
	comp=Z,4.8nm,1.3s						
OBN	Obninsk	19.09	1	ceP	P	04 06 19.7	+0.3
OBN				pmax	pmax		
	comp=Z,79nm,2.5s						
OBN				MLR	MLR		
	comp=Z,205nm,17.0s						
OBKA	Obir	19.10	310	eP	Pn	04 06 20.4	0.0
	comp=Z,8.3nm,1.0s						
MORC	Moravsky Berou	19.15	322	eP	Pn	04 06 22.7	+1.7
KRUC	Moravsky	19.32	318	eP	Pn	04 06 24.8	+1.9
KRUC	Moravsky	19.32	318	P	Pn	04 06 25.1	+2.2
VRAC	Vranov	19.36	319	P	Pn	04 06 22.9	-0.5
	comp=Z,0.2nm,0.3s,baz=107,slow=16,SNR=2.4						
VRAC	Vranov	19.36	319	eP	Pn	04 06 27.3	+3.9
MYKA	Terra Mystica	19.72	309	eP	Pn	04 06 27.6	-0.2
	comp=Z,18nm,0.8s						
MOS	Moscow	19.75	3	eP	P	04 06 26.0	-0.6
MOS				pmax	pmax		
	comp=Z,48nm,0.7s						
MOA	Molln	19.88	313	eP	P	04 06 28.4	+0.2
	comp=Z,14nm,0.8s						
NACGM	Naroch	19.89	344	i P	Pn	04 06 31.7	+2.0
NACGM				i P	Pn	04 06 31.7	+2.0
NACGM				i P	Pn	04 06 31.7	+2.0
NACGM				i PP	PnPn	04 06 47.4	+3.8
NACGM				i PPP	PPP	04 06 53.5	
NACGM				i S	Sn	04 10 19.3	+5.5
NACGM				i SS	SnSn	04 10 39.2	+11
NACGM				i SSS	SSS	04 11 04.4	
NACGM				i LQ	LQ	04 12 39.9	
NACGM				i LR	LR	04 14 27.5	
SUW	Suwalki	20.05	338	P	Pn	04 06 31.3	-0.2
SUW				pmax	pmax		
	comp=Z,32nm,1.0s						
KBA	Koelnbreinsper	20.09	310	eP	P	04 06 29.3	-1.3
	comp=Z,6.6nm,0.7s						
KBA	Koelnbreinsper	20.09	310	P	P	04 06 30.7	+0.1
KBA				pmax	pmax		
	comp=Z,13nm,1.0s						
ZOU	Zoufplan	20.11	309	P	P	04 06 30.7	-0.2
IDID	Didziasalis	20.29	345	eP	P	04 06 28.9	-3.6
IDID				IAmb	IAmb	04 06 42.7	
	comp=Z,13nm,1.0s						
OSTC	Ostas	20.30	322	eP	Pn	04 06 36.3	+1.6
CKRC	Cesky Krumlov	20.34	316	eP	Pn	04 06 36.2	+1.1
CHVC	Chvalec	20.41	322	eP	Pn	04 06 37.2	+1.3
IIGN	Ignalina	20.43	344	eP	P	04 06 31.1	-2.9
IIGN				IAmb	IAmb	04 06 57.5	
	comp=Z,7.8nm,0.8s						
ABTA	Abfaltersbach	20.48	309	eP	P	04 06 35.3	+0.5
	comp=Z,10nm,1.2s						
TEOL	Teolo	20.53	304	P	P	04 06 34.3	-1.0
ISAL	Salakas	20.66	344	eP	P	04 06 32.4	-4.1
ISAL				IAmb	IAmb	04 06 41.4	
	comp=Z,9.2nm,0.6s						
GEC2	GERESS Array S	20.70	315	P	P	04 06 37.3	+0.1
GEC2				IAmb	IAmb	04 06 42.0	
	comp=Z,12nm,0.8s						
GERES	GERESS Array B	20.70	315	P	P	04 06 36.5	-0.6
	comp=Z,9.6nm,0.7s,baz=118,slow=11,SNR=33						
GERES				LR	LR	04 15 07.2	
	comp=Z,127nm,20.4s,baz=143,slow=38						
GERES	GERESS Array B	20.70	315	P	P	04 06 36.2	-0.9
CTI	Castel Tesino	20.77	306	P	P	04 06 38.0	0.0
CTI				pmax	pmax		
	comp=Z,19nm,1.0s						
CTI	Castel Tesino	20.77	306	P	P	04 06 38.0	0.0
CTI				IAmb	IAmb	04 06 42.7	
	comp=Z,19nm,1.0s						
PRU	Pruhonice	20.84	319	eP	Pn	04 06 41.0	+0.1
PRU	Pruhonice	20.84	319	eP	Pn	04 06 41.0	+0.1
KHC	Kasperske Hory	20.91	316	eP	Pn	04 06 41.5	-0.3
KHC	Kasperske Hory	20.91	316	eP	Pn	04 06 41.5	-0.3
KHC	Kasperske Hory	20.91	316	P	P	04 06 38.8	-0.6
PRA	Prague	20.94	319	eP	Pn	04 06 42.8	+0.7
PRA	Prague	20.94	319	eP	Pn	04 06 42.8	+0.7
PABE	Paberze	21.12	341	eP	P	04 06 41.6	+0.1
PABE				IAmb	IAmb	04 06 48.9	
	comp=Z,42nm,1.1s						
PVCC	Panska Ves	21.13	320	eP	P	04 06 44.5	+2.8
PVCC	Panska Ves	21.13	320	eP	P	04 06 44.5	+2.8
VSL	Villasalto	21.22	287	P	P	04 06 42.8	+0.1
WTTA	Wattenberg	21.23	309	eP	P	04 06 44.9	+1.9
	comp=Z,14nm,1.1s						
WATA	Walderalm	21.30	310	eP	P	04 06 45.3	+1.6
	comp=Z,10nm,0.9s						
WET	Wettzell	21.32	315	P	P	04 06 45.1	+1.4
WET				pmax	pmax		
	comp=Z,16nm,1.1s						
SQTA	Sankt Quirin	21.48	309	P	P	04 06 46.5	+0.8
	comp=Z,14nm,1.3s						
KEST	Kesra	21.50	277	P	P	04 06 46.0	+0.2
	comp=Z,12nm,1.0s,baz=1.3,slow=5.1,SNR=14						
KEST	Kesra	21.50	277	P	P	04 06 45.8	0.0
AKTO	Aktyubinsk	21.50	41	P	P	04 06 44.6	-1.0
	comp=Z,19nm,0.7s,baz=242,slow=11,SNR=40						
MOTA	Moosalm	21.60	309	eP	P	04 06 48.5	+1.6
	comp=Z,11nm,0.9s						
GKP	Gorka Klasztor	21.64	329	eP	P	04 06 46.1	-1.0
BRG	Berggiesshubel	21.66	320	P	P	04 06 51.6	+4.3
BRG				pmax	pmax		
	comp=Z,7.0nm,1.1s						
BRG	Berggiesshubel	21.66	320	eP	P	04 06 51.4	+4.1
BRG				Amp		04 06 55.5	
	comp=Z,8.3nm,1.1s						
FETA	Feichten	21.71	308	eP	P	04 06 49.5	+1.4
	comp=Z,22nm,1.9s						
RETA	Reutte	21.87	309	eP	P	04 06 47.3	-2.4
	comp=Z,4.5nm,0.6s						
ABKAR	Akbulak array	21.97	46	P	P	04 06 49.4	-1.2
ABKAR	Akbulak array	21.97	46	P	P	04 06 49.9	-0.8
ABKAR				IAmb	IAmb	04 06 54.3	
	comp=Z,8.2nm,0.9s						
DAVOX	Davos/Dischmat	22.18	307	P	P	04 06 51.5	-1.6
	comp=Z,1.3nm,0.6s,baz=135,slow=14,SNR=4.1						
DAVOX				LR	LR	04 16 43.6	
	comp=Z,136nm,19.5s,baz=104,slow=40						
DAVA	Damuels	22.35	308	eP	P	04 06 53.0	-2.0
	comp=Z,7.9nm,0.7s						
CLL	Collm	22.39	320	eP	P	04 06 55.0	-0.2
CLL				e		04 07 03.0	
CLL				e		04 07 11.0	
CLL	Collm	22.39	320	eP	P	04 06 55.0	-0.2
CLL				e		04 07 03.0	
SBF	Sospel	23.10	299	eP	P	04 07 02.3	-0.5
SBF				pmax	pmax		
	comp=Z,20nm,0.8s						
VSU	Vasula	23.25	348	eP	P	04 07 03.5	-0.5
FRF	La Foret Royal	23.61	298	eP	P	04 07 07.3	-0.6
FRF				pmax	pmax		
	comp=Z,112nm,2.2s						
LMR	La Mourre	23.68	297	eP	P	04 07 09.7	+1.1
LMR				pmax	pmax		
	comp=Z,90nm,2.0s						
BFO	Black Forest	23.70	310	P	P	04 07 08.9	+0.2
BFO				pmax	pmax		
	comp=Z,8.0nm,0.9s						
BFO	Black Forest	23.70	310	P	P	04 07 08.9	+0.2
BFO				IAmb	IAmb	04 07 15.7	
	comp=Z,8.2nm,0.9s						
MBDF	Montbardon	23.73	300	eP	P	04 07 08.3	-0.9
MBDF				pmax	pmax		
	comp=Z,15nm,0.8s						
SENIN	Lac Senin/Sane	23.75	305	P	P	04 07 09.2	-0.3
BNI	Bardonecchia	23.86	301	P	P	04 07 09.8	-0.6
BNI				pmax	pmax		
	comp=Z,11nm,0.9s						
BNI	Bardonecchia	23.86	301	P	P	04 07 09.8	-0.6
BNI				IAmb	IAmb	04 07 16.9	
	comp=Z,11nm,0.9s						
LPG	La Plagne	23.90	302	eP	P	04 07 10.5	-0.6
LPG				pmax	pmax		
	comp=Z,17nm,0.8s						
LPL	La Plagne	23.92	302	eP	P	04 07 10.5	-0.7
LPL				pmax	pmax		
	comp=Z,13nm,0.7s						
MTSE	Matsula	24.05	344	eP	P	04 07 14.9	+2.9
KIRV	Kirov	24.26	17	P	P	04 07 12.6	-1.3
	comp=Z,17nm,0.6s,baz=196,slow=2.1,SNR=6.9						
KIRV				LR	LR	04 16 56.6	
	comp=Z,149nm,21.2s,baz=217,slow=37						
KIRV	Kirov	24.26	17	i P	P	04 07 12.9	-1.0
CDF	Champ du Feu	24.39	309	eP	P	04 07 13.5	-1.8
CDF				pmax	pmax		
	comp=Z,27nm,1.6s						
ECH	Echery	24.39	309	P	P	04 07 15.1	-0.2
ECH				pmax	pmax		
	comp=Z,9.0nm,0.8s						
ECH	Echery	24.39	309	P	P	04 07 15.1	-0.2
ECH				IAmb	IAmb	04 07 20.4	
	comp=Z,8.7nm,0.8s						
HINF	Hinteralfeld	24.46	308	eP	P	04 07 15.3	-0.6
HINF				pmax	pmax		
	comp=Z,52nm,2.0s						
HAU	Haudompre	24.84	308	eP	P	04 07 17.4	-1.9
HAU				pmax	pmax		
	comp=Z,22nm,1.4s						
KLMR	Klimovskoe	24.95	4	eP	P	04 07 18.9	-1.2
KLMR				pmax	pmax		
	comp=Z,60nm,1.3s						
KLMR	Klimovskoe	24.95	4	eP	P	04 07 18.9	-1.2
KLMR				AMP		04 07 21.3	
	comp=Z,60nm,1.3s						
ATD	Arta Tunnel	25.19	164	LR	LR	04 16 00.9	
	comp=Z,113nm,18.2s,baz=21,slow=34						
SSB	Saint Sauveur	25.38	301	P	P	04 07 23.5	-0.8
SSB				pmax	pmax		
	comp=Z,14nm,1.1s						
SSB	Saint Sauveur	25.38	301	P	P	04 07 23.5	-0.8
SSB				IAmb	IAmb	04 07 29.5	
	comp=Z,14nm,1.1s						
ARU	Arti	25.52	30	P	P	04 07 24.9	-0.4
	comp=Z,2.4nm,0.5s,baz=226,slow=9.0,SNR=13						
ARU				LR	LR	04 19 20.2	
	comp=Z,68nm,18.0s,baz=208,slow=41						
ARU	Arti	25.52	30	d iP	P	04 07 22.5	-2.8
ARU				S	S	04 11 49.8	-3.7
ARU				pmax	pmax		
	comp=Z,51nm,2.9s						
ARU	Arti	25.52	30	P	P	04 07 24.6	-0.7
ARU				IAmb	IAmb	04 07 25.8	
	comp=Z,7.3nm,0.7s						
FINES	FINESS Array B	26.19	349	P	P	04 07 30.3	-1.0
	comp=Z,3.4nm,0.7s,baz=160,slow=16,SNR=8.3						
FINES				LR	LR	04 19 38.4	
	comp=Z,299nm,18.0s,baz=118,slow=41						
FINES	FINESS Array B	26.19	349	ceP	P	04 07 34.7	+3.4
FINES				pmax	pmax		
	comp=Z,4.0nm,0.6s						
LOR	Lormes	26.26	305	eP	P	04 07 29.9	-2.3
LOR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
AVF	Avril sur Loir	26.49	304	eP	P	04 07 33.1	-1.2
AVF				pmax	pmax		
	comp=Z,9.0nm,0.8s						
UPP	Uppsala	26.62	339	eP	P	04 07 33.8	-1.4
SVE	Sverdlovsk	26.63	31	eP	P	04 07 36.4	+1.0
SVE				pmax	pmax		
	comp=Z,27nm,0.9s						
IUG	Iuzhnay	27.07	66	eP	P	04 07 38.6	-1.1
	baz=66						
IUG	Iuzhnay	27.07	66	eP	P	04 07 38.6	-1.1
KK31	Karatay Array	27.46	64	P	P	04 07 43.4	+0.3
KK31				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KK31	Karatay Array	27.46	64	P	P	04 07 43.4	+0.3
KK31				IAmb	IAmb	04 07 44.2	
	comp=Z,9.5nm,0.8s						
KKAR	Karatay Array	27.46	64	P	P	04 07 43.4	+0.3
KKAR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KKAR	Karatay Array	27.46	64	P	P	04 07 43.4	+0.3
KKAR				IAmb	IAmb	04 07 44.2	
	comp=Z,9.5nm,0.8s						
RJF	Les Rejaudoux	27.50	300	eP	P	04 07 42.2	-1.2
RJF				pmax	pmax		
	comp=Z,17nm,1.0s						
HFS	Hagfors	28.04	336	P	P	04 07 47.0	-1.0
	comp=Z,4.6nm,0.6s,baz=149,slow=9.7,SNR=13						
HFS				LR	LR	04 21 26.1	
	comp=Z,184nm,18.6s,baz=168,slow=42						
ETSF	Etsaut	28.80	295	eP	P	04 07 54.4	-0.7
ETSF				pmax	pmax		
	comp=Z,4.0nm,0.7s						
TAM	Tamanrasset	29.43	252	P	P	04 08 00.6	-0.4
TAM				pmax	pmax		
	comp=Z,5.0nm,1.1s						
TAM	Tamanrasset	29.43	252	P	P	04 08 00.6	-0.4
BRVK	Borovoye	29.46	44	ceP	P	04 08 00.1	-0.7
BRVK				pmax	pmax		
	comp=Z,8.0nm,1.3s						
BRVK	Borovoye	29.46	44	IAmb	IAmb	04 08 04.2	
	comp=Z,6.4nm,1.0s						
BRVK	Borovoye	29.46	44	P	P	04 08 01.1	+0.4
BVAR	Borovoye Array	29.51	44	P	P	04 08 01.0	-0.2
	comp=Z,1.5nm,0.6s,baz=0.0,slow=5.8,SNR=7.7						
NB2	NORSAR Subarra	29.54	336	P	P	04 07 59.6	-1.8
	comp=Z,0.6nm,0.5s,baz=136,slow=9.3						
NOA	NORSAR Array B	29.54	336	P	P	04 08 00.4	-1.0
	comp=Z,0.8nm,0.5s,baz=138,slow=9.3,SNR=12						
NOA				LR	LR	04 21 26.2	
	comp=Z,90nm,19.6s,baz=10.0,slow=40						
GRR	Gorron	29.60	306	eP	P	04 07 59.4	-2.7
GRR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
BRZS	Berezniki	29.96	51	eP	P	04 08 04.0	-1.2
	baz=50						
BRZS	Berezniki	29.96	51	eP	P	04 08 04.0	-1.2
BTLS	Baital	30.13	61	eP	P	04 08 05.9	-0.8
	baz=60						
BTLS	Baital	30.13	61	eP	P	04 08 05.9	-0.8
AAK	Ala-Archa	30.38	66	ceP	P	04 08 08.7	-0.5
AAK				pmax	pmax		
	comp=Z,24nm,1.7s						
AAK	Ala-Archa	30.38	66	P	P	04 08 09.3	+0.1
AAK				IAmb	IAmb	04 08 10.6	
	comp=Z,3.6nm,0.8s						
ROSF	Rostrenen	31.18	306	eP	P	04 08 14.1	-1.9
ROSF				pmax	pmax		
	comp=Z,23nm,1.0s						
ESDC	Sonseca Array	31.50	289	P	P	04 08 17.6	-1.5
	comp=Z,1.4nm,0.8s,baz=65,slow=8.6,SNR=9.4						
ESDC	Sonseca Array	31.50	289	P	P	04 08 17.9	-1.1
KSH	Kashi	31.69	71	P	P	04 08 19.7	-1.0
KSH				pmax	pmax		
	comp=Z,9.0nm,1.2s						
KSH				pmax	pmax		
	comp=Z,770nm,6.8s						
KUU	Kurty	31.73	63	eP	P	04 08 20.9	-0.1
	comp=Z,4.5nm,1.0s,baz=63						
KUU	Kurty	31.73	63	eP	P	04 08 20.8	-0.1
KUU				pmax	pmax		
	comp=Z,4.0nm,1.0s						
LVZ	Lovozero	31.92	359	i P	P	04 08 25.2	+2.8
LVZ				pmax	pmax		
	comp=Z,17nm,1.1s						
CHKK	Chushkaly	32.19	63	eP	P	04 08 25.6	+0.6
	baz=63						
CHKK	Chushkaly	32.19	63	eP	P	04 08 25.6	+0.6
MDOK	Medeo	32.25	64	eP	P	04 08 24.5	-1.2
	baz=64						
MDOK	Medeo	32.25	64	eP	P	04 08 24.4	-1.2
TDK	Taldyqorghan	33.21	61	eP	P	04 08 34.3	+0.4
	baz=61						
TDK	Taldyqorghan	33.21	61	eP	P	04 08 34.3	+0.4
SATY	Saty	33.24	65	eP	P	04 08 33.8	-0.6
	comp=Z,3.6nm,1.4s,baz=64						
SATY	Saty	33.24	65	eP	P	04 08 33.7	-0.6
SATY				pmax	pmax		
	comp=Z,4.0nm,1.4s						
KPKS	Kokpek	33.43	64	eP	P	04 08 35.4	-0.6
	baz=64						
KPKS	Kokpek	33.43	64	eP	P	04 08 35.3	-0.6
KURK	Kurchatov	33.84	51	ceP	P	04 08 39.0	-0.2
KURK				pmax	pmax		
	comp=Z,19nm,1.3s						
KURK	Kurchatov	33.84	51	P	P	04 08 39.6	+0.4
SHLS	Shalkode	34.01	64	eP	P	04 08 42.7	+1.7
	baz=64						
SHLS	Shalkode	34.01	64	eP	P	04 08 42.7	+1.7
ARCES	ARCESS Array B	34.04	353	P	P	04 08 41.8	+0.9
	comp=Z,2.1nm,0.6s,baz=177,slow=8.0,SNR=3.9						
ARCES				LR	LR	04 22 38.0	
	comp=Z,243nm,20.0s,baz=290,slow=37						
SEM	Semipalatinsk	34.83	52	eP	P	04 08 47.9	-0.2
	comp=Z,2.8nm,0.8s,baz=51						
SEM	Semipalatinsk	34.83	52	eP	P	04 08 47.9	-0.2
SEM				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MAKZ	Makanchi	35.73	58	P	P	04 08 55.9	+0.2
MAKZ				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MAKZ	Makanchi	35.73	58	P	P	04 08 55.9	+0.2
MK31	Makanchi Array	35.94	58	ceP	P	04 08 57.9	+0.4
MK31	Makanchi Array	35.94	58	P	P	04 08 57.8	+0.2
MK31				IAmb	IAmb	04 08 58.3	
	comp=Z,3.5nm,0.7s						
MKAR	Makanchi Array	35.94	58	P	P	04 08 57.8	+0.2
	comp=Z,4.4nm,0.7s,baz=267,slow=7.4,SNR=44						
ZSN	Zaisan	37.70	57	eP	P	04 09 12.2	-0.3
	baz=57						
ZSN	Zaisan	37.70	57	eP	P	04 09 12.1	-0.3
ZAA0	Zalesovo Array	38.08	46	P	P	04 09 15.2	-0.4
ZAA0				IAmb	IAmb	04 09 15.7	
	comp=Z,3.7nm,0.6s						
ZALV	Zalesovo Beam	38.08	46	P	P	04 09 14.9	-0.6
	comp=Z,4.2nm,0.5s,baz=263,slow=8.9,SNR=20						
ZALV				LR	LR	04 27 36.7	
	comp=Z,70nm,18.0s,baz=44,slow=40						
TORD	Torodi Ar. Bea	38.24	242	P	P	04 09 15.9	-1.4
	comp=Z,2.5nm,0.8s,baz=43,slow=8.4,SNR=6.9						
TORD				LR	LR	04 29 39.9	
	comp=Z,49nm,19.1s,baz=290,slow=44						
DGZ	Jazzator, Alta	39.40	53	i P	P	04 09 27.2	+0.3
DGZ				pmax	pmax		
	comp=Z,12nm,1.1s						
WMQ	Urumqi	39.92	62	eP	P	04 09 32.3	+1.1
DANN	Dangsing	40.89	87	eP	P	04 09 40.2	+0.5
	comp=Z,39nm,0.7s						
KOWA	Kowa	41.59	249	P	P	04 09 44.8	-0.4

KOWA				IAmb	IAmb	04 09 45.2	
	comp=Z,5.5nm,0.8s						
GKN	**Gorkha**	**41.74**	**87**	*e*P	**P**	**04 09 46.7**	**+0.2**
	comp=Z,34nm,0.7s						
DMN	**Daman**	**42.28**	**87**	*e*P	**P**	**04 09 51.3**	**+0.3**
	comp=Z,32nm,0.9s						
KKN	**Kakani**	**42.35**	**87**	*e*P	**P**	**04 09 51.5**	**0.0**
	comp=Z,26nm,0.7s						
PKIN	**Phulchoki**	**42.53**	**87**	*e*P	**P**	**04 09 53.4**	**+0.3**
	comp=Z,15nm,0.6s						
PKI	**Pulchoki**	**42.54**	**87**	*e*P	**P**	**04 09 53.3**	**+0.1**
	comp=Z,16nm,0.8s						
GUN	**Gumba**	**42.78**	**86**	*e*P	**P**	**04 09 55.3**	**+0.1**
	comp=Z,53nm,1.2s						
NRIK	**Noril'sk**	**43.45**	**24**	P	**P**	**04 09 59.5**	**-0.2**
	comp=Z,4.2nm,0.7s,baz=290,slow=4.5,SNR=5.2						
NRIK	**Noril'sk**	**43.45**	**24**	*ce*P	**P**	**04 10 00.0**	**+0.4**
NRIK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
NRIK	**Noril'sk**	**43.45**	**24**	P	**P**	**04 10 00.1**	**+0.4**
NRIK				IAmb	IAmb	04 10 03.8	
	comp=Z,7.7nm,1.1s						
RAMN	**Ramite**	**43.76**	**87**	*e*P	**P**	**04 10 02.6**	**-0.4**
	comp=Z,33nm,0.7s						
DBIC	**Dimbokro**	**47.35**	**242**	P	**P**	**04 10 30.2**	**-1.1**
	comp=Z,5.5nm,0.7s,baz=16,slow=6.7,SNR=9.5						
DBIC				LR	LR	04 36 06.3	
	comp=Z,34nm,19.9s,baz=46,slow=43						
DBIC	**Dimbokro**	**47.35**	**242**	P	**P**	**04 10 30.3**	**-0.9**
DBIC				pmax	pmax		
	comp=Z,5.0nm,0.7s						
DBIC	**Dimbokro**	**47.35**	**242**	P	**P**	**04 10 30.3**	**-0.9**
KIC	**Kosan Boka**	**47.48**	**241**	*e*P	**P**	**04 10 30.6**	**-1.7**
	comp=Z,16nm,0.8s						
TIC	**Toumodi**	**47.48**	**242**	*e*P	**P**	**04 10 30.6**	**-1.7**
LIC	**Lamto**	**47.78**	**242**	*e*P	**P**	**04 10 33.0**	**-1.6**
	comp=Z,25nm,1.1s						
ZAK	**Zakamensk**	**49.50**	**51**	*e*P	**P**	**04 10 47.1**	**-0.5**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
TLY	**Talaya**	**49.51**	**49**	*i* P	**P**	**04 10 47.5**	**0.0**
TLY				pmax	pmax		
	comp=Z,5.0nm,1.1s						
GTA	**Gaotai**	**49.73**	**66**	P	**P**	**04 10 49.3**	**-0.2**
GTA				pP		04 10 56.7	
GTA				sP		04 11 00.8	
GTA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
LSZ	**Lusaka**	**51.55**	**190**	P	**P**	**04 11 03.1**	**-0.2**
LSZ				pmax	pmax		
	comp=Z,7.0nm,0.9s						
LSZ	**Lusaka**	**51.55**	**190**	P	**P**	**04 11 03.1**	**-0.2**
LSZ				IAmb	IAmb	04 11 09.1	
	comp=Z,6.7nm,0.9s						
SONM	**Songino Array**	**52.05**	**54**	P	**P**	**04 11 06.9**	**+0.1**
	comp=Z,4.1nm,1.0s,baz=292,slow=7.0,SNR=18						
ULN	**Ulaanbaatar**	**52.47**	**53**	*ce*P	**P**	**04 11 10.4**	**+0.4**
ULN				pmax	pmax		
	comp=Z,9.0nm,0.8s						
LZH	**Lanzhou**	**53.85**	**68**	*e*P	**P**	**04 11 20.9**	**+0.5**
LZH				pP		04 11 26.5	
LZH				sP		04 11 28.2	
LZH				PP	**PP**	**04 13 27.4**	**+6.1**
LZH				pmax	pmax		
	comp=Z,13nm,1.1s						
LZH				pmax	pmax		
	comp=Z,63nm,5.4s						
TIXI	**Tiksi**	**57.17**	**22**	*i* P	**P**	**04 11 43.1**	**-0.4**
HHC	**Hu-ho-hao-te**	**57.74**	**60**	*e*P	**P**	**04 11 49.8**	**+1.6**
HHC				pmax	pmax		
	comp=Z,8.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,73nm,5.5s						
CMAR	**Chiang Mai Arr**	**57.79**	**90**	P	**P**	**04 11 48.5**	**-0.2**
	comp=Z,6.5nm,0.8s,baz=294,slow=8.1,SNR=14						
CMAR				LR	LR	04 41 58.3	
	comp=Z,25nm,18.2s,baz=190,slow=42						
CMAR	**Chiang Mai Arr**	**57.79**	**90**	P	**P**	**04 11 48.4**	**-0.3**
BOSA	**Boshof**	**65.08**	**190**	P	**P**	**04 12 38.9**	**+1.1**
	comp=Z,7.5nm,0.6s,baz=12,slow=6.6,SNR=25						
BOSA	**Boshof**	**65.08**	**190**	P	**P**	**04 12 37.6**	**-0.1**
KLR	**Kul'dur**	**67.17**	**45**	*i* P	**P**	**04 12 52.7**	**+1.7**
KLR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KSRS	**Korea Array**	**70.62**	**57**	LR	LR	04 46 05.9	
	comp=Z,28nm,18.3s,baz=25,slow=38						
MJAR	**Matsushiro Arr**	**78.00**	**54**	LR	LR	04 52 15.6	
	comp=Z,23nm,18.3s,baz=5.0,slow=39						
ANM	**Nome**	**78.35**	**9**	P	**P**	**04 13 57.4**	**+0.3**
ANM				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ANM	**Nome**	**78.35**	**9**	P	**P**	**04 13 57.4**	**+0.3**
YKA	**Yellowknife Ar**	**78.98**	**347**	P	**P**	**04 13 60.0**	**-0.7**
	comp=Z,0.9nm,0.7s,baz=32,slow=6.2,SNR=9.7						
YKA	**Yellowknife Ar**	**78.98**	**347**	*ce*P	**P**	**04 14 02.0**	**+1.4**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ILAR	**Eielson Array**	**79.51**	**1**	P	**P**	**04 14 04.0**	**+0.5**
	comp=Z,0.3nm,0.7s,baz=297,slow=1.3,SNR=8.0						
ILAR	**Eielson Array**	**79.51**	**1**	P	**P**	**04 14 03.7**	**+0.2**
ILAR	**Eielson Array**	**79.51**	**1**	P	**P**	**04 14 03.7**	**+0.2**
ULM	**Lac du Bonnet**	**84.12**	**331**	P	**P**	**04 14 26.7**	**-1.4**
	comp=Z,2.0nm,0.6s,baz=67,slow=5.1,SNR=6.0						
ULM	**Lac du Bonnet**	**84.12**	**331**	P	**P**	**04 14 28.0**	**-0.1**
ULM				pmax	pmax		
	comp=Z,4.0nm,1.2s						
ULM	**Lac du Bonnet**	**84.12**	**331**	P	**P**	**04 14 28.0**	**-0.1**
ULM				IAmb	IAmb	04 14 33.7	
	comp=Z,4.4nm,1.1s						
PLCA	**Paso Flores**	**123.71**	**241**	PKP	**PKPdf**	**04 20 54.4**	**-0.5**
	comp=Z,1.4nm,0.7s,baz=18,slow=2.5,SNR=4.5						
PLCA	**Paso Flores**	**123.71**	**241**	PKPdf	**PKPdf**	**04 20 51.6**	**-3.3**

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*JMA **10** 04:02:54.1±0.1, 23.°94N×122.°40E, h18^{km}±2^{km}, M2.8*

*TAP **10** 04:02:54.9, 24.°02N×122.°40E, h26^{km}, ML3.0, D*

ISC 10 04:02:54.5±1.1**, 23.°97N**±0.°03×**122.°39E**±0.°02**, h23**^{km}±13^{km}**, n51,** σ**0.^{s}90**/87**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.69**	**46**	P	**Pb**	**04 03 07.5**	**-0.5**
JYNG				S	**Sb**	**04 03 17.3**	**+0.2**
TWD	**Chiawan**	**0.74**	**279**	*e*S	**Sb**	**04 03 18.7**	**+0.4**
	baz=274						
YOJ	**Yonaguni jima**	**0.75**	**49**	P	**Pb**	**04 03 08.7**	**-0.1**
YOJ				S	**Sb**	**04 03 18.8**	**+0.2**
ENA	**Nanau**	**0.75**	**308**	P	**Pb**	**04 03 08.9**	**0.0**
	baz=312						
ENA				*e*S	**Sb**	**04 03 17.7**	**-1.0**
	baz=312						
NACB	**Ninganchiao**	**0.76**	**286**	*e*P	**Pb**	**04 03 09.1**	**+0.1**
	baz=267						
NACB				*e*S	**Sb**	**04 03 19.4**	**+0.5**
	baz=267						
TWC	**Suao**	**0.81**	**322**	*i* P	**Pb**	**04 03 09.2**	**-0.7**
	baz=320						
TWC				S	**Sb**	**04 03 19.3**	**-1.0**
	baz=320						
TWE	**Neicheng**	**1.00**	**319**	*e*P	**Pn**	**04 03 13.2**	**+0.1**
	baz=316						
TWE				*e*S	**Sb**	**04 03 26.1**	**+0.2**
	baz=316						
HGSD	**Ruisui**	**1.01**	**242**	*e*P	**Pb**	**04 03 12.7**	**-0.6**
	baz=239						
HGSD				*e*S	**Sb**	**04 03 25.7**	**-0.4**
	baz=239						
NTC	**Toucheng**	**1.02**	**330**	*e*S	**Sb**	**04 03 26.2**	**-0.2**
	baz=327						
NDT	**Datong Townshi**	**1.02**	**308**	P	**Pn**	**04 03 14.1**	**+0.7**
	baz=305						
NDT				*e*S	**Sn**	**04 03 27.2**	**+0.2**
	baz=305						
NNSB	**Datong**	**1.03**	**296**	P	**Pb**	**04 03 13.4**	**-0.3**
	baz=281						
NNSH	**Datong**	**1.03**	**296**	P	**Pb**	**04 03 13.3**	**-0.4**
	baz=281						
NNS	**Nan Shan**	**1.04**	**297**	P	**Pn**	**04 03 13.8**	**0.0**
	baz=282						
WHF	**Hehuan Shan**	**1.05**	**280**	*e*P	**Pb**	**04 03 13.6**	**-0.5**
	baz=263						
FUSS	**Fushou**	**1.09**	**285**	*e*P	**Pb**	**04 03 14.8**	**0.0**
	baz=282						
TWB1	**Santiao Chiao**	**1.10**	**340**	P	**Pn**	**04 03 14.2**	**-0.2**
	baz=356						
TWB1				*e*S	**Sb**	**04 03 28.4**	**-0.2**
	baz=356						
CHGB	**Renai**	**1.12**	**275**	*e*P	**Pn**	**04 03 14.8**	**-0.1**
	baz=260						
CHGB				*e*S	**Sb**	**04 03 29.7**	**+0.2**
	baz=260						
TIPB	**Shuangxi**	**1.12**	**333**	*i* P	**Pb**	**04 03 15.4**	**+0.1**
	baz=331						
TIPB				*i* S	**Sb**	**04 03 29.1**	**-0.3**
	baz=331						
NWLT	**Wulai**	**1.14**	**315**	P	**Pb**	**04 03 16.1**	**+0.5**
	baz=312						
NWLT				S	**Sn**	**04 03 30.6**	**+0.6**
	baz=312						
EYUL	**Yuli**	**1.16**	**238**	*e*P	**Pn**	**04 03 14.4**	**-1.0**
	baz=235						
EYUL				*e*S	**Sb**	**04 03 30.8**	**+0.2**
	baz=235						
VWDT	**VWDT**	**1.17**	**260**	*e*P	**Pn**	**04 03 15.7**	**+0.3**
	baz=256						
VWDT				*e*S	**Sn**	**04 03 31.1**	**+0.5**
	baz=256						
NSK	**Sanguang**	**1.18**	**307**	P	**Pn**	**04 03 15.6**	**0.0**
	baz=304						
NSK				*e*S	**Sn**	**04 03 31.4**	**+0.5**
	baz=304						
TWF1	**Yuli**	**1.18**	**239**	P	**Pn**	**04 03 15.7**	**+0.1**
	baz=235						
TWF1				S	**Sb**	**04 03 30.9**	**-0.1**
	baz=235						
NWF	**Wu-fen Shan**	**1.23**	**333**	P	**Pn**	**04 03 15.9**	**-0.5**
	baz=331						
NWF				S	**Sb**	**04 03 33.3**	**+0.8**
	baz=331						
WFSB	**Wu-fen Shan**	**1.23**	**333**	*e*P	**Pn**	**04 03 15.9**	**-0.3**
	baz=331						
WFSB				*e*S	**Sb**	**04 03 33.4**	**+0.9**
	baz=331						
FULB	**Fuli**	**1.27**	**233**	P	**Pn**	**04 03 16.6**	**-0.2**
	baz=231						
IRIF	**Iriomote-Funau**	**1.27**	**73**	P	**Pn**	**04 03 17.2**	**+0.3**
IRIF				S	**Sb**	**04 03 34.3**	**+0.5**
HATJ	**Hateruma jima**	**1.29**	**86**	*e*S	**Sn**	**04 03 33.9**	**+0.2**
SSLB	**Suanglung**	**1.33**	**262**	P	**Pb**	**04 03 18.5**	**-0.3**
	baz=259						
SSLB				*e*S	**Sn**	**04 03 35.1**	**+0.4**
	baz=259						
WHP	**Taichung City**	**1.36**	**283**	*e*P	**Pb**	**04 03 20.6**	**+1.3**
	baz=268						
WHP				*e*S	**Sb**	**04 03 38.4**	**+2.2**
	baz=268						
TYC	**Yuchr**	**1.41**	**268**	*e*P	**Pb**	**04 03 22.1**	**+2.0**
	baz=264						
TYC				*e*S	**Sb**	**04 03 38.1**	**+0.5**
	baz=264						
EDH	**Donghe**	**1.41**	**225**	*e*P	**Pn**	**04 03 18.2**	**-0.6**
	baz=214						
EDH				*e*S	**Sn**	**04 03 34.5**	**-2.1**
	baz=214						
LIOB	**Emei**	**1.43**	**298**	*e*P	**Pn**	**04 03 19.3**	**+0.3**
	baz=295						
LIOB				*e*S	**Sb**	**04 03 38.0**	**-0.1**
	baz=295						
NSTT	**Nanjuang**	**1.43**	**298**	*e*S	**Sb**	**04 03 38.5**	**+0.2**
	baz=294						
ELDTW	**Lidau**	**1.48**	**239**	*e*P	**Pn**	**04 03 20.2**	**+0.3**
	baz=236						
ELDTW				*e*S	**Sn**	**04 03 37.4**	**-1.2**
	baz=236						
JKRS	**Kuro-shima**	**1.50**	**79**	P	**Pb**	**04 03 20.8**	**-0.9**
LDUT	**Ludao**	**1.55**	**214**	P	**Pn**	**04 03 20.1**	**-0.5**
	baz=212						
LDUT				S	**Sn**	**04 03 37.8**	**-2.2**
	baz=212						
JIJ	**Ishigaki jima**	**1.65**	**76**	P	**Pn**	**04 03 22.6**	**+0.6**
JIJ				*e*S	**Sn**	**04 03 42.8**	**+0.4**
TPUB	**Ta-pu**	**1.75**	**248**	*e*P	**Pb**	**04 03 25.3**	**-0.6**
	baz=245						
TPUB				*e*S	**Sb**	**04 03 47.1**	**-0.4**
	baz=245						
CHN4	**Tsaushan**	**1.76**	**250**	P	**Pb**	**04 03 26.3**	**+0.1**
	baz=247						
CHN4				S	**Sb**	**04 03 49.1**	**+1.3**
	baz=247						
WTP	**Ta-pu**	**1.78**	**246**	P	**Pb**	**04 03 26.0**	**-0.6**
	baz=244						
WTP				S	**Sb**	**04 03 47.7**	**-0.8**
	baz=244						
JISG	**Ishigakijimahi**	**1.85**	**70**	P	**Pn**	**04 03 24.6**	**-0.3**
JISG				*e*S	**Sn**	**04 03 46.8**	**-0.8**
SLGT	**Liugui**	**1.88**	**239**	P	**Pn**	**04 03 26.4**	**+1.3**
	baz=228						
SLGT				*e*S	**Sb**	**04 03 52.7**	**+1.6**
	baz=228						
CHN1	**Nanshi**	**1.88**	**246**	S	**Sb**	**04 03 51.8**	**+0.5**
	baz=243						
TWK	**Hsinying**	**1.88**	**249**	P	**Pb**	**04 03 27.7**	**-0.5**
	baz=246						
TWK				S	**Sb**	**04 03 51.3**	**-0.1**
	baz=246						
MASBT	**Mashibuluo**	**2.11**	**230**	P	**Pn**	**04 03 29.9**	**+1.5**
	baz=222						
MASBT				*e*S	**Sn**	**04 03 55.9**	**+2.0**
	baz=222						
EAST	**Anshuo**	**2.13**	**222**	P	**Pn**	**04 03 29.6**	**+0.9**
	baz=221						
JTJ	**Tarama**	**2.21**	**72**	*e*S	**Sn**	**04 03 58.3**	**+2.0**
PHUB	**P'eng-hu**	**2.62**	**261**	*e*S	**Sn**	**04 04 07.8**	**+1.2**
	baz=258						
VWUC	**VWUC**	**2.87**	**291**	*e*P	**Pn**	**04 03 38.1**	**-0.6**
	baz=288						
VWUC				*e*S	**Sn**	**04 04 10.1**	**-2.5**
	baz=288						
PTMZ	**Houxiangcun**	**3.17**	**290**	*e*P	**Pn**	**04 03 42.8**	**-0.1**
	baz=287						
PTMZ				*e*S	**Sn**	**04 04 17.5**	**-2.4**
	baz=287						

KRSC 10 04:12:57.9±1.0**, 52.°01N**×**157.°61E, h143**^{km}±8^{km}**, ML3.6, Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDTR	**Khodutka, Kamc**	**0.35**	**125**	*e*P	Pn	04 13 18.6	+0.9
KDTR				*e*S	Sn	04 13 33.5	+0.8
MTVR	**Mutnovka**	**0.59**	**37**	*e*P	Pn	04 13 20.6	+1.5
GRL	**Gorelyy**	**0.61**	**28**	*e*P	Pn	04 13 20.8	+1.6
RUS	**Russkaya**	**0.70**	**52**	*e*P	Pn	04 13 20.6	+1.0
RUS				*e*S	Sn	04 13 37.4	+1.3
KRMR	**Karymshinskiy**	**0.88**	**21**	*e*P	Pn	04 13 22.5	+1.6
APC	**Apacha**	**0.95**	**343**	*e*P	Pn	04 13 21.7	+0.1
APC				*e*S	Sn	04 13 38.8	-0.8
PET	**Petropavlovsk**	**1.20**	**32**	*e*P	Pn	04 13 24.7	+0.9
PET				*e*S	Sn	04 13 45.7	+2.2
DALK	**Dalny**	**1.24**	**34**	*e*P	Pn	04 13 25.4	+1.2
DALK				*e*S	Sn	04 13 46.2	+2.0
UGLR	**Uglovaya**	**1.41**	**31**	*e*P	Pn	04 13 28.0	+1.9
UGLR				*e*S	Sn	04 13 50.7	+3.1
KOK	**Koryaka**	**1.43**	**26**	*e*P	Pn	04 13 28.1	+1.9
AVH	**Avacha**	**1.43**	**28**	*e*P	Pn	04 13 28.2	+1.9
SMAR	**Somma**	**1.45**	**30**	*e*P	Pn	04 13 28.4	+1.8
KRER	**Koryakskii**	**1.47**	**28**	*e*P	Pn	04 13 28.4	+1.6
KRER				*e*S	Sn	04 13 51.4	+2.5
NLC	**Nalytchevo**	**1.57**	**42**	*e*S	Sn	04 13 50.2	-0.2
SKR	**Severo-Kuril's**	**1.63**	**216**	*e*P	Pn	04 13 30.3	+2.0
SKR				*e*S	Sn	04 13 54.2	+2.8
GNL	**Ganaly**	**1.70**	**7**	*e*P	Pn	04 13 29.8	+0.6
SPN	**Mys Shipunski**	**1.83**	**53**	*e*P	Pn	04 13 32.1	+1.5
SPN				*e*S	Sn	04 13 55.8	+0.1
KZV	**Kizimen**	**3.50**	**26**	*e*P	Pn	04 13 53.4	+1.9
TUMD	**Tumrok D**	**3.60**	**26**	P	Pn	04 13 55.1	+2.4
SRKR	**Sorokina**	**5.10**	**23**	P	Pn	04 14 14.6	+2.2
KBG	**Krutoberegovo**	**5.20**	**33**	*e*P	Pn	04 14 15.4	+1.7
KBTR	**Krutoberegovo**	**5.20**	**34**	P	Pn	04 14 14.6	+0.8

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*IDC **10** 04:44:06.5±1.1, 53.°75S×0.°96W, h0^{km}, mb4.1/4, mb1 4.1/4, mb1mx3.9/17, mbtmp4.1/4, MS4.0/6, Ms1 3.9/6, ms1mx3.6/19, Error ellipse: s-maj=83.5km s-min=30.0km az=72.0*

ISC 10 04:44:07.6±0.9**, 53.°90S**±0.°10×**1.°6W**±0.°4**, h10**^{km}**, n14,** σ**1.^{s}01**/12**, mb4.1**/4**, MS4.0**/6**, Bouvet Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**17.08**	**188**	P	**Pn**	**04 48 06.3**	**+0.2**
VNA1				S	**S**	**04 51 25.0**	**-0.5**
VNA2	**Neumayer--Watz**	**17.29**	**186**	P	**Pn**	**04 48 07.8**	**-0.9**
	baz=3.2,slow=15						
VNA2				S	**S**	**04 51 30.0**	**+0.3**
VNA3	**Neumayer Olymp**	**17.78**	**189**	P	**Pn**	**04 48 14.4**	**-0.4**
VNA3				S	Sn	04 51 21.4	-11
SNAA	**Sanae**	**17.85**	**181**	P	**Pn**	**04 48 16.0**	**+0.3**
BOSA	**Boshof**	**31.95**	**49**	LR	LR	05 01 22.1	
	comp=Z,147nm,18.1s,baz=212,slow=33						
DBIC	**Dimbokro**	**60.40**	**356**	P	**P**	**04 54 18.4**	**+1.5**
	1.1nm,0.6s,baz=146,slow=7.3,SNR=2.3						
DBIC				LR	LR	05 14 14.1	
	comp=Z,32nm,18.7s,baz=184,slow=30						
KMBO	**Kilima Mbogo**	**61.52**	**45**	LR	LR	05 19 07.0	
	comp=Z,144nm,20.3s,baz=122,slow=34						
TORD	**Torodi Ar. Bea**	**66.83**	**3**	P	**P**	**04 54 57.2**	**-2.1**
	0.9nm,0.7s,baz=186,slow=6.2,SNR=3.3						
TORD				LR	LR	05 18 01.0	
	comp=Z,83nm,21.8s,baz=135,slow=30						
STKA	**Stephens Creek**	**88.81**	**149**	P	**P**	**04 57 01.9**	**+0.3**
	0.9nm,0.3s,baz=194,slow=4.4,SNR=6.2						
EIL	**Elat**	**89.02**	**31**	LR	LR	05 36 33.4	
	comp=Z,55nm,18.6s,baz=260,slow=36						
IDI	**Anoyia**	**91.72**	**21**	LR	LR	05 35 13.6	
	comp=Z,564nm,21.7s,baz=328,slow=34						
ASAR	**Alice Springs**	**93.72**	**140**	P	**P**	**04 57 24.9**	**+0.3**
	0.5nm,0.9s,baz=208,slow=3.7,SNR=3.1						
YKA	**Yellowknife Ar**	**145.24**	**311**	PKPbc	**PKPbc**	**05 03 43.4**	**-0.3**
	3.4nm,0.8s,baz=102,slow=4.3,SNR=46						
ILAR	**Eielson Array**	**159.54**	**316**	PKPab	**PKPab**	**05 04 44.1**	**+0.9**
	0.8nm,1.0s,baz=72,slow=4.2,SNR=5.7						

GCMT 10 04:54:13.0±0.4**, 41.°27S**±0.°02×**90.°91W**±0.°03**, h25**^{km}±1^{km}**, MW5.0**/85**, Moment Tensor Solution. s17,c20; s85,c113; Duration: 0 Moment tensor: Scale** 10^{16} **Nm;** M_{rr}-0.75±.18; $M_{\theta\theta}$0.85±.15; $M_{\phi\phi}$-0.10±.14; $M_{r\theta}$-1.64±.31; $M_{\theta\phi}$-2.85±.09; $M_{\phi r}$0.51±.24; **Best double couple:** $M_0$3.30500×10^{16} **NP1:**ϕ_s357.00000°**,**δ60.00000°**,** λ-2.00000°. **NP2:**ϕ_s88.00000°**,**δ88.00000°**,**λ-150.00000°. **Principal axes:** T 3.8220**,** Plg19.0000°**,** Azm218.0000°**;** N -1.0330**,** Plg60.0000°**,** Azm91.0000°**;** P -2.7890**,** Plg22.0000°**,** Azm316.0000°**; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function Southeast of Easter Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RKT	**Rikitea**	**40.95**	**282**	*e*LQ	LQ	05 11 28.4	
	448nm,28.5s						
TBI	**Tubuai**	**51.65**	**271**	*e*LR	LR	05 18 04.9	
	comp=Z,208nm,26.5s						
PPT2	**Papeete2**	**55.16**	**277**	*e*S	S	05 11 34.9	+9.4
	72nm,26.2s						
PPT2				*e*LR	LR	05 19 42.8	
	comp=Z,80nm,24.0s						
DZM	**Mont Dzumac**	**84.70**	**245**	*e*LR	LR	05 33 17.2	
	comp=Z,166nm,25.1s						

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*MOS **10** 05:31:29.9±1.3, 34.°51N×28.°36E, h12^{km}, mb4.3/28 Error ellipse: s-maj=6.3km s-min=3.4km az=107.3*

*ISK **10** 05:31:32.4, 34.°59N×28.°47E, h85^{km}, ML4.2/26*

*HLW **10** 05:31:33.0, 34.°38N×28.°56E, h13^{km}±15^{km}, Md4.1, Ml4.5*

*THE **10** 05:31:33.0, 34.°48N×28.°65E, h28^{km}±20^{km}, ML3.7/4, Error ellipse: s-maj=21.0km s-min=0.8km az=146.0*

*IDC **10** 05:31:34.0±3.5, 34.°62N×28.°41E, h32^{km}±28^{km}, mb3.9/15, mb1 4.1/25, mb1mx3.9/60, mbtmp4.1/25, ML4.0/10, MS3.5/5, Ms1 3.6/5, ms1mx2.9/45, Error ellipse: s-maj=15.1km s-min=12.3km az=159.0*

*MED_RC **10** 05:31:34.0±0.8, 34.°60N×28.°46E, h26^{km}±1^{km}, MW4.4/12, Moment Tensor Solution.Mantle waves: s12,c13; Duration: 1.^{s}0 Moment tensor: Scale 10^{15}Nm; M_{rr}-5.09±.87; $M_{\theta\theta}$1.39±.67; $M_{\phi\phi}$3.70±.78; $M_{r\theta}$1.00±.43; $M_{\theta\phi}$1.27±.53; $M_{\phi r}$-0.49±.34; Best double couple: $M_0$4.78000×10^{15} NP1:ϕ_s214.00000°,δ46.00000°, λ-76.00000°. NP2:ϕ_s14.00000°,δ46.00000°, λ-104.00000°. Principal axes: T 4.2600, Plg0.0000°, Azm114.0000°; N 1.0300, Plg10.0000°, Azm24.0000°; P -5.2900, Plg80.0000°, Azm205.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

*NIC **10** 05:31:34.2±0.0, 34.°62N×28.°59E, h34^{km}±28^{km}, Ml4.3/4*

*NEIC **10** 05:31:35.2±2.0, 34.°62N±0.°08×28.°43E±0.°06, h44^{km}±6^{km}, mb4.2/24, Error ellipse: s-maj=11.2km s-min=7.2km az=191.0*

*DDA **10** 05:31:44.2, 35.°44N×28.°48E, h25^{km}±3^{km}, MW4.3*

ISC 10 05:31:31.9±3.5**, 34.°51N**±0.°04×**28.°52E**±0.°03**, h17**^{km}±23^{km}**, n285,** σ**1.^{s}43**/296**, mb4.3**/44**, MS3.9**/3**, 6C, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KARP	**Karpathos**	**1.52**	**313**	P	**Pn**	**05 31 58.6**	**+0.3**
KARP				S	**Sb**	**05 32 18.4**	**-0.2**
	592nm,0.8s						
KARP	**Karpathos**	**1.52**	**313**	PN	**Pn**	**05 31 58.4**	**+0.1**
KARP				SN	**Sn**	**05 32 16.8**	**-0.9**
KARP	**Karpathos**	**1.52**	**313**		**Pn**	**05 31 58.3**	**+0.1**
KARP	**Karpathos**	**1.52**	**313**	P	**Pn**	**05 31 58.6**	**+0.3**
KARP				S	**Sn**	**05 32 18.0**	**+0.3**
KARP				AML	AML	05 32 30.7	
	3.3nm,1.0s						
KARP				AML	AML	05 32 30.7	
	3.3nm,1.0s						
KARP				AML	AML	05 32 46.9	
	2.6nm,0.6s						
KARP				AML	AML	05 32 46.9	
	2.6nm,0.6s						
ARG	**Arkhangelos**	**1.73**	**350**	P	**Pn**	**05 32 01.0**	**-0.3**
ARG				S	**Sn**	**05 32 22.2**	**-0.7**
	982nm,0.7s						
ARG	**Arkhangelos**	**1.73**	**350**	PN	**Pn**	**05 32 00.9**	**-0.3**
ARG				SN	**Sn**	**05 32 21.6**	**-1.3**
ARG	**Arkhangelos**	**1.73**	**350**	P	**Pn**	**05 32 01.0**	**-0.3**
ARG	**Arkhangelos**	**1.73**	**350**	P	**Pn**	**05 32 00.9**	**-0.3**
ARG				S	**Sn**	**05 32 21.1**	**-1.9**
AKAS	**Kas**	**1.94**	**27**	*i* P	**Pn**	**05 32 03.8**	**-0.4**
AKAS				*i* S	Sn	05 32 15.6	-13
AKAS				IAML		05 32 29.0	
	comp=N,364nm,0.6s						
AKAS				IAML		05 32 29.0	
	comp=E,254nm,0.4s						
AKAS	**Kas**	**1.94**	**27**	Pn	**Pn**	**05 32 04.1**	**-0.1**
ZKR	**Zakros**	**1.98**	**288**	P	**Pn**	**05 32 04.6**	**-0.1**
ZKR				S	**Sn**	**05 32 29.8**	**+0.6**
	comp=E,988nm,0.7s						
ZKR	**Zakros**	**1.98**	**288**	PN	**Pn**	**05 32 04.7**	**0.0**
ZKR				SN	**Sn**	**05 32 27.8**	**-1.4**
FETY	**Fethiye**	**2.17**	**12**	P	**Pn**	**05 32 05.8**	**-1.5**
FETY				S	**Sn**	**05 32 31.9**	**-1.9**
TURN	**Turunc**	**2.27**	**355**	PN	**Pn**	**05 32 08.4**	**-0.2**
TURN				SN	**Sn**	**05 32 34.7**	**-1.5**
TURN	**Turunc**	**2.27**	**355**	*i* P	**Pn**	**05 32 08.2**	**-0.4**
TURN				*i* S	Sn	05 32 22.9	-13
TURN				IAML		05 32 38.0	
	comp=N,287nm,0.3s						
TURN				IAML		05 32 39.0	
	comp=E,275nm,0.3s						
DALY	**Dalyan (Mula)**	**2.31**	**3**	PN	**Pn**	**05 32 08.6**	**-0.5**
AKUM	**Antalya-Kumluc**	**2.35**	**39**	*i* P	**Pn**	**05 32 09.9**	**+0.3**
AKUM				*i* S	Sn	05 32 27.4	-11
DATC	**Datca-Mugla**	**2.35**	**343**	PN	**Pn**	**05 32 08.9**	**-0.8**
NPS	**Neapolis**	**2.50**	**288**	P	**Pn**	**05 32 12.3**	**+0.5**
NPS				S	**Sn**	**05 32 42.3**	**+0.4**
	comp=E,1µm,0.6s						
NPS	**Neapolis**	**2.50**	**288**	P	**Pn**	**05 32 12.3**	**+0.5**
NPS				S	**Sn**	**05 32 42.3**	**+0.4**
OSC1	**CSNet OBS 1**	**2.50**	**113**	P	**Pn**	**05 32 12.6**	**+0.8**
OSC1				S	**Sn**	**05 32 42.2**	**+0.2**
ELL	**Elmali**	**2.51**	**27**	PN	**Pn**	**05 32 11.8**	**-0.2**
ELL	**Elmali**	**2.51**	**27**	P	**Pn**	**05 32 13.3**	**+1.3**
ELL	**Elmali**	**2.51**	**27**	Pn	**Pn**	**05 32 13.3**	**+1.3**
LAST	**Lasithi**	**2.58**	**285**	P	**Pn**	**05 32 13.4**	**+0.5**
YER	**Yerkesik**	**2.63**	**356**	PN	**Pn**	**05 32 14.5**	**+0.9**
YER	**Yerkesik**	**2.63**	**356**	P	**Pn**	**05 32 14.8**	**+1.2**
CAEL	**Denizli, Camel**	**2.69**	**14**	*i* P	**Pn**	**05 32 14.9**	**+0.4**
CAEL				*i* S	Sn	05 32 36.0	-11
CAEL				IAML		05 32 54.0	

	comp=E,771nm,0.7s						
CAEL				IAML		05 33 01.0	
	comp=N,689nm,0.8s						
BDRM	Kayabasi	2.70	341	i P	Pn	05 32 13.6	-0.8
BDRM				i S	Sn	05 32 31.0	-16
BDRM				IAML		05 32 46.0	
	comp=E,180nm,0.7s						
BDRM				IAML		05 32 49.0	
	comp=N,301nm,0.8s						
MULA	Mugla, Merkez-	2.75	357	i P	Pn	05 32 16.1	+0.9
MULA				i S	Sn	05 32 36.7	-11
MULA				IAML		05 32 53.0	
	comp=E,332nm,0.5s						
MULA				IAML		05 32 55.0	
	comp=N,129nm,0.3s						
KORT	Korkueli	2.90	30	PN	Pn	05 32 18.7	+1.3
KORT	Korkueli	2.90	30	i P	Pn	05 32 18.3	+0.9
KORT				i S	Sn	05 32 41.1	-11
KORT				IAML		05 33 07.0	
	comp=N,205nm,1.0s						
KORT				IAML		05 33 07.0	
	comp=E,196nm,0.8s						
TAVA	DENIZLI_Tavas	2.97	6	i P	Pn	05 32 18.4	+0.1
TAVA				i S	Sn	05 32 40.6	-13
TAVA				IAML		05 32 52.0	
	comp=N,203nm,0.8s						
TAVA				IAML		05 32 58.0	
	comp=E,244nm,0.5s						
IDI	Anoyia	3.08	286	Pn	Pn	05 32 20.5	+0.6
	comp=E,56nm,0.3s,baz=115,slow=13,SNR=65						
IDI				Sn	Sn	05 32 54.7	-1.5
	comp=E,50nm,0.3s,baz=11,slow=20,SNR=8.6						
IDI	Anoyia	3.08	286	P	Pn	05 32 20.4	+0.6
SIVA	Sivas	3.09	280	P	Pn	05 32 20.4	+0.5
SANT	Santorini	3.11	308	Pn	Pn	05 32 20.2	0.0
DDIM	Aydin, Didim	3.12	341	i P	Pn	05 32 19.3	-1.0
DDIM				i S	Sn	05 32 46.7	-10
DDIM				IAML		05 33 04.0	
	comp=E,208nm,1.1s						
DDIM				IAML		05 33 10.0	
	comp=N,286nm,0.8s						
AKMS	Akamas	3.19	80	P	Pn	05 32 21.2	0.0
AKMS				S	Sn	05 32 57.3	-1.5
AKMS				AML	AML	05 32 58.8	
	comp=N,2.1nm,0.3s						
AKMS				AML	AML	05 32 58.8	
	comp=N,2.1nm,0.3s						
AKMS				AML	AML	05 33 00.3	
	comp=N,2.3nm,0.3s						
AKMS				AML	AML	05 33 00.3	
	comp=N,2.3nm,0.3s						
BUCA	Burdur, Bucak-	3.27	30	i P	Pn	05 32 25.0	+2.6
BUCA				i S	Sn	05 32 46.6	-14
BUCA				IAML		05 33 11.0	
	comp=N,118nm,0.6s						
BUCA				IAML		05 33 17.0	
	comp=E,130nm,0.9s						
BCK	Bucak	3.39	29	PN	Pn	05 32 26.1	+2.0
BRDR	BURDUR-Merkez	3.42	21	i P	Pn	05 32 26.1	+1.7
BRDR				i S	Sn	05 32 49.9	-15
BRDR				IAML		05 33 08.0	
	comp=E,87nm,0.5s						
BRDR				IAML		05 33 11.0	
	comp=N,100nm,0.5s						
ALFC	Alefka	3.42	78	P	Pn	05 32 25.0	+0.5
ALFC				S	Sn	05 33 03.7	-0.9
ALFC				AML	AML	05 33 04.0	
	comp=N,1.5nm,0.3s						
ALFC				AML	AML	05 33 04.0	
	comp=N,1.5nm,0.3s						
ALFC				AML	AML	05 33 04.1	
	comp=N,2.4nm,0.7s						
ALFC				AML	AML	05 33 04.1	
	comp=N,2.4nm,0.7s						
OSC2	CSNet OBS 4	3.44	114	P	Pn	05 32 25.2	+0.6
OSC2				S	Sn	05 33 04.4	-0.5
AYDB	Zeytinkoy-Aydi	3.47	352	PN	Pn	05 32 24.6	-0.6
ALAN	Alanya-ANTALYA	3.52	54	PN	Pn	05 32 26.0	+0.2
APE	Apeiranthos	3.52	317	PN	Pn	05 32 24.9	-1.0
APE	Apeiranthos	3.52	317	i P	Pn	05 32 24.6	-1.3
APE				i S	Sn	05 32 49.3	-18
APE	Apeiranthos	3.52	317	i P	Pn	05 32 25.3	-0.6
GAZI	Gazipasa	3.55	60	PN	Pn	05 32 26.8	+0.6
SZAC	Souni	3.61	85	P	Pn	05 32 27.5	+0.4
SZAC				AML	AML	05 33 16.9	
	comp=N,2.4nm,0.4s						
SZAC				AML	AML	05 33 18.4	
	comp=N,2.7nm,0.3s						
BASM	Basmaki-Afyon	3.62	20	PN	Pn	05 32 26.8	-0.5
LEF	Lefka	3.65	79	PN	Pn	05 32 27.9	+0.3
VAM	Vamos	3.66	285	P	Pn	05 32 30.4	+2.8
GVD	Gavdhos	3.66	276	PN	Pn	05 32 28.2	+0.4
ISP	Isparta	3.68	26	P	Pn	05 32 29.2	+1.1
ISP	Isparta	3.68	26		Pn	05 32 29.2	+1.1
DGB	zmir	3.77	340	i P	Pn	05 32 28.2	-1.0
DGB				IAML		05 33 41.0	
	comp=N,84nm,1.9s						
DGB				IAML		05 33 50.0	
	comp=E,101nm,2.6s						
IMMV	Iera Moni Meta	3.84	286	P	Pn	05 32 30.8	+0.6
IMMV	Iera Moni Meta	3.84	286	PN	Pn	05 32 30.2	0.0
ASGA	Asgata	3.91	85	P	Pn	05 32 31.7	+0.5
BAGO	Egridir - ISPA	3.93	27	i P	Pn	05 32 31.1	-0.4
BAGO				i S	Sn	05 33 01.2	-16
BAGO				IAML		05 33 28.0	
	comp=N,22nm,0.6s						
BAGO				IAML		05 33 39.0	
	comp=E,25nm,0.7s						
SEDI	Konya, Seydise	3.94	41	i P	Pn	05 32 33.3	+1.6
SEDI				i S	Sn	05 33 00.2	-17
SEDI				IAML		05 33 20.0	
	comp=N,268nm,0.6s						
SEDI				IAML		05 33 25.0	
	comp=E,254nm,0.6s						
KZIL	AFYON_Kizioren	3.96	19	i P	Pn	05 32 30.9	-1.1
KZIL				i S	Sn	05 32 58.5	-20
KZIL				IAML		05 33 22.0	
	comp=N,47nm,0.7s						
KZIL				IAML		05 33 23.0	
	comp=E,38nm,0.4s						
CSS	Mathiatis	3.99	82	PN	Pn	05 32 32.9	+0.6
CSS	Mathiatis	3.99	82	i P	Pn	05 32 32.0	-0.2
CSS	Mathiatis	3.99	82	Pn	Pn	05 32 35.2	+2.9
CSS					Sn	05 33 18.2	-0.5
CSS	Mathiatis	3.99	82	P	Pn	05 32 32.9	+0.6
BLCB	Balcova	4.05	343	PN	Pn	05 32 31.9	-1.1
SLUM	Salum	4.09	224	P	Pn	05 32 34.1	+0.5
	baz=226						
TEKE	Tekeli-Mersin	4.10	65	PN	Pn	05 32 34.1	+0.4
ERMK	Ermenek	4.17	58	i P	Pn	05 32 36.1	+1.2
USAK	Uak-Merkez	4.22	5	i P	Pn	05 32 34.8	-0.6
USAK				i S	Sn	05 33 04.0	-20
USAK				IAML		05 33 12.0	
	comp=N,32nm,1.0s						
USAK				IAML		05 33 21.0	
	comp=E,48nm,1.0s						
MVOU	Mavrovouni	4.24	82	P	Pn	05 32 36.3	+0.6
BERE	Bereket-Mersin	4.26	63	PN	Pn	05 32 36.2	+0.1
YVAC	Isparta, Yalva	4.35	30	i P	Pn	05 32 40.0	+2.7
YVAC				i S	Sn	05 33 09.6	-18
YVAC				IAML		05 33 29.0	
	comp=E,73nm,1.0s						
YVAC				IAML		05 33 30.0	
	comp=N,44nm,0.7s						
AKHS	Akhisar	4.40	353	i P	Pn	05 32 36.6	-1.3
AKHS				IAML		05 33 36.0	
	comp=N,0.2nm,0.9s						
AKHS				IAML		05 33 45.0	
	comp=E,17nm,0.6s						
DOGA	KONYA_Doganhis	4.40	34	i P	Pn	05 32 40.7	+2.7
DOGA				i S	Sn	05 33 09.2	-20
DOGA				IAML		05 33 30.0	
	comp=E,156nm,0.6s						
DOGA				IAML		05 33 40.0	
	comp=N,223nm,0.8s						
AKKU	Akkuyu-Mersin	4.43	67	PN	Pn	05 32 38.5	+0.2
TEVE	Tevekalti-Mers	4.46	63	PN	Pn	05 32 39.1	+0.4
KKBE	Karaman, Kazim	4.50	52	i P	Pn	05 32 41.2	+1.9
IKL	Isikli	4.56	66	PN	Pn	05 32 40.5	+0.4
ZEDA	zmir-Bergama	4.60	346	i P	Pn	05 32 39.2	-1.3
ZEDA				i S	Sn	05 33 01.0	-33
ZEDA				IAML		05 33 36.0	
	comp=E,59nm,1.1s						
ZEDA				IAML		05 33 48.0	
	comp=N,61nm,1.6s						
KONT	Konya--Tatoy	4.63	41	PN	Pn	05 32 40.9	-0.2
KEBE	Keben-Mersin	4.66	64	PN	Pn	05 32 41.7	+0.2
EREN	Erenkoy	4.75	76	PN	Pn	05 32 43.4	+0.7
LADK	Ladik-KONYA	4.82	39	PN	Pn	05 32 43.4	-0.3
KDHN	Kadinhani	4.94	35	i P	Pn	05 32 46.8	+1.4
KDHN				IAML		05 33 43.0	
	comp=N,40nm,0.5s						
KDHN				IAML		05 33 46.0	
	comp=E,46nm,0.6s						
KIZK	Mersin	5.00	65	PN	Pn	05 32 46.4	+0.3
HMYD	Mayadein	5.08	157	P	Pn	05 32 47.4	+0.1
	baz=156						
HMYD				S	Sn	05 33 40.9	-4.7
	baz=156						
HNAT	Natroun	5.18	159	P	Pn	05 32 49.0	+0.4
	baz=159						
KOT	Kottamia	5.36	148	P	Pn	05 32 51.2	+0.1
	baz=147						
HHAG	Hagoal	5.46	145	P	Pn	05 32 52.5	0.0
	baz=144						
HHAG				AMP		05 33 00.0	
	baz=144						
HSAF	As Saff	5.51	151	P	Pn	05 32 53.3	0.0
	baz=150						
GLL	Jalalah	5.61	150	P	Pn	05 32 54.8	+0.2
	baz=149						
SWA2		5.86	207	P	Pn	05 32 58.1	+0.2
	baz=209						
SUZ	Suez	5.92	141	P	Pn	05 32 59.4	+0.6
	baz=140						
MMAI	Mount Meron Ar	5.93	103	Pn	Pn	05 33 00.2	+1.3
	comp=E,8.1nm,0.3s,baz=282,slow=10,SNR=14						
MMAI				Sn	Sn	05 34 04.2	-2.3
	comp=E,18nm,0.3s,baz=310,slow=15,SNR=9.7						
KARA	Karaisali	5.98	61	PN	Pn	05 32 59.1	-0.5
ITM	Ithomi	5.98	298	Pn	Pn	05 32 58.9	-0.7
QRWL	Qaraoun	6.03	97	eP	Pn	05 33 00.6	+0.2
CMRD	Camardi-Nigde	6.12	57	PN	Pn	05 33 01.4	-0.2
RCY	Rachaya	6.16	97	eP	Pn	05 33 03.1	+0.9
ZAF	Zafarana	6.24	146	P	Pn	05 33 02.5	-0.6
	baz=145						
ZNM	Zenema	6.32	143	P	Pn	05 33 04.5	+0.3
	baz=142						
NBNS	Bani Suef	6.33	157	P	Pn	05 33 05.1	+0.7
	baz=157						
BR131	Keskin Array S	6.62	37	i P	Pn	05 33 09.7	+1.1
BR131	Keskin Array S	6.62	37	Pn	Pn	05 33 09.7	+1.1
BRTR	Keskin Array B	6.62	37	Pn	Pn	05 33 09.7	+1.1
	comp=E,0.7nm,0.3s,baz=220,slow=16,SNR=14						
BRTR				Sn	Sn	05 34 20.8	-2.9
	comp=E,1.9nm,0.3s,baz=205,slow=26,SNR=14						
BRTR	Keskin Array B	6.62	37	i P	Pn	05 33 10.6	+2.1
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.5s						
BRTR	Keskin Array B	6.62	37	Pn	Pn	05 33 11.0	+2.4
ALN	Alexandroupoli	6.67	344	P	Pn	05 33 08.5	-0.6
ALN	Alexandroupoli	6.67	344	Pn	Pn	05 33 08.4	-0.6
AGG	Agios Georgios	6.70	314	P	Pn	05 33 10.5	+1.0
AGG	Agios Georgios	6.70	314	Pn	Pn	05 33 10.5	+1.0
TAMRE	El Minia	7.11	163	P	Pn	05 33 14.0	-1.1
	baz=162						
GRB	Gharib	7.21	148	P	Pn	05 33 16.1	-0.4
	baz=148						
EIL	Elat	7.29	130	Pn	Pn	05 33 18.1	+0.6
	comp=Z,3.5nm,0.3s,baz=296,slow=1.9,SNR=68						
EIL				Sn	Sn	05 34 34.3	-5.6
	comp=Z,19nm,0.3s,baz=236,slow=1.8,SNR=13						
HBST	Basata	7.47	133	P	Pn	05 33 20.8	+0.7
	baz=132						
THE	Thessaloniki	7.53	326	P	Pn	05 33 22.9	+2.0
THE				pmax	pmax		
	comp=Z,22nm,0.9s						
GAZ	Gaziantep	7.55	67	Pn	Pn	05 33 22.8	+1.7
TR2	Tor 2	7.55	143	P	Pn	05 33 20.8	-0.4
	baz=142						
ASUT		7.56	159	P	Pn	05 33 21.5	+0.2
	baz=158						
NUB	Nuweibaa	7.56	135	P	Pn	05 33 22.2	+1.0
	baz=134						
HKAT	Jabal Katrina	7.58	140	P	Pn	05 33 22.2	+0.4
	baz=140						
SRS	Serrai	7.66	331	P	Pn	05 33 24.4	+1.7
SRS				pmax	pmax		
	comp=Z,27nm,1.2s						
TR1	Tor 1	7.98	143	P	Pn	05 33 26.7	-0.4
	baz=142						
KNT	Kendrikon	7.99	328	P	Pn	05 33 29.8	+2.6
KNT				pmax	pmax		
	comp=Z,20nm,2.6s						
GRG	Griva	8.05	325	P	Pn	05 33 30.0	+1.9
GRG				pmax	pmax		
	comp=Z,53nm,1.4s						
PLD	Plovdiv	8.15	340	P	Pn	05 33 31.0	+1.6
PLD				pmax	pmax		
	comp=Z,2.0nm,1.4s						
FNA	Florina	8.44	320	P	Pn	05 33 35.1	+1.7
FNA	Florina	8.44	320	Pn	Pn	05 33 35.1	+1.7
HHRG	Al Ghardaqah	8.46	148	P	Pn	05 33 35.6	+1.8
	baz=147						
VTS	Vitosha	9.09	335	P	Pn	05 33 42.9	+0.5
VTS	Vitosha	9.09	335	Pn	Pn	05 33 42.9	+0.5
TIP	Timpagrande	10.51	300	Pn	Pn	05 33 58.4	-3.4
PDG	Podgorica	10.73	320	Pn	Pn	05 34 04.3	-0.4
MLR	Muntele Rosu	11.14	351	Pn	Pn	05 34 10.3	-0.1
	comp=Z,0.2nm,0.3s,baz=169,slow=20,SNR=3.5						
DBRK	Dubrovnik	11.49	318	ePn	Pn	05 34 10.6	-4.5
DBRK				Sn	Sn	05 36 09.7	-13
DIVS	Divibare	11.62	328	Pn	Pn	05 34 18.2	+1.2
RAFF	Raffo Rosso	11.80	287	Pn	Pn	05 34 17.1	-2.2
VAE	Valguarnera	11.80	289	Sn	Sn	05 36 14.7	-16
	comp=Z,2.6nm,0.3s,baz=185,slow=2.4,SNR=3.6						
STON	Ston	11.87	318	i Pn	Pn	05 34 15.7	-4.6
STON				Sn	Sn	05 36 18.1	-14
ANN	Anapa	12.35	31	i P	Pn	05 34 30.7	+3.8
RICI	Ricice	12.59	319	i Pn	Pn	05 34 26.8	-3.4
RICI				Sn	Sn	05 36 38.6	-11
HVAR	Hvar	12.77	316	ePn	Pn	05 34 27.6	-5.0
HVAR				Sn	Sn	05 36 40.1	-14
ZIRJ	Zirje	13.53	316	ePn	Pn	05 34 38.6	-4.3
MORI	Morici	13.62	317	ePn	Pn	05 34 38.4	-5.8
MORI				Sn	Sn	05 37 02.9	-12
DUGI	Dugi Otok	14.07	316	ePn	Pn	05 34 46.5	-3.9
NEY	Neytrino	14.08	47	i P	P	05 34 55.1	-3.2
KBZ	Khabaz	14.45	46	Pn	P	05 35 01.3	-0.9
	comp=Z,0.1nm,0.3s,baz=221,slow=9.4,SNR=8.6						
KBZ	Khabaz	14.45	46	i P	P	05 35 01.9	-0.4
KBZ				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KIV	Kislovodsk	14.46	45	eP	P	05 35 01.2	-1.3
KIV				pmax	pmax		
	comp=Z,49nm,1.0s						
KIV				MLR	MLR		
	comp=Z,93nm,13.0s						
NVLJ	Novalja	14.53	318	i Pn	Pn	05 34 50.7	-5.9
PSZ	Piszkesteto	14.87	337	P	Pn	05 35 02.2	+0.9
PSZ	Piszkesteto	14.87	337	Pn	Pn	05 35 02.2	+0.9
KOLS	Kolonicke sedl	15.14	344	eP	P	05 35 09.6	-0.3
KOLS	Kolonicke sedl	15.14	344	eP	P	05 35 09.6	-0.3
KEST	Kesra	15.74	280	Pn	Pn	05 35 11.7	-1.1
	comp=Z,0.1nm,0.3s,baz=185,slow=11,SNR=2.2						
KEST	Kesra	15.74	280	Pn	Pn	05 35 12.1	-0.7
KEST				IAmb	IAmb	05 35 19.2	
	comp=Z,14nm,0.8s						
NIE	Niedzica	16.09	340	P	P	05 35 22.1	+1.7
AKASG	Malin Array Be	16.19	2	Pn	Pn	05 35 18.3	-0.1
	comp=Z,1.2nm,0.3s,baz=198,slow=12,SNR=4.5						
AKASG	Malin Array Be	16.19	2	i P	P	05 35 21.6	+0.1
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.5s						
AKASG	Malin Array Be	16.19	2		Pn	05 35 19.7	+1.2
AKBB	Malin Array Si	16.19	2	P	Pn	05 35 19.4	+1.0
AKBB				pmax	pmax		
	comp=Z,6.0nm,0.7s						
AKBB	Malin Array Si	16.19	2		Pn	05 35 19.4	+1.0
MYKA	Terra Mystica	16.53	322	i Pn	Pn	05 35 20.1	-2.7
	comp=Z,0.5nm,0.2s						
ZOU	Zoufplan	16.83	320	Pn	Pn	05 35 25.2	-1.6
TEOL	Teolo	16.83	315	Pn	Pn	05 35 24.7	-1.9
TEOL				IAmb	IAmb	05 35 26.0	
	comp=Z,11nm,0.6s						
KBA	Koelnbreinsper	16.98	322	Pn	Pn	05 35 25.8	-2.8
	comp=Z,6.9nm,1.0s,SNR=5.4						
KBA	Koelnbreinsper	16.98	322	P	Pn	05 35 27.5	-1.2
KBA				pmax	pmax		
	comp=Z,16nm,2.5s						
ABTA	Abfaltersbach	17.19	320	ePn	Pn	05 35 28.4	-2.9
	comp=Z,4.0nm,0.5s,SNR=9.9						
VRAC	Vranov	17.21	333	LR	LR	05 43 26.2	
	comp=Z,98nm,20.0s,baz=132,slow=42						
CTI	Castel Tesino	17.23	317	P	Pn	05 35 29.9	-1.9
CTI				pmax	pmax		
	comp=Z,9.0nm,0.8s						
CTI	Castel Tesino	17.23	317	Pn	Pn	05 35 29.9	-1.9
MORC	Moravsky Berou	17.26	335	P	P	05 35 33.6	+0.1
WTTA	Wattenberg	17.98	320	i Pn	Pn	05 35 39.0	-2.1
	comp=Z,3.2nm,0.4s						
WTTA	Wattenberg	17.98	320	P	Pn	05 35 40.1	-1.1
WTTA				pmax	pmax		
	comp=Z,12nm,1.1s						
GERES	GERESS Array B	18.05	327	P	Pn	05 35 40.9	-1.0
	comp=Z,0.4nm,0.3s,baz=143,slow=11,SNR=9.7						
GERES	GERESS Array B	18.05	327	P	Pn	05 35 41.3	-0.6
GERES	GERESS Array B	18.05	327		Pn	05 35 41.3	-0.6
WATA	Walderalm	18.06	320	i Pn	Pn	05 35 41.0	-1.0
	comp=Z,6.1nm,0.7s						
DPC	Dobruska-Polom	18.17	334	eP	P	05 35 43.7	+0.2
DPC	Dobruska-Polom	18.17	334	eP	P	05 35 43.7	+0.2
SQTA	Sankt Quirin	18.18	319	i Pn	Pn	05 35 42.1	-1.5
	comp=Z,8.8nm,0.8s						
VORD	Divnogorie	18.22	22	eP	Pn	05 35 43.5	-0.3
VORD				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KHC	Kasperske Hory	18.32	327	ceP	Pn	05 35 43.6	-1.5
KHC				pmax	pmax		
	comp=Z,12nm,0.9s						
KHC	Kasperske Hory	18.32	327	eP	Pn	05 35 43.2	-1.9
KHC	Kasperske Hory	18.32	327		Pn	05 35 43.9	-1.2
MOTA	Moosalm	18.32	320	ePn	Pn	05 35 43.7	-1.5
	comp=Z,4.5nm,0.7s						
FETA	Feichten	18.32	318	ePn	Pn	05 35 43.5	-1.8
	comp=Z,7.6nm,0.7s,SNR=13						
OSTC	Ostas	18.38	334	eP	Pn	05 35 46.1	+0.3
VSR	Storozhevoye	18.40	22	eP	P	05 35 44.8	-1.1
VSR				pmax	pmax		
	comp=Z,10.0nm,1.3s						
CHVC	Chvalec	18.46	334	eP	P	05 35 46.2	-0.5
RETA	Reutte	18.59	320	i Pn	P	05 35 46.6	-1.5
	comp=Z,2.8nm,0.4s						
WET	Wettzell	18.64	326	P	P	05 35 47.5	-1.2
WET				pmax	pmax		
	comp=Z,8.0nm,2.3s						
DAVOX	Davos/Dischmat	18.66	317	P	Pn	05 35 49.3	-0.1
	comp=Z,0.6nm,0.3s,baz=163,slow=5.5,SNR=7.9						
DAVOX				LR	LR	05 45 44.5	
	comp=Z,61nm,20.1s,baz=134,slow=46						
SBF	Sospel	18.78	306	eP	P	05 35 49.0	-1.3
SBF				pmax	pmax		
	comp=Z,29nm,1.2s						
DAVA	Damuels	18.95	318	Pn	P	05 35 51.6	-0.6
	comp=Z,8.3nm,0.6s,SNR=6.4						
VRH	Novokhopyorsk	19.24	26	eP	Pn	05 35 55.9	-0.2
VRH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
LPSR	Galich'ya Gora	19.56	19	eP	Pn	05 36 01.0	+1.0
LPSR				pmax	pmax		
	comp=Z,6.0nm,0.6s						
LPG	La Plagne	19.90	310	eP	P	05 36 02.7	0.0
LPG				pmax	pmax		
	comp=Z,5.0nm,0.6s						
LPL	La Plagne	19.92	310	eP	P	05 36 02.7	-0.2
LPL				pmax	pmax		
	comp=Z,7.0nm,0.7s						
SENIN	Lac Senin/Sane	19.95	313	P	P	05 36 02.2	-1.1
SENIN				IAmb	IAmb	05 36 08.0	
	comp=Z,14nm,0.8s						
SLE	Schleitheim	19.99	318	P	P	05 36 03.6	+0.1
SLE				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CLL	Collm	20.20	331	e(P)	Pn	05 36 07.0	-0.6
CLL				epPP		05 36 28.0	
CLL	Collm	20.20	331	eP	Pn	05 36 07.0	-0.6
BFO	Black Forest	20.41	319	P	P	05 36 07.7	-0.3
BFO				pmax	pmax		
	comp=Z,8.0nm,0.9s						
BFO	Black Forest	20.41	319	P	P	05 36 07.7	-0.3
BFO				IAmb	IAmb	05 36 25.6	
	comp=Z,8.0nm,0.9s						
CABF	La Chapelle	20.81	312	eP	P	05 36 10.4	-2.0
CABF				pmax	pmax		
	comp=Z,10.0nm,0.7s						
VIVF	Saint-Julien-l	20.99	307	eP	P	05 36 12.3	-2.0
VIVF				pmax	pmax		
	comp=Z,9.0nm,0.8s						
ECH	Echery	20.99	317	P	P	05 36 14.4	+0.1
ECH				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ECH	Echery	20.99	317	P	P	05 36 14.3	+0.1
ECH				IAmb	IAmb	05 36 18.9	
	comp=Z,9.6nm,1.1s						
CDF	Champ du Feu	21.03	318	eP	P	05 36 13.5	-1.3
CDF				pmax	pmax		
	comp=Z,7.0nm,0.7s						
HAU	Haudompre	21.34	316	eP	P	05 36 17.6	-0.4
HAU				pmax	pmax		
	comp=Z,3.0nm,0.6s						
SMF	Signal de Mont	22.22	310	eP	P	05 36 25.1	-2.4
SMF				pmax	pmax		
	comp=Z,15nm,1.0s						
WLF	Walferdange	22.34	319	P	P	05 36 28.7	-0.1
WLF				pmax	pmax		
	comp=Z,17nm,1.2s						
WLF	Walferdange	22.34	319	P	P	05 36 28.7	-0.1
WLF				IAmb	IAmb	05 36 39.6	
	comp=Z,17nm,1.2s						
LOR	Lormes	22.47	312	P	P	05 36 29.1	-1.1
LOR				pmax	pmax		
	comp=Z,11nm,0.9s						
BELG	Belogornoye	22.51	32	i P	P	05 36 32.2	+1.8
AVF	Avril sur Loir	22.58	310	eP	P	05 36 28.5	-2.9
AVF				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BGF	Bois d'Agland	22.81	310	eP	P	05 36 32.5	-1.3
BGF				pmax	pmax		
	comp=Z,9.0nm,0.9s						
TCF	Toulx Ste Croi	23.12	308	eP	P	05 36 36.7	-0.3
TCF				pmax	pmax		
	comp=Z,12nm,1.2s						
RJF	Les Rejaudoux	23.24	306	eP	P	05 36 36.6	-1.6
RJF				pmax	pmax		
	comp=Z,6.0nm,0.8s						
TAM	Tamanrasset	23.25	246	P	P	05 36 39.4	+0.7
TAM				pmax	pmax		
	comp=Z,4.0nm,0.8s						
TAM	Tamanrasset	23.25	246	P	P	05 36 39.4	+0.7
TAM				IAmb	IAmb	05 36 41.3	
	comp=Z,4.4nm,0.8s						
CLF	Chambon-Foret	23.77	313	P	P	05 36 41.9	-1.5
ETSF	Etsaut	24.10	299	eP	P	05 36 49.8	+3.2
ETSF				pmax	pmax		
	comp=Z,66nm,2.1s						
MFF	Saint Martin d	24.76	308	eP	P	05 36 53.1	+0.6
MFF				pmax	pmax		
	comp=Z,14nm,1.1s						
FLN	La Foliniere	25.74	312	eP	P	05 36 58.6	-2.8
FLN				pmax	pmax		
	comp=Z,14nm,0.7s						
GRR	Gorron	25.83	311	eP	P	05 37 00.6	-1.6
GRR				pmax	pmax		
	comp=Z,24nm,1.0s						
ESBB	Sonseca Array	26.33	291	P	P	05 37 07.0	+0.1
ESBB				IAmb	IAmb	05 37 22.9	
	comp=Z,6.9nm,0.9s						
ESDC	Sonseca Array	26.33	291	P	P	05 37 06.5	-0.4
	comp=Z,4.6nm,0.8s,baz=79,slow=8.9,SNR=22						
AKTO	Aktyubinsk	26.72	44	P	P	05 37 10.6	+0.4
	comp=Z,2.5nm,0.7s,baz=246,slow=8.1,SNR=8.7						
SGMF	Saint Gilles	26.85	310	eP	P	05 37 10.3	-1.1
SGMF				pmax	pmax		
	comp=Z,60nm,1.6s						
FINES	FINESS Array B	27.00	357	P	P	05 37 11.2	-1.4
	comp=Z,3.0nm,0.7s,baz=160,slow=11,SNR=13						
FINES	FINESS Array B	27.00	357	i P	P	05 37 11.6	-1.0
FINES				pmax	pmax		
	comp=Z,3.0nm,0.6s						
FINES	FINESS Array B	27.00	357	P	P	05 37 11.5	-1.0
FIA1	FINESS Array S	27.00	357	P	P	05 37 11.5	-1.0
QUIF	Quistinic	27.12	309	eP	P	05 37 14.9	+1.0
QUIF				pmax	pmax		
	comp=Z,12nm,1.0s						

HFS	Hagfors	27.40	344	P	P	05 37 14.1	-2.1
	comp=Z,1.8nm,0.5s,baz=146,slow=11,SNR=8.7						
ABKAR	Akbulak array	27.41	48	P	P	05 37 16.5	+0.1
NORES	NORESS Array B	28.45	342	P	P	05 37 27.8	+2.3
NORES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
NOA	NORSAR Array B	28.79	343	P	P	05 37 27.8	-0.9
	comp=Z,0.8nm,0.6s,baz=147,slow=10,SNR=3.7						
ARU	Arti	30.00	34	*i* P	P	05 37 40.3	+0.9
EKA	Eskdalemuir Ar	30.19	323	P	P	05 37 39.1	-1.9
	comp=Z,0.2nm,0.3s,baz=127,slow=12,SNR=4.4						
TOA0	Torodi Ar. Sit	32.29	235	P	P	05 37 59.9	-0.1
TORD	Torodi Ar. Bea	32.29	235	P	P	05 38 00.1	+0.2
	comp=Z,4.5nm,0.8s,baz=33,slow=9.8,SNR=20						
TORD	Torodi Ar. Bea	32.29	235	P	P	05 37 59.9	-0.1
KKAR	Karatay Array	33.54	62	P	P	05 38 11.6	+0.9
KKAR	Karatay Array	33.54	62	P	P	05 38 11.6	+0.9
BRVK	Borovoye	34.77	45	*i* P	P	05 38 23.5	+2.3
BRVK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
ARCES	ARCESS Array B	35.12	358	P	P	05 38 22.3	-1.8
	comp=Z,4.1nm,0.7s,baz=178,slow=7.0,SNR=5.1						
KOWA	Kowa	35.45	244	P	P	05 38 27.1	-0.4
KOWA				IAmb	IAmb	05 38 28.0	
	comp=Z,3.4nm,0.8s						
AAK	Ala-Archa	36.48	63	*i* P	P	05 38 39.8	+3.6
AAK	Ala-Archa	36.48	63	P	P	05 38 36.7	+0.5
KURK	Kurchatov	39.46	50	*i* P	P	05 39 03.6	+2.5
KURK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
DBIC	Dimbokro	41.40	236	P	P	05 39 16.9	-0.5
	comp=Z,4.1nm,0.7s,baz=25,slow=10,SNR=8.0						
DBIC	Dimbokro	41.40	236	P	P	05 39 17.0	-0.5
DBIC				pmax	pmax		
	comp=Z,11nm,1.2s						
DBIC	Dimbokro	41.40	236	P	P	05 39 17.0	-0.5
DBIC				IAmb	IAmb	05 39 29.4	
	comp=Z,11nm,1.1s						
JMIC	Jan Mayen	41.51	343	LR	LR	05 57 46.0	
	comp=Z,156nm,18.4s,baz=64,slow=38						
TIC	Toumodi	41.53	236	*e*P	P	05 39 17.1	-1.5
KIC	Kosan Boka	41.55	235	*e*P	P	05 39 18.2	-0.5
	comp=Z,13nm,0.7s						
MK31	Makanchi Array	41.84	56	*ce*P	P	05 39 21.4	+0.6
MK31	Makanchi Array	41.84	56	P	P	05 39 20.2	-0.6
MK31				IAmb	IAmb	05 39 22.6	
	comp=Z,2.1nm,0.7s						
MKAR	Makanchi Array	41.84	56	P	P	05 39 21.5	+0.7
	comp=Z,2.9nm,0.7s,baz=280,slow=5.9,SNR=32						
MKAR	Makanchi Array	41.84	56	*ce*P	P	05 39 21.2	+0.4
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
LIC	Lamto	41.84	235	*e*P	P	05 39 19.8	-1.3
	comp=Z,16nm,0.8s						
ZALV	Zalesovo Beam	43.47	46	P	P	05 39 33.5	-0.4
	comp=Z,1.2nm,0.6s,baz=271,slow=8.5,SNR=4.9						
ZALV	Zalesovo Beam	43.47	46	*i* P	P	05 39 35.2	+1.3
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.6s						
SPA0	Spitsbergen Ar	44.09	356	P	P	05 39 38.2	-0.4
NRIK	Noril'sk	47.31	24	*i* P	P	05 40 06.2	+2.1
NRIK				pmax	pmax		
	comp=Z,3.0nm,1.4s						
TLY	Talaya	55.02	47	LR	LR	06 06 20.7	
	comp=Z,49nm,18.2s,baz=310,slow=38						
TLY	Talaya	55.02	47	*ce*P	P	05 41 05.3	+3.0
TLY				pmax	pmax		
	comp=Z,4.0nm,1.3s						
GTA	Gaotai	55.83	62	*e*P	P	05 41 09.2	+0.8
GTA				pP	pP	05 41 12.4	-0.7
GTA				sP	sP	05 41 15.3	+0.4
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
GTA				smax	smax		
	comp=N,6.0nm,1.0s						
GTA				smax	smax		
	comp=E,2.0nm,1.3s						
SONM	Songino Array	57.75	51	P	P	05 41 23.2	+1.2
	comp=E,2.9nm,0.8s,baz=287,slow=8.1,SNR=20						
SONM	Songino Array	57.75	51	P	P	05 41 22.2	+0.2
ULN	Ulaanbaatar	58.17	51	*ce*P	P	05 41 26.4	+1.5
ULN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
DRLN	Deer Lake	62.38	312	P	P	05 41 52.5	-1.0
BOSA	Boshof	62.86	183	P	P	05 41 57.8	+0.9
	comp=Z,2.3nm,0.8s,baz=42,slow=14,SNR=3.2						
KLR	Kul'dur	72.43	42	*i* P	P	05 43 00.5	+3.4
KLR				pmax	pmax		
	comp=Z,15nm,2.7s						
TJN	Taejon	76.67	55	*ce*P	P	05 43 27.4	+5.4
YKA	Yellowknife Ar	78.89	344	P	P	05 43 32.4	-1.4
	comp=Z,0.5nm,0.8s,baz=39,slow=5.4,SNR=9.3						
ILAR	Eielson Array	80.98	358	P	P	05 43 44.3	-0.9
	comp=Z,0.6nm,0.8s,baz=346,slow=3.2,SNR=6.1						
PDAR	Pinedale Array	94.07	330	LR	LR	06 31 32.0	
	comp=Z,40nm,18.1s,baz=74,slow=38						

IDC ***10*** *05:39:07.8±1.6, 44°.33N×6°.62E, h0^{km}, mb4.2/1, mb1 3.8/5, mb1mx3.3/57, mbtmp3.6/5, ML3.8/4, Error ellipse: s-maj=39.8km s-min=17.6km az=129.0*

LDG ***10*** *05:39:10.9±0.0, 44°.55N×6°.68E, h8^{km}, Ml3.3/56, Error ellipse: s-maj=0.8km s-min=0.6km az=64.0*

ROM ***10*** *05:39:10.7±0.1, 44°.502N±0°.003×6°.640E±0°.005, h12^{km}, Md1.9/4, Error ellipse: s-maj=0.4km s-min=0.3km az=41.0*

GEN ***10*** *05:39:11.0, 44°.53N×6°.67E, h5^{km}±1^{km}, Ml3.0*

PRU ***10*** *05:39:11.5±0.0, 44°.14N×7°.11E, h0^{km}*

STR ***10*** *05:39:11.3±0.2, 44°.6N±0°.9×°±°, h5^{km}, MLv3.0/6, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/alpes_taup-2.11 preliminary*

BGR ***10*** *05:39:14.3±0.6, 44°.61N×6°.75E, h5^{km}, ML3.2/8, Error ellipse: s-maj=34.5km s-min=11.1km az=108.0*

ISC 10 05:39:11.7±0.8**, 44°.51N**±0°.01×**6°.67E**±0°.01**, h16**^{km}±6^{km}**, n156, σ2^{s}51**/278**, 3C-1D, France**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OGAG	Argentiere	0.11	238	Pg	Pb	05 39 16.4	+0.9
OGAG				Sg	Sb	05 39 20.3	+2.2
MBDF	Montbardon	0.22	18	*e*Pg	Pg	05 39 15.4	-1.5
MBDF	Montbardon	0.22	18	*e*P	Pg	05 39 16.2	-0.7
MBDF				*e*Sg	Sg	05 39 18.3	-2.2
	706nm,0.2s						
PZZ	Stroppo	0.32	91	P	Pg	05 39 17.5	-1.0
PZZ				S	Sg	05 39 22.2	-0.9
PZZ	Stroppo	0.32	91	⇑P	Pg	05 39 17.5	-1.0
PZZ				S	Sg	05 39 22.8	-0.3
PZZ				AML	AML		
	comp=E,12205µm,0.8s						
PZZ				AML	AML		
	comp=N,14150µm,0.6s						
PZZ				END			
ISO	Isola	0.43	141	Pg	Pg	05 39 19.4	-0.9
ISO				Sg	Sg	05 39 25.0	-1.2
OGDI	Digne	0.48	214	Pg	Pb	05 39 22.2	+0.3
OGDI				Sg	Sb	05 39 29.8	+1.0
BNI	Bardonecchia	0.54	0	P	Pg	05 39 21.2	-1.2
BNI				S	Sg	05 39 28.9	-0.8
BNI				AML	AML		
	comp=E,536µm,0.1s						
BNI				AML	AML		
	comp=N,874µm,0.8s						
BNI				AML	AML		
	comp=E,708µm,0.1s						
BNI				AML	AML		
	comp=E,535µm,0.1s						
BNI				AML	AML		
	comp=N,874µm,0.8s						
BNI				AML	AML		
	comp=E,709µm,0.1s						
BNI				AML	AML		
	comp=N,1006µm,0.8s						
BNI				END			
STV	Sant Anna di V	0.54	120	P	Pg	05 39 21.7	-0.7
STV				S	Sg	05 39 28.7	-1.0
STV	Sant Anna di V	0.54	120	P	Pg	05 39 21.8	-0.7
STV				S	Sg	05 39 28.8	-0.9
STV				AML	AML		
	comp=E,1370µm,0.5s						
STV				AML	AML		
	comp=N,1490µm,0.3s						
STV				END			
ENR	Entracque	0.61	118	P	Pg	05 39 22.7	-1.0
ENR				S	Sg	05 39 30.7	-1.2
OGMO	Fort Saint-Gob	0.69	1	Pg	Pg	05 39 23.9	-1.4
OGMO				Sg	Sg	05 39 32.8	-1.7
ORIF	Oris-en-Rattie	0.69	306	*e*Pg	Pg	05 39 23.7	-1.6
ORIF	Oris-en-Rattie	0.69	306	*e*P	Pg	05 39 25.2	-0.1
ORIF				*e*Sg	Sg	05 39 32.6	-1.9
	comp=N,101nm,0.1s						
ORIF	Oris-en-Rattie	0.69	306	Pg	Pg	05 39 23.7	-1.6
ORIF				Sg	Sg	05 39 32.8	-1.8
ORIF	Oris-en-Rattie	0.69	306	P	Pg	05 39 23.7	-1.6
ORIF				S	Sg	05 39 33.3	-1.3
BLAF	les Blancs	0.72	219	Pg	Pg	05 39 25.6	-0.2
BLAF				Sg	Sb	05 39 36.2	+0.7
TURF	col de Turini	0.75	136	Pg	Pg	05 39 25.6	-0.7
TURF				Sg	Sg	05 39 35.6	-0.6
CALF	Calern	0.78	167	Pg	Pg	05 39 26.7	-0.3
CALF				Sg	Sb	05 39 37.6	+0.2
GDM	Grand'Maison	0.80	330	P	Pg	05 39 25.6	-1.6
GDM				Pg	Pb	05 39 26.2	-1.1
SAOF	Saorge	0.82	129	Pg	Pg	05 39 27.0	-0.7
SAOF				Sg	Sg	05 39 37.9	-0.7
SAOF	Saorge	0.82	129	P	Pg	05 39 27.0	-0.7
SAOF				S	Sg	05 39 37.7	-0.9
SAOF	Saorge	0.82	129	AML	AML		
	comp=N,1075µm,1.6s						
SAOF				AML	AML		
	comp=E,1009µm,0.4s						
ESCA	l'Escarene	0.85	143	Pg	Pg	05 39 27.5	-0.7
ESCA				Sg	Sb	05 39 39.4	+0.2
SBF	Sospel	0.85	140	*e*Pg	Pg	05 39 27.4	-0.8
SBF				*e*Sg	Sg	05 39 38.4	-1.1
	comp=E,268nm,0.2s						
GBOS	Grotte di Boss	0.88	108	P	Pg	05 39 27.5	-1.2
GBOS				S	Sg	05 39 39.1	-1.3
GBOS	Grotte di Boss	0.88	108	⇑P	Pg	05 39 27.6	-1.2
GBOS				S	Sg	05 39 39.1	-1.3
GBOS				AML	AML		
	comp=E,936µm,0.3s						
GBOS				AML	AML		
	comp=N,656µm,1.0s						
GBOS				END			
MGRO	Montegrosso	0.94	120	P	Pg	05 39 28.9	-1.0
MGRO				S	Sg	05 39 41.4	-1.0
MGRO	Montegrosso	0.94	120	P	Pg	05 39 28.9	-1.0
MGRO				S	Sg	05 39 41.7	-0.7
MGRO				AML	AML		
	comp=E,706µm,0.5s						
MGRO				AML	AML		
	comp=N,824µm,0.4s						
FRF	La Foret Royal	0.95	181	*e*Pg	Pg	05 39 29.4	-0.8
FRF	La Foret Royal	0.95	181	*e*P	Pn	05 39 31.0	+0.6
MON	Monaco	0.95	145	Pg	Pg	05 39 29.6	-0.6
MON				Sg	Sb	05 39 42.9	+0.8
SMRF	Simiane la Rot	0.95	236	*e*Pg	Pg	05 39 30.0	-0.2
SMRF	Simiane la Rot	0.95	236	*e*P	Pn	05 39 31.2	+0.7
SMRF				*e*Sg	Sg	05 39 42.0	-0.7
	comp=N,217nm,0.2s						
BSTF	la Bastide-des	0.97	230	Pg	Pn	05 39 31.5	+0.8
BSTF				Sg	Sn	05 39 46.4	+2.2
LPG	La Plagne	0.98	3	*e*Pg	Pg	05 39 29.2	-1.6
LPG	La Plagne	0.98	3	*e*P	Pg	05 39 30.7	-0.1
LPG				*e*Sg	Sg	05 39 41.7	-2.1
	comp=N,193nm,0.3s						
LSD	Lago del Serru	1.00	19	P	Pg	05 39 29.2	-1.8
LSD				S	Sg	05 39 42.3	-2.0
LSD	Lago del Serru	1.00	19	P	Pg	05 39 29.3	-1.8
LPL	La Plagne	1.00	2	*e*Pg	Pg	05 39 29.5	-1.7
LPL	La Plagne	1.00	2	*e*P	Pg	05 39 31.1	-0.1
LPL				*e*Sg	Sg	05 39 42.1	-2.2
	comp=N,78nm,0.2s						
EILF	Villa Eilenroc	1.02	161	Pg	Pg	05 39 31.5	0.0
EILF				Sg	Sg	05 39 45.0	+0.2
RUSF	Rustrel	1.03	237	Pg	Pg	05 39 31.9	+0.3
RUSF				Sg	Sg	05 39 46.0	+0.9
MONC	Moncucco Torin	1.05	58	P	Pb	05 39 31.4	-0.2
IMI	Imperia	1.07	124	P	Pb	05 39 30.7	-1.1
IMI				S	Sb	05 39 44.0	-1.5
RORO	Rocca Rossa	1.08	111	P	Pb	05 39 31.0	-1.0
RORO				S	Sb	05 39 43.7	-2.1
RORO	Rocca Rossa	1.08	111	⇓P	Pb	05 39 31.0	-1.0
RORO				S	Sb	05 39 44.8	-1.0
RORO				AML	AML		
	comp=E,710µm,0.5s						
RORO				AML	AML		
	comp=N,933µm,0.2s						
ARTF	Artigues	1.12	214	P	Pb	05 39 33.0	+0.4
ARTF				Pg	Pn	05 39 33.3	+0.6
ARTF				Sg	Sn	05 39 49.3	+1.5
RSL	Roselend	1.18	358	P	Pb	05 39 32.7	-1.0
RSL				Pg	Pn	05 39 33.3	-0.3
RSL				Sg	Sb	05 39 47.8	-0.9
LMR	La Mourre	1.19	186	*e*Pg	Pn	05 39 33.8	+0.2
LMR				*e*Sg	Sb	05 39 49.6	+0.7
	comp=N,153nm,0.2s						
FINB	Finale Ligure	1.23	105	⇑P	Pn	05 39 33.8	-0.5
FINB				AML	AML		
	comp=E,506µm,0.3s						
FINB				AML	AML		
	comp=N,574µm,0.5s						
TRAV	Traversella	1.26	37	P	Pn	05 39 33.4	-1.3
TRAV	Traversella	1.26	37	P	Pn	05 39 34.0	-0.7
CIRO	Champorcher	1.26	30	P	Pn	05 39 34.2	-0.7
CIRO	Champorcher	1.26	30	P	Pn	05 39 34.4	-0.5
MRGE	Morge	1.28	12	P	Pn	05 39 34.4	-0.7
OGSM	Saint Maurice	1.29	328	P	Pn	05 39 35.3	+0.2
OGSM				Pg	Pb	05 39 35.9	+0.2
PCP	Piancastagn	1.34	88	P	Pn	05 39 35.4	-0.4
ARBF	Arbois	1.41	224	Pg	Pg	05 39 38.8	0.0
ARBF				Sg	Sg	05 39 58.1	+1.1
VIVF	Saint-Julien-l	1.47	284	*e*P	Pn	05 39 37.6	+0.1
VIVF				*e*Sn	Sn	05 39 52.8	-3.6
	comp=N,53nm,0.1s						
SATI	Passo dei Sala	1.60	31	P	Pn	05 39 39.5	-0.1
SSB	Saint Sauveur	1.70	298	P	Pn	05 39 40.6	-0.1
SSB				Pg	Pb	05 39 43.3	+0.8
OG35	Corcelles	1.72	333	Pn	Pn	05 39 42.0	+1.1
EMBD	Embd, Matterta	1.89	25	Pn	Pn	05 39 44.0	+0.7
LASF	Ste Croix	2.07	259	*e*Pn	Pn	05 39 45.1	-0.7
LASF	Ste Croix	2.07	259	*e*Pg	Pb	05 39 49.6	+0.8
LASF				*e*Sg	Sb	05 40 16.3	+2.0
	comp=N,19nm,0.3s						
CABF	La Chapelle	2.14	349	*e*P	Pn	05 39 48.0	+1.2
CABF	La Chapelle	2.14	349	*e*Pg	Pb	05 39 50.6	+0.5
CABF				*e*Sn	Sn	05 40 09.7	-3.3
	comp=N,36nm,0.3s						
CABF				*e*Sg	Sb	05 40 17.3	+0.9
	comp=N,71nm,0.4s						
TORNY	Torny/Romont	2.27	5	Pn	Pn	05 39 49.6	+1.1
BRANT	Les Verrieres	2.43	357	Pn	Pn	05 39 52.0	+1.2
LBL	Lubilhac	2.54	288	P	Pn	05 39 52.7	+0.4
LBL				Pn	Pb	05 39 53.3	-3.6
PGF	Pioggiola	2.59	138	*e*Pn	Pn	05 39 53.1	0.0
PGF	Pioggiola	2.59	138	*e*P	Pn	05 39 54.6	+1.5
PGF				*e*Sn	Sn	05 40 22.2	-2.1
	comp=N,29nm,0.2s						
PGF	Pioggiola	2.59	138	Pn	Pn	05 39 53.6	+0.6
PGF				Sn	Sn	05 40 24.4	+0.1
CHMF	Charmoille	2.73	360	Pn	Pn	05 39 55.6	+0.6
BALST	Balsthal	2.91	14	*e*Pn	Pn	05 39 58.8	+1.4
BALST				*e*Pg	Pb	05 40 05.5	+2.2
BALST				*e*Sg	Sb	05 40 41.6	+3.0
SMF	Signal de Mont	2.91	318	*e*P	Pn	05 39 58.2	+0.8
SMF	Signal de Mont	2.91	318	*e*Pg	Pb	05 40 04.5	+1.2
SMF				*e*Sg	Sb	05 40 41.7	+3.1
	comp=N,19nm,0.2s						
SMPL	Sampolo	3.08	141	AML	AML		
	comp=N,51µm,1.6s						
SMPL				AML	AML		
	comp=E,46µm,1.4s						
CAVE	Cavezzo	3.11	82	AML	AML		
	comp=E,408µm,0.4s						
CAVE				AML	AML		
	comp=N,352µm,0.6s						
SULZ	Cheisacher	3.18	18	*e*Pn	Pn	05 40 02.1	+1.1
SULZ				*e*Sn	Sn	05 40 39.7	+1.1
SULZ				*e*Sg	Sg	05 40 52.0	-1.7
DAVOX	Davos/Dischmat	3.19	44	Pn	Pn	05 40 02.3	+0.9
	comp=N,1.8nm,0.3s,baz=197,slow=8.9,SNR=14						
DAVOX				Lg	Lg	05 40 49.1	
	comp=N,1.4nm,0.3s,baz=158,slow=19,SNR=3.7						
AVF	Avril sur Loir	3.26	316	*e*P	Pn	05 40 03.0	+1.0
AVF	Avril sur Loir	3.26	316	*e*Pg	Pb	05 40 11.1	+2.0
AVF				*e*Sn	Sn	05 40 36.4	-4.0
	comp=N,5.9nm,0.2s						
AVF				*e*Sg	Sb	05 40 52.5	+4.1
	comp=N,9.3nm,0.2s						
WILA	Wila	3.29	27	*e*Pn	Pn	05 40 04.2	+1.5
WILA				*e*Pg	Pg	05 40 12.7	-2.1
HINF	Hinteralfeld	3.31	2	*e*P	Pn	05 40 03.5	+0.7
HINF	Hinteralfeld	3.31	2	*e*Pg	Pb	05 40 11.7	+1.8
HINF				*e*Sn	Sn	05 40 37.4	-4.4
	comp=N,12nm,0.3s						
HINF				*e*Sg	Sb	05 40 53.6	+3.7
	comp=N,13nm,0.2s						
SSF	Saint Saulge	3.38	320	*e*P	Pn	05 40 04.8	+1.1
SSF	Saint Saulge	3.38	320	*e*Pg	Pb	05 40 13.8	+2.7
SSF				*e*Sn	Sn	05 40 39.5	-3.9
	comp=N,14nm,0.3s						
SSF				*e*Sg	Sb	05 40 56.0	+4.1
	comp=N,20nm,0.3s						
BGF	Bois d'Agland	3.38	309	*e*P	Pn	05 40 04.7	+1.0
BGF	Bois d'Agland	3.38	309	*e*Pg	Pb	05 40 13.4	+2.3
BGF				*e*Sn	Sn	05 40 39.1	-4.4
	comp=N,22nm,0.3s						
BGF				*e*Sg	Sb	05 40 56.4	+4.5
	comp=N,43nm,0.4s						
METMA	Mettma DE	3.38	18	*e*Pn	Pn	05 40 04.3	+0.5
METMA				*e*Pg	Pb	05 40 13.9	+2.7
METMA				*e*Sn	Sn	05 40 43.3	-0.4
METMA				*e*Sg	Sg	05 40 57.1	-3.2
LOR	Lormes	3.38	326	*e*P	Pn	05 40 04.9	+1.1
	baz=146						
LOR	Lormes	3.38	326	*e*Pg	Pb	05 40 13.8	+2.6
	baz=144						
LOR				*e*Sn	Sn	05 40 39.6	-4.0
	comp=N,19nm,0.3s,baz=146						
LOR				*e*Sg	Sb	05 40 55.8	+3.7
	comp=N,35nm,0.3s,baz=152						
MTLF	Montolieu	3.42	252	*e*Pn	Pn	05 40 04.1	-0.3
MTLF	Montolieu	3.42	252	*e*P	Pn	05 40 05.8	+1.4
MTLF	Montolieu	3.42	252	*e*Pg	Pb	05 40 14.6	+2.6
MTLF				*e*Sn	Sn	05 40 41.5	-3.2
	comp=N,8.0nm,0.2s						
MTLF				*e*Sg	Sg	05 40 58.5	-3.2
	comp=N,11nm,0.3s						
SLE	Schleitheim	3.49	21	*e*Pn	Pn	05 40 05.6	+0.3
SLE				*e*Pg	Pb	05 40 15.6	+2.5
SLE				*e*Sn	Sn	05 40 46.7	+0.4
SLE				*e*Sg	Sg	05 41 00.1	-3.6
HAU	Haudompre	3.50	356	*e*P	Pn	05 40 06.2	+0.8
HAU	Haudompre	3.50	356	*e*Pg	Pb	05 40 15.9	+2.7
HAU				*e*Sn	Sn	05 40 42.1	-4.4
	comp=N,81nm,0.4s						
HAU				*e*Sg	Sb	05 40 59.5	+4.0
	comp=N,96nm,0.4s						
BERGE	Lenzkirch (DE)	3.52	17	*e*Pn	Pn	05 40 05.8	+0.1
BERGE				*e*Pg	Pb	05 40 16.6	+3.0
BERGE				*e*Sn	Sn	05 40 47.8	+0.8
BERGE				*e*Sg	Sb	05 41 00.4	+4.3
DAVA	Damuels	3.56	38	*e*Pn	Pn	05 40 09.5	+3.1
	comp=N,1.6nm,0.2s						
DAVA				*e*Sn	Sn	05 40 52.5	+4.2
	comp=N,29nm,0.8s						
TCF	Toulx Ste Croi	3.61	301	*e*P	Pn	05 40 07.7	+0.8
TCF	Toulx Ste Croi	3.61	301	*e*Pg	Pb	05 40 18.5	+3.4
TCF				*e*Sn	Sn	05 40 45.3	-3.9
	comp=N,16nm,0.4s						
TCF				*e*Sg	Sb	05 41 03.3	+4.7
	comp=N,15nm,0.4s						
WALHA	Wallhausen, DE	3.66	27	*e*Pn	Pn	05 40 08.6	+1.0
WALHA				*e*Pg	Pg	05 40 19.7	-2.0
WALHA				*e*Sn	Sn	05 40 52.4	+1.9
WALHA				*e*Sg	Sg	05 41 05.9	-3.3
EMING	Emmingen-Lipti	3.70	23	*e*Pn	Pn	05 40 09.1	+0.9
EMING				*e*Pg	Pb	05 40 19.5	+2.8
EMING				*e*Sn	Sn	05 40 52.5	+1.0
EMING				*e*Sg	Sb	05 41 06.1	+4.8
ECH	Echery	3.72	5	*e*Pn	Pn	05 40 09.1	+0.6
ECH				*e*Pg	Pg	05 40 22.6	-0.3
ECH				*e*Sn	Sn	05 40 51.7	-0.2
RJF	Les Rejaudoux	3.75	284	*e*P	Pn	05 40 09.7	+0.9
RJF	Les Rejaudoux	3.75	284	*e*Pg	Pb	05 40 21.0	+3.6
RJF				*e*Sn	Sn	05 40 48.5	-4.1
	comp=N,9.2nm,0.4s						
RJF				*e*Sg	Sb	05 41 07.7	+5.1
	comp=N,14nm,0.3s						
FETA	Feichten	3.79	47	*i* Pn	Pn	05 40 12.6	+3.1
	comp=N,1.0nm,0.3s						
FETA				*e*Sn	Sn	05 40 57.6	+3.8
	comp=N,5.7nm,0.8s						
SFTF	Sexfontaines	3.86	344	*e*P	Pn	05 40 11.6	+1.2
	baz=157						
SFTF	Sexfontaines	3.86	344	*e*Pg	Pb	05 40 22.2	+2.8
	baz=162						
SFTF				*e*Sn	Sn	05 40 50.6	-4.8
	comp=N,24nm,0.3s						
SFTF				*e*Sg	Sb	05 41 10.2	+4.3
	comp=N,26nm,0.3s						
CDF	Champ du Feu	3.92	6	*e*Pn	Pn	05 40 09.4	-1.9
CDF	Champ du Feu	3.92	6	*e*P	Pn	05 40 11.5	+0.2
CDF	Champ du Feu	3.92	6	*e*Pg	Pb	05 40 22.9	+2.4
CDF				*e*Sn	Sn	05 40 52.3	-4.7
	comp=N,6.1nm,0.3s						
CDF				*e*Sg	Sb	05 41 13.0	+5.3
	comp=N,11nm,0.3s						
HYF	Humbligny	3.94	316	*e*P	Pn	05 40 12.7	+1.2
HYF	Humbligny	3.94	316	*e*Pg	Pb	05 40 24.0	+3.3
HYF				*e*Sn	Sn	05 40 52.6	-4.7
HYF				*e*Sg	Sb	05 41 13.0	+4.9
UBR	Ueberruh	3.97	36	*e*Pn	Pn	05 40 14.3	+2.4
BFO	Black Forest	3.98	16	*e*Pn	Pn	05 40 12.2	+0.1
BFO				*e*Pg	Pg	05 40 25.7	-2.2
BFO				*e*Sn	Sn	05 40 58.0	-0.5
PAGF	Fort de Pagny	4.09	351	*e*P	Pn	05 40 14.9	+1.3
	baz=169						
PAGF	Fort de Pagny	4.09	351	*e*Pg	Pb	05 40 26.2	+2.8
	baz=170						
PAGF				*e*Sn	Sn	05 40 56.2	-4.9
	comp=N,4.2nm,0.2s,baz=168						
PAGF				*e*Sg	Sg	05 41 18.6	-4.5
	comp=N,30nm,0.5s,baz=179						
RETA	Reutte	4.12	42	*i* Pn	Pn	05 40 17.2	+3.3
	comp=N,1.1nm,0.2s						
MEZF	Maizieres J'vi	4.14	345	*e*Pn	Pn	05 40 12.0	-2.2
MEZF	Maizieres J'vi	4.14	345	*e*P	Pn	05 40 15.6	+1.4
	baz=167						
MEZF	Maizieres J'vi	4.14	345	*e*Pg	Pb	05 40 27.2	+3.0
	baz=168						
MEZF				*e*Sn	Sn	05 40 57.2	-5.1
	comp=N,24nm,0.3s,baz=160						
MEZF				*e*Sg	Sb	05 41 19.3	+5.4
	comp=N,24nm,0.3s						
SQTA	Sankt Quirin	4.17	48	*e*Pn	Pn	05 40 19.4	+4.7
	comp=N,2.3nm,0.2s						
SQTA				*e*Sn	Sn	05 41 07.0	+3.9
	comp=N,7.4nm,0.6s						
MOTA	Moosalm	4.19	46	*i* Pn	Pn	05 40 16.6	+1.5
	comp=N,1.4nm,0.2s						
MOTA				*i* Sn	Sn	05 41 06.5	+2.7
	comp=N,5.5nm,0.4s						
SAVF	Savonnieres en	4.24	346	*e*P	Pn	05 40 17.0	+1.4
	baz=169						
SAVF	Savonnieres en	4.24	346	*e*Pg	Pb	05 40 28.4	+2.6
	baz=164						
SAVF				*e*Sn	Sn	05 40 59.5	-5.2
	comp=N,22nm,0.4s,baz=166						
SAVF				*e*Sg	Sb	05 41 22.8	+6.1
	comp=N,25nm,0.5s						
LFF	La Frestale	4.25	278	*e*Pn	Pn	05 40 13.7	-2.0
LFF	La Frestale	4.25	278	*e*Pg	Pb	05 40 28.6	+2.6
LFF				*e*Sn	Sn	05 41 00.8	-4.1
LFF				*e*Sg	Sg	05 41 24.3	-3.7
	comp=N,18nm,0.5s						
WTTA	Wattenberg	4.42	50	*i* Pn	Pn	05 40 22.2	+3.9
	comp=N,1.4nm,0.1s						
WTTA				*i* Sn	Sn	05 41 13.6	+4.1
	comp=N,4.9nm,0.4s						
WATA	Walderalm	4.43	49	*i* Pn	Pn	05 40 22.6	+4.2
	comp=N,2.7nm,0.2s						
ABTA	Abfaltersbach	4.67	59	*i* Pn	Pn	05 40 26.6	+5.1
	comp=N,1.6nm,0.4s						
ABTA				*e*Sn	Sn	05 41 18.7	+3.3
	comp=N,5.8nm,0.6s						
EPF	Esparros	4.82	254	*e*Pn	Pn	05 40 22.1	-1.5
EPF				*e*Sg	Sg	05 41 42.3	-4.0
	comp=N,3.0nm,0.2s						

MFF	Saint Martin d	5.22	296	eP	Pn	05 40 30.3	+1.2
MFF				eSn	Sn	05 41 23.6	-5.3
	comp=N,2.6nm,0.3s						
MFF				eSg	Sg	05 41 54.1	-5.2
	comp=N,3.6nm,0.4s						
KBA	Koelnbreinsper	5.32	59	ePn	Pn	05 40 34.4	+3.7
	comp=N,1.7nm,0.6s						
KBA				i Sn	Sn	05 41 35.2	+3.5
	comp=N,1.5nm,0.4s						
ETSF	Etsaut	5.49	255	ePn	Pn	05 40 30.7	-2.1
ETSF	Etsaut	5.49	255	eP	Pn	05 40 35.4	+2.6
ETSF				eSn	Sn	05 41 30.7	-4.8
	comp=N,2.9nm,0.3s						
ETSF				eSg	Sg	05 42 02.7	-5.0
	comp=N,2.3nm,0.3s						
GIVF	Givet	5.73	348	eP	Pn	05 40 37.5	+1.5
GIVF				eSn	Sn	05 41 35.4	-6.0
	comp=N,3.4nm,0.2s						
BAIF	Baives	5.79	344	ePn	Pn	05 40 34.1	-2.8
BAIF	Baives	5.79	344	eP	Pn	05 40 38.1	+1.2
BAIF				eSn	Sn	05 41 37.0	-6.0
	comp=N,2.6nm,0.3s						
OBKA	Obir	5.88	67	ePn	Pn	05 40 41.8	+3.6
	comp=N,1.1nm,0.3s						
LDF	La Druitiere	6.21	313	eP	Pn	05 40 43.7	+1.1
GRR	Gorron	6.49	309	eP	Pn	05 40 47.3	+0.9
GRR				eSn	Sn	05 41 53.7	-6.3
	comp=N,3.6nm,0.4s						
GERES	GERESS Array B	6.49	46	Pn	Pn	05 40 46.7	+0.1
	comp=N,2.3nm,0.3s,baz=233,slow=13,SNR=35						
GERES				Sn	Sn	05 42 00.9	+0.6
	comp=N,0.9nm,0.3s,baz=236,slow=24,SNR=7.8						
FLN	La Foliniere	6.50	313	ePn	Pn	05 40 44.0	-2.6
	baz=135						
FLN	La Foliniere	6.50	313	eP	Pn	05 40 47.6	+1.0
	baz=136						
FLN				eSn	Sn	05 41 54.0	-6.4
	comp=N,1.3nm,0.2s						
KHC	Kasperske Hory	6.62	43	ePN	Pn	05 40 49.7	+1.5
KHC				eSN	Sn	05 42 03.9	+0.6
SGMF	Saint Gilles	7.40	304	eP	Pn	05 40 59.7	+0.8
SGMF				eSn	Sn	05 42 15.6	-6.8
	comp=N,0.7nm,0.3s						
QUIF	Quistinic	7.62	300	ePn	Pn	05 40 59.4	-2.6
QUIF	Quistinic	7.62	300	eP	Pn	05 41 04.6	+2.6
ROSF	Rostrenen	7.86	303	ePn	Pn	05 41 02.9	-2.4
ROSF				eSn	Sn	05 42 26.8	-7.1
	comp=N,0.3nm,0.2s						
ESDC	Sonseca Array	9.27	242	Pn	Pn	05 41 22.2	-2.4
	comp=N,0.1nm,0.3s,baz=57,slow=14,SNR=1.9						
EKA	Eskdalemuir Ar	12.53	333	Pn	Pn	05 42 09.2	+0.1
	baz=136,slow=14,SNR=12						
BOSA	Boshof	74.73	163	P	P	05 50 47.9	-2.7
	comp=N,1.4nm,0.6s,baz=342,slow=6.4,SNR=4.6						

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*LDG **10** 05:39:24.2±0.1, 44°.54N×6°.67E, h8^{km}, Md2.8/1, Ml3.3/59,*
Error ellipse: s-maj=1.0km s-min=0.7km az=82.0
*STR **10** 05:39:24.2±0.3, 45°N±2°×°±°, h8^{km}, MLv3.0/7,*
smi:scs/0.6/LOCSAT earthModelID
smi:scs/0.6/alpes_taup-2.11 preliminary
ISC 10 05:39:24.7±0.8**, 44°.51N**±0°.02×**6°.65E**±0°.02**, h18**^{km}±4^{km},
n66, σ2^{s}.**91**/130**, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OGAG	Argentiere	0.10	233	Pg	Pb	05 39 29.8	+1.4
OGAG				Sg	Sb	05 39 33.7	+2.7
MBDF	Montbardon	0.23	22	ePg	Pg	05 39 28.6	-1.6
MBDF	Montbardon	0.23	22	eP	Pg	05 39 29.5	-0.7
MBDF				eSg	Sg	05 39 31.6	-2.4
	628nm,0.2s						
ISO	Isola	0.44	139	Pg	Pg	05 39 33.0	-0.7
ISO				Sg	Sg	05 39 38.5	-1.2
ORIF	Oris-en-Rattie	0.68	307	ePg	Pg	05 39 37.1	-1.1
ORIF				eSg	Sg	05 39 45.8	-1.5
	551nm,0.3s						
ORIF	Oris-en-Rattie	0.68	307	Pg	Pg	05 39 36.8	-1.4
ORIF				Sg	Sg	05 39 46.1	-1.2
OGMO	Fort Saint-Gob	0.70	2	Pg	Pg	05 39 37.7	-0.8
OGMO				Sg	Sg	05 39 46.7	-1.1
BLAF	les Blancs	0.71	218	Pg	Pg	05 39 37.8	-0.8
TURF	col de Turini	0.76	135	Pg	Pg	05 39 38.8	-0.8
TURF				Sg	Sb	05 39 49.4	-0.2
GDM	Grand'Maison	0.79	331	Pg	Pg	05 39 39.2	-1.0
GDM				Sg	Sg	05 39 49.3	-1.3
SBF	Sospel	0.86	139	ePg	Pg	05 39 40.6	-0.9
SBF				eSg	Sg	05 39 51.7	-1.2
	418nm,0.3s						
SMRF	Simiane la Rot	0.94	236	ePg	Pb	05 39 43.3	+0.8
SMRF	Simiane la Rot	0.94	236	eP	Pn	05 39 44.5	+1.4
SMRF				eSg	Sg	05 39 55.3	-0.1
	164nm,0.2s						
FRF	La Foret Royal	0.95	180	ePg	Pb	05 39 42.6	-0.1
FRF	La Foret Royal	0.95	180	eP	Pn	05 39 44.4	+1.2
LPG	La Plagne	0.99	4	ePg	Pg	05 39 42.4	-1.6
LPG	La Plagne	0.99	4	eP	Pb	05 39 44.0	+0.5
LPG				eSg	Sg	05 39 54.9	-2.1
	175nm,0.3s						
LPL	La Plagne	1.00	3	ePg	Pb	05 39 42.7	-1.0
LPL	La Plagne	1.00	3	eP	Pg	05 39 44.3	0.0
LPL				eSg	Sg	05 39 55.4	-2.1
	128nm,0.2s						
RSL	Roselend	1.18	359	Pg	Pb	05 39 46.1	-0.5
RSL				Sg	Sb	05 40 02.5	+0.9
LMR	La Mourre	1.18	185	ePg	Pb	05 39 47.0	+0.4
LMR				eSg	Sn	05 40 02.9	+0.9
	141nm,0.2s						
OGSM	Saint Maurice	1.29	329	Pg	Pn	05 39 49.0	+1.1
OGSM				Sg	Sb	05 40 05.9	+1.2
VIVF	Saint-Julien-l	1.45	284	eP	Pn	05 39 50.9	+0.8
VIVF				eSn	Sn	05 40 06.1	-2.6
	27nm,0.2s						
VIVF				eSg	Sb	05 40 10.2	+0.8
	72nm,0.2s						
OG35	Corcelles	1.71	334	Pg	Pb	05 39 56.8	+1.2
OG35				Sg	Sb	05 40 19.4	+2.5
LASF	Ste Croix	2.05	259	ePn	Pn	05 39 58.3	-0.1
LASF	Ste Croix	2.05	259	ePg	Pb	05 40 02.9	+1.4
LASF				eSg	Sb	05 40 29.6	+3.0
	13nm,0.2s						
CABF	La Chapelle	2.13	350	eP	Pn	05 40 01.4	+1.8
CABF	La Chapelle	2.13	350	ePg	Pb	05 40 03.9	+1.0
CABF				eSg	Sb	05 40 30.7	+1.6
	62nm,0.4s						
PGF	Pioggiola	2.60	138	eP	Pn	05 40 07.9	+1.9
PGF				eSn	Sn	05 40 35.4	-1.8
	32nm,0.3s						
SMF	Signal de Mont	2.90	318	eP	Pn	05 40 11.5	+1.4
SMF	Signal de Mont	2.90	318	ePg	Pb	05 40 17.9	+1.9
SMF				eSg	Sb	05 40 54.9	+3.7
	42nm,0.3s						
AVF	Avril sur Loir	3.25	316	eP	Pn	05 40 16.2	+1.5
AVF				eSn	Sn	05 40 50.2	-2.7
	14nm,0.3s						
AVF				eSg	Sb	05 41 05.9	+5.0
	16nm,0.2s						
HINF	Hinteralfeld	3.31	2	eP	Pn	05 40 16.6	+1.0
HINF	Hinteralfeld	3.31	2	ePg	Pb	05 40 24.9	+2.0
HINF				eSn	Sn	05 40 50.8	-3.7
	22nm,0.4s						
HINF				eSg	Sb	05 41 07.0	+4.2
	12nm,0.2s						
BGF	Bois d'Agland	3.37	309	eP	Pn	05 40 18.1	+1.7
BGF	Bois d'Agland	3.37	309	ePg	Pb	05 40 26.5	+2.7
BGF				eSn	Sn	05 40 53.0	-2.9
	31nm,0.3s						
BGF				eSg	Sb	05 41 09.2	+4.8
	76nm,0.6s						
SSF	Saint Saulge	3.37	320	eP	Pn	05 40 18.0	+1.6
SSF				eSn	Sn	05 40 52.7	-3.2
	27nm,0.3s						
SSF				eSg	Sb	05 41 09.5	+5.1
	26nm,0.5s						
LOR	Lormes	3.38	326	eP	Pn	05 40 18.2	+1.7
	baz=145						
LOR	Lormes	3.38	326	ePg	Pb	05 40 26.7	+2.7
	baz=145						
LOR				eSn	Sn	05 40 53.0	-3.1
	44nm,0.4s,baz=144						
LOR				eSg	Sb	05 41 09.1	+4.4
	26nm,0.3s,baz=150						
MTLF	Montolieu	3.41	251	ePn	Pn	05 40 15.5	-1.5
MTLF	Montolieu	3.41	251	eP	Pn	05 40 19.2	+2.2
MTLF				eSn	Sn	05 40 55.0	-2.0
	19nm,0.4s						
MTLF				eSg	Sg	05 41 12.0	-2.2
	14nm,0.4s						
HAU	Haudompre	3.50	357	eP	Pn	05 40 19.5	+1.2
HAU	Haudompre	3.50	357	ePg	Pb	05 40 29.1	+3.0
HAU				eSn	Sn	05 40 55.3	-3.9
	30nm,0.2s						
HAU				eSg	Sb	05 41 13.0	+4.7
	20nm,0.3s						
TCF	Toulx Ste Croi	3.59	301	eP	Pn	05 40 21.1	+1.5
TCF				eSn	Sn	05 40 58.7	-2.9
	14nm,0.4s						
TCF				eSg	Sb	05 41 16.2	+5.1
	15nm,0.4s						
RJF	Les Rejaudoux	3.73	284	eP	Pn	05 40 22.6	+1.2
RJF				eSn	Sn	05 41 01.7	-3.2
	8.7nm,0.3s						
RJF				eSg	Sb	05 41 21.1	+6.1
	14nm,0.4s						
SFTF	Sexfontaines	3.86	344	eP	Pn	05 40 24.9	+1.8
	baz=160						
SFTF	Sexfontaines	3.86	344	ePg	Pb	05 40 35.4	+3.2
	baz=162						
SFTF				eSn	Sn	05 41 03.9	-4.1
	22nm,0.3s						
SFTF				eSg	Sb	05 41 23.6	+5.0
	20nm,0.3s						
CDF	Champ du Feu	3.92	6	eP	Pn	05 40 24.8	+0.7
CDF	Champ du Feu	3.92	6	ePg	Pb	05 40 36.1	+2.7
CDF				eSn	Sn	05 41 06.3	-3.5
	6.3nm,0.2s						
CDF				eSg	Sb	05 41 26.0	+5.4
	18nm,0.5s						
HYF	Humbligny	3.93	316	eP	Pn	05 40 25.9	+1.8
HYF				eSn	Sn	05 41 06.7	-3.1
HYF				eSg	Sb	05 41 26.0	+5.4
PAGF	Fort de Pagny	4.09	351	eP	Pn	05 40 28.1	+1.7
	baz=169						
PAGF				eSn	Sn	05 41 09.7	-4.1
	25nm,0.4s,baz=168						
PAGF				eSg	Sg	05 41 31.7	-4.4
	42nm,0.6s,baz=174						
MEZF	Maizieres J'vi	4.14	345	eP	Pn	05 40 28.9	+1.9
	baz=163						
MEZF				eSn	Sn	05 41 10.7	-4.2
	32nm,0.3s,baz=164						
MEZF				eSg	Sb	05 41 32.6	+5.9
	44nm,0.6s						
LFF	La Frestale	4.23	278	ePn	Pn	05 40 26.8	-1.5
LFF				eSn	Sn	05 41 14.3	-2.9
	10nm,0.3s						
LFF				eSg	Sg	05 41 37.8	-2.8
	26nm,0.6s						
SAVF	Savonnieres en	4.24	346	eP	Pn	05 40 30.3	+2.0
	baz=168						
SAVF				eSn	Sn	05 41 12.9	-4.4
	30nm,0.5s,baz=169						
SAVF				eSg	Sb	05 41 35.5	+6.1
	45nm,0.6s						
EPF	Esparros	4.80	254	ePn	Pn	05 40 35.3	-0.9
EPF	Esparros	4.80	254	eP	Pn	05 40 38.8	+2.6
EPF	Esparros	4.80	254	ePg	Pb	05 40 53.4	+5.0
EPF				eSn	Sn	05 41 28.9	-2.5
	4.9nm,0.3s						
EPF				eSg	Sg	05 41 55.6	-3.3
	7.1nm,0.5s						
MFF	Saint Martin d	5.21	296	eP	Pn	05 40 43.8	+2.1
MFF				eSn	Sn	05 41 37.6	-3.7
	2.0nm,0.2s						
MFF				eSg	Sg	05 42 06.5	-5.3
	8.2nm,0.5s						
ETSF	Etsaut	5.47	255	eP	Pn	05 40 48.6	+3.2
ETSF	Etsaut	5.47	255	ePg	Pb	05 41 04.7	+5.0
ETSF				eSn	Sn	05 41 43.7	-4.1
	3.4nm,0.6s						
ETSF				eSg	Sg	05 42 15.9	-4.3
	1.9nm,0.4s						
GIVF	Givet	5.73	348	eP	Pn	05 40 50.7	+1.9
GIVF				eSn	Sn	05 41 48.9	-5.2
	9.5nm,0.3s						
BAIF	Baives	5.79	344	eP	Pn	05 40 51.4	+1.7
BAIF				eSn	Sn	05 41 50.4	-5.2
	5.7nm,0.4s						
LDF	La Druitiere	6.20	314	eP	Pn	05 40 56.9	+1.6
LDF				eSn	Sn	05 42 01.1	-4.6
	3.0nm,0.3s						
GRR	Gorron	6.47	309	eP	Pn	05 41 00.6	+1.6
GRR				eSn	Sn	05 42 07.5	-4.9
	6.4nm,0.4s						
FLN	La Foliniere	6.49	313	eP	Pn	05 41 00.9	+1.6
	baz=130						
FLN				eSn	Sn	05 42 07.8	-5.1
	6.8nm,0.4s						
SGMF	Saint Gilles	7.38	304	eP	Pn	05 41 13.0	+1.5
SGMF				eSn	Sn	05 42 29.3	-5.5
	0.2nm,0.1s						

NNC 10 06:07:29.6±5.7**, 37°.03N**×**70°.60E, h0**^{km}**, mb3.8, mpv3.5,**
4C-1D, Error ellipse: s-maj=46.0km s-min=42.5km
az=43.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IUG	Iuzhnay	5.13	355	Pg	Pn	06 08 47.4	-0.4
	2.1nm,0.1s						
IUG				Lg	Lg	06 09 49.9	
	12nm,0.3s						
MRKS	Merke	6.06	19	Pg	Pn	06 09 00.5	-0.1
	3.8nm,0.4s						
MRKS				Lg	Lg	06 10 12.9	
	5.1nm,0.6s						
KK31	Karatay Array	6.07	359	⇓P	Pn	06 09 00.3	-0.3
	0.3nm,0.2s,baz=176,slow=12,SNR=5.8						
KK31				⇑S	Sn	06 10 11.1	+0.3
	2.3nm,0.5s,baz=177,slow=20						
AAK	Ala-Archa	6.35	27	⇑P	Pn	06 09 05.1	+0.5
	1.1nm,0.3s						
AAK				⇑S	Sn	06 10 20.3	+2.3
	7.2nm,0.9s						
TKM2	Tokmak 2	7.03	32	⇑P	Pn	06 09 13.4	-0.6
	2.8nm,1.1s						
KST	Kastek	7.28	33	Pg	Pn	06 09 18.8	+1.4
	1.5nm,0.3s						
KST				Lg	Lg	06 10 43.7	
	2.1nm,0.7s						

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*KRNET **10** 06:13:13.7±0.1, 39°.57N×74°.84E, mb3.2*
*SOME **10** 06:13:19.7, 39°.95N×74°.83E, h5^{km}*
*NNC **10** 06:13:23.2±1.8, 39°.99N×74°.80E, h19^{km}±8^{km}, mb3.6,*
mpv3.2, Error ellipse: s-maj=14.2km s-min=8.0km
az=166.0
ISC 10 06:13:17.0±1.3**, 39°.79N**±0°.06×**74°.80E**±0°.03**, h10**^{km}**, n56,**
σ1^{s}.**58**/89**, 29C-9D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	1.02	283	⇓iP	Pg	06 13 34.4	-2.3
	baz=94						
SFK				⇓iS	Sb	06 13 50.4	-0.2
	baz=94						
ARSB	Arslanbob	2.07	318	⇑iP	Pb	06 13 54.1	-0.6
	baz=22						
ARSB				⇑iS	Sg	06 14 22.7	-0.7
	baz=22						
ARLS	Aral	2.10	350	⇑iP	Pb	06 13 55.4	+0.2
	baz=51						
ARLS				⇑iS	Sg	06 14 25.2	+0.7
	baz=51						
DRK	Karamyk	2.34	263	⇑iP	Pn	06 13 55.6	-0.2
	baz=69						
DRK				⇑iS	Sn	06 14 25.9	+1.2
	baz=69						
UCH	Uchtor	2.44	355	⇑eP	Pb	06 13 59.9	-1.4
	baz=55						
UCH				⇑iS	Sg	06 14 33.7	-1.8
	baz=55						
UCH	Uchtor	2.44	355	P	Pg	06 14 03.5	-0.4
	SNR=7.8						
AML	Almayashu	2.48	341	⇑eP	Pb	06 14 00.5	-1.4
	baz=42						
AML				⇑iS	Sg	06 14 34.8	-2.0
	baz=42						
AML	Almayashu	2.48	341	P	Pg	06 14 03.8	-0.9
	SNR=27						
ULHL	Ulahol	2.68	23	⇑iP	Pn	06 14 02.3	+1.9
	baz=21						
ULHL				⇑iS	Sb	06 14 37.4	-0.9
	baz=21						
ULHL	Ulahol	2.68	23	P	Pb	06 14 05.9	+0.7
	SNR=7.5						
AAK	Ala-Archa	2.85	355	⇑eP	Pb	06 14 05.6	-2.5
	baz=55						
AAK				⇑iS	Sb	06 14 43.2	+0.1
	baz=55						
AAK	Ala-Archa	2.85	355	P	Pb	06 14 09.3	+1.2
	SNR=8.7						
AAK	Ala-Archa	2.85	355	⇓Pn	Pb	06 14 05.6	-2.5
	1.1nm,0.5s						
AAK				⇓Pg	Pg	06 14 09.8	-1.8
	9.0nm,0.7s						
AAK				⇑Lg	Lg	06 14 51.0	
	18nm,0.8s						
KBK	Karagaybulak	2.86	2	⇑iP	Pb	06 14 05.7	-2.6
	baz=2.0						
KBK				⇑iS	Sb	06 14 43.4	-0.1
	baz=2.0						
EKS2	Erkin-Say	2.97	345	⇑iP	Pb	06 14 07.4	-2.7
	baz=46						
EKS2				⇑iS	Sb	06 14 46.2	-0.2
	baz=46						
EKS2	Erkin-Say	2.97	345	P	Pg	06 14 12.3	-1.6
	SNR=5.6						
BTK	Batken	3.08	276	⇑iP	Pn	06 14 05.9	+0.2
	baz=80						
BTK				⇑iS	Sn	06 14 44.5	+1.9
	baz=80						
MRKS	Merke	3.18	339	eP	Pg	06 14 16.3	-1.6
	9.2nm,0.9s						
MRKS				eS	Sg	06 14 55.6	-3.5
	5.3nm,0.6s						
MRKS	Merke	3.18	339	Pg	Pg	06 14 16.3	-1.6
	9.2nm,0.9s						
TKM2	Tokmak 2	3.18	11	⇓iP	Pn	06 14 09.7	+2.4
	baz=9.0						
TKM2				⇓iS	Sb	06 14 50.6	-2.1
	baz=9.0						
TKM2	Tokmak 2	3.18	11	P	Pn	06 14 10.2	+2.9
	SNR=13						
TKM2	Tokmak 2	3.18	11	⇓Pn	Pn	06 14 09.5	+2.2
	1.4nm,0.2s						
TKM2				⇓Pg	Pb	06 14 13.4	-0.3
	6.2nm,0.5s						
TKM2				⇑Lg	Lg	06 14 51.7	
	18nm,0.5s						
MNAS	Manas	3.20	328	⇑iP	Pn	06 14 10.3	+2.8
	baz=30						
MNAS				⇑iS	Sb	06 14 51.4	-1.8
	baz=30						
TRKS	Terek-Say	3.28	303	⇑iP	Pn	06 14 09.2	+0.6
	baz=5.0						
TRKS				⇑iS	Sn	06 14 49.7	+1.9
	baz=5.0						
KST	Kastek	3.36	15	eP	Pg	06 14 18.8	-2.6
	8.7nm,0.4s						
KST				eS	Sb	06 15 00.8	+3.0
	11nm,0.4s						
KST	Kastek	3.36	15	Pg	Pg	06 14 21.5	+0.1
	5.9nm,0.5s						
KST				Lg	Lg	06 15 04.2	
	11nm,0.4s						
IZV	Izvestkoviy	3.52	22	eP	Pg	06 14 25.5	+1.2
	4.4nm,0.6s						
IZV				eS	Sg	06 15 10.8	+1.0
	10nm,0.9s						
IZV	Izvestkoviy	3.52	22	Pg	Pg	06 14 25.5	+1.2
	4.4nm,0.6s						
IZV				Lg	Lg	06 15 10.8	
	10nm,0.9s						
DGS	Degeres	3.52	12	eP	Pb	06 14 18.5	-1.0
	15nm,0.6s						
DGS				eS	Sb	06 14 59.1	-3.3
	8.1nm,0.7s						
DGS	Degeres	3.52	12	Pg	Pg	06 14 24.6	+0.1
	13nm,0.6s						
DGS				Lg	Lg	06 15 09.7	
	10nm,0.8s						
TNSS	Tian-Shan	3.62	26	eP	Pg	06 14 26.3	-0.1
	3.2nm,0.3s						
TNSS				eS	Sg	06 15 12.0	-1.3
	5.3nm,0.6s						
TNSS	Tian-Shan	3.62	26	Pg	Pg	06 14 26.3	-0.1
	3.2nm,0.3s						
TNSS				Lg	Lg	06 15 12.0	
	5.3nm,0.6s						
MDOK	Medeo	3.77	26	eP	Pg	06 14 29.6	+0.5
	3.8nm,0.3s						
MDOK				eS	Sg	06 15 17.8	-0.1
	7.9nm,0.7s						
MDOK	Medeo	3.77	26	Pg	Pg	06 14 29.6	+0.5
	3.8nm,0.3s						
MDOK				Lg	Lg	06 15 17.8	
	7.9nm,0.7s						
KOTS	Kotyrbulak	3.85	26	eP	Pg	06 14 30.9	+0.1
	10nm,0.5s						
KOTS				eS	Sg	06 15 19.9	-0.7
	35nm,0.7s						
KOTS	Kotyrbulak	3.85	26	Pg	Pg	06 14 30.8	+0.1
	10nm,0.5s						
KOTS				Lg	Lg	06 15 19.9	
	35nm,0.7s						
KRBS	Karabastau	3.96	9	eP	Pg	06 14 33.9	+1.1
	3.7nm,0.5s						
KRBS				eS	Sg	06 15 25.0	+1.1
	5.6nm,0.3s						
KRBS	Karabastau	3.96	9	Pg	Pg	06 14 33.9	+1.1
	3.7nm,0.5s						
KRBS				Lg	Lg	06 15 25.0	
	5.6nm,0.3s						
KTBS	Karatobe	4.16	19	eP	Pg	06 14 37.1	+0.5
	2.1nm,0.7s						
KTBS				eS	Sg	06 15 30.7	+0.2
	7.5nm,0.5s						
KTBS	Karatobe	4.16	19	Pg	Pg	06 14 37.2	+0.5
	2.1nm,0.7s						
KTBS				Lg	Lg	06 15 30.7	
	7.5nm,0.5s						
SATY	Saty	4.24	39	Pg	Pg	06 14 37.6	-0.6
	2.0nm,0.7s						
SATY				Lg	Lg	06 15 31.8	
	3.5nm,0.3s						
KUU	Kurty	4.25	15	eP	Pg	06 14 38.1	-0.4
	3.4nm,1.3s						
KUU				eS	Sg	06 15 32.3	-1.3
	11nm,0.6s						
KUU	Kurty	4.25	15	Pg	Pg	06 14 38.1	-0.4
	2.5nm,0.7s						
KUU				Lg	Lg	06 15 32.3	
	11nm,0.6s						
IUG	Iuzhnay	4.31	305	eP	Pg	06 14 40.2	+0.7
	6.8nm,0.4s						
IUG				eS	Sg	06 15 36.3	+0.9
	14nm,0.5s						
IUG	Iuzhnay	4.31	305	Pg	Pg	06 14 40.4	+0.8
	14nm,0.8s						
IUG				Lg	Lg	06 15 36.7	
	13nm,0.6s						
CHKK	Chushkaly	4.38	21	eP	Pg	06 14 40.4	-0.3
	2.2nm,0.4s						
CHKK				eS	Sg	06 15 36.4	-1.0
	5.2nm,0.4s						
CHKK	Chushkaly	4.38	21	Pg	Pg	06 14 40.4	-0.3
	2.2nm,0.4s						
CHKK				Lg	Lg	06 15 36.4	
	5.2nm,0.4s						
KK31	Karatay Array	4.62	317	⇑Pn	Pn	06 14 28.1	+1.3
	0.2nm,0.3s,baz=122,slow=13,SNR=7.8						
KK31				⇑Pg	Pb	06 14 40.5	+2.4
	1.3nm,0.5s,baz=128,slow=15,SNR=12						
KK31				⇓Sn	Sn	06 15 23.4	+2.8
	5.0nm,0.7s						
KK31				⇑Lg	Lg	06 15 43.9	
	3.6nm,0.5s						
BRLS	Borolday	4.94	313	Pg	Pg	06 14 51.3	-0.3
ARXS	Arharly	4.96	26	eP	Pg	06 14 50.1	-1.9
	6.8nm,0.5s						
ARXS				eS	Sg	06 15 53.5	-2.6
	5.3nm,0.7s						
ARXS	Arharly	4.96	26	Pg	Pg	06 14 50.1	-1.9
	6.8nm,0.5s						
ARXS				Lg	Lg	06 15 53.5	
	5.3nm,0.7s						
PDGK	Podgornoye	4.98	43	Pg	Pg	06 14 49.0	-3.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	0.9nm,0.5s						
PDGK	2.9nm,0.9s			Lg	Lg	06 15 51.3	
MNBS	Baschi 2.0nm,0.5s	5.05	31	eP	Pg	06 14 53.0	-0.8
MNBS	6.1nm,1.1s			eS	Sg	06 15 57.9	-1.4
MNBS	Baschi 2.0nm,0.5s	5.05	31	Pg	Pg	06 14 53.0	-0.8
MNBS	6.1nm,1.1s			Lg	Lg	06 15 57.9	
BTLS	Baital 1.7nm,0.5s	5.28	354	eP	Pg	06 14 56.3	-1.7
BTLS	2.6nm,0.7s			eS	Sg	06 16 04.3	-2.0
BTLS	Baital 1.7nm,0.5s	5.28	354	Pg	Pg	06 14 56.3	-1.7
BTLS	2.6nm,0.7s			Lg	Lg	06 16 04.3	

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*TAP **10** 06:58:43.6,24°.01N×122°.36E,h16km±1km,ML3.0,D*
*JMA **10** 06:58:43.8±0.2,23°.97N×122°.40E,h20km±4km,M2.7*
ISC 10 06:58:43.6±1.2,**23°.98N**±0°.02×**122°.38E**±0°.02,**h18**km±4km,
n56,σ**0ˢ.54**/104,**Taiwan region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.70	48	P	Pb	06 58 56.9	-0.3
JYNG				S	Sb	06 59 05.7	-0.7
TWD	Chiawan baz=276	0.72	278	eP	Pg	06 58 58.3	+0.5
TWD	baz=276			eS	Sg	06 59 08.4	+0.9
ENA	Nanau baz=307	0.73	307	P	Pb	06 58 57.1	-0.7
ENA	baz=307			eS	Sg	06 59 07.8	0.0
NACB	Ninganchiao baz=283	0.74	285	eP	Pg	06 58 58.5	+0.3
NACB	baz=283			eS	Sn	06 59 09.9	0.0
YOJ	Yonaguni jima	0.75	50	P	Pb	06 58 58.0	-0.1
YOJ				S	Sb	06 59 07.3	-0.6
TWC	Suao baz=322	0.79	322	eP	Pb	06 58 58.7	-0.1
TWC	baz=322			eS	Sb	06 59 08.8	-0.3
ETLH	Xiulin Townshi baz=284	0.85	286	eP	Pb	06 58 58.9	-0.9
ETLH	baz=284			eS	Sg	06 59 11.6	+0.1
ESL	Shilin baz=257	0.88	259	eP	Pb	06 58 59.6	-0.7
NDS	Dongshan baz=316	0.89	317	P	Pg	06 59 00.8	-0.1
NDS	baz=316			eS	Sb	06 59 12.2	+0.3
TWE	Neicheng baz=319	0.98	319	eP	Pb	06 59 02.0	-0.1
TWE	baz=319			eS	Sb	06 59 14.0	-0.7
HGSD	Ruisui baz=239	1.00	241	eP	Pb	06 59 02.0	-0.3
HGSD	baz=239			eS	Sn	06 59 16.9	+0.6
NDT	Datong Townshi baz=307	1.00	308	eP	Pb	06 59 02.2	-0.3
NDT	baz=307			eS	Sg	06 59 16.1	-0.2
NNSB	Datong baz=295	1.01	296	eP	Pb	06 59 02.7	0.0
NNSB	baz=295			eS	Sb	06 59 16.1	+0.4
NNSH	Datong baz=295	1.01	296	eP	Pb	06 59 02.7	0.0
NNSH	baz=295			eS	Sg	06 59 16.2	-0.4
NNS	Nan Shan baz=295	1.03	297	eS	Sb	06 59 16.4	+0.3
WHF	Hehuan Shan baz=277	1.03	279	eP	Pb	06 59 03.0	-0.1
WHF	baz=277			eS	Sb	06 59 15.8	-0.7
FUSS	Fushou baz=283	1.07	285	eP	Pb	06 59 03.8	0.0
FUSS	baz=283			eS	Sg	06 59 18.3	-0.3
EHY	Hungye baz=242	1.08	244	eP	Pb	06 59 03.7	+0.1
EHY	baz=242			eS	Sb	06 59 17.9	+0.4
TWB1	Santiao Chiao baz=341	1.08	341	eP	Pb	06 59 03.8	+0.1
TWB1	baz=341			eS	Sb	06 59 17.5	-0.1
CHGB	Renai baz=272	1.10	274	eP	Pn	06 59 04.6	+0.3
CHGB	baz=272			eS	Sn	06 59 19.1	-0.1
TIPB	Shuangxi baz=333	1.11	333	i P	Pb	06 59 04.0	-0.2
TIPB	baz=333			eS	Sb	06 59 18.6	+0.2
NWLT	Wulai baz=314	1.13	315	eP	Pb	06 59 04.7	+0.2
NWLT	baz=314			eS	Sg	06 59 20.5	+0.3
TDCB	Techi baz=282	1.15	284	eP	Pn	06 59 04.3	-0.6
TDCB	baz=282			eS	Sn	06 59 20.6	+0.4
VWDT	VWDT baz=257	1.16	259	P	Pn	06 59 05.0	+0.2
VWDT	baz=257			eS	Sn	06 59 20.1	0.0
EYUL	Yuli baz=235	1.16	237	eP	Pn	06 59 04.7	-0.1
EYUL	baz=235			eS	Sn	06 59 20.3	0.0
NSK	Sanguang baz=306	1.16	307	eP	Pn	06 59 04.7	-0.3
NSK	baz=306			eS	Sg	06 59 21.1	-0.2
TWF1	Yuli baz=235	1.17	238	eP	Pn	06 59 05.0	0.0
TWF1	baz=235			eS	Sb	06 59 20.3	+0.2
NWF	Wu-fen Shan baz=333	1.21	333	eP	Pn	06 59 05.3	-0.4
NWF	baz=333			eS	Sn	06 59 21.9	+0.2
WFSB	Wu-fen Shan baz=333	1.21	333	eP	Pn	06 59 05.5	-0.2
WFSB	baz=333			eS	Sn	06 59 22.1	+0.5
TWA	Mucha baz=324	1.23	324	eP	Pn	06 59 05.8	-0.1
FULB	Fuli baz=230	1.26	232	eP	Pn	06 59 06.0	-0.3
FULB	baz=230			eS	Sn	06 59 23.5	+0.7
IRIF	Iriomote-Funau	1.28	74	P	Pn	06 59 06.9	+0.3
IRIF				S	Sb	06 59 23.9	+0.6
HATJ	Hateruma jima	1.31	86	P	Pb	06 59 07.5	-0.1
HATJ				eS	Sn	06 59 23.0	-0.8
SSLB	Suanglung baz=260	1.32	262	eP	Pg	06 59 08.6	-0.5
SSLB	baz=260			eS	Sb	06 59 25.3	+0.9
WHP	Taichung City baz=281	1.34	283	eP	Pg	06 59 09.7	+0.1
WHP	baz=281			eS	Sb	06 59 25.2	+0.1
SMLT	Sun Moon Lake baz=264	1.36	266	eP	Pb	06 59 08.3	-0.2
SMLT	baz=264			eS	Sb	06 59 25.8	+0.3
TYC	Yuchr baz=265	1.40	267	eP	Pg	06 59 09.9	-0.6
TYC	baz=265			eS	Sb	06 59 27.3	+0.8
YUS	Yu-Shan baz=248	1.40	250	eS	Sn	06 59 26.3	-0.5
LIOB	Emei baz=297	1.41	298	eP	Pb	06 59 09.4	0.0
LIOB	baz=297			eS	Sg	06 59 28.7	-0.5
NSTT	Nanjuang baz=296	1.41	298	eP	Pn	06 59 08.0	-0.4
NSTT	baz=296			eS	Sg	06 59 28.4	-0.9
ELDTW	Lidau baz=236	1.48	238	eP	Pb	06 59 10.3	-0.3
ELDTW	baz=236			eS	Sn	06 59 27.3	-1.0
JKRS	Kuro-shima	1.51	80	P	Pn	06 59 10.5	+0.8
JKRS				S	Sn	06 59 29.3	+0.4
ALS	Alishan baz=250	1.52	252	eP	Pn	06 59 10.7	+0.7
ALS	baz=250			eS	Sb	06 59 30.2	-0.2
JIJ	Ishigaki jima	1.66	76	P	Pn	06 59 12.1	+0.4
JIJ				eS	Sn	06 59 32.9	+0.4
TWGBT	Beinan baz=224	1.66	226	eP	Pn	06 59 11.3	-0.5
TWGBT	baz=224			eS	Sn	06 59 32.0	-0.7
TWG	Pinlang baz=224	1.67	226	eP	Pn	06 59 11.9	+0.1
TPUB	Ta-pu baz=246	1.74	247	eP	Pb	06 59 14.4	-0.6
TPUB	baz=246			eS	Sb	06 59 36.2	-0.3
WTP	Ta-pu baz=244	1.78	246	eP	Pb	06 59 15.3	-0.3
WTP	baz=244			eS	Sb	06 59 37.1	-0.5
WTK	Tuku baz=260	1.85	261	eS	Sb	06 59 39.3	-0.2
JISG	Ishigakijimahi	1.86	71	P	Pn	06 59 13.9	-0.6
SLGT	Liugui baz=237	1.87	239	eP	Pb	06 59 16.2	-1.0
CHN1	Nanshi baz=244	1.87	245	eP	Pb	06 59 17.8	+0.5
CHN1	baz=244			eS	Sb	06 59 40.6	+0.3
LAY	Lan-yu baz=200	2.08	202	eP	Pn	06 59 17.5	0.0
LAY	baz=200			eS	Sn	06 59 44.5	+1.6
MASBT	Mashibuluo baz=228	2.11	230	eP	Pn	06 59 18.9	+1.0
MASBT	baz=228			eS	Sb	06 59 46.2	-0.8
EAST	Anshuo baz=220	2.12	222	eP	Pn	06 59 18.1	-0.1
EAST	baz=220			eS	Sb	06 59 46.8	-0.8
PHUB	P'eng-hu baz=259	2.61	260	eP	Pn	06 59 27.0	+2.1
PHUB	baz=259			eS	Sn	06 59 56.6	+0.5

IDC 10 07:10:45.3±3.6,**54°.48N**×**87°.21E,h0**km,**mb1 3.0**/2,
mb1mx2.9/43,**mbtmp3.0**/2,**ML2.3**/1,**Error ellipse:
s-maj=32.5km s-min=21.1km az=43.0,Southwestern
Siberia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA baz=70,slow=336,SNR=1.1	1.50	250	i		07 22 45.3	
ZALV	Zalesovo Beam 1.0nm,0.3s,baz=69,slow=16,SNR=29	1.50	250	Pg	Pn	07 11 10.8	-2.6
ZALV	1.0nm,0.3s,baz=71,slow=23,SNR=5.8			Lg	Lg	07 11 32.1	
KURBB	Kurchatov Arra baz=55,slow=14,SNR=4.8	6.55	237	Pn	Pn	07 12 24.0	+1.3
MKAR	Makanchi Array 0.0nm,0.3s,baz=21,slow=14,SNR=4.5	8.30	204	Pn	Pn	07 12 48.2	+1.4

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*SOME **10** 07:11:29.6,41°.00N×70°.80E,h10km*
*NNC **10** 07:11:30.6±6.5,41°.03N×69°.56E,h142km±50km,mb1.9,
mpv3.5,Error ellipse: s-maj=93.9km s-min=52.8km
az=99.0*
*KRNET **10** 07:11:30.5±0.1,41°.26N×70°.56E,h13km,mb2.4*
ISC 10 07:11:31.7±1.5,**41°.25N**±0°.05×**70°.65E**±0°.05,**h15**km±13km,
n18,σ**1ˢ.73**/28,**18C-6D,Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TRKS	Terek-Say baz=66	0.46	53	⇑iP	Pg	07 11 40.6	-0.4
TRKS	baz=66			⇑iS	Sg	07 11 47.7	+0.4
IUG	Iuzhnay 53nm,0.1s	1.01	333	eP	Pn	07 11 56.5	+5.0
IUG	92nm,0.3s			eS	Sn	07 12 16.1	+11
IUG	Iuzhnay 53nm,0.1s	1.01	333	P	Pn	07 11 56.4	+5.0
IUG	92nm,0.3s			S	Sn	07 12 16.1	+11
BTK	Batken baz=71	1.20	174	⇑iP	Pn	07 11 53.7	-0.4
BTK	baz=71			⇑iS	Sn	07 12 11.1	+0.9
ARSB	Arslanbob baz=87	1.76	87	⇓iP	Pb	07 12 04.7	+0.8
ARSB	baz=87			⇓iS	Sg	07 12 29.7	+1.2
KK31	Karatay Array 1.8nm,0.4s,baz=177,slow=14	1.85	357	⇑Pn	Pg	07 12 07.3	0.0
KK31	11nm,0.3s			⇓Sn	Sg	07 12 36.5	+5.2
MNAS	Manas baz=49	1.86	48	⇑iP	Pg	07 12 06.2	-1.2
MNAS	baz=49			⇑iS	Sg	07 12 32.0	+0.5
BRLS	Borolday 18nm,0.1s	1.88	342	eP	Pg	07 12 06.1	-1.6
BRLS	21nm,0.2s			eS	Sg	07 12 32.4	+0.3
BRLS	Borolday 18nm,0.1s	1.88	342	Pg	Pg	07 12 06.1	-1.6
BRLS	21nm,0.2s			Lg	Lg	07 12 32.4	
MRKS	Merke 5.2nm,0.2s	2.43	51	eP	Pg	07 12 17.5	-0.9
MRKS	5.2nm,0.3s			eS	Sg	07 12 51.0	+1.0
MRKS	Merke 5.2nm,0.2s	2.43	51	Pg	Pg	07 12 17.4	-1.0
MRKS	5.2nm,0.3s			Lg	Lg	07 12 51.2	
AML	Almayashu baz=69	2.45	68	⇓iP	Pb	07 12 15.0	-0.7
AML	baz=69			⇓iS	Sb	07 12 47.4	+1.6
SFK	Sufi-Kurgan baz=18	2.50	119	⇑iP	Pb	07 12 15.5	-1.0
SFK	baz=18			⇑iS	Sb	07 12 49.2	+2.0
EKS2	Erkin-Say baz=59	2.73	58	⇑iP	Pb	07 12 18.4	-1.9
EKS2	baz=59			⇑iS	Sb	07 12 53.3	-0.3
ARLS	Aral baz=77	2.83	76	⇑iP	Pb	07 12 20.4	-1.6
ARLS	baz=77			⇑iS	Sb	07 12 56.5	0.0
AAK	Ala-Archa baz=64	3.19	63	⇑iP	Pb	07 12 25.1	-3.1
AAK	baz=64			⇑iS	Sb	07 13 05.0	-1.9
AAK	Ala-Archa 0.9nm,0.4s	3.19	63	⇓Pn	Pb	07 12 30.0	+1.9
AAK	2.4nm,0.6s			⇑Lg	Lg	07 13 11.4	
TKM2	Tokmak 2	4.04	64	⇑Pn	Pb	07 12 43.9	+1.1
TKM2	2.5nm,0.8s			⇑Lg	Lg	07 13 39.5	

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*NNC **10** 07:12:40.9±0.7,49°.95N×78°.39E,h0km,mb3.4,mpv2.9,
Error ellipse: s-maj=17.0km s-min=3.3km az=93.0,
Suspected Mining explosion.*
*IDC **10** 07:12:42.9±0.8,50°.05N×78°.82E,h0km,mb1 2.8/3,
mb1mx2.8/44,mbtmp2.8/3,ML2.6/3,Error ellipse:
s-maj=14.6km s-min=6.0km az=59.0*
ISC 10 07:12:42.4±1.0,**49°.99N**±0°.05×**78°.61E**±0°.08,**h0**km,**n17,**
σ**0ˢ.82**/29,**14C-9D,Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KUR07	Kurchatov Arra	0.59	354	⇑P	Pg	07 12 53.7	0.0
KUR07				⇓S	Sg	07 13 02.5	+1.1
KUR06	Kurchatov Arra	0.61	355	⇓P	Pg	07 12 54.0	-0.1
KUR06				⇓S	Sb	07 13 04.0	-1.2
KUR14	Kurchatov Arra	0.62	359	⇑P	Pg	07 12 53.8	-0.4
KUR14				⇑S	Sg	07 13 03.0	+0.7
KUR15	Kurchatov Arra	0.63	357	⇑P	Pg	07 12 54.1	-0.3
KUR15				⇑S	Sg	07 13 03.5	+1.0
KURBB	Kurchatov Arra 3.2nm,0.3s,baz=166,slow=19,SNR=48	0.63	355	Pg	Pg	07 12 54.2	-0.3
KURBB	3.4nm,0.3s,baz=177,slow=32,SNR=20			Lg	Lg	07 13 03.6	
KURBB	Kurchatov Arra 27nm,0.3s	0.63	355	⇑P	Pg	07 12 54.2	-0.3
KURBB	92nm,0.5s			⇑S	Sg	07 13 03.2	+0.5
KUR16	Kurchatov Arra	0.64	354	⇓P	Pg	07 12 54.3	-0.3
KUR16				⇓S	Sg	07 13 03.6	+0.8
KUR17	Kurchatov Arra	0.65	352	⇑P	Pg	07 12 54.6	-0.1
KUR17				⇑S	Sb	07 13 04.5	-1.6
KUR05	Kurchatov Arra	0.65	356	⇑P	Pg	07 12 54.5	-0.3
KUR05				⇓S	Sg	07 13 03.6	+0.3
KUR04	Kurchatov Arra	0.67	356	⇑P	Pg	07 12 54.8	-0.4
KUR04				⇑S	Sg	07 13 04.4	+0.5
KURK	Kurchatov 11nm,0.4s	0.72	0	⇓P	Pg	07 12 55.7	-0.5
KURK	30nm,0.7s			⇑S	Sb	07 13 07.2	-1.1
MAKZ	Makanchi 4.2nm,0.9s	3.90	144	⇓Pn	Pb	07 13 51.3	-0.7
MAKZ	8.8nm,0.6s			⇓Lg	Lg	07 14 42.0	
MK31	Makanchi Array 0.1nm,0.1s,baz=323,slow=9.8,SNR=15	4.03	141	Pn	Pn	07 13 46.5	+1.2
MK31	1.3nm,0.5s,baz=324,slow=13,SNR=9.3			Pg	Pb	07 13 53.6	-0.6
MK31	16nm,0.7s			⇑Lg	Lg	07 14 45.7	
MKAR	Makanchi Array 0.4nm,0.3s,baz=327,slow=10,SNR=19	4.03	141	Pn	Pn	07 13 46.2	+0.9
MKAR	0.9nm,0.3s,baz=331,slow=15,SNR=17			Pg	Pb	07 13 52.4	-1.8
MKAR	2.4nm,0.3s,baz=324,slow=29,SNR=22			Lg	Lg	07 14 47.3	
I46RU	ZALESOVO INFRA baz=225,slow=330,SNR=1.2	5.51	42	i		07 45 01.4	
ZALV	Zalesovo Beam 1.1nm,0.3s,baz=233,slow=14,SNR=8.2	5.51	42	Pn	Pn	07 14 06.4	+0.8
ZALV	0.3nm,0.3s,baz=226,slow=30,SNR=1.8			Lg	Lg	07 15 31.9	
BVAR	Borovoye Array 0.2nm,0.3s,baz=109,slow=18,SNR=3.1	5.96	304	Pn	Pn	07 14 11.9	0.0
BVAR	0.5nm,0.3s,baz=90,slow=27,SNR=6.2			Sn	Sn	07 15 21.6	+0.8
BVAR	0.6nm,0.3s,baz=109,slow=32,SNR=5.3			Lg	Lg	07 15 57.9	

IDC 10 07:14:19.2±1.9,**8°.47S**×**129°.38E,h0**km,**mb3.9**/1,
mb1 3.5/3,**mb1mx3.3**/39,**mbtmp3.4**/3,**ML3.2**/2,**Error
ellipse: s-maj=117.9km s-min=31.3km az=66.0,Timor
Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr 0.1nm,0.3s,baz=336,slow=12,SNR=3.8	12.37	158	Pn	Pn	07 17 15.9	-0.9
WRA	0.5nm,0.3s,baz=334,slow=22,SNR=8.4			Sn	Sn	07 19 29.6	-5.8
ASAR	Alice Springs 0.1nm,0.3s,baz=338,slow=8.8,SNR=4.9	15.72	165	Pn	Pn	07 18 03.4	+1.2
ASAR	0.1nm,0.3s,baz=345,slow=25,SNR=3.9			Sn	Sn	07 20 52.8	-4.4
MKAR	Makanchi Array 0.7nm,0.5s,baz=118,slow=8.1,SNR=12	69.12	327	P	P	07 25 27.4	0.0

IDC 10 07:21:55.4±1.4,**44°.72N**×**124°.06E,h0**km,**mb3.8**/2,
mb1 3.7/5,**mb1mx3.3**/43,**mbtmp3.7**/5,**ML3.6**/2,**MS2.7**/3,
Ms1 2.7/3,**ms1mx2.5**/41,**Error ellipse: s-maj=23.8km
s-min=17.4km az=20.0,Northeastern China**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
USRK	Ussuriysk Ar. baz=274,slow=13,SNR=3.2	5.70	92	Pn	Pn	07 23 20.9	-0.4
USRK	baz=275,slow=16,SNR=18			Pg	Pg	07 23 40.4	-4.3
USRK	baz=291,slow=28,SNR=6.9			Lg	Lg	07 24 56.9	
KLR	Kul'dur 1.3nm,0.3s,baz=217,slow=12,SNR=18	6.93	47	Pn	Pn	07 23 38.1	0.0
KLR	7.4nm,0.3s,baz=178,slow=20,SNR=7.4			Lg	Lg	07 25 34.5	
KLR	comp=Z,33nm,20.5s,baz=138,slow=35			LR	LR	07 25 58.8	
KSRS	Korea Array 0.9nm,0.3s,baz=342,slow=12,SNR=5.7	7.83	157	Pn	Pn	07 23 52.1	+1.7
KSRS	1.1nm,0.3s,baz=347,slow=18,SNR=6.2			Pg	Pg	07 24 21.2	-4.1
KSRS	3.6nm,0.3s,baz=338,slow=30,SNR=16			Lg	Lg	07 26 01.1	
SONM	Songino Array 0.4nm,0.3s,baz=97,slow=28,SNR=5.6	12.61	291	Lg	Lg	07 28 43.3	
SONM	comp=Z,43nm,20.4s,baz=2.5,slow=39			LR	LR	07 30 06.4	
ASAJ	Asahikawa comp=Z,42nm,18.5s,baz=356,slow=37	13.27	86	LR	LR	07 30 03.8	
TLY	Talaya 0.0nm,0.3s,baz=270,slow=9.3,SNR=6.7	15.26	304	Lg	Lg	07 30 06.5	
FINES	FINESS Array B 0.6nm,0.5s,baz=52,slow=9.0,SNR=3.3	55.43	325	P	P	07 31 30.8	-0.3
AKASG	Malin Array Be 0.4nm,0.3s,baz=47,slow=7.7,SNR=5.8	59.80	313	P	P	07 32 02.1	0.0

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*IDC **10** 07:32:34.8±0.9,37°.29N×98°.10W,h0km,mb3.6/1,
mb1 3.9/6,mb1mx3.6/37,mbtmp3.6/6,ML2.3/2,Error
ellipse: s-maj=11.4km s-min=11.0km az=123.0*
*NEIC **10** 07:32:36±1.3,37°.19N±0°.02×98°.02W±0°.02,h5km±1km,
mb_Lg3.6/131,Error ellipse: s-maj=4.8km s-min=2.8km
az=33.0*
*ANF **10** 07:32:37.2±0.6,37°.20N×98°.00W,h16km±4km,ML4.5/16,
Error ellipse: s-maj=1.9km s-min=1.5km az=40.0*
ISC 10 07:32:36.0±0.8,**37°.20N**±0°.02×**98°.02W**±0°.03,**h7**km±5km,
n170,σ**0ˢ.91**/185,**Kansas**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KAN08	Anthony NE Sta	0.05	54		Pg	07 32 37.4	-0.2
KAN08					Sg	07 32 38.6	-0.2
KAN10	Anthony SW Sta	0.10	219	Pg	Pg	07 32 38.1	-0.2
KAN10				Sg	Sg	07 32 39.8	-0.1
KAN12	Harper NE Stat	0.10	9	Pg	Pg	07 32 38.2	-0.1
KAN12				Sg	Sg	07 32 39.9	0.0
KAN05	Bluff City Nor	0.15	128		Pg	07 32 39.2	+0.1
KAN05				Sg	Sg	07 32 41.3	+0.1
KAN01	Argonia South	0.21	103		Pg	07 32 40.3	+0.1
KAN01				Sg	Sg	07 32 43.5	+0.4
KAN14	Manchester OK	0.25	170		Pg	07 32 40.9	0.0
KAN14				Sg	Sg	07 32 44.7	+0.5
KS21	Milan North St	0.29	73		Pg	07 32 41.8	0.0
KS21				Sg	Sg	07 32 46.1	+0.3
KAN13	South Haven SW	0.47	113		Pg	07 32 45.0	-0.1
KAN13				Sg	Sg	07 32 51.6	+0.4
CROK	Carrier	0.69	178		Pg	07 32 49.0	-0.4
CROK				Sg	Sg	07 32 58.5	+0.1
U32A	Winter Ranch,	1.14	224		Pg	07 32 57.0	-0.8
U32A	Winter Ranch, baz=44	1.14	224	P		07 32 56.9	
U32A	baz=44			S		07 33 14.4	
T35A	Sooner Cattle	1.24	103	Pn	Pg	07 32 58.9	-0.8
T35B	Sooner Cattle baz=283,SNR=280	1.24	103	P		07 32 58.8	
T35B	baz=283			S		07 33 15.1	
R32A	Long Quarter,	1.34	336		Pn	07 33 00.5	-0.7
R32A	Long Quarter, baz=156,SNR=285	1.34	336	P		07 33 00.4	
R32A				S		07 33 18.2	

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      baz=156
QUOK  Quay                1.47 134           Pn    07 33 02.7 -0.2
OK029 Liberty Lake        1.47 162           Pn    07 33 02.6 -0.4
OK031 S. Brethren Rd      1.56 142           Pn    07 33 04.3 +0.1
BCOK  Bluff Creek, N      1.57 168           Pn    07 33 04.7 +0.3
OK030 Cody Creek RV       1.61 142           Pn    07 33 05.0 +0.2
ADOK  Arcadia Dam         1.63 161  Pn       Pn    07 33 05.7 +0.6
OK025 Westminster Rd      1.71 161           Pn    07 33 06.6 +0.4
OKCFA Oklahoma City       1.84 165           Pn    07 33 08.3 +0.3
OKCFA                               IAmb_Lg        07 33 36.0
      comp=Z,201nm,0.9s
OKCSW OKLAHOMA CITY       1.85 165           Pn    07 33 08.6 +0.4
FNO   Franklin            2.00 165           Pb    07 33 11.8 -1.0
CBKS  Cedar Bluff         2.11 320  P        Pn    07 33 12.2 +0.4
      baz=140,SNR=66
CBKS                                S        Sn    07 33 39.4 +1.2
      baz=140
CBKS  Cedar Bluff         2.11 320           Pn    07 33 12.2 +0.4
CBKS  Cedar Bluff         2.11 320  P              07 33 12.0
      baz=140,SNR=84
CBKS                                S              07 33 39.2
      baz=140
KSU1  Kansas State U      2.20  30  P        Pn    07 33 13.9 +0.9
      baz=211,SNR=105
KSU1                                S        Sn    07 33 41.1 +0.7
      baz=211
KSU1  Kansas State U      2.20  30           Pn    07 33 13.9 +0.9
KSU1  Kansas State U      2.20  30  P              07 33 13.8
      baz=211,SNR=54
KSU1                                S              07 33 41.1
      baz=211
TUL1  Leonard             2.21 125  P        Pn    07 33 13.4 +0.4
      baz=306,SNR=71
TUL1                                S        Sn    07 33 41.3 +0.8
      baz=306
TUL1  Leonard             2.21 125           Pn    07 33 12.7 -0.3
TUL1                                IAmb_Lg        07 33 45.3
      comp=Z,334nm,0.8s
TUL1  Leonard             2.21 125  P              07 33 13.4
      baz=306,SNR=148
TUL1                                S              07 33 44.0
      baz=306
WMOK  Wichita Mounta      2.53 194  P        Pn    07 33 18.1 +0.6
      baz=14,SNR=31
WMOK                                S        Sn    07 33 50.3 +1.6
      baz=14
WMOK  Wichita Mounta      2.53 194           Pn    07 33 18.3 +0.8
WMOK  Wichita Mounta      2.53 194  P              07 33 18.1
      baz=14,SNR=42
U38A  Gravette            3.01 104           Pn    07 33 24.5 +0.4
U38A                                IAmb_Lg        07 34 17.7
      comp=Z,143nm,0.8s
U38A  Gravette            3.01 104  P              07 33 24.7
      baz=286,SNR=64
X37A  Clayton             3.38 140           Pn    07 33 29.7 +0.6
X37A  Clayton             3.38 140  P              07 33 29.4
      baz=321
HHAR  Hobbs               3.40 104           Pn    07 33 30.1 +0.6
HHAR                                IAmb_Lg        07 34 24.5
      comp=Z,96nm,0.9s
HHAR  Hobbs               3.40 104  P              07 33 30.1
      baz=287
N33B  J Bar K, Exete      3.56   7  P              07 33 31.4
      baz=187,SNR=20
N33A  J Bar K, Exete      3.56   7           Pn    07 33 31.0 -0.7
N33A                                IAmb_Lg        07 34 36.9
      comp=Z,165nm,0.9s
AMTX  Amarillo            3.76 233  S        Sn    07 34 19.9 +0.8
      baz=51
AMTX  Amarillo            3.76 233  Pn       Pn    07 33 35.5 +1.0
S39A  Bolivar             3.77  81  Pn       Pn    07 33 34.9 +0.3
S39A                                IAmb_Lg        07 34 36.6
      comp=Z,92nm,0.7s
S39A  Bolivar             3.77  81  P              07 33 34.6
      baz=264,SNR=80
Z35A  Perchaven, San      3.91 171           Pn    07 33 36.9 +0.4
Z35A  Perchaven, San      3.91 171  P              07 33 37.0
      baz=351
W39A  Magazine            3.96 119  P        Pn    07 33 36.9 -0.3
      baz=302,SNR=8.8
W39A                                S        Sn    07 34 23.9  0.0
      baz=302
W39A  Magazine            3.96 119           Pn    07 33 37.2  0.0
W39A                                IAmb_Lg        07 34 44.5
      comp=Z,176nm,0.9s
W39A  Magazine            3.96 119  P              07 33 36.9
      baz=302,SNR=19
KSCO  Kaye Shedlock'      4.06 298  P        Pn    07 33 38.6 -0.1
      baz=115
KSCO                                S        Sn    07 34 26.0 -0.5
      baz=115
KSCO  Kaye Shedlock'      4.06 298           Pn    07 33 38.9 +0.2
KSCO                                IAmb_Lg        07 34 54.4
      comp=Z,140nm,1.1s
N35A  Tabor               4.10  26           Pn    07 33 38.9 -0.1
N35A  Tabor               4.10  26  S              07 34 28.3
      baz=208
BGNE  Belgrade            4.20 359  P        Pn    07 33 40.8 +0.3
      baz=179
BGNE                                S        Sn    07 34 30.7 +0.8
      baz=179
BGNE  Belgrade            4.20 359           Pn    07 33 40.9 +0.3
BGNE                                IAmb_Lg        07 34 59.6
      comp=Z,152nm,0.8s
BGNE  Belgrade            4.20 359  P              07 33 40.8
      baz=179,SNR=7.0
U40A  Yellville           4.23 100  P        Pn    07 33 40.8  0.0
      baz=283,SNR=28
U40A                                S        Sn    07 34 30.1 -0.4
      baz=283
U40A  Yellville           4.23 100           Pn    07 33 41.0 +0.1
U40A                                IAmb_Lg        07 34 51.5
      comp=Z,145nm,0.7s
U40A  Yellville           4.23 100  P              07 33 40.7
      baz=283,SNR=76
U40A                                P              07 33 40.7
      baz=283,SNR=76
P38A  Dawn                4.27  54           Pn    07 33 41.9 +0.4
P38A  Dawn                4.27  54  P              07 33 41.6
      baz=237,SNR=22
MIAR  Mount Ida           4.47 125  P        Pn    07 33 44.3 +0.1
      baz=308,SNR=18
MIAR                                S        Sn    07 34 36.2 -0.3
      baz=308
MIAR  Mount Ida           4.47 125  Pn       Pn    07 33 44.4 +0.2
MIAR                                IAmb_Lg        07 35 04.7
      comp=Z,110nm,0.8s
MIAR  Mount Ida           4.47 125  P              07 33 44.7
      baz=308,SNR=58
MIAR                                S              07 34 37.8
      baz=308
MGMO  Mountain Grove      4.59  89           Pn    07 33 46.1 +0.2
Z38A  Mt. Pleasant        4.65 147           Pn    07 33 46.8 +0.2
Z38A  Mt. Pleasant        4.65 147  P              07 33 47.1
      baz=329
Z38A                                S              07 34 40.9
      baz=329
R40A  Maddies Statio      4.69  75           Pn    07 33 46.7 -0.4
R40A                                IAmb_Lg        07 35 11.4
      comp=Z,97nm,0.8s
R40A  Maddies Statio      4.69  75  P              07 33 47.1
      baz=258,SNR=51
ABTX  Abilene, Hawle      4.76 197  S        Sn    07 34 42.6 -0.9
      baz=16
ABTX  Abilene, Hawle      4.76 197           Pn    07 33 49.8 +1.7
OGNE  Ogallala            4.87 321  P        Pn    07 33 49.8  0.0
      baz=139,SNR=5.3
OGNE                                S        Sn    07 34 46.9 +0.4
      baz=139
OGNE  Ogallala            4.87 321  Pn       Pn    07 33 51.0 +1.2
OGNE                                IAmb_Lg        07 35 13.3
      comp=Z,90nm,0.8s
OGNE  Ogallala            4.87 321  P              07 33 50.6
      baz=139,SNR=8.9
FCAR  Ozark Folk Cen      4.92 104           Pn    07 33 50.1 -0.3
FCAR                                IAmb_Lg        07 35 23.1
      comp=Z,64nm,0.7s
X40A  Basin Creek Fa      5.00 121  P        Pn    07 33 51.9 +0.4
      baz=304,SNR=8.2
X40A                                S        Sn    07 34 49.1 -0.5
      baz=304
X40A  Basin Creek Fa      5.00 121  Pn       Pn    07 33 52.0 +0.5
X40A                                IAmb_Lg        07 35 22.4
      comp=Z,87nm,0.8s
X40A  Basin Creek Fa      5.00 121  P              07 33 51.6
      baz=304,SNR=32
X40A                                P              07 33 51.6
      baz=304,SNR=32
WHAR  Wooly Hollow        5.01 111           Pn    07 33 51.5  0.0
WHAR                                IAmb_Lg        07 35 16.7
      comp=Z,144nm,0.8s
MSTX  Muleshoe            5.04 232  P        Pn    07 33 52.8 +0.7
      baz=49
MSTX                                S        Sn    07 34 50.6  0.0
      baz=49
MSTX  Muleshoe            5.04 232           Pn    07 33 52.9 +0.8
MSTX                                IAmb_Lg        07 35 29.2
      comp=Z,72nm,1.0s
W41B  Gary Mavity, V      5.08 112  P        Pn    07 33 52.7 +0.1
      baz=295
W41B                                S        Sn    07 34 50.7 -0.8
      baz=295
W41B  Gary Mavity, V      5.08 112  P              07 33 52.4
      baz=295,SNR=26
N38A  Joes South For      5.17  45           Pn    07 33 53.5 -0.3
N38A                                IAmb_Lg        07 35 23.1
      comp=Z,121nm,0.8s
N38A  Joes South For      5.17  45  P              07 33 53.6
      baz=228,SNR=6.6
WHTX  Lake Whitney,       5.22 175  P        Pn    07 33 54.8 +0.3
      baz=355
WHTX                                Sb       Sb    07 35 14.7 +4.4
      baz=355
WHTX  Lake Whitney,       5.22 175           Pn    07 33 56.2 +1.8
P40A  Paris               5.24  62           Pn    07 33 55.6 +0.9
P40A                                IAmb_Lg        07 35 25.6
      comp=Z,78nm,0.8s
WLAR  White Oak Lake      5.32 130           Pn    07 33 55.9 +0.1
WLAR                                IAmb_Lg        07 35 29.0
      comp=Z,111nm,0.8s
CCM   Cathedral Cave      5.44  79  P        Pn    07 33 57.2 -0.4
      baz=263
CCM   Cathedral Cave      5.44  79           Pn    07 33 56.6 -0.9
CCM   Cathedral Cave      5.44  79  P              07 33 57.1
      baz=263,SNR=7.0
237A  Washetta, Mont      5.50 160           Pn    07 33 58.4 +0.1
237A                                IAmb_Lg        07 35 38.0
      comp=Z,68nm,0.9s
T42A  Van Buren           5.54  90           Pn    07 33 58.4 -0.4
T42A  Van Buren           5.54  90  P              07 33 58.6
      baz=274,SNR=16
LCAR  Lake Charles        5.63  99           Pn    07 34 00.1  0.0
LCAR                                IAmb_Lg        07 35 37.0
      comp=Z,91nm,1.2s
Z41A  Richland Creek      5.80 131  P        Pn    07 34 02.2 -0.2
      baz=314
Z41A                                S        Sn    07 35 06.4 -2.8
      baz=314
Q24A  Divide              5.89 290  P        Pn    07 34 03.6 -0.4
      baz=105,SNR=7.5
Q24A                                S        Sn    07 35 09.9 -2.0
      baz=105
SDCO  Great Sand Dun      5.98 277           Pn    07 34 07.2 +2.1
SCIA  State Center        5.99  37           Pn    07 34 06.9 +1.9
SCIA                                IAmb_Lg        07 35 58.7
      comp=Z,114nm,0.8s
SCIA  State Center        5.99  37  S              07 35 11.8
      baz=220
CCAR  Cane Creek          6.05 121  IAmb_Lg        07 35 58.1
      comp=Z,81nm,0.9s
FVM   French Village      6.08  80  Pn       Pn    07 34 04.6 -1.7
FVM                                 IAmb_Lg        07 35 45.9
      comp=Z,69nm,1.1s
PBMO  Poplar Bluff        6.09  92           Pn    07 34 06.6 +0.2
PBMO                                IAmb_Lg        07 35 51.9
      comp=Z,86nm,0.7s
NATX  Nacogdoches         6.09 152  S        Sn    07 35 13.1 -3.3
      baz=334
NATX  Nacogdoches         6.09 152  Pn       Pn    07 34 07.6 +1.2
NATX                                IAmb_Lg        07 36 04.8
      comp=Z,75nm,0.9s
NATX  Nacogdoches         6.09 152  S              07 35 12.8
      baz=334
435B  Jarrell             6.41 177  IAmb_Lg        07 36 03.8
      comp=Z,46nm,0.8s
ISCO  Idaho Springs       6.50 296  P        Pn    07 34 12.9 +0.6
      baz=111
ISCO  Idaho Springs       6.50 296           Pn    07 34 13.7 +1.4
ISCO  Idaho Springs       6.50 296  P              07 34 11.9
      baz=111,SNR=5.9
N41A  Harden Midland      6.59  56           Pn    07 34 12.9 -0.3
N41A                                IAmb_Lg        07 36 07.6
      comp=Z,70nm,0.7s
ECSD  EROS Data Cent      6.61   9  P        Pn    07 34 12.9 -0.7
      baz=190
ECSD  EROS Data Cent      6.61   9           Pn    07 34 12.1 -1.5
ECSD  EROS Data Cent      6.61   9  P              07 34 12.9
      baz=190,SNR=14
JCT   Junction City       6.87 193           Pn    07 34 16.9 -0.2
JCT                                 IAmb_Lg        07 36 19.7
      comp=Z,93nm,0.8s
S44A  Carbondale          6.99  83           Pn    07 34 18.4 -0.3
S44A                                IAmb_Lg        07 36 25.2
      comp=Z,80nm,0.8s
SIUC  Southern Illin      7.02  83           Pn    07 34 18.5 -0.6
SIUC                                IAmb_Lg        07 36 27.1
      comp=Z,75nm,0.9s
143A  Socs Landing,       7.04 128  Pn       Pn    07 34 19.1 -0.4
143A                                IAmb_Lg        07 36 35.9
      comp=Z,67nm,0.8s
PHWY  Pilot Hill          7.08 308           Pn    07 34 20.5 +0.3
PHWY                                IAmb_Lg        07 36 22.9
      comp=Z,50nm,0.8s
P43A  Skaggs, Pawnee      7.10  67  Pn       Pn    07 34 20.7 +0.5
P43A                                IAmb_Lg        07 36 22.8
      comp=Z,81nm,0.9s
N23A  Red Feather La      7.19 303  P        Pn    07 34 22.5 +0.8
      baz=118
ANMO  Albuquerque         7.20 254  Pn       Pn    07 34 25.0 +3.2
      comp=Z,0.1nm,0.3s,baz=66,slow=16,SNR=1.8
ANMO                                Lg       Lg    07 36 19.7
      comp=Z,3.8nm,0.3s,baz=26,slow=16,SNR=7.6
ANMO  Albuquerque         7.20 254           Pn    07 34 22.3 +0.6
GDL2  Guadalupe Moun      7.22 228  Pn       Pn    07 34 23.1 +1.0
Q44A  Meyer Farm, Va      7.30  74  Pn       Pn    07 34 23.8 +0.8
Q44A                                IAmb_Lg        07 36 31.2
      comp=Z,61nm,1.0s
W45A  Hickory Valley      7.43 103  Pn       Pn    07 34 23.7 -1.1
W45A                                IAmb_Lg        07 36 38.4
      comp=Z,83nm,0.7s
OXF   Oxford              7.49 108  P        Pn    07 34 25.0 -0.6
      baz=294
OXF   Oxford              7.49 108           Pn    07 34 24.3 -1.3
T45A  Paducah             7.49  89  IAmb_Lg        07 36 36.1
      comp=Z,88nm,0.8s
441A  DeRidder            7.58 147  Pn       Pn    07 34 27.5 +0.7
HDIL  Hopedale            7.58  61  P        Pn    07 34 26.8 -0.1
      baz=246
HDIL  Hopedale            7.58  61           Pn    07 34 25.9 -0.9
HDIL                                IAmb_Lg        07 36 46.8
      comp=Z,74nm,0.7s
BNM   Barren Site         7.64 249  Pn       Pn    07 34 28.2 +0.3
I37A  Lemond, Waseca      7.66  26           Pn    07 34 27.6 -0.3
I37A                                IAmb_Lg        07 36 50.5
      comp=Z,45nm,0.8s
Y45A  Yeager Farm, C      7.67 113  IAmb_Lg        07 36 44.0
      comp=Z,59nm,0.8s
O44A  Mansfield           8.03  66  Pn       Pn    07 34 33.7 +0.7
O44A                                IAmb_Lg        07 37 01.3
      comp=Z,51nm,0.7s
MNTX  Cornudas Mount      8.19 230  P        Pn    07 34 35.6 +0.3
      baz=46,SNR=7.1
MNTX  Cornudas Mount      8.19 230           Pn    07 34 36.0 +0.7
MNTX                                IAmb_Lg        07 37 09.3
      comp=Z,32nm,0.8s
JFWS  Jewell Farm         8.25  44  P        Pn    07 34 34.6 -1.4
      baz=229
JFWS  Jewell Farm         8.25  44           Pn    07 34 34.8 -1.2
JFWS                                IAmb_Lg        07 36 58.3
      comp=Z,62nm,0.7s
USIN  University of       8.25  82           Pn    07 34 35.2 -0.9
USIN                                IAmb_Lg        07 37 05.7
      comp=Z,64nm,1.0s
WVT   Waverly             8.26  94  P        Pn    07 34 35.1 -1.0
      baz=280
WVT   Waverly             8.26  94           Pn    07 34 35.6 -0.5
RSSD  Black Hills         8.29 328  P        Pn    07 34 37.4 +0.6
      baz=145
RSSD  Black Hills         8.29 328           Pn    07 34 38.1 +1.4
RSSD                                IAmb_Lg        07 37 09.5
      comp=Z,36nm,0.8s
RSSD  Black Hills         8.29 328  P              07 34 38.1
      baz=145,SNR=5.6
PLAL  Pickwick Lake       8.35 102  Pn       Pn    07 34 36.8 -0.6
MVCO  Mesa Verde          8.37 273           Pn    07 34 38.0 +0.2
RWWY  Rawlins             8.40 305  Pn       Pn    07 34 39.1 +0.7
RWWY                                IAmb_Lg        07 37 07.6
      comp=Z,51nm,1.0s
K22A  Casper              8.50 312           Pn    07 34 39.6 -0.1
K22A                                IAmb_Lg        07 37 19.3
      comp=Z,43nm,0.9s
PV03  Paradox Valley      8.65 280  Pn       Pn    07 34 42.1 +0.4
PV11  David Mesa, Pa      8.67 281  Pn       Pn    07 34 42.7 +0.7
PV04  Paradox Valley      8.70 281  Pn       Pn    07 34 43.8 +1.4
T47A  Sharon Grove        8.72  88           Pn    07 34 42.2 -0.3
F33A  5 Mile Ranch,       8.73   8  Pn       Pn    07 34 41.8 -0.8
F33A                                IAmb_Lg        07 37 25.1
      comp=Z,30nm,1.0s
I40A  Norwalk             8.74  38  IAmb_Lg        07 37 21.6
      comp=Z,36nm,0.8s
M44A  Midewin, Midew      8.79  59  IAmb_Lg        07 37 24.1
      comp=Z,69nm,1.0s
P46A  Rosedale            8.82  71  Pn       Pn    07 34 45.1 +1.2
P46A                                IAmb_Lg        07 37 19.5
      comp=Z,58nm,0.8s
SPMN  Marine on St.       8.93  24  Pn       Pn    07 34 45.2 -0.1
SFIN  Lafayette           9.10  66  P        Pn    07 34 47.0 -0.6
      baz=253
SFIN  Lafayette           9.10  66  Pn       Pn    07 34 48.1 +0.5
SFIN                                IAmb_Lg        07 37 25.8
      comp=Z,50nm,0.7s
TX31  Lajitas Ar. Si      9.16 213           Pn    07 34 50.0 +1.4
TX32  Lajitas Array       9.16 213           Pn    07 34 47.8 -0.8
TXAR  Lajitas Array       9.16 213  Pn       Pn    07 34 47.3 -1.3
      comp=Z,1.3nm,0.3s,baz=34,slow=10,SNR=63
TXAR                                Lg       Lg    07 37 20.7
      comp=Z,0.8nm,0.3s,baz=44,slow=27,SNR=3.2
TXAR  Lajitas Array       9.16 213           Pn    07 34 48.3 -0.3
K43A  Burlington          9.24  51  Pn       Pn    07 34 49.6  0.0
K43A                                IAmb_Lg        07 37 30.7
      comp=Z,59nm,0.8s
BLO   Bloomington         9.26  74           Pn    07 34 49.6 -0.3
121A  Cookes Peak, D      9.28 243  IAmb_Lg        07 37 45.6
      comp=Z,28nm,1.1s
F36A  Milaca              9.29  20  Pn       Pn    07 34 49.2 -1.0
WCI   Wyandotte Cave      9.35  80  IAmb_Lg        07 37 27.4
      comp=Z,34nm,0.8s
E28A  Huff                9.58 349  IAmb_Lg        07 37 50.5
      comp=Z,42nm,1.0s
I42A  Draeger Farm,       9.62  43  Pn       Pn    07 34 55.2 +0.4
U49A  Red Boiling Sp      9.83  90  Pn       Pn    07 34 57.9 +0.1
G40A  Rib Lake            9.98  34  Pn       Pn    07 35 00.6 +0.9
P48A  Milroy             10.15  73  Pn       Pn    07 35 01.1 -0.9
FPAL  Fort Paine         10.41 101  Pn       Pn    07 35 05.4 -0.3
BW06  Boulder Array      10.45 306  P        Pn    07 35 06.4  0.0
      baz=118
BW06  Boulder Array      10.45 306           Pn    07 35 06.7 +0.3
PD31  Pinedale Array     10.45 306           Pn    07 35 06.8 +0.4
PDAR  Pinedale Array     10.45 306  Pn       Pn    07 35 04.8 -1.7
      comp=Z,0.3nm,0.3s,baz=117,slow=14,SNR=16
PDAR                                Lg       Lg    07 37 58.7
      comp=Z,0.5nm,0.3s,baz=111,slow=20,SNR=3.7
PDAR  Pinedale Array     10.45 306  Pn       Pn    07 35 07.2 +0.8
W50A  Signal Mountai     10.46  97  Pn       Pn    07 35 06.5 +0.2
E38A  The Farm, Brul     10.56  25  Pn       Pn    07 35 07.5 -0.1
P49A  Miami Univ. Ec     10.70  73  Pn       Pn    07 35 08.7 -0.9
CPCT  Cooper Cave        11.03  95  Pn       Pn    07 35 13.8 -0.3
V51A  Loudon             11.09  93  Pn       Pn    07 35 15.6 +0.7
COWI  Conover            11.09  34  Pn       Pn    07 35 14.2 -0.8
O49A  Covington          11.10  70  Pn       Pn    07 35 13.2 -1.9
TKL   Tuckaleechee C     11.58  93  Pn       Pn    07 35 20.5 -1.1
      comp=Z,0.7nm,0.3s,baz=232,slow=6.2,SNR=10
TKL                                 Lg       Lg    07 38 36.1
      comp=Z,0.8nm,0.3s,baz=186,slow=10.0,SNR=8.9
TKL   Tuckaleechee C     11.58  93  Pn       Pn    07 35 20.9 -0.8
V52A  Sevierville        11.68  92  Pn       Pn    07 35 22.5 -0.6
EYMN  Ely                11.76  22  Pn       Pn    07 35 23.8 -0.3
ULM   Lac du Bonnet      13.14   6  Pn       Pn    07 35 37.5 -5.3
      comp=Z,0.2nm,0.3s,baz=184,slow=11,SNR=4.5
ULM                                 Sn       Sn    07 37 58.0  -11
      comp=Z,0.3nm,0.3s,baz=108,slow=20,SNR=2.9
ULM                                 Lg       Lg    07 39 24.2
      comp=Z,0.2nm,0.3s,baz=98,slow=11,SNR=3.5
W57A  Gilead             14.70  93  P              07 36 03.7
      baz=283,SNR=9.4
W57A                                P              07 36 03.7
      baz=283,SNR=9.4
NVAR  Mina Array Bea     16.08 281  Pn       Pn    07 36 23.2 +0.5
      comp=Z,0.0nm,0.3s,baz=84,slow=10,SNR=2.4
YKA   Yellowknife Ar     27.32 343  P        P     07 38 22.7 +1.7
      comp=Z,0.2nm,0.6s,baz=144,slow=9.2,SNR=3.4
ILAR  Eielson Array      39.73 330  P        P     07 40 07.0 -1.8
      comp=Z,0.7nm,0.8s,baz=114,slow=8.2,SNR=2.6
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*JMA **10** 07:35:01.9±0.1, 23°.95N×122°.40E, h18^{km}±2^{km}, M2.7*
*TAP **10** 07:35:03.9, 24°.05N×122°.31E, h36^{km}±1^{km}, ML3.1, D*
ISC 10 07:35:02.4±1.1**, 24°.01N**±0°.02×**122°.36E**±0°.02**, h25**^{km}±12^{km}**,**
n69, σ0^{s}.81/135**, Taiwan region**

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Code  Station Name        Δ°   AZ°  Phase ID        Time       Res
                                    Op       ISC    h  m  s    ISC
JYNG  Yonagunijimaku      0.69  50  P        Pb    07 35 15.2 -0.6
JYNG                                eS       Sb    07 35 24.8 -0.2
ENA   Nanau               0.70 307  i P      Pb    07 35 16.5 +0.5
      baz=314
ENA                                 S        Sb    07 35 26.3 +1.0
      baz=314
TWD   Chiawan             0.70 276  eP       Pn    07 35 17.3 +0.5
      baz=272
TWD                                 S        Sb    07 35 24.9 -0.4
      baz=272
NACB  Ninganchiao         0.72 283  P        Pb    07 35 16.5 +0.2
      baz=269
NACB                                S        Sb    07 35 25.3 -0.5
      baz=269
YOJ   Yonaguni jima       0.75  53  P        Pb    07 35 16.2 -0.5
YOJ                                 S        Sb    07 35 26.3 -0.2
TWC   Suao                0.76 322  P        Pb    07 35 16.9  0.0
      baz=323
TWC                                 eS       Sb    07 35 26.5 -0.4
      baz=323
ETLH  Xiulin Townshi      0.83 284  eP       Pb    07 35 17.9 -0.3
      baz=271
ETLH                                eS       Sb    07 35 29.3 +0.3
      baz=271
ESL   Shilin              0.87 257  eP       Pn    07 35 19.5 +0.4
      baz=247
ESL                                 eS       Sb    07 35 30.3 +0.2
      baz=247
ILA   Ilan                0.94 324  eP       Pn    07 35 20.4 +0.4
      baz=323
ILA                                 eS       Sb    07 35 32.2 +0.2
      baz=323
TWE   Neicheng            0.95 318  eP       Pn    07 35 20.5 +0.3
      baz=318
TWE                                 eS       Sb    07 35 32.6 +0.2
      baz=318
ENTT  Nioudou             0.96 311  P        Pn    07 35 20.8 +0.4
      baz=299
ENTT                                S        Sn    07 35 33.5 +0.3
      baz=299
NDT   Datong Townshi      0.97 308  P        Pb    07 35 21.8 +1.2
      baz=306
NDT                                 eS       Sb    07 35 32.8 -0.3
      baz=306
NNSB  Datong              0.99 295  eP       Pn    07 35 21.0 +0.2
      baz=284
NNSB                                eS       Sb    07 35 33.5  0.0
      baz=284
NNSH  Datong              0.99 295  P        Pn    07 35 20.9 +0.1
      baz=284
NNSH                                eS       Sb    07 35 33.0 -0.6
      baz=284
NNS   Nan Shan            1.00 296  P        Pn    07 35 21.4 +0.4
      baz=285
NNS                                 S        Sb    07 35 31.6 -2.3
      baz=285
HGSD  Ruisui              1.00 239  eP       Pn    07 35 20.3 -0.6
      baz=236
HGSD                                eS       Sb    07 35 33.4 -0.4
      baz=236
WHF   Hehuan Shan         1.01 278  P        Pb    07 35 21.8 +0.3
      baz=265
WHF                                 S        Sb    07 35 33.6 -1.0
      baz=265
FUSS  Fushou              1.05 283  eP       Pn    07 35 21.2 -0.6
      baz=281
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FUSS	baz=281			eS	Sn	07 35 34.0	-1.8
TWB1	**Santiao Chiao** baz=342	1.05	341	eP	Pn	07 35 21.9	+0.3
TWB1	baz=342			eS	Sn	07 35 34.6	-0.8
EHY	**Hungye** baz=252	1.07	242	P	Pn	07 35 21.6	-0.3
EHY	baz=252			eS	Sn	07 35 35.5	-0.6
TIPB	**Shuangxi** baz=332	1.08	333	eP	Pn	07 35 22.1	+0.1
TIPB	baz=332			eS	Sn	07 35 35.7	-0.5
CHGB	**Renai** baz=261	1.09	273	eP	Pn	07 35 22.7	+0.4
CHGB	baz=261			eS	Sn	07 35 34.3	-2.3
NWLT	**Wulai** baz=313	1.09	315	eP	Pn	07 35 22.8	+0.5
NWLT	baz=313			eS	Sn	07 35 37.0	+0.4
TDCB	**Techi** baz=272	1.12	283	eP	Pn	07 35 23.1	+0.4
TDCB	baz=272			eS	Sn	07 35 36.8	-0.7
NSK	**Sanguang** baz=304	1.13	306	P	Pn	07 35 23.2	+0.5
NSK	baz=304			eS	Sn	07 35 37.2	-0.3
VWDT	**VWDT** baz=246	1.15	257	P	Pn	07 35 23.4	+0.6
VWDT	baz=246			eS	Sn	07 35 35.9	-1.9
EYUL	**Yuli** baz=248	1.16	236	eP	Pb	07 35 24.0	+0.2
EYUL	baz=248			eS	Sb	07 35 38.7	+0.3
TWF1	**Yuli** baz=248	1.17	236	eP	Pn	07 35 23.1	-0.2
TWF1	baz=248			eS	Sn	07 35 38.6	+0.1
NWF	**Wu-fen Shan** baz=333	1.18	334	eP	Pn	07 35 23.6	+0.2
NWF	baz=333			eS	Sb	07 35 41.0	+1.8
WFSB	**Wu-fen Shan** baz=346	1.18	334	eP	Pn	07 35 23.5	+0.1
WFSB	baz=346			eS	Sn	07 35 38.4	-0.4
TWA	**Mucha** baz=323	1.20	324	eP	Pn	07 35 24.0	+0.3
TWA	baz=323			eS	Sn	07 35 39.2	0.0
TNOU	**National Taiwa** baz=334	1.26	335	eP	Pn	07 35 25.2	+0.8
TNOU	baz=334			eS	Sn	07 35 39.9	-0.7
FULB	**Fuli** baz=218	1.27	231	eP	Pn	07 35 24.4	-0.2
FULB	baz=218			eS	Sn	07 35 40.6	-0.2
IRIF	**Iriomote-Funau**	1.29	75	P	Pn	07 35 24.7	-0.2
IRIF				S	Sn	07 35 41.8	+0.4
SSLB	**Suanglung** baz=258	1.31	261	eP	Pb	07 35 26.1	-0.2
SSLB	baz=258			eS	Sn	07 35 41.7	-0.2
WHP	**Taichung City** baz=271	1.32	282	eP	Pn	07 35 26.3	+0.9
WHP	baz=271			eS	Sn	07 35 42.5	+0.3
HATJ	**Hateruma jima**	1.32	88	eS	Sn	07 35 41.8	-0.3
SMLT	**Sun Moon Lake** baz=263	1.34	265	eP	Pn	07 35 26.6	+0.8
SMLT	baz=263			eS	Sn	07 35 43.1	+0.3
TYC	**Yuchr** baz=264	1.38	266	eP	Pb	07 35 27.2	-0.3
TYC	baz=264			eS	Sn	07 35 43.8	+0.2
LIOB	**Emei** baz=295	1.38	298	eP	Pb	07 35 27.6	+0.1
LIOB	baz=295			eS	Sn	07 35 44.4	+0.7
NSTT	**Nanjuang** baz=295	1.39	297	eP	Pn	07 35 26.6	+0.4
NSTT	baz=295			eS	Sn	07 35 43.9	+0.1
YUS	**Yu-Shan** baz=246	1.39	248	eP	Pn	07 35 27.2	+0.5
YUS	baz=246			eS	Sn	07 35 44.2	-0.3
EDH	**Donghe** baz=215	1.42	223	eP	Pn	07 35 26.6	-0.1
EDH	baz=215			eS	Sn	07 35 42.5	-2.0
ELDTW	**Lidau** baz=235	1.48	237	eP	Pn	07 35 28.3	+0.7
ELDTW	baz=235			eS	Sn	07 35 46.9	+0.7
JKRS	**Kuro-shima**	1.52	81	P	Pn	07 35 29.0	+0.9
JIJ	**Ishigaki jima**	1.67	77	P	Pn	07 35 30.3	+0.3
JIJ				eS	Sn	07 35 50.8	+0.2
TWGBT	**Beinan** baz=234	1.67	225	eP	Pn	07 35 28.6	-1.5
TWGBT	baz=234			eS	Sn	07 35 50.0	-0.7
TWG	**Pinlang** baz=234	1.67	225	eP	Pn	07 35 29.0	-1.1
TWG	baz=234			eS	Sn	07 35 50.4	-0.5
STYT	**Tauyuan** baz=231	1.69	241	eP	Pn	07 35 31.6	+1.1
STYT	baz=231			eS	Sn	07 35 51.9	+0.4
TPUB	**Ta-pu** baz=245	1.74	246	eP	Pb	07 35 32.9	-0.7
TPUB	baz=245			eS	Sn	07 35 53.6	+1.1
CHN4	**Tsaushan** baz=247	1.75	248	eP	Pb	07 35 33.9	+0.1
CHN4	baz=247			eS	Sb	07 35 54.6	-0.7
WTP	**Ta-pu** baz=244	1.77	245	eP	Pn	07 35 32.7	+1.1
WTP	baz=244			eS	Sn	07 35 54.0	+0.6
TWK	**Hsinying** baz=246	1.87	247	eP	Pb	07 35 35.4	-0.5
TWK	baz=246			eS	Sb	07 35 57.8	-1.1
CHN1	**Nanshi** baz=243	1.87	244	eP	Pn	07 35 34.1	+1.2
CHN1	baz=243			eS	Sn	07 35 56.0	+0.2
JISG	**Ishigakijimahi**	1.87	72	P	Pn	07 35 32.7	-0.1
JISG				eS	Sn	07 35 56.2	+0.5
SLGT	**Liugui** baz=229	1.87	238	eP	Pn	07 35 34.0	+1.1
SLGT	baz=229			eS	Sn	07 35 56.7	+1.0
ECL	**Taimali** baz=222	1.91	223	eP	Pn	07 35 35.0	+1.6
ECL	baz=222			eS	Sn	07 35 56.2	-0.4
SSD	**Sandimen** baz=227	2.02	232	eP	Pn	07 35 36.5	+1.5
SSD	baz=227			eS	Sn	07 35 59.7	+0.2
TSMG	**Majia** baz=226	2.04	231	eP	Pn	07 35 36.7	+1.5
TSMG	baz=226			eS	Sn	07 36 00.9	+0.9
MASBT	**Mashibuluo** baz=225	2.11	229	eP	Pn	07 35 37.2	+1.0
MASBT	baz=225			eS	Sn	07 36 02.5	+0.8
EAST	**Anshuo** baz=221	2.13	221	eP	Pn	07 35 37.2	+0.7
EAST	baz=221			eS	Sn	07 36 03.0	+0.7
SLIU	**Shizi** baz=219	2.29	219	eP	Pn	07 35 39.7	+1.0
SLIU	baz=219			eS	Sn	07 36 06.0	-0.1
PHUB	**P'eng-hu** baz=273	2.60	260	eP	Pn	07 35 44.3	+1.4
PHUB	baz=273			eS	Sn	07 36 13.7	-0.1
PNG	**Penghu** baz=260	2.61	261	eS	Sn	07 36 14.2	+0.3
PTTC	**Pingtan** baz=299	2.79	303	eP	Pn	07 35 46.7	+1.3
PTTC	baz=299			eS	Sn	07 36 16.5	-1.7
VWUC	**VWUC** baz=288	2.83	291	eP	Pn	07 35 46.3	+0.3
VWUC	baz=288			eS	Sn	07 36 17.8	-1.5
PTMZ	**Houxiangcun** baz=287	3.12	290	eP	Pn	07 35 50.3	+0.2
PTMZ	baz=287			eS	Sn	07 36 25.6	-1.1
MHZQ	**Yeshan** baz=301	3.67	305	eP	Pn	07 35 58.8	+1.2
MHZQ	baz=301			eS	Sn	07 36 38.3	-1.8
AXDP	**Jialang** baz=272	4.10	283	eP	Pn	07 36 04.1	+0.6
AXDP	baz=272			eS	Sn	07 36 49.5	-1.1

PGC 10 07:39:42.6, 54°.41N×117°.16W, h1km, ML3.6/7, 180km
Nne of Jasper, Alberta Alberta, Canada, Alberta

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNB	**Mounoet Dainar**	2.33	199	Pn	Pn	07 40 21.8	-0.5
NBC4	**NorthernBC 4**	2.39	304	Pn	Pn	07 40 22.4	-0.5
NBC4				Sn	Sn	07 40 51.6	-1.2
EDM	**Edmonton**	2.55	116	Pn	Pn	07 40 24.9	-0.3
EDM				Sn	Sn	07 40 55.6	-1.3
EDM				Sg	Sb	07 41 01.3	+0.2
BLBC	**Blue River**	2.68	209	Pn	Pn	07 40 26.8	-0.3
BMBC	**Bull Mountain**	3.28	302	Pn	Pn	07 40 34.9	-0.4
BMBC				Pg	Pb	07 40 42.0	+0.3
BMBC				Sn	Sn	07 41 13.1	-1.9
BMBC				Sg	Sg	07 41 25.2	-2.8
SLEB	**Sale Mountain**	3.30	191	Pn	Pn	07 40 34.6	-0.9
PRDA	**Priddis**	3.95	153	Pn	Pn	07 40 44.0	-0.5
PRDA				Pg	Pb	07 40 53.1	-0.1
PRDA				Sn	Sn	07 41 28.0	-3.6
FSB	**Fort Saint Jam**	4.18	274	Pn	Pn	07 40 47.0	-0.6
UBRB	**Upper Baezaeko**	4.39	253	Sg	Sb	07 41 57.7	+3.7
NBC5	**NorthernBC 5**	4.40	317	Pn	Pn	07 40 49.5	-1.0
NBC5				Sn	Sn	07 41 39.2	-3.3
LLLB	**Lillooet**	4.77	219	Sg	Sb	07 42 08.3	+3.3
NBC6	**NorthernBC 6**	4.78	333	Pn	Pn	07 40 54.7	-1.1
NBC6				Sn	Sn	07 41 47.8	-3.9
NBC6				Sg	Sb	07 42 08.6	+3.5
PNT	**Penticton**	5.32	198	Sg	Sb	07 42 23.6	+3.0
FNBB	**Fort Nelson**	5.53	327	Pn	Pn	07 41 04.8	-1.3
FNBB				Sn	Sn	07 42 06.5	-3.8
NBC3	**NorthernBC 3**	5.58	341	Sg	Sg	07 42 35.4	-6.3
WALA	**Waterton Lakes**	5.72	158	Pn	Pn	07 41 08.2	-0.6

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*KRNET **10** 08:04:55.7±0.1, 40°.30N×79°.82E, mb3.2*
*SOME **10** 08:04:59.9, 40°.72N×79°.03E, h10km*
*NNC **10** 08:05:01.5±1.4, 40°.80N×79°.01E, h0km, mb3.8, mpv3.5,*
Error ellipse: s-maj=9.5km s-min=7.4km az=163.0
ISC 10 08:05:03.1±2.2**, 40°.74N**±0°.09×**79°.13E**±0°.06**, h10km, n44,**
σ**1s.92**/71**, 21C-6D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRZ	**Przheval'sk** baz=34	1.82	343	⇓iP	Pn	08 05 34.2	-0.5
PRZ	baz=34			⇓iS	Sg	08 06 02.7	+0.9
KDJ	**Kajisay** baz=13	2.02	314	⇑iP	Pb	08 05 38.4	-1.6
KDJ	baz=13			⇑iS	Sg	08 06 08.9	+0.9
ANVS	**Anan'yevo** baz=28	2.31	332	⇑iP	Pn	08 05 42.3	+0.8
ANVS	baz=28			⇑iS	Sg	08 06 15.7	-1.8
SATY	**Saty** 15nm,0.3s	2.38	347	eP	Pb	08 05 44.3	-1.8
SATY	34nm,0.5s			eS	Sb	08 06 15.7	+0.1
SATY	**Saty** 15nm,0.3s	2.38	347	Pg	Pn	08 05 43.1	+0.8
SATY	34nm,0.5s			Lg	Lg	08 06 15.7	
UZB	**Uzynbulak** 9.5nm,0.2s	2.41	358	eP	Pb	08 05 44.5	-2.1
UZB	20nm,0.4s			eS	Sb	08 06 16.1	-0.2
UZB	**Uzynbulak** 9.5nm,0.2s	2.41	358	Pg	Pn	08 05 43.5	+0.9
UZB	20nm,0.4s			Lg	Lg	08 06 17.2	
SHLS	**Shalkode** 12nm,0.3s	2.43	6	eP	Pb	08 05 46.7	-0.2
SHLS	74nm,0.7s			eS	Sg	08 06 20.3	-0.9
SHLS	**Shalkode** 12nm,0.3s	2.43	6	Pg	Pb	08 05 45.7	-1.2
SHLS	74nm,0.7s			Lg	Lg	08 06 20.3	
PDGK	**Podgornoye** 4.1nm,0.3s	2.60	6	Pg	Pn	08 05 46.1	+0.7
PDGK	16nm,0.5s			Lg	Lg	08 06 21.2	
PDGK	**Podgornoye** 8.3nm,0.6s	2.60	6	⇑Pn	Pn	08 05 45.9	+0.5
PDGK	63nm,0.9s			⇓Sn	Sb	08 06 21.3	-0.7
ULHL	**Ulahol** baz=7.0	2.64	306	⇑iP	Pn	08 05 46.4	+0.5
ULHL	baz=7.0			⇑iS	Sb	08 06 23.5	+0.4
KPKS	**Kokpek** 30nm,0.3s	2.74	353	eP	Pb	08 05 50.5	-1.8
KPKS	72nm,0.4s			eS	Sb	08 06 26.6	+0.6
TNSS	**Tian-Shan** 5.3nm,0.3s	2.81	325	eP	Pb	08 05 51.8	-1.8
TNSS	18nm,0.5s			eS	Sb	08 06 28.9	+0.5
TNSS	**Tian-Shan** 5.9nm,0.3s	2.81	325	Pg	Pb	08 05 51.1	-2.6
TNSS	18nm,0.5s			Lg	Lg	08 06 29.9	
MDOK	**Medeo** 14nm,0.3s	2.88	328	eP	Pb	08 05 52.5	-2.1
MDOK	28nm,0.7s			eS	Sb	08 06 29.7	-0.2
MDOK	**Medeo** 9.7nm,0.5s	2.88	328	⇑P	Pb	08 05 52.3	-2.3
MDOK	**Medeo** 14nm,0.3s	2.88	328	Pg	Pb	08 05 52.1	-2.5
MDOK	28nm,0.7s			Lg	Lg	08 06 30.3	
KOTS	**Kotyrbulak** 30nm,0.2s	2.91	330	eP	Pb	08 05 53.2	-2.0
KOTS	64nm,0.4s			eS	Sb	08 06 31.6	+0.7
KOTS	**Kotyrbulak** 30nm,0.2s	2.91	330	Pg	Pb	08 05 52.8	-2.4
KOTS	64nm,0.4s			Lg	Lg	08 06 31.8	
KST	**Kastek** 4.2nm,0.5s	3.30	315	eP	Pb	08 05 59.8	-2.0
KST	16nm,0.4s			eS	Sb	08 06 42.5	+0.5
KST	**Kastek** 4.3nm,0.3s	3.30	315	Pg	Pb	08 05 58.9	-2.8
KST	16nm,0.4s			Lg	Lg	08 06 42.5	
MNBS	**Baschi** 14nm,0.4s	3.38	351	eP	Pb	08 06 02.4	-0.7
MNBS	26nm,0.3s			eS	Sb	08 06 46.6	+2.3
MNBS	**Baschi** 14nm,0.4s	3.38	351	Pg	Pb	08 06 02.2	-1.0
TKM2	**Tokmak 2** baz=11	3.42	311	⇑iP	Pn	08 05 57.7	+1.0
TKM2	baz=11			⇑iS	Sb	08 06 42.4	-3.2
TKM2	**Tokmak 2** 8.4nm,1.6s	3.42	311	⇓Pn	Pn	08 05 55.5	-1.2
TKM2	7.9nm,0.7s			⇑Sn	Sb	08 06 47.5	+1.9
KTBS	**Karatobe** 2.7nm,0.3s	3.48	329	eP	Pb	08 06 03.3	-1.5
KTBS	18nm,0.5s			eS	Sb	08 06 48.6	+1.5
KTBS	**Karatobe** 2.7nm,0.3s	3.48	329	Pg	Pb	08 06 02.3	-2.6
KTBS	18nm,0.5s			Lg	Lg	08 06 48.0	
DGS	**Degeres** 3.6nm,0.5s	3.54	316	eP	Pb	08 06 04.1	-1.7
DGS	8.7nm,0.7s			eS	Sb	08 06 49.4	+0.6
DGS	**Degeres** 3.6nm,0.5s	3.54	316	Pg	Pb	08 06 03.3	-2.5
DGS	8.7nm,0.7s			Lg	Lg	08 06 49.4	
DJR	**Jarkent** 0.9nm,0.2s	3.62	8	eP	Pb	08 06 06.7	-0.6
DJR	20nm,0.4s			eS	Sb	08 06 53.9	+2.5
DJR	**Jarkent** 1.8nm,0.1s	3.62	8	Pg	Pb	08 06 06.2	-1.1
DJR	20nm,0.4s			Lg	Lg	08 06 54.3	
KBK	**Karagaybulak** baz=4.0	3.67	303	⇑iP	Pn	08 06 01.1	+1.1
KBK	baz=4.0			⇑iS	Sn	08 06 47.9	+4.5
KUU	**Kurty** 1.4nm,0.2s	3.77	328	eP	Pb	08 06 08.9	-0.8
KUU	12nm,0.7s			eS	Sb	08 06 58.0	+2.6
KUU	**Kurty** 1.4nm,0.2s	3.77	328	Pg	Pb	08 06 08.4	-1.3
KUU	12nm,0.7s			Lg	Lg	08 06 58.8	
UCH	**Uchtor** baz=97	3.77	295	⇓iP	Pn	08 06 02.1	+0.4
UCH	baz=97			⇓iS	Sn	08 06 50.2	+3.8
ARLS	**Aral** baz=92	3.79	289	⇑iP	Pn	08 06 01.7	0.0
ARLS	baz=92			⇑iS	Sn	08 06 49.6	+3.2
AAK	**Ala-Archa** baz=2.0	3.95	300	⇑iP	Pn	08 06 05.0	+1.1
AAK	baz=2.0			⇑iS	Sn	08 06 54.7	+4.3
AAK	**Ala-Archa** 3.7nm,0.9s	3.95	300	⇑Pn	Pb	08 06 12.4	-0.5
AAK	5.5nm,0.7s			⇑Lg	Lg	08 07 03.2	
TDK	**Taldyqorghan** 20nm,0.1s	4.29	353	eP	Pg	08 06 21.1	-4.2
TDK	18nm,0.6s			eS	Sg	08 07 19.6	-1.3
TDK	**Taldyqorghan** 20nm,0.1s	4.29	353	Pg	Pb	08 06 20.3	+1.6
EKS2	**Erkin-Say** baz=99	4.44	297	⇑iP	Pn	08 06 11.3	+0.7
EKS2	baz=99			⇑iS	Sn	08 07 05.8	+3.4
KAPS	**Kapalarasan** 2.3nm,0.7s	4.55	2	eP	Pb	08 06 22.3	-0.7
KAPS	3.9nm,0.4s			eS	Sb	08 07 21.8	+3.9
KAPS	**Kapalarasan** 2.3nm,0.7s	4.55	2	Pg	Pb	08 06 22.3	-0.7
KAPS	3.9nm,0.4s			Lg	Lg	08 07 21.8	

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*ANF **10** 08:05:23.4±2.0, 31°.56N×115°.62W, h6km±9km, ML2.7/8,*
Error ellipse: s-maj=19.9km s-min=10.6km az=39.0
*NEIC **10** 08:05:24.1±2.1, 31°.56N±0°.01×115°.63W±0°.03, h5km±6km,*
Error ellipse: s-maj=4.3km s-min=1.0km az=64.0
*PAS **10** 08:05:24.6±2.2, 31°.52N±0°.04×115°.67W±0°.03, h14km±7km,*
ML3.2/105, ML2.9/36(NEIC), Error ellipse: s-maj=6.5km
s-min=3.0km az=189.0
*SCEDC **10** 08:05:24.6, 31°.52N×115°.67W, h14km*
*ECX **10** 08:05:25.0±0.8, 31°.51N×115°.66W, h6km±3km, MD2.8,*
ML3.0
*MEX **10** 08:05:26.4±0.8, 31°.45N×115°.64W, h12km±17km, MD3.6*
ISC 10 08:05:23.0±1.2**, 31°.46N**±0°.02×**115°.64W**±0°.02**, h14**km±9km**,**
n89, σ**0s.82**/119**, 10C-7D, Baja California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VTX	**Valle De La Tr**	0.14	241	⇓eP	Pb	08 05 28.4	+1.0
VTX				eS	Sb	08 05 30.6	+0.3
SJX	**San Joaquin**	0.41	318	⇓eP	Pn	08 05 34.7	+0.4
SJX				eS	Sn	08 05 42.0	+0.2
SPIG	**San Pedro Mart**	0.44	160	eP	Pn	08 05 34.1	-1.0
SPIG				i S	Sn	08 05 41.2	-1.8
SPIG	**San Pedro Mart**	0.44	160	eP	Pn	08 05 34.0	-1.1
SPIG				eS	Sn	08 05 41.1	-1.9
SPX	**San Pedro Mart**	0.45	160		Pn	08 05 34.1	-1.1
SPX					Sb	08 05 40.8	+1.3
SPX	**San Pedro Mart** comp=E,486nm,0.3s	0.45	160	IAML		08 05 41.4	
SPX	comp=N,659nm,0.2s			IAML		08 05 41.6	
SPX	**San Pedro Mart**	0.45	160	⇓iP	Pn	08 05 34.1	-1.1
SPX				eS	Sb	08 05 41.0	+1.5
SPX	comp=E,744nm,0.2s			IAML		08 05 41.4	
SPX				⇓e		08 05 41.4	
SPX	comp=N,1μm,0.2s			IAML		08 05 41.6	
SPX				⇑e		08 05 41.6	
ECBX	**El Chinero**	0.51	88	⇑iP	Pb	08 05 33.5	-0.1
ECBX				eP	Pb	08 05 33.5	-0.1
ECBX				eS	Sb	08 05 40.4	-0.4
ECBX				eS	Sb	08 05 40.4	-0.4
SVX	**San Vicente**	0.54	256	eP	Pb	08 05 34.5	+0.4
SVX				i S	Sb	08 05 41.8	+0.1
ESJX	**Sierra Juarez**	0.60	335		Pg	08 05 34.7	-0.2
ESJX					Sg	08 05 42.1	-0.9
ESJX	**Sierra Juarez** comp=N,2μm,0.1s	0.60	335	IAML		08 05 42.3	
ESJX	comp=E,2μm,0.1s			IAML		08 05 42.5	
SFX	**San Felipe**	0.80	122		Pn	08 05 40.1	+0.4
SFX					Sn	08 05 50.9	-0.5
SFX	**San Felipe** comp=N,482nm,0.5s	0.80	122	IAML		08 05 52.5	
SFX	comp=E,391nm,0.2s			IAML		08 05 52.5	
SFX	**San Felipe**	0.80	122	⇑eP	Pn	08 05 40.1	+0.4
SFX				eS	Sn	08 05 51.6	+0.2
SQX	**San Quintin**	0.90	193	⇓eP	Pn	08 05 41.7	+0.5
SQX				eS	Sn	08 05 54.1	+0.1
CCX	**Cicese**	0.96	295		Pb	08 05 41.3	-0.1
CCX	**Cicese** comp=E,189nm,0.4s	0.96	295	IAML		08 05 57.3	
CCX	**Cicese**	0.96	295	⇑eP	Pb	08 05 41.3	-0.1
GUVIX	**Guadalupe Vict**	0.97	30		Pn	08 05 42.0	-0.1
GUVIX					Sn	08 05 55.3	-0.4
GUVIX	**Guadalupe Vict**	0.97	30	eP	Pn	08 05 42.1	-0.1
CPBX	**Cerro Prieto**	1.00	17		Pn	08 05 44.1	+1.6
CPBX	**Cerro Prieto**	1.00	17	eP	Pn	08 05 44.1	+1.6
MBIG	**Mexicali**	1.02	22	eP	Pn	08 05 43.6	+0.8
MBIG				eS	Sg	08 05 56.1	+0.2
MBIG	**Mexicali**	1.02	22	eP	Pn	08 05 43.5	+0.8
UABX	**UABC, Campus M**	1.18	8		Pg	08 05 46.3	+0.5
UABX	**UABC, Campus M** comp=E,463nm,0.5s	1.18	8	IAML		08 06 03.0	
UABX	comp=N,493nm,0.4s			IAML		08 06 04.0	
SGL	**Mount Signal**	1.19	357		Pn	08 05 44.6	-0.6
SGL					Sn	08 06 00.7	-0.4
RMX	**La Rumorosa**	1.20	342		Pn	08 05 44.3	-1.1
RMX					Sb	08 05 58.0	-2.9
RMX	**La Rumorosa** comp=E,267nm,0.1s	1.20	342	IAML		08 05 59.4	
RMX	comp=N,226nm,0.3s			IAML		08 06 01.3	
RMX	**La Rumorosa**	1.20	342	⇑eP	Pn	08 05 44.3	-1.1
RMX				eS	Sb	08 05 58.1	-2.9
YUH	**Yuha Desert**	1.21	349		Pn	08 05 45.1	-0.3

YUH					Sb	08 06 00.3	-0.8
CBX	Cerro Bola	1.22	315		Pn	08 05 45.8	+0.1
CBX				IAML		08 06 01.7	
	comp=N,361nm,0.3s						
CBX				IAML		08 06 02.3	
	comp=E,288nm,0.5s						
CBX	Cerro Bola	1.22	315		Sb	08 06 00.3	-1.1
CBX	Cerro Bola	1.22	315	⇓eP	Pn	08 05 45.7	+0.1
CBX				eS	Sb	08 06 01.0	-0.5
CBX				e		08 06 02.3	
CBX				IAML		08 06 02.3	
	comp=E,575nm,0.2s						
IKP	In-Ko-Pah, Jac	1.25	342	P	Pn	08 05 46.1	+0.1
	baz=162						
IKP				S	Sb	08 06 01.4	-1.0
	baz=162						
IKP	In-Ko-Pah, Jac	1.25	342		Pn	08 05 46.2	+0.1
IKP					Sb	08 06 01.4	-1.0
IKP	In-Ko-Pah, Jac	1.25	342	⇓eP	Pn	08 05 46.2	+0.1
WESC	Westside Schoo	1.30	357		Pb	08 05 47.0	-0.1
WESC	Westside Schoo	1.30	357	⇑eP	Pb	08 05 47.0	-0.1
TJIG	Tijuana	1.31	318	eP	Pn	08 05 47.0	+0.2
TJIG				eS	Sb	08 06 03.0	-1.0
TJIG	Tijuana	1.31	318	⇑eP	Pn	08 05 47.0	+0.2
DREC	Desert Rsrch C	1.35	7		Pn	08 05 47.5	+0.1
DREC	Desert Rsrch C	1.35	7	⇑eP	Pn	08 05 47.5	+0.1
TKX	Tecate	1.38	324		Sn	08 06 04.9	-0.9
TKX	Tecate	1.38	324	Pn	Pb	08 05 48.3	-0.2
COK2	Cook Ranch 2	1.39	357		Pn	08 05 47.7	-0.2
SNR	Schaffner Ranc	1.41	7		Pn	08 05 48.1	-0.1
YMD	Yuma Desert	1.44	40		Pn	08 05 48.1	-0.5
CRR	Carrizo Plain	1.45	349		Pb	08 05 49.7	0.0
CRR					Sb	08 06 08.3	+0.3
SWSC	Sam W. Stewart	1.49	355	P	Pn	08 05 48.7	-0.6
	baz=176						
SWSC				S	Sb	08 06 09.8	+0.6
	baz=176						
SWSC	Sam W. Stewart	1.49	355		Pn	08 05 49.1	-0.2
SWSC	Sam W. Stewart	1.49	355	⇑eP	Pn	08 05 49.0	-0.2
BAR	Barrett	1.50	325		Pn	08 05 50.0	+0.5
BAR					Sn	08 06 07.8	-1.1
BAR	Barrett	1.50	325	⇑eP	Pb	08 05 50.1	-0.5
CBKC	Canebrake	1.53	340		Pn	08 05 50.4	+0.5
MONP2	Monument Peak	1.57	335	P	Pb	08 05 51.3	-0.7
	baz=155						
MONP2				S	Sn	08 06 11.0	+0.1
	baz=155						
MONP2	Monument Peak	1.57	335		Pn	08 05 51.2	+0.5
MONP2					Sn	08 06 11.0	+0.1
OLP	Otay Lakes Par	1.58	317		Pb	08 05 51.6	-0.4
OLP					Sn	08 06 11.2	+0.3
TJX	Tijuana	1.59	312		Pn	08 05 51.3	+0.6
TJX					Sg	08 06 13.8	-0.4
TJX				IAML		08 06 22.6	
	comp=E,378nm,1.5s						
SDRC	San Diego Road	1.68	319		Pb	08 05 53.8	+0.1
SDRC					Sn	08 06 13.5	+0.2
GLA	Glamis	1.73	23	P	Pn	08 05 52.3	-0.3
	baz=205						
GLA				S	Sb	08 06 16.0	-0.2
	baz=205						
GLA	Glamis	1.73	23		Pn	08 05 52.4	-0.3
GLA				IAML		08 06 18.5	
	comp=E,91nm,0.3s						
SLH	Sleepy Hollow	1.80	343		Pb	08 05 56.4	+0.6
PIX	Pinacate	1.87	86		Pn	08 05 54.2	-0.3
DPP	Dos Picos Cty	1.89	325		Pb	08 05 57.7	+0.5
109C	Camp Elliot, M	1.89	319	P	Pn	08 05 55.7	+0.9
	baz=138						
109C				S	Sn	08 06 19.5	+1.1
	baz=138						
109C	Camp Elliot, M	1.89	319		Pb	08 05 56.2	-1.0
109C				IAML		08 06 20.9	
	comp=N,250nm,0.3s						
CPE	Camp Elliot	1.89	319		Pb	08 05 56.2	-1.0
HWB	Hans Werner Br	1.92	325		Pb	08 05 57.6	-0.1
MATG	Mataguay Scout	1.93	334		Pb	08 05 58.3	+0.3
113A	Mohawk Valley,	2.06	50		Pn	08 05 57.3	+0.2
PLM	Palomar	2.15	332		Pb	08 06 01.9	0.0
FRD	Ford Ranch, An	2.19	338		Pb	08 06 03.0	+0.7
BC3	Big Chuckawall	2.20	4	P	Pn	08 05 59.2	+0.1
	baz=185						
SNDA	J Saunders Pla	2.24	339		Pb	08 06 04.3	+1.0
PFO	Pinyon Flats O	2.25	342	P	Pn	08 05 60.0	0.0
	baz=162						
PFO				S	Sn	08 06 28.2	+0.6
	baz=162						
PFO	Pinyon Flats O	2.25	342		Pn	08 06 00.1	+0.2
PFO				IAML		08 06 33.6	
	comp=N,44nm,0.5s						
PMD	Palm Desert	2.27	344		Pb	08 06 04.9	+1.2
CRY	Cary Ranch	2.29	337		Pb	08 06 04.8	+0.6
214A	Organ Pipe Nat	2.46	78	P	Pn	08 06 03.2	+0.4
	baz=261						
214A	Organ Pipe Nat	2.46	78	eP	Pn	08 06 02.9	+0.2
214A				i S	Sn	08 06 32.7	0.0
214A	Organ Pipe Nat	2.46	78		Pn	08 06 02.6	-0.1
MURC	Murrieta	2.51	329	P	Pn	08 06 03.3	0.0
	baz=148						
BELC	Belle Mtn. Jos	2.55	353	P	Pn	08 06 04.6	+0.6
	baz=174						
IRM	Iron Mountain	2.72	9	P	Pn	08 06 07.0	+0.7
	baz=190						
X16A	Lo Mia Camp, P	4.60	49	Pn	Pn	08 06 32.0	-0.2
X16A				IAML		08 08 16.7	
	comp=N,7.3nm,4.8s						
X16A				IAML		08 08 30.2	
	comp=E,9.0nm,4.6s						
U15A	North Rim	5.68	28	Pn	Pn	08 06 49.3	+2.1
KNB	Kanab	6.01	22	Pn	Pn	08 06 53.8	+2.1
CCUT	Cedar City	6.36	17	Pn	Pn	08 06 58.0	+1.5

IDC ***10*** *08:22:12.7±0.6, 2°.36S×119°.58E, h0^{km}, mb4.3/12, mb1 4.4/13, mb1mx4.1/48, mbtmp4.3/13, ML4.4/1, MS3.6/18, Ms1 3.7/18, ms1mx3.4/58, Error ellipse: s-maj=37.5km s-min=12.4km az=64.0*

DJA ***10*** *08:22:14.5±0.2, 2°S±2°×11°9E±°, h10^{km}, M4.8/20, mB5.2/5, mb4.7/19, MLv4.9/20, Mw(mB)4.5/5*

NEIC ***10*** *08:22:18.6±1.8, 2°.45S±0°.06×119°.42E±0°.07, h47^{km}±9^{km}, mb4.6/22, Error ellipse: s-maj=11.2km s-min=7.6km az=59.0*

ISC 10 08:22:17.7±0.5**, 2°.43S**±0°.05×**119°.42E**±0°.05**, h35**^{km}**, n94,** σ**1^{s}.47**/87**, mb4.5**/29**, MS3.5**/14**, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TTSI	Tana Toraja	0.73	147	P	Pn	08 22 27.4	-4.1
TTSI				S	Sn	08 22 38.8	-2.6
SPSI	Sidrap Palu	1.56	167	P	Pn	08 22 41.4	-1.6
BNSI	Bone	2.07	161	P	Pn	08 22 49.8	-0.2
BNSI				S	Sn	08 23 21.0	+6.4
KAPI	Kappang	2.59	173	Pn	Pn	08 22 56.4	-0.7
	70nm,0.3s,baz=334,slow=10,SNR=122						
KAPI				Sn	Sn	08 23 32.0	+4.7
	758nm,0.3s,baz=182,slow=23,SNR=22						
KAPI				LR	LR	08 24 09.9	
	comp=Z,2μm,18.9s,baz=38,slow=44						
KAPI	Kappang	2.59	173	Pn	Pn	08 22 56.7	-0.4
APSI	Ampana	2.69	56	P	Pn	08 22 58.8	+0.3
BKB	Balikpapan	2.78	295	Pn	Pn	08 23 00.9	+1.2
BKB	Balikpapan	2.78	295	P	Pn	08 22 59.7	0.0
BKSI	Bulukumba	2.96	166	P	Pn	08 23 03.0	+0.8
KBKI	Kotabaru	3.36	255	P	Pn	08 23 05.8	-1.9
KDI	Kendari	3.54	115	P	Pn	08 23 09.1	-1.0
LUWI	Luwuk	3.62	68	Pn	Pn	08 23 12.0	+0.7
LUWI	Luwuk	3.62	68	P	Pn	08 23 11.1	-0.2
TOLI2	Tolitoli	3.77	21	Pn	Pn	08 23 13.6	+0.2
MRSI	Marisa	3.83	41	P	Pn	08 23 13.2	-1.0
BSSI	Bau Bau, Buton	3.84	164	P	Pn	08 23 15.0	+0.7
BBKI	Banjar Baru	4.69	257	P	Pn	08 23 24.4	-1.6
GTOI	Gorontalo	4.71	50	P	Pn	08 23 26.2	0.0
MTKI	Muara Teweh, K	4.76	288	P	Pn	08 23 25.3	-1.6
KMSI	Cibinong	5.45	57	P	Pn	08 23 37.0	+0.6
	1.7nm220nm,0.6s						
PLAI	Plampang	6.56	194	P	Pn	08 23 51.4	-0.4
	0.6nm777nm82nm,0.9s						
TWSI	Taliwang, Sumb	6.76	202	P	Pn	08 23 53.2	-1.2
	0.3nm5μm35nm,0.6s						
SRBI	Singaraja	7.01	217	P	Pn	08 23 56.9	-1.0
	0.3nm1μm70nm,0.6s						
MYLDM	Lahad Datu	7.62	353	Pn	Pn	08 24 07.5	+1.3
SOEI	Soe	8.73	147	Pn	Pn	08 24 23.7	+2.1
SOEI	Soe	8.73	147	P	Pn	08 24 20.9	-0.7
	46nm,1.0s						
BATI	Baumata	8.80	152	LR	LR	08 28 00.0	
	comp=Z,601nm,20.4s,baz=354,slow=40						
DAV	Davao City (W)	11.26	33	LR	LR	08 30 28.1	
	comp=Z,254nm,18.1s,baz=150,slow=45						
CISI	Cisompet, Garu	12.63	246	Pn	Pn	08 25 17.6	+2.6
CISI	Cisompet, Garu	12.63	246	P	P	08 25 23.0	-2.9
KLSI		14.83	261	P	Pn	08 25 44.3	-0.7
	10.0nm,1.3s						
KASI	Kota Agung	15.20	258	P	Pn	08 25 49.6	-0.3
	32nm,0.8s						
MDSI	Maura Dua	15.35	262	P	P	08 25 58.2	+2.1
FITZ	Fitzroy Crossi	16.72	159	Pn	P	08 26 11.4	+0.1
	0.1nm,0.3s,baz=331,slow=10,SNR=2.7						
FITZ				LR	LR	08 34 14.7	
	comp=Z,129nm,18.9s,baz=342,slow=43						
SDSI	Sungai Dareh	18.05	274	P	P	08 26 26.7	+0.7
	1μm14nm,1.1s						
PSA00	Pilbara Seismi	19.03	179		P	08 26 36.5	-0.3
IPM	Ipoh	19.62	290	P	Pn	08 26 44.6	-0.3
MNSI	Mandailing Nat	20.09	279	P	Pn	08 27 02.4	+12
RPSI	Rantau Prapat	21.11	284	P	P	08 26 59.6	+0.1
RPSI				IAmb	IAmb	08 27 01.5	
	comp=Z,44nm,1.1s						
PSI	Prapat	21.14	284	P	P	08 27 00.7	+0.8
	comp=Z,18nm,0.8s,baz=180,slow=1.0,SNR=7.4						
PSI				LR	LR	08 35 59.9	
	comp=Z,135nm,18.4s,baz=89,slow=39						
WB0	Warramunga Arr	22.61	141	P	P	08 27 13.8	-1.7
WB0				IAmb	IAmb	08 27 17.3	
	comp=Z,25nm,1.2s						
WRA	Warramunga Arr	22.70	141	P	P	08 27 14.7	-1.9
	comp=Z,11nm,0.9s,baz=316,slow=12,SNR=41						
WRA				LR	LR	08 38 45.2	
	comp=Z,150nm,18.3s,baz=185,slow=44						
WB2	Warramunga Arr	22.71	141	P	P	08 27 15.2	-1.4
WB2				IAmb	IAmb	08 27 18.4	
	comp=Z,25nm,1.1s						
WR0	Warramunga Arr	22.84	141	P	P	08 27 17.1	-0.9
WR0				IAmb	IAmb	08 27 19.4	
	comp=Z,20nm,0.8s						
AS31	Alice Springs	25.34	148	P	P	08 27 41.5	0.0
ASAR	Alice Springs	25.34	148	P	P	08 27 41.0	-0.6
	comp=Z,5.7nm,0.8s,baz=340,slow=12,SNR=34						
ASAR				PcP	PcP	08 31 14.8	+0.9
	comp=Z,0.9nm,0.9s,baz=337,slow=1.9,SNR=4.5						
ASAR				LR	LR	08 38 05.8	
	comp=Z,118nm,19.5s,baz=328,slow=38						
ASAR	Alice Springs	25.34	148	P	P	08 27 40.9	-0.7
CMAR	Chiang Mai Arr	28.93	317	P	P	08 28 19.3	+5.5
	comp=Z,1.3nm,0.3s,baz=141,slow=6.5,SNR=5.0						
CMAR				LR	LR	08 42 55.7	
	comp=Z,217nm,18.3s,baz=185,slow=43						
FORT	Forrest	29.36	165	P	P	08 28 18.1	+0.7
FORT				IAmb	IAmb	08 28 31.9	
	comp=Z,11nm,0.9s						
NWAO	Narrogin (SRO)	30.41	184	LR	LR	08 41 33.5	
	comp=Z,95nm,19.9s,baz=327,slow=38						
BBOO	Buckleboo	34.02	154	P	P	08 28 58.1	-0.3
STKA	Stephens Creek	35.98	147	P	P	08 29 14.8	-0.5
	comp=Z,2.9nm,0.6s,baz=325,slow=8.7,SNR=8.4						
STKA				LR	LR	08 45 13.2	
	comp=Z,112nm,19.9s,baz=282,slow=38						
STKA	Stephens Creek	35.98	147	P	P	08 29 14.6	-0.7
KSRS	Korea Array	40.46	10	LR	LR	08 47 29.0	
	comp=Z,61nm,19.1s,baz=195,slow=38						
BJT	Baijiatuau	42.35	356	P	P	08 30 07.7	-0.6
BJT				IAmb	IAmb	08 30 11.9	
	comp=Z,12nm,1.1s						
MJAR	Matsushiro Arr	42.54	23	LR	LR	08 46 11.9	
	comp=Z,74nm,21.8s,baz=210,slow=34						
GTA	Gaotai	45.37	339	eP	P	08 30 33.9	+1.0
GTA				pP	pP	08 30 38.0	-5.4
GTA				sP	sP	08 30 40.8	-6.8
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
USRK	Ussuriysk Ar.	47.77	12	LR	LR	08 50 26.8	
	comp=Z,60nm,21.4s,baz=168,slow=36						
ULN	Ulaanbaatar	51.24	349	P	P	08 31 18.7	+0.6
SONM	Songino Array	51.34	349	P	P	08 31 19.1	+0.4
	comp=Z,3.3nm,1.0s,baz=165,slow=7.6,SNR=14						
SONM				LR	LR	08 54 08.2	
	comp=Z,85nm,21.5s,baz=118,slow=37						
SONM	Songino Array	51.34	349	P	P	08 31 18.3	-0.4
KLR	Kul'dur	52.55	10	LR	LR	08 53 22.6	
	comp=Z,37nm,21.8s,baz=246,slow=36						
TLY	Talaya	55.55	348	P	P	08 31 49.6	+0.1
	comp=Z,1.6nm,0.6s,baz=160,slow=6.4,SNR=8.8						
TLY	Talaya	55.55	348	P	P	08 31 50.3	+0.9
TLY				IAmb	IAmb	08 31 54.2	
	comp=Z,12nm,1.3s						
KSH	Kashi	57.70	321	P	P	08 32 06.9	+1.8
KSH				pP	pP	08 32 13.9	-1.9
KSH				pmax	pmax		
	comp=Z,12nm,1.1s						
KSH				pmax	pmax		
	comp=Z,420nm,5.7s						
SHLS	Shalkode	57.88	326	eP	P	08 32 04.7	-1.6
	baz=326						
SATY	Saty	58.41	326	eP	P	08 32 08.9	-1.1
	comp=Z,2.7nm,0.9s,baz=325						
KPKS	Kokpek	58.51	326	eP	P	08 32 08.9	-1.7
	comp=Z,4.7nm,1.0s,baz=326						
MK31	Makanchi Array	58.89	331	P	P	08 32 12.2	-1.0
MK31				IAmb	IAmb	08 32 24.9	
	comp=Z,5.2nm,1.2s						
MKAR	Makanchi Array	58.89	331	P	P	08 32 13.9	+0.8
	comp=Z,2.0nm,0.7s,baz=135,slow=7.1,SNR=21						
MKAR				LR	LR	09 00 31.1	
	comp=Z,51nm,19.5s,baz=160,slow=39						
MKAR	Makanchi Array	58.89	331	P	P	08 32 12.9	-0.2
MDOK	Medeo	59.24	325	eP	P	08 32 14.9	-0.9
	baz=325						
KBL	Kabul	59.85	313	P	P	08 32 19.3	-1.0
KUU	Kurty	60.10	325	eP	P	08 32 19.2	-2.3
	comp=Z,7.5nm,0.9s,baz=325						
AAK	Ala-Archa	60.42	323	P	P	08 32 25.0	+1.0
	comp=Z,1.5nm,0.5s,baz=158,slow=11,SNR=3.4						
AAK	Ala-Archa	60.42	323	P	P	08 32 24.3	+0.3
BTLS	Baital	62.10	325	eP	P	08 32 33.8	-1.3
	baz=325						
SEM	Semipalatinsk	62.40	333	eP	P	08 32 35.6	-1.7
	comp=Z,3.6nm,1.8s,baz=333						
ZAA0	Zalesovo Array	63.12	338	P	P	08 32 42.1	+0.4
ZALV	Zalesovo Beam	63.12	338	P	P	08 32 41.5	-0.2
	comp=Z,5.6nm,0.7s,baz=139,slow=14,SNR=18						
KURBB	Kurchatov Arra	63.34	332	P	P	08 32 43.4	+0.2
	comp=Z,5.6nm,1.1s,baz=130,slow=6.3,SNR=15						
KURK	Kurchatov	63.37	332	P	P	08 32 44.0	+0.6
PETK	Petropavlovsk-	63.94	25	LR	LR	08 59 35.4	
	comp=Z,44nm,21.6s,baz=248,slow=35						
BRZS	Berezniki	65.81	329	eP	P	08 32 59.1	-0.2
	comp=Z,3.1nm,1.4s,baz=329						
BVAR	Borovoye Array	68.77	331	P	P	08 33 17.9	-0.2
	comp=Z,0.4nm,0.5s,baz=166,slow=24,SNR=2.7						
ABKAR	Akbulak array	72.50	324	P	P	08 33 40.6	-0.3
ABKAR	Akbulak array	72.50	324	P	P	08 33 40.7	-0.2
ABKAR				IAmb	IAmb	08 33 44.8	
	comp=Z,11nm,1.4s						
AKTO	Aktyubinsk	74.13	324	P	P	08 33 50.5	0.0
	comp=Z,1.9nm,0.7s,baz=64,slow=7.8,SNR=2.0						
VNDA	Vanda	78.38	171	LR	LR	09 10 33.2	
	comp=Z,119nm,18.6s,baz=345,slow=37						
QSPA	South Pole Qui	87.52	180	P	P	08 35 00.6	-1.2
QSPA				IAmb	IAmb	08 35 22.3	
	comp=Z,4.9nm,1.4s						
PDAR	Pinedale Array	120.76	40	PKP	PKiKP	08 41 08.2	+1.3
	comp=Z,0.5nm,1.0s,baz=72,slow=4.8,SNR=3.6						
ULM	Lac du Bonnet	123.77	26	PKP	PKPdf	08 41 11.7	-0.2
	comp=Z,1.4nm,0.8s,baz=263,slow=3.8,SNR=2.9						
TXAR	Lajitas Array	131.12	52	PKP	PKiKP	08 41 28.8	+1.1
	comp=Z,0.2nm,0.7s,baz=217,slow=0.6,SNR=3.5						
CPUP	Villa Florida	151.24	186	PKPbc	PKiKP	08 42 10.3	+1.5
	comp=Z,0.7nm,0.3s,baz=230,slow=2.4,SNR=3.5						

IDC ***10*** *08:26:13.7±1.1, 2°.32S×119°.99E, h0^{km}, mb3.4/5, mb1 3.6/6, mb1mx3.4/51, mbtmp3.5/6, ML3.9/1, Error ellipse: s-maj=55.1km s-min=17.1km az=71.0*

ISC 10 08:26:18.5±1.1**, 2°.32S**±0°.10×**120°.1E**±0°.3**, h35**^{km}**, n6,** σ**1^{s}.81**/7**, mb3.5**/5**, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPI	Kappang	2.69	187	Pn	Pn	08 26 57.9	-1.4
	23nm,0.3s,baz=14,slow=11,SNR=13						
KAPI				Sn	Sn	08 27 31.9	+1.2
	18nm,0.3s,baz=221,slow=20,SNR=3.3						
WRA	Warramunga Arr	22.39	142	P	P	08 31 14.8	+0.8
	1.3nm,0.9s,baz=315,slow=12,SNR=3.2						
ASAR	Alice Springs	25.09	149	P	P	08 31 42.4	+2.3
	0.2nm,0.6s,baz=346,slow=14,SNR=3.6						
STKA	Stephens Creek	35.72	148	P	P	08 33 12.6	-1.3
	0.9nm,1.0s,baz=342,slow=6.4,SNR=2.5						
SONM	Songino Array	51.36	348	P	P	08 35 19.0	-0.8
	0.2nm,0.4s,baz=170,slow=7.0,SNR=2.5						
KURBB	Kurchatov Arra	63.55	332	P	P	08 36 46.5	+1.1
	0.3nm,0.4s,baz=140,slow=6.2,SNR=3.4						

IDC ***10*** *08:56:30.0±0.6, 37°.19N×30°.14E, h0^{km}, mb4.4/24, mb1 4.4/32, mb1mx4.3/56, mbtmp4.4/32, ML4.2/8, MS3.6/33, Ms1 3.7/33, ms1mx3.5/63, Error ellipse: s-maj=12.6km s-min=10.3km az=154.0*

ISK ***10*** *08:56:29.4, 37°.18N×30°.00E, h5^{km}, ML4.5/37*

NIC ***10*** *08:56:30.9±0.0, 37°.03N×30°.22E, h3^{km}±1^{km}, Ml4.6/4*

DDA ***10*** *08:56:30.3, 37°.15N×30°.07E, h12^{km}±5^{km}, MW4.5*

MOS ***10*** *08:56:30.1±1.3, 37°.08N×30°.23E, h12^{km}, mb4.7/31, Error ellipse: s-maj=4.6km s-min=3.3km az=103.2*

NEIC ***10*** *08:56:31.2±1.1, 37°.12N±0°.06×30°.08E±0°.07, h10^{km}±1^{km}, Error ellipse: s-maj=10.4km s-min=8.8km az=160.0*

THE ***10*** *08:56:32.6, 37°.21N×30°.03E, h0^{km}±1^{km}, ML4.2/1, Error ellipse: s-maj=4.1km s-min=0.6km az=100.0*

GCMT ***10*** *08:56:32.9±0.4, 36°.81N±0°.05×29°.91E±0°.03, h23^{km}±1^{km}, MW4.8/79, Moment Tensor Solution. s11,c13; s79,c95; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.66±.17; M$_{\theta\theta}$0.18±.10; M$_{\phi\phi}$1.48±.10; M$_{r\theta}$-0.90±.19; M$_{\theta\phi}$0.29±.07; M$_{\phi r}$0.45±.12; Best double couple: M$_0$1.83500×10^{16} NP1:φ$_s$32.00000°, δ44.00000°, λ-56.00000°. NP2: φ$_s$168.00000°, δ55.00000°, λ-119.00000°. Principal axes: T 1.5680, Plg6.0000°, Azm278.0000°; N 0.5320, Plg23.0000°, Azm186.0000°; P -2.1030, Plg66.0000°, Azm21.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

MED_RC ***10*** *08:56:34.0±0.4, 36°.97N×29°.95E, h11^{km}±1^{km}, MW4.7/25, Moment Tensor Solution.Mantle waves: s25,c30; Duration: 1^{s}.0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.70±.11; M$_{\theta\theta}$-0.11±.06; M$_{\phi\phi}$0.81±.07; M$_{r\theta}$-0.42±.22; M$_{\theta\phi}$0.05±.04; M$_{\phi r}$1.09±.25; Best double couple: M$_0$1.40000×10^{16} NP1:φ$_s$24.00000°, δ20.00000°, λ-51.00000°. NP2:φ$_s$163.00000°, δ74.00000°, λ-103.00000°. Principal axes: T 1.4000, Plg28.0000°, Azm263.0000°; N 0.0000, Plg12.0000°, Azm167.0000°; P -1.4000, Plg59.0000°, Azm55.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

ISC 10 08:56:31.5±0.8**, 37°.13N**±0°.02×**30°.08E**±0°.01**, h9**^{km}±5^{km}**, n410,** σ**1^{s}.77**/454**, mb4.7**/78**, MS3.7**/25**, 43C-19D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KORT	Korkueli	0.25	120	⇑iP	Pg	08 56 36.1	-0.5
KORT				i S	Sb	08 56 42.4	+2.4
KORT				IAML		08 56 46.0	
	comp=N,36μm,0.8s						
ELL	Elmali	0.40	200	PG	Pg	08 56 38.6	-0.8
ELL	Elmali	0.40	200	P	Pg	08 56 38.8	-0.6
ELL	Elmali	0.40	200		Pg	08 56 38.8	-0.6
ELL	Elmali	0.40	200	P	Pg	08 56 38.4	-1.0
ELL				S	Sg	08 56 45.2	+0.5
GOLH	Golhisar	0.43	285	⇑iP	Pg	08 56 38.0	-1.9
GOLH				IAML		08 56 46.0	
	comp=N,6μm,0.2s						
GOLH				i S	Sg	08 56 46.2	+0.6
GOLH				IAML		08 56 53.0	
	comp=E,45μm,1.0s						
BUCA	Burdur, Bucak-	0.43	62	⇑iP	Pg	08 56 38.3	-1.6
BUCA				i S	Sg	08 56 46.2	+0.5
ANTB	Antalya	0.51	116	PG	Pg	08 56 41.6	+0.2
ANTB				SG	Sn	08 56 51.6	-2.1
BRDR	BURDUR-Merkez	0.57	358	⇓iP	Pg	08 56 39.8	-2.8
BRDR				i S	Sg	08 56 49.5	-0.6
BRDR				IAML		08 56 58.0	
	comp=E,7μm,0.6s						
BRDR				IAML		08 56 58.0	
	comp=N,7μm,0.9s						
CAEL	Denizli, Camel	0.61	270	⇑iP	Pg	08 56 41.2	-2.1
CAEL				i S	Sg	08 56 52.6	+1.3
CAEL				IAML		08 57 04.0	
	comp=N,16μm,1.0s						
CAEL				IAML		08 57 04.0	
	comp=E,21μm,1.2s						
ISP	Isparta	0.78	27	PG	Pg	08 56 44.3	-2.2
ISP				SG	Sg	08 56 56.9	+0.2
ISP	Isparta	0.78	27	P	Pg	08 56 45.2	-1.3
ISP	Isparta	0.78	27		Pg	08 56 45.2	-1.3
BASM	Basmaki-Afyon	0.79	358	PG	Pg	08 56 44.8	-2.0
AKUM	Antalya-Kumluc	0.83	165	i P	Pb	08 56 48.1	+0.1
AKUM				i S	Sn	08 57 05.3	+3.8
AKUM				IAML		08 57 16.0	
	comp=E,7μm,0.7s						
FETY	Fethiye	0.94	239	PG	Pb	08 56 46.7	-3.2
FETY				SG	Sb	08 57 01.9	-0.5
AKAS	Kas	0.97	203	PG	Pb	08 56 49.4	-1.1
AKAS	Kas	0.97	203	i P	Pb	08 56 49.0	-1.5
AKAS				IAML		08 57 09.0	
	comp=E,1μm,0.3s						
AKAS				i S	Sn	08 57 09.1	+3.8
AKAS				IAML		08 57 14.0	
	comp=N,10μm,0.8s						
TAVA	DENIZLI_Tavas	0.99	290	⇑iP	Pb	08 56 47.8	-3.1
TAVA				i S	Sb	08 57 02.0	-2.0
BAGO	Egridir - ISPA	1.03	33	⇑iP	Pb	08 56 48.3	-3.2
BAGO				i S	Sn	08 57 09.1	+2.3
KZIL	AFYON_Kizioren	1.13	2	⇓iP	Pb	08 56 51.5	-1.7
KZIL				i S	Sn	08 57 09.3	0.0
KZIL				IAML		08 57 14.0	
	comp=N,2μm,1.6s						
KZIL				IAML		08 57 15.0	
	comp=E,2μm,0.6s						
DALY	Dalyan (Mula)	1.18	255	PN	Pn	08 56 52.2	-1.9
DALY				SN	Sb	08 57 09.3	-0.1
DALY	Dalyan (Mula)	1.18	255	⇑iP	Pn	08 56 52.1	-2.1
DALY				i S	Sg	08 57 13.1	+3.5
DALY				IAML		08 57 15.0	
	comp=N,7μm,0.9s						
KEPZ	Antalya-Kepez	1.24	100	i P	Pn	08 56 53.7	-1.2
KEPZ				i S	Sg	08 57 20.8	+9.5
KHAL	Karahalli	1.33	340	i P	Pn	08 56 54.9	-1.4
KHAL				i S	Sb	08 57 14.6	+0.8
SEDI	Konya, Seydise	1.37	76	⇑iP	Pn	08 56 56.5	-0.4
SEDI				i S	Sg	08 57 17.4	+1.7
MULA	Mugla, Merkez-	1.41	276	i P	Pn	08 56 56.9	-0.4
MULA				i S	Sg	08 57 17.7	+0.8
MULA				IAML		08 57 19.0	
	comp=E,7μm,0.9s						
YER	Yerkesik	1.44	271	P	Pn	08 56 57.6	-0.1
YER				S	Sb	08 57 17.2	+0.4
YER	Yerkesik	1.44	271	PN	Pn	08 56 56.8	-0.9
YER	Yerkesik	1.44	271	P	Pn	08 56 57.0	-0.7
YVAC	Isparta, Yalva	1.47	38	⇑iP	Pn	08 56 58.5	+0.4
YVAC				i S	Sg	08 57 20.1	+1.5
TURN	Turunc	1.51	257	PN	Pn	08 56 58.1	-0.6
TURN				SN	Sb	08 57 19.0	+0.1
TURN	Turunc	1.51	257	i P	Pn	08 56 57.9	-0.8
TURN				i S	Sg	08 57 21.5	+1.4
DOGA	KONYA_Doganhis	1.59	52	⇑iP	Pn	08 56 59.8	-0.2
DOGA				i S	Sg	08 57 22.9	+0.1
AFYO	Afyonkarahisar	1.67	6	i P	Pn	08 57 00.1	-0.8
AFYO				i S	Sg	08 57 32.0	+6.9
KULA	Kula-Manisa	1.79	321	P	Pn	08 57 01.8	-0.7
KULA				S	Sn	08 57 24.5	-0.8
KULA	Kula-Manisa	1.79	321	PN	Pn	08 57 01.4	-1.1
KULA				SN	Sn	08 57 24.8	-0.5
USAK	Uak-Merkez	1.79	332	i P	Pn	08 57 01.6	-1.0
USAK				i S	Sg	08 57 29.4	+0.3
ARG	Arkhangelos	1.81	241	P	Pn	08 57 03.6	+0.8
ARG				S	Sb	08 57 28.2	+0.6
	comp=E,5μm,1.5s						
ARG	Arkhangelos	1.81	241	PN	Pn	08 57 02.9	+0.1
ARG	Arkhangelos	1.81	241	P	Pb	08 57 05.3	+0.5
ARG	Arkhangelos	1.81	241	⇑P	Pn	08 57 03.6	+0.8

ARG				S	Sg	08 57 29.3	-0.5
MANT	Manisa	1.82	319	*i* P	Pn	08 57 01.9	-1.2
MANT				*i* S	Sg	08 57 34.1	+4.1
MLSB	Milas	1.85	276	PN	Pn	08 57 02.8	-0.5
AYDB	Zeytinkoy-Aydi	1.92	296	PN	Pn	08 57 03.8	-0.7
KONT	Konya--Tatoy	1.99	65	PN	Pn	08 57 06.0	+0.7
KONT	Konya--Tatoy	1.99	65	⇑*i*P	Pb	08 57 06.9	-0.9
KONT				*i* S	Sb	08 57 33.5	+0.8
GAZI	Gazipasa	2.00	116	PN	Pb	08 57 07.0	-1.1
GAZI	Gazipasa	2.00	116	*i* P	Pn	08 57 06.5	+1.0
GAZI				*i* S	Sg	08 57 40.5	+4.6
LADK	Ladik-KONYA	2.11	59	PN	Pn	08 57 07.8	+0.8
KDHN	Kadinhani	2.13	49	*i* P	Pn	08 57 07.7	+0.4
KDHN				*i* S	Sb	08 57 38.6	+1.7
SIMA	Simav-Kutahya	2.14	336	PN	Pn	08 57 06.5	-0.9
DEMI	Demirci	2.20	331	*e*P	Pn	08 57 07.0	-1.2
DEMI				*i* S	Sg	08 57 47.2	+5.2
BODT	Bodrum	2.22	269	P	Pn	08 57 08.5	+0.1
BODT	Bodrum	2.22	269	PN	Pn	08 57 08.1	-0.3
KKBE	Karaman, Kazim	2.29	87	*i* P	Pb	08 57 12.7	-0.2
KKBE				*i* S	Sg	08 57 44.8	-0.2
ERMK	Ermenek	2.32	101	*i* P	Pb	08 57 12.9	-0.7
ERMK				*i* S	Sb	08 57 44.0	+1.6
CIFT	Cifteler, Eski	2.36	19	PN	Pn	08 57 10.2	-0.2
CIFT	Cifteler, Eski	2.36	19	*i* P	Pn	08 57 10.0	-0.5
CIFT				*i* S	Sb	08 57 44.5	+1.0
SVRH	Sivrihisar-ESK	2.58	26	PN	Pn	08 57 13.7	+0.2
TEKE	Tekeli-Mersin	2.63	111	PN	Pn	08 57 15.9	+1.9
BERE	Bereket-Mersin	2.64	106	PN	Pn	08 57 16.3	+2.0
SMG	Samos	2.65	284	P	Pn	08 57 14.2	-0.1
BLCB	Balcova	2.72	298	P	Pn	08 57 14.9	-0.3
BLCB	Balcova	2.72	298	PN	Pn	08 57 14.9	-0.3
TEVE	Tevekalti-Mers	2.79	103	PN	Pn	08 57 18.2	+1.9
ALFC	Alefka	2.83	133	⇑P	Pn	08 57 14.3	-2.5
ALFC				AML	AML	08 58 01.9	
	comp=E,6.9nm,1.0s						
ALFC				AML	AML	08 58 08.5	
	comp=E,6.1nm,0.8s						
KARP	Karpathos	2.84	237	P	Pn	08 57 17.6	+0.7
KARP	Karpathos	2.84	237	PN	Pn	08 57 17.4	+0.5
KARP	Karpathos	2.84	237	Pn	Pn	08 57 16.5	-0.4
KARP	Karpathos	2.84	237	⇑P	Pn	08 57 17.2	+0.3
KARP				AML	AML	08 58 09.8	
	comp=E,4.6nm,1.2s						
KARP				AML	AML	08 58 17.4	
	comp=E,5.3nm,0.7s						
AKKU	Akkuyu-Mersin	2.95	108	PN	Pn	08 57 20.6	+2.1
KEBE	Keben-Mersin	2.99	102	PN	Pn	08 57 20.9	+1.8
IKL	Isikli	3.03	106	PN	Pn	08 57 21.6	+2.1
LEF	Lefka	3.03	131	⇓P	Pn	08 57 21.6	+2.1
LEF				⇓S	Sb	08 57 59.7	-2.9
CAVI	Cavuskoy	3.08	357	PN	Pn	08 57 20.2	0.0
NATA	Nata	3.09	138	S	Sn	08 57 57.5	0.0
SILI	Silifke-Mersin	3.18	103	PN	Pn	08 57 23.6	+2.0
SERE	Sereflikochisa	3.30	55	PN	Pn	08 57 24.8	+1.5
ADVT	Abdulvahap	3.31	355	PN	Pn	08 57 23.6	+0.2
GULT	Gulveren	3.32	6	PN	Pn	08 57 23.9	+0.3
KIZK	Mersin	3.32	100	PN	Pn	08 57 25.9	+2.3
CSS	Mathiatis	3.41	128	PN	Pn	08 57 27.1	+2.4
CSS	Mathiatis	3.41	128	Pn	Pn	08 57 24.4	-0.3
CSS	Mathiatis	3.41	128	⇑P	Pn	08 57 23.4	-1.4
CHOS	Chios island	3.43	293	P	Pn	08 57 25.8	+0.7
BR231	Keskin MP Arra	3.44	37		Pn	08 57 25.2	-0.1
MDUB	Mudurnu	3.45	14	PN	Pn	08 57 25.5	0.0
MDUB	Mudurnu	3.45	14	Pn	Pn	08 57 25.2	-0.3
YAYX	Yaylak	3.46	57	PN	Pn	08 57 26.6	+1.1
LOD	Lodumlu	3.47	37	PN	Pn	08 57 25.3	-0.4
ASGA	Asgata	3.47	131	S	Sn	08 58 05.3	-1.5
YUVA	Yuva-Kibriscik	3.49	21	PN	Pn	08 57 26.7	+0.7
MVOU	Mavrovouni	3.56	125	⇑P	Pn	08 57 25.6	-1.3
MVOU				AML	AML	08 58 29.6	
	comp=E,3.2nm,0.9s						
MVOU				AML	AML	08 58 33.1	
	comp=E,3.8nm,0.9s						
APE	Apeiranthos	3.64	270	⇑P	Pn	08 57 30.2	+2.2
APE	Apeiranthos	3.64	270	⇓*e*P	Pn	08 57 28.6	+0.6
EDC	Edincik	3.65	332	P	Pn	08 57 31.4	+3.3
EREN	Erenkoy	3.67	115	PN	Pn	08 57 30.7	+2.4
ZKR	Zakros	3.72	238	P	Pn	08 57 30.7	+1.7
ZKR				S	Sn	08 58 16.4	+3.5
ZKR				AML	AML	08 58 20.5	
	comp=E,2.0nm,0.7s						
ZKR				AML	AML	08 58 20.5	
	comp=E,2.0nm,0.7s						
ZKR				AML	AML	08 58 23.3	
	comp=E,1.1nm,0.8s						
ZKR				AML	AML	08 58 23.3	
	comp=E,1.1nm,0.8s						
SANT	Santorini	3.79	260	Pn	Pn	08 57 29.8	-0.3
BR131	Keskin Array S	3.81	46	*c i*P	Pn	08 57 30.8	+0.3
BR131	Keskin Array S	3.81	46	Pn	Pn	08 57 30.5	0.0
BRTR	Keskin Array B	3.81	46	Pn	Pn	08 57 30.8	+0.3
	comp=E,4.5nm,0.3s,baz=228,slow=15,SNR=57						
BRTR				Sn	Sn	08 58 16.2	+0.7
	comp=E,14nm,0.3s,baz=215,slow=25,SNR=21						
BRTR				LR	LR	08 59 23.5	
	comp=E,2µm,18.9s,baz=216,slow=46						
BRTR	Keskin Array B	3.81	46	*i* P	Pn	08 57 30.7	+0.3
BRTR				pmax	pmax		
	comp=Z,80nm,0.7s						
BRTR	Keskin Array B	3.81	46		Pn	08 57 30.2	-0.2
EZN	Ezine	3.99	314	P	Pn	08 57 32.6	-0.2
EZN	Ezine	3.99	314	P	Pn	08 57 32.8	0.0
OSC2	CSNet OBS 4	4.42	155	P	Pn	08 57 37.7	-0.9
OSC2				S	Sn	08 58 29.4	-0.8
IDI	Anoyia	4.58	248	Pn	Pn	08 57 42.3	+1.3
	comp=Z,5.4nm,0.3s,baz=44,slow=17,SNR=6.3						
IDI				Sn	Sn	08 58 34.0	-0.3
	comp=Z,19nm,0.3s,baz=80,slow=11,SNR=10						
IDI				LR	LR	08 59 57.6	
	comp=Z,1µm,18.1s,baz=77,slow=45						
ALN	Alexandroupoli	4.90	321	P	Pn	08 57 44.9	-0.4
ALN	Alexandroupoli	4.90	321	Pn	Pn	08 57 44.9	-0.4
HWQ	Hawqa	5.55	119	*e*P	Pn	08 57 57.2	+2.8
DQRL	Deir Qamar	5.63	126	*e*P	Pn	08 57 59.2	+3.8
GAZ	Gaziantep	5.70	87		Pn	08 57 56.0	-0.3
RCY	Rachaya	5.94	126	*e*P	Pn	08 58 01.7	+2.0
MMAI	Mount Meron Ar	5.99	132	Pn	Pn	08 58 01.8	+1.5
	comp=Z,34nm,0.3s,baz=307,slow=11,SNR=57						
MMAI				Sn	Sn	08 59 11.3	+2.3
	baz=305,slow=28,SNR=2.1						
KVT	Kavak	6.09	48	P	Pn	08 58 04.6	+2.9
AGG	Agios Georgios	6.40	290	P	Pn	08 58 05.7	-0.2
AGG	Agios Georgios	6.40	290		Pn	08 58 05.7	-0.2
SRS	Serrai	6.43	310	P	Pn	08 58 08.2	+1.9
SRS				pmax	pmax		
	comp=Z,63nm,1.0s						
PLD	Plovdiv	6.48	322	P	Pn	08 58 08.6	+1.7
PLD				pmax	pmax		
	comp=Z,389nm,0.8s						
ITM	Ithomi	6.51	273	Pn	Pn	08 58 07.4	-0.1
LIT	Litokhoron	6.64	299	P	Pn	08 58 09.1	-0.1
LIT	Litokhoron	6.64	299	Pn	Pn	08 58 09.1	-0.1
GRG	Griva	7.09	305	P	Pn	08 58 17.3	+1.9
GRG				pmax	pmax		
	comp=Z,78nm,1.4s						
VAY	Valandovo	7.18	308	*i* Pn	Pn	08 58 18.0	+1.5
TIRR	Tirgusor	7.43	351	⇓P	Pn	08 58 20.5	+0.5
TIRR	Tirgusor	7.43	351	P	Pn	08 58 19.0	-1.0
TIRR				pmax	pmax		
	comp=Z,96nm,0.9s						
TIRR	Tirgusor	7.43	351		Pn	08 58 19.7	-0.3
PLVB	Pleven	7.52	328	⇑P	Pn	08 58 22.4	+1.3
VTS	Vitosha	7.60	318	⇑P	Pn	08 58 23.4	+1.0
VTS	Vitosha	7.60	318	P	Pn	08 58 22.9	+0.4
VTS	Vitosha	7.60	318		Pn	08 58 22.9	+0.4
STIP	Stip	7.62	309	*i* Pn	Pn	08 58 22.3	-0.4
FNA	Florina	7.70	301	P	Pn	08 58 24.0	+0.2
FNA	Florina	7.70	301	Pn	Pn	08 58 24.0	+0.2
TPGR	Topolog	7.82	351	⇓P	Pn	08 58 25.8	+0.4
SEV	Sevastopol'	7.89	19	*e*P	Pn	08 58 26.9	+0.6
SEV				*e*S	Sn	08 59 53.7	-2.0
SEV				pmax	pmax		
	comp=Z,4.0nm,0.3s						
SEV				smax	smax		
	comp=N,3.0nm,0.3s						
SEV				smax	smax		
	comp=E,1.0nm,0.3s						
CFR	Carcaliu	8.18	350	⇓P	Pn	08 58 30.4	+0.2
CFR	Carcaliu	8.18	350	P	Pn	08 58 31.6	+1.4
CFR				pmax	pmax		
	comp=Z,18nm,0.9s						
OHR	Ohrid	8.24	302	*i* Pn	Pn	08 58 40.8	+10
EIL	Elat	8.48	150	Pn	Pn	08 58 35.1	+0.7
	comp=Z,9.3nm,0.3s,baz=332,slow=7.7,SNR=27						
EIL				Sn	Sn	09 00 07.1	-3.1
	comp=Z,1.6nm,0.3s,baz=328,slow=13,SNR=3.3						
EIL				LR	LR	09 03 10.5	
	comp=Z,72nm,18.3s,baz=314,slow=47						
SUDU	Sudak	8.60	24	*e*P	Pn	08 58 39.6	+3.6
SUDU				*e*S	Sn	09 00 15.9	+2.8
SUDU				pmax	pmax		
	comp=Z,29nm,0.6s						
SUDU				smax	smax		
	comp=N,4.0nm,0.5s						
SUDU				smax	smax		
	comp=E,9.0nm,0.3s						
MLR	Muntele Rosu	8.92	341	Pn	Pn	08 58 42.7	+2.3
	comp=E,0.6nm,0.3s,baz=200,slow=5.0,SNR=8.2						
MLR				LR	LR	09 02 35.9	
	comp=E,299nm,18.7s,baz=168,slow=41						
MLR	Muntele Rosu	8.92	341	⇑P	Pn	08 58 41.5	+1.0
MLR	Muntele Rosu	8.92	341	Pn	Pn	08 58 40.3	-0.2
VRI	Vrincioaia	9.09	345	⇓P	Pn	08 58 43.9	+1.2
VRI	Vrincioaia	9.09	345	P	Pn	08 58 44.0	+1.2
VRI				pmax	pmax		
	comp=Z,34nm,1.0s						
PLOR	Plostina	9.09	345	⇑P	Pn	08 58 44.3	+1.5
PLOR	Plostina	9.09	345	P	Pn	08 58 46.1	+3.3
PLOR				pmax	pmax		
	comp=Z,27nm,0.9s						
VOIR		9.12	337	⇑P	Pn	08 58 43.8	+0.5
ANN	Anapa	9.47	34	*e*P	Pn	08 58 44.2	-3.7
ANN				*e*S	Sn	09 00 34.0	-0.3
ANN				pmax	pmax		
	comp=Z,49nm,1.1s						
DOPR	Dopca	9.51	340	⇑P	Pn	08 58 50.2	+1.7
LOT	Lotru	9.57	332	⇑P	Pn	08 58 51.0	+1.5
HERR	Herculane	9.67	326	⇓P	Pn	08 58 51.7	+1.1
SOC	Sochi	9.78	46	*e*P	Pn	08 58 50.4	-1.8
SOC				*e*		09 00 43.4	
SOC				pmax	pmax		
	comp=Z,25nm,0.9s						
SOC				MLR	MLR		
	comp=Z,76nm,13.0s						
PDG	Podgorica	9.87	306		Pn	08 58 53.3	-0.2
GZR	Gura Zlata	9.92	329	⇑P	Pn	08 58 55.3	+1.1
MDVR	Moldovita	9.92	323	⇓P	Pn	08 58 54.8	+0.6
BIZ	Bicaz	10.24	344	⇓P	Pn	08 58 59.7	+1.2
DEV	Deva	10.27	331	P	Pn	08 59 02.1	+3.2
DEV				pmax	pmax		
	comp=Z,40nm,0.7s						
BZS	Buzias	10.60	326	⇑P	Pn	08 59 04.6	+1.2
BZS	Buzias	10.60	326	P	Pn	08 59 05.9	+2.5
BZS				pmax	pmax		
	comp=Z,13nm,1.4s						
TIP	Timpagrande	10.69	285	⇓P	Pn	08 59 06.4	+1.7
TIP	Timpagrande	10.69	285		Pn	08 59 03.4	-1.4
CHVG	Ch'k'valeri	10.77	55	⇓P	Pn	08 59 06.4	+0.6
BURAR	Bucovina Array	11.08	343	⇓P	Pn	08 59 11.2	+1.2
BURAR	Bucovina Array	11.08	343	Pn	Pn	08 59 09.8	-0.2
ONI	Oni	11.63	58	P	Pn	08 59 23.5	+5.9
KIV	Kislovodsk	11.76	51	*e*P	Pn	08 59 19.7	+0.3
KIV				pmax	pmax		
	comp=Z,63nm,1.1s						
KIV				MLR	MLR		
	comp=Z,170nm,10.0s						
KIV	Kislovodsk	11.76	51	Pn	Pn	08 59 19.8	+0.3
KBZ	Khabaz	11.78	52	Pn	Pn	08 59 24.8	+5.3
	comp=Z,0.1nm,0.3s,baz=251,slow=4.5,SNR=5.2						
KBZ	Khabaz	11.78	52	⇑*e*P	Pn	08 59 23.8	+4.3
ZEI	Tsey	12.01	58	*e*P	Pn	08 59 27.1	+4.1
ZEI				pmax	pmax		
	comp=Z,15nm,1.0s						
NCK	Nalchik	12.11	54	⇑*e*P	Pn	08 59 26.9	+2.7
NCK				pmax	pmax		
	comp=Z,27nm,1.0s						
UZH	Uzhgorod	12.83	336	*e*P	Pn	08 59 36.5	+2.6
KOLS	Kolonicke sedl	13.10	337	*e*P	Pn	08 59 41.6	+4.0
KOLS	Kolonicke sedl	13.10	337	*e*PN	Pn	08 59 41.6	+4.0
PSZ	Piszkesteto	13.13	328	P	Pn	08 59 36.9	-1.1
PSZ	Piszkesteto	13.13	328		Pn	08 59 36.9	-1.1
AKASG	Malin Array Be	13.59	358	Pn	Pn	08 59 40.7	-3.5
	comp=Z,0.9nm,0.3s,baz=175,slow=12,SNR=3.0						
AKBB	Malin Array Si	13.59	358	⇑*e*P	Pn	08 59 45.1	+0.9
VYHS	Vyhne	14.02	328	*e*P	Pn	08 59 53.6	+3.4
VYHS	Vyhne	14.02	328	*e*PN	Pn	08 59 53.6	+3.4
NIE	Niedzica	14.19	333	P	Pn	08 59 56.2	+3.8
NRCA	Norcia	14.20	299		Pn	08 59 51.5	-1.2
ARSA	Arzberg	14.77	318	*e*P	P	09 00 03.8	-2.7
	comp=Z,15nm,1.4s						
JAVC	Velka Javorina	14.81	326	*e*PN	P	09 00 09.5	+2.6
CONA	Conrad Observa	15.02	320	*e*P	Pn	09 00 06.2	+2.3
	comp=Z,11nm,1.6s						
VSR	Storozhevoye	15.50	22	*e*P	Pn	09 00 08.4	-1.7
VSR				pmax	pmax		
	comp=Z,5.0nm,0.5s						
KRUC	Moravsky	15.53	324	*e*PN	P	09 00 16.4	+1.5
KRUC	Moravsky	15.53	324	P	P	09 00 16.1	+1.2
KRUC				pmax	pmax		
	comp=Z,13nm,2.1s						
MORC	Moravsky Berou	15.55	328	⇑P	Pn	09 00 11.8	+1.0
MORC	Moravsky Berou	15.55	328	*e*PN	P	09 00 15.7	+0.5
MORC	Moravsky Berou	15.55	328	P	Pn	09 00 09.7	-1.1
MORC				pmax	pmax		
	comp=Z,20nm,1.5s						
MORC	Moravsky Berou	15.55	328		Pn	09 00 09.7	-1.1
VRAC	Vranov	15.62	325	Pn	P	09 00 16.5	+0.7
	comp=Z,0.5nm,0.3s,baz=170,slow=11,SNR=5.3						
VRAC				LR	LR	09 08 03.8	
	comp=Z,128nm,18.4s,baz=148,slow=44						
VRAC	Vranov	15.62	325	⇓P	Pn	09 00 12.0	+0.4
VRAC	Vranov	15.62	325	*e*PN	P	09 00 17.5	+1.6
VRAC	Vranov	15.62	325	P	P	09 00 17.3	+1.4
VRAC				pmax	pmax		
	comp=Z,17nm,1.9s						
OSSC	Osservatorio P	15.71	300		Pn	09 00 12.0	-0.9
OSSC				IAmb	IAmb	09 00 23.0	
	comp=Z,28nm,1.2s						
MOA	Molln	15.81	318	*e*P	P	09 00 18.0	0.0
	comp=Z,10.0nm,1.4s						
ZOU	Zoufplan	15.82	312		Pn	09 00 14.3	-0.2
KBA	Koelnbreinsper	15.88	314	*e*P	P	09 00 18.1	-0.9
	comp=Z,16nm,1.5s						
KBA	Koelnbreinsper	15.88	314	P	P	09 00 19.7	+0.7
KBA				pmax	pmax		
	comp=Z,10.0nm,1.7s						
TEOL	Teolo	16.08	307	Pn	Pn	09 00 16.7	-0.9
KRLC	Kraliky	16.10	328	*e*P	P	09 00 26.4	+5.1
KRLC	Kraliky	16.10	328	*e*P	P	09 00 26.4	+5.1
ZCCA	Zocca	16.16	302	P	Pn	09 00 19.2	+0.5
ZCCA				IAmb	IAmb	09 00 31.8	
	comp=Z,52nm,1.2s						
ABTA	Abfaltersbach	16.20	312	*e*P	P	09 00 23.7	+1.4
	comp=Z,5.4nm,0.9s						
VRH	Novokhopyorsk	16.33	27	*e*P	Pn	09 00 22.2	+1.4
VRH				pmax	pmax		
	comp=Z,50nm,1.0s						
CTI	Castel Tesino	16.39	309	P	Pn	09 00 20.7	-1.0
CTI				pmax	pmax		
	comp=Z,15nm,0.9s						
CTI	Castel Tesino	16.39	309		Pn	09 00 20.7	-1.0
VSL	Villasalto	16.42	285	P	Pn	09 00 22.1	0.0
VSL				IAmb	IAmb	09 00 29.3	
	comp=Z,48nm,1.0s						
DPC	Dobruska-Polom	16.50	328	*e*P	P	09 00 27.3	+1.6
DPC	Dobruska-Polom	16.50	328	*e*P	P	09 00 27.3	+1.6
LPSR	Galich'ya Gora	16.68	19	*e*P	Pn	09 00 24.2	-0.9
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GEC2	GERESS Array S	16.71	320		Pn	09 00 26.1	+0.3
GERES	GERESS Array B	16.71	320	Pn	P	09 00 27.2	-0.9
	comp=Z,0.4nm,0.3s,baz=125,slow=12,SNR=24						
GERES				LR	LR	09 07 49.4	
	comp=Z,259nm,18.4s,baz=154,slow=41						
GERES	GERESS Array B	16.71	320		P	09 00 28.2	+0.1
KEST	Kesra	16.75	271	Pn	Pn	09 00 27.1	+0.8
	comp=Z,0.6nm,0.3s,baz=72,slow=11,SNR=4.4						
KEST				LR	LR	09 08 52.1	
	comp=Z,172nm,18.2s,baz=78,slow=44						
KEST	Kesra	16.75	271	P	P	09 00 28.3	-0.2
KEST				IAmb	IAmb	09 00 57.3	
	comp=Z,49nm,1.4s						
KSP	Ksiaz	16.88	329	P	P	09 00 31.1	+1.2
KSP				pmax	pmax		
	comp=Z,14nm,1.8s						
KHC	Kasperske Hory	16.96	320	*e*P	P	09 00 31.7	+0.9
KHC	Kasperske Hory	16.96	320	*e*P	P	09 00 31.7	+0.9
KHC				*e*x	x	09 00 43.0	
KHC	Kasperske Hory	16.96	320	P	Pn	09 00 29.7	+0.9
WTTA	Wattenberg	16.97	312	*e*P	P	09 00 32.6	+1.5
	comp=Z,23nm,1.3s						
WTTA	Wattenberg	16.97	312	P	P	09 00 33.3	+2.2
WTTA				pmax	pmax		
	comp=Z,15nm,1.1s						
WATA	Walderalm	17.04	313	*e*P	P	09 00 34.3	+2.4
	comp=Z,11nm,1.0s						
PRU	Pruhonice	17.05	324	*e*P	P	09 00 38.0	+6.3
PRU	Pruhonice	17.05	324	*e*P	P	09 00 38.0	+6.3
SQTA	Sankt Quirin	17.20	312	*e*P	P	09 00 32.9	-0.7
	comp=Z,22nm,1.4s						
WET	Wettzell	17.33	319	P	P	09 00 36.5	+1.7
WET				pmax	pmax		
	comp=Z,22nm,1.9s						
MOTA	Moosalm	17.33	312	*e*P	P	09 00 37.3	+2.3
	comp=Z,26nm,1.3s						
FETA	Feichten	17.40	311	*e*P	P	09 00 40.0	+4.2
	comp=Z,30nm,1.3s						
MNK	Minsk	17.45	356	*i* P	P	09 00 37.3	+1.3
	comp=E,4.0nm,0.8s						
MNK				*i* P	P	09 00 37.3	+1.3
	comp=N,15nm,0.8s						
MNK				*i* P	P	09 00 37.3	+1.3
	comp=Z,8.0nm,0.8s						
MNK				*i* PP	PnPn	09 00 47.6	+2.7
MNK				*i* S	S	09 03 53.7	-3.5
MNK				*i* SS	SnSn	09 04 08.8	+6.5
MNK				*i* SS	SnSn	09 04 08.8	+6.5
MNK				*i* LQ	LQ	09 05 50.6	
MNK				*i* LR	LR	09 07 10.8	
MNK				*i* LRM	MLR	09 08 07.5	
	comp=N,105nm,12.2s						
MNK				*i* LRM	MLR	09 08 09.3	
	comp=Z,75nm,12.2s						
MNK				*i* LRM	MLR	09 08 35.5	
	comp=E,9.0nm,13.6s						
RETA	Reutte	17.60	312	*e*P	P	09 00 39.5	+1.6
	comp=E,12nm,1.3s						
DAVOX	Davos/Dischmat	17.81	309	P	P	09 00 42.7	+2.3
	comp=E,0.1nm,0.3s,baz=100,slow=9.6,SNR=8.9						
DAVOX				LR	LR	09 08 37.8	
	comp=E,323nm,19.0s,baz=142,slow=41						
NACGM	Naroch	17.92	354	*i* P	Pn	09 00 39.5	-1.2
NACGM				*i* P	Pn	09 00 39.5	-1.2
NACGM				*i* P	Pn	09 00 39.5	-1.2
NACGM				*i* PP	PnPn	09 00 50.3	-1.2
NACGM				*i* PPP	PPP	09 00 58.0	
NACGM				*i* S	Sn	09 03 58.3	-2.2
NACGM				*i* SS	SnSn	09 04 15.4	+1.3
NACGM				*i* SSS	SSS	09 04 28.2	
NACGM				*i* LQ	LQ	09 06 07.3	
NACGM				*i* LR	LR	09 07 27.9	
BRG	Berggiesshubel	17.93	325	P	P	09 00 44.0	+2.5
BRG				pmax	pmax		
	comp=Z,13nm,1.8s						
BRG	Berggiesshubel	17.93	325	*e*P	P	09 00 43.8	+2.3
BRG				Amp		09 00 47.7	
	comp=Z,24nm,1.4s						
DAVA	Damuels	18.04	311	*e*P	P	09 00 44.5	+1.7
	comp=Z,17nm,1.4s						
OBN	Obninsk	18.53	12	⇑*e*P	Pn	09 00 48.5	+0.4
OBN				*e*S	S	09 04 19.1	-0.1
OBN				pmax	pmax		
	comp=Z,12nm,1.0s						
OBN				MLR	MLR		
	comp=Z,74nm,8.0s						
CLL	Collm	18.66	325	*e*(P)	Pn	09 00 51.0	+1.2
CLL				*e*		09 00 56.0	
CLL				*e*S	S	09 04 23.0	+0.9
CLL				LmH		09 07 00.0	
	comp=N,300nm,19.3s						
CLL				LmH		09 07 00.0	
	comp=E,400nm,18.7s						
CLL				LmV		09 09 00.0	
	comp=Z,200nm,18.7s						
FRF	La Foret Royal	18.95	297	*e*P	Pn	09 00 57.9	+4.5
FRF				pmax	pmax		
	comp=Z,22nm,1.1s						
RAYN	Ar Rayn	18.97	131	P	P	09 00 53.0	-0.1
RAYN				pmax	pmax		
	comp=Z,20nm,1.0s						
RAYN	Ar Rayn	18.97	131		P	09 00 53.0	-0.1
RAYN				IAmb	IAmb	09 01 01.2	
	comp=Z,20nm,1.0s						
LMR	La Mourre	19.00	296	*e*P	Pn	09 00 58.3	+4.3
LMR				pmax	pmax		
	comp=Z,38nm,1.7s						
SLE	Schleitheim	19.09	311	P	Pn	09 00 55.9	+0.8
SLE				pmax	pmax		
	comp=Z,18nm,1.3s						
MBDF	Montbardon	19.14	301	*e*P	Pn	09 00 58.4	+2.6
MBDF				pmax	pmax		
	comp=Z,12nm,0.8s						
SENIN	Lac Senin/Sane	19.29	306		P	09 00 55.4	-1.2
SENIN				IAmb	IAmb	09 01 07.4	
	comp=Z,17nm,0.8s						
BNI	Bardonecchia	19.29	302	P	P	09 00 55.4	-1.2
BNI				pmax	pmax		
	comp=Z,33nm,1.3s						
BNI	Bardonecchia	19.29	302		P	09 00 55.4	-1.2
BNI				IAmb	IAmb	09 01 03.5	
	comp=Z,33nm,1.3s						
MOS	Moscow	19.31	13	*e*P	Pn	09 01 03.3	+5.8
LPG	La Plagne	19.37	303	*e*P	Pn	09 01 02.1	+3.4
LPG				pmax	pmax		
	comp=Z,60nm,1.5s						
LPL	La Plagne	19.39	303	*e*P	Pn	09 01 01.0	+2.2
LPL				pmax	pmax		
	comp=Z,46nm,1.4s						
BFO	Black Forest	19.44	312	P	P	09 00 57.1	-1.0
BFO				pmax	pmax		
	comp=Z,31nm,1.5s						
BFO	Black Forest	19.44	312		P	09 00 57.1	-1.0
BFO				IAmb	IAmb	09 01 03.8	
	comp=Z,30nm,1.5s						
ORIF	Oris-en-Rattie	19.80	301	*e*P	Pn	09 01 06.1	+2.4
ORIF				pmax	pmax		
	comp=Z,16nm,1.2s						
ECH	Echery	20.09	311	P	P	09 01 04.8	-0.4
ECH				pmax	pmax		
	comp=Z,18nm,1.0s						
ECH	Echery	20.09	311	P	P	09 01 04.8	-0.4
ECH				IAmb	IAmb	09 01 09.9	
	comp=Z,18nm,1.0s						
HINF	Hinteralfeld	20.12	309	*e*P	Pn	09 01 08.3	+1.0
HINF				pmax	pmax		
	comp=Z,22nm,1.2s						
CABF	La Chapelle	20.16	306	*e*P	Pn	09 01 10.0	+2.1
CABF				pmax	pmax		
	comp=Z,16nm,0.9s						
TNS	Taunus Mts	20.31	317	P	Pn	09 01 11.0	+1.4
TNS				pmax	pmax		
	comp=Z,31nm,1.7s						
HAU	Haudompre	20.50	309	*e*P	P	09 01 10.1	+0.4
HAU				pmax	pmax		
	comp=Z,35nm,1.0s						
VIVF	Saint-Julien-l	20.62	300	*e*P	Pn	09 01 13.4	+0.2
VIVF				pmax	pmax		
	comp=Z,15nm,1.1s						
VSU	Vasula	21.46	355	⇑*e*P	P	09 01 21.5	+1.7
VSU				pmax	pmax		
	comp=Z,52nm,0.9s						
AVF	Avril sur Loir	22.00	304	*e*P	P	09 01 29.0	+3.2
AVF				pmax	pmax		
	comp=Z,21nm,1.2s						
GEYT	Alibeck	22.22	79	P	P	09 01 28.1	-0.2
	comp=Z,6.1nm,0.7s,baz=264,slow=15,SNR=8.1						
GEYT				LR	LR	09 12 22.7	
	comp=Z,111nm,18.8s,baz=225,slow=43						
GEYT	Alibeck	22.22	79	P	P	09 01 28.2	0.0
GYA0B	ALIBECK ARRAY	22.22	79	P	P	09 01 28.0	-0.3
GYA0B				IAmb	IAmb	09 01 37.4	
	comp=Z,31nm,1.2s						
AKTO	Aktyubinsk	23.99	47	P	P	09 01 45.0	-1.2
	comp=Z,32nm,1.1s,baz=245,slow=12,SNR=13						
AKTO				LR	LR	09 13 46.0	
	comp=Z,146nm,20.5s,baz=205,slow=43						
AKTO	Aktyubinsk	23.99	47	P	P	09 01 45.0	-1.2
ETSF	Etsaut	24.09	293	*e*P	P	09 01 50.2	+3.0
ETSF				pmax	pmax		
	comp=Z,36nm,1.9s						

FIA1	**FINESS Array S**	24.47	355	P	P	09 01 49.4	-1.0
FINES	**FINESS Array B**	24.47	355	P	P	09 01 49.7	-0.7
	comp=Z,9.9nm,0.7s,baz=157,slow=12,SNR=18						
FINES	**FINESS Array B**	24.47	355	*i* P	P	09 01 54.0	+3.6
FINES				pmax	pmax		
	comp=Z,5.0nm,0.7s						
FINES	**FINESS Array B**	24.47	355	P	P	09 01 49.5	-0.9
KLMR	**Klimovskoe**	24.49	11	*e*P	P	09 01 48.7	-1.9
KLMR				pmax	pmax		
	comp=Z,34nm,1.1s						
KLMR	**Klimovskoe**	24.49	11	*e*P	P	09 01 48.8	-1.9
KLMR				AMP		09 01 54.0	
	comp=Z,34nm,1.1s						
ABKAR	**Akbulak array**	24.75	51	P	P	09 01 52.6	-0.5
ABKAR	**Akbulak array**	24.75	51	P	P	09 01 52.4	-0.7
ABKAR				IAmb	IAmb	09 01 57.0	
	comp=Z,15nm,1.1s						
KIRV	**Kirov**	24.91	24	P	P	09 01 52.2	-2.2
	comp=Z,13nm,0.6s,baz=244,slow=6.1,SNR=4.8						
KIRV	**Kirov**	24.91	24⇑	*e*P	P	09 01 52.9	-1.5
FLN	**La Foliniere**	25.04	307	*e*P	P	09 01 56.8	+1.0
FLN				pmax	pmax		
	comp=Z,17nm,1.0s						
GRR	**Gorron**	25.18	306	*e*P	P	09 01 58.2	+1.2
GRR				pmax	pmax		
	comp=Z,41nm,1.3s						
HFS	**Hagfors**	25.30	341	P	P	09 01 57.3	-0.7
	comp=Z,4.9nm,0.9s,baz=170,slow=13,SNR=3.7						
HFS				LR	LR	09 12 08.5	
	comp=Z,202nm,19.3s,baz=150,slow=37						
TAM	**Tamanrasset**	25.53	243	P	P	09 02 00.1	-0.5
TAM				pmax	pmax		
	comp=Z,19nm,1.1s						
TAM	**Tamanrasset**	25.53	243	P	P	09 02 00.1	-0.5
ESDC	**Sonseca Array**	26.71	286	P	P	09 02 11.2	+0.2
	comp=Z,7.8nm,0.9s,baz=77,slow=9.8,SNR=29						
ESDC				LR	LR	09 13 15.8	
	comp=Z,146nm,19.4s,baz=65,slow=38						
ESDC	**Sonseca Array**	26.71	286	P	P	09 02 10.8	-0.3
NOA	**NORSAR Array B**	26.73	340	P	P	09 02 11.7	+0.7
	comp=Z,1.3nm,0.8s,baz=149,slow=8.2,SNR=2.4						
NOA				LR	LR	09 12 19.7	
	comp=Z,96nm,21.3s,baz=150,slow=36						
ARU	**Arti**	27.13	36	P	P	09 02 15.6	+1.1
	comp=Z,3.4nm,0.6s,baz=232,slow=6.6,SNR=7.7						
ARU				LR	LR	09 13 27.8	
	comp=Z,113nm,18.4s,baz=289,slow=38						
ARU	**Arti**	27.13	36	*d i*P	P	09 02 16.3	+1.8
ARU						09 02 53.5	
ARU				S	S	09 06 57.4	+4.7
ARU				pmax	pmax		
	comp=Z,20nm,0.9s						
ARU	**Arti**	27.13	36	P	P	09 02 15.3	+0.8
WSAR	**Wadi Sarin**	28.17	111	LR	LR	09 16 57.7	
	comp=Z,89nm,18.5s,baz=327,slow=44						
MDT	**Midelt**	28.65	272	LR	LR	09 14 45.7	
	comp=Z,77nm,21.3s,baz=118,slow=38						
EKA	**Eskdalemuir Ar**	28.93	320	P	P	09 02 32.9	+2.2
	comp=Z,2.2nm,0.8s,baz=106,slow=8.8,SNR=3.5						
IUG	**Iuzhnay**	30.97	68	*e*P	P	09 02 49.1	+0.1
	baz=68						
IUG	**Iuzhnay**	30.97	68	*e*P	P	09 02 49.0	+0.1
KK31	**Karatay Array**	31.26	66	P	P	09 02 50.6	-0.9
KK31				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KK31	**Karatay Array**	31.26	66	P	P	09 02 50.6	-0.9
KK31				IAmb	IAmb	09 02 58.7	
	comp=Z,7.0nm,1.1s						
KKAR	**Karatay Array**	31.26	66	P	P	09 02 50.7	-0.8
KKAR	**Karatay Array**	31.26	66	P	P	09 02 50.7	-0.8
KKAR				IAmb	IAmb	09 02 58.7	
	comp=Z,7.0nm,1.1s						
BRVK	**Borovoye**	32.05	47⇑	*e*P	P	09 02 58.2	0.0
BRVK				pmax	pmax		
	comp=Z,11nm,1.3s						
BRVK	**Borovoye**	32.05	47	P	P	09 02 58.5	+0.3
BVAR	**Borovoye Array**	32.10	47	P	P	09 02 57.6	-1.0
	comp=Z,1.5nm,0.8s,baz=312,slow=12,SNR=5.2						
ARCES	**ARCESS Array B**	32.56	357	P	P	09 03 02.4	-0.2
	comp=Z,8.3nm,1.0s,baz=173,slow=9.1,SNR=4.2						
ARCES				LR	LR	09 16 14.8	
	comp=Z,128nm,18.7s,baz=95,slow=36						
SOCY	**Socotra**	32.81	133	P	P	09 03 02.8	-2.6
BTLS	**Baital**	33.73	62	*e*P	P	09 03 12.5	-0.6
	baz=62						
BTLS	**Baital**	33.73	62	*e*P	P	09 03 12.4	-0.6
AAK	**Ala-Archa**	34.22	67	P	P	09 03 18.2	+0.7
	comp=Z,2.3nm,0.6s,baz=263,slow=7.6,SNR=7.8						
AAK	**Ala-Archa**	34.22	67⇓	*e*P	P	09 03 18.3	+0.8
AAK				pmax	pmax		
	comp=Z,16nm,1.3s						
AAK	**Ala-Archa**	34.22	67	P	P	09 03 17.3	-0.2
AAK				IAmb	IAmb	09 03 30.7	
	comp=Z,4.7nm,1.1s						
TOA0	**Torodi Ar. Sit**	34.84	234	P	P	09 03 22.8	-0.1
TORD	**Torodi Ar. Bea**	34.84	234	P	P	09 03 23.6	+0.7
	comp=Z,8.9nm,0.7s,baz=32,slow=9.2,SNR=26						
TORD				LR	LR	09 19 44.2	
	comp=Z,99nm,19.9s,baz=85,slow=40						
TORD	**Torodi Ar. Bea**	34.84	234	P	P	09 03 22.9	+0.1
TORD				IAmb	IAmb	09 03 29.5	
	comp=Z,8.9nm,0.9s						
KUU	**Kurty**	35.44	64	*e*P	P	09 03 27.3	-0.6
	comp=Z,3.5nm,0.9s,baz=64						
KUU	**Kurty**	35.44	64	*e*P	P	09 03 27.2	-0.6
KUU				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KSH	**Kashi**	35.79	72	P	P	09 03 28.3	-2.7
KSH				pP	sP	09 03 38.7	+3.0
KSH				pmax	pmax		
	comp=Z,6.0nm,0.4s						
KSH				pmax	pmax		
	comp=Z,790nm,6.0s						
CHKK	**Chushkaly**	35.91	64	*e*P	P	09 03 31.3	-0.6
	baz=64						
CHKK	**Chushkaly**	35.91	64	*e*P	P	09 03 31.3	-0.6
AAA	**Alma-Ata**	35.92	65	*e*P	P	09 03 31.0	-1.1
	comp=Z,9.5nm,0.4s,baz=65						
AAA	**Alma-Ata**	35.92	65	*e*P	P	09 03 31.0	-1.1
AAA				pmax	pmax		
	comp=Z,9.0nm,0.4s						
MDOK	**Medeo**	36.03	65	*e*P	P	09 03 32.3	-0.8
	baz=65						
MDOK	**Medeo**	36.03	65	*e*P	P	09 03 32.3	-0.8
KURBB	**Kurchatov Arra**	36.78	53	P	P	09 03 38.8	-0.4
	comp=Z,5.3nm,0.9s,baz=275,slow=8.7,SNR=21						
TDK	**Taldyqorghan**	36.81	62	*e*P	P	09 03 38.7	-1.0
	comp=Z,9.4nm,0.6s,baz=62						
TDK	**Taldyqorghan**	36.81	62	*e*P	P	09 03 38.6	-1.0
TDK				pmax	pmax		
	comp=Z,9.0nm,0.6s						
KURK	**Kurchatov**	36.84	53⇑	*e*P	P	09 03 39.2	-0.5
KURK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KURK	**Kurchatov**	36.84	53	P	P	09 03 39.5	-0.2
KURK				IAmb	IAmb	09 03 49.0	
	comp=Z,11nm,0.8s						
SATY	**Saty**	37.03	65	*e*P	P	09 03 41.1	-0.6
	baz=65						
SATY	**Saty**	37.03	65	*e*P	P	09 03 41.0	-0.6
KOWA	**Kowa**	37.76	242	P	P	09 03 48.3	+0.4
	comp=Z,1.8nm,0.5s,baz=36,slow=13,SNR=6.0						
SEM	**Semipalatinsk**	37.87	53	*e*P	P	09 03 48.0	-0.7
	baz=53						
SEM	**Semipalatinsk**	37.87	53	*e*P	P	09 03 48.0	-0.7
MAKZ	**Makanchi**	39.14	59	P	P	09 03 59.4	+0.1
MAKZ				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MAKZ	**Makanchi**	39.14	59	P	P	09 03 59.4	+0.1
MK31	**Makanchi Array**	39.36	59⇑	*e*P	P	09 04 00.4	-0.6
MK31	**Makanchi Array**	39.36	59	P	P	09 04 00.5	-0.6
MK31				IAmb	IAmb	09 04 06.6	
	comp=Z,5.3nm,0.8s						
MKAR	**Makanchi Array**	39.36	59	P	P	09 04 00.6	-0.5
	comp=Z,2.7nm,0.6s,baz=280,slow=6.6,SNR=20						
MKAR				LR	LR	09 21 49.9	
	comp=Z,102nm,18.0s,baz=280,slow=39						
ZAA0	**Zalesovo Array**	40.76	48	P	P	09 04 12.2	-0.2
ZALV	**Zalesovo Beam**	40.76	48	P	P	09 04 10.1	-2.4
	comp=Z,4.2nm,0.6s,baz=278,slow=10,SNR=7.4						
ZALV				LR	LR	09 23 17.0	
	comp=Z,108nm,19.4s,baz=254,slow=40						
ZALV	**Zalesovo Beam**	40.76	48	*i* P	P	09 04 12.1	-0.4
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.5s						
ZSN	**Zaisan**	41.05	58	*e*P	P	09 04 14.8	-0.2
	baz=58						
ZSN	**Zaisan**	41.05	58	*e*P	P	09 04 14.8	-0.2
DGZ	**Jazzator, Alta**	42.52	54⇑	*e*P	P	09 04 26.3	-0.9
DGZ				pmax	pmax		
	comp=Z,2.0nm,1.0s						
DBIC	**Dimbokro**	43.93	235	P	P	09 04 39.3	+0.5
	comp=Z,5.7nm,0.9s,baz=7.3,slow=9.3,SNR=4.3						
DBIC				LR	LR	09 24 58.2	
	comp=Z,94nm,19.9s,baz=32,slow=39						
DBIC	**Dimbokro**	43.93	235	P	P	09 04 37.6	-1.2
DBIC				IAmb	IAmb	09 04 50.6	
	comp=Z,12nm,1.1s						
TIC	**Toumodi**	44.06	235	*e*P	P	09 04 42.6	+2.8
KIC	**Kosan Boka**	44.09	235	*e*P	P	09 04 42.9	+2.9
	comp=Z,12nm,0.7s						
LIC	**Lamto**	44.38	235	*e*P	P	09 04 45.1	+2.7
	comp=Z,35nm,0.9s						
NRIK	**Noril'sk**	44.41	25	LR	LR	09 25 00.3	
	comp=Z,82nm,18.1s,baz=229,slow=39						
DANN	**Dangsing**	45.48	85	*e*P	P	09 04 51.2	-0.2
	comp=Z,123nm,0.8s						
GKN	**Gorkha**	46.33	85	*e*P	P	09 04 57.1	-0.9
	comp=Z,108nm,1.1s						
DMN	**Daman**	46.87	85	*e*P	P	09 05 01.8	-0.6
	comp=Z,64nm,0.9s						
PKIN	**Phulchoki**	47.12	85	*e*P	P	09 05 03.3	-1.0
	comp=Z,38nm,0.8s						
PKI	**Pulchoki**	47.13	85	*e*P	P	09 05 03.3	-1.2
	comp=Z,51nm,1.0s						
GUN	**Gumba**	47.36	84	*e*P	P	09 05 05.0	-1.2
	comp=Z,60nm,1.0s						
RAMN	**Ramite**	48.36	85	*e*P	P	09 05 12.4	-1.5
	comp=Z,64nm,0.8s						
ODAN	**Odare**	49.02	85	*e*P	P	09 05 17.7	-1.3
	comp=Z,34nm,0.9s						
TAPN	**Taplejung**	49.06	84	*e*P	P	09 05 17.8	-1.6
	comp=Z,30nm,0.9s						
LSA	**Lhasa**	50.75	80	P	P	09 05 31.3	-1.1
LSA				pmax	pmax		
	comp=Z,13nm,1.3s						
LSA	**Lhasa**	50.75	80	P	P	09 05 31.3	-1.1
LSA				IAmb	IAmb	09 05 36.3	
	comp=Z,13nm,1.3s						
TLY	**Talaya**	52.33	49⇑	*e*P	P	09 05 42.9	-0.5
TLY				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ZAK	**Zakamensk**	52.44	51	*e*P	P	09 05 43.8	-0.5
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
GTA	**Gaotai**	53.52	65	*e*P	P	09 05 51.6	-0.9
GTA				pP	sP	09 05 58.6	+1.4
GTA				sP	pP	09 06 02.6	+6.7
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
SONM	**Songino Array**	55.14	53	P	P	09 06 04.0	-0.2
	comp=Z,1.4nm,0.7s,baz=284,slow=6.5,SNR=7.9						
SONM	**Songino Array**	55.14	53	P	P	09 06 03.8	-0.4
ULN	**Ulaanbaatar**	55.55	53⇑	*e*P	P	09 06 06.6	-0.5
ULN				pmax	pmax		
	comp=Z,2.0nm,1.1s						
TIXI	**Tiksi**	57.90	22⇑	*e*P	P	09 06 23.0	-0.2
EUNU	**Eureka**	58.01	349	P	P	09 06 23.2	-0.8
EUNU				IAmb	IAmb	09 06 27.6	
	comp=Z,6.5nm,1.0s						
MHMT	**Maesarieng**	61.78	88	P	P	09 06 49.2	-1.5
	comp=Z,1µmcomp=Z,39nm,0.9s						
CHTO	**Chiang Mai**	62.25	87	P	P	09 06 52.1	-1.8
CHTO				pmax	pmax		
	comp=Z,11nm,0.9s						
CHTO	**Chiang Mai**	62.25	87	P	P	09 06 52.1	-1.8
CMMT	**Chiang Mai**	62.25	87	P	P	09 06 52.3	-1.6
	comp=Z,7.3nm,1.1s						
XAN	**Xi'an**	62.40	67	P	P	09 06 53.3	-1.4
XAN				pP	pP	09 06 59.4	+1.2
XAN				pmax	pmax		
	comp=Z,7.0nm,1.1s						
CMAR	**Chiang Mai Arr**	62.44	87	P	P	09 06 53.6	-1.5
	comp=Z,11nm,0.8s,baz=298,slow=8.1,SNR=27						
CMAR				LR	LR	09 39 38.4	
	comp=Z,28nm,20.0s,baz=350,slow=42						
CMAR	**Chiang Mai Arr**	62.44	87	*i* P	P	09 06 53.7	-1.4
CMAR				pmax	pmax		
	comp=Z,11nm,0.8s						
CM05	**Chiang Mai Arr**	62.47	87	P	P	09 06 54.0	-1.4
	comp=Z,97nmcomp=Z,15nm,1.0s						
CM09	**Chiang Mai Arr**	62.48	87	P	P	09 06 54.9	-0.6
	comp=Z,156nmcomp=Z,19nm,1.0s						
CM04	**Chiang Mai Arr**	62.50	87	P	P	09 06 54.7	-0.8
	comp=Z,155nmcomp=Z,20nm,1.0s						
LAMP	**Lampang**	62.95	87	P	P	09 06 59.3	+0.8
	comp=Z,43nm,1.1s						
SUKH	**Sukhothai**	63.52	88	P	P	09 07 01.5	-0.7
	comp=Z,40nm,1.0s						
UMPA	**Umpang Tak**	63.60	89	P	P	09 07 02.0	-0.9
	comp=Z,6µmcomp=Z,38nm,0.9s						
UTTA	**Uttaradit**	64.11	87	P	P	09 07 05.5	-0.7
	comp=Z,23nm,0.8s						
PHIT	**Phitsanulok**	64.30	87	P	P	09 07 07.1	-0.4
	comp=Z,998nmcomp=Z,147nm,1.0s						
UTHA	**Uthaitani**	64.42	89	P	P	09 07 07.8	-0.5
	comp=Z,41nm,1.0s						
BOSA	**Boshof**	65.55	185	P	P	09 07 15.6	+0.2
	comp=Z,2.9nm,0.8s,baz=350,slow=7.2,SNR=4.1						
BOSA	**Boshof**	65.55	185	P	P	09 07 15.1	-0.3
PHET	**Kaeng Krachan**	66.06	92	P	P	09 07 22.4	+3.4
	comp=Z,811nmcomp=Z,23nm,0.9s						
CHAI	**Chaiyaphum**	66.27	88	P	P	09 07 19.5	-0.7
KLR	**Kul'dur**	69.64	43⇑	*e*P	P	09 07 40.7	-0.3
KLR				pmax	pmax		
	comp=Z,2.0nm,1.2s						
SEY	**Seymchan**	70.18	24⇓	*e*P	P	09 07 44.0	-0.1
C36M	**Paulatuk**	72.14	351	P	P	09 07 54.9	-0.9
KSRS	**Korea Array**	73.91	55	P	P	09 08 06.3	-0.5
	comp=Z,1.5nm,0.8s,baz=313,slow=3.8,SNR=3.4						
KSRS				LR	LR	09 44 48.9	
	comp=Z,40nm,19.2s,baz=335,slow=39						
INK	**Inuvik**	74.17	354	P	P	09 08 06.6	-1.2
	comp=Z,3.0nm,1.1s,baz=333,slow=7.8,SNR=4.0						
YKA	**Yellowknife Ar**	76.73	344	P	P	09 08 21.6	-1.0
	comp=Z,1.1nm,0.8s,baz=34,slow=5.5,SNR=19						
IMAR	**Indian Mountai**	77.18	2	P	P	09 08 24.1	-1.0
PETK	**Petropavlovsk-**	79.32	29	LR	LR	09 46 46.7	
	comp=Z,38nm,20.3s,baz=288,slow=38						
PPLA	**Purkeypile**	80.30	1	P	P	09 08 41.6	-1.0
PPLA				IAmb	IAmb	09 09 05.3	
	comp=Z,9.1nm,1.2s						
ULM	**Lac du Bonnet**	80.82	328	P	P	09 08 45.2	-0.1
	comp=Z,0.9nm,0.5s,baz=34,slow=3.6,SNR=3.5						
ULM				LR	LR	09 46 18.4	
	comp=Z,68nm,18.3s,baz=67,slow=37						
ULM	**Lac du Bonnet**	80.82	328⇑	*e*P	P	09 08 47.4	+2.0
MJAR	**Matsushiro Arr**	81.02	51	LR	LR	09 47 10.8	
	comp=Z,42nm,20.7s,baz=320,slow=38						
TKL	**Tuckaleechee C**	85.09	312	LR	LR	09 46 19.9	
	comp=Z,47nm,21.8s,baz=38,slow=35						
NEW	**Newport**	90.10	339	LR	LR	09 50 13.0	
	comp=Z,21nm,18.7s,baz=25,slow=36						
BDFB	**Brasilia**	90.12	251	LR	LR	09 51 13.8	
	comp=Z,44nm,19.9s,baz=83,slow=36						
PDAR	**Pinedale Array**	92.40	331	LR	LR	09 52 58.3	
	comp=Z,73nm,18.3s,baz=349,slow=37						
ROSC	**El Rosal**	98.49	283	LR	LR	09 56 22.1	
	comp=Z,31nm,19.4s,baz=80,slow=36						
NVAR	**Mina Array Bea**	99.36	335	LR	LR	10 01 19.1	
	comp=Z,33nm,19.4s,baz=23,slow=39						

ROM 10 08:57:47.3±0.1**, 42°.959N**±0°.001×**13°.043E**±0°.003**, h10^{km}, ML0.7**/2**, Error ellipse: s-maj=0.2km s-min=0.0km az=85.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FDMO	**Fiordimonte**	0.08	23	P	Pg	08 57 50.2	+0.4
FDMO				S	Sg	08 57 52.2	+0.6
FDMO				AML	AML		
	comp=E,113µm,0.1s						
FDMO				AML	AML		
	comp=N,90µm,0.1s						
CESI	**CESI - Serrava**	0.11	294	P	Pg	08 57 50.5	+0.4
CESI				S	Sg	08 57 52.8	+0.6
CESI				AML	AML		
	comp=N,33µm,1.5s						
CESI				AML	AML		
	comp=E,34µm,0.2s						
NRCA	**Norcia**	0.14	157	P	Pg	08 57 51.0	+0.5
NRCA				S	Sg	08 57 53.7	+0.9
CSP1	**Cessapalombo**	0.18	42	P	Pg	08 57 51.8	+0.5
CSP1				S	Sg	08 57 55.0	+1.0
PE3	**Peglio**	0.84	332	P	Pg	08 57 59.7	-3.8

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*BJI **10** 09:00:36.0±0.0, 4°.20S×145°.90E, h79^{km}, mB5.1/2, mb4.6/6*

*DJA **10** 09:00:37.6±0.8, 5°S±7°×14°5E±°, h86^{km}±5^{km}, M4.8/25, mB5.0/8, mb4.9/25, MLv5.2/4, Mw(mB)4.4/8*

*IDC **10** 09:00:37.5±1.9, 4°.86S×145°.09E, h70^{km}±18^{km}, mb4.4/19, mb1 4.5/23, mb1mx4.4/37, mbtmp4.7/23, MS3.6/10, Ms1 3.6/10, ms1mx3.2/44, Error ellipse: s-maj=13.9km s-min=9.1km az=75.0*

*NEIC **10** 09:00:38.1±1.7, 4°.83S±0°.06×145°.13E±0°.05, h76^{km}±7^{km}, mb4.8/43, Error ellipse: s-maj=9.9km s-min=6.3km az=159.0*

ISC 10 09:00:36.1±0.4**, 4°.84S**±0°.05×**145°.10E**±0°.06**, h54^{km}, n122,** σ**1^{s}39**/120**, mb4.8**/41**, MS3.6**/7**, 1D, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MANU	**Manus Island**	3.58	39		Pn	09 01 30.7	+1.5
JAY	**Jayapura**	4.96	298	P	Pn	09 01 51.1	+3.0
	7.7nm,0.3s,baz=121,slow=7.5,SNR=17						
JAY				S	Sn	09 02 57.6	+13
	6.0nm,0.3s,baz=120,slow=23,SNR=1.3						
JAY				LR	LR	09 04 10.7	
	comp=Z,931nm,21.8s,baz=84,slow=43						
JAY	**Jayapura**	4.96	298	P	Pn	09 01 50.8	+2.7
	0.3nm640nm69nm,0.9s						
PMG	**Port Moresby**	4.98	156	P	Pn	09 01 50.0	+1.7
	46nm,0.3s,baz=338,slow=6.1,SNR=83						
PMG				S	Sn	09 02 44.3	-0.3
	49nm,0.3s,baz=292,slow=23,SNR=14						
PMG	**Port Moresby**	4.98	156	P	Pn	09 01 50.0	+1.7
	389nm,0.8s						
GENI	**Genyem**	5.40	294	P	Pn	09 01 56.9	+2.7
	2.3nm4µm349nm,0.7s						
COEN	**Coen**	9.26	192	Pn	Pn	09 02 49.6	+2.6
FAKI	**Fak Fak**	12.96	278	Pn	Pn	09 03 39.4	+1.8
MTSU	**Mount Surprise**	13.24	183	P	Pn	09 03 44.6	+3.2
	baz=13,SNR=30						
SIJI	**Sorong**	14.37	286	P	Pn	09 03 58.1	+1.5
	1.5nm,0.3s,baz=90,slow=8.4,SNR=9.8						
SWI	**Sorong**	14.37	286	P	Pn	09 03 58.5	+1.8
	42nm,0.7s						
KDU	**Kakadu**	14.71	237	P	Pn	09 04 01.1	0.0
	baz=14,SNR=33						
CTA	**Charters Tower**	15.20	176	P	P	09 04 12.5	+1.0
	1.6nm,0.3s,baz=9.1,slow=14,SNR=18						
CTAO	**Charters Tower**	15.20	176	P	P	09 04 13.2	+1.7
MTN	**Manton Dam**	15.92	239	P	Pn	09 04 17.2	+0.4
	baz=16,SNR=5.5						
MTN	**Manton Dam**	15.92	239	P	Pn	09 04 17.7	+1.0
QIS	**Mount Isa**	16.51	198	P	Pn	09 04 24.5	+0.2
	baz=16,SNR=7.9						
WB0	**Warramunga Arr**	18.14	214	P	Pn	09 04 44.4	+0.1
WB0				IAmb	IAmb	09 04 46.6	
	comp=Z,80nm,1.4s						
WR0	**Warramunga Arr**	18.21	213	P	P	09 04 44.8	0.0
WR0				IAmb	IAmb	09 04 46.7	
	comp=Z,46nm,1.0s						
WRAB	**Tennant Creek**	18.29	214	P	P	09 04 44.6	-1.1
WRAB				IAmb	IAmb	09 04 47.1	
	comp=Z,36nm,0.8s						
WB2	**Warramunga Arr**	18.30	214	P	Pn	09 04 46.2	-0.1
WB2				IAmb	IAmb	09 04 48.5	
	comp=Z,41nm,1.1s						
WRA	**Warramunga Arr**	18.31	214	P	Pn	09 04 46.5	+0.2
	comp=Z,1.2nm,0.3s,baz=40,slow=11,SNR=89						
WRA				S	Sn	09 08 04.5	-5.7
	comp=Z,0.2nm,0.3s,baz=32,slow=24,SNR=5.3						
WRA				LR	LR	09 12 29.0	
	comp=Z,79nm,19.2s,baz=185,slow=39						
GUMO	**Guam**	18.31	359	LR	LR	09 11 12.7	
	comp=Z,600nm,19.9s,baz=129,slow=35						
SANI	**Sanana**	19.27	278	P	P	09 04 56.5	0.0
	comp=Z,29nm,0.8s						
EIDS	**Eidsvold**	21.21	165	P	P	09 05 18.7	+1.4
	baz=21,SNR=14						
EIDS	**Eidsvold**	21.21	165	P	P	09 05 18.0	+0.7
EIDS				IAmb	IAmb	09 05 21.9	
	comp=Z,37nm,1.1s						
SOEI	**Soe**	21.23	256	P	P	09 05 18.7	+0.9
SOEI	**Soe**	21.23	256	P	P	09 05 18.1	+0.3
	comp=Z,1µmcomp=Z,140nm,1.1s						
AS31	**Alice Springs**	21.61	209	P	P	09 05 20.5	-1.2
ASAR	**Alice Springs**	21.61	209	P	P	09 05 21.4	-0.4
	comp=Z,17nm,1.1s,baz=35,slow=11,SNR=57						
ASAR				S	S	09 09 17.2	-1.2
	comp=Z,1.7nm,1.0s,baz=24,slow=20,SNR=3.6						
ASAR	**Alice Springs**	21.61	209	P	P	09 05 20.8	-0.9
QLP	**Quilpie**	21.64	182	P	P	09 05 22.5	+0.5
	baz=21,SNR=8.2						
RMQ	**Roma**	21.81	171	P	P	09 05 25.9	+2.1
	baz=22,SNR=24						
BATI	**Baumata**	21.90	255	P	P	09 05 26.3	+1.4
	comp=Z,78nm,0.7s,baz=128,slow=3.5,SNR=11						
BATI	**Baumata**	21.90	255	P	P	09 05 25.3	+0.3
	comp=Z,55nm,0.9s						
GTOI	**Gorontalo**	22.73	283	P	P	09 05 35.6	+1.8
	comp=Z,376nmcomp=Z,24nm,0.6s						
FITZ	**Fitzroy Crossi**	23.14	234	P	P	09 05 36.2	-1.8
	baz=23,SNR=94						
FITZ	**Fitzroy Crossi**	23.14	234	P	P	09 05 36.0	-1.9
	comp=Z,56nm,0.6s,baz=50,slow=7.8,SNR=188						
FITZ				LR	LR	09 15 13.4	
	comp=Z,106nm,20.7s,baz=69,slow=38						
FITZ	**Fitzroy Crossi**	23.14	234	P	P	09 05 36.8	-1.2
FITZ				IAmb	IAmb	09 05 39.1	
	comp=Z,58nm,0.7s						
APSI	**Ampana**	23.74	279	P	P	09 05 44.5	+0.9
	comp=Z,464nmcomp=Z,34nm,1.7s						
TOLI2	**Tolitoli**	25.00	283	P	P	09 05 54.9	-0.3
TOLI2				IAmb	IAmb	09 06 13.9	
	comp=Z,25nm,0.8s						
KAPI	**Kappang**	25.25	269	P	P	09 05 57.4	-0.1
	comp=Z,11nm,0.8s,baz=221,slow=2.3,SNR=4.1						
KAPI	**Kappang**	25.25	269	P	P	09 05 57.3	-0.1
TTSI	**Tana Toraja**	25.28	273	P	P	09 05 57.6	-0.1
	comp=Z,883nmcomp=Z,28nm,1.3s						
ARMA	**Armidale**	26.18	167	P	P	09 06 06.7	+0.9
	baz=26,SNR=16						
ARMA	**Armidale**	26.18	167	P	P	09 06 06.6	+0.8
ARMA				IAmb	IAmb	09 06 07.7	
	comp=Z,33nm,0.8s						
CMSA	**Cobar Meteorol**	26.57	179	P	P	09 06 09.8	+0.7
	baz=26,SNR=30						
DZM	**Mont Dzumac**	26.84	132	P	P	09 06 11.7	-0.2
	comp=Z,5.8nm,0.6s,baz=230,slow=18,SNR=9.4						
DZM				LR	LR	09 15 59.0	
	comp=Z,137nm,21.5s,baz=326,slow=34						
STKA	**Stephens Creek**	27.10	187	P	P	09 06 13.8	-0.2
	baz=27,SNR=27						
STKA	**Stephens Creek**	27.10	187	P	P	09 06 13.7	-0.2
	comp=Z,12nm,0.7s,baz=353,slow=8.8,SNR=39						
STKA	**Stephens Creek**	27.10	187	P	P	09 06 13.8	-0.2
HTT	**Hallett**	29.02	191	P	P	09 06 31.3	+0.2
	baz=29,SNR=4.5						
BBOO	**Buckleboo**	29.08	196	P	P	09 06 31.8	+0.2
	baz=29,SNR=5.4						
BBOO	**Buckleboo**	29.08	196	P	P	09 06 31.0	-0.6
YNG	**Young**	29.47	174	P	P	09 06 36.1	+1.0
	baz=29,SNR=12						
PSA00	**Pilbara Seismi**	29.60	234	P	P	09 06 35.7	-0.6
PSA00				IAmb	IAmb	09 06 37.5	
	comp=Z,14nm,0.8s						
FORT	**Forrest**	30.39	210	P	P	09 06 43.9	+0.8
	baz=30,SNR=9.0						
FORT	**Forrest**	30.39	210	P	P	09 06 43.1	0.0
FORT				IAmb	IAmb	09 06 44.5	
	comp=Z,20nm,0.7s						
CNB	**Canberra Magne**	30.58	173	P	P	09 06 46.2	+1.2
	baz=30,SNR=15						
ARPS	**Mount Arapiles**	31.92	185	P	P	09 06 57.7	+1.1
	baz=32,SNR=9.0						
TOO	**Toolangi**	32.58	179	P	P	09 07 04.2	+1.8
TOO				IAmb	IAmb	09 07 04.6	
	comp=Z,11nm,0.9s						
MEEK	**Meekatharra**	33.31	227	P	P	09 07 08.9	-0.1
	baz=33,SNR=8.4						
BLDU	**Ballidu**	37.04	223	P	P	09 07 40.8	-0.2
	baz=37,SNR=7.0						
KASI	**Kota Agung**	40.44	267	P	P	09 08 09.1	-0.6

	comp=Z,44nm,1.0s						
MDSI	Maura Dua	40.78	269	P	P	09 08 12.0	-0.5
	comp=Z,27nm,1.0s						
RAO	Raoul Island	42.58	129	LR	LR	09 24 09.5	
	comp=Z,318nm,19.1s,baz=136,slow=33						
SDSI	Sungai Dareh	43.78	274	P	P	09 08 36.2	-0.7
URZ	Urewera	44.20	143	P	P	09 08 40.9	+1.0
	comp=Z,15nm,0.9s,baz=221,slow=2.6,SNR=9.2						
URZ				LR	LR	09 25 42.8	
	comp=Z,100nm,18.7s,baz=212,slow=34						
URZ	Urewera	44.20	143	P	P	09 08 40.9	+1.0
BKZ	Black Stump Fm	44.44	145	P	P	09 08 42.5	+0.6
BKZ				IAmb	IAmb	09 08 45.1	
	comp=Z,27nm,1.1s						
TUWZ	Tuamarina	44.63	149	P	P	09 08 43.8	+0.4
BSWZ	Blackbirch Sta	44.81	149	P	P	09 08 45.3	+0.5
BSWZ	Blackbirch Sta	44.81	149	P	P	09 08 45.6	+0.8
RPZ	Rata Peaks	44.98	153	P	P	09 08 46.8	+0.8
	comp=Z,21nm,0.6s,baz=345,slow=3.1,SNR=17						
RPZ				LR	LR	09 26 37.3	
	comp=Z,102nm,18.1s,baz=262,slow=35						
KSRS	Korea Array	45.02	341	P	P	09 08 46.6	+0.2
	comp=Z,4.0nm,0.9s,baz=152,slow=9.3,SNR=7.7						
KSRS				LR	LR	09 25 21.7	
	comp=Z,18nm,21.0s,baz=340,slow=33						
LBZ	Lake Benmore	45.13	155	P	P	09 08 47.3	0.0
KHZ	Kahutara	45.16	150	P	P	09 08 47.2	-0.3
BFZ	Birch Farm	45.33	146	P	P	09 08 49.7	+0.8
WHZ	Wether Hill Ro	45.47	158	P	P	09 08 49.9	0.0
ODZ	Otahua Downs	45.85	155	P	P	09 08 54.7	+1.8
USRK	Ussuriysk Ar.	50.22	348	P	P	09 09 25.6	-1.1
	comp=Z,4.3nm,0.8s,baz=193,slow=5.9,SNR=6.0						
USRK	Ussuriysk Ar.	50.22	348	P	P	09 09 25.8	-0.8
CMAR	Chiang Mai Arr	51.04	298	P	P	09 09 33.6	+0.3
	comp=Z,1.3nm,0.3s,baz=121,slow=5.5,SNR=6.0						
KLR	Kul'dur	55.09	349	P	P	09 10 02.0	-0.5
	comp=Z,4.6nm,0.9s,baz=210,slow=6.7,SNR=12						
PETK	Petropavlovsk-	58.70	9	P	P	09 10 28.9	+0.9
	comp=Z,7.7nm,0.9s,baz=159,slow=7.7,SNR=7.7						
GTA	Gaotai	60.65	321	*e*P	P	09 10 44.2	+2.3
GTA				pP	pP	09 10 59.5	+2.8
GTA				pmax	pmax		
	comp=Z,2.0nm,1.2s						
SONM	Songino Array	62.48	332	P	P	09 10 54.1	0.0
	comp=Z,3.6nm,1.2s,baz=159,slow=5.8,SNR=8.4						
SONM	Songino Array	62.48	332	P	P	09 10 54.0	0.0
CASY	Casey	65.88	195	P	P	09 11 15.6	-0.2
VNDA	Vanda	73.18	176	P	P	09 12 01.1	+0.4
	comp=Z,6.7nm,0.6s,baz=334,slow=7.7,SNR=13						
VNDA	Vanda	73.18	176	P	P	09 12 01.0	+0.3
MK31	Makanchi Array	75.41	321	P	P	09 12 14.1	-0.1
MKAR	Makanchi Array	75.41	321	P	P	09 12 13.4	-0.9
	comp=Z,3.1nm,0.9s,baz=108,slow=6.9,SNR=18						
MKAR	Makanchi Array	75.41	321	P	P	09 12 13.8	-0.4
MAKZ	Makanchi	75.61	321	P	P	09 12 15.2	-0.2
RDOG	Red Dog Mine	81.20	17	P	P	09 12 45.9	+0.1
RDOG				IAmb	IAmb	09 12 47.1	
	comp=Z,8.0nm,0.8s						
KKAR	Karatay Array	82.13	315	P	P	09 12 49.7	-1.5
KTH	Kantishna Hill	83.06	24	P	P	09 12 54.6	-1.1
KTH				IAmb	IAmb	09 13 13.5	
	comp=Z,29nm,1.5s						
IMAR	Indian Mountai	83.09	21	P	P	09 12 55.7	0.0
TRF	Thorofare Moun	83.27	24	P	P	09 12 56.1	-0.8
TRF				IAmb	IAmb	09 14 51.4	
	comp=Z,49nm,1.9s						
NRIK	Noril'sk	83.60	342	P	P	09 12 57.5	-0.7
	comp=Z,11nm,0.7s,baz=114,slow=4.7,SNR=23						
NRIK	Noril'sk	83.60	342	P	P	09 12 57.4	-0.8
NRIK				IAmb	IAmb	09 12 58.8	
	comp=Z,12nm,0.8s						
RND	Reindeer	83.84	24	P	P	09 12 59.0	-0.7
RND				IAmb	IAmb	09 12 59.4	
	comp=Z,10.0nm,0.8s						
DHY	Denali Highway	84.33	25	P	P	09 13 01.9	-0.4
CCB	Clear Creek Bu	84.76	23	P	P	09 13 02.5	-1.7
CCB				IAmb	IAmb	09 13 03.6	
	comp=Z,6.4nm,0.8s						
BRVK	Borovoye	84.79	324	P	P	09 13 03.6	-1.0
COLD	Coldfoot	84.92	21	P	P	09 13 04.9	0.0
COLD				IAmb	IAmb	09 16 04.8	
	comp=Z,16nm,1.7s						
QSPA	South Pole Qui	85.12	180	P	P	09 13 05.6	-0.6
QSPA				IAmb	IAmb	09 13 06.5	
	comp=Z,19nm,0.8s						
IL31		85.17	24	P	P	09 13 04.4	-1.8
IL31				IAmb	IAmb	09 13 05.3	
	comp=Z,8.1nm,0.8s						
ILAR	Eielson Array	85.17	24	P	P	09 13 04.6	-1.7
	comp=Z,5.6nm,0.7s,baz=250,slow=5.3,SNR=53						
TOLK	Toolik Lake Re	85.73	20	P	P	09 13 08.8	-0.3
DOT	Dot Lake	85.93	25	P	P	09 13 07.2	-3.0
DOT				IAmb	IAmb	09 13 11.0	
	comp=Z,17nm,1.0s						
BCAR	Beaver Creek A	86.72	26	P	P	09 13 13.5	-0.5
BMAR	Burnt Mountain	87.00	21	P	P	09 13 15.3	0.0
SYO	Syowa Base	91.02	200	⇓*e*X	P	09 13 43.4	+9.2
BBB	Bella Bella	91.81	38	LR	LR	09 46 58.0	
	comp=Z,20nm,20.1s,baz=275,slow=30						
YKA	Yellowknife Ar	99.03	28	P	Pdif	09 14 08.7	-2.2
	comp=Z,0.1nm,0.4s,baz=262,slow=4.2,SNR=3.1						
YKA				PKKPbc	PKKPbc	09 30 35.1	-4.3
	comp=Z,0.4nm,0.6s,baz=91,slow=3.6,SNR=8.6						
TXAR	Lajitas Array	110.85	61	PKKP	PKKPab	09 30 12.4	+0.2
	comp=Z,0.6nm,0.7s,baz=112,slow=6.0,SNR=9.7						
CPUP	Villa Florida	142.15	146	PKhKP	PKPpre	09 19 57.1	
	comp=Z,2.4nm,0.9s,baz=87,slow=2.9,SNR=3.5						
CPUP	Villa Florida	142.15	146	PKPdf	PKPdf	09 19 58.3	-4.8
TORD	Torodi Ar. Bea	142.97	285	PKhKP	PKPpre	09 20 00.8	
	comp=Z,0.5nm,0.8s,baz=334,slow=20,SNR=2.9						
DBIC	Dimbokro	150.05	275	PKPbc	PKPbc	09 20 21.1	-0.7
	comp=Z,3.3nm,0.8s,baz=188,slow=1.0,SNR=5.2						

IDC 10 09:00:52.4±6.2, 55°.90S×151°.34W, h0^{km}, mb3.8/1, mb1 4.0/1, mb1mx3.6/27, mbtmp3.8/1, Error ellipse: s-maj=574.6km s-min=66.9km az=164.0, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
H03S2	Juan Fernandez	53.16	97	T	T	10 07 04.2	
	baz=219,slow=74,SNR=11						
H03S1	Juan Fernandez	53.16	98	T	T	10 07 02.4	
	baz=219,slow=74,SNR=11						
H03S3	Juan Fernandez	53.17	97	T	T	10 07 01.2	
	baz=219,slow=74,SNR=14						
H03N3	Juan Fernandez	53.44	97	T	T	10 07 25.3	
	baz=222,slow=72,SNR=61						
H03N2	Juan Fernandez	53.45	97	T	T	10 07 19.3	
	baz=222,slow=72,SNR=43						
H03N1	Juan Fernandez	53.46	97	T	T	10 07 21.2	
	baz=222,slow=72,SNR=51						
ASAR	Alice Springs	62.25	268	P	P	09 11 16.1	+0.1
	0.6nm,0.5s,baz=137,slow=6.3,SNR=6.0						
H10N3	ASCENSION HYDR	107.16	135	T	T	11 14 48.3	
	baz=204,slow=75,SNR=4.2						
H10N1	ASCENSION HYDR	107.16	135	T	T	11 14 34.4	
	baz=204,slow=75,SNR=4.9						
H10N2	ASCENSION HYDR	107.18	135	T	T	11 14 41.1	
	baz=204,slow=75,SNR=4.1						
ILAR	Eielson Array	120.39	2	PKP	PKiKP	09 19 44.1	0.0
	0.3nm,0.7s,baz=191,slow=0.9,SNR=4.8						
MKAR	Makanchi Array	146.09	277	PKPbc	PKPbc	09 20 32.9	-0.4
	1.8nm,0.8s,baz=119,slow=4.6,SNR=17						
ZALV	Zalesovo Beam	148.42	290	PKPbc	PKPbc	09 20 38.4	-1.2
	0.9nm,0.6s,baz=129,slow=2.0,SNR=3.6						
KURBB	Kurchatov Arra	150.25	281	PKPbc	PKPbc	09 20 43.4	-0.8
	1.2nm,0.8s,baz=113,slow=2.1,SNR=4.0						

WEL 10 09:07:55.4, 38°.8S±0°.7×17°5E±°, h14^{km}±2^{km}, M2.6/22, ML2.9/22, MLv2.6/22, Error ellipse: s-maj=0.0km s-min=0.0km az=118.9, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
VRZ	Vera Road	0.31	182	P	Pb	09 08 02.8	+0.1
VRZ				S	Sb	09 08 08.3	+0.7
HIZ	Hauiti	0.31	12	P	Pb	09 08 02.8	+0.1
HIZ				S	Sb	09 08 08.0	+0.4
MHEZ	Mangahewa	0.43	233	P	Pb	09 08 05.1	+0.2
MHEZ				S	Sb	09 08 12.9	+1.7
TWVZ	Taurewa	0.58	116	P	Pg	09 08 06.9	+0.1
TWVZ				S	Sg	09 08 15.0	+0.5
DREZ	Durham Road	0.58	230	P	Pb	09 08 07.4	+0.1
DREZ				S	Sb	09 08 16.7	+1.2
PKVZ	Pokaka	0.65	137	P	Pg	09 08 08.2	+0.1
NEZ	North Egmont	0.69	229	P	Pb	09 08 09.5	+0.1
WTVZ	West Tongariro	0.70	115	P	Pb	09 08 09.5	0.0
PREZ	Palmer Road	0.71	222	P	Pb	09 08 09.8	+0.3
PKE	Pukeiti	0.72	238	P	Pb	09 08 09.8	+0.1
PKE				S	Sn	09 08 21.1	-0.9
KRVZ	Karewarewa	0.73	113	P	Pb	09 08 10.0	0.0
KRVZ				S	Sb	09 08 20.3	+0.3
KATZ	Kakaramea	0.74	103	P	Pg	09 08 09.9	+0.1
KATZ				S	Sb	09 08 20.8	+0.7
NGZ	Ngauruhoe	0.74	119	P	Pb	09 08 10.0	-0.1
NGZ				S	Sb	09 08 21.4	+1.2
KHEZ	Kahui Hut	0.76	231	P	Pb	09 08 10.4	0.0
WATZ	Wairara	0.76	82	P	Pb	09 08 10.5	+0.1
TLZ	Tolley Road	0.77	51	P	Pg	09 08 10.1	-0.3
OTVZ	Oturere	0.78	117	P	Pg	09 08 10.6	0.0
RATZ	Rangitukua	0.78	94	P	Pb	09 08 11.1	+0.3
MTVZ	Mangateitei	0.79	136	P	Pg	09 08 10.5	-0.2
TMVZ	Te Maari	0.79	113	P	Pb	09 08 10.9	0.0
WNVZ	Wahianoa	0.82	129	P	Pg	09 08 11.4	0.0
TUVZ	Tukino	0.82	124	P	Pb	09 08 11.6	+0.1
NBEZ	Newall Road No	0.84	237	P	Pb	09 08 11.9	+0.2
RITZ	Rihia Road	0.86	101	P	Pn	09 08 12.7	-0.5
KUTZ	Kaahu Road	0.89	69	P	Pg	09 08 12.5	-0.1
NMEZ	Namu Road	0.92	229	P	Pb	09 08 11.6	-1.4
WAZ	Wanganui	0.95	170	P	Pg	09 08 13.8	0.0
MOVZ	Moawhango	0.96	128	P	Pb	09 08 13.8	-0.1
BHHZ	Black Hill Sta	1.21	124	P	Pn	09 08 17.8	-0.2
TOZ	Tahuroa Road	1.23	28	P	Pn	09 08 16.9	-1.2
BKZ	Black Stump Fm	1.39	105	P	Pb	09 08 20.7	-0.4
KWHZ	Kaweka Forest	1.42	116	P	Pg	09 08 22.8	0.0
KRHZ	Kereru	1.49	124	P	Pg	09 08 23.7	-0.3
PNHZ	Pukenui	1.56	135	P	Pg	09 08 24.7	-0.6
OPRZ	Ohinepanea	1.71	56	P	Pb	09 08 27.3	+0.8
MKAZ	Moumakai	1.74	10	P	Pn	09 08 24.7	-0.5
AWAZ	Awhitu Peninsu	1.75	357	P	Pn	09 08 25.0	-0.4
DVHZ	Dannevirke	1.83	144	P	Pg	09 08 30.4	-0.1
MRZ	Mangatainoka R	1.94	162	P	Pn	09 08 29.2	+1.2
PRWZ	Pori Road	1.97	152	P	Pg	09 08 32.7	-0.5
WIAZ	Waiheke Island	2.04	8	P	Pn	09 08 29.0	-0.3
KIW	Kapiti Island	2.04	177	P	Pn	09 08 30.5	+1.1
DUWZ	D'Urville Isla	2.09	198	P	Pn	09 08 31.3	+1.3
TIWZ	Tintock	2.14	157	P	Pg	09 08 35.6	-0.8
HOWZ	Holdsworth Sta	2.16	165	P	Pb	09 08 33.7	-0.5
BFZ	Birch Farm	2.18	149	P	Pb	09 08 34.6	0.0
CAW	Cannon Point	2.30	174	P	Pb	09 08 36.1	-0.6
TMWZ	Te Maipa	2.44	160	P	Pg	09 08 41.2	-1.1
BHW	Baring Head	2.59	178	P	Pb	09 08 39.3	-2.3
HAZ	Te Kaha	2.59	67	P	Pb	09 08 43.0	+1.3
QRZ	Quartz Range	2.65	220	P	Pn	09 08 36.4	-1.2
TUWZ	Tuamarina	2.69	193	P	Pn	09 08 40.2	+2.0
PKGZ	Pakihiroa	2.76	71	P	Pb	09 08 44.4	-0.1
PLWZ	Palliser	2.77	172	P	Pb	09 08 46.4	+1.7
PUZ	Puketiti	2.84	76	P	Pb	09 08 45.6	-0.2
WMGZ	Waiomatatini S	3.03	72	P	Pn	09 08 45.5	+2.6

IDC 10 09:20:06.9±5.7, 26°.00S×28°.69E, h0^{km}, mb1 2.4/2, mb1mx2.4/46, mbtmp2.3/2, ML1.9/2, Error ellipse: s-maj=43.5km s-min=28.5km az=72.0, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
LBTB	Lobatse	2.96	289	Pn	Pn	09 20 53.6	-1.7
	0.1nm,0.3s,baz=117,slow=14,SNR=1.0						
LBTB				Pg	Pb	09 21 00.7	+0.2
	0.2nm,0.3s,baz=111,slow=16,SNR=2.0						
LBTB				Lg	Lg	09 21 42.0	
	0.5nm,0.3s,baz=24,slow=22,SNR=8.0						
BOSA	Boshof	4.01	229	Pn	Pn	09 21 11.7	+1.9
	0.1nm,0.3s,baz=62,slow=15,SNR=1.5						
BOSA				Lg	Lg	09 22 13.4	
	0.3nm,0.3s,baz=141,slow=6.1,SNR=5.4						
I47ZA	BOSHOF INFRASO	4.03	229	*i*		09 43 40.0	
	baz=51,slow=307,SNR=2.1						
I35NA	TSUMEB INFRASO	12.29	301	*i*		10 33 20.0	
	baz=126,slow=306,SNR=0.7						

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*MAN **10** 09:26:56.5, 7°.18N×126°.62E, h130^{km}, mb4.5, ML3.3, MS3.1*

*IDC **10** 09:26:58.9±0.9, 7°.34N×126°.62E, h142^{km}±8^{km}, mb3.7/16, mb1 3.8/17, mb1mx3.6/48, mbtmp4.1/17, Error ellipse: s-maj=21.4km s-min=10.5km az=72.0*

*NEIC **10** 09:26:59.6±1.3, 7°.3N±0°.1×126°.5E±0°.1, h147^{km}±6^{km}, mb4.4/40, Error ellipse: s-maj=16.0km s-min=14.4km az=55.0*

ISC 10 09:26:58.3±0.7, 7°.22N±0°.04×126°.59E±0°.07, h138^{km}±6^{km}, n78, σ1^{s}.52/93, mb4.3/35, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
MATI	Mati	0.43	231	*e*P	Pn	09 27 16.0	-1.9
MATI				*e*S	Sn	09 27 31.5	-1.3
DAV	Davao City (W)	1.02	262	P	Pn	09 27 23.5	+1.5
	560nm,0.3s,baz=230,slow=0.9,SNR=23						
DAV				S	Sn	09 27 42.5	+2.4
	602nm,0.3s,baz=313,slow=23,SNR=81						
DDMP	Don Marcelino,	1.41	218	*e*P	Pn	09 27 24.9	-1.2
DDMP				*e*S	Sn	09 27 46.2	-1.0
KCP	Kidapawan	1.51	262	⇑*i*P	Pn	09 27 28.4	+1.4
KCP				*i* S	Sn	09 27 46.5	-2.5
BUKP	Musuan	1.65	293	*e*P	Pn	09 27 28.2	-0.5
BUKP				*e*S	Sn	09 27 51.8	-0.1
BUTP	Butuan	1.98	331	*e*P	Pn	09 27 32.4	-0.2
BUTP				*e*S	Sn	09 28 04.5	+5.7
SKMP	Bagumbayan, Su	2.15	251	*e*P	Pn	09 27 33.1	-1.5
SKMP				*e*S	Sn	09 28 00.0	-2.3
CGP	Cagayan de Oro	2.24	303	⇓*e*P	Pn	09 27 36.8	+1.2
CGP				*e*S	Sn	09 28 04.2	-0.2
GLSP	General Luna,	2.59	350	*e*P	Pn	09 27 38.3	-1.7
GLSP				*e*S	Sn	09 28 07.6	-4.4
PAGZ	Pagadian	3.24	281	*e*P	Pn	09 27 47.6	-0.7
PAGZ				*e*S	Sn	09 28 24.6	-2.4
MSLP	Maasin	3.36	329	*e*P	Pn	09 27 49.1	-0.8
MSLP				*e*S	Sn	09 28 32.7	+2.9
CNOP	Candoni, Negro	4.69	304	*e*P	Pn	09 28 07.4	0.0
TOLI2	Tolitoli	8.39	224	Pn	Pn	09 28 56.8	-0.2
SIJI	Sorong	9.29	150	P	Pn	09 29 10.6	+1.5
	5.5nm,0.3s,baz=232,slow=22,SNR=18						
SIJI				S	Sn	09 30 47.2	-5.0
	3.3nm,0.3s,baz=180,slow=23,SNR=6.6						
FAKI	Fak Fak	11.55	151	Pn	Pn	09 29 42.0	+2.8
SBUM	Sibu	15.08	252		P	09 30 29.3	+2.9
SBUM				IAmb	IAmb	09 30 32.5	
	comp=Z,15nm,0.6s						
JCJ	Chichijima	24.70	35	P	P	09 32 05.2	-1.5
	comp=Z,106nm,0.5s,baz=233,slow=7.9,SNR=2.6						
JCJ	Chichijima	24.70	35	IAmb	IAmb	09 32 09.6	
	comp=Z,174nm,0.9s						
FITZ	Fitzroy Crossi	25.18	182	P	P	09 32 13.7	+2.6
	comp=Z,1.6nm,0.6s,baz=275,slow=1.8,SNR=7.0						
FITZ	Fitzroy Crossi	25.18	182	P	P	09 32 12.1	+1.0
COEN	Coen	26.71	142	P	P	09 32 28.9	+3.9
COEN				IAmb	IAmb	09 32 29.1	
	comp=Z,9.9nm,1.1s						
WB0	Warramunga Arr	27.90	164	P	P	09 32 36.7	+1.2
WB0				IAmb	IAmb	09 33 04.6	
	comp=Z,6.3nm,1.3s						
WRA	Warramunga Arr	28.05	164	P	P	09 32 37.6	+0.7
	comp=Z,0.2nm,0.5s,baz=342,slow=8.4,SNR=6.2						
WRA				PcP	PcP	09 35 48.5	+0.2
	comp=Z,1.1nm,0.6s,baz=333,slow=2.4,SNR=9.2						
WB2	Warramunga Arr	28.05	164	P	P	09 32 37.3	+0.5
WB2				IAmb	IAmb	09 33 05.6	
	comp=Z,10nm,1.5s						
WR0	Warramunga Arr	28.12	164	P	P	09 32 39.4	+1.9
WR0				IAmb	IAmb	09 32 47.2	
	comp=Z,8.1nm,1.4s						
AS31	Alice Springs	31.52	167	P	P	09 33 07.9	+0.4
ASAR	Alice Springs	31.52	167	P	P	09 33 08.1	+0.5
	comp=Z,0.3nm,0.3s,baz=342,slow=7.8,SNR=12						
ASAR				PcP	PcP	09 35 57.5	+0.3
	comp=Z,1.7nm,0.5s,baz=348,slow=2.5,SNR=21						
ASAR	Alice Springs	31.52	167	P	P	09 33 10.0	+2.5
USRK	Ussuriysk Ar.	37.13	6	P	P	09 33 54.7	-0.8
	comp=Z,1.3nm,0.7s,baz=171,slow=6.9,SNR=4.1						
FORT	Forrest	37.81	178	P	P	09 34 02.3	+0.9
BBOO	Buckleboo	40.82	168	P	P	09 34 26.6	+0.3
BBOO				IAmb	IAmb	09 34 27.1	
	comp=Z,8.0nm,1.2s						
NWAO	Narrogin (SRO)	40.91	192	P	P	09 34 26.6	-0.5
NWAO				IAmb	IAmb	09 34 28.2	
	comp=Z,15nm,1.1s						
STKA	Stephens Creek	41.44	161	P	P	09 34 31.8	+0.3
	comp=Z,0.8nm,0.5s,baz=27,slow=4.0,SNR=3.8						
STKA	Stephens Creek	41.44	161	P	P	09 34 31.9	+0.5
SONM	Songino Array	43.97	340	P	P	09 34 51.0	-0.9
	comp=Z,0.6nm,0.8s,baz=154,slow=9.3,SNR=2.6						
SONM				PcP	PcP	09 36 35.2	-0.1
	comp=Z,0.8nm,0.6s,baz=131,slow=3.1,SNR=5.3						
PETK	Petropavlovsk-	52.28	23	P	P	09 35 55.6	+0.1
	comp=Z,5.4nm,1.0s,baz=158,slow=4.3,SNR=5.2						
MK31	Makanchi Array	54.65	324	P	P	09 36 12.7	-0.2
MK31				IAmb	IAmb	09 36 13.6	
	comp=Z,4.6nm,1.0s						
MKAR	Makanchi Array	54.65	324	P	P	09 36 12.7	-0.1
	comp=Z,3.0nm,0.5s,baz=116,slow=7.4,SNR=51						
MKAR				PcP	PcP	09 37 13.8	-0.2
	comp=Z,2.8nm,0.8s,baz=111,slow=4.9,SNR=9.7						
MAKZ	Makanchi	54.84	324	P	P	09 36 13.5	-0.8
MAKZ				IAmb	IAmb	09 36 15.1	
	comp=Z,6.8nm,1.1s						
NIL	Nilore	55.74	306	P	P	09 36 20.4	-0.6
ZALV	Zalesovo Beam	57.44	332	P	P	09 36 31.0	-1.6
	comp=Z,1.2nm,0.5s,baz=134,slow=6.4,SNR=6.1						
AAK	Ala-Archa	57.72	316	P	P	09 36 34.7	-0.3
	comp=Z,1.1nm,0.4s,baz=93,slow=8.1,SNR=4.5						
AAK	Ala-Archa	57.72	316	P	P	09 36 35.1	+0.2
KURK	Kurchatov	58.76	326	P	P	09 36 41.4	-0.4
KURBB	Kurchatov Arra	58.76	326	P	P	09 36 41.4	-0.3
	comp=Z,3.1nm,0.6s,baz=122,slow=7.4,SNR=34						
KBL	Kabul	59.34	306	P	P	09 36 45.7	-0.6
KK31	Karatay Array	60.62	316	P	P	09 36 53.8	-1.0
KK31				IAmb	IAmb	09 36 55.1	
	comp=Z,3.1nm,0.8s						
KKAR	Karatay Array	60.62	316	P	P	09 36 54.3	-0.4
KKAR				IAmb	IAmb	09 36 55.1	
	comp=Z,3.1nm,0.8s						
BRVK	Borovoye	64.42	326	P	P	09 37 18.9	-0.8
BRVK				IAmb	IAmb	09 37 20.2	
	comp=Z,5.7nm,1.0s						
ABKAR	Akbulak array	69.39	320	P	P	09 37 50.9	-0.3
TTA	Tatalina	77.87	27	P	P	09 38 40.3	-0.3
RAYN	Ar Rayn	79.01	293	P	P	09 38 47.4	-0.2
RAYN				IAmb	IAmb	09 38 48.0	
	comp=Z,5.1nm,0.7s						
KDAK	Kodiak Island	79.03	33	P	P	09 38 47.1	+0.2
	comp=Z,9.6nm,1.1s,baz=74,slow=12,SNR=1.0						
KDAK	Kodiak Island	79.03	33	P	P	09 38 47.1	+0.2
IMAR	Indian Mountai	79.23	24	P	P	09 38 48.1	+0.2
PPLA	Purkeypile	79.61	27	P	P	09 38 51.3	+1.1
PPLA				IAmb	IAmb	09 38 57.3	
	comp=Z,11nm,1.2s						
SKT	Skwentna	79.84	28	P	P	09 38 50.8	-0.5
SUA	Susitna One	80.19	29	P	P	09 38 53.5	+0.2
SUA				IAmb	IAmb	09 38 58.0	
	comp=Z,8.3nm,1.0s						
TRF	Thorofare Moun	80.50	27	P	P	09 38 54.8	-0.3
TRF				IAmb	IAmb	09 39 00.5	
	comp=Z,9.0nm,1.4s						
COLD	Coldfoot	80.75	23	P	P	09 38 56.8	+0.8
GHO	Glory Hole Cre	81.07	29	P	P	09 38 57.7	-0.3
KNK	Knik Glacier	81.28	29	P	P	09 38 59.5	+0.4
KNK				IAmb	IAmb	09 39 13.4	
	comp=Z,15nm,1.1s						
SCM	Sheep Creek Mo	81.83	29	P	P	09 39 01.4	-0.6
HDA	Harding Lake	82.00	26	P	P	09 39 01.6	-1.1
IL31		82.03	26	P	P	09 39 02.5	-0.2
IL31				IAmb	IAmb	09 39 06.8	
	comp=Z,7.0nm,1.4s						
ILAR	Eielson Array	82.03	26	P	P	09 39 01.9	-0.9
	comp=Z,0.6nm,0.8s,baz=237,slow=5.2,SNR=13						
ILAR	Eielson Array	82.03	26	P	P	09 39 02.3	-0.5
MENT	Mentasta	83.48	27	P	P	09 39 11.4	+1.0
MENT				IAmb	IAmb	09 39 18.1	
	comp=Z,9.2nm,1.4s						
GLB	Gilahina Butte	83.52	29	P	P	09 39 11.2	+0.5
BCAR	Beaver Creek A	84.35	27	P	P	09 39 15.9	+1.1
EGAK	Eagle	84.48	25	P	P	09 39 15.9	+0.5
CTGM	Chitina Glacie	84.75	29	P	P	09 39 18.4	+1.4
FINES	FINESS Array B	88.71	332	P	P	09 39 34.6	-1.3
	comp=Z,2.5nm,0.9s,baz=300,slow=3.8,SNR=4.3						
AKASG	Malin Array Be	89.11	321	P	P	09 39 36.8	-1.3
	comp=Z,1.6nm,0.4s,baz=67,slow=4.7,SNR=6.9						
YKA	Yellowknife Ar	96.39	24	P	P	09 40 10.9	-0.5
	comp=Z,0.5nm,0.8s,baz=302,slow=4.0,SNR=7.7						
TXAR	Lajitas Array	119.54	51	PKP	PKiKP	09 45 32.6	0.0
	comp=Z,0.3nm,0.6s,baz=345,slow=2.4,SNR=6.1						
TXAR	Lajitas Array	119.54	51		PKiKP	09 45 33.1	+0.5
TORD	Torodi Ar. Bea	121.65	290	PKP	PKPdf	09 45 36.2	-0.6
	comp=Z,1.1nm,0.7s,baz=26,slow=2.5,SNR=5.5						

NNC 10 09:43:44.7±2.6, 53°.63N×88°.14E, h0^{km}, mb3.7, mpv3.3, 4C, Error ellipse: s-maj=19.5km s-min=13.0km az=77.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	2.00	281	⇑Pn	Pn	09 44 18.8	-0.9
	4.3nm,0.7s,baz=98,slow=16						
ZAA0				⇑Sn	Sb	09 44 46.4	-0.7
	7.6nm,0.5s,baz=99,slow=28						
KURK	Kurchatov	6.54	247	⇑Pn	Pn	09 45 22.3	+0.3
	3.6nm,0.8s						
KURBB	Kurchatov Arra	6.63	247	⇑Pn	Pn	09 45 24.0	+0.6
	5.4nm,0.6s						
MK31	Makanchi Array	7.80	211	Pn	Pn	09 45 41.1	+1.8
	0.6nm,0.6s,baz=28,slow=12,SNR=12						

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*SKHL **10** 09:58:19.5±0.3, 42°.70N×146°.60E, h32^{km}±1^{km}, mb4.4/2*

*JMA **10** 09:58:20.3±0.2, 42°.87N×146°.65E, h50^{km}±3^{km}, M3.1*

ISC 10 09:58:20.9±3.6, 43°.0N±0°.1×146°.47E±0°.08, h12^{km}±27^{km}, n12, σ0^{s}.55/19, Off southeast coast of Hokkaido

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
NEM2	Nemuro 2	0.67	308	P	Pn	09 58 35.8	-0.4
NEM2				*e*S	Sn	09 58 47.5	+0.8
NMR	Nemuro--Hokkai	0.68	307	*i* P	Pb	09 58 35.0	+0.3
NMR				*i* S	Sn	09 58 46.8	-0.1
JKHN	Kushirohamanak	0.97	278	P	Pb	09 58 39.9	+0.3
GRPR	Tuman	1.16	334	*e*P	Pn	09 58 42.0	-0.9
GRPR				AMB	AMB	09 58 43.0	
	130nm,0.3s						
GRPR				*i* S	Sn	09 58 58.8	+0.2
GRPR				A	A	09 58 59.0	
	494nm,0.3s						
GRPR				A	A	09 58 59.0	
	335nm,0.3s						
YUK	Yuzh-Kuril'sk	1.17	338	*e*P	Pn	09 58 42.0	-1.0
YUK				AMB	AMB	09 58 46.0	
	180nm,0.4s						
YUK				*i* S	Sn	09 58 59.1	+0.2
YUK				A	A	09 59 01.0	
	252nm,0.3s						
YUK				A	A	09 59 01.0	
	361nm,0.3s						
JAK	Akkeshi	1.30	272	P	Pn	09 58 44.4	-0.5
JAK				*e*S	Sn	09 59 02.0	-0.2
JNSB	Nemuroshibetsu	1.35	308	P	Pn	09 58 45.3	-0.2
JRA	Rausu	1.39	315	*e*S	Sb	09 59 04.8	+0.3
JNK	Nakash	1.43	297	*e*S	Sn	09 59 05.0	-0.3
JAR	Ashorobuto	2.01	281	P	Pn	09 58 54.5	-0.1
JTKR	Abashiri--Toko	2.12	299	P	Pn	09 58 56.8	+0.6
JTKR				*e*S	Sb	09 59 25.1	-0.5
KUR	Kuril'sk	2.49	23	*e*P	Pn	09 59 01.0	-0.2
KUR				*i* S	Sn	09 59 32.0	+0.5
KUR				A	A	09 59 34.0	
	130nm,0.3s						
KUR				A	A	09 59 34.0	
	35nm,0.3s						

IDC 10 10:01:20.7±8.0, 0°.15S×129°.27E, h0^{km}, mb3.7/3, mb1 4.0/4, mb1mx3.5/41, mbtmp3.8/4, ML3.6/1, Error ellipse: s-maj=120.0km s-min=35.4km az=166.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SIJI	Sorong	2.12	110	Pn	Pn	10 01 56.8	-0.7
	21nm,0.3s,baz=123,slow=23,SNR=53						
SIJI				Sn	Sn	10 02 24.4	-0.1

	10.0nm,0.3s,baz=230,slow=23,SNR=10						
WRA	**Warramunga Arr**	**20.29**	**166**	P	P	10 05 58.7	+0.5
	0.7nm,0.5s,baz=344,slow=12,SNR=15						
ASAR	**Alice Springs**	**23.80**	**169**	P	P	10 06 35.6	+0.2
	2.4nm,0.8s,baz=353,slow=9.3,SNR=26						
STKA	**Stephens Creek**	**33.64**	**161**	P	P	10 08 03.1	-0.1
	0.7nm,0.5s,baz=337,slow=13,SNR=5.1						

IDC 10 10:09:33.3±2.4,6°.20S×146°.47E,h110km±23km,mb3.3/3, mb1 3.4/6,mb1mx3.1/37,mbtmp3.7/6,MS2.4/1,Ms1 2.4/1, ms1mx2.2/21,Error ellipse: s-maj=28.1km s-min=20.0km az=68.0,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.25**	**168**	P	Pn	10 10 24.7	+1.9
	10nm,0.3s,baz=3.1,slow=5.5,SNR=22						
PMG				S	Sn	10 11 00.9	0.0
	37nm,0.3s,baz=148,slow=22,SNR=40						
PMG				LR	LR	10 12 00.3	
	comp=Z,60nm,18.6s,baz=150,slow=45						
JAY	**Jayapura**	**6.81**	**302**	P	Pn	10 11 10.3	-0.6
	1.7nm,0.3s,baz=167,slow=9.1,SNR=6.4						
WRA	**Warramunga Arr**	**18.04**	**220**	P	P	10 13 35.9	-0.2
	0.1nm,0.3s,baz=41,slow=11,SNR=6.4						
ASAR	**Alice Springs**	**21.16**	**214**	P	P	10 14 10.2	+0.3
	0.4nm,0.5s,baz=57,slow=8.8,SNR=13						
FITZ	**Fitzroy Crossi**	**23.51**	**238**	P	P	10 14 33.5	-0.1
	2.5nm,0.9s,baz=36,slow=9.7,SNR=3.6						
ILAR	**Eielson Array**	**85.88**	**23**	P	P	10 22 00.4	-0.2
	1.4nm,0.7s,baz=252,slow=4.9,SNR=22						
TORD	**Torodi Ar. Bea**	**144.63**	**284**	PKP	PKPdf	10 28 57.8	-0.4
	1.7nm,0.7s,baz=72,slow=3.4,SNR=6.7						

IDC 10 10:10:06.7±2.3,1°.66N×125°.96E,h0km,mb3.3/3, mb1 3.6/3,mb1mx3.3/44,mbtmp3.4/3,MS2.8/1,Ms1 3.0/1, ms1mx2.4/25,Error ellipse: s-maj=228.0km s-min=26.9km az=65.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.98**	**159**	P	P	10 15 11.6	-1.6
	0.7nm,0.6s,baz=337,slow=11,SNR=3.9						
ASAR	**Alice Springs**	**26.33**	**163**	P	P	10 15 45.9	+1.3
	0.3nm,0.5s,baz=345,slow=13,SNR=6.1						
CMAR	**Chiang Mai Arr**	**31.32**	**304**	LR	LR	10 31 38.4	
	comp=Z,14nm,18.1s,baz=165,slow=41						
MKAR	**Makanchi Array**	**58.83**	**326**	P	P	10 20 07.0	-0.2
	0.2nm,0.5s,baz=120,slow=8.9,SNR=4.8						

*NEIC **10** 10:20:11.7±2.5,20°.8S±0°.1×170°.11E±0°.09,h10km±1km, mb4.5/11,Error ellipse: s-maj=20.2km s-min=11.2km az=153.0*

*IDC **10** 10:20:12.3±1.1,20°.56S×169°.86E,h0km,mb4.1/6, mb1 4.3/9,mb1mx4.1/30,mbtmp4.1/9,ML4.8/2,MS3.3/8, Ms1 3.3/8,ms1mx3.1/23,Error ellipse: s-maj=37.3km s-min=19.1km az=155.0*

*NOU **10** 10:20:18.7,20°.73S×169°.51E,h0km,MLv3.9,Vanuatu Islands*

ISC 10 10:20:12.8±0.7,20°.66S±0°.07×169°.95E±0°.07,h10km,n38, σ1ˢ.76/38,mb4.4/11,MS3.4/4,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LIFNC	**LIFOU**	**2.54**	**267**	P	**Pn**	**10 20 54.0**	**0.0**
PINNC	**Pines Island,**	**3.03**	**230**	P	**Pn**	**10 21 02.0**	**+1.2**
YATNC	**Mamie plateau,**	**3.17**	**243**	P	**Pn**	**10 21 04.0**	**+1.2**
DVP	**Devils Point**	**3.36**	**330**	P	**Pb**	**10 21 10.9**	**-1.5**
OUENC	**Ouen Island, N**	**3.38**	**238**	P	**Pn**	**10 21 08.2**	**+2.6**
DZM	**Mont Dzumac**	**3.56**	**246**	Pn	**Pn**	**10 21 09.8**	**+1.6**
	1.6nm,0.3s,baz=65,slow=20,SNR=16						
DZM				Sn	**Sn**	**10 21 52.8**	**+2.5**
	8.9nm,0.3s,baz=307,slow=23,SNR=8.1						
DZM				LR	LR	10 22 06.9	
	comp=Z,189nm,21.5s,baz=52,slow=33						
DZM	**Mont Dzumac**	**3.56**	**246**	*e*Pn	**Pn**	**10 21 09.7**	**+1.6**
	14nm,0.3s						
DZM				*e*Sn	**Sn**	**10 21 46.3**	**-4.0**
	23nm,0.3s						
DZM	**Mont Dzumac**	**3.56**	**246**		**Pn**	**10 21 10.1**	**+2.0**
DZM	**Mont Dzumac**	**3.56**	**246**	P	**Pn**	**10 21 10.4**	**+2.3**
ONTNC	**Ouen Toro**	**3.64**	**243**	P	**Pn**	**10 21 11.4**	**+2.1**
NOUC	**Port Laguerre**	**3.69**	**246**	P	**Pn**	**10 21 11.6**	**+1.7**
KOUNC	**Koumac, New Ca**	**5.30**	**270**	P	**Pn**	**10 21 34.0**	**+1.9**
SANVU	**Saraoutou**	**5.80**	**333**	Pn	**Pn**	**10 21 40.6**	**+1.7**
SANVU	**Saraoutou**	**5.80**	**333**	P	Pn	10 21 44.4	+5.5
MSVF	**Nonsavu**	**8.19**	**71**	Pn	**Pn**	**10 22 11.1**	**-0.7**
	0.8nm,0.3s,baz=246,slow=12,SNR=16						
MSVF				LR	LR	10 24 42.3	
	comp=Z,446nm,19.4s,baz=252,slow=33						
MSVF	**Nonsavu**	**8.19**	**71**		**Pn**	**10 22 10.9**	**-0.9**
HNR	**Honiara**	**14.75**	**318**	LR	LR	10 28 42.2	
	comp=Z,56nm,18.1s,baz=49,slow=35						
URZ	**Urewera**	**18.60**	**162**	P	**Pn**	**10 24 32.4**	**+2.0**
	0.7nm,0.3s,baz=68,slow=5.6,SNR=6.8						
URZ				LR	LR	10 30 35.3	
	comp=Z,71nm,18.4s,baz=31,slow=33						
BKZ	**Black Stump Fm**	**19.29**	**164**	P	**P**	**10 24 34.4**	**-3.4**
BKZ				IAmb	IAmb	10 24 52.1	
	comp=Z,37nm,1.4s						
STKA	**Stephens Creek**	**27.69**	**240**	P	**P**	**10 26 02.1**	**+0.9**
	comp=Z,1.9nm,0.6s,baz=89,slow=11,SNR=6.4						
STKA				LR	LR	10 35 30.4	
	comp=Z,96nm,21.8s,baz=50,slow=33						
STKA	**Stephens Creek**	**27.69**	**240**	P	**P**	**10 25 58.5**	**-2.7**
BBOO	**Buckleboo**	**32.46**	**241**	P	**P**	**10 26 42.1**	**-1.3**
WR0	**Warramunga Arr**	**33.17**	**265**	P	**P**	**10 26 48.8**	**-1.0**
WR0				IAmb	IAmb	10 26 54.1	
	comp=Z,11nm,1.5s						
WB0	**Warramunga Arr**	**33.34**	**265**	P	**P**	**10 26 52.0**	**+0.8**
WB0				IAmb	IAmb	10 27 02.6	
	comp=Z,9.3nm,1.5s						
WB2	**Warramunga Arr**	**33.35**	**265**	P	**P**	**10 26 50.3**	**-1.1**
WB2				IAmb	IAmb	10 27 15.7	
	comp=Z,11nm,1.5s						
WRA	**Warramunga Arr**	**33.37**	**265**	P	**P**	**10 26 50.1**	**-1.4**
	comp=Z,0.7nm,0.5s,baz=92,slow=8.5,SNR=13						
WRA				LR	LR	10 39 14.9	
	comp=Z,94nm,19.7s,baz=160,slow=34						
WRA	**Warramunga Arr**	**33.37**	**265**	P	**P**	**10 26 49.9**	**-1.6**
AS31	**Alice Springs**	**33.46**	**258**	P	**P**	**10 26 52.6**	**+0.3**
ASAR	**Alice Springs**	**33.46**	**258**	P	**P**	**10 26 52.3**	**0.0**
	comp=Z,5.8nm,0.9s,baz=81,slow=9.2,SNR=43						
ASAR				LR	LR	10 39 58.8	
	comp=Z,76nm,20.5s,baz=118,slow=36						
ASAR	**Alice Springs**	**33.46**	**258**	P	**P**	**10 26 52.2**	**-0.2**
MTN	**Manton Dam**	**37.90**	**276**	P	**P**	**10 27 30.4**	**-0.1**
FITZ	**Fitzroy Crossi**	**41.78**	**266**	P	**P**	**10 28 03.4**	**+0.7**
FITZ				IAmb	IAmb	10 28 03.8	
	comp=Z,5.4nm,0.7s						
QSPA	**South Pole Qui**	**69.40**	**180**	P	**P**	**10 31 19.9**	**-0.9**
QSPA				IAmb	IAmb	10 31 21.2	
	comp=Z,4.2nm,1.0s						
CMAR	**Chiang Mai Arr**	**79.69**	**294**	P	**P**	**10 32 22.9**	**+1.7**
	comp=Z,0.8nm,0.3s,baz=110,slow=4.9,SNR=2.1						
NVAR	**Mina Array Bea**	**89.24**	**48**	P	**P**	**10 33 11.9**	**+2.5**
	comp=Z,0.4nm,0.8s,baz=216,slow=9.0,SNR=2.5						
NVAR				LR	LR	11 04 53.4	
	comp=Z,16nm,21.6s,baz=337,slow=30						
ILAR	**Eielson Array**	**91.38**	**17**	P	**P**	**10 33 18.8**	**+0.3**
	comp=Z,0.6nm,0.8s,baz=223,slow=7.1,SNR=5.3						
ILAR	**Eielson Array**	**91.38**	**17**	P	**P**	**10 33 17.9**	**-0.6**
GERES	**GERESS Array B**	**146.05**	**332**	PKPbc	**PKPab**	**10 39 53.8**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=35,slow=7.2,SNR=2.2						

*NEIC **10** 10:29:31.6±2.2,20°.3S±0°.1×177°.8W±0°.1,h506km±7km, mb4.6/38,Error ellipse: s-maj=18.7km s-min=14.8km az=160.0*

*IDC **10** 10:29:32.0±2.0,20°.29S×177°.85W,h505km±18km, mb3.8/12,mb1 3.9/14,mb1mx3.7/26,mbtmp4.6/14,Error ellipse: s-maj=28.7km s-min=14.0km az=150.0*

ISC 10 10:29:31.2±0.4,20°.30S±0°.06×177°.74W±0°.07,h500km, n102,σ2ˢ.48/114,mb4.5/31,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.73**	**302**	P	**P**	**10 30 57.3**	**+1.4**
	4.2nm,0.3s,baz=162,slow=9.2,SNR=19						
MSVF				S	**S**	**10 32 09.6**	**+4.6**
	baz=141,slow=21,SNR=1.3						
MSVF	**Nonsavu**	**4.73**	**302**	P	**P**	**10 30 57.1**	**+1.1**
NIUE	**Niue**	**7.46**	**82**		**P**	**10 31 21.4**	**-0.8**
GLKZ	**Green Lake**	**8.93**	**181**	P	**P**	**10 31 34.8**	**-2.4**
GLKZ				S	**S**	**10 33 15.5**	**-5.2**
DZM	**Mont Dzumac**	**14.86**	**260**	P	**P**	**10 32 39.8**	**-0.3**
	0.8nm,0.3s,baz=116,slow=11,SNR=16						
DZM	**Mont Dzumac**	**14.86**	**260**	P	**P**	**10 32 40.6**	**+0.5**
SANVU	**Saraoutou**	**15.12**	**286**	P	**P**	**10 32 41.5**	**-1.3**
OUZ	**Omahuta**	**16.71**	**205**	P	**P**	**10 33 00.8**	**+1.6**
OUZ				IAmb	IAmb	10 33 01.5	
	comp=Z,33nm,1.2s						
MXZ	**Matakaoa Point**	**17.55**	**190**	P	**P**	**10 33 09.4**	**+2.1**
WMGZ	**Waiomatatini S**	**17.78**	**190**	P	**P**	**10 33 15.1**	**+5.7**
WMGZ				S	**S**	**10 36 16.4**	**+8.9**
HAZ	**Te Kaha**	**17.83**	**192**	P	**P**	**10 33 10.7**	**+0.8**
HAZ				S	**S**	**10 36 14.9**	**+6.6**
PUZ	**Puketiti**	**18.05**	**190**	P	**P**	**10 33 10.3**	**-1.6**
PUZ				S	**S**	**10 36 21.5**	**+9.4**
RUGZ	**Raukumara Rang**	**18.05**	**192**	P	**P**	**10 33 15.0**	**+2.9**
TWGZ	**Tauwhareparae**	**18.20**	**191**	P	**P**	**10 33 14.0**	**+0.6**
TWGZ				S	**S**	**10 36 20.8**	**+6.3**
MWZ	**Matawai**	**18.44**	**192**	P	**P**	**10 33 14.9**	**-0.6**
MWZ				S	**S**	**10 36 22.2**	**+3.9**
URZ	**Urewera**	**18.45**	**193**	P	**P**	**10 33 13.7**	**-1.8**
URZ				IAmb	IAmb	10 33 30.8	
	comp=Z,23nm,1.1s						
URZ	**Urewera**	**18.45**	**193**	P	**P**	**10 33 14.1**	**-1.5**
URZ				S	**S**	**10 36 19.2**	**+0.8**
TKGZ	**Te Karaka**	**18.48**	**191**	P	**P**	**10 33 19.9**	**+4.0**
MUGZ	**Murupara**	**18.73**	**194**	P	**P**	**10 33 24.6**	**+6.5**
MUGZ				S	S	10 36 34.1	+11
RIGZ	**Rimuhau**	**18.75**	**191**	P	**P**	**10 33 18.5**	**+0.1**
SNGZ	**Shannon Statio**	**18.91**	**192**	P	**P**	**10 33 24.7**	**+4.9**
MTHZ	**Maungataniwha**	**19.08**	**193**	P	P	10 33 30.0	+8.7
RAHZ	**Arahi**	**19.09**	**192**	P	**P**	**10 33 27.9**	**+6.5**
RAHZ				S	**S**	**10 36 33.9**	**+5.0**
NMHZ	**Naumai**	**19.32**	**193**	P	**P**	**10 33 22.5**	**-1.1**
NMHZ				S	S	10 36 46.1	+13
BKZ	**Black Stump Fm**	**19.45**	**194**	P	**P**	**10 33 25.5**	**+0.7**
BKZ	**Black Stump Fm**	**19.45**	**194**	P	P	10 33 35.4	+11
BKZ				S	**S**	**10 36 35.3**	**+0.5**
MCHZ	**McNeill Hill**	**19.68**	**193**	P	P	10 33 36.3	+10
MCHZ				S	**S**	**10 36 46.6**	**+8.2**
KAHZ	**Kahuranaki**	**19.98**	**192**	P	P	10 33 39.9	+10
KAHZ				S	**S**	**10 36 46.8**	**+3.5**
PXZ	**Pawanui**	**20.21**	**192**	P	P	10 33 39.1	+7.5
BFZ	**Birch Farm**	**20.96**	**193**	P	**P**	**10 33 37.6**	**-0.8**
QRZ	**Quartz Range**	**22.08**	**200**	P	**P**	**10 33 48.4**	**-0.2**
QRZ				IAmb	IAmb	10 33 58.2	
	comp=Z,20nm,1.2s						
THZ	**Tophouse**	**22.82**	**198**	P	**P**	**10 33 54.8**	**-0.4**
THZ				IAmb	IAmb	10 34 14.0	
	comp=Z,25nm,1.4s						
KHZ	**Kahutara**	**23.25**	**197**	P	**P**	**10 33 57.4**	**-1.5**
LTZ	**Lake Taylor**	**23.94**	**198**	P	**P**	**10 34 06.2**	**+1.0**
LTZ				IAmb	IAmb	10 34 10.5	
	comp=Z,13nm,1.1s						
WHZ	**Wether Hill Ro**	**28.11**	**201**	P	**P**	**10 34 40.8**	**-1.1**
WHZ				IAmb	IAmb	10 34 44.1	
	comp=Z,17nm,0.9s						
EIDS	**Eidsvold**	**29.14**	**254**	P	**P**	**10 34 50.6**	**-0.7**
EIDS				IAmb	IAmb	10 34 54.4	
	comp=Z,27nm,1.4s						
ARMA	**Armidale**	**29.38**	**244**	P	**P**	**10 34 53.8**	**+0.4**
ARMA				IAmb	IAmb	10 34 54.1	
	comp=Z,7.5nm,0.7s						
CTA	**Charters Tower**	**33.75**	**264**	P	**P**	**10 35 30.4**	**-0.5**
	comp=Z,27nm,0.5s,baz=276,slow=2.7,SNR=3.3						
CTAO	**Charters Tower**	**33.75**	**264**	P	**P**	**10 35 30.6**	**-0.3**
PMG	**Port Moresby**	**35.53**	**283**	P	**P**	**10 35 44.8**	**-1.1**
	comp=Z,31nm,0.9s,baz=158,slow=3.3,SNR=7.6						
PMG	**Port Moresby**	**35.53**	**283**	P	**P**	**10 35 44.6**	**-1.3**
TOO	**Toolangi**	**36.21**	**234**	P	**P**	**10 35 51.6**	**+0.4**
TOO				IAmb	IAmb	10 35 52.0	
	comp=Z,23nm,0.8s						
TAU	**Tasmania Unive**	**36.94**	**224**	P	**P**	**10 35 56.1**	**-1.0**
TAU				IAmb	IAmb	10 36 07.6	
	comp=Z,27nm,1.1s						
COEN	**Coen**	**37.81**	**273**	P	**P**	**10 36 03.9**	**-0.8**
COEN				IAmb	IAmb	10 36 05.0	
	comp=Z,8.9nm,0.7s						
STKA	**Stephens Creek**	**38.10**	**244**	P	**P**	**10 36 06.7**	**-0.1**
	comp=Z,7.3nm,0.8s,baz=88,slow=10,SNR=16						
STKA	**Stephens Creek**	**38.10**	**244**	P	**P**	**10 36 06.5**	**-0.2**
BBOO	**Buckleboo**	**42.86**	**243**	P	**P**	**10 36 44.4**	**-0.5**
BBOO				IAmb	IAmb	10 36 45.1	
	comp=Z,16nm,0.9s						
JAY	**Jayapura**	**44.21**	**288**	P	**P**	**10 36 55.6**	**-0.1**
	comp=Z,24nm,0.5s,baz=156,slow=3.0,SNR=16						
WR0	**Warramunga Arr**	**44.68**	**262**	P	**P**	**10 36 57.9**	**-1.4**
AS31	**Alice Springs**	**44.80**	**256**	P	**P**	**10 36 59.7**	**-0.6**
ASAR	**Alice Springs**	**44.80**	**256**	P	**P**	**10 36 59.5**	**-0.7**
	comp=Z,29nm,0.7s,baz=99,slow=8.1,SNR=351						
ASAR				PcP	**PcP**	**10 38 31.4**	**-0.4**
	comp=Z,3.7nm,0.6s,baz=105,slow=3.7,SNR=12						
ASAR				ScP	**ScP**	**10 41 37.5**	**+1.3**
	comp=Z,0.4nm,0.7s,baz=100,slow=4.8,SNR=3.2						
ASAR				S	**S**	**10 42 57.6**	**-3.2**
	comp=Z,0.5nm,0.8s,baz=92,slow=15,SNR=4.6						
ASAR	**Alice Springs**	**44.80**	**256**	P	**P**	**10 36 58.9**	**-1.3**
WB0	**Warramunga Arr**	**44.85**	**262**	P	**P**	**10 36 59.4**	**-1.2**
WB0				IAmb	IAmb	10 37 00.1	
	comp=Z,15nm,0.6s						
WB2	**Warramunga Arr**	**44.86**	**262**	P	**P**	**10 36 59.5**	**-1.1**
WB2				IAmb	IAmb	10 36 59.9	
	comp=Z,11nm,0.7s						
WRAB	**Tennant Creek**	**44.86**	**262**	P	**P**	**10 36 59.5**	**-1.2**
WRAB				IAmb	IAmb	10 36 59.8	
	comp=Z,10nm,0.7s						
WRA	**Warramunga Arr**	**44.87**	**262**	P	**P**	**10 36 59.4**	**-1.4**
	comp=Z,4.5nm,0.3s,baz=96,slow=7.6,SNR=226						
WRA				PcP	**PcP**	**10 38 31.9**	**0.0**
	comp=Z,3.1nm,0.9s,baz=96,slow=3.6,SNR=6.8						
MTN	**Manton Dam**	**49.41**	**270**	P	**P**	**10 37 34.4**	**-0.6**
MTN				IAmb	IAmb	10 37 34.9	
	comp=Z,17nm,0.7s						
FORT	**Forrest**	**49.60**	**246**	P	**P**	**10 37 35.4**	**-0.8**
FITZ	**Fitzroy Crossi**	**53.30**	**262**	P	**P**	**10 38 02.9**	**-0.3**
SOEI	**Soe**	**56.74**	**272**	P	**P**	**10 38 28.0**	**+0.4**
PSA00	**Pilbara Seismi**	**57.95**	**257**	P	**P**	**10 38 34.9**	**-0.8**
PSA00				IAmb	IAmb	10 38 35.5	
	comp=Z,25nm,0.8s						
NWAO	**Narrogin (SRO)**	**58.68**	**243**	P	**P**	**10 38 40.4**	**0.0**
MORW	**Morawa**	**60.13**	**247**	P	**P**	**10 38 50.2**	**0.0**
CASY	**Casey**	**64.25**	**205**	P	**P**	**10 39 16.4**	**+0.1**
CASY				IAmb	IAmb	10 39 27.5	
	comp=Z,38nm,1.5s						
QSPA	**South Pole Qui**	**69.77**	**180**	P	**P**	**10 39 51.4**	**+0.9**
QSPA				IAmb	IAmb	10 39 52.3	
	comp=Z,9.0nm,0.8s						
UGM	**Wanagama**	**70.21**	**269**	P	**P**	**10 39 54.0**	**0.0**
USRK	**Ussuriysk Ar.**	**78.93**	**326**	P	**P**	**10 40 43.1**	**+0.7**
	comp=Z,2.8nm,0.9s,baz=195,slow=13,SNR=4.1						
USRK	**Ussuriysk Ar.**	**78.93**	**326**	P	**P**	**10 40 43.3**	**+0.9**
YBH	**Yreka Blue Hor**	**79.98**	**39**	P	**P**	**10 40 49.4**	**+1.3**
BEKR	**Beckworth**	**80.25**	**41**	P	**P**	**10 40 50.8**	**+1.1**
NVAR	**Mina Array Bea**	**80.71**	**43**	P	**P**	**10 40 53.1**	**+0.9**
	comp=Z,1.2nm,0.7s,baz=225,slow=8.7,SNR=9.1						
NVAR				pP	**pwP**	**10 42 43.4**	**+0.1**
	comp=Z,0.6nm,0.8s,baz=237,slow=9.2,SNR=3.2						
NVAR	**Mina Array Bea**	**80.71**	**43**	P	**P**	**10 40 52.9**	**+0.7**
PINE	**Pine Mountain**	**82.27**	**38**	P	**P**	**10 41 01.8**	**+1.8**
PINE				IAmb	IAmb	10 41 02.7	
	comp=Z,14nm,1.2s						
I07A	**Izee**	**83.28**	**38**	P	**P**	**10 41 06.2**	**+1.2**
TXAR	**Lajitas Array**	**86.74**	**57**	P	**P**	**10 41 23.5**	**+1.3**
	comp=Z,0.6nm,0.7s,baz=218,slow=7.0,SNR=11						
TXAR				pP	**pwP**	**10 43 14.2**	**-1.1**
	comp=Z,0.9nm,1.1s,baz=233,slow=4.4,SNR=4.5						
TXAR	**Lajitas Array**	**86.74**	**57**	P	**P**	**10 41 23.2**	**+1.1**
ILAR	**Eielson Array**	**88.06**	**13**	P	**P**	**10 41 26.5**	**-0.9**
	comp=Z,0.7nm,0.6s,baz=222,slow=5.8,SNR=10.0						
XAN	**Xi'an**	**88.20**	**307**	P	**P**	**10 41 29.6**	**+0.7**
XAN				pP	PcP	10 41 38.0	+7.9
XAN				pmax	pmax		
	comp=Z,8.0nm,1.5s						
SNAA	**Sanae**	**88.21**	**178**	P	**P**	**10 41 27.3**	**-1.0**
VNA3	**Neumayer Olymp**	**88.33**	**176**	P	**P**	**10 41 28.1**	**-0.7**
PDAR	**Pinedale Array**	**88.65**	**43**	P	**P**	**10 41 31.2**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=217,slow=4.3,SNR=6.9						
PDAR	**Pinedale Array**	**88.65**	**43**	P	**P**	**10 41 31.5**	**+0.5**
VNA2	**Neumayer--Watz**	**88.77**	**177**	P	**P**	**10 41 30.4**	**-0.4**
	baz=189,slow=3.7						
VNA1	**Neumayer--Stat**	**89.00**	**177**	P	**P**	**10 41 31.2**	**-0.6**
CMAR	**Chiang Mai Arr**	**90.28**	**289**	P	**P**	**10 41 39.7**	**+0.9**
	comp=Z,3.4nm,0.9s,baz=119,slow=3.0,SNR=18						
CMAR	**Chiang Mai Arr**	**90.28**	**289**	P	**P**	**10 41 39.5**	**+0.7**
ZALV	**Zalesovo Beam**	**110.49**	**321**	PKiKP	**PKiKP**	**10 47 04.1**	**-2.0**
	comp=Z,1.0nm,0.6s,baz=330,slow=2.0,SNR=4.3						
MKAR	**Makanchi Array**	**111.23**	**313**	PKiKP	**PKiKP**	**10 47 06.2**	**-1.6**
	comp=Z,0.7nm,0.6s,baz=142,slow=0.3,SNR=10						
AKASG	**Malin Array Be**	**142.95**	**331**	PKhKP	PKPpre	10 48 03.7	
	comp=Z,2.2nm,0.4s,baz=41,slow=4.6,SNR=13						
MBAR	**Mbarara**	**145.23**	**237**	PKPbc	**PKPdf**	**10 48 13.0**	**+0.3**
	comp=Z,2.0nm,0.4s,baz=126,slow=6.7,SNR=7.4						
MBAR	**Mbarara**	**145.23**	**237**	PKPdf	**PKPdf**	**10 48 12.4**	**-0.4**
BRTR	**Keskin Array B**	**146.88**	**313**	PKPbc	**PKPbc**	**10 48 16.9**	**-0.6**
	comp=Z,3.2nm,0.7s,baz=135,slow=5.0,SNR=8.2						
BRTR	**Keskin Array B**	**146.88**	**313**		**PKPbc**	**10 48 16.4**	**-1.1**
BUR08	**Bucovina Ar. S**	**146.99**	**331**		**PKPbc**	**10 48 18.1**	**+0.6**
BURAR	**Bucovina Array**	**147.00**	**331**		**PKPbc**	**10 48 17.2**	**-0.3**
CLL	**Collm**	**147.92**	**347**	*i* PKPbc	**PKPbc**	**10 48 19.4**	**-0.2**
	comp=Z,16nm,1.0s						
CLL	**Collm**	**147.92**	**347**		**PKPbc**	**10 48 18.4**	**-1.2**
VYHS	**Vyhne**	**148.86**	**338**	*e*PKP	**PKPdf**	**10 48 19.1**	**+1.6**
KHC	**Kasperske Hory**	**149.83**	**345**		**PKPbc**	**10 48 24.3**	**-0.1**
GERES	**GERESS Array B**	**150.07**	**345**	PKPbc	**PKPbc**	**10 48 24.9**	**-0.1**
	comp=Z,2.4nm,0.8s,baz=0.0,slow=1.5,SNR=14						
GERES	**GERESS Array B**	**150.07**	**345**		**PKPbc**	**10 48 24.3**	**-0.8**
TORD	**Torodi Ar. Bea**	**172.87**	**176**	PKPab	**PKPab**	**10 50 13.2**	**+0.1**
	comp=Z,0.7nm,0.7s,baz=147,slow=4.7,SNR=2.6						

*IDC **10** 10:41:14.6±3.6,5°.31S×10°.99W,h0km,mb4.1/9,mb1 4.2/9, mb1mx4.0/35,mbtmp4.1/9,MS3.3/7,Ms1 3.3/7, ms1mx3.1/30,Error ellipse: s-maj=95.8km s-min=24.8km az=73.0*

ISC 10 10:41:16.4±3.3,5°.3S±0°.2×10°.9W±0°.6,h10km,n16,σ1ˢ.08/9, mb4.0/8,MS3.2/6,Ascension Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H10N2	**ASCENSION HYDR**	**4.33**	**234**	T	T	10 46 01.2	
	baz=53,slow=74,SNR=244						
H10N1	**ASCENSION HYDR**	**4.33**	**234**	T	T	10 46 03.2	
	baz=53,slow=74,SNR=236						
H10N3	**ASCENSION HYDR**	**4.35**	**234**	T	T	10 46 02.6	
	baz=53,slow=74,SNR=219						
DBIC	**Dimbokro**	**13.35**	**27**	LR	LR	10 48 42.7	
	comp=Z,63nm,19.4s,baz=176,slow=34						
KOWA	**Kowa**	**20.83**	**19**	P	**P**	**10 45 57.6**	**-0.8**
	10nm,1.0s,baz=204,slow=10,SNR=14						
KOWA				LR	LR	10 53 31.3	
	comp=Z,78nm,18.1s,baz=202,slow=35						
TORD	**Torodi Ar. Bea**	**22.21**	**34**	P	**P**	**10 46 12.9**	**-0.3**
	3.7nm,0.6s,baz=212,slow=10,SNR=20						
TORD				LR	LR	10 54 02.7	
	comp=Z,83nm,18.3s,baz=185,slow=34						
RCBR	**Riachuelo**	**24.85**	**268**	LR	LR	10 53 28.6	
	comp=Z,93nm,19.2s,baz=138,slow=30						
BDFB	**Brasilia**	**37.81**	**251**	LR	LR	11 00 55.2	
	comp=Z,75nm,19.2s,baz=69,slow=31						
MDT	**Midelt**	**38.38**	**9**	P	**P**	**10 48 38.9**	**+0.9**
	2.3nm,0.9s,baz=282,slow=9.3,SNR=2.9						
MATP	**Matopo**	**41.14**	**115**	P	**P**	**10 49 01.1**	**-0.2**
	1.6nm,0.7s,baz=292,slow=11,SNR=5.2						
BOSA	**Boshof**	**41.38**	**128**	P	**P**	**10 49 03.1**	**-0.2**
	3.5nm,1.0s,baz=324,slow=7.3,SNR=3.1						
BOSA				LR	LR	11 03 47.6	
	comp=Z,27nm,20.4s,baz=189,slow=33						
GERES	**GERESS Array B**	**58.06**	**19**	P	**P**	**10 51 08.7**	**-1.1**
	1.5nm,0.8s,baz=190,slow=4.1,SNR=6.3						
BRTR	**Keskin Array B**	**60.75**	**38**	P	**P**	**10 51 30.2**	**+1.5**
	2.2nm,0.9s,baz=243,slow=6.3,SNR=4.5						
ROSC	**El Rosal**	**64.10**	**278**	LR	LR	11 19 08.6	
	comp=Z,38nm,18.2s,baz=99,slow=36						
AKASG	**Malin Array Be**	**65.60**	**27**	P	**P**	**10 51 59.7**	**-0.7**
	3.3nm,0.8s,baz=223,slow=6.0,SNR=9.1						
KBZ	**Khabaz**	**68.73**	**39**	P	**P**	**10 52 21.5**	**+1.1**
	2.5nm,0.9s,baz=278,slow=4.3,SNR=4.2						

*NOU **10** 10:46:59.9,37°.89S×176°.78E,h116km,MLv3.5,North Island, New Zealand*

WEL 10 10:47:01.0,38°S±2°×17°7E±°,h119km±3km,M2.6/52, MLv2.6/52,Error ellipse: s-maj=0.0km s-min=0.0km az=173.0,North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OPRZ	**Ohinepanea**	**0.11**	**350**	P	Pn	10 47 17.2	-0.2
OMRZ	**Omania**	**0.23**	**226**	P	Pn	10 47 17.7	+0.1
KARZ	**Kaharoa**	**0.27**	**255**	P	Pn	10 47 17.8	0.0
TARZ	**Mount Tarawera**	**0.29**	**191**	P	Pn	10 47 18.3	+0.3
TGRZ	**Tauranga**	**0.34**	**311**	P	Pn	10 47 18.0	0.0
NGRZ	**Ngongotaha**	**0.34**	**244**	P	Pn	10 47 18.4	+0.3
HLRZ	**Highlands Stat**	**0.35**	**211**	P	Pn	10 47 18.4	+0.3
UTU	**Utuhina**	**0.38**	**233**	P	Pn	10 47 18.6	+0.4
RRRZ	**Republican Roa**	**0.39**	**187**	P	Pn	10 47 18.3	0.0
HSRZ	**Hossack Road**	**0.45**	**216**	P	Pn	10 47 19.1	+0.5
HRRZ	**Handcock Road**	**0.50**	**208**	P	Pn	10 47 19.1	+0.3
KMRZ	**Kaimai**	**0.52**	**282**	P	Pn	10 47 19.1	+0.1
URZ	**Urewera**	**0.52**	**126**	P	Pn	10 47 18.5	-0.4
GRRZ	**Galatos Road**	**0.54**	**223**	P	Pn	10 47 19.3	+0.2
MUGZ	**Murupara**	**0.55**	**164**	P	Pn	10 47 19.4	+0.2
PRRZ	**Plateau Road**	**0.57**	**195**	P	Pn	10 47 19.3	0.0
RTZ	**Ruatahuna**	**0.74**	**155**	P	Pn	10 47 20.4	-0.2
KUTZ	**Kaahu Road**	**0.80**	**228**	P	Pn	10 47 21.4	+0.2
MWZ	**Matawai**	**0.84**	**117**	P	Pn	10 47 21.6	+0.1
RAGZ	**Rawiri**	**0.85**	**130**	P	Pn	10 47 22.4	+0.8
RUGZ	**Raukumara Rang**	**0.87**	**91**	P	Pn	10 47 21.4	-0.5
TOZ	**Tahuroa Road**	**0.88**	**284**	P	Pn	10 47 22.1	+0.3
MRHZ	**Matea Rd**	**0.89**	**188**	P	Pn	10 47 22.9	+0.9
TLZ	**Tolley Road**	**0.90**	**245**	P	Pn	10 47 22.5	+0.4
MTHZ	**Maungataniwha**	**0.92**	**167**	P	Pn	10 47 22.3	+0.1
HAZ	**Te Kaha**	**0.97**	**79**	P	Pn	10 47 22.0	-0.6
HATZ	**Hinemaiaia**	**1.01**	**202**	P	Pn	10 47 23.8	+0.7
SNGZ	**Shannon Statio**	**1.02**	**144**	P	Pn	10 47 23.8	+0.6
RAHZ	**Arahi**	**1.04**	**158**	P	Pn	10 47 24.0	+0.6
TKGZ	**Te Karaka**	**1.11**	**116**	P	Pn	10 47 24.5	+0.5
TWGZ	**Tauwhareparae**	**1.13**	**102**	P	Pn	10 47 24.9	+0.6
NMHZ	**Naumai**	**1.16**	**171**	P	Pn	10 47 25.9	+1.2
PKGZ	**Pakihiroa**	**1.19**	**87**	P	Pn	10 47 25.1	+0.2
RIGZ	**Rimuhau**	**1.20**	**129**	P	Pn	10 47 25.4	+0.4
BKZ	**Black Stump Fm**	**1.22**	**183**	P	Pn	10 47 25.2	0.0
WHHZ	**Waihua**	**1.24**	**156**	P	Pn	10 47 25.8	+0.4
PUZ	**Puketiti**	**1.33**	**96**	P	Pn	10 47 26.3	-0.2
ARHZ	**Aropaoanui**	**1.35**	**166**	P	Pn	10 47 27.1	+0.5
TMVZ	**Te Maari**	**1.35**	**210**	P	Pn	10 47 27.7	+0.9
KUZ	**Kuaotunu**	**1.38**	**330**	P	Pn	10 47 27.0	0.0
CNGZ	**Carnagh Statio**	**1.39**	**113**	P	Pn	10 47 27.9	+0.8
WTVZ	**West Tongariro**	**1.40**	**213**	P	Pn	10 47 28.0	+0.7
OTVZ	**Oturere**	**1.41**	**210**	P	Pn	10 47 28.3	+0.8
MKAZ	**Moumakai**	**1.41**	**306**	P	Pn	10 47 27.6	+0.3
PRGZ	**Paritu Road**	**1.41**	**134**	P	Pn	10 47 27.4	0.0
MXZ	**Matakaoa Point**	**1.42**	**75**	P	Pn	10 47 28.1	+0.7
WMGZ	**Waiomatatini S**	**1.46**	**85**	P	Pn	10 47 28.0	+0.1
HIZ	**Hauiti**	**1.47**	**247**	P	Pn	10 47 28.5	+0.6
KWHZ	**Kaweka Forest**	**1.48**	**185**	P	Pn	10 47 28.4	+0.2
MCHZ	**McNeill Hill**	**1.50**	**176**	P	Pn	10 47 28.7	+0.4
TUVZ	**Tukino**	**1.50**	**209**	P	Pn	10 47 29.2	+0.7
WNVZ	**Wahianoa**	**1.57**	**209**	P	Pn	10 47 29.9	+0.5
BHHZ	**Black Hill Sta**	**1.59**	**195**	P	Pn	10 47 29.3	-0.2
MHGZ	**Mahia Peninsul**	**1.59**	**139**	P	Pn	10 47 29.5	+0.1
MOVZ	**Moawhango**	**1.59**	**204**	P	Pn	10 47 29.4	-0.1
WIAZ	**Waiheke Island**	**1.63**	**315**	P	Pn	10 47 30.3	+0.4
ETAZ	**East Tamaki Re**	**1.65**	**307**	P	Pn	10 47 30.7	+0.6
MTVZ	**Mangateitei**	**1.67**	**211**	P	Pn	10 47 31.3	+0.8
KRHZ	**Kereru**	**1.70**	**185**	P	Pn	10 47 31.1	+0.4
CKHZ	**Cape Kidnapper**	**1.75**	**167**	P	Pn	10 47 31.1	-0.2
AWAZ	**Awhitu Peninsu**	**1.78**	**299**	P	Pn	10 47 32.0	+0.4
MBAZ	**Motutapu North**	**1.78**	**311**	P	Pn	10 47 32.3	+0.6
VRZ	**Vera Road**	**1.85**	**230**	P	Pn	10 47 33.8	+1.3
KAHZ	**Kahuranaki**	**1.86**	**173**	P	Pn	10 47 32.4	-0.3
PNHZ	**Pukenui**	**1.98**	**188**	P	Pn	10 47 33.9	-0.3
PXZ	**Pawanui**	**2.09**	**174**	P	Pn	10 47 35.5	0.0
WPHZ	**Waipukurau**	**2.11**	**183**	P	Pn	10 47 35.0	-0.8
TSZ	**Takapari Road**	**2.16**	**193**	P	Pn	10 47 39.1	+2.6
WAZ	**Wanganui**	**2.19**	**214**	P	Pn	10 47 37.1	+0.3
PRHZ	**Porangahau**	**2.31**	**179**	P	Pn	10 47 37.5	-0.8
NEZ	**North Egmont**	**2.35**	**235**	P	Pn	10 47 40.9	+2.0
PKE	**Pukeiti**	**2.38**	**238**	P	Pn	10 47 39.4	+0.2
ANWZ	**Angora Road**	**2.51**	**182**	P	Pn	10 47 40.0	-0.8
PRWZ	**Pori Road**	**2.64**	**190**	P	Pn	10 47 41.9	-0.7
BFZ	**Birch Farm**	**2.74**	**185**	P	Pn	10 47 41.9	-1.9
MRZ	**Mangatainoka R**	**2.82**	**196**	P	Pn	10 47 42.9	-1.9
TIWZ	**Tintock**	**2.87**	**191**	P	Pn	10 47 43.4	-2.2

HOWZ	Holdsworth Sta	3.06	195	P	Pn	10 47 45.7	-2.3
OGWZ	Otaki Gorge	3.06	200	P	Pn	10 47 46.6	-1.5
KIW	Kapiti Island	3.18	203	P	Pn	10 47 47.8	-1.8
TMWZ	Te Maipa	3.20	189	P	Pn	10 47 47.8	-2.1
MTW	Mount Morrison	3.31	194	P	Pn	10 47 48.8	-2.5
CAW	Cannon Point	3.36	200	P	Pn	10 47 49.1	-2.9
PLWZ	Palliser	3.76	195	P	Pn	10 47 54.1	-3.2
QRZ	Quartz Range	4.25	226	P	Pn	10 48 01.3	-2.6
THZ	Tophouse	4.74	215	P	Pn	10 48 08.0	-2.4
KHZ	Kahutara	5.03	207	P	Pn	10 48 11.0	-3.3

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*ISK **10** 10:49:43.2, 36°.45N×35°.71E, h24^{km}, ML2.6/10*
*DDA **10** 10:49:43.0, 36°.44N×35°.61E, h10^{km}±3^{km}, ML2.3*
ISC 10 10:49:44.4±1.1**, 36°.43N**±0°.06×**35°.62E**±0°.03**, h25**^{km}±8^{km}**,**
n20, σ1^{s}13/32**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRTD	Karatas-Adana	0.23	316	PG	Pb	10 49 50.1	-0.3
KRTD				SG	Sb	10 49 55.2	+0.7
KRTS	Karatas	0.24	307	PG	Pb	10 49 50.4	-0.2
KRTS				SG	Sb	10 49 55.7	+0.9
TAHT	Tahtakopru-Hat	0.46	96	PG	Pb	10 49 52.1	-1.9
TAHT				SG	Sb	10 49 58.7	-1.8
CEYT	Ceyhan	0.59	10	PG	Pb	10 49 54.9	-1.3
DED	Mersin	0.85	309	*i* P	Pb	10 49 58.9	-1.5
DED				*i* S	Sb	10 50 11.3	-0.1
KARA	Karaisali	0.95	332	PG	Pb	10 50 00.7	-1.5
KOZT	Kozan	1.07	9	PG	Pb	10 50 02.5	-1.7
GULE	Gulek	1.09	322	*i* P	Pb	10 50 03.9	-0.8
GULE				*i* S	Sn	10 50 19.0	+0.4
GULE				IAML		10 50 25.0	
	comp=E,72nm,0.4s						
KAMA	Osmaniye	1.14	48	*i* P	Pb	10 50 05.2	-0.2
KAMA				*i* S	Sn	10 50 20.3	+0.6
KUZU	Kuzuini	1.23	73	*i* P	Pb	10 50 06.8	-0.1
KUZU				*i* S	Sb	10 50 23.2	+0.9
KUZU				IAML		10 50 26.0	
	comp=E,160nm,0.5s						
ANDN	Andirin	1.29	27	*i* P	Pb	10 50 08.6	+0.5
ANDN				*i* S	Sb	10 50 25.3	+1.0
CMRD	Camardi-Nigde	1.33	338	PN	Pb	10 50 07.1	-1.7
HCB	Kahramanmara	1.38	48	*i* P	Pb	10 50 08.5	-1.1
HCB				*i* S	Sb	10 50 26.4	-0.5
HCB				IAML		10 50 28.0	
	comp=E,46nm,0.3s						
KEBE	Keben-Mersin	1.53	271	PN	Pn	10 50 11.0	+0.8
KERG	Konya-Eregli	1.55	310	*i* P	Pb	10 50 11.0	-1.5
KERG				*i* S	Sb	10 50 32.3	+0.6
IKL	Isikli	1.57	264	PN	Pn	10 50 11.2	+0.5
GZT	Gaziantep	1.82	59	*i* P	Pb	10 50 17.8	+0.8
GZT				*i* S	Sb	10 50 41.8	+2.3
GZT				IAML		10 50 54.0	
	comp=E,29nm,0.3s						
TEKE	Tekeli-Mersin	2.04	263	PN	Pn	10 50 17.9	+0.8
SARI	SarD1z-Kayseri	2.08	18	PN	Pn	10 50 17.1	-0.8
SURC	SANLIURFA_SURC	2.45	78	*e*P	Pn	10 50 22.7	-0.1
SURC				*i* S	Sb	10 50 58.4	+0.7
SURC				IAML		10 51 03.0	
	comp=E,38nm,0.6s						

DNK 10 11:09:12.8±2.1**, 69°.47N×52°.98W, h26**^{km}±17^{km}**, ML1.6,**
Western Kalaallit Nunaat

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ILULI	Ilulissat	0.71	110	*i* P	Pb	11 09 25.7	-0.9
ILULI	Ilulissat	0.71	110	*e*	Pb	11 09 25.0	-1.5
	baz=295,slow=16						
ILULI				*i* P	Pn	11 09 25.7	-1.4
ILULI				IAML		11 09 42.1	
	comp=Z,22nm,0.3s						
NUUG	Nuugaatsiaq	2.08	358	*e*P	Pn	11 09 46.8	+0.9
SFJD	Kangerlussuaq	2.64	159	*i* P	Pn	11 09 54.0	+0.5
SFJD				*e*S	Sn	11 10 24.1	-0.5
SFJD				IAML		11 10 40.1	
	comp=Z,0.4nm,0.3s						
ICESG	Greenland Ices	4.75	88	*i* P	Pn	11 10 25.6	+2.7
SUMG	Summit	5.67	50	*i* P	Pn	11 10 34.7	-0.8
SUMG	Summit	5.67	50	*e*P	Pn	11 10 34.7	-0.8

DNK 10 11:14:36.7±1.6**, 69°.44N×52°.69W, h34**^{km}±12^{km}**, ML1.4,**
Western Kalaallit Nunaat

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ILULI	Ilulissat	0.61	112	*i* P	Pn	11 14 47.4	-1.5
ILULI				*i* S	Sn	11 14 57.7	+0.2
ILULI	Ilulissat	0.61	112	*e*	Pn	11 14 47.0	-1.8
	baz=294,slow=16						
ILULI				*i* P	Pb	11 14 47.5	-1.5
ILULI				*i* S	Sn	11 14 57.8	+0.3
ILULI				IAML		11 15 04.0	
	comp=Z,12nm,0.3s						
NUUG	Nuugaatsiaq	2.11	356	*e*P	Pn	11 15 11.2	+1.6
NUUG				*e*S	Sn	11 15 34.2	-0.4
SFJD	Kangerlussuaq	2.58	162	*i* P	Pn	11 15 16.4	+0.4
SFJD				*e*S	Sn	11 15 45.9	-0.2
SFJD	Kangerlussuaq	2.58	162	*i* P	Pn	11 15 19.0	+3.0
SFJD	Kangerlussuaq	2.58	162	*e*P	Pn	11 15 16.4	+0.4
SFJD				*e*S	Sn	11 15 45.9	-0.2
SFJD				IAML		11 15 52.7	
	comp=Z,0.3nm,0.3s						
SFJD	Kangerlussuaq	2.58	162	*i* P	Pn	11 15 19.0	+3.0

RSNC 10 11:35:52.9±2.0**, 2°.72N×73°.11W, h9**^{km}±10^{km}**, ML2.4,**
Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUVC	San Jose del G	0.51	110	*e*P	Pg	11 36 02.2	-0.7
GUVC				*e*S	Sg	11 36 09.5	-0.1
GUVC				*i*		11 36 16.4	
	comp=Z,136nm,0.3s						
MACC	Macarena, Meta	0.93	232	*e*P	Pg	11 36 09.5	-1.3
MACC				*e*S	Sg	11 36 21.8	-1.2
MACC				*i*		11 36 24.2	
	comp=Z,60nm,0.4s						
PTGC	Puerto Gaitan,	1.76	34	*e*P	Pn	11 36 22.3	-1.4
PTGC				*e*S	Sn	11 36 45.3	-1.0
PTGC				*i*		11 36 47.9	
	comp=Z,37nm,0.1s						
CHIC	Chingaza	2.00	342	*e*P	Pn	11 36 26.0	-1.2
CHIC				*e*S	Sn	11 36 51.1	-1.4
CHIC				*i*		11 36 56.3	
	comp=Z,33nm,0.4s						
TOLC	Tolima	2.88	310	*e*P	Pn	11 36 40.9	+1.6
TOLC				*e*S	Sb	11 37 17.6	-2.6
ANIL	Santa Ana	2.89	308	*e*P	Pn	11 36 40.1	+0.7
ANIL				*e*S	Sb	11 37 18.6	-1.8
ANIL				*i*		11 37 21.5	
	comp=Z,7.5nm,0.4s						
BARC	Barichara	3.85	359	*e*P	Pn	11 36 52.4	-0.2

RSNC 10 11:36:25.1±2.3**, 8°.25N×72°.25W, h4**^{km}±14^{km}**, ML2.0,**
Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAMC	Pamplona, Colo	1.00	206	*e*Pg	Pg	11 36 42.0	-2.4
PAMC				*e*S	Sg	11 36 57.1	-0.3
PAMC				*i*		11 37 04.4	
	comp=Z,26nm,0.2s						
OCAC	Ocana	1.05	270	*e*P	Pg	11 36 43.2	-2.1
OCAC				*i*		11 36 43.8	
	comp=Z,34nm,0.2s						
OCAC				*e*S	Sg	11 36 57.4	-1.7
SMLC	San Martn de	1.88	287	*e*P	Pn	11 36 55.0	-3.1
SMLC				*e*S	Sn	11 37 22.7	+0.4
BARC	Barichara	1.88	209	*e*P	Pn	11 36 58.1	-0.2
BARC				*e*S	Sn	11 37 22.4	-0.3
BARC				*i*	Sg	11 37 28.4	+2.8
	comp=Z,13nm,0.5s						
BARC	Barichara	1.88	209	*i*	Sg	11 37 28.5	+2.8
	comp=Z,13nm,0.5s						

IDC 10 11:55:47.9±45.0**, 13°.65S×167°.93E, h122**^{km}±105^{km}**,**
mb3.7/3**, mb1 3.9**/4**, mb1mx3.4**/34**, mbtmp4.1**/4**, ML3.8**/1**,**
Error ellipse: s-maj=822.9km s-min=94.3km az=64.0,
Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	8.49	189	P	Pn	11 57 48.1	-0.1
	1.1nm,0.3s,baz=11,slow=10,SNR=23						
DZM				S	Sn	11 59 12.5	-10
	0.2nm,0.3s,baz=60,slow=20,SNR=1.0						
STKA	Stephens Creek	30.18	229	P	P	12 01 46.7	0.0
	2.2nm,0.5s,baz=51,slow=10,SNR=9.7						
WRA	Warramunga Arr	32.72	254	P	P	12 02 09.4	+0.3
	0.5nm,0.4s,baz=85,slow=8.7,SNR=17						
ASAR	Alice Springs	33.66	248	P	P	12 02 17.0	-0.4
	1.5nm,0.4s,baz=77,slow=9.4,SNR=82						

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*IDC **10** 12:27:01.1±0.8, 28°.26S×71°.13W, h0^{km}, mb4.0/8,*
mb1 4.2/11, mb1mx4.1/22, mbtmp3.9/11, ML3.8/3, MS3.0/4,
Ms1 3.0/4, ms1mx2.9/21, Error ellipse: s-maj=27.7km
s-min=22.7km az=69.0
*NEIC **10** 12:27:06.0±2.4, 28°.11S±0°.04×71°.29W±0°.08, h34^{km}±4^{km},*
Error ellipse: s-maj=10.7km s-min=5.0km az=100.0
*GUC **10** 12:27:06.7±0.6, 28°.19S×71°.11W, h34^{km}±2^{km}, ML4.5*
ISC 10 12:27:06.1±0.6**, 28°.10S**±0°.04×**71°.27W**±0°.07**, h35**^{km}**, n71,**
σ1^{s}58/75**, mb3.9**/10**, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AC04	Llanos de Chal	0.20	122	*e*P	Pn	12 27 12.7	-0.3
AC04				*i* S	Sn	12 27 17.0	-0.7
AC04				IAML		12 27 17.5	
	comp=E,102µm,0.2s						
AC04	Llanos de Chal	0.20	122		Pn	12 27 12.7	-0.3
AC04				Sn	Sn	12 27 17.1	-0.5
LCO	Las Campanas	1.04	151		Pn	12 27 24.7	+0.2
LCO				Sn	Sn	12 27 36.7	-1.2
GO03	Copiap	1.04	62	*e*P	Pn	12 27 25.2	+0.9
GO03				*i* S	Sn	12 27 39.3	+1.6
GO03				IAML		12 27 40.8	
	comp=N,37µm,0.5s						
GO03	Copiap	1.04	62		Pn	12 27 25.6	+1.3
GO03				Sn	Sn	12 27 38.5	+0.8
AC05	El Transito	1.14	130	*e*P	Pn	12 27 26.0	+0.2
AC05				*i* S	Sn	12 27 40.0	-0.3
AC05	El Transito	1.14	130		Pn	12 27 25.9	+0.1
AC01	Pan de Azucar	2.03	17	*e*P	Pn	12 27 38.2	+0.3
AC01	Pan de Azucar	2.03	17	Pn	Pn	12 27 38.0	+0.2
GO04	Tololo Observa	2.11	169	*e*P	Pn	12 27 40.1	+1.0
GO04				*i* S	Sn	12 28 07.9	+3.6
GO04	Tololo Observa	2.11	169		Pn	12 27 40.2	+1.0
CO01	Juntas del Tor	2.14	152	*e*P	Pn	12 27 41.7	+2.2
CO01				*i* S	Sn	12 28 08.3	+3.3
CO01				IAML		12 28 18.6	
	comp=N,3µm,0.4s						
CO01	Juntas del Tor	2.14	152		Pn	12 27 41.0	+1.4
AC02	Maricunga	2.28	57	*e*P	Pn	12 27 44.5	+2.7
AC02				*i* S	Sn	12 28 13.7	+4.9
AC02				IAML		12 28 18.0	
	comp=E,5µm,0.5s						
AC02	Maricunga	2.28	57	Pn	Pn	12 27 42.5	+0.8
CO03	El Pedregal	2.78	170	Pn	Pn	12 27 49.0	+0.8
GO02	Mina Guanaco	3.29	28	Pn	Pn	12 27 56.6	+1.2
PB14	IPOC Station P	3.54	13	Pn	Pn	12 27 57.9	-1.0
PB10	IPOC Station P	4.61	8		Pn	12 28 15.0	+1.6
VA03	San Esteban	4.69	173		Pn	12 28 14.9	+0.3
PEL	Peldehue	5.05	174	Pn	Pn	12 28 18.7	-0.8
PB15	IPOC Station P	5.13	19		Pn	12 28 20.8	+0.1
MT02	Curacav	5.15	179		Pn	12 28 20.9	+0.2
MT05	Renca	5.30	175	Pn	Pn	12 28 19.8	-3.0
PB06	IPOC Station P	5.58	16	Pn	Pn	12 28 26.0	-0.8
PB04	IPOC Station P	5.83	10	Pn	Pn	12 28 27.9	-2.3
LVC	Limon Verde	5.87	22	Pn	Pn	12 28 31.3	+0.3
	comp=E,1.8nm,0.3s,baz=177,slow=7.8,SNR=26						
LVC				Sn	Sn	12 29 36.6	-0.5
	comp=E,11nm,0.3s,baz=199,slow=15,SNR=3.4						
LVC				Lg	Lg	12 30 05.2	
	comp=E,42nm,0.3s,baz=6.1,slow=24,SNR=9.1						
LVC				LR	LR	12 30 50.3	
	comp=E,230nm,18.7s,baz=216,slow=38						
LVC	Limon Verde	5.87	22		Pn	12 28 31.1	+0.2
PB07	IPOC Station P	6.47	11	Pn	Pn	12 28 37.4	-1.6
PB09	IPOC Station P	6.54	17	Pn	Pn	12 28 39.1	-0.9
BO02	Sierra Bellavi	6.69	177	Pn	Pn	12 28 41.6	-0.3
PB01	IPOC Station P	7.21	13	Pn	Pn	12 28 48.5	-0.6
PATCX	Punta Patache	7.32	8	Pn	Pn	12 28 50.5	-0.1
TA01	Diego Aracena	7.56	8	Pn	Pn	12 28 52.9	-1.0
H03N1	Juan Fernandez	8.46	229	T	T	12 37 38.7	
	baz=56,slow=72,SNR=2213						
H03N2	Juan Fernandez	8.47	229	T	T	12 37 37.3	
	baz=56,slow=72,SNR=1544						
H03N3	Juan Fernandez	8.48	229	T	T	12 37 45.1	
	baz=56,slow=72,SNR=1111						
PSGCX	Pisagua	8.53	7	Pn	Pn	12 29 05.5	-1.7
BI02	San Fabin de	8.54	180	Pn	Pn	12 29 04.6	-2.7
MNMC	Minye Minye	9.06	10		Pn	12 29 14.0	-0.7
CPUP	Villa Florida	12.53	85	Pn	Pn	12 30 00.3	-1.6
	comp=E,0.5nm,0.3s,baz=257,slow=12,SNR=5.1						
CPUP				Lg	Lg	12 33 26.9	
	comp=E,0.3nm,0.3s,baz=18,slow=9.6,SNR=2.0						
CPUP	Villa Florida	12.53	85	Pn	Pn	12 29 58.6	-3.3
PLCA	Paso Flores	12.62	178	Pn	Pn	12 30 00.5	-2.7
	comp=E,0.1nm,0.3s,baz=224,slow=15,SNR=1.9						
PLCA				Lg	Lg	12 33 36.8	
	comp=E,0.1nm,0.3s,baz=323,slow=20,SNR=1.5						
PLCA				LR	LR	12 35 30.4	
	comp=E,124nm,19.0s,baz=360,slow=41						
SIV	San Ignacio	15.30	40	Pn	Pn	12 30 34.4	-5.2
	comp=E,0.5nm,0.3s,baz=238,slow=6.6,SNR=5.2						
NNA	Nana	16.86	341	LR	LR	12 35 01.5	
	comp=E,7.7nm,21.7s,baz=163,slow=28						
SAML	Samuel	20.52	23	P	P	12 31 42.6	+1.2
BDFB	Brasilia	24.83	65	LR	LR	12 43 31.2	
	comp=E,85nm,18.1s,baz=167,slow=40						
VNA3	Neumayer Olymp	54.60	160	P	P	12 36 31.1	+0.4
VNA2	Neumayer--Watz	55.23	159	P	P	12 36 35.7	+0.5
	baz=291,slow=9.2						
SNAA	Sanae	56.83	159	P	P	12 36 47.0	+0.3
SNAA	Sanae	56.83	159	P	P	12 36 46.7	0.0
SNAA				IAmb	IAmb	12 36 48.0	
	comp=Z,5.0nm,1.2s						
QSPA	South Pole Qui	62.12	180	P	P	12 37 24.5	+1.1
QSPA				IAmb	IAmb	12 37 25.1	
	comp=Z,8.1nm,1.2s						
TXAR	Lajitas Array	64.98	329	P	P	12 37 44.3	+1.7
	comp=Z,0.4nm,0.6s,baz=144,slow=7.2,SNR=3.8						
DBIC	Dimbokro	72.72	72	P	P	12 38 30.9	-0.1
	comp=Z,7.5nm,1.1s,baz=221,slow=9.3,SNR=3.2						
DBIC	Dimbokro	72.72	72	P	P	12 38 30.9	-0.1
KOWA	Kowa	77.62	66	P	P	12 38 59.5	+0.3
	comp=Z,0.9nm,0.4s,baz=259,slow=5.2,SNR=2.0						
KOWA	Kowa	77.62	66	IAmb	IAmb	12 39 10.8	
	comp=Z,3.4nm,0.9s						
PDAR	Pinedale Array	78.83	332	P	P	12 39 07.5	+1.9
	comp=Z,0.6nm,0.6s,baz=126,slow=7.5,SNR=6.1						
NVAR	Mina Array Bea	79.46	324	P	P	12 39 11.6	+2.4
	comp=Z,0.6nm,0.7s,baz=161,slow=6.7,SNR=7.3						
NVAR	Mina Array Bea	79.46	324	P	P	12 39 10.5	+1.4
ULM	Lac du Bonnet	81.00	344	P	P	12 39 17.8	+1.0
	comp=Z,0.6nm,0.5s,baz=158,slow=7.9,SNR=3.8						
ULM	Lac du Bonnet	81.00	344	P	P	12 39 16.6	-0.2
TORD	Torodi Ar. Bea	81.59	70	P	P	12 39 21.2	+0.4
	comp=Z,0.8nm,0.5s,baz=270,slow=5.1,SNR=5.1						
TORD	Torodi Ar. Bea	81.59	70	P	P	12 39 20.1	-0.7
MCMT	McKenzie Canyo	81.89	332	P	P	12 39 22.4	+0.4
YKA	Yellowknife Ar	96.70	341	P	P	12 40 33.0	+0.9
	comp=Z,0.1nm,0.5s,baz=136,slow=4.9,SNR=5.6						
ASAR	Alice Springs	123.10	208	PKP	PKPdf	12 45 59.4	-0.2
	comp=Z,0.2nm,0.5s,baz=135,slow=1.5,SNR=5.8						
WRA	Warramunga Arr	126.20	210	PKP	PKPdf	12 46 05.9	+0.3
	comp=Z,0.7nm,0.6s,baz=156,slow=1.8,SNR=15						
ZALV	Zalesovo Beam	148.79	28	PKPbc	PKPbc	12 46 49.2	-0.3
	comp=Z,2.8nm,0.6s,baz=310,slow=3.5,SNR=11						
MKAR	Makanchi Array	152.12	41	PKPbc	PKiKP	12 46 58.4	+0.4
	comp=Z,1.3nm,0.6s,baz=305,slow=1.7,SNR=14						
MKAR	Makanchi Array	152.12	41		PKiKP	12 46 58.6	+0.5

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*IDC **10** 12:34:17.5±3.9, 37°.10N×71°.91E, h118^{km}±27^{km}, mb3.5/10,*
mb1 3.6/16, mb1mx3.3/56, mbtmp4.0/16, MS3.8/1,
Ms1 3.8/1, ms1mx2.5/37, Error ellipse: s-maj=40.7km
s-min=17.5km az=169.0
*NEIC **10** 12:34:20.0±2.1, 37°.39N±0°.04×71°.9E±0°.1, h135^{km}±9^{km},*
mb4.0/2, Error ellipse: s-maj=14.0km s-min=5.8km
az=99.0
*NNC **10** 12:34:21.1±2.6, 38°.74N×72°.69E, h0^{km}, mb4.3, mpv3.9,*
Error ellipse: s-maj=21.8km s-min=10.2km az=170.0
ISC 10 12:34:18.6±0.5**, 37°.27N**±0°.05×**71°.92E**±0°.05**, h130**^{km}**, n72,**
σ2^{s}40/89**, mb3.8**/10**, 5C-6D, Afghanistan-Tajikistan**
border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	Kabul	3.59	221	Pn	Pn	12 35 16.3	+3.2
KBL				Sn	Sn	12 35 59.4	+4.1
NIL	Nilore	3.77	163		Pn	12 35 19.0	+3.7
NIL				Sn	Sn	12 36 01.1	+1.8
AML	Almayashu	5.04	15	P	Pn	12 35 33.3	+0.7
	SNR=41						
IUG	Iuzhnay	5.08	344	Pg	Pn	12 35 33.0	+0.1
	3.1nm,0.1s						
IUG				Lg	Lg	12 36 26.5	
	168nm,0.7s						
UCH	Uchtor	5.34	21	P	Pn	12 35 37.4	+0.8
	SNR=43						
EKS2	Erkin-Say	5.57	14	P	Pn	12 35 40.4	+1.1
	SNR=30						
AAK	Ala-Archa	5.71	19	P	Pn	12 35 42.6	+1.3
	10nm,0.3s,baz=189,slow=4.1,SNR=150						
AAK				S	Sn	12 36 44.5	-1.4
	1.9nm,0.3s,baz=329,slow=23,SNR=18						
AAK	Ala-Archa	5.71	19	P	Pn	12 35 42.6	+1.3
	SNR=58						
AAK	Ala-Archa	5.71	19	P	Pn	12 35 42.6	+1.3
	20nm,0.5s						
AAK				⇑S	Sn	12 36 44.4	-1.4
	18nm,0.4s						
AAK	Ala-Archa	5.71	19	Pn	Pn	12 35 42.4	+1.1
AAK				Sn	Sn	12 36 44.8	-1.1
THN	Thein Dam	5.75	146	*e*P	Pn	12 35 45.0	+3.4
THN				*e*S	Sn	12 36 46.0	-0.4
KBK	Karagaybulak	5.86	22	P	Pn	12 35 45.9	+2.5
	SNR=13						
KK31	Karatay Array	5.93	350	⇓P	Pn	12 35 44.4	+0.4
	12nm,0.3s,baz=175,slow=12,SNR=127						
KK31				⇓S	Sn	12 36 45.6	-5.2
	21nm,0.4s						
KK31	Karatay Array	5.93	350		Pn	12 35 44.6	+0.5
KK31				Sn	Sn	12 36 45.8	-5.0
KKAR	Karatay Array	5.93	350	Pn	Pn	12 35 44.5	+0.5
KKAR				Sn	Sn	12 36 45.9	-4.9
ULHL	Ulahol	5.98	32	P	Pn	12 35 45.5	+0.5
	SNR=7.2						
CHMS	Chumysh	6.12	20	P	Pn	12 35 47.7	+1.1
	SNR=5.4						
DHRM	DHARAMSHALA	6.17	143	*e*P	Pn	12 35 47.3	-0.3
DHRM				*e*P	Pn	12 35 48.3	+0.7
DHRM				*e*S	Sn	12 36 53.9	-3.1
DHRM				*e*S	Sn	12 36 54.1	-2.9
DHRM				IAML		12 37 00.5	
	comp=N,254nm,0.7s						
DHRM				IAML		12 37 00.8	
	comp=E,459nm,0.2s						
DHRM				IAML		12 37 00.8	
	comp=E,492nm,0.5s						
DHRM				IAML		12 37 00.9	
	comp=N,252nm,0.3s						
TKM2	Tokmak 2	6.31	25	P	Pn	12 35 50.5	+1.1
	SNR=32						
TKM2	Tokmak 2	6.31	25	⇑P	Pn	12 35 50.4	+1.1
	comp=N,17nm,0.6s						
TKM2				⇑S	Sn	12 36 59.5	-0.8
	comp=N,9.9nm,0.9s						
KST	Kastek	6.54	27	Pg	Pn	12 35 53.4	+0.9
	comp=N,9.2nm,0.5s						
KST				Lg	Lg	12 37 01.8	
	comp=N,12nm,1.0s						
DGS	Degeres	6.65	25	Pg	Pn	12 35 54.5	+0.6
	comp=N,14nm,0.7s						
DGS				Lg	Lg	12 37 03.7	
	comp=N,5.0nm,0.6s						
IZV	Izvestkoviy	6.79	30	Pg	Pn	12 35 56.8	+1.0
	comp=N,3.7nm,0.5s						
IZV				Lg	Lg	12 37 07.6	
	comp=N,3.3nm,0.3s						
BHK	Bhakra	6.92	146	*e*S	Sn	12 37 11.8	-3.1
TNSS	Tian-Shan	6.93	32	Pg	Pn	12 35 58.2	+0.3
	comp=N,2.3nm,0.4s						
TNSS				Lg	Lg	12 37 10.1	
	comp=N,2.0nm,0.8s						
KRBS	Karabastau	7.03	23	Pg	Pn	12 35 59.0	+0.1
	comp=N,12nm,0.4s						
KOTS	Kotyrbulak	7.16	32	Pg	Pn	12 36 02.7	+2.0
	comp=N,30nm,0.5s						
KOTS				Lg	Lg	12 37 17.6	
	comp=N,13nm,0.9s						
KTBS	Karatobe	7.39	28	Pg	Pn	12 36 05.4	+1.7
	comp=N,2.1nm,0.6s						
SMLA	Simla	7.51	143	*e*P	Pn	12 36 06.5	+1.1
SMLA				*e*P	Pn	12 36 07.0	+1.6
SMLA				*e*S	Sn	12 37 24.6	-4.4
SMLA				*e*S	Sn	12 37 24.6	-4.4
SMLA				IAML		12 37 31.4	
	comp=N,138nm,0.2s						
SMLA				IAML		12 37 32.2	
	comp=E,128nm,0.0s						
DDI	Dehra Dun	8.60	142	*e*S	Sn	12 37 48.6	-7.0
DDI				*e*S	Sn	12 37 52.4	-3.3
NDI	New Delhi	9.65	151	*e*P	Pn	12 36 33.3	-0.8
NDI				*e*S	Sn	12 38 15.3	-5.5
AYAN	Aya Nagar	9.79	152	*e*S	Sn	12 38 19.4	-4.9
KUDL	Kundal	9.88	156	*e*P	Pn	12 36 32.3	-5.0
KUDL				*e*S	Sn	12 38 17.3	-9.1
SONA	Sohna	9.99	153	*e*S	Sn	12 38 20.7	-8.3
GEYT	Alibeck	10.97	278	P	Pn	12 36 50.6	-1.3
	comp=E,2.6nm,0.3s,baz=113,slow=5.6,SNR=9.1						
GEYT				S	Sn	12 38 47.2	-5.7
	comp=E,1.9nm,0.3s,baz=157,slow=15,SNR=5.0						
GEYT	Alibeck	10.97	278		Pn	12 36 50.3	-1.7
GYA0B	ALIBECK ARRAY	10.97	278	Pn	Pn	12 36 51.1	-0.8
MAKZ	Makanchi	12.10	35	Pn	Pn	12 37 05.8	-0.9
MK31	Makanchi Array	12.24	36		Pn	12 37 08.4	0.0
MKAR	Makanchi Array	12.24	36	P	Pn	12 37 08.9	+0.5
	comp=E,0.1nm,0.3s,baz=218,slow=15,SNR=10						
MKAR	Makanchi Array	12.24	36		Pn	12 37 08.4	-0.1
DANN	Dangsing	13.34	128	*e*P	Pn	12 37 21.5	-1.6
	comp=E,17nm,0.3s						
KURBB	Kurchatov Arra	14.16	17	P	P	12 37 36.5	-0.2
	comp=E,0.3nm,0.3s,baz=206,slow=10,SNR=12						
KURBB	Kurchatov Arra	14.16	17	⇓P	P	12 37 37.1	+0.4
	comp=E,4.5nm,0.7s						
KURK	Kurchatov	14.27	18	⇓P	P	12 37 38.1	+0.2
	comp=E,4.9nm,0.9s						
KURK	Kurchatov	14.27	18		P	12 37 36.3	-1.5
AB31	Akbulak array	14.80	328	⇑P	Pn	12 37 40.7	-0.5
	comp=E,0.7nm,0.3s,baz=143,slow=12,SNR=42						
AB31				⇑S	Sn	12 40 10.1	-15
	comp=E,7.6nm,0.7s						
ABKAR	Akbulak array	14.80	328	Pn	Pn	12 37 40.2	-1.0
PKIN	Phulchoki	14.91	127	*e*P	Pn	12 37 42.0	-1.1
	comp=E,12nm,0.4s						
GUN	Gumba	15.00	124	*e*P	Pn	12 37 42.2	-2.1
	comp=E,11nm,0.4s						
BVAR	Borovoye Array	15.79	357	P	Pn	12 37 52.4	-1.1
	comp=E,0.7nm,0.3s,baz=116,slow=10,SNR=15						
BRVK	Borovoye	15.83	356	⇓P	Pn	12 37 52.9	-1.2
	comp=E,10nm,1.5s						
BRVK	Borovoye	15.83	356	Pn	Pn	12 37 53.3	-0.7
BRVK				IAmb	IAmb	12 37 57.0	
	comp=Z,5.9nm,0.9s						
RAMN	Ramite	16.12	125	*e*P	Pn	12 37 57.2	-0.9
	comp=Z,17nm,0.5s						
AKTO	Aktyubinsk	16.51	327	P	P	12 38 03.9	+1.1
	comp=Z,0.8nm,0.3s,baz=127,slow=12,SNR=12						
AKTO				S	Sn	12 40 53.0	-13
	comp=Z,0.1nm,0.3s,baz=16,slow=18,SNR=4.1						
AKTO	Aktyubinsk	16.51	327	⇓P	P	12 38 03.8	+1.1
	comp=Z,4.9nm,0.9s						
TAPN	Taplejung	16.59	122	*e*P	Pn	12 38 03.9	0.0
ODAN	Odare	16.70	124	*e*P	Pn	12 38 05.0	-0.1
ZAA0	Zalesovo Array	18.91	24	P	P	12 38 29.4	+0.5
ZAA0				IAmb	IAmb	12 38 30.1	
	comp=Z,3.5nm,0.4s						
ZALV	Zalesovo Beam	18.91	24	P	P	12 38 29.6	+0.7
	comp=Z,1.2nm,0.3s,baz=211,slow=10,SNR=25						
ZALV	Zalesovo Beam	18.91	24	P	P	12 38 29.3	+0.4
ARU	Arti	21.16	339	P	P	12 38 54.3	+1.2
	comp=Z,1.0nm,0.2s,baz=129,slow=13,SNR=5.1						

KVAR	Kislovodsk Arr	23.09	296	LR	LR	12 50 28.9	
	comp=Z,214nm,19.2s,baz=115,slow=42						
SONM	Songino Array	27.29	56	P	P	12 39 52.6	+1.6
	comp=Z,0.2nm,0.4s,baz=258,slow=7.2,SNR=2.1						
AKASG	Malin Array Be	33.05	308	P	P	12 40 43.3	+1.9
	comp=Z,0.6nm,0.3s,baz=110,slow=8.3,SNR=3.7						
FINES	FINESS Array B	37.27	325	P	P	12 41 18.5	+1.1
	comp=Z,2.7nm,1.0s,baz=129,slow=11,SNR=1.8						
ARCES	ARCESS Array B	40.72	337	P	P	12 41 47.5	+1.4
	comp=Z,5.1nm,0.9s,baz=110,slow=7.8,SNR=4.8						
HFS	Hagfors	42.92	321	P	P	12 42 05.1	+1.0
	comp=Z,1.4nm,0.5s,baz=91,slow=11,SNR=8.1						
KLR	Kul'dur	44.09	55	P	P	12 42 14.7	+1.1
	comp=Z,1.0nm,0.5s,baz=301,slow=5.0,SNR=4.3						
TORD	Torodi Ar. Bea	66.47	269	P	P	12 44 54.5	+0.1
	comp=Z,0.4nm,0.5s,baz=63,slow=5.3,SNR=2.3						
INK	Inuvik	73.03	10	P	P	12 45 34.8	+1.2
	comp=Z,1.0nm,0.6s,baz=0.0,slow=3.0,SNR=3.7						
YKA	Yellowknife Ar	80.44	3	P	P	12 46 16.3	+0.9
	comp=Z,0.5nm,0.5s,baz=355,slow=5.1,SNR=12						

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*IDC **10** 13:25:18.9±0.9, 19°.14N×67°.18W, h0^{km}, mb3.7/7,*
mb1 4.0/9, mb1mx3.7/62, mbtmp3.9/9, ML3.2/2, MS3.1/4,
Ms1 3.1/4, ms1mx2.8/51, Error ellipse: s-maj=26.4km
s-min=15.2km az=50.0
*RSPR **10** 13:25:21.5, 19°.36N×67°.26W, h45^{km}±12^{km}, MD3.4/17*
*NEIC **10** 13:25:22.4±2.3, 19°.22N±0°.02×67°.19W±0°.05, h26^{km}±7^{km},*
Error ellipse: s-maj=6.5km s-min=2.0km az=79.0
ISC 10 13:25:23.1±0.7**, 19°.19N**±0°.05×**67°.14W**±0°.04**, h29**^{km}**, n106,**
σ**1§12**/97**, mb3.9**/7**, MS3.2**/4**, 9C-8D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AGPR	Aguadilla, PR	0.72	178	⇓*e*P	Pb	13 25 36.5	-0.7
AGPR	Aguadilla, PR	0.72	178	*e*S	Sn	13 25 49.0	+1.6
AGPR	Aguadilla, PR	0.72	178		Sn	13 25 49.0	+1.6
AGPR	Aguadilla, PR	0.72	178		Pb	13 25 36.0	-1.2
AGPR	Aguadilla, PR	0.72	178	IAML		13 25 51.3	
	comp=N,4μm,0.5s						
AGPR				IAML		13 25 52.5	
	comp=E,4μm,0.5s						
EMPR	Esperanza - Ma	0.92	141	⇓*e*P	Pn	13 25 39.2	-0.8
EMPR	Esperanza - Ma	0.92	141	*e*S	Sb	13 25 54.2	+2.0
EMPR	Esperanza - Ma	0.92	141		Sb	13 25 54.2	+2.0
EMPR	Esperanza - Ma	0.92	141		Pn	13 25 38.9	-1.1
EMPR	Esperanza - Ma	0.92	141	IAML		13 25 55.9	
	comp=N,6μm,0.8s						
EMPR				IAML		13 26 02.8	
	comp=E,3μm,0.7s						
AOPR	Arecibo Observ	0.92	157	⇑*e*P	Pn	13 25 39.2	-0.9
AOPR	Arecibo Observ	0.92	157	*e*S	Sn	13 25 53.2	+0.9
AOPR	Arecibo Observ	0.92	157		Sn	13 25 53.2	+0.9
AOPR	Arecibo Observ	0.92	157		Pn	13 25 38.5	-1.5
AOPR	Arecibo Observ	0.92	157	IAML		13 25 59.3	
	comp=N,5μm,0.4s						
AOPR				IAML		13 26 04.0	
	comp=E,7μm,0.4s						
MPR	Mayaguez	0.98	180		Pn	13 25 39.9	-1.0
MPR				IAML		13 25 58.5	
	comp=N,3μm,0.6s						
LSP	Las Mesas	1.01	177	⇓*e*P	Pn	13 25 41.2	-0.2
LSP	Las Mesas	1.01	177	*e*S	Sb	13 25 56.2	+1.2
LSP	Las Mesas	1.01	177		Pn	13 25 41.2	-0.2
LSP					Sb	13 25 56.2	+1.2
MLPR	Magueyes Islan	1.22	176	⇑*e*P	Pn	13 25 42.9	-1.3
MLPR	Magueyes Islan	1.22	176	*e*S	Sb	13 26 00.4	-0.5
MLPR	Magueyes Islan	1.22	176		Sb	13 26 00.4	-0.5
MLPR	Magueyes Islan	1.22	176		Pn	13 25 42.6	-1.6
MLPR	Magueyes Islan	1.22	176	IAML		13 26 02.3	
	comp=E,2μm,0.8s						
MLPR				IAML		13 26 02.6	
	comp=N,1μm,0.9s						
CELP	Cerrillos	1.23	155	⇓*e*P	Pn	13 25 43.6	-0.7
CELP	Cerrillos	1.23	155	*e*S	Sb	13 26 01.9	+0.7
CELP	Cerrillos	1.23	155		Pn	13 25 43.6	-0.7
CELP					Sb	13 26 01.9	+0.7
GBPR	Guanica, Bosqu	1.24	169	⇑*e*P	Pn	13 25 44.8	+0.3
GBPR	Guanica, Bosqu	1.24	169	*e*S	Sb	13 26 02.3	+0.9
GBPR	Guanica, Bosqu	1.24	169		Pn	13 25 44.8	+0.3
GBPR					Sb	13 26 02.3	+0.9
OBIP	Obispado Ponce	1.25	156	⇑*e*P	Pn	13 25 43.4	-1.2
OBIP	Obispado Ponce	1.25	156	*e*S	Sb	13 26 01.6	-0.2
OBIP	Obispado Ponce	1.25	156		Sb	13 26 01.6	-0.2
OBIP	Obispado Ponce	1.25	156		Pn	13 25 43.0	-1.6
OBIP	Obispado Ponce	1.25	156	IAML		13 26 04.4	
	comp=N,4μm,0.6s						
OBIP				IAML		13 26 05.2	
	comp=E,3μm,0.5s						
GCPR	Guaynabo City	1.33	131	⇓*e*P	Pn	13 25 45.1	-0.6
GCPR	Guaynabo City	1.33	131	*e*S	Sb	13 26 03.8	-0.3
GCPR	Guaynabo City	1.33	131		Sb	13 26 03.8	-0.3
GCPR	Guaynabo City	1.33	131		Pn	13 25 44.4	-1.3
GCPR	Guaynabo City	1.33	131	IAML		13 26 04.4	
	comp=E,819nm,0.7s						
GCPR				IAML		13 26 10.7	
	comp=N,344nm,0.8s						
ICMP	Isla Caja de M	1.42	156	⇑*e*P	Pn	13 25 47.2	+0.2
ICMP	Isla Caja de M	1.42	156	*e*S	Sb	13 26 06.9	+0.2
ICMP	Isla Caja de M	1.42	156		Sb	13 26 06.9	+0.2
ICMP	Isla Caja de M	1.42	156		Pn	13 25 46.6	-0.4
ICMP	Isla Caja de M	1.42	156	IAML		13 26 15.9	
	comp=N,2μm,0.9s						
ICMP				IAML		13 26 19.8	
	comp=E,2μm,0.7s						
SJG	San Juan	1.43	139	Pn	Pn	13 25 46.9	-0.1
	comp=E,45nm,0.3s,baz=318,slow=9.5,SNR=28						
SJG				Sn	Sb	13 26 05.9	-0.9
	comp=E,250nm,0.3s,baz=69,slow=23,SNR=14						
SJG	San Juan	1.43	139		Pn	13 25 46.2	-0.9
SJG	San Juan	1.43	139	IAML		13 26 09.6	
	comp=E,1μm,0.5s						
SJG				IAML		13 26 10.7	
	comp=E,948nm,0.5s						
SJG	San Juan	1.43	139	*e*P	Pn	13 25 46.9	-0.1
SJG				*i*		13 25 52.6	
	comp=Z,3μm,0.1s						
SJG				*e*S	Sn	13 26 05.1	+0.3
CBYP	Canovanas	1.52	127	⇑*e*P	Pn	13 25 48.1	-0.3
CBYP	Canovanas	1.52	127	*e*S	Sb	13 26 08.8	-0.8
CBYP	Canovanas	1.52	127		Sb	13 26 08.8	-0.8
CBYP	Canovanas	1.52	127		Pn	13 25 47.4	-1.0
CBYP	Canovanas	1.52	127	IAML		13 26 14.5	
	comp=N,2μm,0.2s						
CBYP				IAML		13 26 16.6	
	comp=E,2μm,0.2s						
IGPR	InterUniversit	1.56	141	⇓*e*P	Pn	13 25 48.5	-0.5
IGPR	InterUniversit	1.56	141	*e*S	Sb	13 26 09.5	-1.2
IGPR	InterUniversit	1.56	141		Sb	13 26 09.5	-1.2
PDPR	Patillas Dam,	1.58	138	⇑*e*P	Pn	13 25 48.9	-0.2
PDPR	Patillas Dam,	1.58	138	*e*S	Sn	13 26 09.7	+1.2
PDPR	Patillas Dam,	1.58	138		Pn	13 25 48.9	-0.2
PDPR	Patillas Dam,	1.58	138		Sn	13 26 09.7	+1.2
PDPR	Patillas Dam,	1.58	138	IAML		13 26 12.9	
	comp=E,558nm,0.3s						
PDPR				IAML		13 26 27.4	
	comp=N,10μm,1.9s						
HUMP	Col San Antoni	1.61	130	⇓*e*P	Pn	13 25 49.4	-0.1
HUMP	Col San Antoni	1.61	130	*e*S	Sn	13 26 10.5	+1.2
HUMP	Col San Antoni	1.61	130		Sn	13 26 10.5	+1.2
HUMP	Col San Antoni	1.61	130		Pn	13 25 48.8	-0.8
HUMP	Col San Antoni	1.61	130	IAML		13 26 22.5	
	comp=N,714nm,0.5s						
HUMP				IAML		13 26 23.4	
	comp=E,729nm,0.3s						
MTP	Monte Pirata	1.86	126	⇓*e*P	Pn	13 25 52.5	-0.5
MTP	Monte Pirata	1.86	126	*e*S	Sn	13 26 16.4	+1.0
MTP	Monte Pirata	1.86	126		Sn	13 26 16.4	+1.0
MTP	Monte Pirata	1.86	126		Pn	13 25 52.1	-0.8
MTP	Monte Pirata	1.86	126	IAML		13 26 25.8	
	comp=E,354nm,0.6s						
MTP				IAML		13 26 26.6	
	comp=N,315nm,0.8s						
CUPR	Culebra, Puert	1.96	116	⇑*e*P	Pn	13 25 53.9	-0.5
CUPR	Culebra, Puert	1.96	116	*e*S	Sn	13 26 19.4	+1.3
CUPR	Culebra, Puert	1.96	116		Sn	13 26 19.4	+1.3
CUPR	Culebra, Puert	1.96	116		Pn	13 25 53.5	-0.9
TBVI	Tortola	2.51	108	⇑*e*P	Pn	13 26 02.0	+0.1
TBVI	Tortola	2.51	108	*e*S	Sn	13 26 33.4	+1.9
TBVI	Tortola	2.51	108		Pn	13 26 02.0	+0.1
TBVI					Sn	13 26 33.4	+1.9
CDVI	St. Croix	2.67	122		Pn	13 26 05.0	+0.8
SDDR	Presa de Saban	3.93	268	*e*P	Pn	13 26 23.9	+2.3
GRTK	Grand Turk	4.40	302	Pn	Pn	13 26 24.4	-3.6
GRTK				IAML		13 27 13.1	
	comp=N,169nm,0.4s						
GRTK				IAML		13 27 16.6	
	comp=N,156nm,0.4s						
URIC	Uribia, Colomb	8.80	213	*e*P	Pn	13 27 26.3	-2.1
PCRV	Puerto La Cruz	9.29	165	Pn	Pn	13 27 35.9	+0.8
	comp=N,0.8nm,0.3s,baz=27,slow=14,SNR=1.5						
PCRV				Sn	Sn	13 29 16.8	-1.9
	comp=N,0.7nm,0.3s,baz=100,slow=12,SNR=2.1						
PLCV	Puerto La Cruz	9.31	164		Pn	13 27 35.9	+0.5
SDV	Santo Domingo	10.79	199	Pn	Pn	13 27 58.9	+3.0
	comp=N,0.8nm,0.3s,baz=16,slow=6.3,SNR=6.2						
SDV				Sn	Sn	13 29 57.4	+1.5
	comp=N,0.2nm,0.3s,baz=338,slow=12,SNR=1.1						
PAMC	Pamplona, Colo	12.96	205	*e*P	Pn	13 28 26.0	+0.1
RUSC	La Rusia	14.43	204	*e*P	Pn	13 28 45.5	-0.5
PTBC	PUERTO BERRIO,	14.45	210	*e*P	Pn	13 28 47.5	+1.6
ROSC	El Rosal	15.89	207	Pn	Pn	13 29 05.3	+0.1
	comp=N,0.9nm,0.3s,baz=350,slow=11,SNR=1.3						
GUY2C	Guyana, Caldas	16.04	211	*e*P	P	13 29 09.1	-1.2
RREF	El Recreo	16.31	210	*e*P	Pn	13 29 11.9	+1.1
TOLC	Tolima	16.57	210	*e*P	P	13 29 16.8	+0.6
TEIG	Tepich	19.93	276	LR	LR	13 38 35.0	
	comp=N,28nm,18.6s,baz=66,slow=40						
PTGA	Pitinga	21.01	160	P	P	13 30 03.8	-0.7
	comp=N,3.0nm,0.5s,baz=322,slow=18,SNR=7.6						
PTGA	Pitinga	21.01	160	P	P	13 30 03.7	-0.9
TKL	Tuckaleechee C	22.02	322	LR	LR	13 37 58.9	
	comp=N,43nm,20.4s,baz=174,slow=34						
SADO	Sadowa	27.40	341	LR	LR	13 41 59.5	
	comp=N,110nm,18.4s,baz=166,slow=36						
ATAH	Atahualpa	28.42	204	LR	LR	13 44 37.4	
	comp=N,34nm,18.1s,baz=42,slow=41						
TXAR	Lajitas Array	34.67	294	P	P	13 32 10.7	+0.2
	comp=N,0.6nm,0.8s,baz=110,slow=9.4,SNR=6.3						
SIV	San Ignacio	35.47	170	P	P	13 32 15.6	-1.7
	comp=N,1.7nm,0.7s,baz=1.2,slow=11,SNR=10						
PDAR	Pinedale Array	42.70	313	P	P	13 33 18.7	+0.9
	comp=N,0.1nm,0.4s,baz=118,slow=9.4,SNR=2.2						
NVAR	Mina Array Bea	48.11	305	P	P	13 34 00.3	-0.4
	comp=N,0.2nm,0.5s,baz=119,slow=5.2,SNR=3.7						
ESDC	Sonseca Array	57.52	55	P	P	13 35 11.0	+0.9
	comp=N,2.1nm,0.7s,baz=272,slow=6.6,SNR=13						
TORD	Torodi Ar. Bea	66.03	84	P	P	13 36 07.7	+0.1
	comp=N,0.7nm,0.7s,baz=294,slow=6.9,SNR=2.8						
KVAR	Kislovodsk Arr	90.32	43	LR	LR	14 17 52.2	
	comp=N,288nm,19.5s,baz=167,slow=35						

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*IDC **10** 13:29:19.1±0.9, 55°.21N×159°.57W, h0^{km}, mb4.1/18,*
mb1 4.4/22, mb1mx4.1/80, mbtmp4.2/22, ML4.3/4, MS3.7/3,
Ms1 3.7/3, ms1mx3.2/54, Error ellipse: s-maj=24.9km
s-min=12.6km az=6.0
*NEIC **10** 13:29:21.6±2.1, 55°.14N±0°.06×159°.44W±0°.06, h20^{km}±5^{km},*
mb4.7/48, ML4.6/10, ML4.4(AEIC), Error ellipse:
s-maj=9.5km s-min=1.7km az=153.0
*AEIC **10** 13:29:22±2.5, 55°.16N±0°.07×159°.49W±0°.06, h7^{km}±4^{km},*
Error ellipse: s-maj=10.0km s-min=3.9km az=160.0
*ANF **10** 13:29:23.6±2.1, 55°.28N×159°.42W, h20^{km}, Error ellipse:*
s-maj=23.9km s-min=18.7km az=178.0
ISC 10 13:29:20.2±0.5**, 55°.15N**±0°.06×**159°.41W**±0°.04**, h10**^{km}**,**
n267, σ**1§18**/268**, mb4.7**/41**, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SDPT	Sand Point	0.64	288		Pn	13 29 34.6	-0.7
SDPT				Sg	Sb	13 29 42.2	-0.3
SDPT				IAML		13 29 44.6	
	comp=N,39μm,0.6s						
CHGN	Chignik	1.28	26	Pn	Pg	13 29 45.0	+0.2
CHGN	Chignik	1.28	26		Sn	13 30 01.9	+0.6
CHGN	Chignik	1.28	26	IAML		13 30 02.7	
	comp=E,23μm,0.5s						
CHGN				IAML		13 30 05.8	
	comp=N,16μm,0.5s						
PS1A	Pavlof South-1	1.36	282		Pn	13 29 45.4	+0.2
PS1A					Sb	13 30 02.1	-1.0
PVV	Pavlof Volcano	1.38	280		Pn	13 29 45.5	0.0
PS4A	Pavlof South-4	1.41	279		Pn	13 29 45.9	0.0
HAG	Hague Volcano	1.44	278		Pn	13 29 46.4	+0.1
DT1	Dutton Round H	1.65	270		Pn	13 29 48.9	-0.3
FALS	False Pass	2.33	264	Pn	Pn	13 29 58.6	+0.2
FALS	False Pass	2.33	264		Sn	13 30 28.1	+1.0
BRPK	Brown Peak	2.55	260		Pn	13 30 02.2	+0.6
SSLN	Shishaldin Nor	2.66	264		Pn	13 30 04.3	+1.1
SSLN					Sn	13 30 37.7	+2.1
SSLS	Shishaldin Sou	2.68	262		Pn	13 30 04.2	+0.8
SSLW	Shishaldin Wes	2.74	264		Pn	13 30 05.3	+1.1
SSBA	Shishaldin	2.74	264		Pn	13 30 05.2	+0.9
SSBA					Sn	13 30 37.7	+0.2
PLBL	Peulik Blue Cr	2.93	28		Pn	13 30 08.8	+2.0
PLK1	Peulik 1	3.08	29		Pn	13 30 10.7	+1.9
PLK3	Peulik 3	3.08	33		Pn	13 30 11.3	+2.4
PLK3					Sn	13 30 49.2	+3.4
PLK2	Peulik 2	3.13	32		Pn	13 30 11.8	+2.3
WEBT	Westdahl Beart	3.14	262		Pn	13 30 10.5	+0.8
WESP	Westdahl Peak	3.14	260		Pn	13 30 11.3	+1.5
PLK5	Peulik 5	3.18	25		Pn	13 30 11.2	+1.1
SII	Sitkinak Islan	3.27	62	Pn	Pn	13 30 12.4	+1.0
SII				IAML		13 31 19.2	
	comp=N,2μm,0.8s						
SII				IAML		13 31 25.6	
	comp=E,2μm,0.7s						
KJL	Kejulik	3.60	35		Pn	13 30 18.8	+2.8
CAHL	Cahill	3.69	36		Pn	13 30 19.1	+1.9
AKSA	Akutan Strait	3.79	257		Pn	13 30 19.9	+1.3
AKSA	Akutan Strait	3.79	257		Pn	13 30 20.1	+1.5
AKSA					Sn	13 31 03.4	+0.2
MGLS	Mageik Landsli	3.80	36		Pn	13 30 21.2	+2.5
AKUT	Akutan	3.83	257	Pn	Pn	13 30 19.9	+0.7
KABR	Katmai Barrier	3.86	38		Pn	13 30 22.1	+2.5
KABR					Sn	13 31 08.2	+3.1
KELA	Mount Kelaz	3.86	30		Pn	13 30 22.5	+2.8
AKLV	Akutan Long Va	3.93	258		Pn	13 30 21.5	+0.9
AKLV					Sn	13 31 09.4	+2.8
AKBBA	Akutan Broad B	3.94	257		Pn	13 30 21.6	+1.0
KCG	Knife Ck. Glac	3.95	35		Pn	13 30 22.9	+2.0
AKMO	Akutan Morgan	3.98	257		Pn	13 30 22.5	+1.3
OHAK	Old Harbor	4.00	56	Pn	Pn	13 30 22.0	+0.6
OHAK				IAML		13 31 34.2	
	comp=N,493nm,0.9s						
UNV	Unalaska Valle	4.34	255	Pn	Pn	13 30 26.2	+0.1
UNV	Unalaska Valle	4.34	255		Sn	13 31 16.0	-0.7
MNAT	Makushin Natee	4.42	256		Pn	13 30 27.9	+0.6
MSW	Makushin Switc	4.47	257		Pn	13 30 28.6	+0.7
MSW					Sn	13 31 18.9	-1.1
MREP	Makushin Rep't	4.48	256		Pn	13 30 29.0	+0.8
MCIR	Makushin Cirqu	4.52	258		Pn	13 30 29.9	+1.2
MGOD	Makushin Gods	4.56	256		Pn	13 30 30.0	+0.8
MAPS	Pakushin South	4.59	256		Pn	13 30 30.4	+0.8
KDAK	Kodiak Island	4.61	52	Pn	Pn	13 30 30.5	+0.6
	comp=N,21nm,0.3s,baz=240,slow=11,SNR=96						
KDAK				Sn	Sn	13 31 22.6	-0.8
	comp=N,13nm,0.3s,baz=247,slow=13,SNR=1.1						
KDAK				LR	LR	13 32 08.3	
	comp=N,194nm,21.2s,baz=240,slow=36						
KDAK	Kodiak Island	4.61	52		Pn	13 30 30.5	+0.6
KDAK				IAML		13 31 50.0	
	comp=N,239nm,0.8s						
OKFG	Magazine Ridge	5.28	254		Pn	13 30 38.6	-0.4
AUH	Augustine H	5.32	35		Pn	13 30 42.7	+3.0
OKWE	Okmok W'ng Wal	5.44	256		Pn	13 30 41.8	+0.5
OPT	Oil Point	5.61	34		Pn	13 30 45.9	+2.3
IVE	Iliamna Volcan	5.96	33		Pn	13 30 50.5	+2.0
NIKH	Nikolski High	5.97	252	Pn	Pn	13 30 47.5	-1.1
HOM	Homer	6.16	40	P	Pn	13 30 53.4	+2.3
	baz=226						
HOM				S	Sn	13 32 00.1	-1.5
	baz=226						
HOM	Homer	6.16	40		Pn	13 30 52.5	+1.4
CNPM	China Poot	6.23	42	Pn	Pn	13 30 53.0	+0.9
SVW2	Sparrevohn	6.29	17		Pn	13 30 54.6	+1.6
RED	Redoubt Volcan	6.36	31		Pn	13 30 55.5	+1.6
SPIA	Saint Paul Isl	6.38	293	Pn	Pn	13 30 54.4	+0.2
RDSO	Redoubt South	6.40	31		Pn	13 30 55.9	+1.4
RSO	Redoubt South	6.40	31	Pn	Pn	13 30 57.1	+2.5
NCT	North Crescent	6.43	30		Pn	13 30 56.4	+1.5
BRLK	Bradley Lake	6.52	41	Pn	Pn	13 30 56.5	+0.4
DFR	Drift River	6.52	31		Pn	13 30 57.2	+1.0
BRSE	Bradley Lake S	6.56	42		Pn	13 30 56.9	+0.3
BGL	Barrier Glacie	7.16	28		Pn	13 31 06.2	+1.3
SPCN	Chakachatna No	7.18	29		Pn	13 31 07.1	+1.9
SPCP	Crater Peak Br	7.22	29		Pn	13 31 07.1	+1.2
SLKM	Skilak Lake	7.27	39		Pn	13 31 07.9	+1.5
SPCG	Spurr Capps Gl	7.28	29		Pn	13 31 06.6	0.0
SEW	Seward	7.29	43	Pn	Pn	13 31 06.5	0.0
STLK	Strandline Lak	7.50	29		Pn	13 31 10.4	+0.8
SUA	Susitna One	7.79	32	Pn	Pn	13 31 14.9	+1.3
RC01	Rabbit Creek A	7.84	37	P	Pn	13 31 15.0	+0.7
	baz=225,SNR=14						
RC01				S	Sn	13 32 41.1	-1.9
	baz=225						
RC01	Rabbit Creek A	7.84	37		Pn	13 31 14.9	+0.7
TT01	Tatalina	7.97	11		Pn	13 31 17.4	+1.4
SKT	Skwentna	7.98	28	Pn	Pn	13 31 18.0	+1.9
TTA	Tatalina	7.99	11	Pn	Pn	13 31 17.7	+1.4
PWL	Port Wells	8.20	41		Pn	13 31 19.9	+0.9
Q23K	Middleton Isla	8.27	53	Pn	Pn	13 31 20.8	+0.9
MID	Middleton Isla	8.27	53	Pn	Pn	13 31 21.0	+1.0
PMR	Palmer	8.41	36		Pn	13 31 21.6	-0.3
KNK	Knik Glacier	8.52	38	Pn	Pn	13 31 23.7	+0.3
GHO	Glory Hole Cre	8.61	35	Pn	Pn	13 31 24.5	-0.3
HIN	Hinchinbrook I	8.66	47	Pn	Pn	13 31 25.3	-0.2
CUT	Chulitna	8.68	29	S	Sn	13 33 04.0	+0.7
	baz=217						
SML	Sawmill	8.83	36	Pn	Pn	13 31 27.5	-0.3
EYAK	Cordova Ski Ar	9.06	48	Pn	Pn	13 31 31.0	+0.2
SCM	Sheep Creek Mo	9.20	38	Pn	Pn	13 31 33.2	+0.3
ATKA	Atka Island	9.26	257	Pn	Pn	13 31 33.8	+0.3
DIV	Divide	9.36	45		Pn	13 31 35.0	-0.1
KAIM	Kayak Island	9.36	53	Pn	Pn	13 31 34.7	-0.3
RAGM	Ragged Mountai	9.45	50		Pn	13 31 36.2	0.0
KTH	Kantishna Hill	9.46	24		Pn	13 31 37.8	+1.3
WAT1	Susitna Watana	9.51	32		Pn	13 31 36.5	-0.5
KLU	Klutina	9.51	43		Pn	13 31 38.0	+0.9
TRF	Thorofare Moun	9.53	25	Pn	Pn	13 31 38.5	+1.1
WAT6	Susitna Watana	9.58	34		Pn	13 31 37.5	-0.6
WAT2	Susitna Watana	9.60	31		Pn	13 31 38.0	-0.3
HMT	Hamilton	9.61	51		Pn	13 31 39.3	+0.8
SUCK	Suckling Hills	9.72	53	Pn	Pn	13 31 40.8	+0.9
BMRM	Bremner River	9.76	47		Pn	13 31 40.6	+0.1
M24K	Tolsona, Glenn	9.79	39	P	Pn	13 31 41.6	+0.6
	baz=230,SNR=18						
M24K				S	Sn	13 33 30.9	+0.1
	baz=230						
M24K	Tolsona, Glenn	9.79	39	Pn	Pn	13 31 41.5	+0.6
RND	Reindeer	9.87	29		Pn	13 31 41.9	0.0
BERG	Berg Lake	9.88	52		Pn	13 31 42.2	0.0
ANM	Nome	9.90	345	Pn	Pn	13 31 43.2	+0.9
BPAW	Bear Paw Mtn.	9.92	22	Pn	Pn	13 31 44.4	+1.7
DHY	Denali Highway	10.05	33	Pn	Pn	13 31 43.9	-0.7
N25K	Chitina, Valde	10.10	44	P	Pn	13 31 45.8	+0.7
	baz=237,SNR=12						
N25K				S	Sn	13 33 36.8	-1.6
	baz=237						
N25K	Chitina, Valde	10.10	44		Pn	13 31 45.3	+0.2
MCK	McKinley	10.11	27	P	Pn	13 31 45.1	-0.1
	baz=216,SNR=13						
MCK				S	Sn	13 33 38.3	-0.2
	baz=216						
CRQM	Cirque	10.29	50		Pn	13 31 47.1	-0.8
GLB	Gilahina Butte	10.33	46	Pn	Pn	13 31 47.1	-1.2
BWN	Browne	10.33	25		Pn	13 31 49.1	+0.8
VRDI	Verde Repeater	10.38	48	Pn	Pn	13 31 49.6	+0.6
TGL	Tana Glacier	10.43	51	Pn	Pn	13 31 49.6	-0.1
PAX	Paxson	10.60	37		Pn	13 31 52.0	0.0
MESA	MESA	10.61	55		Pn	13 31 52.7	+0.5
MCARA	McCarthy VSAT	10.63	47		Pn	13 31 53.0	+0.6
GAMB	Gambell	10.65	329	Pn	Pn	13 31 53.8	+1.2
BALM	Baldy	10.77	50		Pn	13 31 54.2	-0.1
NEA2	Nenana	10.78	24	P	Pn	13 31 54.6	+0.2
	baz=213,SNR=6.6						
MLY	Manley	10.80	20	P	Pn	13 31 55.6	+0.9
	baz=208,SNR=8.0						
WRH	Wood River Hil	10.92	27	Pn	Pn	13 31 55.1	-1.2
BARN	Barnard Glacie	11.08	51		Pn	13 31 56.7	-1.9
CCB	Clear Creek Bu	11.14	27	Pn	Pn	13 31 57.8	-1.5
HDA	Harding Lake	11.18	29	S	Sn	13 34 01.5	-3.3
	baz=220						
HDA	Harding Lake	11.18	29		Pn	13 31 58.3	-1.6
CTGM	Chitina Glacie	11.18	51	Pn	Pn	13 32 00.1	0.0
I23K	Minto, Yukon-K	11.19	22	P	Pn	13 32 00.1	+0.2
	baz=211,SNR=7.5						
I23K	Minto, Yukon-K	11.19	22		Pn	13 31 58.5	-1.4
MENT	Mentasta	11.20	40		Pn	13 31 59.9	-0.3
MDM	Murphy Dome	11.29	25	Pn	Pn	13 31 59.4	-1.9
TCOL	CIGO, UAF Yank	11.31	26	P	Pn	13 32 02.3	+0.8
	baz=216,SNR=11						
TCOL	CIGO, UAF Yank	11.31	26		Pn	13 32 01.8	+0.2
COLA	College	11.31	26		Pn	13 32 01.6	0.0
RIDG	Independent Ri	11.33	35	Pn	Pn	13 32 00.4	-1.5
IL31		11.48	28		Pn	13 32 02.0	-1.9
ILAR	Eielson Array	11.48	28	Pn	Pn	13 32 02.0	-1.9
	comp=N,0.9nm,0.3s,baz=217,slow=13,SNR=38						
ILAR				Sn	Sn	13 34 01.5	-11
	baz=337,slow=11,SNR=1.3						
ILAR				LR	LR	13 36 48.0	
	comp=N,265nm,19.2s,baz=234,slow=39						
ILAR	Eielson Array	11.48	28	Pn	Pn	13 32 02.3	-1.6
DOT	Dot Lake	11.53	36	Pn	Pn	13 32 04.5	-0.1
POKR	Poker Plat Res	11.61	26	P	Pn	13 32 06.2	+0.5
	baz=216,SNR=8.8						
POKR	Poker Plat Res	11.61	26		Pn	13 32 05.0	-0.8
SCRK	Sand Creek	11.77	35	P	Pn	13 32 08.5	+0.4
	baz=228						
PRP	Porcupine Dome	12.42	28	Pn	Pn	13 32 15.5	-1.5
COLD	Coldfoot	12.88	16	P	Pn	13 32 24.2	+1.1
	baz=204						
COLD	Coldfoot	12.88	16	Pn	Pn	13 32 22.9	-0.1
HYT	Haines Junctio	12.90	55	Pn	Pn	13 32 24.6	+1.2
RDOG	Red Dog Mine	13.05	354	Pn	Pn	13 32 26.0	+0.6
EGAK	Eagle	13.23	36	Pn	Pn	13 32 27.0	-0.8
FYU	Fort Yukon	13.32	25	Pn	Pn	13 32 28.2	-0.8
SIT	Sitka	13.56	72	Pn	Pn	13 32 31.2	-1.0
SKAG	Skagway	13.68	62	Pn	Pn	13 32 35.2	+1.3
BESE	Bessie Mountai	13.83	66	Pn	Pn	13 32 37.9	+1.8
JIS	Juneau Island	14.06	67	Pn	Pn	13 32 40.0	+0.9
WHY	Whitehorse	14.11	57	Pn	Pn	13 32 40.3	+0.4
TOLK	Toolik Lake Re	14.27	15	P	Pn	13 32 42.3	+0.2
	baz=203,SNR=9.5						
TOLK	Toolik Lake Re	14.27	15	Pn	Pn	13 32 41.5	-0.6
CRAG	Craig	14.94	78	Pn	Pn	13 32 50.4	-0.8
WRAK	Wrangell Islan	15.24	74	Pn	Pn	13 32 54.8	-0.3
WRAK				IAmb	IAmb	13 33 04.0	
	comp=Z,26nm,1.2s						
A21K	Barrow	16.28	3	P	Pn	13 33 08.7	+0.2
	baz=186,SNR=14						
A21K	Barrow	16.28	3	Pn	Pn	13 33 09.1	+0.6
A21K				IAmb	IAmb	13 33 17.5	
	comp=Z,56nm,1.4s						
DLBC	Dease Lake	16.36	66	Pn	Pn	13 33 11.7	+1.9
	comp=Z,0.6nm,0.3s,baz=264,slow=12,SNR=18						
DLBC				Sn	Sn	13 36 09.7	-1.5
	comp=Z,0.1nm,0.3s,baz=164,slow=18,SNR=1.1						
DLBC	Dease Lake	16.36	66	Pn	Pn	13 33 09.9	+0.2
INK	Inuvik	17.79	32	P	Pn	13 33 27.1	-0.5
	comp=Z,1.9nm,0.3s,baz=223,slow=12,SNR=34						
INK				LR	LR	13 41 07.4	
	comp=Z,325nm,18.6s,baz=232,slow=40						
INK	Inuvik	17.79	32	Pn	Pn	13 33 26.4	-1.2
BBB	Bella Bella	18.70	86	P	Pn	13 33 40.1	+1.4
	comp=Z,0.2nm,0.3s,baz=266,slow=12,SNR=3.6						
BBB	Bella Bella	18.70	86	IAmb	IAmb	13 33 43.3	
	comp=Z,64nm,1.4s						
C36M	Paulatuk	21.30	34	P	P	13 34 05.6	-0.9
	baz=246,SNR=23						
C36M	Paulatuk	21.30	34	P	P	13 34 05.7	-0.8
YKA	Yellowknife Ar	23.89	54	P	P	13 34 33.5	0.0
	comp=Z,6.4nm,0.8s,baz=273,slow=9.0,SNR=56						
YKA				LR	LR	13 44 49.8	
	comp=Z,178nm,19.1s,baz=0.0,slow=39						
PEA0B	Petropavlovsk-	24.93	283	P	P	13 34 42.0	-1.2
PETK	Petropavlovsk-	24.93	283	P	P	13 34 42.6	-0.5
	comp=Z,9.7nm,0.5s,baz=79,slow=13,SNR=7.5						
PETK	Petropavlovsk-	24.93	283	P	P	13 34 41.1	-2.1
SEY	Seymchan	25.42	307	P	P	13 34 47.0	-0.6
	comp=Z,1.6nm,0.7s,baz=82,slow=10,SNR=5.9						
B08A	Colville Reser	25.44	89	P	P	13 34 49.1	+1.3
NEW	Newport	26.75	87	P	P	13 35 01.2	+1.4
	comp=Z,6.9nm,1.0s,baz=311,slow=9.3,SNR=6.3						
NEW	Newport	26.75	87	P	P	13 34 59.0	-0.8
WALA	Waterton Lakes	28.19	83	P	P	13 35 12.3	-0.4
JTMT	Jette	28.65	86	P	P	13 35 15.3	-1.6
JTMT				IAmb	IAmb	13 35 19.8	

	comp=Z,9.5nm,0.9s						
HRY	Holter Researc	30.62	86	P	P	13 35 34.2	-0.1
LRM	Limekiln Ridge	30.76	88	P	P	13 35 35.6	-0.2
PNTR	Pine Nut	30.98	105	P	P	13 35 39.0	+1.3
PNTR				IAmb	IAmb	13 35 40.7	
	comp=Z,7.1nm,1.0s						
BCYI	Bear Canyon	31.10	91	P	P	13 35 38.2	-0.5
MCMT	McKenzie Canyo	31.11	90	P	P	13 35 38.5	-0.3
YHL	Hebgen Lake	32.05	88	P	P	13 35 46.1	-1.1
NVAR	Mina Array Bea	32.16	104	P	P	13 35 49.9	+1.8
	comp=Z,1.7nm,0.8s,baz=299,slow=8.3,SNR=10						
YHH	Holmes Hill	32.28	88	P	P	13 35 49.3	+0.1
YMR	Madison River	32.29	88	P	P	13 35 48.9	-0.2
YNE	Yellowstone No	32.63	87	P	P	13 35 52.8	+0.6
RLMT	Red Lodge	32.99	86	P	P	13 35 56.0	+0.7
RLMT				IAmb	IAmb	13 35 58.5	
	comp=Z,11nm,1.1s						
HVU	Hansel Valley	33.04	94	P	P	13 35 56.8	+1.1
PDAR	Pinedale Array	34.26	90	P	P	13 36 07.5	+1.1
	comp=Z,0.9nm,0.7s,baz=308,slow=3.8,SNR=9.8						
FCC	Fort Churchill	34.54	57	P	P	13 36 07.5	-0.8
FCC				IAmb	IAmb	13 36 09.6	
	comp=Z,15nm,1.4s						
SRU	San Rafael Swe	36.09	96	P	P	13 36 22.1	0.0
RSSD	Black Hills	36.58	84	P	P	13 36 26.3	0.0
O20A	White River Ci	36.71	92	P	P	13 36 27.0	-0.4
O20A				IAmb	IAmb	13 36 33.5	
	comp=Z,18nm,1.4s						
W13A	Hualapai Mount	37.02	104	P	P	13 36 29.9	-0.1
ULM	Lac du Bonnet	37.62	70	P	P	13 36 35.2	+0.4
	comp=Z,3.0nm,0.6s,baz=301,slow=7.5,SNR=7.3						
ULM	Lac du Bonnet	37.62	70	P	P	13 36 34.4	-0.4
PV01	Paradox Valley	37.87	95	P	P	13 36 37.8	+0.5
AGMN	Agassiz Nation	38.71	73	P	P	13 36 43.9	-0.1
AGMN				IAmb	IAmb	13 36 44.8	
	comp=Z,6.7nm,0.8s						
ECSD	EROS Data Cent	41.03	79	P	P	13 37 02.9	-0.5
EYMN	Ely	41.30	71	P	P	13 37 05.1	-0.4
EYMN				IAmb	IAmb	13 37 06.3	
	comp=Z,7.7nm,0.7s						
H11N2	WAKE ISLAND Hy	43.56	229	T	T	14 23 38.7	
	baz=28,slow=76,SNR=11						
H11N3	WAKE ISLAND Hy	43.56	229	T	T	14 23 50.5	
	baz=28,slow=76,SNR=12						
H11N1	WAKE ISLAND Hy	43.58	229	T	T	14 23 52.9	
	baz=28,slow=76,SNR=11						
H11S1	WAKE ISLAND Hy	44.73	229	T	T	14 25 01.2	
	baz=26,slow=74						
H11S2	WAKE ISLAND Hy	44.74	229	T	T	14 25 04.8	
	baz=26,slow=74						
H11S3	WAKE ISLAND Hy	44.74	229	T	T	14 25 02.7	
	baz=26						
P38A	Dawn	45.47	81	P	P	13 37 38.3	-0.9
P38A				IAmb	IAmb	13 37 39.5	
	comp=Z,7.8nm,0.7s						
MJAR	Matsushiro Arr	45.59	273	P	P	13 37 39.3	-0.9
	comp=Z,1.1nm,0.4s,baz=45,slow=7.8,SNR=4.3						
MJAR	Matsushiro Arr	45.59	273	IAmb	IAmb	13 37 48.2	
	comp=Z,2.3nm,0.8s						
DAG	Danmarks Havn	46.01	12	iP	P	13 37 42.1	-0.9
DAG	Danmarks Havn	46.01	12	iP	P	13 37 42.1	-0.9
P40A	Paris	46.37	80	P	P	13 37 45.3	-1.0
P40A				IAmb	IAmb	13 37 47.1	
	comp=Z,13nm,1.2s						
TX31	Lajitas Ar. Si	47.06	100	P	P	13 37 52.0	0.0
TX31				IAmb	IAmb	13 37 53.7	
	comp=Z,7.0nm,1.1s						
TX32	Lajitas Array	47.06	100	P	P	13 37 52.3	+0.4
TXAR	Lajitas Array	47.06	100	P	P	13 37 52.5	+0.5
	comp=Z,1.5nm,0.9s,baz=304,slow=5.7,SNR=17						
TXAR	Lajitas Array	47.06	100	P	P	13 37 52.3	+0.4
JHJ2	Mitsune	47.12	268	P	P	13 37 51.8	-0.4
SFJD	Kangerlussuaq	47.13	31	P	P	13 37 52.1	+0.2
	comp=Z,5.7nm,0.7s,baz=311,slow=9.3,SNR=2.6						
SFJD	Kangerlussuaq	47.13	31	IAmb	IAmb	13 38 01.7	
	comp=Z,12nm,0.8s						
DBG	Daneborg	47.95	14	iP	P	13 37 57.4	-0.8
ICESG	Greenland Ices	48.55	25	iP	P	13 38 03.0	-0.3
ICESG				IAmb	IAmb	13 38 03.8	
	comp=Z,17nm,0.6s						
SFIN	Lafayette	48.58	76	P	P	13 38 03.5	0.0
CCAR	Cane Creek	50.48	86	P	P	13 38 18.3	+0.3
WVT	Waverly	51.13	81	P	P	13 38 22.4	-0.6
WVT				IAmb	IAmb	13 38 24.0	
	comp=Z,10.0nm,0.9s						
R50A	Paris	51.58	76	P	P	13 38 24.9	-1.4
R50A				IAmb	IAmb	13 38 26.2	
	comp=Z,7.7nm,0.8s						
Q51A	Peebles	51.60	75	P	P	13 38 24.4	-2.0
Q51A				IAmb	IAmb	13 38 26.6	
	comp=Z,14nm,0.9s						
CLTN	Cedars of Leba	52.01	80	P	P	13 38 29.4	-0.1
CLTN				IAmb	IAmb	13 38 30.7	
	comp=Z,14nm,1.1s						
L56A	Greenwood	52.56	68	P	P	13 38 32.0	-1.7
BATG	Bathurst New B	54.77	56	P	P	13 38 48.5	-1.1
BATG				IAmb	IAmb	13 38 50.7	
	comp=Z,14nm,1.0s						
K62A	Royalston	54.98	64	P	P	13 38 51.2	-0.1
K62A				IAmb	IAmb	13 38 57.1	
	comp=Z,7.6nm,1.0s						
KSCT	Kent School, K	55.01	66	P	P	13 38 51.7	+0.3
KSCT				IAmb	IAmb	13 38 56.2	
	comp=Z,7.4nm,0.9s						
ARCES	ARCESS Array B	55.57	358	P	P	13 38 56.7	+1.6
	comp=Z,4.6nm,0.9s,baz=352,slow=5.5,SNR=1.1						
HHC	Hu-ho-hao-te	57.25	296	eP	P	13 39 09.9	+2.3
HHC				pmax	pmax		
	comp=Z,11nm,1.1s						
HHC				pmax	pmax		
	comp=Z,230nm,5.6s						
PATS	Pohnpei	58.77	231	P	P	13 39 17.6	-0.7
FINES	FINESS Array B	63.66	357	P	P	13 39 50.8	-0.1
	comp=Z,0.7nm,0.4s,baz=8.4,slow=7.6,SNR=6.1						
NC405	NORSAR Array S	63.86	5	P	P	13 39 52.8	+0.5
NB2	NORSAR Subarra	63.91	5	P	P	13 39 50.1	-2.6
	comp=Z,24nm,1.4s,baz=352,slow=6.5						
NOA	NORSAR Array B	63.91	5	P	P	13 39 52.4	-0.3
	comp=Z,1.0nm,0.7s,baz=354,slow=6.6,SNR=3.9						
ARU	Arti	64.56	338	P	P	13 39 57.0	0.0
	comp=Z,0.8nm,0.4s,baz=12,slow=6.9,SNR=3.3						
ARU	Arti	64.56	338	IAmb	IAmb	13 40 05.8	
	comp=Z,5.2nm,0.5s						
LZH	Lanzhou	64.81	297	eP	P	13 39 57.2	-1.9
LZH				pP	pP	13 40 02.8	+0.5
LZH				sP	sP	13 40 05.5	+2.0
LZH				pmax	pmax		
	comp=Z,21nm,1.3s						
LZH				pmax	pmax		
	comp=Z,73nm,7.2s						
WMQ	Urumqi	66.21	313	eP	P	13 40 09.9	+2.0
CLL	Collm	73.72	5	epP	pP	13 41 03.0	+6.0
AKASG	Malin Array Be	74.27	354	P	P	13 40 56.8	-0.2
	comp=Z,1.4nm,0.3s,baz=8.5,slow=5.7,SNR=7.1						
AKBB	Malin Array Si	74.27	354	P	P	13 40 58.0	+1.0
GERES	GERESS Array B	76.21	5	P	P	13 41 08.6	+0.2
	comp=Z,1.0nm,0.9s,baz=26,slow=5.9,SNR=3.9						
TAPN	Taplejung	79.88	304	eP	P	13 41 33.3	+4.0
GUN	Gumba	80.27	305	eP	P	13 41 33.9	+2.4
	comp=Z,26nm,0.8s						
ODAN	Odare	80.44	304	eP	P	13 41 33.1	+0.8
KKN	Kakani	80.65	306	eP	P	13 41 34.4	+1.0
RAMN	Ramite	80.74	304	eP	P	13 41 33.0	-0.9
GKN	Gorkha	80.77	306	eP	P	13 41 34.4	+0.4
PKI	Pulchoki	80.78	306	eP	P	13 41 34.8	+0.6
DANN	Dangsing	80.88	307	eP	P	13 41 34.6	-0.1
	comp=Z,77nm,0.9s						
DMN	Daman	80.89	306	eP	P	13 41 33.9	-0.8
KOLN	Koldanda	81.45	307	eP	P	13 41 35.8	-1.8
	comp=Z,18nm,0.9s						
CMAR	Chiang Mai Arr	81.50	290	P	P	13 41 38.0	+0.2
	comp=Z,1.8nm,0.9s,baz=12,slow=5.4,SNR=9.4						
ESDC	Sonseca Array	83.23	19	P	P	13 41 46.9	+0.3
	comp=Z,1.4nm,0.7s,baz=341,slow=4.7,SNR=6.6						
H03N2	Juan Fernandez	111.70	117	T	T	15 48 57.6	
	baz=324,slow=77,SNR=4.0						
H03N1	Juan Fernandez	111.71	117	T	T	15 48 58.9	
	baz=324,slow=77,SNR=4.9						
H03N3	Juan Fernandez	111.72	117	T	T	15 48 57.0	
	baz=324,slow=77,SNR=7.1						
BOSA	Boshof	153.26	351	PKPbc	PKiKP	13 49 19.5	+1.2
	comp=Z,1.5nm,0.7s,baz=37,slow=3.2,SNR=1.8						

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*MAN **10** 13:29:34.6, 11°.43N×126°.48E, h7^{km}, mb6.1, ML5.1, MS5.7*

MAN INTENSITY IV - MERCEDES AND GUIUAN.

*IDC **10** 13:29:37.6±0.3, 11°.17N×126°.08E, h0^{km}, mb5.0/44, mb1 5.0/48, mb1mx5.0/51, mbtmp5.0/48, ML4.1/4, MS5.0/35, Ms1 5.0/35, ms1mx4.8/58, Error ellipse: s-maj=13.3km s-min=6.6km az=81.0*

*NEIC **10** 13:29:38.4±1.7, 11°.23N±0°.06×126°.18E±0°.08, h10^{km}±1^{km}, mb5.3/142, Mwb5.2/34, Mww5.4, Mwc5.5(GCMT), Error ellipse: s-maj=14.1km s-min=10.6km az=258.0*

*GCMT **10** 13:29:42.4±0.1, 11°.31N±0°.01×126°.33E, h12^{km}, MW5.4/157, Moment Tensor Solution. s125,c200; s157,c304; Duration: 1^{s}3 Moment tensor: Scale 10^{17} Nm; M_{rr}1.40±.01; $M_{\theta\theta}$-0.06±.01; $M_{\phi\phi}$-1.34±.01; $M_{r\theta}$-0.21±.04; $M_{\theta\phi}$0.24±.01; $M_{\phi r}$0.93±.03; Best double couple: $M_0$1.68900×10^{17} NP1:ϕ_s171.00000°, δ28.00000°, λ92.00000°. NP2:ϕ_s348.00000°, δ62.00000°, λ89.00000°. Principal axes: T 1.6970, Plg73.0000°, Azm255.0000°; N -0.0190, Plg1.0000°, Azm349.0000°; P -1.6820, Plg17.0000°, Azm79.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BJI **10** 13:29:42.4±0.0, 11°.35N×126°.13E, h42^{km}, mB5.5/71, mb5.2/82, Ms5.5/89, Ms7 5.3/82*

*MOS **10** 13:29:42.7±1.2, 11°.20N×126°.15E, h55^{km}, mb5.5/88, MS5.1/15, Error ellipse: s-maj=7.2km s-min=3.7km az=114.5*

*NEIC **10** 13:29:43, 11°.31N×126°.35E, h12^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.47; $M_{\theta\theta}$-0.07; $M_{\phi\phi}$-1.40; $M_{r\theta}$-0.03; $M_{\theta\phi}$0.28; $M_{\phi r}$1.34; Fault plane solution: $M_0$1.98000×10^{17} NP1:ϕ_s162.00000°, δ24.00000°, λ78.00000°. NP2:ϕ_s355.00000°, δ66.00000°, λ95.00000°. Principal axes: T 2.0016, Plg68.0000°, Azm275.0000°; N -0.0344, Plg5.0000°, Azm173.0000°; P -1.9672, Plg21.0000°, Azm81.0000°;*

*NEIC **10** 13:29:43.9, 11°.20N×126°.15E, h19^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}8.26; $M_{\theta\theta}$-2.47; $M_{\phi\phi}$-5.80; $M_{r\theta}$-0.28; $M_{\theta\phi}$1.37; $M_{\phi r}$4.09; Fault plane solution: $M_0$8.53000×10^{16} NP1:ϕ_s156.89000°, δ30.84000°, λ81.08000°. NP2:ϕ_s347.25000°, δ59.58000°, λ95.29000°. Principal axes: T 9.3699, Plg75.0000°, Azm272.0000°; N -2.0677, Plg5.0000°, Azm165.0000°; P -7.3021, Plg14.0000°, Azm73.0000°;*

*NEIC **10** 13:29:44, 11°.11N×126°.56E, h16^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.36; $M_{\theta\theta}$-0.10; $M_{\phi\phi}$-1.26; $M_{r\theta}$0.13; $M_{\theta\phi}$0.11; $M_{\phi r}$0.54; Fault plane solution: $M_0$1.43000×10^{17} NP1:ϕ_s168.00000°, δ34.00000°, λ79.00000°. NP2:ϕ_s1.00000°, δ56.00000°, λ97.00000°. Principal axes: T 1.4821, Plg78.0000°, Azm295.0000°; N -0.1103, Plg6.0000°, Azm177.0000°; P -1.3718, Plg11.0000°, Azm86.0000°;*

*DJA **10** 13:29:47.8±1.1, 11°N±8°×12°6E±°, h72^{km}±7^{km}, M5.3/49, mb5.2/49, mB5.7/45, MLv6.2/2, Mw(mB)5.2/45, MwMwp5.2/23, Mwp5.4/23*

*KLM **10** 13:29:50, 11°.46N×126°.41E, h114^{km}, mb5.4*

ISC 10 13:29:44.0±0.4**, 11°.27N**±0°.02×**126°.25E**±0°.04**, h49**^{km}±2^{km}**, h49**^{km}**:pP-P, n701,** σ**1**^{s}**59**/768**, mb5.2**/228**, MS5.1**/72**, 25C-24D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OCLP	Ormoc	1.62	263	eP	Pn	13 30 08.6	-1.6
OCLP				eS	Sn	13 30 33.0	+3.1
MSLP	Maasin	1.77	231	eP	Pn	13 30 10.6	-1.6
MSLP				eS	Sn	13 30 37.7	+4.2
CNP	Catarman	1.98	309	eP	Pn	13 30 12.5	-2.6
CNP				eS	Sn	13 30 37.7	-1.1
BUTP	Butuan	2.36	195	eP	Pn	13 30 18.6	-1.8
BUTP				eS	Sn	13 30 52.9	+4.7
LLP	Lapu-Lapu	2.43	247	⇑eP	Pn	13 30 20.5	-0.8
LLP				eS	Sn	13 31 02.8	+13
PVCP	Virac	3.09	319	eP	Pn	13 30 25.2	-5.1
CGP	Cagayan de Oro	3.18	209	⇓iP	Pn	13 30 31.1	-0.5
CGP				i S	Sn	13 31 15.4	+7.0
BUKP	Musuan	3.56	199	eP	Pn	13 30 36.0	-0.9
BUKP				eS	Sn	13 31 19.6	+1.8
GUIM	Jordan	3.65	260	eP	Pn	13 30 36.5	-1.5
CNOP	Candoni, Negro	3.82	248	eP	Pn	13 30 38.5	-1.9
CNOP				eS	Sn	13 31 42.1	+18
DAV	Davao City (W)	4.22	189	Pn	Pn	13 30 47.8	+1.9
	60nm,0.3s,baz=130,slow=8.1,SNR=1.4						
DAV	Davao City (W)	4.22	189	⇑eP	Pn	13 30 55.7	+10
JAP	San Jose, Anti	4.25	263	⇓eP	Pn	13 30 47.8	+1.5
MATI	Mati	4.29	180	eP	Pn	13 30 48.2	+1.4
MATI				eS	Sn	13 31 50.9	+15
KCP	Kidapawan	4.38	195	⇑eP	Pn	13 30 49.2	+1.1
KCP				i S	Sn	13 31 39.0	+1.0
PAGZ	Pagadian	4.42	220	eP	Pn	13 30 47.1	-1.4
PAGZ				eS	Sn	13 31 48.0	+9.2
GQP	Guinayangan	4.54	306	⇓eP	Pn	13 30 37.5	-13
JCNP	Jose Panganiba	4.58	311	eP	Pn	13 30 47.2	-3.6
JCNP				eS	Sn	13 31 38.7	-4.1
SKMP	Bagumbayan, Su	5.01	200	eP	Pn	13 31 00.2	+3.5
SKMP				eS	Sn	13 31 52.2	-1.0
DDMP	Don Marcelino,	5.15	186	eP	Pn	13 31 00.8	+2.1
LQP	Lukban	5.39	302	⇑eP	Pn	13 31 00.4	-1.8
POLP	Polilio Island	5.43	310	eP	Pn	13 31 00.0	-2.4
PGP	Puerto Galera	5.63	294	⇑eP	Pn	13 31 04.2	-1.1
TGY	Tagaytay City	5.90	299	Pn	Pn	13 31 09.5	+0.6
	41nm,0.3s,baz=136,slow=5.0,SNR=13						
TGY				LR	LR	13 33 51.5	
	comp=Z,14µm,18.3s,baz=127,slow=44						
CVP	Callao Caves	7.70	327	⇓eP	Pn	13 31 31.0	-2.6
CVP				i S	Sn	13 32 33.8	-26
SZP	Santa	8.39	319	Pn	Pn	13 31 42.1	-1.1
TNTI	Ternate	10.48	174		Pn	13 32 10.4	-1.4
TNTI	Ternate	10.48	174	P	Pn	13 32 10.7	-1.1
	2µm144nm,1.5s						
GTOI	Gorontalo	11.04	197	P	Pn	13 32 19.6	+0.2
	2µm74nm,1.2s						
KKM	Kota Kinabalu	11.19	243		Pn	13 32 20.4	-1.1
TOLI2	Tolitoli	11.45	209	Pn	Pn	13 32 23.5	-1.6
MRSI	Marisa	11.54	202	P	Pn	13 32 29.2	+3.0
	4µm2µm59nm,1.3s						
SPMM	Sapulut	11.67	237	P	Pn	13 32 37.0	+9.0
LUWI	Luwuk	12.70	196	P	Pn	13 32 43.0	+0.9
	6µm6µm228nm,1.5s						
APSI	Ampana	12.93	201	P	Pn	13 32 46.4	+1.2
	4µm4µm132nm,1.9s						
YULB	Yu-li	12.95	339	Pn	Pn	13 32 42.5	-3.0
SWI	Sorong	13.04	157	P	Pn	13 32 45.3	-1.4
SWI				pmax	pmax		
	comp=Z,57nm,1.1s						
SWI	Sorong	13.04	157	P	Pn	13 32 46.4	-0.3
	comp=Z,4µmcomp=Z,2µmcomp=Z,57nm,1.1s						
SIJI	Sorong	13.05	157	Pn	Pn	13 32 46.1	-0.8
	comp=Z,1.6nm,0.3s,baz=337,slow=13,SNR=9.6						
SIJI				Sn	Sn	13 34 59.4	-11
	comp=Z,0.4nm,0.3s,baz=218,slow=19,SNR=1.0						
TPUB	Ta-pu	13.11	337		Pn	13 32 46.5	-1.2
SANI	Sanana	13.23	181	P	Pn	13 32 43.9	-5.4
	comp=Z,3µmcomp=Z,1µmcomp=Z,82nm,0.9s						
SSLB	Suanglung	13.43	339	Pn	Pn	13 32 50.5	-1.6
YHNB	Yeheng	14.11	342	Pn	Pn	13 32 57.4	-4.0
NLAI	Namlea	14.43	177	P	Pn	13 33 02.7	-2.9
	comp=Z,53nm,0.9s						
MSAI	Masohi	14.76	169	P	Pn	13 33 08.2	-1.7
	comp=Z,1µmcomp=Z,72nm,1.2s						
KNMB	Chin-men Tao	15.10	331	Pn	Pn	13 33 13.3	-0.9
FAKI	Fak Fak	15.30	157	Pn	Pn	13 33 15.4	-1.6
FAKI				IAmb	IAmb	13 33 41.1	
	comp=Z,267nm,1.4s						
FAKI	Fak Fak	15.30	157	P	Pn	13 33 15.8	-1.2
	comp=Z,5µmcomp=Z,8µmcomp=Z,146nm,1.0s						
QZH	Quanzhou	15.42	333	⇑iP	Pn	13 33 14.2	-4.2
QZH				sP	pP	13 33 32.4	+0.5
QZH				eS	Sn	13 36 05.0	-3.2
QZH				sS	S	13 36 18.1	-4.0
QZH				pmax	pmax		
	comp=Z,2µm,6.4s						
QZH				LR	LR		
	comp=Z,6µm,15.6s						
QZH				LR	LR		
	comp=Z,2µm,13.3s						
QZH				LR	LR		
	comp=Z,7µm,16.1s						
BKB	Balikpapan	15.53	217	P	Pn	13 33 19.8	-0.1
	comp=Z,10µmcomp=Z,8µmcomp=Z,471nm,1.1s						
TTSI	Tana Toraja	15.59	205	P	Pn	13 33 21.6	+1.0
	comp=Z,5µmcomp=Z,3µmcomp=Z,231nm,1.3s						
JOW	Kunigami	15.60	7	Pn	Pn	13 33 21.4	+0.5
	comp=Z,0.8nm,0.3s,baz=190,slow=11,SNR=2.2						
SRPI	Serui, Papua	16.40	142	P	Pn	13 33 32.0	+1.0
	comp=Z,9µmcomp=Z,533nm,0.4s						
SBUM	Sibu	16.44	239	P	P	13 33 38.0	+4.4
SPSI	Sidrap Palu	16.44	203	P	P	13 33 35.3	+1.7
	comp=Z,4µmcomp=Z,4µmcomp=Z,129nm,0.8s						
MTKI	Muara Teweh, K	16.56	224	P	P	13 33 36.7	+1.7
	comp=Z,4µmcomp=Z,59nm,2.1s						
BNSI	Bone	16.72	202	P	Pn	13 33 33.4	-1.6
	comp=Z,6µmcomp=Z,134nm,1.3s						
KAPI	Kappang	17.41	202	P	Pn	13 33 41.8	-1.8
	comp=Z,2.4nm,0.3s,baz=214,slow=17,SNR=2.1						
KAPI				LR	LR	13 41 22.5	
	comp=Z,5µm,20.0s,baz=356,slow=41						
KAPI	Kappang	17.41	202	P	Pn	13 33 41.0	-2.7
KAPI				pmax	pmax		
	comp=Z,94nm,1.1s						
KAPI	Kappang	17.41	202		Pn	13 33 41.0	-2.7
BKSI	Bulukumba	17.57	201	P	P	13 33 45.9	-0.1
	comp=Z,3µmcomp=Z,2µmcomp=Z,66nm,0.9s						
KBKI	Kotabaru	17.60	215	P	P	13 33 48.4	+2.0
	comp=Z,3µmcomp=Z,194nm,1.1s						
QIZ	Qiongzhong	17.60	298	P	Pn	13 33 44.8	-1.2
QIZ				S	Sn	13 37 02.9	+1.6
QIZ				pmax	pmax		
	comp=Z,26nm,1.4s						
QIZ				pmax	pmax		
	comp=Z,2µm,9.8s						
QIZ				LR	LR		
	comp=Z,3µm,12.9s						
QIZ				LR	LR		
	comp=Z,4µm,16.5s						
QIZ				LR	LR		
	comp=Z,5µm,16.3s						
QIZ	Qiongzhong	17.60	298	P	Pn	13 33 45.0	-1.0
GUMO	Guam	18.33	81	LR	LR	13 40 29.5	
	comp=Z,6µm,19.2s,baz=262,slow=35						
BBKI	Banjar Baru	18.52	218	P	Pn	13 33 57.3	+0.2
	comp=Z,5µmcomp=Z,98nm,1.3s						
KSM	Kuching	18.57	240	P	P	13 33 55.6	-1.5
KSM	Kuching	18.57	240	P	Pn	13 34 02.0	+4.2
GENI	Genyem	19.53	134	P	P	13 34 08.2	+0.6
	comp=Z,10µmcomp=Z,7µmcomp=Z,113nm,1.1s						
SAUI	Saumlaki	19.77	165		P	13 34 08.9	-1.3
SAUI	Saumlaki	19.77	165	P	P	13 34 09.9	-0.3
	comp=Z,7µmcomp=Z,7µmcomp=Z,382nm,0.7s						
JAY	Jayapura	19.86	133	P	P	13 34 12.2	+1.0
	comp=Z,0.4nm,0.3s,baz=299,slow=16,SNR=2.8						
JAY				LR	LR	13 41 19.3	
	comp=Z,8µm,19.1s,baz=318,slow=35						
JAY	Jayapura	19.86	133	P	P	13 34 10.3	-0.9
	comp=Z,2µmcomp=Z,56nm,1.1s						
PBKI	Pangkalan Bun	20.07	227	P	Pn	13 34 15.8	+0.2
	comp=Z,4µmcomp=Z,304nm,1.2s						
MMRI	Maumere	20.17	192	P	P	13 34 13.3	-1.2
MMRI				IAmb	IAmb	13 34 24.1	
	comp=Z,267nm,1.0s						
MMRI	Maumere	20.17	192	P	P	13 34 15.0	+0.5
	comp=Z,4µmcomp=Z,4µmcomp=Z,288nm,1.1s						
SSE	Sheshan	20.28	347	P	P	13 34 15.3	-0.4
SSE				pP	sP	13 34 28.2	-2.5
SSE				S	S	13 38 02.0	+1.5
SSE				pmax	pmax		
	comp=Z,31nm,1.3s						
SSE				pmax	pmax		
	comp=Z,560nm,3.6s						
SSE				LR	LR		
	comp=Z,2µm,16.7s						
SSE	Sheshan	20.28	347	P	P	13 34 15.3	-0.4
SSE				IAmb	IAmb	13 34 29.4	
	comp=Z,102nm,0.9s						
EDFI	Ende, Flores	20.39	193	P	P	13 34 16.6	-0.5
	comp=Z,1µmcomp=Z,81nm,0.7s						
JSU	Suzuyama	20.52	10	P	P	13 34 18.7	+0.4
JSU				IAmb	IAmb	13 34 35.5	
	comp=Z,140nm,1.3s						
UBPT	Khong Chiam	20.61	283	P	Pn	13 34 21.5	-0.5
	comp=Z,2µmcomp=Z,38nm,1.0s						
UBPT	Khong Chiam	20.61	283	P	P	13 34 18.1	-1.2
SOEI	Soe	20.98	185	P	P	13 34 22.6	-0.8
SOEI	Soe	20.98	185	P	P	13 34 23.1	-0.3
	comp=Z,6µmcomp=Z,8µmcomp=Z,314nm,0.9s						
BATI	Baumata	21.48	187	P	P	13 34 28.2	-0.5
	comp=Z,370nm,0.9s,baz=82,slow=0.6,SNR=46						
BATI				S	S	13 38 26.5	+2.0
	comp=Z,80nm,1.1s,baz=113,slow=22,SNR=7.8						
BATI				LR	LR	13 43 35.6	
	comp=Z,4µm,20.7s,baz=307,slow=39						
BATI	Baumata	21.48	187	P	P	13 34 28.3	-0.5
	comp=Z,2µmcomp=Z,2µmcomp=Z,263nm,1.0s						
JCJ	Chichijima	21.75	41	LR	LR	13 42 20.0	
	comp=Z,6µm,19.2s,baz=222,slow=35						
NJ2	Nanjing	21.78	343	eP	P	13 34 31.8	0.0
NJ2				pP	sP	13 34 44.7	-2.1
NJ2				S	S	13 38 31.9	+1.8
NJ2				pmax	pmax		
	comp=Z,40nm,0.9s						
NJ2				pmax	pmax		
	comp=Z,1µm,3.5s						
NJ2				LR	LR		
	comp=Z,3µm,14.2s						
NJ2				LR	LR		
	comp=Z,4µm,13.2s						
NJ2				LR	LR		
	comp=Z,4µm,19.6s						
KMMI	Kalianget	21.92	214	P	P	13 34 35.1	+1.7
	comp=Z,5µmcomp=Z,5µmcomp=Z,160nm,1.2s						
TWSI	Taliwang, Sumb	21.95	205	P	P	13 34 33.8	+0.1
	comp=Z,2µmcomp=Z,1µmcomp=Z,92nm,1.1s						
SRBI	Singaraja	22.14	210	P	P	13 34 35.1	-0.6
	comp=Z,3µmcomp=Z,3µmcomp=Z,74nm,0.9s						
JNU	Nakatsue	22.17	10	P	P	13 34 37.0	+1.0
	comp=Z,22nm,0.9s,baz=157,slow=2.1,SNR=7.4						
JNU				LR	LR	13 44 11.0	
	comp=Z,3µm,18.3s,baz=170,slow=39						
JNU	Nakatsue	22.17	10	P	P	13 34 36.2	+0.3
DNP	Denpasar	22.65	209	P	P	13 34 43.1	+1.9
DNP				pmax	pmax		
	comp=Z,399nm,1.1s						
DNP	Denpasar	22.65	209	P	P	13 34 42.7	+1.5
	comp=Z,32µmcomp=Z,464nm,0.9s						
JAGI	Jajag, Banyuwa	23.00	212	P	P	13 34 44.2	-0.6
JAGI	Jajag, Banyuwa	23.00	212	P	P	13 34 45.8	+0.9
	comp=Z,3µmcomp=Z,5µmcomp=Z,367nm,0.9s						
TPI	Tanjungpandan	23.15	234	P	P	13 34 47.3	+0.9
	comp=Z,4µmcomp=Z,124nm,1.4s						
NONG	Nongkai	23.33	290	P	P	13 34 45.0	-3.1
	comp=Z,57nm,1.0s						
SLVN	Son La	23.63	298	P	P	13 34 50.0	-1.0
SRAK	Srakaew	23.77	279	P	P	13 34 48.0	-4.3
	comp=Z,3µmcomp=Z,162nm,0.8s						
GYA	Guiyang	23.86	312	⇓P	P	13 34 53.4	+0.2
GYA				pP	pP	13 35 05.4	+1.4
GYA				PcP	PcP	13 38 37.9	+2.6
GYA				S	S	13 39 08.4	+2.4
GYA				pmax	pmax		
	comp=Z,37nm,1.6s						
GYA				pmax	pmax		
	comp=Z,1µm,3.5s						
GYA				LR	LR		
	comp=Z,5µm,13.5s						
GYA				LR	LR		
	comp=Z,6µm,16.9s						
GYA				LR	LR		
	comp=Z,8µm,18.5s						
CHAI	Chaiyaphum	24.02	284	P	P	13 34 52.0	-2.6
	comp=Z,790nmcomp=Z,78nm,0.9s						
MYKOM	Kota Tinggi	24.14	249	P	P	13 34 54.6	-1.1
MYKOM	Kota Tinggi	24.14	249	P	P	13 34 55.0	-0.7
MTN	Manton Dam	24.44	168	P	P	13 34 57.6	-0.8
	baz=24,SNR=54						
MTN	Manton Dam	24.44	168	P	P	13 34 57.4	-1.0
MTN				IAmb	IAmb	13 35 23.8	
	comp=Z,161nm,1.1s						
JHS	Saijyo	24.44	14	P	P	13 34 58.8	+0.5
ENH	Enshi	24.50	323	P	P	13 34 58.0	-0.8
ENH				IAmb	IAmb	13 35 13.2	
	comp=Z,141nm,1.4s						
KDU	Kakadu	24.59	165	P	P	13 34 59.2	-0.4
	baz=25,SNR=93						
UGM	Wanagama	24.65	220	P	P	13 34 58.7	-1.7
UGM	Wanagama	24.65	220	P	P	13 34 59.6	-0.8
	comp=Z,4µmcomp=Z,6µmcomp=Z,284nm,1.6s						

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TJN   Taejon            25.02   2⇓eP     P      13 35 04.5 +1.0
JHJ   Hachijo jima 2    25.05  28 LR     LR     13 45 21.8
      comp=Z,5µm,18.6s,baz=212,slow=37
JHJ2  Mitsune           25.06  28 P      P      13 35 03.6 -0.3
JWT   Wachi             25.32  18 P      P      13 35 06.1 -0.1
JWT                               IAmb   IAmb   13 35 24.8
      comp=Z,63nm,1.1s
UTTA  Uttaradit         25.68 288 P      P      13 35 08.0 -1.6
      comp=Z,624nmcomp=Z,58nm,0.8s
PHIT  Phitsanulok       25.70 286 P      P      13 35 09.7 -0.2
      comp=Z,141nm,0.8s
NANT  Nan               25.76 290 P      P      13 35 09.3 -1.1
      comp=Z,22µmcomp=Z,601nm,0.7s
LEM   Lembang           25.82 227 P      P      13 35 13.2 +2.1
      comp=Z,56nm,0.6s,baz=143,slow=22,SNR=13
LEM   Lembang           25.82 227 P      P      13 35 12.9 +1.8
      comp=Z,2µmcomp=Z,2µmcomp=Z,69nm,1.4s
IPM   Ipoh              25.86 257 P      P      13 35 10.3 -1.1
IPM                               IAmb   IAmb   13 35 13.7
      comp=Z,73nm,0.7s
IPM   Ipoh              25.86 257 P      P      13 35 11.0 -0.4
INU   Inuyama           25.90  20 P      P      13 35 10.9 -0.5
INU                               IAmb   IAmb   13 35 16.3
      comp=Z,60nm,1.2s
KULM  Kulim             26.00 259 P      P      13 35 12.0 -0.7
KULM                              IAmb   IAmb   13 35 36.9
      comp=Z,117nm,1.0s
KULM  Kulim             26.00 259 P      P      13 35 13.0 +0.4
CBJI  Citeko            26.10 229 P      P      13 35 15.1 +1.6
      comp=Z,5µmcomp=Z,8µmcomp=Z,165nm,0.8s
KSAR  Wonju Array Be    26.11   3 P      P      13 35 12.5 -0.8
KSAR  Wonju Array Be    26.11   3 P      P      13 35 12.5 -0.8
KSRS  Korea Array       26.12   3 P      P      13 35 14.3 +0.9
      comp=Z,18nm,0.9s,baz=183,slow=9.7,SNR=26
KSRS                              LR     LR     13 47 22.1
      comp=Z,4µm,18.4s,baz=167,slow=41
TIA   Tai'an            26.17 343 P      P      13 35 14.0 +0.1
TIA                               S      S      13 39 44.4 +1.9
TIA                               pmax   pmax
      comp=Z,14nm,0.9s
TIA                               pmax   pmax
      comp=Z,430nm,8.4s
TIA                               LR     LR
      comp=Z,2µm,13.9s
TIA                               LR     LR
      comp=Z,3µm,11.6s
TIA                               LR     LR
      comp=Z,3µm,18.9s
KMI   Kunming           26.18 305⇑P      P      13 35 14.0 -0.4
KMI                               pP     pP     13 35 27.9 +1.9
KMI                               sP     sP     13 35 32.8 +1.4
KMI                               PP     PnPn   13 35 57.3 +2.3
KMI                               S      S      13 39 46.0 +2.7
KMI                               SS     SnSn   13 40 51.3 +5.6
KMI                               pmax   pmax
      comp=Z,27nm,0.7s
KMI                               pmax   pmax
      comp=Z,630nm,10.3s
KMI                               LR     LR
      comp=Z,3µm,12.7s
KMI                               LR     LR
      comp=Z,4µm,15.5s
KMI                               LR     LR
      comp=Z,4µm,17.4s
KMI   Kunming           26.18 305 P      P      13 35 13.3 -1.1
KMI                               pmax   pmax
      comp=Z,22nm,0.7s
KMI   Kunming           26.18 305 P      P      13 35 13.3 -1.1
CISI  Cisompet, Garu    26.19 225 P      P      13 35 13.2 -1.1
JGF   Kuroka            26.24  21 P      P      13 35 13.9 -0.7
DBJI  Dramaga           26.26 229 P      P      13 35 15.3 +0.3
      comp=Z,8µmcomp=Z,202nm,1.9s
SRIT  Nakonsritamara    26.37 267 P      P      13 35 14.5 -1.5
TRTT  Trang             26.40 265 P      P      13 35 18.4 +2.2
      comp=Z,2µmcomp=Z,80nm,1.3s
UTHA  Uthaitani         26.41 282 P      P      13 35 15.7 -0.6
      comp=Z,354nmcomp=Z,39nm,0.7s
SUKH  Sukhothai         26.49 287 P      P      13 35 16.0 -1.0
      comp=Z,52nm,0.7s
KLSI                    26.64 235 P      P      13 35 18.3 -0.1
LAMP  Lampang           26.69 289 P      P      13 35 18.1 -0.7
      comp=Z,499nmcomp=Z,47nm,0.6s
UMPA  Umpang Tak        27.04 284 P      P      13 35 21.6 -0.4
      comp=Z,36nm,0.9s
CM35  Chiang Mai Arr    27.16 289 P      P      13 35 21.0 -2.1
CM36  Chiang Mai Arr    27.19 289 P      P      13 35 22.0 -1.3
CM34  Chiang Mai Arr    27.20 289 P      P      13 35 22.0 -1.4
CM09  Chiang Mai Arr    27.27 288 P      P      13 35 23.0 -1.0
      comp=Z,280nmcomp=Z,34nm,0.9s
CM04  Chiang Mai Arr    27.27 288 P      P      13 35 23.4 -0.7
      comp=Z,241nmcomp=Z,30nm,1.1s
CM01  Chiang Mai Arr    27.29 288 P      P      13 35 23.6 -0.6
      comp=Z,264nmcomp=Z,29nm,0.9s
CM05  Chiang Mai Arr    27.30 288 P      P      13 35 23.0 -1.3
      comp=Z,157nmcomp=Z,17nm,1.1s
CM02  Chiang Mai Arr    27.31 288 P      P      13 35 23.7 -0.7
      comp=Z,227nmcomp=Z,26nm,0.8s
CM31  Chiang Mai Arr    27.32 288 P      P      13 35 23.8 -0.7
      comp=Z,8µmcomp=Z,851nm,0.8s
CM31  Chiang Mai Arr    27.32 288 P      P      13 35 22.5 -2.0
CMAR  Chiang Mai Arr    27.32 288 P      P      13 35 23.6 -0.9
      comp=Z,16nm,0.7s,baz=99,slow=7.5,SNR=124
CMAR                              LR     LR     13 45 11.1
      comp=Z,2µm,21.5s,baz=153,slow=34
CMAR  Chiang Mai Arr    27.32 288i P     P      13 35 23.7 -0.8
CMAR                              pmax   pmax
      comp=Z,16nm,0.7s
CMAR  Chiang Mai Arr    27.32 288 P      P      13 35 22.1 -2.4
CM15  Chiang Mai Arr    27.33 288 P      P      13 35 23.9 -0.8
      comp=Z,266nmcomp=Z,34nm,0.9s
CM13  Chiang Mai Arr    27.34 288 P      P      13 35 24.0 -0.7
      comp=Z,186nmcomp=Z,23nm,0.9s
CMMT  Chiang Mai        27.38 289 P      P      13 35 22.0 -3.1
      comp=Z,355nmcomp=Z,11nm,1.3s
CM33  Chiang Mai Arr    27.39 289 P      P      13 35 23.0 -2.1
CHTO  Chiang Mai        27.39 289 P      P      13 35 22.8 -2.3
CHTO                              pmax   pmax
      comp=Z,15nm,0.9s
CHTO  Chiang Mai        27.39 289 P      P      13 35 22.8 -2.3
MAJO  Matsushiro        27.39  21⇓eP     P      13 35 23.2 -1.7
MAJO                              pmax   pmax
      comp=Z,12nm,1.1s
MAT   Matsushiro        27.39  21 P      P      13 35 23.5 -1.4
MAT                               S      S      13 39 57.8 -3.9
MJAR  Matsushiro Arr    27.39  21 P      P      13 35 25.2 +0.3
      comp=Z,8.5nm,1.0s,baz=198,slow=8.3,SNR=8.2
MJAR                              LR     LR     13 46 03.5
      comp=Z,7µm,18.5s,baz=205,slow=36
MJAR  Matsushiro Arr    27.39  21 P      P      13 35 25.2 +0.3
MJAR                              pmax   pmax
      comp=Z,7.0nm,1.3s
MJAR  Matsushiro Arr    27.39  21 IAmb   IAmb   13 35 28.1
      comp=Z,7.4nm,1.2s
CM32  Chiang Mai Arr    27.44 289 P      P      13 35 24.0 -1.6
XAN   Xi'an             27.65 328 P      P      13 35 26.6 -0.7
XAN                               pP     pP     13 35 38.2 +0.4
XAN                               PP     PnPn   13 36 13.9 -0.9
XAN                               PcP    PcP    13 38 42.8 -0.9
XAN                               S      S      13 40 03.9 -2.1
XAN                               SS     SnSn   13 41 23.9 +2.6
XAN                               pmax   pmax
      comp=Z,55nm,0.8s
XAN                               pmax   pmax
      comp=Z,740nm,4.7s
XAN                               LR     LR
      comp=Z,5µm,14.5s
XAN                               LR     LR
      comp=Z,6µm,14.5s
XAN                               LR     LR
      comp=Z,9µm,15.1s
PKDT  Phuket            27.72 266 P      P      13 35 27.5 -0.6
      comp=Z,11µmcomp=Z,63nm,0.7s
KSI   Kapahiang         27.81 239 P      P      13 35 29.2 +0.2
KSI                               pmax   pmax
      comp=Z,74nm,0.8s
DL2   Dalian            27.83 352 P      P      13 35 29.1 +0.3
DL2                               pP     sP     13 35 42.0 -2.0
DL2                               sP     pwP    13 35 48.5 -1.1
DL2                               S      S      13 40 08.4 -0.1
DL2                               SS     SnSn   13 41 23.4 -2.1
DL2                               pmax   pmax
      comp=Z,23nm,0.7s
DL2                               pmax   pmax
      comp=Z,500nm,3.8s
DL2                               LR     LR
      comp=Z,4µm,15.5s
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DL2                               LR     LR
      comp=Z,2µm,14.6s
DL2                               LR     LR
      comp=Z,4µm,15.4s
MHMT  Maesarieng        28.21 287 P      P      13 35 30.9 -1.5
PSI   Prapat            28.36 255 P      P      13 35 33.2 -0.8
      comp=Z,8.9nm,0.7s,baz=0.6,slow=4.9,SNR=8.8
PSI   Prapat            28.36 255 P      P      13 35 31.5 -2.5
PSI                               pmax   pmax
      comp=Z,39nm,1.1s
RPSI  Rantau Prapat     28.40 255 P      P      13 35 33.2 -0.9
RPSI  Rantau Prapat     28.40 255 P      P      13 35 31.5 -2.6
RPSI                              IAmb   IAmb   13 35 59.2
      comp=Z,39nm,1.1s
CD2   Chengdu           28.57 317 P      P      13 35 34.9 -0.7
CD2                               sP     pwP    13 35 54.0 +0.6
CD2                               S      S      13 40 25.7 +5.2
CD2                               sS     sS     13 40 42.9 +4.2
CD2                               pmax   pmax
      comp=Z,60nm,0.7s
CD2                               pmax   pmax
      comp=Z,710nm,3.9s
CD2                               LR     LR
      comp=Z,8µm,15.1s
CD2                               LR     LR
      comp=Z,9µm,18.7s
CD2                               LR     LR
      comp=Z,14µm,18.0s
TIY   Taiyuan           29.11 337 eP     P      13 35 41.6 +1.3
TIY                               SS     SS     13 41 57.2  -37
TIY                               pmax   pmax
      comp=Z,350nm,5.4s
TIY                               LR     LR
      comp=Z,3µm,11.9s
TIY                               LR     LR
      comp=Z,790nm,9.6s
TIY                               LR     LR
      comp=Z,2µm,11.7s
FITZ  Fitzroy Crossi    29.18 181 P      P      13 35 40.1 -0.9
      baz=29,SNR=15
FITZ  Fitzroy Crossi    29.18 181 P      P      13 35 40.0 -1.0
      comp=Z,10nm,0.6s,baz=4.8,slow=7.8,SNR=27
FITZ                              S      S      13 40 33.5 +3.5
      comp=Z,7.6nm,1.1s,baz=44,slow=15,SNR=3.0
FITZ  Fitzroy Crossi    29.18 181 P      P      13 35 39.3 -1.7
FITZ                              IAmb   IAmb   13 35 58.2
      comp=Z,58nm,1.2s
PMG   Port Moresby      29.23 134⇑eP     P      13 35 40.5 -1.0
PMG                               pmax   pmax
      comp=Z,19nm,1.2s
JMM   Marumori          29.53  24 P      P      13 35 42.9 -1.0
JMM                               IAmb   IAmb   13 35 47.2
      comp=Z,63nm,1.2s
BJT   Baijiatuau        30.00 344 P      P      13 35 47.0 -1.0
BJT                               pmax   pmax
      comp=Z,14nm,1.0s
BJT   Baijiatuau        30.00 344 P      P      13 35 47.0 -1.0
BJI   Beijing           30.02 344 P      P      13 35 47.6 -0.6
BJI                               pP     pP     13 36 01.6 +3.2
BJI                               S      S      13 40 45.9 +3.1
BJI                               sS     sS     13 41 04.3 +3.2
BJI                               pmax   pmax
      comp=Z,14nm,1.9s
BJI                               pmax   pmax
      comp=Z,410nm,3.5s
BJI                               LR     LR
      comp=Z,3µm,17.2s
BJI                               LR     LR
      comp=Z,1µm,11.8s
BJI                               LR     LR
      comp=Z,2µm,17.0s
GSI   Gunungsitoli      30.13 253 P      P      13 35 46.9 -2.6
GSI                               IAmb   IAmb   13 36 07.1
      comp=Z,35nm,0.8s
COEN  Coen              30.16 146 P      P      13 35 48.4 -1.4
COEN                              IAmb   IAmb   13 36 03.7
      comp=Z,38nm,1.1s
SNY   Shenyang          30.54 356⇓P      P      13 35 53.7 +1.0
SNY                               S      S      13 40 52.8 +1.9
SNY                               pmax   pmax
      comp=Z,37nm,0.9s
SNY                               LR     LR
      comp=Z,3µm,18.2s
SNY                               LR     LR
      comp=Z,2µm,15.6s
SNY                               LR     LR
      comp=Z,4µm,18.5s
MSHR  Mys Shultsa       31.49   7⇑eP     P      13 36 01.0 -0.1
MSHR                              pmax   pmax
      comp=Z,15nm,1.0s
LZH   Lanzhou           31.96 324⇑P      P      13 36 06.0 +0.4
LZH                               pP     pP     13 36 17.6 +0.6
LZH                               S      S      13 41 15.4 +1.7
LZH                               sS     sS     13 41 35.0 +3.0
LZH                               pmax   pmax
      comp=Z,51nm,1.3s
LZH                               pmax   pmax
      comp=Z,850nm,6.8s
LZH                               LR     LR
      comp=Z,6µm,13.6s
LZH                               LR     LR
      comp=Z,6µm,13.0s
LZH                               LR     LR
      comp=Z,6µm,14.6s
WRAB  Tennant Creek     32.01 166⇓eP     P      13 36 05.2 -0.8
WRAB                              pmax   pmax
      comp=Z,40nm,1.3s
WRAB  Tennant Creek     32.01 166 P      P      13 36 04.2 -1.8
WRAB                              IAmb   IAmb   13 36 09.0
      comp=Z,23nm,0.8s
WRA   Warramunga Arr    32.02 166 P      P      13 36 04.9 -1.1
      comp=Z,16nm,0.7s,baz=349,slow=9.2,SNR=42
WRA                               PcP    PcP    13 38 56.6 +1.5
      comp=Z,8.5nm,1.1s,baz=357,slow=3.8,SNR=5.1
WRA                               S      S      13 41 11.1 -3.5
      comp=Z,4.5nm,1.2s,baz=346,slow=17,SNR=5.4
WRA   Warramunga Arr    32.02 166i P     P      13 36 04.6 -1.4
WRA                               pmax   pmax
      comp=Z,16nm,0.7s
WRA   Warramunga Arr    32.02 166 P      P      13 36 04.0 -2.0
WB2   Warramunga Arr    32.02 166 P      P      13 36 04.2 -1.8
WB2                               IAmb   IAmb   13 36 09.1
      comp=Z,28nm,0.8s
WR0   Warramunga Arr    32.09 165 P      P      13 36 04.5 -2.1
WR0                               IAmb   IAmb   13 36 07.3
      comp=Z,35nm,1.1s
HHC   Hu-ho-hao-te      32.19 339⇓iP     P      13 36 08.6 +1.2
HHC                               pP     pP     13 36 20.5 +2.2
HHC                               sP     pwP    13 36 25.9 -0.8
HHC                               S      S      13 41 17.3 +0.3
HHC                               sS     sS     13 41 36.2 +0.9
HHC                               SS     SnSn   13 43 13.1 +1.6
HHC                               pmax   pmax
      comp=Z,30nm,1.1s
HHC                               LR     LR
      comp=Z,2µm,12.6s
HHC                               LR     LR
      comp=Z,2µm,13.5s
HHC                               LR     LR
      comp=Z,2µm,13.8s
CN2   Changchun         32.42 359 eP     P      13 36 09.5 +0.1
CN2                               ePP    PnPn   13 37 19.2 +1.5
CN2                               eS     S      13 41 20.9 +0.4
CN2                               eSS    SnSn   13 43 19.6 +2.5
CN2                               pmax   pmax
      comp=Z,10.0nm,1.0s
CN2                               LR     LR
      comp=Z,3µm,15.0s
CN2                               LR     LR
      comp=Z,1µm,15.0s
CN2                               LR     LR
      comp=Z,3µm,16.0s
BTO   Baotou            32.55 337 eP     P      13 36 12.0 +1.4
LKP   Lekhapani         32.72 304 ex     P      13 36 06.0 -6.2
USA0B Ussuriysk Arra    33.19   8 P      P      13 36 16.4 +0.4
USA0B                             pmax   pmax
      comp=Z,16nm,0.9s
USA0B Ussuriysk Arra    33.19   8 P      P      13 36 16.4 +0.4
USRK  Ussuriysk Ar.     33.19   8 P      P      13 36 17.4 +1.4
      comp=Z,9.5nm,0.7s,baz=188,slow=8.1,SNR=21
USRK                              LR     LR     13 50 50.9
      comp=Z,2µm,18.5s,baz=164,slow=38
USRK  Ussuriysk Ar.     33.19   8 P      P      13 36 15.6 -0.4
USRK  Ussuriysk Ar.     33.19   8 P      P      13 36 15.6 -0.4
PSA00 Pilbara Seismi    33.23 191 P      P      13 36 14.9 -1.7
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PSA00 Pilbara Seismi    33.23 191 P      P      13 36 15.1 -1.6
PSA00                             IAmb   IAmb   13 36 18.0
      comp=Z,36nm,0.9s
MDJ   Mudanjiang        33.36   4 P      P      13 36 19.4 +1.9
MDJ                               pP     sP     13 36 32.6 -0.1
MDJ                               S      S      13 41 37.5 +2.6
MDJ                               sS     sS     13 41 59.1 +5.9
MDJ                               pmax   pmax
      comp=Z,18nm,1.3s
MDJ                               pmax   pmax
      comp=Z,470nm,3.7s
MDJ                               LR     LR
      comp=Z,2µm,15.1s
MDJ                               LR     LR
      comp=Z,2µm,17.2s
MDJ                               LR     LR
      comp=Z,2µm,15.1s
MDJ   Mudanjiang        33.36   4 P      P      13 36 18.0 +0.5
MDJ                               IAmb   IAmb   13 36 21.9
      comp=Z,36nm,1.1s
KOHI  KOHIMA            33.58 300 ex     P      13 36 16.8 -3.1
SAIH  SAIHA             33.65 294 eP     P      13 36 18.8 -1.7
SAIH                              IAmb   IAmb   13 36 23.0
      comp=Z,132nm,0.8s
MTSU  Mount Surprise    34.23 148 P      P      13 36 25.0 -0.4
      baz=34,SNR=4.5
QIS   Mount Isa         34.24 157 P      P      13 36 24.6 -0.9
      baz=34,SNR=145
ZIRO  ZIRO              34.43 303 eP     P      13 36 25.1 -2.2
ZIRO                              IAmb   IAmb   13 36 28.0
      comp=Z,25nm,0.8s
TEY   Ternei            34.81  13⇓eP     P      13 36 31.2 +1.2
TEY                               pmax   pmax
      comp=Z,20nm,1.2s
TEZP  TEZPUR            34.99 301 eP     P      13 36 29.6 -2.3
BELO  BELONIA           35.20 294 eP     P      13 36 32.5 -1.3
SHL   Shillong          35.44 298 P      P      13 36 34.1 -1.9
SHL                               pmax   pmax
      comp=Z,83nm,1.0s
SHL   Shillong          35.44 298 eP     P      13 36 33.5 -2.5
SHL                               IAmb   IAmb   13 36 36.4
      comp=Z,45nm,0.4s
SHL   Shillong          35.44 298 P      P      13 36 34.1 -1.9
AS31  Alice Springs     35.52 168 P      P      13 36 35.1 -1.4
ASAR  Alice Springs     35.52 168 P      P      13 36 35.9 -0.5
      comp=Z,12nm,0.7s,baz=351,slow=7.1,SNR=84
ASAR                              PcP    PcP    13 39 06.0 +1.0
      comp=Z,8.1nm,0.9s,baz=356,slow=2.7,SNR=6.0
ASAR                              S      S      13 42 10.1 +1.4
      comp=Z,2.0nm,1.0s,baz=355,slow=20,SNR=3.8
ASAR  Alice Springs     35.52 168 P      P      13 36 34.9 -1.5
ASAR  Alice Springs     35.52 168 P      P      13 36 34.9 -1.5
AGT   Agartala          35.53 295 eP     P      13 36 36.7 +0.1
ASAJ  Asahikawa         35.65  20 P      P      13 36 39.0 +1.7
      comp=Z,11nm,0.8s,baz=277,slow=6.3,SNR=7.1
ASAJ                              LR     LR     13 51 57.0
      comp=Z,4µm,18.6s,baz=216,slow=37
ASAJ  Asahikawa         35.65  20 P      P      13 36 39.0 +1.7
ASAJ                              pmax   pmax
      comp=Z,77nm,1.5s
JKA   Kamikawa-asahi    35.65  20 P      P      13 36 39.0 +1.7
JKA   Kamikawa-asahi    35.65  20 IAmb   IAmb   13 37 04.5
      comp=Z,77nm,1.5s
GUWA  GUWAHATI          35.80 299 eP     P      13 36 36.9 -1.9
GTA   Gaotai            36.56 325⇑P      P      13 36 45.9 +0.6
GTA                               pP     pP     13 36 57.6 +1.4
GTA                               sP     sP     13 37 02.6 +1.5
GTA                               PcP    PcP    13 39 09.6 +1.6
GTA                               S      S      13 42 28.6 +4.0
GTA                               pmax   pmax
      comp=Z,43nm,1.2s
GTA                               pmax   pmax
      comp=Z,940nm,5.4s
GTA                               LR     LR
      comp=Z,950nm,15.3s
GTA                               LR     LR
      comp=Z,2µm,14.9s
GTA                               LR     LR
      comp=Z,3µm,13.5s
YUK   Yuzh-Kuril'sk     36.78  24c iP    P      13 36 47.4 +0.4
YUK                               e             13 38 13.1
YUK                               eS     S      13 42 28.2 +0.6
YUK                               eSS    SnSn   13 45 01.5 -1.1
YUK                               eSSS   SSS    13 45 36.8
YUK                               pmax   pmax
      comp=Z,484nm,1.4s
YUK                               MLR    MLR
      comp=Z,2µm,19.0s
YUK                               MLR    MLR
      comp=N,2µm,15.0s
YUK                               MLR    MLR
      comp=E,2µm,16.0s
LSA   Lhasa             37.44 305 P      P      13 36 53.8 +0.5
LSA                               pP     pP     13 37 03.6 -1.0
LSA                               S      S      13 42 40.1 +1.2
LSA                               pmax   pmax
      comp=E,46nm,0.6s
LSA                               LR     LR
      comp=E,5µm,16.4s
LSA                               LR     LR
      comp=E,4µm,17.1s
LSA                               LR     LR
      comp=E,6µm,19.9s
LSA   Lhasa             37.44 305 P      P      13 36 52.8 -0.6
LSA                               pmax   pmax
      comp=Z,18nm,0.7s
LSA   Lhasa             37.44 305 P      P      13 36 52.8 -0.6
KLR   Kul'dur           38.12   6 P      P      13 36 58.9 +0.5
      comp=Z,7.5nm,0.6s,baz=196,slow=6.5,SNR=32
KLR   Kul'dur           38.12   6⇓eP     P      13 36 58.8 +0.5
KLR                               pmax   pmax
      comp=Z,29nm,1.6s
YSS   Yuzh-Sakhalins    38.22  18 eP     P      13 37 00.9 +1.8
YSS                               e*SP   pwP    13 37 20.5 -0.1
YSS                               e             13 38 31.0
YSS                               ePPP   PPP    13 38 55.2
YSS                               eS     S      13 42 51.2 +2.0
YSS                               eSSS   SSS    13 46 03.0
YSS                               pmax   pmax
      comp=Z,40nm,1.0s
YSS                               MLR    MLR
      comp=Z,2µm,16.0s
HIA   Hailar            38.27 353 P      P      13 37 00.1 +0.6
HIA                               pmax   pmax
      comp=Z,19nm,1.0s
HIA   Hailar            38.27 353 P      P      13 37 00.1 +0.6
MEEK  Meekatharra       38.40 191 P      P      13 36 59.7 -1.2
      baz=38,SNR=32
GTK   Tadong            38.77 300 eP     P      13 37 03.1 -1.1
GTK                               IAmb   IAmb   13 37 05.6
      comp=Z,84nm,1.5s
HNR   Honiara           39.32 120 LR     LR     13 52 21.8
      comp=Z,3µm,20.6s,baz=294,slow=35
ULN   Ulaanbaatar       39.89 340c iP    P      13 37 13.9 +0.7
ULN                               pmax   pmax
      comp=Z,95nm,2.5s
ULN   Ulaanbaatar       39.89 340 P      P      13 37 13.3  0.0
H11N1 WAKE ISLAND Hy    39.98  73 T      T      14 20 36.4
      baz=266
H11N2 WAKE ISLAND Hy    39.98  73 T      T      14 20 40.0
      baz=266
H11N3 WAKE ISLAND Hy    39.99  73 T      T      14 20 35.7
      baz=266
SONM  Songino Array     40.09 339 P      P      13 37 15.4 +0.5
      comp=Z,20nm,1.0s,baz=155,slow=8.3,SNR=65
SONM                              S      S      13 43 23.1 +5.4
      comp=Z,0.7nm,0.9s,baz=116,slow=6.6,SNR=2.2
SONM                              LR     LR     13 55 42.7
      comp=Z,2µm,18.3s,baz=145,slow=39
SONM  Songino Array     40.09 339 P      P      13 37 15.0 +0.1
SONM                              S      S      13 43 23.1 +5.4
SONM                              pmax   pmax
      comp=Z,16nm,1.0s
SONM  Songino Array     40.09 339 P      P      13 37 15.0 +0.1
GRNR  Gornyy            40.27  10⇑iP     P      13 37 16.9 +0.7
GRNR                              eS     S      13 43 24.5 +4.5
GRNR                              pmax   pmax
      comp=N,5.0nm,1.2s
GRNR                              pmax   pmax
      comp=Z,5.0nm,1.0s
GRNR                              smax   smax
      comp=N,4.0nm,0.9s
GRNR                              MLR    MLR
      comp=E,690nm,13.0s
GRNR                              MLR    MLR
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	comp=N,1µm,16.0s						
BOK	**Bokaro**	40.31	294	eP	P	13 37 15.6	-1.3
MORW	**Morawa**	41.29	194	P	P	13 37 24.2	-0.6
	baz=41,SNR=5.4						
MORW	**Morawa**	41.29	194	P	P	13 37 22.9	-1.9
MORW				IAmb	IAmb	13 37 26.3	
	comp=Z,90nm,1.3s						
TYV	**Tymovskoe**	41.71	16	eP	P	13 37 29.4	+1.4
TYV				eS	S	13 43 46.7	+5.2
TYV				pmax	pmax		
	comp=Z,600nm,3.4s						
TYV				pmax	pmax		
	comp=Z,23nm,1.5s						
TYV				smax	smax		
	comp=E,9.0nm,1.4s						
TYV				smax	smax		
	comp=E,1µm,3.9s						
FORT	**Forrest**	41.84	178	P	P	13 37 29.1	-0.2
	baz=42,SNR=24						
FORT	**Forrest**	41.84	178	P	P	13 37 28.2	-1.0
FORT				IAmb	IAmb	13 37 44.1	
	comp=Z,58nm,0.7s						
ZEA	**Zeya**	42.37	1	eP	P	13 37 31.8	-1.6
ZEA				e		13 39 31.6	
ZEA				eS	S	13 43 51.4	+0.3
ZEA				e		13 47 44.9	
ZEA				pmax	pmax		
	comp=Z,300nm,4.8s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ZEA				smax	smax		
	comp=E,500nm,9.7s						
ZEA				MLR	MLR		
	comp=N,2µm,16.0s						
KMBL	**Kambalda**	42.59	186	P	P	13 37 35.7	+0.2
	baz=43,SNR=23						
BLDU	**Ballidu**	42.63	192	P	P	13 37 34.5	-1.3
	baz=43,SNR=14						
ZAK	**Zakamensk**	43.34	339	eP	P	13 37 41.6	+0.2
ZAK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
NKL	**Nikolayevsk**	43.35	13	eP	P	13 37 39.2	-2.1
NKL				eS	S	13 43 56.9	-8.6
NKL				pmax	pmax		
	comp=E,73nm,0.8s						
NKL				pmax	pmax		
	comp=N,8.0nm,0.9s						
NKL				pmax	pmax		
	comp=Z,29nm,1.2s						
NKL				MLR	MLR		
	comp=E,901nm,14.0s						
NKL				MLR	MLR		
	comp=N,331nm,20.0s						
NKL				MLR	MLR		
	comp=Z,1µm,16.0s						
KLBR	**Kellerberrin**	43.38	191	P	P	13 37 41.1	-0.7
	baz=44,SNR=27						
MUN	**Mundaring**	44.06	192	P	P	13 37 46.9	-0.3
	baz=44,SNR=7.2						
TLY	**Talaya**	44.30	340	LR	LR	13 57 40.3	
	comp=Z,1µm,18.2s,baz=144,slow=38						
TLY	**Talaya**	44.30	340	eP	P	13 37 49.4	+0.4
TLY				eS	S	13 44 29.1	+10
TLY				pmax	pmax		
	comp=Z,82nm,1.1s						
TLY				MLR	MLR		
	comp=Z,4µm,16.0s						
TLY	**Talaya**	44.30	340	P	P	13 37 48.7	-0.3
NWAO	**Narrogin (SRO)**	44.78	191	P	P	13 37 52.7	-0.3
	baz=45,SNR=21						
NWAO	**Narrogin (SRO)**	44.78	191	LR	LR	13 58 33.4	
	comp=Z,662nm,20.7s,baz=16,slow=39						
NWAO	**Narrogin (SRO)**	44.78	191	P	P	13 37 52.2	-0.8
NWAO				pmax	pmax		
	comp=Z,95nm,1.0s						
NWAO	**Narrogin (SRO)**	44.78	191	P	P	13 37 52.2	-0.8
NWAO	**Narrogin (SRO)**	44.78	191	P	P	13 37 52.2	-0.8
NWAO				IAmb	IAmb	13 38 08.2	
	comp=Z,75nm,0.9s						
BBOO	**Buckleboo**	44.82	168	P	P	13 37 53.3	0.0
	baz=45,SNR=44						
BBOO	**Buckleboo**	44.82	168	P	P	13 37 52.8	-0.5
BBOO				IAmb	IAmb	13 37 55.6	
	comp=Z,52nm,0.8s						
MOY	**Mondy**	45.22	338	eP	P	13 37 56.5	+0.1
MOY				pmax	pmax		
	comp=Z,188nm,3.4s						
STKA	**Stephens Creek**	45.35	162	P	P	13 37 57.4	-0.1
	baz=45,SNR=76						
STKA	**Stephens Creek**	45.35	162	P	P	13 37 57.5	0.0
	comp=Z,59nm,0.9s,baz=337,slow=8.1,SNR=90						
STKA	**Stephens Creek**	45.35	162c	eP	P	13 37 57.1	-0.4
STKA	**Stephens Creek**	45.35	162	P	P	13 37 56.9	-0.6
HTT	**Hallett**	46.06	165	P	P	13 38 03.6	+0.4
	baz=46,SNR=21						
WMQ	**Urumqi**	46.43	321	eP	P	13 38 06.8	+0.7
WMQ				pP	sP	13 38 19.8	-2.2
WMQ				PcP	PcP	13 39 42.5	+2.3
WMQ				S	S	13 44 51.1	+0.5
WMQ				sS	sS	13 45 07.6	-1.9
WMQ				pmax	pmax		
	comp=Z,62nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,1µm,4.5s						
WMQ				LR	LR		
	comp=Z,8µm,12.9s						
WMQ				LR	LR		
	comp=Z,3µm,18.7s						
WMQ				LR	LR		
	comp=Z,3µm,17.3s						
WMQ	**Urumqi**	46.43	321	P	P	13 38 06.4	+0.3
WMQ				pmax	pmax		
	comp=Z,74nm,1.2s						
WMQ	**Urumqi**	46.43	321	P	P	13 38 06.4	+0.3
CMSA	**Cobar Meteorol**	46.46	157	P	P	13 38 06.8	+0.5
	baz=46,SNR=11						
HYB	**Hyderabad**	46.52	283	i P	P	13 38 05.0	-2.1
BOD	**Bodaibo**	47.39	351	eP	P	13 38 13.7	+0.5
BOD				pmax	pmax		
	comp=Z,42nm,1.5s						
BHPL	**Bhopal**	47.91	291	eP	P	13 38 14.8	-3.1
BHPL				IAmb	IAmb	13 38 17.3	
	comp=Z,26nm,1.3s						
ARMA	**Armidale**	48.10	150	P	P	13 38 19.1	-0.1
	baz=48,SNR=5.1						
SANVU	**Saraoutou**	48.47	122	P	P	13 38 23.9	+1.8
DDI	**Dehra Dun**	48.47	301	eP	P	13 38 21.8	-0.3
DDI				IAmb	IAmb	13 38 23.5	
	comp=Z,87nm,0.8s						
PEA0B	**Petropavlovsk-**	48.75	25	P	P	13 38 24.6	+0.8
PEA0B				pmax	pmax		
	comp=Z,75nm,1.4s						
PEA0B	**Petropavlovsk-**	48.75	25	P	P	13 38 24.6	+0.8
PETK	**Petropavlovsk-**	48.75	25	P	P	13 38 25.6	+1.8
	comp=Z,6.4nm,0.8s,baz=196,slow=1.7,SNR=5.8						
PETK				LR	LR	14 01 09.4	
	comp=Z,3µm,18.0s,baz=219,slow=39						
PETK	**Petropavlovsk-**	48.75	25	P	P	13 38 23.3	-0.5
PETK	**Petropavlovsk-**	48.75	25	P	P	13 38 23.3	-0.5
PET	**Petropavlovsk**	49.08	25	eP	P	13 38 35.0	+8.7
PET				eS	S	13 45 38.8	+11
PET				MLR	MLR		
	comp=Z,3µm,17.0s						
SMLA	**Simla**	49.39	301	eP	P	13 38 26.6	-2.4
DGZ	**Jazzator, Alta**	49.91	328c	eP	P	13 38 34.2	+1.2
DGZ				pmax	pmax		
	comp=Z,19nm,1.1s						
ARPS	**Mount Arapiles**	49.98	164	P	P	13 38 33.7	+0.3
	baz=50,SNR=13						
ZSN	**Zaisan**	50.05	324	eP	P	13 38 32.8	-1.0
	baz=324						
ZSN				eS	S	13 45 41.9	+0.4
	baz=324						
ZSN	**Zaisan**	50.05	324	eP	P	13 38 32.8	-1.0
ZSN				eS	S	13 45 41.8	+0.3
DHRM	**DHARAMSHALA**	50.36	303	eP	P	13 38 34.3	-2.4
DHRM				IAmb	IAmb	13 38 37.4	
	comp=Z,44nm,0.5s						
YAK	**Yakutsk**	50.74	2	P	P	13 38 40.2	+1.5
	comp=Z,16nm,0.7s,baz=34,slow=1.5,SNR=17						
YAK	**Yakutsk**	50.74	2	eP	P	13 38 38.4	-0.3
YAK				e*PP	pP	13 38 49.7	+0.1
YAK				eS	S	13 45 51.3	+0.8
YAK				e*SS	sS	13 46 13.5	+3.8
YAK				pmax	pmax		
	comp=Z,54nm,0.9s						
YAK				pmax	pmax		
	comp=N,22nm,1.0s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.0s						
YAK				smax	smax		
	comp=N,171nm,3.8s						
YAK				smax	smax		
	comp=E,110nm,3.7s						
YAK				MLR	MLR		
	comp=Z,2µm,16.0s						
YAK				MLR	MLR		
	comp=N,1µm,18.0s						
YAK	**Yakutsk**	50.74	2	P	P	13 38 37.6	-1.1
YAK				IAmb	IAmb	13 38 41.4	
	comp=Z,66nm,1.0s						
MK31	**Makanchi Array**	51.23	322c	iP	P	13 38 43.3	+0.5
MK31				pmax	pmax		
	comp=Z,86nm,0.7s						
MK31	**Makanchi Array**	51.23	322	P	P	13 38 42.8	+0.1
MKAR	**Makanchi Array**	51.23	322	P	P	13 38 43.3	+0.5
	comp=Z,84nm,0.7s,baz=119,slow=7.8,SNR=454						
MKAR				LR	LR	14 02 09.2	
	comp=Z,1µm,19.7s,baz=117,slow=38						
MKAR	**Makanchi Array**	51.23	322	P	P	13 38 42.8	0.0
SHLS	**Shalkode**	51.40	317	eP	P	13 38 40.9	-3.4
	comp=Z,45nm,1.2s,baz=317						
SHLS				eS	S	13 45 56.3	-4.4
	baz=317						
SHLS	**Shalkode**	51.40	317	eP	P	13 38 40.8	-3.4
SHLS				eS	S	13 45 56.2	-4.4
SHLS				pmax	pmax		
	comp=Z,45nm,1.2s						
MAKZ	**Makanchi**	51.42	322	P	P	13 38 43.5	-0.7
MAKZ				pmax	pmax		
	comp=Z,51nm,0.8s						
MAKZ	**Makanchi**	51.42	322	P	P	13 38 43.5	-0.7
MAKZ				IAmb	IAmb	13 38 47.0	
	comp=Z,51nm,0.8s						
PDGK	**Podgornoye**	51.45	317	i P	P	13 38 44.4	-0.2
PDGK				pmax	pmax		
	comp=Z,59nm,1.1s						
DZM	**Mont Dzumac**	51.50	130	P	P	13 38 45.9	+0.7
	comp=Z,30nm,1.0s,baz=299,slow=10,SNR=5.9						
DZM	**Mont Dzumac**	51.50	130	eP	P	13 38 46.2	+1.0
	comp=Z,77nm,1.1s						
DZM				eS	S	13 45 58.4	-3.9
	comp=Z,2µm,24.9s						
DZM				eLQ	LQ	13 51 27.6	
	comp=Z,2µm,36.9s						
DZM				eLR	LR	13 53 22.1	
	comp=Z,1µm,28.1s						
DZM	**Mont Dzumac**	51.50	130	P	P	13 38 44.5	-0.7
DZM				IAmb	IAmb	13 38 47.6	
	comp=Z,34nm,1.0s						
DZM	**Mont Dzumac**	51.50	130	P	P	13 38 46.5	+1.3
MA2	**Magadan**	51.59	16⇓	eP	P	13 38 46.9	+1.7
MA2				pmax	pmax		
	comp=Z,18nm,1.3s						
UZB	**Uzynbulak**	51.69	317	eP	P	13 38 45.2	-1.3
	comp=Z,12nm,0.8s,baz=317						
UZB	**Uzynbulak**	51.69	317	eP	P	13 38 45.1	-1.4
UZB				pmax	pmax		
	comp=Z,12nm,0.8s						
TOO	**Toolangi**	51.83	161	P	P	13 38 46.4	-0.9
TOO				pmax	pmax		
	comp=Z,69nm,1.3s						
TOO	**Toolangi**	51.83	161	P	P	13 38 46.4	-0.9
TOO				IAmb	IAmb	13 38 50.2	
	comp=Z,69nm,1.2s						
KPKS	**Kokpek**	52.05	317	eP	P	13 38 47.8	-1.3
	baz=317						
KPKS				eS	S	13 46 09.4	0.0
	baz=317						
KPKS	**Kokpek**	52.05	317	eP	P	13 38 47.7	-1.3
KPKS				eS	S	13 46 09.4	0.0
SATY	**Saty**	52.07	316	eP	P	13 38 47.9	-1.4
	comp=Z,40nm,1.2s,baz=316						
SATY	**Saty**	52.07	316	eP	P	13 38 47.9	-1.4
SATY				pmax	pmax		
	comp=Z,40nm,1.2s						
KSH	**Kashi**	52.55	311	P	P	13 38 54.4	+1.5
KSH				pP	pP	13 39 06.8	+1.8
KSH				S	S	13 46 14.5	-2.0
KSH				ScS	ScS	13 48 39.4	+0.6
KSH				pmax	pmax		
	comp=Z,38nm,0.9s						
KSH				pmax	pmax		
	comp=Z,1µm,3.6s						
KSH				LR	LR		
	comp=Z,2µm,7.8s						
KSH				LR	LR		
	comp=Z,5µm,15.5s						
KSH				LR	LR		
	comp=Z,4µm,15.4s						
TDK	**Taldyqorghan**	52.85	319	eP	P	13 38 54.5	-0.4
	comp=Z,59nm,0.9s,baz=319						
TDK				eS	S	13 46 21.0	+0.8
	baz=319						
TDK	**Taldyqorghan**	52.85	319	eP	P	13 38 54.4	-0.4
TDK				eS	S	13 46 20.9	+0.8
TDK				pmax	pmax		
	comp=Z,59nm,0.9s						
MDOK	**Medeo**	53.03	316	eP	P	13 38 55.7	-0.8
	baz=316						
MDOK				LR	LR	14 01 42.9	
	comp=Z,2µm,16.3s,baz=316						
MDOK	**Medeo**	53.03	316	eP	P	13 38 55.6	-0.8
MDOK				MLR	MLR		
	comp=Z,2µm,16.0s						
TNSS	**Tian-Shan**	53.06	316	eP	P	13 38 56.1	-0.8
	baz=316						
TNSS	**Tian-Shan**	53.06	316	eP	P	13 38 56.1	-0.8
AAA	**Alma-Ata**	53.14	316	eP	P	13 38 56.5	-0.6
	baz=316						
AAA				LR	LR	14 01 56.4	
	comp=Z,1µm,15.1s,baz=316						
AAA	**Alma-Ata**	53.14	316	eP	P	13 38 56.5	-0.6
AAA				MLR	MLR		
	comp=Z,1µm,15.0s						
ULHL	**Ulahol**	53.26	315	P	P	13 38 58.5	+0.4
	SNR=30						
CHKK	**Chushkaly**	53.33	317	eP	P	13 38 57.7	-0.7
	baz=317						
CHKK	**Chushkaly**	53.33	317	eP	P	13 38 57.7	-0.7
ZAA0	**Zalesovo Array**	53.75	331	P	P	13 39 00.4	-0.8
ZAA0				IAmb	IAmb	13 39 13.6	
	comp=Z,42nm,1.4s						
ZALV	**Zalesovo Beam**	53.75	331	P	P	13 39 01.3	+0.1
	comp=Z,14nm,0.8s,baz=116,slow=6.8,SNR=40						
ZALV				LR	LR	14 02 57.0	
	comp=Z,1µm,18.6s,baz=126,slow=37						
ZALV	**Zalesovo Beam**	53.75	331	i P	P	13 39 01.7	+0.5
ZALV				pmax	pmax		
	comp=Z,14nm,0.8s						
ZALV	**Zalesovo Beam**	53.75	331	P	P	13 39 00.3	-0.9
KUU	**Kurty**	53.78	317	eP	P	13 39 00.9	-0.8
	comp=Z,44nm,0.8s,baz=317						
KUU	**Kurty**	53.78	317	eP	P	13 39 00.9	-0.8
KUU				pmax	pmax		
	comp=Z,44nm,0.8s						
TKM2	**Tokmak 2**	53.94	315	P	P	13 39 04.2	+1.1
	SNR=19						
TKM2	**Tokmak 2**	53.94	315	i P	P	13 39 03.1	0.0
TKM2				pmax	pmax		
	comp=Z,44nm,1.3s						
SEM	**Semipalatinsk**	54.18	325	eP	P	13 39 03.2	-1.5
	comp=Z,9.6nm,0.8s,baz=325						
SEM				LR	LR	14 03 12.1	
	comp=Z,483nm,15.1s,baz=325						
SEM	**Semipalatinsk**	54.18	325	eP	P	13 39 03.2	-1.5
SEM				pmax	pmax		
	comp=Z,10.0nm,0.8s						
SEM				MLR	MLR		
	comp=Z,483nm,15.0s						
KBK	**Karagaybulak**	54.30	315	P	P	13 39 06.5	+0.8
	SNR=26						
UCH	**Uchtor**	54.46	314	P	P	13 39 08.2	+0.9
	SNR=64						
CHMS	**Chumysh**	54.55	315	P	P	13 39 07.9	+0.6
	SNR=14						
AAK	**Ala-Archa**	54.61	315	LR	LR	14 05 18.7	
	comp=Z,2µm,18.0s,baz=86,slow=39						
AAK	**Ala-Archa**	54.61	315	P	P	13 39 08.8	+0.8
	SNR=12						
AAK	**Ala-Archa**	54.61	315c	iP	P	13 39 08.2	+0.2
AAK				pmax	pmax		
	comp=Z,156nm,2.5s						
AAK	**Ala-Archa**	54.61	315	P	P	13 39 07.5	-0.4
SGDS	**Sogindy**	54.79	316	eP	P	13 39 08.2	-1.0
	baz=316						
SGDS	**Sogindy**	54.79	316	eP	P	13 39 08.1	-1.0
SEY	**Seymchan**	54.87	14	P	P	13 39 10.8	+1.6
	comp=Z,7.5nm,0.8s,baz=221,slow=6.8,SNR=17						
SEY	**Seymchan**	54.87	14⇓	eP	P	13 39 11.3	+2.1
AML	**Almayashu**	55.01	314	P	P	13 39 12.3	+1.2
	SNR=36						
EKS2	**Erkin-Say**	55.12	315	P	P	13 39 12.2	+0.6
	SNR=34						
KURK	**Kurchatov**	55.24	325c	iP	P	13 39 12.5	+0.4
KURK				pmax	pmax		
	comp=Z,217nm,1.0s						
KURK	**Kurchatov**	55.24	325	P	P	13 39 12.1	0.0
BTLS	**Baital**	55.73	317	eP	P	13 39 14.7	-1.1
	comp=Z,18nm,0.8s,baz=317						
BTLS	**Baital**	55.73	317	eP	P	13 39 14.6	-1.1
BTLS				pmax	pmax		
	comp=Z,18nm,0.8s						
KBL	**Kabul**	56.76	304	P	P	13 39 22.3	-1.2
KBL				pmax	pmax		
	comp=Z,37nm,0.7s						
KBL	**Kabul**	56.76	304	P	P	13 39 22.3	-1.2
KBL				IAmb	IAmb	13 39 24.7	
	comp=Z,37nm,0.7s						
DZA	**Taraz**	56.91	314	eP	P	13 39 23.4	-0.9
	comp=Z,19nm,0.9s,baz=314						
DZA	**Taraz**	56.91	314	eP	P	13 39 23.3	-0.9
DZA				pmax	pmax		
	comp=Z,19nm,0.9s						
KK31	**Karatay Array**	57.54	314	P	P	13 39 27.9	-0.8
KK31				pmax	pmax		
	comp=Z,43nm,1.0s						
KK31	**Karatay Array**	57.54	314	P	P	13 39 27.9	-0.8
KK31				IAmb	IAmb	13 39 30.8	
	comp=Z,43nm,1.0s						
KKAR	**Karatay Array**	57.54	314	P	P	13 39 28.1	-0.6
KKAR				pmax	pmax		
	comp=Z,43nm,1.0s						
KKAR	**Karatay Array**	57.54	314	P	P	13 39 28.3	-0.4
KKAR	**Karatay Array**	57.54	314	P	P	13 39 28.1	-0.6
KKAR				IAmb	IAmb	13 39 30.8	
	comp=Z,43nm,1.0s						
IUG	**Iuzhnay**	57.63	313	eP	P	13 39 27.9	-1.5
	comp=Z,26nm,1.2s,baz=313						
IUG	**Iuzhnay**	57.63	313	eP	P	13 39 27.9	-1.5
IUG				pmax	pmax		
	comp=Z,26nm,1.2s						
TAS	**Tashkent**	57.95	312	P	P	13 39 32.4	+0.8
TAS				pmax	pmax		
	comp=Z,40nm,0.5s						
BRLS	**Borolday**	58.00	314	eP	P	13 39 31.8	-0.1
	comp=Z,18nm,1.0s,baz=314						
BRLS	**Borolday**	58.00	314	eP	P	13 39 31.8	-0.1
BRLS				pmax	pmax		
	comp=Z,18nm,1.0s						
BRZS	**Berezniki**	58.38	322	eP	P	13 39 33.4	-1.0
	comp=Z,21nm,1.7s,baz=322						
BRZS	**Berezniki**	58.38	322	eP	P	13 39 33.4	-1.0
BRZS				pmax	pmax		
	comp=Z,21nm,1.7s						
MSVF	**Nonsavu**	58.71	119	P	P	13 39 38.9	+1.6
	comp=Z,20nm,1.0s,baz=242,slow=6.9,SNR=9.9						
MSVF	**Nonsavu**	58.71	119⇑	eP	P	13 39 39.6	+2.3
MSVF				pmax	pmax		
	comp=Z,32nm,1.1s						
TIXI	**Tiksi**	60.36	1⇓	eP	P	13 39 47.6	-0.1
TIXI				pmax	pmax		
	comp=Z,92nm,1.0s						
TIXI	**Tiksi**	60.36	1	P	P	13 39 46.9	-0.8
TIXI				IAmb	IAmb	13 39 49.4	
	comp=Z,24nm,1.1s						
BVAR	**Borovoye Array**	60.84	325	P	P	13 39 51.9	+0.6
	comp=Z,23nm,0.8s,baz=46,slow=19,SNR=112						
BRVK	**Borovoye**	60.91	325c	iP	P	13 39 52.0	+0.2
BRVK				pmax	pmax		
	comp=Z,82nm,0.8s						
BRVK	**Borovoye**	60.91	325	P	P	13 39 51.5	-0.2
HRA	**Herat**	62.31	303	P	P	13 40 00.2	-1.6
HRA				IAmb	IAmb	13 40 03.7	
	comp=Z,11nm,0.8s						
NRIK	**Noril'sk**	63.05	346	P	P	13 40 06.7	+0.9
	comp=Z,14nm,0.6s,baz=132,slow=7.7,SNR=22						
NRIK				LR	LR	14 09 58.3	
	comp=Z,2µm,19.1s,baz=140,slow=38						
NRIK	**Noril'sk**	63.05	346c	eP	P	13 40 05.9	+0.1
NRIK				pmax	pmax		
	comp=Z,47nm,1.3s						
NRIK	**Noril'sk**	63.05	346	P	P	13 40 05.3	-0.5
WSAR	**Wadi Sarin**	65.18	290	LR	LR	14 12 24.2	
	comp=Z,284nm,18.9s,baz=104,slow=40						
GEYT	**Alibeck**	65.93	307	P	P	13 40 25.6	+0.3
	comp=Z,11nm,0.9s,baz=212,slow=5.3,SNR=16						
GEYT				LR	LR	14 12 50.7	
	comp=Z,980nm,18.1s,baz=55,slow=39						
GEYT	**Alibeck**	65.93	307	P	P	13 40 24.4	-1.0
GYA0B	**ALIBECK ARRAY**	65.93	307	P	P	13 40 24.2	-1.1
GYA0B				IAmb	IAmb	13 40 39.1	
	comp=Z,25nm,0.9s						
AB31	**Akbulak array**	66.11	319⇑	eP	P	13 40 26.1	-0.1
AB31				pmax	pmax		
	comp=Z,33nm,0.8s						
ABKAR	**Akbulak array**	66.11	319	P	P	13 40 25.1	-1.1
SVE	**Sverdlovsk**	67.37	327⇓	eP	P	13 40 34.1	+0.1
SVE				eS	S	13 49 28.3	+2.4
SVE				pmax	pmax		
	comp=Z,134nm,1.3s						
DCZ	**Deep Cove**	67.43	150	P	P	13 40 34.1	-0.3
AKTO	**Aktyubinsk**	67.55	320	P	P	13 40 35.4	+0.1
	comp=Z,22nm,0.7s,baz=89,slow=7.8,SNR=62						
UNV	**Unalaska Valle**	67.60	36	P	P	13 40 36.3	+0.8
GAMB	**Gambell**	67.78	25	P	P	13 40 36.1	-0.3
GAMB				IAmb	IAmb	13 40 40.0	
	comp=Z,25nm,1.1s						
THZ	**Tophouse**	67.98	144	P	P	13 40 36.9	-1.3
THZ				IAmb	IAmb	13 40 40.2	
	comp=Z,26nm,0.8s						
RPZ	**Rata Peaks**	68.22	147	P	P	13 40 39.1	-0.5
LTZ	**Lake Taylor**	68.28	145	P	P	13 40 39.2	-0.8
LTZ				IAmb	IAmb	13 40 42.6	
	comp=Z,33nm,1.0s						
ARU	**Arti**	68.39	326	P	P	13 40 40.5	0.0
	comp=Z,8.0nm,0.5s,baz=106,slow=3.0,SNR=26						
ARU				LR	LR	14 12 49.5	
	comp=Z,705nm,18.4s,baz=110,slow=38						
ARU	**Arti**	68.39	326c	iP	P	13 40 40.4	0.0
ARU						13 43 08.5	
ARU				S	S	13 49 42.1	+4.0
ARU				SS	SS	13 54 04.5	+2.4
ARU				pmax	pmax		
	comp=Z,82nm,1.3s						
ARU				MLR	MLR		
	comp=Z,1µm,16.0s						
ARU	**Arti**	68.39	326	P	P	13 40 39.7	-0.8
URZ	**Urewera**	68.42	139	LR	LR	14 10 28.3	
	comp=Z,1µm,19.9s,baz=26,slow=36						
OXZ	**Oxford**	68.50	146	P	P	13 40 40.8	-0.5
OXZ				IAmb	IAmb	13 40 46.8	
	comp=Z,16nm,0.8s						
BKZ	**Black Stump Fm**	68.56	140	P	P	13 40 41.2	-0.6
KHZ	**Kahutara**	68.76	144	P	P	13 40 43.4	+0.5
BFZ	**Birch Farm**	69.30	141	P	P	13 40 46.0	-0.3
BFZ				IAmb	IAmb	13 40 48.8	
	comp=Z,34nm,1.0s						
SOCY	**Socotra**	70.55	279	P	P	13 40 53.0	-1.6
KIRV	**Kirov**	73.60	328	P	P	13 41 12.4	+0.5
	baz=96,slow=2.1						
KIRV	**Kirov**	73.60	328⇓	eP	P	13 41 12.2	+0.3
BELG	**Belogornoye**	74.22	321	P	P	13 41 16.0	+0.3
	comp=Z,94nm,0.9s,baz=286,slow=0.7,SNR=19						
BELG				LR	LR	14 13 39.2	
	comp=Z,466nm,20.9s,baz=126,slow=36						
TTA	**Tatalina**	74.46	28	P	P	13 41 17.5	+0.4
TTA				pmax	pmax		
	comp=Z,15nm,1.1s						
TTA	**Tatalina**	74.46	28	P	P	13 41 17.5	+0.4
SVW2	**Sparrevohn**	74.50	30	P	P	13 41 17.6	+0.4
SVW2				IAmb	IAmb	13 41 21.1	
	comp=Z,30nm,1.2s						
LGD	**Lagodekhi**	75.15	310	P	P	13 41 22.5	+1.1
DDFL	**Dedoflistskaro**	75.26	310	P	P	13 41 24.7	+2.6
A21K	**Barrow**	75.28	19	P	P	13 41 22.2	+0.7
	baz=262,SNR=19						

A21K	**Barrow**	**75.28**	**19**	P	**P**	**13 41 22.1**	**+0.6**
GROC	**Groznyy**	**75.44**	**312**	*e*P	**P**	**13 41 22.8**	**-0.2**
GROC				*e*		13 41 35.1	
GROC				*e*		13 44 07.8	
GROC				pmax	pmax		
	comp=Z,89nm,1.4s						
OHAK	**Old Harbor**	**75.45**	**34**	P	**P**	**13 41 22.9**	**+0.2**
KDAK	**Kodiak Island**	**75.84**	**33**	P	**P**	**13 41 26.5**	**+1.5**
	comp=Z,34nm,1.0s,baz=318,slow=12,SNR=3.2						
KDAK	**Kodiak Island**	**75.84**	**33**	⇓*e*P	**P**	**13 41 26.4**	**+1.5**
KDAK				pmax	pmax		
	comp=Z,61nm,1.1s						
PPLA	**Purkeypile**	**76.21**	**28**	P	**P**	**13 41 27.6**	**+0.5**
PPLA				IAmb	IAmb	13 41 29.8	
	comp=Z,43nm,1.4s						
SPU	**Mount Spurr**	**76.21**	**30**	P	**P**	**13 41 27.4**	**+0.3**
KZRT	**Kazreti**	**76.55**	**310**	P	**P**	**13 41 30.5**	**+1.0**
CNPM	**China Poot**	**76.58**	**31**	P	**P**	**13 41 29.3**	**+0.1**
BRLK	**Bradley Lake**	**76.76**	**31**	P	**P**	**13 41 29.9**	**-0.3**
SUA	**Susitna One**	**76.84**	**29**	P	**P**	**13 41 30.9**	**+0.2**
SUA				IAmb	IAmb	13 41 33.4	
	comp=Z,26nm,1.0s						
ZEI	**Tsey**	**76.85**	**311**	*e*P	**P**	**13 41 30.8**	**-0.5**
ZEI				pmax	pmax		
	comp=Z,36nm,1.0s						
MLY	**Manley**	**76.92**	**26**	P	**P**	**13 41 31.6**	**+0.5**
	baz=268,SNR=16						
TRF	**Thorofare Moun**	**77.08**	**27**	P	**P**	**13 41 31.6**	**-0.5**
TRF				IAmb	IAmb	13 41 44.9	
	comp=Z,36nm,1.2s						
BGD	**Bogdanovka**	**77.16**	**310**	P	**P**	**13 41 34.9**	**+1.8**
RAYN	**Ar Rayn**	**77.18**	**292**	P	**P**	**13 41 31.6**	**-1.7**
RAYN	**Ar Rayn**	**77.18**	**292**	P	**P**	**13 41 31.6**	**-1.7**
ONI	**Oni**	**77.19**	**311**	P	**P**	**13 41 34.3**	**+1.3**
COLD	**Coldfoot**	**77.19**	**23**	P	**P**	**13 41 32.9**	**+0.4**
	baz=268,SNR=27						
COLD	**Coldfoot**	**77.19**	**23**	P	**P**	**13 41 32.8**	**+0.3**
COLD				IAmb	IAmb	13 41 36.5	
	comp=Z,24nm,1.0s						
AKH	**Akhalkalaki**	**77.23**	**310**	P	**P**	**13 41 34.7**	**+1.2**
RC01	**Rabbit Creek A**	**77.33**	**30**	P	**P**	**13 41 33.7**	**+0.3**
	baz=270						
TOLK	**Toolik Lake Re**	**77.47**	**22**	P	**P**	**13 41 34.5**	**+0.5**
	baz=269,SNR=15						
TOLK	**Toolik Lake Re**	**77.47**	**22**	P	**P**	**13 41 34.6**	**+0.5**
TOLK				IAmb	IAmb	13 41 37.3	
	comp=Z,28nm,1.1s						
SEW	**Seward**	**77.48**	**31**	P	**P**	**13 41 35.0**	**+0.9**
SEW				IAmb	IAmb	13 41 55.5	
	comp=Z,56nm,1.3s						
I23K	**Minto, Yukon-K**	**77.50**	**26**	P	**P**	**13 41 34.4**	**+0.2**
	baz=270,SNR=9.2						
I23K	**Minto, Yukon-K**	**77.50**	**26**	P	**P**	**13 41 34.8**	**+0.6**
KBZ	**Khabaz**	**77.52**	**312**	P	**P**	**13 41 34.9**	**+0.2**
	comp=Z,13nm,0.8s,baz=119,slow=2.5,SNR=15						
KBZ	**Khabaz**	**77.52**	**312**	*ce*P	**P**	**13 41 34.5**	**-0.2**
KBZ				pmax	pmax		
	comp=Z,41nm,1.5s						
PMR	**Palmer**	**77.62**	**29**	P	**P**	**13 41 34.9**	**0.0**
PMR				pmax	pmax		
	comp=Z,26nm,1.1s						
PMR	**Palmer**	**77.62**	**29**	P	**P**	**13 41 34.9**	**0.0**
PMR				IAmb	IAmb	13 41 36.7	
	comp=Z,26nm,1.1s						
NEA2	**Nenana**	**77.63**	**26**	P	**P**	**13 41 35.4**	**+0.5**
	baz=270,SNR=13						
KVAR	**Kislovodsk Arr**	**77.65**	**313**	P	**P**	**13 41 37.1**	**+1.5**
	comp=Z,14nm,0.7s,baz=119,slow=17,SNR=7.4						
KIV	**Kislovodsk**	**77.66**	**313**	*e*P	**P**	**13 41 35.5**	**-0.2**
KIV				pmax	pmax		
	comp=Z,148nm,1.0s						
KIV	**Kislovodsk**	**77.66**	**313**	P	**P**	**13 41 35.5**	**-0.2**
NEY	**Neytrino**	**77.68**	**312**	⇓*e*P	**P**	**13 41 36.3**	**+0.4**
NEY				pmax	pmax		
	comp=Z,12nm,1.9s						
MCK	**McKinley**	**77.69**	**27**	P	**P**	**13 41 35.1**	**-0.3**
	baz=270,SNR=18						
RND	**Reindeer**	**77.73**	**27**	P	**P**	**13 41 35.3**	**-0.4**
RND				pmax	pmax		
	comp=Z,30nm,1.1s						
RND	**Reindeer**	**77.73**	**27**	P	**P**	**13 41 35.3**	**-0.4**
RND				IAmb	IAmb	13 41 38.0	
	comp=Z,30nm,1.1s						
VRH	**Novokhopyorsk**	**77.89**	**320**	*e*P	**P**	**13 41 35.2**	**-1.4**
VRH				pmax	pmax		
	comp=Z,70nm,1.4s						
KNK	**Knik Glacier**	**77.94**	**29**	P	**P**	**13 41 36.9**	**+0.1**
KNK				IAmb	IAmb	13 41 39.6	
	comp=Z,36nm,1.1s						
MDM	**Murphy Dome**	**77.98**	**26**	P	**P**	**13 41 37.5**	**+0.5**
MDM				IAmb	IAmb	13 41 41.2	
	comp=Z,23nm,1.1s						
SML	**Sawmill**	**78.00**	**29**	P	**P**	**13 41 37.5**	**+0.4**
SML				pmax	pmax		
	comp=Z,56nm,1.2s						
WRH	**Wood River Hil**	**78.05**	**26**	P	**P**	**13 41 37.6**	**+0.3**
WRH				IAmb	IAmb	13 41 50.7	
	comp=Z,22nm,1.2s						
TCOL	**CIGO, UAF Yank**	**78.14**	**26**	P	**P**	**13 41 38.0**	**+0.3**
	baz=271						
COLA	**College**	**78.15**	**26**	*de*P	**P**	**13 41 38.7**	**+0.9**
COLA				pmax	pmax		
	comp=Z,12nm,1.0s						
CCB	**Clear Creek Bu**	**78.17**	**26**	P	**P**	**13 41 37.5**	**-0.4**
CCB				IAmb	IAmb	13 41 50.4	
	comp=Z,25nm,1.3s						
POKR	**Poker Plat Res**	**78.32**	**26**	P	**P**	**13 41 38.9**	**+0.1**
	baz=272,SNR=6.6						
DHY	**Denali Highway**	**78.40**	**28**	P	**P**	**13 41 39.1**	**-0.4**
SCM	**Sheep Creek Mo**	**78.47**	**29**	P	**P**	**13 41 40.2**	**+0.4**
SCM				pmax	pmax		
	comp=Z,69nm,1.2s						
SCM	**Sheep Creek Mo**	**78.47**	**29**	P	**P**	**13 41 40.2**	**+0.4**
HDA	**Harding Lake**	**78.55**	**26**	P	**P**	**13 41 40.2**	**+0.1**
	baz=272,SNR=6.0						
HDA	**Harding Lake**	**78.55**	**26**	P	**P**	**13 41 39.1**	**-1.0**
IL31		**78.56**	**26**	P	**P**	**13 41 39.9**	**-0.1**
ILAR	**Eielson Array**	**78.56**	**26**	P	**P**	**13 41 40.1**	**0.0**
	comp=Z,5.2nm,0.9s,baz=246,slow=5.5,SNR=29						
ILAR				PKKPbc	**PKKPbc**	**14 00 34.9**	**-3.4**
	comp=Z,0.6nm,0.9s,baz=134,slow=2.1,SNR=5.3						
ILAR				LR	LR	14 18 31.1	
	comp=Z,290nm,18.6s,baz=272,slow=37						
ILAR	**Eielson Array**	**78.56**	**26**	P	**P**	**13 41 38.8**	**-1.3**
ILAR	**Eielson Array**	**78.56**	**26**	P	**P**	**13 41 38.8**	**-1.3**
KLMR	**Klimovskoe**	**78.66**	**330**	*e*P	**P**	**13 41 38.5**	**-2.1**
KLMR				*e*		13 44 34.8	
KLMR				pmax	pmax		
	comp=Z,83nm,1.4s						
KLMR	**Klimovskoe**	**78.66**	**330**	*e*P	**P**	**13 41 38.6**	**-2.1**
KLMR				AMP		13 41 53.0	
	comp=Z,83nm,1.4s						
KLMR				*e*PP	**PP**	**13 44 34.9**	**-4.0**
KLMR				LQ	LQ	14 11 27.8	
KLMR				LQ	LQ	14 11 27.8	
KLMR				LR	LR	14 17 36.1	
M24K	**Tolsona, Glenn**	**79.00**	**29**	P	**P**	**13 41 42.9**	**+0.2**
	baz=273						
KLU	**Klutina**	**79.16**	**29**	P	**P**	**13 41 44.6**	**+1.0**
KLU				IAmb	IAmb	13 41 55.0	
	comp=Z,24nm,1.1s						
TMCR	**Tamitsa**	**79.17**	**334**	*e*P	**P**	**13 41 42.1**	**-1.3**
PAX	**Paxson**	**79.28**	**28**	P	**P**	**13 41 43.4**	**-0.8**
PAX				pmax	pmax		
	comp=Z,26nm,1.2s						
PAX	**Paxson**	**79.28**	**28**	P	**P**	**13 41 43.4**	**-0.8**
PAX				IAmb	IAmb	13 41 46.8	
	comp=Z,26nm,1.2s						
VSR	**Storozhevoye**	**79.49**	**320**	*e*P	**P**	**13 41 44.6**	**-0.9**
VSR				pmax	pmax		
	comp=Z,60nm,1.5s						
RIDG	**Independent Ri**	**79.51**	**27**	P	**P**	**13 41 45.7**	**+0.3**
RIDG				IAmb	IAmb	13 41 48.0	
	comp=Z,61nm,1.2s						
LPSR	**Galich'ya Gora**	**79.53**	**322**	*e*P	**P**	**13 41 45.1**	**-0.5**
LPSR				pmax	pmax		
	comp=Z,40nm,0.8s						
N25K	**Chitina, Valde**	**79.78**	**29**	P	**P**	**13 41 47.6**	**+0.6**
	baz=275,SNR=5.7						
SOC	**Sochi**	**79.83**	**313**	*e*P	**P**	**13 41 43.4**	**-4.1**
SOC				*e*		13 44 44.4	
SOC				*e*PPP	PPP	13 46 36.4	
SOC				*e*S	**S**	**13 51 44.6**	**-2.5**
SOC				*e*SS	**SS**	**13 56 54.8**	**-2.0**
SOC				*e*SSS	SSS	14 00 21.8	
SOC				MLR	MLR		
	comp=Z,749nm,14.0s						
DOT	**Dot Lake**	**79.86**	**27**	P	**P**	**13 41 47.9**	**+0.6**
SCRK	**Sand Creek**	**79.87**	**27**	P	**P**	**13 41 47.5**	**+0.1**
	baz=275,SNR=10						
MOS	**Moscow**	**80.01**	**325**	*e*P	**P**	**13 41 45.4**	**-2.8**
MOS				pmax	pmax		
	comp=Z,81nm,1.4s						
GLB	**Gilahina Butte**	**80.17**	**29**	P	**P**	**13 41 49.7**	**+0.7**
GLB				IAmb	IAmb	13 41 52.4	
	comp=Z,36nm,1.2s						
OBN	**Obninsk**	**80.67**	**324**	⇓*e*P	**P**	**13 41 51.8**	**+0.1**
OBN				*e*S	**S**	**13 52 01.3**	**+5.9**
OBN				*e*SS	**SS**	**13 57 07.1**	**-1.6**
OBN				pmax	pmax		
	comp=Z,84nm,1.7s						
OBN				MLR	MLR		
	comp=Z,1µm,17.0s						
OBN	**Obninsk**	**80.67**	**324**	P	**P**	**13 41 51.1**	**-0.6**
OBN				IAmb	IAmb	13 41 54.6	
	comp=Z,38nm,1.1s						
BARN	**Barnard Glacie**	**81.25**	**29**	P	**P**	**13 41 56.9**	**+1.9**
BARN				IAmb	IAmb	13 42 25.5	
	comp=Z,50nm,1.4s						
ANN	**Anapa**	**81.33**	**314**	*e*P	**P**	**13 41 53.1**	**-2.3**
ANN				*e**PP	**PcP**	**13 42 04.6**	**+3.1**
ANN				*e*S	**S**	**13 52 04.7**	**+2.1**
ANN				pmax	pmax		
	comp=Z,61nm,0.8s						
CTGM	**Chitina Glacie**	**81.42**	**30**	P	**P**	**13 41 56.1**	**+0.3**
CTGM				IAmb	IAmb	13 42 01.6	
	comp=Z,52nm,1.2s						
DAWY	**Dawson**	**81.87**	**26**	P	**P**	**13 41 58.2**	**+0.2**
DAWY				IAmb	IAmb	13 42 11.8	
	comp=Z,23nm,1.1s						
JOF	**Joensuu**	**82.30**	**333**	P	**P**	**13 42 00.8**	**+0.6**
MSF	**Maaselka**	**82.73**	**336**	P	**P**	**13 42 04.3**	**+1.9**
MSF				pmax	pmax		
	comp=Z,77nm,2.5s						
KVT	**Kavak**	**82.85**	**310**	P	**P**	**13 42 05.2**	**+1.6**
SPA0	**Spitsbergen Ar**	**83.04**	**349**	P	**P**	**13 42 03.7**	**-0.1**
ARCES	**ARCESS Array B**	**83.26**	**340**	P	**P**	**13 42 05.9**	**+0.8**
	comp=Z,15nm,0.9s,baz=75,slow=6.8,SNR=17						
ARCES				LR	LR	14 24 03.9	
	comp=Z,542nm,18.1s,baz=70,slow=39						
ARCES	**ARCESS Array B**	**83.26**	**340**	P	**P**	**13 42 05.9**	**+0.8**
ARCES				pmax	pmax		
	comp=Z,21nm,1.0s						
HYT	**Haines Junctio**	**83.29**	**29**	P	**P**	**13 42 05.9**	**+0.3**
HYT				IAmb	IAmb	13 42 09.0	
	comp=Z,20nm,1.2s						
INK	**Inuvik**	**83.37**	**22**	P	**P**	**13 42 07.6**	**+2.0**
	comp=Z,7.7nm,0.9s,baz=285,slow=5.2,SNR=9.7						
INK	**Inuvik**	**83.37**	**22**	P	**P**	**13 42 04.7**	**-0.9**
INK				pmax	pmax		
	comp=Z,18nm,1.2s						
INK	**Inuvik**	**83.37**	**22**	P	**P**	**13 42 04.7**	**-0.9**
INK				IAmb	IAmb	13 42 08.8	
	comp=Z,18nm,1.2s						
WHY	**Whitehorse**	**84.58**	**29**	P	**P**	**13 42 12.9**	**+0.7**
WHY				IAmb	IAmb	13 42 16.3	
	comp=Z,31nm,1.0s						
SUF	**Sumiainen**	**84.66**	**333**	P	**P**	**13 42 13.4**	**+1.1**
BR131	**Keskin Array S**	**84.89**	**309**	*d i*P	**P**	**13 42 13.7**	**-0.4**
BR131	**Keskin Array S**	**84.89**	**309**	P	**P**	**13 42 13.1**	**-1.0**
BR131				IAmb	IAmb	13 42 15.2	
	comp=Z,28nm,0.8s						
BRTR	**Keskin Array B**	**84.89**	**309**	P	**P**	**13 42 13.8**	**-0.4**
	comp=Z,12nm,0.8s,baz=112,slow=4.7,SNR=28						
BRTR				LR	LR	14 27 33.3	
	comp=Z,315nm,18.1s,baz=88,slow=41						
BRTR	**Keskin Array B**	**84.89**	**309**	P	**P**	**13 42 13.2**	**-1.0**
BRTR	**Keskin Array B**	**84.89**	**309**	P	**P**	**13 42 13.2**	**-1.0**
FINES	**FINESS Array B**	**85.01**	**332**	P	**P**	**13 42 14.2**	**+0.2**
	comp=Z,8.1nm,0.6s,baz=79,slow=4.7,SNR=25						
VSU	**Vasula**	**85.42**	**329**	*e*P	**P**	**13 42 15.9**	**-0.3**
VSU	**Vasula**	**85.42**	**329**	⇓*e*P	**P**	**13 42 15.6**	**-0.6**
VSU				pmax	pmax		
	comp=Z,59nm,0.9s						
MNK	**Minsk**	**85.73**	**325**	*i* P	**P**	**13 42 18.1**	**+0.3**
	comp=E,3.0nm,0.9s						
MNK				*i* P	**P**	**13 42 18.1**	**+0.3**
	comp=N,5.0nm,0.9s						
MNK				*i* P	**P**	**13 42 18.1**	**+0.3**
	comp=Z,20nm,0.9s						
MNK				*i* PcP	**PcP**	**13 42 21.3**	**+0.7**
MNK				*i* PP	**PP**	**13 45 37.4**	**+0.2**
MNK				*i* PPP	PPP	13 47 31.1	
MNK				*i* S	**S**	**13 52 40.2**	**-6.5**
MNK				*i* ScS	**ScS**	**13 52 56.8**	**+0.7**
MNK				*i* SS	**SS**	**13 58 26.4**	**+2.8**
MNK				*i* SSS	SSS	14 01 51.1	
MNK				*i* LQ	LQ	14 15 38.5	
MNK				*i* LR	LR	14 18 05.1	
MNK				*i* LRM	MLR	14 23 21.9	
	comp=N,375nm,19.2s						
MNK				*i* LRM	MLR	14 23 25.1	
	comp=Z,766nm,19.1s						
MNK				*i* LRM	MLR	14 23 30.9	
	comp=E,74nm,19.2s						
AKASG	**Malin Array Be**	**85.78**	**321**	P	**P**	**13 42 18.1**	**-0.1**
	comp=E,26nm,0.9s,baz=64,slow=4.6,SNR=36						
AKASG				LR	LR	14 23 07.5	
	comp=E,353nm,19.1s,baz=75,slow=37						
AKASG	**Malin Array Be**	**85.78**	**321**	P	**P**	**13 42 17.0**	**-1.2**
AKASG				pmax	pmax		
	comp=Z,18nm,0.9s						
AKASG	**Malin Array Be**	**85.78**	**321**	P	**P**	**13 42 17.0**	**-1.2**
AKBB	**Malin Array Si**	**85.78**	**321**	⇓*e*P	**P**	**13 42 17.9**	**-0.3**
AKBB	**Malin Array Si**	**85.78**	**321**	P	**P**	**13 42 17.8**	**-0.4**
AKBB				IAmb	IAmb	13 42 20.1	
	comp=Z,39nm,1.1s						
IDID	**Didziasalis**	**86.18**	**326**	*e*P	**P**	**13 42 20.9**	**+0.9**
NACGM	**Naroch**	**86.26**	**325**	*i* P	**P**	**13 42 18.1**	**-2.3**
NACGM				*i* P	**P**	**13 42 18.1**	**-2.3**
NACGM				*i* P	**P**	**13 42 18.1**	**-2.3**
NACGM				*i* PP	PP	13 46 03.0	+22
NACGM				*i* PPP	PPP	13 48 28.1	
NACGM				*i* S	**S**	**13 52 49.1**	**-2.7**
NACGM				*i* PS		13 55 32.9	
NACGM				*i* SS	SS	13 59 28.3	+57
NACGM				*i* SSS	SSS	14 03 37.9	
NACGM				*i* LQ	LQ	14 16 27.6	
NACGM				*i* LR	LR	14 20 39.8	
C36M	**Paulatuk**	**86.32**	**20**	P	**P**	**13 42 21.0**	**+0.6**
	baz=292						
C36M	**Paulatuk**	**86.32**	**20**	P	**P**	**13 42 20.1**	**-0.3**
C36M				IAmb	IAmb	13 42 23.5	
	comp=Z,18nm,0.9s						
ISAL	**Salakas**	**86.45**	**326**	*e*P	**P**	**13 42 22.0**	**+0.6**
IIGN	**Ignalina**	**86.46**	**326**	*e*P	**P**	**13 42 22.0**	**+0.6**
EUNU	**Eureka**	**87.28**	**5**	P	**P**	**13 42 24.8**	**-0.3**
PABE	**Paberze**	**87.65**	**326**	*e*P	**P**	**13 42 26.8**	**-0.4**
CFR	**Carcaliu**	**87.75**	**316**	P	**P**	**13 42 29.3**	**+1.4**
PPT	**Papeete**	**87.90**	**108**	P	**P**	**13 42 32.3**	**+3.2**
	comp=Z,29nm,0.7s,baz=76,slow=19,SNR=3.3						
PPT				LR	LR	14 18 44.0	
	comp=Z,604nm,18.2s,baz=278,slow=34						
PPT2	**Papeete2**	**87.90**	**108**	*e*S	**S**	**13 53 07.4**	**-1.7**
	comp=Z,456nm,26.2s						
PPT2	**Papeete2**	**87.90**	**108**	*e*LR	LR	14 10 16.5	
	comp=Z,2µm,35.2s,baz=288						
SUW	**Suwalki**	**88.52**	**325**	*e*P	**P**	**13 42 30.9**	**-0.5**
SUW	**Suwalki**	**88.52**	**325**	P	**P**	**13 42 30.8**	**-0.5**
SUW				pmax	pmax		
	comp=Z,52nm,1.0s						
VRI	**Vrincioaia**	**88.54**	**316**	P	**P**	**13 42 32.3**	**+0.6**
VRI				pmax	pmax		
	comp=Z,24nm,0.8s						
BURAR	**Bucovina Array**	**89.09**	**318**	P	**P**	**13 42 33.6**	**-0.7**
BURAR	**Bucovina Array**	**89.09**	**318**	P	**P**	**13 42 33.8**	**-0.5**
BUR08	**Bucovina Ar. S**	**89.09**	**318**	P	**P**	**13 42 33.5**	**-0.9**
BUR08				IAmb	IAmb	13 42 36.3	
	comp=Z,12nm,0.8s						
MLR	**Muntele Rosu**	**89.17**	**316**	P	**P**	**13 42 35.3**	**+0.5**
	comp=Z,9.1nm,0.9s,baz=85,slow=5.7,SNR=6.0						
MLR	**Muntele Rosu**	**89.17**	**316**	P	**P**	**13 42 35.1**	**+0.3**
MLR				pmax	pmax		
	comp=Z,20nm,2.2s						
KMBO	**Kilima Mbogo**	**89.23**	**269**	P	**P**	**13 42 36.0**	**+0.2**
	comp=Z,1.6nm,0.3s,baz=58,slow=4.4,SNR=10						
KMBO				LR	LR	14 20 02.7	
	comp=Z,745nm,20.8s,baz=96,slow=34						
LVV	**L'vov**	**89.23**	**321**	*e*P	**P**	**13 42 35.5**	**+0.7**
TBI	**Tubuai**	**89.25**	**114**	*e*S	**S**	**13 53 20.0**	**-1.5**
	comp=Z,613nm,25.8s						
TBI	**Tubuai**	**89.25**	**114**	*e*LR	LR	14 10 56.9	
	comp=Z,727nm,23.0s,baz=293						
UPP	**Uppsala**	**89.46**	**331**	*e*P	**P**	**13 42 34.2**	**-1.4**
DAG	**Danmarks Havn**	**89.77**	**352**	*i* P	**P**	**13 42 36.3**	**-0.4**
	comp=Z,7.4nm,0.9s						
DAG	**Danmarks Havn**	**89.77**	**352**	*i* P	**P**	**13 42 36.3**	**-0.4**
DAG				pmax	pmax		
	comp=Z,7.0nm,0.9s						
DAG	**Danmarks Havn**	**89.77**	**352**	*i* P	**P**	**13 42 36.4**	**-0.4**
DAG				IAmb	IAmb	13 42 38.2	
	comp=Z,7.4nm,0.9s						
RES	**Resolute Bay**	**90.53**	**10**	P	**P**	**13 42 41.8**	**+1.4**
	comp=Z,5.7nm,0.8s,baz=312,slow=5.2,SNR=23						
RES	**Resolute Bay**	**90.53**	**10**	P	**P**	**13 42 40.3**	**0.0**
RES				pmax	pmax		
	comp=Z,11nm,1.0s						
RES	**Resolute Bay**	**90.53**	**10**	P	**P**	**13 42 40.3**	**0.0**
KOLS	**Kolonicke sedl**	**90.59**	**320**	*e*P	**P**	**13 42 42.0**	**+0.8**
KOLS	**Kolonicke sedl**	**90.59**	**320**	*e*P	**P**	**13 42 42.0**	**+0.8**
UZH	**Uzhgorod**	**90.67**	**320**	*e*P	**P**	**13 42 41.5**	**0.0**
UZH				*e*		13 42 53.3	
UZH				*e*		13 43 02.1	
VNDA	**Vanda**	**90.91**	**173**	P	**P**	**13 42 42.7**	**+0.8**
	comp=Z,15nm,1.0s,baz=319,slow=4.9,SNR=9.0						
VNDA	**Vanda**	**90.91**	**173**	P	**P**	**13 42 41.7**	**-0.3**
VNDA				pmax	pmax		
	comp=Z,32nm,1.2s						
VNDA	**Vanda**	**90.91**	**173**	P	**P**	**13 42 41.7**	**-0.3**
VNDA				IAmb	IAmb	13 42 44.3	
	comp=Z,32nm,1.2s						
DRGR		**90.96**	**318**	P	**P**	**13 42 42.7**	**-0.3**
DRGR				pmax	pmax		
	comp=Z,8.0nm,1.0s						
CRVS	**Cervenica-Dubn**	**91.11**	**320**	*e*P	**P**	**13 42 44.7**	**+1.1**
CRVS				pmax	pmax		
	comp=Z,53nm,1.1s						
CRVS	**Cervenica-Dubn**	**91.11**	**320**	*e*P	**P**	**13 42 44.7**	**+1.1**
NIE	**Niedzica**	**91.66**	**321**	P	**P**	**13 42 46.2**	**0.0**
NIE				pmax	pmax		
	comp=Z,7.0nm,1.3s						
OJC	**Ojcow**	**91.70**	**322**	P	**P**	**13 42 46.8**	**+0.5**
OJC				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KECS	**Kecovo**	**91.86**	**320**	*e*P	**P**	**13 42 47.8**	**+0.7**
KECS				pmax	pmax		
	comp=Z,12nm,1.4s						
KECS	**Kecovo**	**91.86**	**320**	*e*P	**P**	**13 42 47.8**	**+0.7**
NB2	**NORSAR Subarra**	**91.86**	**334**	P	**P**	**13 42 47.0**	**+0.1**
	comp=Z,3.0nm,0.8s,baz=61,slow=4.4						
NB2	**NORSAR Subarra**	**91.86**	**334**	P	**P**	**13 42 47.0**	**+0.1**
	baz=61,slow=4.4						
NOA	**NORSAR Array B**	**91.86**	**334**	P	**P**	**13 42 46.9**	**0.0**
	comp=Z,2.8nm,0.8s,baz=63,slow=4.6,SNR=11						
NOA				LR	LR	14 28 10.1	
	comp=Z,986nm,18.1s,baz=60,slow=38						
YKA	**Yellowknife Ar**	**92.86**	**24**	P	**P**	**13 42 51.4**	**0.0**
	comp=Z,3.7nm,0.9s,baz=303,slow=4.1,SNR=41						
YKA				PKKPbc	**PKKPdf**	**14 00 00.8**	**-0.4**
	comp=Z,0.7nm,0.7s,baz=119,slow=3.3,SNR=10						
YKA				LR	LR	14 27 02.3	
	comp=Z,366nm,19.8s,baz=0.0,slow=37						
MORC	**Moravsky Berou**	**93.22**	**322**	*e*P	**P**	**13 42 54.7**	**+1.3**
JAVC	**Velka Javorina**	**93.48**	**321**	*e*P	**P**	**13 42 56.1**	**+1.5**
VRAC	**Vranov**	**93.97**	**322**	*e*P	**P**	**13 42 58.1**	**+1.3**
CONA	**Conrad Observa**	**94.94**	**321**	*i* P	**P**	**13 43 02.4**	**+1.0**
	comp=Z,11nm,1.5s						
TAOE	**Nuku Hiva Isla**	**95.20**	**98**	*e*PS	PS	13 55 32.4	-6.5
	comp=Z,560nm,25.0s						
TAOE	**Nuku Hiva Isla**	**95.20**	**98**	*e*LR	LR	14 13 42.6	
	comp=Z,1µm,28.3s						
CLL	**Collm**	**95.27**	**325**	*e*S	**S**	**13 54 17.0**	**+2.4**
CLL				*e*PS	PS	13 55 31.0	-6.8
CLL				*e*PPS	PPS	13 56 11.0	
CLL				*e*		14 08 30.0	
CLL				Lm	MLR	14 33 00.0	
	comp=Z,1µm,18.5s						
ARSA	**Arzberg**	**95.42**	**320**	*e*P	**P**	**13 43 04.3**	**+0.9**
	comp=Z,8.3nm,1.2s						
MBAR	**Mbarara**	**95.52**	**270**	LR	LR	14 24 57.0	
	comp=Z,35nm,21.4s,baz=52,slow=35						
GERES	**GERESS Array B**	**95.90**	**322**	P	**P**	**13 43 06.2**	**+0.5**
	comp=Z,1.8nm,0.9s,baz=54,slow=6.8,SNR=7.2						
GERES	**GERESS Array B**	**95.90**	**322**	P	**P**	**13 43 04.0**	**-1.7**
GERES	**GERESS Array B**	**95.90**	**322**	P	**P**	**13 43 04.0**	**-1.7**
SOKA	**Soboth**	**95.95**	**320**	*e*P	**P**	**13 43 05.5**	**-0.5**
	comp=Z,7.1nm,1.0s						
MOA	**Molln**	**95.96**	**321**	*i* P	**P**	**13 43 05.9**	**-0.1**
	comp=Z,18nm,1.3s						
CRES	**Cresnjev**	**96.01**	**319**	*i* P	**P**	**13 43 06.6**	**+0.3**
BOJS	**Bojanci**	**96.27**	**319**	*e*P	**P**	**13 43 08.4**	**+1.1**
OBKA	**Obir**	**96.32**	**320**	*e*P	**P**	**13 43 08.2**	**+0.4**
	comp=Z,7.2nm,0.8s						
LJU	**Ljubljana**	**96.52**	**319**	*e*P	**P**	**13 43 08.9**	**+0.4**
KBA	**Koelnbreinsper**	**96.85**	**321**	*i* P	**P**	**13 43 11.1**	**+0.9**
	comp=Z,6.4nm,0.8s						
KBA	**Koelnbreinsper**	**96.85**	**321**	P	**P**	**13 43 11.2**	**+1.0**
KBA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ABTA	**Abfaltersbach**	**97.50**	**321**	*i* P	**P**	**13 43 12.8**	**-0.2**
	comp=Z,8.2nm,1.0s						
STAL	**STALIGIAL**	**97.58**	**320**	P	**P**	**13 43 12.0**	**-1.4**
WTTA	**Wattenberg**	**97.82**	**321**	*i* P	Pdif	13 43 15.0	+0.4
	comp=Z,18nm,1.2s						
WTTA	**Wattenberg**	**97.82**	**321**	P	Pdif	13 43 14.8	+0.2
WTTA				pmax	pmax		
	comp=Z,11nm,0.9s						
WATA	**Walderalm**	**97.83**	**321**	*i* P	Pdif	13 43 14.8	+0.2
	comp=Z,9.5nm,1.0s						
SQTA	**Sankt Quirin**	**98.10**	**321**	*i* P	Pdif	13 43 16.2	+0.4
	comp=Z,12nm,1.3s						
MOTA	**Moosalm**	**98.11**	**322**	*e*P	Pdif	13 43 16.2	+0.3
	comp=Z,8.5nm,0.9s						
FETA	**Feichten**	**98.49**	**321**	*e*P	Pdif	13 43 18.2	+0.6
	comp=Z,4.5nm,0.9s						
DAVA	**Damuels**	**98.88**	**322**	*e*P	Pdif	13 43 20.0	+0.7
	comp=Z,4.6nm,0.9s						
RKT	**Rikitea**	**102.34**	**111**	*e*LR	LR	14 17 01.4	
	comp=Z,532nm,33.2s						
VNA2	**Neumayer--Watz**	**113.94**	**195**	P	**PKiKP**	**13 48 16.9**	**-0.1**
MESJ	**Messejana**	**115.18**	**321**	*e*PKPdf	**PKiKP**	**13 48 19.0**	**-1.5**
MESJ				*e*PP	**PP**	**13 49 19.4**	**-0.9**
MESJ				AMS	AMS	14 45 46.3	
	comp=Z,464nm,15.2s						
MESJ	**Messejana**	**115.18**	**321**	*e*PKIKP	**PKiKP**	**13 48 18.9**	**-1.5**
MESJ				*e*		13 49 19.4	
MORF	**Marmelete**	**115.78**	**321**	*e*PKPdf	**PKiKP**	**13 48 20.0**	**-1.7**
MORF				*e*PP	**PP**	**13 49 23.7**	**-0.9**
MORF				AMS	AMS	14 45 53.2	
	comp=Z,400nm,17.3s						
MORF	**Marmelete**	**115.78**	**321**	*e*PKIKP	**PKiKP**	**13 48 19.9**	**-1.7**
MORF				*e*		13 49 23.6	
TXAR	**Lajitas Array**	**117.19**	**49**	PKP	**PKiKP**	**13 48 25.9**	**+1.2**
	comp=Z,1.0nm,0.7s,baz=336,slow=0.6,SNR=12						
TXAR	**Lajitas Array**	**117.19**	**49**	PKIKP	**PKPdf**	**13 48 24.2**	**-0.5**
TXAR	**Lajitas Array**	**117.19**	**49**	PKPdf	**PKPdf**	**13 48 24.2**	**-0.5**
S39A	**Bolivar**	**118.80**	**35**	PKPdf	**PKPdf**	**13 48 26.8**	**-0.7**
R40A	**Maddies Statio**	**118.96**	**34**		**PKPdf**	**13 48 26.7**	**-1.0**
D56A	**ZEC Mazanza, M**	**118.99**	**16**	P	**PKPdf**	**13 48 27.2**	**-0.3**
	baz=336						
CCM	**Cathedral Cave**	**119.69**	**34**	P	**PKiKP**	**13 48 29.1**	**0.0**
	baz=317						
TOA0	**Torodi Ar. Sit**	**119.87**	**292**	PKPdf	**PKPdf**	**13 48 28.9**	**-1.1**
TORD	**Torodi Ar. Bea**	**119.87**	**292**	PKP	**PKiKP**	**13 48 30.1**	**0.0**
	comp=Z,3.8nm,0.8s,baz=46,slow=2.0,SNR=16						
TORD				PKKPbc	**PKKPbc**	**13 58 40.2**	**+1.0**
	comp=Z,1.0nm,0.8s,baz=270,slow=3.0,SNR=3.7						
U40A	**Yellville**	**120.00**	**36**	P	**PKPdf**	**13 48 29.5**	**-0.2**
	baz=315						
U40A	**Yellville**	**120.00**	**36**	PKPdf	**PKPdf**	**13 48 29.6**	**-0.2**
W39A	**Magazine**	**120.25**	**38**	P	**PKPdf**	**13 48 30.1**	**-0.1**
	baz=313						
E63A	**Oxbow**	**121.09**	**12**	P	**PKiKP**	**13 48 31.7**	**0.0**
	baz=343						
J57A	**Williamstown**	**121.92**	**19**	P	**PKiKP**	**13 48 33.4**	**0.0**
	baz=334						
H61A	**Lyndonville**	**122.07**	**15**	P	**PKiKP**	**13 48 34.0**	**+0.3**
	baz=339						
M54A	**Oil Creek Stat**	**122.32**	**23**	P	**PKiKP**	**13 48 34.4**	**+0.2**
	baz=330						
J59A	**Piesco**	**122.34**	**18**	P	**PKPdf**	**13 48 34.0**	**-0.1**
	baz=336						
WVT	**Waverly**	**122.95**	**33**	P	**PKPdf**	**13 48 35.1**	**-0.3**
	baz=319						
OXF	**Oxford**	**123.28**	**35**	P	**PKPdf**	**13 48 35.7**	**-0.4**

	baz=317						
J62A	**Henniker**	**123.32**	**16**	P	**PKPdf**	**13 48 35.3**	**-0.6**
	baz=339						
L61A	**Hillsdale 1, H**	**123.78**	**18**	P	**PKPdf**	**13 48 37.0**	**+0.1**
	baz=337						
O56A	**Blue Knob Stat**	**123.81**	**23**	P	**PKiKP**	**13 48 37.2**	**-0.1**
	baz=330						
KOWA	**Kowa**	**124.46**	**296**	PKPdf	**PKPdf**	**13 48 36.5**	**-2.3**
U54A	**Nelsons Funny**	**125.61**	**28**	P	**PKPdf**	**13 48 40.2**	**-0.4**
	baz=326						
W58A	**Raeford**	**128.02**	**27**	P	**PKPdf**	**13 48 45.0**	**-0.2**
	baz=328						
KIC	**Kosan Boka**	**128.18**	**287**	*e*PKP2	**PKPdf**	**13 48 45.0**	**-1.0**
	comp=Z,18nm,1.1s						
DBIC	**Dimbokro**	**128.18**	**288**	PKP	**PKiKP**	**13 48 46.8**	**+0.2**
	comp=Z,9.7nm,1.1s,baz=82,slow=3.2,SNR=4.6						
TIC	**Toumodi**	**128.35**	**288**	*e*PKP2	**PKPdf**	**13 48 45.6**	**-0.7**
LIC	**Lamto**	**128.49**	**287**	*e*PKP2	**PKPdf**	**13 48 46.3**	**-0.3**
	comp=Z,42nm,1.4s						
SDDR	**Presa de Saban**	**145.33**	**30**		**PKPbc**	**13 49 16.9**	**-0.4**
SDDR	**Presa de Saban**	**145.33**	**30**	*e*P	**PKPdf**	**13 49 18.6**	**+1.1**
BCIP	**Isla Barro Col**	**147.06**	**53**	PKP2	**PKPdf**	**13 49 21.2**	**+0.7**
BCIP	**Isla Barro Col**	**147.06**	**53**		**PKPdf**	**13 49 21.2**	**+0.7**
BCIP	**Isla Barro Col**	**147.06**	**53**	*e*P	**PKPdf**	**13 49 16.0**	**-4.5**
PNME	**Penonome**	**147.08**	**55**	*e*P	**PKPab**	**13 49 23.9**	**-0.3**
PLCA	**Paso Flores**	**147.12**	**156**	PKPbc	**PKPab**	**13 49 22.9**	**-0.8**
	comp=Z,14nm,0.9s,baz=212,slow=4.6,SNR=13						
UPA	**Univ. de Panam**	**147.41**	**53**	*e*P	**PKPdf**	**13 49 21.7**	**+0.7**
AZU	**Azuero**	**147.53**	**55**	*e*P	**PKPab**	**13 49 25.3**	**-0.7**
LC01	**Cunco**	**148.09**	**153**		**PKPbc**	**13 49 23.4**	**-1.3**
UPD2	**Meteti**	**148.86**	**52**	*e*P	**PKPdf**	**13 49 21.5**	**-1.9**
SMRC	**Santa Marta, M**	**149.83**	**43**	*e*P	**PKPdf**	**13 49 27.3**	**+2.3**
MOTC	**Monteria, Cord**	**150.48**	**48**	*e*P	**PKPdf**	**13 49 28.4**	**+2.4**
ARGC	**Ariguani, Magd**	**150.75**	**45**	*e*P	**PKPbc**	**13 49 29.5**	**-2.5**
CRJC	**Cerrejon, Guaj**	**150.82**	**41**	*e*P	**PKPdf**	**13 49 23.6**	**-3.0**
URIC	**Uribia, Colomb**	**150.87**	**39**	*e*P	**PKPbc**	**13 49 32.2**	**-0.1**
DBBC	**Dabeiba**	**151.21**	**52**	*e*P	**PKPbc**	**13 49 33.2**	**0.0**
UREC	**San Jos de Ur**	**151.25**	**50**	*e*P	**PKPdf**	**13 49 28.7**	**+1.5**
SMLC	**San Martn de**	**151.61**	**46**	*e*P	**PKPbc**	**13 49 32.9**	**-1.1**
PLMC	**San Jos del P**	**152.42**	**56**	*e*P	**PKPdf**	**13 49 30.1**	**+1.0**
OCAC	**Ocana**	**152.54**	**46**	*e*P	**PKPdf**	**13 49 30.9**	**+1.5**
PTBC	**PUERTO BERRIO,**	**152.85**	**50**	*e*P	**PKPdf**	**13 49 30.0**	**+0.4**
YOTC	**Yotoco, Valle**	**152.90**	**57**	*e*P	**PKPdf**	**13 49 30.8**	**+0.9**
OTAV	**Otavalo**	**152.93**	**67**	*e*P	**PKPdf**	**13 49 28.4**	**-1.9**
GUY2C	**Guyana, Caldas**	**152.97**	**54**	*e*P	**PKPdf**	**13 49 29.4**	**-1.0**
BRRC	**Barranca, Sant**	**153.03**	**48**	*e*P	**PKPdf**	**13 49 29.4**	**-0.5**
NORC	**Norcasia**	**153.15**	**53**	*e*P	**PKPdf**	**13 49 28.9**	**-1.2**
BBAC	**Balboa, Cauca**	**153.17**	**62**	*e*P	PKPdf	13 49 17.9	-12
RREF	**El Recreo**	**153.18**	**54**	*e*P	**PKiKP**	**13 49 40.2**	**+1.7**
ANIL	**Santa Ana**	**153.37**	**55**	*e*P	PKPdf	13 49 22.9	-7.8
TOLC	**Tolima**	**153.38**	**55**	*e*P	**PKiKP**	**13 49 40.2**	**+1.6**
POPC	**Popayan, Colom**	**153.39**	**60**	*e*P	**PKPdf**	**13 49 32.9**	**+2.2**
GCUF	**Volcan Galeras**	**153.47**	**64**	*e*P	**PKPdf**	**13 49 29.4**	**-1.8**
PAMC	**Pamplona, Colo**	**153.60**	**46**	*e*P	**PKPbc**	**13 49 39.0**	**-0.1**
SPBC	**San Pablo de B**	**153.71**	**51**	*e*P	**PKPbc**	**13 49 36.4**	**-2.5**
PCON	**Cinco Dias**	**153.74**	**60**	*e*P	**PKPdf**	**13 49 32.2**	**+0.6**
BARC	**Barichara**	**153.76**	**48**	*e*P	**PKiKP**	**13 49 39.9**	**+0.7**
ORTC	**Ortega, Tolima**	**153.84**	**56**	*e*P	**PKiKP**	**13 49 39.1**	**0.0**
MARP	**Paez Belalcaza**	**153.84**	**59**	*e*P	**PKPdf**	**13 49 32.2**	**+0.8**
SDV	**Santo Domingo**	**153.87**	**41**	PKP	**PKPdf**	**13 49 33.3**	**+2.0**
	comp=Z,7.2nm,0.5s,baz=25,slow=1.7,SNR=9.1						
SDV	**Santo Domingo**	**153.87**	**41**	*e*P	**PKPdf**	**13 49 28.9**	**-2.4**
ROSC	**El Rosal**	**154.02**	**53**	PKP	**PKPdf**	**13 49 33.6**	**+1.8**
	comp=Z,5.5nm,0.3s,baz=344,slow=7.4,SNR=4.2						
SOCV	**Socops**	**154.18**	**42**	*e*P	**PKPdf**	**13 49 32.5**	**+1.0**
RUSC	**La Rusia**	**154.30**	**49**	*e*P	**PKPdf**	**13 49 34.0**	**+1.7**
BETC	**Betania**	**154.36**	**59**	*e*P	**PKPdf**	**13 49 33.2**	**+1.4**
GARC	**Garzon, Huila**	**154.58**	**60**	*e*P	**PKPdf**	**13 49 29.4**	**-3.1**
CHIC	**Chingaza**	**154.61**	**53**	*e*P	**PKPdf**	**13 49 31.3**	**-1.4**
FLOC	**Florencia**	**154.76**	**61**	*e*P	**PKPdf**	**13 49 30.3**	**-2.1**
MACC	**Macarena, Meta**	**155.98**	**58**	*e*P	**PKPdf**	**13 49 31.3**	**-2.7**
ELOV	**Elorza**	**156.04**	**41**	*e*P	**PKPdf**	**13 49 34.2**	**+0.1**
GUVC	**San Jose del G**	**156.75**	**55**	*e*P	**PKPdf**	**13 49 32.2**	**-2.8**
PTGA	**Pitinga**	**167.85**	**31**	PKPab	**PKPab**	**13 50 52.7**	**-0.2**
BDFB	**Brasilia**	**172.92**	**231**	PKP2	**PKPab**	**13 51 12.7**	**-2.9**
BDFB	**Brasilia**	**172.92**	**231**	PKPab	**PKPab**	**13 51 12.7**	**-2.9**

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*IDC **10** 13:33:06.7±2.8, 19°.72S×69°.14W, h107^{km}±31^{km}, mb3.8/4, mb1 3.8/7, mb1mx3.5/33, mbtmp4.1/7, MS3.8/2, Ms1 3.9/2, ms1mx3.0/22, Error ellipse: s-maj=29.4km s-min=21.7km az=140.0*

*NEIC **10** 13:33:06.0±2.2, 19°.72S±0°.05×69°.33W±0°.08, h102^{km}±6^{km}, mb4.1/8, ML4.1(GUC), Error ellipse: s-maj=11.4km s-min=6.9km az=82.0*

*GUC **10** 13:33:07.2±0.6, 19°.76S×69°.29W, h98^{km}±3^{km}, ML3.9*

ISC 10 13:33:05.8±0.7**, 19°.76S**±0°.04×**69°.31W**±0°.06**, h101**^{km}±6^{km}**, n60, σ1^{s}19**/65**, mb4.0**/6**, 4C-5D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB08	**IPOC Station P**	**0.41**	**159**	⇓*i*P	**Pn**	**13 33 22.4**	**+0.8**
PB08				*e*S	**Sn**	**13 33 34.1**	**+0.8**
PB08				IAML		13 33 36.7	
	comp=N,5µm,0.1s						
PB08	**IPOC Station P**	**0.41**	**159**	Pn	**Pn**	**13 33 22.4**	**+0.8**
MNMC	**Minye Minye**	**0.68**	**336**	⇑*i*P	**Pn**	**13 33 24.3**	**+0.8**
MNMC				*i* S	**Sn**	**13 33 37.7**	**+1.0**
MNMC	**Minye Minye**	**0.68**	**336**	Pn	**Pn**	**13 33 24.0**	**+0.5**
HMBC	**Humberstone**	**0.75**	**227**	⇓*i*P	**Pn**	**13 33 24.5**	**+0.6**
HMBC				*e*S	**Sn**	**13 33 38.0**	**+0.4**
HMBC				IAML		13 33 38.7	
	comp=E,13µm,0.5s						
PSGC	**Pisagua**	**0.79**	**282**	⇑*i*P	**Pn**	**13 33 24.5**	**+0.3**
PSGC				*e*S	**Sn**	**13 33 38.3**	**+0.2**
PSGCX	**Pisagua**	**0.79**	**282**		**Pn**	**13 33 23.7**	**-0.6**
TA02	**Huaiquique**	**0.93**	**237**	⇑*i*P	**Pn**	**13 33 26.1**	**+0.6**
TA02				*e*S	**Sn**	**13 33 40.5**	**+0.1**
TA01	**Diego Aracena**	**1.15**	**226**	⇑*i*P	**Pn**	**13 33 28.3**	**+0.4**
TA01				*e*S	**Sn**	**13 33 44.7**	**0.0**
TA01				IAML		13 33 45.5	
	comp=E,3µm,0.2s						
TA01	**Diego Aracena**	**1.15**	**226**	Pn	**Pn**	**13 33 28.4**	**+0.5**
PB01	**IPOC Station P**	**1.29**	**188**	⇓*i*P	**Pn**	**13 33 30.7**	**+1.1**
PB01				*e*S	**Sn**	**13 33 49.1**	**+1.4**
PB01				IAML		13 33 50.5	
	comp=N,3µm,0.2s						
PB01	**IPOC Station P**	**1.29**	**188**	Pn	**Pn**	**13 33 30.5**	**+0.8**
PATCX	**Punta Patache**	**1.32**	**217**	*e*P	**Pn**	**13 33 30.6**	**+0.5**
PATCX				*i* S	**Sn**	**13 33 49.0**	**+0.6**
PATCX				IAML		13 33 50.4	
	comp=E,2µm,0.2s						
PATCX	**Punta Patache**	**1.32**	**217**	Pn	**Pn**	**13 33 30.6**	**+0.5**
PB16	**IPOC Station P**	**1.43**	**352**	⇓*i*P	**Pn**	**13 33 33.2**	**+1.3**
PB16	**IPOC Station P**	**1.43**	**352**		**Pn**	**13 33 32.9**	**+1.1**
PB02	**IPOC Station P**	**1.65**	**200**	*e*P	**Pn**	**13 33 34.8**	**+0.7**
PB02				*i* S	**Sn**	**13 33 55.5**	**-0.1**
PB02				IAML		13 34 02.7	
	comp=E,2µm,0.5s						
AP01	**Chacalluta**	**1.69**	**324**	⇓*i*P	**Pn**	**13 33 35.1**	**+0.5**
AP01				*i* S	**Sn**	**13 33 56.5**	**+0.1**
AP01				IAML		13 33 60.0	
	comp=N,3µm,0.4s						
AP01	**Chacalluta**	**1.69**	**324**	Pn	**Pn**	**13 33 34.9**	**+0.4**
PB09	**IPOC Station P**	**2.03**	**178**	*e*P	**Pn**	**13 33 40.3**	**+1.4**
PB09				*i* S	**Sn**	**13 34 06.1**	**+1.9**
PB09				IAML		13 34 12.6	
	comp=N,504nm,0.5s						
PB09	**IPOC Station P**	**2.03**	**178**	Pn	**Pn**	**13 33 40.5**	**+1.5**
PB07	**IPOC Station P**	**2.03**	**195**	*e*P	**Pn**	**13 33 39.6**	**+0.6**
PB07				*i* S	**Sn**	**13 34 03.0**	**-1.4**
PB07				IAML		13 34 10.5	
	comp=E,831nm,0.4s						
PB07	**IPOC Station P**	**2.03**	**195**		**Pn**	**13 33 40.0**	**+1.0**
PB03	**IPOC Station P**	**2.32**	**190**	*e*P	**Pn**	**13 33 43.2**	**+0.5**
PB03				IAML		13 34 20.7	
	comp=E,536nm,0.2s						
PB04	**IPOC Station P**	**2.68**	**197**	*e*P	**Pn**	**13 33 48.6**	**+1.1**
PB04	**IPOC Station P**	**2.68**	**197**		**Pn**	**13 33 49.1**	**+1.6**
LVC	**Limon Verde**	**2.86**	**173**	P	**Pn**	**13 33 51.8**	**+1.8**
	comp=E,66nm,0.3s,baz=360,slow=12,SNR=225						
LVC				S	**Sn**	**13 34 26.1**	**+2.1**
	comp=E,55nm,0.3s,baz=244,slow=21,SNR=13						
LVC	**Limon Verde**	**2.86**	**173**	Pn	**Pn**	**13 33 51.6**	**+1.6**
PB06	**IPOC Station P**	**2.94**	**185**	*e*P	**Pn**	**13 33 51.3**	**+0.3**
PB06	**IPOC Station P**	**2.94**	**185**		**Pn**	**13 33 51.1**	**+0.2**
PB15	**IPOC Station P**	**3.44**	**183**		**Pn**	**13 33 58.2**	**+0.6**
PB10	**IPOC Station P**	**3.91**	**197**	Pn	**Pn**	**13 34 02.9**	**-1.0**
PB14	**IPOC Station P**	**4.95**	**192**	Pn	**Pn**	**13 34 16.5**	**-1.6**
GO02	**Mina Guanaco**	**5.38**	**183**	Pn	**Pn**	**13 34 23.3**	**-0.7**
AC01	**Pan de Azucar**	**6.47**	**190**	Pn	Pn	13 34 35.1	-3.4
AC02	**Maricunga**	**7.04**	**179**	Pn	**Pn**	**13 34 45.8**	**-1.0**
AC04	**Llanos de Chal**	**8.56**	**191**	Pn	Pn	13 35 02.5	-4.4
SIV	**San Ignacio**	**8.69**	**66**	P	**Pn**	**13 35 07.1**	**-1.6**
	comp=E,0.8nm,0.3s,baz=268,slow=12,SNR=12						
AC05	**El Transito**	**9.08**	**185**	Pn	**Pn**	**13 35 10.8**	**-3.3**
LCO	**Las Campanas**	**9.30**	**188**	Pn	**Pn**	**13 35 14.3**	**-2.8**
CPUP	**Villa Florida**	**12.81**	**123**	P	**Pn**	**13 36 02.7**	**-1.5**
	comp=E,0.2nm,0.3s,baz=296,slow=12,SNR=4.5						
MT02	**Curacav**	**13.54**	**187**	Pn	**Pn**	**13 36 14.0**	**+0.2**
BI02	**San Fabin de**	**16.93**	**185**		**Pn**	**13 36 55.9**	**-0.6**
BI02				IAmb	IAmb	13 37 13.6	
	comp=Z,9.5nm,1.5s						
BDFB	**Brasilia**	**20.69**	**82**	P	**P**	**13 37 37.8**	**-0.2**
	comp=Z,3.9nm,0.5s,baz=217,slow=5.1,SNR=4.5						
BDFB	**Brasilia**	**20.69**	**82**	P	**P**	**13 37 38.0**	**0.0**
BDFB				IAmb	IAmb	13 37 42.6	
	comp=Z,6.1nm,1.2s						
PTGA	**Pitinga**	**21.01**	**27**	P	**P**	**13 37 39.3**	**-2.0**
MDP	**Montagnes des**	**29.65**	**35**	LR	LR	13 51 14.7	
	comp=Z,106nm,20.6s,baz=223,slow=37						
TXAR	**Lajitas Array**	**59.00**	**325**	P	**P**	**13 42 55.9**	**+0.7**
	comp=Z,0.1nm,0.4s,baz=134,slow=7.8,SNR=1.1						
ULM	**Lac du Bonnet**	**73.55**	**343**	P	**P**	**13 44 27.2**	**-0.3**
	comp=Z,0.5nm,0.3s,baz=180,slow=3.1,SNR=3.4						
ULM	**Lac du Bonnet**	**73.55**	**343**	IAmb	IAmb	13 44 27.6	
	comp=Z,6.0nm,1.4s						
TOA0	**Torodi Ar. Sit**	**77.13**	**71**	P	**P**	**13 44 47.7**	**-1.1**
TOA0				IAmb	IAmb	13 44 53.7	
	comp=Z,4.4nm,1.4s						
TORD	**Torodi Ar. Bea**	**77.13**	**71**	P	**P**	**13 44 48.0**	**-0.8**
	comp=Z,1.0nm,0.5s,baz=254,slow=5.3,SNR=12						
TORD	**Torodi Ar. Bea**	**77.13**	**71**	P	**P**	**13 44 47.5**	**-1.3**
SBA	**Scott Base**	**77.46**	**190**	P	**P**	**13 44 50.9**	**+1.3**
VNDA	**Vanda**	**78.49**	**190**	LR	LR	14 14 29.1	
	comp=Z,107nm,21.3s,baz=343,slow=32						
VNDA	**Vanda**	**78.49**	**190**	P	**P**	**13 44 58.0**	**+2.7**
VNDA				IAmb	IAmb	13 45 25.8	
	comp=Z,22nm,1.4s						
YKA	**Yellowknife Ar**	**89.43**	**341**	P	**P**	**13 45 51.7**	**+0.9**
	comp=Z,1.0nm,0.6s,baz=128,slow=5.4,SNR=16						
H11N3	**WAKE ISLAND Hy**	**127.31**	**280**	T	T	16 11 54.2	
	baz=102,slow=75,SNR=7.3						
H11N2	**WAKE ISLAND Hy**	**127.32**	**280**	T	T	16 11 49.0	
	baz=102,slow=75,SNR=8.3						
H11N1	**WAKE ISLAND Hy**	**127.33**	**280**	T	T	16 11 46.5	
	baz=102,slow=75,SNR=6.4						

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*IDC **10** 13:41:28.1±1.4, 29°.46S×70°.84W, h0^{km}, mb3.5/2, mb1 3.7/4, mb1mx3.6/27, mbtmp3.6/4, ML3.4/2, MS2.8/1, Ms1 2.8/1, ms1mx2.6/15, Error ellipse: s-maj=55.0km s-min=28.1km az=102.0*

*GUC **10** 13:41:28.5±0.6, 29°.43S×71°.93W, h46^{km}±9^{km}, ML3.7*

ISC 10 13:41:24.3±2.9**, 29°.40S**±0°.05×**72°.23W**±0°.10**, h10**^{km}±16^{km}**, n18, σ1^{s}99**/23**, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GO04	**Tololo Observa**	**1.46**	**122**	*e*P	**Pn**	**13 41 51.4**	**+0.4**
GO04				*i* S	**Sn**	**13 42 09.2**	**-1.2**
AC04	**Llanos de Chal**	**1.57**	**41**	*e*P	**Pb**	**13 41 53.7**	**+0.4**
AC04				*i* S	**Sn**	**13 42 12.7**	**+0.2**
AC04				IAML		13 42 25.1	
	comp=E,961nm,0.7s						
AC05	**El Transito**	**1.80**	**72**	*e*P	**Pb**	**13 41 57.3**	**-0.2**
AC05				*i* S	**Sn**	**13 42 20.4**	**+1.9**
AC05				IAML		13 42 24.1	
	comp=N,3µm,0.8s						
CO01	**Juntas del Tor**	**1.95**	**108**	*e*P	**Pn**	**13 41 59.1**	**+1.5**
CO01				*i* S	**Sn**	**13 42 21.4**	**-0.9**
CO01				IAML		13 42 23.9	
	comp=N,1µm,0.5s						
CO03	**El Pedregal**	**1.96**	**137**	*e*P	**Pn**	**13 41 59.2**	**+1.5**
CO03				*i* S	**Sn**	**13 42 22.0**	**-0.4**
CO03				IAML		13 42 27.0	
	comp=E,1µm,0.1s						
GO03	**Copiap**	**2.52**	**45**	*e*P	**Pn**	**13 42 07.2**	**+2.0**
GO03				*i* S	**Sg**	**13 42 43.9**	**-1.3**
GO03				IAML		13 42 54.1	
	comp=N,490nm,0.6s						
AC02	**Maricunga**	**3.75**	**48**	*e*P	**Pn**	**13 42 25.8**	**+3.2**
AC02				*i* S	**Sb**	**13 43 17.6**	**+1.1**
PEL	**Peldehue**	**3.96**	**161**	*e*P	**Pn**	**13 42 28.5**	**+3.4**
H03N1	**Juan Fernandez**	**6.99**	**233**	T	T	13 50 57.7	
	baz=64,slow=71,SNR=145						
H03N2	**Juan Fernandez**	**7.00**	**233**	T	T	13 50 58.3	
	baz=64,slow=71,SNR=152						
H03N3	**Juan Fernandez**	**7.00**	**233**	T	T	13 50 57.1	
	baz=64,slow=71,SNR=239						
LVC	**Limon Verde**	**7.39**	**25**	Pn	**Pn**	**13 43 13.8**	**+1.2**
	comp=N,0.5nm,0.3s,baz=203,slow=11,SNR=6.5						
LVC				Pg	**Pb**	**13 43 32.7**	**-0.2**
	comp=N,1.1nm,0.3s,baz=202,slow=9.0,SNR=5.5						
LVC				Sn	**Sn**	**13 44 34.4**	**-2.3**
	comp=N,0.6nm,0.3s,baz=57,slow=16,SNR=1.7						
LVC				Lg	Lg	13 45 10.2	
	comp=N,1.1nm,0.3s,baz=300,slow=20,SNR=7.8						
LVC				LR	LR	13 45 55.7	
	comp=N,73nm,21.8s,baz=216,slow=38						
SIV	**San Ignacio**	**16.84**	**40**	Pn	**Pn**	**13 45 18.1**	**-2.2**
	comp=N,0.2nm,0.3s,baz=232,slow=19,SNR=2.8						
TXAR	**Lajitas Array**	**65.66**	**330**	P	P	13 52 18.0	+9.0
	comp=N,0.3nm,0.8s,baz=146,slow=6.9,SNR=2.3						
TORD	**Torodi Ar. Bea**	**82.82**	**71**	P	**P**	**13 53 47.2**	**-2.1**
	comp=N,0.4nm,0.8s,baz=250,slow=3.8,SNR=1.6						
KURBB	**Kurchatov Arra**	**149.49**	**38**	PKPbc	**PKPab**	**14 01 17.3**	**-1.0**
	comp=N,0.4nm,0.6s,baz=307,slow=3.2,SNR=4.3						
ZALV	**Zalesovo Beam**	**150.33**	**28**	PKPbc	**PKPab**	**14 01 19.8**	**-1.9**
	comp=N,2.8nm,0.8s,baz=298,slow=3.2,SNR=7.8						
MKAR	**Makanchi Array**	**153.65**	**42**	PKPbc	**PKiKP**	**14 01 27.2**	**+3.9**
	comp=N,0.3nm,0.8s,baz=281,slow=2.3,SNR=2.4						

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*NOU **10** 13:46:57.2, 25°.37S×179°.93E, h528^{km}, mb4.4, South of Fiji Islands*

*IDC **10** 13:46:57.5±0.8, 25°.33S×179°.59E, h499^{km}±8^{km}, mb3.9/27, mb1 4.0/30, mb1mx3.9/44, mbtmp4.7/30, Error ellipse: s-maj=10.2km s-min=9.6km az=14.0*

*NEIC **10** 13:46:58.8±1.7, 25°.33S±0°.10×179°.6E±0°.1, h517^{km}±6^{km}, mb4.6/102, Error ellipse: s-maj=15.0km s-min=13.9km az=129.0*

ISC 10 13:46:57.8±0.3**, 25°.40S**±0°.05×**179°.61E**±0°.06**, h507**^{km}**, n192, σ1^{s}25**/204**, mb4.5**/64**, 2C, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RIZ	**Raoul Island**	**4.41**	**151**	P	**P**	**13 48 21.7**	**+1.8**
RAO	**Raoul Island**	**4.42**	**151**	P	**P**	**13 48 19.0**	**-1.0**
	372nm,0.3s,baz=90,slow=8.1,SNR=12						
RAO				S	**S**	**13 49 28.2**	**+1.0**
	134nm,0.3s,baz=311,slow=19,SNR=1.8						
RAO	**Raoul Island**	**4.42**	**151**	P	**P**	**13 48 21.2**	**+1.2**
RAO	**Raoul Island**	**4.42**	**151**	P	**P**	**13 48 19.9**	**-0.1**
GLKZ	**Green Lake**	**4.43**	**151**	P	**P**	**13 48 20.0**	**0.0**
GLKZ				S	**S**	**13 49 28.5**	**+1.3**
MSVF	**Nonsavu**	**7.77**	**349**	P	**P**	**13 48 51.2**	**-1.0**
	11nm,0.3s,baz=260,slow=22,SNR=57						
MSVF				S	**S**	**13 50 24.7**	**-1.1**
	baz=17,slow=18,SNR=1.5						
MSVF	**Nonsavu**	**7.77**	**349**		**P**	**13 48 51.4**	**-0.8**
MSVF	**Nonsavu**	**7.77**	**349**	P	**P**	**13 48 51.5**	**-0.7**
OUZ	**Omahuta**	**11.08**	**207**	P	**P**	**13 49 28.9**	**+2.6**
OUZ	**Omahuta**	**11.08**	**207**	P	**P**	**13 49 27.7**	**+1.3**
PINNC	**Pines Island,**	**11.46**	**281**	P	**P**	**13 49 33.1**	**+2.5**
KUZ	**Kuaotunu**	**11.79**	**195**	P	**P**	**13 49 35.6**	**+1.7**
MXZ	**Matakaoa Point**	**12.18**	**185**	P	**P**	**13 49 38.8**	**+0.8**
MXZ	**Matakaoa Point**	**12.18**	**185**	P	**P**	**13 49 39.0**	**+1.1**
MXZ				S	**S**	**13 51 51.9**	**+1.9**
HAZ	**Te Kaha**	**12.42**	**187**	P	**P**	**13 49 40.0**	**-0.5**
HAZ				S	**S**	**13 51 49.9**	**-4.7**
WMGZ	**Waiomatatini S**	**12.42**	**184**	P	**P**	**13 49 41.0**	**+0.4**
WMGZ				S	**S**	**13 51 50.9**	**-3.9**
DZM	**Mont Dzumac**	**12.51**	**283**	P	**P**	**13 49 42.3**	**+0.5**
	1.4nm,0.3s,baz=83,slow=15,SNR=12						
DZM	**Mont Dzumac**	**12.51**	**283**	P	**P**	**13 49 43.5**	**+1.7**
DZM	**Mont Dzumac**	**12.51**	**283**	P	**P**	**13 49 44.2**	**+2.4**
PKGZ	**Pakihiroa**	**12.52**	**186**	P	**P**	**13 49 42.5**	**+0.9**
PKGZ				S	**S**	**13 51 54.9**	**-1.8**
RUGZ	**Raukumara Rang**	**12.63**	**187**	P	**P**	**13 49 44.1**	**+1.1**
RUGZ				S	**S**	**13 51 56.5**	**-2.6**
PUZ	**Puketiti**	**12.69**	**185**	P	**P**	**13 49 44.2**	**+0.8**
PUZ				S	**S**	**13 51 54.5**	**-5.4**
KMRZ	**Kaimai**	**12.79**	**193**	P	**P**	**13 49 46.1**	**+1.6**
TWGZ	**Tauwhareparae**	**12.81**	**186**	P	**P**	**13 49 44.4**	**-0.4**
TWGZ				S	**S**	**13 51 58.9**	**-3.5**
URZ	**Urewera**	**12.99**	**189**	P	**P**	**13 49 45.6**	**-1.0**
	2.4nm,0.3s,baz=243,slow=4.6,SNR=18						
URZ				S	**S**	**13 52 03.9**	**-1.9**
	6.5nm,0.3s,baz=88,slow=18,SNR=11						
URZ	**Urewera**	**12.99**	**189**	P	**P**	**13 49 44.3**	**-2.3**
URZ	**Urewera**	**12.99**	**189**	P	**P**	**13 49 44.8**	**-1.8**
URZ				S	**S**	**13 52 05.2**	**-0.6**
HIZ	**Hauiti**	**13.68**	**196**	P	**P**	**13 49 55.0**	**+1.2**
BKZ	**Black Stump Fm**	**13.97**	**190**	P	**P**	**13 49 55.8**	**-1.1**
KOUNC	**Koumac, New Ca**	**14.91**	**286**	P	**P**	**13 50 09.3**	**+2.3**
SANVU	**Saraoutou**	**15.26**	**308**	P	**P**	**13 50 09.3**	**-1.4**
SANVU	**Saraoutou**	**15.26**	**308**	P	**P**	**13 50 11.6**	**+0.9**
BFZ	**Birch Farm**	**15.50**	**190**	P	**P**	**13 50 08.7**	**-4.2**
MSWZ	**Moikau Station**	**16.38**	**192**	P	**P**	**13 50 20.9**	**-1.1**
SNZO	**South Karori**	**16.38**	**193**	P	**P**	**13 50 20.7**	**-1.3**
BHW	**Baring Head**	**16.44**	**193**	P	**P**	**13 50 19.7**	**-2.9**
QRZ	**Quartz Range**	**16.48**	**199**	P	**P**	**13 50 22.2**	**-0.8**
NNZ	**Nelson**	**16.60**	**197**	P	**P**	**13 50 21.5**	**-2.8**
THZ	**Tophouse**	**17.24**	**197**	P	**P**	**13 50 28.4**	**-2.2**
THZ				IAmb	IAmb	13 50 34.0	
	comp=Z,21nm,0.8s						
KHZ	**Kahutara**	**17.70**	**195**	P	**P**	**13 50 32.6**	**-2.2**
KHZ				IAmb	IAmb	13 50 36.2	
	comp=Z,14nm,0.8s						
LTZ	**Lake Taylor**	**18.36**	**197**	P	**P**	**13 50 39.0**	**-1.9**
LTZ				IAmb	IAmb	13 50 46.7	
	comp=Z,15nm,0.8s						
OXZ	**Oxford**	**18.93**	**197**	P	**P**	**13 50 45.1**	**-1.0**
OXZ				IAmb	IAmb	13 50 46.4	
	comp=Z,15nm,0.6s						
MQZ	**McQueen’s Vall**	**19.13**	**196**	P	**P**	**13 50 46.3**	**-1.5**
MQZ				IAmb	IAmb	13 51 12.0	
	comp=Z,29nm,1.2s						
RPZ	**Rata Peaks**	**19.56**	**199**	P	**P**	**13 50 52.5**	**+0.7**
	comp=Z,1.3nm,0.3s,baz=350,slow=2.7,SNR=9.1						
RPZ	**Rata Peaks**	**19.56**	**199**	P	**P**	**13 50 51.4**	**-0.4**
RPZ				IAmb	IAmb	13 51 05.0	
	comp=Z,18nm,1.0s						
FOZ	**Fox Glacier**	**19.78**	**201**	P	**P**	**13 50 53.7**	**-0.1**
FOZ				IAmb	IAmb	13 51 02.4	
	comp=Z,20nm,1.0s						
LBZ	**Lake Benmore**	**20.43**	**200**	P	**P**	**13 50 59.2**	**-0.5**
LBZ				IAmb	IAmb	13 51 26.5	
	comp=Z,43nm,1.5s						
WKZ	**Wanaka**	**21.20**	**201**	P	**P**	**13 51 06.6**	**-0.1**
WHZ	**Wether Hill Ro**	**22.49**	**202**	P	**P**	**13 51 19.0**	**+0.7**
HNR	**Honiara**	**24.52**	**307**	P	**P**	**13 51 35.4**	**-1.4**
	comp=Z,50nm,0.4s,baz=142,slow=4.9,SNR=6.0						
HNR	**Honiara**	**24.52**	**307**	P	**P**	**13 51 34.1**	**-2.7**
HNR	**Honiara**	**24.52**	**307**	P	**P**	**13 51 35.6**	**-1.2**
ARMA	**Armidale**	**25.20**	**252**	P	**P**	**13 51 43.5**	**+0.8**
EIDS	**Eidsvold**	**25.76**	**264**	P	**P**	**13 51 48.5**	**+0.9**
CAN	**Canberra**	**28.11**	**242**	P	**P**	**13 52 09.7**	**+1.5**
CAN				IAmb	IAmb	13 52 16.3	
	comp=Z,15nm,1.3s						
CTA	**Charters Tower**	**31.16**	**273**	P	**P**	**13 52 35.6**	**+0.7**
	comp=Z,31nm,0.5s,baz=95,slow=11,SNR=91						
CTAO	**Charters Tower**	**31.16**	**273**	P	**P**	**13 52 35.2**	**+0.3**
TOO	**Toolangi**	**31.36**	**239**	P	**P**	**13 52 37.3**	**+0.9**
RABL	**Rabaul**	**33.75**	**304**	P	**P**	**13 52 56.5**	**-0.4**
STKA	**Stephens Creek**	**33.86**	**250**	P	**P**	**13 52 58.2**	**+0.5**
	comp=Z,2.5nm,0.6s,baz=105,slow=12,SNR=8.4						
STKA				ScP	**ScP**	**13 58 19.4**	**+0.9**
	comp=Z,0.8nm,0.7s,baz=291,slow=2.8,SNR=3.8						
STKA	**Stephens Creek**	**33.86**	**250**	P	**P**	**13 52 58.1**	**+0.4**
PMG	**Port Moresby**	**34.68**	**291**	P	**P**	**13 53 04.5**	**-0.2**
	comp=Z,19nm,0.7s,baz=99,slow=7.0,SNR=10						
PMG	**Port Moresby**	**34.68**	**291**	P	**P**	**13 53 04.0**	**-0.7**
PMG				IAmb	IAmb	13 53 06.0	
	comp=Z,20nm,0.7s						
PMG	**Port Moresby**	**34.68**	**291**	P	**P**	**13 53 05.8**	**+1.0**
XMAS	**Kiritimati**	**35.19**	**43**	P	**P**	**13 53 08.4**	**-0.6**
COEN	**Coen**	**36.03**	**281**	P	**P**	**13 53 16.8**	**+0.7**
COEN				IAmb	IAmb	13 53 17.7	
	comp=Z,20nm,0.9s						
BBOO	**Buckleboo**	**38.55**	**249**	P	**P**	**13 53 35.8**	**-0.7**
MANU	**Manus Island**	**38.78**	**302**	P	**P**	**13 53 38.1**	**-0.5**
MANU				IAmb	IAmb	13 53 40.2	
	comp=Z,17nm,0.8s						
AS31	**Alice Springs**	**41.46**	**262**	P	**P**	**13 54 00.0**	**-0.1**
ASAR	**Alice Springs**	**41.46**	**262**	P	**P**	**13 54 00.1**	**0.0**
	comp=Z,7.3nm,0.5s,baz=92,slow=7.6,SNR=245						
ASAR				ScP	**ScP**	**13 58 49.3**	**+1.6**
	comp=Z,0.7nm,0.8s,baz=139,slow=3.3,SNR=4.2						
ASAR				S	**S**	**13 59 39.6**	**+1.1**
	comp=Z,0.5nm,0.5s,baz=94,slow=17,SNR=7.4						
ASAR	**Alice Springs**	**41.46**	**262**	P	**P**	**13 53 59.1**	**-1.0**
TAOE	**Nuku Hiva Isla**	**41.62**	**74**	P	**P**	**13 54 01.2**	**-0.3**
WR0	**Warramunga Arr**	**41.79**	**268**	P	**P**	**13 54 01.8**	**-0.9**
WR0				IAmb	IAmb	13 54 02.9	
	comp=Z,27nm,1.4s						
WB2	**Warramunga Arr**	**41.97**	**268**	P	**P**	**13 54 03.4**	**-0.7**
WB2				IAmb	IAmb	13 54 04.0	
	comp=Z,17nm,0.5s						
WRAB	**Tennant Creek**	**41.97**	**268**	P	**P**	**13 54 03.3**	**-0.8**
WRAB				IAmb	IAmb	13 54 04.0	
	comp=Z,14nm,0.5s						
WB0	**Warramunga Arr**	**41.98**	**268**	P	**P**	**13 54 03.4**	**-0.8**
WB0				IAmb	IAmb	13 54 04.4	
	comp=Z,18nm,0.7s						
WRA	**Warramunga Arr**	**41.98**	**268**	P	**P**	**13 54 03.7**	**-0.4**
	comp=Z,9.9nm,0.4s,baz=103,slow=7.9,SNR=152						
WRA				ScP	**ScP**	**13 58 52.0**	**+2.2**
	comp=Z,1.4nm,0.8s,baz=99,slow=4.1,SNR=5.6						
WRA				S	**S**	**13 59 45.3**	**-0.7**
	comp=Z,1.6nm,0.9s,baz=97,slow=14,SNR=6.1						
WRA	**Warramunga Arr**	**41.98**	**268**	P	**P**	**13 54 02.5**	**-1.6**
JAY	**Jayapura**	**43.80**	**295**	P	**P**	**13 54 18.2**	**-0.3**
	comp=Z,18nm,0.8s,baz=177,slow=12,SNR=6.7						
FORT	**Forrest**	**45.47**	**251**	P	**P**	**13 54 30.0**	**-1.2**
FORT				IAmb	IAmb	13 54 31.0	
	comp=Z,20nm,0.8s						
MTN	**Manton Dam**	**47.24**	**276**	P	**P**	**13 54 43.5**	**-1.3**
MTN				IAmb	IAmb	13 54 59.1	
	comp=Z,33nm,1.5s						
FITZ	**Fitzroy Crossi**	**50.38**	**267**	P	**P**	**13 55 08.2**	**+0.1**
	comp=Z,11nm,0.5s,baz=106,slow=6.2,SNR=81						
FITZ	**Fitzroy Crossi**	**50.38**	**267**	P	**P**	**13 55 07.8**	**-0.3**
FITZ				IAmb	IAmb	13 55 09.1	
	comp=Z,14nm,0.6s						
KHLU	**Kahalu`u**	**50.67**	**30**	P	**P**	**13 55 09.9**	**-0.3**
HMH	**Humu‘ula Sheep**	**50.87**	**31**	P	**P**	**13 55 11.7**	**-0.2**
POHA	**Pohakuloa**	**50.98**	**31**	P	**P**	**13 55 12.4**	**-0.3**
SIJI	**Sorong**	**52.59**	**290**	P	**P**	**13 55 24.0**	**-0.2**
	comp=Z,46nm,0.7s,baz=115,slow=4.2,SNR=22						
PSA00	**Pilbara Seismi**	**54.56**	**261**	P	**P**	**13 55 37.0**	**-1.1**
SOEI	**Soe**	**54.63**	**276**	P	**P**	**13 55 39.7**	**+0.9**
SOEI				IAmb	IAmb	13 55 46.4	
	comp=Z,23nm,0.8s						
BATI	**Baumata**	**55.00**	**275**	P	**P**	**13 55 41.9**	**+0.7**
	comp=Z,17nm,0.4s,baz=80,slow=0.4,SNR=9.5						
MORW	**Morawa**	**56.04**	**251**	P	**P**	**13 55 47.8**	**-0.6**
MORW				IAmb	IAmb	13 55 49.7	
	comp=Z,25nm,1.3s						
GIRL	**Giralia**	**59.24**	**258**	P	**P**	**13 56 11.0**	**+0.8**
LUWI	**Luwuk**	**59.84**	**285**	P	**P**	**13 56 13.9**	**-0.4**
LUWI				IAmb	IAmb	13 56 37.6	
	comp=Z,23nm,1.0s						
TOLI2	**Tolitoli**	**62.62**	**286**	P	**P**	**13 56 31.0**	**-1.6**
TOLI2				IAmb	IAmb	13 56 33.3	
	comp=Z,13nm,0.7s						
JAGI	**Jajag, Banyuwa**	**64.28**	**273**	P	**P**	**13 56 41.9**	**-1.3**
JAGI				IAmb	IAmb	13 56 42.6	
	comp=Z,28nm,1.1s						
QSPA	**South Pole Qui**	**64.69**	**180**	P	**P**	**13 56 46.0**	**+0.9**
	comp=Z,2.1nm,0.6s,baz=277,slow=1.0,SNR=18						
QSPA	**South Pole Qui**	**64.69**	**180**	P	**P**	**13 56 45.8**	**+0.6**
UGM	**Wanagama**	**67.78**	**272**	P	**P**	**13 57 04.0**	**-1.1**
LEM	**Lembang**	**70.85**	**271**	P	**P**	**13 57 24.1**	**+0.3**
	comp=Z,18nm,0.5s,baz=23,slow=20,SNR=5.9						
XMIS	**Christmas Isla**	**71.16**	**267**	P	**P**	**13 57 25.0**	**-0.5**
XMIS				IAmb	IAmb	13 57 38.1	
	comp=Z,35nm,0.9s						
KSM	**Kuching**	**72.02**	**281**	P	**P**	**13 57 30.0**	**-0.4**
KSM				IAmb	IAmb	13 57 33.8	
	comp=Z,48nm,1.3s						
INU	**Inuyama**	**72.63**	**325**	P	**P**	**13 57 33.5**	**+0.1**
INU				IAmb	IAmb	13 57 56.5	
	comp=Z,51nm,1.5s						
JGF	**Kuroka**	**72.64**	**325**	P	**P**	**13 57 33.3**	**-0.2**
MJAR	**Matsushiro Arr**	**72.94**	**326**	P	**P**	**13 57 34.9**	**-0.3**
	comp=Z,6.9nm,0.8s,baz=159,slow=5.6,SNR=12						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	72.94	326	P	P	13 57 35.0	-0.2
MAJO	Matsushiro	72.94	326	P	P	13 57 34.9	-0.3
MAJO				IAmb	IAmb	13 57 35.3	
	comp=Z,12nm,0.8s						
MAT	Matsushiro	72.94	326	P	P	13 57 34.2	-1.0
MJB9	Matsu-Tunnel	72.94	326	P	P	13 57 35.4	+0.2
MJB9				IAmb	IAmb	13 57 35.7	
	comp=Z,21nm,0.6s						
JMN	Monobe	73.12	321	P	P	13 57 36.4	0.0
JWT	Wachi	73.44	323	P	P	13 57 38.0	-0.1
JSU	Suzuyama	73.54	318	P	P	13 57 38.3	-0.5
JSU				IAmb	IAmb	13 57 56.6	
	comp=Z,47nm,1.3s						
JNU	Nakatsue	74.42	319	P	P	13 57 43.3	-0.4
	comp=Z,12nm,0.9s,baz=28,slow=3.0,SNR=6.5						
JNU	Nakatsue	74.42	319	P	P	13 57 43.4	-0.4
JNU				IAmb	IAmb	13 57 43.8	
	comp=Z,19nm,1.0s						
TPUB	Ta-pu	74.89	305	P	P	13 57 44.6	-1.9
SSLB	Suanglung	74.94	306	P	P	13 57 45.2	-1.6
SSLB				IAmb	IAmb	13 57 46.0	
	comp=Z,12nm,0.9s						
BELA	Belgrano 2	75.00	173	P	P	13 57 45.9	-0.4
MNAI	Manna	76.09	272	P	P	13 57 54.0	+0.4
JKA	Kamikawa-asahi	77.04	334	P	P	13 57 58.5	+0.6
JKA	Kamikawa-asahi	77.04	334	IAmb	IAmb	13 58 06.5	
	comp=Z,36nm,1.3s						
ASAJ	Asahikawa	77.04	334	P	P	13 57 58.5	+0.6
	comp=Z,6.7nm,1.0s,baz=252,slow=12,SNR=5.1						
KSRS	Korea Array	79.17	321	P	P	13 58 10.1	+0.5
	comp=Z,4.4nm,0.7s,baz=133,slow=5.4,SNR=15						
KSAR	Wonju Array Be	79.19	320	P	P	13 58 10.4	+0.7
PETK	Petropavlovsk-	80.47	347	P	P	13 58 16.2	+0.1
	comp=Z,4.5nm,0.8s,baz=120,slow=9.2,SNR=5.3						
NJ2	Nanjing	81.38	311	eP	P	13 58 21.1	-0.2
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
USRK	Ussuriysk Ar.	81.83	328	P	P	13 58 24.1	+0.8
	comp=Z,1.4nm,0.6s,baz=103,slow=6.4,SNR=2.8						
VNA3	Neumayer Olymp	83.40	177	P	P	13 58 30.4	-0.6
VNA2	Neumayer--Watz	83.81	178	P	P	13 58 32.5	-0.5
	baz=195,slow=4.6						
ISA	Isabella, Lake	84.31	46	P	P	13 58 36.6	+0.6
ISA				IAmb	IAmb	13 58 37.6	
	comp=Z,10nm,0.8s						
AFDM	Forest Hills D	84.73	42	P	P	13 58 38.7	+0.6
ORV	Oroville	84.80	42	P	P	13 58 38.7	+0.4
GLA	Glamis	85.26	50	P	P	13 58 41.1	+0.4
GLA				IAmb	IAmb	13 58 42.9	
	comp=Z,13nm,1.0s						
KLR	Kul'dur	85.66	331	P	P	13 58 43.1	+0.9
	comp=Z,1.3nm,0.7s,baz=201,slow=1.5,SNR=4.7						
PNTR	Pine Nut	85.66	43	P	P	13 58 43.0	+0.2
PNTR				IAmb	IAmb	13 58 44.1	
	comp=Z,7.7nm,0.8s						
BEKR	Beckworth	85.68	42	P	P	13 58 42.6	-0.2
113A	Mohawk Valley,	85.84	51	P	P	13 58 43.6	+0.1
214A	Organ Pipe Nat	86.07	52	P	P	13 58 45.3	+0.7
NVAR	Mina Array Bea	86.07	44	P	P	13 58 45.1	+0.4
	comp=Z,3.3nm,0.8s,baz=223,slow=8.5,SNR=14						
NVAR	Mina Array Bea	86.07	44	P	P	13 58 44.4	-0.4
NV11	Mina Array Sit	86.17	44	P	P	13 58 45.2	+0.1
PAHR	Pah Rah Range	86.17	43	P	P	13 58 44.9	-0.2
TPNV	Topopah Spring	86.52	46	P	P	13 58 46.6	-0.2
MOD	Modoc Plateau	86.97	40	P	P	13 58 48.7	-0.1
PLCA	Paso Flores	87.47	134	P	P	13 58 52.1	+0.8
	comp=Z,1.0nm,0.6s,baz=207,slow=8.2,SNR=3.5						
PRN	Pahroc Range	87.57	46	P	P	13 58 52.3	+0.6
TUC	Tucson	87.71	53	P	P	13 58 53.2	+0.8
TUC				IAmb	IAmb	13 58 54.8	
	comp=Z,5.3nm,0.8s						
PINE	Pine Mountain	87.78	39	P	P	13 58 53.3	+0.7
PINE				IAmb	IAmb	13 58 55.1	
	comp=Z,22nm,1.1s						
WVOR	Wild Horse Val	88.27	41	P	P	13 58 54.7	-0.1
WVOR				IAmb	IAmb	13 58 56.2	
	comp=Z,8.2nm,1.1s						
319A	Douglas	88.31	54	P	P	13 58 56.2	+0.8
319A				IAmb	IAmb	13 58 57.7	
	comp=Z,13nm,1.1s						
X16A	Lo Mia Camp, P	88.36	51	P	P	13 58 56.0	+0.4
LCMT	Little Creek M	88.54	48	P	P	13 58 56.7	+0.4
CCUT	Cedar City	88.76	47	P	P	13 58 57.8	+0.4
I07A	Izee	88.77	39	P	P	13 58 57.6	+0.4
I07A				IAmb	IAmb	13 58 58.3	
	comp=Z,5.6nm,0.8s						
KNB	Kanab	88.82	48	P	P	13 58 58.2	+0.6
U15A	North Rim	88.86	48	P	P	13 58 58.5	+0.5
U15A				IAmb	IAmb	13 58 59.8	
	comp=Z,4.9nm,0.8s						
SZCU	Shurtz Canyon	88.97	47	P	P	13 58 58.7	+0.4
WUAZ	Wupatki	89.00	50	P	P	13 58 58.7	+0.2
WUAZ				IAmb	IAmb	13 59 00.1	
	comp=Z,6.7nm,1.1s						
ELK	Elko	89.34	44	P	P	13 59 00.1	0.0
XAN	Xi'an	89.39	308	P	P	13 59 00.8	+0.6
XAN				pP	PcP	13 59 08.2	+7.1
XAN				pmax	pmax		
	comp=Z,10.0nm,0.9s						
X18A	Snowflake	89.47	51	P	P	13 59 01.1	+0.4
KMI	Kunming	89.65	298	⇑P	P	13 59 03.2	+1.4
KMI				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CMAR	Chiang Mai Arr	89.72	291	P	P	13 59 03.2	+1.2
	comp=Z,2.0nm,0.9s,baz=138,slow=3.6,SNR=14						
CMAR	Chiang Mai Arr	89.72	291	P	P	13 59 02.7	+0.7
MTPU	Mount Pierson	89.81	47	P	P	13 59 03.4	+1.0
MSU	Marysvale	90.07	47	P	P	13 59 04.2	+0.7
SKT	Skwentna	90.11	13	P	P	13 59 04.2	+1.4
MFID	Camas Ranch	90.52	41	P	P	13 59 05.2	0.0
SEY	Seymchan	90.66	348	P	P	13 59 05.0	-0.2
	comp=Z,1.1nm,0.6s,baz=77,slow=22,SNR=5.5						
TMUT	Trail Mountain	91.13	47	P	P	13 59 08.9	+0.5
HHC	Hu-ho-hao-te	91.23	315	eP	P	13 59 08.8	+0.2
HHC				pmax	pmax		
	comp=Z,6.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,810nm,5.1s						
HVU	Hansel Valley	91.46	44	P	P	13 59 09.7	0.0
SRU	San Rafael Swe	91.48	47	P	P	13 59 09.6	-0.3
TX31	Lajitas Ar. Si	91.52	58	P	P	13 59 10.2	-0.1
TX31				IAmb	IAmb	13 59 11.3	
	comp=Z,9.3nm,0.9s						
TX32	Lajitas Array	91.52	58	P	P	13 59 10.2	0.0
TXAR	Lajitas Array	91.52	58	P	P	13 59 10.9	+0.6
	comp=Z,2.3nm,0.8s,baz=213,slow=6.3,SNR=25						
TXAR	Lajitas Array	91.52	58	P	P	13 59 10.3	+0.1
ILAR	Eielson Array	93.57	14	P	P	13 59 17.7	-0.9
	comp=Z,0.4nm,0.9s,baz=218,slow=6.0,SNR=1.9						
PDAR	Pinedale Array	94.01	44	P	P	13 59 21.0	-0.5
	comp=Z,0.5nm,0.8s,baz=224,slow=4.1,SNR=3.5						
LZH	Lanzhou	94.02	308	⇑P	P	13 59 18.8	-2.8
LZH				pP	pP	14 01 14.5	+1.3
LZH				sP	sP	14 02 05.8	+1.9
LZH				pmax	pmax		
	comp=Z,20nm,1.4s						
LZH				pmax	pmax		
	comp=Z,110nm,5.5s						
SONM	Songino Array	98.01	319	P	Pdif	13 59 40.2	+1.0
	comp=Z,0.2nm,0.6s,baz=132,slow=4.3,SNR=2.1						
KSH	Kashi	115.81	303	PKP	PKPdf	14 04 43.3	+0.7
KSH				PP	PP	14 06 11.6	+16
KSH				AMB	AMB		
	comp=Z,700nm,6.1s						
TULEG	Thule	119.51	14		PKPdf	14 04 49.6	+1.2
GEYT	Alibeck	129.40	299	SKPbc	SKPbc	14 07 44.2	+1.4
	comp=Z,2.0nm,0.6s,baz=294,slow=4.4,SNR=3.9						
ARCES	ARCESS Array B	133.28	348	SKPbc	SKPbc	14 07 55.5	+0.1
	comp=Z,1.8nm,0.5s,baz=35,slow=3.0,SNR=12						
FINES	FINESS Array B	139.74	341	SKPbc	SKPbc	14 08 14.8	0.0
	comp=Z,5.1nm,0.8s,baz=29,slow=4.4,SNR=11						
NB2	NORSAR Subarra	143.50	351	PKP	PKPab	14 05 31.4	-0.8
	comp=Z,1.2nm,0.6s,baz=16,slow=3.3						
NOA	NORSAR Array B	143.50	351	PKP	PKPab	14 05 31.4	-0.8
	comp=Z,1.0nm,0.7s,baz=17,slow=1.6,SNR=6.9						
HFS	Hagfors	143.94	348	PKP	PKPbc	14 05 32.9	-0.8
	comp=Z,4.2nm,0.5s,baz=58,slow=3.9,SNR=16						
AKASG	Malin Array Be	146.02	326	PKPbc	PKPdf	14 05 39.5	+1.1
	comp=Z,2.0nm,0.4s,baz=38,slow=4.5,SNR=9.3						
AKASG				SKPbc	SKPbc	14 08 30.8	+0.4
	comp=Z,0.3nm,0.4s,baz=46,slow=2.4,SNR=4.1						
MMAI	Mount Meron Ar	147.97	292	PKPbc	PKPbc	14 05 46.9	+0.8
	comp=Z,3.1nm,0.4s,baz=66,slow=4.9,SNR=5.1						
BRTR	Keskin Array B	148.17	305	PKPbc	PKPbc	14 05 46.3	-0.3
	comp=Z,2.3nm,0.6s,baz=164,slow=2.7,SNR=2.5						
BRTR	Keskin Array B	148.17	305		PKiKP	14 05 50.7	+2.9
EKA	Eskdalemuir Ar	150.03	3	PKPbc	PKPbc	14 05 49.7	-0.6
	comp=Z,0.3nm,0.4s,baz=0.0,slow=3.5,SNR=1.7						

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*IDC **10** 13:50:44.6±1.2, 53°.32N×160°.62E, h0^{km}, mb3.7/8, mb1 3.8/8, mb1mx3.4/75, mbtmp3.7/8, MS4.2/1, Ms1 4.2/1, ms1mx3.3/42, Error ellipse: s-maj=34.7km s-min=17.9km az=163.0*

*NEIC **10** 13:50:45.0±1.7, 53°.4N±0°.3×160°.8E±0°.2, h6^{km}±6^{km}, mb4.2/6, Error ellipse: s-maj=37.5km s-min=12.7km az=165.0*

*KRSC **10** 13:50:48.0±0.9, 53°.25N×160°.61E, h41^{km}±10^{km}, ML4.2*

ISC 10 13:50:45.1±1.5**, 53°.33N**±0°.04×**160°.63E**±0°.04**, h5**^{km}±9^{km}**, n60, σ1°.10**/72**, mb4.0**/11**, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	Mys Shipunski	0.43	238	eP	Pn	13 50 58.3	+0.5
SPN				eS	Sb	13 51 04.6	+2.8
NLC	Nalytchevo	0.79	259	eP	Pn	13 51 03.3	+0.6
NLC				eS	Sn	13 51 13.4	-1.4
KII	Karymskiy	1.00	316	eP	Pn	13 51 07.4	+1.7
KII				eS	Sn	13 51 20.2	0.0
UGLR	Uglovaya	1.09	264	eP	Pn	13 51 08.3	+1.3
UGLR				eS	Sn	13 51 22.2	-0.3
SMAR	Somma	1.10	267	eP	Pn	13 51 08.2	+1.0
KRER	Koryakskii	1.13	270	eP	Pn	13 51 09.0	+1.4
KRER				eS	Sn	13 51 23.8	+0.3
AVH	Avacha	1.14	268	eP	Pn	13 51 09.0	+1.4
AVH				eS	Sn	13 51 23.7	+0.1
DALK	Dalny	1.17	256	eP	Pn	13 51 08.4	+0.5
DALK				eS	Sb	13 51 22.4	-0.6
KRX	Arik	1.19	272	eP	Pn	13 51 09.5	+1.1
KRX				eS	Sb	13 51 23.9	+0.1
KOK	Koryaka	1.20	269	eP	Pn	13 51 09.7	+1.2
KOK				eS	Sn	13 51 24.3	-0.8
PET	Petropavlovsk	1.23	256	eP	Pn	13 51 09.4	+0.6
PET				eS	Sg	13 51 24.0	-0.4
PET	Petropavlovsk	1.23	256	Pn	Pn	13 51 09.1	+0.4
RUS	Russkaya	1.56	236	eP	Pb	13 51 13.7	-0.7
RUS				eS	Sn	13 51 31.7	-2.3
KRMR	Karymshinskiy	1.59	253	eP	Pg	13 51 15.4	0.0
KRMR				eS	Sn	13 51 34.4	-0.2
GNL	Ganaly	1.65	284	eP	Pg	13 51 16.9	+0.3
GNL				eS	Sg	13 51 37.9	0.0
MTVR	Mutnovka	1.71	241	eP	Pb	13 51 16.2	-0.7
MTVR				eS	Sn	13 51 36.0	-1.7
GRL	Gorelyy	1.73	244	eP	Pb	13 51 17.0	-0.3
PEA0B	Petropavlovsk-	1.77	264		Pb	13 51 18.3	+0.3
PETK	Petropavlovsk-	1.77	264	Pn	Pb	13 51 18.0	0.0
	18nm,0.3s,baz=96,slow=20,SNR=285						
PETK				Sn	Sb	13 51 40.2	-0.3
	47nm,0.3s,baz=96,slow=38,SNR=13						
PETK	Petropavlovsk-	1.77	264		Pb	13 51 17.7	-0.4
KZV	Kizimen	1.80	354	eP	Pg	13 51 20.0	+0.5
KZV				eS	Sg	13 51 43.5	+0.6
TUMD	Tumrok D	1.88	356	eP	Pg	13 51 20.7	-0.5
TUMD				eS	Sb	13 51 43.9	+0.2
TUMR	Tumrok	1.98	352	eP	Pg	13 51 22.9	-0.1
APC	Apacha	2.13	260	eP	Pb	13 51 23.9	-0.1
APC				eS	Sb	13 51 49.2	-1.5
KDTR	Khodutka, Kamc	2.18	227	eP	Pb	13 51 24.1	-0.7
KDTR				eS	Sn	13 51 49.4	+0.3
KMNR	Kamenistaya	2.44	355	eP	Pb	13 51 30.4	+0.9
KOZ	Kozyrevsk	2.77	351	eP	Pb	13 51 33.9	-1.1
ESO	Esso	2.83	337	eP	Pb	13 51 34.6	-1.5
KLY	Klyuchi	2.99	0	eP	Pb	13 51 37.4	-1.3
SRDR	Sredinnyy	3.04	350	eP	Pb	13 51 37.2	-2.4
KBTR	Krutoberegovo	3.15	23	eP	Pb	13 51 38.9	-2.6
KBG	Krutoberegovo	3.17	21	eP	Pb	13 51 40.9	-0.9
BDR	Baidarnaya	3.27	6	eP	Pb	13 51 41.6	-1.9
SMKR	Semkarok	3.30	8	eP	Pb	13 51 42.9	-1.1
SRKR	Sorokina	3.35	5	eP	Pb	13 51 43.1	-1.8
BKI	Bering	3.66	57	eP	Pn	13 51 44.7	+2.6
CHGN	Chignik	23.54	66	P	P	13 55 54.7	-1.0
ILAR	Eielson Array	28.42	46	P	P	13 56 41.0	+0.9
	0.6nm,0.9s,baz=260,slow=8.1,SNR=4.3						
H11N2	WAKE ISLAND Hy	33.88	169	T	T	14 33 51.1	
	baz=353,slow=76,SNR=17						
H11N3	WAKE ISLAND Hy	33.90	169	T	T	14 33 26.1	
	baz=353,slow=76,SNR=16						
H11N1	WAKE ISLAND Hy	33.90	169	T	T	14 33 54.2	
	baz=353,slow=76,SNR=18						
H11S1	WAKE ISLAND Hy	35.07	170	T	T	14 35 21.1	
	baz=353						
H11S3	WAKE ISLAND Hy	35.08	170	T	T	14 35 19.5	
	baz=353						
H11S2	WAKE ISLAND Hy	35.09	170	T	T	14 35 15.8	
	baz=353						
YKA	Yellowknife Ar	42.77	43	P	P	13 58 43.7	+0.8
	0.4nm,0.8s,baz=301,slow=6.8,SNR=4.9						
SPITS	Spitsbergen Ar	46.96	351	P	P	13 59 15.5	-0.5
	8.0nm,1.0s,baz=33,slow=9.2,SNR=1.6						
KURBB	Kurchatov Arra	47.98	302	P	P	13 59 24.7	+0.4
	0.3nm,0.5s,baz=61,slow=7.7,SNR=3.3						
MK31	Makanchi Array	48.34	296	P	P	13 59 27.5	+0.3
MKAR	Makanchi Array	48.34	296	P	P	13 59 27.4	+0.2
	0.7nm,0.4s,baz=54,slow=6.4,SNR=20						
MAKZ	Makanchi	48.50	296	P	P	13 59 28.8	+0.3
MAKZ				IAmb	IAmb	13 59 29.7	
	comp=Z,4.3nm,1.4s						
BRVK	Borovoye	50.52	309	P	P	13 59 44.8	+1.0
BRVK				IAmb	IAmb	13 59 51.4	
	comp=Z,2.5nm,1.4s						
DAV	Davao City (W)	54.18	225	LR	LR	14 19 04.6	
	comp=Z,230nm,22.0s,baz=297,slow=31						
GCMT	Greycliff	54.98	59	P	P	14 00 17.1	+0.1
ILULI	Ilulissat	55.58	13	P	P	14 00 20.8	+0.1
PDAR	Pinedale Array	57.13	61	P	P	14 00 31.2	-1.3
DUG	Dugway, Tooele	57.18	65	P	P	14 00 30.8	-2.1
DUG				IAmb	IAmb	14 00 34.7	
	comp=Z,3.4nm,1.4s						
FINES	FINESS Array B	60.03	337	P	P	14 00 51.9	-0.3
	comp=Z,3.4nm,1.1s,baz=32,slow=8.2,SNR=1.7						
TXAR	Lajitas Array	70.25	67	P	P	14 02 00.1	+0.9
	comp=Z,0.2nm,0.6s,baz=308,slow=4.4,SNR=2.8						
TXAR	Lajitas Array	70.25	67	P	P	14 01 59.6	+0.4
ASAR	Alice Springs	80.11	205	P	P	14 02 55.3	-0.4
	comp=Z,0.1nm,0.4s,baz=15,slow=5.6,SNR=4.6						

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*NEIC **10** 14:00:36.2±2.9, 6°.86S±0°.08×104°.15E±0°.09, h8^{km}±5^{km}, mb4.4/13, Error ellipse: s-maj=14.9km s-min=8.1km az=47.0*

*IDC **10** 14:00:36.2±1.7, 6°.63S×104°.15E, h0^{km}, mb3.7/9, mb1 3.8/11, mb1mx3.6/60, mbtmp3.8/11, ML4.1/2, Error ellipse: s-maj=54.3km s-min=16.8km az=41.0*

*DJA **10** 14:00:38.9±0.4, 7°S±4°×10°4E±°, h10^{km}, M3.9/11, MLv3.9/11*

ISC 10 14:00:38.0±0.6**, 6°.83S**±0°.06×**104°.09E**±0°.05**, h24**^{km}**, n49, σ1°.51**/51**, mb4.1**/14**, Sunda Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KASI	Kota Agung	1.36	17	P	Pb	14 01 02.4	-0.4
LWLI	Liwa	1.80	359	P	Pb	14 01 10.6	+0.2
BLSI	Bandar Lampung	1.85	38	P	Pb	14 01 09.0	-2.2
BLSI				S	Sb	14 01 31.1	-2.9
KLSI		2.22	17	P	Pb	14 01 15.7	-1.8
MDSI	Maura Dua	2.33	2	P	Pb	14 01 18.1	-1.3
DBJI	Dramaga	2.66	84	P	Pn	14 01 20.3	+1.0
MNAI	Manna	2.70	335	Pn	Pb	14 01 23.9	-1.8
MNAI	Manna	2.70	335	P	Pb	14 01 24.2	-1.5
CBJI	Citeko	2.77	82	P	Pb	14 01 24.0	-2.9
LHSI	Lahat	3.04	349	P	Pb	14 01 29.0	-2.4
KSI	Kapahiang	3.49	335	P	Pb	14 01 35.6	-3.6
LEM	Lembang	3.50	90	Pn	Pn	14 01 31.4	+0.2
	3.1nm,0.3s,baz=325,slow=19,SNR=1.8						
LEM				Sn	Sn	14 02 14.9	+3.0
	5.1nm,0.3s,baz=342,slow=20,SNR=1.7						
LEM	Lembang	3.50	90	P	Pn	14 01 31.8	+0.7
CISI	Cisompet, Garu	3.77	101	Pn	Pn	14 01 33.0	-1.7
CISI	Cisompet, Garu	3.77	101	P	Pn	14 01 34.8	+0.1
XMIS	Christmas Isla	3.94	157	Pn	Pn	14 01 35.3	-1.8
SMRI	Semarang	6.31	92	Pn	Pn	14 02 07.9	-1.6
UGM	Wanagama	6.47	100	Pn	Pn	14 02 12.6	+0.8
JAGI	Jajag, Banyuwa	10.11	100	Pn	Pn	14 03 02.1	+0.3
GSI	Gunungsitoli	10.37	321	Pn	Pn	14 03 05.8	+0.4
TOLI2	Tolitoli	18.43	65		Pn	14 04 52.1	+0.1
GIRL	Giralia	18.51	149		Pn	14 04 54.2	+1.3
BATI	Baumata	19.64	101	P	Pn	14 05 06.7	-0.1
	2.9nm,0.3s,baz=79,slow=3.4,SNR=4.2						
BATI				S	S	14 08 43.5	-2.3
	1.0nm,0.3s,baz=315,slow=19,SNR=1.9						
SOEI	Soe	20.18	100	P	P	14 05 11.1	-0.1
SOEI				IAmb	IAmb	14 05 35.2	
	comp=Z,32nm,1.3s						
CMAR	Chiang Mai Arr	25.64	349	P	P	14 06 05.8	-0.2
	comp=Z,0.5nm,0.7s,baz=180,slow=8.2,SNR=7.6						
MTN	Manton Dam	27.29	105	P	P	14 06 22.5	+1.5
WRA	Warramunga Arr	32.11	117	P	P	14 07 06.0	+2.3
	comp=Z,0.4nm,0.8s,baz=289,slow=10.0,SNR=2.5						
WB2	Warramunga Arr	32.12	117	P	P	14 07 05.0	+1.3
WB2				IAmb	IAmb	14 07 18.8	
	comp=Z,5.2nm,1.1s						
WR0	Warramunga Arr	32.29	117	P	P	14 07 06.7	+1.4
WR0				IAmb	IAmb	14 07 23.0	
	comp=Z,7.2nm,1.3s						
ASAR	Alice Springs	33.16	124	P	P	14 07 14.4	+1.5
	comp=Z,0.1nm,0.5s,baz=301,slow=8.0,SNR=5.5						
ENH	Enshi	37.25	8	P	P	14 07 47.2	-0.7
ENH				IAmb	IAmb	14 08 04.5	
	comp=Z,4.6nm,0.5s						
LSA	Lhasa	38.39	342	P	P	14 07 57.9	-0.2
LSA				IAmb	IAmb	14 08 19.1	
	comp=Z,1.9nm,0.4s						
STKA	Stephens Creek	42.92	130	P	P	14 08 34.9	-0.2
SONM	Songino Array	54.47	2	P	P	14 10 04.5	+0.8
	comp=Z,1.0nm,1.0s,baz=174,slow=6.6,SNR=6.0						
SONM	Songino Array	54.47	2	IAmb	IAmb	14 10 05.3	
	comp=Z,1.0nm,0.9s						
USA0B	Ussuriysk Arra	56.70	24	P	P	14 10 19.4	-0.1
USRK	Ussuriysk Ar.	56.70	24	P	P	14 10 19.5	-0.1
	comp=Z,3.1nm,0.7s,baz=206,slow=3.5,SNR=4.4						
USRK	Ussuriysk Ar.	56.70	24	P	P	14 10 19.6	+0.1
MK31	Makanchi Array	56.80	342	P	P	14 10 21.3	+1.0
MKAR	Makanchi Array	56.80	342	P	P	14 10 21.7	+1.4
	comp=Z,0.6nm,0.5s,baz=149,slow=9.7,SNR=8.7						
MKAR	Makanchi Array	56.80	342	P	P	14 10 21.4	+1.1
KURBB	Kurchatov Arra	61.35	342	P	P	14 10 53.0	+1.3
	comp=Z,0.6nm,0.7s,baz=153,slow=6.3,SNR=4.9						
ZAA0	Zalesovo Array	62.69	347	P	P	14 11 01.3	+0.6
ZAA0				IAmb	IAmb	14 11 13.6	
	comp=Z,4.4nm,1.4s						
ZALV	Zalesovo Beam	62.69	347	P	P	14 11 00.3	-0.4
	comp=Z,2.6nm,0.3s,baz=149,slow=5.5,SNR=18						
ZALV	Zalesovo Beam	62.69	347	P	P	14 11 01.4	+0.8
BVAR	Borovoye Array	66.12	338	P	P	14 11 24.1	+1.0
	comp=Z,0.8nm,0.6s,baz=156,slow=14,SNR=6.8						
ABKAR	Akbulak array	67.82	330	P	P	14 11 35.4	+1.4
TXAR	Lajitas Array	145.58	46	PKPbc	PKiKP	14 20 17.4	-1.7
	comp=Z,0.6nm,0.5s,baz=249,slow=1.4,SNR=14						
TXAR	Lajitas Array	145.58	46		PKiKP	14 20 17.1	-2.0

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*IDC **10** 14:22:50.7±1.5, 19°.56S×70°.76W, h0^{km}, mb4.0/4, mb1 4.1/6, mb1mx3.8/36, mbtmp4.0/6, ML3.5/2, MS3.5/1, Ms1 3.5/1, ms1mx2.8/40, Error ellipse: s-maj=40.4km s-min=23.3km az=85.0*

*NEIC **10** 14:22:52.4±1.9, 19°.79S±0°.04×70°.99W±0°.07, h16^{km}±5^{km}, mb4.2/5, ML4.0(GUC), Error ellipse: s-maj=10.1km s-min=6.1km az=101.0*

*GUC **10** 14:22:54.5±0.7, 19°.75S×71°.01W, h35^{km}±3^{km}, ML4.0*

ISC 10 14:22:51.4±2.2**, 19°.74S**±0°.04×**71°.03W**±0°.06**, h10**^{km}±14^{km}**, n49, σ1°.03**/55**, mb4.2**/5**, 4C-1D, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.86	81	⇓iP	Pb	14 23 08.4	-0.2
PSGC				i S	Sg	14 23 20.4	+1.0
PSGCX	Pisagua	0.86	81	Pg	Pb	14 23 08.5	-0.1
PSGCX				Sg	Sg	14 23 20.2	+0.8
TA02	Huaiquique	0.99	122	eP	Pn	14 23 11.2	-0.3
TA02				eS	Sn	14 23 24.9	-0.7
TA02				IAML		14 23 26.3	
	comp=E,5µm,0.4s						
TA01	Diego Aracena	1.14	136	eP	Pn	14 23 13.4	-0.2
TA01				eS	Sn	14 23 28.0	-1.3
TA01				IAML		14 23 33.3	
	comp=N,3µm,0.5s						
TA01	Diego Aracena	1.14	136		Pn	14 23 13.4	-0.2
HMBC	Humberstone	1.20	117	⇑iP	Pb	14 23 14.2	-0.2
HMBC				eS	Sn	14 23 29.6	-1.2
HMBC				IAML		14 23 34.9	
	comp=N,8µm,0.5s						
PATCX	Punta Patache	1.35	143	⇑iP	Pn	14 23 16.4	-0.2
PATCX				i S	Sb	14 23 33.8	-0.6
PATCX				IAML		14 23 43.0	
	comp=E,2µm,0.4s						
PATCX	Punta Patache	1.35	143	Pn	Pn	14 23 16.4	-0.2
MNMC	Minye Minye	1.48	66	eP	Pb	14 23 19.0	-0.3
MNMC				i S	Sb	14 23 38.6	+0.3
MNMC	Minye Minye	1.48	66		Pb	14 23 19.1	-0.2
AP01	Chacalluta	1.51	26	⇑iP	Pb	14 23 19.8	+0.2
AP01				i S	Sn	14 23 37.9	-0.4
AP01				IAML		14 23 41.8	
	comp=E,9µm,0.5s						
AP01	Chacalluta	1.51	26		Pb	14 23 19.6	+0.1
PB08	IPOC Station P	1.81	103	eP	Pn	14 23 23.6	+0.6
PB08				i S	Sb	14 23 47.2	-0.6
PB08	IPOC Station P	1.81	103		Pn	14 23 23.4	+0.4
PB02	IPOC Station P	1.90	146	eP	Pn	14 23 24.3	+0.3
PB02				eS	Sn	14 23 47.8	-0.3
PB02				IAML		14 23 59.4	
	comp=E,3µm,0.6s						
PB01	IPOC Station P	1.94	132	⇑iP	Pn	14 23 25.2	+0.5
PB01				i S	Sn	14 23 48.6	-0.5
PB01				IAML		14 23 56.0	
	comp=E,1µm,0.7s						
PB01	IPOC Station P	1.94	132		Pn	14 23 24.9	+0.3
PB16	IPOC Station P	2.00	46		Pb	14 23 27.3	-1.1
PB07	IPOC Station P	2.25	152	eP	Pn	14 23 29.0	+0.1
PB07				i S	Sb	14 24 01.3	+1.0
PB07				IAML		14 24 08.7	
	comp=E,1µm,0.6s						
PB07	IPOC Station P	2.25	152		Pn	14 23 29.1	+0.1
PB09	IPOC Station P	2.64	141		Pn	14 23 35.2	+0.9
PB04	IPOC Station P	2.71	163		Pn	14 23 34.7	-0.6
PB06	IPOC Station P	3.25	156		Pn	14 23 42.1	-0.6
LVC	Limon Verde	3.47	146	Pn	Pn	14 23 47.6	+1.7
	comp=E,7.6nm,0.3s,baz=327,slow=9.9,SNR=33						
LVC				Sn	Sn	14 24 29.1	+1.7
	comp=E,10nm,0.3s,baz=177,slow=4.4,SNR=5.8						
LVC				Lg	Lg	14 24 40.7	
	comp=E,21nm,0.3s,baz=71,slow=15,SNR=9.3						
LVC	Limon Verde	3.47	146	Pn	Pn	14 23 45.2	-0.7
PB15	IPOC Station P	3.74	157		Pn	14 23 48.5	-1.0
PB10	IPOC Station P	3.78	173	Pn	Pn	14 23 48.4	-1.5
PB14	IPOC Station P	4.90	173	Pn	Pn	14 24 03.8	-1.7
GO02	Mina Guanaco	5.56	166	Pn	Pn	14 24 13.7	-0.9
AC01	Pan de Azucar	6.39	177	Pn	Pn	14 24 23.8	-2.0
AC05	El Transito	9.08	176	Pn	Pn	14 25 02.4	-0.4
SIV	San Ignacio	10.19	70	Pn	Pn	14 25 15.4	-2.5
	comp=E,0.3nm,0.3s,baz=247,slow=12,SNR=2.7						
SIV				LR	LR	14 29 57.9	
	comp=E,296nm,21.3s,baz=254,slow=43						
SAML	Samuel	13.14	36		Pn	14 25 58.4	+0.1
PLCA	Paso Flores	20.93	179	P	Pn	14 27 36.8	-0.2
	comp=E,3.1nm,1.0s,baz=12,slow=12,SNR=2.9						
PLCA	Paso Flores	20.93	179	P	P	14 27 34.3	-0.1
PTGA	Pitinga	21.78	31	P	P	14 27 41.3	-2.3
	comp=E,2.5nm,0.3s,baz=199,slow=10,SNR=6.4						
PTGA	Pitinga	21.78	31	P	P	14 27 42.0	-1.6
PTGA				IAmb	IAmb	14 27 46.5	
	comp=Z,14nm,1.3s						
ACON	Acoyapa	34.45	335	P	P	14 29 39.8	+0.2
QSPA	South Pole Qui	70.44	180	P	P	14 34 08.1	+2.2
QSPA				IAmb	IAmb	14 34 21.0	
	comp=Z,1.2nm,0.8s						
LRM	Limekiln Ridge	75.29	331	P	P	14 34 36.8	+1.8
TOA0	Torodi Ar. Sit	78.66	72	P	P	14 34 53.5	-0.8
TOA0				IAmb	IAmb	14 34 54.4	
	comp=Z,4.3nm,1.1s						
TORD	Torodi Ar. Bea	78.66	72	P	P	14 34 53.1	-1.3
	comp=Z,1.7nm,0.7s,baz=255,slow=5.3,SNR=8.6						
YKA	Yellowknife Ar	88.88	341	P	P	14 35 46.4	+0.8
	comp=Z,1.1nm,1.0s,baz=132,slow=5.5,SNR=11						
H11S2	WAKE ISLAND Hy	125.67	279	T	T	17 01 07.4	
	baz=101,slow=75						
H11S1	WAKE ISLAND Hy	125.67	279	T	T	17 01 11.0	
	baz=101,slow=75						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H11S3	WAKE ISLAND Hy	125.69	279	T	T	17 01 11.7	
	baz=101,slow=75						
H11N3	WAKE ISLAND Hy	125.71	281	T	T	17 01 16.6	
	baz=101,slow=74						
H11N2	WAKE ISLAND Hy	125.72	281	T	T	17 01 15.7	
	baz=101,slow=74						
H11N1	WAKE ISLAND Hy	125.73	280	T	T	17 01 13.1	
	baz=101						

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*IDC **10** 14:31:33.2±0.8, 52°.28N×168°.74W, h0^{km}, mb4.2/28, mb1 4.4/29, mb1mx4.2/64, mbtmp4.2/29, ML3.4/1, MS3.7/1, Ms1 3.7/1, ms1mx3.0/51, Error ellipse: s-maj=23.0km s-min=12.9km az=170.0*

*NEIC **10** 14:31:36.0±2.2, 52°.26N±0°.05×168°.54W±0°.08, h19^{km}±4^{km}, mb4.3/64, ML3.5(AEIC), Error ellipse: s-maj=9.3km s-min=4.9km az=139.0*

*AEIC **10** 14:31:36±2.4, 52°.21N±0°.05×168°.49W±0°.07, h20^{km}±4^{km}, Error ellipse: s-maj=8.4km s-min=4.9km az=143.0*

ISC 10 14:31:35.8±1.5**, 52°.23N**±0°.06×**168°.60W**±0°.05**, h18**^{km}±6^{km}**, n164, σ1.^{s}08**/163**, mb4.5**/53**, 1C, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIKH	Nikolski High	0.76	348		Pn	14 31 52.2	+0.6
NIKH	Nikolski High	0.76	348		Sn	14 32 05.3	+2.7
OKSO	Okmok South	1.16	13		Pn	14 31 57.0	-0.1
OKSO					Sg	14 32 14.3	+0.9
OKFG	Magazine Ridge	1.25	19		Pn	14 31 58.3	0.0
OKFG					Sg	14 32 16.2	-0.2
OKRE	Okmok R'deer P	1.32	11		Pb	14 32 00.7	+0.7
MAPS	Pakushin South	1.87	32		Pn	14 32 07.6	+0.7
MAPS					Sb	14 32 31.3	-1.1
MGOD	Makushin Gods	1.88	33		Pn	14 32 07.9	+0.9
MREP	Makushin Rep't	1.94	34		Pn	14 32 08.7	+0.9
MSW	Makushin Switc	2.01	32		Pn	14 32 09.9	+1.1
MSW					Sn	14 32 34.6	+1.1
MNAT	Makushin Natee	2.02	34		Pn	14 32 09.6	+0.7
UNV	Unalaska Valle	2.05	37		Pn	14 32 09.6	+0.3
UNV	Unalaska Valle	2.05	37		Sb	14 32 36.5	-1.0
AKMO	Akutan Morgan	2.43	39		Pn	14 32 16.3	+1.8
ZRO	Akutan Zero	2.44	39		Pn	14 32 16.3	+1.6
AKBBA	Akutan Broad B	2.46	40		Pn	14 32 16.4	+1.4
AKBBA					Sn	14 32 45.6	+1.0
AKLV	Akutan Long Va	2.50	38		Pn	14 32 17.2	+1.6
AHB	Akutan Harbor	2.52	40		Pn	14 32 17.2	+1.4
AKUT	Akutan	2.56	41	Pn	Pn	14 32 15.8	-0.4
AKSA	Akutan Strait	2.59	41		Pn	14 32 18.2	+1.6
AKSA					Sn	14 32 50.2	+2.6
AKSA	Akutan Strait	2.59	41		Pn	14 32 17.9	+1.2
KOFP	Korovin Flat P	3.38	273		Pn	14 32 29.2	+1.5
ATKA	Atka Island	3.44	272	Pn	Pn	14 32 29.2	+0.8
FALS	False Pass	4.06	48	Pn	Pn	14 32 38.4	+1.6
ADK	Adak	5.00	269		Pn	14 32 50.9	+1.0
SDPT	Sand Point	5.74	54	Pn	Pn	14 32 59.8	-0.1
CHGN	Chignik	7.22	52	Pn	Pn	14 33 22.0	+1.8
OHAK	Old Harbor	10.16	54	Pn	Pn	14 34 00.5	0.0
KDAK	Kodiak Island	10.73	53	Pn	Pn	14 34 08.1	-0.3
	1.9nm,0.3s,baz=263,slow=6.2,SNR=12						
RSO	Redoubt South	12.02	40	Pn	Pn	14 34 26.1	0.0
CNPM	China Poot	12.15	46	Pn	Pn	14 34 29.6	+1.7
BRLK	Bradley Lake	12.43	46	Pn	Pn	14 34 31.5	-0.1
KNK	Knik Glacier	14.30	42	Pn	Pn	14 34 56.4	-0.6
GHO	Glory Hole Cre	14.30	40	Pn	Pn	14 34 57.2	+0.1
SML	Sawmill	14.55	41	Pn	Pn	14 34 59.4	-1.2
SCM	Sheep Creek Mo	14.98	42		Pn	14 35 05.0	-1.4
EYAK	Cordova Ski Ar	15.08	48	Pn	Pn	14 35 05.9	-1.6
RND	Reindeer	15.28	35	Pn	Pn	14 35 08.9	-1.5
RND				IAmb	IAmb	14 35 28.4	
	comp=Z,9.2nm,1.0s						
KLU	Klutina	15.40	44		Pn	14 35 09.9	-2.1
KLU				IAmb	IAmb	14 35 21.9	
	comp=Z,15nm,0.8s						
KAIM	Kayak Island	15.47	51	Pn	Pn	14 35 12.1	-0.7
M24K	Tolsona, Glenn	15.59	42	Pn	Pn	14 35 13.4	-0.9
HMT	Hamilton	15.68	49	Pn	Pn	14 35 14.9	-0.6
N25K	Chitina, Valde	16.02	45		Pn	14 35 18.6	-1.4
N25K				IAmb	IAmb	14 35 20.7	
	comp=Z,11nm,0.9s						
WRH	Wood River Hil	16.21	33	Pn	Pn	14 35 20.0	-2.3
I23K	Minto, Yukon-K	16.25	30	Pn	Pn	14 35 22.5	-0.3
GLB	Gilahina Butte	16.30	46		Pn	14 35 21.6	-1.9
GLB				IAmb	IAmb	14 35 44.0	
	comp=Z,12nm,0.8s						
PAX	Paxson	16.30	40		Pn	14 35 23.0	-0.6
CRQM	Cirque	16.35	49	Pn	Pn	14 35 23.3	-1.0
CRQM				IAmb	IAmb	14 35 46.6	
	comp=Z,24nm,0.9s						
VRDI	Verde Repeater	16.38	47	Pn	Pn	14 35 22.9	-1.7
VRDI				IAmb	IAmb	14 35 40.8	
	comp=Z,18nm,1.3s						
CCB	Clear Creek Bu	16.42	33		Pn	14 35 23.5	-1.4
MDM	Murphy Dome	16.48	31	Pn	Pn	14 35 25.3	-0.5
TGL	Tana Glacier	16.49	49	Pn	Pn	14 35 25.3	-0.7
TGL				IAmb	IAmb	14 35 32.5	
	comp=Z,26nm,0.9s						
TCOL	CIGO, UAF Yank	16.55	32	Pn	Pn	14 35 26.1	-0.4
TCOL				IAmb	IAmb	14 35 28.3	
	comp=Z,14nm,1.1s						
COLA	College	16.55	32	Pn	Pn	14 35 26.0	-0.5
COLA				IAmb	IAmb	14 35 27.9	
	comp=Z,11nm,0.9s						
HDA	Harding Lake	16.56	34	Pn	Pn	14 35 25.0	-1.8
MCARA	McCarthy VSAT	16.63	47	Pn	Pn	14 35 26.4	-1.2
MCARA				IAmb	IAmb	14 35 29.1	
	comp=Z,25nm,1.1s						
IL31		16.80	33		Pn	14 35 27.8	-2.0
ILAR	Eielson Array	16.80	33	Pn	Pn	14 35 28.7	-1.1
	comp=Z,0.1nm,0.3s,baz=235,slow=11,SNR=16						
ILAR	Eielson Array	16.80	33		Pn	14 35 28.2	-1.6
BALM	Baldy	16.81	48	Pn	Pn	14 35 29.1	-0.9
BALM				IAmb	IAmb	14 35 45.4	
	comp=Z,12nm,0.9s						
POKR	Poker Plat Res	16.84	32	Pn	Pn	14 35 29.4	-0.9
MENT	Mentasta	16.98	41	Pn	Pn	14 35 31.8	-0.4
BARN	Barnard Glacie	17.13	48		Pn	14 35 33.9	-0.2
DOT	Dot Lake	17.19	39	P	Pn	14 35 35.4	+0.6
CTGM	Chitina Glacie	17.25	49	Pn	Pn	14 35 34.4	-1.2
CTGM				IAmb	IAmb	14 35 40.6	
	comp=Z,11nm,0.8s						
PRP	Porcupine Dome	17.72	32	Pn	Pn	14 35 39.5	-1.9
FYU	Fort Yukon	18.47	30		P	14 35 49.4	-0.8
FYU				IAmb	IAmb	14 35 54.1	
	comp=Z,29nm,1.4s						
TOLK	Toolik Lake Re	18.80	22		Pn	14 35 55.1	+0.7
A21K	Barrow	19.90	11	P	P	14 36 06.5	+0.7
A21K				IAmb	IAmb	14 36 13.7	
	comp=Z,15nm,0.6s						
WHY	Whitehorse	20.25	52		P	14 36 09.2	-0.7
WHY				IAmb	IAmb	14 36 16.5	
	comp=Z,18nm,1.1s						
PEA0B	Petropavlovsk-	20.36	286	P	P	14 36 10.9	-0.1
PETK	Petropavlovsk-	20.36	286	P	P	14 36 10.6	-0.4
	comp=Z,8.9nm,0.6s,baz=87,slow=14,SNR=30						
PETK	Petropavlovsk-	20.36	286	P	P	14 36 10.9	-0.1
DLBC	Dease Lake	22.55	59	P	P	14 36 34.7	+0.1
	comp=Z,1.5nm,0.9s,baz=272,slow=8.8,SNR=1.8						
DLBC	Dease Lake	22.55	59	IAmb	IAmb	14 36 55.4	
	comp=Z,12nm,1.4s						
SEY	Seymchan	23.11	313	P	P	14 36 39.1	-1.2
	comp=Z,3.5nm,0.7s,baz=105,slow=8.6,SNR=14						
INK	Inuvik	23.20	33	P	P	14 36 40.1	-1.1
	comp=Z,3.5nm,0.5s,baz=237,slow=7.9,SNR=17						
INK				LR	LR	14 46 40.6	
	comp=Z,180nm,18.1s,baz=189,slow=39						
INK	Inuvik	23.20	33	P	P	14 36 40.1	-1.1
INK				IAmb	IAmb	14 36 41.2	
	comp=Z,5.7nm,0.8s						
YKA	Yellowknife Ar	29.98	49	P	P	14 37 43.9	+1.3
	comp=Z,1.1nm,0.7s,baz=277,slow=7.1,SNR=16						
TIXI	Tiksi	33.10	329	P	P	14 38 09.5	-0.5
TIXI				IAmb	IAmb	14 38 10.7	
	comp=Z,2.5nm,0.8s						
RES	Resolute Bay	36.29	26	P	P	14 38 33.9	-3.6
MCMT	McKenzie Canyo	36.84	79	P	P	14 38 44.2	+1.3
KLR	Kul'dur	36.95	290	P	P	14 38 42.3	-1.2
	comp=Z,2.5nm,0.8s,baz=70,slow=6.0,SNR=4.6						
H11N2	WAKE ISLAND Hy	37.65	220	T	T	15 18 44.0	
	baz=25,slow=76						
H11N3	WAKE ISLAND Hy	37.65	220	T	T	15 18 42.3	
	baz=25,slow=76						
H11N1	WAKE ISLAND Hy	37.66	220	T	T	15 18 44.0	
	baz=25,slow=76						
EUNU	Eureka	37.72	16	P	P	14 38 50.7	+1.0
YHL	Hebgen Lake	37.83	78	P	P	14 38 52.3	+1.0
YHH	Holmes Hill	38.06	78	P	P	14 38 54.5	+1.2
FLWY	Flagg Ranch	38.54	78	P	P	14 38 57.8	+0.6
FLWY				IAmb	IAmb	14 39 05.2	
	comp=Z,8.2nm,1.4s						
H11S1	WAKE ISLAND Hy	38.83	219	T	T	15 20 09.7	
	baz=24,slow=76						
H11S2	WAKE ISLAND Hy	38.84	219	T	T	15 20 10.1	
	baz=24,slow=76						
H11S3	WAKE ISLAND Hy	38.85	219	T	T	15 20 10.8	
	baz=24,slow=76						
BW06	Boulder Array	39.96	79	P	P	14 39 10.2	+1.1
BW06				IAmb	IAmb	14 39 28.6	
	comp=Z,7.2nm,1.4s						
PD31	Pinedale Array	39.96	79	P	P	14 39 10.2	+1.0
PD31				IAmb	IAmb	14 39 28.7	
	comp=Z,6.0nm,1.3s						
PDAR	Pinedale Array	39.96	79	P	P	14 39 10.3	+1.2
	comp=Z,2.7nm,0.9s,baz=298,slow=6.4,SNR=12						
PDAR	Pinedale Array	39.96	79	P	P	14 39 09.9	+0.7
FCC	Fort Churchill	40.66	50	P	P	14 39 15.0	+0.6
FCC				IAmb	IAmb	14 39 16.4	
	comp=Z,9.0nm,0.8s						
KSRS	Korea Array	45.89	277	P	P	14 39 57.3	+0.4
	comp=Z,2.4nm,0.9s,baz=59,slow=6.9,SNR=4.3						
SPA0	Spitsbergen Ar	49.82	359	P	P	14 40 26.6	-0.3
SPA0				IAmb	IAmb	14 40 31.2	
	comp=Z,6.4nm,0.9s						
DAG	Danmarks Havn	49.86	9	*i* P	P	14 40 26.7	-0.4
	comp=Z,3.3nm,0.7s						
DAG	Danmarks Havn	49.86	9	*i* P	P	14 40 26.8	-0.4
DAG				IAmb	IAmb	14 40 27.8	
	comp=Z,3.3nm,0.7s						
SUMG	Summit	50.77	17	*i* P	P	14 40 34.5	-0.1
	comp=Z,24nm,0.8s						
SUMG	Summit	50.77	17	P	P	14 40 34.5	-0.1
SUMG	Summit	50.77	17	*i* P	P	14 40 34.5	-0.1
SUMG				IAmb	IAmb	14 40 37.8	
	comp=Z,24nm,0.8s						
TLY	Talaya	50.80	307	P	P	14 40 34.2	-0.4
TLY				IAmb	IAmb	14 40 35.7	
	comp=Z,5.4nm,0.7s						
E43A	Lone Tree Farm	50.87	62	P	P	14 40 35.4	+0.3
E43A				IAmb	IAmb	14 40 36.5	
	comp=Z,4.8nm,0.8s						
ULN	Ulaanbaatar	51.41	301	P	P	14 40 38.8	-0.6
ULN				IAmb	IAmb	14 40 40.0	
	comp=Z,3.2nm,0.8s						
SONM	Songino Array	51.78	301	P	P	14 40 41.6	-0.5
	comp=Z,1.6nm,0.8s,baz=57,slow=7.4,SNR=9.3						
SONM				PcP	PcP	14 41 55.2	+0.1
	comp=Z,1.5nm,1.0s,baz=97,slow=5.9,SNR=4.2						
SONM	Songino Array	51.78	301	P	P	14 40 41.5	-0.6
TXAR	Lajitas Array	52.27	89	P	P	14 40 46.4	+0.4
	comp=Z,0.5nm,0.5s,baz=292,slow=3.9,SNR=6.9						
TXAR	Lajitas Array	52.27	89	P	P	14 40 45.9	-0.1
P40A	Paris	52.37	72	P	P	14 40 45.5	-1.0
ICESG	Greenland Ices	53.34	20	*i* P	P	14 40 53.8	+0.2
ICESG				IAmb	IAmb	14 40 54.3	
	comp=Z,8.2nm,0.8s						
HHC	Hu-ho-hao-te	53.41	292	*e*P	P	14 40 56.0	+1.7
HHC				pmax	pmax		
	comp=Z,6.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,290nm,5.3s						
ZALV	Zalesovo Beam	57.84	318	P	P	14 41 25.3	-0.5
	comp=Z,2.6nm,0.8s,baz=46,slow=12,SNR=7.2						
ARCES	ARCESS Array B	58.11	354	P	P	14 41 26.6	-0.8
	comp=Z,7.1nm,1.0s,baz=24,slow=9.4,SNR=5.0						
GTA	Gaotai	60.96	298	*e*P	P	14 41 47.1	-0.6
GTA				pP	sP	14 41 54.2	-0.1
GTA				sP	pwP	14 41 58.1	+1.3
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KURK	Kurchatov	62.79	319	P	P	14 41 58.7	-0.9
KURBB	Kurchatov Arra	62.90	319	P	P	14 41 60.0	-0.4
	comp=Z,3.7nm,0.8s,baz=46,slow=7.4,SNR=27						
WMQ	Urumqi	63.99	309	*e*P	P	14 42 09.0	+1.2
BVAR	Borovoye Array	64.09	325	P	P	14 42 07.8	-0.4
	comp=Z,3.3nm,0.8s,baz=93,slow=5.9,SNR=28						
BRVK	Borovoye	64.10	325	P	P	14 42 06.4	-1.9
MK31	Makanchi Array	64.25	314	P	P	14 42 08.2	-1.1
MK31				IAmb	IAmb	14 42 09.4	
	comp=Z,2.8nm,0.8s						
MKAR	Makanchi Array	64.25	314	P	P	14 42 08.5	-0.8
	comp=Z,3.1nm,0.7s,baz=50,slow=6.4,SNR=40						
MKAR	Makanchi Array	64.25	314	P	P	14 42 08.1	-1.3
MAKZ	Makanchi	64.37	314	P	P	14 42 09.0	-1.2
MAKZ				IAmb	IAmb	14 42 10.2	
	comp=Z,2.6nm,0.8s						
ARU	Arti	64.96	333	P	P	14 42 13.4	-0.4
FIA1	FINESS Array S	66.07	352	P	P	14 42 20.5	-0.4
FINES	FINESS Array B	66.07	352	P	P	14 42 20.6	-0.3
	comp=Z,6.3nm,0.7s,baz=17,slow=9.2,SNR=21						
FINES	FINESS Array B	66.07	352	P	P	14 42 20.3	-0.6
NB2	NORSAR Subarra	67.08	0	P	P	14 42 28.2	+0.8
	comp=Z,1.0nm,0.6s,baz=1.4,slow=7.4						
NOA	NORSAR Array B	67.08	0	P	P	14 42 27.6	+0.1
	comp=Z,2.0nm,0.7s,baz=359,slow=6.1,SNR=4.5						
KMI	Kunming	69.76	285	⇑PKP	P	14 42 46.1	+1.1
KMI				LR	LR		
	comp=Z,130nm,86.3s						
AKTO	Aktyubinsk	70.37	330	P	P	14 42 47.7	-0.3
	comp=Z,6.1nm,0.7s,baz=28,slow=6.6						
ABKAR	Akbulak array	70.80	329	P	P	14 42 50.2	-0.5
ABKAR	Akbulak array	70.80	329	P	P	14 42 50.4	-0.3
AAK	Ala-Archa	70.93	316	P	P	14 42 52.0	+0.2
	comp=Z,5.1nm,0.8s,baz=114,slow=4.2,SNR=18						
AAK	Ala-Archa	70.93	316	P	P	14 42 51.6	-0.3
KK31	Karatay Array	72.21	319	P	P	14 42 59.1	-0.2
KK31				IAmb	IAmb	14 43 00.3	
	comp=Z,4.0nm,0.8s						
KKAR	Karatay Array	72.21	319	P	P	14 42 58.9	-0.4
KKAR	Karatay Array	72.21	319	P	P	14 42 59.2	-0.2
KKAR				IAmb	IAmb	14 43 00.3	
	comp=Z,4.0nm,0.8s						
KSH	Kashi	72.82	313	P	P	14 43 06.3	+3.1
KSH				pP	pwP	14 43 13.4	+1.0
KSH				pmax	pmax		
	comp=Z,16nm,0.7s						
KSH				pmax	pmax		
	comp=Z,290nm,4.1s						
AKASG	Malin Array Be	76.34	348	P	P	14 43 22.4	-0.8
	comp=Z,2.1nm,0.5s,baz=15,slow=6.1,SNR=5.3						
CMAR	Chiang Mai Arr	77.11	283	P	P	14 43 27.8	-0.3
	comp=Z,1.9nm,0.8s,baz=24,slow=6.3,SNR=14						
CMAR	Chiang Mai Arr	77.11	283	P	P	14 43 28.2	+0.1
KOLS	Kolonicke sedl	78.79	353	*e*P	P	14 43 36.6	-0.4
NIL	Nilore	78.88	311	P	P	14 43 36.6	-1.1
GERES	GERESS Array B	79.28	358	P	P	14 43 40.6	+0.8
	comp=Z,1.0nm,0.7s,baz=1.4,slow=3.9,SNR=5.7						
BURAR	Bucovina Array	79.83	351	P	P	14 43 41.7	-1.1
CONA	Conrad Observa	80.15	357	*e*P	P	14 43 43.7	-0.7
	comp=Z,6.9nm,1.5s						
KBZ	Khabaz	80.62	337	P	P	14 43 48.4	+1.4
	comp=Z,3.6nm,1.0s,baz=195,slow=3.0,SNR=5.3						
RETA	Reutte	80.66	0	*e*P	P	14 43 46.6	-0.6
	comp=Z,6.6nm,1.1s						
MOTA	Moosalm	80.80	0	*e*P	P	14 43 47.9	-0.2
	comp=Z,7.5nm,1.2s						
ARSA	Arzberg	80.83	357	*e*P	P	14 43 42.4	-5.7
	comp=Z,3.0nm,0.8s						
SQTA	Sankt Quirin	80.93	0	*e*P	P	14 43 48.8	+0.1
	comp=Z,9.1nm,1.0s						
KBA	Koelnbreinsper	81.06	359	*e*P	P	14 43 50.1	+0.6
	comp=Z,8.3nm,0.8s						
FETA	Feichten	81.13	0	*e*P	P	14 43 51.1	+1.3
	comp=Z,5.6nm,1.0s						
DAVOX	Davos/Dischmat	81.36	1	P	P	14 43 52.2	+1.1
	comp=Z,2.9nm,0.6s,baz=159,slow=20,SNR=4.0						
GEYT	Alibeck	81.42	324	P	P	14 43 52.4	+1.0
	comp=Z,2.8nm,0.7s,baz=250,slow=12,SNR=6.3						
GEYT	Alibeck	81.42	324	P	P	14 43 51.6	+0.2
OBKA	Obir	81.60	358	*e*P	P	14 43 52.3	0.0
	comp=Z,19nm,1.5s						
WRA	Warramunga Arr	87.29	232	P	P	14 44 22.4	+1.2
	comp=Z,0.9nm,1.1s,baz=33,slow=6.3,SNR=3.1						
ESDC	Sonseca Array	87.50	12	P	P	14 44 22.6	+0.4
	comp=Z,0.4nm,0.5s,baz=354,slow=4.4,SNR=4.7						
ASAR	Alice Springs	90.67	231	P	P	14 44 35.9	-1.2
	comp=Z,0.7nm,0.9s,baz=28,slow=4.6,SNR=8.6						

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*IDC **10** 14:40:33.6±7.9, 31°.41S×179°.99W, h425^{km}±97^{km}, mb2.7/3, mb1 3.0/4, mb1mx2.9/24, mbtmp3.8/4, Error ellipse: s-maj=97.1km s-min=44.8km az=3.0*

*WEL **10** 14:40:38.1±0.9, 31°S±10°×18°0W±2°7, h303^{km}±18^{km}, M4.6/13, mB4.8/6, ML4.9/6, MLv5.0/13, Mw(mB)4.1/6, Error ellipse: s-maj=0.0km s-min=0.0km az=109.6*

ISC 10 14:40:30.9±1.0**, 31°.05S**±0°.08×**179°.6E**±0°.1**, h350**^{km}**, n45, σ2.^{s}26**/67**, mb3.1**/3**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	2.82	51	P	Pn	14 41 30.0	+1.3
GLKZ				S	S	14 42 16.2	+1.0
MXZ	Matakaoa Point	6.58	189	P	Pn	14 42 10.5	+2.3
MXZ				S	S	14 43 25.0	-2.3
WMGZ	Waiomatatini S	6.81	188	P	Pn	14 42 14.0	+3.0
WMGZ				S	S	14 43 31.5	-0.9
HAZ	Te Kaha	6.84	192	P	Pn	14 42 14.3	+3.0
HAZ				S	S	14 43 35.7	+2.7
RUGZ	Raukumara Rang	7.07	192	P	Pn	14 42 17.0	+2.9
RUGZ				S	S	14 43 37.1	-0.9
OPRZ	Ohinepanea	7.21	199	P	Pn	14 42 21.2	+5.5
TWGZ	Tauwhareparae	7.22	190	P	Pn	14 42 19.8	+3.9
TWGZ				S	S	14 43 41.6	+0.4
KMRZ	Kaimai	7.40	203	P	Pn	14 42 25.6	+7.7
URZ	Urewera	7.47	195	P	Pn	14 42 21.0	+2.4
	10nm,0.3s,baz=271,slow=4.4,SNR=113						
URZ				S	S	14 43 46.4	+0.1
	10nm,0.3s,baz=148,slow=19,SNR=17						
CNGZ	Carnagh Statio	7.50	188	P	Pn	14 42 22.5	+3.5
TKGZ	Te Karaka	7.50	190	P	Pn	14 42 21.3	+2.3
TKGZ				S	S	14 43 46.6	-0.5
MUGZ	Murupara	7.75	196	P	Pn	14 42 24.9	+2.9
MUGZ				S	S	14 43 52.9	+0.3
RIGZ	Rimuhau	7.78	190	P	Pn	14 42 24.3	+1.9
RIGZ				S	S	14 43 49.2	-3.9
PRGZ	Paritu Road	7.97	189	P	Pn	14 42 28.8	+4.2
PRGZ				S	S	14 43 57.6	+0.3
HIZ	Hauiti	8.39	206	P	P	14 42 36.4	+4.1
TMVZ	Te Maari	8.64	200	P	P	14 42 35.8	+0.6
TMVZ				S	S	14 44 12.1	0.0
TWVZ	Taurewa	8.68	202	P	P	14 42 37.0	+1.3
OTVZ	Oturere	8.70	200	P	P	14 42 35.9	0.0
OTVZ				S	S	14 44 12.5	-0.9
WNVZ	Wahianoa	8.87	200	P	P	14 42 37.7	-0.1
WNVZ				S	S	14 44 17.8	+0.7
BHHZ	Black Hill Sta	8.89	198	P	Pn	14 42 36.8	+1.2
BHHZ				S	S	14 44 15.6	-1.8
PKVZ	Pokaka	8.91	202	P	P	14 42 39.0	+0.8
KRHZ	Kereru	8.96	196	P	Pn	14 42 37.7	+1.3
KRHZ				S	S	14 44 16.9	-1.9
VRZ	Vera Road	8.96	205	P	P	14 42 41.1	+2.4
PXZ	Pawanui	9.22	193	P	Pn	14 42 39.8	+0.3
PXZ				S	S	14 44 20.8	-3.8
PNHZ	Pukenui	9.25	196	P	Pn	14 42 40.6	+0.7
PNHZ				S	S	14 44 22.5	-2.9
PKE	Pukeiti	9.31	208	P	P	14 42 48.0	+5.4
LREZ	Lake Rotokare	9.38	205	P	P	14 42 46.2	+2.8
WAZ	Wanganui	9.45	202	P	P	14 42 45.5	+1.4
WAZ				S	S	14 44 30.4	+0.8
TSZ	Takapari Road	9.45	197	P	Pn	14 42 41.4	-0.8
TSZ				S	S	14 44 24.6	-5.1
PRHZ	Porangahau	9.49	194	P	Pn	14 42 44.0	+1.3
PRHZ				S	S	14 44 27.6	-3.0
DVHZ	Dannevirke	9.63	196	P	Pn	14 42 45.5	+1.2
DVHZ				S	S	14 44 28.3	-5.3
ANWZ	Angora Road	9.71	194	P	P	14 42 47.5	+0.5
ANWZ				S	S	14 44 34.2	-1.3
POWZ	Post Office Ro	9.81	197	P	P	14 42 48.2	+0.1
POWZ				S	S	14 44 33.6	-4.1
PRWZ	Pori Road	9.92	196	P	P	14 42 49.6	+0.3
PRWZ				S	S	14 44 36.2	-3.7
BFZ	Birch Farm	9.97	195	P	Pn	14 42 48.4	0.0
MRZ	Mangatainoka R	10.11	198	P	Pn	14 42 49.7	-0.4
TIWZ	Tintock	10.15	196	P	P	14 42 51.9	+0.1
HOWZ	Holdsworth Sta	10.35	197	P	Pn	14 42 52.8	-0.2
OGWZ	Otaki Gorge	10.37	199	P	Pn	14 42 53.2	+0.1
MTW	Mount Morrison	10.60	197	P	Pn	14 42 56.1	+0.2
PAWZ	Paruwai Farm	10.83	197	P	Pn	14 42 59.3	+0.6
STKA	Stephens Creek	32.29	258	P	P	14 46 29.6	+1.2
	1.3nm,0.9s,baz=106,slow=18,SNR=2.8						
ASAR	Alice Springs	40.98	269	P	P	14 47 40.5	-0.7
	0.2nm,0.5s,baz=107,slow=7.4,SNR=8.6						
WRA	Warramunga Arr	42.03	274	P	P	14 47 49.0	-0.7
	0.4nm,0.3s,baz=111,slow=8.1,SNR=24						
FINES	FINESS Array B	145.00	338	PKPbc	PKPdf	14 59 21.3	-4.7
	0.9nm,0.5s,baz=72,slow=4.5,SNR=3.4						

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*IDC **10** 14:43:57.7±1.2, 46°.56N×86°.42E, h0^{km}, mb3.4/2, mb1 3.5/7, mb1mx3.2/57, mbtmp3.3/7, ML2.9/5, Error ellipse: s-maj=15.9km s-min=12.3km az=29.0*

*SOME **10** 14:44:00.8, 46°.60N×86°.13E, h5^{km}*

*NNC **10** 14:44:02.2±2.3, 46°.78N×86°.13E, h0^{km}, mb3.6, mpv3.5, Error ellipse: s-maj=21.2km s-min=13.5km az=59.0*

*ASRS **10** 14:44:03.8±0.3, 47°N±2°×8°6E±°, h10^{km}, MLh3.7/8, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/tab confirmed*

ISC 10 14:44:00.0±0.9**, 46°.69N**±0°.05×**86°.55E**±0°.04**, h10**^{km}**, n41, σ2.^{s}18**/69**, 10C-5D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZSN	Zaisan	1.38	304	*e*P	Pg	14 44 28.0	+1.5
	36nm,0.1s						
ZSN				*e*S	Sg	14 44 47.9	+3.5
	244nm,0.3s						
ZSN	Zaisan	1.38	304	P	Pb	14 44 26.3	+0.4
	36nm,0.1s						
ZSN				S	Sg	14 44 45.3	+0.9
	244nm,0.3s						
MK31	Makanchi Array	2.93	274	Pn	Pn	14 44 46.6	-0.1
	0.5nm,0.3s,baz=102,slow=13,SNR=375						
MK31				⇑Pg	Pb	14 44 50.8	-1.5
	2.3nm,0.3s,baz=97,slow=16,SNR=20						
MK31				⇓Lg	Lg	14 45 26.5	
	80nm,0.6s						
MKAR	Makanchi Array	2.93	274	Pn	Pn	14 44 46.8	0.0
	1.5nm,0.3s,baz=94,slow=15,SNR=35						
MKAR				Lg	Lg	14 45 26.6	
	25nm,0.3s,baz=88,slow=32,SNR=24						
MKAR	Makanchi Array	2.93	274	Pn	Pn	14 44 46.7	0.0
MKAR				Pg	Pb	14 44 50.9	-1.4
MKAR				Sg	Sb	14 45 28.6	+0.4
DGZ	Jazzator, Alta	3.08	11	Pn	Pb	14 44 54.6	-0.3
DGZ				Pg	Pg	14 45 02.5	+3.5
DGZ				Sg	Sg	14 45 38.0	-0.8
MAKZ	Makanchi	3.14	274	Pn	Pn	14 44 49.7	0.0
MAKZ				Pg	Pb	14 44 55.3	-0.7
MAKZ				Sg	Sb	14 45 35.0	+0.7
MAKZ	Makanchi	3.14	274	⇓Pn	Pn	14 44 49.6	0.0
	0.6nm,0.3s						
MAKZ				⇑Pg	Pb	14 44 55.0	-1.0
	2.1nm,0.3s						
MAKZ				⇑Lg	Lg	14 45 33.9	
	31nm,0.4s						
CUR	Chagan-Uzun	3.62	19	Pn	Pb	14 45 01.9	-2.3
CUR				Pg	Pg	14 45 13.7	+4.3
CUR				Sg	Sg	14 46 00.6	+4.3
CHBI	Chibit, Altay	3.69	10	Pn	Pb	14 45 02.9	-2.3
CHBI				Pg	Pg	14 45 14.0	+3.4
CHBI				Sg	Sg	14 46 00.7	+2.4
ULGR	Ulagan, Altay	4.05	13	Pn	Pb	14 45 07.6	-3.9
ULGR				Pg	Pg	14 45 20.1	+2.5
ULGR				Sg	Sg	14 46 12.8	+2.8
UKR	Ust'-Kan	4.41	345	Pn	Pn	14 45 12.3	+5.1
UKR				Pg	Pg	14 45 25.4	+0.8
UKR				Sg	Sg	14 46 22.8	+1.1
TEL	Teeli	4.96	28	Pg	Pg	14 45 35.9	+0.8
TEL				Sg	Sg	14 46 41.2	+1.9
ARTR	Artybash	5.14	5	Pg	Pg	14 45 40.3	+1.9
ARTR				Sg	Sg	14 46 47.9	+3.0
KAPS	Kapalarasan	5.20	257	*e*P	Pb	14 45 32.0	+0.9
	1.1nm,0.2s						
KAPS				*e*S	Sb	14 46 39.0	+5.4
	14nm,0.4s						
KAPS	Kapalarasan	5.20	257	Pg	Pn	14 45 17.3	-0.6
	2.9nm,0.2s						
KAPS				Lg	Lg	14 46 13.3	
	5.4nm,0.2s						
GALT	Gorno-Altaysk,	5.29	356	Sg	Sg	14 46 48.4	-1.5

DJR	**Jarkent**	**5.30**	**246**	*e*P	**Pb**	**14 45 33.4**	**+0.6**
	1.7nm,0.4s						
DJR				*e*S	**Sb**	**14 46 40.8**	**+4.3**
	6.1nm,0.3s						
PDGK	**Podgornoye**	**6.02**	**239**	Pg	**Pn**	**14 45 27.8**	**-1.5**
	1.2nm,0.2s						
PDGK				Lg	Lg	14 46 31.5	
	3.6nm,0.7s						
PDGK	**Podgornoye**	**6.02**	**239**	⇓Pn	**Pn**	**14 45 27.8**	**-1.5**
	1.0nm,0.5s						
PDGK				⇓Sn	**Sn**	**14 46 32.5**	**-5.8**
	9.3nm,0.9s						
PDGK				⇑Lg	Lg	14 47 03.9	
	18nm,0.7s						
TASR	**Tashtagol**	**6.14**	**8**	Sg	**Sg**	**14 47 16.5**	**-0.6**
SHLS	**Shalkode**	**6.14**	**238**	Pg	**Pn**	**14 45 28.4**	**-2.5**
	7.4nm,0.2s						
MNBS	**Baschi**	**6.30**	**249**	Pg	**Pn**	**14 45 33.7**	**+0.6**
	2.6nm,0.2s						
MNBS				Lg	Lg	14 46 42.1	
	9.4nm,0.2s						
UZB	**Uzynbulak**	**6.41**	**239**	Pg	**Pn**	**14 45 34.4**	**-0.2**
	2.8nm,0.2s						
UZB				Lg	Lg	14 46 42.8	
	6.6nm,0.3s						
ELT	**Eltsovka**	**6.59**	**358**	Pg	**Pg**	**14 46 05.2**	**-0.9**
ELT				Sg	**Sg**	**14 47 30.7**	**-0.6**
KURBB	**Kurchatov Arra**	**6.61**	**310**	Pn	**Pn**	**14 45 37.2**	**0.0**
	0.2nm,0.3s,baz=121,slow=13,SNR=7.8						
KURBB				Sn	**Sn**	**14 46 52.2**	**-0.3**
	0.4nm,0.3s,baz=112,slow=30,SNR=5.0						
KURBB				Lg	Lg	14 47 27.7	
	0.6nm,0.3s,baz=92,slow=31,SNR=8.7						
KURBB	**Kurchatov Arra**	**6.61**	**310**	⇑Pn	**Pn**	**14 45 37.1**	**0.0**
	0.8nm,0.3s						
KURBB				⇑Sn	**Sn**	**14 46 53.5**	**+1.0**
	8.7nm,0.5s						
KURBB				⇓Lg	Lg	14 47 27.8	
	69nm,0.6s						
ARXS	**Arharly**	**6.61**	**251**	Pg	**Pn**	**14 45 39.4**	**+2.1**
	4.4nm,0.3s						
ARXS				Lg	Lg	14 46 51.5	
	5.2nm,0.4s						
KURK	**Kurchatov**	**6.62**	**310**	Sg	**Sg**	**14 47 28.4**	**-3.9**
KURK	**Kurchatov**	**6.62**	**310**	⇑Pn	**Pn**	**14 45 37.0**	**-0.2**
	0.6nm,0.4s						
KURK				⇑Pg	Pb	14 45 45.4	-10
	1.1nm,0.4s						
KURK				⇑Sn	**Sn**	**14 46 50.4**	**-2.3**
	3.7nm,0.4s						
KURK				⇑Lg	Lg	14 47 26.3	
	40nm,0.7s						
TBTR	**Tabat**	**6.81**	**22**	Pg	**Pg**	**14 46 10.0**	**-0.3**
TBTR				Sg	**Sg**	**14 47 39.5**	**+1.1**
SATY	**Saty**	**6.83**	**241**	Pg	**Pn**	**14 45 40.5**	**+0.2**
	3.3nm,0.1s						
SATY				Lg	Lg	14 46 53.0	
	7.9nm,0.3s						
DJOS	**Djoyskaya Sosn**	**6.88**	**25**	Sg	**Sg**	**14 47 42.8**	**+2.2**
LUZB	**Luzhba, Kemero**	**7.14**	**11**	Sg	**Sg**	**14 47 47.4**	**-1.8**
KZLR	**Kyzyl**	**7.21**	**43**	Sg	**Sg**	**14 47 52.1**	**+0.6**
ZALV	**Zalesovo Beam**	**7.36**	**352**	Pn	**Pn**	**14 45 49.5**	**+2.1**
	0.5nm,0.3s,baz=176,slow=14,SNR=10						
ZALV				Sn	**Sn**	**14 47 12.1**	**+1.3**
	2.3nm,0.3s,baz=172,slow=26,SNR=12						
ZALV				Lg	Lg	14 47 54.9	
	0.8nm,0.3s,baz=171,slow=32,SNR=4.0						
TNSS	**Tian-Shan**	**7.73**	**245**	Lg	Lg	14 47 19.2	
	1.6nm,0.5s						
AAK	**Ala-Archa**	**9.49**	**249**	Pn	**Pn**	**14 46 15.5**	**-1.4**
	0.2nm,0.3s,baz=18,slow=6.4,SNR=2.5						
AAK				Lg	Lg	14 48 56.2	
	0.1nm,0.3s,baz=234,slow=17,SNR=1.6						
BVAR	**Borovoye Array**	**12.19**	**307**	Pn	**Pn**	**14 46 50.7**	**-2.9**
	0.1nm,0.3s,baz=117,slow=13,SNR=2.3						
BVAR				Sn	**Sn**	**14 49 05.6**	**-4.0**
	0.5nm,0.3s,baz=94,slow=31,SNR=7.6						
BVAR				Lg	Lg	14 50 25.5	
	0.2nm,0.3s,baz=79,slow=22,SNR=2.5						
ILAR	**Eielson Array**	**61.35**	**23**	P	**P**	**14 54 15.7**	**+0.3**
	0.3nm,0.6s,baz=310,slow=6.5,SNR=4.7						
ASAR	**Alice Springs**	**82.06**	**137**	P	**P**	**14 56 19.2**	**-1.2**
	0.2nm,0.5s,baz=330,slow=5.0,SNR=8.4						

BJI ***10*** *14:47:49.0±0.0, 9.°60N×57.°60E, h10^{km}, mB5.4/60, mb5.0/74, Ms5.4/74, Ms7 5.2/69*

MOS ***10*** *14:47:49.4±1.2, 9.°71N×57.°60E, h10^{km}, mb5.5/119, MS5.0/40, Error ellipse: s-maj=5.3km s-min=2.9km az=105.3*

IDC ***10*** *14:47:49.7±0.4, 9.°75N×57.°68E, h0^{km}, mb5.1/49, mb1 5.1/51, mb1mx5.0/62, mbtmp5.0/51, ML3.8/2, MS4.9/41, Ms1 4.9/41, ms1mx4.8/48, Error ellipse: s-maj=10.6km s-min=10.0km az=180.0*

GCMT ***10*** *14:47:50.5±0.1, 9.°68N±0.°01×57.°38E±0.°01, h12^{km}, MW5.4/156, Moment Tensor Solution. s102,c145; s156,c306; Duration: 1^{s}3 Moment tensor: Scale 10^{17} Nm; M_{rr}1.52±.02; $M_{\theta\theta}$-1.46±.02; $M_{\phi\phi}$-0.06±.02; $M_{r\theta}$-0.91±.05; $M_{\theta\phi}$0.51±.01; $M_{\phi r}$-0.17±.05; Best double couple: $M_0$1.83000×10^{17} NP1:ϕ_s122.00000°, δ33.00000°, λ114.00000°. NP2:ϕ_s274.00000°, δ60.00000°, λ75.00000°. Principal axes: T 1.8270, Plg71.0000°, Azm150.0000°; N 0.0040, Plg13.0000°, Azm282.0000°; P -1.8330, Plg14.0000°, Azm15.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***10*** *14:47:50.5±1.6, 9.°72N±0.°08×57.°58E±0.°06, h10^{km}±1^{km}, mb5.5/146, Mwb5.3/24, Mww5.4, Mwc5.4(GCMT) Error ellipse: s-maj=14.7km s-min=9.4km az=207.0*

NEIC ***10*** *14:47:50, 9.°62N×57.°40E, h12^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.65; $M_{\theta\theta}$-1.55; $M_{\phi\phi}$-0.10; $M_{r\theta}$-0.52; $M_{\theta\phi}$0.56; $M_{\phi r}$0.24; Fault plane solution: $M_0$1.79000×10^{17} NP1:ϕ_s107.00000°, δ36.00000°, λ87.00000°. NP2:ϕ_s291.00000°, δ54.00000°, λ92.00000°. Principal axes: T 1.7449, Plg81.0000°, Azm211.0000°; N 0.0895, Plg2.0000°, Azm110.0000°; P -1.8344, Plg9.0000°, Azm19.0000°;*

NEIC ***10*** *14:47:50.5, 9.°73N×57.°59E, h4^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.09; $M_{\theta\theta}$-1.13; $M_{\phi\phi}$0.03; $M_{r\theta}$-0.51; $M_{\theta\phi}$0.31; $M_{\phi r}$0.25; Fault plane solution: $M_0$1.29000×10^{17} NP1:ϕ_s97.56000°, δ32.40000°, λ79.61000°. NP2:ϕ_s289.81000°, δ58.20000°, λ96.53000°. Principal axes: T 1.2347, Plg76.0000°, Azm219.0000°; N 0.0984, Plg6.0000°, Azm106.0000°; P -1.3331, Plg13.0000°, Azm15.0000°;*

BGR ***10*** *14:47:55.0±0.0, 9.°97N×56.°76E, h10^{km}, mb5.5, Ms4.5*

DSN ***10*** *14:47:57.9±1.8, 10.°26N×57.°24E, h17^{km}, mb5.8/7, Ms5.2/14, Error ellipse: s-maj=23.9km s-min=16.0km az=132.0*

NEIC ***10*** *14:47:57, 9.°57N×57.°45E, h12^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.35; $M_{\theta\theta}$-0.92; $M_{\phi\phi}$-0.44; $M_{r\theta}$-0.62; $M_{\theta\phi}$0.19; $M_{\phi r}$0.29; Fault plane solution: $M_0$1.39000×10^{17} NP1:ϕ_s108.00000°, δ30.00000°, λ87.00000°. NP2:ϕ_s292.00000°, δ60.00000°, λ92.00000°. Principal axes: T 1.5384, Plg75.0000°, Azm207.0000°; N -0.3724, Plg2.0000°, Azm111.0000°; P -1.1661, Plg15.0000°, Azm21.0000°;*

ISC 10 14:47:51.3±0.2**, 9.°67N**±0.°04×**57.°67E**±0.°03**, h10**^{km}**, n958,** σ1^s**85**/1066**, mb5.4**/350**, MS5.0**/95**, 76C-50D, Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCY	**Socotra**	**4.39**	**305**		**Pn**	**14 48 58.0**	**-0.2**
SOCY	**Socotra**	**4.39**	**305**	P	**Pn**	**14 48 58.1**	**-0.2**
	SNR=11						
DMTO	**DMTO**	**8.42**	**342**	P	**Pn**	**14 49 55.3**	**+1.8**
DMTO				P	**Pn**	**14 49 55.3**	**+1.8**
DMTO				P	**Pn**	**14 49 55.3**	**+1.8**
RBK	**Rabkut**	**8.48**	**337**	P	**Pn**	**14 49 57.8**	**+3.4**
	SNR=12						
RBK				P	**Pn**	**14 49 57.8**	**+3.4**
	SNR=12						
RBK				P	**Pn**	**14 49 57.8**	**+3.4**
	SNR=12						
RBK				S	**Sn**	**14 51 38.4**	**+8.2**
RBK				S	**Sn**	**14 51 38.4**	**+8.2**
RBK				S	**Sn**	**14 51 38.4**	**+8.2**
SHAO	**Shalim**	**8.53**	**347**	P	**Pn**	**14 49 56.5**	**+1.4**
	SNR=10.0						
SHAO				P	**Pn**	**14 49 56.5**	**+1.4**
	SNR=10.0						
SHAO				P	**Pn**	**14 49 56.5**	**+1.4**
	SNR=10.0						
SHAO				S	**Sn**	**14 51 38.0**	**+6.5**
SHAO				S	**Sn**	**14 51 38.0**	**+6.5**
SHAO				S	**Sn**	**14 51 38.0**	**+6.5**
ABTO	**Aybut**	**8.74**	**331**	P	**Pn**	**14 50 01.2**	**+3.3**
	SNR=18						
ABTO				P	**Pn**	**14 50 01.2**	**+3.3**
	SNR=18						
ABTO				P	**Pn**	**14 50 01.2**	**+3.3**
	SNR=18						
WHFO	**Wadi Hawf**	**9.03**	**336**	P	**Pn**	**14 50 05.2**	**+3.3**
	SNR=10						
WHFO				P	**Pn**	**14 50 05.2**	**+3.3**
	SNR=10						
DOK	**Doka**	**9.53**	**339**	P	**Pn**	**14 50 11.4**	**+2.7**
	SNR=22						
DOK				P	**Pn**	**14 50 11.4**	**+2.7**
	SNR=22						
DOK				P	**Pn**	**14 50 11.4**	**+2.7**
	SNR=22						
DQM	**DQM**	**10.20**	**359**	P	**Pn**	**14 50 17.1**	**-0.8**
DQM				P	**Pn**	**14 50 17.1**	**-0.8**
DQM				P	**Pn**	**14 50 17.1**	**-0.8**
MHTO	**MHTO**	**11.25**	**1**	P	**Pn**	**14 50 32.4**	**+0.1**
	SNR=8.0						
MHTO				P	**Pn**	**14 50 32.4**	**+0.1**
	SNR=8.0						
MHTO				S	**Sn**	**14 52 43.4**	**+5.1**
MHTO				S	**Sn**	**14 52 43.4**	**+5.1**
JLN	**Jalan Bani Buh**	**12.52**	**7**	P	**Pn**	**14 50 48.0**	**-1.6**
JLN				P	**Pn**	**14 50 48.0**	**-1.6**
JMDO	**Jabal Madar**	**12.63**	**2**	P	**Pn**	**14 50 51.9**	**+0.7**
	SNR=20						
JMDO				P	**Pn**	**14 50 51.9**	**+0.7**
	SNR=20						
WBK	**Wadi Bani Khal**	**12.93**	**5**	P	**Pn**	**14 50 56.8**	**+1.6**
	SNR=14						
WBK				P	**Pn**	**14 50 56.8**	**+1.6**
	SNR=14						
BSY	**Bisya**	**13.01**	**358**	P	**Pn**	**14 50 57.2**	**+0.9**
	SNR=26						
BSY				P	**Pn**	**14 50 57.2**	**+0.9**
	SNR=26						
SMDO	**Samad**	**13.32**	**2**	P	**Pn**	**14 51 00.9**	**+0.3**
	SNR=17						
SMDO				P	**Pn**	**14 51 00.9**	**+0.3**
	SNR=17						
SMDO				P	**Pn**	**14 51 00.9**	**+0.3**
	SNR=17						
WSAR	**Wadi Sarin**	**13.52**	**4**	Pn	**Pn**	**14 51 03.8**	**+0.4**
	0.2nm,0.3s,baz=216,slow=12,SNR=7.7						
WSAR				LR	LR	14 55 33.7	
	comp=Z,22μm,18.4s,baz=208,slow=34						
ARQ	**Araqi**	**13.63**	**356**	P	**Pn**	**14 51 06.3**	**+1.4**
	SNR=13						
ARQ				P	**Pn**	**14 51 06.3**	**+1.4**
	SNR=13						
ARQ				P	**Pn**	**14 51 06.3**	**+1.4**
	SNR=13						
BIDO	**Bidbid**	**13.78**	**2**	P	**Pn**	**14 51 07.8**	**+0.9**
	SNR=10						
BIDO				P	**Pn**	**14 51 07.8**	**+0.9**
	SNR=10						
HOQ	**Hoqain**	**13.84**	**359**	P	**Pn**	**14 51 07.1**	**-0.6**
	SNR=24						
HOQ				P	**Pn**	**14 51 07.1**	**-0.6**
	SNR=24						
HOQ				P	**Pn**	**14 51 07.1**	**-0.6**
	SNR=24						
HOQ				S	**Sn**	**14 53 46.6**	**+5.1**
HOQ				S	**Sn**	**14 53 46.6**	**+5.1**
HOQ				S	**Sn**	**14 53 46.6**	**+5.1**
DAMY	**Dhamar**	**13.86**	**292**	Pn	**Pn**	**14 51 05.1**	**-3.2**
ALNE	**Al Ain**	**14.42**	**353**	*i* P	**Pn**	**14 51 14.7**	**-0.9**
	SNR=14						
ALNE	**Al Ain**	**14.42**	**353**	P	**Pn**	**14 51 14.1**	**-1.6**
	SNR=16						
ALNE				P	**Pn**	**14 51 14.1**	**-1.6**
	SNR=16						
ALNE				S	S	14 54 06.1	-10
ALNE				S	S	14 54 06.1	-10
SOHO	**SOHO**	**14.42**	**356**	P	**Pn**	**14 51 14.3**	**-1.4**
SOHO	**SOHO**	**14.42**	**356**	P	**Pn**	**14 51 14.6**	**-1.1**
SOHO				P	**Pn**	**14 51 14.6**	**-1.1**
SOHO				P	**Pn**	**14 51 14.6**	**-1.1**
SOHO				S	**Sn**	**14 54 02.1**	**+6.4**
SOHO				S	**Sn**	**14 54 02.1**	**+6.4**
SOHO				S	**Sn**	**14 54 02.1**	**+6.4**
ATD	**Arta Tunnel**	**14.69**	**279**	Pn	**Pn**	**14 51 20.4**	**+1.1**
	0.8nm,0.3s,baz=78,slow=5.6,SNR=1.6						
ATD				LR	LR	14 55 58.4	
	comp=Z,2μm,21.0s,baz=87,slow=33						
ATD	**Arta Tunnel**	**14.69**	**279**	P	**P**	**14 51 23.7**	**-2.0**
ASHO	**Ashiyiah**	**15.01**	**354**	*i* P	**Pn**	**14 51 22.1**	**-1.6**
	SNR=20						
ASHO	**Ashiyiah**	**15.01**	**354**	P	**Pn**	**14 51 21.2**	**-2.4**
	SNR=19						
ASHO				P	**Pn**	**14 51 21.2**	**-2.4**
	SNR=19						
AJN	**Ajban**	**15.03**	**351**	P	**Pn**	**14 51 22.5**	**-1.4**
	SNR=7.2						
AJN				P	**Pn**	**14 51 22.5**	**-1.4**
	SNR=7.2						
AJN				P	**Pn**	**14 51 22.5**	**-1.4**
	SNR=7.2						
ASUD	**Al Ashush, Dub**	**15.04**	**352**	*i* P	**Pn**	**14 51 22.8**	**-1.2**
	SNR=11						
ASUD	**Al Ashush, Dub**	**15.04**	**352**	P	**Pn**	**14 51 22.2**	**-1.8**
	SNR=8.2						
ASUD				P	**Pn**	**14 51 22.2**	**-1.8**
	SNR=8.2						
FAQ	**Al Faqa, Dubai**	**15.12**	**353**	*i* P	**Pn**	**14 51 24.2**	**-0.9**
	SNR=12						
FAQ	**Al Faqa, Dubai**	**15.12**	**353**	P	**Pn**	**14 51 26.0**	**+0.9**
	SNR=9.5						
FAQ				P	**Pn**	**14 51 26.0**	**+0.9**
	SNR=9.5						
FAQ				P	**Pn**	**14 51 26.0**	**+0.9**
	SNR=9.5						
HATD	**Hatta, Dubai**	**15.14**	**355**	*i* P	**Pn**	**14 51 24.2**	**-1.2**
	SNR=14						
HATD	**Hatta, Dubai**	**15.14**	**355**	P	**Pn**	**14 51 24.2**	**-1.2**
	SNR=13						
HATD				P	**Pn**	**14 51 24.2**	**-1.2**
	SNR=13						
HATD				P	**Pn**	**14 51 24.2**	**-1.2**
	SNR=13						
UOSS	**Minazif**	**15.25**	**355**	*i* P	**Pn**	**14 51 25.3**	**-1.6**
	SNR=14						
UOSS	**Minazif**	**15.25**	**355**		**Pn**	**14 51 24.0**	**-2.9**
UOSS				IAmb	IAmb	14 51 49.0	
	comp=Z,157nm,0.9s						
UOSS	**Minazif**	**15.25**	**355**	P	**Pn**	**14 51 25.5**	**-1.4**
UOSS				P	**Pn**	**14 51 25.5**	**-1.4**
UOSS				P	**Pn**	**14 51 25.5**	**-1.4**
NAZ	**Nazwa, Dubai**	**15.35**	**353**	*i* P	**Pn**	**14 51 26.5**	**-1.7**
	SNR=8.4						
NAZ	**Nazwa, Dubai**	**15.35**	**353**	P	**Pn**	**14 51 26.8**	**-1.4**
	SNR=10						
NAZ				P	**Pn**	**14 51 26.8**	**-1.4**
	SNR=10						
SLWR	**Sila**	**15.41**	**339**	P	**Pn**	**14 51 28.5**	**-0.4**
MDH	**Madha**	**15.60**	**355**	P	**Pn**	**14 51 29.1**	**-2.2**
MDH	**Madha**	**15.60**	**355**	P	**Pn**	**14 51 29.7**	**-1.7**
MDH				P	**Pn**	**14 51 29.7**	**-1.7**
MDH				P	**Pn**	**14 51 29.7**	**-1.7**
MSFE	**Esma-Masafi**	**15.67**	**355**	*i* P	**Pn**	**14 51 29.3**	**-3.1**
	SNR=9.0						
MASF	**Masafi**	**15.68**	**355**	P	**Pn**	**14 51 29.8**	**-2.6**
MASF				P	**Pn**	**14 51 29.8**	**-2.6**
MASF				P	**Pn**	**14 51 29.8**	**-2.6**
BANOM	**Banah**	**16.21**	**356**	*i* P	**Pn**	**14 51 37.1**	**-2.3**
	SNR=26						
BANOM	**Banah**	**16.21**	**356**	P	**Pn**	**14 51 37.9**	**-1.5**
	SNR=12						
BANOM				P	**Pn**	**14 51 37.9**	**-1.5**
	SNR=12						
SHME	**Shamm**	**16.35**	**355**	*i* P	**Pn**	**14 51 39.5**	**-1.6**
	SNR=25						
SHME	**Shamm**	**16.35**	**355**	P	**Pn**	**14 51 39.3**	**-1.8**
	SNR=13						
SHME				P	**Pn**	**14 51 39.3**	**-1.8**
	SNR=13						
SHME				P	**Pn**	**14 51 39.3**	**-1.8**
	SNR=13						
TEND	**Ethiopian Broa**	**16.51**	**279**	*e*P	**P**	**14 51 46.4**	**+0.6**
TEND				*e*S	**S**	**14 55 05.5**	**+6.9**
GOA	**Goa**	**16.79**	**68**	*e*P	**Pn**	**14 51 48.1**	**+1.4**
ANKE	**Ethiopia-Afar**	**17.68**	**271**	*e*P	**Pn**	**14 51 58.3**	**0.0**
ANKE				*e*S	**S**	**14 55 33.6**	**+10**
BHUJ	**Bhuj**	**17.72**	**39**	*e*P	**Pn**	**14 51 57.7**	**-0.5**
DESE	**Dese**	**17.80**	**276**	*e*P	**P**	**14 52 01.1**	**+0.7**
DESE				*e*S	**S**	**14 55 26.6**	**+1.2**
POO	**Poona**	**17.98**	**59**	*e*P	**P**	**14 52 04.3**	**+2.2**
RAYN	**Ar Rayn**	**18.02**	**321**	*i* P	**Pn**	**14 51 59.1**	**-3.0**
	SNR=74						
RAYN	**Ar Rayn**	**18.02**	**321**	P	**Pn**	**14 51 59.5**	**-2.7**
RAYN				pmax	pmax		
	comp=Z,178nm,1.1s						
RAYN	**Ar Rayn**	**18.02**	**321**		**Pn**	**14 51 59.5**	**-2.7**
AAE	**Adis Abeba**	**18.66**	**270**	*e*P	**Pn**	**14 52 11.0**	**+0.7**
AAE				*e*S	**S**	**14 55 42.4**	**-0.6**
FURI	**Furi**	**18.76**	**269**	*e*P	**Pn**	**14 52 12.8**	**+1.4**
FURI				*e*S	**S**	**14 55 44.1**	**-0.8**
TRD	**Trivandrum**	**19.08**	**92**	*e*P	**P**	**14 52 14.7**	**+0.4**
RDF	**Al-Radifah**	**21.38**	**335**	*e*P		14 52 36.8	
HYB	**Hyderabad**	**21.70**	**67**	*i* P	**P**	**14 52 45.0**	**+2.3**
HYB				*e*S	**S**	**14 56 48.0**	**+4.9**
HYB	**Hyderabad**	**21.70**	**67**	*e*P	**P**	**14 52 45.0**	**+2.3**
HYB				IAmb	IAmb	14 52 49.2	
	comp=Z,55nm,0.9s						
UMR	**Umm Al-Rimmam**	**21.86**	**336**	*e*P		14 52 42.1	
RST	**Umm Al-Ruwaisa**	**22.11**	**335**	*e*P		14 52 44.8	
MIB	**Mutribah**	**22.24**	**336**	*e*P		14 52 45.9	
MDRS	**Chennai**	**22.39**	**79**	*e*P	**P**	**14 52 53.9**	**+3.9**
MDRS				IAmb	IAmb	14 53 05.8	
	comp=Z,47nm,0.5s						
KIBK	**Kibwezi**	**22.90**	**240**	P	**P**	**14 52 55.2**	**-0.5**
	SNR=84						
PALK	**Pallekele**	**22.91**	**94**	P	**P**	**14 52 56.1**	**+0.5**
	comp=Z,23nm,1.0s,baz=17,slow=10,SNR=4.7						
PALK				LR	LR	14 59 53.8	
	comp=Z,2μm,21.8s,baz=35,slow=32						
PALK	**Pallekele**	**22.91**	**94**	*ce*P	**P**	**14 52 57.9**	**+2.3**
PALK				pmax	pmax		
	comp=Z,106nm,1.6s						
KMBO	**Kilima Mbogo**	**22.99**	**243**	P	**P**	**14 52 56.4**	**-0.3**
	comp=Z,24nm,0.9s,baz=54,slow=11,SNR=54						
KMBO				LR	LR	15 02 47.2	
	comp=Z,3μm,18.4s,baz=68,slow=39						
LODK	**Lodwar**	**23.00**	**256**	P	**P**	**14 52 58.3**	**+1.6**
	SNR=99						
BHPL	**Bhopal**	**23.22**	**52**	*e*P	**P**	**14 52 59.0**	**+0.3**
BHPL				IAmb	IAmb	14 53 07.6	
	comp=Z,246nm,1.8s						
SBV	**Sambava**	**24.23**	**199**	P	**P**	**14 53 10.6**	**+2.0**
	SNR=5.7						
HRA	**Herat**	**24.95**	**9**	P	**P**	**14 53 15.3**	**+0.1**
HRA				IAmb	IAmb	14 53 20.0	
	comp=Z,169nm,1.2s						
KBL	**Kabul**	**26.86**	**21**	P	**P**	**14 53 31.7**	**-0.8**
KBL				pmax	pmax		
	comp=Z,75nm,1.3s						
KBL	**Kabul**	**26.86**	**21**	P	**P**	**14 53 31.7**	**-0.8**
NIL	**Nilore**	**27.84**	**29**	P	**P**	**14 53 39.6**	**-1.5**
NIL				pmax	pmax		
	comp=Z,64nm,1.3s						
NIL	**Nilore**	**27.84**	**29**	P	**P**	**14 53 39.6**	**-1.5**
DDI	**Dehra Dun**	**28.00**	**40**	*e*P	**P**	**14 53 41.9**	**-0.7**
DDI				IAmb	IAmb	14 53 49.8	
SMLA	**Simla**	**28.01**	**38**	*e*P	**P**	**14 53 44.1**	**+1.5**
SMLA				IAmb	IAmb	14 53 50.6	
	comp=Z,31nm,0.9s						
GEYT	**Alibeck**	**28.14**	**1**	P	**P**	**14 53 43.1**	**-0.6**
	comp=Z,24nm,1.1s,baz=217,slow=9.3,SNR=22						
GEYT				LR	LR	15 05 58.6	
	comp=Z,2μm,18.4s,baz=175,slow=39						
GEYT	**Alibeck**	**28.14**	**1**	P	**P**	**14 53 42.9**	**-0.8**
GYA0B	**ALIBECK ARRAY**	**28.14**	**1**	P	**P**	**14 53 43.7**	**0.0**
GYA0B				IAmb	IAmb	14 53 58.3	
	comp=Z,129nm,1.4s						
DHRM	**DHARAMSHALA**	**28.32**	**35**	*e*P	**P**	**14 53 47.0**	**+1.4**
DHRM				IAmb	IAmb	14 53 54.1	
	comp=Z,2μm,4.4s						
MBAR	**Mbarara**	**28.69**	**251**	P	**P**	**14 53 49.9**	**+0.9**
	comp=Z,6.2nm,0.9s,baz=54,slow=9.8,SNR=13						
MBAR				LR	LR	15 05 34.6	
	comp=Z,4μm,19.1s,baz=50,slow=37						
MBAR	**Mbarara**	**28.69**	**251**	*de*P	**P**	**14 53 50.5**	**+1.5**
MBAR				pmax	pmax		
	comp=Z,10.0nm,1.2s						
MBAR				MLR	MLR		
	comp=Z,3μm,19.0s						
MBAR	**Mbarara**	**28.69**	**251**	P	**P**	**14 53 49.4**	**+0.4**
MBAR	**Mbarara**	**28.69**	**251**	P	**P**	**14 53 51.3**	**+2.3**
MBAR				P	**P**	**14 53 51.3**	**+2.3**
EIL	**Elat**	**29.10**	**316**	LR	LR	15 05 17.9	
	comp=Z,3μm,18.1s,baz=128,slow=36						
OPO	**Ambohidratompo**	**29.91**	**200**	P	**P**	**14 54 01.5**	**+1.8**
	comp=Z,24nm,1.2s,baz=31,slow=9.8,SNR=6.9						
OPO				LR	LR	15 03 35.6	
	comp=Z,5μm,18.7s,baz=180,slow=32						
ABPO	**Ambohimpanom**	**30.31**	**200**	P	**P**	**14 54 03.4**	**+0.1**
ABPO				pmax	pmax		
	comp=Z,94nm,1.5s						
ABPO	**Ambohimpanom**	**30.31**	**200**	P	**P**	**14 54 03.4**	**+0.1**
ABPO				IAmb	IAmb	14 54 07.8	
	comp=Z,94nm,1.4s						
BOK	**Bokaro**	**30.37**	**59**	*e*P	**P**	**14 54 07.3**	**+3.6**
DANN	**Dangsing**	**30.76**	**49**	*e*P	**P**	**14 54 09.2**	**+1.8**
	comp=Z,89nm,1.1s						
GKN	**Gorkha**	**31.24**	**51**	*e*P	**P**	**14 54 13.5**	**+2.0**
	comp=Z,95nm,1.1s						
DMN	**Daman**	**31.41**	**52**	*e*P	**P**	**14 54 15.4**	**+2.3**
	comp=Z,203nm,1.2s						
PKIN	**Phulchoki**	**31.62**	**52**	*e*P	**P**	**14 54 17.0**	**+2.0**
	comp=Z,87nm,1.1s						
PKI	**Pulchoki**	**31.62**	**52**	*e*P	**P**	**14 54 17.0**	**+1.9**
	comp=Z,169nm,1.3s						
KKN	**Kakani**	**31.63**	**52**	*e*P	**P**	**14 54 17.3**	**+2.3**
	comp=Z,159nm,1.1s						
GUN	**Gumba**	**32.15**	**52**	*e*P	**P**	**14 54 22.1**	**+2.3**
	comp=Z,436nm,1.4s						
RAMN	**Ramite**	**32.27**	**54**	*e*P	**P**	**14 54 22.9**	**+2.2**
	comp=Z,160nm,1.2s						
ODAN	**Odare**	**32.87**	**55**	*e*P	**P**	**14 54 28.1**	**+2.2**
	comp=Z,179nm,1.5s						
AKT	**Akhty**	**32.87**	**346**	*de*P	**P**	**14 54 26.7**	**+1.1**
AKT				pmax	pmax		
	comp=Z,27nm,1.0s						
AKT				MLR	MLR		
	comp=Z,1μm,15.0s						
GAZ	**Gaziantep**	**33.04**	**329**	P	**P**	**14 54 25.2**	**-1.8**
TAPN	**Taplejung**	**33.34**	**54**	*e*P	**P**	**14 54 32.1**	**+2.0**
	comp=Z,276nm,1.2s						
MALT	**Malatya**	**33.35**	**332**	P	**P**	**14 54 32.7**	**+2.9**
KARS	**Kars**	**33.44**	**340**	P	**P**	**14 54 34.4**	**+3.8**
LGD	**Lagodekhi**	**33.58**	**344**	P	**P**	**14 54 34.5**	**+2.9**
KZRT	**Kazreti**	**33.69**	**342**	P	**P**	**14 54 35.0**	**+2.3**
KSH	**Kashi**	**33.91**	**26**	P	**P**	**14 54 32.3**	**-2.4**
KSH				sP	pwP	14 54 41.5	+0.6
KSH				PP	**PnPn**	**14 55 45.8**	**-1.8**
KSH				S	**S**	**14 59 53.4**	**-6.1**
KSH				PcS	**PcS**	**15 00 56.4**	**-2.9**
KSH				pmax	pmax		
	comp=Z,77nm,0.9s						
KSH				pmax	pmax		
	comp=Z,1μm,4.2s						
KSH				LR	LR		
	comp=Z,5μm,14.4s						
KSH				LR	LR		
	comp=Z,8μm,18.0s						
KSH				LR	LR		
	comp=Z,4μm,18.2s						
AKH	**Akhalkalaki**	**34.00**	**341**	P	**P**	**14 54 37.7**	**+2.2**
IUG	**Iuzhnay**	**34.12**	**16**	*e*P	**P**	**14 54 36.6**	**0.0**
	baz=17						
IUG				*e*S	**S**	**15 00 02.8**	**+0.1**
	baz=17						
IUG	**Iuzhnay**	**34.12**	**16**	*e*P	**P**	**14 54 36.5**	**0.0**
IUG				*e*S	**S**	**15 00 02.8**	**+0.1**
MAK	**Makhachkala**	**34.33**	**347**	*e*P	**P**	**14 54 38.7**	**+0.6**
MAK				*e*		14 55 52.1	
MAK				*e*PPP	PPP	14 56 04.1	
MAK				*e*S	**S**	**15 00 06.3**	**+0.7**
MAK				*e*SSS	SSS	15 02 32.0	

MAK				pmax	pmax		
	comp=Z,114nm,0.8s						
MAK				MLR	MLR		
	comp=Z,3μm,16.0s						
DBC	Dubki	34.55	346	⇑eP	P	14 54 40.8	+0.7
DBC				pmax	pmax		
	comp=Z,14nm,1.1s						
GUDG	Gudauri	34.65	343	P	P	14 54 44.7	+3.5
DVE	Vedeno	34.66	345	⇑eP	P	14 54 42.5	+1.4
DVE				pmax	pmax		
	comp=Z,31nm,1.1s						
DVE				MLR	MLR		
	comp=Z,8μm,17.0s						
DGPR	DIGLIPUR	34.72	81	IAmb	IAmb	14 54 52.1	
	comp=Z,61nm,0.9s						
BATM	Batumi	34.78	339	P	P	14 54 41.7	-0.4
GROC	Groznyy	34.97	345	⇓eP	P	14 54 45.1	+1.4
GROC				pmax	pmax		
	comp=Z,57nm,1.1s						
GROC				MLR	MLR		
	comp=Z,910nm,15.0s						
ONI	Oni	35.08	342	P	P	14 54 46.8	+2.1
ZEI	Tsey	35.12	342	eP	P	14 54 44.9	-0.3
ZEI				pmax	pmax		
	comp=Z,57nm,1.4s						
KK31	Karatay Array	35.14	16	P	P	14 54 44.5	-0.7
KK31				pmax	pmax		
	comp=Z,25nm,1.1s						
KK31	Karatay Array	35.14	16	P	P	14 54 44.5	-0.7
KKAR	Karatay Array	35.14	16	P	P	14 54 44.4	-0.8
KKAR						14 54 44.7	
KKAR				pmax	pmax		
	comp=Z,25nm,1.1s						
KKAR	Karatay Array	35.14	16	P	P	14 54 44.7	-0.5
KKAR	Karatay Array	35.14	16	P	P	14 54 44.4	-0.8
DZA	Taraz	35.19	18	eP	P	14 54 45.3	-0.3
	baz=18						
DZA	Taraz	35.19	18	eP	P	14 54 45.3	-0.3
AML	Almayashu	35.27	21	P	P	14 54 49.7	+2.9
	SNR=12						
UCH	Uchtor	35.64	22	P	P	14 54 52.2	+2.2
	SNR=24						
EKS2	Erkin-Say	35.76	20	P	P	14 54 53.5	+2.8
	SNR=92						
NCK	Nalchik	35.86	342	⇑eP	P	14 54 51.4	+0.1
NCK				pmax	pmax		
	comp=Z,22nm,0.9s						
NCK				MLR	MLR		
	comp=Z,4μm,18.0s						
TOKA	Tokat	35.86	332	P	P	14 54 49.5	-2.0
TOKA				IAmb	IAmb	14 54 56.0	
	comp=Z,90nm,1.2s						
NEY	Neytrino	35.90	341	⇓eP	P	14 54 53.1	+1.2
NEY				pmax	pmax		
	comp=Z,10.0nm,1.1s						
NEY				MLR	MLR		
	comp=Z,2μm,17.0s						
AAK	Ala-Archa	35.99	21	P	P	14 54 55.7	+3.0
	SNR=42						
AAK	Ala-Archa	35.99	21	i P	P	14 54 55.7	+3.0
	SNR=55						
AAK	Ala-Archa	35.99	21	ceP	P	14 54 55.0	+2.3
AAK				pmax	pmax		
	comp=Z,170nm,1.2s						
AAK				MLR	MLR		
	comp=Z,12μm,27.0s						
AAK	Ala-Archa	35.99	21	P	P	14 54 54.1	+1.4
AAK				IAmb	IAmb	14 54 57.9	
	comp=Z,61nm,1.2s						
SHL	Shillong	36.09	60	P	P	14 54 53.0	-0.8
SHL				pmax	pmax		
	comp=Z,48nm,1.2s						
SHL	Shillong	36.09	60	eP	P	14 54 54.3	+0.5
SHL				IAmb	IAmb	14 54 59.0	
	comp=Z,848nm,3.5s						
SHL	Shillong	36.09	60	P	P	14 54 53.0	-0.8
KBK	Karagaybulak	36.17	22	P	P	14 54 56.8	+2.5
	SNR=32						
KBZ	Khabaz	36.28	342	P	P	14 54 55.4	+0.6
	comp=Z,18nm,1.1s,baz=170,slow=4.5,SNR=12						
KBZ				LR	LR	15 11 19.0	
	comp=Z,4μm,18.4s,baz=145,slow=39						
KBZ	Khabaz	36.28	342	deP	P	14 54 56.1	+1.2
KBZ				pmax	pmax		
	comp=Z,25nm,1.1s						
KBZ				MLR	MLR		
	comp=Z,4μm,18.0s						
ULHL	Ulahol	36.31	24	P	P	14 54 57.1	+1.6
	SNR=50						
CHMS	Chumysh	36.40	21	P	P	14 54 58.4	+2.3
	SNR=18						
PYA1	Pyatigorsk	36.52	342	⇑eP	P	14 54 57.7	+0.7
PYA1				pmax	pmax		
	comp=Z,1.0nm,1.3s						
USP	Ospenovka	36.55	21	P	P	14 54 59.5	+2.3
	SNR=11						
KVAR	Kislovodsk Arr	36.55	342	P	P	14 54 57.4	0.0
	comp=Z,6.8nm,0.9s,baz=22,slow=5.4,SNR=3.1						
KIV	Kislovodsk	36.55	342	i P	P	14 54 58.9	+1.6
	SNR=9.6						
KIV	Kislovodsk	36.55	342	eP	P	14 54 58.5	+1.1
KIV				e		14 56 22.3	
KIV				eS	S	15 00 40.9	+1.0
KIV				pmax	pmax		
	comp=Z,246nm,3.8s						
KIV				pmax	pmax		
	comp=Z,153nm,1.1s						
KIV				MLR	MLR		
	comp=Z,6μm,16.0s						
KIV	Kislovodsk	36.55	342	P	P	14 54 56.5	-0.9
KIV				IAmb	IAmb	14 55 01.1	
	comp=Z,65nm,1.2s						
TKM2	Tokmak 2	36.64	22	P	P	14 55 00.5	+2.1
	SNR=24						
TKM2	Tokmak 2	36.64	22	i P	P	14 54 59.1	+0.8
TKM2				pmax	pmax		
	comp=Z,22nm,1.2s						
ARXR	Arkhyz	36.66	340	deP	P	14 54 59.3	+1.0
ARXR				pmax	pmax		
	comp=Z,48nm,1.1s						
ARXR				MLR	MLR		
	comp=Z,3μm,17.0s						
KVT	Kavak	36.66	332	P	P	14 55 01.4	+3.1
AKAS	Kas	36.71	320	P	P	14 54 57.9	-0.9
AKAS				IAmb	IAmb	14 55 14.9	
	comp=Z,100nm,1.0s						
SGDS	Sogindy	36.76	21	eP	P	14 54 59.2	+0.1
	comp=Z,16nm,1.2s,baz=21						
SGDS	Sogindy	36.76	21	eP	P	14 54 59.2	+0.1
SGDS				pmax	pmax		
	comp=Z,16nm,1.2s						
BR131	Keskin Array S	36.80	328	deP	P	14 55 00.0	+0.4
BR131	Keskin Array S	36.80	328	P	P	14 54 58.4	-1.1
BR131				IAmb	IAmb	14 55 03.1	
	comp=Z,62nm,1.1s						
BRTR	Keskin Array B	36.80	328	P	P	14 55 00.3	+0.7
	comp=Z,37nm,1.2s,baz=152,slow=8.2,SNR=37						
BRTR				PcP	PcP	14 57 22.4	+0.7
	comp=Z,8.3nm,1.0s,baz=149,slow=5.9,SNR=4.6						
BRTR				LR	LR	15 10 46.7	
	comp=Z,2μm,20.1s,baz=112,slow=38						
BRTR	Keskin Array B	36.80	328	P	P	14 54 58.5	-1.1
BRTR	Keskin Array B	36.80	328	P	P	14 54 58.5	-1.1
ELL	Elmali	36.85	321	P	P	14 54 59.1	-0.9
ELL				pmax	pmax		
	comp=Z,349nm,1.1s						
ELL	Elmali	36.85	321	P	P	14 54 59.1	-0.9
LSA	Lhasa	37.08	53	P	P	14 55 01.8	-0.7
LSA				pmax	pmax		
	comp=Z,53nm,1.3s						
LSA	Lhasa	37.08	53	P	P	14 55 01.8	-0.7
RPOR	Krasnaya Polya	37.13	339	deP	P	14 55 02.6	+0.4
RPOR				pmax	pmax		
	comp=Z,21nm,1.2s						
RPOR				MLR	MLR		
	comp=Z,2μm,17.0s						
MTBS	Maitube	37.14	23	eP	P	14 55 01.7	-0.7
	baz=23						
MTBS	Maitube	37.14	23	eP	P	14 55 01.6	-0.7
SOC	Sochi	37.22	338	eP	P	14 55 02.3	-0.7
SOC				e		14 56 25.2	
SOC				ePPP	PPP	14 56 43.7	
SOC				eS	S	15 00 49.8	-0.1
SOC				eSS	SnSn	15 03 11.8	-13
SOC				pmax	pmax		
	comp=Z,43nm,1.1s						
SOC				MLR	MLR		
	comp=Z,995nm,14.0s						
TNSS	Tian-Shan	37.26	24	eP	P	14 55 04.5	+0.6
	baz=24						
TNSS	Tian-Shan	37.26	24	eP	P	14 55 04.4	+0.6
ANTO	Ankara	37.34	328	P	P	14 55 02.4	-1.8
ANTO	Ankara	37.34	328	P	P	14 55 02.4	-1.8
AAA	Alma-Ata	37.39	23	eP	P	14 55 04.4	-0.2
	comp=Z,26nm,1.2s,baz=24						
AAA				LR	LR	15 10 24.0	
	comp=Z,1μm,15.2s,baz=24						
AAA	Alma-Ata	37.39	23	eP	P	14 55 04.3	-0.2
AAA				pmax	pmax		
	comp=Z,26nm,1.2s						
AAA				MLR	MLR		
	comp=Z,1μm,15.0s						
MDOK	Medeo	37.41	24	eP	P	14 55 04.2	-0.6
	baz=24						
MDOK				LR	LR	15 10 14.9	
	comp=Z,1μm,14.6s,baz=24						
MDOK	Medeo	37.41	24	eP	P	14 55 04.1	-0.6
MDOK				MLR	MLR		
	comp=Z,1μm,15.0s						
GUZR	Guzeripl'	37.44	339	deP	P	14 55 05.4	+0.5
GUZR				pmax	pmax		
	comp=Z,35nm,1.2s						
GUZR				MLR	MLR		
	comp=Z,2μm,16.0s						
GOF	Gofitskoye	37.45	343	⇑eP	P	14 55 11.5	+6.7
GOF				pmax	pmax		
	comp=Z,101nm,1.9s						
KUU	Kurty	37.76	22	eP	P	14 55 07.0	-0.5
	comp=Z,84nm,1.4s,baz=22						
KUU	Kurty	37.76	22	eP	P	14 55 07.0	-0.5
KUU				pmax	pmax		
	comp=Z,84nm,1.4s						
SATY	Saty	37.87	25	eP	P	14 55 08.1	-0.6
	comp=Z,41nm,1.4s,baz=25						
SATY	Saty	37.87	25	eP	P	14 55 08.0	-0.6
SATY				pmax	pmax		
	comp=Z,41nm,1.4s						
BTLS	Baital	37.97	19	eP	P	14 55 09.2	0.0
	comp=Z,27nm,1.3s,baz=19						
BTLS	Baital	37.97	19	eP	P	14 55 09.2	0.0
BTLS				pmax	pmax		
	comp=Z,27nm,1.3s						
CHKK	Chushkaly	37.97	23	eP	P	14 55 09.4	0.0
	baz=23						
CHKK	Chushkaly	37.97	23	eP	P	14 55 09.3	0.0
UZB	Uzynbulak	38.20	26	eP	P	14 55 11.3	-0.2
	comp=Z,29nm,1.2s,baz=26						
UZB	Uzynbulak	38.20	26	eP	P	14 55 11.3	-0.2
UZB				pmax	pmax		
	comp=Z,29nm,1.2s						
LSZ	Lusaka	38.31	230	P	P	14 55 11.4	-1.3
LSZ				pmax	pmax		
	comp=Z,88nm,1.5s						
LSZ	Lusaka	38.31	230	P	P	14 55 11.4	-1.3
KPKS	Kokpek	38.32	25	eP	P	14 55 12.1	-0.4
	comp=Z,36nm,1.0s,baz=25						
KPKS	Kokpek	38.32	25	eP	P	14 55 12.0	-0.4
KPKS				pmax	pmax		
	comp=Z,36nm,1.0s						
SHLS	Shalkode	38.40	26	eP	P	14 55 15.2	+2.1
	comp=Z,29nm,1.1s,baz=26						
SHLS	Shalkode	38.40	26	eP	P	14 55 15.2	+2.1
SHLS				pmax	pmax		
	comp=Z,29nm,1.1s						
PDGK	Podgornoye	38.55	26	i P	P	14 55 14.6	+0.2
PDGK				pmax	pmax		
	comp=Z,67nm,1.2s						
MANT	Manisa	38.79	322	P	P	14 55 14.6	-1.9
ANN	Anapa	39.12	337	eP	P	14 55 18.2	-0.7
ANN				e		14 56 52.6	
ANN				eS	S	15 01 18.6	0.0
ANN				eSS	SnSn	15 04 07.5	-3.4
ANN				pmax	pmax		
	comp=Z,112nm,1.1s						
ANN				MLR	MLR		
	comp=Z,2μm,17.0s						
ANN				MLR	MLR		
	comp=N,2μm,12.0s						
LHMI	Lhok Sumawe	39.18	94	P	P	14 55 18.8	-1.0
LHMI				IAmb	IAmb	14 55 47.0	
	comp=Z,112nm,1.1s						
IDI	Anoyia	39.27	316	P	P	14 55 20.6	+0.2
	comp=Z,153nm,1.1s,baz=114,slow=7.7,SNR=9.0						
SANT	Santorini	39.48	317	P	P	14 55 20.2	-1.9
TDK	Taldyqorghan	39.48	23	eP	P	14 55 22.3	+0.3
	comp=Z,118nm,1.2s,baz=23						
TDK				LR	LR	15 11 38.5	
	comp=Z,982nm,16.2s,baz=23						
TDK	Taldyqorghan	39.48	23	eP	P	14 55 22.3	+0.3
TDK				pmax	pmax		
	comp=Z,118nm,1.2s						
TDK				MLR	MLR		
	comp=Z,982nm,16.0s						
AB31	Akbulak array	39.50	2	⇑eP	P	14 55 23.1	+1.1
AB31				pmax	pmax		
	comp=Z,75nm,1.1s						
ABKAR	Akbulak array	39.50	2	P	P	14 55 22.4	+0.4
ABKAR	Akbulak array	39.50	2	P	P	14 55 22.6	+0.5
ABKAR				IAmb	IAmb	14 55 26.0	
	comp=Z,81nm,1.1s						
MHMT	Maesarieng	39.91	73	P	P	14 55 27.0	+1.1
	comp=Z,90nm,1.1s						
GSI	Gunungsitoli	40.54	99	P	P	14 55 30.1	-1.2
UMPA	Umpang Tak	40.61	76	P	P	14 55 34.6	+2.8
	comp=Z,2μmcomp=Z,79nm,1.0s						
AKTO	Aktyubinsk	40.64	0	P	P	14 55 31.9	+0.4
	comp=Z,50nm,1.1s,baz=198,slow=9.0,SNR=31						
CM32	Chiang Mai Arr	40.83	73	P	P	14 55 35.0	+1.5
CM13	Chiang Mai Arr	40.86	73	P	P	14 55 36.3	+2.5
	comp=Z,248nmcomp=Z,25nm,1.2s						
CM15	Chiang Mai Arr	40.88	73	P	P	14 55 36.0	+2.0
	comp=Z,234nmcomp=Z,26nm,1.2s						
CM05	Chiang Mai Arr	40.89	73	P	P	14 55 36.5	+2.5
	comp=Z,248nmcomp=Z,30nm,1.2s						
CM31	Chiang Mai Arr	40.90	73	P	P	14 55 36.0	+1.9
	comp=Z,11μmcomp=Z,1μm,1.2s						
CM31	Chiang Mai Arr	40.90	73	P	P	14 55 34.7	+0.6
CM31				IAmb	IAmb	14 55 43.5	
	comp=Z,105nm,1.2s						
CMAR	Chiang Mai Arr	40.90	73	P	P	14 55 35.6	+1.5
	comp=Z,28nm,1.1s,baz=266,slow=8.0,SNR=138						
CMAR				PcP	PcP	14 57 36.2	+1.4
	comp=Z,1.5nm,1.0s,baz=272,slow=5.0,SNR=4.4						
CMAR				LR	LR	15 10 48.2	
	comp=Z,606nm,21.2s,baz=304,slow=34						
CMAR	Chiang Mai Arr	40.90	73	P	P	14 55 35.0	+0.9
CMAR	Chiang Mai Arr	40.90	73	P	P	14 55 35.0	+0.9
CM02	Chiang Mai Arr	40.90	73	P	P	14 55 36.6	+2.5
	comp=Z,482nmcomp=Z,59nm,1.2s						
CM01	Chiang Mai Arr	40.91	73	P	P	14 55 36.7	+2.5
	comp=Z,357nmcomp=Z,47nm,1.2s						
CM04	Chiang Mai Arr	40.92	73	P	P	14 55 36.9	+2.5
	comp=Z,424nmcomp=Z,56nm,1.2s						
CHTO	Chiang Mai	40.94	72	P	P	14 55 35.5	+1.0
CHTO				pmax	pmax		
	comp=Z,41nm,1.1s						
CHTO	Chiang Mai	40.94	72	P	P	14 55 35.5	+1.0
CM09	Chiang Mai Arr	40.94	73	P	P	14 55 37.0	+2.6
	comp=Z,431nmcomp=Z,66nm,1.1s						
CM33	Chiang Mai Arr	40.94	72	P	P	14 55 36.0	+1.5
CMMT	Chiang Mai	40.94	72	P	P	14 55 35.4	+0.9
	comp=Z,378nmcomp=Z,19nm,1.1s						
EZN	Ezine	40.98	322	P	P	14 55 37.4	+3.0
CM36	Chiang Mai Arr	41.05	73	P	P	14 55 37.0	+1.7
CM35	Chiang Mai Arr	41.12	73	P	P	14 55 37.0	+1.1
UTHA	Uthaitani	41.13	77	P	P	14 55 38.9	+2.9
	comp=Z,541nmcomp=Z,64nm,1.1s						
CM34	Chiang Mai Arr	41.14	72	P	P	14 55 38.0	+1.9
PHET	Kaeng Krachan	41.24	81	P	P	14 55 40.0	+3.0
	comp=Z,34nm,1.0s						
SUKH	Sukhothai	41.45	75	P	P	14 55 41.0	+2.4
	comp=Z,33nm,1.1s						
PSI	Prapat	41.54	97	P	P	14 55 41.2	+1.6
PSI				pmax	pmax		
	comp=Z,59nm,1.4s						
LAMP	Lampang	41.55	73	P	P	14 55 42.0	+2.5
	comp=Z,603nmcomp=Z,72nm,1.0s						
TRTT	Trang	41.55	89	P	P	14 55 41.9	+2.3
	comp=Z,28nm,1.4s						
RPSI	Rantau Prapat	41.56	97	P	P	14 55 41.2	+1.6
ALN	Alexandroupoli	41.81	323	P	P	14 55 41.5	+0.2
ALN				pmax	pmax		
	comp=Z,119nm,1.1s						
ALN	Alexandroupoli	41.81	323	P	P	14 55 41.5	+0.2
ALN				IAmb	IAmb	14 55 44.9	
	comp=Z,119nm,1.1s						
BRZS	Berezniki	42.08	14	eP	P	14 55 42.8	-0.6
	baz=14						
BRZS	Berezniki	42.08	14	eP	P	14 55 42.7	-0.6
PHIT	Phitsanulok	42.17	75	P	P	14 55 47.8	+3.2
	comp=Z,130nm,1.1s						
ITM	Ithomi	42.30	316	P	P	14 55 45.0	-0.3
UTTA	Uttaradit	42.35	74	P	P	14 55 48.4	+2.4
	comp=Z,250nmcomp=Z,32nm,1.0s						
MAKZ	Makanchi	42.40	25	P	P	14 55 46.2	+0.2
MAKZ				pmax	pmax		
	comp=Z,84nm,1.4s						
MAKZ	Makanchi	42.40	25	P	P	14 55 46.2	+0.2
MK31	Makanchi Array	42.51	25	c iP	P	14 55 47.5	+0.5
MK31				pmax	pmax		
	comp=Z,38nm,1.1s						
MK31	Makanchi Array	42.51	25	P	P	14 55 47.0	0.0
MKAR	Makanchi Array	42.51	25	P	P	14 55 47.3	+0.4
	comp=Z,24nm,1.1s,baz=210,slow=7.0,SNR=74						
MKAR				PcP	PcP	14 57 39.8	+0.2
	comp=Z,5.2nm,1.1s,baz=237,slow=3.0,SNR=2.5						
MKAR				LR	LR	15 15 18.0	
	comp=Z,2μm,19.8s,baz=221,slow=39						
MKAR	Makanchi Array	42.51	25	P	P	14 55 46.6	-0.4
MKAR						14 57 39.8	
MKAR	Makanchi Array	42.51	25	P	P	14 55 46.6	-0.4
MNSI	Mandailing Nat	42.61	99	P	P	14 55 50.2	+2.0
	comp=Z,833nmcomp=Z,41nm,1.7s						
PAIG	Paliouri	42.66	321	P	P	14 55 49.8	+1.6
PAIG				pmax	pmax		
	comp=Z,125nm,1.4s						
OUR	Ouranopolis	42.71	321	P	P	14 55 52.0	+3.4
KULM	Kulim	42.81	93	P	P	14 55 49.4	-0.4
KULM	Kulim	42.81	93	P	P	14 55 49.0	-0.8
WMQ	Urumqi	42.86	32	eP	P	14 55 50.7	+0.8
WMQ				sP	pwP	14 55 56.6	+0.5
WMQ				PP	PP	14 57 30.3	+1.0
WMQ				S	S	15 02 18.2	+3.8
WMQ				pmax	pmax		
	comp=Z,22nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,630nm,7.1s						
WMQ				LR	LR		
	comp=Z,2μm,18.9s						
WMQ				LR	LR		
	comp=Z,2μm,25.7s						
WMQ				LR	LR		
	comp=Z,2μm,25.7s						
WMQ	Urumqi	42.86	32	P	P	14 55 49.3	-0.6
WMQ				pmax	pmax		
	comp=Z,52nm,1.2s						
WMQ	Urumqi	42.86	32	P	P	14 55 49.3	-0.6
TIRR	Tirgusor	42.90	329	⇑P	P	14 55 49.7	-0.4
TIRR	Tirgusor	42.90	329	P	P	14 55 49.3	-0.8
TIRR				pmax	pmax		
	comp=Z,349nm,1.1s						
TIRR	Tirgusor	42.90	329	P	P	14 55 49.3	-0.8
AGG	Agios Georgios	43.01	319	P	P	14 55 50.3	-0.9
AGG				pmax	pmax		
	comp=Z,147nm,1.2s						
AGG	Agios Georgios	43.01	319	P	P	14 55 50.2	-0.9
AGG				IAmb	IAmb	14 55 53.4	
	comp=Z,147nm,1.2s						
TLBR	Topalu	43.15	329	⇑P	P	14 55 52.6	+0.5
TPGR	Topolog	43.18	329	⇓P	P	14 55 52.3	-0.1
TLCR		43.22	330	⇑P	P	14 55 53.1	+0.4
TLCR		43.22	330	P	P	14 55 53.0	+0.4
RAZG	Razgrad	43.29	327	⇑P	P	14 55 54.3	+1.0
IPM	Ipoh	43.31	94	P	P	14 55 55.0	+1.1
HARR	Harsova	43.31	329	⇑P	P	14 55 54.1	+0.6
HARR	Harsova	43.31	329	P	P	14 55 54.0	+0.6
BELG	Belogornoye	43.38	351	P	P	14 55 53.3	-0.5
	comp=Z,58nm,1.0s,baz=346,slow=0.8,SNR=16						
BELG				PcP	PcP	14 57 42.0	-0.3
	comp=Z,90nm,1.2s,baz=26,slow=3.0,SNR=4.2						
BELG	Belogornoye	43.38	351	⇓eP	P	14 55 53.8	0.0
BELG				pmax	pmax		
	comp=Z,13nm,1.1s						
SOH	Sokhos	43.39	321	P	P	14 55 55.9	+1.7
SRS	Serrai	43.42	322	P	P	14 55 55.5	+1.1
SRS				pmax	pmax		
	comp=Z,58nm,1.3s						
VRH	Novokhopyorsk	43.43	345	eP	P	14 55 53.8	-0.5
VRH				pmax	pmax		
	comp=Z,100nm,1.2s						
LIT	Litokhoron	43.51	320	P	P	14 55 54.1	-1.0
LIT				pmax	pmax		
	comp=Z,59nm,1.1s						
LIT	Litokhoron	43.51	320	P	P	14 55 54.1	-1.0
CFR	Carcaliu	43.55	330	⇓P	P	14 55 54.9	-0.5
CFR	Carcaliu	43.55	330	P	P	14 55 55.5	+0.2
CFR				pmax	pmax		
	comp=Z,54nm,1.3s						
CHAI	Chaiyaphum	43.59	77	P	P	14 55 58.0	+1.9
	comp=Z,478nmcomp=Z,48nm,1.1s						
SRAK	Srakaew	43.60	80	P	P	14 56 04.1	+8.0
VORD	Divnogorie	43.86	343	eP	P	14 55 57.2	-0.5
VORD				pmax	pmax		
	comp=Z,40nm,1.0s						
GRG	Griva	44.05	321	P	P	14 55 59.9	+0.4
GRG				pmax	pmax		
	comp=Z,28nm,1.3s						
VSR	Storozhevoye	44.12	343	eP	P	14 55 58.7	-1.1
VSR				pmax	pmax		
	comp=Z,60nm,1.0s						
ZSN	Zaisan	44.13	26	eP	P	14 55 59.8	-0.2
	baz=26						
ZSN	Zaisan	44.13	26	eP	P	14 55 59.8	-0.2
BKNI	Bangkinang	44.14	100	P	P	14 55 59.7	-0.8
BKNI	Bangkinang	44.14	100	P	P	14 56 02.2	+1.7
	comp=Z,1μmcomp=Z,130nm,1.1s						
VAY	Valandovo	44.16	322	P	P	14 56 02.3	+2.0
VAY				pmax	pmax		
	comp=Z,42nm,1.4s						
PLVB	Pleven	44.21	325	⇑P	P	14 56 00.4	-0.3
ISR	Istrita	44.32	328	⇑P	P	14 56 02.7	+1.1
ISR	Istrita	44.32	328	P	P	14 56 02.7	+1.1
PETR	Petresti	44.39	330	⇑P	P	14 56 03.5	+1.5
KHON	Khomkaen	44.42	77	P	P	14 56 05.6	+2.9
	comp=Z,74nm,1.1s						
KURK	Kurchatov	44.42	19	ceP	P	14 56 02.8	+0.6
KURK				pmax	pmax		
	comp=Z,33nm,1.3s						
KURK				MLR	MLR		
	comp=Z,6μm,21.0s						
KURK	Kurchatov	44.42	19	P	P	14 56 01.8	-0.4
BRVK	Borovoye	44.45	11	i P	P	14 56 02.4	-0.1
BRVK				pmax	pmax		
	comp=Z,58nm,1.7s						
BRVK				MLR	MLR		
	comp=Z,3μm,17.0s						
BRVK	Borovoye	44.45	11	P	P	14 56 01.0	-1.5
MILM	Milestii Mici	44.48	332	⇑P	P	14 56 02.7	-0.1
ODBI	Odobesti	44.50	329	⇑P	P	14 56 04.3	+1.3
VORR	Voronezh	44.52	344	eP	P	14 56 04.0	+1.0
VORR				pmax	pmax		
	comp=Z,300nm,1.2s						
VTS	Vitosha	44.53	323	⇑P	P	14 56 03.6	+0.2
VTS	Vitosha	44.53	323	P	P	14 56 01.9	-1.6
VTS				pmax	pmax		
	comp=Z,67nm,1.0s						
VTS	Vitosha	44.53	323	P	P	14 56 01.9	-1.6
VTS				IAmb	IAmb	14 56 06.5	
	comp=Z,67nm,1.0s						
GHRR		44.54	330	⇑P	P	14 56 03.3	+0.1
IGT	Igoumenitsa	44.59	318	P	P	14 56 03.7	-0.1
IGT				pmax	pmax		
	comp=Z,151nm,1.1s						
FNA	Florina	44.60	320	P	P	14 56 02.0	-1.9
FNA				pmax	pmax		
	comp=Z,32nm,1.0s						
FNA	Florina	44.60	320	P	P	14 56 01.9	-1.9
STIP	Stip	44.61	322	i P	P	14 55 55.3	-8.6
NEHR	Nehoiu	44.66	329	⇑P	P	14 56 05.5	+1.2
SEM	Semipalatinsk	44.70	20	eP	P	14 56 03.8	-1.0
	comp=Z,28nm,0.9s,baz=20						
SEM				LR	LR	15 15 02.1	
	comp=Z,395nm,16.7s,baz=20						
SEM	Semipalatinsk	44.70	20	eP	P	14 56 03.7	-1.0
SEM				pmax	pmax		
	comp=Z,28nm,0.9s						

SEM				MLR	MLR		
	comp=Z,395nm,17.0s						
VLAD	Vladila	44.72	326	⇑P	P	14 56 05.6	+0.8
VRI	Vrincioaia	44.74	329	⇑P	P	14 56 05.6	+0.7
VRI	Vrincioaia	44.74	329	P	P	14 56 06.0	+1.1
VRI				pmax	pmax		
	comp=Z,142nm,1.1s						
HUMR	Humele	44.75	327	⇓P	P	14 56 05.8	+0.8
VASR	Vaslui	44.76	331	⇑P	P	14 56 05.6	+0.5
PLOR	Plostina	44.77	329	⇑P	P	14 56 06.2	+1.0
PLOR	Plostina	44.77	329	P	P	14 56 06.2	+1.0
SDSI	Sungai Dareh	44.82	101	P	P	14 56 08.4	+2.4
	comp=Z,2µmcomp=Z,33nm,1.6s						
NONG	Nongkai	44.84	74	P	P	14 56 07.8	+1.8
	comp=Z,65nm,1.3s						
MLR	Muntele Rosu	44.88	328	P	P	14 56 06.7	+0.5
	comp=Z,69nm,1.0s,baz=346,slow=2.8,SNR=21						
MLR	Muntele Rosu	44.88	328	⇓P	P	14 56 07.4	+1.2
MLR	Muntele Rosu	44.88	328	P	P	14 56 05.5	-0.7
MLR				pmax	pmax		
	comp=Z,133nm,1.2s						
MLR	Muntele Rosu	44.88	328	P	P	14 56 05.5	-0.7
TESR	Tescani	45.23	330	⇑P	P	14 56 08.5	-0.2
IAS	Iasi	45.27	331	⇑P	P	14 56 10.2	+1.2
IAS	Iasi	45.27	331	P	P	14 56 09.6	+0.6
IAS				pmax	pmax		
	comp=Z,524nm,1.2s						
VOIR		45.31	328	⇑P	P	14 56 09.4	-0.1
VOIR		45.31	328	P	P	14 56 09.4	-0.1
OZUR		45.37	329	⇑P	P	14 56 10.4	+0.5
LPSR	Galich'ya Gora	45.43	344	*e*P	P	14 56 09.5	-0.7
LPSR				pmax	pmax		
	comp=Z,50nm,1.5s						
KMI	Kunming	45.44	64	⇑P	P	14 56 12.1	+1.1
KMI				pP	sP	14 56 15.7	+1.6
KMI				sP	pwP	14 56 17.1	-0.1
KMI				PcP	PcP	14 57 53.5	+3.2
KMI				S	S	15 02 54.8	+1.9
KMI				sS	sS	15 03 02.0	+5.8
KMI				SS	ScS	15 06 10.3	+1.7
KMI				pmax	pmax		
	comp=Z,36nm,1.3s						
KMI				pmax	pmax		
	comp=Z,280nm,4.0s						
KMI				LR	LR		
	comp=Z,380nm,18.8s						
KMI				LR	LR		
	comp=Z,1µm,22.9s						
KMI				LR	LR		
	comp=Z,1µm,24.2s						
KMI	Kunming	45.44	64	P	P	14 56 11.4	+0.3
KMI				pmax	pmax		
	comp=Z,42nm,1.0s						
KMI	Kunming	45.44	64	P	P	14 56 11.3	+0.3
KMI				IAmb	IAmb	14 56 18.4	
	comp=Z,42nm,1.0s						
ARR	Arges	45.49	327	⇓P	P	14 56 11.0	+0.1
DOPR	Dopca	45.49	329	⇑P	P	14 56 10.5	-0.4
SORM	Soroca	45.59	333	⇓P	P	14 56 10.3	-1.2
SORM	Soroca	45.59	333	P	P	14 56 10.3	-1.2
BIZ	Bicaz	45.80	330	⇑P	P	14 56 14.1	+0.9
SLVN	Son La	45.88	70	P	P	14 56 14.6	+0.2
LOT	Lotru	46.00	327	⇑P	P	14 56 14.3	-0.7
PRAR	RASCA	46.03	330	⇑P	P	14 56 14.8	-0.3
GZR	Gura Zlata	46.51	326	⇑P	P	14 56 19.2	+0.3
LBTB	Lobatse	46.54	222	P	P	14 56 20.0	+0.5
	comp=Z,54nm,1.1s,baz=41,slow=11,SNR=5.6						
LBTB				LR	LR	15 13 10.0	
	comp=Z,3µm,21.7s,baz=46,slow=33						
LBTB	Lobatse	46.54	222	P	P	14 56 19.9	+0.4
LBTB				pmax	pmax		
	comp=Z,113nm,1.2s						
LBTB	Lobatse	46.54	222	P	P	14 56 19.9	+0.4
MYKOM	Kota Tinggi	46.57	97	P	P	14 56 19.4	-0.4
MYKOM				IAmb	IAmb	14 56 26.7	
	comp=Z,84nm,1.3s						
MYKOM	Kota Tinggi	46.57	97	P	P	14 56 22.0	+2.2
ARU	Arti	46.65	1	P	P	14 56 19.7	-0.1
	comp=Z,14nm,1.0s,baz=179,slow=8.4,SNR=26						
ARU				PcP	PcP	14 57 53.2	-0.3
	comp=Z,2.3nm,0.5s,baz=180,slow=5.1,SNR=6.7						
ARU	Arti	46.65	1	*d i*P	P	14 56 20.3	+0.5
ARU						14 57 52.8	
ARU						14 58 08.1	
ARU				S	S	15 03 10.1	+1.2
ARU				SS	SS	15 06 32.0	-3.2
ARU				pmax	pmax		
	comp=Z,77nm,1.2s						
ARU	Arti	46.65	1	P	P	14 56 19.5	-0.3
ARU				IAmb	IAmb	14 56 23.1	
	comp=Z,76nm,1.2s						
KSI	Kapahiang	46.67	104	P	P	14 56 22.2	+1.5
	comp=Z,10µmcomp=Z,53nm,1.3s						
BURAR	Bucovina Array	46.70	330	⇓P	P	14 56 21.3	+0.8
BURAR	Bucovina Array	46.70	330	P	P	14 56 21.3	+0.8
BURAR	Bucovina Array	46.70	330	P	P	14 56 20.0	-0.5
MDVR	Moldovita	46.72	325	⇑P	P	14 56 20.0	-0.6
BUR08	Bucovina Ar. S	46.73	330	P	P	14 56 19.7	-1.0
BUR08				IAmb	IAmb	14 56 31.7	
	comp=Z,46nm,1.2s						
KMPD	K-Podol'skiy	46.77	332	P	P	14 56 20.0	-0.8
ARCR	ARCALIA	46.77	329	⇑P	P	14 56 21.4	+0.4
TIP	Timpagrande	46.83	316	⇑P	P	14 56 22.6	+1.0
PDG	Podgorica	46.83	321	⇑P	P	14 56 21.9	+0.4
PDG	Podgorica	46.83	321	P	P	14 56 20.5	-0.9
PDG				IAmb	IAmb	14 56 22.8	
	comp=Z,64nm,1.2s						
CJR	Cluj-Napoca	46.91	328	⇓P	P	14 56 22.6	+0.4
CJR	Cluj-Napoca	46.91	328	P	P	14 56 22.5	+0.4
DGZ	Jazzator, Alta	46.95	26	*c i*P	P	14 56 23.2	+0.8
DGZ				pmax	pmax		
	comp=Z,21nm,1.2s						
DGZ				MLR	MLR		
	comp=Z,4µm,21.0s						
SVE	Sverdlovsk	47.10	2	⇑*e*P	P	14 56 23.7	+0.4
SVE				*e*S	S	15 03 19.6	+4.3
SVE				pmax	pmax		
	comp=Z,77nm,1.3s						
SVE				MLR	MLR		
	comp=Z,2µm,19.0s						
JMBI	JAMBI	47.14	101	P	P	14 56 26.8	+2.5
AKASG	Malin Array Be	47.15	336	P	P	14 56 22.8	-1.0
	comp=Z,24nm,1.0s,baz=142,slow=6.7,SNR=21						
AKASG				PcP	PcP	14 57 55.5	+0.1
	comp=Z,5.6nm,0.7s,baz=135,slow=2.1,SNR=7.3						
AKASG				LR	LR	15 18 38.9	
	comp=Z,1µm,18.8s,baz=120,slow=39						
AKASG	Malin Array Be	47.15	336	P	P	14 56 21.3	-2.4
AKASG				pmax	pmax		
	comp=Z,8.0nm,1.2s						
AKASG	Malin Array Be	47.15	336	P	P	14 56 21.3	-2.4
AKBB	Malin Array Si	47.15	336	⇑*e*P	P	14 56 22.5	-1.3
AKBB	Malin Array Si	47.15	336	P	P	14 56 21.7	-2.1
AKBB				IAmb	IAmb	14 56 25.8	
	comp=Z,59nm,1.1s						
KIEV	Kiev	47.15	336	P	P	14 56 22.0	-1.8
HORU	Horodok	47.25	332	P	P	14 56 24.0	-0.6
KSV	Kosov	47.25	331	P	P	14 56 24.0	-0.7
BZS	Buzias	47.28	326	⇓P	P	14 56 24.6	-0.3
BZS	Buzias	47.28	326	P	P	14 56 24.4	-0.5
BZS				pmax	pmax		
	comp=Z,88nm,1.0s						
DIVS	Divibare	47.31	323	⇑*i*P	P	14 56 25.0	-0.3
DIVS	Divibare	47.31	323	P	P	14 56 23.4	-1.9
DIVS				IAmb	IAmb	14 56 26.8	
	comp=Z,42nm,1.2s						
DRGR		47.43	328	⇓P	P	14 56 26.2	+0.1
DRGR		47.43	328	P	P	14 56 26.4	+0.2
DRGR				pmax	pmax		
	comp=Z,41nm,2.2s						
BBLS	Lazići	47.53	323	*e*P	P	14 56 25.5	-1.5
BMR	Baia Mare	47.60	329	⇑P	P	14 56 26.7	-0.6
LHSI	Lahat	47.61	104	P	P	14 56 30.1	+2.1
	comp=Z,72nm,1.1s						
SIRR	Siria	47.66	327	⇑P	P	14 56 27.7	-0.2
RAFF	Raffo Rosso	47.68	312	P	P	14 56 25.6	-2.6
CD2	Chengdu	47.70	57	P	P	14 56 28.3	-0.2
CD2				pmax	pmax		
	comp=Z,50nm,0.9s						
GTA	Gaotai	47.79	45	⇓P	P	14 56 30.0	+0.8
GTA				pP	pwP	14 56 35.0	-0.4
GTA				sP	sP	14 56 38.3	+6.1
GTA				PP	PP	14 58 16.6	-4.4
GTA				S	S	15 03 24.9	-1.1
GTA				pmax	pmax		
	comp=Z,8.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,280nm,5.0s						
GTA				LR	LR		
	comp=Z,990nm,17.4s						
GTA				LR	LR		
	comp=Z,1µm,16.7s						
GTA				LR	LR		
	comp=Z,2µm,18.5s						
FRGS	Fruska Gora	48.03	324	⇑P	P	14 56 30.2	-0.6
FRGS	Fruska Gora	48.03	324	⇑*i*P	P	14 56 29.9	-0.9
STON	Ston	48.03	321	*e*P	P	14 56 29.0	-1.8
TRSU	Trosnyk	48.15	329	P	P	14 56 32.3	+0.7
OBN	Obninsk	48.31	344	⇓*e*P	P	14 56 32.5	-0.2
OBN				*e*		14 58 02.2	
OBN				*e*		14 58 25.0	
OBN				*i* S	S	15 03 33.8	+1.3
OBN				pmax	pmax		
	comp=Z,113nm,1.7s						
OBN				MLR	MLR		
	comp=Z,2µm,19.0s						
MORS	Morshin	48.38	331	P	P	14 56 33.5	+0.1
MDSI	Maura Dua	48.43	105	P	P	14 56 36.3	+2.0
	comp=Z,527nmcomp=Z,28nm,1.2s						
LWLI	Liwa	48.47	106	P	P	14 56 37.8	+3.0
	comp=Z,46nm,1.1s						
PMBI	Palembang	48.56	103	P	P	14 56 36.2	+0.9
	comp=Z,45µmcomp=Z,116nm,0.5s						
MOS	Moscow	48.59	345	*e*P	P	14 56 34.0	-0.8
MOS				*e*		14 58 28.3	
MOS				pmax	pmax		
	comp=Z,138nm,1.0s						
MOS				MLR	MLR		
	comp=Z,2µm,18.0s						
CORL	Corleone	48.72	313	P	P	14 56 35.2	-1.1
SGRT	San Giovanni R	48.73	318	P	P	14 56 36.0	-0.3
LVV	L'vov	48.78	332	*e*P	P	14 56 36.4	-0.1
LVV				*e*S	S	15 03 35.2	-4.3
LVV				*e*SS	SS	15 06 59.5	-11
LVV				pmax	pmax		
	comp=Z,160nm,1.3s						
LVV				MLR	MLR		
	comp=E,700nm,17.0s						
LVV				MLR	MLR		
	comp=N,400nm,16.0s						
LVV				MLR	MLR		
	comp=Z,900nm,17.0s						
TSUM	Tsumeb	48.83	234	P	P	14 56 36.1	-1.3
TSUM				IAmb	IAmb	14 56 57.8	
	comp=Z,45nm,1.3s						
UZH	Uzhgorod	48.83	329	*e*P	P	14 56 36.1	-0.8
UZH				*e*		14 56 41.7	
KLSI		49.01	105	P	P	14 56 40.7	+1.9
	comp=Z,294nmcomp=Z,14nm,1.3s						
KASI	Kota Agung	49.04	106	P	P	14 56 40.7	+1.7
	comp=Z,1µmcomp=Z,74nm,1.2s						
KOLS	Kolonicke sedl	49.04	330	*e*P	P	14 56 38.6	+0.1
KOLS				pmax	pmax		
	comp=Z,74nm,1.2s						
KOLS	Kolonicke sedl	49.04	330	*e*P	P	14 56 38.6	+0.1
GYA	Guiyang	49.16	63	⇑P	P	14 56 40.3	+0.3
GYA				sP	pwP	14 56 48.9	+2.7
GYA				S	S	15 03 49.6	+3.8
GYA				pmax	pmax		
	comp=Z,31nm,1.4s						
GYA				pmax	pmax		
	comp=Z,260nm,4.3s						
GYA				LR	LR		
	comp=Z,1µm,20.6s						
GYA				LR	LR		
	comp=Z,660nm,26.9s						
GYA				LR	LR		
	comp=Z,1µm,23.4s						
PAOL	Paolisi	49.17	317	P	P	14 56 37.2	-2.5
PAOL				IAmb	IAmb	14 56 52.6	
	comp=Z,104nm,1.4s						
KIRV	Kirov	49.21	354	P	P	14 56 38.2	-1.3
	comp=Z,15nm,0.7s,baz=213,slow=5.1,SNR=7.0						
KIRV				LR	LR	15 18 43.1	
	comp=Z,809nm,18.6s,baz=168,slow=38						
KIRV	Kirov	49.21	354	*ce*P	P	14 56 39.0	-0.6
ZAA0	Zalesovo Array	49.21	21	P	P	14 56 39.0	-0.7
ZAA0				IAmb	IAmb	14 56 46.6	
	comp=Z,57nm,1.1s						
ZALV	Zalesovo Beam	49.21	21	P	P	14 56 39.5	-0.2
	comp=Z,36nm,0.9s,baz=223,slow=7.9,SNR=52						
ZALV				LR	LR	15 18 20.3	
	comp=Z,2µm,20.6s,baz=218,slow=37						
ZALV	Zalesovo Beam	49.21	21	P	P	14 56 38.9	-0.8
ZALV	Zalesovo Beam	49.21	21	P	P	14 56 38.9	-0.8
BOSA	Boshof	49.28	218	P	P	14 56 40.6	-0.1
	comp=Z,53nm,1.1s,baz=47,slow=8.4,SNR=26						
BOSA				LR	LR	15 14 45.7	
	comp=Z,4µm,21.8s,baz=38,slow=33						
BOSA	Boshof	49.28	218	P	P	14 56 40.7	-0.1
BOSA				pmax	pmax		
	comp=Z,116nm,1.3s						
BOSA	Boshof	49.28	218	P	P	14 56 40.7	-0.1
KWP	Kalwaria Pacla	49.29	331	*e*P	P	14 56 39.7	-0.7
KWP	Kalwaria Pacla	49.29	331	P	P	14 56 39.3	-1.1
KWP				pmax	pmax		
	comp=Z,151nm,1.3s						
KWP	Kalwaria Pacla	49.29	331	P	P	14 56 39.3	-1.1
MORH	Mrgy, Hungar	49.31	325	⇓P	P	14 56 40.2	-0.3
MORH	Mrgy, Hungar	49.31	325	⇑*i*P	P	14 56 40.0	-0.6
BLY	Banja Luka	49.35	322	⇑*i*P	P	14 56 40.5	-0.4
LZH	Lanzhou	49.39	50	⇓P	P	14 56 42.8	+1.2
LZH				pP	sP	14 56 46.1	+1.4
LZH				sP	pwP	14 56 47.8	0.0
LZH				pmax	pmax		
	comp=Z,36nm,1.3s						
LZH				pmax	pmax		
	comp=Z,390nm,5.4s						
CRVS	Cervenica-Dubn	49.43	329	*e*P	P	14 56 41.8	+0.3
CRVS				pmax	pmax		
	comp=Z,202nm,1.5s						
CRVS	Cervenica-Dubn	49.43	329	*e*P	P	14 56 41.8	+0.3
PSZ	Piszkesteto	49.63	327	⇑P	P	14 56 42.0	-1.1
PSZ	Piszkesteto	49.63	327	P	P	14 56 41.7	-1.4
PSZ				pmax	pmax		
	comp=Z,36nm,1.1s						
PSZ	Piszkesteto	49.63	327	P	P	14 56 41.7	-1.4
KECS	Kecovo	49.66	328	*e*P	P	14 56 43.9	+0.6
KECS				pmax	pmax		
	comp=Z,14nm,1.3s						
KECS	Kecovo	49.66	328	*e*P	P	14 56 43.9	+0.6
BLSI	Bandar Lampung	49.70	105	P	P	14 56 44.9	+0.8
INTR	Introdacqua	50.06	318	P	P	14 56 44.5	-2.0
NIE	Niedzica	50.35	329	*e*P	P	14 56 49.6	+1.1
NIE	Niedzica	50.35	329	P	P	14 56 49.0	+0.5
SRO	Srobarova	50.42	326	*e*P	P	14 56 49.0	0.0
SRO	Srobarova	50.42	326	*e*P	P	14 56 49.0	0.0
BEHE	Becsehely	50.52	324	*e*P	P	14 56 50.4	+0.6
MNK	Minsk	50.60	338	*e*P	P	14 56 50.0	-0.2
MNK	Minsk	50.60	338	*i* P	P	14 56 46.6	-3.7
	comp=E,3.0nm,0.9s						
MNK				*i* P	P	14 56 46.6	-3.7
	comp=N,22nm,0.9s						
MNK				*i* P	P	14 56 46.6	-3.7
	comp=Z,49nm,0.9s						
MNK				*i* PcP	PcP	14 58 04.4	-3.4
MNK				*i* PP	PP	14 58 42.4	-3.8
MNK				*i* PPP	PPP	14 59 38.3	
MNK				*i* S	S	15 03 56.7	-8.1
MNK				*i* SS	SS	15 07 44.8	+5.8
MNK				*i* SSS	SSS	15 09 03.8	
MNK				*i* LQ	LQ	15 14 32.6	
MNK				*i* LR	LR	15 16 40.9	
MNK				*i* LRM	MLR	15 20 04.0	
	comp=N,1µm,16.6s						
MNK				*i* LRM	MLR	15 20 05.9	
	comp=Z,1µm,16.6s						
MNK				*i* LRM	MLR	15 20 14.8	
	comp=E,102nm,16.6s						
LANS	Liptovska Anna	50.61	328	*e*P	P	14 56 55.5	+5.0
LANS				pmax	pmax		
	comp=Z,24nm,1.1s						
LANS	Liptovska Anna	50.61	328	*e*P	P	14 56 55.5	+5.0
KOGS	Kog	50.81	324	*e*P	P	14 56 51.4	-0.6
BOJS	Bojanci	50.91	322	*e*P	P	14 56 52.2	-0.5
KEST	Kesra	50.92	308	P	P	14 56 54.0	+1.0
	comp=Z,42nm,1.1s,baz=112,slow=2.7,SNR=11						
KEST				LR	LR	15 20 06.7	
	comp=Z,855nm,18.1s,baz=17,slow=38						
KEST	Kesra	50.92	308	P	P	14 56 52.5	-0.6
KEST				IAmb	IAmb	14 57 18.2	
	comp=Z,97nm,1.2s						
CRES	Cresnjev	50.95	323	⇑*i*P	P	14 56 52.5	-0.6
NRCA	Norcia	50.96	318	P	P	14 56 52.0	-1.3
NRCA				IAmb	IAmb	14 56 56.1	
	comp=Z,81nm,1.2s						
LEGS	Legarje	51.10	323	*e*P	P	14 56 53.3	-0.9
OJC	Ojcow	51.10	330	*e*P	P	14 56 53.2	-0.9
OJC	Ojcow	51.10	330	P	P	14 56 52.2	-1.9
OJC				pmax	pmax		
	comp=Z,49nm,1.1s						
OJC	Ojcow	51.10	330	P	P	14 56 52.2	-1.9
OJC				IAmb	IAmb	14 56 55.8	
	comp=Z,49nm,1.1s						
QIZ	Qiongzhong	51.24	73	P	P	14 56 54.4	-1.2
QIZ				PP	PP	14 58 51.2	-1.4
QIZ				S	S	15 04 13.9	-0.7
QIZ				sS	sS	15 04 20.7	+2.9
QIZ				LR	LR		
	comp=Z,630nm,12.0s						
QIZ				LR	LR		
	comp=Z,760nm,13.1s						
QIZ				LR	LR		
	comp=Z,910nm,16.3s						
RIY	Rijeka	51.28	322	⇑*i*P	P	14 56 54.4	-1.1
ZST	Bratislava	51.30	326	*e*P	P	14 56 55.0	-0.7
ZST				pmax	pmax		
	comp=Z,158nm,1.3s						
ZST	Bratislava	51.30	326	*e*P	P	14 56 55.0	-0.7
SMOL	Smolenice	51.31	327	*e*P	P	14 56 55.3	-0.4
SMOL				pmax	pmax		
	comp=Z,19nm,1.2s						
SMOL	Smolenice	51.31	327	*e*P	P	14 56 55.3	-0.4
MODS	Modra-Piesok	51.31	326	*e*P	P	14 56 53.5	-2.2
MODS				pmax	pmax		
	comp=Z,78nm,1.3s						
MODS	Modra-Piesok	51.31	326	*e*P	P	14 56 53.5	-2.2
SOP	Sopron	51.32	325	P	P	14 56 56.2	+0.4
SOP				pmax	pmax		
	comp=Z,74nm,1.1s						
NACGM	Naroch	51.32	338	*i* P	P	14 56 54.9	-0.7
NACGM				*i* P	P	14 56 54.9	-0.7
NACGM				*i* P	P	14 56 54.9	-0.7
NACGM				*i* pP	PcP	14 58 08.1	-2.4
NACGM				*i* PP	PP	14 59 02.8	+10
NACGM				*i* PPP	PPP	15 00 35.2	
NACGM				*i* S	S	15 03 42.0	-33
NACGM				*i* SS	SS	15 07 31.8	-19
NACGM				*i* SSS	SSS	15 09 45.7	
NACGM				*i* LQ	LQ	15 15 33.7	
NACGM				*i* LR	LR	15 18 07.8	
JAVC	Velka Javorina	51.38	327	*e*P	P	14 56 55.7	-0.6
DBJI	Dramaga	51.49	106	P	P	14 56 58.6	+1.0
	comp=Z,53nm,1.2s						
TAM	Tamanrasset	51.49	291	P	P	14 56 57.6	-0.1
TAM				pmax	pmax		
	comp=Z,41nm,1.1s						
TAM	Tamanrasset	51.49	291	P	P	14 56 57.6	-0.1
CEY	Cerknica	51.52	322	⇑*i*P	P	14 56 57.2	-0.2
MURB	Monte Urbino	51.54	319	P	P	14 56 56.0	-1.5
MURB				IAmb	IAmb	14 57 05.4	
	comp=Z,86nm,1.2s						
LJU	Ljubljana	51.62	323	*e*P	P	14 56 57.8	-0.3
LJU	Ljubljana	51.62	323	⇑*i*P	P	14 56 57.3	-0.8
SOKA	Soboth	51.65	324	*i* P	P	14 56 57.8	-0.6
	comp=Z,31nm,1.1s,SNR=10						
IDID	Didziasalis	51.65	338	*e*P	P	14 56 58.2	+0.1
BEL	Belsk	51.66	332	P	P	14 56 59.9	+1.6
ARSA	Arzberg	51.67	324	*i* P	P	14 56 57.9	-0.6
	comp=Z,39nm,1.1s,SNR=11						
LATE	Laterza	51.73	318	P	P	14 56 57.9	-1.1
LATE				IAmb	IAmb	14 57 01.3	
	comp=Z,45nm,1.0s						
CONA	Conrad Observa	51.84	325	*i* P	P	14 56 59.1	-0.7
	comp=Z,79nm,1.2s,SNR=33						
OBKA	Obir	51.85	323	*i* P	P	14 56 59.4	-0.4
	comp=Z,55nm,1.1s,SNR=14						
IIGN	Ignalina	51.87	338	*e*P	P	14 56 59.9	+0.1
TRI	Trieste	51.91	322	P	P	14 56 58.6	-1.6
TRI				pmax	pmax		
	comp=Z,102nm,1.2s						
TRI	Trieste	51.91	322	P	P	14 56 58.6	-1.6
TRI				IAmb	IAmb	14 57 02.1	
	comp=Z,102nm,1.2s						
MORC	Moravsky Berou	51.99	328	⇑P	P	14 56 59.9	-0.9
MORC	Moravsky Berou	51.99	328	*e*P	P	14 56 59.6	-1.2
MORC	Moravsky Berou	51.99	328	P	P	14 56 59.4	-1.4
MORC	Moravsky Berou	51.99	328	P	P	14 56 59.4	-1.4
MORC				IAmb	IAmb	14 57 02.9	
	comp=Z,63nm,1.1s						
ISAL	Salakas	52.07	338	*e*P	P	14 57 00.9	-0.3
SUW	Suwalki	52.09	335	*e*P	P	14 57 01.0	-0.5
SUW	Suwalki	52.09	335	*e*P	P	14 57 00.9	-0.5
SUW	Suwalki	52.09	335	P	P	14 56 59.6	-1.8
SUW				pmax	pmax		
	comp=Z,159nm,1.0s						
SUW	Suwalki	52.09	335	P	P	14 56 59.6	-1.8
KRUC	Moravsky	52.18	327	*e*P	P	14 57 01.1	-1.1
VRAC	Vranov	52.22	327	P	P	14 57 01.1	-1.4
	comp=Z,23nm,0.9s,baz=127,slow=6.4,SNR=12						
VRAC	Vranov	52.22	327	⇑P	P	14 57 01.8	-0.7
VRAC	Vranov	52.22	327	*e*P	P	14 57 01.0	-1.4
ENH	Enshi	52.34	59	P	P	14 57 02.0	-1.7
ENH				IAmb	IAmb	14 57 14.4	
	comp=Z,96nm,1.3s						
LEM	Lembang	52.39	106	P	P	14 57 05.3	+0.8
	comp=Z,772nmcomp=Z,33nm,1.8s						
CASP	Castiglione de	52.43	317	P	P	14 57 02.2	-2.0
CASP				IAmb	IAmb	14 57 17.5	
	comp=Z,89nm,1.3s						
MYKA	Terra Mystica	52.45	323	*i* P	P	14 57 03.7	-0.7
	comp=Z,56nm,1.1s,SNR=20						
OSSC	Osservatorio P	52.49	318	P	P	14 57 03.2	-1.4
KRLC	Kraliky	52.56	328	*e*P	P	14 57 03.5	-1.6
KRLC	Kraliky	52.56	328	*e*P	P	14 57 03.5	-1.6
MOA	Molln	52.71	324	*i* P	P	14 57 05.0	-1.2
	comp=Z,53nm,1.1s,SNR=17						
XAN	Xi'an	52.74	54	P	P	14 57 06.6	-0.1
XAN				sP	pwP	14 57 13.0	+0.1
XAN				PcP	PcP	14 58 16.6	+0.3
XAN				S	S	15 04 33.3	-1.7
XAN				SS	SS	15 08 11.7	-2.0
XAN				pmax	pmax		
	comp=Z,45nm,1.3s						
XAN				pmax	pmax		
	comp=Z,360nm,6.5s						
XAN				LR	LR		
	comp=Z,360nm,15.5s						
XAN				LR	LR		
	comp=Z,1µm,18.4s						
XAN				LR	LR		
	comp=Z,2µm,20.6s						
CISI	Cisompet, Garu	52.80	107	P	P	14 57 07.9	+0.5
CISI				IAmb	IAmb	14 57 11.4	
	comp=Z,55nm,0.8s						
CISI	Cisompet, Garu	52.80	107	P	P	14 57 04.5	-2.9
	comp=Z,76nm,1.0s						
TREC	Trest	52.81	327	*e*P	P	14 57 06.1	-0.8
TREC	Trest	52.81	327	*e*P	P	14 57 06.1	-0.8
ZOU	Zoufplan	52.81	322	P	P	14 57 05.2	-2.0
ZOU				IAmb	IAmb	14 57 09.2	
	comp=Z,53nm,1.2s						
STAL	STALIGIAL	52.82	322	P	P	14 57 05.5	-1.5
KLMR	Klimovskoe	52.83	349	*e*P	P	14 57 04.6	-2.2
KLMR				*e*		14 58 14.7	
KLMR				pmax	pmax		
	comp=Z,100nm,1.5s						
KLMR	Klimovskoe	52.83	349	*e*P	P	14 57 04.6	-2.2
KLMR				AMP		14 57 20.3	
	comp=Z,100nm,1.5s						
KLMR				*e*PcP	PcP	14 58 14.7	-1.3
KLMR				LQ	LQ	15 15 41.0	
KLMR				LQ	LQ	15 15 41.0	
KLMR				LR	LR	15 18 27.9	
PABE	Paberze	52.85	337	*e*P	P	14 57 06.2	-0.8
KBA	Koelnbreinsper	52.85	323	*i* P	P	14 57 06.4	-1.0
	comp=Z,52nm,1.1s,SNR=22						
KBA	Koelnbreinsper	52.85	323	P	P	14 57 06.7	-0.7
JCJI	Jatiwangi	52.91	106	P	P	14 57 09.7	+1.6
	comp=Z,329nm,0.4s						
DPC	Dobruska-Polom	52.96	328	*e*P	P	14 57 06.6	-1.4
DPC	Dobruska-Polom	52.96	328	*e*P	P	14 57 06.6	-1.4
KSM	Kuching	52.96	95	P	P	14 57 10.0	+1.5

Code	Station	Delta	Az	Phase	ISC phase	Time	Res
ZCCA	Zocca	53.02	319	P	P	14 57 09.0	+0.4
TEOL	Teolo	53.04	321	P	P	14 57 06.6	-2.0
TEOL				IAmb	IAmb	14 57 14.9	
	comp=Z,53nm,1.0s						
OSTC	Ostas	53.13	328	eP	P	14 57 08.3	-1.0
OSTC				ex	x	14 57 14.0	
ABTA	Abfaltersbach	53.18	322	iP	P	14 57 08.9	-0.8
	comp=Z,46nm,1.1s,SNR=14						
CKRC	Cesky Krumlov	53.20	325	eP	P	14 57 08.6	-1.2
UPC	Upice	53.21	328	eP	P	14 57 09.1	-0.7
UPC	Upice	53.21	328	eP	P	14 57 09.1	-0.7
CHVC	Chvalec	53.24	328	eP	P	14 57 09.1	-0.9
KSP	Ksiaz	53.26	328	eP	P	14 57 09.8	-0.4
KSP	Ksiaz	53.26	328	P	P	14 57 09.6	-0.6
VLC	Villacollemand	53.32	319	P	P	14 57 08.8	-2.0
VLC				IAmb	IAmb	14 57 31.4	
	comp=Z,52nm,1.3s						
CTI	Castel Tesino	53.37	321	P	P	14 57 09.2	-2.0
CTI				pmax	pmax		
	comp=Z,53nm,1.2s						
CTI	Castel Tesino	53.37	321	P	P	14 57 09.2	-2.0
CTI				IAmb	IAmb	14 57 13.2	
	comp=Z,53nm,1.2s						
GEC2	GERESS Array S	53.55	325	P	P	14 57 10.3	-2.2
GERES	GERESS Array B	53.55	325	P	P	14 57 10.1	-2.3
	comp=Z,6.3nm,1.0s,baz=111,slow=7.4,SNR=12						
GERES				PcP	PcP	14 58 19.4	+0.2
	comp=Z,4.9nm,1.1s,baz=183,slow=3.9,SNR=4.5						
GERES				LR	LR	15 21 31.5	
	comp=Z,332nm,18.9s,baz=118,slow=38						
PRU	Pruhonice	53.70	327	eP	P	14 57 12.0	-1.4
PRU	Pruhonice	53.70	327	eP	P	14 57 12.0	-1.4
KHC	Kasperske Hory	53.77	325	ceP	P	14 57 11.8	-2.2
KHC				pmax	pmax		
	comp=Z,91nm,1.3s						
KHC	Kasperske Hory	53.77	325	eP	P	14 57 11.5	-2.4
KHC				epP	sP	14 57 17.4	+0.2
KHC	Kasperske Hory	53.77	325	P	P	14 57 11.6	-2.4
KHC				IAmb	IAmb	14 57 15.1	
	comp=Z,43nm,1.2s						
PRA	Prague	53.81	327	eP	P	14 57 13.5	-0.7
PRA	Prague	53.81	327	eP	P	14 57 13.5	-0.7
SALO	Salr	53.87	320	P	P	14 57 13.4	-1.4
WTTA	Wattenberg	53.95	323	iP	P	14 57 13.7	-1.8
	comp=Z,90nm,1.2s,SNR=22						
WTTA	Wattenberg	53.95	323	P	P	14 57 14.5	-1.0
PVCC	Panska Ves	53.98	327	eP	P	14 57 14.8	-0.7
PVCC	Panska Ves	53.98	327	eP	P	14 57 14.8	-0.7
PBUR	Paburge	54.02	336	eP	P	14 57 15.6	0.0
WATA	Walderalm	54.02	323	iP	P	14 57 13.9	-2.1
	comp=Z,86nm,1.2s,SNR=22						
VSU	Vasula	54.09	341	eP	P	14 57 14.8	-1.2
VSU	Vasula	54.09	341⇑	eP	P	14 57 14.3	-1.7
VSU				pmax	pmax		
	comp=Z,124nm,1.1s						
VSU				MLR	MLR		
	comp=Z,3µm,18.0s						
SQTA	Sankt Quirin	54.19	322	iP	P	14 57 15.6	-1.6
	comp=Z,87nm,1.5s,SNR=17						
GKP	Gorka Klasztor	54.25	331	eP	P	14 57 16.4	-1.0
MOTA	Moosalm	54.31	323	iP	P	14 57 16.3	-1.8
	comp=Z,97nm,1.0s,SNR=30						
FETA	Feichten	54.39	322	iP	P	14 57 17.4	-1.3
	comp=Z,40nm,1.1s,SNR=14						
BRG	Berggiesshubel	54.51	327	iP	P	14 57 18.3	-1.0
BRG				Amp		14 57 21.2	
	comp=Z,42nm,1.2s						
BRG				PP	PP	14 59 25.3	+3.8
BRG				Amp		14 59 27.2	
	comp=Z,59nm,1.7s						
BRG				S	S	15 05 05.0	+6.7
BRG				Amp		15 24 29.0	
	comp=N,0.6nm,18.6s						
BRG				Amp		15 24 43.0	
	comp=Z,1.1nm,16.7s						
BRG				Amp		15 24 48.0	
	comp=E,661nm,27.0s						
BRG	Berggiesshubel	54.51	327	eP	P	14 57 18.4	-0.8
	comp=E,42nm,1.2s,baz=120,slow=7.3						
RETA	Reutte	54.58	323	iP	P	14 57 18.3	-1.7
	comp=E,32nm,1.0s,SNR=12						
FUR	Furstenfeldbru	54.60	324	eP	P	14 57 18.9	-1.2
	comp=E,181nm,1.1s,baz=120,slow=7.3						
SUR	Sutherland	54.65	218	LR	LR	15 18 05.8	
	comp=E,3µm,21.4s,baz=44,slow=33						
SUR	Sutherland	54.65	218	P	P	14 57 19.5	-1.3
SBUM	Sibu	54.66	94	P	P	14 57 22.0	+1.0
MOY	Mondy	54.74	32	eP	P	14 57 21.6	+0.5
MOY				pmax	pmax		
	comp=Z,74nm,1.8s						
DAVOX	Davos/Dischmat	54.79	321	P	P	14 57 20.8	-0.9
	comp=Z,79nm,1.1s,baz=170,slow=6.4,SNR=25						
FBE	Freiberg	54.85	327	eP	P	14 57 21.3	-0.4
	comp=Z,60nm,1.2s,baz=120,slow=7.3						
GRC1	Grafenberg Arr	54.87	324	P	P	14 57 20.2	-1.7
ROTZ	Rotzenmuhle	54.87	326	eP	P	14 57 20.6	-1.3
	comp=Z,33nm,1.2s,baz=120,slow=7.3						
TOA0	Torodi Ar. Sit	54.89	279	P	P	14 57 21.5	-1.2
TOA0				IAmb	IAmb	14 57 27.7	
	comp=Z,47nm,1.1s						
TORD	Torodi Ar. Bea	54.89	279	P	P	14 57 22.5	-0.1
	comp=Z,25nm,1.0s,baz=90,slow=6.6,SNR=33						
TORD				LR	LR	15 19 09.8	
	comp=Z,518nm,21.7s,baz=85,slow=34						
TORD	Torodi Ar. Bea	54.89	279	P	P	14 57 21.7	-1.0
NKC	Novy Kostel	54.97	326	eP	P	14 57 21.7	-1.0
NKC	Novy Kostel	54.97	326	eP	P	14 57 21.7	-1.0
DAVA	Damuels	55.02	322	iP	P	14 57 21.9	-1.4
	comp=Z,52nm,1.1s,SNR=19						
SLIT	Slitere, Latvi	55.03	338	eP	P	14 57 21.6	-1.3
WERN	Wernitzgruen	55.04	326	eP	P	14 57 22.8	-0.4
	comp=Z,78nm,1.1s,baz=120,slow=7.3						
TANN	Tannenbergstha	55.06	326	eP	P	14 57 22.6	-0.8
	comp=Z,26nm,1.2s,baz=120,slow=7.3						
UBR	Ueberruh	55.06	323	eP	P	14 57 22.3	-1.1
	comp=Z,66nm,1.1s,baz=120,slow=7.3						
GUNZ	Gunzen	55.10	326	eP	P	14 57 23.1	-0.6
	comp=Z,85nm,1.2s,baz=120,slow=7.3						
WERD	Werda	55.16	326	eP	P	14 57 23.3	-0.7
	comp=Z,36nm,1.1s,baz=120,slow=7.3						
CLL	Collm	55.24	328	eP	P	14 57 23.0	-1.6
	comp=Z,56nm,1.2s						
CLL				i		14 57 30.1	
CLL				i		14 57 33.6	
CLL				eS	S	15 05 10.0	+1.8
CLL				eSSS	SSS	15 10 57.0	
CLL				LmH		15 23 00.0	
	comp=N,500nm,18.7s						
CLL				LmH		15 23 00.0	
	comp=E,400nm,20.6s						
CLL				LmV		15 25 00.0	
	comp=Z,500nm,21.0s						
CLL	Collm	55.24	328	eP	P	14 57 23.0	-1.6
CLL				i		14 57 30.1	
CLL				eS	S	15 05 10.0	+1.8
CLL				pmax	pmax		
	comp=Z,56nm,1.2s						
CLL				MLR	MLR		
	comp=Z,500nm,21.0s						
CLL	Collm	55.24	328	P	P	14 57 22.6	-2.0
CLL				IAmb	IAmb	14 57 27.4	
	comp=Z,49nm,1.2s						
CLL	Collm	55.24	328	eP	P	14 57 24.1	-0.5
	comp=Z,56nm,1.2s,baz=120,slow=7.3						
PLN	Plauen	55.26	326	eP	P	14 57 24.1	-0.7
	comp=Z,26nm,1.3s,baz=120,slow=7.3						
ZAK	Zakamensk	55.27	34	eP	P	14 57 17.8	-7.1
ZAK				e		14 58 21.7	
ZAK				pmax	pmax		
	comp=Z,12nm,1.4s						
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.3s						
MTSE	Matsula	55.27	339	eP	P	14 57 24.1	-0.5
GRA1	Grafenberg Arr	55.38	325	P	P	14 57 23.4	-2.3
GRA1				IAmb	IAmb	14 57 26.9	
	comp=Z,81nm,1.1s						
GRF	Grafenberg Arr	55.38	325	P	P	14 57 23.4	-2.3
GRF				pmax	pmax		
	comp=Z,81nm,1.1s						
GRF	Grafenberg Arr	55.38	325	eP	P	14 57 24.2	-1.4
	comp=Z,89nm,1.2s,baz=120,slow=7.3						
GRF				eL	L	15 27 12.2	
	comp=Z,475nm,21.1s						
GRFO	Grafenberg	55.38	325	P	P	14 57 23.5	-2.1
GRFO				pmax	pmax		
	comp=Z,73nm,1.1s						
GRFO	Grafenberg	55.38	325	P	P	14 57 23.5	-2.1
GRFO				IAmb	IAmb	14 57 26.8	
	comp=Z,73nm,1.1s						
UGM	Wanagama	55.46	107	P	P	14 57 26.5	-0.3
UGM	Wanagama	55.46	107	P	P	14 57 28.2	+1.4
	comp=Z,162nm,1.3s						
BTO	Baotou	55.48	47	eP	P	14 57 26.9	+0.3
RUE	Ruedersdorf	55.48	329	eP	P	14 57 25.8	-0.5
	comp=Z,220nm,1.1s,baz=120,slow=7.3						
SONM	Songino Array	55.84	38	P	P	14 57 29.4	+0.3
	comp=Z,25nm,1.2s,baz=236,slow=6.1,SNR=48						
SONM	Songino Array	55.84	38	P	P	14 57 28.4	-0.7
SONM				pmax	pmax		
	comp=Z,17nm,1.1s						
SONM	Songino Array	55.84	38	P	P	14 57 28.4	-0.7
NEUB	Neuenburg	55.84	327	eP	P	14 57 28.3	-0.6
	comp=Z,74nm,1.1s,baz=120,slow=7.3						
SLE	Schleitheim	56.08	322	P	P	14 57 30.0	-0.7
BNI	Bardonecchia	56.10	318	P	P	14 57 29.1	-2.0
BNI				pmax	pmax		
	comp=Z,39nm,1.4s						
BNI	Bardonecchia	56.10	318	P	P	14 57 29.1	-2.0
TLY	Talaya	56.13	33	ceP	P	14 57 32.2	+1.2
TLY				pmax	pmax		
	comp=Z,17nm,1.2s						
TLY				MLR	MLR		
	comp=Z,2µm,18.0s						
TLY	Talaya	56.13	33	P	P	14 57 29.3	-1.7
TMCR	Tamitsa	56.16	350	eP	P	14 57 29.2	-1.7
TMCR				pmax	pmax		
	comp=Z,105nm,1.2s						
SENIN	Lac Senin/Sane	56.23	320	P	P	14 57 30.3	-1.7
ULN	Ulaanbaatar	56.25	38	ceP	P	14 57 32.1	0.0
ULN				pmax	pmax		
	comp=Z,21nm,1.3s						
ULN				MLR	MLR		
	comp=Z,1µm,18.0s						
ULN	Ulaanbaatar	56.25	38	P	P	14 57 30.7	-1.4
BFO	Black Forest	56.42	323	P	P	14 57 31.5	-1.7
BFO				pmax	pmax		
	comp=Z,65nm,1.2s						
BFO	Black Forest	56.42	323	P	P	14 57 31.5	-1.7
BFO				IAmb	IAmb	14 57 35.1	
	comp=Z,65nm,1.2s						
BFO	Black Forest	56.42	323	eP	P	14 57 32.4	-0.8
	comp=Z,68nm,1.2s,baz=120,slow=7.3						
TIY	Taiyuan	56.44	51	eP	P	14 57 32.4	-1.1
TIY				S	S	15 05 28.0	+3.2
TIY				SS	SS	15 09 12.8	+0.8
TIY				pmax	pmax		
	comp=Z,24nm,0.8s						
TIY				pmax	pmax		
	comp=Z,440nm,4.2s						
TIY				LR	LR		
	comp=Z,1µm,14.1s						
TIY				LR	LR		
	comp=Z,2µm,17.7s						
TIY				LR	LR		
	comp=Z,3µm,18.6s						
BSD	Bornholm Skovb	56.46	332	eP	P	14 57 32.2	-1.0
UBBA	Unterbreizbach	56.62	326	eP	P	14 57 33.7	-0.6
	comp=Z,42nm,1.8s,baz=120,slow=7.3						
FIA1	FINESS Array S	56.64	342	P	P	14 57 32.5	-1.9
FIA1				IAmb	IAmb	14 57 38.6	
	comp=Z,55nm,1.4s						
FINES	FINESS Array B	56.64	342	P	P	14 57 33.2	-1.1
	comp=Z,13nm,0.9s,baz=126,slow=9.7,SNR=12						
FINES				LR	LR	15 24 11.4	
	comp=Z,2µm,22.0s,baz=138,slow=39						
FINES	FINESS Array B	56.64	342	P	P	14 57 32.6	-1.8
FINES	FINESS Array B	56.64	342	P	P	14 57 32.6	-1.8
HHC	Hu-ho-hao-te	56.67	47	eP	P	14 57 35.4	+0.2
HHC				pP	sP	14 57 40.0	+1.8
HHC				sP	pwP	14 57 42.4	+1.0
HHC				S	S	15 05 25.7	-2.1
HHC				sS	sS	15 05 33.6	+2.1
HHC				pmax	pmax		
	comp=Z,22nm,1.1s						
HHC				pmax	pmax		
	comp=Z,380nm,5.1s						
HHC				LR	LR		
	comp=Z,2µm,18.2s						
HHC				LR	LR		
	comp=Z,3µm,20.4s						
HHC				LR	LR		
	comp=Z,4µm,19.8s						
FLTG	Flechtingen	56.71	328	eP	P	14 57 34.2	-0.8
	comp=Z,71nm,1.2s,baz=120,slow=7.3						
TOD	Tromm	56.72	324	P	P	14 57 34.0	-1.3
ASSE	Asse, Remlinge	56.91	327	eP	P	14 57 35.9	-0.5
	comp=Z,51nm,1.1s,baz=120,slow=7.3						
CLZ	Clausthal	56.92	327	eP	P	14 57 36.3	-0.3
	comp=Z,63nm,1.1s,baz=120,slow=7.3						
GTTG	Gottingen	56.99	327	eP	P	14 57 36.7	-0.5
	comp=Z,82nm,1.1s,baz=120,slow=7.3						
KTD	Kalmit	57.01	324	P	P	14 57 37.3	0.0
ECH	Echery	57.08	322	P	P	14 57 36.0	-1.8
ECH				pmax	pmax		
	comp=Z,57nm,1.1s						
ECH	Echery	57.08	322	P	P	14 57 36.0	-1.8
ECH				IAmb	IAmb	14 57 39.8	
	comp=Z,57nm,1.1s						
TNS	Taunus Mts	57.21	325	P	P	14 57 38.1	-0.6
SSB	Saint Sauveur	57.59	318	P	P	14 57 40.1	-1.5
SSB				pmax	pmax		
	comp=Z,54nm,1.5s						
SSB	Saint Sauveur	57.59	318	P	P	14 57 40.0	-1.5
SSB				IAmb	IAmb	14 57 55.0	
	comp=Z,54nm,1.5s						
MTKI	Muara Teweh, K	57.93	97	P	P	14 57 46.6	+2.2
AHRW	Bad Neuenahr-A	58.13	325	eP	P	14 57 45.1	0.0
	comp=Z,39nm,1.1s,baz=120,slow=7.3						
WLF	Walferdange	58.29	323	dP	P	14 57 45.6	-0.7
	comp=Z,79nm,1.2s						
WLF	Walferdange	58.29	323	P	P	14 57 45.2	-1.1
WLF				pmax	pmax		
	comp=Z,117nm,1.1s						
WLF	Walferdange	58.29	323	P	P	14 57 45.2	-1.1
WLF	Walferdange	58.29	323	eP	P	14 57 46.0	-0.4
	comp=Z,124nm,1.1s,baz=120,slow=7.3						
BUG	Bochum--Univer	58.43	326	eP	P	14 57 46.8	-0.4
	comp=Z,63nm,1.1s,baz=120,slow=7.3						
BBKI	Banjar Baru	58.43	100	P	P	14 57 52.1	+4.2
	comp=Z,1µmcomp=Z,27nm,1.4s						
IBBN	Ibbenburen	58.56	327	eP	P	14 57 47.9	-0.2
	comp=Z,48nm,1.2s,baz=120,slow=7.3						
BHOU	Houvegnez	58.67	324	bP	P	14 57 48.6	-0.4
	comp=Z,23nm,1.3s						
BHOU				dx	x	14 58 15.0	
BTNL	Ternell	58.70	324	dP	P	14 57 49.0	-0.2
MEM	Membach	58.78	324	dP	P	14 57 49.3	-0.4
	comp=Z,20nm,1.2s						
MEM				dx	x	14 58 17.6	
MEM	Membach	58.78	324	P	P	14 57 49.9	+0.2
BSTI	Sart Tilman	59.02	324	dP	P	14 57 51.5	+0.1
RCHB	Rochefort	59.04	324	dP	P	14 57 51.3	-0.2
	comp=Z,49nm,1.4s						
BCLA	Clavier	59.11	324	dP	P	14 57 51.9	0.0
BGES	Gesves	59.22	324	κP	P	14 57 52.4	-0.4
	comp=Z,25nm,1.7s						
BGES				dx	x	14 58 19.3	
BMRD	Maredsous	59.37	324	dP	P	14 57 54.1	+0.3
DOU	Dourbes	59.39	323	dP	P	14 57 53.2	-0.7
	comp=Z,43nm,1.3s						
SNF	Seneffe	59.74	324	dP	P	14 57 56.1	-0.2
TIA	Tai'an	59.77	54	P	P	14 57 56.9	0.0
TIA				pmax	pmax		
	comp=Z,14nm,1.2s						
UCC	Uccle	59.81	324	P	P	14 57 55.5	-1.3
UCC				pmax	pmax		
	comp=Z,126nm,1.3s						
UCC	Uccle	59.81	324	P	P	14 57 55.5	-1.3
BJT	Baijiatuau	59.83	49	P	P	14 57 56.6	-0.5
BJT				pmax	pmax		
	comp=Z,19nm,1.0s						
BJT	Baijiatuau	59.83	49	P	P	14 57 56.6	-0.5
BJI	Beijing	59.84	49	P	P	14 57 57.8	+0.6
BJI				S	S	15 06 05.5	-3.5
BJI				SS	SS	15 10 04.0	-1.2
BJI				pmax	pmax		
	comp=Z,16nm,1.1s						
BJI				pmax	pmax		
	comp=Z,330nm,5.3s						
BJI				LR	LR		
	comp=Z,2µm,15.7s						
BJI				LR	LR		
	comp=Z,1µm,16.1s						
BJI				LR	LR		
	comp=Z,2µm,27.5s						
SRBI	Singaraja	59.96	105	P	P	14 57 59.7	+1.3
	comp=Z,38nm,0.9s						
HFS	Hagfors	60.02	336	P	P	14 57 56.4	-1.7
	comp=Z,34nm,1.1s,baz=147,slow=3.5,SNR=12						
CLF	Chambon-Foret	60.03	320	P	P	14 57 57.3	-1.0
KOWA	Kowa	60.36	281	P	P	14 58 01.2	0.0
KOWA				IAmb	IAmb	14 58 12.5	
	comp=Z,48nm,1.2s						
NJ2	Nanjing	60.55	59	eP	P	14 57 59.6	-2.6
NJ2				sP	pwP	14 58 09.0	+0.5
NJ2				S	S	15 06 13.3	-5.0
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,270nm,3.5s						
NJ2				LR	LR		
	comp=Z,720nm,18.0s						
NJ2				LR	LR		
	comp=Z,570nm,19.9s						
NJ2				LR	LR		
	comp=Z,950nm,25.0s						
SESP	Santiago Espad	60.73	308	P		14 58 04.3	
ARF	Arif	61.07	301	P		14 58 08.0	
NC602	NORSAR Array S	61.24	336	P	P	14 58 04.6	-1.8
NC602				IAmb	IAmb	14 58 19.1	
	comp=Z,54nm,1.3s						
KONO	Kongsberg	61.42	335⇑	eP	P	14 58 07.8	+0.2
KONO				pmax	pmax		
	comp=Z,21nm,1.1s						
KONO				MLR	MLR		
	comp=Z,619nm,17.0s						
NB2	NORSAR Subarra	61.55	336	P	P	14 58 06.3	-2.2
	comp=Z,29nm,1.4s,baz=120,slow=7.4						
NB2	NORSAR Subarra	61.55	336	P	P	14 58 06.3	-2.2
	baz=120,slow=7.4						
NOA	NORSAR Array B	61.55	336	P	P	14 58 06.5	-2.0
	comp=Z,12nm,1.1s,baz=120,slow=7.5,SNR=6.9						
NOA				LR	LR	15 27 14.4	
	comp=Z,2µm,20.2s,baz=115,slow=38						
MDT	Midelt	61.56	302	P	P	14 58 09.7	+0.5
	comp=Z,44nm,1.1s,baz=101,slow=5.0,SNR=33						
GOLM	Goulmima	61.72	301	P		14 58 13.0	
TWSI	Taliwang, Sumb	61.73	105	P	P	14 58 08.1	-2.4
	comp=Z,558nmcomp=Z,20nm,1.0s						
KIC	Kosan Boka	61.82	272	ePKP1	P	14 58 12.3	+1.2
	comp=Z,86nm,1.2s						
LCRM	LCR	61.87	303	P		14 58 14.0	
DBIC	Dimbokro	61.89	272	P	P	14 58 12.1	+0.5
	comp=Z,17nm,1.0s,baz=62,slow=7.7,SNR=9.4						
DBIC				LR	LR	15 25 21.8	
	comp=Z,349nm,19.3s,baz=64,slow=36						
DBIC	Dimbokro	61.89	272	P	P	14 58 10.5	-1.1
DBIC				pmax	pmax		
	comp=Z,51nm,1.3s						
DBIC	Dimbokro	61.89	272	P	P	14 58 10.5	-1.1
DBIC				IAmb	IAmb	14 58 22.7	
	comp=Z,51nm,1.2s						
TIC	Toumodi	62.06	272	ePKP1	P	14 58 12.8	0.0
ESBB	Sonseca Array	62.11	310	P	P	14 58 12.1	-0.6
ESDC	Sonseca Array	62.11	310	P	P	14 58 12.2	-0.6
	comp=Z,42nm,1.1s,baz=85,slow=5.6,SNR=58						
ESDC				LR	LR	15 26 57.8	
	comp=Z,178nm,18.6s,baz=90,slow=38						
LIC	Lamto	62.12	272	ePKP1	P	14 58 13.3	+0.1
	comp=Z,108nm,1.3s						
ZGR	Zagora	62.14	299	P		14 58 15.0	
TZRR	Tazzarine	62.15	300	P		14 58 15.0	
SICH	Sidi Chahed	62.30	303	P		14 58 18.0	
NACB	Ninganchiao	62.37	68	P	P	14 58 14.1	-0.5
NACB				IAmb	IAmb	14 58 29.6	
	comp=Z,22nm,0.8s						
PAB	San Pablo	62.38	310	P	P	14 58 13.7	-0.9
PAB				pmax	pmax		
	comp=Z,130nm,1.4s						
PAB	San Pablo	62.38	310	P	P	14 58 13.7	-0.9
SSE	Sheshan	62.42	60	P	P	14 58 15.3	+0.4
SSE				pmax	pmax		
	comp=Z,10.0nm,1.2s						
SSE				pmax	pmax		
	comp=Z,130nm,7.5s						
SSE				LR	LR		
	comp=Z,250nm,18.2s						
SSE				LR	LR		
	comp=Z,380nm,20.4s						
SSE	Sheshan	62.42	60	P	P	14 58 14.6	-0.3
SSE				IAmb	IAmb	14 58 21.5	
	comp=Z,37nm,1.0s						
NRIK	Noril'sk	62.65	11	P	P	14 58 15.3	-0.4
	comp=Z,16nm,1.2s,baz=211,slow=2.7,SNR=8.9						
NRIK				LR	LR	15 28 50.1	
	comp=Z,2µm,19.5s,baz=208,slow=39						
NRIK	Noril'sk	62.65	11⇓	eP	P	14 58 16.0	+0.3
NRIK				pmax	pmax		
	comp=Z,32nm,1.4s						
NRIK				MLR	MLR		
	comp=Z,2µm,17.0s						
NRIK	Noril'sk	62.65	11	P	P	14 58 15.5	-0.2
NRIK				IAmb	IAmb	14 58 19.2	
	comp=Z,34nm,1.4s						
HORN	Hornachuelos	62.79	308	P		14 58 18.3	
OUZM	OUZ	63.19	300	P		14 58 23.0	
ARCES	ARCESS Array B	63.27	348	P	P	14 58 18.0	-1.9
	comp=Z,18nm,1.0s,baz=193,slow=3.7,SNR=5.8						
ARCES				LR	LR	15 28 45.6	
	comp=Z,822nm,19.7s,baz=135,slow=39						
ARCES	ARCESS Array B	63.27	348	P	P	14 58 18.6	-1.3
ARCES				pmax	pmax		
	comp=Z,39nm,1.3s						
ARCES	ARCESS Array B	63.27	348	P	P	14 58 18.6	-1.3
ZHG	ZHG	63.33	303	P		14 58 23.0	
SPSI	Sidrap Palu	63.33	99	P	P	14 58 21.1	-0.1
	comp=Z,838nmcomp=Z,18nm,1.1s						
KAPI	Kappang	63.55	101	P	P	14 58 22.6	-0.1
KAPI				pmax	pmax		
	comp=Z,68nm,1.3s						
KAPI	Kappang	63.55	101	P	P	14 58 22.6	-0.1
BNSI	Bone	63.76	100	P	P	14 58 24.6	+0.6
	comp=Z,2µmcomp=Z,94nm,1.4s						
DL2	Dalian	63.76	51	P	P	14 58 24.3	+0.7
DL2				S	S	15 07 03.4	+4.8
DL2				pmax	pmax		
	comp=Z,34nm,1.2s						
DL2				pmax	pmax		
	comp=Z,550nm,6.2s						
DL2				LR	LR		
	comp=Z,800nm,19.8s						
DL2				LR	LR		
	comp=Z,800nm,21.2s						
DL2				LR	LR		
	comp=Z,2µm,24.7s						
BKSI	Bulukumba	63.98	101	P	P	14 58 27.2	+1.7
	comp=Z,842nmcomp=Z,28nm,2.7s						
PBAR	Barrancos	64.23	308	eP	P	14 58 26.4	-0.4
	comp=Z,77nm,1.5s						
SRHM	Skhour des Reh	64.28	301	P		14 58 30.0	
BOD	Bodaibo	64.31	30	eP	P	14 58 26.6	-0.3
BOD				pmax	pmax		
	comp=Z,15nm,2.1s						
APSI	Ampana	64.54	96	P	P	14 58 30.0	+0.8
	comp=Z,815nmcomp=Z,26nm,1.8s						
MRSI	Marisa	64.57	94	P	P	14 58 29.6	+0.2
	comp=Z,697nmcomp=Z,34nm,1.4s						
PBRG	Braganca	64.58	312	eP	P	14 58 29.3	+0.2
	comp=Z,93nm,1.5s						
TTIG	Tnine Tigouga,	64.60	299	P		14 58 32.0	
HIA	Hailar	64.62	40	P	P	14 58 29.0	-0.2
HIA				pmax	pmax		
	comp=Z,27nm,1.1s						
HIA	Hailar	64.62	40	P	P	14 58 28.9	-0.2
HIA				IAmb	IAmb	14 58 36.4	
	comp=Z,27nm,1.1s						
MVO	Moncorvo	64.68	311	eP	P	14 58 30.1	+0.3
	comp=Z,112nm,1.6s						
PMRV	Marv??o	64.69	309	eP	P	14 58 29.5	-0.3
	comp=Z,108nm,1.7s						
PCBR	Castelo Branco	64.81	309	eP	P	14 58 30.1	-0.4
	comp=Z,64nm,1.7s						
PCVE	Castro Verde	64.94	307	eP	P	14 58 31.6	+0.2
	comp=Z,81nm,1.7s						
MTE	Manteigas	64.95	310	eP	P	14 58 32.2	+0.7
	comp=Z,57nm,1.5s						

Sta	Name	Dist	Az	Phase	ISC	Time	Res
MESJ	**Messejana**	**65.11**	**307**	*e*P	**P**	**14 58 33.6**	**+1.1**
PVIS	**Viseu**	**65.26**	**310**	*e*P	**P**	**14 58 34.2**	**+0.7**
	comp=Z,128nm,1.6s						
PMTG	**Montargil**	**65.28**	**309**	*e*P	**P**	**14 58 33.8**	**+0.2**
	comp=Z,74nm,1.6s						
POLO	**Lamas de Olo**	**65.29**	**311**	*e*P	**P**	**14 58 34.0**	**+0.3**
	comp=Z,50nm,1.7s						
MORF	**Marmelete**	**65.39**	**307**	*e*P	**P**	**14 58 34.6**	**+0.2**
PTEO	**Sao Teotonio**	**65.47**	**307**	*e*P	**P**	**14 58 35.4**	**+0.5**
GTOI	**Gorontalo**	**65.60**	**94**	P	**P**	**14 58 35.1**	**-1.0**
	comp=Z,496nmcomp=Z,14nm,1.5s						
PCAS	**Casmilo, Conde**	**65.62**	**310**	*e*P	**P**	**14 58 36.2**	**+0.4**
	comp=Z,110nm,1.6s						
BASI	**Baing, Sumba**	**65.63**	**106**	P	**P**	**14 58 40.0**	**+3.7**
	comp=Z,2µmcomp=Z,130nm,1.4s						
EAH	**EAH**	**65.65**	**300**	P		14 58 39.0	
SNY	**Shenyang**	**65.69**	**48**	⇓P	**P**	**14 58 35.9**	**-0.3**
SNY				S	**S**	**15 07 28.8**	**+6.5**
SNY				pmax	pmax		
	comp=Z,14nm,1.5s						
SNY				LR	LR		
	comp=Z,900nm,16.6s						
SNY				LR	LR		
	comp=Z,970nm,17.8s						
SNY				LR	LR		
	comp=Z,1µm,18.0s						
EKA	**Eskdalemuir Ar**	**65.69**	**327**	P	**P**	**14 58 34.3**	**-1.7**
	comp=Z,0.4nm,0.3s,baz=112,slow=6.7,SNR=9.0						
ESK	**Eskdalemuir**	**65.71**	**327**	P	**P**	**14 58 35.2**	**-0.9**
ESK				pmax	pmax		
	comp=Z,51nm,1.5s						
ESK	**Eskdalemuir**	**65.71**	**327**	P	**P**	**14 58 35.2**	**-0.9**
ESK				IAmb	IAmb	14 59 02.2	
	comp=Z,51nm,1.5s						
EDFI	**Ende, Flores**	**66.32**	**104**	P	**P**	**14 58 41.2**	**+0.4**
	comp=Z,21nm,1.4s						
MMRI	**Maumere**	**66.81**	**104**	P	**P**	**14 58 42.4**	**-1.4**
MMRI	**Maumere**	**66.81**	**104**	P	**P**	**14 58 45.2**	**+1.3**
	comp=Z,1µmcomp=Z,107nm,1.3s						
DSB	**Dublin**	**66.87**	**324**	P	**P**	**14 58 42.0**	**-1.5**
DSB				IAmb	IAmb	14 58 45.8	
	comp=Z,52nm,1.3s						
CN2	**Changchun**	**67.35**	**47**	*e*P	**P**	**14 58 44.2**	**-2.6**
CN2				*e*S	**S**	**15 07 39.2**	**-3.2**
CN2				pmax	pmax		
	comp=Z,20nm,1.5s						
CN2				LR	LR		
	comp=Z,960nm,18.0s						
CN2				LR	LR		
	comp=Z,2µm,18.0s						
CN2				LR	LR		
	comp=Z,2µm,19.0s						
PSA00	**Pilbara Seismi**	**68.45**	**118**	P	**P**	**14 58 54.7**	**+0.6**
PSA00				IAmb	IAmb	14 58 56.1	
	comp=Z,51nm,1.4s						
KSAR	**Wonju Array Be**	**68.49**	**54**	P	**P**	**14 58 52.9**	**-1.2**
KSAR	**Wonju Array Be**	**68.49**	**54**	P	**P**	**14 58 52.9**	**-1.2**
KSRS	**Korea Array**	**68.52**	**54**	P	**P**	**14 58 52.6**	**-1.7**
	comp=Z,17nm,1.1s,baz=259,slow=6.8,SNR=18						
KSRS				LR	LR	15 30 04.8	
	comp=Z,930nm,21.6s,baz=278,slow=37						
BATI	**Baumata**	**68.56**	**105**	P	**P**	**14 58 56.3**	**+1.3**
	comp=Z,1µmcomp=Z,53nm,1.3s						
VAL	**Valentia**	**68.86**	**322**	P	**P**	**14 58 59.0**	**+2.9**
SANI	**Sanana**	**69.02**	**96**	P	**P**	**14 58 57.6**	**-0.2**
	comp=Z,860nmcomp=Z,42nm,1.2s						
SOEI	**Soe**	**69.03**	**104**	P	**P**	**14 58 57.2**	**-0.8**
SOEI	**Soe**	**69.03**	**104**	P	**P**	**14 58 59.4**	**+1.4**
	comp=Z,2µmcomp=Z,196nm,1.2s						
H01W3	**Cape Leeuwin H**	**69.34**	**133**	T	T	16 14 32.6	
	baz=299,slow=75						
H01W2	**Cape Leeuwin H**	**69.35**	**133**	T	T	16 14 32.5	
	baz=299,slow=75						
H01W1	**Cape Leeuwin H**	**69.36**	**133**	T	T	16 14 33.0	
	baz=299,slow=75						
ZEA	**Zeya**	**70.21**	**36**	*e*P	**P**	**14 59 05.6**	**+1.2**
ZEA				pmax	pmax		
	comp=Z,20nm,1.2s						
MDJ	**Mudanjiang**	**70.41**	**46**	P	**P**	**14 59 05.8**	**0.0**
MDJ				pP	pP	14 59 08.7	+0.6
MDJ				sP	sP	14 59 10.5	+1.6
MDJ				S	**S**	**15 08 18.6**	**-0.1**
MDJ				pmax	pmax		
	comp=Z,15nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,640nm,9.2s						
MDJ				LR	LR		
	comp=Z,1µm,16.9s						
MDJ				LR	LR		
	comp=Z,1µm,20.4s						
MDJ				LR	LR		
	comp=Z,2µm,25.9s						
MDJ	**Mudanjiang**	**70.41**	**46**	P	**P**	**14 59 04.3**	**-1.5**
MDJ				IAmb	IAmb	14 59 16.5	
	comp=Z,54nm,1.4s						
JNU	**Nakatsue**	**70.74**	**58**	P	**P**	**14 59 06.6**	**-1.5**
SPA0	**Spitsbergen Ar**	**71.57**	**352**	P	**P**	**14 59 12.1**	**-0.2**
SPITS	**Spitsbergen Ar**	**71.57**	**352**	P	**P**	**14 59 11.7**	**-0.7**
	comp=Z,101nm,1.1s,baz=126,slow=8.5,SNR=13						
USA0B	**Ussuriysk Arra**	**72.08**	**47**	⇑*e*P	**P**	**14 59 16.4**	**+0.4**
USRK	**Ussuriysk Ar.**	**72.08**	**47**	P	**P**	**14 59 16.0**	**0.0**
	comp=Z,3.7nm,0.9s,baz=272,slow=5.2,SNR=7.4						
USRK				LR	LR	15 31 47.5	
	comp=Z,1µm,20.8s,baz=260,slow=37						
USRK	**Ussuriysk Ar.**	**72.08**	**47**	P	**P**	**14 59 14.5**	**-1.4**
USRK	**Ussuriysk Ar.**	**72.08**	**47**	P	**P**	**14 59 14.5**	**-1.4**
PMOZ	**Porto Moniz, M**	**72.13**	**301**	P	**P**	**14 59 14.6**	**-2.0**
KLR	**Kul'dur**	**72.34**	**41**	P	**P**	**14 59 16.3**	**-1.1**
	comp=Z,27nm,1.3s,baz=270,slow=6.7,SNR=12						
KLR	**Kul'dur**	**72.34**	**41**	*de*P	**P**	**14 59 15.9**	**-1.5**
KLR				pmax	pmax		
	comp=Z,34nm,1.3s						
KLR				MLR	MLR		
	comp=Z,2µm,19.0s						
KBS	**Kingsbay**	**72.73**	**352**	⇓*e*P	**P**	**14 59 19.5**	**+0.3**
KBS				pmax	pmax		
	comp=Z,51nm,1.0s						
KBS				MLR	MLR		
	comp=Z,826nm,18.0s						
KBS	**Kingsbay**	**72.73**	**352**	P	**P**	**14 59 18.1**	**-1.1**
KBS				IAmb	IAmb	14 59 25.8	
	comp=Z,74nm,1.2s						
MBO	**M'Bour**	**72.87**	**282**	P	**P**	**14 59 18.5**	**-2.6**
YAK	**Yakutsk**	**73.10**	**28**	P	**P**	**14 59 20.7**	**-1.0**
	comp=Z,11nm,0.7s,baz=249,slow=1.6,SNR=22						
YAK	**Yakutsk**	**73.10**	**28**	*e*P	**P**	**14 59 20.6**	**-1.0**
YAK				e*PP	**pwP**	**14 59 32.3**	**+4.2**
YAK				*e*S	**S**	**15 08 44.3**	**-4.7**
YAK				*e*		15 09 36.7	
YAK				*e*SS	**SS**	**15 13 28.1**	**-1.7**
YAK				pmax	pmax		
	comp=Z,66nm,1.0s						
YAK				pmax	pmax		
	comp=N,8.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,32nm,1.1s						
YAK				pmax	pmax		
	comp=Z,105nm,3.5s						
YAK				pmax	pmax		
	comp=N,92nm,3.5s						
YAK				pmax	pmax		
	comp=E,98nm,4.2s						
YAK				smax	smax		
	comp=N,172nm,3.7s						
YAK				smax	smax		
	comp=E,181nm,3.7s						
YAK				MLR	MLR		
	comp=Z,921nm,17.0s						
YAK				MLR	MLR		
	comp=N,354nm,18.0s						
YAK				MLR	MLR		
	comp=E,383nm,14.0s						
YAK	**Yakutsk**	**73.10**	**28**	P	**P**	**14 59 19.9**	**-1.7**
SWI	**Sorong**	**73.98**	**94**	P	**P**	**14 59 27.4**	**-0.3**
	comp=E,25nm,1.3s						
SIJI	**Sorong**	**73.99**	**94**	LR	LR	15 32 29.1	
	comp=E,99nm,19.7s,baz=293,slow=36						
TIXI	**Tiksi**	**74.99**	**18**	⇓*e*P	**P**	**14 59 31.9**	**-0.6**
TIXI				pmax	pmax		
	comp=Z,91nm,1.3s						
TIXI	**Tiksi**	**74.99**	**18**	P	**P**	**14 59 31.6**	**-0.9**
SAUI	**Saumlaki**	**75.39**	**101**	P	**P**	**14 59 34.1**	**-1.8**
SAUI	**Saumlaki**	**75.39**	**101**	P	**P**	**14 59 36.8**	**+0.9**
	comp=Z,70nm,1.1s						
TEY	**Ternei**	**75.41**	**46**	⇓*e*P	**P**	**14 59 34.8**	**-0.7**
TEY				pmax	pmax		
	comp=N,20nm,1.1s						
TEY				pmax	pmax		
	comp=Z,20nm,1.7s						
GRNR	**Gornyy**	**75.46**	**40**	⇑*i*P	**P**	**14 59 33.3**	**-2.4**
GRNR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
GRNR				MLR	MLR		
	comp=N,520nm,16.0s						
MJAR	**Matsushiro Arr**	**76.73**	**55**	P	**P**	**14 59 42.7**	**-0.6**
	comp=N,10.0nm,1.1s,baz=275,slow=7.2,SNR=10						
MJAR				LR	LR	15 35 56.3	
	comp=N,610nm,19.1s,baz=265,slow=38						
MJAR	**Matsushiro Arr**	**76.73**	**55**	P	**P**	**14 59 41.2**	**-2.0**
MJAR				pmax	pmax		
	comp=Z,10.0nm,1.2s						
MJAR	**Matsushiro Arr**	**76.73**	**55**	P	**P**	**14 59 41.2**	**-2.0**
DBG	**Daneborg**	**77.47**	**344**	*i* P	**P**	**14 59 47.4**	**+0.8**
DBG				IAmb	IAmb	14 59 50.3	
	comp=Z,51nm,1.3s						
SCO	**Scoresbysund**	**77.47**	**340**	*i* P	**P**	**14 59 47.2**	**+0.6**
SCO	**Scoresbysund**	**77.47**	**340**	*i* P	**P**	**14 59 47.2**	**+0.6**
SCO	**Scoresbysund**	**77.47**	**340**	P	**P**	**14 59 44.3**	**-2.3**
SCO				IAmb	IAmb	14 59 51.5	
	comp=Z,59nm,1.3s						
SCO	**Scoresbysund**	**77.47**	**340**	*i* P	**P**	**14 59 47.2**	**+0.6**
DAG	**Danmarks Havn**	**77.52**	**347**	⇑*i*P	**P**	**14 59 46.6**	**-0.2**
	comp=Z,72nm,1.2s						
DAG	**Danmarks Havn**	**77.52**	**347**	⇑*i*P	**P**	**14 59 46.6**	**-0.2**
DAG				pmax	pmax		
	comp=Z,72nm,1.2s						
DAG	**Danmarks Havn**	**77.52**	**347**	⇑*i*P	**P**	**14 59 46.7**	**-0.2**
DAG				IAmb	IAmb	14 59 49.4	
	comp=Z,72nm,1.2s						
FORT	**Forrest**	**78.47**	**124**	P	**P**	**14 59 53.3**	**+0.4**
FORT				IAmb	IAmb	14 59 57.0	
	comp=Z,65nm,1.1s						
TYV	**Tymovskoe**	**79.41**	**40**	*e*P	**P**	**15 00 00.0**	**+2.2**
TYV				pmax	pmax		
	comp=Z,19nm,1.5s						
TYV				pmax	pmax		
	comp=Z,400nm,3.7s						
SYO	**Syowa Base**	**79.51**	**187**	⇓*e*P	**P**	**15 00 00.4**	**+2.6**
YSS	**Yuzh-Sakhalins**	**79.66**	**44**	*e*P	**P**	**14 59 59.2**	**0.0**
YSS				*e*		15 03 00.0	
YSS				*e*S	**S**	**15 10 00.6**	**-1.0**
YSS				*e*PS	**PnS**	**15 10 57.9**	**+13**
YSS				pmax	pmax		
	comp=Z,700nm,7.1s						
ASAJ	**Asahikawa**	**79.71**	**47**	LR	LR	15 37 17.6	
	comp=Z,817nm,19.6s,baz=303,slow=37						
JCJ	**Chichijima**	**80.81**	**64**	LR	LR	15 35 38.9	
	comp=Z,322nm,19.8s,baz=278,slow=36						
WRA	**Warramunga Arr**	**80.95**	**112**	P	**P**	**15 00 06.3**	**-0.4**
	comp=Z,39nm,1.1s,baz=296,slow=4.4,SNR=73						
WRA				LR	LR	15 32 58.0	
	comp=Z,151nm,19.7s,baz=220,slow=33						
WRA	**Warramunga Arr**	**80.95**	**112**	P	**P**	**15 00 05.7**	**-1.0**
WRA				pmax	pmax		
	comp=Z,6.0nm,1.2s						
WRA	**Warramunga Arr**	**80.95**	**112**	P	**P**	**15 00 05.7**	**-1.0**
WRAB	**Tennant Creek**	**80.96**	**112**	*ce*P	**P**	**15 00 06.6**	**-0.1**
WRAB				pmax	pmax		
	comp=Z,61nm,1.2s						
WRAB	**Tennant Creek**	**80.96**	**112**	P	**P**	**15 00 06.7**	**0.0**
WRAB				IAmb	IAmb	15 00 10.3	
	comp=Z,77nm,1.2s						
WB0	**Warramunga Arr**	**80.96**	**112**	P	**P**	**15 00 06.4**	**-0.3**
WB0				IAmb	IAmb	15 00 10.1	
	comp=Z,72nm,1.2s						
WB2	**Warramunga Arr**	**80.96**	**112**	P	**P**	**15 00 06.4**	**-0.4**
WB2				IAmb	IAmb	15 00 10.3	
	comp=Z,74nm,1.2s						
WR0	**Warramunga Arr**	**81.14**	**112**	P	**P**	**15 00 07.4**	**-0.3**
WR0				IAmb	IAmb	15 00 11.0	
	comp=Z,50nm,1.2s						
ASAR	**Alice Springs**	**81.46**	**116**	P	**P**	**15 00 09.2**	**-0.2**
	comp=Z,18nm,0.9s,baz=290,slow=4.9,SNR=140						
ASAR				LR	LR	15 35 10.7	
	comp=Z,135nm,18.5s,baz=280,slow=35						
ASAR	**Alice Springs**	**81.46**	**116**	P	**P**	**15 00 09.3**	**0.0**
AS31	**Alice Springs**	**81.46**	**116**	P	**P**	**15 00 09.2**	**-0.2**
YUK	**Yuzh-Kuril'sk**	**82.06**	**47**	P	**P**	**15 00 09.8**	**-2.3**
YUK				*e*		15 03 21.4	
YUK				S	**S**	**15 10 20.5**	**-6.3**
YUK				*e*SS	**SS**	**15 15 40.9**	**-4.9**
YUK				MLR	MLR		
	comp=Z,981nm,17.0s						
SUMG	**Summit**	**82.67**	**342**	*i* P	**P**	**15 00 16.1**	**+0.9**
	comp=Z,272nm,1.4s						
SUMG	**Summit**	**82.67**	**342**	*i* P	**P**	**15 00 16.1**	**+0.9**
SUMG				pmax	pmax		
	comp=Z,270nm,1.4s						
SUMG	**Summit**	**82.67**	**342**	*i* P	**P**	**15 00 16.1**	**+0.9**
SUMG				IAmb	IAmb	15 00 18.8	
	comp=Z,272nm,1.4s						
MA2	**Magadan**	**83.31**	**31**	P	**P**	**15 00 18.0**	**-0.3**
	comp=Z,7.6nm,0.8s,baz=320,slow=10,SNR=3.8						
MA2	**Magadan**	**83.31**	**31**	*ce*P	**P**	**15 00 19.0**	**+0.7**
MA2				pmax	pmax		
	comp=Z,28nm,1.7s						
MA2				MLR	MLR		
	comp=Z,688nm,20.0s						
JAY	**Jayapura**	**83.56**	**94**	LR	LR	15 40 32.8	
	comp=Z,57nm,18.1s,baz=344,slow=38						
SEY	**Seymchan**	**83.61**	**27**	P	**P**	**15 00 19.8**	**0.0**
	comp=Z,23nm,1.2s,baz=277,slow=4.5,SNR=14						
SEY				LR	LR	15 39 51.2	
	comp=Z,1µm,20.0s,baz=301,slow=37						
SEY	**Seymchan**	**83.61**	**27**	⇓*e*P	**P**	**15 00 20.3**	**+0.6**
ICESG	**Greenland Ices**	**83.64**	**339**	*i* P	**P**	**15 00 21.0**	**+0.8**
ICESG				IAmb	IAmb	15 00 23.8	
	comp=Z,47nm,1.2s						
GUMO	**Guam**	**85.08**	**77**	LR	LR	15 33 48.0	
	comp=Z,533nm,20.3s,baz=289,slow=32						
BBOO	**Buckleboo**	**85.58**	**124**	P	**P**	**15 00 28.7**	**-1.6**
BBOO				IAmb	IAmb	15 00 34.0	
	comp=Z,45nm,1.2s						
ILULI	**Ilulissat**	**87.56**	**340**	P	**P**	**15 00 38.6**	**-0.6**
ILULI				pmax	pmax		
	comp=Z,30nm,1.2s						
ILULI	**Ilulissat**	**87.56**	**340**	P	**P**	**15 00 38.6**	**-0.6**
ILULI				IAmb	IAmb	15 00 41.4	
	comp=Z,30nm,1.2s						
UPNV	**Upernavik**	**87.66**	**344**	*i* P	**P**	**15 00 40.1**	**+0.4**
UPNV				IAmb	IAmb	15 00 42.1	
	comp=Z,41nm,1.2s						
PETK	**Petropavlovsk-**	**88.30**	**36**	LR	LR	15 43 01.8	
	comp=Z,934nm,19.7s,baz=280,slow=38						
EUNU	**Eureka**	**88.54**	**354**	P	**P**	**15 00 44.0**	**+0.1**
TULEG	**Thule**	**88.57**	**349**	P	**P**	**15 00 43.5**	**-0.5**
TULEG	**Thule**	**88.57**	**349**	⇑*i*P	**P**	**15 00 44.0**	**0.0**
TULEG				IAmb	IAmb	15 00 46.9	
	comp=Z,63nm,1.3s						
PET	**Petropavlovsk**	**88.88**	**36**	⇓*e*P	**P**	**15 00 46.8**	**+0.9**
PET				pmax	pmax		
	comp=Z,159nm,1.2s						
PET				MLR	MLR		
	comp=Z,4µm,23.0s						
STKA	**Stephens Creek**	**89.94**	**122**	P	**P**	**15 00 50.9**	**-0.4**
	comp=Z,12nm,1.1s,baz=313,slow=6.6,SNR=14						
STKA				LR	LR	15 38 01.2	
	comp=Z,728nm,18.7s,baz=244,slow=34						
STKA	**Stephens Creek**	**89.94**	**122**	*ce*P	**P**	**15 00 51.4**	**+0.1**
STKA	**Stephens Creek**	**89.94**	**122**	P	**P**	**15 00 51.0**	**-0.2**
SNAA	**Sanae**	**90.27**	**196**	*ce*P	**P**	**15 00 54.9**	**+2.9**
SNAA				pmax	pmax		
	comp=Z,16nm,1.4s						
SNAA				MLR	MLR		
	comp=Z,828nm,17.0s						
PMG	**Port Moresby**	**91.06**	**99**	⇓*e*P	**P**	**15 00 58.5**	**+1.7**
PMG				pmax	pmax		
	comp=Z,53nm,1.4s						
CTA	**Charters Tower**	**91.95**	**110**	P	**P**	**15 01 00.3**	**-0.6**
	comp=Z,4.7nm,0.9s,baz=262,slow=8.9						
RES	**Resolute Bay**	**94.11**	**353**	P	**P**	**15 01 09.4**	**-0.3**
	comp=Z,6.3nm,1.3s,baz=47,slow=10,SNR=4.6						
RES				LR	LR	15 47 27.0	
	comp=Z,320nm,20.5s,baz=48,slow=38						
RCBR	**Riachuelo**	**94.47**	**265**	*e*P	**P**	**15 01 14.0**	**+1.4**
A21K	**Barrow**	**96.00**	**11**	P	**P**	**15 01 18.0**	**-0.4**
A21K				IAmb	IAmb	15 01 23.4	
	comp=Z,20nm,1.4s						
FRB	**Frobisher Bay**	**96.29**	**339**	P	**P**	**15 01 19.2**	**-0.6**
	comp=Z,5.3nm,1.1s,baz=92,slow=6.8,SNR=5.4						
NBPS	**Pedro II - PI**	**99.70**	**267**	*e*P	**Pdif**	**15 01 37.2**	**+0.9**
ILAR	**Eielson Array**	**103.50**	**11**	PKiKP	**PKiKP**	**15 06 09.4**	**-1.3**
	comp=Z,6.4nm,1.1s,baz=337,slow=5.2,SNR=15						
YKA	**Yellowknife Ar**	**107.81**	**356**	PKiKP	**PKiKP**	**15 06 18.2**	**-0.5**
	comp=Z,1.0nm,0.9s,baz=20,slow=2.1,SNR=4.9						
DZM	**Mont Dzumac**	**110.90**	**110**	*e*LR	LR	15 39 15.7	
	comp=Z,471nm,21.3s						
ECSD	**EROS Data Cent**	**121.93**	**338**	PKPdf	**PKPdf**	**15 06 45.3**	**-1.0**
NEW	**Newport**	**122.13**	**356**	PKIKP	**PKPdf**	**15 06 46.3**	**-0.3**
NEW	**Newport**	**122.13**	**356**	PKPdf	**PKPdf**	**15 06 46.3**	**-0.3**
JTMT	**Jette**	**122.39**	**354**	PKPdf	**PKPdf**	**15 06 46.0**	**-1.2**
MSO	**Missoula**	**123.26**	**353**	PKPdf	**PKPdf**	**15 06 48.1**	**-0.8**
K31A	**O'Neill**	**123.67**	**339**	PKPdf	**PKPdf**	**15 06 49.2**	**-0.5**
RSSD	**Black Hills**	**123.94**	**344**	PKIKP	**PKPdf**	**15 06 50.0**	**-0.5**
RSSD	**Black Hills**	**123.94**	**344**	PKPdf	**PKPdf**	**15 06 50.0**	**-0.5**
FVM	**French Village**	**123.99**	**330**	PKIKP	**PKPdf**	**15 06 48.9**	**-1.5**
FVM	**French Village**	**123.99**	**330**		**PKPdf**	**15 06 48.9**	**-1.5**
P38A	**Dawn**	**124.14**	**333**	PKPdf	**PKPdf**	**15 06 49.5**	**-1.1**
BOZ	**Bozeman (W)**	**124.15**	**351**	PKIKP	**PKPdf**	**15 06 49.7**	**-1.0**
BOZ	**Bozeman (W)**	**124.15**	**351**		**PKPdf**	**15 06 49.7**	**-1.0**
CCM	**Cathedral Cave**	**124.34**	**330**	PKIKP	**PKPdf**	**15 06 50.0**	**-1.1**
CCM	**Cathedral Cave**	**124.34**	**330**	PKPdf	**PKPdf**	**15 06 50.0**	**-1.1**
DLMT	**Dillon**	**124.52**	**352**	PKPdf	**PKPdf**	**15 06 50.8**	**-0.6**
R40A	**Maddies Statio**	**124.64**	**331**	PKPdf	**PKPdf**	**15 06 50.9**	**-0.8**
PLCA	**Paso Flores**	**124.89**	**227**	PKP	**PKPdf**	**15 06 52.6**	**+0.5**
	comp=Z,9.6nm,1.2s,baz=77,slow=6.6,SNR=5.3						
YHB	**Horse Butte**	**124.90**	**350**		**PKPdf**	**15 06 52.7**	**+0.4**
G08A	**Pilot Rock**	**125.21**	**357**		**PKPdf**	**15 06 52.0**	**-0.7**
SDV	**Santo Domingo**	**125.33**	**288**	*e*P	**PKiKP**	**15 06 55.1**	**+0.9**
FLWY	**Flagg Ranch**	**125.47**	**350**		**PKPdf**	**15 06 52.2**	**-1.1**
MGMO	**Mountain Grove**	**125.55**	**331**		**PKPdf**	**15 06 51.9**	**-1.6**
S39A	**Bolivar**	**125.62**	**332**	PKPdf	**PKPdf**	**15 06 51.5**	**-2.1**
BCYI	**Bear Canyon**	**125.67**	**352**	PKPdf	**PKPdf**	**15 06 53.2**	**-0.5**
MOOW	**Moose Ponds**	**125.80**	**350**		**PKPdf**	**15 06 53.0**	**-1.1**
K22A	**Casper**	**125.96**	**346**	PKPdf	**PKPdf**	**15 06 52.8**	**-1.5**
REDW	**Red Top Meadow**	**126.19**	**350**	PKPdf	**PKPdf**	**15 06 53.8**	**-1.0**
U40A	**Yellville**	**126.47**	**330**	PKPdf	**PKPdf**	**15 06 54.0**	**-1.2**
BW06	**Boulder Array**	**126.52**	**348**		**PKPdf**	**15 06 54.7**	**-0.8**
PD31	**Pinedale Array**	**126.52**	**348**		**PKPdf**	**15 06 54.7**	**-0.8**
PDAR	**Pinedale Array**	**126.52**	**348**	PKP	**PKPdf**	**15 06 55.0**	**-0.4**
	comp=Z,13nm,1.1s,baz=68,slow=2.2,SNR=37						
PDAR	**Pinedale Array**	**126.52**	**348**	PKPdf	**PKPdf**	**15 06 54.6**	**-0.8**
BI02	**San Fabin de**	**126.69**	**231**		**PKPdf**	**15 06 55.1**	**-0.5**
MFID	**Camas Ranch**	**126.84**	**354**	PKPdf	**PKPdf**	**15 06 55.3**	**-0.6**
RWWY	**Rawlins**	**127.03**	**346**		**PKPdf**	**15 06 55.5**	**-1.0**
HHAR	**Hobbs**	**127.05**	**331**	PKPdf	**PKPdf**	**15 06 54.5**	**-1.9**
TAMC	**Tame, Arauca**	**127.17**	**286**	*e*P	**PKPdf**	**15 06 53.7**	**-3.5**
R32A	**Long Quarter,**	**127.32**	**337**		**PKPdf**	**15 06 56.4**	**-0.4**
LVC	**Limon Verde**	**127.36**	**249**	PKIKP	**PKiKP**	**15 06 59.4**	**+1.2**
LVC	**Limon Verde**	**127.36**	**249**	*e*P	**PKiKP**	**15 06 59.0**	**+0.8**
CBKS	**Cedar Bluff**	**127.37**	**338**	PKIKP	**PKPdf**	**15 06 56.6**	**-0.3**
CBKS	**Cedar Bluff**	**127.37**	**338**	PKPdf	**PKPdf**	**15 06 56.6**	**-0.3**
T35A	**Sooner Cattle**	**127.70**	**334**	PKPdf	**PKPdf**	**15 06 55.8**	**-1.8**
AC05	**El Transito**	**127.73**	**241**		**PKPdf**	**15 06 56.5**	**-1.5**
WVOR	**Wild Horse Val**	**128.04**	**357**	PKIKP	**PKPdf**	**15 06 57.3**	**-0.9**
WVOR	**Wild Horse Val**	**128.04**	**357**	PKPdf	**PKPdf**	**15 06 57.3**	**-0.9**
PTGC	**Puerto Gaitan,**	**128.12**	**283**	*e*P	**PKPdf**	**15 06 55.1**	**-3.8**
PB16	**IPOC Station P**	**128.18**	**254**	PKPdf	**PKPdf**	**15 06 56.7**	**-2.9**
KSCO	**Kaye Shedlock'**	**128.21**	**340**	PKPdf	**PKPdf**	**15 06 58.7**	**+0.1**
MIAR	**Mount Ida**	**128.26**	**330**	PKIKP	**PKPdf**	**15 06 56.3**	**-2.4**
MIAR	**Mount Ida**	**128.26**	**330**	PKPdf	**PKPdf**	**15 06 56.3**	**-2.4**
ARGC	**Ariguani, Magd**	**128.36**	**291**	*e*P	PKiKP	15 07 08.5	+8.5
TCUT	**Toone Canyon**	**128.47**	**349**		**PKPdf**	**15 06 58.0**	**-1.2**
RUSC	**La Rusia**	**128.55**	**285**	*e*P	**PKPdf**	**15 07 01.1**	**+0.7**
SMLC	**San Martn de**	**128.56**	**289**	*e*P	**PKPdf**	**15 06 58.1**	**-1.7**
RDMU	**Red Mountain**	**128.64**	**348**		**PKPdf**	**15 06 58.2**	**-1.3**
O20A	**White River Ci**	**128.75**	**346**	PKPdf	**PKPdf**	**15 06 58.5**	**-1.2**
BRRC	**Barranca, Sant**	**128.78**	**287**	*e*P	**PKPdf**	**15 06 57.9**	**-2.2**
PTBC	**PUERTO BERRIO,**	**129.66**	**287**	*e*P	**PKPdf**	**15 06 58.1**	**-3.8**
P17A	**Butcher Ranch,**	**129.93**	**348**		**PKPdf**	**15 07 01.4**	**-0.6**
MOTC	**Monteria, Cord**	**130.05**	**290**	*e*P	**PKiKP**	**15 07 07.0**	**+3.6**
TMUT	**Trail Mountain**	**130.20**	**349**		**PKPdf**	**15 07 01.1**	**-1.5**
SRU	**San Rafael Swe**	**130.24**	**348**	PKIKP	**PKPdf**	**15 07 01.8**	**-0.8**
SRU	**San Rafael Swe**	**130.24**	**348**		**PKPdf**	**15 07 01.8**	**-0.8**
SDCO	**Great Sand Dun**	**130.27**	**342**	PKPdf	**PKPdf**	**15 07 01.7**	**-1.1**
MACC	**Macarena, Meta**	**130.31**	**281**	*e*P	**PKPdf**	**15 07 02.5**	**-0.6**
NORC	**Norcasia**	**130.35**	**286**	*e*P	**PKPdf**	**15 07 02.5**	**-0.7**
PV15	**Paradox Valley**	**130.51**	**346**		**PKPdf**	**15 07 02.0**	**-1.2**
WMOK	**Wichita Mounta**	**130.52**	**334**	PKIKP	**PKPdf**	**15 07 02.0**	**-1.0**
WMOK	**Wichita Mounta**	**130.52**	**334**	PKPdf	**PKPdf**	**15 07 02.0**	**-1.0**
PV23	**Carpenter Ridg**	**130.54**	**346**		**PKPdf**	**15 07 02.3**	**-1.0**
PV12	**Saucer Basin,**	**130.62**	**346**		**PKPdf**	**15 07 01.7**	**-1.7**
PV19	**Morning Glory**	**130.67**	**346**		**PKPdf**	**15 07 02.0**	**-1.4**
PV03	**Paradox Valley**	**130.69**	**346**		**PKPdf**	**15 07 02.5**	**-1.0**
PV17	**East Wray Mesa**	**130.69**	**346**		**PKPdf**	**15 07 02.7**	**-0.8**
PV02	**Paradox Valley**	**130.71**	**346**		**PKPdf**	**15 07 03.3**	**-0.2**
PV18	**Skein Mesa, Pa**	**130.71**	**346**	PKPdf	**PKPdf**	**15 07 02.2**	**-1.3**
HELC	**Santa Helena**	**130.78**	**287**	*e*P	**PKPdf**	**15 07 05.5**	**+1.1**
PAHR	**Pah Rah Range**	**130.80**	**357**	PKPdf	**PKPdf**	**15 07 01.9**	**-1.7**
PV05	**Paradox Valley**	**130.91**	**346**		**PKPdf**	**15 07 01.4**	**-2.5**
GUY2C	**Guyana, Caldas**	**130.92**	**286**	*e*P	**PKPdf**	**15 07 04.0**	**-0.8**
RREF	**El Recreo**	**131.00**	**285**	*e*P	**PKiKP**	**15 07 07.0**	**+0.9**
TOLC	**Tolima**	**131.06**	**285**	*e*P	**PKPdf**	**15 07 02.5**	**-2.4**
MSU	**Marysvale**	**131.14**	**349**	PKIKP	**PKPdf**	**15 07 01.4**	**-3.0**
MSU	**Marysvale**	**131.14**	**349**	PKPdf	**PKPdf**	**15 07 01.4**	**-3.0**
DBBC	**Dabeiba**	**131.15**	**288**	*e*P	**PKPdf**	**15 07 05.5**	**+0.7**
ANIL	**Santa Ana**	**131.17**	**285**	*e*P	**PKPdf**	**15 07 05.7**	**+0.6**
ORTC	**Ortega, Tolima**	**131.19**	**284**	*e*P	PKPdf	15 06 55.1	-10
PSUT	**Pine Spring**	**131.40**	**351**	PKPdf	**PKPdf**	**15 07 02.9**	**-2.0**
AMTX	**Amarillo**	**131.56**	**337**	PKPdf	**PKPdf**	**15 07 03.8**	**-1.2**
MTPU	**Mount Pierson**	**131.60**	**349**	PKPdf	**PKPdf**	**15 07 03.8**	**-1.7**
PTLC	**Puerto Leguiza**	**131.70**	**279**	*e*P	**PKPdf**	**15 07 05.5**	**-0.2**
BETC	**Betania**	**131.71**	**282**	*e*P	PKPdf	15 06 55.1	-11
GARC	**Garzon, Huila**	**131.89**	**282**	*e*P	**PKPdf**	**15 07 04.0**	**-2.4**
PLMC	**San Jos del P**	**131.89**	**286**	*e*P	**PKiKP**	**15 07 08.5**	**+1.3**
NVAR	**Mina Array Bea**	**132.00**	**356**	PKP	**PKPdf**	**15 07 06.8**	**+0.8**
	comp=Z,6.5nm,0.8s,baz=25,slow=0.8,SNR=36						
NVAR	**Mina Array Bea**	**132.00**	**356**	PKPdf	**PKPdf**	**15 07 05.6**	**-0.3**
MARP	**Paez Belalcaza**	**132.16**	**283**	*e*P	**PKPdf**	**15 07 05.5**	**-1.5**
FLOC	**Florencia**	**132.19**	**281**	*e*P	PKPdf	15 06 58.1	-8.6
WHTX	**Lake Whitney,**	**132.23**	**331**	PKPdf	**PKPdf**	**15 07 05.7**	**-0.6**
CCUT	**Cedar City**	**132.28**	**350**	PKPdf	**PKPdf**	**15 07 05.0**	**-1.5**
PTAC	**Punta Ardita,**	**132.60**	**289**	*e*P	**PKiKP**	**15 07 11.4**	**+2.9**
LCMT	**Little Creek M**	**132.79**	**350**		**PKPdf**	**15 07 05.5**	**-1.9**
POPC	**Popayan, Colom**	**132.93**	**283**	*e*P	**PKPdf**	**15 07 08.5**	**+0.1**
ANMO	**Albuquerque**	**133.15**	**342**	PKIKP	**PKPdf**	**15 07 06.4**	**-1.8**
ANMO	**Albuquerque**	**133.15**	**342**	PKPdf	**PKPdf**	**15 07 06.4**	**-1.8**
PRVC	**Isla de Provid**	**133.33**	**299**	*e*P	**PKPdf**	**15 07 08.5**	**-0.2**
BBAC	**Balboa, Cauca**	**133.62**	**282**	*e*P	**PKPdf**	**15 07 08.5**	**-1.2**
BCIP	**Isla Barro Col**	**133.74**	**293**	*e*P	PKPdf	15 06 58.1	-11
GCUF	**Volcan Galeras**	**133.92**	**281**	*e*P	**PKiKP**	**15 07 14.4**	**+2.5**
JCT	**Junction City**	**134.59**	**332**	PKIKP	**PKPdf**	**15 07 09.2**	**-1.6**
JCT	**Junction City**	**134.59**	**332**		**PKPdf**	**15 07 09.2**	**-1.6**
W13A	**Hualapai Mount**	**134.76**	**350**	PKPdf	**PKPdf**	**15 07 09.5**	**-1.8**
X16A	**Lo Mia Camp, P**	**134.95**	**347**	PKPdf	**PKPdf**	**15 07 09.4**	**-2.2**
OTAV	**Otavalo**	**135.23**	**280**	*e*P	**PKPdf**	**15 07 11.4**	**-1.5**
MNTX	**Cornudas Mount**	**135.78**	**339**	PKPdf	**PKPdf**	**15 07 10.6**	**-2.3**
121A	**Cookes Peak, D**	**135.79**	**342**	PKPdf	**PKPdf**	**15 07 11.4**	**-1.8**
TUC	**Tucson**	**136.82**	**346**	PKIKP	**PKPdf**	**15 07 16.5**	**+1.5**
TXAR	**Lajitas Array**	**137.25**	**336**	PKP	**PKPdf**	**15 07 16.0**	**+0.1**
	comp=Z,11nm,1.2s,baz=46,slow=3.9,SNR=6.4						
TXAR	**Lajitas Array**	**137.25**	**336**	PKIKP	**PKPdf**	**15 07 15.7**	**-0.2**
JTS	**Las Juntas de**	**137.85**	**297**	*e*P	PKPdf	15 07 02.5	-15
TGUH	**Tegucigalpa,Un**	**137.98**	**304**	*e*P	**PKPdf**	**15 07 15.9**	**-1.7**
TLIG	**Tlapa**	**144.17**	**319**	PKPdf	**PKPab**	**15 07 25.5**	**-0.8**
LPIG	**La Paz**	**144.44**	**341**	PKP	PKPbc	15 07 27.9	+0.8
	comp=Z,31nm,0.4s,baz=289,slow=2.4,SNR=10.0						
TBI	**Tubuai**	**150.72**	**121**	*e*LR	LR	15 57 25.0	
	comp=Z,552nm,25.5s						
PPT2	**Papeete2**	**152.41**	**109**	*e*PKPbc	**PKPbc**	**15 07 47.2**	**-1.6**
	comp=Z,76nm,1.2s						
PPT2	**Papeete2**	**152.41**	**109**	*e*LR	LR	15 58 12.8	
	comp=Z,564nm,23.0s						
PPT	**Papeete**	**152.41**	**109**	PKPbc	**PKPbc**	**15 07 49.1**	**+0.3**
	comp=Z,38nm,0.9s,baz=87,slow=18,SNR=3.9						
RKT	**Rikitea**	**161.97**	**139**	*e*LR	LR	16 02 40.5	
	comp=Z,777nm,26.8s						

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*IDC **10** 14:48:30.2±1.0, 21°.62S×68°.22W, h107^{km}±11^{km}, mb3.8/5, mb1 3.9/8, mb1mx3.6/39, mbtmp4.2/8, Error ellipse: s-maj=28.3km s-min=16.4km az=134.0*

*NEIC **10** 14:48:30.8±1.6, 21°.78S±0°.05×68°.27W±0°.09, h117^{km}±6^{km}, mb4.2/8, ML4.0(GUC), Error ellipse: s-maj=11.8km s-min=7.1km az=99.0*

*VAO **10** 14:48:30.6±0.4, 21°.72S×68°.42W, h133^{km}±7^{km}, mb4.3*

*GUC **10** 14:48:32.3±0.6, 21°.82S×68°.38W, h122^{km}±4^{km}, ML4.0*

ISC 10 14:48:30.9±0.6**, 21°.78S**±0°.03×**68°.33W**±0°.06**, h126**^{km}±6^{km}**, n90, σ1^{s}15**/107**, mb4.2**/6**, 10C-2D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	IPOC Station P	0.85	268	⇑iP	Pn	14 48 52.8	+0.6
PB09				iS	Sn	14 49 08.4	0.0
PB09	IPOC Station P	0.85	268		Pn	14 48 52.5	+0.3
PB09				Sn	Sn	14 49 07.5	-0.9
LVC	Limon Verde	0.99	213	P	Pn	14 48 54.0	+0.3
	337nm,0.3s,baz=9.0,slow=7.9,SNR=1632						
LVC				S	Sn	14 49 10.8	-0.3
	70nm,0.3s,baz=235,slow=17,SNR=12						
LVC	Limon Verde	0.99	213	⇓iP	Pn	14 48 54.0	+0.3
LVC				iS	Sn	14 49 10.8	-0.3
LVC	Limon Verde	0.99	213		Pn	14 48 53.8	+0.1
LVC				Sn	Sn	14 49 10.3	-0.8
LVC	Limon Verde	0.99	213	eP	Pn	14 48 54.2	+0.5
LVC				eS	Sn	14 49 11.5	+0.4
PB01	IPOC Station P	1.30	304	⇑iP	Pn	14 48 56.8	+0.2
PB01				eS	Sn	14 49 15.9	-0.2
PB01				IAML		14 49 18.8	
	comp=N,2µm,0.1s						
PB01	IPOC Station P	1.30	304		Pn	14 48 56.9	+0.3
PB03	IPOC Station P	1.35	258	⇑iP	Pn	14 48 57.1	0.0
PB03				iS	Sn	14 49 16.5	-0.7
PB03				IAML		14 49 19.0	
	comp=E,2µm,0.2s						
PB07	IPOC Station P	1.45	272	⇑iP	Pn	14 48 58.2	-0.1
PB07				eS	Sn	14 49 18.1	-1.0
PB07				IAML		14 49 20.0	
	comp=N,2µm,0.5s						
PB07	IPOC Station P	1.45	272		Pn	14 48 58.0	-0.3
PB06	IPOC Station P	1.48	231	⇑iP	Pn	14 48 58.9	+0.3
PB06				eS	Sn	14 49 19.9	+0.2
PB06	IPOC Station P	1.48	231		Pn	14 48 58.7	+0.1
PB02	IPOC Station P	1.53	287	⇑iP	Pn	14 48 59.1	0.0
PB02				eS	Sn	14 49 20.1	-0.5
PB02				IAML		14 49 23.3	
	comp=N,3µm,0.1s						
PB15	IPOC Station P	1.77	216	⇑iP	Pn	14 49 02.6	+0.4
PB15				eS	Sn	14 49 25.7	-0.2
PB15	IPOC Station P	1.77	216		Pn	14 49 02.5	+0.4
PB04	IPOC Station P	1.78	251	⇑iP	Pn	14 49 01.9	-0.2
PB04				eS	Sn	14 49 25.0	-0.9
PB04				IAML		14 49 28.8	
	comp=N,1µm,0.2s						
PB04	IPOC Station P	1.78	251		Pn	14 49 01.6	-0.5
PB08	IPOC Station P	1.80	335	⇓iP	Pn	14 49 04.1	+1.5
PB08				iS	Sn	14 49 28.4	+1.6
PB08				IAML		14 49 30.2	
	comp=E,1µm,0.5s						
PB08	IPOC Station P	1.80	335		Pn	14 49 03.7	+1.1
PATCX	Punta Patache	1.95	299	⇑iP	Pn	14 49 04.2	+0.1
PATCX				iS	Sn	14 49 28.6	-0.9
PATCX				IAML		14 49 31.1	
	comp=E,3µm,0.1s						
PATCX	Punta Patache	1.95	299	Pn	Pn	14 49 04.0	-0.1
PB05	IPOC Station P	2.04	238	⇑iP	Pn	14 49 04.9	-0.3
PB05				iS	Sn	14 49 30.1	-1.4
PB05				IAML		14 49 37.0	
	comp=E,585nm,0.3s						
TA01	Diego Aracena	2.10	305	eP	Pn	14 49 05.6	-0.3
TA01				eS	Sn	14 49 31.1	-1.6
TA01				IAML		14 49 33.0	
	comp=E,2µm,0.3s						
TA01	Diego Aracena	2.10	305	Pn	Pn	14 49 05.5	-0.3
TA02	Huaiquique	2.25	311	eP	Pn	14 49 07.3	-0.5
TA02				eS	Sn	14 49 34.6	-1.5
PB10	IPOC Station P	2.69	229	Pn	Pn	14 49 12.8	-0.4
PSGC	Pisagua	2.74	322	eP	Pn	14 49 13.4	-0.7
PSGC				eS	Sn	14 49 45.1	-2.3
PSGCX	Pisagua	2.74	322	Pn	Pn	14 49 13.4	-0.7
MNMC	Minye Minye	2.88	336		Pn	14 49 16.7	+0.5
PB14	IPOC Station P	3.42	214	Pn	Pn	14 49 22.8	-0.3
GO02	Mina Guanaco	3.56	199	Pn	Pn	14 49 24.8	-0.3
PB16	IPOC Station P	3.60	342		Pn	14 49 26.6	+0.8
AC01	Pan de Azucar	4.82	205	Pn	Pn	14 49 39.6	-1.9
AC02	Maricunga	5.09	188	Pn	Pn	14 49 43.1	-2.4
GO03	Copiap	6.05	196	Pn	Pn	14 49 55.1	-2.9
AC04	Llanos de Chal	6.87	201	Pn	Pn	14 50 05.6	-3.4
AC05	El Transito	7.25	194		Pn	14 50 11.0	-3.3
LCO	Las Campanas	7.52	196	Pn	Pn	14 50 14.2	-3.8
GO04	Tololo Observa	8.65	194	Pn	Pn	14 50 28.8	-4.5
SIV	San Ignacio	8.96	51	P	Pn	14 50 35.3	-2.1
	comp=E,9.3nm,0.3s,baz=247,slow=10,SNR=124						
CO02	Combarbal	9.69	194	Pn	Pn	14 50 42.7	-4.5
CPUP	Villa Florida	11.03	116	P	Pn	14 51 04.6	-0.4
	comp=E,0.3nm,0.3s,baz=278,slow=11,SNR=4.2						
CPUP	Villa Florida	11.03	116	Pn	Pn	14 51 04.1	-0.9
VILB	Vilhena	11.71	43	eP	Pn	14 51 13.4	-0.8
ETMB	Extrema	12.06	10	eP	Pn	14 51 18.3	-0.5
PP1B	Ponte de Pedra	13.33	74	eP	Pn	14 51 35.1	-0.1
TRCB	Terra Rica	14.57	97	eP	Pn	14 51 50.8	-0.3
BI02	San Fabin de	15.06	189	P	Pn	14 51 56.9	-0.2
BI02				IAmb	IAmb	14 52 02.3	
	comp=Z,17nm,1.4s						
PTGB	Pitanga	15.23	104	eP	P	14 52 01.9	+0.4
PCMB	Pacaembu	15.87	93	eP	P	14 52 08.0	-0.4
CPSB	Cacapava Do Su	15.89	126	eP	Pn	14 52 08.0	+0.6
ARAG	Araguaiana, MT	16.76	72	eP	P	14 52 18.7	+0.4
ITRB	Iturama	16.94	86	eP	P	14 52 20.4	+0.1
BB19B	Bebedouro	18.45	91	eP	Pn	14 52 37.4	-1.1
SNDB	Serra Nova Dou	18.98	62	eP	P	14 52 42.6	0.0
PLCA	Paso Flores	18.99	185	P	Pn	14 52 44.8	0.0
	comp=Z,0.2nm,0.3s,baz=7.0,slow=9.4,SNR=8.2						
PLCA	Paso Flores	18.99	185		P	14 52 43.6	+0.9
NPGB	Novo Progresso	19.27	42	eP	P	14 52 44.8	-1.0
IPMB	Ipameri, GO	19.29	82	eP	P	14 52 46.4	+0.3
MACA	Manacapuru-AM	19.94	23	eP	P	14 52 52.3	-0.7
BDFB	Brasilia	20.18	76	P	P	14 52 55.0	-0.7
	comp=Z,2.0nm,0.4s,baz=238,slow=9.3,SNR=4.4						
BDFB	Brasilia	20.18	76	P	P	14 52 55.2	-0.5
BDFB				IAmb	IAmb	14 53 22.8	
	comp=Z,12nm,1.4s						
ITTB	Itaituba	21.18	37	eP	P	14 53 05.4	-1.0
PEXB	Peixe	21.41	67	eP	P	14 53 08.4	-0.6
BSCB	Bom Sucesso	21.95	92	eP	P	14 53 14.4	-0.2
PTGA	Pitinga	22.45	22	P	P	14 53 17.1	-2.5
	comp=Z,1.8nm,0.4s,baz=298,slow=23,SNR=5.4						
PTGA	Pitinga	22.45	22	P	P	14 53 18.2	-1.4
PTGA				IAmb	IAmb	14 53 26.4	
	comp=Z,12nm,1.4s						
PTGA	Pitinga	22.45	22	eP	P	14 53 17.7	-1.9
PRPB	Parauapebas	23.69	52	eP	P	14 53 30.4	-0.9
SMTB	Santa Maria do	23.73	60	eP	P	14 53 31.5	-0.1
JANB	Januaria	23.73	78	eP	P	14 53 30.8	-0.9
DUB01	Friburgo-RJ	24.07	96	eP	P	14 53 33.9	-0.9
MALB	Monte Alegre	24.07	37	eP	P	14 53 34.4	-0.3
SDBA	SAO DESIDERIO	24.22	71	eP	P	14 53 36.0	-0.2
MCPB	Macapa, AP	26.55	39	eP	P	14 53 56.8	-0.3
PDPR	Patillas Dam,	39.61	3	P	P	14 55 47.7	-2.5
VNA3	Neumayer Olymp	59.64	161	P	P	14 58 23.2	+1.9
VNA2	Neumayer--Watz	60.21	161	P	P	14 58 27.1	+1.9
	baz=282,slow=7.0						
SNAA	Sanae	61.84	161	P	P	14 58 38.0	+1.8
QSPA	South Pole Qui	68.42	180	P	P	14 59 20.8	+1.9
QSPA				IAmb	IAmb	14 59 22.3	
	comp=Z,8.7nm,1.2s						
TOA0	Torodi Ar. Sit	76.94	70	P	P	15 00 10.6	+0.7
TOA0				IAmb	IAmb	15 00 36.1	
	comp=Z,14nm,1.4s						
TORD	Torodi Ar. Bea	76.94	70	P	P	15 00 10.6	+0.7
	comp=Z,2.3nm,0.6s,baz=255,slow=5.3,SNR=16						
TORD	Torodi Ar. Bea	76.94	70	P	P	15 00 10.4	+0.5
MATP	Matopo	88.61	111	P	P	15 01 11.3	+1.0
	comp=Z,1.4nm,0.6s,baz=228,slow=4.6,SNR=2.3						
YKA	Yellowknife Ar	91.62	340	P	P	15 01 24.4	+1.3
	comp=Z,0.6nm,0.7s,baz=130,slow=4.7,SNR=13						
ARU	Arti	128.07	34	PKP	PKiKP	15 07 23.1	+0.9
	comp=Z,0.4nm,0.3s,baz=325,slow=5.0,SNR=3.4						
ASAR	Alice Springs	129.92	207	PKP	PKiKP	15 07 27.7	+0.6
	comp=Z,0.7nm,0.8s,baz=126,slow=1.7,SNR=9.4						
WRA	Warramunga Arr	132.99	210	PKP	PKiKP	15 07 33.9	+0.5
	comp=Z,0.8nm,0.7s,baz=157,slow=1.7,SNR=11						
MKAR	Makanchi Array	145.54	37	PKPbc	PKPab	15 07 55.7	+0.9
	comp=Z,0.4nm,0.6s,baz=326,slow=4.1,SNR=6.1						

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*IDC **10** 14:52:58.4±1.1, 9°.64N×57°.76E, h0^{km}, mb3.9/9, mb1 4.1/9, mb1mx3.7/64, mbtmp3.9/9, Error ellipse: s-maj=31.6km s-min=24.7km az=18.0*
*NEIC **10** 14:53:00.1±1.2, 9°.62N±0°.10×57°.7E±0°.1, h15^{km}±5^{km}, mb4.4/9, Error ellipse: s-maj=20.5km s-min=13.0km az=71.0*
ISC 10 14:52:59.8±1.0, **9°.7N**±0°.2×**57°.7E**±0°.1, **h10^{km}, n26, σ0^{s}95**/24, **mb4.1**/12, **Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UOSS	Minazif	15.25	355	P	P	14 56 39.8	-0.4
RAYN	Ar Rayn	18.06	321	P	P	14 57 11.7	+0.2
RAYN				IAmb	IAmb	14 57 13.1	
	comp=Z,40nm,1.4s						
KKAR	Karatay Array	35.11	16	P	P	14 59 54.6	+1.2
ABKAR	Akbulak array	39.49	2	P	P	15 00 30.7	+0.3
ABKAR	Akbulak array	39.49	2	P	P	15 00 30.7	+0.3
ABKAR				IAmb	IAmb	15 00 32.2	
	comp=Z,7.4nm,1.1s						
AKTO	Aktyubinsk	40.63	0	P	P	15 00 40.4	+0.5
	comp=Z,1.9nm,0.8s,baz=177,slow=9.8,SNR=3.2						
CMAR	Chiang Mai Arr	40.82	73	P	P	15 00 43.2	+1.2
	comp=Z,3.7nm,1.0s,baz=263,slow=8.6,SNR=6.2						
CMAR	Chiang Mai Arr	40.82	73	P	P	15 00 43.6	+1.6
MK31	Makanchi Array	42.47	25	P	P	15 00 55.2	+0.1
MKAR	Makanchi Array	42.47	25	P	P	15 00 55.4	+0.3
	comp=Z,1.2nm,0.8s,baz=220,slow=9.3,SNR=4.9						
BURAR	Bucovina Array	46.73	330	P	P	15 01 28.1	-1.1
ZAA0	Zalesovo Array	49.18	21	P	P	15 01 47.5	-0.3
ZAA0				IAmb	IAmb	15 01 54.1	
	comp=Z,3.9nm,0.8s						
ZALV	Zalesovo Beam	49.18	21	P	P	15 01 47.5	-0.4
	comp=Z,3.5nm,0.8s,baz=211,slow=8.3,SNR=5.8						
MORC	Moravsky Berou	52.02	328	P	P	15 02 08.4	-1.1
MORC				IAmb	IAmb	15 02 13.8	
	comp=Z,4.3nm,1.0s						
TORD	Torodi Ar. Bea	54.96	279	P	P	15 02 33.1	+1.5
	comp=Z,1.1nm,0.9s,baz=83,slow=6.8,SNR=3.2						
TORD	Torodi Ar. Bea	54.96	279	IAmb	IAmb	15 02 36.8	
	comp=Z,1.6nm,1.1s						
SONM	Songino Array	55.78	38	P	P	15 02 37.7	+0.5
	comp=Z,2.4nm,1.2s,baz=258,slow=7.1,SNR=4.1						
SONM	Songino Array	55.78	38	P	P	15 02 37.4	+0.2
ESDC	Sonseca Array	62.16	310	P	P	15 03 21.2	-0.4
	comp=Z,2.3nm,1.1s,baz=66,slow=5.6,SNR=4.2						
ESDC	Sonseca Array	62.16	310	IAmb	IAmb	15 03 25.8	
	comp=Z,15nm,1.4s						
KSAR	Wonju Array Be	68.42	54	P	P	15 03 59.6	-2.5
WRA	Warramunga Arr	80.89	112	P	P	15 05 14.7	-0.2
	comp=Z,1.1nm,0.9s,baz=292,slow=4.7,SNR=4.3						
ASAR	Alice Springs	81.40	116	P	P	15 05 17.0	-0.5
	comp=Z,1.6nm,0.8s,baz=288,slow=4.9,SNR=6.8						
PDAR	Pinedale Array	126.53	348	PKP	PKPdf	15 12 03.8	-0.2
	comp=Z,0.4nm,0.7s,baz=72,slow=2.9,SNR=2.5						
PDAR	Pinedale Array	126.53	348		PKPdf	15 12 03.1	-0.8
NVAR	Mina Array Bea	132.00	356	PKP	PKiKP	15 12 15.8	+0.3
	comp=Z,1.7nm,1.1s,baz=270,slow=3.6,SNR=1.9						

IDC 10 14:58:14.1±348.0, **54°.14N**×**43°.23E, h0^{km}, Error ellipse: s-maj=149.5km s-min=98.9km az=138.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I43RU	DUBNA INFRASON	4.30	310	i		15 25 10.0	
	baz=125,slow=341,SNR=2.2						
I31KZ	AKTYUBINSK INF	9.81	106	i		15 56 00.0	
	baz=299,slow=274,SNR=1.7						
I46RU	ZALESOVO INFRA	24.17	73	i		17 27 40.0	
	baz=288,slow=335,SNR=0.5						

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*FUNV **10** 14:59:59.8, 12°.15N×69°.98W, h3^{km}, MW3.0*
ISC 10 14:59:59.0±1.8, **12°.18N**±0°.08×**69°.96W**±0°.04, **h12^{km}**±8^{km}, **n16, σ1^{s}04**/29, **1D, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MONV	Montecano	0.22	183	eP	Pg	15 00 03.8	0.0
MONV				eS	Sg	15 00 06.5	-0.6
DABV	Dabajuro	1.42	208	eP	Pn	15 00 24.6	+0.1
DABV				eS	Sn	15 00 41.6	-1.4
DABV	Dabajuro	1.42	208	eP	Pn	15 00 24.8	+0.3
DABV				eS	Sn	15 00 43.6	+0.5
SIQV	Siquisique	1.53	174	eP	Pn	15 00 26.8	+0.7
SIQV				eS	Sb	15 00 47.9	+1.3
JACV	Jacura	1.55	134	eP	Pn	15 00 27.5	+1.1
URIC	Uribia, Colomb	2.05	257	⇓iP	Pn	15 00 34.6	+1.4
URIC				eS	Sb	15 01 00.2	-1.3
URIC				i		15 01 04.0	
	comp=Z,45nm,0.4s						
CURV	Curarigua	2.15	180	eP	Pn	15 00 35.5	+0.8
CURV				eS	Sn	15 01 02.8	+1.3
SANV	Sanarito	2.69	171	eP	Pn	15 00 43.0	+0.7
SANV				eS	Sn	15 01 14.5	-0.3
MAPV	Macapo	2.76	148	eP	Pn	15 00 43.9	+0.9
MAPV				eS	Sn	15 01 15.6	-0.7
CRJC	Cerrejon, Guaj	3.09	248	eP	Pn	15 00 48.7	+1.1
SDV	Santo Domingo	3.34	192	eP	Pn	15 00 51.5	+0.4
TACV	Tcata	3.52	125	eP	Pn	15 00 54.3	+0.7
TACV				eS	Sn	15 01 35.1	0.0
BAUV	El Baul	3.73	149	eP	Pn	15 00 57.1	+0.7
BAUV				eS	Sn	15 01 39.4	-0.8
SOCV	Socops	3.97	193	eP	Pn	15 00 60.0	+0.3
SOCV				eS	Sn	15 01 44.6	-1.6
BIRV	Birongo	3.99	115	eP	Pn	15 01 00.2	+0.2
BIRV				eS	Sn	15 01 45.3	-1.5
MERV	Las Mercedes	4.63	129	eP	Pn	15 01 09.7	+0.9
MERV				eS	Sn	15 02 00.3	-2.1

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*IDC **10** 15:01:58.2±3.2, 20°.61S×169°.43E, h64^{km}±47^{km}, mb3.4/3, mb1 3.8/5, mb1mx3.5/33, mbtmp3.8/5, ML4.5/2, Error ellipse: s-maj=168.7km s-min=16.7km az=158.0*
*NEIC **10** 15:01:58.7±2.0, 20°.99S±0°.08×169°.7E±0°.1, h83^{km}±5^{km}, mb4.5/10, Error ellipse: s-maj=15.6km s-min=11.2km az=114.0*
ISC 10 15:01:55.2±0.8, **21°.02S**±0°.09×**169°.79E**±0°.09, **h50^{km}, n20, σ1^{s}00**/19, **mb4.4**/8, **Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	3.29	251	P	Pn	15 02 45.1	+0.8
	28nm,0.3s,baz=96,slow=7.0,SNR=788						
DZM				S	Sn	15 03 21.9	-0.3
	74nm,0.3s,baz=125,slow=18,SNR=21						
DZM	Mont Dzumac	3.29	251		Pn	15 02 45.4	+1.1
SANVU	Saraoutou	6.06	336		Pn	15 03 24.1	+1.8
MSVF	Nonsavu	8.45	69	P	Pn	15 04 01.9	+6.8
	0.2nm,0.3s,baz=254,slow=9.7,SNR=6.0						
BKZ	Black Stump Fm	18.98	164	P	Pn	15 06 15.3	+1.6
FOZ	Fox Glacier	22.45	180	P	P	15 06 49.1	-0.8
FOZ				IAmb	IAmb	15 07 11.0	
	comp=Z,61nm,1.4s						
WKZ	Wanaka	23.75	181	P	P	15 07 03.8	+0.9
WHZ	Wether Hill Ro	24.86	183	P	P	15 07 14.1	+1.2
WHZ				IAmb	IAmb	15 07 37.4	
	comp=Z,36nm,1.4s						
RAR	Rarotonga	28.37	96	P	P	15 07 44.7	-0.2
WB0	Warramunga Arr	33.16	266	P	P	15 08 27.0	-0.2
WB0				IAmb	IAmb	15 08 53.0	
	comp=Z,6.8nm,1.4s						
WB2	Warramunga Arr	33.18	265	P	P	15 08 26.9	-0.4
WB2				IAmb	IAmb	15 08 49.1	
	comp=Z,8.5nm,1.4s						
WRA	Warramunga Arr	33.19	265	P	P	15 08 26.8	-0.6
	comp=Z,0.6nm,0.9s,baz=96,slow=8.2,SNR=8.2						
WRA	Warramunga Arr	33.19	265	IAmb	IAmb	15 08 28.6	
	comp=Z,0.1nm,1.1s						
ASAR	Alice Springs	33.24	259	P	P	15 08 28.1	+0.2
	comp=Z,0.3nm,0.3s,baz=76,slow=8.0,SNR=22						
ASAR	Alice Springs	33.24	259	P	P	15 08 27.2	-0.7
QSPA	South Pole Qui	69.04	180	P	P	15 12 54.8	-0.7
QSPA				IAmb	IAmb	15 12 59.1	
	comp=Z,9.7nm,1.4s						
KS19	Wonju Array Si	70.33	326	P	P	15 13 02.0	-1.6
NVAR	Mina Array Bea	89.59	48	P	P	15 14 47.8	0.0
	comp=Z,0.6nm,0.6s,baz=221,slow=6.7,SNR=6.7						
NVAR	Mina Array Bea	89.59	48	P	P	15 14 46.8	-1.0
GERES	GERESS Array B	146.30	331	PKPbc	PKPdf	15 21 29.6	+0.5
	comp=Z,0.2nm,0.3s,baz=35,slow=3.9,SNR=2.3						

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*SKHL **10** 15:02:10.6±0.4, 45°.80N×141°.50E, h15^{km}±5^{km}, mb4.2/2*
*JMA **10** 15:02:10.7±0.4, 45°.84N×141°.74E, h10^{km}, M2.5*
ISC 10 15:02:11.9±1.1, **45°.75N**±0°.04×**141°.70E**±0°.06, **h15^{km}**±13^{km}, **n6, σ0^{s}72**/11, **Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JWK2	Keihoku	0.46	162	P	Pg	15 02 20.9	-0.2
JWK2				eS	Sg	15 02 27.7	+0.4
JRBN	Rebuntou	0.56	234	P	Pg	15 02 22.5	-0.4
JRBN				eS	Sg	15 02 30.0	-0.3
JRR	Rishiri	0.68	204	P	Pb	15 02 25.3	0.0
JRR				eS	Sb	15 02 35.3	+0.9
JSE	Soyaes	1.01	142	eS	Sb	15 02 43.6	-0.5
KHLM	Kholmsk	1.32	10	ePg	Pb	15 02 36.1	-0.3
KHLM				eSg	Sg	15 02 55.7	+1.1
KHLM				A	A	15 02 59.6	
	160nm,0.6s						
KHLM				A	A	15 02 59.6	
	230nm,0.6s						
YSS	Yuzh-Sakhalins	1.41	31	ePg	Pg	15 02 38.3	-0.6
YSS				AMB	AMB	15 02 39.1	
	40nm,0.1s						
YSS				eSg	Sg	15 02 58.0	+0.8

ASRS 10 15:08:56.8±0.2, **52°N**±1°×**9°6E**±°, **h5^{km}, MLh3.4**/11, **smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/iasp91 confirmed, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TDJR	Todzha	0.61	17	Pg	Pn	15 09 13.0	+0.8
TDJR				Sg	Sn	15 09 21.4	-1.0
KZLR	Kyzyl	0.85	263	Pg	Pn	15 09 17.8	+2.4
KZLR				Sg	Sn	15 09 30.0	+1.7
KNGR	Kungurtug, Tuv	1.63	138	Pg	Pg	15 09 28.8	+0.9
KNGR				Sg	Sg	15 09 49.4	+0.4
ARDR	Aradan	1.65	298	Pg	Pg	15 09 32.3	+3.9
ARDR				Sg	Sg	15 09 55.5	+5.8
BLRR	Bol’shaya Rech	2.40	302	Pg	Pg	15 09 45.7	+2.9
BLRR				Sg	Sg	15 10 17.4	+3.6
DJOS	Djoyskaya Sosn	2.88	292	Pg	Pg	15 09 54.7	+2.8
DJOS				Sg	Sg	15 10 32.2	+3.1
CERR	Cheremushki	2.88	293	Pg	Pg	15 09 55.3	+3.3
CERR				Sg	Sg	15 10 32.2	+2.8
DJO	Djoy, Khakassi	2.98	291	Pg	Pg	15 09 56.5	+2.7
DJO				Sg	Sg	15 10 34.6	+2.3
ORY	Orie	3.21	353	Pg	Pg	15 09 58.3	-0.1
ORY				Sg	Sg	15 10 39.0	-0.9
MOY	Mondy	3.23	91	Pg	Pb	15 09 56.6	+2.0
MOY				Sg	Sg	15 10 37.8	-2.6
KTRR	Kuturchin	3.26	344	Pg	Pg	15 09 58.7	-0.6
KTRR				Sg	Sg	15 10 41.8	+0.2
ABNR	Abakan	3.27	307	Pg	Pg	15 10 03.6	+4.3
ABNR				Sg	Sg	15 10 46.3	+4.7
TBTR	Tabat	3.31	292	Pg	Pg	15 10 02.2	+2.0
TBTR				Sg	Sg	15 10 44.8	+1.8
TEL	Teeli	3.60	259	Pg	Pg	15 10 04.8	-0.9
TEL				Sg	Sg	15 10 51.9	-0.4
SHRR	Shira	4.32	310	Pg	Pg	15 10 19.6	0.0
SHRR				Sg	Sg	15 11 16.2	+0.6
LUZB	Luzhba, Kemero	4.58	296	Sg	Sg	15 11 22.9	-0.9
SHTK	Zheleznogorsk-	4.70	345	Pg	Pg	15 10 23.3	-3.5
SHTK				Sg	Sg	15 11 24.5	-3.2
GZLN	Zheleznogorsk	4.72	346	Pg	Pg	15 10 27.4	+0.2
GZLN				Sg	Sg	15 11 26.2	-2.0
ZAK	Zakamensk	4.93	104	Pg	Pg	15 10 28.0	-3.1
ZAK				Sg	Sg	15 11 30.9	-4.0
TASR	Tashtagol	4.96	284	Pg	Pg	15 10 33.3	+1.6
TASR				Sg	Sg	15 11 37.0	+1.2
CUR	Chagan-Uzun	5.02	253	Pg	Pg	15 10 33.3	+0.4
CUR				Sg	Sg	15 11 36.2	-1.6
ULGR	Ulagan, Altay	5.07	259	Pg	Pg	15 10 34.4	+0.5
ULGR				Sg	Sg	15 11 38.0	-1.7
ARTR	Artybash	5.29	273	Pg	Pg	15 10 38.5	+0.5
ARTR				Sg	Sg	15 11 51.1	+4.5
CHBI	Chibit, Altay	5.45	257	Pg	Pg	15 10 42.1	+0.9
CHBI				Sg	Sg	15 11 54.2	+2.6
DGZ	Jazzator, Alta	5.72	251	Pg	Pg	15 10 48.3	+1.9
DGZ				Sg	Sg	15 12 02.4	+2.0
BRCR	Berchikul'	5.86	314	Sg	Sg	15 12 05.4	+0.5
ELT	Eltsovka	6.01	288	Sg	Sg	15 12 07.5	-2.2
TRG	Tyrgan	6.54	78	Sg	Sg	15 12 21.2	-5.3

IDC 10 15:22:04.3±1.2, **9°.48S**×**158°.41E, h0^{km}, mb3.7**/4, **mb1 3.8**/4, **mb1mx3.5**/40, **mbtmp3.7**/4, **Error ellipse: s-maj=36.6km s-min=13.2km az=172.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	1.52	88	Pg	Pn	15 22 32.4	-0.3
	39nm,0.3s,baz=228,slow=5.9,SNR=16						
HNR				Lg	Lg	15 22 51.9	
	57nm,0.3s,baz=233,slow=5.9,SNR=4.0						
WRA	Warramunga Arr	25.46	243	P	P	15 27 33.1	-1.2
	1.2nm,0.9s,baz=71,slow=9.6,SNR=7.6						
STKA	Stephens Creek	27.20	213	P	P	15 27 50.6	+0.7
	1.8nm,0.9s,baz=11,slow=15,SNR=3.5						
ASAR	Alice Springs	27.33	236	P	P	15 27 51.5	+0.3
	0.3nm,0.7s,baz=62,slow=11,SNR=7.5						
SONM	Songino Array	73.25	326	P	P	15 33 37.7	+0.2
	0.7nm,0.6s,baz=135,slow=5.9,SNR=5.6						

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*JMA **10** 15:35:26.0±0.4, 32°.92N×139°.26E, h219^{km}, M2.9*
*IDC **10** 15:35:27.2±1.0, 32°.94N×139°.25E, h212^{km}±14^{km}, mb2.8/2, mb1 3.1/4, mb1mx2.7/42, mbtmp3.5/4, Error ellipse: s-maj=87.5km s-min=22.2km az=86.0*
ISC 10 15:35:27.4±1.1, **32°.93N**±0°.08×**139°.09E**±0°.09, **h200^{km}, n16, σ1^{s}56**/18, **mb3.2**/3, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2	0.61	72	P	Pn	15 35 57.1	+2.2
	9.5nm,0.3s,baz=112,slow=22,SNR=12						
JHJ				S	Sn	15 36 18.3	+2.1
	11nm,0.3s,baz=81,slow=22,SNR=4.6						
TK02	Tokai 2	1.50	313	P	Pn	15 36 02.8	+2.0
TTO1	TONANKAI O.B.S	2.05	290	P	Pn	15 36 07.8	+1.7
JOD2	Odawara 2	2.32	360	P	Pn	15 36 10.5	+1.2
JOD2				eS	Sn	15 36 43.7	+1.5
BSO1	Boso 1	2.33	42	S	Sn	15 36 42.1	+1.0
JIE	Ise	2.46	307	P	Pn	15 36 11.8	+1.0
JYN	Shimob	2.60	350	P	Pn	15 36 13.7	+1.3
JTNC	Tanabenakahech	3.04	288	P	Pn	15 36 18.5	+1.0
JRY	Ryogami san	3.08	357	P	Pn	15 36 18.0	+0.1
JRY				eS	Sn	15 36 58.0	+0.3
JWY	Kouya	3.19	295	P	Pn	15 36 20.4	+1.1
JAG	Ashikaga	3.50	5	P	Pn	15 36 22.1	-0.8
MJAR	Matsushiro Arr	3.67	349	P	Pn	15 36 26.1	+1.0
	0.1nm,0.3s,baz=170,slow=12,SNR=2.8						
ASAJ	Asahikawa	11.50	13	P	Pn	15 38 03.5	-2.2
	0.3nm,0.3s,baz=204,slow=12,SNR=9.1						
FITZ	Fitzroy Crossi	52.35	196	P	P	15 44 13.5	-5.4
	1.8nm,0.8s,baz=17,slow=11,SNR=2.7						
WRA	Warramunga Arr	52.77	186	P	P	15 44 20.6	-1.5
	0.3nm,0.5s,baz=1.4,slow=8.2,SNR=13						
ASAR	Alice Springs	56.50	186	P	P	15 44 47.2	-1.6
	0.2nm,0.7s,baz=22,slow=11,SNR=9.1						

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*MAN **10** 15:39:04.7, 6°.05N×126°.71E, h78^{km}, mb4.5, ML3.4, MS3.2*
*IDC **10** 15:39:09.3±3.1, 6°.02N×126°.29E, h132^{km}±16^{km}, mb2.9/3, mb1 3.1/3, mb1mx2.8/43, mbtmp3.3/3, Error ellipse: s-maj=208.8km s-min=22.2km az=65.0*
ISC 10 15:39:05.5±1.4, **6°.02N**±0°.08×**126°.7E**±0°.1, **h95^{km}**±12^{km}, **n12, σ1^{s}96**/18, **mb3.0**/3, **2C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	0.96	275	eP	Pn	15 39 24.6	-0.4
DDMP				eS	Sn	15 39 41.6	+1.9
MATI	Mati	1.00	336	eP	Pn	15 39 23.5	-2.1
MATI				eS	Sn	15 39 38.6	-2.0
DAV	Davao City (W)	1.50	314	P	Pn	15 39 33.9	+2.4
	78nm,0.3s,baz=163,slow=5.3,SNR=2.7						
DAV				S	Sn	15 39 54.6	+3.4
	68nm,0.3s,baz=267,slow=21,SNR=13						
KCP	Kidapawan	1.85	302	⇑eP	Pn	15 39 37.2	+1.2
SKMP	Bagumbayan, Su	2.17	283	eP	Pn	15 39 40.1	+0.1
SKMP				eS	Sn	15 40 03.4	-3.2
BUKP	Musuan	2.44	319	eP	Pn	15 39 43.8	+0.1
BUKP				eS	Sn	15 40 13.7	+0.8

CGP	**Cagayan de Oro**	3.11	321	⇑eP	Pn	15 39 52.2	-0.4
CGP				eS	Sn	15 40 29.4	+0.4
PAGZ	**Pagadian**	3.73	299	eP	Pn	15 40 00.9	-0.1
GLSP	**General Luna,**	3.77	352	eP	Pn	15 40 02.9	+1.3
WRA	**Warramunga Arr**	26.88	164	P	P	15 44 40.1	+2.4
	0.4nm,0.9s,baz=344,slow=10,SNR=2.2						
ASAR	**Alice Springs**	30.34	167	P	P	15 45 08.7	+0.3
	0.2nm,0.6s,baz=339,slow=7.0,SNR=6.6						
MKAR	**Makanchi Array**	55.66	324	P	P	15 48 30.0	-1.8
	0.3nm,0.5s,baz=119,slow=7.7,SNR=5.0						

*IDC **10** 15:45:29.6±0.8, 27°.18N×103°.46E, h0^{km}, mb3.8/12, mb1 3.9/13, mb1mx3.8/55, mbtmp3.8/13, ML3.6/1, MS3.4/3, Ms1 3.5/3, ms1mx3.1/37, Error ellipse: s-maj=27.2km s-min=15.8km az=64.0*

*NEIC **10** 15:45:34.0±1.4, 27°.16N±0°.06×103°.4E±0°.1, h31^{km}±5^{km}, mb4.2/18, Error ellipse: s-maj=13.4km s-min=8.7km az=105.0*

ISC 10 15:45:34.3±0.6**, 27°.15N**±0°.08×**103°.48E**±0°.09**, h35^{km}, n42, σ0^{s}.87**/37**, mb4.1**/19**, Yunnan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMI	**Kunming**	2.12	198	Pn	Pn	15 46 05.2	-2.3
SLVN	**Son La**	5.80	176	Pn	Pn	15 46 57.8	-0.2
ENH	**Enshi**	6.12	58		Pn	15 47 03.6	+1.3
CHTO	**Chiang Mai**	9.29	208	Pn	Pn	15 47 46.6	+0.7
CMAR	**Chiang Mai Arr**	9.61	207	Pn	Pn	15 47 50.2	0.0
	0.1nm,0.3s,baz=14,slow=13,SNR=10						
CMAR				Lg	Lg	15 50 32.6	
	0.2nm,0.3s,baz=162,slow=30,SNR=2.4						
CMAR				LR	LR	15 52 05.4	
	comp=Z,143nm,19.6s,baz=7.5,slow=41						
CMAR	**Chiang Mai Arr**	9.61	207		Pn	15 47 49.4	-0.8
LSA	**Lhasa**	11.15	286	Pn	Pn	15 48 11.4	-0.3
SONM	**Songino Array**	20.77	6	P	Pn	15 50 11.8	-3.1
	1.1nm,0.8s,baz=185,slow=10.0,SNR=8.2						
SONM	**Songino Array**	20.77	6	P	Pn	15 50 12.6	-2.3
ULN	**Ulaanbaatar**	20.87	7	P	Pn	15 50 13.5	-2.4
ULN					Pn	15 50 13.6	-2.4
KSRS	**Korea Array**	23.01	57	P	P	15 50 36.3	+0.2
	1.6nm,0.7s,baz=248,slow=9.7,SNR=5.7						
KSRS				LR	LR	16 00 47.8	
	comp=Z,183nm,19.1s,baz=336,slow=40						
HIA	**Hailar**	25.41	25	P	P	15 50 59.1	+0.7
HIA				IAmb	IAmb	15 51 06.3	
	comp=Z,4.7nm,0.7s						
MK31	**Makanchi Array**	25.76	325	P	P	15 51 01.0	-0.7
MK31				IAmb	IAmb	15 51 19.0	
	comp=Z,5.0nm,1.4s						
MKAR	**Makanchi Array**	25.76	325	P	P	15 51 02.1	+0.4
	comp=Z,1.6nm,0.8s,baz=130,slow=11,SNR=13						
MKAR	**Makanchi Array**	25.76	325	P	P	15 51 01.3	-0.4
MAKZ	**Makanchi**	25.93	325	P	P	15 51 03.9	+0.7
MAKZ				IAmb	IAmb	15 51 17.9	
	comp=Z,5.3nm,1.5s						
AAK	**Ala-Archa**	28.18	311	P	P	15 51 24.0	+0.3
	comp=Z,0.4nm,0.5s,baz=108,slow=13,SNR=1.9						
USRK	**Ussuriysk Ar.**	28.53	46	LR	LR	16 02 48.2	
	comp=Z,76nm,20.7s,baz=346,slow=36						
ZALV	**Zalesovo Beam**	30.10	338	P	P	15 51 42.1	+1.7
	comp=Z,3.5nm,0.8s,baz=140,slow=7.8,SNR=4.4						
KKAR	**Karatay Array**	31.07	309	P	P	15 51 48.9	-0.2
CISI	**Cisompet, Garu**	34.75	172	P	P	15 52 22.4	+0.9
NRIK	**Noril'sk**	43.24	352	P	P	15 53 31.5	-0.3
	comp=Z,1.7nm,0.6s,baz=172,slow=14,SNR=2.9						
NRIK	**Noril'sk**	43.24	352	IAmb	IAmb	15 53 54.9	
	comp=Z,7.0nm,1.4s						
TIXI	**Tiksi**	46.72	11	P	P	15 53 58.6	-0.9
TIXI				IAmb	IAmb	15 54 00.3	
	comp=Z,3.7nm,1.1s						
PETK	**Petropavlovsk-**	47.45	42	P	P	15 54 03.5	-1.9
MTN	**Manton Dam**	47.97	142	P	P	15 54 10.9	+1.1
WRAB	**Tennant Creek**	55.55	144	P	P	15 55 06.5	+0.2
WRAB				IAmb	IAmb	15 55 18.4	
	comp=Z,4.1nm,0.9s						
WRA	**Warramunga Arr**	55.55	144	P	P	15 55 06.6	+0.3
	comp=Z,0.6nm,0.4s,baz=333,slow=8.4,SNR=33						
WRA	**Warramunga Arr**	55.55	144	P	P	15 55 06.2	-0.1
WB2	**Warramunga Arr**	55.55	144	P	P	15 55 06.5	+0.1
WR0	**Warramunga Arr**	55.67	144	P	P	15 55 06.8	-0.4
WR0				IAmb	IAmb	15 55 19.6	
	comp=Z,6.2nm,1.2s						
AS31	**Alice Springs**	58.44	147	P	P	15 55 27.4	+0.6
ASAR	**Alice Springs**	58.44	147	P	P	15 55 28.1	+1.2
	comp=Z,0.3nm,0.4s,baz=323,slow=6.7,SNR=21						
AKASG	**Malin Array Be**	59.73	315	P	P	15 55 34.9	-0.5
	comp=Z,0.9nm,0.6s,baz=67,slow=6.7,SNR=3.1						
FINES	**FINESS Array B**	60.57	327	P	P	15 55 40.5	-0.5
	comp=Z,1.2nm,0.8s,baz=101,slow=7.5,SNR=1.7						
ARCES	**ARCESS Array B**	60.65	337	P	P	15 55 41.3	-0.1
	comp=Z,18nm,1.2s,baz=79,slow=6.7,SNR=1.9						
IMAR	**Indian Mountai**	70.52	25	P	P	15 56 46.3	+1.1
BMAR	**Burnt Mountain**	73.13	22	P	P	15 57 01.9	+1.0
ILAR	**Eielson Array**	73.63	25	P	P	15 57 04.3	+0.4
	comp=Z,0.7nm,1.0s,baz=282,slow=4.4,SNR=5.0						
ILAR	**Eielson Array**	73.63	25	P	P	15 57 03.5	-0.3
PRP	**Porcupine Dome**	73.77	24	P	P	15 57 05.3	+0.5
PRP				IAmb	IAmb	15 57 07.7	
	comp=Z,5.1nm,1.0s						
YKA	**Yellowknife Ar**	85.62	17	P	P	15 58 09.7	+0.8
	comp=Z,1.0nm,0.8s,baz=329,slow=4.0,SNR=16						

IDC 10 15:55:54.8±4.4**, 9°.45N**×**57°.21E, h0^{km}, mb3.4**/4**, mb1 3.7**/4**, mb1mx3.4**/41**, mbtmp3.4**/4**, Error ellipse: s-maj=113.1km s-min=46.5km az=86.0, Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	41.39	73	P	P	16 03 43.1	-0.1
	0.3nm,0.3s,baz=267,slow=11,SNR=6.0						
MKAR	**Makanchi Array**	42.90	25	P	P	16 03 55.1	-0.1
	0.2nm,0.5s,baz=205,slow=6.4,SNR=4.0						
WRA	**Warramunga Arr**	81.29	112	P	P	16 08 14.0	+0.4
	0.4nm,0.9s,baz=293,slow=4.4,SNR=1.6						
ASAR	**Alice Springs**	81.77	116	P	P	16 08 16.0	-0.2
	0.3nm,0.7s,baz=289,slow=5.0,SNR=6.2						

*INET **10** 16:00:34.0, 14°.49N×89°.57W, h120^{km}, MW3.3*

*SNET **10** 16:00:37.8±1.2, 14°.51N×89°.18W, h1^{km}±3^{km}, ML3.2*

*GCG **10** 16:00:40.1±0.6, 15°.36N×89°.49W, h73^{km}, MD3.5*

ISC 10 16:00:36.1±1.4**, 14°.63N**±0°.06×**89°.08W**±0°.04**, h11^{km}**±11^{km}**, n18, σ0^{s}.82**/27**, 2C, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESQI	**Esquipulas**	0.27	255	⇑iP	Pb	16 00 42.0	-1.0
ESQI				eS	Sg	16 00 45.5	+0.1
MTO3	**Montecristo**	0.36	230	⇑iP	Pg	16 00 43.0	-0.3
MTO3				eS	Sg	16 00 47.1	-1.1
MTO3				IAML		16 00 48.3	
	comp=Z,2µm,0.1s						
TACO	**Tacachico**	0.71	202	eP	Pg	16 00 49.6	-0.3
MRL	**Marmol**	0.74	307	eP	Pn	16 00 52.4	-0.2
MRL				eS	Sn	16 01 02.7	-1.4
LBRS	**Las Brisas**	0.89	178	eP	Pb	16 00 53.5	-0.1
BOQS	**Boqueron**	0.91	193	eP	Pb	16 00 54.1	0.0
SBLS	**San Blas**	0.95	214	eP	Pb	16 00 54.6	-0.1
CEVE	**Cerro Verde**	0.96	214	eP	Pb	16 00 54.9	0.0
CEVE				eS	Sg	16 01 08.5	+1.3
CEVE				IAML		16 01 13.6	
	comp=Z,776nm,0.2s						
LFRS	**El Faro**	1.00	179	eP	Pg	16 00 55.3	-0.1
COEG	**Centro de Oper**	1.02	169	eP	Pn	16 00 56.0	-0.5
COEG				eS	Sg	16 01 09.6	+0.4
COEG				IAML		16 01 19.1	
	comp=Z,983nm,0.5s						
JAYA	**Jayaque - finc**	1.04	201	eP	Pb	16 00 56.0	-0.1
JAYA				eS	Sg	16 01 09.2	-0.4
JAYA				IAML		16 01 15.3	
	comp=Z,663nm,0.3s						
NBG	**Las Nubes**	1.23	268	eP	Pg	16 01 01.2	+1.4
NBG				eS	Sn	16 01 17.9	+1.6
COEB	**Comit de Eme**	1.24	155	eP	Pg	16 01 00.2	+0.1
COEB				eS	Sg	16 01 17.9	+1.6
COEB				IAML		16 01 25.4	
	comp=Z,709nm,0.3s						
TECA	**Tecapa**	1.26	154	eP	Pg	16 01 00.5	+0.1
PCG	**Pacaya**	1.50	261	eP	Pg	16 01 05.9	+0.9
FUG	**Fuego 3**	1.72	264	eP	Pg	16 01 09.2	0.0
LCND	**La Caada**	1.75	139	eP	Pg	16 01 08.9	-0.7
LCND				eS	Sg	16 01 32.6	+0.3
LCND				IAML		16 01 35.5	
	comp=Z,651nm,0.4s						
TGUH	**Tegucigalpa,Un**	1.84	108	eP	Pg	16 01 11.8	+0.5

*BGR **10** 16:09:20.5±0.0, 15°.74N×120°.26E, h33^{km}, mb5.4*

*BJI **10** 16:09:20.7±0.0, 13°.75N×120°.93E, h142^{km}, mB5.0/52, mb4.9/77*

*MOS **10** 16:09:22.9±0.9, 14°.03N×120°.66E, h134^{km}, mb5.1/102, Error ellipse: s-maj=6.6km s-min=3.5km az=117.9*

*IDC **10** 16:09:23.7±0.3, 13°.98N×120°.63E, h127^{km}±2^{km}, mb4.6/42, mb1 4.7/44, mb1mx4.6/53, mbtmp5.0/44, MS3.8/14, Ms1 3.8/14, ms1mx3.5/45, Error ellipse: s-maj=8.9km s-min=6.1km az=67.0*

*MAN **10** 16:09:23.1, 14°.00N×120°.36E, h101^{km}, mb5.6, ML4.6, MS5.0*

MAN INTENSITY III - NASUGBU.

*GCMT **10** 16:09:24.1±0.2, 14°.06N±0°.01×120°.54E±0°.01, h130^{km}±1^{km}, MW5.2/138, Moment Tensor Solution. s76,c96; s138,c217; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.89±.12; $M_{\theta\theta}$-3.86±.13; $M_{\phi\phi}$-0.03±.16; $M_{r\theta}$1.89±.10; $M_{\theta\phi}$2.24±.12; $M_{\phi r}$-4.60±.10; Best double couple: $M_0$6.67500×10^{16} NP1:ϕ_s270.00000°, δ31.00000°, λ40.00000°. NP2:ϕ_s144.00000°, δ71.00000°, λ114.00000°. Principal axes: T 6.9410, Plg57.0000°, Azm86.0000°; N -0.5360, Plg23.0000°, Azm316.0000°; P -6.4090, Plg22.0000°, Azm216.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **10** 16:09:24.1±1.6, 14°.00N±0°.04×120°.62E±0°.08, h135^{km}±4^{km}, mb5.1/187 Error ellipse: s-maj=11.1km s-min=5.7km az=80.0*

*KLM **10** 16:09:25, 14°.13N×120°.66E, h129^{km}, mb5.1*

*DJA **10** 16:09:26.1±0.3, 14°N±2°×12°1E±°, h134^{km}±4^{km}, M4.8/82, mb5.2/82, mB5.3/46, MLv5.3/1, Mw(mB)4.8/46, MwMwp4.7/2, Mwp5.0/2*

ISC 10 16:09:24.2±0.3**, 13°.95N**±0°.03×**120°.58E**±0°.03**, h134^{km}**±2^{km}**, h134^{km}:pP-P, n789, σ1^{s}.34**/851**, mb5.1**/281**, 64C-25D, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	0.38	67	P	Pn	16 09 42.1	-1.0
	3µm,0.3s,baz=295,slow=1.6,SNR=107						
TGY				S	Sn	16 09 56.7	-0.8
	13µm,0.3s,baz=280,slow=20,SNR=17						
TGY	**Tagaytay City**	0.38	67	⇑eP	Pn	16 09 42.0	-1.2
TGY				i S	Sn	16 09 56.4	-1.2
PGP	**Puerto Galera**	0.58	141	⇑eP	Pn	16 09 42.3	-1.9
PGP				eS	Sn	16 09 56.6	-2.8
LQP	**Lukban**	0.95	80	⇓iP	Pn	16 09 46.7	-0.5
LQP				i S	Sn	16 10 04.6	0.0
BOAC	**Boac**	1.33	112	eP	Pn	16 09 50.5	-0.2
BOAC				eS	Sn	16 10 10.8	0.0
SJMP	**San Jose**	1.57	160	eP	Pn	16 09 52.5	-1.0
SJMP				eS	Sn	16 10 14.8	-0.9
GQP	**Guinayangan**	1.82	91	⇓iP	Pn	16 09 56.8	+0.6
BUSP	**Coron**	1.97	191	eP	Pn	16 09 56.3	-1.8
BUSP				eS	Sn	16 10 21.8	-2.3
JCNP	**Jose Panganiba**	2.08	81	eP	Pn	16 09 58.7	-0.7
JCNP				eS	Sn	16 10 27.8	+1.4
BCP	**Baguio City**	2.45	1	⇑iP	Pn	16 10 02.8	-1.3
BCP				i S	Sn	16 10 24.2	-11
ENPP	**El Nido**	2.95	202	eP	Pn	16 10 09.1	-1.2
ENPP				eS	Sn	16 10 42.5	-3.5
CUYO	**Cuyo Island**	3.11	172	eP	Pn	16 10 11.7	-0.8
CAUP	**Cauayan**	3.21	22	eP	Pn	16 10 12.5	-1.1
JAP	**San Jose, Anti**	3.46	157	eP	Pn	16 10 18.3	+1.4
JAP				eS	Sn	16 10 50.2	-7.5
SZP	**Santa**	3.58	358	Pn	Pn	16 10 17.1	-1.5
GUIM	**Jordan**	3.85	149	eP	Pn	16 10 21.8	-0.2
CVP	**Callao Caves**	3.92	18	⇓eP	Pn	16 10 21.8	-1.2
CVP				i S	Sn	16 11 21.5	+13
SIPP	**Brgy, Tapao**	3.95	358	⇓eP	Pn	16 10 23.9	+0.5
SIPP				i S	Sn	16 11 33.7	+24
CNOP	**Candoni, Negro**	4.57	154	eP	Pn	16 10 32.1	+0.4
CNOP				eS	Sn	16 11 25.3	+1.2
LLP	**Lapu-Lapu**	4.90	137	eP	Pn	16 10 39.6	+3.5
LLP				eS	Sn	16 11 35.1	+3.0
MSLP	**Maasin**	5.65	132	eP	Pn	16 10 48.5	+2.4
PAGZ	**Pagadian**	6.66	155	eP	Pn	16 11 01.2	+1.5
PAGZ				eS	Sn	16 12 19.2	+4.8
CGP	**Cagayan de Oro**	6.79	143	⇓eP	Pn	16 11 05.9	+4.4
GLSP	**General Luna,**	6.83	127	eP	Pn	16 11 03.2	+1.2
BUTP	**Butuan**	7.00	135	eP	Pn	16 11 05.1	+0.9
BUKP	**Musuan**	7.47	143	eP	Pn	16 11 14.1	+3.5
KCP	**Kidapawan**	8.20	147	⇓eP	Pn	16 11 24.3	+3.8
SKMP	**Bagumbayan, Su**	8.35	152	eP	Pn	16 11 24.2	+1.7
DAV	**Davao City (W)**	8.42	144	P	Pn	16 11 23.8	+0.4
	49nm,0.3s,baz=42,slow=3.7,SNR=6.9						
TWG	**Pinlang**	8.83	3		Pn	16 11 26.6	-2.2
KKM	**Kota Kinabalu**	8.95	209	Pn	Pn	16 11 31.1	+0.5
MYLDM	**Lahad Datu**	8.95	193	Pn	Pn	16 11 33.0	+2.4
TPUB	**Ta-pu**	9.30	0	Pn	Pn	16 11 35.4	+0.3
YULB	**Yu-li**	9.41	4		Pn	16 11 37.1	+0.4
SSLB	**Suanglung**	9.79	2	Pn	Pn	16 11 42.1	+0.4
SPMM	**Sapulut**	10.04	204	P	Pn	16 11 51.0	+5.9
NACB	**Ninganchiao**	10.21	5	Pn	Pn	16 11 47.7	+0.4
KNMB	**Chin-men Tao**	10.66	349		Pn	16 11 52.5	-0.7
YHNB	**Yeheng**	10.69	4	Pn	Pn	16 11 54.4	+0.6
YOJ	**Yonaguni jima**	10.70	12	P	Pn	16 11 54.1	+0.2
YOJ	**Yonaguni jima**	10.70	12	Pn	Pn	16 11 54.1	+0.2
QZH	**Quanzhou**	11.09	351	⇑iP	Pn	16 11 58.6	-0.4
QZH				eS	Sn	16 13 59.5	-1.9
QIZ	**Qiongzhong**	11.46	298	P	Pn	16 12 04.5	+0.5
QIZ				S	Sn	16 14 11.7	+1.2
QIZ				pmax	pmax		
	comp=Z,76nm,1.0s						
QIZ	**Qiongzhong**	11.46	298	Pn	Pn	16 12 04.8	+0.8
DLV	**T Lat**	11.95	262	Pn	Pn	16 12 12.3	+1.7
TOLI2	**Tolitoli**	12.76	179		Pn	16 12 22.5	+1.5
MNI	**Manado**	13.12	161	P	P	16 12 29.2	-1.6
MNI				pmax	pmax		
	comp=Z,238nm,0.8s						
GTOI	**Gorontalo**	13.45	169	P	Pn	16 12 30.3	+0.5
	comp=Z,508nmcomp=Z,40nm,1.3s						
MRSI	**Marisa**	13.46	174	P	P	16 12 32.7	-1.8
	comp=Z,1µmcomp=Z,87nm,1.3s						
KMSI	**Cibinong**	13.71	165	P	P	16 12 36.0	-1.3
	comp=Z,71nm,0.6s						
SBUM	**Sibu**	14.10	217	Pn	P	16 12 40.3	-1.3
SBUM				P	Pn	16 12 44.4	+6.2
UBPT	**Khong Chiam**	14.68	277	P	P	16 12 48.0	-0.1
	comp=Z,825nmcomp=Z,62nm,0.9s						
UBPT	**Khong Chiam**	14.68	277		Pn	16 12 46.8	+1.3
JOW	**Kunigami**	14.70	28	P	Pn	16 12 46.4	+0.8
	comp=Z,1.0nm,0.3s,baz=200,slow=10,SNR=8.4						
JOW				LR	LR	16 17 32.8	
	comp=Z,452nm,18.7s,baz=184,slow=33						
TNTI	**Ternate**	14.72	152	P	Pn	16 12 47.0	+1.0
	comp=Z,48nm,1.2s						
APSI	**Ampana**	14.81	176	P	P	16 12 51.5	+2.0
	comp=Z,628nmcomp=Z,63nm,0.9s						
LUWI	**Luwuk**	15.06	172		P	16 12 53.6	+1.3
LUWI				IAmb	IAmb	16 13 00.3	
	comp=Z,131nm,0.9s						
LUWI	**Luwuk**	15.06	172	P	P	16 12 54.1	+1.8
	comp=Z,2µmcomp=Z,199nm,1.2s						
BKB	**Balikpapan**	15.55	194	P	Pn	16 12 57.1	+0.8
BKB	**Balikpapan**	15.55	194	P	P	16 12 58.8	+1.1
	comp=Z,3µmcomp=Z,169nm,0.9s						
MTKI	**Muara Teweh, K**	15.83	201	P	P	16 13 02.8	+1.9
	comp=Z,85nm,1.5s						
KSM	**Kuching**	16.03	220		P	16 13 04.4	+1.4
STKI	**Sintang**	16.48	214	P	P	16 13 11.4	+3.4
	comp=Z,59nm,0.8s						
SANI	**Sanana**	16.78	161	P	P	16 13 09.7	-1.6
	comp=Z,38nm,1.2s						
TTSI	**Tana Toraja**	16.90	183	P	Pn	16 13 15.9	+3.0
	comp=Z,634nmcomp=Z,69nm,1.4s						
SSE	**Sheshan**	17.07	2	P	Pn	16 13 15.2	+0.4
SSE				S	Sn	16 16 22.9	-2.5
SSE				pmax	pmax		
	comp=Z,12nm,1.4s						
SSE				pmax	pmax		
	comp=Z,92nm,8.0s						
SSE				LR	LR		
	comp=Z,130nm,21.3s						
SSE				LR	LR		
	comp=Z,140nm,21.0s						
SSE	**Sheshan**	17.07	2		P	16 13 14.0	-0.4
NONG	**Nongkai**	17.25	286	P	Pn	16 13 20.0	+2.9
	comp=Z,37nm,1.1s						
KBKI	**Kotabaru**	17.69	195	P	Pn	16 13 24.3	+1.9
	comp=Z,674nmcomp=Z,48nm,0.6s						
SPSI	**Sidrap Palu**	17.82	183	P	Pn	16 13 26.3	+2.4
	comp=Z,544nmcomp=Z,83nm,1.0s						
SRAK	**Srakaew**	17.99	272	P	P	16 13 21.0	-3.6
	comp=Z,8µmcomp=Z,811nm,1.4s						
GYA	**Guiyang**	18.01	316	⇓P	Pn	16 13 27.9	+1.6
GYA				pP	P	16 13 33.2	+8.2
GYA				PP	pwP	16 13 54.1	+2.6
GYA				S	S	16 16 45.4	+0.5
GYA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
GYA				pmax	pmax		
	comp=Z,100nm,4.3s						
GYA				LR	LR		
	comp=Z,440nm,12.9s						
GYA				LR	LR		
	comp=Z,290nm,14.6s						
GYA				LR	LR		
	comp=Z,380nm,12.4s						
CHAI	**Chaiyaphum**	18.07	278	P	Pn	16 13 27.0	+0.1
	comp=Z,1µmcomp=Z,137nm,0.8s						
NJ2	**Nanjing**	18.09	355	⇑iP	Pn	16 13 27.2	+0.3
NJ2				S	Sn	16 16 48.1	-1.5
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,210nm,3.5s						
NJ2				LR	LR		
	comp=Z,410nm,11.8s						
NJ2				LR	LR		
	comp=Z,350nm,10.8s						
NJ2				LR	LR		
	comp=Z,400nm,11.4s						
SWI	**Sorong**	18.13	143	P	Pn	16 13 28.8	+1.2
	comp=Z,1µmcomp=Z,35nm,1.1s						
BBKI	**Banjar Baru**	18.21	199	P	Pn	16 13 29.7	+1.1
	comp=Z,2µmcomp=Z,196nm,1.0s						
BNSI	**Bone**	18.24	181	P	Pn	16 13 31.5	+2.6
	comp=Z,969nmcomp=Z,114nm,0.8s						
PBKI	**Pangkalan Bun**	18.76	209	P	Pn	16 13 35.6	+0.6
	comp=Z,4µmcomp=Z,259nm,1.0s						
KAPI	**Kappang**	18.86	183	P	Pn	16 13 37.1	+0.9
	comp=Z,5.3nm,0.3s,baz=4.0,slow=5.9,SNR=24						
KAPI				LR	LR	16 21 22.7	
	comp=Z,237nm,18.5s,baz=350,slow=38						
KAPI	**Kappang**	18.86	183	P	Pn	16 13 37.1	+0.9
KAPI				pmax	pmax		
	comp=Z,72nm,0.7s						
KAPI	**Kappang**	18.86	183	Pn	Pn	16 13 37.1	+0.9
KAPI				IAmb	IAmb	16 13 39.1	
	comp=Z,72nm,0.7s						
MSAI	**Masohi**	19.08	154	P	Pn	16 13 39.3	+0.5
	comp=Z,708nmcomp=Z,28nm,0.7s						
BKSI	**Bulukumba**	19.16	181	P	Pn	16 13 40.3	+0.7
	comp=Z,791nmcomp=Z,84nm,0.8s						
ENH	**Enshi**	19.19	330	P	P	16 13 38.1	+0.4
PATY	**Pattaya**	19.20	269	P	Pn	16 13 40.9	+0.7
	comp=Z,138nm,1.1s						
UTTA	**Uttaradit**	19.62	284	P	Pn	16 13 44.6	-0.5
	comp=Z,250nmcomp=Z,17nm,1.1s						
JSU	**Suzuyama**	19.68	26	P	P	16 13 42.2	-0.8
JSU				IAmb	IAmb	16 13 47.9	
	comp=Z,74nm,1.0s						
PHIT	**Phitsanulok**	19.68	282	P	Pn	16 13 46.0	+0.2
	comp=Z,153nm,1.0s						
BSSI	**Bau Bau, Buton**	19.96	180	P	Pn	16 13 48.5	-0.6
	comp=Z,82nm,0.8s						
KMI	**Kunming**	20.12	306	⇑P	Pn	16 13 53.2	+2.0
KMI				S	S	16 17 29.6	+2.6
KMI				SS	Sn	16 18 02.5	+24
KMI				pmax	pmax		
	comp=Z,9.0nm,0.7s						
KMI				pmax	pmax		
	comp=Z,93nm,5.2s						
KMI				LR	LR		
	comp=Z,240nm,9.4s						
KMI				LR	LR		
	comp=Z,280nm,11.7s						
KMI				LR	LR		
	comp=Z,320nm,15.5s						
FAKI	**Fak Fak**	20.37	145	P	P	16 13 49.7	-0.8
PHET	**Kaeng Krachan**	20.40	270	P	Pn	16 13 53.8	-0.4
	comp=Z,69nm,1.0s						
SUKH	**Sukhothai**	20.46	283	P	Pn	16 13 54.1	-0.9
	comp=Z,139nm,1.0s						
UTHA	**Uthaitani**	20.50	277	P	Pn	16 13 54.5	-0.9
	comp=Z,499nmcomp=Z,34nm,0.7s						
LAMP	**Lampang**	20.61	286	P	Pn	16 13 55.4	-1.3
	comp=Z,395nmcomp=Z,48nm,0.8s						
SRDT	**SRDT**	20.81	274	P	Pn	16 14 02.0	+2.9
TPI	**Tanjungpandan**	20.97	219	P	Pn	16 14 01.3	+0.3
	comp=Z,1µmcomp=Z,138nm,1.0s						
CM35	**Chiang Mai Arr**	21.08	286	P	P	16 13 59.0	+0.9
UMPA	**Umpang Tak**	21.09	279	P	P	16 14 01.4	+3.2
	comp=Z,624nmcomp=Z,38nm,0.9s						
CM36	**Chiang Mai Arr**	21.11	285	P	P	16 14 00.0	+1.6
CM34	**Chiang Mai Arr**	21.12	286	P	P	16 14 00.0	+1.5
CM09	**Chiang Mai Arr**	21.20	285	P	P	16 14 01.6	+2.3
	comp=Z,374nmcomp=Z,42nm,1.0s						
CM04	**Chiang Mai Arr**	21.20	285	P	P	16 14 01.0	+1.6
	comp=Z,326nmcomp=Z,35nm,1.0s						
CM01	**Chiang Mai Arr**	21.23	285	P	P	16 14 02.0	+2.3
	comp=Z,344nmcomp=Z,34nm,1.1s						
CM05	**Chiang Mai Arr**	21.23	285	P	P	16 14 02.0	+2.2
	comp=Z,272nmcomp=Z,27nm,1.3s						
CM02	**Chiang Mai Arr**	21.24	285	P	P	16 14 02.0	+2.2
	comp=Z,344nmcomp=Z,35nm,0.9s						
CM31	**Chiang Mai Arr**	21.25	285	P	P	16 14 02.0	+2.1
	comp=Z,9µmcomp=Z,891nm,1.4s						
CM31	**Chiang Mai Arr**	21.25	285	P	P	16 14 01.1	+1.2
CM31				IAmb	IAmb	16 14 04.3	
	comp=Z,74nm,1.2s						
CMAR	**Chiang Mai Arr**	21.25	285	P	P	16 14 01.7	+1.8
	comp=Z,15nm,0.9s,baz=98,slow=7.2,SNR=105						
CMAR				PcP	PcP	16 18 01.1	+1.3
	comp=Z,1.8nm,0.8s,baz=80,slow=1.0,SNR=6.2						
CMAR				ScP	ScP	16 21 24.8	+0.4
	comp=Z,1.5nm,1.0s,baz=48,slow=1.5,SNR=6.9						
CMAR	**Chiang Mai Arr**	21.25	285	⇑eP	P	16 14 01.7	+1.8
CMAR				pmax	pmax		
	comp=Z,17nm,0.8s						
CMAR	**Chiang Mai Arr**	21.25	285	P	P	16 14 00.2	+0.3
CM15	**Chiang Mai Arr**	21.26	285	P	P	16 14 02.2	+2.1
	comp=Z,330nmcomp=Z,40nm,1.0s						
JNU	**Nakatsue**	21.27	24	P	P	16 14 00.5	+0.6
	comp=Z,20nm,0.9s,baz=61,slow=4.4,SNR=5.8						
JNU	**Nakatsue**	21.27	24	P	P	16 13 59.4	-0.6
CM13	**Chiang Mai Arr**	21.27	285	P	P	16 14 02.4	+2.2
	comp=Z,307nmcomp=Z,34nm,1.2s						
CMMT	**Chiang Mai**	21.30	286	P	P	16 14 00.8	+0.4
	comp=Z,12nm,1.0s						
CM33	**Chiang Mai Arr**	21.30	286	P	P	16 14 01.0	+0.5
CHTO	**Chiang Mai**	21.30	286	P	P	16 14 01.1	+0.6
CHTO				pmax	pmax		
	comp=Z,20nm,1.0s						
CHTO	**Chiang Mai**	21.30	286	P	P	16 14 01.1	+0.6
TRTT	**Trang**	21.38	256	P	P	16 14 02.2	+0.9
	comp=Z,1µmcomp=Z,62nm,1.0s						
KULM	**Kulim**	21.43	248	P	P	16 14 02.9	+1.0
KULM	**Kulim**	21.43	248	P	P	16 14 02.0	+0.1
IPM	**Ipoh**	21.45	246	P	P	16 14 02.3	+0.2
IPM	**Ipoh**	21.45	246	P	P	16 14 03.0	+0.9
PPBI	**Pangkal Pinang**	21.48	223	P	P	16 14 04.1	+1.7
	comp=Z,22µmcomp=Z,65nm,1.5s						
BAKI	**Biak**	21.52	133	P	P	16 14 12.5	+10
KMMI	**Kalianget**	21.87	198	P	P	16 14 10.0	+3.5
	comp=Z,2µmcomp=Z,223nm,0.9s						
SURT	**Suratani**	21.91	259	P	P	16 14 11.0	+4.0
	comp=Z,1.9nm,1.1s						
JTU	**Tsushima**	21.98	20	P	P	16 14 07.1	-0.4
JTU				IAmb	IAmb	16 14 09.6	
	comp=Z,145nm,1.0s						
SRPI	**Serui, Papua**	22.10	134	P	P	16 14 10.1	+1.3
	comp=Z,137nm,0.8s						
MHMT	**Maesarieng**	22.16	284	P	P	16 14 10.4	+1.0
	comp=Z,1µmcomp=Z,84nm,1.0s						
TIA	**Tai'an**	22.38	353	P	P	16 14 12.1	+0.6
TIA				pmax	pmax		
	comp=Z,65nm,0.9s						
MMRI	**Maumere**	22.50	176	P	P	16 14 13.1	+0.3

MMRI				IAmb	IAmb	16 14 20.9	
	comp=Z,102nm,0.8s						
MMRI	**Maumere**	22.50	176	P	P	16 14 14.6	+1.8
	comp=Z,1µmcomp=Z,153nm,0.8s						
SRBI	**Singaraja**	22.53	194	P	P	16 14 15.3	+2.2
	comp=Z,2µmcomp=Z,198nm,1.2s						
EDFI	**Ende, Flores**	22.58	177	P	P	16 14 15.1	+1.4
	comp=Z,2µmcomp=Z,281nm,0.7s						
XAN	**Xi'an**	22.62	334	P	P	16 14 13.2	-0.7
XAN				pP	pP	16 14 41.2	+2.3
XAN				PP	PnPn	16 14 47.2	+1.1
XAN				S	S	16 18 09.6	-2.1
XAN				pmax	pmax		
	comp=Z,37nm,1.5s						
XAN				pmax	pmax		
	comp=Z,260nm,5.9s						
PKDT	**Phuket**	22.64	257	P	P	16 14 14.8	+0.6
PLAI	**Plampang**	22.80	187	P	P	16 14 18.3	+2.6
	comp=Z,3µmcomp=Z,296nm,0.8s						
JMBI	**JAMBI**	22.84	229	P	P	16 14 20.0	+3.9
	comp=Z,7µmcomp=Z,649nm,1.1s						
TWSI	**Taliwang, Sumb**	22.84	189	P	P	16 14 19.2	+3.1
	comp=Z,2µmcomp=Z,40nm,0.9s						
PMBI	**Palembang**	22.95	224	P	P	16 14 19.1	+1.9
PMBI	**Palembang**	22.95	224	P	P	16 14 20.3	+3.1
	comp=Z,5µmcomp=Z,449nm,1.1s						
JMN	**Monobe**	23.10	29	P	P	16 14 18.2	-0.2
DNP	**Denpasar**	23.11	194	P	P	16 14 22.0	+3.5
DNP				pmax	pmax		
	comp=Z,321nm,0.9s						
TJN	**Taejon**	23.14	14	*ce*P	P	16 14 18.7	0.0
JAGI	**Jajag, Banyuwa**	23.17	196	P	P	16 14 20.5	+1.3
JAGI				IAmb	IAmb	16 14 25.6	
	comp=Z,91nm,0.9s						
JAGI	**Jajag, Banyuwa**	23.17	196	P	P	16 14 22.5	+3.3
	comp=Z,2µmcomp=Z,119nm,0.9s						
GUMO	**Guam**	23.60	88	P	P	16 14 23.0	-0.1
	comp=Z,282nm,1.1s,baz=38,slow=22,SNR=4.1						
GUMO	**Guam**	23.60	88	P	P	16 14 22.5	-0.6
GUMO				pmax	pmax		
	comp=Z,698nm,1.4s						
GUMO	**Guam**	23.60	88	P	P	16 14 22.5	-0.6
GUMO	**Guam**	23.60	88	P	P	16 14 24.4	+1.3
BKNI	**Bangkinang**	23.61	237	P	P	16 14 23.9	+0.7
BKNI	**Bangkinang**	23.61	237	P	P	16 14 24.8	+1.6
	comp=Z,2µmcomp=Z,224nm,1.1s						
JHS	**Saijyo**	23.82	26	P	P	16 14 24.3	-0.6
JHS				IAmb	IAmb	16 14 29.3	
	comp=Z,88nm,1.2s						
SOEI	**Soe**	23.84	171	P	P	16 14 24.7	-0.7
SOEI				IAmb	IAmb	16 14 36.5	
	comp=Z,76nm,0.8s						
SOEI	**Soe**	23.84	171	P	P	16 14 31.5	+6.1
	comp=Z,1µmcomp=Z,115nm,0.8s						
UGM	**Wanagama**	23.91	205	P	P	16 14 27.0	+1.2
UGM	**Wanagama**	23.91	205	P	P	16 14 29.1	+3.2
	comp=Z,172nm,1.3s						
SMPI	**Sarmi**	23.96	130	P	P	16 14 29.2	+2.8
	comp=Z,123nm,1.2s						
SDSI	**Sungai Dareh**	24.05	234	P	P	16 14 28.8	+1.6
	comp=Z,148nm,1.1s						
TSI	**Tuntungan**	24.08	246	P	P	16 14 30.3	+2.8
	comp=Z,322nm,1.1s						
PSI	**Prapat**	24.09	245	P	P	16 14 29.1	+1.4
	comp=Z,77nm,0.9s,baz=0.8,slow=3.4,SNR=54						
PSI	**Prapat**	24.09	245	P	P	16 14 27.9	+0.2
PSI				pmax	pmax		
	comp=Z,71nm,0.8s						
RPSI	**Rantau Prapat**	24.14	244	P	P	16 14 27.9	0.0
RPSI				IAmb	IAmb	16 14 30.1	
	comp=Z,71nm,0.8s						
BATI	**Baumata**	24.20	173	P	P	16 14 28.5	+0.1
	comp=Z,235nm,0.6s,baz=314,slow=0.7,SNR=48						
BATI	**Baumata**	24.20	173	P	P	16 14 28.6	+0.1
	comp=Z,1µmcomp=Z,217nm,0.8s						
KSAR	**Wonju Array Be**	24.28	14	P	P	16 14 28.2	-0.9
KSAR	**Wonju Array Be**	24.28	14	P	P	16 14 28.2	-0.9
KLSI		24.30	221	P	P	16 14 31.7	+2.3
	comp=Z,1µmcomp=Z,118nm,1.1s						
KSRS	**Korea Array**	24.30	14	P	P	16 14 28.8	-0.5
	comp=Z,12nm,0.9s,baz=191,slow=10,SNR=15						
KSRS				LR	LR	16 24 32.0	
	comp=Z,129nm,19.8s,baz=200,slow=38						
LEM	**Lembang**	24.32	213	P	P	16 14 31.4	+1.6
	comp=Z,59nm,0.9s,baz=100,slow=10.0,SNR=11						
LHSI	**Lahat**	24.46	225	P	P	16 14 34.0	+3.1
	comp=Z,4µmcomp=Z,435nm,0.9s						
BLSI	**Bandar Lampung**	24.49	219	P	P	16 14 34.3	+3.1
	comp=Z,184nm,1.1s						
MDSI	**Maura Dua**	24.50	223	P	P	16 14 33.0	+1.7
	comp=Z,707nmcomp=Z,98nm,1.0s						
MNSI	**Mandailing Nat**	24.55	240	P	P	16 14 33.1	+1.4
	comp=Z,126nm,0.9s						
DBJI	**Dramaga**	24.56	215	P	P	16 14 35.0	+3.1
	comp=Z,69nm,0.8s						
PDSI	**Padang**	24.80	235	P	P	16 14 34.9	+0.8
	comp=Z,618nmcomp=Z,45nm,0.8s						
CISI	**Cisompet, Garu**	24.84	211	P	P	16 14 34.4	0.0
CISI	**Cisompet, Garu**	24.84	211	P	P	16 14 36.1	+1.7
	comp=Z,2µmcomp=Z,224nm,1.0s						
DL2	**Dalian**	24.87	2	P	P	16 14 34.5	+0.1
DL2				sP	sP	16 15 20.9	+2.6
DL2				S	S	16 18 46.2	-1.4
DL2				pmax	pmax		
	comp=Z,64nm,0.8s						
LWLI	**Liwa**	24.98	222	P	P	16 14 37.8	+2.1
	comp=Z,309nm,0.9s						
KSI	**Kapahiang**	24.98	227	P	P	16 14 37.9	+2.2
KSI				pmax	pmax		
	comp=Z,164nm,1.0s						
KSI	**Kapahiang**	24.98	227	P	P	16 14 38.0	+2.2
	comp=Z,164nm,1.0s						
KASI	**Kota Agung**	25.08	221	P	P	16 14 37.8	+1.3
	comp=Z,2µmcomp=Z,136nm,1.2s						
JWT	**Wachi**	25.09	30	P	P	16 14 35.6	-0.8
JWT				IAmb	IAmb	16 14 40.5	
	comp=Z,67nm,0.9s						
MNAI	**Manna**	25.23	225	P	P	16 14 39.0	+1.1
GENI	**Genyem**	25.45	129	P	P	16 14 42.3	+2.4
	comp=Z,167nm,1.7s						
JAY	**Jayapura**	25.81	128	P	P	16 14 44.1	+1.0
	comp=Z,29nm,0.9s,baz=232,slow=4.9,SNR=4.0						
JHJ	**Hachijo jima 2**	25.88	39	LR	LR	16 24 32.2	
	comp=Z,268nm,20.5s,baz=66,slow=35						
INU	**Inuyama**	25.95	32	P	P	16 14 42.7	-1.4
GSI	**Gunungsitoli**	25.99	243	P	P	16 14 44.4	-0.4
GSI	**Gunungsitoli**	25.99	243	P	P	16 14 45.2	+0.4
	comp=Z,123nm,0.9s						
BJT	**Baijiatuau**	26.25	352	P	P	16 14 45.7	-1.1
BJT				pmax	pmax		
	comp=Z,93nm,1.4s						
BJT	**Baijiatuau**	26.25	352	P	P	16 14 45.7	-1.1
BJT				IAmb	IAmb	16 14 48.6	
	comp=Z,93nm,1.4s						
BJI	**Beijing**	26.27	352	P	P	16 14 47.6	+0.6
BJI				pP	pP	16 15 17.1	+1.7
BJI				sP	sP	16 15 33.8	+2.8
BJI				S	S	16 19 09.8	+0.1
BJI				pmax	pmax		
	comp=Z,46nm,1.2s						
BJI				pmax	pmax		
	comp=Z,150nm,3.5s						
JGF	**Kuroka**	26.32	32	P	P	16 14 46.7	-0.9
JGF				IAmb	IAmb	16 14 51.1	
	comp=Z,43nm,1.2s						
LZH	**Lanzhou**	26.67	329	⇑P	P	16 14 51.9	+1.0
LZH				pP	pP	16 15 23.4	+4.3
LZH				sP	sP	16 15 39.9	+5.3
LZH				S	S	16 19 17.2	+0.8
LZH				sS	sS	16 20 08.2	+1.7
LZH				SS	SnSn	16 20 40.7	+4.9
LZH				pmax	pmax		
	comp=Z,39nm,1.3s						
LZH				pmax	pmax		
	comp=Z,170nm,4.6s						
LZH				LR	LR		
	comp=Z,1µm,14.1s						
LZH				LR	LR		
	comp=Z,800nm,14.1s						
LZH				LR	LR		
	comp=Z,860nm,15.2s						
MAJO	**Matsushiro**	27.48	32	P	P	16 14 55.9	-2.0
MAJO				pmax	pmax		
	comp=Z,36nm,1.5s						
MAJO	**Matsushiro**	27.48	32	P	P	16 14 55.9	-2.0
MAT	**Matsushiro**	27.48	32	P	P	16 14 55.3	-2.6
MAT				*e*S	S	16 19 26.0	-2.9
MJAR	**Matsushiro Arr**	27.48	32	P	P	16 14 55.9	-2.0
	comp=Z,4.1nm,0.9s,baz=215,slow=8.8,SNR=6.8						
MJAR				PcP	PcP	16 18 12.9	-0.2
	comp=Z,4.6nm,1.0s,baz=156,slow=3.1,SNR=5.9						
MJAR				LR	LR	16 24 50.1	
	comp=Z,88nm,21.0s,baz=220,slow=34						
MJAR	**Matsushiro Arr**	27.48	32	P	P	16 14 55.1	-2.9
SNY	**Shenyang**	27.90	5	⇑P	P	16 14 59.2	-2.3
SNY				LR	LR		
	comp=Z,140nm,17.5s						
SNY				LR	LR		
	comp=Z,280nm,14.7s						
SNY				LR	LR		
	comp=Z,230nm,13.5s						
HHC	**Hu-ho-hao-te**	27.93	345	⇑*i*P	P	16 15 02.7	+0.7
HHC				pP	pP	16 15 32.0	+1.4
HHC				S	S	16 19 34.5	-1.5
HHC				pmax	pmax		
	comp=Z,45nm,1.1s						
HHC				pmax	pmax		
	comp=Z,110nm,5.3s						
BTO	**Baotou**	28.11	343	*e*P	P	16 15 05.1	+1.5
XMI	**Christmas Isla**	28.39	212	P	P	16 15 07.7	+1.5
JMM	**Marumori**	29.83	33	P	P	16 15 17.5	-1.2
JMM				IAmb	IAmb	16 15 22.2	
	comp=Z,69nm,1.4s						
CN2	**Changchun**	30.04	7	*e*P	P	16 15 18.7	-1.8
CN2				*e*pP	pP	16 15 48.6	-0.6
GTA	**Gaotai**	31.26	328	⇑P	P	16 15 32.4	+0.9
GTA				pP	pP	16 16 03.3	+3.1
GTA				sP	sP	16 16 18.4	+2.9
GTA				PcP	PcP	16 18 23.7	+0.9
GTA				S	S	16 20 29.3	+0.9
GTA				ScP	ScP	16 21 54.4	+0.9
GTA				pmax	pmax		
	comp=Z,35nm,1.4s						
GTA				pmax	pmax		
	comp=Z,130nm,5.0s						
GTA				LR	LR		
	comp=Z,490nm,17.8s						
GTA				LR	LR		
	comp=Z,470nm,16.4s						
GTA				LR	LR		
	comp=Z,390nm,13.8s						
LSA	**Lhasa**	31.37	305	P	P	16 15 35.9	+3.0
LSA				pmax	pmax		
	comp=Z,19nm,1.3s						
MDJ	**Mudanjiang**	31.51	12	P	P	16 15 33.6	+0.2
MDJ				pP	pP	16 16 02.6	+0.3
MDJ				pmax	pmax		
	comp=Z,26nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,360nm,3.9s						
MDJ	**Mudanjiang**	31.51	12	P	P	16 15 32.5	-0.9
USA0B	**Ussuriysk Arra**	31.68	16	*de*P	P	16 15 35.3	+0.4
USA0B	**Ussuriysk Arra**	31.68	16	P	P	16 15 34.2	-0.7
USRK	**Ussuriysk Ar.**	31.68	16	P	P	16 15 34.9	-0.1
	comp=Z,10.0nm,0.6s,baz=204,slow=7.6,SNR=31						
USRK	**Ussuriysk Ar.**	31.68	16	P	P	16 15 34.3	-0.7
PMG	**Port Moresby**	35.13	130	P	P	16 16 05.9	+0.7
	comp=Z,32nm,0.8s,baz=346,slow=6.5,SNR=9.5						
PMG	**Port Moresby**	35.13	130	⇑*e*P	P	16 16 06.0	+0.8
PMG				pmax	pmax		
	comp=Z,76nm,1.7s						
PMG	**Port Moresby**	35.13	130	P	P	16 16 05.0	-0.2
PMG				IAmb	IAmb	16 16 08.2	
	comp=Z,35nm,0.8s						
HIA	**Hailar**	35.22	359	P	P	16 16 04.4	-1.2
HIA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
HIA	**Hailar**	35.22	359	P	P	16 16 04.4	-1.2
PSA00	**Pilbara Seismi**	35.31	181	P	P	16 16 06.2	-0.4
PSA00	**Pilbara Seismi**	35.31	181	P	P	16 16 06.5	-0.1
PSA00				IAmb	IAmb	16 16 07.6	
	comp=Z,77nm,0.8s						
ASAJ	**Asahikawa**	35.47	28	P	P	16 16 07.5	-0.2
	comp=Z,14nm,0.9s,baz=221,slow=11,SNR=20						
JKA	**Kamikawa-asahi**	35.47	28	P	P	16 16 07.5	-0.2
JKA	**Kamikawa-asahi**	35.47	28	IAmb	IAmb	16 16 25.7	
	comp=Z,55nm,1.4s						
COEN	**Coen**	35.63	140	P	P	16 16 07.9	-1.6
ULN	**Ulaanbaatar**	35.63	344	*c i*P	P	16 16 09.7	+0.4
ULN				pmax	pmax		
	comp=Z,96nm,1.7s						
ULN	**Ulaanbaatar**	35.63	344	P	P	16 16 09.1	-0.2
SONM	**Songino Array**	35.78	344	P	P	16 16 10.8	+0.3
	comp=Z,22nm,0.6s,baz=163,slow=9.9,SNR=132						
SONM				PcP	PcP	16 18 35.7	+0.3
	comp=Z,1.9nm,0.8s,baz=131,slow=3.9,SNR=2.5						
SONM				LR	LR	16 33 06.9	
	comp=Z,106nm,20.6s,baz=162,slow=40						
SONM	**Songino Array**	35.78	344	P	P	16 16 10.0	-0.5
SONM				pmax	pmax		
	comp=Z,27nm,0.9s						
SONM	**Songino Array**	35.78	344	P	P	16 16 10.0	-0.5
RABL	**Rabaul**	36.15	118	P	P	16 16 13.9	-0.1
RABL	**Rabaul**	36.15	118	P	P	16 16 16.4	+2.4
WB0	**Warramunga Arr**	36.16	158	P	P	16 16 12.1	-1.8
WB0				IAmb	IAmb	16 16 41.7	
	comp=Z,22nm,0.8s						
WRAB	**Tennant Creek**	36.30	158	*ce*P	P	16 16 14.0	-1.1
WRAB				pmax	pmax		
	comp=Z,34nm,1.0s						
WRAB	**Tennant Creek**	36.30	158	P	P	16 16 13.6	-1.5
WRAB				IAmb	IAmb	16 16 17.9	
	comp=Z,30nm,0.9s						
WRA	**Warramunga Arr**	36.30	158	P	P	16 16 14.2	-0.9
	comp=Z,15nm,0.6s,baz=338,slow=9.6,SNR=31						
WRA				pP	pP	16 16 41.8	-2.9
	comp=Z,27nm,0.9s,baz=336,slow=9.7,SNR=8.5						
WRA				S	S	16 21 39.6	-6.6
	comp=Z,9.5nm,0.9s,baz=338,slow=15,SNR=15						
WRA				ScP	ScP	16 22 09.2	-2.2
	comp=Z,5.3nm,1.0s,baz=348,slow=3.7,SNR=5.5						
WB2	**Warramunga Arr**	36.31	158	P	P	16 16 13.8	-1.4
WB2				IAmb	IAmb	16 16 17.9	
	comp=Z,27nm,0.8s						
KLR	**Kul'dur**	36.36	12	P	P	16 16 14.6	-0.6
	comp=Z,29nm,0.9s,baz=219,slow=7.7,SNR=69						
KLR				LR	LR	16 32 24.5	
	comp=Z,97nm,21.4s,baz=196,slow=38						
KLR	**Kul'dur**	36.36	12	*c i*P	P	16 16 14.7	-0.6
KLR				pmax	pmax		
	comp=Z,43nm,0.9s						
WR0	**Warramunga Arr**	36.39	158	P	P	16 16 13.2	-2.7
WR0				IAmb	IAmb	16 16 18.7	
	comp=Z,24nm,1.0s						
GIRL	**Giralia**	36.90	190	P	P	16 16 19.6	-0.4
YSS	**Yuzh-Sakhalins**	37.77	25	⇓*e*P	P	16 16 26.8	-0.4
YSS				pmax	pmax		
	comp=Z,29nm,1.1s						
GRNR	**Gornyy**	38.91	16	⇓*i*P	P	16 16 37.1	+0.4
GRNR				*e*S	S	16 22 29.1	+4.2
GRNR				pmax	pmax		
	comp=N,10.0nm,1.1s						
GRNR				pmax	pmax		
	comp=Z,20nm,1.1s						
GRNR				smax	smax		
	comp=N,1.0nm,0.8s						
GRNR				MLR	MLR		
	comp=E,80nm,16.0s						
ZAK	**Zakamensk**	38.97	342	*e*P	P	16 16 36.5	-0.8
ZAK				pmax	pmax		
	comp=Z,18nm,0.9s						
AS31	**Alice Springs**	39.59	161	P	P	16 16 42.0	-0.8
ASAR	**Alice Springs**	39.59	161	P	P	16 16 42.2	-0.5
	comp=Z,9.6nm,0.5s,baz=338,slow=6.7,SNR=48						
ASAR				pP	pP	16 17 10.8	-1.8
	comp=Z,15nm,0.8s,baz=338,slow=6.4,SNR=8.5						
ASAR				ScP	ScP	16 22 22.9	-1.0
	comp=Z,2.6nm,0.9s,baz=351,slow=3.3,SNR=7.6						
ASAR				S	S	16 22 31.9	-3.9
	comp=Z,12nm,1.0s,baz=341,slow=16,SNR=24						
ASAR	**Alice Springs**	39.59	161	P	P	16 16 41.8	-0.9
TLY	**Talaya**	40.02	344	P	P	16 16 46.1	+0.2
	comp=Z,8.2nm,0.5s,baz=238,slow=6.3,SNR=6.3						
TLY	**Talaya**	40.02	344	*e*P	P	16 16 46.3	+0.3
TLY				pmax	pmax		
	comp=Z,25nm,0.8s						
TLY	**Talaya**	40.02	344	P	P	16 16 44.8	-1.1
HYB	**Hyderabad**	40.55	281	*i* P	P	16 16 52.0	+1.2
HYB				*e*sP	sP	16 17 37.0	+2.4
MOY	**Mondy**	40.79	341	*e*P	P	16 16 53.0	+0.7
MOY				pmax	pmax		
	comp=Z,46nm,2.1s						
WMQ	**Urumqi**	40.93	323	*e*P	P	16 16 54.7	+1.1
WMQ				sP	sP	16 17 44.9	+6.9
WMQ				pmax	pmax		
	comp=Z,14nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,370nm,3.7s						
WMQ				LR	LR		
	comp=Z,690nm,19.9s						
WMQ				LR	LR		
	comp=Z,660nm,10.3s						
WMQ				LR	LR		
	comp=Z,340nm,18.5s						
WMQ	**Urumqi**	40.93	323	P	P	16 16 54.3	+0.7
WMQ				pmax	pmax		
	comp=Z,30nm,1.2s						
WMQ	**Urumqi**	40.93	323	P	P	16 16 54.3	+0.7
CTA	**Charters Tower**	42.22	143	P	P	16 17 05.2	+1.0
	comp=Z,24nm,0.6s,baz=316,slow=9.8,SNR=42						
CTAO	**Charters Tower**	42.22	143	P	P	16 17 04.6	+0.4
CTAO				pmax	pmax		
	comp=Z,30nm,0.7s						
CTAO	**Charters Tower**	42.22	143	P	P	16 17 04.6	+0.4
CTAO				IAmb	IAmb	16 17 05.7	
	comp=Z,30nm,0.7s						
MORW	**Morawa**	42.99	186	P	P	16 17 09.2	-1.1
MORW				IAmb	IAmb	16 17 13.7	
	comp=Z,45nm,1.4s						
BOD	**Bodaibo**	44.06	355	*e*P	P	16 17 18.4	-0.2
BOD				pmax	pmax		
	comp=Z,15nm,1.6s						
ZSN	**Zaisan**	44.68	326	*e*P	P	16 17 23.1	-0.6
	baz=326						
ZSN	**Zaisan**	44.68	326	*e*P	P	16 17 23.1	-0.6
DGZ	**Jazzator, Alta**	44.76	330	*ce*P	P	16 17 25.4	+0.9
DGZ				pmax	pmax		
	comp=Z,15nm,1.0s						
FORT	**Forrest**	45.05	171	P	P	16 17 26.1	-0.6
HNR	**Honiara**	45.45	119	P	P	16 17 31.3	+1.1
	comp=Z,121nm,0.9s,baz=246,slow=5.0,SNR=10						
HNR	**Honiara**	45.45	119	P	P	16 17 30.3	+0.1
HNR				pmax	pmax		
	comp=Z,122nm,0.8s						
HNR	**Honiara**	45.45	119	P	P	16 17 30.3	+0.1
HNR	**Honiara**	45.45	119	P	P	16 17 31.8	+1.6
SHLS	**Shalkode**	45.69	318	*e*P	P	16 17 29.5	-2.4
	comp=Z,24nm,0.7s,baz=318						
SHLS	**Shalkode**	45.69	318	*e*P	P	16 17 29.5	-2.4
SHLS				pmax	pmax		
	comp=Z,24nm,0.7s						
PDGK	**Podgornoye**	45.75	318	*i* P	P	16 17 33.1	+0.8
PDGK				pmax	pmax		
	comp=Z,66nm,0.8s						
MK31	**Makanchi Array**	45.76	324	*c i*P	P	16 17 33.1	+0.9
MK31				pmax	pmax		
	comp=Z,44nm,1.2s						
MK31	**Makanchi Array**	45.76	324	P	P	16 17 32.8	+0.6
MKAR	**Makanchi Array**	45.76	324	P	P	16 17 33.4	+1.1
	comp=Z,4.0nm,0.3s,baz=108,slow=8.3,SNR=129						
MKAR				pP	pP	16 18 01.3	-1.3
	comp=Z,3.4nm,0.8s,baz=118,slow=9.7,SNR=3.0						
MKAR				PcP	PcP	16 19 08.2	+0.5
	comp=Z,8.0nm,0.8s,baz=110,slow=5.3,SNR=6.5						
MKAR	**Makanchi Array**	45.76	324	P	P	16 17 32.5	+0.2
MAKZ	**Makanchi**	45.95	323	P	P	16 17 34.1	+0.4
MAKZ				pmax	pmax		
	comp=Z,40nm,1.4s						
MAKZ	**Makanchi**	45.95	323	P	P	16 17 34.0	+0.4
MAKZ				IAmb	IAmb	16 17 36.1	
	comp=Z,40nm,1.4s						
UZB	**Uzynbulak**	45.97	318	*e*P	P	16 17 34.2	+0.1
	comp=Z,25nm,0.7s,baz=318						
UZB	**Uzynbulak**	45.97	318	*e*P	P	16 17 34.2	+0.1
UZB				pmax	pmax		
	comp=Z,25nm,0.7s						
KPKS	**Kokpek**	46.34	318	*e*P	P	16 17 36.2	-0.7
	comp=Z,24nm,0.8s,baz=318						
KPKS	**Kokpek**	46.34	318	*e*P	P	16 17 36.2	-0.7
KPKS				pmax	pmax		
	comp=Z,25nm,0.8s						
SATY	**Saty**	46.34	317	*e*P	P	16 17 36.5	-0.5
	comp=Z,11nm,0.6s,baz=317						
SATY	**Saty**	46.34	317	*e*P	P	16 17 36.5	-0.5
SATY				pmax	pmax		
	comp=Z,11nm,0.6s						
KSH	**Kashi**	46.64	312	P	P	16 17 42.0	+2.6
KSH				sP	sP	16 18 33.1	+9.1
KSH				PcP	PcP	16 19 13.7	+2.6
KSH				S	S	16 24 18.1	-0.6
KSH				pmax	pmax		
	comp=Z,53nm,1.1s						
KSH				pmax	pmax		
	comp=Z,410nm,4.1s						
KSH				LR	LR		
	comp=Z,500nm,6.2s						
KSH				LR	LR		
	comp=Z,780nm,7.2s						
KSH				LR	LR		
	comp=Z,430nm,8.3s						
NWAO	**Narrogin (SRO)**	46.72	184	P	P	16 17 40.0	+0.2
	comp=Z,18nm,0.8s,baz=3.5,slow=9.0,SNR=7.9						
NWAO				pP	pP	16 18 08.2	-1.9
	comp=Z,14nm,0.7s,baz=5.3,slow=6.7,SNR=3.3						
NWAO	**Narrogin (SRO)**	46.72	184	P	P	16 17 39.8	-0.1
NIL	**Nilore**	47.07	303	P	P	16 17 42.2	-0.5
NIL				pmax	pmax		
	comp=Z,21nm,0.9s						
NIL	**Nilore**	47.07	303	P	P	16 17 42.2	-0.5
TDK	**Taldyqorghan**	47.21	320	*e*P	P	16 17 43.5	-0.1
	comp=Z,71nm,0.8s,baz=320						
TDK	**Taldyqorghan**	47.21	320	*e*P	P	16 17 43.4	-0.1
TDK				pmax	pmax		
	comp=Z,71nm,0.8s						
MDOK	**Medeo**	47.28	317	*e*P	P	16 17 44.0	-0.4
	baz=317						
MDOK	**Medeo**	47.28	317	*e*P	P	16 17 43.9	-0.4
TNSS	**Tian-Shan**	47.30	316	*e*P	P	16 17 45.0	+0.2
	baz=316						
TNSS	**Tian-Shan**	47.30	316	*e*P	P	16 17 45.0	+0.2
AAA	**Alma-Ata**	47.39	317	*e*P	P	16 17 45.5	+0.4
	comp=Z,20nm,1.0s,baz=317						
AAA	**Alma-Ata**	47.39	317	*e*P	P	16 17 45.5	+0.4
AAA				pmax	pmax		
	comp=Z,20nm,1.0s						
ULHL	**Ulahol**	47.46	315	P	P	16 17 47.5	+1.7
	SNR=79						
CHKK	**Chushkaly**	47.61	318	*e*P	P	16 17 46.6	-0.1
	baz=318						
CHKK	**Chushkaly**	47.61	318	*e*P	P	16 17 46.6	-0.1
KUU	**Kurty**	48.05	317	*e*P	P	16 17 49.7	-0.5
	comp=Z,128nm,0.8s,baz=317						
KUU	**Kurty**	48.05	317	*e*P	P	16 17 49.6	-0.5
KUU				pmax	pmax		
	comp=Z,128nm,0.8s						
TKM2	**Tokmak 2**	48.16	316	P	P	16 17 52.2	+1.0
	SNR=33						
TKM2	**Tokmak 2**	48.16	316	*i* P	P	16 17 51.9	+0.7
TKM2				pmax	pmax		
	comp=Z,21nm,0.8s						
YAK	**Yakutsk**	48.45	6	*e*P	P	16 17 52.3	-0.5
YAK				*e**PP	pP	16 18 19.7	-3.8
YAK				*e*		16 19 15.8	
YAK				*e*		16 19 39.7	
YAK				*e*S	S	16 24 40.6	-2.6
YAK				*e**SS	sS	16 25 32.9	-3.3
YAK				*e*SS	SS	16 28 03.2	-11
YAK				pmax	pmax		
	comp=Z,46nm,0.9s						
YAK				pmax	pmax		
	comp=N,18nm,1.1s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,178nm,3.2s						
YAK				pmax	pmax		
	comp=N,44nm,2.7s						
YAK				pmax	pmax		
	comp=E,38nm,2.8s						
YAK				smax	smax		
	comp=N,90nm,3.8s						
YAK	**Yakutsk**	48.45	6	P	P	16 17 51.1	-1.6
YAK				IAmb	IAmb	16 17 53.1	
	comp=Z,40nm,0.8s						
KBK	**Karagaybulak**	48.50	315	P	P	16 17 55.6	+1.8
	SNR=49						
UCH	**Uchtor**	48.64	315	P	P	16 17 57.2	+2.0

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      SNR=44
CHMS  Chumysh            48.76 316    P      P       16 17 56.7 +1.1
      SNR=26
ZAA0  Zalesovo Array     48.78 333    P      P       16 17 54.4 -1.0
ZAA0                                  IAmb   IAmb    16 17 56.6
      comp=Z,22nm,1.0s
ZALV  Zalesovo Beam      48.78 333    P      P       16 17 54.9 -0.5
      comp=Z,4.7nm,0.3s,baz=126,slow=7.5,SNR=45
ZALV                                  pP     pP      16 18 24.5 -1.6
      comp=Z,4.4nm,0.7s,baz=118,slow=6.5,SNR=3.1
ZALV  Zalesovo Beam      48.78 333    P      P       16 17 54.0 -1.4
BBOO  Buckleboo          48.80 163    P      P       16 17 54.9 -1.0
AAK   Ala-Archa          48.80 315    P      P       16 17 57.1 +1.0
      comp=Z,12nm,0.7s,baz=101,slow=6.9,SNR=47
AAK   Ala-Archa          48.80 315    P      P       16 17 58.2 +2.1
      SNR=20
AAK   Ala-Archa          48.80 315⇑eP     P       16 17 57.4 +1.3
AAK                                   pmax   pmax
      comp=Z,94nm,1.5s
AAK   Ala-Archa          48.80 315    P      P       16 17 56.9 +0.8
PEA0B Petropavlovsk-     48.86  29⇓eP     P       16 17 56.4 +0.3
PEA0B Petropavlovsk-     48.86  29    P      P       16 17 55.7 -0.4
PETK  Petropavlovsk-     48.86  29    P      P       16 17 56.5 +0.4
      comp=Z,17nm,0.8s,baz=218,slow=6.6,SNR=14
PETK                                  LR     LR      16 40 26.0
      comp=Z,54nm,19.2s,baz=243,slow=38
PETK  Petropavlovsk-     48.86  29    P      P       16 17 55.6 -0.5
PETK  Petropavlovsk-     48.86  29    P      P       16 17 55.6 -0.5
SEM   Semipalatinsk      48.87 327   eP      P       16 17 55.1 -1.5
      baz=327
SEM   Semipalatinsk      48.87 327   eP      P       16 17 55.0 -1.5
SGDS  Sogindy            49.02 316   eP      P       16 17 56.8 -0.8
      baz=316
SGDS  Sogindy            49.02 316   eP      P       16 17 56.7 -0.8
EIDS  Eidsvold           49.11 143    P      P       16 17 58.3  0.0
EIDS                                  IAmb   IAmb    16 17 59.0
      comp=Z,29nm,1.4s
AML   Almayashu          49.17 314    P      P       16 18 00.9 +1.7
      SNR=42
EKS2  Erkin-Say          49.30 315    P      P       16 18 01.5 +1.6
      SNR=36
STKA  Stephens Creek     49.83 156    P      P       16 18 03.5 -0.2
      comp=Z,9.5nm,0.7s,baz=338,slow=7.7,SNR=21
STKA  Stephens Creek     49.83 156    P      P       16 18 03.0 -0.7
KURBB Kurchatov Arra     49.91 326    P      P       16 18 04.9 +0.8
      comp=Z,54nm,0.9s,baz=123,slow=7.8,SNR=222
KURBB                                 pP     pP      16 18 33.6 -1.3
      comp=Z,15nm,1.1s,baz=122,slow=7.9,SNR=2.3
KURK  Kurchatov          49.91 326    P      P       16 18 04.5 +0.4
KURK                                  pmax   pmax
      comp=Z,137nm,1.0s
KURK  Kurchatov          49.91 326    P      P       16 18 04.5 +0.4
BTLS  Baital             50.02 318   eP      P       16 18 04.4 -0.7
      comp=Z,15nm,0.8s,baz=318
BTLS  Baital             50.02 318   eP      P       16 18 04.3 -0.7
BTLS                                  pmax   pmax
      comp=Z,15nm,0.8s
KBL   Kabul              50.67 303    P      P       16 18 09.7 -0.7
KBL                                   pmax   pmax
      comp=Z,18nm,1.0s
KBL   Kabul              50.67 303    P      P       16 18 09.7 -0.7
MA2   Magadan            50.70  19ceP     P       16 18 10.0 +0.1
MA2                                   pmax   pmax
      comp=Z,42nm,1.7s
MA2   Magadan            50.70  19    P      P       16 18 09.0 -0.9
MA2                                   IAmb   IAmb    16 18 11.2
      comp=Z,25nm,0.9s
KK02  Karatay Array      51.71 314    P      P       16 18 18.0 +0.2
KK31  Karatay Array      51.71 314    P      P       16 18 17.5 -0.3
KK31                                  pmax   pmax
      comp=Z,34nm,0.9s
KK31  Karatay Array      51.71 314    P      P       16 18 17.5 -0.3
KK31                                  IAmb   IAmb    16 18 19.8
      comp=Z,34nm,0.9s
KKAR  Karatay Array      51.71 314    P      P       16 18 18.0 +0.2
KKAR                                  pmax   pmax
      comp=Z,34nm,0.9s
KKAR  Karatay Array      51.71 314    P      P       16 18 18.0 +0.2
KKAR                                  IAmb   IAmb    16 18 19.8
      comp=Z,34nm,0.9s
KKAR  Karatay Array      51.71 314    P      P       16 18 17.9 +0.1
IUG   Iuzhnay            51.76 313   eP      P       16 18 18.2 -0.1
      comp=Z,27nm,0.8s,baz=313
IUG   Iuzhnay            51.76 313   eP      P       16 18 18.1 -0.1
IUG                                   pmax   pmax
      comp=Z,27nm,0.8s
BRLS  Borolday           52.16 314   eP      P       16 18 21.3 +0.1
      comp=Z,13nm,0.7s,baz=314
BRLS  Borolday           52.16 314   eP      P       16 18 21.2 +0.1
BRLS                                  pmax   pmax
      comp=Z,13nm,0.7s
BRZS  Berezniki          52.90 323   eP      P       16 18 26.0 -0.5
      comp=Z,17nm,0.6s,baz=323
BRZS  Berezniki          52.90 323   eP      P       16 18 25.9 -0.5
BRZS                                  pmax   pmax
      comp=Z,17nm,0.6s
ARMA  Armidale           53.29 146    P      P       16 18 30.1 +0.5
SEY   Seymchan           53.81  17⇓eP     P       16 18 33.3 +0.5
SANVU Saraoutou          54.58 121    P      P       16 18 39.1  0.0
SANVU Saraoutou          54.58 121    P      P       16 18 40.7 +1.6
KOUNC Koumac, New Ca     54.97 128    P      P       16 18 43.6 +1.8
BVAR  Borovoye Array     55.50 326    P      P       16 18 45.8 +0.6
      comp=Z,14nm,0.7s,baz=160,slow=17,SNR=124
BRVK  Borovoye           55.57 326ceP     P       16 18 46.4 +0.7
BRVK                                  pmax   pmax
      comp=Z,131nm,1.0s
BRVK  Borovoye           55.57 326    P      P       16 18 45.8 +0.2
CAN   Canberra           55.92 152    P      P       16 18 49.0 +0.5
CAN                                   pmax   pmax
      comp=Z,45nm,1.5s
CAN   Canberra           55.92 152    P      P       16 18 49.0 +0.5
CAN                                   IAmb   IAmb    16 18 53.1
      comp=Z,45nm,1.5s
HRA   Herat              56.20 302    P      P       16 18 50.4 -0.4
TOO   Toolangi           56.35 156    P      P       16 18 51.2 -0.2
TOO                                   pmax   pmax
      comp=Z,15nm,1.0s
TOO   Toolangi           56.35 156    P      P       16 18 51.2 -0.2
TOO                                   IAmb   IAmb    16 18 52.8
      comp=Z,16nm,0.9s
DZM   Mont Dzumac        57.48 128    P      P       16 19 00.1 +0.4
DZM   Mont Dzumac        57.48 128    P      P       16 19 01.2 +1.5
YATNC Mamie plateau,     57.82 128    P      P       16 19 03.9 +1.9
TIXI  Tiksi              57.89   3ceP     P       16 19 00.4 -1.3
TIXI                                  pmax   pmax
      comp=Z,330nm,2.5s
TIXI  Tiksi              57.89   3    P      P       16 19 00.1 -1.6
TIXI                                  IAmb   IAmb    16 19 01.9
      comp=Z,40nm,1.2s
NRIK  Noril'sk           59.14 347    P      P       16 19 10.6 +0.2
      comp=Z,34nm,0.9s,baz=128,slow=6.4,SNR=56
NRIK  Noril'sk           59.14 347c iP     P       16 19 10.2 -0.2
NRIK                                  pmax   pmax
      comp=Z,59nm,1.0s
NRIK  Noril'sk           59.14 347    P      P       16 19 09.7 -0.7
GEYT  Alibeck            59.89 306    P      P       16 19 16.9 +0.7
      comp=Z,22nm,1.1s,baz=205,slow=6.6,SNR=27
GEYT  Alibeck            59.89 306    P      P       16 19 16.5 +0.3
GYA0B ALIBECK ARRAY      59.89 306    P      P       16 19 16.4 +0.2
GYA0B                                 IAmb   IAmb    16 19 18.9
      comp=Z,26nm,0.9s
AB31  Akbulak array      60.47 319⇑eP     P       16 19 20.2 +0.4
AB31                                  pmax   pmax
      comp=Z,15nm,0.7s
ABKAR Akbulak array      60.47 319    P      P       16 19 19.9  0.0
ABKAR Akbulak array      60.47 319    P      P       16 19 19.8  0.0
ABKAR                                 IAmb   IAmb    16 19 21.4
      comp=Z,23nm,0.8s
AKTO  Aktyubinsk         61.95 320    P      P       16 19 30.1 +0.3
      comp=Z,12nm,0.8s,baz=99,slow=7.3,SNR=44
AKTO                                  pP     pP      16 19 59.9 -1.6
      comp=Z,21nm,1.1s,baz=51,slow=2.9,SNR=6.5
SVE   Sverdlovsk         62.13 327⇑eP     P       16 19 31.5 +0.6
SVE                                  eS      S       16 27 46.0 +0.6
SVE                                   pmax   pmax
      comp=Z,103nm,1.2s
ARU   Arti               63.11 327    P      P       16 19 37.6 +0.2
      comp=Z,5.1nm,0.5s,baz=128,slow=3.7,SNR=32
ARU   Arti               63.11 327c iP     P       16 19 37.2 -0.2
ARU                                   *PP    pP      16 20 09.9 +0.5
ARU                                   S      S       16 28 01.3 +3.6
ARU                                   SS     SS      16 32 03.7 -2.0
ARU                                   pmax   pmax
      comp=Z,65nm,1.5s
ARU   Arti               63.11 327    P      P       16 19 35.9 -1.5
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ARU                                   IAmb   IAmb    16 19 38.3
      comp=Z,34nm,0.9s
SOCY  Socotra            64.69 277    P      P       16 19 47.6 -1.0
MSVF  Nonsavu            64.85 117c iP     P       16 19 51.3 +1.8
MSVF                                  pmax   pmax
      comp=Z,48nm,0.9s
MSVF  Nonsavu            64.85 117    P      P       16 19 50.8 +1.3
MSVF  Nonsavu            64.85 117    P      P       16 19 51.9 +2.4
LKRN  Lenkeran, Azer     67.26 306    P      P       16 20 05.8 +1.3
NIKH  Nikolski High      67.28  38    P      P       16 20 03.2 -1.2
GAMB  Gambell            67.78  26    P      P       16 20 07.1 -0.1
GAMB                                  IAmb   IAmb    16 20 09.5
      comp=Z,38nm,1.0s
KIRV  Kirov              68.39 328    P      P       16 20 11.4 +0.3
      comp=Z,39nm,0.8s,baz=137,slow=1.7,SNR=12
KIRV  Kirov              68.39 328⇓eP     P       16 20 11.2  0.0
SEKA  Sheki              68.48 309    P      P       16 20 13.0 +0.8
MNGR  Mingechevir, A     68.57 309    P      P       16 20 14.0 +1.3
BELG  Belogornoye        68.67 321    P      P       16 20 13.3 +0.2
      comp=Z,76nm,0.9s,baz=125,slow=0.9,SNR=23
BELG  Belogornoye        68.67 321d iP     P       16 20 13.2 +0.2
BELG                                i *PP    pP      16 20 44.2 -1.1
BELG                                  pmax   pmax
      comp=Z,15nm,0.9s
UNV   Unalaska Valle     68.78  37    P      P       16 20 12.9 -0.8
ZKTA  Zakatala           68.92 309    P      P       16 20 16.0 +1.1
GANJ  Ganja              69.15 308    P      P       16 20 17.8 +1.5
NAX   Nakhchivan         69.82 307    P      P       16 20 21.6 +1.1
GUDG  Gudauri            70.50 310    P      P       16 20 28.7 +3.9
KZRT  Kazreti            70.59 309    P      P       16 20 26.3 +1.1
ANM   Nome               70.65  26    P      P       16 20 25.3 +0.3
ANM                                   pmax   pmax
      comp=Z,29nm,1.1s
ANM   Nome               70.65  26    P      P       16 20 25.3 +0.3
ANM                                   IAmb   IAmb    16 20 27.3
      comp=Z,29nm,1.1s
ZEI   Tsey               70.92 311   eP      P       16 20 25.9 -1.4
ZEI                                   pmax   pmax
      comp=Z,21nm,1.4s
RAYN  Ar Rayn            71.06 290    P      P       16 20 27.8 -0.5
RAYN                                  pmax   pmax
      comp=Z,25nm,1.0s
RAYN  Ar Rayn            71.06 290    P      P       16 20 27.8 -0.5
RAYN                                  IAmb   IAmb    16 20 30.1
      comp=Z,25nm,1.0s
NCK   Nalchik            71.12 311⇑eP     P       16 20 29.2 +0.9
NCK                                   pmax   pmax
      comp=Z,9.0nm,0.9s
BGD   Bogdanovka         71.19 309    P      P       16 20 31.3 +2.3
ONI   Oni                71.26 311    P      P       16 20 31.6 +2.4
AKH   Akhalkalaki        71.27 309 ⇑P      P       16 20 30.8 +1.3
AKH   Akhalkalaki        71.27 309    P      P       16 20 30.7 +1.3
KBZ   Khabaz             71.62 312    P      P       16 20 31.9 +0.7
      comp=Z,10nm,0.9s,baz=101,slow=3.9,SNR=16
KBZ   Khabaz             71.62 312    P      P       16 20 32.0 +0.7
GEVA  Gevas              71.76 306    P      P       16 20 32.0 -0.4
GEVA                                  IAmb   IAmb    16 20 34.6
      comp=Z,26nm,0.9s
NEY   Neytrino           71.77 311⇓eP     P       16 20 33.1 +0.7
NEY                                   pmax   pmax
      comp=Z,17nm,2.5s
KIV   Kislovodsk         71.77 312   eP      P       16 20 32.6 +0.3
KIV                                   pmax   pmax
      comp=Z,91nm,1.0s
KIV   Kislovodsk         71.77 312    P      P       16 20 32.3  0.0
KIV                                   IAmb   IAmb    16 20 34.0
      comp=Z,32nm,1.0s
RDOG  Red Dog Mine       72.11  23    P      P       16 20 33.5 -0.2
VRH   Novokhopyorsk      72.28 320   eP      P       16 20 34.5 -0.5
VRH                                   pmax   pmax
      comp=Z,100nm,1.2s
QRZ   Quartz Range       72.66 141    P      P       16 20 37.2 -0.1
QRZ                                   IAmb   IAmb    16 20 39.3
      comp=Z,40nm,1.2s
NNZ   Nelson             73.41 141    P      P       16 20 41.8  0.0
NNZ                                   IAmb   IAmb    16 20 43.7
      comp=Z,46nm,1.0s
THZ   Tophouse           73.45 142    P      P       16 20 42.1  0.0
RPZ   Rata Peaks         73.56 144    P      P       16 20 43.2 +0.6
RPZ                                   IAmb   IAmb    16 20 43.4
      comp=Z,32nm,1.1s
KLMR  Klimovskoe         73.57 330   eP      P       16 20 40.6 -1.8
KLMR                                 e               16 23 27.2
KLMR                                  pmax   pmax
      comp=Z,59nm,1.0s
KLMR  Klimovskoe         73.57 330   eP      P       16 20 40.7 -1.7
KLMR                                  AMP            16 20 43.0
      comp=Z,59nm,1.0s
KLMR                                 ePP     PP      16 23 27.2 -0.8
MARD  Mardin             73.64 305    P      P       16 20 43.2 -0.3
LTZ   Lake Taylor        73.69 143    P      P       16 20 43.8 +0.4
VORD  Divnogorie         73.82 319   eP      P       16 20 43.4 -0.7
VORD                                  pmax   pmax
      comp=Z,20nm,0.8s
TUWZ  Tuamarina          73.88 141    P      P       16 20 44.9 +0.4
VSR   Storozhevoye       73.89 320   eP      P       16 20 43.3 -1.2
VSR                                   pmax   pmax
      comp=Z,30nm,0.7s
LPSR  Galich'ya Gora     73.98 321   eP      P       16 20 44.6 -0.4
LPSR                                  pmax   pmax
      comp=Z,60nm,0.8s
BKZ   Black Stump Fm     74.20 138    P      P       16 20 46.2 -0.3
BKZ                                   IAmb   IAmb    16 20 47.6
      comp=Z,29nm,0.8s
TMCR  Tamitsa            74.30 333   eP      P       16 20 44.8 -1.8
TMCR                                  pmax   pmax
      comp=Z,50nm,0.9s
A21K  Barrow             74.57  19    P      P       16 20 48.5 +0.4
      baz=268,SNR=15
A21K  Barrow             74.57  19    P      P       16 20 48.1 +0.1
MOS   Moscow             74.63 324   eP      P       16 20 47.5 -1.2
MOS                                  eS      S       16 30 09.4 -4.1
MOS                                   pmax   pmax
      comp=Z,52nm,0.7s
TTA   Tatalina           74.69  28    P      P       16 20 49.7 +0.7
TTA                                   pmax   pmax
      comp=Z,26nm,0.8s
TTA   Tatalina           74.69  28    P      P       16 20 49.7 +0.7
TTA                                   IAmb   IAmb    16 20 50.9
      comp=Z,26nm,0.8s
PLWZ  Palliser           74.76 141    P      P       16 20 49.5 -0.2
BFZ   Birch Farm         74.88 139    P      P       16 20 50.4  0.0
BFZ                                   IAmb   IAmb    16 21 03.9
      comp=Z,38nm,1.2s
SVW2  Sparrevohn         74.93  30    P      P       16 20 50.6 +0.2
SVW2                                  IAmb   IAmb    16 20 52.5
      comp=Z,18nm,0.8s
OBN   Obninsk            75.27 324    LR     LR      16 55 22.1
      comp=Z,28nm,18.5s,baz=168,slow=37
OBN   Obninsk            75.27 324⇓eP     P       16 20 52.1 -0.2
OBN                                 i *PP    pP      16 21 26.6 +1.2
OBN                                  eS      S       16 30 19.1 -1.4
OBN                                  eSS     SS      16 35 19.5 +6.9
OBN                                   pmax   pmax
      comp=Z,68nm,1.3s
OBN   Obninsk            75.27 324    P      P       16 20 51.6 -0.7
OBN                                   IAmb   IAmb    16 20 52.9
      comp=Z,55nm,1.0s
MALT  Malatya            75.39 306    P      P       16 20 55.5 +1.9
PPLA  Purkeypile         76.44  28    P      P       16 20 59.7 +0.7
PPLA                                  IAmb   IAmb    16 21 00.8
      comp=Z,36nm,0.9s
GAZ   Gaziantep          76.48 305    P      P       16 20 59.6 -0.2
GAZ                                   IAmb   IAmb    16 21 02.0
      comp=Z,31nm,1.0s
SKT   Skwentna           76.82  29    P      P       16 21 00.3 -0.7
SKT                                   IAmb   IAmb    16 21 01.8
      comp=Z,45nm,1.0s
BPAW  Bear Paw Mtn.      76.89  27    P      P       16 21 00.6 -0.8
MLY   Manley             76.92  26    P      P       16 21 02.2 +0.7
      baz=275,SNR=38
COLD  Coldfoot           76.95  24    P      P       16 21 02.5 +0.9
      baz=275,SNR=16
COLD  Coldfoot           76.95  24    P      P       16 21 01.5 -0.2
KTH   Kantishna Hill     76.96  27    P      P       16 21 01.5 -0.4
KTH                                   IAmb   IAmb    16 21 03.6
      comp=Z,22nm,0.9s
HOM   Homer              76.97  31    P      P       16 21 02.1 +0.2
      baz=275
TOLK  Toolik Lake Re     77.06  22    P      P       16 21 02.6 +0.3
      baz=275,SNR=17
TOLK  Toolik Lake Re     77.06  22    P      P       16 21 02.5 +0.1
TOLK                                  IAmb   IAmb    16 21 04.1
      comp=Z,21nm,0.8s
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CAPN  Captain Cook N     77.11  30    P      P       16 21 02.6  0.0
      baz=275
CNPM  China Poot         77.19  31    P      P       16 21 03.0 -0.2
CNPM                                  IAmb   IAmb    16 21 03.7
      comp=Z,38nm,1.0s
SUA   Susitna One        77.24  29    P      P       16 21 03.2 -0.3
TRF   Thorofare Moun     77.25  27    P      P       16 21 03.9 +0.2
TRF                                   IAmb   IAmb    16 21 06.6
      comp=Z,37nm,0.9s
BRLK  Bradley Lake       77.34  31    P      P       16 21 03.9 -0.1
BRLK                                  IAmb   IAmb    16 21 06.5
      comp=Z,37nm,0.8s
JOF   Joensuu            77.36 332    P      P       16 21 04.4 +0.4
JOF                                   pmax   pmax
      comp=Z,48nm,0.9s
CUT   Chulitna           77.37  29    P      P       16 21 03.7 -0.4
      baz=276
I23K  Minto, Yukon-K     77.48  26    P      P       16 21 05.2 +0.5
      baz=276,SNR=24
I23K  Minto, Yukon-K     77.48  26    P      P       16 21 04.8 +0.2
I23K                                  IAmb   IAmb    16 21 07.0
      comp=Z,46nm,1.1s
BWN   Browne             77.54  27    P      P       16 21 05.7 +0.6
BWN                                   IAmb   IAmb    16 21 07.4
      comp=Z,55nm,1.0s
NEA2  Nenana             77.67  26    P      P       16 21 05.7  0.0
      baz=276,SNR=16
RC01  Rabbit Creek A     77.76  30    P      P       16 21 05.6 -0.7
      baz=277,SNR=6.3
MCK   McKinley           77.83  27    P      P       16 21 06.5 -0.1
      baz=277,SNR=43
RND   Reindeer           77.90  27    P      P       16 21 06.3 -0.8
RND                                   pmax   pmax
      comp=Z,54nm,0.8s
RND   Reindeer           77.90  27    P      P       16 21 06.3 -0.8
MDM   Murphy Dome        77.98  26    P      P       16 21 07.5  0.0
MDM                                   IAmb   IAmb    16 21 09.7
      comp=Z,44nm,0.9s
PMR   Palmer             77.99  29    P      P       16 21 06.9 -0.6
PMR                                   pmax   pmax
      comp=Z,51nm,0.9s
PMR   Palmer             77.99  29    P      P       16 21 06.9 -0.6
PMR                                   IAmb   IAmb    16 21 08.2
      comp=Z,51nm,0.9s
SEW   Seward             78.02  31    P      P       16 21 06.7 -1.0
SEW                                   IAmb   IAmb    16 21 09.4
      comp=Z,38nm,0.8s
GHO   Glory Hole Cre     78.07  29    P      P       16 21 07.9 -0.2
GHO                                   IAmb   IAmb    16 21 12.5
      comp=Z,44nm,1.1s
WRH   Wood River Hil     78.10  26    P      P       16 21 07.7 -0.4
WRH                                   IAmb   IAmb    16 21 09.9
      comp=Z,20nm,0.8s
TCOL  CIGO, UAF Yank     78.15  26    P      P       16 21 07.8 -0.5
      baz=277
TCOL  CIGO, UAF Yank     78.15  26    P      P       16 21 07.6 -0.8
TCOL                                  IAmb   IAmb    16 21 10.8
      comp=Z,34nm,0.8s
COLA  College            78.15  26    P      P       16 21 07.5 -0.9
COLA                                  pmax   pmax
      comp=Z,33nm,0.9s
COLA  College            78.15  26    P      P       16 21 07.5 -0.9
COLA                                  IAmb   IAmb    16 21 10.8
      comp=Z,33nm,0.8s
CCB   Clear Creek Bu     78.20  26    P      P       16 21 07.9 -0.8
POKR  Poker Plat Res     78.30  26    P      P       16 21 09.5 +0.3
      baz=278,SNR=12
POKR  Poker Plat Res     78.30  26    P      P       16 21 08.4 -0.8
KNK   Knik Glacier       78.33  29    P      P       16 21 08.8 -0.7
KNK                                   IAmb   IAmb    16 21 10.7
      comp=Z,48nm,0.8s
SML   Sawmill            78.34  29    P      P       16 21 09.1 -0.5
SML                                   pmax   pmax
      comp=Z,80nm,1.0s
SML   Sawmill            78.34  29    P      P       16 21 09.1 -0.5
IL31                     78.58  26    P      P       16 21 09.2 -1.5
ILAR  Eielson Array      78.58  26    P      P       16 21 09.8 -0.9
      comp=Z,7.7nm,0.9s,baz=266,slow=3.3,SNR=44
ILAR                                  LR     LR      16 58 32.0
      comp=Z,132nm,19.7s,baz=188,slow=38
ILAR  Eielson Array      78.58  26    P      P       16 21 09.0 -1.8
HDA   Harding Lake       78.60  26    P      P       16 21 09.9 -1.0
      baz=278,SNR=16
HDA   Harding Lake       78.60  26    P      P       16 21 09.6 -1.3
HDA                                   IAmb   IAmb    16 21 11.0
      comp=Z,28nm,0.8s
DHY   Denali Highway     78.61  28    P      P       16 21 10.4 -0.7
DHY                                   IAmb   IAmb    16 21 12.4
      comp=Z,23nm,0.8s
ARCES ARCESS Array B     78.81 339    P      P       16 21 11.6 -0.3
      comp=Z,15nm,0.8s,baz=60,slow=3.7,SNR=13
ARCES ARCESS Array B     78.81 339    P      P       16 21 11.8 -0.2
SCM   Sheep Creek Mo     78.81  29    P      P       16 21 11.5 -0.7
SCM                                   pmax   pmax
      comp=Z,67nm,0.9s
SCM   Sheep Creek Mo     78.81  29    P      P       16 21 11.4 -0.7
BR131 Keskin Array S     78.90 308⇑eP     P       16 21 12.8 -0.4
BR131 Keskin Array S     78.90 308    P      P       16 21 12.4 -0.8
BRTR  Keskin Array B     78.90 308    P      P       16 21 13.3 +0.1
      comp=Z,4.4nm,0.8s,baz=125,slow=5.5,SNR=12
BRTR  Keskin Array B     78.90 308    P      P       16 21 12.4 -0.8
BRTR  Keskin Array B     78.90 308    P      P       16 21 12.4 -0.8
FYU   Fort Yukon         78.98  24    P      P       16 21 13.4 +0.5
FYU                                   IAmb   IAmb    16 21 14.9
      comp=Z,26nm,0.8s
PRP   Porcupine Dome     79.03  25    P      P       16 21 12.6 -0.8
M24K  Tolsona, Glenn     79.31  29    P      P       16 21 15.4 +0.5
      baz=279,SNR=8.8
M24K  Tolsona, Glenn     79.31  29    P      P       16 21 14.4 -0.5
SPA0  Spitsbergen Ar     79.32 348    P      P       16 21 14.3 -0.3
SPA0  Spitsbergen Ar     79.32 348   eP      P       16 21 14.9 +0.4
SPITS Spitsbergen Ar     79.32 348    LR     LR      17 00 21.8
      comp=Z,83nm,19.0s,baz=185,slow=39
SPITS Spitsbergen Ar     79.32 348    P      P       16 21 15.2 +0.6
SPITS                                 pmax   pmax
      comp=Z,1.0nm,0.2s
PAX   Paxson             79.48  28    P      P       16 21 15.5 -0.3
PAX                                   pmax   pmax
      comp=Z,26nm,0.9s
PAX   Paxson             79.48  28    P      P       16 21 15.5 -0.3
PAX                                   IAmb   IAmb    16 21 17.3
      comp=Z,26nm,0.9s
KLU   Klutina            79.53  29    P      P       16 21 16.0  0.0
KLU                                   IAmb   IAmb    16 21 17.4
      comp=Z,23nm,0.7s
RIDG  Independent Ri     79.62  27    P      P       16 21 15.8 -0.7
Q23K  Middleton Isla     79.67  31    P      P       16 21 17.3 +0.6
      baz=280
KTK1  Kautokeino         79.70 339   eP      P       16 21 17.8 +1.1
SCRK  Sand Creek         79.95  26    P      P       16 21 18.2 -0.2
      baz=281,SNR=23
DOT   Dot Lake           79.98  27    P      P       16 21 17.8 -0.6
DOT                                   IAmb   IAmb    16 21 20.1
      comp=Z,42nm,1.1s
FIA1  FINESS Array S     80.00 331    P      P       16 21 18.3 -0.2
FIA1                                  IAmb   IAmb    16 21 19.2
      comp=Z,64nm,1.5s
FINES FINESS Array B     80.01 331    P      P       16 21 18.1 -0.4
      comp=Z,5.7nm,0.6s,baz=48,slow=5.1,SNR=21
N25K  Chitina, Valde     80.13  29    P      P       16 21 19.9 +0.6
      baz=281,SNR=6.3
N25K  Chitina, Valde     80.13  29    P      P       16 21 19.2 -0.2
AKASG Malin Array Be     80.19 320    P      P       16 21 19.3 -0.4
      comp=Z,3.6nm,0.5s,baz=64,slow=5.6,SNR=25
AKASG Malin Array Be     80.19 320    P      P       16 21 18.3 -1.4
AKBB  Malin Array Si     80.19 320⇓eP     P       16 21 19.2 -0.5
AKBB  Malin Array Si     80.19 320    P      P       16 21 18.6 -1.1
KIEV  Kiev               80.20 320    P      P       16 21 17.0 -2.8
VSU   Vasula             80.23 328   eP      P       16 21 19.8  0.0
VSU   Vasula             80.23 328d iP     P       16 21 19.8  0.0
VSU                                   pmax   pmax
      comp=Z,143nm,0.9s
MENT  Mentasta           80.28  28    P      P       16 21 20.2 +0.2
MNK   Minsk              80.33 324  i P      P       16 21 19.8 -0.6
      comp=E,2.0nm,0.9s
MNK                                 i P      P       16 21 19.8 -0.6
      comp=N,12nm,0.9s
MNK                                 i P      P       16 21 19.8 -0.6
      comp=Z,31nm,0.9s
MNK                                 i PcP    PcP     16 21 26.2 -0.9
MNK                                 i pP     pP      16 21 54.7 +0.9
MNK                                 i sP     sP      16 22 09.9 +1.8
MNK                                 i PP     PP      16 24 35.1  +10
MNK                                 i PPP    PPP     16 26 14.3
MNK                                 i S      S       16 31 15.0 +0.1
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MNK				i ScS	ScS	16 31 32.5	-1.6
MNK				i sS	sS	16 32 15.4	+3.6
MNK				i SS	SS	16 35 49.3	-39
MNK				i SSS	SSS	16 39 41.3	
MNK				i SKKS		16 48 12.4	
MNK				i LRM	MLR	16 58 52.0	
	comp=E,14nm,15.5s						
MNK				i LRM	MLR	16 59 05.1	
	comp=Z,78nm,14.5s						
MNK				i LRM	MLR	17 01 02.3	
	comp=N,91nm,15.2s						
GLB	Gilahina Butte	80.53	29	P	P	16 21 21.4	-0.1
GLB				IAmb	IAmb	16 21 23.1	
	comp=Z,31nm,1.0s						
VRDI	Verde Repeater	80.75	29	P	P	16 21 22.6	-0.2
IDID	Didziasalis	80.83	325	eP	P	16 21 23.5	+0.5
NACGM	Naroch	80.88	324	i P	P	16 21 23.6	+0.3
NACGM				i P	P	16 21 23.6	+0.3
NACGM				i P	P	16 21 23.6	+0.3
NACGM				i PcP	PcP	16 21 37.8	+8.3
NACGM				i PP	PP	16 24 07.3	-22
NACGM				i PPP	PPP	16 25 57.8	
NACGM				i S	S	16 30 51.3	-29
NACGM				i PS	PnS	16 33 16.6	+52
NACGM				i SS	SS	16 35 43.0	-54
NACGM				i SSS	SSS	16 39 09.3	
NACGM				i LQ	LQ	16 48 42.4	
NACGM				i LR	LR	16 54 23.8	
MCARA	McCarthy VSAT	80.92	29	P	P	16 21 23.7	+0.3
EGAK	Eagle	80.99	25	P	P	16 21 23.4	-0.3
EGAK				IAmb	IAmb	16 21 25.0	
	comp=Z,35nm,0.8s						
CRQM	Cirque	80.99	30	P	P	16 21 23.7	-0.4
CRQM				IAmb	IAmb	16 21 26.1	
	comp=Z,48nm,1.1s						
IIGN	Ignalina	81.11	325	eP	P	16 21 24.1	-0.4
ISAL	Salakas	81.12	325	eP	P	16 21 24.7	+0.2
TGL	Tana Glacier	81.14	30	P	P	16 21 25.0	+0.2
TGL				IAmb	IAmb	16 21 26.2	
	comp=Z,27nm,0.8s						
SORM	Soroca	81.22	317	⇑P	P	16 21 24.9	-0.3
SORM	Soroca	81.22	317	P	P	16 21 24.9	-0.3
BALM	Baldy	81.31	29	P	P	16 21 25.6	0.0
BALM				pmax	pmax		
	comp=Z,19nm,1.0s						
BALM	Baldy	81.31	29	P	P	16 21 25.6	0.0
TLCR		81.47	314	⇑P	P	16 21 27.3	+0.7
TLCR		81.47	314	P	P	16 21 27.3	+0.7
BARN	Barnard Glacie	81.63	29	P	P	16 21 27.6	+0.2
BARN				IAmb	IAmb	16 21 29.5	
	comp=Z,38nm,0.8s						
MTSE	Matsula	81.68	328	eP	P	16 21 26.4	-1.0
CTGM	Chitina Glacie	81.81	29	P	P	16 21 28.6	+0.3
CFR	Carcaliu	81.94	314	⇑P	P	16 21 29.4	+0.3
CFR	Carcaliu	81.94	314	P	P	16 21 29.4	+0.3
HORU	Horodok	82.25	319	P	P	16 21 29.9	-0.8
PABE	Paberze	82.33	325	eP	P	16 21 30.9	0.0
KMPD	K-Podol'skiy	82.37	318	P	P	16 21 30.0	-1.3
TESR	Tescani	82.68	316	⇑P	P	16 21 33.0	0.0
VRI	Vrincioaia	82.77	315	⇑P	P	16 21 34.4	+0.9
VRI	Vrincioaia	82.77	315	P	P	16 21 34.7	+1.2
VRI				pmax	pmax		
	comp=Z,42nm,1.2s						
PRAR	RASCA	82.78	317	⇑P	P	16 21 33.8	+0.3
PLOR	Plostina	82.83	315	⇑P	P	16 21 34.9	+1.1
PLOR	Plostina	82.83	315	P	P	16 21 34.8	+1.1
STEI	Steigen	82.83	338	eP	P	16 21 33.3	+0.1
INK	Inuvik	82.90	21	P	P	16 21 33.3	-0.3
INK				pmax	pmax		
	comp=Z,41nm,0.9s						
INK	Inuvik	82.90	21	P	P	16 21 33.3	-0.3
INK				IAmb	IAmb	16 21 34.7	
	comp=Z,40nm,0.9s						
BIZ	Bicaz	82.95	317	⇑P	P	16 21 34.7	+0.3
FAUS	Fauske	83.00	338	eP	P	16 21 34.1	0.0
SUW	Suwalki	83.13	324	eP	P	16 21 35.0	0.0
SUW	Suwalki	83.13	324	eP	P	16 21 34.6	-0.5
SUW	Suwalki	83.13	324	P	P	16 21 35.1	0.0
SUW				pmax	pmax		
	comp=Z,57nm,1.1s						
NEHR	Nehoiu	83.16	315	⇑P	P	16 21 36.6	+1.1
PBUR	Paburge	83.32	326	eP	P	16 21 36.0	0.0
KSV	Kosov	83.33	318	P	P	16 21 35.0	-1.3
OZUR		83.36	316	⇑P	P	16 21 36.7	+0.2
MLR	Muntele Rosu	83.39	315	LR	LR	17 01 29.1	
	comp=Z,147nm,18.5s,baz=0.5,slow=38						
MLR	Muntele Rosu	83.39	315	⇑P	P	16 21 37.1	+0.3
MLR	Muntele Rosu	83.39	315	P	P	16 21 36.3	-0.5
MLR				pmax	pmax		
	comp=Z,23nm,0.9s						
MLR	Muntele Rosu	83.39	315	P	P	16 21 36.3	-0.5
MLR				IAmb	IAmb	16 21 38.3	
	comp=Z,23nm,0.9s						
BURAR	Bucovina Array	83.39	317	⇑P	P	16 21 37.7	+0.9
BURAR	Bucovina Array	83.39	317	P	P	16 21 37.6	+0.9
BURAR	Bucovina Array	83.39	317	P	P	16 21 36.2	-0.5
BUR08	Bucovina Ar. S	83.40	317	P	P	16 21 36.4	-0.4
BUR08				IAmb	IAmb	16 21 40.1	
	comp=Z,22nm,1.0s						
RAZG	Razgrad	83.43	313	⇑P	P	16 21 37.4	+0.5
LVV	L'vov	83.64	320	eP	P	16 21 37.2	-0.6
HYT	Haines Junctio	83.65	29	P	P	16 21 38.9	+1.1
HYT				IAmb	IAmb	16 21 40.2	
	comp=Z,38nm,1.0s						
DOPR	Dopca	83.66	316	⇑P	P	16 21 38.4	+0.4
KMBO	Kilima Mbogo	83.79	267	P	P	16 21 41.0	+1.5
	comp=Z,11nm,0.9s,baz=53,slow=7.2,SNR=21						
KMBO				pP	pP	16 22 11.3	-1.9
	comp=Z,2.3nm,0.7s,baz=43,slow=1.4,SNR=2.2						
MORS	Morshin	83.89	319	P	P	16 21 39.0	-0.1
VOIR		84.01	315	⇑P	P	16 21 39.5	-0.5
VOIR		84.01	315	P	P	16 21 39.4	-0.5
COPA	Copaceanca	84.20	314	⇑P	P	16 21 40.9	+0.1
HUMR	Humele	84.28	314	⇑P	P	16 21 40.9	-0.2
ARR	Arges	84.31	315	⇑P	P	16 21 41.9	+0.4
EZN	Ezine	84.41	309	P	P	16 21 45.5	+3.6
UPP	Uppsala	84.43	330	eP	P	16 21 41.0	-0.6
BMR	Baia Mare	84.51	318	P	P	16 21 43.4	+1.2
BMR				pmax	pmax		
	comp=Z,27nm,1.4s						
KWP	Kalwaria Pacla	84.51	320	eP	P	16 21 43.2	+0.9
KWP	Kalwaria Pacla	84.51	320	P	P	16 21 42.6	+0.3
KWP				pmax	pmax		
	comp=Z,70nm,2.4s						
CJR	Cluj-Napoca	84.68	317	⇑P	P	16 21 44.8	+1.6
PLVB	Pleven	84.80	313	⇓P	P	16 21 44.3	+0.5
VLAD	Vladila	84.81	314	⇑P	P	16 21 44.3	+0.5
LOT	Lotru	84.88	315	⇑P	P	16 21 44.7	+0.4
WHY	Whitehorse	84.92	29	P	P	16 21 44.9	+0.7
KOLS	Kolonicke sedl	84.97	319	eP	P	16 21 45.4	+0.8
KOLS				pmax	pmax		
	comp=Z,31nm,1.4s						
KOLS	Kolonicke sedl	84.97	319	eP	P	16 21 45.3	+0.7
UZH	Uzhgorod	85.04	319	eP	P	16 21 45.5	+0.6
UZH				e		16 22 19.9	
BEL	Belsk	85.09	322	eP	P	16 21 45.8	+0.8
DRGR		85.25	317	⇓P	P	16 21 46.6	+0.5
DRGR		85.25	317	P	P	16 21 46.3	+0.2
DRGR				pmax	pmax		
	comp=Z,25nm,1.1s						
DEV	Deva	85.36	316	⇑P	P	16 21 47.9	+1.4
DEV	Deva	85.36	316	P	P	16 21 47.9	+1.4
CRVS	Cervenica-Dubn	85.50	319	eP	P	16 21 48.1	+0.9
CRVS				pmax	pmax		
	comp=Z,124nm,1.2s						
CRVS	Cervenica-Dubn	85.50	319	eP	P	16 21 48.1	+0.9
GZR	Gura Zlata	85.57	316	⇑P	P	16 21 48.1	+0.3
C36M	Paulatuk	85.61	19	P	P	16 21 46.9	-0.3
	baz=298						
C36M	Paulatuk	85.61	19	P	P	16 21 46.6	-0.6
BESE	Bessie Mountai	85.63	31	P	P	16 21 48.3	+0.6
BESE				IAmb	IAmb	16 21 50.1	
	comp=Z,46nm,1.1s						
PUNG	Punghina	85.76	314	⇑P	P	16 21 49.4	+0.9
HERR	Herculane	85.95	315	⇑P	P	16 21 49.7	+0.2
JIS	Juneau Island	85.97	31	P	P	16 21 48.3	-0.9
JIS				IAmb	IAmb	16 21 51.8	
	comp=Z,23nm,0.9s						
VTS	Vitosha	85.98	313	⇑P	P	16 21 50.3	+0.4
VTS	Vitosha	85.98	313	P	P	16 21 49.2	-0.7
VTS				pmax	pmax		
	comp=Z,32nm,1.2s						
VTS	Vitosha	85.98	313	P	P	16 21 49.2	-0.7
VTS				IAmb	IAmb	16 21 52.2	
	comp=Z,32nm,1.2s						
NIE	Niedzica	86.08	320	eP	P	16 21 51.4	+1.3
NIE	Niedzica	86.08	320	P	P	16 21 50.9	+0.8
NIE				pmax	pmax		
	comp=Z,20nm,1.1s						
SIRR	Siria	86.09	317	⇑P	P	16 21 50.6	+0.5
OJC	Ojcow	86.16	321	eP	P	16 21 51.1	+0.7
OJC	Ojcow	86.16	321	P	P	16 21 49.9	-0.5
OJC				pmax	pmax		
	comp=Z,45nm,0.9s						
OJC	Ojcow	86.16	321	P	P	16 21 49.9	-0.5
HFS	Hagfors	86.20	331	LR	LR	17 03 53.2	
	comp=Z,61nm,21.8s,baz=32,slow=38						
KECS	Kecovo	86.23	319	eP	P	16 21 51.3	+0.5
KECS				pmax	pmax		
	comp=Z,13nm,0.8s						
KECS	Kecovo	86.23	319	eP	P	16 21 51.3	+0.5
BZS	Buzias	86.30	316	⇑P	P	16 21 51.2	0.0
BZS	Buzias	86.30	316	P	P	16 21 51.2	0.0
DAG	Danmarks Havn	86.34	351	i P	P	16 21 49.5	-1.2
	comp=Z,6.5nm,0.8s						
DAG	Danmarks Havn	86.34	351	i P	P	16 21 49.5	-1.2
DAG				pmax	pmax		
	comp=Z,7.0nm,0.8s						
DAG	Danmarks Havn	86.34	351	i P	P	16 21 49.6	-1.2
DAG				IAmb	IAmb	16 21 52.6	
	comp=Z,6.5nm,0.8s						
MDVR	Moldovita	86.46	315	⇑P	P	16 21 52.3	+0.2
LANS	Liptovska Anna	86.68	320	eP	P	16 21 59.4	+6.4
LANS				pmax	pmax		
	comp=Z,5.0nm,0.9s						
LANS	Liptovska Anna	86.68	320	eP	P	16 21 59.4	+6.4
NC405	NORSAR Array S	86.73	333	P	P	16 21 51.7	-1.3
PSZ	Piszkesteto	86.78	319	⇑P	P	16 21 53.9	+0.3
PSZ	Piszkesteto	86.78	319	P	P	16 21 52.8	-0.8
PSZ				pmax	pmax		
	comp=Z,12nm,1.0s						
PSZ	Piszkesteto	86.78	319	P	P	16 21 52.8	-0.8
NC303	NORSAR Array S	86.84	333	P	P	16 21 52.3	-1.2
NC602	NORSAR Array S	86.96	332	eP	P	16 21 53.0	-1.0
NB2	NORSAR Subarra	86.98	333	P	P	16 21 53.1	-1.1
	comp=Z,41nm,1.1s,baz=68,slow=4.6						
NB2	NORSAR Subarra	86.98	333	P	P	16 21 52.0	-2.2
NB2				pmax	pmax		
	comp=Z,8.0nm,0.9s						
NB2	NORSAR Subarra	86.98	333	P	P	16 21 53.1	-1.1
	baz=68,slow=4.6						
NOA	NORSAR Array B	86.98	333	P	P	16 21 53.4	-0.9
	comp=Z,18nm,0.9s,baz=67,slow=4.7,SNR=28						
NC204	NORSAR Array S	87.09	333	P	P	16 21 53.9	-0.9
NC204				IAmb	IAmb	16 22 12.1	
	comp=Z,21nm,1.1s						
NAO01	NORSAR Array S	87.21	333	P	P	16 21 54.0	-1.3
OSL	Oslo	87.65	332	eP	P	16 21 56.9	-0.5
MORC	Moravsky Berou	87.68	321	⇑P	P	16 21 58.2	+0.4
MORC	Moravsky Berou	87.68	321	eP	P	16 21 58.3	+0.4
MORC	Moravsky Berou	87.68	321	P	P	16 21 57.0	-0.9
MORC				pmax	pmax		
	comp=Z,24nm,1.4s						
MORC	Moravsky Berou	87.68	321	P	P	16 21 57.0	-0.9
MORC				IAmb	IAmb	16 21 58.7	
	comp=Z,24nm,1.4s						
JAVC	Velka Javorina	87.90	320	eP	P	16 22 00.6	+1.7
DLBC	Dease Lake	88.04	30	P	P	16 21 58.2	-1.2
DLBC				IAmb	IAmb	16 22 02.7	
	comp=Z,24nm,1.5s						
KRLC	Kraliky	88.05	321	ePCP	P	16 21 59.5	-0.1
KSP	Ksiaz	88.08	322	eP	P	16 21 58.7	-0.9
KSP	Ksiaz	88.08	322	P	P	16 22 00.5	+0.8
KSP				pmax	pmax		
	comp=Z,22nm,1.2s						
MORH	Mrgy, Hungar	88.11	317	⇑P	P	16 21 59.4	-0.5
DPC	Dobruska-Polom	88.23	322	P	P	16 22 01.4	+1.0
DPC				pmax	pmax		
	comp=Z,78nm,2.0s						
DPC	Dobruska-Polom	88.23	322	ePCP	P	16 22 00.3	-0.1
AKN	Aaknes	88.32	335	eP	P	16 21 58.6	-1.9
VRAC	Vranov	88.42	321	⇑P	P	16 22 01.8	+0.5
VRAC	Vranov	88.42	321	eP	P	16 22 01.8	+0.5
VRAC	Vranov	88.42	321	P	P	16 22 02.3	+1.0
VRAC				pmax	pmax		
	comp=Z,24nm,1.5s						
KRUC	Moravsky	88.62	320	eP	P	16 22 02.8	+0.6
KRUC	Moravsky	88.62	320	P	P	16 22 03.1	+0.9
RES	Resolute Bay	88.80	9	P	P	16 22 02.0	-0.5
RES				pmax	pmax		
	comp=Z,21nm,0.9s						
RES	Resolute Bay	88.80	9	P	P	16 22 02.0	-0.5
RES				IAmb	IAmb	16 22 03.5	
	comp=Z,21nm,0.8s						
PDG	Podgorica	88.86	313	⇑P	P	16 22 03.7	+0.3
PVCC	Panska Ves	89.22	322	P	P	16 22 05.9	+0.9
PVCC				pmax	pmax		
	comp=Z,10.0nm,1.2s						
BRG	Berggiesshubel	89.47	323	P	P	16 22 06.7	+0.6
BRG				pmax	pmax		
	comp=Z,22nm,1.2s						
BRG	Berggiesshubel	89.47	323	i P	P	16 22 06.6	+0.4
BRG				Amp		16 22 07.5	
	comp=Z,20nm,1.1s						
BRG				ex	x	16 22 38.3	
BRG				Amp		16 22 39.8	
	comp=Z,6.7nm,1.1s						
BRG	Berggiesshubel	89.47	323	eP	P	16 22 07.1	+1.0
	comp=Z,20nm,1.1s,baz=66,slow=4.7						
FBE	Freiberg	89.80	323	eP	P	16 22 08.9	+1.2
	comp=Z,34nm,1.3s,baz=66,slow=4.7						
BLS5	Blasjo	89.82	332	eP	P	16 22 06.5	-1.2
CLL	Collm	89.86	323	i P	P	16 22 07.4	-0.5
	comp=Z,21nm,1.3s						
CLL				eS	S	16 32 48.0	-0.9
CLL	Collm	89.86	323	P	P	16 22 07.1	-0.8
CLL				pmax	pmax		
	comp=Z,20nm,1.3s						
CLL	Collm	89.86	323	P	P	16 22 07.1	-0.8
CLL				IAmb	IAmb	16 22 09.3	
	comp=Z,20nm,1.3s						
CLL	Collm	89.86	323	eP	P	16 22 08.5	+0.5
	baz=66,slow=4.7						
MBAR	Mbarara	89.99	269	⇓eP	P	16 22 10.7	+1.2
MBAR				pmax	pmax		
	comp=Z,7.0nm,1.0s						
CKRC	Cesky Krumlov	90.00	321	ePCP	P	16 22 08.8	+0.1
SOKA	Soboth	90.31	318	eP	P	16 22 09.7	-0.6
	comp=Z,3.5nm,0.8s						
BSEG	Bad Segeberg	90.32	326	P	P	16 22 10.3	+0.3
BSEG				pmax	pmax		
	comp=Z,19nm,1.2s						
BSEG	Bad Segeberg	90.32	326	eP	P	16 22 10.7	+0.7
	comp=Z,37nm,1.7s,baz=66,slow=4.7						
KHC	Kasperske Hory	90.33	321	P	P	16 22 09.4	-0.9
KHC				pmax	pmax		
	comp=Z,11nm,1.3s						
KHC	Kasperske Hory	90.33	321	ePCP	P	16 22 10.1	-0.2
KHC	Kasperske Hory	90.33	321	P	P	16 22 09.4	-0.9
GEC2	GERESS Array S	90.36	321	P	P	16 22 09.4	-1.1
GEC2				IAmb	IAmb	16 22 11.6	
	comp=Z,14nm,1.1s						
GEC2	GERESS Array S	90.36	321	eP	P	16 22 11.4	+0.9
	comp=Z,27nm,1.5s,baz=66,slow=4.7						
GERES	GERESS Array B	90.36	321	P	P	16 22 10.8	+0.3
	comp=Z,3.9nm,0.8s,baz=60,slow=5.3,SNR=23						
GERES				pP	pP	16 22 42.0	-2.4
	comp=Z,1.5nm,0.8s,baz=57,slow=4.9,SNR=3.2						
GERES	GERESS Array B	90.36	321	P	P	16 22 09.7	-0.8
GERES	GERESS Array B	90.36	321	P	P	16 22 09.7	-0.8
MOA	Molln	90.38	320	i P	P	16 22 10.9	+0.5
	comp=Z,6.5nm,0.6s						
FLTG	Flechtingen	90.47	325	eP	P	16 22 11.0	+0.3
	comp=Z,17nm,1.5s,baz=66,slow=4.7						
NKC	Novy Kostel	90.59	322	P	P	16 22 12.2	+0.8
NKC				pmax	pmax		
	comp=Z,7.0nm,2.3s						
NKC	Novy Kostel	90.59	322	ePCP	PcP	16 22 12.0	-0.5
WERD	Werda	90.59	323	eP	P	16 22 12.3	+0.8
	comp=Z,22nm,1.4s,baz=66,slow=4.7						
NEUB	Neuenburg	90.61	323	eP	P	16 22 12.3	+0.8
	comp=Z,34nm,1.3s,baz=66,slow=4.7						
GUNZ	Gunzen	90.61	323	eP	P	16 22 12.5	+1.0
	comp=Z,22nm,1.2s,baz=66,slow=4.7						
WERN	Wernitzgruen	90.61	322	eP	P	16 22 12.5	+0.9
	comp=Z,69nm,2.4s,baz=66,slow=4.7						
PLN	Plauen	90.67	323	eP	P	16 22 12.6	+0.8
	comp=Z,25nm,1.4s,baz=66,slow=4.7						
WET	Wettzell	90.75	321	P	P	16 22 12.4	+0.2
WET				pmax	pmax		
	comp=Z,9.0nm,1.5s						
WET	Wettzell	90.75	321	eP	P	16 22 13.3	+1.1
	comp=Z,20nm,1.5s,baz=66,slow=4.7						
MANZ	Manzenberg	90.89	322	eP	P	16 22 14.1	+1.2
	comp=Z,16nm,1.3s,baz=66,slow=4.7						
ROTZ	Rotzenmuhle	90.92	322	eP	P	16 22 14.2	+1.3
	comp=Z,20nm,1.2s,baz=66,slow=4.7						
CLZ	Clausthal	91.15	324	eP	P	16 22 15.2	+1.2
	comp=Z,24nm,1.5s,baz=66,slow=4.7						
KBA	Koelnbreinsper	91.24	319	eP	P	16 22 13.9	-0.8
	comp=Z,6.0nm,0.9s						
KBA	Koelnbreinsper	91.24	319	P	P	16 22 14.4	-0.3
KBA				pmax	pmax		
	comp=Z,9.0nm,1.4s						
RJOB	Jochberg	91.34	320	eP	P	16 22 15.7	+0.7
	comp=Z,58nm,1.1s,baz=66,slow=4.7						
GRB1	Grafenberg Arr	91.39	322	P	P	16 22 16.0	+0.8
GRB1				pmax	pmax		
	comp=Z,21nm,1.0s						
GRF	Grafenberg Arr	91.53	322	eP	P	16 22 17.0	+1.2
	comp=Z,35nm,1.7s,baz=66,slow=4.7						
UBBA	Unterbreizbach	91.79	324	eP	P	16 22 17.8	+1.0
	comp=Z,35nm,1.8s,baz=66,slow=4.7						
ABTA	Abfaltersbach	91.89	319	eP	P	16 22 16.3	-1.4
	comp=Z,10nm,1.1s						
WTTA	Wattenberg	92.25	320	eP	P	16 22 19.2	-0.1
	comp=Z,23nm,1.0s,SNR=8.1						
WTTA	Wattenberg	92.25	320	P	P	16 22 19.3	-0.1
WTTA				pmax	pmax		
	comp=Z,28nm,1.2s						
WATA	Walderalm	92.25	320	eP	P	16 22 18.9	-0.4
	comp=Z,14nm,1.0s,SNR=5.1						
IBBN	Ibbenburen	92.41	325	eP	P	16 22 20.5	+0.8
	comp=Z,32nm,1.4s,baz=66,slow=4.7						
KASTN	Kahler Asten	92.53	324	eP	P	16 22 21.5	+1.1
	comp=Z,44nm,1.9s,baz=66,slow=4.7						
SQTA	Sankt Quirin	92.53	320	eP	P	16 22 19.8	-0.8
	comp=Z,23nm,1.0s,SNR=7.2						
MOTA	Moosalm	92.55	320	eP	P	16 22 20.1	-0.6
	comp=Z,19nm,1.0s,SNR=7.0						
SUMG	Summit	92.56	354	i P	P	16 22 20.0	-0.6
	comp=Z,42nm,1.2s						
SUMG	Summit	92.56	354	P	P	16 22 19.6	-1.0
SUMG				pmax	pmax		
	comp=Z,7.0nm,1.0s						
SUMG	Summit	92.56	354	P	P	16 22 19.6	-1.0
SUMG	Summit	92.56	354	i P	P	16 22 20.0	-0.6
SUMG				IAmb	IAmb	16 22 23.6	
	comp=Z,42nm,1.2s						
YKA	Yellowknife Ar	92.59	22	P	P	16 22 20.2	-0.1
	comp=Z,17nm,0.8s,baz=315,slow=3.9,SNR=194						
FETA	Feichten	92.91	320	eP	P	16 22 22.2	-0.2
	comp=Z,18nm,1.0s,SNR=6.2						
TNS	Taunus Mts	92.94	323	eP	P	16 22 23.4	+1.1
	comp=Z,19nm,1.3s,baz=66,slow=4.7						
UBR	Ueberruh	93.03	321	eP	P	16 22 23.4	+0.5
	comp=Z,39nm,1.5s,baz=66,slow=4.7						
BUG	Bochum--Univer	93.07	325	eP	P	16 22 23.5	+0.7
	comp=Z,33nm,1.5s,baz=66,slow=4.7						
DAVA	Damuels	93.33	320	eP	P	16 22 24.9	+0.6
	comp=Z,12nm,1.1s						
SLE	Schleitheim	93.98	321	P	P	16 22 26.0	-1.2
SLE				pmax	pmax		
	comp=Z,14nm,2.1s						
PPT	Papeete	93.98	107	LR	LR	16 56 24.6	
	comp=Z,24nm,20.2s,baz=292,slow=30						
WLF	Walferdange	94.52	324	dP	P	16 22 30.3	+0.8
WLF	Walferdange	94.52	324	P	P	16 22 28.6	-0.9
WLF				pmax	pmax		
	comp=Z,26nm,1.2s						
WLF	Walferdange	94.52	324	P	P	16 22 28.6	-0.9
WLF	Walferdange	94.52	324	eP	P	16 22 30.8	+1.3
	comp=Z,26nm,1.1s,baz=66,slow=4.7						
BGES	Gesves	94.78	325	dP	P	16 22 30.3	-0.4
BMRD	Maredsous	95.00	325	dP	P	16 22 30.2	-1.5
DOU	Dourbes	95.20	324	dP	P	16 22 31.7	-0.9
DOU	Dourbes	95.20	324	P	P	16 22 32.0	-0.6
DOU				pmax	pmax		
	comp=Z,11nm,1.6s						
LSZ	Lusaka	95.84	256	P	P	16 22 35.9	-0.5
LSZ				pmax	pmax		
	comp=Z,17nm,1.3s						
LSZ	Lusaka	95.84	256	P	P	16 22 35.9	-0.5
ICESG	Greenland Ices	95.99	353	eP	P	16 22 35.7	-0.5
L04D	Klamath Falls	99.69	42	P	Pdif	16 22 53.1	-0.2
	baz=299						
NEW	Newport	99.69	35	P	Pdif	16 22 52.9	-0.1
	baz=304						
M02C	Callahan	99.72	43	P	Pdif	16 22 53.3	0.0
	baz=298						
HLID	Hailey	103.91	38	P	Pdif	16 23 11.3	-0.7
	baz=305						
VNA2	Neumayer--Watz	115.00	197	P	PKiKP	16 27 47.5	-1.2
TX31	Lajitas Ar. Si	119.38	44	PKPdf	PKPdf	16 27 57.6	-1.0
TX32	Lajitas Array	119.38	44		PKPdf	16 27 57.4	-1.2
TXAR	Lajitas Array	119.38	44	PKP	PKiKP	16 27 58.8	+0.1
	comp=Z,2.1nm,0.7s,baz=222,slow=0.7,SNR=23						
TXAR	Lajitas Array	119.38	44	PKIKP	PKPdf	16 27 57.5	-1.1
TXAR	Lajitas Array	119.38	44	PKPdf	PKPdf	16 27 57.5	-1.1
S39A	Bolivar	119.56	31		PKPdf	16 27 57.2	-1.4
R40A	Maddies Statio	119.60	29	PKPdf	PKPdf	16 27 57.7	-1.0
U40A	Yellville	120.84	31	PKPdf	PKPdf	16 28 00.1	-1.0
JCT	Junction City	121.17	41	PKIKP	PKPdf	16 28 01.1	-0.9
JCT	Junction City	121.17	41	PKPdf	PKPdf	16 28 01.1	-0.9
O49A	Covington	121.37	22		PKPdf	16 28 01.1	-0.9
DBIC	Dimbokro	122.10	287	PKP	PKiKP	16 28 04.4	+0.2
	comp=Z,3.5nm,0.8s,baz=239,slow=1.7,SNR=3.6						
WVT	Waverly	123.42	27	PKIKP	PKPdf	16 28 05.1	-0.9
WVT	Waverly	123.42	27	PKPdf	PKPdf	16 28 05.1	-0.9
CPCT	Cooper Cave	125.42	25	PKPdf	PKPdf	16 28 08.1	-1.8
JTS	Las Juntas de	145.05	48	PKIKP	PKPbc	16 28 44.6	-1.8
JTS	Las Juntas de	145.05	48		PKPbc	16 28 44.6	-1.8
SDDR	Presa de Saban	145.25	20		PKPbc	16 28 46.3	-0.7
PDPR	Patillas Dam,	147.57	12	PKPbc	PKPbc	16 28 52.4	-1.3
BCIP	Isla Barro Col	149.38	43	PKP2	PKPbc	16 28 57.2	-1.2
BCIP	Isla Barro Col	149.38	43		PKPbc	16 28 57.2	-1.2
PLCA	Paso Flores	151.60	162	PKPbc	PKPbc	16 29 03.2	+0.1
	comp=Z,9.4nm,0.8s,baz=204,slow=2.8,SNR=22						
PLCA	Paso Flores	151.60	162	PKIKP	PKPbc	16 29 02.6	-0.5
PLCA	Paso Flores	151.60	162		PKPbc	16 29 02.6	-0.5
SDV	Santo Domingo	154.73	27	PKPbc	PKPbc	16 29 09.4	-1.4
RCBR	Riachuelo	155.48	287	PKPab	PKPab	16 29 29.5	+0.2
	comp=Z,5.0nm,0.7s,baz=102,slow=1.5,SNR=4.4						
PTGA	Pitinga	166.85	2	PKPab	PKPab	16 30 17.5	-1.0
	comp=Z,8.9nm,1.0s,baz=0.9,slow=5.0,SNR=9.1						
PTGA	Pitinga	166.85	2	PKPab	PKPab	16 30 17.3	-1.2
CPUP	Villa Florida	167.53	189	PKPab	PKPab	16 30 21.0	-0.2
	comp=Z,0.6nm,0.3s,baz=101,slow=3.9,SNR=3.7						
BDFB	Brasilia	168.84	260	PKPab	PKPab	16 30 27.4	-0.4
	comp=Z,2.2nm,0.4s,baz=86,slow=6.0,SNR=3.7						
SAML	Samuel	173.81	37	PKP2	PKPab	16 30 48.0	-1.5
SAML	Samuel	173.81	37		PKPab	16 30 48.0	-1.5
SIV	San Ignacio	177.42	142	PKP	PKPdf	16 29 19.7	0.0
	comp=Z,1.8nm,0.8s,baz=120,slow=2.0,SNR=7.3						

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*IDC **10** 16:10:22.4±1.8, 7°.72S×128°.59E, h135^{km}±23^{km}, mb3.3/2, mb1 3.6/7, mb1mx3.2/45, mbtmp4.0/7, Error ellipse: s-maj=32.7km s-min=15.6km az=105.0*

ISC 10 16:10:22.1±0.8, **7°.84S**±0°.06×**128°.55E**±0°.10, **h150**^{km}, **n7**, σ2^{s}.89/11, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	5.37	244	P	Pn	16 11 41.8	+1.2
	4.4nm,0.3s,baz=38,slow=3.1,SNR=10						
BATI				S	Sn	16 12 38.0	-3.7
	11nm,0.3s,baz=188,slow=1.0,SNR=14						
SIJI	Sorong	7.43	21	P	Pn	16 12 07.2	-0.8
	1.5nm,0.3s,baz=57,slow=22,SNR=20						
SIJI				S	Sn	16 13 28.4	-2.8
	1.5nm,0.3s,baz=2.0,slow=5.6,SNR=6.9						
FITZ	Fitzroy Crossi	10.59	195	P	Pn	16 12 51.0	+1.1
	1.4nm,0.3s,baz=17,slow=13,SNR=58						
FITZ				S	Sn	16 14 44.1	-2.9
	2.9nm,0.3s,baz=107,slow=17,SNR=7.3						
WRA	Warramunga Arr	13.28	156	P	Pn	16 13 26.4	+1.6
	2.4nm,0.3s,baz=342,slow=13,SNR=71						
WRA				S	Sn	16 15 48.3	-3.6
	1.3nm,0.3s,baz=329,slow=23,SNR=8.3						
ASAR	Alice Springs	16.55	163	P	Pn	16 14 09.6	+3.8
	0.8nm,0.3s,baz=328,slow=9.5,SNR=92						
SONM	Songino Array	58.79	343	P	P	16 20 06.5	+1.8

	0.9nm,0.8s,baz=170,slow=9.1,SNR=2.5						
MKAR	Makanchi Array	68.15	328	P	P	16 21 06.5	+0.5
	0.4nm,0.7s,baz=130,slow=6.9,SNR=0.9						

MAN 10 16:20:04.6, 9°.83N×122°.27E, h7km, mb4.3, ML3.2, MS2.9, Negros

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NNC 10 16:36:49.1±5.4, 37°.21N×71°.07E, h0km, mb3.6, mpv3.6, 2C-3D, Error ellipse: s-maj=43.6km s-min=40.7km az=144.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IUG	Iuzhnay	4.99	351	Pg	Pn	16 38 07.7	+2.3
	33nm,0.2s						
IUG				Lg	Lg	16 39 08.1	
	17nm,0.3s						
MRKS	Merke	5.77	16	Pg	Pn	16 38 16.4	+0.3
	2.0nm,0.3s						
MRKS				Lg	Lg	16 39 22.8	
	5.3nm,1.0s						
KK31	Karatay Array	5.90	356	P	Pn	16 38 18.6	+0.8
	1.4nm,0.3s,baz=169,slow=12,SNR=41						
KK31				⇓S	Sn	16 39 26.7	+0.6
	2.7nm,0.3s						
AAK	Ala-Archa	6.02	25	⇑P	Pn	16 38 19.9	+0.3
	0.6nm,0.3s						
AAK				⇑S	Sn	16 39 31.5	+2.1
	6.4nm,1.0s						
TKM2	Tokmak 2	6.68	30	⇓P	Pn	16 38 27.4	-1.2
	0.9nm,0.8s						
TKM2				⇓S	Sn	16 39 46.2	+0.7
	1.4nm,0.7s						

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*ECX **10** 16:58:49.8±0.8, 31°.51N×115°.67W, h5km±3km, MD2.2, ML2.4, Fault plane solution: NP1:φs344.90000°, δ75.52000°, λ-26.57000°.*
*MEX **10** 16:58:49.8±0.3, 31°.44N×115°.79W, h10km, MD3.6*
ISC 10 16:58:48.1±1.0, 31°.52N±0°.03×115°.63W±0°.03, h15km±8km, n15, σ0s.46/26, 5C-8D, Baja California

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VTX	Valle De La Tr	0.18	225	⇑eP	Pb	16 58 53.0	-0.1
VTX				eS	Sg	16 58 55.3	-0.2
SJX	San Joaquin	0.37	311	⇓iP	Pn	16 58 59.4	+0.6
SJX				eS	Sn	16 59 06.7	+1.0
SPIG	San Pedro Mart	0.49	163	⇓eP	Pb	16 58 58.8	+0.2
	baz=325,slow=14						
SPIG				i S	Sb	16 59 05.8	0.0
SPIG	San Pedro Mart	0.49	163	eP	Pb	16 58 58.5	-0.1
SPIG				eS	Sb	16 59 05.8	0.0
ECBX	El Chinero	0.50	95	⇑iP	Pg	16 58 58.2	+0.2
ECBX				eS	Sg	16 59 05.0	+0.2
SPX	San Pedro Mart	0.50	163	⇓iP	Pb	16 58 58.8	+0.1
SPX				eS	Sb	16 59 05.7	-0.3
SPX				IAML		16 59 06.3	
	comp=N,203nm,0.1s						
SPX				e		16 59 06.3	
SVX	San Vicente	0.56	250	⇑eP	Pg	16 58 59.2	+0.1
SVX				eS	Sg	16 59 06.6	-0.1
SFX	San Felipe	0.82	125	⇓eP	Pn	16 59 05.3	+0.2
SFX				eS	Sn	16 59 16.5	-0.5
CCX	Cicese	0.94	292	eP	Pb	16 59 06.0	-0.2
SQX	San Quintin	0.96	193	⇓eP	Pb	16 59 06.4	0.0
SQX				eS	Sb	16 59 18.8	-0.1
RMX	La Rumorosa	1.14	341	⇓eP	Pn	16 59 08.9	-0.8
RMX				eS	Sb	16 59 23.0	-1.4
CBX	Cerro Bola	1.18	312	⇑eP	Pb	16 59 10.5	+0.3
CBX				IAML		16 59 26.5	
	comp=N,144nm,0.3s						
CBX				⇑e		16 59 26.5	
IKP	In-Ko-Pah, Jac	1.20	340	⇓eP	Pb	16 59 10.9	+0.4
TJIG	Tijuana	1.27	316	eP	Pb	16 59 11.8	+0.1
TJIG				eS	Sb	16 59 27.8	-0.1
MONP2	Monument Peak	1.52	334	⇓eP	Pb	16 59 16.4	+0.2

ASRS 10 17:01:29.8±0.2, 53°N±1°×97°.6E±0°.8, h5km, MLh3.8/12, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/tab confirmed, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TDJR	Todzha	1.30	223	Pg	Pn	17 01 54.6	-0.1
TDJR				Sg	Sg	17 02 11.2	-0.4
ORY	Orie	2.19	320	Pg	Pb	17 02 10.1	+0.2
ORY				Sg	Sg	17 02 39.1	-0.9
KZLR	Kyzyl	2.51	230	Pg	Pg	17 02 16.7	-1.3
KZLR				Sg	Sb	17 02 48.4	+1.7
KTRR	Kuturchin	2.52	310	Pg	Pb	17 02 15.6	0.0
KTRR				Sg	Sg	17 02 50.5	-0.3
ARDR	Aradan	2.61	254	Pg	Pb	17 02 18.0	+0.9
ARDR				Sg	Sg	17 02 52.8	-0.9
MOY	Mondy	2.70	127	Pg	Pb	17 02 18.4	-0.2
MOY				Sg	Sg	17 02 54.3	-2.1
KNGR	Kungurtug, Tuv	2.76	180	Pg	Pb	17 02 20.3	+0.7
KNGR				Sg	Sg	17 02 56.4	-1.8
BLRR	Bol'shaya Rech	3.10	266	Pg	Pb	17 02 25.9	+0.5
BLRR				Sg	Sb	17 03 06.2	+2.7
ABNR	Abakan	3.67	278	Pg	Pg	17 02 37.6	-2.5
ABNR				Sg	Sg	17 03 24.6	-2.9
CERR	Cheremushki	3.73	265	Pg	Pb	17 02 38.6	+2.4
CERR				Sg	Sg	17 03 25.9	-3.8
GZLN	Zheleznogorsk	3.74	326	Sg	Sg	17 03 28.1	-1.6
DJOS	Djoyskaya Sosn	3.75	264	Pg	Pg	17 02 39.9	-1.8
DJOS				Sg	Sg	17 03 26.5	-3.8
SHTK	Zheleznogorsk-	3.76	324	Pg	Pb	17 02 37.5	+1.0
SHTK				Sg	Sg	17 03 28.9	-1.4
DJO	Djoy, Khakassi	3.87	264	Pg	Pg	17 02 42.1	-1.7
DJO				Sg	Sg	17 03 30.6	-3.2
TLY	Talaya	4.08	112	Pg	Pg	17 02 45.4	-2.6
TLY				Sg	Sb	17 03 36.0	+4.3
TBTR	Tabat	4.14	267	Pg	Pb	17 02 45.4	+2.3
TBTR				Sg	Sg	17 03 39.7	-2.8
IRK	Irkutsk	4.23	103	Pg	Pb	17 02 45.0	+0.4
IRK				Sg	Sg	17 03 43.9	-1.6
SHRR	Shira	4.52	288	Pg	Pb	17 02 51.2	+1.7
SHRR				Sg	Sg	17 03 50.8	-3.9
ZAK	Zakamensk	4.63	128	Pg	Pb	17 02 53.7	+2.2
ZAK				Sg	Sg	17 03 55.8	-2.7
TEL	Teeli	5.09	246	Pg	Pg	17 03 04.5	-2.8
TEL				Sg	Sg	17 04 10.2	-3.0
LUZB	Luzhba, Kemero	5.17	277	Pg	Pb	17 03 03.1	+2.4
LUZB				Sg	Sg	17 04 11.9	-4.0
TRG	Tyrgan	5.34	93	Pg	Pb	17 03 06.4	+2.9
TRG				Sg	Sg	17 04 14.7	-6.5
BRCR	Berchikul'	5.85	297	Pg	Pb	17 03 15.4	+3.2
BRCR				Sg	Sg	17 04 32.7	-4.7
TASR	Tashtagol	5.87	268	Pg	Pb	17 03 16.6	+4.1
TASR				Sg	Sg	17 04 31.3	-6.7
ARTR	Artybash	6.45	260	Pg	Pg	17 03 29.8	-3.5
ARTR				Sg	Sg	17 04 53.0	-3.9
ULGR	Ulagan, Altay	6.53	249	Pg	Pg	17 03 30.7	-4.0
ULGR				Sg	Sg	17 04 56.9	-2.3
CUR	Chagan-Uzun	6.58	244	Pg	Pg	17 03 33.7	-2.0
CUR				Sg	Sg	17 04 55.7	-5.2
ELT	Eltsovka	6.78	274	Sg	Sg	17 05 00.8	-6.6
CHBI	Chibit, Altay	6.93	248	Pg	Pg	17 03 39.3	-3.2
CHBI				Sg	Sg	17 05 09.6	-2.6
SALR	Pechorkino, Sa	7.09	283	Sg	Sg	17 05 15.7	-1.5
DGZ	Jazzator, Alta	7.30	244	Pg	Pg	17 03 49.5	0.0
DGZ				Sg	Sg	17 05 22.1	-1.8
YLYR	Ulyunkhan	8.14	74	Pg	Pn	17 03 28.6	+0.1
YLYR				Sg	Sg	17 05 42.5	-8.4
ULN	Ulaanbaatar	8.16	129	Sg	Sg	17 05 47.4	-4.3

IDC 10 17:07:56.7±2.3, 28°.25N×105°.51E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.2/45, mbtmp3.3/3, Error ellipse: s-maj=550.2km s-min=29.9km az=54.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	25.95	322	P	P	17 13 30.8	0.0
	0.2nm,0.5s,baz=119,slow=9.0,SNR=2.7						
WRA	Warramunga Arr	55.43	147	P	P	17 17 33.6	+0.4
	0.3nm,0.5s,baz=333,slow=8.3,SNR=5.7						
ASAR	Alice Springs	58.43	149	P	P	17 17 53.9	-0.6
	0.3nm,0.7s,baz=328,slow=7.0,SNR=5.0						

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*IDC **10** 17:25:43.3±1.2, 32°.91S×178°.21W, h0km, mb4.6/4, mb1 4.8/5, mb1mx4.2/29, mbtmp4.6/5, ML4.4/1, MS3.5/10, Ms1 3.6/10, ms1mx3.4/24, Error ellipse: s-maj=38.7km s-min=30.0km az=145.0*
*NEIC **10** 17:25:47.9±2.2, 33°.13S±0°.06×178°.1W±0°.2, h35km±4km, mb4.7/20, Error ellipse: s-maj=18.7km s-min=8.2km az=105.0*
*WEL **10** 17:25:48.6±0.6, 33°S±8°×17°9W±1°8, h33km, M4.4/25, mB4.9/13, ML5.0/25, MLv4.8/25, Mw(mB)4.2/13, Error ellipse: s-maj=0.0km s-min=0.0km az=112.7*
*NOU **10** 17:26:29.8, 36°.13S×179°.59W, h105km, MLv4.3, East of North Island, N.Z.*
ISC 10 17:25:47.9±0.6, 33°.11S±0°.05×178°.1W±0°.1, h34km, n107, σ1s.82/129, mb4.7/11, MS3.4/10, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.84	3	P	Pn	17 26 41.2	-3.4
GLKZ				S	Sn	17 27 22.7	-5.8
RAO	Raoul Island	3.85	3	Pn	Pn	17 26 45.7	+1.0
RAO				Sn	Sn	17 27 23.6	-5.1
MXZ	Matakaoa Point	5.31	212	Pn	Pn	17 27 04.4	-0.3
MXZ				Sn	Sn	17 28 03.0	-1.7
MXZ	Matakaoa Point	5.31	212	P	Pn	17 27 03.6	-1.1
MXZ				S	Sn	17 28 03.5	-1.1
PKGZ	Pakihiroa	5.68	212	P	Pn	17 27 09.3	-0.6
PKGZ				S	Sn	17 28 13.4	-0.5
HAZ	Te Kaha	5.71	215	P	Pn	17 27 09.9	-0.3
HAZ				S	Sn	17 28 15.4	+0.9
RUGZ	Raukumara Rang	5.92	214	P	Pn	17 27 13.6	+0.3
RUGZ				S	Sn	17 28 22.5	+2.4
TWGZ	Tauwhareparae	5.96	211	P	Pn	17 27 13.8	0.0
TWGZ				S	Sn	17 28 22.0	+1.2
CNGZ	Carnagh Statio	6.13	208	P	Pn	17 27 17.6	+1.6
TKGZ	Te Karaka	6.24	210	P	Pn	17 27 20.3	+2.8
TKGZ				S	Sn	17 28 28.3	+0.8
MWZ	Matawai	6.29	213	P	Pn	17 27 17.3	-1.0
MWZ				S	Sn	17 28 29.0	0.0
URZ	Urewera	6.43	216	Pn	Pn	17 27 20.3	+0.2
	8.2nm,0.3s,baz=27,slow=1.2,SNR=36						
URZ				Sn	Sn	17 28 31.9	-0.4
	16nm,0.3s,baz=134,slow=9.7,SNR=9.0						
URZ	Urewera	6.43	216	Pn	Pn	17 27 19.5	-0.6
URZ				Sn	Sn	17 28 31.4	-0.9
URZ	Urewera	6.43	216	P	Pn	17 27 20.0	-0.1
URZ				S	Sn	17 28 32.3	+0.1
RIGZ	Rimuhau	6.50	210	P	Pn	17 27 20.8	-0.3
RIGZ				S	Sn	17 28 33.6	-0.5
PRGZ	Paritu Road	6.64	208	P	Pn	17 27 22.7	-0.3
PRGZ				S	Sn	17 28 37.0	-0.5
SNGZ	Shannon Statio	6.74	212	P	Pn	17 27 25.6	+1.2
SNGZ				S	Sn	17 28 40.7	+0.6
MUGZ	Murupara	6.77	216	P	Pn	17 27 25.2	+0.5
RTZ	Ruatahuna	6.77	214	P	Pn	17 27 25.2	+0.2
RTZ				S	Sn	17 28 40.0	-0.9
MHGZ	Mahia Peninsul	6.83	207	P	Pn	17 27 25.7	+0.1
MHGZ				S	Sn	17 28 42.3	+0.2
RAHZ	Arahi	6.97	212	P	Pn	17 27 28.9	+1.4
RAHZ				S	Sn	17 28 45.5	-0.1
MTHZ	Maungataniwha	7.03	214	P	Pn	17 27 29.8	+1.5
MTHZ				S	Sn	17 28 47.9	+0.8
WHHZ	Waihua	7.03	211	P	Pn	17 27 30.4	+2.0
WHHZ				S	Sn	17 28 47.0	-0.2
OUZ	Omahuta	7.17	251	Pn	Pn	17 27 32.4	+2.2
NMHZ	Naumai	7.24	213	P	Pn	17 27 32.5	+1.2
NMHZ				S	Sn	17 28 51.9	-0.5
ARHZ	Aropaoanui	7.29	211	P	Pn	17 27 32.9	+1.0
ARHZ				S	Sn	17 28 52.7	-0.8
BKZ	Black Stump Fm	7.44	214		Pn	17 27 32.9	-1.2
BKZ	Black Stump Fm	7.44	214	P	Pn	17 27 33.8	-0.2
BKZ				S	Sn	17 28 56.2	-1.1
MCHZ	McNeill Hill	7.57	212	P	Pn	17 27 36.1	+0.3
MCHZ				S	Sn	17 29 00.2	-0.3
KWHZ	Kaweka Forest	7.68	213	P	Pn	17 27 36.7	-0.6
KWHZ				S	Sn	17 29 01.2	-2.0
TMVZ	Te Maari	7.79	218	P	Pn	17 27 38.6	-0.4
TMVZ				S	Sn	17 29 03.9	-2.1
HIZ	Hauiti	7.84	225	Pn	Pn	17 27 40.0	+0.5
OTVZ	Oturere	7.85	218	P	Pn	17 27 39.6	-0.1
OTVZ				S	Sn	17 29 05.2	-2.2
WTVZ	West Tongariro	7.85	218	P	Pn	17 27 42.1	+2.3
KRHZ	Kereru	7.88	213	P	Pn	17 27 39.0	-1.1
KRHZ				S	Sn	17 29 04.6	-3.5
NGZ	Ngauruhoe	7.89	218	P	Pn	17 27 41.4	+1.1
BHHZ	Black Hill Sta	7.90	215	P	Pn	17 27 40.7	+0.3
BHHZ				S	Sn	17 29 06.0	-2.6
MOVZ	Moawhango	7.99	216	P	Pn	17 27 42.0	+0.4
MOVZ				S	Sn	17 29 07.2	-3.6
WNVZ	Wahianoa	8.01	217	P	Pn	17 27 42.7	+0.8
WNVZ				S	Sn	17 29 08.9	-2.4
PRHZ	Porangahau	8.28	209	P	Pn	17 27 45.4	-0.2
PRHZ				S	Sn	17 29 14.6	-3.3
VRZ	Vera Road	8.31	222	P	Pn	17 27 49.2	+3.3
BFZ	Birch Farm	8.79	209	Pn	Pn	17 27 49.8	-2.8
MSWZ	Moikau Station	9.82	211	Pn	Pn	17 28 04.6	-2.1
PLWZ	Palliser	9.94	210	Pn	Pn	17 28 05.5	-2.9
SNZO	South Karori	9.97	213	Pn	Pn	17 28 05.4	-3.3
BHW	Baring Head	9.98	212	Pn	Pn	17 28 07.0	-1.8
TUWZ	Tuamarina	10.42	215	Pn	Pn	17 28 13.2	-1.7
NNZ	Nelson	10.54	217	Pn	Pn	17 28 14.2	-2.3
CMWZ	Cape Campbell	10.55	213	Pn	Pn	17 28 15.2	-1.3
BSWZ	Blackbirch Sta	10.68	214	Pn	Pn	17 28 14.8	-3.6
QRZ	Quartz Range	10.72	221	Pn	Pn	17 28 17.4	-1.6
THZ	Tophouse	11.19	217	Pn	Pn	17 28 23.7	-1.7
KHZ	Kahutara	11.38	213	Pn	Pn	17 28 25.3	-2.7
LTZ	Lake Taylor	12.26	215	Pn	Pn	17 28 37.9	-2.2
OXZ	Oxford	12.78	214	Pn	Pn	17 28 43.6	-3.5
MQZ	McQueen's Vall	12.80	212	Pn	Pn	17 28 43.9	-3.4
RPZ	Rata Peaks	13.55	215	Pn	Pn	17 28 53.7	-3.9
	0.8nm,0.3s,baz=90,slow=6.1,SNR=2.7						
RPZ	Rata Peaks	13.55	215		Pn	17 28 53.4	-4.2
FOZ	Fox Glacier	14.04	219	Pn	Pn	17 29 02.8	-1.5
LBZ	Lake Benmore	14.46	216	Pn	Pn	17 29 10.7	+0.6
ODZ	Otahua Downs	14.74	213	Pn	Pn	17 29 10.7	-3.1
WKZ	Wanaka	15.36	217	Pn	Pn	17 29 17.7	-4.3
WKZ				IAmb	IAmb	17 29 57.6	
	comp=Z,89nm,1.5s						
MSVF	Nonsavu	15.69	346	LR	LR	17 34 22.9	
	comp=Z,198nm,19.3s,baz=154,slow=34						
MSVF	Nonsavu	15.69	346	Pn	Pn	17 29 27.1	+0.5
MLZ	Mavora Lakes	16.19	217	Pn	Pn	17 29 33.1	+0.3
WHZ	Wether Hill Ro	16.65	216	Pn	Pn	17 29 36.3	-2.2
WHZ				IAmb	IAmb	17 30 09.0	
	comp=Z,58nm,1.7s						
DCZ	Deep Cove	16.75	218	Pn	Pn	17 29 37.2	-2.6
DCZ				IAmb	IAmb	17 29 39.6	
	comp=Z,70nm,1.6s						
DZM	Mont Dzumac	17.52	305	LR	LR	17 35 22.9	
	comp=Z,512nm,18.1s,baz=184,slow=33						
DZM	Mont Dzumac	17.52	305	eLR	LR	17 33 46.6	
	comp=Z,438nm,22.9s						
DZM	Mont Dzumac	17.52	305	Pn	Pn	17 29 48.5	-1.1
RAR	Rarotonga	20.15	59	LR	LR	17 36 06.8	
	comp=Z,53nm,21.1s,baz=246,slow=31						
SANVU	Saraoutou	22.04	319	P	P	17 30 41.5	+1.9
SANVU				IAmb	IAmb	17 31 03.6	
	comp=Z,25nm,0.9s						
TBI	Tubuai	27.00	76	eLR	LR	17 38 19.5	
	comp=Z,153nm,27.8s						
PPT2	Papeete2	29.96	66	eLR	LR	17 39 36.2	
	comp=Z,68nm,21.5s						
PPT	Papeete	29.97	66	LR	LR	17 40 41.8	
	comp=Z,51nm,21.9s,baz=219,slow=30						
KNTN	Kanton	30.77	13	P	P	17 32 02.7	+2.5
HNR	Honiara	31.04	314	LR	LR	17 43 09.6	
	comp=Z,70nm,18.1s,baz=152,slow=34						
STKA	Stephens Creek	33.84	261	LR	LR	17 45 26.0	
	comp=Z,215nm,18.1s,baz=65,slow=35						
CTA	Charters Tower	34.21	283	P	P	17 32 30.9	+0.5
	comp=Z,3.4nm,0.5s,baz=118,slow=10.0,SNR=7.0						
CTAO	Charters Tower	34.21	283	P	P	17 32 31.3	+0.9
PMG	Port Moresby	39.72	298	LR	LR	17 47 31.3	
	comp=Z,69nm,18.2s,baz=104,slow=33						
AS31	Alice Springs	42.91	270	P	P	17 33 43.4	-0.1
ASAR	Alice Springs	42.91	270	P	P	17 33 43.1	-0.4
	comp=Z,3.5nm,0.7s,baz=109,slow=7.4,SNR=80						
ASAR	Alice Springs	42.91	270	P	P	17 33 42.9	-0.6
KWAJ	Kwajalein Atol	43.83	339	P	P	17 33 52.3	+1.5
WR0	Warramunga Arr	43.97	275	P	P	17 33 51.7	-0.3
WB2	Warramunga Arr	44.13	275	P	P	17 33 52.8	-0.5
WB2				IAmb	IAmb	17 33 53.6	
	comp=Z,8.2nm,0.6s						
WRAB	Tennant Creek	44.14	275	P	P	17 33 53.3	-0.1
WRAB				IAmb	IAmb	17 34 06.8	
	comp=Z,6.8nm,0.7s						
WRA	Warramunga Arr	44.15	275	P	P	17 33 52.8	-0.7
	comp=Z,5.8nm,0.5s,baz=116,slow=7.6,SNR=101						
WRA				LR	LR	17 51 02.2	
	comp=Z,76nm,18.7s,baz=125,slow=34						
WB0	Warramunga Arr	44.18	275	P	P	17 33 53.5	-0.2
WB0				IAmb	IAmb	17 33 53.9	
	comp=Z,9.2nm,0.6s						
SBA	Scott Base	45.34	184	P	P	17 34 03.9	+1.7
CASY	Casey	52.71	209	P	P	17 35 00.6	+1.9
CASY				IAmb	IAmb	17 35 43.7	
	comp=Z,30nm,1.4s						
QSPA	South Pole Qui	57.01	180	P	P	17 35 29.4	-0.7
QSPA				IAmb	IAmb	17 35 49.8	
	comp=Z,12nm,0.9s						
SNAA	Sanae	75.46	178	P	P	17 37 27.1	-1.0
SNAA				IAmb	IAmb	17 38 00.7	
	comp=Z,6.9nm,1.2s						
MJAR	Matsushiro Arr	80.40	326	P	P	17 37 55.4	-0.4
	comp=Z,3.6nm,0.3s,baz=153,slow=7.2,SNR=31						
KNMB	Chin-men Tao	83.24	305	P	P	17 38 10.0	-0.9
CMAR	Chiang Mai Arr	94.18	289	LR	LR	18 21 28.1	
	comp=Z,8.7nm,21.0s,baz=185,slow=36						
CPUP	Villa Florida	98.39	129	LR	LR	18 20 02.3	
	comp=Z,36nm,18.4s,baz=214,slow=33						
MKAR	Makanchi Array	119.40	309	PKP	PKiKP	17 44 33.8	+0.3
	comp=Z,0.6nm,1.0s,baz=169,slow=1.5,SNR=2.2						
KBZ	Khabaz	146.45	301	PKPbc	PKPbc	17 45 25.2	0.0
	comp=Z,1.7nm,0.8s,baz=160,slow=7.6,SNR=2.7						
FINES	FINESS Array B	147.63	338	PKPbc	PKiKP	17 45 29.2	-0.8
	comp=Z,7.5nm,0.6s,baz=38,slow=4.0,SNR=36						
FINES	FINESS Array B	147.63	338	PKPdf	PKPdf	17 45 26.1	+0.9
FINES					PKPbc	17 45 29.0	+1.0
NB2	NORSAR Subarra	151.40	350	PKP	PKiKP	17 45 39.1	+1.3
	comp=Z,1.1nm,0.6s,baz=13,slow=2.6						
NOA	NORSAR Array B	151.40	350	PKPbc	PKPbc	17 45 36.6	-0.7
	comp=Z,2.7nm,0.8s,baz=14,slow=4.1,SNR=8.0						
AKASG	Malin Array Be	153.32	319	PKPbc	PKPbc	17 45 42.0	+0.1
	comp=Z,0.4nm,0.3s,baz=56,slow=2.7,SNR=5.2						
TORD	Torodi Ar. Bea	160.13	180	PKPab	PKPab	17 46 26.1	+2.0
	comp=Z,0.7nm,0.9s,baz=151,slow=3.3,SNR=2.9						
GERES	GERESS Array B	161.95	334	PKPab	PKPab	17 46 29.8	-1.6
	comp=Z,0.9nm,0.9s,baz=353,slow=6.7,SNR=4.0						

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*IDC **10** 17:27:19.4±1.5, 56°.11N×168°.51W, h0km, mb3.7/8, mb1 3.9/11, mb1mx3.6/56, mbtmp3.7/11, ML3.0/3, MS3.1/3, Ms1 3.2/3, ms1mx2.6/44, Error ellipse: s-maj=41.1km s-min=16.0km az=172.0*
*AEIC **10** 17:27:21±5.9, 56°.39N±0°.05×169°.32W±0°.09, h16km±4km, Error ellipse: s-maj=7.3km s-min=6.9km az=224.0*
*NEIC **10** 17:27:23.9±2.1, 56°.61N±0°.03×169°.1W±0°.1, h19km±5km, mb4.0/5, ML3.7(AEIC), Error ellipse: s-maj=11.1km s-min=3.7km az=78.0*
ISC 10 17:27:23.4±0.7, 56°.63N±0°.09×168°.93W±0°.06, h10km, n60, σ1s.23/57, mb3.6/6, Pribilof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPIA	Saint Paul Isl	0.91	307		Pg	17 27 40.4	-0.4
MSW	Makushin Switc	2.99	155		Pn	17 28 11.7	+0.9
MNAT	Makushin Natee	3.04	154		Pn	17 28 11.5	0.0
AKMO	Akutan Morgan	3.04	146		Pn	17 28 12.4	+0.9
MAPS	Pakushin South	3.05	157		Pn	17 28 11.1	-0.5
ZRO	Akutan Zero	3.05	145		Pn	17 28 12.4	+0.7
MGOD	Makushin Gods	3.08	157		Pn	17 28 11.7	-0.4
AKUT	Akutan	3.08	143		Pn	17 28 12.6	+0.5
AHB	Akutan Harbor	3.08	144		Pn	17 28 12.3	+0.2
MREP	Makushin Rep't	3.09	155		Pn	17 28 11.4	-0.9
AKSA	Akutan Strait	3.11	142		Pn	17 28 12.6	+0.2
UNV	Unalaska Valle	3.12	153		Pn	17 28 11.8	-0.8
OKSP	Okmok Steeple	3.41	174		Pn	17 28 12.7	-3.9
FALS	False Pass	3.59	117	Pn	Pn	17 28 19.0	0.0
NIKH	Nikolski High	3.67	179	Pn	Pn	17 28 19.1	-1.1
SDPT	Sand Point	4.92	102	Pn	Pn	17 28 37.2	0.0
ATKA	Atka Island	5.40	217	Pn	Pn	17 28 42.4	-1.5
CHGN	Chignik	5.84	89	Pn	Pn	17 28 52.6	+2.7
GAMB	Gambell	7.30	350	Pn	Pn	17 29 08.3	-1.5
ANM	Nome	8.14	11	Pn	Pn	17 29 20.1	-1.5
SVW2	Sparrevohn	8.23	52	Pn	Pn	17 29 22.8	+0.1
OHAK	Old Harbor	8.57	80	Pn	Pn	17 29 28.4	+1.0
KDAK	Kodiak Island	8.94	76	Pn	Pn	17 29 30.3	-2.1
	0.3nm,0.3s,baz=156,slow=21,SNR=1.6						
KDAK	Kodiak Island	8.94	76	Pn	Pn	17 29 31.3	-1.2
TTA	Tatalina	9.06	41	Pn	Pn	17 29 33.5	-0.6
RSO	Redoubt South	9.28	59	Pn	Pn	17 29 37.8	+0.6
BRLK	Bradley Lake	10.02	64	Pn	Pn	17 29 48.0	+0.8
SKT	Skwentna	10.36	52	Pn	Pn	17 29 51.8	-0.1
PPLA	Purkeypile	10.49	46	Pn	Pn	17 29 51.4	-2.4
SUA	Susitna One	10.52	55	Pn	Pn	17 29 52.9	-1.3
KTH	Kantishna Hill	11.32	45	Pn	Pn	17 30 04.5	-0.4
GHO	Glory Hole Cre	11.45	55	Pn	Pn	17 30 05.2	-1.5
TRF	Thorofare Moun	11.52	46	Pn	Pn	17 30 08.3	+0.5
IMAR	Indian Mountai	11.84	31	Pn	Pn	17 30 12.7	+0.7
RND	Reindeer	12.08	48	Pn	Pn	17 30 15.2	-0.1
DHY	Denali Highway	12.56	50	Pn	Pn	17 30 24.4	+2.3
I23K	Minto, Yukon-K	12.73	40	Pn	Pn	17 30 25.9	+1.7
KLU	Klutina	12.76	58	Pn	Pn	17 30 26.0	+1.3
MDM	Murphy Dome	13.04	42	Pn	Pn	17 30 33.6	+5.1
N25K	Chitina, Valde	13.40	58	Pn	Pn	17 30 33.8	+0.4
ILAR	Eielson Array	13.45	44	Pn	Pn	17 30 33.8	-0.3
	0.0nm,0.3s,baz=230,slow=11,SNR=4.4						
ILAR				LR	LR	17 36 10.0	
	comp=Z,70nm,19.0s,baz=266,slow=39						
GLB	Gilahina Butte	13.75	59	Pn	Pn	17 30 37.8	-0.3
CTGM	Chitina Glacie	14.88	62	Pn	Pn	17 30 54.4	+0.7
FYU	Fort Yukon	14.92	39		Pn	17 30 54.6	+0.6
BCAR	Beaver Creek A	14.99	53	Pn	Pn	17 30 55.5	+0.4
BMAR	Burnt Mountain	15.59	36	P	P	17 31 06.0	-1.2
HYT	Haines Junctio	16.74	62	P	P	17 31 21.2	+1.1
HYT				IAmb	IAmb	17 31 48.0	
	comp=Z,14nm,1.3s						
WHY	Whitehorse	18.03	63	P	P	17 31 35.7	+1.4
WHY				IAmb	IAmb	17 31 53.2	
	comp=Z,16nm,1.4s						
PETK	Petropavlovsk-	19.41	274	P	Pn	17 31 51.4	+0.8
	comp=Z,0.2nm,0.3s,baz=83,slow=12,SNR=4.2						
INK	Inuvik	19.75	40	P	P	17 31 52.1	-0.8
	comp=Z,2.8nm,0.6s,baz=270,slow=16,SNR=6.7						
INK	Inuvik	19.75	40	P	P	17 31 52.9	0.0
INK				IAmb	IAmb	17 31 56.4	
	comp=Z,18nm,1.6s						
CRAG	Craig	19.89	78	P	Pn	17 31 56.3	+0.1
SEY	Seymchan	20.21	304	P	P	17 31 59.7	+1.7
	comp=Z,3.8nm,0.8s,baz=103,slow=8.5,SNR=11						
YKA	Yellowknife Ar	27.40	55	P	P	17 33 06.1	-2.4
	comp=Z,0.8nm,1.1s,baz=33,slow=31,SNR=3.9						
YKA				LR	LR	17 43 44.6	
	comp=Z,55nm,21.0s,baz=0.0,slow=36						
NVAR	Mina Array Bea	37.70	97	P	P	17 34 33.8	-5.2
	comp=Z,0.1nm,0.4s,baz=322,slow=7.1,SNR=1.9						
ANMO	Albuquerque	46.76	90	LR	LR	17 54 26.7	
	comp=Z,18nm,18.2s,baz=344,slow=35						
SONM	Songino Array	49.43	298	P	P	17 36 14.4	+1.1
	comp=Z,0.7nm,0.9s,baz=56,slow=5.9,SNR=5.2						
MKAR	Makanchi Array	61.10	312	P	P	17 37 38.0	+0.8
	comp=Z,0.5nm,0.9s,baz=108,slow=11,SNR=3.1						
AKASG	Malin Array Be	71.98	348	P	P	17 38 46.9	+0.2
	comp=Z,1.4nm,0.6s,baz=14,slow=6.0,SNR=4.6						
CMAR	Chiang Mai Arr	75.95	282	P	P	17 39 10.6	+0.2
	comp=Z,0.4nm,0.3s,baz=20,slow=7.3,SNR=6.0						

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*KRNET **10** 17:29:26.7±0.1, 40°.86N×74°.24E, h8km, mb2.3*
*SOME **10** 17:29:27.5, 40°.92N×74°.17E, h5km*
*NNC **10** 17:29:28.3±2.2, 40°.85N×74°.10E, h0km, mb2.8, mpv2.7, Error ellipse: s-maj=16.7km s-min=11.3km az=164.0*
ISC 10 17:29:25.8±1.6, 40°.84N±0°.07×74°.25E±0°.04, h5km±20km, n23, σ0s.99/38, 13C-1D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARLS	Aral	1.02	3	⇑iP	Pg	17 29 45.6	+0.2

	baz=4.0						
ARLS				⇑*i*S	Sg	17 29 58.8	+0.1
	baz=4.0						
ARSB	Arslanbob	1.07	297	⇑*i*P	Pg	17 29 46.7	+0.3
	baz=96						
ARSB				⇑*i*S	Sg	17 30 01.1	+0.8
	baz=96						
OHH	Osh	1.16	255	⇑*i*P	Pg	17 29 47.9	-0.1
	baz=54						
OHH				⇑*i*S	Sg	17 30 04.1	+1.1
	baz=54						
AAK	Ala-Archa	1.81	6	⇑P	Pb	17 30 00.2	+0.8
	0.4nm,0.2s						
AAK				⇑S	Sg	17 30 24.7	+0.9
	1.8nm,0.5s						
MRKS	Merke	2.05	338	*e*P	Pb	17 30 04.8	+1.2
	1.9nm,0.2s						
MRKS				*e*S	Sg	17 30 31.6	-0.1
	6.2nm,0.5s						
MRKS	Merke	2.05	338	Pg	Pb	17 30 04.8	+1.2
	1.9nm,0.2s						
MRKS				Lg	Lg	17 30 31.6	
	6.2nm,0.5s						
MNAS	Manas	2.10	322	⇑*i*P	Pb	17 30 04.1	-0.3
	baz=22						
MNAS				⇑*i*S	Sb	17 30 30.6	-0.3
	baz=22						
TKM2	Tokmak 2	2.31	25	⇓Pn	Pg	17 30 09.9	-0.1
	15nm,2.4s						
TKM2				⇑Sn	Sg	17 30 40.6	+0.7
	1.4nm,0.5s						
KST	Kastek	2.54	30	*e*P	Pg	17 30 14.9	+0.4
	0.5nm,0.2s						
KST				*e*S	Sg	17 30 48.8	+1.3
	4.8nm,0.6s						
DGS	Degeres	2.65	25	*e*P	Pg	17 30 16.9	+0.2
	2.1nm,0.4s						
DGS				*e*S	Sg	17 30 52.5	+1.5
	4.3nm,0.4s						
DGS	Degeres	2.65	25	Pg	Pg	17 30 16.9	+0.2
	2.1nm,0.4s						
DGS				Lg	Lg	17 30 52.5	
	4.3nm,0.4s						
TNSS	Tian-Shan	2.98	42	*e*P	Pg	17 30 22.4	-0.5
	0.4nm,0.1s						
TNSS				*e*S	Sg	17 31 01.7	+0.3
	2.2nm,0.4s						
TNSS	Tian-Shan	2.98	42	Pg	Pg	17 30 22.4	-0.5
	0.4nm,0.1s						
TNSS				Lg	Lg	17 31 01.7	
	2.2nm,0.4s						
KRBS	Karabastau	3.04	20	*e*P	Pg	17 30 23.0	-1.1
	0.9nm,0.3s						
KRBS				*e*S	Sg	17 31 02.7	-0.8
	3.3nm,0.4s						
KOTS	Kotyrbulak	3.20	41	*e*P	Pg	17 30 26.3	-0.8
	0.9nm,0.2s						
KOTS				*e*S	Sg	17 31 08.4	-0.2
	14nm,0.6s						
KOTS	Kotyrbulak	3.20	41	Pg	Pg	17 30 26.3	-0.8
	0.9nm,0.2s						
KOTS				Lg	Lg	17 31 08.5	
	14nm,0.6s						
KTBS	Karatobe	3.39	31	*e*P	Pg	17 30 29.5	-1.2
	0.3nm,0.2s						
KTBS				*e*S	Sg	17 31 13.9	-0.7
	3.1nm,0.3s						
KTBS	Karatobe	3.39	31	Pg	Pg	17 30 29.5	-1.2
	0.3nm,0.2s						
KTBS				Lg	Lg	17 31 13.9	
	3.1nm,0.3s						
IUG	Iuzhnay	3.43	294	*e*P	Pg	17 30 29.9	-1.5
	1.1nm,0.2s						
IUG				*e*S	Sg	17 31 14.4	-1.4
	12nm,0.4s						
IUG	Iuzhnay	3.43	294	Pg	Pg	17 30 29.9	-1.5
	1.1nm,0.2s						
IUG				Lg	Lg	17 31 14.5	
	12nm,0.4s						
KK31	Karatay Array	3.59	310	⇑Pn	Pb	17 30 30.6	+0.9
	0.2nm,0.3s						
KK31				⇑Lg	Lg	17 31 18.7	
	0.9nm,0.4s,baz=129,slow=29						
CHKK	Chushkaly	3.63	33	*e*P	Pg	17 30 33.5	-1.8
CHKK				*e*S	Sg	17 31 21.4	-1.0
CHKK	Chushkaly	3.63	33	Pg	Pg	17 30 33.5	-1.8
CHKK				Lg	Lg	17 31 21.4	

IDC ***10*** *17:40:10.8±2.8, 32°.84S×178°.42W, h0^{km}, mb3.9/2, mb1 4.2/3, mb1mx3.8/31, mbtmp4.0/3, ML4.0/1, MS3.3/2, Ms1 3.3/2, ms1mx2.9/19, Error ellipse: s-maj=68.8km s-min=43.6km az=126.0*

NEIC ***10*** *17:40:17.6±2.0, 33°.6S±0°.1×178°.1W±0°.2, h72^{km}±13^{km}, mb4.5/8, Error ellipse: s-maj=23.1km s-min=17.8km az=218.0*

WEL ***10*** *17:41:23.6, 37°S±33°×17°8E±1°2, h47^{km}±16^{km}, M2.5/14, ML2.7/14, MLv2.5/14, Error ellipse: s-maj=0.1km s-min=0.0km az=166.0*

ISC 10 17:40:14.7±1.7**, 33°.3S**±0°.1×**178°.1W**±0°.2**, h34^{km}, n50, σ1^s.88**/49**, mb4.4**/6**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	5.15	213	Pn	Pn	17 41 30.3	+0.9
MXZ	Matakaoa Point	5.15	213	P	Pn	17 41 32.3	+3.0
WMGZ	Waiomatatini S	5.31	211	P	Pn	17 41 35.5	+3.8
PKGZ	Pakihiroa	5.52	213	P	Pn	17 41 36.3	+1.7
HAZ	Te Kaha	5.55	216	P	Pn	17 41 36.7	+1.8
RUGZ	Raukumara Rang	5.77	215	P	Pn	17 41 40.3	+2.3
TWGZ	Tauwhareparae	5.80	212	P	Pn	17 41 40.8	+2.4
CNGZ	Carnagh Statio	5.96	209	P	Pn	17 41 44.4	+3.9
KUZ	Kuaotunu	6.10	234	P	Pb	17 41 57.0	-3.1
MWZ	Matawai	6.13	214	P	Pn	17 41 44.2	+1.3
URZ	Urewera	6.28	217	Pn	Pn	17 41 47.3	+2.4
	3.5nm,0.3s,baz=270,slow=3.6,SNR=19						
URZ				Sn	Sn	17 42 58.3	+2.9
	4.6nm,0.3s,baz=260,slow=18,SNR=4.4						
URZ	Urewera	6.28	217	Pn	Pn	17 41 46.6	+1.8
URZ	Urewera	6.28	217	P	Pn	17 41 46.5	+1.7
RIGZ	Rimuhau	6.34	210	P	Pn	17 41 48.4	+2.7
MUGZ	Murupara	6.62	217	P	Pn	17 41 50.7	+1.1
RTZ	Ruatahuna	6.62	215	P	Pn	17 41 51.2	+1.6
RAHZ	Arahi	6.81	213	P	Pn	17 41 55.2	+3.0
MTHZ	Maungataniwha	6.87	215	P	Pn	17 41 55.9	+2.9
OUZ	Omahuta	7.11	252	Pn	Pn	17 41 59.4	+3.2
BKZ	Black Stump Fm	7.29	215	Pn	Pn	17 41 59.3	+0.6
BKZ	Black Stump Fm	7.29	215	P	Pn	17 42 00.1	+1.3
KAHZ	Kahuranaki	7.62	210	P	Pn	17 42 04.6	+1.2
OTVZ	Oturere	7.70	219	P	Pn	17 42 05.9	+1.4
BHHZ	Black Hill Sta	7.75	215	P	Pn	17 42 07.1	+2.1
BFZ	Birch Farm	8.63	210	Pn	Pn	17 42 17.4	+0.3
BFZ	Birch Farm	8.63	210	P	Pn	17 42 17.2	+0.1
MSWZ	Moikau Station	9.66	211	Pn	Pn	17 42 29.7	-1.5
PLWZ	Palliser	9.78	211	Pn	Pn	17 42 32.4	-0.6
SNZO	South Karori	9.82	213	Pn	Pn	17 42 34.4	+1.0
BHW	Baring Head	9.82	212	Pn	Pn	17 42 33.3	-0.1
TUWZ	Tuamarina	10.27	216	Pn	Pn	17 42 40.8	+1.2
NNZ	Nelson	10.39	218	Pn	Pn	17 42 41.4	+0.1
BSWZ	Blackbirch Sta	10.52	215	Pn	Pn	17 42 44.3	+1.2
QRZ	Quartz Range	10.58	222	Pn	Pn	17 42 42.0	-1.8
THZ	Tophouse	11.04	217	Pn	Pn	17 42 48.8	-1.4
KHZ	Kahutara	11.22	213	Pn	Pn	17 42 51.0	-1.6
WKZ	Wanaka	15.21	217	Pn	Pn	17 43 47.4	+0.5
WKZ				IAmb	IAmb	17 44 19.2	
	comp=Z,51nm,1.4s						
MSVF	Nonsavu	15.87	347	LR	LR	17 48 39.7	
	comp=Z,76nm,18.8s,baz=94,slow=33						
DZM	Mont Dzumac	17.62	305	LR	LR	17 49 40.8	
	comp=Z,154nm,18.1s,baz=180,slow=33						
SANVU	Saraoutou	22.18	320	P	P	17 45 10.1	+2.1
SANVU				IAmb	IAmb	17 45 39.6	
	comp=Z,17nm,1.0s						
AS31	Alice Springs	42.91	270	P	P	17 48 10.0	-0.4
ASAR	Alice Springs	42.91	270	P	P	17 48 09.3	-1.0
	comp=Z,0.9nm,0.7s,baz=109,slow=7.8,SNR=22						
WR0	Warramunga Arr	43.99	275	P	P	17 48 18.2	-0.8
WB2	Warramunga Arr	44.15	275	P	P	17 48 19.6	-0.7
WB2				IAmb	IAmb	17 48 25.9	
	comp=Z,15nm,1.4s						
WRAB	Tennant Creek	44.16	275	P	P	17 48 19.1	-1.2
WRAB				IAmb	IAmb	17 48 37.6	
	comp=Z,8.7nm,1.2s						
WRA	Warramunga Arr	44.16	275	P	P	17 48 19.6	-0.8
	comp=Z,1.1nm,0.4s,baz=115,slow=7.9,SNR=35						
WRA	Warramunga Arr	44.16	275	P	P	17 48 19.3	-1.1
WB0	Warramunga Arr	44.20	275	P	P	17 48 19.8	-0.9
WB0				IAmb	IAmb	17 48 45.0	
	comp=Z,15nm,1.6s						
FINES	FINESS Array B	147.80	338	PKPbc	PKPbc	17 59 54.6	-0.5
	comp=Z,1.4nm,0.6s,baz=25,slow=4.6,SNR=11						
FINES	FINESS Array B	147.80	338		PKPbc	17 59 54.5	-0.7

UPP ***10*** *18:04:34.3±0.1, 67°.05N×20°.96E, h0^{km}, ML2.0, Explosion*

HEL ***10*** *18:04:35.1±0.1, 67°.04N×20°.96E, h0^{km}, ML2.1, ML2.0(UPP), Explosion*

IDC ***10*** *18:04:36.8±0.9, 67°.06N×21°.42E, h0^{km}, mb1 3.1/4, mb1mx2.8/39, mbtmp3.0/4, ML1.8/4, Error ellipse: s-maj=18.2km s-min=8.1km az=115.0*

NAO ***10*** *18:04:36.3±1.1, 67°.09N×21°.50E, ML2.3*

BER ***10*** *18:04:37.9±4.5, 67°.02N×20°.79E, h0^{km}, ML1.5, ML2.3(NAO), Suspected explosion*

ISC 10 18:04:34.5±0.7**, 67°.04N**±0°.02×**21°.01E**±0°.02**, h0^{km}, n57, σ1^s.37**/76**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MASU	Masugnsbyn	0.56	42	P	Pg	18 04 45.3	0.0
MASU				S	Sg	18 04 53.0	+0.4
MASU	Masugnsbyn	0.56	42	*i* P	Pg	18 04 45.3	0.0
MASU				*i* S	Sg	18 04 53.0	+0.4
ERTU	Ertsjaerv	0.68	136	P	Pg	18 04 47.4	0.0
ERTU	Ertsjaerv	0.68	136	*e*P	Pg	18 04 47.3	-0.1
PAJU	Pajala	0.82	90	P	Pg	18 04 49.9	-0.4
PAJU	Pajala	0.82	90	*e*P	Pg	18 04 50.2	0.0
HARU	Harads	0.89	181	P	Pg	18 04 50.8	-0.6
HARU	Harads	0.89	181	*i* P	Pg	18 04 50.8	-0.6
KUA	Kurravaara	0.95	344	P	Pg	18 04 51.9	-0.7
KUA	Kurravaara	0.95	344	*e*P	Pg	18 04 51.9	-0.7
RATU	Laukkuluspa	0.96	326	P	Pg	18 04 51.6	-1.2
RATU	Laukkuluspa	0.96	326	*e*P	Pg	18 04 51.6	-1.2
SALU	Saltoluokta	1.03	290	P	Pg	18 04 53.5	-0.7
SALU	Saltoluokta	1.03	290	*e*P	Pg	18 04 53.6	-0.7
SALU				*e*S	Sb	18 05 08.7	-0.6
SALU	Saltoluokta	1.03	290	*e*P	Pg	18 04 53.5	-0.7
LANU	Lannavaara	1.08	20	P	Pg	18 04 54.5	-0.5
LANU	Lannavaara	1.08	20	*e*P	Pg	18 04 54.6	-0.5
LANU				*e*SN	Sn	18 05 14.6	+2.1
KALU	Kalix	1.52	141	P	Pn	18 05 02.5	-0.3
KALU	Kalix	1.52	141	*e*P	Pn	18 05 02.5	-0.3
KALU				*e*S	Sg	18 05 24.9	+1.8
SJUU	Sjulsmark	1.56	171	P	Pn	18 05 03.1	-0.4
SJUU	Sjulsmark	1.56	171	*e*P	Pn	18 05 03.1	-0.4
TOF	Tornio	1.64	125	*e*P	Pn	18 05 04.5	0.0
LILU	Lilltraesk	1.83	196	P	Pn	18 05 07.5	+0.4
LILU	Lilltraesk	1.83	196	*e*P	Pn	18 05 07.5	+0.4
KIF	Kilpisjarvi	1.97	358	Pn	Pb	18 05 10.9	-0.3
KIF				Sn	Sg	18 05 39.0	+1.3
KIF	Kilpisjarvi	1.97	358	*e*P	Pb	18 05 10.9	-0.3
KIF				*e*S	Sg	18 05 39.4	+1.7
KIF	Kilpisjarvi	1.97	358	*e*P	Pb	18 05 10.7	-0.5
RNF	Rovaniemi	2.03	100	*e*P	Pb	18 05 11.0	-1.1
RNF				*e*S	Sb	18 05 38.4	+0.5
KTK1	Kautokeino	2.15	22	Pn	Pb	18 05 13.1	-1.1
KTK1				Sn	Sb	18 05 39.6	-1.7
KTK1	Kautokeino	2.15	22	*e*P	Pb	18 05 14.2	+0.1
KTK1				*e*S	Sg	18 05 42.5	-0.8
KTK1				IAML		18 05 49.2	
	comp=Z,7.0nm,0.3s						
SGF	Sodankyl	2.18	77	*e*P	Pn	18 05 13.1	+1.2
STEI	Steigen	2.39	294	*e*Pg	Pb	18 05 17.3	-1.1
STEI				IAML		18 05 59.2	
	comp=Z,6.0nm,0.5s						
BURU	Burvik	2.48	176	*e*PB	Pn	18 05 17.2	+1.3
BURU				*e*SG	Sb	18 05 51.1	+0.4
OBF4	Vikkela, Lumij	2.80	141	*e*P	Pn	18 05 22.4	+2.0
OUL	Oulu	2.80	132	*e*P	Pn	18 05 21.4	+1.0
OBF0	Syolatti, Pyha	2.88	151	*e*PG	Pb	18 05 26.3	-0.4
ARA0	ARCESS Array S	3.01	32	Pn	Pn	18 05 23.0	-0.3
	baz=207,slow=14						
ARA0	ARCESS Array S	3.01	32	Pn	Pn	18 05 23.0	-0.3
	baz=207,slow=14						
ARA0	ARCESS Array S	3.01	32	*e*P	Pn	18 05 24.1	+0.8
ARCES	ARCESS Array B	3.01	32	Pn	Pn	18 05 23.9	+0.6
	baz=205,slow=14,SNR=16						
ARCES				Sn	Sn	18 06 02.1	+2.1
	baz=218,slow=27,SNR=9.1						
OUF	Merijarvi	3.10	149	*e*P	Pn	18 05 25.7	+1.2
VRF	Varrio	3.39	74	*e*PG	Pg	18 05 38.2	-1.2
VRF				MSG		18 06 15.3	
	comp=Z,4.2nm,0.2s						
MSF	Maaselka	3.41	106	*e*P	Pn	18 05 30.3	+1.4
OLKF	Oulanka, Finla	3.41	98	*e*PB	Pb	18 05 33.4	-2.4
KEV	Kevo	3.51	36	*e*PB	Pb	18 05 36.6	-0.8
KU6	Riekki	3.70	102	*e*PB	Pb	18 05 37.9	-2.6
KU6				MSG		18 06 13.0	
	comp=Z,3.2nm,0.2s						
HUSU	Husum	3.79	192	*e*PB	Pn	18 05 38.1	+4.0
VAF	Ylistaro	4.08	169	*e*PB	Pb	18 05 43.8	-3.3
APA0	Apatity Array	4.67	78	Pn	Pn	18 05 47.2	+1.0
	baz=268,slow=11						
APA0				Sn	Sn	18 06 40.4	-0.6
	baz=285,slow=37						
APA0	Apatity Array	4.67	78	Pn	Pn	18 05 47.2	+1.0
	baz=268,slow=11						
APA0				Sn	Sn	18 06 40.4	-0.6
	baz=285,slow=37						
FIA0	FINESS Array S	6.04	156	Pn	Pn	18 06 07.3	+2.4
	baz=348,slow=14						
FIA0				Sn	Sn	18 07 14.7	+0.1
	baz=329,slow=37						
FIA0	FINESS Array S	6.04	156	Pn	Pn	18 06 07.3	+2.4
	baz=348,slow=14						
FIA0				Sn	Sn	18 07 14.7	+0.1
	baz=329,slow=37						
FINES	FINESS Array B	6.04	156	Pn	Pn	18 06 06.2	+1.3
	comp=Z,0.1nm,0.3s,baz=350,slow=11,SNR=5.2						
FINES				Sn	Sn	18 07 16.6	+2.0
	comp=Z,0.2nm,0.3s,baz=344,slow=23,SNR=7.1						
NOA	NORSAR Array B	7.39	220	Pn	Pn	18 06 27.1	+3.6
	comp=Z,0.0nm,0.3s,baz=297,slow=22,SNR=3.8						
NOA				Sn	Sn	18 07 49.5	+1.4
	comp=Z,0.0nm,0.3s,baz=314,slow=27,SNR=1.2						
HFS	Hagfors	7.66	209	Pn	Pn	18 06 29.1	+1.9
	comp=Z,0.1nm,0.3s,baz=41,slow=16,SNR=0.8						
HFS				Sn	Sn	18 07 51.9	-2.6
	baz=29,slow=27,SNR=1.6						
HFS	Hagfors	7.66	209	Pn	Pn	18 06 28.6	+1.4
	baz=33,slow=16						
HFS	Hagfors	7.66	209	Pn	Pn	18 06 28.6	+1.4
	baz=33,slow=16						

SOME ***10*** *18:36:10.3, 42°.23N×81°.13E, h15^{km}*

NNC ***10*** *18:36:10.9±5.2, 42°.04N×80°.90E, h0^{km}, mb2.8, mpv2.5, Error ellipse: s-maj=73.5km s-min=24.4km az=30.0*

ISC 10 18:36:03.0±3.0**, 42°.0N**±0°.1×**81°.76E**±0°.10**, h27^{km}**±16^{km}**, n22, σ1^s.68**/42**, 2C-1D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTMS	Ketmen	1.75	324	*e*P	Pb	18 36 35.6	+1.1
	0.2nm,0.0s						
KTMS				*e*S	Sn	18 36 54.4	+1.1
	9.5nm,0.4s						
SHLS	Shalkode	2.03	304	*e*P	Pn	18 36 36.2	+0.6
	2.6nm,0.2s						
SHLS				*e*S	Sn	18 36 54.0	-6.2
	14nm,0.2s						
PDGK	Podgornoye	2.12	309	⇓P	Pb	18 36 41.0	+0.3
	1.5nm,0.5s						
PDGK				⇑S	Sn	18 37 03.7	+1.4
	5.0nm,0.3s						
UZB	Uzynbulak	2.31	300	*e*P	Pb	18 36 44.7	+0.7
	7.0nm,0.4s						
UZB				*e*S	Sn	18 37 09.3	+2.3
	14nm,0.3s						
KPKS	Kokpek	2.68	303	*e*P	Pb	18 36 51.0	+0.7
	8.7nm,0.3s						
KPKS				*e*S	Sb	18 37 20.7	-2.0
	64nm,0.6s						
SATY	Saty	2.68	294	*e*P	Pb	18 36 51.5	+1.2
	3.3nm,0.4s						
SATY				*e*S	Sb	18 37 21.6	-1.2
	24nm,0.1s						
DJR	Jarkent	2.71	329	*e*P	Pb	18 36 53.0	+2.2
	1.9nm,0.5s						
DJR				*e*S	Sb	18 37 24.5	+0.8
	14nm,0.5s						
KURS	Kuram	3.02	300	*e*P	Pb	18 36 56.9	+0.9
	2.4nm,0.3s						
KURS				*e*S	Sb	18 37 30.8	-1.6
	14nm,0.5s						
MNBS	Baschi	3.20	311	*e*P	Pb	18 36 59.7	+0.6
	2.8nm,0.3s						
MNBS				*e*S	Sb	18 37 35.7	-2.1
	9.4nm,0.2s						
ARXS	Arharly	3.61	309	*e*P	Pb	18 37 06.6	+0.5
	2.0nm,0.4s						
ARXS				*e*S	Sb	18 37 47.7	-1.8
	3.6nm,0.3s						
KOTS	Kotyrbulak	3.63	291	*e*P	Pb	18 37 07.3	+0.7
	2.8nm,0.4s						
KOTS				*e*S	Sb	18 37 48.8	-1.4
	34nm,0.6s						
MDOK	Medeo	3.66	290	*e*P	Pb	18 37 07.3	+0.4
	1.8nm,0.5s						
MDOK				*e*S	Sb	18 37 48.6	-2.3
	5.1nm,0.5s						
KAPS	Kapalarasan	3.69	333	*e*P	Pb	18 37 09.6	+2.2
	0.4nm,0.1s						
KAPS				*e*S	Sb	18 37 52.6	+0.9
	3.4nm,0.4s						
TNSS	Tian-Shan	3.69	287	*e*P	Pb	18 37 09.0	+1.3
	1.0nm,0.4s						
TNSS				*e*S	Sb	18 37 51.5	-0.7
	3.2nm,0.3s						
IZV	Izvestkoviy	3.93	287	*e*P	Pb	18 37 11.9	+0.3
	1.4nm,0.4s						
IZV				*e*S	Sb	18 37 56.8	-2.0
	8.4nm,0.5s						
CHKK	Chushkaly	3.95	299	*e*P	Pb	18 37 12.5	+0.7
	0.6nm,0.1s						
CHKK				*e*S	Sb	18 37 57.5	-1.6
	4.2nm,0.2s						
KTBS	Karatobe	4.09	296	*e*P	Pb	18 37 14.9	+0.6
	1.2nm,0.5s						
KTBS				*e*S	Sb	18 38 01.8	-1.4
	8.5nm,0.3s						
KUU	Kurty	4.39	297	*e*P	Pb	18 37 20.6	+1.3
	0.5nm,0.5s						
KUU				*e*S	Sb	18 38 11.4	-0.4
	2.6nm,0.4s						
DGS	Degeres	4.58	287	*e*P	Pb	18 37 24.4	+1.8
	0.8nm,0.4s						
DGS				*e*S	Sb	18 38 18.4	+1.0
	2.3nm,0.5s						
KRBS	Karabastau	4.77	292	*e*P	Pb	18 37 26.9	+1.1
	1.3nm,0.4s						
KRBS				*e*S	Sb	18 38 22.4	-0.4
	2.0nm,0.3s						
MK31	Makanchi Array	4.78	4	Pn	Pb	18 37 25.0	-1.0
	baz=206,slow=18,SNR=4.7						
MAKZ	Makanchi	4.78	2	⇑Pn	Pb	18 37 25.1	-0.9
	1.1nm,0.8s						

TEH ***10*** *18:49:48.3, 28°.06N×57°.27E, h8^{km}, ML3.6*

THR ***10*** *18:49:50.4±0.4, 28°.13N×57°.13E, h6^{km}±16^{km}, ML3.6*

ISC 10 18:49:49.5±1.0**, 28°.03N**±0°.07×**57°.29E**±0°.06**, h10^{km}, n15, σ1^s.70**/17**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KHNJ	Kahnooj	0.38	102	*e*Sg	Sb	18 50 02.2	-2.0
GENO	Geno	1.17	238	*e*Pg	Pg	18 50 12.0	0.0
GENO				*e*Sg	Sg	18 50 27.5	+0.3
GENO				*e*		18 50 33.7	
	comp=Z,99nm,0.4s						
BNDS	Bandar-Abbas	1.17	238	*e*Pg	Pg	18 50 12.0	0.0
BNDS				*e*Sg	Sn	18 50 28.0	-0.2
BNDS				IAML		18 50 30.8	
	comp=N,2µm,0.3s						
BNDS				IAML		18 50 31.4	
	comp=E,2µm,0.3s						
KBAM	BAM	1.51	43	*e*Pg	Pg	18 50 17.3	-1.1
KBAM				*e*		18 50 21.7	
	comp=Z,99nm,0.8s						
NGRK	Negar Kerman	1.69	343	*e*Pg	Pb	18 50 20.0	-0.8
NGRK				*e*		18 50 47.1	
	comp=Z,99nm,0.4s						
CHMN	Cheshme madani	1.84	7	*e*Pg	Pb	18 50 22.4	-1.1
CHMN				*e*		18 50 54.6	
	comp=Z,99nm,0.3s						
KRBR	Kerman	2.00	347	*e*Pn	Pb	18 50 25.1	-1.1
KRBR				IAML		18 50 57.8	
	comp=E,367nm,0.4s						
KRBR				IAML		18 50 58.9	
	comp=N,455nm,0.3s						
TVBK	TV Kerman	2.01	347	*e*Pn	Pb	18 50 25.2	-1.1
TVBK				*e*		18 51 00.4	
	comp=Z,99nm,0.4s						
KHGB	Koh Gabri	2.45	343	*e*Pn	Pb	18 50 32.4	-1.3
KHGB				*e*		18 50 37.2	
	comp=Z,99nm,0.7s						
LAR1	LAR	2.60	263	*e*Pn	Pn	18 50 32.8	+1.1
NHDN	Nehbandan	4.13	35	*e*Pn	Pn	18 50 55.3	+2.6
BSRN	Basiran	4.24	22	*e*Pn	Pn	18 50 57.1	+2.9
BSRN				IAML		18 52 21.6	
	comp=N,29nm,0.8s						
ICHK	Chekchek	4.89	330	*e*Pn	Pn	18 51 03.9	+0.6
AFRZ	Afriz	5.58	15	*e*Pn	Pn	18 51 16.2	+3.5
IRAM	Ramesheh	5.69	313	*e*Pn	Pn	18 51 15.0	+0.8

NEIC ***10*** *18:57:33.1±1.3, 2°.1N±0°.2×89°.85E±0°.04, h16^{km}±6^{km}, mb4.8/5, Error ellipse: s-maj=24.2km s-min=3.3km az=189.0*

IDC ***10*** *18:57:36.1±1.8, 2°.81N×89°.88E, h0^{km}, mb3.4/4, mb1 3.8/6, mb1mx3.5/32, mbtmp3.6/6, ML3.9/1, MS3.2/3, Ms1 3.2/3, ms1mx2.7/37, Error ellipse: s-maj=49.5km s-min=24.8km az=54.0*

ISC 10 18:57:32.2±1.3**, 2°.1N**±0°.2×**89°.9E**±0°.1**, h10^{km}, n15, σ1^s.02**/12**, mb3.9**/6**, North Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LHMI	Lhok Sumawe	7.70	66	Pn	Pn	18 59 26.0	+1.5
GSI	Gunungsitoli	7.74	96	Pn	Pn	18 59 25.1	+0.1
PALK	Pallekele	10.48	300	Pn	Pn	19 00 03.3	+0.7
	1.1nm,0.3s,baz=220,slow=13,SNR=12						
PALK				Sn	Sn	19 01 47.5	-13
	5.7nm,0.3s,baz=311,slow=23,SNR=14						
PALK				LR	LR	19 03 24.9	
	comp=Z,82nm,18.6s,baz=213,slow=34						
KULM	Kulim	11.20	73	Pn	Pn	19 00 13.1	+0.6
CMAR	Chiang Mai Arr	18.51	28	P	P	19 01 46.6	-2.2
	baz=244,slow=31,SNR=1.6						
CMAR				LR	LR	19 08 36.3	
	comp=Z,29nm,19.1s,baz=235,slow=37						
MKAR	Makanchi Array	44.98	353	P	P	19 05 47.4	-0.3
	0.2nm,0.6s,baz=172,slow=7.1,SNR=2.5						
SONM	Songino Array	47.73	15	P	P	19 06 09.9	+0.5
	0.5nm,0.6s,baz=195,slow=10,SNR=6.1						
WB0	Warramunga Arr	48.80	119	P	P	19 06 18.4	+0.5
WB0				IAmb	IAmb	19 06 45.4	
	comp=Z,13nm,1.6s						
WRA	Warramunga Arr	48.81	119	P	P	19 06 26.6	+8.6
	comp=Z,0.8nm,0.7s,baz=296,slow=8.6,SNR=8.0						
WRAB	Tennant Creek	48.82	119	P	P	19 06 17.9	-0.2
WRAB				IAmb	IAmb	19 06 18.0	
	comp=Z,19nm,1.8s						
WB2	Warramunga Arr	48.82	119	P	P	19 06 17.4	-0.7
WR0	Warramunga Arr	48.99	119	P	P	19 06 19.9	+0.4
ASAR	Alice Springs	49.90	124	P	P	19 06 33.7	+7.4
	comp=Z,0.1nm,0.6s,baz=300,slow=7.4,SNR=1.3						
ABKAR	Akbulak array	53.48	336	P	P	19 06 52.1	-0.5
PMG	Port Moresby	58.20	102	LR	LR	19 35 24.6	
	comp=Z,57nm,18.3s,baz=232,slow=39						

IDC ***10*** *19:09:45.3±1.7, 1°.69N×121°.56E, h0^{km}, mb3.3/4, mb1 3.5/4, mb1mx3.3/29, mbtmp3.3/4, MS2.7/2, Ms1 2.7/2, ms1mx2.3/30, Error ellipse: s-maj=226.9km s-min=27.8km az=61.0*

DJA ***10*** *19:09:51.9±0.5, 1°N±4°×12°1E±°, h10^{km}, M4.0/9, mb4.2/4, MLv3.9/9*

ISC 10 19:09:42.9±2.3**, 1°.8N**±0°.2×**120°.34E**±0°.09**, h10^{km}, n16, σ2^s.62**/14**, mb3.4**/4**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRSI	Marisa	2.05	129	P	Pn	19 10 19.2	+1.7
MRSI				S	Sn	19 10 41.5	-1.6
GTOI	Gorontalo	2.90	113	P	Pn	19 10 31.8	+2.7
APSI	Ampana	2.97	154	P	Pn	19 10 32.0	+1.9
LUWI	Luwuk	3.70	139	P	Pn	19 10 43.8	+3.6
KMSI	Cibinong	3.83	108	P	Pb	19 10 51.0	+0.4
TTSI	Tana Toraja	4.81	186	P	Pn	19 10 58.3	+2.8
SPSI	Sidrap Palu	5.73	186	P	Pn	19 11 10.2	+2.1
	0.1nm19nm,0.7s						
MTKI	Muara Teweh, K	6.08	244	P	Pn	19 11 15.7	+2.8
BNSI	Bone	6.13	182	P	Pn	19 11 15.6	+1.9
	0.1nm20nm,0.8s						
SANI	Sanana	6.80	124	P	Pn	19 11 26.0	+3.2
BATI	Baumata	12.35	165	LR	LR	19 18 34.8	
	comp=Z,28nm,19.9s,baz=220,slow=44						
LEM	Lembang	15.31	236	LR	LR	19 21 11.2	
	comp=Z,34nm,21.8s,baz=54,slow=42						
WRA	Warramunga Arr	25.58	148	P	P	19 15 10.2	-2.2
	0.7nm,0.7s,baz=326,slow=11,SNR=9.4						
ASAR	Alice Springs	28.52	153	P	P	19 15 37.5	-1.4
	0.2nm,0.6s,baz=346,slow=14,SNR=5.1						
STKA	Stephens Creek	39.07	151	P	P	19 17 08.0	-2.2
	0.7nm,0.7s,baz=323,slow=15,SNR=1.6						
MKAR	Makanchi Array	55.73	329	P	P	19 19 28.8	+8.9
	0.2nm,0.6s,baz=132,slow=8.0,SNR=2.8						

*BJI **10** 19:23:41.3±0.0, 38°.11N×142°.30E, h39^{km}, mB4.9/30, mb4.5/47, Ms4.1/8, Ms7 3.7/8*

*MOS **10** 19:23:45.6±0.8, 38°.34N×141°.91E, h48^{km}, mb4.6/21, Error ellipse: s-maj=7.0km s-min=5.0km az=108.4*

*JMA **10** 19:23:47.3±0.1, 38°.30N×141°.85E, h47^{km}±1^{km}, M4.2*

JMA Felt II J1.

*NIED **10** 19:23:47.4, 38°.30N×141°.85E, h47^{km}, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.28; $M_{\theta\theta}$-0.15; $M_{\phi\phi}$-1.13; $M_{r\theta}$1.12; $M_{\theta\phi}$-0.55; $M_{\phi r}$1.19; Fault plane solution: $M_0$2.11000×10^{15} NP1:ϕ_s39.00000°, δ71.00000°, λ100.00000°. NP2:ϕ_s189.00000°, δ22.00000°, λ62.00000°.*

*NEIC **10** 19:23:47.4±1.3, 38°.25N±0°.03×141°.83E±0°.08, h47^{km}±4^{km}, mb4.6/49 Error ellipse: s-maj=9.4km s-min=4.5km az=100.0*

*IDC **10** 19:23:48.7±1.8, 38°.31N×141°.82E, h58^{km}±16^{km}, mb3.9/28, mb1 4.0/35, mb1mx3.9/57, mbtmp4.2/35, MS3.0/8, Ms1 3.1/8, ms1mx2.8/49, Error ellipse: s-maj=14.1km s-min=11.5km az=108.0*

ISC 10 19:23:46.6±0.6, **38°.27N**±0°.04×**141°.99E**±0°.05, **h43**^{km}±4^{km}, **n257**, σ**1**^{s}**38**/279, **mb4.5**/88, **8C-19D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.42	275	P	Pn	19 23 56.2	-0.2
JIKH				S	Sn	19 24 02.3	-1.0
JIO	Ouri	0.54	290	P	Pn	19 23 57.5	-0.4
JIO				S	Sn	19 24 04.7	-1.3
JKMT	Kesennumamotoy	0.67	323	P	Pn	19 23 59.5	-0.2
JKMT				S	Sn	19 24 08.1	-1.1
OFUJ	Ofunato	0.84	343	P	Pn	19 24 02.1	0.0
OFUJ				S	Sn	19 24 12.5	-0.8
JMK	Ichinoseki	0.91	318	P	Pn	19 24 02.8	-0.1
JMK				*e*S	Sn	19 24 13.5	-1.4
JMM	Marumori	1.03	247	P	Pn	19 24 03.7	-0.8
JMM				*e*S	Sn	19 24 15.7	-2.1
JMM	Marumori	1.03	247		Pn	19 24 03.8	-0.8
JMM				Sn	Sn	19 24 15.0	-2.8
JOU	Okura	1.05	275	P	Pn	19 24 04.4	-0.4
JOU				*e*S	Sn	19 24 17.1	-1.2
JFK	Kawauchi	1.27	225	P	Pn	19 24 07.4	-0.4
JFK				S	Sn	19 24 22.0	-1.7
JOM	Ohasama	1.32	336	P	Pn	19 24 08.8	+0.3
JYK	Kaneyama	1.43	297	P	Pn	19 24 09.8	-0.3
JFT	Otama	1.51	241	P	Pn	19 24 11.2	0.0
JFT				*e*S	Sn	19 24 28.8	-0.9
JYS	Shirataka	1.52	269	P	Pn	19 24 10.9	-0.4
JRG	Rokugo	1.54	317	P	Pn	19 24 11.7	+0.1
JYT	Yasato	2.50	216	Pn	Pn	19 24 24.2	-0.4
JYT				Sn	Sn	19 24 51.9	-1.9
JTM	Tenmabayashi	2.61	344	Pn	Pn	19 24 27.6	+1.4
JTM				Sn	Sn	19 24 57.3	+0.6
JSD	Sado	2.95	267	Pn	Pn	19 24 30.0	-0.9
MJA0	Matsu Arr-Jizo	3.45	241	*e*P	Pn	19 24 39.3	+1.5
MJA0				pmax	pmax		
	comp=Z,2.0nm,0.3s						
MJAR	Matsushiro Arr	3.47	241	P	Pn	19 24 39.4	+1.2
	comp=Z,1.7nm,0.3s,baz=57,slow=11,SNR=49						
MJAR				LR	LR	19 26 20.4	
	comp=Z,223nm,18.8s,baz=55,slow=45						
MJAR	Matsushiro Arr	3.47	241	P	Pn	19 24 38.6	+0.5
MJAR	Matsushiro Arr	3.47	241	Pn	Pn	19 24 38.6	+0.5
MAJO	Matsushiro	3.47	241	*d i*P	Pn	19 24 39.3	+1.2
MAJO	Matsushiro	3.47	241	Pn	Pn	19 24 39.3	+1.2
MAT	Matsushiro	3.47	241	P	Pn	19 24 39.4	+1.3
MAT				*e*S	Sn	19 25 18.2	+0.2
MJB9	Matsu-Tunnel	3.47	241		Pn	19 24 38.4	+0.2
ERM	Erimo	3.84	13	*de*P	Pn	19 24 44.0	+0.9
ERM	Erimo	3.84	13	Pn	Pn	19 24 44.5	+1.3
JGF	Kuroka	4.57	236	Pn	Pn	19 24 55.2	+2.0
JEW	Eniwo	4.58	355	Pn	Pn	19 24 54.2	+0.9
JSG	Sagara	4.72	222	Pn	Pn	19 24 57.2	+2.0
INU	Inuyama	4.95	235	Pn	Pn	19 25 00.5	+2.2
JHJ2	Mitsune	5.45	200	Pn	Pn	19 25 06.4	+1.2
JHJ	Hachijo jima 2	5.45	200	P	Pn	19 25 05.9	+0.7
	comp=Z,26nm,0.3s,baz=316,slow=23,SNR=14						
JHJ				S	Sn	19 26 04.8	-1.9
	comp=Z,68nm,0.3s,baz=107,slow=23,SNR=8.5						
NMR	Nemuro--Hokkai	5.83	28	⇓*i*P	Pn	19 25 09.5	-0.9
NMR				*i* S	Sn	19 26 11.0	-4.8
JKA	Kamikawa-asahi	5.86	4	Pn	Pn	19 25 11.1	+0.4
ASAJ	Asahikawa	5.86	4	P	Pn	19 25 11.2	+0.4
	comp=Z,4.2nm,0.3s,baz=217,slow=12,SNR=47						
ASAJ				S	Sn	19 26 15.7	-0.9
	baz=284,slow=32,SNR=2.3						
ASAJ				LR	LR	19 27 38.2	
	comp=Z,122nm,21.9s,baz=156,slow=39						
JWT	Wachi	6.07	243	Pn	Pn	19 25 16.7	+2.9
GLVR	Golovnino	6.08	25	*e*P	Pn	19 25 14.0	+0.2
GLVR				*e*S	Sn	19 26 18.9	-3.1
GLVR				smax	smax		
	comp=E,295nm,0.4s						
GLVR				smax	smax		
	comp=N,404nm,0.7s						
GRPR	Tuman	6.39	25	*e*P	Pn	19 25 17.8	-0.2
GRPR				*e*S	Sn	19 26 24.9	-4.7
GRPR				pmax	pmax		
	comp=Z,74nm,0.5s						
GRPR				smax	smax		
	comp=N,139nm,0.4s						
GRPR				smax	smax		
	comp=E,345nm,0.4s						
YUK	Yuzh-Kuril'sk	6.45	26	⇓*i*P	Pn	19 25 19.7	+0.7
YUK				*i* S	Sn	19 26 27.1	-4.2
YUK				pmax	pmax		
	comp=E,46nm,0.5s						
YUK				pmax	pmax		
	comp=Z,99nm,0.5s						
YUK				smax	smax		
	comp=E,116nm,0.2s						
YUK				smax	smax		
	comp=N,343nm,0.5s						
JHS	Saijyo	7.85	248	Pn	Pn	19 25 41.4	+3.2
TEY	Ternei	7.87	331	⇓*i*P	Pn	19 25 43.7	+5.3
TEY				pmax	pmax		
	comp=N,80nm,0.7s						
TEY				pmax	pmax		
	comp=E,60nm,0.7s						
TEY				pmax	pmax		
	comp=Z,90nm,0.7s						
JMN	Monobe	7.99	238	Pn	Pn	19 25 41.1	+1.0
KUR	Kuril'sk	8.22	30	P	Pn	19 25 35.1	-8.1
KUR				*e*S	Sn	19 27 08.7	-6.0
KUR				pmax	pmax		
	comp=Z,45nm,0.5s						
KUR				smax	smax		
	comp=N,39nm,0.6s						
KUR				smax	smax		
	comp=E,68nm,0.6s						
YSS	Yuzh-Sakhalins	8.70	3	⇑*e*P	Pn	19 25 51.1	+1.4
YSS				pmax	pmax		
	comp=Z,42nm,1.7s						
YSS	Yuzh-Sakhalins	8.70	3	Pn	Pn	19 25 51.9	+2.3
USRK	Ussuriysk Ar.	9.58	311	P	Pn	19 26 02.7	+0.9
	baz=125,slow=14,SNR=24						
USRK				LR	LR	19 29 31.3	
	comp=Z,142nm,19.1s,baz=154,slow=36						
USRK	Ussuriysk Ar.	9.58	311	Pn	Pn	19 26 02.4	+0.6
USA0B	Ussuriysk Arra	9.58	311	*de*P	Pn	19 26 02.7	+0.9
USA0B	Ussuriysk Arra	9.58	311	Pn	Pn	19 26 01.9	+0.1
JNU	Nakatsue	10.39	244	P	Pn	19 26 15.2	+2.1
	comp=Z,0.3nm,0.3s,baz=166,slow=7.9,SNR=3.9						
JNU				LR	LR	19 30 08.8	
	comp=Z,130nm,21.6s,baz=32,slow=37						
JNU	Nakatsue	10.39	244	Pn	Pn	19 26 16.2	+3.1
JTU	Tsushima	10.82	254	Pn	Pn	19 26 17.9	-0.9
KSRS	Korea Array	11.15	270	P	Pn	19 26 25.9	+2.5
	comp=Z,0.4nm,0.3s,baz=84,slow=14,SNR=3.6						
KSRS				LR	LR	19 29 38.5	
	comp=Z,69nm,18.6s,baz=104,slow=32						
KSAR	Wonju Array Be	11.19	270	P	Pn	19 26 23.8	0.0
KSAR	Wonju Array Be	11.19	270	Pn	Pn	19 26 23.8	0.0
KS19	Wonju Array Si	11.19	270	Pn	Pn	19 26 23.8	-0.1
MDJ	Mudanjiang	11.25	308	P	Pn	19 26 24.3	-0.4
MDJ				sP		19 26 39.1	
MDJ				pmax	pmax		
	comp=Z,5.0nm,1.4s						
MDJ				pmax	pmax		
	comp=Z,200nm,5.3s						
MDJ	Mudanjiang	11.25	308	Pn	Pn	19 26 26.8	+2.1
KLR	Kul'dur	13.21	329	P	Pn	19 26 51.3	0.0
	comp=Z,0.2nm,0.3s,baz=92,slow=9.3,SNR=4.4						
KLR				LR	LR	19 31 49.6	
	comp=Z,115nm,20.0s,baz=136,slow=37						
KLR	Kul'dur	13.21	329	⇓*e*P	Pn	19 26 50.3	-1.0
KLR				pmax	pmax		
	comp=Z,7.0nm,1.6s						
DL2	Dalian	15.94	279	*e*P	Pn	19 27 28.8	+1.1
DL2				pmax	pmax		
	comp=Z,29nm,1.2s						
ZEA	Zeya	18.49	332	*e*P	P	19 27 58.4	-0.4
ZEA				pmax	pmax		
	comp=N,10.0nm,0.4s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NJ2	Nanjing	19.89	259	*e*P	P	19 28 13.4	-0.8
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
YOJ	Yonaguni jima	21.21	235	P	P	19 28 26.3	-2.3
YOJ				pmax	pmax		
	comp=Z,76nm,1.1s						
YOJ	Yonaguni jima	21.21	235	P	P	19 28 26.3	-2.3
MA2	Magadan	22.05	12	P	P	19 28 37.9	+0.6
	comp=Z,8.2nm,0.6s,baz=186,slow=9.5,SNR=6.8						
MA2	Magadan	22.05	12	⇓*e*P	P	19 28 39.7	+2.4
MA2				pmax	pmax		
	comp=Z,9.0nm,1.0s						
MA2	Magadan	22.05	12	P	P	19 28 38.5	+1.2
YHNB	Yeheng	22.14	238	P	P	19 28 39.2	+0.5
YHNB				IAmb	IAmb	19 29 12.9	
	comp=Z,79nm,1.8s						
NACB	Ninganchiao	22.33	237	P	P	19 28 37.3	-3.4
NACB				IAmb	IAmb	19 29 14.1	
	comp=Z,18nm,0.9s						
SSLB	Suanglung	23.02	237	P	P	19 28 45.1	-2.9
SSLB				IAmb	IAmb	19 29 21.7	
	comp=Z,46nm,1.6s						
YULB	Yu-li	23.07	236	P	P	19 28 44.9	-3.6
YULB				IAmb	IAmb	19 28 57.2	
	comp=Z,38nm,1.4s						
HHC	Hu-ho-hao-te	23.55	286	*e*P	P	19 28 52.6	-0.4
HHC				pmax	pmax		
	comp=Z,6.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,250nm,5.0s						
TPUB	Ta-pu	23.57	237	P	P	19 28 51.0	-2.3
TWG	Pinlang	23.62	235	P	P	19 28 52.7	-1.1
TWG				IAmb	IAmb	19 29 03.5	
	comp=Z,27nm,1.1s						
KNMB	Chin-men Tao	24.32	242	P	P	19 28 58.4	-1.8
YAK	Yakutsk	24.97	346	P	P	19 29 04.9	-0.9
	comp=Z,2.7nm,0.3s,baz=139,slow=1.0,SNR=7.4						
YAK				LR	LR	19 38 36.3	
	comp=Z,41nm,19.6s,baz=112,slow=36						
YAK	Yakutsk	24.97	346	⇓*e*P	P	19 29 04.7	-1.0
YAK				pmax	pmax		
	comp=Z,16nm,1.0s						
YAK	Yakutsk	24.97	346	P	P	19 29 04.6	-1.1
YAK				IAmb	IAmb	19 29 08.4	
	comp=Z,14nm,0.9s						
SEY	Seymchan	25.49	11	P	P	19 29 10.6	+0.2
	comp=Z,4.3nm,0.8s,baz=197,slow=5.4,SNR=14						
SEY	Seymchan	25.49	11	⇓*e*P	P	19 29 11.4	+1.0
BOD	Bodaibo	26.74	326	*e*P	P	19 29 21.0	-0.8
BOD				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ULN	Ulaanbaatar	27.06	302	⇑*e*P	P	19 29 25.4	+0.3
ULN				pmax	pmax		
	comp=Z,4.0nm,1.3s						
ULN	Ulaanbaatar	27.06	302	P	P	19 29 25.4	+0.3
SONM	Songino Array	27.50	302	P	P	19 29 27.5	-1.4
	comp=Z,1.3nm,0.8s,baz=109,slow=8.8,SNR=7.9						
SONM	Songino Array	27.50	302	*e*P	P	19 29 28.9	0.0
SONM				pmax	pmax		
	comp=Z,1.0nm,0.8s						
SONM	Songino Array	27.50	302	P	P	19 29 28.9	0.0
ENH	Enshi	27.91	263	P	P	19 29 31.6	-1.1
ENH				IAmb	IAmb	19 29 32.9	
	comp=Z,22nm,0.9s						
H11N2	WAKE ISLAND Hy	28.42	124	T	T	19 59 51.3	
	baz=316,slow=75,SNR=1685						
H11N1	WAKE ISLAND Hy	28.43	124	T	T	19 59 48.6	
	baz=316,slow=75,SNR=1795						
H11N3	WAKE ISLAND Hy	28.43	124	T	T	19 59 49.3	
	baz=316,slow=75,SNR=1647						
H11S1	WAKE ISLAND Hy	29.17	126	T	T	20 00 46.7	
	baz=318,slow=76,SNR=436						
H11S3	WAKE ISLAND Hy	29.18	126	T	T	20 00 45.7	
	baz=318,slow=76,SNR=598						
H11S2	WAKE ISLAND Hy	29.19	126	T	T	20 00 49.9	
	baz=318,slow=76,SNR=360						
ZAK	Zakamensk	29.88	307	*e*P	P	19 29 42.9	-7.1
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
TLY	Talaya	29.89	309	P	P	19 29 49.3	-0.7
	comp=Z,2.4nm,0.7s,baz=120,slow=7.0,SNR=6.6						
TLY	Talaya	29.89	309	⇓*e*P	P	19 29 49.7	-0.3
TLY				pmax	pmax		
	comp=Z,4.0nm,1.0s						
TLY	Talaya	29.89	309	P	P	19 29 49.0	-0.9
LZH	Lanzhou	30.33	278	*e*P	P	19 29 53.9	-0.4
LZH				pP	pP	19 30 06.3	+0.5
LZH				sP	sP	19 30 12.1	+1.2
LZH				PP	PnPn	19 30 52.6	-0.8
LZH				pmax	pmax		
	comp=Z,25nm,1.2s						
LZH				pmax	pmax		
	comp=Z,79nm,5.3s						
GTA	Gaotai	32.66	285	P	P	19 30 14.1	-0.5
GTA				pP	pP	19 30 27.9	+1.7
GTA				sP	sP	19 30 32.6	+1.3
GTA				PP	PP	19 31 28.0	-0.8
GTA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
GTA				pmax	pmax		
	comp=Z,48nm,4.7s						
GTA				LR	LR		
	comp=Z,98nm,14.5s						
GTA				LR	LR		
	comp=Z,45nm,10.2s						
GTA				LR	LR		
	comp=Z,64nm,12.7s						
QIZ	Qiongzhong	33.87	245	P	P	19 30 26.6	+1.5
KMI	Kunming	35.62	260	⇓P	P	19 30 40.8	+0.3
KMI				pmax	pmax		
	comp=Z,14nm,0.5s						
KMI	Kunming	35.62	260	P	P	19 30 39.8	-0.7
KMI				pmax	pmax		
	comp=Z,11nm,0.5s						
KMI	Kunming	35.62	260	P	P	19 30 39.8	-0.7
TNA	Tin City	39.55	30	P	P	19 31 14.8	+1.8
TNA				IAmb	IAmb	19 31 43.7	
	comp=Z,15nm,1.7s						
DGZ	Jazzator, Alta	40.05	305	*c i*P	P	19 31 18.0	+0.4
DGZ				pmax	pmax		
	comp=Z,15nm,0.8s						
WMQ	Urumqi	40.70	296	*e*P	P	19 31 23.8	+0.8
WMQ				pP	pP	19 31 33.3	-1.4
WMQ				sP	sP	19 31 41.3	+1.5
WMQ				pmax	pmax		
	comp=Z,23nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,110nm,6.1s						
WMQ				LR	LR		
	comp=Z,450nm,29.1s						
WMQ				LR	LR		
	comp=Z,1µm,29.1s						
WMQ				LR	LR		
	comp=Z,260nm,29.2s						
WMQ	Urumqi	40.70	296	P	P	19 31 22.6	-0.4
WMQ				pmax	pmax		
	comp=Z,18nm,0.8s						
WMQ	Urumqi	40.70	296	P	P	19 31 22.6	-0.4
WMQ				IAmb	IAmb	19 31 25.4	
	comp=Z,18nm,0.8s						
ZAA0	Zalesovo Array	41.43	311	P	P	19 31 28.3	-0.4
ZAA0				IAmb	IAmb	19 31 29.0	
	comp=Z,5.2nm,0.8s						
ZALV	Zalesovo Beam	41.43	311	P	P	19 31 28.5	-0.2
	comp=Z,3.9nm,0.4s,baz=87,slow=7.6,SNR=17						
ZALV				PcP	PcP	19 33 25.4	-0.5
	comp=Z,1.2nm,0.4s,baz=94,slow=3.6,SNR=5.7						
ZSN	Zaisan	42.02	302	*e*P	P	19 31 33.3	-0.3
	comp=Z,5.6nm,0.8s,baz=302						
ZSN	Zaisan	42.02	302	*e*P	P	19 31 33.3	-0.3
ZSN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
CMAR	Chiang Mai Arr	42.26	254	P	P	19 31 35.4	-0.5
	comp=Z,0.5nm,0.5s,baz=42,slow=8.3,SNR=7.3						
CMAR				LR	LR	19 49 41.3	
	comp=Z,9.5nm,19.0s,baz=280,slow=37						
CMAR	Chiang Mai Arr	42.26	254	*e*P	P	19 31 36.1	+0.2
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
CMAR	Chiang Mai Arr	42.26	254	P	P	19 31 36.7	+0.8
NRIK	Noril'sk	42.34	335	⇓*e*P	P	19 31 36.5	+0.6
NRIK				pmax	pmax		
	comp=Z,5.0nm,1.4s						
LSA	Lhasa	42.57	274	P	P	19 31 39.4	+0.6
LSA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
LSA	Lhasa	42.57	274	P	P	19 31 39.4	+0.6
MK31	Makanchi Array	43.86	301	*ce*P	P	19 31 48.0	-0.6
MK31	Makanchi Array	43.86	301	P	P	19 31 48.3	-0.3
MKAR	Makanchi Array	43.86	301	P	P	19 31 48.1	-0.4
	comp=Z,3.6nm,0.6s,baz=85,slow=10.0,SNR=46						
MAKZ	Makanchi	44.07	301	P	P	19 31 49.8	-0.4
MAKZ				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MAKZ	Makanchi	44.07	301	P	P	19 31 49.8	-0.4
SVW2	Sparrevohn	44.26	38	P	P	19 31 54.0	+2.4
SVW2				IAmb	IAmb	19 32 25.8	
	comp=Z,26nm,1.5s						
SEM	Semipalatinsk	44.56	307	*e*P	P	19 31 52.5	-1.9
	baz=306						
SEM	Semipalatinsk	44.56	307	*e*P	P	19 31 52.4	-1.9
KURK	Kurchatov	45.54	307	P	P	19 32 01.8	0.0
KURK	Kurchatov	45.54	307	P	P	19 32 01.2	-0.6
KURK				IAmb	IAmb	19 32 02.5	
	comp=Z,16nm,0.8s						
KURBB	Kurchatov Arra	45.61	307	P	P	19 32 01.8	-0.6
	comp=Z,12nm,0.8s,baz=82,slow=8.2,SNR=92						
TAPN	Taplejung	46.32	273	*e*P	P	19 32 08.6	-0.1
	comp=Z,5.0nm,0.4s						
SHLS	Shalkode	46.68	297	*e*P	P	19 32 07.8	-3.3
	baz=297						
SHLS	Shalkode	46.68	297	*e*P	P	19 32 07.7	-3.3
ODAN	Odare	46.80	273	*e*P	P	19 32 11.9	-0.5
	comp=Z,9.2nm,0.5s						
TDK	Taldyqorghan	46.91	300	*e*P	P	19 32 12.0	-0.7
	comp=Z,2.6nm,0.5s,baz=300						
TDK	Taldyqorghan	46.91	300	*e*P	P	19 32 12.0	-0.7
TDK				pmax	pmax		
	comp=Z,3.0nm,0.5s						
KPKS	Kokpek	47.14	297	*e*P	P	19 32 13.6	-1.0
	baz=297						
KPKS	Kokpek	47.14	297	*e*P	P	19 32 13.6	-1.0
RAMN	Ramite	47.38	273	*e*P	P	19 32 16.3	-0.6
	comp=Z,18nm,0.9s						
GHO	Glory Hole Cre	47.45	37	P	P	19 32 18.4	+1.7
SATY	Saty	47.45	297	*e*P	P	19 32 16.4	-0.7
	baz=297						
SATY	Saty	47.45	297	*e*P	P	19 32 16.3	-0.8
GUN	Gumba	47.50	275	*e*P	P	19 32 17.7	-0.2
	comp=Z,13nm,0.3s						
MDM	Murphy Dome	47.62	33	P	P	19 32 20.2	+2.2
MDM				IAmb	IAmb	19 32 33.5	
	comp=Z,10nm,1.6s						
KKN	Kakani	48.03	275	*e*P	P	19 32 21.5	-0.3
	comp=Z,25nm,0.8s						
PKI	Pulchoki	48.03	275	*e*P	P	19 32 21.3	-0.7
	comp=Z,8.0nm,0.6s						
PKIN	Phulchoki	48.03	275	*e*P	P	19 32 21.0	-1.0
	comp=Z,9.4nm,0.6s						
SCM	Sheep Creek Mo	48.20	37	P	P	19 32 24.3	+1.7
SCM				pmax	pmax		
	comp=Z,68nm,1.8s						
SCM	Sheep Creek Mo	48.20	37	P	P	19 32 24.3	+1.7
IL31		48.20	33	P	P	19 32 23.5	+1.1
IL31				IAmb	IAmb	19 32 56.7	
	comp=Z,13nm,1.6s						
ILAR	Eielson Array	48.20	33	P	P	19 32 23.6	+1.2
	comp=Z,1.1nm,0.7s,baz=267,slow=6.7,SNR=14						
CHKK	Chushkaly	48.21	298	*e*P	P	19 32 21.5	-1.3
	baz=298						
CHKK	Chushkaly	48.21	298	*e*P	P	19 32 21.5	-1.3
MDOK	Medeo	48.37	298	*e*P	P	19 32 23.5	-0.8
	baz=298						
MDOK	Medeo	48.37	298	*e*P	P	19 32 23.4	-0.8
GKN	Gorkha	48.43	276	*e*P	P	19 32 24.3	-0.6
	comp=Z,31nm,0.9s						
TNSS	Tian-Shan	48.48	297	*e*P	P	19 32 24.4	-0.9
	baz=297						
TNSS	Tian-Shan	48.48	297	*e*P	P	19 32 24.4	-0.9
KUU	Kurty	48.64	299	*e*P	P	19 32 24.7	-1.5
	comp=Z,2.0nm,0.7s,baz=299						
KUU	Kurty	48.64	299	*e*P	P	19 32 24.6	-1.5
KUU				pmax	pmax		
	comp=Z,2.0nm,0.7s						
M24K	Tolsona, Glenn	48.72	36	P	P	19 32 28.1	+1.6
DANN	Dangsing	48.96	277	*e*P	P	19 32 29.1	0.0
	comp=Z,57nm,0.7s						
BRZS	Berezniki	49.42	307	*e*P	P	19 32 30.7	-1.3
	baz=307						
BRZS	Berezniki	49.42	307	*e*P	P	19 32 30.6	-1.3
BVAR	Borovoye Array	50.09	312	P	P	19 32 36.7	-0.3
	comp=Z,0.9nm,0.5s,baz=72,slow=10,SNR=5.0						
BRVK	Borovoye	50.14	312	⇓*e*P	P	19 32 37.0	-0.4
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
AAK	Ala-Archa	50.31	298	⇑*e*P	P	19 32 38.2	-0.9
AAK				pmax	pmax		
	comp=Z,22nm,2.5s						
AAK	Ala-Archa	50.31	298	P	P	19 32 38.8	-0.3
DZA	Taraz	52.42	299	*e*P	P	19 32 53.8	-0.9
	comp=Z,2.8nm,0.6s,baz=299						
DZA	Taraz	52.42	299	*e*P	P	19 32 53.8	-0.9
DZA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KK31	Karatay Array	52.91	299	P	P	19 32 57.8	-0.5
KK31				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KK31	Karatay Array	52.91	299	P	P	19 32 57.8	-0.5
KKAR	Karatay Array	52.91	299	P	P	19 32 57.8	-0.5
KKAR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KKAR	Karatay Array	52.91	299	P	P	19 32 57.2	-1.1
KKAR	Karatay Array	52.91	299	P	P	19 32 57.8	-0.5
KKAR				IAmb	IAmb	19 33 15.4	
	comp=Z,2.3nm,1.0s						
INK	Inuvik	53.08	28	P	P	19 32 59.8	+0.8
	comp=Z,2.0nm,0.8s,baz=317,slow=8.3,SNR=4.5						
INK	Inuvik	53.08	28	P	P	19 33 00.2	+1.1
INK				pmax	pmax		
	comp=Z,9.0nm,1.6s						
INK	Inuvik	53.08	28	P	P	19 33 00.2	+1.1
INK				IAmb	IAmb	19 33 07.2	
	comp=Z,9.0nm,1.6s						
IUG	Iuzhnay	53.59	299	*e*P	P	19 33 02.8	-0.6
	baz=298						
IUG	Iuzhnay	53.59	299	*e*P	P	19 33 02.7	-0.6
NIL	Nilore	54.67	288	P	P	19 33 11.2	-0.1

NIL				pmax	pmax		
	comp=Z,7.0nm,0.8s						
NIL	Nilore	54.67	288	P	P	19 33 11.2	-0.1
NIL				IAmb	IAmb	19 33 12.5	
	comp=Z,7.2nm,0.8s						
ARU	Arti	55.74	318	P	P	19 33 18.3	-0.3
	comp=Z,1.7nm,0.6s,baz=87,slow=8.7,SNR=9.7						
ARU	Arti	55.74	318	*d i*P	P	19 33 18.0	-0.6
ARU				S	S	19 40 59.0	-3.0
ARU				SS	SS	19 44 40.4	-6.8
ARU				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KBL	Kabul	57.41	290	P	P	19 33 30.4	-0.7
KBL				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KBL	Kabul	57.41	290	P	P	19 33 30.4	-0.7
KBL				IAmb	IAmb	19 33 31.7	
	comp=Z,4.4nm,0.8s						
ABKAR	Akbulak array	57.50	310	P	P	19 33 30.6	-0.6
ABKAR				IAmb	IAmb	19 33 48.8	
	comp=Z,2.6nm,0.6s						
ABKAR	Akbulak array	57.50	310	P	P	19 33 30.5	-0.6
WB0	Warramunga Arr	58.17	188	P	P	19 33 36.2	+0.1
AKTO	Aktyubinsk	58.19	312	P	P	19 33 35.8	-0.3
	comp=Z,2.8nm,0.9s,baz=70,slow=13,SNR=5.0						
WRAB	Tennant Creek	58.34	188	⇑*e*P	P	19 33 37.2	-0.1
WRAB				pmax	pmax		
	comp=Z,7.0nm,1.7s						
WRAB	Tennant Creek	58.34	188	P	P	19 33 37.2	-0.1
WRAB				IAmb	IAmb	19 33 55.8	
	comp=Z,6.0nm,1.0s						
WR0	Warramunga Arr	58.34	188	P	P	19 33 37.4	0.0
WR0				IAmb	IAmb	19 34 05.5	
	comp=Z,9.9nm,1.4s						
WB2	Warramunga Arr	58.35	188	P	P	19 33 37.3	-0.1
WRA	Warramunga Arr	58.35	188	P	P	19 33 37.2	-0.2
	comp=Z,1.3nm,0.5s,baz=6.4,slow=7.3,SNR=25						
WRA	Warramunga Arr	58.35	188	P	P	19 33 37.2	-0.2
SANVU	Saraoutou	58.44	151	P	P	19 33 37.9	-0.2
EUNU	Eureka	58.90	9	P	P	19 33 40.8	+0.2
EUNU				IAmb	IAmb	19 33 41.8	
	comp=Z,2.0nm,0.7s						
KIRV	Kirov	59.54	323	P	P	19 33 45.1	-0.1
	comp=Z,5.2nm,0.5s,baz=343,slow=1.7,SNR=3.9						
KIRV	Kirov	59.54	323	⇑*e*P	P	19 33 44.9	-0.3
RES	Resolute Bay	61.29	15	P	P	19 33 57.5	+0.6
RES				pmax	pmax		
	comp=Z,4.0nm,1.1s						
RES	Resolute Bay	61.29	15	P	P	19 33 57.5	+0.6
RES				IAmb	IAmb	19 33 58.1	
	comp=Z,4.3nm,1.1s						
AS31	Alice Springs	62.08	188	P	P	19 34 02.9	0.0
ASAR	Alice Springs	62.08	188	P	P	19 34 03.2	+0.4
	comp=Z,0.9nm,0.6s,baz=2.3,slow=4.7,SNR=19						
ASAR	Alice Springs	62.08	188	P	P	19 34 02.8	-0.1
HRA	Herat	62.44	293	P	P	19 34 05.2	-0.4
YKA	Yellowknife Ar	62.51	31	P	P	19 34 05.6	+0.3
	comp=Z,0.6nm,0.7s,baz=305,slow=6.3,SNR=13						
YKA	Yellowknife Ar	62.51	31	*e*P	P	19 34 06.4	+1.1
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ARCES	ARCESS Array B	63.00	339	P	P	19 34 08.7	+0.2
	comp=Z,1.7nm,0.5s,baz=57,slow=7.4,SNR=14						
ARCES	ARCESS Array B	63.00	339	P	P	19 34 08.9	+0.3
BELG	Belogornoye	63.21	317	⇓*e*P	P	19 34 09.7	-0.4
BELG				pmax	pmax		
	comp=Z,2.0nm,0.9s						
DAG	Danmarks Havn	64.58	355	*i* P	P	19 34 18.3	-0.5
DAG	Danmarks Havn	64.58	355	*i* P	P	19 34 18.3	-0.5
DAG	Danmarks Havn	64.58	355	*i* P	P	19 34 18.3	-0.5
FINES	FINESS Array B	67.93	332	P	P	19 34 39.9	-0.5
	comp=Z,5.8nm,0.8s,baz=43,slow=8.6,SNR=12						
FINES	FINESS Array B	67.93	332	*e*P	P	19 34 40.7	+0.2
FINES				pmax	pmax		
	comp=Z,6.0nm,0.8s						
FINES	FINESS Array B	67.93	332	P	P	19 34 40.4	-0.1
SUMG	Summit	69.45	0	*i* P	P	19 34 51.0	+0.8
SUMG	Summit	69.45	0	*i* P	P	19 34 51.0	+0.8
SUMG	Summit	69.45	0	P	P	19 34 50.9	+0.6
SUMG				IAmb	IAmb	19 34 51.8	
	comp=Z,8.6nm,1.1s						
SUMG	Summit	69.45	0	*i* P	P	19 34 51.0	+0.8
KIV	Kislovodsk	70.44	311	*e*P	P	19 34 57.7	+1.2
KIV				pmax	pmax		
	comp=Z,25nm,1.0s						
KBZ	Khabaz	70.45	311	P	P	19 34 56.2	-0.1
	comp=Z,3.7nm,0.9s,baz=49,slow=1.5,SNR=7.6						
NACGM	Naroch	71.94	327	*i* P	P	19 35 04.6	-0.6
NACGM				*i* P	P	19 35 04.6	-0.6
NACGM				*i* P	P	19 35 04.6	-0.6
NACGM				*i* PcP	sP	19 35 21.4	-1.2
NACGM				*i* PP	PP	19 37 54.0	+9.3
NACGM				*i* PPP	PPP	19 39 26.0	
NACGM				*i* S	S	19 44 28.8	+5.8
NACGM				*i* SS	SS	19 49 17.2	+18
NACGM				*i* ScP		19 52 08.1	
NACGM				*i* LQ	LQ	20 02 14.3	
NACGM				*i* LR	LR	20 07 11.2	
NB2	NORSAR Subarra	73.22	337	P	P	19 35 12.7	-0.1
	comp=Z,3.1nm,0.8s,baz=36,slow=6.2						
NOA	NORSAR Array B	73.22	337	P	P	19 35 12.2	-0.6
	comp=Z,3.6nm,0.7s,baz=39,slow=6.0,SNR=14						
NOA	NORSAR Array B	73.22	337	*e*P	P	19 35 12.6	-0.2
NOA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
AKASG	Malin Array Be	73.60	322	P	P	19 35 14.6	-0.5
	comp=Z,3.7nm,0.5s,baz=44,slow=6.2,SNR=19						
AKASG	Malin Array Be	73.60	322	P	P	19 35 14.8	-0.3
AKASG				pmax	pmax		
	comp=Z,2.0nm,1.1s						
AKASG	Malin Array Be	73.60	322	P	P	19 35 14.8	-0.3
AKBB	Malin Array Si	73.60	322	⇑*e*P	P	19 35 15.3	+0.2
NVAR	Mina Array Bea	73.88	54	P	P	19 35 19.3	+2.0
	comp=Z,0.6nm,0.8s,baz=278,slow=6.3,SNR=2.4						
PDAR	Pinedale Array	76.47	46	P	P	19 35 33.5	+1.4
	comp=Z,0.6nm,0.5s,baz=25,slow=1.1,SNR=7.5						
PDAR	Pinedale Array	76.47	46	P	P	19 35 33.2	+1.0
BURAR	Bucovina Array	77.62	322	P	P	19 35 38.2	-0.1
BRTR	Keskin Array B	78.38	312	P	P	19 35 42.5	-0.2
	comp=Z,0.6nm,0.4s,baz=138,slow=2.0,SNR=4.2						
BRTR	Keskin Array B	78.38	312	*e*P	P	19 35 41.6	-1.1
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MORC	Moravsky Berou	79.57	327	*e*P	P	19 35 48.8	-0.2
CLL	Collm	80.25	330	*i* P	P	19 35 52.2	-0.3
	comp=Z,7.0nm,1.0s						
CLL				*e*sP	sP	19 36 11.0	+0.9
CLL	Collm	80.25	330	*i* P	P	19 35 52.2	-0.3
CLL				pmax	pmax		
	comp=Z,7.0nm,1.0s						
VRAC	Vranov	80.33	327	*e*P	P	19 35 54.1	+1.1
KRUC	Moravsky	80.60	327	*e*P	P	19 35 54.2	-0.3
CONA	Conrad Observa	81.70	327	*e*P	P	19 36 01.0	+0.6
	comp=Z,0.8nm,0.4s						
KHC	Kasperske Hory	81.73	329	*de*P	P	19 36 01.1	+0.6
KHC				pmax	pmax		
	comp=Z,6.0nm,1.3s						
KHC	Kasperske Hory	81.73	329	*e*P	P	19 36 00.0	-0.5
GERES	GERESS Array B	81.90	328	P	P	19 36 00.8	-0.6
	comp=Z,0.8nm,0.5s,baz=42,slow=4.3,SNR=8.4						
GERES	GERESS Array B	81.90	328	*e*P	P	19 36 01.3	-0.2
GERES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
SOKA	Soboth	83.02	326	*e*P	P	19 36 07.2	-0.2
	comp=Z,1.7nm,0.6s						
KBA	Koelnbreinsper	83.44	328	*e*P	P	19 36 09.9	+0.4
	comp=Z,1.9nm,0.7s						
BMRD	Maredsous	84.10	334	*d*P	P	19 36 12.1	-0.6
BMRD				*d*pP	pP	19 36 27.1	+1.7
MOTA	Moosalm	84.15	329	*i* P	P	19 36 13.5	+0.2
	comp=Z,0.3nm,0.2s						
FETA	Feichten	84.57	329	*i* P	P	19 36 15.7	+0.3
	comp=Z,0.6nm,0.4s						
TXAR	Lajitas Array	89.00	53	P	P	19 36 38.5	+1.3
	comp=Z,0.5nm,0.7s,baz=291,slow=2.7,SNR=6.6						
TXAR	Lajitas Array	89.00	53	P	P	19 36 37.9	+0.8
LPAZ	La Paz	145.66	59	PKPbc	PKPbc	19 43 21.8	0.0
	comp=Z,1.0nm,0.6s,baz=320,slow=4.3,SNR=5.0						
LPAZ	La Paz	145.66	59	*e*PKP2	PKPab	19 43 22.8	+0.7
LPAZ				pmax	pmax		
	comp=Z,1.0nm,0.6s						

IDC 10 19:46:02.6±1.8**,4°.17S**×**138°.60E,h0km,mb3.1**/1**,mb1 3.4**/4**,mb1mx3.2**/29**,mbtmp3.2**/4**,ML3.1**/3**,Error ellipse: s-maj=53.2km s-min=29.1km az=111.0,Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	2.67	52	Pn	Pn	19 46 47.7	+0.8
	1.0nm,0.3s,baz=207,slow=22,SNR=1.7						
WRA	Warramunga Arr	16.22	194	Pn	P	19 49 53.7	-1.6
	0.2nm,0.3s,baz=25,slow=12,SNR=6.6						
ASAR	Alice Springs	19.90	193	P	P	19 50 35.5	-0.5
	0.1nm,0.3s,baz=30,slow=9.6,SNR=7.1						
MKAR	Makanchi Array	70.87	323	P	P	19 57 21.2	-0.3
	0.1nm,0.4s,baz=133,slow=6.3,SNR=1.8						

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*IDC **10** 20:08:33.2±1.8,3°.37S×147°.92E,h0km,mb3.7/5,mb1 4.0/5,mb1mx3.7/39,mbtmp3.7/5,MS3.3/4,Ms1 3.3/4,ms1mx2.9/32,Error ellipse: s-maj=79.0km s-min=26.3km az=116.0*

*NEIC **10** 20:08:37.9±1.5,2°.9S±0°.2×147°.3E±0°.1,h32km±8km,mb4.1/8,Error ellipse: s-maj=33.1km s-min=15.0km az=173.0*

ISC 10 20:08:38.5±1.4**,2°.9S**±0°.2×**147°.2E**±0°.3**,h35km,n23,σ0s.81**/13**,mb3.7**/7**,Admiralty Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	6.55	274	LR	LR	20 12 29.7	
	comp=Z,76nm,18.5s,baz=276,slow=33						
SIJI	Sorong	16.10	277	LR	LR	20 18 44.3	
	comp=Z,64nm,20.1s,baz=82,slow=36						
CTAO	Charters Tower	17.07	183	P	P	20 12 36.5	+0.4
CTAO				IAmb	IAmb	20 13 26.0	
	comp=Z,32nm,1.5s						
WB0	Warramunga Arr	20.91	216	P	P	20 13 17.5	-0.7
WB0				IAmb	IAmb	20 13 28.6	
	comp=Z,15nm,1.6s						
WR0	Warramunga Arr	20.97	215	P	P	20 13 17.3	-1.5
WR0				IAmb	IAmb	20 13 36.2	
	comp=Z,6.1nm,1.1s						
WRAB	Tennant Creek	21.06	216	P	P	20 13 18.9	-0.9
WRAB				IAmb	IAmb	20 13 31.1	
	comp=Z,5.4nm,0.9s						
WB2	Warramunga Arr	21.07	216	P	P	20 13 18.9	-1.0
WB2				IAmb	IAmb	20 13 31.3	
	comp=Z,12nm,1.4s						
WRA	Warramunga Arr	21.08	216	P	P	20 13 20.4	+0.4
	comp=Z,2.0nm,0.6s,baz=39,slow=12,SNR=26						
AS31	Alice Springs	24.31	211	P	P	20 13 53.5	+0.5
ASAR	Alice Springs	24.31	211	P	P	20 13 53.7	+0.7
	comp=Z,0.8nm,0.5s,baz=39,slow=7.6,SNR=22						
ASAR	Alice Springs	24.31	211	P	P	20 13 53.1	+0.1
LUWI	Luwuk	24.53	274	P	P	20 13 55.4	+0.3
FITZ	Fitzroy Crossi	25.98	233	P	P	20 14 09.1	+0.8
	comp=Z,1.2nm,0.9s,baz=46,slow=11,SNR=1.3						
FITZ				LR	LR	20 25 54.6	
	comp=Z,44nm,18.6s,baz=122,slow=40						
H11S3	WAKE ISLAND Hy	28.64	41	T	T	20 44 19.1	
	baz=223,slow=76,SNR=105						
H11S2	WAKE ISLAND Hy	28.65	41	T	T	20 44 19.4	
	baz=223,slow=76,SNR=77						
H11S1	WAKE ISLAND Hy	28.66	41	T	T	20 44 19.8	
	baz=223,slow=76,SNR=59						
H11N1	WAKE ISLAND Hy	29.66	40	T	T	20 45 36.0	
	baz=222,slow=76,SNR=22						
H11N3	WAKE ISLAND Hy	29.67	40	T	T	20 45 35.5	
	baz=222,slow=76,SNR=49						
H11N2	WAKE ISLAND Hy	29.67	40	T	T	20 45 37.1	
	baz=222,slow=76,SNR=57						
VNDA	Vanda	74.93	177	LR	LR	20 49 33.1	
	comp=Z,82nm,18.6s,baz=300,slow=33						
MKAR	Makanchi Array	75.32	320	P	P	20 20 24.7	+6.4
	comp=Z,0.2nm,0.8s,baz=86,slow=6.5,SNR=2.4						
YKA	Yellowknife Ar	96.37	28	P	P	20 22 03.3	-0.3
	comp=Z,0.5nm,0.8s,baz=275,slow=3.4,SNR=8.3						
TORD	Torodi Ar. Bea	144.47	289	PKPbc	PKPab	20 28 11.1	+0.5
	comp=Z,1.4nm,1.2s,baz=56,slow=3.6,SNR=4.2						

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*IDC **10** 20:44:15.8±0.8,50°.18N×115°.17W,h0km,mb3.1/4,mb1 3.6/8,mb1mx3.5/40,mbtmp3.4/8,ML3.9/3,Error ellipse: s-maj=15.6km s-min=9.9km az=102.0*

ISC 10 20:44:16.5±0.9**,50°.31N**±0°.08×**115°.00W**±0°.10**,h10km,n11,σ1s.73**/9**,mb3.0**/3**,British Columbia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEW	Newport	2.48	215	Pn	Pn	20 44 57.4	+0.5
	7.0nm,0.3s,baz=37,slow=14,SNR=67						
NEW				Sn	Sn	20 45 25.1	-2.1
	8.0nm,0.3s,baz=328,slow=20,SNR=5.8						
I56US	NEWPORT INFRAS	2.48	215	*i*		20 58 59.2	
	baz=38,slow=327,SNR=1.3						
PDAR	Pinedale Array	8.43	152	Pn	Pn	20 46 19.6	+0.8
	0.2nm,0.3s,baz=352,slow=13,SNR=7.2						
I10CA	LAC DU BONNET	12.15	83	*i*		22 00 20.0	
	baz=277,slow=329,SNR=1.4						
YKA	Yellowknife Ar	12.21	1	Pn	Pn	20 47 08.2	-2.0
	0.9nm,0.3s,baz=178,slow=13,SNR=36						
YKA				Sn	Sn	20 49 17.2	-9.1
	0.2nm,0.3s,baz=174,slow=23,SNR=3.5						
YKA				Lg	Lg	20 50 36.0	
	baz=177,slow=28,SNR=4.0						
ULM	Lac du Bonnet	12.24	83	Pn	Pn	20 47 10.0	-0.7
	0.2nm,0.3s,baz=306,slow=15,SNR=2.1						
ULM				Pg		20 47 54.9	
	0.3nm,0.3s,baz=290,slow=16,SNR=3.4						
ULM				Lg	Lg	20 50 30.7	
	0.4nm,0.3s,baz=49,slow=11,SNR=3.5						
INK	Inuvik	20.21	340	P	Pn	20 48 53.8	+0.8
	1.0nm,0.5s,baz=135,slow=17,SNR=4.4						
ILAR	Eielson Array	22.08	323	P	P	20 49 13.9	+2.6
	0.4nm,0.8s,baz=106,slow=8.9,SNR=4.5						
TXAR	Lajitas Array	22.64	154	P	P	20 49 18.2	+0.6
	0.3nm,0.6s,baz=342,slow=7.9,SNR=3.4						
RES	Resolute Bay	25.86	12	P	P	20 49 48.6	+0.9
	0.4nm,0.5s,baz=231,slow=11,SNR=2.5						
WRA	Warramunga Arr	118.23	272	PKP	PKPdf	21 03 04.0	+0.2
	0.6nm,1.1s,baz=42,slow=2.1,SNR=1.6						

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*TIR **10** 20:59:31.3,40°.31N×19°.78E,h7km±2km,Md3.4,Ml2.8*

*THE **10** 20:59:32.5,40°.27N×19°.78E,h16km±2km,ML2.3/2,Error ellipse: s-maj=3.5km s-min=0.8km az=250.0*

*ATH **10** 20:59:32.6,40°.33N×19°.77E,h8km±4km,ML2.9/3,Error ellipse: s-maj=4.2km s-min=1.4km az=262.0*

ISC 10 20:59:32.3±0.9**,40°.31N**±0°.02×**19°.77E**±0°.02**,h10km**±8km**,n56,σ0s.92**/76**,2C-4D,Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VLO	Vlora	0.27	308	P	Pg	20 59 38.0	+0.3
VLO				S	Sb	20 59 44.0	+0.2
VLO	Vlora	0.27	308	P	Pg	20 59 37.1	-0.6
	baz=307						
VLO				S	Sg	20 59 41.4	0.0
	baz=307						
VLO				AMP			
	comp=N,40nm,0.3s,baz=307						
SRN	Sarande	0.46	157	P	Pg	20 59 40.6	-0.7
SRN				S	Sg	20 59 47.6	+0.3
SRN	Sarande	0.46	157	P	Pg	20 59 40.4	-0.9
	baz=158						
SRN				S	Sg	20 59 47.9	+0.5
	baz=158						
SRN				AMP			
	comp=N,2.5nm,0.3s,baz=158						
KEK	Kerkira	0.59	178	P	Pg	20 59 43.1	-0.7
KEK				S	Sb	20 59 53.1	0.0
KEK	Kerkira	0.59	178	P	Pg	20 59 43.1	-0.7
KEK				S	Sg	20 59 52.1	+0.5
	comp=N,352nm,0.6s						
LSK	Leskovik	0.65	103	P	Pg	20 59 44.3	-0.7
	baz=104						
LSK				S	Sg	20 59 54.0	+0.4
	baz=104						
LSK				AMP			
	comp=N,2.3nm,0.9s,baz=104						
KBN	Korca	0.84	67	P	Pg	20 59 48.1	-0.4
KBN	Korca	0.84	67	P	Pg	20 59 47.6	-0.9
	baz=67						
KBN				S	Sb	21 00 00.1	-0.2
	baz=67						
IGT	Igoumenitsa	0.88	151	P	Pg	20 59 48.8	-0.5
IGT				S	Sb	21 00 03.1	+1.5
IGT	Igoumenitsa	0.88	151	P	Pg	20 59 48.9	-0.4
IGT				S	Sg	21 00 00.1	-0.7
	comp=N,262nm,0.6s						
NEST	Nestorio	0.98	83	P	Pg	20 59 50.5	-0.7
NEST	Nestorio	0.98	83	P	Pg	20 59 50.4	-0.8
SCTE	Santa Cesarea	1.02	257	P	Pg	20 59 52.2	+0.2
SCTE				S	Sb	21 00 06.3	+0.7
SCTE				AML	AML	21 00 10.7	
	comp=E,1112µm,0.5s						
SCTE				AML	AML	21 00 10.8	
	comp=N,463µm,0.8s						
TIR	Tirane	1.04	4	P	Pg	20 59 51.5	-0.9
TIR				S	Sg	21 00 06.2	+0.2
TIR				AML	AML	21 00 15.5	
	comp=N,1640µm,0.6s						
TIR				AML	AML	21 00 17.4	
	comp=E,1210µm,0.7s						
TIR	Tirane	1.04	4	P	Pg	20 59 52.3	-0.2
TIR	Tirane	1.04	4	⇓P	Pg	20 59 52.2	-0.2
TIR	Tirane	1.04	4	P	Pg	20 59 51.8	-0.6
	baz=3.0						
TIR				S	Sb	21 00 07.2	+0.9
	baz=3.0						
JAN	Janina	1.05	128	P	Pb	20 59 53.0	+0.4
JAN	Janina	1.05	128	P	Pg	20 59 52.8	+0.3
OHR	Ohrid	1.12	44	*i* Pn	Pg	20 59 52.5	-1.4
KPRO	Kipourio	1.27	105	P	Pn	20 59 56.6	+0.4
FNA	Florina	1.31	68	P	Pn	20 59 56.2	-0.6
FNA	Florina	1.31	68	P	Pn	20 59 55.9	-0.9
PHP	Peshkopia	1.47	20	P	Pn	20 59 59.5	+0.6
	baz=19						
PHP				S	Sg	21 00 20.7	+1.1
	baz=19						
KZN	Kozani	1.53	89	P	Pb	21 00 01.3	+0.5
KZN				S	Sg	21 00 21.0	-0.5
KZN				AML	AML	21 00 27.1	
	comp=E,710µm,0.8s						
KZN				AML	AML	21 00 30.7	
	comp=N,642µm,1.0s						
PUK	Puka	1.74	3	P	Pb	21 00 04.2	-0.2
	baz=2.0						
PUK				S	Sg	21 00 29.0	+0.7
	baz=2.0						
NYDR	Nydri-Lefkada	1.74	155	P	Pb	21 00 04.8	+0.5
EVGI	Lefkada island	1.82	158	P	Pb	21 00 05.9	+0.3
THL	Klokotos Trika	1.88	112	P	Pb	21 00 07.1	+0.4
PDO	Prodromos	2.02	147	P	Pb	21 00 08.9	-0.3
BCI	Bajram Curri	2.07	6	P	Pb	21 00 09.5	-0.5
	baz=5.0						
BCI				S	Sg	21 00 38.7	-0.2
	baz=5.0						
SKO	Skopje	2.09	37	*i* Pn	Pb	21 00 09.9	-0.3
EVR	Evrytania	2.10	131	P	Pb	21 00 10.3	-0.2
NOCI	Noci	2.12	284	P	Pn	21 00 09.6	+1.8
PDG	Podgorica	2.16	350	⇑P	Pg	21 00 14.8	+1.1
MAKR	Makrakomi, Fth	2.23	125	P	Pb	21 00 13.2	+0.4
STIP	Stip	2.29	52	*i* Pn	Pb	21 00 14.9	+1.1
AGG	Agios Georgios	2.35	122	P	Pb	21 00 13.6	-1.3
VAY	Valandovo	2.35	64	*i* Pn	Pb	21 00 15.7	+0.9
MATE	Matera	2.36	279	⇑P	Pg	21 00 17.4	-0.2
DBRK	Dubrovnik	2.66	333	*e*Pn	Pn	21 00 13.9	-1.3
STON	Ston	3.00	329	*e*Pn	Pn	21 00 17.3	-2.5
STON				Sn	Sn	21 00 54.1	-1.7
VTS	Vitosha	3.48	47	⇓P	Pn	21 00 29.0	+2.3
RICI	Ricice	3.75	329	*e*Pn	Pn	21 00 29.0	-1.2
RICI				Sn	Sn	21 01 13.7	-0.6
KIJV	Kijevo	4.46	327	*i* Pn	Pn	21 00 39.2	-0.8
KIJV				Sn	Sn	21 01 31.7	-0.3
ZIRJ	Zirje	4.55	319	*e*Pn	Pn	21 00 40.5	-0.6
MORI	Morici	4.67	321	*e*Pn	Pn	21 00 42.9	+0.1
HERR	Herculane	4.97	22	⇓P	Pn	21 00 49.7	+2.7
DUGI	Dugi Otok	5.08	318	*e*Pn	Pn	21 00 48.3	-0.3
GZR	Gura Zlata	5.54	22	⇓P	Pn	21 00 56.3	+1.4
NVLJ	Novalja	5.59	321	*e*Pn	Pn	21 00 54.9	-0.5
MOSL	Moslavina	5.75	338	*i* Pn	Pn	21 00 56.1	-1.5
SOKA	Soboth	7.24	333	*e*Pn	Pn	21 01 18.4	+0.2
	comp=N,1.2nm,0.4s						
SQTA	Sankt Quirin	9.28	321	*i* Pn	Pn	21 01 44.9	-1.3
	comp=N,1.2nm,0.3s						
MOTA	Moosalm	9.42	321	Pn	Pn	21 01 47.3	-0.8
	comp=N,2.4nm,0.6s						

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*IDC **10** 21:28:55.2±0.7,1°.83N×97°.23W,h0km,mb4.2/15,mb1 4.4/15,mb1mx4.3/33,mbtmp4.2/15,MS4.1/27,Ms1 4.2/27,ms1mx4.0/35,Error ellipse: s-maj=26.8km s-min=13.4km az=47.0*

*NEIC **10** 21:28:56.2±1.0,1°.8N±0°.1×97°.1W±0°.1,h10km±1km,mb4.7/62,Error ellipse: s-maj=24.3km s-min=17.5km az=234.0*

*GCMT **10** 21:29:00.2±0.4,2°.06N±0°.03×96°.57W±0°.03,h16km±1km,MW4.9/84,Moment Tensor Solution. s24,c27; s84,c103; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.25±.15; $M_{\theta\theta}$-2.36±.13; $M_{\phi\phi}$0.11±.09; $M_{r\theta}$0.56±.31; $M_{\theta\phi}$-0.16±.06; $M_{\phi r}$2.24±.36; Best double couple: $M_0$3.11100×10^{16} NP1:ϕ_s288.00000°,δ41.00000°,λ138.00000°. NP2: ϕ_s52.00000°,δ64.00000°,λ58.00000°. Principal axes: T 3.6890, Plg58.0000°, Azm277.0000°; N -1.1510, Plg29.0000°, Azm68.0000°; P -2.5330, Plg13.0000°, Azm165.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 10 21:28:56.3±0.6**,1°.86N**±0°.09×**97°.16W**±0°.09**,h10km,n176,σ1s.25**/153**,mb4.7**/39**,MS4.1**/29**,West of Galapagos Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MTO3	Montecristo	14.65	31	Pn	Pn	21 32 23.8	-0.2
JTS	Las Juntas de	14.74	55	Pn	Pn	21 32 25.3	+0.2
CMIG	Matias Romero	15.30	8	LR	LR	21 37 00.2	
	comp=Z,2µm,20.1s,baz=174,slow=32						
ACON	Acoyapa	15.56	49	Pn	Pn	21 32 36.6	+0.7
TGUH	Tegucigalpa,Un	15.57	38	Pn	Pn	21 32 36.4	+0.2
TGUH				IAmb	IAmb	21 32 52.3	
	comp=Z,28nm,0.5s						
TLIG	Tlapa	15.67	355	Pn	Pn	21 32 37.7	+0.2
ESPN	Las Esperanzas	16.37	51	Pn	Pn	21 32 46.0	-0.4
OTAV	Otavalo	18.77	95	P	P	21 33 15.4	-0.9
GCUF	Volcan Galeras	19.81	92	*e*P	Pn	21 33 31.0	+1.7
BBAC	Balboa, Cauca	19.90	89	*e*P	P	21 33 23.6	-4.8
TEIG	Tepich	20.21	25	LR	LR	21 40 27.7	
	comp=Z,1µm,18.2s,baz=182,slow=34						
ATAH	Atahualpa	20.74	116	P	Pn	21 33 40.7	+0.5
	comp=Z,2.8nm,0.6s,baz=256,slow=9.7,SNR=2.2						
ATAH				LR	LR	21 40 28.7	
	comp=Z,93nm,18.3s,baz=293,slow=33						
PCON	Cinco Dias	20.75	88	*e*P	P	21 33 35.7	-2.4
YOTC	Yotoco, Valle	20.89	84	*e*P	P	21 33 39.8	+0.7
PLMC	San Jos del P	21.05	81	*e*P	P	21 33 40.3	-0.6
MARP	Paez Belalcaza	21.20	87	*e*P	P	21 33 44.0	+1.3
ZAIG	Zacatecas	21.44	346	P	P	21 33 46.6	+1.4
ZAIG				IAmb	IAmb	21 33 55.1	
	comp=Z,29nm,1.1s						
CBOC	Ciudad Bolivar	21.46	79	*e*P	P	21 33 46.2	+0.9
FLOC	Florencia	21.49	90	*e*P	P	21 33 45.8	+0.2
DBBC	Dabeiba	21.50	76	*e*P	P	21 33 46.8	+1.2
GARC	Garzon, Huila	21.65	89	*e*P	P	21 33 43.3	-4.2
BETC	Betania	21.71	87	*e*P	P	21 33 49.6	+1.7
ANIL	Santa Ana	21.87	83	*e*P	P	21 33 51.0	+1.1
TOLC	Tolima	21.97	82	*e*P	P	21 33 52.1	+1.2
ORTC	Ortega, Tolima	21.98	84	*e*P	P	21 33 50.5	-0.3
RREF	El Recreo	21.98	82	*e*P	P	21 33 48.6	-2.7
GUY2C	Guyana, Caldas	22.00	81	*e*P	P	21 33 49.8	-1.7
PTLC	Puerto Leguiza	22.42	94	*e*P	P	21 33 56.5	+1.0
NORC	Norcasia	22.54	80	*e*P	P	21 34 02.2	+5.4
ROSC	El Rosal	22.98	82	P	P	21 34 03.3	+1.4
	comp=Z,8.2nm,0.3s,baz=126,slow=11,SNR=5.2						
ROSC				LR	LR	21 41 41.8	
	comp=Z,260nm,20.3s,baz=241,slow=33						
ROSC	El Rosal	22.98	82	P	P	21 34 01.3	-0.6
ROSC				IAmb	IAmb	21 34 05.9	
	comp=Z,26nm,1.1s						
SMLC	San Martn de	23.98	72	*e*P	P	21 34 09.4	-1.9
RUSC	La Rusia	24.34	80	*e*P	P	21 34 16.7	+1.5
NNA	Nana	24.42	125	LR	LR	21 41 21.3	
	comp=Z,425nm,21.8s,baz=299,slow=30						
OCAC	Ocana	24.56	74	*e*P	P	21 34 10.4	-6.5
PAMC	Pamplona, Colo	24.97	77	*e*P	P	21 34 22.1	+1.2
LPIG	La Paz	25.52	331	LR	LR	21 42 06.1	
	comp=Z,1µm,20.3s,baz=166,slow=31						

TAMC	Tame, Arauca	25.70	79	eP	P	21 34 24.8	-2.2
HPIG		26.24	343	P	P	21 34 31.1	-0.8
HPIG				IAmb	IAmb	21 34 45.3	
	comp=Z,22nm,1.6s						
SDV	Santo Domingo	27.30	74	P	P	21 34 43.3	+1.6
	comp=Z,8.2nm,0.8s,baz=223,slow=7.0,SNR=8.5						
SDV				LR	LR	21 43 39.8	
	comp=Z,321nm,21.9s,baz=242,slow=32						
SDV	Santo Domingo	27.30	74	P	P	21 34 41.2	-0.4
SDV				IAmb	IAmb	21 34 48.2	
	comp=Z,9.5nm,0.8s						
SDV	Santo Domingo	27.30	74	eP	P	21 34 42.4	+0.8
HKT	Hockley	27.97	2	P	P	21 34 46.9	-0.2
HKT				IAmb	IAmb	21 34 53.9	
	comp=Z,27nm,1.8s						
TXAR	Lajitas Array	28.02	348	P	P	21 34 48.8	+0.9
	comp=Z,2.1nm,0.8s,baz=160,slow=11,SNR=14						
TXAR				PcP	PcP	21 38 03.6	+0.8
	comp=Z,0.8nm,0.8s,baz=173,slow=5.2,SNR=4.9						
TXAR				LR	LR	21 44 53.8	
	comp=Z,779nm,18.2s,baz=0.0,slow=34						
TXAR	Lajitas Array	28.02	348	P	P	21 34 48.5	+0.7
TX31	Lajitas Ar. Si	28.02	348	P	P	21 34 47.9	+0.1
TX31				IAmb	IAmb	21 35 03.5	
	comp=Z,28nm,1.5s						
TX32	Lajitas Array	28.02	348	P	P	21 34 48.2	+0.4
JCT	Junction City	28.58	355	P	P	21 34 53.2	+0.5
JCT				IAmb	IAmb	21 34 59.6	
	comp=Z,15nm,1.1s						
342A	Flagon Creek P	29.71	8	P	P	21 35 01.5	-1.2
WHTX	Lake Whitney,	29.98	359	P	P	21 35 04.7	-0.3
WHTX				IAmb	IAmb	21 35 11.7	
	comp=Z,9.7nm,0.8s						
MNTX	Cornudas Mount	30.68	346	P	P	21 35 11.0	-0.3
ABTX	Abilene, Hawle	30.70	356	P	P	21 35 11.3	-0.1
ABTX				IAmb	IAmb	21 35 18.0	
	comp=Z,9.4nm,1.0s						
121A	Cookes Peak, D	32.11	343	P	P	21 35 23.9	-0.2
121A				IAmb	IAmb	21 35 39.9	
	comp=Z,19nm,1.5s						
MSTX	Muleshoe	32.38	351	P	P	21 35 25.9	-0.5
TUC	Tucson	32.90	338	P	P	21 35 29.7	-1.2
ETMB	Extrema	32.92	111	eP	P	21 35 31.1	-0.1
AMTX	Amarillo	33.13	353	P	P	21 35 32.0	-0.9
BNM	Barren Site	33.33	346	P	P	21 35 35.2	+0.4
LPAZ	La Paz	33.86	123	P	P	21 35 41.2	+1.1
	comp=Z,2.2nm,0.9s,baz=321,slow=11,SNR=6.5						
LPAZ				PcP	PcP	21 38 19.9	+0.8
	comp=Z,1.0nm,0.6s,baz=318,slow=3.9,SNR=3.6						
LPAZ				LR	LR	21 47 50.1	
	comp=Z,262nm,19.2s,baz=298,slow=34						
LPAZ	La Paz	33.86	123	P	P	21 35 39.1	-1.0
TUL1	Leonard	33.91	2	P	P	21 35 39.2	-0.3
ANMO	Albuquerque	34.05	346	LR	LR	21 48 25.0	
	comp=Z,714nm,19.9s,baz=164,slow=34						
ANMO	Albuquerque	34.05	346	P	P	21 35 40.9	-0.1
FCAR	Ozark Folk Cen	34.19	7	P	P	21 35 42.5	+0.5
FCAR				IAmb	IAmb	21 35 54.9	
	comp=Z,20nm,1.6s						
113A	Mohawk Valley,	34.49	335	P	P	21 35 44.7	+0.1
113A				IAmb	IAmb	21 35 51.5	
	comp=Z,17nm,1.6s						
X18A	Snowflake	34.63	341	P	P	21 35 47.5	+1.4
X18A				IAmb	IAmb	21 35 53.9	
	comp=Z,21nm,1.8s						
CBYP	Canovanas	34.76	60	P	P	21 35 46.5	-0.8
WVT	Waverly	35.18	13	P	P	21 35 50.4	-0.1
WVT				IAmb	IAmb	21 35 56.7	
	comp=Z,13nm,1.1s						
GLA	Glamis	35.19	334	P	P	21 35 50.9	+0.2
GLA				IAmb	IAmb	21 35 53.4	
	comp=Z,9.1nm,0.8s						
PBMO	Poplar Bluff	35.30	9	P	P	21 35 51.3	-0.3
MGMO	Mountain Grove	35.41	7	P	P	21 35 52.4	-0.2
MGMO				IAmb	IAmb	21 35 59.7	
	comp=Z,20nm,1.4s						
SAML	Samuel	35.52	108	P	P	21 35 52.5	-1.2
SAML				IAmb	IAmb	21 35 55.8	
	comp=Z,10nm,1.1s						
SAML	Samuel	35.52	108	eP	P	21 35 53.6	-0.1
S39A	Bolivar	35.84	5	P	P	21 35 56.7	+0.5
S39A				IAmb	IAmb	21 35 57.4	
	comp=Z,17nm,1.4s						
TKL	Tuckaleechee C	35.85	19	LR	LR	21 50 08.8	
	comp=Z,603nm,20.3s,baz=204,slow=36						
WUAZ	Wupatki	36.00	340	P	P	21 35 59.0	+1.1
S44A	Carbondale	36.40	11	P	P	21 36 00.7	-0.3
PFO	Pinyon Flats O	36.40	332	LR	LR	21 48 26.5	
	comp=Z,226nm,19.9s,baz=156,slow=32						
SDCO	Great Sand Dun	36.53	349	P	P	21 36 02.3	-0.2
R40A	Maddies Statio	36.54	6	P	P	21 36 02.5	+0.3
R40A				IAmb	IAmb	21 36 08.7	
	comp=Z,19nm,1.1s						
W13A	Hualapai Mount	36.56	337	P	P	21 36 03.7	+1.0
W13A				IAmb	IAmb	21 36 16.6	
	comp=Z,17nm,1.8s						
PTGA	Pitinga	37.27	94	P	P	21 36 09.3	+0.5
	comp=Z,9.8nm,0.9s,baz=280,slow=8.1,SNR=18						
PTGA	Pitinga	37.27	94	P	P	21 36 08.2	-0.7
PTGA				IAmb	IAmb	21 36 11.3	
	comp=Z,15nm,1.1s						
PTGA	Pitinga	37.27	94	eP	P	21 36 09.3	+0.5
KSCO	Kaye Shedlock’	37.32	353	P	P	21 36 10.1	+1.1
P46A	Rosedale	38.66	12	P	P	21 36 20.4	+0.3
P46A				IAmb	IAmb	21 36 22.6	
	comp=Z,18nm,0.8s						
P48A	Milroy	38.93	15	P	P	21 36 21.9	-0.5
H03N2	Juan Fernandez	39.09	155	T	T	22 17 58.4	
	baz=332,slow=77,SNR=188						
H03N1	Juan Fernandez	39.10	155	T	T	22 18 01.0	
	baz=332,slow=77,SNR=272						
H03N3	Juan Fernandez	39.10	156	T	T	22 17 59.8	
	baz=332,slow=77,SNR=230						
HDIL	Hopedale	39.18	9	P	P	21 36 24.8	+0.3
VILB	Vilhena	39.51	113	eP	P	21 36 27.6	-0.1
L42A	Oliver, Polo	40.53	9	P	P	21 36 35.6	-0.1
L42A				IAmb	IAmb	21 36 41.6	
	comp=Z,25nm,1.1s						
NVAR	Mina Array Bea	41.23	335	P	P	21 36 44.1	+2.2
	comp=Z,1.3nm,0.8s,baz=162,slow=8.2,SNR=9.8						
NVAR				PcP	PcP	21 38 41.0	+0.2
	comp=Z,0.5nm,0.7s,baz=134,slow=3.9,SNR=3.1						
NVAR	Mina Array Bea	41.23	335	P	P	21 36 42.4	+0.6
JFWS	Jewell Farm	41.34	8	P	P	21 36 42.5	+0.1
JFWS				IAmb	IAmb	21 36 48.7	
	comp=Z,18nm,1.1s						
BGU	Big Grassy Mou	41.46	342	P	P	21 36 43.4	-0.2
ECSD	EROS Data Cent	41.70	1	P	P	21 36 45.0	-0.4
ECSD				IAmb	IAmb	21 36 51.9	
	comp=Z,22nm,1.2s						
ITTB	Itaituba	41.85	99	eP	P	21 36 46.2	-0.8
PD31	Pinedale Array	42.22	346	P	P	21 36 50.1	+0.3
PDAR	Pinedale Array	42.22	346	P	P	21 36 50.6	+0.7
	comp=Z,1.8nm,0.7s,baz=148,slow=8.3,SNR=17						
PDAR				PcP	PcP	21 38 43.6	-0.4
	comp=Z,0.3nm,0.7s,baz=156,slow=4.7,SNR=1.9						
PDAR				LR	LR	21 53 55.4	
	comp=Z,539nm,19.3s,baz=162,slow=36						
PDAR	Pinedale Array	42.22	346	P	P	21 36 50.3	+0.4
RSSD	Black Hills	42.53	353	P	P	21 36 52.5	+0.2
NPGB	Novo Progresso	42.64	102	eP	P	21 36 52.4	-1.0
MALB	Monte Alegre	43.04	95	eP	P	21 36 56.1	-0.5
MOOW	Moose Ponds	43.43	346	P	P	21 36 59.8	+0.2
TAOE	Nuku Hiva Isla	44.15	255	eT	T	22 24 14.2	
	comp=Z,26nm,0.2s						
YNE	Yellowstone No	44.45	347	P	P	21 37 08.1	+0.2
MCPB	Macapa, AP	45.15	92	eP	P	21 37 12.1	-1.5
SADO	Sadowa	45.60	18	LR	LR	21 56 01.1	
	comp=Z,486nm,20.0s,baz=184,slow=36						
AGMN	Agassiz Nation	46.28	1	P	P	21 37 21.8	-0.2
AQDB	Aquidauana	46.28	121	eP	P	21 37 22.7	+0.2
CPUP	Villa Florida	47.57	129	P	P	21 37 33.0	+0.5
	comp=Z,0.8nm,0.4s,baz=280,slow=11,SNR=3.0						
CPUP				LR	LR	21 56 25.8	
	comp=Z,111nm,20.3s,baz=301,slow=35						
SNDB	Serra Nova Dou	47.59	108	eP	P	21 37 32.8	0.0
PRPB	Parauapebas	47.93	100	eP	P	21 37 34.8	-0.7
ARAG	Araguaiana, MT	48.09	113	eP	P	21 37 35.8	-0.9
ULM	Lac du Bonnet	48.23	1	P	P	21 37 36.9	-0.3
	comp=Z,4.4nm,0.8s,baz=184,slow=8.6,SNR=12						
ULM				LR	LR	21 57 48.6	
	comp=Z,172nm,20.1s,baz=190,slow=36						
ULM	Lac du Bonnet	48.23	1	P	P	21 37 36.5	-0.7
ULM				IAmb	IAmb	21 37 37.5	
	comp=Z,7.5nm,0.9s						
TRQ	Mont Tremblant	48.41	21	P	P	21 37 38.5	-0.3
PLCA	Paso Flores	48.84	153	P	P	21 37 43.0	+0.8
	comp=Z,2.1nm,0.8s,baz=344,slow=11,SNR=3.3						
PLCA				LR	LR	21 53 47.3	
	comp=Z,515nm,18.8s,baz=340,slow=30						
TMAB	Tom-Au,PA,Br	49.23	95	eP	P	21 37 46.5	+1.1
PEXB	Peixe	50.47	107	eP	P	21 37 54.8	-0.1
SMTB	Santa Maria do	50.53	103	eP	P	21 37 56.2	+0.8
BDFB	Brasilia	51.59	112	P	P	21 38 03.2	-0.2
	comp=Z,4.9nm,0.9s,baz=262,slow=14,SNR=4.3						
BDFB				LR	LR	21 58 49.1	
	comp=Z,163nm,19.4s,baz=290,slow=35						
BDFB	Brasilia	51.59	112	P	P	21 38 02.8	-0.6
BDFB				IAmb	IAmb	21 38 05.1	
	comp=Z,8.6nm,1.2s						
PPT	Papeete	55.12	247	LR	LR	21 56 14.0	
	comp=Z,68nm,21.9s,baz=68,slow=30						
PPT2	Papeete2	55.13	247	eLR	LR	21 54 30.0	
	comp=Z,171nm,26.0s						
TBI	Tubuai	56.70	240	eLR	LR	21 55 14.4	
	comp=Z,144nm,29.0s						
YKA	Yellowknife Ar	61.89	351	P	P	21 39 15.5	-0.2
	comp=Z,1.5nm,0.8s,baz=154,slow=7.0,SNR=14						
YKA				LR	LR	22 05 52.5	
	comp=Z,345nm,18.2s,baz=0.0,slow=36						
BCAR	Beaver Creek A	69.36	340	P	P	21 40 04.5	+0.5
EPYK	Eagle Plains	70.12	344	P	P	21 40 09.7	+1.0
EPYK				IAmb	IAmb	21 40 11.6	
	comp=Z,10nm,1.1s						
INK	Inuvik	70.79	346	P	P	21 40 13.6	+1.0
RND	Reindeer	72.09	338	P	P	21 40 21.5	+0.8
IL31		72.19	340	P	P	21 40 21.4	+0.3
ILAR	Eielson Array	72.19	340	P	P	21 40 21.2	0.0
	comp=Z,6.4nm,0.8s,baz=148,slow=5.0,SNR=63						
ILAR				LR	LR	22 12 53.9	
	comp=Z,242nm,18.0s,baz=128,slow=37						
BMAR	Burnt Mountain	73.10	343	P	P	21 40 27.2	+0.6
I23K	Minto, Yukon-K	73.26	340	P	P	21 40 28.3	+0.8
I23K				IAmb	IAmb	21 40 33.5	
	comp=Z,6.6nm,0.8s						
RDOG	Red Dog Mine	79.39	340	P	P	21 41 02.8	+0.5
RDOG				IAmb	IAmb	21 41 09.6	
	comp=Z,11nm,1.2s						
ESDC	Sonseca Array	91.29	50	P	P	21 42 02.9	+0.4
	comp=Z,1.0nm,0.9s,baz=277,slow=5.6,SNR=5.8						
ESDC				LR	LR	22 16 24.2	
	comp=Z,50nm,21.3s,baz=40,slow=31						
ESDC	Sonseca Array	91.29	50	P	P	21 42 02.3	-0.3
RPZ	Rata Peaks	92.57	227	LR	LR	22 16 03.2	
	comp=Z,134nm,18.8s,baz=116,slow=31						
VNDA	Vanda	94.18	192	LR	LR	22 15 22.2	
	comp=Z,90nm,21.3s,baz=143,slow=30						
H11N3	WAKE ISLAND Hy	94.97	290	T	T	23 27 44.8	
	baz=86,slow=75,SNR=18						
H11N2	WAKE ISLAND Hy	94.98	290	T	T	23 27 46.8	
	baz=86,slow=75,SNR=11						
H11N1	WAKE ISLAND Hy	94.98	290	T	T	23 27 46.1	
	baz=86,slow=75,SNR=15						
H11S2	WAKE ISLAND Hy	95.24	289	T	T	23 28 08.9	
	baz=86,slow=74,SNR=46						
H11S1	WAKE ISLAND Hy	95.24	289	T	T	23 28 09.1	
	baz=86,slow=74,SNR=48						
H11S3	WAKE ISLAND Hy	95.26	289	T	T	23 28 10.1	
	baz=86,slow=74,SNR=26						
DZM	Mont Dzumac	96.62	248	LR	LR	22 15 18.8	
	comp=Z,40nm,22.0s,baz=104,slow=29						
NOA	NORSAR Array B	97.19	28	LR	LR	22 23 22.5	
	comp=Z,44nm,21.3s,baz=310,slow=34						
ARCES	ARCESS Array B	99.18	17	LR	LR	22 27 05.5	
	comp=Z,99nm,19.1s,baz=285,slow=35						
ZALV	Zalesovo Beam	124.37	359	PKP	PKPdf	21 47 55.2	-0.5
	comp=Z,2.3nm,0.7s,baz=318,slow=3.9,SNR=3.7						
ASAR	Alice Springs	126.07	242	PKP	PKPdf	21 48 00.1	+0.2
	comp=Z,1.4nm,0.8s,baz=106,slow=2.5,SNR=12						
ASAR	Alice Springs	126.07	242		PKPdf	21 47 59.8	-0.1
SONM	Songino Array	126.41	340	PKP	PKiKP	21 48 00.4	0.0
	comp=Z,1.2nm,0.8s,baz=308,slow=0.9,SNR=8.2						
SONM	Songino Array	126.41	340		PKPdf	21 48 00.1	+0.2
WRA	Warramunga Arr	126.61	247	PKP	PKPdf	21 48 00.5	-0.4
	comp=Z,1.6nm,0.8s,baz=96,slow=1.5,SNR=13						
HHC	Hu-ho-hao-te	130.09	332	eP	PKiKP	21 48 08.4	+0.5
MKAR	Makanchi Array	131.55	1	PKP	PKiKP	21 48 10.2	-0.5
	comp=Z,0.7nm,0.8s,baz=0.0,slow=2.4,SNR=7.1						
NJ2	Nanjing	132.03	318	eP	PKPdf	21 48 10.7	-0.2
WMQ	Urumqi	134.32	355	eP	PKPdf	21 48 14.7	-0.3
LZH	Lanzhou	137.47	335	ePKP	PKPdf	21 48 16.5	-4.7
LZH				pPKP	PKiKP	21 48 19.7	-3.4
LZH				sPKP		21 48 21.3	
KMI	Kunming	146.97	326	PKPbc	PKPbc	21 48 40.9	+0.5
KMI				pPKP	sPKPab	21 48 44.9	-0.1
KMI				sPKP		21 48 46.8	
KMI				LR	LR		
	comp=Z,230nm,59.6s						
DANN	Dangsing	149.96	358	eP	PKPbc	21 48 48.2	0.0
	comp=Z,22nm,0.8s						
GUN	Gumba	150.26	355	eP	PKPbc	21 48 48.9	-0.1
	comp=Z,43nm,1.0s						
GKN	Gorkha	150.26	357	eP	PKPbc	21 48 48.6	-0.2
	comp=Z,15nm,0.9s						
KKN	Kakani	150.43	356	eP	PKPbc	21 48 49.1	-0.2
	comp=Z,20nm,0.9s						
KOLN	Koldanda	150.54	359	eP	PKPbc	21 48 49.3	-0.2
	comp=Z,19nm,1.2s						
TAPN	Taplejung	150.59	351	eP	PKPbc	21 48 49.7	0.0
	comp=Z,31nm,1.1s						
DMN	Daman	150.63	356	eP	PKPbc	21 48 49.4	-0.4
	comp=Z,12nm,0.7s						
PKIN	Phulchoki	150.64	355	eP	PKPbc	21 48 49.0	-0.8
	comp=Z,6.7nm,0.7s						
PKI	Pulchoki	150.64	355	eP	PKPbc	21 48 49.2	-0.7
	comp=Z,16nm,1.1s						
ODAN	Odare	151.12	352	eP	PKPbc	21 48 50.6	-0.3
	comp=Z,16nm,1.0s						
RAMN	Ramite	151.13	353	eP	PKPbc	21 48 49.2	-1.8
	comp=Z,18nm,0.9s						
CMAR	Chiang Mai Arr	154.34	323	PKP	PKPdf	21 48 50.6	+0.9
	comp=Z,0.9nm,0.4s,baz=280,slow=0.9,SNR=5.9						
CMAR	Chiang Mai Arr	154.34	323		PKPdf	21 48 50.5	+0.7

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*IDC **10** 21:31:25.1±9.4, 20°.88N×122°.08E, h139^{km}±92^{km}, mb3.3/10, mb1 3.5/10, mb1mx3.2/44, mbtmp3.8/10, Error ellipse: s-maj=36.9km s-min=14.7km az=68.0*

*TAP **10** 21:31:28.4, 21°.10N×122°.06E, h171^{km}, ML4.5, D*

ISC 10 21:31:28.2±1.1**, 21°.07N**±0°.07×**122°.06E**±0°.08**, h167**^{km}±7^{km}**, n101, σ1^{s}21**/176**, mb3.5**/10**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LAY	Lan-yu	1.07	334	P	Pn	21 31 55.7	+0.4
	baz=333						
LAY				eS	Sn	21 32 14.0	-2.2
	baz=333						
TSEB	Hengchuen, Pin	1.36	308	P	Pn	21 31 59.0	+1.3
	baz=301						
TSEB				S	Sn	21 32 21.4	+0.9
	baz=301						
TWKBT	Hengchun	1.45	307	P	Pn	21 31 59.3	+0.7
	baz=303						
TWKBT				eS	Sn	21 32 20.7	-1.3
	baz=303						
TWK1	Hengchun	1.46	307	P	Pn	21 31 59.5	+0.8
	baz=303						
TWK1				S	Sn	21 32 21.2	-1.0
	baz=303						
SNW	Nanwan	1.51	306	eS	Sn	21 32 23.5	+0.5
	baz=304						
HEN	Hengchun	1.54	307	P	Pn	21 32 00.3	+0.8
	baz=304						
HEN				S	Sn	21 32 24.4	+0.7
	baz=304						
SLIU	Shizi	1.64	315	P	Pn	21 32 00.6	+0.1
	baz=320						
SLIU				eS	Sn	21 32 24.6	-0.8
	baz=320						
TAW	Tawu	1.68	320	P	Pn	21 32 00.8	-0.1
	baz=322						
TAW				S	Sn	21 32 25.3	-0.9
	baz=322						
LDUT	Ludao	1.69	341	P	Pn	21 32 00.6	-0.4
	baz=344						
LDUT				eS	Sn	21 32 26.1	-0.3
	baz=344						
EAST	Anshuo	1.73	320	P	Pn	21 32 01.2	-0.2
	baz=319						
EAST				S	Sn	21 32 25.5	-1.7
	baz=319						
ECL	Taimali	1.83	326	P	Pn	21 32 01.9	-0.7
	baz=321						
ECL				S	Sn	21 32 27.2	-2.0
	baz=321						
SCZT	Fangliau	1.86	314	P	Pn	21 32 03.0	+0.1
	baz=319						
SCZT				S	Sn	21 32 29.0	-0.8
	baz=319						
TTN	Taitung	1.88	333	eP	Pn	21 32 03.6	+0.6
	baz=328						
TTN				S	Sn	21 32 30.1	0.0
	baz=328						
TWGBT	Beinan	1.96	333	P	Pn	21 32 03.6	-0.4
	baz=326						
TWGBT				eS	Sn	21 32 28.5	-3.2
	baz=326						
TWG	Pinlang	1.97	332	P	Pn	21 32 03.8	-0.2
	baz=326						
TWG				S	Sn	21 32 30.1	-1.8
	baz=326						
SSPT	Xinbi	1.98	316	P	Pn	21 32 04.9	+0.8
	baz=319						
SSPT				eS	Sn	21 32 32.9	+1.0
	baz=319						
WLCH	Liuqiu	2.02	310	P	Pn	21 32 06.8	+2.3
	baz=309						
WLCH				S	Sn	21 32 35.0	+2.3
	baz=309						
EDH	Donghe	2.02	340	P	Pn	21 32 05.1	+0.5
	baz=339						
EDH				S	Sn	21 32 32.2	-0.7
	baz=339						
LONT	Longtian	2.02	335	P	Pn	21 32 04.7	0.0
	baz=328						
LONT				S	Sn	21 32 31.8	-1.2
	baz=328						
TWP	Hsiaoliuchiu	2.02	309	P	Pn	21 32 06.4	+1.8
	baz=309						
TWP				S	Sn	21 32 35.0	+2.1
	baz=309						
MASBT	Mashibuluo	2.03	320	P	Pn	21 32 04.9	+0.2
	baz=319						
MASBT				eS	Sn	21 32 30.7	-2.3
	baz=319						
TSMG	Majia	2.09	321	eP	Pn	21 32 05.5	+0.1
	baz=321						
TSMG				eS	Sn	21 32 32.4	-1.9
	baz=321						
CHKT	Chengkung	2.12	343	eP	Pn	21 32 06.0	+0.2
	baz=346						
CHKT				eS	Sn	21 32 34.6	-0.3
	baz=346						
SSD	Sandimen	2.13	322	P	Pn	21 32 06.0	+0.1
	baz=321						
SSD				S	Sn	21 32 33.1	-2.0
	baz=321						
TSPT	Pingtung City	2.16	318	eP	Pn	21 32 07.5	+1.3
	baz=323						
TSPT				eS	Sn	21 32 36.1	+0.5
	baz=323						
KAU	Kaohsiung	2.21	313	eS	Sn	21 32 37.9	+1.2
	baz=305						
FULB	Fuli	2.24	342	P	Pn	21 32 07.7	+0.6
	baz=344						
FULB				S	Sn	21 32 37.4	+0.1
	baz=344						
TWM1	Shoushan	2.31	319	P	Pn	21 32 09.4	+1.4
	baz=325						
TWM1				S	Sn	21 32 41.1	+2.2
	baz=325						
SNJT	Kaohsiung City	2.32	317	eP	Pn	21 32 08.8	+0.8
	baz=308						
SNJT				eS	Sn	21 32 39.8	+0.9
	baz=308						
SCST	Cishan	2.32	322	P	Pn	21 32 09.2	+1.2
	baz=328						
SCST				S	Sn	21 32 38.1	-0.9
	baz=328						
ELDTW	Lidau	2.32	336	P	Pn	21 32 09.0	+0.8
	baz=337						
ELDTW				S	Sn	21 32 37.4	-1.8
	baz=337						
SLGT	Liugui	2.32	326	P	Pn	21 32 08.6	+0.5
	baz=325						
SLGT				eS	Sn	21 32 38.1	-1.0
	baz=325						
EYUL	Yuli	2.37	343	eP	Pn	21 32 09.4	+0.8
	baz=347						
EYUL				eS	Sn	21 32 39.4	-0.7
	baz=347						
TWF1	Yuli	2.38	343	eP	Pn	21 32 08.6	-0.2
	baz=347						
TWF1				S	Sn	21 32 39.1	-1.2
	baz=347						
STYT	Tauyuan	2.41	330	P	Pn	21 32 09.4	+0.3
	baz=324						
STYT				S	Sn	21 32 40.7	-0.3
	baz=324						
SGST	Jiashian	2.43	326	P	Pn	21 32 08.6	-0.7
	baz=325						
SGST				eS	Sn	21 32 39.4	-1.9
	baz=325						
HGSD	Ruisui	2.48	346	P	Pn	21 32 11.2	+1.2
	baz=348						
HGSD				S	Sn	21 32 43.3	+0.8
	baz=348						
EHY	Hungye	2.52	344	P	Pn	21 32 10.1	-0.3
	baz=337						
EHY				S	Sn	21 32 42.2	-1.1
	baz=337						
CHN1	Nanshi	2.54	326	P	Pn	21 32 10.5	-0.1
	baz=326						
CHN1				S	Sn	21 32 41.8	-1.9
	baz=326						
CHN3	Shinhua	2.54	322	eP	Pn	21 32 12.3	+1.6
	baz=328						
CHN3				eS	Sn	21 32 43.9	+0.3
	baz=328						
WTP	Ta-pu	2.55	329	P	Pn	21 32 11.2	+0.4
	baz=328						
WTP				S	Sn	21 32 42.6	-1.3
	baz=328						
SNST	Tainan City	2.58	326	P	Pn	21 32 11.6	+0.4
	baz=326						
SNST				eS	Sn	21 32 43.9	-0.7
	baz=326						
TPUB	Ta-pu	2.59	329	eP	Pn	21 32 11.2	-0.1
	baz=322						
TPUB				eS	Sn	21 32 41.8	-2.9
	baz=322						
TAI1	Yung-k'ang	2.59	319	eP	Pn	21 32 12.3	+1.0
	baz=319						
TAI1				eS	Sn	21 32 44.6	-0.2
	baz=319						
YUS	Yu-Shan	2.62	337	P	Pn	21 32 13.4	+1.3
	baz=336						
YUS				eS	Sn	21 32 45.5	-0.7
	baz=336						
TWK	Hsinying	2.63	327	P	Pn	21 32 12.1	+0.3
	baz=326						
TWK				S	Sn	21 32 44.1	-1.5
	baz=326						
CHN4	Tsaushan	2.65	329	P	Pn	21 32 11.8	-0.1
	baz=323						
CHN4				S	Sn	21 32 45.0	-1.0
	baz=323						
ALS	Alishan	2.69	335	P	Pn	21 32 13.1	+0.3
	baz=327						
ALS				eS	Sn	21 32 47.0	-0.5
	baz=327						
SCLT	Jiali	2.72	321	P	Pn	21 32 13.1	+0.4
	baz=326						
SCLT				S	Sn	21 32 46.5	-0.9
	baz=326						
ESL	Shilin	2.79	348	eS	Sn	21 32 48.0	-1.1
	baz=341						
VWDT	VWDT	2.80	343	P	Pn	21 32 15.3	+1.5
	baz=345						
VWDT				eS	Sn	21 32 48.3	-1.1
	baz=345						
ICHU	Yijhu	2.81	324	eP	Pn	21 32 14.2	+0.3
	baz=329						
ICHU				eS	Sn	21 32 47.4	-2.2
	baz=329						
CHN5	Tsauling	2.82	333	P	Pn	21 32 14.4	+0.3
	baz=333						
CHN5				S	Sn	21 32 48.9	-1.0
	baz=333						

CHN8	Yiju	2.84	323	P	Pn	21 32 13.4	-0.9
	baz=328						
CHN8				S	Sn	21 32 48.7	-1.4
	baz=328						
WHYT	Xinyi Township	2.84	337	eS	Sn	21 32 49.6	-0.8
	baz=329						
CHY	Chiayi	2.85	328	eS	Sn	21 32 50.0	-0.4
	baz=323						
CHN2	Minshiung	2.86	329	eS	Sn	21 32 50.4	-0.1
	baz=323						
SSLB	Suanglung	2.89	340	P	Pn	21 32 14.9	-0.1
	baz=331						
SSLB				eS	Sn	21 32 49.8	-1.6
	baz=331						
WGK	Gukeng	2.95	332	eS	Sn	21 32 50.6	-1.9
	baz=332						
WDLH	Douliu	2.96	332	eP	Pn	21 32 15.3	-0.5
	baz=331						
WDLH				eS	Sn	21 32 52.6	-0.3
	baz=331						
SMLT	Sun Moon Lake	3.00	339	eP	Pn	21 32 16.6	+0.2
	baz=332						
SMLT				eS	Sn	21 32 52.4	-1.5
	baz=332						
WJS	Zhushan	3.00	336	eP	Pn	21 32 16.8	+0.5
	baz=336						
WJS				eS	Sn	21 32 53.0	-0.8
	baz=336						
TWD	Chiawan	3.03	352	eS	Sn	21 32 52.4	-1.9
	baz=356						
WTK	Tuku	3.03	330	eP	Pn	21 32 16.0	-0.7
	baz=325						
WTK				eS	Sn	21 32 51.7	-2.6
	baz=325						
TYC	Yuchr	3.03	339	eP	Pn	21 32 16.6	0.0
	baz=331						
TYC				eS	Sn	21 32 53.5	-1.0
	baz=331						
WSF	Szhu	3.07	327	eS	Sn	21 32 53.7	-1.5
	baz=326						
WNT	Mingjian	3.07	336	eP	Pn	21 32 17.5	+0.3
	baz=335						
WNT				eS	Sn	21 32 54.1	-1.2
	baz=335						
CHGB	Renai	3.09	345	eP	Pn	21 32 18.1	+0.5
	baz=344						
CHGB				eS	Sn	21 32 55.4	-0.6
	baz=344						
WPL	Puli Township	3.10	341	eP	Pn	21 32 18.6	+1.0
	baz=333						
WPL				eS	Sn	21 32 55.4	-0.6
	baz=333						
WDGT	Dungji	3.11	315	eP	Pn	21 32 17.7	0.0
	baz=314						
WDGT				eS	Sn	21 32 53.5	-2.7
	baz=314						
NACB	Ninganchiao	3.12	352	eP	Pn	21 32 18.1	+0.4
	baz=358						
NACB				eS	Sn	21 32 55.8	-0.6
	baz=358						
DPDB	Guoxing	3.13	341	eP	Pn	21 32 17.9	-0.1
	baz=333						
DPDB				eS	Sn	21 32 56.7	0.0
	baz=333						
WHF	Hehuan Shan	3.15	347	eP	Pn	21 32 19.6	+1.1
	baz=352						
WHF				eS	Sn	21 32 57.1	-0.6
	baz=352						
ETLH	Xiulin Townshi	3.17	350	eP	Pn	21 32 19.0	+0.5
	baz=344						
ETLH				eS	Sn	21 32 56.3	-1.3
	baz=344						
RLNB	Erlin	3.22	331	eP	Pn	21 32 19.4	+0.5
	baz=336						
RLNB				eS	Sn	21 32 57.1	-1.4
	baz=336						
VCHM	Qimei	3.24	312	eP	Pn	21 32 19.2	0.0
	baz=311						
VCHM				eS	Sn	21 32 55.8	-3.1
	baz=311						
FUSS	Fushou	3.25	347	eP	Pn	21 32 21.2	+1.5
	baz=351						
FUSS				eS	Sn	21 32 60.0	+0.2
	baz=351						
TWT	Tachien	3.27	346	eP	Pn	21 32 21.2	+1.3
	baz=339						
TWT				eS	Sn	21 33 01.3	+1.2
	baz=339						
TDCB	Techi	3.28	345	eP	Pn	21 32 20.7	+0.8
	baz=338						
WCHH	Zhanghua	3.30	335	eS	Sn	21 32 60.0	-0.5
	baz=335						
PHUB	P'eng-hu	3.35	317	eP	Pn	21 32 19.9	-0.8
	baz=322						
PHUB				eS	Sn	21 32 58.0	-3.4
	baz=322						
WHP	Taichung City	3.36	342	eP	Pn	21 32 21.2	+0.4
	baz=334						
WHP				eS	Sn	21 33 02.4	+0.5
	baz=334						
ENA	Nanau	3.36	355	eP	Pn	21 32 20.7	0.0
	baz=355						
PNG	Penghu	3.40	317	eP	Pn	21 32 20.9	-0.3
	baz=323						
PNG				eS	Sn	21 33 00.4	-2.2
	baz=323						
NNSB	Datong	3.40	350	eP	Pn	21 32 22.7	+1.3
	baz=355						
NNSB				eS	Sn	21 33 02.6	-0.3
	baz=355						
NNSH	Datong	3.40	350	eP	Pn	21 32 23.1	+1.7
	baz=355						
NNSH				eS	Sn	21 33 03.0	+0.1
	baz=355						
NNS	Nan Shan	3.42	349	eP	Pn	21 32 22.7	+1.1
	baz=355						
NNS				eS	Sn	21 33 01.3	-1.9
	baz=355						
NDT	Datong Townshi	3.55	352	eP	Pn	21 32 24.9	+1.6
	baz=357						
ENTT	Nioudou	3.58	353	eP	Pn	21 32 24.6	+1.0
	baz=358						
ENTT				eS	Sn	21 33 04.1	-2.8
	baz=358						
NSK	Sanguang	3.65	350	eP	Pn	21 32 26.4	+1.9
	baz=356						
CMAR	Chiang Mai Arr	21.91	267	P	P	21 36 07.8	-0.5
	0.2nm,0.3s,baz=77,slow=9.7,SNR=1.7						
KLR	Kul'dur	29.15	13	P	P	21 37 14.6	+1.1
	0.7nm,0.6s,baz=214,slow=7.7,SNR=2.1						
SONM	Songino Array	29.54	338	P	P	21 37 17.9	+0.7
	0.6nm,0.5s,baz=149,slow=9.8,SNR=7.0						
MKAR	Makanchi Array	41.16	318	P	P	21 38 57.5	+1.4
	2.6nm,0.6s,baz=111,slow=9.5,SNR=48						
WRA	Warramunga Arr	42.49	163	P	P	21 39 04.9	-2.3
	0.4nm,0.3s,baz=344,slow=9.2,SNR=17						
ZALV	Zalesovo Beam	43.30	329	P	P	21 39 13.7	+0.4
	0.8nm,0.5s,baz=111,slow=8.1,SNR=3.7						
KURBB	Kurchatov Arra	45.02	322	P	P	21 39 27.8	+0.8
	1.1nm,0.4s,baz=113,slow=7.9,SNR=19						
ASAR	Alice Springs	45.94	165	P	P	21 39 32.8	-1.7
	0.2nm,0.4s,baz=348,slow=8.6,SNR=2.3						
FINES	FINESS Array B	74.53	330	P	P	21 42 48.3	0.0
	2.0nm,0.9s,baz=46,slow=5.5,SNR=3.4						
YKA	Yellowknife Ar	85.51	23	P	P	21 43 47.5	+0.4
	0.2nm,0.6s,baz=306,slow=4.3,SNR=3.4						
NVAR	Mina Array Bea	98.14	44	P	Pdif	21 44 48.7	+2.1
	0.3nm,0.3s,baz=256,slow=3.6,SNR=4.8						

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*INET **10** 21:41:23.5, 8°.73N×83°.29W, h15^{km}, MW2.8*

UPA 10 21:41:24.5±0.9**, 8°.74N×83°.25W, h16**^{km}±3^{km}**, MW4.1, 3C-2D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PIRO	Carate, Puerto	0.34	194	eP	Pg	21 41 31.3	-0.3
PIRO				i S	Sb	21 41 37.7	+0.3
MLIR3	Monte Lirio, C	0.43	82	eP	Pb	21 41 33.9	+0.1
MLIR3				eS	Sb	21 41 41.2	+1.2
DRK0	Durika	0.52	1	i P	Pb	21 41 35.3	-0.1
DRK0				i S	Sb	21 41 44.1	+1.3
BRU2	Volcan	0.56	84	⇓iP	Pb	21 41 35.9	-0.1
BRU2				i S	Sb	21 41 45.1	+1.2
BC3P	Paso Ancho	0.64	83	⇑iP	Pg	21 41 37.1	-0.1
BC3P				i S	Sb	21 41 47.0	+0.8
BCO2	Palmira	0.72	91	⇓iP	Pg	21 41 38.3	-0.3
BCO2				i S	Sb	21 41 49.6	+1.2
PTAR3	Potrerillos Ar	0.75	93	⇑iP	Pg	21 41 39.0	-0.2
PTAR3				i S	Sn	21 41 50.5	-1.2
PSOM3	Paja de Sombre	0.92	93	⇑iP	Pb	21 41 41.2	-0.9
PSOM3				i S	Sb	21 41 54.2	+0.1
GMAL	Guarumal, Vera	2.22	116	eP	Pn	21 42 02.3	+1.6
CACAO	El Cacao, Vera	2.74	120	eP	Pb	21 42 11.7	-1.5

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*IDC **10** 21:49:50.7±0.8, 22°.43N×118°.45E, h0^{km}, mb3.8/8, mb1 3.9/11, mb1mx3.6/44, mbtmp3.8/11, ML3.7/3, MS3.2/9, Ms1 3.2/9, ms1mx2.9/51, Error ellipse: s-maj=27.5km s-min=17.2km az=64.0*

*NEIC **10** 21:49:52.2±1.8, 22°.57N±0°.04×118°.42E±0°.07, h10^{km}±1^{km}, mb4.0/8, Error ellipse: s-maj=11.6km s-min=4.4km az=67.0*

*BJI **10** 21:49:52.5±0.0, 22°.64N×118°.43E, h17^{km}, mB4.3/8, mb4.1/14, ML4.3/10, Ms4.1/16, Ms7 4.0/15*

ISC 10 21:49:53.5±0.6**, 22°.57N**±0°.06×**118°.39E**±0°.06**, h17**^{km}**, n50, σ2^{s}.07**/51**, mb4.0**/13**, MS3.1**/7**, 3C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNMB	Chin-men Tao	1.89	360		Pn	21 50 23.6	-1.4
TPUB	Ta-pu	2.19	70		Pn	21 50 27.6	-1.6
QZH	Quanzhou	2.37	4	⇑iPn	Pn	21 50 30.0	-1.6
QZH				Sn	Sn	21 50 57.9	-2.4
QZH				smax	smax		
	comp=N,330nm,0.4s						
QZH				smax	smax		
	comp=E,870nm,0.5s						
TWG	Pinlang	2.49	84		Pn	21 50 31.4	-1.8
SSLB	Suanglung	2.65	62		Pn	21 50 34.1	-1.4
YULB	Yu-li	2.80	72		Pn	21 50 36.5	-1.0
NACB	Ninganchiao	3.35	61		Pn	21 50 44.3	-0.8
YHNB	Yeheng	3.44	52		Pn	21 50 45.2	-1.3
TATO	Taipei	3.71	49		Pn	21 50 49.9	-0.1
YOJ	Yonaguni jima	4.64	65	Pn	Pn	21 51 03.2	+0.4
GZH	Guangzhou	4.69	277	Pn	Pn	21 51 00.6	-2.9
GZH				Sn	Sn	21 51 51.4	-6.1
GZH				smax	smax		
	comp=N,450nm,1.1s						
GZH				smax	smax		
	comp=E,450nm,0.9s						
QIZ	Qiongzhong	8.74	248	P	Pn	21 51 59.0	-0.2
QIZ				S	Sn	21 53 41.9	+4.6
QIZ				LR	LR		
	comp=N,650nm,6.7s						
QIZ				LR	LR		
	comp=E,530nm,10.0s						
QIZ				LR	LR		
	comp=Z,510nm,12.6s						
QIZ	Qiongzhong	8.74	248	Pn	Pn	21 51 58.8	-0.3
SSE	Sheshan	8.85	16	P	Pn	21 51 59.7	-1.0
SSE				S	Sn	21 53 45.4	+5.4
SSE				pmax	pmax		
	comp=Z,17nm,0.8s						
SSE				smax	smax		
	comp=N,35nm,1.2s						
SSE				smax	smax		
	comp=E,40nm,0.9s						
SSE	Sheshan	8.85	16		Pn	21 51 59.7	-1.0
NJ2	Nanjing	9.46	2	⇑iP	Pn	21 52 07.6	-1.3
NJ2				S	Sn	21 53 49.2	-5.7
NJ2				pmax	pmax		
	comp=Z,14nm,0.6s						
NJ2				LR	LR		
	comp=N,1µm,8.8s						
NJ2				LR	LR		
	comp=E,500nm,7.4s						
NJ2				LR	LR		
	comp=Z,870nm,8.8s						
JOW	Kunigami	9.94	63	Pn	Pn	21 52 15.2	-0.4
	1.3nm,0.3s,baz=205,slow=10,SNR=7.3						
GYA	Guiyang	11.36	292	⇑P	Pn	21 52 35.6	+0.4
GYA				S	Sn	21 54 42.4	+0.6
GYA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
GYA				LR	LR		
	comp=N,770nm,11.6s						
GYA				LR	LR		
	comp=Z,190nm,8.0s						
UBPT	Khong Chiam	14.21	242	Pn	Pn	21 53 14.5	+0.4
DAV	Davao City (W)	16.89	155	LR	LR	22 01 48.8	
	comp=Z,44nm,19.6s,baz=284,slow=43						
KSRS	Korea Array	16.96	27	P	P	21 53 52.3	+0.5
	0.2nm,0.3s,baz=224,slow=13,SNR=2.8						
KSRS				LR	LR	22 00 18.5	
	comp=Z,59nm,18.0s,baz=214,slow=37						
BJT	Baijiatuau	17.50	354	P	P	21 53 57.8	0.0
BJT				IAmb	IAmb	21 54 08.8	
	comp=Z,9.7nm,1.3s						
CMAR	Chiang Mai Arr	18.67	261	P	Pn	21 54 12.5	+1.3
	comp=Z,0.1nm,0.3s,baz=79,slow=14,SNR=8.5						
CMAR				LR	LR	22 01 43.4	
	comp=Z,62nm,18.3s,baz=133,slow=38						
CMAR	Chiang Mai Arr	18.67	261	P	Pn	21 54 11.5	+0.3
MJAR	Matsushiro Arr	22.10	47	LR	LR	22 04 12.2	
	comp=Z,37nm,18.3s,baz=240,slow=39						
GTA	Gaotai	23.07	321	P	P	21 55 02.9	+4.6
GTA				pP	sP	21 55 08.0	+2.6
GTA				sP	pP	21 55 11.5	+8.3
GTA				pmax	pmax		
	comp=Z,2.0nm,1.2s						
GTA	Gaotai	23.07	321	eP	P	21 54 57.3	-1.0
GTA				pP	pP	21 55 02.8	-0.4
GTA				sP	sP	21 55 05.7	+0.3
GTA				LR	LR		
	comp=Z,220nm,13.8s						
GTA				LR	LR		
	comp=Z,130nm,11.3s						
GTA				LR	LR		
	comp=Z,160nm,13.8s						
SHL	Shillong	24.38	282	P	P	21 55 10.4	-0.8
SHL				IAmb	IAmb	21 55 11.4	
	comp=Z,9.4nm,1.3s						
LSA	Lhasa	25.43	292	P	P	21 55 21.8	+0.8
LSA				IAmb	IAmb	21 55 24.0	
	comp=Z,4.5nm,1.0s						
SONM	Songino Array	26.98	342	P	P	21 55 34.7	+0.2
	comp=Z,0.7nm,0.9s,baz=148,slow=8.5,SNR=3.5						
SONM				LR	LR	22 06 56.3	
	comp=Z,43nm,21.0s,baz=232,slow=38						
SONM	Songino Array	26.98	342	P	P	21 55 34.2	-0.3
PSI	Prapat	27.25	227	LR	LR	22 05 40.8	
	comp=Z,95nm,18.3s,baz=295,slow=35						
KLR	Kul'dur	28.63	18	LR	LR	22 07 19.7	
	comp=Z,46nm,19.4s,baz=206,slow=36						
ASAJ	Asahikawa	29.32	37	LR	LR	22 07 05.9	
	comp=Z,43nm,18.6s,baz=217,slow=35						
WMQ	Urumqi	33.01	317	eP	P	21 56 30.0	+2.2
MK31	Makanchi Array	37.78	319	P	P	21 57 08.9	+0.1
MK31				IAmb	IAmb	21 57 14.3	
	comp=Z,1.3nm,0.8s						
MKAR	Makanchi Array	37.78	319	P	P	21 57 09.2	+0.4
	comp=Z,1.0nm,0.7s,baz=116,slow=10,SNR=14						
MKAR				PcP	PcP	21 59 25.3	0.0
	comp=Z,0.8nm,1.0s,baz=116,slow=5.6,SNR=3.0						
MKAR	Makanchi Array	37.78	319	P	P	21 57 08.8	+0.1
MAKZ	Makanchi	37.98	318	P	P	21 57 10.6	+0.2
KURBB	Kurchatov Arra	41.75	322	P	P	21 57 41.8	+0.2
	comp=Z,0.9nm,0.7s,baz=129,slow=7.4,SNR=7.6						
KK31	Karatay Array	44.45	309	P	P	21 58 04.5	+0.8
KK31				IAmb	IAmb	21 58 08.7	
	comp=Z,3.9nm,1.4s						
KKAR	Karatay Array	44.45	309	P	P	21 58 04.4	+0.7
WRA	Warramunga Arr	45.03	159	P	P	21 58 06.9	-1.6
	comp=Z,3.0nm,1.1s,baz=343,slow=8.8,SNR=9.6						
WB2	Warramunga Arr	45.03	159	P	P	21 58 07.2	-1.2
ASAR	Alice Springs	48.37	161	P	P	21 58 33.9	-0.7
	comp=Z,1.2nm,0.8s,baz=330,slow=6.7,SNR=11						
ASAR	Alice Springs	48.37	161	P	P	21 58 33.7	-0.9
HNR	Honiara	51.66	123	LR	LR	22 17 46.0	
	comp=Z,40nm,21.7s,baz=164,slow=32						
STKA	Stephens Creek	58.52	157	P	P	21 59 45.9	-3.1
	comp=Z,1.4nm,0.7s,baz=342,slow=13,SNR=2.4						
KMBO	Kilima Mbogo	82.25	266	P	P	22 02 15.7	+0.9
	comp=Z,0.8nm,0.5s,baz=36,slow=11,SNR=4.0						
YKA	Yellowknife Ar	85.43	22	P	P	22 02 32.0	+2.1
	comp=Z,0.3nm,0.7s,baz=322,slow=4.3,SNR=3.9						

NNC 10 22:21:52.1±5.9**, 37°.11N×70°.92E, h0**^{km}**, mb4.0, mpv3.9, 2C-1D, Error ellipse: s-maj=49.4km s-min=46.9km az=80.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IUG	Iuzhnay	5.08	353	Pg	Pn	22 23 11.4	+1.9
	8.8nm,0.1s						
IUG				Lg	Lg	22 24 12.1	
	34nm,0.5s						
MRKS	Merke	5.91	17	Pg	Pn	22 23 20.6	-0.3
	5.0nm,0.2s						
MRKS				Lg	Lg	22 24 29.8	
	5.5nm,0.4s						
KK31	Karatay Array	6.00	357	P	Pn	22 23 22.4	+0.3
	0.6nm,0.2s,baz=184,slow=12,SNR=68						
KK31				⇑S	Sn	22 24 32.7	+1.1
	1.3nm,0.3s						
AAK	Ala-Archa	6.17	25	⇑P	Pn	22 23 24.3	-0.3
	2.1nm,0.3s						
AAK				⇓S	Sn	22 24 37.1	+1.1
	6.2nm,0.8s						

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*TAP **10** 22:42:21.5, 24°.75N×122°.26E, h97^{km}, ML3.0, D*

*JMA **10** 22:42:21.5±0.1, 24°.65N×122°.22E, h102^{km}±2^{km}, M2.4*

ISC 10 22:42:21.6±1.4**, 24°.77N**±0°.04×**122°.24E**±0°.03**, h98**^{km}±7^{km}**, n73, σ0^{s}.89**/123**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.33	317	eP	Pn	22 42 36.3	+0.2
	baz=314						
TWB1				eS	Sn	22 42 46.6	-0.4
	baz=314						
NTC	Toucheng	0.38	284	eP	Pn	22 42 35.7	-0.7
	baz=282						
TWC	Suao	0.39	246	P	Pn	22 42 36.1	-0.3
	baz=249						
TWC				eS	Sn	22 42 46.2	-1.3
	baz=249						
TIPB	Shuangxi	0.43	299	P	Pn	22 42 37.0	+0.3
	baz=299						
TIPB				eS	Sn	22 42 48.0	0.0
	baz=299						
NWF	Wu-fen Shan	0.51	306	eP	Pn	22 42 37.8	+0.4
	baz=302						
WFSB	Wu-fen Shan	0.51	306	eP	Pn	22 42 36.6	-0.6
	baz=302						
TWE	Neicheng	0.52	265	P	Pn	22 42 37.6	+0.3
	baz=272						
TWE				eS	Sn	22 42 49.0	-0.1
	baz=272						
ENA	Nanau	0.56	233	P	Pn	22 42 38.0	+0.3
	baz=235						
ENA				S	Sn	22 42 50.0	+0.3
	baz=235						
TNOU	National Taiwa	0.57	312	eP	Pn	22 42 37.5	-0.2
	baz=304						
TNOU				eS	Sn	22 42 49.6	-0.2
	baz=304						
ENTT	Nioudou	0.62	259	P	Pn	22 42 38.8	+0.6
	baz=262						
ENTT				eS	Sn	22 42 52.1	+1.5
	baz=262						
TWA	Mucha	0.63	290	eP	Pn	22 42 38.0	-0.3
	baz=291						
TWA				eS	Sn	22 42 50.0	-0.7
	baz=291						
NWLT	Wulai	0.67	271	P	Pn	22 42 39.0	+0.4
	baz=278						
NWLT				eS	Sn	22 42 51.5	+0.2
	baz=278						
NDT	Datong Townshi	0.68	256	P	Pn	22 42 39.4	+0.8
	baz=260						
NDT				S	Sn	22 42 52.5	+1.1
	baz=260						
JYNG	Yonagunijimaku	0.72	116	P	Pn	22 42 39.1	+0.1
JYNG				eS	Sn	22 42 52.0	0.0
BACT	New Taipei Cit	0.76	288	eP	Pn	22 42 39.7	+0.4
	baz=285						
YOJ	Yonaguni jima	0.77	113	P	Pn	22 42 39.6	+0.1
YOJ				eS	Sn	22 42 53.2	+0.3
TWY	Chenhua	0.77	311	eP	Pn	22 42 39.9	+0.5
	baz=305						
TWY				eS	Sn	22 42 53.3	+0.4
	baz=305						
NSK	Sanguang	0.80	264	P	Pn	22 42 40.2	+0.3
	baz=273						
NSK				S	Sn	22 42 53.7	0.0
	baz=273						
NACB	Ninganchiao	0.83	225	P	Pn	22 42 39.8	-0.3
	baz=220						
NACB				S	Sn	22 42 53.1	-0.9
	baz=220						
NNSB	Datong	0.85	247	P	Pn	22 42 40.7	+0.3
	baz=242						
NNSB				S	Sn	22 42 54.7	+0.2
	baz=242						
NNSH	Datong	0.85	247	i P	Pn	22 42 41.0	+0.6
	baz=243						
NNSH				S	Sn	22 42 54.4	-0.2
	baz=243						
NNS	Nan Shan	0.85	248	i P	Pn	22 42 41.0	+0.6
	baz=243						
NNS				S	Sn	22 42 54.1	-0.5
	baz=243						
NTY	Taoyuan	0.88	286	eP	Pn	22 42 41.1	+0.4
	baz=286						
NTY				eS	Sn	22 42 55.2	+0.2
	baz=286						
ETLH	Xiulin Townshi	0.88	231	P	Pn	22 42 40.8	0.0
	baz=233						
ETLH				eS	Sn	22 42 54.3	-0.9
	baz=233						
TWD	Chiawan	0.90	221	eP	Pn	22 42 40.6	-0.2
	baz=217						
TWD				eS	Sn	22 42 54.6	-0.6
	baz=217						
FUSS	Fushou	1.04	241	P	Pn	22 42 43.0	+0.4
	baz=238						
FUSS				eS	Sn	22 42 58.4	0.0
	baz=238						
WHF	Hehuan Shan	1.08	235	P	Pn	22 42 43.6	+0.4
	baz=232						
WHF				eS	Sn	22 42 58.9	-0.5
	baz=232						
TDCB	Techi	1.11	243	eP	Pn	22 42 43.9	+0.6
	baz=239						
TDCB				eS	Sn	22 42 59.4	-0.2
	baz=239						
HSN1	Hsinchu	1.11	271	eP	Pn	22 42 43.5	+0.4
	baz=272						
HSN1				eS	Sn	22 43 00.4	+1.1
	baz=272						
LIOB	Emei	1.12	264	P	Pn	22 42 43.4	+0.2
	baz=265						
LIOB				eS	Sn	22 42 59.7	+0.2
	baz=265						
CHGB	Renai	1.20	234	P	Pn	22 42 44.8	+0.4
	baz=229						
CHGB				eS	Sn	22 43 01.1	-0.3
	baz=229						
ESL	Shilin	1.20	218	eP	Pn	22 42 43.3	-0.9
	baz=226						
WHP	Taichung City	1.27	248	eP	Pn	22 42 45.8	+0.7
	baz=258						
WHP				eS	Sn	22 43 03.4	+0.6
	baz=258						
WPL	Puli Township	1.39	238	P	Pn	22 42 47.2	+0.8
	baz=234						
WPL				eS	Sn	22 43 06.2	+1.0
	baz=234						
NSY	Sanyi	1.39	256	eP	Pn	22 42 46.9	+0.5
	baz=257						
TWQ1	Liyutan	1.40	253	eP	Pn	22 42 47.2	+0.7
	baz=254						
DPDB	Guoxing	1.40	239	eP	Pn	22 42 47.5	+0.9
	baz=250						
VWDT	VWDT	1.42	225	P	Pn	22 42 47.0	+0.2
	baz=220						
VWDT				eS	Sn	22 43 05.4	-0.4
	baz=220						
IRIF	Iriomote-Funau	1.43	107	P	Pn	22 42 46.8	0.0
IRIF				S	Sn	22 43 05.8	-0.2
HGSD	Ruisui	1.47	210	P	Pn	22 42 46.8	-0.6
	baz=221						
HGSD				eS	Sn	22 43 05.6	-1.3
	baz=221						
SMLT	Sun Moon Lake	1.50	234	P	Pn	22 42 48.8	+0.9
	baz=231						

SMLT				eS	Sn	22 43 09.1	+1.3
	baz=231						
SSLB	Suanglung	1.52	230	P	Pn	22 42 48.8	+0.7
	baz=226						
SSLB				eS	Sn	22 43 09.7	+1.6
	baz=226						
TYC	Yuchr	1.52	236	eP	Pn	22 42 48.7	+0.7
	baz=237						
TYC				S	Sn	22 43 09.7	+1.6
	baz=237						
HATJ	Hateruma jima	1.59	116	P	Pn	22 42 49.6	+0.7
HATJ				eS	Sn	22 43 09.4	-0.3
EYUL	Yuli	1.64	211	eP	Pn	22 42 50.1	+0.5
	baz=219						
TWF1	Yuli	1.65	212	eP	Pn	22 42 50.5	+0.8
	baz=220						
JKRS	Kuro-shima	1.70	108	P	Pn	22 42 50.7	+0.5
JKRS				S	Sn	22 43 12.4	+0.4
FULB	Fuli	1.78	209	eP	Pn	22 42 54.0	+2.6
	baz=218						
JIJ	Ishigaki jima	1.78	103	P	Pn	22 42 51.3	0.0
JIJ				S	Sn	22 43 13.2	-0.7
ALS	Alishan	1.81	227	P	Pn	22 42 52.9	+1.0
	baz=220						
ALS				eS	Sn	22 43 17.2	+2.2
	baz=220						
CHN5	Tsauling	1.84	231	P	Pn	22 42 53.1	+0.9
	baz=241						
CHN5				eS	Sn	22 43 16.1	+0.7
	baz=241						
WDLH	Douliu	1.88	236	eP	Pn	22 42 53.3	+0.7
	baz=237						
JISG	Ishigakijimahi	1.90	95	P	Pn	22 42 53.1	+0.4
JISG				eS	Sn	22 43 16.5	0.0
ELDTW	Lidau	1.93	216	eP	Pn	22 42 52.6	-0.7
	baz=212						
EDH	Donghe	1.98	206	eP	Pn	22 42 53.0	-0.8
	baz=215						
EDH				eS	Sn	22 43 16.4	-2.1
	baz=215						
CHN4	Tsaushan	2.06	227	eP	Pn	22 42 55.5	+0.6
	baz=228						
CHN4				eS	Sn	22 43 22.7	+2.4
	baz=228						
TPUB	Ta-pu	2.07	226	eP	Pn	22 42 55.6	+0.6
	baz=237						
TPUB				eS	Sn	22 43 21.4	+0.9
	baz=237						
STYT	Tauyuan	2.09	221	eP	Pn	22 42 56.5	+1.1
	baz=221						
STYT				eS	Sn	22 43 22.4	+1.3
	baz=221						
WTP	Ta-pu	2.12	225	eP	Pn	22 42 56.3	+0.6
	baz=237						
WTP				eS	Sn	22 43 23.7	+1.9
	baz=237						
TWK	Hsinying	2.19	227	eP	Pn	22 42 56.7	+0.1
	baz=218						
TWK				eS	Sn	22 43 23.6	+0.2
	baz=218						
LDUT	Ludao	2.20	199	eP	Pn	22 42 55.1	-1.6
	baz=198						
LDUT				eS	Sn	22 43 20.2	-3.3
	baz=198						
CHN1	Nanshi	2.22	225	eP	Pn	22 42 57.1	+0.2
	baz=237						
JTJ	Tarama	2.25	93	P	Pn	22 42 58.1	+0.8
JTJ				eS	Sn	22 43 24.8	+0.2
SLGT	Liugui	2.29	220	eP	Pn	22 42 57.6	-0.2
	baz=228						
MATB	Ma-tsu	2.49	304	eP	Pn	22 42 59.8	-0.7
	baz=303						
VWUC	VWUC	2.54	276	eP	Pn	22 43 00.2	-1.0
	baz=276						
JIRB	Irabujima	2.67	88	P	Pn	22 43 04.0	+1.1
JIRB				eS	Sn	22 43 35.1	+0.5
PNG	Penghu	2.72	245	eP	Pn	22 43 02.3	-1.3
	baz=245						
PHUB	P'eng-hu	2.73	243	eP	Pn	22 43 02.4	-1.3
	baz=244						
WDGT	Dungji	2.79	238	eP	Pn	22 43 04.1	-0.4
	baz=239						
PTMZ	Houxiangcun	2.84	276	eP	Pn	22 43 04.5	-0.7
	baz=276						
LYJJ	Jianjiangzhen	2.85	309	eP	Pn	22 43 04.5	-0.8
	baz=308						
KNMB	Chin-men Tao	3.52	266	eP	Pn	22 43 12.4	-1.8
	baz=258						

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*IDC **10** 22:48:26.3±7.6, 37°.12N×71°.66E, $h291^{km}\pm44^{km}$, mb3.1/4, mb1 3.1/10, mb1mx2.8/59, mbtmp3.8/10, Error ellipse: s-maj=77.1km s-min=31.7km az=180.0*
*NNC **10** 22:48:44.7±3.4, 38°.62N×72°.02E, $h0^{km}$, mb3.6, mpv3.2, Error ellipse: s-maj=30.2km s-min=23.6km az=42.0*
ISC 10 22:48:00.5±1.2**, 36°.72N**±0°.08×**71°.3E**±0°.1**, $h10^{km}$, n25, σ2^{s}.45**/26**, mb3.8**/4**, 3C-3D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IUG	Iuzhnay	5.51	350	Pg	Pg	22 49 45.3	-0.8
	2.8nm,0.2s						
IUG				Lg	Lg	22 50 48.5	
	12nm,0.3s						
MRKS	Merke	6.20	13	Pg	Pb	22 49 52.0	+3.4
	3.7nm,0.3s						
MRKS				Lg	Lg	22 51 00.6	
	7.5nm,0.6s						
AAK	Ala-Archa	6.40	22	P	Pb	22 49 54.5	+2.5
	0.8nm,0.3s,baz=183,slow=7.8,SNR=20						
AAK				S	Sb	22 51 04.2	-4.5
	0.5nm,0.3s,baz=178,slow=22,SNR=4.4						
AAK	Ala-Archa	6.40	22	⇑Pn	Pb	22 49 54.2	+2.1
	2.2nm,0.8s						
AAK				⇑Pg	Pg	22 50 06.5	+3.4
	1.5nm,0.5s						
AAK				⇓Lg	Lg	22 51 04.8	
	4.0nm,0.6s						
KK31	Karatay Array	6.41	355	Pn	Pb	22 49 55.5	+3.3
	0.2nm,0.3s,baz=174,slow=13,SNR=7.0						
KK31				⇓Lg	Lg	22 51 08.0	
	2.9nm,0.7s						
TKM2	Tokmak 2	7.01	27	⇓Pn	Pb	22 50 02.0	-0.6
	2.8nm,0.8s						
TKM2				⇑Pg	Pg	22 50 15.4	+0.5
	1.3nm,0.6s						
KST	Kastek	7.26	28	Pg	Pb	22 50 05.7	-1.0
	3.0nm,0.3s						
KST				Lg	Lg	22 51 25.9	
	4.4nm,0.5s						
MKAR	Makanchi Array	12.96	36	P		22 51 15.0	
	0.2nm,0.3s,baz=218,slow=11,SNR=11						
DANN	Dangsing	13.40	125	eP	P	22 51 19.9	-0.8
	7.4nm,0.5s						
GKN	Gorkha	14.21	124	eP	P	22 51 28.9	-0.6
	10nm,0.5s						
KKN	Kakani	14.78	123	eP	P	22 51 35.9	0.0
	16nm,0.5s						
DMN	Daman	14.78	124	eP	P	22 51 37.4	+1.5
KURBB	Kurchatov Arra	14.84	18	P	P	22 51 37.2	+1.1
	0.1nm,0.3s,baz=206,slow=11,SNR=10.0						
PKIN	Phulchoki	14.99	123	eP	P	22 51 38.8	+0.4
	9.4nm,0.5s						
PKI	Pulchoki	15.01	123	eP	P	22 51 39.3	+0.7
	13nm,0.6s						
RAMN	Ramite	16.21	123	eP	P	22 51 53.7	+1.8
	13nm,0.6s						
BVAR	Borovoye Array	16.32	358	P	P	22 51 55.1	+2.5
	0.3nm,0.3s,baz=167,slow=13,SNR=7.9						
AKTO	Aktyubinsk	16.72	329	P	P	22 52 01.0	+3.9
	1.4nm,0.3s,baz=129,slow=8.5,SNR=17						
TAPN	Taplejung	16.73	119	eP	P	22 51 58.6	+1.0
	4.4nm,0.5s						
ODAN	Odare	16.81	121	eP	P	22 52 01.0	+2.5
	6.2nm,0.6s						
ZALV	Zalesovo Beam	19.61	24	P	P	22 52 28.9	0.0
	1.4nm,0.3s,baz=219,slow=11,SNR=18						
ARU	Arti	21.51	340	P	P	22 52 49.6	+0.2
	0.6nm,0.4s,baz=131,slow=11,SNR=4.0						
FINES	FINESS Array B	37.45	326	P	P	22 55 10.0	-3.7
	2.0nm,1.0s,baz=119,slow=14,SNR=3.7						
ARCES	ARCESS Array B	41.04	337	P	P	22 55 39.2	-4.5
	7.7nm,1.2s,baz=116,slow=8.4,SNR=7.7						
YKA	Yellowknife Ar	81.02	3	P	P	23 00 05.7	-9.5
	0.5nm,0.6s,baz=357,slow=5.4,SNR=11						

NNC 10 22:52:29.2±2.3**, 38°.02N×71°.71E, $h0^{km}$, mb3.8, mpv3.5, 2C-4D, Error ellipse: s-maj=18.0km s-min=14.8km az=175.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IUG	Iuzhnay	4.32	343	Pg	Pn	22 53 36.4	+0.2
	5.1nm,0.1s						
IUG				Lg	Lg	22 54 29.4	
	12nm,0.5s						
MRKS	Merke	4.86	13	Pg	Pn	22 53 44.2	+0.6
	3.6nm,0.2s						
AAK	Ala-Archa	5.08	24	⇓P	Pn	22 53 47.1	+0.4
	2.7nm,0.8s						
AAK				⇑S	Sn	22 54 47.6	+1.5
	6.3nm,1.1s						
KK31	Karatay Array	5.16	350	⇑P	Pn	22 53 47.8	+0.1
	0.9nm,0.2s,baz=175,slow=12,SNR=11						
KK31				⇓S	Sn	22 54 49.0	+1.0
	1.4nm,0.3s						
TKM2	Tokmak 2	5.72	30	⇓P	Pn	22 53 55.1	-0.5
	1.9nm,0.8s						
TKM2				⇓S	Sn	22 55 02.7	+0.7
	4.1nm,1.3s						
DGS	Degeres	6.06	29	Pg	Pn	22 53 59.1	-1.1
	2.2nm,0.6s						
DGS				Lg	Lg	22 55 05.9	
	1.2nm,0.6s						

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*IDC **10** 23:16:30.2±4.6, 37°.31N×72°.45E, $h210^{km}\pm33^{km}$, mb3.3/7, mb1 3.5/12, mb1mx3.1/39, mbtmp4.0/12, Error ellipse: s-maj=45.4km s-min=26.4km az=162.0*
*NEIC **10** 23:16:31.4±1.1, 37°.51N±0°.08×72°.29E±0°.07, $h205^{km}\pm5^{km}$, mb4.1/7, Error ellipse: s-maj=11.0km s-min=8.7km az=182.0*
*NNC **10** 23:16:34.5±4.7, 37°.67N×72°.15E, $h100^{km}$, mb4.0, mpv4.7, Error ellipse: s-maj=41.9km s-min=34.4km az=44.0*
ISC 10 23:16:30.2±0.6**, 37°.44N**±0°.05×**72°.40E**±0°.06**, $h200^{km}$, n64, σ1^{s}.52**/70**, mb3.5**/9**, 3C-1D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIL	Nilore	3.84	169	Pn	Pn	23 17 32.7	+2.6
NIL				Sn	Sn	23 18 19.4	+2.4
KBL	Kabul	3.97	224	Pn	Pn	23 17 33.1	+1.3
KBL				Sn	Sn	23 18 20.4	+0.3
TAS	Tashkent	4.57	329	Pn	Pn	23 17 39.4	+0.3
AML	Almayashu	4.79	12	P	Pn	23 17 42.8	+0.6
	SNR=425						
IUG	Iuzhnay	5.05	340	Pg	Pn	23 17 45.7	+0.6
	73nm,0.2s						
UCH	Uchtor	5.05	18	P	Pn	23 17 46.2	+0.6
	SNR=24						
EKS2	Erkin-Say	5.32	11	P	Pn	23 17 49.4	+0.6
	SNR=48						
MRKS	Merke	5.34	7	Pg	Pn	23 17 49.4	+0.4
	81nm,0.3s						
MRKS				Lg	Lg	23 18 48.0	
	20nm,0.3s						
AAK	Ala-Archa	5.44	17	P	Pn	23 17 51.3	+1.0
	7.5nm,0.3s,baz=189,slow=8.0,SNR=194						
AAK				S	Sn	23 18 52.9	-0.6
	6.2nm,0.3s,baz=321,slow=20,SNR=14						
AAK	Ala-Archa	5.44	17	P	Pn	23 17 51.2	+1.0
	SNR=51						
AAK	Ala-Archa	5.44	17	⇑P	Pn	23 17 51.3	+1.0
	20nm,0.5s						
AAK				⇓S	Sn	23 18 51.4	-2.1
	9.1nm,0.3s						
AAK	Ala-Archa	5.44	17	Pn	Pn	23 17 51.1	+0.9
DZA	Taraz	5.51	352	Pg	Pn	23 17 51.5	+0.4
	117nm,0.3s						
DZA				Lg	Lg	23 18 51.1	
	87nm,0.3s						
KBK	Karagaybulak	5.57	20	P	Pn	23 17 53.4	+1.5
	SNR=14						
ULHL	Ulahol	5.64	30	P	Pn	23 17 53.4	+0.6
	SNR=27						
THN	Thein Dam	5.69	150	eP	Pn	23 18 09.5	+16
THN				eS	Sn	23 18 58.5	-0.6
CHMS	Chumysh	5.84	17	P	Pn	23 17 56.3	+1.1
	SNR=16						
KK31	Karatay Array	5.84	346	P	Pn	23 17 55.1	-0.2
	13nm,0.5s,baz=155,slow=11,SNR=231						
KK31				⇑S	Sn	23 18 57.8	-4.9
	16nm,0.3s						
KK31	Karatay Array	5.84	346	Pn	Pn	23 17 55.3	0.0
KKAR	Karatay Array	5.84	346	Pn	Pn	23 17 55.0	-0.3
KKAR	Karatay Array	5.84	346	Pn	Pn	23 17 55.2	-0.1
TKM2	Tokmak 2	6.00	23	P	Pn	23 17 58.3	+0.8
	SNR=40						
TKM2	Tokmak 2	6.00	23	⇑P	Pn	23 17 58.4	+0.8
	15nm,0.6s						
USP	Ospenovka	6.04	15	P	Pn	23 17 58.2	+0.4
	SNR=17						
DHRM	DHARAMSHALA	6.09	147	eP	Pn	23 17 59.8	+1.0
DHRM				eS	Sn	23 19 06.2	-2.6
DHRM				IAML		23 19 09.9	
	comp=E,367nm,0.2s						
DHRM				IAML		23 19 10.1	
	comp=N,396nm,0.9s						
KST	Kastek	6.23	25	Pg	Pn	23 18 01.3	+0.9
	comp=N,24nm,0.4s						
KST				Lg	Lg	23 19 06.5	
	comp=N,16nm,0.9s						
SMLA	Simla	7.42	147	eP	Pn	23 18 16.8	+0.9
SMLA				eS	Sn	23 19 36.1	-3.8
SMLA				IAML		23 19 39.1	
	comp=E,130nm,0.3s						
SMLA				IAML		23 19 40.1	
	comp=N,110nm,0.6s						
KUDL	Kundal	9.88	158	eS	Sn	23 20 30.7	-7.7
MAKZ	Makanchi	11.75	34	Pn	Pn	23 19 11.6	-0.1
MK31	Makanchi Array	11.88	35	P	P	23 19 19.1	+0.9
MKAR	Makanchi Array	11.88	35	P	Pn	23 19 15.0	+1.6
	comp=N,0.1nm,0.3s,baz=206,slow=11,SNR=4.1						
DANN	Dangsing	13.15	130	eP	Pn	23 19 30.4	+0.6
KURBB	Kurchatov Arra	13.89	16	P	P	23 19 40.7	+0.1
	comp=N,0.1nm,0.3s,baz=202,slow=10,SNR=13						
GKN	Gorkha	13.94	129	eP	Pn	23 19 40.3	+0.8
	comp=N,31nm,0.4s						
KURK	Kurchatov	14.00	17	P	P	23 19 42.8	+1.1
PKIN	Phulchoki	14.71	128	eP	P	23 19 50.7	+0.5
	comp=N,7.7nm,0.4s						
PKI	Pulchoki	14.72	128	eP	P	23 19 51.1	+0.7
	comp=N,8.2nm,0.3s						
ABKAR	Akbulak array	14.87	327	P	Pn	23 19 50.3	-0.2
AB05	Akbulak array	14.88	327		Pn	23 19 50.5	-0.2
BVAR	Borovoye Array	15.65	355	P	Pn	23 20 00.7	+0.6
	comp=N,0.3nm,0.3s,baz=151,slow=11,SNR=8.5						
BRVK	Borovoye	15.69	355	P	Pn	23 20 01.1	+0.6
RAMN	Ramite	15.91	127	eP	P	23 20 03.9	+0.5
	comp=N,14nm,0.4s						
TAPN	Taplejung	16.36	124	eP	Pn	23 20 10.1	+1.0
	comp=N,5.4nm,0.5s						
AKTO	Aktyubinsk	16.58	326	P	Pn	23 20 11.1	-0.1
	comp=N,1.2nm,0.3s,baz=124,slow=9.6,SNR=22						
ZAA0	Zalesovo Array	18.60	23	P	P	23 20 33.2	+0.9
ZAA0				IAmb	IAmb	23 20 33.5	
	comp=Z,6.7nm,0.7s						
ZALV	Zalesovo Beam	18.60	23	P	P	23 20 33.0	+0.7
	comp=Z,1.3nm,0.3s,baz=225,slow=10,SNR=35						
ARU	Arti	21.14	338	P	P	23 20 59.3	0.0
	baz=180,slow=6.1						
ARU	Arti	21.14	338	P	P	23 21 00.9	+1.5
ARU				IAmb	IAmb	23 21 09.3	
	comp=Z,4.0nm,1.2s						
AKASG	Malin Array Be	33.25	307	P	P	23 22 48.9	+0.6
	comp=Z,0.3nm,0.3s,baz=107,slow=8.4,SNR=4.2						
AKASG	Malin Array Be	33.25	307	P	P	23 22 48.7	+0.4
FIA1	FINESS Array S	37.35	325	P	P	23 23 23.2	+0.2
FINES	FINESS Array B	37.35	325	P	P	23 23 23.2	+0.2
	comp=Z,0.8nm,0.3s,baz=119,slow=9.1,SNR=12						
ARD5	ARCESS Array S	40.71	337	P	P	23 23 51.6	+0.8
ARCES	ARCESS Array B	40.72	337	P	P	23 23 51.1	+0.2
	comp=Z,5.7nm,1.0s,baz=116,slow=7.3,SNR=10						
ARCES	ARCESS Array B	40.72	337	IAmb	IAmb	23 23 55.1	
	comp=Z,26nm,1.3s						
NC405	NORSAR Array S	44.08	323	P	P	23 24 18.0	-0.1
NC303	NORSAR Array S	44.25	323	P	P	23 24 19.8	+0.3
NB201	NORSAR Array S	44.28	322	P	P	23 24 19.5	-0.2
NB2	NORSAR Subarra	44.32	322	P	P	23 24 19.6	-0.4
	comp=Z,0.8nm,0.5s,baz=92,slow=7.9						
NOA	NORSAR Array B	44.32	322	P	P	23 24 19.8	-0.2
	comp=Z,1.4nm,0.7s,baz=92,slow=7.6,SNR=5.5						
NC204	NORSAR Array S	44.55	323	P	P	23 24 21.6	-0.2
NC204				IAmb	IAmb	23 24 37.0	
	comp=Z,11nm,1.1s						
ESDC	Sonseca Array	58.01	298	P	P	23 26 02.0	-0.1
	comp=Z,0.4nm,0.7s,baz=65,slow=7.5,SNR=2.8						
TORD	Torodi Ar. Bea	66.86	269	P	P	23 26 59.8	-1.1
	comp=Z,0.6nm,0.6s,baz=43,slow=5.8,SNR=3.3						
YKA	Yellowknife Ar	80.25	3	P	P	23 28 17.3	-0.8
	comp=Z,0.4nm,0.4s,baz=356,slow=5.0,SNR=8.2						

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*UPA **10** 23:30:29.4±1.2, 8°.79N×78°.57W, $h5^{km}\pm7^{km}$, MW3.5*
ISC 10 23:30:28.7±1.7**, 9°.3N**±0°.2×**78°.50W**±0°.04**, $h71^{km}\pm15^{km}$, n12, σ0^{s}.92**/20**, Panama**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNTA3	Canitas, Panam	0.39	259	eP	Pn	23 30 40.8	+0.2
CNTA3				eS	Sn	23 30 49.0	-0.5
UPD2	Meteti	0.89	147	eP	Pn	23 30 41.3	-4.6
UPD2				eS	Sn	23 30 59.6	+0.9
UPA	Univ. de Panam	1.06	253	eP	Pn	23 30 48.5	+0.4
UPA				eS	Sn	23 31 01.0	-1.5
TABO3	Taboga, Panama	1.15	244	eS	Sn	23 31 03.3	-1.2
CAP2	Capurgana	1.30	120	eP	Pn	23 30 51.4	+0.3
CAP2				eS	Sn	23 31 08.8	+0.9
CHOR3	La Chorrera	1.31	252	eS	Sn	23 31 08.1	0.0
CAPC	Capurgana	1.31	120	eP	Pn	23 30 51.8	+0.5
CAPC				eS	Sn	23 31 06.8	-1.4
CAPC				i		23 31 15.1	
	comp=Z,46nm,0.1s						
BCIP	Isla Barro Col	1.32	264	eP	Pn	23 30 52.1	+0.8
BCIP				eS	Sn	23 31 08.7	+0.3
ZANG	Zanguenga, Cho	1.39	256	eS	Sn	23 31 09.5	-0.4
MOTC	Monteria, Cord	2.85	100	eP	Pn	23 31 12.8	+1.0
MOTC				eS	Sn	23 31 44.6	-0.6
MOTC				i		23 31 46.6	
	comp=Z,10nm,0.3s						
MONA	Monteria	2.86	100	eP	Pn	23 31 12.7	+0.7
MONA				eS	Sn	23 31 43.9	-1.4
UREC	San Jos de Ur	3.32	117	eP	Pn	23 31 18.1	-0.1
UREC				eS	Sn	23 31 55.6	-0.9
UREC				i		23 31 59.0	
	comp=N,8.6nm,0.3s						

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*INET **10** 23:41:14.0, 9°.59N×83°.56W, $h5^{km}$, MW3.0*
UPA 10 23:41:14.5±0.8**, 9°.55N×83°.49W, $h7^{km}\pm4^{km}$, MW3.5, 3C-1D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRK0	Durika	0.37	140	⇓iP	Pg	23 41 22.6	+0.7
DRK0				eS	Sg	23 41 28.1	+1.3
HDC	Heredia	0.76	306	eS	Sg	23 41 38.4	-0.8
BRU2	Volcan	1.09	134	⇑iP	Pg	23 41 35.3	-0.2
BRU2				eS	Sn	23 41 51.0	-0.7
CDITO	Canoas	1.15	148	eP	Pg	23 41 35.2	-1.3
BCO2	Palmira	1.26	131	⇑iP	Pn	23 41 38.3	-0.4
BCO2				eS	Sb	23 41 55.2	+0.1
JTS	Las Juntas de	1.62	297	⇑iP	Pn	23 41 42.6	-0.8
JTS				eS	Sn	23 42 03.7	-0.9

WEL 10 23:41:19.7, 44°S±5°×**16°9E**±°**, $h5^{km}\pm4^{km}$, M2.8**/12**, mB5.6**/1**, ML2.7**/11**, MLv2.8**/12**, Mw(mB)5.1**/1**, Error ellipse: s-maj=0.0km s-min=0.0km az=112.3, South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCZ	Jackson Bay	0.47	257	P	Pb	23 41 30.3	-0.1
FOZ	Fox Glacier	0.53	34	P	Pb	23 41 31.1	-0.3
LBZ	Lake Benmore	0.69	127	P	Pb	23 41 34.5	+0.3
WKZ	Wanaka	0.90	198	P	Pg	23 41 35.6	-1.3
GCSZ	Gaunt Creek Bo	0.93	46	P	Pb	23 41 38.5	+0.2
RPZ	Rata Peaks	1.21	78	P	Pn	23 41 45.6	+2.3
TMZ	Timaru	1.22	110	P	Pn	23 41 44.4	+1.1
EAZ	Earnscleugh	1.26	183	P	Pg	23 41 43.9	0.0
ARCZ	Arundel	1.27	89	P	Pb	23 41 45.3	+1.2
WVZ	Waitaha Valley	1.31	47	P	Pg	23 41 45.1	+0.3
ODZ	Otahua Downs	1.39	141	P	Pg	23 41 46.6	+0.3
MLZ	Mavora Lakes	1.67	213	P	Pg	23 41 51.8	0.0
TUZ	Tuapeka	1.99	176	P	Pg	23 41 57.4	-0.4
LTZ	Lake Taylor	2.40	61	P	Pn	23 42 01.4	+1.8
DSZ	Denniston Nort	2.84	39	P	Pn	23 42 06.5	+0.9
QRZ	Quartz Range	3.90	37	P	Pn	23 42 21.0	+0.8
MTVZ	Mangateitei	6.45	47	P	Pn	23 42 57.1	+1.8

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*RSNC **11** 00:10:07.7±1.1, 4°.71N×73°.01W, $h23^{km}\pm4^{km}$, ML3.2, Mw3.3*
*IDC **11** 00:10:13.1±1.1, 5°.44N×73°.38W, $h70^{km}\pm15^{km}$, mb3.2/2, mb1 3.6/3, mb1mx3.1/29, mbtmp3.6/3, Error ellipse: s-maj=31.9km s-min=10.2km az=133.0*
ISC 11 00:10:06.6±1.2**, 4°.74N**±0°.03×**72°.98W**±0°.03**, $h30^{km}\pm12^{km}$, n36, σ1^{s}.46**/61**, 1C-2D, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHIC	Chingaza	0.76	262	⇓iP	Pb	00 10 21.0	-0.6
CHIC				eS	Sb	00 10 32.0	+0.1
CHIC				i		00 10 33.6	
	comp=Z,942nm,0.7s						
PTGC	Puerto Gaitan,	1.00	122	⇓iP	Pn	00 10 25.0	+0.4
PTGC				eS	Sb	00 10 39.6	+1.4
RUSC	La Rusia	1.15	355	⇑eP	Pn	00 10 28.3	+1.1
RUSC				eS	Sb	00 10 44.4	+1.2
RUSC				i		00 10 46.4	
	comp=Z,603nm,0.5s						
ROSC	El Rosal	1.34	274	P	Pn	00 10 31.4	+1.7
	comp=Z,26nm,0.3s,baz=100,slow=12,SNR=51						
ROSC				S	Sb	00 10 49.1	+0.7
	comp=Z,54nm,0.3s,baz=122,slow=23,SNR=8.7						
ROSC	El Rosal	1.34	274	eP	Pn	00 10 30.9	+1.3
ROSC				eS	Sn	00 10 48.2	+1.4
ROSC				i		00 10 55.6	
	comp=Z,168nm,0.3s						
SPBC	San Pablo de B	1.42	310	eP	Pn	00 10 30.8	+0.3
SPBC				eS	Sn	00 10 48.8	+0.6
SPBC				i		00 10 55.0	
	comp=Z,514nm,0.2s						
BARC	Barichara	1.85	354	eP	Pn	00 10 37.4	+0.8
NORC	Norcasia	2.06	294	eP	Pn	00 10 39.9	+0.7
NORC				eS	Sn	00 11 05.1	+1.2
NORC				i		00 11 07.6	
	comp=Z,86nm,0.5s						
TAMC	Tame, Arauca	2.06	35	eP	Pn	00 10 41.4	+2.1
TAMC				eS	Sn	00 11 07.2	+3.2
TAMC				i		00 11 22.0	
	comp=Z,184nm,0.2s						
GUVC	San Jose del G	2.20	171	eS	Sn	00 11 07.6	+0.1
PTBC	PUERTO BERRIO,	2.32	321	eP	Pn	00 10 43.5	+0.7
PTBC				eS	Sn	00 11 11.2	+0.9
PTBC				i		00 11 20.1	
	comp=Z,89nm,0.3s						
TOLC	Tolima	2.34	266	eP	Pn	00 10 43.8	+0.4
TOLC				eS	Sn	00 11 11.9	+0.6
TOLC				i		00 11 31.3	
	comp=Z,56nm,0.3s						
RREF	El Recreo	2.37	274	eP	Pn	00 10 44.3	+0.2
RREF				eS	Sn	00 11 13.1	+0.7
RREF				i		00 11 24.7	
	comp=Z,73nm,0.3s						
ORTC	Ortega, Tolima	2.41	250	eP	Pn	00 10 44.1	+0.1
ORTC				eS	Sn	00 11 13.3	+0.8
ORTC				i		00 11 21.7	
	comp=Z,221nm,0.2s						
GUY2C	Guyana, Caldas	2.43	282	eP	Pn	00 10 45.6	+0.9
GUY2C				eS	Sn	00 11 13.4	-0.3
GUY2C				i		00 11 19.3	
	comp=Z,81nm,0.6s						
ANIL	Santa Ana	2.43	264	eP	Pn	00 10 45.3	+0.7
BRRC	Barranca, Sant	2.47	343	eP	Pn	00 10 45.7	+0.9
BRRC				eS	Sn	00 11 15.6	+1.6
BRRC				i		00 11 18.5	
	comp=Z,52nm,0.4s						
PAMC	Pamplona, Colo	2.60	6	eP	Pn	00 10 48.4	+1.3
PAMC				i		00 11 22.0	
	comp=Z,56nm,0.3s						
MACC	Macarena, Meta	2.72	199	eP	Pn	00 10 47.4	-0.9
MACC				eS	Sn	00 11 20.6	+0.4

MACC				i		00 11 38.8	
	comp=Z,311nm,0.4s						
BETC	Betania	3.19	230	eP	Pb	00 11 00.1	-2.7
BETC				eS	Sb	00 11 42.1	+0.8
CBOC	Ciudad Bolivar	3.22	290	eP	Pn	00 10 56.4	+1.0
ZARC	Zaragoza, Cauc	3.32	326	eP	Pn	00 10 57.3	+0.8
ZARC				eS	Sn	00 11 34.1	-0.8
ZARC				i		00 11 40.9	
	comp=Z,38nm,0.4s						
YOTC	Yotoco, Valle	3.44	258	eP	Pn	00 10 57.8	-0.5
OCAC	Ocana	3.50	354	eP	Pn	00 10 59.8	+0.7
OCAC				eS	Sn	00 11 41.2	+1.5
OCAC				i		00 12 01.4	
	comp=Z,56nm,0.5s						
GARC	Garzon, Huila	3.57	225	eP	Pn	00 11 01.2	+1.0
GARC				eS	Sb	00 11 53.4	+1.3
UREC	San Jos de Ur	3.93	320	eP	Pn	00 11 04.2	-0.8
UREC				eS	Sn	00 11 48.6	-1.5
UREC				i		00 11 52.2	
	comp=Z,25nm,0.3s						
FLOC	Florencia	4.12	221	eP	Pn	00 11 08.2	+0.6
FLOC				eS	Sb	00 12 09.2	+1.4
FLOC				i		00 12 14.5	
	comp=Z,81nm,0.5s						
PCON	Cinco Dias	4.17	235	eP	Pn	00 11 07.2	-1.5
PCON				eS	Sb	00 12 12.6	+2.8
PCON				i		00 12 24.2	
	comp=Z,79nm,0.7s						
SMLC	San Martn de	4.18	345	eP	Pn	00 11 06.7	-1.7
SMLC				eS	Sn	00 11 52.2	-4.1
SMLC				i		00 12 08.3	
	comp=Z,21nm,0.3s						
POPC	Popayan, Colom	4.29	240	eP	Pn	00 11 10.8	+0.7
POPC				eS	Sb	00 12 15.2	+2.3
SDV	Santo Domingo	4.74	29	P	Pn	00 11 17.0	+0.7
	comp=Z,9.4nm,0.3s,baz=217,slow=10,SNR=29						
SDV				S	Sn	00 12 08.1	-2.2
	comp=Z,21nm,0.3s,baz=37,slow=12,SNR=15						
SDV	Santo Domingo	4.74	29	eP	Pn	00 11 16.6	+0.3
SDV				eS	Sn	00 12 07.0	-3.2
SDV				i		00 12 11.2	
	comp=Z,50nm,0.5s						
MOTC	Monteria, Cord	4.82	327	eP	Pn	00 11 15.6	-1.6
MOTC				eS	Sn	00 12 11.5	-0.6
BBAC	Balboa, Cauca	5.04	238	eP	Pn	00 11 18.1	-2.4
LPAZ	La Paz	21.43	167	P	P	00 15 05.0	+12
	comp=Z,1.3nm,0.5s,baz=344,slow=10,SNR=6.6						
YKA	Yellowknife Ar	65.26	340	P	P	00 20 42.1	-3.1
	comp=Z,0.2nm,0.5s,baz=138,slow=6.6,SNR=4.0						

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*IDC **11** 00:16:43.8±1.9, 3°.71N×126°.11E, h0^{km}, mb3.6/4, mb1 3.8/4, mb1mx3.5/36, mbtmp3.7/4, Error ellipse: s-maj=126.2km s-min=23.7km az=68.0*

ISC 11 00:16:49.0±1.3**, 3°.6N**±0°.1×**126°.5E**±0°.3**, h35^{km}, n7,** σ**1^s.47**/9**, mb3.7**/4**, 1C, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	Don Marcelino,	2.56	342	eP	Pn	00 17 28.0	-0.1
DDMP				eS	Sn	00 17 57.5	-0.6
SKMP	Bagumbayan, Su	3.45	326	eP	Pn	00 17 40.6	+0.3
SKMP				eS	Sn	00 18 21.2	+1.1
KCP	Kidapawan	3.62	337	⇑eP	Pn	00 17 44.6	+1.9
KCP				i S	Sn	00 18 37.1	+13
FITZ	Fitzroy Crossi	21.62	182	P	P	00 21 36.0	-0.2
	4.5nm,1.2s,baz=1.6,slow=11,SNR=2.4						
WRA	Warramunga Arr	24.68	162	P	P	00 22 08.7	+1.9
	1.3nm,0.8s,baz=341,slow=10.0,SNR=11						
ASAR	Alice Springs	28.09	165	P	P	00 22 38.1	+0.5
	0.3nm,0.6s,baz=338,slow=7.1,SNR=2.2						
MKAR	Makanchi Array	57.49	325	P	P	00 26 32.9	-1.9
	0.5nm,0.5s,baz=122,slow=7.7,SNR=11						

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*HEL **11** 00:34:58.8, 67°.87N×20°.06E, h0^{km}, ML1.9, Explosion*

UPP 11 00:34:59.9±0.5**, 67°.83N×20°.19E, h3^{km}**±6^{km}**, ML1.9, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUA	Kurravaara	0.14	23	P	Pg	00 35 02.4	-0.2
KUA				S	Sg	00 35 04.3	-0.1
KUA	Kurravaara	0.14	23	i P	Pg	00 35 02.4	-0.2
KUA				i S	Sg	00 35 04.3	-0.1
RATU	Laukkuluspa	0.23	269	P	Pg	00 35 04.2	-0.1
RATU	Laukkuluspa	0.23	269	i P	Pg	00 35 04.2	-0.1
KOVU	Salmi	0.40	358	P	Pg	00 35 07.2	-0.3
KOVU	Salmi	0.40	358	i P	Pg	00 35 07.2	-0.3
NIKU	Nikkaluokta	0.44	275	P	Pg	00 35 08.1	-0.3
NIKU	Nikkaluokta	0.44	275	i P	Pg	00 35 08.1	-0.3
LANU	Lannavaara	0.71	71	P	Pg	00 35 13.0	-0.5
LANU	Lannavaara	0.71	71	eP	Pg	00 35 12.8	-0.8
	baz=258						
LANU				eS	Sg	00 35 22.1	-0.6
DUNU	Dundret	0.73	168	P	Pg	00 35 13.1	-0.7
DUNU	Dundret	0.73	168	i P	Pg	00 35 13.1	-0.7
MASU	Masugnsbyn	0.79	118	P	Pg	00 35 14.5	-0.4
MASU	Masugnsbyn	0.79	118	i P	Pg	00 35 14.5	-0.4
SALU	Saltoluokta	0.79	236	P	Pg	00 35 14.4	-0.6
SALU	Saltoluokta	0.79	236	i P	Pg	00 35 14.4	-0.6
KIF	Kilpisjarvi	1.20	11	eP	Pg	00 35 22.6	-0.2
KIF	Kilpisjarvi	1.20	11	ePB	Pg	00 35 22.8	-0.1
KIF				MSG		00 35 35.6	
	comp=Z,12nm,0.2s						
KIF				eSB	Sg	00 35 38.6	+0.2
PAJU	Pajala	1.39	124	P	Pn	00 35 24.9	-1.2
PAJU	Pajala	1.39	124	eP	Pn	00 35 24.7	-1.5
PAJU				eSB	Sg	00 35 43.3	-1.0
ERTU	Ertsjaerv	1.50	148	eP	Pn	00 35 26.8	-0.8
ERTU				eSN	Sn	00 35 47.6	0.0
TOF	Tornio	2.39	135	ePB	Pn	00 35 41.3	+1.4
	baz=320						
TOF				MSG		00 36 11.4	
	comp=Z,4.0nm,0.2s						
TOF				eSB	Sb	00 36 12.8	-0.6
SGF	Sodankyl	2.45	96	ePB	Pn	00 35 42.5	+1.8
	baz=282						
SGF				eSG	Sb	00 36 15.6	+0.5
RNF	Rovaniemi	2.58	116	ePB	Pn	00 35 44.1	+1.7
RNF				eSB	Sb	00 36 17.5	-1.1
ARA0	ARCESS Array S	2.59	46	eP	Pn	00 35 43.6	+1.0
BURU	Burvik	3.30	171	eP	Pn	00 35 54.4	+2.1
OLKF	Oulanka, Finla	3.91	109	ePG	Pb	00 36 10.0	+0.7
KU6	Riekki	4.22	111	ePG	Pb	00 36 15.4	+0.7

UPP 11 00:35:36.2±0.1**, 67°.82N×20°.22E, h0^{km}, ML3.0, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOVU	Salmi	0.40	357	P	Pg	00 35 43.9	0.0
KOVU				S	Sg	00 35 49.5	+0.3
NIKU	Nikkaluokta	0.45	276	P	Pg	00 35 44.9	0.0
NIKU				S	Sg	00 35 50.9	+0.2
DUNU	Dundret	0.72	169	P	Pg	00 35 49.6	-0.3
MASU	Masugnsbyn	0.77	118	P	Pg	00 35 50.7	-0.3
PAJU	Pajala	1.37	124	P	Pg	00 36 01.5	-1.0
PAJU				S	Sg	00 36 20.0	-0.3

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*IDC **11** 01:09:37.4±2.6, 40°.66N×50°.11E, h0^{km}, mb3.6/2, mb1 3.6/5, mb1mx3.3/28, mbtmp3.5/5, ML2.2/2, Error ellipse: s-maj=65.7km s-min=20.3km az=17.0*

ISC 11 01:09:42.8±1.1**, 40°.9N**±0°.1×**50°.29E**±0°.07**, h35^{km}, n7,** σ**2^s.26**/11**, 2C-2D, Caspian Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBZ	Khabaz	6.18	300	Pn	Pn	01 11 12.5	+1.0
	0.0nm,0.3s,baz=90,slow=20,SNR=1.6						
KBZ				Sn	Sn	01 12 18.0	-3.0
	0.1nm,0.3s,baz=331,slow=19,SNR=1.7						
GEYT	Alibeck	6.73	113	Pn	Pn	01 11 18.1	-1.1
	0.1nm,0.3s,baz=296,slow=15,SNR=1.7						
GEYT				Sn	Sn	01 12 33.0	-1.6
	0.3nm,0.3s,baz=325,slow=25,SNR=1.6						
AB31	Akbulak array	10.80	36	⇓Pn	Pn	01 12 18.1	+3.3
	0.2nm,0.3s,baz=223,slow=12,SNR=5.6						
AB31				⇓Sn	Sn	01 14 13.1	-1.4
	0.6nm,0.2s,baz=176,slow=24,SNR=7.0						
AKTO	Aktyubinsk	10.98	27	⇑Pn	Pn	01 12 18.6	+1.3
	3.1nm,0.9s						
AKTO				⇑Sn	Sn	01 14 15.6	-3.2
	4.4nm,0.8s						
AKASG	Malin Array Be	17.62	311	P	P	01 13 46.4	+0.3
	0.9nm,0.3s,baz=116,slow=12,SNR=6.0						
MKAR	Makanchi Array	23.72	65	P	P	01 14 53.2	+1.7
	0.5nm,0.4s,baz=259,slow=9.8,SNR=17						
FINES	FINESS Array B	25.31	333	P	P	01 15 06.0	+0.2
	1.8nm,0.8s,baz=140,slow=9.2,SNR=6.2						

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*BER **11** 01:35:12.5±2.7, 79°.46N×3°.55E, h10^{km}, ML2.0, ML2.8(DNK), Confirmed Earthquake*

ISC 11 01:35:11.4±1.3**, 78°.9N**±0°.2×**3°.48E**±0°.04**, h12^{km}, n12,** σ**1^s.70**/22**, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBS	Kingsbay	1.63	86	eP	Pn	01 35 39.3	-0.6
KBS				eS	Sn	01 35 58.5	-2.3
KBS				IAML		01 36 08.5	
	comp=Z,27nm,0.3s						
KBS	Kingsbay	1.63	86	i P	Pn	01 35 39.3	-0.6
KBS				i S	Sn	01 35 58.4	-2.3
KBS				IAML		01 36 09.0	
	comp=Z,55nm,0.3s						
BRBA	Barentsburg A	2.32	107	eP	Pb	01 35 53.9	+0.8
BRBA				eS	Sb	01 36 21.6	0.0
BRBA				IAML		01 36 22.1	
	comp=Z,15nm,0.2s						
SPA0	Spitsbergen Ar	2.68	100	eP	Pn	01 35 55.9	+1.7
SPA0				e		01 35 58.1	
SPA0				eS	Sn	01 36 27.3	+0.8
SPA0				IAML		01 36 34.2	
	comp=Z,8.7nm,0.5s						
HSPB	Hornsund (broa	3.18	121	eP	Pb	01 36 06.9	-0.7
HSPB				eS	Sb	01 36 45.1	-1.1
DAG	Danmarks Havn	5.12	256	eP	Pn	01 36 28.7	+1.0
DAG				eS	Sn	01 37 24.3	-2.4
DAG				IAML		01 37 29.6	
	comp=Z,5.2nm,0.3s						
DAG	Danmarks Havn	5.12	256	e	Pn	01 36 27.8	0.0
	baz=47,slow=16						
DAG				i P	Pn	01 36 29.1	+1.3
DAG				i S	Sn	01 37 24.8	-1.9
DAG				IAML		01 37 29.6	
	comp=Z,5.2nm,0.3s						
HOPEN	Hopen	5.17	107	eP	Pn	01 36 30.1	+1.8
HOPEN				eS	Sn	01 37 26.8	-1.0
HOPEN				IAML		01 37 31.3	
	comp=Z,7.0nm,0.3s						
DBG	Daneborg	7.13	242	i P	Pn	01 36 58.3	+3.1
DBG				i S	Sn	01 38 15.0	-0.9
DBG				IAML		01 38 22.4	
	comp=Z,2.9nm,0.5s						
DBG	Daneborg	7.13	242	i P	Pn	01 36 58.3	+3.1
DBG				i S	Sn	01 38 15.0	-0.9
DBG				IAML		01 38 22.4	
	comp=Z,2.9nm,0.5s						
ZFI2	Zemlya Franca-	7.83	55	eP	Pn	01 36 57.7	-7.2
ZFI2				eS	Sn	01 38 14.0	-19
	comp=Z,5.8nm,0.6s						
SUMG	Summit	11.80	260	i P	Pn	01 37 58.6	-0.9
SUMG				e		01 40 02.9	

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*TIR **11** 01:44:24.4, 41°.96N×20°.23E, h6^{km}±2^{km}, Md2.7, Ml2.5*

*BEO **11** 01:44:25.4±0.3, 41°.99N×20°.25E, h12^{km}±3^{km}, ML2.1/9*

*PDG **11** 01:44:25.2±0.2, 41°.97N×20°.15E, h10^{km}, ML2.3/11, Error ellipse: s-maj=0.3km s-min=0.4km az=0.0*

ISC 11 01:44:25.0±1.0**, 41°.96N**±0°.02×**20°.20E**±0°.02**, h19^{km}**±2^{km}**, n48,** σ**0^s.99**/76**, 3C-1D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PUK	Puka	0.24	290	P	Pb	01 44 29.7	-0.9
	baz=288						
PUK				S	Sg	01 44 34.6	-0.1
	baz=288						
PUK				AMP			
	comp=N,5.5nm,0.2s,baz=288						
PHP	Peshkopia	0.33	147	P	Pg	01 44 31.3	-0.9
	baz=150						
PHP				S	Sg	01 44 36.0	-1.1
	baz=150						
PHP				AMP			
	comp=N,1.7nm,0.4s,baz=150						
BCI	Bajram Curri	0.42	346	P	Pg	01 44 33.1	-0.6
	baz=344						
BCI				S	Sg	01 44 39.2	-0.3
	baz=344						
BCI				AMP			
	comp=E,1.6nm,0.3s,baz=344						
PVY	Plav	0.66	344	⇓iPg	Pb	01 44 37.2	-0.7
PVY				i Sg	Sg	01 44 47.4	+0.5
TIR	Tirane	0.66	202	ePg	Pb	01 44 38.1	+0.2
TIR				eSg	Sn	01 44 48.9	-0.3
TIR	Tirane	0.66	202	P	Pb	01 44 38.0	+0.1
	baz=205						
TIR				S	Sg	01 44 47.5	+0.5
	baz=205						
ULC	Ulcinj	0.71	271	ePg	Pb	01 44 37.9	-0.9
ULC				i Sg	Sg	01 44 48.6	0.0
PDG	Podgorica	0.84	304	ePg	Pb	01 44 40.0	-1.0
PDG				eSg	Sn	01 44 53.6	-0.1
PDG	Podgorica	0.84	304	ePn	Pb	01 44 39.7	-1.3
TTG	Podgorica	0.84	304	ePg	Pb	01 44 40.0	-1.0
TTG				i Sg	Sn	01 44 53.2	-0.5
SKO	Skopje	0.93	89	ePg	Pb	01 44 41.2	-1.2
SKO				eSg	Sb	01 44 54.4	+0.1
SKO	Skopje	0.93	89	i Pn	Pb	01 44 41.9	-0.5
IVA	Berane	0.94	346	ePg	Pb	01 44 42.3	-0.4
IVA				i Sg	Sn	01 44 56.8	+0.6
OHR	Ohrid	0.96	152	i Pn	Pb	01 44 42.3	-0.7
KOME	Kolasin	1.02	331	ePg	Pb	01 44 43.7	-0.5
KOME				i Sg	Sn	01 44 59.6	+1.3
BUM	Brajici-Budva	1.03	290	⇑iPg	Pb	01 44 43.6	-0.6
BUM				i Sg	Sn	01 44 58.9	+0.5
CEME	Cevo	1.12	302	ePg	Pn	01 44 45.1	-0.6
CEME				i Sg	Sg	01 45 02.2	+0.8
NKME	Niksic	1.23	312	ePg	Pn	01 44 47.2	+0.1
NKME				i Sg	Sg	01 45 06.2	+1.4
NKY	Niksic	1.23	314	ePg	Pn	01 44 47.5	+0.2
NKY				i Sg	Sg	01 45 06.5	+1.4
HCY	Herceg Novi	1.36	292	ePn	Pn	01 44 49.0	+0.1
HCY	Herceg Novi	1.36	292	ePg	Pb	01 44 49.5	-0.3
HCY				i Sg	Sg	01 45 10.4	+1.4
PLE	Pljevlja	1.49	337	⇑iPg	Pb	01 44 52.4	+0.2
PLE				i Sg	Sg	01 45 14.7	+1.4
STIP	Stip	1.51	100	i Pn	Pg	01 44 54.3	+0.2
BRY	Bratogost	1.55	308	ePn	Pn	01 44 52.1	+0.4
BRY	Bratogost	1.55	308	⇑iPg	Pb	01 44 52.7	-0.4
BRY				i Sg	Sg	01 45 15.9	+0.8
TREB	Trebinje	1.57	299	ePn	Pb	01 44 53.2	-0.1
TREB				eSg	Sg	01 45 17.3	+1.7
TREB	Trebinje	1.57	299	ePn	Pb	01 44 53.5	+0.2
IVAS	Ivanjica	1.61	359	ePg	Pn	01 44 53.1	+0.6
IVAS				eSg	Sb	01 45 15.6	+1.4
DBRK	Dubrovnik	1.68	296	ePn	Pn	01 44 53.2	-0.1
DBRK				Sn	Sg	01 45 19.9	+0.7
RUDO	Rudo	1.77	340	ePn	Pb	01 44 55.9	-0.8
VAY	Valandovo	1.89	109	i Pn	Pb	01 44 58.5	-0.3
GRUS	Gruza	1.96	11	ePn	Pn	01 44 58.3	+1.1
GRUS				eSg	Sg	01 45 27.5	-0.8
BBLS	Lazići	1.99	343	ePn	Pn	01 44 56.2	-1.5
BBLS				eSn	Sb	01 45 23.7	-1.4
BBLS	Lazići	1.99	343	ePn	Pn	01 44 58.7	+1.0
STON	Ston	2.06	297	ePn	Pn	01 45 00.1	+1.5
STON				eSg	Sg	01 45 31.2	-0.2
STON	Ston	2.06	297	ePn	Pn	01 45 00.1	+1.5
STON				Sn	Sg	01 45 31.1	-0.3
STON	Ston	2.06	297	ePn	Pn	01 44 59.8	+1.2
DIVS	Divibare	2.14	356	ePn	Pn	01 45 00.7	+0.9
DIVS	Divibare	2.14	356	ePn	Pn	01 44 59.7	-0.1
ZAPS	Zavoj	2.23	53	ePn	Pn	01 45 01.9	+1.0
TRUS	Trudelj	2.27	4	ePn	Pn	01 45 02.4	+1.0
HAPS	Han Pijesak,Bl	2.31	337	ePn	Pb	01 45 04.6	-1.6
HAPS				eSn	Sn	01 45 32.1	+2.0
HAPS	Han Pijesak,Bl	2.31	337	ePn	Pb	01 45 04.3	-1.9
ZAGS	Zajecar	2.38	38	ePn	Pn	01 45 04.0	+1.1
RICI	Ricice	2.73	305	ePn	Pb	01 45 11.7	-1.5
RICI				Sn	Sg	01 45 52.0	-0.8
FRGS	Fruska Gora	3.21	355	ePn	Pn	01 45 15.2	+0.8
FRGS	Fruska Gora	3.21	355	ePn	Pn	01 45 14.6	+0.2
MORH	Mrgy, Hungar	4.40	346	ePn	Pn	01 45 27.6	-3.1

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*IDC **11** 02:08:23.5±1.4, 36°.39N×70°.92E, h0^{km}, mb3.9/11, mb1 4.0/15, mb1mx3.6/65, mbtmp3.9/15, ML3.8/3, MS2.7/1, Ms1 2.7/1, ms1mx2.3/39, Error ellipse: s-maj=26.7km s-min=22.0km az=19.0*

*NNC **11** 02:08:36.9±2.8, 37°.04N×70°.64E, h127^{km}±37^{km}, mb3.6, mpv4.3, Error ellipse: s-maj=26.0km s-min=13.3km az=35.0*

ISC 11 02:08:36.5±0.7**, 36°.79N**±0°.06×**71°.11E**±0°.09**, h100^{km}, n63,** σ**1^s.40**/65**, mb3.7**/10**, 9C-4D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEP	Cherat	3.03	167	P	Pn	02 09 23.8	+1.0
THW	Thamme Wali	4.02	172	P	Pn	02 09 36.1	+0.1
AML	Almayashu	5.69	20	P	Pn	02 09 58.8	-0.1
	SNR=56						
THN	Thein Dam	5.77	138	ex	Pn	02 10 02.5	+2.9
THN				ex	Sn	02 11 14.4	+10
UCH	Uchtor	6.03	25	P	Pn	02 10 03.8	+0.3
	SNR=29						
MRKS	Merke	6.16	15	Pg	Pn	02 10 04.8	-0.2
	25nm,0.4s						
MRKS				Lg	Lg	02 11 14.9	
	16nm,0.3s						
EKS2	Erkin-Say	6.21	18	P	Pn	02 10 06.1	+0.4
	SNR=24						
DHRM	DHARAMSHALA	6.23	135	eP	Pn	02 10 05.3	-0.8
DHRM				eS	Sn	02 11 14.7	-1.5
DHRM				IAML		02 11 18.6	
	comp=E,249nm,0.5s						
DHRM				IAML		02 11 18.9	
	comp=N,307nm,0.1s						
KK31	Karatay Array	6.32	356	⇑P	Pn	02 10 05.0	-2.1
	comp=N,6.6nm,0.7s,baz=182,slow=13,SNR=140						
KK31				⇓S	Sn	02 11 13.9	-3.9
	comp=N,40nm,0.6s						
AAK	Ala-Archa	6.39	23	Pn	Pn	02 10 08.9	+0.7
	comp=N,6.1nm,0.3s,baz=206,slow=7.7,SNR=67						
AAK				Sn	Sn	02 11 19.6	-0.2
	comp=N,1.4nm,0.3s,baz=344,slow=23,SNR=1.4						
AAK				Lg	Lg	02 11 49.6	
	baz=168,slow=20,SNR=1.1						
AAK				LR	LR	02 13 15.1	
	comp=N,61nm,21.7s,baz=268,slow=43						
AAK	Ala-Archa	6.39	23	P	Pn	02 10 08.7	+0.5
	SNR=32						
AAK	Ala-Archa	6.39	23	⇑P	Pn	02 10 08.7	+0.5
	comp=N,14nm,0.5s						
AAK				⇑S	Sn	02 11 19.4	-0.3
	comp=N,22nm,0.7s						
KBK	Karagaybulak	6.56	26	P	Pn	02 10 11.5	+1.0
	SNR=13						
ULHL	Ulahol	6.74	34	P	Pn	02 10 13.6	+0.7
	SNR=8.1						
CHMS	Chumysh	6.80	23	P	Pn	02 10 13.8	+0.2
	SNR=34						
USP	Ospenovka	6.97	21	P	Pn	02 10 15.5	-0.4
	SNR=17						
TKM2	Tokmak 2	7.03	28	P	Pn	02 10 17.2	+0.3
	SNR=53						
TKM2	Tokmak 2	7.03	28	⇑P	Pn	02 10 17.2	+0.3
	comp=N,22nm,0.6s						
SGDS	Sogindy	7.18	21	P	Pn	02 10 18.2	-0.6
	comp=N,13nm,0.5s						
KST	Kastek	7.27	29	P	Pn	02 10 20.6	+0.6
	comp=N,28nm,0.8s						
DGS	Degeres	7.37	28	P	Pn	02 10 21.5	+0.1
	comp=N,9.0nm,0.6s						
MTBS	Maitube	7.53	31	P	Pn	02 10 24.2	+0.6
	comp=N,8.8nm,0.5s						
SMLA	Simla	7.56	137	ex	Pn	02 10 22.2	-1.8
SMLA				ex	Sn	02 11 44.9	-3.1
SMLA				IAML		02 11 50.5	
	comp=E,86nm,0.1s						
SMLA				IAML		02 11 50.8	
	comp=N,63nm,0.1s						
TNSS	Tian-Shan	7.68	34	P	Pn	02 10 26.3	+0.4
	comp=N,7.1nm,0.5s						
KRBS	Karabastau	7.73	25	P	Pn	02 10 25.3	-0.9
	comp=N,8.4nm,0.7s						
KOTS	Kotyrbulak	7.91	34	P	Pn	02 10 29.8	+1.0
	comp=N,21nm,0.3s						
KTBS	Karatobe	8.12	30	P	Pn	02 10 30.7	-0.8
	comp=N,2.1nm,0.5s						
KUU	Kurty	8.14	28	P	Pn	02 10 31.2	-0.6
	comp=N,6.7nm,0.3s						
BTLS	Baital	8.53	14	P	Pn	02 10 35.6	-1.5
	comp=N,2.4nm,0.3s						
KURS	Kuram	8.60	37	P	Pn	02 10 38.3	+0.3
	comp=N,7.2nm,0.8s						
PDGK	Podgornoye	9.16	42	⇓P	Pn	02 10 45.4	-0.3
	comp=N,3.4nm,0.7s						
GEYT	Alibeck	10.41	280	Pn	Pn	02 10 56.5	-6.2
	comp=N,0.2nm,0.3s,baz=120,slow=14,SNR=5.9						
GEYT				Sn	Sn	02 12 44.2	-13
	comp=N,0.2nm,0.3s,baz=84,slow=25,SNR=1.3						
KAPS	Kapalarasan	10.52	34	P	Pn	02 11 03.5	-0.6
	comp=N,2.6nm,0.7s						
MAKZ	Makanchi	12.87	36	⇑P	Pn	02 11 35.1	-0.3
	comp=N,3.5nm,0.8s						
MK31	Makanchi Array	13.00	36	⇑P	Pn	02 11 36.6	-0.7
	comp=N,1.8nm,0.5s,baz=216,slow=13,SNR=20						
MKAR	Makanchi Array	13.00	36	Pn	Pn	02 11 36.7	-0.5
	comp=N,0.1nm,0.3s,baz=216,slow=14,SNR=18						
DANN	Dangsing	13.58	125	eP	Pn	02 11 43.2	-2.0
	comp=N,11nm,0.4s						
GKN	Gorkha	14.39	124	eS	Sn	02 14 23.8	-10
KURBB	Kurchatov Arra	14.82	19	Pn	Pn	02 11 58.2	-2.5
	comp=N,0.0nm,0.3s,baz=208,slow=12,SNR=4.6						
KURBB				Lg	Lg	02 16 23.4	
	comp=N,0.0nm,0.3s,baz=205,slow=26,SNR=4.1						
AB31	Akbulak array	14.87	330	⇑P	Pn	02 11 56.3	-5.0
	comp=N,2.0nm,0.8s,baz=153,slow=12,SNR=19						
AB31				S	Sn	02 14 31.1	-14
	comp=N,2.2nm,0.6s,baz=155,slow=22,SNR=6.1						
KURK	Kurchatov	14.93	19	⇑P	Pn	02 12 02.5	+0.5
	comp=N,2.8nm,0.6s						
PKIN	Phulchoki	15.18	123	eP	Pn	02 12 04.0	-1.6
	comp=N,8.9nm,0.5s						
PKI	Pulchoki	15.19	123	eP	Pn	02 12 04.4	-1.5
	comp=N,9.7nm,0.5s						
GUN	Gumba	15.29	121	eP	Pn	02 12 06.3	-0.9
BVAR	Borovoye Array	16.24	358	Pn	Pn	02 12 16.3	-2.1
	comp=N,0.5nm,0.3s,baz=51,slow=12,SNR=9.0						
BRVK	Borovoye	16.28	358	⇓P	Pn	02 12 16.8	-2.1
	comp=N,4.0nm,0.7s						
RAMN	Ramite	16.39	122	eP	Pn	02 12 20.2	-0.6
	comp=N,13nm,0.6s						
AKTO	Aktyubinsk	16.57	329	Pn	Pn	02 12 19.3	-3.3
	comp=N,0.5nm,0.3s,baz=143,slow=11,SNR=18						
AKTO				Sn	Sn	02 15 12.5	-14
	comp=N,0.1nm,0.3s,baz=0.0,slow=20,SNR=2.2						
AKTO	Aktyubinsk	16.57	329	⇑P	Pn	02 12 19.0	-3.6
	comp=N,5.5nm,0.7s						
AKTO				⇓S	Sn	02 15 11.8	-15
	comp=N,4.7nm,1.1s						
TAPN	Taplejung	16.91	119	eP	P	02 12 27.5	-0.1
	comp=N,6.0nm,0.4s						
ODAN	Odare	16.99	121	eP	Pn	02 12 27.2	-1.0
	comp=N,5.1nm,0.4s						
ZALV	Zalesovo Beam	19.61	25	P	P	02 12 57.0	+0.3
	comp=N,8.4nm,0.3s,baz=212,slow=10.0,SNR=50						
ARU	Arti	21.39	341	P	P	02 13 16.0	+0.3
	comp=N,0.9nm,0.4s,baz=203,slow=11,SNR=4.9						
SONM	Songino Array	28.10	56	P	P	02 14 20.8	+2.1
	comp=N,1.0nm,0.5s,baz=263,slow=9.1,SNR=4.6						
NRIK	Noril'sk	33.82	10	P	P	02 15 10.1	+1.5
	comp=N,1.6nm,0.6s,baz=208,slow=15,SNR=2.0						
FINES	FINESS Array B	37.29	326	P	P	02 15 39.0	+0.6
	comp=N,0.6nm,0.4s,baz=126,slow=7.1,SNR=2.2						
ARCES	ARCESS Array B	40.91	337	P	P	02 16 09.5	+1.0
	comp=N,3.9nm,0.8s,baz=104,slow=9.4,SNR=6.0						
HFS	Hagfors	42.89	322	P	P	02 16 25.4	+0.7
	comp=N,1.3nm,0.4s,baz=98,slow=11,SNR=13						
NB2	NORSAR Subarra	44.20	323	P	P	02 16 35.5	+0.3
	comp=Z,0.5nm,0.5s,baz=96,slow=7.9						
NOA	NORSAR Array B	44.20	323	P	P	02 16 35.5	+0.3
	comp=Z,0.5nm,0.4s,baz=96,slow=7.8,SNR=3.6						
ILAR	Eielson Array	74.47	16	P	P	02 20 05.0	+1.5
	comp=Z,0.5nm,0.8s,baz=308,slow=4.3,SNR=4.7						
YKA	Yellowknife Ar	80.95	3	P	P	02 20 41.4	+2.0
	comp=Z,0.5nm,0.7s,baz=356,slow=5.2,SNR=8.3						

WRA	Warramunga Arr	82.07	122	P	P	02 20 46.0	0.0
	comp=Z,0.1nm,0.4s,baz=313,slow=6.0,SNR=5.5						

IDC **11** *02:09:09.9±2.9, 55°.89N×149°.93W, h0^{km}, mb3.2/1, mb1 3.7/6, mb1mx3.3/62, mbtmp3.5/6, ML3.4/5, MS2.7/4, Ms1 2.8/4, ms1mx2.6/16, Error ellipse: s-maj=46.4km s-min=26.0km az=47.0*

NEIC **11** *02:09:13.0±1.5, 56°.12N±0°.08×150°.1W±0°.1, h27^{km}±10^{km}, Error ellipse: s-maj=12.6km s-min=7.9km az=164.0*

AEIC **11** *02:09:13±1.4, 56°.14N±0°.06×150°.08W±0°.09, h28^{km}±5^{km}, ML3.5, ML3.9/26(NEIC), Error ellipse: s-maj=8.8km s-min=7.0km az=214.0*

ISC 11 02:09:13.9±1.2**, 56°.12N**±0°.09×**150°.09W**±0°.06**, h35**^{km}**, n87,** σ**1^{s}04**/86**, Gulf of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHAK	Old Harbor	2.08	303		Pn	02 09 45.3	-1.0
OHAK					Sn	02 10 09.6	-1.3
KDAK	Kodiak Island	2.16	322	Pn	Pn	02 09 47.2	-0.1
	14nm,0.3s,baz=130,slow=4.8,SNR=170						
KDAK				Sn	Sn	02 10 12.4	-0.4
	13nm,0.3s,baz=26,slow=22,SNR=20						
KDAK				LR	LR	02 10 27.0	
	comp=Z,177nm,19.1s,baz=221,slow=32						
SII	Sitkinak Islan	2.32	283		Pn	02 09 48.3	-1.2
SII					Sn	02 10 14.7	-2.2
SII				IAML		02 10 16.7	
	comp=E,389nm,0.6s						
SII				IAML		02 10 32.6	
	comp=N,334nm,2.8s						
KAHG	Katmai Hook Gl	3.40	316		Pn	02 10 05.9	+1.5
CAHL	Cahill	3.44	306		Pn	02 10 05.5	+0.5
CNPM	China Poot	3.47	350		Pn	02 10 04.9	-0.5
CNPM					Sn	02 10 45.2	-0.1
CNPM				IAML		02 12 21.1	
	comp=N,122nm,3.4s						
BRSE	Bradley Lake S	3.65	355		Pn	02 10 07.1	-0.8
BRSE					Sn	02 10 48.7	-1.0
BRLK	Bradley Lake	3.68	354		Pn	02 10 07.3	-1.0
BRLK				IAML		02 10 54.0	
	comp=N,129nm,2.5s						
PLK3	Peulik 3	3.73	298		Pn	02 10 08.9	-0.1
Q23K	Middleton Isla	3.88	30	Pn	Pn	02 10 10.8	-0.1
OPT	Oil Point	3.92	336		Pn	02 10 12.6	+1.0
SEW	Seward	4.01	5		Pn	02 10 12.1	-0.7
IVE	Iliamna Volcan	4.21	340		Pn	02 10 15.0	-0.5
O22K	Cooper Landing	4.38	2	Pn	Pn	02 10 18.3	+0.5
O22K				IAML		02 11 16.4	
	comp=E,216nm,1.1s						
O22K				IAML		02 11 17.6	
	comp=N,234nm,0.5s						
SLKM	Skilak Lake	4.41	359		Pn	02 10 17.2	-1.0
RDSO	Redoubt South	4.57	343		Pn	02 10 19.4	-1.2
RSO	Redoubt South	4.58	343	Pn	Pn	02 10 20.9	+0.1
CHGN	Chignik	4.65	276	Pn	Pn	02 10 22.9	+1.4
CHGN				IAML		02 11 32.6	
	comp=E,94nm,3.2s						
CHGN				IAML		02 11 53.2	
	comp=N,92nm,3.8s						
HIN	Hinchinbrook I	4.69	22		Pn	02 10 21.7	-0.4
HIN				IAML		02 12 29.1	
	comp=N,141nm,2.1s						
HIN				IAML		02 12 53.6	
	comp=E,155nm,2.3s						
PWL	Port Wells	4.85	10		Pn	02 10 23.6	-0.7
RC01	Rabbit Creek A	4.99	2		Pn	02 10 25.5	-0.7
EYAK	Cordova Ski Ar	5.00	25		Pn	02 10 26.0	-0.3
SUCK	Suckling Hills	5.19	38		Pn	02 10 29.0	0.0
HMT	Hamilton	5.23	34	Pn	Pn	02 10 29.4	-0.2
SPCP	Crater Peak Br	5.28	349		Pn	02 10 29.8	-0.5
SPCG	Spurr Capps Gl	5.29	350		Pn	02 10 29.9	-0.5
SUA	Susitna One	5.38	357	Pn	Pn	02 10 30.8	-0.8
SUA				IAML		02 11 13.9	
	comp=N,76nm,4.7s						
SUA				IAML		02 12 47.0	
	comp=E,87nm,4.1s						
KNK	Knik Glacier	5.38	8		Pn	02 10 30.7	-0.9
KNK				IAML		02 11 32.0	
	comp=E,51nm,3.4s						
KNK				IAML		02 12 09.5	
	comp=N,39nm,2.6s						
BERG	Berg Lake	5.46	36		Pn	02 10 31.8	-0.8
STLK	Strandline Lak	5.47	351		Pn	02 10 32.4	-0.5
DIV	Divide	5.51	22		Pn	02 10 33.3	-0.1
PMR	Palmer	5.52	5	Pn	Pn	02 10 33.5	+0.1
KHIT	Khitrov Hills	5.64	37		Pn	02 10 34.6	-0.7
BMRM	Bremner River	5.65	28		Pn	02 10 35.0	-0.3
KULT	Kultieth River	5.69	40		Pn	02 10 35.2	-0.7
GHO	Glory Hole Cre	5.71	6		Pn	02 10 36.8	+0.8
SVW2	Sparrevohn	5.76	332	Pn	Pn	02 10 36.5	-0.3
SML	Sawmill	5.78	8	Pn	Pn	02 10 37.9	+0.8
KLU	Klutina	5.81	20		Pn	02 10 37.7	+0.2
SCM	Sheep Creek Mo	5.91	13	Pn	Pn	02 10 39.2	+0.3
CRQM	Cirque	5.91	35	Pn	Pn	02 10 37.7	-1.4
SKT	Skwentna	5.93	353	Pn	Pn	02 10 39.0	-0.1
TGL	Tana Glacier	6.01	36	Pn	Pn	02 10 40.0	-0.4
VRDI	Verde Repeater	6.18	31	Pn	Pn	02 10 42.3	-0.4
N25K	Chitina, Valde	6.20	25	Pn	Pn	02 10 43.3	+0.5
GLB	Gilahina Butte	6.26	29	Pn	Pn	02 10 43.9	+0.2
KIAG	Kiagna River	6.29	37		Pn	02 10 43.7	-0.5
GRNC	Granite Creek	6.37	40		Pn	02 10 44.9	-0.5
BALM	Baldy	6.38	36	Pn	Pn	02 10 45.0	-0.4
TABL	Table Mountain	6.41	44	Pn	Pn	02 10 45.3	-0.5
MCARA	McCarthy VSAT	6.43	32	Pn	Pn	02 10 45.9	-0.1
PTPK	Patty Peak	6.46	35		Pn	02 10 46.5	0.0
BARN	Barnard Glacie	6.63	38	Pn	Pn	02 10 48.8	-0.1
CTGM	Chitina Glacie	6.68	40	Pn	Pn	02 10 49.4	-0.1
LOGN	Logan Glacier	6.71	42		Pn	02 10 49.3	-0.6
PPLA	Purkeypile	6.88	352	Pn	Pn	02 10 54.0	+1.7
RND	Reindeer	7.34	4	Pn	Pn	02 10 59.5	+1.0
TRF	Thorofare Moun	7.36	359	Pn	Pn	02 11 00.3	+1.5
TTA	Tatalina	7.46	339	Pn	Pn	02 10 59.2	-1.0
KTH	Kantishna Hill	7.47	357	Pn	Pn	02 11 02.0	+1.7
HYT	Haines Junctio	8.11	49	Pn	Pn	02 11 08.9	-0.1
DOT	Dot Lake	8.14	19	Pn	Pn	02 11 11.7	+2.3
BCAR	Beaver Creek A	8.14	28	Pn	Pn	02 11 10.1	+0.7
HDA	Harding Lake	8.46	9	Pn	Pn	02 11 16.5	+2.6
BESE	Bessie Mountai	8.60	67	Pn	Pn	02 11 13.8	-1.9
CCB	Clear Creek Bu	8.63	7	Pn	Pn	02 11 18.2	+2.1
ILAR	Eielson Array	8.83	9	Pn	Pn	02 11 19.6	+0.8
	comp=N,0.2nm,0.3s,baz=187,slow=14,SNR=12						
ILAR				Sn	Sn	02 12 53.4	-3.5
	comp=N,0.6nm,0.3s,baz=193,slow=24,SNR=9.1						
ILAR				LR	LR	02 14 53.2	
	comp=N,55nm,21.8s,baz=316,slow=38						
TCOL	CIGO, UAF Yank	8.86	6	Pn	Pn	02 11 18.9	-0.3
MDM	Murphy Dome	8.92	5	Pn	Pn	02 11 22.2	+2.2
WHY	Whitehorse	9.19	54	Pn	Pn	02 11 24.0	+0.2
FYU	Fort Yukon	10.74	10	Pn	Pn	02 11 46.3	+1.4
DLBC	Dease Lake	11.10	70	Pn	Pn	02 11 49.4	-0.6
	comp=N,0.2nm,0.3s,baz=265,slow=11,SNR=2.0						
DLBC				LR	LR	02 15 51.3	
	comp=N,29nm,18.9s,baz=282,slow=36						
DLBC	Dease Lake	11.10	70		Pn	02 11 49.7	-0.3
ANM	Nome	11.33	325	Pn	Pn	02 11 54.1	+1.1
BMAR	Burnt Mountain	11.64	11	Pn	Pn	02 11 58.5	+1.1
INK	Inuvik	14.39	25	Pn	Pn	02 12 36.0	+1.3
	comp=N,0.1nm,0.3s,baz=170,slow=15,SNR=3.4						
INK	Inuvik	14.39	25		Pn	02 12 35.9	+1.2
YKA	Yellowknife Ar	19.01	56	P	Pn	02 13 33.5	+0.4
	comp=N,0.1nm,0.3s,baz=263,slow=9.2,SNR=15						
NVAR	Mina Array Bea	27.54	117	P	P	02 14 57.1	-0.2
	comp=N,0.3nm,0.8s,baz=308,slow=12,SNR=2.4						
NVAR	Mina Array Bea	27.54	117		P	02 14 58.5	+1.2
H11N2	WAKE ISLAND Hy	48.41	239	T	T	03 09 59.3	
	baz=30,slow=76,SNR=6.6						
H11N3	WAKE ISLAND Hy	48.41	239	T	T	03 10 02.4	
	baz=30,slow=76,SNR=5.5						
H11N1	WAKE ISLAND Hy	48.43	239	T	T	03 10 02.5	
	baz=30,slow=76,SNR=5.1						
H11S1	WAKE ISLAND Hy	49.55	239	T	T	03 12 19.2	
	baz=23						
H11S2	WAKE ISLAND Hy	49.56	239	T	T	03 11 53.8	
	baz=23						
H11S3	WAKE ISLAND Hy	49.57	239	T	T	03 11 53.8	
	baz=23						
MJAR	Matsushiro Arr	50.75	279	LR	LR	02 39 40.7	
	comp=N,10nm,19.8s,baz=250,slow=36						

NEIC **11** *02:35:39.5±1.2, 6°.24S±0°.09×154°.90E±0°.09, h102^{km}±8^{km}, mb4.3/17, Error ellipse: s-maj=14.7km s-min=9.9km az=47.0*

IDC **11** *02:35:39.8±2.4, 6°.23S×154°.79E, h104^{km}±23^{km}, mb3.9/13, mb1 4.2/16, mb1mx4.0/29, mbtmp4.3/16, MS3.2/2, Ms1 3.2/2, ms1mx2.7/26, Error ellipse: s-maj=18.1km s-min=13.2km az=177.0*

ISC 11 02:35:39.6±0.5**, 6°.22S**±0°.06×**154°.85E**±0°.06**, h100**^{km}**, n45,** σ**1^{s}11**/45**, mb4.2**/19**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	3.35	307	Pn	Pn	02 36 32.2	+2.1
HNR	Honiara	5.97	123	P	Pn	02 37 04.5	-1.1
	64nm,0.3s,baz=233,slow=9.6,SNR=6.0						
HNR				S	Sn	02 38 16.1	+3.5
	9.4nm,0.3s,baz=81,slow=10,SNR=5.3						
HNR	Honiara	5.97	123	Pn	Pn	02 37 04.9	-0.6
PMG	Port Moresby	8.25	247	P	Pn	02 37 36.0	-0.6
	16nm,0.3s,baz=54,slow=8.1,SNR=29						
PMG				S	Sn	02 39 09.1	+0.9
	1.2nm,0.3s,baz=163,slow=19,SNR=1.9						
PMG				LR	LR	02 40 28.4	
	comp=Z,120nm,20.5s,baz=348,slow=35						
PMG	Port Moresby	8.25	247	Pn	Pn	02 37 36.9	+0.3
PATS	Pohnpei	13.42	15	Pn	Pn	02 38 44.6	-1.5
COEN	Coen	13.82	235	P	P	02 38 58.6	+2.2
DZM	Mont Dzumac	19.33	146	P	P	02 39 57.5	+0.2
	0.9nm,0.3s,baz=345,slow=17,SNR=6.7						
DZM	Mont Dzumac	19.33	146	P	P	02 39 57.3	+0.1
DZM				IAmb	IAmb	02 39 58.1	
	comp=Z,15nm,0.8s						
WR0	Warramunga Arr	24.00	233	P	P	02 40 45.3	+0.1
WR0				IAmb	IAmb	02 40 46.2	
	comp=Z,14nm,0.9s						
WB0	Warramunga Arr	24.01	234	P	P	02 40 45.2	-0.1
WB0				IAmb	IAmb	02 40 46.3	
	comp=Z,7.3nm,0.8s						
WRAB	Tennant Creek	24.13	234	P	P	02 40 46.6	+0.1
WRAB				IAmb	IAmb	02 40 46.9	
	comp=Z,7.0nm,0.7s						
WB2	Warramunga Arr	24.14	234	P	P	02 40 46.7	+0.2
WB2				IAmb	IAmb	02 40 47.0	
	comp=Z,7.7nm,0.7s						
WRA	Warramunga Arr	24.15	234	P	P	02 40 46.6	0.0
	comp=Z,6.3nm,0.7s,baz=57,slow=9.4,SNR=51						
WRA				PcP	PcP	02 44 25.1	-0.2
	comp=Z,0.3nm,0.6s,baz=61,slow=2.5,SNR=6.7						
WRA				LR	LR	02 49 31.8	
	comp=Z,58nm,18.7s,baz=180,slow=34						
WRA	Warramunga Arr	24.15	234	P	P	02 40 45.5	-1.0
MTN	Manton Dam	24.29	253	P	P	02 40 47.7	-0.2
MTN				IAmb	IAmb	02 40 48.9	
	comp=Z,16nm,1.2s						
AS31	Alice Springs	26.58	227	P	P	02 41 08.4	-0.2
ASAR	Alice Springs	26.58	227	P	P	02 41 07.8	-0.8
	comp=Z,2.6nm,0.6s,baz=58,slow=8.7,SNR=31						
ASAR				PcP	PcP	02 44 30.5	-0.2
	comp=Z,0.6nm,0.7s,baz=77,slow=2.0,SNR=4.8						
ASAR	Alice Springs	26.58	227	P	P	02 41 07.6	-1.0
H11S3	WAKE ISLAND Hy	27.19	25	T	T	03 09 25.5	
	baz=205,slow=76,SNR=14						
H11S2	WAKE ISLAND Hy	27.20	25	T	T	03 09 24.1	
	baz=205,slow=76,SNR=17						
H11S1	WAKE ISLAND Hy	27.21	25	T	T	03 09 22.3	
	baz=205,slow=76,SNR=15						
STKA	Stephens Creek	28.38	204	P	P	02 41 22.3	-2.2
	comp=Z,1.9nm,0.6s,baz=360,slow=7.2,SNR=4.3						
STKA	Stephens Creek	28.38	204	P	P	02 41 23.9	-0.5
FITZ	Fitzroy Crossi	30.84	245	P	P	02 41 45.6	-0.9
FITZ				IAmb	IAmb	02 41 46.6	
	comp=Z,4.5nm,0.9s						
BBOO	Buckleboo	31.72	211	P	P	02 41 52.9	-1.1
TAU	Tasmania Unive	37.14	189	P	P	02 42 41.7	+1.1
BFZ	Birch Farm	39.30	154	P	P	02 42 58.3	-0.5
PLWZ	Palliser	39.61	156	P	P	02 43 00.8	-0.6
RPZ	Rata Peaks	39.97	162	P	P	02 43 03.9	-0.4
	comp=Z,4.1nm,0.7s,baz=284,slow=4.2,SNR=2.2						
MORW	Morawa	43.10	233	P	P	02 43 29.3	-0.8
PETK	Petropavlovsk-	59.15	2	P	P	02 45 29.8	+0.1
	comp=Z,7.0nm,0.9s,baz=195,slow=10,SNR=2.9						
PETK	Petropavlovsk-	59.15	2	P	P	02 45 32.3	+2.6
CMAR	Chiang Mai Arr	60.33	295	P	P	02 45 38.2	-0.2
	comp=Z,8.0nm,0.5s,baz=117,slow=5.2,SNR=15						
SONM	Songino Array	68.61	327	P	P	02 46 31.9	-0.1
	comp=Z,0.6nm,0.8s,baz=140,slow=4.4,SNR=3.8						
ANM	Nome	76.53	17	P	P	02 47 19.5	+1.0
ILAR	Eielson Array	82.71	22	P	P	02 47 51.5	-0.4
	comp=Z,0.6nm,0.8s,baz=248,slow=4.7,SNR=6.2						
ILAR	Eielson Array	82.71	22	P	P	02 47 51.3	-0.6
MK31	Makanchi Array	82.73	319	P	P	02 47 51.7	-0.8
MKAR	Makanchi Array	82.73	319	P	P	02 47 51.8	-0.7
	comp=Z,1.4nm,0.6s,baz=99,slow=5.4,SNR=22						
ZALV	Zalesovo Beam	83.46	326	P	P	02 47 54.3	-1.7
	comp=Z,1.4nm,0.6s,baz=105,slow=3.4,SNR=6.4						
QSPA	South Pole Qui	83.75	180	P	P	02 47 57.3	-0.2
QSPA				IAmb	IAmb	02 47 58.0	
	comp=Z,4.3nm,0.8s						
NVAR	Mina Array Bea	91.36	52	P	P	02 48 35.2	+0.4
	comp=Z,0.7nm,0.8s,baz=254,slow=6.2,SNR=5.9						
YKA	Yellowknife Ar	95.72	28	P	P	02 48 53.4	-0.6
	comp=Z,0.3nm,0.6s,baz=262,slow=3.6,SNR=6.0						
PDAR	Pinedale Array	98.29	48	P	Pdif	02 49 07.2	+0.8
	comp=Z,0.2nm,0.6s,baz=286,slow=6.4,SNR=1.9						

IDC **11** *02:59:59.1±1.1, 33°.88N×137°.41E, h344^{km}±11^{km}, mb3.0/7, mb1 3.1/13, mb1mx2.9/41, mbtmp3.7/13, Error ellipse: s-maj=22.6km s-min=13.5km az=69.0*

JMA **11** *02:59:59.4±0.2, 33°.92N×137°.24E, h344^{km}±2^{km}, M3.1*

ISC 11 02:59:59.4±0.7**, 33°.92N**±0°.08×**137°.23E**±0°.07**, h343**^{km}±6^{km}**, n27,** σ**0^{s}84**/35**, mb3.1**/7**, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TTO2	TONANKAI O.B.S	0.26	222	P	Pn	03 00 42.9	+0.7
TTO4	TONANKAI O.B.S	0.27	72	P	Pn	03 00 42.9	+0.7
TK02	Tokai 2	0.44	87	P	Pn	03 00 43.2	+0.7
TTO1	TONANKAI O.B.S	0.48	231	P	Pn	03 00 43.2	+0.6
TTO5	TONANKAI O.B.S	0.52	51	P	Pn	03 00 43.5	+0.8
JIE	Ise	0.64	317	P	Pn	03 00 43.6	+0.4
JIE				S	S	03 01 17.8	-0.5
JKN2	Miekihoku	0.86	292	P	Pn	03 00 44.0	+0.1
JKN2				S	S	03 01 18.8	-0.7
HMMJ	Hamamatsu 2	1.01	23	P	Pn	03 00 44.7	+0.2
HMMJ				*e*S	S	03 01 20.2	-0.4
JTNC	Tanabenakahech	1.35	266	P	Pn	03 00 46.3	+0.2
JTNC				S	S	03 01 23.0	-0.5
JWY	Kouya	1.39	283	P	Pn	03 00 46.8	+0.4
JWY				*e*S	S	03 01 23.3	-0.7
JEG	Eigenji	1.39	330	P	Pn	03 00 46.5	+0.2
JNY	Yasuok	1.52	20	P	Pn	03 00 47.3	+0.2
JNY				*e*S	S	03 01 24.7	-0.6
JYTA	Yamagatataniai	1.71	346	P	Pn	03 00 48.6	+0.5
JWT	Wachi	2.03	312	P	Pn	03 00 50.7	+0.4
JWT				S	S	03 01 30.2	-0.9
JHJ	Hachijo jima 2	2.28	110	P	Pn	03 00 50.9	-1.4
	11nm,0.3s,baz=45,slow=20,SNR=1.2						
JHJ				S	S	03 01 37.0	+2.4
	3.8nm,0.3s,baz=77,slow=20,SNR=0.9						
MJAR	Matsushiro Arr	2.73	17	P	Pn	03 00 56.0	+0.1
	0.2nm,0.3s,baz=185,slow=9.0,SNR=11						
JNU	Nakatsue	5.37	263	P	Pn	03 01 23.2	+0.3
	0.6nm,0.3s,baz=74,slow=8.9,SNR=2.8						
KSRS	Korea Array	8.35	298	P	Pn	03 01 59.1	+1.6
	0.3nm,0.3s,baz=112,slow=12,SNR=6.0						
USRK	Ussuriysk Ar.	11.04	340	P	P	03 02 30.5	0.0
	baz=150,slow=12,SNR=5.5						
KLR	Kul'dur	15.83	347	P	P	03 03 23.8	+0.7
	0.2nm,0.3s,baz=141,slow=11,SNR=6.0						
SONM	Songino Array	26.93	310	P	P	03 05 11.9	+1.5
	0.4nm,0.5s,baz=125,slow=9.2,SNR=4.0						
MKAR	Makanchi Array	42.96	304	P	P	03 07 26.6	+0.8
	0.8nm,0.4s,baz=85,slow=9.9,SNR=18						
WRA	Warramunga Arr	53.64	183	P	P	03 08 46.0	-0.7
	0.2nm,0.3s,baz=0.3,slow=7.5,SNR=14						
ILAR	Eielson Array	53.92	31	P	P	03 08 47.2	-1.0
	0.2nm,0.8s,baz=289,slow=8.5,SNR=2.6						
STKA	Stephens Creek	65.58	176	P	P	03 10 06.7	-0.4
	0.7nm,0.3s,baz=268,slow=0.9,SNR=4.2						
FINES	FINESS Array B	69.94	332	P	P	03 10 34.1	+0.2
	0.9nm,0.4s,baz=58,slow=5.4,SNR=13						
GERES	GERESS Array B	83.48	326	P	P	03 11 48.4	-0.8
	0.1nm,0.3s,baz=359,slow=9.8,SNR=2.1						

BGR **11** *03:30:08.8±0.0, 12°.49N×93°.03E, h37^{km}, mb5.1, Ms4.6*

IDC **11** *03:30:09.0±0.4, 13°.10N×92°.24E, h0^{km}, mb4.9/53, mb1 4.9/54, mb1mx4.9/64, mbtmp4.9/54, ML4.7/1, MS4.6/28, Ms1 4.6/28, ms1mx4.5/35, Error ellipse: s-maj=11.2km s-min=7.9km az=37.0*

KLM **11** *03:30:08, 13°.31N×91°.96E, h10^{km}, mb5.3*

DJA **11** *03:30:09.6±0.4, 13°N±3°×9°2E±°, h10^{km}, M5.2/14, mb5.2/14, mB5.5/13, MLv5.5/1, Mw(mB)5.0/13, MwMwp4.6/2, Mwp5.0/2*

BJI **11** *03:30:10.4±0.0, 13°.20N×92°.24E, h21^{km}, mB5.1/63, mb5.0/78, Ms5.0/89, Ms7 4.7/81*

MOS **11** *03:30:11.9±0.8, 13°.15N×92°.28E, h32^{km}, mb5.3/55, MS4.7/7, Error ellipse: s-maj=6.3km s-min=3.8km az=110.6*

NEIC **11** *03:30:11.8±0.9, 13°.23N±0°.07×92°.35E±0°.08, h20^{km}±3^{km}, mb5.3/145, Mwb5.1/26, Error ellipse: s-maj=11.1km s-min=10.0km az=78.0*

NDI **11** *03:30:12.0±3.4, 13°.23N×92°.22E, h9^{km}±12^{km}, mb5.0, ML5.3, mb5.3(NEIC)*

GCMT **11** *03:30:12.8±0.1, 13°.13N±0°.01×92°.30E±0°.01, h27^{km}, MW5.3/140, Moment Tensor Solution. s92,c132; s140,c242; Duration: 1^{s}1 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-0.07±.02; M$_{\theta\theta}$-0.79±.02; M$_{\phi\phi}$0.86±.01; M$_{r\theta}$-0.39±.03; M$_{\theta\phi}$0.62±.01; M$_{\phi r}$-0.50±.04; Best double couple: M$_0$1.18900×10^{17} NP1:φ$_s$151.00000°, δ63.00000°, λ173.00000°. NP2:φ$_s$244.00000°, δ84.00000°, λ27.00000°. Principal axes: T 1.3270, Plg23.0000°, Azm111.0000°; N -0.2760, Plg62.0000°, Azm256.0000°; P -1.0510, Plg14.0000°, Azm14.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC **11** *03:30:13.7, 13°.26N×92°.39E, h20^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.66; M$_{\theta\theta}$-3.73; M$_{\phi\phi}$3.08; M$_{r\theta}$-1.07; M$_{\theta\phi}$3.71; M$_{\phi r}$-3.16; Fault plane solution: M$_0$6.07000×10^{16} NP1:φ$_s$155.14000°, δ72.26000°, λ155.92000°. NP2:φ$_s$252.90000°, δ67.13000°, λ19.31000°. Principal axes: T 6.5750, Plg29.0000°, Azm113.0000°; N -1.1964, Plg60.0000°, Azm301.0000°; P -5.3786, Plg3.0000°, Azm205.0000°;*

ISC 11 03:30:13.6±0.3**, 13°.21N**±0°.03×**92°.29E**±0°.03**, h32**^{km}±2^{km}**, h32**^{km}**:pP-P, n714,** σ**1^{s}77**/787**, mb5.2**/220**, MS4.7**/60**, 103C-37D, Fault plane solution: NP1:**φ$_s$246.55603°, δ87.32623°, λ50.29985°. **NP2:**φ$_s$153.34003°, δ39.77522°, λ175.81859°. **Principal axes:** T Plg35.2005°, Azm122.9998°; N Plg39.6484°, Azm248.7739°; P Plg30.6950°, Azm8.2425°; **Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DGPR	DIGLIPUR	0.63	93	*e*P	Pn	03 30 26.9	+0.5
DGPR				*e*S	Sn	03 30 37.3	+2.1
PBA	Port Blair	1.61	164	*e*P	Pb	03 30 41.8	-0.9
PBA				*e*S	Sb	03 31 02.4	-0.2
SRDT	SRDT	6.74	80	P	Pn	03 31 50.0	-0.4
	0.8nm9μm217nm,0.7s						
UMPA	Umpang Tak	7.02	64	P	Pn	03 31 54.3	0.0
	3.4nm10μm1μm,0.8s						
PHET	Kaeng Krachan	7.16	92	P	Pn	03 31 57.9	+1.7
	3.6nm10μm1μm,0.8s						
UTHA	Uthaitani	7.32	71	P	Pn	03 31 59.7	+1.3
	1.1nm3μm324nm,0.8s						
MHMT	Maesarieng	7.34	47	P	Pn	03 31 58.3	-0.4
	4.9nm4μm397nm,0.9s						
SURT	Suratani	7.66	123	P	Pn	03 32 05.8	+2.8
	0.0nm111nm14nm,1.2s						
PKDT	Phuket	7.95	131	P	Pn	03 32 08.8	+1.7
CM13	Chiang Mai Arr	8.21	50	P	Pn	03 32 11.0	+0.4
	0.9nm835nm116nm,0.8s						
CM05	Chiang Mai Arr	8.23	50	P	Pn	03 32 11.8	+0.9
	1.1nm1μm184nm,0.8s						
CM15	Chiang Mai Arr	8.24	50	P	Pn	03 32 13.0	+1.9
	0.9nm1μm108nm,0.8s						
CM02	Chiang Mai Arr	8.25	50	P	Pn	03 32 12.0	+0.8
	1.2nm1μm151nm,0.8s						
CM01	Chiang Mai Arr	8.25	50	P	Pn	03 32 12.4	+1.3
	1.5nm1μm135nm,0.8s						
CM04	Chiang Mai Arr	8.25	50	P	Pn	03 32 12.2	+1.0
	1.7nm1μm193nm,0.8s						
SUKH	Sukhothai	8.26	58	P	Pn	03 32 12.2	+0.9
	1.6nm4μm371nm,0.7s						
CM31	Chiang Mai Arr	8.26	50	P	Pn	03 32 13.6	+2.3
	40nm35μm4μm,0.7s						
CM31	Chiang Mai Arr	8.26	50		Pn	03 32 09.6	-1.7
CM31				Sn	Sn	03 33 39.9	-3.7
CMAR	Chiang Mai Arr	8.26	50	Pn	Pn	03 32 11.2	-0.1
	2.4nm,0.3s,baz=243,slow=16,SNR=33						
CMAR				Sn	Sn	03 33 39.6	-4.0
	7.4nm,0.3s,baz=238,slow=27,SNR=8.5						
CMAR				LR	LR	03 36 18.8	
	comp=Z,5μm,18.2s,baz=276,slow=44						
CMAR	Chiang Mai Arr	8.26	50		Pn	03 32 09.2	-2.1
CMAR					Sn	03 33 40.0	-3.6
CM09	Chiang Mai Arr	8.29	50	P	Pn	03 32 12.9	+1.3
	1.5nm1μm198nm,0.9s						
CM32	Chiang Mai Arr	8.31	49	P	Pn	03 32 12.0	0.0
PATY	Pattaya	8.37	91	P	Pn	03 32 13.0	+0.3
	1.2nm17μm356nm,0.7s						
CM36	Chiang Mai Arr	8.41	50	P	Pn	03 32 14.0	+0.6
CHTO	Chiang Mai	8.49	48	P	Pn	03 32 14.0	-0.4
CHTO						03 33 43.9	
CHTO	Chiang Mai	8.49	48		Pn	03 32 14.0	-0.4
CHTO				Sn	Sn	03 33 43.9	-5.2
CMMT	Chiang Mai	8.49	48	P	Pn	03 32 14.2	-0.2
	0.5nm791nm51nm,0.8s						
CM33	Chiang Mai Arr	8.49	48	P	Pn	03 32 14.0	-0.5
CM35	Chiang Mai Arr	8.55	50	P	Pn	03 32 16.0	+0.7
CM34	Chiang Mai Arr	8.66	49	P	Pn	03 32 18.7	+1.9
PHIT	Phitsanulok	8.79	62	P	Pn	03 32 19.6	+1.1
	2.5nm7μm746nm,0.8s						
LAMP	Lampang	8.82	52	P	Pn	03 32 20.0	+1.0
	1.6nm2μm284nm,0.8s						
TRTT	Trang	9.03	126	P	Pn	03 32 22.0	+0.2
	3μm105nm,1.1s						
UTTA	Uttaradit	9.16	59	P	Pn	03 32 25.7	+2.1
	728nm73nm,0.9s						
LHMI	Lhok Sumawe	9.17	149	Pn	Pn	03 32 24.4	+0.7
LHMI	Lhok Sumawe	9.17	149	P	Pn	03 32 24.7	+1.0
	5μm258nm,1.0s						
SAIH	SAIHA	9.26	4	*e*S	Sn	03 34 02.6	-5.5
BWNR	Bhubaneshwar	9.39	320	*e*P	Pn	03 32 24.1	-2.7
BWNR				*e*S	Sn	03 33 58.4	-13
BWNR				*e*S	Sn	03 34 05.5	-5.8
PAYA	Payao	9.51	49	P	Pn	03 32 31.4	+3.0
	20μm3μm,0.8s						
SRAK	Srakaew	9.52	84	P	Pn	03 32 38.3	+10
VIS	Vishakhapatnam	9.73	299	*e*P	Pn	03 32 31.0	-0.4
VIS				IAmb	IAmb	03 32 57.4	
	comp=Z,2.4nm,0.9s						
VIS				*e*S	Sn	03 34 10.1	-10
CHAI	Chaiyaphum	9.77	73	P	Pn	03 32 34.0	+2.1
	comp=Z,2μmcomp=Z,236nm,0.9s						
BELO	BELONIA	10.02	356	*e*P	Pn	03 32 33.0	-2.3
KHON	Khomkaen	10.65	72	P	Pn	03 32 46.0	+1.9
	comp=Z,5μmcomp=Z,297nm,1.0s						
TPTI		11.01	154	P	Pn	03 32 44.5	-4.4
	comp=Z,882nmcomp=Z,67nm,1.4s						
KULM	Kulim	11.40	133	Pn	Pn	03 32 54.2	-0.1
TSI	Tuntungan	11.47	147	P	Pn	03 32 55.1	-0.2
	comp=Z,250nm,0.9s						
NONG	Nongkai	11.52	64	P	Pn	03 32 57.7	+1.7
	comp=Z,151nm,1.4s						
IMP	Imphal	11.67	7	*e*P	Pn	03 32 56.9	-1.1
IMP				*e*x	x	03 35 01.9	
MDRS	Chennai	11.73	271	*e*P	Pn	03 32 58.6	-0.2
MDRS				IAmb	IAmb	03 33 14.2	
	comp=Z,578nm,1.1s						
BOK	Bokaro	12.15	331	*e*P	Pn	03 33 04.6	+0.1
BOK				IAmb	IAmb	03 33 15.0	
	comp=Z,113nm,0.6s						
IPM	Ipoh	12.23	134	Pn	Pn	03 33 05.2	-0.6
PSI	Prapat	12.25	147	P	Pn	03 33 07.0	+0.9
SHL	Shillong	12.30	358	P	Pn	03 33 02.9	-3.9
SHL	Shillong	12.30	358	IAmb	IAmb	03 33 09.3	
	comp=Z,330nm,0.6s						
SHL				*e*x	P	03 33 02.2	-16

SHL				*e*S	Sn	03 35 11.8	-11
SHL	**Shillong**	**12.30**	**358**	Pn	**Pn**	**03 33 02.9**	**-3.9**
RPSI	**Rantau Prapat**	**12.34**	**147**	Pn	**Pn**	**03 33 07.0**	**-0.2**
KOHI	**KOHIMA**	**12.56**	**8**	*e*P	**Pn**	**03 33 08.2**	**-2.2**
KOHI				*e*S	**Sn**	**03 35 23.0**	**-6.3**
PALK	**Pallekele**	**12.83**	**244**	*de*P	**Pn**	**03 33 13.3**	**-0.7**
PALK				pmax	pmax		
	comp=Z,26nm,0.4s						
GUWA	**GUWAHATI**	**12.93**	**358**	*e*x	Pn	03 33 09.9	-5.3
GUWA				*e*S	Sn	03 35 28.0	-10
GUWA				IAML		03 35 33.9	
	comp=E,279nm,0.4s						
UBPT	**Khong Chiam**	**12.95**	**79**	P	**Pn**	**03 33 17.2**	**+1.7**
UBPT	**Khong Chiam**	**12.95**	**79**		**Pn**	**03 33 13.6**	**-1.8**
MOKO	**MOKOCHONG**	**13.21**	**9**	*e*P	**Pn**	**03 33 16.6**	**-2.6**
MOKO				*e*x	x	03 35 40.2	
MOKO				IAML		03 35 48.7	
	comp=E,1µm,0.7s						
MOKO				IAML		03 35 51.0	
	comp=N,904nm,1.2s						
TEZP	**TEZPUR**	**13.35**	**2**	*e*P	Pn	03 33 16.1	-4.9
TEZP				*e*S	Sn	03 35 34.1	-14
TEZP				IAML		03 35 42.1	
	comp=N,270nm,0.5s						
TEZP				IAML		03 35 42.5	
	comp=E,308nm,0.7s						
SLVN	**Son La**	**13.72**	**52**	Pn	**Pn**	**03 33 24.3**	**-1.8**
HYB	**Hyderabad**	**13.89**	**289**	*i* P	**Pn**	**03 33 25.0**	**-3.4**
HYB				*e*S	**Sn**	**03 36 01.0**	**-0.6**
HYB	**Hyderabad**	**13.89**	**289**	*e*P	**Pn**	**03 33 29.0**	**+0.5**
MNSI	**Mandailing Nat**	**14.29**	**149**	P	**Pn**	**03 33 37.0**	**+3.1**
	comp=E,8µmcomp=E,31nm,0.5s						
ZIRO	**ZIRO**	**14.32**	**6**	*e*x	**Pn**	**03 33 30.2**	**-4.2**
ZIRO				*e*S	Sn	03 36 01.3	-11
ZIRO				IAML		03 36 12.9	
	comp=E,3µm,0.2s						
ZIRO				IAML		03 36 15.1	
	comp=N,3µm,0.0s						
ODAN	**Odare**	**14.34**	**342**	*e*P	**Pn**	**03 33 30.9**	**-3.7**
	comp=N,175nm,0.5s						
LKP	**Lekhapani**	**14.44**	**13**	*e*P	**Pn**	**03 33 37.5**	**+1.7**
LKP				*e*x	x	03 36 14.9	
RAMN	**Ramite**	**14.67**	**340**	*e*P	**Pn**	**03 33 34.9**	**-4.3**
	comp=N,242nm,0.5s						
TAPN	**Taplejung**	**14.71**	**344**	*e*P	**Pn**	**03 33 35.9**	**-3.8**
NGP	**Nagpur**	**14.90**	**304**	*e*P	**Pn**	**03 33 40.5**	**-1.6**
NGP				*e*S	Sn	03 36 14.6	-12
KMI	**Kunming**	**15.41**	**38**	⇓P	**P**	**03 33 51.3**	**-2.0**
KMI				sP	pP	03 33 58.9	-2.9
KMI				PP	**sP**	**03 34 04.8**	**-1.0**
KMI				S	**Sn**	**03 36 42.5**	**+3.5**
KMI				pmax	pmax		
	comp=N,39nm,1.3s						
KMI				pmax	pmax		
	comp=N,490nm,4.9s						
KMI				LR	LR		
	comp=N,3µm,16.4s						
KMI				LR	LR		
	comp=N,3µm,14.3s						
KMI				LR	LR		
	comp=N,3µm,17.0s						
KMI	**Kunming**	**15.41**	**38**	P	**Pn**	**03 33 46.6**	**-2.5**
KMI				pmax	pmax		
	comp=Z,74nm,1.0s						
KMI	**Kunming**	**15.41**	**38**	Pn	**Pn**	**03 33 46.6**	**-2.5**
PKI	**Pulchoki**	**15.67**	**337**	*e*P	**Pn**	**03 33 47.5**	**-5.0**
	comp=Z,130nm,0.6s						
PKIN	**Phulchoki**	**15.68**	**337**	*e*P	**Pn**	**03 33 48.3**	**-4.2**
	comp=Z,299nm,0.6s						
TRD	**Trivandrum**	**15.76**	**254**	IAmb	IAmb	03 36 41.5	
	comp=Z,447nm,0.0s						
TRD				*e*x	**P**	**03 34 01.4**	**+4.4**
GUN	**Gumba**	**15.80**	**339**	*e*P	**Pn**	**03 33 50.7**	**-3.5**
	comp=Z,247nm,0.8s						
DMN	**Daman**	**15.82**	**336**	*e*P	**Pn**	**03 33 50.6**	**-3.7**
	comp=Z,712nm,0.8s						
DLV	**T Lat**	**15.86**	**93**	Pn	**Pn**	**03 33 52.9**	**-2.0**
KKN	**Kakani**	**15.91**	**337**	*e*P	**Pn**	**03 33 51.6**	**-3.9**
	comp=Z,313nm,0.8s						
MYKOM	**Kota Tinggi**	**16.12**	**134**	Pn	**Pn**	**03 33 57.4**	**-0.5**
MYKOM				IAmb	IAmb	03 34 12.6	
	comp=Z,214nm,1.0s						
MYKOM	**Kota Tinggi**	**16.12**	**134**	P	**P**	**03 34 00.0**	**-0.9**
GKN	**Gorkha**	**16.36**	**335**	*e*P	**Pn**	**03 33 56.2**	**-4.9**
	comp=Z,110nm,0.3s						
LSA	**Lhasa**	**16.45**	**357**	P	**Pn**	**03 33 59.4**	**-3.1**
LSA				S	**Sn**	**03 37 09.3**	**+5.0**
LSA				pmax	pmax		
	comp=Z,120nm,1.0s						
LSA				LR	LR		
	comp=Z,3µm,14.2s						
LSA				LR	LR		
	comp=Z,6µm,15.7s						
LSA				LR	LR		
	comp=Z,7µm,15.0s						
LSA	**Lhasa**	**16.45**	**357**	*i* Pn	**Pn**	**03 33 58.8**	**-3.7**
	SNR=51						
LSA	**Lhasa**	**16.45**	**357**	P	**Pn**	**03 33 59.4**	**-3.1**
LSA				pmax	pmax		
	comp=Z,277nm,0.7s						
LSA	**Lhasa**	**16.45**	**357**	Pn	**Pn**	**03 33 59.4**	**-3.1**
LSA				IAmb	IAmb	03 34 08.1	
	comp=Z,276nm,0.7s						
DANN	**Dangsing**	**17.03**	**334**	*e*P	**Pn**	**03 34 05.4**	**-4.3**
	comp=Z,232nm,0.7s						
BHPL	**Bhopal**	**17.27**	**307**	*e*P	**Pn**	**03 34 12.2**	**-0.3**
BHPL				IAmb	IAmb	03 34 23.7	
	comp=Z,172nm,1.7s						
QIZ	**Qiongzhong**	**17.83**	**69**	P	**Pn**	**03 34 18.9**	**-0.5**
QIZ				S	**Sn**	**03 37 37.7**	**+0.4**
QIZ				pmax	pmax		
	comp=Z,17nm,1.8s						
QIZ				pmax	pmax		
	comp=Z,380nm,2.7s						
QIZ				LR	LR		
	comp=Z,2µm,14.6s						
QIZ				LR	LR		
	comp=Z,3µm,16.0s						
QIZ				LR	LR		
	comp=Z,4µm,14.3s						
QIZ	**Qiongzhong**	**17.83**	**69**	P	**Pn**	**03 34 18.8**	**-0.5**
GOA	**Goa**	**18.03**	**279**	*e*P	**P**	**03 34 23.2**	**+1.1**
POO	**Poona**	**18.50**	**289**	*e*P	**P**	**03 34 25.0**	**-2.4**
	comp=Z,100nm,1.0s						
POO				*e*x	x	03 34 32.5	
POO				*e*PP	**PnPn**	**03 34 40.0**	**+0.3**
POO				*e*PP	**sP**	**03 34 46.0**	**+6.5**
POO				*i* S	Sn	03 37 36.0	-18
POO				*i* SS	**S**	**03 37 57.0**	**+0.1**
POO				*i* SSS	SSS	03 38 08.0	
GYA	**Guiyang**	**18.86**	**44**	⇑P	**Pn**	**03 34 32.8**	**+0.7**
GYA				sP	pP	03 34 40.7	+0.9
GYA				S	**Sn**	**03 38 03.0**	**+0.6**
GYA				SS	**SnSn**	**03 38 23.6**	**+7.0**
GYA				pmax	pmax		
	comp=Z,19nm,1.3s						
GYA				pmax	pmax		
	comp=Z,370nm,4.9s						
GYA				LR	LR		
	comp=Z,3µm,12.6s						
GYA				LR	LR		
	comp=Z,1µm,14.8s						
GYA				LR	LR		
	comp=Z,3µm,14.8s						
CD2	**Chengdu**	**20.55**	**29**	P	**P**	**03 34 49.7**	**+0.1**
CD2				sP	pP	03 34 57.6	-0.4
CD2				PP	**PnPn**	**03 35 10.5**	**+2.7**
CD2				S	**S**	**03 38 30.3**	**-7.6**
CD2				sS	sS	03 38 48.3	-2.9
CD2				SS	**SnSn**	**03 39 06.3**	**+8.3**
CD2				pmax	pmax		
	comp=Z,240nm,1.1s						
CD2				pmax	pmax		
	comp=Z,660nm,6.3s						
CD2				LR	LR		
	comp=Z,3µm,22.3s						
CD2				LR	LR		
	comp=Z,4µm,23.7s						
CD2				LR	LR		
	comp=Z,2µm,14.4s						
NDI	**New Delhi**	**20.82**	**320**	*e*P	Pn	03 34 55.0	-0.2
NDI				*e*S	S	03 38 31.0	-12
KSM	**Kuching**	**21.32**	**122**	P	**P**	**03 34 57.3**	**-0.7**
KSM				IAmb	IAmb	03 35 01.5	
	comp=Z,102nm,0.9s						
KSM	**Kuching**	**21.32**	**122**	P	**P**	**03 34 57.0**	**-1.0**
SBUM	**Sibu**	**22.43**	**117**	P	**P**	**03 35 08.8**	**-1.1**
SBUM				IAmb	IAmb	03 35 12.2	
	comp=Z,145nm,1.1s						
SBUM	**Sibu**	**22.43**	**117**	P	**P**	**03 35 10.0**	**0.0**
SMLA	**Simla**	**22.63**	**324**	*e*x	**P**	**03 35 12.9**	**+1.0**
SMLA				IAmb	IAmb	03 35 26.1	
	comp=Z,207nm,1.7s						
BHUJ	**Bhuj**	**23.67**	**298**	IAmb	IAmb	03 35 43.0	
	comp=Z,97nm,0.4s						
BHUJ				*e*x	**P**	**03 35 18.3**	**-4.2**
DHRM	**DHARAMSHALA**	**23.95**	**325**	*e*x	**P**	**03 35 26.7**	**+1.4**
KKM	**Kota Kinabalu**	**24.63**	**105**	P	**P**	**03 35 30.8**	**-0.7**
KKM				IAmb	IAmb	03 35 33.7	
	comp=Z,141nm,1.1s						
LZH	**Lanzhou**	**25.04**	**23**	*e*P	**P**	**03 35 36.4**	**+1.2**
LZH				sP	pP	03 35 41.6	-2.7
LZH				S	**S**	**03 39 54.3**	**-3.2**
LZH				sS	pS	03 40 04.6	-2.5
LZH				pmax	pmax		
	comp=Z,130nm,1.3s						
LZH				pmax	pmax		
	comp=Z,310nm,6.0s						
LZH				LR	LR		
	comp=Z,2µm,14.6s						
LZH				LR	LR		
	comp=Z,2µm,15.2s						
LZH				LR	LR		
	comp=Z,2µm,17.9s						
BATP	**Bataraza**	**25.42**	**97**	*e*P	**P**	**03 35 37.8**	**-0.8**
XAN	**Xi'an**	**25.66**	**33**	P	**P**	**03 35 40.1**	**-0.6**
XAN				pP	pP	03 35 44.8	-4.9
XAN				S	**S**	**03 40 03.2**	**-4.0**
XAN				sS	pS	03 40 13.8	-3.3
XAN				pmax	pmax		
	comp=Z,140nm,1.0s						
XAN				pmax	pmax		
	comp=Z,420nm,6.1s						
XAN				LR	LR		
	comp=Z,2µm,18.4s						
XAN				LR	LR		
	comp=Z,2µm,18.4s						
XAN				LR	LR		
	comp=Z,2µm,18.4s						
ENPP	**El Nido**	**26.59**	**91**	*e*P	**P**	**03 35 46.9**	**-2.3**
WHN	**Wuhan**	**26.69**	**46**	⇓P	**P**	**03 35 51.0**	**+1.1**
WHN				pP	**sP**	**03 36 02.8**	**-0.2**
WHN				S	**S**	**03 40 23.1**	**-0.2**
WHN				sS	**sS**	**03 40 39.7**	**+1.1**
WHN				LR	LR		
	comp=Z,5µm,15.3s						
WHN				LR	LR		
	comp=Z,2µm,12.6s						
WHN				LR	LR		
	comp=Z,6µm,15.6s						
NIL	**Nilore**	**26.73**	**323**	P	**P**	**03 35 50.5**	**+0.2**
NIL				pmax	pmax		
	comp=Z,86nm,0.9s						
NIL	**Nilore**	**26.73**	**323**	P	**P**	**03 35 50.5**	**+0.2**
NIL				IAmb	IAmb	03 36 02.1	
	comp=Z,86nm,0.8s						
GTA	**Gaotai**	**26.93**	**13**	⇓P	**P**	**03 35 53.3**	**+1.1**
GTA				pP	pP	03 35 59.4	-1.6
GTA				sP	pwP	03 36 02.5	-0.6
GTA				S	**S**	**03 40 29.2**	**+1.9**
GTA				sS	sS	03 40 41.2	-0.7
GTA				ScS	**ScS**	**03 46 42.0**	**-0.7**
GTA				pmax	pmax		
	comp=Z,69nm,1.0s						
GTA				pmax	pmax		
	comp=Z,200nm,5.1s						
GTA				LR	LR		
	comp=Z,690nm,18.2s						
GTA				LR	LR		
	comp=Z,2µm,18.9s						
GTA				LR	LR		
	comp=Z,590nm,17.1s						
MYLDM	**Lahad Datu**	**27.06**	**105**	P	**P**	**03 35 53.1**	**-0.3**
LUBP	**Lubang**	**27.19**	**86**	*e*P	**P**	**03 35 53.5**	**-1.1**
BUSP	**Coron**	**27.26**	**89**	*e*P	**P**	**03 35 54.8**	**-0.4**
QZH	**Quanzhou**	**27.41**	**61**	⇑*i*P	**P**	**03 35 57.3**	**+0.9**
QZH				S	**S**	**03 40 38.4**	**+3.6**
QZH				pmax	pmax		
	comp=Z,33nm,0.8s						
QZH				LR	LR		
	comp=Z,970nm,17.1s						
QZH				LR	LR		
	comp=Z,1µm,15.2s						
QZH				LR	LR		
	comp=Z,2µm,14.7s						
SMPP	**San Manuel, Pa**	**27.61**	**80**	*e*P	**P**	**03 35 57.8**	**-0.6**
MACP	**Maragondon, Ca**	**27.63**	**84**	*e*P	**P**	**03 35 58.1**	**-0.4**
ABRA	**Dolores**	**27.74**	**77**	*e*P	**P**	**03 36 01.9**	**+2.4**
TGY	**Tagaytay City**	**27.85**	**85**	P	**P**	**03 36 01.8**	**+1.2**
	comp=Z,190nm,0.3s,baz=280,slow=6.4,SNR=7.3						
TGY				LR	LR	03 47 06.7	
	comp=Z,783nm,20.1s,baz=274,slow=36						
CUYO	**Cuyo Island**	**28.19**	**92**	*e*P	**P**	**03 36 03.0**	**-0.6**
APYP	**Conner**	**28.26**	**77**	*e*P	**P**	**03 36 04.5**	**+0.4**
LQP	**Lukban**	**28.43**	**85**	⇓*e*P	**P**	**03 36 06.7**	**+0.8**
BALP	**Baler**	**28.46**	**81**	*e*P	**P**	**03 36 06.1**	**+0.2**
H08S3	**Diego Garcia H**	**28.55**	**225**	T	T	04 05 54.9	
	baz=44,slow=76,SNR=5407						
H08S2	**Diego Garcia H**	**28.56**	**225**	T	T	04 05 54.9	
	baz=44,slow=76,SNR=134						
H08S1	**Diego Carcia H**	**28.57**	**225**	T	T	04 05 57.0	
	baz=44,slow=76,SNR=23						
CAUP	**Cauayan**	**28.75**	**79**	*e*P	**P**	**03 36 09.3**	**+0.9**
TWG	**Pinlang**	**28.95**	**67**	P	**P**	**03 36 09.0**	**-1.2**
SGCP	**Mt. Cagua**	**29.06**	**76**	*e*P	**P**	**03 36 11.1**	**-0.1**
SSLB	**Suanglung**	**29.09**	**65**	P	**P**	**03 36 10.5**	**-1.1**
YULB	**Yu-li**	**29.29**	**66**	P	**P**	**03 36 12.1**	**-1.2**
YULB				IAmb	IAmb	03 36 16.7	
	comp=Z,53nm,1.0s						
YHNB	**Yeheng**	**29.71**	**63**	IAmb	IAmb	03 36 30.5	
	comp=Z,48nm,0.9s						
GUIM	**Jordan**	**29.75**	**92**	*e*P	**P**	**03 36 16.5**	**-0.9**
KSH	**Kashi**	**29.90**	**334**	P	**P**	**03 36 17.2**	**-1.4**
KSH				pP	pwP	03 36 28.3	-1.6
KSH				S	**S**	**03 41 08.0**	**-6.0**
KSH				pmax	pmax		
	comp=Z,20nm,0.7s						
KSH				pmax	pmax		
	comp=Z,470nm,5.0s						
KSH				LR	LR		
	comp=Z,1µm,6.8s						
KSH				LR	LR		
	comp=Z,2µm,9.1s						
KSH				LR	LR		
	comp=Z,2µm,21.8s						
KBL	**Kabul**	**29.91**	**319**	P	**P**	**03 36 18.7**	**-0.2**
KBL				pmax	pmax		
	comp=Z,20nm,1.0s						
KBL	**Kabul**	**29.91**	**319**	P	**P**	**03 36 18.7**	**-0.2**
CNOP	**Candoni, Negro**	**29.92**	**93**	*e*P	**P**	**03 36 19.0**	**0.0**
TIY	**Taiyuan**	**30.30**	**33**	P	**P**	**03 36 22.7**	**+0.6**
TIY				sP	**pP**	**03 36 31.0**	**-0.3**
TIY				PP	**PnPn**	**03 37 25.2**	**+4.4**
TIY				S	**S**	**03 41 16.6**	**-3.6**
TIY				sS	**pS**	**03 41 31.5**	**+1.2**
TIY				SS	**ScP**	**03 43 00.1**	**-2.2**
TIY				pmax	pmax		
	comp=Z,17nm,0.5s						
TIY				pmax	pmax		
	comp=Z,140nm,4.7s						
TIY				LR	LR		
	comp=Z,1µm,14.4s						
TIY				LR	LR		
	comp=Z,1µm,16.9s						
TIY				LR	LR		
	comp=Z,1µm,15.7s						
NJ2	**Nanjing**	**30.73**	**48**	*e*P	**P**	**03 36 27.3**	**+1.4**
NJ2				sP	**pP**	**03 36 33.6**	**-1.4**
NJ2				S	**S**	**03 41 28.8**	**+1.9**
NJ2				sS	**pS**	**03 41 38.1**	**+0.9**
NJ2				pmax	pmax		
	comp=Z,32nm,0.8s						
NJ2				LR	LR		
	comp=Z,3µm,18.0s						
NJ2				LR	LR		
	comp=Z,3µm,18.0s						
NJ2				LR	LR		
	comp=Z,2µm,19.9s						
WMQ	**Urumqi**	**30.76**	**353**	*e*P	**P**	**03 36 27.8**	**+1.7**
WMQ				pP	pP	03 36 30.5	-4.6
WMQ				sP	sP	03 36 36.9	-2.1
WMQ				PP	**PP**	**03 37 27.3**	**-8.6**
WMQ				pmax	pmax		
	comp=Z,25nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,330nm,4.5s						
WMQ				LR	LR		
	comp=Z,1µm,22.1s						
WMQ				LR	LR		
	comp=Z,4µm,24.1s						
WMQ				LR	LR		
	comp=Z,960nm,29.5s						
WMQ	**Urumqi**	**30.76**	**353**	IAmb	IAmb	03 36 40.2	
	comp=Z,33nm,0.8s						
PAGZ	**Pagadian**	**31.02**	**97**	*e*P	**P**	**03 36 29.2**	**+0.6**
SHLS	**Shalkode**	**31.83**	**342**	*e*P	**P**	**03 36 35.4**	**-0.2**
	baz=343						
SHLS	**Shalkode**	**31.83**	**342**	*e*P	**P**	**03 36 35.4**	**-0.2**
UZB	**Uzynbulak**	**31.95**	**342**	*e*P	**P**	**03 36 37.8**	**+1.1**
	baz=342						
UZB	**Uzynbulak**	**31.95**	**342**	*e*P	**P**	**03 36 37.8**	**+1.1**
TIA	**Tai'an**	**31.97**	**40**	P	**P**	**03 36 37.8**	**+1.0**
TIA				S	**S**	**03 41 47.5**	**+1.2**
TIA				pmax	pmax		
	comp=Z,15nm,0.8s						
TIA				LR	LR		
	comp=Z,1µm,15.7s						
TIA				LR	LR		
	comp=Z,1µm,15.2s						
TIA				LR	LR		
	comp=Z,1µm,17.2s						
SSE	**Sheshan**	**32.00**	**51**	P	**P**	**03 36 39.0**	**+1.9**
SSE				S	**S**	**03 41 48.9**	**+2.2**
SSE				pmax	pmax		
	comp=Z,9.0nm,1.0s						
SSE				pmax	pmax		
	comp=Z,74nm,6.1s						
SSE				LR	LR		
	comp=Z,770nm,16.8s						
SSE				LR	LR		
	comp=Z,700nm,19.3s						
SATY	**Saty**	**32.07**	**341**	*e*P	**P**	**03 36 38.6**	**+0.9**
	comp=Z,11nm,0.9s,baz=341						
SATY	**Saty**	**32.07**	**341**	*e*P	**P**	**03 36 38.6**	**+0.9**
SATY				pmax	pmax		
	comp=Z,11nm,0.9s						
ULHL	**Ulahol**	**32.11**	**337**	P	**P**	**03 36 39.8**	**+1.6**
	SNR=14						
HHC	**Hu-ho-hao-te**	**32.30**	**28**	*e*P	**P**	**03 36 40.7**	**+1.0**
HHC				sP	pP	03 36 50.1	+1.2
HHC				S	**S**	**03 41 52.4**	**+1.0**
HHC				SS	**SnSn**	**03 43 45.0**	**+0.3**
HHC				pmax	pmax		
	comp=Z,38nm,1.0s						
HHC				pmax	pmax		
	comp=Z,100nm,4.4s						
HHC				LR	LR		
	comp=Z,1µm,16.9s						
HHC				LR	LR		
	comp=Z,930nm,14.6s						
HHC				LR	LR		
	comp=Z,1µm,15.3s						
KPKS	**Kokpek**	**32.35**	**341**	*e*P	**P**	**03 36 41.0**	**+0.8**
	comp=Z,20nm,1.1s,baz=341						
KPKS	**Kokpek**	**32.35**	**341**	*e*P	**P**	**03 36 40.9**	**+0.8**
KPKS				pmax	pmax		
	comp=Z,20nm,1.1s						
SKMP	**Bagumbayan, Su**	**32.44**	**99**	*e*P	**P**	**03 36 40.5**	**-0.7**
JLN	**Jalan Bani Buh**	**32.50**	**291**	P	**P**	**03 36 44.1**	**+2.5**
	SNR=5.8						
JLN				P	**P**	**03 36 44.1**	**+2.5**
	SNR=5.8						
TNSS	**Tian-Shan**	**32.54**	**339**	*e*P	**P**	**03 36 42.3**	**+0.1**
	baz=339						
TNSS	**Tian-Shan**	**32.54**	**339**	*e*P	**P**	**03 36 42.3**	**+0.1**
MDOK	**Medeo**	**32.62**	**339**	*e*P	**P**	**03 36 43.8**	**+1.2**
	baz=339						
MDOK	**Medeo**	**32.62**	**339**	*e*P	**P**	**03 36 43.7**	**+1.2**
AAA	**Alma-Ata**	**32.70**	**339**	*e*P	**P**	**03 36 44.8**	**+1.5**
	baz=339						
AAA	**Alma-Ata**	**32.70**	**339**	*e*P	**P**	**03 36 44.7**	**+1.5**
KAPI	**Kappang**	**32.74**	**122**	P	**P**	**03 36 44.0**	**+0.2**
	comp=Z,39nm,0.9s,baz=290,slow=11,SNR=8.9						
KAPI	**Kappang**	**32.74**	**122**	P	**P**	**03 36 44.0**	**+0.2**
KAPI	**Kappang**	**32.74**	**122**	P	**P**	**03 36 43.6**	**-0.2**
KAPI				IAmb	IAmb	03 36 44.5	
	comp=Z,44nm,0.8s						
KAPI	**Kappang**	**32.74**	**122**	P	**P**	**03 36 42.6**	**-1.1**
KAPI				P	**P**	**03 36 42.6**	**-1.1**
KAPI				S	**S**	**03 41 57.6**	**-1.0**
KAPI				S	**S**	**03 41 57.6**	**-1.0**
UCH	**Uchtor**	**32.77**	**335**	P	**P**	**03 36 45.4**	**+1.2**
	SNR=20						
MTBS	**Maitube**	**32.81**	**338**	*e*P	**P**	**03 36 44.7**	**+0.5**
	baz=338						
MTBS	**Maitube**	**32.81**	**338**	*e*P	**P**	**03 36 44.6**	**+0.5**
KCP	**Kidapawan**	**32.85**	**98**	⇓*i*P	**P**	**03 36 45.3**	**+0.4**
TKM2	**Tokmak 2**	**32.93**	**337**	P	**P**	**03 36 46.9**	**+1.5**
	SNR=24						
TKM2	**Tokmak 2**	**32.93**	**337**	*i* P	**P**	**03 36 47.9**	**+2.5**
TKM2				pmax	pmax		
	comp=Z,22nm,1.0s						
KBK	**Karagaybulak**	**32.96**	**336**	P	**P**	**03 36 47.9**	**+2.3**
	SNR=12						
AML	**Almayashu**	**33.03**	**334**	P	**P**	**03 36 47.8**	**+1.3**
	SNR=31						
AAK	**Ala-Archa**	**33.12**	**336**	LR	LR	03 51 29.0	
	comp=Z,2µm,21.6s,baz=152,slow=39						
AAK	**Ala-Archa**	**33.12**	**336**	P	**P**	**03 36 48.8**	**+1.8**
	SNR=26						
AAK	**Ala-Archa**	**33.12**	**336**	*i* P	**P**	**03 36 48.9**	**+1.8**
	SNR=35						
AAK	**Ala-Archa**	**33.12**	**336**	*de*P	**P**	**03 36 48.6**	**+1.6**
AAK				pmax	pmax		
	comp=Z,35nm,1.1s						
AAK	**Ala-Archa**	**33.12**	**336**	P	**P**	**03 36 46.8**	**-0.2**
AAK				IAmb	IAmb	03 37 00.4	
	comp=Z,21nm,0.7s						
AAK	**Ala-Archa**	**33.12**	**336**	P	**P**	**03 36 49.1**	**+2.1**
AAK				P	**P**	**03 36 49.1**	**+2.1**
CHKK	**Chushkaly**	**33.25**	**340**	*e*P	**P**	**03 36 48.0**	**+0.1**
	baz=340						
CHKK	**Chushkaly**	**33.25**	**340**	*e*P	**P**	**03 36 48.0**	**+0.1**
DAV	**Davao City (W)**	**33.31**	**97**	P	**P**	**03 36 49.4**	**+0.6**
	comp=Z,189nm,0.4s,baz=312,slow=8.6,SNR=3.8						
GLSP	**General Luna,**	**33.32**	**92**	*e*P	**P**	**03 36 47.5**	**-1.4**
CHMS	**Chumysh**	**33.32**	**336**	P	**P**	**03 36 50.3**	**+1.7**
	SNR=11						
EKS2	**Erkin-Say**	**33.44**	**335**	P	**P**	**03 36 51.5**	**+1.8**
	SNR=24						
KUU	**Kurty**	**33.50**	**339**	*e*P	**P**	**03 36 50.1**	**0.0**
	comp=Z,37nm,1.2s,baz=339						
KUU	**Kurty**	**33.50**	**339**	*e*P	**P**	**03 36 50.1**	**0.0**
KUU				pmax	pmax		
	comp=Z,37nm,1.2s						
MHTO	**MHTO**	**33.65**	**288**	P	**P**	**03 36 53.6**	**+2.0**
MHTO				P	**P**	**03 36 53.6**	**+2.0**
USP	**Ospenovka**	**33.65**	**336**	P	**P**	**03 36 52.6**	**+1.2**
	SNR=48						
DDMP	**Don Marcelino,**	**33.67**	**99**	*e*P	**P**	**03 36 52.6**	**+0.6**
SGDS	**Sogindy**	**33.76**	**337**	*e*P	**P**	**03 36 53.1**	**+0.6**
	comp=Z,10nm,1.0s,baz=336						
SGDS	**Sogindy**	**33.76**	**337**	*e*P	**P**	**03 36 53.0**	**+0.6**
SGDS				pmax	pmax		
	comp=Z,10.0nm,1.0s						
TDK	**Taldyqorghan**	**33.82**	**342**	*e*P	**P**	**03 36 53.6**	**+0.7**
	baz=342						
TDK	**Taldyqorghan**	**33.82**	**342**	*e*P	**P**	**03 36 53.6**	**+0.7**
SMDO	**Samad**	**33.90**	**292**	P	**P**	**03 36 56.9**	**+2.9**
	SNR=5.7						
SMDO				P	**P**	**03 36 56.9**	**+2.9**
	SNR=5.7						
SMDO				S	S	03 42 28.0	+11
SMDO				S	S	03 42 28.0	+11
BJT	**Baijiatuau**	**33.97**	**34**	IAmb	IAmb	03 37 06.4	
	comp=Z,37nm,0.8s						
BJI	**Beijing**	**33.99**	**34**	P	**P**	**03 36 55.7**	**+1.3**
BJI				PP	**PP**	**03 38 14.1**	**+2.4**
BJI				S	**S**	**03 42 21.0**	**+3.5**
BJI				pmax	pmax		
	comp=Z,40nm,0.9s						
BJI				LR	LR		
	comp=Z,1µm,21.3s						
BJI				LR	LR		
	comp=Z,2µm,23.5s						
BJI				LR	LR		

	comp=Z,750nm,22.4s						
MATI	Mati	33.99	97	eP	P	03 37 04.7	+10
HRA	Herat	34.43	313	P	P	03 36 58.6	+0.1
MK31	Makanchi Array	34.52	348	d iP	P	03 36 59.6	+0.7
MK31				pmax	pmax		
	comp=Z,57nm,1.0s						
MK31	Makanchi Array	34.52	348	IAmb	IAmb	03 37 11.5	
	comp=Z,48nm,0.8s						
MKAR	Makanchi Array	34.52	348	P	P	03 37 00.2	+1.3
	comp=Z,41nm,0.9s,baz=163,slow=8.6,SNR=200						
MKAR				LR	LR	03 54 54.6	
	comp=Z,844nm,19.9s,baz=159,slow=43						
MKAR	Makanchi Array	34.52	348	P	P	03 36 58.9	0.0
MAKZ	Makanchi	34.60	347	P	P	03 36 59.5	-0.1
MAKZ				pmax	pmax		
	comp=Z,57nm,0.8s						
MAKZ	Makanchi	34.60	347	P	P	03 36 59.5	-0.1
BSY	Bisya	34.62	291	P	P	03 37 03.4	+3.3
	SNR=7.5						
BSY				P	P	03 37 03.4	+3.3
	SNR=7.5						
BSY				S	S	03 42 38.5	+11
BSY				S	S	03 42 38.5	+11
HOQ	Hoqain	34.67	292	P	P	03 37 03.8	+3.3
	SNR=7.1						
HOQ				P	P	03 37 03.8	+3.3
	SNR=7.1						
DZA	Taraz	34.68	332	eP	P	03 37 01.4	+1.0
	baz=332						
DZA	Taraz	34.68	332	eP	P	03 37 01.3	+1.0
ZSN	Zaisan	34.70	351	eP	P	03 37 01.4	+1.0
	comp=Z,28nm,1.0s,baz=351						
ZSN	Zaisan	34.70	351	eP	P	03 37 01.4	+1.0
ZSN				pmax	pmax		
	comp=Z,28nm,1.0s						
IUG	Iuzhnay	34.71	330	eP	P	03 37 02.0	+1.3
	comp=Z,16nm,0.6s,baz=330						
IUG	Iuzhnay	34.71	330	eP	P	03 37 02.0	+1.3
IUG				pmax	pmax		
	comp=Z,16nm,0.6s						
KK31	Karatay Array	35.22	332	IAmb	IAmb	03 37 19.3	
	comp=Z,30nm,0.9s						
KKAR	Karatay Array	35.22	332	P	P	03 37 05.1	+0.1
KKAR	Karatay Array	35.22	332	P	P	03 37 05.1	+0.1
KKAR	Karatay Array	35.22	332	IAmb	IAmb	03 37 19.3	
	comp=Z,30nm,0.9s						
BTLS	Baital	35.33	337	eP	P	03 37 06.6	+0.7
	comp=Z,11nm,0.6s,baz=337						
BTLS	Baital	35.33	337	eP	P	03 37 06.5	+0.7
BTLS				pmax	pmax		
	comp=Z,11nm,0.6s						
ARQ	Araqi	35.34	292	P	P	03 37 09.1	+2.9
ARQ				P	P	03 37 09.1	+2.9
SOHO	SOHO	35.47	293	P	P	03 37 17.3	+10
SOHO	SOHO	35.47	293	P	P	03 37 10.5	+3.1
SOHO				P	P	03 37 10.5	+3.1
BRLS	Borolday	35.47	331	eP	P	03 37 07.7	+0.5
	baz=331						
BRLS	Borolday	35.47	331	eP	P	03 37 07.7	+0.5
UOSS	Minazif	35.93	294	P	P	03 37 20.5	+9.1
HATD	Hatta, Dubai	35.97	294	i P	P	03 37 21.1	+9.3
	SNR=7.3						
ASHO	Ashiyiah	36.01	294	P	P	03 37 14.8	+2.8
	SNR=5.1						
ASHO				P	P	03 37 14.8	+2.8
	SNR=5.1						
BANOM	Banah	36.06	296	P	P	03 37 15.1	+2.6
DMTO	DMTO	36.22	282	P	P	03 37 16.1	+2.2
DMTO				P	P	03 37 16.1	+2.2
JOW	Kunigami	36.29	63	P	P	03 37 15.6	+1.2
	comp=Z,8.7nm,0.3s,baz=122,slow=20,SNR=11						
FAQ	Al Faqa, Dubai	36.43	294	P	P	03 37 25.2	+10
DL2	Dalian	36.45	40	P	P	03 37 15.4	-0.2
DL2				S	S	03 42 56.5	+1.2
DL2				pmax	pmax		
	comp=Z,50nm,1.0s						
DL2				pmax	pmax		
	comp=Z,180nm,4.0s						
DL2				LR	LR		
	comp=Z,1µm,19.4s						
DL2				LR	LR		
	comp=Z,1µm,16.6s						
DL2				LR	LR		
	comp=Z,2µm,16.3s						
SONM	Songino Array	36.47	16	P	P	03 37 17.0	+1.2
	comp=Z,49nm,1.1s,baz=199,slow=8.4,SNR=121						
SONM				LR	LR	03 55 37.6	
	comp=Z,854nm,18.2s,baz=194,slow=42						
SONM	Songino Array	36.47	16	P	P	03 37 17.0	+1.2
SONM	Songino Array	36.47	16	P	P	03 37 15.3	-0.5
SONM				IAmb	IAmb	03 37 18.8	
	comp=Z,34nm,1.0s						
DGZ	Jazzator, Alta	36.61	355	deP	P	03 37 17.8	+0.8
DGZ				pmax	pmax		
	comp=Z,24nm,1.2s						
ASUD	Al Ashush, Dub	36.65	294	P	P	03 37 27.8	+10
ULN	Ulaanbaatar	36.68	17	d iP	P	03 37 18.2	+0.6
ULN				pmax	pmax		
	comp=Z,35nm,1.3s						
ULN	Ulaanbaatar	36.68	17	P	P	03 37 17.2	-0.5
DOK	Doka	37.04	283	P	P	03 37 23.0	+2.2
DOK				P	P	03 37 23.0	+2.2
WHFO	Wadi Hawf	37.35	282	P	P	03 37 25.3	+1.7
WHFO				P	P	03 37 25.3	+1.7
SOCY	Socotra	37.35	273	P	P	03 37 23.6	-0.1
SOCY				IAmb	IAmb	03 37 35.2	
	comp=Z,40nm,1.1s						
ABTO	Aybut	37.79	281	P	P	03 37 29.4	+2.1
ABTO				P	P	03 37 29.4	+2.1
ZAK	Zakamensk	38.14	11	eP	P	03 37 30.3	+0.4
ZAK				e		03 39 51.4	
ZAK				pmax	pmax		
	comp=Z,20nm,1.2s						
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.1s						
SEM	Semipalatinsk	38.38	348	eP	P	03 37 31.7	-0.3
	comp=Z,24nm,1.3s,baz=348						
SEM	Semipalatinsk	38.38	348	eP	P	03 37 31.7	-0.3
SEM				pmax	pmax		
	comp=Z,24nm,1.3s						
KURBB	Kurchatov Arra	38.96	346	P	P	03 37 37.4	+0.7
	comp=Z,41nm,0.9s,baz=161,slow=8.0,SNR=104						
KURBB				S	S	03 43 39.6	+6.5
	comp=Z,1.2nm,1.0s,baz=159,slow=13,SNR=4.4						
TJN	Taejon	38.99	47	⇑eP	P	03 37 38.7	+1.6
MOY	Mondy	39.00	9	eP	P	03 37 37.8	+0.7
MOY				pmax	pmax		
	comp=Z,41nm,1.8s						
KURK	Kurchatov	39.03	346	P	P	03 37 37.4	+0.2
KURK				S	S	03 43 39.6	+5.5
KURK	Kurchatov	39.03	346	P	P	03 37 37.2	0.0
KURK	Kurchatov	39.03	346	P	P	03 37 38.2	+1.0
KURK				P	P	03 37 38.2	+1.0
GEYT	Alibeck	39.09	315	P	P	03 37 39.8	+1.8
	comp=Z,23nm,0.7s,baz=140,slow=9.7,SNR=31						
GEYT				LR	LR	03 57 36.7	
	comp=Z,385nm,18.1s,baz=155,slow=42						
GEYT	Alibeck	39.09	315	P	P	03 37 37.6	-0.4
GYA0B	ALIBECK ARRAY	39.09	315	IAmb	IAmb	03 37 50.8	
	comp=Z,54nm,0.7s						
SOEI	Soe	39.10	124	P	P	03 37 35.5	-2.9
SOEI				IAmb	IAmb	03 37 51.8	
	comp=Z,46nm,0.8s						
TLY	Talaya	39.45	11	P	P	03 37 42.7	+2.0
	comp=Z,14nm,0.9s,baz=213,slow=8.1,SNR=12						
TLY	Talaya	39.45	11	eP	P	03 37 43.5	+2.7
TLY				eS	S	03 43 41.5	+0.9
TLY				pmax	pmax		
	comp=Z,60nm,1.0s						
TLY				MLR	MLR		
	comp=Z,1µm,17.0s						
TLY	Talaya	39.45	11	P	P	03 37 40.4	-0.4
KSAR	Wonju Array Be	39.85	46	P	P	03 37 43.6	-0.6
KSAR	Wonju Array Be	39.85	46	P	P	03 37 43.6	-0.6
KSRS	Korea Array	39.88	46	P	P	03 37 45.4	+0.9
	comp=Z,11nm,0.7s,baz=242,slow=8.7,SNR=31						
KSRS				LR	LR	03 57 07.0	
	comp=Z,2µm,18.2s,baz=239,slow=40						
BRZS	Berezniki	40.04	340	eP	P	03 37 46.2	+0.6
	baz=340						
BRZS	Berezniki	40.04	340	eP	P	03 37 46.2	+0.6
IRK	Irkutsk	40.11	11	eP	P	03 37 46.3	+0.1
IRK				pmax	pmax		
	comp=Z,30nm,1.6s						
JNU	Nakatsue	40.34	54	P	P	03 37 49.7	+1.3
	comp=Z,18nm,0.9s,baz=282,slow=4.1,SNR=5.4						
ZAA0	Zalesovo Array	41.07	353	P	P	03 37 54.2	+0.2
ZAA0				IAmb	IAmb	03 38 06.3	
	comp=Z,73nm,1.1s						
ZALV	Zalesovo Beam	41.07	353	P	P	03 37 54.4	+0.3
	comp=Z,45nm,0.8s,baz=170,slow=9.0,SNR=131						
ZALV				LR	LR	03 58 06.0	
	comp=Z,1µm,20.8s,baz=182,slow=41						
ZALV	Zalesovo Beam	41.07	353	P	P	03 37 54.1	0.0
SIJI	Sorong	41.10	107	P	P	03 37 54.3	-0.6
	comp=Z,30nm,0.6s,baz=309,slow=7.7,SNR=13						
GIRL	Giralia	41.62	149	P	P	03 37 59.3	+0.3
	baz=42,SNR=4.0						
CN2	Changchun	41.68	37	eP	P	03 37 59.5	+0.3
CN2				pP	pP	03 38 09.3	+0.6
CN2				S	S	03 44 08.0	-5.9
CN2				SS	SS	03 47 17.9	-2.1
CN2				pmax	pmax		
	comp=Z,30nm,1.1s						
CN2				pmax	pmax		
	comp=Z,190nm,5.3s						
CN2				LR	LR		
	comp=Z,1µm,18.3s						
CN2				LR	LR		
	comp=Z,1µm,17.8s						
CN2				LR	LR		
	comp=Z,1µm,15.6s						
FAKI	Fak Fak	42.78	109	P	P	03 38 07.9	-0.7
JMN	Monobe	42.91	54	IAmb	IAmb	03 38 14.2	
	comp=Z,51nm,1.0s						
BVAR	Borovoye Array	43.38	341	P	P	03 38 12.9	-0.1
	comp=Z,2.4nm,0.6s,baz=115,slow=9.7,SNR=10						
BRVK	Borovoye	43.45	341	⇑eP	P	03 38 14.2	+0.7
BRVK				pmax	pmax		
	comp=Z,22nm,1.0s						
BRVK	Borovoye	43.45	341	P	P	03 38 13.5	0.0
PSA00	Pilbara Seismi	43.89	142	P	P	03 38 17.1	-0.4
PSA00	Pilbara Seismi	43.89	142	IAmb	IAmb	03 38 17.3	
	comp=Z,38nm,0.9s						
RDF	Al-Radifah	44.30	298	eP		03 38 20.7	
MSHR	Mys Shultsa	44.51	41	⇑eP	P	03 38 22.4	+0.2
MSHR				pmax	pmax		
	comp=Z,45nm,1.7s						
MIB	Mutribah	44.65	299	eP		03 38 22.9	
ABKAR	Akbulak array	44.72	330	P	P	03 38 23.9	+0.2
ABKAR	Akbulak array	44.72	330	IAmb	IAmb	03 38 36.6	
	comp=Z,50nm,0.8s						
RST	Umm Al-Ruwaisa	44.88	299	eP		03 38 25.6	
FITZ	Fitzroy Crossi	45.28	133	P	P	03 38 27.5	-1.1
	baz=45,SNR=51						
FITZ	Fitzroy Crossi	45.28	133	P	P	03 38 27.4	-1.1
	comp=Z,57nm,0.9s,baz=331,slow=6.9,SNR=81						
RAYN	Ar Rayn	45.39	290	i P	P	03 38 38.6	+9.0
	SNR=5.7						
RAYN	Ar Rayn	45.39	290	P	P	03 38 29.8	+0.2
RAYN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
RAYN	Ar Rayn	45.39	290	P	P	03 38 29.8	+0.2
USA0B	Ussuriysk Arra	45.84	40	⇓eP	P	03 38 32.6	-0.1
USA0B	Ussuriysk Arra	45.84	40	P	P	03 38 32.4	-0.3
USA0B				IAmb	IAmb	03 38 47.6	
	comp=Z,38nm,1.1s						
USRK	Ussuriysk Ar.	45.84	40	P	P	03 38 33.5	+0.8
	comp=Z,6.8nm,0.7s,baz=249,slow=7.6,SNR=13						
USRK				LR	LR	04 01 32.1	
	comp=Z,1µm,18.1s,baz=227,slow=41						
USRK	Ussuriysk Ar.	45.84	40	P	P	03 38 32.2	-0.5
JGF	Kuroka	46.20	53	IAmb	IAmb	03 38 48.5	
	comp=Z,29nm,1.0s						
MTN	Manton Dam	46.40	122	P	P	03 38 36.0	-1.5
	baz=46,SNR=6.5						
AKTO	Aktyubinsk	46.43	330	P	P	03 38 38.2	+0.9
	comp=Z,11nm,0.6s,baz=116,slow=8.4,SNR=32						
MAJO	Matsushiro	47.14	52	⇓eP	P	03 38 44.4	+1.3
MAJO				pmax	pmax		
	comp=Z,10.0nm,0.6s						
MAJO	Matsushiro	47.14	52	P	P	03 38 42.3	-0.7
MAJO				IAmb	IAmb	03 38 58.5	
	comp=Z,43nm,1.1s						
MAT	Matsushiro	47.14	52	P	P	03 38 44.2	+1.1
MAT				S	S	03 45 35.4	+1.8
MJAR	Matsushiro Arr	47.14	52	P	P	03 38 44.5	+1.4
	comp=Z,8.6nm,1.0s,baz=267,slow=9.1,SNR=11						
MJAR				PcP	PcP	03 40 15.1	+0.5
	comp=Z,2.9nm,0.8s,baz=228,slow=3.9,SNR=2.1						
MJAR				LR	LR	04 01 34.4	
	comp=Z,1µm,18.1s,baz=245,slow=40						
MJAR	Matsushiro Arr	47.14	52	P	P	03 38 42.3	-0.8
MJAR					PcP	03 40 14.6	+0.1
MEEK	Meekatharra	47.16	147	P	P	03 38 42.4	-0.8
	baz=47,SNR=15						
KDU	Kakadu	47.43	121	P	P	03 38 43.9	-1.6
	baz=48,SNR=9.3						
BOD	Bodaibo	47.47	16	eP	P	03 38 45.0	-0.2
BOD				pmax	pmax		
	comp=Z,46nm,1.6s						
MORW	Morawa	47.89	152	P	P	03 38 48.8	-0.1
	baz=48,SNR=9.6						
MORW	Morawa	47.89	152	IAmb	IAmb	03 38 49.9	
	comp=Z,51nm,1.1s						
KLR	Kul'dur	48.37	34	P	P	03 38 52.6	+0.2
	comp=Z,4.1nm,1.0s,baz=259,slow=7.9,SNR=8.7						
KLR	Kul'dur	48.37	34	⇑eP	P	03 38 52.7	+0.3
KLR				pmax	pmax		
	comp=Z,12nm,2.0s						
ZEA	Zeya	48.95	27	eP	P	03 38 57.7	+1.0
ZEA				eS	S	03 46 04.0	+5.4
ZEA				pmax	pmax		
	comp=Z,20nm,1.0s						
ZEA				smax	smax		
	comp=E,200nm,5.6s						
ZEA				MLR	MLR		
	comp=N,400nm,17.0s						
ZEA				MLR	MLR		
	comp=Z,600nm,17.0s						
ZEA				MLR	MLR		
	comp=E,400nm,15.0s						
GNI	Garni	49.48	312	P	P	03 39 03.9	+2.6
GNI	Garni	49.48	312	P	P	03 39 01.3	+0.1
GNI				pmax	pmax		
	comp=Z,58nm,0.9s						
GNI	Garni	49.48	312	P	P	03 39 01.3	+0.1
GNI	Garni	49.48	312	P	P	03 39 03.4	+2.2
GNI				P	P	03 39 03.4	+2.2
BLDU	Ballidu	49.50	152	P	P	03 39 00.9	-0.4
	baz=50,SNR=7.9						
SVE	Sverdlovsk	49.80	338	deP	P	03 39 04.3	+1.1
SVE				eS	S	03 46 16.9	+6.4
SVE				pmax	pmax		
	comp=Z,57nm,0.9s						
GROC	Groznyy	49.82	316	eP	P	03 39 05.3	+1.7
GROC				e		03 40 27.6	
GROC				e		03 41 00.4	
GROC				eS	S	03 46 14.8	+3.6
GROC				pmax	pmax		
	comp=Z,115nm,1.1s						
ARU	Arti	50.30	336	P	P	03 39 07.2	+0.3
	comp=Z,3.3nm,0.6s,baz=153,slow=4.0,SNR=17						
ARU	Arti	50.30	336	d iP	P	03 39 07.3	+0.3
ARU						03 40 27.1	
ARU				S	S	03 46 22.1	+4.7
ARU				pmax	pmax		
	comp=Z,32nm,1.1s						
ARU	Arti	50.30	336	P	P	03 39 07.2	+0.3
ARU				IAmb	IAmb	03 39 19.8	
	comp=Z,39nm,1.0s						
MUN	Mundaring	50.44	153	P	P	03 39 08.4	+0.1
	baz=51,SNR=17						
AKH	Akhalkalaki	50.79	313	⇑P	P	03 39 13.9	+2.8
KLBR	Kellerberrin	50.80	152	P	P	03 39 10.9	-0.2
	baz=51,SNR=21						
ZEI	Tsey	50.97	315	eP	P	03 39 13.6	+1.1
ZEI				pmax	pmax		
	comp=Z,44nm,1.0s						
NCK	Nalchik	51.42	316	⇑eP	P	03 39 17.0	+1.3
NCK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
NWAO	Narrogin (SRO)	51.70	153	P	P	03 39 17.5	-0.3
	baz=52,SNR=15						
NWAO	Narrogin (SRO)	51.70	153	P	P	03 39 17.3	-0.5
NWAO				pmax	pmax		
	comp=Z,60nm,0.8s						
NWAO	Narrogin (SRO)	51.70	153	P	P	03 39 17.2	-0.5
GRNR	Gornyy	51.74	34	⇑iP	P	03 39 19.1	+1.2
GRNR				pmax	pmax		
	comp=N,4.0nm,0.7s						
GRNR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
GRNR				MLR	MLR		
	comp=N,510nm,20.0s						
GRNR				MLR	MLR		
	comp=E,430nm,20.0s						
GRNR				MLR	MLR		
	comp=Z,540nm,15.0s						
NEY	Neytrino	51.94	315	⇓eP	P	03 39 20.9	+1.2
NEY				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KBZ	Khabaz	51.98	316	P	P	03 39 21.0	+1.2
	comp=Z,5.8nm,0.9s,baz=111,slow=7.0,SNR=15						
KBZ				LR	LR	04 05 19.4	
	comp=Z,424nm,19.7s,baz=128,slow=41						
KVAR	Kislovodsk Arr	52.20	316	P	P	03 39 23.8	+2.2
	comp=Z,10nm,1.0s,baz=270,slow=20,SNR=3.7						
KIV	Kislovodsk	52.20	316	⇑P	P	03 39 23.4	+1.8
KIV	Kislovodsk	52.20	316	i P	P	03 39 23.2	+1.6
	SNR=11						
KIV	Kislovodsk	52.20	316	eP	P	03 39 22.8	+1.2
KIV				pmax	pmax		
	comp=Z,256nm,1.1s						
KIV				MLR	MLR		
	comp=Z,956nm,17.0s						
KIV	Kislovodsk	52.20	316	P	P	03 39 21.9	+0.3
KIV	Kislovodsk	52.20	316	P	P	03 39 23.2	+1.6
KIV				P	P	03 39 23.2	+1.6
GOF	Gofitskoye	52.35	317	⇑eP	P	03 39 32.7	+10
KMBL	Kambalda	52.64	148	P	P	03 39 24.6	-0.2
	baz=53,SNR=16						
ASAJ	Asahikawa	52.74	44	P	P	03 39 28.2	+2.8
	comp=Z,21nm,0.8s,baz=244,slow=11,SNR=9.9						
WB0	Warramunga Arr	52.83	128	P	P	03 39 25.9	-0.6
WB0				IAmb	IAmb	03 39 26.8	
	comp=Z,65nm,1.1s						
BELG	Belogornoye	52.85	327	P	P	03 39 26.4	+0.4
	comp=Z,33nm,0.9s,baz=148,slow=1.9,SNR=11						
WRA	Warramunga Arr	52.89	128	P	P	03 39 26.1	-0.8
	comp=Z,34nm,0.8s,baz=305,slow=8.2,SNR=231						
WRA				PcP	PcP	03 40 36.2	+0.4
	comp=Z,6.1nm,0.7s,baz=313,slow=3.6,SNR=4.7						
WRA				S	S	03 46 48.0	-6.1
	comp=Z,3.7nm,1.1s,baz=301,slow=14,SNR=8.3						
WRAB	Tennant Creek	52.90	128	c iP	P	03 39 26.3	-0.6
WRAB				pmax	pmax		
	comp=Z,72nm,1.3s						
WRAB	Tennant Creek	52.90	128	P	P	03 39 26.1	-0.8
WRAB				IAmb	IAmb	03 39 26.9	
	comp=Z,39nm,0.7s						
WB2	Warramunga Arr	52.90	128	P	P	03 39 26.3	-0.7
	baz=53						
WB2	Warramunga Arr	52.90	128	P	P	03 39 26.2	-0.7
WB2				IAmb	IAmb	03 39 26.9	
	comp=Z,40nm,0.8s						
WR0	Warramunga Arr	53.06	128	IAmb	IAmb	03 39 28.1	
	comp=Z,40nm,0.8s						
YSS	Yuzh-Sakhalins	53.84	41	eP	P	03 39 34.9	+1.4
YSS				e*SP	pP	03 39 43.6	+0.5
YSS				e		03 40 42.7	
YSS				e		03 41 41.2	
YSS				eS	S	03 47 07.1	+0.8
YSS				eSS	SKiKP	03 50 42.0	-3.0
YSS				eSSS	SSS	03 52 47.6	
YSS				pmax	pmax		
	comp=Z,30nm,1.0s						
YSS	Yuzh-Sakhalins	53.84	41	P	P	03 39 33.0	-0.5
YSS				IAmb	IAmb	03 39 44.8	
	comp=Z,42nm,0.9s						
SOC	Sochi	54.12	315	eP	P	03 39 34.0	-1.6
SOC				eS	S	03 47 09.8	-0.4
SOC				eSS	SS	03 50 52.4	+0.4
SOC				eSSS	SSS	03 52 51.5	
SOC				pmax	pmax		
	comp=Z,18nm,0.8s						
SOC				MLR	MLR		
	comp=Z,360nm,17.0s						
OPO	Ambohidratompo	54.53	236	P	P	03 39 40.9	+1.8
	comp=Z,3.8nm,0.7s,baz=79,slow=10,SNR=2.3						
ASPA	Alice Springs	54.76	132	P	P	03 39 39.8	-0.8
	baz=55						
ASAR	Alice Springs	54.77	132	P	P	03 39 40.0	-0.5
	comp=Z,18nm,0.6s,baz=309,slow=6.6,SNR=168						
ASAR				PcP	PcP	03 40 43.4	+0.4
	comp=Z,7.1nm,0.8s,baz=313,slow=5.0,SNR=5.7						
ASAR				S	S	03 47 14.5	-4.9
	comp=Z,3.4nm,1.0s,baz=305,slow=14,SNR=14						
ASAR				LR	LR	04 05 34.7	
	comp=Z,376nm,19.4s,baz=302,slow=39						
ASAR	Alice Springs	54.77	132	P	P	03 39 40.1	-0.4
EIL	Elat	55.30	297	P	P	03 39 45.1	+0.7
	comp=Z,4.7nm,0.5s,baz=102,slow=5.0						
KIRV	Kirov	55.44	334	P	P	03 39 46.0	+1.2
	comp=Z,14nm,0.4s,baz=74,slow=10,SNR=5.1						
VRH	Novokhopyorsk	55.55	324	eP	P	03 39 45.7	-0.1
VRH				e*SP	pP	03 39 54.7	-0.4
VRH				pmax	pmax		
	comp=Z,40nm,0.8s						
YAK	Yakutsk	55.60	20	P	P	03 39 46.5	+0.5
	comp=Z,24nm,0.6s,baz=31,slow=2.1,SNR=12						
YAK	Yakutsk	55.60	20	eP	P	03 39 45.9	0.0
YAK				e		03 40 42.6	
YAK				e		03 41 57.6	
YAK				ePPP	PPP	03 43 03.1	
YAK				eS	S	03 47 20.3	-9.1
YAK				eSS	SS	03 51 07.8	-6.8
YAK				pmax	pmax		
	comp=Z,55nm,0.9s						
YAK				pmax	pmax		
	comp=E,14nm,0.9s						
YAK				pmax	pmax		
	comp=N,12nm,0.8s						
YAK				pmax	pmax		
	comp=Z,157nm,3.1s						
YAK				pmax	pmax		
	comp=N,82nm,3.5s						
YAK				pmax	pmax		
	comp=E,168nm,3.5s						
YAK				smax	smax		
	comp=N,133nm,3.8s						
YAK				smax	smax		
	comp=E,196nm,3.8s						
YAK	Yakutsk	55.60	20	P	P	03 39 46.0	0.0
TOKA	Tokat	55.61	310	IAmb	IAmb	03 39 58.7	
	comp=Z,30nm,0.9s						
FORT	Forrest	55.64	142	P	P	03 39 47.0	+0.3
	baz=56,SNR=15						
FORT	Forrest	55.64	142	P	P	03 39 46.6	0.0
NRIK	Noril'sk	56.17	358	P	P	03 39 50.6	+0.7
	comp=Z,13nm,0.7s,baz=151,slow=5.6,SNR=19						
NRIK				LR	LR	04 06 19.5	
	comp=Z,733nm,21.9s,baz=180,slow=39						
NRIK	Noril'sk	56.17	358	IAmb	IAmb	03 39 51.5	
	comp=Z,18nm,0.8s						
KMBO	Kilima Mbogo	56.39	260	P	P	03 39 53.5	+0.8
	comp=Z,0.5nm,0.4s,baz=45,slow=19,SNR=1.5						
KMBO				LR	LR	04 02 23.9	
	comp=Z,583nm,19.9s,baz=68,slow=34						
VORD	Divnogorie	56.87	323	eP	P	03 39 55.1	-0.1
VORD				e*SP	pP	03 40 04.3	-0.2
VORD				pmax	pmax		
	comp=Z,20nm,0.7s						
VSR	Storozhevoye	57.04	323	eP	P	03 39 55.8	-0.6
VSR				e*SP	pP	03 40 04.9	-0.8
VSR				pmax	pmax		
	comp=Z,20nm,1.0s						
COEN	Coen	57.18	116	P	P	03 39 57.4	-0.5
QIS	Mount Isa	57.36	125	P	P	03 39 59.1	-0.1
	baz=57,SNR=26						
BR131	Keskin Array S	57.63	309	deP	P	03 40 00.4	-0.6
BR131	Keskin Array S	57.63	309	IAmb	IAmb	03 40 12.0	
	comp=Z,36nm,0.8s						
BRTR	Keskin Array B	57.63	309	P	P	03 40 00.8	-0.3
	comp=Z,7.8nm,0.8s,baz=121,slow=7.6,SNR=21						
BRTR				LR	LR	04 07 46.3	
	comp=Z,468nm,18.8s,baz=101,slow=39						
BRTR	Keskin Array B	57.63	309	P	P	03 40 01.0	-0.1
BRTR	Keskin Array B	57.63	309	P	P	03 40 01.0	-0.1
LPSR	Galich'ya Gora	57.69	325	eP	P	03 40 01.2	+0.2
LPSR				e*SP	pP	03 40 09.8	-0.5
LPSR				pmax	pmax		
	comp=Z,30nm,1.0s						
PMG	Port Moresby	58.93	110	P	P	03 40 11.1	+0.8
	comp=Z,86nm,0.9s,baz=296,slow=4.6,SNR=12						
PMG	Port Moresby	58.93	110	ceP	P	03 40 11.3	+1.0
PMG				pmax	pmax		

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             comp=Z,248nm,1.7s
PMG    Port Moresby      58.93 110   P      P       03 40 09.6  -0.7
PMG    Port Moresby      58.93 110   P      P       03 40 10.9  +0.6
MOS    Moscow            59.61 328  eP      P       03 40 13.7  -0.6
MOS                                  pmax   pmax
             comp=Z,57nm,1.5s
MOS                                  MLR    MLR
             comp=Z,1µm,17.0s
OBN    Obninsk           59.93 327   P      P       03 40 17.2  +0.7
             comp=Z,2.0nm,0.4s,baz=119,slow=13,SNR=4.0
OBN    Obninsk           59.93 327 ⇑P      P       03 40 17.1  +0.6
OBN    Obninsk           59.93 327   P      P       03 40 16.7  +0.2
OBN                                  IAmb   IAmb    03 40 27.8
             comp=Z,36nm,1.1s
MTSU   Mount Surprise    60.03 120   P      P       03 40 18.2  +0.4
             baz=60,SNR=4.7
KLMR   Klimovskoe        60.89 334  eP      P       03 40 21.6  -1.4
KLMR                                 pmax   pmax
             comp=Z,71nm,1.5s
KLMR   Klimovskoe        60.89 334  eP      P       03 40 21.7  -1.3
KLMR                                 AMP            03 40 39.6
             comp=Z,71nm,1.5s
KLMR                                 LQ     LQ      04 01 00.4
KLMR                                 LQ     LQ      04 01 00.4
KLMR                                 LR     LR      04 07 31.8
BBOO   Buckleboo         61.98 139   P      P       03 40 30.5  -0.3
             baz=62,SNR=24
BBOO   Buckleboo         61.98 139   P      P       03 40 30.7  -0.1
TLCR                     62.09 314 ⇑P      P       03 40 32.0  +0.7
TIRR   Tirgusor          62.25 313 ⇑P      P       03 40 33.2  +0.8
TPGR   Topolog           62.31 314 ⇑P      P       03 40 33.6  +0.7
MILM   Milestii Mici     62.39 316 ⇓P      P       03 40 33.3   0.0
TIXI   Tiksi             62.41  12   P      P       03 40 32.9  -0.2
TIXI                                 pmax   pmax
             comp=Z,42nm,0.9s
TIXI   Tiksi             62.41  12   P      P       03 40 32.9  -0.2
MBAR   Mbarara           62.51 262   P      P       03 40 35.0  +0.1
MBAR                                 pmax   pmax
             comp=Z,6.0nm,0.9s
MBAR   Mbarara           62.51 262   P      P       03 40 35.0  +0.1
CTAO   Charters Tower    62.55 121   P      P       03 40 34.4  -0.5
CTAO                                 pmax   pmax
             comp=Z,60nm,1.2s
CTAO   Charters Tower    62.55 121   P      P       03 40 34.4  -0.5
CFR    Carcaliu          62.56 314 ⇑P      P       03 40 35.3  +0.9
ICOR   Ion Corvin        62.64 313 ⇑P      P       03 40 36.1  +1.0
AKASG  Malin Array Be    62.88 320   P      P       03 40 36.2  -0.3
             comp=Z,4.1nm,0.8s,baz=88,slow=4.8,SNR=21
AKASG                                LR     LR      04 13 07.0
             comp=Z,354nm,18.5s,baz=90,slow=41
AKASG  Malin Array Be    62.88 320   P      P       03 40 36.5   0.0
AKASG                                pmax   pmax
             comp=Z,6.0nm,0.9s
AKASG  Malin Array Be    62.88 320   P      P       03 40 36.5   0.0
AKBB   Malin Array Si    62.88 320   P      P       03 40 36.6  +0.1
AKBB                                 pmax   pmax
             comp=Z,19nm,0.9s
AKBB   Malin Array Si    62.88 320   P      P       03 40 36.6  +0.1
AKBB                                 IAmb   IAmb    03 40 47.7
             comp=Z,19nm,0.8s
SORM   Soroca            62.92 317 ⇑P      P       03 40 37.1  +0.3
MA2    Magadan           62.96  29   P      P       03 40 37.5  +0.5
             comp=Z,27nm,0.9s,baz=216,slow=4.1,SNR=12
MA2    Magadan           62.96  29 deP      P       03 40 37.9  +0.9
MA2                                  pmax   pmax
             comp=Z,34nm,1.0s
MA2    Magadan           62.96  29   P      P       03 40 36.9  -0.1
VASR   Vaslui            63.03 316 ⇑P      P       03 40 38.0  +0.4
TMCR   Tamitsa           63.04 336  eP      P       03 40 37.4  +0.1
TMCR                                 pmax   pmax
             comp=Z,29nm,1.3s
PETR   Petresti          63.27 315 ⇑P      P       03 40 41.1  +1.8
IAS    Iasi              63.28 316 ⇑P      P       03 40 39.1  -0.1
PGOR   Pogoanele         63.33 314 ⇑P      P       03 40 41.9  +2.3
ODBI   Odobesti          63.40 315 ⇑P      P       03 40 41.8  +1.7
RAZG   Razgrad           63.49 312 ⇑P      P       03 40 41.6  +0.9
VRI    Vrincioaia        63.64 315 ⇑P      P       03 40 43.4  +1.7
ISR    Istrita           63.66 314 ⇑P      P       03 40 43.4  +1.4
PLOR   Plostina          63.69 315 ⇑P      P       03 40 43.9  +1.8
TESR   Tescani           63.79 315 ⇑P      P       03 40 43.3  +0.6
SGRR   Singureni         63.95 313 ⇓P      P       03 40 44.6  +0.9
SECR                     63.99 314 ⇑P      P       03 40 45.9  +1.9
QLP    Quilpie           64.12 128   P      P       03 40 46.0  +0.9
             baz=64,SNR=5.9
MLR    Muntele Rosu      64.13 314   P      P       03 40 46.7  +1.6
             comp=Z,38nm,0.9s,baz=49,slow=2.4,SNR=21
MLR    Muntele Rosu      64.13 314 ⇑P      P       03 40 46.6  +1.4
MLR    Muntele Rosu      64.13 314   P      P       03 40 45.6  +0.4
PRAR   RASCA             64.20 316 ⇑P      P       03 40 45.9  +0.5
BIZ    Bicaz             64.22 316 ⇑P      P       03 40 46.6  +1.1
HTT    Hallett           64.23 138   P      P       03 40 46.1  +0.3
             baz=64,SNR=15
OZUR                     64.32 315 ⇑P      P       03 40 46.2   0.0
ZIMR                     64.33 312 ⇑P      P       03 40 47.5  +1.3
MNK    Minsk             64.54 324  i P     P       03 40 47.2  -0.2
             comp=E,3.0nm,1.0s
MNK                                 i P     P       03 40 47.2  -0.2
             comp=N,14nm,1.0s
MNK                                 i P     P       03 40 47.2  -0.2
             comp=Z,53nm,1.0s
MNK                                 i PcP   PcP     03 41 20.6  -0.7
MNK                                 i PP    PP      03 43 09.4  -0.1
MNK                                 i PPP   PPP     03 44 40.8
MNK                                 i S     S       03 49 25.6  +1.1
MNK                                 i ScS   ScS     03 50 40.5  +1.1
MNK                                 i SS    SS      03 53 39.0  +3.9
MNK                                 i SSS   SSS     03 56 41.3
MNK                                 i LQ    LQ      04 04 28.9
MNK                                 i LR    LR      04 07 58.0
MNK                                 i LRM   MLR     04 11 19.1
             comp=E,41nm,18.7s
MNK                                 i LRM   MLR     04 13 04.8
             comp=Z,182nm,18.0s
MNK                                 i LRM   MLR     04 13 10.0
             comp=N,400nm,18.0s
DOPR   Dopca             64.58 315 ⇑P      P       03 40 48.8  +0.9
HUMR   Humele            64.70 313 ⇑P      P       03 40 49.4  +0.7
STFAR  Stefanesti-Arg    64.75 313 ⇑P      P       03 40 50.9  +1.9
VOIR                     64.75 314 ⇑P      P       03 40 50.0  +0.9
PETK   Petropavlovsk-    64.82  37   P      P       03 40 50.7  +1.4
             comp=N,12nm,1.1s,baz=275,slow=7.1,SNR=2.1
PETK                                 LR     LR      04 14 01.1
             comp=N,842nm,18.0s,baz=243,slow=40
PLVB   Pleven            64.84 312 ⇑P      P       03 40 50.7  +1.1
SEY    Seymchan          64.91  26   P      P       03 40 49.9  +0.2
             comp=N,11nm,1.0s,baz=284,slow=4.5,SNR=15
BURAR  Bucovina Array    64.92 317 ⇑P      P       03 40 51.5  +1.3
BURAR  Bucovina Array    64.92 317   P      P       03 40 50.2   0.0
BUR08  Bucovina Ar. S    64.93 317   P      P       03 40 50.3   0.0
BUR08                                IAmb   IAmb    03 41 04.2
             comp=Z,19nm,0.8s
ARR    Arges             65.03 314 ⇓P      P       03 40 51.6  +0.6
VLAD   Vladila           65.05 312 ⇓P      P       03 40 52.2  +1.3
STKA   Stephens Creek    65.11 135   P      P       03 40 51.6  +0.1
             baz=65,SNR=27
STKA   Stephens Creek    65.11 135   P      P       03 40 51.6  +0.1
             comp=Z,23nm,0.8s,baz=313,slow=7.1,SNR=45
STKA                                 LR     LR      04 12 56.6
             comp=Z,499nm,19.3s,baz=291,slow=40
STKA   Stephens Creek    65.11 135   P      P       03 40 51.3  -0.1
NACGM  Naroch            65.26 325  i P     P       03 40 50.9  -1.2
NACGM                               i P     P       03 40 50.9  -1.2
NACGM                               i P     P       03 40 50.9  -1.2
NACGM                               i PcP   PcP     03 41 21.7  -2.5
NACGM                               i PP    PP      03 43 08.3  -7.4
NACGM                               i PPP   PPP     03 44 51.9
NACGM                               i S     S       03 49 29.6  -3.7
NACGM                               i PS            03 51 05.3
NACGM                               i SS    SS      03 53 44.0  -2.2
NACGM                               i SSS   SSS     03 56 46.8
NACGM                               i LQ    LQ      04 04 44.2
NACGM                               i LR    LR      04 10 20.3
IDID   Didziasalis       65.37 325  eP      P       03 40 50.4  -2.4
ARCR   ARCALIA           65.43 316 ⇑P      P       03 40 54.9  +1.5
LOT    Lotru             65.65 314 ⇑P      P       03 40 55.3  +0.4
IIGN   Ignalina          65.67 325  eP      P       03 40 52.3  -2.4
ISAL   Salakas           65.77 325  eP      P       03 40 53.4  -1.9
VTS    Vitosha           65.78 311 ⇑P      P       03 40 56.5  +0.6
VTS    Vitosha           65.78 311   IAmb   IAmb    03 41 07.5
             comp=Z,17nm,0.9s
BAIL   Bailesti          65.81 312 ⇑P      P       03 40 57.2  +1.4
CJR    Cluj-Napoca       65.90 315 ⇑P      P       03 40 58.1  +1.6
LVV    L'vov             66.00 319  eP      P       03 40 57.6  +0.6
VSU    Vasula            66.11 328  eP      P       03 40 57.4  -0.1
VSU    Vasula            66.11 328⇑eP      P       03 40 57.9  +0.4
VSU                                  pmax   pmax
             comp=Z,210nm,3.0s
PUNG   Punghina          66.13 313 ⇓P      P       03 40 59.2  +1.2
VAY    Valandovo         66.19 309  i Pn    P       03 40 54.1  -4.3
DEV    Deva              66.30 314 ⇑P      P       03 41 00.4  +1.4
GZR    Gura Zlata        66.34 314 ⇑P      P       03 40 59.9  +0.5
STIP   Stip              66.50 310  i Pn    P       03 40 58.9  -1.4
DRGR                     66.52 315 ⇑P      P       03 41 01.6  +1.1
HERR   Herculane         66.55 313 ⇑P      P       03 41 01.5  +0.9
KWP    Kalwaria Pacla    66.83 318  eP      P       03 41 03.4  +1.1
KWP                                 esP     pP      03 41 11.5  -0.3
KWP                                 eL      L       04 14 51.0
             comp=Z,309nm,23.0s
PABE   Paberze           66.96 325  eP      P       03 41 02.1  -0.9
BOVS   Bovan             66.97 312 ⇑P      P       03 41 03.3   0.0
UZH    Uzhgorod          66.99 317⇑i P     P       03 41 04.6  +1.3
UZH                                 i               03 41 26.3
KOLS   Kolonicke sedl    67.03 318  eP      P       03 41 04.5  +0.9
KOLS                                e               03 41 14.9
KOLS   Kolonicke sedl    67.03 318  eP      P       03 41 04.5  +0.9
KOLS                                e               03 41 14.9
MDVR   Moldovita         67.04 313 ⇑P      P       03 41 04.4  +0.6
SUW    Suwalki           67.15 323  eP      P       03 41 04.4  +0.2
SUW                                 esP     pP      03 41 13.6  -0.1
SUW                                 eL      L       04 13 02.3
             comp=Z,668nm,18.7s
SUW    Suwalki           67.15 323  eP      P       03 41 03.8  -0.4
SUW    Suwalki           67.15 323   P      P       03 41 03.2  -1.0
SUW                                  pmax   pmax
             comp=Z,94nm,0.9s
SUW    Suwalki           67.15 323   P      P       03 41 03.2  -1.0
BZS    Buzias            67.17 314 ⇑P      P       03 41 05.2  +0.6
FIA1   FINESS Array S    67.18 332   P      P       03 41 04.6  +0.4
FIA1                                 IAmb   IAmb    03 41 16.9
             comp=Z,28nm,0.8s
FINES  FINESS Array B    67.18 332   P      P       03 41 04.6  +0.3
             comp=Z,14nm,0.8s,baz=102,slow=6.0,SNR=33
FINES                                LR     LR      04 13 42.9
             comp=Z,613nm,20.6s,baz=116,slow=39
SIRR   Siria             67.19 315 ⇑P      P       03 41 06.0  +1.3
OHR    Ohrid             67.52 309  i Pn    P       03 41 06.5  -0.5
CRVS   Cervenica-Dubn    67.56 318  eP      P       03 41 08.2  +1.2
CRVS                                e               03 41 18.8
CRVS                                 pmax   pmax
             comp=Z,59nm,1.3s
CRVS   Cervenica-Dubn    67.56 318  eP      P       03 41 08.2  +1.2
CRVS                                e               03 41 18.8
RMQ    Roma              67.58 126   P      P       03 41 09.2  +1.7
             baz=68,SNR=32
MTSE   Matsula           67.66 328  eP      P       03 41 06.7  -0.6
CMSA   Cobar Meteorol    67.82 132   P      P       03 41 09.4  +0.6
             baz=68,SNR=77
KECS   Kecovo            68.17 317  e       P       03 41 22.6  +12
PBUR   Paburge           68.18 325  eP      P       03 41 11.2  +0.5
DIVS   Divibare          68.23 312   IAmb   IAmb    03 41 29.0
             comp=Z,21nm,1.1s
NIE    Niedzica          68.37 318  eP      P       03 41 13.7  +1.6
NIE                                 esP     pwP     03 41 22.4  -1.4
NIE                                 eL      L       04 12 55.2
             comp=Z,212nm,22.8s
FRGS   Fruska Gora       68.41 313 ⇑P      P       03 41 12.6  +0.2
PSZ    Piszkesteto       68.52 316 ⇑P      P       03 41 13.8  +0.7
PSZ    Piszkesteto       68.52 316   IAmb   IAmb    03 41 25.1
             comp=Z,21nm,0.9s
PDG    Podgorica         68.71 311 ⇑P      P       03 41 14.7  +0.4
OJC    Ojcow             68.76 319  eP      P       03 41 15.3  +0.9
OJC                                 esP     pP      03 41 23.8  -0.2
OJC                                 eL      L       04 15 49.0
             comp=Z,597nm,18.2s
EIDS   Eidsvold          68.92 124   IAmb   IAmb    03 41 17.0
             comp=Z,22nm,1.0s
VYHS   Vyhne             69.26 317  eP      P       03 41 18.0  +0.4
VYHS                                e               03 41 27.5
VYHS                                 pmax   pmax
             comp=Z,15nm,1.2s
VYHS   Vyhne             69.26 317  eP      P       03 41 18.0  +0.4
VYHS                                e               03 41 27.5
MORH   Mrgy, Hungar      69.28 315 ⇑P      P       03 41 17.6  -0.1
SRO    Srobarova         69.58 316  eP      P       03 41 21.2  +1.7
SRO                                 e               03 41 31.8
SRO    Srobarova         69.58 316  eP      P       03 41 21.2  +1.7
SRO                                 e               03 41 31.8
ARCES  ARCESS Array B    69.66 340   P      P       03 41 20.5  +0.8
             comp=Z,16nm,0.9s,baz=86,slow=5.0,SNR=12
ARCES                                LR     LR      04 14 41.9
             comp=Z,924nm,18.2s,baz=105,slow=38
ARCES  ARCESS Array B    69.66 340   P      P       03 41 19.7  +0.1
ARCES                                IAmb   IAmb    03 41 21.0
             comp=Z,18nm,1.0s
JAVC   Velka Javorina    70.06 317  eP      P       03 41 23.9  +1.3
MORC   Moravsky Berou    70.18 318 ⇑P      P       03 41 24.0  +0.7
MORC   Moravsky Berou    70.18 318  eP      P       03 41 24.0  +0.7
MORC   Moravsky Berou    70.18 318   IAmb   IAmb    03 41 36.1
             comp=Z,31nm,0.8s
MODS   Modra-Piesok      70.30 317  eP      P       03 41 23.7  -0.3
MODS                                e               03 41 34.3
MODS                                 pmax   pmax
             comp=Z,29nm,1.0s
MODS   Modra-Piesok      70.30 317  eP      P       03 41 23.7  -0.3
MODS                                e               03 41 34.3
ZST    Bratislava        70.41 317  e       P       03 41 36.0  +11
KRLC   Kraliky           70.69 319  eP      P       03 41 27.4  +1.0
KRLC                                e               03 41 36.5
KRLC   Kraliky           70.69 319  eP      P       03 41 27.4  +1.0
KRLC                                ex      x       03 41 36.5
VRAC   Vranov            70.78 318   P      P       03 41 26.9   0.0
             comp=Z,1.6nm,0.4s,baz=87,slow=5.2,SNR=4.1
VRAC   Vranov            70.78 318 ⇑P      P       03 41 27.7  +0.7
VRAC   Vranov            70.78 318  eP      P       03 41 28.2  +1.3
KRUC   Moravsky          70.90 318  eP      P       03 41 28.2  +0.5
KOGS   Kog               70.94 315  i P     P       03 41 28.4  +0.4
KOGS                                i pP    pwP     03 41 39.1  -0.6
UPP    Uppsala           70.97 329  eP      P       03 41 27.1  -0.7
DPC    Dobruska-Polom    71.00 319  eP      P       03 41 29.6  +1.3
DPC                                 e               03 41 40.3
DPC    Dobruska-Polom    71.00 319  eP      P       03 41 29.6  +1.3
DPC                                 ex      x       03 41 40.3
TOO    Toolangi          71.00 138   P      P       03 41 29.9  +1.5
             baz=71,SNR=4.5
TOO    Toolangi          71.00 138   IAmb   IAmb    03 41 30.1
             comp=Z,32nm,1.0s
KSP    Ksiaz             71.03 319  eP      P       03 41 29.6  +1.2
KSP                                 esP     pP      03 41 37.7  -0.3
KSP                                 eL      L       04 16 00.9
             comp=Z,363nm,19.8s
OSTC   Ostas             71.07 319  eP      P       03 41 29.6  +0.9
OSTC                                ex      x       03 41 38.7
CHVC   Chvalec           71.17 319  eP      P       03 41 30.4  +1.1
CHVC                                ex      x       03 41 39.6
UPC    Upice             71.20 319  eP      P       03 41 30.5  +1.1
UPC    Upice             71.20 319  eP      P       03 41 30.5  +1.1
CONA   Conrad Observa    71.23 316  eP      P       03 41 30.3  +0.5
             comp=Z,4.8nm,0.8s,SNR=5.5
ARSA   Arzberg           71.45 316  eP      P       03 41 32.0  +0.9
             comp=Z,9.4nm,1.1s
ARMA   Armidale          71.67 128   P      P       03 41 34.5  +1.9
             baz=72,SNR=16
PERS   Pernice           71.73 315  i P     P       03 41 33.2  +0.5
PERS                                i pP    pwP     03 41 43.9  -0.7
SOKA   Soboth            71.78 315  eP      P       03 41 33.8  +0.7
             comp=Z,11nm,1.1s,SNR=8.5
OBKA   Obir              72.12 315  eP      P       03 41 35.9  +0.7
             comp=Z,9.1nm,0.9s,SNR=5.0
PVCC   Panska Ves        72.12 319  eP      P       03 41 36.2  +1.2
PVCC                                e               03 41 46.8
PVCC   Panska Ves        72.12 319  eP      P       03 41 36.2  +1.2
PVCC                                ex      x       03 41 46.8
PRU    Pruhonice         72.13 318  eP      P       03 41 35.9  +0.9
PRU                                 e               03 41 47.0
PRU    Pruhonice         72.13 318  eP      P       03 41 35.9  +0.9
PRU                                 ex      x       03 41 47.0
CAN    Canberra          72.16 134   IAmb   IAmb    03 41 36.6
             comp=Z,34nm,0.9s
PRA    Prague            72.20 319  eP      P       03 41 36.7  +1.3
PRA                                 e               03 41 45.9
PRA    Prague            72.20 319  eP      P       03 41 36.7  +1.3
PRA                                 ex      x       03 41 45.9
CKRC   Cesky Krumlov     72.27 317  eP      P       03 41 36.7  +0.7
CKRC                                ex      x       03 41 47.6
MOA    Molln             72.30 316  eP      P       03 41 35.7  -0.5
             comp=Z,3.2nm,0.9s,SNR=5.0
CNB    Canberra Magne    72.41 134   P      P       03 41 37.6  +0.6
             baz=72,SNR=7.1
PBCC   Pribram           72.48 318  eP      P       03 41 38.4  +1.2
PBCC                                ex      x       03 41 47.1
BRG    Berggiesshubel    72.52 319  i P     P       03 41 38.4  +1.0
BRG                                  Amp            03 41 40.5
             comp=Z,36nm,1.7s
BRG                                 ex      x       03 41 49.1
BRG                                  Amp            03 41 50.3
             comp=Z,18nm,0.8s
BRG    Berggiesshubel    72.52 319  eP      P       03 41 38.4  +1.0
             comp=Z,36nm,1.7s,baz=88,slow=5.7
BRG                                 epP     sP      03 41 49.3  -1.1
VAE    Valguarnera       72.52 305   P      P       03 41 42.8  +5.1
             comp=Z,9.2nm,0.4s,baz=113,slow=7.7,SNR=2.3
RUE    Ruedersdorf       72.64 321  eP      P       03 41 39.1  +1.1
             comp=Z,38nm,0.9s,baz=88,slow=5.7
RUE                                 epP     pwP     03 41 49.8  -0.1
GEC2   GERESS Array S    72.67 317   IAmb   IAmb    03 41 51.0
             comp=Z,23nm,0.8s
GEC2   GERESS Array S    72.67 317  eP      P       03 41 39.3  +0.8
             comp=Z,18nm,0.9s,baz=88,slow=5.7
GEC2                                epP     pwP     03 41 49.7  -0.5
GERES  GERESS Array B    72.67 317   P      P       03 41 39.0  +0.5
             comp=Z,9.8nm,0.8s,baz=77,slow=5.8,SNR=61
GERES                                LR     LR      04 18 45.9
             comp=Z,244nm,18.0s,baz=67,slow=40
GERES  GERESS Array B    72.67 317   P      P       03 41 39.0  +0.5
GERES  GERESS Array B    72.67 317   P      P       03 41 38.5   0.0
MYKA   Terra Mystica     72.74 315  eP      P       03 41 38.8  -0.1
             comp=Z,1.6nm,0.6s
KHC    Kasperske Hory    72.75 318  eP      P       03 41 39.4  +0.6
KHC                                 e               03 41 49.9
KHC    Kasperske Hory    72.75 318  eP      P       03 41 39.4  +0.6
KHC                                 ex      x       03 41 49.9
FBE    Freiberg          72.89 319  eP      P       03 41 41.0  +1.4
             comp=Z,46nm,1.6s,baz=88,slow=5.7
FBE                                 epP     sP      03 41 51.6  -1.0
KBA    Koelnbreinsper    72.94 315  eP      P       03 41 40.0  -0.1
             comp=Z,3.2nm,0.7s
HFS    Hagfors           72.96 329   P      P       03 41 40.2  +0.4
             comp=Z,12nm,0.8s,baz=119,slow=5.4,SNR=18
CLL    Collm             73.12 320  i P     P       03 41 41.4  +0.6
             comp=Z,11nm,1.0s
CLL                                 i pP    pP      03 41 45.8  -4.6
CLL                                 i sP    pwP     03 41 50.6  -2.1
             comp=Z,15nm,0.9s
CLL                                 i PcP   PcP     03 41 57.1  -0.4
CLL                                 ePP     PP      03 44 21.0  -2.8
CLL                                 eS      S       03 51 06.0  -0.3
CLL                                 e(SS)           03 56 12.0
CLL                                 e(SSS)          03 59 30.0
CLL                                 eSSSS           04 00 54.0
CLL                                  LmV            04 18 00.0
             comp=Z,500nm,19.8s
CLL    Collm             73.12 320  i P     P       03 41 41.4  +0.6
CLL                                 i               03 41 52.1
CLL                                  pmax   pmax
             comp=Z,11nm,1.0s
CLL                                  MLR    MLR
             comp=Z,500nm,19.8s
CLL    Collm             73.12 320  eP      P       03 41 41.5  +0.6
             comp=Z,7.8nm,1.0s,baz=88,slow=5.7
CLL                                 epP     pwP     03 41 52.1  -0.6
ZOU    Zoufplan          73.20 315   IAmb   IAmb    03 41 59.5
             comp=Z,26nm,1.1s
WET    Wettzell          73.22 318  eP      P       03 41 42.5  +0.9
             comp=Z,16nm,1.2s,baz=88,slow=5.7
WET                                 epP     pwP     03 41 53.1  -0.3
RJOB   Jochberg          73.30 316  eP      P       03 41 43.2  +1.1
             comp=Z,24nm,0.9s,baz=88,slow=5.7
TANN   Tannenbergstha    73.47 319  eP      P       03 41 43.9  +0.9
             comp=Z,13nm,1.3s,baz=88,slow=5.7
TANN                                epP     pwP     03 41 54.7  -0.2
NKC    Novy Kostel       73.48 319  eP      P       03 41 43.7  +0.6
NKC                                 e               03 41 53.5
NKC    Novy Kostel       73.48 319  eP      P       03 41 43.7  +0.6
NKC                                 ex      x       03 41 53.5
ABTA   Abfaltersbach     73.52 315  eP      P       03 41 43.0  -0.4
             comp=Z,2.0nm,0.7s
WERN   Wernitzgruen      73.52 319  eP      P       03 41 44.4  +1.0
             comp=Z,10.0nm,1.1s,baz=88,slow=5.7
WERN                                epP     pwP     03 41 55.1  -0.1
GUNZ   Gunzen            73.55 319  eP      P       03 41 44.5  +1.0
             comp=Z,14nm,1.1s,baz=88,slow=5.7
GUNZ                                epP     pwP     03 41 55.1  -0.2
ROTZ   Rotzenmuhle       73.64 318  eP      P       03 41 45.3  +1.3
             comp=Z,28nm,1.4s,baz=88,slow=5.7
ROTZ                                epP     sP      03 41 55.9  -1.1
PLN    Plauen            73.66 319  eP      P       03 41 44.9  +0.8
             comp=Z,7.7nm,0.9s,baz=88,slow=5.7
PLN                                 epP     pwP     03 41 55.7  -0.3
MANZ   Manzenberg        73.70 318  eP      P       03 41 45.8  +1.4
             comp=Z,30nm,1.4s,baz=88,slow=5.7
MANZ                                epP     sP      03 41 56.4  -1.0
NEUB   Neuenburg         73.89 320  eP      P       03 41 46.2  +0.8
             comp=Z,24nm,1.2s,baz=88,slow=5.7
NEUB                                epP     pwP     03 41 56.8  -0.4
NC602  NORSAR Array S    74.06 330   P      P       03 41 46.3  +0.1
NC602                                IAmb   IAmb    03 42 00.3
             comp=Z,39nm,0.9s
WTTA   Wattenberg        74.10 316  eP      P       03 41 46.5  -0.5
             comp=Z,3.5nm,0.5s,SNR=7.3
WATA   Walderalm         74.14 316  eP      P       03 41 46.5  -0.7
             comp=Z,2.8nm,0.6s
CTI    Castel Tesino     74.14 314   IAmb   IAmb    03 41 59.3
             comp=Z,23nm,0.8s
FLTG   Flechtingen       74.20 321  eP      P       03 41 47.4  +0.2
             comp=Z,49nm,2.0s,baz=88,slow=5.7
FLTG                                epP     pwP     03 41 58.1  -0.9
NB2    NORSAR Subarra    74.22 330   P      P       03 41 46.8  -0.4
             comp=Z,16nm,0.8s,baz=94,slow=5.3
NB2    NORSAR Subarra    74.22 330   P      P       03 41 46.8  -0.4
             baz=94,slow=5.3
NOA    NORSAR Array B    74.22 330   P      P       03 41 47.2   0.0
             comp=Z,11nm,0.9s,baz=91,slow=5.7,SNR=17
NOA                                  LR     LR      04 17 36.0
             comp=Z,371nm,21.0s,baz=110,slow=38
HSPB   Hornsund (broa    74.24 347  eP      P       03 41 48.2  +1.2
HSPB                                eL      L       04 17 43.5
             comp=Z,676nm,22.2s
SPITS  Spitsbergen Ar    74.27 348   P      P       03 41 48.0  +0.8
             comp=Z,18nm,0.8s,baz=96,slow=8.0,SNR=11
GRA1   Grafenberg Arr    74.28 318   IAmb   IAmb    03 42 00.4
             comp=Z,26nm,1.0s
GRF    Grafenberg Arr    74.28 318  eP      P       03 41 49.1  +1.3
             comp=Z,18nm,1.1s,baz=88,slow=5.7
GRF                                 eL      L       04 19 03.9
             comp=Z,351nm,21.0s
GRFO   Grafenberg        74.28 318   P      P       03 41 47.7  -0.1
GRFO                                 pmax   pmax
             comp=Z,20nm,0.9s
GRFO   Grafenberg        74.28 318   P      P       03 41 47.7  -0.1
GRFO                                 IAmb   IAmb    03 42 00.4
             comp=Z,20nm,0.9s
SQTA   Sankt Quirin      74.39 316  eP      P       03 41 48.3  -0.3
             comp=Z,9.0nm,0.9s
MOTA   Moosalm           74.45 316  eP      P       03 41 48.6  -0.4
             comp=Z,7.5nm,0.9s,SNR=7.8
ASSE   Asse, Remlinge    74.55 321  epP     pP      03 42 00.5  +1.8
RETA   Reutte            74.68 316  eP      P       03 41 50.0  -0.3
             comp=Z,10nm,1.1s,SNR=8.6
ZCCA   Zocca             74.71 313   IAmb   IAmb    03 42 08.7
             comp=Z,41nm,1.1s
BSEG   Bad Segeberg      74.72 323  eP      P       03 41 51.5  +1.4
             comp=Z,28nm,1.0s,baz=88,slow=5.7
BSEG                                epP     sP      03 42 02.3  -1.3
FETA   Feichten          74.73 315  eP      P       03 41 50.6   0.0
             comp=Z,6.1nm,1.0s,SNR=7.1
CLZ    Clausthal         74.75 320  eP      P       03 41 51.4  +1.0
             comp=Z,20nm,1.1s,baz=88,slow=5.7
CLZ                                 epP     pwP     03 42 02.1  -0.2
GTTG   Gottingen         75.01 320  eP      P       03 41 53.0  +1.0
             comp=Z,35nm,1.2s,baz=88,slow=5.7
GTTG                                epP     pwP     03 42 03.8   0.0
UBR    Ueberruh          75.11 316  epP     pP      03 42 03.5  +1.3
LBTB   Lobatse           75.28 239   P      P       03 41 54.4  +0.4
LBTB                                 pmax   pmax
             comp=Z,13nm,0.9s
LBTB   Lobatse           75.28 239   P      P       03 41 54.4  +0.4
DAVA   Damuels           75.29 316  eP      P       03 41 53.9   0.0
             comp=Z,4.4nm,0.5s,SNR=9.2
MUD    Monsted U'grnd    75.31 325  i P     P       03 41 54.1  +0.6
MUD    Monsted U'grnd    75.31 325  i P     P       03 41 54.1  +0.6
MUD    Monsted U'grnd    75.31 325  i P     P       03 41 53.1  -0.3
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MUD				i P	pP	03 41 54.2	-8.9
DAVOX	Davos/Dischmat	75.32	315	P	P	03 41 53.9	-0.2
	comp=Z,5.0nm,0.8s,baz=105,slow=6.9,SNR=9.4						
KASTN	Kahler Asten	76.00	320	eP	P	03 41 58.4	+0.8
	comp=Z,18nm,1.4s,baz=88,slow=5.7						
TNS	Taunus Mts	76.05	319	epP	pP	03 42 09.5	+1.9
BFO	Black Forest	76.26	317	P	P	03 41 59.5	+0.3
BFO				pmax	pmax		
	comp=Z,11nm,1.1s						
BFO	Black Forest	76.26	317	P	P	03 41 59.5	+0.3
BFO	Black Forest	76.26	317	eP	P	03 41 59.4	+0.1
	comp=Z,5.5nm,1.0s,baz=88,slow=5.7						
IBBN	Ibbenburen	76.34	321	eP	P	03 42 00.5	+1.1
	comp=Z,21nm,0.8s,baz=88,slow=5.7						
IBBN				epP	PcP	03 42 11.2	0.0
BUG	Bochum--Univer	76.70	320	eP	P	03 42 02.5	+1.0
	comp=Z,16nm,1.0s,baz=88,slow=5.7						
KEST	Kesra	76.74	304	P	P	03 42 01.8	-0.4
	comp=Z,7.2nm,0.8s,baz=312,slow=5.0,SNR=9.3						
KEST	Kesra	76.74	304	IAmb	IAmb	03 42 19.9	
	comp=Z,32nm,1.0s						
AHRW	Bad Neuenahr-A	76.90	319	eP	P	03 42 03.9	+1.2
	comp=Z,16nm,1.1s,baz=88,slow=5.7						
BOSA	Boshof	76.94	236	P	P	03 42 03.5	+0.1
	comp=Z,6.0nm,0.7s,baz=72,slow=3.3,SNR=15						
BOSA				LR	LR	04 14 15.5	
	comp=Z,272nm,18.6s,baz=72,slow=34						
BOSA	Boshof	76.94	236	P	P	03 42 03.7	+0.2
BOSA				pmax	pmax		
	comp=Z,29nm,1.2s						
BOSA	Boshof	76.94	236	P	P	03 42 03.7	+0.2
BOSA				IAmb	IAmb	03 42 16.0	
	comp=Z,29nm,1.1s						
SENIN	Lac Senin/Sane	77.13	315	IAmb	IAmb	03 42 16.3	
	comp=Z,15nm,0.8s						
BNI	Bardonecchia	77.70	314	IAmb	IAmb	03 42 23.2	
	comp=Z,26nm,0.8s						
DZM	Mont Dzumac	80.69	115	P	P	03 42 25.6	+1.4
	comp=Z,8.2nm,0.8s,baz=266,slow=19,SNR=2.2						
DZM	Mont Dzumac	80.69	115	eP	P	03 42 25.4	+1.2
	comp=Z,69nm,1.4s						
DAG	Danmarks Havn	81.91	347	i P	P	03 42 28.5	-1.0
	comp=Z,7.3nm,0.9s						
DAG				i		03 42 40.5	
DAG	Danmarks Havn	81.91	347	i P	P	03 42 28.5	-1.0
DAG				i		03 42 40.5	
DAG				pmax	pmax		
	comp=Z,7.0nm,0.9s						
DAG	Danmarks Havn	81.91	347	i P	P	03 42 28.6	-1.0
DAG				IAmb	IAmb	03 42 30.9	
	comp=Z,7.3nm,0.9s						
DAG				i		03 42 40.5	
TAM	Tamanrasset	82.06	292	P	P	03 42 30.3	-1.2
TAM				pmax	pmax		
	comp=Z,14nm,1.1s						
TAM	Tamanrasset	82.06	292	P	P	03 42 30.3	-1.2
TNA	Tin City	82.09	24	P	P	03 42 31.0	+0.4
	baz=284						
DBG	Daneborg	83.28	345	i P	P	03 42 35.5	-1.2
DBG				i		03 42 47.6	
RDOG	Red Dog Mine	83.29	21	IAmb	IAmb	03 42 50.4	
	comp=Z,30nm,1.2s						
ANM	Nome	83.40	25	IAmb	IAmb	03 42 50.4	
	comp=Z,35nm,1.1s						
A21K	Barrow	84.15	18	P	P	03 42 41.6	+0.4
	baz=294						
ESDC	Sonseca Array	86.41	310	P	P	03 42 53.7	+0.5
	comp=Z,2.4nm,0.9s,baz=63,slow=4.2,SNR=14						
ESDC				PP	PP	03 46 12.0	-2.5
	comp=Z,0.6nm,0.8s,baz=44,slow=6.6,SNR=2.2						
ESDC				LR	LR	04 26 49.9	
	comp=Z,124nm,19.1s,baz=95,slow=39						
ESDC	Sonseca Array	86.41	310	P	P	03 42 53.2	0.0
ESDC				IAmb	IAmb	03 43 05.8	
	comp=Z,14nm,0.9s						
PAB	San Pablo	86.73	310	P	P	03 42 54.8	-0.1
PAB				pmax	pmax		
	comp=Z,9.0nm,1.1s						
PAB	San Pablo	86.73	310	P	P	03 42 54.8	-0.1
IMAR	Indian Mountai	87.41	22	P	P	03 42 57.7	+0.2
TOLK	Toolik Lake Re	87.54	19	P	P	03 42 58.9	+0.8
	baz=301						
TOLK	Toolik Lake Re	87.54	19	IAmb	IAmb	03 43 12.1	
	comp=Z,24nm,0.8s						
TORD	Torodi Ar. Bea	87.62	283	P	P	03 43 00.1	+0.6
	comp=Z,4.1nm,0.7s,baz=78,slow=4.2,SNR=11						
TORD				PP	PP	03 46 21.7	-3.3
	comp=Z,2.1nm,1.0s,baz=76,slow=6.1,SNR=3.8						
TORD				PKKPbc	PKKPbc	04 00 53.4	+6.0
	comp=Z,0.5nm,0.8s,baz=248,slow=2.7,SNR=4.6						
TORD				LR	LR	04 24 26.6	
	comp=Z,195nm,18.7s,baz=85,slow=37						
TORD	Torodi Ar. Bea	87.62	283	P	P	03 42 59.2	-0.3
TORD				IAmb	IAmb	03 43 11.6	
	comp=Z,20nm,0.8s						
TTA	Tatalina	87.87	25	IAmb	IAmb	03 43 14.4	
	comp=Z,22nm,1.2s						
COLD	Coldfoot	88.05	20	P	P	03 43 00.4	-0.1
	baz=300						
MVO	Moncorvo	88.29	312	eP	P	03 43 02.7	+0.4
	comp=Z,23nm,1.9s						
MVO				i -		03 43 14.4	
SUMG	Summit	88.57	347	i P	P	03 43 02.6	-0.8
	comp=Z,59nm,1.2s						
SUMG				i		03 43 14.4	
SUMG	Summit	88.57	347	i P	P	03 43 02.6	-0.8
SUMG				i		03 43 14.4	
SUMG				pmax	pmax		
	comp=Z,59nm,1.2s						
SUMG	Summit	88.57	347	i P	P	03 43 02.6	-0.8
SUMG				IAmb	IAmb	03 43 06.2	
	comp=Z,59nm,1.2s						
SUMG				i		03 43 14.5	
MLY	Manley	88.97	22	P	P	03 43 05.1	+0.2
	baz=300						
PCBR	Castelo Branco	88.98	311	eP	P	03 43 06.8	+1.3
PCBR				i -		03 43 17.9	
I23K	Minto, Yukon-K	89.41	22	P	P	03 43 08.3	+1.4
	baz=301						
I23K	Minto, Yukon-K	89.41	22	IAmb	IAmb	03 43 21.7	
	comp=Z,21nm,1.0s						
BMAR	Burnt Mountain	89.77	19	P	P	03 43 08.8	+0.1
NEA2	Nenana	89.80	22	P	P	03 43 08.9	+0.1
	baz=301						
TRF	Thorofare Moun	89.93	24	IAmb	IAmb	03 43 25.1	
	comp=Z,17nm,1.0s						
SYO	Syowa Base	89.95	197	⇓ePcP	PcP	03 43 14.8	+4.4
COLA	College	90.10	22	⇓eP	P	03 43 10.6	+0.5
COLA				pmax	pmax		
	comp=Z,4.0nm,1.7s						
POKR	Poker Plat Res	90.12	21	P	P	03 43 11.0	+0.7
	baz=303						
PNCL	Nicolau / Gran	90.26	309	eP	P	03 43 13.2	+1.7
	comp=Z,32nm,2.2s						
PNCL				i -		03 43 24.2	
MCK	McKinley	90.30	23	P	P	03 43 10.9	-0.3
	baz=301						
KULLO	Kullorsuaq	90.33	352	eP	P	03 43 10.4	-0.6
KULLO				i		03 43 21.5	
CUT	Chulitna	90.46	24	P	P	03 43 11.9	0.0
	baz=300						
ILAR	Eielson Array	90.50	22	P	P	03 43 12.2	+0.2
	comp=Z,1.5nm,0.7s,baz=297,slow=4.8,SNR=13						
ILAR				PP	PP	03 46 47.8	+1.4
	comp=Z,1.6nm,1.0s,baz=301,slow=6.0,SNR=4.0						
ILAR				LR	LR	04 25 39.7	
	comp=Z,265nm,18.3s,baz=312,slow=37						
RND	Reindeer	90.50	23	P	P	03 43 12.2	0.0
RND				pmax	pmax		
	comp=Z,20nm,1.1s						
RND	Reindeer	90.50	23	P	P	03 43 12.2	0.0
RND				IAmb	IAmb	03 43 23.6	
	comp=Z,20nm,1.1s						
HDA	Harding Lake	90.68	22	P	P	03 43 12.9	0.0
	baz=303						
ICESG	Greenland Ices	91.25	345	i P	P	03 43 17.2	+1.4
ICESG				IAmb	IAmb	03 43 18.8	
	comp=Z,12nm,1.0s						
ICESG				i		03 43 26.8	
RC01	Rabbit Creek A	91.35	25	P	P	03 43 16.2	+0.1
	baz=301						
SCRK	Sand Creek	91.99	22	P	P	03 43 18.9	-0.2
	baz=306						
PAX	Paxson	92.03	23	IAmb	IAmb	03 43 34.6	
	comp=Z,15nm,1.1s						
INK	Inuvik	92.39	15	P	P	03 43 21.2	+0.5
	comp=Z,3.6nm,1.0s,baz=319,slow=4.0,SNR=4.7						
INK	Inuvik	92.39	15	IAmb	IAmb	03 43 34.7	
	comp=Z,22nm,1.1s						
KOWA	Kowa	92.70	285	P	P	03 43 23.0	-0.3
KOWA				IAmb	IAmb	03 43 36.1	
	comp=Z,18nm,0.9s						
N25K	Chitina, Valde	93.15	24	P	P	03 43 25.7	+1.2
	baz=305						
BCAR	Beaver Creek A	93.33	22	P	P	03 43 25.4	+0.2
C36M	Paulatuk	93.78	12	P	P	03 43 26.9	-0.2
	baz=325						
DBIC	Dimbokro	95.40	278	P	P	03 43 36.4	+0.7
	comp=Z,2.3nm,0.8s,baz=5.9,slow=4.6,SNR=4.8						
DBIC				LR	LR	04 26 01.9	
	comp=Z,141nm,20.3s,baz=50,slow=35						
VNDA	Vanda	98.49	168	LR	LR	04 25 18.3	
	comp=Z,197nm,18.4s,baz=300,slow=34						
YKA	Yellowknife Ar	101.67	12	P	Pdif	03 44 03.5	+0.8
	comp=Z,0.4nm,0.9s,baz=326,slow=4.0,SNR=6.3						
YKA				PP	PP	03 48 08.8	-3.7
	comp=Z,1.7nm,0.9s,baz=339,slow=7.2,SNR=8.0						
ULM	Lac du Bonnet	116.41	6	PP	PP	03 49 58.5	-1.0
	comp=Z,2.4nm,0.9s,baz=22,slow=5.3,SNR=2.9						
PPT2	Papeete2	120.42	103	eLR	LR	04 25 58.7	
	comp=Z,176nm,24.8s						
PDAR	Pinedale Array	120.80	19	PKP	PKiKP	03 49 03.3	0.0
	comp=Z,0.3nm,0.6s,baz=56,slow=3.7,SNR=4.4						
PDAR	Pinedale Array	120.80	19	PKPdf	PKPdf	03 49 02.7	-0.5
TBI	Tubuai	120.88	109	eLR	LR	04 26 05.9	
	comp=Z,210nm,25.2s						
NVAR	Mina Array Bea	121.19	28	PKP	PKiKP	03 49 05.6	+1.5
	comp=Z,1.0nm,0.8s,baz=291,slow=2.8,SNR=4.9						
NVAR	Mina Array Bea	121.19	28	PKPdf	PKPdf	03 49 03.6	-0.5
TAOE	Nuku Hiva Isla	128.43	91	eLR	LR	04 29 45.1	
	comp=Z,179nm,33.4s						
ANMO	Albuquerque	128.91	20	PKIKP	PKPdf	03 49 17.8	-1.1
ANMO	Albuquerque	128.91	20	PKPdf	PKPdf	03 49 17.8	-1.1
TXAR	Lajitas Array	134.99	20	PKhKP	PKPpre	03 49 22.2	
	comp=Z,0.1nm,0.4s,baz=22,slow=31,SNR=2.6						
TXAR				PKP	PKPdf	03 49 30.1	-0.2
	comp=Z,1.0nm,1.0s,baz=335,slow=0.8,SNR=6.5						
TXAR				PP	PP	03 51 59.9	-3.7
	comp=Z,1.8nm,1.1s,baz=347,slow=3.9,SNR=4.7						
TXAR	Lajitas Array	134.99	20	PKPdf	PKPdf	03 49 29.8	-0.5
BDFB	Brasilia	141.51	261	PKP	PKPdf	03 49 41.9	-0.7
	comp=Z,1.4nm,0.6s,baz=159,slow=8.6,SNR=2.2						
GO07	Milladeo Hill,	147.83	200		PKPbc	03 49 55.8	+0.3
CPUP	Villa Florida	148.66	241	PKPbc	PKPbc	03 49 58.2	-0.1
	comp=Z,5.7nm,0.9s,baz=96,slow=3.8,SNR=10.0						
CPUP	Villa Florida	148.66	241		PKPbc	03 49 58.1	-0.2
PLCA	Paso Flores	148.73	206	PKPbc	PKPbc	03 49 58.4	+0.2
	comp=Z,3.5nm,0.8s,baz=55,slow=0.2,SNR=9.8						
PTGA	Pitinga	149.85	292		PKPbc	03 50 01.2	-0.4
PETF	Flores	149.99	4		PKPbc	03 50 01.2	-0.6
SDV	Santo Domingo	152.26	321	PKPdf	PKPdf	03 49 60.0	-0.7
TGUH	Tegucigalpa,Un	152.91	359	PKPdf	PKPdf	03 49 59.7	-1.9
CO01	Juntas del Tor	156.67	222	PKPdf	PKPdf	03 50 06.2	-0.3
ROSC	El Rosal	157.67	323	PKP	PKPdf	03 50 09.2	+0.8
	comp=Z,3.5nm,0.4s,baz=198,slow=22,SNR=1.4						
AC02	Maricunga	157.94	229	PKPdf	PKPdf	03 50 07.6	-0.9
LPAZ	La Paz	160.82	258	PKP	PKPdf	03 50 13.1	+0.9
	comp=Z,0.8nm,0.9s,baz=270,slow=20,SNR=2.1						
LPAZ				PKPab	PKPab	03 50 55.1	+0.5
	comp=Z,2.8nm,0.9s,baz=90,slow=25,SNR=4.5						
LPAZ	La Paz	160.82	258	PKPdf	PKPdf	03 50 10.2	-2.0
LPAZ				PKPab	PKPab	03 50 52.8	-1.8
OTAV	Otavalo	163.79	325	PKIKP	PKPdf	03 50 13.0	-2.1
OTAV	Otavalo	163.79	325		PKPdf	03 50 13.0	-2.1

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*NEIC **11** 04:34:45.7±1.1, 6.°19S±0.°06×102.°86E±0.°09, h10^{km}±1^{km}, mb4.5/11 Error ellipse: s-maj=14.5km s-min=9.2km az=260.0*

*DJA **11** 04:34:47.1±2.5, 6°S±5°×10°3E±°, h23^{km}±24^{km}, M4.7/13, mB5.5/4, mb4.8/6, MLv4.5/13, Mw(mB)5.0/4*

*IDC **11** 04:34:50.5±1.1, 6.°12S×102.°91E, h36^{km}±4^{km}, mb3.8/14, mb1 4.0/15, mb1mx3.8/49, mbtmp4.1/15, ML4.6/1, MS3.2/5, Ms1 3.3/5, ms1mx2.8/53, Error ellipse: s-maj=40.6km s-min=12.4km az=49.0*

ISC 11 04:34:49.2±0.6, **6.°21S**±0.°07×**102.°85E**±0.°07, **h33**^{km}, **n63**, σ**1.^{s}02**/59, **mb4.4**/21, **MS3.0**/3, **Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LWLI	Liwa	1.69	45	P	Pn	04 35 16.4	-0.2
KASI	Kota Agung	1.77	67	P	Pn	04 35 16.9	-0.7
MNAI	Manna	1.84	3		Pn	04 35 17.2	-1.4
MNAI				Sn	Sn	04 35 39.5	-1.3
MNAI	Manna	1.84	3	P	Pn	04 35 17.7	-0.9
MDSI	Maura Dua	2.17	38	P	Pn	04 35 23.3	+0.3
KLSI		2.41	51	P	Pn	04 35 26.6	+0.3
LHSI	Lahat	2.46	16	P	Pn	04 35 27.7	+0.6
CBJI	Citeko	3.98	93	P	Pn	04 35 47.7	-0.3
LEM	Lembang	4.78	98	Pn	Pn	04 36 01.2	+2.1
	28nm,0.3s,baz=310,slow=4.7,SNR=14						
LEM				Sn	Sn	04 36 54.0	+0.5
	7.9nm,0.3s,baz=320,slow=16,SNR=4.6						
LEM				LR	LR	04 38 12.1	
	comp=Z,151nm,20.7s,baz=212,slow=43						
LEM	Lembang	4.78	98	P	Pn	04 35 59.1	0.0
XMIS	Christmas Isla	5.07	147		Pn	04 35 59.0	-3.9
CISI	Cisompet, Garu	5.11	105		Pn	04 36 03.2	-0.4
CISI	Cisompet, Garu	5.11	105	P	Pn	04 36 03.5	-0.1
PDSI	Padang	5.78	336	P	Pn	04 36 13.9	+1.1
	0.2nm16nm,0.5s						
UGM	Wanagama	7.80	103	Pn	Pn	04 36 40.8	+0.2
UGM	Wanagama	7.80	103	P	Pn	04 36 41.6	+1.0
	0.5nm104nm,0.4s						
COCO	West Island	8.40	225		Pn	04 36 47.9	-0.8
PSI	Prapat	9.77	336	LR	LR	04 41 10.1	
	comp=Z,159nm,19.6s,baz=150,slow=40						
JAGI	Jajag, Banyuwa	11.43	102	Pn	Pn	04 37 28.2	-2.2
TWSI	Taliwang, Sumb	14.14	101	P	Pn	04 38 04.5	-2.8
	654nm11nm,0.9s						
PLAI	Plampang	15.03	101	P	Pn	04 38 16.7	-2.6
	50nm,0.7s						
BATI	Baumata	20.98	102	P	P	04 39 29.9	0.0
	66nm,0.8s,baz=104,slow=2.2,SNR=8.2						
BATI	Baumata	20.98	102	P	P	04 39 29.9	0.0
	44nm,0.8s						
SOEI	Soe	21.50	101	P	P	04 39 35.0	-0.6
SOEI				IAmb	IAmb	04 39 45.8	
	comp=Z,28nm,0.7s						
SOEI					S	04 43 31.6	-0.9
SOEI	Soe	21.50	101	P	P	04 39 35.0	-0.6
PSA00	Pilbara Seismi	22.44	135	P	P	04 39 45.5	-0.1
PSA00				IAmb	IAmb	04 39 47.5	
	comp=Z,21nm,1.1s						
CMAR	Chiang Mai Arr	24.81	351	P	P	04 40 07.8	-0.8
	comp=Z,2.2nm,0.4s,baz=181,slow=8.6,SNR=11						
CMAR				LR	LR	04 49 25.3	
	comp=Z,36nm,21.5s,baz=218,slow=35						
CMAR	Chiang Mai Arr	24.81	351	P	P	04 40 08.2	-0.4
FITZ	Fitzroy Crossi	25.18	120	P	P	04 40 12.8	+0.9
	comp=Z,8.3nm,0.9s,baz=272,slow=4.4,SNR=11						
FITZ				LR	LR	04 50 48.9	
	comp=Z,49nm,20.0s,baz=294,slow=38						
FITZ	Fitzroy Crossi	25.18	120	P	P	04 40 11.2	-0.7
FITZ				IAmb	IAmb	04 40 15.0	
	comp=Z,8.1nm,0.9s						
H08S2	Diego Garcia H	30.16	265	T	T	05 12 44.1	
	baz=90,slow=74						
H08S3	Diego Garcia H	30.17	266	T	T	05 12 38.1	
	baz=90,slow=74						
H08S1	Diego Carcia H	30.18	265	T	T	05 12 40.2	
	baz=90						
H01W3	Cape Leeuwin H	30.38	161	T	T	05 12 56.3	
	baz=335						
H01W2	Cape Leeuwin H	30.39	161	T	T	05 12 56.1	
	baz=335						
H01W1	Cape Leeuwin H	30.39	161	T	T	05 12 56.1	
	baz=335						
SHL	Shillong	33.34	342	P	P	04 41 22.7	-1.8
WB0	Warramunga Arr	33.48	117	P	P	04 41 25.4	-0.3
WB0				IAmb	IAmb	04 41 43.8	
	comp=Z,8.6nm,1.2s						
WRA	Warramunga Arr	33.49	117	P	P	04 41 26.0	+0.2
	comp=Z,2.6nm,0.8s,baz=293,slow=10.0,SNR=18						
WB2	Warramunga Arr	33.50	117	P	P	04 41 25.6	-0.3
WR0	Warramunga Arr	33.67	117	P	P	04 41 27.5	+0.1
WR0				IAmb	IAmb	04 41 30.2	
	comp=Z,5.0nm,0.8s						
ASAR	Alice Springs	34.53	123	P	P	04 41 35.8	+0.9
	comp=Z,1.3nm,0.5s,baz=304,slow=8.2,SNR=17						
ASAR	Alice Springs	34.53	123	P	P	04 41 34.7	-0.2
PMG	Port Moresby	43.99	97	LR	LR	05 03 14.2	
	comp=Z,96nm,18.6s,baz=194,slow=39						
STKA	Stephens Creek	44.26	130	P	P	04 42 56.3	+0.4
	comp=Z,4.8nm,0.5s,baz=306,slow=9.3,SNR=8.9						
STKA	Stephens Creek	44.26	130	P	P	04 42 55.2	-0.7
KSRS	Korea Array	49.34	26	P	P	04 43 34.9	-0.5
	comp=Z,1.0nm,0.5s,baz=221,slow=7.1,SNR=2.5						
SONM	Songino Array	53.90	3	P	P	04 44 09.5	0.0
	comp=Z,1.4nm,0.7s,baz=176,slow=8.8,SNR=11						
SONM				pP	pP	04 44 21.3	+2.3
	comp=Z,3.1nm,0.6s,baz=185,slow=8.9,SNR=15						
SONM	Songino Array	53.90	3	P	P	04 44 09.3	-0.2
MK31	Makanchi Array	55.84	343	P	P	04 44 23.4	0.0
MKAR	Makanchi Array	55.84	343	P	P	04 44 23.1	-0.4
	comp=Z,0.6nm,0.5s,baz=152,slow=8.4,SNR=13						
MKAR				pP	pP	04 44 34.9	+1.9
	comp=Z,2.4nm,0.6s,baz=145,slow=8.0,SNR=20						
MKAR	Makanchi Array	55.84	343	P	P	04 44 22.9	-0.6
USRK	Ussuriysk Ar.	56.64	25	P	P	04 44 29.0	-0.2
	comp=Z,1.8nm,0.7s,baz=224,slow=5.8,SNR=2.3						
KURBB	Kurchatov Arra	60.38	342	P	P	04 44 55.5	+0.4
	comp=Z,0.3nm,0.4s,baz=157,slow=6.9,SNR=2.1						
KURBB				pP	pP	04 45 06.5	+1.9
	comp=Z,1.3nm,0.7s,baz=162,slow=6.5,SNR=5.3						
KURK	Kurchatov	60.44	343	P	P	04 44 55.9	+0.5
KURK				IAmb	IAmb	04 45 07.9	
	comp=Z,2.0nm,0.7s						
ZALV	Zalesovo Beam	61.83	348	P	P	04 45 06.1	+1.2
	comp=Z,0.9nm,0.5s,baz=167,slow=2.3,SNR=4.0						
ZALV				pP	pP	04 45 15.3	+0.9
	comp=Z,4.6nm,0.6s,baz=166,slow=4.6,SNR=12						
BVAR	Borovoye Array	65.10	339	P	P	04 45 27.7	+1.2
	comp=Z,0.4nm,0.5s,baz=123,slow=11,SNR=2.5						
BVAR				pP	pP	04 45 37.3	+1.1
	comp=Z,1.1nm,0.6s,baz=172,slow=24,SNR=6.5						
KBZ	Khabaz	73.33	319	pP	pP	04 46 28.6	+1.1
	comp=Z,3.4nm,0.9s,baz=89,slow=3.8,SNR=5.4						
BRTR	Keskin Array B	78.25	313	pP	pP	04 46 57.4	+1.4
	comp=Z,2.5nm,0.8s,baz=127,slow=6.1,SNR=5.4						
AKASG	Malin Array Be	84.53	322	P	P	04 47 19.7	+0.7
	comp=Z,0.2nm,0.2s,baz=87,slow=1.6,SNR=1.6						
FINES	FINESS Array B	89.14	332	P	P	04 47 41.4	+0.2
	comp=Z,2.2nm,1.0s,baz=67,slow=15,SNR=1.9						
FINES				pP	pwP	04 47 54.4	+1.1
	comp=Z,1.1nm,0.5s,baz=115,slow=3.9,SNR=2.7						
H09N1	TRISTAN DA CUN	105.88	229	T	T	06 51 50.9	
	SNR=5.6						
TXAR	Lajitas Array	146.01	44	PKPbc	PKPdf	04 54 27.6	+1.8
	comp=Z,2.1nm,0.8s,baz=289,slow=1.0,SNR=23						

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*NNC **11** 04:40:07.9±2.6, 37.°67N×71.°51E, h246^{km}±104^{km}, mb2.5, mpv3.7, Error ellipse: s-maj=57.5km s-min=10.5km az=5.0*

ISC 11 04:40:05.0±5.0, **37.°3N**±0.°3×**71.°5E**±0.°2, **h109**^{km}, **n11**, σ**0.^{s}41**/12, **3C-1D**, **Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	5.12	18	P	Pn	04 41 19.8	+0.1
	SNR=44						
UCH	Uchtor	5.45	24	P	Pn	04 41 24.3	0.0
	SNR=7.9						
MRKS	Merke	5.61	13	Lg	Lg	04 42 28.2	
	3.8nm,0.2s						
EKS2	Erkin-Say	5.64	17	P	Pn	04 41 27.0	+0.5
	SNR=10						
AAK	Ala-Archa	5.81	22	P	Pn	04 41 29.3	+0.4
	SNR=9.6						
AAK	Ala-Archa	5.81	22	⇑P	Pn	04 41 28.9	0.0
	5.5nm,0.4s						
AAK				⇑S	Sn	04 42 34.8	+0.5
	2.8nm,0.6s						
KK31	Karatay Array	5.87	353	⇑P	Pn	04 41 29.8	+0.3
	0.3nm,0.1s,baz=187,slow=15,SNR=46						
KK31				S	Sn	04 42 34.7	-0.6
	1.3nm,0.3s,baz=172,slow=18,SNR=10						
TKM2	Tokmak 2	6.44	28	P	Pn	04 41 37.5	0.0
	SNR=7.6						
TKM2	Tokmak 2	6.44	28	⇓P	Pn	04 41 37.2	-0.2
	3.3nm,0.5s						
SGDS	Sogindy	6.60	20	P	Pn	04 41 39.1	-0.4
	4.3nm,0.2s						
DGS	Degeres	6.78	27	P	Pn	04 41 41.5	-0.5
	2.6nm,0.4s						

IDC 11 04:47:24.1±5.8, **22.°73S**×**179.°70E**, **h0**^{km}, **mb3.6**/2, **mb1 3.9**/2, **mb1mx3.6**/41, **mbtmp3.6**/2, **Error ellipse: s-maj=265.8km s-min=89.2km az=158.0**, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	41.96	259	P	P	04 55 15.9	-1.2
	0.3nm,0.4s,baz=91,slow=6.7,SNR=8.1						
WRA	Warramunga Arr	42.22	265	P	P	04 55 20.1	+0.9
	0.4nm,0.4s,baz=101,slow=8.3,SNR=7.0						
AKASG	Malin Array Be	143.83	328	PKP	PKPdf	05 07 00.7	-0.4
	0.1nm,0.3s,baz=53,slow=4.6,SNR=4.3						

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*IDC **11** 04:54:12.1±1.2, 28.°69N×140.°46E, h0^{km}, mb3.9/6, mb1 4.2/8, mb1mx3.7/46, mbtmp3.8/8, ML3.2/2, MS3.0/1, Ms1 3.0/1, ms1mx2.4/40, Error ellipse: s-maj=43.1km s-min=22.0km az=84.0*

ISC 11 04:54:16.4±2.8, **28.°4N**±0.°3×**140.°3E**±0.°4, **h50**^{km}, **n12**, σ**1.^{s}86**/8, **mb3.9**/5, **Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	2.12	127	Pn	Pn	04 54 48.9	-0.5
	30nm,0.3s,baz=283,slow=18,SNR=7.9						
JCJ				Sn	Sn	04 55 12.8	-1.8
	74nm,0.3s,baz=279,slow=22,SNR=13						
MJAR	Matsushiro Arr	8.31	348	Pn	Pn	04 56 11.7	-2.7
	0.1nm,0.3s,baz=170,slow=18,SNR=1.5						
JOW	Kunigami	10.77	265	LR	LR	05 00 54.5	
	comp=Z,76nm,18.7s,baz=225,slow=37						
H11N2	WAKE ISLAND Hy	25.73	104	T	T	05 26 20.3	
	baz=296,slow=75,SNR=16						
H11N1	WAKE ISLAND Hy	25.74	104	T	T	05 26 18.5	
	baz=296,slow=75,SNR=14						
H11N3	WAKE ISLAND Hy	25.75	104	T	T	05 26 19.4	
	baz=296,slow=75,SNR=14						
WRA	Warramunga Arr	48.39	187	P	P	05 02 59.0	+5.4
	3.1nm,0.9s,baz=9.4,slow=8.2,SNR=16						
ILAR	Eielson Array	57.39	29	P	P	05 04 00.5	+1.1
	0.6nm,1.1s,baz=283,slow=4.4,SNR=2.7						
ARCES	ARCESS Array B	71.77	340	P	P	05 05 32.9	-0.2
	12nm,1.1s,baz=41,slow=5.9,SNR=2.7						
YKA	Yellowknife Ar	71.80	28	P	P	05 05 34.2	+0.8
	0.0nm,0.3s,baz=298,slow=5.3,SNR=5.1						
NVAR	Mina Array Bea	81.03	51	P	P	05 06 28.7	+2.2
	0.5nm,0.7s,baz=300,slow=6.5,SNR=5.6						
TXAR	Lajitas Array	96.15	52	P	P	05 07 39.6	+0.2
	0.3nm,0.8s,baz=308,slow=7.9,SNR=1.9						

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*IDC **11** 05:10:40.7±0.8, 17.°82S×178.°85W, h586^{km}±8^{km}, mb3.7/16, mb1 3.9/18, mb1mx3.7/42, mbtmp4.6/18, Error ellipse: s-maj=25.0km s-min=10.3km az=147.0*

*NEIC **11** 05:10:41.1±1.4, 17.°5S±0.°1×178.°9W±0.°2, h577^{km}±7^{km}, mb4.2/66, Error ellipse: s-maj=24.3km s-min=17.4km az=137.0*

ISC 11 05:10:41.8±0.5, **17.°6S**±0.°1×**178.°84W**±0.°09, **h600**^{km}, **n122**, σ**1.^{s}77**/126, **mb4.1**/42, **3C-5D**, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	2.97	267	P	P	05 11 56.7	-4.1
	10nm,0.3s,baz=108,slow=4.3,SNR=146						
MSVF				S	S	05 13 03.1	-2.1
	baz=180,slow=20,SNR=9.7						
MSVF	Nonsavu	2.97	267	P	P	05 11 57.5	-3.3
DZM	Mont Dzumac	14.54	250	P	P	05 13 44.8	-1.1
	0.6nm,0.3s,baz=117,slow=9.4,SNR=4.0						
DZM	Mont Dzumac	14.54	250	P	P	05 13 45.8	-0.1
URZ	Urewera	20.90	189	P	P	05 14 41.2	-2.2
	9.6nm,0.7s,baz=25,slow=19,SNR=2.9						
EIDS	Eidsvold	28.99	249	P	P	05 15 56.3	+1.4
WKZ	Wanaka	29.01	198	P	P	05 15 54.3	-0.5
ARMA	Armidale	29.75	239	P	P	05 16 03.7	+2.2
MLZ	Mavora Lakes	29.77	199	P	P	05 16 02.8	+1.5
WHZ	Wether Hill Ro	30.30	198	P	P	05 16 06.8	+1.0
COEN	Coen	36.69	270	P	P	05 17 02.5	+2.7

STKA	Stephens Creek	38.43	241	P	P	05 17 13.1	-0.6
	11nm,0.8s,baz=86,slow=11,SNR=16						
STKA	Stephens Creek	38.43	241	P	P	05 17 16.4	+2.7
BBOO	Buckleboo	43.20	241	P	P	05 17 53.8	+2.3
WB0	Warramunga Arr	44.25	260	P	P	05 17 57.9	-1.8
WB0				IAmb	IAmb	05 18 02.5	
	comp=Z,11nm,1.0s						
WB2	Warramunga Arr	44.27	259	P	P	05 18 00.7	+0.8
WRA	Warramunga Arr	44.28	259	P	P	05 17 58.0	-2.0
	comp=Z,6.4nm,0.8s,baz=93,slow=6.9,SNR=46						
WRA				PcP	PcP	05 19 33.0	+2.1
	comp=Z,0.7nm,0.8s,baz=98,slow=7.2,SNR=2.6						
WRA				ScP	ScP	05 22 25.5	-1.0
	comp=Z,0.4nm,1.0s,baz=93,slow=4.2,SNR=1.3						
WRA				S	S	05 23 48.5	-3.1
	comp=Z,0.1nm,0.5s,baz=76,slow=14,SNR=1.7						
WRA	Warramunga Arr	44.28	259	P	P	05 17 58.6	-1.4
AS31	Alice Springs	44.48	254		P	05 18 00.7	-0.8
ASAR	Alice Springs	44.48	254	P	P	05 17 59.9	-1.6
	comp=Z,50nm,0.7s,baz=86,slow=7.9,SNR=74						
ASAR				PcP	PcP	05 19 33.9	+2.4
	comp=Z,1.0nm,0.6s,baz=102,slow=3.7,SNR=2.8						
ASAR				ScP	ScP	05 22 28.4	+1.1
	comp=Z,0.2nm,0.5s,baz=95,slow=4.1,SNR=2.3						
ASAR				S	S	05 23 53.3	-1.1
	comp=Z,0.2nm,0.4s,baz=84,slow=17,SNR=2.1						
ASAR	Alice Springs	44.48	254		P	05 18 00.1	-1.3
FITZ	Fitzroy Crossi	52.67	260	P	P	05 19 04.9	+3.0
FITZ				IAmb	IAmb	05 19 15.8	
	comp=Z,15nm,1.5s						
QSPA	South Pole Qui	72.47	180	P	P	05 21 08.8	+0.3
QSPA				IAmb	IAmb	05 21 11.9	
	comp=Z,11nm,0.8s						
KMRM	Mail Ridge	77.03	40	P	P	05 21 36.3	+2.1
KMRM				IAmb	IAmb	05 21 55.9	
	comp=Z,14nm,1.2s						
MDPB	Devils Postpil	78.53	44	P	P	05 21 43.0	+0.4
MDPB				IAmb	IAmb	05 21 45.1	
	comp=Z,6.8nm,0.9s						
YBH	Yreka Blue Hor	78.53	39	P	P	05 21 43.6	+1.3
	comp=Z,2.5nm,0.7s,baz=146,slow=2.4,SNR=9.1						
OMMB	Old Mammoth Mi	78.58	44	P	P	05 21 44.5	+1.6
WAKR	Walker	78.77	44	P	P	05 21 44.8	+1.0
HUMO	Hull Mountain	78.90	39	P	P	05 21 46.1	+1.9
BEKR	Beckworth	78.92	42	P	P	05 21 45.9	+1.4
PNTR	Pine Nut	78.98	43	P	P	05 21 45.7	+0.8
PNTR				IAmb	IAmb	05 21 47.6	
	comp=Z,10nm,0.8s						
LHV	Little Huntoon	79.25	44	P	P	05 21 47.8	+1.8
LHV				IAmb	IAmb	05 21 49.1	
	comp=Z,7.0nm,0.9s						
PAHR	Pah Rah Range	79.46	43	P	P	05 21 48.5	+1.2
NVAR	Mina Array Bea	79.48	44	P	P	05 21 48.4	+0.9
	comp=Z,3.5nm,0.7s,baz=225,slow=9.1,SNR=36						
NVAR	Mina Array Bea	79.48	44	P	P	05 21 48.6	+1.1
NV11	Mina Array Sit	79.58	44	P	P	05 21 49.3	+1.3
TPH	Tonopah	80.01	45	P	P	05 21 51.0	+0.7
TPNV	Topopah Spring	80.09	46	P	P	05 21 52.5	+1.7
TPNV					pP	05 23 51.0	-4.8
MOD	Modoc Plateau	80.10	40	P	P	05 21 51.5	+0.8
MOD				IAmb	IAmb	05 21 53.1	
	comp=Z,5.7nm,0.7s						
K05A	Summer Lake	80.21	39	P	P	05 21 52.9	+1.7
PINE	Pine Mountain	80.79	38	P	P	05 21 55.8	+1.6
PINE				IAmb	IAmb	05 21 57.1	
	comp=Z,6.2nm,0.8s						
PRN	Pahroc Range	81.15	46	P	P	05 21 56.7	+0.6
PRN				IAmb	IAmb	05 21 59.2	
	comp=Z,6.5nm,0.9s						
R11A	Troy Canyon, C	81.26	45	P	P	05 21 57.0	+0.3
R11A					pP	05 23 55.2	-7.1
WVOR	Wild Horse Val	81.43	41	P	P	05 21 58.4	+1.0
WVOR				IAmb	IAmb	05 22 00.6	
	comp=Z,5.9nm,0.8s						
I07A	Izee	81.81	39	IAmb	IAmb	05 22 02.0	
	comp=Z,5.5nm,0.8s						
TUC	Tucson	81.83	53	P	P	05 22 01.2	+1.6
TUC				IAmb	IAmb	05 22 03.1	
	comp=Z,5.5nm,0.8s						
TTA	Tatalina	82.23	10	P	P	05 22 03.0	+2.2
TTA				IAmb	IAmb	05 22 14.6	
	comp=Z,10nm,1.3s						
X16A	Lo Mia Camp, P	82.29	50	P	P	05 22 03.0	+1.0
X16A				IAmb	IAmb	05 22 05.3	
	comp=Z,7.8nm,0.9s						
CCUT	Cedar City	82.39	47	P	P	05 22 03.4	+0.9
KNB	Kanab	82.51	48	P	P	05 22 04.8	+1.7
PSUT	Pine Spring	82.53	46	P	P	05 22 04.4	+1.3
BELA	Belgrano 2	82.54	173	P	P	05 22 03.9	+1.5
GHO	Glory Hole Cre	82.59	14	P	P	05 22 04.2	+1.5
U15A	North Rim	82.61	48	IAmb	IAmb	05 22 07.0	
	comp=Z,9.5nm,0.8s						
ELK	Elko	82.70	43	P	P	05 22 04.2	+0.1
	comp=Z,3.3nm,0.8s,baz=241,slow=5.7,SNR=7.8						
ELK	Elko	82.70	43	P	P	05 22 04.6	+0.5
ELK				IAmb	IAmb	05 22 06.6	
	comp=Z,4.4nm,0.9s						
G08A	Pilot Rock	82.81	38	P	P	05 22 06.3	+2.0
WUAZ	Wupatki	82.85	49	IAmb	IAmb	05 22 07.9	
	comp=Z,8.3nm,1.1s						
SCM	Sheep Creek Mo	83.02	14	P	P	05 22 06.4	+1.5
SEY	Seymchan	83.37	347	P	P	05 22 07.0	+0.6
	comp=Z,0.9nm,0.3s,baz=147,slow=5.2,SNR=7.2						
MTPU	Mount Pierson	83.44	47	P	P	05 22 09.9	+2.0
VRDI	Verde Repeater	83.48	16	P	P	05 22 08.3	+1.0
N25K	Chitina, Valde	83.50	16	P	P	05 22 08.9	+1.6
N25K				IAmb	IAmb	05 22 28.2	
	comp=Z,12nm,1.2s						
M24K	Tolsona, Glenn	83.53	15	P	P	05 22 09.4	+2.1
GLB	Gilahina Butte	83.57	16	P	P	05 22 08.9	+1.3
GLB				IAmb	IAmb	05 22 09.6	
	comp=Z,7.3nm,0.7s						
BALM	Baldy	83.63	17	P	P	05 22 08.8	+0.8
BALM				IAmb	IAmb	05 22 11.9	
	comp=Z,12nm,1.0s						
KTH	Kantishna Hill	83.75	12	P	P	05 22 08.9	+0.5
KTH				IAmb	IAmb	05 22 14.0	
	comp=Z,5.3nm,0.9s						
F10A	Beach Ranch, E	84.20	38	P	P	05 22 12.5	+1.4
F10A				IAmb	IAmb	05 22 13.3	
	comp=Z,8.6nm,1.1s						
B08A	Colville Reser	84.31	35	P	P	05 22 12.8	+1.2
B08A				IAmb	IAmb	05 22 13.4	
	comp=Z,3.6nm,0.8s						
HLID	Hailey	84.66	41	P	P	05 22 15.1	+1.6
HLID				IAmb	IAmb	05 22 16.5	
	comp=Z,3.4nm,0.8s						
HLID					pP	05 24 13.9	-6.8
TMUT	Trail Mountain	84.71	46	P	P	05 22 15.1	+1.1
NEW	Newport	85.49	36	P	P	05 22 18.2	+0.9
	comp=Z,1.6nm,0.5s,baz=166,slow=4.9,SNR=5.2						
ILAR	Eielson Array	85.66	13	P	P	05 22 18.1	+0.5
	comp=Z,1.2nm,0.4s,baz=225,slow=5.2,SNR=18						
ILAR	Eielson Array	85.66	13	P	P	05 22 18.4	+0.8
TXAR	Lajitas Array	86.17	58	P	P	05 22 21.4	+0.4
	comp=Z,4.4nm,0.8s,baz=218,slow=6.4,SNR=59						
ANMO	Albuquerque	86.22	52	P	P	05 22 22.5	+1.2
	comp=Z,1.9nm,0.8s,baz=228,slow=6.3,SNR=5.9						
ANMO	Albuquerque	86.22	52	P	P	05 22 23.1	+1.9
LOHW	Long Hollow	87.11	42	IAmb	IAmb	05 22 27.9	
	comp=Z,2.7nm,0.7s						
COLD	Coldfoot	87.17	11	IAmb	IAmb	05 22 27.4	
	comp=Z,2.8nm,0.8s						
YHL	Hebgen Lake	87.31	41	P	P	05 22 27.6	+1.3
BW06	Boulder Array	87.40	44	P	P	05 22 27.5	+0.9
BW06				IAmb	IAmb	05 22 28.8	
	comp=Z,2.2nm,0.7s						
PD31	Pinedale Array	87.40	44	P	P	05 22 28.2	+1.6
PD31				IAmb	IAmb	05 22 28.8	
	comp=Z,1.9nm,0.7s						
PDAR	Pinedale Array	87.40	44	P	P	05 22 27.8	+1.1
	comp=Z,1.7nm,0.5s,baz=219,slow=3.6,SNR=22						
INK	Inuvik	91.68	15	P	P	05 22 46.1	+0.6
	comp=Z,1.7nm,0.8s,baz=211,slow=4.7,SNR=4.5						
PLCA	Paso Flores	91.85	134	P	P	05 22 45.3	-1.9
	comp=Z,2.2nm,0.9s,baz=254,slow=7.4,SNR=2.8						
YKA	Yellowknife Ar	94.21	25	P	P	05 22 58.4	+1.2
	comp=Z,1.1nm,0.8s,baz=240,slow=3.9,SNR=15						
MKAR	Makanchi Array	108.61	314	PKiKP	PKiKP	05 28 04.8	+1.5
	comp=Z,0.3nm,0.5s,baz=208,slow=0.6,SNR=5.1						
KURBB	Kurchatov Arra	111.36	318	PKKPbc	PKKPbc	05 39 08.3	+1.6
	comp=Z,0.2nm,0.3s,baz=331,slow=3.6,SNR=4.2						
BUR08	Bucovina Ar. S	144.12	332		PKiKP	05 29 13.5	-0.6
BURAR	Bucovina Array	144.13	332	⇓P	PKiKP	05 29 13.7	-0.5
BIZ	Bicaz	144.22	330	⇑P	PKiKP	05 29 14.1	-0.1
BRTR	Keskin Array B	144.26	315	PKP	PKiKP	05 29 12.7	-2.0
	comp=Z,2.7nm,0.9s,baz=121,slow=4.8,SNR=4.9						
CHVC	Chvalec	144.98	343	*e*PKP	PKiKP	05 29 15.6	-0.1
CLL	Collm	145.06	347	*i* PKPbc	PKiKP	05 29 15.1	-0.6
	comp=Z,7.0nm,0.6s						
DPC	Dobruska-Polom	145.12	343	*e*PKP	PKiKP	05 29 16.2	+0.2
KRLC	Kraliky	145.23	342	*e*PKP	PKiKP	05 29 16.3	+0.1
DOPR	Dopca	145.27	330	⇑P	PKiKP	05 29 16.7	+0.3
DRGR		145.86	333	⇓P	PKiKP	05 29 18.3	+0.6
ARR	Arges	146.07	330	⇑P	PKPab	05 29 19.8	+1.8
KHC	Kasperske Hory	146.96	345	*e*PKP	PKPab	05 29 20.9	-0.5
CKRC	Cesky Krumlov	147.06	344	*e*PKP	PKPab	05 29 21.4	-0.4
GEC2	GERESS Array S	147.19	345		PKPab	05 29 21.4	-1.0
GERES	GERESS Array B	147.19	345	PKPbc	PKPab	05 29 21.4	-1.0
	comp=Z,2.8nm,0.7s,baz=21,slow=2.9,SNR=20						
GERES	GERESS Array B	147.19	345		PKiKP	05 29 20.7	+0.3
BZS	Buzias	147.26	333	⇓P	PKPab	05 29 21.6	-1.0
CONA	Conrad Observa	147.43	342	*e*P	PKPab	05 29 22.6	-0.8
	comp=Z,2.6nm,0.5s,SNR=4.8						
HERR	Herculane	147.47	331	⇓P	PKiKP	05 29 21.6	+0.7
MORH	Mrgy, Hungar	147.97	337	⇓P	PKPab	05 29 23.7	-1.8
SOKA	Soboth	148.80	341	*e*P	PKiKP	05 29 25.0	+1.3
	comp=Z,2.3nm,0.7s						
KBA	Koelnbreinsper	148.91	344	*i* P	PKiKP	05 29 25.2	+1.1
	comp=Z,3.3nm,0.6s						
WATA	Walderalm	149.11	346	*e*P	PKiKP	05 29 25.7	+1.3
	comp=Z,5.0nm,0.6s						
RETA	Reutte	149.15	347	*e*P	PKiKP	05 29 26.1	+1.7
	comp=Z,2.2nm,0.5s						
WTTA	Wattenberg	149.16	346	*i* P	PKiKP	05 29 26.3	+1.7
	comp=Z,5.4nm,0.5s,SNR=5.0						
MYKA	Terra Mystica	149.24	343	*e*P	PKiKP	05 29 25.8	+1.2
	comp=Z,3.8nm,0.5s						
SQTA	Sankt Quirin	149.30	347	*i* P	PKiKP	05 29 26.6	+1.8
	comp=Z,4.5nm,0.5s						
ABTA	Abfaltersbach	149.44	345	*i* P	PKiKP	05 29 26.3	+1.2
	comp=Z,5.9nm,0.6s,SNR=5.9						
DAVA	Damuels	149.52	348	*e*P	PKiKP	05 29 27.2	+1.9
	comp=Z,4.8nm,0.8s						
FETA	Feichten	149.60	347	*i* P	PKiKP	05 29 27.3	+1.8
	comp=Z,4.0nm,0.8s						
ESDC	Sonseca Array	157.54	10	PKP	PKPdf	05 29 30.3	-0.4
	comp=Z,0.3nm,0.8s,baz=347,slow=5.3,SNR=1.7						
KOWA	Kowa	174.16	121	PKP	PKPdf	05 29 43.3	-1.0
	comp=Z,1.7nm,0.8s,baz=267,slow=4.5,SNR=2.3						
TORD	Torodi Ar. Bea	175.56	187	PKP	PKPdf	05 29 44.0	-0.7
	comp=Z,1.8nm,1.0s,baz=262,slow=0.9,SNR=5.5						
TORD	Torodi Ar. Bea	175.56	187		PKPdf	05 29 46.6	+1.9

VAO ***11*** *05:11:31.3±0.4, 34°.14S×71°.48W, h10^{km}, mb4.6*
SJA ***11*** *05:11:32.3±0.6, 34°.17S×71°.78W, h14^{km}±3^{km}, ML4.4, MW4.4*
NEIC ***11*** *05:11:33.3, 34°.23S×71°.92W, h50^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}4.05; $M_{\theta\theta}$-1.13; $M_{\phi\phi}$-2.91; $M_{r\theta}$0.52; $M_{\theta\phi}$3.50; $M_{\phi r}$4.08; Fault plane solution: $M_0$6.50000×10^{15} NP1:ϕ_s349.82000°, δ67.03000°, λ119.69000°. NP2:ϕ_s114.21000°, δ36.89000°, λ40.56000°. Principal axes: T 6.4757, Plg57.0000°, Azm300.0000°; N 0.0472, Plg27.0000°, Azm157.0000°; P -6.5228, Plg17.0000°, Azm58.0000°;*
NEIC ***11*** *05:11:33.6±1.9, 34°.23S±0°.04×71°.87W±0°.07, h45^{km}±4^{km} Error ellipse: s-maj=8.7km s-min=5.8km az=92.0*
IDC ***11*** *05:11:33.6±0.5, 34°.16S×71°.63W, h46^{km}±3^{km}, mb4.3/17, mb1 4.4/19, mb1mx4.3/32, mbtmp4.6/19, MS3.5/9, Ms1 3.5/9, ms1mx3.3/26, Error ellipse: s-maj=17.0km s-min=11.8km az=63.0*
GUC ***11*** *05:11:34.1±0.6, 34°.21S×71°.84W, h44^{km}±1^{km}, ML4.7*
ISC 11 05:11:32.9±0.4, **34°.22S**±0°.03×**71°.90W**±0°.05, **h43**^{km}±3^{km}, **n215**, σ1^{s}**67**/228, **mb4.7**/46, **MS3.4**/7, **12D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BO03	Pichilemu	0.28	190	⇓*i*P	Pn	05 11 42.5	+1.3
BO03				*i* S	Sn	05 11 48.6	+1.5
BO03				IAML		05 11 49.3	
	comp=E,115μm,0.3s						
VA05	Santo Domingo	0.61	23	⇓*i*P	Pn	05 11 45.9	+0.6
VA05				*i* S	Sn	05 11 54.4	+0.4
VA05				IAML		05 11 55.4	
	comp=N,100μm,0.2s						
MT09	Talagante	0.88	60	⇓*i*P	Pn	05 11 49.4	+0.4
MT09				*i* S	Sn	05 12 01.0	+0.3
MT09				IAML		05 12 03.4	
	comp=N,67μm,0.4s						
BO02	Sierra Bellavi	1.09	122	⇓*i*P	Pn	05 11 52.7	+0.9
BO02				*i* S	Sn	05 12 06.5	+0.7
BO02				IAML		05 12 09.7	
	comp=N,57μm,0.3s						
BO02	Sierra Bellavi	1.09	122	Pn	Pn	05 11 52.7	+0.9
BO02				Sn	Sn	05 12 06.3	+0.5
MT02	Curacav	1.15	34	⇓*i*P	Pn	05 11 53.2	+0.6
MT02				*i* S	Sn	05 12 07.3	+0.2
MT02				IAML		05 12 08.4	
	comp=E,19μm,0.3s						
MT02	Curacav	1.15	34	Pn	Pn	05 11 53.4	+0.8
MT02				Sn	Sn	05 12 07.4	+0.2
MT05	Renca	1.27	50	⇓*i*P	Pn	05 11 55.3	+1.0
MT05				*i* S	Sn	05 12 10.7	+0.4
MT05				IAML		05 12 13.4	
	comp=E,37μm,0.3s						
MT05	Renca	1.27	50	Pn	Pn	05 11 55.1	+0.7
MT05				Sn	Sn	05 12 11.6	+1.3
MT03	Universidad Ad	1.37	58	⇓*i*P	Pn	05 11 56.4	+0.7
MT03				*i* S	Sn	05 12 13.1	+0.4
MT03				IAML		05 12 17.2	
	comp=N,44μm,0.2s						
ROC1	El Roble	1.45	31	*e*P	Pn	05 11 58.0	+1.1
ROC1				*e*S	Sn	05 12 17.2	+2.5
LMEL	Las Melosas	1.46	76	⇓*i*P	Pn	05 11 57.8	+0.8
LMEL				*i* S	Sn	05 12 15.8	+0.8
LMEL				IAML		05 12 17.6	
	comp=N,24μm,0.2s						
PEL	Peldehue	1.48	44	*e*P	Pn	05 11 57.8	+0.7
PEL				*i* S	Sn	05 12 16.9	+1.6
PEL				IAML		05 12 19.4	
	comp=N,15μm,0.4s						
PEL	Peldehue	1.48	44		Pn	05 11 57.8	+0.7
PEL				Sn	Sn	05 12 16.9	+1.6
PEL	Peldehue	1.48	44	*e*P	Pn	05 11 58.2	+1.1
PEL				*e*S	Sn	05 12 17.6	+2.3
VA03	San Esteban	1.84	38	⇓*i*P	Pn	05 12 03.3	+1.2
VA03				*i* S	Sn	05 12 25.5	+1.3
VA03				IAML		05 12 29.5	
	comp=E,15μm,0.3s						
VA03	San Esteban	1.84	38		Pn	05 12 03.6	+1.5
COIS	El Sosneado	2.10	116	*e*P	Pn	05 12 08.0	+2.3
COIS				*e*S	Sn	05 12 42.3	+12
LAMA	Las Malvinas	2.33	109	*e*P	Pn	05 12 11.7	+2.8
PUMA	Malargue	2.39	123	*e*P	Pn	05 12 12.9	+3.3
BI02	San Fabin de	2.49	168	⇓*i*P	Pn	05 12 12.2	+1.1
BI02				IAML		05 12 56.5	
	comp=E,2μm,0.2s						
BI02	San Fabin de	2.49	168	Pn	Pn	05 12 12.2	+1.1
EDS3	Malargue	2.57	128	*e*P	Pn	05 12 15.5	+3.2
EDS3				*e*S	Sn	05 12 28.3	-14
BI03	Tigo	2.77	199	*e*P	Pn	05 12 15.0	+0.1
BI03	Tigo	2.77	199	Pn	Pn	05 12 14.9	0.0
RFA	San Rafael	2.89	102	*e*P	Pn	05 12 18.6	+2.1
RFA				IAML		05 13 09.6	
	comp=Z,1μm,2.6s						
AUSP	Uspallata	2.90	47	*e*P	Pn	05 12 19.8	+3.0
CO02	Combarbal	3.10	14	⇓*i*P	Pn	05 12 20.3	+0.8
CO02				*i* S	Sn	05 12 54.5	-0.9
CO02	Combarbal	3.10	14		Pn	05 12 20.3	+0.8
LAJA	Laja	3.12	192	*e*P	Pn	05 12 20.2	+0.5
CO03	El Pedregal	3.52	17	Pn	Pn	05 12 26.8	+1.5
RTCV	Cerro Valdivia	3.67	51	*e*P	Pn	05 12 29.6	+2.3
RTCV				IAML		05 13 32.0	
	comp=Z,696nm,1.5s						
CANA	Caviahue	3.72	170	*e*P	Pn	05 12 31.0	+2.9
CANA				IAML		05 13 40.2	
	comp=Z,285nm,0.7s						
ZON	Zonda	3.80	46	Pn	Pn	05 12 30.6	+1.5
ZON	Zonda	3.80	46	*e*P	Pn	05 12 31.3	+2.2
ZON				IAML		05 13 48.6	
	comp=Z,306nm,0.7s						
RTLL	Cerro Villicun	4.08	46	*e*P	Pn	05 12 34.8	+1.9
RTLL				IAML		05 13 45.1	
	comp=Z,394nm,1.3s						
GO04	Tololo Observa	4.14	13		Pn	05 12 35.0	+1.1
ACCO	Cerro Coronel	4.34	34	*e*P	Pn	05 12 38.7	+1.9
ACCO				*e*S	Sn	05 13 31.5	+5.2
ACCO				IAML		05 13 55.9	
	comp=Z,467nm,0.9s						
CO01	Juntas del Tor	4.50	20		Pn	05 12 40.6	+1.8
AROD	Rodeo	4.54	28	*e*P	Pn	05 12 42.0	+2.6
AROD				*e*S	Sn	05 13 31.6	+0.6
LC01	Cunco	4.67	180	⇓*i*P	Pn	05 12 41.0	+0.1
LC01	Cunco	4.67	180	Pn	Pn	05 12 41.3	+0.4
ACDV	Cuesta del Vie	4.68	31	*e*P	Pn	05 12 43.4	+2.3
ACDV				IAML		05 13 54.5	
	comp=Z,234nm,0.6s						
LCO	Las Campanas	5.29	12	Pn	Pn	05 12 50.5	+0.7
MRA	San Martin	5.48	73	*e*P	Pn	05 12 53.8	+1.6
MRA				IAML		05 14 30.4	
	comp=Z,228nm,0.6s						
AC05	El Transito	5.54	15		Pn	05 12 54.1	+1.0
VA04	Juan Fernndez	5.79	274	Pn	Pn	05 12 57.6	+1.4
H03S1	Juan Fernandez	5.83	272	T	T	05 18 54.1	
	baz=94,slow=74,SNR=3178						
H03S3	Juan Fernandez	5.83	272	T	T	05 18 56.8	
	baz=94,slow=74,SNR=2444						
H03S2	Juan Fernandez	5.84	272	T	T	05 18 55.3	
	baz=94,slow=74,SNR=2385						
H03N1	Juan Fernandez	5.88	276	T	T	05 19 07.1	
	baz=97,slow=74,SNR=23						
H03N3	Juan Fernandez	5.89	275	T	T	05 19 03.6	
	baz=97,slow=74,SNR=21						
H03N2	Juan Fernandez	5.90	276	T	T	05 19 04.0	
	baz=97,slow=74,SNR=22						
APLL	PUNTA DE LOS L	5.94	52	*e*P	Pn	05 12 58.3	-0.1
APLL				IAML		05 14 38.8	
	comp=Z,338nm,0.9s						
AC04	Llanos de Chal	6.04	7	Pn	Pn	05 12 59.3	-0.4
VCA	Vinchina	6.31	31	*e*P	Pn	05 13 04.7	+1.1
VCA				*e*S	Sn	05 14 17.6	+3.0
VCA				IAML		05 15 04.9	
	comp=Z,310nm,0.7s						
ACLC	CERRO LA CRUZ	6.37	43	*e*P	Pn	05 13 03.9	-0.6
ACLC				IAML		05 15 00.6	
	comp=Z,172nm,1.8s						
PLCA	Paso Flores	6.59	171	P	Pn	05 13 08.8	+1.5
	comp=Z,3.6nm,0.3s,baz=332,slow=13,SNR=149						
PLCA				S	Sn	05 14 23.6	+2.4
	comp=Z,1.0nm,0.3s,baz=293,slow=13,SNR=3.1						
PLCA				LR	LR	05 15 45.1	
	comp=Z,490nm,19.4s,baz=351,slow=38						
PLCA	Paso Flores	6.59	171	Pn	Pn	05 13 08.9	+1.6
PLCA	Paso Flores	6.59	171	*e*P	Pn	05 13 09.2	+1.9
GO03	Copiap	6.76	13		Pn	05 13 09.2	-0.5
GO03	Copiap	6.76	13	*e*P	Pn	05 13 09.8	+0.1
GO03				*e*S	Sn	05 14 23.5	-1.9
AC02	Maricunga	7.74	19	Pn	Pn	05 13 23.4	-0.1
AC01	Pan de Azucar	8.12	8		Pn	05 13 25.8	-2.6
LL01	San Ignacio de	8.16	183	Pn	Pn	05 13 27.7	-1.0
GO07	Milladeo Hill,	8.99	188	Pn	Pn	05 13 37.7	-2.3
GO02	Mina Guanaco	9.25	13	Pn	Pn	05 13 41.6	-2.5
PB10	IPOC Station P	10.73	7	Pn	Pn	05 14 00.2	-3.9
PB15	IPOC Station P	11.18	12		Pn	05 14 07.6	-2.8
LVC	Limon Verde	11.86	14	P	Pn	05 14 15.1	-4.7
	comp=Z,0.9nm,0.3s,baz=156,slow=8.7,SNR=3.4						
LVC				S	Sn	05 16 22.5	-8.6
	comp=Z,0.5nm,0.3s,baz=222,slow=12,SNR=1.7						
LVC	Limon Verde	11.86	14	*e*P	Pn	05 14 20.1	+0.3
PB07	IPOC Station P	12.57	9	Pn	Pn	05 14 26.4	-3.0
PB09	IPOC Station P	12.60	11	Pn	Pn	05 14 26.7	-3.0
ITQB	Itaqui	13.74	75	*e*P	Pn	05 14 42.8	-2.4
PB08	IPOC Station P	14.23	11	Pn	Pn	05 14 52.8	+0.6
CPUP	Villa Florida	14.84	62	P	Pn	05 14 54.6	-5.3
	comp=Z,0.2nm,0.3s,baz=200,slow=9.7,SNR=3.3						
CPUP				LR	LR	05 21 02.6	
	comp=Z,194nm,20.2s,baz=298,slow=39						
CPUP	Villa Florida	14.84	62	*e*P	Pn	05 14 56.9	-3.0
MNMC	Minye Minye	15.17	8		Pn	05 15 04.7	+0.2
MNMC				IAmb	IAmb	05 15 14.8	
	comp=Z,24nm,0.6s						
PLTB	Pedras Altas	15.55	86	*e*P	Pn	05 15 06.0	-3.3
CPSB	Cacapava Do Su	16.07	81	*e*P	Pn	05 15 12.8	-3.0
LPAZ	La Paz	18.18	12	P	Pn	05 15 43.1	+0.4
	comp=Z,0.7nm,0.3s,baz=180,slow=8.0,SNR=20						
LPAZ	La Paz	18.18	12		Pn	05 15 44.1	+1.4
LPAZ	La Paz	18.18	12	*e*P	Pn	05 15 43.9	+1.2
ITAB	Concordia	18.36	73	*e*P	P	05 15 41.8	-2.2
CNLB	Canela	18.55	80	*e*P	P	05 15 44.4	-1.7
PTGB	Pitanga	19.67	66	*e*P	P	05 15 57.1	-1.4
AQDB	Aquidauana	19.83	50	*e*P	P	05 15 59.3	-0.8
EFI	East Falkland	20.11	154	P	P	05 15 58.9	-4.1
EFI				IAmb	IAmb	05 16 07.4	
	comp=Z,73nm,1.1s						
TRCB	Terra Rica	20.37	61	*e*P	P	05 16 04.6	-1.4
SIV	San Ignacio	20.60	31	P	P	05 16 07.8	-0.8
	comp=Z,11nm,0.6s,baz=215,slow=8.0,SNR=66						
PCMB	Pacaembu	22.10	61	*e*P	P	05 16 22.6	-2.0
FRTB	Fartura	22.33	67	*e*P	P	05 16 25.1	-2.0
PP1B	Ponte de Pedra	22.49	47	*e*P	P	05 16 27.8	-1.1
NNA	Nana	22.58	347	P	P	05 16 30.2	+0.4
	comp=Z,8.7nm,0.7s,baz=182,slow=10,SNR=7.2						
NNA				LR	LR	05 23 57.3	
	comp=Z,121nm,18.9s,baz=265,slow=33						
VILB	Vilhena	23.69	29	*e*P	P	05 16 39.0	-1.9
SPB	Sao Paulo	23.84	70	*e*P	P	05 16 41.5	-0.7
ITRB	Iturama	23.97	58	*e*P	P	05 16 41.7	-1.8
ETMB	Extrema	24.84	13	*e*P	P	05 16 53.1	+1.7
ARAG	Araguaiana, MT	25.83	49	*e*P	P	05 16 59.1	-1.3
CZSB	Cruzeiro do Su	26.37	358	*e*P	P	05 17 06.5	+1.3
IPMB	Ipameri, GO	26.62	59	*e*P	P	05 17 07.3	-0.3
ATAH	Atahualpa	27.61	346	LR	LR	05 25 40.8	
	comp=Z,89nm,20.2s,baz=183,slow=31						
BDFB	Brasilia	28.37	55	P	P	05 17 21.5	-1.8
	comp=Z,8.0nm,0.7s,baz=221,slow=9.5,SNR=14						
BDFB				LR	LR	05 29 51.0	
	comp=Z,226nm,20.0s,baz=210,slow=39						
BDFB	Brasilia	28.37	55	P	P	05 17 23.4	+0.1
PEXB	Peixe	30.76	50	*e*P	P	05 17 43.5	-0.9
NPGB	Novo Progresso	31.06	33	*e*P	P	05 17 45.9	-1.2
NAN01	Guarapari, ES	32.71	68	*e*P	P	05 17 59.5	-2.0
RPN	Rapa Nui	32.82	272	LR	LR	05 27 59.4	
	comp=Z,120nm,19.1s,baz=98,slow=30						
ITTB	Itaituba	33.29	30	*e*P	P	05 18 05.8	-0.8
OTAV	Otavalo	34.82	348	P	P	05 18 22.4	+2.0
OTAV					PcP	05 20 55.0	+1.9
OTAV	Otavalo	34.82	348	*e*P	P	05 18 23.2	+2.8
PTGA	Pitinga	35.14	21	P	P	05 18 22.9	+0.3
PTGA				IAmb	IAmb	05 18 39.8	
	comp=Z,11nm,0.9s						
PTGA	Pitinga	35.14	21	*e*P	P	05 18 23.0	+0.4
GDU01	Guandu, BA	35.67	63	*e*P	P	05 18 25.4	-1.8
MALB	Monte Alegre	36.17	31	*e*P	P	05 18 31.1	-0.4
ROSC	El Rosal	38.91	356	P	P	05 18 53.4	-1.7
	comp=Z,2.5nm,0.4s,baz=210,slow=20,SNR=1.6						
NBPS	Pedro II - PI	40.99	50	*e*P	P	05 19 11.0	-1.0
SDV	Santo Domingo	42.88	2	P	P	05 19 26.1	-1.5
	comp=Z,4.8nm,1.0s,baz=222,slow=6.2,SNR=1.0						
SDV	Santo Domingo	42.88	2	P	P	05 19 30.1	+2.6
SDV	Santo Domingo	42.88	2	*e*P	P	05 19 29.2	+1.7
PCRV	Puerto La Cruz	44.69	10	P	P	05 19 40.2	-1.7
	baz=68,slow=16						
BELA	Belgrano 2	46.65	170	P	P	05 19 58.3	+1.7
BELA				IAmb	IAmb	05 20 10.8	
	comp=Z,9.7nm,0.9s						
VNA3	Neumayer Olymp	49.11	158	P	P	05 20 16.5	+0.7
VNA2	Neumayer--Watz	49.77	157	P	P	05 20 20.8	0.0
	baz=295,slow=8.5						
SNAA	Sanae	51.34	158	P	P	05 20 33.4	+0.7
SNAA	Sanae	51.34	158		P	05 20 33.5	+0.9
TEIG	Tepich	56.34	341	P	P	05 21 10.0	+0.4
	comp=Z,15nm,0.5s,baz=104,slow=5.1,SNR=12						
346A	Big Creek Wild	67.32	344	P	P	05 22 25.2	+1.8
GOGA	Godfrey	68.15	350	P	P	05 22 28.8	+0.3
GOGA				IAmb	IAmb	05 22 41.5	
	comp=Z,5.0nm,0.7s						
W57A	Gilead	69.43	353	P	P	05 22 36.5	+0.1
W57A				IAmb	IAmb	05 22 46.3	
	comp=Z,14nm,1.1s						
KMSC	Kings Mountain	69.56	352	P	P	05 22 38.1	+0.9
KMSC				IAmb	IAmb	05 22 50.6	
	comp=Z,15nm,1.1s						
X48A	Hartselle	69.77	347	P	P	05 22 39.7	+1.1
X48A				IAmb	IAmb	05 22 52.7	
	comp=Z,14nm,1.1s						
TXAR	Lajitas Array	69.98	331	P	P	05 22 41.6	+1.5
	comp=Z,4.4nm,0.6s,baz=158,slow=8.6,SNR=60						
TXAR				pP	pP	05 22 54.2	+1.5

	comp=Z,2.7nm,0.7s,baz=149,slow=9.6,SNR=7.0						
TXAR				LR	LR	05 48 44.0	
	comp=Z,53nm,18.1s,baz=0.0,slow=32						
W50A	Signal Mountai	70.19	348	P	P	05 22 41.7	+0.5
V55A	Taylorsville	70.25	352	P	P	05 22 41.6	+0.2
V55A				IAmb	IAmb	05 22 57.2	
	comp=Z,14nm,1.1s						
PPT	Papeete	70.32	262	LR	LR	05 44 09.6	
	comp=Z,13nm,21.7s,baz=160,slow=28						
TKL	Tuckaleechee C	70.40	350	P	P	05 22 39.7	-2.7
	comp=Z,3.9nm,0.7s,baz=179,slow=11,SNR=5.4						
TKL	Tuckaleechee C	70.40	350	P	P	05 22 42.0	-0.4
TKL				IAmb	IAmb	05 22 55.5	
	comp=Z,6.8nm,0.8s						
PLAL	Pickwick Lake	70.49	346	IAmb	IAmb	05 22 56.5	
	comp=Z,8.5nm,0.7s						
V51A	Loudon	70.63	349	P	P	05 22 43.9	+0.2
V51A				IAmb	IAmb	05 22 52.9	
	comp=Z,9.0nm,1.1s						
U54A	Nelsons Funny	70.98	352	P	P	05 22 46.0	0.0
U54A				IAmb	IAmb	05 22 55.8	
	comp=Z,14nm,1.0s						
CLTN	Cedars of Leba	71.23	348	P	P	05 22 47.6	+0.2
CLTN				IAmb	IAmb	05 22 49.1	
	comp=Z,9.6nm,0.9s						
TZTN	Tazewell	71.23	350	P	P	05 22 47.2	-0.2
U49A	Red Boiling Sp	71.55	348	P	P	05 22 48.9	-0.5
U49A				IAmb	IAmb	05 22 50.2	
	comp=Z,8.0nm,0.8s						
WVT	Waverly	71.55	346	P	P	05 22 50.1	+0.8
T47A	Sharon Grove	72.25	347	P	P	05 22 54.1	+0.6
T47A				IAmb	IAmb	05 22 54.4	
	comp=Z,11nm,0.8s						
FCAR	Ozark Folk Cen	72.26	343	P	P	05 22 54.2	+0.6
FCAR				IAmb	IAmb	05 23 07.4	
	comp=Z,8.3nm,0.8s						
MNTX	Cornudas Mount	72.76	331	IAmb	IAmb	05 22 58.1	
	comp=Z,7.0nm,0.7s						
U40A	Yellville	72.88	342	IAmb	IAmb	05 23 11.3	
	comp=Z,8.2nm,0.8s						
HHAR	Hobbs	73.09	342	P	P	05 22 59.5	+1.0
HHAR				IAmb	IAmb	05 23 12.6	
	comp=Z,10nm,1.1s						
T42A	Van Buren	73.11	344	P	P	05 22 59.6	+1.0
FVM	French Village	73.87	345	IAmb	IAmb	05 23 17.1	
	comp=Z,12nm,1.0s						
CCM	Cathedral Cave	74.12	344	P	P	05 23 05.4	+0.8
AMTX	Amarillo	74.18	335	IAmb	IAmb	05 23 21.8	
	comp=Z,8.4nm,1.0s						
S39A	Bolivar	74.27	342	P	P	05 23 05.8	+0.4
O56A	Blue Knob Stat	74.37	355	P	P	05 23 07.0	+1.0
O56A				IAmb	IAmb	05 23 15.6	
	comp=Z,11nm,1.1s						
121A	Cookes Peak, D	74.48	329	P	P	05 23 07.7	+0.7
121A				IAmb	IAmb	05 23 10.4	
	comp=Z,12nm,0.8s						
R40A	Maddies Statio	74.58	343	P	P	05 23 08.1	+0.9
U32A	Winter Ranch,	74.65	338	P	P	05 23 09.2	+1.5
SSPA	Standing Stone	74.69	355	P	P	05 23 08.1	+0.3
SSPA				IAmb	IAmb	05 23 26.6	
	comp=Z,11nm,1.1s						
KAN13	South Haven SW	74.77	339	P	P	05 23 09.0	+0.7
ACSO	Alum Creek Sta	74.79	351	P	P	05 23 08.9	+0.5
ODNJ	Ogdensburg	74.97	358	P	P	05 23 10.4	+1.0
DBIC	Dimbokro	75.14	71	P	P	05 23 08.2	-2.8
	comp=Z,3.0nm,0.9s,baz=352,slow=5.1,SNR=2.3						
DBIC				pP	pP	05 23 23.2	-0.5
	comp=Z,4.1nm,0.8s,baz=216,slow=6.6,SNR=3.7						
DBIC				LR	LR	05 56 08.0	
	comp=Z,19nm,18.9s,baz=234,slow=36						
TUC	Tucson	75.61	327	P	P	05 23 15.9	+2.4
ANMO	Albuquerque	76.03	331	P	P	05 23 16.2	+0.3
	comp=Z,5.8nm,0.8s,baz=158,slow=7.7,SNR=17						
ANMO				pP	pP	05 23 30.6	+2.0
	comp=Z,3.3nm,0.8s,baz=173,slow=6.0,SNR=5.1						
ANMO	Albuquerque	76.03	331	P	P	05 23 17.9	+2.0
WUAZ	Wupatki	78.58	328	IAmb	IAmb	05 23 33.5	
	comp=Z,7.7nm,0.9s						
PV13	Radium Mtn., P	79.76	331	IAmb	IAmb	05 23 39.3	
	comp=Z,9.3nm,0.8s						
PV02	Paradox Valley	79.76	331	IAmb	IAmb	05 23 40.0	
	comp=Z,9.8nm,1.1s						
PV18	Skein Mesa, Pa	79.87	331	IAmb	IAmb	05 23 39.8	
	comp=Z,7.7nm,0.7s						
BOSA	Boshof	79.87	118	P	P	05 23 37.1	-0.4
	comp=Z,6.4nm,0.8s,baz=217,slow=3.6,SNR=8.6						
BOSA				pP	pP	05 23 50.1	-0.2
	comp=Z,3.9nm,0.7s,baz=181,slow=3.6,SNR=3.3						
BOSA	Boshof	79.87	118	IAmb	IAmb	05 23 38.8	
	comp=Z,7.4nm,0.9s						
SMCO	Snowmass	79.92	333	IAmb	IAmb	05 23 41.0	
	comp=Z,9.4nm,0.8s						
KOWA	Kowa	80.63	65	P	P	05 23 41.0	-0.5
	comp=Z,1.6nm,0.5s,baz=180,slow=2.5,SNR=6.9						
ECSD	EROS Data Cent	80.79	342	IAmb	IAmb	05 23 43.5	
	comp=Z,12nm,0.8s						
PDAR	Pinedale Array	84.01	333	P	P	05 23 59.6	+0.8
	comp=Z,2.5nm,0.8s,baz=157,slow=4.9,SNR=17						
PDAR				pP	pP	05 24 13.1	+1.4
	comp=Z,1.4nm,0.8s,baz=151,slow=3.4,SNR=5.2						
PDAR	Pinedale Array	84.01	333	P	P	05 23 59.1	+0.3
NVAR	Mina Array Bea	84.13	325	P	P	05 24 00.6	+1.1
	comp=Z,3.4nm,0.7s,baz=156,slow=6.1,SNR=31						
NVAR				pP	pP	05 24 14.6	+2.2
	comp=Z,2.7nm,0.7s,baz=151,slow=5.8,SNR=9.6						
NVAR	Mina Array Bea	84.13	325	P	P	05 24 01.6	+2.1
TORD	Torodi Ar. Bea	84.18	70	P	P	05 24 00.1	0.0
	comp=Z,3.1nm,0.8s,baz=264,slow=3.9,SNR=12						
TORD				pP	pP	05 24 12.6	-0.3
	comp=Z,3.9nm,0.7s,baz=258,slow=4.3,SNR=11						
TORD	Torodi Ar. Bea	84.18	70	P	P	05 24 00.3	+0.2
ELK	Elko	84.61	328	P	P	05 24 03.2	+1.3
	comp=Z,5.7nm,0.8s,baz=158,slow=3.1,SNR=25						
ELK				pP	pP	05 24 16.6	+1.8
	comp=Z,3.5nm,0.8s,baz=181,slow=4.8,SNR=7.3						
ELK	Elko	84.61	328	IAmb	IAmb	05 24 04.5	
	comp=Z,6.3nm,0.8s						
HLID	Hailey	86.58	331	IAmb	IAmb	05 24 14.6	
	comp=Z,8.8nm,1.0s						
ULM	Lac du Bonnet	86.74	345	P	P	05 24 10.9	-1.0
	comp=Z,3.3nm,0.6s,baz=184,slow=3.7,SNR=7.0						
YBH	Yreka Blue Hor	88.81	325	P	P	05 24 22.6	+0.4
	comp=Z,4.3nm,0.8s,baz=81,slow=4.6,SNR=13						
YBH				pP	pP	05 24 36.1	+1.0
	comp=Z,3.9nm,0.7s,baz=14,slow=4.2,SNR=6.1						
YBH	Yreka Blue Hor	88.81	325	P	P	05 24 23.3	+1.1
YBH				IAmb	IAmb	05 24 24.1	
	comp=Z,6.0nm,0.9s						
YKA	Yellowknife Ar	102.30	341	P	Pdif	05 25 22.9	-0.1
	comp=Z,0.6nm,0.6s,baz=138,slow=4.8,SNR=11						
YKA				pP	pPdif	05 25 36.2	+0.3
	comp=Z,0.3nm,0.5s,baz=138,slow=4.7,SNR=3.2						
CLL	Collm	112.93	43	*e*PP	PP	05 30 55.0	+0.7
ILAR	Eielson Array	114.44	333	PKP	PKPdf	05 30 05.5	-1.8
	comp=Z,0.5nm,0.8s,baz=185,slow=2.1,SNR=5.1						
NOA	NORSAR Array B	116.15	33	PKP	PKPdf	05 30 09.8	-0.9
	comp=Z,1.0nm,1.0s,baz=273,slow=7.5,SNR=2.0						
ASAR	Alice Springs	117.42	207	PKP	PKPdf	05 30 13.8	-0.6
	comp=Z,1.3nm,1.0s,baz=133,slow=2.0,SNR=5.6						
WRA	Warramunga Arr	120.62	209	PKP	PKPdf	05 30 18.9	-1.8
	comp=Z,1.3nm,0.5s,baz=156,slow=1.7,SNR=25						
WRA				pPKP	pPKPdf	05 30 34.1	+0.1
	comp=Z,0.6nm,0.6s,baz=156,slow=1.6,SNR=2.8						
BRTR	Keskin Array B	121.84	61	PKP	PKPdf	05 30 22.4	-0.1
	comp=Z,1.3nm,0.8s,baz=222,slow=1.7,SNR=3.6						
FINES	FINESS Array B	123.11	35	PKP	PKPdf	05 30 23.2	-0.8
	comp=Z,1.1nm,0.7s,baz=273,slow=2.5,SNR=1.6						
ARCES	ARCESS Array B	124.17	25	PKP	PKPdf	05 30 25.7	-0.1
	comp=Z,0.7nm,0.4s,baz=300,slow=2.0,SNR=4.8						
H11S2	WAKE ISLAND Hy	125.88	269	T	T	07 49 04.9	
	baz=117,slow=74						
H11S1	WAKE ISLAND Hy	125.89	269	T	T	07 49 04.3	
	baz=117,slow=74						
H11S3	WAKE ISLAND Hy	125.90	269	T	T	07 49 06.0	
	baz=117						
H11N3	WAKE ISLAND Hy	126.30	270	T	T	07 49 29.7	
	baz=115,slow=78,SNR=22						
H11N1	WAKE ISLAND Hy	126.31	270	T	T	07 49 30.9	
	baz=115,slow=78,SNR=30						
H11N2	WAKE ISLAND Hy	126.31	270	T	T	07 49 34.0	
	baz=115,slow=78,SNR=20						
SEY	Seymchan	140.28	330	PKP	PKPdf	05 30 56.0	-0.3
	comp=Z,3.1nm,0.6s,baz=84,slow=3.7,SNR=7.2						
AAK	Ala-Archa	152.51	62	PKPbc	PKiKP	05 31 25.5	+0.7
	baz=190,slow=2.9						
KURBB	Kurchatov Arra	152.95	44	PKP	PKPdf	05 31 18.3	+0.6
	comp=Z,0.5nm,0.6s,baz=319,slow=2.1,SNR=3.4						
KURBB				PKPbc	PKiKP	05 31 25.9	+0.7
	comp=Z,4.0nm,0.5s,baz=303,slow=2.9,SNR=26						
KURBB				pPKPbc	pPKPbc	05 31 38.6	+0.2
	comp=Z,2.7nm,0.6s,baz=296,slow=2.9,SNR=7.0						
KURK	Kurchatov	152.96	43		PKPab	05 31 38.6	+2.1
KSH	Kashi	153.85	69	PKPbc	PKPbc	05 31 27.2	-0.4
KSH				pPKP	pPKPdf	05 31 35.5	+2.4
KSH				PP	PP	05 35 22.4	+6.5
KSH				AMB	AMB		
	comp=Z,440nm,5.4s						
ZALV	Zalesovo Beam	154.35	33	PKP	PKPdf	05 31 19.8	+0.2
	comp=Z,1.3nm,0.7s,baz=270,slow=0.7,SNR=6.2						
ZALV				PKPbc	PKiKP	05 31 28.1	+0.1
	comp=Z,5.0nm,0.6s,baz=277,slow=1.6,SNR=20						
ZALV				PKPab	pPKPbc	05 31 40.9	-0.5
	comp=Z,1.8nm,0.4s,baz=306,slow=3.4,SNR=9.6						
ZALV				pPKPab	pPKPab	05 31 55.5	+0.2
	comp=Z,4.3nm,0.6s,baz=303,slow=5.3,SNR=5.0						
ZALV	Zalesovo Beam	154.35	33	PKPdf	PKPdf	05 31 15.8	-3.8
MJAR	Matsushiro Arr	155.38	284	PKPab	PKPab	05 31 47.8	+0.4
	comp=Z,1.2nm,0.3s,baz=116,slow=3.0,SNR=2.2						
MKAR	Makanchi Array	156.82	49	PKP	PKPdf	05 31 23.6	+0.3
	comp=Z,0.7nm,0.8s,baz=274,slow=3.5,SNR=4.4						
MKAR				PKPab	PKPab	05 31 52.2	-1.0
	comp=Z,1.0nm,0.8s,baz=295,slow=2.8,SNR=4.8						
MKAR				pPKPab	pPKPab	05 32 06.0	-0.3
	comp=Z,0.7nm,0.5s,baz=290,slow=3.0,SNR=3.9						
KSRS	Korea Array	163.60	287	PKPab	PKPab	05 32 24.3	+1.3
	comp=Z,0.5nm,0.3s,baz=76,slow=5.1,SNR=2.9						
SONM	Songino Array	166.34	5	PKP	PKPdf	05 31 33.0	-0.3
	comp=Z,0.3nm,0.4s,baz=318,slow=1.9,SNR=1.9						
SONM				PKPab	PKPab	05 32 35.2	+0.5
	comp=Z,0.7nm,0.7s,baz=346,slow=3.4,SNR=5.1						
SONM				pPKPab	pPKPab	05 32 47.0	-0.7
	comp=Z,0.8nm,0.8s,baz=325,slow=3.1,SNR=3.3						
XAN	Xi'an	179.29	256	PKP	PKPdf	05 31 39.5	+0.6
XAN				sPKP		05 31 56.1	
XAN				LR	LR		
	comp=N,190nm,15.2s						
XAN				LR	LR		
	comp=E,100nm,18.4s						
XAN				LR	LR		
	comp=Z,160nm,16.3s						

INET **11** *05:20:11.9, 13°.54N×90°.76W, h15^{km}, MW4.6*

NEIC **11** *05:20:12.9±2.5, 13°.57N±0°.08×90°.78W±0°.07, h59^{km}±4^{km}, mb4.5/60, Md4.7(SNET), Error ellipse: s-maj=13.8km s-min=7.7km az=216.0*

IDC **11** *05:20:12.1±0.7, 13°.81N×90°.33W, h52^{km}±4^{km}, mb3.7/14, mb1 3.9/17, mb1mx3.8/43, mbtmp4.0/17, MS3.5/5, Ms1 3.5/5, ms1mx3.2/27, Error ellipse: s-maj=29.1km s-min=11.9km az=49.0*

SNET **11** *05:20:12.8±0.9, 13°.58N×90°.67W, h20^{km}±3^{km}, ML4.7*

GCG **11** *05:20:13.3±0.3, 13°.68N×90°.81W, h27^{km}±4^{km}, MD4.5*

UCR **11** *05:20:13.0±1.3, 13°.65N×90°.68W, h20^{km}±5^{km}, ML4.5, MW4.1, mb4.5(NEIC)*

ISC 11 05:20:11.6±0.5**, 13°.57N**±0°.05×**90°.81W**±0°.05**, h53**^{km}±4^{km}**, h53**^{km}**:pP-P, n185,** σ1^{s}.76/201**, mb4.4**/33**, MS3.5**/4**, 17C-28D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCG	Pacaya	0.84	13	*e*P	Pn	05 20 28.0	+0.4
FUG	Fuego 3	0.88	358	⇓*i*P	Pn	05 20 28.2	+0.2
NBG	Las Nubes	1.11	24	*e*P	Pn	05 20 32.5	+1.3
RTR	El Retiro	1.17	74	⇓*i*P	Pn	05 20 32.3	+0.4
RTR	El Retiro	1.17	74	⇓*i*P	Pn	05 20 32.3	+0.4
CEVE	Cerro Verde	1.18	77	⇓*i*P	Pn	05 20 32.2	+0.1
CEVE				*e*S	Sn	05 20 47.4	+0.2
CEVE	Cerro Verde	1.18	77	⇓*i*P	Pn	05 20 32.2	+0.1
CEVE				*e*S	Sn	05 20 47.4	+0.2
SBLS	San Blas	1.18	77	⇓*i*P	Pn	05 20 32.1	0.0
SBLS	San Blas	1.18	77	⇓*i*P	Pn	05 20 32.1	0.0
SNJE	San Jose	1.20	75	⇓*i*P	Pn	05 20 32.6	+0.2
SNJE	San Jose	1.20	75	⇓*i*P	Pn	05 20 32.6	+0.2
RTAL	Retalhuleu	1.29	318		Pn	05 20 33.1	-0.2
UNIC	Universidad Ca	1.29	71	⇑*i*P	Pn	05 20 33.7	+0.3
UNIC	Universidad Ca	1.29	71	⇑*i*P	Pn	05 20 33.7	+0.3
JAYA	Jayaque - finc	1.32	86	⇓*i*P	Pn	05 20 33.8	-0.1
JAYA				*e*S	Sn	05 20 50.1	-0.5
JAYA				IAML		05 20 51.6	
	comp=Z,20μm,0.3s						
JAYA	Jayaque - finc	1.32	86	⇓*i*P	Pn	05 20 33.8	-0.1
JAYA				*e*S	Sn	05 20 50.1	-0.5
JAYA				IAML		05 20 51.6	
	comp=Z,20μm,0.3s						
CEDA	San Andres	1.39	80	⇓*e*P	Pn	05 20 34.9	+0.2
CEDA				*e*S	Sn	05 20 52.8	+0.7
CEDA				IAML		05 21 03.5	
	comp=Z,18μm,0.5s						
CEDA	San Andres	1.39	80	⇓*e*P	Pn	05 20 34.9	+0.2
CEDA				*e*S	Sn	05 20 52.8	+0.7
CEDA				IAML		05 21 03.5	
	comp=Z,18μm,0.5s						
LALI	Alcalda de L	1.45	93	⇑*i*P	Pn	05 20 35.7	+0.3
LALI	Alcalda de L	1.45	93	⇑*i*P	Pn	05 20 35.7	+0.3
PMON	Piamonte	1.46	84	⇑*e*P	Pn	05 20 36.0	+0.3
PMON	Piamonte	1.46	84	⇑*e*P	Pn	05 20 36.0	+0.3
TACO	Tacachico	1.47	74	⇓*i*P	Pn	05 20 36.2	+0.5
TACO	Tacachico	1.47	74	⇓*i*P	Pn	05 20 36.2	+0.5
ITCA	Escuela Especi	1.49	86	*e*P	Pn	05 20 36.6	+0.5
ITCA	Escuela Especi	1.49	86	*e*P	Pn	05 20 36.6	+0.5
BOQS	Boqueron	1.49	83	⇑*i*P	Pn	05 20 36.9	+0.7
BOQS	Boqueron	1.49	83	⇑*i*P	Pn	05 20 36.9	+0.7
UEES	Universidad Ev	1.53	84	⇑*e*P	Pn	05 20 37.2	+0.6
UEES	Universidad Ev	1.53	84	⇑*e*P	Pn	05 20 37.2	+0.6
SNET	Serv Nac Est T	1.54	85	⇑*e*P	Pn	05 20 37.2	+0.5
SNET				*e*S	Sn	05 20 56.1	+0.5
SNET				IAML		05 21 00.8	
	comp=Z,9μm,0.5s						
SNET	Serv Nac Est T	1.54	85	⇑*e*P	Pn	05 20 37.2	+0.5
SNET				*e*S	Sn	05 20 56.1	+0.5
SNET				IAML		05 21 00.8	
	comp=Z,9μm,0.5s						
SNET	Serv Nac Est T	1.54	85		Pn	05 20 37.2	+0.5
OPAM	Oficina de Pla	1.57	84	*e*P	Pn	05 20 38.2	+1.1
OPAM	Oficina de Pla	1.57	84	*e*P	Pn	05 20 38.2	+1.1
IGN	Direccin Gen	1.60	84	*e*P	Pn	05 20 38.6	+1.0
IGN	Direccin Gen	1.60	84	*e*P	Pn	05 20 38.6	+1.0
MTO3	Montecristo	1.63	59	⇓*i*P	Pn	05 20 38.5	+0.4
MTO3				*e*S	Sn	05 21 00.5	+2.4
MTO3	Montecristo	1.63	59	⇓*i*P	Pn	05 20 38.5	+0.4
MTO3				*e*S	Sn	05 21 00.5	+2.4
MTO3	Montecristo	1.63	59	Pn	Pn	05 20 38.4	+0.4
AEIL	Aeropuerto Ilo	1.65	85	*e*P	Pn	05 20 39.4	+1.2
AEIL	Aeropuerto Ilo	1.65	85	*e*P	Pn	05 20 39.4	+1.2
LFRS	El Faro	1.70	88	⇓*e*P	Pn	05 20 39.7	+0.8
LFRS	El Faro	1.70	88	⇓*e*P	Pn	05 20 39.7	+0.8
LBRS	Las Brisas	1.72	84	⇑*e*P	Pn	05 20 40.3	+1.0
LBRS	Las Brisas	1.72	84	⇑*e*P	Pn	05 20 40.3	+1.0
ESQI	Esquipulas	1.73	55	⇓*i*P	Pn	05 20 40.2	+0.7
ESQI	Esquipulas	1.73	55	Pn	Pn	05 20 40.1	+0.7
MRL	Marmol	1.86	36	*e*P	Pn	05 20 42.9	+1.7
MRL				*e*S	Sn	05 21 06.1	+2.3
HUEH	Huehuetenango	1.87	339	Pn	Pn	05 20 42.7	+1.3
COEG	Centro de Oper	1.87	88	*e*P	Pn	05 20 42.2	+0.9
COEG	Centro de Oper	1.87	88	*e*P	Pn	05 20 42.2	+0.9
LLGN	La Laguna	1.90	72	*e*P	Pn	05 20 42.1	+0.4
LLGN	La Laguna	1.90	72	*e*P	Pn	05 20 42.1	+0.4
PQSS	Presa 15 de Se	2.18	88	*e*P	Pn	05 20 46.4	+0.9
COEB	Comit de Eme	2.21	91	⇓*e*P	Pn	05 20 46.9	+0.9
COEB				IAML		05 21 18.0	
	comp=Z,3μm,0.5s						
COEB	Comit de Eme	2.21	91	⇓*e*P	Pn	05 20 46.9	+0.9
COEB				IAML		05 21 18.0	
	comp=Z,3μm,0.5s						
TECA	Tecapa	2.24	92	⇑*e*P	Pn	05 20 47.5	+1.1
TECA	Tecapa	2.24	92	⇑*e*P	Pn	05 20 47.5	+1.1
PACA	Pacayal	2.42	92	*e*P	Pn	05 20 50.0	+1.3
PACA	Pacayal	2.42	92	*e*P	Pn	05 20 50.0	+1.3
LCND	La Caada	2.85	95	*e*P	Pn	05 20 55.5	+0.9
LCND	La Caada	2.85	95	*e*P	Pn	05 20 55.5	+0.9
CNCH	Conchagua	2.91	95	*e*P	Pn	05 20 56.7	+1.2
CNCH	Conchagua	2.91	95	*e*P	Pn	05 20 56.7	+1.2
PETF	Flores	3.45	15	Pn	Pn	05 21 04.0	+1.1
TGUH	Tegucigalpa,Un	3.47	81	Pn	Pn	05 21 04.1	+0.9
CRIN	San Cristobal	3.76	103	Pn	Pn	05 21 09.2	+2.1
CMIG	Matias Romero	5.27	312	P	Pn	05 21 29.1	+1.3
	comp=Z,4.4nm,0.3s,baz=117,slow=10,SNR=27						
CMIG				S	Sn	05 22 27.1	-0.1
	comp=Z,14nm,0.3s,baz=88,slow=23,SNR=6.0						
ACON	Acoyapa	5.72	105	Pn	Pn	05 21 34.2	+0.2
GBS3	Finca Las Img	5.92	117	⇓*e*P	Pn	05 21 39.8	+3.1
LAPC	Finca la Perla	5.94	117	*e*P	Pn	05 21 38.7	+1.6
GB1A	Borinquen Arri	5.95	117	⇓*e*P	Pn	05 21 40.8	+3.6
BUEV	Buena Vista	5.95	117	*e*P	Pn	05 21 40.5	+3.2
GPS2	Hotel Rincn d	6.02	117	⇓*e*P	Pn	05 21 41.3	+3.1
GUAB	Guayabo de Bag	6.15	117	⇓*e*P	Pn	05 21 42.8	+2.8
COLC	Colonia	6.19	117	*e*P	Pn	05 21 44.2	+3.7
HORNC	Hornillas	6.19	117	*e*P	Pn	05 21 42.8	+2.2
CUI	Cuipilapa	6.23	117	⇓*e*P	Pn	05 21 43.0	+2.0
ESPN	Las Esperanzas	6.49	101	Pn	Pn	05 21 45.1	+0.6
JTS	Las Juntas de	6.59	119	Pn	Pn	05 21 48.2	+2.3
CASO	Castillo	6.71	117	⇓*e*P	Pn	05 21 50.1	+2.5
CEDE	Laguna Cedeo	6.71	116	*e*P	Pn	05 21 44.9	-2.8
TEIG	Tepich	7.05	20	P	Pn	05 21 53.9	+1.7
	comp=Z,13nm,0.3s,baz=198,slow=5.0,SNR=37						
TEIG				LR	LR	05 25 13.9	
	comp=Z,383nm,18.4s,baz=183,slow=45						
EDLM	Las Mercedes	8.26	120	*e*P	Pn	05 22 12.9	+4.1
EDBA	Buenos Aires	8.58	120	*e*P	Pn	05 22 16.4	+3.1
LPLA	Las Palmas La	8.88	120	*e*P	Pn	05 22 20.7	+3.3
PAYG	Puerto Ayora	14.16	178	P	P	05 23 38.9	+3.4
CBOC	Ciudad Bolivar	16.46	116	*e*P	Pn	05 23 55.5	-3.8
PLMC	San Jos del P	16.71	120	*e*P	Pn	05 23 58.2	-4.1
441A	DeRidder	17.24	353	P	P	05 24 12.7	+3.1
GUY2C	Guyana, Caldas	17.33	117	*e*P	Pn	05 24 09.1	-1.3
RREF	El Recreo	17.51	118	*e*P	Pn	05 24 10.5	-2.2
PTBC	PUERTO BERRIO,	17.54	112	*e*P	Pn	05 24 11.9	-0.6
NORC	Norcasia	17.60	115	*e*P	P	05 24 14.6	+0.9
BBAC	Balboa, Cauca	17.65	129	*e*P	Pn	05 24 13.2	-0.8
TOLC	Tolima	17.69	119	*e*P	Pn	05 24 14.6	-0.1
POPC	Popayan, Colom	17.75	127	*e*P	P	05 24 17.4	+1.8
344A	Westbrook Farm	17.80	0	P	P	05 24 20.2	+4.4
344A				IAmb	IAmb	05 24 22.1	
	comp=Z,29nm,0.8s						
SOTA	Rioblanco	18.06	128	⇑*e*P	P	05 24 18.7	-0.5
PCON	Cinco Dias	18.10	127	*e*P	Pn	05 24 21.4	+1.5
GCUF	Volcan Galeras	18.11	132	*e*P	P	05 24 07.8	-12
ORTC	Ortega, Tolima	18.11	121	*e*P	Pn	05 24 20.1	+0.5
VBMS	Vicksburg	18.57	1	P	Pn	05 24 28.0	+3.1
VBMS				IAmb	IAmb	05 24 40.9	
	comp=Z,34nm,0.8s						
TIGA	Tifton	18.99	19	P	Pn	05 24 34.0	+4.1
CHIC	Chingaza	19.04	116	*e*P	P	05 24 25.6	-4.4
RUSC	La Rusia	19.05	112	*e*P	P	05 24 26.9	-3.2
FLOC	Florencia	19.14	127	*e*P	P	05 24 28.3	-2.4
TX32	Lajitas Array	19.71	325		Pn	05 24 39.6	+1.0
TXAR	Lajitas Array	19.71	325	P	Pn	05 24 39.4	+0.7
	comp=Z,0.3nm,0.3s,baz=148,slow=11,SNR=9.8						
TXAR				PcP	PcP	05 28 55.5	+1.4
	comp=Z,0.0nm,0.3s,baz=151,slow=2.9,SNR=3.1						
TXAR				pPcP		05 29 11.0	
	comp=Z,0.1nm,0.3s,baz=132,slow=1.3,SNR=3.9						
TXAR	Lajitas Array	19.71	325	P	Pn	05 24 39.8	+1.2
TX31	Lajitas Ar. Si	19.71	325		Pn	05 24 39.7	+1.0
TAMC	Tame, Arauca	20.01	109	*e*P	P	05 24 33.8	-6.4
WLAR	White Oak Lake	20.14	354	P	P	05 24 42.5	+1.2
WLAR				IAmb	IAmb	05 24 44.3	
	comp=Z,18nm,0.9s						
MACC	Macarena, Meta	20.25	123	*e*P	P	05 24 43.3	+0.6
SDV	Santo Domingo	20.32	101	P	P	05 24 41.3	-2.4
	comp=Z,0.4nm,0.3s,baz=299,slow=8.3,SNR=5.9						
SDV	Santo Domingo	20.32	101	P	P	05 24 42.4	-1.3
SDV	Santo Domingo	20.32	101	*e*P	P	05 24 37.9	-5.8
Z51A	Franklin	20.32	14	P	Pn	05 24 45.5	-0.2
Z51A					sP	05 24 59.6	-2.5
Z35A	Perchaven, San	20.54	344	P	P	05 24 45.8	+0.2
Z35A				IAmb	IAmb	05 25 04.5	
	comp=Z,14nm,0.9s						
Y49A	Blount Mountai	20.59	10	P	P	05 24 47.0	+0.7
Y49A				IAmb	IAmb	05 25 03.3	
	comp=Z,17nm,0.9s						
OXF	Oxford	20.89	3	P	Pn	05 24 55.2	+2.7
OXF				IAmb	IAmb	05 24 56.9	
	comp=Z,30nm,0.9s						
X48A	Hartselle	21.07	9	P	P	05 24 51.7	+0.3
X48A					sP	05 25 07.0	-3.2
X48A				IAmb	IAmb	05 25 11.2	
	comp=Z,12nm,0.8s						
Y52A	Lilburn	21.12	16	P	P	05 24 52.8	+0.9
Y52A				IAmb	IAmb	05 25 08.0	
	comp=Z,18nm,0.9s						
FPAL	Fort Paine	21.41	12	P	P	05 24 57.4	+2.4
FPAL				IAmb	IAmb	05 25 10.9	
	comp=Z,13nm,0.8s						
MNTX	Cornudas Mount	22.47	326	P	P	05 25 06.6	+0.2
MNTX				IAmb	IAmb	05 25 09.3	
	comp=Z,12nm,0.7s						
CPCT	Cooper Cave	22.52	13	P	P	05 25 06.7	-0.2
CPCT				IAmb	IAmb	05 25 10.2	
	comp=Z,14nm,0.8s						
CPCT					pP	05 25 21.8	+2.7
OK025	Westminster Rd	22.70	346	IAmb	IAmb	05 25 23.7	
	comp=Z,12nm,0.8s						
U40A	Yellville	22.77	356	P	P	05 25 09.6	0.0
BCOK	Bluff Creek, N	22.84	346	P	P	05 25 09.1	-1.2
TKL	Tuckaleechee C	22.89	15	P	P	05 25 08.7	-2.1
	comp=Z,4.2nm,0.8s,baz=182,slow=12,SNR=5.4						
TKL	Tuckaleechee C	22.89	15	P	P	05 25 10.8	0.0
TKL					pP	05 25 25.0	+1.9
TKL				IAmb	IAmb	05 25 26.4	
	comp=Z,18nm,1.0s						
OK031	S. Brethren Rd	22.94	347	IAmb	IAmb	05 25 10.1	
	comp=Z,11nm,0.8s						
U49A	Red Boiling Sp	23.29	10	P	P	05 25 14.2	-0.5
U49A					pP	05 25 28.9	+1.6
U49A				IAmb	IAmb	05 25 31.1	
	comp=Z,29nm,1.2s						
Y60A	Bolivia	23.34	27	P	P	05 25 12.4	-2.8
T47A	Sharon Grove	23.56	7	IAmb	IAmb	05 25 41.9	
	comp=Z,21nm,1.1s						
S39A	Bolivar	24.13	355	IAmb	IAmb	05 25 37.1	
	comp=Z,16nm,0.8s						
121A	Cookes Peak, D	24.44	323	P	P	05 25 28.4	+2.8
121A				IAmb	IAmb	05 25 29.8	
	comp=Z,14nm,0.8s						
S51A	Beattyville	24.82	14	P	P	05 25 28.6	-0.2
S51A					pP	05 25 43.3	+1.1
S51A				IAmb	IAmb	05 25 46.4	
	comp=Z,16nm,0.9s						
WCI	Wyandotte Cave	24.89	8	P	P	05 25 29.0	-0.4
WCI				IAmb	IAmb	05 25 45.2	
	comp=Z,17nm,0.8s						
BNM	Barren Site	25.02	328	P	P	05 25 32.9	+1.9
ANMO	Albuquerque	25.56	329	P	P	05 25 37.4	+1.6
	comp=Z,1.4nm,0.9s,baz=156,slow=12,SNR=3.7						
TUC	Tucson	26.12	319	P	P	05 25 42.3	+1.6
WUAZ	Wupatki	28.65	323	P	P	05 26 05.6	+2.1
W13A	Hualapai Mount	29.89	320	P	P	05 26 16.7	+2.1
TKX	Tecate	30.22	313	P	P	05 26 19.7	+2.4
SZCU	Shurtz Canyon	31.09	324	P	P	05 26 26.4	+1.2
SZCU					pP	05 26 41.5	+2.8
MSU	Marysvale	31.24	327	P	P	05 26 28.6	+2.1
PDAR	Pinedale Array	33.30	334	PcP	PcP	05 29 26.0	+0.4
	comp=Z,2.1nm,1.2s,baz=108,slow=4.8,SNR=3.5						
PDAR				pPcP		05 29 40.6	
	comp=Z,0.2nm,0.3s,baz=137,slow=6.5,SNR=1.7						
PTGA	Pitinga	33.70	113	P	P	05 26 48.7	+0.7
PTGA				IAmb	IAmb	05 26 49.2	
	comp=Z,7.9nm,0.8s						
ELK	Elko	34.49	326	P	P	05 26 56.4	+1.6
	comp=Z,2.0nm,0.8s,baz=138,slow=6.2,SNR=8.3						
ELK				pP	pP	05 27 10.7	+2.2
	comp=Z,1.6nm,0.6s,baz=156,slow=6.1,SNR=4.4						
ELK				PcP	PcP	05 29 30.0	+0.9
	comp=Z,1.3nm,0.8s,baz=182,slow=14,SNR=5.0						
ELK	Elko	34.49	326	P	P	05 26 55.4	+0.5
NV11	Mina Array Sit	34.65	321	P	P	05 26 57.4	+1.2
NV11				IAmb	IAmb	05 27 12.8	
	comp=Z,5.7nm,0.8s						
NVAR	Mina Array Bea	34.74	320	P	P	05 26 59.6	+2.6
	comp=Z,5.9nm,0.7s,baz=132,slow=8.3,SNR=38						
NVAR				pP	pP	05 27 13.5	+2.9
	comp=Z,5.7nm,0.6s,baz=134,slow=8.2,SNR=16						
NVAR				PcP	PcP	05 29 31.4	+1.6
	comp=Z,0.4nm,0.6s,baz=117,slow=3.5,SNR=6.1						
NVAR				pPcP		05 29 46.6	
	comp=Z,1.8nm,0.8s,baz=127,slow=3.4,SNR=7.5						
NVAR				LR	LR	05 42 35.3	
	comp=Z,81nm,18.7s,baz=168,slow=39						
NVAR	Mina Array Bea	34.74	320	P	P	05 26 57.5	+0.5
LHV	Little Huntoon	34.76	320	P	P	05 27 00.4	+3.6
SAML	Samuel	35.39	128	P	P	05 27 01.1	-1.4

SAML				IAmb	IAmb	05 27 02.7	
	comp=Z,4.2nm,0.8s						
SAML					**pP**	**05 27 15.9**	**-0.2**
PNTR	**Pine Nut**	**35.95**	**320**	IAmb	IAmb	05 27 24.3	
	comp=Z,5.4nm,0.8s						
ULM	**Lac du Bonnet**	**36.82**	**355**	P	**P**	**05 27 12.1**	**-2.2**
	comp=Z,1.5nm,0.5s,baz=188,slow=7.4,SNR=4.5						
ULM				LR	LR	05 43 16.5	
	comp=Z,40nm,20.4s,baz=113,slow=38						
ULM	**Lac du Bonnet**	**36.82**	**355**	P	**P**	**05 27 11.7**	**-2.7**
BEKR	**Beckworth**	**36.88**	**321**	P	**P**	**05 27 13.9**	**-1.4**
BEKR				IAmb	IAmb	05 27 19.4	
	comp=Z,7.5nm,1.2s						
WVOR	**Wild Horse Val**	**37.50**	**325**	IAmb	IAmb	05 27 36.5	
	comp=Z,8.9nm,1.1s						
YBH	**Yreka Blue Hor**	**39.42**	**321**	P	**P**	**05 27 36.3**	**-0.2**
	comp=Z,1.3nm,0.6s,baz=81,slow=8.0,SNR=5.6						
H04A	**Detroit Lake**	**40.92**	**325**	P	**P**	**05 27 49.8**	**+0.9**
SIV	**San Ignacio**	**41.55**	**134**	LR	LR	05 44 17.5	
	comp=Z,60nm,19.6s,baz=17,slow=35						
H03N2	**Juan Fernandez**	**48.09**	**167**	T	T	06 20 20.6	
	baz=346,slow=76,SNR=5.8						
H03N1	**Juan Fernandez**	**48.10**	**167**	T	T	06 20 23.7	
	baz=346,slow=76,SNR=10.0						
H03N3	**Juan Fernandez**	**48.11**	**167**	T	T	06 20 27.7	
	baz=346,slow=76,SNR=6.8						
CPUP	**Villa Florida**	**51.31**	**141**	P	**P**	**05 29 08.9**	**-1.7**
	comp=Z,2.2nm,1.1s,baz=274,slow=1.9,SNR=3.1						
CPUP				LR	LR	05 50 23.9	
	comp=Z,54nm,19.1s,baz=286,slow=35						
BDFB	**Brasilia**	**51.31**	**123**	P	**P**	**05 29 09.9**	**-1.1**
	comp=Z,1.7nm,0.7s,baz=255,slow=12,SNR=1.6						
BDFB				pP	**pP**	**05 29 23.7**	**-1.4**
	comp=Z,1.3nm,0.6s,baz=268,slow=9.3,SNR=1.9						
YKA	**Yellowknife Ar**	**51.72**	**346**	P	**P**	**05 29 11.8**	**-1.4**
	comp=Z,0.8nm,0.8s,baz=143,slow=8.2,SNR=7.6						
YKA				pP	**pP**	**05 29 25.9**	**-1.6**
	comp=Z,1.0nm,0.7s,baz=139,slow=8.5,SNR=7.9						
YKA				PcP	**PcP**	**05 30 25.1**	**-0.9**
	comp=Z,0.8nm,0.7s,baz=142,slow=4.6,SNR=8.7						
YKA				pPcP		05 30 40.4	
	comp=Z,0.6nm,0.5s,baz=145,slow=4.0,SNR=7.6						
PLCA	**Paso Flores**	**57.19**	**162**	P	**P**	**05 29 54.1**	**+0.8**
	comp=Z,2.4nm,1.0s,baz=328,slow=9.5,SNR=3.1						
PLCA	**Paso Flores**	**57.19**	**162**	IAmb	IAmb	05 29 55.2	
	comp=Z,9.1nm,1.4s						
RES	**Resolute Bay**	**61.15**	**359**	P	**P**	**05 30 18.4**	**-1.7**
	comp=Z,0.7nm,0.6s,baz=185,slow=14,SNR=3.6						
RES				pP	**pP**	**05 30 33.0**	**-1.7**
	comp=Z,1.9nm,0.6s,baz=179,slow=9.4,SNR=6.1						
ILAR	**Eielson Array**	**63.70**	**337**	P	**P**	**05 30 36.8**	**-0.5**
	comp=Z,0.4nm,0.6s,baz=171,slow=4.9,SNR=7.2						
ILAR				pP	**pP**	**05 30 52.0**	**0.0**
	comp=Z,0.5nm,0.6s,baz=164,slow=4.4,SNR=3.6						
BMAR	**Burnt Mountain**	**64.10**	**340**	P	**P**	**05 30 40.2**	**+0.3**
DBIC	**Dimbokro**	**84.54**	**84**	P	**P**	**05 32 38.4**	**-1.4**
	comp=Z,3.3nm,0.8s,baz=269,slow=3.2,SNR=4.1						
TORD	**Torodi Ar. Bea**	**89.35**	**77**	P	**P**	**05 33 02.3**	**-0.8**
	comp=Z,0.5nm,0.8s,baz=276,slow=5.7,SNR=2.0						
KURK	**Kurchatov**	**115.33**	**7**		**PKiKP**	**05 38 47.2**	**-0.1**
KURBB	**Kurchatov Arra**	**115.41**	**7**	PKP	**PKiKP**	**05 38 47.2**	**-0.3**
	comp=Z,0.5nm,0.4s,baz=354,slow=1.8,SNR=4.4						
SONM	**Songino Array**	**116.98**	**347**	PKP	**PKPdf**	**05 38 49.9**	**-0.9**
	comp=Z,0.6nm,0.8s,baz=15,slow=1.1,SNR=3.5						
BOSA	**Boshof**	**119.12**	**115**	PKP	**PKPdf**	**05 38 55.5**	**+0.1**
	comp=Z,1.9nm,0.6s,baz=304,slow=2.8,SNR=6.4						
MKAR	**Makanchi Array**	**119.60**	**5**	PKP	**PKPdf**	**05 38 54.9**	**-0.9**
	comp=Z,0.5nm,0.7s,baz=2.1,slow=2.3,SNR=5.5						
MKAR				pPKP	**pPKPdf**	**05 39 10.5**	**-1.1**
	comp=Z,0.2nm,0.4s,baz=309,slow=3.3,SNR=2.8						
WRA	**Warramunga Arr**	**136.41**	**255**	PKP	**PKPdf**	**05 39 29.7**	**+1.3**
	comp=Z,0.5nm,0.7s,baz=94,slow=2.8,SNR=3.0						
CMAR	**Chiang Mai Arr**	**146.76**	**343**	PKPbc	**PKPbc**	**05 39 48.9**	**+0.2**
	comp=Z,6.7nm,0.7s,baz=340,slow=3.7,SNR=26						
CMAR				pPKPbc	pPKPbc	05 40 03.5	-0.7
	comp=Z,4.2nm,0.4s,baz=335,slow=3.3,SNR=4.1						

IDC 11 05:22:38.3±0.9**,56°.19S**×**150°.92W,h0**^{km}**,mb3.9**/4**,mb1 4.1**/4**,mb1mx3.9**/20**,mbtmp3.9**/4**,MS3.6**/4**,Ms1 3.6**/4**,ms1mx3.2**/22**,Error ellipse: s-maj=128.5km s-min=25.8km az=7.0,Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNDA	**Vanda**	**26.89**	**201**	LR	LR	05 35 31.0	
	comp=Z,85nm,19.6s,baz=134,slow=29						
QSPA	**South Pole Qui**	**33.96**	**180**	LR	LR	05 39 47.3	
	comp=Z,90nm,18.8s,baz=155,slow=30						
MSVF	**Nonsavu**	**44.96**	**316**	LR	LR	05 45 15.1	
	comp=Z,53nm,21.3s,baz=44,slow=30						
PLCA	**Paso Flores**	**52.41**	**109**	P	P	05 31 52.9	+0.7
	2.4nm,0.9s,baz=230,slow=10,SNR=3.6						
H03S2	**Juan Fernandez**	**52.89**	**97**	T	T	06 28 51.0	
	baz=219,slow=74,SNR=20						
H03S1	**Juan Fernandez**	**52.89**	**97**	T	T	06 28 50.4	
	baz=219,slow=74,SNR=24						
H03S3	**Juan Fernandez**	**52.91**	**97**	T	T	06 28 49.6	
	baz=219,slow=74,SNR=21						
H03N3	**Juan Fernandez**	**53.17**	**97**	T	T	06 29 14.2	
	baz=222,slow=72,SNR=139						
H03N2	**Juan Fernandez**	**53.18**	**97**	T	T	06 29 13.4	
	baz=222,slow=72,SNR=105						
H03N1	**Juan Fernandez**	**53.19**	**97**	T	T	06 29 12.8	
	baz=222,slow=72,SNR=184						
ASAR	**Alice Springs**	**62.48**	**268**	P	P	05 33 03.5	+0.1
	1.2nm,0.8s,baz=142,slow=6.5,SNR=6.7						
H01W1	**Cape Leeuwin H**	**64.36**	**245**	T	T	06 43 21.0	
	baz=146						
H01W2	**Cape Leeuwin H**	**64.37**	**245**	T	T	06 43 16.6	
	baz=146						
H01W3	**Cape Leeuwin H**	**64.38**	**245**	T	T	06 43 21.9	
	baz=146						
WRA	**Warramunga Arr**	**65.19**	**271**	P	P	05 33 21.6	+0.3
	0.9nm,1.0s,baz=146,slow=5.9,SNR=3.7						
SIV	**San Ignacio**	**76.80**	**99**	P	P	05 34 31.1	-0.7
	1.0nm,0.8s,baz=199,slow=5.4,SNR=4.1						
BOSA	**Boshof**	**95.48**	**177**	LR	LR	06 16 24.6	
	comp=Z,45nm,18.1s,baz=188,slow=34						
H10N3	**ASCENSION HYDR**	**106.79**	**134**	T	T	07 36 18.4	
	baz=203,slow=75,SNR=4.0						
H10N1	**ASCENSION HYDR**	**106.80**	**135**	T	T	07 36 24.1	
	baz=203,slow=75,SNR=4.1						
H10N2	**ASCENSION HYDR**	**106.81**	**134**	T	T	07 36 19.2	
	baz=203,slow=75,SNR=4.4						
ILAR	**Eielson Array**	**120.67**	**2**	PKP	PKiKP	05 41 31.2	+0.6
	0.5nm,0.7s,baz=280,slow=2.9,SNR=5.4						
MKAR	**Makanchi Array**	**146.35**	**277**	PKPbc	PKPdf	05 42 19.1	+0.3
	2.5nm,0.8s,baz=118,slow=4.7,SNR=26						
ZALV	**Zalesovo Beam**	**148.74**	**290**	PKPbc	PKPbc	05 42 24.9	-1.4
	0.5nm,0.3s,baz=64,slow=3.4,SNR=2.8						
KURBB	**Kurchatov Arra**	**150.54**	**280**	PKPbc	PKPbc	05 42 30.1	-0.7
	1.8nm,0.8s,baz=117,slow=1.7,SNR=13						

IDC 11 05:40:02.7±9.6**,16°.14S**×**173°.13W,h0**^{km}**,mb3.7**/3**,mb1 4.0**/3**,mb1mx3.6**/29**,mbtmp3.7**/3**,MS2.6**/1**,Ms1 2.6**/1**,ms1mx2.5**/30**,Error ellipse: s-maj=428.6km s-min=35.2km az=139.0,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAR	**Rarotonga**	**13.63**	**114**	LR	LR	05 47 24.2	
	comp=Z,28nm,21.1s,baz=192,slow=32						
WRA	**Warramunga Arr**	**49.93**	**257**	P	P	05 48 59.2	+0.4
	0.4nm,0.7s,baz=92,slow=8.2,SNR=4.9						
ASAR	**Alice Springs**	**50.13**	**252**	P	P	05 48 59.8	-0.5
	1.2nm,0.6s,baz=89,slow=7.9,SNR=14						
ILAR	**Eielson Array**	**83.11**	**11**	P	P	05 52 30.0	0.0
	0.3nm,0.6s,baz=228,slow=7.0,SNR=10.0						

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*SOME **11** 05:45:07.2,43°.37N×81°.17E,h10^{km}*
*NNC **11** 05:45:07.8±0.5,43°.38N×81°.15E,h0^{km},mb3.5,mpv3.5,Error ellipse: s-maj=4.4km s-min=2.2km az=147.0*
ISC 11 05:45:07.4±1.7**,43°.31N**±0°.05×**81°.10E**±0°.05**,h10**^{km}±11^{km}**,n52,**$\sigma 1^{s}$**.89**/80**,13C-5D,Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTMS	**Ketmen**	**0.56**	**284**	*e*P	**Pg**	**05 45 18.7**	**+0.3**
	11nm,0.1s						
KTMS				*e*S	**Sg**	**05 45 27.0**	**+1.2**
	216nm,0.3s						
KTMS	**Ketmen**	**0.56**	**284**	P	**Pg**	**05 45 18.7**	**+0.3**
	11nm,0.1s						
KTMS				S	**Sg**	**05 45 27.0**	**+1.2**
	216nm,0.3s						
PDGK	**Podgornoye**	**1.17**	**271**	P	**Pn**	**05 45 30.3**	**+0.3**
	12nm,0.1s						
PDGK				S	**Sn**	**05 45 47.4**	**+1.3**
	116nm,0.2s						
PDGK	**Podgornoye**	**1.17**	**271**	⇑P	**Pn**	**05 45 30.3**	**+0.3**
	11nm,0.3s						
PDGK				⇑S	**Sn**	**05 45 47.8**	**+1.7**
	115nm,0.3s						
SHLS	**Shalkode**	**1.21**	**263**	⇓*i*P	Pn	05 45 26.2	-4.3
	131nm,0.1s						
SHLS				⇑*i*S	**Sb**	**05 45 40.2**	**-5.8**
	490nm,0.3s						
SHLS	**Shalkode**	**1.21**	**263**	P	Pn	05 45 26.2	-4.3
	131nm,0.1s						
SHLS				S	**Sb**	**05 45 40.2**	**-5.8**
	490nm,0.3s						
DJR	**Jarkent**	**1.39**	**318**	*e*P	**Pg**	**05 45 33.7**	**-0.4**
	6.6nm,0.1s						
DJR				*e*S	**Sg**	**05 45 52.9**	**+0.7**
	72nm,0.1s						
DJR	**Jarkent**	**1.39**	**318**	P	**Pg**	**05 45 33.7**	**-0.4**
	6.6nm,0.1s						
DJR				S	**Sg**	**05 45 52.9**	**+0.7**
	72nm,0.1s						
UZB	**Uzynbulak**	**1.53**	**264**	⇑*i*P	**Pb**	**05 45 37.0**	**+1.1**
	20nm,0.1s						
UZB				⇑*i*S	**Sg**	**05 45 58.4**	**+1.9**
	219nm,0.2s						
UZB	**Uzynbulak**	**1.53**	**264**	P	**Pb**	**05 45 37.0**	**+1.1**
	20nm,0.1s						
UZB				S	**Sg**	**05 45 58.4**	**+1.9**
	219nm,0.2s						
KPKS	**Kokpek**	**1.77**	**276**	*e*P	**Pb**	**05 45 40.7**	**+0.8**
	48nm,0.1s						
KPKS				*e*S	**Sg**	**05 46 05.4**	**+1.2**
	211nm,0.2s						
SATY	**Saty**	**1.98**	**264**	*e*P	**Pb**	**05 45 44.7**	**+1.0**
	20nm,0.1s						
SATY				*e*S	**Sg**	**05 46 11.8**	**+0.6**
	139nm,0.2s						
SATY	**Saty**	**1.98**	**264**	Pg	**Pb**	**05 45 44.7**	**+1.0**
	20nm,0.1s						
SATY				Lg	Lg	05 46 11.8	
	139nm,0.2s						
MNBS	**Baschi**	**2.10**	**292**	*e*P	**Pb**	**05 45 46.0**	**+0.4**
	28nm,0.4s						
MNBS				*e*S	**Sb**	**05 46 13.9**	**+2.1**
	84nm,0.2s						
MNBS	**Baschi**	**2.10**	**292**	Pg	**Pb**	**05 45 46.0**	**+0.4**
	28nm,0.4s						
MNBS				Lg	Lg	05 46 13.9	
	84nm,0.2s						
KURS	**Kuram**	**2.14**	**276**	*e*P	**Pb**	**05 45 47.3**	**+1.0**
	8.7nm,0.5s						
KURS				*e*S	**Sg**	**05 46 16.9**	**+0.7**
	31nm,0.3s						
KURS	**Kuram**	**2.14**	**276**	Pg	**Pb**	**05 45 47.3**	**+1.0**
	8.7nm,0.5s						
KURS				Lg	Lg	05 46 16.9	
	31nm,0.3s						
KAPS	**Kapalarasan**	**2.33**	**328**	*e*P	**Pb**	**05 45 49.8**	**+0.2**
	10nm,0.2s						
KAPS				⇓*i*S	**Sg**	**05 46 20.8**	**-1.6**
	53nm,0.2s						
KAPS	**Kapalarasan**	**2.33**	**328**	Pg	**Pb**	**05 45 49.8**	**+0.2**
	10nm,0.2s						
KAPS				Lg	Lg	05 46 20.8	
	53nm,0.2s						
ARXS	**Arharly**	**2.53**	**292**	*e*P	**Pb**	**05 45 54.5**	**+1.5**
	15nm,0.2s						
ARXS				*e*S	**Sg**	**05 46 28.3**	**-0.5**
	21nm,0.3s						
ARXS	**Arharly**	**2.53**	**292**	Pg	**Pb**	**05 45 54.5**	**+1.5**
	15nm,0.2s						
ARXS				Lg	Lg	05 46 28.3	
	21nm,0.3s						
TDK	**Taldyqorghan**	**2.57**	**312**	*e*P	**Pb**	**05 45 54.4**	**+0.9**
	58nm,0.1s						
TDK				*e*S	**Sg**	**05 46 28.0**	**-1.9**
	31nm,0.2s						
TDK	**Taldyqorghan**	**2.57**	**312**	Pg	**Pb**	**05 45 54.4**	**+0.9**
	58nm,0.1s						
TDK				Lg	Lg	05 46 28.0	
	31nm,0.2s						
KOTS	**Kotyrbulak**	**2.91**	**270**	*e*P	**Pb**	**05 46 01.9**	**+2.4**
	15nm,0.2s						
KOTS				*e*S	**Sg**	**05 46 41.0**	**0.0**
	54nm,0.5s						
KOTS	**Kotyrbulak**	**2.91**	**270**	Pg	**Pb**	**05 46 01.9**	**+2.4**
	15nm,0.2s						
KOTS				Lg	Lg	05 46 41.0	
	54nm,0.5s						
MDOK	**Medeo**	**2.96**	**268**	*e*P	**Pb**	**05 46 02.1**	**+1.7**
	5.6nm,0.3s						
MDOK				*e*S	**Sg**	**05 46 41.6**	**-1.0**
	20nm,0.5s						
MDOK	**Medeo**	**2.96**	**268**	Pg	**Pb**	**05 46 01.8**	**+1.4**
	2.9nm,0.4s						
MDOK				⇑Lg	Lg	05 46 43.2	
	11nm,0.4s						
MDOK	**Medeo**	**2.96**	**268**	Pg	**Pb**	**05 46 02.1**	**+1.7**
	5.6nm,0.3s						
MDOK				Lg	Lg	05 46 41.6	
	20nm,0.5s						
CHKK	**Chushkaly**	**3.03**	**282**	*e*P	**Pb**	**05 46 03.0**	**+1.5**
	3.8nm,0.1s						
CHKK				*e*S	**Sg**	**05 46 43.2**	**-1.7**
	20nm,0.1s						
CHKK	**Chushkaly**	**3.03**	**282**	Pg	**Pb**	**05 46 03.0**	**+1.5**
	3.8nm,0.1s						
CHKK				Lg	Lg	05 46 43.2	
	20nm,0.1s						
TNSS	**Tian-Shan**	**3.05**	**266**	*e*P	**Pb**	**05 46 04.3**	**+2.4**
	6.4nm,0.4s						
TNSS				*e*S	**Sg**	**05 46 45.4**	**0.0**
	13nm,0.3s						
TNSS	**Tian-Shan**	**3.05**	**266**	Pg	**Pb**	**05 46 04.3**	**+2.4**
	6.4nm,0.4s						
TNSS				Lg	Lg	05 46 45.3	
	13nm,0.3s						
KTBS	**Karatobe**	**3.24**	**279**	*e*P	**Pb**	**05 46 07.3**	**+2.3**
	3.9nm,0.2s						
KTBS				*e*S	**Sg**	**05 46 50.5**	**-0.9**
	19nm,0.4s						
KTBS	**Karatobe**	**3.24**	**279**	Pg	**Pb**	**05 46 07.3**	**+2.3**
	3.9nm,0.2s						
KTBS				Lg	Lg	05 46 50.5	
	19nm,0.4s						
IZV	**Izvestkoviy**	**3.29**	**267**	*e*P	**Pb**	**05 46 08.3**	**+2.3**
	3.6nm,0.1s						
IZV				*e*S	**Sg**	**05 46 52.5**	**-0.6**
	43nm,0.5s						
IZV	**Izvestkoviy**	**3.29**	**267**	Pg	**Pb**	**05 46 08.3**	**+2.3**
	3.6nm,0.1s						
IZV				Lg	Lg	05 46 52.5	
	43nm,0.5s						
MTBS	**Maitube**	**3.42**	**269**	*e*P	**Pb**	**05 46 10.4**	**+2.4**
	3.9nm,0.2s						
MTBS				*e*S	**Sg**	**05 46 56.1**	**-1.0**
	11nm,0.1s						
MTBS	**Maitube**	**3.42**	**269**	Pg	**Pb**	**05 46 10.4**	**+2.4**
	3.9nm,0.2s						
MTBS				Lg	Lg	05 46 56.1	
	11nm,0.1s						
KUU	**Kurty**	**3.50**	**281**	*e*P	**Pb**	**05 46 12.2**	**+2.7**
	2.2nm,0.2s						
KUU				*e*S	**Sg**	**05 46 58.9**	**-1.1**
	13nm,0.2s						
KUU	**Kurty**	**3.50**	**281**	Pg	**Pb**	**05 46 12.2**	**+2.7**
	2.2nm,0.2s						
KUU				Lg	Lg	05 46 58.9	
	13nm,0.2s						
MAKZ	**Makanchi**	**3.55**	**10**	⇑Pn	**Pn**	**05 46 04.2**	**+1.6**
	0.3nm,0.5s						
MAKZ				⇑Pg	**Pb**	**05 46 10.4**	**+0.1**
	0.9nm,0.4s						
MAKZ				⇓Lg	Lg	05 46 55.5	
	9.7nm,0.8s						
MK31	**Makanchi Array**	**3.58**	**13**	⇑Pn	**Pn**	**05 46 03.6**	**+0.6**
	0.1nm,0.3s,baz=201,slow=14,SNR=27						
MK31				⇓Pg	**Pb**	**05 46 11.1**	**+0.2**
	0.3nm,0.2s,baz=194,slow=14,SNR=20						
MK31				⇓Lg	Lg	05 46 57.7	
	7.5nm,0.5s,baz=197,slow=29,SNR=13						
KST	**Kastek**	**3.77**	**268**	*e*P	**Pb**	**05 46 17.0**	**+3.0**
	4.9nm,0.2s						
KST				*e*S	**Sg**	**05 47 07.1**	**-1.2**
	16nm,0.3s						
KST	**Kastek**	**3.77**	**268**	Pg	**Pb**	**05 46 17.0**	**+3.0**
	4.9nm,0.2s						
KST				Lg	Lg	05 47 07.1	
	16nm,0.3s						
DGS	**Degeres**	**3.89**	**271**	*e*P	**Pb**	**05 46 19.7**	**+3.6**
	5.0nm,0.2s						
TKM2	**Tokmak 2**	**4.05**	**266**	⇑Pg	**Pg**	**05 46 22.7**	**-2.2**
	2.0nm,0.5s						
TKM2				⇑Lg	Lg	05 47 16.3	
	9.9nm,0.5s						
SGDS	**Sogindy**	**4.72**	**274**	Pg	**Pg**	**05 46 34.9**	**-2.8**
	2.5nm,0.7s						
SGDS				Lg	Lg	05 47 37.4	
	4.8nm,0.2s						
AAK	**Ala-Archa**	**4.89**	**264**	⇑Pg	**Pg**	**05 46 38.7**	**-2.4**
	2.3nm,0.7s						
AAK				⇑Lg	Lg	05 47 44.4	
	4.2nm,0.5s						
ZSN	**Zaisan**	**4.91**	**31**	*e*P	**Pb**	**05 46 33.1**	**-0.4**
	4.7nm,0.3s						
ZSN				*e*S	**Sb**	**05 47 34.5**	**+1.9**
	8.3nm,0.4s						
ZSN	**Zaisan**	**4.91**	**31**	Pg	**Pb**	**05 46 33.1**	**-0.4**
	4.7nm,0.3s						
ZSN				Lg	Lg	05 47 34.5	
	8.3nm,0.4s						
MRKS	**Merke**	**5.80**	**267**	*e*P	**Pg**	**05 46 55.9**	**-2.5**
	1.8nm,0.2s						
MRKS				*e*S	**Sg**	**05 48 14.2**	**+0.7**
	5.0nm,0.4s						
MRKS	**Merke**	**5.80**	**267**	Pg	**Pg**	**05 46 55.9**	**-2.5**
	1.8nm,0.2s						
MRKS				Lg	Lg	05 48 14.2	
	5.0nm,0.4s						

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*NNC **11** 05:48:16.8±1.7,46°.02N×82°.58E,h0^{km},mb3.8,mpv3.1,Error ellipse: s-maj=11.0km s-min=7.6km az=108.0*
*SOME **11** 05:48:17.4,46°.10N×82°.22E,h0^{km}*
ISC 11 05:48:19.3±1.1**,46°.24N**±0°.07×**82°.39E**±0°.08**,h10**^{km}**,n15,**$\sigma 1^{s}$**.54**/24**,3C-1D,Kazakhstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MK31	**Makanchi Array**	**0.56**	**353**	⇑P	**Pn**	**05 48 32.6**	**-0.7**
	0.8nm,0.1s,baz=160,slow=17,SNR=61						
MK31				⇑S	**Sn**	**05 48 43.5**	**+0.8**
	2.2nm,0.2s,baz=157,slow=28,SNR=15						
MAKZ	**Makanchi**	**0.63**	**334**	⇓P	**Pn**	**05 48 34.3**	**0.0**
	2.7nm,0.3s						
MAKZ				⇑S	**Sn**	**05 48 46.6**	**+2.0**
	5.1nm,0.4s						
ZSN	**Zaisan**	**2.09**	**54**	*e*P	**Pb**	**05 48 56.1**	**-1.2**
	4.2nm,0.1s						
ZSN				*e*S	**Sb**	**05 49 24.0**	**+0.8**
	11nm,0.3s						
ZSN	**Zaisan**	**2.09**	**54**	Pg	**Pb**	**05 48 56.1**	**-1.2**
	4.2nm,0.1s						
ZSN				Lg	Lg	05 49 24.0	
	11nm,0.3s						
KAPS	**Kapalarasan**	**2.33**	**247**	*e*P	**Pn**	**05 48 58.3**	**+0.6**
	1.8nm,0.1s						
KAPS				*e*S	**Sn**	**05 49 27.8**	**+1.4**
	7.0nm,0.2s						
KAPS	**Kapalarasan**	**2.33**	**247**	Pg	**Pn**	**05 48 58.3**	**+0.6**
	1.8nm,0.1s						
KAPS				Lg	Lg	05 49 27.8	
	7.0nm,0.2s						
DJR	**Jarkent**	**2.65**	**225**	*e*P	**Pb**	**05 49 04.5**	**-2.3**
	1.5nm,0.2s						
DJR				*e*S	**Sb**	**05 49 38.7**	**-0.7**
	4.8nm,0.3s						
DJR	**Jarkent**	**2.65**	**225**	Pg	**Pb**	**05 49 04.5**	**-2.3**
	1.5nm,0.2s						
DJR				Lg	Lg	05 49 38.7	
	4.8nm,0.3s						
MNBS	**Baschi**	**3.55**	**234**	*e*P	**Pb**	**05 49 19.9**	**-2.4**
	2.4nm,0.3s						
MNBS				*e*S	**Sb**	**05 50 05.0**	**-0.5**
	3.9nm,0.2s						
MNBS	**Baschi**	**3.55**	**234**	Pg	**Pb**	**05 49 19.9**	**-2.4**
	2.4nm,0.3s						
MNBS				Lg	Lg	05 50 05.0	
	3.9nm,0.2s						
KPKS	**Kokpek**	**3.83**	**225**	*e*P	**Pb**	**05 49 25.9**	**-1.0**
	3.3nm,0.2s						
KPKS				*e*S	**Sb**	**05 50 15.3**	**+1.9**
	8.9nm,0.3s						
UZB	**Uzynbulak**	**3.92**	**219**	*e*P	**Pb**	**05 49 27.2**	**-1.2**
	4.3nm,0.2s						
UZB				*e*S	**Sb**	**05 50 17.4**	**+1.4**
	2.9nm,0.2s						
UZB	**Uzynbulak**	**3.92**	**219**	Pg	**Pb**	**05 49 27.2**	**-1.2**
	4.3nm,0.2s						
UZB				Lg	Lg	05 50 17.4	
	2.9nm,0.2s						
SATY	**Saty**	**4.27**	**223**	*e*P	**Pb**	**05 49 33.5**	**-0.9**
	0.5nm,0.1s						
SATY				*e*S	**Sb**	**05 50 28.0**	**+2.0**
	4.4nm,0.1s						
SATY	**Saty**	**4.27**	**223**	Pg	**Pb**	**05 49 33.5**	**-0.9**
	0.5nm,0.1s						
SATY				Lg	Lg	05 50 28.0	
	4.4nm,0.1s						

KRSC 11 05:59:10.4±1.4**,53°.88N**×**168°.38E,h39**^{km}±21^{km}**,ML3.7,Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BKI	**Bering**	**1.93**	**314**	P	Pn	05 59 43.7	+3.0
BKI				S	Sn	06 00 05.6	+1.9
KBTR	**Krutoberegovo**	**3.96**	**308**	P	Pn	06 00 12.1	+3.5
KBG	**Krutoberegovo**	**4.04**	**308**	S	Sn	06 01 03.0	+7.4
KZV	**Kizimen**	**4.88**	**288**	P	Pn	06 00 25.6	+4.3
KZV				S	Sn	06 01 20.7	+4.2
TUMR	**Tumrok**	**4.99**	**290**	P	Pn	06 00 27.6	+4.7
UGLR	**Uglovaya**	**5.74**	**267**	P	Pn	06 00 38.3	+5.2
SMAR	**Somma**	**5.74**	**268**	P	Pn	06 00 38.4	+5.1
KOK	**Koryaka**	**5.84**	**268**	P	Pn	06 00 38.7	+4.3
PET	**Petropavlovsk**	**5.88**	**266**	P	Pn	06 00 40.1	+5.2
OSSR	**Ossora**	**6.13**	**333**	P	Pn	06 00 43.1	+4.8
KRMR	**Karymshinskiy**	**6.23**	**264**	S	Sn	06 01 54.5	+4.9
MTVR	**Mutnovka**	**6.29**	**261**	P	Pn	06 00 45.7	+5.0
MTVR				S	Sn	06 01 55.3	+4.0
GRL	**Gorelyy**	**6.34**	**262**	P	Pn	06 00 46.0	+4.7

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*IDC **11** 06:11:38.4±1.1,12°.26S×166°.69E,h144^{km}±8^{km},mb4.0/18,mb1 4.1/18,mb1mx4.1/29,mbtmp4.4/18,Error ellipse: s-maj=24.4km s-min=14.5km az=141.0*
*NEIC **11** 06:11:41.6±1.6,12°.2S±0°.1×166°.7E±0°.1,h170^{km}±7^{km},mb4.6/18,Error ellipse: s-maj=20.3km s-min=14.6km az=82.0*
ISC 11 06:11:39.5±0.4**,12°.13S**±0°.06×**166°.61E**±0°.09**,h150**^{km}**,n70,**$\sigma 1^{s}$**.55**/75**,mb4.4**/26**,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**3.35**	**170**	Pn	**Pn**	**06 12 33.2**	**+1.9**
YATNC	**Mamie plateau,**	**9.88**	**178**	P	**Pn**	**06 13 59.9**	**+2.0**
DZM	**Mont Dzumac**	**9.89**	**181**	P	**Pn**	**06 14 00.5**	**+2.4**
	5.8nm,0.3s,baz=164,slow=20,SNR=54						
DZM				S	**Sn**	**06 15 42.6**	**-5.1**
	1.0nm,0.3s,baz=156,slow=23,SNR=1.6						
DZM	**Mont Dzumac**	**9.89**	**181**		**Pn**	**06 14 00.1**	**+1.9**
DZM	**Mont Dzumac**	**9.89**	**181**	P	**Pn**	**06 14 01.6**	**+3.5**
NOUC	**Port Laguerre**	**9.92**	**182**	P	**Pn**	**06 14 02.8**	**+4.4**
ONTNC	**Ouen Toro**	**10.12**	**181**	P	**Pn**	**06 14 05.3**	**+4.2**
OUENC	**Ouen Island, N**	**10.23**	**179**	P	**Pn**	**06 14 06.6**	**+4.0**
MSVF	**Nonsavu**	**12.38**	**118**	P	**Pn**	**06 14 33.0**	**+2.2**
	2.6nm,0.3s,baz=301,slow=15,SNR=6.6						
EIDS	**Eidsvold**	**19.71**	**226**	P	**P**	**06 15 57.8**	**+0.4**
PATS	**Pohnpei**	**20.57**	**336**	P	Pn	06 16 08.8	-1.8
CTA	**Charters Tower**	**21.08**	**245**	P	**P**	**06 16 12.9**	**+0.8**
	10nm,0.6s,baz=77,slow=14,SNR=10						
CTAO	**Charters Tower**	**21.08**	**245**	P	**P**	**06 16 12.4**	**+0.3**
CTAO				IAmb	IAmb	06 16 40.5	
	comp=Z,16nm,1.0s						
ARMA	**Armidale**	**22.89**	**215**	P	**P**	**06 16 32.0**	**+1.6**
ARMA				IAmb	IAmb	06 16 52.5	
	comp=Z,21nm,1.5s						
COEN	**Coen**	**22.90**	**263**	P	**P**	**06 16 32.1**	**+1.6**
BKZ	**Black Stump Fm**	**28.32**	**164**	P	**P**	**06 17 18.7**	**-0.5**
BKZ				IAmb	IAmb	06 17 34.5	

	comp=Z,20nm,1.4s						
THZ	Tophouse	30.03	171	P	P	06 17 34.4	+0.1
LTZ	Lake Taylor	30.93	172	P	P	06 17 40.7	-1.4
LTZ				IAmb	IAmb	06 17 40.8	
	comp=Z,20nm,1.3s						
WR0	Warramunga Arr	31.74	252	P	P	06 17 47.4	-2.2
WR0				IAmb	IAmb	06 17 48.7	
	comp=Z,10nm,1.4s						
WB0	Warramunga Arr	31.85	252	P	P	06 17 50.4	-0.1
WRA	Warramunga Arr	31.93	252	P	P	06 17 50.8	-0.4
	comp=Z,0.4nm,0.5s,baz=82,slow=8.8,SNR=4.5						
WRA				pP	pP	06 18 20.8	-0.8
	comp=Z,1.3nm,1.1s,baz=80,slow=8.2,SNR=3.3						
WRA				PcP	PcP	06 20 38.0	-0.1
	comp=Z,0.7nm,0.7s,baz=74,slow=3.2,SNR=3.9						
ASAR	Alice Springs	33.09	245	P	P	06 17 59.8	-1.5
	comp=Z,1.7nm,0.7s,baz=69,slow=9.4,SNR=20						
ASAR				pP	pP	06 18 31.6	-0.2
	comp=Z,0.6nm,0.6s,baz=69,slow=9.3,SNR=2.1						
ASAR				PcP	PcP	06 20 40.1	-1.2
	comp=Z,0.4nm,0.7s,baz=76,slow=2.8,SNR=4.6						
MJAR	Matsushiro Arr	55.32	332	P	P	06 20 56.9	-0.8
	comp=Z,4.3nm,0.7s,baz=169,slow=8.4,SNR=9.2						
JNU	Nakatsue	56.45	324	P	P	06 21 05.3	-0.5
	comp=Z,6.5nm,0.6s,baz=227,slow=7.0,SNR=2.1						
JKA	Kamikawa-asahi	60.09	340	P	P	06 21 31.9	+1.2
JKA	Kamikawa-asahi	60.09	340	IAmb	IAmb	06 21 39.0	
	comp=Z,20nm,1.1s						
ASAJ	Asahikawa	60.09	340	P	P	06 21 31.9	+1.2
	comp=Z,8.2nm,0.6s,baz=216,slow=7.9,SNR=8.5						
KSRS	Korea Array	61.24	325	P	P	06 21 40.0	+1.3
	comp=Z,2.6nm,0.8s,baz=131,slow=7.1,SNR=9.0						
USRK	Ussuriysk Ar.	64.29	333	P	P	06 21 58.8	+0.1
	comp=Z,6.4nm,0.8s,baz=136,slow=5.7,SNR=9.1						
PETK	Petropavlovsk-	65.42	354	P	P	06 22 05.9	0.0
	comp=Z,3.7nm,0.7s,baz=138,slow=9.1,SNR=2.4						
CMAR	Chiang Mai Arr	73.32	294	P	P	06 22 56.5	+1.4
	comp=Z,2.2nm,0.5s,baz=132,slow=4.5,SNR=10						
SEY	Seymchan	75.64	353	P	P	06 23 08.3	+0.7
	baz=160,slow=5.0						
QSPA	South Pole Qui	77.88	180	P	P	06 23 20.4	-0.1
ULN	Ulaanbaatar	79.67	324	P	P	06 23 31.2	+0.6
ULN				IAmb	IAmb	06 23 32.8	
	comp=Z,10nm,0.8s						
SONM	Songino Array	80.04	324	P	P	06 23 33.0	+0.6
	comp=Z,2.6nm,0.7s,baz=144,slow=6.0,SNR=15						
SONM	Songino Array	80.04	324	IAmb	IAmb	06 23 34.6	
	comp=Z,3.6nm,1.0s						
IMAR	Indian Mountai	83.24	15	P	P	06 23 49.0	+0.4
HDA	Harding Lake	84.00	18	P	P	06 23 50.7	-1.9
HDA				IAmb	IAmb	06 23 53.1	
	comp=Z,9.3nm,0.8s						
IL31		84.27	18	P	P	06 23 53.1	-0.7
IL31				IAmb	IAmb	06 23 54.4	
	comp=Z,5.6nm,0.8s						
ILAR	Eielson Array	84.27	18	P	P	06 23 53.6	-0.3
	comp=Z,4.3nm,0.8s,baz=245,slow=5.0,SNR=52						
ILAR	Eielson Array	84.27	18	P	P	06 23 53.5	-0.5
NVAR	Mina Array Bea	86.08	50	P	P	06 24 04.0	+0.1
	comp=Z,0.6nm,0.4s,baz=234,slow=7.7,SNR=3.8						
NVAR				pP	pP	06 24 40.9	-0.3
	comp=Z,0.3nm,0.6s,baz=239,slow=8.2,SNR=0.9						
ZSN	Zaisan	93.33	318	*e*P	P	06 24 36.9	-0.6
	baz=318						
PDAR	Pinedale Array	93.66	47	P	P	06 24 39.4	0.0
	comp=Z,0.1nm,0.4s,baz=292,slow=2.8,SNR=2.5						
MK31	Makanchi Array	94.89	317	P	P	06 24 45.0	+0.4
MK31				IAmb	IAmb	06 24 46.0	
	comp=Z,5.5nm,0.9s						
MKAR	Makanchi Array	94.89	317	P	P	06 24 45.1	+0.5
	comp=Z,6.1nm,0.8s,baz=95,slow=6.6,SNR=62						
MKAR				PKKP	PKKPdf	06 41 38.2	-3.4
	comp=Z,0.4nm,0.7s,baz=281,slow=3.5,SNR=5.8						
MKAR	Makanchi Array	94.89	317	P	P	06 24 45.4	+0.8
ZALV	Zalesovo Beam	94.92	324	P	P	06 24 44.2	-0.4
	comp=Z,2.5nm,0.8s,baz=108,slow=4.8,SNR=10.0						
MAKZ	Makanchi	95.10	317	P	P	06 24 46.2	+0.6
YKA	Yellowknife Ar	95.54	27	P	P	06 24 45.4	-1.7
	comp=Z,0.3nm,0.5s,baz=255,slow=4.0,SNR=5.0						
TXAR	Lajitas Array	95.60	61	P	P	06 24 46.9	-1.5
	comp=Z,0.2nm,0.6s,baz=221,slow=3.9,SNR=4.5						
KPKS	Kokpek	96.74	313	*e*P	P	06 24 52.1	-1.1
	baz=313						
SATY	Saty	96.87	312	*e*P	P	06 24 52.8	-1.0
	baz=312						
SEM	Semipalatinsk	96.93	320	*e*P	P	06 24 52.6	-1.4
	baz=320						
ARCES	ARCESS Array B	117.59	346	PKP	PKPdf	06 30 06.5	-0.6
	comp=Z,8.6nm,1.1s,baz=60,slow=1.7,SNR=6.2						
FINES	FINESS Array B	123.08	339	PKP	PKPdf	06 30 16.5	-1.3
	comp=Z,3.3nm,0.9s,baz=48,slow=2.8,SNR=4.6						
NOA	NORSAR Array B	127.96	345	PKP	PKPdf	06 30 27.0	-0.3
	comp=Z,1.5nm,0.9s,baz=31,slow=2.0,SNR=2.6						
GERES	GERESS Array B	137.04	334	PKP	PKiKP	06 30 46.1	-0.6
	comp=Z,0.8nm,0.8s,baz=8.5,slow=2.0,SNR=4.6						
KEST	Kesra	148.79	323	PKPbc	PKPbc	06 31 10.5	+0.7
	comp=Z,9.1nm,0.7s,baz=30,slow=1.5,SNR=10						
PBRG	Braganca	149.87	350	*e*P	PKPab	06 31 19.6	+1.5
PCAB	Cabril	150.16	352	*e*P	PKiKP	06 31 14.5	+0.8
POLO	Lamas de Olo	150.46	351	*e*P	PKiKP	06 31 14.4	0.0
PVRL	Vila Real	150.54	351	*e*P	PKiKP	06 31 14.7	+0.2
MVO	Moncorvo	150.54	350	*e*P	PKiKP	06 31 14.6	0.0
PVIS	Viseu	151.12	351	*e*P	PKiKP	06 31 15.8	0.0
ESDC	Sonseca Array	151.32	345	PKPbc	PKPbc	06 31 15.9	+0.1
	comp=Z,2.0nm,0.7s,baz=20,slow=2.5,SNR=20						
ESDC				PKPab	PKPab	06 31 25.4	+1.2
	comp=Z,3.1nm,0.6s,baz=15,slow=3.9,SNR=17						
MTE	Manteigas	151.37	351	*e*P	PKiKP	06 31 16.6	+0.3
PCAS	Casmilo, Conde	151.85	352	*e*P	PKiKP	06 31 17.2	0.0
PCBR	Castelo Branco	151.91	350	*e*P	PKPbc	06 31 17.2	+0.2
PMRV	Marv??o	152.30	350	*e*P	PKiKP	06 31 18.5	+0.3

ANF ***11*** *06:19:34.3±0.7, 41°.90N×119°.64W, h2^{km}±5^{km}, ML3.1/6,*
Error ellipse: s-maj=3.8km s-min=2.6km az=99.0
SEA ***11*** *06:19:35.9±3.1, 41°.88N±0°.03×119°.62W±0°.02, h0^{km}±4^{km},*
Error ellipse: s-maj=4.3km s-min=2.0km az=155.0
REN ***11*** *06:19:35.0±2.3, 41°.90N±0°.02×119°.63W±0°.02, h9^{km}±6^{km},*
ML2.8/5, ML2.6/38(NEIC), ML3.1/13(SEA), Error ellipse:
s-maj=2.8km s-min=1.6km az=221.0
NEIC ***11*** *06:19:35.9±3.8, 41°.97N±0°.03×119°.65W±0°.03, h3^{km}±1^{km},*
Error ellipse: s-maj=4.9km s-min=2.6km az=155.0
ISC 11 06:19:35.2±1.3**, 41°.92N**±0°.03×**119°.62W**±0°.03**, h8**^{km}±11^{km}**,**
n38, σ0^{s}.85/46**, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOD	Modoc Plateau	0.51	269		Pg	06 19 45.1	-0.1
MOD					Sg	06 19 52.6	+0.7
MOD	Modoc Plateau	0.51	269	IAML		06 19 52.8	
	comp=E,2μm,0.6s						
MOD				IAML		06 19 56.1	
	comp=N,580nm,0.7s						
LKVW	Lakeview	0.63	299		Pg	06 19 47.3	-0.1
WVOR	Wild Horse Val	0.89	54		Pb	06 19 52.4	-0.6
WVOR				IAML		06 20 08.1	
	comp=N,199nm,0.8s						
WVOR				IAML		06 20 08.4	
	comp=N,130nm,0.9s						
WVOR	Wild Horse Val	0.89	54		Sn	06 20 05.6	-1.8
K05A	Summer Lake	1.25	311		Pg	06 19 58.8	-0.3
K05A					Sn	06 20 16.5	+0.3
K05A	Summer Lake	1.25	311	IAML		06 20 19.3	
	comp=E,214nm,0.9s						
LASM	Arnica Sink	1.50	258		Pn	06 20 02.0	-0.6
LTIM	Timbered Crate	1.59	243		Pn	06 20 03.4	-0.4
M04C	Macdoel	1.67	266	P	Pn	06 20 04.1	-0.7
	baz=85,SNR=31						
M04C				S	Sn	06 20 26.7	+0.2
	baz=85						
M04C	Macdoel	1.67	266		Pn	06 20 04.3	-0.5
LBCM	Butte Creek Ri	1.69	231		Pn	06 20 04.7	-0.5
LBCM					Sg	06 20 30.2	+0.6
K04D	Chiloquin, OR	1.74	295	Pb	Pb	06 20 06.9	-0.5
	baz=114,SNR=6.8						
K04D				Sg	Sg	06 20 31.4	+0.3
	baz=114						
J05D	Fort Rock, OR	1.81	319	P	Pn	06 20 06.7	-0.3
	baz=139,SNR=47						
J05D				Sg	Sg	06 20 34.5	+1.0
	baz=139						
J05D	Fort Rock, OR	1.81	319		Pb	06 20 08.7	-0.1
L04D	Klamath Falls	2.02	279	P	Pn	06 20 09.1	-0.7
	baz=98,SNR=18						
L04D				Sb	Sb	06 20 38.7	+1.0
	baz=98						
SVIC	Surveyors Ice	2.10	326		Pb	06 20 14.4	+0.7
PINE	Pine Mountain	2.11	333	Pn	Pb	06 20 13.9	0.0
PINE				IAML		06 20 50.4	
	comp=E,39nm,1.2s						
PINE				IAML		06 20 50.9	
	comp=N,33nm,1.1s						
BEKR	Beckworth	2.12	196	Pn	Pb	06 20 13.8	-0.3
BEKR				IAML		06 20 43.2	
	comp=N,46nm,0.3s						
BEKR				IAML		06 20 43.6	
	comp=E,41nm,0.5s						
I07A	Izee	2.17	2	Pn	Pb	06 20 14.6	-0.1
PAHR	Pah Rah Range	2.21	175	Pn	Pb	06 20 15.4	-0.2
PAHR				IAML		06 20 47.2	
	comp=E,30nm,0.4s						
PAHR				IAML		06 20 47.4	
	comp=N,35nm,0.4s						
O03E	Paynes Creek	2.31	226	P	Pn	06 20 13.5	-0.2
	baz=45,SNR=9.3						
O03E				Sb	Sb	06 20 46.9	+0.8
	baz=45						
YBH	Yreka Blue Hor	2.32	266		Pn	06 20 13.0	-0.8
M02C	Callahan	2.48	259	Sb	Sb	06 20 52.1	+1.2
	baz=77						
N02D	Trinity Center	2.50	249	Pb	Pb	06 20 19.3	-1.2
	baz=67,SNR=8.4						
N02D				Sb	Sb	06 20 53.0	+1.5
	baz=67						
HUMO	Hull Mountain	2.57	287		Pn	06 20 16.7	-0.6
HUMO				IAML		06 21 02.5	
	comp=E,26nm,0.8s						
HUMO				IAML		06 21 04.4	
	comp=N,28nm,1.5s						
WDC	Whiskeytown Da	2.58	240	Pn	Pn	06 20 16.9	-0.3
WDC				IAML		06 20 54.8	
	comp=N,24nm,0.5s						
WDC				IAML		06 20 59.2	
	comp=E,20nm,0.7s						
VCNR	Virginia City	2.62	181	Pn	Pb	06 20 22.4	-0.1
VCNR				IAML		06 20 59.5	
	comp=E,45nm,0.8s						
ORV	Oroville	2.76	212	Pn	Pb	06 20 23.4	-1.3
I04A	Tendick Farm,	2.78	313	Sb	Sg	06 21 02.3	-2.3
	baz=132						
PNTR	Pine Nut	2.83	180	Pn	Pb	06 20 25.6	-0.4
PNTR				IAML		06 21 20.7	
	comp=N,34nm,1.2s						
O02D	Mt. Diablo Mer	2.96	235	Pb	Pb	06 20 27.2	-1.1
	baz=53						
O02D				Sb	Sb	06 21 06.2	+1.5
	baz=53						
L02E	Cave Junction	2.98	276	Sb	Sb	06 21 06.7	+1.6
	baz=94						
K02D	Willamette Mer	3.10	286	P	Pn	06 20 23.9	-0.6
	baz=104,SNR=21						
MFID	Camas Ranch	3.17	61	Pn	Pn	06 20 25.5	0.0
MFID				IAML		06 21 21.3	
	comp=N,22nm,0.7s						
MFID				IAML		06 21 30.2	
	comp=N,19nm,0.8s						
KBO	Bosley Butte	3.44	276	Pn	Pn	06 20 29.7	+0.4
ELK	Elko	3.50	108	Pn	Pn	06 20 30.6	+0.5
HVU	Hansel Valley	5.11	89		Pb	06 21 05.1	+0.1

IDC ***11*** *06:25:12.9±1.8, 9°.51S×125°.76E, h0^{km}, mb3.9/1,*
mb1 3.9/3, mb1mx3.6/22, mbtmp3.7/3, ML3.7/2, Error
ellipse: s-maj=172.3km s-min=31.2km az=58.0
DJA ***11*** *06:25:21.6±1.4, 10°S±10°×12°4E±°, h26^{km}±7^{km}, M3.2/5,*
MLv3.2/5
ISC 11 06:25:16.2±1.0**, 10°.4S**±0°.1×**124°.8E**±0°.1**, h35**^{km}**, n7,**
σ1^{s}.79/10**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	0.80	323	P	Pn	06 25 32.2	+1.2
SOEI				S	Sn	06 25 38.9	-2.9
BATI	Baumata	1.08	280	P	Pn	06 25 35.9	+1.0
MMRI	Maumere	3.03	305	P	Pn	06 26 02.9	+1.2
EDFI	Ende, Flores	3.43	298	P	Pn	06 26 07.1	-0.2
WRA	Warramunga Arr	13.25	137	Pn	Pn	06 28 23.4	+1.4
	0.3nm,0.3s,baz=321,slow=13,SNR=13						
WRA				Sn	Sn	06 30 46.1	-2.0
	0.9nm,0.3s,baz=305,slow=19,SNR=12						
ASAR	Alice Springs	15.82	148	Pn	P	06 28 59.9	0.0
	0.4nm,0.3s,baz=319,slow=12,SNR=16						
ASAR				Sn	Sn	06 31 48.9	-2.0
	0.3nm,0.3s,baz=313,slow=21,SNR=6.1						
MKAR	Makanchi Array	68.38	330	P	P	06 36 14.8	+0.5
	0.8nm,0.5s,baz=136,slow=6.9,SNR=14						

VAO ***11*** *06:25:38.1±0.6, 21°.87S×69°.05W, h149^{km}±4^{km}, mb3.9*
IDC ***11*** *06:25:40.1±0.9, 21°.86S×68°.25W, h114^{km}±12^{km}, mb3.3/2,*
mb1 3.3/5, mb1mx3.2/23, mbtmp3.6/5, Error ellipse:
s-maj=38.3km s-min=13.7km az=103.0
GUC ***11*** *06:25:41.6±0.6, 21°.77S×68°.57W, h113^{km}±3^{km}, ML3.9*
ISC 11 06:25:40.3±0.7**, 21°.77S**±0°.03×**68°.64W**±0°.06**, h127**^{km}±7^{km}**,**
n48, σ1^{s}.08/66**, 9C-3D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	IPOC Station P	0.56	267	⇑*i*P	Pn	06 25 59.9	+0.3
PB09				*i* S	Sn	06 26 13.5	-0.6
LVC	Limon Verde	0.88	196	P	Pn	06 26 01.8	-0.4
	22nm,0.3s,baz=47,slow=12,SNR=137						
LVC				S	Sn	06 26 18.3	-0.5
	88nm,0.3s,baz=108,slow=20,SNR=20						
LVC	Limon Verde	0.88	196	⇓*i*P	Pn	06 26 02.3	+0.1
LVC				*i* S	Sn	06 26 18.3	-0.5
LVC	Limon Verde	0.88	196	*e*P	Pn	06 26 02.3	+0.1
LVC				*e*S	Sn	06 26 18.4	-0.5
PB01	IPOC Station P	1.07	312	⇑*i*P	Pn	06 26 03.7	0.0
PB01				*e*S	Sn	06 26 21.1	-0.2
PB01				IAML		06 26 22.7	
	comp=E,2μm,0.2s						
PB07	IPOC Station P	1.16	272	⇑*i*P	Pn	06 26 05.0	+0.4
PB07				*i* S	Sn	06 26 23.2	+0.1
PB07				IAML		06 26 24.1	
	comp=N,3μm,0.4s						
PB06	IPOC Station P	1.27	222	⇑*i*P	Pn	06 26 06.4	+0.6
PB04	IPOC Station P	1.51	248	⇑*i*P	Pn	06 26 08.9	+0.5
PB04				*i* S	Sn	06 26 29.9	+0.1
PB04				IAML		06 26 31.8	
	comp=N,1μm,0.2s						
PB15	IPOC Station P	1.63	208	*e*P	Pn	06 26 10.6	+0.7
PB15				*e*S	Sn	06 26 33.4	+1.0
PB08	IPOC Station P	1.69	343	⇑*i*P	Pn	06 26 11.6	+0.9
PB08				*i* S	Sn	06 26 34.1	+0.2
PATCX	Punta Patache	1.69	303	⇑*i*P	Pn	06 26 10.9	+0.4
PATCX				*i* S	Sn	06 26 33.6	+0.1
PATCX				IAML		06 26 36.3	
	comp=E,2μm,0.2s						
PB05	IPOC Station P	1.80	233	⇑*i*P	Pn	06 26 12.2	+0.4
PB05				*e*S	Sn	06 26 36.0	+0.1
TA01	Diego Aracena	1.87	309	⇑*i*P	Pn	06 26 12.3	-0.1
TA01				*i* S	Sn	06 26 36.8	-0.3
TA01				IAML		06 26 37.9	
	comp=E,1μm,0.3s						
HMBC	Humberstone	1.88	322	*i* P	Pn	06 26 12.4	-0.4
HMBC				*e*S	Sn	06 26 37.2	-0.4
TA02	Huaiquique	2.04	317	*e*P	Pn	06 26 14.9	+0.4
TA02				*e*S	Sn	06 26 40.8	+0.1
TA02				IAML		06 26 44.6	
	comp=N,1μm,0.2s						
PB10	IPOC Station P	2.48	225	*e*P	Pn	06 26 20.1	+0.1
PB10				*i* S	Sn	06 26 47.2	-3.5
PSGC	Pisagua	2.56	327	⇓*i*P	Pn	06 26 20.3	-1.0
PSGC				*e*S	Sn	06 26 50.9	-1.9
PSGC				IAML		06 26 52.9	
	comp=N,288nm,0.3s						
MNMC	Minye Minye	2.77	341	⇓*i*P	Pn	06 26 24.2	+0.1
MNMC				*e*S	Sn	06 26 58.1	+0.3
LPAZ	La Paz	5.47	5	P	Pn	06 27 01.9	+1.7
	comp=N,1.2nm,0.3s,baz=200,slow=8.0,SNR=21						
LPAZ				S	Sn	06 28 04.3	+1.9
	comp=N,0.2nm,0.3s,baz=280,slow=12,SNR=1.4						
LPAZ	La Paz	5.47	5	*e*P	Pn	06 27 01.2	+1.0
SIV	San Ignacio	9.18	53	P	Pn	06 27 45.9	-3.9
	comp=N,0.5nm,0.3s,baz=244,slow=13,SNR=10						
SIV				S	Sn	06 29 20.8	-11
	comp=N,0.1nm,0.3s,baz=183,slow=19,SNR=1.5						
AQDB	Aquidauana	12.15	86	*e*P	Pn	06 28 32.2	+2.9
TRCB	Terra Rica	14.86	97	*e*P	P	06 29 06.3	-0.3
PTGB	Pitanga	15.52	104	*e*P	P	06 29 14.1	+0.1
ITAB	Concordia	15.98	113	*e*P	P	06 29 18.8	-0.2
CPSB	Cacapava Do Su	16.13	125	*e*P	Pn	06 29 19.8	0.0
PCMB	Pacaembu	16.16	93	*e*P	P	06 29 21.4	+0.4
ARAG	Araguaiana, MT	17.04	72	*e*P	Pn	06 29 31.6	+0.7
ITRB	Iturama	17.23	86	*e*P	P	06 29 32.9	+0.1
FRTB	Fartura	17.69	99	*e*P	P	06 29 38.0	0.0
CNLB	Canela	17.71	119	*e*P	Pn	06 29 38.6	-0.5
BB19B	Bebedouro	18.74	92	*e*P	P	06 29 48.7	-0.7
PLCA	Paso Flores	18.98	184	P	P	06 29 52.4	+0.5
	comp=N,0.1nm,0.3s,baz=12,slow=11,SNR=4.9						
SNDB	Serra Nova Dou	19.23	62	*e*P	P	06 29 53.4	-1.4
NPGB	Novo Progresso	19.46	43	*e*P	P	06 29 56.3	-1.0
IPMB	Ipameri, GO	19.58	83	*e*P	P	06 29 57.5	-1.1
PET01	Itanhaem-SP	19.82	101	*e*P	P	06 30 00.3	-0.8
VAO	Valinhos	20.08	98	*e*P	P	06 30 03.5	-0.5
ITTB	Itaituba	21.35	38	*e*P	P	06 30 16.3	-1.3
PEXB	Peixe	21.68	67	*e*P	P	06 30 19.9	-1.2
BSCB	Bom Sucesso	22.24	92	*e*P	P	06 30 26.6	-0.3
ESAR	Angra dos Reis	22.41	98	*e*P	P	06 30 28.3	-0.2
SMTB	Santa Maria do	23.98	61	*e*P	P	06 30 42.6	-0.6
JANB	Januaria	24.01	78	*e*P	P	06 30 42.7	-0.9
MALB	Monte Alegre	24.24	37	*e*P	P	06 30 44.7	-0.8
NAN01	Guarapari, ES	27.09	87	*e*P	P	06 31 09.1	-2.2
TORD	Torodi Ar. Bea	77.21	70	P	P	06 37 20.8	-0.1
	comp=N,0.4nm,0.5s,baz=255,slow=5.0,SNR=4.5						
YKA	Yellowknife Ar	91.52	340	P	P	06 38 33.6	+1.6
	comp=N,0.2nm,0.5s,baz=125,slow=5.4,SNR=5.0						

KRNET ***11*** *06:34:39.3±0.1, 41°.22N×70°.93E, h24^{km}, mb2.5*
NNC ***11*** *06:34:42.2±1.8, 41°.41N×71°.04E, h0^{km}, mb3.4, mpv3.3,*
Error ellipse: s-maj=16.3km s-min=4.8km az=11.0
SOME ***11*** *06:34:42.8, 41°.47N×71°.10E, h5^{km}*
ISC 11 06:34:39.7±1.1**, 41°.27N**±0°.03×**71°.05E**±0°.03**, h26**^{km}±10^{km}**,**
n37, σ2^{s}.31/45**, 28C-8D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRKS	Terek-Say	0.27	14	⇑*i*P	Pb	06 34 46.1	-0.4
	baz=36						
TRKS				⇑*i*S	Sb	06 34 51.2	0.0
	baz=36						
IUG	Iuzhnay	1.16	319	*e*P	Pb	06 35 01.9	+0.7
	85nm,0.1s						
IUG				*e*S	Sn	06 35 15.3	-0.3
	56nm,0.2s						
IUG	Iuzhnay	1.16	319	P	Pb	06 35 01.9	+0.7
	85nm,0.1s						
IUG				S	Sn	06 35 15.3	-0.3
	56nm,0.2s						
BTK	Batken	1.22	189	⇑*i*P	Pn	06 35 00.6	-0.7
	baz=84						
BTK				⇑*i*S	Sn	06 35 16.5	-0.5
	baz=84						
ARSB	Arslanbob	1.45	87	⇑*i*P	Pb	06 35 07.1	+0.9
	baz=85						
ARSB				⇑*i*S	Sb	06 35 27.7	+3.4
	baz=85						
OHH	Osh	1.51	119	⇓*i*P	Pb	06 35 07.9	+0.8
	baz=16						
OHH				⇓*i*S	Sb	06 35 28.7	+2.9
	baz=16						
MNAS	Manas	1.63	41	⇑*i*P	Pb	06 35 10.5	+1.3
	baz=42						
MNAS				⇑*i*S	Sb	06 35 33.2	+3.8
	baz=42						
DRK	Karamyk	1.88	162	⇑*i*P	Pn	06 35 12.4	+2.0
	baz=59						
DRK				⇑*i*S	Sb	06 35 36.2	-0.4
	baz=59						
KK31	Karatay Array	1.88	348	⇑Pn	Pb	06 35 13.2	-0.1
	0.6nm,0.2s,baz=182,slow=16,SNR=37						
KK31				⇓Sn	Sb	06 35 39.2	+2.9
	7.1nm,0.3s						
BRLS	Borolday	1.98	333	*e*P	Pb	06 35 14.8	-0.2
	13nm,0.1s						
BRLS				*e*S	Sb	06 35 37.5	-1.8
	32nm,0.1s						
BRLS	Borolday	1.98	333	P	Pb	06 35 14.8	-0.2
	13nm,0.1s						
BRLS				S	Sb	06 35 37.5	-1.8
	32nm,0.1s						
AML	Almayashu	2.16	66	⇑*i*P	Pb	06 35 17.9	-0.4
	baz=65						
AML				⇑*i*S	Sb	06 35 45.8	+1.0
	baz=65						
MRKS	Merke	2.19	47	*e*P	Pb	06 35 20.9	+2.2
	6.0nm,0.2s						
MRKS				*e*S	Sb	06 35 47.9	+2.5
	14nm,0.2s						
MRKS	Merke	2.19	47	Pg	Pb	06 35 20.9	+2.2
	6.0nm,0.2s						
MRKS				Lg	Lg	06 35 47.9	
	14nm,0.2s						
SFK	Sufi-Kurgan	2.25	123	⇑*i*P	Pb	06 35 18.3	-1.5
	baz=21						
SFK				⇑*i*S	Sb	06 35 46.6	-0.6
	baz=21						
EKS2	Erkin-Say	2.46	55	⇑*i*P	Pb	06 35 21.9	-1.5
	baz=55						
EKS2				⇑*i*S	Sb	06 35 53.2	-0.1
	baz=55						
ARLS	Aral	2.52	75	⇑*i*P	Pb	06 35 23.0	-1.4
	baz=75						
ARLS				⇑*i*S	Sb	06 35 55.0	-0.1
	baz=75						
UCH	Uchtor	2.76	69	⇑*i*P	Pb	06 35 26.6	-2.0
	baz=68						
UCH				⇑*i*S	Sb	06 36 00.9	-1.3
	baz=68						
AAK	Ala-Archa	2.91	61	⇑*i*P	Pb	06 35 28.3	-2.7
	baz=61						
AAK				⇑*i*S	Sb	06 36 04.0	-2.1
	baz=61						
AAK	Ala-Archa	2.91	61	⇑Pg	Pb	06 35 33.6	+2.7
	1.8nm,0.6s						
AAK				⇑Lg	Lg	06 36 11.3	
	2.7nm,0.5s						
KBK	Karagaybulak	3.22	63	⇑*i*P	Pb	06 35 32.8	-3.5
	baz=63						
KBK				⇑*i*S	Sb	06 36 11.5	-3.6
	baz=63						
USP	Ospenovka	3.24	51	⇓*i*P	Pb	06 35 32.9	-3.7
	baz=51						
USP				⇓*i*S	Sb	06 36 12.0	-3.7
	baz=51						
SGDS	Sogindy	3.43	49	Pg	Pb	06 35 43.4	+3.5
	2.6nm,0.2s						
SGDS				Lg	Lg	06 36 26.4	
	3.7nm,0.2s						
TKM2	Tokmak 2	3.76	62	⇓*e*P	Pb	06 35 40.5	-5.0
	baz=62						
TKM2				⇓*i*S	Sb	06 36 24.7	-6.1
	baz=62						
TKM2	Tokmak 2	3.76	62	⇓Pg	Pb	06 35 48.9	+3.4
	1.4nm,0.5s						
TKM2				⇑Lg	Lg	06 36 40.5	
	4.2nm,0.9s						
DGS	Degeres	4.02	59	*e*P	Pb	06 35 54.7	+4.9
	1.7nm,0.2s						
DGS				*e*S	Sb	06 36 46.0	+7.9
	4.1nm,0.4s						
DGS	Degeres	4.02	59	Pg	Pb	06 35 54.7	+4.9
	1.7nm,0.2s						
DGS				Lg	Lg	06 36 46.0	
	4.1nm,0.4s						
KST	Kastek	4.06	62	*e*P	Pb	06 35 56.1	+5.5
	2.7nm,0.3s						
KST				*e*S	Sb	06 36 48.4	+9.2
	5.5nm,0.4s						
KST	Kastek	4.06	62	Pg	Pb	06 35 56.1	+5.5
	2.7nm,0.3s						
KST				Lg	Lg	06 36 48.4	
	5.5nm,0.4s						
KRBS	Karabastau	4.19	53	*e*P	Pb	06 35 58.7	+6.0
	1.2nm,0.2s						
KRBS				*e*S	Sb	06 36 52.9	+10
	3.1nm,0.4s						
KRBS	Karabastau	4.19	53	Pg	Pb	06 35 58.7	+6.0
	1.2nm,0.2s						
KRBS				Lg	Lg	06 36 52.9	
	3.1nm,0.4s						
BTLS	Baital	4.36	29	*e*P	Pb	06 36 00.2	+4.6
	1.3nm,0.3s						
BTLS				*e*S	Sb	06 36 55.6	+7.9

	1.5nm,0.2s						
BTLS	Baital	4.36	29	Pg	Pb	06 36 00.2	+4.6
	1.3nm,0.3s						
BTLS				Lg	Lg	06 36 55.6	
	1.5nm,0.2s						
KUU	Kurty	4.70	54	*e*P	Pb	06 36 07.1	+5.6
	0.5nm,0.1s						
KUU				*e*S	Sb	06 37 07.3	+10
	2.3nm,0.2s						
KUU	Kurty	4.70	54	Pg	Pb	06 36 07.1	+5.6
	0.5nm,0.1s						
KUU				Lg	Lg	06 37 07.3	
	2.3nm,0.2s						
TNSS	Tian-Shan	4.72	66	*e*P	Pb	06 36 09.4	+7.4
	1.3nm,0.2s						
TNSS				*e*S	Sb	06 37 11.9	+13
	1.4nm,0.2s						
TNSS	Tian-Shan	4.72	66	Pg	Pb	06 36 09.4	+7.4
	1.3nm,0.2s						
TNSS				Lg	Lg	06 37 11.9	
	1.4nm,0.2s						

IDC 11 06:55:58.6±1.8, **2°.91N**×**128°.65E**, **h0**^{km}, **mb3.8**/5, **mb1 3.9**/5, **mb1mx3.6**/32, **mbtmp3.8**/5, **Error ellipse: s-maj=98.1km s-min=22.2km az=69.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	21.08	188	P	P	07 00 46.5	+1.7
	1.1nm,0.8s,baz=23,slow=13,SNR=3.1						
WRA	Warramunga Arr	23.39	166	P	P	07 01 09.0	-0.2
	0.4nm,0.3s,baz=344,slow=11,SNR=18						
ASAR	Alice Springs	26.91	169	P	P	07 01 41.0	-0.6
	1.1nm,0.5s,baz=354,slow=7.9,SNR=39						
STKA	Stephens Creek	36.72	161	P	P	07 03 07.4	-0.3
	1.5nm,0.7s,baz=348,slow=9.3,SNR=2.8						
MKAR	Makanchi Array	59.32	325	P	P	07 06 02.6	+0.1
	0.5nm,0.4s,baz=122,slow=8.4,SNR=9.8						

IDC 11 07:02:32.0±2.0, **7°.05S**×**128°.43E**, **h0**^{km}, **mb3.7**/1, **mb1 3.7**/4, **mb1mx3.4**/35, **mbtmp3.6**/4, **ML3.2**/3, **Error ellipse: s-maj=85.3km s-min=28.6km az=74.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	11.32	194	Pn	Pn	07 05 14.7	-0.4
	0.1nm,0.3s,baz=16,slow=15,SNR=1.7						
FITZ				Sn	Sn	07 07 14.0	-8.3
	0.1nm,0.3s,baz=76,slow=18,SNR=1.8						
WRA	Warramunga Arr	14.04	156	Pn	Pn	07 05 51.9	-0.5
	0.2nm,0.3s,baz=335,slow=13,SNR=7.1						
WRA				Sn	Sn	07 08 21.8	-7.3
	0.3nm,0.3s,baz=338,slow=22,SNR=4.4						
ASAR	Alice Springs	17.34	163	P	P	07 06 36.5	-0.7
	0.0nm,0.3s,baz=344,slow=12,SNR=2.7						
ASAR				S	Sn	07 09 36.6	-13
	0.0nm,0.3s,baz=320,slow=16,SNR=2.3						
MKAR	Makanchi Array	67.42	328	P	P	07 13 29.5	0.0
	0.7nm,0.7s,baz=126,slow=7.9,SNR=5.9						

IDC ***11*** *07:11:50.5±0.8, 55°.06S×30°.91W, h0^{km}, mb4.1/8, mb1 4.2/8, mb1mx4.0/23, mbtmp4.1/8, Error ellipse: s-maj=28.1km s-min=21.6km az=41.0*

NEIC ***11*** *07:11:55.9±1.5, 55°.1S±0°.1×30°.9W±0°.2, h34^{km}±5^{km}, mb4.5/14, Error ellipse: s-maj=19.1km s-min=16.5km az=59.0*

ISC 11 07:11:52.1±0.6, **55°.1S**±0°.1×**30°.9W**±0°.1, **h10**^{km}, **n33**, σ**1^{s}02**/28, **mb4.3**/12, **South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	3.35	281	Pn	Pn	07 12 44.6	+0.1
VNA3	Neumayer Olymp	18.67	159	P	Pn	07 16 10.1	-0.1
VNA2	Neumayer--Watz	18.94	156	P	Pn	07 16 15.6	+2.1
	baz=322,slow=13						
SNAA	Sanae	20.53	155	P	P	07 16 29.2	-1.1
SNAA	Sanae	20.53	155	P	P	07 16 30.1	-0.1
BELA	Belgrano 2	22.97	182	P	P	07 16 56.1	-0.1
CPUP	Villa Florida	34.60	315	P	P	07 18 39.9	-1.2
	1.6nm,0.5s,baz=146,slow=7.9,SNR=7.2						
CPUP	Villa Florida	34.60	315	IAmb	IAmb	07 18 45.1	
	comp=Z,9.0nm,1.3s						
QSPA	South Pole Qui	35.21	180	P	P	07 18 45.8	-0.4
	comp=Z,1.6nm,0.5s,baz=144,slow=4.0,SNR=3.8						
QSPA	South Pole Qui	35.21	180	IAmb	IAmb	07 18 47.8	
	comp=Z,12nm,1.5s						
CO03	El Pedregal	37.12	294	P	P	07 19 03.5	+0.7
CO01	Juntas del Tor	37.49	296	P	P	07 19 08.1	+1.9
CO01				IAmb	IAmb	07 19 15.1	
	comp=Z,12nm,1.4s						
AC05	El Transito	38.50	297	P	P	07 19 15.6	+1.0
AC04	Llanos de Chal	39.43	296	P	P	07 19 19.8	-2.3
AC04				IAmb	IAmb	07 19 24.0	
	comp=Z,12nm,1.2s						
GO02	Mina Guanaco	41.17	301	P	P	07 19 37.6	+0.7
GO02				IAmb	IAmb	07 19 38.7	
	comp=Z,5.7nm,0.8s						
LVC	Limon Verde	42.99	303	P	P	07 19 51.8	-0.1
	comp=Z,1.7nm,0.8s,baz=194,slow=8.3,SNR=1.7						
PB01	IPOC Station P	44.60	304	P	P	07 20 05.7	+1.2
PB01				IAmb	IAmb	07 20 22.9	
	comp=Z,6.2nm,0.9s						
MNMC	Minye Minye	46.30	305	P	P	07 20 18.8	+0.6
VNDA	Vanda	47.46	184	P	P	07 20 26.1	-0.2
	comp=Z,1.1nm,0.7s,baz=101,slow=5.2,SNR=1.1						
VNDA	Vanda	47.46	184	P	P	07 20 26.5	+0.2
BOSA	Boshof	47.81	80	P	P	07 20 29.0	-0.7
	comp=Z,1.3nm,0.6s,baz=232,slow=18,SNR=1.7						
LPAZ	La Paz	48.10	309	P	P	07 20 33.2	+0.6
	comp=Z,2.2nm,0.5s,baz=168,slow=4.8,SNR=7.4						
LPAZ	La Paz	48.10	309	P	P	07 20 34.3	+1.6
H10N1	ASCENSION HYDR	48.86	22	T	T	08 14 00.7	
	baz=191						
H10N3	ASCENSION HYDR	48.86	22	T	T	08 13 53.0	
	baz=191						
H10N2	ASCENSION HYDR	48.88	22	T	T	08 13 49.8	
	baz=191						
LBTB	Lobatse	50.78	77	P	P	07 20 53.3	+0.8
	comp=Z,2.6nm,0.8s,baz=230,slow=7.9,SNR=2.8						
TORD	Torodi Ar. Bea	73.28	33	P	P	07 23 23.9	+0.3
	comp=Z,1.0nm,0.6s,baz=197,slow=6.1,SNR=4.2						
FINES	FINESS Array B	124.50	29	PKP	PKPdf	07 30 50.5	+0.5
	comp=Z,1.1nm,0.8s,baz=225,slow=5.7,SNR=1.4						
YKA	Yellowknife Ar	134.04	320	PKP	PKPdf	07 31 07.6	-0.5
	comp=Z,0.4nm,0.6s,baz=119,slow=3.1,SNR=8.8						
ILAR	Eielson Array	147.89	314	PKPbc	PKPbc	07 31 35.2	-0.7
	comp=Z,2.4nm,0.7s,baz=118,slow=1.5,SNR=21						
ILAR	Eielson Array	147.89	314		PKPbc	07 31 35.4	-0.6
SONM	Songino Array	152.76	87	PKPbc	PKPbc	07 31 48.0	-0.3
	comp=Z,0.5nm,0.5s,baz=231,slow=3.1,SNR=1.4						

NNC 11 07:23:31.5±1.8, **53°.85N**×**90°.64E**, **h0**^{km}, **mb3.7**, **mpv3.4**, **5C-6D**, **Error ellipse: s-maj=13.8km s-min=9.4km az=59.0, Suspected Mining explosion., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	3.45	274	⇑Pg	Pb	07 24 33.8	+0.4
	6.0nm,0.9s						
ZAA0				⇓Lg	Lg	07 25 22.2	
	23nm,0.8s						
KURK	Kurchatov	8.01	252	⇑Pn	Pn	07 25 29.5	+0.5
	5.2nm,1.0s						
KURK				⇓Sn	Sn	07 27 01.1	+0.8
	18nm,1.0s						
KURK				⇓Lg	Lg	07 27 47.8	
	80nm,1.1s						
MK31	Makanchi Array	8.85	220	⇓Pn	Pn	07 25 40.9	+0.3
	0.5nm,0.5s,baz=42,slow=11,SNR=23						
MK31				⇑Sn	Sn	07 27 22.5	+1.5
	11nm,1.0s,baz=46,slow=21,SNR=6.0						
MK31				⇓Lg	Lg	07 28 13.8	
	30nm,1.1s,baz=40,slow=28,SNR=3.6						
MAKZ	Makanchi	8.96	222	⇓Pn	Pn	07 25 42.6	+0.5
	0.8nm,0.5s						
MAKZ				⇑Sn	Sn	07 27 24.1	+0.4
	6.2nm,0.8s						
MAKZ				⇑Lg	Lg	07 28 16.8	
	22nm,1.0s						

NNC 11 07:41:08.0±5.3, **36°.41N**×**70°.49E**, **h0**^{km}, **mb3.5**, **mpv3.0**, **5C**, **Error ellipse: s-maj=50.9km s-min=39.7km az=127.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	6.68	0	⇑P	Pn	07 42 48.6	+1.2
	0.2nm,0.3s,baz=59,slow=25,SNR=3.4						
KK31				⇑S	Sn	07 44 05.2	+0.9
	0.3nm,0.3s,baz=181,slow=24,SNR=5.0						
AAK	Ala-Archa	6.94	25	⇑P	Pn	07 42 50.3	-0.8
	2.9nm,1.1s						
AAK				⇑S	Sn	07 44 12.2	+1.3
	2.1nm,0.6s						
AB31	Akbulak array	14.97	332	⇑P	Pn	07 44 39.9	-0.9
	1.1nm,0.8s,baz=159,slow=12,SNR=6.7						

IDC 11 07:55:55.8±68.0, **19°.89S**×**177°.44W**, **h0**^{km}, **mb3.5**/3, **mb1 3.7**/3, **mb1mx3.5**/20, **mbtmp3.5**/3, **Error ellipse: s-maj=1245.0km s-min=185.6km az=83.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	38.53	244	P	P	08 03 20.1	-0.1
	0.9nm,0.5s,baz=53,slow=10,SNR=4.6						
ASAR	Alice Springs	45.17	256	P	P	08 04 14.9	+0.1
	0.3nm,0.5s,baz=95,slow=7.7,SNR=6.0						
WRA	Warramunga Arr	45.20	261	P	P	08 04 14.5	-0.6
	0.5nm,1.0s,baz=98,slow=7.4,SNR=2.5						

NEIC ***11*** *08:12:34.2±0.8, 11°.0S±0°.1×163°.02E±0°.10, h44^{km}±8^{km}, mb4.4/10, Error ellipse: s-maj=18.1km s-min=11.3km az=211.0*

IDC ***11*** *08:12:34.8±3.3, 10°.97S×162°.99E, h51^{km}±26^{km}, mb3.9/8, mb1 4.0/11, mb1mx3.7/46, mbtmp4.2/11, ML4.2/3, MS3.3/5, Ms1 3.3/5, ms1mx2.8/43, Error ellipse: s-maj=24.3km s-min=19.2km az=73.0*

ISC 11 08:12:33.0±0.7, **10°.91S**±0°.09×**163°.06E**±0°.09, **h34**^{km}, **n38**, σ**1^{s}13**/31, **mb4.3**/11, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	3.39	295	P	Pn	08 13 24.7	+1.1
	145nm,0.3s,baz=141,slow=6.6,SNR=28						
HNR				S	Sn	08 14 04.3	+1.6
	85nm,0.3s,baz=358,slow=15,SNR=2.1						
HNR				LR	LR	08 14 46.3	
	comp=Z,478nm,18.7s,baz=160,slow=39						
SANVU	Saraoutou	6.06	139		Pn	08 14 00.9	+0.7
NOUC	Port Laguerre	11.56	165	P	Pn	08 15 17.8	+2.1
DZM	Mont Dzumac	11.57	164	P	Pn	08 15 17.4	+1.6
	1.3nm,0.3s,baz=26,slow=8.4,SNR=32						
DZM				LR	LR	08 19 10.9	
	comp=Z,129nm,21.3s,baz=8.5,slow=34						
DZM	Mont Dzumac	11.57	164	*e*Pn	Pn	08 15 17.5	+1.6
	5.5nm,0.3s						
DZM				*e*LR	LR	08 18 18.8	
	comp=Z,243nm,25.2s						
DZM	Mont Dzumac	11.57	164	P	Pn	08 15 17.6	+1.7
YATNC	Mamie plateau,	11.68	162	P	Pn	08 15 17.8	+0.4
OUENC	Ouen Island, N	12.01	163	P	Pn	08 15 24.6	+2.8
PMG	Port Moresby	15.72	274	LR	LR	08 21 37.9	
	comp=Z,117nm,19.2s,baz=109,slow=35						
MSVF	Nonsavu	16.03	117	LR	LR	08 21 04.6	
	comp=Z,97nm,21.5s,baz=314,slow=32						
CTA	Charters Tower	18.57	239	P	P	08 16 46.1	-1.2
	0.2nm,0.3s,baz=67,slow=16,SNR=1.2						
COEN	Coen	19.65	259	Pn	Pn	08 17 00.3	-0.4
COEN				IAmb	IAmb	08 17 06.1	
	comp=Z,18nm,1.2s						
WR0	Warramunga Arr	28.88	248	P	P	08 18 28.3	-0.5
WB0	Warramunga Arr	28.97	249	P	P	08 18 28.9	-0.8
WB0				IAmb	IAmb	08 18 31.0	
	comp=Z,5.7nm,0.9s						
WB2	Warramunga Arr	29.05	249	P	P	08 18 30.5	+0.1
WB2				IAmb	IAmb	08 18 34.5	
	comp=Z,14nm,1.5s						
WRA	Warramunga Arr	29.06	249	P	P	08 18 30.0	-0.5
	comp=Z,2.2nm,0.7s,baz=78,slow=9.1,SNR=13						
WRA				PcP	PcP	08 21 38.8	+0.5
	comp=Z,0.4nm,0.9s,baz=72,slow=2.9,SNR=2.5						
WRA				LR	LR	08 29 31.6	
	comp=Z,62nm,18.5s,baz=170,slow=35						
H11S2	WAKE ISLAND Hy	29.43	7	T	T	08 49 19.2	
	baz=187,slow=76,SNR=172						
H11S3	WAKE ISLAND Hy	29.43	7	T	T	08 49 19.2	
	baz=187,slow=76,SNR=144						
H11S1	WAKE ISLAND Hy	29.45	7	T	T	08 49 20.5	
	baz=187,slow=76,SNR=132						
ASAR	Alice Springs	30.52	242	P	P	08 18 42.5	-0.9
	comp=Z,0.9nm,0.5s,baz=70,slow=9.7,SNR=18						
ASAR	Alice Springs	30.52	242	P	P	08 18 43.0	-0.3
H11N1	WAKE ISLAND Hy	30.66	7	T	T	08 50 51.5	
	baz=188,slow=76,SNR=82						
H11N3	WAKE ISLAND Hy	30.67	7	T	T	08 50 52.2	
	baz=188,slow=76,SNR=137						
H11N2	WAKE ISLAND Hy	30.68	7	T	T	08 50 52.6	
	baz=188,slow=76,SNR=143						
BBOO	Buckleboo	33.03	225	P	P	08 19 03.3	-2.0
FITZ	Fitzroy Crossi	36.87	254	P	P	08 19 37.5	-1.1
	comp=Z,5.7nm,0.6s,baz=83,slow=6.9,SNR=30						
FITZ	Fitzroy Crossi	36.87	254	IAmb	IAmb	08 19 38.7	
	comp=Z,4.8nm,0.6s						
TOLI2	Tolitoli	43.70	283	P	P	08 20 34.6	-0.7
MORW	Morawa	47.38	240	P	P	08 21 04.8	+0.6
ASAJ	Asahikawa	57.83	343	P	P	08 22 21.6	+0.5
	comp=Z,1.5nm,0.4s,baz=124,slow=10,SNR=1.2						
SONM	Songino Array	77.01	325	P	P	08 24 22.7	+0.1
	comp=Z,0.9nm,0.6s,baz=144,slow=4.3,SNR=7.4						
SONM	Songino Array	77.01	325	P	P	08 24 22.9	+0.3
QSPA	South Pole Qui	79.10	180	P	P	08 24 33.7	-0.3
ILAR	Eielson Array	84.24	19	P	P	08 24 59.8	-1.0
	comp=Z,0.2nm,0.7s,baz=248,slow=5.7,SNR=1.9						
MK31	Makanchi Array	91.62	317	P	P	08 25 36.8	+0.1
MK31				IAmb	IAmb	08 25 38.4	
	comp=Z,2.2nm,0.8s						
MKAR	Makanchi Array	91.62	317	P	P	08 25 36.7	0.0
	comp=Z,1.7nm,0.7s,baz=106,slow=5.6,SNR=15						
MKAR	Makanchi Array	91.62	317	P	P	08 25 37.0	+0.3
YKA	Yellowknife Ar	96.07	28	P	P	08 25 56.6	0.0
	comp=Z,0.1nm,0.6s,baz=256,slow=4.0,SNR=3.8						

NNC 11 08:14:11.0±2.9, **55°.81N**×**86°.14E**, **h13**^{km}±12^{km}, **mb3.6**, **mpv3.2**, **5C-3D**, **Error ellipse: s-maj=16.7km s-min=14.3km az=158.0, Suspected Mining explosion., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	2.02	203	⇑Pn	Pn	08 14 44.8	0.0
	5.0nm,0.6s,baz=23,slow=15						
ZAA0				⇓Lg	Lg	08 15 15.5	
	2.7nm,0.4s						
KURBB	Kurchatov Arra	6.92	224	⇓Pn	Pn	08 15 51.8	-0.3
	3.6nm,0.8s						
KURBB				⇑Sn	Sn	08 17 10.8	+0.2
	3.8nm,0.8s						
KURBB				⇑Lg	Lg	08 17 49.4	
	9.2nm,0.7s						
MK31	Makanchi Array	9.35	197	⇑Pn	Pn	08 16 25.6	+0.2
	1.6nm,0.8s						
MK31				⇓Sn	Sn	08 18 12.7	+2.3
	0.4nm,0.5s						
MK31				⇑Lg	Lg	08 19 06.3	
	0.8nm,0.6s						

IDC ***11*** *08:18:37.2±1.0, 2°.90N×128°.67E, h0^{km}, mb3.8/7, mb1 3.9/8, mb1mx3.6/61, mbtmp3.8/8, ML3.4/1, MS2.7/2, Ms1 2.7/2, ms1mx2.3/47, Error ellipse: s-maj=67.5km s-min=15.8km az=68.0*

ISC 11 08:18:42.2±1.0, **2°.9N**±0°.2×**128°.7E**±0°.3, **h35**^{km}, **n14**, σ**1^{s}21**/10, **mb3.8**/7, **1D**, **Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	4.55	145	Pn	Pn	08 19 46.8	-1.8
	1.9nm,0.3s,baz=41,slow=23,SNR=6.3						
SIJI				Sn	Sn	08 20 42.7	+2.4
	baz=200,slow=23,SNR=0.8						
KCP	Kidapawan	5.43	319	⇓*e*P	Pn	08 20 07.2	+6.4
GUMO	Guam	19.19	56	LR	LR	08 29 14.9	
	comp=Z,48nm,20.0s,baz=280,slow=33						
FITZ	Fitzroy Crossi	21.09	188	P	P	08 23 23.6	-0.1
	1.2nm,0.7s,baz=8.7,slow=10,SNR=1.9						
WRA	Warramunga Arr	23.37	167	P	P	08 23 47.5	-0.4
	4.1nm,0.5s,baz=345,slow=10,SNR=43						
ASAR	Alice Springs	26.89	169	P	P	08 24 20.3	+0.2
	0.6nm,0.6s,baz=355,slow=8.0,SNR=13						
ASAR				PcP	PcP	08 27 42.3	+0.3
	0.3nm,0.5s,baz=356,slow=2.4,SNR=6.1						
JCJ	Chichijima	27.30	27	LR	LR	08 36 15.1	
	comp=Z,7.3nm,18.3s,baz=334,slow=39						
STKA	Stephens Creek	36.70	161	P	P	08 25 45.7	-0.3
	2.1nm,0.5s,baz=0.9,slow=7.0,SNR=5.8						
H11N1	WAKE ISLAND Hy	40.86	63	T	T	09 10 17.9	
	baz=250						
H11N2	WAKE ISLAND Hy	40.87	63	T	T	09 10 22.8	
	baz=250						
H11N3	WAKE ISLAND Hy	40.88	63	T	T	09 10 21.5	
	baz=250						
SONM	Songino Array	48.72	340	P	P	08 27 23.4	-0.1
	0.2nm,0.4s,baz=156,slow=7.3,SNR=1.8						
MKAR	Makanchi Array	59.35	325	P	P	08 28 41.8	+0.9
	1.0nm,0.6s,baz=114,slow=8.4,SNR=5.5						
KURBB	Kurchatov Arra	63.49	327	P	P	08 29 08.9	+0.1
	0.3nm,0.3s,baz=126,slow=6.1,SNR=5.0						

IDC ***11*** *08:31:45.2±3.2, 27°.56N×56°.17E, h0^{km}, mb3.4/3, mb1 3.4/3, mb1mx3.2/56, mbtmp3.4/3, Error ellipse: s-maj=81.2km s-min=35.9km az=160.0*

TEH ***11*** *08:31:50.6, 28°.01N×56°.01E, h10^{km}, ML3.3*

THR ***11*** *08:31:51.1±0.4, 28°.02N×56°.07E, h14^{km}±5^{km}, ML3.2*

ISC 11 08:31:50.8±0.8, **28°.02N**±0°.03×**56°.07E**±0°.07, **h16**^{km}, **n27**, σ**1^{s}82**/29, **mb3.5**/3, **Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GENO	Geno	0.62	171	*e*Sg	Sb	08 32 12.7	+0.8
GENO				*e*Pg	Pg	08 32 02.0	-1.1
BNDS	Bandar-Abbas	0.62	171	*e*Pg	Pg	08 32 03.4	+0.3
BNDS				IAML		08 32 19.2	
	comp=N,1µm,0.5s						
BNDS	Bandar-Abbas	0.62	171	*e*Pg	Pg	08 32 03.4	+0.3
LAR1	LAR	1.54	257	*e*Pg	Pn	08 32 18.7	+1.0
LAR1				*e*		08 32 59.5	
	comp=Z,99nm,0.6s						
NGRK	Negar Kerman	1.72	20	*e*Pn	Pn	08 32 21.9	+1.4
NGRK				*e*		08 32 58.6	
	comp=Z,99nm,0.3s						
SHME	Shamm	1.96	178	*e*Pn	Pb	08 32 25.1	-1.0
KRBR	Kerman	2.05	17	*e*Pn	Pb	08 32 27.4	-0.5
KRBR				*e*Sg	Sg	08 32 55.7	-1.2
KRBR				IAML		08 33 00.9	
	comp=N,149nm,0.6s						
KRBR	Kerman	2.05	17	*e*Pn	Pb	08 32 27.4	-0.5
TVBK	TV Kerman	2.06	17	*e*Pn	Pb	08 32 27.5	-0.5
TVBK				*e*		08 32 35.5	
	comp=Z,99nm,0.6s						
BANOM	Banah	2.10	174	*e*Pn	Pb	08 32 27.9	-0.6
CHMN	Cheshme madani	2.25	35	*e*Pn	Pb	08 32 30.9	-0.3
CHMN				*e*		08 33 03.2	
	comp=Z,99nm,0.6s						
KBAM	BAM	2.38	61	*e*Pn	Pb	08 32 32.6	-0.7
KBAM				*e*		08 33 07.3	
	comp=Z,99nm,0.7s						
KHGB	Koh Gabri	2.38	9	*e*Pn	Pb	08 32 32.7	-0.7
KHGB				*e*		08 33 22.3	
	comp=Z,99nm,0.6s						
MSFE	Esma-Masafi	2.65	178	*e*Pn	Pn	08 32 34.9	+2.0
MDH	Madha	2.71	176	*e*Pn	Pn	08 32 36.2	+2.4
UOSS	Minazif	3.06	178	*e*Pn	Pn	08 32 40.0	+1.4
HATD	Hatta, Dubai	3.18	179	*e*Pn	Pn	08 32 43.1	+2.9
ASUD	Al Ashush, Dub	3.44	191	*e*Pn	Pn	08 32 46.7	+2.9
IMEH	Mehriz	3.59	340	*e*Pn	Pn	08 32 49.0	+2.9
YZKH	Yazd	4.54	344	*e*Pn	Pn	08 33 01.6	+2.6
YZKH	Yazd	4.54	344	*e*Pn	Pn	08 33 01.6	+2.6
IRAM	Ramesheh	4.95	321	*e*Pn	Pn	08 33 07.4	+2.7
TPRV	Parvadeh(Tabas	5.02	6	*e*Pn	Pn	08 33 07.8	+2.2
IZEF	Zefreh	5.84	327	*e*Pn	Pn	08 33 19.3	+2.4
BRTR	Keskin Array B	21.92	308	P	P	08 36 44.0	+0.5
	comp=Z,1.2nm,0.6s,baz=118,slow=12,SNR=6.2						
MKAR	Makanchi Array	27.82	41	P	P	08 37 38.7	-0.6
	comp=Z,0.2nm,0.7s,baz=225,slow=11,SNR=2.2						
TORD	Torodi Ar. Bea	52.61	265	P	P	08 41 01.5	-2.7
	comp=Z,0.4nm,0.6s,baz=55,slow=7.6,SNR=3.2						

IDC ***11*** *08:41:21.9±1.8, 13°.41N×145°.02E, h53^{km}±14^{km}, mb3.2/6, mb1 3.5/6, mb1mx3.2/45, mbtmp3.5/6, Error ellipse: s-maj=43.9km s-min=19.2km az=105.0*

ISC 11 08:41:19.6±1.0, **13°.3N**±0°.1×**145°.4E**±0°.1, **h35**^{km}, **n13**, σ**1^{s}17**/8, **mb3.4**/6, **Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	0.58	302	P	Pn	08 41 32.8	+1.4
	290nm,0.3s,baz=146,slow=11,SNR=1.9						
GUMO				S	Sn	08 41 39.3	-0.5
	1µm,0.3s,baz=331,slow=22,SNR=7.7						
H11S3	WAKE ISLAND Hy	21.13	73	T	T	09 08 46.0	
	baz=259,slow=75,SNR=18						
H11S1	WAKE ISLAND Hy	21.14	73	T	T	09 08 44.0	
	baz=259,slow=75,SNR=20						
H11S2	WAKE ISLAND Hy	21.15	73	T	T	09 08 36.1	
	baz=259,slow=75,SNR=0.1						
H11N1	WAKE ISLAND Hy	21.58	70	T	T	09 09 17.9	
	baz=257,slow=75,SNR=30						
H11N2	WAKE ISLAND Hy	21.59	70	T	T	09 09 18.0	
	baz=257,slow=75,SNR=23						
H11N3	WAKE ISLAND Hy	21.60	70	T	T	09 09 19.3	
	baz=257,slow=75,SNR=23						
WRA	Warramunga Arr	34.76	198	P	P	08 48 07.5	+0.7
	0.5nm,0.8s,baz=20,slow=9.7,SNR=4.8						
FITZ	Fitzroy Crossi	36.76	212	P	P	08 48 23.0	-1.0
	3.6nm,1.2s,baz=21,slow=8.3,SNR=2.3						
ASAR	Alice Springs	38.40	197	P	P	08 48 38.7	+0.9
	0.3nm,0.7s,baz=22,slow=10,SNR=6.4						
MKAR	Makanchi Array	62.06	316	P	P	08 51 35.4	-1.4
	0.3nm,0.4s,baz=99,slow=7.9,SNR=6.0						
ILAR	Eielson Array	68.63	25	P	P	08 52 18.7	-0.3
	0.2nm,0.6s,baz=247,slow=5.7,SNR=4.2						
YKA	Yellowknife Ar	82.90	27	P	P	08 53 41.1	+0.6
	0.1nm,0.4s,baz=289,slow=4.6,SNR=1.7						

IDC ***11*** *09:21:12.0±2.2, 29°.62N×51°.11E, h0^{km}, mb3.8/8, mb1 3.8/8, mb1mx3.6/46, mbtmp3.8/8, MS3.0/2, Ms1 2.9/2, ms1mx2.4/43, Error ellipse: s-maj=62.4km s-min=23.3km az=152.0*

THR ***11*** *09:21:12.5±0.4, 29°.54N×51°.51E, h6^{km}±7^{km}, ML3.4*

TEH ***11*** *09:21:13.5, 29°.54N×51°.33E, h11^{km}, ML3.5*

KISR ***11*** *09:21:15.7±0.7, 29°.74N×51°.16E, h42^{km}±710^{km}, ML3.9, Hypocentre not reviewed by the ISC*

ISC 11 09:21:13.7±0.8, **29°.50N**±0°.05×**51°.34E**±0°.05, **h10**^{km}, **n52**, σ**1^{s}24**/51, **mb3.7**/8, **Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAZ1	Kazerun	0.29	65	*e*Pg	Pg	09 21 19.3	-0.3
KAZ1				*e*		09 21 30.3	
	comp=Z,99nm,0.2s						
AHBU	AHRAM	0.64	183	*e*Pg	Pg	09 21 26.1	0.0
SHI	Shiraz	1.03	82	*e*Pg	Pg	09 21 33.7	+0.1
SHI				*e*		09 21 58.8	
	comp=Z,99nm,0.4s						
ABEH	Behbahan	1.44	320	*e*Pg	Pn	09 21 41.1	+1.2
KLNJ	Kolanjah	1.52	8	*e*Pg	Pn	09 21 42.0	+0.7
KLNJ				*e*		09 22 08.9	
	comp=Z,99nm,0.4s						
QIR1	Qir	1.81	124	*e*Pg	Pg	09 21 49.4	+0.9
QIR1				*e*		09 22 32.2	
	comp=Z,99nm,0.5s						
IRAM	Ramesheh	2.47	21	*e*Pn	Pn	09 21 55.2	+1.0
IRAM				*e*		09 22 37.2	
	comp=Z,99nm,0.6s						
SHK1	Shahrekord	2.84	352	*e*Pn	Pn	09 22 00.1	+0.7
UMR	Umm Al-Rimmam	3.16	272	*e*P		09 22 03.8	
IPIR	Pirpir	3.19	353	*e*		09 22 45.6	
	comp=Z,99nm,0.4s						
IPIR				*e*Pn	Pn	09 22 05.3	+1.0
RDF	Al-Radifah	3.36	261	*e*P		09 22 06.9	
RDF				*e*S		09 22 45.7	

RDF				IAML		09 22 51.2	
	comp=Z,308nm,0.4s						
SHGR	Shooshtar-Gavs	3.39	321	*e*Pn	Pn	09 22 08.5	+1.8
SHGR				*e*S	Sn	09 22 50.1	+3.0
SHGR				IAML		09 23 10.0	
	comp=N,65nm,0.7s						
SHGR				IAML		09 23 34.7	
	comp=E,58nm,0.5s						
SHGR	Shooshtar-Gavs	3.39	321	*e*Pn	Pn	09 22 08.5	+1.8
IMEH	Mehriz	3.40	56	*e*		09 22 10.9	
	comp=Z,99nm,0.2s						
IMEH				*e*Pn	Pn	09 22 09.3	+2.3
IZEF	Zefreh	3.49	14	*e*Pn	Pn	09 22 09.1	+0.8
MIB	Mutribah	3.49	276	*e*P		09 22 07.8	
NASN	Na'in	3.52	21	*e*Pn	Pn	09 22 09.0	+0.2
NASN	Na'in	3.52	21	*e*Pn	Pn	09 22 09.0	+0.2
RST	Umm Al-Ruwaisa	3.78	271	*e*P		09 22 12.9	
ICHK	Chekchek	3.80	43	*e*Pn	Pn	09 22 14.1	+1.6
ANAR	Anarak	4.21	28	*e*Pn	Pn	09 22 19.5	+1.4
QAM	Ghamsar	4.25	1	*e*Pn	Pn	09 22 19.5	+0.8
KHMZ	Khomeyn	4.38	345	*e*Pn	Pn	09 22 22.0	+1.4
KHMZ	Khomeyn	4.38	345	*e*Pn	Pn	09 22 22.0	+1.4
KRSH	Karshahi	4.50	8	*e*Pn	Pn	09 22 22.8	+0.6
KHGB	Koh Gabri	4.54	78	*e*Pn	Pn	09 22 24.1	+1.3
KHGB				*e*		09 22 46.4	
	comp=Z,99nm,0.7s						
TVBK	TV Kerman	4.74	83	*e*Pn	Pn	09 22 27.4	+1.8
ASAO	Ashtian	5.15	348	*e*Pn	Pn	09 22 32.6	+1.4
ASAO	Ashtian	5.15	348	*e*Pn	Pn	09 22 32.6	+1.4
IQOM	Qom	5.33	358	*e*Pn	Pn	09 22 33.3	-0.3
BANOM	Banah	5.66	128	*e*Pn	Pn	09 22 39.2	+1.2
TPRV	Parvadeh(Tabas	5.77	51	*e*Pn	Pn	09 22 41.0	+1.5
KHNJ	Kahnooj	5.80	104	*e*Pn	Pn	09 22 42.0	+2.1
NAZ	Nazwa, Dubai	5.92	138	*e*Pn	Pn	09 22 41.4	-0.1
MSFE	Esma-Masafi	5.95	133	*e*Pn	Pn	09 22 42.8	+0.9
IRAZ	Razeghan	6.00	349	*e*Pn	Pn	09 22 44.1	+1.3
MDH	Madha	6.08	132	*e*Pn	Pn	09 22 44.1	+0.4
IFIR	Firoozkooh	6.24	11	*e*Pn	Pn	09 22 46.3	+0.2
UOSS	Minazif	6.28	135	*e*Pn	Pn	09 22 46.5	+0.1
TNSJ	Nastanj	6.32	44	*e*Pn	Pn	09 22 48.7	+1.6
HATD	Hatta, Dubai	6.32	136	*e*Pn	Pn	09 22 46.9	-0.1
ASHO	Ashiyiah	6.38	138	*e*Pn	Pn	09 22 48.4	+0.5
TKDS	Koohdasht(Taba	6.41	49	*e*Pn	Pn	09 22 49.6	+1.2
ALNE	Al Ain	6.71	143	*e*Pn	Pn	09 22 52.5	+0.2
BSRN	Basiran	7.14	68	*e*Pn	Pn	09 22 57.5	-0.8
BSRN	Basiran	7.14	68	*e*Pn	Pn	09 22 57.6	-0.8
KBZ	Khabaz	15.72	337	LR	LR	09 31 33.6	
	comp=Z,64nm,19.9s,baz=348,slow=40						
AKTO	Aktyubinsk	21.51	12	P	P	09 26 01.7	-0.9
	comp=Z,1.8nm,0.4s,baz=196,slow=9.8,SNR=9.9						
AAK	Ala-Archa	22.76	49	P	P	09 26 18.4	+2.1
	comp=Z,0.8nm,0.5s,baz=247,slow=10,SNR=3.6						
MLR	Muntele Rosu	25.55	316	LR	LR	09 37 48.1	
	comp=Z,30nm,22.0s,baz=40,slow=39						
BVAR	Borovoye Array	27.35	25	P	P	09 26 58.3	-0.5
	comp=Z,0.6nm,0.8s,baz=200,slow=16,SNR=3.4						
KURBB	Kurchatov Arra	29.35	36	P	P	09 27 17.0	+0.3
	comp=Z,0.5nm,0.5s,baz=235,slow=9.2,SNR=1.1						
MKAR	Makanchi Array	29.58	46	P	P	09 27 18.5	-0.3
	comp=Z,0.4nm,0.5s,baz=236,slow=7.2,SNR=5.7						
ZALV	Zalesovo Beam	34.41	35	P	P	09 27 60.0	-1.1
	comp=Z,1.0nm,0.4s,baz=256,slow=8.4,SNR=5.6						
HFS	Hagfors	39.68	331	P	P	09 28 43.9	-1.8
	comp=Z,0.9nm,0.4s,baz=122,slow=10,SNR=1.7						
TORD	Torodi Ar. Bea	48.65	261	P	P	09 29 56.7	-1.6
	comp=Z,1.1nm,0.4s,baz=60,slow=8.1,SNR=7.7						

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*BEO **11** 09:29:58.9±0.4, 43°.17N×17°.78E, h3^{km}±2^{km}, ML2.6/11*
*PDG **11** 09:29:58.7±0.2, 43°.14N×17°.84E, h7^{km}, MD3.0/1, ML2.5/11, Error ellipse: s-maj=0.3km s-min=0.3km az=0.0*
*RHSSO **11** 09:29:59.5±0.2, 43°.13N×17°.82E, h6^{km}±2^{km}, ML2.8/13*
ISC 11 09:29:58.8±1.0, **43°.15N**±0°.02×**17°.82E**±0°.01, **h4**^{km}±9^{km}, **n68**, σ1^{s}**12**/124, **16C-10D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STON	Ston	0.29	198	*e*Pg	Pg	09 30 04.5	0.0
STON				*e*Sg	Sg	09 30 09.6	+1.3
STON	Ston	0.29	198	*i* Pg	Pg	09 30 04.5	0.0
STON				Sg	Sg	09 30 09.5	+1.1
STON	Ston	0.29	198	⇑*i*Pg	Pg	09 30 04.4	0.0
STON				*e*Sg	Sg	09 30 09.6	+1.3
DBRK	Dubrovnik	0.54	154	*e*Pg	Pg	09 30 08.0	-1.1
DBRK				Sg	Sg	09 30 16.0	-0.1
BRY	Bratogost	0.58	115	⇓*i*Pg	Pg	09 30 09.2	-0.8
BRY				*e*Sg	Sg	09 30 18.1	+0.5
BRY	Bratogost	0.58	115	*e*Pg	Pg	09 30 09.3	-0.8
BRY				*i* Sg	Sg	09 30 18.2	+0.6
TREB	Trebinje	0.58	138	*e*Pg	Pg	09 30 09.5	-0.5
TREB				*e*Sg	Sg	09 30 18.8	+1.3
TREB	Trebinje	0.58	138	⇑*i*Pg	Pg	09 30 09.4	-0.5
TREB				*e*Sg	Sg	09 30 18.5	+1.0
MAKA	Makarska	0.60	283	*i* Pg	Pb	09 30 10.7	-1.3
MAKA				Sg	Sb	09 30 20.5	-0.3
RICI	Ricice	0.61	305	*i* Pg	Pb	09 30 10.7	-1.4
RICI				Sg	Sb	09 30 20.3	-0.7
UPM	Unac-Piva	0.79	86	*e*Pg	Pg	09 30 13.8	-0.3
UPM				*e*Sg	Sg	09 30 25.5	+1.1
UPM	Unac-Piva	0.79	86	⇑*i*Pg	Pg	09 30 13.3	-0.8
UPM				*i* Sg	Sg	09 30 25.7	+1.3
HCY	Herceg Novi	0.86	145	*e*Pg	Pg	09 30 14.4	-0.9
HCY	Herceg Novi	0.86	145	*e*Pg	Pg	09 30 14.4	-0.9
HCY				*i* Sg	Sg	09 30 27.5	+1.1
NKME	Niksic	0.91	114	*e*Pg	Pg	09 30 15.3	-1.1
NKME				*i* Sg	Sg	09 30 29.4	+1.2
NKY	Niksic	0.92	111	*e*Pg	Pg	09 30 15.9	-0.6
NKY				*i* Sg	Sg	09 30 29.7	+1.2
CEME	Cevo	1.01	126	*e*Pg	Pg	09 30 16.8	-1.3
CEME				*i* Sg	Sg	09 30 32.6	+1.4
HVAR	Hvar	1.01	272	*e*Pg	Pb	09 30 18.1	-0.7
HVAR				Sg	Sn	09 30 33.9	-0.5
PLE	Pljevlja	1.16	81	⇑*i*Pg	Pb	09 30 19.9	-1.6
PLE				*i* Sg	Sb	09 30 38.2	+1.3
BUM	Brajici-Budva	1.16	137	⇑*i*Pg	Pb	09 30 20.0	-1.5
BUM				*i* Sg	Sb	09 30 37.8	+0.9
HAPS	Han Pijesak,Bl	1.24	41	*e*Pg	Pn	09 30 21.3	-1.8
HAPS				*e*Sg	Sb	09 30 38.4	-1.0
HAPS	Han Pijesak,Bl	1.24	41	⇑*i*Pg	Pn	09 30 21.4	-1.7
HAPS				*e*Sg	Sb	09 30 39.3	-0.1
KOME	Kolasin	1.28	103	⇓*i*Pg	Pn	09 30 22.0	-1.6
KOME				*i* Sg	Sn	09 30 41.9	+0.7
PDG	Podgorica	1.28	124	*e*Pg	Pn	09 30 22.9	-0.5
PDG				*e*Sg	Sb	09 30 39.5	-0.7
PDG	Podgorica	1.28	124	⇑P	Pn	09 30 22.0	-1.4
PDG				⇑S	Sb	09 30 40.0	-0.2
PDG	Podgorica	1.28	124	⇑*i*Pg	Pn	09 30 22.5	-0.9
PDG				*e*Sg	Sb	09 30 40.1	-0.1
TTG	Podgorica	1.28	124	*e*Pg	Pn	09 30 22.0	-1.4
TTG				*i* Sg	Sg	09 30 41.9	+2.1
KIJV	Kijevo	1.34	310	*e*Pg	Pb	09 30 23.6	-0.9
KIJV				Sn	Sn	09 30 46.2	+3.7
BBLS	Lazići	1.35	58	*e*Pn	Pb	09 30 25.2	+0.4
BBLS				*e*Sn	Sb	09 30 42.4	-0.1
BBLS	Lazići	1.35	58	*e*Pg	Pn	09 30 24.3	-0.3
BBLS				*e*Sg	Sn	09 30 43.2	+0.1
MGRS	Mrkonjic Grad	1.37	337	⇑*i*Pg	Pb	09 30 24.5	-0.6
MGRS				*e*Sg	Sg	09 30 43.6	+0.6
IVA	Berane	1.54	100	⇓*i*Pg	Pn	09 30 27.0	-0.2
IVA				*i* Sg	Sg	09 30 50.4	+2.0
ULC	Ulcinj	1.58	138	*e*Pg	Pn	09 30 27.0	-0.7
ULC				*i* Sg	Sg	09 30 51.3	+1.6
BLY	Banja Luka	1.66	344	*e*Pn	Pb	09 30 28.9	-1.1
BLY				*e*Sg	Sg	09 30 51.2	-1.1
BLY	Banja Luka	1.66	344	⇑*i*Pn	Pb	09 30 28.7	-1.3
BLY				*e*Sn	Sg	09 30 51.5	-0.8
ZIRJ	Zirje	1.67	288	*i* Pn	Pg	09 30 29.9	-0.9
ZIRJ				Sn	Sg	09 30 52.7	+0.4
MORI	Morici	1.70	296	*e*Pn	Pb	09 30 30.1	-0.5
MORI				Sn	Sg	09 30 53.9	+0.5
IVAS	Ivanjica	1.75	75	*e*Pn	Pn	09 30 30.4	+0.4
IVAS				*e*Sn	Sn	09 30 53.5	+0.7
DIVS	Divibare	1.84	58	*e*Pn	Pn	09 30 31.9	+0.6
DIVS				*e*Sn	Sb	09 30 56.7	+0.3
DIVS	Divibare	1.84	58	*e*Pn	Pn	09 30 31.6	+0.3
DIVS				*e*Sn	Sn	09 30 55.4	+0.4
TEKS	Tekeris	1.86	41	*e*Pn	Pn	09 30 31.4	-0.2
TEKS				*e*Sg	Sb	09 30 57.8	+0.6
TEKS	Tekeris	1.86	41	*e*Pn	Pn	09 30 32.4	+0.8
TEKS				*e*Sn	Sn	09 30 56.1	+0.5
UDBI	Udbina	2.03	313	*i* Pn	Pg	09 30 37.0	-0.7
UDBI				Sn	Sg	09 31 04.3	+0.3
TRUS	Trudelj	2.16	59	*e*Pn	Pn	09 30 37.1	+1.5
TRUS				*e*Sg	Sg	09 31 08.1	-0.1
DUGI	Dugi Otok	2.18	294	*i* Pn	Pb	09 30 37.8	-1.0
DUGI				Sn	Sg	09 31 07.1	-1.7
GRUS	Gruza	2.23	70	*e*Pn	Pn	09 30 36.6	0.0
GRUS				*e*Sg	Sg	09 31 11.7	+1.3
GRUS	Gruza	2.23	70	⇑P	Pn	09 30 37.0	+0.4
GRUS				⇑S	Sn	09 31 03.3	-1.2
FRGS	Fruska Gora	2.46	35	⇑P	Pb	09 30 42.4	-1.3
FRGS	Fruska Gora	2.46	35	*e*Pn	Pn	09 30 40.7	+0.9
FRGS				*e*Sn	Sn	09 31 11.8	+1.4
NVLJ	Novalja	2.56	304	*e*Pn	Pn	09 30 41.1	0.0
NVLJ				Sn	Sb	09 31 16.7	-0.4
MOSL	Moslavina	2.58	343	*e*Pn	Pn	09 30 41.7	+0.3
MATE	Matera	2.63	199	⇓P	Pb	09 30 46.1	-0.5
MATE				⇓S	Sb	09 31 18.8	-0.5
OZLJ	Ozalj	2.99	326	*e*Pn	Pn	09 30 48.8	+1.9
MORH	Mrgy, Hungar	3.12	11	*e*Pn	Pn	09 30 49.7	+0.9
MORH				*e*Sn	Sn	09 31 26.9	+0.4
KALN	Kalnik	3.14	342	*i* Pn	Pn	09 30 48.8	-0.2
CRES	Cresnjev	3.17	328	*e*Pn	Pn	09 30 50.4	+1.0
CRES				*e*Sn	Sn	09 31 28.0	+0.4
RIY	Rijeka	3.24	313	*e*Pn	Pn	09 30 51.6	+1.2
RIY				*e*Sn	Sn	09 31 29.3	-0.1
MDVR	Moldovita	3.25	59	⇑P	Pn	09 30 51.7	+1.1
MDVR				⇓S	Sn	09 31 28.5	-1.2
ZAPS	Zavoj	3.52	86	*e*Sn	Sn	09 31 36.4	0.0
CEY	Cerknica	3.55	318	*e*Pn	Pn	09 30 54.8	0.0
CEY				*e*Sn	Sn	09 31 36.9	-0.3
HERR	Herculane	3.74	61	⇓P	Pn	09 30 58.8	+1.5
HERR				⇓S	Sn	09 31 41.4	-0.4
SOKA	Soboth	4.04	332	*e*Pn	Pn	09 31 03.1	+1.5
	7.9nm,0.5s						
GZR	Gura Zlata	4.21	56	⇓P	Pn	09 31 03.7	0.0
GZR				⇓S	Sn	09 31 53.1	-0.3
ARSA	Arzberg	4.41	339	*e*Pn	Pn	09 31 09.8	+3.2
	3.4nm,0.3s						
CONA	Conrad Observa	4.97	345	*e*Pn	Pn	09 31 16.7	+2.4
	1.0nm,0.2s						
DRGR		5.03	42	⇑P	Pn	09 31 16.9	+1.8
KBA	Koelnbreinsper	5.05	323	*e*Pn	Pn	09 31 18.4	+3.0
	0.8nm,0.3s						
MOA	Molln	5.32	333	*e*Pn	Pn	09 31 20.7	+1.6
	2.0nm,0.3s						

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*PGC **11** 09:37:31.9±0.1, 47°.56N×129°.23W, h10^{km}, MLSn2.9/20, Mw3.6/20, 302km Wsw of Tofino, Bc Off Coast Of Washington*
*IDC **11** 09:37:37.3±2.5, 47°.85N×128°.68W, h0^{km}, mb3.4/1, mb1 3.5/7, mb1mx3.4/51, mbtmp3.3/7, ML3.2/5, MS3.5/20, Ms1 3.5/20, ms1mx3.4/31, Error ellipse: s-maj=53.7km s-min=15.8km az=67.0*
ISC 11 09:37:38.7±1.4, **47°.91N**±0°.08×**128°.83W**±0°.09, **h13**^{km}, **n57**, σ1^{s}**43**/46, **MS3.3**/9, **Off coast of Washington**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDB	Eliza Dome	2.26	29	Pn	Pn	09 38 13.7	-2.1
OZB	Mount Ozzard	2.46	63	Pn	Pn	09 38 16.2	-2.2
GDR	Gold River	2.63	44	Pn	Pn	09 38 19.7	-1.1
B928	Bamfield	2.63	68	Pn	Pn	09 38 18.6	-2.1
B928				Sn	Sn	09 38 52.0	-0.4
BTB	Buttle Lake	2.69	53	Pn	Pn	09 38 20.3	-1.5
BTB				Sn	Sn	09 38 55.0	+0.8
WOSB	Woss	2.70	33	Pn	Pn	09 38 20.0	-1.8
MAYB	Maynard	2.72	23	Pn	Pn	09 38 20.6	-1.6
TLCB	Telegraph Cove	2.94	26	Pn	Pn	09 38 24.2	-0.9
MGB	Mount Grey	2.96	67	Pn	Pn	09 38 22.8	-2.6
MGB				Sn	Sn	09 39 01.2	+0.3
B927	Port Alberni	2.97	62	Pn	Pn	09 38 23.7	-1.8
NCRB	Newcastle Ridg	3.09	35	Pn	Pn	09 38 25.7	-1.5
B926	Mesachie Lake	3.26	72	Pn	Pn	09 38 27.4	-2.0
B926				Sn	Sn	09 39 08.4	+0.3
TXB	Texada	3.41	57	Pn	Pn	09 38 29.9	-1.6
NLLB	Nanaimo Lost L	3.47	66	Pn	Pn	09 38 30.9	-1.5
NLLB				Sn	Sn	09 39 14.1	+0.8
B010	North Saanich	3.67	76	Pn	Pn	09 38 33.7	-1.3
B010				Sn	Sn	09 39 18.7	+0.6
PA12	PA12 Sannich	3.67	76	Pn	Pn	09 38 32.9	-2.1
PGC	Sidney	3.67	76	Pn	Pn	09 38 32.9	-2.1
B011	North Saanich	3.67	76	Pn	Pn	09 38 32.9	-2.1
SHB	Sechelt	3.69	61	Pn	Pn	09 38 34.5	-0.8
VGZ	Gonzales	3.72	80	Pn	Pn	09 38 33.2	-2.5
VGZ				Sn	Sn	09 39 19.7	+0.4
HDW	Hoodsport	3.90	92	Pn	Pn	09 38 36.5	-1.9
BLN	Blyn Mountain	3.94	86	Pn	Pn	09 38 37.1	-1.7
BIB	Bowen Island	3.95	66	Pn	Pn	09 38 38.1	-0.9
MCW	Mount Constitu	4.08	77	Pn	Pn	09 38 40.4	-0.3
WPB	Watts Point	4.10	63	Pn	Pn	09 38 40.9	-0.1
BBB	Bella Bella	4.30	6	Pn	Pn	09 38 42.7	-1.0
	3.2nm,0.3s,baz=157,slow=2.2,SNR=23						
BBB				LR	LR	09 40 22.4	
	comp=Z,284nm,20.1s,baz=16,slow=38						
BBB	Bella Bella	4.30	6	Pn	Pn	09 38 42.6	-1.1
BBB				Sn	Sn	09 39 34.1	+0.4
WSLR	Whistler	4.47	58	Pn	Pn	09 38 46.6	+0.4
JCW	Jim Creek	4.63	84	Pn	Pn	09 38 47.8	-0.6
MBW	Mount Baker	4.70	77	Pn	Pn	09 38 48.6	-0.8
RPW	Rockport	4.92	81	Pn	Pn	09 38 51.2	-1.1
LLLB	Lillooet	5.29	57	Pn	Pn	09 38 57.4	0.0
YBH	Yreka Blue Hor	7.55	143	Pn	Pn	09 39 28.5	0.0
	0.2nm,0.3s,baz=321,slow=5.8,SNR=8.2						
YBH				LR	LR	09 42 10.1	
	comp=Z,557nm,18.8s,baz=320,slow=37						
NEW	Newport	7.85	83	LR	LR	09 42 42.6	
	comp=Z,614nm,21.0s,baz=286,slow=39						
DLBC	Dease Lake	10.57	357	LR	LR	09 44 23.0	
	comp=Z,138nm,18.1s,baz=239,slow=38						
ELK	Elko	12.07	121	LR	LR	09 45 15.2	
	comp=Z,381nm,18.1s,baz=320,slow=38						
NVAR	Mina Array Bea	12.19	137	Pn	Pn	09 40 32.8	+0.7
	0.0nm,0.3s,baz=322,slow=10,SNR=4.1						
NVAR				LR	LR	09 45 07.6	
	comp=Z,464nm,19.2s,baz=334,slow=37						
PDAR	Pinedale Array	14.48	104	Pn	Pn	09 41 05.3	+1.9
	0.1nm,0.3s,baz=294,slow=14,SNR=5.0						
PDAR				LR	LR	09 46 58.9	
	comp=Z,332nm,18.5s,baz=309,slow=39						
YKA	Yellowknife Ar	16.65	23	Pn	Pn	09 41 30.5	-0.9
	baz=221,slow=14,SNR=2.4						
YKA				LR	LR	09 48 10.8	
	comp=Z,135nm,18.9s,baz=0.0,slow=38						
PFO	Pinyon Flats O	17.05	142	LR	LR	09 48 24.1	
	comp=Z,177nm,18.6s,baz=328,slow=38						
KDAK	Kodiak Island	17.33	314	LR	LR	09 46 20.1	
	comp=Z,320nm,19.6s,baz=150,slow=30						
ILAR	Eielson Array	19.51	337	P	Pn	09 42 07.8	+1.3
	0.0nm,0.3s,baz=142,slow=10,SNR=3.1						
ILAR				LR	LR	09 48 29.3	
	comp=Z,150nm,20.7s,baz=153,slow=33						
INK	Inuvik	20.59	355	LR	LR	09 51 22.1	
	comp=Z,46nm,18.6s,baz=186,slow=40						
ANMO	Albuquerque	21.10	120	P	P	09 42 22.6	-0.4
	2.1nm,0.9s,baz=316,slow=13,SNR=2.3						
ANMO				LR	LR	09 50 48.8	
	comp=Z,118nm,20.6s,baz=294,slow=38						
ULM	Lac du Bonnet	21.61	71	LR	LR	09 51 03.4	
	comp=Z,230nm,18.7s,baz=279,slow=37						
TXAR	Lajitas Array	26.84	125	LR	LR	09 54 35.4	
	comp=Z,200nm,19.1s,baz=0.0,slow=38						
LPIG	La Paz	27.95	142	LR	LR	09 52 20.0	
	comp=Z,65nm,21.3s,baz=356,slow=32						
PETK	Petropavlovsk-	45.12	305	LR	LR	10 01 15.3	
	comp=Z,64nm,21.8s,baz=90,slow=31						
H11N2	WAKE ISLAND Hy	58.44	265	T	T	10 50 30.0	
	baz=45,slow=75,SNR=35						
H11N3	WAKE ISLAND Hy	58.44	265	T	T	10 50 30.0	
	baz=45,slow=75,SNR=35						
H11N1	WAKE ISLAND Hy	58.46	265	T	T	10 50 30.8	
	baz=45,slow=75,SNR=29						
H11S1	WAKE ISLAND Hy	59.43	264	T	T	10 51 45.7	
	baz=45,slow=76,SNR=8.1						
H11S2	WAKE ISLAND Hy	59.44	264	T	T	10 51 45.6	
	baz=45,slow=76,SNR=13						
H11S3	WAKE ISLAND Hy	59.45	264	T	T	10 51 45.9	
	baz=45,slow=76,SNR=8.8						
USRK	Ussuriysk Ar.	64.10	308	LR	LR	10 17 05.2	
	comp=Z,32nm,18.2s,baz=43,slow=37						
MJAR	Matsushiro Arr	65.76	298	LR	LR	10 11 40.2	
	comp=Z,16nm,21.3s,baz=235,slow=31						
KSRS	Korea Array	71.02	305	LR	LR	10 21 22.9	
	comp=Z,9.2nm,18.0s,baz=0.0,slow=37						

IDC 11 09:45:39.1±8.9, **5°.63S**×**151°.33E**, **h92**^{km}±61^{km}, **mb3.4**/3, **mb1 3.5**/4, **mb1mx3.2**/27, **mbtmp3.7**/4, **ML1.7**/1, **MS2.4**/1, **Ms1 2.4**/1, **ms1mx2.3**/13, **Error ellipse: s-maj=102.3km s-min=60.1km az=126.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	5.58	228	P	Pn	09 47 00.7	+1.1
	1.3nm,0.3s,baz=50,slow=17,SNR=1.6						
PMG				S	Sn	09 48 01.0	-1.4
	1.2nm,0.3s,baz=232,slow=15,SNR=1.9						
PMG				LR	LR	09 49 08.2	
	comp=Z,40nm,20.5s,baz=96,slow=37						
WRA	Warramunga Arr	21.80	228	P	P	09 50 23.8	0.0
	0.9nm,0.6s,baz=53,slow=9.9,SNR=12						
ASAR	Alice Springs	24.55	221	P	P	09 50 51.0	+0.6
	0.9nm,0.7s,baz=58,slow=8.7,SNR=11						
FITZ	Fitzroy Crossi	27.97	242	P	P	09 51 22.5	+1.2
	1.0nm,0.3s,baz=59,slow=10.0,SNR=11						
TORD	Torodi Ar. Bea	149.15	286	PKPbc	PKPdf	10 05 15.3	+1.7
	0.5nm,0.6s,baz=84,slow=3.8,SNR=2.0						

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*IDC **11** 09:46:31.6±0.8, 10°.54S×51°.93W, h0^{km}, mb3.8/4, mb1 4.0/9, mb1mx3.8/36, mbtmp3.9/9, ML3.9/5, Error ellipse: s-maj=20.7km s-min=18.1km az=166.0*
*VAO **11** 09:46:31.5±0.2, 10°.48S×51°.76W, h0^{km}, mbR4.1*
ISC 11 09:46:32.1±0.5, **10°.47S**±0°.06×**51°.89W**±0°.05, **h10**^{km}, **n57**, σ1^{s}**64**/60, **mb3.9**/4, **Brazil**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNDB	Serra Nova Dou	1.61	159	*e*P	Pb	09 47 01.7	-0.2
PEXB	Peixe	3.88	115	*e*P	Pn	09 47 32.6	+0.7
PEXB				*e*S	Sn	09 48 16.4	-1.2
NPGB	Novo Progresso	4.83	315	*e*P	Pn	09 47 48.1	+3.2
ARAG	Araguaiana, MT	5.21	179	*e*P	Pn	09 47 50.7	+0.6
BDFB	Brasilia	6.38	144	Pn	Pn	09 48 06.3	-0.1
	0.6nm,0.3s,baz=306,slow=12,SNR=2.3						
BDFB				Pg	Pb	09 48 26.8	+3.4
	9.7nm,0.3s,baz=311,slow=20,SNR=15						
BDFB				Sn	Sn	09 49 16.0	-3.4
	9.8nm,0.3s,baz=286,slow=21,SNR=4.1						
BDFB				Lg	Lg	09 49 48.6	
	47nm,0.3s,baz=225,slow=20,SNR=16						
SDBA	SAO DESIDERIO	7.12	106	*e*P	Pn	09 48 16.8	+0.3
ITTB	Itaituba	7.16	328	*e*P	Pn	09 48 19.9	+2.9
PP1B	Ponte de Pedra	7.66	202	*e*P	Pn	09 48 24.5	+0.7
IPMB	Ipameri, GO	8.28	155	*e*P	Pn	09 48 32.4	0.0
VILB	Vilhena	8.50	252	*e*P	Pn	09 48 38.1	+2.6
JANB	Januaria	8.69	122	*e*P	Pn	09 48 37.0	-1.0
MALB	Monte Alegre	8.88	344	*e*P	Pn	09 48 42.3	+1.7
TMAB	Tom-Au,PA,Br	8.89	25	*e*P	Pn	09 48 40.5	-0.2
MCPB	Macapa, AP	10.04	359	*e*P	Pn	09 48 57.1	+0.5
SIV	San Ignacio	10.48	237	Pn	Pn	09 49 01.7	-0.9
	1.0nm,0.3s,baz=83,slow=13,SNR=21						
SIV				Sn	Sn	09 50 57.0	-3.3
	1.8nm,0.3s,baz=47,slow=16,SNR=1.8						
SIV				Lg	Lg	09 52 02.6	
	2.2nm,0.3s,baz=10.0,slow=15,SNR=5.0						
ROSB	Rosrio	10.77	46	*e*P	Pn	09 49 05.2	-1.4
BB19B	Bebedouro	11.02	163	*e*P	Pn	09 49 10.1	+0.1
PCMB	Pacaembu	11.09	177	*e*P	Pn	09 49 11.6	+0.7
DIAM	Diamantina, MG	11.13	135	*e*P	Pn	09 49 11.2	-0.3
MACA	Manacapuru-AM	11.35	309	*e*P	Pn	09 49 16.4	+2.0
NBPS	Pedro II - PI	11.99	61	*e*P	Pn	09 49 22.0	-1.3
GDU01	Guandu, BA	12.47	106	*e*P	Pn	09 49 27.7	-2.1
BSCB	Bom Sucesso	12.51	148	*e*P	Pn	09 49 29.5	-0.9
PTGA	Pitinga	12.57	320	Pn	Pn	09 49 31.5	+0.4
	3.8nm,0.3s,baz=150,slow=19,SNR=32						
PTGA				Sn	Sn	09 51 46.1	-5.2
	6.0nm,0.3s,baz=43,slow=19,SNR=4.2						
PTGA				Lg	Lg	09 53 08.4	
	1.4nm,0.3s,baz=4.7,slow=22,SNR=1.2						
PTGA	Pitinga	12.57	320	*e*P	Pn	09 49 31.7	+0.5
FRTB	Fartura	12.99	170	*e*P	Pn	09 49 36.6	-0.4
SJMB	Sao Joao De Ma	13.20	130	*e*P	Pn	09 49 38.7	-1.1
VAO	Valinhos	13.32	160	*e*P	Pn	09 49 41.5	0.0
BSFB	Barra de Sao F	13.53	129	*e*P	Pn	09 49 42.8	-1.5
NAN01	Guarapari, ES	13.56	124	*e*P	Pn	09 49 42.1	-2.5
NBMO	Morrinhos-CE	13.74	60	*e*P	Pn	09 49 46.5	-0.7
ETMB	Extrema	14.11	271	*e*P	Pn	09 49 53.7	+1.4
RIB01	Linhares ES	14.16	130	*e*P	Pn	09 49 51.1	-1.8
PTGB	Pitanga	14.17	181	*e*P	Pn	09 49 53.0	0.0
VAS01	Vassouras-RJ	14.26	146	*e*P	Pn	09 49 53.2	-1.0
ESAR	Angra dos Reis	14.37	151	*e*P	Pn	09 49 55.3	-0.4
MAN01	Angra dos Reis	14.47	149	*e*P	Pn	09 49 56.9	-0.3
DUB01	Friburgo-RJ	14.71	143	*e*P	Pn	09 50 00.4	-0.1
CAM01	Campos-RJ	14.96	140	*e*P	Pn	09 50 03.3	-0.4
NBLI	Livramento-PB	15.08	79	*e*P	Pn	09 50 03.1	-2.4
NBPA	Parau_RN	15.36	73	*e*P	Pn	09 50 08.0	-1.1
MDP	Montagnes des	15.49	357	Pn	Pn	09 50 07.8	-3.0
	0.3nm,0.3s,baz=173,slow=13,SNR=1.3						
MDP				Lg	Lg	09 54 35.7	
	1.0nm,0.3s,baz=69,slow=22,SNR=4.1						
RCBR	Riachuelo	16.48	75	Lg	Lg	09 55 06.6	
	0.6nm,0.3s,baz=137,slow=9.3,SNR=1.9						
CPUP	Villa Florida	16.59	197	Pn	Pn	09 50 24.4	-0.5
	0.2nm,0.3s,baz=25,slow=14,SNR=1.9						
CPUP	Villa Florida	16.59	197	*e*P	Pn	09 50 24.8	-0.1
ITAB	Concordia	16.68	181	*e*P	Pn	09 50 26.2	+0.2
LPAZ	La Paz	16.82	248	Pn	Pn	09 50 28.9	+0.5
	0.1nm,0.3s,baz=48,slow=12,SNR=2.0						
LPAZ				Lg	Lg	09 55 21.4	
	0.2nm,0.3s,baz=60,slow=17,SNR=2.1						
LPAZ	La Paz	16.82	248	*e*P	Pn	09 50 29.3	+0.8
CZSB	Cruzeiro do Su	20.73	276	*e*S	Sn	09 55 09.6	0.0
PLCA	Paso Flores	34.36	206	P	P	09 53 19.4	+0.1
	2.0nm,1.1s,baz=23,slow=7.7,SNR=2.9						
DBIC	Dimbokro	49.83	72	P	P	09 55 27.6	+1.8
	2.4nm,0.6s,baz=248,slow=5.4,SNR=1.8						
TORD	Torodi Ar. Bea	58.13	67	P	P	09 56 27.3	+0.8
	0.8nm,0.6s,baz=255,slow=7.3,SNR=6.2						
TXAR	Lajitas Array	63.68	310	P	P	09 57 06.1	+2.0
	0.1nm,0.4s,baz=117,slow=7.2,SNR=6.7						
MKAR	Makanchi Array	127.03	38	PKP	PKiKP	10 05 38.2	+0.9
	0.2nm,0.6s,baz=5.7,slow=1.4,SNR=2.6						
ASAR	Alice Springs	145.60	189	PKPbc	PKPab	10 06 12.3	+0.3
	0.7nm,0.6s,baz=162,slow=4.0,SNR=10						
WRA	Warramunga Arr	149.16	191	PKPbc	PKPbc	10 06 22.6	+0.8
	0.6nm,0.6s,baz=169,slow=2.2,SNR=7.9						
CMAR	Chiang Mai Arr	150.70	71	PKPbc	PKPbc	10 06 25.5	0.0
	1.1nm,0.3s,baz=290,slow=4.7,SNR=4.2						

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*NEIC **11** 09:50:41.1±2.0, 27°.71S±0°.03×71°.7W±0°.1, h28^{km}±8^{km}, Mwr4.2/35, ML4.2(GUC), Error ellipse: s-maj=15.0km s-min=3.9km az=89.0*
*NEIC **11** 09:50:41.1, 27°.71S×71°.67W, h23^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$1.58; M$_{\theta\theta}$0.63; M$_{\phi\phi}$-2.21; M$_{r\theta}$0.09; M$_{\theta\phi}$0.55; M$_{\phi r}$0.93; Fault plane solution: M$_{0}$2.25000×10^{15} NP1:φ$_{s}$1.19000°, δ58.60000°, λ104.99000°. NP2:φ$_{s}$153.99000°, δ34.46000°, λ67.03000°. Principal axes: T 1.8319, Plg72.0000°, Azm308.0000°; N 0.6788, Plg13.0000°, Azm173.0000°; P -2.5107, Plg12.0000°, Azm80.0000°;*
*SJA **11** 09:50:41.0±1.4, 27°.58S×71°.53W, h58^{km}±28^{km}, ML4.4, MW4.2*
*GUC **11** 09:50:42.1±0.8, 27°.81S×71°.34W, h31^{km}±5^{km}, ML4.3*
*IDC **11** 09:50:44.1±8.1, 27°.70S×71°.38W, h27^{km}±52^{km}, mb3.9/5, mb1 4.1/9, mb1mx3.9/31, mbtmp4.0/9, ML4.0/4, MS3.3/8, Ms1 3.3/8, ms1mx3.1/24, Error ellipse: s-maj=33.0km s-min=27.8km az=65.0*
*VAO **11** 09:50:47.5±0.4, 27°.24S×71°.07W, h10^{km}, mb4.4*
ISC 11 09:50:39.5±0.5, **27°.72S**±0°.03×**71°.67W**±0°.04, **h10**^{km}, **n106**, σ2^{s}**27**/122, **mb4.7**/7, **MS3.6**/3, **5C-4D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AC04	Llanos de Chal	0.72	132	⇓*i*P	Pg	09 50 52.3	-1.0
AC04				⇓*i*S	Sg	09 50 59.4	-3.3
AC04				IAML		09 50 60.0	
	comp=E,41μm,0.2s						
AC04	Llanos de Chal	0.72	132		Pg	09 50 52.4	-1.0
GO03	Copiap	1.28	85	⇓*i*P	Pn	09 51 01.4	-2.2
GO03				*i* S	Sb	09 51 15.8	-4.6
GO03	Copiap	1.28	85		Pn	09 51 01.3	-2.3

GO03	Copiap	1.28	85	*i*P	Pn	09 51 01.4	-2.2
GO03	Copiap	1.28	85	*e*P	Pn	09 51 01.4	-2.2
GO03				*e*S	Sb	09 51 19.5	-0.9
LCO	Las Campanas	1.54	147		Pn	09 51 07.2	-0.2
AC05	El Transito	1.66	132	⇓*i*P	Pn	09 51 07.9	-1.0
AC05				*i*S	Sn	09 51 26.7	-3.7
AC05				IAML		09 51 32.5	
	comp=N,5µm,0.5s						
AC05	El Transito	1.66	132		Pn	09 51 08.1	-0.7
AC01	Pan de Azucar	1.84	32	⇑*i*P	Pn	09 51 11.0	-0.2
AC01				*i*S	Sb	09 51 36.7	+0.4
AC01				IAML		09 51 41.7	
	comp=N,3µm,0.5s						
AC01	Pan de Azucar	1.84	32	Pn	Pn	09 51 11.0	-0.2
AC02	Maricunga	2.43	69	⇑*i*P	Pn	09 51 20.7	+0.9
AC02				*i*S	Sn	09 51 49.4	-0.4
AC02				IAML		09 51 53.2	
	comp=N,4µm,0.4s						
AC02	Maricunga	2.43	69		Pn	09 51 20.8	+1.0
GO04	Tololo Observa	2.56	163	*e*P	Pn	09 51 21.6	+0.3
GO04	Tololo Observa	2.56	163		Pn	09 51 21.6	+0.3
GO04	Tololo Observa	2.56	163	*i*P	Pn	09 51 21.8	+0.5
GO04				*e*S	Sn	09 51 53.9	+1.2
CO01	Juntas del Tor	2.64	149	⇑*i*P	Pn	09 51 23.2	+0.7
CO01				*i*S	Sn	09 51 53.7	-1.0
CO01				IAML		09 52 01.5	
	comp=N,3µm,0.4s						
CO01	Juntas del Tor	2.64	149		Pn	09 51 23.5	+1.1
AROD	Rodeo	3.11	142	*i*P	Pn	09 51 31.5	+2.6
AROD	Rodeo	3.11	142	*e*P	Pn	09 51 31.5	+2.6
GO02	Mina Guanaco	3.16	37	⇑*i*P	Pn	09 51 30.1	+0.5
GO02				*i*S	Sb	09 52 17.9	+3.2
GO02	Mina Guanaco	3.16	37	Pn	Pn	09 51 29.8	+0.1
VCA	Vinchina	3.22	109	*i*P	Pn	09 51 33.3	+3.0
VCA				IAML		09 52 23.9	
	comp=Z,1µm,0.6s						
CO03	El Pedregal	3.22	165	*e*P	Pn	09 51 30.7	+0.4
CO03	El Pedregal	3.22	165		Pn	09 51 31.4	+1.1
PB14	IPOC Station P	3.29	21	Pn	Pn	09 51 30.9	-0.4
PB14	IPOC Station P	3.29	21	*i*P	Pn	09 51 31.0	-0.4
PB14				IAML		09 52 33.7	
	comp=Z,788nm,1.0s						
PB14	IPOC Station P	3.29	21	*i*P	Pn	09 51 31.1	-0.3
PB14				IAML		09 52 33.7	
	comp=Z,788nm,1.0s						
AGUA	GUANDACOL	3.31	123	*i*P	Pn	09 51 34.8	+3.3
ACDV	Cuesta del Vie	3.31	138	*i*P	Pn	09 51 34.1	+2.6
ACDV	Cuesta del Vie	3.31	138	*e*P	Pn	09 51 34.3	+2.7
ACDV				*e*S	Sb	09 52 19.8	+0.9
ACDV				IAML		09 52 24.1	
	comp=Z,859nm,1.2s						
CO02	Combarbal	3.52	171	⇑*i*P	Pn	09 51 34.4	0.0
CO02				*i*S	Sb	09 52 25.1	+0.3
CO02	Combarbal	3.52	171		Pn	09 51 34.2	-0.2
ACCO	Cerro Coronel	3.66	142	*i*P	Pn	09 51 39.3	+2.8
ACCO				*i*S	Sb	09 52 26.8	-2.1
ACCO				IAML		09 52 36.1	
	comp=Z,1µm,0.5s						
PB10	IPOC Station P	4.31	14	Pn	Pn	09 51 44.1	-1.1
PB10	IPOC Station P	4.31	14	*i*P	Pn	09 51 43.9	-1.3
PB10	IPOC Station P	4.31	14	*i*P	Pn	09 51 44.0	-1.1
PB10				IAML		09 53 15.6	
	comp=Z,284nm,0.7s						
ACLC	CERRO LA CRUZ	4.49	113	*i*P	Pn	09 51 48.8	+1.1
ACLC				IAML		09 52 51.0	
	comp=Z,488nm,0.4s						
RTLL	Cerro Villicun	4.55	143	*i*P	Pn	09 51 50.9	+2.4
RTLL				*i*S	Sn	09 52 42.4	+1.0
RTLL				IAML		09 53 04.2	
	comp=Z,482nm,0.5s						
ZON	Zonda	4.62	146	Pn	Pn	09 51 51.6	+2.1
ZON	Zonda	4.62	146	*i*P	Pn	09 51 51.7	+2.3
ZON				IAML		09 53 11.4	
	comp=Z,344nm,0.9s						
AUSP	Uspallata	4.91	157	*i*P	Pn	09 51 56.9	+3.3
PB15	IPOC Station P	4.92	24		Pn	09 51 54.2	+0.5
RTCV	Cerro Valdivia	4.94	147	*i*P	Pn	09 51 56.0	+2.0
RTCV				IAML		09 53 18.6	
	comp=Z,175nm,0.6s						
VA03	San Esteban	5.12	169		Pn	09 51 56.7	+0.4
APLL	PUNTA DE LOS L	5.23	122	*i*P	Pn	09 51 58.5	+0.6
ROC1	El Roble	5.27	174	*i*P	Pn	09 52 00.6	+2.0
FSA	Cafayete	5.33	74	*i*P	Pn	09 52 03.0	+3.6
PB06	IPOC Station P	5.34	21		Pn	09 51 58.8	-0.7
PEL	Peldehue	5.47	171	Pn	Pn	09 52 01.7	+0.5
PEL	Peldehue	5.47	171	*i*P	Pn	09 52 02.9	+1.8
PEL	Peldehue	5.47	171	*i*P	Pn	09 52 03.0	+1.8
MT02	Curacav	5.54	175		Pn	09 52 02.9	+0.9
PB04	IPOC Station P	5.54	15		Pn	09 52 00.7	-1.5
LVC	Limon Verde	5.67	27	Pn	Pn	09 52 04.3	0.0
	comp=Z,13nm,0.3s,baz=182,slow=9.0,SNR=106						
LVC				Sn	Sn	09 53 01.1	-8.5
	comp=Z,16nm,0.3s,baz=235,slow=8.4,SNR=4.4						
LVC				Lg	Lg	09 53 29.0	
	comp=Z,26nm,0.3s,baz=358,slow=16,SNR=4.6						
LVC				LR	LR	09 54 39.9	
	comp=Z,342nm,19.2s,baz=224,slow=43						
LVC	Limon Verde	5.67	27	*e*P	Pn	09 52 04.2	0.0
LVC				*e*S	Sn	09 53 00.9	-8.7
AHML	Horco Molle	5.72	82	*i*P	Pn	09 52 07.3	+2.7
AHML				IAML		09 53 38.0	
	comp=Z,88nm,0.7s						
PB07	IPOC Station P	6.18	16		Pn	09 52 09.7	-1.4
SLA	San Lorenzo	6.29	63	*i*P	Pn	09 52 15.8	+3.3
PB09	IPOC Station P	6.30	21		Pn	09 52 12.3	-0.3
MRA	San Martin	6.97	134	*i*P	Pn	09 52 21.8	0.0
MRA				*i*P	Pn	09 52 21.8	0.0
BO02	Sierra Bellavi	7.09	174	Pn	Pn	09 52 22.5	-1.0
H03N1	Juan Fernandez	8.45	226	Pn	Pn	09 52 40.9	-0.9
	baz=111,slow=17,SNR=23						
H03N1				Sn	Sn	09 54 13.4	-3.7
H03N1				T	T	10 01 38.3	
	baz=55,slow=71,SNR=2532						
H03N2	Juan Fernandez	8.46	226	Pn	Pn	09 52 41.7	-0.2
	baz=111,slow=17,SNR=14						
H03N2				Sn	Sn	09 54 13.4	-4.0
H03N2				T	T	10 01 43.6	
	baz=55,slow=71,SNR=2380						
H03N3	Juan Fernandez	8.47	226	Pn	Pn	09 52 40.9	-1.1
	baz=111,slow=17,SNR=28						
H03N3				Sn	Sn	09 54 13.0	-4.6
H03N3				T	T	10 01 43.4	
	baz=55,slow=71,SNR=1835						
H03S3	Juan Fernandez	8.70	224	Pn	Pn	09 52 43.9	-1.3
	baz=106,slow=78,SNR=15						
H03S3				Sn	Sn	09 54 18.5	-4.7
	SNR=4.0						
H03S3				T	T	10 01 47.5	
	baz=38						
H03S1	Juan Fernandez	8.71	224	Pn	Pn	09 52 43.7	-1.6
	baz=106,slow=78,SNR=10						
H03S1				Sn	Sn	09 54 18.1	-5.5
H03S1				T	T	10 02 00.3	
	baz=38						
H03S2	Juan Fernandez	8.72	224	Pn	Pn	09 52 44.2	-1.2
	baz=106,slow=78,SNR=11						
H03S2				Sn	Sn	09 54 17.3	-6.4
H03S2				T	T	10 01 51.2	
	baz=38						
BI02	San Fabin de	8.92	178	Pn	Pn	09 52 47.6	-1.0
LC01	Cunco	11.15	181	Pn	Pn	09 53 18.0	-1.0
LPAZ	La Paz	11.84	17	Pn	Pn	09 53 28.8	-0.3
	comp=Z,1.3nm,0.3s,baz=208,slow=7.1,SNR=9.3						
LPAZ				LR	LR	09 57 31.3	
	comp=Z,39nm,20.0s,baz=216,slow=35						
LPAZ	La Paz	11.84	17		Pn	09 53 29.0	-0.1
CPUP	Villa Florida	12.86	87	Pn	Pn	09 53 43.1	+0.6
	comp=Z,0.2nm,0.3s,baz=266,slow=17,SNR=2.6						
CPUP				LR	LR	09 59 00.1	
	comp=Z,251nm,18.2s,baz=263,slow=39						
CPUP	Villa Florida	12.86	87		Pn	09 53 39.4	-3.0
PLCA	Paso Flores	13.01	176	Pn	Pn	09 53 47.9	+3.3
	comp=Z,0.1nm,0.3s,baz=349,slow=12,SNR=1.4						
PLCA				LR	LR	09 59 27.9	
	comp=Z,226nm,18.2s,baz=350,slow=40						
ITQB	Itaqui	13.35	102	*e*P	Pn	09 53 50.9	+1.7
ITQB				*e*S	Sn	09 56 17.5	-0.2
CPSB	Cacapava Do Su	16.17	104	*e*P	Pn	09 54 29.2	+2.3
NNA	Nana	16.39	342	LR	LR	09 59 29.7	
	comp=Z,45nm,20.3s,baz=162,slow=32						
TRCB	Terra Rica	17.90	78	*e*P	Pn	09 54 49.2	+0.4
CNLB	Canela	18.37	100	*e*P	Pn	09 54 56.1	+1.6
PP1B	Ponte de Pedra	18.46	60	*e*P	P	09 54 55.4	-0.2
CZSB	Cruzeiro do Su	19.91	357	*e*P	Pn	09 55 14.2	+1.2
SAML	Samuel	20.32	25	*e*P	P	09 55 16.3	+0.4
ITRB	Iturama	21.06	72	*e*P	P	09 55 25.3	+1.3
ATAH	Atahualpa	21.44	341	LR	LR	10 03 30.4	
	comp=Z,22nm,18.9s,baz=155,slow=36						
ARAG	Araguaiana, MT	21.95	61	*e*P	P	09 55 33.7	+0.3
BDFB	Brasilia	25.00	66	LR	LR	10 06 58.0	
	comp=Z,211nm,20.5s,baz=275,slow=39						
MACA	Manacapuru-AM	26.58	25	*e*P	P	09 56 20.8	+2.8
ITTB	Itaituba	27.75	36	*e*P	P	09 56 30.6	+2.1
H06E1	SOCORRO T-PHAS	59.85	316	T	T	11 06 15.0	
	SNR=11						
TXAR	Lajitas Array	64.47	329	P	P	10 01 19.9	+3.4
	comp=Z,0.2nm,0.6s,baz=158,slow=9.7,SNR=2.6						
LIC	Lamto	72.57	73	*e*P	P	10 02 07.2	-0.2
	comp=Z,24nm,0.9s						
TIC	Toumodi	72.80	73	*e*P	P	10 02 08.3	-0.4
KIC	Kosan Boka	72.88	73	*e*P	P	10 02 09.2	0.0
	comp=Z,13nm,0.6s						
DBIC	Dimbokro	72.95	73	P	P	10 02 10.0	+0.4
	comp=Z,9.8nm,0.7s,baz=217,slow=6.7,SNR=9.4						
PDAR	Pinedale Array	78.34	333	P	P	10 02 42.9	+2.8
	comp=Z,0.2nm,0.5s,baz=148,slow=8.6,SNR=2.6						
TORD	Torodi Ar. Bea	81.80	71	P	P	10 02 59.4	+0.2
	comp=Z,6.3nm,0.9s,baz=257,slow=4.5,SNR=20						
TORD				LR	LR	10 39 51.1	
	comp=Z,38nm,18.4s,baz=290,slow=36						
YKA	Yellowknife Ar	96.23	341	P	P	10 04 09.0	+1.7
	comp=Z,0.2nm,0.6s,baz=140,slow=4.9,SNR=2.7						
ASAR	Alice Springs	123.26	208	PKP	PKiKP	10 09 38.1	+0.5
	comp=Z,0.6nm,1.0s,baz=134,slow=1.7,SNR=3.0						
ASAR	Alice Springs	123.26	208		PKPdf	10 09 35.5	-1.8
H11S2	WAKE ISLAND Hy	125.94	273	T	T	12 28 58.2	
	baz=112,slow=75,SNR=9.8						
H11S1	WAKE ISLAND Hy	125.95	274	T	T	12 28 53.5	
	baz=112,slow=75,SNR=20						
H11S3	WAKE ISLAND Hy	125.96	273	T	T	12 28 53.7	
	baz=112,slow=75,SNR=16						
WRA	Warramunga Arr	126.34	211	PKP	PKiKP	10 09 44.4	+0.6
	comp=Z,0.4nm,0.7s,baz=158,slow=1.8,SNR=6.1						
ZALV	Zalesovo Beam	148.62	27	PKPbc	PKiKP	10 10 27.8	-0.1
	comp=Z,10nm,0.8s,baz=316,slow=4.1,SNR=27						
MKAR	Makanchi Array	152.07	40	PKPbc	PKiKP	10 10 36.3	+1.0
	comp=Z,2.6nm,0.7s,baz=329,slow=2.1,SNR=30						

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*IDC **11** 10:17:03.0±1.6, 9°.95S×117°.36E, h0^{km}, mb3.4/3, mb1 3.7/7, mb1mx3.5/42, mbtmp3.6/7, ML3.6/4, MS2.7/1, Ms1 2.7/1, ms1mx2.3/23, Error ellipse: s-maj=50.2km s-min=20.9km az=49.0*

*DJA **11** 10:17:08.9±0.9, 10°S±9°×11°8E±°, h10^{km}, M4.1/7, MLv4.1/7*

ISC 11 10:17:09.2±0.9, **9°.84S**±0°.07×**117°.88E**±0°.06, **h35^{km}, n14,** σ**2.^{s}49**/18, **Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLAI	Plampang	1.01	354	P	Pn	10 17 27.1	+0.3
TWSI	Taliwang, Sumb	1.47	318	P	Pn	10 17 34.6	+1.4
SRBI	Singaraja	3.15	303	P	Pn	10 17 59.4	+3.0
EDFI	Ende, Flores	3.92	74	P	Pn	10 18 08.6	+1.6
JAGI	Jajag, Banyuwa	3.92	290	P	Pn	10 18 08.2	+1.3
BSSI	Bau Bau, Buton	4.49	35	P	Pn	10 18 17.0	+2.2
BKSI	Bulukumba	5.01	27	P	Pn	10 18 21.9	0.0
KAPI	Kappang	5.14	21	Pn	Pn	10 18 26.0	+2.3
	1.8nm,0.3s,baz=243,slow=5.9,SNR=6.3						
KAPI				Sn	Sn	10 19 20.2	-1.6
	13nm,0.3s,baz=226,slow=22,SNR=19						
KAPI				LR	LR	10 20 29.4	
	comp=Z,78nm,18.7s,baz=170,slow=38						
BATI	Baumata	5.71	94	Pn	Pn	10 18 36.1	+4.5
	7.4nm,0.3s,baz=68,slow=5.0,SNR=5.1						
BATI				Sn	Sn	10 19 36.8	+0.8
	3.7nm,0.3s,baz=8.8,slow=15,SNR=1.5						
FITZ	Fitzroy Crossi	11.14	138	Pn	Pn	10 19 46.9	+0.8
	0.2nm,0.3s,baz=328,slow=11,SNR=14						
FITZ				Sn	Sn	10 21 45.5	-4.0
	0.9nm,0.3s,baz=205,slow=16,SNR=9.9						
WRA	Warramunga Arr	18.80	124	P	Pn	10 21 27.5	+1.0
	0.2nm,0.3s,baz=294,slow=14,SNR=8.5						
WRA				S	Sn	10 24 45.0	-11
	0.1nm,0.3s,baz=293,slow=22,SNR=2.3						
ASAR	Alice Springs	20.58	134	P	P	10 21 47.8	+2.6
	0.7nm,0.6s,baz=317,slow=11,SNR=10						
ASAR				S	S	10 25 30.0	-3.6
	0.4nm,0.6s,baz=303,slow=23,SNR=3.0						
MKAR	Makanchi Array	64.70	334	P	P	10 27 42.4	-1.3
	0.3nm,0.5s,baz=142,slow=6.6,SNR=5.2						
KURBB	Kurchatov Arra	69.23	334	P	P	10 28 10.4	-2.0
	0.3nm,0.7s,baz=144,slow=5.5,SNR=2.3						

NNC 11 10:34:20.6±0.3, **51°.36N×75°.57E, h0^{km}, mb3.5, mpv3.0, 5C-3D, Error ellipse: s-maj=10.9km s-min=1.9km az=29.0, Suspected Mining explosion., Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURBB	Kurchatov Arra	2.01	110	⇓Pg	Pb	10 34 57.4	-0.6
	5.4nm,0.4s						
KURBB				⇓Lg	Lg	10 35 24.3	
	49nm,0.6s						
BRVK	Borovoye	3.67	300	⇑Sn	Sn	10 36 03.6	+1.0
	2.0nm,0.6s						
BRVK				⇓Lg	Lg	10 36 17.5	
	5.3nm,0.8s						
MAKZ	Makanchi	6.20	135	⇑Sn	Sn	10 37 06.7	+1.7
	1.1nm,0.6s						
MAKZ				⇑Lg	Lg	10 37 36.6	
	2.4nm,0.7s						
MK31	Makanchi Array	6.35	133	⇑Sn	Sn	10 37 09.5	+0.8
	1.2nm,0.9s,baz=322,slow=24,SNR=5.5						
MK31				⇑Lg	Lg	10 37 41.5	
	1.0nm,0.5s,baz=332,slow=26,SNR=4.4						

IDC 11 10:36:44.8±2.2, **3°.01N×127°.91E, h0^{km}, mb3.4**/3, **mb1 3.6**/3, **mb1mx3.4**/33, **mbtmp3.4**/3, **MS2.8**/1, **Ms1 2.8**/1, **ms1mx2.2**/23, **Error ellipse: s-maj=152.3km s-min=26.7km az=67.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.66	165	P	P	10 41 57.9	-0.3
	0.9nm,0.6s,baz=344,slow=11,SNR=8.6						
WRA				LR	LR	10 53 24.8	
	comp=Z,22nm,19.6s,baz=80,slow=42						
ASAR	Alice Springs	27.15	168	P	P	10 42 30.1	+0.2
	0.2nm,0.6s,baz=356,slow=7.4,SNR=4.3						
MKAR	Makanchi Array	58.82	325	P	P	10 46 45.1	0.0
	0.2nm,0.4s,baz=115,slow=7.5,SNR=4.8						

IDC 11 10:40:05.0±1.4, **12°.59N×143°.45E, h0^{km}, mb3.3**/3, **mb1 3.5**/3, **mb1mx3.3**/36, **mbtmp3.3**/3, **Error ellipse: s-maj=41.5km s-min=20.8km az=130.0, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	1.70	54	Pn	Pn	10 40 36.0	0.0
	49nm,0.3s,baz=207,slow=2.3,SNR=24						
GUMO				Sn	Sn	10 40 58.1	-0.3
	67nm,0.3s,baz=0.5,slow=23,SNR=12						
H11N1	WAKE ISLAND Hy	23.58	70	T	T	11 09 15.8	
	baz=255,slow=75,SNR=3.9						
H11N2	WAKE ISLAND Hy	23.59	69	T	T	11 09 13.8	
	baz=255,slow=75,SNR=4.1						
H11N3	WAKE ISLAND Hy	23.60	70	T	T	11 09 17.3	
	baz=255,slow=75,SNR=4.2						
WRA	Warramunga Arr	33.55	196	P	P	10 46 45.9	-1.0
	0.4nm,0.8s,baz=9.8,slow=10,SNR=2.0						
ASAR	Alice Springs	37.23	195	P	P	10 47 18.9	+0.4
	0.3nm,0.7s,baz=18,slow=10,SNR=4.1						
MKAR	Makanchi Array	61.25	317	P	P	10 50 22.6	+0.4
	0.3nm,0.7s,baz=83,slow=4.6,SNR=2.5						

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*KRNET **11** 10:55:36.6±0.1, 42°.09N×79°.84E, h18^{km}, mb3.5*

*SOME **11** 10:55:36.3, 42°.10N×79°.72E, h5^{km}*

*NNC **11** 10:55:36.7±0.8, 42°.10N×79°.79E, h0^{km}, mb3.6, mpv3.4, Error ellipse: s-maj=5.1km s-min=3.1km az=143.0*

ISC 11 10:55:38.3±1.5, **42°.14N**±0°.06×**79°.83E**±0°.05, **h10^{km}, n65,** σ**1.^{s}35**/108, **20C-14D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHLS	Shalkode	1.05	345	⇓*e*P	Pg	10 55 57.2	-1.4
	baz=2.0						
SHLS				⇓*e*S	Sg	10 56 12.3	0.0
	baz=2.0						
SHLS	Shalkode	1.05	345	⇓*e*P	Pg	10 55 57.2	-1.4
	227nm,0.2s						
SHLS				*e*S	Sg	10 56 12.3	0.0
	89nm,0.2s						
SHLS	Shalkode	1.05	345	P	Pg	10 55 57.2	-1.4
	227nm,0.2s						
SHLS				S	Sg	10 56 12.3	0.0
	89nm,0.2s						
PRZ	Przheval'sk	1.11	288	⇑*e*P	Pg	10 55 58.1	-1.6
	baz=92						
PRZ				⇑*i*S	Sg	10 56 13.7	-0.5
	baz=92						
UZB	Uzynbulak	1.17	330	⇓*e*P	Pb	10 55 59.3	-1.4
	baz=31						
UZB				⇓*e*S	Sb	10 56 16.0	0.0
	baz=31						
UZB	Uzynbulak	1.17	330	⇓*e*P	Pb	10 55 59.3	-1.4
	7.5nm,0.1s						
UZB				*e*S	Sb	10 56 16.0	0.0
	45nm,0.2s						
UZB	Uzynbulak	1.17	330	P	Pb	10 55 59.3	-1.4
	7.5nm,0.1s						
UZB				S	Sb	10 56 16.0	0.0
	45nm,0.2s						
PDGK	Podgornoye	1.21	348	P	Pn	10 56 00.1	-1.4
	21nm,0.2s						
PDGK				S	Sb	10 56 17.3	+0.1
	28nm,0.2s						
PDGK	Podgornoye	1.21	348	⇑P	Pn	10 55 59.9	-1.6
	12nm,0.3s						
PDGK				⇑S	Sb	10 56 17.3	+0.1
	22nm,0.3s						
KTMS	Ketmen	1.36	16	*e*P	Pn	10 56 02.5	-1.0
	baz=15						
KTMS				*e*S	Sb	10 56 21.5	0.0
	baz=15						
KTMS	Ketmen	1.36	16	*e*P	Pn	10 56 02.5	-1.0
	27nm,0.2s						
KTMS				*e*S	Sb	10 56 21.5	0.0
	31nm,0.3s						
KTMS	Ketmen	1.36	16	P	Pn	10 56 02.5	-1.0
	27nm,0.2s						
KTMS				S	Sb	10 56 21.5	0.0
	31nm,0.3s						
SATY	Saty	1.40	312	*e*P	Pn	10 56 03.7	-0.3
	baz=13						
SATY				*e*S	Sg	10 56 23.5	+0.3
	baz=13						
SATY	Saty	1.40	312	*e*P	Pn	10 56 03.7	-0.3
	4.7nm,0.2s						
SATY				*e*S	Sg	10 56 23.5	+0.3
	47nm,0.1s						
SATY	Saty	1.40	312	P	Pn	10 56 03.7	-0.3
	4.7nm,0.2s						
SATY				S	Sg	10 56 23.5	+0.3
	47nm,0.1s						
KPKS	Kokpek	1.57	328	*e*P	Pn	10 56 06.4	0.0
	baz=29						
KPKS				*e*S	Sb	10 56 27.9	+0.4
	baz=29						
KPKS	Kokpek	1.57	328	*e*P	Pn	10 56 06.4	0.0
	70nm,0.2s						
KPKS				*e*S	Sb	10 56 27.9	+0.4
	42nm,0.3s						
ANVS	Anan'yevo	1.72	293	⇓*i*P	Pb	10 56 09.2	-1.0
	baz=94						
ANVS				⇓*i*S	Sb	10 56 32.2	+0.2
	baz=94						
KURS	Kuram	1.82	318	*e*P	Pb	10 56 11.1	-0.6
	baz=19						
KURS				*e*S	Sg	10 56 35.9	-0.8
	baz=19						
KURS	Kuram	1.82	318	*e*P	Pb	10 56 11.1	-0.6
	9.0nm,0.2s						
KURS				*e*S	Sg	10 56 36.0	-0.8
	19nm,0.3s						
KURS	Kuram	1.82	318	P	Pb	10 56 11.1	-0.6
	9.0nm,0.2s						
KURS				S	Sg	10 56 36.0	-0.8
	19nm,0.3s						
KDJ	Kajisay	1.97	271	⇑*i*P	Pb	10 56 13.0	-1.4
	baz=72						
KDJ				⇑*i*S	Sb	10 56 39.4	+0.3
	baz=72						
DJR	Jarkent	2.19	359	*e*P	Pb	10 56 17.6	-0.5
	12nm,0.2s						
DJR				*e*S	Sg	10 56 47.5	-1.2
	79nm,0.3s						
DJR	Jarkent	2.19	359	Pg	Pb	10 56 17.6	-0.5
	12nm,0.2s						
DJR				Lg	Lg	10 56 47.5	
	79nm,0.3s						
MNBS	Baschi	2.20	332	*e*P	Pb	10 56 17.8	-0.5
	24nm,0.1s						
MNBS				*e*S	Sg	10 56 47.6	-1.4
	156nm,0.3s						
MNBS	Baschi	2.20	332	Pg	Pb	10 56 17.8	-0.5
	24nm,0.1s						
MNBS				Lg	Lg	10 56 47.6	
	156nm,0.3s						
KOTS	Kotyrbulak	2.28	300	*e*P	Pb	10 56 18.8	-0.9
	7.5nm,0.1s						
KOTS				*e*S	Sb	10 56 49.3	+1.3
	17nm,0.3s						
KOTS	Kotyrbulak	2.28	300	Pg	Pb	10 56 18.8	-0.9
	7.5nm,0.1s						
KOTS				Lg	Lg	10 56 49.3	
	17nm,0.3s						
MDOK	Medeo	2.29	297	*e*P	Pb	10 56 18.4	-1.5
	5.4nm,0.3s						
MDOK				*e*S	Sb	10 56 48.8	+0.5
	37nm,0.5s						
MDOK	Medeo	2.29	297	⇑Pg	Pb	10 56 18.4	-1.5
	10nm,0.6s						
MDOK				⇓Lg	Lg	10 56 48.7	
	27nm,0.5s						
MDOK	Medeo	2.29	297	Pg	Pb	10 56 18.4	-1.5
	5.4nm,0.3s						
MDOK				Lg	Lg	10 56 48.8	
	37nm,0.5s						
TNSS	Tian-Shan	2.31	294	*e*P	Pb	10 56 18.8	-1.5
	5.8nm,0.2s						
TNSS				*e*S	Sb	10 56 49.4	+0.4
	16nm,0.4s						
TNSS	Tian-Shan	2.31	294	Pg	Pb	10 56 18.8	-1.5
	5.8nm,0.2s						
TNSS				Lg	Lg	10 56 49.4	
	16nm,0.4s						
ARXS	Arharly	2.54	325	*e*P	Pb	10 56 23.4	-0.5
	6.3nm,0.2s						
ARXS				*e*S	Sb	10 56 57.3	+2.0
	100nm,0.4s						
ARXS	Arharly	2.54	325	Pg	Pb	10 56 23.4	-0.5
	6.3nm,0.2s						
ARXS				Lg	Lg	10 56 57.3	
	100nm,0.4s						
IZV	Izvestkoviy	2.54	292	*e*P	Pb	10 56 22.9	-1.1
	2.6nm,0.2s						
IZV				*e*S	Sb	10 56 56.5	+1.1
	32nm,0.6s						
IZV	Izvestkoviy	2.54	292	Pg	Pb	10 56 23.0	-1.1
	2.6nm,0.2s						
IZV				Lg	Lg	10 56 56.5	
	32nm,0.6s						
ULHL	Ulahol	2.67	273	⇑*i*P	Pn	10 56 23.1	+1.6
	baz=75						
ULHL				⇑*i*S	Sn	10 56 56.1	+2.1
	baz=75						
CHKK	Chushkaly	2.70	310	*e*P	Pb	10 56 26.2	-0.5
	3.4nm,0.1s						
CHKK				*e*S	Sb	10 57 01.9	+2.0
	92nm,0.4s						
CHKK	Chushkaly	2.70	310	Pg	Pb	10 56 26.2	-0.5
	3.4nm,0.1s						
CHKK				Lg	Lg	10 57 01.8	
	92nm,0.4s						
MTBS	Maitube	2.70	293	*e*P	Pb	10 56 26.0	-0.7
	4.3nm,0.1s						
MTBS				*e*S	Sb	10 57 01.7	+1.8
	15nm,0.3s						
MTBS	Maitube	2.70	293	Pg	Pb	10 56 26.0	-0.7
	4.3nm,0.1s						

MTBS				Lg	Lg	10 57 01.7	
	15nm,0.3s						
KTBS	Karatobe	2.79	305	eP	Pb	10 56 28.0	-0.4
	6.2nm,0.3s						
KTBS				eS	Sb	10 57 04.9	+2.2
	52nm,0.4s						
KTBS	Karatobe	2.79	305	Pg	Pb	10 56 28.0	-0.4
	6.2nm,0.3s						
KTBS				Lg	Lg	10 57 04.9	
	52nm,0.4s						
KST	Kastek	2.99	289	eP	Pb	10 56 30.6	-1.1
	8.7nm,0.5s						
KST				eS	Sb	10 57 09.8	+1.3
	14nm,0.7s						
KST	Kastek	2.99	289	Pg	Pb	10 56 30.7	-1.1
	8.7nm,0.5s						
KST				Lg	Lg	10 57 09.8	
	14nm,0.7s						
KUU	Kurty	3.10	306	eP	Pb	10 56 32.8	-0.8
	0.7nm,0.2s						
KUU				eS	Sb	10 57 13.4	+1.9
	32nm,0.3s						
KUU	Kurty	3.10	306	Pg	Pb	10 56 32.8	-0.8
	0.7nm,0.2s						
KUU				Lg	Lg	10 57 13.4	
	32nm,0.3s						
KAPS	Kapalarasan	3.16	354	eP	Pb	10 56 35.4	+0.8
	3.8nm,0.2s						
KAPS				eS	Sg	10 57 17.3	-2.6
	10nm,0.3s						
KAPS	Kapalarasan	3.16	354	Pg	Pb	10 56 35.4	+0.8
	3.8nm,0.2s						
KAPS				Lg	Lg	10 57 17.3	
	10nm,0.3s						
DGS	Degeres	3.19	292	eP	Pb	10 56 33.3	-1.8
	1.3nm,0.2s						
DGS				eS	Sb	10 57 14.2	+0.2
	8.7nm,0.5s						
DGS	Degeres	3.19	292	Pg	Pb	10 56 33.3	-1.8
	1.3nm,0.2s						
DGS				Lg	Lg	10 57 14.2	
	8.7nm,0.5s						
TKM2	Tokmak 2	3.22	285	⇑iP	Pn	10 56 31.1	+1.9
	baz=86						
TKM2				⇑iS	Sn	10 57 09.7	+1.9
	baz=86						
TKM2	Tokmak 2	3.22	285	⇑Pg	Pb	10 56 34.0	-1.8
	2.4nm,0.5s						
TKM2				⇑Lg	Lg	10 57 17.6	
	8.0nm,0.5s						
KRBS	Karabastau	3.42	298	eP	Pb	10 56 38.6	-0.5
	1.2nm,0.4s						
KRBS				eS	Sb	10 57 23.3	+2.5
	12nm,0.3s						
KRBS	Karabastau	3.42	298	Pg	Pb	10 56 38.6	-0.5
	1.2nm,0.4s						
KRBS				Lg	Lg	10 57 23.3	
	12nm,0.3s						
UCH	Uchtor	3.95	273	⇑eP	Pn	10 56 40.4	+1.0
	baz=74						
UCH				⇑iS	Sn	10 57 26.3	+0.3
	baz=74						
AAK	Ala-Archa	3.98	279	⇑iP	Pn	10 56 41.0	+1.4
	baz=80						
AAK				⇑iS	Sn	10 57 27.8	+1.4
	baz=80						
AAK	Ala-Archa	3.98	279	⇑Pg	Pb	10 56 47.8	-0.8
	1.4nm,0.5s						
AAK				⇑Lg	Lg	10 57 40.1	
	5.2nm,0.5s						
SGDS	Sogindy	4.04	291	Pg	Pb	10 56 49.5	-0.2
	0.5nm,0.2s						
SGDS				Lg	Lg	10 57 42.0	
	4.0nm,0.5s						
MAKZ	Makanchi	4.91	17	⇓Pn	Pn	10 56 53.8	+1.6
	0.2nm,0.1s						
MAKZ				⇓Sn	Sn	10 57 52.1	+3.0
	0.9nm,0.4s						
MAKZ				⇓Lg	Lg	10 58 12.9	
	1.8nm,0.8s						
MRKS	Merke	4.92	279	eP	Pb	10 57 06.0	+1.3
	1.5nm,0.4s						
MRKS				eS	Sg	10 58 10.0	-6.3
	4.1nm,0.4s						
MRKS	Merke	4.92	279	Pg	Pb	10 57 06.0	+1.3
	1.5nm,0.4s						
MRKS				Lg	Lg	10 58 10.0	
	4.1nm,0.4s						
MK31	Makanchi Array	4.97	20	Pn	Pn	10 56 54.1	+1.1
	0.2nm,0.2s,baz=202,slow=13,SNR=65						
MK31				⇑Sn	Sn	10 57 53.8	+3.2
	1.4nm,0.4s						
MK31				⇓Lg	Lg	10 58 15.6	
	3.3nm,0.7s						
KK31	Karatay Array	6.94	281	⇓Lg	Lg	10 59 14.2	
	0.5nm,0.4s,baz=96,slow=25,SNR=3.7						

IDC 11 11:09:05.2±1.5, 1°.07S×24°.52W, h0^{km}, mb3.7/3, mb1 4.0/3, mb1mx3.5/38, mbtmp3.7/3, MS3.3/5, Ms1 3.3/5, ms1mx2.9/40, Error ellipse: s-maj=67.4km s-min=39.4km az=7.0, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H10N3	ASCENSION HYDR	12.04	124	T	T	11 24 24.5	
	baz=304,slow=74,SNR=21						
H10N2	ASCENSION HYDR	12.04	124	T	T	11 24 24.8	
	baz=304,slow=74,SNR=25						
H10N1	ASCENSION HYDR	12.05	124	T	T	11 24 25.6	
	baz=304,slow=74,SNR=21						
H10S3	ASCENSION HYDR	12.55	129	T	T	11 24 56.2	
	baz=307,slow=74,SNR=24						
H10S2	ASCENSION HYDR	12.57	129	T	T	11 25 04.2	
	baz=273,slow=74,SNR=9.9						
DBIC	Dimbokro	21.07	68	P	P	11 13 51.1	-0.1
	3.4nm,0.9s,baz=234,slow=9.6,SNR=4.2						
DBIC				LR	LR	11 20 23.0	
	comp=Z,52nm,19.9s,baz=208,slow=32						
KOWA	Kowa	25.52	52	LR	LR	11 23 56.1	
	comp=Z,30nm,18.3s,baz=205,slow=35						
BDFB	Brasilia	27.33	237	LR	LR	11 25 15.0	
	comp=Z,92nm,18.6s,baz=71,slow=36						
TORD	Torodi Ar. Bea	29.59	61	LR	LR	11 25 32.8	
	comp=Z,32nm,19.2s,baz=220,slow=33						
KVAR	Kislovodsk Arr	74.52	44	LR	LR	11 55 07.4	
	comp=Z,57nm,21.6s,baz=87,slow=37						
TXAR	Lajitas Array	81.07	300	P	P	11 21 22.6	-0.2
	0.2nm,0.8s,baz=113,slow=6.9,SNR=2.6						
YKA	Yellowknife Ar	90.98	332	P	P	11 22 11.2	+0.1
	0.5nm,0.7s,baz=96,slow=5.6,SNR=8.2						
ASAR	Alice Springs	147.68	141	PKPbc	PKPbc	11 28 52.1	-0.7
	0.9nm,0.8s,baz=214,slow=2.0,SNR=14						

IDC 11 11:28:09.8±3.3, 21°.04S×71°.51W, h0^{km}, mb4.0/1, mb1 3.7/2, mb1mx3.5/26, mbtmp3.7/2, ML3.4/1, Error ellipse: s-maj=148.5km s-min=47.6km az=119.0

GUC 11 11:28:19.4±0.7, 20°.24S×70°.94W, h32^{km}±3^{km}, ML3.5

ISC 11 11:28:14.2±2.0, 20°.15S±0°.04×71°.02W±0°.08, h7^{km}±11^{km}, n20, $\sigma 0^{s}.85$/23, 4C-3D, Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TA02	Huaiquique	0.84	98	eP	Pn	11 28 32.2	-0.2
TA02				i S	Sb	11 28 42.2	-0.4
TA02				IAML		11 28 42.6	
	comp=E,7μm,0.3s						
TA01	Diego Aracena	0.89	118	⇓iP	Pn	11 28 32.9	-0.2
TA01				i S	Sb	11 28 43.3	-0.6
TA01				IAML		11 28 45.1	
	comp=E,3μm,0.5s						
PSGC	Pisagua	1.01	57	⇓iP	Pn	11 28 36.0	+1.2
PSGC				i S	Sn	11 28 49.1	-0.1
PATCX	Punta Patache	1.05	130	⇓iP	Pn	11 28 35.6	+0.3
PATCX				i S	Sg	11 28 47.8	-0.2
PATCX				IAML		11 28 49.3	
	comp=E,1μm,0.4s						
MNMC	Minye Minye	1.68	53	eP	Pg	11 28 46.9	+0.5
MNMC				i S	Sg	11 29 09.3	+1.0
MNMC				IAML		11 29 12.6	
	comp=N,2μm,0.4s						
PB01	IPOC Station P	1.69	122	⇑iP	Pb	11 28 45.7	+0.1
PB01				i S	Sn	11 29 06.2	+0.2
PB01				IAML		11 29 11.6	
	comp=N,1μm,0.5s						
PB08	IPOC Station P	1.75	90	⇑iP	Pb	11 28 47.0	+0.1
PB08				eS	Sb	11 29 09.0	-0.2
PB08				IAML		11 29 12.1	
	comp=E,484nm,0.8s						
PB07	IPOC Station P	1.89	146	⇑iP	Pb	11 28 48.3	-0.9
PB07				IAML		11 29 29.1	
	comp=E,502nm,0.7s						
PB04	IPOC Station P	2.32	160	eP	Pn	11 28 54.1	+1.1
PB04				IAML		11 29 40.9	
	comp=N,467nm,0.7s						
PB09	IPOC Station P	2.33	135	⇑iP	Pb	11 28 55.7	-1.0
PB09				i S	Sg	11 29 28.5	-0.6
PB09				IAML		11 29 35.4	
	comp=E,567nm,0.6s						
PB05	IPOC Station P	2.79	164	eP	Pn	11 29 00.2	+0.8
LPAZ	La Paz	4.72	36	Pn	Pb	11 29 35.4	-2.3
	comp=E,0.6nm,0.3s,baz=212,slow=9.0,SNR=8.5						
LPAZ				Sn	Sg	11 30 46.1	+0.1
	baz=244,slow=18,SNR=1.9						
H03N1	Juan Fernandez	14.99	206	T	T	11 47 10.8	
	baz=33,slow=72,SNR=20						
H03N2	Juan Fernandez	14.99	206	T	T	11 47 10.6	
	baz=33,slow=72,SNR=18						
H03N3	Juan Fernandez	15.00	206	T	T	11 47 09.6	
	baz=33,slow=72,SNR=14						
TORD	Torodi Ar. Bea	78.78	71	P	P	11 40 18.9	+0.7
	comp=E,0.5nm,0.8s,baz=249,slow=6.5,SNR=4.1						
H11S2	WAKE ISLAND Hy	125.74	279	T	T	14 06 48.6	
	baz=115						
H11S1	WAKE ISLAND Hy	125.75	279	T	T	14 06 38.2	
	baz=115						
H11S3	WAKE ISLAND Hy	125.76	279	T	T	14 06 40.0	
	baz=115						
MKAR	Makanchi Array	145.65	33	PKPbc	PKPdf	11 47 52.8	-0.6
	comp=E,0.6nm,0.7s,baz=310,slow=3.4,SNR=3.5						

MOS 11 11:39:26.2±1.2, 48°.42N×154°.98E, h53^{km}, mb4.5/1, Error ellipse: s-maj=25.3km s-min=5.5km az=69.1

IDC 11 11:39:27.0±5.3, 48°.39N×154°.86E, h41^{km}±50^{km}, mb3.3/7, mb1 3.7/9, mb1mx3.3/63, mbtmp3.7/9, ML5.2/1, Error ellipse: s-maj=44.4km s-min=18.1km az=143.0

KRSC 11 11:39:28.7±2.6, 48°.69N×156°.39E, h7^{km}±36^{km}, ML4.4

SKHL 11 11:39:29.3±0.5, 48°.70N×154°.70E, h80^{km}±4^{km}, mb4.4/5

ISC 11 11:39:27.2±0.8, 48°.47N±0°.09×155°.0E±0°.1, h43^{km}, n64, $\sigma 1^{s}.90$/67, mb3.6/7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	2.33	18	ePN	Pn	11 40 02.5	-0.5
SKR				eS	Sn	11 40 28.1	-2.3
SKR				pmax	pmax		
	comp=Z,13nm,0.5s						
SKR				smax	smax		
	comp=N,201nm,0.2s						
SKR				smax	smax		
	comp=E,169nm,0.4s						
SKR	Severo-Kuril's	2.33	18	eP	Pn	11 40 02.3	-0.7
SKR				eS	Sn	11 40 27.9	-2.5
SKR	Severo-Kuril's	2.33	18	eP	Pn	11 40 02.7	-0.3
SKR				AMB	AMB	11 40 03.5	
	comp=E,30nm,0.3s						
SKR				eS	Sn	11 40 28.1	-2.3
SKR				A	A	11 40 32.0	
	comp=E,200nm,0.3s						
SKR				A	A	11 40 32.0	
	comp=E,170nm,0.3s						
PAU	Pauzhetka	3.22	21	PN	Pn	11 40 16.4	+1.2
PAU				S	Sn	11 40 52.2	-0.1
PAU	Pauzhetka	3.22	21	eP	Pn	11 40 16.4	+1.2
PAU				eS	Sn	11 40 52.2	-0.1
PAU	Pauzhetka	3.22	21	eP	Pn	11 40 16.5	+1.2
PAU				eS	Sn	11 40 51.5	-0.8
PAU				A	A	11 40 54.3	
	comp=E,390nm,0.3s						
PAU				A	A	11 40 54.3	
	comp=E,310nm,0.3s						
KDTR	Khodutka, Kamc	3.89	29	eS	Sn	11 41 05.1	-3.6
MTVR	Mutnovka	4.50	26	PN	Pn	11 40 33.5	+0.5
MTVR	Mutnovka	4.50	26	eP	Pn	11 40 33.5	+0.5
MTVR				eS	Sn	11 41 22.8	-1.3
GRL	Gorelyy	4.54	24	PN	Pn	11 40 34.5	+1.1
GRL	Gorelyy	4.54	24	eP	Pn	11 40 34.5	+1.1
RUS	Russkaya	4.56	28	PN	Pn	11 40 33.2	-0.4
RUS	Russkaya	4.56	28	eP	Pn	11 40 33.2	-0.4
RUS				eS	Sn	11 41 23.2	-2.0
RUS	Russkaya	4.56	28	eP	Pn	11 40 33.2	-0.4
KRMR	Karymshinskiy	4.80	23	PN	Pn	11 40 38.9	+2.0
KRMR	Karymshinskiy	4.80	23	eP	Pn	11 40 38.9	+2.0
PETK	Petropavlovsk-	4.95	19	P	Pn	11 40 40.5	+1.5
	comp=E,0.9nm,0.3s,baz=175,slow=12,SNR=17						
DALK	Dalny	5.15	26	PN	Pn	11 40 42.3	+0.6
DALK	Dalny	5.15	26	eP	Pn	11 40 42.3	+0.6
DALK				eS	Sn	11 41 38.7	-1.1
KOK	Koryaka	5.35	24	PN	Pn	11 40 46.8	+2.3
KOK	Koryaka	5.35	24	eP	Pn	11 40 46.8	+2.3
KOK	Koryaka	5.35	24	eP	Pn	11 40 46.8	+2.3
AVH	Avacha	5.36	25	PN	Pn	11 40 47.8	+3.2
AVH	Avacha	5.36	25	eP	Pn	11 40 47.8	+3.2
SMAR	Somma	5.37	25	PN	Pn	11 40 46.8	+1.9
SMAR	Somma	5.37	25	eP	Pn	11 40 46.8	+1.9
KRER	Koryakskii	5.39	25	PN	Pn	11 40 48.1	+2.9
KRER	Koryakskii	5.39	25	eP	Pn	11 40 48.1	+2.9
GNL	Ganaly	5.55	18	PN	Pn	11 40 49.2	+1.9
GNL	Ganaly	5.55	18	eP	Pn	11 40 49.2	+1.9
KUR	Kuril'sk	5.86	239	ePN	Pn	11 40 53.9	+2.4
KUR				eS	Sn	11 41 58.6	+1.3
KUR				pmax	pmax		
	comp=Z,29nm,0.3s						
KUR				pmax	pmax		
	comp=N,10.0nm,0.1s						
KUR				pmax	pmax		
	comp=E,19nm,0.2s						
KUR				smax	smax		
	comp=E,19nm,0.1s						
KUR				smax	smax		
	comp=N,33nm,0.5s						
KUR	Kuril'sk	5.86	239	eP	Pn	11 40 53.9	+2.4
KUR				AMB	AMB	11 40 56.0	
	comp=N,10.0nm,0.3s						
KUR				AMB	AMB	11 40 56.0	
	comp=N,20nm,0.3s						
KUR				AMB	AMB	11 40 56.0	
	comp=N,20nm,0.3s						
KUR				eS	Sn	11 41 56.4	-0.9
KUR				A	A	11 42 04.5	
	comp=N,90nm,0.9s						
KUR				A	A	11 42 04.5	
	comp=N,60nm,0.9s						
TUMR	Tumrok	7.53	23	PN	Pn	11 41 18.5	+4.1
TUMR	Tumrok	7.53	23	eP	Pn	11 41 18.5	+4.1
YUK	Yuzh-Kuril'sk	7.73	238	ePN	Pn	11 41 19.8	+2.8
YUK				pmax	pmax		
	comp=Z,64nm,0.1s						
YUK				pmax	pmax		
	comp=N,15nm,0.2s						
YUK	Yuzh-Kuril'sk	7.73	238	eP	Pn	11 41 19.8	+2.8
YUK				AMB	AMB	11 41 20.2	
	comp=N,20nm,0.4s						
YUK				AMB	AMB	11 41 20.2	
	comp=N,10.0nm,0.4s						
YUK				eS	Sn	11 42 42.2	-1.0
GRPR	Tuman	7.80	238	ePN	Pn	11 41 19.0	+0.9
GRPR				pmax	pmax		
	comp=Z,58nm,0.4s						
GRPR				pmax	pmax		
	comp=E,28nm,0.2s						
GRPR	Tuman	7.80	238	eP	Pn	11 41 19.8	+1.7
GRPR				AMB	AMB	11 41 22.0	
	comp=E,10.0nm,0.4s						
GRPR				eS	Sn	11 42 43.0	-2.1
NMR	Nemuro--Hokkai	8.23	235	ePN	Pn	11 41 22.8	-1.1
NMR	Nemuro--Hokkai	8.23	235	i S	Sn	11 42 52.1	-3.4
YSS	Yuzh-Sakhalins	8.40	264	eP	Pn	11 41 26.2	0.0
YSS				AMB	AMB	11 41 26.8	
	comp=E,10.0nm,0.5s						
KBTR	Krutoberegovo	9.11	29	PN	Pn	11 41 36.1	+0.3
KBTR	Krutoberegovo	9.11	29	eP	Pn	11 41 36.1	+0.3
ASAJ	Asahikawa	9.62	248	P	Pn	11 41 46.5	+3.5
	comp=E,1.5nm,0.3s,baz=63,slow=12,SNR=21						
EKMR	Ekimchan	14.67	297	eP	Pn	11 42 46.4	-5.3
KLR	Kul'dur	15.32	282	P	P	11 43 04.6	+0.3
	comp=E,0.1nm,0.3s,baz=87,slow=9.4,SNR=4.5						
YAK	Yakutsk	19.64	323	P	P	11 43 51.8	0.0
	comp=E,0.3nm,0.3s,baz=130,slow=0.8,SNR=2.4						
KSRS	Korea Array	22.55	251	P	P	11 44 21.7	-1.7
	comp=E,0.5nm,0.5s,baz=48,slow=9.3,SNR=4.1						
KSRS	Korea Array	22.55	251	eP	P	11 44 21.7	-1.7
H11N2	WAKE ISLAND Hy	30.24	157	T	T	12 17 20.8	
	baz=345,slow=77,SNR=29						
H11N1	WAKE ISLAND Hy	30.25	157	T	T	12 17 25.6	
	baz=345,slow=77,SNR=34						
H11N3	WAKE ISLAND Hy	30.25	157	T	T	12 17 13.8	
	baz=345,slow=77,SNR=27						
H11S1	WAKE ISLAND Hy	31.36	158	T	T	12 18 43.8	
	baz=345,slow=76,SNR=181						
H11S3	WAKE ISLAND Hy	31.37	158	T	T	12 18 44.5	
	baz=345,slow=76,SNR=277						
H11S2	WAKE ISLAND Hy	31.38	158	T	T	12 18 45.2	
	baz=345,slow=76,SNR=150						
YKA	Yellowknife Ar	48.78	38	P	P	11 48 07.6	+0.3
	comp=E,0.4nm,0.8s,baz=299,slow=7.0,SNR=4.7						
CMAR	Chiang Mai Arr	54.01	257	P	P	11 48 46.5	-0.6
	comp=E,1.4nm,0.7s,baz=34,slow=7.0,SNR=9.9						
PDAR	Pinedale Array	62.71	56	P	P	11 49 48.7	+0.9
	comp=E,0.5nm,0.9s,baz=324,slow=4.5,SNR=2.6						
WRA	Warramunga Arr	70.56	201	P	P	11 50 36.9	-0.7
	comp=E,0.5nm,0.8s,baz=13,slow=6.6,SNR=3.2						
ASAR	Alice Springs	74.25	200	P	P	11 50 59.1	-0.5
	comp=E,0.6nm,0.9s,baz=9.1,slow=4.4,SNR=5.7						
TXAR	Lajitas Array	75.55	62	P	P	11 51 08.0	+0.7
	comp=E,0.2nm,0.5s,baz=297,slow=5.9,SNR=8.0						
H03N2	Juan Fernandez	137.48	90	T	T	14 31 59.3	
	baz=310,slow=77,SNR=16						
H03N1	Juan Fernandez	137.49	90	T	T	14 31 50.9	
	baz=310,slow=77,SNR=29						
H03N3	Juan Fernandez	137.49	90	T	T	14 31 52.0	
	baz=310,slow=77,SNR=22						

IDC 11 11:54:46.6±0.8, 52°.22N×168°.72W, h0^{km}, mb4.2/26, mb1 4.3/27, mb1mx4.2/56, mbtmp4.2/27, ML3.2/1, MS3.8/4, Ms1 3.7/4, ms1mx3.0/44, Error ellipse: s-maj=23.5km s-min=12.2km az=173.0

BJI 11 11:54:48.5±0.0, 52°.20N×168°.70W, h30^{km}, mB5.1/22, mb4.7/33, Ms4.5/1, Ms7 4.4/1

AEIC 11 11:54:49±2.3, 52°.11N±0°.06×168°.50W±0°.07, h18^{km}±5^{km}, ML3.4, mb4.4/35(NEIC), Error ellipse: s-maj=9.2km s-min=5.8km az=167.0

NEIC 11 11:54:50.8±1.4, 52°.20N±0°.03×168°.63W±0°.08, h26^{km}±4^{km}, Error ellipse: s-maj=7.6km s-min=4.2km az=112.0

MOS 11 11:54:52.8±1.1, 52°.72N×169°.00W, h31^{km}, mb4.9/13, Error ellipse: s-maj=21.0km s-min=9.9km az=97.1

ISC 11 11:54:50.6±0.5, 52°.21N±0°.07×168°.61W±0°.05, h26^{km}, n160, $\sigma 1^{s}.19$/148, mb4.5/50, MS3.8/4, 16C, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIKH	Nikolski High	0.78	349	Pg	Pn	11 55 06.6	+0.7
NIKH	Nikolski High	0.78	349		Sn	11 55 20.1	+3.4
OKSP	Okmok Steeple	1.06	10		Pb	11 55 10.2	-0.2
OKSO	Okmok South	1.18	13		Pb	11 55 10.9	-1.4
OKSO					Sb	11 55 28.3	+1.1
OKFG	Magazine Ridge	1.28	19		Pb	11 55 12.3	-1.7
OKFG					Sb	11 55 31.0	+1.1
MAPS	Pakushin South	1.89	31		Pb	11 55 21.8	-2.7
MAPS					Sb	11 55 47.2	-0.4
MGOD	Makushin Gods	1.90	33		Pb	11 55 22.3	-2.4
MREP	Makushin Rep't	1.96	34		Pn	11 55 22.6	+0.4
MSW	Makushin Switc	2.03	32		Pn	11 55 23.8	+0.7
MNAT	Makushin Natee	2.04	34		Pn	11 55 23.4	+0.2
UNV	Unalaska Valle	2.07	37	Pn	Pn	11 55 23.9	+0.2
AKRB	Akutan Reef Bi	2.46	37		Pn	11 55 29.9	+0.9
AKLV	Akutan Long Va	2.52	38		Pn	11 55 30.7	+0.8
AKUT	Akutan	2.58	40	Pn	Pn	11 55 32.1	+1.6
ATKA	Atka Island	3.44	272	Pn	Pn	11 55 41.8	-0.7
CNBA	Chernabura Isl	5.98	61	Pn	Pn	11 56 17.8	+0.4
CHGN	Chignik	7.24	51	Pn	Pn	11 56 36.9	+2.3
AMKA	Amchitka	7.55	268	Pn	Pn	11 56 39.1	+0.3
OHAK	Old Harbor	10.18	54	Pn	Pn	11 57 14.9	+0.1
KDAK	Kodiak Island	10.75	52	Pn	Pn	11 57 22.2	-0.4
	1.1nm,0.3s,baz=246,slow=8.4,SNR=7.5						
KDAK	Kodiak Island	10.75	52	i P	Pn	11 57 23.7	+1.0
SUA	Susitna One	13.43	39	Pn	Pn	11 58 00.1	+0.8
SKT	Skwentna	13.44	37	Pn	Pn	11 58 02.5	+3.0
KTH	Kantishna Hill	14.69	32		P	11 58 18.4	-4.0
SCM	Sheep Creek Mo	15.00	42		Pn	11 58 18.1	-2.5
SCM				IAmb	IAmb	11 58 25.9	
	comp=Z,29nm,0.9s						
KLU	Klutina	15.42	44	Pn	Pn	11 58 23.8	-2.4
KLU				IAmb	IAmb	11 58 30.1	
	comp=Z,20nm,1.0s						
M24K	Tolsona, Glenn	15.61	42	Pn	Pn	11 58 27.7	-0.9
M24K				IAmb	IAmb	11 58 44.7	
	comp=Z,43nm,0.9s						
IMAR	Indian Mountai	15.71	23		P	11 58 30.5	-3.1
N25K	Chitina, Valde	16.04	45	Pn	Pn	11 58 32.8	-1.4
N25K				IAmb	IAmb	11 58 39.1	
	comp=Z,24nm,1.2s						
GLB	Gilahina Butte	16.32	46	Pn	Pn	11 58 36.4	-1.3
GLB				IAmb	IAmb	11 58 45.2	
	comp=Z,34nm,1.5s						
CCB	Clear Creek Bu	16.44	33	Pn	Pn	11 58 39.1	0.0
TGL	Tana Glacier	16.51	49		P	11 58 41.0	-1.7
TGL				IAmb	IAmb	11 58 46.0	
	comp=Z,51nm,1.1s						
COLA	College	16.57	32	i P	Pn	11 58 40.7	-0.1
COLA				pmax	pmax		
	comp=Z,15nm,1.1s						
IL31		16.83	33		P	11 58 44.1	-1.8
ILAR	Eielson Array	16.83	33	Pn	Pn	11 58 43.0	-1.0
	comp=Z,0.1nm,0.3s,baz=238,slow=11,SNR=18						
BARN	Barnard Glacie	17.15	48	P	Pn	11 58 47.8	-0.5
BARN				IAmb	IAmb	11 58 54.7	
	comp=Z,35nm,1.5s						
CTGM	Chitina Glacie	17.27	49	P	Pn	11 58 49.2	-0.6
CTGM				IAmb	IAmb	11 59 08.5	
	comp=Z,37nm,1.2s						
COLD	Coldfoot	17.57	24		P	11 58 54.0	-0.1
TOLK	Toolik Lake Re	18.82	22	P	Pn	11 59 08.5	-0.1
EGAK	Eagle	18.88	38	P	Pn	11 59 08.8	-0.5
BMAR	Burnt Mountain	19.25	28	P	Pn	11 59 12.2	-1.5
WHY	Whitehorse	20.27	52	P	Pn	11 59 25.5	-0.5
WHY				IAmb	IAmb	11 59 29.6	
	comp=Z,14nm,0.9s						
PEA0B	Petropavlovsk-	20.36	286	P	Pn	11 59 24.4	-2.6
PETK	Petropavlovsk-	20.36	286	P	Pn	11 59 24.4	-2.5
	comp=Z,11nm,0.5s,baz=85,slow=13,SNR=69						
PETK	Petropavlovsk-	20.36	286	P	Pn	11 59 24.6	-2.4
SEY	Seymchan	23.12	313	P	P	11 59 53.2	-1.0
	comp=Z,5.4nm,0.7s,baz=71,slow=23,SNR=13						
INK	Inuvik	23.23	33	P	P	11 59 53.9	-1.3
	comp=Z,4.5nm,0.6s,baz=259,slow=8.9,SNR=17						
INK	Inuvik	23.23	33	P	P	11 59 54.6	-0.6
INK				IAmb	IAmb	12 00 11.1	
	comp=Z,5.3nm,0.8s						
BBB	Bella Bella	24.60	74	LR	LR	12 08 08.5	
	comp=Z,87nm,19.9s,baz=100,slow=32						
YKA	Yellowknife Ar	30.00	49	P	P	12 00 57.8	+1.2
	comp=Z,1.4nm,0.7s,baz=271,slow=6.9,SNR=20						
YKA				ScP	ScP	12 07 39.2	+1.0
	comp=Z,0.4nm,0.7s,baz=282,slow=2.8,SNR=6.1						
YKA	Yellowknife Ar	30.00	49	ceP	P	12 00 59.5	+2.9
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ASAJ	Asahikawa	32.99	276	P	P	12 01 22.7	-0.4
	comp=Z,12nm,1.1s,baz=124,slow=10,SNR=4.1						
TIXI	Tiksi	33.12	329	ceP	P	12 01 24.0	+0.1
TIXI				pmax	pmax		
	comp=Z,16nm,1.0s						
YAK	Yakutsk	33.63	311	i P	P	12 01 26.6	-1.9
YAK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
RES	Resolute Bay	36.31	26	P	P	12 01 50.8	-0.6
RES				IAmb	IAmb	12 01 58.3	
	comp=Z,4.7nm,1.4s						
MCMT	McKenzie Canyo	36.85	79	P	P	12 01 58.0	+1.3
KLR	Kul'dur	36.95	290	P	P	12 01 55.6	-1.6
	comp=Z,3.4nm,0.8s,baz=42,slow=6.8,SNR=9.2						
KLR	Kul'dur	36.95	290	ceP	P	12 01 55.9	-1.3
KLR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
NVAR	Mina Array Bea	37.19	91	P	P	12 02 00.8	+1.1
	comp=Z,0.4nm,0.9s,baz=258,slow=9.0,SNR=2.5						
ZEA	Zeya	37.49	299	eP	P	12 02 00.4	-1.3
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
H11N2	WAKE ISLAND Hy	37.62	220	T	T	12 42 53.7	

	baz=28,SNR=5.1						
H11N3	WAKE ISLAND Hy	37.63	220	T	T	12 43 13.6	
	baz=28						
H11N1	WAKE ISLAND Hy	37.64	220	T	T	12 42 54.7	
	baz=28						
EUNU	Eureka	37.74	16	P	P	12 02 04.8	+1.2
YHH	Holmes Hill	38.07	78	P	P	12 02 08.3	+1.2
H11S1	WAKE ISLAND Hy	38.81	219	T	T	12 43 58.5	
	baz=23,slow=76,SNR=23						
H11S2	WAKE ISLAND Hy	38.82	219	T	T	12 43 49.2	
	baz=23,slow=76,SNR=11						
H11S3	WAKE ISLAND Hy	38.83	219	T	T	12 44 09.8	
	baz=23,slow=76,SNR=8.6						
USRK	Ussuriysk Ar.	39.39	283	P	P	12 02 16.9	-0.8
	comp=Z,1.9nm,0.7s,baz=34,slow=9.6,SNR=5.1						
PD31	Pinedale Array	39.97	79	P	P	12 02 23.3	+0.4
PDAR	Pinedale Array	39.97	79	P	P	12 02 23.8	+0.8
	comp=Z,0.9nm,0.6s,baz=299,slow=4.0,SNR=10						
CN2	Changchun	43.51	286	eP	P	12 02 50.6	-0.9
ULM	Lac du Bonnet	43.81	62	LR	LR	12 21 43.7	
	comp=Z,77nm,19.9s,baz=283,slow=37						
KSRS	Korea Array	45.89	277	P	P	12 03 11.1	+0.5
	comp=Z,0.7nm,0.6s,baz=57,slow=5.7,SNR=4.8						
NRIK	Noril'sk	46.79	332	ceP	P	12 03 16.2	-1.1
NRIK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
SPA0	Spitsbergen Ar	49.84	359	P	P	12 03 40.7	0.0
SPITS	Spitsbergen Ar	49.84	359	P	P	12 03 40.2	-0.6
	comp=Z,8.6nm,0.9s,baz=57,slow=5.3,SNR=6.9						
DAG	Danmarks Havn	49.88	9	iP	P	12 03 40.5	-0.5
	comp=Z,4.6nm,0.8s						
DAG	Danmarks Havn	49.88	9	iP	P	12 03 40.5	-0.5
DAG				pmax	pmax		
	comp=Z,5.0nm,0.8s						
DAG	Danmarks Havn	49.88	9	iP	P	12 03 40.6	-0.5
DAG				IAmb	IAmb	12 03 41.7	
	comp=Z,4.6nm,0.8s						
SUMG	Summit	50.80	17	iP	P	12 03 48.7	+0.3
	comp=Z,38nm,1.0s						
SUMG	Summit	50.80	17	iP	P	12 03 48.7	+0.3
SUMG				pmax	pmax		
	comp=Z,39nm,1.0s						
SUMG	Summit	50.80	17	P	P	12 03 49.5	+1.1
SUMG	Summit	50.80	17	iP	P	12 03 48.8	+0.3
SUMG				IAmb	IAmb	12 03 51.8	
	comp=Z,38nm,1.0s						
TLY	Talaya	50.81	307	P	P	12 03 48.2	-0.2
	comp=Z,7.3nm,0.9s,baz=20,slow=8.1,SNR=4.1						
TLY	Talaya	50.81	307	eP	P	12 03 48.7	+0.3
TLY				pmax	pmax		
	comp=Z,14nm,0.7s						
TLY				MLR	MLR		
	comp=Z,139nm,6.0s						
TLY	Talaya	50.81	307	IAmb	IAmb	12 03 49.8	
	comp=Z,7.1nm,0.9s						
ULN	Ulaanbaatar	51.42	301	ceP	P	12 03 53.0	-0.2
ULN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
SONM	Songino Array	51.78	301	P	P	12 03 55.7	-0.1
	comp=Z,2.5nm,0.9s,baz=53,slow=7.1,SNR=12						
SONM				PcP	PcP	12 05 08.6	-0.2
	comp=Z,1.3nm,0.8s,baz=85,slow=2.9,SNR=4.3						
SONM	Songino Array	51.78	301	IAmb	IAmb	12 03 56.7	
	comp=Z,2.5nm,1.0s						
DBG	Daneborg	51.99	10	iP	P	12 03 56.5	-0.3
DBG				IAmb	IAmb	12 03 58.3	
	comp=Z,6.4nm,0.8s						
TX31	Lajitas Ar. Si	52.28	89	P	P	12 04 00.0	+0.3
TX32	Lajitas Array	52.28	89	P	P	12 04 00.4	+0.7
TX32				IAmb	IAmb	12 04 18.5	
	comp=Z,3.6nm,0.9s						
TXAR	Lajitas Array	52.28	89	P	P	12 03 59.7	-0.1
	comp=Z,0.6nm,0.8s,baz=292,slow=5.2,SNR=8.0						
TXAR	Lajitas Array	52.28	89	P	P	12 04 00.3	+0.5
ICESG	Greenland Ices	53.36	20	iP	P	12 04 07.4	-0.1
ICESG				IAmb	IAmb	12 04 08.1	
	comp=Z,8.5nm,0.7s						
HHC	Hu-ho-hao-te	53.42	292	eP	P	12 04 09.5	+1.5
HHC				pmax	pmax		
	comp=Z,9.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,100nm,5.1s						
ZALV	Zalesovo Beam	57.86	318	P	P	12 04 38.5	-1.0
	comp=Z,1.4nm,0.7s,baz=29,slow=6.8,SNR=6.0						
ARCES	ARCESS Array B	58.13	354	P	P	12 04 41.3	0.0
	comp=Z,7.6nm,0.9s,baz=359,slow=8.7,SNR=4.7						
ARCES	ARCESS Array B	58.13	354	IAmb	IAmb	12 04 41.8	
	comp=Z,24nm,1.2s						
LVZ	Lovozero	58.96	350	P	P	12 04 47.4	+0.3
XAN	Xi'an	59.59	287	P	P	12 04 51.6	-0.4
XAN				pP	pwP	12 05 04.7	+1.0
XAN				pmax	pmax		
	comp=Z,8.0nm,1.3s						
SSPA	Standing Stone	59.64	62	P	P	12 04 52.3	+0.2
DGZ	Jazzator, Alta	59.80	313	iP	P	12 04 53.4	+0.1
DGZ				pmax	pmax		
	comp=Z,5.0nm,0.7s						
GTA	Gaotai	60.97	298	eP	P	12 05 00.8	-0.6
GTA				pP	pP	12 05 07.7	-0.7
GTA				sP	pwP	12 05 10.7	-2.5
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
LZH	Lanzhou	61.08	292	eP	P	12 05 03.1	+0.8
LZH				pP	pwP	12 05 12.8	-1.2
LZH				sP	sP	12 05 17.3	+5.4
LZH				pmax	pmax		
	comp=Z,16nm,1.3s						
KURK	Kurchatov	62.80	319	ceP	P	12 05 13.1	-0.3
KURK				pmax	pmax		
	comp=Z,12nm,2.5s						
KURK	Kurchatov	62.80	319	P	P	12 05 13.2	-0.2
WMQ	Urumqi	64.00	309	eP	P	12 05 23.4	+1.9
BRVK	Borovoye	64.12	325	ceP	P	12 05 21.5	-0.6
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MK31	Makanchi Array	64.26	314	ceP	P	12 05 22.3	-0.8
MK31	Makanchi Array	64.26	314	P	P	12 05 22.6	-0.6
MK31				IAmb	IAmb	12 05 23.1	
	comp=Z,3.1nm,0.8s						
MKAR	Makanchi Array	64.26	314	P	P	12 05 22.2	-0.9
	comp=Z,3.1nm,0.7s,baz=52,slow=6.5,SNR=33						
MKAR	Makanchi Array	64.26	314	P	P	12 05 22.7	-0.4
MAKZ	Makanchi	64.38	314	P	P	12 05 23.6	-0.3
MAKZ				IAmb	IAmb	12 05 23.9	
	comp=Z,5.5nm,1.1s						
ARU	Arti	64.98	333	c iP	P	12 05 27.6	0.0
ARU						12 07 45.8	
ARU				S	S	12 14 08.7	+1.3
ARU				SS	SS	12 18 15.5	-2.8
ARU				pmax	pmax		
	comp=Z,12nm,0.8s						
KLMR	Klimovskoe	65.06	345	eP	P	12 05 26.4	-1.6
KLMR				pmax	pmax		
	comp=Z,25nm,1.3s						
KLMR	Klimovskoe	65.06	345	eP	P	12 05 26.5	-1.6
KLMR				AMP		12 05 27.9	
	comp=Z,25nm,1.3s						
KIRV	Kirov	65.32	339	ceP	P	12 05 29.0	-0.8
FIA1	FINESS Array S	66.09	352	P	P	12 05 34.8	+0.1
FIA1				IAmb	IAmb	12 06 02.5	
	comp=Z,4.1nm,1.0s						
FINES	FINESS Array B	66.09	352	P	P	12 05 33.5	-1.2
	comp=Z,3.8nm,0.7s,baz=15,slow=7.9,SNR=8.5						
FINES	FINESS Array B	66.09	352	P	P	12 05 34.7	0.0
NB2	NORSAR Subarra	67.10	0	P	P	12 05 41.4	+0.2
	comp=Z,9.5nm,1.0s,baz=0.8,slow=6.5						
NOA	NORSAR Array B	67.10	0	P	P	12 05 41.4	+0.2
	comp=Z,3.2nm,0.8s,baz=1.6,slow=6.5,SNR=4.3						
AB04	Akbulak array	70.82	329	P	P	12 06 04.9	+0.5
ABKAR	Akbulak array	70.82	329	P	P	12 06 04.7	+0.2
AAK	Ala-Archa	70.94	316	ceP	P	12 06 05.6	0.0
AAK				pmax	pmax		
	comp=Z,14nm,0.8s						
KKAR	Karatay Array	72.22	319	P	P	12 06 13.5	+0.4
KSH	Kashi	72.83	313	P	P	12 06 20.7	+3.8
KSH				pP	pwP	12 06 28.4	+0.1
KSH				pmax	pmax		
	comp=Z,7.0nm,0.6s						
KSH				pmax	pmax		
	comp=Z,510nm,7.2s						
RAR	Rarotonga	73.51	171	LR	LR	12 29 12.1	
	comp=Z,119nm,21.6s,baz=157,slow=28						
AKASG	Malin Array Be	76.36	348	P	P	12 06 37.3	+0.3
	comp=Z,2.7nm,0.6s,baz=13,slow=5.8,SNR=4.2						
AKASG	Malin Array Be	76.36	348	IAmb	IAmb	12 06 37.5	
	comp=Z,1.7nm,0.9s						
AKBB	Malin Array Si	76.36	348	ceP	P	12 06 36.8	-0.2
CMAR	Chiang Mai Arr	77.11	283	P	P	12 06 42.2	+0.5
	comp=Z,2.0nm,0.9s,baz=24,slow=6.6,SNR=13						
DPC	Dobruska-Polom	77.73	357	eP	P	12 06 45.6	+0.8
DPC	Dobruska-Polom	77.73	357	eP	P	12 06 45.6	+0.8
KRLC	Kraliky	77.99	356	eP	P	12 06 47.3	+1.1
KRLC	Kraliky	77.99	356	eP	P	12 06 47.3	+1.1
MORC	Moravsky Berou	78.26	356	eP	P	12 06 48.3	+0.6
VRAC	Vranov	78.76	357	eP	P	12 06 51.2	+0.7
KOLS	Kolonicke sedl	78.81	353	eP	P	12 06 52.0	+1.3
KOLS	Kolonicke sedl	78.81	353	eP	P	12 06 52.0	+1.3
CRVS	Cervenica-Dubn	78.90	353	eP	P	12 06 52.6	+1.4
CRVS	Cervenica-Dubn	78.90	353	eP	P	12 06 52.6	+1.4
KRUC	Moravsky	79.02	357	eP	P	12 06 52.7	+0.9
KHC	Kasperske Hory	79.02	359	eP	P	12 06 53.4	+1.5
KHC	Kasperske Hory	79.02	359	eP	P	12 06 53.4	+1.5
JAVC	Velka Javorina	79.17	356	eP	P	12 06 54.2	+1.4
GERES	GERESS Array B	79.31	358	P	P	12 06 54.4	+0.8
	comp=Z,0.7nm,0.6s,baz=5.7,slow=5.4,SNR=5.4						
VYHS	Vyhne	79.47	355	eP	P	12 06 56.1	+1.7
VYHS	Vyhne	79.47	355	eP	P	12 06 56.1	+1.7
BURAR	Bucovina Array	79.86	351	⇑P	P	12 06 57.5	+0.9
BIZ	Bicaz	80.43	350	⇑P	P	12 06 59.5	0.0
KBZ	Khabaz	80.64	337	P	P	12 07 02.5	+1.8
	comp=Z,3.5nm,0.9s,baz=168,slow=0.8,SNR=5.8						
KBZ	Khabaz	80.64	337	ceP	P	12 07 01.8	+1.1
KBZ				pmax	pmax		
	comp=Z,4.0nm,1.0s						
DRGR		80.90	352	⇑P	P	12 07 03.0	+0.9
GEYT	Alibeck	81.44	324	P	P	12 07 06.0	+0.9
	comp=Z,2.3nm,0.5s,baz=258,slow=7.0,SNR=4.6						
ESDC	Sonseca Array	87.52	12	P	P	12 07 36.1	+0.2
	comp=Z,0.6nm,0.7s,baz=5.3,slow=5.5,SNR=2.5						
ASAR	Alice Springs	90.65	231	P	P	12 07 49.4	-1.3
	comp=Z,0.6nm,0.7s,baz=30,slow=4.2,SNR=5.9						
URZ	Urewera	90.95	191	LR	LR	12 47 10.9	
	comp=Z,57nm,18.2s,baz=24,slow=35						

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*IDC **11** 11:55:41.3±2.2, 38°.07S×75°.61W, h0^{km}, mb3.4/2, mb1 3.8/4, mb1mx3.6/29, mbtmp3.4/4, ML3.7/2, Error ellipse: s-maj=69.5km s-min=28.1km az=37.0*

ISC 11 11:55:45.6±1.5**, 38°.0S**±0°.3×**75°.7W**±0°.2**, h35^{km}, n10, σ1^{s}70**/11**, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLCA	Paso Flores	4.79	126	Pn	Pn	11 56 54.2	-1.1
	0.5nm,0.3s,baz=301,slow=12,SNR=15						
PLCA				Sn	Sn	11 57 49.6	-0.1
	0.7nm,0.3s,baz=197,slow=20,SNR=6.7						
H03S1	Juan Fernandez	4.93	327	Pn	Pn	11 56 55.3	-1.7
H03S1				T	T	12 02 03.8	
	baz=145,slow=71,SNR=5.6						
H03S2	Juan Fernandez	4.95	326	Pn	Pn	11 56 55.1	-2.0
H03S2				T	T	12 02 03.7	
	baz=145,slow=71,SNR=5.1						
H03S3	Juan Fernandez	4.95	327	Pn	Pn	11 56 55.4	-1.8
H03S3				T	T	12 02 04.1	
	baz=145,slow=71,SNR=6.1						
H03N3	Juan Fernandez	5.27	329	Pn	Pn	11 57 00.5	-1.1
	SNR=16						
H03N1	Juan Fernandez	5.28	329	Pn	Pn	11 57 00.3	-1.5
	SNR=30						
H03N2	Juan Fernandez	5.29	329	Pn	Pn	11 57 00.7	-1.2
	SNR=11						
CPUP	Villa Florida	19.36	58	P	P	12 00 08.6	+0.4
	0.1nm,0.3s,baz=228,slow=14,SNR=1.2						
TXAR	Lajitas Array	71.95	334	P	P	12 07 06.1	+0.6
	0.3nm,0.7s,baz=152,slow=10.0,SNR=3.5						
PDAR	Pinedale Array	86.11	336	P	P	12 08 25.4	+2.5
	0.1nm,0.5s,baz=135,slow=8.4,SNR=1.6						

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*IDC **11** 12:01:56.1±11.0, 23°.76S×179°.67W, h455^{km}±131^{km}, mb3.3/3, mb1 3.4/4, mb1mx3.0/29, mbtmp4.2/4, Error ellipse: s-maj=88.9km s-min=47.7km az=21.0*

*NEIC **11** 12:01:57.1±0.5, 23°.8S±0°.1×179°.3W±0°.3, h517^{km}±23^{km}, mb4.3/16, Error ellipse: s-maj=38.3km s-min=8.5km az=65.0*

ISC 11 12:01:57.2±1.9**, 23°.9S**±0°.1×**179°.3W**±0°.2**, h512^{km}, n22, σ0^{s}60**/23**, mb4.2**/11**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	14.66	191	P	P	12 05 04.4	+0.9
	0.4nm,0.3s,baz=276,slow=4.1,SNR=7.2						
URZ				S	S	12 07 35.8	-1.3
	0.3nm,0.3s,baz=203,slow=17,SNR=1.5						
BKZ	Black Stump Fm	15.65	192	P	P	12 05 14.6	+0.7
EIDS	Eidsvold	26.92	261	P	P	12 06 57.1	0.0
CAN	Canberra	29.68	240	P	P	12 07 21.8	+0.6
CAN				IAmb	IAmb	12 07 31.4	
	comp=Z,20nm,1.3s						
CTAO	Charters Tower	32.09	270	P	P	12 07 42.9	+0.8
PMG	Port Moresby	35.07	289	P	P	12 08 06.5	-0.7
PMG				IAmb	IAmb	12 08 27.8	
	comp=Z,21nm,1.1s						
STKA	Stephens Creek	35.30	248	P	P	12 08 09.6	+0.6
	comp=Z,1.0nm,0.5s,baz=111,slow=16,SNR=5.0						
STKA	Stephens Creek	35.30	248	P	P	12 08 09.0	+0.1
BBOO	Buckleboo	40.02	247	P	P	12 08 47.6	+0.1
BBOO				IAmb	IAmb	12 08 58.7	
	comp=Z,18nm,1.2s						
ASAR	Alice Springs	42.65	260	P	P	12 09 09.1	+0.5
	comp=Z,1.3nm,0.5s,baz=99,slow=7.0,SNR=19						
ASAR	Alice Springs	42.65	260	P	P	12 09 08.9	+0.4
WR0	Warramunga Arr	42.83	266	P	P	12 09 10.1	0.0
WB2	Warramunga Arr	43.01	266	P	P	12 09 11.6	+0.2
WB2				IAmb	IAmb	12 09 12.2	
	comp=Z,3.6nm,0.6s						
WRAB	Tennant Creek	43.01	266	P	P	12 09 11.6	+0.1
WB0	Warramunga Arr	43.02	266	P	P	12 09 11.6	+0.2
WB0				IAmb	IAmb	12 09 12.8	
	comp=Z,4.2nm,0.7s						
WRA	Warramunga Arr	43.02	266	P	P	12 09 11.6	+0.1
	comp=Z,3.9nm,0.6s,baz=95,slow=8.4,SNR=56						
FORT	Forrest	46.90	249	P	P	12 09 41.3	+0.1
MTN	Manton Dam	48.07	274	P	P	12 09 49.6	-0.5
MTN				IAmb	IAmb	12 09 52.0	
	comp=Z,20nm,1.3s						
FITZ	Fitzroy Crossi	51.44	265	P	P	12 10 15.5	+0.5
MORW	Morawa	57.46	250	P	P	12 10 56.1	-1.1
MORW				IAmb	IAmb	12 11 05.4	
	comp=Z,13nm,1.1s						
SNAA	Sanae	84.68	179	P	P	12 13 36.2	-0.1
SNAA				IAmb	IAmb	12 13 44.6	
	comp=Z,10nm,1.5s						
AKASG	Malin Array Be	145.28	328	PKPbc	PKiKP	12 20 40.2	-0.1
	comp=Z,0.5nm,0.3s,baz=44,slow=4.4,SNR=2.2						

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*NNC **11** 12:07:23.3±4.1, 40°.85N×70°.26E, h0^{km}, mb3.0, mpv3.0, Error ellipse: s-maj=30.3km s-min=16.4km az=36.0*

*SOME **11** 12:07:24.5, 40°.95N×70°.40E, h10^{km}*

*KRNET **11** 12:07:28.5±0.1, 41°.12N×70°.51E, h13^{km}, mb2.6*

ISC 11 12:07:26.5±1.9**, 41°.06N**±0°.06×**70°.47E**±0°.05**, h11**^{km}±11^{km}**, n14, σ2^{s}05**/23**, 7C-7D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRKS	Terek-Say	0.69	47	⇑iP	Pg	12 07 40.1	+0.2
	baz=55						
TRKS				⇑iS	Sg	12 07 49.0	0.0
	baz=55						
BTK	Batken	1.04	165	⇓iP	Pn	12 07 49.4	+2.3
	baz=68						
BTK				⇓iS	Sn	12 08 04.5	+2.8
	baz=68						
IUG	Iuzhnay	1.13	343	eP	Pg	12 07 48.7	+0.4
	24nm,0.1s						
IUG				eS	Sn	12 08 07.4	+3.2
	62nm,0.3s						
IUG	Iuzhnay	1.13	343	P	Pg	12 07 48.9	+0.6
	9.0nm,0.1s						
IUG				S	Sn	12 08 07.6	+3.4
	62nm,0.3s						
ARSB	Arslanbob	1.92	81	⇓iP	Pg	12 08 03.6	+0.4
	baz=83						
ARSB				⇓iS	Sg	12 08 28.7	+0.6
	baz=83						
BRLS	Borolday	2.02	347	eP	Pn	12 07 57.9	-2.7
	8.3nm,0.2s						
BRLS				eS	Sn	12 08 23.5	-2.4
	9.3nm,0.2s						
BRLS	Borolday	2.02	347	Pg	Pn	12 07 57.9	-2.7
	8.3nm,0.2s						
BRLS				Lg	Lg	12 08 23.5	
	9.3nm,0.2s						
KK31	Karatay Array	2.04	1	Pg	Pb	12 08 03.5	-0.2
	1.6nm,0.5s,baz=196,slow=19,SNR=18						
KK31				Lg	Lg	12 08 32.7	
	1.3nm,0.3s,baz=193,slow=25,SNR=6.1						
MNAS	Manas	2.08	46	⇑eP	Pg	12 08 05.9	-0.6
	baz=47						
MNAS				⇑iS	Sb	12 08 33.2	+2.7
	baz=47						
AML	Almayashu	2.65	65	⇑iP	Pb	12 08 14.1	-0.1
	baz=66						
AML				⇑iS	Sb	12 08 47.6	+0.8
	baz=66						
MRKS	Merke	2.66	50	eP	Pg	12 08 16.5	-1.0
	2.0nm,0.4s						
MRKS				eS	Sg	12 08 55.6	+3.7
	3.3nm,0.9s						
MRKS	Merke	2.66	50	Pg	Pg	12 08 16.5	-1.0
	2.0nm,0.4s						
MRKS				Lg	Lg	12 08 55.6	
	3.3nm,0.9s						
ARLS	Aral	3.00	73	⇓iP	Pb	12 08 19.1	-1.0
	baz=74						
ARLS				⇓iS	Sb	12 08 56.1	-0.8
	baz=74						
AAK	Ala-Archa	3.40	61	⇓Pg	Pg	12 08 30.3	-1.3
	0.5nm,0.5s						
AAK				⇑Lg	Lg	12 09 19.0	
	2.0nm,0.6s						

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*GCG **11** 12:44:17.6±0.4, 13°.44N×92°.45W, h32^{km}±999^{km}, MD3.8*

*IDC **11** 12:44:20.0±2.7, 13°.87N×91°.99W, h0^{km}, mb3.4/2, mb1 3.9/5, mb1mx3.6/38, mbtmp3.6/5, ML3.7/3, MS2.4/1, Ms1 2.4/1, ms1mx2.1/25, Error ellipse: s-maj=49.8km s-min=40.2km az=155.0*

*MEX **11** 12:44:21.2±0.4, 13°.66N×92°.28W, h5^{km}, MD4.4*

ISC 11 12:44:26.1±1.3**, 14°.0N**±0°.1×**92°.26W**±0°.05**, h35^{km}, n14, σ1^{s}98**/23**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.95	359	iP	Pn	12 44 41.1	-2.0
THIG				iS	Sn	12 44 56.5	+1.1
FUG	Fuego 3	1.46	70	eP	Pn	12 44 47.7	-2.4
PCG	Pacaya	1.66	74	eP	Pn	12 44 50.5	-2.4
PCG				eS	Sn	12 45 16.1	+2.9
NBG	Las Nubes	1.96	71	eP	Pn	12 44 56.0	-1.1
PCIG		1.98	332	iP	Pn	12 44 55.0	-2.1
PCIG				iS	Sn	12 45 21.4	+0.6
MRL	Marmol	2.73	65	eP	Pn	12 45 05.9	-1.8
MRL				eS	Sn	12 45 43.6	+3.9
TGIG		2.94	344	iP	Pn	12 45 09.4	-0.9
TGIG				eS	Sn	12 45 47.2	+2.7
CMIG	Matias Romero	4.02	321	Pn	Pn	12 45 24.1	-1.2
	2.0nm,0.3s,baz=143,slow=9.2,SNR=15						
CMIG				Sn	Sn	12 46 12.1	+0.9
	3.8nm,0.3s,baz=99,slow=13,SNR=4.2						
CMIG	Matias Romero	4.02	321	iP	Pn	12 45 24.3	-1.0
CMIG				iS	Sn	12 46 12.0	+0.7
TEIG	Tepich	7.31	31	Pn	Pn	12 46 08.9	-1.5
	4.8nm,0.3s,baz=359,slow=0.7,SNR=24						
TEIG				Sn	Sn	12 47 30.7	-1.5
	0.7nm,0.3s,baz=234,slow=19,SNR=1.1						
TEIG				LR	LR	12 48 32.0	
	comp=Z,28nm,21.0s,baz=225,slow=35						
TXAR	Lajitas Array	18.61	327	P	Pn	12 48 42.5	+1.4
	0.0nm,0.3s,baz=144,slow=14,SNR=6.7						
NVAR	Mina Array Bea	33.56	321	P	P	12 51 05.5	+2.4
	0.3nm,0.7s,baz=128,slow=9.6,SNR=4.0						
YKA	Yellowknife Ar	51.02	347	P	P	12 53 22.7	-1.7
	0.1nm,0.4s,baz=151,slow=7.7,SNR=4.9						
YKA				PcP	PcP	12 54 39.2	-0.8
	0.3nm,0.8s,baz=148,slow=4.5,SNR=3.1						
CMAR	Chiang Mai Arr	145.96	341	PKPbc	PKPbc	13 04 02.5	-0.4
	0.8nm,0.7s,baz=337,slow=3.3,SNR=7.4						

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*MOS **11** 13:01:13.9±1.2, 23°.48S×66°.74W, h190^{km}, mb5.2/42, Error ellipse: s-maj=9.3km s-min=5.0km az=106.3*

*SJA **11** 13:01:14.2±0.5, 23°.52S×66°.82W, h219^{km}±4^{km}, ML5.4, MW5.1*

*NEIC **11** 13:01:15.8±1.9, 23°.56S±0°.06×66°.72W±0°.08, h202^{km}±3^{km}, mb5.1/449, Mwb5.5/31, Mww5.5, Md5.2(SJA), Mwc5.5(GCMT), Error ellipse: s-maj=11.1km s-min=8.9km az=78.0*

*BJI **11** 13:01:15.4±0.0, 23°.79S×67°.35W, h205^{km}, mB5.3/19*

*VAO **11** 13:01:15.8±0.4, 23°.46S×66°.67W, h203^{km}±3^{km}, mb5.5*

*GUC **11** 13:01:16.3±0.6, 23°.59S×66°.96W, h214^{km}±5^{km}, MW5.4*

*NEIC **11** 13:01:16.5, 23°.55S×66°.73W, h217^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.57; M$_{\theta\theta}$-0.34; M$_{\phi\phi}$0.90; M$_{r\theta}$0.34; M$_{\theta\phi}$-0.37; M$_{\phi r}$-1.73; Fault plane solution: M$_0$1.97000×10^{17} NP1:φ$_s$349.47000°, δ78.08000°, λ-86.57000°. NP2:φ$_s$153.27000°, δ12.40000°, λ-105.84000°. Principal axes: T 2.1472, Plg33.0000°, Azm77.0000°; N -0.4300, Plg3.0000°, Azm169.0000°; P -1.7172, Plg57.0000°, Azm264.0000°;*

*IDC **11** 13:01:16.9±0.4, 23°.35S×66°.69W, h200^{km}±3^{km}, mb4.7/27, mb1 4.8/32, mb1mx4.8/35, mbtmp5.2/32, MS4.1/9, Ms1 4.1/9, ms1mx3.9/21 Error ellipse: s-maj=9.2km s-min=6.6km az=19.0*

*NEIC **11** 13:01:18, 23°.54S×66°.73W, h200^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.58; M$_{\theta\theta}$0.01; M$_{\phi\phi}$0.57; M$_{r\theta}$0.40; M$_{\theta\phi}$-0.32; M$_{\phi r}$-1.73; Fault plane solution: M$_0$1.89000×10^{17} NP1:φ$_s$141.00000°, δ11.00000°, λ-115.00000°. NP2:φ$_s$347.00000°, δ80.00000°, λ-85.00000°. Principal axes: T 1.9438, Plg35.0000°, Azm73.0000°; N -0.1068, Plg5.0000°, Azm166.0000°; P -1.8371, Plg55.0000°, Azm262.0000°;*

*GCMT **11** 13:01:19.8±0.1, 23°.50S±0°.01×66°.84W±0°.01, h220^{km}, MW5.5/138, Moment Tensor Solution. s124,c187; s138,c241; Duration: 1^{s}4 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-0.89±.02; M$_{\theta\theta}$-0.07±.03; M$_{\phi\phi}$0.95±.03; M$_{r\theta}$0.46±.02; M$_{\theta\phi}$-0.37±.03; M$_{\phi r}$-1.90±.02; Best double couple: M$_0$2.18600×10^{17} NP1:φ$_s$156.00000°, δ13.00000°, λ-100.00000°. NP2:φ$_s$346.00000°, δ77.00000°, λ-88.00000°. Principal axes: T 2.2770, Plg32.0000°, Azm74.0000°; N -0.1820, Plg2.0000°, Azm166.0000°; P -2.0960, Plg58.0000°, Azm259.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **11** 13:01:20, 23°.53S×66°.87W, h219^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.77; M$_{\theta\theta}$-0.04; M$_{\phi\phi}$0.81; M$_{r\theta}$0.45; M$_{\theta\phi}$-0.35; M$_{\phi r}$-1.76; Fault plane solution: M$_0$2.01000×10^{17} NP1:φ$_s$152.00000°, δ13.00000°, λ-103.00000°. NP2:φ$_s$345.00000°, δ77.00000°, λ-87.00000°. Principal axes: T 2.0849, Plg32.0000°, Azm73.0000°; N -0.1550, Plg3.0000°, Azm165.0000°; P -1.9298, Plg57.0000°, Azm259.0000°;*

ISC 11 13:01:15.5±0.4**, 23°.51S**±0°.03×**66°.78W**±0°.03**, h199**^{km}±3^{km}**, h199^{km}:pP-P, n1255, σ1^{s}34**/1342**, mb5.1**/278**, 55C-158D, Fault plane solution: NP1:**φ$_s$214.02068°**,** δ29.26700°, λ-65.36313°. **NP2:**φ$_s$6.28877°**,** δ63.61655°**,** λ-103.14952°. **Principal axes:** T Plg17.6153°**,** Azm106.0054°**;** N Plg11.7591°**,** Azm12.2157°**;** P Plg68.6017°**,** Azm250.1274°**; Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HJA	Humahuaca	1.29	77	eP	Pn	13 01 49.6	+1.9
HJA				IAML		13 02 19.2	
	comp=Z,15μm,1.3s						
SLA	San Lorenzo	1.68	136	⇓iP	Pn	13 01 53.0	+2.1
SLA				iS	Sn	13 02 21.6	+3.1
SLA	San Lorenzo	1.68	136	eP	Pn	13 01 52.8	+1.9
SLA				eS	Sn	13 02 21.5	+3.1
SLA				IAML		13 02 23.1	
	comp=Z,10μm,0.9s						
AZAP	Zapla	1.72	115	eP	Pn	13 01 52.6	+1.2
YJA	Yavi	1.77	42	eP	Pn	13 01 53.6	+1.5
YJA				eS	Sn	13 02 22.8	+2.4
LVC	Limon Verde	2.16	294	P	Pn	13 01 56.7	+0.8

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      comp=Z,4µm,0.3s,baz=128,slow=6.7,SNR=2735
LVC                                S     Sn    13 02 27.7 +0.3
      comp=Z,2µm,0.3s,baz=133,slow=0.4,SNR=20
LVC   Limon Verde        2.16 294  eP    Pn    13 01 56.7 +0.8
LVC                                eS    Sn    13 02 26.7 -0.7
LVC   Limon Verde        2.16 294  eP    Pn    13 01 56.9 +1.0
LVC   Limon Verde        2.16 294  eP    Pn    13 01 56.9 +1.0
ASTB  Santa Barbara      2.17 102  eP    Pn    13 01 56.8 +0.9
ASTB                               eS    Sn    13 02 28.4 +1.1
PB15  IPOC Station P     2.49 276⇑eP    Pn    13 01 59.9 +0.4
PB15                               eS    Sn    13 02 32.6 -1.0
PB15  IPOC Station P     2.49 276        Pn    13 01 59.8 +0.4
PB15  IPOC Station P     2.49 276  eP    Pn    13 01 59.8 +0.4
PB15                               eS    Sn    13 02 33.2 -0.5
FSA   Cafayete           2.69 165  eP    Pn    13 02 02.2 +0.6
FSA                                eS    Sn    13 02 36.9 -0.9
PB06  IPOC Station P     2.69 287⇑iP    Pn    13 02 02.1 +0.4
PB06                               i S   Sn    13 02 36.3 -1.4
PB06  IPOC Station P     2.69 287        Pn    13 02 02.0 +0.4
PB06  IPOC Station P     2.69 287  eP    Pn    13 02 02.0 +0.3
PB06                               eS    Sn    13 02 36.8 -0.9
PB06                                IAML       13 02 43.7
      comp=Z,15µm,0.3s
PB09  IPOC Station P     2.84 306⇑iP    Pn    13 02 04.5 +1.0
PB09                               eS    Sn    13 02 41.1 +0.3
PB09  IPOC Station P     2.84 306        Pn    13 02 04.5 +1.0
PB09  IPOC Station P     2.84 306  eP    Pn    13 02 04.4 +1.0
PB09                               eS    Sn    13 02 40.7 -0.1
PB09                                IAML       13 02 42.6
      comp=Z,11µm,0.9s
GO02  Mina Guanaco       3.05 237⇓eP    Pn    13 02 05.7 -0.3
GO02                               eS    Sn    13 02 43.8 -1.5
GO02  Mina Guanaco       3.05 237   Pn   Pn    13 02 05.9  0.0
PB05  IPOC Station P     3.22 281⇑iP    Pn    13 02 07.4 -0.3
PB05                               i S   Sn    13 02 45.5 -3.1
PB05  IPOC Station P     3.22 281  eP    Pn    13 02 07.7 -0.1
PB05                               eS    Sn    13 02 46.6 -2.1
PB05                                IAML       13 02 55.2
      comp=Z,8µm,0.5s
PB04  IPOC Station P     3.32 290⇑iP    Pn    13 02 09.0 -0.1
PB04                               i S   Sn    13 02 48.5 -2.4
PB04  IPOC Station P     3.32 290        Pn    13 02 08.9 -0.2
PB04  IPOC Station P     3.32 290  eP    Pn    13 02 09.0 -0.1
PB04                               eS    Sn    13 02 49.2 -1.8
PB07  IPOC Station P     3.38 301        Pn    13 02 09.7  0.0
PB07  IPOC Station P     3.38 301  eP    Pn    13 02 09.8  0.0
PB07                               eS    Sn    13 02 49.8 -2.4
PB10  IPOC Station P     3.47 269⇑iP    Pn    13 02 10.6 -0.1
PB10                               i S   Sn    13 02 50.8 -3.0
PB10  IPOC Station P     3.47 269   Pn   Pn    13 02 10.5 -0.1
PB10  IPOC Station P     3.47 269  eP    Pn    13 02 10.4 -0.3
PB10                               eS    Sn    13 02 51.8 -2.0
PB10                                IAML       13 02 55.1
      comp=Z,6µm,0.4s
PB14  IPOC Station P     3.50 251⇑iP    Pn    13 02 10.7 -0.6
PB14                               i S   Sn    13 02 52.1 -2.9
PB14  IPOC Station P     3.50 251   Pn   Pn    13 02 10.6 -0.6
PB14  IPOC Station P     3.50 251  eP    Pn    13 02 10.4 -0.9
PB14                               eP    Pn    13 02 10.8 -0.6
PB14                               eS    Sn    13 02 53.2 -1.8
PB14                                IAML       13 02 57.9
      comp=Z,6µm,0.5s
PB01  IPOC Station P     3.51 314⇑iP    Pn    13 02 11.3  0.0
PB01                               i S   Sn    13 02 53.5 -1.5
PB01  IPOC Station P     3.51 314        Pn    13 02 11.3  0.0
PB01  IPOC Station P     3.51 314  eP    Pn    13 02 11.2 -0.1
PB01                               eS    Sn    13 02 53.5 -1.5
AHML  Horco Molle        3.51 158  eP    Pn    13 02 11.6 +0.4
AHML                               eS    Sn    13 02 54.0 -1.1
PB02  IPOC Station P     3.62 306⇑iP    Pn    13 02 12.3 -0.3
PB02                               i S   Sn    13 02 54.6 -2.8
PB02  IPOC Station P     3.62 306  eP    Pn    13 02 12.5 -0.1
PB02                               eS    Sn    13 02 55.0 -2.3
AC02  Maricunga          3.94 212   Pn   Pn    13 02 16.8 -0.1
PB08  IPOC Station P     4.01 326⇑iP    Pn    13 02 18.8 +1.0
PB08                               i S   Sn    13 03 06.5 -0.2
PB08  IPOC Station P     4.01 326        Pn    13 02 18.6 +0.8
PATCX Punta Patache      4.12 310⇑iP    Pn    13 02 17.9 -0.9
PATCX                              i S   Sn    13 03 04.9 -3.6
PATCX Punta Patache      4.12 310   Pn   Pn    13 02 17.8 -0.9
TA01  Diego Aracena      4.31 312  eP    Pn    13 02 19.7 -1.4
TA01                               i S   Sn    13 03 08.9 -3.7
TA01  Diego Aracena      4.31 312   Pn   Pn    13 02 20.1 -0.9
AC01  Pan de Azucar      4.35 232⇑iP    Pn    13 02 19.8 -1.8
AC01                               i S   Sn    13 03 08.9 -4.8
AC01  Pan de Azucar      4.35 232   Pn   Pn    13 02 19.6 -2.0
PSGCX Pisagua            4.99 321        Pn    13 02 27.6 -2.2
MNMC  Minye Minye        5.09 328  i S   Sn    13 03 29.3 -1.7
MNMC  Minye Minye        5.09 328        Pn    13 02 30.9 -0.4
GO03  Copiap             5.13 217        Pn    13 02 29.2 -2.4
GO03  Copiap             5.13 217  eP    Pn    13 02 29.8 -1.8
GO03                               eS    Sn    13 03 27.6 -3.9
VCA   Vinchina           5.36 194  eP    Pn    13 02 35.2 +0.6
VCA                                eS    Sn    13 03 34.7 -2.4
PB16  IPOC Station P     5.75 333   Pn   Pn    13 02 39.8 -0.2
ACLC  CERRO LA CRUZ      5.89 181  eP    Pn    13 02 41.0 -0.5
AC04  Llanos de Chal     6.07 219   Pn   Pn    13 02 40.2 -3.3
AP01  Chacalluta         6.10 326   Pn   Pn    13 02 41.2 -2.9
AGUA  GUANDACOL          6.15 194  eP    Pn    13 02 44.2 -0.5
AGUA                                IAML       13 04 10.5
      comp=Z,677nm,0.7s
AC05  El Transito        6.17 210        Pn    13 02 42.6 -2.4
LCO   Las Campanas       6.51 212   P    Pn    13 02 46.4 -3.2
LCO   Las Campanas       6.51 212   Pn   Pn    13 02 46.4 -3.2
APLL  PUNTA DE LOS L     6.86 178  eP    Pn    13 02 52.6 -1.3
AROD  Rodeo              7.05 199  eP    Pn    13 02 56.0 -0.7
CO01  Juntas del Tor     7.09 204        Pn    13 02 55.2 -1.8
LPAZ  La Paz             7.30 350   P    Pn    13 03 00.2  0.0
      comp=Z,24nm,0.3s,baz=157,slow=8.6,SNR=165
LPAZ                                S    Sn    13 04 21.5 -1.8
      baz=287,slow=8.0,SNR=1.6
LPAZ  La Paz             7.30 350   Pn   Pn    13 03 00.6 +0.4
LPAZ  La Paz             7.30 350⇓iP    Pn    13 03 01.3 +1.0
LPAZ  La Paz             7.30 350  eP    Pn    13 03 01.2 +1.0
ACCO  Cerro Coronel      7.34 196  eP    Pn    13 02 59.8 -0.6
ACCO                                IAML       13 04 24.5
      comp=Z,324nm,1.2s
GO04  Tololo Observa     7.55 208        Pn    13 02 59.4 -3.6
RTLL  Cerro Villicun     7.93 191  eP    Pn    13 03 06.2 -1.7
RTLL                               eS    Sn    13 04 33.4 -4.0
RTLL                                IAML       13 04 37.6
      comp=Z,321nm,0.6s
CO03  El Pedregal        8.09 205        Pn    13 03 06.4 -3.5
ZON   Zonda              8.18 191   P    Pn    13 03 08.7 -2.4
ZON   Zonda              8.18 191   Pn   Pn    13 03 08.7 -2.4
CO02  Combarbal          8.53 205        Pn    13 03 11.6 -4.2
CPUP  Villa Florida      9.02 110   P    Pn    13 03 20.8 -1.2
      comp=Z,1.8nm,0.3s,baz=293,slow=12,SNR=192
CPUP                                S    Sn    13 04 58.4 -4.8
      baz=348,slow=20,SNR=1.1
CPUP  Villa Florida      9.02 110   Pn   Pn    13 03 20.5 -1.6
SIV   San Ignacio        9.21  37   P    Pn    13 03 23.0 -1.5
      comp=Z,165nm,0.3s,baz=230,slow=11,SNR=1890
SIV                                 S    Sn    13 04 54.3  -14
      baz=227,slow=15,SNR=4.0
VA03  San Esteban        9.80 199        Pn    13 03 28.9 -3.3
PEL   Peldehue          10.20 199   P    Pn    13 03 33.7 -3.6
PEL   Peldehue          10.20 199        Pn    13 03 33.7 -3.6
MT02  Curacav           10.44 201        Pn    13 03 36.2 -4.2
MT05  Renca             10.44 199   Pn   Pn    13 03 36.9 -3.6
AQDB  Aquidauana        10.71  76  eP    Pn    13 03 43.1 -0.8
ITQB  Itaqui            10.96 126  eP    Pn    13 03 46.2 -0.8
BO02  Sierra Bellavi    11.77 196        Pn    13 03 55.9 -1.6
VILB  Vilhena           12.21  32  eP    Pn    13 04 02.7 -0.5
PP1B  Ponte de Pedra    12.60  64  eP    Pn    13 04 06.7 -1.4
TRCB  Terra Rica        13.03  90  eP    Pn    13 04 12.1 -1.4
PTGB  Pitanga           13.49  98  eP    Pn    13 04 19.7 +0.4
ETMB  Extrema           13.63   2  eP    Pn    13 04 19.2 -1.7
BI02  San Fabin de      13.67 195        Pn    13 04 19.8 -1.6
CPSB  Cacapava Do Su    13.73 123  eP    Pn    13 04 20.9 -1.2
ITAB  Concordia         13.75 109  eP    Pn    13 04 21.8 -0.6
PLTB  Pedras Altas      14.27 128  eP    Pn    13 04 26.9 -1.9
BI03  Tigo              14.34 201   Pn   Pn    13 04 26.8 -2.8
PCMB  Pacaembu          14.46  86  eP    Pn    13 04 30.2 -1.0
VA04  Juan Fernndez     14.62 224   P    Pn    13 04 30.9 -2.0
SAML  Samuel            14.88  14   P    Pn    13 04 35.5 -0.9
SAML  Samuel            14.88  14   P    Pn    13 04 35.5 -0.9
SAML  Samuel            14.88  14⇑iP    Pn    13 04 35.0 -1.4
SAML  Samuel            14.88  14  eP    Pn    13 04 35.2 -1.2
NNA   Nana              14.93 318   P    P     13 04 38.3 +0.5
      comp=Z,6.4nm,0.3s,baz=151,slow=8.8,SNR=23
NNA                                 S    S     13 07 18.7 -4.5
      comp=Z,4.0nm,0.3s,baz=266,slow=14,SNR=2.1
NNA   Nana              14.93 318        Pn    13 04 36.5 -0.5
CNLB  Canela            15.39 115  eP    Pn    13 04 40.6 -1.9
ITRB  Iturama           15.73  79  eP    P     13 04 46.1 -0.5
FRTB  Fartura           15.80  93  eP    P     13 04 47.4  0.0
LC01  Cunco             15.94 195   P    P     13 04 47.9 -0.9
LC01                                IAmb IAmb  13 04 51.7
      comp=Z,47nm,0.6s
ARAG  Araguaiana, MT    16.09  64  eP    P     13 04 50.2 -0.3
CZSB  Cruzeiro do Su    16.69 339  eP    P     13 04 55.8 -1.4
BB19B Bebedouro         17.06  85  eP    P     13 05 00.7 -0.6
PLCA  Paso Flores       17.46 190   P    P     13 05 06.1 +0.6
      comp=Z,3.1nm,0.3s,baz=5.1,slow=13,SNR=82
PLCA                                S    S     13 08 20.3 +3.6
      comp=Z,0.1nm,0.3s,baz=29,slow=19,SNR=1.4
PLCA                                PcP  PcP   13 09 36.9 +0.9
      comp=Z,0.9nm,0.3s,baz=62,slow=2.5,SNR=4.3
PLCA  Paso Flores       17.46 190   P    P     13 05 05.1 -0.4
PLCA                                pmax pmax
      comp=Z,159nm,1.1s
PLCA  Paso Flores       17.46 190   P    P     13 05 05.1 -0.4
PLCA  Paso Flores       17.46 190  eP    P     13 05 05.3 -0.2
SPB   Sao Paulo         17.74  94  eP    P     13 05 08.2 -0.4
PET01 Itanhaem-SP       17.85  96  eP    P     13 05 09.6 -0.2
IPMB  Ipameri, GO       18.21  76  eP    P     13 05 12.7 -1.1
VAO   Valinhos          18.21  92  eP    P     13 05 12.7 -1.1
SNDB  Serra Nova Dou    18.66  55  eP    P     13 05 18.1 -0.6
BDFB  Brasilia          19.32  69   P    P     13 05 25.8 -0.1
      comp=Z,56nm,0.3s,baz=245,slow=12,SNR=343
BDFB                                S    S     13 08 52.3 -1.7
      comp=Z,0.9nm,0.3s,baz=204,slow=21,SNR=1.3
BDFB  Brasilia          19.32  69   P    P     13 05 25.6 -0.4
LL01  San Ignacio de    19.39 193   P    P     13 05 25.5 -0.7
PARB  Paraibuna         19.42  94  eP    P     13 05 26.3 -0.5
NPGB  Novo Progresso    19.71  36  eP    P     13 05 27.6 -2.3
ATAH  Atahualpa         19.74 324   P    P     13 05 31.2 +0.5
      comp=Z,2.7nm,0.3s,baz=158,slow=10,SNR=28
ATAH                                S    S     13 09 08.7 +6.0
      comp=Z,0.3nm,0.3s,baz=84,slow=18,SNR=1.6
ATAH                                ScP  ScP   13 13 00.1 +2.1
      comp=Z,0.3nm,0.3s,baz=137,slow=5.0,SNR=4.9
GO07  Milladeo Hill,    20.37 195   P    P     13 05 34.5 -2.2
BSCB  Bom Sucesso       20.52  87  eP    P     13 05 37.9 -0.7
ESAR  Angra dos Reis    20.53  93  eP    P     13 05 37.7 -0.9
PEXB  Peixe             20.90  60  eP    P     13 05 41.9 -0.8
MAN01 Angra dos Reis    20.98  93  eP    P     13 05 43.2 -0.3
MACA  Manacapuru-AM     21.07  17  eP    P     13 05 42.4 -2.1
VAS01 Vassouras-RJ      21.53  91  eP    P     13 05 48.9 -0.3
ITTB  Itaituba          21.81  31  eP    P     13 05 50.1 -2.0
DIAM  Diamantina, MG    22.19  81  eP    P     13 05 55.0 -0.9
JANB  Januaria          22.79  72  eP    P     13 06 00.3 -1.0
CAM01 Campos-RJ         23.23  91  eP    P     13 06 04.2 -0.9
SMTB  Santa Maria do    23.44  55  eP    P     13 06 06.0 -1.1
SDBA  SAO DESIDERIO     23.52  66  eP    P     13 06 06.6 -1.2
PTGA  Pitinga           23.59  17   P    P     13 06 07.7 -0.7
      comp=Z,69nm,0.4s,baz=201,slow=11,SNR=148
PTGA                                S    S     13 10 05.7 -2.3
      comp=Z,12nm,0.7s,baz=302,slow=24,SNR=1.8
PTGA  Pitinga           23.59  17   P    P     13 06 07.2 -1.2
PTGA  Pitinga           23.59  17  eP    P     13 06 07.7 -0.7
PRPB  Parauapebas       23.74  46  eP    P     13 06 07.6 -2.2
ALF01 Guarapari-ES      24.30  88  eP    P     13 06 14.1 -0.8
SJMB  Sao Joao De Ma    24.34  84  eP    P     13 06 13.7 -1.5
BSFB  Barra de Sao F    24.61  84  eP    P     13 06 15.8 -1.9
MALB  Monte Alegre      24.71  31  eP    P     13 06 17.1 -1.4
PTLC  Puerto Leguiza    24.80 341  eP    P     13 06 14.1 -5.3
RIB01 Linhares ES       24.90  85  eP    P     13 06 19.0 -1.3
OTAV  Otavalo           26.19 333   P    P     13 06 32.6 +0.2
OTAV                                pmax pmax
      comp=Z,17nm,0.7s
OTAV  Otavalo           26.19 333   P    P     13 06 32.6 +0.2
OTAV                                IAmb IAmb  13 06 36.7
      comp=Z,16nm,0.7s
OTAV  Otavalo           26.19 333⇓eP    P     13 06 34.1 +1.7
OTAV  Otavalo           26.19 333  eP    P     13 06 33.1 +0.7
FLOC  Florencia         26.39 340⇓iP    P     13 06 34.5 +0.7
MACC  Macarena, Meta    26.41 344  eP    P     13 06 34.4 +0.5
GUVC  San Jose del G    26.52 347  eP    P     13 06 33.3 -1.6
GCUF  Volcan Galeras    26.65 336⇓eP    P     13 06 38.7 +2.1
GARC  Garzon, Huila     26.91 340  eP    P     13 06 39.9 +1.2
MCPB  Macapa, AP        27.09  34  eP    P     13 06 36.8 -3.1
PCON  Cinco Dias        27.34 339  eP    P     13 06 43.9 +1.1
BBAC  Balboa, Cauca     27.35 337  eP    P     13 06 44.3 +1.8
BETC  Betania           27.37 341  eP    P     13 06 43.6 +1.1
GDU01 Guandu, BA        27.51  74  eP    P     13 06 41.9 -1.8
POPC  Popayan, Colom    27.63 338  eP    P     13 06 46.7 +1.7
PTGC  Puerto Gaitan,    28.03 349  eP    P     13 06 52.2 +3.9
GO09  Cerro Castillo    28.05 187   P    P     13 06 48.0 -0.1
GO09                                IAmb IAmb  13 06 58.1
      comp=Z,55nm,1.3s
ORTC  Ortega, Tolima    28.48 342  eP    P     13 06 52.3  0.0
GR1C  Gorgona, Isla     28.59 336  eP    P     13 06 55.6 +2.4
CHIC  Chingaza          28.78 345  eP    P     13 06 55.1 -0.2
YOTC  Yotoco, Valle     28.88 340  eP    P     13 06 55.7 -0.2
EFI   East Falkland     28.91 169   P    P     13 06 55.6 -0.1
EFI                                 pmax pmax
      comp=Z,79nm,0.9s
EFI   East Falkland     28.91 169   P    P     13 06 55.6 -0.1
ANIL  Santa Ana         29.07 342  eP    P     13 06 58.2 +0.3
ROSC  El Rosal          29.12 344   P    P     13 06 59.7 +1.3
      comp=Z,21nm,0.5s,baz=290,slow=23,SNR=5.1
ROSC                                LR   LR    13 21 44.7
      comp=Z,582nm,18.3s,baz=191,slow=42
ROSC  El Rosal          29.12 344   P    P     13 06 58.6 +0.2
TOLC  Tolima            29.14 342  eP    P     13 06 57.0 -1.5
MALC  Bahia Malaga      29.23 338⇑eP    P     13 07 01.5 +2.6
RREF  El Recreo         29.45 342  eP    P     13 07 03.4 +1.8
PLMC  San Jos del P     29.73 341  eP    P     13 07 02.8 -0.5
GUY2C Guyana, Caldas    29.76 343  eP    P     13 07 03.6 -0.6
SPBC  San Pablo de B    29.85 345  eP    P     13 07 03.8 -0.7
RUSC  La Rusia          29.86 347⇓eP    P     13 07 05.6 +0.5
NORC  Norcasia          29.96 344  eP    P     13 07 04.5 -0.9
ROSB  Rosrio            30.00  50  eP    P     13 07 04.0 -1.7
TAMC  Tame, Arauca      30.16 350  eP    P     13 07 13.7 +6.6
ELOV  Elorza            30.44 355  eP    P     13 07 11.9 +2.4
BARC  Barichara         30.57 347  eP    P     13 07 10.9  0.0
PTBC  PUERTO BERRIO,    30.79 345  eP    P     13 07 10.3 -2.4
NBPS  Pedro II - PI     30.96  56  eP    P     13 07 12.8 -1.5
PAMC  Pamplona, Colo    31.20 349  eP    P     13 07 15.4 -1.4
DBBC  Dabeiba           31.71 342  eP    P     13 07 20.4 -0.4
PAYG  Puerto Ayora      32.18 312   P    P     13 07 25.7 +0.8
PAYG                                IAmb IAmb  13 07 31.2
      comp=Z,63nm,1.4s
UREC  San Jos de Ur     32.23 344  eP    P     13 07 24.1 -1.1
SDV   Santo Domingo     32.42 353   P    P     13 07 26.2 -0.8
      baz=120,slow=8.1
SDV                                 S    S     13 12 22.9 -4.0
      comp=Z,2.3nm,0.5s,baz=56,slow=18,SNR=1.4
SDV   Santo Domingo     32.42 353  eP    P     13 07 31.2 +4.1
SDV   Santo Domingo     32.42 353  eP    P     13 07 26.2 -0.8
NBMO  Morrinhos-CE      32.73  56  eP    P     13 07 27.8 -1.9
NBLI  Livramento-PB     32.82  66  eP    P     13 07 29.5 -1.0
SMLC  San Martn de      32.90 347  eP    P     13 07 27.6 -3.4
NBPA  Parau_RN          33.57  63  eP    P     13 07 35.4 -1.6
NBRF  Rio Formoso -     33.69  69  eP    P     13 07 36.0 -2.0
DABV  Dabajuro          34.43 353  eP    P     13 07 48.9 +4.7
RCBR  Riachuelo         34.53  64   P    P     13 07 44.2 -1.0
RCBR                                pmax pmax
      comp=Z,140nm,0.6s
RCBR  Riachuelo         34.53  64   P    P     13 07 44.2 -1.0
RCBR  Riachuelo         34.53  64  eP    P     13 07 44.8 -0.4
CRJC  Cerrejon, Guaj    34.83 349  eP    P     13 07 46.8 -1.0
BCIP  Isla Barro Col    34.90 337   P    P     13 07 49.0 +0.8
BCIP                                pmax pmax
      comp=Z,49nm,0.6s
BCIP  Isla Barro Col    34.90 337   P    P     13 07 49.0 +0.8
BCIP                                IAmb IAmb  13 07 50.9
      comp=Z,48nm,0.6s
BCIP  Isla Barro Col    34.90 337  eP    P     13 07 50.1 +1.9
SMRC  Santa Marta, M    35.22 347  eP    P     13 07 46.9 -4.1
URIC  Uribia, Colomb    35.36 351  eP    P     13 07 49.4 -2.9
GRGR  Grenville         35.77   9   P    P     13 07 55.9 +0.1
SVB   Belmont           36.95   9   P    P     13 08 05.2 -0.5
MCLT  Moule a Chique    37.43   9   P    P     13 08 09.4 -0.3
JTS   Las Juntas de     38.01 330d iP    P     13 08 15.5 +0.9
JTS                                 pmax pmax
      comp=Z,23nm,1.2s
JTS   Las Juntas de     38.01 330⇓eP    P     13 08 17.5 +2.9
HOPE  Hope Point        38.18 151   P    P     13 08 13.7 -1.8
HOPE                                pmax pmax
      comp=Z,256nm,1.4s
HOPE  Hope Point        38.18 151   P    P     13 08 13.7 -1.8
FDF   Fort de France    38.40   9   P    P     13 08 16.8 -1.1
FDF                                 pmax pmax
      comp=Z,230nm,0.4s
FDF   Fort de France    38.40   9   P    P     13 08 16.8 -1.1
RPN   Rapa Nui          38.51 255   P    P     13 08 18.9 +0.2
RPN                                 pmax pmax
      comp=Z,272nm,1.4s
RPN   Rapa Nui          38.51 255   P    P     13 08 18.9 +0.2
DLPL  La Plaine         38.98   9   P    P     13 08 22.2 -0.4
SABA  Saba              41.02   5   P    P     13 08 39.0 -0.4
SABA                                IAmb IAmb  13 08 50.0
      comp=Z,94nm,1.0s
MLPR  Magueyes Islan    41.23 360   P    P     13 08 39.6 -1.4
PDPR  Patillas Dam,     41.28   1   P    P     13 08 39.9 -1.6
OBIP  Obispado Ponce    41.30   0   P    P     13 08 39.6 -2.0
SJG   San Juan          41.37   1   P    P     13 08 41.0 -1.1
      comp=Z,19nm,0.3s,baz=184,slow=16,SNR=12
SJG   San Juan          41.37   1   P    P     13 08 41.1 -1.1
SJG                                 pmax pmax
      comp=Z,54nm,1.1s
SJG   San Juan          41.37   1   P    P     13 08 41.1 -1.1
SJG                                 IAmb IAmb  13 08 45.9
      comp=Z,54nm,1.1s
SJG   San Juan          41.37   1  eP    P     13 08 40.6 -1.6
HUMP  Col San Antoni    41.41   1   P    P     13 08 40.3 -2.2
HUMP                                IAmb IAmb  13 08 47.9
      comp=Z,40nm,0.5s
MPR   Mayaguez          41.47 359   P    P     13 08 42.8 -0.1
MPR                                 IAmb IAmb  13 08 47.4
      comp=Z,57nm,0.6s
CBYP  Canovanas         41.54   1   P    P     13 08 42.9 -0.8
GCPR  Guaynabo City     41.57   1   P    P     13 08 44.0 +0.2
GCPR                                IAmb IAmb  13 08 47.7
      comp=Z,38nm,0.5s
CUPR  Culebra, Puert    41.59   2   P    P     13 08 43.4 -0.6
CUPR                                IAmb IAmb  13 08 46.4
      comp=Z,74nm,1.3s
AOPR  Arecibo Observ    41.60   0   P    P     13 08 42.9 -1.2
EMPR  Esperanza - Ma    41.73   0   P    P     13 08 44.6 -0.5
TGUH  Tegucigalpa,Un    42.38 330   P    P     13 08 50.0 -0.5
TGUH                                IAmb IAmb  13 08 53.4
      comp=Z,53nm,0.6s
TGUH  Tegucigalpa,Un    42.38 330  eP    P     13 08 51.6 +1.0
SDDR  Presa de Saban    42.46 354   P    P     13 08 49.8 -1.3
SDDR                                IAmb IAmb  13 09 00.1
      comp=Z,28nm,0.5s
SDDR  Presa de Saban    42.46 354  eP    P     13 08 52.5 +1.4
MTO3  Montecristo       43.67 327   P    P     13 09 02.1 +1.1
MTO3                                IAmb IAmb  13 09 03.1
      comp=Z,60nm,0.6s
ESQI  Esquipulas        43.80 328   P    P     13 09 02.3 +0.3
GRTK  Grand Turk        44.95 354   P    P     13 09 09.3 -1.5
HUEH  Huehuetenango     45.54 326   P    P     13 09 14.5 -1.3
PETF  Flores            46.08 329   P    P     13 09 18.4 -1.3
CCIG  Comitan           46.67 326   P    P     13 09 24.7 +0.1
CCIG                                IAmb IAmb  13 09 26.1
      comp=Z,36nm,0.6s
TEIG  Tepich            48.26 333   P    P     13 09 36.7 +0.2
      comp=Z,58nm,0.5s,baz=132,slow=1.8,SNR=118
TEIG                                ScP  ScP   13 14 37.3 +1.3
      comp=Z,5.9nm,0.8s,baz=301,slow=20,SNR=2.1
TEIG  Tepich            48.26 333   P    P     13 09 36.2 -0.3
TEIG                                IAmb IAmb  13 09 37.3
      comp=Z,59nm,0.7s
TEIG  Tepich            48.26 333  eP    P     13 09 36.4 -0.1
CMIG  Matias Romero     48.81 323   P    P     13 09 41.3 +0.5
      comp=Z,17nm,0.7s,baz=145,slow=5.4,SNR=32
061Z  Ochoppi           50.95 344   P    P     13 09 57.5 +0.8
TLIG  Tlapa             51.29 320   P    P     13 10 00.7 +1.1
TLIG                                IAmb IAmb  13 10 02.1
      comp=Z,32nm,0.6s
ASCN  Ascension         52.48  82   P    P     13 10 07.0 -1.5
DWPF  Disney Wildern    53.23 344   P    P     13 10 13.9 +0.4
      baz=163
553A  Crawfordville     56.02 342   P    P     13 10 34.0 +0.5
BELA  Belgrano 2        56.50 172   P    P     13 10 36.5 +0.2
257A  Skidaway Islan    56.83 346   P    P     13 10 38.5 -0.6
352A  Blakely           57.37 342   P    P     13 10 43.1 +0.1
VNA3  Neumayer Olymp    57.55 161   P    P     13 10 44.9 +1.1
VNA3  Neumayer Olymp    57.55 161   pP   pP    13 11 35.0 +4.5
NHSC  New Hope          57.73 347   P    P     13 10 45.7 +0.2
      baz=165
BRAL  Brewton           57.73 339   P    P     13 10 45.8 +0.3
      baz=158,SNR=5.9
BRAL  Brewton           57.73 339   P    P     13 10 45.8 +0.3
VNA1  Neumayer--Stat    57.74 160   P    P     13 10 46.6 +1.5
VNA1  Neumayer--Stat    57.74 160   pP   pP    13 11 36.1 +4.3
154A  Montrose          57.95 344   P    P     13 10 46.7 -0.3
154A                                IAmb IAmb  13 10 48.3
      comp=Z,58nm,1.1s
VNA2  Neumayer--Watz    58.11 161   P    P     13 10 48.7 +1.0
      baz=283,slow=8.4
VNA2  Neumayer--Watz    58.11 161   pP   pP    13 11 35.5 +1.0
      baz=299,slow=9.3
250A  Grady             58.24 341   P    P     13 10 48.7 -0.3
Y59A  Loris             58.33 348   P    P     13 10 49.6  0.0
152A  Waverly Hall      58.43 342   P    P     13 10 49.7 -0.7
152A                                IAmb IAmb  13 10 50.6
      comp=Z,17nm,0.6s
X60A  Albert Glenn T    58.74 349   P    P     13 10 52.5  0.0
      baz=168
346A  Big Creek Wild    58.75 337   P    P     13 10 52.4 -0.2
GOGA  Godfrey           58.80 344   P    P     13 10 52.6 -0.2
      baz=162
GOGA  Godfrey           58.80 344   P    P     13 10 52.7 -0.2
GOGA                                pmax pmax
      comp=Z,11nm,0.6s
GOGA  Godfrey           58.80 344   P    P     13 10 52.7 -0.2
X59A  McDuffie Farm,    58.84 349   P    P     13 10 53.5 +0.3
      baz=167
KVTX  Kingsville        58.98 328   P    P     13 10 55.5 +1.2
JSC   Jenkinsville      59.10 346   P    P     13 10 55.5 +0.6
JSC                                 pmax pmax
      comp=Z,15nm,0.5s
JSC   Jenkinsville      59.10 346   P    P     13 10 55.5 +0.6
JSC                                 IAmb IAmb  13 10 56.1
      comp=Z,15nm,0.5s
W60A  Pink Hill         59.16 350   P    P     13 10 56.0 +0.7
      baz=168
Z51A  Franklin          59.17 342   P    P     13 10 55.1 -0.3
Z51A                                IAmb IAmb  13 11 00.5
      comp=Z,19nm,0.4s
344A  Westbrook Farm    59.27 336   P    P     13 10 56.2 +0.1
344A                                IAmb IAmb  13 10 57.2
      comp=Z,36nm,0.6s
BIRD  Birdtown, Kers    59.28 347   P    P     13 10 56.3 +0.2
BIRD                                IAmb IAmb  13 10 57.8
      comp=Z,44nm,1.1s
HODGE Hodges            59.28 345   P    P     13 10 56.3 +0.1
Y52A  Lilburn           59.38 343   P    P     13 10 56.5 -0.3
Y52A                                IAmb IAmb  13 10 57.3
      comp=Z,19nm,0.6s
V62A  Hyde County Ai    59.39 351   P    P     13 10 57.2 +0.3
      baz=170
W58A  Raeford           59.40 348   P    P     13 10 57.6 +0.6
      baz=167,SNR=6.5
LRAL  Lakeview Retre    59.45 340   P    P     13 10 57.2 -0.1
      baz=158,SNR=20
LRAL  Lakeview Retre    59.45 340   P    P     13 10 56.5 -0.8
LRAL                                IAmb IAmb  13 10 57.5
      comp=Z,29nm,0.5s
W57A  Gilead            59.67 347   P    P     13 10 58.6 -0.2
W57A                                IAmb IAmb  13 11 01.5
      comp=Z,55nm,1.1s
PAULI Pauline           59.74 346   P    P     13 10 59.9 +0.6
PAULI                               IAmb IAmb  13 11 00.4
      comp=Z,16nm,0.6s
SNAA  Sanae             59.74 161   P    P     13 10 59.9 +0.9
SNAA  Sanae             59.74 161   pP   pP    13 11 43.7 -2.2
SNAA  Sanae             59.74 161   P    P     13 10 59.3 +0.3
SNAA                                pmax pmax
      comp=Z,55nm,0.8s
SNAA  Sanae             59.74 161   P    P     13 10 59.3 +0.3
SNAA                                IAmb IAmb  13 11 00.8
      comp=Z,55nm,0.8s
146A  Union             59.75 338   P    P     13 10 59.2 -0.2
146A                                IAmb IAmb  13 11 00.1
      comp=Z,35nm,0.7s
W56A  Indian Trail      59.77 347   P    P     13 11 00.2 +0.6
      baz=165
342A  Flagon Creek P    59.81 335   P    P     13 11 00.6 +0.8
Z47A  Carrollton        59.94 339   P    P     13 11 00.4 -0.3
KMSC  Kings Mountain    59.94 346   P    P     13 11 01.2 +0.5
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      baz=165
KMSC  Kings Mountain   59.94 346   P      P      13 11 00.5 -0.2
KMSC                               IAmb   IAmb   13 11 02.5
      comp=Z,31nm,1.1s
V59A  Middlesex        59.94 349   P      P      13 11 00.5 -0.1
      baz=168
Y49A  Blount Mountai   60.03 341   P      P      13 11 01.1 -0.2
Y49A                               IAmb   IAmb   13 11 02.6
      comp=Z,21nm,0.6s
HKT   Hockley          60.04 331 d iP     P      13 11 02.0 +0.7
HKT                                pmax   pmax
      comp=Z,15nm,1.1s
HKT   Hockley          60.04 331   P      P      13 11 01.8 +0.4
HKT                                IAmb   IAmb   13 11 03.1
      comp=Z,34nm,1.3s
BG3   Lake Jocassee    60.17 345   P      P      13 11 02.3  0.0
X51A  Calhoun          60.26 343   P      P      13 11 03.1 +0.3
X51A                               IAmb   IAmb   13 11 03.5
      comp=Z,42nm,0.7s
V57A  Coltrane Farms   60.34 348   P      P      13 11 03.7 +0.3
      baz=166
833A  Chaparral WMA,   60.37 327   P      P      13 11 04.8 +1.1
      baz=145,SNR=36
V56A  Mocksville       60.41 347   P      P      13 11 04.7 +0.9
      baz=166,SNR=7.3
FPAL  Fort Paine       60.44 342   P      P      13 11 03.9 -0.2
U59A  Littleton        60.44 350   P      P      13 11 04.3 +0.3
V55A  Taylorsville     60.60 347   P      P      13 11 05.3 +0.2
V55A                               IAmb   IAmb   13 11 06.5
      comp=Z,31nm,0.7s
U58A  Oxford           60.61 349   P      P      13 11 05.8 +0.7
      baz=168
X48A  Hartselle        60.77 341   P      P      13 11 06.2 -0.2
V53A  Saluda           60.78 345   P      P      13 11 06.5 +0.1
U57A  Blanch           60.79 348   P      P      13 11 06.9 +0.5
      baz=167
W50A  Signal Mountai   60.98 343   P      P      13 11 07.6 -0.1
W50A                               IAmb   IAmb   13 11 08.3
      comp=Z,20nm,0.7s
CPCT  Cooper Cave      61.00 343   P      P      13 11 07.7 -0.2
TKL   Tuckaleechee C   61.01 344   P      P      13 11 07.7 -0.1
      comp=Z,10nm,0.6s,baz=168,slow=8.3,SNR=18
TKL   Tuckaleechee C   61.01 344   P      P      13 11 07.6 -0.3
Y45A  Yeager Farm, C   61.03 338   P      P      13 11 08.2 +0.1
NATX  Nacogdoches      61.09 333   P      P      13 11 09.9 +1.4
      baz=151,SNR=5.0
NATX  Nacogdoches      61.09 333   P      P      13 11 09.5 +1.0
V52A  Sevierville      61.14 344   P      P      13 11 08.4 -0.3
V52A                               IAmb   IAmb   13 11 24.5
      comp=Z,53nm,1.5s
T58A  Grand View Acr   61.14 349   P      P      13 11 09.3 +0.6
      baz=168
SWET  Sewanee          61.16 342   P      P      13 11 08.9 -0.1
SWET                               IAmb   IAmb   13 11 09.4
      comp=Z,31nm,0.7s
V51A  Loudon           61.29 344   P      P      13 11 09.5 -0.3
T57A  Hurt             61.32 349   P      P      13 11 10.6 +0.7
      baz=167
T57A  Hurt             61.32 349   P      P      13 11 09.8 -0.1
U54A  Nelsons Funny    61.37 346   P      P      13 11 10.7 +0.3
      baz=164
U54A  Nelsons Funny    61.37 346   P      P      13 11 10.7 +0.3
U54A                               IAmb   IAmb   13 11 12.5
      comp=Z,24nm,0.8s
T56A  Rocky Mt         61.50 348   P      P      13 11 11.9 +0.7
      baz=166
435B  Jarrell          61.54 330   P      P      13 11 12.3 +0.7
      baz=148
435B  Jarrell          61.54 330   P      P      13 11 11.9 +0.3
435B                               IAmb   IAmb   13 11 12.8
      comp=Z,26nm,0.7s
OXF   Oxford           61.58 339   P      P      13 11 11.0 -0.7
      baz=156,SNR=5.9
OXF   Oxford           61.58 339   P      P      13 11 11.0 -0.7
OXF                                pmax   pmax
      comp=Z,55nm,0.5s
OXF   Oxford           61.58 339   P      P      13 11 11.0 -0.7
MBO   M'Bour           61.58  57   P      P      13 11 11.4 -0.7
Z41A  Richland Creek   61.66 335   P      P      13 11 13.2 +0.9
      baz=153
S59A  Mechanicsville   61.74 351   P      P      13 11 13.7 +1.0
      baz=169
BLA   Blacksburg       61.75 348   P      P      13 11 13.3 +0.5
      baz=166
BLA   Blacksburg       61.75 348   P      P      13 11 13.6 +0.7
BLA                                pmax   pmax
      comp=Z,29nm,1.2s
BLA   Blacksburg       61.75 348   P      P      13 11 13.6 +0.7
BLA                                IAmb   IAmb   13 11 26.4
      comp=Z,30nm,1.2s
237A  Washetta, Mont   61.79 332   P      P      13 11 13.8 +0.6
237A                               IAmb   IAmb   13 11 15.0
      comp=Z,38nm,0.7s
TZTN  Tazewell         61.79 345   P      P      13 11 13.2  0.0
TZTN                               IAmb   IAmb   13 11 32.9
      comp=Z,51nm,1.4s
CCAR  Cane Creek       61.86 337   P      P      13 11 13.5 -0.1
CCAR                               IAmb   IAmb   13 11 16.2
      comp=Z,30nm,0.5s
V48A  Smith Brothers   61.91 342   P      P      13 11 13.6 -0.4
V48A                               IAmb   IAmb   13 11 14.3
      comp=Z,24nm,0.7s
S57A  Dark Hollow, R   62.01 349   P      P      13 11 14.9 +0.4
      baz=167
S57A  Dark Hollow, R   62.01 349   P      P      13 11 14.9 +0.4
S57A                               IAmb   IAmb   13 11 18.1
      comp=Z,33nm,1.3s
R58B  Mineral          62.03 350   P      P      13 11 15.3 +0.7
      baz=168
R58B  Mineral          62.03 350   P      P      13 11 15.0 +0.4
R58B                               IAmb   IAmb   13 11 18.1
      comp=Z,36nm,1.4s
RKT   Rikitea          62.05 255  eS      S      13 19 25.4 +1.2
      comp=Z,417nm,26.5s
X43A  Marvell          62.09 338   P      P      13 11 15.5 +0.4
      baz=155
CLTN  Cedars of Leba   62.09 342   P      P      13 11 14.9 -0.2
CLTN                               IAmb   IAmb   13 11 15.5
      comp=Z,19nm,0.9s
W45A  Hickory Valley   62.09 339   P      P      13 11 14.9 -0.3
WLAR  White Oak Lake   62.16 335   P      P      13 11 15.9 +0.3
JCT   Junction City    62.34 328   P      P      13 11 17.6 +0.6
      baz=146,SNR=25
JCT   Junction City    62.34 328   P      P      13 11 16.7 -0.3
JCT                                pmax   pmax
      comp=Z,42nm,0.7s
JCT   Junction City    62.34 328   P      P      13 11 16.7 -0.3
U49A  Red Boiling Sp   62.34 343   P      P      13 11 16.3 -0.5
U49A                               IAmb   IAmb   13 11 16.8
      comp=Z,12nm,0.6s
R58A  Rapidan          62.38 350   P      P      13 11 17.4 +0.5
      baz=168
R57A  Stanardsville    62.46 350   P      P      13 11 18.3 +0.8
      baz=168
S54A  Dingess, Beckl   62.50 347   P      P      13 11 18.1 +0.2
      baz=165,SNR=5.2
S54A  Dingess, Beckl   62.50 347   P      P      13 11 17.9 +0.1
S54A                               IAmb   IAmb   13 11 18.7
      comp=Z,27nm,0.8s
WHTX  Lake Whitney,    62.50 331   P      P      13 11 18.6 +0.6
      baz=148,SNR=13
WHTX  Lake Whitney,    62.50 331   P      P      13 11 18.1 +0.2
Z38A  Mt. Pleasant     62.53 333   P      P      13 11 18.6 +0.5
T50A  Nancy            62.57 344   P      P      13 11 17.7 -0.5
WVT   Waverly          62.57 341   P      P      13 11 17.8 -0.5
      baz=158
WVT   Waverly          62.57 341   P      P      13 11 17.3 -0.9
WVT                                pmax   pmax
      comp=Z,47nm,0.6s
WVT   Waverly          62.57 341   P      P      13 11 17.3 -0.9
HPIG                   62.67 321   P      P      13 11 19.9 +0.5
X40A  Basin Creek Fa   62.77 336   P      P      13 11 19.5 -0.1
      baz=153
X40A  Basin Creek Fa   62.77 336   P      P      13 11 19.5 -0.1
R54A  Victor           62.80 347   P      P      13 11 20.2 +0.4
      baz=165
SLBS  Sierra La Lagu   62.91 315   P      P      13 11 22.4 +1.5
Q58A  Fox Den Farm,    62.96 350   P      P      13 11 21.1 +0.4
      baz=169
LNXT  Lenox            63.06 339   P      P      13 11 21.2 -0.3
MIAR  Mount Ida        63.10 335   P      P      13 11 22.1 +0.2
      baz=152,SNR=27
MIAR  Mount Ida        63.10 335   P      P      13 11 21.9 +0.1
MIAR                               pmax   pmax
      comp=Z,34nm,0.6s
MIAR  Mount Ida        63.10 335   P      P      13 11 21.9 +0.1
GNAR  Gosnell          63.11 339   P      P      13 11 22.2 +0.4
GLAT  Glass            63.15 340   P      P      13 11 22.1 +0.1
T47A  Sharon Grove     63.15 342   P      P      13 11 21.4 -0.7
T47A                               IAmb   IAmb   13 11 22.7
      comp=Z,37nm,0.9s
W41B  Gary Mavity, V   63.16 337   P      P      13 11 22.0 -0.2
      baz=154,SNR=6.6
Q57A  Strasburg        63.16 350   P      P      13 11 23.5 +1.4
      baz=168
WHAR  Wooly Hollow     63.28 337   P      P      13 11 22.6 -0.3
WHAR                               IAmb   IAmb   13 11 25.4
      comp=Z,37nm,1.3s
Q56A  Snyder Ridge,    63.30 349   P      P      13 11 24.1 +1.1
      baz=167
Q56A  Snyder Ridge,    63.30 349   P      P      13 11 22.8 -0.3
Q56A                               IAmb   IAmb   13 11 44.7
      comp=Z,32nm,1.1s
HICK  Hickman          63.38 340   P      P      13 11 23.3 -0.3
TXAR  Lajitas Array    63.40 324   P      P      13 11 24.9 +0.8
      comp=Z,7.0nm,0.4s,baz=149,slow=8.4,SNR=46
TXAR                               ScP           13 15 43.0
      comp=Z,0.6nm,0.7s,baz=156,slow=7.6,SNR=3.8
TXAR                               PKP2bc        13 40 25.3
      comp=Z,0.6nm,0.8s,baz=311,slow=2.7,SNR=6.0
TXAR  Lajitas Array    63.40 324   P      P      13 11 24.4 +0.4
TX31  Lajitas Ar. Si   63.40 324   P      P      13 11 24.2 +0.1
TX31                               IAmb   IAmb   13 11 26.6
      comp=Z,63nm,1.3s
TX32  Lajitas Array    63.40 324   P      P      13 11 24.2 +0.1
PVMO  Portageville     63.41 339   P      P      13 11 23.8  0.0
PENMO Penman           63.42 340   P      P      13 11 24.3 +0.4
P59A  Jarrettsville    63.44 352   P      P      13 11 24.7 +0.8
      baz=170
P60A  Greenville       63.53 352   P      P      13 11 26.3 +1.7
      baz=171
P57A  Homestead Farm   63.54 350   P      P      13 11 25.2 +0.6
      baz=168
P57A  Homestead Farm   63.54 350   P      P      13 11 25.6 +1.0
P57A                               IAmb   IAmb   13 11 26.5
      comp=Z,49nm,1.3s
Q54A  Coxs Mills       63.54 348   P      P      13 11 24.4 -0.2
Z35A  Perchaven, San   63.55 332   P      P      13 11 24.6 -0.2
Q53A  Leroy            63.56 347   P      P      13 11 25.4 +0.6
      baz=165
LCAR  Lake Charles     63.58 338   P      P      13 11 24.2 -0.7
T45A  Paducah          63.64 341   P      P      13 11 24.2 -1.0
PARMO Parma            63.66 339   P      P      13 11 25.5 +0.1
W39A  Magazine         63.75 336   P      P      13 11 26.9 +0.9
      baz=152,SNR=17
W39A  Magazine         63.75 336   P      P      13 11 26.2 +0.1
FCAR  Ozark Folk Cen   63.76 337   P      P      13 11 25.6 -0.5
FCAR                               IAmb   IAmb   13 11 26.2
      comp=Z,22nm,0.5s
MVL   Millersville     63.81 352   P      P      13 11 26.2 -0.1
Q52A  Bidwell          63.81 347   P      P      13 11 26.4  0.0
X37A  Clayton          63.84 334   P      P      13 11 27.3 +0.6
X37A                               IAmb   IAmb   13 11 28.1
      comp=Z,31nm,0.9s
PBMO  Poplar Bluff     63.98 339   P      P      13 11 27.3 -0.2
O60A  Telford          64.00 353   P      P      13 11 28.4 +0.9
      baz=171
O58A  Lewisberry       64.01 351   P      P      13 11 27.9 +0.2
      baz=170
MCWV  Mont Chateau     64.01 349   P      P      13 11 28.1 +0.5
      baz=167
MCWV  Mont Chateau     64.01 349   P      P      13 11 27.6 -0.1
ABTX  Abilene, Hawle   64.03 329   P      P      13 11 28.4 +0.3
      baz=146,SNR=7.9
ABTX  Abilene, Hawle   64.03 329   P      P      13 11 27.9 -0.1
ABTX                               IAmb   IAmb   13 11 29.1
      comp=Z,35nm,1.1s
WCI   Wyandotte Cave   64.09 343   P      P      13 11 27.3 -0.8
      baz=160
WCI   Wyandotte Cave   64.09 343   P      P      13 11 27.1 -1.1
WCI                                pmax   pmax
      comp=Z,27nm,0.5s
WCI   Wyandotte Cave   64.09 343   P      P      13 11 27.1 -1.1
WCI                                IAmb   IAmb   13 11 28.3
      comp=Z,27nm,0.5s
Q51A  Peebles          64.11 346   P      P      13 11 28.0 -0.3
P53A  Whipple          64.14 347   P      P      13 11 28.2 -0.3
P53A                               IAmb   IAmb   13 11 29.4
      comp=Z,18nm,0.7s
O57A  Amberson         64.19 351   P      P      13 11 29.6 +0.7
      baz=169
O56A  Blue Knob Stat   64.39 350   P      P      13 11 30.9 +0.7
      baz=168
O56A  Blue Knob Stat   64.39 350   P      P      13 11 30.5 +0.3
O56A                               IAmb   IAmb   13 11 42.0
      comp=Z,30nm,1.4s
T42A  Van Buren        64.43 339   P      P      13 11 29.2 -1.3
T42A                               IAmb   IAmb   13 11 31.7
      comp=Z,31nm,1.4s
P52A  Corning          64.43 347   P      P      13 11 30.2 -0.2
      baz=164
P52A  Corning          64.43 347   P      P      13 11 30.0 -0.4
P52A                               IAmb   IAmb   13 11 30.7
      comp=Z,17nm,0.8s
U40A  Yellville        64.44 337   P      P      13 11 30.6  0.0
      baz=154,SNR=25
U40A  Yellville        64.44 337   P      P      13 11 29.9 -0.6
S44A  Carbondale       64.44 340   P      P      13 11 29.3 -1.2
S44A                               IAmb   IAmb   13 11 33.4
      comp=Z,21nm,0.5s
SIUC  Southern Illin   64.45 340   P      P      13 11 29.9 -0.6
N60A  Cedar Hill Far   64.52 353   P      P      13 11 31.2 +0.3
      baz=172
PAL   Palisades        64.53 354   P      P      13 11 31.6 +0.6
      baz=173
O54A  Avella           64.62 348   P      P      13 11 31.4 -0.2
N59A  State Game Lan   64.64 352   P      P      13 11 32.7 +1.0
      baz=171
N59A  State Game Lan   64.64 352   P      P      13 11 31.6 -0.2
N59A                               IAmb   IAmb   13 11 46.6
      comp=Z,24nm,1.2s
SSPA  Standing Stone   64.65 351   P      P      13 11 32.6 +0.8
      baz=169
SSPA  Standing Stone   64.65 351   P      P      13 11 32.0 +0.2
ODNJ  Ogdensburg       64.67 353   P      P      13 11 32.3 +0.4
N58A  Sunbury          64.68 352   P      P      13 11 32.8 +0.8
      baz=170
N58A  Sunbury          64.68 352   P      P      13 11 32.6 +0.7
N58A                               IAmb   IAmb   13 11 42.3
      comp=Z,50nm,1.4s
N57A  Milroy           64.72 351   P      P      13 11 33.1 +0.9
      baz=169
HHAR  Hobbs            64.77 336   P      P      13 11 32.8 +0.1
O52A  Adamsville       64.83 347   P      P      13 11 33.2 +0.1
M64A  Tiverton         64.86 356   P      P      13 11 34.9 +1.8
      baz=176
M60A  Port Jervis      64.92 353   P      P      13 11 34.2 +0.7
      baz=172
P49A  Miami Univ. Ec   64.92 345   P      P      13 11 33.1 -0.5
      baz=162
P49A  Miami Univ. Ec   64.92 345   P      P      13 11 32.6 -0.9
P49A                               IAmb   IAmb   13 11 33.7
      comp=Z,31nm,1.2s
MGMO  Mountain Grove   64.94 338   P      P      13 11 33.4 -0.4
MGMO                               IAmb   IAmb   13 11 34.4
      comp=Z,26nm,0.6s
P48A  Milroy           65.02 344   P      P      13 11 32.7 -1.5
P48A                               IAmb   IAmb   13 11 37.1
      comp=Z,14nm,0.5s
BLO   Bloomington      65.03 343   P      P      13 11 33.4 -0.9
BLO                                pmax   pmax
      comp=Z,27nm,0.5s
BLO   Bloomington      65.03 343   P      P      13 11 33.4 -0.9
BLO                                IAmb   IAmb   13 11 34.5
      comp=Z,27nm,0.5s
U38A  Gravette         65.08 336   P      P      13 11 34.3 -0.4
U38A                               IAmb   IAmb   13 11 37.2
      comp=Z,22nm,0.5s
FVM   French Village   65.08 340   P      P      13 11 34.1 -0.5
FVM                                pmax   pmax
      comp=Z,39nm,0.6s
FVM   French Village   65.08 340   P      P      13 11 34.1 -0.5
TUL1  Leonard          65.16 334   P      P      13 11 35.4 +0.2
      baz=151
TUL1  Leonard          65.16 334   P      P      13 11 34.0 -1.2
TUL1                               IAmb   IAmb   13 11 36.8
      comp=Z,22nm,0.8s
M58A  Price’s Panora   65.17 352   P      P      13 11 36.0 +0.8
      baz=170
ACSO  Alum Creek Sta   65.19 346   P      P      13 11 35.1 -0.2
      baz=164
ACSO  Alum Creek Sta   65.19 346   P      P      13 11 35.0 -0.2
L63A  North Scituate   65.19 356   P      P      13 11 36.1 +0.8
      baz=175
L63A  North Scituate   65.19 356   P      P      13 11 35.2  0.0
KSCT  Kent School, K   65.20 354   P      P      13 11 35.5 +0.2
M59A  Waymart          65.22 353   P      P      13 11 36.4 +1.0
      baz=171
L64A  Middleborough    65.22 357   P      P      13 11 35.9 +0.5
L64A                               IAmb   IAmb   13 11 58.1
      comp=Z,72nm,1.2s
M57A  Sunshine Farm,   65.23 351   P      P      13 11 36.5 +0.9
      baz=170
M57A  Sunshine Farm,   65.23 351   P      P      13 11 36.0 +0.5
M57A                               IAmb   IAmb   13 11 48.8
      comp=Z,25nm,1.1s
BRYW  Bryant College   65.25 356   P      P      13 11 36.3 +0.7
BRYW                               IAmb   IAmb   13 11 37.3
      comp=Z,52nm,0.9s
FNO   Franklin         65.26 333   P      P      13 11 36.4 +0.6
KSPA  Keystone Colle   65.27 353   P      P      13 11 36.6 +0.8
KSPA                               IAmb   IAmb   13 11 40.9
      comp=Z,49nm,1.4s
N54A  Moraine State    65.31 349   P      P      13 11 36.6 +0.6
      baz=167
N54A  Moraine State    65.31 349   P      P      13 11 36.4 +0.4
N54A                               IAmb   IAmb   13 11 44.8
      comp=Z,36nm,1.4s
OKCSW OKLAHOMA CITY    65.40 333   P      P      13 11 36.9 +0.1
CCM   Cathedral Cave   65.41 339   P      P      13 11 36.7 -0.1
      baz=155
CCM   Cathedral Cave   65.41 339   P      P      13 11 36.5 -0.3
CCM                                pmax   pmax
      comp=Z,69nm,0.6s
CCM   Cathedral Cave   65.41 339   P      P      13 11 36.5 -0.3
WMOK  Wichita Mounta   65.41 331   P      P      13 11 36.7 -0.2
      baz=148
WMOK  Wichita Mounta   65.41 331   P      P      13 11 36.4 -0.5
WMOK                               pmax   pmax
      comp=Z,8.0nm,1.0s
WMOK  Wichita Mounta   65.41 331   P      P      13 11 36.4 -0.5
OKCFA Oklahoma City    65.41 333   P      P      13 11 37.0 +0.1
OKCFA                              IAmb   IAmb   13 11 37.5
      comp=Z,62nm,1.2s
O49A  Covington        65.45 345   P      P      13 11 36.5 -0.4
OK025 Westminster Rd   65.51 333   P      P      13 11 37.2 -0.2
L60A  Shokan           65.53 354   P      P      13 11 38.0 +0.5
      baz=172
OK030 Cody Creek RV    65.58 334   P      P      13 11 37.8 -0.1
M55A  Ridgway          65.60 350   P      P      13 11 37.8 -0.1
M55A                               IAmb   IAmb   13 11 56.8
      comp=Z,37nm,1.5s
OK031 S. Brethren Rd   65.62 333   P      P      13 11 38.2  0.0
P46A  Rosedale         65.64 343   P      P      13 11 37.2 -1.0
L61A  Hillsdale 1, H   65.67 354   P      P      13 11 38.8 +0.4
      baz=173
BCOK  Bluff Creek, N   65.69 333   P      P      13 11 38.3 -0.3
OK029 Liberty Lake     65.74 333   P      P      13 11 38.8 -0.1
QUOK  Quay             65.76 334   P      P      13 11 39.4 +0.4
L58A  Harry Jones Me   65.76 353   P      P      13 11 40.1 +1.1
      baz=171,SNR=7.8
M54A  Oil Creek Stat   65.78 349   P      P      13 11 39.2 +0.2
      baz=167
M54A  Oil Creek Stat   65.78 349   P      P      13 11 39.4 +0.3
M54A                               IAmb   IAmb   13 11 40.6
      comp=Z,38nm,1.2s
S39A  Bolivar          65.80 337   P      P      13 11 39.4 +0.2
L59A  Walton           65.81 353   P      P      13 11 40.4 +1.1
      baz=172
L59A  Walton           65.81 353   P      P      13 11 39.9 +0.5
L59A                               IAmb   IAmb   13 11 42.1
      comp=Z,30nm,0.8s
CLNB  Carlsbad         65.82 326   P      P      13 11 40.2 +0.5
HRV   Adam Dziewonsk   65.83 356   P      P      13 11 40.2 +0.9
      baz=175
HRV   Adam Dziewonsk   65.83 356   P      P      13 11 39.2 -0.2
HRV                                pmax   pmax
      comp=Z,50nm,1.1s
HRV   Adam Dziewonsk   65.83 356   P      P      13 11 39.2 -0.2
HRV                                IAmb   IAmb   13 11 41.9
      comp=Z,50nm,1.1s
L57A  Andrews Acres    65.84 352   P      P      13 11 40.2 +0.7
      baz=170
L61B  Northampton      65.85 355   P      P      13 11 40.3 +0.8
      baz=174
BINY  Binghamton       65.93 353   P      P      13 11 41.1 +1.0
      baz=171,SNR=5.8
BINY  Binghamton       65.93 353   P      P      13 11 40.8 +0.8
BINY                               IAmb   IAmb   13 11 42.4
      comp=Z,47nm,0.9s
R40A  Maddies Statio   65.97 338   P      P      13 11 40.0 -0.3
R40A                               IAmb   IAmb   13 11 41.1
      comp=Z,28nm,0.6s
GDL2  Guadalupe Moun   66.02 326   P      P      13 11 41.8 +0.8
L56A  Greenwood        66.07 351   P      P      13 11 41.6 +0.6
      baz=169,SNR=5.3
L56A  Greenwood        66.07 351   P      P      13 11 41.2 +0.3
L56A                               IAmb   IAmb   13 11 42.2
      comp=Z,21nm,0.6s
N49A  Columbus Grove   66.11 346   P      P      13 11 40.9 -0.3
N49A                               IAmb   IAmb   13 11 43.2
      comp=Z,46nm,1.2s
K61A  Williamstown     66.12 355   P      P      13 11 42.0 +0.8
      baz=173
MNTX  Cornudas Mount   66.17 324   P      P      13 11 41.9 +0.1
      baz=141,SNR=54
MNTX  Cornudas Mount   66.17 324   P      P      13 11 41.2 -0.5
MNTX                               IAmb   IAmb   13 11 42.6
      comp=Z,22nm,0.7s
P43A  Skaggs, Pawnee   66.32 341   P      P      13 11 41.4 -1.1
P43A                               IAmb   IAmb   13 11 42.3
      comp=Z,29nm,0.6s
SFIN  Lafayette        66.32 343   P      P      13 11 41.4 -1.1
      baz=160
SFIN  Lafayette        66.32 343   P      P      13 11 41.2 -1.3
T35A  Sooner Cattle    66.32 334   P      P      13 11 42.4 -0.2
T35A                               IAmb   IAmb   13 11 44.3
      comp=Z,24nm,0.6s
K59A  Cooperstown      66.37 354   P      P      13 11 43.6 +0.8
      baz=172,SNR=6.3
ERPA  Erie             66.43 349   P      P      13 11 43.5 +0.3
      baz=167
ERPA  Erie             66.43 349   P      P      13 11 43.3 +0.1
ERPA                               IAmb   IAmb   13 11 44.1
      comp=Z,29nm,0.7s
N47A  Urbana           66.43 344   P      P      13 11 42.5 -0.7
N47A                               IAmb   IAmb   13 11 43.5
      comp=Z,37nm,1.3s
K58A  Earlville        66.45 353   P      P      13 11 44.0 +0.7
      baz=171,SNR=7.9
K58A  Earlville        66.45 353   P      P      13 11 43.7 +0.4
K58A                               IAmb   IAmb   13 11 44.7
      comp=Z,41nm,0.6s
WVNY  West Valley, N   66.49 350   P      P      13 11 44.0 +0.4
WVNY                               IAmb   IAmb   13 11 53.4
      comp=Z,26nm,0.8s
K57A  Scipio Center    66.52 352   P      P      13 11 44.1 +0.4
      baz=170
CROK  Carrier          66.57 333   P      P      13 11 44.3 +0.1
K56A  Middlesex        66.59 352   P      P      13 11 44.8 +0.6
      baz=169,SNR=5.3
MSTX  Muleshoe         66.63 328   P      P      13 11 45.3 +0.5
      baz=144,SNR=24
MSTX  Muleshoe         66.63 328   P      P      13 11 45.0 +0.2
QSPA  South Pole Qui   66.69 180   P      P      13 11 45.8 +1.0
J60A  Lant Hill Farm   66.70 355   P      P      13 11 45.8 +0.9
      baz=173
MMNY  Mt. Morris Dam   66.70 351   P      P      13 11 45.0 +0.1
MMNY                               IAmb   IAmb   13 11 45.9
      comp=Z,29nm,0.5s
J61A  Chester          66.73 355   P      P      13 11 46.1 +1.0
      baz=174
KAN13 South Haven SW   66.79 334   P      P      13 11 45.5 -0.1
AMTX  Amarillo         66.85 329   P      P      13 11 46.4 +0.3
      baz=145
AMTX  Amarillo         66.85 329   P      P      13 11 46.4 +0.3
AMTX                               IAmb   IAmb   13 11 47.0
      comp=Z,52nm,1.3s
U32A  Winter Ranch,    66.89 332   P      P      13 11 46.6 +0.3
U32A                               IAmb   IAmb   13 11 48.5
      comp=Z,25nm,0.7s
SRIG  Santa Rosalia    66.94 316   P      P      13 11 47.3 +0.6
SRIG                               IAmb   IAmb   13 11 49.1
      comp=Z,34nm,0.7s
P40A  Paris            67.01 339   P      P      13 11 46.4 -0.5
P40A                               IAmb   IAmb   13 11 47.8
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       comp=Z,26nm,0.6s
J59A   Piesco            67.02 354  P     P     13 11 48.0 +1.1
       baz=172,SNR=7.9
J59A   Piesco            67.02 354  P     P     13 11 47.2 +0.3
J59A                                IAmb  IAmb  13 11 48.9
       comp=Z,44nm,0.9s
KAN01  Argonia South     67.03 333  P     P     13 11 47.5 +0.4
LIC    Lamto             67.09  72  eP    P     13 11 46.7 -1.3
       comp=Z,73nm,0.5s
HDIL   Hopedale          67.09 342  P     P     13 11 46.6 -0.7
       baz=158
HDIL   Hopedale          67.09 342  P     P     13 11 46.4 -1.0
HDIL                                IAmb  IAmb  13 11 47.2
       comp=Z,29nm,0.6s
J56A   Wolcott           67.10 352  P     P     13 11 47.7 +0.4
       baz=170,SNR=7.7
J56A   Wolcott           67.10 352  P     P     13 11 47.1 -0.3
J56A                                IAmb  IAmb  13 11 48.5
       comp=Z,46nm,0.7s
J57A   Williamstown      67.12 353  P     P     13 11 48.3 +0.7
       baz=171
J57A   Williamstown      67.12 353  P     P     13 11 47.1 -0.4
J57A                                IAmb  IAmb  13 11 49.5
       comp=Z,41nm,1.1s
L48A   N Adams           67.14 346  P     P     13 11 47.0 -0.7
KAN08  Anthony NE Sta    67.18 333  P     P     13 11 47.5 -0.5
J55A   Hilton            67.22 351  P     P     13 11 48.1 +0.1
KAN12  Harper NE Stat    67.25 333  P     P     13 11 49.4 +0.9
I60A   Shoreham          67.29 355  P     P     13 11 49.4 +0.9
       baz=174
I58A   Old Forge         67.29 354  P     P     13 11 49.4 +0.8
       baz=172
TIC    Toumodi           67.30  72  eP    P     13 11 48.1 -1.2
I63A   Otisfield         67.32 357  P     P     13 11 50.0 +1.3
HSIG                     67.34 319  P     P     13 11 50.0 +0.7
HSIG                                IAmb  IAmb  13 11 51.5
       comp=Z,40nm,0.6s
KIC    Kosan Boka        67.41  72  eP    P     13 11 49.0 -1.0
       comp=Z,114nm,0.6s
DBIC   Dimbokro          67.45  72  P     P     13 11 49.0 -1.3
       comp=Z,35nm,0.5s,baz=218,slow=6.7,SNR=73
DBIC                                pP    pP    13 12 38.9 +0.7
       comp=Z,50nm,1.0s,baz=216,slow=7.3,SNR=6.0
DBIC   Dimbokro          67.45  72  P     P     13 11 48.8 -1.5
NCB    Newcomb           67.49 354  P     P     13 11 50.5 +0.7
K50A   Casco             67.55 347  P     P     13 11 49.8 -0.5
LBNH   Lisbon            67.58 356  P     P     13 11 51.6 +1.2
LBNH                                pmax  pmax
       comp=Z,46nm,1.5s
LBNH   Lisbon            67.58 356  P     P     13 11 51.6 +1.2
LBNH                                IAmb  IAmb  13 11 56.0
       comp=Z,46nm,1.4s
P38A   Dawn              67.60 338  P     P     13 11 50.4 -0.2
I57A   Carthage          67.61 353  P     P     13 11 51.2 +0.6
       baz=171
N41A   Harden Midland    67.70 340  P     P     13 11 50.4 -0.8
N41A                                IAmb  IAmb  13 11 51.6
       comp=Z,36nm,0.8s
H62A   Milan             67.87 357  P     P     13 11 53.1 +0.9
H62A                                IAmb  IAmb  13 11 56.0
       comp=Z,36nm,1.4s
H61A   Lyndonville       67.87 356  P     P     13 11 53.7 +1.5
       baz=175
HAL    Halifax           67.88   2  P     P     13 11 52.6 +0.4
HAL                                 pmax  pmax
       comp=Z,71nm,1.4s
HAL    Halifax           67.88   2  P     P     13 11 52.6 +0.4
HAL                                 IAmb  IAmb  13 12 07.8
       comp=Z,71nm,1.4s
H65A   Eastbrook         67.89 359  P     P     13 11 53.0 +0.7
       baz=178
EMMW   East Machias      67.89 359  P     P     13 11 53.3 +1.1
EMMW                                IAmb  IAmb  13 11 59.8
       comp=Z,32nm,1.0s
H58A   Gabriels          67.93 354  P     P     13 11 53.1 +0.5
       baz=173
319A   Douglas           68.08 321  P     P     13 11 55.7 +1.8
H57A   Richville         68.10 353  P     P     13 11 54.1 +0.6
       baz=171
121A   Cookes Peak, D    68.11 323  P     P     13 11 56.2 +2.1
       baz=140,SNR=40
121A   Cookes Peak, D    68.11 323  P     P     13 11 55.7 +1.6
H59A   Cadyville         68.12 355  P     P     13 11 54.2 +0.5
       baz=173
LONY   Lake Ozonia       68.17 354  P     P     13 11 54.5 +0.4
I51A   Listowel          68.25 349  P     P     13 11 54.6  0.0
       baz=166
KSU1   Kansas State U    68.25 335  P     P     13 11 54.9 +0.2
       baz=151,SNR=7.1
KSU1   Kansas State U    68.25 335  P     P     13 11 54.9 +0.2
KSU1                                IAmb  IAmb  13 11 55.9
       comp=Z,63nm,1.1s
GGN    Saint George      68.30 360  P     P     13 11 55.8 +1.1
GGN                                 IAmb  IAmb  13 12 22.1
       comp=Z,66nm,1.4s
FRNY   Flat Rock         68.30 355  P     P     13 11 55.2 +0.4
G65A   Princeton         68.38 359  P     P     13 11 55.7 +0.4
G65A                                IAmb  IAmb  13 11 56.3
       comp=Z,94nm,1.5s
DELO   Deloro Mine       68.42 352  P     P     13 11 55.8 +0.2
J47A   Sunmer            68.46 346  P     P     13 11 56.1 +0.2
J47A                                IAmb  IAmb  13 12 08.5
       comp=Z,52nm,1.3s
PKME   Peaks-Kenny Pk    68.48 358  P     P     13 11 56.4 +0.5
       baz=178
PKME   Peaks-Kenny Pk    68.48 358  P     P     13 11 56.5 +0.6
PKME                                IAmb  IAmb  13 12 12.8
       comp=Z,72nm,1.5s
G62A   West of Eustis    68.48 357  P     P     13 11 56.5 +0.6
R32A   Long Quarter,     68.50 333  P     P     13 11 56.7 +0.4
N38A   Joes South For    68.54 339  P     P     13 11 56.1 -0.3
H53A   Bobcaygeon        68.61 351  P     P     13 11 57.4 +0.7
       baz=168
MOQ    Mont Orford       68.67 356  P     P     13 11 57.9 +0.6
BNM    Barren Site       68.73 325  P     P     13 11 59.4 +1.4
GBN    Guysborough       68.75   4  P     P     13 11 57.3 -0.3
GBN                                 IAmb  IAmb  13 12 03.0
       comp=Z,84nm,1.4s
K43A   Burlington        68.82 343  P     P     13 11 57.3 -0.8
K43A                                IAmb  IAmb  13 11 58.3
       comp=Z,40nm,0.8s
PLVO   Plevna            68.86 352  P     P     13 11 58.6 +0.3
SADO   Sadowa            68.88 351  P     P     13 11 58.3 -0.1
       comp=Z,7.2nm,0.5s,baz=208,slow=9.0,SNR=8.6
SADO   Sadowa            68.88 351  P     P     13 11 58.5 +0.1
F63A   Nahmakanta, Br    68.91 358  P     P     13 11 58.5 -0.1
F63A                                IAmb  IAmb  13 12 22.4
       comp=Z,35nm,1.4s
LENM   Lemitar           68.92 325  P     P     13 12 00.6 +1.4
LMN    Caledonia Moun    69.05   1  P     P     13 12 00.0 +0.6
F64A   Sherman           69.05 359  P     P     13 12 00.2 +0.7
       baz=178
F64A   Sherman           69.05 359  P     P     13 12 00.1 +0.7
F64A                                IAmb  IAmb  13 12 11.9
       comp=Z,16nm,0.6s
ANMO   Albuquerque       69.25 326  P     P     13 12 02.9 +1.6
       comp=Z,21nm,0.6s,baz=134,slow=6.9,SNR=102
ANMO   Albuquerque       69.25 326  P     P     13 12 02.8 +1.6
       baz=141
ANMO   Albuquerque       69.25 326  P     P     13 12 02.6 +1.4
ANMO                                IAmb  IAmb  13 12 03.5
       comp=Z,32nm,0.8s
CBKS   Cedar Bluff       69.26 333  P     P     13 12 02.1 +1.1
       baz=148,SNR=20
CBKS   Cedar Bluff       69.26 333  P     P     13 12 01.8 +0.8
CBKS                                pmax  pmax
       comp=Z,64nm,0.6s
CBKS   Cedar Bluff       69.26 333  P     P     13 12 01.8 +0.8
G54A   Lake Saint Pet    69.35 352  P     P     13 12 01.6 +0.3
       baz=169
N35A   Tabor             69.44 337  P     P     13 12 01.9  0.0
JFWS   Jewell Farm       69.54 342  P     P     13 12 02.5  0.0
       baz=157,SNR=6.4
JFWS   Jewell Farm       69.54 342  P     P     13 12 02.2 -0.4
JFWS                                pmax  pmax
       comp=Z,32nm,0.7s
JFWS   Jewell Farm       69.54 342  P     P     13 12 02.2 -0.4
JFWS                                IAmb  IAmb  13 12 03.1
       comp=Z,32nm,0.7s
E64A   Bridgewater       69.60 359  P     P     13 12 03.7 +0.9
       baz=179
E63A   Oxbow             69.61 359  P     P     13 12 04.0 +1.2
       baz=178
E63A   Oxbow             69.61 359  P     P     13 12 03.7 +0.8
TUC    Tucson            69.63 321  P     P     13 12 05.1 +1.7
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       baz=137
TUC    Tucson            69.63 321  P     P     13 12 04.8 +1.4
TUC                                 pmax  pmax
       comp=Z,23nm,1.0s
TUC    Tucson            69.63 321  P     P     13 12 04.8 +1.4
TUC                                 IAmb  IAmb  13 12 05.8
       comp=Z,23nm,0.9s
E60A   Ste Agathe de     69.67 357  P     P     13 12 04.4 +1.2
       baz=175
E61A   Lac Etchemin      69.69 357  P     P     13 12 04.5 +1.1
       baz=176
TRQ    Mont Tremblant    69.76 354  P     P     13 12 04.1 +0.2
E58A   La Victoria       69.80 355  P     P     13 12 05.0 +0.9
       baz=174
PQI    Presque Isle      69.86 359  P     P     13 12 04.5 +0.1
ALGO   Algonquin Park    69.89 352  P     P     13 12 04.7 +0.2
       baz=169
T25A   Trinidad          69.97 329  P     P     13 12 07.1 +1.5
       baz=144,SNR=18
N33A   J Bar K, Exete    70.00 336  P     P     13 12 05.9 +0.5
I42A   Draeger Farm,     70.08 343  P     P     13 12 05.7 -0.1
I42A                                IAmb  IAmb  13 12 06.3
       comp=Z,66nm,1.4s
E56A   St. Veronique     70.12 354  P     P     13 12 06.2 +0.2
       baz=172
D63A   Stockholm         70.22 359  P     P     13 12 07.2 +0.7
       baz=179
D61A   St Aubert, Com    70.45 358  P     P     13 12 08.7 +0.8
       baz=177
BATG   Bathurst New B    70.46   1  P     P     13 12 08.6 +0.6
BATG                                IAmb  IAmb  13 12 30.2
       comp=Z,42nm,1.4s
D58A   Chemin du LacG    70.49 356  P     P     13 12 08.7 +0.5
       baz=174
I40A   Norwalk           70.55 342  P     P     13 12 08.4 -0.3
I40A                                IAmb  IAmb  13 12 10.0
       comp=Z,17nm,0.4s
214A   Organ Pipe Nat    70.56 320  P     P     13 12 11.1 +2.1
       baz=136,SNR=32
214A   Organ Pipe Nat    70.56 320  P     P     13 12 11.0 +1.9
214A                                IAmb  IAmb  13 12 11.7
       comp=Z,31nm,0.7s
D56A   ZEC Mazanza, M    70.59 354  P     P     13 12 08.9 +0.1
       baz=172
D55A   Sainte-Anne-du    70.64 354  P     P     13 12 09.0 -0.1
       baz=172
KSCO   Kaye Shedlock'    70.67 331  P     P     13 12 10.8 +1.1
       baz=145,SNR=7.7
KSCO   Kaye Shedlock'    70.67 331  P     P     13 12 09.8 +0.1
KSCO                                IAmb  IAmb  13 12 13.4
       comp=Z,64nm,1.2s
L34A   Svendsen Farm,    70.67 337  P     P     13 12 09.4  0.0
PIX    Pinacate          70.67 319  P     P     13 12 10.3 +0.7
MACI   Morro de la Ar    70.68  46  P     P     13 12 10.5 +0.5
MACI                                IAmb  IAmb  13 12 11.5
       comp=Z,31nm,0.9s
LATQ   La Tuque          70.77 356  P     P     13 12 10.1 +0.3
       baz=174
LATQ   La Tuque          70.77 356  P     P     13 12 10.1 +0.3
X18A   Snowflake         70.80 323  P     P     13 12 12.0 +1.4
BGNE   Belgrade          70.84 336  P     P     13 12 11.3 +0.8
       baz=150,SNR=28
BGNE   Belgrade          70.84 336  P     P     13 12 11.0 +0.5
SDCO   Great Sand Dun    70.98 328  P     P     13 12 13.5 +1.7
       baz=143,SNR=38
SDCO   Great Sand Dun    70.98 328  P     P     13 12 13.2 +1.4
SDCO                                IAmb  IAmb  13 12 14.1
       comp=Z,26nm,0.9s
W18A   Petrified Fore    71.12 324  P     P     13 12 14.3 +1.8
       baz=139,SNR=17
W18A   Petrified Fore    71.12 324  P     P     13 12 14.0 +1.5
W18A                                IAmb  IAmb  13 12 15.0
       comp=Z,32nm,0.7s
SFX    San Felipe        71.16 318  P     P     13 12 13.9 +1.3
SFX                                 IAmb  IAmb  13 12 15.0
       comp=Z,35nm,0.7s
E46A   Sault Ste Mari    71.34 347  P     P     13 12 12.8 -0.5
I37A   Lemond, Waseca    71.49 340  P     P     13 12 14.3  0.0
I37A                                IAmb  IAmb  13 12 14.9
       comp=Z,35nm,0.6s
SPX    San Pedro Mart    71.54 317  P     P     13 12 16.9 +1.6
X16A   Lo Mia Camp, P    71.54 322  P     P     13 12 16.9 +1.8
X16A                                IAmb  IAmb  13 12 17.8
       comp=Z,21nm,0.7s
S22A   4UR Ranch, Cre    71.63 327  P     P     13 12 17.2 +1.6
       baz=142,SNR=18
113A   Mohawk Valley,    71.71 320  P     P     13 12 17.4 +1.5
113A                                IAmb  IAmb  13 12 18.1
       comp=Z,16nm,0.6s
Q24A   Divide            71.78 329  P     P     13 12 18.1 +1.6
       baz=143,SNR=30
E43A   Lone Tree Farm    71.93 345  P     P     13 12 16.8 -0.1
E43A                                IAmb  IAmb  13 12 33.5
       comp=Z,44nm,1.4s
OGNE   Ogallala          72.01 333  P     P     13 12 19.0 +1.4
       baz=146
OGNE   Ogallala          72.01 333  P     P     13 12 18.8 +1.2
KOWA   Kowa              72.04  65  P     P     13 12 17.5 -0.7
MVCO   Mesa Verde        72.05 326  P     P     13 12 19.9 +1.8
       baz=140,SNR=24
MVCO   Mesa Verde        72.05 326  P     P     13 12 19.2 +1.1
MVCO                                IAmb  IAmb  13 12 20.4
       comp=Z,31nm,0.8s
K31A   O'Neill           72.11 336  P     P     13 12 18.9 +0.8
ECSD   EROS Data Cent    72.30 338  P     P     13 12 19.4 +0.2
       baz=151,SNR=23
ECSD   EROS Data Cent    72.30 338  P     P     13 12 19.2  0.0
ECSD                                IAmb  IAmb  13 12 21.8
       comp=Z,36nm,1.1s
WUAZ   Wupatki           72.31 323  P     P     13 12 21.9 +2.3
       baz=138,SNR=29
WUAZ   Wupatki           72.31 323  P     P     13 12 21.4 +1.8
WUAZ                                IAmb  IAmb  13 12 22.4
       comp=Z,32nm,0.7s
SPMN   Marine on St.     72.40 341  P     P     13 12 19.5 -0.2
       baz=155
ESJX   Sierra Juarez     72.50 318  P     P     13 12 22.4 +1.6
GLA    Glamis            72.54 319  P     P     13 12 22.6 +1.8
       baz=134
ISCO   Idaho Springs     72.66 330  P     P     13 12 23.4 +1.6
       baz=143,SNR=20
ISCO   Idaho Springs     72.66 330  P     P     13 12 22.9 +1.2
ISCO                                pmax  pmax
       comp=Z,21nm,1.0s
ISCO   Idaho Springs     72.66 330  P     P     13 12 22.9 +1.2
PV01   Paradox Valley    72.80 327  P     P     13 12 24.3 +1.8
LSQQ   Lebel-sur-Quev    72.81 353  P     P     13 12 21.9 -0.1
       baz=170
SMCO   Snowmass          72.82 328  P     P     13 12 24.6 +1.8
SMCO                                IAmb  IAmb  13 12 25.4
       comp=Z,22nm,0.7s
CCX    Cicese            72.85 317  P     P     13 12 24.6 +2.0
CCX                                 IAmb  IAmb  13 12 25.1
       comp=Z,33nm,0.6s
DRLN   Deer Lake         72.91   6  P     P     13 12 23.1 +0.5
DRLN                                IAmb  IAmb  13 12 24.1
       comp=Z,29nm,1.1s
PV15   Paradox Valley    72.91 327  P     P     13 12 24.7 +1.5
PV15                                IAmb  IAmb  13 12 25.9
       comp=Z,42nm,1.1s
PV13   Radium Mtn., P    72.94 326  P     P     13 12 24.4 +1.1
D41A   Chassel           72.94 345  P     P     13 12 23.3 +0.4
D41A                                IAmb  IAmb  13 12 28.8
       comp=Z,51nm,1.1s
RMX    La Rumorosa       72.99 318  P     P     13 12 24.8 +1.1
RMX                                 IAmb  IAmb  13 12 25.9
       comp=Z,34nm,1.0s
PDMCI  Parker Dam,Lak    73.01 320  P     P     13 12 25.1 +1.6
       baz=135,SNR=6.1
PV03   Paradox Valley    73.03 327  P     P     13 12 24.8 +1.0
IKP    In-Ko-Pah, Jac    73.04 318  P     P     13 12 26.0 +2.1
       baz=133,SNR=11
PV18   Skein Mesa, Pa    73.05 326  P     P     13 12 25.0 +1.0
PV18                                IAmb  IAmb  13 12 26.1
       comp=Z,31nm,1.2s
PV12   Saucer Basin,     73.05 327  P     P     13 12 25.0 +1.0
PV12                                IAmb  IAmb  13 12 26.3
       comp=Z,21nm,0.7s
SWSC   Sam W. Stewart    73.05 318  P     P     13 12 25.6 +1.8
       baz=134
PV07   Paradox Valley    73.07 327  P     P     13 12 25.1 +1.0
PV11   David Mesa, Pa    73.07 327  P     P     13 12 25.1 +1.0
PV11                                IAmb  IAmb  13 12 26.2
       comp=Z,44nm,1.3s
PV17   East Wray Mesa    73.10 326  P     P     13 12 25.1 +0.9
PV17                                IAmb  IAmb  13 12 26.4
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       comp=Z,32nm,1.2s
PV16   Nyswonger Mesa    73.11 327  P     P     13 12 25.0 +0.7
PV19   Morning Glory     73.14 326  P     P     13 12 25.0 +0.5
CBX    Cerro Bola        73.15 317  P     P     13 12 26.2 +1.6
PV20   West Nyswonger    73.16 327  P     P     13 12 25.5 +0.9
PV04   Paradox Valley    73.16 327  P     P     13 12 25.9 +1.3
F36A   Milaca            73.19 341  P     P     13 12 24.1 -0.2
PV14   Lion Creek, Pa    73.21 326  P     P     13 12 25.5 +0.6
PV14                                IAmb  IAmb  13 12 27.1
       comp=Z,28nm,1.0s
PV22   Blue Mesa, Par    73.21 327  P     P     13 12 26.4 +1.5
PV22                                IAmb  IAmb  13 12 27.3
       comp=Z,26nm,0.7s
PV10   Paradox Valley    73.22 326  P     P     13 12 25.5 +0.5
PV23   Carpenter Ridg    73.26 327  P     P     13 12 26.7 +1.4
PMOZ   Porto Moniz, M    73.31  42  P           13 12 26.0
PMOZ   Porto Moniz, M    73.31  42  P     P     13 12 25.5 +0.1
PMOZ   Porto Moniz, M    73.31  42  eP    P     13 12 25.8 +0.3
       comp=Z,140nm,0.5s
PMOZ   Porto Moniz, M    73.31  42  eLR   LR    13 33 19.0
       comp=Z,97nm,18.0s
BC3    Big Chuckawall    73.33 319  P     P     13 12 27.5 +1.9
       baz=134,SNR=14
MONP2  Monument Peak     73.40 318  P     P     13 12 28.0 +1.9
       baz=133,SNR=14
BAR    Barrett           73.41 318  P     P     13 12 27.5 +1.5
W13A   Hualapai Mount    73.42 321  P     P     13 12 27.4 +1.2
W13A                                IAmb  IAmb  13 12 29.0
       comp=Z,15nm,0.6s
U15A   North Rim         73.48 323  P     P     13 12 28.6 +2.0
U15A                                IAmb  IAmb  13 12 29.6
       comp=Z,29nm,0.7s
IRM    Iron Mountain     73.50 320  P     P     13 12 28.4 +2.0
       baz=134,SNR=23
MATQ   Matagami          73.58 353  P     P     13 12 26.1 -0.3
       baz=170
NEE2   Needles Airpor    73.62 320  P     P     13 12 28.8 +1.8
       baz=135
N23A   Red Feather La    73.69 330  P     P     13 12 29.4 +1.7
       baz=143,SNR=12
SUSD   Miller            73.75 337  P     P     13 12 28.0 +0.3
       baz=149
SUSD   Miller            73.75 337  P     P     13 12 27.6 -0.1
PHWY   Pilot Hill        73.79 331  P     P     13 12 29.1 +0.8
PHWY                                IAmb  IAmb  13 12 30.3
       comp=Z,51nm,1.4s
BELC   Belle Mtn. Jos    73.90 319  P     P     13 12 30.9 +2.0
       baz=134,SNR=14
TPFO   Pinon Flats       73.91 319  P     P     13 12 30.9 +1.9
       baz=133,SNR=11
PFO    Pinyon Flats O    73.91 319  P     P     13 12 30.6 +1.6
       comp=Z,16nm,0.8s,baz=128,slow=5.2,SNR=24
PFO    Pinyon Flats O    73.91 319  P     P     13 12 30.9 +2.0
       baz=133,SNR=8.1
PFO    Pinyon Flats O    73.91 319  P     P     13 12 30.1 +1.1
PFO                                 IAmb  IAmb  13 12 31.6
       comp=Z,19nm,0.8s
SYO    Syowa Base        73.93 159⇓eP   P     13 12 23.8 -4.6
SYO    Syowa Base        73.93 159⇓eX   P     13 12 29.6 +1.2
F33A   5 Mile Ranch,     74.05 339  P     P     13 12 28.9 -0.4
O20A   White River Ci    74.17 328  P     P     13 12 32.2 +1.8
       baz=141,SNR=32
O20A   White River Ci    74.17 328  P     P     13 12 31.5 +1.1
O20A                                IAmb  IAmb  13 12 33.4
       comp=Z,42nm,0.9s
KNB    Kanab             74.20 323  P     P     13 12 31.8 +1.1
KNB                                 pmax  pmax
       comp=Z,55nm,0.9s
KNB    Kanab             74.20 323  P     P     13 12 31.8 +1.1
SBA    Scott Base        74.21 190  P     P     13 12 31.9 +2.0
SBA                                 pmax  pmax
       comp=Z,66nm,1.4s
SBA    Scott Base        74.21 190  P     P     13 12 31.9 +2.0
SBA                                 IAmb  IAmb  13 12 53.7
       comp=Z,66nm,1.4s
PKCU   Pink Cliffs       74.24 324  P     P     13 12 32.3 +1.3
GMRC   Granite Mounta    74.24 320  P     P     13 12 33.1 +2.2
       baz=134,SNR=52
MURC   Murrieta          74.35 318  P     P     13 12 33.4 +2.0
       baz=133,SNR=10.0
LCMT   Little Creek M    74.43 323  P     P     13 12 33.6 +1.7
EYMN   Ely               74.52 343  P     P     13 12 31.6 -0.4
       baz=156
EYMN   Ely               74.52 343  P     P     13 12 31.5 -0.4
SRU    San Rafael Swe    74.53 326  P     P     13 12 33.7 +1.2
SRU                                 pmax  pmax
       comp=Z,44nm,0.6s
SRU    San Rafael Swe    74.53 326  P     P     13 12 33.7 +1.2
MTPU   Mount Pierson     74.61 324  P     P     13 12 34.4 +1.3
BBRC   Big Bear Solar    74.64 319  P     P     13 12 35.5 +2.3
       baz=133,SNR=14
HEC    Hector,Ludlow     74.67 320  P     P     13 12 35.6 +2.3
       baz=134,SNR=15
TBI    Tubuai            74.71 251  eS    S     13 21 54.5 +0.8
       comp=Z,572nm,26.8s
SZCU   Shurtz Canyon     74.77 323  P     P     13 12 35.4 +1.5
SCI2   San Clemente I    74.78 317  P     P     13 12 35.5 +1.7
       baz=132
CCUT   Cedar City        74.89 323  P     P     13 12 36.7 +2.1
RWWY   Rawlins           74.90 330  P     P     13 12 34.8 +0.1
RWWY                                IAmb  IAmb  13 12 37.8
       comp=Z,64nm,1.2s
P17A   Butcher Ranch,    74.91 326  P     P     13 12 35.4 +0.7
MSU    Marysvale         74.95 325  P     P     13 12 36.3 +1.4
MSU    Marysvale         74.95 325  P     P     13 12 36.3 +1.4
MVU    Marysvale         74.96 325  P     P     13 12 36.3 +1.3
TMUT   Trail Mountain    75.02 326  P     P     13 12 35.8 +0.3
BFSC   Mount Baldy Ra    75.07 318  P     P     13 12 37.3 +1.7
       baz=133,SNR=11
RRX    Edison Barstow    75.10 319  P     P     13 12 37.9 +2.2
       baz=133
SHPR   Sheep Range       75.15 321  P     P     13 12 37.3 +1.2
SHPR                                IAmb  IAmb  13 12 38.8
       comp=Z,18nm,0.7s
TCRU   Three Creeks R    75.16 325  P     P     13 12 38.0 +1.8
VNDA   Vanda             75.22 190  P     P     13 12 37.6 +2.0
       comp=Z,17nm,1.0s,baz=133,slow=5.0,SNR=13
VNDA                                LR    LR    13 46 31.5
       comp=Z,75nm,18.0s,baz=142,slow=36
VNDA   Vanda             75.22 190  P     P     13 12 37.3 +1.6
GSC    Goldstone, Bar    75.28 320  P     P     13 12 38.8 +2.1
       baz=133,SNR=14
GSC    Goldstone, Bar    75.28 320  P     P     13 12 38.5 +1.8
GSC                                 pmax  pmax
       comp=Z,21nm,0.7s
GSC    Goldstone, Bar    75.28 320  P     P     13 12 38.5 +1.8
GSC                                 IAmb  IAmb  13 12 39.4
       comp=Z,21nm,0.7s
MWC    Mount Wilson      75.30 318  P     P     13 12 38.5 +1.5
MWC                                 pmax  pmax
       comp=Z,29nm,0.6s
MWC    Mount Wilson      75.30 318  P     P     13 12 38.5 +1.5
MWC                                 IAmb  IAmb  13 12 39.4
       comp=Z,29nm,0.6s
K22A   Casper            75.35 331  P     P     13 12 38.7 +1.6
       baz=143,SNR=14
K22A   Casper            75.35 331  P     P     13 12 38.5 +1.4
K22A                                IAmb  IAmb  13 12 41.2
       comp=Z,46nm,1.2s
SHOC   Shoshone, Teco    75.37 320  P     P     13 12 38.9 +1.7
       baz=134
RSSD   Black Hills       75.46 333  P     P     13 12 38.9 +1.2
       baz=145
RSSD   Black Hills       75.46 333  P     P     13 12 38.4 +0.6
RSSD                                pmax  pmax
       comp=Z,26nm,1.0s
RSSD   Black Hills       75.46 333  P     P     13 12 38.4 +0.6
RSSD                                IAmb  IAmb  13 12 40.1
       comp=Z,26nm,0.9s
DECC   Green Verdugo     75.49 318  P     P     13 12 39.6 +1.7
       baz=132
B35A   Bob, Littlefor    75.51 342  P     P     13 12 37.9 +0.3
B35A                                IAmb  IAmb  13 12 38.8
       comp=Z,27nm,0.9s
SNCC   San Nicolas Is    75.57 316  P     P     13 12 40.0 +1.6
       baz=131
EDW2   Edwards Air Fo    75.70 319  P     P     13 12 40.7 +1.5
       baz=132,SNR=16
PRN    Pahroc Range      75.72 322  P     P     13 12 40.6 +1.3
MPU    Maple Canyon      75.78 326  P     P     13 12 40.5 +0.9
VAH    Vaihoa            75.85 259  eP    P     13 12 42.2 +1.9
       comp=Z,71nm,1.1s
PSUT   Pine Spring       75.86 324  P     P     13 12 42.0 +1.9
SUR    Sutherland        75.87 119  P     P     13 12 40.7 +0.2
LRMC   Laurel Mtn Rad    75.92 319  P     P     13 12 42.3 +1.8
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      baz=133,SNR=8.0
NLU   North Lily Min    75.96 326 P       P       13 12 42.1 +1.4
OSI   Osito Audit: C    75.97 318 P       P       13 12 42.3 +1.7
      baz=132
TPNV  Topopah Spring    76.09 321 P       P       13 12 43.7 +2.3
      baz=134,SNR=32
TPNV  Topopah Spring    76.09 321 P       P       13 12 43.4 +2.0
TPNV                              pmax    pmax
      comp=Z,29nm,0.6s
TPNV  Topopah Spring    76.09 321 P       P       13 12 43.4 +2.0
TPNV                              IAmb    IAmb    13 12 44.3
      comp=Z,29nm,0.6s
FURC  Furnace Creek,    76.11 320 P       P       13 12 43.3 +2.1
      baz=134,SNR=20
JLU   Jordanelle        76.12 327 P       P       13 12 42.8 +1.2
SCZ2  Santa Cruz Isl    76.13 317 P       P       13 12 43.1 +1.6
      baz=131
MPMC  Manual Prospec    76.20 320 P       P       13 12 43.5 +1.4
      baz=133,SNR=14
TOA0  Torodi Ar. Sit    76.20  69 P       P       13 12 41.5  -0.8
TORD  Torodi Ar. Bea    76.20  69 P       P       13 12 41.7  -0.6
      comp=Z,43nm,0.4s,baz=259,slow=5.7,SNR=293
TORD                              pP      pP      13 13 32.4 +1.2
      comp=Z,20nm,0.8s,baz=253,slow=5.5,SNR=2.4
TORD                              S       S       13 22 05.3  -5.0
      comp=Z,1.7nm,0.8s,baz=255,slow=10,SNR=6.8
TORD  Torodi Ar. Bea    76.20  69 P       P       13 12 41.4  -0.9
E28A  Huff              76.21 337 P       P       13 12 42.5 +0.8
CTU   Camp Tracy        76.34 326 P       P       13 12 43.8 +1.0
ARVC  Arvin             76.38 318 P       P       13 12 44.8 +2.0
      baz=132
TCUT  Toone Canyon      76.48 327 P       P       13 12 44.9 +1.3
DUG   Dugway, Tooele    76.52 325 P       P       13 12 45.5 +1.8
      baz=137,SNR=13
DUG   Dugway, Tooele    76.52 325 P       P       13 12 45.0 +1.3
DUG                               pmax    pmax
      comp=Z,38nm,1.3s
DUG   Dugway, Tooele    76.52 325 P       P       13 12 45.0 +1.3
DUG                               IAmb    IAmb    13 12 46.2
      comp=Z,38nm,1.2s
ISA   Isabella, Lake    76.52 319 P       P       13 12 45.8 +2.0
      baz=132,SNR=21
ISA   Isabella, Lake    76.52 319 P       P       13 12 45.4 +1.7
ISA                               pmax    pmax
      comp=Z,25nm,0.8s
ISA   Isabella, Lake    76.52 319 P       P       13 12 45.4 +1.7
ISA                               IAmb    IAmb    13 12 46.4
      comp=Z,25nm,0.8s
R11A  Troy Canyon, C    76.69 323 P       P       13 12 47.0 +2.2
      baz=135,SNR=25
R11A  Troy Canyon, C    76.69 323 P       P       13 12 46.5 +1.8
R11A                              IAmb    IAmb    13 12 47.6
      comp=Z,60nm,1.4s
PAE   Paea              76.75 256 eP      P       13 12 47.5 +2.1
      comp=Z,10nm,1.0s
PPT2  Papeete2          76.77 256 eP      P       13 12 47.5 +1.9
      comp=Z,45nm,1.1s
PPT2                              eS      S       13 22 16.4  -0.2
      comp=Z,594nm,28.5s
PPT   Papeete           76.78 256 P       P       13 12 48.4 +2.9
      comp=Z,22nm,0.5s,baz=80,slow=5.6,SNR=7.3
PPT                               LR      LR      13 40 30.8
      comp=Z,40nm,20.6s,baz=102,slow=31
CWC   Cottonwood Cre    76.81 320 P       P       13 12 47.4 +1.9
      baz=133
PKM   Mcpherson Peak    76.83 318 P       P       13 12 47.6 +2.0
      baz=131,SNR=18
BW06  Boulder Array     76.83 329 P       P       13 12 46.6 +1.0
      baz=140,SNR=19
BW06  Boulder Array     76.83 329 P       P       13 12 46.1 +0.6
PD31  Pinedale Array    76.83 329 P       P       13 12 46.2 +0.6
PDAR  Pinedale Array    76.83 329 P       P       13 12 46.5 +1.0
      comp=Z,7.3nm,0.5s,baz=134,slow=7.7,SNR=68
PDAR                              LR      LR      13 50 56.8
      comp=Z,44nm,19.9s,baz=142,slow=39
PDAR  Pinedale Array    76.83 329 P       P       13 12 46.1 +0.5
MDND  Maddock           76.91 338 P       P       13 12 46.6 +1.1
      baz=149,SNR=20
MDND  Maddock           76.91 338 P       P       13 12 46.3 +0.7
VES   Vestal, Richgr    77.01 319 P       P       13 12 48.0 +1.7
      baz=132,SNR=14
SPUT  South Promonto    77.15 326 P       P       13 12 48.4 +1.2
BGU   Big Grassy Mou    77.17 326 P       P       13 12 48.4 +1.0
SMMC  Simmler           77.22 318 P       P       13 12 49.8 +2.2
      baz=131,SNR=11
TIN   Tinemaha, Big     77.31 320 P       P       13 12 50.1 +1.9
      baz=133
TPH   Tonopah           77.42 321 P       P       13 12 50.0 +1.1
TPH                               pmax    pmax
      comp=Z,175nm,1.3s
TPH   Tonopah           77.42 321 P       P       13 12 50.0 +1.1
AHID  Auburn Hatcher    77.57 328 P       P       13 12 50.7 +1.1
TTIG  Tnine Tigouga,    77.58  49 P               13 12 51.2
TSUM  Tsumeb            77.59 106 P       P       13 12 50.0  -0.2
TSUM                              IAmb    IAmb    13 12 51.4
      comp=Z,30nm,1.0s
PAGB  Antelope Grade    77.65 318 P       P       13 12 51.5 +1.6
PAGB                              IAmb    IAmb    13 12 52.5
      comp=Z,20nm,0.7s
HVU   Hansel Valley     77.66 327 P       P       13 12 51.0 +0.9
HVU                               pmax    pmax
      comp=Z,26nm,1.0s
HVU   Hansel Valley     77.66 327 P       P       13 12 51.0 +0.9
ULM   Lac du Bonnet     77.83 341 P       P       13 12 50.7 +0.2
      comp=Z,10nm,0.4s,baz=154,slow=6.8,SNR=48
ULM                               PKKPbc  PKKPbc  13 31 50.7  -2.8
      comp=Z,0.6nm,0.3s,baz=281,slow=4.1,SNR=3.2
ULM                               LR      LR      13 50 46.2
      comp=Z,120nm,19.5s,baz=138,slow=38
ULM   Lac du Bonnet     77.83 341 P       P       13 12 50.7 +0.2
ULM                               IAmb    IAmb    13 12 52.9
      comp=Z,18nm,0.7s
REDW  Red Top Meadow    77.90 329 P       P       13 12 52.5 +1.1
REDW                              IAmb    IAmb    13 12 53.6
      comp=Z,23nm,0.8s
ECR   Eagle Creek       77.92 328 P       P       13 12 52.9 +1.4
SNOW  Snow King Moun    77.93 329 P       P       13 12 53.2 +1.5
SNOW                              IAmb    IAmb    13 12 54.4
      comp=Z,21nm,0.8s
LOHW  Long Hollow       77.97 329 P       P       13 12 53.3 +1.5
LOHW                              IAmb    IAmb    13 12 54.0
      comp=Z,27nm,0.7s
OMMB  Old Mammoth Mi    78.14 320 P       P       13 12 54.1 +1.1
OMMB                              IAmb    IAmb    13 12 55.3
      comp=Z,25nm,0.7s
MOOW  Moose Ponds       78.14 329 P       P       13 12 54.1 +1.4
ELK   Elko              78.19 324 P       P       13 12 54.6 +1.5
      comp=Z,10nm,0.6s,baz=133,slow=4.7,SNR=39
ELK   Elko              78.19 324 P       P       13 12 54.4 +1.2
MDPB  Devils Postpil    78.20 320 P       P       13 12 54.4 +1.2
NV11  Mina Array Sit    78.20 321 P       P       13 12 54.6 +1.5
LHV   Little Huntoon    78.28 321 P       P       13 12 55.3 +2.0
LHV                               IAmb    IAmb    13 12 58.3
      comp=Z,50nm,1.4s
NVAR  Mina Array Bea    78.28 321 P       P       13 12 55.1 +1.5
      comp=Z,4.4nm,0.5s,baz=140,slow=5.8,SNR=100
NVAR                              PKKPbc  PKKPbc  13 31 51.6  -0.3
      comp=Z,0.3nm,0.5s,baz=304,slow=2.1,SNR=3.9
NVAR                              LR      LR      13 46 34.7
      comp=Z,71nm,18.4s,baz=196,slow=35
PMPB  Monarch Peak      78.30 318 P       P       13 12 54.3 +0.7
PMPB                              IAmb    IAmb    13 12 59.1
      comp=Z,64nm,1.4s
FLWY  Flagg Ranch       78.37 329 P       P       13 12 55.4 +1.4
FLWY                              IAmb    IAmb    13 12 56.6
      comp=Z,35nm,0.8s
LAO   LASA Array        78.45 333 P       P       13 12 55.3 +1.2
      baz=144,SNR=14
LAO   LASA Array        78.45 333 P       P       13 12 55.1 +0.9
LAO                               IAmb    IAmb    13 12 55.9
      comp=Z,41nm,0.6s
RYN   Ryan              78.55 321 P       P       13 12 56.3 +1.3
H17A  Grant Village     78.55 330 P       P       13 12 57.1 +2.1
      baz=140,SNR=12
H17A  Grant Village     78.55 330 P       P       13 12 56.6 +1.6
YPP   Pitchstone Pla    78.57 329 P       P       13 12 56.7 +1.5
LKWY  Lake              78.60 330 P       P       13 12 57.3 +2.0
LKWY                              pmax    pmax
      comp=Z,16nm,0.8s
LKWY  Lake              78.60 330 P       P       13 12 57.3 +2.0
YMP   Mirror Lake Pl    78.62 330 P       P       13 12 57.0 +1.5
YNE   Yellowstone No    78.76 330 P       P       13 12 57.5 +1.4
YNR   Norris Junctio    78.85 330 P       P       13 12 58.2 +1.6
YMR   Madison River     78.94 330 P       P       13 12 58.3 +1.2
OUZM  OUZ               78.96  49 P               13 12 58.5
YHH   Holmes Hill       78.98 330 P       P       13 12 59.4 +2.0
WAKR  Walker            78.99 321 P       P       13 12 59.6 +2.1
SAO   San Andreas Ge    79.05 318 P       P       13 12 59.1 +1.5
SAO                               pmax    pmax
      comp=Z,14nm,1.0s
SAO   San Andreas Ge    79.05 318 P       P       13 12 59.1 +1.5
DGMT  Dagmar            79.10 336 P       P       13 12 59.3 +1.7
      baz=145,SNR=41
DGMT  Dagmar            79.10 336 P       P       13 12 59.2 +1.6
SRHM  Skhour des Reh    79.10  47 P               13 12 59.1
YHB   Horse Butte       79.11 329 P       P       13 12 59.3 +1.3
YHL   Hebgen Lake       79.18 330 P       P       13 13 00.2 +1.8
GCMT  Greycliff         79.21 331 P       P       13 12 59.5 +1.1
CMB   Columbia Colle    79.24 320 P       P       13 12 59.8 +1.1
CMB                               pmax    pmax
      comp=Z,24nm,1.5s
CMB   Columbia Colle    79.24 320 P       P       13 12 59.8 +1.1
QLMT  Earthquake Lak    79.28 329 P       P       13 13 00.6 +1.6
ZGR   Zagora            79.30  51 P               13 13 01.0
PNTR  Pine Nut          79.48 321 P       P       13 13 01.7 +1.6
PNTR                              IAmb    IAmb    13 13 02.8
      comp=Z,36nm,0.7s
VCNR  Virginia City     79.64 321 P       P       13 13 02.1 +1.1
TZRR  Tazzarine         79.72  50 P               13 13 03.0
PAHR  Pah Rah Range     79.77 321 P       P       13 13 02.9 +1.3
PAHR                              IAmb    IAmb    13 13 04.2
      comp=Z,39nm,0.9s
RUBR  Rubicon Trail     79.78 321 P       P       13 13 03.1 +1.4
RUBR                              IAmb    IAmb    13 13 04.4
      comp=Z,22nm,0.9s
HLID  Hailey            79.79 327 P       P       13 13 03.9 +2.2
      baz=136,SNR=73
HLID  Hailey            79.79 327 P       P       13 13 03.5 +1.8
HLID                              IAmb    IAmb    13 13 04.5
      comp=Z,40nm,0.7s
BCYI  Bear Canyon       79.84 328 P       P       13 13 03.4 +1.5
MCMT  McKenzie Canyo    79.95 329 P       P       13 13 04.2 +1.6
BOZ   Bozeman (W)       79.95 330 P       P       13 13 03.7 +1.3
      baz=139,SNR=14
BOZ   Bozeman (W)       79.95 330 P       P       13 13 03.1 +0.7
BOZ                               pmax    pmax
      comp=Z,10.0nm,0.9s
BOZ   Bozeman (W)       79.95 330 P       P       13 13 03.1 +0.7
AFDM  Forest Hills D    80.19 320 P       P       13 13 04.7 +1.0
DLMT  Dillon            80.23 329 P       P       13 13 05.3 +1.4
DLMT                              IAmb    IAmb    13 13 06.3
      comp=Z,22nm,0.7s
MFID  Camas Ranch       80.40 326 P       P       13 13 06.0 +1.1
BEKR  Beckworth         80.43 321 P       P       13 13 06.2 +1.0
BEKR                              IAmb    IAmb    13 13 09.3
      comp=Z,48nm,1.5s
LRM   Limekiln Ridge    80.50 330 P       P       13 13 06.4 +0.9
ZHG   ZHG               80.53  47 P               13 13 07.0
GOLM  Goulmima          80.68  50 P               13 13 09.0
RTC   Rabat Centre      80.70  47 P               13 13 08.0
BOSA  Boshof            80.77 117 P       P       13 13 07.1  -0.2
      comp=Z,24nm,0.6s,baz=257,slow=4.0,SNR=46
BOSA  Boshof            80.77 117 P       P       13 13 06.8  -0.5
BOSA                              IAmb    IAmb    13 13 08.9
      comp=Z,25nm,0.7s
HRY   Holter Researc    80.88 330 P       P       13 13 08.5 +1.1
ORV   Oroville          80.89 320 P       P       13 13 08.4 +1.0
ORV                               pmax    pmax
      comp=Z,37nm,1.2s
ORV   Oroville          80.89 320 P       P       13 13 08.4 +1.0
ORV                               IAmb    IAmb    13 13 09.7
      comp=Z,37nm,1.1s
EGMT  Eagleton          80.97 332 P       P       13 13 08.6 +0.9
      baz=141,SNR=33
EGMT  Eagleton          80.97 332 P       P       13 13 08.1 +0.4
EGMT                              IAmb    IAmb    13 13 09.6
      comp=Z,44nm,0.9s
ARF   Arif              81.04  50 P               13 13 10.1
WVOR  Wild Horse Val    81.20 324 P       P       13 13 09.6 +0.5
WVOR                              pmax    pmax
      comp=Z,8.0nm,1.2s
WVOR  Wild Horse Val    81.20 324 P       P       13 13 09.6 +0.5
MORF  Marmelete         81.54  43 eP      P       13 13 11.8 +0.9
MORF                              AMb     AMB     13 13 23.1
      comp=Z,56nm,1.4s
MORF                              eS      S       13 23 06.7 +0.7
MORF  Marmelete         81.54  43 eP      P       13 13 11.8 +0.9
MORF                              eS      S       13 23 06.7 +0.7
MORF  Marmelete         81.54  43 eP      P       13 13 11.4 +0.5
      comp=Z,34nm,1.3s
MDT   Midelt            81.55  49 P               13 13 12.6
O03E  Paynes Creek      81.55 321 P       P       13 13 11.2 +0.2
      baz=131,SNR=11
PTEO  Sao Teotonio      81.64  43 eP      P       13 13 11.8 +0.5
      comp=Z,125nm,1.6s
MOD   Modoc Plateau     81.75 323 P       P       13 13 12.5 +0.5
MOD                               IAmb    IAmb    13 13 14.1
      comp=Z,38nm,1.3s
MAW   Mawson            81.84 163 P       P       13 13 12.7 +0.7
      comp=Z,40nm,0.8s,baz=214,slow=6.5,SNR=9.7
MAW   Mawson            81.84 163 IAmb    IAmb    13 13 14.3
      comp=Z,11nm,0.9s
LCRM  LCR               81.88  48 P               13 13 14.6
MSO   Missoula          81.94 329 P       P       13 13 14.4 +1.6
      baz=137,SNR=16
MSO   Missoula          81.94 329 P       P       13 13 13.3 +0.4
PBDV  Barranco-do-Ve    81.95  44 eP      P       13 13 14.3 +1.2
      comp=Z,94nm,1.3s
O02D  Mt. Diablo Mer    82.05 320 P       P       13 13 14.3 +0.7
      baz=130,SNR=5.5
PNCL  Nicolau / Gran    82.11  43 eP      P       13 13 14.8 +1.0
      comp=Z,21nm,0.6s
PCVE  Castro Verde      82.12  43 eP      P       13 13 15.0 +1.1
      comp=Z,46nm,1.7s
MESJ  Messejana         82.14  43 eP      P       13 13 14.8 +0.9
MESJ                              AMb     AMB     13 13 16.7
      comp=Z,29nm,1.4s
MESJ                              eS      S       13 23 12.6 +0.6
MESJ  Messejana         82.14  43 eP      P       13 13 14.8 +0.9
MESJ                              eS      S       13 23 12.5 +0.6
MESJ  Messejana         82.14  43 eP      P       13 13 15.7 +1.8
      comp=Z,28nm,0.5s
WDC   Whiskeytown Da    82.16 321 P       P       13 13 13.2  -0.8
WDC                               pmax    pmax
      comp=Z,13nm,0.7s
WDC   Whiskeytown Da    82.16 321 P       P       13 13 13.2  -0.8
BMO   Blue Mountains    82.17 326 P       P       13 13 14.8 +0.7
BMO                               pmax    pmax
      comp=Z,36nm,1.5s
BMO   Blue Mountains    82.17 326 P       P       13 13 14.8 +0.7
PVAQ  Vaqueiros         82.19  44 eP      P       13 13 14.6 +0.4
      comp=Z,49nm,1.5s
PVAQ  Vaqueiros         82.19  44 eLR     LR      13 40 20.0
      comp=Z,164nm,20.0s
LBTB  Lobatse           82.40 114 P       P       13 13 15.3  -0.6
LBTB                              pmax    pmax
      comp=Z,28nm,0.5s
LBTB  Lobatse           82.40 114 P       P       13 13 15.3  -0.6
LBTB                              IAmb    IAmb    13 13 20.0
      comp=Z,28nm,0.5s
PBEJ  Beja              82.47  43 eP      P       13 13 17.2 +1.5
      comp=Z,13nm,1.6s
N02D  Trinity Center    82.51 321 P       P       13 13 16.3 +0.4
      baz=130,SNR=7.6
M04C  Macdoel           82.54 322 P       P       13 13 17.3 +1.2
      baz=131,SNR=17
K05A  Summer Lake       82.63 323 P       P       13 13 17.8 +1.1
K05A                              IAmb    IAmb    13 13 19.1
      comp=Z,44nm,0.7s
JTMT  Jette             82.77 330 P       P       13 13 18.2 +1.1
JTMT                              IAmb    IAmb    13 13 19.0
      comp=Z,30nm,0.5s
I07A  Izee              82.78 325 P       P       13 13 18.6 +1.3
PSBE  So Bento          82.81  41 eP      P       13 13 18.8 +1.4
      comp=Z,98nm,1.2s
PMTG  Montargil         82.89  42 eP      P       13 13 18.6 +0.8
      comp=Z,79nm,1.6s
F10A  Beach Ranch, E    82.91 327 P       P       13 13 18.4 +0.5
F10A                              IAmb    IAmb    13 13 21.1
      comp=Z,38nm,0.6s
YBH   Yreka Blue Hor    83.00 321 P       P       13 13 18.5   0.0
      comp=Z,5.7nm,0.7s,baz=150,slow=1.6,SNR=29
YBH   Yreka Blue Hor    83.00 321 P       P       13 13 18.0  -0.5
K04D  Chiloquin, OR     83.04 322 P       P       13 13 20.0 +1.3
      baz=131,SNR=8.5
KHMM  Horse Mountain    83.05 320 P       P       13 13 19.8 +1.0
PBAR  Barrancos         83.08  43 eP      P       13 13 19.5 +0.7
      comp=Z,21nm,1.5s
L04D  Klamath Falls     83.08 322 P       P       13 13 19.6 +0.7
      baz=130,SNR=7.4
PESTR Estremoz          83.16  42 P       P       13 13 19.9 +0.7
PESTR Estremoz          83.16  42 eP      P       13 13 20.8 +1.6
      comp=Z,39nm,2.0s
J05D  Fort Rock, OR     83.18 323 P       P       13 13 20.9 +1.5
      baz=131,SNR=28
G08A  Pilot Rock        83.32 326 P       P       13 13 20.6 +0.6
PCAS  Casmilo, Conde    83.33  41 eP      P       13 13 21.6 +1.6
      comp=Z,54nm,1.4s
PINE  Pine Mountain     83.36 324 P       P       13 13 21.7 +1.3
PINE                              IAmb    IAmb    13 13 22.8
      comp=Z,30nm,0.6s
FIGM  Figuig            83.52  51 P               13 13 23.0
KRMB  Red Mountain      83.56 321 P       P       13 13 22.2 +0.9
FFC   Flin Flon         83.57 340 P       P       13 13 21.3 +0.4
FFC                               pmax    pmax
      comp=Z,8.0nm,0.8s
FFC   Flin Flon         83.57 340 P       P       13 13 21.3 +0.4
WALA  Waterton Lakes    83.57 331 P       P       13 13 21.9 +0.7
PMRV  Marv??o           83.62  42 eP      P       13 13 22.6 +1.0
      comp=Z,41nm,1.7s
PMRV  Marv??o           83.62  42 eLQ     LQ      13 36 01.5
PMRV                              eLR     LR      13 41 39.9
      comp=Z,116nm,22.0s
J04D  Umpqua Nationa    83.64 323 P       P       13 13 23.0 +1.2
      baz=131,SNR=7.6
HUMO  Hull Mountain     83.70 322 P       P       13 13 22.2 +0.3
L02E  Cave Junction     83.79 321 P       P       13 13 23.9 +1.6
      baz=130,SNR=7.0
PCBR  Castelo Branco    83.81  42 eP      P       13 13 23.8 +1.3
      comp=Z,33nm,1.2s
I05D  Terrebonne, OR    83.93 324 P       P       13 13 24.8 +1.7
      baz=131,SNR=30
TAM   Tamanrasset       83.99  62 P       P       13 13 24.8 +0.8
TAM                               pmax    pmax
      comp=Z,64nm,1.3s
TAM   Tamanrasset       83.99  62 P       P       13 13 24.8 +0.8
TAM                               IAmb    IAmb    13 13 25.4
      comp=Z,64nm,1.3s
HORN  Hornachuelos      84.02  44 P               13 13 24.7
PVIS  Viseu             84.10  41 eP      P       13 13 24.9 +0.9
      comp=Z,36nm,1.6s
MTE   Manteigas         84.11  41 P       P       13 13 24.3 +0.2
MTE                               IAmb    IAmb    13 13 28.3
      comp=Z,29nm,1.1s
MTE   Manteigas         84.11  41 eP      P       13 13 25.0 +0.9
      comp=Z,49nm,2.1s
MTE   Manteigas         84.11  41 eLQ     LQ      13 34 32.5
MTE                               eLR     LR      13 40 05.5
      comp=Z,131nm,18.0s
K02D  Willamette Mer    84.16 322 P       P       13 13 25.9 +1.6
      baz=130,SNR=10
I04A  Tendick Farm,     84.16 323 P       P       13 13 24.8 +0.6
      baz=130,SNR=7.8
E08A  Dider Farm, El    84.19 327 P       P       13 13 25.7 +1.5
F07A  Phinny Hill Vi    84.23 326 P       P       13 13 25.9 +1.5
F07A                              IAmb    IAmb    13 13 27.9
      comp=Z,40nm,1.5s
HAWA  Hanford           84.36 326 P       P       13 13 26.1 +1.0
HAWA                              IAmb    IAmb    13 13 27.1
      comp=Z,39nm,1.1s
NEW   Newport           84.47 329 P       P       13 13 27.0 +1.3
      comp=Z,11nm,0.6s,baz=113,slow=6.6,SNR=19
NEW   Newport           84.47 329 P       P       13 13 27.0 +1.3
      baz=135
NEW   Newport           84.47 329 P       P       13 13 27.0 +1.3
NEW   Newport           84.47 329 P       P       13 13 25.9 +0.3
D08A  Wollman Farm,     84.51 327 P       P       13 13 26.4 +0.6
D08A                              IAmb    IAmb    13 13 27.7
      comp=Z,27nm,0.9s
G05D  Wamic, OR         84.52 325 P       P       13 13 27.7 +1.7
      baz=131,SNR=6.1
PVRL  Vila Real         84.55  40 eP      P       13 13 25.8  -0.4
      comp=Z,58nm,1.6s
POLO  Lamas de Olo      84.56  40 eP      P       13 13 27.6 +1.2
      comp=Z,26nm,1.7s
J01E  Myrtle Point      84.61 322 P       P       13 13 28.0 +1.6
      baz=129
H04A  Detroit Lake      84.62 324 P       P       13 13 26.8 +0.3
I03D  Drain, OR         84.62 323 P       P       13 13 27.7 +1.3
      baz=130,SNR=6.5
PCAB  Cabril            84.63  40 eP      P       13 13 26.5  -0.1
      comp=Z,50nm,1.6s
E07A  Sunnyside         84.64 326 P       P       13 13 27.4 +0.9
PGAV  Gavieira, Arco    84.64  40 eP      P       13 13 25.9  -0.9
      comp=Z,46nm,1.1s
PGAV  Gavieira, Arco    84.64  40 eLQ     LQ      13 36 21.0
PGAV                              eLR     LR      13 40 50.9
      comp=Z,104nm,20.0s
C09A  Chrisman Ranch    84.70 328 P       P       13 13 27.1 +0.3
H04D  Lebanon           84.81 323 P       P       13 13 28.6 +1.2
      baz=130
MVO   Moncorvo          84.89  41 eP      P       13 13 28.7 +0.7
      comp=Z,64nm,1.6s
MVO   Moncorvo          84.89  41 eLQ     LQ      13 37 45.0
MVO                               eLR     LR      13 40 48.7
      comp=Z,112nm,16.0s
FCC   Fort Churchill    85.03 346 P       P       13 13 28.2 +0.1
FCC                               pmax    pmax
      comp=Z,28nm,0.5s
FCC   Fort Churchill    85.03 346 P       P       13 13 28.2 +0.1
FCC                               IAmb    IAmb    13 13 29.4
      comp=Z,28nm,0.5s
I02D  Swisshome         85.16 323 P       P       13 13 30.5 +1.4
      baz=129
COR   Corvallis         85.16 323 P       P       13 13 29.6 +0.5
COR                               pmax    pmax
      comp=Z,39nm,1.0s
COR   Corvallis         85.16 323 P       P       13 13 29.6 +0.5
COR                               IAmb    IAmb    13 13 31.5
      comp=Z,39nm,0.9s
PBRG  Braganca          85.45  41 eP      P       13 13 32.7 +2.0
      comp=Z,50nm,1.4s
G03D  McMinnville, O    85.54 324 P       P       13 13 32.1 +1.1
      baz=130
PAB   San Pablo         85.58  43 P       P       13 13 32.0 +0.5
PAB                               pmax    pmax
      comp=Z,36nm,1.0s
PAB   San Pablo         85.58  43 P       P       13 13 32.0 +0.5
PAB                               IAmb    IAmb    13 13 33.8
      comp=Z,36nm,0.9s
PAB   San Pablo         85.58  43 P               13 13 32.5
B08A  Colville Reser    85.60 328 P       P       13 13 31.2  -0.1
LON   Longmire          85.77 326 P       P       13 13 32.3 +0.1
LON                               pmax    pmax
      comp=Z,8.0nm,0.9s
LON   Longmire          85.77 326 P       P       13 13 32.3 +0.1
ESDC  Sonseca Array     85.90  43 P       P       13 13 33.9 +0.9
      comp=Z,13nm,1.0s,baz=233,slow=5.4,SNR=47
ESDC                              pP      pP      13 14 24.4 +1.3
      comp=Z,4.0nm,1.1s,baz=252,slow=4.4,SNR=2.8
ESDC                              LR      LR      13 49 40.2
      comp=Z,114nm,20.9s,baz=235,slow=34
ESDC  Sonseca Array     85.90  43 IAmb    IAmb    13 13 35.2
      comp=Z,116nm,1.4s
ESBB  Sonseca Array     85.90  43 P       P       13 13 34.3 +1.3
ESBB                              IAmb    IAmb    13 13 35.5
      comp=Z,41nm,1.2s
F04D  Rainier, OR       85.97 325 P       P       13 13 34.6 +1.6
      baz=130
E04D  Cinebar           86.04 325 P       P       13 13 35.1 +1.7
      baz=130
D05A  Enumclaw          86.15 326 P       P       13 13 35.2 +1.2
D05A                              IAmb    IAmb    13 13 35.3
      comp=Z,27nm,0.9s
E03A  Lebam             86.56 325 P       P       13 13 36.8 +0.9
E03A                              IAmb    IAmb    13 13 38.2
      comp=Z,56nm,1.1s
B06A  Marblemount       86.77 327 P       P       13 13 37.1 +0.2
B05A  Bryant            86.91 327 P       P       13 13 38.0 +0.4
      baz=131,SNR=19
FRB   Frobisher Bay     86.97 359 P       P       13 13 37.4  -0.1
      comp=Z,7.2nm,0.9s,baz=171,slow=4.3,SNR=12
NLWA  Neilton Lookou    87.26 325 P       P       13 13 40.0 +0.6
NLWA                              IAmb    IAmb    13 13 41.2
      comp=Z,20nm,0.9s
A04D  Lummi Island      87.52 327 P       P       13 13 41.5 +1.1
      baz=130,SNR=7.6
PGC   Sidney            87.85 326 P       P       13 13 42.7 +0.7
PGC                               IAmb    IAmb    13 13 44.2
      comp=Z,22nm,0.8s
KEST  Kesra             92.95  52 P       P       13 14 07.4 +1.2
      comp=Z,5.9nm,0.5s,baz=245,slow=0.9,SNR=9.9
KEST                              LR      LR      13 57 15.3
      comp=Z,196nm,19.5s,baz=244,slow=36
YKA   Yellowknife Ar    93.74 340 P       P       13 14 09.5 +0.4
      comp=Z,10nm,0.5s,baz=132,slow=5.3,SNR=245
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YKA				pP	pP	13 15 01.1	+1.2
	comp=Z,3.5nm,0.9s,baz=131,slow=5.2,SNR=2.7						
YKA				PKKPbc	PKKPdf	13 31 12.8	-1.4
	comp=Z,0.3nm,0.4s,baz=335,slow=3.1,SNR=5.5						
YKA				LR	LR	14 01 42.8	
	comp=Z,90nm,18.1s,baz=0.0,slow=39						
RES	Resolute Bay	99.63	353	P	Pdif	13 14 35.8	+0.3
	comp=Z,0.9nm,0.8s,baz=153,slow=4.5,SNR=2.8						
RES	Resolute Bay	99.63	353	IAmb	IAmb	13 14 36.8	
	comp=Z,1.2nm,0.9s						
GERES	GERESS Array B	101.39	42	P	Pdif	13 14 45.3	+1.3
	comp=Z,0.2nm,0.3s,baz=254,slow=7.0,SNR=1.6						
GERES				PKKPbc	PKKPbc	13 30 53.5	-0.1
	comp=Z,0.5nm,0.5s,baz=37,slow=3.3,SNR=4.2						
INK	Inuvik	103.50	339	Pdiff	Pdif	13 14 53.6	+0.8
	comp=Z,0.8nm,0.5s,baz=5.7,slow=1.5,SNR=4.2						
INK				PKKPbc	PKKPbc	13 30 46.6	-1.2
	comp=Z,1.4nm,0.7s,baz=343,slow=3.6,SNR=6.0						
M24K	Tolsona, Glenn	105.70	331	P	PKiKP	13 19 15.0	+0.4
	baz=110						
ILAR	Eielson Array	106.91	334	PKiKP	PKiKP	13 19 16.9	+0.2
	comp=Z,0.3nm,0.7s,baz=162,slow=0.7,SNR=4.4						
ILAR				PP	PP	13 19 35.0	-1.8
	comp=Z,0.9nm,0.9s,baz=118,slow=7.2,SNR=5.5						
ILAR				PKKPbc	PKKPbc	13 30 35.1	-2.3
	comp=Z,0.3nm,0.4s,baz=296,slow=3.0,SNR=4.7						
COLD	Coldfoot	108.93	336	P	PKiKP	13 19 21.4	+1.0
	baz=105						
TOLK	Toolik Lake Re	109.08	337	P	PKiKP	13 19 21.6	+0.8
	baz=106						
AKASG	Malin Array Be	111.54	43	PKiKP	PKiKP	13 19 25.5	-0.3
	comp=Z,0.8nm,0.4s,baz=270,slow=2.5,SNR=7.2						
AKASG				PKKPbc	PKKPbc	13 30 21.1	-0.9
	comp=Z,0.5nm,0.4s,baz=66,slow=4.4,SNR=5.1						
AKASG				PKKPab	PKKPab	13 30 30.6	+1.4
	comp=Z,3.1nm,0.9s,baz=66,slow=4.5,SNR=5.1						
AKASG	Malin Array Be	111.54	43	i PKIKP	PKiKP	13 19 25.7	-0.1
AKASG	Malin Array Be	111.54	43		PKiKP	13 19 25.7	-0.1
FINES	FINESS Array B	111.70	31	PKiKP	PKiKP	13 19 26.9	+1.1
	comp=Z,1.3nm,0.7s,baz=205,slow=2.9,SNR=1.9						
FINES				PKKPbc	PKKPbc	13 30 20.6	-1.2
	comp=Z,1.1nm,0.5s,baz=93,slow=5.3,SNR=13						
FINES				PKKPab	PKKPab	13 30 29.2	+1.2
	comp=Z,1.6nm,0.8s,baz=105,slow=2.2,SNR=4.0						
BRTR	Keskin Array B	112.36	55	PKKPab	PKKPab	13 30 28.4	+2.1
	comp=Z,1.2nm,0.9s,baz=54,slow=6.3,SNR=4.0						
ARCES	ARCESS Array B	112.59	22	PKKPbc	PKKPbc	13 30 17.6	-1.5
	comp=Z,15nm,1.1s,baz=17,slow=5.1,SNR=10						
ARCES				PKKPab	PKKPab	13 30 25.5	+1.6
	comp=Z,4.5nm,0.9s,baz=84,slow=5.0,SNR=3.7						
APA	Apatity	115.38	25	⇓iPKIKP	PKPdf	13 19 27.6	-5.1
APA				i *PP	PP	13 20 17.4	-20
APA				pmax	pmax		
	comp=Z,3.0nm,1.3s						
SOC	Sochi	117.51	52	i PKIKP	PKPdf	13 19 36.6	-0.9
SOC				e		13 20 53.9	
SOC				ePPP	PPP	13 23 20.2	
SOC				e		13 26 13.7	
SOC				ePS	PKKPdf	13 30 33.8	+4.8
SOC				eSS	SS	13 36 49.0	+0.5
SOC				eSSS	SSS	13 41 16.6	
LPSR	Galich'ya Gora	117.77	42	ePKIKP	PKPdf	13 19 37.1	-0.6
LPSR				pmax	pmax		
	comp=Z,9.0nm,0.6s						
VSR	Storozhevoye	117.84	43	ePKIKP	PKPdf	13 19 36.6	-1.3
VSR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KLMR	Klimovskoe	118.16	32	ePKIKP	PKPdf	13 19 37.3	-0.9
KLMR				pmax	pmax		
	comp=Z,13nm,1.0s						
KLMR	Klimovskoe	118.16	32	ePKPdf	PKPdf	13 19 37.3	-0.9
KLMR				AMP		13 19 38.9	
	comp=Z,13nm,1.0s						
VRH	Novokhopyorsk	119.44	43	ePKIKP	PKPdf	13 19 40.2	-0.7
VRH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KIV	Kislovodsk	119.69	52	i PKIKP	PKiKP	13 19 42.4	+0.5
KIV				pmax	pmax		
	comp=Z,18nm,1.1s						
KBZ	Khabaz	119.82	52	PKP	PKiKP	13 19 42.8	+0.8
	comp=Z,6.5nm,0.9s,baz=171,slow=0.8,SNR=9.6						
BELG	Belogornoye	123.08	42	i PKIKP	PKPdf	13 19 48.0	+0.1
ARU	Arti	128.67	35	PKP	PKiKP	13 19 59.7	+0.6
	comp=Z,2.2nm,0.5s,baz=318,slow=1.9,SNR=11						
ARU				SKPbc	SKPbc	13 23 01.2	
	comp=Z,1.1nm,0.5s,baz=236,slow=4.4,SNR=7.5						
ARU	Arti	128.67	35	i PKIKP	PKPdf	13 19 58.5	0.0
ARU						13 22 03.7	
ARU						13 26 54.0	
AS31	Alice Springs	128.99	205	PKPdf	PKPdf	13 19 59.4	-0.9
ASAR	Alice Springs	128.99	205	PKP	PKPdf	13 20 00.3	0.0
	comp=Z,10nm,0.8s,baz=153,slow=2.3,SNR=64						
ASAR				pPKP	pPKPdf	13 20 54.9	+1.6
	comp=Z,4.2nm,0.8s,baz=77,slow=2.4,SNR=4.0						
ASAR				SKPbc	SKPbc	13 23 02.6	
	comp=Z,1.3nm,0.8s,baz=144,slow=4.0,SNR=3.0						
ASAR	Alice Springs	128.99	205	PKPdf	PKPdf	13 19 59.7	-0.6
AKTO	Aktyubinsk	129.79	43	PKP	PKiKP	13 20 02.2	+0.6
	comp=Z,6.2nm,0.8s,baz=338,slow=1.9,SNR=19						
AKTO				SKPbc	SKPbc	13 23 05.8	+1.4
	comp=Z,12nm,0.8s,baz=291,slow=3.3,SNR=22						
TIXI	Tiksi	131.01	354	PKIKP	PKiKP	13 20 03.0	-0.5
TIXI	Tiksi	131.01	354	PKPdf	PKiKP	13 20 03.0	-0.5
GEYT	Alibeck	131.15	59	PKP	PKPdf	13 20 03.8	-0.1
	comp=Z,1.3nm,0.5s,baz=242,slow=9.4,SNR=2.3						
GEYT				SKPbc	SKPab	13 23 11.1	+0.6
	comp=Z,6.3nm,0.8s,baz=266,slow=4.5,SNR=11						
ABKAR	Akbulak array	131.24	44	PKPdf	PKPdf	13 20 04.0	+0.3
ABKAR	Akbulak array	131.24	44	PKPdf	PKiKP	13 20 04.2	-0.4
NRIK	Noril'sk	131.64	12	PKP	PKiKP	13 20 05.0	+0.2
	comp=Z,1.1nm,0.3s,baz=44,slow=4.9,SNR=4.5						
NRIK				SKPbc	SKPab	13 23 11.4	0.0
	comp=Z,2.9nm,0.6s,baz=334,slow=2.2,SNR=7.7						
WB2	Warramunga Arr	132.15	207	PKPdf	PKPdf	13 20 06.1	-0.2
WRA	Warramunga Arr	132.15	207	PKhKP	PKPpre	13 19 45.3	
	comp=Z,0.4nm,0.3s,baz=160,slow=2.4,SNR=15						
WRA				PKP	PKPdf	13 20 06.7	+0.4
	comp=Z,6.6nm,0.5s,baz=156,slow=1.7,SNR=41						
WRA				pPKP	pPKPdf	13 21 01.1	+1.8
	comp=Z,4.2nm,0.9s,baz=162,slow=1.5,SNR=3.5						
WRA				SKPbc	SKPab	13 23 14.9	-0.4
	comp=Z,6.0nm,0.6s,baz=155,slow=3.7,SNR=23						
WRAB	Tennant Creek	132.16	207	PKIKP	PKPdf	13 20 06.0	-0.3
WRAB	Tennant Creek	132.16	207		PKPdf	13 20 06.0	-0.3
WB0	Warramunga Arr	132.29	207		PKPdf	13 20 05.6	-1.0
SEY	Seymchan	132.71	337	PKP	PKiKP	13 20 07.1	0.0
	comp=Z,8.1nm,0.6s,baz=49,slow=1.6,SNR=17						
SEY				SKPbc	SKPbc	13 23 15.3	+0.7
	comp=Z,4.0nm,0.7s,baz=66,slow=2.4,SNR=7.9						
PETK	Petropavlovsk-	135.34	323	PKhKP	PKPpre	13 20 04.1	
	comp=Z,2.4nm,0.5s,baz=66,slow=1.2,SNR=14						
PETK				PKP	PKiKP	13 20 12.5	-0.3
	comp=Z,4.4nm,0.4s,baz=77,slow=3.0,SNR=22						
PETK				SKPbc	SKPbc	13 23 24.6	+1.2
	comp=Z,12nm,0.8s,baz=79,slow=3.2,SNR=8.9						
MA2	Magadan	135.39	334	SKPbc	SKPbc	13 23 23.4	0.0
	comp=Z,7.5nm,0.8s,baz=115,slow=3.7,SNR=5.1						
BRVK	Borovoye	136.21	36	PKIKP	PKiKP	13 20 13.8	-0.7
BRVK	Borovoye	136.21	36	PKPdf	PKiKP	13 20 13.8	-0.7
BVAR	Borovoye Array	136.28	36	PKP	PKiKP	13 20 14.0	-0.7
	comp=Z,1.6nm,0.6s,baz=352,slow=9.3,SNR=14						
BVAR				SKPbc	SKPbc	13 23 27.4	+1.0
	comp=Z,0.8nm,0.5s,baz=357,slow=5.8,SNR=6.7						
BRZS	Berezniki	138.87	40	ePKP	PKPdf	13 20 18.4	+0.5
	baz=40						
BRZS	Berezniki	138.87	40	ePKIKP	PKPdf	13 20 18.3	+0.5
IUG	Iuzhnay	139.72	52	ePKP	PKPdf	13 20 20.0	+0.2
	baz=52						
IUG	Iuzhnay	139.72	52	ePKIKP	PKPdf	13 20 20.0	+0.2
KKAR	Karatay Array	139.82	50	PKIKP	PKPdf	13 20 20.0	+0.2
KKAR	Karatay Array	139.82	50	PKPdf	PKPdf	13 20 20.0	+0.2
YAK	Yakutsk	139.89	348	PKP	PKPdf	13 20 20.0	+0.7
	comp=Z,6.4nm,0.6s,baz=239,slow=0.5,SNR=5.5						
DZA	Taraz	140.46	50	ePKP	PKPdf	13 20 21.7	+0.7
	baz=51						
DZA	Taraz	140.46	50	ePKIKP	PKPdf	13 20 21.7	+0.7
BTLS	Baital	141.65	46	ePKP	PKPdf	13 20 23.8	+0.8
	baz=47						
BTLS	Baital	141.65	46	ePKIKP	PKPdf	13 20 23.8	+0.8
KURK	Kurchatov	141.86	36	PKIKP	PKiKP	13 20 24.7	-1.4
KURK	Kurchatov	141.86	36	PKPdf	PKPdf	13 20 23.9	+0.7
KURBB	Kurchatov Arra	141.86	36	PKhKP	PKPpre	13 20 19.6	
	comp=Z,2.3nm,0.8s,baz=302,slow=3.2,SNR=19						
KURBB				PKP	PKiKP	13 20 24.7	-1.4
	comp=Z,5.3nm,0.7s,baz=305,slow=2.6,SNR=21						
KURBB				SKPbc	SKiKP	13 23 43.3	-0.1
	comp=Z,2.2nm,0.6s,baz=305,slow=3.1,SNR=11						
EKS2	Erkin-Say	142.25	50	P	PKiKP	13 20 26.1	-1.4
	SNR=6.1						
AML	Almayashu	142.35	51	P	PKiKP	13 20 26.9	-1.1
	SNR=5.9						
AAK	Ala-Archa	142.76	50	PKhKP	PKPpre	13 20 23.8	
	comp=Z,4.8nm,0.7s,baz=172,slow=2.8,SNR=12						
AAK				SKPbc	SKiKP	13 23 45.6	-0.2
	comp=Z,2.9nm,0.6s,baz=227,slow=4.7,SNR=6.8						
AAK	Ala-Archa	142.76	50	PKPdf	PKPdf	13 20 23.5	-1.8
ZALV	Zalesovo Beam	142.87	28	PKhKP	PKPpre	13 20 22.8	
	comp=Z,7.4nm,0.4s,baz=309,slow=3.9,SNR=24						
ZALV				SKPbc	SKiKP	13 23 45.2	-0.1
	comp=Z,5.7nm,0.6s,baz=314,slow=3.9,SNR=4.8						
UCH	Uchtor	142.90	50	P	PKPdf	13 20 24.6	-1.4
	SNR=7.5						
KBK	Karagaybulak	143.07	50	P	PKPdf	13 20 24.9	-1.0
	SNR=8.7						
TKM2	Tokmak 2	143.44	49	P	PKPdf	13 20 25.6	-1.0
	SNR=7.3						
NIL	Nilore	143.67	65	PKIKP	PKPbc	13 20 25.0	-0.1
NIL	Nilore	143.67	65	PKPdf	PKPbc	13 20 25.0	-0.1
MTBS	Maitube	143.94	48	ePKP	PKPdf	13 20 28.1	+0.9
	baz=48						
MTBS	Maitube	143.94	48	ePKIKP	PKPdf	13 20 28.1	+0.9
CHKK	Chushkaly	144.05	47	ePKP	PKPdf	13 20 27.7	+0.4
	baz=47						
CHKK	Chushkaly	144.05	47	ePKIKP	PKPdf	13 20 27.7	+0.4
SAUI	Saumlaki	144.06	212	PKPdf	PKPdf	13 20 27.6	-0.7
SAUI	Saumlaki	144.06	212	PKP	PKPdf	13 20 28.5	+0.3
ULHL	Ulahol	144.11	50	P	PKPdf	13 20 28.5	+0.8
	SNR=20						
AAA	Alma-Ata	144.24	48	ePKP	PKPdf	13 20 27.8	0.0
	baz=48						
AAA	Alma-Ata	144.24	48	ePKIKP	PKPdf	13 20 27.7	0.0
TNSS	Tian-Shan	144.32	48	ePKP	PKPdf	13 20 28.1	-0.3
	baz=48						
TNSS	Tian-Shan	144.32	48	ePKIKP	PKPdf	13 20 28.0	-0.3
MDOK	Medeo	144.35	48	ePKP	PKPbc	13 20 27.3	+0.3
	baz=48						
MDOK	Medeo	144.35	48	ePKIKP	PKPbc	13 20 27.3	+0.3
TYV	Tymovskoe	144.44	328	ePKIKP	PKPdf	13 20 27.9	+0.2
TYV				pmax	pmax		
	comp=Z,29nm,0.8s						
TYV				pmax	pmax		
	comp=Z,500nm,2.7s						
TDK	Taldyqorghan	144.51	44	ePKP	PKPdf	13 20 28.5	+0.4
	baz=45						
TDK	Taldyqorghan	144.51	44	ePKIKP	PKPdf	13 20 28.5	+0.4
KUR	Kuril'sk	144.52	316	i PKIKP	PKiKP	13 20 33.2	+1.4
SMPI	Sarmi	144.53	228	PKP	PKPdf	13 20 29.0	-0.1
KSH	Kashi	144.75	54	PKPbc	PKPdf	13 20 29.0	+0.2
KSH				PP	PP	13 23 47.4	-0.8
KSH				PKS	PKSdf	13 24 06.8	+2.4
KSH				AMB	AMB		
	comp=Z,200nm,5.1s						
BATI	Baumata	144.97	198	PKP	PKPdf	13 20 30.9	+1.1
SOEI	Soe	145.22	199		PKPab	13 20 31.1	+0.5
SOEI	Soe	145.22	199	PKP	PKPab	13 20 31.9	+1.3
SATY	Saty	145.31	47	ePKP	PKPdf	13 20 29.5	-0.3
	baz=48						
SATY	Saty	145.31	47	ePKIKP	PKPdf	13 20 29.4	-0.3
KPKS	Kokpek	145.33	47	ePKP	PKPbc	13 20 29.8	-0.1
	baz=47						
KPKS	Kokpek	145.33	47	ePKP2	PKPbc	13 20 29.8	-0.1
XMIS	Christmas Isla	145.42	167		PKPdf	13 20 30.6	+0.1
UZB	Uzynbulak	145.69	47	ePKP	PKPbc	13 20 30.8	-0.4
	baz=47						
UZB	Uzynbulak	145.69	47	ePKP2	PKPbc	13 20 30.7	-0.4
BASI	Baing, Sumba	145.72	193	PKP	PKPab	13 20 32.9	+0.6
MAKZ	Makanchi	145.83	39	PKP2	PKPbc	13 20 30.9	-0.4
MAKZ	Makanchi	145.83	39	PKPbc	PKPbc	13 20 30.9	-0.4
MK31	Makanchi Array	146.02	39	PKP2	PKPbc	13 20 31.4	-0.4
MK31	Makanchi Array	146.02	39	PKPbc	PKPbc	13 20 31.4	-0.4
MKAR	Makanchi Array	146.02	39	PKPbc	PKPbc	13 20 31.6	-0.2
	comp=Z,32nm,0.8s,baz=305,slow=2.4,SNR=162						
MKAR				pPKPbc	pPKPab	13 21 24.4	+0.1
	comp=Z,24nm,1.0s,baz=291,slow=3.4,SNR=4.1						
MKAR				SKPbc	SKiKP	13 23 52.6	+0.4
	comp=Z,4.0nm,0.6s,baz=334,slow=1.7,SNR=4.6						
MKAR	Makanchi Array	146.02	39	PKPbc	PKPbc	13 20 31.4	-0.4
WSI	Waingapu	146.31	193	PKP	PKPab	13 20 34.8	+0.2
DHRM	DHARAMSHALA	146.35	67	eP	PKPdf	13 20 24.5	-7.4
YSS	Yuzh-Sakhalins	146.73	322	ePKP2	PKPbc	13 20 33.3	-0.5
YSS				pmax	pmax		
	comp=Z,50nm,0.7s						
YSS	Yuzh-Sakhalins	146.73	322	PKPbc	PKPbc	13 20 33.2	-0.6
BAKI	Biak	146.86	225	PKP	PKPab	13 20 36.8	-0.1
EDFI	Ende, Flores	146.89	195	PKP	PKPdf	13 20 33.5	+0.3
DGZ	Jazzator, Alta	146.96	31	i PKIKP	PKPdf	13 20 32.6	+0.3
HYB	Hyderabad	147.01	94	i PKP	PKPdf	13 20 34.0	+0.8
HYB	Hyderabad	147.01	94	eP	PKPdf	13 20 24.0	-9.2
HYB				i pP	pPKPbc	13 21 28.0	+0.2
ZSN	Zaisan	147.09	36	ePKP	PKPdf	13 20 33.0	+0.5
	baz=37						
ZSN	Zaisan	147.09	36	ePKIKP	PKPdf	13 20 32.9	+0.5
SMLA	Simla	147.19	69	eP	PKPbc	13 20 35.4	-0.1
SMLA				i pP	pPKPab	13 21 29.9	+0.8
BHPL	Bhopal	147.19	83	eP	PKPdf	13 20 26.2	-7.1
BHPL				i pP	pPKPab	13 21 28.9	-0.4
GRNR	Gornyy	147.37	332	⇓iPKP2	PKiKP	13 20 36.6	-0.9
GRNR				pmax	pmax		
	comp=N,3.0nm,1.0s						
GRNR				pmax	pmax		
	comp=Z,20nm,1.2s						
PLAI	Plampang	147.56	188	PKP	PKPbc	13 20 37.3	+0.3
TWSI	Taliwang, Sumb	147.75	187	PKP	PKPdf	13 20 35.4	+0.9
FAKI	Fak Fak	147.85	218		PKPbc	13 20 36.7	-1.1
FAKI	Fak Fak	147.85	218	PKP	PKPbc	13 20 38.7	+0.8
DDI	Dehra Dun	148.01	70	eP	PKPdf	13 20 27.8	-6.7
ZEA	Zeya	148.01	344	ePKP2	PKPbc	13 20 37.4	+0.4
ZEA				pmax	pmax		
	comp=Z,100nm,1.1s						
NGP	Nagpur	148.34	87	eP	PKPdf	13 20 26.9	-8.3
JKA	Kamikawa-asahi	148.35	318	PKPbc	PKPbc	13 20 38.3	0.0
ASAJ	Asahikawa	148.36	318	PKPbc	PKiKP	13 20 39.1	-0.7
	comp=Z,39nm,0.8s,baz=244,slow=1.2,SNR=43						
UGM	Wanagama	148.66	175	PKP	PKiKP	13 20 40.7	-0.6
CISI	Cisompet, Garu	148.68	170		PKPbc	13 20 39.2	-0.8
CISI	Cisompet, Garu	148.68	170	PKP	PKPbc	13 20 40.0	0.0
LEM	Lembang	149.36	169	PKP	PKPdf	13 20 39.3	+2.0
DBJI	Dramaga	149.46	167	PKP	PKPdf	13 20 37.6	+0.3
KASI	Kota Agung	149.91	162	PKP	PKiKP	13 20 43.9	0.0
SWI	Sorong	150.09	218	PKP	PKiKP	13 20 44.2	0.0
LWLI	Liwa	150.27	161	PKP	PKiKP	13 20 44.5	-0.3
MOY	Mondy	150.35	15	ePKIKP	PKiKP	13 20 44.3	+0.5
MOY				e		13 21 36.3	
MOY				pmax	pmax		
	comp=Z,33nm,1.1s						
KLR	Kul'dur	150.47	335	PKP	PKPdf	13 20 38.4	+0.7
	comp=Z,7.7nm,0.7s,baz=313,slow=2.6,SNR=5.0						
KLR				PKPbc	PKiKP	13 20 43.8	-0.1
	comp=Z,14nm,0.4s,baz=24,slow=2.6,SNR=34						
KLR				pPKPbc	pPKPbc	13 21 35.9	-0.2
	comp=Z,8.1nm,0.9s,baz=349,slow=5.3,SNR=3.1						
KLSI		150.77	162	PKP	PKPbc	13 20 45.2	+0.1
MDSI	Maura Dua	150.81	161	PKP	PKPdf	13 20 39.5	+0.1
WMQ	Urumqi	150.84	40	ePKPbc	PKPdf	13 20 38.3	-0.3
TLY	Talaya	150.92	12	PKPbc	PKiKP	13 20 44.9	+0.1
	comp=Z,6.4nm,0.4s,baz=223,slow=3.3,SNR=9.9						
TLY	Talaya	150.92	12	i PKIKP	PKPdf	13 20 40.3	+1.9
TLY				pmax	pmax		
	comp=Z,26nm,0.8s						
TLY	Talaya	150.92	12		PKPbc	13 20 44.4	+0.1
JTM	Tenmabayashi	150.98	313		PKPbc	13 20 44.5	-0.2
KSI	Kapahiang	151.08	158	PKP	PKiKP	13 20 46.6	+0.2
LHSI	Lahat	151.23	160	PKP	PKiKP	13 20 46.7	+0.1
TEY	Ternei	151.30	324	⇑iPKIKP	PKPbc	13 20 45.5	+0.2
TEY				pmax	pmax		
	comp=N,10.0nm,0.7s						
TEY				pmax	pmax		
	comp=E,10.0nm,0.7s						
TEY				pmax	pmax		
	comp=Z,60nm,0.7s						
BNSI	Bone	151.46	194	PKP	PKiKP	13 20 47.7	+0.6
SANI	Sanana	151.72	208	PKP	PKPdf	13 20 42.5	+1.7
SPSI	Sidrap Palu	151.96	194	PKP	PKiKP	13 20 48.3	+0.2
ZAK	Zakamensk	152.08	14	ePKIKP	PKPdf	13 20 41.6	+1.3
ZAK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
JMM	Marumori	152.43	308		PKPbc	13 20 48.1	0.0
DANN	Dangsing	153.10	73	eP	PKPdf	13 20 43.5	+0.7
	comp=Z,72nm,0.8s						
JYT	Yasato	153.50	305		PKiKP	13 20 50.6	+0.1
GKN	Gorkha	153.90	74	eP	PKPdf	13 20 44.2	+0.5
USRK	Ussuriysk Ar.	154.25	328	PKP	PKPdf	13 20 45.3	+1.8
	comp=Z,3.3nm,0.9s,baz=177,slow=3.6,SNR=4.8						
USRK				PKPbc	PKiKP	13 20 52.5	+0.6
	comp=Z,3.7nm,0.5s,baz=30,slow=3.1,SNR=12						
USRK				PKPab	PKPab	13 21 06.8	+0.2
	comp=Z,2.6nm,0.6s,baz=47,slow=4.2,SNR=4.7						
USRK	Ussuriysk Ar.	154.25	328	PKPdf	PKPdf	13 20 43.1	-0.4
USRK				PKPbc	PKiKP	13 20 52.0	+0.1
USRK				PKPab	PKPab	13 21 07.2	+0.6
KKN	Kakani	154.48	74	eP	PKPdf	13 20 45.7	+1.1
PKIN	Phulchoki	154.59	75	eP	PKPdf	13 20 45.7	+0.8
PKI	Pulchoki	154.60	75	eP	PKPdf	13 20 45.5	+0.5
JHJ	Hachijo jima 2	154.79	298	PKPbc	PKiKP	13 20 53.6	+0.2
	comp=Z,71nm,0.8s,baz=58,slow=9.5,SNR=5.5						
JHJ				PKPab	PKPab	13 21 09.9	+0.5
	comp=Z,55nm,0.8s,baz=50,slow=20,SNR=1.6						
MJAR	Matsushiro Arr	154.85	307	PKPbc	PKiKP	13 20 53.7	+0.3
	comp=Z,5.1nm,0.4s,baz=87,slow=1.4,SNR=21						
MJAR				PKPab	PKPab	13 21 10.2	+0.7
	comp=Z,5.0nm,0.6s,baz=66,slow=4.3,SNR=6.7						
MAJO	Matsushiro	154.85	307	PKIKP	PKPdf	13 20 44.2	-0.4
MAJO						13 21 09.6	
MAJO	Matsushiro	154.85	307	PKPdf	PKPdf	13 20 44.2	-0.4
MAJO					PKiKP	13 20 53.5	0.0
MAJO				PKPab	PKPab	13 21 09.6	+0.1
MAT	Matsushiro	154.85	307	PKP	PKiKP	13 20 53.7	+0.3
BOK	Bokaro	154.97	84	i pP	PKPab	13 21 11.0	+0.6
GUN	Gumba	155.00	74	eP	PKPdf	13 20 46.0	+0.5
RPSI	Rantau Prapat	155.11	144	PKPab	PKPab	13 21 10.2	-0.8
SONM	Songino Array	155.12	11	PKP	PKPdf	13 20 46.2	+1.4
	comp=Z,4.4nm,0.9s,baz=304,slow=1.2,SNR=24						
SONM				PKPbc	PKPab	13 20 54.6	-16
	comp=Z,5.0nm,0.9s,baz=276,slow=1.0,SNR=15						
SONM				PKPab	PKPab	13 21 11.5	+1.1
	comp=Z,4.6nm,0.8s,baz=309,slow=0.9,SNR=5.6						
SONM				pPKPbc	pPKPbc	13 21 45.3	-1.3
	comp=Z,2.7nm,1.0s,baz=345,slow=1.7,SNR=2.0						
SONM	Songino Array	155.12	11	PKPdf	PKPdf	13 20 44.7	-0.1
SONM				PKPbc	PKPab	13 20 54.1	-16
SONM				PKPab	PKPab	13 21 10.9	+0.6
PSI	Prapat	155.19	144	PKP2	PKPab	13 21 10.2	-1.3
RAMN	Ramite	155.69	76	eP	PKPdf	13 20 47.0	+0.7
	comp=Z,20nm,0.6s						
ODAN	Odare	156.40	76	eP	PKPdf	13 20 47.7	+0.4
TAPN	Taplejung	156.66	75	eP	PKPdf	13 20 48.4	+0.7
CN2	Changchun	157.40	336	eP	PKPab	13 21 16.3	-3.8
GTK	Tadong	157.45	75	i pP	PKPab	13 21 22.0	+0.8
DGPR	DIGLIPUR	158.20	115	i pP	PKPab	13 21 25.6	+1.2
SHL	Shillong	160.48	80	PKP2	PKPab	13 21 32.6	-1.9
SHL	Shillong	160.48	80	eP	PKPdf	13 20 44.1	-8.0
SHL				i pP	pPKPdf	13 21 47.2	+1.9
SHL	Shillong	160.48	80	PKPab	PKPab	13 21 32.6	-1.9
GTA	Gaotai	160.49	33	PKP	PKPdf	13 20 52.5	+0.9
GTA				PKPab	PKPab	13 21 35.4	+1.5
GTA				pPKP	pPKPdf	13 21 48.5	+3.6
GTA				PP	PP	13 25 22.2	+5.8
GTA				AMB	AMB		
	comp=Z,180nm,5.5s						
KSRS	Korea Array	161.23	321	PKP	PKPdf	13 20 54.1	+1.9
	comp=Z,4.9nm,1.0s,baz=93,slow=1.3,SNR=12						
KSRS				PKPab	PKPab	13 21 38.2	+1.2
	comp=Z,2.7nm,0.9s,baz=4.4,slow=5.9,SNR=8.6						
KSRS				pPKPab	pPKPab	13 22 29.1	+1.2
	comp=Z,2.1nm,0.8s,baz=40,slow=4.4,SNR=2.4						
TEZP	TEZPUR	161.24	76	i pP	PKPab	13 21 47.8	+10
KSAR	Wonju Array Be	161.26	321	PKIKP	PKPdf	13 20 51.4	-0.9
KSAR						13 21 37.7	
KSAR	Wonju Array Be	161.26	321		PKPdf	13 20 51.4	-0.9
KSAR					PKPab	13 21 37.7	+0.6
SAIH	SAIHA	161.34	89	eP	PKPdf	13 20 54.3	+1.3
SAIH				i pP	pPKPdf	13 21 47.5	+1.1
KOHI	KOHIMA	162.48	79	eP	PKPdf	13 20 46.7	-7.4
KOHI				i pP	pPKPdf	13 21 49.5	+2.1
HHC	Hu-ho-hao-te	162.65	4	ePKP	PKPdf	13 20 49.3	-4.5
HHC				SS	SS	13 45 30.2	-2.3
DL2	Dalian	163.06	337	PKP	PKPdf	13 20 46.7	-7.4
DL2				pPKP	PKPab	13 21 45.3	+0.4
DL2				PP	PP	13 25 28.2	-1.4
UMPA	Umpang Tak	164.67	116	P	PKPdf	13 20 58.0	+1.8
	comp=Z,15nm,0.9s						
MHMT	Maesarieng	164.76	108	P	PKPdf	13 20 56.8	+0.6
MHMT	Maesarieng	164.76	108	P	PKPab	13 21 53.2	+0.1
	comp=Z,0.2nmcomp=Z,974nmcomp=Z,72nm,1.2s						
LZH	Lanzhou	165.07	31	ePKP	PKPdf	13 20 57.8	+1.6
LZH				SKKS		13 32 08.1	
LZH				SS	SS	13 46 02.0	+3.6
LZH				AMB	AMB		
	comp=Z,240nm,7.0s						
CM13	Chiang Mai Arr	165.71	108	P	PKPdf	13 20 59.0	+2.0
	comp=Z,214nmcomp=Z,3.0nm,0.4s						
CM13	Chiang Mai Arr	165.71	108	P	PKPab	13 21 58.3	+1.0
	comp=Z,214nmcomp=Z,18nm,1.3s						
CM05	Chiang Mai Arr	165.73	108	P	PKPdf	13 20 59.0	+2.0
	comp=Z,202nmcomp=Z,4.4nm,1.0s						
CM05	Chiang Mai Arr	165.73	108	P	PKPab	13 21 58.2	+0.8
	comp=Z,203nmcomp=Z,18nm,1.2s						
CM15	Chiang Mai Arr	165.73	108	P	PKPdf	13 20 59.0	+1.9
	comp=Z,229nmcomp=Z,6.0nm,0.8s						
CM15	Chiang Mai Arr	165.73	108	P	PKPab	13 21 58.2	+0.8
	comp=Z,18nm,0.8s						
CM32	Chiang Mai Arr	165.74	107	P	PKPdf	13 20 58.0	+0.9
CM32	Chiang Mai Arr	165.74	107	P	PKPab	13 21 58.0	+0.5
CM02	Chiang Mai Arr	165.75	108	P	PKPdf	13 20 58.0	+0.9
	comp=Z,142nmcomp=Z,4.7nm,0.9s						
CM02	Chiang Mai Arr	165.75	108	P	PKPab	13 21 58.0	+0.6
	comp=Z,200nmcomp=Z,22nm,1.0s						
CM01	Chiang Mai Arr	165.75	108	P	PKPdf	13 20 59.0	+2.0
	comp=Z,242nmcomp=Z,5.4nm,1.1s						
CM01	Chiang Mai Arr	165.75	108	P	PKPab	13 21 58.0	+0.5
	comp=Z,242nmcomp=Z,22nm,1.4s						
CM31	Chiang Mai Arr	165.75	108	P	PKPab	13 21 58.2	+0.7
	comp=Z,7µmcomp=Z,646nm,1.1s						
CM31	Chiang Mai Arr	165.75	108		PKPab	13 21 57.6	+0.1
CMAR	Chiang Mai Arr	165.75	108	PKP	PKPdf	13 20 58.2	+1.1
	comp=Z,3.2nm,0.8s,baz=265,slow=2.5,SNR=21						
CMAR				PKPab	PKPab	13 21 58.1	+0.6
	comp=Z,8.6nm,0.6s,baz=254,slow=4.8,SNR=40						
CMAR				PP	PP	13 25 46.4	+1.1
	comp=Z,0.9nm,0.5s,baz=257,slow=5.9,SNR=5.8						
CMAR	Chiang Mai Arr	165.75	108		PKPdf	13 20 55.1	-2.0
CM04	Chiang Mai Arr	165.76	108	P	PKPdf	13 20 59.0	+2.0
	comp=Z,246nmcomp=Z,5.9nm,1.0s						
CM04	Chiang Mai Arr	165.76	108	P	PKPab	13 21 58.4	+0.8
	comp=Z,276nmcomp=Z,24nm,1.1s						
CM09	Chiang Mai Arr	165.79	108	P	PKPdf	13 20 59.2	+2.1
	comp=Z,235nmcomp=Z,5.8nm,0.9s						
CM09	Chiang Mai Arr	165.79	108	P	PKPab	13 21 58.2	+0.6
	comp=Z,235nmcomp=Z,22nm,0.9s						
SRAK	Srakaew	165.82	130	P	PKPab	13 22 02.0	+4.3
CHTO	Chiang Mai	165.89	107	PKP2	PKPab	13 21 57.3	-0.8
CHTO	Chiang Mai	165.89	107	PKPab	PKPab	13 21 57.3	-0.8
CM33	Chiang Mai Arr	165.89	107	P	PKPdf	13 20 57.0	-0.2
CMMT	Chiang Mai	165.89	107	P	PKPdf	13 20 57.0	-0.2
	comp=Z,2.7nm,1.0s						
CM36	Chiang Mai Arr	165.91	108	P	PKPdf	13 20 58.0	+0.8
LAMP	Lampang	166.38	109	P	PKPab	13 22 01.0	+0.7
	comp=Z,811nmcomp=Z,76nm,1.1s						
UTTA	Uttaradit	166.83	113	P	PKPab	13 22 03.0	+0.8
PAYA	Payao	166.90	106	P	PKPdf	13 21 06.0	+8.0
	comp=Z,339µmcomp=Z,24µm,0.7s						
CD2	Chengdu	168.81	47	PKP	PKPdf	13 20 57.1	-1.9
XAN	Xi'an	168.85	19	PKP	PKPdf	13 20 59.9	+1.0
XAN				PKPab	PKPab	13 22 11.0	+0.4
XAN				SS	SS	13 46 37.8	+2.2
XAN				LR	LR		
	comp=Z,180nm,14.1s						
XAN				LR	LR		
	comp=Z,310nm,16.3s						
XAN				LR	LR		
	comp=Z,230nm,20.6s						
NONG	Nongkai	169.13	118	P	PKPab	13 22 13.6	+1.2
KMI	Kunming	170.31	78	⇓ePKP	PKPdf	13 21 02.3	+2.0
GYA	Guiyang	173.36	62	PKP	PKPdf	13 21 02.3	+0.7
GYA				PKPab	PKPab	13 22 31.9	+0.7
GYA				PP	PP	13 26 22.1	-1.3
GYA				SKKS		13 32 47.4	
GYA				SS	SS	13 47 20.7	-2.1
GYA				AMB	AMB		
	comp=Z,95nm,9.6s						
QIZ	Qiongzhong	174.54	144	PKP	PKPdf	13 21 00.4	-1.6
QIZ				PP	PP	13 26 26.8	-1.1
QIZ				SS	SS	13 47 31.4	-0.5

SOME 11 13:44:26.0, 38°.68N×72°.35E, h5^{km}
NNC 11 13:44:33.5±2.7, 38°.10N×72°.10E, h150^{km}±65^{km}, mb2.9, mpv3.8, Error ellipse: s-maj=32.1km s-min=15.8km az=19.0
ISC 11 13:44:26.7±3.4, 37°.7N±0°.2×72°.1E±0°.1, h35^{km}, n12, σ2^s.02/16, 2C-2D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	Almayashu SNR=41	4.62	15	P	Pn	13 45 36.2	+1.8
IUG	Iuzhnay 5.0nm,0.1s	4.76	341	eP	Pn	13 45 38.7	+2.7
IUG	16nm,0.4s			eS	Sn	13 46 31.1	+1.1
UCH	Uchtor SNR=33	4.91	21	P	Pn	13 45 39.8	+1.4
MRKS	Merke 20nm,0.4s	5.14	9	eP	Pn	13 45 43.2	+1.9
MRKS	9.5nm,0.3s			eS	Sn	13 46 38.8	-0.6
EKS2	Erkin-Say SNR=34	5.14	14	P	Pn	13 45 43.4	+2.1
AAK	Ala-Archa SNR=26	5.28	19	P	Pn	13 45 45.4	+2.0
AAK	Ala-Archa 8.6nm,0.4s	5.28	19	⇓P	Pn	13 45 45.3	+2.0
AAK	3.5nm,0.5s			⇑S	Sn	13 46 42.2	-0.8
ULHL	Ulahol SNR=11	5.55	33	P	Pn	13 45 47.7	+0.7
KK31	Karatay Array 10nm,0.3s,baz=154,slow=11,SNR=152	5.57	348	⇓P	Pn	13 45 49.1	+2.0
KK31	2.6nm,0.3s,baz=172,slow=24,SNR=10			S	Sn	13 46 47.8	-2.1
CHMS	Chumysh SNR=5.2	5.69	20	P	Pn	13 45 50.5	+1.8
TKM2	Tokmak 2 1.9nm,0.5s	5.88	26	⇑P	Pn	13 45 53.4	+1.9
AB31	Akbulak array 0.3nm,0.5s,baz=132,slow=14,SNR=14	14.55	327	P	Pn	13 47 47.4	-2.6

SOME 11 13:45:45.8, 39°.22N×70°.83E, h0^{km}
IDC 11 13:45:49.1±2.0, 38°.53N×70°.00E, h0^{km}, mb3.7/2, mb1 3.6/8, mb1mx3.4/60, mbtmp3.5/8, ML3.1/6, Error ellipse: s-maj=37.9km s-min=16.6km az=146.0
NNC 11 13:45:53.5±3.1, 39°.04N×69°.56E, h0^{km}, mb4.2, mpv3.9, Error ellipse: s-maj=23.4km s-min=15.2km az=9.0
KRNET 11 13:45:55.4±0.1, 39°.08N×69°.93E, mb3.5
ISC 11 13:45:54.5±1.3, 39°.14N±0°.08×69°.85E±0°.05, h13^{km}, n30, σ3^s.60/45, 18C-9D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BTK	Batken baz=35	1.18	39	⇑eP	Pg	13 46 18.5	+1.3
BTK	baz=35			⇑iS	Sn	13 46 34.4	+1.6
TRKS	Terek-Say baz=21	2.58	22	⇑iP	Pb	13 46 40.3	-0.4
TRKS	baz=21			⇑iS	Sb	13 47 13.6	+1.2
OHH	Osh baz=56	2.65	58	⇓iP	Pb	13 46 40.8	-1.0
OHH	baz=56			⇓iS	Sb	13 47 14.6	+0.4
SFK	Sufi-Kurgan baz=70	2.95	72	⇑iP	Pb	13 46 45.5	-1.6
SFK	baz=70			⇑iS	Sb	13 47 21.7	-1.5
IUG	Iuzhnay 76nm,0.2s	3.00	3	eP	Pn	13 46 42.5	+0.6
IUG	382nm,0.6s			eS	Sn	13 47 22.9	+5.1
IUG	Iuzhnay 47nm,0.4s	3.00	3	Pg	Pb	13 46 48.1	+0.2
IUG	182nm,0.8s			Lg	Lg	13 47 33.7	
ARSB	Arslanbob baz=45	3.24	47	⇑iP	Pb	13 46 49.3	-2.6
ARSB	baz=45			⇑iS	Sb	13 47 29.8	-1.5
BRLS	Borolday 28nm,0.3s	3.88	360	eP	Pn	13 46 54.7	+0.8
BRLS	42nm,0.3s			eS	Sn	13 47 44.1	+4.7
BRLS	Borolday 11nm,0.4s	3.88	360	Pg	Pb	13 46 59.8	-3.0
BRLS	42nm,0.3s			Lg	Lg	13 47 53.7	
MNAS	Manas baz=29	3.90	30	⇑iP	Pb	13 46 59.2	-4.0
MNAS	baz=29			⇑iS	Sb	13 47 45.4	-5.0
DZA	Taraz 125nm,0.1s	3.91	16	eP	Pn	13 46 55.9	+1.6
DZA	124nm,0.4s			eS	Sn	13 47 46.3	+6.3
KK31	Karatay Array 2.9nm,0.4s,baz=189,slow=14,SNR=15	3.99	7	⇓Pn	Pn	13 46 59.2	+3.9
KK31	16nm,0.8s,baz=191,slow=17,SNR=5.3			⇑Pg	Pg	13 47 10.9	0.0
KK31	31nm,0.6s,baz=191,slow=26,SNR=11			Lg	Lg	13 48 04.4	
AML	Almayashu baz=42	4.18	43	⇓eP	Pb	13 47 03.1	-5.0
AML	baz=42			⇓eS	Sb	13 47 52.4	-6.2
ARLS	Aral baz=49	4.36	50	⇑iP	Pb	13 47 05.5	-5.5
ARLS	baz=49			⇑iS	Sb	13 47 56.5	-7.0
MRKS	Merke 8.4nm,0.3s	4.41	34	eP	Pn	13 47 00.0	-1.2
MRKS	27nm,0.5s			eS	Sn	13 47 53.9	+1.4
MRKS	Merke 8.4nm,0.3s	4.41	34	Pg	Pn	13 47 04.6	+3.3
MRKS	27nm,0.5s			Lg	Lg	13 48 01.1	
EKS2	Erkin-Say baz=38	4.61	39	⇑iP	Pn	13 47 09.1	+5.2
EKS2	baz=38			⇑iS	Sn	13 48 03.5	+6.2
UCH	Uchtor baz=46	4.70	47	⇓iP	Pn	13 47 10.1	+4.7
UCH	baz=46			⇓iS	Sb	13 48 06.6	-6.9
AAK	Ala-Archa 1.4nm,0.3s,baz=213,slow=10,SNR=5.4	4.96	44	Pn	Pn	13 47 11.6	+2.8
AAK	1.7nm,0.3s,baz=16,slow=22,SNR=6.1			Sn	Sb	13 48 15.1	-5.7
AAK	Ala-Archa 4.4nm,0.5s	4.96	44	⇑Pn	Pn	13 47 12.8	+4.1
AAK	11nm,0.5s			⇓Sn	Sb	13 48 15.2	-5.5
SGDS	Sogindy 7.8nm,0.4s	5.61	38	Pg	Pn	13 47 20.0	+2.4
SGDS	9.1nm,0.6s			Lg	Lg	13 48 28.5	
TKM2	Tokmak 2 4.7nm,0.5s	5.75	47	⇓Pn	Pn	13 47 23.2	+3.4
TKM2	14nm,0.7s			⇑Sn	Sn	13 48 32.6	+6.9
MKAR	Makanchi Array 0.0nm,0.3s,baz=238,slow=15,SNR=3.3	11.88	46	Pn	Pn	13 48 46.3	+2.7
AB31	Akbulak array 0.8nm,0.3s,baz=140,slow=12,SNR=32	12.35	328	⇑Pn	Pn	13 48 49.5	-0.3
KURBB	Kurchatov Arra 0.0nm,0.3s,baz=210,slow=9.7,SNR=1.9	13.01	25	Pn	Pn	13 49 00.6	+1.7
BVAR	Borovoye Array 0.2nm,0.3s,baz=174,slow=17,SNR=8.3	13.89	1	Pn	Pn	13 49 10.8	-0.1
AKTO	Aktyubinsk 0.3nm,0.3s,baz=136,slow=11,SNR=2.4	14.05	327	Pn	Pn	13 49 14.8	+1.7
AKTO	0.1nm,0.3s,baz=71,slow=20,SNR=1.7			Sn	Sn	13 51 46.1	-2.8
ZALV	Zalesovo Beam 0.2nm,0.3s,baz=220,slow=10.0,SNR=4.4	17.98	30	P	Pn	13 50 04.3	+0.4
TORD	Torodi Ar. Bea 0.5nm,0.8s,baz=54,slow=7.3,SNR=1.7	64.92	267	P	P	13 56 31.9	-2.0
YKA	Yellowknife Ar 0.7nm,0.6s,baz=359,slow=5.5,SNR=15	78.65	2	P	P	13 57 55.1	-0.6

IDC 11 13:48:03.5±2.6, 2°.94S×101°.59E, h0^{km}, mb3.6/6, mb1 3.6/6, mb1mx3.3/52, mbtmp3.6/6, MS3.6/1, Ms1 3.6/1, ms1mx2.6/42, Error ellipse: s-maj=127.0km s-min=20.0km az=55.0
DJA 11 13:48:26.5±5.1, 3°S±23°×10°2E±1°4, h200^{km}±45^{km}, M3.6/5, MLv3.6/5
ISC 11 13:48:27.5±1.3, 2°.6S±0°.2×102°.3E±0°.4, h200^{km}, n9, σ0^s.61/9, mb3.3/6, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LHSI	Lahat	1.74	134	P	Pn	13 49 02.7	-0.8
MNAI	Manna	1.87	159	P	Pn	13 49 04.4	-0.4
WRA	Warramunga Arr 0.1nm,0.2s,baz=292,slow=7.8,SNR=7.8	35.73	121	P	P	13 55 07.4	-0.1
ASAR	Alice Springs 0.2nm,0.3s,baz=303,slow=8.0,SNR=8.6	37.07	127	P	P	13 55 19.7	+0.9
ASAR	0.2nm,0.6s,baz=300,slow=2.6,SNR=1.6			PcP	PcP	13 57 35.6	+0.5
JCJ	Chichijima comp=Z,71nm,21.9s,baz=104,slow=35	48.49	50	LR	LR	14 17 01.2	
SONM	Songino Array 0.7nm,0.6s,baz=186,slow=9.3,SNR=5.2	50.36	4	P	P	13 57 04.5	+0.3
MKAR	Makanchi Array 0.9nm,0.6s,baz=157,slow=8.7,SNR=11	52.25	343	P	P	13 57 17.7	-0.5
KURBB	Kurchatov Arra 0.3nm,0.6s,baz=163,slow=6.2,SNR=4.2	56.79	342	P	P	13 57 50.6	-0.1
ZALV	Zalesovo Beam 0.9nm,0.5s,baz=158,slow=5.8,SNR=3.1	58.20	348	P	P	13 58 00.4	-0.2

IDC 11 13:53:47.8±2.8, 4°.07S×126°.93E, h0^{km}, mb3.1/2, mb1 3.3/3, mb1mx3.1/46, mbtmp3.2/3, ML3.2/1, MS2.9/1, Ms1 2.9/1, ms1mx2.3/19, Error ellipse: s-maj=350.0km s-min=29.8km az=65.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong comp=Z,117nm,21.6s,baz=5.0,slow=47	5.38	54	LR	LR	13 58 02.7	
WRA	Warramunga Arr 0.1nm,0.3s,baz=334,slow=13,SNR=5.8	17.35	156	P	P	13 57 52.7	-0.4
ASAR	Alice Springs 0.2nm,0.5s,baz=345,slow=12,SNR=5.3	20.61	162	P	P	13 58 28.3	-0.6
MKAR	Makanchi Array 0.3nm,0.6s,baz=131,slow=5.9,SNR=3.6	64.12	328	P	P	14 04 24.0	0.0

IDC 11 14:04:14.6±1.2, 39°.38N×110°.57E, h0^{km}, mb3.5/5, mb1 3.7/7, mb1mx3.4/53, mbtmp3.6/7, ML3.1/2, Error ellipse: s-maj=25.9km s-min=20.0km az=47.0
ISC 11 14:04:19.1±1.1, 39°.5N±0°.2×110°.6E±0°.1, h35^{km}, n8, σ1^s.40/8, mb3.7/6, Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SONM	Songino Array 0.1nm,0.3s,baz=155,slow=13,SNR=25	8.90	341	Pn	Pn	14 06 24.1	-1.1
SONM	0.2nm,0.3s,baz=158,slow=28,SNR=5.7			Lg	Lg	14 09 03.9	
KSRS	Korea Array 0.1nm,0.3s,baz=295,slow=12,SNR=2.3	13.70	93	Pn	Pn	14 07 29.3	-1.4
MKAR	Makanchi Array 3.2nm,0.9s,baz=98,slow=12,SNR=32	21.86	299	P	P	14 09 08.5	-0.1
ZALV	Zalesovo Beam 0.2nm,0.4s,baz=125,slow=12,SNR=1.5	22.69	318	P	P	14 09 17.7	+0.3
CMAR	Chiang Mai Arr 2.6nm,0.7s,baz=13,slow=10,SNR=25	23.27	209	P	P	14 09 22.8	-0.8
JHJ	Hachijo jima 2 177nm,1.1s,baz=62,slow=5.8,SNR=4.0	24.27	96	P	P	14 09 34.8	+1.8
KURBB	Kurchatov Arra 2.0nm,1.0s,baz=106,slow=9.5,SNR=9.2	25.08	307	P	P	14 09 41.0	+0.9
YKA	Yellowknife Ar 0.2nm,0.6s,baz=315,slow=4.5,SNR=3.8	72.07	20	P	P	14 15 40.5	+1.3

NEIC 11 14:05:23.8±1.1, 53°.1N±0°.1×172°.6E±0°.1, h7^{km}±6^{km}, mb4.4/8, Error ellipse: s-maj=18.6km s-min=4.2km az=208.0
IDC 11 14:05:29.2±3.8, 53°.08N×172°.22E, h47^{km}±37^{km}, mb3.2/7, mb1 3.6/9, mb1mx3.3/62, mbtmp3.5/9, ML2.9/1, Error ellipse: s-maj=69.4km s-min=18.7km az=3.0
ISC 11 14:05:26.7±0.8, 53°.0N±0°.2×172°.39E±0°.06, h28^{km}, n28, σ0^s.93/23, mb3.7/11, Near Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMY	Shemya	1.08	106		Pn	14 05 44.6	-1.3
SMY				Sn	Sn	14 05 59.1	-0.7
PEA0B	Petropavlovsk-	8.85	276	Pn	Pn	14 07 33.0	+0.5
PETK	Petropavlovsk- 0.6nm,0.3s,baz=90,slow=17,SNR=14	8.85	276	P	Pn	14 07 33.4	+0.8
PETK	2.2nm,0.3s,baz=92,slow=17,SNR=13			S	Sn	14 09 10.2	-1.1
PETK	Petropavlovsk-	8.85	276	Pn	Pn	14 07 33.2	+0.6
SEY	Seymchan baz=131,slow=16,SNR=2.0	14.46	321	P	Pn	14 08 48.9	-0.2
TTA	Tatalina	19.25	47	P	P	14 09 46.9	-1.7
OHAK	Old Harbor	19.93	64	Pn	P	14 09 56.0	+0.1
USA0B	Ussuriysk Arra	27.81	268	P	P	14 11 13.9	+0.8
USA0B	comp=Z,13nm,1.5s			IAmb	IAmb	14 11 18.7	
H11N2	WAKE ISLAND Hy baz=5.5,slow=76,SNR=634	33.51	189	T	T	14 47 22.7	
H11N3	WAKE ISLAND Hy baz=5.5,slow=76,SNR=622	33.52	189	T	T	14 47 23.7	
H11N1	WAKE ISLAND Hy baz=5.5,slow=76,SNR=729	33.53	189	T	T	14 47 24.2	
H11S1	WAKE ISLAND Hy baz=5.4,slow=76,SNR=952	34.74	190	T	T	14 48 52.3	
H11S3	WAKE ISLAND Hy baz=5.4,slow=76,SNR=657	34.76	190	T	T	14 49 06.6	
H11S2	WAKE ISLAND Hy baz=5.4,slow=76,SNR=301	34.76	189	T	T	14 49 07.9	
YKA	Yellowknife Ar comp=Z,0.4nm,0.6s,baz=293,slow=7.3,SNR=4.0	38.01	46	P	P	14 12 42.9	+1.1
SONM	Songino Array comp=Z,0.3nm,0.6s,baz=54,slow=7.3,SNR=1.8	41.02	290	P	P	14 13 07.5	+0.3
NVAR	Mina Array Bea comp=Z,0.5nm,0.8s,baz=281,slow=9.1,SNR=3.3	48.62	78	P	P	14 14 08.4	+0.5
FCC	Fort Churchill	48.63	44	P	P	14 14 08.2	+0.9
FCC	comp=Z,5.0nm,1.2s			IAmb	IAmb	14 14 33.0	
PDAR	Pinedale Array comp=Z,0.3nm,0.5s,baz=299,slow=4.3,SNR=4.7	50.85	68	P	P	14 14 25.7	+0.8
PSUT	Pine Spring	51.17	75	P	P	14 14 27.6	+0.3
KURK	Kurchatov	53.84	308	P	P	14 14 46.9	+0.3
KURK	Kurchatov comp=Z,2.2nm,0.8s	53.84	308	IAmb	IAmb	14 14 46.9	
KURBB	Kurchatov Arra comp=Z,1.0nm,0.7s,baz=48,slow=7.2,SNR=9.9	53.95	308	P	P	14 14 46.9	-0.5
PV17	East Wray Mesa	54.18	72	P	P	14 14 50.5	+1.0
PV17	comp=Z,2.8nm,0.6s			IAmb	IAmb	14 14 50.9	
MKAR	Makanchi Array comp=Z,0.3nm,0.7s,baz=54,slow=6.2,SNR=3.9	54.66	303	P	P	14 14 51.5	-1.2
KEV	Kevo	54.96	346	P	P	14 14 52.9	-1.6
ABKAR	Akbulak array	63.19	317	P	P	14 15 51.7	-0.1
TXAR	Lajitas Array comp=Z,0.4nm,0.6s,baz=303,slow=3.9,SNR=6.9	63.63	76	P	P	14 15 56.1	+1.0

IDC 11 14:05:41.2±2.8, 3°.66S×129°.91E, h0^{km}, mb3.0/2, mb1 3.3/3, mb1mx3.1/46, mbtmp3.1/3, ML2.7/1, MS3.6/1, Ms1 3.6/1, ms1mx2.7/18, Error ellipse: s-maj=188.1km s-min=31.4km az=70.0, Seram

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr 0.0nm,0.3s,baz=349,slow=14,SNR=1.6	16.75	165	Pn	P	14 09 39.2	-0.6
ASAR	Alice Springs 0.2nm,0.4s,baz=349,slow=11,SNR=7.0	20.26	169	P	P	14 10 17.7	-0.8
CTA	Charters Tower comp=Z,161nm,20.3s,baz=19,slow=38	22.81	137	LR	LR	14 20 17.4	
MKAR	Makanchi Array 0.4nm,1.0s,baz=125,slow=8.8,SNR=1.9	65.41	326	P	P	14 16 25.9	0.0

IDC 11 14:14:24.6±3.2, 11°.73N×127°.34E, h0^{km}, mb3.6/4, mb1 3.7/4, mb1mx3.4/40, mbtmp3.6/4, MS2.7/1, Ms1 2.7/1, ms1mx2.4/36, Error ellipse: s-maj=242.2km s-min=25.0km az=65.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	Davao City (W) comp=Z,85nm,19.7s,baz=172,slow=40	4.95	201	LR	LR	14 17 44.0	
WRA	Warramunga Arr 0.2nm,0.6s,baz=350,slow=9.2,SNR=1.7	32.22	168	P	P	14 20 54.8	0.0
ASAR	Alice Springs 0.1nm,0.3s,baz=354,slow=7.5,SNR=12	35.76	170	P	P	14 21 24.9	-0.6
STKA	Stephens Creek 2.7nm,1.0s,baz=344,slow=15,SNR=2.8	45.46	163	P	P	14 22 46.2	+0.6
MKAR	Makanchi Array 0.7nm,0.7s,baz=115,slow=8.3,SNR=9.6	51.53	322	P	P	14 23 32.2	-0.1

IDC 11 14:15:03.5±3.2, 14°.55S×174°.26W, h0^{km}, mb3.7/4, mb1 4.0/4, mb1mx3.7/36, mbtmp3.7/4, Error ellipse: s-maj=188.2km s-min=28.1km az=146.0
NEIC 11 14:15:07.5±1.7, 14°.60S±0°.07×174°.1W±0°.2, h35^{km}±2^{km}, mb4.5/3, Error ellipse: s-maj=27.7km s-min=11.9km az=94.0
ISC 11 14:15:07.3±1.1, 14°.7S±0°.3×174°.1W±0°.2, h35^{km}, n10, σ1^s.16/9, mb3.8/6, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	2.39	71		Pn	14 15 35.5	-8.6
PPTF	Pamatai, Papee	23.73	100	P	P	14 20 15.6	-0.9
PPTF	comp=Z,77nm,1.3s			IAmb	IAmb	14 20 38.8	
WRA	Warramunga Arr comp=Z,0.6nm,0.9s,baz=94,slow=7.2,SNR=5.2	49.35	256	P	P	14 23 54.7	+1.0
AS31	Alice Springs	49.69	251	P	P	14 23 56.2	0.0
AS31	comp=Z,1.2nm,0.9s			IAmb	IAmb	14 24 02.8	
ASAR	Alice Springs comp=Z,1.7nm,0.7s,baz=86,slow=8.2,SNR=26	49.69	251	P	P	14 23 56.4	+0.1
AMKA	Amchitka	66.06	355	P	P	14 25 50.3	-0.1
MJAR	Matsushiro Arr	67.98	320	P	P	14 26 01.6	-1.5
NVAR	Mina Array Bea comp=Z,0.5nm,0.7s,baz=222,slow=9.4,SNR=4.5	74.27	42	P	P	14 26 43.3	+1.9
NVAR	Mina Array Bea	74.27	42	P	P	14 26 41.3	-0.1
ILAR	Eielson Array comp=Z,0.4nm,0.9s,baz=202,slow=6.8,SNR=2.0	81.91	11	P	P	14 27 23.3	+0.5

IDC 11 14:32:14.9±0.7, 0°.97N×98°.11E, h0^{km}, mb4.4/16, mb1 4.4/17, mb1mx4.2/38, mbtmp4.3/17, ML4.3/1, MS3.4/13, Ms1 3.5/13, ms1mx3.2/56, Error ellipse: s-maj=22.1km s-min=13.0km az=70.0
BJI 11 14:32:18.9±0.0, 0°.99N×98°.17E, h45^{km}, mB5.1/25, mb4.6/45, Ms4.2/5, Ms7 4.0/5
DJA 11 14:32:18.4±0.5, 1°N±5°×9°8E±°, h10^{km}, M4.6/6, MLv4.6/6
NEIC 11 14:32:20.4±1.9, 1°.12N±0°.07×97°.95E±0°.05, h36^{km}±6^{km}, mb4.7/44, Error ellipse: s-maj=10.1km s-min=5.8km az=203.0
KLM 11 14:32:23, 1°.41N×97°.83E, h41^{km}, mb4.5
ISC 11 14:32:20.0±0.5, 1°.10N±0°.05×98°.05E±0°.05, h32^{km}, n148, σ1^s.13/141, mb4.6/42, MS3.5/13, 1C, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSI	Gunungsitoli	0.51	293		Pb	14 32 30.4	-0.4
GSI				Sn	Sb	14 32 36.1	-2.1
GSI	Gunungsitoli	0.51	293	P	Pb	14 32 30.4	-0.4
GSI				S	Sb	14 32 36.8	-1.4
RPSI	Rantau Prapat	1.81	29		Pn	14 32 50.4	+1.5
RPSI	Rantau Prapat	1.81	29	Pn	Pn	14 32 49.9	+0.9
PSI	Prapat 22nm,0.3s,baz=180,slow=9.0,SNR=57	1.90	27	Pn	Pn	14 32 50.4	+0.1
PSI	79nm,0.3s,baz=1.5,slow=2.4,SNR=8.1			Sn	Sn	14 33 15.3	+2.0
TPTI		2.31	338	P	Pn	14 32 56.2	+0.3
TSI	Tuntungan	2.44	12	P	Pn	14 32 59.5	+1.9
BKNI	Bangkinang	3.09	104	Pn	Pn	14 33 09.0	+2.4
LHMI	Lhok Sumawe	4.24	345	Pn	Pn	14 33 22.5	0.0
IPM	Ipoh	4.48	41	Pn	Pn	14 33 26.0	+0.2
IPM	Ipoh	4.48	41	P	Pn	14 33 28.0	+2.2
KULM	Kulim	4.90	32	Pn	Pn	14 33 32.0	+0.4
KULM	Kulim	4.90	32	P	Pn	14 33 34.0	+2.4
MYKOM	Kota Tinggi	5.84	83		Pn	14 33 44.2	-0.2
MYKOM	Kota Tinggi	5.84	83	P	Pn	14 33 42.0	-2.4
PKDT	Phuket 56nm,0.7s	6.75	2	P	Pb	14 34 15.0	-1.7
MNAI	Manna	7.31	138	Pn	Pn	14 34 05.9	+1.2
SBUM	Sibu	14.23	84	Pn	Pn	14 35 40.6	+1.1
UTHA	Uthaitani 10nm,0.8s	14.43	5	P	P	14 35 49.8	+1.2
DLV	T Lat	14.94	43	P	P	14 35 54.5	0.0
CHAI	Chaiyaphum 8.5nm,0.6s	15.21	15	P	P	14 36 07.0	+10
SUKH	Sukhothai	16.35	5	P	P	14 36 20.6	+11
MHMT	Maesarieng 8.7nm,1.0s	16.97	360	P	P	14 36 16.2	-0.5
CM04	Chiang Mai Arr 52nm6.1nm,0.8s	17.21	3	P	Pn	14 36 18.6	+0.4
CM05	Chiang Mai Arr 47nm5.9nm,0.9s	17.21	3	P	Pn	14 36 18.6	+0.4
CM13	Chiang Mai Arr 52nm7.5nm,0.9s	17.23	3	P	Pn	14 36 18.0	-0.4
CM01	Chiang Mai Arr 66nm7.0nm,0.9s	17.23	3	P	P	14 36 20.3	+0.6
CM02	Chiang Mai Arr 55nm7.9nm,0.8s	17.25	3	P	Pn	14 36 19.0	+0.4
CM09	Chiang Mai Arr 58nm8.0nm,0.8s	17.26	3	P	P	14 36 19.8	-0.3
CM15	Chiang Mai Arr 56nm8.1nm,0.8s	17.26	3	P	Pn	14 36 19.2	+0.4
CM31	Chiang Mai Arr 3µm198nm,0.8s	17.27	3	P	P	14 36 20.8	+0.7
CM31	Chiang Mai Arr	17.27	3	Pn	Pn	14 36 16.0	-2.9
CMAR	Chiang Mai Arr 0.4nm,0.3s,baz=195,slow=12,SNR=23	17.27	3	P	Pn	14 36 18.6	-0.4
CMAR	0.2nm,0.3s,baz=198,slow=26,SNR=4.0			S	S	14 39 37.2	-1.2
CMAR	baz=255,slow=1.8,SNR=4.9			PcP	PcP	14 41 02.0	+0.9
CMAR	comp=Z,75nm,19.3s,baz=268,slow=34			LR	LR	14 42 14.0	
CMAR	Chiang Mai Arr	17.27	3	Pn	Pn	14 36 17.1	-1.9
CM36	Chiang Mai Arr	17.34	3	P	P	14 36 21.0	+0.1
LAMP	Lampang	17.38	5	P	P	14 36 32.3	+11
CM32	Chiang Mai Arr	17.46	3	P	P	14 36 22.0	-0.2
CM35	Chiang Mai Arr	17.50	3	P	P	14 36 23.0	+0.3
CHTO	Chiang Mai	17.62	3		Pn	14 36 22.7	-0.6
CMMT	Chiang Mai 4.3nm,0.7s	17.62	3	P	P	14 36 24.1	0.0
CM33	Chiang Mai Arr	17.63	3	P	P	14 36 25.0	+0.9
CM34	Chiang Mai Arr	17.67	3	P	Pn	14 36 24.0	+0.1
PALK	Pallekele comp=Z,142nm,21.3s,baz=216,slow=34	18.35	290	LR	LR	14 42 38.1	
KKM	Kota Kinabalu	18.78	74	P	P	14 36 37.0	+0.1
MYLDM	Lahad Datu	20.81	78		P	14 36 57.6	-1.4
MYLDM	comp=Z,26nm,1.0s			IAmb	IAmb	14 37 22.3	
SLVN	Son La	20.90	15	P	P	14 36 56.3	-3.7
QIZ	Qiongzhong	21.24	32	P	P	14 37 01.9	-1.6
QIZ	comp=Z,52nm,1.4s			IAmb	IAmb	14 37 21.2	
SAIH	SAIHA	21.82	347	eP	P	14 37 09.1	-0.8
KAPI	Kappang comp=Z,151nm,18.1s,baz=262,slow=39	22.52	106	LR	LR	14 46 43.9	
TOLI2	Tolitoli	22.73	90	P	P	14 37 19.1	-0.5
TOLI2	comp=Z,13nm,0.8s			IAmb	IAmb	14 37 19.9	
KMI	Kunming	24.31	10	⇑eP	P	14 37 36.0	+0.9
KMI	comp=Z,8.0nm,0.6s			pmax	pmax		
KOHI	KOHIMA	24.77	351	eP	P	14 37 38.5	-0.7
SHL	Shillong	25.04	347	eP	P	14 37 41.6	-0.1
SHL	comp=Z,13nm,0.5s			IAmb	IAmb	14 37 44.0	
MOKO	MOKOCHONG	25.30	353	eP	P	14 37 43.9	-0.1
BOK	Bokaro	25.45	333	eP	P	14 37 47.2	+1.9
BOK	comp=Z,21nm,0.7s			IAmb	IAmb	14 37 51.2	
TEZP	TEZPUR	25.86	349	eP	P	14 37 48.5	-0.4
TEZP	comp=Z,11nm,0.5s			IAmb	IAmb	14 37 49.8	
ZIRO	ZIRO	26.58	352	eP	P	14 37 54.8	-0.8
H08S2	Diego Garcia H baz=73,slow=76,SNR=28	26.93	251	T	T	15 05 27.7	
H08S3	Diego Garcia H baz=73,slow=76,SNR=128	26.93	251	T	T	15 05 26.2	
H08S1	Diego Carcia H baz=73,slow=76,SNR=6.7	26.95	251	T	T	15 05 27.6	

BATI	Baumata	27.86	114	P	P	14 38 06.6	-0.5
	comp=Z,5.8nm,0.5s,baz=233,slow=10,SNR=1.8						
DAV	Davao City (W)	28.08	77	LR	LR	14 50 06.3	
	comp=Z,85nm,18.5s,baz=333,slow=38						
LSA	Lhasa	29.19	348	P	P	14 38 20.4	+1.2
LSA				pmax	pmax		
	comp=Z,42nm,0.6s						
LSA	Lhasa	29.19	348	P	P	14 38 19.7	+0.5
LSA				IAmb	IAmb	14 38 21.9	
	comp=Z,13nm,0.7s						
YULB	Yu-li	31.62	44	P	P	14 38 40.1	-0.2
YULB				IAmb	IAmb	14 39 00.1	
	comp=Z,17nm,1.2s						
WHN	Wuhan	33.12	26	P	P	14 38 55.3	+2.0
YOJ	Yonaguni jima	33.50	44	P	P	14 38 58.2	+1.5
XAN	Xi'an	34.31	16	P	P	14 39 01.8	-1.9
XAN				pmax	pmax		
	comp=Z,10.0nm,0.9s						
XAN				LR	LR		
	comp=Z,180nm,18.4s						
XAN				LR	LR		
	comp=Z,230nm,22.8s						
FAKI	Fak Fak	34.42	97	P	P	14 39 04.4	-0.5
FAKI				IAmb	IAmb	14 39 16.0	
	comp=Z,21nm,1.3s						
SMLA	Simla	35.82	329	eP	P	14 39 15.8	-0.9
SMLA				IAmb	IAmb	14 39 23.1	
	comp=Z,6.0nm,0.7s						
DHRM	DHARAMSHALA	37.15	329	eP	P	14 39 31.8	+3.4
NWAO	Narrogin (SRO)	38.39	154	LR	LR	14 54 34.8	
	comp=Z,64nm,21.1s,baz=328,slow=35						
NIL	Nilore	39.86	327	P	P	14 39 49.0	-1.9
NIL				IAmb	IAmb	14 39 52.0	
	comp=Z,8.2nm,0.6s						
WB0	Warramunga Arr	41.23	122	P	P	14 40 00.0	-2.4
WRA	Warramunga Arr	41.27	122	P	P	14 40 00.1	-2.5
	comp=Z,1.7nm,0.8s,baz=301,slow=9.1,SNR=19						
WRA				LR	LR	15 00 00.3	
	comp=Z,53nm,18.2s,baz=150,slow=40						
WRAB	Tennant Creek	41.27	122	P	P	14 40 00.6	-2.1
WB2	Warramunga Arr	41.28	122	P	P	14 40 00.6	-2.1
HHC	Hu-ho-hao-te	41.42	16	eP	P	14 40 04.5	+0.8
HHC				pmax	pmax		
	comp=Z,7.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,130nm,5.4s						
HHC				LR	LR		
	comp=Z,190nm,14.5s						
HHC				LR	LR		
	comp=Z,140nm,13.2s						
WR0	Warramunga Arr	41.44	122	P	P	14 40 01.9	-2.2
WR0				IAmb	IAmb	14 40 09.2	
	comp=Z,7.7nm,0.9s						
BJI	Beijing	42.12	21	P	P	14 40 09.7	+0.4
BJI				pmax	pmax		
	comp=Z,3.0nm,0.6s						
FORT	Forrest	42.66	141	P	P	14 40 14.9	+1.1
AS31	Alice Springs	42.66	128	P	P	14 40 12.2	-1.9
ASAR	Alice Springs	42.66	128	P	P	14 40 12.4	-1.6
	comp=Z,0.9nm,0.8s,baz=299,slow=7.7,SNR=13						
ASAR				PcP	PcP	14 42 06.4	+0.6
	comp=Z,1.2nm,0.9s,baz=284,slow=3.6,SNR=5.8						
ASAR				LR	LR	14 59 39.4	
	comp=Z,33nm,19.5s,baz=332,slow=39						
ASAR	Alice Springs	42.66	128	P	P	14 40 12.6	-1.5
WMQ	Urumqi	43.52	349	eP	P	14 40 21.7	+1.0
WMQ				pP	pP	14 40 30.9	+0.8
WSAR	Wadi Sarin	44.11	303	LR	LR	14 58 44.3	
	comp=Z,27nm,19.0s,baz=98,slow=36						
SHLS	Shalkode	45.05	341	eP	P	14 40 31.9	-1.2
	baz=341						
UZB	Uzynbulak	45.19	340	eP	P	14 40 34.0	-0.2
	baz=340						
SATY	Saty	45.32	340	eP	P	14 40 35.8	+0.6
	baz=339						
KSAR	Wonju Array Be	45.42	34	P	P	14 40 35.3	-0.6
KSRS	Korea Array	45.45	34	P	P	14 40 35.9	-0.3
	comp=Z,5.1nm,0.8s,baz=220,slow=8.6,SNR=19						
KSRS				LR	LR	15 02 48.1	
	comp=Z,39nm,18.1s,baz=220,slow=40						
KPKS	Kokpek	45.58	340	eP	P	14 40 37.6	+0.4
	baz=340						
MDOK	Medeo	45.89	339	eP	P	14 40 39.6	-0.2
	baz=338						
MTBS	Maitube	46.09	338	eP	P	14 40 41.6	+0.3
	baz=338						
CHKK	Chushkaly	46.51	339	eP	P	14 40 44.6	+0.1
	baz=339						
JMN	Monobe	46.68	42	P	P	14 40 47.1	+1.1
KUU	Kurty	46.78	338	eP	P	14 40 46.9	+0.3
	baz=338						
JHS	Saijyo	46.94	40	P	P	14 40 48.0	0.0
SONM	Songino Array	47.11	8	P	P	14 40 49.9	+0.7
	comp=Z,3.7nm,0.4s,baz=187,slow=9.3,SNR=50						
SONM				PcP	PcP	14 42 21.1	+0.4
	comp=Z,1.4nm,0.7s,baz=179,slow=3.8,SNR=4.3						
SONM				LR	LR	15 02 35.2	
	comp=Z,85nm,18.0s,baz=68,slow=38						
SONM	Songino Array	47.11	8	P	P	14 40 49.3	+0.1
ULN	Ulaanbaatar	47.23	8	P	P	14 40 50.3	+0.1
ULN				IAmb	IAmb	14 40 51.4	
	comp=Z,4.1nm,0.7s						
MK31	Makanchi Array	47.55	345	P	P	14 40 52.9	+0.4
MK31				IAmb	IAmb	14 40 56.3	
	comp=Z,7.4nm,1.0s						
MKAR	Makanchi Array	47.55	345	P	P	14 40 53.1	+0.6
	comp=Z,4.6nm,0.5s,baz=158,slow=8.3,SNR=90						
MKAR				LR	LR	15 03 02.8	
	comp=Z,50nm,18.1s,baz=258,slow=39						
MKAR	Makanchi Array	47.55	345	P	P	14 40 52.7	+0.2
ZSN	Zaisan	47.57	348	eP	P	14 40 52.5	-0.1
	comp=Z,3.2nm,0.8s,baz=348						
MAKZ	Makanchi	47.64	345	P	P	14 40 53.4	+0.2
MAKZ				IAmb	IAmb	14 40 56.9	
	comp=Z,6.9nm,0.7s						
IUG	Iuzhnay	48.00	332	eP	P	14 40 56.5	+0.4
	baz=332						
KKAR	Karatay Array	48.52	333	P	P	14 41 00.1	0.0
JWT	Wachi	48.61	41	P	P	14 41 00.3	-0.6
BTLS	Baital	48.62	337	eP	P	14 41 01.0	+0.2
	baz=337						
CN2	Changchun	49.01	26	eP	P	14 41 02.9	-0.9
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BBOO	Buckleboo	49.23	137	P	P	14 41 05.5	-0.2
MJB9	Matsu-Tunnel	51.19	42	P	P	14 41 20.8	+0.3
MJAR	Matsushiro Arr	51.19	42	P	P	14 41 19.4	-1.2
	comp=Z,4.1nm,1.1s,baz=206,slow=11,SNR=4.9						
MJAR				LR	LR	15 02 48.1	
	comp=Z,43nm,20.7s,baz=335,slow=36						
MJAR	Matsushiro Arr	51.19	42	IAmb	IAmb	14 41 21.3	
	comp=Z,2.8nm,0.9s						
SEM	Semipalatinsk	51.41	346	eP	P	14 41 22.1	0.0
	baz=345						
KURK	Kurchatov	52.11	344	P	P	14 41 27.3	+0.3
KURK				IAmb	IAmb	14 41 42.1	
	comp=Z,6.5nm,0.9s						
USA0B	Ussuriysk Arra	52.42	30	P	P	14 41 29.1	-0.3
USRK	Ussuriysk Ar.	52.42	30	P	P	14 41 29.7	+0.2
	comp=Z,14nm,0.9s,baz=225,slow=5.6,SNR=24						
USRK				LR	LR	15 04 41.3	
	comp=Z,45nm,18.2s,baz=149,slow=37						
USRK	Ussuriysk Ar.	52.42	30	P	P	14 41 29.0	-0.4
STKA	Stephens Creek	52.66	133	P	P	14 41 30.0	-1.5
	comp=Z,2.5nm,0.8s,baz=285,slow=3.2,SNR=4.7						
STKA	Stephens Creek	52.66	133	P	P	14 41 31.0	-0.5
BRZS	Berezniki	53.29	340	eP	P	14 41 36.1	+0.2
	baz=340						
JMM	Marumori	53.64	42	P	P	14 41 38.4	-0.3
ZAA0	Zalesovo Array	53.79	350	P	P	14 41 39.4	0.0
ZAA0				IAmb	IAmb	14 41 40.5	
	comp=Z,8.2nm,0.6s						
ZALV	Zalesovo Beam	53.79	350	P	P	14 41 39.7	+0.3
	comp=Z,7.8nm,0.5s,baz=264,slow=3.0,SNR=50						
JTM	Tenmabayashi	55.42	39	P	P	14 41 50.9	-0.6
BRVK	Borovoye	56.69	340	P	P	14 42 00.1	-0.2
BRVK				IAmb	IAmb	14 42 10.1	
	comp=Z,8.8nm,1.3s						
EIDS	Eidsvold	57.60	121	P	P	14 42 07.9	+0.6
ABKAR	Akbulak array	58.00	332	P	P	14 42 09.2	-0.4
ABKAR				IAmb	IAmb	14 42 18.5	
	comp=Z,4.7nm,0.9s						
ABKAR	Akbulak array	58.00	332	P	P	14 42 09.2	-0.4
KBZ	Khabaz	64.70	319	P	P	14 42 56.1	+1.0
	comp=Z,0.9nm,0.8s,baz=139,slow=6.4,SNR=1.2						
YAK	Yakutsk	65.28	16	P	P	14 42 57.9	-0.5
NRIK	Noril'sk	68.48	356	P	P	14 43 18.1	-0.7
	comp=Z,3.7nm,0.5s,baz=158,slow=4.3,SNR=7.2						
NRIK	Noril'sk	68.48	356	P	P	14 43 18.0	-0.7
NRIK				IAmb	IAmb	14 43 19.5	
	comp=Z,9.8nm,1.1s						
TIXI	Tiksi	73.14	10	P	P	14 43 45.8	-1.2
TIXI				IAmb	IAmb	14 43 47.2	
	comp=Z,12nm,1.2s						
RPZ	Rata Peaks	78.54	135	P	P	14 44 18.5	+0.1
RPZ				IAmb	IAmb	14 44 23.2	
	comp=Z,17nm,1.2s						
KOLS	Kolonicke sedl	79.84	320	eP	P	14 44 27.5	+2.0
FINES	FINESS Array B	80.48	332	P	P	14 44 29.3	+0.7
	comp=Z,2.9nm,0.7s,baz=94,slow=5.7,SNR=7.7						
ARCES	ARCESS Array B	82.91	340	P	P	14 44 41.8	+0.4
	comp=Z,2.5nm,0.7s,baz=114,slow=5.4,SNR=6.9						
GERES	GERESS Array B	85.44	319	P	P	14 44 55.1	+0.4
	comp=Z,0.8nm,0.8s,baz=64,slow=3.7,SNR=5.7						
CLL	Collm	86.04	321	esP	sP	14 45 14.0	+2.8
NB2	NORSAR Subarra	87.50	331	P	P	14 45 05.3	+0.8
	comp=Z,0.7nm,0.6s,baz=97,slow=4.6						
NOA	NORSAR Array B	87.50	331	P	P	14 45 04.6	+0.1
	comp=Z,1.0nm,0.6s,baz=94,slow=4.9,SNR=4.0						
ULM	Lac du Bonnet	127.47	11	PKP	PKPdf	14 51 21.8	-0.1
	comp=Z,1.4nm,0.6s,baz=63,slow=4.5,SNR=3.3						
NVAR	Mina Array Bea	128.36	36	PKP	PKiKP	14 51 24.9	0.0
	comp=Z,0.6nm,0.7s,baz=238,slow=2.8,SNR=4.9						
TXAR	Lajitas Array	143.30	33	PKhKP	PKPpre	14 51 48.9	
	comp=Z,0.4nm,0.7s,baz=304,slow=0.5,SNR=5.8						
CPUP	Villa Florida	145.50	221	PKPbc	PKPab	14 51 56.7	+0.6
	comp=Z,0.4nm,0.3s,baz=143,slow=4.2,SNR=3.7						

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*DJA **11** 14:48:12.1±0.6, 8°S±5°×12°8E±°, h164^{km}±26^{km}, M3.9/7, mb3.5/4, MLv4.0/7*

*IDC **11** 14:48:19.0±5.7, 8.°42S×127.°69E, h123^{km}±63^{km}, mb3.1/1, mb1 3.3/5, mb1mx3.1/34, mbtmp3.6/5, Error ellipse: s-maj=55.8km s-min=18.4km az=37.0*

ISC 11 14:48:11.6±1.1, **7.°92S**±0.°08×**127.°86E**±0.°08, **h150**^{km}, **n11**, σ**2.**^{s}**03**/13, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	Saumlaki	3.41	91	P	Pn	14 49 09.2	+5.0
BNDI	Bandanaira	3.94	31	P	Pn	14 49 08.8	-2.3
SOEI	Soe	3.99	243	P	Pn	14 49 12.5	+0.6
BATI	Baumata	4.73	241	P	Pn	14 49 22.4	+0.9
	6.6nm,0.3s,baz=136,slow=2.5,SNR=18						
BATI				S	Sn	14 50 14.6	-1.4
	5.1nm,0.3s,baz=1.1,slow=18,SNR=7.2						
BATI	Baumata	4.73	241	P	Pn	14 49 22.0	+0.5
EDFI	Ende, Flores	6.16	262	P	Pn	14 49 40.1	-0.5
	0.1nm3.0nm,1.5s						
FAKI	Fak Fak	6.61	42	P	Pn	14 49 46.3	-0.2
	0.1nm20nm,1.3s						
FITZ	Fitzroy Crossi	10.35	192	P	Pn	14 50 36.1	-0.1
	0.5nm,0.3s,baz=15,slow=11,SNR=28						
FITZ				S	Sn	14 52 28.1	-2.7
	0.4nm,0.3s,baz=171,slow=15,SNR=2.8						
WRA	Warramunga Arr	13.50	153	P	P	14 51 20.9	-0.4
	0.1nm,0.3s,baz=332,slow=13,SNR=7.4						
WRA				S	Sn	14 53 45.6	-1.2
	0.5nm,0.3s,baz=321,slow=26,SNR=9.7						
ASAR	Alice Springs	16.70	160	P	Pn	14 52 01.6	+4.7
	0.2nm,0.3s,baz=340,slow=12,SNR=20						
ASAR				S	Sn	14 55 02.2	-1.4
	0.1nm,0.3s,baz=317,slow=18,SNR=5.9						
MKAR	Makanchi Array	67.85	328	P	P	14 59 06.2	+13
	0.3nm,0.6s,baz=145,slow=6.0,SNR=1.2						

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*BJI **11** 14:48:40.4±0.0, 3.°05S×100.°50E, h73^{km}, mB5.2/19, mb4.6/23*

*NEIC **11** 14:48:45.8±1.8, 2.°32S±0.°08×100.°67E±0.°10, h61^{km}±7^{km}, mb4.6/28, Error ellipse: s-maj=16.2km s-min=9.0km az=52.0*

*DJA **11** 14:48:46.8±0.5, 2°S±4°×10°1E±°, h49^{km}±7^{km}, M4.3/13, mb4.3/7, mB4.9/1, MLv4.4/13, Mw(mB)4.2/1*

*IDC **11** 14:48:48.0±3.7, 2.°20S×100.°91E, h75^{km}±32^{km}, mb3.9/17, mb1 4.1/18, mb1mx3.8/43, mbtmp4.3/18, MS3.2/4, Ms1 3.2/4, ms1mx2.8/53, Error ellipse: s-maj=33.7km s-min=12.1km az=52.0*

ISC 11 14:48:44.5±0.5, **2.°33S**±0.°07×**100.°67E**±0.°08, **h50**^{km}, **n109**, σ**1.**^{s}**64**/104, **mb4.5**/46, **MS3.0**/3, **1C**, **Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PDSI	Padang	1.42	352	P	Pn	14 49 09.3	+1.4
SDSI	Sungai Dareh	1.58	29	P	Pn	14 49 11.8	+1.7
KSI	Kapahiang	2.33	124	P	Pn	14 49 22.6	+2.2
BKNI	Bangkinang	2.66	8	Pn	Pn	14 49 26.9	+2.0
BKNI	Bangkinang	2.66	8	P	Pn	14 49 27.8	+2.9
MNAI	Manna	3.05	132		Pn	14 49 32.4	+2.2
MNAI	Manna	3.05	132	P	Pn	14 49 31.8	+1.6
JMBI	JAMBI	3.05	77	P	Pn	14 49 33.0	+2.8
LHSI	Lahat	3.21	118	P	Pn	14 49 34.6	+2.1
MNSI	Mandailing Nat	3.29	341	P	Pn	14 49 36.4	+2.9
MDSI	Maura Dua	4.11	122	P	Pn	14 49 47.6	+2.9
LWLI	Liwa	4.31	128	P	Pn	14 49 52.3	+4.7
KLSI		4.68	120	P	Pn	14 49 54.4	+1.8
GSI	Gunungsitoli	4.75	319		Pn	14 49 54.9	+1.3
GSI	Gunungsitoli	4.75	319	P	Pn	14 49 55.4	+1.8
KASI	Kota Agung	4.96	130	P	Pn	14 49 58.0	+1.5
MYKOM	Kota Tinggi	5.18	38	Pn	Pn	14 50 01.2	+1.8
RPSI	Rantau Prapat	5.29	341		Pn	14 50 05.8	+4.9
PSI	Prapat	5.38	341	P	Pn	14 50 05.8	+3.4
	1.9nm,0.3s,baz=180,slow=18,SNR=8.8						
TPTI		6.56	328	P	Pn	14 50 21.1	+2.7
	0.1nm12nm,0.5s						
IPM	Ipoh	6.77	3	Pn	Pn	14 50 23.5	+2.2
KULM	Kulim	7.57	360	Pn	Pn	14 50 35.0	+2.7
LEM	Lembang	8.24	123	LR	LR	14 53 59.3	
	comp=Z,106nm,21.5s,baz=242,slow=38						
JAGI	Jajag, Banyuwa	14.74	115	Pn	Pn	14 52 10.2	+0.1
MYLDM	Lahad Datu	19.31	67	P	P	14 53 06.7	+1.1
TOLI2	Tolitoli	20.39	81	P	P	14 53 18.5	+1.1
TOLI2				IAmb	IAmb	14 53 19.5	
	comp=Z,17nm,0.8s						
CM31	Chiang Mai Arr	20.72	355	P	P	14 53 19.3	-1.6
CMAR	Chiang Mai Arr	20.72	355	P	P	14 53 19.8	-1.1
	comp=Z,2.3nm,0.7s,baz=186,slow=10,SNR=18						
CMAR				LR	LR	15 01 00.1	
	comp=Z,55nm,18.5s,baz=201,slow=36						
CMAR	Chiang Mai Arr	20.72	355	P	P	14 53 19.1	-1.8
MRSI	Marisa	21.45	83	P	P	14 53 30.5	+1.8
PALK	Pallekele	22.09	296	LR	LR	15 00 58.1	
	comp=Z,52nm,20.3s,baz=205,slow=33						
KMI	Kunming	27.36	4	⇑eP	P	14 54 34.4	+9.1
KMI				pmax	pmax		
	comp=Z,5.0nm,0.6s						
H08S2	Diego Garcia H	28.55	258	T	T	15 23 40.1	
	baz=81,slow=74,SNR=9.3						
H08S3	Diego Garcia H	28.56	258	T	T	15 23 48.4	
	baz=81,slow=74,SNR=83						
H08S1	Diego Carcia H	28.57	258	T	T	15 23 53.8	
	baz=81						
ODAN	Odare	31.72	337	eP	P	14 55 06.0	+2.0
	comp=Z,43nm,0.6s						
TAPN	Taplejung	32.04	338	eP	P	14 55 09.0	+2.1
	comp=Z,77nm,0.9s						
RAMN	Ramite	32.12	336	eP	P	14 55 09.7	+2.2
	comp=Z,14nm,0.6s						
LSA	Lhasa	33.12	345	P	P	14 55 15.5	-1.0
LSA				IAmb	IAmb	14 55 19.8	
	comp=Z,3.2nm,0.7s						
PKIN	Phulchoki	33.17	335	eP	P	14 55 18.4	+1.7
	comp=Z,9.8nm,0.6s						
GUN	Gumba	33.26	336	eP	P	14 55 19.6	+2.0
	comp=Z,41nm,0.6s						
DMN	Daman	33.33	334	eP	P	14 55 19.9	+1.8
	comp=Z,5.9nm,0.5s						
KKN	Kakani	33.41	335	eP	P	14 55 20.5	+1.8
	comp=Z,9.0nm,0.4s						
GKN	Gorkha	33.87	334	eP	P	14 55 24.5	+1.8
	comp=Z,19nm,0.6s						
DANN	Dangsing	34.56	333	eP	P	14 55 30.6	+1.8
	comp=Z,25nm,0.4s						
XAN	Xi'an	37.00	11	P	P	14 55 48.2	-1.1
XAN				pP	sP	14 56 08.4	+0.1
XAN				pmax	pmax		
	comp=Z,7.0nm,0.7s						
WRA	Warramunga Arr	37.25	120	P	P	14 55 50.4	-1.3
	comp=Z,2.0nm,0.5s,baz=297,slow=9.3,SNR=9.9						
WRA				PcP	PcP	14 58 10.4	-0.2
	comp=Z,0.1nm,0.3s,baz=303,slow=2.6,SNR=5.1						
WRAB	Tennant Creek	37.26	120	P	P	14 55 51.2	-0.6
WRAB				IAmb	IAmb	14 55 55.6	
	comp=Z,12nm,1.5s						
AS31	Alice Springs	38.52	126	P	P	14 56 01.8	-0.6
ASAR	Alice Springs	38.52	126	P	P	14 56 02.6	+0.2
	comp=Z,5.5nm,0.6s,baz=301,slow=8.0,SNR=42						
ASAR				PcP	PcP	14 58 15.3	+0.8
	comp=Z,1.0nm,0.6s,baz=313,slow=3.2,SNR=5.3						
ASAR				S	S	15 01 50.0	-4.9
	comp=Z,0.8nm,1.0s,baz=303,slow=14,SNR=5.0						
ASAR	Alice Springs	38.52	126	P	P	14 56 02.2	-0.2
HHC	Hu-ho-hao-te	44.11	12	eP	P	14 56 50.7	+2.7
HHC				pmax	pmax		
	comp=Z,9.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,110nm,4.8s						
NIL	Nilore	44.14	327	P	P	14 56 49.0	+0.7
NIL				IAmb	IAmb	14 56 50.3	
	comp=Z,11nm,0.8s						
PMG	Port Moresby	46.73	101	LR	LR	15 20 00.7	
	comp=Z,38nm,18.2s,baz=258,slow=40						
KSRS	Korea Array	46.96	30	P	P	14 57 09.2	-1.3
	comp=Z,1.4nm,0.9s,baz=232,slow=7.8,SNR=4.3						
WMQ	Urumqi	47.40	347	eP	P	14 57 15.2	+1.3
WMQ				sP	sP	14 57 37.9	+5.1
WMQ				pmax	pmax		
	comp=Z,6.0nm,1.7s						
WMQ				pmax	pmax		
	comp=Z,250nm,4.5s						
WMQ	Urumqi	47.40	347	P	P	14 57 14.8	+0.9
KSH	Kashi	47.42	334	P	P	14 57 14.5	+0.3
KSH				pP	pwP	14 57 31.7	+4.4
KSH				PcP	PcP	14 58 41.7	-2.4
KSH				S	S	15 03 58.9	-6.2
KSH				SS	SS	15 07 29.2	-4.3
KSH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KSH				pmax	pmax		
	comp=Z,390nm,5.6s						
CTA	Charters Tower	47.85	115	P	P	14 57 16.6	-1.1
	comp=Z,2.8nm,0.7s,baz=297,slow=4.5,SNR=1.5						
CTAO	Charters Tower	47.85	115	P	P	14 57 17.0	-0.8
CTAO				IAmb	IAmb	14 57 42.0	
	comp=Z,16nm,1.4s						
STKA	Stephens Creek	48.43	132	P	P	14 57 22.8	+0.7
	comp=Z,2.0nm,0.6s,baz=303,slow=7.6,SNR=9.2						
STKA	Stephens Creek	48.43	132	P	P	14 57 22.0	0.0
SHLS	Shalkode	49.14	340	eP	P	14 57 27.4	0.0
	comp=Z,3.9nm,0.7s,baz=340						
UZB	Uzynbulak	49.29	339	eP	P	14 57 29.6	+1.0
	comp=Z,2.5nm,0.6s,baz=339						
SATY	Saty	49.44	339	eP	P	14 57 30.1	+0.5
	baz=339						
KPKS	Kokpek	49.69	339	eP	P	14 57 32.4	+0.8
	comp=Z,4.5nm,1.2s,baz=339						
MDOK	Medeo	50.03	338	eP	P	14 57 34.9	+0.6
	baz=338						
SONM	Songino Array	50.20	5	P	P	14 57 36.1	+0.7
	comp=Z,2.4nm,0.8s,baz=184,slow=9.2,SNR=17						
SONM	Songino Array	50.20	5	P	P	14 57 35.4	0.0
CHKK	Chushkaly	50.65	338	eP	P	14 57 39.1	+0.4
	baz=338						
KUU	Kurty	50.92	337	eP	P	14 57 41.2	+0.4
	comp=Z,4.5nm,0.9s,baz=338						
TDK	Taldyqorghan	51.13	340	eP	P	14 57 43.0	+0.7
	comp=Z,3.8nm,0.7s,baz=340						
ZSN	Zaisan	51.47	346	eP	P	14 57 45.9	+1.0
	comp=Z,4.8nm,0.8s,baz=347						
MK31	Makanchi Array	51.52	344	P	P	14 57 45.4	+0.1
MK31				IAmb	IAmb	14 57 46.6	
	comp=Z,7.1nm,0.7s						
MKAR	Makanchi Array	51.52	344	P	P	14 57 45.9	+0.7
	comp=Z,9.8nm,0.6s,baz=148,slow=8.1,SNR=153						
MKAR	Makanchi Array	51.52	344	P	P	14 57 45.4	+0.2
MAKZ	Makanchi	51.62	344	P	P	14 57 46.1	+0.1
MAKZ				IAmb	IAmb	14 57 47.3	
	comp=Z,4.3nm,0.8s						
IUG	Iuzhnay	52.24	331	eP	P	14 57 50.9	+0.2
	baz=332						
KK31	Karatay Array	52.75	332	P	P	14 57 55.0	+0.6
KKAR	Karatay Array	52.75	332	P	P	14 57 54.8	+0.4
KKAR	Karatay Array	52.75	332	P	P	14 57 55.2	+0.8
KKAR				IAmb	IAmb	14 58 03.5	
	comp=Z,1.6nm,0.9s						
BTLS	Baital	52.78	336	eP	P	14 57 54.3	-0.3
	baz=337						
EIDS	Eidsvold	53.61	120	P	P	14 58 01.1	0.0
USRK	Ussuriysk Ar.	54.13	27	P	P	14 58 04.8	+0.3
	comp=Z,3.1nm,0.7s,baz=201,slow=7.7,SNR=3.6						
SEM	Semipalatinsk	55.38	344	eP	P	14 58 13.0	-0.6
	comp=Z,2.3nm,0.6s,baz=344						
ARMA	Armidale	55.67	126	P	P	14 58 15.7	-0.3
KURK	Kurchatov	56.11	343	P	P	14 58 18.6	0.0
KURK				IAmb	IAmb	14 58 20.1	
	comp=Z,7.1nm,0.8s						
GEYT	Alibeck	56.13	320	P	P	14 58 20.1	+1.0
	comp=Z,1.0nm,0.5s,baz=258,slow=4.3,SNR=2.3						
ZAA0	Zalesovo Array	57.61	349	P	P	14 58 29.1	-0.1
ZALV	Zalesovo Beam	57.61	349	P	P	14 58 29.3	+0.1
	comp=Z,11nm,0.7s,baz=172,slow=5.5,SNR=54						
ZALV	Zalesovo Beam	57.61	349	P	P	14 58 29.0	-0.2
BRVK	Borovoye	60.79	340	P	P	14 58 51.0	-0.1
BRVK				IAmb	IAmb	14 59 05.7	
	comp=Z,2.1nm,0.7s						
YSS	Yuzh-Sakhalins	61.41	32	P	P	14 58 55.6	+0.1
ABKAR	Akbulak array	62.25	331	P	P	14 59 01.0	-0.1
ABKAR				IAmb	IAmb	14 59 02.4	
	comp=Z,5.9nm,0.8s						
ABKAR	Akbulak array	62.25	331	P	P	14 59 01.2	+0.1
KBZ	Khabaz	68.99	319	P	P	14 59 45.7	+1.0
	comp=Z,1.7nm,0.8s,baz=133,slow=5.2,SNR=5.7						
NRIK	Noril'sk	72.08	355	P	P	15 00 01.9	-1.1
	comp=Z,3.0nm,0.6s,baz=177,slow=9.5,SNR=5.9						
NRIK	Noril'sk	72.08	355	P	P	15 00 02.4	-0.7
NRIK				IAmb	IAmb	15 00 03.8	
	comp=Z,10.0nm,1.3s						
BRTR	Keskin Array B	74.04	312	P	P	15 00 16.3	+0.9
	comp=Z,0.9nm,0.5s,baz=130,slow=8.1,SNR=2.8						
RPZ	Rata Peaks	74.28	135	P	P	15 00 16.4	-0.2
BKZ	Black Stump Fm	77.55	129	P	P	15 00 35.5	+0.1
BKZ				IAmb	IAmb	15 00 42.1	
	comp=Z,14nm,1.4s						
BFZ	Birch Farm	77.56	131	P	P	15 00 34.8	-0.6
ALN	Alexandroupoli	79.95	312	P	P	15 00 48.4	0.0
FINES	FINESS Array B	84.71	332	P	P	15 01 13.8	+0.9
	comp=Z,1.1nm,0.6s,baz=104,slow=8.0,SNR=3.9						
GERES	GERESS Array B	89.74	319	P	P	15 01 39.5	+1.9
	comp=Z,0.3nm,0.6s,baz=34,slow=3.4,SNR=3.6						
NOA	NORSAR Array B	91.75	331	P	P	15 01 46.3	-0.3
	comp=Z,1.6nm,0.8s,baz=100,slow=7.0,SNR=1.3						
VNA2	Neumayer--Watz	93.66	198	P	P	15 01 47.0	-8.2
	baz=309,slow=14						
CPUP	Villa Florida	144.45	215	PKP	PKPdf	15 08 16.6	+0.6
	comp=Z,3.1nm,0.8s,baz=123,slow=4.8,SNR=8.0						
TXAR	Lajitas Array	144.55	38	PKP	PKPbc	15 08 15.8	+0.8
	comp=Z,3.0nm,0.7s,baz=305,slow=1.1,SNR=44						

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*IDC **11** 14:52:15.2±5.9, 3.°57N×127.°53E, h115^{km}±67^{km}, mb3.4/4, mb1 3.6/5, mb1mx3.2/33, mbtmp3.7/5, Error ellipse: s-maj=131.9km s-min=25.5km az=66.0*

*DJA **11** 14:52:18.0±1.4, 4°N±13°×12°8E±°, h142^{km}±14^{km}, M3.9/8, mb3.8/4, mB4.6/1, MLv3.9/8, Mw(mB)3.8/1*

ISC 11 14:52:16.7±1.0, **3.°86N**±0.°08×**127.°88E**±0.°09, **h150**^{km}, **n15**, σ**1.**^{s}**60**/17, **mb3.7**/4, **1D**, **Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	Sangihe	2.35	266	P	Pn	14 52 55.2	-0.8
SGSI				S	Sn	14 53 24.8	-1.4
DDMP	Don Marcelino,	3.10	316	eP	Pn	14 53 03.6	-1.8
TNTI	Ternate	3.11	189	P	Pn	14 53 05.6	+0.1
KCP	Kidapawan	4.18	319	⇓eP	Pn	14 53 20.9	+1.5
SKMP	Bagumbayan, Su	4.24	309	eP	Pn	14 53 19.2	-1.0
SWI	Sorong	5.78	144	P	Pn	14 53 41.2	+0.7
	0.1nm13nm,1.1s						
SIJI	Sorong	5.79	144	P	Pn	14 53 40.3	-0.4
	1.9nm,0.3s,baz=216,slow=23,SNR=36						
SIJI				S	Sn	14 54 42.9	-3.5
	2.8nm,0.3s,baz=189,slow=22,SNR=9.1						
GTOI	Gorontalo	5.82	237	P	Pn	14 53 41.1	+0.1
	0.0nm8.9nm,1.1s						
PAGZ	Pagadian	5.97	312	eP	Pn	14 53 41.3	-1.8
SANI	Sanana	6.16	198	P	Pn	14 53 43.3	-2.3

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	0.1nm7.8nm,0.8s						
LUWI	Luwuk	7.05	226	P	Pn	14 53 57.7	+0.2
WRA	Warramunga Arr	24.49	165	P	P	14 57 21.6	-0.5
	0.7nm,0.4s,baz=342,slow=10,SNR=7.5						
ASAR	Alice Springs	27.98	168	P	P	14 57 53.8	+0.2
	1.4nm,0.4s,baz=351,slow=7.3,SNR=18						
STKA	Stephens Creek	37.86	161	P	P	14 59 20.2	+1.1
	0.7nm,0.3s,baz=343,slow=8.6,SNR=4.3						
MKAR	Makanchi Array	58.11	325	P	P	15 01 56.5	+2.0
	0.1nm,0.4s,baz=116,slow=9.8,SNR=1.9						

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*ISK **11** 15:11:49.6, 38°.65N×26°.00E, h11^{km}, ML2.8/8*
*DDA **11** 15:11:50.7, 38°.59N×26°.17E, h7^{km}±3^{km}, ML2.3*
ISC 11 15:11:50.5±1.1**, 38°.61N**±0°.03×**26°.09E**±0°.05**, h14**^{km}±9^{km}**,**
n17, σ0ˢ.68/28**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOS	Chios island	0.23	187	PG	Pg	15 11 55.7	+0.2
CHOS				SG	Sg	15 11 59.6	+0.7
ZEYE	Izmir, Urla-Ze	0.49	139	*i* P	Pg	15 11 59.9	-0.3
ZEYE				*i* S	Sg	15 12 05.9	-0.9
ZEYE				IAML		15 12 11.0	
	comp=E,219nm,0.2s						
DKL	Dikili	0.78	54	PG	Pb	15 12 06.2	+0.3
DKL				SG	Sb	15 12 17.9	+1.5
DGB	zmir	0.84	132	*i* P	Pg	15 12 05.9	-0.8
DGB				*i* S	Sg	15 12 16.7	-0.9
DGB				IAML		15 12 17.0	
	comp=E,77nm,0.5s						
AYVA	Ayvalik	0.84	34	*e*P	Pb	15 12 07.1	+0.2
AYVA				*i* S	Sb	15 12 18.3	+0.3
AYVA				IAML		15 12 21.0	
	comp=N,176nm,0.5s						
KOCA	Canakkale, Ayv	0.89	2	*i* P	Pb	15 12 07.9	+0.1
KOCA				*i* S	Sn	15 12 20.8	-0.6
BUHA	Balikesir, Bur	1.17	41	*i* P	Pb	15 12 11.5	-1.1
BUHA				*i* S	Sg	15 12 28.0	-0.4
BUHA				IAML		15 12 40.0	
	comp=N,40nm,0.6s						
EZN	Ezine	1.23	8	PN	Pn	15 12 12.8	-0.5
EZN				SN	Sn	15 12 29.8	+0.1
GCAM	G?zelcaml?	1.28	135	PN	Pg	15 12 15.0	-0.1
GCAM	G?zelcaml?	1.28	135	*e*P	Pb	15 12 14.6	+0.1
GCAM				*i* S	Sg	15 12 31.5	-0.3
GCAM				IAML		15 12 32.0	
	comp=N,94nm,0.8s						
AKHS	Akhisar	1.37	78	*i* P	Pb	15 12 16.1	+0.1
AKHS				*i* S	Sb	15 12 33.4	-0.1
AKHS				IAML		15 12 35.0	
	comp=E,36nm,0.4s						
STEP	BALIKESIR_Sava	1.48	58	*e*P	Pn	15 12 16.6	-0.2
STEP				IAML		15 12 38.0	
	comp=N,73nm,0.7s						
STEP				*i* S	Sg	15 12 38.2	0.0
AYDB	Zeytinkoy-Aydi	1.56	115	PN	Pb	15 12 19.4	+0.1
APE	Apeiranthos	1.60	196	PN	Pn	15 12 18.7	+0.2
BODT	Bodrum	1.82	148	PN	Pb	15 12 22.9	-0.8
KULA	Kula-Manisa	2.02	92	PN	Pn	15 12 25.5	+1.3
SMAA	Simav-Kutahya	2.31	77	PN	Pn	15 12 29.4	+1.2

IDC 11 15:12:39.6±3.3**, 33°.87S**×**178°.89W, h0**^{km}**, mb3.6**/2**,**
mb1 3.9/3**, mb1mx3.7**/37**, mbtmp3.7**/3**, ML3.8**/1**, Error**
ellipse: s-maj=74.7km s-min=37.0km az=116.0, South
of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	5.45	215	Pn	Pn	15 14 02.3	+0.3
	3.0nm,0.3s,baz=271,slow=4.1,SNR=27						
URZ				Sn	Sn	15 15 05.8	+0.4
	2.5nm,0.3s,baz=165,slow=18,SNR=6.2						
ASAR	Alice Springs	42.30	271	P	P	15 20 35.2	0.0
	0.7nm,0.8s,baz=110,slow=7.5,SNR=11						
WRA	Warramunga Arr	43.60	276	P	P	15 20 45.5	-0.3
	0.7nm,0.7s,baz=119,slow=7.5,SNR=7.2						
FINES	FINESS Array B	148.09	337	PKPbc	PKPbc	15 32 25.7	-0.7
	2.4nm,0.9s,baz=41,slow=4.4,SNR=3.6						

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*NAO **11** 15:14:31.4±0.7, 67°.77N×20°.44E, ML2.9*
*IDC **11** 15:14:32.4±0.8, 67°.78N×20°.53E, h0^{km}, mb1 3.4/5, mb1mx3.1/69, mbtmp3.4/5, ML2.4/5, Error ellipse: s-maj=14.4km s-min=7.1km az=110.0*
*HEL **11** 15:14:32.3, 67°.82N×20°.28E, h0^{km}, ML2.5, Explosion*
*BER **11** 15:14:32.2±3.7, 67°.77N×20°.01E, h0^{km}, ML2.0, ML2.9(NAO), Suspected explosion*
ISC 11 15:14:30.0±0.7**, 67°.78N**±0°.02×**20°.27E**±0°.03**, h0**^{km}**, n41,**
σ1ˢ.84/64**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	Kurravaara	0.18	8	*i* P	Pg	15 14 34.1	+0.6
KUA				*i* S	Sg	15 14 35.9	+0.1
RATU	Laukkuluspa	0.26	280	*i* P	Pg	15 14 35.8	+0.8
RATU				*i* S	Sg	15 14 39.1	+0.7
KOVU	Salmi	0.45	355	*i* P	Pg	15 14 38.9	+0.2
NIKU	Nikkaluokta	0.48	281	*i* P	Pg	15 14 39.8	+0.6
DUNU	Dundret	0.67	170	*i* P	Pg	15 14 44.5	+1.7
LANU	Lannavaara	0.70	66	*e*P	Pg	15 14 44.4	+0.9
	baz=248						
MASU	Masugnsbyn	0.74	115	*i* P	Pb	15 14 46.0	+0.2
KIF	Kilpisjarvi	1.25	9	Pg	Pn	15 14 55.0	+0.3
KIF				Lg	Lg	15 15 10.8	
KIF	Kilpisjarvi	1.25	9	Pg	Pn	15 14 55.0	+0.3
KIF				Sg	Sb	15 15 10.8	-0.2
KIF	Kilpisjarvi	1.25	9	*e*PB	Pb	15 14 54.5	+0.1
	baz=194						
KIF				MSG		15 15 09.9	
	comp=Z,36nm,0.2s						
KIF				*e*S	Sg	15 15 10.2	+0.1
PAJU	Pajala	1.33	123	*e*P	Pg	15 14 56.3	+0.8
ERTU	Ertsjaerv	1.44	148	*e*P	Pn	15 14 58.2	+0.9
ERTU				*e*SB	Sn	15 15 18.2	+1.3
KTK1	Kautokeino	1.66	40	Pn	Pn	15 15 01.1	+0.7
KTK1				Lg	Lg	15 15 22.9	
KTK1	Kautokeino	1.66	40	*e*P	Pn	15 15 01.0	+0.7
KTK1				*e*S	Sb	15 15 22.8	0.0
KTK1				IAML		15 15 28.3	
	comp=Z,24nm,0.3s						
JETT	Jettan, Norway	1.79	2	Pn	Pn	15 15 02.6	+0.5
JETT				Sn	Sb	15 15 26.5	-0.1
TRO	Tromso	1.93	346	Pn	Pn	15 15 04.9	+0.9
TRO				Sn	Sb	15 15 30.2	-0.3
TOF	Tornio	2.34	135	*e*P	Pb	15 15 12.6	-0.4
TOF				MSG		15 15 42.3	
	comp=Z,31nm,0.2s						
TOF				*e*SG	Sg	15 15 44.9	-0.1
SGF	Sodankyl	2.42	95	*e*P	Pn	15 15 12.9	+2.2
	baz=282						
SGF				*e*SB	Sb	15 15 44.5	-0.2
RNF	Rovaniemi	2.53	115	*e*PB	Pb	15 15 15.5	-0.7
RNF				*e*SB	Sb	15 15 48.8	+1.0
ARA0	ARCESS Array S	2.60	45	Pn	Pn	15 15 14.8	+1.5
	baz=237,slow=14						
ARA0				Sn	Sb	15 15 48.0	-2.1
ARA0	ARCESS Array S	2.60	45	Pn	Pn	15 15 14.8	+1.5
	baz=237,slow=14						
ARA0				Sn	Sb	15 15 48.0	-2.1
ARA0	ARCESS Array S	2.60	45	*e*SG	Sg	15 15 52.2	-1.4
ARCES	ARCESS Array B	2.60	45	Pn	Pn	15 15 14.9	+1.6
	baz=229,slow=14,SNR=25						
ARCES				Sn	Sn	15 15 47.8	+2.1
	baz=230,slow=26,SNR=14						
BURU	Burvik	3.24	172	*e*P	Pn	15 15 25.2	+3.2
OLKF	Oulanka, Finla	3.86	108	*e*P	Pn	15 15 33.1	+2.4
OUF	Merijarvi	3.88	150	*e*P	Pn	15 15 34.4	+3.6
UMAU	Umeaa	3.92	177	*e*P	Pn	15 15 34.4	+3.1
MSF	Maaselka	3.94	114	*e*P	Pn	15 15 34.3	+2.7
	baz=301						
KU6	Riekki	4.18	110	*e*P	Pn	15 15 37.1	+2.2
	baz=296						
APA0	Apatity Array	4.85	86	Pn	Pn	15 15 44.5	+0.3
	baz=276,slow=11						
APA0				Sn	Sn	15 16 41.0	0.0
	baz=273,slow=28						
APA0				Lg	Lg	15 16 57.3	
	baz=276,slow=22						
APA0	Apatity Array	4.85	86	Pn	Pn	15 15 44.5	+0.3
	baz=276,slow=11						
APA0				Sn	Sn	15 16 41.0	0.0
	baz=273,slow=28						
FIA0	FINESS Array S	6.83	156	Pn	Pn	15 16 13.8	+2.5
	baz=344,slow=12						
FIA0				Sn	Sn	15 17 29.3	-0.3
	baz=347,slow=28						
FIA0				Lg	Lg	15 18 02.8	
	baz=344,slow=28						
FIA0	FINESS Array S	6.83	156	Pn	Pn	15 16 13.8	+2.5
	baz=344,slow=12						
FIA0				Sn	Sn	15 17 29.3	-0.3
	baz=347,slow=28						
FIA0				Sg	Sg	15 18 02.8	-6.3
	baz=344,slow=28						
FINES	FINESS Array B	6.83	156	Pn	Pn	15 16 13.2	+1.9
	comp=Z,0.1nm,0.3s,baz=346,slow=11,SNR=9.6						
FINES				Sn	Sn	15 17 30.3	+0.7
	comp=Z,0.4nm,0.3s,baz=346,slow=22,SNR=6.1						
FINES				Lg	Lg	15 18 04.4	
	comp=Z,0.9nm,0.3s,baz=348,slow=27,SNR=8.3						
NOA	NORSAR Array B	7.81	214	Pn	Pn	15 16 26.5	+1.7
	comp=Z,0.0nm,0.3s,baz=19,slow=11,SNR=5.1						
NOA				Lg	Lg	15 18 38.4	
	comp=Z,0.1nm,0.3s,baz=28,slow=21,SNR=4.9						
HFS	Hagfors	8.20	204	Pn	Pn	15 16 31.6	+1.6
	comp=Z,0.1nm,0.3s,baz=15,slow=14,SNR=7.8						
HFS				Sn	Sn	15 18 01.3	-1.9
	comp=Z,0.4nm,0.3s,baz=24,slow=23,SNR=5.5						
HFS				Lg	Lg	15 18 48.3	
	comp=Z,0.5nm,0.3s,baz=17,slow=26,SNR=3.9						
HFS	Hagfors	8.20	204	Pn	Pn	15 16 30.4	+0.4
	baz=7.0,slow=14						
HFS				Sn	Sn	15 17 58.3	-4.9
	baz=27,slow=22						
HFS				Lg	Lg	15 18 44.5	
	baz=29,slow=28						
HFS	Hagfors	8.20	204	Pn	Pn	15 16 30.4	+0.4
	baz=7.0,slow=14						
HFS				Sn	Sn	15 17 58.3	-4.9
	baz=27,slow=22						
HFS				Sg	Sg	15 18 44.5	-8.4
	baz=29,slow=28						
SPA0	Spitsbergen Ar	10.51	356	Pn	Pn	15 17 02.6	+0.8
	baz=158,slow=14						
SPA0	Spitsbergen Ar	10.51	356	Pn	Pn	15 17 02.6	+0.8
	baz=158,slow=14						
SPITS	Spitsbergen Ar	10.51	356	Pn	Pn	15 17 02.0	+0.3
	baz=147,slow=14,SNR=7.8						

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*IDC **11** 15:25:43.0±1.6, 1°.99N×126°.51E, h0^{km}, mb3.7/3, mb1 3.8/4, mb1mx3.5/43, mbtmp3.7/4, ML3.7/1, Error ellipse: s-maj=115.7km s-min=21.9km az=68.0*
*DJA **11** 15:25:48.2±0.4, 2°N±5°×12°7E±°, h10^{km}, M4.0/11, mb4.2/3, mB4.6/1, MLv3.9/11, Mw(mB)3.8/1*
ISC 11 15:25:49.5±1.1**, 2°.05N**±0°.08×**126°.67E**±0°.09**, h47**^{km}**, n12,**
σ1ˢ.00/13**, mb3.8**/3**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.45	151	P	Pn	15 26 14.3	+1.0
SGSI	Sangihe	1.99	325	P	Pn	15 26 21.3	+0.6
GTOI	Gorontalo	3.91	249	P	Pn	15 26 47.4	+0.3
SANI	Sanana	4.12	189	P	Pn	15 26 49.4	-0.6
LUWI	Luwuk	4.96	232	P	Pn	15 27 02.5	+1.1
MRSI	Marisa	4.97	252	P	Pn	15 27 02.0	+0.3
NLAI	Namlea	5.27	175	P	Pn	15 27 07.1	+1.4
	0.1nm20nm,0.9s						
APSI	Ampana	5.81	240	P	Pn	15 27 14.7	+1.5
FITZ	Fitzroy Crossi	20.04	183	P	P	15 30 17.9	-0.8
	0.2nm,0.3s,baz=21,slow=12,SNR=1.5						
WRA	Warramunga Arr	23.11	161	P	P	15 30 50.5	-1.1
	1.5nm,0.4s,baz=338,slow=11,SNR=26						
ASAR	Alice Springs	26.51	165	P	P	15 31 22.1	-0.8
	0.3nm,0.4s,baz=344,slow=8.4,SNR=14						
ASAR				PcP	PcP	15 34 47.3	+0.3
	0.4nm,1.0s,baz=354,slow=2.0,SNR=2.0						
MKAR	Makanchi Array	58.90	326	P	P	15 35 43.6	-0.2
	0.8nm,0.4s,baz=120,slow=7.6,SNR=25						

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*NOU **11** 15:29:42.7, 37°.30S×176°.83E, h261^{km}, MLv3.9, North Island, New Zealand*
WEL 11 15:29:40.9, 37°S±5°×**17°7E**±°**, h283**^{km}±7^{km}**, M3.6**/103**,**
mB3.8/1**, MLv3.6**/103**, Mw(mB)2.8**/1**, Error ellipse:**
s-maj=0.0km s-min=0.0km az=2.4, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MYRZ	Mayor Island	0.35	267	P	Pn	15 30 16.1	-1.2
TGRZ	Tauranga	0.57	215	P	Pn	15 30 16.8	-0.9
OPRZ	Ohinepanea	0.59	190	P	Pn	15 30 16.8	-1.0
MARZ	Manawahe	0.72	180	P	Pn	15 30 17.7	-0.6
KMRZ	Kaimai	0.82	225	P	Pn	15 30 18.2	-0.5
KARZ	Kaharoa	0.83	204	P	Pn	15 30 18.7	0.0
OMRZ	Omania	0.88	196	P	Pn	15 30 18.7	-0.2
MKRZ	Makatiti	0.89	191	P	Pn	15 30 19.4	+0.4
KUZ	Kuaotunu	0.93	304	P	Pn	15 30 18.3	-0.9
TARZ	Mount Tarawera	0.98	188	P	Pn	15 30 19.6	+0.1
UTU	Utuhina	0.99	203	P	Pn	15 30 19.6	+0.2
HAZ	Te Kaha	1.01	120	P	Pn	15 30 18.3	-1.2
HLRZ	Highlands Stat	1.02	195	P	Pn	15 30 19.6	0.0
TOZ	Tahuroa Road	1.05	243	P	Pn	15 30 19.6	-0.1
URZ	Urewera	1.05	161	P	Pn	15 30 18.6	-1.1
RUGZ	Raukumara Rang	1.06	132	P	Pn	15 30 18.2	-1.6
RRRZ	Republican Roa	1.08	187	P	Pn	15 30 19.5	-0.3
HSRZ	Hossack Road	1.10	198	P	Pn	15 30 20.1	+0.1
HRRZ	Handcock Road	1.17	195	P	Pn	15 30 20.4	0.0
GRRZ	Galatos Road	1.17	202	P	Pn	15 30 20.7	+0.3
MUGZ	Murupara	1.21	177	P	Pn	15 30 20.0	-0.6
MKAZ	Moumakai	1.22	277	P	Pn	15 30 20.6	-0.1
PRRZ	Plateau Road	1.25	190	P	Pn	15 30 20.7	-0.1
MWZ	Matawai	1.26	148	P	Pn	15 30 20.2	-0.7
PKGZ	Pakihiroa	1.27	120	P	Pn	15 30 20.8	-0.2
WPRZ	Whakapapatarin	1.32	198	P	Pn	15 30 21.4	+0.2
WIAZ	Waiheke Island	1.32	290	P	Pn	15 30 21.1	-0.1
ALRZ	Allen Road	1.32	191	P	Pn	15 30 21.3	0.0
MXZ	Matakaoa Point	1.33	103	P	Pn	15 30 21.1	-0.2
RAGZ	Rawiri	1.36	155	P	Pn	15 30 21.4	-0.2
RTZ	Ruatahuna	1.37	170	P	Pn	15 30 21.1	-0.5
TWGZ	Tauwhareparae	1.38	132	P	Pn	15 30 21.9	+0.2
TLZ	Tolley Road	1.40	220	P	Pn	15 30 22.4	+0.6
KUTZ	Kaahu Road	1.40	209	P	Pn	15 30 22.4	+0.6
GRZ	Great Barrier	1.41	316	P	Pn	15 30 21.5	-0.3
ETAZ	East Tamaki Re	1.43	282	P	Pn	15 30 22.2	+0.2
WMGZ	Waiomatatini S	1.49	112	P	Pn	15 30 22.5	+0.2
PUZ	Puketiti	1.49	123	P	Pn	15 30 22.3	0.0
TKGZ	Te Karaka	1.50	142	P	Pn	15 30 22.3	0.0
MBAZ	Motutapu North	1.51	289	P	Pn	15 30 22.8	+0.4
WHTZ	Whakaora	1.51	202	P	Pn	15 30 23.4	+0.9
MRHZ	Matea Rd	1.58	187	P	Pn	15 30 22.9	-0.1
MTHZ	Maungataniwha	1.59	175	P	Pn	15 30 22.9	-0.2
EPAZ	Eden Park BICE	1.59	283	P	Pn	15 30 23.2	+0.2
SNGZ	Shannon Statio	1.60	161	P	Pn	15 30 23.4	+0.3
HBAZ	Herne Bay Bore	1.61	284	P	Pn	15 30 23.6	+0.4
ABAZ	Army Bay	1.62	294	P	Pn	15 30 23.8	+0.6
WATZ	Wairara	1.62	207	P	Pn	15 30 24.0	+0.7
AWAZ	Awhitu Peninsu	1.64	276	P	Pn	15 30 23.8	+0.4
RIGZ	Rimuhau	1.68	150	P	Pn	15 30 24.2	+0.5
RAHZ	Arahi	1.68	169	P	Pn	15 30 24.1	+0.4
WTAZ	Waiatarua	1.71	280	P	Pn	15 30 24.5	+0.5
CNGZ	Carnagh Statio	1.72	136	P	Pn	15 30 24.8	+0.9
RVAZ	Riverhead Bore	1.75	286	P	Pn	15 30 22.6	-1.6
RATZ	Rangitukua	1.75	204	P	Pn	15 30 24.8	+0.5
RITZ	Rihia Road	1.83	200	P	Pn	15 30 25.9	+1.1
NMHZ	Naumai	1.83	177	P	Pn	15 30 25.7	+0.8
WHHZ	Waihua	1.86	167	P	Pn	15 30 25.8	+0.8
KATZ	Kakaramea	1.88	204	P	Pn	15 30 26.8	+1.5
BKZ	Black Stump Fm	1.90	184	P	Pn	15 30 25.3	-0.1
HIZ	Hauiti	1.91	229	P	Pn	15 30 26.7	+1.3
PRGZ	Paritu Road	1.91	151	P	Pn	15 30 25.9	+0.5
KNZ	Kokohu	1.92	156	P	Pn	15 30 25.8	+0.3
KRVZ	Karewarewa	2.00	204	P	Pn	15 30 26.9	+0.6
TMVZ	Te Maari	2.00	202	P	Pn	15 30 26.8	+0.5
ARHZ	Aropaoanui	2.01	173	P	Pn	15 30 27.0	+0.8
ETVZ	East Tongariro	2.02	202	P	Pn	15 30 27.0	+0.6
WTVZ	West Tongariro	2.04	205	P	Pn	15 30 27.1	+0.6
TWVZ	Taurewa	2.05	208	P	Pn	15 30 27.4	+0.7
OTVZ	Oturere	2.06	203	P	Pn	15 30 27.6	+0.8
NGZ	Ngauruhoe	2.09	204	P	Pn	15 30 28.0	+1.0
MHGZ	Mahia Peninsul	2.12	153	P	Pn	15 30 27.9	+0.7
TUVZ	Tukino	2.16	202	P	Pn	15 30 28.3	+0.7
KWHZ	Kaweka Forest	2.17	185	P	Pn	15 30 28.3	+0.7
MCHZ	McNeill Hill	2.18	180	P	Pn	15 30 28.6	+1.0
WHVZ	Whangaehu Hut	2.19	203	P	Pn	15 30 28.8	+0.8
TRVZ	Turoa	2.22	203	P	Pn	15 30 29.0	+0.7
WNVZ	Wahianoa	2.23	202	P	Pn	15 30 28.9	+0.6
MOVZ	Moawhango	2.26	199	P	Pn	15 30 28.6	+0.2
BHHZ	Black Hill Sta	2.27	192	P	Pn	15 30 28.8	+0.2
PKVZ	Pokaka	2.28	207	P	Pn	15 30 29.3	+0.7
WCZ	Waipu Caves	2.30	304	P	Pn	15 30 29.9	+1.1
MTVZ	Mangateitei	2.32	204	P	Pn	15 30 29.8	+0.8
KRHZ	Kereru	2.39	186	P	Pn	15 30 30.0	+0.5
VRZ	Vera Road	2.40	219	P	Pn	15 30 31.4	+1.9
CKHZ	Cape Kidnapper	2.41	173	P	Pn	15 30 30.5	+0.8
KAHZ	Kahuranaki	2.53	177	P	Pn	15 30 31.8	+0.9
PNHZ	Pukenui	2.67	188	P	Pn	15 30 32.7	+0.5
PXZ	Pawanui	2.77	177	P	Pn	15 30 33.7	+0.6
WPHZ	Waipukurau	2.80	184	P	Pn	15 30 34.3	+0.8
WPHZ	Waipukurau	2.80	184	P	S	15 31 08.9	-6.5
WAZ	Wanganui	2.82	208	P	Pn	15 30 34.9	+1.2
LREZ	Lake Rotokare	2.83	219	P	Pn	15 30 36.1	+2.4
TSZ	Takapari Road	2.85	191	P	Pn	15 30 34.4	+0.5
NEZ	North Egmont	2.85	225	P	Pn	15 30 37.1	+3.0
PKE	Pukeiti	2.87	227	P	Pn	15 30 37.2	+3.1
KHEZ	Kahui Hut	2.92	225	P	Pn	15 30 37.6	+3.0
PRHZ	Porangahau	3.00	181	P	Pn	15 30 36.0	+0.6
DVHZ	Dannevirke	3.06	187	P	Pn	15 30 36.5	+0.5
OHWZ	Ohakea	3.12	200	P	Pn	15 30 38.0	+1.3
ANWZ	Angora Road	3.19	183	P	Pn	15 30 38.3	+0.9
ANWZ	Angora Road	3.19	183	P	S	15 31 16.3	-6.2
POWZ	Post Office Ro	3.20	193	P	Pn	15 30 38.1	+0.6
POWZ	Post Office Ro	3.20	193	P	S	15 31 19.1	-3.6
OUZ	Omahuta	3.22	308	P	Pn	15 30 39.7	+1.9
PRWZ	Pori Road	3.33	189	P	Pn	15 30 39.8	+0.9
BFZ	Birch Farm	3.43	186	P	Pn	15 30 40.4	+0.5
MRZ	Mangatainoka R	3.50	194	P	Pn	15 30 41.0	+0.3
TIWZ	Tintock	3.56	190	P	Pn	15 30 42.1	+0.7
TIWZ	Tintock	3.56	190	P	S	15 31 21.7	-8.0
CPWZ	Castlepoint	3.66	186	P	Pn	15 30 43.6	+1.2
CPWZ	Castlepoint	3.66	186	P	S	15 31 25.9	-5.6
OGWZ	Otaki Gorge	3.74	198	P	Pn	15 30 43.8	+0.6
HOWZ	Holdsworth Sta	3.74	194	P	Pn	15 30 43.5	+0.2
HOWZ	Holdsworth Sta	3.74	194	P	S	15 31 28.7	-4.5
KIW	Kapiti Island	3.85	200	P	Pn	15 30 44.9	+0.4
TMWZ	Te Maipa	3.89	189	P	Pn	15 30 45.7	+0.8
TMWZ	Te Maipa	3.89	189	P	S	15 31 30.1	-6.0
MTW	Mount Morrison	4.00	193	P	Pn	15 30 46.3	+0.2
MTW	Mount Morrison	4.00	193	P	S	15 31 29.7	-8.5
CAW	Cannon Point	4.04	198	P	Pn	15 30 46.9	+0.3
DUWZ	D’Urville Isla	4.13	210	P	Pn	15 30 48.4	+0.7
TRWZ	Traveller	4.20	190	P	Pn	15 30 49.2	+0.8
TRWZ	Traveller	4.20	190	P	S	15 31 35.9	-6.5
PAWZ	Paruwai Farm	4.22	193	P	Pn	15 30 49.0	+0.3
WEL	Wellington	4.28	200	P	Pn	15 30 50.0	+0.7
MSWZ	Moikau Station	4.29	195	P	Pn	15 30 49.7	+0.2
MSWZ	Moikau Station	4.29	195	P	S	15 31 39.3	-5.1
TCW	Tory Channel	4.36	205	P	Pn	15 30 50.9	+0.6
BHW	Baring Head	4.37	198	P	Pn	15 30 50.7	+0.4
PLWZ	Palliser	4.44	194	P	Pn	15 30 51.5	+0.3
TUWZ	Tuamarina	4.67	206	P	Pn	15 30 54.2	+0.5
NNZ	Nelson	4.71	212	P	Pn	15 30 55.0	+0.7
QRZ	Quartz Range	4.80	221	P	Pn	15 30 55.7	+0.3
CMWZ	Cape Campbell	4.87	202	P	Pn	15 30 57.5	+1.4
BSWZ	Blackbirch Sta	4.95	205	P	Pn	15 30 57.8	+0.8
THZ	Tophouse	5.36	212	P	Pn	15 31 02.8	+0.8
KHZ	Kahutara	5.68	204	P	Pn	15 31 07.1	+1.3
DSZ	Denniston Nort	5.85	219	P	Pn	15 31 08.0	+0.1
GVZ	Greta Valley S	6.34	205	P	Pn	15 31 14.9	+1.1
LTZ	Lake Taylor	6.46	210	P	Pn	15 31 16.0	+0.7
AMCZ	Amberley	6.66	206	P	Pn	15 31 19.1	+1.4
INZ	Inchbonnie	6.77	215	P	Pn	15 31 20.3	+1.2
OKCZ	Okains Bay	7.02	202	P	Pn	15 31 23.7	+1.7
OXZ	Oxford	7.02	209	P	Pn	15 31 22.5	+0.4
MQZ	McQueen’s Vall	7.13	204	P	Pn	15 31 24.0	+0.6
RACZ	Rakaia	7.32	207	P	Pn	15 31 26.6	+0.8
WACZ	Wakanui South	7.62	207	P	Pn	15 31 30.3	+0.8
RPZ	Rata Peaks	7.74	212	P	Pn	15 31 32.7	+1.7
GCSZ	Gaunt Creek Bo	7.75	217	P	Pn	15 31 32.8	+1.7
ARCZ	Arundel	7.88	210	P	Pn	15 31 33.9	+1.2
FOZ	Fox Glacier	8.16	218	P	Pn	15 31 37.7	+1.6
TMZ	Timaru	8.31	209	P	Pn	15 31 39.8	+1.8
ODZ	Otahua Downs	9.00	208	P	Pn	15 31 49.4	+2.8
JCZ	Jackson Bay	9.06	219	P	Pn	15 31 49.0	+1.5

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*ISN **11** 15:32:04.6±2.0, 32°.76N×47°.70E, h9^{km}±16^{km}, ML3.1*
*TEH **11** 15:32:05.0, 32°.75N×47°.77E, h8^{km}, ML3.3*
*THR **11** 15:32:07.3±0.4, 32°.77N×47°.81E, h18^{km}±2^{km}, ML3.2*
ISC 11 15:32:05.3±1.3**, 32°.77N**±0°.03×**47°.77E**±0°.03**, h4**^{km}±12^{km}**,**
n31, σ1ˢ.15/36**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DHL1	Dehloran	0.42	259	*e*Pg	Pg	15 32 13.1	-0.3
DHL1				*e*Sg	Sg	15 32 20.0	+1.1
IKFM	Kafar-mosalman	0.76	5	*e*Pg	Pg	15 32 19.9	0.0
IKMR	Kamar-syah	0.91	34	*e*Pg	Pg	15 32 22.4	-0.4
IKMR				*e*		15 32 39.3	
	comp=Z,99nm,0.2s						
IDOB	Doab	1.07	18	*e*Pg	Pb	15 32 26.4	-0.3
SHGR	Shooshtar-Gavs	1.09	127	*e*Pg	Pb	15 32 27.3	+0.5
SHGR				*e*Sg	Sb	15 32 41.8	+0.4
SHGR				IAML		15 33 04.8	
	comp=E,596nm,0.6s						
SHGR	Shooshtar-Gavs	1.09	127	*e*Pg	Pb	15 32 27.3	+0.5
IBDR	Badra	1.58	283	*e*Pg	Pn	15 32 32.3	-1.9
	baz=103						
IBDR				*e*Sg	Sn	15 32 55.2	+0.1
IBDR				AML	AML	15 33 01.6	
	comp=N,156nm,0.6s						
IBDR				AML	AML	15 33 05.7	
	comp=E,238nm,0.6s						
AHWZ	Ahwaz	1.61	152	*e*Pg	Pn	15 32 34.9	+0.3
KCHF	Cheshme Sefid,	1.62	338	*e*Pg	Pb	15 32 36.5	+0.5
KCHF				*e*		15 33 07.5	
	comp=Z,99nm,0.4s						
KER	Kermanshah	1.70	342	*e*Pn	Pb	15 32 37.4	+0.1
IGHG	Ghaleghazi	1.85	328	*e*Pg	Pb	15 32 40.9	+1.0
IGHG				*e*		15 33 20.0	
	comp=Z,99nm,0.7s						
KHMZ	Khomeyn	2.08	62	*e*Pn	Pb	15 32 43.1	-0.6
KHMZ	Khomeyn	2.08	62	*e*Pn	Pb	15 32 43.1	-0.6
IALM	Almabolaq	2.12	9	*e*Pn	Pb	15 32 43.4	-1.0
NSR	Nassriya	2.23	219	*e*Pn	Pn	15 32 42.6	-0.5
NSR				*e*Sn	Sn	15 33 10.5	-0.6
NSR				AML	AML	15 33 15.6	
	comp=E,509nm,0.3s						
IDHR	Dehrash	2.25	330	*e*Pn	Pn	15 32 45.1	+1.6
IDHR				*e*		15 32 49.2	
	comp=Z,99nm,0.2s						
HAGD	Aghdareh	2.35	29	*e*Pn	Pb	15 32 46.4	-2.0
HAGD				*e*		15 33 22.7	
	comp=Z,99nm,0.5s						
ASAO	Ashtian	2.59	46	*e*Pn	Pb	15 32 50.4	-2.1
ASAO				*e*Sg	Sg	15 33 28.0	-0.6
ASAO	Ashtian	2.59	46	*e*Pn	Pb	15 32 50.4	-2.1
IPIR	Pirpir	2.63	91	*e*Pn	Pn	15 32 50.1	+1.2
IPIR				*e*		15 33 36.9	
	comp=Z,99nm,0.7s						
SHK1	Shahrekord	2.67	99	*e*Pn	Pn	15 32 49.4	+0.1
SHK1				*e*		15 33 35.5	
	comp=Z,99nm,0.4s						
IRAZ	Razeghan	3.19	34	*e*Pn	Pn	15 32 58.3	+1.9
QAM	Ghamsar	3.23	71	*e*Pn	Pn	15 32 58.4	+1.3
IKLH	Kolahrood	3.25	79	*e*Pn	Pn	15 32 59.3	+2.0
IKLH				*e*		15 33 08.3	
	comp=Z,99nm,0.3s						
QABG	Abgarm-Qazvin	3.30	27	*e*Pn	Pn	15 32 58.5	+0.5
GHVR	GHOM	3.40	59	*e*S	Sn	15 33 39.7	-0.5
IQOM	Qom	3.44	52	*e*Pn	Pn	15 33 01.4	+1.4
IZEF	Zefreh	3.84	87	*e*Pn	Pn	15 33 06.7	+1.2
KRSH	Karshahi	3.85	71	*e*Pn	Pn	15 33 06.5	+1.0
IVRN	Varamin	3.97	55	*e*Pn	Pn	15 33 08.4	+1.3
IRAM	Ramesheh	4.02	102	*e*Pn	Pn	15 33 07.4	-0.5

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*IDC **11** 15:38:25.2±5.9, 5°.11S×147°.29E, h100^{km}±64^{km}, mb3.4/3, mb1 3.6/5, mb1mx3.3/37, mbtmp3.8/5, ML1.5/1, Error ellipse: s-maj=86.9km s-min=39.2km az=118.0*
ISC 11 15:38:26.3±2.1**, 5°.2S**±0°.1×**147°.0E**±0°.3**, h100**^{km}**, n6,**
σ1ˢ.98/7**, mb3.5**/3**, Eastern New Guinea region**

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

PMG	**Port Moresby**	4.22	178	P	Pn	15 39 30.0	+1.5
	1.9nm,0.3s,baz=350,slow=6.1,SNR=9.3						
PMG				S	Sn	15 40 15.0	-1.7
	5.2nm,0.3s,baz=230,slow=21,SNR=6.4						
WRA	**Warramunga Arr**	19.18	219	P	Pn	15 42 42.9	-1.3
	1.0nm,0.3s,baz=48,slow=11,SNR=67						
ASAR	**Alice Springs**	22.31	213	P	P	15 43 16.4	+0.5
	1.4nm,0.6s,baz=34,slow=11,SNR=49						
FITZ	**Fitzroy Crossi**	24.52	237	P	P	15 43 38.3	+1.6
	2.0nm,0.5s,baz=54,slow=11,SNR=9.9						
MKAR	**Makanchi Array**	76.86	320	P	P	15 50 07.8	+0.3
	0.1nm,0.5s,baz=102,slow=7.5,SNR=1.3						
TORD	**Torodi Ar. Bea**	144.89	285	PKPbc	PKPab	15 57 49.7	-2.4
	0.2nm,0.3s,baz=81,slow=1.7,SNR=1.4						

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*BER **11** 15:41:02.9±2.8, 77°.36N×7°.44E, h10^{km}, ML2.6, ML3.0(DNK), Confirmed Earthquake*

*IEPN **11** 15:41:03.0, 77°.35N×7°.46E, h10^{km}*

*NAO **11** 15:41:03.3±6.5, 77°.39N×7°.27E, h16^{km}±55^{km}, ML3.8*

*IDC **11** 15:41:03.1±0.8, 77°.29N×7°.47E, h0^{km}, mb3.7/9, mb1 3.9/13, mb1mx3.7/51, mbtmp3.8/13, ML3.0/3, MS3.3/4, Ms1 3.3/4, ms1mx2.8/42, Error ellipse: s-maj=17.4km s-min=13.1km az=43.0*

*DNK **11** 15:41:05.1±2.4, 77°.74N×6°.41E, h10^{km}±40^{km}, ML3.0*

ISC 11 15:41:02.3±3.1**, 77°.36N**±0°.06×**7°.46E**±0°.04**, h9**^{km}±20^{km}**, n48, σ3^s.13**/65**, mb3.7**/9**, MS3.2**/3**, 1C-1D, Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRBA	**Barentsburg A**	1.61	61	Pn	Pn	15 41 29.9	-0.9
BRBA				Lg	Lg	15 41 47.7	
BRBA	**Barentsburg A**	1.61	61	eP	Pn	15 41 30.0	-0.9
BRBA				eS	Sn	15 41 47.6	-4.1
BRBA				IAML		15 41 49.3	
	comp=Z,125nm,0.4s						
KBS	**Kingsbay**	1.83	28	Pn	Pn	15 41 32.8	-1.0
KBS				Sn	Sn	15 41 54.1	-2.9
KBS	**Kingsbay**	1.83	28	eP	Pn	15 41 32.8	-1.0
KBS				eS	Sn	15 41 53.4	-3.7
KBS				IAML		15 41 59.6	
	comp=Z,102nm,0.8s						
KBS	**Kingsbay**	1.83	28	i P	Pn	15 41 32.8	-1.0
KBS				i S	Sn	15 41 55.2	-1.9
KBS				IAML		15 42 01.3	
	comp=Z,179nm,0.4s						
HSPB	**Hornsund (broa**	1.84	97	Pn	Pn	15 41 32.9	-1.0
HSPB				Sn	Sn	15 41 52.8	-4.4
HSPB	**Hornsund (broa**	1.84	97	eP	Pn	15 41 33.0	-0.9
HSPB				e		15 41 52.8	
HSPB				IAML		15 41 53.8	
	comp=Z,238nm,0.3s						
HSPB	**Hornsund (broa**	1.84	97	⇓iP	Pn	15 41 32.9	-1.0
HSPB				i S	Sn	15 41 52.4	-4.9
SPA0	**Spitsbergen Ar**	2.07	62	Pn	Pn	15 41 37.3	+0.1
	baz=242,slow=14						
SPA0				Sn	Sn	15 42 01.1	-1.8
	baz=250,slow=22						
SPA0	**Spitsbergen Ar**	2.07	62	Pn	Pn	15 41 37.3	+0.1
	baz=242,slow=14						
SPA0				Sn	Sn	15 42 01.1	-1.8
	baz=250,slow=22						
SPITS	**Spitsbergen Ar**	2.07	62	Pn	Pb	15 41 37.6	-2.4
	baz=237,slow=14,SNR=1506						
SPITS				Sn	Sn	15 42 01.9	-1.1
	baz=245,slow=14,SNR=5.4						
BJO1	**Bjornoya**	4.01	130	eP	Pn	15 42 00.8	-3.1
BJO1				eS	Sn	15 42 45.0	-5.8
HOPEN	**Hopen**	4.07	93	Pn	Pn	15 42 04.3	-0.3
HOPEN				Sn	Sn	15 42 47.5	-4.7
HOPEN	**Hopen**	4.07	93	eP	Pn	15 42 04.2	-0.3
HOPEN				eS	Sn	15 42 47.4	-4.7
HOPEN				IAML		15 43 03.7	
	comp=Z,93nm,0.4s						
DAG	**Danmarks Havn**	5.86	277	i P	Pn	15 42 28.2	-1.0
DAG				i S	Sn	15 43 28.6	-7.8
DAG	**Danmarks Havn**	5.86	277	e	Pn	15 42 27.0	-2.2
	baz=72,slow=16						
DAG				eP	Pn	15 42 28.0	-1.2
DAG				eS	Sn	15 43 28.6	-7.8
DAG				IAML		15 43 35.1	
	comp=Z,10.0nm,0.4s						
DAG	**Danmarks Havn**	5.86	277	e	Pn	15 42 27.0	-2.2
	baz=72,slow=16						
DAG				i P	Pn	15 42 28.2	-1.0
DAG				i S	Sn	15 43 28.7	-7.8
DAG				IAML		15 43 35.1	
	comp=Z,10.0nm,0.4s						
DBG	**Daneborg**	7.39	260	Pn	Pn	15 42 49.6	-0.4
DBG				Sn	Sn	15 44 07.0	-6.8
DBG	**Daneborg**	7.39	260	eP	Pn	15 42 49.0	-1.1
DBG				eS	Sn	15 44 03.9	-10
DBG				IAML		15 44 13.5	
	comp=Z,2.2nm,0.5s						
DBG	**Daneborg**	7.39	260	i P	Pn	15 42 49.7	-0.4
DBG				i S	Sn	15 44 06.5	-7.3
DBG				IAML		15 44 13.5	
	comp=Z,2.2nm,0.5s						
ZFI	**Zemlya Franca-**	8.19	47	eP	Pn	15 43 02.0	+0.9
ZFI				eS	Sn	15 44 31.8	-1.7
ZFI2	**Zemlya Franca-**	8.19	47	⇑iP	Pn	15 43 01.1	+0.1
ZFI2				eS	Sn	15 44 27.1	-6.4
	comp=Z,14nm,0.6s						
ARA0	**ARCESS Array S**	9.33	138	Pn	Pn	15 43 16.8	+0.1
	baz=324,slow=11						
ARA0	**ARCESS Array S**	9.33	138	Pn	Pn	15 43 16.8	+0.1
	baz=324,slow=11						
ARCES	**ARCESS Array B**	9.33	138	Pn	Pn	15 43 15.8	-0.9
	baz=323,slow=11,SNR=9.7						
ARCES				Sn	Sn	15 44 51.7	-10
	baz=338,slow=26,SNR=1.5						
ARCES				LR	LR	15 46 36.0	
	comp=Z,140nm,19.9s,baz=285,slow=36						
APA0	**Apatity Array**	12.27	129	Pn	Pn	15 43 56.2	-0.8
	baz=315,slow=10						
APA0	**Apatity Array**	12.27	129	Pn	Pn	15 43 56.2	-0.8
	baz=315,slow=10						
SUMG	**Summit**	12.50	271	i P	Pn	15 44 00.0	-0.4
SUMG	**Summit**	12.50	271	i P	Pn	15 44 00.0	-0.4
SUMG	**Summit**	12.50	271	i P	Pn	15 44 00.0	-0.4
AMDE	**Amderma**	16.40	88	eP	Pn	15 44 51.1	-1.2
	comp=Z,3.5nm,1.0s						
AMDE				eS	Sn	15 47 41.5	-13
LSH	**Leshukonskoye**	17.08	116	eP	Pn	15 44 57.8	-3.1
	comp=Z,102nm,2.8s						
LSH				eS	Sn	15 47 55.6	-15
FINES	**FINESS Array B**	17.11	149	P	P	15 45 01.4	-1.5
	comp=Z,0.1nm,0.3s,baz=354,slow=18,SNR=4.5						
HFS	**Hagfors**	17.43	170	P	P	15 45 08.2	+1.6
	comp=Z,0.1nm,0.3s,baz=355,slow=7.2,SNR=1.1						
KLMR	**Klimovskoe**	19.62	129	P	Pn	15 45 34.0	+2.1
	comp=Z,27nm,1.9s						
RES	**Resolute Bay**	21.90	316	P	P	15 45 57.9	+2.8
	comp=Z,1.7nm,0.7s,baz=48,slow=10,SNR=5.2						
NRIK	**Noril'sk**	22.27	67	P	P	15 46 01.5	+2.4
	comp=Z,4.2nm,0.8s,baz=334,slow=7.9,SNR=8.4						
FRB	**Frobisher Bay**	26.19	282	LR	LR	15 57 32.4	
	comp=Z,77nm,20.1s,baz=88,slow=38						
AKASG	**Malin Array Be**	28.01	150	P	P	15 46 54.9	+1.8
	comp=Z,0.2nm,0.3s,baz=354,slow=9.9,SNR=4.1						
ZALV	**Zalesovo Beam**	35.38	85	P	P	15 47 58.8	+1.1
	comp=Z,1.1nm,0.7s,baz=327,slow=12,SNR=3.9						
YKA	**Yellowknife Ar**	35.94	318	P	P	15 48 03.7	+1.3
	comp=Z,0.7nm,0.6s,baz=14,slow=8.2,SNR=13						
ILAR	**Eielson Array**	37.23	342	P	P	15 48 17.5	+4.1
	comp=Z,0.8nm,0.8s,baz=8.9,slow=6.9,SNR=6.3						
MKAR	**Makanchi Array**	41.55	91	P	P	15 48 52.7	+3.0
	comp=Z,0.8nm,0.8s,baz=353,slow=6.3,SNR=12						
ULM	**Lac du Bonnet**	44.33	297	LR	LR	16 07 19.7	
	comp=Z,67nm,18.4s,baz=308,slow=36						
PETK	**Petropavlovsk-**	48.47	24	LR	LR	16 09 17.5	
	comp=Z,18nm,20.4s,baz=302,slow=35						
TORD	**Torodi Ar. Bea**	64.28	186	P	P	15 51 39.6	+2.0
	comp=Z,0.6nm,0.6s,baz=1.9,slow=6.8,SNR=2.7						
TXAR	**Lajitas Array**	66.04	297	P	P	15 51 51.2	+2.1
	comp=Z,0.5nm,0.6s,baz=21,slow=3.9,SNR=4.5						
ASAR	**Alice Springs**	120.62	59	PKP	PKiKP	15 59 55.6	+1.8
	comp=Z,0.3nm,0.7s,baz=356,slow=1.2,SNR=5.1						

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*IDC **11** 15:42:04.2±0.9, 52°.40N×168°.63W, h0^{km}, mb3.9/18, mb1 4.0/19, mb1mx3.9/55, mbtmp3.9/19, ML3.1/1, MS3.3/1, Ms1 3.3/1, ms1mx2.5/42, Error ellipse: s-maj=25.8km s-min=15.4km az=168.0*

*AEIC **11** 15:42:05±2.3, 52°.11N±0°.06×168°.49W±0°.06, h17^{km}±5^{km}, Error ellipse: s-maj=10.4km s-min=1.1km az=152.0*

*NEIC **11** 15:42:05.3±2.4, 52°.13N±0°.07×168°.56W±0°.10, h15^{km}±5^{km}, mb4.2/36, Error ellipse: s-maj=10.6km s-min=8.0km az=150.0*

ISC 11 15:42:07.3±0.6**, 52°.21N**±0°.07×**168°.59W**±0°.06**, h26**^{km}**, n93, σ1^s.27**/96**, mb4.1**/23**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIKH	**Nikolski High**	0.79	348		Pn	15 42 22.8	+0.1
NIKH	**Nikolski High**	0.79	348		Sn	15 42 36.6	+3.0
OKSP	**Okmok Steeple**	1.07	10		Pb	15 42 26.7	-0.4
OKSO	**Okmok South**	1.18	13		Pn	15 42 27.5	-0.7
OKSO					Sb	15 42 45.2	+1.2
OKFG	**Magazine Ridge**	1.28	19		Pn	15 42 28.9	-0.6
OKFG					Sb	15 42 47.9	+1.2
MAPS	**Pakushin South**	1.89	31		Pn	15 42 38.2	+0.3
MAPS					Sb	15 43 03.6	-0.7
MGOD	**Makushin Gods**	1.90	32		Pn	15 42 38.6	+0.5
MREP	**Makushin Rep't**	1.96	34		Pn	15 42 39.0	+0.1
MSW	**Makushin Switc**	2.03	32		Pn	15 42 40.3	+0.5
MNAT	**Makushin Natee**	2.04	34		Pn	15 42 40.2	+0.3
AKMO	**Akutan Morgan**	2.45	38		Pn	15 42 45.8	+0.3
AHB	**Akutan Harbor**	2.54	40		Pn	15 42 46.9	0.0
AKUT	**Akutan**	2.57	40	Pn	Pn	15 42 47.4	+0.2
ATKA	**Atka Island**	3.45	272	Pn	Pn	15 42 57.8	-1.4
ADK	**Adak**	5.00	270	Pn	Pn	15 43 20.8	+0.2
CNBA	**Chernabura Isl**	5.98	60	Pn	Pn	15 43 33.5	-0.4
CHGN	**Chignik**	7.24	51	Pn	Pn	15 43 53.5	+2.3
AMKA	**Amchitka**	7.55	268	Pn	Pn	15 43 55.9	+0.3
OHAK	**Old Harbor**	10.17	54	Pn	Pn	15 44 29.9	-1.5
KDAK	**Kodiak Island**	10.75	52	Pn	Pn	15 44 38.7	-0.7
	0.8nm,0.3s,baz=264,slow=8.8,SNR=7.5						
KDAK	**Kodiak Island**	10.75	52	Pn	Pn	15 44 38.5	-0.8
CNPM	**China Poot**	12.17	46	Pn	Pn	15 45 01.4	+2.6
SEW	**Seward**	13.24	46	Pn	Pn	15 45 13.0	-0.4
SUA	**Susitna One**	13.42	39	Pn	Pn	15 45 16.4	+0.5
PPLA	**Purkeypile**	13.82	33	Pn	P	15 45 25.0	-4.5
KNK	**Knik Glacier**	14.31	42	Pn	Pn	15 45 26.7	-1.3
GHO	**Glory Hole Cre**	14.32	40	Pn	Pn	15 45 28.1	0.0
HIN	**Hinchinbrook I**	14.69	47	Pn	Pn	15 45 31.9	-1.2
SCM	**Sheep Creek Mo**	14.99	42	Pn	Pn	15 45 35.1	-2.2
EYAK	**Cordova Ski Ar**	15.09	47	Pn	Pn	15 45 37.3	-1.2
RND	**Reindeer**	15.30	35	Pn	Pn	15 45 40.2	-1.1
KLU	**Klutina**	15.42	44	Pn	Pn	15 45 40.0	-2.9
KLU				IAmb	IAmb	15 45 45.4	
	comp=Z,32nm,1.4s						
M24K	**Tolsona, Glenn**	15.60	42	Pn	Pn	15 45 43.3	-1.9
M24K				IAmb	IAmb	15 45 44.3	
	comp=Z,23nm,0.8s						
N25K	**Chitina, Valde**	16.04	45	Pn	Pn	15 45 49.5	-1.3
WRH	**Wood River Hil**	16.23	33	Pn	Pn	15 45 53.7	+0.5
I23K	**Minto, Yukon-K**	16.28	30	P	P	15 45 55.5	-1.1
I23K				IAmb	IAmb	15 46 08.3	
	comp=Z,13nm,1.1s						
GLB	**Gilahina Butte**	16.32	46		Pn	15 45 52.8	-1.6
GLB				IAmb	IAmb	15 45 55.1	
	comp=Z,15nm,1.3s						
CRQM	**Cirque**	16.36	49	P	Pn	15 45 54.0	-1.1
CRQM				IAmb	IAmb	15 46 04.2	
	comp=Z,49nm,1.3s						
VRDI	**Verde Repeater**	16.39	47		Pn	15 45 54.7	-0.8
VRDI				IAmb	IAmb	15 45 58.6	
	comp=Z,23nm,1.2s						
CCB	**Clear Creek Bu**	16.44	33		Pn	15 45 55.5	-0.4
TGL	**Tana Glacier**	16.51	49	P	P	15 45 57.2	-2.1
HDA	**Harding Lake**	16.58	34	P	Pn	15 45 57.4	-0.3
MCARA	**McCarthy VSAT**	16.64	47	P	P	15 45 59.5	-1.2
MCARA				IAmb	IAmb	15 46 06.6	
	comp=Z,39nm,1.4s						
IL31		16.82	33	P	Pn	15 46 00.5	-0.2
ILAR	**Eielson Array**	16.82	33	Pn	Pn	15 45 57.5	-3.2
	comp=Z,0.1nm,0.3s,baz=240,slow=11,SNR=6.3						
ILAR	**Eielson Array**	16.82	33	P	Pn	15 46 00.6	-0.1
BALM	**Baldy**	16.82	48	P	P	15 46 01.2	-1.7
BALM				IAmb	IAmb	15 46 13.8	
	comp=Z,38nm,1.4s						
BARN	**Barnard Glacie**	17.15	48	P	P	15 46 06.2	-0.3
BARN				IAmb	IAmb	15 46 11.3	
	comp=Z,22nm,1.2s						
TABL	**Table Mountain**	17.20	51	P	Pn	15 46 04.3	-1.3
TABL				IAmb	IAmb	15 46 19.8	
	comp=Z,55nm,1.4s						
COLD	**Coldfoot**	17.57	24	P	P	15 46 11.7	+0.8
FYU	**Fort Yukon**	18.49	30	P	Pn	15 46 23.0	+1.8
FYU				IAmb	IAmb	15 46 36.6	
	comp=Z,16nm,1.4s						
EGAK	**Eagle**	18.88	38	P	Pn	15 46 25.8	-0.2
HYT	**Haines Junctio**	19.03	51	P	Pn	15 46 31.7	+3.7
HYT				IAmb	IAmb	15 46 34.0	
	comp=Z,8.0nm,0.7s						
BMAR	**Burnt Mountain**	19.25	28	P	Pn	15 46 29.9	-0.5
PEA0B	**Petropavlovsk-**	20.36	286	P	P	15 46 40.2	-1.4
PETK	**Petropavlovsk-**	20.36	286	P	P	15 46 40.9	-0.7
	comp=Z,4.8nm,0.4s,baz=87,slow=14,SNR=47						
PETK	**Petropavlovsk-**	20.36	286	P	P	15 46 40.8	-0.9
SEY	**Seymchan**	23.13	313	P	P	15 47 10.3	-0.7
	comp=Z,1.7nm,0.7s,baz=72,slow=22,SNR=7.3						
INK	**Inuvik**	23.22	33	P	P	15 47 10.3	-1.5
	comp=Z,1.8nm,0.5s,baz=245,slow=8.7,SNR=6.0						
INK	**Inuvik**	23.22	33	P	P	15 47 10.8	-1.1
INK				IAmb	IAmb	15 47 11.6	
	comp=Z,5.3nm,1.1s						
YKA	**Yellowknife Ar**	29.99	49	P	P	15 48 13.6	+0.3
	comp=Z,0.7nm,0.6s,baz=268,slow=6.9,SNR=12						
PDAR	**Pinedale Array**	39.97	79	P	P	15 49 39.8	+0.2
	comp=Z,0.5nm,0.5s,baz=315,slow=4.2,SNR=4.9						
PDAR	**Pinedale Array**	39.97	79	P	P	15 49 40.3	+0.7
PASC	**Pasadena Art C**	40.02	96	P	P	15 49 39.9	0.0
FCC	**Fort Churchill**	40.68	50	P	P	15 49 45.9	+0.9
FCC				IAmb	IAmb	15 49 46.7	
	comp=Z,6.2nm,0.9s						
KSRS	**Korea Array**	45.90	277	P	P	15 50 27.6	+0.2
	comp=Z,0.9nm,0.8s,baz=63,slow=7.5,SNR=2.1						
SUMG	**Summit**	50.80	17	P	P	15 51 06.3	+1.1
ULN	**Ulaanbaatar**	51.43	301	P	P	15 51 10.6	+0.6
ULN				IAmb	IAmb	15 51 10.7	
	comp=Z,2.8nm,0.9s						
SONM	**Songino Array**	51.79	301	P	P	15 51 13.0	+0.3
	comp=Z,1.5nm,0.9s,baz=53,slow=6.4,SNR=6.8						
SONM	**Songino Array**	51.79	301	P	P	15 51 12.1	-0.6
TXAR	**Lajitas Array**	52.27	89	P	P	15 51 17.1	+0.7
	comp=Z,0.3nm,0.7s,baz=293,slow=6.5,SNR=3.6						
SCO	**Scoresbysund**	55.28	13	P	P	15 51 37.8	+0.2
ZALV	**Zalesovo Beam**	57.87	318	P	P	15 51 56.5	+0.2
	comp=Z,0.3nm,0.4s,baz=43,slow=11,SNR=1.9						
ZALV				LR	LR	16 16 41.7	
	comp=Z,25nm,20.5s,baz=5.0,slow=36						
BRVK	**Borovoye**	64.12	325	P	P	15 52 39.2	+0.4
BRVK				IAmb	IAmb	15 52 39.7	
	comp=Z,2.5nm,0.9s						
MK31	**Makanchi Array**	64.26	314	P	P	15 52 39.5	-0.4
MK31				IAmb	IAmb	15 52 39.8	
	comp=Z,1.4nm,0.8s						
MKAR	**Makanchi Array**	64.26	314	P	P	15 52 39.2	-0.7
	comp=Z,1.6nm,0.8s,baz=52,slow=6.3,SNR=14						
MKAR	**Makanchi Array**	64.26	314	P	P	15 52 39.1	-0.8
MAKZ	**Makanchi**	64.39	314	P	P	15 52 39.7	-1.0
MAKZ				IAmb	IAmb	15 52 40.6	
	comp=Z,2.6nm,1.1s						
ARU	**Arti**	64.98	333	P	P	15 52 44.1	-0.3
	comp=Z,0.7nm,0.4s,baz=356,slow=20,SNR=5.5						
ARU	**Arti**	64.98	333	P	P	15 52 44.9	+0.6
FIA1	**FINESS Array S**	66.10	352	P	P	15 52 51.3	-0.1
FINES	**FINESS Array B**	66.10	352	P	P	15 52 50.9	-0.5
	comp=Z,3.1nm,0.8s,baz=21,slow=6.9,SNR=6.0						
FINES	**FINESS Array B**	66.10	352	P	P	15 52 51.2	-0.2
HFS	**Hagfors**	68.00	359	P	P	15 53 03.5	-0.1
	comp=Z,0.9nm,0.3s,baz=353,slow=2.6,SNR=13						
ABKAR	**Akbulak array**	70.82	329	P	P	15 53 21.5	+0.2
KK31	**Karatay Array**	72.23	319	P	P	15 53 29.2	-0.6
KK31				IAmb	IAmb	15 53 31.1	
	comp=Z,3.1nm,1.1s						
KKAR	**Karatay Array**	72.23	319	P	P	15 53 29.2	-0.6
AKASG	**Malin Array Be**	76.36	348	P	P	15 53 53.1	-0.6
	comp=Z,1.4nm,0.6s,baz=16,slow=6.2,SNR=4.6						
CMAR	**Chiang Mai Arr**	77.12	283	P	P	15 53 58.9	+0.4
	comp=Z,0.9nm,0.8s,baz=29,slow=5.5,SNR=7.5						
CMAR	**Chiang Mai Arr**	77.12	283	P	P	15 53 57.8	-0.7
KBZ	**Khabaz**	80.65	337	P	P	15 54 18.9	+1.5
	comp=Z,3.2nm,0.8s,baz=118,slow=6.4,SNR=4.7						
WRA	**Warramunga Arr**	87.28	232	P	P	15 54 52.3	+0.8
	comp=Z,0.3nm,0.7s,baz=33,slow=6.1,SNR=1.5						
ASAR	**Alice Springs**	90.66	231	P	P	15 55 10.1	+2.7
	comp=Z,0.2nm,0.6s,baz=30,slow=4.7,SNR=5.2						

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*DRS **11** 15:53:07.7±0.0, 42°.55N×45°.06E, h8^{km}, ML2.1/5*

*NORS **11** 15:53:15.8±0.0, 42°.45N×45°.43E, h15^{km}, MPVA3.4*

*MOS **11** 15:53:16.5±0.0, 42°.52N×45°.44E, h10^{km}, MPVA3.2*

*TIF **11** 15:53:18.6, 42°.66N×45°.38E, h11^{km}±1^{km}*

ISC 11 15:53:17.1±1.0**, 42°.58N**±0°.03×**45°.45E**±0°.02**, h10**^{km}±9^{km}**, n25, σ1^s.00**/45**, 4C-6D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTLR	**Botlikh**	0.57	82	⇑ePg	Pg	15 53 27.0	-1.3
	34nm,0.1s						
BTLR				⇓eSg	Sg	15 53 36.4	+0.5
	38nm,0.3s						
PNSH	**Pansheti**	0.62	275	P	Pb	15 53 30.1	-0.1
PNSH				S	Sb	15 53 38.1	-0.9
DVE	**Vedeno**	0.62	53	ePg	Pg	15 53 29.5	+0.3
DVE				eSg	Sg	15 53 38.0	+0.6
KMGR	**Komgaron**	0.64	318	ePg	Pb	15 53 31.3	+0.8
KMGR				eSg	Sn	15 53 43.0	+0.3
GROC	**Groznyy**	0.67	22	ePg	Pb	15 53 31.2	+0.3
GROC				eSg	Sb	15 53 42.1	+1.9
LACR	**Lac**	0.89	286	ePg	Pb	15 53 34.1	-0.6
LACR				eSg	Sg	15 53 45.2	-0.6
XNZR	**Khunzakh**	0.93	92	ePg	Pb	15 53 35.3	-0.1
XNZR				eSg	Sg	15 53 47.1	+0.1
LGD	**Lagodekhi**	0.95	142	P	Pn	15 53 35.8	-0.8
BTNK	**Botanikuri**	1.02	209	P	Pn	15 53 39.4	+1.8
BTKR	**Batakoyurt**	1.03	320	ePg	Pg	15 53 35.7	-1.3
BTKR				eSg	Sg	15 53 50.5	0.0
KRNR	**Karanay**	1.10	77	⇑ePg	Pn	15 53 38.5	-0.2
	5.6nm,0.4s						
KRNR				⇑eSg	Sn	15 53 53.7	-0.3
	25nm,0.3s						
DBC	**Dubki**	1.10	66	⇓ePg	Pn	15 53 38.9	+0.2
	8.8nm,0.5s						
DBC				⇓eSg	Sn	15 53 54.9	+0.8
	20nm,0.7s						
GNBR	**Gunib**	1.13	99	⇓iPg	Pn	15 53 39.1	0.0
	14nm,0.5s						
GNBR				⇓eSg	Sn	15 53 53.8	-0.9
	62nm,0.5s						
ARKR	**Arakani**	1.14	88	⇓ePg	Pn	15 53 39.6	+0.4
	7.5nm,0.5s						
ARKR				⇑eSg	Sn	15 53 55.0	+0.1
	40nm,0.2s						
ZEI	**Tsey**	1.16	281	ePg	Pn	15 53 39.0	-0.6
ZEI				eSg	Sg	15 53 53.6	-1.0
DDFL	**Dedoflistskaro**	1.24	156	P	Pg	15 53 44.4	+3.4
DIGR	**Digorskoe uzhe**	1.42	284	ePg	Pg	15 53 43.8	-0.5
DIGR				eSg	Sn	15 54 01.3	-0.6
ONI	**Oni**	1.48	271	P	Pg	15 53 45.8	+0.4
ONI	**Oni**	1.48	271	ePg	Pg	15 53 45.7	+0.3
ONI				eSg	Sg	15 54 04.9	+0.3
BRNG	**Burnasheti**	1.54	232	P	Pg	15 53 47.9	+1.2
BRNG				S	Sg	15 54 09.7	+2.9
DMNI	**Dmanisi**	1.57	217	P	Pg	15 53 47.1	-0.1
DMNI				S	Sg	15 54 08.6	+1.1
BKRG	**Bakuriani**	1.65	241	P	Pg	15 53 48.9	0.0
BKRG				S	Sg	15 54 12.1	+1.8
ABS	**Abastumani**	2.13	248	P	Pg	15 53 56.9	-1.1
ABS				S	Sg	15 54 24.6	-1.0
KBZ	**Khabaz**	2.19	302	ePg	Pb	15 53 57.0	+0.1
KBZ				eSg	Sb	15 54 25.0	+1.0
GNI	**Garni**	2.49	193	ePn	Pn	15 53 57.1	-0.8
GNI				eSn	Sb	15 54 30.6	-2.1

PRE 11 15:55:44.3±1.3**, 18°.20S**×**27°.50E, h5**^{km}**, ML3.5, Zimbabwe**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSNA	**Messina**	4.76	151	eP	Pn	15 56 58.2	+1.4
MSNA				eS	Sn	15 57 53.4	+1.0
MSNA				AML	AML	15 58 20.2	
	comp=Z,230nm,0.4s						
MOPA	**Mopani**	6.43	146	eP	Pn	15 57 20.1	+0.4
MOPA				eS	Sn	15 58 31.1	-2.4
MOPA				AML	AML	15 59 12.8	
	comp=Z,110nm,0.6s						
LBTB	**Lobatse**	7.01	194	eP	Pn	15 57 29.0	+1.2
LBTB				eS	Sn	15 58 44.3	-3.7
LBTB				AML	AML	15 59 02.2	
	comp=Z,16nm,0.3s						
PRYS	**Parys**	8.69	181	eP	Pn	15 57 52.7	+1.8
PRYS				eS	Sn	15 59 25.5	-3.9
PRYS				AML	AML	16 00 32.5	
	comp=Z,32nm,0.6s						
POGA	**Pongola**	9.90	158	eP	Pn	15 58 08.0	+0.7
POGA				eS	Sn	15 59 53.0	-5.9
POGA				AML	AML	16 00 17.8	
	comp=Z,15nm,0.4s						
BOSA	**Boshof**	10.57	191	eP	Pn	15 58 18.8	+2.1
GRAN	**Grantham**	14.85	198	eP	Pn	15 59 16.3	+1.3

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*IDC **11** 15:56:28.6±2.2, 0°.02S×123°.84E, h114^{km}±22^{km}, mb3.8/10, mb1 3.9/13, mb1mx3.7/33, mbtmp4.2/13, MS2.6/3, Ms1 2.7/3, ms1mx2.5/36, Error ellipse: s-maj=17.6km s-min=12.3km az=77.0*

*NEIC **11** 15:56:28.9±2.1, 0°.11S±0°.08×123°.89E±0°.07, h111^{km}±6^{km}, mb4.5/21, Error ellipse: s-maj=11.1km s-min=10.2km az=162.0*

*DJA **11** 15:56:29.6±0.3, 0°S±4°×12°4E±°, h89^{km}±8^{km}, M4.5/18, mb4.7/8, mB4.9/6, MLv4.6/18, Mw(mB)4.2/6*

ISC 11 15:56:29.5±0.7**, 0°.06S**±0°.05×**123°.94E**±0°.06**, h122**^{km}±7^{km}**, n74, σ1^s.51**/83**, mb4.3**/29**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMSI	**Cibinong**	0.63	3	P	Pn	15 56 47.6	-1.0
KMSI				S	Sn	15 57 01.7	-1.3
LUWI	**Luwuk**	1.53	230	Pn	Pn	15 56 54.3	-3.2
LUWI	**Luwuk**	1.53	230	P	Pn	15 56 54.2	-3.2
MRSI	**Marisa**	2.07	285	P	Pn	15 57 01.0	-3.0
APSI	**Ampana**	2.45	250	P	Pn	15 57 06.7	-2.0
SANI	**Sanana**	2.84	134	P	Pn	15 57 10.7	-3.2
TOLI2	**Tolitoli**	3.37	290	Pn	Pn	15 57 19.5	-1.3
TNTI	**Ternate**	3.52	76	Pn	Pn	15 57 21.9	-0.8
TNTI	**Ternate**	3.52	76	P	Pn	15 57 21.8	-1.0
NLAI	**Namlea**	4.46	135	P	Pn	15 57 34.2	-1.1
TTSI	**Tana Toraja**	5.08	234	P	Pn	15 57 42.3	-1.3
SPSI	**Sidrap Palu**	5.70	227	P	Pn	15 57 51.1	-0.8
	0.6nm2μm148nm,0.5s						
BNSI	**Bone**	5.77	222	P	Pn	15 57 51.4	-1.5
	0.3nm866nm44nm,0.6s						
MSAI	**Masohi**	5.96	123	P	Pn	15 57 56.0	+0.6
	0.1nm48nm,1.0s						
KAPI	**Kappang**	6.46	220	P	Pn	15 58 01.8	-0.4
	11nm,0.3s,baz=26,slow=1.9,SNR=10						
KAPI				S	Sn	15 59 11.8	-2.9
	10nm,0.3s,baz=194,slow=19,SNR=6.4						
KAPI				LR	LR	16 00 42.5	
	comp=Z,68nm,18.5s,baz=69,slow=40						
KAPI	**Kappang**	6.46	220	Pn	Pn	15 58 02.1	-0.1
DAV	**Davao City (W)**	7.27	13	LR	LR	16 01 53.6	
	comp=Z,39nm,19.9s,baz=10,slow=45						
SWI	**Sorong**	7.36	96	P	Pn	15 58 14.8	+0.4
	0.2nm948nm69nm,0.7s						
SIJI	**Sorong**	7.37	96	P	Pn	15 58 14.8	+0.3
	17nm,0.3s,baz=67,slow=9.9,SNR=46						
BNDI	**Bandanaira**	7.42	127	P	Pn	15 58 15.1	-0.2
	0.4nm140nm,1.0s						
MYLDM	**Lahad Datu**	7.53	314	Pn	Pn	15 58 18.2	+1.6
FAKI	**Fak Fak**	8.77	109	Pn	Pn	15 58 31.3	-2.2
FAKI	**Fak Fak**	8.77	109	P	Pn	15 58 31.8	-1.7
KKM	**Kota Kinabalu**	9.81	308	Pn	Pn	15 58 50.2	+2.6
KSM	**Kuching**	13.72	276	P	P	15 59 45.5	+1.9
FITZ	**Fitzroy Crossi**	18.00	175	P	Pn	16 00 31.3	-0.8
	0.2nm,0.3s,baz=354,slow=7.8,SNR=14						
FITZ	**Fitzroy Crossi**	18.00	175	P	Pn	16 00 31.7	-0.4
PSA00	**Pilbara Seismi**	21.75	190	P	P	16 01 12.2	+0.7
PSA00				IAmb	IAmb	16 01 23.1	
	comp=Z,15nm,1.2s						
WB0	**Warramunga Arr**	22.10	153	P	P	16 01 15.5	+0.4
WB0				IAmb	IAmb	16 01 17.1	
	comp=Z,16nm,1.4s						
WRA	**Warramunga Arr**	22.23	153	P	P	16 01 16.8	+0.4
	comp=Z,3.2nm,0.6s,baz=337,slow=10,SNR=51						

WRA	Warramunga Arr	22.23	153	P	P	16 01 15.6	-0.8
WB2	Warramunga Arr	22.24	153	P	P	16 01 17.2	+0.7
WB2				IAmb	IAmb	16 01 18.1	
	comp=Z,23nm,1.4s						
WR0	Warramunga Arr	22.34	153	P	P	16 01 17.1	-0.4
TPUB	Ta-pu	23.44	352	P	P	16 01 28.7	+0.7
TPUB				IAmb	IAmb	16 01 42.1	
	comp=Z,29nm,1.3s						
AS31	Alice Springs	25.38	158	P	P	16 01 46.3	+0.6
AS31				PcP	PcP	16 05 16.2	+1.1
ASAR	Alice Springs	25.38	158	P	P	16 01 46.4	+0.8
	comp=Z,0.9nm,0.4s,baz=346,slow=16,SNR=36						
ASAR				PcP	PcP	16 05 16.1	+0.9
	comp=Z,0.8nm,0.4s,baz=347,slow=2.3,SNR=12						
ASAR	Alice Springs	25.38	158	P	P	16 01 46.3	+0.6
ASAR				PcP	PcP	16 05 16.2	+1.1
CMAR	Chiang Mai Arr	30.69	308	P	P	16 02 33.4	+0.4
	comp=Z,0.5nm,0.4s,baz=139,slow=7.4,SNR=8.5						
CMAR				LR	LR	16 15 57.2	
	comp=Z,10nm,18.9s,baz=5.0,slow=38						
FORT	Forrest	30.80	173	P	P	16 02 34.3	+0.5
NJ2	Nanjing	32.30	352	eP	P	16 02 49.2	+2.4
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.5s						
JMN	Monobe	34.88	15	P	P	16 03 10.1	+0.8
STKA	Stephens Creek	35.78	154	P	P	16 03 17.6	+0.6
	comp=Z,4.0nm,0.5s,baz=336,slow=8.7,SNR=18						
STKA	Stephens Creek	35.78	154	P	P	16 03 18.0	+1.0
STKA				PcP	PcP	16 05 43.3	+1.0
JWT	Wachi	36.75	16	P	P	16 03 25.9	+0.7
JWT				IAmb	IAmb	16 03 27.7	
	comp=Z,29nm,1.3s						
JGF	Kuroka	37.62	18	P	P	16 03 33.4	+0.9
JGF				IAmb	IAmb	16 03 47.9	
	comp=Z,18nm,1.4s						
MJAR	Matsushiro Arr	38.75	18	P	P	16 03 41.7	-0.3
	comp=Z,3.5nm,0.6s,baz=191,slow=9.2,SNR=8.8						
MJAR	Matsushiro Arr	38.75	18	P	P	16 03 41.8	-0.3
JMM	Marumori	40.81	21	P	P	16 04 00.5	+1.5
JMM				IAmb	IAmb	16 04 13.2	
	comp=Z,27nm,1.4s						
HHC	Hu-ho-hao-te	42.24	346	eP	P	16 04 13.2	+2.4
HHC				S	S	16 10 16.1	-6.1
HHC				pmax	pmax		
	comp=Z,7.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,57nm,4.8s						
ODAN	Odare	44.18	310	eP	P	16 04 26.3	-0.5
	comp=Z,8.3nm,0.8s						
TAPN	Taplejung	44.19	311	eP	P	16 04 26.8	-0.1
USA0B	Ussuriysk Arra	44.65	8	P	P	16 04 30.1	+0.2
USA0B				IAmb	IAmb	16 04 40.0	
	comp=Z,9.7nm,1.4s						
USRK	Ussuriysk Ar.	44.65	8	P	P	16 04 30.1	+0.2
	comp=Z,2.5nm,0.4s,baz=194,slow=6.4,SNR=20						
USRK	Ussuriysk Ar.	44.65	8	P	P	16 04 30.2	+0.4
RAMN	Ramite	44.83	310	eP	P	16 04 32.1	+0.1
	comp=Z,5.5nm,0.5s						
GUN	Gumba	45.87	311	eP	P	16 04 39.9	-0.4
	comp=Z,5.3nm,0.3s						
PKI	Pulchoki	46.06	310	eP	P	16 04 41.4	-0.3
	comp=Z,1.8nm,0.4s						
PKIN	Phulchoki	46.07	310	eP	P	16 04 41.1	-0.7
	comp=Z,2.0nm,0.3s						
GKN	Gorkha	46.87	310	eP	P	16 04 47.1	-0.7
	comp=Z,3.3nm,0.3s						
DANN	Dangsing	47.71	310	eP	P	16 04 54.1	-0.4
	comp=Z,4.4nm,0.3s						
SONM	Songino Array	50.09	345	P	P	16 05 11.0	-1.2
	comp=Z,0.7nm,0.5s,baz=160,slow=8.6,SNR=3.7						
SONM	Songino Array	50.09	345	P	P	16 05 12.5	+0.4
WMQ	Urumqi	54.34	328	eP	P	16 05 46.4	+2.8
MK31	Makanchi Array	59.16	328	P	P	16 06 16.3	-1.3
MK31				IAmb	IAmb	16 06 18.1	
	comp=Z,1.0nm,0.6s						
MKAR	Makanchi Array	59.16	328	P	P	16 06 16.4	-1.1
	comp=Z,1.1nm,0.5s,baz=124,slow=8.3,SNR=19						
MKAR				PcP	PcP	16 07 04.1	-0.7
	comp=Z,1.0nm,0.5s,baz=154,slow=3.7,SNR=8.4						
MKAR	Makanchi Array	59.16	328	P	P	16 06 16.1	-1.5
MKAR				PcP	PcP	16 07 04.3	-0.5
PETK	Petropavlovsk-	59.97	23	P	P	16 06 22.8	-0.2
	comp=Z,3.4nm,0.9s,baz=212,slow=3.3,SNR=9.8						
PETK	Petropavlovsk-	59.97	23	P	P	16 06 24.3	+1.4
YAK	Yakutsk	62.08	3	P	P	16 06 36.7	-0.2
KURK	Kurchatov	63.50	330	P	P	16 06 45.3	-1.3
KURK				IAmb	IAmb	16 06 47.3	
	comp=Z,3.7nm,0.7s						
TIXI	Tiksi	71.66	2	P	P	16 07 37.0	-0.5
ABKAR	Akbulak array	73.36	322	P	P	16 07 46.3	-1.7
ABKAR				PcP	PcP	16 08 02.1	-1.5
NRIK	Noril'sk	73.46	347	P	P	16 07 47.2	-1.0
	comp=Z,0.7nm,0.3s,baz=121,slow=7.1,SNR=4.1						
TORD	Torodi Ar. Bea	121.33	285	PKP	PKPdf	16 15 07.7	-1.6
	comp=Z,0.5nm,0.5s,baz=29,slow=3.3,SNR=3.2						

*IDC **11** 16:18:57.0±1.3, 52.°58N×168.°88W, h0^{km}, mb3.8/13, mb1 3.9/14, mb1mx3.7/62, mbtmp3.8/14, ML2.8/1, Error ellipse: s-maj=36.2km s-min=17.4km az=163.0*

*AEIC **11** 16:18:57±2.1, 52.°09N±0.°06×168.°49W±0.°07, h17^{km}±6^{km}, mb4.2/12(NEIC), Error ellipse: s-maj=8.9km s-min=5.5km az=151.0*

*NEIC **11** 16:18:58.4±1.9, 52.°08N±0.°03×168.°49W±0.°08, h30^{km}±6^{km}, Error ellipse: s-maj=7.8km s-min=1.9km az=64.0*

ISC 11 16:18:58.2±0.8, **52.°13N**±0.°08×**168.°46W**±0.°06, **h26**^{km}, **n46**, σ**1.^{s}32**/44, **mb3.7**/13, **Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIKH	Nikolski High	0.88	344		Pb	16 19 14.5	-0.3
NIKH	Nikolski High	0.88	344		Sn	16 19 28.1	+1.3
OKSP	Okmok Steeple	1.13	5		Pb	16 19 18.3	-0.8
OKSO	Okmok South	1.24	8		Pb	16 19 19.1	-1.9
OKSO					Sb	16 19 37.2	+0.5
OKFG	Magazine Ridge	1.33	14		Pb	16 19 20.5	-1.9
OKFG					Sb	16 19 40.1	+1.1
MAPS	Pakushin South	1.92	28		Pb	16 19 29.6	-2.8
MSW	Makushin Switc	2.06	29		Pb	16 19 32.3	-2.5
MNAT	Makushin Natee	2.06	31		Pn	16 19 31.4	+0.3
AKUT	Akutan	2.58	38	Pn	Pb	16 19 39.9	-3.8
ADK	Adak	5.09	270	Pn	Pn	16 20 11.9	-0.8
OHAK	Old Harbor	10.15	54	Pn	Pn	16 21 23.1	+1.0
KDAK	Kodiak Island	10.73	52	Pn	Pn	16 21 29.7	-0.3
	0.4nm,0.3s,baz=232,slow=2.5,SNR=2.8						
KDAK	Kodiak Island	10.73	52	Pn	Pn	16 21 30.4	+0.4
SUA	Susitna One	13.43	39	Pn	Pn	16 22 08.1	+1.1
KNK	Knik Glacier	14.32	42	Pn	Pn	16 22 19.0	+0.1
SCM	Sheep Creek Mo	15.00	41	Pn	Pn	16 22 27.4	-0.8
KLU	Klutina	15.42	44	Pn	Pn	16 22 32.5	-1.3
KLU				IAmb	IAmb	16 22 44.9	
	comp=Z,28nm,1.2s						
M24K	Tolsona, Glenn	15.61	42	Pn	Pn	16 22 35.5	-0.7
M24K				IAmb	IAmb	16 22 51.0	
	comp=Z,45nm,1.4s						
N25K	Chitina, Valde	16.04	44	Pn	Pn	16 22 41.5	-0.3
N25K				IAmb	IAmb	16 22 52.5	
	comp=Z,25nm,1.4s						
WRH	Wood River Hil	16.25	33	Pn	P	16 22 45.8	-1.5
GLB	Gilahina Butte	16.31	46	Pn	Pn	16 22 44.5	-0.7
GLB				IAmb	IAmb	16 23 07.5	
	comp=Z,25nm,1.3s						
CCB	Clear Creek Bu	16.46	32		P	16 22 48.6	-1.0
ILAR	Eielson Array	16.84	33	Pn	Pn	16 22 50.2	-1.7
	comp=Z,0.0nm,0.3s,baz=242,slow=11,SNR=5.4						
DOT	Dot Lake	17.22	39	P	P	16 22 58.8	+0.8
EGAK	Eagle	18.89	37	P	Pn	16 23 16.7	-0.3
BMAR	Burnt Mountain	19.27	28	P	Pn	16 23 20.8	-0.9
PEA0B	Petropavlovsk-	20.46	286	P	Pn	16 23 32.8	-3.0
PETK	Petropavlovsk-	20.46	286	P	P	16 23 32.7	-0.9
	comp=Z,5.6nm,0.6s,baz=86,slow=13,SNR=21						
PETK	Petropavlovsk-	20.46	286	P	Pn	16 23 33.0	-2.8
CRAG	Craig	20.99	67	P	P	16 23 41.0	+1.8
INK	Inuvik	23.24	33	P	P	16 24 02.6	-0.4
	comp=Z,1.7nm,0.6s,baz=250,slow=9.2,SNR=5.3						
INK	Inuvik	23.24	33	P	P	16 24 03.4	+0.4
INK				IAmb	IAmb	16 24 04.4	
	comp=Z,2.2nm,0.8s						
SEY	Seymchan	23.24	313	P	P	16 24 01.2	-1.8
	comp=Z,1.7nm,0.8s,baz=83,slow=18,SNR=5.3						
YKA	Yellowknife Ar	29.98	49	P	P	16 25 06.0	+1.9
	comp=Z,0.3nm,0.7s,baz=271,slow=6.8,SNR=5.1						
PDAR	Pinedale Array	39.90	79	P	P	16 26 33.7	+3.8
	comp=Z,0.6nm,0.6s,baz=281,slow=5.4,SNR=3.5						
PDAR	Pinedale Array	39.90	79	P	P	16 26 31.7	+1.8
FCC	Fort Churchill	40.66	50	P	P	16 26 37.0	+1.3
TULEG	Thule	42.16	20	P	P	16 26 48.1	+0.3
TULEG				IAmb	IAmb	16 26 51.2	
	comp=Z,8.0nm,1.0s						
KSRS	Korea Array	45.99	278	P	P	16 27 19.1	+0.1
	comp=Z,0.7nm,0.7s,baz=45,slow=7.4,SNR=1.6						
SONM	Songino Array	51.90	301	P	P	16 28 03.9	-0.5
	comp=Z,0.7nm,0.7s,baz=58,slow=8.0,SNR=5.5						
MKAR	Makanchi Array	64.38	314	P	P	16 29 30.7	-0.8
	comp=Z,1.2nm,0.8s,baz=50,slow=6.5,SNR=13						
FINES	FINESS Array B	66.18	352	P	P	16 29 42.5	-0.4
	comp=Z,2.5nm,0.9s,baz=28,slow=6.3,SNR=2.2						
AKASG	Malin Array Be	76.45	349	P	P	16 30 45.2	0.0
	comp=Z,1.0nm,0.6s,baz=16,slow=6.0,SNR=4.8						
CMAR	Chiang Mai Arr	77.22	284	P	P	16 30 50.4	+0.5
	comp=Z,0.6nm,0.9s,baz=18,slow=6.9,SNR=5.6						
GERES	GERESS Array B	79.39	359	P	P	16 31 01.3	-0.3
	comp=Z,0.5nm,0.7s,baz=23,slow=4.5,SNR=3.7						
ASAR	Alice Springs	90.67	231	P	P	16 32 02.8	+4.5
	comp=Z,0.3nm,0.9s,baz=19,slow=5.0,SNR=1.9						

*UCR **11** 16:22:16.6±1.3, 13.°12N×90.°82W, h23^{km}±9^{km}, ML3.8, mb4.0(NEIC)*

*NEIC **11** 16:22:16.6±2.8, 13.°1N±0.°1×90.°97W±0.°08, h46^{km}±13^{km}, mb4.0/4, Error ellipse: s-maj=19.0km s-min=9.4km az=199.0*

*SNET **11** 16:22:16.5±1.2, 13.°13N×90.°83W, h24^{km}±8^{km}, ML3.9*

*IDC **11** 16:22:20.5±5.8, 14.°11N×90.°34W, h35^{km}±47^{km}, mb3.6/6, mb1 3.9/9, mb1mx3.6/47, mbtmp3.8/9, ML3.5/3, MS3.4/2, Ms1 3.4/2, ms1mx2.7/38, Error ellipse: s-maj=73.9km s-min=26.8km az=31.0*

*GCG **11** 16:22:25.3±0.3, 13.°82N×90.°85W, h26^{km}±999^{km}, MD4.1*

ISC 11 16:22:14.6±1.3, **13.°1N**±0.°1×**90.°94W**±0.°05, **h33**^{km}, **n49**, σ**1.^{s}70**/49, **mb4.0**/7, **Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCG	Pacaya	1.37	14	eP	Pn	16 22 38.0	+0.3
FUG	Fuego 3	1.39	4	eP	Pn	16 22 37.9	0.0
CEVE	Cerro Verde	1.50	59	eP	Pb	16 22 40.4	-1.5
CEVE				eS	Sb	16 23 00.5	-0.2
CEVE				IAML		16 23 05.6	
	comp=Z,3µm,0.4s						
CEVE	Cerro Verde	1.50	59	eP	Pb	16 22 40.4	-1.5
CEVE				eS	Sb	16 23 00.5	-0.2
CEVE				IAML		16 23 05.6	
	comp=Z,3µm,0.4s						
SBLS	San Blas	1.50	58	eP	Pb	16 22 40.6	-1.5
SBLS	San Blas	1.50	58	eP	Pb	16 22 40.6	-1.5
RTR	El Retiro	1.51	56	eP	Pb	16 22 40.8	-1.4
RTR	El Retiro	1.51	56	eP	Pb	16 22 40.8	-1.4
SNJE	San Jose	1.53	58	eP	Pb	16 22 40.9	-1.7
SNJE	San Jose	1.53	58	eP	Pb	16 22 40.9	-1.7
JAYA	Jayaque - finc	1.57	67	eP	Pb	16 22 40.7	-2.4
JAYA				eS	Sn	16 22 59.4	-0.2
JAYA				IAML		16 23 06.1	
	comp=Z,1µm,0.3s						
JAYA	Jayaque - finc	1.57	67	eP	Pb	16 22 40.7	-2.4
JAYA				eS	Sn	16 22 59.4	-0.2
JAYA				IAML		16 23 06.1	
	comp=Z,1µm,0.3s						
NBG	Las Nubes	1.63	21	eP	Pn	16 22 42.8	+1.5
RTAL	Retalhuleu	1.64	333	Pn	Pn	16 22 40.6	-0.5
UNIC	Universidad Ca	1.64	55	eP	Pb	16 22 42.5	-1.8
UNIC	Universidad Ca	1.64	55	eP	Pb	16 22 42.5	-1.8
PMON	Piamonte	1.71	67	eP	Pb	16 22 43.9	-1.6
PMON	Piamonte	1.71	67	eP	Pb	16 22 43.9	-1.6
BOQS	Boqueron	1.75	67	eP	Pb	16 22 45.1	-1.1
BOQS	Boqueron	1.75	67	eP	Pb	16 22 45.1	-1.1
SNET	Serv Nac Est T	1.78	69	Pn	Pb	16 22 44.6	-2.0
MTO3	Montecristo	2.04	49	eP	Pb	16 22 48.5	-2.6
MTO3				eS	Sn	16 23 12.8	+1.6
MTO3	Montecristo	2.04	49	eP	Pb	16 22 48.5	-2.6
MTO3				eS	Sn	16 23 12.8	+1.6
MTO3	Montecristo	2.04	49	Pn	Pb	16 22 48.6	-2.6
ESQI	Esquipulas	2.16	46	Pn	Pn	16 22 50.2	+1.8
HUEH	Huehuetenango	2.32	346	Pn	Pn	16 22 52.0	+1.3
MRL	Marmol	2.36	31	eP	Pn	16 22 53.8	+2.6
CMIG	Matias Romero	5.54	317	Pn	Pn	16 23 35.8	+1.1
	comp=Z,2.6nm,0.3s,baz=135,slow=9.9,SNR=18						
TEIG	Tepich	7.58	19	Pn	Pn	16 24 04.1	+1.4
	comp=Z,9.2nm,0.3s,baz=148,slow=1.3,SNR=71						
TEIG	Tepich	7.58	19	Pn	Pn	16 24 04.7	+1.9
H06E1	SOCORRO T-PHAS	20.04	289	T	T	16 47 01.9	
	SNR=16						
TXAR	Lajitas Array	20.05	326	P	Pn	16 26 46.5	-0.6
	comp=Z,0.0nm,0.3s,baz=146,slow=12,SNR=9.6						
TXAR	Lajitas Array	20.05	326	P	Pn	16 26 47.4	+0.3
SDV	Santo Domingo	20.36	100	P	Pn	16 26 50.8	-0.1
	comp=Z,0.5nm,0.3s,baz=311,slow=8.2,SNR=4.2						
TKL	Tuckaleechee C	23.42	15	LR	LR	16 37 08.3	
	comp=Z,129nm,18.2s,baz=190,slow=40						
ATAH	Atahualpa	23.61	147	LR	LR	16 34 49.7	
	comp=Z,62nm,18.4s,baz=340,slow=31						
NVAR	Mina Array Bea	35.05	321	P	P	16 29 06.7	+1.9
	comp=Z,1.2nm,0.7s,baz=130,slow=8.7,SNR=12						
NVAR	Mina Array Bea	35.05	321	P	P	16 29 08.1	+3.4
ULM	Lac du Bonnet	37.31	355	P	P	16 29 20.7	-2.9
	comp=Z,2.0nm,0.6s,baz=201,slow=7.0,SNR=4.4						
ULM	Lac du Bonnet	37.31	355	P	P	16 29 22.2	-1.4
JTMT	Jette	39.70	335	P	P	16 29 45.8	+1.9
JTMT				IAmb	IAmb	16 29 47.6	
	comp=Z,3.8nm,1.4s						
YKA	Yellowknife Ar	52.18	346	P	P	16 31 20.6	-1.3
	comp=Z,0.5nm,0.8s,baz=140,slow=7.8,SNR=4.0						
INK	Inuvik	61.64	343	P	P	16 32 28.8	+0.1
	comp=Z,0.7nm,0.4s,baz=2.8,slow=16,SNR=5.1						
INK	Inuvik	61.64	343	P	P	16 32 29.0	+0.3
RES	Resolute Bay	61.66	359	P	P	16 32 26.8	-2.0
	comp=Z,1.1nm,0.6s,baz=177,slow=8.5,SNR=7.6						
RES	Resolute Bay	61.66	359	P	P	16 32 27.6	-1.2
RES				IAmb	IAmb	16 32 30.6	
	comp=Z,1.1nm,0.8s						
ILAR	Eielson Array	64.11	337	P	P	16 32 46.2	+1.0
	comp=Z,0.6nm,0.9s,baz=130,slow=5.3,SNR=4.8						
ILAR	Eielson Array	64.11	337	P	P	16 32 46.7	+1.4
CMAR	Chiang Mai Arr	147.21	342	PKPbc	PKiKP	16 41 57.5	-0.3
	comp=Z,1.7nm,0.8s,baz=330,slow=2.9,SNR=14						

NOU 11 16:29:40.7, 17.°21S×168.°08E, h180^{km}, MLv4.4, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	Devils Point	0.52	169	P	Pn	16 30 06.8	+1.2
SANVU	Saraoutou	1.94	334	P	Pn	16 30 17.2	0.0
LIFNC	LIFOU	3.64	192	P	Pn	16 30 36.6	-0.6
DZM	Mont Dzumac	5.08	197	P	Pn	16 30 55.9	+0.2
NOUC	Port Laguerre	5.15	199	P	Pn	16 30 56.8	+0.3
PINNC	Pines Island,	5.41	186	P	Pn	16 31 00.0	+0.1

*UCR **11** 16:31:35.9±2.5, 7.°22N×81.°58W, h5^{km}, MW5.0, mb4.3(NEIC)*

*IDC **11** 16:31:36.6±2.7, 7.°30N×81.°89W, h0^{km}, mb3.8/6, mb1 4.0/7, mb1mx3.7/34, mbtmp3.9/7, ML2.8/1, MS3.1/8, Ms1 3.1/8, ms1mx2.9/33, Error ellipse: s-maj=83.4km s-min=25.2km az=33.0*

*UPA **11** 16:31:39.4±1.6, 7.°71N×81.°62W, h2^{km}±4^{km}, MW4.8, Fault plane solution: NP1:ϕ_s281.10000°, δ63.71000°, λ39.21000°.*

*NEIC **11** 16:31:45.3±1.0, 7.°7N±0.°1×81.°61W±0.°07, h49^{km}±12^{km}, mb4.3/4, Error ellipse: s-maj=20.4km s-min=10.1km az=185.0*

ISC 11 16:31:39.9±1.2, **7.°65N**±0.°04×**81.°64W**±0.°02, **h10**^{km}±7^{km}, **n128**, σ**1.^{s}61**/155, **mb3.8**/7, **MS2.9**/5, **18C-23D**, **Panama**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PVID3	Puerto Vidal,	0.39	5	⇓iP	Pg	16 31 47.6	0.0
PVID3				iS	Sg	16 31 53.2	+0.3
GMAL	Guarumal, Vera	0.42	75	⇓iP	Pg	16 31 47.6	-0.5
GMAL				iS	Sg	16 31 54.0	+0.3
RSUS3	Rio de Jesus,	0.58	56	⇓iP	Pg	16 31 51.0	-0.1
RSUS3				iS	Sg	16 31 59.3	+0.5
NANC3	Nancito, Chiri	0.59	351	⇓iP	Pg	16 31 50.9	-0.4
NANC3				iS	Sg	16 31 59.9	+0.9
MESA3	La Mesa, Verag	0.67	43	⇓iP	Pg	16 31 52.3	-0.5
MESA3				iS	Sg	16 32 02.0	+0.4
PONU3	Ponuga, Veragu	0.70	71	⇓iP	Pg	16 31 52.6	-0.7
PONU3				iS	Sg	16 32 03.3	+0.8
STIA3	Santiago, Vera	0.80	56	⇓iP	Pg	16 31 54.4	-0.9
STIA3				iS	Sb	16 32 07.5	+0.8
CNAZ3	Canazas, Verag	0.81	32	⇑iP	Pg	16 31 54.4	-1.2
CNAZ3				iS	Sg	16 32 05.5	-0.7
CACAO	El Cacao, Vera	0.83	112	⇑iP	Pg	16 31 55.2	-0.7
CACAO				iS	Sb	16 32 09.0	+1.3
SFRA3	San Francisco,	0.89	48	⇓iP	Pg	16 31 55.9	-1.1
SFRA3				iS	Sg	16 32 08.4	-0.1
OCU3	Ocu, Herrera	0.91	71	⇑iP	Pg	16 31 56.5	-0.9
OCU3				iS	Sb	16 32 10.0	+0.2
CHIR3	Chiriqui UPA,	1.00	317	⇓eP	Pg	16 31 57.9	-1.3
SAFE3	Santa Fe, Vera	1.02	33	⇓iP	Pg	16 31 58.0	-1.5
SAFE3				iS	Sg	16 32 11.8	-1.0
PEDE3	Pedregal, Chir	1.06	313	eP	Pg	16 31 58.4	-1.8
LOMA3	Las Lomas, Chi	1.07	316	eP	Pg	16 32 00.2	-0.3
LOCO3	Loma Colorada,	1.07	314	iP	Pg	16 31 58.7	-1.8
BAGA3	Bagala, Chiriq	1.19	313	eP	Pb	16 32 01.2	-1.3
PSOM3	Paja de Sombre	1.23	327	⇓iP	Pn	16 32 01.3	-1.8
CHIT3	Chitre	1.25	76	⇑eP	Pb	16 32 04.0	+0.4
CHIT3				iS	Sb	16 32 18.7	-1.0
PTAR3	Potrerillos Ar	1.33	321	⇓eP	Pn	16 32 03.4	-1.3
LESP3	La Esperanza,	1.36	303	eP	Pn	16 32 03.4	-1.5
AZU	Azuero	1.36	84	⇓iP	Pn	16 32 03.7	-1.2
	baz=269,slow=14						
AZU				iS	Sb	16 32 22.4	-0.6
AZU				iS	Sn	16 32 22.6	-0.5
AZU	Azuero	1.36	84	⇓iP	Pn	16 32 03.6	-1.3
AZU				eS	Sb	16 32 21.7	-1.2
AZU				i		16 32 27.2	
	comp=Z,4µm,0.4s						
CHGR2	Aguacate	1.37	339	⇓eP	Pn	16 32 03.7	-1.4
CHGR2				iS	Sn	16 32 24.3	+1.0
BCO2	Palmira	1.38	320	⇓iP	Pn	16 32 04.0	-1.3
BCO2				eS	Sb	16 32 24.1	+0.6
SBAR3	San Bartolo, C	1.40	298	eP	Pn	16 32 03.7	-1.7
BC3P	Paso Ancho	1.50	320	⇑eP	Pn	16 32 06.2	-0.9
PCRI3	Pocri, Los San	1.51	90	⇓iP	Pn	16 32 07.8	+0.8
PCRI3				iS	Sb	16 32 27.7	+0.4
CDITO	Canoas	1.52	307	eP	Pn	16 32 06.0	-1.2
CDITO	Canoas	1.52	307	⇑eP	Pn	16 32 05.4	-1.8
CDITO				eS	Sg	16 32 33.6	+4.7
BRU2	Volcan	1.54	318	⇓iP	Pn	16 32 07.0	-0.6
BRU2				eS	Sb	16 32 29.0	+0.8
PNME	Penonome	1.54	58	⇓iP	Pn	16 32 06.5	-0.9
PNME				iS	Sn	16 32 26.0	-1.5
PNME	Penonome	1.54	58	eP	Pn	16 32 06.8	-0.7
MLIR3	Monte Lirio, C	1.63	314	iP	Pn	16 32 09.0	+0.3
MLIR3	Monte Lirio, C	1.63	314	iS	Sn	16 32 30.8	+1.0
EDSV	San Vito	1.75	311	eP	Pn	16 32 11.8	+1.3
VTON	El Valle, Cocl	1.79	58	⇓iP	Pn	16 32 11.2	+0.3
VTON				iS	Sn	16 32 34.8	+1.1
PIRO	Carate, Puerto	1.84	294	eP	Pn	16 32 10.6	-0.9
PIRO				iS	Sb	16 32 36.9	+0.3
PIRO	Carate, Puerto	1.84	294	⇑eP	Pn	16 32 10.6	-0.9
LPLA	Las Palmas La	1.92	315	eP	Pn	16 32 11.8	-1.0
LPLA				eS	Sb	16 32 40.4	+1.1
CNI2	El Empalme, Bo	1.94	335	⇑eP	Pn	16 32 14.4	+1.5
CNI2				iS	Sn	16 32 37.0	-0.4
RIOS	Rincon, Osa	2.13	299	eP	Pn	16 32 14.9	-0.5
RGM0	Gandoca	2.15	334	⇑eP	Pn	16 32 17.4	+1.6
RGM0	Gandoca	2.15	334	⇑eP	Pn	16 32 17.3	+1.6
RGM0				eS	Sg	16 32 51.2	+2.2
ZANG	Zanguenga, Cho	2.18	54	eP	Pn	16 32 16.8	+0.6
ZANG				eS	Sn	16 32 40.8	-2.6
EDBA	Buenos Aires	2.20	313	eP	Pn	16 32 18.3	+1.7
EDPN	Palmar Norte	2.22	306	eP	Pn	16 32 16.1	-0.6
CHOR3	La Chorrera	2.23	56	eP	Pn	16 32 18.5	+1.6
CHOR3				eS	Sn	16 32 45.7	+1.1
DRK0	Durika	2.25	315	⇑eP	Pn	16 32 17.1	-0.2
DRK0	Durika	2.25	315	eP	Pn	16 32 18.3	+1.0
BCIP	Isla Barro Col	2.33	50	⇓iP	Pn	16 32 19.6	+1.2
BCIP				iS	Sn	16 32 47.0	-0.1
BCIP	Isla Barro Col	2.33	50		Pn	16 32 19.5	+1.2
BCIP	Isla Barro Col	2.33	50	⇓iP	Pn	16 32 19.4	+1.0
BCIP				eS	Sn	16 32 48.7	+1.6
TABO3	Taboga, Panama	2.36	61	eP	Pn	16 32 20.1	+1.5
ARRA3	Arraijan, Pana	2.36	56	⇓iP	Pn	16 32 20.1	+1.5
ARRA3				iS	Sn	16 32 47.8	+0.2
MLIR	Monte Lirio	2.37	48	⇑iP	Pn	16 32 20.4	+1.6
MLIR	Monte Lirio	2.37	48	iS	Sn	16 32 49.5	+1.5
PML3	Paraiso	2.42	56	eP	Pn	16 32 20.7	+1.2
UPA	Univ. de Panam	2.47	58	eP	Pn	16 32 21.2	+1.0
UPA				iS	Sn	16 32 51.2	+0.8
UPA	Univ. de Panam	2.47	58	eP	Pn	16 32 21.5	+1.4
PEZE	Perez Zeledon,	2.65	311	eP	Pn	16 32 23.5	+0.8
EDDO	Dominical	2.71	306	eP	Pb	16 32 27.0	-1.5
CDM	Cerro de Muert	2.82	312	⇑eP	Pn	16 32 26.2	+0.7
CHPO	Chepo, Panama	2.92	59	eP	Pn	16 32 27.5	+1.1
CHPO				iS	Sn	16 32 59.8	-1.8
RIMA	Rio Macho	3.04	314	⇑eP	Pn	16 32 28.9	+0.7
LCR2	La Lucha 2	3.12	312	eP	Pn	16 32 30.3	+0.9
CNTA3	Canitas, Panam	3.14	60	eP	Pn	16 32 28.1	-1.2
CVTR	Volcan Turrial	3.15	318	⇑eP	Pn	16 32 32.3	+2.4
HDC	Heredia	3.38	314	eP	Pn	16 32 32.0	-0.9
HDC	Heredia	3.38	314	eP	Pn	16 32 34.9	+2.1
HDC	Heredia	3.38	314	Pn	Pn	16 32 35.5	+2.6
JACO	JACO, Garabito	3.59	304	eP	Pn	16 32 38.1	+2.4
UPD2	Meteti	3.70	76	iP	Pn	16 32 39.5	+2.4
UPD2	Meteti	3.70	76	eP	Pn	16 32 39.5	+2.4
PTAC	Punta Ardita,	3.83	97	eP	Pn	16 32 41.7	+2.7
CASO	Castillo	4.12	312	eP	Pn	16 32 44.0	+1.1
ARE1	Arenal 1	4.12	313	⇑eP	Pn	16 32 44.6	+1.6
CEDE	Laguna Cedeo	4.13	313	eP	Pn	16 32 44.3	+1.2
JTS	Las Juntas de	4.19	309	⇑iP	Pn	16 32 46.9	+3.0
JTS	Las Juntas de	4.19	309	⇑iP	Pn	16 32 46.9	+3.0
JTS	Las Juntas de	4.19	309	Pn	Pn	16 32 46.9	+3.0
JTS	Las Juntas de	4.19	309	eP	Pn	16 32 46.8	+3.0
CAP2	Capurgana	4.35	77	eP	Pn	16 32 47.4	+1.3
CAPC	Capurgana	4.36	77	eP	Pn	16 32 48.7	+2.5
PLVR	Palo Verde	4.54	306	eP	Pn	16 32 48.6	-0.2
HORNC	Hornillas	4.63	311	eP	Pn	16 32 53.1	+3.1
LAPC	Finca la Perla	4.86	310	eP	Pn	16 32 55.0	+1.9
ESPN	Las Esperanzas	5.22	330	Pn	Pn	16 33 01.3	+3.3
DBBC	Dabeiba	5.42	96	eP	Pn	16 33 00.8	-0.1
ACON	Acoyapa	5.52	321	Pn	Pn	16 33 05.0	+2.8
PRVC	Isla de Provid	5.69	3	eP	Pn	16 33 03.6	-0.9
MOTC	Monteria, Cord	6.02	79	eP	Pn	16 33 11.7	+2.7
MONA	Monteria	6.02	79	eP	Pn	16 33 10.3	+1.1
UREC	San Jos de Ur	6.05	89	eP	Pn	16 33 14.2	+4.7
YOTC	Yotoco, Valle	6.41	124	eP	Pn	16 33 13.8	-0.7
GUY2C	Guyana, Caldas	6.69	111	eP	Pn	16 33 21.3	+2.7
ZARC	Zaragoza, Cauc	6.73	91	eP	Pn	16 33 19.8	+1.0
RREF	El Recreo	6.83	113	eP	Pn	16 33 22.4	+1.7
TOLC	Tolima	6.99	116	eP	Pn	16 33 22.2	-0.5
BBAC	Balboa, Cauca	7.10	142	eP	Pn	16 33 27.2	+3.1
ORTC	Ortega, Tolima	7.37	120	eP	Pn	16 33 29.8	+2.1
PCON	Cinco Dias	7.43	135	eP	Pn	16 33 32.5	+3.5
SMLC	San Martn de	7.58	81	eP	Pn	16 33 32.2	+1.8
ROSC	El Rosal	7.80	111	LR	LR	16 36 37.3	
	comp=Z,152nm,19.1s,baz=260,slow=38						
RUSC	La Rusia	8.68	101	eP	Pn	16 33 33.6	-12
URIC	Uribia, Colomb	10.33	66	eP	Pn	16 34 07.5	-0.7
SOCV	Socops	10.70	86	eP	Pn	16 34 15.2	+1.8
SDV	Santo Domingo	10.96	83	Pn	Pn	16 34 19.6	+2.5
	comp=Z,0.6nm,0.3s,baz=251,slow=10,SNR=11						
SDV				LR	LR	16 40 01.1	
	comp=Z,211nm,18.1s,baz=276,slow=45						
SDV	Santo Domingo	10.96	83	Pn	Pn	16 34 20.9	+3.8
SDV	Santo Domingo	10.96	83	eP	Pn	16 34 19.2	+2.1
TEIG	Tepich	14.05	333	LR	LR	16 40 35.9	
	comp=Z,64nm,18.3s,baz=133,slow=38						
SDDR	Presa de Saban	15.10	41	Pn	P	16 35 16.9	-1.9
CMIG	Matias Romero	15.97	307	Pn	P	16 35 27.4	-0.9
	comp=Z,0.1nm,0.3s,baz=105,slow=8.3,SNR=6.2						
NNA	Nana	20.09	166	LR	LR	16 43 41.6	
	comp=Z,23nm,21.5s,baz=350,slow=37						
PTGA	Pitinga	23.16	110	P	P	16 36 45.5	-1.3
	comp=Z,1.3nm,0.4s,baz=288,slow=14,SNR=4.0						
PTGA				LR	LR	16 46 14.7	
	comp=Z,27nm,18.5s,baz=100,slow=38						
SAML	Samuel	24.70	132	P	P	16 37 01.9	+0.4
LPAZ	La Paz	27.29	151	LR	LR	16 49 24.2	
	comp=Z,28nm,18.0s,baz=204,slow=39						
MDP	Montagnes des	28.93	93	LR	LR	16 50 41.7	
	comp=Z,44nm,20.1s,baz=260,slow=39						
BDFB	Brasilia	40.56	125	LR	LR	16 56 55.2	
	comp=Z,74nm,19.2s,baz=124,slow=37						
ULM	Lac du Bonnet	44.09	347	P	P	16 39 48.1	0.0

	comp=Z,1.3nm,0.4s,baz=148,slow=7.4,SNR=3.9						
ULM	**Lac du Bonnet**	**44.09**	**347**	P	**P**	**16 39 48.1**	**0.0**
ULM				IAmb	IAmb	16 40 00.1	
	comp=Z,6.8nm,1.1s						
YKA	**Yellowknife Ar**	**59.78**	**343**	P	**P**	**16 41 44.8**	**-0.2**
	comp=Z,0.7nm,0.8s,baz=133,slow=7.7,SNR=8.2						
INK	**Inuvik**	**69.49**	**342**	P	**P**	**16 42 48.8**	**+0.6**
INK				IAmb	IAmb	16 42 53.1	
	comp=Z,3.8nm,0.9s						
ILAR	**Eielson Array**	**72.70**	**336**	P	**P**	**16 43 08.4**	**+0.7**
	comp=Z,0.6nm,0.9s,baz=104,slow=3.8,SNR=3.8						
ILAR	**Eielson Array**	**72.70**	**336**	P	**P**	**16 43 07.8**	**0.0**
ESDC	**Sonseca Array**	**75.68**	**51**	P	**P**	**16 43 26.4**	**+0.6**
	comp=Z,1.0nm,0.9s,baz=268,slow=6.0,SNR=4.5						
TORD	**Torodi Ar. Bea**	**81.84**	**78**	P	**P**	**16 44 01.0**	**+0.9**
	comp=Z,0.4nm,0.6s,baz=291,slow=5.7,SNR=2.3						
ASAR	**Alice Springs**	**142.40**	**241**	PKP	**PKPdf**	**16 51 10.2**	**-3.7**
	comp=Z,0.4nm,0.9s,baz=112,slow=3.8,SNR=4.2						

TEH ***11*** *16:48:33.5, 30°.83N×56°.89E, h8^{km}, ML3.5*
THR ***11*** *16:48:33.9±0.3, 30°.82N×56°.93E, h15^{km}±4^{km}, ML3.5*
ISC 11 16:48:34.5±1.0**, 30°.68N**±0°.04×**56°.92E**±0°.04**, h11**^{km}**, n29, σ1^{s}.19**/31**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHGB	**Koh Gabri**	**0.49**	**231**	*e*Pg	**Pb**	**16 48 44.4**	**-0.8**
TVBK	**TV Kerman**	**0.71**	**191**	*e*Pg	**Pn**	**16 48 50.2**	**-0.6**
TVBK				*e*		16 49 08.7	
	comp=Z,99nm,0.4s						
KRBR	**Kerman**	**0.71**	**191**	*e*Pg	**Pn**	**16 48 50.2**	**-0.6**
KRBR				*e*Sg	**Sn**	**16 49 02.0**	**+0.1**
KRBR	**Kerman**	**0.71**	**191**	*e*Pg	**Pn**	**16 48 50.2**	**-0.6**
CHMN	**Cheshme madani**	**0.98**	**146**	*e*Pg	**Pn**	**16 48 54.7**	**+0.2**
NGRK	**Negar Kerman**	**1.05**	**189**	*e*Pg	**Pn**	**16 48 56.7**	**+1.2**
NGRK				*e*		16 49 01.4	
	comp=Z,99nm,0.2s						
IBAF	**Bafgh**	**1.47**	**308**	*e*Pg	**Pn**	**16 48 58.9**	**-2.2**
IBAF				*e*		16 49 02.7	
	comp=Z,99nm,0.2s						
KBAM	**BAM**	**2.04**	**139**	*e*Pn	**Pb**	**16 49 11.6**	**0.0**
KBAM				*e*		16 49 49.7	
	comp=Z,99nm,0.4s						
IMEH	**Mehriz**	**2.10**	**290**	*e*Pn	**Pn**	**16 49 10.1**	**+0.3**
IMEH				*e*		16 49 13.2	
	comp=Z,99nm,0.2s						
BSRN	**Basiran**	**2.28**	**55**	*e*Pn	**Pn**	**16 49 12.0**	**-0.3**
BSRN	**Basiran**	**2.28**	**55**	*e*Pn	**Pn**	**16 49 12.0**	**-0.3**
TPRV	**Parvadeh(Tabas**	**2.35**	**355**	*e*Pn	**Pn**	**16 49 12.0**	**-1.1**
IKOO	**Kooshah**	**2.49**	**45**	*e*Pn	**Pn**	**16 49 15.4**	**+0.2**
YZKH	**Yazd**	**2.62**	**311**	*e*Pn	**Pn**	**16 49 16.8**	**0.0**
YZKH				*e*Sg	**Sb**	**16 49 53.5**	**-0.1**
YZKH	**Yazd**	**2.62**	**311**	*e*Pn	**Pn**	**16 49 16.8**	**0.0**
ICHK	**Chekchek**	**2.65**	**307**	*e*	**Sg**	**16 50 03.4**	**+3.7**
	comp=N,99nm,0.4s						
ITEG	**Tejag**	**2.71**	**35**	*e*Pn	**Pn**	**16 49 17.9**	**-0.2**
NHDN	**Nehbandan**	**2.78**	**74**	*e*Pn	**Pn**	**16 49 19.9**	**+0.8**
TKDS	**Koohdasht(Taba**	**2.93**	**3**	*e*Pn	**Pn**	**16 49 20.2**	**-0.9**
TKDS				*e*		16 50 10.5	
	comp=Z,99nm,0.4s						
TABS	**Tabas**	**2.96**	**3**	*e*Pn	**Pn**	**16 49 20.7**	**-0.9**
TABS				IAML		16 50 19.5	
	comp=N,128nm,0.5s						
TABS	**Tabas**	**2.96**	**3**	*e*Pn	**Pn**	**16 49 20.7**	**-0.9**
IDAH	**Dahanechah**	**3.25**	**50**	*e*Pn	**Pn**	**16 49 25.9**	**+0.3**
AFRZ	**Afriz**	**3.27**	**33**	*e*Pn	**Pn**	**16 49 24.8**	**-1.0**
TNSJ	**Nastanj**	**3.28**	**356**	*e*Pn	**Pn**	**16 49 25.1**	**-0.9**
GENO	**Geno**	**3.33**	**191**	*e*Pn	**Pb**	**16 49 30.8**	**-3.0**
IMON	**Monand**	**3.43**	**42**	*e*Pn	**Pn**	**16 49 28.5**	**+0.4**
IMON				*e*		16 49 46.6	
	comp=Z,99nm,0.2s						
ANAR	**Anarak**	**3.69**	**314**	*e*Pn	**Pn**	**16 49 31.6**	**0.0**
IRAM	**Ramesheh**	**4.04**	**287**	*e*Pn	**Pn**	**16 49 38.0**	**+1.5**
IPAY	**Payeh**	**6.01**	**16**	*e*Pn	**Pn**	**16 50 03.4**	**-0.2**

SJA ***11*** *17:07:17.4±0.6, 30°.18S×71°.56W, h62^{km}±6^{km}, ML4.1, MW4.2*
NEIC ***11*** *17:07:17.5±2.5, 30°.17S±0°.03×71°.61W±0°.08, h56^{km}±5^{km}, mb4.7/8, ML5.0(GUC), Error ellipse: s-maj=9.7km s-min=3.1km az=102.0*
IDC ***11*** *17:07:19.2±0.8, 30°.28S×71°.20W, h70^{km}±5^{km}, mb4.0/5, mb1 4.2/9, mb1mx3.9/28, mbtmp4.3/9, MS3.1/5, Ms1 3.1/5, ms1mx3.0/24, Error ellipse: s-maj=23.1km s-min=21.3km az=55.0*
GUC ***11*** *17:07:19.4±0.6, 30°.19S×71°.44W, h62^{km}±4^{km}, ML4.9*
VAO ***11*** *17:07:30.0±1.4, 29°.33S×69°.92W, h10^{km}, mb4.2*
ISC 11 17:07:17.0±0.5**, 30°.16S**±0°.03×**71°.60W**±0°.05**, h52**^{km}±4^{km}**, n118, σ1^{s}.84**/134**, mb4.4**/7**, 8C-3D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO04	**Tololo Observa**	**0.70**	**92**	⇑*e*P	**Pn**	**17 07 32.4**	**+1.3**
GO04				*e*S	**Sn**	**17 07 42.3**	**+1.1**
GO04				IAML		17 07 44.1	
	comp=E,179µm,0.6s						
GO04	**Tololo Observa**	**0.70**	**92**		**Pn**	**17 07 32.6**	**+1.6**
GO04	**Tololo Observa**	**0.70**	**92**	*e*P	**Pn**	**17 07 32.4**	**+1.3**
GO04				*e*S	**Sn**	**17 07 43.4**	**+2.2**
CO03	**El Pedregal**	**1.04**	**131**	⇓*i*P	**Pn**	**17 07 36.5**	**+1.1**
CO03				*i* S	**Sn**	**17 07 49.6**	**+0.5**
CO03				IAML		17 07 50.2	
	comp=E,56µm,0.1s						
CO03	**El Pedregal**	**1.04**	**131**		**Pn**	**17 07 36.4**	**+0.9**
CO03					**Sn**	**17 07 48.3**	**-0.7**
CO02	**Combarbal**	**1.17**	**154**	⇓*e*P	**Pn**	**17 07 38.8**	**+1.6**
CO02				*i* S	**Sn**	**17 07 53.6**	**+1.5**
CO02				IAML		17 07 54.6	
	comp=N,64µm,0.2s						
CO02	**Combarbal**	**1.17**	**154**		**Pn**	**17 07 38.8**	**+1.6**
CO01	**Juntas del Tor**	**1.32**	**83**	*e*P	**Pn**	**17 07 40.5**	**+1.2**
CO01				*i* S	**Sn**	**17 07 56.2**	**+0.2**
CO01	**Juntas del Tor**	**1.32**	**83**		**Pn**	**17 07 40.5**	**+1.2**
LCO	**Las Campanas**	**1.39**	**35**	*i* S	**Sn**	**17 07 59.8**	**+2.2**
LCO	**Las Campanas**	**1.39**	**35**		**Pn**	**17 07 42.0**	**+1.7**
AC05	**El Transito**	**1.75**	**42**	⇑*e*P	**Pn**	**17 07 47.2**	**+2.0**
AC05				*e*S	**Sn**	**17 08 08.9**	**+2.5**
AC05	**El Transito**	**1.75**	**42**		**Pn**	**17 07 47.0**	**+1.9**
AROD	**Rodeo**	**1.84**	**91**	*e*P	**Pn**	**17 07 48.8**	**+2.2**
AROD				*e*S	**Sn**	**17 08 11.5**	**+2.6**
AC04	**Llanos de Chal**	**2.00**	**14**	*e*P	**Pn**	**17 07 50.7**	**+2.3**
AC04				*e*S	**Sn**	**17 08 13.8**	**+1.6**
AC04	**Llanos de Chal**	**2.00**	**14**		**Pn**	**17 07 50.3**	**+1.9**
ACDV	**Cuesta del Vie**	**2.15**	**91**	*e*P	**Pn**	**17 07 52.7**	**+2.1**
ACDV				IAML		17 08 24.4	
	comp=Z,680nm,0.9s						
ACCO	**Cerro Coronel**	**2.23**	**102**	*e*P	**Pn**	**17 07 54.6**	**+2.7**
ACCO				IAML		17 08 25.2	
	comp=Z,703nm,1.3s						
VA03	**San Esteban**	**2.75**	**161**	*e*P	**Pn**	**17 08 00.8**	**+2.0**
VA03				*i* S	**Sn**	**17 08 32.1**	**+1.3**
VA03				IAML		17 08 37.5	
	comp=E,3µm,0.2s						
VA03	**San Esteban**	**2.75**	**161**		**Pn**	**17 08 00.4**	**+1.6**
GO03	**Copiap**	**2.82**	**26**	⇑*i*P	**Pn**	**17 08 01.1**	**+1.4**
GO03	**Copiap**	**2.82**	**26**		**Pn**	**17 08 00.6**	**+0.8**
GO03	**Copiap**	**2.82**	**26**	*e*P	**Pn**	**17 08 01.6**	**+1.9**
GO03				*e*S	**Sn**	**17 08 35.7**	**+3.2**
ROCH	**El Roble**	**2.85**	**170**	⇑*e*P	**Pn**	**17 08 01.7**	**+1.4**
ZON	**Zonda**	**2.87**	**120**	Pn	**Pn**	**17 08 02.4**	**+2.0**
ZON	**Zonda**	**2.87**	**120**	*e*P	**Pn**	**17 08 02.0**	**+1.6**
ZON				*e*S	Sn	17 08 15.6	-18
ZON				IAML		17 08 59.5	
	comp=Z,350nm,0.6s						
RTLL	**Cerro Villicun**	**2.94**	**114**	*e*P	**Pn**	**17 08 03.1**	**+1.9**
RTLL				IAML		17 09 00.8	
	comp=Z,623nm,0.6s						
PEL	**Peldehue**	**3.08**	**166**	⇑*e*P	**Pn**	**17 08 04.9**	**+1.7**
PEL				*i* S	**Sn**	**17 08 40.3**	**+1.5**
PEL	**Peldehue**	**3.08**	**166**	Pn	**Pn**	**17 08 04.5**	**+1.3**
PEL	**Peldehue**	**3.08**	**166**	*e*P	**Pn**	**17 08 05.2**	**+2.0**
PEL				*e*S	**Sn**	**17 08 41.0**	**+2.2**
MT02	**Curacav**	**3.12**	**173**	*e*P	**Pn**	**17 08 04.8**	**+1.0**
MT02	**Curacav**	**3.12**	**173**		**Pn**	**17 08 04.8**	**+1.0**
RTCV	**Cerro Valdivia**	**3.13**	**124**	*e*P	**Pn**	**17 08 06.6**	**+2.7**
RTCV				IAML		17 09 07.0	
	comp=Z,287nm,0.6s						
VCA	**Vinchina**	**3.28**	**65**	*e*P	**Pn**	**17 08 09.6**	**+3.4**
VCA				*e*S	**Sn**	**17 08 48.9**	**+4.9**
VCA				IAML		17 09 11.8	
	comp=Z,1µm,1.1s						
MT05	**Renca**	**3.31**	**167**	*e*P	**Pn**	**17 08 08.2**	**+1.8**
MT05				*e*S	**Sn**	**17 08 45.6**	**+1.1**
MT05				IAML		17 09 05.2	
	comp=E,1µm,0.2s						
MT05	**Renca**	**3.31**	**167**	Pn	**Pn**	**17 08 06.8**	**+0.4**
MT03	**Universidad Ad**	**3.46**	**165**	⇑*e*P	**Pn**	**17 08 10.4**	**+2.0**
MT03				*i* S	**Sn**	**17 08 50.1**	**+2.0**
MT03				IAML		17 08 51.5	
	comp=N,2µm,0.2s						
VA05	**Santo Domingo**	**3.49**	**180**	*e*P	**Pn**	**17 08 09.6**	**+0.8**
VA05				IAML		17 09 12.0	
	comp=E,963nm,0.5s						
MT09	**Talagante**	**3.65**	**172**	*e*P	**Pn**	**17 08 12.6**	**+1.5**
AC02	**Maricunga**	**3.96**	**34**	Pn	**Pn**	**17 08 16.9**	**+1.2**
AC01	**Pan de Azucar**	**4.09**	**13**	⇑*e*P	**Pn**	**17 08 17.1**	**0.0**
AC01	**Pan de Azucar**	**4.09**	**13**	Pn	**Pn**	**17 08 17.2**	**+0.1**
ACLC	**CERRO LA CRUZ**	**4.11**	**81**	*e*P	**Pn**	**17 08 18.8**	**+1.4**
ACLC				*e*S	Sn	17 08 52.3	-12
ACLC				IAML		17 09 32.8	
	comp=Z,322nm,0.8s						
BO02	**Sierra Bellavi**	**4.67**	**172**	Pn	**Pn**	**17 08 26.0**	**+0.9**
GO02	**Mina Guanaco**	**5.29**	**20**	Pn	**Pn**	**17 08 33.4**	**-0.4**
MRA	**San Martin**	**5.52**	**116**	*e*P	**Pn**	**17 08 37.0**	**+0.3**
MRA				*e*S	**Sn**	**17 09 35.2**	**-3.7**
MRA				IAML		17 10 28.5	
	comp=Z,128nm,0.8s						
PB14	**IPOC Station P**	**5.61**	**11**	Pn	**Pn**	**17 08 36.6**	**-1.6**
AHML	**Horco Molle**	**6.46**	**60**	*e*P	**Pn**	**17 08 51.0**	**+1.5**
AHML				IAML		17 10 55.6	
	comp=Z,32nm,2.5s						
BI02	**San Fabin de**	**6.50**	**178**	Pn	**Pn**	**17 08 50.8**	**+0.7**
PB10	**IPOC Station P**	**6.68**	**8**	*e*P	**Pn**	**17 08 51.5**	**-1.1**
PB10				*e*S	**Sn**	**17 10 04.1**	**-3.3**
PB10				IAML		17 10 54.4	
	comp=Z,40nm,0.6s						
BI03	**Tigo**	**6.77**	**190**	Pn	**Pn**	**17 08 53.0**	**-0.8**
H03N1	**Juan Fernandez**	**7.03**	**240**	T	T	17 16 05.8	
	baz=70,slow=72,SNR=357						
H03N2	**Juan Fernandez**	**7.04**	**240**	T	T	17 16 08.3	
	baz=70,slow=72,SNR=427						
H03N3	**Juan Fernandez**	**7.04**	**240**	T	T	17 16 07.0	
	baz=70,slow=72,SNR=246						
VA04	**Juan Fernndez**	**7.06**	**239**	Pn	**Pn**	**17 08 58.0**	**+0.3**
PB15	**IPOC Station P**	**7.18**	**16**		**Pn**	**17 08 58.5**	**-1.1**
PB05	**IPOC Station P**	**7.38**	**10**	*e*P	**Pn**	**17 09 01.0**	**-1.3**
PB05				*e*S	**Sn**	**17 10 22.0**	**-2.8**
PB05				IAML		17 11 09.2	
	comp=Z,56nm,0.6s						
PB06	**IPOC Station P**	**7.64**	**14**		**Pn**	**17 09 03.9**	**-2.0**
LVC	**Limon Verde**	**7.89**	**18**	P	**Pn**	**17 09 06.0**	**-3.6**
	comp=Z,3.5nm,0.3s,baz=185,slow=11,SNR=28						
LVC				S	**Sn**	**17 10 35.1**	**-2.6**
	comp=Z,3.0nm,0.3s,baz=1.4,slow=12,SNR=3.1						
LVC				LR	LR	17 12 46.0	
	comp=Z,77nm,20.0s,baz=203,slow=41						
LVC	**Limon Verde**	**7.89**	**18**	*e*P	**Pn**	**17 09 08.1**	**-1.4**
LVC				*e*S	Sn	17 10 27.3	-10
PB07	**IPOC Station P**	**8.54**	**11**		**Pn**	**17 09 15.9**	**-2.3**
PB09	**IPOC Station P**	**8.59**	**15**		**Pn**	**17 09 19.3**	**+0.4**
LC01	**Cunco**	**8.72**	**181**	Pn	**Pn**	**17 09 19.6**	**-0.9**
PB01	**IPOC Station P**	**9.27**	**12**		**Pn**	**17 09 25.2**	**-3.0**
PATCX	**Punta Patache**	**9.39**	**8**	Pn	**Pn**	**17 09 28.1**	**-1.7**
PLCA	**Paso Flores**	**10.59**	**176**	P	**Pn**	**17 09 45.5**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=344,slow=11,SNR=4.0						
PLCA				LR	LR	17 14 06.3	
	comp=Z,117nm,20.5s,baz=344,slow=39						
MNMC	**Minye Minye**	**11.13**	**10**		**Pn**	**17 09 50.7**	**-3.0**
PB16	**IPOC Station P**	**11.92**	**10**	Pn	**Pn**	**17 10 02.7**	**-2.1**
ITQB	**Itaqui**	**13.01**	**92**	*e*P	**Pn**	**17 10 16.4**	**-2.7**
CPUP	**Villa Florida**	**13.15**	**77**	P	**Pn**	**17 10 18.2**	**-2.8**
	comp=Z,0.2nm,0.3s,baz=276,slow=8.4,SNR=2.0						
CPUP				LR	LR	17 15 10.3	
	comp=Z,96nm,20.9s,baz=254,slow=37						
CPUP	**Villa Florida**	**13.15**	**77**		**Pn**	**17 10 18.1**	**-3.0**
LPAZ	**La Paz**	**14.17**	**14**	P	**Pn**	**17 10 36.7**	**+1.3**
	comp=Z,2.0nm,0.3s,baz=183,slow=6.9,SNR=72						
LPAZ				LR	LR	17 16 10.8	
	comp=Z,71nm,21.2s,baz=138,slow=37						
LPAZ	**La Paz**	**14.17**	**14**	P	**Pn**	**17 10 38.5**	**+3.0**
LPAZ	**La Paz**	**14.17**	**14**	*e*P	**Pn**	**17 10 37.5**	**+2.0**
SIV	**San Ignacio**	**17.09**	**37**	P	**Pn**	**17 11 11.8**	**-0.6**
	comp=Z,1.1nm,0.3s,baz=239,slow=11,SNR=71						
PP1B	**Ponte de Pedra**	**19.72**	**54**	*e*P	**P**	**17 11 41.8**	**-0.5**
VILB	**Vilhena**	**20.11**	**34**	*e*P	**P**	**17 11 46.7**	**+0.1**
ETMB	**Extrema**	**20.85**	**15**	*e*P	Pn	17 11 59.5	+1.9
ITRB	**Iturama**	**21.86**	**66**	*e*P	**P**	**17 12 03.8**	**-1.7**
PET01	**Itanhaem-SP**	**22.39**	**81**	*e*P	**P**	**17 12 10.3**	**-0.7**
SAML	**Samuel**	**22.52**	**22**	P	**P**	**17 12 12.3**	**-0.3**
SAML	**Samuel**	**22.52**	**22**	*e*P	**P**	**17 12 16.9**	**+4.4**
ARAG	**Araguaiana, MT**	**23.16**	**56**	*e*P	**P**	**17 12 20.0**	**+0.8**
BDFB	**Brasilia**	**26.02**	**62**	P	**P**	**17 12 43.2**	**-2.3**
	comp=Z,3.9nm,0.6s,baz=211,slow=6.3,SNR=6.1						
BDFB	**Brasilia**	**26.02**	**62**	P	**P**	**17 12 43.2**	**-2.3**
BDFB				IAmb	IAmb	17 13 09.7	
	comp=Z,13nm,1.0s						
NPGB	**Novo Progresso**	**27.59**	**37**	*e*P	**P**	**17 13 04.4**	**+4.9**
TEIG	**Tepich**	**52.60**	**340**	P	**P**	**17 16 27.0**	**+1.4**
	comp=Z,12nm,0.6s,baz=281,slow=1.4,SNR=9.9						
TEIG	**Tepich**	**52.60**	**340**	P	**P**	**17 16 27.2**	**+1.6**
TEIG				IAmb	IAmb	17 16 28.0	
	comp=Z,31nm,1.3s						
SNAA	**Sanae**	**55.01**	**159**	P	**P**	**17 16 42.7**	**-0.1**
SNAA	**Sanae**	**55.01**	**159**	P	**P**	**17 16 42.6**	**-0.1**
SNAA				IAmb	IAmb	17 16 43.7	
	comp=Z,8.4nm,1.2s						
TXAR	**Lajitas Array**	**66.59**	**330**	P	**P**	**17 18 04.2**	**+2.2**
	comp=Z,0.9nm,0.7s,baz=146,slow=9.1,SNR=6.2						
TXAR				pP	**sP**	**17 18 22.3**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=155,slow=11,SNR=2.1						
TXAR	**Lajitas Array**	**66.59**	**330**	P	**P**	**17 18 00.9**	**-1.1**
TX31	**Lajitas Ar. Si**	**66.59**	**330**	P	**P**	**17 17 59.6**	**-2.3**
TX31				IAmb	IAmb	17 18 23.1	
	comp=Z,16nm,1.4s						
PLAL	**Pickwick Lake**	**66.63**	**345**	P	**P**	**17 18 01.0**	**-0.9**
SYO	**Syowa Base**	**69.30**	**159**	⇑*e*pP	pP	17 18 30.6	-2.5
SYO	**Syowa Base**	**69.30**	**159**	⇓*e*PcP	**PcP**	**17 18 40.8**	**-0.9**
DBIC	**Dimbokro**	**73.62**	**72**	LR	LR	17 51 40.1	
	comp=Z,23nm,18.1s,baz=180,slow=36						
BOSA	**Boshof**	**81.54**	**118**	P	**P**	**17 19 28.4**	**-1.1**
	comp=Z,2.0nm,0.8s,baz=348,slow=3.7,SNR=3.3						
BOSA	**Boshof**	**81.54**	**118**	P	**P**	**17 19 28.5**	**-1.0**
BOSA				IAmb	IAmb	17 19 50.0	
	comp=Z,13nm,1.4s						
TORD	**Torodi Ar. Bea**	**82.56**	**70**	P	**P**	**17 19 33.6**	**-1.1**
	comp=Z,1.3nm,0.8s,baz=275,slow=5.2,SNR=6.1						
TORD				pP	**pP**	**17 19 52.0**	**+2.3**
	comp=Z,1.2nm,0.7s,baz=277,slow=4.0,SNR=3.4						
TORD	**Torodi Ar. Bea**	**82.56**	**70**	P	**P**	**17 19 33.6**	**-1.1**
LRM	**Limekiln Ridge**	**84.21**	**333**	P	**P**	**17 19 43.3**	**+0.4**
ASAR	**Alice Springs**	**121.14**	**207**	PKP	**PKPdf**	**17 26 03.8**	**-0.8**
	comp=Z,0.3nm,0.5s,baz=124,slow=1.7,SNR=10						
ASAR	**Alice Springs**	**121.14**	**207**		**PKPdf**	**17 26 03.6**	**-1.0**
WRA	**Warramunga Arr**	**124.28**	**210**	PKP	**PKPdf**	**17 26 10.2**	**-0.5**
	comp=Z,0.5nm,0.4s,baz=159,slow=1.7,SNR=19						
H11S2	**WAKE ISLAND Hy**	**126.11**	**272**	T	T	19 45 14.3	
	baz=115,slow=75,SNR=27						
H11S1	**WAKE ISLAND Hy**	**126.12**	**272**	T	T	19 45 16.8	
	baz=115,slow=75,SNR=32						
H11S3	**WAKE ISLAND Hy**	**126.13**	**272**	T	T	19 45 15.8	
	baz=115,slow=75,SNR=33						
NIL	**Nilore**	**150.05**	**74**		**PKPbc**	**17 27 01.4**	**-0.6**
AAK	**Ala-Archa**	**150.20**	**56**		**PKiKP**	**17 27 02.9**	**-0.2**
ZAA0	**Zalesovo Array**	**150.74**	**29**		**PKPbc**	**17 27 02.9**	**-0.1**
ZALV	**Zalesovo Beam**	**150.74**	**29**	PKPbc	**PKPbc**	**17 27 02.8**	**-0.1**
	comp=Z,9.1nm,0.7s,baz=316,slow=4.1,SNR=31						
ZALV				pPKPbc	**sPKPbc**	**17 27 22.9**	**-1.2**
	comp=Z,5.5nm,0.7s,baz=286,slow=3.0,SNR=7.2						
MKAR	**Makanchi Array**	**153.84**	**43**	PKPbc	**PKPbc**	**17 27 09.0**	**-1.2**
	comp=Z,0.6nm,0.7s,baz=286,slow=2.2,SNR=7.9						
MKAR				PKPab	**sPKPdf**	**17 27 23.4**	**-0.1**
	comp=Z,1.0nm,0.7s,baz=283,slow=4.4,SNR=8.1						
MKAR				pPKPbc	**sPKPbc**	**17 27 29.9**	**-1.5**
	comp=Z,1.0nm,1.0s,baz=321,slow=1.6,SNR=3.3						
MKAR	**Makanchi Array**	**153.84**	**43**		**PKPbc**	**17 27 10.0**	**-0.2**
MJAR	**Matsushiro Arr**	**154.36**	**292**	PKPab	**PKPab**	**17 27 27.8**	**+1.8**
	comp=Z,1.3nm,0.6s,baz=79,slow=3.0,SNR=2.8						
MJAR	**Matsushiro Arr**	**154.36**	**292**		**PKPab**	**17 27 26.5**	**+0.5**
SONM	**Songino Array**	**162.28**	**4**	PKPab	**PKPab**	**17 28 01.2**	**+1.3**
	comp=Z,0.5nm,0.8s,baz=328,slow=5.2,SNR=4.3						
SONM	**Songino Array**	**162.28**	**4**		**PKPab**	**17 28 00.9**	**+1.0**

SOME ***11*** *17:21:58.4, 38°.95N×72°.12E, h0^{km}*
NNC ***11*** *17:21:59.1±5.5, 38°.89N×72°.55E, h0^{km}, mb3.6, mpv3.4, Error ellipse: s-maj=38.6km s-min=26.7km az=175.0*
ISC 11 17:22:00.5±3.9**, 39°.0N**±0°.2×**72°.36E**±0°.07**, h10**^{km}**, n7, σ2^{s}.13**/10**, 2C, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IUG	**Iuzhnay**	**3.61**	**331**	*e*P	**Pb**	**17 23 05.5**	**+1.0**
	1.6nm,0.0s						
IUG				*e*S	**Sg**	**17 23 53.8**	**-2.7**
	17nm,0.6s						
IUG	**Iuzhnay**	**3.61**	**331**	Pg	**Pg**	**17 23 09.4**	**-0.2**
	2.4nm,0.1s						
IUG				Lg	Lg	17 24 00.7	
	17nm,0.6s						
MRKS	**Merke**	**3.80**	**10**	*e*P	**Pg**	**17 23 11.3**	**-1.9**
	4.3nm,0.3s						
MRKS				*e*S	**Sg**	**17 24 04.0**	**+1.4**
	4.9nm,0.6s						
MRKS	**Merke**	**3.80**	**10**	Pg	**Pg**	**17 23 11.3**	**-1.9**
	4.3nm,0.3s						
MRKS				Lg	Lg	17 24 04.0	
	4.9nm,0.6s						
AAK	**Ala-Archa**	**3.98**	**23**	⇑Pg	**Pb**	**17 23 11.4**	**+0.6**
	3.0nm,1.1s						
AAK				⇑Lg	Lg	17 24 07.9	
	2.6nm,0.5s						
KK31	**Karatay Array**	**4.33**	**342**	Pg	**Pb**	**17 23 19.1**	**+2.4**
	1.0nm,0.3s,baz=152,slow=12,SNR=18						
KK31				Lg	Lg	17 24 17.6	
	1.2nm,0.3s,baz=163,slow=23,SNR=12						
DGS	**Degeres**	**4.96**	**30**	*e*P	**Pg**	**17 23 33.6**	**-1.9**
DGS				*e*S	**Sg**	**17 24 41.8**	**+2.0**

TUL ***11*** *17:23:58.7±1.7, 36°.70N±0°.02×97°.83W±0°.03, h5^{km}±7^{km}, ML3.1, mb_Lg2.9/46(NEIC), Error ellipse: s-maj=3.5km s-min=1.8km az=57.0*
NEIC ***11*** *17:23:58.4±1.3, 36°.66N±0°.02×97°.85W±0°.03, h4^{km}±7^{km}, Error ellipse: s-maj=3.7km s-min=1.9km az=55.0*
ANF ***11*** *17:23:59.1±0.7, 36°.68N×97°.82W, h5^{km}, ML3.5/7, Error ellipse: s-maj=9.2km s-min=7.9km az=73.0*
ISC 11 17:23:58.6±1.1**, 36°.67N**±0°.02×**97°.83W**±0°.03**, h3**^{km}±11^{km}**, n57, σ1^{s}.06**/55**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CROK	**Carrier**	**0.21**	**217**	Pg	**Pg**	**17 24 03.4**	**+0.8**
CROK				Sg	**Sg**	**17 24 07.0**	**+1.6**
KAN14	**Manchester OK**	**0.30**	**339**	Pg	**Pg**	**17 24 04.5**	**0.0**
KAN14				Sg	**Sg**	**17 24 08.6**	**+0.1**
KAN05	**Bluff City Nor**	**0.44**	**355**	Pg	**Pg**	**17 24 06.7**	**-0.3**
KAN05					**Sg**	**17 24 12.3**	**-0.4**
KAN13	**South Haven SW**	**0.44**	**39**	Pg	**Pg**	**17 24 07.1**	**0.0**
KAN13				Sg	**Sg**	**17 24 12.0**	**-0.9**
KAN01	**Argonia South**	**0.48**	**6**	Pg	**Pg**	**17 24 07.9**	**0.0**
KAN10	**Anthony SW Sta**	**0.50**	**335**	Pg	**Pg**	**17 24 08.3**	**+0.1**
KAN10				Sg	**Sg**	**17 24 14.4**	**-0.3**
KAN08	**Anthony NE Sta**	**0.57**	**348**	Pg	**Pg**	**17 24 08.9**	**-0.6**
KAN12	**Harper NE Stat**	**0.64**	**348**	Pg	**Pg**	**17 24 10.5**	**-0.4**
KAN12				Sg	**Sg**	**17 24 19.2**	**0.0**
OK029	**Liberty Lake**	**0.92**	**161**		**Pg**	**17 24 16.7**	**+0.4**
U32A	**Winter Ranch,**	**0.99**	**253**	Pg	**Pg**	**17 24 16.9**	**-0.6**
BCOK	**Bluff Creek, N**	**1.03**	**170**		**Pg**	**17 24 18.0**	**-0.3**
QUOK	**Quay**	**1.03**	**119**		**Pg**	**17 24 18.3**	**-0.1**
OK031	**S. Brethren Rd**	**1.07**	**132**	Pg	**Pg**	**17 24 19.3**	**+0.1**
T35A	**Sooner Cattle**	**1.08**	**77**	Pg	**Pg**	**17 24 17.5**	**-1.8**
OK030	**Cody Creek RV**	**1.12**	**131**	Pg	**Pg**	**17 24 19.6**	**-0.6**
OK025	**Westminster Rd**	**1.16**	**160**	Pg	**Pg**	**17 24 20.3**	**-0.5**
OKCFA	**Oklahoma City**	**1.29**	**166**		**Pn**	**17 24 21.8**	**-1.8**
OKCSW	**OKLAHOMA CITY**	**1.30**	**166**		**Pn**	**17 24 23.4**	**-0.3**
FNO	**Franklin**	**1.45**	**166**		**Pn**	**17 24 22.9**	**-3.0**
TUL1	**Leonard**	**1.81**	**114**	P	**Pn**	**17 24 29.5**	**-1.2**
	baz=296						
TUL1				S	**Sb**	**17 24 55.7**	**+0.2**
	baz=296						
TUL1	**Leonard**	**1.81**	**114**		**Pn**	**17 24 29.6**	**-1.2**
TUL1				IAmb_Lg		17 24 59.3	
	comp=Z,85nm,0.8s						
R32A	**Long Quarter,**	**1.88**	**338**		**Pn**	**17 24 30.2**	**-1.5**
WMOK	**Wichita Mounta**	**2.08**	**202**	P	**Pn**	**17 24 34.9**	**+0.5**
	baz=21						
WMOK				S	**Sb**	**17 25 02.4**	**-0.9**
	baz=21						
WMOK	**Wichita Mounta**	**2.08**	**202**		**Pn**	**17 24 33.5**	**-1.0**
KSU1	**Kansas State U**	**2.61**	**21**	P	**Pn**	**17 24 42.7**	**+1.0**
	baz=202						
KSU1				S	**Sn**	**17 25 14.8**	**+0.9**
	baz=202						
KSU1	**Kansas State U**	**2.61**	**21**		**Pn**	**17 24 41.2**	**-0.5**
CBKS	**Cedar Bluff**	**2.62**	**325**	P	**Pn**	**17 24 42.5**	**+0.6**
	baz=144						
CBKS				S	**Sn**	**17 25 14.8**	**+0.5**
	baz=144						
CBKS	**Cedar Bluff**	**2.62**	**325**	Pn	**Pn**	**17 24 40.3**	**-1.6**
U38A	**Gravette**	**2.78**	**94**		**Pb**	**17 24 49.5**	**+0.6**
X37A	**Clayton**	**2.88**	**135**		**Pn**	**17 24 46.1**	**+0.7**
X37A				IAmb_Lg		17 25 33.9	
	comp=Z,29nm,0.9s						
HHAR	**Hobbs**	**3.16**	**96**		**Pn**	**17 24 49.3**	**0.0**
W39A	**Magazine**	**3.60**	**113**	P	**Pn**	**17 24 55.4**	**+0.1**
	baz=296						
W39A	**Magazine**	**3.60**	**113**		**Pn**	**17 24 55.3**	**+0.1**
W39A				IAmb_Lg		17 25 54.4	
	comp=Z,28nm,0.7s						
AMTX	**Amarillo**	**3.61**	**241**	Pn	**Pn**	**17 24 54.9**	**-0.6**
AMTX				IAmb_Lg		17 25 58.5	
	comp=Z,35nm,0.8s						
S39A	**Bolivar**	**3.74**	**73**		**Pn**	**17 24 57.6**	**+0.4**
S39A				IAmb_Lg		17 25 57.9	
	comp=Z,23nm,0.8s						
U40A	**Yellville**	**4.02**	**93**	P	**Pn**	**17 25 01.0**	**-0.1**
	baz=276						
U40A	**Yellville**	**4.02**	**93**		**Pn**	**17 25 01.8**	**+0.7**
U40A				IAmb_Lg		17 26 14.6	
	comp=Z,20nm,0.8s						
MIAR	**Mount Ida**	**4.06**	**120**	P	**Pn**	**17 25 02.7**	**+1.1**
	baz=303						
MIAR	**Mount Ida**	**4.06**	**120**		**Pn**	**17 25 03.0**	**+1.4**
MIAR				IAmb_Lg		17 26 17.1	
	comp=Z,30nm,1.2s						
Z38A	**Mt. Pleasant**	**4.13**	**145**	IAmb_Lg		17 26 14.6	
	comp=Z,37nm,0.8s						
KSCO	**Kaye Shedlock’**	**4.46**	**303**	IAmb_Lg		17 26 32.3	
	comp=Z,20nm,0.7s						
MGMO	**Mountain Grove**	**4.48**	**82**	Pn	**Pn**	**17 25 08.2**	**+0.8**
MGMO				IAmb_Lg		17 26 20.1	
	comp=Z,23nm,0.9s						
N35A	**Tabor**	**4.52**	**22**	IAmb_Lg		17 26 28.0	
	comp=Z,46nm,0.9s						
X40A	**Basin Creek Fa**	**4.62**	**117**	Pn	**Pn**	**17 25 05.3**	**-3.9**
WHAR	**Wooly Hollow**	**4.70**	**105**	Pn	**Pn**	**17 25 11.0**	**+0.6**
R40A	**Maddies Statio**	**4.71**	**68**	Pn	**Pn**	**17 25 11.1**	**+0.6**
R40A				IAmb_Lg		17 26 34.7	
	comp=Z,29nm,0.8s						
BGNE	**Belgrade**	**4.74**	**357**	IAmb_Lg		17 26 34.5	
	comp=Z,33nm,0.8s						
MSTX	**Muleshoe**	**4.86**	**238**	IAmb_Lg		17 26 44.1	
	comp=Z,16nm,1.1s						
237A	**Washetta, Mont**	**4.95**	**160**	IAmb_Lg		17 26 44.8	
	comp=Z,27nm,1.1s						
P40A	**Paris**	**5.38**	**56**	Pn	**Pn**	**17 25 21.1**	**+1.4**
P40A				IAmb_Lg		17 26 55.3	
	comp=Z,24nm,0.8s						
L34A	**Svendsen Farm,**	**5.41**	**12**	IAmb_Lg		17 26 54.2	
	comp=Z,31nm,1.1s						
CCM	**Cathedral Cave**	**5.42**	**73**	Pn	**Pn**	**17 25 20.4**	**0.0**
CCM				IAmb_Lg		17 26 53.9	
	comp=Z,32nm,1.0s						
PBMO	**Poplar Bluff**	**5.94**	**87**	IAmb_Lg		17 27 10.9	
	comp=Z,16nm,0.8s						
K31A	**O'Neill**	**5.99**	**353**	IAmb_Lg		17 27 10.4	
	comp=Z,28nm,0.8s						
JCT	**Junction City**	**6.39**	**196**	IAmb_Lg		17 27 25.5	
	comp=Z,13nm,0.9s						
S44A	**Carbondale**	**6.92**	**79**	IAmb_Lg		17 27 39.7	
	comp=Z,21nm,0.7s						
K22A	**Casper**	**8.98**	**314**	IAmb_Lg		17 29 07.0	
	comp=Z,9.3nm,0.9s						

IDC ***11*** *17:33:19.2±1.9, 43°.16N×105°.16W, h0^{km}, mb2.9/1, mb1 3.7/4, mb1mx3.4/44, mbtmp3.4/4, ML3.6/3, Error ellipse: s-maj=38.1km s-min=8.8km az=154.0*

ANF ***11*** *17:33:22.9±0.3, 43°.67N×105°.31W, h0^{km}, ML3.8/15, Error ellipse: s-maj=3.7km s-min=2.4km az=136.0*

NEIC ***11*** *17:33:23.3±1.2, 43°.64N±0°.05×105°.25W±0°.06, h0^{km}±2^{km}, ML3.4/60, Error ellipse: s-maj=9.2km s-min=6.5km az=135.0*

ISC 11 17:33:23.5±0.8**, 43°.68N**±0°.03×**105°.31W**±0°.04**, h0^{km}, n87,** σ**1^{s}.12**/95**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	Black Hills	1.02	64	P	Pg	17 33 42.3	-0.7
	baz=244						
RSSD				S	Sb	17 33 57.2	-1.1
	baz=244						
RSSD	Black Hills	1.02	64		Pg	17 33 42.2	-0.9
K22A	Casper	1.36	221	P	Pg	17 33 47.6	-2.0
	baz=41,SNR=308						
K22A				S	Sg	17 34 06.9	-0.4
	baz=41						
K22A	Casper	1.36	221	Pn	Pg	17 33 47.4	-2.2
K22A				IAML		17 34 11.9	
	comp=N,1μm,0.3s						
PHWY	Pilot Hill	2.38	183		Pn	17 34 03.6	-0.5
RWWY	Rawlins	2.44	216		Pn	17 34 03.9	-0.9
N23A	Red Feather La	2.83	190	P	Pn	17 34 10.3	+0.1
	baz=9.4,SNR=63						
LAO	LASA Array	3.08	348	P	Pn	17 34 13.3	-0.2
	baz=168						
LAO				S	Sn	17 34 51.0	+0.1
	baz=168						
LAO	LASA Array	3.08	348	Pn	Pn	17 34 12.9	-0.5
LAO				IAML		17 35 11.9	
	comp=N,151nm,0.7s						
LAO				IAML		17 35 33.4	
	comp=N,115nm,0.8s						
RLMT	Red Lodge	3.18	298	P	Pn	17 34 14.7	-0.4
	baz=116,SNR=33						
RLMT	Red Lodge	3.18	298	Pn	Pn	17 34 15.0	0.0
RLMT				IAML		17 35 02.4	
	comp=N,78nm,0.4s						
RLMT				IAML		17 35 05.5	
	comp=N,63nm,0.4s						
PD31	Pinedale Array	3.24	255		Pn	17 34 15.4	-0.4
PDAR	Pinedale Array	3.24	255	Pn	Pn	17 34 15.3	-0.4
	comp=N,5.7nm,0.3s,baz=78,slow=17,SNR=62						
PDAR				Lg	Lg	17 35 00.4	
	comp=N,57nm,0.3s,baz=83,slow=32,SNR=28						
PDAR	Pinedale Array	3.24	255	Pn	Pn	17 34 15.6	-0.2
BW06	Boulder Array	3.24	255	P	Pn	17 34 15.3	-0.5
	baz=72,SNR=56						
BW06	Boulder Array	3.24	255		Pn	17 34 15.5	-0.3
BW06				IAML		17 35 04.3	
	comp=N,113nm,0.3s						
BW06				IAML		17 35 05.1	
	comp=N,82nm,0.4s						
YNE	Yellowstone No	3.62	293	Pn	Pn	17 34 20.9	-0.3
YNE				IAML		17 35 21.5	
	comp=N,106nm,0.4s						
YNE				IAML		17 35 22.0	
	comp=E,108nm,0.3s						
YMP	Mirror Lake Pl	3.64	289		Pn	17 34 21.9	+0.4
YMP				IAML		17 35 21.0	
	comp=N,113nm,0.4s						
YMP				IAML		17 35 29.8	
	comp=E,115nm,0.6s						
OGNE	Ogallala	3.66	137	P	Pn	17 34 21.2	-0.3
	baz=320						
OGNE				S	Sn	17 35 05.0	-0.3
	baz=320						
OGNE	Ogallala	3.66	137		Pn	17 34 21.5	+0.1
GCMT	Greycliff	3.75	306		Pn	17 34 22.8	0.0
LKWY	Lake	3.77	285		Pn	17 34 24.1	+0.9
LKWY				IAML		17 34 51.7	
	comp=E,62nm,0.5s						
LOHW	Long Hollow	3.84	271		Pn	17 34 24.5	+0.4
LOHW				IAML		17 35 23.5	
	comp=E,34nm,0.4s						
H17A	Grant Village	3.87	282	P	Pn	17 34 24.8	+0.3
	baz=99						
H17A	Grant Village	3.87	282		Pn	17 34 24.9	+0.5
H17A				IAML		17 35 26.7	
	comp=E,40nm,0.5s						
H17A				IAML		17 35 28.3	
	comp=N,36nm,0.7s						
ISCO	Idaho Springs	3.88	183	P	Pn	17 34 23.6	-1.2
	baz=3.3						
ISCO				S	Sn	17 35 12.4	+1.1
	baz=3.3						
ISCO	Idaho Springs	3.88	183	Pn	Pn	17 34 23.8	-1.0
FLWY	Flagg Ranch	3.92	278		Pn	17 34 24.8	-0.4
FLWY				IAML		17 35 41.8	
	comp=N,44nm,1.8s						
FLWY				IAML		17 35 55.9	
	comp=N,33nm,1.1s						
MOOW	Moose Ponds	3.94	273		Pn	17 34 25.7	+0.2
YPP	Pitchstone Pla	4.01	280		Pn	17 34 27.1	+0.6
REDW	Red Top Meadow	4.04	267		Pn	17 34 27.1	+0.2
REDW				IAML		17 35 32.3	
	comp=N,60nm,0.5s						
REDW				IAML		17 35 55.2	
	comp=N,53nm,0.9s						
YHH	Holmes Hill	4.13	287	Pn	Pn	17 34 27.9	-0.3
O20A	White River Ci	4.17	213	P	Pn	17 34 27.4	-1.1
	baz=31						
O20A				Sb	Sb	17 35 31.4	+2.7
	baz=31						
O20A	White River Ci	4.17	213	Pn	Pn	17 34 28.3	-0.3
O20A				IAML		17 35 34.4	
	comp=E,52nm,0.4s						
O20A				IAML		17 35 52.5	
	comp=N,45nm,1.6s						
YMR	Madison River	4.19	286		Pn	17 34 29.5	+0.6
YMR				IAML		17 35 44.5	
	comp=E,44nm,1.0s						
YMR				IAML		17 35 44.0	
	comp=N,58nm,0.9s						
AHID	Auburn Hatcher	4.33	260		Pn	17 34 30.6	-0.3
AHID				IAML		17 35 44.9	
	comp=E,65nm,0.8s						
AHID				IAML		17 35 46.4	
	comp=N,59nm,1.0s						
E28A	Huff	4.36	47	Pn	Pn	17 34 31.1	0.0
YHB	Horse Butte	4.37	286		Pn	17 34 31.2	-0.1
YHL	Hebgen Lake	4.38	288		Pn	17 34 31.2	-0.3
YHL				IAML		17 35 55.4	
	comp=E,28nm,1.1s						
YHL				IAML		17 36 01.0	
	comp=N,35nm,0.9s						
RDMU	Red Mountain	4.44	227		Pn	17 34 32.3	0.0
RDMU				IAML		17 35 44.9	
	comp=E,38nm,0.6s						
RDMU				IAML		17 36 00.8	
	comp=N,34nm,0.8s						
ECR	Eagle Creek	4.46	264		Pn	17 34 32.8	+0.1
QLMT	Earthquake Lak	4.55	287		Pn	17 34 33.7	-0.1
Q24A	Divide	4.71	179	Sb	Sb	17 35 47.8	+3.1
	baz=359						
DGMT	Dagmar	4.85	9	P	Pn	17 34 37.9	+0.1
	baz=190						
DGMT				Sb	Sb	17 35 52.2	+3.9
	baz=190						
DGMT	Dagmar	4.85	9	Pn	Pn	17 34 38.3	+0.5
BOZ	Bozeman (W)	4.90	295	P	Pn	17 34 37.3	-1.2
	baz=111						
BOZ				Sb	Sb	17 35 51.6	+1.8
	baz=111						
BOZ	Bozeman (W)	4.90	295		Pn	17 34 38.0	-0.6
BOZ				IAML		17 36 03.5	
	comp=N,16nm,0.7s						
KSCO	Kaye Shedlock'	5.08	156	Sb	Sb	17 35 59.1	+4.0
	baz=338						
KSCO	Kaye Shedlock'	5.08	156		Pn	17 34 40.3	-0.7
TCUT	Toone Canyon	5.19	243		Pn	17 34 42.2	-0.5
EGMT	Eagleton	5.34	326	P	Pn	17 34 44.0	-0.6
	baz=143						
EGMT	Eagleton	5.34	326	Pn	Pn	17 34 44.8	+0.2
DLMT	Dillon	5.48	290		Pn	17 34 47.0	+0.5
HRY	Holter Researc	5.52	306		Pn	17 34 46.4	-0.6
LRM	Limekiln Ridge	5.52	295	Pn	Pn	17 34 47.9	+0.7
MCMT	McKenzie Canyo	5.54	285		Pn	17 34 47.4	0.0
PV07	Paradox Valley	5.81	207		Pn	17 34 51.5	+0.3
P17A	Butcher Ranch,	5.85	226		Pn	17 34 52.2	+0.5
BCYI	Bear Canyon	5.88	279	Pn	Pn	17 34 52.8	+0.7
PV23	Carpenter Ridg	5.93	209		Pn	17 34 52.2	-0.6
SDCO	Great Sand Dun	5.93	181	Pn	Pn	17 34 52.9	0.0
PV04	Paradox Valley	5.94	208		Pn	17 34 52.7	-0.2
PV12	Saucer Basin,	5.97	207	Pn	Pn	17 34 52.7	-0.7
MPU	Maple Canyon	5.98	234	Pn	Pn	17 34 53.2	-0.2
PV14	Lion Creek, Pa	6.00	209		Pn	17 34 53.8	0.0
PV10	Paradox Valley	6.00	209	Pn	Pn	17 34 55.0	+1.2
PV11	David Mesa, Pa	6.01	208		Pn	17 34 53.7	-0.2
PV16	Nyswonger Mesa	6.02	208		Pn	17 34 53.5	-0.5
SRU	San Rafael Swe	6.02	222		Pn	17 34 52.8	-1.2
PV19	Morning Glory	6.04	209	Pn	Pn	17 34 52.4	-2.0
PV03	Paradox Valley	6.05	207		Pn	17 34 54.3	-0.1
PV02	Paradox Valley	6.05	207		Pn	17 34 54.8	+0.3
PV17	East Wray Mesa	6.06	208		Pn	17 34 55.0	+0.4
PV18	Skein Mesa, Pa	6.08	208	Pn	Pn	17 34 54.1	-0.6
PV13	Radium Mtn., P	6.12	207		Pn	17 34 55.3	-0.2
TMUT	Trail Mountain	6.23	227		Pn	17 34 57.3	+0.3
PV05	Paradox Valley	6.29	208		Pn	17 34 56.9	-0.8
ECSD	EROS Data Cent	6.30	87		Pn	17 34 57.1	-0.6
Q16A	Castle Valley	6.49	225		Pn	17 35 00.1	-0.3
DUG	Dugway, Tooele	6.59	241	P	Pn	17 35 00.1	-1.7
	baz=56						
DUG	Dugway, Tooele	6.59	241	Pn	Pn	17 35 00.4	-1.4
MSU	Marysvale	7.32	227	Pn	Pn	17 35 11.4	-0.4
JTMT	Jette	7.48	306	Pn	Pn	17 35 14.6	+0.6
PSUT	Pine Spring	8.25	234	Pn	Pn	17 35 25.3	+0.7
ULM	Lac du Bonnet	9.20	41	Pn	Pn	17 35 34.9	-2.6
	comp=N,1.6nm,0.3s,baz=235,slow=11,SNR=13						
ULM				Pg		17 36 10.6	
	comp=N,0.9nm,0.3s,baz=224,slow=16,SNR=5.0						
ULM				Lg	Lg	17 38 14.0	
	comp=N,0.3nm,0.3s,baz=130,slow=16,SNR=4.6						
NVAR	Mina Array Bea	11.12	246	Pn	Pn	17 36 00.1	-3.8
	comp=N,0.2nm,0.3s,baz=62,slow=11,SNR=2.3						
YKA	Yellowknife Ar	19.62	347	P	Pn	17 37 54.8	+0.4
	comp=N,0.4nm,0.5s,baz=153,slow=9.5,SNR=6.4						

IDC ***11*** *17:34:40.8±3.6, 5°.71S×145°.68E, h83^{km}±30^{km}, mb3.6/3, mb1 3.7/6, mb1mx3.3/30, mbtmp3.9/6, MS4.2/1, Ms1 4.2/1, ms1mx2.5/32, Error ellipse: s-maj=66.3km s-min=18.7km az=54.0*

ISC 11 17:34:39.0±3.5**, 5°.5S**±0°.3×**146°.0E**±0°.4**, h100^{km}, n8,** σ**0^{s}.78**/8**, mb3.8**/3**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	4.03	163	P	Pn	17 35 38.4	-0.3
	3.6nm,0.3s,baz=345,slow=12,SNR=18						
PMG				S	Sn	17 36 24.4	-0.5
	3.4nm,0.3s,baz=141,slow=23,SNR=13						
PMG	Port Moresby	4.03	163	P	Pn	17 35 38.3	-0.3
JAY	Jayapura	6.06	299	P	Pn	17 36 05.8	-0.3
	0.6nm,0.3s,baz=122,slow=21,SNR=1.3						
WRA	Warramunga Arr	18.28	217	P	P	17 38 44.5	-0.5
	0.4nm,0.3s,baz=34,slow=11,SNR=23						
ASAR	Alice Springs	21.48	212	P	P	17 39 20.1	+0.4
	1.0nm,0.5s,baz=44,slow=8.0,SNR=45						
FITZ	Fitzroy Crossi	23.48	236	P	P	17 39 39.8	-0.2
	3.2nm,0.5s,baz=66,slow=11,SNR=25						
STKA	Stephens Creek	26.55	188	P	P	17 40 08.9	+1.4
	1.1nm,0.3s,baz=7.2,slow=12,SNR=5.8						
RAO	Raoul Island	41.46	129	LR	LR	17 57 21.3	
	comp=Z,307nm,20.3s,baz=164,slow=33						

IDC 11 17:53:15.1±2.0**, 0°.75N**×**127°.09E, h0^{km}, mb3.0**/3**, mb1 3.2**/3**, mb1mx3.1**/38**, mbtmp3.0**/3**, Error ellipse: s-maj=199.0km s-min=17.8km az=66.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	21.76	161	P	P	17 58 08.0	-0.4
	0.6nm,0.8s,baz=339,slow=11,SNR=4.6						
ASAR	Alice Springs	25.16	165	P	P	17 58 43.0	+0.8
	0.4nm,0.8s,baz=345,slow=12,SNR=2.8						
MKAR	Makanchi Array	60.20	326	P	P	18 03 24.9	-0.1
	0.1nm,0.4s,baz=119,slow=7.6,SNR=1.8						

DJA 11 17:56:57.1±0.5**, 0°S**±4°×**12°.3E**±°**, h10^{km}, M2.4**/6**, MLv2.4**/6**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GTOI	Gorontalo	0.78	5	P	Pn	17 57 14.5	+0.3
LUWI	Luwuk	0.90	191	P	Pg	17 57 14.5	0.0
MRSI	Marisa	1.18	302	P	Pb	17 57 18.4	-1.2
APSI	Ampana	1.50	240	P	Pn	17 57 23.8	-0.2

IDC ***11*** *18:39:26.3±2.7, 59°.67N×24°.87E, h0^{km}, mb1 3.6/3, mb1mx3.1/38, mbtmp3.5/3, ML2.2/3, Error ellipse: s-maj=32.8km s-min=10.3km az=154.0*

HEL ***11*** *18:39:28.5±0.1, 59°.82N×24°.37E, h0^{km}, ML1.9, Explosion*

ISC 11 18:39:26.6±0.8**, 59°.79N**±0°.03×**24°.41E**±0°.03**, h0^{km}, n16,** σ**0^{s}.78**/28**, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MEF	Metsahovi	0.43	359	*e*P	Pg	18 39 35.3	+0.5
MEF				*e*S	Sg	18 39 41.1	+0.7
NUR	Nurmijrvi	0.73	9	*e*P	Pg	18 39 40.7	+0.1
ARBE	Arbavere	0.88	113	*e*P	Pb	18 39 44.7	+0.1
ARBE				*e*S	Sb	18 39 57.3	+0.4
PVF	Pernaja	1.05	43	*e*P	Pg	18 39 46.8	+0.1
MTSE	Matsula	1.12	196	*e*P	Pn	18 39 48.6	-0.9
VJF	Virojoki	1.74	63	*e*P	Pb	18 39 59.1	-0.3
VJF				*e*S	Sg	18 40 22.7	+0.1
VJF				MSG		18 40 25.5	
	comp=Z,8.7nm,0.1s						
VSU	Vasula	1.79	137	*e*P	Pg	18 40 00.4	-0.4
VSU				*e*S	Sg	18 40 25.1	+1.0
RAF	Rauma	1.80	314	*e*P	Pb	18 39 59.7	-0.7
RAF				*e*S	Sn	18 40 22.9	+0.4
FIA0	FINESS Array S	1.85	26	*e*P	Pb	18 40 01.0	-0.3
FIA0				*e*S	Sb	18 40 25.1	+0.1
FIA0				MSG		18 40 28.5	
	comp=Z,7.0nm,0.1s						
FINES	FINESS Array B	1.85	26	Pn	Pb	18 40 00.9	-0.3
	comp=Z,1.1nm,0.3s,baz=200,slow=15,SNR=89						
FINES				Sn	Sb	18 40 25.6	+0.6
	comp=Z,1.3nm,0.3s,baz=200,slow=23,SNR=8.6						
AAL	Aland	2.25	282	*e*P	Pb	18 40 07.2	-0.9
AAL				*e*SB	Sb	18 40 36.0	-0.5
KEF	Keuruu	2.40	5	*e*PB	Pb	18 40 09.7	-0.9
KEF				*e*S	Sn	18 40 37.0	-0.1
KEF				MSG		18 40 42.6	
	comp=Z,3.3nm,0.1s						
KAF	Kangasniemi	2.51	21	*e*PB	Pb	18 40 11.3	-1.1
KAF				*e*SB	Sb	18 40 43.2	-0.7
KAF				MSG		18 40 45.9	
	comp=Z,4.3nm,0.2s						
HFS	Hagfors	5.39	278	Pn	Pn	18 40 50.0	+1.8
	comp=Z,0.1nm,0.3s,baz=86,slow=12,SNR=7.3						
HFS				Sn	Sn	18 41 52.7	+1.7
	comp=Z,0.3nm,0.3s,baz=96,slow=25,SNR=5.4						
HFS				Lg	Lg	18 42 12.8	
	comp=Z,0.4nm,0.3s,baz=95,slow=30,SNR=6.6						
NOA	NORSAR Array B	6.65	287	Pn	Pn	18 41 05.0	-0.5
	comp=Z,0.0nm,0.3s,baz=96,slow=14,SNR=1.1						
NOA				Sn	Sn	18 42 22.9	+0.9
	comp=Z,0.0nm,0.3s,baz=80,slow=15,SNR=2.1						
ARCES	ARCESS Array B	9.80	2	Pn	Pn	18 41 47.9	-0.7
	baz=183,slow=14,SNR=2.0						

IDC ***11*** *18:44:28.4±2.0, 59°.77N×24°.61E, h0^{km}, mb1 3.2/3, mb1mx2.9/38, mbtmp3.1/3, ML2.4/3, Error ellipse: s-maj=22.9km s-min=7.1km az=143.0*

UPP ***11*** *18:44:28.2±2.3, 59°.88N×24°.54E, h0^{km}, ML2.0, Suspected explosion*

HEL ***11*** *18:44:29.3±0.1, 59°.82N×24°.36E, h0^{km}, ML2.2, ML2.0(UPP), Explosion*

ISC 11 18:44:27.8±0.8**, 59°.80N**±0°.03×**24°.49E**±0°.04**, h0^{km}, n32,** σ**0^{s}.91**/46**, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MEF	Metsahovi	0.42	353	*e*P	Pg	18 44 36.6	+0.7
MEF				*e*S	Sg	18 44 41.7	+0.4
NUR	Nurmijrvi	0.71	6	*e*P	Pg	18 44 42.0	+0.5
NUR				*e*S	Sg	18 44 50.8	0.0
ARBE	Arbavere	0.84	115	*e*P	Pb	18 44 45.8	+0.5
ARBE				*e*S	Sb	18 44 56.5	-0.5
PVF	Pernaja	1.01	42	*e*P	Pb	18 44 48.1	-0.1
MTSE	Matsula	1.15	198	*e*P	Pg	18 44 49.8	0.0
MTSE				*e*S	Sg	18 45 04.7	+0.1
VJF	Virojoki	1.70	63	*e*P	Pg	18 45 00.3	0.0
VJF				*e*S	Sg	18 45 22.6	+0.3
VJF				MSG		18 45 25.2	
	comp=Z,21nm,0.2s						
VSU	Vasula	1.77	138	*e*P	Pg	18 45 01.7	0.0
VSU				*e*S	Sb	18 45 24.3	+0.4
FIA0	FINESS Array S	1.82	25	*e*P	Pb	18 45 02.2	+0.2
FIA0				*e*S	Sb	18 45 25.3	0.0
FIA0				MSG		18 45 29.2	
	comp=Z,11nm,0.1s						
FINES	FINESS Array B	1.82	25	Pn	Pb	18 45 02.2	+0.2
	comp=Z,3.9nm,0.3s,baz=205,slow=14,SNR=174						
FINES				Lg	Lg	18 45 25.8	
	comp=Z,3.2nm,0.3s,baz=203,slow=26,SNR=17						
RAF	Rauma	1.83	313	*e*P	Pn	18 45 00.9	+0.5
RAF				*e*S	Sn	18 45 23.6	-0.6
AAL	Aland	2.29	281	P	Pn	18 45 07.8	+1.0
AAL				S	Sn	18 45 37.2	+1.5
AAL	Aland	2.29	281	*e*P	Pn	18 45 07.8	+1.0
AAL				*e*SG	Sn	18 45 37.4	+1.7
KEF	Keuruu	2.38	4	MSG		18 45 44.3	
	comp=Z,9.0nm,0.2s						
KAF	Kangasniemi	2.48	20	MSG		18 45 47.1	
	comp=Z,9.7nm,0.2s						
NRTU	Norrtaelje	2.97	270	P	Pn	18 45 16.6	+0.5
NRTU	Norrtaelje	2.97	270	*e*P	Pn	18 45 16.6	+0.5
GRAU	Graesoe	3.03	283	P	Pn	18 45 16.8	-0.2
GRAU				S	Sn	18 45 53.9	-0.1
GRAU	Graesoe	3.03	283	*e*P	Pn	18 45 16.8	-0.2
GRAU				*e*S	Sn	18 45 53.9	-0.1
FORU	Forsmark	3.22	283	P	Pn	18 45 19.4	-0.1
FORU	Forsmark	3.22	283	*e*P	Pn	18 45 19.4	-0.1
FLYU	Flymyra	3.34	278	P	Pn	18 45 21.8	+0.6
FLYU				S	Sn	18 46 01.6	+0.1
FLYU	Flymyra	3.34	278	*e*P	Pn	18 45 21.8	+0.6
FLYU				*e*S	Sn	18 46 01.6	+0.1
NYNU	Nynaeshamn	3.41	259	P	Pn	18 45 22.9	+0.7
NYNU	Nynaeshamn	3.41	259	*e*P	Pn	18 45 22.9	+0.7
FIBU	Brunna	3.60	275	P	Pn	18 45 25.4	+0.6
OSTU	Oestervaala	3.72	280	P	Pn	18 45 27.0	+0.6
OSTU	Oestervaala	3.72	280	*e*P	Pn	18 45 27.0	+0.6
IGGU	Iggoen	3.73	290	P	Pn	18 45 26.8	+0.3
IGGU	Iggoen	3.73	290	*e*P	Pn	18 45 26.8	+0.3
HFS	Hagfors	5.44	278	Pn	Pn	18 45 49.8	-0.2
	comp=Z,0.2nm,0.3s,baz=100,slow=14,SNR=12						
HFS				Sn	Sn	18 46 51.0	-2.2
	comp=Z,0.4nm,0.3s,baz=95,slow=26,SNR=6.4						
HFS				Lg	Lg	18 47 13.5	
	comp=Z,0.5nm,0.3s,baz=84,slow=29,SNR=2.6						
NOA	NORSAR Array B	6.69	286	Pn	Pn	18 46 06.6	-0.7
	comp=Z,0.0nm,0.3s,baz=93,slow=13,SNR=12						
NOA				Sn	Sn	18 47 20.1	-4.0
	comp=Z,0.0nm,0.3s,baz=110,slow=18,SNR=1.4						
ARCES	ARCESS Array B	9.78	2	Pn	Pn	18 46 48.9	-0.7
	baz=182,slow=14,SNR=7.2						

SJA ***11*** *18:57:17.4±0.6, 23°.04S×66°.71W, h247^{km}±4^{km}, ML6.2, MW5.9*

NEIC ***11*** *18:57:18.5, 23°.12S×66°.58W, h230^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{19}Nm; M$_{rr}$-0.85; M$_{\theta\theta}$-0.06; M$_{\phi\phi}$0.91; M$_{r\theta}$-0.12; M$_{\theta\phi}$-0.25; M$_{\phi r}$-0.91; Fault plane solution: M$_0$1.30000×10^{19} NP1:ϕ_s1.78000°, δ68.28000°, λ-76.92000°. NP2:ϕ_s149.67000°, δ25.19000°, λ-119.59000°. Principal axes: T 1.3192, Plg22.0000°, Azm82.0000°; N -0.0481, Plg12.0000°, Azm177.0000°; P -1.2711, Plg64.0000°, Azm293.0000°;*

GUC ***11*** *18:57:19.1±0.4, 23°.17S×66°.86W, h239^{km}±3^{km}, MW6.6*

BJI ***11*** *18:57:19.2±0.0, 22°.78S×67°.23W, h196^{km}, mB6.5/60*

MOS ***11*** *18:57:21.1±0.9, 22°.74S×66°.74W, h205^{km}, mb6.2/5, MS5.8/5, Error ellipse: s-maj=8.7km s-min=5.3km az=96.9*

VAO ***11*** *18:57:21.0±0.4, 23°.01S×66°.53W, h205^{km}±4^{km}, mb6.4*

IDC ***11*** *18:57:21.0±0.5, 23°.00S×66°.53W, h203^{km}±3^{km}, mb5.7/44, mb1 5.8/52, mb1mx5.7/54, mbtmp6.2/52, MS5.8/9, Ms1 5.8/9, ms1mx5.2/33, Error ellipse: s-maj=7.5km s-min=5.9km az=73.0*

NEIC ***11*** *18:57:22.5±2.1, 23°.11S±0°.06×66°.69W±0°.08, h223^{km}±1^{km}, mb6.3/655, Mwb6.7/69, Mww6.7, Md6.3(SJA), Mwc6.7(GCMT), Mwr6.6(GUC), Error ellipse: s-maj=11.6km s-min=10.1km az=267.0*

NEIC ***11*** *18:57:24, 23°.22S×66°.60W, h200^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{19}Nm; M$_{rr}$-0.94; M$_{\theta\theta}$-0.05; M$_{\phi\phi}$0.99; M$_{r\theta}$-0.09; M$_{\theta\phi}$-0.03; M$_{\phi r}$-1.01; Fault plane solution: M$_0$1.40000×10^{19} NP1:ϕ_s173.00000°, δ22.00000°, λ-99.00000°. NP2:ϕ_s3.00000°, δ68.00000°, λ-86.00000°. Principal axes: T 1.4216, Plg23.0000°, Azm90.0000°; N -0.0407, Plg3.0000°, Azm182.0000°; P -1.3809, Plg67.0000°, Azm280.0000°;*

GCMT ***11*** *18:57:26.5±0.0, 23°.14S×66°.80W, h223^{km}, MW6.7/170, Moment Tensor Solution. s170,c451; s167,c775; Duration: 5^{s}.4 Moment tensor: Scale 10^{19}Nm; M$_{rr}$-0.80±.00; M$_{\theta\theta}$-0.01±.01; M$_{\phi\phi}$0.81±.01; M$_{r\theta}$-0.09±.00; M$_{\theta\phi}$-0.07±.01; M$_{\phi r}$-1.07±.00; Best double couple: M$_0$1.34600×10^{19} NP1:ϕ_s168.00000°, δ19.00000°, λ-104.00000°. NP2:ϕ_s3.00000°, δ72.00000°, λ-85.00000°. Principal axes: T 1.3480, Plg26.0000°, Azm89.0000°; N -0.0030, Plg5.0000°, Azm181.0000°; P -1.3450, Plg63.0000°, Azm281.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

NEIC ***11*** *18:57:27, 23°.19S×66°.81W, h222^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{19}Nm; M$_{rr}$-0.83; M$_{\theta\theta}$0.03; M$_{\phi\phi}$0.80; M$_{r\theta}$-0.11; M$_{\theta\phi}$-0.04; M$_{\phi r}$-1.13; Fault plane solution: M$_0$1.40000×10^{19} NP1:ϕ_s171.00000°, δ18.00000°, λ-102.00000°. NP2:ϕ_s4.00000°, δ72.00000°, λ-86.00000°. Principal axes: T 1.3776, Plg27.0000°, Azm91.0000°; N 0.0386, Plg4.0000°, Azm183.0000°; P -1.4162, Plg63.0000°, Azm280.0000°;*

ISC 11 18:57:20.5±0.2**, 23°.07S**±0°.02×**66°.66W**±0°.02**, h204^{km}**±1^{km}**, h204^{km}:pP-P, n2262,** σ**1^{s}.68**/2841**, mb6.3**/467**, 62C-107D, Fault plane solution: NP1:**ϕ_s192.65334°**,** δ33.43315°**,** λ-61.94136°. **NP2:**ϕ_s340.08652°**,** δ60.90841°**,** λ-107.25196°. **Principal axes:** T Plg14.2587°**,** Azm82.5828°**;** N Plg15.0202°**,** Azm348.6727°**;** P Plg69.0514°**,** Azm214.1739°**; Fault plane solution: NP1:**ϕ_s10.91495°**,** δ77.96752°**,** λ-74.36387°. **NP2:** ϕ_s137.59473°**,** δ19.63789°**,** λ-141.66213°. **Principal axes:** T Plg31.2364°**,** Azm88.0357°**;** N Plg15.2841°**,** Azm187.5757°**;** P Plg54.4281°**,** Azm300.0393°**; Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HJA	Humahuaca	1.16	97	*e*P	Pn	18 57 54.2	+2.0
HJA				IAML		18 58 29.8	
	comp=Z,23μm,2.0s						
YJA	Yavi	1.38	50	*e*P	Pn	18 57 56.1	+2.1
YJA				*e*S	S	18 58 24.4	+4.8
YJA				IAML		18 58 32.2	
	comp=Z,15μm,1.9s						
AZAP	Zapla	1.86	129	*e*P	Pn	18 57 58.9	+0.7
AZAP				IAML		18 58 39.9	
	comp=Z,26μm,0.9s						
SLA	San Lorenzo	1.96	148	⇓*i*P	Pn	18 58 00.4	+1.3
SLA				*i* S	S	18 58 32.1	+3.4
SLA	San Lorenzo	1.96	148	*e*P	Pn	18 58 00.5	+1.5
SLA				*e*S	S	18 58 32.4	+3.7
SLA				IAML		18 58 36.8	
	comp=Z,55μm,2.1s						
LVC	Limon Verde	2.12	282	P	Pn	18 58 00.8	-0.1
	comp=Z,16μm,0.3s,baz=103,slow=6.9						
LVC				S	S	18 58 34.8	+3.0
	comp=Z,9μm,0.3s,baz=219,slow=23,SNR=10						
LVC	Limon Verde	2.12	282	⇑*i*P	Pn	18 58 00.8	-0.1
LVC				*i* S	S	18 58 31.9	+0.1
LVC	Limon Verde	2.12	282	P	Pn	18 58 00.9	0.0
LVC	Limon Verde	2.12	282	*e*P	Pn	18 58 01.0	0.0
LVC				IAML		18 58 40.3	
	comp=Z,26μm,1.4s						
LVC	Limon Verde	2.12	282	*e*P	Pn	18 58 01.0	0.0
ASTB	Santa Barbara	2.21	114	*e*P	Pn	18 58 02.6	+1.0
ASTB				IAML		18 58 48.4	

	comp=Z,2μm,0.8s						
PB15	IPOC Station P	2.59	266	⇑iP	Pn	18 58 05.2	-0.6
PB15				eS	S	18 58 39.9	-0.7
PB15	IPOC Station P	2.59	266		Pn	18 58 04.6	-1.2
PB15	IPOC Station P	2.59	266	eP	Pn	18 58 05.3	-0.5
PB15				eS	S	18 58 39.9	-0.7
PB15				IAML		18 58 45.3	
	comp=Z,293μm,0.3s						
PB09	IPOC Station P	2.70	297	⇑iP	Pn	18 58 07.4	+0.3
PB09				eS	S	18 58 43.5	+0.8
PB09	IPOC Station P	2.70	297		Pn	18 58 07.4	+0.3
PB09	IPOC Station P	2.70	297	eP	Pn	18 58 07.4	+0.3
PB09				eS	S	18 58 42.7	-0.1
PB09				IAML		18 58 50.3	
	comp=Z,70μm,0.6s						
PB06	IPOC Station P	2.71	277	⇑iP	Pn	18 58 06.4	-0.7
PB06				i S	S	18 58 41.8	-1.0
PB06	IPOC Station P	2.71	277		Pn	18 58 06.3	-0.7
PB06	IPOC Station P	2.71	277	eP	Pn	18 58 06.6	-0.5
PB06				eS	S	18 58 41.4	-1.4
PB06				IAML		18 58 51.1	
	comp=Z,67μm,0.2s						
PB03	IPOC Station P	3.03	289	⇑iP	Pn	18 58 10.0	-0.8
PB03				i S	S	18 58 47.3	-2.3
PB03	IPOC Station P	3.03	289	eP	Pn	18 58 10.0	-0.8
PB03				eS	S	18 58 48.6	-1.0
PB03				IAML		18 58 52.1	
	comp=Z,114μm,0.3s						
FSA	Cafayete	3.10	169	eP	Pn	18 58 12.0	+0.5
FSA				eS	S	18 58 53.9	+2.8
PB07	IPOC Station P	3.27	293	⇑iP	Pn	18 58 13.0	-0.7
PB07				i S	S	18 58 52.0	-2.6
PB07	IPOC Station P	3.27	293		Pn	18 58 12.5	-1.2
PB07	IPOC Station P	3.27	293	eP	Pn	18 58 12.8	-0.8
PB07				eS	S	18 58 53.8	-0.8
PB07				IAML		18 58 59.3	
	comp=Z,112μm,0.5s						
PB05	IPOC Station P	3.27	273	⇑iP	Pn	18 58 12.3	-1.4
PB05				i S	S	18 58 52.5	-2.1
PB05	IPOC Station P	3.27	273	eP	Pn	18 58 12.6	-1.1
PB05				eS	S	18 58 54.0	-0.6
PB05				IAML		18 59 01.4	
	comp=Z,51μm,0.3s						
PB04	IPOC Station P	3.30	282	⇑iP	Pn	18 58 13.0	-1.1
PB04				eS	S	18 58 54.0	-1.3
PB04	IPOC Station P	3.30	282		Pn	18 58 12.8	-1.2
PB04	IPOC Station P	3.30	282	eP	Pn	18 58 13.2	-0.9
PB04				eS	S	18 58 52.7	-2.6
PB04				IAML		18 59 00.8	
	comp=Z,80μm,0.5s						
PB01	IPOC Station P	3.30	307	⇑iP	Pn	18 58 13.6	-0.4
PB01				i S	S	18 58 54.9	-0.5
PB01	IPOC Station P	3.30	307		Pn	18 58 13.4	-0.6
PB01	IPOC Station P	3.30	307	eP	Pn	18 58 13.4	-0.6
PB01				eS	S	18 58 54.4	-0.9
PB01				IAML		18 59 00.7	
	comp=Z,59μm,0.2s						
GO02	Mina Guanaco	3.39	231	⇑iP	Pn	18 58 13.9	-1.4
GO02				eS	S	18 58 55.8	-1.8
GO02	Mina Guanaco	3.39	231		Pn	18 58 13.7	-1.6
PB02	IPOC Station P	3.46	299	⇑iP	Pn	18 58 15.0	-0.9
PB02				eS	S	18 58 58.3	-0.5
PB02	IPOC Station P	3.46	299	eP	Pn	18 58 14.8	-1.2
PB02				eS	S	18 58 56.8	-2.0
PB02				eS	S	18 59 00.0	+1.2
PB02				IAML		18 59 05.5	
	comp=Z,148μm,0.3s						
PB10	IPOC Station P	3.61	262	⇑iP	Pn	18 58 16.2	-1.4
PB10				eS	S	18 58 58.7	-3.1
PB10	IPOC Station P	3.61	262		Pn	18 58 16.1	-1.4
PB10	IPOC Station P	3.61	262	eP	Pn	18 58 16.4	-1.2
PB10				eS	S	18 59 00.0	-1.7
PB10				IAML		18 59 07.1	
	comp=Z,47μm,0.8s						
PB08	IPOC Station P	3.72	321	⇑iP	Pn	18 58 20.1	+0.7
PB08				i S	S	18 59 05.8	+0.8
PB08	IPOC Station P	3.72	321		Pn	18 58 19.8	+0.4
PB14	IPOC Station P	3.76	245	⇑iP	Pn	18 58 17.9	-1.8
PB14	IPOC Station P	3.76	245		Pn	18 58 17.6	-2.1
AHML	Horco Molle	3.89	162	⇓iP	Pn	18 58 20.7	-0.3
AHML				eS	S	18 59 08.5	+0.2
AHML	Horco Molle	3.89	162	eP	Pn	18 58 20.8	-0.3
AHML				eS	S	18 59 08.8	+0.5
AHML				IAML		18 59 11.5	
	comp=Z,14μm,2.0s						
PATCX	Punta Patache	3.94	304	⇑iP	Pn	18 58 20.4	-1.3
PATCX				i S	S	18 59 06.8	-2.4
PATCX	Punta Patache	3.94	304	Pn	Pn	18 58 20.2	-1.5
HMBC	Humberstone	4.09	312	⇑iP	Pn	18 58 22.0	-1.6
HMBC				eS	S	18 59 10.3	-2.4
TA01	Diego Aracena	4.11	307	⇑iP	Pn	18 58 22.2	-1.6
TA01				i S	S	18 59 09.9	-3.0
TA01	Diego Aracena	4.11	307	Pn	Pn	18 58 22.0	-1.8
TA02	Huaiquique	4.26	310	eP	Pn	18 58 23.5	-2.2
AC02	Maricunga	4.37	210	⇑eP	Pn	18 58 26.1	-1.4
AC02	Maricunga	4.37	210	Pn	Pn	18 58 26.1	-1.4
AC01	Pan de Azucar	4.72	229	⇑eP	Pn	18 58 28.1	-3.3
PSGCX	Pisagua	4.72	316	Pn	Pn	18 58 29.3	-2.3
MNMC	Minye Minye	4.78	324	⇑eP	Pn	18 58 31.9	-0.7
MNMC				eS	S	18 59 28.5	-0.2
MNMC	Minye Minye	4.78	324		Pn	18 58 31.8	-0.7
PB16	IPOC Station P	5.41	330		Pn	18 58 40.3	-0.5
GO03	Copiap	5.55	215	⇑eP	Pn	18 58 38.3	-3.7
GO03	Copiap	5.55	215		Pn	18 58 38.4	-3.6
AP01	Chacalluta	5.80	323	eP	Pn	18 58 42.9	-2.4
AP01	Chacalluta	5.80	323		Pn	18 58 43.2	-2.1
VCA	Vinchina	5.82	194	eP	Pn	18 58 45.2	-0.4
VCA				eS	S	18 59 38.3	-14
VCA				IAML		18 59 59.9	
	comp=Z,7μm,1.5s						
ACLC	CERRO LA CRUZ	6.34	182	eP	Pn	18 58 50.8	-1.6
ACLC				eS	S	18 59 59.9	-5.0
ACLC				IAML		19 00 06.2	
	comp=Z,10μm,0.8s						
AC04	Llanos de Chal	6.48	217	Pn	Pn	18 58 49.4	-4.6
AC05	El Transito	6.60	209		Pn	18 58 51.9	-3.7
AGUA	GUANDACOL	6.60	194	eP	Pn	18 58 53.8	-1.8
AGUA				eS	S	19 00 06.6	-4.4
AGUA				IAML		19 00 18.1	
	comp=Z,2μm,1.1s						
LPAZ	La Paz	6.88	348	P	Pn	18 59 00.2	+0.4
	comp=Z,205nm,0.3s,baz=148,slow=5.3,SNR=374						
LPAZ				S	S	19 00 21.5	+3.0
	comp=Z,27nm,0.3s,baz=240,slow=21,SNR=2.4						
LPAZ				LR	LR	19 02 10.7	
	comp=Z,77μm,19.9s,baz=171,slow=42						
LPAZ				P3KPbc		19 36 19.7	
	comp=Z,0.2nm,0.3s,baz=333,slow=1.9,SNR=4.3						
LPAZ	La Paz	6.88	348	P	Pn	18 59 00.8	+0.9
LPAZ	La Paz	6.88	348		Pn	18 59 00.8	+0.9
LPAZ	La Paz	6.88	348	⇓eP	Pn	18 59 00.8	+0.9
LPAZ	La Paz	6.88	348	eP	Pn	18 59 01.1	+1.2
LCO	Las Campanas	6.95	211	P	Pn	18 58 55.7	-4.5
LCO	Las Campanas	6.95	211	Pn	Pn	18 58 55.7	-4.5
APLL	PUNTA DE LOS L	7.30	179	eP	Pn	18 59 02.2	-2.5
ACDV	Cuesta del Vie	7.41	197	eP	Pn	18 59 05.1	-1.0
ACDV				eS	S	19 00 25.8	-4.4
AROD	Rodeo	7.51	199	eP	Pn	18 59 06.0	-1.6
AROD				eS	S	19 00 29.5	-3.2
CO01	Juntas del Tor	7.54	203		Pn	18 59 05.5	-2.5
ACCO	Cerro Coronel	7.79	195	eP	Pn	18 59 09.4	-1.9
ACCO				eS	S	19 00 35.3	-4.2
GO04	Tololo Observa	7.99	207		Pn	18 59 09.1	-4.6
CO03	El Pedregal	8.53	204		Pn	18 59 16.4	-4.3
ZON	Zonda	8.63	192	P	Pn	18 59 19.2	-2.8
ZON	Zonda	8.63	192		Pn	18 59 19.1	-2.8
SIV	San Ignacio	8.79	38	P	Pn	18 59 23.0	-1.2
	comp=Z,329nm,0.3s,baz=231,slow=12,SNR=1883						
CO02	Combarbal	8.98	205		Pn	18 59 21.5	-5.0
CPUP	Villa Florida	9.09	113	P	Pn	18 59 26.4	-1.5
	comp=Z,16nm,0.3s,baz=293,slow=12,SNR=292						
CPUP				P3KPbc		19 36 08.2	
	baz=164,slow=4.2,SNR=4.2						
CPUP	Villa Florida	9.09	113	Pn	Pn	18 59 26.1	-1.7
CPUP	Villa Florida	9.09	113	eP	Pn	18 59 26.6	-1.3
VA03	San Esteban	10.25	199		Pn	18 59 39.3	-3.7
PEL	Peldehue	10.65	199	P	Pn	18 59 43.8	-4.2
PEL	Peldehue	10.65	199		Pn	18 59 43.8	-4.2
MT02	Curacav	10.89	200		Pn	18 59 46.1	-5.0
MT05	Renca	10.90	198		Pn	18 59 47.3	-3.9
ITQB	Itaqui	11.14	128	eP	Pn	18 59 53.4	-0.9
VILB	Vilhena	11.78	32	eP	Pn	19 00 02.5	-0.1
BO02	Sierra Bellavi	12.23	196	P	Pn	19 00 05.5	-2.6
PP1B	Ponte de Pedra	12.31	66	eP	Pn	19 00 08.1	-1.2
TRCB	Terra Rica	12.93	92	eP	Pn	19 00 16.0	-1.0
ETMB	Extrema	13.18	2	eP	Pn	19 00 19.1	-1.1
PTGB	Pitanga	13.46	100	eP	Pn	19 00 23.8	+0.1
ITAB	Concordia	13.80	110	eP	Pn	19 00 27.4	-0.4
LPA	La Plata	14.05	149	eP	Pn	19 00 22.5	-8.3
LPA				S	S	19 02 54.2	-13
LPA				PCP	PcP	19 05 31.2	-4.1
LPA				SCS	ScS	19 12 23.7	-3.2
BI02	San Fabin de	14.13	195	P	Pn	19 00 30.3	-1.6
PCMB	Pacaembu	14.33	87	eP	Pn	19 00 33.4	-0.9
SAML	Samuel	14.43	14	P	Pn	19 00 34.7	-0.9
SAML	Samuel	14.43	14		Pn	19 00 34.7	-0.9
SAML	Samuel	14.43	14	⇑eP	Pn	19 00 34.7	-0.9
SAML	Samuel	14.43	14	eP	Pn	19 00 34.8	-0.9
PLTB	Pedras Altas	14.46	130	eP	Pn	19 00 34.2	-1.7
NNA	Nana	14.67	317	P	Pn	19 00 39.8	+1.1
	comp=Z,30nm,0.3s,baz=166,slow=12,SNR=70						
NNA				S	S	19 03 24.6	+2.9
	comp=Z,70nm,0.3s,baz=214,slow=15,SNR=5.3						
NNA	Nana	14.67	317		Pn	19 00 39.0	+0.2
BI03	Tigo	14.79	200		Pn	19 00 37.3	-2.6
VA04	Juan Fernndez	15.01	223		Pn	19 00 41.0	-1.6
ITRB	Iturama	15.55	81	eP	P	19 00 49.1	-0.2
ARAG	Araguaiana, MT	15.80	65	eP	P	19 00 51.9	-0.1
CZSB	Cruzeiro do Su	16.32	338	eP	P	19 00 57.6	-0.1
LC01	Cunco	16.40	195	P	P	19 00 57.0	-1.4
LC01				IAmb	IAmb	19 01 02.9	
	comp=Z,1μm,1.0s						
BB19B	Bebedouro	16.93	87	eP	P	19 01 05.0	+0.5
SPB	Sao Paulo	17.67	95	P	P	19 01 12.2	-0.4
SPB	Sao Paulo	17.67	95	eP	P	19 01 12.5	0.0
PET01	Itanhaem-SP	17.80	98	eP	P	19 01 13.8	-0.2
PLCA	Paso Flores	17.92	190	P	P	19 01 15.8	+0.6
	comp=Z,59nm,0.3s,baz=16,slow=13,SNR=574						
PLCA				PcP	PcP	19 05 43.1	+2.0
	comp=Z,11nm,0.3s,baz=226,slow=1.0,SNR=6.3						
PLCA				ScP	ScP	19 08 57.5	+0.4
	comp=Z,0.3nm,0.3s,baz=359,slow=3.9,SNR=3.6						
PLCA	Paso Flores	17.92	190	P	P	19 01 14.2	-0.9
PLCA				IAmb	IAmb	19 01 17.0	
	comp=Z,947nm,0.8s						
IPMB	Ipameri, GO	18.00	77	eP	P	19 01 17.3	+1.1
VAO	Valinhos	18.13	94	eP	P	19 01 17.5	-0.2
SNDB	Serra Nova Dou	18.32	56	eP	P	19 01 19.5	-0.2
BDFB	Brasilia	19.07	71	P	P	19 01 28.0	+0.1
	comp=Z,285nm,0.3s,baz=239,slow=12,SNR=780						
BDFB				ScP	ScP	19 09 00.8	+0.7
	baz=342,slow=5.9,SNR=3.6						
BDFB	Brasilia	19.07	71	P	P	19 01 28.0	+0.1
BDFB	Brasilia	19.07	71	P	P	19 01 27.6	-0.3
NPGB	Novo Progresso	19.29	36	eP	P	19 01 28.2	-1.9
PARB	Paraibuna	19.34	95	eP	P	19 01 30.1	-0.6
ATAH	Atahualpa	19.45	323	P	P	19 01 33.7	+1.4
	comp=Z,15nm,0.3s,baz=149,slow=7.4,SNR=128						
LL01	San Ignacio de	19.85	193	P	P	19 01 34.4	-1.4
BSCB	Bom Sucesso	20.39	88	eP	P	19 01 41.5	-0.5
ESAR	Angra dos Reis	20.45	94	eP	P	19 01 42.1	-0.3
PEXB	Peixe	20.59	61	eP	P	19 01 43.4	-0.7
MACA	Manacapuru-AM	20.62	17	eP	P	19 01 42.8	-1.5
GO07	Milladeo Hill,	20.82	195	P	P	19 01 44.1	-2.1
MAN01	Angra dos Reis	20.90	94	eP	P	19 01 46.5	-0.9
ITTB	Itaituba	21.38	31	eP	P	19 01 50.4	-1.9
VAS01	Vassouras-RJ	21.44	92	eP	P	19 01 52.3	-0.6
DUB01	Friburgo-RJ	22.45	92	eP	P	19 02 01.7	-1.0
JANB	Januaria	22.56	73	eP	P	19 02 03.0	-0.8
SMTB	Santa Maria do	23.10	55	eP	P	19 02 07.4	-1.2
PTGA	Pitinga	23.14	17	P	P	19 02 08.0	-0.9
	comp=Z,1μm,0.9s,baz=199,slow=11,SNR=311						
PTGA				S	S	19 06 06.9	+2.0
	comp=Z,845nm,1.2s,baz=218,slow=20,SNR=14						
PTGA				P3KPbc		19 35 25.9	
	comp=Z,2.0nm,0.3s,baz=105,slow=23,SNR=4.9						
PTGA	Pitinga	23.14	17	P	P	19 02 07.8	-1.1
PTGA	Pitinga	23.14	17	⇑iP	P	19 02 08.0	-0.9
PTGA	Pitinga	23.14	17	eP	P	19 02 07.8	-1.1
CAM01	Campos-RJ	23.14	92	eP	P	19 02 07.9	-0.9
SDBA	SAO DESIDERIO	23.24	67	eP	P	19 02 08.4	-1.5
PRPB	Parauapebas	23.36	47	eP	P	19 02 08.9	-2.0
SJMB	Sao Joao De Ma	24.18	84	eP	P	19 02 17.2	-1.2
ALF01	Guarapari-ES	24.19	89	eP	P	19 02 17.9	-0.6
MALB	Monte Alegre	24.28	31	eP	P	19 02 17.7	-1.5
PTLC	Puerto Leguiza	24.41	340	⇓eP	P	19 02 13.4	-7.1
BSFB	Barra de Sao F	24.46	85	eP	P	19 02 19.4	-1.5
RIB01	Linhares ES	24.76	86	eP	P	19 02 22.0	-1.6
OTAV	Otavalo	25.85	332	P	P	19 02 30.9	-3.1
OTAV				pmax	pmax		
	comp=Z,1μm,1.4s						
OTAV	Otavalo	25.85	332	P	P	19 02 30.9	-3.1
OTAV				IAmb	IAmb	19 02 45.5	
	comp=Z,1μm,1.4s						
OTAV	Otavalo	25.85	332	⇓eP	P	19 02 35.4	+1.5
OTAV	Otavalo	25.85	332	eP	P	19 02 35.6	+1.7
FLOC	Florencia	26.02	339	⇓eP	P	19 02 34.8	-0.2
MACC	Macarena, Meta	26.02	343	eP	P	19 02 36.0	+1.0
MACC	Macarena, Meta	26.02	343	⇓eP	P	19 02 34.0	-1.0
CFLOR	Florencia	26.02	339	eP	P	19 02 35.2	+0.2
GUVC	San Jose del G	26.11	346	eP	P	19 02 34.9	-0.9
CMBC	Cumbal	26.22	334	eP	P	19 02 37.3	0.0
CPAS1	Pasto	26.25	335	eP	P	19 02 39.3	+1.8
CPAS2	Pasto	26.25	335	eP	P	19 02 34.5	-2.9
GCUF	Volcan Galeras	26.29	335	⇓eP	P	19 02 39.9	+1.9
CRUC	La Cruz	26.46	336	eP	P	19 02 44.5	+5.2
GARC	Garzon, Huila	26.54	340	⇓eP	P	19 02 39.9	+0.1
MCPB	Macapa, AP	26.66	34	eP	P	19 02 39.6	-1.2
SOTA	Rioblanco	26.86	338	eP	P	19 02 44.6	+1.6
PCON	Cinco Dias	26.96	338	⇓eP	P	19 02 45.7	+1.6
BBAC	Balboa, Cauca	26.98	336	⇓eP	P	19 02 44.8	+1.0
BETC	Betania	26.98	340	⇓eP	P	19 02 44.6	+0.9
POPC	Popayan, Colom	27.26	338	⇓eP	P	19 02 46.3	0.0
GDU01	Guandu, BA	27.29	75	eP	P	19 02 44.7	-1.6
MARP	Paez Belalcaza	27.30	339	⇓eP	P	19 02 46.9	+0.2
TMAB	Tom-Au,PA,Br	27.34	44	eP	P	19 02 46.2	-0.5
CTUM2	Tumaco	27.39	333	eP	P	19 02 48.4	+1.2
TUMC	Tumaco	27.39	333	⇓eP	P	19 02 48.7	+1.5
PTGC	Puerto Gaitan,	27.62	348	eP	P	19 02 48.0	-1.3
RAC02	Cali,SGC	27.99	339	eP	P	19 03 04.2	+12
ORTC	Ortega, Tolima	28.09	342	⇓eP	P	19 02 52.9	-0.6
GR1C	Gorgona, Isla	28.24	335	eP	P	19 02 55.4	+0.7
CHIC	Chingaza	28.38	345	⇓eP	P	19 02 54.6	-1.9
GO09	Cerro Castillo	28.50	187	P	P	19 02 54.7	-1.9
YOTC	Yotoco, Valle	28.50	339	eP	P	19 02 56.5	-0.6
YOTC	Yotoco, Valle	28.50	339	⇓eP	P	19 02 56.4	-0.8
ANIL	Santa Ana	28.69	342	⇓eP	P	19 02 58.5	-0.5
ROSC	El Rosal	28.73	344	P	P	19 02 59.8	+0.3
	comp=Z,138nm,0.5s,baz=175,slow=6.5,SNR=22						
ROSC				LR	LR	19 15 02.5	
	comp=Z,47μm,20.1s,baz=192,slow=37						
ROSC	El Rosal	28.73	344	P	P	19 02 58.7	-0.7
ROSC				IAmb	IAmb	19 03 26.6	
	comp=Z,1μm,1.6s						
ROSC	El Rosal	28.73	344	⇓eP	P	19 02 58.8	-0.7
TOLC	Tolima	28.75	342	eP	P	19 02 58.4	-1.3
MALC	Bahia Malaga	28.86	337	eP	P	19 03 01.8	+1.6
RREF	El Recreo	29.06	342	⇓eP	P	19 03 02.4	-0.3
CMAN1	Manizales, Cal	29.27	342	eP	P	19 03 05.5	+1.3
EFI	East Falkland	29.32	169	c iP	P	19 03 03.6	-0.3
EFI				pmax	pmax		
	comp=Z,896nm,1.1s						
EFI	East Falkland	29.32	169	P	P	19 03 03.2	-0.7
EFI				IAmb	IAmb	19 03 07.8	
	comp=Z,1μm,1.2s						
PLMC	San Jos del P	29.35	340	⇓eP	P	19 03 03.6	-1.0
GUY2C	Guyana, Caldas	29.37	342	⇓eP	P	19 03 04.9	-0.4
SPBC	San Pablo de B	29.45	345	⇓eP	P	19 03 04.0	-1.6
RUSC	La Rusia	29.46	347	⇓eP	P	19 03 06.1	+0.1
NORC	Norcasia	29.56	343	⇓eP	P	19 03 03.6	-2.9
CNOCA	NORCASIA, CALD	29.57	343	eP	P	19 03 05.4	-1.1
ROSB	Rosrio	29.64	51	eP	P	19 03 05.9	-1.2
TAMC	Tame, Arauca	29.75	350	eP	P	19 03 07.5	-0.6
TAMC	Tame, Arauca	29.75	350	eP	P	19 03 07.2	-0.8
PIZC	Pizarro, Choco	29.75	338	⇓eP	P	19 03 08.6	+0.4
ELOV	Elorza	30.01	354	⇓eP	P	19 03 09.1	-1.3
BARC	Barichara	30.16	347	eP	P	19 03 09.3	-2.7
CBOC	Ciudad Bolivar	30.17	341	⇓iP	P	19 03 10.2	-1.8
GO10	Punta Arenas	30.23	185	P	P	19 03 10.7	-1.2
GO10				IAmb	IAmb	19 03 24.7	
	comp=Z,682nm,0.9s						
PTBC	PUERTO BERRIO,	30.39	345	⇓eP	P	19 03 10.6	-3.2
BRRC	Barranca, Sant	30.77	346	⇓iP	P	19 03 13.5	-3.6
PAMC	Pamplona, Colo	30.79	348	eP	P	19 03 15.8	-2.0
SOLC	Bahia Solano	30.95	339	eP	P	19 03 18.6	0.0
SOLC	Bahia Solano	30.95	339	eP	P	19 03 18.1	-0.5
MDP	Montagnes des	31.17	28	P	P	19 03 19.6	-0.9
	comp=Z,289nm,0.4s,baz=200,slow=12,SNR=85						
MDP				S	S	19 08 10.4	-1.0
	comp=Z,220nm,1.1s,baz=27,slow=13,SNR=8.6						
DBBC	Dabeiba	31.32	342	eP	P	19 03 20.8	-1.2
SOCV	Socops	31.43	352	⇓eP	P	19 03 21.9	-1.0
USHA	Ushuaia	31.75	182	P	P	19 03 26.1	+0.9
	comp=Z,98nm,0.6s,baz=0.6,slow=8.0,SNR=26						
OCAC	Ocana	31.79	347	eP	P	19 03 21.1	-5.1
UREC	San Jos de Ur	31.83	343	⇓eP	P	19 03 24.1	-2.2
BAUV	El Baul	31.84	357	eP	P	19 03 22.3	-4.1
PTAC	Punta Ardita,	31.95	339	⇓eP	P	19 03 28.3	+1.0
PAYG	Puerto Ayora	31.97	311	P	P	19 03 25.4	-2.3
PAYG				IAmb	IAmb	19 03 32.7	
	comp=Z,1μm,1.6s						
PAYG	Puerto Ayora	31.97	311	⇓eP	P	19 03 29.4	+1.8
SDV	Santo Domingo	31.99	353	P	P	19 03 26.9	-1.1
SDV				IAmb	IAmb	19 03 32.1	
	comp=Z,762nm,1.0s						
SDV	Santo Domingo	31.99	353	⇓eP	P	19 03 26.1	-1.8
SDV	Santo Domingo	31.99	353	eP	P	19 03 26.4	-1.5
ORIV	Oritupano	32.10	6	eP	P	19 03 27.7	-0.9
NBMO	Morrinhos-CE	32.40	57	eP	P	19 03 29.9	-1.4
SMLC	San Martn de	32.49	346	⇓eP	P	19 03 28.3	-3.8
NBLI	Livramento-PB	32.54	66	eP	P	19 03 31.5	-1.2
MOTC	Monteria, Cord	32.85	343	⇓eP	P	19 03 32.8	-2.4
PLCV	Puerto La Cruz	33.09	4		S	19 08 43.1	+2.0
PCRV	Puerto La Cruz	33.10	4	P	P	19 03 37.5	+0.1
	comp=Z,632nm,1.1s,baz=181,slow=4.5,SNR=17						
PCRV				S	S	19 08 43.1	+1.8
	comp=Z,78nm,0.8s,baz=171,slow=22,SNR=5.9						
CAPC	Capurgana	33.20	340	⇓iP	P	19 03 36.5	-1.7
NBPA	Parau_RN	33.28	63	eP	P	19 03 37.9	-1.1
UPD2	Meteti	33.33	339	⇓eP	P	19 03 38.5	-0.8
NBRF	Rio Formoso -	33.43	70	eP	P	19 03 38.7	-1.6
AZU	Azuero	33.44	335	⇓eP	P	19 03 42.4	+2.1
ARGC	Ariguani, Magd	33.55	346	⇓eP	P	19 03 39.2	-2.1
TPP	Pointe-a-Pierr	33.57	9	eP	P	19 03 45.5	+4.1
TBH	Brigand Hill	33.79	10	eP	P	19 03 45.5	+2.2
TRN	Trinidad (W)	33.90	9	eP	P	19 03 45.5	+1.2
CVALL	Valledupar, Ce	33.99	348	eP	P	19 03 42.3	-2.7
DABV	Dabajuro	34.00	353	⇓eP	P	19 03 42.6	-2.6
PNME	Penonome	34.09	335	⇓eP	P	19 03 47.4	+1.5
RCBR	Riachuelo	34.24	65	P	P	19 03 46.7	-0.6
	comp=Z,683nm,0.6s,baz=136,slow=1.5,SNR=149						
RCBR	Riachuelo	34.24	65	P	P	19 03 46.1	-1.3
RCBR	Riachuelo	34.24	65	eP	P	19 03 46.6	-0.8
UPA	Univ. de Panam	34.25	337	⇓eP	P	19 03 48.5	+1.2
CRJC	Cerrejon, Guaj	34.42	349	⇓eP	P	19 03 44.8	-4.1
BOT	Bacolet	34.52	10	eP	P	19 03 50.9	+1.4
TPR	Prospect	34.52	10	eP	P	19 03 51.0	+1.4
BCIP	Isla Barro Col	34.53	337	P	P	19 03 51.0	+1.3
BCIP				pmax	pmax		
	comp=Z,965nm,1.0s						
BCIP	Isla Barro Col	34.53	337	P	P	19 03 51.0	+1.3
BCIP				IAmb	IAmb	19 03 56.7	
	comp=Z,965nm,0.9s						
BCIP	Isla Barro Col	34.53	337	⇓eP	P	19 03 51.5	+1.8
SMRC	Santa Marta, M	34.81	347	eP	P	19 03 48.7	-3.4
SMRC	Santa Marta, M	34.81	347	⇓eP	P	19 03 48.3	-3.8
URIC	Uribia, Colomb	34.95	351	eP	P	19 03 49.6	-3.7
URIC	Uribia, Colomb	34.95	351	⇓eP	P	19 03 49.1	-4.1
GRGR	Grenville	35.32	8	eP	P	19 03 56.2	-0.2
GRGR	Grenville	35.32	8	P	P	19 03 56.1	-0.3
GCMP	Grenada, Carri	35.70	9	eP	P	19 03 59.3	-0.3
SVB	Belmont	36.50	9	eP	P	19 04 05.8	-0.7
SVB	Belmont	36.50	9	P	P	19 04 05.4	-1.1
SVB				IAmb	IAmb	19 04 12.9	
	comp=Z,1μm,1.0s						
BCHC	Barbados, Cave	36.63	12	eP	P	19 04 11.9	+4.4
BBGH	Gun Hill	36.65	12	eP	P	19 04 09.2	+1.4
BBGH	Gun Hill	36.65	12	P	P	19 04 07.3	-0.4
BBGH				IAmb	IAmb	19 04 13.8	
	comp=Z,1μm,0.9s						
MCLT	Moule a Chique	36.98	9	eP	P	19 04 10.2	-0.2
MCLT	Moule a Chique	36.98	9	P	P	19 04 09.8	-0.7
HDC	Heredia	37.04	331	P	P	19 04 12.6	+1.4
SLB	Belfond	37.08	9	eP	P	19 04 12.2	+0.9
SLBI	Saint Lucia, B	37.28	9	eP	P	19 04 12.7	-0.3
JTS	Las Juntas de	37.68	330	d iP	P	19 04 18.5	+2.1
JTS				pmax	pmax		
	comp=Z,2μm,1.3s						
JTS	Las Juntas de	37.68	330	P	P	19 04 18.5	+2.1
JTS				IAmb	IAmb	19 04 24.3	
	comp=Z,2μm,1.2s						
JTS	Las Juntas de	37.68	330	⇓eP	P	19 04 18.4	+1.9
MPOM	Morne Pois Mar	37.71	9	eP	P	19 04 14.5	-2.1
BIM	Bigot	37.75	9	eP	P	19 04 16.5	-0.5
FDF	Fort de France	37.95	9	eP	P	19 04 17.7	-1.1
FDF	Fort de France	37.95	9	P	P	19 04 17.6	-1.1
FDF				pmax	pmax		
	comp=Z,4μm,0.9s						
FDF	Fort de France	37.95	9	P	P	19 04 17.6	-1.1
ILAM	Ilet Lapin Mar	38.03	9	eP	P	19 04 18.4	-0.9
HOPE	Hope Point	38.52	152	P	P	19 04 22.5	-0.4
HOPE				pmax	pmax		
	comp=Z,1μm,1.5s						
HOPE	Hope Point	38.52	152	P	P	19 04 22.5	-0.4
HOPE				IAmb	IAmb	19 04 25.6	
	comp=Z,1μm,1.4s						
DLPL	La Plaine	38.53	8	eP	P	19 04 21.5	-2.0
DLPL	La Plaine	38.53	8	P	P	19 04 21.9	-1.5
DSLB	Salisbury	38.61	8	eP	P	19 04 19.4	-4.7
RPN	Rapa Nui	38.72	255	P	P	19 04 25.7	+0.7
RPN				pmax	pmax		
	comp=Z,3μm,1.2s						
RPN	Rapa Nui	38.72	255	P	P	19 04 25.7	+0.7
PRVC	Isla de Provid	38.97	337	eP	P	19 04 28.2	+1.1
PRVC	Isla de Provid	38.97	337	⇓eP	P	19 04 28.5	+1.4
TDBA	Terre de Bas,	38.99	8	eP	P	19 04 27.8	+0.6
TBG	Guadaloupe-3	38.99	8	eP	P	19 04 27.2	-0.1
ESPN	Las Esperanzas	39.07	332	P	P	19 04 28.3	+0.3
MAGL	Barre de l’ile	39.13	8	eP	P	19 04 24.4	-4.0
CBE	Ff, Capester	39.21	8	eP	P	19 04 24.6	-4.5
ACON	Acoyapa	39.25	331	P	P	19 04 30.6	+1.1
ABD	La Joyeuse, An	39.62	8	eP	P	19 04 27.1	-5.3
MLYT	Lee's Yard	39.78	7	eP	P	19 04 31.5	-2.3
ANBD	Bethesda, Anti	40.15	7	eP	P	19 04 27.2	-10
SKI	Saint Kitts	40.33	6	eP	P	19 04 30.1	-8.2
SKI	Saint Kitts	40.33	6	P	P	19 04 36.3	-2.1
SKI				pmax	pmax		
	comp=Z,599nm,0.9s						
SKI	Saint Kitts	40.33	6	P	P	19 04 36.2	-2.1
SEUS	St. Eustatius	40.47	5	eP	P	19 04 33.6	-5.8
SEUS	St. Eustatius	40.47	5	P	P	19 04 38.9	-0.5
SEUS				IAmb	IAmb	19 04 42.5	
	comp=Z,2μm,1.6s						
SABA	Saba	40.58	5	eP	P	19 04 35.4	-4.9
SABA	Saba	40.58	5	P	P	19 04 38.9	-1.4
ICMP	Isla Caja de M	40.70	0	P	P	19 04 40.4	-0.9
ANWB	Willy Bob	40.76	7	eP	P	19 04 36.0	-5.8
ANWB	Willy Bob	40.76	7	P	P	19 04 39.4	-2.5
CRIN	San Cristobal	40.77	329	P	P	19 04 41.1	-0.9
CRIN				IAmb	IAmb	19 04 51.3	
	comp=Z,602nm,0.8s						
IGPR	InterUniversit	40.78	1	P	P	19 04 40.7	-1.3
MLPR	Magueyes Islan	40.78	359	P	P	19 04 39.4	-2.5
PDPR	Patillas Dam,	40.84	1	P	P	19 04 40.2	-2.2
OBIP	Obispado Ponce	40.86	0	P	P	19 04 40.0	-2.6
MTP	Monte Pirata	40.92	2	P	P	19 04 40.5	-2.7
SJG	San Juan	40.93	1	P	P	19 04 41.5	-1.7
	comp=Z,376nm,1.0s,baz=159,slow=3.3,SNR=47						
SJG				S	S	19 10 40.0	+0.4
	comp=Z,34nm,0.6s,baz=10,slow=21,SNR=9.3						
SJG	San Juan	40.93	1	P	P	19 04 41.2	-1.9
SJG				IAmb	IAmb	19 04 46.2	
	comp=Z,938nm,1.3s						
SJG	San Juan	40.93	1	⇓eP	P	19 04 41.6	-1.5
MPR	Mayaguez	41.03	359	P	P	19 04 42.0	-2.0
CBYP	Canovanas	41.09	1	P	P	19 04 42.8	-1.8
GCPR	Guaynabo City	41.12	1	P	P	19 04 42.5	-2.3
CUPR	Culebra, Puert	41.14	2	P	P	19 04 43.0	-1.9
AOPR	Arecibo Observ	41.16	360	P	P	19 04 43.2	-1.9
AGPR	Aguadilla, PR	41.28	359	P	P	19 04 44.3	-1.7
EMPR	Esperanza - Ma	41.29	0	P	P	19 04 44.3	-1.8
JAKH	Jacmel	41.45	352	P	P	19 04 46.4	-1.0
LGNH	Logne	41.73	352	P	P	19 04 48.9	-0.8
PMSA	Palmer Station	41.73	178	P	P	19 04 49.2	0.0
	comp=Z,139nm,0.6s,baz=19,slow=6.9,SNR=27						

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PMSA  Palmer Station     41.73 178   P     P     19 04 48.5 -0.6
PMSA                                 IAmb  IAmb  19 04 53.7
      comp=Z,2μm,1.8s
PMSA  Palmer Station     41.73 178  eP     P     19 04 50.9 +1.7
SDDR  Presa de Saban     42.03 353   P     P     19 04 50.2 -2.0
SDDR  Presa de Saban     42.03 353⇓ eP     P     19 04 47.8 -4.5
TGUH  Tegucigalpa,Un     42.05 329   P     P     19 04 52.9 +0.4
TGUH  Tegucigalpa,Un     42.05 329⇓ eP     P     19 04 52.3 -0.2
MTDJ  Mount Denham       42.39 345⇓ eP     P     19 04 54.9 -0.2
SNET  Serv Nac Est T     42.69 327   P     P     19 04 57.3 -0.3
SNET                                 IAmb  IAmb  19 05 05.3
      comp=Z,2μm,1.3s
MTO3  Montecristo        43.36 327   P     P     19 05 03.9 +0.8
MTO3                                 IAmb  IAmb  19 05 09.4
      comp=Z,1μm,1.1s
ESQI  Esquipulas         43.49 327   P     P     19 05 05.2 +1.2
GTBY  Guantanamo Bay     43.52 348   P     P     19 05 02.9 -1.2
GTBY  Guantanamo Bay     43.52 348⇓ eP     P     19 05 01.8 -2.3
IXG   Ixpaco             43.72 326  eP     P     19 05 09.7 +3.7
PCG   Pacaya             43.99 326  eP     P     19 05 10.0 +1.8
NBG   Las Nubes          44.02 326  eP     P     19 05 11.2 +2.7
MRL   Marmol             44.10 327  eP     P     19 05 10.7 +1.7
FUG   Fuego 3            44.16 325  eP     P     19 05 11.5 +2.0
CBCY  The Bluff, Cay     44.42 342   P     P     19 05 11.1 -0.2
FSCY  Frank Sound, G     44.44 340   P     P     19 05 11.5 +0.1
LCCY  Blossom Villag     44.45 342   P     P     19 05 11.4  0.0
GRTK  Grand Turk         44.52 354   P     P     19 05 10.8 -1.1
GRTK                                 IAmb  IAmb  19 05 16.0
      comp=Z,1μm,1.0s
RTAL  Retalhuleu         44.68 324   P     P     19 05 13.8 +0.5
HUEH  Huehuetenango      45.23 325   P     P     19 05 18.7 +0.7
PETF  Flores             45.76 328   P     P     19 05 22.2 +0.4
PETF                                 IAmb  IAmb  19 05 27.9
      comp=Z,2μm,1.1s
CCIG  Comitan            46.37 325   P     P     19 05 26.4 -0.4
CCIG                                 IAmb  IAmb  19 05 32.5
      comp=Z,1μm,1.1s
TEIG  Tepich             47.92 332   S     S     19 12 22.3 +2.0
      comp=Z,13nm,0.9s,baz=10.0,slow=22,SNR=9.2
TEIG  Tepich             47.92 332   P     P     19 05 37.9 -0.6
TEIG                                 IAmb  IAmb  19 05 43.4
      comp=Z,2μm,1.0s
TEIG  Tepich             47.92 332  eP     P     19 05 36.2 -2.3
CMIG  Matias Romero      48.52 323   S     S     19 12 32.0 +3.1
      comp=Z,5.4nm,1.0s,baz=334,slow=20,SNR=6.6
061Z  Ochoppi            50.56 343   P     P     19 05 58.3 -0.1
TLIG  Tlapa              51.02 320   P     P     19 06 02.5 +0.3
060A  Indiantown         51.54 344   P     P     19 06 05.2 -0.5
060A                                 IAmb  IAmb  19 06 11.3
      comp=Z,1μm,1.1s
H10N3 ASCENSION HYDR52.22  82   P     P     19 06 11.5 +0.8
      baz=244,slow=7.2,SNR=18
H10N1 ASCENSION HYDR52.24  82   P     P     19 06 10.9 +0.1
      baz=244,slow=7.2,SNR=17
H10N2 ASCENSION HYDR52.24  82   P     P     19 06 11.4 +0.6
      baz=244,slow=7.2,SNR=18
ASCN  Ascension          52.32  82   P     P     19 06 11.0 -0.7
ASCN                                 IAmb  IAmb  19 06 14.7
      comp=Z,690nm,0.8s
UNM   Universidad Na     52.76 320   P     P     19 06 14.4 -0.7
UNM                                  pmax  pmax
      comp=Z,4μm,1.7s
UNM   Universidad Na     52.76 320   P     P     19 06 14.4 -0.7
DWPF  Disney Wildern     52.84 344   P     P     19 06 15.7 +0.6
      baz=163
DWPF                                 S     S     19 13 26.4 -1.5
      baz=163
DWPF  Disney Wildern     52.84 344   P     P     19 06 14.7 -0.4
DWPF                                 IAmb  IAmb  19 06 20.5
      comp=Z,1μm,0.9s
MOIG  Morelia            54.23 319   P     P     19 06 26.2 +0.5
MOIG                                 IAmb  IAmb  19 06 32.4
      comp=Z,703nm,0.8s
656A  Willston           54.32 343   P     P     19 06 25.9 -0.1
656A                                 IAmb  IAmb  19 06 31.2
      comp=Z,1μm,0.9s
BBSR  BB Station         55.16   2   P     P     19 06 31.4 -0.5
456A  Hilliard           55.48 344   P     P     19 06 34.7 +0.5
553A  Crawfordville      55.63 341   P     P     19 06 35.6 +0.3
257A  Skidaway Islan     56.43 345   P     P     19 06 41.0 +0.1
451A  Vernon             56.43 340   P     P     19 06 41.0  0.0
TIGA  Tifton             56.57 343   P     P     19 06 42.0  0.0
      baz=161
TIGA                                 S     S     19 14 16.3 -1.3
      baz=161
SACV  Santiago Islan     56.60  52   P     P     19 06 40.6 -1.9
255A  Hazlehurst         56.74 344   P     P     19 06 42.9 -0.2
BELA  Belgrano 2         56.92 172   P     P     19 06 43.7 -0.2
BELA                                 IAmb  IAmb  19 06 48.1
      comp=Z,977nm,1.5s
352A  Blakely            56.99 341   P     P     19 06 44.4 -0.4
RGRS  Roger Stewart      57.14 346   P     P     19 06 46.0 +0.2
CSU   Charleston Sou     57.19 347   P     P     19 06 46.5 +0.2
Z59A  Georgetown, SC     57.27 347   P     P     19 06 48.5 +1.8
      baz=166
NHSC  New Hope           57.33 347   P     P     19 06 47.5 +0.3
      baz=165
NHSC                                 S     S     19 14 27.5 +0.1
      baz=165
NHSC  New Hope           57.33 347   P     P     19 06 47.8 +0.6
BRAL  Brewton            57.36 339   P     P     19 06 47.2 -0.3
      baz=158,SNR=36
BRAL                                 S     S     19 14 25.8 -2.1
      baz=158
BRAL  Brewton            57.36 339   P     P     19 06 47.4  0.0
PTCN  Pitcairn Islan     57.47 254   P     P     19 06 48.4 -0.2
PTCN  Pitcairn Islan     57.47 254   P     P     19 06 52.8 +4.2
      comp=Z,7μm,1.3s
SHEL  Horse Pasture      57.51  95   P     P     19 06 48.6 -0.4
SHEL                                 pmax  pmax
      comp=Z,469nm,0.8s
SHEL  Horse Pasture      57.51  95   P     P     19 06 48.6 -0.4
SHEL                                 IAmb  IAmb  19 06 51.9
      comp=Z,469nm,0.8s
154A  Montrose           57.55 344   P     P     19 06 48.7 -0.1
545A  Edgard             57.56 335   P     P     19 06 49.7 +0.8
545A                                 IAmb  IAmb  19 06 53.4
      comp=Z,985nm,1.0s
Z56A  Williston          57.80 345   P     P     19 06 50.6 +0.1
Y60A  Bolivia            57.81 349   P     P     19 06 50.5  0.0
250A  Grady              57.86 340   P     P     19 06 50.5 -0.4
Y59A  Loris              57.92 348   P     P     19 06 51.5 +0.3
Y59A                                 IAmb  IAmb  19 06 56.3
      comp=Z,855nm,1.1s
VNA3  Neumayer Olymp     57.93 161   P     P     19 06 51.4 +0.3
VNA3                                 S     S     19 14 35.6 +1.1
VNA3  Neumayer Olymp     57.93 161   ScP   ScP   19 11 22.0 +0.6
VNA3  Neumayer Olymp     57.93 161   pP    pP    19 07 41.5 +3.1
Y58A  Scranton           57.99 347   P     P     19 06 52.0 +0.2
152A  Waverly Hall       58.04 342   P     P     19 06 51.6 -0.6
152A                                 IAmb  IAmb  19 06 56.7
      comp=Z,614nm,0.9s
VNA1  Neumayer--Stat     58.12 160   P     P     19 06 53.1 +0.9
VNA1                                 S     S     19 14 42.2 +5.4
VNA1  Neumayer--Stat     58.12 160   ScP   ScP   19 11 22.7 +0.5
Y57A  Sumter             58.25 347   P     P     19 06 53.7 +0.1
X60A  Albert Glenn T     58.32 349   P     P     19 06 53.9 -0.2
      baz=168,SNR=41
X60A                                 S     S     19 14 35.2 -5.1
      baz=168
346A  Big Creek Wild     58.39 337   P     P     19 06 54.0 -0.6
GOGA  Godfrey            58.40 344   P     P     19 06 54.2 -0.5
      baz=162,SNR=129
GOGA                                 S     S     19 14 38.2 -3.2
      baz=162
GOGA  Godfrey            58.40 344   P     P     19 06 54.3 -0.4
GOGA                                 pmax  pmax
      comp=Z,570nm,1.1s
GOGA  Godfrey            58.40 344   P     P     19 06 54.2 -0.4
GOGA                                 IAmb  IAmb  19 06 59.4
      comp=Z,570nm,1.1s
VNA2  Neumayer--Watz     58.49 161   P     P     19 06 55.3 +0.4
      baz=286,slow=7.8
VNA2                                 S     S     19 14 44.1 +2.3
VNA2  Neumayer--Watz     58.49 161   ScP   ScP   19 11 22.6 -1.2
VNA2  Neumayer--Watz     58.49 161   pP    pP    19 07 45.8 +3.5
      baz=300,slow=11
X58A  Rowland            58.55 348   P     P     19 06 55.6 -0.1
X57A  Johnson Farm,      58.62 347   S     S     19 14 40.7 -3.4
      baz=166
KVTX  Kingsville         58.66 327   P     P     19 06 57.0 +0.4
JSC   Jenkinsville       58.70 346   P     P     19 06 57.1 +0.4
JSC                                  pmax  pmax
      comp=Z,756nm,1.0s
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JSC   Jenkinsville       58.70 346   P     P     19 06 57.1 +0.4
JSC                                  IAmb  IAmb  19 07 02.0
      comp=Z,756nm,1.0s
W60A  Pink Hill          58.74 349   S     S     19 14 44.1 -1.6
      baz=168
W61A  Ground Anchor      58.75 350   P     P     19 06 56.5 -0.5
      baz=169
Z51A  Franklin           58.78 342   P     P     19 06 56.7 -0.6
Z51A                                 IAmb  IAmb  19 07 02.0
      comp=Z,1μm,1.4s
BIRD  Birdtown, Kers     58.87 347   P     P     19 06 58.5 +0.6
HODGE Hodges             58.88 345   P     P     19 06 58.0 +0.1
HODGE                                IAmb  IAmb  19 07 03.2
      comp=Z,646nm,1.0s
CNNC  Cliffs of the      58.95 349   P     P     19 06 57.9 -0.5
      baz=168
CNNC                                 S     S     19 14 45.5 -2.9
      baz=168
CNNC  Cliffs of the      58.95 349   P     P     19 06 58.7 +0.3
CNNC                                 IAmb  IAmb  19 07 03.3
      comp=Z,841nm,1.1s
V62A  Hyde County Ai     58.97 351   P     P     19 06 58.6 +0.1
      baz=170
V62A  Hyde County Ai     58.97 351   P     P     19 06 58.4 -0.1
W59A  Clinton            58.98 349   S     S     19 14 44.0 -4.8
      baz=167
W58A  Raeford            58.99 348   S     S     19 14 45.0 -3.8
      baz=167
Y52A  Lilburn            58.99 343   P     P     19 06 58.3 -0.4
Y52A                                 IAmb  IAmb  19 07 03.4
      comp=Z,777nm,1.0s
LRAL  Lakeview Retre     59.06 340   P     P     19 06 58.3 -0.9
      baz=158,SNR=137
LRAL                                 S     S     19 14 46.2 -3.7
      baz=158
441A  DeRidder           59.25 333   P     P     19 07 01.6 +1.0
W57A  Gilead             59.26 347   P     P     19 07 00.6 +0.1
V61A  Roper              59.28 351   P     P     19 07 01.5 +0.8
PAULI Pauline            59.34 346   P     P     19 07 01.5 +0.4
PAULI                                IAmb  IAmb  19 07 06.5
      comp=Z,814nm,0.9s
W56A  Indian Trail       59.37 347   S     S     19 14 49.4 -4.4
      baz=165
146A  Union              59.38 338   P     P     19 07 01.1 -0.3
342A  Flagon Creek P     59.45 335   P     P     19 07 02.7 +0.7
VBMS  Vicksburg          59.52 337   P     P     19 07 02.1 -0.3
      baz=155,SNR=24
VBMS                                 S     S     19 14 53.3 -2.5
      baz=155
VBMS  Vicksburg          59.52 337   P     P     19 07 02.2 -0.2
VBMS                                 IAmb  IAmb  19 07 07.4
      comp=Z,1μm,1.2s
KMSC  Kings Mountain     59.54 346   P     P     19 07 02.6 +0.1
      baz=164,SNR=325
KMSC                                 S     S     19 14 54.3 -1.7
      baz=164
KMSC  Kings Mountain     59.54 346   P     P     19 07 02.7 +0.2
Y49A  Blount Mountai     59.65 341   P     P     19 07 02.6 -0.7
Y49A                                 IAmb  IAmb  19 07 05.6
      comp=Z,448nm,0.8s
HKT   Hockley            59.70 331d iP     P     19 07 04.1 +0.5
HKT                                  pmax  pmax
      comp=Z,817nm,1.7s
HKT   Hockley            59.70 331   P     P     19 07 04.0 +0.4
HKT                                  IAmb  IAmb  19 07 09.6
      comp=Z,2μm,1.8s
735A  Kenedy             59.71 328   P     P     19 07 03.6 -0.2
735A                                 IAmb  IAmb  19 07 09.7
      comp=Z,1μm,1.0s
BG3   Lake Jocassee      59.77 345   P     P     19 07 04.2 +0.1
BG3                                  IAmb  IAmb  19 07 09.3
      comp=Z,543nm,1.0s
U61A  Possum Corner      59.80 351   P     P     19 07 03.8 -0.4
      baz=170,SNR=24
U61A                                 S     S     19 14 59.1  0.0
      baz=170
U61A  Possum Corner      59.80 351   P     P     19 07 04.2  0.0
X51A  Calhoun            59.87 343   P     P     19 07 04.4 -0.3
V57A  Coltrane Farms     59.93 348   S     S     19 14 56.7 -4.2
      baz=166
V56A  Mocksville         60.00 347   S     S     19 14 58.2 -3.6
      baz=165
U59A  Littleton          60.02 350   P     P     19 07 05.3 -0.4
U59A                                 IAmb  IAmb  19 07 10.7
      comp=Z,630nm,0.9s
U60A  Pendleton          60.04 350   P     P     19 07 06.0 +0.2
      baz=169,SNR=8.1
U60A                                 S     S     19 14 59.8 -2.5
      baz=169
FPAL  Fort Paine         60.05 342   P     P     19 07 05.5 -0.6
FPAL                                 IAmb  IAmb  19 07 10.4
      comp=Z,508nm,0.8s
833A  Chaparral WMA,     60.05 327   P     P     19 07 06.7 +0.6
      baz=145,SNR=332
833A                                 S     S     19 15 01.7 -1.1
      baz=145
W52A  Murphy             60.12 344   P     P     19 07 06.2 -0.2
W52A                                 IAmb  IAmb  19 07 11.4
      comp=Z,876nm,1.1s
SNAA  Sanae              60.13 161   P     P     19 07 06.4 +0.2
SNAA                                 S     S     19 15 03.3 +0.5
SNAA  Sanae              60.13 161   ScP   ScP   19 11 31.7 +0.5
SNAA  Sanae              60.13 161   pP    pP    19 07 56.2 +2.3
SNAA  Sanae              60.13 161   P     P     19 07 06.3 +0.2
      comp=Z,297nm,0.7s,baz=271,slow=8.3,SNR=178
SNAA  Sanae              60.13 161   P     P     19 07 05.9 -0.2
SNAA                                 IAmb  IAmb  19 07 09.9
      comp=Z,584nm,1.0s
V55A  Taylorsville       60.19 346   P     P     19 07 07.4 +0.5
143A  Socs Landing,      60.28 336   P     P     19 07 07.4 -0.1
V53A  Saluda             60.38 345   P     P     19 07 08.2  0.0
V53A                                 IAmb  IAmb  19 07 11.2
      comp=Z,457nm,0.8s
X48A  Hartselle          60.39 341   P     P     19 07 08.0 -0.3
U56A  King               60.50 347   P     P     19 07 09.8 +0.8
      baz=166,SNR=93
U56A                                 S     S     19 15 08.4 +0.2
      baz=166
U56A  King               60.50 347   P     P     19 07 09.7 +0.8
W50A  Signal Mountai     60.59 343   P     P     19 07 09.1 -0.5
CPCT  Cooper Cave        60.61 343   P     P     19 07 09.3 -0.4
CPCT                                 IAmb  IAmb  19 07 14.4
      comp=Z,746nm,1.1s
TKL   Tuckaleechee C     60.61 344   P     P     19 07 09.6 -0.1
      baz=154,slow=6.6
TKL   Tuckaleechee C     60.61 344   P     P     19 07 09.2 -0.5
TKL                                  IAmb  IAmb  19 07 14.4
      comp=Z,1μm,1.1s
T60A  Surry              60.63 351   P     P     19 07 10.1 +0.3
      baz=169,SNR=56
T60A                                 S     S     19 15 09.0 -0.7
      baz=169
T60A  Surry              60.63 351   P     P     19 07 09.2 -0.6
T58A  Grand View Acr     60.73 349   S     S     19 15 06.2 -4.9
      baz=168
V52A  Sevierville        60.74 344   P     P     19 07 10.0 -0.6
NATX  Nacogdoches        60.75 333   P     P     19 07 11.6 +0.9
      baz=150,SNR=48
NATX                                 S     S     19 15 12.4 +0.9
      baz=150
NATX  Nacogdoches        60.75 333   P     P     19 07 11.7 +0.9
SWET  Sewanee            60.78 342   P     P     19 07 10.6 -0.3
V51A  Loudon             60.90 344   P     P     19 07 11.1 -0.5
T57A  Hurt               60.91 348   P     P     19 07 11.9 +0.2
      baz=167,SNR=103
T57A                                 S     S     19 15 12.4 -0.9
      baz=167
T57A  Hurt               60.91 348   P     P     19 07 11.5 -0.2
T57A                                 IAmb  IAmb  19 07 14.9
      comp=Z,510nm,0.9s
U54A  Nelsons Funny      60.97 346   P     P     19 07 12.5 +0.3
      baz=164,SNR=211
U54A                                 S     S     19 15 13.1 -1.2
      baz=164
U54A  Nelsons Funny      60.97 346   P     P     19 07 12.2  0.0
T56A  Rocky Mt           61.09 348   S     S     19 15 14.9 -0.7
      baz=166
S60A  Water View         61.17 351   P     P     19 07 13.5 +0.1
      baz=170,SNR=14
S60A                                 S     S     19 15 16.2 -0.4
      baz=170
PLAL  Pickwick Lake      61.20 340   P     P     19 07 12.7 -1.0
PLAL                                 IAmb  IAmb  19 07 17.8
      comp=Z,1μm,1.1s
OXF   Oxford             61.20 339   P     P     19 07 12.6 -1.1
      baz=156,SNR=196
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OXF                                  S     S     19 15 13.3 -3.8
      baz=156
OXF   Oxford             61.20 339   P     P     19 07 12.5 -1.2
OXF                                  pmax  pmax
      comp=Z,2μm,1.1s
OXF   Oxford             61.20 339   P     P     19 07 12.5 -1.2
435B  Jarrell            61.21 330   P     P     19 07 14.1 +0.2
      baz=148,SNR=30
435B                                 S     S     19 15 15.2 -2.2
      baz=148
435B  Jarrell            61.21 330   P     P     19 07 14.1 +0.2
435B                                 IAmb  IAmb  19 07 19.2
      comp=Z,394nm,0.8s
MBO   M'Bour             61.25  57   P     P     19 07 14.6 +0.2
MBO                                  IAmb  IAmb  19 07 19.1
      comp=Z,392nm,0.9s
S58A  Poland Farm, P     61.30 350   P     P     19 07 14.4 +0.1
      baz=168,SNR=21
S58A                                 S     S     19 15 17.0 -1.1
      baz=168
S58A  Poland Farm, P     61.30 350   P     P     19 07 14.2 -0.1
Z41A  Richland Creek     61.31 335   P     P     19 07 14.4 -0.1
      baz=153,SNR=26
Z41A                                 S     S     19 15 17.7 -0.8
      baz=153
S59A  Mechanicsville     61.32 350   P     P     19 07 14.7 +0.2
      baz=169,SNR=36
S59A                                 S     S     19 15 17.5 -1.0
      baz=169
BLA   Blacksburg         61.34 348   P     P     19 07 15.2 +0.5
      baz=166,SNR=73
BLA                                  S     S     19 15 19.6 +0.7
      baz=166
BLA   Blacksburg         61.34 348   P     P     19 07 15.2 +0.5
BLA                                  pmax  pmax
      comp=Z,2μm,1.4s
BLA   Blacksburg         61.34 348   P     P     19 07 15.2 +0.5
JSRW  J. Sargeant Re     61.35 350   P     P     19 07 14.8 +0.2
TZTN  Tazewell           61.40 345   P     P     19 07 14.6 -0.4
      baz=162,SNR=44
TZTN                                 S     S     19 15 16.9 -2.6
      baz=162
TZTN  Tazewell           61.40 345   P     P     19 07 14.3 -0.7
TZTN                                 IAmb  IAmb  19 07 20.6
      comp=Z,906nm,1.6s
237A  Washetta, Mont     61.45 332   P     P     19 07 16.1 +0.7
CCAR  Cane Creek         61.50 336   P     P     19 07 16.0 +0.3
CCAR                                 IAmb  IAmb  19 07 21.2
      comp=Z,920nm,0.9s
V48A  Smith Brothers     61.52 341   P     P     19 07 14.9 -1.0
S57A  Dark Hollow, R     61.60 349   P     P     19 07 16.6 +0.3
      baz=167,SNR=84
S57A                                 S     S     19 15 21.8 -0.2
      baz=167
S57A  Dark Hollow, R     61.60 349   P     P     19 07 16.5 +0.2
S57A                                 IAmb  IAmb  19 07 21.7
      comp=Z,829nm,1.2s
R58B  Mineral            61.61 350   P     P     19 07 16.6 +0.2
      baz=168,SNR=90
R58B                                 S     S     19 15 21.2 -1.0
      baz=168
R58B  Mineral            61.61 350   P     P     19 07 16.6 +0.2
R58B                                 IAmb  IAmb  19 07 21.7
      comp=Z,824nm,1.1s
CLTN  Cedars of Leba     61.71 342   P     P     19 07 16.4 -0.6
CLTN                                 IAmb  IAmb  19 07 19.5
      comp=Z,601nm,1.0s
R60A  Leonardtown, M     61.72 351   P     P     19 07 18.2 +1.1
      baz=170,SNR=9.7
R60A                                 S     S     19 15 23.1 -0.3
      baz=170
X43A  Marvell            61.72 337   P     P     19 07 17.3 +0.1
      baz=155,SNR=13
X43A                                 S     S     19 15 21.7 -1.8
      baz=155
W45A  Hickory Valley     61.72 339   P     P     19 07 16.4 -0.7
R59A  King George, V     61.73 351   P     P     19 07 17.2 +0.1
      baz=169,SNR=58
R59A                                 S     S     19 15 22.4 -1.1
      baz=169
CBN   Corbin Frederi     61.77 350   P     P     19 07 17.3 -0.1
      baz=169,SNR=15
CBN                                  S     S     19 15 22.7 -1.4
      baz=169
CBN   Corbin Frederi     61.77 350   P     P     19 07 17.6 +0.2
CBN                                  IAmb  IAmb  19 07 22.5
      comp=Z,851nm,1.3s
WLAR  White Oak Lake     61.80 335   P     P     19 07 18.6 +0.8
MET   Memphis--Engin     61.94 338   P     P     19 07 18.3 -0.3
U49A  Red Boiling Sp     61.95 343   P     P     19 07 17.8 -0.9
U49A                                 IAmb  IAmb  19 07 22.9
      comp=Z,752nm,1.4s
R58A  Rapidan            61.96 350   P     P     19 07 18.7  0.0
      baz=168,SNR=72
R58A                                 S     S     19 15 26.2 -0.3
      baz=168
JCT   Junction City      62.02 328   P     P     19 07 19.4 +0.1
      baz=145,SNR=259
JCT                                  S     S     19 15 26.6 -1.1
      baz=145
JCT   Junction City      62.02 328   P     P     19 07 19.5 +0.1
JCT                                  pmax  pmax
      comp=Z,651nm,0.8s
JCT   Junction City      62.02 328   P     P     19 07 19.5 +0.1
JCT                                  IAmb  IAmb  19 07 24.6
      comp=Z,651nm,0.8s
R57A  Stanardsville      62.05 349   P     P     19 07 19.6 +0.3
      baz=168,SNR=75
R57A                                 S     S     19 15 27.3 -0.3
      baz=168
S54A  Dingess, Beckl     62.09 347   P     P     19 07 19.7 +0.1
      baz=165,SNR=192
S54A                                 S     S     19 15 27.3 -0.9
      baz=165
S54A  Dingess, Beckl     62.09 347   P     P     19 07 19.6 +0.1
Q61A  Milford            62.15 352   P     P     19 07 19.8 -0.1
      baz=171
Q61A                                 S     S     19 15 28.3 -0.5
      baz=171
WHTX  Lake Whitney,      62.17 331   P     P     19 07 20.4 +0.1
      baz=148,SNR=124
WHTX                                 S     S     19 15 27.9 -1.5
      baz=148
WHTX  Lake Whitney,      62.17 331   P     P     19 07 20.3 +0.1
WHTX                                 IAmb  IAmb  19 07 23.4
      comp=Z,523nm,0.8s
T50A  Nancy              62.17 344   P     P     19 07 19.4 -0.7
Z38A  Mt. Pleasant       62.18 333   P     P     19 07 20.7 +0.4
WVT   Waverly            62.19 341   P     P     19 07 19.7 -0.5
      baz=158
WVT                                  S     S     19 15 25.1 -4.3
      baz=158
WVT   Waverly            62.19 341   P     P     19 07 19.4 -0.9
WVT                                  pmax  pmax
      comp=Z,1μm,0.9s
WVT   Waverly            62.19 341   P     P     19 07 19.4 -0.9
RKT   Rikitea            62.26 255  eS     S     19 15 32.8 +1.8
      comp=Z,28μm,30.8s
Q59A  Harwood            62.31 351   P     P     19 07 20.8 -0.2
      baz=170,SNR=10.0
Q59A                                 S     S     19 15 29.3 -1.5
      baz=170
Q60A  Greensboro         62.34 352   P     P     19 07 21.1 -0.1
      baz=170,SNR=18
Q60A                                 S     S     19 15 30.0 -1.1
      baz=170
Q60A  Greensboro         62.34 352   P     P     19 07 21.9 +0.7
HPIG                     62.39 321   P     P     19 07 22.4 +0.4
HPIG                                 IAmb  IAmb  19 07 28.1
      comp=Z,573nm,1.2s
R54A  Victor             62.39 347   P     P     19 07 21.6  0.0
      baz=165,SNR=155
R54A                                 S     S     19 15 31.2 -0.8
      baz=165
X40A  Basin Creek Fa     62.41 336   P     P     19 07 21.1 -0.6
      baz=153,SNR=44
X40A                                 S     S     19 15 29.0 -3.2
      baz=153
X40A  Basin Creek Fa     62.41 336   P     P     19 07 21.5 -0.2
S51A  Beattyville        62.45 345   P     P     19 07 21.4 -0.6
HALT  Halls              62.46 339   P     P     19 07 21.6 -0.4
LPAR  Lepanto            62.50 338   P     P     19 07 22.2 -0.1
Q58A  Fox Den Farm,      62.54 350   P     P     19 07 22.6 +0.1
      baz=169,SNR=38
Q58A                                 S     S     19 15 32.6 -1.1
      baz=169
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HBAR	**Harrisburg**	**62.58**	**338**	P	**P**	**19 07 22.8**	**-0.1**
HBAR				IAmb	IAmb	19 07 28.4	
	comp=Z,1µm,1.7s						
SLBS	**Sierra La Lagu**	**62.67**	**315**	P	**P**	**19 07 25.5**	**+1.6**
LNXT	**Lenox**	**62.68**	**339**	P	**P**	**19 07 22.9**	**-0.6**
GNAR	**Gosnell**	**62.73**	**339**	P	**P**	**19 07 23.8**	**-0.1**
R53A	**Hurricane**	**62.74**	**347**	P	**P**	**19 07 23.7**	**-0.2**
R53A				IAmb	IAmb	19 07 28.8	
	comp=Z,690nm,1.0s						
MIAR	**Mount Ida**	**62.74**	**335**	P	**P**	**19 07 23.8**	**-0.2**
	baz=152,SNR=239						
MIAR				S	**S**	**19 15 33.8**	**-2.7**
	baz=152						
MIAR	**Mount Ida**	**62.74**	**335**	P	**P**	**19 07 23.7**	**-0.2**
MIAR				pmax	pmax		
	comp=Z,963nm,1.2s						
MIAR	**Mount Ida**	**62.74**	**335**	P	**P**	**19 07 23.6**	**-0.3**
MIAR				IAmb	IAmb	19 07 28.9	
	comp=Z,963nm,1.2s						
Q57A	**Strasburg**	**62.75**	**350**	P	**P**	**19 07 24.7**	**+0.8**
	baz=168,SNR=77						
Q57A				S	**S**	**19 15 36.2**	**-0.1**
	baz=168						
T47A	**Sharon Grove**	**62.77**	**342**	P	**P**	**19 07 23.1**	**-1.0**
GLAT	**Glass**	**62.77**	**340**	P	**P**	**19 07 23.8**	**-0.3**
W41B	**Gary Mavity, V**	**62.80**	**337**	P	**P**	**19 07 24.1**	**-0.2**
	baz=154,SNR=134						
W41B				S	**S**	**19 15 34.4**	**-2.7**
	baz=154						
PEBM	**Pemiscott Bayo**	**62.81**	**339**	P	**P**	**19 07 24.0**	**-0.4**
P61A	**Hammonton**	**62.87**	**353**	P	**P**	**19 07 24.4**	**-0.3**
	baz=172						
P61A				S	**S**	**19 15 37.6**	**-0.2**
	baz=172						
P61A	**Hammonton**	**62.87**	**353**	P	**P**	**19 07 24.5**	**-0.2**
P61A				IAmb	IAmb	19 07 29.9	
	comp=Z,936nm,1.1s						
SDMD	**Soldier's Deli**	**62.87**	**351**	P	**P**	**19 07 25.1**	**+0.3**
Q56A	**Snyder Ridge,**	**62.88**	**349**	P	**P**	**19 07 25.7**	**+0.8**
	baz=167,SNR=132						
Q56A				S	**S**	**19 15 38.6**	**+0.6**
	baz=167						
Q56A	**Snyder Ridge,**	**62.88**	**349**	P	**P**	**19 07 25.5**	**+0.6**
Q56A				IAmb	IAmb	19 07 28.6	
	comp=Z,684nm,0.9s						
WHAR	**Wooly Hollow**	**62.92**	**337**	P	**P**	**19 07 24.4**	**-0.7**
WHAR				IAmb	IAmb	19 07 29.7	
	comp=Z,396nm,1.0s						
HICK	**Hickman**	**63.00**	**340**	P	**P**	**19 07 25.2**	**-0.5**
P59A	**Jarrettsville**	**63.01**	**352**	P	**P**	**19 07 26.0**	**+0.3**
	baz=170,SNR=113						
P59A				S	**S**	**19 15 39.2**	**-0.3**
	baz=170						
P58A	**Pank, Wackersv**	**63.02**	**351**	P	**P**	**19 07 25.8**	**+0.1**
	baz=169,SNR=45						
P58A				S	**S**	**19 15 39.8**	**+0.2**
	baz=169						
PVMO	**Portageville**	**63.04**	**339**	P	**P**	**19 07 26.0**	**+0.1**
PENMO	**Penman**	**63.05**	**339**	P	**P**	**19 07 25.9**	**0.0**
TXAR	**Lajitas Array**	**63.10**	**324**	P	**P**	**19 07 26.9**	**+0.3**
	comp=Z,86nm,0.7s,baz=149,slow=8.6,SNR=153						
TXAR				PKPPKP	**P'P'df**	**19 36 21.6**	**-1.2**
	comp=Z,1.5nm,0.9s,baz=241,slow=1.3,SNR=5.2						
TXAR				P4KPbc		19 44 24.4	
	comp=Z,3.2nm,0.8s,baz=131,slow=2.5,SNR=27						
TXAR	**Lajitas Array**	**63.10**	**324**	P	**P**	**19 07 26.4**	**-0.2**
TX31	**Lajitas Ar. Si**	**63.11**	**324**	P	**P**	**19 07 26.9**	**+0.3**
TX32	**Lajitas Array**	**63.11**	**324**	P	**P**	**19 07 26.9**	**+0.2**
TX32				IAmb	IAmb	19 07 31.6	
	comp=Z,1µm,1.9s						
P60A	**Greenville**	**63.11**	**352**	P	**P**	**19 07 26.3**	**0.0**
	baz=171,SNR=33						
P60A				S	**S**	**19 15 39.6**	**-1.1**
	baz=171						
P60A	**Greenville**	**63.11**	**352**	P	**P**	**19 07 25.9**	**-0.3**
P57A	**Homestead Farm**	**63.12**	**350**	P	**P**	**19 07 27.4**	**+1.0**
	baz=168,SNR=108						
P57A				S	**S**	**19 15 41.0**	**0.0**
	baz=168						
P57A	**Homestead Farm**	**63.12**	**350**	P	**P**	**19 07 26.9**	**+0.5**
P57A				IAmb	IAmb	19 07 32.2	
	comp=Z,617nm,0.9s						
Q54A	**Coxs Mills**	**63.13**	**348**	P	**P**	**19 07 26.2**	**-0.3**
Q54A				IAmb	IAmb	19 07 29.4	
	comp=Z,498nm,0.9s						
Q53A	**Leroy**	**63.15**	**347**	P	**P**	**19 07 26.5**	**-0.1**
	baz=165,SNR=166						
Q53A				S	**S**	**19 15 40.1**	**-1.2**
	baz=165						
PSUB	**Penn St. - Bra**	**63.20**	**352**	P	**P**	**19 07 26.1**	**-0.8**
LPIG	**La Paz**	**63.20**	**315**	P	**P**	**19 07 27.4**	**+0.2**
	comp=Z,485nm,0.9s,baz=189,slow=0.6						
Z35A	**Perchaven, San**	**63.21**	**331**	P	**P**	**19 07 27.4**	**+0.3**
LCAR	**Lake Charles**	**63.21**	**338**	P	**P**	**19 07 26.1**	**-1.0**
LCAR				IAmb	IAmb	19 07 31.5	
	comp=Z,634nm,1.2s						
WUPA	**West Chester U**	**63.22**	**352**	P	**P**	**19 07 27.1**	**+0.1**
R50A	**Paris**	**63.24**	**344**	P	**P**	**19 07 26.0**	**-1.1**
R50A				IAmb	IAmb	19 07 31.6	
	comp=Z,602nm,1.4s						
HENM	**Henderson Moun**	**63.24**	**340**	P	**P**	**19 07 27.2**	**0.0**
T45A	**Paducah**	**63.26**	**340**	P	**P**	**19 07 26.5**	**-0.8**
O61A	**Allentown**	**63.26**	**353**	P	**P**	**19 07 27.4**	**+0.1**
	baz=172,SNR=14						
O61A				S	**S**	**19 15 42.1**	**-0.4**
	baz=172						
P56A	**Dayton Farm, R**	**63.28**	**349**	P	**P**	**19 07 28.2**	**+0.8**
	baz=168,SNR=56						
P56A				S	**S**	**19 15 43.0**	**+0.1**
	baz=168						
PARMO	**Parma**	**63.28**	**339**	P	**P**	**19 07 27.4**	**0.0**
MVL	**Millersville**	**63.38**	**352**	P	**P**	**19 07 28.1**	**0.0**
MVL				IAmb	IAmb	19 07 32.9	
	comp=Z,381nm,1.0s						
FCAR	**Ozark Folk Cen**	**63.39**	**337**	P	**P**	**19 07 27.5**	**-0.7**
FCAR				IAmb	IAmb	19 07 30.5	
	comp=Z,354nm,1.0s						
W39A	**Magazine**	**63.40**	**335**	P	**P**	**19 07 28.8**	**+0.5**
	baz=152,SNR=299						
W39A				S	**S**	**19 15 43.1**	**-1.4**
	baz=152						
W39A	**Magazine**	**63.40**	**335**	P	**P**	**19 07 28.2**	**-0.1**
W39A				IAmb	IAmb	19 07 31.7	
	comp=Z,738nm,0.9s						
Q52A	**Bidwell**	**63.41**	**346**	P	**P**	**19 07 27.8**	**-0.5**
Q52A				IAmb	IAmb	19 07 31.0	
	comp=Z,553nm,0.9s						
R49A	**Shelbyville**	**63.46**	**344**	P	**P**	**19 07 27.4**	**-1.2**
X37A	**Clayton**	**63.49**	**334**	P	**P**	**19 07 28.8**	**-0.2**
O60A	**Telford**	**63.58**	**353**	P	**P**	**19 07 29.6**	**+0.3**
	baz=171,SNR=36						
O60A				S	**S**	**19 15 46.5**	**0.0**
	baz=171						
O58A	**Lewisberry**	**63.59**	**351**	P	**P**	**19 07 30.0**	**+0.6**
	baz=170,SNR=54						
O58A				S	**S**	**19 15 46.3**	**-0.4**
	baz=170						
MCWV	**Mont Chateau**	**63.60**	**349**	P	**P**	**19 07 30.1**	**+0.5**
	baz=166,SNR=41						
MCWV				S	**S**	**19 15 47.9**	**+1.0**
	baz=166						
MCWV	**Mont Chateau**	**63.60**	**349**	P	**P**	**19 07 29.8**	**+0.3**
MCWV				IAmb	IAmb	19 07 33.0	
	comp=Z,311nm,0.8s						
PBMO	**Poplar Bluff**	**63.61**	**339**	P	**P**	**19 07 28.6**	**-1.0**
PAGS	**Pennsylvania G**	**63.66**	**351**	P	**P**	**19 07 29.6**	**-0.3**
O59A	**Robesonia**	**63.67**	**352**	P	**P**	**19 07 29.8**	**-0.1**
	baz=170						
O59A				S	**S**	**19 15 46.8**	**-0.9**
	baz=170						
WCI	**Wyandotte Cave**	**63.70**	**343**	P	**P**	**19 07 28.7**	**-1.4**
	baz=160						
WCI				S	**S**	**19 15 43.9**	**-4.2**
	baz=160						
WCI	**Wyandotte Cave**	**63.70**	**343**	P	**P**	**19 07 29.1**	**-1.1**
WCI				pmax	pmax		
	comp=Z,737nm,0.6s						
WCI	**Wyandotte Cave**	**63.70**	**343**	P	**P**	**19 07 29.1**	**-1.1**
ABTX	**Abilene, Hawle**	**63.71**	**329**	P	**P**	**19 07 30.3**	**-0.1**
	baz=146,SNR=128						
ABTX				S	**S**	**19 15 46.5**	**-2.0**
	baz=146						
ABTX	**Abilene, Hawle**	**63.71**	**329**	P	**P**	**19 07 30.1**	**-0.3**
ABTX				IAmb	IAmb	19 07 35.6	
	comp=Z,746nm,1.1s						
Q51A	**Peebles**	**63.71**	**346**	P	**P**	**19 07 29.6**	**-0.7**
Q51A				IAmb	IAmb	19 07 32.8	
	comp=Z,386nm,1.0s						
P53A	**Whipple**	**63.73**	**347**	P	**P**	**19 07 30.1**	**-0.3**
O57A	**Amberson**	**63.77**	**351**	P	**P**	**19 07 31.2**	**+0.5**
	baz=169,SNR=45						
O57A				S	**S**	**19 15 48.5**	**-0.5**
	baz=169						
USIN	**University of**	**63.84**	**342**	P	**P**	**19 07 30.0**	**-1.1**
USIN				IAmb	IAmb	19 07 34.7	
	comp=Z,482nm,0.9s						
BRNJ	**Basking Ridge**	**63.84**	**353**	P	**P**	**19 07 31.6**	**+0.5**
BRNJ				IAmb	IAmb	19 07 36.6	
	comp=Z,511nm,1.0s						
LUPA	**Lehigh Univers**	**63.85**	**353**	P	**P**	**19 07 31.7**	**+0.5**
N61A	**South Mountain**	**63.88**	**354**	P	**P**	**19 07 31.9**	**+0.6**
	baz=172,SNR=45						
N61A				S	**S**	**19 15 50.0**	**-0.3**
	baz=172						
CPNY	**Central Park**	**63.89**	**354**	P	**P**	**19 07 31.2**	**-0.1**
CPNY				IAmb	IAmb	19 07 36.5	
	comp=Z,461nm,1.2s						
N63A	**Mattituck**	**63.96**	**355**	P	**P**	**19 07 32.6**	**+0.9**
	baz=174						
N63A				S	**S**	**19 15 51.2**	**+0.1**
	baz=174						
O56A	**Blue Knob Stat**	**63.98**	**350**	P	**P**	**19 07 32.7**	**+0.7**
	baz=168,SNR=82						
O56A				S	**S**	**19 15 51.1**	**-0.5**
	baz=168						
O56A	**Blue Knob Stat**	**63.98**	**350**	P	**P**	**19 07 32.1**	**+0.1**
O56A				IAmb	IAmb	19 07 35.6	
	comp=Z,533nm,1.0s						
N62A	**Caumsett State**	**63.98**	**354**	P	**P**	**19 07 32.2**	**+0.3**
	baz=173,SNR=11						
N62A				S	**S**	**19 15 50.4**	**-1.1**
	baz=173						
P52A	**Corning**	**64.03**	**347**	P	**P**	**19 07 31.8**	**-0.5**
	baz=164,SNR=99						
P52A				S	**S**	**19 15 49.4**	**-2.7**
	baz=164						
P52A	**Corning**	**64.03**	**347**	P	**P**	**19 07 31.8**	**-0.5**
P52A				IAmb	IAmb	19 07 34.9	
	comp=Z,872nm,1.0s						
T42A	**Van Buren**	**64.06**	**338**	P	**P**	**19 07 31.3**	**-1.3**
S44A	**Carbondale**	**64.06**	**340**	P	**P**	**19 07 31.2**	**-1.4**
S44A				IAmb	IAmb	19 07 36.7	
	comp=Z,733nm,1.0s						
SIUC	**Southern Illin**	**64.07**	**340**	P	**P**	**19 07 31.6**	**-1.0**
SIUC				IAmb	IAmb	19 07 36.8	
	comp=Z,932nm,1.1s						
U40A	**Yellville**	**64.07**	**337**	P	**P**	**19 07 32.2**	**-0.5**
	baz=153,SNR=212						
U40A				S	**S**	**19 15 49.8**	**-3.1**
	baz=153						
U40A	**Yellville**	**64.07**	**337**	P	**P**	**19 07 32.0**	**-0.7**
U40A				IAmb	IAmb	19 07 35.3	
	comp=Z,402nm,0.9s						
P51A	**Williamsport**	**64.08**	**346**	P	**P**	**19 07 31.8**	**-0.9**
P51A				IAmb	IAmb	19 07 35.0	
	comp=Z,441nm,1.0s						
N60A	**Cedar Hill Far**	**64.09**	**353**	P	**P**	**19 07 32.7**	**0.0**
	baz=171,SNR=51						
N60A				S	**S**	**19 15 51.8**	**-1.0**
	baz=171						
PAL	**Palisades**	**64.10**	**354**	P	**P**	**19 07 32.6**	**-0.1**
	baz=173,SNR=23						
PAL				S	**S**	**19 15 52.6**	**-0.2**
	baz=173						
PAL	**Palisades**	**64.10**	**354**	P	**P**	**19 07 32.9**	**+0.2**
PAL				pmax	pmax		
	comp=Z,406nm,1.1s						
PAL	**Palisades**	**64.10**	**354**	P	**P**	**19 07 32.9**	**+0.2**
PAL				IAmb	IAmb	19 07 37.8	
	comp=Z,406nm,1.1s						
WSPT	**Westport, CT**	**64.21**	**354**	P	**P**	**19 07 33.9**	**+0.5**
WSPT				IAmb	IAmb	19 07 38.7	
	comp=Z,531nm,1.0s						
O54A	**Avella**	**64.21**	**348**	P	**P**	**19 07 33.4**	**-0.1**
O54A				IAmb	IAmb	19 07 36.4	
	comp=Z,350nm,0.8s						
N59A	**State Game Lan**	**64.22**	**352**	P	**P**	**19 07 33.7**	**+0.2**
	baz=171,SNR=31						
N59A				S	**S**	**19 15 54.1**	**-0.3**
	baz=171						
N59A	**State Game Lan**	**64.22**	**352**	P	**P**	**19 07 33.5**	**0.0**
N59A				IAmb	IAmb	19 07 39.3	
	comp=Z,785nm,1.6s						
SSPA	**Standing Stone**	**64.23**	**351**	P	**P**	**19 07 33.2**	**-0.4**
	baz=169						
SSPA				S	**S**	**19 15 54.2**	**-0.3**
	baz=169						
SSPA	**Standing Stone**	**64.23**	**351**	P	**P**	**19 07 33.9**	**+0.3**
SSPA				IAmb	IAmb	19 07 39.1	
	comp=Z,746nm,1.4s						
ODNJ	**Ogdensburg**	**64.25**	**353**	P	**P**	**19 07 34.1**	**+0.5**
ODNJ				IAmb	IAmb	19 07 39.0	
	comp=Z,788nm,1.5s						
N58A	**Sunbury**	**64.26**	**352**	P	**P**	**19 07 34.1**	**+0.4**
	baz=170,SNR=92						
N58A				S	**S**	**19 15 53.9**	**-1.0**
	baz=170						
N58A	**Sunbury**	**64.26**	**352**	P	**P**	**19 07 34.2**	**+0.4**
N58A				IAmb	IAmb	19 07 39.4	
	comp=Z,900nm,1.2s						
TRNY	**Table Rock, Ra**	**64.27**	**354**	P	**P**	**19 07 34.2**	**+0.3**
N57A	**Milroy**	**64.30**	**351**	P	**P**	**19 07 34.2**	**+0.2**
	baz=169,SNR=86						
N57A				S	**S**	**19 15 54.2**	**-1.2**
	baz=169						
YLE	**Yale**	**64.32**	**355**	P	**P**	**19 07 34.0**	**-0.1**
M63A	**Gales Ferry**	**64.33**	**356**	P	**P**	**19 07 34.1**	**-0.1**
	baz=175,SNR=9.0						
M63A				S	**S**	**19 15 54.7**	**-1.1**
	baz=175						
M63A	**Gales Ferry**	**64.33**	**356**	P	**P**	**19 07 34.1**	**-0.1**
M63A				IAmb	IAmb	19 07 39.6	
	comp=Z,425nm,1.2s						
M61A	**Granite Spring**	**64.39**	**354**	P	**P**	**19 07 34.0**	**-0.5**
	baz=173,SNR=33						
M61A				S	**S**	**19 15 56.2**	**-0.2**
	baz=173						
M65A	**Busby, Falmout**	**64.40**	**357**	P	**P**	**19 07 34.1**	**-0.6**
	baz=176						
M65A				S	**S**	**19 15 54.6**	**-2.0**
	baz=176						
HHAR	**Hobbs**	**64.41**	**336**	P	**P**	**19 07 34.5**	**-0.4**
HHAR				IAmb	IAmb	19 07 39.7	
	comp=Z,598nm,0.9s						
M64A	**Tiverton**	**64.42**	**356**	P	**P**	**19 07 34.6**	**-0.2**
	baz=175,SNR=10						
M64A				S	**S**	**19 15 55.2**	**-1.6**
	baz=175						
M64A	**Tiverton**	**64.42**	**356**	P	**P**	**19 07 34.9**	**+0.1**
O52A	**Adamsville**	**64.43**	**347**	P	**P**	**19 07 34.6**	**-0.3**
O52A				IAmb	IAmb	19 07 37.6	
	comp=Z,576nm,0.9s						
O53A	**New Philadelph**	**64.43**	**348**	P	**P**	**19 07 35.0**	**+0.1**
	baz=165,SNR=86						
O53A				S	**S**	**19 15 55.3**	**-1.8**
	baz=165						
O53A	**New Philadelph**	**64.43**	**348**	P	**P**	**19 07 34.7**	**-0.2**
O53A				IAmb	IAmb	19 07 37.8	
	comp=Z,447nm,0.8s						
M62A	**Hamden**	**64.44**	**355**	P	**P**	**19 07 35.1**	**+0.2**
	baz=174,SNR=34						
M62A				S	**S**	**19 15 56.6**	**-0.4**
	baz=174						
M60A	**Port Jervis**	**64.49**	**353**	P	**P**	**19 07 35.4**	**+0.1**
	baz=172,SNR=43						
M60A				S	**S**	**19 15 56.7**	**-1.0**
	baz=172						
P49A	**Miami Univ. Ec**	**64.52**	**345**	P	**P**	**19 07 34.3**	**-1.2**
	baz=162,SNR=110						
P49A				S	**S**	**19 15 54.6**	**-3.6**
	baz=162						
P49A	**Miami Univ. Ec**	**64.52**	**345**	P	**P**	**19 07 34.5**	**-1.0**
P49A				IAmb	IAmb	19 07 39.4	
	comp=Z,622nm,1.0s						
N56A	**West Decatur**	**64.57**	**350**	P	**P**	**19 07 36.2**	**+0.4**
	baz=168,SNR=44						
N56A				S	**S**	**19 15 58.7**	**-0.1**
	baz=168						
MGMO	**Mountain Grove**	**64.58**	**338**	P	**P**	**19 07 35.3**	**-0.6**
MGMO				IAmb	IAmb	19 07 38.7	
	comp=Z,592nm,0.9s						
P48A	**Milroy**	**64.63**	**344**	P	**P**	**19 07 34.8**	**-1.4**
P48A				IAmb	IAmb	19 07 39.3	
	comp=Z,634nm,1.3s						
BLO	**Bloomington**	**64.64**	**343**	P	**P**	**19 07 35.4**	**-0.9**
BLO				pmax	pmax		
	comp=Z,315nm,0.7s						
BLO	**Bloomington**	**64.64**	**343**	P	**P**	**19 07 35.4**	**-0.9**
BLO				IAmb	IAmb	19 07 40.2	
	comp=Z,315nm,0.7s						
FVM	**French Village**	**64.70**	**339**	P	**P**	**19 07 36.2**	**-0.5**
FVM				pmax	pmax		
	comp=Z,2µm,1.3s						
FVM	**French Village**	**64.70**	**339**	P	**P**	**19 07 36.2**	**-0.5**
U38A	**Gravette**	**64.72**	**335**	P	**P**	**19 07 36.1**	**-0.8**
U38A				IAmb	IAmb	19 07 41.8	
	comp=Z,1µm,1.6s						
UCCT	**U. Connecticut**	**64.74**	**355**	P	**P**	**19 07 36.8**	**0.0**
UCCT				IAmb	IAmb	19 07 39.9	
	comp=Z,319nm,0.9s						
M58A	**Price's Panora**	**64.75**	**352**	P	**P**	**19 07 37.6**	**+0.6**
	baz=170,SNR=107						
M58A				S	**S**	**19 16 00.4**	**-0.6**
	baz=170						
L63A	**North Scituate**	**64.76**	**356**	P	**P**	**19 07 37.0**	**0.0**
	baz=175,SNR=89						
L63A				S	**S**	**19 16 00.2**	**-0.8**
	baz=175						
L63A	**North Scituate**	**64.76**	**356**	P	**P**	**19 07 37.1**	**+0.2**
KSCT	**Kent School, K**	**64.77**	**354**	P	**P**	**19 07 37.3**	**+0.2**
KSCT				IAmb	IAmb	19 07 42.4	
	comp=Z,657nm,1.2s						
ACSO	**Alum Creek Sta**	**64.78**	**346**	P	**P**	**19 07 36.7**	**-0.5**
	baz=164,SNR=113						
ACSO				S	**S**	**19 15 58.5**	**-2.8**
	baz=164						
ACSO	**Alum Creek Sta**	**64.78**	**346**	P	**P**	**19 07 36.2**	**-1.0**
L64A	**Middleborough**	**64.79**	**357**	P	**P**	**19 07 37.3**	**+0.2**
	baz=176,SNR=23						
L64A				S	**S**	**19 16 00.8**	**-0.4**
	baz=176						
L64A	**Middleborough**	**64.79**	**357**	P	**P**	**19 07 37.7**	**+0.5**
L64A				IAmb	IAmb	19 07 42.4	
	comp=Z,667nm,1.2s						
M59A	**Waymart**	**64.79**	**353**	P	**P**	**19 07 37.7**	**+0.4**
	baz=171,SNR=122						
M59A				S	**S**	**19 16 00.9**	**-0.6**
	baz=171						
M57A	**Sunshine Farm,**	**64.81**	**351**	P	**P**	**19 07 38.0**	**+0.7**
	baz=169,SNR=57						
M57A				S	**S**	**19 16 01.2**	**-0.4**
	baz=169						
M57A	**Sunshine Farm,**	**64.81**	**351**	P	**P**	**19 07 37.8**	**+0.5**
M57A				IAmb	IAmb	19 07 41.0	
	comp=Z,468nm,0.9s						
TUL1	**Leonard**	**64.81**	**334**	P	**P**	**19 07 37.4**	**-0.1**
	baz=150,SNR=99						
TUL1				S	**S**	**19 16 00.3**	**-1.6**
	baz=150						
TUL1	**Leonard**	**64.81**	**334**	P	**P**	**19 07 37.4**	**-0.1**
BRYW	**Bryant College**	**64.81**	**356**	P	**P**	**19 07 37.6**	**+0.3**
L65A	**Cape Cod Natio**	**64.84**	**357**	P	**P**	**19 07 37.6**	**+0.2**
	baz=177						
L65A				S	**S**	**19 16 00.9**	**-1.0**
	baz=177						
KSPA	**Keystone Colle**	**64.85**	**352**	P	**P**	**19 07 37.8**	**+0.2**
KSPA				IAmb	IAmb	19 07 41.1	
	comp=Z,472nm,0.9s						
N54A	**Moraine State**	**64.89**	**349**	P	**P**	**19 07 38.2**	**+0.3**
	baz=166						
N54A				S	**S**	**19 16 02.3**	**-0.4**
	baz=166						
N53A	**Lisbon**	**64.90**	**348**	P	**P**	**19 07 37.8**	**-0.1**
N53A				IAmb	IAmb	19 07 41.0	
	comp=Z,351nm,0.8s						
FNO	**Franklin**	**64.91**	**332**	P	**P**	**19 07 38.0**	**-0.1**
FNO				IAmb	IAmb	19 07 43.2	
	comp=Z,577nm,0.9s						
L62A	**Suffield**	**65.01**	**355**	P	**P**	**19 07 38.9**	**+0.4**
	baz=174						
L62A				S	**S**	**19 16 02.5**	**-1.4**
	baz=174						
L62A	**Suffield**	**65.01**	**355**	P	**P**	**19 07 38.6**	**0.0**
CCM	**Cathedral Cave**	**65.04**	**339**	P	**P**	**19 07 38.3**	**-0.6**
	baz=155						
CCM				S	**S**	**19 16 01.3**	**-3.2**
	baz=155						
CCM	**Cathedral Cave**	**65.04**	**339**	P	**P**	**19 07 38.2**	**-0.7**
CCM				pmax	pmax		
	comp=Z,900nm,0.7s						
CCM	**Cathedral Cave**	**65.04**	**339**	P	**P**	**19 07 38.1**	**-0.7**
O49A	**Covington**	**65.05**	**345**	P	**P**	**19 07 38.0**	**-0.9**
O49A				IAmb	IAmb	19 07 41.1	
	comp=Z,565nm,0.9s						
OKCSW	**OKLAHOMA CITY**	**65.06**	**333**	P	**P**	**19 07 38.3**	**-0.8**
OKCFA	**Oklahoma City**	**65.07**	**333**	P	**P**	**19 07 38.9**	**-0.2**
OKCFA				IAmb	IAmb	19 07 43.8	
	comp=Z,658nm,0.9s						
WMOK	**Wichita Mounta**	**65.08**	**331**	P	**P**	**19 07 38.6**	**-0.7**
	baz=148,SNR=51						
WMOK				S	**S**	**19 16 03.0**	**-2.3**
	baz=148						
WMOK	**Wichita Mounta**	**65.08**	**331**	P	**P**	**19 07 38.2**	**-1.0**
WMOK				pmax	pmax		
	comp=Z,502nm,1.5s						
WMOK	**Wichita Mounta**	**65.08**	**331**	P	**P**	**19 07 38.2**	**-1.0**
WMOK				IAmb	IAmb	19 07 43.9	
	comp=Z,502nm,1.4s						
L60A	**Shokan**	**65.10**	**354**	P	**P**	**19 07 39.9**	**+0.7**
	baz=172,SNR=113						
L60A				S	**S**	**19 16 04.6**	**-0.6**
	baz=172						
M56A	**Emporium**	**65.10**	**350**	P	**P**	**19 07 39.4**	**+0.2**
	baz=168,SNR=102						
M56A				S	**S**	**19 16 04.4**	**-0.9**
	baz=168						
M56A	**Emporium**	**65.10**	**350**	P	**P**	**19 07 39.6**	**+0.3**
M56A				IAmb	IAmb	19 07 44.5	
	comp=Z,516nm,0.8s						
Q44A	**Meyer Farm, Va**	**65.10**	**341**	P	**P**	**19 07 37.7**	**-1.6**
Q44A				IAmb	IAmb	19 07 42.8	
	comp=Z,625nm,1.1s						
OK025	**Westminster Rd**	**65.16**	**333**	P	**P**	**19 07 39.3**	**-0.5**
M55A	**Ridgway**	**65.18**	**350**	P	**P**	**19 07 39.9**	**+0.2**
M55A				IAmb	IAmb	19 07 43.0	
	comp=Z,583nm,0.9s						
BCX	**Boston College**	**65.20**	**356**	P	**P**	**19 07 40.1**	**+0.3**
QUA2	**Belchertown**	**65.23**	**355**	P	**P**	**19 07 40.1**	**+0.1**
QUA2				IAmb	IAmb	19 07 45.0	
	comp=Z,418nm,0.9s						
OK030	**Cody Creek RV**	**65.23**	**333**	P	**P**	**19 07 40.1**	**-0.1**
SLM	**Saint Louis**	**65.24**	**340**	P	**P**	**19 07 39.1**	**-1.0**
SLM				pmax	pmax		
	comp=Z,464nm,1.1s						
SLM	**Saint Louis**	**65.24**	**340**	P	**P**	**19 07 39.1**	**-1.0**
SLM				IAmb	IAmb	19 07 43.5	
	comp=Z,464nm,1.1s						
L61A	**Hillsdale 1, H**	**65.24**	**354**	P	**P**	**19 07 40.4**	**+0.4**
	baz=173,SNR=35						
L61A				S	**S**	**19 16 07.0**	**+0.2**
	baz=173						
P46A	**Rosedale**	**65.25**	**343**	P	**P**	**19 07 38.7**	**-1.5**
P46A				IAmb	IAmb	19 07 43.8	
	comp=Z,431nm,1.1s						
WES	**Weston**	**65.26**	**356**	P	**P**	**19 07 40.3**	**+0.1**
WES				pmax	pmax		
	comp=Z,283nm,1.0s						
WES	**Weston**	**65.26**	**356**	P	**P**	**19 07 40.3**	**+0.1**
OK031	**S. Brethren Rd**	**65.27**	**333**	P	**P**	**19 07 40.3**	**-0.1**
N51A	**Ashland**	**65.31**	**347**	P	**P**	**19 07 40.0**	**-0.6**
N51A				IAmb	IAmb	19 07 43.0	
	comp=Z,542nm,0.9s						
L58A	**Harry Jones Me**	**65.34**	**352**	P	**P**	**19 07 41.5**	**+0.8**
	baz=171,SNR=282						
L58A				S	**S**	**19 16 08.2**	**+0.1**
	baz=171						
BCOK	**Bluff Creek, N**	**65.34**	**333**	P	**P**	**19 07 40.5**	**-0.4**
M54A	**Oil Creek Stat**	**65.37**	**349**	P	**P**	**19 07 41.1**	**+0.2**
	baz=167,SNR=162						
M54A				S	**S**	**19 16 07.1**	**-1.4**
	baz=167						
M54A	**Oil Creek Stat**	**65.37**	**349**	P	**P**	**19 07 40.9**	**0.0**
M54A				IAmb	IAmb	19 07 44.1	
	comp=Z,782nm,0.9s						
L59A	**Walton**	**65.39**	**353**	P	**P**	**19 07 41.7**	**+0.6**
	baz=172,SNR=162						
L59A				S	**S**	**19 16 08.7**	**0.0**
	baz=172						
L59A	**Walton**	**65.39**	**353**	P	**P**	**19 07 41.7**	**+0.6**

OK029	**Liberty Lake**	**65.40**	**333**	P	**P**	**19 07 41.1**	**-0.2**
HRV	**Adam Dziewonsk**	**65.40**	**356**	P	**P**	**19 07 41.7**	**+0.6**
	baz=175						
HRV				S	**S**	**19 16 06.5**	**-2.2**
	baz=175						
HRV	**Adam Dziewonsk**	**65.40**	**356**	P	**P**	**19 07 41.3**	**+0.2**
HRV				pmax	pmax		
	comp=Z,781nm,1.0s						
HRV	**Adam Dziewonsk**	**65.40**	**356**	P	**P**	**19 07 41.3**	**+0.2**
HRV				IAmb	IAmb	19 07 46.5	
	comp=Z,781nm,1.0s						
QUOK	**Quay**	**65.41**	**334**	P	**P**	**19 07 41.3**	**0.0**
L57A	**Andrews Acres**	**65.42**	**352**	P	**P**	**19 07 41.7**	**+0.4**
	baz=170,SNR=75						
L57A				S	**S**	**19 16 08.2**	**-0.9**
	baz=170						
L61B	**Northampton**	**65.42**	**355**	P	**P**	**19 07 41.5**	**+0.2**
	baz=174,SNR=54						
L61B				S	**S**	**19 16 08.4**	**-0.6**
	baz=174						
S39A	**Bolivar**	**65.43**	**337**	P	**P**	**19 07 40.9**	**-0.6**
M53A	**WI Miller and**	**65.48**	**348**	P	**P**	**19 07 41.7**	**+0.1**
	baz=166,SNR=69						
M53A				S	**S**	**19 16 08.1**	**-1.8**
	baz=166						
M53A	**WI Miller and**	**65.48**	**348**	P	**P**	**19 07 41.4**	**-0.2**
M53A				IAmb	IAmb	19 07 44.6	
	comp=Z,568nm,0.9s						
BINY	**Binghamton**	**65.50**	**352**	P	**P**	**19 07 42.6**	**+0.7**
	baz=171,SNR=272						
BINY				S	**S**	**19 16 10.2**	**+0.1**
	baz=171						
BINY	**Binghamton**	**65.50**	**352**	P	**P**	**19 07 42.5**	**+0.7**
CLNB	**Carlsbad**	**65.52**	**326**	P	**P**	**19 07 42.9**	**+0.6**
K63A	**Dunstable**	**65.58**	**356**	P	**P**	**19 07 42.5**	**+0.3**
	baz=175,SNR=16						
K63A				S	**S**	**19 16 11.2**	**+0.3**
	baz=175						
K63A	**Dunstable**	**65.58**	**356**	P	**P**	**19 07 42.3**	**+0.1**
ALLY	**Alegheny Colle**	**65.59**	**349**	P	**P**	**19 07 42.4**	**+0.1**
R40A	**Maddies Statio**	**65.60**	**338**	P	**P**	**19 07 41.7**	**-0.8**
K62A	**Royalston**	**65.60**	**355**	P	**P**	**19 07 43.0**	**+0.6**
	baz=174,SNR=28						
K62A				S	**S**	**19 16 10.9**	**-0.4**
	baz=174						
K62A	**Royalston**	**65.60**	**355**	P	**P**	**19 07 42.4**	**0.0**
K62A				IAmb	IAmb	19 07 47.9	
	comp=Z,426nm,1.1s						
L56A	**Greenwood**	**65.65**	**351**	P	**P**	**19 07 43.2**	**+0.4**
	baz=169,SNR=108						
L56A				S	**S**	**19 16 10.9**	**-1.0**
	baz=169						
L56A	**Greenwood**	**65.65**	**351**	P	**P**	**19 07 43.2**	**+0.4**
L56A				IAmb	IAmb	19 07 46.1	
	comp=Z,783nm,0.9s						
K61A	**Williamstown**	**65.69**	**355**	P	**P**	**19 07 43.6**	**+0.7**
	baz=173,SNR=59						
K61A				S	**S**	**19 16 13.2**	**+0.9**
	baz=173						
K60A	**Five Rivers En**	**65.69**	**354**	P	**P**	**19 07 43.8**	**+0.8**
	baz=173,SNR=39						
K60A				S	**S**	**19 16 12.4**	**+0.2**
	baz=173						
M52A	**Chesterland**	**65.71**	**348**	P	**P**	**19 07 42.8**	**-0.3**
M52A				IAmb	IAmb	19 07 45.9	
	comp=Z,401nm,0.8s						
N49A	**Columbus Grove**	**65.71**	**346**	P	**P**	**19 07 42.5**	**-0.6**
TRY	**Troy**	**65.78**	**354**	P	**P**	**19 07 44.2**	**+0.6**
MNTX	**Cornudas Mount**	**65.87**	**324**	P	**P**	**19 07 44.0**	**-0.3**
	baz=141,SNR=348						
MNTX				S	**S**	**19 16 13.7**	**-1.3**
	baz=141						
MNTX	**Cornudas Mount**	**65.87**	**324**	P	**P**	**19 07 43.8**	**-0.6**
MNTX				IAmb	IAmb	19 07 49.2	
	comp=Z,434nm,0.9s						
L53A	**Girard**	**65.90**	**349**	P	**P**	**19 07 44.2**	**-0.1**
	baz=166,SNR=118						
L53A				S	**S**	**19 16 12.5**	**-2.4**
	baz=166						
M50A	**Fremont**	**65.92**	**347**	P	**P**	**19 07 43.6**	**-0.8**
M50A				IAmb	IAmb	19 07 46.8	
	comp=Z,460nm,0.8s						
SFIN	**Lafayette**	**65.93**	**343**	P	**P**	**19 07 42.9**	**-1.6**
	baz=160,SNR=54						
SFIN				S	**S**	**19 16 08.8**	**-6.4**
	baz=160						
SFIN	**Lafayette**	**65.93**	**343**	P	**P**	**19 07 43.1**	**-1.4**
SFIN				IAmb	IAmb	19 07 48.1	
	comp=Z,628nm,1.1s						
P43A	**Skaggs, Pawnee**	**65.94**	**341**	P	**P**	**19 07 43.4**	**-1.1**
P43A				IAmb	IAmb	19 07 48.5	
	comp=Z,624nm,0.9s						
K59A	**Cooperstown**	**65.94**	**353**	P	**P**	**19 07 45.4**	**+0.8**
	baz=172,SNR=292						
K59A				S	**S**	**19 16 15.8**	**+0.4**
	baz=172						
T35A	**Sooner Cattle**	**65.97**	**334**	P	**P**	**19 07 44.9**	**0.0**
ERPA	**Erie**	**66.02**	**349**	P	**P**	**19 07 45.1**	**+0.1**
	baz=167,SNR=146						
ERPA				S	**S**	**19 16 14.7**	**-1.5**
	baz=167						
ERPA	**Erie**	**66.02**	**349**	P	**P**	**19 07 44.9**	**-0.1**
K58A	**Earlville**	**66.02**	**353**	P	**P**	**19 07 45.8**	**+0.7**
	baz=171,SNR=308						
K58A				S	**S**	**19 16 16.0**	**-0.3**
	baz=171						
K58A	**Earlville**	**66.02**	**353**	P	**P**	**19 07 45.4**	**+0.3**
N47A	**Urbana**	**66.03**	**344**	P	**P**	**19 07 43.9**	**-1.2**
N47A				IAmb	IAmb	19 07 49.1	
	comp=Z,941nm,1.1s						
WVNY	**West Valley, N**	**66.07**	**350**	P	**P**	**19 07 45.5**	**+0.1**
K57A	**Scipio Center**	**66.09**	**352**	P	**P**	**19 07 45.8**	**+0.2**
	baz=170,SNR=149						
K57A				S	**S**	**19 16 16.0**	**-1.2**
	baz=170						
O44A	**Mansfield**	**66.10**	**342**	P	**P**	**19 07 44.0**	**-1.6**
O44A				IAmb	IAmb	19 07 49.0	
	comp=Z,524nm,1.1s						
CPRX	**Cap Rock**	**66.12**	**326**	P	**P**	**19 07 46.1**	**+0.1**
J62A	**Henniker**	**66.13**	**356**	P	**P**	**19 07 46.9**	**+1.2**
	baz=175,SNR=48						
J62A				S	**S**	**19 16 17.7**	**+0.2**
	baz=175						
J63A	**Strafford**	**66.14**	**356**	P	**P**	**19 07 45.9**	**+0.2**
	baz=176						
J63A				S	**S**	**19 16 17.8**	**+0.1**
	baz=176						
K56A	**Middlesex**	**66.17**	**351**	P	**P**	**19 07 46.2**	**+0.2**
	baz=169,SNR=183						
K56A				S	**S**	**19 16 17.2**	**-0.9**
	baz=169						
CROK	**Carrier**	**66.22**	**333**	P	**P**	**19 07 46.3**	**-0.2**
J60A	**Lant Hill Farm**	**66.27**	**355**	P	**P**	**19 07 47.1**	**+0.5**
	baz=173,SNR=28						
J60A				S	**S**	**19 16 21.2**	**+1.9**
	baz=173						
MMNY	**Mt. Morris Dam**	**66.28**	**351**	P	**P**	**19 07 47.0**	**+0.2**
MMNY				IAmb	IAmb	19 07 49.9	
	comp=Z,752nm,0.8s						
J61A	**Chester**	**66.30**	**355**	P	**P**	**19 07 47.8**	**+0.9**
	baz=174,SNR=36						
J61A				S	**S**	**19 16 20.8**	**+1.2**
	baz=174						
MSTX	**Muleshoe**	**66.31**	**328**	P	**P**	**19 07 47.1**	**-0.2**
FFD	**Franklin Falls**	**66.36**	**356**	P	**P**	**19 07 47.9**	**+0.7**
FFD				IAmb	IAmb	19 07 53.0	
	comp=Z,941nm,1.4s						
ACCN	**Adirondack Com**	**66.43**	**354**	P	**P**	**19 07 48.0**	**+0.3**
ACCN				IAmb	IAmb	19 07 53.3	
	comp=Z,689nm,1.4s						
KAN13	**South Haven SW**	**66.45**	**333**	P	**P**	**19 07 48.2**	**+0.3**
AMTX	**Amarillo**	**66.53**	**329**	P	**P**	**19 07 48.1**	**-0.5**
	baz=145						
AMTX				S	**S**	**19 16 20.5**	**-2.5**
	baz=145						
AMTX	**Amarillo**	**66.53**	**329**	P	**P**	**19 07 48.1**	**-0.5**
AMTX				IAmb	IAmb	19 07 53.5	
	comp=Z,598nm,0.9s						
U32A	**Winter Ranch,**	**66.55**	**332**	P	**P**	**19 07 48.8**	**+0.1**
J59A	**Piesco**	**66.59**	**354**	P	**P**	**19 07 49.4**	**+0.7**
	baz=172,SNR=526						
J59A				S	**S**	**19 16 24.2**	**+1.0**
	baz=172						
J59A	**Piesco**	**66.59**	**354**	P	**P**	**19 07 48.7**	**0.0**
KAN14	**Manchester OK**	**66.60**	**333**	P	**P**	**19 07 48.9**	**0.0**
KAN14				IAmb	IAmb	19 07 53.9	
	comp=Z,850nm,1.1s						
P40A	**Paris**	**66.64**	**339**	P	**P**	**19 07 48.2**	**-0.9**
P40A				IAmb	IAmb	19 07 53.5	
	comp=Z,1µm,1.2s						
HNH	**Hanover**	**66.64**	**356**	P	**P**	**19 07 49.9**	**+0.9**
HNH				IAmb	IAmb	19 07 55.0	
	comp=Z,1µm,1.2s						
J56A	**Wolcott**	**66.67**	**352**	P	**P**	**19 07 49.3**	**+0.2**
	baz=170,SNR=313						
J56A				S	**S**	**19 16 21.9**	**-2.1**
	baz=170						
J56A	**Wolcott**	**66.67**	**352**	P	**P**	**19 07 49.1**	**-0.1**
KAN01	**Argonia South**	**66.68**	**333**	P	**P**	**19 07 50.0**	**+0.6**
KAN05	**Bluff City Nor**	**66.69**	**333**	P	**P**	**19 07 48.9**	**-0.6**
SRIG	**Santa Rosalia**	**66.69**	**316**	P	**P**	**19 07 50.7**	**+1.1**
SRIG				IAmb	IAmb	19 07 54.0	
	comp=Z,460nm,0.9s						
J57A	**Williamstown**	**66.70**	**353**	P	**P**	**19 07 49.5**	**+0.1**
	baz=171,SNR=145						
J57A				S	**S**	**19 16 23.4**	**-1.1**
	baz=171						
J57A	**Williamstown**	**66.70**	**353**	P	**P**	**19 07 49.6**	**+0.3**
J57A				IAmb	IAmb	19 07 52.6	
	comp=Z,865nm,0.9s						
HDIL	**Hopedale**	**66.71**	**341**	P	**P**	**19 07 48.2**	**-1.2**
	baz=157,SNR=58						
HDIL				S	**S**	**19 16 19.1**	**-5.6**
	baz=157						
HDIL	**Hopedale**	**66.71**	**341**	P	**P**	**19 07 48.2**	**-1.2**
HDIL				IAmb	IAmb	19 07 53.3	
	comp=Z,974nm,1.2s						
I64A	**Boothbay**	**66.71**	**358**	P	**P**	**19 07 50.5**	**+1.1**
	baz=177,SNR=20						
I64A				S	**S**	**19 16 25.2**	**+0.7**
	baz=177						
I62A	**Tamworth**	**66.75**	**356**	P	**P**	**19 07 50.7**	**+1.1**
	baz=175,SNR=35						
I62A				S	**S**	**19 16 25.7**	**+0.7**
	baz=175						
I62A	**Tamworth**	**66.75**	**356**	P	**P**	**19 07 50.5**	**+0.9**
I62A				IAmb	IAmb	19 07 55.3	
	comp=Z,416nm,1.1s						
J55A	**Hilton**	**66.80**	**351**	P	**P**	**19 07 49.8**	**-0.1**
KAN10	**Anthony SW Sta**	**66.80**	**333**	P	**P**	**19 07 50.1**	**0.0**
KAN10				IAmb	IAmb	19 07 55.3	
	comp=Z,517nm,0.9s						
KAN08	**Anthony NE Sta**	**66.83**	**333**	P	**P**	**19 07 50.8**	**+0.5**
LIC	**Lamto**	**66.86**	**72**	*e*P	**P**	**19 07 49.5**	**-1.5**
	comp=Z,445nm,0.8s						
I60A	**Shoreham**	**66.86**	**355**	P	**P**	**19 07 51.0**	**+0.7**
	baz=173,SNR=143						
I60A				S	**S**	**19 16 27.9**	**+1.6**
	baz=173						
I58A	**Old Forge**	**66.86**	**353**	P	**P**	**19 07 50.9**	**+0.4**
	baz=172,SNR=131						
I58A				S	**S**	**19 16 26.6**	**+0.2**
	baz=172						
I63A	**Otisfield**	**66.88**	**357**	P	**P**	**19 07 51.1**	**+0.6**
	baz=176,SNR=35						
I63A				S	**S**	**19 16 27.0**	**+0.5**
	baz=176						
I63A	**Otisfield**	**66.88**	**357**	P	**P**	**19 07 51.6**	**+1.1**
I63A				IAmb	IAmb	19 07 56.3	
	comp=Z,504nm,0.9s						
KAN12	**Harper NE Stat**	**66.90**	**333**	P	**P**	**19 07 51.1**	**+0.3**
KAN12				IAmb	IAmb	19 07 54.0	
	comp=Z,759nm,0.9s						
AAM	**Ann Arbor**	**66.91**	**346**	P	**P**	**19 07 50.0**	**-0.7**
	baz=163,SNR=13						
AAM				S	**S**	**19 16 23.4**	**-3.6**
	baz=163						
AAM	**Ann Arbor**	**66.91**	**346**	P	**P**	**19 07 50.0**	**-0.7**
AAM				pmax	pmax		
	comp=Z,455nm,1.3s						
AAM	**Ann Arbor**	**66.91**	**346**	P	**P**	**19 07 50.0**	**-0.7**
J54A	**Appleton**	**66.92**	**351**	P	**P**	**19 07 50.7**	**-0.1**
J54A				IAmb	IAmb	19 07 53.8	
	comp=Z,461nm,0.8s						
TIC	**Toumodi**	**67.06**	**72**	*e*P	**P**	**19 07 50.9**	**-1.4**
NCB	**Newcomb**	**67.07**	**354**	P	**P**	**19 07 51.9**	**+0.2**
HSIG		**67.08**	**318**	P	**P**	**19 07 53.0**	**+0.9**
HSIG				IAmb	IAmb	19 07 58.4	
	comp=Z,1µm,1.3s						
M44A	**Midewin, Midew**	**67.12**	**343**	P	**P**	**19 07 50.5**	**-1.6**
QSPA	**South Pole Qui**	**67.14**	**180**	P	**P**	**19 07 52.2**	**+0.2**
QSPA				IAmb	IAmb	19 07 56.4	
	comp=Z,508nm,0.7s						
K50A	**Casco**	**67.15**	**347**	P	**P**	**19 07 51.4**	**-0.8**
K50A				IAmb	IAmb	19 07 54.4	
	comp=Z,784nm,0.8s						
LBNH	**Lisbon**	**67.15**	**356**	P	**P**	**19 07 52.6**	**+0.5**
	baz=175,SNR=55						
LBNH				S	**S**	**19 16 30.9**	**+1.2**
	baz=175						
LBNH	**Lisbon**	**67.15**	**356**	P	**P**	**19 07 52.5**	**+0.3**
LBNH				pmax	pmax		
	comp=Z,525nm,1.0s						
LBNH	**Lisbon**	**67.15**	**356**	P	**P**	**19 07 52.5**	**+0.3**
LBNH				IAmb	IAmb	19 07 57.9	
	comp=Z,525nm,0.9s						
KIC	**Kosan Boka**	**67.17**	**72**	*e*P	**P**	**19 07 51.5**	**-1.5**
	comp=Z,456nm,0.5s						
I57A	**Carthage**	**67.18**	**353**	P	**P**	**19 07 52.5**	**+0.1**
	baz=171,SNR=177						
I57A				S	**S**	**19 16 29.4**	**-0.8**
	baz=171						
DBIC	**Dimbokro**	**67.21**	**72**	P	**P**	**19 07 52.1**	**-1.1**
	comp=Z,211nm,0.5s,baz=220,slow=6.9,SNR=167						
DBIC				pP	**pP**	**19 08 41.9**	**0.0**
	comp=Z,107nm,0.8s,baz=189,slow=4.9,SNR=1.4						
DBIC				PP	**PP**	**19 10 19.4**	**-4.8**
	comp=Z,56nm,0.7s,baz=220,slow=11,SNR=3.5						
DBIC				S	**S**	**19 16 27.6**	**-4.1**
	comp=Z,33nm,1.0s,baz=238,slow=13,SNR=4.6						
DBIC				PKPPKP	**P'P'df**	**19 36 15.2**	**-3.0**
	comp=Z,13nm,0.9s,baz=16,slow=3.7,SNR=5.4						
DBIC	**Dimbokro**	**67.21**	**72**	P	**P**	**19 07 52.1**	**-1.1**
DBIC				IAmb	IAmb	19 08 05.5	
	comp=Z,485nm,0.9s						
P38A	**Dawn**	**67.23**	**338**	P	**P**	**19 07 52.3**	**-0.5**
L46A	**Eue Claire**	**67.25**	**344**	P	**P**	**19 07 51.6**	**-1.2**
L46A				IAmb	IAmb	19 07 54.6	
	comp=Z,624nm,0.9s						
VT1	**Waterbury**	**67.30**	**355**	P	**P**	**19 07 53.3**	**+0.1**
N41A	**Harden Midland**	**67.32**	**340**	P	**P**	**19 07 52.3**	**-1.0**
N41A				IAmb	IAmb	19 07 57.3	
	comp=Z,930nm,1.0s						
PECO	**Prince Edward**	**67.34**	**352**	P	**P**	**19 07 53.5**	**+0.2**
WVL	**Waterville**	**67.36**	**358**	P	**P**	**19 07 54.2**	**+0.8**
H64A	**Troy**	**67.42**	**358**	P	**P**	**19 07 54.2**	**+0.4**
	baz=178,SNR=23						
H64A				S	**S**	**19 16 33.1**	**+0.2**
	baz=178						
HAL	**Halifax**	**67.43**	**2**	P	**P**	**19 07 54.3**	**+0.4**
HAL				pmax	pmax		
	comp=Z,468nm,0.9s						
HAL	**Halifax**	**67.43**	**2**	P	**P**	**19 07 54.2**	**+0.4**
HAL				IAmb	IAmb	19 07 57.0	
	comp=Z,468nm,0.9s						
H62A	**Milan**	**67.43**	**357**	P	**P**	**19 07 54.8**	**+0.8**
	baz=176,SNR=18						
H62A				S	**S**	**19 16 34.0**	**+0.8**
	baz=176						
H62A	**Milan**	**67.43**	**357**	P	**P**	**19 07 54.8**	**+0.8**
H62A				IAmb	IAmb	19 07 59.7	
	comp=Z,1µm,1.9s						
H61A	**Lyndonville**	**67.44**	**356**	P	**P**	**19 07 54.7**	**+0.7**
	baz=175,SNR=71						
H61A				S	**S**	**19 16 34.3**	**+1.0**
	baz=175						
H65A	**Eastbrook**	**67.45**	**359**	P	**P**	**19 07 54.5**	**+0.5**
	baz=178,SNR=28						
H65A				S	**S**	**19 16 32.8**	**-0.4**
	baz=178						
EMMW	**East Machias**	**67.45**	**359**	P	**P**	**19 07 54.4**	**+0.4**
EMMW				IAmb	IAmb	19 07 59.4	
	comp=Z,398nm,1.0s						
HQIL	**Hanson Quary C**	**67.46**	**343**	P	**P**	**19 07 53.2**	**-0.9**
HQIL				IAmb	IAmb	19 07 57.8	
	comp=Z,655nm,1.2s						
H63A	**New Sharon**	**67.47**	**357**	P	**P**	**19 07 55.1**	**+1.0**
	baz=177,SNR=53						
H63A				S	**S**	**19 16 33.9**	**+0.5**
	baz=177						
H58A	**Gabriels**	**67.50**	**354**	P	**P**	**19 07 54.6**	**+0.2**
	baz=173,SNR=143						
H58A				S	**S**	**19 16 34.9**	**+0.9**
	baz=173						
H60A	**Morristown**	**67.52**	**355**	P	**P**	**19 07 55.1**	**+0.6**
	baz=174,SNR=36						
H60A				S	**S**	**19 16 35.8**	**+1.6**
	baz=174						
H66A	**Whiting**	**67.52**	**360**	P	**P**	**19 07 55.1**	**+0.6**
	baz=179,SNR=27						
H66A				S	**S**	**19 16 34.0**	**-0.1**
	baz=179						
H57A	**Richville**	**67.67**	**353**	P	**P**	**19 07 55.6**	**+0.2**
	baz=171,SNR=165						
H57A				S	**S**	**19 16 35.2**	**-0.7**
	baz=171						
H59A	**Cadyville**	**67.69**	**355**	P	**P**	**19 07 56.0**	**+0.5**
	baz=173,SNR=54						
H59A				S	**S**	**19 16 36.6**	**+0.4**
	baz=173						
LONY	**Lake Ozonia**	**67.74**	**354**	P	**P**	**19 07 56.2**	**+0.3**
	baz=172,SNR=150						
LONY				S	**S**	**19 16 37.4**	**+0.6**
	baz=172						
LONY	**Lake Ozonia**	**67.74**	**354**	P	**P**	**19 07 56.3**	**+0.3**
LONY				IAmb	IAmb	19 08 01.4	
	comp=Z,794nm,1.1s						
319A	**Douglas**	**67.80**	**321**	P	**P**	**19 07 57.6**	**+0.9**
319A				IAmb	IAmb	19 08 03.1	
	comp=Z,518nm,0.8s						
121A	**Cookes Peak, D**	**67.82**	**323**	P	**P**	**19 07 58.2**	**+1.4**
	baz=139,SNR=254						
121A				S	**S**	**19 16 38.7**	**+0.1**
	baz=139						
121A	**Cookes Peak, D**	**67.82**	**323**	P	**P**	**19 07 58.0**	**+1.2**
121A				IAmb	IAmb	19 08 03.6	
	comp=Z,1µm,1.2s						
L44A	**Lake County Fo**	**67.83**	**343**	P	**P**	**19 07 55.2**	**-1.2**
	baz=159,SNR=22						
L44A				S	**S**	**19 16 32.4**	**-5.5**
	baz=159						
L44A	**Lake County Fo**	**67.83**	**343**	P	**P**	**19 07 55.7**	**-0.7**
L44A				IAmb	IAmb	19 08 00.4	
	comp=Z,764nm,1.1s						
I51A	**Listowel**	**67.83**	**349**	P	**P**	**19 07 56.2**	**-0.2**
	baz=166,SNR=146						
I51A				S	**S**	**19 16 34.5**	**-3.5**
	baz=166						
GGN	**Saint George**	**67.85**	**360**	P	**P**	**19 07 57.5**	**+0.9**
GGN				IAmb	IAmb	19 08 01.9	
	comp=Z,468nm,0.9s						
FRNY	**Flat Rock**	**67.87**	**355**	P	**P**	**19 07 56.5**	**-0.1**
KSU1	**Kansas State U**	**67.90**	**335**	P	**P**	**19 07 56.7**	**-0.3**
	baz=150,SNR=86						
KSU1				S	**S**	**19 16 36.5**	**-2.4**
	baz=150						
KSU1	**Kansas State U**	**67.90**	**335**	P	**P**	**19 07 56.6**	**-0.4**
KSU1				IAmb	IAmb	19 07 59.6	
	comp=Z,803nm,0.9s						
G63A	**Kingsbury**	**67.90**	**358**	P	**P**	**19 07 57.7**	**+0.8**
	baz=177,SNR=33						
G63A				S	**S**	**19 16 38.4**	**-0.3**
	baz=177						
G65A	**Princeton**	**67.94**	**359**	P	**P**	**19 07 57.8**	**+0.7**
	baz=179,SNR=22						
G65A				S	**S**	**19 16 38.6**	**-0.4**
	baz=179						
G65A	**Princeton**	**67.94**	**359**	P	**P**	**19 07 57.1**	**0.0**
DELO	**Deloro Mine**	**68.00**	**352**	P	**P**	**19 07 57.4**	**0.0**
DELO				IAmb	IAmb	19 08 00.4	
	comp=Z,368nm,0.8s						
G64A	**Maxfield**	**68.01**	**358**	P	**P**	**19 07 57.8**	**+0.3**
	baz=178,SNR=46						
G64A				S	**S**	**19 16 39.9**	**-0.1**
	baz=178						
G60A	**Masonville**	**68.03**	**356**	P	**P**	**19 07 58.1**	**+0.5**
	baz=174,SNR=42						
G60A				S	**S**	**19 16 41.5**	**+1.2**
	baz=174						
PKME	**Peaks-Kenny Pk**	**68.04**	**358**	P	**P**	**19 07 58.0**	**+0.3**
	baz=177,SNR=29						
PKME				S	**S**	**19 16 39.8**	**-0.5**
	baz=177						
PKME	**Peaks-Kenny Pk**	**68.04**	**358**	P	**P**	**19 07 58.1**	**+0.4**
G62A	**West of Eustis**	**68.05**	**357**	P	**P**	**19 07 58.3**	**+0.6**
	baz=176,SNR=51						
G62A				S	**S**	**19 16 41.6**	**+1.1**
	baz=176						
G62A	**West of Eustis**	**68.05**	**357**	P	**P**	**19 07 58.1**	**+0.3**
G62A				IAmb	IAmb	19 08 01.6	
	comp=Z,450nm,1.0s						
J47A	**Sunmer**	**68.06**	**346**	P	**P**	**19 07 57.0**	**-0.9**
J47A				IAmb	IAmb	19 08 02.0	
	comp=Z,774nm,1.1s						
G59A	**Clarenceville**	**68.08**	**355**	P	**P**	**19 07 58.6**	**+0.7**
	baz=174						
G59A				S	**S**	**19 16 41.5**	**+0.8**
	baz=174						
L42A	**Oliver, Polo**	**68.15**	**342**	P	**P**	**19 07 57.5**	**-1.0**
L42A				IAmb	IAmb	19 08 02.7	
	comp=Z,407nm,1.0s						
R32A	**Long Quarter,**	**68.16**	**333**	P	**P**	**19 07 58.9**	**+0.2**
G61A	**St-Isidore-de-**	**68.16**	**356**	P	**P**	**19 07 59.4**	**+0.9**
	baz=175,SNR=45						
G61A				S	**S**	**19 16 42.8**	**+1.0**
	baz=175						
N38A	**Joes South For**	**68.17**	**339**	P	**P**	**19 07 57.8**	**-0.8**
N38A				IAmb	IAmb	19 08 00.9	
	comp=Z,535nm,0.8s						
H53A	**Bobcaygeon**	**68.19**	**351**	P	**P**	**19 07 58.5**	**-0.1**
	baz=168,SNR=110						
H53A				S	**S**	**19 16 40.7**	**-1.4**
	baz=168						
G58A	**Ormstown**	**68.22**	**354**	P	**P**	**19 07 59.1**	**+0.3**
	baz=173,SNR=57						
G58A				S	**S**	**19 16 43.2**	**+0.8**
	baz=173						
MOQ	**Mont Orford**	**68.24**	**356**	P	**P**	**19 07 59.6**	**+0.6**
G57A	**Newington**	**68.26**	**354**	P	**P**	**19 07 59.4**	**+0.3**
	baz=172,SNR=66						
G57A				S	**S**	**19 16 42.2**	**-0.7**
	baz=172						
BNM	**Barren Site**	**68.42**	**325**	P	**P**	**19 08 01.4**	**+0.7**
K43A	**Burlington**	**68.43**	**343**	P	**P**	**19 07 59.5**	**-0.7**
K43A				IAmb	IAmb	19 08 02.5	
	comp=Z,905nm,1.0s						
SADO	**Sadowa**	**68.46**	**350**	P	**P**	**19 08 00.2**	**-0.2**
	comp=Z,427nm,0.9s,baz=192,slow=8.2						
SADO	**Sadowa**	**68.46**	**350**	P	**P**	**19 08 00.1**	**-0.3**
SADO				IAmb	IAmb	19 08 03.1	
	comp=Z,405nm,0.9s						
F63A	**Nahmakanta, Br**	**68.47**	**358**	P	**P**	**19 08 00.8**	**+0.4**
	baz=178,SNR=23						
F63A				S	**S**	**19 16 45.2**	**-0.2**
	baz=178						
F63A	**Nahmakanta, Br**	**68.47**	**358**	P	**P**	**19 08 01.0**	**+0.6**
F63A				IAmb	IAmb	19 08 05.9	
	comp=Z,552nm,1.3s						
Y22D	**IRIS PASSCAL I**	**68.52**	**325**	P	**P**	**19 08 02.1**	**+1.0**
	baz=140						
Y22D				S	**S**	**19 16 48.9**	**+2.1**
	baz=140						
Y22D	**IRIS PASSCAL I**	**68.52**	**325**	P	**P**	**19 08 01.9**	**+0.8**
Y22D				IAmb	IAmb	19 08 10.1	
	comp=Z,412nm,0.9s						
LMN	**Caledonia Moun**	**68.61**	**1**	P	**P**	**19 08 01.0**	**-0.3**
LMN				IAmb	IAmb	19 08 04.0	
	comp=Z,382nm,0.8s						
F64A	**Sherman**	**68.61**	**359**	P	**P**	**19 08 01.5**	**+0.3**
	baz=178,SNR=59						
F64A				S	**S**	**19 16 46.1**	**-1.0**
	baz=178						
F64A	**Sherman**	**68.61**	**359**	P	**P**	**19 08 01.6**	**+0.3**
F64A				IAmb	IAmb	19 08 06.5	
	comp=Z,498nm,0.8s						
LENM	**Lemitar**	**68.62**	**325**	P	**P**	**19 08 03.1**	**+1.3**
F59A	**Saint Guilaume**	**68.81**	**355**	P	**P**	**19 08 03.3**	**+0.9**
	baz=174						
F59A				S	**S**	**19 16 48.3**	**-1.0**
	baz=174						
F60A	**Warwick**	**68.87**	**356**	P	**P**	**19 08 03.0**	**+0.2**
	baz=175,SNR=26						
F60A				S	**S**	**19 16 49.4**	**-0.7**
	baz=175						
F58A	**St-Lin Laurent**	**68.91**	**355**	P	**P**	**19 08 03.0**	**-0.1**
	baz=173						
F58A				S	**S**	**19 16 49.4**	**-1.1**
	baz=173						
CBKS	**Cedar Bluff**	**68.92**	**333**	P	**P**	**19 08 04.0**	**+0.6**

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      baz=148,SNR=209
CBKS                              S     S      19 16 50.3 -0.8
      baz=148
CBKS  Cedar Bluff      68.92 333  P     P      19 08 04.0 +0.6
CBKS                              pmax  pmax
      comp=Z,1µm,0.9s
CBKS  Cedar Bluff      68.92 333  P     P      19 08 04.0 +0.6
G54A  Lake Saint Pet   68.92 351  P     P      19 08 03.1 -0.1
      baz=169,SNR=86
G54A                              S     S      19 16 49.0 -1.8
      baz=169
F57A  Harrington       68.94 354  P     P      19 08 03.0 -0.2
      baz=172,SNR=11
F57A                              S     S      19 16 50.1 -0.7
      baz=172
ANMO  Albuquerque      68.95 326  P     P      19 08 04.8 +0.9
      comp=Z,473nm,1.0s,baz=137,slow=7.0,SNR=283
ANMO  Albuquerque      68.95 326  P     P      19 08 04.8 +0.9
      baz=141
ANMO                              S     S      19 16 51.3 -0.6
      baz=141
ANMO  Albuquerque      68.95 326  P     P      19 08 04.5 +0.7
ANMO                              IAmb  IAmb   19 08 10.1
      comp=Z,702nm,1.1s
N35A  Tabor            69.07 337  P     P      19 08 03.8 -0.4
N35A                              IAmb  IAmb   19 08 06.7
      comp=Z,539nm,0.8s
JFWS  Jewell Farm      69.16 342  P     P      19 08 04.3 -0.4
      baz=157,SNR=92
JFWS                              S     S      19 16 49.4 -4.2
      baz=157
JFWS  Jewell Farm      69.16 342  P     P      19 08 04.1 -0.6
JFWS  Jewell Farm      69.16 342  P     P      19 08 04.1 -0.6
JFWS                              IAmb  IAmb   19 08 07.2
      comp=Z,631nm,0.8s
E64A  Bridgewater      69.16 359  P     P      19 08 04.9 +0.3
      baz=179,SNR=47
E64A                              S     S      19 16 52.2 -1.2
      baz=179
SCIA  State Center     69.16 339  P     P      19 08 04.2 -0.5
      baz=154,SNR=26
SCIA                              S     S      19 16 49.4 -4.3
      baz=154
SCIA  State Center     69.16 339  P     P      19 08 04.3 -0.4
SCIA                              IAmb  IAmb   19 08 07.3
      comp=Z,787nm,0.9s
E63A  Oxbow            69.17 359  P     P      19 08 05.1 +0.4
      baz=178,SNR=34
E63A                              S     S      19 16 53.1 -0.6
      baz=178
E63A  Oxbow            69.17 359  P     P      19 08 04.9 +0.2
E60A  Ste Agathe de    69.24 356  P     P      19 08 05.6 +0.5
      baz=175,SNR=22
E60A                              S     S      19 16 54.0 -0.4
      baz=175
E61A  Lac Etchemin     69.25 357  P     P      19 08 05.8 +0.6
      baz=176,SNR=28
E61A                              S     S      19 16 54.0 -0.6
      baz=176
TRQ   Mont Tremblant   69.33 354  P     P      19 08 05.5 -0.2
TUC   Tucson           69.35 321  P     P      19 08 07.1 +0.8
      baz=137
TUC                               S     S      19 16 59.0 +2.5
      baz=137
TUC   Tucson           69.35 321  P     P      19 08 07.0 +0.8
TUC                               pmax  pmax
      comp=Z,767nm,1.3s
TUC   Tucson           69.35 321  P     P      19 08 07.0 +0.8
TUC                               IAmb  IAmb   19 08 12.6
      comp=Z,767nm,1.3s
E58A  La Victoria      69.37 355  P     P      19 08 05.9  0.0
      baz=174,SNR=51
E58A                              S     S      19 16 55.7 -0.1
      baz=174
PQI   Presque Isle     69.42 359  P     P      19 08 06.6 +0.4
E59A  St. Maurice      69.42 356  P     P      19 08 06.3 +0.2
      baz=174,SNR=12
E59A                              S     S      19 16 56.1 -0.4
      baz=174
ALGO  Algonquin Park   69.47 352  P     P      19 08 06.3 -0.2
      baz=169,SNR=114
ALGO                              S     S      19 16 55.6 -1.5
      baz=169
E57A  Chemin Saint G   69.48 354  P     P      19 08 06.6  0.0
      baz=173,SNR=75
E57A                              S     S      19 16 56.9 -0.3
      baz=173
GLMI  Grayling         69.52 346  P     P      19 08 06.3 -0.6
      baz=162,SNR=12
GLMI                              S     S      19 16 53.9 -3.9
      baz=162
GLMI  Grayling         69.52 346  P     P      19 08 06.3 -0.6
GLMI                              IAmb  IAmb   19 08 09.9
      comp=Z,693nm,0.9s
N33A  J Bar K, Exete   69.64 335  P     P      19 08 07.6 -0.1
T25A  Trinidad         69.65 329  P     P      19 08 09.3 +1.2
      baz=143,SNR=220
T25A                              S     S      19 17 00.5 +0.4
      baz=143
K38A  Parkersburg      69.68 340  P     P      19 08 07.0 -0.9
K38A                              IAmb  IAmb   19 08 12.3
      comp=Z,1µm,1.2s
I42A  Draeger Farm,    69.69 343  P     P      19 08 07.4 -0.5
I42A                              IAmb  IAmb   19 08 10.6
      comp=Z,519nm,0.9s
E56A  St. Veronique    69.69 354  P     P      19 08 07.8 -0.1
      baz=172,SNR=77
E56A                              S     S      19 16 59.0 -0.7
      baz=172
E55A  Montcerf-Lytto   69.71 353  P     P      19 08 08.0  0.0
      baz=171,SNR=7.2
E55A                              S     S      19 16 59.4 -0.5
      baz=171
D60A  Saint Jean D’O   69.75 357  P     P      19 08 08.5 +0.3
      baz=176,SNR=32
D60A                              S     S      19 17 00.9 +0.5
      baz=176
D63A  Stockholm        69.78 359  P     P      19 08 08.6 +0.1
      baz=179,SNR=68
D63A                              S     S      19 16 59.8 -0.9
      baz=179
D59A  Saint-Raymond    69.90 356  P     P      19 08 09.8 +0.7
      baz=175,SNR=8.7
D59A                              S     S      19 17 01.5 -0.6
      baz=175
H43A  Windswept, Lux   69.93 344  P     P      19 08 09.1 -0.3
H43A                              IAmb  IAmb   19 08 11.7
      comp=Z,527nm,0.9s
G45A  Suttons Bay      69.96 346  P     P      19 08 08.7 -0.9
D61A  St Aubert, Com   70.01 357  P     P      19 08 10.2 +0.4
      baz=177,SNR=67
D61A                              S     S      19 17 02.7 -0.7
      baz=177
BATG  Bathurst New B   70.01   0  P     P      19 08 09.9 +0.1
D58A  Chemin du LacG   70.06 355  P     P      19 08 10.2 +0.1
      baz=174,SNR=169
D58A                              S     S      19 17 03.2 -0.7
      baz=174
I40A  Norwalk          70.16 342  P     P      19 08 10.2 -0.7
D56A  ZEC Mazanza, M   70.17 354  P     P      19 08 10.8  0.0
      baz=172,SNR=84
D56A                              S     S      19 17 04.4 -0.8
      baz=172
214A  Organ Pipe Nat   70.29 319  P     P      19 08 13.6 +1.6
      baz=135,SNR=249
214A                              S     S      19 17 11.2 +3.8
      baz=135
214A  Organ Pipe Nat   70.29 319  P     P      19 08 13.0 +1.0
214A                              IAmb  IAmb   19 08 18.6
      comp=Z,751nm,1.1s
L34A  Svendsen Farm,   70.31 337  P     P      19 08 11.3 -0.5
KSCO  Kaye Shedlock’   70.33 331  P     P      19 08 13.1 +0.9
      baz=145
KSCO                              S     S      19 17 07.7 -0.1
      baz=145
KSCO  Kaye Shedlock’   70.33 331  P     P      19 08 13.0 +0.9
KSCO                              IAmb  IAmb   19 08 16.1
      comp=Z,700nm,0.9s
LATQ  La Tuque         70.34 356  P     P      19 08 11.6 -0.2
      baz=174,SNR=11
LATQ                              S     S      19 17 06.4 -0.7
      baz=174
PIX   Pinacate         70.41 319  P     P      19 08 13.3 +0.8
H07S1 FLORES T-PHASE   70.41  29  eP    P      19 08 14.0 +1.6
H07S1                             eS    S      19 17 07.0 -1.4
BGNE  Belgrade         70.48 335  P     P      19 08 13.2 +0.4
      baz=149,SNR=155
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BGNE                              S     S      19 17 07.9 -1.3
      baz=149
BGNE  Belgrade         70.48 335  P     P      19 08 13.0 +0.1
X18A  Snowflake        70.51 323  P     P      19 08 14.7 +1.4
X18A                              IAmb  IAmb   19 08 19.9
      comp=Z,506nm,1.1s
SDCO  Great Sand Dun   70.66 328  P     P      19 08 15.4 +1.1
      baz=142,SNR=707
SDCO                              S     S      19 17 13.3 +1.4
      baz=142
SDCO  Great Sand Dun   70.66 328  P     P      19 08 15.2 +0.9
SDCO                              IAmb  IAmb   19 08 20.6
      comp=Z,791nm,1.0s
H07N1 FLORES T-PHASE   70.70  28  eP    P      19 08 16.5 +2.3
W18A  Petrified Fore   70.83 324  P     P      19 08 16.4 +1.1
      baz=138,SNR=58
W18A                              S     S      19 17 17.0 +3.3
      baz=138
W18A  Petrified Fore   70.83 324  P     P      19 08 16.1 +0.8
W18A                              IAmb  IAmb   19 08 21.7
      comp=Z,877nm,1.1s
HOR   Horta            70.89  31  eP    P      19 08 17.4 +2.1
      comp=Z,351nm,0.9s
CALA  Caldeira         70.90  31  eP    P      19 08 17.4 +1.9
      comp=Z,382nm,1.0s
CALA                              eS    S      19 17 18.8 +4.6
SFX   San Felipe       70.90 317  P     P      19 08 16.8 +1.2
SFX                               IAmb  IAmb   19 08 19.8
      comp=Z,475nm,0.9s
PCAN  Candelaria       70.91  31  eP    P      19 08 17.6 +2.1
      comp=Z,464nm,0.7s
PCAN                              eS    S      19 17 16.7 +2.5
E46A  Sault Ste Mari   70.93 347  P     P      19 08 14.7 -0.6
E46A                              IAmb  IAmb   19 08 17.9
      comp=Z,745nm,0.8s
PCED  Cedros           70.94  31  eP    P      19 08 17.3 +1.7
      comp=Z,350nm,0.7s
PCED                              eS    S      19 17 18.1 +3.6
PICO  Pico             70.97  31  eP    P      19 08 17.8 +1.9
      comp=Z,518nm,1.4s
PICO                              eS    S      19 17 15.1 +0.1
PPNO  Prainha do Nor   71.02  31  eP    P      19 08 16.9 +0.7
      comp=Z,710nm,0.9s
PPNO                              eS    S      19 17 18.8 +3.2
PID   Ribeirinha       71.07  31  eP    P      19 08 17.5 +1.1
      comp=Z,481nm,1.4s
PID                               eS    S      19 17 18.8 +2.8
I37A  Lemond, Waseca   71.11 340  P     P      19 08 16.0 -0.6
I37A                              IAmb  IAmb   19 08 19.1
      comp=Z,652nm,0.8s
F42A  Maple Grove Fa   71.22 344  P     P      19 08 17.1 -0.1
ROSA  Rosais           71.23  31  eP    P      19 08 19.5 +2.1
      comp=Z,689nm,1.0s
ROSA                              eS    S      19 17 18.5 +0.7
ROSA  Rosais           71.23  31  P     P      19 08 19.5 +2.1
ROSA                              IAmb  IAmb   19 08 22.8
      comp=Z,576nm,1.0s
PMAN  Manadas          71.23  31  eP    P      19 08 18.9 +1.5
      comp=Z,768nm,0.8s
PMAN                              eS    S      19 17 21.2 +3.4
X16A  Lo Mia Camp, P   71.26 322  P     P      19 08 19.1 +1.2
X16A                              IAmb  IAmb   19 08 24.7
      comp=Z,558nm,1.2s
SPX   San Pedro Mart   71.29 317  P     P      19 08 19.3 +1.0
G40A  Rib Lake         71.31 343  P     P      19 08 17.3 -0.5
S22A  4UR Ranch, Cre   71.31 327  P     P      19 08 19.5 +1.2
      baz=141,SNR=242
S22A                              S     S      19 17 21.8 +2.3
      baz=141
PSMA  Santa Maria      71.42  34  eP    P      19 08 18.7 +0.2
      comp=Z,303nm,1.6s
PSMA                              eS    S      19 17 16.9 -3.2
113A  Mohawk Valley,   71.44 319  P     P      19 08 19.4 +0.7
113A                              IAmb  IAmb   19 08 24.6
      comp=Z,1µm,1.9s
TAOE  Nuku Hiva Isla   71.44 268  eP    P      19 08 21.2 +1.9
      comp=Z,2µm,1.5s
TAOE                              eS    S      19 17 23.5 +2.0
      comp=Z,13µm,31.6s
TAOE  Nuku Hiva Isla   71.44 268  eLQ   LQ     19 27 25.4
      comp=Z,21µm,27.0s
TAOE                              eLR   LR     19 30 27.0
      comp=Z,13µm,23.6s
TAOE  Nuku Hiva Isla   71.44 268  P     P      19 08 23.0 +3.7
      comp=Z,899nm,1.5s
Q24A  Divide           71.45 329  P     P      19 08 20.3 +1.2
      baz=143,SNR=256
Q24A                              S     S      19 17 23.4 +2.4
      baz=143
PSMN  Pico do Norte,   71.46  34  eP    P      19 08 19.1 +0.3
      comp=Z,380nm,1.6s
PSMN                              eS    S      19 17 16.3 -4.3
VLDQ  Val d'Or         71.51 352  P     P      19 08 18.4 -0.3
E43A  Lone Tree Farm   71.53 345  P     P      19 08 18.4 -0.5
E43A                              IAmb  IAmb   19 08 21.5
      comp=Z,313nm,0.8s
SRBC  Serra Branca     71.58  31  eP    P      19 08 20.9 +1.5
      comp=Z,564nm,1.1s
PGRA  Graciosa         71.60  31  eP    P      19 08 20.5 +0.9
      comp=Z,420nm,1.3s
PGRA                              eS    S      19 17 26.8 +4.8
ADH   Angra Heroismo   71.66  32  eP    P      19 08 21.4 +1.5
      comp=Z,609nm,1.1s
OGNE  Ogallala         71.66 332  P     P      19 08 20.9 +0.9
      baz=146,SNR=55
OGNE                              S     S      19 17 24.2 +1.3
      baz=146
OGNE  Ogallala         71.66 332  P     P      19 08 20.3 +0.3
PDA   Ponta Delgada    71.73  33  eP    P      19 08 20.9 +0.6
      comp=Z,348nm,1.0s
MVCO  Mesa Verde       71.74 326  P     P      19 08 21.9 +1.1
      baz=140,SNR=422
MVCO                              S     S      19 17 26.8 +2.5
      baz=140
MVCO  Mesa Verde       71.74 326  P     P      19 08 21.9 +1.1
MVCO                              IAmb  IAmb   19 08 27.2
      comp=Z,891nm,1.1s
PSCM  Serra do Cume    71.75  32  eP    P      19 08 21.7 +1.2
      comp=Z,595nm,0.9s
PSCM                              eS    S      19 17 28.6 +4.8
K31A  O'Neill          71.76 336  P     P      19 08 20.6 +0.1
K31A                              IAmb  IAmb   19 08 23.6
      comp=Z,802nm,0.8s
PSET  Sete Cidades     71.76  33  eP    P      19 08 22.4 +1.8
      comp=Z,394nm,0.9s
PSET                              eS    S      19 17 21.2 -2.8
KOWA  Kowa             71.76  65  P     P      19 08 20.1 -0.9
      comp=Z,318nm,0.6s,baz=244,slow=6.3,SNR=138
KOWA                              pP    pP     19 09 10.8 +0.5
      comp=Z,72nm,0.7s,baz=230,slow=4.9,SNR=0.7
KOWA                              S     S      19 17 17.6 -7.2
      comp=Z,26nm,0.9s,baz=266,slow=10,SNR=12
KOWA  Kowa             71.76  65  P     P      19 08 19.9 -1.1
KOWA                              IAmb  IAmb   19 08 25.6
      comp=Z,357nm,0.7s
PAGU  Agualva, Azore   71.77  32  eS    S      19 17 24.8 +0.8
CMLA  Cha da Macela    71.81  33  P            19 08 21.8
GRON  Grota Negra      71.81  33  eP    P      19 08 21.7 +0.8
      comp=Z,412nm,0.7s
CMLA  Cha da Macela    71.81  33  eP    P      19 08 22.1 +1.2
      comp=Z,417nm,0.9s
CMLA                              eS    S      19 17 25.6 +1.1
CMLA  Cha da Macela    71.81  33  P     P      19 08 21.5 +0.6
CMLA                              pmax  pmax
      comp=Z,311nm,0.7s
CMLA  Cha da Macela    71.81  33  P     P      19 08 21.5 +0.6
CMLA                              IAmb  IAmb   19 08 25.6
      comp=Z,311nm,0.7s
ECSD  EROS Data Cent   71.94 338  P     P      19 08 21.2 -0.2
      baz=151,SNR=326
ECSD                              S     S      19 17 23.7 -2.1
      baz=151
ECSD  EROS Data Cent   71.94 338  P     P      19 08 20.8 -0.7
ECSD                              IAmb  IAmb   19 08 26.3
      comp=Z,829nm,1.2s
BART  Pico Bartolome   72.00  34  eP    P      19 08 22.9 +0.8
      comp=Z,661nm,0.8s
SPMN  Marine on St.    72.02 341  P     P      19 08 20.8 -1.2
      baz=155,SNR=38
SPMN                              S     S      19 17 22.9 -3.6
      baz=155
SPMN  Marine on St.    72.02 341  P     P      19 08 21.2 -0.7
SPMN                              IAmb  IAmb   19 08 24.3
      comp=Z,491nm,1.1s
WUAZ  Wupatki          72.02 323  P     P      19 08 24.0 +1.6
      baz=137,SNR=273
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WUAZ                              S     SKiKP  19 17 31.4 -6.8
      baz=137
WUAZ  Wupatki          72.02 323  P     P      19 08 23.9 +1.5
WUAZ                              IAmb  IAmb   19 08 29.2
      comp=Z,868nm,1.1s
ESJX  Sierra Juarez    72.25 317  P     P      19 08 20.9 -2.9
GLA   Glamis           72.27 319  P     P      19 08 25.1 +1.4
      baz=134,SNR=73
GLA                               S     SKiKP  19 17 34.1 -4.5
      baz=134
GLA   Glamis           72.27 319  P     P      19 08 24.3 +0.5
GLA                               pmax  pmax
      comp=Z,359nm,1.0s
GLA   Glamis           72.27 319  P     P      19 08 24.3 +0.5
ISCO  Idaho Springs    72.34 329  P     P      19 08 25.4 +1.1
      baz=143,SNR=289
ISCO                              S     S      19 17 32.9 +1.8
      baz=143
ISCO  Idaho Springs    72.34 329  P     P      19 08 25.0 +0.7
ISCO                              pmax  pmax
      comp=Z,343nm,0.9s
ISCO  Idaho Springs    72.34 329  P     P      19 08 25.0 +0.7
LSQQ  Lebel-sur-Quev   72.38 353  P     P      19 08 23.4 -0.6
      baz=170
LSQQ                              S     S      19 17 27.7 -2.9
      baz=170
DRLN  Deer Lake        72.45   6  P     P      19 08 24.2 -0.1
DRLN                              IAmb  IAmb   19 08 27.2
      comp=Z,426nm,0.9s
PV01  Paradox Valley   72.48 326  P     P      19 08 26.4 +1.2
PV01                              IAmb  IAmb   19 08 31.7
      comp=Z,1µm,1.4s
SMCO  Snowmass         72.50 328  P     P      19 08 26.6 +1.2
SMCO                              IAmb  IAmb   19 08 30.0
      comp=Z,384nm,0.8s
D41A  Chassel          72.55 344  P     P      19 08 24.9 -0.1
D41A                              IAmb  IAmb   19 08 28.1
      comp=Z,825nm,0.9s
PV15  Paradox Valley   72.60 327  P     P      19 08 27.2 +1.4
PV15                              IAmb  IAmb   19 08 32.6
      comp=Z,989nm,1.2s
CCX   Cicese           72.60 317  P     P      19 08 27.1 +1.5
PV02  Paradox Valley   72.63 326  P     P      19 08 27.4 +1.4
PV02                              IAmb  IAmb   19 08 33.4
      comp=Z,741nm,1.5s
PV13  Radium Mtn., P   72.63 326  P     P      19 08 27.0 +1.0
PV13                              IAmb  IAmb   19 08 30.3
      comp=Z,479nm,0.9s
PV05  Paradox Valley   72.71 326  P     P      19 08 27.4 +0.9
PV05                              IAmb  IAmb   19 08 30.5
      comp=Z,503nm,1.0s
PV03  Paradox Valley   72.72 326  P     P      19 08 27.6 +1.0
RMX   La Rumorosa      72.73 318  P     P      19 08 27.6 +1.0
RMX                               IAmb  IAmb   19 08 30.8
      comp=Z,480nm,1.0s
PDMCI Parker Dam,Lak   72.74 320  P     P      19 08 27.6 +1.2
      baz=135,SNR=49
PDMCI                             S     SKiKP  19 17 39.6 +0.5
      baz=135
PV12  Saucer Basin,    72.74 326  P     P      19 08 28.0 +1.3
PV12                              IAmb  IAmb   19 08 32.4
      comp=Z,1µm,1.5s
PV18  Skein Mesa, Pa   72.74 326  P     P      19 08 27.1 +0.5
PV18                              IAmb  IAmb   19 08 32.8
      comp=Z,523nm,1.0s
PV07  Paradox Valley   72.76 327  P     P      19 08 27.9 +1.1
PV07                              IAmb  IAmb   19 08 32.5
      comp=Z,843nm,1.4s
PV11  David Mesa, Pa   72.76 326  P     P      19 08 27.8 +1.1
PV11                              IAmb  IAmb   19 08 33.0
      comp=Z,1µm,1.7s
IKP   In-Ko-Pah, Jac   72.78 318  P     P      19 08 28.3 +1.5
      baz=133,SNR=94
IKP                               S     SKiKP  19 17 39.8 +0.5
      baz=133
PV17  East Wray Mesa   72.79 326  P     P      19 08 27.7 +0.8
PV17                              IAmb  IAmb   19 08 33.0
      comp=Z,418nm,1.0s
SWSC  Sam W. Stewart   72.79 318  P     P      19 08 28.1 +1.3
      baz=133,SNR=36
SWSC                              S     SKiKP  19 17 42.2 +2.9
      baz=133
PV16  Nyswonger Mesa   72.80 326  P     P      19 08 27.7 +0.8
F36A  Milaca           72.81 341  P     P      19 08 26.1 -0.5
F36A                              IAmb  IAmb   19 08 29.0
      comp=Z,345nm,0.8s
PV19  Morning Glory    72.83 326  P     P      19 08 28.1 +0.9
PV20  West Nyswonger   72.84 326  P     P      19 08 28.1 +0.9
PV04  Paradox Valley   72.85 326  P     P      19 08 28.3 +1.0
PV04                              IAmb  IAmb   19 08 33.6
      comp=Z,907nm,1.5s
PV14  Lion Creek, Pa   72.90 326  P     P      19 08 28.5 +0.9
PV14                              IAmb  IAmb   19 08 33.7
      comp=Z,535nm,1.1s
CBX   Cerro Bola       72.90 317  P     P      19 08 29.1 +1.5
PV22  Blue Mesa, Par   72.90 327  P     P      19 08 28.7 +1.2
PV10  Paradox Valley   72.91 326  P     P      19 08 28.1 +0.4
PMOZ  Porto Moniz, M   72.91  42  P            19 08 28.9
PMOZ  Porto Moniz, M   72.91  42  P     P      19 08 26.5 -1.1
PMOZ  Porto Moniz, M   72.91  42  eP    P      19 08 27.5 -0.1
      comp=Z,396nm,0.5s
PMOZ                              epP   pP     19 09 18.2 +1.1
PMOZ                              eS    S      19 17 34.5 -2.9
PMOZ                              A     A      19 36 30.2
      comp=Z,4µm,20.1s
E38A  The Farm, Brul   72.91 342  P     P      19 08 26.6 -0.6
PV23  Carpenter Ridg   72.95 326  P     P      19 08 28.9 +1.0
TKX   Tecate           73.04 317  P     P      19 08 29.9 +1.6
TKX                               IAmb  IAmb   19 08 32.6
      comp=Z,510nm,1.1s
BC3   Big Chuckawall   73.07 319  P     P      19 08 29.9 +1.4
      baz=134,SNR=88
BC3                               S     S      19 17 44.0 +4.8
      baz=134
MONP2 Monument Peak    73.14 318  P     P      19 08 30.5 +1.4
      baz=133,SNR=84
MONP2                             S     S      19 17 43.9 +3.7
      baz=133
W13A  Hualapai Mount   73.15 321  P     P      19 08 30.5 +1.4
W13A                              IAmb  IAmb   19 08 35.3
      comp=Z,911nm,1.8s
MATQ  Matagami         73.15 353  P     P      19 08 27.9 -0.6
      baz=170,SNR=65
MATQ                              S     SKiKP  19 17 36.2 -3.1
      baz=170
BAR   Barrett          73.15 318  P     P      19 08 29.4 +0.4
BAR                               IAmb  IAmb   19 08 33.2
      comp=Z,374nm,0.8s
U15A  North Rim        73.19 323  P     P      19 08 31.1 +1.7
U15A                              IAmb  IAmb   19 08 36.5
      comp=Z,706nm,1.1s
IRM   Iron Mountain    73.23 320  P     P      19 08 30.8 +1.4
      baz=134,SNR=179
IRM                               S     S      19 17 44.0 +3.1
      baz=134
NEE2  Needles Airpor   73.34 320  P     P      19 08 31.2 +1.2
      baz=135,SNR=25
NEE2                              S     S      19 17 45.4 +3.4
      baz=135
N23A  Red Feather La   73.36 330  P     P      19 08 31.5 +1.2
      baz=143,SNR=236
N23A                              S     S      19 17 44.0 +1.5
      baz=143
SUSD  Miller           73.39 336  P     P      19 08 29.9 -0.2
      baz=149,SNR=24
SUSD                              S     S      19 17 41.0 -1.2
      baz=149
SUSD  Miller           73.39 336  P     P      19 08 29.5 -0.5
SUSD                              IAmb  IAmb   19 08 33.2
      comp=Z,768nm,0.8s
PHWY  Pilot Hill       73.46 330  P     P      19 08 31.9 +1.0
PHWY                              IAmb  IAmb   19 08 36.9
      comp=Z,874nm,1.5s
109C  Camp Elliot, M   73.56 317  P     P      19 08 32.6 +1.4
      baz=132,SNR=10
109C                              S     S      19 17 47.9 +3.4
      baz=132
109C  Camp Elliot, M   73.56 317  P     P      19 08 32.4 +1.1
109C                              IAmb  IAmb   19 08 37.6
      comp=Z,674nm,1.6s
PMPS  Porto Santo      73.61  42  eP    P      19 08 33.5 +2.0
      comp=Z,418nm,1.5s
PMPST Porto Santo, M   73.62  42  eP    P      19 08 34.7 +3.1
      comp=Z,391nm,1.2s
PMPST                             epP   pP     19 09 22.9 +1.7
BELC  Belle Mtn. Jos   73.64 319  P     P      19 08 33.3 +1.5
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	baz=133,SNR=110						
BELC				S	**S**	**19 17 49.1**	**+3.5**
	baz=133						
TPFO	**Pinon Flats**	**73.64**	**318**	P	**P**	**19 08 33.3**	**+1.3**
	baz=133,SNR=140						
TPFO				S	**S**	**19 17 50.6**	**+4.9**
	baz=133						
PFO	**Pinyon Flats O**	**73.65**	**318**	P	**P**	**19 08 33.5**	**+1.5**
	comp=Z,247nm,1.0s,baz=125,slow=5.4,SNR=78						
PFO	**Pinyon Flats O**	**73.65**	**318**	P	**P**	**19 08 33.4**	**+1.5**
	baz=133,SNR=135						
PFO				S	**S**	**19 17 50.4**	**+4.7**
	baz=133						
PFO	**Pinyon Flats O**	**73.65**	**318**	P	**P**	**19 08 33.2**	**+1.3**
PFO				IAmb	IAmb	19 08 38.5	
	comp=Z,443nm,1.1s						
F33A	**5 Mile Ranch,**	**73.67**	**339**	P	**P**	**19 08 30.9**	**-0.7**
O20A	**White River Ci**	**73.86**	**328**	P	**P**	**19 08 34.5**	**+1.4**
	baz=141,SNR=464						
O20A				S	**S**	**19 17 50.8**	**+2.9**
	baz=141						
O20A	**White River Ci**	**73.86**	**328**	P	**P**	**19 08 34.3**	**+1.2**
KNB	**Kanab**	**73.91**	**323**	P	**P**	**19 08 35.3**	**+1.8**
KNB				pmax	pmax		
	comp=Z,2µm,1.1s						
KNB	**Kanab**	**73.91**	**323**	P	**P**	**19 08 35.3**	**+1.8**
PKCU	**Pink Cliffs**	**73.94**	**324**	P	**P**	**19 08 35.2**	**+1.4**
PKCU				IAmb	IAmb	19 08 39.8	
	comp=Z,707nm,1.5s						
GMRC	**Granite Mounta**	**73.97**	**320**	P	**P**	**19 08 35.5**	**+1.7**
	baz=134,SNR=426						
GMRC				S	**S**	**19 17 53.1**	**+3.8**
	baz=134						
MURC	**Murrieta**	**74.10**	**318**	P	**P**	**19 08 35.7**	**+1.3**
	baz=132,SNR=54						
MURC				S	**S**	**19 17 54.5**	**+3.9**
	baz=132						
EYMN	**Ely**	**74.12**	**343**	P	**P**	**19 08 33.6**	**-0.6**
	baz=156,SNR=40						
EYMN				S	**S**	**19 17 46.0**	**-4.2**
	baz=156						
EYMN	**Ely**	**74.12**	**343**	P	**P**	**19 08 33.4**	**-0.8**
LCMT	**Little Creek M**	**74.14**	**323**	P	**P**	**19 08 36.1**	**+1.3**
SRU	**San Rafael Swe**	**74.22**	**326**	P	**P**	**19 08 36.0**	**+0.8**
SRU				pmax	pmax		
	comp=Z,662nm,0.8s						
SRU	**San Rafael Swe**	**74.22**	**326**	P	**P**	**19 08 36.0**	**+0.8**
SRU				IAmb	IAmb	19 08 39.3	
	comp=Z,662nm,0.8s						
SYO	**Syowa Base**	**74.31**	**159**	⇓*i*P	**P**	**19 08 33.6**	**-1.4**
SYO	**Syowa Base**	**74.31**	**159**	⇓*i*X	P	19 08 39.6	+4.6
SYO	**Syowa Base**	**74.31**	**159**	⇑*i*pP	pP	19 09 26.4	+1.7
MTPU	**Mount Pierson**	**74.31**	**324**	P	**P**	**19 08 37.0**	**+1.0**
BBRC	**Big Bear Solar**	**74.37**	**319**	P	**P**	**19 08 38.2**	**+1.9**
	baz=133,SNR=11						
BBRC				S	**S**	**19 17 58.1**	**+4.1**
	baz=133						
HEC	**Hector,Ludlow**	**74.41**	**319**	P	**P**	**19 08 38.0**	**+1.8**
	baz=133,SNR=287						
HEC				S	**S**	**19 17 57.8**	**+3.8**
	baz=133						
Q16A	**Castle Valley**	**74.42**	**325**	P	**P**	**19 08 37.5**	**+1.2**
Q16A				IAmb	IAmb	19 08 43.8	
	comp=Z,1µm,1.5s						
SZCU	**Shurtz Canyon**	**74.48**	**323**	P	**P**	**19 08 38.3**	**+1.6**
SZCU				IAmb	IAmb	19 08 43.6	
	comp=Z,1µm,1.6s						
SCI2	**San Clemente I**	**74.53**	**317**	P	**P**	**19 08 37.9**	**+1.0**
	baz=131,SNR=20						
SCI2				S	**S**	**19 17 58.7**	**+3.4**
	baz=131						
RWWY	**Rawlins**	**74.57**	**330**	P	**P**	**19 08 37.1**	**-0.2**
RWWY				IAmb	IAmb	19 08 40.5	
	comp=Z,641nm,0.9s						
CCUT	**Cedar City**	**74.60**	**323**	P	**P**	**19 08 39.5**	**+2.0**
CCUT				IAmb	IAmb	19 08 42.7	
	comp=Z,750nm,0.9s						
P17A	**Butcher Ranch,**	**74.61**	**326**	P	**P**	**19 08 38.5**	**+1.1**
P17A				IAmb	IAmb	19 08 41.7	
	comp=Z,803nm,1.0s						
MSU	**Marysvale**	**74.65**	**325**	P	**P**	**19 08 39.1**	**+1.4**
MSU	**Marysvale**	**74.65**	**325**	P	**P**	**19 08 39.1**	**+1.4**
MVU	**Marysvale**	**74.66**	**324**	P	**P**	**19 08 39.1**	**+1.2**
TMUT	**Trail Mountain**	**74.72**	**326**	P	**P**	**19 08 39.3**	**+1.1**
TMUT				IAmb	IAmb	19 08 43.8	
	comp=Z,715nm,1.5s						
BFSC	**Mount Baldy Ra**	**74.81**	**318**	P	**P**	**19 08 39.7**	**+1.1**
	baz=132,SNR=126						
BFSC				S	**S**	**19 18 01.6**	**+3.0**
	baz=132						
RRX	**Edison Barstow**	**74.83**	**319**	P	**P**	**19 08 40.2**	**+1.6**
	baz=133,SNR=8.4						
RRX				S	**S**	**19 18 01.8**	**+3.1**
	baz=133						
RDMU	**Red Mountain**	**74.84**	**327**	P	**P**	**19 08 39.9**	**+1.1**
RDMU				IAmb	IAmb	19 08 44.8	
	comp=Z,709nm,1.0s						
FMP	**Fort Macarthur**	**74.85**	**317**	P	**P**	**19 08 40.1**	**+1.4**
	baz=132,SNR=6.8						
FMP				S	**S**	**19 18 01.3**	**+2.5**
	baz=132						
TCRU	**Three Creeks R**	**74.86**	**324**	P	**P**	**19 08 40.6**	**+1.6**
SHPR	**Sheep Range**	**74.87**	**321**	P	**P**	**19 08 40.5**	**+1.5**
SHPR				IAmb	IAmb	19 08 45.8	
	comp=Z,454nm,1.1s						
TBI	**Tubuai**	**74.95**	**251**	*e*P	**P**	**19 08 41.6**	**+2.0**
	comp=Z,2µm,1.2s						
TBI				*e*S	**S**	**19 18 02.8**	**+2.3**
	comp=Z,29µm,32.0s						
GSC	**Goldstone, Bar**	**75.01**	**319**	P	**P**	**19 08 41.4**	**+1.7**
	baz=133,SNR=117						
GSC				S	**S**	**19 18 04.6**	**+3.8**
	baz=133						
K22A	**Casper**	**75.01**	**331**	P	**P**	**19 08 40.8**	**+1.2**
	baz=142,SNR=135						
K22A				S	**S**	**19 18 02.5**	**+1.9**
	baz=142						
K22A	**Casper**	**75.01**	**331**	P	**P**	**19 08 40.6**	**+0.9**
K22A				IAmb	IAmb	19 08 45.8	
	comp=Z,799nm,1.1s						
MWC	**Mount Wilson**	**75.05**	**318**	P	**P**	**19 08 41.2**	**+1.1**
MWC				pmax	pmax		
	comp=Z,679nm,1.2s						
MWC	**Mount Wilson**	**75.05**	**318**	P	**P**	**19 08 41.2**	**+1.1**
MWC				IAmb	IAmb	19 08 46.5	
	comp=Z,679nm,1.1s						
D32A	**Dogwood Acres,**	**75.05**	**339**	P	**P**	**19 08 39.0**	**-0.5**
D32A				IAmb	IAmb	19 08 44.3	
	comp=Z,554nm,1.2s						
PASC	**Pasadena Art C**	**75.09**	**318**	P	**P**	**19 08 41.4**	**+1.3**
PASC				IAmb	IAmb	19 08 46.5	
	comp=Z,696nm,1.2s						
SHOC	**Shoshone, Teco**	**75.10**	**320**	P	**P**	**19 08 41.8**	**+1.7**
	baz=134,SNR=6.1						
SHOC				S	**S**	**19 18 05.4**	**+3.8**
	baz=134						
RSSD	**Black Hills**	**75.12**	**333**	P	**P**	**19 08 41.2**	**+0.9**
	baz=145						
RSSD				S	**S**	**19 18 03.2**	**+1.4**
	baz=145						
B35A	**Bob, Littlefor**	**75.12**	**342**	P	**P**	**19 08 38.9**	**-1.0**
B35A				IAmb	IAmb	19 08 42.5	
	comp=Z,389nm,0.9s						
DECC	**Green Verdugo**	**75.23**	**318**	P	**P**	**19 08 42.5**	**+1.5**
	baz=132,SNR=26						
DECC				S	**S**	**19 18 05.8**	**+2.7**
	baz=132						
SNCC	**San Nicolas Is**	**75.32**	**316**	P	**P**	**19 08 42.6**	**+1.2**
	baz=131,SNR=13						
SNCC				S	**S**	**19 18 05.8**	**+1.7**
	baz=131						
SNCC	**San Nicolas Is**	**75.32**	**316**	P	**P**	**19 08 41.6**	**+0.2**
SNCC				IAmb	IAmb	19 08 45.5	
	comp=Z,532nm,0.9s						
PRN	**Pahroc Range**	**75.44**	**322**	P	**P**	**19 08 43.8**	**+1.6**
PRN				IAmb	IAmb	19 08 49.2	
	comp=Z,779nm,1.2s						
EDW2	**Edwards Air Fo**	**75.44**	**318**	P	**P**	**19 08 43.1**	**+1.0**
	baz=132,SNR=145						
EDW2				S	**S**	**19 18 06.8**	**+1.3**
	baz=132						
MPU	**Maple Canyon**	**75.47**	**326**	P	**P**	**19 08 43.1**	**+0.8**
MPU				IAmb	IAmb	19 08 46.7	
	comp=Z,437nm,1.0s						
MEH	**Mehetia**	**75.53**	**257**	*e*P	**P**	**19 08 44.7**	**+1.7**
	comp=Z,156nm,1.2s						
PSUT	**Pine Spring**	**75.57**	**324**	P	**P**	**19 08 44.5**	**+1.5**
PSUT				IAmb	IAmb	19 08 47.6	
	comp=Z,382nm,0.9s						
NLU	**North Lily Min**	**75.65**	**326**	P	**P**	**19 08 44.7**	**+1.3**
LRMC	**Laurel Mtn Rad**	**75.66**	**319**	P	**P**	**19 08 44.9**	**+1.5**
	baz=132,SNR=64						
LRMC				S	**S**	**19 18 10.2**	**+2.3**
	baz=132						
VNDA	**Vanda**	**75.67**	**190**	P	**P**	**19 08 43.9**	**+1.2**
	comp=Z,79nm,0.9s,baz=137,slow=5.1,SNR=60						
VNDA	**Vanda**	**75.67**	**190**	P	**P**	**19 08 44.0**	**+1.2**
VNDA				pmax	pmax		
	comp=Z,237nm,1.4s						
VNDA	**Vanda**	**75.67**	**190**	P	**P**	**19 08 44.0**	**+1.2**
AGMN	**Agassiz Nation**	**75.71**	**340**	P	**P**	**19 08 43.0**	**-0.3**
	baz=152,SNR=26						
AGMN				S	**S**	**19 18 04.1**	**-3.6**
	baz=152						
AGMN	**Agassiz Nation**	**75.71**	**340**	P	**P**	**19 08 43.0**	**-0.3**
OSI	**Osito Audit: C**	**75.72**	**318**	P	**P**	**19 08 44.9**	**+1.2**
	baz=132,SNR=13						
OSI				S	**S**	**19 18 11.0**	**+2.6**
	baz=132						
OSI	**Osito Audit: C**	**75.72**	**318**	P	**P**	**19 08 44.8**	**+1.1**
JLU	**Jordanelle**	**75.81**	**326**	P	**P**	**19 08 45.0**	**+0.7**
JLU				IAmb	IAmb	19 08 50.7	
	comp=Z,1µm,1.3s						
TPNV	**Topopah Spring**	**75.81**	**321**	P	**P**	**19 08 46.2**	**+1.8**
	baz=134,SNR=502						
TPNV				S	**S**	**19 18 14.7**	**+5.0**
	baz=134						
TPNV	**Topopah Spring**	**75.81**	**321**	P	**P**	**19 08 45.6**	**+1.3**
TPNV				pmax	pmax		
	comp=Z,558nm,1.0s						
TPNV	**Topopah Spring**	**75.81**	**321**	P	**P**	**19 08 45.6**	**+1.3**
TPNV				IAmb	IAmb	19 08 49.2	
	comp=Z,558nm,0.9s						
FURC	**Furnace Creek,**	**75.84**	**320**	P	**P**	**19 08 46.0**	**+1.7**
	baz=133,SNR=95						
FURC				S	**S**	**19 18 14.5**	**+5.1**
	baz=133						
E28A	**Huff**	**75.85**	**337**	P	**P**	**19 08 44.6**	**+0.5**
SCZ2	**Santa Cruz Isl**	**75.88**	**317**	P	**P**	**19 08 45.3**	**+0.7**
	baz=131,SNR=23						
SCZ2				S	**S**	**19 18 11.4**	**+1.2**
	baz=131						
MPMC	**Manual Prospec**	**75.93**	**320**	P	**P**	**19 08 46.2**	**+1.2**
	baz=133,SNR=210						
MPMC				S	**S**	**19 18 14.8**	**+3.8**
	baz=133						
TORD	**Torodi Ar. Bea**	**75.94**	**69**	P	**P**	**19 08 44.5**	**-0.8**
	comp=Z,219nm,0.4s,baz=257,slow=5.5,SNR=240						
TORD				pP	**pP**	**19 09 35.1**	**0.0**
	comp=Z,59nm,0.7s,baz=251,slow=5.0,SNR=1.0						
TORD				S	**S**	**19 18 06.4**	**-5.2**
	comp=Z,26nm,1.0s,baz=253,slow=9.7,SNR=8.6						
TORD				PKKPbc	**PKKPbc**	**19 28 00.6**	**+1.0**
	comp=Z,1.4nm,0.5s,baz=50,slow=2.2,SNR=5.4						
SUR	**Sutherland**	**76.00**	**119**	P	**P**	**19 08 45.6**	**0.0**
	comp=Z,210nm,0.8s,baz=233,slow=5.4,SNR=100						
SUR	**Sutherland**	**76.00**	**119**	P	**P**	**19 08 45.7**	**0.0**
CTU	**Camp Tracy**	**76.03**	**326**	P	**P**	**19 08 46.4**	**+0.9**
VAH	**Vaihoa**	**76.03**	**259**	*e*P	**P**	**19 08 47.9**	**+2.0**
	comp=Z,1µm,1.1s						
ARVC	**Arvin**	**76.12**	**318**	P	**P**	**19 08 47.4**	**+1.5**
	baz=132,SNR=18						
ARVC				S	**S**	**19 18 16.1**	**+3.4**
	baz=132						
TCUT	**Toone Canyon**	**76.17**	**327**	P	**P**	**19 08 47.5**	**+1.1**
TCUT				IAmb	IAmb	19 08 52.6	
	comp=Z,595nm,0.8s						
DUG	**Dugway, Tooele**	**76.21**	**325**	P	**P**	**19 08 48.0**	**+1.5**
	baz=137,SNR=304						
DUG				S	**S**	**19 18 17.0**	**+3.2**
	baz=137						
DUG	**Dugway, Tooele**	**76.21**	**325**	P	**P**	**19 08 47.7**	**+1.2**
DUG				pmax	pmax		
	comp=Z,465nm,1.0s						
DUG	**Dugway, Tooele**	**76.21**	**325**	P	**P**	**19 08 47.7**	**+1.2**
DUG				IAmb	IAmb	19 08 51.0	
	comp=Z,465nm,1.0s						
SBC	**Santa Barbara**	**76.22**	**317**	P	**P**	**19 08 47.1**	**+0.6**
	baz=131						
SBC				S	**S**	**19 18 15.9**	**+2.1**
	baz=131						
ISA	**Isabella, Lake**	**76.26**	**319**	P	**P**	**19 08 48.4**	**+1.6**
	baz=132,SNR=257						
ISA				S	**S**	**19 18 18.1**	**+3.8**
	baz=132						
ISA	**Isabella, Lake**	**76.26**	**319**	P	**P**	**19 08 48.2**	**+1.4**
ISA				pmax	pmax		
	comp=Z,466nm,1.0s						
ISA	**Isabella, Lake**	**76.26**	**319**	P	**P**	**19 08 48.1**	**+1.4**
ISA				IAmb	IAmb	19 08 51.4	
	comp=Z,466nm,1.0s						
R11A	**Troy Canyon, C**	**76.40**	**322**	P	**P**	**19 08 49.4**	**+1.8**
	baz=135,SNR=481						
R11A				S	**S**	**19 18 19.8**	**+3.7**
	baz=135						
R11A	**Troy Canyon, C**	**76.40**	**322**	P	**P**	**19 08 49.0**	**+1.3**
R11A				IAmb	IAmb	19 08 54.5	
	comp=Z,606nm,1.2s						
GRAC	**Grapevine Rang**	**76.49**	**320**	P	**P**	**19 08 49.5**	**+1.5**
	baz=133,SNR=61						
GRAC				S	**S**	**19 18 21.2**	**+4.4**
	baz=133						
PD31	**Pinedale Array**	**76.51**	**329**	P	**P**	**19 08 48.8**	**+0.6**
PDAR	**Pinedale Array**	**76.51**	**329**	P	**P**	**19 08 48.6**	**+0.4**
	comp=Z,89nm,0.7s,baz=130,slow=7.8,SNR=157						
PDAR				PKKPbc	**PKKPbc**	**19 27 59.0**	**-1.8**
	comp=Z,0.7nm,0.5s,baz=243,slow=1.1,SNR=4.4						
PDAR				PKPPKP		19 36 00.9	
	comp=Z,1.0nm,0.8s,baz=135,slow=1.0,SNR=5.2						
PDAR				P4KPbc		19 45 20.1	
	comp=Z,0.8nm,0.8s,baz=142,slow=5.1,SNR=6.3						
PDAR	**Pinedale Array**	**76.51**	**329**	P	**P**	**19 08 48.8**	**+0.6**
BW06	**Boulder Array**	**76.51**	**329**	P	**P**	**19 08 48.8**	**+0.5**
	baz=140,SNR=206						
BW06				S	**S**	**19 18 18.5**	**+1.3**
	baz=140						
BW06	**Boulder Array**	**76.51**	**329**	P	**P**	**19 08 48.8**	**+0.5**
CWC	**Cottonwood Cre**	**76.54**	**320**	P	**P**	**19 08 49.9**	**+1.4**
	baz=132						
CWC				S	**S**	**19 18 21.5**	**+3.9**
	baz=132						
MDND	**Maddock**	**76.54**	**338**	P	**P**	**19 08 48.6**	**+0.6**
	baz=149,SNR=51						
MDND				S	**S**	**19 18 15.0**	**-1.8**
	baz=149						
MDND	**Maddock**	**76.54**	**338**	P	**P**	**19 08 48.4**	**+0.4**
PKM	**Mcpherson Peak**	**76.57**	**317**	P	**P**	**19 08 50.2**	**+1.6**
	baz=131,SNR=40						
PKM				S	**S**	**19 18 21.4**	**+3.3**
	baz=131						
TVO	**Taravao**	**76.62**	**256**	*e*P	**P**	**19 08 51.3**	**+2.1**
	comp=Z,250nm,1.3s						
TVO	**Taravao**	**76.62**	**256**	*e*PP	PP	19 11 44.2	-0.1
	comp=Z,81nm,1.5s						
VES	**Vestal, Richgr**	**76.75**	**319**	P	**P**	**19 08 50.8**	**+1.4**
	baz=132,SNR=23						
VES				S	**S**	**19 18 23.1**	**+3.6**
	baz=132						
TIAR	**Tiarei**	**76.78**	**256**	*e*P	**P**	**19 08 51.8**	**+1.7**
	comp=Z,65nm,1.2s						
TIAR	**Tiarei**	**76.78**	**256**	*e*PP	PP	19 11 45.2	-0.4
	comp=Z,41nm,1.3s						
SPUT	**South Promonto**	**76.84**	**326**	P	**P**	**19 08 51.0**	**+0.9**
SPUT				IAmb	IAmb	19 08 54.2	
	comp=Z,585nm,0.8s						
BGU	**Big Grassy Mou**	**76.86**	**326**	P	**P**	**19 08 50.8**	**+0.7**
BGU				IAmb	IAmb	19 08 54.2	
	comp=Z,412nm,1.0s						
PAE	**Paea**	**76.95**	**256**	*e*P	**P**	**19 08 52.8**	**+1.8**
	comp=Z,272nm,1.2s						
PAE	**Paea**	**76.95**	**256**	*e*PP	PP	19 11 46.7	-0.3
	comp=Z,97nm,1.4s						
SMMC	**Simmler**	**76.96**	**318**	P	**P**	**19 08 52.3**	**+1.6**
	baz=131,SNR=89						
SMMC				S	**S**	**19 18 25.3**	**+3.4**
	baz=131						
PPT2	**Papeete2**	**76.97**	**256**	*e*P	**P**	**19 08 53.2**	**+2.0**
	comp=Z,986nm,1.4s						
PPT2	**Papeete2**	**76.97**	**256**	*e*PP	PP	19 11 47.4	+0.1
	comp=Z,323nm,1.5s						
PPT2				*e*S	**S**	**19 18 23.4**	**+0.4**
	comp=Z,15µm,26.2s						
PPT	**Papeete**	**76.98**	**256**	P	**P**	**19 08 53.5**	**+2.3**
	comp=Z,397nm,0.8s,baz=97,slow=5.1,SNR=55						
PPT				LR	LR	19 33 59.3	
	comp=Z,3µm,20.8s,baz=96,slow=28						
TIN	**Tinemaha, Big**	**77.04**	**320**	P	**P**	**19 08 52.8**	**+1.6**
	baz=132,SNR=32						
TIN				S	**S**	**19 18 26.8**	**+3.9**
	baz=132						
EAH	**EAH**	**77.08**	**47**	P		19 08 53.0	
TPH	**Tonopah**	**77.14**	**321**	P	**P**	**19 08 52.9**	**+1.1**
TPH				pmax	pmax		
	comp=Z,3µm,1.3s						
TPH	**Tonopah**	**77.14**	**321**	P	**P**	**19 08 52.9**	**+1.1**
VOG	**Valley Oaks Go**	**77.24**	**319**	P	**P**	**19 08 51.9**	**-0.3**
	baz=132						
VOG				S	**S**	**19 18 27.4**	**+2.6**
	baz=132						
AHID	**Auburn Hatcher**	**77.25**	**328**	P	**P**	**19 08 53.0**	**+0.7**
HVU	**Hansel Valley**	**77.35**	**326**	P	**P**	**19 08 53.5**	**+0.6**
HVU				pmax	pmax		
	comp=Z,554nm,1.0s						
HVU	**Hansel Valley**	**77.35**	**326**	P	**P**	**19 08 53.5**	**+0.6**
HVU				IAmb	IAmb	19 08 56.8	
	comp=Z,554nm,1.0s						
PAGB	**Antelope Grade**	**77.39**	**318**	P	**P**	**19 08 54.2**	**+1.2**
PAGB				IAmb	IAmb	19 08 59.6	
	comp=Z,930nm,1.2s						
ULM	**Lac du Bonnet**	**77.44**	**341**	P	**P**	**19 08 52.5**	**-0.4**
	comp=Z,137nm,0.5s,baz=153,slow=6.0,SNR=96						
ULM				PKKPbc	**PKKPbc**	**19 27 56.8**	**-2.0**
	comp=Z,4.8nm,0.5s,baz=345,slow=3.3,SNR=8.9						
ULM				PKPPKP	**P'P'df**	**19 36 02.1**	**+5.1**
	comp=Z,1.9nm,0.8s,baz=218,slow=4.4,SNR=3.2						
ULM				LR	LR	19 47 05.0	
	comp=Z,6µm,20.0s,baz=153,slow=38						
ULM	**Lac du Bonnet**	**77.44**	**341**	*d* *i*P	**P**	**19 08 52.7**	**-0.2**
ULM	**Lac du Bonnet**	**77.44**	**341**	P	**P**	**19 08 52.4**	**-0.5**
ULM				IAmb	IAmb	19 08 55.5	
	comp=Z,779nm,1.5s						
REDW	**Red Top Meadow**	**77.58**	**329**	P	**P**	**19 08 54.9**	**+0.7**
REDW				IAmb	IAmb	19 09 00.3	
	comp=Z,566nm,0.8s						
ECR	**Eagle Creek**	**77.60**	**328**	P	**P**	**19 08 55.1**	**+0.9**
TSUM	**Tsumeb**	**77.61**	**106**	P	**P**	**19 08 54.4**	**-0.4**
	comp=Z,352nm,0.7s,baz=239,slow=5.6,SNR=210						
TSUM	**Tsumeb**	**77.61**	**106**	P	**P**	**19 08 54.1**	**-0.7**
TSUM				IAmb	IAmb	19 08 57.0	
	comp=Z,415nm,0.8s						
SNOW	**Snow King Moun**	**77.61**	**329**	P	**P**	**19 08 55.1**	**+0.8**
SNOW				IAmb	IAmb	19 08 58.5	
	comp=Z,533nm,0.8s						
LOHW	**Long Hollow**	**77.65**	**329**	P	**P**	**19 08 55.1**	**+0.6**
LOHW				IAmb	IAmb	19 09 00.2	
	comp=Z,490nm,0.8s						
MLAC	**Mammoth, Mammo**	**77.78**	**320**	P	**P**	**19 08 57.0**	**+1.6**
	baz=132,SNR=110						
MLAC				S	**S**	**19 18 33.9**	**+2.8**
	baz=132						
MOOW	**Moose Ponds**	**77.82**	**329**	P	**P**	**19 08 56.1**	**+0.7**
MOOW				IAmb	IAmb	19 08 59.5	
	comp=Z,2µm,1.9s						
OMMB	**Old Mammoth Mi**	**77.87**	**320**	P	**P**	**19 08 56.9**	**+0.9**
OMMB				IAmb	IAmb	19 09 00.2	
	comp=Z,458nm,1.0s						
ELK	**Elko**	**77.89**	**324**	P	**P**	**19 08 57.0**	**+1.1**
	comp=Z,224nm,0.8s,baz=135,slow=4.1,SNR=216						
ELK	**Elko**	**77.89**	**324**	P	**P**	**19 08 56.6**	**+0.6**
NV11	**Mina Array Sit**	**77.92**	**321**	P	**P**	**19 08 56.9**	**+0.8**
NV11				IAmb	IAmb	19 09 02.4	
	comp=Z,708nm,1.4s						
MDPB	**Devils Postpil**	**77.93**	**320**	P	**P**	**19 08 57.2**	**+0.9**
LHV	**Little Huntoon**	**78.00**	**321**	P	**P**	**19 08 57.8**	**+1.5**
LHV				IAmb	IAmb	19 09 03.2	
	comp=Z,996nm,1.6s						
NVAR	**Mina Array Bea**	**78.01**	**321**	P	**P**	**19 08 57.9**	**+1.2**
	comp=Z,175nm,1.0s,baz=150,slow=6.0,SNR=141						
NVAR				PKKPbc	**PKKPbc**	**19 27 57.0**	**0.0**
	comp=Z,1.5nm,0.6s,baz=306,slow=2.3,SNR=5.6						
NVAR				PKPPKP	**P'P'df**	**19 36 02.6**	**+5.2**
	comp=Z,1.1nm,0.7s,baz=293,slow=4.2,SNR=4.4						
NVAR				P4KPbc		19 45 30.0	
	comp=Z,0.8nm,0.6s,baz=142,slow=5.2,SNR=6.0						
NVAR	**Mina Array Bea**	**78.01**	**321**	P	**P**	**19 08 54.5**	**-2.1**
PMPB	**Monarch Peak**	**78.04**	**318**	P	**P**	**19 08 58.3**	**+1.6**
FLWY	**Flagg Ranch**	**78.05**	**329**	P	**P**	**19 08 58.0**	**+1.2**
FLWY				IAmb	IAmb	19 09 01.3	
	comp=Z,790nm,0.9s						
LAO	**LASA Array**	**78.10**	**333**	P	**P**	**19 08 57.2**	**+0.4**
	baz=143,SNR=148						
LAO				S	**S**	**19 18 34.9**	**+1.2**
	baz=143						
LAO	**LASA Array**	**78.10**	**333**	P	**P**	**19 08 57.2**	**+0.4**
LAO				IAmb	IAmb	19 09 00.4	
	comp=Z,641nm,0.8s						
RLMT	**Red Lodge**	**78.18**	**331**	P	**P**	**19 08 58.5**	**+1.1**
	baz=141,SNR=658						
RLMT				S	**S**	**19 18 36.1**	**+1.0**
	baz=141						
RLMT	**Red Lodge**	**78.18**	**331**	P	**P**	**19 08 58.1**	**+0.7**
RLMT				IAmb	IAmb	19 09 01.5	
	comp=Z,675nm,0.7s						
H17A	**Grant Village**	**78.23**	**329**	P	**P**	**19 08 59.5**	**+1.8**
	baz=139,SNR=308						
H17A				S	**S**	**19 18 39.6**	**+3.9**
	baz=139						
H17A	**Grant Village**	**78.23**	**329**	P	**P**	**19 08 59.3**	**+1.5**
YPP	**Pitchstone Pla**	**78.24**	**329**	P	**P**	**19 08 59.1**	**+1.2**
RYN	**Ryan**	**78.27**	**321**	P	**P**	**19 08 59.0**	**+1.1**
RYN				IAmb	IAmb	19 09 04.3	
	comp=Z,531nm,1.2s						
LKWY	**Lake**	**78.27**	**330**	P	**P**	**19 08 59.9**	**+1.9**
LKWY				pmax	pmax		
	comp=Z,551nm,1.0s						
LKWY	**Lake**	**78.27**	**330**	P	**P**	**19 08 59.9**	**+1.9**
LKWY				IAmb	IAmb	19 09 05.2	
	comp=Z,551nm,1.0s						
YMP	**Mirror Lake Pl**	**78.29**	**330**	P	**P**	**19 08 59.1**	**+0.9**
YMP				IAmb	IAmb	19 09 08.5	
	comp=Z,430nm,0.7s						
YNE	**Yellowstone No**	**78.43**	**330**	P	**P**	**19 08 60.0**	**+1.1**
YNR	**Norris Junctio**	**78.52**	**330**	P	**P**	**19 09 00.5**	**+1.2**
OUZM	**OUZ**	**78.59**	**49**	P		19 09 00.4	
YMR	**Madison River**	**78.62**	**329**	P	**P**	**19 09 01.4**	**+1.5**
YMR				IAmb	IAmb	19 09 04.7	
	comp=Z,679nm,0.8s						
YHH	**Holmes Hill**	**78.65**	**330**	P	**P**	**19 09 01.4**	**+1.3**
YHH				IAmb	IAmb	19 09 04.8	
	comp=Z,722nm,0.8s						
WAKR	**Walker**	**78.72**	**320**	P	**P**	**19 09 01.9**	**+1.4**
WAKR				IAmb	IAmb	19 09 07.3	
	comp=Z,400nm,1.0s						
SRHM	**Skhour des Reh**	**78.72**	**47**	P		19 09 02.0	
DGMT	**Dagmar**	**78.74**	**336**	P	**P**	**19 09 01.1**	**+1.0**
YHB	**Horse Butte**	**78.79**	**329**	P	**P**	**19 09 02.3**	**+1.5**
YHB				IAmb	IAmb	19 09 05.3	
	comp=Z,639nm,0.8s						
SAO	**San Andreas Ge**	**78.80**	**318**	P	**P**	**19 09 00.8**	**+0.1**
SAO				pmax	pmax		
	comp=Z,203nm,1.1s						
SAO	**San Andreas Ge**	**78.80**	**318**	P	**P**	**19 09 00.8**	**+0.1**
EKNA	**AfricaArray -**	**78.83**	**81**	⇑*i*P	**P**	**19 09 02.2**	**+0.7**
YHL	**Hebgen Lake**	**78.86**	**329**	P	**P**	**19 09 02.6**	**+1.4**
YHL				IAmb	IAmb	19 09 05.9	
	comp=Z,423nm,0.7s						
GCMT	**Greycliff**	**78.88**	**331**	P	**P**	**19 09 02.0**	**+0.9**
ZGR	**Zagora**	**78.94**	**51**	P		19 09 03.0	
QLMT	**Earthquake Lak**	**78.96**	**329**	P	**P**	**19 09 03.2**	**+1.5**
CMB	**Columbia Colle**	**78.97**	**320**	P	**P**	**19 09 02.3**	**+0.6**
CMB				pmax	pmax		
	comp=Z,134nm,1.0s						
CMB	**Columbia Colle**	**78.97**	**320**	P	**P**	**19 09 02.3**	**+0.6**
PNTR	**Pine Nut**	**79.20**	**321**	P	**P**	**19 09 04.8**	**+1.6**
PNTR				IAmb	IAmb	19 09 07.8	
	comp=Z,652nm,0.9s						
TZRR	**Tazzarine**	**79.35**	**50**	P		19 09 05.0	
VCNR	**Virginia City**	**79.37**	**321**	P	**P**	**19 09 05.5**	**+1.5**
VCNR				IAmb	IAmb	19 09 10.5	
	comp=Z,630nm,1.2s						
HLID	**Hailey**	**79.48**	**327**	P	**P**	**19 09 06.2**	**+1.7**
	baz=136,SNR=1000						
HLID				S	**S**	**19 18 53.6**	**+4.8**
	baz=136						
HLID	**Hailey**	**79.48**	**327**	P	**P**	**19 09 06.1**	**+1.7**
PAHR	**Pah Rah Range**	**79.49**	**321**	P	**P**	**19 09 05.7**	**+1.1**
RUBR	**Rubicon Trail**	**79.50**	**320**	P	**P**	**19 09 06.4**	**+1.7**
RUBR				IAmb	IAmb	19 09 11.3	

	comp=Z,1µm,1.4s						
BCYI	**Bear Canyon**	79.52	328	P	**P**	**19 09 05.9**	**+1.2**
AVE	**Averroes**	79.54	47	P	**P**	**19 09 05.5**	**+0.7**
AVE				S	**S**	**19 18 47.9**	**-1.5**
BOZ	**Bozeman (W)**	79.62	330	P	**P**	**19 09 06.0**	**+0.9**
	baz=139,SNR=226						
BOZ				S	**S**	**19 18 52.6**	**+2.5**
	baz=139						
BOZ	**Bozeman (W)**	79.62	330	P	**P**	**19 09 05.5**	**+0.3**
BOZ				pmax	pmax		
	comp=Z,179nm,0.9s						
BOZ	**Bozeman (W)**	79.62	330	P	**P**	**19 09 05.5**	**+0.3**
DLMT	**Dillon**	79.90	329	P	**P**	**19 09 07.8**	**+1.2**
DLMT				IAmb	IAmb	19 09 13.7	
	comp=Z,753nm,1.2s						
AFDM	**Forest Hills D**	79.92	320	P	**P**	**19 09 07.1**	**+0.3**
MFID	**Camas Ranch**	80.09	326	P	**P**	**19 09 08.7**	**+1.0**
MFID				IAmb	IAmb	19 09 14.1	
	comp=Z,494nm,1.1s						
ZHG	**ZHG**	80.15	47	P		19 09 08.4	
BEKR	**Beckworth**	80.16	321	P	**P**	**19 09 09.1**	**+0.9**
BEKR				IAmb	IAmb	19 09 14.3	
	comp=Z,587nm,1.3s						
LRM	**Limekiln Ridge**	80.18	329	P	**P**	**19 09 09.1**	**+0.9**
RTC	**Rabat Centre**	80.32	47	P		19 09 10.4	
RTC	**Rabat Centre**	80.32	47	P	**P**	**19 09 09.6**	**+0.6**
MCCM	**Marconi Confer**	80.55	318	P	**P**	**19 09 10.9**	**+0.9**
MCCM				IAmb	IAmb	19 09 14.0	
	comp=Z,585nm,1.1s						
HRY	**Holter Researc**	80.55	330	P	**P**	**19 09 11.2**	**+1.1**
ORV	**Oroville**	80.62	320	P	**P**	**19 09 11.3**	**+0.9**
ORV				pmax	pmax		
	comp=Z,687nm,1.2s						
ORV	**Oroville**	80.62	320	P	**P**	**19 09 11.3**	**+0.9**
ORV				IAmb	IAmb	19 09 14.7	
	comp=Z,687nm,1.1s						
EGMT	**Eagleton**	80.63	332	P	**P**	**19 09 10.6**	**+0.2**
	baz=140,SNR=375						
EGMT				S	**S**	**19 19 01.5**	**+1.1**
	baz=140						
EGMT	**Eagleton**	80.63	332	P	**P**	**19 09 10.7**	**+0.2**
EGMT				IAmb	IAmb	19 09 13.8	
	comp=Z,797nm,0.9s						
ARF	**Arif**	80.67	50	P		19 09 12.0	
BOSA	**Boshof**	80.88	117	P	**P**	**19 09 11.7**	**-0.7**
	comp=Z,251nm,0.8s,baz=255,slow=3.6,SNR=195						
BOSA				pP	**pP**	**19 10 03.2**	**+0.4**
	comp=Z,21nm,0.5s,baz=229,slow=12,SNR=0.8						
BOSA				S	**S**	**19 18 59.0**	**-5.2**
	comp=Z,12nm,1.0s,baz=140,slow=19,SNR=12						
BOSA				PKKPbc	**PKKPbc**	**19 27 48.6**	**0.0**
	comp=Z,13nm,0.6s,baz=83,slow=2.1,SNR=33						
BOSA				PKPPKP	**P'P'df**	**19 35 53.9**	**-1.3**
	comp=Z,4.4nm,1.1s,baz=50,slow=4.1,SNR=3.8						
BOSA	**Boshof**	80.88	117	P	**P**	**19 09 11.4**	**-1.0**
WVOR	**Wild Horse Val**	80.90	324	P	**P**	**19 09 12.4**	**+0.4**
WVOR				pmax	pmax		
	comp=Z,798nm,2.0s						
WVOR	**Wild Horse Val**	80.90	324	P	**P**	**19 09 12.4**	**+0.4**
WVOR				IAmb	IAmb	19 09 17.9	
	comp=Z,798nm,1.9s						
GDXM	**Geysers**	80.92	319	P	**P**	**19 09 12.7**	**+0.6**
PFVI	**Vila Bisbo**	80.93	43	P		19 09 13.2	
PFVI	**Vila Bisbo**	80.93	43	P	**P**	**19 09 12.4**	**+0.2**
PFVI	**Vila Bisbo**	80.93	43	*e*P	**P**	**19 09 13.8**	**+1.7**
	comp=Z,369nm,1.3s						
PFVI				*e*pP	**pP**	**19 10 03.2**	**+0.5**
MORF	**Marmelete**	81.14	43	*e*P	**P**	**19 09 13.4**	**0.0**
MORF				AMb	AMB	19 09 18.0	
	comp=Z,380nm,1.1s						
MORF				*e*S	**S**	**19 19 07.6**	**+1.5**
MORF	**Marmelete**	81.14	43	*e*P	**P**	**19 09 13.3**	**0.0**
MORF				*e*S	**S**	**19 19 07.5**	**+1.5**
MORF	**Marmelete**	81.14	43	*e*P	**P**	**19 09 14.8**	**+1.5**
	comp=Z,340nm,1.4s						
MORF				*e*pP	**pP**	**19 10 02.3**	**-1.6**
MDT	**Midelt**	81.18	49	P	**P**	**19 09 14.3**	**+0.6**
	comp=Z,245nm,0.9s,baz=229,slow=2.3,SNR=207						
MDT				PKKPbc	**PKKPbc**	**19 27 50.1**	**+0.8**
	comp=Z,0.9nm,0.5s,baz=62,slow=0.2,SNR=5.4						
MDT	**Midelt**	81.18	49	P		19 09 14.5	
HOPS	**Hopland Field**	81.20	319	P	**P**	**19 09 14.5**	**+1.0**
HOPS				IAmb	IAmb	19 09 19.8	
	comp=Z,573nm,1.4s						
IFR	**Ifrane**	81.22	48	P	**P**	**19 09 13.4**	**-0.6**
IFR				S	**S**	**19 19 05.3**	**-2.0**
PTEO	**Sao Teotonio**	81.25	43	*e*P	**P**	**19 09 14.8**	**+1.0**
	comp=Z,668nm,1.4s						
O03E	**Paynes Creek**	81.28	321	P	**P**	**19 09 13.7**	**-0.3**
	baz=130,SNR=208						
O03E				S	**S**	**19 19 07.5**	**+0.1**
	baz=130						
SICH	**Sidi Chahed**	81.43	47	P		19 09 18.0	
MOD	**Modoc Plateau**	81.47	323	P	**P**	**19 09 15.7**	**+0.6**
MOD				IAmb	IAmb	19 09 19.1	
	comp=Z,404nm,0.9s						
LCRM	**LCR**	81.50	48	P		19 09 16.4	
PBDV	**Barranco-do-Ve**	81.56	44	*e*P	**P**	**19 09 16.5**	**+1.0**
	comp=Z,466nm,1.2s						
PBDV				*e*pP	**pP**	**19 10 04.4**	**-1.7**
MSO	**Missoula**	81.62	329	P	**P**	**19 09 16.6**	**+1.0**
	baz=137,SNR=114						
MSO				S	**S**	**19 19 13.4**	**+2.7**
	baz=137						
MSO	**Missoula**	81.62	329	P	**P**	**19 09 16.4**	**+0.8**
LIS	**Lisbon**	81.70	42	*e*P	**P**	**19 09 16.2**	**+0.1**
LIS				AMb	AMB	19 09 20.7	
	comp=Z,378nm,0.8s						
LIS				*e*S	**S**	**19 19 13.3**	**+1.7**
LIS	**Lisbon**	81.70	42	*e*P	**P**	**19 09 16.2**	**+0.1**
LIS				*e*S	**S**	**19 19 13.3**	**+1.7**
LIS	**Lisbon**	81.70	42	*e*P	**P**	**19 09 18.2**	**+2.1**
	comp=Z,384nm,1.3s						
LIS				*e*pP	**pP**	**19 10 04.7**	**-2.1**
PNCL	**Nicolau / Gran**	81.71	43	*e*P	**P**	**19 09 17.2**	**+1.0**
	comp=Z,210nm,1.3s						
PNCL				*e*pP	**pP**	**19 10 07.8**	**+0.9**
PNCL				A	A	19 37 11.9	
	comp=Z,6µm,20.1s						
PCVE	**Castro Verde**	81.73	43	*e*P	**P**	**19 09 17.1**	**+0.8**
	comp=Z,257nm,1.9s						
PCVE				*e*pP	**pP**	**19 10 08.9**	**+2.0**
MESJ	**Messejana**	81.74	43	*e*P	**P**	**19 09 16.6**	**+0.2**
MESJ				AMb	AMB	19 09 20.6	
	comp=Z,279nm,1.0s						
MESJ				*e*S	**S**	**19 19 13.4**	**+1.4**
MESJ	**Messejana**	81.74	43	*e*P	**P**	**19 09 16.5**	**+0.2**
MESJ				*e*S	**S**	**19 19 13.4**	**+1.4**
MESJ	**Messejana**	81.74	43	*e*P	**P**	**19 09 16.8**	**+0.4**
	comp=Z,282nm,1.3s						
MESJ				*e*pP	**pP**	**19 10 05.3**	**-1.7**
PMAFR	**Mafra**	81.77	42	*e*P	**P**	**19 09 17.4**	**+0.9**
	comp=Z,367nm,1.3s						
PMAFR				*e*pP	**pP**	**19 10 07.3**	**+0.2**
O02D	**Mt. Diablo Mer**	81.78	320	P	**P**	**19 09 16.9**	**+0.2**
	baz=130,SNR=122						
O02D				S	**S**	**19 19 13.8**	**+1.2**
	baz=130						
PVAQ	**Vaqueiros**	81.79	44	P		19 09 17.4	
PVAQ	**Vaqueiros**	81.79	44	P	**P**	**19 09 17.1**	**+0.4**
PVAQ	**Vaqueiros**	81.79	44	*e*P	**P**	**19 09 17.6**	**+0.9**
	comp=Z,264nm,2.3s						
PVAQ				*e*pP	**pP**	**19 10 06.6**	**-0.7**
PVAQ				*e*S	**S**	**19 19 14.8**	**+2.2**
PVAQ				A	A	19 41 04.8	
	comp=Z,7µm,20.1s						
BMO	**Blue Mountains**	81.86	326	P	**P**	**19 09 17.4**	**+0.4**
BMO				pmax	pmax		
	comp=Z,1µm,1.7s						
BMO	**Blue Mountains**	81.86	326	P	**P**	**19 09 17.4**	**+0.4**
BMO				IAmb	IAmb	19 09 20.9	
	comp=Z,1µm,1.6s						
WDC	**Whiskeytown Da**	81.89	320	P	**P**	**19 09 16.3**	**-0.8**
WDC				pmax	pmax		
	comp=Z,206nm,0.8s						
WDC	**Whiskeytown Da**	81.89	320	P	**P**	**19 09 16.3**	**-0.8**
KCPM	**Cahto Peak**	81.94	319	P	**P**	**19 09 18.4**	**+0.9**
KCPM				IAmb	IAmb	19 09 24.0	
	comp=Z,1µm,1.8s						
CHEFC	**Chefchaouen**	81.99	47	P		19 09 19.0	
PBEJ	**Beja**	82.08	43	*e*P	**P**	**19 09 18.9**	**+0.8**
	comp=Z,128nm,1.4s						
SFS	**San Fernando**	82.21	45	P	**P**	**19 09 18.6**	**-0.2**
SFS				S	**S**	**19 19 18.2**	**+1.4**
MAW	**Mawson**	82.23	163	P	**P**	**19 09 19.0**	**+0.5**
	comp=Z,167nm,0.8s,baz=209,slow=5.4,SNR=28						
MAW				pP	**pP**	**19 10 09.7**	**+0.6**
	comp=Z,24nm,0.7s,baz=225,slow=8.6,SNR=0.8						
MAW	**Mawson**	82.23	163	P	**P**	**19 09 19.1**	**+0.6**
N02D	**Trinity Center**	82.24	321	P	**P**	**19 09 19.1**	**+0.1**
	baz=130,SNR=160						
N02D				S	**S**	**19 19 17.2**	**+0.1**
	baz=130						
M04C	**Macdoel**	82.26	322	P	**P**	**19 09 19.9**	**+0.8**
	baz=130,SNR=318						
M04C				S	**S**	**19 19 19.8**	**+2.3**
	baz=130						
EVO	**Evora**	82.29	43	P	**P**	**19 09 21.1**	**+1.9**
EVO				S	**S**	**19 19 17.5**	**-0.1**
EVO	**Evora**	82.29	43	*e*P	**P**	**19 09 20.1**	**+0.9**
	comp=Z,152nm,1.2s						
EVO				*e*pP	**pP**	**19 10 07.3**	**-2.6**
K05A	**Summer Lake**	82.34	323	P	**P**	**19 09 20.7**	**+1.1**
KMRM	**Mail Ridge**	82.36	320	P	**P**	**19 09 21.0**	**+1.4**
PSBE	**So Bento**	82.41	41	*e*P	**P**	**19 09 20.8**	**+0.9**
	comp=Z,540nm,1.8s						
PSBE				*e*pP	**pP**	**19 10 09.1**	**-1.5**
CEU	**Ceuta**	82.42	46	P	**P**	**19 09 21.2**	**+1.3**
CEU				S	**S**	**19 19 18.5**	**-0.5**
JTMT	**Jette**	82.44	330	P	**P**	**19 09 20.9**	**+0.9**
JTMT				IAmb	IAmb	19 09 23.7	
	comp=Z,416nm,0.8s						
LBTB	**Lobatse**	82.48	114	P	**P**	**19 09 20.0**	**-0.8**
LBTB				pmax	pmax		
	comp=Z,301nm,1.0s						
LBTB	**Lobatse**	82.48	114	P	**P**	**19 09 19.9**	**-0.8**
I07A	**Izee**	82.48	325	P	**P**	**19 09 21.2**	**+0.9**
PMTG	**Montargil**	82.49	42	*e*P	**P**	**19 09 21.2**	**+1.0**
PMTG				*e*pP	**pP**	**19 10 08.0**	**-2.9**
M02C	**Callahan**	82.59	321	P	**P**	**19 09 21.2**	**+0.4**
	baz=130,SNR=106						
M02C				S	**S**	**19 19 20.9**	**+0.2**
	baz=130						
F10A	**Beach Ranch, E**	82.60	327	P	**P**	**19 09 21.4**	**+0.6**
F10A				IAmb	IAmb	19 09 25.9	
	comp=Z,801nm,0.9s						
PBAR	**Barrancos**	82.69	43	*e*P	**P**	**19 09 21.7**	**+0.4**
	comp=Z,202nm,1.3s						
PBAR				*e*pP	**pP**	**19 10 10.9**	**-1.1**
YBH	**Yreka Blue Hor**	82.72	321	P	**P**	**19 09 21.1**	**-0.4**
	comp=Z,129nm,0.7s,baz=93,slow=2.8,SNR=130						
YBH				S	**S**	**19 19 19.3**	**-2.8**
	comp=Z,2.2nm,0.9s,baz=208,slow=5.7,SNR=3.5						
YBH	**Yreka Blue Hor**	82.72	321	P	**P**	**19 09 21.0**	**-0.5**
PVLZ	**Peæn de**	82.73	47	P	**P**	**19 09 19.4**	**-2.1**
PVLZ				S	**S**	**19 19 19.8**	**-2.4**
K04D	**Chiloquin, OR**	82.75	322	P	**P**	**19 09 22.6**	**+0.9**
	baz=131,SNR=31						
K04D				S	**S**	**19 19 24.5**	**+2.1**
	baz=131						
PESTR	**Estremoz**	82.76	42	P		19 09 22.3	
PESTR	**Estremoz**	82.76	42	P	**P**	**19 09 22.1**	**+0.5**
KHMM	**Horse Mountain**	82.78	320	P	**P**	**19 09 22.8**	**+0.9**
L04D	**Klamath Falls**	82.80	322	P	**P**	**19 09 22.2**	**+0.2**
	baz=130,SNR=117						
L04D				S	**S**	**19 19 24.3**	**+1.4**
	baz=130						
J05D	**Fort Rock, OR**	82.89	323	P	**P**	**19 09 23.4**	**+1.0**
	baz=131,SNR=302						
J05D				S	**S**	**19 19 26.7**	**+2.9**
	baz=131						
JCC	**Jacoby Creek,**	82.92	320	P	**P**	**19 09 23.4**	**+1.0**
PCAS	**Casmilo, Conde**	82.92	41	*e*P	**P**	**19 09 23.9**	**+1.4**
	comp=Z,335nm,1.3s						
PCAS				*e*pP	**pP**	**19 10 13.1**	**-0.1**
PALE	**Palemas**	82.99	47	P		19 09 25.0	
G08A	**Pilot Rock**	83.01	326	P	**P**	**19 09 23.7**	**+0.7**
PINE	**Pine Mountain**	83.06	324	P	**P**	**19 09 24.3**	**+0.9**
PINE				IAmb	IAmb	19 09 27.7	
	comp=Z,557nm,0.8s						
COI	**Coimbra**	83.07	41	P	**P**	**19 09 24.0**	**+0.8**
COI				pmax	pmax		
	comp=Z,276nm,1.0s						
COI	**Coimbra**	83.07	41	P	**P**	**19 09 24.0**	**+0.8**
COI	**Coimbra**	83.07	41	*e*P	**P**	**19 09 25.3**	**+2.1**
	comp=Z,412nm,2.0s						
COI				*e*pP	**pP**	**19 10 13.6**	**-0.3**
FIGM	**Figuig**	83.16	51	P		19 09 25.0	
FFC	**Flin Flon**	83.19	340	P	**P**	**19 09 23.2**	**-0.3**
FFC				pmax	pmax		
	comp=Z,220nm,1.2s						
FFC	**Flin Flon**	83.19	340	P	**P**	**19 09 23.1**	**-0.3**
PMRV	**Marv??o**	83.22	42	*e*P	**P**	**19 09 25.1**	**+1.1**
	comp=Z,169nm,1.6s						
PMRV				*e*pP	**pP**	**19 10 13.8**	**-1.0**
PMRV				*e*S	**S**	**19 19 28.3**	**+1.3**
PMRV				A	A	19 37 55.0	
	comp=Z,5µm,20.1s						
WALA	**Waterton Lakes**	83.23	331	P	**P**	**19 09 24.1**	**+0.1**
WALA				IAmb	IAmb	19 09 27.4	
	comp=Z,335nm,0.8s						
KRMB	**Red Mountain**	83.29	321	P	**P**	**19 09 25.3**	**+0.9**
J04D	**Umpqua Nationa**	83.35	323	P	**P**	**19 09 25.5**	**+0.7**
	baz=130,SNR=194						
J04D				S	**S**	**19 19 31.0**	**+2.4**
	baz=130						
PCBR	**Castelo Branco**	83.42	42	*e*P	**P**	**19 09 26.1**	**+1.1**
	comp=Z,201nm,2.0s						
HUMO	**Hull Mountain**	83.42	322	P	**P**	**19 09 24.7**	**-0.3**
E09A	**Wood Farm, Sta**	83.43	327	P	**P**	**19 09 25.1**	**+0.2**
E09A				IAmb	IAmb	19 09 28.2	
	comp=Z,781nm,1.8s						
JBK	**JBK**	83.44	49	P		19 09 26.0	
L02E	**Cave Junction**	83.51	321	P	**P**	**19 09 26.3**	**+0.9**
	baz=129,SNR=157						
L02E				S	**S**	**19 19 32.0**	**+2.2**
	baz=129						
PTO	**Porto**	83.53	40	*e*P	**P**	**19 09 26.2**	**+0.7**
	comp=Z,455nm,1.7s						
EMAL	**Malaga-Limoner**	83.55	46	P	**P**	**19 09 26.7**	**+1.0**
EMAL				S	**S**	**19 19 28.2**	**-2.1**
HORN	**Hornachuelos**	83.63	44	P		19 09 27.1	
GOG	**Mont Gurugu**	83.64	48	P		19 09 27.0	
I05D	**Terrebonne, OR**	83.64	324	P	**P**	**19 09 27.2**	**+1.1**
	baz=131,SNR=137						
I05D				S	**S**	**19 19 34.9**	**+3.8**
	baz=131						
TAM	**Tamanrasset**	83.69	62	P	**P**	**19 09 27.1**	**+0.2**
TAM				pmax	pmax		
	comp=Z,247nm,0.8s						
TAM	**Tamanrasset**	83.69	62	P	**P**	**19 09 27.1**	**+0.2**
PVIS	**Viseu**	83.69	41	*e*P	**P**	**19 09 27.7**	**+1.3**
	comp=Z,251nm,1.6s						
PVIS				*e*pP	**pP**	**19 10 19.6**	**+2.3**
MTE	**Manteigas**	83.71	41	P	**P**	**19 09 26.5**	**-0.1**
MTE	**Manteigas**	83.71	41	*e*P	**P**	**19 09 28.0**	**+1.4**
	comp=Z,491nm,1.3s						
MTE				*e*pP	pP	19 10 14.1	-3.3
MTE				*e*S	**S**	**19 19 29.9**	**-2.1**
MTE				A	A	19 39 09.8	
	comp=Z,6µm,20.1s						
MELI	**Melilla**	83.72	48	P	P	19 09 38.0	+11
MELI				S	**S**	**19 19 31.2**	**-0.9**
I04A	**Tendick Farm,**	83.87	323	P	**P**	**19 09 27.3**	**0.0**
	baz=130,SNR=112						
I04A				S	**S**	**19 19 33.9**	**+0.5**
	baz=130						
E08A	**Dider Farm, El**	83.88	327	P	**P**	**19 09 27.3**	**+0.2**
K02D	**Willamette Mer**	83.88	322	P	**P**	**19 09 28.2**	**+0.8**
	baz=129,SNR=242						
K02D				S	**S**	**19 19 35.4**	**+1.8**
	baz=129						
KBO	**Bosley Butte**	83.90	321	P	**P**	**19 09 28.6**	**+1.1**
KBO				IAmb	IAmb	19 09 34.6	
	comp=Z,1µm,1.5s						
F07A	**Phinny Hill Vi**	83.92	326	P	**P**	**19 09 28.6**	**+1.2**
F07A				IAmb	IAmb	19 09 34.5	
	comp=Z,1µm,1.8s						
HAWA	**Hanford**	84.05	326	P	**P**	**19 09 28.9**	**+0.9**
HAWA				IAmb	IAmb	19 09 32.0	
	comp=Z,530nm,0.8s						
PVRL	**Vila Real**	84.14	40	*e*P	**P**	**19 09 30.1**	**+1.4**
	comp=Z,489nm,1.6s						
PVRL				*e*pP	**pP**	**19 10 22.4**	**+2.8**
NEW	**Newport**	84.15	329	P	**P**	**19 09 28.2**	**-0.3**
	comp=Z,26nm,0.4s,baz=131,slow=5.3,SNR=36						
NEW	**Newport**	84.15	329	P	**P**	**19 09 28.4**	**-0.2**
	baz=135,SNR=60						
NEW				S	**S**	**19 19 36.0**	**0.0**
	baz=135						
NEW	**Newport**	84.15	329	P	**P**	**19 09 28.1**	**-0.4**
POLO	**Lamas de Olo**	84.15	40	*e*P	**P**	**19 09 30.0**	**+1.2**
	comp=Z,176nm,2.1s						
POLO				*e*pP	**pP**	**19 10 18.9**	**-0.8**
D08A	**Wollman Farm,**	84.19	327	P	**P**	**19 09 29.4**	**+0.6**
D08A				IAmb	IAmb	19 09 32.6	
	comp=Z,490nm,1.0s						
G05D	**Wamic, OR**	84.22	325	P	**P**	**19 09 30.3**	**+1.3**
	baz=131,SNR=100						
G05D				S	**S**	**19 19 41.6**	**+4.9**
	baz=131						
PCAB	**Cabril**	84.22	40	*e*P	**P**	**19 09 30.2**	**+1.1**
	comp=Z,423nm,1.6s						
PGAV	**Gavieira, Arco**	84.23	40	*e*P	**P**	**19 09 30.3**	**+1.1**
	comp=Z,401nm,1.7s						
PGAV				*e*pP	pP	19 10 16.0	-4.1
PGAV				*e*S	**S**	**19 19 33.5**	**-3.7**
H04A	**Detroit Lake**	84.32	324	P	**P**	**19 09 29.6**	**+0.1**
J01E	**Myrtle Point**	84.33	322	P	**P**	**19 09 30.5**	**+1.1**
	baz=129,SNR=95						
J01E				S	**S**	**19 19 40.3**	**+2.5**
	baz=129						
E07A	**Sunnyside**	84.33	326	P	**P**	**19 09 30.2**	**+0.7**
I03D	**Drain, OR**	84.33	322	P	**P**	**19 09 30.2**	**+0.7**
	baz=130,SNR=117						
I03D				S	**S**	**19 19 39.2**	**+1.3**
	baz=130						
KEBM	**Edson Butte**	84.38	321	P	**P**	**19 09 30.9**	**+1.0**
KEBM				IAmb	IAmb	19 09 34.0	
	comp=Z,743nm,1.0s						
C09A	**Chrisman Ranch**	84.38	328	P	**P**	**19 09 30.2**	**+0.6**
MVO	**Moncorvo**	84.49	41	*e*P	**P**	**19 09 31.2**	**+0.8**
	comp=Z,495nm,1.1s						
MVO				*e*pP	**pP**	**19 10 20.1**	**-1.3**
MVO				*e*S	**S**	**19 19 35.0**	**-4.7**
MVO				A	A	19 39 52.9	
	comp=Z,5µm,23.0s						
H04D	**Lebanon**	84.52	323	P	**P**	**19 09 30.6**	**+0.2**
	baz=130,SNR=27						
H04D				S	**S**	**19 19 40.3**	**+0.5**
	baz=130						
FCC	**Fort Churchill**	84.63	346	P	**P**	**19 09 30.8**	**+0.2**
FCC				pmax	pmax		
	comp=Z,369nm,0.7s						
FCC	**Fort Churchill**	84.63	346	P	**P**	**19 09 30.8**	**+0.2**
FCC				IAmb	IAmb	19 09 33.8	
	comp=Z,369nm,0.7s						
RAR	**Rarotonga**	84.64	249	P	**P**	**19 09 32.3**	**+0.7**
	comp=Z,160nm,1.1s,baz=178,slow=3.8,SNR=16						
RAR	**Rarotonga**	84.64	249	P	**P**	**19 09 31.3**	**-0.3**
RAR				IAmb	IAmb	19 09 35.1	
	comp=Z,634nm,1.4s						
RAR	**Rarotonga**	84.64	249	P	**P**	**19 09 33.8**	**+2.2**
	comp=Z,354nm,1.5s						
F05D	**White Salmon**	84.72	325	P	**P**	**19 09 32.2**	**+0.8**
	baz=131,SNR=35						
F05D				S	**S**	**19 19 45.3**	**+3.7**
	baz=131						
I02D	**Swisshome**	84.87	323	P	**P**	**19 09 33.2**	**+1.1**
	baz=129,SNR=90						
I02D				S	**S**	**19 19 45.4**	**+2.2**
	baz=129						
COR	**Corvallis**	84.87	323	P	**P**	**19 09 33.2**	**+1.0**
COR				pmax	pmax		
	comp=Z,592nm,0.9s						
COR	**Corvallis**	84.87	323	P	**P**	**19 09 33.2**	**+1.0**
COR				IAmb	IAmb	19 09 36.4	
	comp=Z,592nm,0.9s						
PBRG	**Braganca**	85.04	40	*e*P	**P**	**19 09 34.4**	**+1.2**
	comp=Z,402nm,1.6s						
PBRG				*e*pP	**pP**	**19 10 23.2**	**-1.0**
PAB	**San Pablo**	85.19	43	P		19 09 34.3	
PAB	**San Pablo**	85.19	43	P	**P**	**19 09 34.3**	**+0.3**
PAB				pmax	pmax		
	comp=Z,440nm,1.2s						
PAB	**San Pablo**	85.19	43	P	**P**	**19 09 34.3**	**+0.3**
PAB				IAmb	IAmb	19 09 37.9	
	comp=Z,440nm,1.1s						
LTY	**Liberty**	85.21	326	P	**P**	**19 09 33.8**	**-0.2**
LTY				IAmb	IAmb	19 09 37.3	
	comp=Z,410nm,0.8s						
G03D	**McMinnville, O**	85.25	324	P	**P**	**19 09 35.0**	**+1.0**
	baz=130,SNR=21						
G03D				S	**S**	**19 19 48.8**	**+2.0**
	baz=130						
B08A	**Colville Reser**	85.28	328	P	**P**	**19 09 33.9**	**-0.3**
LON	**Longmire**	85.47	326	P	**P**	**19 09 35.1**	**-0.1**
LON				pmax	pmax		
	comp=Z,158nm,0.8s						
LON	**Longmire**	85.47	326	P	**P**	**19 09 35.1**	**-0.1**
ESDC	**Sonseca Array**	85.51	43	P	**P**	**19 09 36.0**	**+0.5**
	comp=Z,168nm,1.0s,baz=247,slow=4.5,SNR=126						
ESDC				ScS	**S**	**19 19 56.8**	**+7.0**
	comp=Z,1.3nm,1.0s,baz=240,slow=7.2,SNR=5.6						
ESDC				PKKPbc	**PKKPbc**	**19 27 39.7**	**+0.2**
	comp=Z,3.1nm,0.6s,baz=21,slow=2.8,SNR=20						
ESDC				PKPPKP	**P'P'df**	**19 35 46.6**	**+2.8**
	comp=Z,0.8nm,0.7s,baz=4.5,slow=2.2,SNR=4.8						
ESDC				LR	LR	19 44 09.8	
	comp=Z,7µm,21.9s,baz=245,slow=33						
ESDC	**Sonseca Array**	85.51	43	P	**P**	**19 09 35.6**	**0.0**
ESDC				IAmb	IAmb	19 09 39.2	
	comp=Z,743nm,1.2s						
ESBB	**Sonseca Array**	85.51	43	P	**P**	**19 09 35.9**	**+0.3**
SESP	**Santiago Espad**	85.55	45	P		19 09 36.0	
USTO	**Oran**	85.59	48	P	P	19 09 42.0	+6.1
ODJA	**Bouhanifia**	85.65	49	P	**P**	**19 09 40.0**	**+3.7**
F04D	**Rainier, OR**	85.67	324	P	**P**	**19 09 37.3**	**+1.2**
	baz=130,SNR=7.6						
F04D				S	**S**	**19 19 52.3**	**+1.4**
	baz=130						
NRS	**Narsarsuaq**	85.67	10	*i* P	**P**	**19 09 35.8**	**+0.1**
	comp=Z,290nm,1.0s						
NRS	**Narsarsuaq**	85.67	10	P	**P**	**19 09 36.2**	**+0.5**
NRS				pmax	pmax		
	comp=Z,298nm,1.0s						
NRS	**Narsarsuaq**	85.67	10	P	**P**	**19 09 36.2**	**+0.5**
NRS	**Narsarsuaq**	85.67	10	*i* P	**P**	**19 09 35.8**	**+0.1**
NRS				IAmb	IAmb	19 09 40.5	
	comp=Z,290nm,1.0s						
E04D	**Cinebar**	85.74	325	P	**P**	**19 09 36.8**	**+0.4**
	baz=130,SNR=28						
E04D				S	**S**	**19 19 52.9**	**+1.4**
	baz=130						
C06D	**Leavenworth**	85.77	327	P	**P**	**19 09 36.4**	**-0.1**
	baz=132,SNR=16						
C06D				S	**S**	**19 19 52.6**	**+0.8**
	baz=132						
D05A	**Enumclaw**	85.84	326	P	**P**	**19 09 37.0**	**+0.1**
D05A				IAmb	IAmb	19 09 40.2	
	comp=Z,518nm,0.8s						
OJBR	**Djebel Berber**	86.12	49	P	**P**	**19 09 42.0**	**+3.3**
D04E	**Lakebay**	86.25	325	P	**P**	**19 09 39.7**	**+0.8**
	baz=130,SNR=27						
D04E				S	**S**	**19 19 58.8**	**+2.4**
	baz=130						
E03A	**Lebam**	86.26	325	P	**P**	**19 09 39.5**	**+0.6**
CART	**Cartagena**	86.28	46	P	**P**	**19 09 38.0**	**-1.2**
CART				S	S	19 19 44.4	-13
CART	**Cartagena**	86.28	46	P	**P**	**19 09 38.6**	**-0.7**
UCM	**Universidad Co**	86.32	43	P	**P**	**19 09 38.8**	**-0.7**
UCM				S	**S**	**19 19 48.9**	**-8.7**
OJGS	**Djebel Guires**	86.36	49	P	**P**	**19 09 43.0**	**+3.1**
B06A	**Marblemount**	86.46	327	P	**P**	**19 09 39.9**	**0.0**
FRB	**Frobisher Bay**	86.53	359	P	**P**	**19 09 39.6**	**-0.3**
	comp=Z,326nm,0.8s,baz=183,slow=5.1,SNR=154						
OKGL	**Djebel Kef Gue**	86.57	49	P	**P**	**19 09 44.0**	**+3.2**
B05A	**Bryant**	86.60	327	P	**P**	**19 09 40.3**	**-0.2**
	baz=131,SNR=180						
B05A				S	**S**	**19 19 59.3**	**-0.5**
	baz=131						
D03D	**Eldon**	86.64	326	P	**P**	**19 09 40.3**	**-0.5**
	baz=130						
D03D				S	**S**	**19 20 00.9**	**+0.6**
	baz=130						
MATP	**Matopo**	86.71	111	S	S	19 19 51.5	-11
	comp=Z,5.5nm,0.9s,baz=209,slow=22,SNR=12						
NLWA	**Neilton Lookou**	86.96	325	P	**P**	**19 09 42.8**	**+0.4**
NLWA				IAmb	IAmb	19 09 46.1	
	comp=Z,352nm,0.9s						
A05A	**Maple Falls**	87.07	327	P	**P**	**19 09 42.9**	**+0.1**
A04D	**Lummi Island**	87.20	327	P	**P**	**19 09 44.0**	**+0.6**
	baz=130,SNR=109						
A04D				S	**S**	**19 20 05.7**	**+0.2**
	baz=130						
PGC	**Sidney**	87.54	326	P	**P**	**19 09 45.4**	**+0.4**

PGC				IAmb	IAmb	19 09 48.7	
	comp=Z,564nm,0.8s						
NUUK	Nuuk	87.74	6	*i* P	P	19 09 47.5	+1.9
NUUK				IAmb	IAmb	19 09 51.1	
	comp=Z,397nm,1.0s						
CKHR	Kef el Ahmar	89.97	51	P	P	19 10 00.6	+3.6
SET	Setif	89.98	50	P	P	19 10 01.0	+4.0
DFRA	Djebel Bou Aff	90.48	50	P	P	19 10 02.6	+3.3
SFJD	Kangerlussuaq	90.59	6	P	P	19 09 58.9	0.0
	comp=Z,108nm,0.9s,baz=205,slow=3.7,SNR=42						
SFJD	Kangerlussuaq	90.59	6	*i* P	P	19 09 59.3	+0.4
	comp=Z,8.3nm,0.8s						
SFJD	Kangerlussuaq	90.59	6	*i* P	P	19 09 59.3	+0.4
SFJD				pmax	pmax		
	comp=Z,8.0nm,0.8s						
SFJD	Kangerlussuaq	90.59	6	P	P	19 09 59.0	0.0
SFJD	Kangerlussuaq	90.59	6	*i* P	P	19 09 59.3	+0.4
SFJD				IAmb	IAmb	19 10 03.6	
	comp=Z,8.3nm,0.8s						
CASM	Ain Smara	90.78	51	P	P	19 10 03.3	+2.6
ISOG	Isortoq, Green	90.84	11	*i* P	P	19 10 01.0	+0.9
ISOG				IAmb	IAmb	19 10 04.8	
	comp=Z,173nm,1.0s						
CASY	Casey	90.91	179	P	P	19 10 01.6	+0.9
CASY				IAmb	IAmb	19 10 04.6	
	comp=Z,352nm,0.8s						
MAHO	Mahon	90.99	47	P	P	19 10 03.1	+1.7
MAHO				S	SKSac	19 20 15.5	+1.6
CKFL	Kef-Lekhel	91.01	51	P	P	19 10 04.5	+2.7
ANGG	Ammassalik, Gr	91.15	12	P	P	19 10 01.8	+0.3
ANGG				IAmb	IAmb	19 10 06.2	
	comp=Z,212nm,0.9s						
ANGG	Ammassalik, Gr	91.15	12	⇓*i*P	P	19 10 02.4	+0.9
ANGG				IAmb	IAmb	19 10 04.7	
	comp=Z,215nm,0.9s						
CAEH	'Ain El Ouahch	91.28	50	P	P	19 10 06.1	+3.2
XMAS	Kiritimati	91.51	272	P	P	19 10 10.9	+6.4
	comp=Z,328nm,1.5s						
CMAH	Djebel Manchou	91.61	51	P	P	19 10 06.6	+2.1
DYA	Yadsworthy	91.70	35	*e*P	P	19 10 04.8	+0.4
DYA				IAmb	IAmb	19 10 07.5	
	comp=Z,873nm,2.8s						
HTL	Hartland	91.73	34	*e*P	P	19 10 05.1	+0.5
BBB	Bella Bella	92.06	327	P	P	19 10 06.5	+0.4
	comp=Z,179nm,0.8s,baz=79,slow=4.2,SNR=22						
BBB	Bella Bella	92.06	327	P	P	19 10 06.4	+0.4
BBB				IAmb	IAmb	19 10 09.4	
	comp=Z,223nm,0.8s						
DSB	Dublin	92.12	31	P	P	19 10 06.8	+0.5
KEST	Kesra	92.60	52	P	P	19 10 10.0	+0.9
	comp=Z,88nm,0.9s,baz=207,slow=1.8,SNR=34						
KEST				PKKPbc	PKKPbc	19 27 21.9	+0.3
	comp=Z,22nm,0.7s,baz=89,slow=0.7,SNR=47						
KEST				LR	LR	19 50 19.7	
	comp=Z,8µm,21.5s,baz=182,slow=34						
KEST	Kesra	92.60	52	P	P	19 10 09.6	+0.5
ILULI	Ilulissat	92.70	6	*i* P	P	19 10 08.9	+0.3
	comp=Z,194nm,0.9s						
ILULI	Ilulissat	92.70	6	*i* P	P	19 10 08.9	+0.3
ILULI				pmax	pmax		
	comp=Z,190nm,0.9s						
ILULI	Ilulissat	92.70	6	P	P	19 10 08.8	+0.1
ILULI				IAmb	IAmb	19 10 11.7	
	comp=Z,199nm,0.9s						
ILULI	Ilulissat	92.70	6	*i* P	P	19 10 09.0	+0.3
ILULI				IAmb	IAmb	19 10 11.4	
	comp=Z,195nm,0.9s						
MCH1	Michaelchurch	93.07	34	*e*P	P	19 10 10.2	-0.5
YLL	Llanberis	93.13	32	*e*P	P	19 10 11.9	+1.0
YKA	Yellowknife Ar	93.36	340	P	P	19 10 11.9	+0.1
	comp=Z,158nm,0.7s,baz=127,slow=5.0,SNR=463						
YKA				PP	PP	19 14 02.1	+3.0
	comp=Z,32nm,1.1s,baz=135,slow=8.7,SNR=5.0						
YKA				PKiKP	PKiKP	19 14 57.2	+0.4
	comp=Z,3.7nm,0.7s,baz=128,slow=2.6,SNR=3.7						
YKA				ScS	S	19 21 02.8	+1.6
	comp=Z,3.6nm,1.1s,baz=129,slow=10,SNR=4.0						
YKA				PKKPbc	PKKPdf	19 27 18.6	-0.8
	comp=Z,2.4nm,0.6s,baz=333,slow=2.9,SNR=11						
YKA				PKPPKP	P'P'df	19 35 29.9	+2.3
	comp=Z,0.6nm,0.7s,baz=309,slow=1.5,SNR=3.8						
STRD	Stroud	93.38	34	*e*P	P	19 10 12.1	0.0
STRD				IAmb	IAmb	19 10 16.1	
	comp=Z,286nm,1.8s						
FOEL	Foel Wylfa	93.47	33	*e*P	P	19 10 13.4	+0.9
WIM	Isle of Man	93.47	31	*e*P	P	19 10 12.7	+0.2
TMWZ	Te Maipa	93.77	222	P	P	19 10 16.8	+2.3
BFZ	Birch Farm	93.79	223	P	P	19 10 17.3	+2.8
SSB	Saint Sauveur	93.81	42	P	P	19 10 14.7	+0.3
SSB	Saint Sauveur	93.81	42	P	P	19 10 14.7	+0.3
CLF	Chambon-Foret	93.81	39	P	P	19 10 14.6	+0.4
GAL1	Galloway	93.87	31	*e*P	P	19 10 15.2	+0.9
ICESG	Greenland Ices	93.96	9	*i* P	P	19 10 16.1	+1.2
ICESG				IAmb	IAmb	19 10 19.4	
	comp=Z,328nm,1.0s						
ICESG				*i*		19 11 10.7	
MTW	Mount Morrison	93.97	222	P	P	19 10 18.5	+3.1
DVHZ	Dannevirke	94.05	223	P	P	19 10 20.2	+4.4
HOWZ	Holdsworth Sta	94.12	222	P	P	19 10 18.8	+2.8
MQZ	McQueen’s Vall	94.17	219	P	P	19 10 16.9	+0.8
HMNX	Herstmonceux	94.20	36	*e*P	P	19 10 15.9	0.0
HMNX				IAmb	IAmb	19 10 19.1	
	comp=Z,180nm,1.3s						
BHW	Baring Head	94.22	222	P	P	19 10 17.5	+1.1
PNHZ	Pukenui	94.25	223	P	P	19 10 20.9	+4.2
BORG	Borgarnes	94.25	18	P	P	19 10 16.4	+0.5
	comp=Z,21nm,0.8s,baz=135,slow=4.3,SNR=1.8						
VSL	Villasalto	94.29	49	P	P	19 10 16.8	0.0
KRHZ	Kereru	94.30	224	P	P	19 10 21.3	+4.3
LAWE	Loch Awe, Argy	94.37	29	*e*P	P	19 10 16.7	+0.2
LAWE				IAmb	IAmb	19 10 19.4	
	comp=Z,54nm,1.0s						
KWHZ	Kaweka Forest	94.39	224	P	P	19 10 23.0	+5.6
KHZ	Kahutara	94.42	220	P	P	19 10 17.3	0.0
KHZ	Kahutara	94.42	220	P	P	19 10 20.5	+3.1
KESW	Keswick, Cumbr	94.48	32	*e*P	P	19 10 17.9	+0.7
KESW				IAmb	IAmb	19 10 21.1	
	comp=Z,72nm,1.0s						
RTZ	Ruatahuna	94.48	225	P	P	19 10 21.5	+3.6
LBWR	Ladybower, Pea	94.50	33	*e*P	P	19 10 17.2	0.0
PGBU	Glenifferbraes	94.53	30	*e*P	P	19 10 18.1	+0.8
PGBU				IAmb	IAmb	19 10 21.1	
	comp=Z,81nm,1.0s						
URZ	Urewera	94.60	225	P	P	19 10 19.7	+1.4
	comp=Z,31nm,0.8s,baz=40,slow=2.6,SNR=8.5						
URZ				LR	LR	19 45 06.9	
	comp=Z,3µm,20.3s,baz=112,slow=30						
URZ	Urewera	94.60	225	P	P	19 10 18.6	+0.3
BSWZ	Blackbirch Sta	94.64	221	P	P	19 10 24.8	+6.4
TCW	Tory Channel	94.70	221	P	P	19 10 22.4	+3.7
ELSH	Elham, Standar	94.78	36	*e*P	P	19 10 19.2	+0.6
NUUG	Nuugaatsiaq	94.81	4	*i* P	P	19 10 19.6	+1.4
NUUG				IAmb	IAmb	19 10 24.0	
	comp=Z,58nm,0.9s						
MOVZ	Moawhango	94.83	224	P	P	19 10 23.9	+4.5
DIB	Dawson Inlet,	94.83	327	P	P	19 10 20.0	+1.3
ESK	Eskdalemuir	94.84	31	*e*P	P	19 10 19.6	+0.8
ESK	Eskdalemuir	94.84	31	P	P	19 10 19.8	+1.0
ESK				pmax	pmax		
	comp=Z,83nm,1.6s						
ESK	Eskdalemuir	94.84	31	P	P	19 10 19.8	+1.0
HPK	Haverah Park	94.85	33	*e*P	P	19 10 19.7	+0.8
ARCZ	Arundel	94.86	218	P	P	19 10 15.7	-3.7
EKA	Eskdalemuir Ar	94.87	31	P	P	19 10 19.2	+0.3
	comp=Z,17nm,0.9s,baz=230,slow=4.4,SNR=24						
EKA				PKKPbc	PKKPdf	19 27 12.6	-3.8
	comp=Z,2.1nm,0.4s,baz=76,slow=3.3,SNR=12						
KPL	Plockton	94.89	28	*e*P	P	19 10 17.9	-1.1
LTZ	Lake Taylor	94.95	219	P	P	19 10 21.7	+1.9
LTZ	Lake Taylor	94.95	219	P	P	19 10 21.4	+1.5
TUVZ	Tukino	94.97	224	P	P	19 10 24.5	+4.4
WNVZ	Wahianoa	94.97	224	P	P	19 10 23.5	+3.3
ETVZ	East Tongariro	95.01	224	P	P	19 10 23.7	+3.4
TRVZ	Turoa	95.02	224	P	P	19 10 24.0	+3.5
OTVZ	Oturere	95.02	224	P	P	19 10 23.9	+3.4
TMVZ	Te Maari	95.02	224	P	P	19 10 23.9	+3.5
BNI	Bardonecchia	95.03	43	P	P	19 10 20.3	+0.2
BNI				pmax	pmax		
	comp=Z,35nm,1.1s						
BNI	Bardonecchia	95.03	43	P	P	19 10 20.2	+0.2
NGZ	Ngauruhoe	95.05	224	P	P	19 10 24.8	+4.3
RPZ	Rata Peaks	95.07	218	P	P	19 10 22.4	+2.0
	comp=Z,51nm,0.9s,baz=64,slow=2.6,SNR=12						
RPZ				LR	LR	19 44 17.1	
	comp=Z,4µm,21.7s,baz=125,slow=30						
RPZ	Rata Peaks	95.07	218	P	P	19 10 22.7	+2.3
RPZ	Rata Peaks	95.07	218	P	P	19 10 22.9	+2.5
INVG	Invergeldie, C	95.08	30	*e*P	P	19 10 20.1	+0.3
WTVZ	West Tongariro	95.10	224	P	P	19 10 25.0	+4.3
LBZ	Lake Benmore	95.14	217	P	P	19 10 22.3	+1.6
PKVZ	Pokaka	95.15	223	P	P	19 10 24.9	+4.0
DUWZ	D’Urville Isla	95.15	222	P	P	19 10 23.0	+2.2
THZ	Tophouse	95.19	220	P	P	19 10 22.6	+1.5
THZ	Tophouse	95.19	220	P	P	19 10 22.6	+1.5
TWVZ	Taurewa	95.22	224	P	P	19 10 24.9	+3.6
NNZ	Nelson	95.24	221	P	P	19 10 23.2	+2.0
WACR	West Acre	95.33	34	*e*P	P	19 10 21.3	+0.2
WACR				IAmb	IAmb	19 10 24.5	
	comp=Z,156nm,1.0s						
WHZ	Wether Hill Ro	95.38	215	P	P	19 10 22.3	+0.6
VRZ	Vera Road	95.62	223	P	P	19 10 25.1	+2.2
MLZ	Mavora Lakes	95.63	215	P	P	19 10 23.3	+0.4
WVZ	Waitaha Valley	95.65	218	P	P	19 10 25.8	+2.8
GCSZ	Gaunt Creek Bo	95.73	218	P	P	19 10 28.7	+5.4
DSZ	Denniston Nort	95.86	220	P	P	19 10 25.2	+1.2
UPNV	Upernavik	95.87	3	*i* P	P	19 10 23.6	+0.5
UPNV				IAmb	IAmb	19 10 25.6	
	comp=Z,24nm,0.8s						
RAO	Raoul Island	95.88	235	LR	LR	19 45 11.6	
	comp=Z,2µm,21.4s,baz=130,slow=30						
HIZ	Hauiti	95.91	224	P	P	19 10 24.8	+0.5
HIZ				IAmb	IAmb	19 10 30.1	
	comp=Z,209nm,1.4s						
HIZ	Hauiti	95.91	224	P	P	19 10 25.9	+1.6
QRZ	Quartz Range	95.98	221	P	P	19 10 25.3	+0.8
KHEZ	Kahui Hut	95.99	223	P	P	19 10 27.0	+2.3
SENIN	Lac Senin/Sane	96.02	42	P	P	19 10 25.4	+0.8
PUH	Pauahi	96.11	288	P	P	19 10 26.6	+1.0
DOU	Dourbes	96.17	38	*d*P	P	19 10 25.4	+0.5
	comp=Z,34nm,1.6s						
SNF	Seneffe	96.19	37	*d*P	P	19 10 25.9	+0.9
BMRD	Maredsous	96.36	38	*d*P	P	19 10 26.8	+1.0
UCC	Uccle	96.37	37	P	P	19 10 26.8	+1.0
UCC				pmax	pmax		
	comp=Z,35nm,0.8s						
UCC	Uccle	96.37	37	P	P	19 10 26.8	+1.0
HMH	Humu‘ula Sheep	96.43	288	P	P	19 10 29.1	+1.8
WRAK	Wrangell Islan	96.50	329	P	P	19 10 26.2	0.0
WRAK				IAmb	IAmb	19 10 29.4	
	comp=Z,89nm,0.8s						
MSSA	Maissana	96.50	45	P	P	19 10 27.1	+0.3
POHA	Pohakuloa	96.53	289	P	P	19 10 26.2	-1.4
RCHB	Rochefort	96.55	38	*d*P	P	19 10 27.7	+1.0
DLBC	Dease Lake	96.55	332	P	P	19 10 28.0	+1.4
	comp=Z,111nm,0.8s,baz=128,slow=4.8,SNR=12						
DLBC				PKKPbc	PKKPbc	19 27 11.4	-0.7
	comp=Z,2.7nm,0.7s,baz=207,slow=6.7,SNR=3.5						
DLBC	Dease Lake	96.55	332	P	P	19 10 27.2	+0.5
DLBC				IAmb	IAmb	19 10 30.2	
	comp=Z,137nm,0.8s						
MBAR	Mbarara	96.58	93	*i* P	P	19 10 30.5	+2.5
MBAR				pmax	pmax		
	comp=Z,21nm,1.3s						
MBAR	Mbarara	96.58	93	P	P	19 10 30.6	+2.7
BGES	Gesves	96.58	38	*d*P	P	19 10 26.9	+0.1
BCLA	Clavier	96.72	38	*d*P	P	19 10 27.6	+0.1
	comp=Z,32nm,2.1s						
CASP	Castiglione de	96.73	46	P	P	19 10 28.8	+1.1
ECH	Echery	96.78	40	P	P	19 10 28.2	+0.4
ECH				pmax	pmax		
	comp=Z,40nm,1.2s						
ECH	Echery	96.78	40	P	P	19 10 28.2	+0.4
KHLU	Kahalu`u	96.79	288	P	P	19 10 29.2	+0.6
WLF	Walferdange	96.85	39	*d*P	P	19 10 29.6	+1.5
	comp=Z,58nm,1.2s						
WLF	Walferdange	96.85	39	P	P	19 10 29.3	+1.2
WLF				pmax	pmax		
	comp=Z,87nm,1.2s						
WLF	Walferdange	96.85	39	P	P	19 10 29.2	+1.2
WLF	Walferdange	96.85	39	*e*Pdiff	P	19 10 30.5	+2.4
	baz=247,slow=4.6						
WLF				*e*PP	PP	19 14 23.8	-2.6
	baz=245,slow=7.5						
WLF				*e*PKKPab	PKKPdf	19 27 44.4	+32
	baz=63,slow=4.6						
BSTI	Sart Tilman	96.95	38	*d*P	P	19 10 30.6	+2.2
VLC	Villacollemand	97.00	45	P	Pdif	19 10 29.3	+0.3
VAE	Valguarnera	97.03	52	PKPPKP		19 35 21.1	
	comp=Z,14nm,0.5s,baz=70,slow=4.4,SNR=4.2						
BHOU	Houvegnez	97.09	38	*d*P	Pdif	19 10 31.2	+2.0
BHOU				*d*pP	pP	19 11 24.6	+3.7
BEBN	Eben Emael	97.11	38	*d*P	Pdif	19 10 30.9	+1.6
MEM	Membach	97.21	38	*d*P	Pdif	19 10 30.5	+0.8
BTNL	Ternell	97.27	38	*d*P	Pdif	19 10 31.0	+1.0
LATE	Laterza	97.29	47	P	Pdif	19 10 31.2	+0.8
SUMG	Summit	97.29	8	*i* P	Pdif	19 10 30.6	+0.5
	comp=Z,176nm,0.7s						
SUMG	Summit	97.29	8	*i* P	Pdif	19 10 30.6	+0.5
SUMG				pmax	pmax		
	comp=Z,180nm,0.7s						
SUMG	Summit	97.29	8	P	P	19 10 29.8	-0.3
SUMG	Summit	97.29	8	*i* P	Pdif	19 10 30.6	+0.5
SUMG				IAmb	IAmb	19 10 36.8	
	comp=Z,176nm,0.7s						
OSSC	Osservatorio P	97.30	46	P	Pdif	19 10 30.5	+0.2
ZCCA	Zocca	97.47	45	P	P	19 10 31.0	0.0
BFO	Black Forest	97.53	41	P	Pdif	19 10 31.6	+0.4
BFO				pmax	pmax		
	comp=Z,14nm,0.8s						
BFO	Black Forest	97.53	41	P	Pdif	19 10 31.6	+0.4
BFO	Black Forest	97.53	41	*e*Pdiff	Pdif	19 10 33.1	+1.9
	baz=247,slow=4.6						
BFO				*e*PP	PP	19 14 29.2	-2.5
	baz=245,slow=7.5						
KULLO	Kullorsuaq	97.60	3	*i* P	Pdif	19 10 31.5	+0.6
	comp=Z,26nm,0.8s						
KULLO	Kullorsuaq	97.60	3	*i* P	Pdif	19 10 31.5	+0.6
KULLO				pmax	pmax		
	comp=Z,26nm,0.8s						
KULLO	Kullorsuaq	97.60	3	*i* P	Pdif	19 10 31.6	+0.7
KULLO				IAmb	IAmb	19 10 33.1	
	comp=Z,26nm,0.8s						
SALO	Salr	97.71	44	P	Pdif	19 10 32.5	+0.4
AHRW	Bad Neuenahr-A	97.78	38	*e*Pdiff	Pdif	19 10 34.9	+2.6
	baz=247,slow=4.6						
DAVOX	Davos/Dischmat	97.80	42	P	Pdif	19 10 32.7	0.0
	comp=Z,57nm,0.9s,baz=228,slow=2.7,SNR=52						
DAVOX				PKKPbc	PKKPbc	19 27 05.5	-2.8
	comp=Z,3.4nm,0.5s,baz=181,slow=7.0,SNR=6.1						
DAVA	Damuels	98.01	42	*i* P	Pdif	19 10 36.7	+3.1
	comp=Z,28nm,0.7s,SNR=19						
DAVA				*e*P	PKKPbc	19 27 08.1	+0.4
	comp=Z,21nm,1.1s						
DAVA				*e*P	P'P'df	19 35 23.3	+2.9
	comp=Z,6.8nm,0.9s						
MURB	Monte Urbino	98.04	46	P	P	19 10 33.4	-0.2
STU	Stuttgart	98.24	40	P	Pdif	19 10 35.2	+0.9
STU				pmax	pmax		
	comp=Z,44nm,1.0s						
STU	Stuttgart	98.24	40	P	Pdif	19 10 35.2	+0.8
STU	Stuttgart	98.24	40	*e*Pdiff	Pdif	19 10 36.6	+2.3
	baz=247,slow=4.6						
STU				*e*PKKPbc	PKKPdf	19 27 08.0	-1.9
	baz=66,slow=2.8						
NRCA	Norcia	98.26	47	P	P	19 10 33.6	-1.1
AQU	L'Aquila	98.26	48	P	Pdif	19 10 34.7	0.0
AQU				pmax	pmax		
	comp=Z,49nm,0.9s						
AQU	L'Aquila	98.26	48	P	Pdif	19 10 34.7	0.0
BUG	Bochum--Univer	98.30	37	*e*Pdiff	Pdif	19 10 36.8	+2.3
	baz=247,slow=4.6						
BUG				*e*PKKPab	PKKPdf	19 27 37.1	+27
	baz=63,slow=4.6						
UBR	Ueberruh	98.32	42	*e*Pdiff	Pdif	19 10 37.4	+2.6
	baz=247,slow=4.6						
UBR				*e*PP	PP	19 14 33.7	-4.2
	baz=245,slow=7.5						
UBR				*e*PKKPbc	PKKPbc	19 27 07.7	+1.0
	baz=66,slow=2.8						
TEOL	Teolo	98.33	44	P	Pdif	19 10 35.1	+0.2
TEOL				IAmb	IAmb	19 10 39.3	
	comp=Z,84nm,0.8s						
JIS	Juneau Island	98.41	330	P	Pdif	19 10 34.8	0.0
TNS	Taunus Mts	98.43	39	*e*Pdiff	Pdif	19 10 37.5	+2.3
	baz=247,slow=4.6						
TNS				*e*PKKPab	PKKPdf	19 27 37.2	+27
	baz=63,slow=4.6						
FETA	Feichten	98.43	42	*i* P	Pdif	19 10 36.8	+1.4
	comp=Z,30nm,0.9s,SNR=36						
FETA				*e*P	PKKPbc	19 27 07.1	+0.6
	comp=Z,24nm,1.0s						
FETA				*e*P	P'P'df	19 35 17.5	-2.2
	comp=Z,6.6nm,1.3s						
SCO	Scoresbysund	98.45	14	*i* P	P	19 10 36.2	+1.5
	comp=Z,12nm,0.9s						
SCO	Scoresbysund	98.45	14	*i* P	P	19 10 36.2	+1.5
SCO				pmax	pmax		
	comp=Z,13nm,0.9s						
SCO	Scoresbysund	98.45	14	P	P	19 10 35.2	+0.5
SCO	Scoresbysund	98.45	14	*i* P	P	19 10 36.3	+1.5
SCO				IAmb	IAmb	19 10 38.4	
	comp=Z,12nm,0.9s						
INTR	Introdacqua	98.47	48	P	P	19 10 36.3	+0.7
CTI	Castel Tesino	98.60	44	P	P	19 10 37.1	+0.9
CTI				pmax	pmax		
	comp=Z,33nm,0.9s						
CTI	Castel Tesino	98.60	44	P	P	19 10 37.1	+0.9
RETA	Reutte	98.64	42	*e*P	P	19 10 36.7	+0.4
	comp=Z,34nm,0.8s,SNR=23						
RETA				*e*P	PKKPbc	19 27 06.1	+0.3
	comp=Z,8.3nm,0.6s						
BESE	Bessie Mountai	98.78	331		P	19 10 37.4	+0.8
BESE				IAmb	IAmb	19 10 40.1	
	comp=Z,83nm,0.9s						
MOTA	Moosalm	98.79	42	*i* P	P	19 10 37.7	+0.7
	comp=Z,23nm,0.8s,SNR=29						
MOTA				*e*S	SKSac	19 20 58.1	+2.6
	comp=Z,14nm,1.0s						
MOTA				*i* P	PKKPbc	19 27 05.8	+0.3
	comp=Z,28nm,0.8s,SNR=10.0						
MOTA				*e*S	SKKPbc	19 30 25.6	-3.0
MOTA				*e*P	P'P'df	19 35 21.4	+2.5
	comp=Z,4.0nm,0.7s						
SQTA	Sankt Quirin	98.81	42	*i* P	P	19 10 37.8	+0.7
	comp=Z,65nm,0.8s,SNR=51						
SQTA				*i* P	PKKPbc	19 27 05.8	+0.4
	comp=Z,22nm,0.7s,SNR=6.9						
KASTN	Kahler Asten	98.84	38	*e*Pdiff	P	19 10 39.0	+2.0
	baz=247,slow=4.6						
KASTN				*e*PKKPab	PKKPdf	19 27 35.3	+26
	baz=63,slow=4.6						
IBBN	Ibbenburen	98.95	37	*e*Pdiff	Pdif	19 10 39.7	+2.3
	baz=247,slow=4.6						
IBBN				*e*PKKPab	PKKPdf	19 27 34.3	+26
	baz=63,slow=4.6						
WATA	Walderalm	99.08	42	*i* P	Pdif	19 10 39.5	+1.1
	comp=Z,32nm,0.9s,SNR=26						
WATA				*e*P	PKKPbc	19 27 05.1	+0.5
	comp=Z,16nm,1.1s						
WATA				*e*P	P'P'df	19 35 20.7	+2.3
	comp=Z,7.6nm,1.1s						
WTTA	Wattenberg	99.09	42	*i* P	Pdif	19 10 39.3	+0.9
	comp=Z,58nm,0.8s,SNR=40						
WTTA				*e*S	SKSac	19 21 01.8	+4.8
	comp=Z,14nm,1.2s						
WTTA				*i* P	PKKPbc	19 27 05.1	+0.4
	comp=Z,19nm,0.6s,SNR=5.8						
WTTA				*e*S	SKKPbc	19 30 22.4	-5.4
	comp=Z,5.8nm,0.8s						
WTTA				*e*P	P'P'df	19 35 21.0	+2.6
	comp=Z,6.7nm,1.0s						
RES	Resolute Bay	99.20	353	P	Pdif	19 10 38.1	0.0
	comp=Z,8.8nm,0.7s,baz=177,slow=7.1,SNR=43						
RES	Resolute Bay	99.20	353	Pdif	Pdif	19 10 38.0	0.0
FUR	Furstenfeldbru	99.24	42	*e*Pdiff	Pdif	19 10 41.2	+2.4
	baz=247,slow=4.6						
FUR				*e*PP	PP	19 14 41.6	-3.2
	baz=245,slow=7.5						
FUR				*e*PKKPbc	PKKPbc	19 27 05.4	+1.3
	baz=66,slow=2.8						
TIP	Timpagrande	99.39	52	⇑P	Pdif	19 10 40.4	+0.6
TIP	Timpagrande	99.39	52	⇑P	PKKPbc	19 27 03.7	+0.4
TULEG	Thule	99.39	359	*i* P	Pdif	19 10 39.5	+0.7
TULEG				IAmb	IAmb	19 10 44.2	
	comp=Z,50nm,1.1s						
ABTA	Abfaltersbach	99.43	43	*i* P	Pdif	19 10 41.3	+1.5
	comp=Z,16nm,1.0s,SNR=14						
ABTA				*i* P	PKKPbc	19 27 03.7	+0.2
	comp=Z,16nm,0.8s,SNR=5.9						
UBBA	Unterbreizbach	99.58	39	*e*Pdiff	Pdif	19 10 42.5	+2.4
	baz=247,slow=4.6						
UBBA				*e*PKKPab	PKKPdf	19 27 31.7	+24
	baz=63,slow=4.6						
GRF	Grafenberg Arr	99.83	40	*e*Pdiff	Pdif	19 10 44.2	+2.7
	baz=247,slow=4.6						
HLG	Helgoland	99.84	35	*e*Pdiff	Pdif	19 10 43.8	+2.6
	baz=247,slow=4.6						
GTTG	Gottingen	99.86	38	*e*Pdiff	Pdif	19 10 44.1	+2.6
	baz=247,slow=4.6						
GTTG				*e*PP	PP	19 14 46.3	-3.0
	baz=245,slow=7.5						
GTTG				*e*PKKPab	PKKPdf	19 27 30.5	+23
	baz=63,slow=4.6						
SKDS	Skadanscina	99.92	45	*i* Pdiff	Pdif	19 10 44.0	+2.1
SKDS				*e*PP	PP	19 14 45.3	-4.7
SKDS				*e*pPP		19 15 33.0	
SKDS				*e*SKSac	SKSac	19 21 02.3	+1.4
SKDS				*e*SKKSac	SKKSac	19 21 35.5	+0.5
SKDS				*e*Sdiff	S	19 22 00.3	+2.1
SKDS				*e*		19 34 19.0	
RJOB	Jochberg	100.00	42	*e*Pdiff	Pdif	19 10 44.5	+2.2
	baz=247,slow=4.6						
RJOB				*e*PKKPbc	PKKPbc	19 27 02.9	+0.9
	baz=66,slow=2.8						
DUGI	Dugi Otok	100.01	46	*i* P	Pdif	19 10 43.1	+0.7
KBA	Koelnbreinsper	100.09	43	*i* P	Pdif	19 10 43.8	+1.0
	comp=Z,10nm,0.6s,SNR=14						
KBA				*e*S	SKSac	19 21 04.9	+3.0
	comp=Z,21nm,1.1s						
KBA				*e*P	PKKPbc	19 27 01.5	-0.3
	comp=Z,5.6nm,0.6s						
MYKA	Terra Mystica	100.10	44	*i* P	Pdif	19 10 44.3	+1.5
	comp=Z,11nm,0.6s,SNR=12						
MYKA				*e*S	SKSac	19 21 05.5	+3.7
	comp=Z,20nm,1.3s						
MYKA				*e*P	PKKPbc	19 27 01.8	+0.2
	comp=Z,5.5nm,0.8s						
NVLJ	Novalja	100.11	46	*i* P	Pdif	19 10 44.0	+1.3
CLZ	Clausthal	100.21	38	*e*Pdiff	Pdif	19 10 45.8	+2.7
	baz=247,slow=4.6						
CLZ				*e*PKKPab	PKKPdf	19 27 29.1	+23
	baz=63,slow=4.6						
ZIRJ	Zirje	100.28	47	*i* P	Pdif	19 10 44.2	+0.7
LJU	Ljubljana	100.44	44	*e*Pdiff	Pdif	19 10 46.5	+2.2
LJU				*e*pPdiff	pPdif	19 11 36.6	+0.6
LJU				*e*PP	PP	19 14 49.0	-4.9
LJU				*e*pPP		19 15 37.0	
LJU				*e*SKSac	SKSac	19 21 04.8	+1.5
LJU				*e*SKKSac	SKKSac	19 21 39.7	+1.0
LJU				*e*Sdiff		19 22 05.1	
LJU				*e*SS	SS	19 29 01.6	-2.0
LJU				*e*		19 31 20.7	
LJU				*e*		19 34 22.4	
ROTZ	Rotzenmuhle	100.44	40	*e*Pdiff	Pdif	19 10 46.9	+2.8
	baz=247,slow=4.6						
ROTZ				*e*PKKPab	PKKPdf	19 27 28.4	+22
	baz=63,slow=4.6						
MANZ	Manzenberg	100.47	40	*e*Pdiff	Pdif	19 10 47.2	+2.9
	baz=247,slow=4.6						
ASSE	Asse, Remlinge	100.50	38	*e*Pdiff	Pdif	19 10 47.3	+3.0
	baz=247,slow=4.6						
WET	Wettzell	100.60	41	*e*Pdiff	Pdif	19 10 47.4	+2.5
	baz=247,slow=4.6						
WET				*e*PKKPab	PKKPdf	19 27 27.8	+22
	baz=63,slow=4.6						
OBKA	Obir	100.63	44	*i* P	Pdif	19 10 46.5	+1.3
	comp=Z,11nm,0.8s,SNR=7.8						
OBKA				*e*S	SKSac	19 21 08.6	+4.2
	comp=Z,13nm,1.2s						
PLN	Plauen	100.70	40	*e*Pdiff	Pdif	19 10 47.9	+2.6
	baz=247,slow=4.6						
PLN				*e*PP	PP	19 14 52.5	-3.2
	baz=245,slow=7.5						
PLN				*e*PKKPbc	PKKPbc	19 27 01.1	+1.1
	baz=66,slow=2.8						
PLN				*e*PKKPab	PKKPdf	19 27 26.8	+21
	baz=63,slow=4.6						
WERN	Wernitzgruen	100.75	40	*e*Pdiff	Pdif	19 10 48.6	+3.1
	baz=247,slow=4.6						
WERN				*e*PKKPab	PKKPdf	19 27 26.6	+21
	baz=63,slow=4.6						
GUNZ	Gunzen	100.75	40	*e*Pdiff	Pdif	19 10 48.4	+2.8
	baz=247,slow=4.6						
GUNZ				*e*PKKPbc	PKKPbc	19 27 01.2	+1.3
	baz=66,slow=2.8						

GUNZ				*e*PKKPab	PKKPdf	19 27 26.8	+21
	baz=63,slow=4.6						
NEUB	Neuenburg	100.76	39	*e*Pdiff	Pdif	19 10 48.1	+2.6
	baz=247,slow=4.6						
NEUB				*e*PKKPab	PKKPdf	19 27 26.4	+21
	baz=63,slow=4.6						
NKC	Novy Kostel	100.77	40	*e*P	Pdif	19 10 46.7	+1.1
NKC				*e*		19 21 10.1	
NKC	Novy Kostel	100.77	40	*e*PDIFF	Pdif	19 10 46.7	+1.1
NKC				*e*SKS		19 21 10.1	
KMY	Karmoy	100.78	30	*e*Pdif	Pdif	19 10 47.2	+1.8
KMY				*e*SKSac	SKSac	19 21 06.8	+2.5
C36M	Paulatuk	100.85	342	Pdiff	Pdif	19 10 44.7	-0.7
	baz=128						
TANN	Tannenbergstha	100.85	40	*e*Pdiff	Pdif	19 10 48.8	+2.8
	baz=247,slow=4.6						
TANN				*e*PKKPbc	PKKPbc	19 27 00.8	+1.1
	baz=66,slow=2.8						
FLTG	Flechtingen	100.90	38	*e*Pdiff	Pdif	19 10 48.4	+2.3
	baz=247,slow=4.6						
FLTG				*e*PP	PP	19 14 55.1	-2.0
	baz=245,slow=7.5						
FLTG				*e*PKKPab	PKKPdf	19 27 25.1	+20
	baz=63,slow=4.6						
MOA	Molln	100.96	43	*i* P	Pdif	19 10 47.7	+1.2
	comp=Z,8.9nm,0.7s,SNR=10						
MOA				*e*S	SKSac	19 21 10.1	+4.3
	comp=Z,20nm,1.3s						
MOA				*e*P	PKKPbc	19 26 59.2	+0.1
	comp=Z,9.3nm,0.8s						
GEC2	GERESS Array S	100.99	42	*e*Pdiff	Pdif	19 10 49.1	+2.4
	baz=247,slow=4.6						
GEC2				*e*PP	PP	19 14 54.9	-3.1
	baz=245,slow=7.5						
GEC2				*e*PKKPbc	PKKPbc	19 27 00.5	+1.2
	baz=66,slow=2.8						
GEC2				*e*PKKPab	PKKPdf	19 27 25.8	+21
	baz=63,slow=4.6						
GERES	GERESS Array B	100.99	42	P	Pdif	19 10 46.8	+0.1
	comp=Z,6.3nm,1.0s,baz=226,slow=3.5,SNR=26						
GERES				PKiKP	PKiKP	19 15 11.6	+0.7
	comp=Z,3.8nm,0.6s,baz=147,slow=1.3,SNR=7.2						
GERES				PKKPbc	PKKPbc	19 26 59.0	-0.3
	comp=Z,7.7nm,0.7s,baz=69,slow=1.6,SNR=14						
GERES				SKKPbc	SKKPbc	19 30 20.1	-2.7
	comp=Z,1.2nm,0.7s,baz=73,slow=1.6,SNR=4.8						
GERES				PKPPKP		19 35 10.3	
	comp=Z,0.9nm,0.8s,baz=194,slow=1.1,SNR=5.1						
GERES	GERESS Array B	100.99	42	Pdif	Pdif	19 10 46.5	-0.2
SOKA	Soboth	101.01	44	*e*P	Pdif	19 10 49.4	+2.6
	comp=Z,3.2nm,0.8s						
SOKA				*e*P	PKKPbc	19 26 59.3	+0.2
	comp=Z,9.6nm,0.8s						
KHC	Kasperske Hory	101.02	41	*e*P	Pdif	19 10 48.1	+1.3
KHC				*e*		19 21 09.3	
KHC				*e*		19 22 09.8	
KHC				*e*		19 23 37.9	
KHC	Kasperske Hory	101.02	41	*e*PDIFF	Pdif	19 10 48.1	+1.3
KHC				*e*pP	pPdif	19 11 36.1	-2.4
KHC				*e*x	x	19 14 23.0	
KHC				*e*SKS		19 21 09.3	
KHC				*e*SDIF	SKKSac	19 22 09.8	+27
KHC				*e*x	x	19 23 37.9	
KHC				*e*PKKP	PKKPbc	19 26 58.5	-0.6
RICI	Ricice	101.23	48	P	Pdif	19 10 48.8	+1.0
SNART	Snartemo	101.30	31	*e*Pdif	Pdif	19 10 49.0	+1.3
SNART				*e*SKSac	SKSac	19 21 08.5	+1.7
SNART				*i*		19 22 09.0	
SNART				*e*SS	SS	19 29 13.6	-1.4
ASK	Askoy	101.33	29	*e*Pdif	Pdif	19 10 48.1	+0.4
ASK				*e*SKSac	SKSac	19 21 10.2	+3.4
ASK				*i*		19 22 11.8	
BER	Bergen	101.34	29	*e*Pdif	Pdif	19 10 48.1	+0.3
BER				IVmB_BB		19 10 49.4	
	comp=Z,4µm,5.6s						
BER				*e*SKSac	SKSac	19 21 09.9	+3.0
BER				*i*		19 22 09.8	
BER				*e*SP	SP	19 23 47.0	+4.7
CKRC	Cesky Krumlov	101.35	42	*e*PDIFF	Pdif	19 10 49.0	+0.8
CKRC				*e*x	x	19 11 41.9	
CKRC				*e*SKS		19 21 10.5	
STON	Ston	101.39	48	*i* P	Pdif	19 10 49.8	+1.3
SUE	Sulen	101.40	28	IVmB_BB		19 11 25.2	
	comp=Z,5µm,6.7s						
SUE				*e*SKSac	SKSac	19 21 10.5	+3.4
SUE				*i*		19 22 10.5	
SUE				*e*SS	SS	19 29 21.7	+5.6
BLS5	Blasjo	101.42	30	*e*Pdif	Pdif	19 10 51.8	+3.5
BLS5				IVmB_BB		19 11 07.5	
	comp=Z,4µm,4.8s						
BLS5				*e*SKSac	SKSac	19 21 11.8	+4.3
BLS5				*i*		19 22 12.0	
BLS5				*e*SS	SS	19 29 17.6	+1.0
MUD	Monsted U'grnd	101.47	33	*i* P	Pdif	19 10 50.0	+1.5
	comp=Z,32nm,1.1s						
MUD	Monsted U'grnd	101.47	33	*i* P	Pdif	19 10 50.0	+1.5
MUD				pmax	pmax		
	comp=Z,32nm,1.1s						
MUD	Monsted U'grnd	101.47	33	*i* P	Pdif	19 10 50.0	+1.5
MUD				IAmb	IAmb	19 10 52.1	
	comp=Z,32nm,1.1s						
PBCC	Pribram	101.48	41	*e*PDIFF	Pdif	19 10 52.2	+3.4
PBCC				*e*SKS		19 21 13.2	
CLL	Collm	101.51	39	*i* Pdif	Pdif	19 10 51.0	+2.2
	comp=Z,152nm,2.8s						
CLL				*e*pPdif	pPdif	19 11 40.0	-0.5
CLL				*e*		19 13 19.0	
CLL				*e*		19 14 23.0	
CLL				*e*		19 14 37.0	
CLL				*e*PP	PP	19 14 56.0	-5.7
CLL				*e*PKiKP	PKiKP	19 15 11.0	-0.6
CLL				*e*pPP		19 15 46.0	
CLL				*e*SKSac	SKSac	19 21 10.0	+1.8
CLL				*e*Sdif	Sdif	19 22 15.0	+3.9
CLL				*e*SP	SP	19 23 44.0	-0.4
CLL				*e*PPS	PPS	19 25 18.0	
CLL				*e*PKKPbc	PKKPbc	19 26 54.0	-3.7
CLL				*i*		19 27 21.6	
	comp=Z,28nm,1.5s						
CLL				*e*SS	SS	19 29 12.0	-6.1
CLL				*e*sSS		19 30 36.0	
CLL				*e*		19 31 56.0	
CLL				*e*SSS	SSS	19 33 18.0	
CLL				*e*sSSS		19 34 36.0	
CLL				*e*SSSS		19 36 54.0	
CLL				Lm	MLR	19 53 00.0	
	comp=N,2µm,22.0s						
CLL				Lm	MLR	19 53 00.0	
	comp=E,5µm,22.0s						
CLL	Collm	101.51	39	*i* P	Pdif	19 10 51.0	+2.2
CLL				*e*		19 15 11.0	
CLL				*e*		19 21 10.0	
CLL				*e*S	Sdif	19 22 15.0	+3.9
CLL				pmax	pmax		
	comp=Z,152nm,2.8s						
CLL				pmax	pmax		
	comp=Z,28nm,1.5s						
CLL	Collm	101.51	39	*e*Pdiff	Pdif	19 10 51.6	+2.8
	baz=247,slow=4.6						
CLL				*e*PP	PP	19 14 58.1	-3.6
	baz=245,slow=7.5						
CLL				*e*PKKPab	PKKPdf	19 27 22.7	+19
	baz=63,slow=4.6						
ARSA	Arzberg	101.53	44	*e*P	Pdif	19 10 55.1	+6.1
	comp=Z,5.3nm,0.6s						
ARSA				*e*S	SKSac	19 21 12.2	+3.6
	comp=Z,14nm,1.2s						
FBE	Freiberg	101.57	40	*e*Pdiff	Pdif	19 10 51.9	+2.9
	baz=247,slow=4.6						
FBE				*e*PP	PP	19 14 58.7	-3.4
	baz=245,slow=7.5						
FBE				*e*PKKPbc	PKKPbc	19 26 58.8	+1.3
	baz=66,slow=2.8						
FBE				*e*PKKPab	PKKPdf	19 27 23.1	+19
	baz=63,slow=4.6						
DBG	Daneborg	101.66	12	*i* P	Pdif	19 10 50.5	+1.5
DBG				IAmb	IAmb	19 10 52.4	
	comp=Z,7.2nm,0.9s						
KOGS	Kog	101.70	44	*i* Pdiff	Pdif	19 10 52.1	+2.3
KOGS				*e*SKSac	SKSac	19 21 11.4	+2.1
KOGS				*e*SKKSac	SKKSac	19 21 49.2	+1.6
KOGS				*e*Sdiff		19 22 17.0	
ODD1	Odda	101.72	30	*e*SKSac	SKSac	19 21 12.4	+3.5
FOO	Floro	101.77	28	*e*Pdif	Pdif	19 10 52.6	+2.9
FOO				IVmBBB		19 11 15.7	
	comp=Z,4µm,4.2s						
FOO				*e*SKSac	SKSac	19 21 12.5	+3.7
FOO				*i*		19 22 11.4	
FOO				*e*SS	SS	19 29 22.7	+1.6
PRA	Prague	101.89	41	*e*SKS		19 21 14.4	
HOMB	Homborsund	101.89	31	*e*Pdif	Pdif	19 10 53.8	+3.5
HOMB				IVmB_BB		19 11 13.9	
	comp=Z,3µm,4.7s						
HOMB				*e*SKSac	SKSac	19 21 12.6	+3.0
HOMB				*i*		19 22 14.3	
HOMB				*e*SP	SP	19 23 50.0	+1.8
HOMB				*e*SS	SS	19 29 23.5	+0.4
BRG	Berggiesshubel	101.90	40	⇓*e*Piff		19 10 52.6	
BRG				Amp		19 10 56.3	
	comp=Z,68nm,2.0s						
BRG				⇓pPiff		19 11 42.0	
BRG				PP	PKiKP	19 15 00.9	-11
BRG				Amp		19 15 03.4	
	comp=Z,105nm,2.4s						
BRG				PKiKP	PP	19 15 14.6	+10
BRG				Amp		19 15 17.0	
	comp=Z,17nm,1.4s						
BRG				⇑SKS		19 21 07.0	
BRG				⇓Siff		19 22 20.0	
BRG				SP	SP	19 23 47.0	-1.6
BRG				⇑PKKPb		19 26 56.2	
BRG				Amp		19 26 57.9	
	comp=Z,12nm,0.9s						
BRG				⇓PKKPf		19 27 20.1	
BRG				Amp		19 27 21.8	
	comp=Z,32nm,1.5s						
BRG				SS	SS	19 29 18.0	-5.5
BRG				PKPPKP		19 35 17.4	
BRG				Amp		19 35 18.3	
	comp=Z,5.7nm,1.6s						
BRG				Amp		19 53 24.0	
	comp=E,4.5nm,17.9s						
BRG				Amp		19 53 28.0	
	comp=Z,5.7nm,19.4s						
BRG				Amp		19 53 36.0	
	comp=N,2.5nm,17.8s						
BRG	Berggiesshubel	101.90	40	*e*PKKPbc	PKKPbc	19 26 57.7	+1.2
	baz=66,slow=2.8						
BRG				*e*PKKPab	PKKPdf	19 27 21.4	+18
	baz=63,slow=4.6						
PRU	Pruhonice	101.92	41	*e*P	Pdif	19 10 52.3	+1.6
PRU				*e*		19 21 14.3	
PRU	Pruhonice	101.92	41	*e*PDIFF	Pdif	19 10 52.3	+1.6
PRU				*e*SKS		19 21 14.3	
CONA	Conrad Observa	101.99	43	*i* P	Pdif	19 10 54.1	+2.9
	comp=N,2.3nm,0.5s,SNR=7.4						
CONA				*e*S	SKSac	19 21 15.6	+4.7
	comp=N,12nm,1.5s						
CONA				*e*P	PKKPbc	19 26 57.0	+0.7
	comp=N,8.0nm,0.6s						
JMIC	Jan Mayen	102.05	17	*e*SS	SS	19 29 27.9	+3.2
PVCC	Panska Ves	102.14	40	*e*P	Pdif	19 10 54.0	+2.4
PVCC				*e*		19 21 14.8	
PVCC	Panska Ves	102.14	40	*e*PDIFF	Pdif	19 10 54.0	+2.4
PVCC				*e*SKS		19 21 14.8	
TREC	Trest	102.25	42	*e*SKS		19 21 15.2	
KMBO	Kilima Mbogo	102.35	97	P	Pdif	19 10 56.8	+3.0
	comp=N,3.8nm,0.9s,baz=247,slow=1.3,SNR=7.6						
RUE	Ruedersdorf	102.40	38	*e*PKKPab		19 27 18.9	
	baz=63,slow=4.6						
KRUC	Moravsky	102.72	42	*e*PDIFF	Pdif	19 10 55.8	+1.5
KRUC				*e*PP	PP	19 15 09.0	-1.9
KRUC				*e*		19 21 14.9	
KRUC				*e*		19 22 24.6	
KRUC				*e*SP	SP	19 23 57.2	-0.2
KRUC				*e*PKKP	PKKPbc	19 26 54.7	+0.7
KRUC				*e*		19 27 17.2	
SKAR	Skarslia	102.80	29	*e*Pdif	Pdif	19 10 58.3	+3.9
SKAR				IVmB_BB		19 11 56.7	
	comp=Z,5µm,5.1s						
SKAR				*e*SKSac	SKSac	19 21 16.6	+2.6
SKAR				*i*		19 22 24.1	
SKAR				*e*SP	SP	19 24 00.2	+2.5
AKN	Aaknes	102.85	28	IVmB_BB		19 11 36.9	
	comp=Z,5µm,5.7s						
AKN				*e*SKSac	SKSac	19 21 17.3	+3.2
AKN				*i*		19 22 24.1	
AKN				*e*SS	SS	19 29 38.2	+2.0
VRAC	Vranov	102.93	42	P	Pdif	19 10 56.0	+0.8
	comp=Z,7.3nm,0.8s,baz=223,slow=4.1,SNR=9.7						
VRAC				PKiKP	PKiKP	19 15 15.5	+1.2
	comp=Z,5.1nm,0.9s,baz=17,slow=3.9,SNR=3.6						
VRAC	Vranov	102.93	42	⇑P	Pdif	19 10 56.8	+1.6
VRAC	Vranov	102.93	42	*e*PDIFF	Pdif	19 10 57.6	+2.4
VRAC				*e*PP	PP	19 15 10.1	-2.3
VRAC				*e*		19 21 17.5	
VRAC				*e*		19 22 26.5	
VRAC				*e*SP	SP	19 24 00.8	+1.2
VRAC				*e*PKKP	PKKPbc	19 26 54.2	+0.8
VRAC				*e*		19 27 16.6	
KONO	Kongsberg	102.97	30	*e*Pdif	Pdif	19 10 52.6	-2.5
KONO				*e*SKSac	SKSac	19 21 18.2	+3.5
KONO				*e*SP	SP	19 24 02.7	+3.3
KONO				*e*SS	SS	19 29 39.0	+1.1
UPC	Upice	102.99	41	*e*P	Pdif	19 10 57.7	+2.2
UPC				*e*		19 21 20.4	
UPC	Upice	102.99	41	*e*PDIFF	Pdif	19 10 57.7	+2.2
UPC				*e*SKS	SKSac	19 21 20.4	+5.2
MODS	Modra-Piesok	103.03	43	*e*P	Pdif	19 10 57.5	+1.8
MODS				*e*		19 21 10.3	
MODS				*e*S	Sdif	19 22 22.6	-1.4
MODS	Modra-Piesok	103.03	43	*e*PDIFF	Pdif	19 10 57.5	+1.8
CHVC	Chvalec	103.05	40	*e*PDIFF	Pdif	19 10 59.0	+3.3
CHVC				*e*SKS	SKSac	19 21 19.9	+4.4
DPC	Dobruska-Polom	103.12	41	*e*P	Pdif	19 10 57.1	+1.0
DPC				*e*		19 15 16.1	
DPC				*e*		19 21 20.4	
DPC	Dobruska-Polom	103.12	41	*e*PDIFF	Pdif	19 10 57.1	+1.0
DPC				*e*PP	PKiKP	19 15 16.1	+1.4
DPC				*e*SKS	SKSac	19 21 20.4	+4.5
INK	Inuvik	103.13	339	Pdiff	Pdif	19 10 55.6	+0.1
	comp=Z,20nm,0.8s,baz=92,slow=5.4,SNR=35						
INK				PKiKP	PKiKP	19 15 15.8	+1.7
	comp=Z,26nm,1.0s,baz=125,slow=8.0,SNR=5.1						
INK				PKKPbc	PKKPbc	19 26 51.5	-2.0
	comp=Z,11nm,0.6s,baz=309,slow=4.3,SNR=28						
INK	Inuvik	103.13	339	P	Pdif	19 10 53.9	-1.7
INK	Inuvik	103.13	339	Pdif	Pdif	19 10 53.9	-1.7
INK					PKKPbc	19 26 51.0	-2.5
OSTC	Ostas	103.13	41	*e*PDIFF	Pdif	19 10 58.0	+1.9
OSTC				*e*x	x	19 15 16.6	
OSTC				*e*SKS	SKSac	19 21 20.9	+5.0
MORH	Mrgy, Hungar	103.18	45	⇑P	Pdif	19 10 57.9	+1.5
MORH	Mrgy, Hungar	103.18	45	⇓P	PKKPbc	19 26 52.4	-0.2
OPO	Ambohidratompo	103.29	117	PKKPbc	PKKPbc	19 26 51.6	+0.3
	comp=Z,6.2nm,0.7s,baz=2.6,slow=3.1,SNR=6.9						
KRLC	Kraliky	103.31	41	*e*P	Pdif	19 10 58.8	+1.9
KRLC				*e*		19 15 17.0	
KRLC				*e*		19 21 21.5	
KRLC	Kraliky	103.31	41	*e*PDIFF	Pdif	19 10 58.8	+1.9
KRLC				*e*x	x	19 11 46.8	
KRLC				*e*PP	PP	19 15 17.0	+1.7
KRLC				*e*SKS	SKSac	19 21 21.5	+4.7
JAVC	Velka Javorina	103.44	43	*e*PDIFF	Pdif	19 10 59.4	+1.8
JAVC				*e*		19 21 20.7	
JAVC				*e*		19 22 32.4	
JAVC				*e*SP	SP	19 24 05.9	+0.9
JAVC				*e*PKKP	PKKPbc	19 26 53.8	+1.8
JAVC				*e*		19 27 15.2	
FRGS	Fruska Gora	103.60	47	⇑P	Pdif	19 11 00.9	+2.6
FRGS	Fruska Gora	103.60	47	⇓P	PKKPbc	19 26 52.3	+1.0
OSL	Oslo	103.61	30	*e*Pdif	Pdif	19 10 59.2	+1.3
OSL				*e*SKSac	SKSac	19 21 18.6	+1.1
OSL				*i*		19 22 29.0	
MORC	Moravsky Berou	103.67	42	⇓P	Pdif	19 10 59.8	+1.3
DOMB	Dombas	103.68	28	*e*Pdif	Pdif	19 11 00.3	+2.0
DOMB				IVmB_BB		19 13 05.1	
	comp=Z,6µm,4.8s						
DOMB				*e*PP	PP	19 15 17.9	+0.2
DOMB				*e*SKSac	SKSac	19 21 17.0	-0.9
DOMB				*i*		19 22 31.7	
DOMB				*e*SP	SP	19 24 11.6	+4.7
DOMB				*e*SS	SS	19 29 50.6	+3.0
DAG	Danmarks Havn	103.72	10	*i* P	Pdif	19 10 59.1	+1.0
	comp=Z,15nm,1.1s						
DAG	Danmarks Havn	103.72	10	*i* P	Pdif	19 10 59.1	+1.0
DAG				pmax	pmax		
	comp=Z,15nm,1.1s						
DAG	Danmarks Havn	103.72	10	*i* P	Pdif	19 10 59.1	+1.0
DAG				IAmb	IAmb	19 11 00.3	
	comp=Z,15nm,1.1s						
GRUS	Gruza	103.81	48	⇑P	Pdif	19 11 02.1	+2.8
VYHS	Vyhne	104.05	43	*e*P	Pdif	19 11 03.1	+2.9
VYHS				*e*		19 21 22.9	
VYHS				*e*S	Sdif	19 22 35.3	+2.8
VYHS	Vyhne	104.05	43	*e*PDIFF	Pdif	19 11 03.1	+2.9
NB2	NORSAR Subarra	104.25	29	PKKP	PKKPab	19 27 07.5	+1.9
	comp=Z,4.9nm,0.7s,baz=68,slow=1.9						
NB2	NORSAR Subarra	104.25	29	PKKP	PKKPab	19 27 07.5	+1.9
	baz=68,slow=1.9						
NOA	NORSAR Array B	104.25	29	Pdiff	Pdif	19 11 02.3	+1.5
	comp=Z,2.8nm,0.9s,baz=245,slow=4.5,SNR=4.8						
NOA				PP	PP	19 15 21.4	-0.5
	comp=Z,2.4nm,1.1s,baz=241,slow=7.4,SNR=5.4						
NOA				PKKPbc	PKKPbc	19 26 48.8	-1.2
	comp=Z,0.5nm,0.4s,baz=255,slow=2.9,SNR=4.4						
NOA				PKKP	PKKPab	19 27 06.2	+0.5
	comp=Z,4.6nm,0.6s,baz=76,slow=4.1,SNR=16						
NOA				PKPPKP		19 35 08.1	
	comp=Z,3.5nm,1.0s,baz=267,slow=3.1,SNR=3.7						
NC602	NORSAR Array S	104.29	30	*e*Pdif	Pdif	19 11 03.9	+2.9
NC602				*e*SKSac	SKSac	19 21 22.4	+1.7
NC602				*i*		19 22 34.6	
NC602				*e*SP	SP	19 24 15.3	+2.1
NC602				*e*SS	SS	19 29 58.9	+3.1
Q23K	Middleton Isla	104.51	329	Pdiff	Pdif	19 11 00.2	-1.7
	baz=111						
PSZ	Piszkesteto	104.54	44	⇓P	PKKPbc	19 26 49.6	+1.0
LANS	Liptovska Anna	104.66	43	*e*P	Pdif	19 11 07.0	+4.1
LANS	Liptovska Anna	104.66	43	*e*PDIFF	Pdif	19 11 07.0	+4.1
LANS				*e*		19 15 19.5	
TBLU	Trondheim	104.66	27	*e*Pdif	Pdif	19 11 02.7	+0.2
TBLU				*e*SKSac	SKSac	19 21 24.4	+2.1
TBLU				*i*		19 22 40.3	
TBLU				*e*SS	SS	19 30 02.4	+1.6
MDVR	Moldovita	104.77	47	⇓P	Pdif	19 11 05.9	+2.4
BZS	Buzias	104.96	47	⇑P	Pdif	19 11 06.3	+2.0
BZS	Buzias	104.96	47	⇑P	PKKPbc	19 26 46.9	-0.3
HFS	Hagfors	105.07	31	Pdiff	Pdif	19 11 07.0	+2.5
	comp=Z,3.0nm,0.8s,baz=260,slow=8.3,SNR=2.1						
HFS				PKiKP	PKiKP	19 15 18.2	+0.3
	comp=Z,5.4nm,0.8s,baz=242,slow=3.2,SNR=4.4						
HFS				PKKPbc	PKKPbc	19 26 46.1	-1.2
	comp=Z,3.0nm,0.4s,baz=98,slow=7.8,SNR=8.2						
HFS				PKKP	PKKPab	19 27 01.2	-0.8
	comp=Z,11nm,0.4s,baz=103,slow=4.7,SNR=22						
SCRK	Sand Creek	105.10	334	Pdiff	Pdif	19 11 05.4	+0.8
	baz=112						
VTS	Vitosha	105.16	50	⇑P	Pdif	19 11 07.2	+1.7
VTS	Vitosha	105.16	50	⇓P	PKKPbc	19 26 47.2	+0.6
SIRR	Siria	105.18	46	⇑P	PKKPbc	19 26 47.6	+1.0
OJC	Ojcow	105.19	42	*e*PKiKP	PKiKP	19 15 20.6	+2.2
NIE	Niedzica	105.26	43	*e*PKiKP	PKiKP	19 15 20.2	+1.6
HERR	Herculane	105.27	47	⇓P	Pdif	19 11 07.8	+2.1
HERR	Herculane	105.27	47	⇓P	PKKPbc	19 26 44.8	-1.3
M24K	Tolsona, Glenn	105.36	331	Pdiff	Pdif	19 11 06.3	+0.5
	baz=110						
PUNG	Punghina	105.45	48	⇓P	PKKPbc	19 26 46.1	+0.5
GZR	Gura Zlata	105.67	47	⇑P	PKKPbc	19 26 46.1	+1.0
NSS	Namsos	105.83	26	*e*Pdif	Pdif	19 11 05.7	-2.0
NSS				*e*PP	PP	19 15 36.4	+3.0
NSS				*e*SKSac	SKSac	19 21 31.4	+4.0
NSS				*i*		19 22 51.1	
NSS				*e*SP	SP	19 24 31.2	+2.3
NSS				*e*SS	SS	19 30 18.7	+2.2
DRGR		106.03	46	⇑P	PKKPbc	19 27 01.8	+18
UZH	Uzhgorod	106.28	44	*e*P	Pdif	19 11 11.0	+0.9
UZH				*i*		19 21 25.0	
UZH				*e*		19 24 36.0	
KOLS	Kolonicke sedl	106.35	43	*e*	PKiKP	19 15 24.9	+4.3
KOLS				*e*SDIFF		19 23 05.3	
LOT	Lotru	106.35	47	⇓P	PKKPbc	19 26 43.9	+0.8
HDA	Harding Lake	106.46	333	Pdiff	Pdif	19 11 08.9	-1.7
	baz=109						
ILAR	Eielson Array	106.56	334	Pdiff	Pdif	19 11 10.8	-0.1
	comp=Z,8.4nm,0.7s,baz=143,slow=3.2,SNR=56						
ILAR				PKiKP	PKiKP	19 15 20.4	-0.2
	comp=Z,3.5nm,0.8s,baz=116,slow=4.5,SNR=7.4						
ILAR				PKKPbc	PKKPbc	19 26 40.0	-2.9
	comp=Z,2.9nm,0.6s,baz=297,slow=3.4,SNR=13						
ILAR	Eielson Array	106.56	334	PKiKP	PKiKP	19 15 20.6	+0.1
CJR	Cluj-Napoca	106.59	46	⇑P	Pdif	19 11 15.3	+3.7
RC01	Rabbit Creek A	106.65	330	Pdiff	Pdif	19 11 11.0	-0.4
	baz=108						
POKR	Poker Plat Res	106.89	334	Pdiff	Pdif	19 11 12.4	-0.1
	baz=108						
ARR	Arges	106.92	47	⇑P	PKKPbc	19 26 42.3	+1.1
HUMR	Humele	106.92	48	⇑P	PKKPbc	19 26 42.1	+1.1
KONS	Konsvik	106.94	24	*e*Pdif	Pdif	19 11 16.6	+4.1
TCOL	CIGO, UAF Yank	106.98	334	Pdiff	Pdif	19 11 11.6	-1.2
	baz=108						
MCK	McKinley	107.08	333	Pdiff	Pdif	19 11 13.7	+0.3
	baz=107						
KDAK	Kodiak Island	107.09	326	PKKPbc	PKKPbc	19 26 40.2	-0.9
	comp=Z,12nm,0.6s,baz=274,slow=4.1,SNR=8.0						
KDAK	Kodiak Island	107.09	326		PKKPbc	19 26 39.6	-1.4
HOM	Homer	107.14	328	Pdiff	Pdif	19 11 14.6	+1.0
	baz=106						
ARCR	ARCALIA	107.19	46	⇑P	PKKPbc	19 26 40.3	-0.1
CAPN	Captain Cook N	107.22	329	Pdiff	Pdif	19 11 13.9	0.0
	baz=106						
VOIR		107.22	47	⇑P	PKKPbc	19 26 40.9	+0.6
CUT	Chulitna	107.28	331	Pdiff	Pdif	19 11 14.6	+0.4
	baz=107						
NEA2	Nenana	107.39	333	Pdiff	Pdif	19 11 15.2	+0.4
	baz=107						
LOF	Lofoten	107.61	23	*e*Pdif	Pdif	19 11 18.8	+3.2
LOF				*e*SKSac	SKSac	19 21 38.9	+3.8
LOF				*i*		19 23 11.1	
LOF				*e*SP	SP	19 24 51.3	+4.4
LOF				*e*SS	SS	19 30 42.3	+1.9
I23K	Minto, Yukon-K	107.67	334	Pdiff	Pdif	19 11 16.6	+0.7
	baz=107						
MLR	Muntele Rosu	107.84	48	PKiKP	PKiKP	19 15 24.7	+1.0
	comp=Z,8.2nm,0.5s,baz=241,slow=1.7,SNR=8.3						
MLR				PKKPbc	PKKPbc	19 26 38.4	0.0
	comp=Z,7.5nm,0.6s,baz=9.5,slow=4.6,SNR=9.2						
MLR	Muntele Rosu	107.84	48	⇑P	PKKPbc	19 26 40.0	+1.6
MLR	Muntele Rosu	107.84	48	PKiKP	PKiKP	19 15 23.7	+0.1
MLR					PKKPbc	19 26 38.1	-0.3
BURAR	Bucovina Array	107.90	45	⇑P	PKKPbc	19 26 52.8	+14
FAUS	Fauske	108.02	24	*e*Pdif	Pdif	19 11 19.1	+1.8
FAUS				IVmB_BB		19 11 54.2	
	comp=Z,9µm,4.7s						
FAUS				*e*SKSac	SKSac	19 21 39.4	+2.6
FAUS				*i*		19 23 07.2	
FAUS				*e*SS	SS	19 30 51.5	+5.5
PBUR	Paburge	108.04	36	*e*P	PKiKP	19 15 23.6	+0.2
STEI	Steigen	108.16	23	*e*Pdif	Pdif	19 11 15.4	-2.6
STEI				*e*SKSac	SKSac	19 21 42.9	+5.5
STEI				*i*		19 23 08.3	
STEI				*e*SP	SP	19 24 56.4	+3.9
STEI				*e*SS	SS	19 30 52.8	+5.0
MLY	Manley	108.20	334	Pdiff	Pdif	19 11 20.1	+1.8
	baz=105						
SUW	Suwalki	108.24	38	*e*PKiKP	PKiKP	19 15 25.4	+1.4
SUW	Suwalki	108.24	38	*e*P	PKiKP	19 15 24.8	+0.9
SUW	Suwalki	108.24	38	*e*P	PKKPbc	19 26 38.1	+0.8
BIZ	Bicaz	108.31	46	⇑P	Pdif	19 11 23.9	+4.7
BIZ	Bicaz	108.31	46	⇓P	PKKPbc	19 26 38.2	+1.4
PLOR	Plostina	108.41	47	⇓P	PKKPbc	19 26 51.7	+15
TESR	Tescani	108.57	47	⇑P	PKKPbc	19 26 36.8	+0.8
COLD	Coldfoot	108.57	336	Pdiff	Pdif	19 11 21.6	+1.7
	baz=105						
SLIT	Slitere, Latvi	108.62	35	*e*P	SP	19 24 58.9	+1.2
PABE	Paberze	109.03	37	*e*P	PKiKP	19 15 25.7	+0.3
PABE	Paberze	109.03	37	*e*P	PKKPbc	19 25 33.5	-61
PABE				IAML		19 26 36.1	
	comp=Z,19nm,0.4s						
MTSE	Matsula	109.65	34	*e*P	PKiKP	19 15 27.7	+1.3
TRO	Tromso	109.88	22	*e*Pdif	Pdif	19 11 27.0	+1.4
TRO				*e*SKSac	SKSac	19 21 47.0	+2.3
TRO				*i*		19 23 25.8	
TRO				*e*SP	SP	19 25 08.2	-1.1
TRO				*e*SS	SS	19 31 10.2	-0.7
ISAL	Salakas	110.25	37	*e*P	PKiKP	19 15 28.7	+1.1
ISAL	Salakas	110.25	37	*e*P	PS	19 25 32.9	-4.9
ISAL				IAML		19 26 32.9	
	comp=Z,6.5nm,0.4s						

IIGN	**Ignalina**	**110.26**	**37**	*e*P	**PKiKP**	**19 15 28.5**	**+0.8**
IIGN	**Ignalina**	**110.26**	**37**	*e*P	**PS**	**19 25 39.2**	**+1.3**
IIGN				IAML		19 26 32.7	
	comp=Z,5.5nm,0.5s						
KBS	**Kingsbay**	**110.31**	**12**	*e*Pdif	**Pdif**	**19 11 28.4**	**+1.1**
KBS				*e*PP	**PP**	**19 16 04.8**	**-0.7**
KBS				*e*SKSac	**SKSac**	**19 21 52.1**	**+6.0**
KBS				*e*SP	SP	19 25 11.9	-1.0
KBS				*e*SS	**SS**	**19 31 16.9**	**+0.7**
NACGM	**Naroch**	**110.49**	**38**	*i* PKP	**PKiKP**	**19 15 27.1**	**-1.0**
NACGM				*i* PKP	**PKiKP**	**19 15 27.1**	**-1.0**
NACGM				*i* PKP	**PKiKP**	**19 15 27.1**	**-1.0**
NACGM				*i* PPP	PPP	19 17 08.9	
NACGM				*i* SKS	SKSac	19 21 58.8	+11
NACGM				*i* SKKS	SKSdf	19 22 01.1	-19
NACGM				*i* S	**SKKSac**	**19 22 42.0**	**-6.8**
NACGM				*i* sS		19 23 34.0	
NACGM				*i* SSS	SSS	19 33 03.6	
NACGM				*i* LQ	LQ	19 44 26.7	
NACGM				*i* LR	LR	19 50 21.6	
IDID	**Didziasalis**	**110.54**	**38**	*e*P	**PKiKP**	**19 15 29.7**	**+1.5**
IDID	**Didziasalis**	**110.54**	**38**	*e*P	**PS**	**19 25 40.1**	**-0.4**
IDID				IAML		19 26 31.8	
	comp=Z,7.9nm,0.4s						
HSPB	**Hornsund (broa**	**110.56**	**14**	*e*Pdif	**Pdif**	**19 11 29.9**	**+1.4**
HSPB				*e*PP	**PP**	**19 16 07.9**	**+0.5**
HSPB				*i*		19 23 27.3	
HSPB				*e*SP	SP	19 25 22.4	+7.2
HSPB				*e*SS	**SS**	**19 31 16.9**	**-2.8**
BJO1	**Bjornoya**	**110.88**	**17**	*e*SP	SP	19 25 21.8	+3.5
BJO1				*e*SS	**SS**	**19 31 26.4**	**+2.4**
SPA0	**Spitsbergen Ar**	**110.99**	**13**	IVmB_BB		19 11 29.7	
	comp=Z,7µm,4.0s						
SPA0				*e*Pdif	**Pdif**	**19 11 30.9**	**+0.4**
SPA0				*e*SS	SS	19 31 30.2	+4.8
SPITS	**Spitsbergen Ar**	**110.99**	**13**	PKiKP	**PKiKP**	**19 15 29.6**	**+1.0**
	comp=Z,12nm,0.9s,baz=153,slow=2.8,SNR=6.9						
SPITS				PKKPbc	**PKKPbc**	**19 26 26.9**	**-2.2**
	comp=Z,8.2nm,0.6s,baz=94,slow=6.8,SNR=10						
MNK	**Minsk**	**111.04**	**39**	*e*PKIKP	**PKiKP**	**19 15 33.0**	**+3.8**
MNK				*e*		19 21 56.0	
MNK				*e*		19 31 40.0	
MNK	**Minsk**	**111.04**	**39**	*i* PKP	**PKiKP**	**19 15 30.3**	**+1.2**
	comp=E,5.0nm,1.9s						
MNK				*i* PKP	**PKiKP**	**19 15 30.3**	**+1.2**
	comp=N,57nm,1.7s						
MNK				*i* PKP	**PKiKP**	**19 15 30.3**	**+1.2**
	comp=Z,42nm,0.7s						
MNK				*i* PP	PP	19 16 24.3	+13
MNK				*i* PPP	PPP	19 18 51.6	
MNK				*i* PKS		19 19 05.9	
MNK				*i* SKS	SKSdf	19 21 57.4	-24
MNK				*i* PKKP	**PKKPab**	**19 26 32.2**	**-3.5**
MNK				*i* PKKS		19 30 08.6	
MNK				*i* SS	SS	19 32 05.5	+38
MNK				*i* SKKS	SKKSdf	19 33 25.1	-14
MNK				*i* SSS	SSS	19 35 47.6	
MNK				*i* LR	LR	20 00 09.3	
MNK				*i* LRM	MLR	20 04 14.9	
	comp=E,189nm,17.7s						
MNK				*i* LRM	MLR	20 04 14.9	
	comp=N,1µm,17.9s						
MNK				*i* LRM	MLR	20 04 14.9	
	comp=Z,1µm,16.9s						
VSU	**Vasula**	**111.11**	**34**	*e*P	**PKiKP**	**19 15 30.2**	**+1.1**
AKASG	**Malin Array Be**	**111.14**	**43**	Pdiff	**Pdif**	**19 11 34.9**	**+3.2**
	comp=Z,0.5nm,0.5s,baz=268,slow=3.8,SNR=4.9						
AKASG				PKiKP	**PKiKP**	**19 15 28.6**	**-0.9**
	comp=Z,30nm,0.7s,baz=265,slow=2.6,SNR=56						
AKASG				PP	**PP**	**19 16 10.8**	**-1.5**
	comp=Z,5.8nm,0.8s,baz=262,slow=5.8,SNR=6.4						
AKASG				SKP		19 18 45.2	
	comp=Z,6.7nm,0.8s,baz=268,slow=2.6,SNR=4.5						
AKASG				Sdiff		19 21 49.8	
	comp=Z,2.5nm,0.9s,baz=256,slow=4.7,SNR=5.1						
AKASG				PKKPbc	**PKKPbc**	**19 26 25.2**	**-2.6**
	comp=Z,15nm,0.5s,baz=65,slow=3.9,SNR=32						
AKASG				PKKPab	**PKKPab**	**19 26 38.2**	**+2.8**
	comp=Z,14nm,0.6s,baz=66,slow=4.3,SNR=6.9						
AKBB	**Malin Array Si**	**111.14**	**43***c*	*i*PKIKP	**PKiKP**	**19 15 29.4**	**-0.1**
FINES	**FINESS Array B**	**111.27**	**31**	Pdiff	**Pdif**	**19 11 34.9**	**+2.9**
	comp=Z,0.8nm,0.7s,baz=292,slow=4.4,SNR=1.1						
FINES				PKiKP	**PKiKP**	**19 15 30.3**	**+0.9**
	comp=Z,8.0nm,0.9s,baz=304,slow=1.2,SNR=10						
FINES				PKKPbc	**PKKPbc**	**19 26 24.9**	**-2.8**
	comp=Z,11nm,0.4s,baz=81,slow=4.1,SNR=23						
FINES				PKPPKP		19 34 53.6	
	comp=Z,3.8nm,0.9s,baz=155,slow=4.6,SNR=4.4						
FINES	**FINESS Array B**	**111.27**	**31**	PKiKP	**PKiKP**	**19 15 28.9**	**-0.6**
KTK1	**Kautokeino**	**111.27**	**23**	*e*Pdif	**Pdif**	**19 11 32.9**	**+1.0**
KTK1				*i*		19 23 32.9	
KTK1				*e*SS	SS	19 31 33.8	+4.3
DZM	**Mont Dzumac**	**111.55**	**233**	PKiKP	**PKiKP**	**19 15 32.2**	**+0.8**
	comp=Z,22nm,0.6s,baz=16,slow=4.3,SNR=30						
DZM				PKKPab	**PKKPab**	**19 26 36.6**	**-1.0**
	comp=Z,11nm,0.7s,baz=119,slow=20,SNR=4.0						
DZM	**Mont Dzumac**	**111.55**	**233**	*e*PP	**PP**	**19 16 09.6**	**-5.6**
	comp=Z,3µm,26.4s						
DZM				*e*SKSac	**SKSac**	**19 21 54.6**	**+0.5**
	comp=Z,4µm,29.9s						
DZM	**Mont Dzumac**	**111.55**	**233**	*e*PS	PS	19 25 50.0	-0.6
	comp=Z,9µm,29.8s						
DZM				*e*SS	SS	19 31 35.8	+1.7
	comp=Z,12µm,30.2s						
DZM	**Mont Dzumac**	**111.55**	**233**	*e*LR	LR	19 49 00.9	
	comp=Z,7µm,25.6s						
A21K	**Barrow**	**111.63**	**340**	Pdiff	**Pdif**	**19 11 34.0**	**+0.7**
	baz=98						
HAMF	**Hammerfest**	**111.66**	**21**	*e*Pdif	**Pdif**	**19 11 35.2**	**+1.7**
HAMF				*e*SKSac	**SKSac**	**19 21 52.7**	**+0.8**
HAMF				*i*		19 23 39.3	
HAMF				*e*SP	SP	19 25 26.1	+0.5
HAMF				*e*SS	**SS**	**19 31 36.6**	**+2.1**
MMAI	**Mount Meron Ar**	**111.90**	**62**	PKiKP	**PKiKP**	**19 15 32.2**	**+0.6**
	comp=Z,6.0nm,0.5s,baz=49,slow=2.5,SNR=15						
MMAI				PKKPbc	**PKKPbc**	**19 26 25.5**	**+0.7**
	comp=Z,8.2nm,0.5s,baz=70,slow=5.4,SNR=20						
MMAI				PKKPab	**PKKPab**	**19 26 36.0**	**+3.0**
	comp=Z,23nm,0.9s,baz=34,slow=2.2,SNR=5.5						
BRTR	**Keskin Array B**	**112.02**	**55**	PKiKP	**PKiKP**	**19 15 32.4**	**+0.6**
	comp=Z,15nm,0.7s,baz=194,slow=2.9,SNR=19						
BRTR				PP	**PP**	**19 16 20.2**	**+1.1**
	comp=Z,6.1nm,0.7s,baz=224,slow=6.9,SNR=3.7						
BRTR				PKKPbc	**PKKPbc**	**19 26 25.4**	**+0.7**
	comp=Z,2.5nm,0.5s,baz=129,slow=4.2,SNR=15						
BRTR				PKKPab	**PKKPab**	**19 26 34.1**	**+1.9**
	comp=Z,24nm,0.7s,baz=119,slow=3.3,SNR=30						
ARCES	**ARCESS Array B**	**112.14**	**22**	PKiKP	**PKiKP**	**19 15 31.6**	**+0.6**
	comp=Z,3.8nm,0.5s,baz=245,slow=2.6,SNR=8.9						
ARCES				PP	**PP**	**19 16 21.1**	**+2.2**
	comp=Z,9.9nm,0.9s,baz=308,slow=6.0,SNR=3.6						
ARCES				PKKPbc	**PKKPbc**	**19 26 22.8**	**-2.3**
	comp=Z,10nm,0.4s,baz=60,slow=3.4,SNR=13						
ARCES	**ARCESS Array B**	**112.14**	**22**		**PKiKP**	**19 15 31.2**	**+0.3**
HOPEN	**Hopen**	**112.64**	**15**	*e*Pdif	**Pdif**	**19 11 38.5**	**+0.7**
HOPEN				*i*		19 23 46.2	
HOPEN				*e*SP	SP	19 25 37.6	+3.2
HOPEN				*e*SS	**SS**	**19 31 52.0**	**+4.7**
APA	**Apatity**	**114.93**	**25**⥣	*i*PKIKP	PKPdf	19 15 37.3	+1.1
APA				*i*		19 16 39.2	
APA				*i*		19 21 59.0	
APA				*i* SS	SS	19 32 15.0	-2.7
APA				pmax	pmax		
	comp=Z,19nm,0.8s						
APA				MLR	MLR		
	comp=Z,5µm,16.0s						
ARMA	**Armidale**	**115.35**	**216**		**PKiKP**	**19 15 37.9**	**-0.6**
LVZ	**Lovozero**	**115.40**	**24***c*	*i*PKIKP	**PKiKP**	**19 15 39.8**	**+2.6**
LVZ				pmax	pmax		
	comp=Z,86nm,1.7s						
LVZ	**Lovozero**	**115.40**	**24**		**PKPdf**	**19 15 36.6**	**-0.6**
TNA	**Tin City**	**115.41**	**333**	Pdiff	**Pdif**	**19 11 51.0**	**+0.7**
	baz=90						
TNA	**Tin City**	**115.41**	**333**		**PKPdf**	**19 15 36.6**	**-0.6**
ANN	**Anapa**	**115.67**	**50**	*i* PKIKP	**PKiKP**	**19 15 39.0**	**+0.7**
ANN				*e*		19 22 08.5	
ANN				*e*SP	SP	19 26 05.1	+1.4
ANN				*e*SS	**SS**	**19 32 26.6**	**-2.0**
ANN				pmax	pmax		
	comp=Z,97nm,1.0s						
OBN	**Obninsk**	**116.10**	**39**	PKKPbc	PKKPbc	19 26 11.6	+0.5
	comp=Z,5.1nm,0.5s,baz=85,slow=2.5,SNR=4.2						
OBN	**Obninsk**	**116.10**	**39**		**PKPdf**	**19 15 37.8**	**-1.0**
MOS	**Moscow**	**116.73**	**38**	*i* PKIKP	**PKPdf**	**19 15 39.3**	**-0.7**
MOS				*e*		19 22 11.1	
MOS				*i* PS	**PKKPbc**	**19 26 05.0**	**-3.9**
MOS				pmax	pmax		
	comp=Z,74nm,1.0s						
TMCR	**Tamitsa**	**116.91**	**28**	*e*PKIKP	**PKPdf**	**19 15 39.7**	**-0.4**
TMCR				pmax	pmax		
	comp=Z,36nm,0.8s						
MARD	**Mardin**	**117.08**	**59**	PKPdf	**PKPdf**	**19 15 41.3**	**-0.2**
SOC	**Sochi**	**117.15**	**52**	*i* PKIKP	**PKiKP**	**19 15 41.4**	**+0.1**
SOC				*e*		19 16 56.3	
SOC				*e*PPP	PPP	19 19 26.3	
SOC				*i*		19 22 13.7	
SOC				*e*PS	PKKPab	19 26 20.2	+11
SOC				*e*SS	SS	19 32 42.2	-5.8
SOC				*e*SSS	SSS	19 37 12.5	
SOC				pmax	pmax		
	comp=Z,99nm,0.6s						
LPSR	**Galich'ya Gora**	**117.37**	**41**	*e*PKIKP	**PKiKP**	**19 15 41.6**	**+0.2**
LPSR				*e*		19 22 14.6	
LPSR				*e*SP	SP	19 26 14.8	-3.8
LPSR				pmax	pmax		
	comp=Z,160nm,0.8s						
VSR	**Storozhevoye**	**117.44**	**43**	*e*PKIKP	**PKPdf**	**19 15 40.6**	**-1.0**
VSR				*e*		19 22 14.0	
VSR				*e*SP	SP	19 26 15.8	-3.6
VSR				pmax	pmax		
	comp=Z,60nm,0.7s						
GUZR	**Guzeripl'**	**117.49**	**51***c*	*i*PKIKP	**PKiKP**	**19 15 43.6**	**+1.6**
GUZR				pmax	pmax		
	comp=Z,22nm,0.7s						
VORD	**Divnogorie**	**117.51**	**43**	*e*PKIKP	**PKiKP**	**19 15 41.6**	**-0.1**
VORD				pmax	pmax		
	comp=Z,80nm,0.5s						
KLMR	**Klimovskoe**	**117.73**	**32**	*e*PKIKP	**PKPdf**	**19 15 40.9**	**-0.9**
KLMR				*e*		19 16 55.8	
KLMR				pmax	pmax		
	comp=Z,77nm,0.8s						
KLMR	**Klimovskoe**	**117.73**	**32**	*e*PKPdf	**PKPdf**	**19 15 40.9**	**-0.9**
KLMR				AMP		19 15 44.7	
	comp=Z,77nm,0.8s						
KLMR				*e*PP	**PP**	**19 16 55.9**	**-2.4**
KLMR				*e*SKP		19 18 58.9	
KLMR				*e*SKKSac	**SKKSac**	**19 23 38.7**	**+1.3**
KLMR				*e*SKKSac	**SKKSac**	**19 23 38.7**	**+1.3**
KLMR				*e*PKKPbc	**PKKPbc**	**19 26 02.8**	**-2.8**
KLMR				*e*SKKP		19 29 43.8	
RAYN	**Ar Rayn**	**118.26**	**75**	*i* PKiKP	**PKiKP**	**19 15 44.3**	**+0.1**
	SNR=12						
RAYN	**Ar Rayn**	**118.26**	**75**	PKIKP	**PKPdf**	**19 15 43.7**	**-0.4**
RAYN	**Ar Rayn**	**118.26**	**75**	PKPdf	**PKPdf**	**19 15 43.7**	**-0.4**
ATKA	**Atka Island**	**118.54**	**318**	PKPdf	**PKiKP**	**19 15 44.2**	**+0.5**
STKA	**Stephens Creek**	**119.04**	**207**	PKP	**PKPdf**	**19 15 45.0**	**-0.4**
	comp=Z,20nm,0.8s,baz=109,slow=1.7,SNR=24						
STKA				SKP		19 19 02.0	
	comp=Z,12nm,0.9s,baz=60,slow=3.8,SNR=4.2						
STKA				PKKPbc	**PKKPbc**	**19 25 60.0**	**-0.5**
	comp=Z,15nm,0.8s,baz=322,slow=5.7,SNR=14						
STKA	**Stephens Creek**	**119.04**	**207**	PKPdf	**PKPdf**	**19 15 44.4**	**-1.0**
VRH	**Novokhopyorsk**	**119.05**	**43**	*e*PKIKP	**PKiKP**	**19 15 44.7**	**0.0**
VRH				*e*		19 22 19.7	
VRH				*e*SP	SP	19 26 27.2	-6.6
VRH				pmax	pmax		
	comp=Z,120nm,0.8s						
NEY	**Neytrino**	**119.30**	**52**	*i* PKIKP	**PKiKP**	**19 15 46.8**	**+1.1**
KIV	**Kislovodsk**	**119.33**	**51**	*i* PKiKP	**PKiKP**	**19 15 45.6**	**0.0**
	SNR=21						
KIV	**Kislovodsk**	**119.33**	**51**	*e*P	**Pdif**	**19 12 09.2**	**+0.8**
KIV				*i*		19 15 46.2	
KIV				*e**PP	pPKPdf	19 16 33.3	-6.5
KIV				*e**SP	sPKPdf	19 16 56.3	-4.7
KIV				*e*		19 17 07.9	
KIV				*e*		19 22 23.2	
KIV				*e*SS	SS	19 33 16.9	+0.6
KIV				pmax	pmax		
	comp=Z,225nm,1.0s						
KIV	**Kislovodsk**	**119.33**	**51**	PKPdf	**PKiKP**	**19 15 45.5**	**-0.2**
KVAR	**Kislovodsk Arr**	**119.33**	**51**	PKP	**PKiKP**	**19 15 45.4**	**-0.2**
	comp=Z,15nm,0.5s,baz=265,slow=23,SNR=14						
KBZ	**Khabaz**	**119.46**	**52**	PKP	**PKiKP**	**19 15 46.0**	**+0.2**
	comp=Z,64nm,0.9s,baz=223,slow=5.1,SNR=71						
KBZ				PKKPbc	**PKKPab**	**19 26 02.3**	**+3.1**
	comp=Z,7.4nm,0.7s,baz=120,slow=6.7,SNR=13						
KBZ	**Khabaz**	**119.46**	**52***d*	*i*PKIKP	**PKiKP**	**19 15 46.3**	**+0.6**
EIDS	**Eidsvold**	**119.53**	**220**	PKPdf	**PKPdf**	**19 15 44.4**	**-2.1**
GOF	**Gofitskoye**	**119.66**	**50**⥣	*i*PKIKP	**PKiKP**	**19 15 47.5**	**+1.4**
GOF				pmax	pmax		
	comp=Z,189nm,0.7s						
AKH	**Akhalkalaki**	**119.70**	**54**	⥣P	**PKKPab**	**19 26 02.5**	**+3.9**
NCK	**Nalchik**	**119.95**	**52**	*i* PKIKP	**PKiKP**	**19 15 47.3**	**+0.5**
ADK	**Adak**	**120.08**	**318**	PKIKP	**PKPdf**	**19 15 45.5**	**-1.1**
ADK	**Adak**	**120.08**	**318**		**PKPdf**	**19 15 45.5**	**-1.1**
ZEI	**Tsey**	**120.12**	**53**	*i* PKIKP	**PKPdf**	**19 15 46.9**	**-0.4**
ZEI				pmax	pmax		
	comp=Z,46nm,0.9s						
GNI	**Garni**	**120.52**	**56**	PKP	**PKiKP**	**19 15 48.6**	**+0.4**
	comp=Z,61nm,0.7s,baz=342,slow=2.9,SNR=56						
GNI				PKKPbc	**PKKPbc**	**19 25 57.9**	**+2.8**
	comp=Z,6.1nm,0.5s,baz=6.5,slow=2.1,SNR=4.1						
GNI	**Garni**	**120.52**	**56**	PKiKP	**PKiKP**	**19 15 48.8**	**+0.6**
RST	**Umm Al-Ruwaisa**	**120.87**	**68**	*e*P		19 15 48.9	
MIB	**Mutribah**	**121.21**	**68**	*e*P		19 15 50.0	
RDF	**Al-Radifah**	**121.23**	**69**	*e*P		19 15 49.6	
UMR	**Umm Al-Rimmam**	**121.49**	**69**	*e*P		19 15 50.1	
GROC	**Groznyy**	**121.53**	**52**	*i* PKIKP	**PKiKP**	**19 15 51.0**	**+1.1**
GROC				*e*		19 17 29.5	
GROC				*e*		19 22 29.3	
GROC				*e*		19 22 42.5	
GROC				pmax	pmax		
	comp=Z,60nm,0.9s						
BELG	**Belogornoye**	**122.68**	**42**	PKP	**PKPdf**	**19 15 51.4**	**-0.2**
	comp=Z,208nm,0.7s,baz=290,slow=1.7,SNR=52						
BELG				PKKPbc	**PKKPbc**	**19 25 46.1**	**-0.9**
	comp=Z,73nm,0.6s,baz=358,slow=0.7,SNR=35						
SOCY	**Socotra**	**122.74**	**90**	PKPdf	**PKiKP**	**19 15 52.9**	**-0.3**
MAK	**Makhachkala**	**122.77**	**53**	*e*P	**Pdif**	**19 12 24.7**	**+1.1**
MAK				*i*		19 15 52.8	
MAK				*e*		19 16 41.8	
MAK				*e*		19 17 33.6	
MAK				*e*PPP	PPP	19 20 10.4	
MAK				*e*		19 22 34.1	
MAK				*e*SS	SS	19 34 03.2	+3.2
MAK				*e*SSS	SSS	19 38 37.8	
MAK				pmax	pmax		
	comp=Z,231nm,1.3s						
MAK				MLR	MLR		
	comp=Z,2µm,19.0s						
KIRV	**Kirov**	**122.95**	**34**	PKKPbc	PKKPbc	19 25 45.4	-0.7
	comp=Z,15nm,0.5s,baz=32,slow=1.1,SNR=13						
KIRV	**Kirov**	**122.95**	**34***d*	*i*PKIKP	**PKiKP**	**19 15 51.9**	**-0.2**
HNR	**Honiara**	**124.11**	**240**	PKP	**PKiKP**	**19 15 55.4**	**-0.4**
	comp=Z,136nm,0.6s,baz=259,slow=0.9,SNR=12						
HNR	**Honiara**	**124.11**	**240**		**PKPdf**	**19 15 55.2**	**-0.4**
HNR	**Honiara**	**124.11**	**240**	P	**PKiKP**	**19 15 56.8**	**+1.0**
NWAO	**Narrogin (SRO)**	**124.20**	**184**	PKP	**PKiKP**	**19 15 55.1**	**-0.5**
	comp=Z,75nm,0.6s,baz=135,slow=3.8,SNR=45						
NWAO				SKP		19 19 11.9	
	comp=Z,22nm,0.9s,baz=215,slow=4.7,SNR=3.8						
NWAO	**Narrogin (SRO)**	**124.20**	**184**	PKPdf	**PKPdf**	**19 15 54.9**	**-0.4**
FORT	**Forrest**	**124.63**	**195**	PKPdf	**PKiKP**	**19 15 56.5**	**0.0**
SHAO	**Shalim**	**126.01**	**84**	*i* PKiKP	**PKiKP**	**19 15 59.2**	**-0.3**
	SNR=13						
CTA	**Charters Tower**	**126.42**	**219**	PKP	**PKiKP**	**19 16 00.1**	**-0.3**
	comp=Z,91nm,0.5s,baz=159,slow=3.6,SNR=93						
CTA				PP	**PP**	**19 17 58.3**	**+1.4**
	comp=Z,15nm,0.9s,baz=153,slow=4.6,SNR=4.2						
CTA				SKP		19 19 16.7	
	comp=Z,37nm,1.1s,baz=180,slow=2.9,SNR=4.8						
CTAO	**Charters Tower**	**126.42**	**219**	PKIKP	**PKiKP**	**19 15 59.7**	**-0.6**
CTAO	**Charters Tower**	**126.42**	**219**	PKPdf	**PKiKP**	**19 15 59.7**	**-0.6**
AJN	**Ajban**	**126.95**	**76**	PKiKP	**PKiKP**	**19 16 02.1**	**+1.0**
ASUD	**Al Ashush, Dub**	**127.27**	**76**	*i* PKiKP	**PKiKP**	**19 16 01.5**	**-0.3**
	SNR=9.0						
FAQ	**Al Faqa, Dubai**	**127.52**	**76**	*i* PKiKP	**PKiKP**	**19 16 02.2**	**-0.1**
	SNR=23						
ALNE	**Al Ain**	**127.53**	**77**	*i* PKiKP	**PKiKP**	**19 16 02.3**	**0.0**
	SNR=21						
NAZ	**Nazwa, Dubai**	**127.63**	**76**	*i* PKiKP	**PKiKP**	**19 16 02.6**	**+0.1**
	SNR=8.6						
ASHO	**Ashiyiah**	**127.93**	**76**	*i* PKiKP	**PKiKP**	**19 16 03.0**	**-0.2**
	SNR=11						
HATD	**Hatta, Dubai**	**128.02**	**76**	*i* PKiKP	**PKiKP**	**19 16 03.0**	**-0.3**
	SNR=12						
MORW	**Morawa**	**128.10**	**183**	PKPdf	**PKPdf**	**19 16 02.2**	**-0.6**
UOSS	**Minazif**	**128.11**	**76**	*i* PKiKP	**PKPdf**	**19 16 02.7**	**-0.1**
	SNR=9.3						
UOSS	**Minazif**	**128.11**	**76**	PKPdf	**PKPdf**	**19 16 01.8**	**-1.0**
MSFE	**Esma-Masafi**	**128.14**	**75**	*i* PKiKP	**PKiKP**	**19 16 03.1**	**-0.5**
	SNR=9.5						
SHME	**Shamm**	**128.24**	**74**	*i* PKiKP	**PKPdf**	**19 16 02.8**	**-0.3**
	SNR=37						
ARU	**Arti**	**128.25**	**35**	SKPbc	SKiKP	19 19 03.0	-16
	comp=Z,35nm,1.1s,baz=296,slow=3.2,SNR=12						
ARU	**Arti**	**128.25**	**35**	*i* PKIKP	**PKiKP**	**19 16 03.1**	**+0.3**
ARU						19 18 09.9	
ARU	**Arti**	**128.25**	**35**	PKPdf	**PKPdf**	**19 16 01.9**	**-0.2**
SOHO	**SOHO**	**128.25**	**77**	*i* PKiKP	**PKPdf**	**19 16 03.0**	**-0.1**
	SNR=36						
MDH	**Madha**	**128.25**	**75**	*i* PKiKP	**PKPdf**	**19 16 02.7**	**-0.4**
	SNR=7.9						
BANOM	**Banah**	**128.36**	**74**	*i* PKiKP	**PKPdf**	**19 16 03.1**	**-0.3**
	SNR=10						
SVE	**Sverdlovsk**	**129.21**	**34**	*e*PKIKP	**PKiKP**	**19 16 05.6**	**+0.9**
SVE				pmax	pmax		
	comp=Z,70nm,0.9s						
AKTO	**Aktyubinsk**	**129.39**	**43**	PKP	**PKiKP**	**19 16 04.7**	**-0.6**
	comp=Z,62nm,0.7s,baz=288,slow=1.1,SNR=13						
AKTO				SKPbc	SKPbc	19 19 07.3	+0.5
	comp=Z,77nm,1.1s,baz=290,slow=2.2,SNR=15						
ASAR	**Alice Springs**	**129.43**	**205**	Pdiff	**Pdif**	**19 12 54.5**	**+0.6**
	comp=Z,0.2nm,0.9s,baz=157,slow=4.1,SNR=1.6						
ASAR				PKP	**PKiKP**	**19 16 05.7**	**-0.6**
	comp=Z,97nm,0.7s,baz=130,slow=1.6,SNR=55						
ASAR				PP	**PP**	**19 18 14.8**	**-1.4**
	comp=Z,19nm,1.0s,baz=155,slow=5.8,SNR=6.8						
ASAR				SKPbc	SKPbc	19 19 07.0	-0.9
	comp=Z,36nm,0.8s,baz=149,slow=4.0,SNR=9.1						
ASAR				PKKPbc	PKKPdf	19 25 23.4	-46
	comp=Z,1.3nm,0.9s,baz=342,slow=3.7,SNR=4.3						
ASAR				PKKP		19 26 10.1	
	comp=Z,2.5nm,0.6s,baz=357,slow=1.6,SNR=9.1						
ASAR				SKKPbc	**SKKPbc**	**19 28 58.8**	**+7.4**
	comp=Z,3.4nm,0.9s,baz=349,slow=3.5,SNR=5.0						
ASAR				PKPPKP	**P'P'df**	**19 34 18.1**	**-3.7**
	comp=Z,0.7nm,0.8s,baz=3.3,slow=1.3,SNR=4.8						
ASAR	**Alice Springs**	**129.43**	**205**	PKHKP	PKPpre	19 15 52.1	
ASAR						19 16 05.1	
ASAR	**Alice Springs**	**129.43**	**205**		PKPpre	19 15 52.1	
ASAR				PKPdf	**PKPdf**	**19 16 05.1**	**-0.5**
ASAR				PP	**PP**	**19 18 13.3**	**-2.8**
WSAR	**Wadi Sarin**	**129.96**	**78**	PKP	**PKPdf**	**19 16 06.4**	**0.0**
	comp=Z,88nm,0.8s,baz=246,slow=2.4,SNR=53						
WSAR				SKPbc	SKPab	19 19 09.9	0.0
	comp=Z,185nm,1.2s,baz=270,slow=4.9,SNR=23						
TIXI	**Tiksi**	**130.59**	**354***d*	*i*PKIKP	**PKiKP**	**19 16 06.5**	**-0.5**
GEYT	**Alibeck**	**130.84**	**59**	PKhKP	PKPpre	19 15 58.8	
	comp=Z,2.8nm,0.5s,baz=304,slow=4.7,SNR=5.5						
GEYT				PKP	**PKiKP**	**19 16 08.1**	**-0.5**
	comp=Z,25nm,0.8s,baz=254,slow=5.4,SNR=25						
GEYT				SKPbc	**SKPab**	**19 19 12.9**	**-0.2**
	comp=Z,119nm,1.0s,baz=252,slow=7.2,SNR=30						
GEYT				PKKP	**PKKPdf**	**19 26 08.5**	**+0.7**
	comp=Z,3.0nm,0.7s,baz=179,slow=5.8,SNR=3.4						
GEYT				SKKPbc	**SKKPbc**	**19 28 54.9**	**+5.8**
	comp=Z,5.3nm,1.0s,baz=211,slow=11,SNR=4.5						
GEYT	**Alibeck**	**130.84**	**59**		PKPpre	19 15 56.9	
ABKAR	**Akbulak array**	**130.85**	**44**		PKPpre	19 15 56.3	
ABKAR	**Akbulak array**	**130.85**	**44**		PKPpre	19 15 55.6	
NRIK	**Noril'sk**	**131.19**	**12**	PKP	**PKiKP**	**19 16 08.3**	**-0.1**
	comp=Z,28nm,0.8s,baz=27,slow=1.1,SNR=21						
NRIK				SKPbc	**SKPab**	**19 19 13.2**	**-0.3**
	comp=Z,73nm,0.9s,baz=317,slow=2.0,SNR=13						
NRIK	**Noril'sk**	**131.19**	**12***d*	*i*PKIKP	**PKiKP**	**19 16 08.6**	**+0.3**
NRIK	**Noril'sk**	**131.19**	**12**	PKPdf	**PKiKP**	**19 16 08.0**	**-0.3**
NRIK				SKPbc	**SKPab**	**19 19 12.6**	**-0.9**
SEY	**Seymchan**	**132.35**	**337**	SKPbc	**SKPab**	**19 19 17.6**	**-1.0**
	comp=Z,54nm,0.8s,baz=96,slow=3.9,SNR=4.3						
SEY				PKKP		19 26 04.3	
	comp=Z,3.3nm,0.5s,baz=284,slow=3.7,SNR=6.5						
SEY	**Seymchan**	**132.35**	**337**	*i* PKIKP	**PKiKP**	**19 16 10.3**	**-0.5**
WRA	**Warramunga Arr**	**132.59**	**207**	PKhKP	PKPpre	19 15 51.8	
	comp=Z,2.2nm,0.4s,baz=166,slow=2.4,SNR=28						
WRA				PKP	**PKiKP**	**19 16 12.8**	**0.0**
	comp=Z,64nm,0.5s,baz=158,slow=1.8,SNR=39						
WRA				PP	**PP**	**19 18 35.2**	**-1.4**
	comp=Z,49nm,1.3s,baz=154,slow=5.3,SNR=11						
WRA				SKPbc	**SKPab**	**19 19 18.7**	**-2.4**
	comp=Z,53nm,0.7s,baz=154,slow=3.4,SNR=17						
WRA				SKKPbc	**SKKPbc**	**19 28 45.6**	**+5.5**
	comp=Z,7.2nm,0.9s,baz=351,slow=6.2,SNR=8.9						
WRAB	**Tennant Creek**	**132.60**	**207***c*	*i*PKIKP	**PKiKP**	**19 16 13.3**	**+0.5**
WRAB				pmax	pmax		
	comp=Z,289nm,1.7s						
COEN	**Coen**	**133.02**	**221**		PKPpre	19 15 58.5	
RABL	**Rabaul**	**133.42**	**239**		**PKPdf**	**19 16 13.0**	**-0.3**
RABL	**Rabaul**	**133.42**	**239**	P	**PKiKP**	**19 16 15.0**	**+0.4**
PMG	**Port Moresby**	**133.77**	**230**	PKhKP	PKPpre	19 16 00.9	
	comp=Z,30nm,0.8s,baz=125,slow=4.6,SNR=8.2						
PMG				PKP	**PKiKP**	**19 16 14.9**	**-0.3**
	comp=Z,115nm,0.8s,baz=22,slow=7.3,SNR=6.7						
PMG				SKPbc	**SKPab**	**19 19 23.9**	**-2.5**
	comp=Z,313nm,1.1s,baz=82,slow=3.1,SNR=16						
PMG	**Port Moresby**	**133.77**	**230**		PKPpre	19 16 00.4	
HRA	**Herat**	**134.22**	**64**		PKPpre	19 16 01.5	
PET	**Petropavlovsk**	**134.56**	**323***c*	*i*PKIKP	**PKiKP**	**19 16 14.6**	**-1.0**
PET				pmax	pmax		
	comp=Z,771nm,1.7s						
PET	**Petropavlovsk**	**134.56**	**323**		PKPpre	19 16 02.8	
MA2	**Magadan**	**135.04**	**334***c*	*i*PKIKP	**PKiKP**	**19 16 16.8**	**+0.4**
MA2				pmax	pmax		
	comp=Z,97nm,1.7s						
MA2	**Magadan**	**135.04**	**334**		PKPpre	19 16 04.5	
PEA0B	**Petropavlovsk-**	**135.06**	**323**	PKHKP	PKPpre	19 16 03.9	
PEA0B	**Petropavlovsk-**	**135.06**	**323**		PKPpre	19 16 03.9	
PETK	**Petropavlovsk-**	**135.06**	**323**	PKhKP	PKPpre	19 16 04.7	
	comp=Z,41nm,0.6s,baz=89,slow=3.0,SNR=33						
PETK				PKP	**PKiKP**	**19 16 16.8**	**+0.1**
	comp=Z,80nm,0.8s,baz=83,slow=5.4,SNR=18						
PETK				SKPbc	**SKPbc**	**19 19 26.5**	**-0.1**
	comp=Z,114nm,0.9s,baz=87,slow=6.1,SNR=17						
PETK	**Petropavlovsk-**	**135.06**	**323**		PKPpre	19 16 04.2	
PSA00	**Pilbara Seismi**	**135.18**	**189**		PKPpre	19 16 03.1	
MBWA	**Marble Bar**	**135.60**	**189**	P	**PKPdf**	**19 16 16.2**	**-1.0**
BRVK	**Borovoye**	**135.79**	**36***d*	*i*PKIKP	**PKiKP**	**19 16 18.9**	**+0.8**
BRVK	**Borovoye**	**135.79**	**36**		PKPpre	19 16 04.8	
BRVK	**Borovoye**	**135.79**	**36**	P	**PKiKP**	**19 16 17.4**	**-0.8**
BVAR	**Borovoye Array**	**135.86**	**36**	PKP	**PKiKP**	**19 16 18.5**	**+0.2**
	comp=Z,39nm,0.7s						
BVAR				SKPbc	**SKPab**	**19 19 29.8**	**-4.5**
	comp=Z,5.3nm,0.6s,baz=208,slow=5.9,SNR=3.8						
SKR	**Severo-Kuril’s**	**136.94**	**321**	*i* PKIKP	**PKPdf**	**19 16 17.6**	**-1.0**
SKR				pmax	pmax		
	comp=Z,1µm,5.4s						
SKR				MLR	MLR		
	comp=Z,700nm,20.0s						
FITZ	**Fitzroy Crossi**	**137.36**	**197**	PKhKP	PKPpre	19 16 07.1	
	comp=Z,8.1nm,0.4s,baz=318,slow=1.1,SNR=51						
FITZ				PKP	**PKiKP**	**19 16 22.7**	**+0.2**
	comp=Z,96nm,0.7s,baz=188,slow=6.4,SNR=23						
FITZ				SKPbc	**SKiKP**	**19 19 35.2**	**-4.0**
	comp=Z,92nm,0.9s,baz=172,slow=1.8,SNR=19						
FITZ	**Fitzroy Crossi**	**137.36**	**197**		PKPpre	19 16 08.2	
BRZS	**Berezniki**	**138.46**	**39**	*e*PKP	**PKPdf**	**19 16 22.0**	**+0.4**
	baz=39						
BRZS				*e*PP	**PP**	**19 19 15.6**	**+1.6**
	baz=39						
BRZS	**Berezniki**	**138.46**	**39**	*e*PKIKP	**PKPdf**	**19 16 21.9**	**+0.4**
BRZS				*e*		19 19 15.6	
MMPI	**Merauke**	**138.98**	**223**	PKP	**PKiKP**	**19 16 25.1**	**-0.7**
IUG	**Iuzhnay**	**139.36**	**52**	*e*PKP	**PKPdf**	**19 16 24.3**	**+0.7**
	baz=52						
IUG	**Iuzhnay**	**139.36**	**52**	*e*PKIKP	**PKPdf**	**19 16 24.2**	**+0.7**
KK31	**Karatay Array**	**139.46**	**50**	PKHKP	PKPpre	19 16 14.4	
KK31	**Karatay Array**	**139.46**	**50**		PKPpre	19 16 14.4	
KKAR	**Karatay Array**	**139.46**	**50**	PKHKP	PKPpre	19 16 14.7	
KKAR	**Karatay Array**	**139.46**	**50**		PKPpre	19 16 14.7	
YAK	**Yakutsk**	**139.48**	**348**	*e*PKHKP	PKPpre	19 16 14.1	
YAK				pmax	pmax		
	comp=Z,106nm,0.9s						
YAK				pmax	pmax		
	comp=N,4.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,434nm,3.0s						
YAK				pmax	pmax		
	comp=N,278nm,2.8s						
YAK				pmax	pmax		
	comp=E,263nm,2.7s						
YAK	**Yakutsk**	**139.48**	**348**		PKPpre	19 16 13.1	
KBL	**Kabul**	**139.82**	**63**	PKHKP	PKPpre	19 16 16.9	

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KBL   Kabul              139.82  63          PKPpre  19 16 16.9
MTN   Manton Dam         140.28 208          PKPpre  19 16 16.6
KURK  Kurchatov          141.44  36  i PKIKP PKiKP   19 16 28.6 -1.1
KURK  Kurchatov          141.44  36          PKPpre  19 16 20.7
KURK  Kurchatov          141.44  36   P      PKPdf   19 16 18.0 -8.9
KURBB Kurchatov Arra     141.44  36   SKPbc  SKiKP   19 19 45.9 -0.7
      comp=E,53nm,1.0s,baz=303,slow=3.2,SNR=7.0
KURBB                                 PKKP           19 25 46.4
      comp=E,1.4nm,0.8s,baz=98,slow=2.0,SNR=4.1
KURBB                                 SKKPbc SKKPbc  19 28 08.3 -1.5
      comp=E,11nm,1.2s,baz=118,slow=4.0,SNR=4.7
EKS2  Erkin-Say          141.89  50   P      PKPdf   19 16 24.8 -3.4
      SNR=39
AML   Almayashu          141.99  50   P      PKPdf   19 16 25.4 -3.4
      SNR=38
USP   Ospenovka          142.19  48   P      PKPdf   19 16 27.3 -1.2
      SNR=38
SGDS  Sogindy            142.22  48  ePKP    PKPdf   19 16 27.6 -1.0
      baz=48
SGDS  Sogindy            142.22  48  ePKIKP  PKPdf   19 16 27.6 -1.0
AAK   Ala-Archa          142.40  49   PKP    PKPdf   19 16 26.8 -2.3
      comp=E,40nm,0.9s,baz=236,slow=3.8,SNR=4.6
AAK                                   SKPbc  SKiKP   19 19 49.1 +0.1
      comp=E,124nm,1.0s,baz=164,slow=1.4,SNR=8.9
AAK                                   SKKPbc SKKPbc  19 28 06.7 +0.9
      comp=E,8.6nm,0.9s,baz=315,slow=2.3,SNR=5.3
AAK   Ala-Archa          142.40  49   P      PKPdf   19 16 26.2 -2.9
      SNR=68
AAK   Ala-Archa          142.40  49  i PKPdf PKPdf   19 16 26.3 -2.9
      SNR=90
ZALV  Zalesovo Beam      142.43  28   PKP    PKPdf   19 16 26.2 -2.3
      comp=E,198nm,0.7s,baz=305,slow=4.1,SNR=131
ZALV                                  SKPbc  SKiKP   19 19 47.5 -0.9
      comp=E,42nm,0.8s,baz=300,slow=3.3,SNR=3.6
ZALV                                  SKKPbc SKKPbc  19 28 05.0 -1.1
      comp=E,7.5nm,0.9s,baz=132,slow=2.1,SNR=4.1
ZALV  Zalesovo Beam      142.43  28          PKPdf   19 16 25.3 -3.3
CHMS  Chumysh            142.46  49   P      PKPdf   19 16 26.5 -2.5
      SNR=38
UCH   Uchtor             142.54  50   P      PKPdf   19 16 27.5 -2.2
      SNR=58
KBK   Karagaybulak       142.71  49   P      PKPdf   19 16 27.5 -2.1
      SNR=89
POO   Poona              142.89  89⇓iP      PKPdf   19 16 26.0 -4.5
TKM2  Tokmak 2           143.07  48   P      PKPdf   19 16 29.2 -1.1
      SNR=36
JAY   Jayapura           143.15 230   PKP    PKPbc   19 16 29.3 +0.7
      comp=E,171nm,0.7s,baz=187,slow=5.5,SNR=53
JAY                                   SKPbc  SKiKP   19 19 51.2 -0.1
      comp=E,152nm,1.0s,baz=242,slow=4.2,SNR=7.4
JAY   Jayapura           143.15 230   PKP    PKPab   19 16 27.0 -0.1
JAY                                   PKP    PKPbc   19 16 29.0 +0.4
KUU   Kurty              143.22  47  ePKP    PKPdf   19 16 29.5 -0.8
      baz=47
KUU   Kurty              143.22  47  ePKIKP  PKPdf   19 16 29.5 -0.8
GENI  Genyem             143.47 229   PKP    PKPdf   19 16 30.7 -1.0
NKL   Nikolayevsk        143.49 332  i PKHKP PKPpre  19 16 26.8
NKL                                  e               19 19 46.1
NKL                                  ePPP    PPP     19 23 00.5
NKL                                   MLR    MLR
      comp=E,4µm,24.0s
NKL                                   MLR    MLR
      comp=N,251nm,21.0s
NKL                                   MLR    MLR
      comp=Z,2µm,20.0s
MTBS  Maitube            143.56  48  ePKP    PKPdf   19 16 30.1 -0.9
      baz=48
MTBS  Maitube            143.56  48  ePKIKP  PKPdf   19 16 30.1 -0.9
CHKK  Chushkaly          143.67  46  ePKP    PKPdf   19 16 30.9 -0.3
      baz=46
CHKK  Chushkaly          143.67  46  ePKIKP  PKPdf   19 16 30.8 -0.3
ULHL  Ulahol             143.75  49   P      PKPdf   19 16 32.0 +0.4
      SNR=50
AAA   Alma-Ata           143.86  47  ePKP    PKPdf   19 16 30.6 -1.0
      baz=48
AAA   Alma-Ata           143.86  47  ePKIKP  PKPbc   19 16 30.5 +0.6
TNSS  Tian-Shan          143.95  48  ePKP    PKPdf   19 16 31.3 -0.9
      baz=48
TNSS  Tian-Shan          143.95  48  ePKIKP  PKPdf   19 16 31.2 -0.9
MDOK  Medeo              143.97  47  ePKP    PKPdf   19 16 31.3 -0.6
      baz=48
MDOK  Medeo              143.97  47  ePKIKP  PKPdf   19 16 31.2 -0.6
TDK   Taldyqorghan       144.12  44  ePKP    PKPdf   19 16 31.3 -0.6
      baz=44
TDK   Taldyqorghan       144.12  44  ePKIKP  PKPdf   19 16 31.3 -0.6
TYV   Tymovskoe          144.12 328  ePKIKP  PKPdf   19 16 30.7 -0.9
TYV                                   pmax   pmax
      comp=Z,389nm,0.8s
KUR   Kuril'sk           144.27 317  i PKIKP PKiKP   19 16 34.9 -0.8
KUR                                  e               19 19 55.1
KUR                                  ePPP    PPP     19 23 13.0
KUR                                  e               19 32 25.2
KUR                                  eSS     SS      19 38 18.0 -0.1
KSH   Kashi              144.40  54   PKP    PKPbc   19 16 31.6 -0.1
KSH                                   pPKP   pPKPdf  19 17 20.6 -6.3
KSH                                   PP     PP      19 19 51.6 +0.9
KSH                                   PKS    PKSdf   19 20 05.4 -2.9
KSH                                   SKKS           19 26 19.0
KSH                                   SS     SS      19 38 17.3 -3.3
KSH                                   AMB    AMB
      comp=Z,4µm,5.8s
KSH                                   LR     LR
      comp=Z,5µm,20.6s
KSH                                   LR     LR
      comp=Z,2µm,16.8s
KSH                                   LR     LR
      comp=Z,7µm,21.7s
SAUI  Saumlaki           144.49 212   PKPdf  PKPab   19 16 31.7 -0.5
SAUI  Saumlaki           144.49 212   PKP    PKPbc   19 16 32.4 -0.1
PALK  Pallekele          144.93 111   PKP    PKPdf   19 16 34.2  0.0
      comp=Z,149nm,0.9s,baz=353,slow=3.6,SNR=34
PALK                                  SKPbc  SKiKP   19 19 55.2 +0.2
      comp=Z,46nm,0.8s,baz=353,slow=3.7,SNR=6.1
SATY  Saty               144.93  47  ePKP    PKPab   19 16 33.9 +0.5
      baz=47
SATY  Saty               144.93  47  ePKIKP  PKPab   19 16 33.8 +0.5
KPKS  Kokpek             144.95  46  ePKP    PKPab   19 16 34.1 +0.8
      baz=46
KPKS  Kokpek             144.95  46  ePKIKP  PKPab   19 16 34.1 +0.8
BOD   Bodaibo            145.28 359  ePKIKP  PKPdf   19 16 32.9 -0.5
BOD                                   pmax   pmax
      comp=Z,1µm,1.4s
UZB   Uzynbulak          145.31  46  ePKP    PKPab   19 16 35.1 +0.3
      baz=47
UZB   Uzynbulak          145.31  46  ePKP2   PKPab   19 16 35.0 +0.3
MAKZ  Makanchi           145.42  39   PKIKP  PKPbc   19 16 34.4  0.0
MAKZ  Makanchi           145.42  39   PKPdf  PKPbc   19 16 34.4  0.0
BATI  Baumata            145.42 198   PKPbc  PKPab   19 16 36.2 +0.4
      comp=Z,1µm,0.7s,baz=191,slow=0.6,SNR=141
BATI  Baumata            145.42 198   PKP    PKPab   19 16 36.4 +0.7
MK31  Makanchi Array     145.61  39d iPKIKP  PKPbc   19 16 34.8 -0.2
MK31  Makanchi Array     145.61  39          PKPdf   19 16 34.5 +0.1
MKAR  Makanchi Array     145.61  39   PKPbc  PKPbc   19 16 34.9 -0.1
      comp=Z,696nm,0.7s,baz=309,slow=3.1,SNR=576
MKAR                                  SKPbc  SKiKP   19 19 55.8 +0.5
      comp=Z,52nm,0.9s,baz=283,slow=2.1,SNR=5.8
MKAR                                  SKKPbc SKKPbc  19 27 49.8 -2.9
      comp=Z,28nm,0.9s,baz=120,slow=3.8,SNR=15
MKAR  Makanchi Array     145.61  39   PKPdf  PKPbc   19 16 34.7 -0.3
SOEI  Soe                145.67 199          PKPab   19 16 36.3 -0.5
SOEI  Soe                145.67 199   PKP    PKPab   19 16 37.1 +0.3
XMIS  Christmas Isla     145.82 166          PKPab   19 16 36.5 -0.7
DHRM  DHARAMSHALA        146.08  66  i P     PKPdf   19 16 35.7 -0.2
DHRM                                 i pP    pPKPdf  19 17 29.8 -0.4
BASI  Baing, Sumba       146.17 193   PKP    PKPbc   19 16 37.2 -0.4
YSS   Yuzh-Sakhalins     146.45 323c iPKIKP  PKPbc   19 16 36.5 -0.9
YSS                                  e               19 20 01.7
YSS                                  eSS     SS      19 38 45.2 +2.7
YSS                                   pmax   pmax
      comp=Z,770nm,0.8s
YSS                                   pmax   pmax
      comp=Z,18µm,8.0s
YSS                                   MLR    MLR
      comp=Z,3µm,17.0s
YSS   Yuzh-Sakhalins     146.45 323   PKPdf  PKPdf   19 16 35.9 +0.2
DGZ   Jazzator, Alta     146.53  31  i PKIKP PKPdf   19 16 36.5 +0.5
DGZ                                  i               19 16 40.0
SRPI  Serui, Papua       146.65 225   PKP    PKPbc   19 16 38.8 -0.2
ZSN   Zaisan             146.68  36  ePKP    PKPdf   19 16 36.9 +0.7
      baz=36
ZSN   Zaisan             146.68  36  ePKIKP  PKPdf   19 16 36.8 +0.7
WSI   Waingapu           146.76 193   PKP    PKPab   19 16 39.8 -1.0
HYB   Hyderabad          146.94  93  i PKP   PKPab   19 16 41.0 -0.6
      comp=Z,2µm,1.5s
HYB                                  esPKP           19 17 37.0
HYB                                  ePP     PP      19 20 00.0 -6.2
HYB                                  eSKKS           19 26 32.0
GRNR  Gornyy             147.03 333⇓iPKIKP  PKPab   19 16 39.9 -1.1
GRNR                                  pmax   pmax
      comp=N,10.0nm,0.7s
GRNR                                  pmax   pmax
      comp=E,20nm,0.7s
GRNR                                  pmax   pmax
      comp=Z,120nm,1.2s
GRNR                                  MLR    MLR
      comp=E,340nm,14.0s
BHPL  Bhopal             147.03  82  eP      PKPdf   19 16 36.6 -0.9
MDRS  Chennai            147.08 102  eP      PKPbc   19 16 39.1 -1.0
MDRS                                 i pP    pPKPdf  19 17 34.2 +2.3
NDI   New Delhi          147.11  73  eP      PKPdf   19 16 37.0 -0.4
NDI                                  eS      SKKSac  19 26 33.5 -4.9
BAKI  Biak               147.25 226   PKP    PKPbc   19 16 41.1 +0.4
MMRI  Maumere            147.31 196   PKPdf  PKPdf   19 16 37.8 -0.4
MMRI  Maumere            147.31 196   PKP    PKPdf   19 16 38.7 +0.5
EDFI  Ende, Flores       147.34 195   PKP    PKPdf   19 16 38.9 +0.5
DDI   Dehra Dun          147.75  69  eP      PKPbc   19 16 40.2 -1.5
DDI                                  i pP    pPKPdf  19 17 35.9 +3.0
PLAI  Plampang           148.01 188   PKP    PKPdf   19 16 40.5 +1.1
JKA   Kamikawa-asahi     148.10 318   PKPdf  PKPdf   19 16 39.3 +0.7
ASAJ  Asahikawa          148.10 318   PKIKP  PKPdf   19 16 39.3 +0.7
BNDI  Bandanaira         148.16 213   PKP    PKPbc   19 16 41.9 -1.2
TWSI  Taliwang, Sumb     148.20 187   PKP    PKPdf   19 16 39.7  0.0
FAKI  Fak Fak            148.26 218   PKPdf  PKPdf   19 16 38.2 -1.6
FAKI  Fak Fak            148.26 218   PKP    PKPbc   19 16 41.5 -1.9
DNP   Denpasar           148.40 184   PKP    PKPbc   19 16 43.0 -0.7
JAGI  Jajag, Banyuwa     148.65 182          PKPdf   19 16 39.3 -1.1
JAGI  Jajag, Banyuwa     148.65 182   PKP    PKPdf   19 16 41.3 +0.9
GUMO  Guam               148.68 258   PKP    PKPdf   19 16 41.7 +1.3
      comp=E,1µm,0.8s,baz=170,slow=12,SNR=15
GUMO                                  PKPbc  PKPbc   19 16 44.6 +0.2
      comp=E,1µm,0.8s,baz=180,slow=8.5,SNR=33
ERM   Erimo              148.78 314c iPKHKP  PKPpre  19 16 44.8
ERM                                   pmax   pmax
      comp=Z,626nm,0.8s
ERM   Erimo              148.78 314          PKPbc   19 16 43.5 -0.4
ANA2  Anatahan           148.84 264          PKPbc   19 16 43.9 -0.8
SRBI  Singaraja          148.99 184   PKP    PKPdf   19 16 40.9  0.0
UGM   Wanagama           149.09 175   PKP    PKPdf   19 16 42.4 +1.2
CISI  Cisompet, Garu     149.09 169   PKPdf  PKPdf   19 16 40.7 -0.5
CISI  Cisompet, Garu     149.09 169   PKP    PKPdf   19 16 42.4 +1.2
ABJI  Asem Bagus         149.32 182   PKP    PKPbc   19 16 44.3 -1.7
JEW   Eniwo              149.48 317   PKPdf  PKPdf   19 16 41.1 +0.3
LEM   Lembang            149.77 169   PKP    PKPdf   19 16 43.1 +0.7
      comp=Z,269nm,0.9s,baz=123,slow=8.1,SNR=29
LEM                                   PKPbc  PKiKP   19 16 47.5 -0.7
      comp=Z,2µm,0.6s,baz=16,slow=3.6,SNR=79
LEM   Lembang            149.77 169   PKP    PKPdf   19 16 43.4 +1.0
DBJI  Dramaga            149.87 167   PKP    PKPdf   19 16 43.8 +1.4
MOY   Mondy              149.90  15  ePKIKP  PKPdf   19 16 43.1 +1.7
MOY                                   pmax   pmax
      comp=Z,1µm,1.9s
SMRI  Semarang           149.94 174   PKP    PKPdf   19 16 43.3 +0.8
IRK   Irkutsk            150.05  11  ePKIKP  PKPdf   19 16 43.1 +1.6
IRK                                   pmax   pmax
      comp=Z,910nm,0.8s
KMMI  Kalianget          150.06 181   PKP    PKPbc   19 16 45.0 -2.8
KLR   Kul'dur            150.12 335   PP     PP      19 20 23.4 +0.6
      comp=Z,25nm,1.0s,baz=22,slow=6.1,SNR=5.2
BSSI  Bau Bau, Buton     150.14 194   PKP    PKPbc   19 16 45.2 -2.8
KASI  Kota Agung         150.30 162   PKP    PKPdf   19 16 44.3 +1.3
WMQ   Urumqi             150.43  39   PKPbc  PKPdf   19 16 42.6 +0.2
WMQ                                   PP     PP      19 20 31.3 +6.0
WMQ                                   SKKS           19 26 55.6
WMQ                                   AMB    AMB
      comp=Z,2µm,11.7s
WMQ                                   LR     LR
      comp=Z,2µm,23.3s
WMQ                                   LR     LR
      comp=Z,3µm,23.3s
WMQ                                   LR     LR
      comp=Z,3µm,20.5s
TLY   Talaya             150.47  12d iPKIKP  PKPdf   19 16 42.9 +0.7
TLY                                  e               19 16 58.1
TLY                                  e               19 17 40.2
TLY                                   pmax   pmax
      comp=Z,264nm,1.6s
TLY                                   pmax   pmax
      comp=Z,331nm,0.7s
TLY   Talaya             150.47  12   PKPdf  PKPdf   19 16 42.5 +0.3
SIJI  Sorong             150.50 219   PKP    PKPdf   19 16 43.7 +0.3
      comp=Z,89nm,0.7s,baz=32,slow=4.7,SNR=30
SIJI                                  PKPbc  PKiKP   19 16 49.8 +0.2
      comp=Z,1µm,0.7s,baz=12,slow=5.4,SNR=100
SWI   Sorong             150.50 219   PKP    PKPdf   19 16 44.1 +0.7
LWLI  Liwa               150.65 161   PKP    PKPdf   19 16 44.8 +1.1
BLSI  Bandar Lampung     150.66 163   PKP    PKPdf   19 16 45.6 +2.0
MNAI  Manna              150.92 158          PKiKP   19 16 49.9 -0.6
MNAI  Manna              150.92 158   PKP    PKPdf   19 16 45.9 +1.9
TEY   Ternei             151.00 325⇓ePKIKP  PKPdf   19 16 43.6 +0.5
TEY                                  e               19 20 28.2
TEY                                   pmax   pmax
      comp=E,10.0nm,1.2s
TEY                                   pmax   pmax
      comp=N,10.0nm,1.4s
TEY                                   pmax   pmax
      comp=Z,20nm,1.0s
TEY                                   pmax   pmax
      comp=N,130nm,0.7s
TEY                                   pmax   pmax
      comp=E,180nm,0.7s
TEY                                   pmax   pmax
      comp=Z,800nm,0.7s
TEY                                   pmax   pmax
      comp=Z,600nm,11.8s
BKSI  Bulukumba          151.02 194   PKP    PKPdf   19 16 45.0 +0.9
CIT   Chita              151.09 360  ePKIKP  PKPdf   19 16 45.7 +2.5
CIT                                  e               19 16 57.7
CIT                                  e               19 20 29.2
CIT                                  e               19 39 33.2
CIT                                   pmax   pmax
      comp=Z,692nm,0.8s
KLSI                     151.16 162   PKP    PKPdf   19 16 44.2 -0.2
MDSI  Maura Dua          151.19 161   PKP    PKPdf   19 16 43.5 -0.9
KAPI  Kappang            151.40 193   PKP    PKPdf   19 16 45.0 +0.3
      comp=Z,42nm,0.5s,baz=109,slow=2.1,SNR=12
KAPI                                  PKPbc  PKiKP   19 16 52.0 +0.6
      comp=Z,274nm,0.4s,baz=190,slow=1.4,SNR=54
KAPI  Kappang            151.40 193   P      PKiKP   19 16 51.8 +0.4
KSI   Kapahiang          151.45 157   PKP    PKPdf   19 16 45.4 +0.5
LHSI  Lahat              151.61 159   PKP    PKPdf   19 16 46.2 +1.2
ZAK   Zakamensk          151.62  14  ePKIKP  PKPdf   19 16 44.9 +0.8
ZAK                                   pmax   pmax
      comp=Z,130nm,0.8s
BNSI  Bone               151.91 194   PKP    PKPdf   19 16 47.2 +1.7
SANI  Sanana             152.16 208   PKP    PKPdf   19 16 46.5 +0.6
SPSI  Sidrap Palu        152.41 194   PKP    PKPdf   19 16 47.7 +1.5
PMBI  Palembang          152.85 161   PKP    PKPdf   19 16 47.6 +0.7
DANN  Dangsing           152.87  73  eP      PKPdf   19 16 47.4 +0.5
      comp=Z,776nm,1.0s
PDSI  Padang             153.07 151   PKP    PKPdf   19 16 48.1 +0.8
TTSI  Tana Toraja        153.29 195   PKP    PKPdf   19 16 48.5 +1.0
JYT   Yasato             153.33 306   PKPdf  PKPdf   19 16 46.7 -0.2
HIA   Hailar             153.37 351   PKIKP  PKPdf   19 16 46.6  0.0
HIA   Hailar             153.37 351          PKPdf   19 16 46.6  0.0
GSI   Gunungsitoli       153.50 143   PKPdf  PKPdf   19 16 48.1 +0.2
GSI   Gunungsitoli       153.50 143   PKP    PKPdf   19 16 49.0 +1.2
BBKI  Banjar Baru        153.59 183   PKP    PKPbc   19 16 53.7 -2.1
JCJ   Chichijima         153.59 285   PKP    PKPdf   19 16 47.6 +0.1
      comp=Z,119nm,0.7s,baz=276,slow=4.3,SNR=10
JCJ                                   PKPbc  PKiKP   19 16 55.8 +0.2
      comp=Z,138nm,0.5s,baz=258,slow=20,SNR=7.6
JCJ   Chichijima         153.59 285   PKPdf  PKPdf   19 16 47.7 +0.2
KBKI  Kotabaru           153.65 186   PKP    PKPdf   19 16 49.8 +1.8
GKN   Gorkha             153.67  73  eP      PKPdf   19 16 47.7 -0.2
      comp=Z,408nm,0.8s
JMBI  JAMBI              153.69 158   PKP    PKPdf   19 16 48.2 +0.1
TPI   Tanjungpandan      153.74 167   PKP    PKPdf   19 16 50.7 +2.5
USRK  Ussuriysk Ar.      153.93 328   PKP    PKPdf   19 16 48.3 +0.8
      comp=Z,16nm,0.6s,baz=210,slow=0.4,SNR=27
USRK                                  PKPbc  PKiKP   19 16 57.0 +1.3
      comp=Z,75nm,0.6s,baz=294,slow=1.4,SNR=45
USRK                                  PKPab  PKPab   19 17 11.1 +1.4
      comp=Z,80nm,0.7s,baz=58,slow=3.8,SNR=8.0
USRK  Ussuriysk Ar.      153.93 328   PKPdf  PKPdf   19 16 47.1 -0.4
PPBI  Pangkal Pinang     153.96 163   PKP    PKPdf   19 16 49.2 +0.7
JSD   Sado               153.97 311   PKPdf  PKPdf   19 16 46.9 -0.8
TNTI  Ternate            153.98 214   PKPdf  PKPdf   19 16 48.9 +0.3
TNTI  Ternate            153.98 214   PKP    PKPdf   19 16 49.5 +1.0
DMN   Daman              154.11  74  eP      PKPdf   19 16 49.5 +0.9
      comp=Z,280nm,1.1s
MNSI  Mandailing Nat     154.14 147   PKP    PKPdf   19 16 48.8 +0.1
KKN   Kakani             154.25  74  eP      PKPdf   19 16 48.7 -0.1
      comp=Z,141nm,0.9s
LUWI  Luwuk              154.34 202   PKPdf  PKPdf   19 16 48.4 -0.6
LUWI  Luwuk              154.34 202   PKP    PKPdf   19 16 50.1 +1.1
PKIN  Phulchoki          154.37  74  eP      PKPdf   19 16 48.6 -0.4
      comp=Z,138nm,1.1s
PKI   Pulchoki           154.38  74  eP      PKPdf   19 16 48.6 -0.5
      comp=Z,176nm,1.3s
SBSI  Sibolga            154.43 145   PKP    PKPdf   19 16 49.3 +0.2
JHJ2  Mitsune            154.65 299   PKPdf  PKPdf   19 16 49.6 +0.8
SONM  Songino Array      154.67  11   PKP    PKPdf   19 16 49.2 +0.6
      comp=Z,57nm,0.7s,baz=280,slow=0.5,SNR=182
SONM                                  PKPbc  PKiKP   19 16 58.7 +1.5
      comp=Z,58nm,0.8s,baz=327,slow=1.6,SNR=18
SONM                                  PKPab  PKPab   19 17 14.2 +1.3
      comp=Z,100nm,0.7s,baz=324,slow=4.1,SNR=15
SONM  Songino Array      154.67  11   PKPdf  PKPdf   19 16 48.6  0.0
MJAR  Matsushiro Arr     154.67 308   PKP    PKPdf   19 16 49.9 +1.1
      comp=Z,30nm,0.8s,baz=125,slow=0.9,SNR=26
MJAR                                  PKPbc  PKiKP   19 16 58.1 +0.5
      comp=Z,72nm,0.6s,baz=76,slow=0.9,SNR=25
MJAR  Matsushiro Arr     154.67 308          PKPdf   19 16 47.6 -1.2
MAJO  Matsushiro         154.67 308   PKIKP  PKPdf   19 16 47.1 -1.7
MAJO  Matsushiro         154.67 308   PKPdf  PKPdf   19 16 47.0 -1.7
MAT   Matsushiro         154.67 308   PKP    PKPdf   19 16 47.2 -1.6
JHJ   Hachijo jima 2     154.67 299   PKPbc  PKiKP   19 16 58.1 +0.5
      comp=Z,469nm,0.7s,baz=32,slow=7.8,SNR=20
MDJ   Mudanjiang         154.71 332          PKPdf   19 16 47.1 -1.5
ULN   Ulaanbaatar        154.75  10c iPKIKP  PKPdf   19 16 49.4 +0.7
ULN                                   pmax   pmax
      comp=Z,140nm,1.7s
ULN   Ulaanbaatar        154.75  10   PKPdf  PKPdf   19 16 49.0 +0.3
ULN   Ulaanbaatar        154.75  10   P      PKPdf   19 16 49.9 +1.2
GUN   Gumba              154.77  73  eP      PKPdf   19 16 49.6  0.0
      comp=Z,80nm,0.7s
APSI  Ampana             154.83 200   PKP    PKPdf   19 16 52.3 +2.6
TPTI                     154.85 139   PKP    PKPdf   19 16 49.8 +0.1
KMSI  Cibinong           155.37 206   PKP    PKPdf   19 16 52.2 +1.8
RPSI  Rantau Prapat      155.40 143          PKPdf   19 16 50.6 +0.2
RPSI  Rantau Prapat      155.40 143   PKPdf  PKPdf   19 16 49.5 -1.0
RAMN  Ramite             155.48  75  eP      PKPdf   19 16 50.8 +0.3
      comp=Z,237nm,0.7s
PSI   Prapat             155.49 143   PKP    PKPdf   19 16 50.6 -0.1
      comp=Z,35nm,0.7s,baz=360,slow=1.3,SNR=35
PSI   Prapat             155.49 143   PKIKP  PKPdf   19 16 49.5 -1.2
BKB   Balikpapan         155.57 189   PKP    PKPdf   19 16 54.6 +3.9
JGF   Kuroka             155.69 306   PKPdf  PKPdf   19 16 49.8 -0.5
GTOI  Gorontalo          155.80 204   PKP    PKPdf   19 16 54.0 +3.0
TSI   Tuntungan          155.86 142   PKP    PKPdf   19 16 51.2 +0.1
MRSI  Marisa             156.04 202   PKP    PKPdf   19 16 50.1 -1.2
INU   Inuyama            156.05 306   PKPdf  PKPdf   19 16 50.3 -0.4
MTKI  Muara Teweh, K     156.09 184   PKP    PKPdf   19 16 52.6 +1.2
ODAN  Odare              156.19  76  eP      PKPdf   19 16 51.5 +0.1
      comp=Z,227nm,0.7s
LHMI  Lhok Sumawe        156.24 136   PKPdf  PKPdf   19 16 51.0 -0.6
LHMI  Lhok Sumawe        156.24 136   PKP    PKPdf   19 16 52.2 +0.7
TAPN  Taplejung          156.44  74  eP      PKPdf   19 16 51.1 -0.7
      comp=Z,101nm,0.7s
MYKOM Kota Tinggi        156.93 155   PKPdf  PKPdf   19 16 52.2 -0.3
CN2   Changchun          157.03 337  ePKP    PKPdf   19 16 51.7  0.0
GTK   Tadong             157.23  74  i P     PKPdf   19 16 50.8 -1.8
GTK                                  i pP    PKPab   19 17 25.2 +0.5
JWT   Wachi              157.27 307          PKPdf   19 16 52.9 +0.7
PBA   Port Blair         157.34 117  eP      PKPdf   19 16 49.9 -3.0
PBA                                  i pP    PKPab   19 17 24.9 -0.2
PBA   Port Blair         157.34 117   PKPdf  PKPdf   19 16 52.0 -0.9
IPM   Ipoh               158.02 145   PKPdf  PKPdf   19 16 53.4 -0.5
DGPR  DIGLIPUR           158.28 113  i P     PKPdf   19 16 53.2 -0.8
DGPR                                  IAmb   IAmb    19 16 57.8
      comp=Z,122nm,1.0s
KSM   Kuching            158.34 172   PKPdf  PKPdf   19 16 55.6 +1.4
KULM  Kulim              158.50 143   PKPdf  PKPdf   19 16 54.4  0.0
JHS   Saijyo             159.06 309   PKPdf  PKPdf   19 16 55.0 +0.5
LSA   Lhasa              159.07  67   PKP    PKPdf   19 16 56.1 +0.9
LSA                                   LR     LR
      comp=Z,9µm,18.5s
LSA                                   LR     LR
      comp=Z,15µm,13.5s
LSA                                   LR     LR
      comp=Z,14µm,12.1s
LSA   Lhasa              159.07  67   PKPdf  PKPdf   19 16 55.5 +0.3
LSA   Lhasa              159.07  67   PKIKP  PKPdf   19 16 55.2  0.0
LSA   Lhasa              159.07  67          PKPdf   19 16 55.2  0.0
SNY   Shenyang           159.42 338 ⇓PKP    PKPdf   19 16 54.7 +0.1
SNY                                   AMB    AMB
      comp=Z,6µm,9.0s
SNY                                   LR     LR
      comp=Z,2µm,24.1s
SNY                                   LR     LR
      comp=Z,2µm,22.6s
SNY                                   LR     LR
      comp=Z,4µm,24.8s
SBUM  Sibu               159.48 177   PKPdf  PKPdf   19 16 56.0 +0.4
AGT   Agartala           159.72  83  i P     PKPdf   19 16 57.3 +1.8
BELO  BELONIA            159.87  85  i P     PKPdf   19 16 54.4 -1.3
GTA   Gaotai             160.06  32 ⇓PKP    PKPdf   19 16 55.9 +0.3
GTA                                   PKPab  PKPab   19 17 37.8 +1.3
GTA                                   PP     PP      19 21 26.0 +7.4
GTA                                   SKKS           19 27 46.2
GTA                                   SS     SS      19 41 13.1 +2.4
GTA                                   AMB    AMB
      comp=Z,1µm,8.0s
GTA                                   LR     LR
      comp=Z,2µm,20.4s
GTA                                   LR     LR
      comp=Z,1µm,20.4s
GTA                                   LR     LR
      comp=Z,2µm,23.3s
GUWA  GUWAHATI           160.08  77  i P     PKPdf   19 16 53.4 -2.4
GUWA                                 i pP    PKPab   19 17 37.2 +0.3
GUWA                                 ePP     PP      19 21 17.3 -2.6
SHL   Shillong           160.29  78  i P     PKPdf   19 16 54.5 -1.9
SHL                                  i pP    PKPab   19 17 36.7 -1.4
SHL                                  ePP     pPKPab  19 18 26.5 -3.5
KSRS  Korea Array        160.95 322   PKP    PKPdf   19 16 56.5  0.0
      comp=Z,22nm,0.8s,baz=82,slow=1.5,SNR=41
KSRS                                  PKPab  PKPab   19 17 41.4 +1.2
      comp=Z,52nm,0.7s,baz=44,slow=4.5,SNR=27
KSRS                                  PP     PP      19 21 27.2 +3.9
      comp=Z,20nm,1.0s,baz=33,slow=5.6,SNR=7.9
KSAR  Wonju Array Be     160.98 322   PKIKP  PKPdf   19 16 56.4 -0.1
KSAR  Wonju Array Be     160.98 322          PKPdf   19 16 56.4 -0.1
TEZP  TEZPUR             161.03  75  i P     PKPdf   19 16 51.3 -5.5
TEZP                                 i pP    PKPab   19 17 40.8 -0.2
TEZP                                 ePP     PP      19 21 21.0 -4.0
SAIH  SAIHA              161.22  88⇓iP      PKPdf   19 16 54.3 -3.0
SAIH                                 i pP    PKPab   19 17 42.7 +0.5
SAIH                                 ex      x       19 21 20.6
JNU   Nakatsue           161.59 307   PKP    PKPdf   19 16 57.0 -0.3
      comp=Z,18nm,0.8s,baz=357,slow=0.7,SNR=8.6
JNU   Nakatsue           161.59 307   PKPdf  PKPdf   19 16 56.0 -1.3
INCN  Inchon             161.64 325   PKIKP  PKPdf   19 16 58.3 +1.1
INCN  Inchon             161.64 325   PKPdf  PKPdf   19 16 58.3 +1.1
ZIRO  ZIRO               161.83  72  i P     PKPdf   19 16 56.7 -1.2
ZIRO                                 i x     x       19 17 45.0
JTU   Tsushima           161.90 313   PKPab  PKPab   19 17 45.8 +1.3
HHC   Hu-ho-hao-te       162.21   4  ePKP    PKPdf   19 16 59.0 +1.2
HHC                                   pPKP   PKPab   19 17 47.0 +1.3
HHC                                   PKS    PKSdf   19 20 33.1 +2.1
HHC                                   PP     PP      19 21 26.3 -3.1
HHC                                   SKKS           19 27 59.9
HHC                                   AMB    AMB
      comp=Z,6µm,12.6s
HHC                                   LR     LR
      comp=Z,3µm,22.0s
HHC                                   LR     LR
      comp=Z,2µm,21.1s
HHC                                   LR     LR
      comp=Z,4µm,23.8s
KOHI  KOHIMA             162.28  78  i P     PKPdf   19 16 56.0 -2.4
KOHI                                 i x     x       19 17 46.8
KOHI                                 ex      x       19 21 31.1
BTO   Baotou             162.29   8  ePKP    PKPdf   19 16 57.5 -0.4
JORH  JORHAT             162.30  74  eP      PKPdf   19 16 58.3 +0.2
JORH                                 i x     x       19 17 46.9
MOKO  MOKOCHONG          162.59  75  eP      PKPdf   19 16 57.8 -0.8
MOKO                                  IAmb   IAmb    19 17 03.3
      comp=Z,177nm,1.2s
MOKO                                 i x     x       19 17 49.3
MOKO                                 ex      x       19 21 27.9
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DL2	**Dalian**	162.70	338	⇓*i*PKP	PKPdf	19 16 57.5	-0.7
DL2				PKPab	PKPab	19 17 47.5	-0.3
DL2				pPKP	pPKPdf	19 17 51.6	-1.1
DL2				PP	PP	19 21 31.8	-0.3
DL2				SS	SS	19 41 38.6	+1.3
DL2				AMB	AMB		
	comp=Z,5µm,6.9s						
DIBR	**DIBRUGARH**	162.77	71	*i* P	PKPdf	19 16 57.7	-0.9
DIBR				*i* x	x	19 17 55.5	
KKM	**Kota Kinabalu**	162.85	190		PKPdf	19 16 59.4	+0.2
BJI	**Beijing**	162.91	353	PKP	PKPdf	19 16 58.5	+0.2
BJI				pPKP	PKPab	19 17 49.2	+0.6
BJI				sPKP		19 18 05.4	
BJI				PP	PP	19 21 33.1	+0.2
BJI				SS	SS	19 41 35.4	-3.5
BJI				AMB	AMB		
	comp=Z,6µm,8.5s						
BJI				LR	LR		
	comp=Z,2µm,21.5s						
BJI				LR	LR		
	comp=Z,2µm,21.3s						
BJI				LR	LR		
	comp=Z,4µm,25.7s						
BJT	**Baijiatuau**	162.93	353	PKIKP	PKPdf	19 16 58.1	-0.3
BJT	**Baijiatuau**	162.93	353		PKPdf	19 16 58.1	-0.3
LKP	**Lekhapani**	163.61	71	*i* P	PKPdf	19 16 55.2	-4.2
LKP				*i* x	x	19 17 52.8	
LKP				*e*x	x	19 21 38.7	
SRDT	**SRDT**	164.00	120	P	PKPab	19 17 56.0	+1.8
	comp=Z,74nm,1.3s						
PATY	**Pattaya**	164.44	128	P	PKPab	19 17 58.5	+2.4
	comp=Z,152nm,0.8s						
LZH	**Lanzhou**	164.63	30	*e*PKP	PKPdf	19 17 01.3	+1.0
LZH				PP	PP	19 21 42.4	-0.3
LZH				SKKS		19 28 08.9	
LZH				AMB	AMB		
	comp=Z,2µm,7.2s						
LZH				LR	LR		
	comp=Z,1µm,19.6s						
LZH				LR	LR		
	comp=Z,1µm,18.3s						
LZH				LR	LR		
	comp=Z,2µm,20.1s						
UMPA	**Umpang Tak**	164.76	114	P	PKPab	19 17 59.0	+1.4
MHMT	**Maesarieng**	164.78	106	P	PKPdf	19 17 00.3	-0.4
	comp=Z,6µmcomp=Z,205nm,1.2s						
UTHA	**Uthaitani**	164.92	117	P	PKPab	19 18 00.3	+2.1
	comp=Z,2µmcomp=Z,261nm,1.0s						
TIY	**Taiyuan**	165.38	3	PKP	PKPdf	19 17 00.9	+0.1
TIY				PKPab	pPKPdf	19 18 02.1	+6.7
TIY				PP	PP	19 21 44.0	-1.9
TIY				SS	SS	19 42 02.4	-2.0
TIY				AMB	AMB		
	comp=Z,4µm,8.3s						
TIY				LR	LR		
	comp=Z,3µm,20.6s						
TIY				LR	LR		
	comp=Z,1µm,16.6s						
TIY				LR	LR		
	comp=Z,1µm,19.7s						
CM13	**Chiang Mai Arr**	165.73	106	P	PKPdf	19 17 02.0	+0.6
	comp=Z,132nmcomp=Z,458nmcomp=Z,40nm,0.9s						
CM13	**Chiang Mai Arr**	165.73	106	P	PKPab	19 18 03.0	+1.1
	comp=Z,1µmcomp=Z,196nm,0.9s						
CM05	**Chiang Mai Arr**	165.76	106	P	PKPdf	19 17 02.0	+0.5
	comp=Z,548nmcomp=Z,55nm,1.0s						
CM05	**Chiang Mai Arr**	165.76	106	P	PKPab	19 18 02.8	+0.7
	comp=Z,2µmcomp=Z,208nm,0.8s						
CM15	**Chiang Mai Arr**	165.76	106	P	PKPdf	19 17 02.1	+0.6
	comp=Z,434nmcomp=Z,43nm,0.9s						
CM15	**Chiang Mai Arr**	165.76	106	P	PKPab	19 18 02.8	+0.8
	comp=Z,2µmcomp=Z,250nm,0.8s						
CM32	**Chiang Mai Arr**	165.76	105	P	PKPdf	19 17 02.0	+0.5
CM02	**Chiang Mai Arr**	165.77	106	P	PKPdf	19 17 02.3	+0.8
	comp=Z,634nmcomp=Z,66nm,1.0s						
CM02	**Chiang Mai Arr**	165.77	106	P	PKPab	19 18 02.9	+0.7
	comp=Z,2µmcomp=Z,316nm,0.9s						
CM01	**Chiang Mai Arr**	165.78	106	P	PKPdf	19 17 02.0	+0.5
	comp=Z,638nmcomp=Z,59nm,0.9s						
CM01	**Chiang Mai Arr**	165.78	106	P	PKPab	19 18 02.9	+0.7
	comp=Z,2µmcomp=Z,294nm,0.8s						
CM31	**Chiang Mai Arr**	165.78	106	P	PKPdf	19 17 01.9	+0.3
	comp=Z,27µmcomp=Z,2µm,1.0s						
CM31	**Chiang Mai Arr**	165.78	106	P	PKPab	19 18 02.9	+0.7
	comp=Z,55µmcomp=Z,8µm,0.8s						
CM31	**Chiang Mai Arr**	165.78	106		PKPdf	19 17 01.0	-0.5
CMAR	**Chiang Mai Arr**	165.78	106	PKP	PKPdf	19 17 01.6	+0.1
	comp=Z,32nm,0.9s,baz=267,slow=2.5,SNR=79						
CMAR				PKPab	PKPab	19 18 03.2	+1.1
	comp=Z,180nm,0.8s,baz=249,slow=5.2,SNR=109						
CMAR				PP	PP	19 21 51.2	+1.2
	comp=Z,30nm,1.2s,baz=250,slow=5.1,SNR=7.2						
CMAR	**Chiang Mai Arr**	165.78	106		PKPdf	19 17 00.1	-1.5
CM04	**Chiang Mai Arr**	165.79	106	P	PKPdf	19 17 02.2	+0.7
	comp=Z,761nmcomp=Z,85nm,0.9s						
CM04	**Chiang Mai Arr**	165.79	106	P	PKPab	19 18 03.0	+0.8
	comp=Z,3µmcomp=Z,333nm,0.9s						
CM09	**Chiang Mai Arr**	165.82	106	P	PKPdf	19 17 02.3	+0.7
	comp=Z,686nmcomp=Z,72nm,0.8s						
CM09	**Chiang Mai Arr**	165.82	106	P	PKPab	19 18 03.0	+0.7
	comp=Z,3µmcomp=Z,352nm,0.8s						
CHTO	**Chiang Mai**	165.90	105	PKIKP	PKPdf	19 17 01.0	-0.6
CHTO	**Chiang Mai**	165.90	105		PKPdf	19 17 01.0	-0.6
CHTO	**Chiang Mai**	165.90	105	P	PKPdf	19 17 01.5	-0.1
CM33	**Chiang Mai Arr**	165.91	105	P	PKPdf	19 17 01.0	-0.6
CM33	**Chiang Mai Arr**	165.91	105	P	PKPab	19 18 03.0	+0.3
CMMT	**Chiang Mai**	165.91	105	P	PKPdf	19 17 00.6	-1.0
	comp=Z,2µmcomp=Z,45nm,1.7s						
CMMT	**Chiang Mai**	165.91	105	P	PKPab	19 18 02.0	-0.7
	comp=Z,3µmcomp=Z,116nm,1.1s						
CM36	**Chiang Mai Arr**	165.94	106	P	PKPab	19 18 03.0	+0.2
JOW	**Kunigami**	165.94	289	PKP	PKPdf	19 17 02.6	+1.1
	comp=Z,33nm,0.9s,baz=146,slow=10,SNR=6.0						
JOW				PKPab	PKPab	19 18 04.4	+1.7
	comp=Z,58nm,0.8s,baz=106,slow=8.0,SNR=6.9						
SRAK	**Srakaew**	166.01	128	P	PKPab	19 18 06.0	+2.9
CM35	**Chiang Mai Arr**	166.04	106	P	PKPab	19 18 03.0	-0.3
TIA	**Tai'an**	166.49	347	PKP	PKPdf	19 17 02.0	+0.4
TIA				PP	PP	19 21 51.8	+0.1
TIA				SKKS		19 28 20.1	
TIA				SS	SS	19 42 12.6	-3.1
TIA				AMB	AMB		
	comp=Z,7µm,8.0s						
TIA				LR	LR		
	comp=Z,2µm,20.6s						
TIA				LR	LR		
	comp=Z,2µm,18.6s						
TIA				LR	LR		
	comp=Z,2µm,21.0s						
DLV	**T Lat**	168.01	157	PKPdf	PKPdf	19 17 04.8	+1.2
DLV				PKPab	PKPab	19 18 11.4	-0.5
XAN	**Xi'an**	168.40	19	PKP	PKPdf	19 17 03.4	+0.3
XAN				PKPab	PKPab	19 18 13.2	+0.1
XAN				PP	PP	19 21 58.2	-3.4
XAN				SKKS		19 28 29.8	
XAN				SS	SS	19 42 29.1	-6.0
XAN				AMB	AMB		
	comp=Z,4µm,8.4s						
XAN				LR	LR		
	comp=Z,2µm,21.4s						
XAN				LR	LR		
	comp=Z,2µm,25.1s						
XAN				LR	LR		
	comp=Z,4µm,21.7s						
CD2	**Chengdu**	168.43	45	PKP	PKPdf	19 17 03.3	+0.1
CD2				pPKP	pPKPdf	19 17 56.5	-1.2
CD2				SKKS		19 28 27.7	
CD2				AMB	AMB		
	comp=Z,2µm,10.1s						
UBPT	**Khong Chiam**	169.27	135	P	PKPdf	19 17 05.0	+1.0
	comp=Z,2µmcomp=Z,49nm,1.1s						
UBPT	**Khong Chiam**	169.27	135		PKPdf	19 17 03.9	-0.1
SSE	**Sheshan**	169.38	321	PKP	PKPdf	19 17 04.1	+0.4
SSE				PP	PP	19 22 08.3	+1.2
SSE				AMB	AMB		
	comp=Z,4µm,11.2s						
SSE				LR	LR		
	comp=Z,1µm,21.0s						
SSE	**Sheshan**	169.38	321		PKPdf	19 17 03.0	-0.7
SSE					PKPab	19 18 17.1	-0.5
NJ2	**Nanjing**	169.80	333	⇓PKP	PKPdf	19 17 04.0	+0.1
NJ2				PKPab	PKPab	19 18 18.3	-1.0
NJ2				SKS	SKSdf	19 23 45.3	-3.0
NJ2				SKKS	SKKSac	19 28 32.7	-3.8
NJ2				SS	SS	19 42 47.3	-2.0
NJ2				AMB	AMB		
	comp=Z,8µm,9.3s						
NJ2				LR	LR		
	comp=Z,2µm,24.5s						
NJ2				LR	LR		
	comp=Z,4µm,25.0s						
NJ2				LR	LR		
	comp=Z,4µm,23.5s						
KMI	**Kunming**	170.10	76	⇓PKP	PKPdf	19 17 04.5	-0.1
KMI				pPKP	pPKPdf	19 18 00.3	+1.1
KMI	**Kunming**	170.10	76	PKIKP	PKPdf	19 17 04.2	-0.4
KMI						19 18 21.1	
KMI	**Kunming**	170.10	76	PKPdf	PKPdf	19 17 04.2	-0.4
KMI					PKPab	19 18 21.1	-0.3
SLVN	**Son La**	171.09	99		PKPdf	19 17 05.0	-0.1
ENH	**Enshi**	172.04	25		PKPdf	19 17 04.5	-0.7
WHN	**Wuhan**	172.50	353	*i* PKP	PKPdf	19 17 04.8	-0.5
WHN				PKPab	PKPab	19 18 31.1	-0.1
WHN				PP	PP	19 22 20.0	-1.7
WHN				SS	SS	19 43 09.1	-5.8
WHN				AMB	AMB		
	comp=Z,10µm,7.2s						
YULB	**Yu-li**	172.67	274		PKPdf	19 17 06.0	+0.4
TWG	**Pinlang**	172.87	270		PKPdf	19 17 05.4	-0.3
SSLB	**Suanglung**	172.97	277		PKPdf	19 17 05.8	0.0
GYA	**Guiyang**	173.06	60	⇑PKP	PKPdf	19 17 06.1	+0.2
GYA				PKPab	PKPab	19 18 35.5	+1.2
GYA				PP	PP	19 22 25.0	-1.3
GYA				SKKS		19 28 50.1	
GYA				AMB	AMB		
	comp=Z,2µm,13.4s						
TPUB	**Ta-pu**	173.29	273		PKPdf	19 17 07.1	+1.2
TPUB				PKPab	PKPab	19 18 36.4	+1.0
QIZ	**Qiongzhong**	174.82	140	PKP	PKPdf	19 17 04.5	-2.0
QIZ				sPKP		19 18 13.9	
QZH	**Quanzhou**	174.84	292	*i* PKP	PKPdf	19 17 07.0	+0.7
QZH				PKPab	PKPab	19 18 43.6	+1.4
QZH				PP	PP	19 22 33.6	-1.4
QZH				SKKS		19 29 01.4	
QZH				AMB	AMB		
	comp=Z,9µm,8.8s						
QZH				LR	LR		
	comp=Z,980nm,17.5s						
QZH				LR	LR		
	comp=Z,4µm,21.6s						
QZH				LR	LR		
	comp=Z,4µm,24.6s						
KNMB	**Chin-men Tao**	175.17	288		PKPdf	19 17 06.5	0.0
KNMB				PKPab	PKPab	19 18 43.2	-0.4
GZH	**Guangzhou**	179.98	345	PKP	PKPdf	19 17 05.5	-1.6
GZH				PP	PP	19 22 55.5	-1.8

NEIC ***11*** *19:02:03.1±1.3, 19°.9S±0°.3×175°.5W±0°.1, h265km±20km, mb4.4/22 Error ellipse: s-maj=39.2km s-min=16.9km az=194.0*

IDC ***11*** *19:02:10.9±8.4, 20°.10S×176°.45W, h263km±46km, mb3.8/6, mb1 3.8/7, mb1mx3.5/47, mbtmp4.4/7, Error ellipse: s-maj=94.7km s-min=55.3km az=107.0*

ISC 11 19:02:02.4±0.7**, 19°.9S**±0°.2×**175°.49W**±0°.07**, h250**km**, n35, σ1**^{s}**.29**/37**, mb4.3**/15**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	5.31	82	Pn	Pn	19 03 23.7	+1.7
NIUE				S	S	19 04 22.3	-3.3
MSVF	**Nonsavu**	6.49	288	P	Pn	19 03 35.7	-1.0
	1.8nm,0.3s,baz=125,slow=16,SNR=11						
MSVF	**Nonsavu**	6.49	288		Pn	19 03 36.6	-0.1
DZM	**Mont Dzumac**	17.01	260	P	Pn	19 05 45.0	-1.5
DZM				IAmb	IAmb	19 05 48.1	
	comp=Z,19nm,0.7s						
BFZ	**Birch Farm**	21.88	197	P	P	19 06 35.3	+0.1
PLWZ	**Palliser**	22.99	198	P	P	19 06 44.6	-0.7
QRZ	**Quartz Range**	23.23	204	P	P	19 06 46.9	-0.5
THZ	**Tophouse**	23.91	202	P	P	19 06 52.7	-1.0
THZ				IAmb	IAmb	19 06 55.1	
	comp=Z,34nm,1.4s						
KHZ	**Kahutara**	24.29	200	P	P	19 06 56.1	-0.9
KHZ				IAmb	IAmb	19 07 03.7	
	comp=Z,22nm,1.3s						
LTZ	**Lake Taylor**	25.04	202	P	P	19 07 03.6	-0.3
LTZ				IAmb	IAmb	19 07 07.7	
	comp=Z,10nm,0.5s						
RPZ	**Rata Peaks**	26.28	202	P	P	19 07 14.7	-0.3
FOZ	**Fox Glacier**	26.59	204	P	P	19 07 16.8	-0.9
FOZ				IAmb	IAmb	19 07 18.3	
	comp=Z,11nm,0.9s						
EIDS	**Eidsvold**	31.28	254	P	P	19 07 58.6	-0.7
EIDS				IAmb	IAmb	19 08 20.5	
	comp=Z,25nm,1.5s						
CTA	**Charters Tower**	35.90	263	P	P	19 08 39.4	+0.3
	comp=Z,8.4nm,0.5s,baz=101,slow=12,SNR=24						
CTAO	**Charters Tower**	35.90	263	P	P	19 08 39.5	+0.3
CTAO				IAmb	IAmb	19 09 05.4	
	comp=Z,21nm,1.2s						
MCQ	**Macquarie Isla**	39.64	203	P	P	19 09 11.2	+1.3
COEN	**Coen**	39.91	272	P	P	19 09 13.6	+0.9
STKA	**Stephens Creek**	40.17	244	P	P	19 09 15.4	+0.8
	comp=Z,1.5nm,0.6s,baz=93,slow=13,SNR=3.8						
STKA	**Stephens Creek**	40.17	244	P	P	19 09 15.4	+0.8
BBOO	**Buckleboo**	44.92	243	P	P	19 09 51.9	-0.8
BBOO				IAmb	IAmb	19 10 09.8	
	comp=Z,25nm,1.4s						
WR0	**Warramunga Arr**	46.83	261	P	P	19 10 06.3	-1.4
AS31	**Alice Springs**	46.95	256	P	P	19 10 07.5	-1.1
ASAR	**Alice Springs**	46.95	256	P	P	19 10 08.6	-0.1
	comp=Z,2.5nm,0.6s,baz=98,slow=8.4,SNR=52						
ASAR				PcP	PcP	19 11 40.2	+3.3
	comp=Z,0.3nm,0.6s,baz=100,slow=3.5,SNR=5.4						
ASAR	**Alice Springs**	46.95	256	P	P	19 10 07.5	-1.1
WB0	**Warramunga Arr**	47.00	261	P	P	19 10 07.5	-1.5
WB0				IAmb	IAmb	19 10 09.6	
	comp=Z,5.6nm,0.6s						
WB2	**Warramunga Arr**	47.01	261	P	P	19 10 07.8	-1.3
WRAB	**Tennant Creek**	47.01	261	P	P	19 10 07.9	-1.2
WRAB				IAmb	IAmb	19 10 09.8	
	comp=Z,14nm,1.4s						
WRA	**Warramunga Arr**	47.02	261	P	P	19 10 08.1	-1.1
	comp=Z,2.1nm,0.6s,baz=96,slow=8.1,SNR=44						
WRA	**Warramunga Arr**	47.02	261	P	P	19 10 08.7	-0.5
MTN	**Manton Dam**	51.52	269	P	P	19 10 41.8	-1.5
MTN				IAmb	IAmb	19 10 44.6	
	comp=Z,5.6nm,0.8s						
SIJI	**Sorong**	55.38	283	P	P	19 11 12.8	+1.6
	comp=Z,9.4nm,0.6s,baz=123,slow=1.8,SNR=7.6						
FITZ	**Fitzroy Crossi**	55.44	261	P	P	19 11 12.8	+1.2
	comp=Z,1.0nm,0.5s,baz=92,slow=6.1,SNR=6.2						
FITZ	**Fitzroy Crossi**	55.44	261	P	P	19 11 12.3	+0.7
NWAO	**Narrogin (SRO)**	60.74	243	P	P	19 11 46.5	-1.6
CLL	**Collm**	147.95	350	*e*PKPbc	PKPbc	19 21 18.0	+0.1

IDC ***11*** *19:02:37.5±1.7, 43°.53N×105°.38W, h0km, mb1 3.7/3, mb1mx3.3/68, mbtmp3.4/3, ML3.4/3, Error ellipse: s-maj=45.5km s-min=8.5km az=153.0*

NEIC ***11*** *19:02:39.1±1.4, 43°.72N±0°.05×105°.28W±0°.09, h0km±2km, ML3.1/58, Error ellipse: s-maj=10.7km s-min=9.0km az=90.0*

ISC 11 19:02:38.5±1.0**, 43°.73N**±0°.05×**105°.27W**±0°.06**, h0**km**, n65, σ1**^{s}**.04**/66**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	0.97	66		Pb	19 02 57.9	-0.5
K22A	**Casper**	1.42	221		Pn	19 03 04.7	-1.0
K22A				IAML		19 03 31.6	
	comp=E,462nm,0.3s						
PHWY	**Pilot Hill**	2.43	183	Pn	Pn	19 03 19.8	+0.1
RWWY	**Rawlins**	2.49	216	Pn	Pn	19 03 20.6	0.0
RWWY				IAML		19 03 57.5	
	comp=E,111nm,0.3s						
RWWY				IAML		19 03 57.7	
	comp=E,110nm,0.4s						
LAO	**LASA Array**	3.03	347		Pn	19 03 27.0	-0.9
LAO				IAML		19 04 29.7	
	comp=E,88nm,0.8s						
RLMT	**Red Lodge**	3.19	297	Pn	Pn	19 03 29.6	-0.5
RLMT				IAML		19 04 18.9	
	comp=E,35nm,0.4s						
RLMT				IAML		19 04 20.8	
	comp=E,50nm,0.3s						
BW06	**Boulder Array**	3.28	254		Pn	19 03 31.6	+0.2
BW06				IAML		19 04 21.4	
	comp=E,46nm,0.3s						
BW06				IAML		19 04 21.9	
	comp=E,30nm,0.3s						
PD31	**Pinedale Array**	3.28	254		Pn	19 03 31.9	+0.5
PDAR	**Pinedale Array**	3.28	254	Pn	Pn	19 03 31.7	+0.3
	comp=E,3.3nm,0.3s,baz=78,slow=16,SNR=78						
PDAR				Pg	Pb	19 03 36.5	-1.3
	comp=E,14nm,0.3s,baz=79,slow=18,SNR=63						
PDAR				Lg	Lg	19 04 18.3	
	comp=E,29nm,0.3s,baz=74,slow=32,SNR=18						
YNE	**Yellowstone No**	3.63	292	Pn	Pn	19 03 36.1	-0.1
YMP	**Mirror Lake Pl**	3.66	288		Pn	19 03 36.8	+0.2
OGNE	**Ogallala**	3.67	138	Pn	Pn	19 03 38.0	+1.3
GCMT	**Greycliff**	3.75	305	Pn	Pn	19 03 38.4	+0.6
LKWY	**Lake**	3.79	284	Pn	Pn	19 03 40.2	+1.9
LKWY				IAML		19 05 45.6	
	comp=E,20nm,4.7s						
LOHW	**Long Hollow**	3.87	270		Pn	19 03 39.6	+0.1
H17A	**Grant Village**	3.88	282		Pn	19 03 41.5	+1.8
H17A				IAML		19 04 39.7	
	comp=E,20nm,0.3s						
ISCO	**Idaho Springs**	3.94	184		Pn	19 03 41.7	+1.2
FLWY	**Flagg Ranch**	3.94	277		Pn	19 03 39.1	-1.3
FLWY				IAML		19 04 49.3	
	comp=E,24nm,2.2s						
FLWY				IAML		19 04 57.5	
	comp=E,20nm,3.9s						
MOOW	**Moose Ponds**	3.97	272		Pn	19 03 40.7	-0.1
SNOW	**Snow King Moun**	4.00	268		Pn	19 03 42.6	+1.4
SNOW				IAML		19 04 47.4	
	comp=E,23nm,2.2s						
SNOW				IAML		19 04 59.2	
	comp=E,23nm,3.2s						
YNR	**Norris Junctio**	4.01	286		Pn	19 03 43.3	+1.8
YPP	**Pitchstone Pla**	4.03	280		Pn	19 03 42.6	+0.9
REDW	**Red Top Meadow**	4.08	267		Pn	19 03 43.2	+0.8
REDW				IAML		19 04 54.9	
	comp=E,21nm,2.5s						
REDW				IAML		19 05 11.9	
	comp=E,23nm,3.6s						
YHH	**Holmes Hill**	4.15	287	Pn	Pn	19 03 45.4	+2.0
YMR	**Madison River**	4.20	285		Pn	19 03 44.6	+0.5
AHID	**Auburn Hatcher**	4.37	259		Pn	19 03 46.1	-0.2
YHL	**Hebgen Lake**	4.39	287		Pn	19 03 47.3	+0.6
RDMU	**Red Mountain**	4.50	227		Pn	19 03 47.9	-0.2
ECR	**Eagle Creek**	4.50	263	Pn	Pn	19 03 48.8	+0.7
SMCO	**Snowmass**	4.73	196		Pb	19 04 03.6	+1.1
SMCO				IAML		19 05 08.3	
	comp=E,21nm,0.4s						
SMCO				IAML		19 05 10.4	
	comp=E,16nm,0.3s						
DGMT	**Dagmar**	4.80	9		Pn	19 03 51.4	-0.6
BOZ	**Bozeman (W)**	4.91	295	Pn	Pn	19 03 54.1	+0.4
BOZ				IAML		19 05 11.6	
	comp=E,11nm,2.5s						
BOZ				IAML		19 05 12.3	
	comp=E,13nm,2.6s						
KSCO	**Kaye Shedlock'**	5.12	156	Pn	Pn	19 03 53.3	-3.2
TCUT	**Toone Canyon**	5.24	242		Pn	19 03 57.4	-1.0
EGMT	**Eagleton**	5.31	325	Pn	Pn	19 03 59.2	0.0
LRM	**Limekiln Ridge**	5.53	295	Pn	Pn	19 04 04.3	+2.1
MCMT	**McKenzie Canyo**	5.55	284		Pn	19 04 02.5	-0.2
BCYI	**Bear Canyon**	5.90	278	Pn	Pn	19 04 08.6	+1.3
P17A	**Butcher Ranch,**	5.91	226	Pn	Pn	19 04 07.8	+0.3
PV04	**Paradox Valley**	6.00	208		Pn	19 04 09.5	+0.8
PV12	**Saucer Basin,**	6.03	207	Pn	Pn	19 04 10.3	+1.1
PV14	**Lion Creek, Pa**	6.06	209	Pn	Pn	19 04 10.8	+1.2
PV10	**Paradox Valley**	6.06	209	Pn	Pn	19 04 11.2	+1.6
PV20	**West Nyswonger**	6.07	209	Pn	Pn	19 04 10.4	+0.8
PV11	**David Mesa, Pa**	6.07	208	Pn	Pn	19 04 09.8	0.0
SRU	**San Rafael Swe**	6.08	222		Pn	19 04 09.7	-0.1
PV16	**Nyswonger Mesa**	6.08	208		Pn	19 04 10.5	+0.7
PV19	**Morning Glory**	6.10	209	Pn	Pn	19 04 10.4	+0.2
PV03	**Paradox Valley**	6.11	208	Pn	Pn	19 04 10.0	-0.2
PV02	**Paradox Valley**	6.11	207	Pn	Pn	19 04 11.0	+0.7
PV17	**East Wray Mesa**	6.12	208	Pn	Pn	19 04 08.8	-1.6
PV01	**Paradox Valley**	6.12	205	Pn	Pn	19 04 09.1	-1.4
PV18	**Skein Mesa, Pa**	6.13	208	Pn	Pn	19 04 10.8	+0.2
PV13	**Radium Mtn., P**	6.18	207	Pn	Pn	19 04 12.1	+0.8
ECSD	**EROS Data Cent**	6.27	87	Pn	Pn	19 04 13.0	+0.8
TMUT	**Trail Mountain**	6.29	227		Pn	19 04 13.5	+0.8
PV05	**Paradox Valley**	6.35	208	Pn	Pn	19 04 12.4	-1.2
BGU	**Big Grassy Mou**	6.40	247	Pn	Pn	19 04 15.9	+1.7
Q16A	**Castle Valley**	6.55	225		Pn	19 04 16.6	+0.4
DUG	**Dugway, Tooele**	6.64	240	Pn	Pn	19 04 18.1	+0.7
JTMT	**Jette**	7.48	306	Pn	Pn	19 04 29.6	+0.7
WALA	**Waterton Lakes**	8.00	315	Pn	Pn	19 04 35.6	-0.6
ULM	**Lac du Bonnet**	9.14	41	Pn	Pn	19 04 51.5	-0.1
	comp=E,1.3nm,0.3s,baz=228,slow=12,SNR=18						
ULM	**Lac du Bonnet**	9.14	41		Pn	19 04 50.8	-0.9
NVAR	**Mina Array Bea**	11.17	246	Pn	Pn	19 05 19.7	+0.1
	comp=E,0.2nm,0.3s,baz=48,slow=16,SNR=2.0						

IDC ***11*** *19:20:28.0±2.1, 59°.62N×24°.79E, h0km, mb1 3.4/3, mb1mx3.1/67, mbtmp3.3/3, ML2.3/3, Error ellipse: s-maj=24.4km s-min=8.5km az=139.0*

HEL ***11*** *19:20:30.2±0.2, 59°.82N×24°.33E, h0km, ML2.0, Explosion*

ISC 11 19:20:28.1±0.8**, 59°.83N**±0°.03×**24°.40E**±0°.03**, h0**km**, n16, σ0**^{s}**.76**/23**, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MEF	**Metsahovi**	0.39	360	*e*P	Pb	19 20 36.8	-1.0
MEF				*e*S	Sb	19 20 43.1	-1.1
NUR	**Nurmijrvi**	0.69	10	*e*P	Pb	19 20 42.2	-0.7
NUR				*e*S	Sb	19 20 52.6	-0.4
ARBE	**Arbavere**	0.90	116	*e*P	Pn	19 20 47.7	-0.2
ARBE				*e*S	Sb	19 20 59.1	+0.2
PVF	**Pernaja**	1.02	45	*e*P	Pb	19 20 48.5	-0.1
MTSE	**Matsula**	1.16	195	*e*P	Pg	19 20 50.0	-0.2
MTSE				*e*S	Sb	19 21 06.0	-0.5
VJF	**Virojoki**	1.73	64	*e*P	Pb	19 21 00.7	+0.1
VJF				*e*S	Sg	19 21 24.4	+0.9
RAF	**Rauma**	1.77	314	*e*P	Pg	19 21 01.8	-0.2
RAF				*e*S	Sg	19 21 24.6	-0.3
RAF				MSG		19 21 29.8	
	comp=Z,6.8nm,0.2s						
FIA0	**FINESS Array S**	1.82	26	*e*P	Pg	19 21 02.5	-0.3
FIA0				*e*S	Sg	19 21 27.1	+0.8
FIA0				MSG		19 21 33.3	
	comp=Z,12nm,0.2s						
FINES	**FINESS Array B**	1.82	26	Pn	Pg	19 21 02.5	-0.3
	comp=Z,1.6nm,0.3s,baz=204,slow=15,SNR=66						
FINES				Lg	Lg	19 21 29.1	
	comp=Z,2.7nm,0.3s,baz=202,slow=28,SNR=13						
VSU	**Vasula**	1.83	138	*e*P	Pg	19 21 02.5	-0.5
VSU				*e*S	Sg	19 21 26.4	-0.3
AAL	**Aland**	2.24	281	*e*PB	Pb	19 21 08.6	-0.7
AAL				*e*SG	Sb	19 21 37.8	+0.3
KEF	**Keuruu**	2.35	5	MSG		19 21 47.4	
	comp=Z,7.7nm,0.2s						
KAF	**Kangasniemi**	2.47	21	MSG		19 21 51.2	
	comp=Z,6.8nm,0.2s						
HFS	**Hagfors**	5.38	278	Pn	Pn	19 21 51.8	+2.3
	comp=Z,0.2nm,0.3s,baz=97,slow=12,SNR=9.5						
HFS				Lg	Lg	19 23 23.8	
	comp=Z,0.4nm,0.3s,baz=79,slow=24,SNR=1.9						
NOA	**NORSAR Array B**	6.64	286	Pn	Pn	19 22 06.6	-0.2
	comp=Z,0.0nm,0.3s,baz=94,slow=13,SNR=5.6						
ARCES	**ARCESS Array B**	9.76	2	Pn	Pn	19 22 49.9	+0.4
	baz=183,slow=14,SNR=6.1						

IDC ***11*** *19:24:15.5±2.2, 59°.72N×24°.75E, h0km, mb1 3.5/3, mb1mx3.1/64, mbtmp3.4/3, ML2.1/2, Error ellipse: s-maj=28.2km s-min=8.6km az=135.0*

BER ***11*** *19:24:15.4±1.7, 59°.63N×24°.75E, h0km, ML2.1, ML2.0(UPP), Suspected explosion*

UPP ***11*** *19:24:16.4±2.7, 59°.85N×24°.47E, h0km, ML2.0, Suspected explosion*

HEL ***11*** *19:24:17.0±0.1, 59°.81N×24°.35E, h0km, ML2.1, ML2.0(UPP), Explosion*

ISC 11 19:24:15.2±0.7**, 59°.86N**±0°.03×**24°.32E**±0°.03**, h0**km**, n42, σ1**^{s}**.62**/62**, 1C, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MEF	**Metsahovi**	0.36	6	*e*P	Pb	19 24 24.3	-0.2
MEF				*e*S	Sb	19 24 29.8	-1.0

NUR	Nurmijrvi	0.68	14	*e*P	Pb	19 24 29.8	0.0
NUR				*e*S	Sb	19 24 39.1	-0.6
ARBE	Arbavere	0.94	116	*e*P	Pg	19 24 33.5	+0.3
ARBE				*e*S	Sg	19 24 45.2	-0.2
PVF	Pernaja	1.03	47	*e*P	Pb	19 24 35.9	0.0
PVF				*e*S	Sb	19 24 49.2	-0.8
MTSE	Matsula	1.17	193	*e*P	Pg	19 24 37.3	-0.3
MTSE				*e*S	Sg	19 24 52.0	-0.8
RAF	Rauma	1.73	314	*e*P	Pg	19 24 48.5	+0.3
RAF				*e*S	Sg	19 25 11.6	+1.0
RAF				MSG		19 25 13.6	
	comp=Z,11nm,0.2s						
VJF	Virojoki	1.75	66	*e*P	Pb	19 24 48.0	-0.2
VJF				*e*S	Sg	19 25 11.2	-0.3
FIA0	FINESS Array S	1.81	28	*e*P	Pg	19 24 49.8	0.0
FIA0				*e*S	Sb	19 25 12.6	+0.2
FIA0				MSG		19 25 17.0	
	comp=Z,18nm,0.1s						
FINES	FINESS Array B	1.81	28	Pn	Pg	19 24 49.9	0.0
	comp=Z,3.7nm,0.3s,baz=204,slow=15,SNR=79						
FINES				Lg	Lg	19 25 13.1	
	comp=Z,3.5nm,0.3s,baz=198,slow=30,SNR=16						
VSU	Vasula	1.87	137	*e*P	Pn	19 24 49.3	+0.9
VSU				*e*S	Sn	19 25 12.2	-0.5
AAL	Aland	2.20	280	P	Pb	19 24 55.7	0.0
AAL				S	Sg	19 25 25.1	-0.5
AAL	Aland	2.20	280	*e*P	Pb	19 24 55.8	+0.1
AAL				*e*SG	Sg	19 25 25.1	-0.5
KEF	Keuruu	2.33	6	*e*PB	Pb	19 24 58.7	+0.7
KEF				*e*SB	Sg	19 25 29.4	-0.6
KEF				MSG		19 25 32.4	
	comp=Z,12nm,0.1s						
KAF	Kangasniemi	2.46	22	MSG		19 25 34.5	
	comp=Z,6.5nm,0.2s						
NRTU	Norrtaelje	2.88	269	P	Pn	19 25 04.1	+1.8
NRTU	Norrtaelje	2.88	269	*e*P	Pn	19 25 04.1	+1.8
GRAU	Graesoe	2.94	282	P	Pn	19 25 04.6	+1.6
GRAU	Graesoe	2.94	282	*e*P	Pn	19 25 04.6	+1.6
FLYU	Flymyra	3.25	278	P	Pn	19 25 09.7	+2.5
FLYU	Flymyra	3.25	278	*e*P	Pn	19 25 09.7	+2.5
NYNU	Nynaeshamn	3.34	258	P	Pn	19 25 11.1	+2.6
NYNU	Nynaeshamn	3.34	258	*e*P	Pn	19 25 11.1	+2.6
FIBU	Brunna	3.51	274	P	Pn	19 25 13.1	+2.2
OSTU	Oestervaala	3.62	279	P	Pn	19 25 14.3	+1.8
OSTU	Oestervaala	3.62	279	*e*P	Pn	19 25 14.3	+1.8
IGGU	Iggoen	3.62	289	P	Pn	19 25 14.4	+1.9
IGGU	Iggoen	3.62	289	*e*P	Pn	19 25 14.4	+1.9
ARNU	Arnoeviken	3.87	301	P	Pn	19 25 18.1	+2.3
ARNU	Arnoeviken	3.87	301	*e*P	Pn	19 25 18.1	+2.3
HFS	Hagfors	5.34	278	Pn	Pn	19 25 38.0	+1.9
	comp=Z,0.2nm,0.3s,baz=94,slow=15,SNR=6.7						
NC602	NORSAR Array S	6.42	283	*e*P	Pn	19 25 52.3	+1.6
NC602				*e*S	Sn	19 27 04.1	-0.5
NC602				IAML		19 27 08.1	
	comp=Z,3.4nm,0.6s						
NC303	NORSAR Array S	6.54	288	*e*P	Pn	19 25 53.4	+1.0
NC303				*e*S	Sn	19 27 06.6	-1.0
NB201	NORSAR Array S	6.55	286	*e*P	Pn	19 25 52.6	-0.1
NB201				*e*S	Sn	19 27 05.5	-2.6
NOA	NORSAR Array B	6.59	286	Pn	Pn	19 25 53.5	+0.2
	comp=Z,0.0nm,0.3s,baz=93,slow=13,SNR=7.3						
NAO01	NORSAR Array S	6.74	284	*e*P	Pn	19 25 56.0	+0.8
NAO01				*e*S	Sn	19 27 11.1	-1.6
STRU	Stroemstad	6.75	269	*e*P	Pn	19 25 56.2	+0.9
STRU				*e*S	Sn	19 27 09.1	-3.7
NBO00	NORSAR Array S	6.80	286	*e*P	Pn	19 25 56.8	+0.7
NBO00				*e*S	Sn	19 27 12.7	-1.5
NC204	NORSAR Array S	6.83	288	*e*P	Pn	19 25 57.0	+0.4
NC204				*e*S	Sn	19 27 13.2	-1.8
DOMB	Dombas	7.74	293	*e*P	Pn	19 26 09.4	+0.4
DOMB				*e*S	Sn	19 27 33.0	-4.3
SKAR	Skarslia	8.01	283	*e*P	Pn	19 26 15.0	+2.4
SKAR				*e*S	Sn	19 27 39.7	-4.1
SKAR				IAML		19 27 56.2	
	comp=Z,2.0nm,1.1s						
ARCES	ARCESS Array B	9.73	2	Pn	Pn	19 26 37.2	+1.0
	baz=180,slow=14,SNR=2.1						
MORC	Moravsky Berou	10.82	204	⇑P	Pn	19 26 52.2	+1.0

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*IDC **11** 19:26:22.1±1.3, 23°.13S×66°.58W, h190km±13km, mb3.6/5, mb1 3.6/11, mb1mx3.5/37, mbtmp4.1/11, Error ellipse: s-maj=22.7km s-min=17.4km az=163.0*

*VAO **11** 19:26:23.4±0.5, 23°.17S×67°.12W, h256km±5km, mb4.0*

*GUC **11** 19:26:24.3±0.4, 23°.05S×67°.14W, h249km±9km, ML4.2*

ISC 11 19:26:23.5±0.7**, 23°.09S**±0°.07×**66°.97W**±0°.08**, h230**km±11km**, n66, σ1.s03**/77**, mb3.9**/5**, 1C, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	1.85	285	P	Pn	19 27 03.7	+0.3
	62nm,0.3s,baz=96,slow=6.5,SNR=180						
LVC				S	S	19 27 33.8	-0.7
	14nm,0.3s,baz=303,slow=20,SNR=17						
LVC	Limon Verde	1.85	285	*e*P	Pn	19 27 03.8	+0.4
PB15	IPOC Station P	2.30	267	*e*P	Pn	19 27 08.1	+0.5
PB15				*i* S	S	19 27 41.8	-0.2
PB06	IPOC Station P	2.43	279	*e*P	Pn	19 27 09.3	+0.5
PB06				*i* S	S	19 27 43.6	-0.6
PB06				IAML		19 27 44.2	
	comp=N,531nm,0.4s						
PB09	IPOC Station P	2.46	301	*e*P	Pn	19 27 10.2	+1.0
PB09				*i* S	S	19 27 44.9	0.0
PB09				IAML		19 27 47.7	
	comp=E,329nm,0.5s						
PB03	IPOC Station P	2.77	291	*e*P	Pn	19 27 13.0	+0.5
PB03				*i* S	S	19 27 49.6	-1.2
PB03				IAML		19 27 51.7	
	comp=E,764nm,0.7s						
PB05	IPOC Station P	2.99	274	*i* P	Pn	19 27 15.2	+0.5
PB05				*i* S	S	19 27 53.9	-1.0
PB05				IAML		19 28 02.3	
	comp=E,248nm,0.3s						
PB07	IPOC Station P	3.02	296	⇑*i*P	Pn	19 27 15.8	+0.6
PB07				*i* S	S	19 27 54.4	-1.4
PB04	IPOC Station P	3.03	284	*i* P	Pn	19 27 15.9	+0.6
PB04				*i* S	S	19 27 54.9	-1.0
PB01	IPOC Station P	3.10	311	*e*P	Pn	19 27 16.5	+0.5
PB01				*i* S	S	19 27 56.5	-0.7
PB02	IPOC Station P	3.23	302	*e*P	Pn	19 27 17.9	+0.4
PB02				*i* S	S	19 27 58.4	-1.5
PB08	IPOC Station P	3.57	325	*e*P	Pn	19 27 22.9	+1.1
PB08				*i* S	S	19 28 07.6	+0.1
HMBC	Humberstone	3.90	315	*e*P	Pn	19 27 25.4	0.0
HMBC				*i* S	S	19 28 12.3	-1.8
MNMC	Minye Minye	4.64	328	*e*P	Pn	19 27 35.3	+0.8
MNMC				*i* S	S	19 28 28.9	-1.8
LPAZ	La Paz	6.85	351	P	Pn	19 28 03.9	+1.1
	comp=E,0.6nm,0.3s,baz=174,slow=4.4,SNR=3.6						
LPAZ	La Paz	6.85	351	*e*P	Pn	19 28 03.9	+1.1
SIV	San Ignacio	8.99	39	P	Pn	19 28 26.1	-3.4
	comp=E,2.4nm,0.3s,baz=228,slow=11,SNR=17						
CPUP	Villa Florida	9.34	112	*e*P	Pn	19 28 35.4	+1.5
AQDB	Aquidauana	10.79	78	*e*P	Pn	19 28 54.3	+1.9
VILB	Vilhena	11.96	34	*e*P	Pn	19 29 08.2	+1.0
PP1B	Ponte de Pedra	12.58	66	*e*P	Pn	19 29 16.8	+1.8
TRCB	Terra Rica	13.21	92	*e*P	Pn	19 29 24.0	+1.2
ETMB	Extrema	13.22	3	*e*P	Pn	19 29 22.6	-0.2
PTGB	Pitanga	13.73	100	*e*P	P	19 29 31.0	+0.4
ITAB	Concordia	14.06	110	*e*P	Pn	19 29 33.5	+0.5
CPSB	Cacapava Do Su	14.11	124	*e*P	Pn	19 29 32.0	-1.6
SAML	Samuel	14.52	15	*e*P	Pn	19 29 38.8	0.0
PCMB	Pacaembu	14.61	87	*e*P	Pn	19 29 41.0	+1.2
PLTB	Pedras Altas	14.67	129	*e*P	Pn	19 29 40.9	+0.4
CNLB	Canela	15.73	117	*e*P	P	19 29 51.0	-1.6
ITRB	Iturama	15.83	81	*e*P	P	19 29 53.2	-0.6
FRTB	Fartura	16.01	94	*e*P	P	19 29 55.5	-0.2
ARAG	Araguaiana, MT	16.07	66	*e*P	P	19 29 55.8	-0.5
BB19B	Bebedouro	17.21	87	*e*P	P	19 30 09.7	+0.7
PLCA	Paso Flores	17.85	189	P	Pn	19 30 17.5	-0.7
	comp=E,0.1nm,0.3s,baz=4.9,slow=14,SNR=1.3						
SPB	Sao Paulo	17.95	95	*e*P	P	19 30 16.5	-0.4
PET01	Itanhaem-SP	18.08	98	*e*P	P	19 30 17.4	-0.9
IPMB	Ipameri, GO	18.28	77	*e*P	P	19 30 20.3	-0.3
VAO	Valinhos	18.41	94	*e*P	P	19 30 20.9	-1.1
SNDB	Serra Nova Dou	18.57	56	*e*P	P	19 30 22.9	-0.8
ATAH	Atahualpa	19.30	324	P	Pn	19 30 37.0	+1.1
	comp=E,0.3nm,0.3s,baz=151,slow=13,SNR=2.9						
BDFB	Brasilia	19.35	71	P	P	19 30 30.6	-1.5
	comp=E,1.2nm,0.3s,baz=250,slow=11,SNR=20						
NPGB	Novo Progresso	19.48	37	*e*P	P	19 30 31.5	-1.8
PARB	Paraibuna	19.63	95	*e*P	P	19 30 34.7	-0.3
BSCB	Bom Sucesso	20.68	88	*e*P	P	19 30 46.1	-0.2
ESAR	Angra dos Reis	20.73	94	*e*P	P	19 30 44.9	-1.8
PEXB	Peixe	20.86	62	*e*P	P	19 30 46.8	-1.3
ITTB	Itaituba	21.55	32	*e*P	P	19 30 53.5	-1.5
VAS01	Vassouras-RJ	21.72	92	*e*P	P	19 30 56.2	-0.4
JANB	Januaria	22.84	74	*e*P	P	19 31 06.4	-0.6
PTGA	Pitinga	23.24	18	P	P	19 31 10.7	+0.1
	comp=E,1.4nm,0.3s,baz=209,slow=12,SNR=5.4						
PTGA	Pitinga	23.24	18	*e*P	P	19 31 10.4	-0.2
SMTB	Santa Maria do	23.35	56	*e*P	P	19 31 11.8	+0.2
CAM01	Campos-RJ	23.42	92	*e*P	P	19 31 11.4	-0.8
SDBA	SAO DESIDERIO	23.52	67	*e*P	P	19 31 12.7	-0.5
PRPB	Parauapebas	23.58	47	*e*P	P	19 31 13.1	-0.6
MALB	Monte Alegre	24.45	32	*e*P	P	19 31 22.1	+0.6
SJMB	Sao Joao De Ma	24.47	85	*e*P	P	19 31 21.0	-0.7
ALF01	Guarapari-ES	24.47	89	*e*P	P	19 31 21.1	-0.6
GDU01	Guandu, BA	27.57	75	*e*P	P	19 31 48.2	-1.3
MDP	Montagnes des	31.32	28	P	P	19 32 23.5	+1.0
	comp=E,8.5nm,0.9s,baz=185,slow=6.8,SNR=5.0						
NBLI	Livramento-PB	32.81	66	*e*P	P	19 32 35.1	-0.6
TORD	Torodi Ar. Bea	76.22	69	P	P	19 37 47.5	+0.5
	comp=E,0.8nm,0.4s,baz=259,slow=5.8,SNR=18						
PDAR	Pinedale Array	76.38	329	P	P	19 37 50.5	+2.9
	comp=E,0.2nm,0.6s,baz=122,slow=8.6,SNR=1.5						
ULM	Lac du Bonnet	77.38	341	P	P	19 37 58.1	+5.5
	comp=E,1.6nm,0.7s,baz=180,slow=5.1,SNR=2.2						
MKAR	Makanchi Array	145.80	39	PKPbc	PKiKP	19 45 38.8	0.0
	comp=E,1.0nm,0.7s,baz=318,slow=3.4,SNR=12						

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*NOU **11** 19:37:38.8, 19°.23S×169°.08E, h122km, MLv4.5, Vanuatu Islands*

*NEIC **11** 19:37:40.2±1.6, 19°.13S±0°.08×168°.8E±0°.2, h135km±13km, mb4.4/19, Error ellipse: s-maj=22.4km s-min=11.3km az=86.0*

*IDC **11** 19:37:45.0±12.0, 18°.96S×166°.39E, h0km, mb4.2/3, mb1 4.4/4, mb1mx3.9/38, mbtmp4.3/4, ML4.3/1, MS4.5/2, Ms1 4.5/2, ms1mx4.1/31, Error ellipse: s-maj=206.7km s-min=32.8km az=60.0*

ISC 11 19:37:40.5±1.1**, 19°.20S**±0°.05×**168°.8E**±0°.1**, h147**km**, n53, σ1.s67**/55**, mb4.4**/13**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	Devils Point	1.56	339	P	Pn	19 38 09.8	-0.7
LIFNC	LIFOU	2.12	222	P	Pn	19 38 15.2	-1.7
LIFNC	LIFOU	2.12	222	P	Sn	19 38 40.4	-4.5
YATNC	Mamie plateau,	3.34	211	P	Pn	19 38 30.5	-1.6
YATNC	Mamie plateau,	3.34	211	P	Pn	19 38 30.3	-1.8
YATNC	Mamie plateau,	3.34	211	P	Pn	19 38 30.5	-1.6
DZM	Mont Dzumac	3.59	217	Pn	Pn	19 38 35.3	0.0
	34nm,0.3s,baz=101,slow=12,SNR=235						
DZM				LR	LR	19 39 02.0	
	comp=Z,1µm,19.0s,baz=311,slow=25						
DZM				Sn	Sn	19 39 16.0	-1.9
	34nm,0.3s,baz=103,slow=20,SNR=11						
DZM	Mont Dzumac	3.59	217		Pn	19 38 35.4	+0.1
DZM				Sn	Sn	19 39 13.0	-5.0
DZM	Mont Dzumac	3.59	217	P	Pn	19 38 35.2	-0.2
DZM	Mont Dzumac	3.59	217	P	Pn	19 38 35.5	+0.1
PINNC	Pines Island,	3.61	200	P	Pn	19 38 34.4	-1.2
PINNC	Pines Island,	3.61	200	P	Pn	19 38 34.6	-1.0
PINNC	Pines Island,	3.61	200	P	Pn	19 38 34.9	-0.7
OUENC	Ouen Island, N	3.67	209	P	Pn	19 38 36.3	-0.1
OUENC	Ouen Island, N	3.67	209	P	Pn	19 38 36.4	0.0
OUENC	Ouen Island, N	3.67	209	P	Pn	19 38 36.6	+0.2
NOUC	Port Laguerre	3.69	218	P	Pn	19 38 36.9	+0.3
NOUC	Port Laguerre	3.69	218	P	Pn	19 38 37.2	+0.6
NOUC	Port Laguerre	3.69	218	P	Pn	19 38 37.3	+0.6
ONTNC	Ouen Toro	3.77	215	P	Pn	19 38 38.0	+0.4
ONTNC	Ouen Toro	3.77	215	P	Pn	19 38 38.1	+0.4
ONTNC	Ouen Toro	3.77	215	P	Pn	19 38 38.1	+0.4
SANVU	Saraoutou	4.02	338	Pn	Pn	19 38 39.7	-1.1
SANVU				Sn	Sn	19 39 25.7	-2.1
SANVU	Saraoutou	4.02	338	P	Pn	19 38 39.8	-1.1
KOUNC	Koumac, New Ca	4.42	252	P	Pn	19 38 48.1	+1.9
BKZ	Black Stump Fm	20.99	163	P	P	19 42 11.7	-0.6
BKZ				IAmb	IAmb	19 42 36.2	
	comp=Z,11nm,1.3s						
CTAO	Charters Tower	21.22	264	P	P	19 42 14.1	-0.7
CTAO				IAmb	IAmb	19 42 15.9	
	comp=Z,25nm,1.4s						
BFZ	Birch Farm	22.35	165	P	P	19 42 27.8	+1.5
BFZ				IAmb	IAmb	19 42 40.3	
	comp=Z,38nm,1.2s						
SNZO	South Karori	22.62	168	P	P	19 42 30.5	+1.7
BHW	Baring Head	22.74	168	P	P	19 42 31.1	+1.1
THZ	Tophouse	22.77	172	P	P	19 42 32.2	+1.9
THZ				IAmb	IAmb	19 42 46.6	
	comp=Z,16nm,1.2s						
MSWZ	Moikau Station	22.83	167	P	P	19 42 32.4	+1.6
PLWZ	Palliser	22.98	167	P	P	19 42 32.7	+0.5
PMG	Port Moresby	23.06	292	P	P	19 42 30.7	-2.5
PMG				IAmb	IAmb	19 42 36.2	
	comp=Z,26nm,1.2s						
KHZ	Kahutara	23.50	171	P	P	19 42 37.7	+0.8
KHZ				IAmb	IAmb	19 42 59.2	
	comp=Z,27nm,1.3s						
LTZ	Lake Taylor	23.70	174	P	P	19 42 40.3	+1.5
LTZ				IAmb	IAmb	19 43 06.9	
	comp=Z,10nm,1.2s						
OXZ	Oxford	24.21	174	P	P	19 42 45.0	+1.6
STKA	Stephens Creek	27.49	237	P	P	19 43 16.0	+2.9
	comp=Z,3.0nm,0.6s,baz=67,slow=9.5,SNR=13						
STKA	Stephens Creek	27.49	237	P	P	19 43 15.1	+2.0
WR0	Warramunga Arr	32.22	263	P	P	19 43 56.0	+1.0
WR0				IAmb	IAmb	19 44 23.3	
	comp=Z,11nm,1.3s						
BBOO	Buckleboo	32.22	239	P	P	19 43 56.9	+2.0
WB0	Warramunga Arr	32.38	263	P	P	19 43 56.9	+0.5
WB2	Warramunga Arr	32.40	263	P	P	19 43 57.1	+0.5
WB2				IAmb	IAmb	19 44 23.3	
	comp=Z,7.6nm,1.4s						
WRAB	Tennant Creek	32.40	263	P	P	19 43 56.9	+0.4
WRA	Warramunga Arr	32.41	263	P	P	19 43 57.9	+1.2
	comp=Z,0.7nm,0.6s,baz=90,slow=7.9,SNR=8.7						
WRA	Warramunga Arr	32.41	263	P	P	19 43 57.1	+0.4
AS31	Alice Springs	32.70	256	P	P	19 44 02.0	+2.8
AS31				IAmb	IAmb	19 44 02.3	
	comp=Z,3.4nm,0.5s						
ASAR	Alice Springs	32.70	256	P	P	19 44 01.7	+2.5
	comp=Z,4.8nm,0.4s,baz=82,slow=8.6,SNR=181						
ASAR	Alice Springs	32.70	256	P	P	19 44 01.3	+2.2
MTN	Manton Dam	36.66	274	P	P	19 44 34.8	+1.5
MTN				IAmb	IAmb	19 44 37.2	
	comp=Z,4.8nm,0.7s						
FITZ	Fitzroy Crossi	40.80	264	P	P	19 45 09.3	+1.7
JGF	Kuroka	62.10	331	P	P	19 47 45.6	-0.2
USRK	Ussuriysk Ar.	71.50	333	LR	LR	20 17 38.6	
	comp=Z,2µm,20.6s,baz=23,slow=34						

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*NEIC **11** 19:41:46.2±1.2, 17°.8S±0°.2×178°.7W±0°.2, h579km±10km, mb4.3/21, Error ellipse: s-maj=34.5km s-min=16.0km az=154.0*

*IDC **11** 19:41:47.3±1.8, 17°.73S×178°.70W, h583km±19km, mb3.3/11, mb1 3.5/13, mb1mx3.3/44, mbtmp4.2/13, Error ellipse: s-maj=48.0km s-min=14.9km az=150.0*

ISC 11 19:41:47.3±0.8**, 17°.8S**±0°.2×**178°.6W**±0°.1**, h600**km**, n44, σ1.s10**/44**, mb4.2**/22**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.20	271	P	P	19 43 06.0	-1.8
	6.1nm,0.3s,baz=122,slow=4.0,SNR=29						
MSVF	Nonsavu	3.20	271	P	P	19 43 05.5	-2.2
AFI	Afiamalu	7.63	60	P	P	19 43 40.0	-3.4
SANVU	Saraoutou	13.82	278	P	P	19 44 42.9	-1.7
DZM	Mont Dzumac	14.69	251	P	P	19 44 52.3	-0.4
	1.2nm,0.3s,baz=157,slow=23,SNR=6.3						
DZM	Mont Dzumac	14.69	251	P	P	19 44 52.0	-0.7
EIDS	Eidsvold	29.13	250	P	P	19 47 00.6	-1.1
EIDS				IAmb	IAmb	19 47 08.3	
	comp=Z,15nm,1.2s						
ARMA	Armidale	29.83	240	P	P	19 47 08.1	+0.3
CTA	Charters Tower	33.29	260	P	P	19 47 36.9	-0.2
	comp=Z,3.9nm,0.6s,baz=75,slow=12,SNR=2.4						
CTAO	Charters Tower	33.29	260	P	P	19 47 37.0	-0.2
CTAO				IAmb	IAmb	19 47 38.2	
	comp=Z,18nm,1.3s						
CAN	Canberra	33.61	232	P	P	19 47 40.1	+0.4
COEN	Coen	36.93	270	P	P	19 48 07.8	+0.5
COEN				IAmb	IAmb	19 48 08.5	
	comp=Z,5.6nm,0.7s						
TOO	Toolangi	37.08	231	P	P	19 48 08.4	+0.1
TOO				IAmb	IAmb	19 48 09.5	
	comp=Z,6.6nm,0.6s						
STKA	Stephens Creek	38.51	241	P	P	19 48 20.7	+0.8
	comp=Z,7.1nm,0.5s,baz=89,slow=9.6,SNR=44						
STKA	Stephens Creek	38.51	241	P	P	19 48 20.6	+0.6
BBOO	Buckleboo	43.29	241	P	P	19 48 57.9	+0.2
WR0	Warramunga Arr	44.28	259	P	P	19 49 05.0	-0.6
WB0	Warramunga Arr	44.44	260	P	P	19 49 06.0	-0.7
WB0				IAmb	IAmb	19 49 07.0	
	comp=Z,4.1nm,0.6s						
WB2	Warramunga Arr	44.46	259	P	P	19 49 06.4	-0.5
WB2				IAmb	IAmb	19 49 07.2	
	comp=Z,6.2nm,0.7s						
WRAB	Tennant Creek	44.47	259	P	P	19 49 06.4	-0.5
WRAB				IAmb	IAmb	19 49 07.2	
	comp=Z,4.5nm,0.7s						
WRA	Warramunga Arr	44.47	259	P	P	19 49 06.3	-0.7
	comp=Z,2.9nm,0.5s,baz=96,slow=7.0,SNR=89						
AS31	Alice Springs	44.64	254	P	P	19 49 08.3	0.0
AS31				IAmb	IAmb	19 49 09.0	
	comp=Z,9.3nm,0.8s						
ASAR	Alice Springs	44.64	254	P	P	19 49 08.4	+0.2
	comp=Z,35nm,0.6s,baz=88,slow=8.1,SNR=834						
ASAR	Alice Springs	44.64	254	P	P	19 49 08.0	-0.3
MTN	Manton Dam	48.63	268	P	P	19 49 38.0	-0.3
MTN				IAmb	IAmb	19 49 46.2	
	comp=Z,10nm,1.2s						
FORT	Forrest	49.88	245	P	P	19 49 46.9	-0.3
SIJI	Sorong	52.05	283	P	P	19 50 03.9	+0.8
	comp=Z,10nm,0.7s,baz=133,slow=11,SNR=5.2						
FITZ	Fitzroy Crossi	52.87	261	P	P	19 50 09.3	+0.4
	comp=Z,1.0nm,0.3s,baz=113,slow=3.1,SNR=18						
FITZ	Fitzroy Crossi	52.87	261	P	P	19 50 09.2	+0.2
PSA00	Pilbara Seismi	57.76	255	P	P	19 50 41.9	-0.8
MORW	Morawa	60.35	246	P	P	19 51 00.1	+0.2
MORW				IAmb	IAmb	19 51 08.5	
	comp=Z,26nm,1.4s						
GIRL	Giralia	62.75	253	P	P	19 51 16.6	+1.0
TPUB	Ta-pu	72.07	303	P	P	19 52 12.1	-0.3
TPUB				IAmb	IAmb	19 52 31.7	
	comp=Z,16nm,1.1s						
BEKR	Beckworth	78.95	42	P	P	19 52 51.8	+1.6
PIX	Pinacate	79.43	52	P	P	19 52 53.2	+0.5
NVAR	Mina Array Bea	79.49	44	P	P	19 52 54.3	+1.2
	comp=Z,0.6nm,0.6s,baz=224,slow=9.4,SNR=4.8						
NVAR	Mina Array Bea	79.49	44	P	P	19 52 54.2	+1.0
SEY	Seymchan	83.67	347	P	P	19 53 14.4	+0.9
	comp=Z,1.1nm,0.8s,baz=259,slow=23,SNR=4.7						
ILAR	Eielson Array	85.86	13	P	P	19 53 24.1	0.0
	comp=Z,0.4nm,0.4s,baz=223,slow=5.1,SNR=7.2						
TXAR	Lajitas Array	86.10	58	P	P	19 53 28.5	+2.2
	comp=Z,0.6nm,0.6s,baz=216,slow=5.5,SNR=6.2						
TXAR	Lajitas Array	86.10	58	P	P	19 53 26.8	+0.6
PDAR	Pinedale Array	87.42	43	P	P	19 53 33.4	+1.1
	comp=Z,0.6nm,0.6s,baz=199,slow=3.3,SNR=4.0						
PDAR	Pinedale Array	87.42	43	P	P	19 53 33.2	+0.9
CMAR	Chiang Mai Arr	88.70	290	P	P	19 53 40.8	+2.3
	comp=Z,0.5nm,0.8s,baz=83,slow=2.6,SNR=4.8						

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*BJI **11** 19:49:13.7±0.0, 3°.02S×139°.52E, h10km, mb4.6/22*

*IDC **11** 19:49:18.1±0.6, 2°.53S×139°.10E, h0km, mb4.4/12, mb1 4.5/13, mb1mx4.3/28, mbtmp4.4/13, ML5.1/2, Error ellipse: s-maj=16.5km s-min=11.2km az=12.0*

*DJA **11** 19:49:20.9±0.3, 2°S±4°×13°9E±°, h10km, M4.9/24, mb4.8/24, mB5.5/4, MLv4.9/8, Mw(mB)4.9/4, MwMwp6.4/1, Mwp6.3/1*

*NEIC **11** 19:49:24.3±1.5, 2°.68S±0°.08×138°.95E±0°.07, h45km±8km, mb4.7/21, Error ellipse: s-maj=12.5km s-min=10.4km az=160.0*

ISC 11 19:49:23.9±0.4**, 2°.65S**±0°.05×**139°.04E**±0°.05**, h37**km**, n103, σ1.s78**/107**, mb4.6**/34**, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GENI	Genyem	1.12	87	P	Pn	19 49 39.8	-3.3
WAMI	Wamena	1.27	195	P	Pn	19 49 48.5	+3.4
JAY	Jayapura	1.67	85	Pg	Pn	19 49 46.5	-4.0
	73nm,0.3s,baz=241,slow=10,SNR=121						
JAY				Lg	Lg	19 50 09.4	
	150nm,0.3s,baz=107,slow=19,SNR=6.5						
JAY	Jayapura	1.67	85	P	Pn	19 49 46.0	-4.5
SRPI	Serui, Papua	2.91	285	P	Pn	19 50 07.0	-0.6
BAKI	Biak	3.27	296	P	Pn	19 50 11.1	-1.5
MMPI	Merauke	5.93	167	P	Pn	19 50 52.3	+3.1
	4.6nm9µm761nm,0.8s						
FAKI	Fak Fak	6.79	268	Pn	Pn	19 51 00.4	-0.6
FAKI	Fak Fak	6.79	268	P	Pn	19 51 00.3	-0.7
	0.6nm102nm,1.1s						
FAKI				S	Sn	19 52 17.2	0.0
	0.6nm102nm,1.1s						
SIJI	Sorong	7.97	283	Pn	Pn	19 51 17.0	-0.2
	7.4nm,0.3s,baz=231,slow=23,SNR=21						
SIJI				Sn	Sn	19 52 44.5	-1.8
	0.6nm,0.3s,baz=307,slow=20,SNR=1.3						
SWI	Sorong	7.98	283	P	Pn	19 51 16.3	-1.0
	0.2nm58nm,0.7s						
MANU	Manus Island	8.34	86		Pn	19 51 24.1	+1.8
MSAI	Masohi	10.12	266	P	Pn	19 51 46.6	-0.2
	19nm,0.8s						
PMG	Port Moresby	10.49	130	Pn	Pn	19 51 54.3	+2.4
	2.2nm,0.3s,baz=331,slow=5.7,SNR=12						
PMG	Port Moresby	10.49	130	Pn	Pn	19 51 52.9	+1.0
PMG	Port Moresby	10.49	130	P	Pn	19 51 54.2	+2.4
NLAI	Namlea	11.94	267	P	Pn	19 52 11.1	-0.6
	73nm,0.8s						
COEN	Coen	11.95	160	Pn	Pn	19 52 12.0	+0.2
MTN	Manton Dam	12.80	217	Pn	Pn	19 52 22.3	-1.1
SANI	Sanana	13.06	272	P	Pn	19 52 26.7	-0.2
	40nm,0.7s						
SOEI	Soe	16.29	244	P	P	19 53 12.6	-0.1
SOEI	Soe	16.29	244	P	Pn	19 53 10.2	+0.1
	233nm,1.1s						
LUWI	Luwuk	16.34	275	P	Pn	19 53 10.3	-0.3
LUWI				IAmb	IAmb	19 53 26.5	
	comp=Z,157nm,1.4s						
LUWI	Luwuk	16.34	275	P	Pn	19 53 11.0	+0.4
	comp=Z,89nm,1.2s						
GTOI	Gorontalo	16.36	281	P	P	19 53 13.4	0.0
	comp=Z,19nm,0.8s						
BATI	Baumata	17.02	243	P	Pn	19 53 19.4	+0.1
	comp=Z,22nm,0.3s,baz=59,slow=2.2,SNR=44						
BATI	Baumata	17.02	243	P	Pn	19 53 19.6	+0.4
	comp=Z,121nm,0.8s						
MRSI	Marisa	17.38	280	P	P	19 53 25.4	+0.7
	comp=Z,30nm,0.6s						
APSI	Ampana	17.47	275	P	P	19 53 26.4	+0.7
	comp=Z,62nm,1.2s						
WRAB	Tennant Creek	17.78	195	P	Pn	19 53 25.2	-3.4
WRAB				IAmb	IAmb	19 53 36.4	
	comp=Z,42nm,0.9s						
WRA	Warramunga Arr	17.79	195	P	Pn	19 53 25.6	-3.1
	comp=Z,1.2nm,0.3s,baz=7.3,slow=12,SNR=31						
WRA				S	Sn	19 56 38.3	-7.8
	comp=Z,0.4nm,0.3s,baz=11,slow=22,SNR=4.7						
EDFI	Ende, Flores	18.29	250	P	Pn	19 53 37.6	+2.6
	comp=Z,17nm,0.9s						
CTA	Charters Tower	18.71	158	P	Pn	19 53 42.8	+2.9
	comp=Z,0.6nm,0.3s,baz=340,slow=12,SNR=9.1						
CTAO	Charters Tower	18.71	158	P	Pn	19 53 43.5	+3.5
SPSI	Sidrap Palu	19.29	266	P	Pn	19 53 53.3	+6.4
FITZ	Fitzroy Crossi	20.21	220	P	P	19 53 54.6	-1.1
	comp=Z,14nm,0.7s,baz=38,slow=11,SNR=18						
FITZ	Fitzroy Crossi	20.21	220	P	P	19 53 54.6	-1.1
FITZ				IAmb	IAmb	19 54 02.8	
	comp=Z,22nm,0.9s						
AS31	Alice Springs	21.47	193	P	P	19 54 08.6	-0.8
ASAR	Alice Springs	21.48	193	P	P	19 54 08.5	-0.9
	comp=Z,9.7nm,0.7s,baz=22,slow=9.8,SNR=48						
ASAR				S	Sn	19 58 11.7	-3.3
	comp=Z,10nm,1.0s,baz=12,slow=20,SNR=8.3						
ASAR	Alice Springs	21.48	193	P	P	19 54 08.1	-1.3
HNR	Honiara	21.84	109	P	P	19 54 12.0	-1.4
	comp=Z,49nm,0.6s,baz=271,slow=1.0,SNR=3.5						
MYLDM	Lahad Datu	21.95	291	P	P	19 54 14.1	-0.4
PLAI	Plampang	22.02	253	P	P	19 54 17.3	+2.0
	comp=Z,34nm,0.8s						
MTKI	Muara Teweh, K	24.19	274	P	P	19 54 39.9	+2.7
	comp=Z,16nm,1.1s						
EIDS	Eidsvold	25.39	154	P	P	19 54 48.9	+1.0
EIDS				IAmb	IAmb	19 54 57.0	

	comp=Z,37nm,1.0s						
STKA	**Stephens Creek**	**29.17**	**176**	P	**P**	**19 55 22.6**	**+0.8**
	comp=Z,1.9nm,0.6s,baz=352,slow=9.9,SNR=6.8						
MDSI	**Maura Dua**	**34.84**	**266**	P	**P**	**19 56 11.7**	**-0.1**
CMAR	**Chiang Mai Arr**	**44.70**	**300**	P	**P**	**19 57 34.0**	**+0.3**
	comp=Z,1.3nm,0.8s,baz=120,slow=6.2,SNR=11						
CMAR	**Chiang Mai Arr**	**44.70**	**300**	P	**P**	**19 57 32.7**	**-1.0**
BJI	**Beijing**	**47.38**	**336**	P	**P**	**19 57 54.2**	**-0.2**
BJI				pmax	pmax		
	comp=Z,5.0nm,1.1s						
TUWZ	**Tuamarina**	**49.73**	**146**	P	**P**	**19 58 12.9**	**+0.3**
GTA	**Gaotai**	**55.22**	**323**	*e*P	**P**	**19 58 53.1**	**-0.3**
GTA				pP	pP	19 58 59.0	-5.9
GTA				sP	sP	19 59 01.8	-7.1
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
ULN	**Ulaanbaatar**	**57.55**	**335**	P	**P**	**19 59 09.6**	**-0.3**
ULN				IAmb	IAmb	19 59 14.4	
	comp=Z,3.5nm,0.8s						
TAPN	**Taplejung**	**57.71**	**305**	*e*P	**P**	**19 59 11.9**	**+0.3**
	comp=Z,27nm,1.3s						
ODAN	**Odare**	**57.79**	**304**	*e*P	**P**	**19 59 12.2**	**+0.1**
	comp=Z,14nm,0.9s						
SONM	**Songino Array**	**57.81**	**335**	P	**P**	**19 59 11.6**	**-0.1**
	comp=Z,1.5nm,0.8s,baz=157,slow=7.4,SNR=6.6						
SONM	**Songino Array**	**57.81**	**335**	P	**P**	**19 59 11.8**	**+0.1**
RAMN	**Ramite**	**58.48**	**304**	*e*P	**P**	**19 59 16.2**	**-0.7**
	comp=Z,9.2nm,0.7s						
GUN	**Gumba**	**59.43**	**305**	*e*P	**P**	**19 59 22.5**	**-1.1**
	comp=Z,28nm,1.2s						
PKI	**Pulchoki**	**59.69**	**304**	*e*P	**P**	**19 59 25.5**	**+0.1**
PKIN	**Phulchoki**	**59.70**	**304**	*e*P	**P**	**19 59 25.5**	**+0.1**
KKN	**Kakani**	**59.88**	**304**	*e*P	**P**	**19 59 26.8**	**+0.2**
GKN	**Gorkha**	**60.48**	**304**	*e*P	**P**	**19 59 31.3**	**+0.7**
	comp=Z,15nm,0.9s						
DANN	**Dangsing**	**61.33**	**304**	*e*P	**P**	**19 59 36.8**	**+0.2**
	comp=Z,6.7nm,0.7s						
WMQ	**Urumqi**	**65.17**	**321**	*e*P	**P**	**20 00 01.9**	**+0.5**
WMQ				PcP	**PcP**	**20 00 32.4**	**-1.4**
WMQ				pmax	pmax		
	comp=Z,10.0nm,1.1s						
MK31	**Makanchi Array**	**69.95**	**322**	P	**P**	**20 00 29.8**	**-1.7**
MK31				IAmb	IAmb	20 00 32.5	
	comp=Z,10nm,1.2s						
MKAR	**Makanchi Array**	**69.95**	**322**	P	**P**	**20 00 30.1**	**-1.3**
	comp=Z,5.0nm,0.6s,baz=104,slow=6.4,SNR=60						
MKAR	**Makanchi Array**	**69.95**	**322**	P	**P**	**20 00 30.3**	**-1.2**
MAKZ	**Makanchi**	**70.14**	**322**	P	**P**	**20 00 31.6**	**-1.0**
MAKZ				IAmb	IAmb	20 00 34.2	
	comp=Z,21nm,1.4s						
SHLS	**Shalkode**	**70.20**	**318**	*e*P	**P**	**20 00 30.5**	**-2.7**
	comp=Z,5.4nm,0.8s,baz=318						
SATY	**Saty**	**70.87**	**317**	*e*P	**P**	**20 00 36.9**	**-0.4**
	comp=Z,4.9nm,0.9s,baz=318						
KSH	**Kashi**	**71.29**	**313**	P	**P**	**20 00 41.1**	**+1.2**
KSH				sP	pP	20 00 50.4	-1.1
KSH				PP	**PP**	**20 03 25.4**	**+7.0**
KSH				S	**S**	**20 09 53.9**	**-1.3**
KSH				pmax	pmax		
	comp=Z,7.0nm,1.2s						
TDK	**Taldyqorghan**	**71.63**	**319**	*e*P	**P**	**20 00 41.5**	**-0.2**
	comp=Z,6.4nm,0.5s,baz=320						
MDOK	**Medeo**	**71.83**	**317**	*e*P	**P**	**20 00 42.5**	**-0.7**
	baz=318						
TNSS	**Tian-Shan**	**71.85**	**317**	*e*P	**P**	**20 00 42.4**	**-1.2**
	baz=317						
AAA	**Alma-Ata**	**71.94**	**317**	*e*P	**P**	**20 00 43.0**	**-0.7**
	baz=318						
ZAA0	**Zalesovo Array**	**72.05**	**330**	P	**P**	**20 00 41.9**	**-2.1**
ZALV	**Zalesovo Beam**	**72.05**	**330**	P	**P**	**20 00 43.4**	**-0.7**
	comp=Z,3.2nm,0.7s,baz=129,slow=12,SNR=6.7						
CHKK	**Chushkaly**	**72.12**	**318**	*e*P	**P**	**20 00 44.3**	**-0.4**
	baz=318						
KUU	**Kurty**	**72.58**	**318**	*e*P	**P**	**20 00 47.1**	**-0.3**
	baz=318						
KURK	**Kurchatov**	**73.86**	**325**	P	**P**	**20 00 54.5**	**-0.3**
KURK				IAmb	IAmb	20 01 07.9	
	comp=Z,6.4nm,0.9s						
KURBB	**Kurchatov Arra**	**73.87**	**325**	P	**P**	**20 00 54.6**	**-0.3**
	comp=Z,2.4nm,1.0s,baz=114,slow=5.2,SNR=13						
TIXI	**Tiksi**	**74.46**	**357**	P	**P**	**20 00 57.5**	**-0.4**
TIXI				IAmb	IAmb	20 01 03.5	
	comp=Z,7.5nm,1.4s						
BTLS	**Baital**	**74.52**	**318**	*e*P	**P**	**20 00 58.2**	**-0.6**
	baz=318						
DZA	**Taraz**	**75.68**	**315**	*e*P	**P**	**20 01 05.3**	**-0.3**
	baz=316						
VNDA	**Vanda**	**75.81**	**175**	P	**P**	**20 01 07.2**	**+1.6**
	comp=Z,3.2nm,0.5s,baz=325,slow=7.5,SNR=9.8						
IUG	**Iuzhnay**	**76.39**	**314**	*e*P	**P**	**20 01 09.3**	**-0.4**
	baz=315						
BRVK	**Borovoye**	**79.53**	**325**	P	**P**	**20 01 26.7**	**-0.1**
BRVK				IAmb	IAmb	20 01 42.0	
	comp=Z,5.7nm,0.8s						
IMAR	**Indian Mountai**	**83.31**	**22**	P	**P**	**20 01 47.2**	**+0.7**
GEYT	**Alibeck**	**84.47**	**308**	P	**P**	**20 01 52.1**	**-1.0**
	comp=Z,1.6nm,0.6s,baz=188,slow=7.9,SNR=4.3						
GEYT	**Alibeck**	**84.47**	**308**	P	**P**	**20 01 53.1**	**0.0**
ABKAR	**Akbulak array**	**84.89**	**320**	P	**P**	**20 01 54.4**	**-0.6**
ABKAR	**Akbulak array**	**84.89**	**320**	P	**P**	**20 01 53.8**	**-1.1**
CCB	**Clear Creek Bu**	**85.23**	**24**	P	**P**	**20 01 55.2**	**-1.1**
IL31		**85.64**	**24**	P	**P**	**20 01 56.3**	**-2.0**
IL31				IAmb	IAmb	20 02 08.3	
	comp=Z,8.0nm,1.1s						
ILAR	**Eielson Array**	**85.64**	**24**	P	**P**	**20 01 56.8**	**-1.6**
	comp=Z,2.2nm,0.7s,baz=261,slow=4.7,SNR=19						
ILAR	**Eielson Array**	**85.64**	**24**	P	**P**	**20 01 56.1**	**-2.2**
BMAR	**Burnt Mountain**	**87.22**	**22**	P	**P**	**20 02 06.1**	**-0.1**
QSPA	**South Pole Qui**	**87.30**	**180**	P	**P**	**20 02 06.6**	**-0.1**
BCAR	**Beaver Creek A**	**87.45**	**27**	P	**P**	**20 02 07.6**	**+0.3**
TORD	**Torodi Ar. Bea**	**136.56**	**286**	PKP	**PKPdf**	**20 08 43.6**	**+0.5**
	comp=Z,1.2nm,0.8s,baz=90,slow=2.0,SNR=4.1						
CPUP	**Villa Florida**	**147.12**	**152**	PKPbc	**PKPbc**	**20 09 03.9**	**+0.1**
	comp=Z,1.4nm,0.6s,baz=257,slow=6.0,SNR=3.5						
LPAZ	**La Paz**	**147.21**	**126**	PKPbc	**PKPbc**	**20 09 05.9**	**+0.9**
	comp=Z,1.2nm,0.7s,baz=214,slow=3.5,SNR=2.9						

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*IDC **11** 19:52:20.0±7.9, 28.°97S×67.°21W, h136^{km}±59^{km}, mb3.8/2, mb1 3.4/5, mb1mx3.2/31, mbtmp3.9/5, MS4.6/2, Ms1 4.6/2, ms1mx4.0/32, Error ellipse: s-maj=73.6km s-min=59.9km az=54.0*

ISC 11 19:52:21.8±2.3**, 28.°9S**±0.°2×**67.°2W**±0.°3**, h150**^{km}**, n8, σ1.ˢ02**/8**, La Rioja Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**6.42**	**345**	P	**Pn**	**19 53 54.2**	**-0.3**
	1.7nm,0.3s,baz=173,slow=9.1,SNR=17						
LVC				S	**Sn**	**19 55 06.1**	**-0.9**
	2.3nm,0.3s,baz=101,slow=24,SNR=6.9						
LPAZ	**La Paz**	**12.55**	**356**	P	**Pn**	**19 55 17.3**	**+1.4**
	0.1nm,0.3s,baz=169,slow=5.6,SNR=1.6						
SIV	**San Ignacio**	**13.99**	**25**	P	**Pn**	**19 55 33.9**	**+0.2**
	0.3nm,0.3s,baz=219,slow=12,SNR=5.1						
PTGA	**Pitinga**	**28.81**	**15**	P	**P**	**19 58 07.2**	**+1.3**
	1.1nm,0.2s,baz=186,slow=8.0,SNR=4.1						
PTGA				LR	LR	20 09 21.1	
	comp=Z,1µm,18.3s,baz=143,slow=35						
TORD	**Torodi Ar. Bea**	**78.49**	**68**	P	**P**	**20 04 06.2**	**-0.5**
	0.8nm,0.7s,baz=243,slow=6.3,SNR=3.7						
MDT	**Midelt**	**85.34**	**49**	LR	LR	20 41 23.0	
	comp=Z,356nm,18.4s,baz=316,slow=34						
ZALV	**Zalesovo Beam**	**147.68**	**31**	PKPbc	**PKPbc**	**20 11 48.1**	**-0.1**
	1.0nm,0.5s,baz=291,slow=4.6,SNR=4.5						
MKAR	**Makanchi Array**	**150.23**	**45**	PKPbc	**PKPbc**	**20 11 54.4**	**-0.6**
	0.5nm,0.6s,baz=303,slow=1.9,SNR=7.7						

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*NEIC **11** 19:58:15.4±1.2, 23.°15S±0.°09×66.°7W±0.°1, h231^{km}±14^{km}, mb4.2/3, Error ellipse: s-maj=19.9km s-min=13.2km az=100.0*

*VAO **11** 19:58:16.4±0.8, 23.°20S×67.°05W, h253^{km}±18^{km}, mb3.9*

*IDC **11** 19:58:16.7±1.4, 22.°98S×66.°73W, h211^{km}±16^{km}, mb3.7/2, mb1 3.5/6, mb1mx3.3/26, mbtmp4.0/6, Error ellipse: s-maj=29.1km s-min=20.1km az=143.0*

ISC 11 19:58:15.1±0.7**, 23.°12S**±0.°07×**66.°63W**±0.°07**, h200**^{km}**, n47, σ1.ˢ36**/49**, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**2.17**	**283**	P	**Pn**	**19 58 57.8**	**+2.0**
	40nm,0.3s,baz=95,slow=6.4,SNR=150						
LVC				S	**Sn**	**19 59 28.2**	**+0.9**
	4.9nm,0.3s,baz=314,slow=20,SNR=7.4						
LVC	**Limon Verde**	**2.17**	**283**	*e*P	**Pn**	**19 58 57.8**	**+2.0**
PB15	**IPOC Station P**	**2.62**	**268**		**Pn**	**19 59 02.3**	**+1.7**
PB06	**IPOC Station P**	**2.75**	**278**		**Pn**	**19 59 03.2**	**+1.3**
PB09	**IPOC Station P**	**2.75**	**298**	Pn	**Pn**	**19 59 04.3**	**+2.2**
PB07	**IPOC Station P**	**3.32**	**294**		**Pn**	**19 59 09.8**	**+1.1**
PB04	**IPOC Station P**	**3.34**	**283**	Pn	**Pn**	**19 59 09.7**	**+0.7**
PB01	**IPOC Station P**	**3.36**	**307**		**Pn**	**19 59 10.2**	**+1.0**
GO02	**Mina Guanaco**	**3.38**	**233**		**Pn**	**19 59 11.1**	**+1.5**
PB10	**IPOC Station P**	**3.63**	**263**		**Pn**	**19 59 13.2**	**+0.9**
PB14	**IPOC Station P**	**3.77**	**246**		**Pn**	**19 59 15.0**	**+0.8**
PB08	**IPOC Station P**	**3.78**	**321**	Pn	**Pn**	**19 59 16.8**	**+2.1**
PATCX	**Punta Patache**	**3.99**	**304**		**Pn**	**19 59 17.3**	**+0.4**
TA01	**Diego Aracena**	**4.17**	**307**		**Pn**	**19 59 18.9**	**-0.1**
AC02	**Maricunga**	**4.34**	**211**	Pn	**Pn**	**19 59 22.2**	**+0.7**
AC01	**Pan de Azucar**	**4.70**	**229**	Pn	**Pn**	**19 59 25.2**	**-0.5**
PSGCX	**Pisagua**	**4.79**	**316**	Pn	**Pn**	**19 59 26.0**	**-0.9**
MNMC	**Minye Minye**	**4.84**	**325**		**Pn**	**19 59 28.6**	**+0.8**
PB16	**IPOC Station P**	**5.47**	**330**		**Pn**	**19 59 37.2**	**+1.1**
AC05	**El Transito**	**6.57**	**209**	Pn	**Pn**	**19 59 49.2**	**-0.5**
LPAZ	**La Paz**	**6.95**	**348**	P	**Pn**	**19 59 55.8**	**+0.6**
	1.1nm,0.3s,baz=187,slow=12,SNR=12						
LPAZ				S	**Sn**	**20 01 12.8**	**-1.8**
	0.1nm,0.3s,baz=48,slow=24,SNR=1.4						
LPAZ	**La Paz**	**6.95**	**348**		**Pn**	**19 59 55.3**	**+0.1**
GO04	**Tololo Observa**	**7.95**	**207**	Pn	**Pn**	**20 00 07.1**	**-0.8**
SIV	**San Ignacio**	**8.82**	**37**	P	**Pn**	**20 00 19.4**	**+0.3**
	0.4nm,0.3s,baz=252,slow=12,SNR=3.4						
ITAB	**Concordia**	**13.75**	**110**	*e*P	**P**	**20 01 24.3**	**+0.2**
CPSB	**Cacapava Do Su**	**13.83**	**124**	*e*P	**P**	**20 01 25.1**	**+0.1**
PCMB	**Pacaembu**	**14.30**	**87**	*e*P	**P**	**20 01 31.1**	**+0.8**
ITRB	**Iturama**	**15.53**	**80**	*e*P	**P**	**20 01 46.6**	**+2.7**
ARAG	**Araguaiana, MT**	**15.79**	**65**	*e*P	**Pn**	**20 01 49.9**	**+2.8**
BB19B	**Bebedouro**	**16.90**	**87**	*e*P	**Pn**	**20 02 02.9**	**+2.6**
SPB	**Sao Paulo**	**17.63**	**95**	*e*P	**Pn**	**20 02 10.0**	**+1.2**
PET01	**Itanhaem-SP**	**17.76**	**98**	*e*P	**Pn**	**20 02 11.0**	**+0.6**
IPMB	**Ipameri, GO**	**17.98**	**77**	*e*P	**Pn**	**20 02 13.4**	**+0.4**
VAO	**Valinhos**	**18.10**	**93**	*e*P	**Pn**	**20 02 14.3**	**-0.1**
SNDB	**Serra Nova Dou**	**18.33**	**55**	*e*P	**P**	**20 02 15.9**	**+1.2**
BDFB	**Brasilia**	**19.06**	**70**	P	**Pn**	**20 02 24.6**	**-1.2**
	0.6nm,0.3s,baz=238,slow=14,SNR=7.1						
BDFB	**Brasilia**	**19.06**	**70**	P	**P**	**20 02 21.5**	**-1.1**
BDFB				IAmb	IAmb	20 02 25.9	
	comp=Z,7.4nm,0.8s						
PARB	**Paraibuna**	**19.31**	**95**	*e*P	**Pn**	**20 02 27.4**	**-1.2**
PEXB	**Peixe**	**20.59**	**61**	*e*P	**P**	**20 02 39.8**	**+0.8**
JANB	**Januaria**	**22.54**	**73**	*e*P	**P**	**20 02 59.3**	**+0.8**
GDU01	**Guandu, BA**	**27.27**	**75**	*e*P	**P**	**20 03 40.4**	**-0.8**
DBIC	**Dimbokro**	**67.20**	**72**	P	**P**	**20 08 48.0**	**-0.2**
	comp=Z,7.3nm,1.1s,baz=223,slow=7.8,SNR=2.0						
DBIC	**Dimbokro**	**67.20**	**72**	P	**P**	**20 08 46.2**	**-1.9**
DBIC				IAmb	IAmb	20 09 01.6	
	comp=Z,18nm,1.2s						
TORD	**Torodi Ar. Bea**	**75.94**	**69**	P	**P**	**20 09 40.2**	**-0.1**
	comp=Z,0.5nm,0.5s,baz=258,slow=5.7,SNR=4.9						
TORD	**Torodi Ar. Bea**	**75.94**	**69**	P	**P**	**20 09 37.9**	**-2.4**
TORD				IAmb	IAmb	20 09 43.8	
	comp=Z,1.9nm,1.4s						
ZALV	**Zalesovo Beam**	**142.46**	**28**	PKP	**PKPdf**	**20 17 21.3**	**-2.3**
	comp=Z,0.3nm,0.5s,baz=291,slow=4.5,SNR=1.5						
MKAR	**Makanchi Array**	**145.63**	**39**	PKPbc	**PKPbc**	**20 17 30.9**	**+0.8**
	comp=Z,1.0nm,0.7s,baz=310,slow=3.3,SNR=8.1						

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*IDC **11** 20:14:25.7±5.4, 37.°55N×71.°69E, h96^{km}±52^{km}, mb1 3.4/6, mb1mx2.9/47, mbtmp3.7/6, Error ellipse: s-maj=71.3km s-min=23.6km az=144.0*

*SOME **11** 20:14:25.3, 38.°70N×72.°45E, h10^{km}*

ISC 11 20:14:31.7±1.3**, 37.°93N**±0.°08×**71.°9E**±0.°1**, h113**^{km}**, n28, σ1.ˢ54**/24**, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	**Almayashu**	**4.42**	**18**	P	**Pn**	**20 15 37.8**	**+0.7**
	SNR=130						
IUG	**Iuzhnay**	**4.44**	**342**	*e*P	**Pn**	**20 15 37.2**	**+0.1**
	9.1nm,0.3s						
IUG				*e*S	**Sn**	**20 16 29.4**	**+1.5**
	59nm,0.5s						
UCH	**Uchtor**	**4.75**	**24**	P	**Pn**	**20 15 42.6**	**+1.0**
	SNR=13						
MRKS	**Merke**	**4.92**	**12**	*e*P	**Pn**	**20 15 41.7**	**-1.9**
	6.9nm,0.2s						
MRKS				*e*S	**Sn**	**20 16 36.3**	**-3.0**
	25nm,0.3s						
EKS2	**Erkin-Say**	**4.94**	**17**	P	**Pn**	**20 15 45.2**	**+1.3**
	SNR=7.6						
AAK	**Ala-Archa**	**5.11**	**22**	P	**Pn**	**20 15 47.3**	**+1.1**
	2.5nm,0.3s,baz=189,slow=7.9,SNR=45						
AAK				S	**Sn**	**20 16 47.3**	**+3.2**
	1.5nm,0.3s,baz=328,slow=22,SNR=15						
AAK	**Ala-Archa**	**5.11**	**22**	P	**Pn**	**20 15 47.4**	**+1.2**
	SNR=11						
ULHL	**Ulahol**	**5.46**	**36**	P	**Pn**	**20 15 51.6**	**+0.7**
	SNR=6.8						
CHMS	**Chumysh**	**5.52**	**23**	P	**Pn**	**20 15 52.3**	**+0.8**
	SNR=11						
USP	**Ospenovka**	**5.69**	**20**	P	**Pn**	**20 15 54.0**	**+0.1**
	SNR=5.6						
KST	**Kastek**	**5.98**	**30**	*e*P	**Pn**	**20 15 59.0**	**+1.1**
	3.6nm,0.3s						
KST				*e*S	**Sn**	**20 17 06.1**	**+0.9**
	5.1nm,0.6s						
DGS	**Degeres**	**6.08**	**28**	*e*P	**Pn**	**20 15 59.9**	**+0.7**
	4.0nm,0.7s						
THN	**Thein Dam**	**6.32**	**149**	*e*S	Sn	20 16 58.0	-15
THN	**Thein Dam**	**6.32**	**149**	*e*P	Pn	20 15 54.0	-8.5
DHRM	**DHARAMSHALA**	**6.73**	**146**	IAML		20 17 10.7	
	comp=N,106nm,0.2s						
DHRM	**DHARAMSHALA**	**6.73**	**146**	*e*P	Pn	20 16 13.9	+5.7
DHRM	**DHARAMSHALA**	**6.73**	**146**	*e*S	Sn	20 17 03.5	-20
DHRM	**DHARAMSHALA**	**6.73**	**146**	IAML		20 17 10.6	
	comp=E,115nm,0.3s						
DJR	**Jarkent**	**8.75**	**41**	*e*P	**Pn**	**20 16 32.3**	**-3.0**
	comp=E,1.0nm,0.3s						
DJR				*e*S	Sn	20 17 46.1	-26
	comp=E,5.1nm,0.2s						
KAPS	**Kapalarasan**	**9.24**	**35**	*e*P	**Pn**	**20 16 40.6**	**-1.3**
	comp=E,0.6nm,0.3s						
KAPS				*e*S	Sn	20 18 00.1	-24
	comp=E,3.2nm,0.6s						
KUDL	**Kundal**	**10.50**	**157**	*e*S	Sn	20 18 28.1	-27
KUDL	**Kundal**	**10.50**	**157**	*e*P	**Pn**	**20 16 59.5**	**+0.4**
KUDL	**Kundal**	**10.50**	**157**	*i* x	**Pn**	**20 16 59.7**	**+0.6**
GEYT	**Alibeck**	**10.87**	**274**	P	Pn	20 16 55.4	-8.6
	comp=E,0.5nm,0.3s,baz=125,slow=12,SNR=6.7						
MKAR	**Makanchi Array**	**11.73**	**38**	P	**Pn**	**20 17 14.6**	**-0.9**
	comp=E,0.2nm,0.3s,baz=222,slow=14,SNR=20						
KURBB	**Kurchatov Arra**	**13.55**	**18**	P	**Pn**	**20 17 40.3**	**+1.2**
	comp=E,0.1nm,0.3s,baz=203,slow=10,SNR=2.8						
AKTO	**Aktyubinsk**	**15.93**	**326**	P	**Pn**	**20 18 08.9**	**-0.4**
	comp=E,0.4nm,0.3s,baz=140,slow=12,SNR=4.7						
ZALV	**Zalesovo Beam**	**18.33**	**25**	P	**P**	**20 18 35.9**	**-1.1**
	comp=E,0.3nm,0.3s,baz=212,slow=10,SNR=6.3						

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*IDC **11** 20:14:45.8±6.1, 36.°34N×70.°97E, h113^{km}±47^{km}, mb3.3/2, mb1 3.4/7, mb1mx3.0/47, mbtmp3.9/7, Error ellipse: s-maj=75.2km s-min=23.2km az=147.0*

ISC 11 20:14:45.9±0.9**, 36.°27N**±0.°08×**71.°2E**±0.°1**, h150**^{km}**, n9, σ2.ˢ09**/12**, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**6.84**	**21**	P	**Pn**	**20 16 25.0**	**+1.2**
	3.3nm,0.3s,baz=142,slow=3.3,SNR=9.2						
AAK				S	**Sn**	**20 17 38.5**	**-2.1**
	2.1nm,0.3s,baz=337,slow=22,SNR=7.6						
KHET	**Khetri**	**9.04**	**153**	*e*S	Sn	20 18 22.6	-11
KHET				*i* x	**Pn**	**20 16 50.5**	**-2.7**
KHET				*e*x	**Pn**	**20 16 52.9**	**-0.2**
KHET				*e*P	**Pn**	**20 16 54.6**	**+1.4**
ARXS	**Arharly**	**9.39**	**30**	*e*P	**Pn**	**20 16 54.9**	**-2.9**
	4.2nm,0.5s						
ARXS				*e*S	Sn	20 18 24.5	-17
	2.2nm,0.4s						
GEYT	**Alibeck**	**10.61**	**283**	P	**Pn**	**20 17 11.5**	**-2.4**
	0.6nm,0.3s,baz=98,slow=9.7,SNR=6.0						
MKAR	**Makanchi Array**	**13.37**	**35**	P	**Pn**	**20 17 50.8**	**+1.1**
	0.4nm,0.3s,baz=225,slow=14,SNR=10						
KURBB	**Kurchatov Arra**	**15.28**	**18**	P	**P**	**20 18 16.6**	**+1.7**
	0.1nm,0.3s,baz=210,slow=11,SNR=7.6						
AKTO	**Aktyubinsk**	**17.08**	**330**	P	**Pn**	**20 18 36.9**	**+1.5**
	0.5nm,0.3s,baz=141,slow=13,SNR=6.9						
ZALV	**Zalesovo Beam**	**20.04**	**24**	P	**Pn**	**20 19 10.8**	**+0.4**
	2.3nm,0.5s,baz=221,slow=10.0,SNR=10						
TORD	**Torodi Ar. Bea**	**65.91**	**269**	P	**P**	**20 25 17.8**	**+1.9**
	0.3nm,0.4s,baz=54,slow=6.2,SNR=1.9						

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*NORS **11** 20:24:38.3±0.0, 42.°51N×43.°79E, h4^{km}, MPVA4.0*

*TIF **11** 20:24:38.3, 42.°43N×43.°82E, h5^{km}±1^{km}*

*MOS **11** 20:24:38.1±0.0, 42.°48N×43.°79E, h11^{km}, MPVA3.9*

*ISK **11** 20:24:39.2, 42.°39N×43.°76E, h4^{km}, ML2.9/7*

*DDA **11** 20:24:45.4, 41.°96N×43.°93E, h36^{km}±1^{km}, ML3.0*

ISC 11 20:24:38.4±1.1**, 42.°41N**±0.°01×**43.°79E**±0.°01**, h2**^{km}±9^{km}**, n97, σ1.ˢ20**/180**, 4C-5D, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONI	**Oni**	**0.31**	**306**	P	**Pb**	**20 24 45.4**	**-1.3**
ONI				S	**Sb**	**20 24 50.2**	**-2.0**
ONI	**Oni**	**0.31**	**306**	⇓*i*PG	**Pb**	**20 24 45.6**	**-1.1**
ONI				*e*S	**Sb**	**20 24 50.7**	**-1.6**
ONI	**Oni**	**0.31**	**306**	*i* Pg	**Pb**	**20 24 45.6**	**-1.1**
ONI				*e*Sg	**Sb**	**20 24 50.2**	**-2.0**
ZEI	**Tsey**	**0.39**	**12**	⇑*i*PG	**Pg**	**20 24 45.9**	**-0.1**
ZEI				*e*S	**Sg**	**20 24 51.6**	**+0.6**
ZEI	**Tsey**	**0.39**	**12**	*i* Pg	**Pg**	**20 24 45.9**	**-0.1**
	1µm,0.1s						
ZEI				*e*Sg	**Sg**	**20 24 51.4**	**+0.4**
	3µm,0.2s						
GUDG	**Gudauri**	**0.51**	**83**	P	**Pg**	**20 24 48.9**	**+0.7**
GUDG				S	**Sg**	**20 24 56.0**	**+1.1**
GUDG	**Gudauri**	**0.51**	**83**	PG	**Pg**	**20 24 48.9**	**+0.7**
GUDG				S	**Sg**	**20 24 56.0**	**+1.1**
DIGR	**Digorskoe uzhe**	**0.52**	**343**	⇓*i*PG	**Pg**	**20 24 48.5**	**+0.1**
DIGR				*e*S	**Sb**	**20 24 55.9**	**-2.4**
DIGR	**Digorskoe uzhe**	**0.52**	**343**	*i* Pg	**Pg**	**20 24 48.4**	**+0.1**
	63nm,0.1s						
DIGR				*e*Sg	**Sg**	**20 24 55.8**	**+0.8**
	605nm,0.3s						
LACR	**Lac**	**0.56**	**41**	*i* PG	**Pg**	**20 24 48.3**	**-0.9**
LACR				*e*S	**Sg**	**20 24 55.7**	**-0.8**
LACR	**Lac**	**0.56**	**41**	*i* Pg	**Pg**	**20 24 48.3**	**-0.9**
	82nm,0.1s						
LACR				*e*Sg	**Sg**	**20 24 55.5**	**-1.0**
	957nm,0.4s						
TKB	**Tkibuli**	**0.59**	**265**	P	**Pb**	**20 24 51.3**	**-0.2**
TKB				S	**Sb**	**20 25 00.9**	**+0.6**
TKB	**Tkibuli**	**0.59**	**265**	PG	**Pb**	**20 24 51.3**	**-0.2**
TKB				S	**Sb**	**20 25 00.9**	**+0.6**
PNSH	**Pansheti**	**0.65**	**69**	P	**Pg**	**20 24 50.5**	**-0.4**
PNSH				S	**Sg**	**20 24 59.0**	**-0.4**
PNSH	**Pansheti**	**0.65**	**69**	PG	**Pg**	**20 24 50.5**	**-0.4**
PNSH				S	**Sg**	**20 24 59.0**	**-0.4**
BKRG	**Bakuriani**	**0.68**	**197**	P	**Pb**	**20 24 52.8**	**-0.2**
BKRG				S	**Sb**	**20 25 03.6**	**+0.7**
BKRG	**Bakuriani**	**0.68**	**197**	PG	**Pb**	**20 24 52.8**	**-0.2**
BKRG				S	**Sb**	**20 25 03.6**	**+0.7**
BRNG	**Burnasheti**	**0.78**	**178**	P	**Pb**	**20 24 54.9**	**+0.1**
ARNR	**Ardon**	**0.85**	**25**	*e*PG	**Pb**	**20 24 55.7**	**-0.3**
ARNR				*e*S	**Sn**	**20 25 08.8**	**-1.7**
ARNR	**Ardon**	**0.85**	**25**	*e*Pg	**Pb**	**20 24 55.7**	**-0.3**
ARNR				*e*Sg	**Sb**	**20 25 07.7**	**-0.1**
LSNR	**Lesken**	**0.87**	**2**	⇓*i*PG	**Pb**	**20 24 55.5**	**-0.8**
LSNR				*e*S	**Sb**	**20 25 08.3**	**-0.1**
LSNR	**Lesken**	**0.87**	**2**	*i* Pg	**Pb**	**20 24 55.5**	**-0.8**
LSNR				*e*Sg	**Sb**	**20 25 08.2**	**-0.2**
VLKR	**Vladikavkaz**	**0.91**	**45**	*e*PG	**Pb**	**20 24 56.4**	**-0.6**
VLKR				*e*S	**Sn**	**20 25 10.3**	**-1.8**
VLKR	**Vladikavkaz**	**0.91**	**45**	*e*Pg	**Pb**	**20 24 56.3**	**-0.6**
VLKR				*e*Sg	**Sn**	**20 25 10.0**	**-2.0**
ABS	**Abastumani**	**0.98**	**229**	P	**Pb**	**20 24 58.0**	**-0.1**
ABS				S	**Sn**	**20 25 12.5**	**-1.2**
ABS	**Abastumani**	**0.98**	**229**	PG	**Pb**	**20 24 58.0**	**-0.1**
ABS				S	**Sn**	**20 25 12.5**	**-1.2**
STDR	**Stavd-Durt**	**0.98**	**12**	*e*PG	**Pn**	**20 24 58.9**	**-0.3**
STDR				*e*S	**Sn**	**20 25 13.5**	**-0.2**
STDR	**Stavd-Durt**	**0.98**	**12**	*e*Pg	**Pn**	**20 24 58.9**	**-0.3**
STDR				*e*Sg	**Sn**	**20 25 12.8**	**-0.9**
SEAG	**Tbilisi Sea**	**0.99**	**130**	P	**Pn**	**20 24 58.8**	**-0.5**
SEAG				S	**Sn**	**20 25 13.5**	**-0.4**
SEAG	**Tbilisi Sea**	**0.99**	**130**	PG	**Pn**	**20 24 58.8**	**-0.5**
SEAG				S	**Sn**	**20 25 13.5**	**-0.4**
AKH	**Akhalkalaki**	**1.02**	**193**	P	**Pb**	**20 24 59.0**	**+0.1**
AKH				S	**Sn**	**20 25 14.3**	**-0.5**
AKH	**Akhalkalaki**	**1.02**	**193**	PG	**Pb**	**20 24 58.8**	**-0.1**
AKH				SG	**Sb**	**20 25 13.4**	**+0.6**
AKH	**Akhalkalaki**	**1.02**	**193**	PG	**Pb**	**20 24 59.0**	**+0.1**
AKH				S	**Sn**	**20 25 14.3**	**-0.5**
KMGR	**Komgaron**	**1.02**	**50**	*e*PG	**Pn**	**20 24 59.2**	**-0.6**
KMGR				*e*S	**Sn**	**20 25 14.7**	**-0.1**
KMGR	**Komgaron**	**1.02**	**50**	*e*Pg	**Pn**	**20 24 59.0**	**-0.9**
KMGR				*e*Sg	**Sn**	**20 25 14.6**	**-0.1**
BTNK	**Botanikuri**	**1.04**	**134**	P	**Pb**	**20 24 59.3**	**+0.2**
BTNK				S	**Sn**	**20 25 14.5**	**-0.7**
BTNK	**Botanikuri**	**1.04**	**134**	*i* P	**Pb**	**20 24 59.3**	**+0.2**
BTNK				*i* S	**Sg**	**20 25 10.6**	**-1.2**
BTNK	**Botanikuri**	**1.04**	**134**	PG	**Pb**	**20 24 59.3**	**+0.2**
BTNK				S	**Sn**	**20 25 14.5**	**-0.7**
NCK	**Nalchik**	**1.10**	**353**	*e*PG	**Pn**	**20 25 00.1**	**-0.8**
NCK				*e*S	**Sn**	**20 25 16.0**	**-0.6**
NCK	**Nalchik**	**1.10**	**353**	*e*Pg	**Pn**	**20 25 00.0**	**-0.8**
	193nm,0.3s						
NCK				*e*Sg	**Sn**	**20 25 15.8**	**-0.8**
	1µm,0.4s						
BTKR	**Batakoyurt**	**1.11**	**30**	*e*PG	**Pn**	**20 25 01.8**	**+0.8**
BTKR				*e*S	**Sn**	**20 25 18.1**	**+1.2**
BTKR	**Batakoyurt**	**1.11**	**30**	*e*Pg	**Pn**	**20 25 01.8**	**+0.8**
BTKR				*e*Sg	**Sn**	**20 25 16.7**	**-0.3**
DMNI	**Dmanisi**	**1.12**	**164**	P	**Pg**	**20 24 59.7**	**-0.1**
DMNI				S	**Sb**	**20 25 15.6**	**+0.1**
DMNI	**Dmanisi**	**1.12**	**164**	PG	**Pg**	**20 24 59.7**	**-0.1**
DMNI				S	**Sb**	**20 25 15.6**	**+0.1**
BGD	**Bogdanovka**	**1.15**	**187**	P	**Pb**	**20 25 01.0**	**-0.1**
BGD				S	**Sn**	**20 25 18.4**	**+0.3**
BGD	**Bogdanovka**	**1.15**	**187**	PG	**Pb**	**20 25 01.0**	**-0.1**
BGD				S	**Sn**	**20 25 18.4**	**+0.3**
NEY	**Neytrino**	**1.15**	**317**	*e*PG	**Pb**	**20 25 00.6**	**-0.5**
NEY				*e*S	**Sn**	**20 25 17.8**	**-0.3**
NEY	**Neytrino**	**1.15**	**317**	*e*Pg	**Pb**	**20 25 00.5**	**-0.7**
NEY				*e*Sg	**Sn**	**20 25 17.2**	**-1.0**
EPOS	**Posof**	**1.20**	**222**	*i* P	**Pg**	**20 25 01.1**	**-0.3**
EPOS				*i* S	**Sg**	**20 25 13.7**	**-3.3**
CHVG	**Ch'k'valeri**	**1.30**	**284**	P	**Pg**	**20 25 04.0**	**+0.7**
CHVG				S	**Sn**	**20 25 23.1**	**+1.6**
CHVG	**Ch'k'valeri**	**1.30**	**284**	PG	**Pg**	**20 25 04.0**	**+0.7**
CHVG				S	**Sn**	**20 25 23.1**	**+1.6**
PRTR	**Priterechnaya**	**1.39**	**15**	*e*PG	**Pg**	**20 25 05.2**	**+0.1**
PRTR				*e*S	**Sn**	**20 25 26.0**	**+2.3**
PRTR	**Priterechnaya**	**1.39**	**15**	*e*Pg	**Pg**	**20 25 05.2**	**+0.1**
PRTR				*e*Sg	**Sn**	**20 25 26.0**	**+2.3**
KBZ	**Khabaz**	**1.48**	**334**	⇑*i*PG	**Pg**	**20 25 06.2**	**-0.5**
KBZ				*i* S	**Sg**	**20 25 26.0**	**+0.2**
KBZ	**Khabaz**	**1.48**	**334**	*i* Pg	**Pb**	**20 25 06.0**	**-0.5**
KBZ				*e*Sg	**Sg**	**20 25 25.8**	**0.0**
TRKR	**Terskaya**	**1.49**	**27**	*e*PG	**Pg**	**20 25 07.7**	**+0.8**
TRKR				*e*S	**Sg**	**20 25 28.8**	**+2.7**
TRKR	**Terskaya**	**1.49**	**27**	*e*Pg	**Pg**	**20 25 07.7**	**+0.8**
TRKR				*e*Sg	**Sg**	**20 25 28.3**	**+2.2**
GROC	**Groznyy**	**1.68**	**61**	*e*PN	**Pb**	**20 25 09.5**	**-0.4**
GROC				*e*		20 25 32.9	
GROC				pmax	pmax		
	comp=Z,40nm,0.6s						
GROC				smax	smax		
	comp=E,139nm,0.6s						
GROC				smax	smax		
	comp=E,110nm,0.6s						
GROC				smax	smax		
	comp=N,73nm,0.4s						
GROC	**Groznyy**	**1.68**	**61**	*e*Pg	**Pg**	**20 25 10.3**	**-0.3**
GROC				*e*Sg	**Sg**	**20 25 34.2**	**+2.0**
EAK	**Akyaka**	**1.73**	**185**	*i* P	**Pn**	**20 25 09.5**	**0.0**
EAK				*i* S	**Sn**	**20 25 25.7**	**-6.5**
PYA1	**Pyatigorsk**	**1.73**	**343**	⇓*i*PN	**Pb**	**20 25 10.2**	**-0.7**
PYA1				*i* S	**Sg**	**20 25 33.5**	**-0.5**
PYA1	**Pyatigorsk**	**1.73**	**343**	*i* Pg	**Pb**	**20 25 10.2**	**-0.7**
PYA1				*i* Sg	**Sg**	**20 25 33.3**	**-0.7**
KIV0	**Kislovodsk Arr**	**1.74**	**333**	*e*Pg	**Pg**	**20 25 11.3**	**-0.5**
KIV0				*i* Sg	**Sg**	**20 25 34.9**	**+0.4**
KIV	**Kislovodsk**	**1.75**	**333**	PN	**Pg**	**20 25 11.0**	**-0.9**
KIV				SN	**Sg**	**20 25 34.3**	**-0.2**
KIV	**Kislovodsk**	**1.75**	**333**	⇑*e*PN	**Pg**	**20 25 11.3**	**-0.6**
KIV				*i* S	**Sg**	**20 25 34.9**	**+0.4**
KIV	**Kislovodsk**	**1.75**	**333**	*i* Pg	**Pg**	**20 25 11.3**	**-0.6**
KIV				*i* Sg	**Sg**	**20 25 34.5**	**0.0**

BEYR	Belyy Ugol+	1.76	336	⇓iPN	Pg	20 25 11.5	-0.5
BEYR				iS	Sg	20 25 34.2	-0.6
BEYR	Belyy Ugol+	1.76	336	ePg	Pg	20 25 11.3	-0.7
BEYR				eSg	Sg	20 25 34.0	-0.8
DVE	Vedeno	1.81	72	ePN	Pb	20 25 12.0	-0.2
DVE				eS	Sg	20 25 37.9	+1.4
DVE	Vedeno	1.81	72	ePg	Pb	20 25 11.8	-0.4
DVE				eSg	Sg	20 25 37.1	+0.7
KARS	Kars	1.86	197	PN	Pb	20 25 12.6	-0.5
DBOC	Borcka	1.91	237	iP	Pb	20 25 13.7	-0.2
DBOC				iS	Sn	20 25 32.6	-4.0
DBOC				IAML		20 25 42.0	
	comp=E,107nm,0.4s						
LGD	Lagodekhi	1.91	107	P	Pb	20 25 13.1	-0.9
LGD				S	Sg	20 25 39.7	-0.1
LGD	Lagodekhi	1.91	107	PN	Pb	20 25 13.1	-0.9
LGD				S	Sg	20 25 39.7	-0.1
DDFL	Dedoflistskaro	1.98	118	P	Pg	20 25 16.0	-0.4
DDFL				S	Sg	20 25 42.9	+0.8
DDFL	Dedoflistskaro	1.98	118	iP	Pg	20 25 16.0	-0.4
DDFL				iS	Sn	20 25 37.5	-1.0
DDFL	Dedoflistskaro	1.98	118	PN	Pg	20 25 16.0	-0.4
DDFL				S	Sg	20 25 42.9	+0.8
DIGO	Kars	2.02	189	iP	Pn	20 25 14.3	+0.7
DIGO				iS	Sn	20 25 36.0	-3.5
DBAD	Bademkaya	2.10	229	iP	Pb	20 25 17.3	+0.2
DBAD				iS	Sn	20 25 39.2	-2.0
DBAD				IAML		20 25 48.0	
	comp=N,235nm,0.6s						
DBAD				IAML		20 25 50.0	
	comp=E,182nm,0.6s						
SENK	Senkaya-Erzuru	2.14	211	PN	Pn	20 25 16.4	+1.1
DDEM	Demirkent	2.15	226	iP	Pb	20 25 18.6	+0.4
DDEM				iS	Sn	20 25 42.0	-0.7
DDEM				IAML		20 25 50.0	
	comp=E,107nm,0.4s						
DDEM				IAML		20 25 51.0	
	comp=N,164nm,0.4s						
ARXR	Arkhyz	2.18	303	iPN	Pn	20 25 14.7	-1.1
ARXR	Arkhyz	2.18	303	ePg	Pb	20 25 18.6	0.0
ARXR				eSg	Sb	20 25 46.4	+0.3
DBC	Dubki	2.32	74	iPN	Pb	20 25 19.4	-1.6
DBC	Dubki	2.32	74	ePn	Pb	20 25 20.1	-0.9
DBC				eSn	Sb	20 25 49.5	-0.6
TASB	TASBURUN-IGDIR	2.44	172	PN	Pn	20 25 20.9	+1.5
CHOM	Cayeli-Rize	2.62	241	PN	Pn	20 25 23.1	+1.4
GOF	Gofitskoye	2.71	349	⇑ePN	Pg	20 25 30.8	+0.6
GOF				eS	Sg	20 26 05.4	+0.1
GOF				pmax	pmax		
	comp=Z,26nm,1.0s						
GOF				smax	smax		
	comp=E,119nm,0.9s						
GOF				smax	smax		
	comp=N,210nm,0.6s						
KOPR	Koprukoy-ERZUR	2.82	212	PN	Pn	20 25 26.2	+1.6
AGRB	Hanur-Agry	2.89	192	PN	Pn	20 25 27.3	+1.7
VSLR	Vesyoloye	2.96	292	ePn	Pn	20 25 28.1	+1.8
VSLR				eSn	Sn	20 26 04.0	+1.7
KRIK	Erzurum-spir	2.99	227	iP	Pb	20 25 32.5	+0.1
KRIK				iS	Sn	20 26 02.0	-1.4
AKT	Akhty	3.08	106	ePn	Pb	20 25 32.4	-1.5
AKT				eSn	Sn	20 26 07.9	+2.3
GUZR	Guzeripl'	3.12	302	iPN	Pn	20 25 30.1	+1.5
ANN	Anapa	5.20	300	PN	Pn	20 25 57.4	+0.3
ANN				eS	Sn	20 27 02.4	+4.8
ANN				pmax	pmax		
	comp=Z,53nm,0.9s						
BRVK	Borovoye	20.64	50	iP	Pn	20 29 21.8	+0.6
AAK	Ala-Archa	22.57	79	iP	P	20 29 41.0	+0.9
AAK				pmax	pmax		
	comp=Z,2.0nm,1.1s						

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*JMA **11** 20:49:06.1±0.2, 35°.66N×140°.76E, h49^{km}±2^{km}, M3.3 Broadband fault plane solution: P waves. NP1: ϕs222.00000°, δ13.00000°, λ109.00000°. NP2: ϕs22.00000°, δ78.00000°, λ86.00000°. Principal axes: T Plg57.0000°, Azm287.0000°; N Plg4.0000°, Azm23.0000°; P Plg33.0000°, Azm116.0000°;*

JMA Felt I J1.

*IDC **11** 20:49:06.8±3.3, 35°.74N×140°.77E, h39^{km}±26^{km}, mb3.3/6, mb1 3.4/9, mb1mx3.2/57, mbtmp3.6/9, ML3.2/3 Error ellipse: s-maj=47.2km s-min=17.7km az=73.0*

ISC 11 20:49:07.0±0.9**, 35°.68N**±0°.05×**140°.79E**±0°.07**, h46**^{km}±7^{km}**, n24,** σ**0^{s}.96**/28**, mb3.6**/6**, 1C-5D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	0.06	66	⇑P	Pn	20 49 13.7	-0.4
CHOJ				eS	Sn	20 49 19.1	-0.1
JSMT	Sammumatsuo	0.28	263	⇓P	Pn	20 49 15.0	-0.4
JSMT				eS	Sn	20 49 22.4	+1.0
JIHU	Itakohorinouch	0.36	324	⇓P	Pn	20 49 16.3	0.0
JIHU				S	Sn	20 49 23.9	+1.0
JCN	Nagara	0.54	242	⇓P	Pn	20 49 18.1	-0.4
JCN				S	Sn	20 49 27.1	+0.4
JYT	Yasato	0.73	319	⇓P	Pn	20 49 19.9	-1.0
JYT				S	Sn	20 49 30.1	-0.9
BSO4	Boso 4	0.78	208	P	Pn	20 49 21.0	-0.5
BSO3	Boso 3	0.90	195	P	Pn	20 49 22.6	-0.4
BSO1	Boso 1	1.03	171	P	Pn	20 49 24.2	-0.3
JAG	Ashikaga	1.31	305	P	Pn	20 49 27.9	-1.0
JOD2	Odawara 2	1.45	254	⇓P	Pn	20 49 29.6	-1.1
JIM2	Oshima 3	1.47	230	P	Pn	20 49 29.1	-1.9
MJAR	Matsushiro Arr	2.26	293	Pn	Pn	20 49 42.1	+0.2
	1.6nm,0.3s,baz=98,slow=7.5,SNR=81						
MAT	Matsushiro	2.26	293	P	Pn	20 49 42.4	+0.5
MAT				S	Sn	20 50 10.7	+2.2
JHJ	Hachijo jima 2	2.68	198	Pn	Pn	20 49 46.5	-1.2
	39nm,0.3s,baz=331,slow=18,SNR=32						
JHJ				Sn	Sn	20 50 17.9	-0.9
	41nm,0.3s,baz=241,slow=24,SNR=8.9						
ASAJ	Asahikawa	8.54	9	Pn	Pn	20 51 07.3	-0.7
	0.3nm,0.3s,baz=208,slow=17,SNR=5.0						
H11N2	WAKE ISLAND Hy	27.93	118	T	T	21 23 53.1	
	baz=310,slow=74,SNR=13						
H11N1	WAKE ISLAND Hy	27.93	118	T	T	21 23 53.9	
	baz=310,slow=74,SNR=12						
H11N3	WAKE ISLAND Hy	27.95	118	T	T	21 23 56.1	
	baz=310,slow=74,SNR=13						
SONM	Songino Array	28.15	306	P	P	20 54 54.5	-0.4
	0.2nm,0.5s,baz=105,slow=8.3,SNR=2.1						
ZALV	Zalesovo Beam	42.47	313	P	P	20 56 56.7	-0.6
	0.6nm,0.5s,baz=82,slow=11,SNR=4.0						
MKAR	Makanchi Array	44.42	303	P	P	20 57 13.2	-0.1
	0.5nm,0.5s,baz=88,slow=10,SNR=7.4						
WRA	Warramunga Arr	55.65	187	P	P	20 58 39.4	+1.0
	0.4nm,0.3s,baz=0.8,slow=7.7,SNR=16						
ARU	Arti	57.05	319	P	P	20 58 47.7	-0.4
	0.4nm,0.3s,baz=32,slow=9.5,SNR=2.8						
ASAR	Alice Springs	59.38	187	P	P	20 59 06.1	+1.5
	0.2nm,0.6s,baz=18,slow=11,SNR=4.3						

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*IDC **11** 21:10:53.6±5.5, 34°.32N×83°.28E, h33^{km}±42^{km}, mb3.6/15, mb1 3.8/19, mb1mx3.6/63, mbtmp3.8/19, ML3.0/3, MS3.8/1, Ms1 3.8/1, ms1mx3.2/44, Error ellipse: s-maj=25.7km s-min=14.4km az=42.0*

ISC 11 21:10:53.6±0.6**, 34°.34N**±0°.08×**83°.43E**±0°.09**, h35**^{km}**, n32,** σ**1^{s}.01**/31**, mb3.8**/13**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DANN	Dangsing	5.98	177	eP	Pn	21 12 18.7	-1.2
	19nm,0.5s						
SMLA	Simla	6.17	240	eP	Pn	21 12 24.7	+2.4
DHRM	DHARAMSHALA	6.32	253	eP	Pn	21 12 25.1	+0.6
GKN	Gorkha	6.40	170	eP	Pn	21 12 26.1	+0.5
	8.8nm,0.4s						
KKN	Kakani	6.72	166	eP	Pn	21 12 30.3	+0.2
	9.9nm,0.6s						
GUN	Gumba	6.75	161	eP	Pn	21 12 31.2	+0.7
	15nm,0.5s						
PKIN	Phulchoki	6.95	165	eP	Pn	21 12 34.4	+1.1
	11nm,0.5s						
PKI	Pulchoki	6.96	165	eP	Pn	21 12 34.3	+0.9
	9.6nm,0.4s						
RAMN	Ramite	7.86	159	eP	Pn	21 12 44.8	-0.9
	22nm,0.6s						
TAPN	Taplejung	7.88	151	eP	Pn	21 12 45.5	-0.5
ODAN	Odare	8.20	154	eP	Pn	21 12 48.9	-1.5
	22nm,0.6s						
AAK	Ala-Archa	10.84	322	Pn	Pn	21 13 27.5	+1.2
	0.2nm,0.3s,baz=126,slow=14,SNR=4.3						
MKAR	Makanchi Array	12.47	356	Pn	Pn	21 13 48.6	+0.1
	baz=184,slow=14,SNR=2.5						
KURBB	Kurchatov Arra	16.66	349	Pn	Pn	21 14 43.0	-1.2
	0.1nm,0.3s,baz=171,slow=11,SNR=25						
ZALV	Zalesovo Beam	19.62	2	P	P	21 15 19.0	+0.1
	0.1nm,0.3s,baz=186,slow=10,SNR=15						
GEYT	Alibeck	20.73	287	P	P	21 15 30.7	-0.5
	0.8nm,0.6s,baz=116,slow=6.6,SNR=2.1						
BVAR	Borovoye Array	20.86	337	P	P	21 15 33.4	+1.1
	1.6nm,0.7s,baz=157,slow=16,SNR=21						
CMAR	Chiang Mai Arr	21.01	135	P	P	21 15 33.6	-0.6
	0.6nm,0.6s,baz=326,slow=11,SNR=8.4						
SONM	Songino Array	21.83	45	P	P	21 15 44.3	+1.3
	1.6nm,0.8s,baz=235,slow=11,SNR=17						
AKTO	Aktyubinsk	24.54	319	P	P	21 16 09.3	-0.5
	1.5nm,0.7s,baz=134,slow=9.2,SNR=4.2						
PSI	Prapat	34.55	152	LR	LR	21 34 15.8	
	comp=Z,149nm,19.2s,baz=90,slow=40						
NRIK	Noril'sk	35.12	3	P	P	21 17 43.6	+0.2
	1.6nm,0.5s,baz=172,slow=8.3,SNR=4.8						
AKASG	Malin Array Be	42.17	310	P	P	21 18 41.4	-1.3
	1.1nm,0.5s,baz=79,slow=7.9,SNR=7.5						
FINES	FINESS Array B	45.01	325	P	P	21 19 05.7	+0.4
	3.0nm,0.7s,baz=123,slow=7.0,SNR=7.7						
NB2	NORSAR Subarra	52.15	324	P	P	21 20 00.5	+0.2
	comp=Z,2.1nm,0.7s,baz=86,slow=7.4						
NOA	NORSAR Array B	52.15	324	P	P	21 20 00.6	+0.2
	comp=Z,3.1nm,0.7s,baz=86,slow=7.3,SNR=12						
GERES	GERESS Array B	52.34	308	P	P	21 20 01.6	-0.5
	comp=Z,0.7nm,0.7s,baz=72,slow=8.6,SNR=4.4						
ESDC	Sonseca Array	67.29	303	P	P	21 21 43.3	-1.6
	comp=Z,0.4nm,0.6s,baz=50,slow=6.7,SNR=5.5						
WRA	Warramunga Arr	72.52	130	P	P	21 22 18.7	+1.6
	comp=Z,1.3nm,0.7s,baz=325,slow=6.3,SNR=17						
ILAR	Eielson Array	73.68	20	P	P	21 22 23.6	+0.2
	comp=Z,0.3nm,0.8s,baz=308,slow=4.5,SNR=3.0						
ASAR	Alice Springs	75.01	133	P	P	21 22 32.8	+1.1
	comp=Z,0.7nm,0.7s,baz=325,slow=5.4,SNR=8.3						
YKA	Yellowknife Ar	82.41	8	P	P	21 23 11.4	-0.3
	comp=Z,0.9nm,0.7s,baz=346,slow=4.7,SNR=16						

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*SOME **11** 21:11:10.4, 45°.10N×81°.88E, h5^{km}*

*NNC **11** 21:11:11.1±0.8, 45°.14N×81°.90E, h0^{km}, mb3.5, mpv3.2, Error ellipse: s-maj=6.9km s-min=4.6km az=130.0*

ISC 11 21:11:08.9±1.0**, 45°.23N**±0°.05×**82°.11E**±0°.05**, h10**^{km}**, n46,** σ**1^{s}.90**/65**, 6C-1D, Kazakhstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DJR	Jarkent	1.88	242	eP	Pb	21 11 43.8	+0.5
	16nm,0.2s						
DJR				eS	Sb	21 12 07.8	+1.0
	25nm,0.2s						
KAPS	Kapalarasan	1.94	273	eP	Pb	21 11 44.5	+0.1
	5.1nm,0.3s						
KAPS				eS	Sg	21 12 09.4	-1.9
	27nm,0.3s						
KAPS	Kapalarasan	1.94	273	P	Pb	21 11 44.5	+0.1
	5.1nm,0.3s						
KAPS				S	Sg	21 12 09.4	-1.9
	27nm,0.3s						
KTMS	Ketmen	2.18	216	eP	Pb	21 11 49.1	+0.6
	0.9nm,0.1s						
KTMS				eS	Sb	21 12 16.7	+1.1
	48nm,0.2s						
KTMS	Ketmen	2.18	216	Pg	Pb	21 11 49.1	+0.6
	0.9nm,0.1s						
KTMS				Lg	Lg	21 12 16.7	
	48nm,0.2s						
TDK	Taldyqorghan	2.63	266	eP	Pb	21 11 56.7	+0.6
	9.8nm,0.2s						
TDK				eS	Sb	21 12 29.7	+1.3
	89nm,0.5s						
TDK	Taldyqorghan	2.63	266	Pg	Pb	21 11 56.7	+0.6
	9.8nm,0.2s						
TDK				Lg	Lg	21 12 29.7	
	89nm,0.5s						
PDGK	Podgornoye	2.67	226	Pg	Pb	21 11 57.3	+0.5
	1.6nm,0.3s						
PDGK				Lg	Lg	21 12 31.1	
	11nm,0.3s						
PDGK	Podgornoye	2.67	226	⇑Pg	Pb	21 11 57.0	+0.2
	3.6nm,0.7s						
PDGK				⇑Lg	Lg	21 12 31.2	
	22nm,0.6s						
SHLS	Shalkode	2.81	224	eP	Pn	21 11 56.1	+2.1
	8.9nm,0.2s						
SHLS				eS	Sn	21 12 29.4	+1.4
	66nm,0.4s						
SHLS	Shalkode	2.81	224	Pg	Pn	21 11 56.1	+2.1
	8.9nm,0.2s						
SHLS				Lg	Lg	21 12 29.3	
	66nm,0.4s						
MNBS	Baschi	2.88	248	eP	Pb	21 12 00.8	+0.3
	13nm,0.4s						
MNBS				eS	Sb	21 12 37.0	+1.2
	35nm,0.3s						
MNBS	Baschi	2.88	248	Pg	Pb	21 12 00.8	+0.3
	13nm,0.4s						
MNBS				Lg	Lg	21 12 37.1	
	35nm,0.3s						
ZSN	Zaisan	2.93	40	eP	Pg	21 12 03.1	-2.0
	7.8nm,0.3s						
ZSN				eS	Sg	21 12 40.8	-2.3
	12nm,0.3s						
ZSN	Zaisan	2.93	40	Pg	Pg	21 12 03.1	-2.0
	7.8nm,0.3s						
ZSN				Lg	Lg	21 12 40.8	
	12nm,0.3s						
KPKS	Kokpek	3.02	236	eP	Pb	21 12 03.1	+0.3
	6.0nm,0.2s						
KPKS				eS	Sb	21 12 40.9	+1.1
	55nm,0.3s						
UZB	Uzynbulak	3.04	228	eP	Pb	21 12 03.5	+0.3
	3.6nm,0.2s						
UZB				eS	Sb	21 12 41.5	+1.2
	17nm,0.2s						
UZB	Uzynbulak	3.04	228	Pg	Pb	21 12 03.5	+0.3
	3.6nm,0.2s						
UZB				Lg	Lg	21 12 41.5	
	17nm,0.2s						
ARXS	Arharly	3.21	253	eP	Pb	21 12 07.1	+1.0
	5.2nm,0.2s						
ARXS				eS	Sb	21 12 47.7	+2.4
	25nm,0.4s						
ARXS	Arharly	3.21	253	Pg	Pb	21 12 07.1	+1.0
	5.2nm,0.2s						
ARXS				Lg	Lg	21 12 47.7	
	25nm,0.4s						
KURS	Kuram	3.31	240	eP	Pb	21 12 08.4	+0.7
	1.0nm,0.2s						
KURS				eS	Sb	21 12 49.9	+1.7
	4.0nm,0.3s						
KURS	Kuram	3.31	240	Pg	Pb	21 12 08.5	+0.7
	1.0nm,0.2s						
KURS				Lg	Lg	21 12 49.9	
	4.0nm,0.3s						
SATY	Saty	3.43	232	eP	Pb	21 12 10.3	+0.4
	3.3nm,0.2s						
SATY				eS	Sb	21 12 53.8	+2.1
	31nm,0.3s						
SATY	Saty	3.43	232	Pg	Pb	21 12 10.3	+0.4
	3.3nm,0.2s						
SATY				Lg	Lg	21 12 53.8	
	31nm,0.3s						
CHKK	Chushkaly	3.91	251	eP	Pb	21 12 19.4	+1.5
	3.2nm,0.1s						
CHKK				eS	Sb	21 13 08.5	+3.3
	9.4nm,0.2s						
CHKK	Chushkaly	3.91	251	Pg	Pb	21 12 19.4	+1.5
	3.2nm,0.1s						
CHKK				Lg	Lg	21 13 08.5	
	9.4nm,0.2s						
KOTS	Kotyrbulak	4.10	243	eP	Pb	21 12 22.3	+1.0
	2.2nm,0.4s						
KOTS				eS	Sb	21 13 13.7	+2.7
	7.6nm,0.5s						
KOTS	Kotyrbulak	4.10	243	Pg	Pb	21 12 22.3	+1.0
	2.2nm,0.4s						
KOTS				Lg	Lg	21 13 13.7	
	7.6nm,0.5s						
KTBS	Karatobe	4.17	251	eP	Pb	21 12 22.9	+0.6
	0.7nm,0.2s						
KTBS				eS	Sb	21 13 15.3	+2.6
	9.9nm,0.5s						
KTBS	Karatobe	4.17	251	Pg	Pb	21 12 22.9	+0.6
	0.7nm,0.2s						
KTBS				Lg	Lg	21 13 15.3	
	9.9nm,0.5s						
MDOK	Medeo	4.18	242	eP	Pb	21 12 24.8	+2.1
	2.1nm,0.7s						
MDOK				eS	Sg	21 13 18.7	-4.5
	3.9nm,0.4s						
MDOK	Medeo	4.18	242	⇓Pg	Pg	21 12 26.2	-2.7
	2.4nm,0.6s						
MDOK				⇑Lg	Lg	21 13 18.5	
	12nm,0.7s						
MDOK	Medeo	4.18	242	Pg	Pb	21 12 24.8	+2.1
	2.1nm,0.7s						
MDOK				Lg	Lg	21 13 18.7	
	3.9nm,0.4s						
TNSS	Tian-Shan	4.31	241	eP	Pb	21 12 26.3	+1.3
	0.7nm,0.3s						
TNSS				eS	Sb	21 13 21.3	+4.1
	3.0nm,0.6s						
TNSS	Tian-Shan	4.31	241	Pg	Pb	21 12 26.3	+1.3
	0.7nm,0.3s						
TNSS				Lg	Lg	21 13 21.3	
	3.0nm,0.6s						
KUU	Kurty	4.33	254	eP	Pb	21 12 25.8	+0.7
	1.1nm,0.5s						
KUU				eS	Sb	21 13 19.7	+2.2
	9.8nm,0.6s						
KUU	Kurty	4.33	254	Pg	Pb	21 12 25.8	+0.7
	1.1nm,0.5s						
KUU				Lg	Lg	21 13 19.7	
	9.8nm,0.6s						
IZV	Izvestkoviy	4.52	243	eP	Pg	21 12 31.8	-3.6
	1.3nm,0.3s						
IZV				eS	Sg	21 13 30.4	-3.6
	7.7nm,0.6s						
IZV	Izvestkoviy	4.52	243	Pg	Pg	21 12 31.8	-3.6
	1.3nm,0.3s						
IZV				Lg	Lg	21 13 30.4	
	7.7nm,0.6s						
KRBS	Karabastau	4.85	254	eP	Pb	21 12 35.3	+1.4
	0.4nm,0.3s						
KRBS				eS	Sb	21 13 36.7	+4.3
	3.3nm,0.2s						
KRBS	Karabastau	4.85	254	Pg	Pb	21 12 35.3	+1.4
	0.4nm,0.3s						
KRBS				Lg	Lg	21 13 36.7	
	3.3nm,0.2s						
KST	Kastek	4.93	246	eP	Pb	21 12 35.9	+0.5
	2.0nm,0.5s						
KST				eS	Sb	21 13 37.7	+2.9
	5.8nm,1.2s						
KST	Kastek	4.93	246	Pg	Pb	21 12 35.9	+0.5
	2.0nm,0.5s						
KST				Lg	Lg	21 13 37.7	
	5.8nm,1.2s						
TKM2	Tokmak 2	5.22	246	⇑Lg	Lg	21 13 51.4	
	3.4nm,0.6s						
KURBB	Kurchatov Arra	5.91	337	⇑Lg	Lg	21 14 17.3	
	7.1nm,0.6s						
KK31	Karatay Array	8.60	260	⇑Lg	Lg	21 15 39.3	
	0.3nm,0.3s,baz=274,slow=2.3,SNR=4.2						

IDC 11 21:18:39.4±1.9**, 23°.13S**×**66°.58W, h203**^{km}±19^{km}**, mb3.1**/2**, mb1 3.3**/5**, mb1mx3.2**/31**, mbtmp3.7**/5**, Error ellipse: s-maj=32.6km s-min=22.4km az=133.0, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	2.21	283	P	Pn	21 19 22.0	+1.2
	26nm,0.3s,baz=87,slow=6.4,SNR=175						
LVC				S	S	21 19 52.8	+0.4
	12nm,0.3s,baz=267,slow=21,SNR=11						
LPAZ	La Paz	6.96	348	P	Pn	21 20 21.5	+1.6
	0.9nm,0.3s,baz=161,slow=7.6,SNR=13						
LPAZ				S	S	21 21 38.2	-1.0
	0.1nm,0.3s,baz=25,slow=14,SNR=2.1						
SIV	San Ignacio	8.79	37	P	Pn	21 20 43.7	+0.6
	0.6nm,0.3s,baz=225,slow=10,SNR=8.8						
TORD	Torodi Ar. Bea	75.89	69	P	P	21 30 03.5	-0.6
	0.5nm,0.4s,baz=253,slow=5.1,SNR=9.3						
PDAR	Pinedale Array	76.61	329	P	P	21 30 08.5	+0.8
	0.2nm,0.6s,baz=126,slow=11,SNR=2.4						

IDC 11 21:19:39.6±2.4**, 6°.91S**×**129°.14E, h0**^{km}**, mb3.4**/1**, mb1 3.4**/3**, mb1mx3.2**/37**, mbtmp3.2**/3**, ML3.4**/2**, Error ellipse: s-maj=145.3km s-min=33.7km az=67.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	13.91	159	Pn	Pn	21 22 57.3	-0.9
	0.2nm,0.3s,baz=341,slow=14,SNR=14						
WRA				Sn	Sn	21 25 18.8	-15
	0.3nm,0.3s,baz=337,slow=20,SNR=7.2						
ASAR	Alice Springs	17.28	165	P	Pn	21 23 43.3	+0.8
	0.1nm,0.3s,baz=343,slow=8.8,SNR=4.2						
MKAR	Makanchi Array	67.68	327	P	P	21 30 38.7	0.0
	0.3nm,0.8s,baz=124,slow=7.2,SNR=2.2						

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*JMA **11** 21:29:11.8±0.8, 46°.64N×153°.35E, h30^{km}, M4.9*

*IDC **11** 21:29:13.4±0.6, 46°.85N×152°.89E, h30^{km}±4^{km}, mb4.2/28, mb1 4.3/34, mb1mx4.3/45, mbtmp4.3/34, ML3.2/5, MS3.7/3, Ms1 3.7/3, ms1mx3.2/46, Error ellipse: s-maj=13.4km s-min=10.2km az=148.0*

*MOS **11** 21:29:15.1±1.0, 46°.81N×152°.87E, h63^{km}, mb4.8/9, Error ellipse: s-maj=6.7km s-min=5.2km az=95.0*

*SKHL **11** 21:29:15.4±0.4, 46°.70N×153°.10E, h68^{km}±3^{km}, mb5.0/14*

*BJI **11** 21:29:15.2±0.0, 46°.88N×152°.81E, h61^{km}, mB5.0/33, mb4.6/54, Ms4.3/8, Ms7 4.1/8*

*NEIC **11** 21:29:17.6±1.1, 46°.89N±0°.08×152°.8E±0°.1, h65^{km}±5^{km}, mb4.7/88, Error ellipse: s-maj=14.9km s-min=9.5km az=127.0*

ISC 11 21:29:14.5±0.5**, 46°.69N**±0°.04×**153°.01E**±0°.05**, h46**^{km}±4^{km}**, h47**^{km}**:pP-P, n425,** σ**1^{s}.55**/462**, mb4.6**/127**, MS4.3**/4**, 19C-17D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	3.87	250	dePN	Pn	21 30 13.3	+1.8
KUR				iS	Sn	21 30 56.6	+0.9
KUR				pmax	pmax		
	comp=N,141nm,0.3s						
KUR				pmax	pmax		
	comp=E,72nm,0.3s						
KUR				pmax	pmax		
	comp=Z,322nm,0.3s						
KUR				smax	smax		
	comp=N,731nm,0.4s						
KUR				smax	smax		
	comp=E,346nm,0.3s						
KUR	Kuril'sk	3.87	250	iP	Pn	21 30 13.5	+2.0
KUR				AMB	AMB	21 30 15.4	
	comp=E,140nm,0.3s						
KUR				AMB	AMB	21 30 15.4	
	comp=E,70nm,0.3s						
KUR				AMB	AMB	21 30 15.4	
	comp=E,320nm,0.3s						
KUR				iS	Sn	21 30 56.7	+1.0
KUR				A	A	21 31 04.7	
	comp=E,730nm,0.4s						
KUR				A	A	21 31 04.7	
	comp=E,350nm,0.4s						
SKR	Severo-Kuril's	4.50	26	ePN	Pn	21 30 19.8	-0.2
SKR				pmax	pmax		
	comp=Z,116nm,0.8s						
SKR	Severo-Kuril's	4.50	26	iP	Pn	21 30 20.4	+0.4
SKR				AMB	AMB	21 30 28.0	
	comp=Z,120nm,0.8s						
SKR				iS	Sn	21 31 09.0	-1.9
SKR				A	A	21 31 17.0	
	comp=Z,310nm,0.8s						
SKR				A	A	21 31 17.0	
	comp=Z,350nm,0.8s						
PAU	Pauzhetka	5.39	26	eP	Pn	21 30 33.4	+1.1
PAU				AMB	AMB	21 30 33.7	
	comp=Z,200nm,0.4s						
PAU				AMB	AMB	21 30 33.7	
	comp=Z,210nm,0.4s						
PAU				eS	Sn	21 31 31.6	-1.5
PAU				A	A	21 31 33.6	
	comp=Z,560nm,0.5s						

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PAU                              A       A       21 31 33.6
        comp=Z,400nm,0.5s
YUK   Yuzh-Kuril'sk      5.70 245 ePN    Pn      21 30 33.7  -2.8
YUK                               pmax   pmax
        comp=N,165nm,0.3s
YUK                               pmax   pmax
        comp=E,68nm,0.3s
YUK                               pmax   pmax
        comp=Z,294nm,0.3s
YUK   Yuzh-Kuril'sk      5.70 245 i P    Pn      21 30 38.7  +2.2
YUK                               AMB    AMB     21 30 47.0
        comp=Z,170nm,0.5s
YUK                               AMB    AMB     21 30 47.0
        comp=Z,70nm,0.5s
YUK                               AMB    AMB     21 30 47.0
        comp=Z,290nm,0.5s
YUK                               i S    Sn      21 31 41.4  +0.9
YUK                               A      A       21 31 52.0
        comp=Z,400nm,0.5s
YUK                               A      A       21 31 52.0
        comp=Z,260nm,0.5s
GRPR  Tuman              5.77 245 ePN    Pn      21 30 39.0  +1.5
GRPR                              pmax   pmax
        comp=Z,345nm,0.4s
GRPR                              pmax   pmax
        comp=N,137nm,0.2s
GRPR                              pmax   pmax
        comp=E,93nm,0.2s
GRPR  Tuman              5.77 245 eP     Pn      21 30 39.0  +1.5
GRPR                              AMB    AMB     21 30 48.0
        comp=E,140nm,0.4s
GRPR                              AMB    AMB     21 30 48.0
        comp=E,90nm,0.4s
GRPR                              AMB    AMB     21 30 48.0
        comp=E,310nm,0.4s
GRPR                              eS     Sn      21 31 42.0  -0.4
GRPR                              A      A       21 31 53.0
        comp=E,250nm,0.4s
GRPR                              A      A       21 31 53.0
        comp=E,240nm,0.4s
NEM2  Nemuro 2           6.13 240  P     Pn      21 30 42.0  -0.4
NEM2                              eS     Sn      21 31 48.7  -2.5
NMR   Nemuro--Hokkai     6.14 240⇑iPN    Pn      21 30 42.0  -0.5
NMR   Nemuro--Hokkai     6.14 240 i P    Pn      21 30 42.5   0.0
NMR                               i S    Sn      21 31 50.0  -1.4
JRA   Rausu              6.21 247  P     Pn      21 30 45.9  +2.4
JNK   Nakash             6.63 245  P     Pn      21 30 51.0  +1.6
JNK                               eS     Sn      21 32 03.7   0.0
JAK   Akkeshi            6.97 241  P     Pn      21 30 53.7  -0.2
JAK                               eS     Sn      21 32 08.7  -3.1
JTKR  Abashiri--Toko     6.97 250  P     Pn      21 30 56.4  +2.5
YSS   Yuzh-Sakhalins     7.04 276 ePN    Pn      21 30 58.1  +3.1
YSS                               eS     Sn      21 32 14.7  +1.0
YSS                               pmax   pmax
        comp=Z,50nm,0.9s
YSS                               MLR    MLR
        comp=Z,700nm,14.0s
YSS   Yuzh-Sakhalins     7.04 276  Pn    Pn      21 30 56.3  +1.4
YSS   Yuzh-Sakhalins     7.04 276 i P    Pn      21 30 58.1  +3.1
YSS                               AMB    AMB     21 30 59.0
        comp=Z,20nm,0.9s
YSS                               AMB    AMB     21 30 59.0
        comp=Z,50nm,0.9s
YSS                               eS     Sn      21 32 14.7  +1.0
YSS                               A      A       21 32 19.4
        comp=Z,30nm,0.6s
YSS                               A      A       21 32 19.4
        comp=Z,40nm,0.6s
PEA0B Petropavlovsk-     7.10  23cePN    Pn      21 30 57.5  +1.7
PEA0B Petropavlovsk-     7.10  23        Pn      21 30 57.4  +1.6
PETK  Petropavlovsk-     7.10  23  Pn    Pn      21 30 54.9  -0.9
        comp=Z,1.1nm,0.3s,baz=181,slow=11,SNR=16
PETK  Petropavlovsk-     7.10  23  PN    Pn      21 30 56.1  +0.3
PETK  Petropavlovsk-     7.10  23  Pn    Pn      21 30 56.1  +0.3
JMP   Maruseppu          7.31 252  P     Pn      21 31 01.2  +2.5
PET   Petropavlovsk      7.31  28 ePN    Pn      21 30 58.8  +0.2
PET   Petropavlovsk      7.31  28 eP     Pn      21 31 01.1  +2.5
PET                               eS     Sn      21 32 17.6  -2.6
PET                               A      A       21 32 19.2
        comp=Z,230nm,0.6s
PET                               A      A       21 32 19.2
        comp=Z,120nm,0.6s
JAR   Ashorobuto         7.38 246  P     Pn      21 31 01.2  +1.6
JAR                               eS     Sn      21 32 21.8  -0.1
JSE   Soyaes             7.49 260  P     Pn      21 31 05.4  +4.3
JOB   Onbets             7.54 243  P     Pn      21 31 03.1  +1.3
JOB                               eS     Sn      21 32 24.2  -1.8
HRK   Horoka             7.70 249 eP     Pn      21 31 06.5  +2.4
UGL   Uglegorsk          7.74 292 ePN    Pn      21 31 08.3  +3.8
UGL                               pmax   pmax
        comp=Z,90nm,0.9s
UGL                               MLR    MLR
        comp=Z,1µm,14.0s
UGL   Uglegorsk          7.74 292 eP     Pn      21 31 07.5  +3.0
UGL                               AMB    AMB     21 31 09.1
        comp=Z,90nm,0.9s
UGL                               eS     Sn      21 32 31.3  +0.6
UGL                               A      A       21 32 34.5
        comp=Z,40nm,1.0s
UGL                               A      A       21 32 34.5
        comp=Z,70nm,1.0s
JKA   Kamikawa-asahi     7.77 254  Pn    Pn      21 31 08.2  +3.3
JKA   Kamikawa-asahi     7.77 254 eP     Pn      21 31 08.2  +3.3
JKK2  Kamakawa 2         7.77 252  P     Pn      21 31 07.8  +2.9
ASAJ  Asahikawa          7.77 254  Pn    Pn      21 31 07.7  +2.8
        comp=Z,6.5nm,0.3s,baz=76,slow=18,SNR=73
ASAJ  Asahikawa          7.77 254  P     Pn      21 31 08.4  +3.5
ASAJ  Asahikawa          7.77 254  PN    Pn      21 31 08.2  +3.3
JWK2  Keihoku            7.86 264  P     Pn      21 31 12.0  +5.8
TYV   Tymovskoe          8.02 305 ePN    Pn      21 31 11.0  +2.8
TYV                               eS     Sn      21 32 43.7  +6.3
TYV                               pmax   pmax
        comp=Z,27nm,0.9s
TYV                               smax   smax
        comp=E,19nm,0.9s
TYV   Tymovskoe          8.02 305 eP     Pn      21 31 11.0  +2.8
TYV                               AMB    AMB     21 31 11.6
        comp=E,10.0nm,0.7s
TYV                               AMB    AMB     21 31 11.6
        comp=E,20nm,0.7s
TYV                               AMB    AMB     21 31 11.6
        comp=E,30nm,0.7s
TYV                               eS     Sn      21 32 38.5  +1.1
TYV                               A      A       21 32 46.0
        comp=E,10.0nm,0.9s
TYV                               A      A       21 32 46.0
        comp=E,20nm,0.9s
JFR   Furan              8.19 248  P     Pn      21 31 12.6  +1.9
MYR   Moyori             8.23 241 eP     Pn      21 31 11.5  +0.3
JAB   Ashibetsu          8.27 251  P     Pn      21 31 15.0  +3.2
JRBN  Rebuntou           8.41 266  P     Pn      21 31 17.5  +3.9
ERM   Erimo              8.46 240  PN    Pn      21 31 15.6  +1.2
ERM   Erimo              8.46 240  Pn    Pn      21 31 15.6  +1.2
ERM   Erimo              8.46 240 eP     Pn      21 31 15.6  +1.2
JEM   Erimo              8.46 240  P     Pn      21 31 15.0  +0.6
JEM                               eS     Sn      21 32 46.0  -2.6
JHR   Hokuryu            8.50 254  P     Pn      21 31 20.4  +5.5
JBT2  Biratori 2         8.53 247  P     Pn      21 31 15.7  +0.4
JBT2                              eS     Sn      21 32 49.6  -0.5
JNBK  Urakawa-nobuka     8.55 243  P     Pn      21 31 15.0  -0.7
JNBK                              eS     Sn      21 32 46.5  -4.3
JEW   Eniwo              9.08 249  P     Pn      21 31 24.7  +1.8
JEW   Eniwo              9.08 249  Pn    Pn      21 31 24.5  +1.7
OKH   Okha               9.43 320 eP     Pn      21 31 31.0  +3.4
OKH                               AMB    AMB     21 31 31.8
        comp=E,30nm,0.8s
JNB   Noboribetsu        9.53 248  P     Pn      21 31 29.2  +0.2
JNB                               eS     Sn      21 33 11.1  -3.5
JKB   Kayabe             9.84 245  P     Pn      21 31 32.0  -1.2
JKB                               eS     Sn      21 33 16.5  -5.7
JYM2  Yakumo 2          10.13 248  P     Pn      21 31 37.2  -0.1
NKL   Nikolayevsk       10.24 314 eP     Pn      21 31 41.9  +3.2
JTM   Tenmabayashi      10.46 240  P     Pn      21 31 40.2  -1.5
JTM                               eS     Sn      21 33 29.6  -7.9
JANG  Nango             10.46 237  P     Pn      21 31 38.5  -3.3
JANG                              eS     Sn      21 33 27.3   -10
JTH   Tanohata          10.55 234  P     Pn      21 31 40.2  -2.8
JTH                               eS     Sn      21 33 29.6   -10
JOSM  Okushiri--Mats    10.72 249  P     Pn      21 31 45.7  +0.3
OFUJ  Ofunato           11.26 232  P     Pn      21 31 49.6  -3.2
OFUJ                              eS     Sn      21 33 47.2   -10
TEY   Ternei            11.56 268⇑iPN    Pn      21 32 02.9  +6.1
TEY                               pmax   pmax
        comp=E,30nm,0.7s
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TEY                               pmax   pmax
        comp=Z,20nm,1.2s
TEY   Ternei            11.56 268 i P    Pn      21 31 58.5  +1.7
TEY                               AMB    AMB     21 31 59.0
        comp=Z,10.0nm,0.9s
TEY                               AMB    AMB     21 31 59.0
        comp=Z,20nm,0.9s
JRG   Rokugo            11.62 236  P     Pn      21 31 55.5  -2.1
JRG                               eS     Sn      21 33 56.5  -9.3
GRNR  Gornyy            11.69 297⇑iPN    Pn      21 32 03.4  +4.9
GRNR                              pmax   pmax
        comp=N,3.0nm,0.7s
GRNR                              pmax   pmax
        comp=Z,20nm,0.9s
GRNR                              MLR    MLR
        comp=E,360nm,14.0s
GRNR                              MLR    MLR
        comp=N,220nm,19.0s
GRNR                              MLR    MLR
        comp=Z,330nm,13.0s
GRNR  Gornyy            11.69 297 eP     Pn      21 32 00.5  +2.0
GRNR                              AMB    AMB     21 32 04.2
        comp=Z,10.0nm,0.8s
GRNR                              AMB    AMB     21 32 04.2
        comp=Z,20nm,0.8s
JIO   Ouri              11.89 230  P     Pn      21 31 58.7  -2.6
JIO                               eS     Sn      21 34 01.1   -11
MA2   Magadan           12.98 355  Pn    Pn      21 32 16.7  +0.7
        comp=Z,5.0nm,0.3s,baz=165,slow=13,SNR=18
MA2                                LR    LR      21 36 51.5
        comp=Z,252nm,19.1s,baz=100,slow=36
MA2   Magadan           12.98 355  Pn    Pn      21 32 16.3  +0.2
MA2   Magadan           12.98 355 eP     Pn      21 32 16.7  +0.7
EKMR  Ekimchan          14.40 304 eP     Pn      21 32 35.6  +0.2
EKMR                              AMB    AMB     21 32 42.2
        comp=Z,10.0nm,0.6s
KLR   Kul'dur           14.47 288  Pn    Pn      21 32 36.3   0.0
        comp=Z,0.1nm,0.3s,baz=107,slow=17,SNR=2.5
KLR                                LR    LR      21 38 20.3
        comp=Z,320nm,20.4s,baz=88,slow=38
KLR   Kul'dur           14.47 288ceP     Pn      21 32 37.0  +0.7
KLR   Kul'dur           14.47 288 eP     Pn      21 32 35.5  -0.8
USRK  Ussuriysk Ar.     14.96 268  Pn    Pn      21 32 42.5  -0.3
        baz=70,slow=11,SNR=7.5
USRK                               LR    LR      21 38 29.7
        comp=Z,316nm,20.6s,baz=182,slow=37
USRK  Ussuriysk Ar.     14.96 268  P     Pn      21 32 42.9  +0.1
USRK  Ussuriysk Ar.     14.96 268  Pn    Pn      21 32 42.9  +0.1
MJAR  Matsushiro Arr    14.99 233  Pn    Pn      21 32 41.4  -1.8
        comp=Z,0.1nm,0.3s,baz=33,slow=11,SNR=6.6
MJAR  Matsushiro Arr    14.99 233  P     P       21 32 49.0  +1.1
MJAR  Matsushiro Arr    14.99 233  P     P       21 32 49.0  +1.1
MAJO  Matsushiro        14.99 233  P     P       21 32 46.1  -1.8
MAJO  Matsushiro        14.99 233  Pn    P       21 32 46.0  -1.8
MAJO  Matsushiro        14.99 233 eP     Pn      21 32 41.8  -1.4
MAT   Matsushiro        14.99 233  P     Pn      21 32 41.4  -1.8
SEY   Seymchan          16.29 359  Pn    Pn      21 32 58.5  -1.2
        comp=Z,0.5nm,0.3s,baz=182,slow=12,SNR=10
SEY   Seymchan          16.29 359 i P    Pn      21 32 59.9  +0.2
SEY   Seymchan          16.29 359 i P    Pn      21 32 59.9  +0.2
MDJ   Mudanjiang        16.50 271        P       21 33 03.5  -1.0
BMKR  Bomnak            17.22 307 eP     Pn      21 33 11.0  -0.5
BMKR                              AMB    AMB     21 33 14.8
        comp=Z,10.0nm,0.8s
BMKR                              AMB    AMB     21 33 14.8
        comp=Z,10.0nm,0.8s
BMKR                              AMB    AMB     21 33 14.8
        comp=Z,10.0nm,0.8s
JWT   Wachi             17.47 236  Pn    P       21 33 15.0  -0.4
JWT                               IAmb   IAmb    21 33 21.2
        comp=Z,51nm,1.4s
ZEA   Zeya              17.87 303 eP     P       21 33 23.0  +3.4
ZEA                               pmax   pmax
        comp=Z,10.0nm,1.1s
ZEA   Zeya              17.87 303 eP     Pn      21 33 19.5  +0.1
ZEA                               AMB    AMB     21 33 24.0
        comp=Z,30nm,1.0s
KROS  Kirovskiy         18.19 305 eP     Pn      21 33 25.4  +2.0
CN2   Changchun         19.59 272 eP     P       21 33 37.7  -0.8
CN2                               pmax   pmax
        comp=Z,10.0nm,0.5s
YAK   Yakutsk           20.34 328  P     P       21 33 45.5  -0.9
        comp=Z,8.7nm,0.4s,baz=113,slow=0.6,SNR=10
YAK   Yakutsk           20.34 328 eP     P       21 33 46.8  +0.3
YAK                               eS     S       21 37 28.2  -3.4
YAK                               eSS    SnSn    21 37 52.2  +0.5
YAK                               e              21 37 57.3
YAK                               e              21 45 08.2
YAK                               pmax   pmax
        comp=Z,18nm,0.9s
YAK                               pmax   pmax
        comp=N,4.0nm,1.0s
YAK                               pmax   pmax
        comp=E,2.0nm,0.9s
YAK                               smax   smax
        comp=N,160nm,4.3s
YAK                               smax   smax
        comp=E,157nm,4.3s
YAK   Yakutsk           20.34 328  P     P       21 33 45.4  -1.1
YAK                               IAmb   IAmb    21 33 47.8
        comp=Z,21nm,0.6s
KSRS  Korea Array       20.71 253  P     Pn      21 33 52.1  -1.4
        comp=Z,4.7nm,0.6s,baz=58,slow=9.0,SNR=17
KSRS  Korea Array       20.71 253 eP     Pn      21 33 52.1  -1.4
KS19  Wonju Array Si    20.72 253  P     Pn      21 33 52.3  -1.4
JNU   Nakatsue          21.63 239  P     P       21 34 02.4  +1.6
        comp=Z,14nm,0.8s,baz=300,slow=1.9,SNR=5.9
JNU   Nakatsue          21.63 239  P     P       21 34 01.8  +1.0
JNU                               IAmb   IAmb    21 34 13.1
        comp=Z,41nm,1.2s
HIA   Hailar            22.32 289  P     P       21 34 07.0  -1.0
HIA                               pmax   pmax
        comp=Z,7.0nm,0.9s
HIA   Hailar            22.32 289  P     P       21 34 07.0  -1.0
BJI   Beijing           27.41 269  P     P       21 34 56.2  +0.7
BJI                               pmax   pmax
        comp=Z,2.0nm,0.7s
BJT   Baijiatuau        27.42 269  P     P       21 34 56.1  +0.4
BJT                               pmax   pmax
        comp=Z,6.0nm,0.6s
BJT   Baijiatuau        27.42 269  P     P       21 34 56.1  +0.4
BJT   Baijiatuau        27.42 269 eP     P       21 34 56.1  +0.4
TIXI  Tiksi             27.51 344ceP     P       21 34 53.9  -2.2
ANM   Nome              28.78  37  P     P       21 35 08.6  +1.1
ANM                               pmax   pmax
        comp=Z,4.0nm,0.8s
ANM   Nome              28.78  37  P     P       21 35 08.6  +1.1
H11N2 WAKE ISLAND Hy    29.20 152  T     T       22 06 36.5
        baz=340,slow=76,SNR=921
H11N1 WAKE ISLAND Hy    29.21 152  T     T       22 06 37.0
        baz=340,slow=76,SNR=655
H11N3 WAKE ISLAND Hy    29.21 152  T     T       22 06 33.8
        baz=340,slow=76,SNR=419
NJ2   Nanjing           29.91 253 eP     P       21 35 19.1  +1.2
NJ2                               pmax   pmax
        comp=Z,6.0nm,0.5s
HHC   Hu-ho-hao-te      30.23 274 eP     P       21 35 20.6  -0.1
HHC                               pmax   pmax
        comp=Z,17nm,1.0s
HHC                               pmax   pmax
        comp=Z,150nm,4.7s
H11S1 WAKE ISLAND Hy    30.28 154  T     T       22 08 02.4
        baz=341,slow=76,SNR=894
H11S3 WAKE ISLAND Hy    30.29 154  T     T       22 08 04.5
        baz=341,slow=76,SNR=856
H11S2 WAKE ISLAND Hy    30.30 154  T     T       22 07 44.3
        baz=341,slow=76,SNR=730
ULN   Ulaanbaatar       30.85 289  P     P       21 35 26.5  +0.3
ULN                               pmax   pmax
        comp=Z,6.0nm,0.9s
ULN   Ulaanbaatar       30.85 289  P     P       21 35 26.5  +0.3
RDOG  Red Dog Mine      30.90  31  P     P       21 35 27.1  +0.8
RDOG                              IAmb   IAmb    21 35 27.9
        comp=Z,6.5nm,0.6s
SONM  Songino Array     31.29 289  P     P       21 35 29.8  -0.3
        comp=Z,1.0nm,0.6s,baz=56,slow=8.6,SNR=4.9
SONM                              PcP    PcP     21 38 23.1  -0.1
        comp=Z,0.5nm,0.7s,baz=121,slow=3.1,SNR=4.0
SONM  Songino Array     31.29 289  P     P       21 35 29.6  -0.5
TLY   Talaya            32.15 297  P     P       21 35 36.3  -1.1
        comp=Z,1.6nm,0.6s,baz=328,slow=1.3,SNR=4.2
TLY   Talaya            32.15 297 i P    P       21 35 36.0  -1.4
TLY                               pmax   pmax
        comp=Z,2.0nm,1.0s
TLY   Talaya            32.15 297  P     P       21 35 35.3  -2.1
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TTA   Tatalina          32.51  41  P     P       21 35 41.1  +0.5
TTA                               pmax   pmax
        comp=Z,11nm,1.4s
TTA   Tatalina          32.51  41  P     P       21 35 41.1  +0.5
TTA                               IAmb   IAmb    21 35 58.4
        comp=Z,11nm,1.4s
WHN   Wuhan             33.85 255 ⇑P     P       21 35 52.9  +0.5
IMAR  Indian Mountai    33.86  36  P     P       21 35 52.7  +0.5
PPLA  Purkeypile        34.26  42  P     P       21 35 56.8  +1.0
TPUB  Ta-pu             34.94 239  P     P       21 36 03.1  +1.1
TRF   Thorofare Moun    35.13  41  P     P       21 36 04.0  +0.6
TRF                               IAmb   IAmb    21 36 14.6
        comp=Z,8.5nm,1.2s
COLD  Coldfoot          35.42  34  P     P       21 36 06.1  +0.5
COLD                              IAmb   IAmb    21 36 07.4
        comp=Z,5.5nm,0.6s
XAN   Xi'an             35.44 265  P     P       21 36 06.5  +0.3
XAN                                pP    sP      21 36 24.0  +1.1
XAN                               pmax   pmax
        comp=Z,19nm,0.9s
XAN                                LR    LR
        comp=Z,190nm,16.3s
XAN                                LR    LR
        comp=Z,340nm,19.5s
XAN                                LR    LR
        comp=Z,680nm,21.7s
TOLK  Toolik Lake Re    35.83  32  P     P       21 36 09.7  +0.5
TOLK                              IAmb   IAmb    21 36 11.1
        comp=Z,7.3nm,0.9s
COLA  College           36.23  38  P     P       21 36 13.1  +0.6
COLA                              pmax   pmax
        comp=Z,10.0nm,0.9s
COLA  College           36.23  38  P     P       21 36 13.1  +0.6
COLA                              IAmb   IAmb    21 36 16.6
        comp=Z,9.9nm,0.8s
POKR  Poker Plat Res    36.41  38  P     P       21 36 14.8  +0.6
POKR                              IAmb   IAmb    21 36 16.4
        comp=Z,10.0nm,0.8s
IL31                    36.64  39  P     P       21 36 16.8  +0.8
IL31                              IAmb   IAmb    21 36 18.6
        comp=Z,12nm,1.4s
ILAR  Eielson Array     36.64  39  P     P       21 36 16.4  +0.4
        comp=Z,1.8nm,0.8s,baz=249,slow=7.6,SNR=15
ILAR  Eielson Array     36.64  39  P     P       21 36 16.0  -0.1
ENH   Enshi             37.29 260  P     P       21 36 21.3  -0.7
ENH                               IAmb   IAmb    21 36 29.6
        comp=Z,5.3nm,0.9s
BMAR  Burnt Mountain    37.61  34  P     P       21 36 25.4  +1.1
LZH   Lanzhou           37.82 272 eP     P       21 36 28.1  +1.5
LZH                                pP    sP      21 36 45.3  +1.8
LZH                               pmax   pmax
        comp=Z,12nm,1.1s
NRIK  Noril'sk          38.78 329  P     P       21 36 32.8  -1.3
        comp=Z,1.6nm,0.5s,baz=175,slow=10.0,SNR=4.3
NRIK  Noril'sk          38.78 329  P     P       21 36 32.8  -1.3
GTA   Gaotai            38.91 279 ⇑P     P       21 36 37.0  +1.3
GTA                               PcP    PcP     21 38 47.0  +1.4
GTA                               pmax   pmax
        comp=Z,5.0nm,1.1s
GTA                               pmax   pmax
        comp=Z,87nm,4.5s
GTA                                LR    LR
        comp=Z,180nm,16.0s
GTA                                LR    LR
        comp=Z,170nm,15.3s
GTA                                LR    LR
        comp=Z,250nm,17.1s
BCAR  Beaver Creek A    38.99  41  P     P       21 36 37.3  +1.3
EGAK  Eagle             39.09  38  P     P       21 36 37.0  +0.3
EGAK                              IAmb   IAmb    21 36 37.9
        comp=Z,7.2nm,0.8s
DAWY  Dawson            39.93  39  P     P       21 36 44.4  +0.6
GYA   Guiyang           41.63 258 ⇑P     P       21 36 58.8  +0.5
GYA                               pmax   pmax
        comp=Z,8.0nm,0.7s
INK   Inuvik            41.74  32  P     P       21 36 58.4  -0.1
        comp=Z,5.5nm,0.5s,baz=286,slow=5.4,SNR=13
INK   Inuvik            41.74  32  P     P       21 36 59.3  +0.8
INK                               pmax   pmax
        comp=Z,12nm,1.0s
INK   Inuvik            41.74  32  P     P       21 36 59.3  +0.8
INK                               IAmb   IAmb    21 37 00.7
        comp=Z,12nm,1.0s
ZAA0  Zalesovo Array    42.59 306  P     P       21 37 03.7  -2.0
ZALV  Zalesovo Beam     42.59 306  P     P       21 37 03.5  -2.1
        comp=Z,1.3nm,0.4s,baz=59,slow=7.2,SNR=10
ZALV                              PcP    PcP     21 38 57.5  +0.4
        comp=Z,2.1nm,0.8s,baz=60,slow=2.3,SNR=10
ZALV  Zalesovo Beam     42.59 306  P     P       21 37 03.6  -2.0
WMQ   Urumqi            44.88 291 eP     P       21 37 26.0  +1.7
WMQ                               pmax   pmax
        comp=Z,8.0nm,0.7s
WMQ                               pmax   pmax
        comp=Z,380nm,11.9s
WMQ                                LR    LR
        comp=Z,360nm,29.0s
WMQ                                LR    LR
        comp=Z,1µm,29.3s
WMQ                                LR    LR
        comp=Z,370nm,29.2s
C36M  Paulatuk          44.91  30  P     P       21 37 24.9  +0.9
ZSN   Zaisan            45.04 297 eP     P       21 37 23.6  -1.8
        baz=297
ZSN   Zaisan            45.04 297 eP     P       21 37 23.6  -1.8
KMI   Kunming           45.16 259 ⇑P     P       21 37 27.7  +0.8
KMI                               pmax   pmax
        comp=Z,7.0nm,0.7s
SEM   Semipalatinsk     46.53 303 eP     P       21 37 35.4  -2.1
        baz=303
SEM   Semipalatinsk     46.53 303 eP     P       21 37 35.3  -2.1
MK31  Makanchi Array    46.91 297ceP     P       21 37 38.9  -1.3
MK31  Makanchi Array    46.91 297  P     P       21 37 38.4  -1.8
MKAR  Makanchi Array    46.91 297  P     P       21 37 39.2  -1.0
        comp=Z,1.7nm,0.5s,baz=71,slow=7.3,SNR=21
MKAR                              PcP    PcP     21 39 12.3  +0.1
        comp=Z,1.2nm,0.6s,baz=64,slow=1.8,SNR=7.9
MKAR  Makanchi Array    46.91 297  P     P       21 37 38.5  -1.7
MAKZ  Makanchi          47.09 298  P     P       21 37 40.1  -1.5
MAKZ                              pmax   pmax
        comp=Z,4.0nm,1.3s
MAKZ  Makanchi          47.09 298  P     P       21 37 40.0  -1.5
KURK  Kurchatov         47.34 304  P     P       21 37 41.7  -1.7
KURK                              pmax   pmax
        comp=Z,4.0nm,1.0s
KURK  Kurchatov         47.34 304  P     P       21 37 41.7  -1.7
EUNU  Eureka            49.20  11  P     P       21 37 57.2  -0.3
NONG  Nongkai           49.78 252  P     P       21 38 04.5  +2.0
        comp=Z,25nm,1.3s
TDK   Taldyqorghan      50.15 297 eP     P       21 38 03.9  -1.2
        comp=Z,7.6nm,1.0s,baz=297
TDK   Taldyqorghan      50.15 297 eP     P       21 38 03.8  -1.2
TDK                               pmax   pmax
        comp=Z,8.0nm,1.0s
LSA   Lhasa             50.21 273  P     P       21 38 08.0  +1.7
LSA                               pmax   pmax
        comp=Z,53nm,0.7s
LSA   Lhasa             50.21 273  P     P       21 38 06.7  +0.5
LSA                               pmax   pmax
        comp=Z,10.0nm,0.7s
LSA   Lhasa             50.21 273  P     P       21 38 06.7  +0.5
LSA   Lhasa             50.21 273 eP     P       21 38 06.7  +0.4
SHLS  Shalkode          50.43 294 eP     P       21 38 03.9  -3.5
        baz=294
SHLS  Shalkode          50.43 294 eP     P       21 38 03.9  -3.5
RABL  Rabaul            50.66 181  P     P       21 38 11.9  +2.8
UZB   Uzynbulak         50.71 295 eP     P       21 38 08.3  -1.3
        baz=295
UZB   Uzynbulak         50.71 295 eP     P       21 38 08.2  -1.3
KPKS  Kokpek            50.76 295 eP     P       21 38 08.1  -1.7
        baz=295
KPKS  Kokpek            50.76 295 eP     P       21 38 08.1  -1.7
BRVK  Borovoye          50.88 309  P     P       21 38 09.3  -1.2
BRVK                              pmax   pmax
        comp=Z,5.0nm,1.5s
BRVK  Borovoye          50.88 309  P     P       21 38 09.3  -1.2
YKA   Yellowknife Ar    51.02  37  P     P       21 38 12.2  +0.9
        comp=Z,4.5nm,0.8s,baz=298,slow=6.6,SNR=41
YKA                                pP    pP      21 38 20.7  -2.6
        comp=Z,3.1nm,0.8s,baz=301,slow=6.9,SNR=9.7
YKA                               PcP    PcP     21 39 27.4  +0.7
        comp=Z,0.8nm,0.6s,baz=305,slow=3.2,SNR=6.1
BRZS  Berezniki         51.06 305 i P    P       21 38 10.0  -1.9
        baz=305
BRZS  Berezniki         51.06 305 i P    P       21 38 09.9  -1.9
SATY  Saty              51.14 295 eP     P       21 38 11.4  -1.4
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	baz=295						
SATY	Saty	51.14	295	eP	P	21 38 11.3	-1.4
CHKK	Chushkaly	51.61	296	eP	P	21 38 14.6	-1.5
	baz=296						
CHKK	Chushkaly	51.61	296	eP	P	21 38 14.5	-1.5
UTTA	Uttaradit	51.72	254	P	P	21 38 19.3	+2.2
	comp=Z,12nm,0.9s						
MDOK	Medeo	51.94	296	eP	P	21 38 17.1	-1.6
	baz=296						
MDOK	Medeo	51.94	296	eP	P	21 38 17.1	-1.6
KUU	Kurty	51.99	297	eP	P	21 38 17.8	-1.2
	baz=297						
KUU	Kurty	51.99	297	eP	P	21 38 17.7	-1.2
CMMT	Chiang Mai	52.03	257	P	P	21 38 19.9	+0.3
	comp=Z,6.6nm,0.8s						
CHTO	Chiang Mai	52.04	257	P	P	21 38 20.1	+0.6
CHTO				pmax	pmax		
	comp=Z,9.0nm,0.8s						
CHTO	Chiang Mai	52.04	257	P	P	21 38 20.1	+0.6
CHTO				IAmb	IAmb	21 38 21.8	
	comp=Z,9.3nm,0.8s						
CM09	Chiang Mai Arr	52.27	256	P	P	21 38 23.0	+1.8
	comp=Z,8.4nm,0.8s						
CM31	Chiang Mai Arr	52.29	256	P	P	21 38 22.3	+0.9
CM31				IAmb	IAmb	21 38 23.9	
	comp=Z,5.2nm,0.7s						
CMAR	Chiang Mai Arr	52.29	256	P	P	21 38 22.6	+1.2
	comp=Z,3.7nm,0.7s,baz=36,slow=7.4,SNR=30						
SHL	Shillong	52.30	268	P	P	21 38 21.9	+0.3
SHL				pmax	pmax		
	comp=Z,20nm,0.6s						
SHL	Shillong	52.30	268	P	P	21 38 21.9	+0.3
CM02	Chiang Mai Arr	52.30	256	P	P	21 38 23.6	+2.2
	comp=Z,52nmcomp=Z,6.8nm,0.9s						
CM01	Chiang Mai Arr	52.30	256	P	P	21 38 23.7	+2.2
	comp=Z,47nmcomp=Z,6.3nm,0.9s						
CM05	Chiang Mai Arr	52.33	256	P	P	21 38 23.6	+1.9
	comp=Z,4.9nm,0.7s						
MHMT	Maesarieng	53.16	257	P	P	21 38 28.0	+0.2
	comp=Z,18nm,0.8s						
SRAK	Srakaew	53.47	250	P	P	21 38 30.1	+0.1
	comp=Z,101nm,0.8s						
AAK	Ala-Archa	53.80	296	P	P	21 38 32.8	+0.3
	comp=Z,1.0nm,0.5s,baz=152,slow=5.7,SNR=7.1						
AAK	Ala-Archa	53.80	296	P	P	21 38 31.8	-0.6
AAK	Ala-Archa	53.80	296	eP	P	21 38 32.8	+0.3
TAPN	Taplejung	54.03	273	eP	P	21 38 35.3	+0.8
	comp=Z,9.0nm,0.3s						
ODAN	Odare	54.56	273	eP	P	21 38 39.1	+0.8
	comp=Z,18nm,0.7s						
KSH	Kashi	54.61	292	P	P	21 38 42.1	+3.7
KSH				pP	sP	21 38 55.2	-0.6
KSH				PcP	PcP	21 39 45.5	+4.6
KSH				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KSH				pmax	pmax		
	comp=Z,410nm,4.7s						
GUN	Gumba	54.94	275	eP	P	21 38 41.6	+0.5
	comp=Z,13nm,0.4s						
ARU	Arti	55.01	317	d iP	P	21 38 39.3	-1.5
ARU						21 40 43.0	
ARU				S	S	21 46 18.8	-0.5
ARU				SS	SS	21 50 03.7	+1.0
ARU				pmax	pmax		
	comp=Z,9.0nm,1.4s						
ARU	Arti	55.01	317	P	P	21 38 39.0	-1.8
ARU				IAmb	IAmb	21 38 42.4	
	comp=Z,2.9nm,0.6s						
RAMN	Ramite	55.05	274	eP	P	21 38 42.5	+0.7
	comp=Z,38nm,0.4s						
KKN	Kakani	55.42	275	eP	P	21 38 45.7	+1.2
	comp=Z,25nm,0.6s						
PKI	Pulchoki	55.48	275	eP	P	21 38 45.4	+0.4
	comp=Z,18nm,0.7s						
PKIN	Phulchoki	55.48	275	eP	P	21 38 45.3	+0.4
	comp=Z,13nm,0.5s						
DZA	Taraz	55.59	298	eP	P	21 38 44.0	-1.3
	baz=298						
DZA	Taraz	55.59	298	eP	P	21 38 43.9	-1.3
DMN	Daman	55.66	275	eP	P	21 38 47.2	+1.0
	comp=Z,28nm,0.7s						
GKN	Gorkha	55.73	276	eP	P	21 38 47.2	+0.6
	comp=Z,30nm,0.7s						
PHET	Kaeng Krachan	55.85	251	P	P	21 38 51.6	+4.3
LTY	Liberty	55.86	55	P	P	21 38 47.7	+0.6
KKAR	Karatay Array	55.97	299	P	P	21 38 47.4	-0.5
DANN	Dangsing	56.11	277	eP	P	21 38 50.5	+1.0
	comp=Z,22nm,0.5s						
DAG	Danmarks Havn	56.70	358	i P	P	21 38 51.6	-1.0
	comp=Z,3.5nm,0.7s						
DAG	Danmarks Havn	56.70	358	i P	P	21 38 51.6	-1.0
DAG				pmax	pmax		
	comp=Z,4.0nm,0.7s						
DAG	Danmarks Havn	56.70	358	i P	P	21 38 51.6	-1.0
DAG				IAmb	IAmb	21 38 52.3	
	comp=Z,3.5nm,0.7s						
IUG	Iuzhnay	56.81	298	eP	P	21 38 52.3	-1.8
	baz=298						
IUG	Iuzhnay	56.81	298	eP	P	21 38 52.2	-1.8
PINE	Pine Mountain	57.69	59	P	P	21 39 01.8	+1.5
PINE				IAmb	IAmb	21 39 03.5	
	comp=Z,4.9nm,0.8s						
ARCES	ARCESS Array B	57.89	341	P	P	21 39 00.1	-1.0
	comp=Z,4.4nm,0.9s,baz=32,slow=8.6,SNR=6.1						
ARCES	ARCESS Array B	57.89	341	P	P	21 39 00.3	-0.8
ARCES				pmax	pmax		
	comp=Z,18nm,1.3s						
ARCES	ARCESS Array B	57.89	341	P	P	21 39 00.3	-0.8
ABKAR	Akbulak array	58.41	310	P	P	21 39 04.1	-0.9
ABKAR	Akbulak array	58.41	310	P	P	21 39 04.2	-0.9
ABKAR				IAmb	IAmb	21 39 11.5	
	comp=Z,1.6nm,0.7s						
WALA	Waterton Lakes	58.53	50	P	P	21 39 07.0	+1.0
WALA				IAmb	IAmb	21 39 08.0	
	comp=Z,6.3nm,0.7s						
DBG	Daneborg	59.21	358	i P	P	21 39 09.0	-1.2
DBG				IAmb	IAmb	21 39 10.3	
	comp=Z,3.8nm,0.9s						
WVOR	Wild Horse Val	59.85	59	P	P	21 39 16.6	+1.3
WVOR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
WVOR	Wild Horse Val	59.85	59	P	P	21 39 16.6	+1.3
WVOR				IAmb	IAmb	21 39 18.2	
	comp=Z,3.4nm,0.9s						
NIL	Nilore	59.86	288	P	P	21 39 15.6	+0.2
NIL				pmax	pmax		
	comp=Z,10.0nm,0.8s						
NIL	Nilore	59.86	288	P	P	21 39 15.6	+0.2
SUMG	Summit	60.77	4	i P	P	21 39 21.0	-0.4
	comp=Z,56nm,0.8s						
SUMG	Summit	60.77	4	i P	P	21 39 21.0	-0.4
SUMG				pmax	pmax		
	comp=Z,56nm,0.8s						
SUMG	Summit	60.77	4	P	P	21 39 20.9	-0.4
SUMG	Summit	60.77	4	i P	P	21 39 21.0	-0.4
SUMG				IAmb	IAmb	21 39 22.3	
	comp=Z,56nm,0.8s						
FFC	Flin Flon	60.83	40	P	P	21 39 22.4	+0.8
FFC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
FFC	Flin Flon	60.83	40	P	P	21 39 22.4	+0.8
FFC				IAmb	IAmb	21 39 23.5	
	comp=Z,6.9nm,0.9s						
KULM	Kulim	60.98	244	P	P	21 39 24.2	+1.1
HRY	Holter Researc	61.07	52	P	P	21 39 24.7	+1.2
PBKI	Pangkalan Bun	61.17	229	P	P	21 39 23.5	-0.8
	comp=Z,4μm,0.8s						
FCC	Fort Churchill	61.35	33	P	P	21 39 25.3	+0.3
FCC				pmax	pmax		
	comp=Z,8.0nm,0.7s						
FCC	Fort Churchill	61.35	33	P	P	21 39 25.3	+0.3
KBL	Kabul	62.03	292	P	P	21 39 29.0	-1.3
KBL				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KBL	Kabul	62.03	292	P	P	21 39 29.0	-1.3
KBL				IAmb	IAmb	21 39 32.6	
	comp=Z,4.1nm,0.7s						
NVAR	Mina Array Bea	62.52	62	P	P	21 39 34.2	+0.7
	comp=Z,1.3nm,0.6s,baz=301,slow=7.3,SNR=10						
NVAR				pP	pP	21 39 43.5	-2.3
	comp=Z,0.6nm,0.5s,baz=304,slow=7.2,SNR=3.6						
NVAR	Mina Array Bea	62.52	62	P	P	21 39 34.5	+0.9
SCO	Scoresbysund	63.09	358	i P	P	21 39 36.5	+0.1
SCO	Scoresbysund	63.09	358	i P	P	21 39 36.5	+0.1
SCO	Scoresbysund	63.09	358	P	P	21 39 35.9	-0.6
SCO				IAmb	IAmb	21 39 38.1	
	comp=Z,3.6nm,0.8s						
SCO	Scoresbysund	63.09	358	i P	P	21 39 36.6	+0.1
MOOW	Moose Ponds	63.54	54	P	P	21 39 41.6	+1.4
FIA1	FINESS Array S	64.06	335	P	P	21 39 42.1	-1.0
FINES	FINESS Array B	64.07	335	P	P	21 39 42.2	-0.8
	comp=Z,8.2nm,0.4s,baz=35,slow=7.4,SNR=79						
FINES	FINESS Array B	64.07	335	P	P	21 39 41.8	-1.2
ICESG	Greenland Ices	64.16	5	i P	P	21 39 43.5	-0.5
ICESG				IAmb	IAmb	21 39 46.7	
	comp=Z,14nm,0.9s						
BKNI	Bangkinang	64.65	241	P	P	21 39 49.3	+1.8
PD31	Pinedale Array	64.84	54	P	P	21 39 49.3	+0.5
PDAR	Pinedale Array	64.84	54	P	P	21 39 49.8	+1.0
	comp=Z,2.7nm,0.8s,baz=291,slow=1.5,SNR=14						
PDAR	Pinedale Array	64.84	54	P	P	21 39 49.3	+0.5
GSI	Gunungsitoli	65.99	244	P	P	21 39 58.2	+1.9
GSI				IAmb	IAmb	21 40 04.3	
	comp=Z,10nm,0.9s						
HRA	Herat	66.41	296	P	P	21 39 58.3	-0.7
GEYT	Alibeck	66.58	301	P	P	21 40 00.2	+0.4
	comp=Z,2.0nm,0.6s,baz=96,slow=3.0,SNR=6.4						
GEYT	Alibeck	66.58	301	P	P	21 39 59.8	0.0
ULM	Lac du Bonnet	66.61	41	P	P	21 40 00.2	+0.5
	comp=Z,3.7nm,0.7s,baz=313,slow=7.2,SNR=6.0						
RSSD	Black Hills	66.92	50	P	P	21 40 02.8	+0.7
RSSD				pmax	pmax		
	comp=Z,5.0nm,0.7s						
RSSD	Black Hills	66.92	50	P	P	21 40 02.8	+0.7
RSSD				IAmb	IAmb	21 40 03.2	
	comp=Z,5.1nm,0.7s						
NC405	NORSAR Array S	68.09	341	P	P	21 40 08.5	-0.4
WB0	Warramunga Arr	68.25	199	P	P	21 40 11.1	+0.8
WB0				IAmb	IAmb	21 40 20.1	
	comp=Z,19nm,1.5s						
NB2	NORSAR Subarra	68.26	341	P	P	21 40 09.3	-0.8
	comp=Z,5.6nm,0.6s,baz=28,slow=6.5						
NOA	NORSAR Array B	68.26	341	P	P	21 40 09.4	-0.7
	comp=Z,8.7nm,0.7s,baz=27,slow=6.4,SNR=26						
WRA	Warramunga Arr	68.43	199	P	P	21 40 11.7	+0.2
	comp=Z,1.8nm,0.9s,baz=8.3,slow=6.7,SNR=4.7						
MNK	Minsk	69.02	329	i P	P	21 40 14.5	-0.3
	comp=E,2.0nm,1.1s						
MNK				i P	P	21 40 14.5	-0.3
	comp=N,7.0nm,1.1s						
MNK				i P	P	21 40 14.5	-0.3
	comp=Z,14nm,0.8s						
MNK				i pP	sP	21 40 35.4	+3.1
MNK				i PP	PP	21 42 50.7	+3.8
MNK				i PPP	PPP	21 44 33.6	
MNK				i S	S	21 49 17.8	+1.9
MNK				i SS	SS	21 53 53.3	+12
MNK				i SSS	SSS	21 56 57.7	
MNK				i LQ	LQ	22 06 22.3	
MNK				i LR	LR	22 11 43.3	
MNK				i LRM	MLR	22 13 48.5	
	comp=E,26nm,18.4s						
MNK				i LRM	MLR	22 13 48.5	
	comp=N,375nm,17.9s						
MNK				i LRM	MLR	22 13 48.5	
	comp=Z,92nm,12.4s						
FITZ	Fitzroy Crossi	69.05	208	P	P	21 40 16.9	+1.6
NACGM	Naroch	69.08	330	i P	P	21 40 12.7	-2.4
NACGM				i P	P	21 40 12.7	-2.4
NACGM				i P	P	21 40 12.7	-2.4
NACGM				i pP	sP	21 40 33.9	+1.1
NACGM				i PP	PP	21 42 43.2	-4.2
NACGM				i PPP	PPP	21 44 28.5	
NACGM				i S	S	21 49 12.2	-4.4
NACGM				i sS	SKiKP	21 50 04.2	+3.0
NACGM				i SS	SS	21 53 34.6	-7.4
NACGM				i SSS	SSS	21 57 52.0	
NACGM				i LQ	LQ	22 05 45.9	
NACGM				i LR	LR	22 10 35.4	
KBZ	Khabaz	70.85	314	P	P	21 40 26.1	-0.1
	comp=Z,3.2nm,0.7s,baz=75,slow=2.4,SNR=8.9						
KBZ	Khabaz	70.85	314	eP	P	21 40 26.1	-0.1
AKASG	Malin Array Be	71.56	326	P	P	21 40 29.4	-0.9
	comp=Z,10nm,0.4s,baz=35,slow=6.2,SNR=54						
AKBB	Malin Array Si	71.56	326	P	P	21 40 29.6	-0.8
AKBB				pmax	pmax		
	comp=Z,13nm,0.7s						
AKBB	Malin Array Si	71.56	326	P	P	21 40 29.6	-0.8
ASAR	Alice Springs	72.13	198	P	P	21 40 36.0	+2.0
	comp=Z,1.7nm,0.7s,baz=11,slow=5.3,SNR=13						
ASAR				pP	pP	21 40 45.6	-0.9
	comp=Z,1.1nm,0.7s,baz=15,slow=5.4,SNR=2.9						
ASAR	Alice Springs	72.13	198	P	P	21 40 35.8	+1.8
GNI	Garni	72.52	310	P	P	21 40 35.9	-0.6
GNI				pmax	pmax		
	comp=Z,14nm,1.5s						
GNI	Garni	72.52	310	P	P	21 40 35.9	-0.6
GNI				IAmb	IAmb	21 40 38.1	
	comp=Z,14nm,1.4s						
PALK	Pallekele	72.62	262	P	P	21 40 37.5	+0.2
PALK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
PALK	Pallekele	72.62	262	P	P	21 40 37.5	+0.2
PALK				IAmb	IAmb	21 40 38.9	
	comp=Z,9.1nm,0.8s						
GKP	Gorka Klasztor	73.53	334	eP	P	21 40 41.8	-0.2
SORM	Soroca	73.96	325	⇓P	P	21 40 43.7	-0.9
MILM	Milestii Mici	74.76	324	⇑P	P	21 40 48.5	-0.8
KWP	Kalwaria Pacla	74.84	329	eP	P	21 40 50.0	+0.3
KWP	Kalwaria Pacla	74.84	329	P	P	21 40 50.1	+0.3
KWP				pmax	pmax		
	comp=Z,29nm,1.1s						
KWP	Kalwaria Pacla	74.84	329	P	P	21 40 50.1	+0.3
OJC	Ojcow	75.34	331	eP	P	21 40 52.8	+0.1
OJC	Ojcow	75.34	331	P	P	21 40 52.4	-0.2
OJC				pmax	pmax		
	comp=Z,15nm,1.2s						
OJC	Ojcow	75.34	331	P	P	21 40 52.4	-0.2
OJC				IAmb	IAmb	21 40 53.2	
	comp=Z,15nm,1.2s						
KOLS	Kolonicke sedl	75.58	329	eP	P	21 40 53.8	-0.3
KOLS	Kolonicke sedl	75.58	329	eP	P	21 40 53.8	-0.3
BUR08	Bucovina Ar. S	75.58	327	P	P	21 40 54.0	-0.2
BURAR	Bucovina Array	75.60	326	⇑P	P	21 40 54.1	-0.2
BURAR	Bucovina Array	75.60	326	P	P	21 40 54.1	-0.2
BIZ	Bicaz	75.82	326	⇓P	P	21 40 55.5	0.0
NIE	Niedzica	75.86	330	eP	P	21 40 55.9	+0.2
KSP	Ksiaz	75.93	333	eP	P	21 40 56.1	+0.1
TESR	Tescani	75.96	325	⇓P	P	21 40 55.5	-0.7
CHVC	Chvalec	76.22	333	eP	P	21 40 57.6	-0.1
DPC	Dobruska-Polom	76.35	333	eP	P	21 40 58.7	+0.3
DPC	Dobruska-Polom	76.35	333	eP	P	21 40 58.7	+0.3
LANS	Liptovska Anna	76.37	331	eP	P	21 40 59.7	+1.1
LANS				pmax	pmax		
	comp=Z,7.0nm,0.9s						
LANS	Liptovska Anna	76.37	331	eP	P	21 40 59.7	+1.1
KRLC	Kraliky	76.44	333	eP	P	21 40 58.9	-0.1
KRLC	Kraliky	76.44	333	eP	P	21 40 58.9	-0.1
MORC	Moravsky Berou	76.46	332	⇑P	P	21 40 59.1	0.0
MORC	Moravsky Berou	76.46	332	eP	P	21 40 58.9	-0.2
MORC	Moravsky Berou	76.46	332	P	P	21 40 58.8	-0.3
MORC				pmax	pmax		
	comp=Z,11nm,1.1s						
MORC	Moravsky Berou	76.46	332	P	P	21 40 58.8	-0.3
MORC				IAmb	IAmb	21 41 00.5	
	comp=Z,11nm,1.1s						
CLL	Collm	76.49	335	⇓iP	P	21 40 58.6	-0.6
	comp=Z,13nm,1.0s						
CLL				epP	pwP	21 41 16.0	+0.7
CLL	Collm	76.49	335	⇓iP	P	21 40 58.6	-0.6
CLL				e*PP	pwP	21 41 16.0	+0.7
CLL				pmax	pmax		
	comp=Z,13nm,1.0s						
CLL	Collm	76.49	335	P	P	21 40 58.6	-0.6
CLL				IAmb	IAmb	21 40 59.4	
	comp=Z,11nm,0.8s						
BRG	Berggiesshubel	76.61	335	eP	P	21 40 59.6	-0.2
BRG				Amp		21 41 01.0	
	comp=Z,3.2nm,1.6s						
OZUR		76.64	325	⇑P	P	21 41 00.4	+0.2
UOSS	Minazif	76.70	292	P	P	21 40 59.9	-0.9
MLR	Muntele Rosu	77.08	325	P	P	21 41 03.1	+0.4
MLR				pmax	pmax		
	comp=Z,13nm,1.0s						
MLR	Muntele Rosu	77.08	325	P	P	21 41 03.1	+0.4
MLR				IAmb	IAmb	21 41 04.7	
	comp=Z,13nm,1.0s						
VYHS	Vyhne	77.15	331	eP	P	21 41 03.0	+0.1
VYHS				pmax	pmax		
	comp=Z,11nm,1.3s						
VYHS	Vyhne	77.15	331	eP	P	21 41 03.0	+0.1
VRAC	Vranov	77.17	332	eP	P	21 41 03.0	-0.1
PRU	Pruhonice	77.21	334	eP	P	21 41 03.6	+0.4
PRU	Pruhonice	77.21	334	eP	P	21 41 03.6	+0.4
JAVC	Velka Javorina	77.22	332	eP	P	21 41 04.2	+0.8
DRGR		77.23	328	⇓P	P	21 41 03.3	-0.3
KRUC	Moravsky	77.45	332	eP	P	21 41 04.3	-0.3
VOIR		77.47	325	⇑P	P	21 41 05.2	+0.3
TX32	Lajitas Array	77.58	60	P	P	21 41 06.7	+0.9
TXAR	Lajitas Array	77.58	60	P	P	21 41 06.7	+0.9
	comp=Z,2.1nm,0.5s,baz=298,slow=4.4,SNR=23						
TXAR				pP	PcP	21 41 15.9	0.0
	comp=Z,2.7nm,0.5s,baz=299,slow=4.4,SNR=12						
TXAR	Lajitas Array	77.58	60	P	P	21 41 06.5	+0.7
SMOL	Smolenice	77.60	332	eP	P	21 41 06.2	+0.8
SMOL				pmax	pmax		
	comp=Z,13nm,1.9s						
SMOL	Smolenice	77.60	332	eP	P	21 41 06.2	+0.8
MODS	Modra-Piesok	77.77	332	eP	P	21 41 06.5	+0.1
MODS				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MODS	Modra-Piesok	77.77	332	eP	P	21 41 06.5	+0.1
SIRR	Siria	78.06	328	⇑P	P	21 41 08.0	-0.1
KHC	Kasperske Hory	78.26	334	eP	P	21 41 09.5	+0.3
KHC	Kasperske Hory	78.26	334	eP	P	21 41 09.5	+0.3
KHC	Kasperske Hory	78.26	334	P	P	21 41 09.1	-0.1
KHC				IAmb	IAmb	21 41 10.2	
	comp=Z,7.1nm,0.9s						
CKRC	Cesky Krumlov	78.32	334	eP	P	21 41 09.3	-0.2
GZR	Gura Zlata	78.38	327	⇓P	P	21 41 09.6	-0.4
BRTR	Keskin Array B	78.39	317	P	P	21 41 09.9	-0.3
	comp=Z,3.2nm,0.8s,baz=84,slow=4.5,SNR=7.6						
BRTR	Keskin Array B	78.39	317	P	P	21 41 10.1	-0.1
BRTR	Keskin Array B	78.39	317	P	P	21 41 10.1	-0.1
GRA1	Grafenberg Arr	78.45	336	P	P	21 41 10.1	0.0
GRA1				IAmb	IAmb	21 41 11.3	
	comp=Z,9.6nm,0.8s						
GRF	Grafenberg Arr	78.45	336	P	P	21 41 10.1	0.0
GRF				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GRFO	Grafenberg	78.45	336	P	P	21 41 10.0	-0.1
GRFO				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GRFO	Grafenberg	78.45	336	P	P	21 41 10.0	-0.1
GRFO				IAmb	IAmb	21 41 11.2	
	comp=Z,9.6nm,0.9s						
GERES	GERESS Array B	78.48	334	P	P	21 41 10.2	-0.2
	comp=Z,1.6nm,0.7s,baz=38,slow=5.5,SNR=16						
GERES	GERESS Array B	78.48	334	P	P	21 41 09.8	-0.6
COPA	Copaceanca	78.49	325	⇓P	P	21 41 09.9	-0.5
CONA	Conrad Observa	78.62	332	i P	P	21 41 11.8	+0.6
	comp=Z,4.7nm,0.9s,SNR=7.9						
BZS	Buzias	78.63	328	⇓P	P	21 41 11.0	-0.2
HERR	Herculane	78.95	327	⇓P	P	21 41 12.4	-0.6
MEM	Membach	78.98	339	dP	P	21 41 13.2	+0.2
MORH	Mrgy, Hungar	79.18	330	⇓P	P	21 41 13.3	-0.8
MOA	Molln	79.19	333	eP	P	21 41 14.4	+0.1
	comp=Z,2.9nm,0.8s						
BCLA	Clavier	79.33	340	dP	P	21 41 14.6	-0.3
BCLA				dPcP	PcP	21 41 24.0	+1.0
BMRD	Maredsous	79.56	340	dP	P	21 41 16.6	+0.4
FRGS	Fruska Gora	79.68	328	⇑P	P	21 41 16.5	-0.4
SOKA	Soboth	79.99	332	i P	P	21 41 19.1	+0.4
	comp=Z,3.9nm,0.8s,SNR=6.8						
MOQ	Mont Orford	80.09	31	P	P	21 41 18.8	-0.5
KBA	Koelnbreinsper	80.16	333	eP	P	21 41 20.0	+0.2
	comp=Z,5.4nm,0.5s						
OBKA	Obir	80.29	332	eP	P	21 41 20.4	+0.1
	comp=Z,1.5nm,0.5s						
BATG	Bathurst New B	80.37	26	P	P	21 41 20.9	+0.2
WATA	Walderalm	80.47	335	i P	P	21 41 21.9	+0.5
	comp=Z,4.7nm,0.5s,SNR=4.8						
BFO	Black Forest	80.48	337	P	P	21 41 20.5	-0.8
BFO				pmax	pmax		
	comp=Z,7.0nm,1.1s						
BFO	Black Forest	80.48	337	P	P	21 41 20.5	-0.8
BFO				IAmb	IAmb	21 41 21.9	
	comp=Z,6.7nm,1.1s						
WTTA	Wattenberg	80.52	334	i P	P	21 41 22.3	+0.6
	comp=Z,5.4nm,0.5s,SNR=11						
DIVS	Divibare	80.53	328	P	P	21 41 21.2	-0.4
DIVS				IAmb	IAmb	21 41 22.2	
	comp=Z,8.7nm,1.1s						
VTS	Vitosha	80.55	325	⇑P	P	21 41 22.1	+0.3
VTS	Vitosha	80.55	325	P	P	21 41 21.8	-0.1
VTS				pmax	pmax		
	comp=Z,14nm,0.9s						
VTS	Vitosha	80.55	325	P	P	21 41 21.8	-0.1
VTS				IAmb	IAmb	21 41 22.8	
	comp=Z,14nm,0.9s						
RETA	Reutte	80.57	335	i P	P	21 41 22.0	+0.2
	comp=Z,2.0nm,0.5s,SNR=4.3						
MOTA	Moosalm	80.60	335	eP	P	21 41 22.4	+0.3
	comp=Z,4.3nm,0.7s						
SQTA	Sankt Quirin	80.68	335	eP	P	21 41 23.2	+0.7
	comp=Z,0.7nm,0.2s						
ECH	Echery	80.90	338	P	P	21 41 23.5	0.0
ECH				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ECH	Echery	80.90	338	P	P	21 41 23.5	0.0
ECH				IAmb	IAmb	21 41 24.0	
	comp=Z,5.2nm,0.9s						
FETA	Feichten	81.00	335	eP	P	21 41 24.9	+0.7
	comp=Z,1.0nm,0.5s						
DAVA	Damuels	81.00	336	eP	P	21 41 25.1	+0.9
	comp=Z,1.3nm,0.5s						
MURB	Monte Urbino	83.84	332	P	P	21 41 39.6	+0.7
OSSC	Osservatorio P	84.01	333	P	P	21 41 39.2	-0.6
OSSC				IAmb	IAmb	21 41 39.9	
	comp=Z,5.6nm,0.9s						
NRCA	Norcia	84.03	332	P	P	21 41 39.7	-0.2
NRCA				IAmb	IAmb	21 41 44.0	
	comp=Z,12nm,1.1s						
RAYN	Ar Rayn	84.39	298	P	P	21 41 42.1	0.0
RAYN				pmax	pmax		
	comp=Z,6.0nm,1.2s						
RAYN	Ar Rayn	84.39	298	P	P	21 41 42.1	0.0
RAYN				IAmb	IAmb	21 41 46.1	
	comp=Z,6.0nm,1.2s						
ITM	Ithomi	85.69	323	P	P	21 41 47.2	-1.2
ESDC	Sonseca Array	91.59	342	P	P	21 42 15.1	-1.2
	comp=Z,0.8nm,0.9s,baz=5.7,slow=4.6,SNR=5.7						
H03N2	Juan Fernandez	138.82	90	T	T	00 23 49.3	
	baz=308,slow=77,SNR=22						
H03N1	Juan Fernandez	138.84	90	T	T	00 24 00.0	
	baz=308,slow=77,SNR=25						
H03N3	Juan Fernandez	138.84	90	T	T	00 24 08.1	
	baz=308,slow=77,SNR=21						
BDFB	Brasilia	144.43	36	PKP	PKPab	21 48 44.0	-0.2
	comp=Z,1.6nm,0.4s,baz=301,slow=6.4,SNR=6.2						
BDFB	Brasilia	144.43	36	PKIKP	PKPab	21 48 44.0	-0.2
PLCA	Paso Flores	148.27	95	PKPbc	PKiKP	21 48 56.1	-0.6
	comp=Z,3.0nm,0.9s,baz=240,slow=8.2,SNR=5.9						
CPUP	Villa Florida	148.56	60	PKPbc	PKPbc	21 48 56.4	+0.2
	comp=Z,2.5nm,0.6s,baz=261,slow=4.0,SNR=5.6						
SNAA	Sanae	152.47	196	PKPab	PKiKP	21 49 04.6	+0.1

IDC **11** *21:29:22.5±0.5, 65°.55S×179°.52W, h0^{km}, mb4.7/9, mb1 4.8/10, mb1mx4.7/16, mbtmp4.7/10, ML4.1/1, MS5.3/17, Ms1 5.3/17, ms1mx5.3/19, Error ellipse: s-maj=29.1km s-min=16.2km az=43.0*

NEIC **11** *21:29:24.6±1.5, 65°.60S±0°.10×179°.6W±0°.3, h10^{km}±1^{km}, mb5.5/65, Ms_20 5.6/447, Mwb5.8/6, Mwc5.8(GCMT), Error ellipse: s-maj=21.4km s-min=15.2km az=62.0*

MOS **11** *21:29:25.5±1.7, 65°.65S×179°.71W, h21^{km}, MS5.4/13, Error ellipse: s-maj=34.5km s-min=10.8km az=96.6*

NEIC **11** *21:29:26.8, 65°.66S×179°.66W, h14^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.39; $M_{\theta\theta}$6.01; $M_{\phi\phi}$-7.41; $M_{r\theta}$-0.15; $M_{\theta\phi}$-2.81; $M_{\phi r}$-0.22; Fault plane solution: $M_0$7.38000×10^{17} NP1:ϕ_s56.37000°, δ89.75000°, λ-178.18000°. NP2:ϕ_s326.36000°, δ88.18000°, λ-0.25000°. Principal axes: T 6.5793, Plg1.0000°, Azm191.0000°; N 1.3981, Plg88.0000°, Azm64.0000°; P -7.9774, Plg1.0000°, Azm281.0000°;*

GCMT **11** *21:29:27.6±0.1, 65°.48S±0°.01×179°.65W±0°.02, h12^{km}, MW5.8/152, Moment Tensor Solution. s69,c87; s152,c306; Duration: 2^{s}0 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.02±.09; $M_{\theta\theta}$4.55±.07; $M_{\phi\phi}$-4.54±.07; $M_{r\theta}$-4.88±.23; $M_{\theta\phi}$-0.85±.07; $M_{\phi r}$1.97±.25; Best double* couple: $M_0 6.66300\times10^{17}$ NP1:ϕ_s223.00000°,δ45.00000°, λ175.00000°. NP2:ϕ_s316.00000°,δ86.00000°,λ45.00000°. Principal axes: T 7.9110, Plg33.0000°, Azm190.0000°; N -2.5030, Plg45.0000°, Azm320.0000°; P -5.4140, Plg27.0000°, Azm81.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function

NEIC ***11*** *21:29:28, 65.°49S×179.°81W, h12km, Moment Tensor Solution. Moment tensor: Scale* 10^{17}*Nm;* M_{rr}*0.13;* $M_{\theta\theta}$*4.86;* $M_{\phi\phi}$*-5.00;* $M_{r\theta}$*-5.09;* $M_{\theta\phi}$*-1.01;* $M_{\phi r}$*2.40; Fault plane solution:* $M_0 7.55000\times10^{17}$ *NP1:*ϕ_s*224.00000°,* δ*45.00000°,*λ*174.00000°. NP2:*ϕ_s*318.00000°,*δ*86.00000°,* λ*45.00000°. Principal axes: T 8.4569, Plg33.0000°, Azm191.0000°; N -2.3932, Plg45.0000°, Azm322.0000°; P -6.0636, Plg27.0000°, Azm82.0000°;*

ISC 11 21:29:24.8±0.3**, 65.°61S**±0.°05×**179.°51W**±0.°07**, h10km, n441,** σ1.s**31**/201**, mb5.4**/44**, MS5.6**/246**, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SBA	Scott Base	12.97	193	P	Pn	21 32 29.1	+0.4
SBA	Scott Base	12.97	193		Pn	21 32 29.1	+0.4
VNDA	Vanda	13.22	198	Pn	Pn	21 32 31.7	-0.4
	0.9nm,0.3s,baz=55,slow=19,SNR=30						
VNDA				Sn	Sn	21 34 54.4	-4.5
	0.3nm,0.3s,baz=41,slow=13,SNR=1.2						
VNDA				LR	LR	21 36 34.6	
	comp=Z,21µm,20.5s,baz=30,slow=32						
VNDA	Vanda	13.22	198	P	Pn	21 32 31.2	-0.9
VNDA	Vanda	13.22	198	Pn	Pn	21 32 31.2	-0.9
WHZ	Wether Hill Ro	20.91	335	P	Pn	21 34 08.3	-1.2
ODZ	Otahua Downs	21.31	341	IAMs_20	IAMs_20	21 40 41.2	
	comp=Z,21µm,18.0s						
DCZ	Deep Cove	21.46	334	P	P	21 34 13.2	+0.3
WKZ	Wanaka	21.76	338	IAMs_20	IAMs_20	21 40 27.2	
	comp=Z,19µm,21.0s						
LBZ	Lake Benmore	22.02	340	IAMs_20	IAMs_20	21 41 23.0	
	comp=Z,18µm,19.0s						
RPZ	Rata Peaks	22.56	342	P	P	21 34 24.1	-0.6
	comp=Z,21nm,1.0s,baz=162,slow=10,SNR=5.9						
RPZ				LR	LR	21 40 58.8	
	comp=Z,16µm,21.6s,baz=165,slow=31						
RPZ	Rata Peaks	22.56	342	P	P	21 34 24.2	-0.5
RPZ				IAmb	IAmb	21 34 31.5	
	comp=Z,263nm,1.9s						
RPZ				IAMs_20	IAMs_20	21 40 47.3	
	comp=Z,17µm,21.0s						
OXZ	Oxford	22.82	344	P	P	21 34 27.6	0.0
FOZ	Fox Glacier	22.91	340	IAMs_20	IAMs_20	21 41 41.5	
	comp=Z,24µm,20.0s						
LTZ	Lake Taylor	23.33	345	IAMs_20	IAMs_20	21 40 57.8	
	comp=Z,17µm,22.0s						
KHZ	Kahutara	23.57	347	IAMs_20	IAMs_20	21 41 53.0	
	comp=Z,18µm,20.0s						
THZ	Tophouse	24.27	346	P	P	21 34 42.6	+0.7
THZ				IAMs_20	IAMs_20	21 41 58.8	
	comp=Z,19µm,20.0s						
MSWZ	Moikau Station	24.42	350	P	P	21 34 43.8	+0.6
BHW	Baring Head	24.45	350	P	P	21 34 43.6	+0.2
QSPA	South Pole Qui	24.48	180	P	P	21 34 44.5	+0.8
QSPA				IAmb	IAmb	21 34 59.3	
	comp=Z,273nm,1.6s						
QSPA	South Pole Qui	24.48	180	IAMs_20	IAMs_20	21 43 07.2	
	comp=Z,26µm,20.0s						
TUWZ	Tuamarina	24.51	348	P	P	21 34 43.1	-0.8
SNZO	South Karori	24.56	349	P	P	21 34 43.2	-1.2
NNZ	Nelson	24.77	347	IAMs_20	IAMs_20	21 42 33.9	
	comp=Z,15µm,18.0s						
BFZ	Birch Farm	25.09	352	P	P	21 34 49.7	+0.5
BFZ				IAmb	IAmb	21 34 55.9	
	comp=Z,262nm,1.7s						
BFZ				IAMs_20	IAMs_20	21 43 11.4	
	comp=Z,13µm,18.0s						
QRZ	Quartz Range	25.24	346	IAMs_20	IAMs_20	21 42 39.3	
	comp=Z,17µm,20.0s						
BKZ	Black Stump Fm	26.59	353	P	P	21 35 03.8	+0.9
CASY	Casey	27.19	236	P	P	21 35 08.1	+0.2
CASY				IAmb	IAmb	21 35 12.8	
	comp=Z,71nm,1.1s						
URZ	Urewera	27.46	354	LR	LR	21 44 04.1	
	comp=Z,17µm,20.5s,baz=206,slow=32						
URZ	Urewera	27.46	354	IAMs_20	IAMs_20	21 43 41.8	
	comp=Z,17µm,20.0s						
MXZ	Matakaoa Point	28.12	356	IAMs_20	IAMs_20	21 43 48.1	
	comp=Z,12µm,20.0s						
OUZ	Omahuta	30.70	349	IAMs_20	IAMs_20	21 46 54.9	
	comp=Z,13µm,18.0s						
BELA	Belgrano 2	35.18	168	P	P	21 36 19.9	+1.8
RAO	Raoul Island	36.39	2	LR	LR	21 47 52.4	
	comp=Z,4µm,21.9s,baz=152,slow=31						
MAW	Mawson	39.96	212	LR	LR	21 53 15.0	
	comp=Z,10µm,20.8s,baz=143,slow=36						
STKA	Stephens Creek	41.14	306	P	P	21 37 08.0	-0.8
	comp=Z,14nm,1.1s,baz=147,slow=11,SNR=8.2						
STKA				LR	LR	21 51 08.8	
	comp=Z,3µm,19.2s,baz=162,slow=32						
STKA	Stephens Creek	41.14	306	*i* P	P	21 37 09.1	+0.3
STKA	Stephens Creek	41.14	306	P	P	21 37 08.2	-0.6
BBOO	Buckleboo	42.24	299	P	P	21 37 17.5	-0.3
SNAA	Sanae	42.96	178	P	P	21 37 24.8	+1.5
SNAA	Sanae	42.96	178	P	P	21 37 23.5	+0.2
SNAA				pmax	pmax		
	comp=Z,129nm,2.0s						
SNAA				MLR	MLR		
	comp=Z,10µm,19.0s						
SNAA	Sanae	42.96	178	P	P	21 37 23.4	+0.2
SNAA				IAmb	IAmb	21 37 27.1	
	comp=Z,129nm,2.0s						
SNAA				IAMs_20	IAMs_20	21 54 38.5	
	comp=Z,10µm,19.0s						
VNA3	Neumayer Olymp	43.23	175	P	P	21 37 26.5	+1.1
VNA2	Neumayer--Watz	43.62	176	P	P	21 37 30.0	+1.4
	baz=163,slow=9.6						
VNA1	Neumayer--Stat	43.87	176	P	P	21 37 32.2	+1.7
ONTNC	Ouen Toro	44.24	341	P	P	21 37 33.8	-0.2
EIDS	Eidsvold	44.37	321		P	21 37 34.8	-0.1
EIDS				IAmb	IAmb	21 37 37.0	
	comp=Z,50nm,1.2s						
DZM	Mont Dzumac	44.48	341	*e*P	P	21 37 34.7	-1.3
	comp=Z,75nm,1.3s						
DZM	Mont Dzumac	44.48	341	*e*LQ	LQ	21 48 01.3	
	comp=Z,9µm,30.9s						
DZM				*e*LR	LR	21 49 58.4	
	comp=Z,14µm,23.4s						
DZM	Mont Dzumac	44.48	341	P	P	21 37 35.1	-0.8
DZM				IAmb	IAmb	21 37 51.3	
	comp=Z,67nm,1.5s						
DZM				IAMs_20	IAMs_20	21 53 28.7	
	comp=Z,9µm,20.0s						
RAR	Rarotonga	46.22	26	LR	LR	21 52 53.4	
	comp=Z,5µm,19.1s,baz=182,slow=31						
RAR	Rarotonga	46.22	26	IAMs_20	IAMs_20	21 52 32.1	
	comp=Z,7µm,19.0s						
KOUNC	Koumac, New Ca	46.28	339	P	P	21 37 49.9	-0.2
TBI	Tubuai	46.46	39	*e*S	S	21 44 37.0	-2.3
	comp=Z,843nm,26.2s						
TBI				*e*LQ	LQ	21 48 29.0	
	comp=Z,9µm,29.2s						
TBI				*e*LR	LR	21 50 37.5	
	comp=Z,9µm,28.8s,baz=199						
TBI	Tubuai	46.46	39	*e*T	T	22 27 23.4	
	comp=Z,126nm,0.3s						
FORT	Forrest	47.07	291	P	P	21 37 55.7	-0.6
FORT				IAMs_20	IAMs_20	21 53 16.5	
	comp=Z,5µm,20.0s						
MSVF	Nonsavu	47.87	357	LR	LR	21 54 39.3	
	comp=Z,2µm,20.8s,baz=196,slow=32						
MSVF	Nonsavu	47.87	357	*i* P	P	21 38 02.7	0.0
MSVF				pmax	pmax		
	comp=Z,20nm,1.5s						
MSVF	Nonsavu	47.87	357	IAMs_20	IAMs_20	21 56 19.4	
	comp=Z,4µm,18.0s						
H01W1	Cape Leeuwin H	49.08	275	T	T	22 31 18.0	
	baz=149,slow=76,SNR=441						
H01W2	Cape Leeuwin H	49.08	275	T	T	22 31 20.3	
	baz=149,slow=76,SNR=486						
H01W3	Cape Leeuwin H	49.09	275	T	T	22 31 23.0	
	baz=149,slow=76,SNR=470						
GO09	Cerro Castillo	50.89	129	P	P	21 38 26.2	+0.8
SANVU	Saraoutou	50.91	343	P	P	21 38 25.3	-0.5
SANVU				IAMs_20	IAMs_20	21 57 24.2	
	comp=Z,5µm,20.0s						
SANVU	Saraoutou	50.91	343	P	P	21 38 26.9	+1.1
RKT	Rikitea	51.12	56	*e*S	S	21 45 45.8	+0.8
	comp=Z,2µm,29.0s						
RKT				*e*LQ	LQ	21 50 22.8	
	comp=Z,4µm,26.8s						
RKT				*e*LR	LR	21 53 05.5	
	comp=Z,2µm,26.2s						
ASAR	Alice Springs	51.33	301	P	P	21 38 27.7	-1.3
	comp=Z,16nm,0.9s,baz=156,slow=7.5,SNR=54						
ASAR				LR	LR	21 57 52.4	
	comp=Z,2µm,18.5s,baz=151,slow=33						
ASAR	Alice Springs	51.33	301	P	P	21 38 28.6	-0.4
ASAR	Alice Springs	51.33	301	P	P	21 38 28.6	-0.4
AS31	Alice Springs	51.33	301	P	P	21 38 28.3	-0.8
TVO	Taravao	51.84	38	*e*T	T	22 34 05.0	
	comp=Z,23nm,0.3s						
PAE	Paea	51.87	37	*e*T	T	22 34 09.2	
	comp=Z,6.7nm,0.3s						
PPT2	Papeete2	51.94	37	*e*S	S	21 45 54.2	-2.3
	comp=Z,1µm,25.5s						
PPT2				*e*LQ	LQ	21 50 48.0	
	comp=Z,5µm,23.0s						
PPT2				*e*LR	LR	21 53 18.0	
	comp=Z,8µm,25.8s,baz=195						
PPT2	Papeete2	51.94	37	*e*T	T	22 34 05.8	
	comp=Z,22nm,0.3s						
PPT	Papeete	51.96	37	LR	LR	21 54 13.3	
	comp=Z,3µm,20.8s,baz=198,slow=29						
TIAR	Tiarei	52.03	37	*e*T	T	22 34 14.8	
	comp=Z,12nm,0.3s						
MEH	Mehetia	52.05	39	*e*T	T	22 34 22.3	
	comp=Z,22nm,0.2s						
MORW	Morawa	53.38	280	P	P	21 38 45.3	+1.2
MORW				IAmb	IAmb	21 39 02.3	
	comp=Z,76nm,1.7s						
MORW				IAMs_20	IAMs_20	21 56 39.2	
	comp=Z,7µm,19.0s						
WR0	Warramunga Arr	54.53	304	P	P	21 38 51.5	-1.1
WR0				IAmb	IAmb	21 38 53.7	
	comp=Z,46nm,1.1s						
WB2	Warramunga Arr	54.61	304	P	P	21 38 51.5	-1.7
WB2				IAmb	IAmb	21 39 01.2	
	comp=Z,53nm,1.4s						
WRA	Warramunga Arr	54.61	304	P	P	21 38 51.5	-1.8
	comp=Z,20nm,1.1s,baz=158,slow=6.5,SNR=49						
WRA				LR	LR	21 59 23.9	
	comp=Z,4µm,20.1s,baz=155,slow=33						
WRAB	Tennant Creek	54.62	304	P	P	21 38 51.6	-1.7
WRAB				pmax	pmax		
	comp=Z,61nm,1.5s						
WRAB				MLR	MLR		
	comp=Z,4µm,20.0s						
WRAB	Tennant Creek	54.62	304	P	P	21 38 51.6	-1.7
WRAB				IAmb	IAmb	21 39 07.9	
	comp=Z,61nm,1.5s						
WRAB	Tennant Creek	54.62	304	IAMs_20	IAMs_20	21 58 51.2	
	comp=Z,4µm,20.0s						
VAH	Vaihoa	54.69	39	*e*T	T	22 37 39.6	
	comp=Z,222nm,0.3s						
WB0	Warramunga Arr	54.76	304	P	P	21 38 52.8	-1.5
EFI	East Falkland	54.77	139	P	P	21 38 54.5	+0.5
EFI				pmax	pmax		
	comp=Z,117nm,1.2s						
EFI	East Falkland	54.77	139	P	P	21 38 54.5	+0.5
COEN	Coen	57.41	316	P	P	21 39 13.1	-0.2
RPN	Rapa Nui	57.45	84	LR	LR	21 58 11.3	
	comp=Z,4µm,19.7s,baz=216,slow=30						
RPN	Rapa Nui	57.45	84	IAMs_20	IAMs_20	21 58 33.8	
	comp=Z,6µm,18.0s						
GO07	Milladeo Hill,	57.56	123	IAMs_20	IAMs_20	21 57 50.3	
	comp=Z,4µm,20.0s						
HNR	Honiara	57.87	336	P	P	21 39 15.6	-0.9
HNR				pmax	pmax		
	comp=Z,143nm,1.1s						
HNR				MLR	MLR		
	comp=Z,3µm,20.0s						
HNR	Honiara	57.87	336	P	P	21 39 15.6	-0.9
PSA00	Pilbara Seismi	58.53	288	P	P	21 39 20.4	-0.7
PSA00	Pilbara Seismi	58.53	288	P	P	21 39 20.1	-1.0
PSA00				IAmb	IAmb	21 39 24.2	
	comp=Z,96nm,1.9s						
PSA00				IAMs_20	IAMs_20	21 59 33.0	
	comp=Z,10µm,21.0s						
LL01	San Ignacio de	58.64	124	P	P	21 39 22.3	+0.7
LL01				IAmb	IAmb	21 39 31.4	
	comp=Z,38nm,1.2s						
FITZ	Fitzroy Crossi	59.45	295	P	P	21 39 26.6	-0.9
FITZ				IAmb	IAmb	21 39 43.0	
	comp=Z,75nm,1.6s						
FITZ				IAMs_20	IAMs_20	22 01 32.6	
	comp=Z,3µm,21.0s						
GIRL	Giralia	59.82	282	IAMs_20	IAMs_20	22 00 08.9	
	comp=Z,6µm,20.0s						
PMG	Port Moresby	60.66	322	P	P	21 39 36.2	+0.5
PMG				pmax	pmax		
	comp=Z,59nm,1.4s						
PMG				MLR	MLR		
	comp=Z,2µm,21.0s						
PMG	Port Moresby	60.66	322	P	P	21 39 36.2	+0.5
PMG				IAmb	IAmb	21 39 45.1	
	comp=Z,59nm,1.4s						
PLCA	Paso Flores	60.74	125	P	P	21 39 36.4	+0.2
	comp=Z,7.8nm,0.9s,baz=232,slow=9.4,SNR=6.0						
PLCA				LR	LR	22 00 31.3	
	comp=Z,1µm,18.4s,baz=210,slow=31						
PLCA	Paso Flores	60.74	125	P	P	21 39 36.8	+0.6
PLCA				pmax	pmax		
	comp=Z,84nm,1.8s						
PLCA	Paso Flores	60.74	125	P	P	21 39 36.8	+0.6
PLCA				IAmb	IAmb	21 39 51.0	
	comp=Z,84nm,1.8s						
LC01	Cunco	61.92	123	P	P	21 39 43.9	-0.2
LC01				IAmb	IAmb	21 39 53.5	
	comp=Z,65nm,1.6s						
MTN	Manton Dam	62.31	303	P	P	21 39 45.7	-1.2
MTN				IAmb	IAmb	21 39 48.3	
	comp=Z,66nm,1.7s						
MTN				IAMs_20	IAMs_20	22 04 24.8	
	comp=Z,3µm,19.0s						
H03S2	Juan Fernandez	63.85	114	T	T	22 50 00.1	
	baz=205,slow=74,SNR=21						
H03S1	Juan Fernandez	63.85	114	T	T	22 49 55.2	
	baz=205,slow=74,SNR=22						
H03S3	Juan Fernandez	63.87	114	T	T	22 50 00.4	
	baz=205,slow=74,SNR=24						
BI02	San Fabin de	64.13	122	P	P	21 39 58.7	-0.2
BI02				IAmb	IAmb	21 40 09.5	
	comp=Z,36nm,1.2s						
BO02	Sierra Bellavi	65.98	121	P	P	21 40 11.0	0.0
SAUI	Saumlaki	66.78	305	IAMs_20	IAMs_20	22 05 48.5	
	comp=Z,4µm,19.0s						
MT02	Curacav	67.24	120	P	P	21 40 19.0	+0.1
PEL	Peldehue	67.50	121	P	P	21 40 20.7	0.0
PEL				pmax	pmax		
	comp=Z,119nm,1.8s						
PEL	Peldehue	67.50	121	P	P	21 40 20.7	0.0
SOEI	Soe	67.62	298	P	P	21 40 21.3	-0.3
SOEI				IAMs_20	IAMs_20	22 08 53.3	
	comp=Z,5µm,19.0s						
VA03	San Esteban	67.90	121	P	P	21 40 23.3	+0.1
VA03				IAmb	IAmb	21 40 27.7	
	comp=Z,28nm,0.9s						
CO02	Combarbal	69.14	120	P	P	21 40 31.0	-0.1
CO02				IAmb	IAmb	21 40 35.9	
	comp=Z,60nm,1.2s						
MMRI	Maumere	69.41	296	P	P	21 40 32.8	+0.2
CO03	El Pedregal	69.59	120	P	P	21 40 33.4	-0.3
CO03				IAmb	IAmb	21 40 41.3	
	comp=Z,62nm,1.4s						
ZON	Zonda	69.66	122	P	P	21 40 34.3	+0.1
ZON				pmax	pmax		
	comp=Z,93nm,1.7s						
ZON	Zonda	69.66	122	P	P	21 40 34.3	+0.1
ZON				IAmb	IAmb	21 40 43.8	
	comp=Z,93nm,1.7s						
CO01	Juntas del Tor	70.58	120	P	P	21 40 39.5	-0.6
LCO	Las Campanas	71.24	119	P	P	21 40 44.0	-0.1
LCO				pmax	pmax		
	comp=Z,33nm,1.2s						
LCO	Las Campanas	71.24	119	P	P	21 40 44.0	-0.1
LCO				IAmb	IAmb	21 40 54.4	
	comp=Z,33nm,1.1s						
AC05	El Transito	71.55	119	P	P	21 40 45.9	+0.1
JAGI	Jajag, Banyuwa	72.66	288	IAMs_20	IAMs_20	22 08 21.5	
	comp=Z,3µm,20.0s						
GO03	Copiap	72.69	119	P	P	21 40 52.7	+0.1
GO03				IAmb	IAmb	21 41 02.4	
	comp=Z,64nm,1.4s						
KAPI	Kappang	73.67	295	IAMs_20	IAMs_20	22 09 54.5	
	comp=Z,3µm,20.0s						
AC01	Pan de Azucar	73.87	118	P	P	21 40 59.6	+0.1
AC01				IAmb	IAmb	21 41 06.5	
	comp=Z,115nm,1.8s						
UGM	Wanagama	74.61	285	IAMs_20	IAMs_20	22 09 46.0	
	comp=Z,3µm,19.0s						
GO02	Mina Guanaco	75.14	118	P	P	21 41 07.0	-0.3
GO02				IAmb	IAmb	21 42 38.9	
	comp=Z,33nm,0.6s						
PB14	IPOC Station P	75.33	117	P	P	21 41 08.1	-0.3
SMRI	Semarang	75.43	285	IAMs_20	IAMs_20	22 07 49.7	
	comp=Z,4µm,22.0s						
PB15	IPOC Station P	76.97	117	P	P	21 41 17.2	-0.3
BKB	Balikpapan	78.20	294	IAMs_20	IAMs_20	22 15 36.1	
	comp=Z,2µm,18.0s						
CPUP	Villa Florida	78.30	129	P	P	21 41 23.6	-1.1
	comp=Z,3.9nm,0.8s,baz=206,slow=5.9,SNR=11						
CPUP				LR	LR	22 13 13.6	
	comp=Z,805nm,19.2s,baz=202,slow=34						
CPUP	Villa Florida	78.30	129	P	P	21 41 24.5	-0.2
CPUP				pmax	pmax		
	comp=Z,119nm,2.0s						
CPUP	Villa Florida	78.30	129	P	P	21 41 24.5	-0.2
CPUP				IAmb	IAmb	21 41 34.3	
	comp=Z,119nm,1.9s						
TOLI2	Tolitoli	78.94	298	IAMs_20	IAMs_20	22 17 30.3	
	comp=Z,2µm,19.0s						
AP01	Chacalluta	81.06	115	IAMs_20	IAMs_20	22 08 24.8	
	comp=Z,2µm,20.0s						
SBUM	Sibu	83.40	291	P	P	21 41 51.9	-0.1
SBUM				IAmb	IAmb	21 41 59.5	
	comp=Z,38nm,1.5s						
LPAZ	La Paz	83.79	116	P	P	21 41 54.0	-0.7
	comp=Z,9.5nm,0.9s,baz=200,slow=5.8,SNR=20						
LPAZ				LR	LR	22 10 08.9	
	comp=Z,1µm,21.5s,baz=200,slow=29						
LPAZ	La Paz	83.79	116	P	P	21 41 54.5	-0.3
LPAZ				pmax	pmax		
	comp=Z,65nm,1.7s						
LPAZ	La Paz	83.79	116	P	P	21 41 54.5	-0.3
LPAZ				IAmb	IAmb	21 42 05.1	
	comp=Z,65nm,1.7s						
BOSA	Boshof	84.15	202	P	P	21 41 56.8	+0.9
	comp=Z,1.8nm,0.9s,baz=165,slow=12,SNR=1.4						
BOSA				LR	LR	22 17 06.1	
	comp=Z,4µm,19.4s,baz=172,slow=34						
BOSA	Boshof	84.15	202	P	P	21 41 56.2	+0.3
BOSA				pmax	pmax		
	comp=Z,25nm,1.4s						
BOSA	Boshof	84.15	202	P	P	21 41 56.2	+0.3
NNA	Nana	84.34	106	*i* P	P	21 41 56.7	-0.2
NNA				pmax	pmax		
	comp=Z,27nm,1.1s						
KKM	Kota Kinabalu	85.17	296	IAMs_20	IAMs_20	22 18 57.5	
	comp=Z,2µm,20.0s						
MYKOM	Kota Tinggi	86.12	283	P	P	21 42 06.4	+0.7
LBTB	Lobatse	87.63	203	P	P	21 42 13.3	+0.1
LBTB				pmax	pmax		
	comp=Z,88nm,2.0s						
LBTB	Lobatse	87.63	203	P	P	21 42 13.3	+0.1
GSI	Gunungsitoli	88.24	277	P	P	21 42 15.8	-0.2
GSI				IAmb	IAmb	21 42 24.1	
	comp=Z,34nm,1.4s						
ABPO	Ambohimpanom	88.55	224	IAMs_20	IAMs_20	22 19 20.4	
	comp=Z,3µm,20.0s						
RPSI	Rantau Prapat	88.95	279	P	P	21 42 20.2	+0.9
RPSI				IAmb	IAmb	21 42 24.7	
	comp=Z,44nm,2.0s						
PSI	Prapat	89.04	279	P	P	21 42 20.3	+0.4
PSI				pmax	pmax		
	comp=Z,44nm,2.0s						
PSI				MLR	MLR		
	comp=Z,2µm,21.0s						
H08S2	Diego Garcia H	90.40	251	T	T	23 23 28.2	
	baz=153,slow=76,SNR=3.4						
H08S3	Diego Garcia H	90.42	251	T	T	23 23 29.4	
	baz=151,slow=76,SNR=24						
KULM	Kulim	90.59	281	P	P	21 42 26.4	-0.6
KULM				IAMs_20	IAMs_20	22 19 07.7	
	comp=Z,2µm,20.0s						
BDFB	Brasilia	91.22	134	P	P	21 42 29.4	-0.7
	comp=Z,3.2nm,0.6s,baz=182,slow=2.6,SNR=5.9						
BDFB				LR	LR	22 22 00.6	
	comp=Z,449nm,18.2s,baz=183,slow=35						
BDFB	Brasilia	91.22	134	P	P	21 42 29.3	-0.8
BDFB				pmax	pmax		
	comp=Z,28nm,1.6s						
BDFB	Brasilia	91.22	134	P	P	21 42 29.3	-0.8
BDFB				IAmb	IAmb	21 42 51.8	
	comp=Z,28nm,1.6s						
SAML	Samuel	92.37	118	P	P	21 42 36.1	+0.8
SAML				pmax	pmax		
	comp=Z,12nm,1.2s						
SAML				MLR	MLR		
	comp=Z,800nm,19.0s						
SAML	Samuel	92.37	118	P	P	21 42 36.1	+0.8
DLV	T Lat	93.53	291	IAMs_20	IAMs_20	22 20 54.8	
	comp=Z,2µm,21.0s						
QIZ	Qiongzhong	99.48	295	P	Pdif	21 43 08.2	+0.8
QIZ	Qiongzhong	99.48	295	S	S	21 54 29.1	-11
QIZ	Qiongzhong	99.48	295	SS	SS	22 01 33.7	+3.5
QIZ				LR	LR		
	comp=N,450nm,29.6s						
QIZ				LR	LR		
	comp=E,360nm,21.6s						
QIZ				LR	LR		
	comp=Z,730nm,24.2s						
PBA	Port Blair	99.59	277	IAMs_20	IAMs_20	22 25 18.6	
	comp=Z,2µm,19.0s						
PALK	Pallekele	100.63	264	IAMs_20	IAMs_20	22 20 15.2	
	comp=Z,2µm,20.0s						
ROSC	El Rosal	100.64	102	IAMs_20	IAMs_20	22 21 32.3	
	comp=Z,2µm,20.0s						
JTS	Las Juntas de	101.18	90	IAMs_20	IAMs_20	22 18 40.7	
	comp=Z,2µm,21.0s						
HDC	Heredia	101.27	91	IAMs_20	IAMs_20	22 19 02.1	
	comp=Z,3µm,22.0s						
BCIP	Isla Barro Col	102.29	95	IAMs_20	IAMs_20	22 19 20.0	
	comp=Z,2µm,21.0s						
PETF	Flores	105.11	83	IAMs_20	IAMs_20	22 21 45.8	
	comp=Z,1µm,21.0s						
SPX	San Pedro Mart	108.10	54	IAMs_20	IAMs_20	22 29 56.3	
	comp=Z,1µm,19.0s						
SFX	San Felipe	108.31	55	IAMs_20	IAMs_20	22 26 57.7	
	comp=Z,1µm,22.0s						
ESJX	Sierra Juarez	108.83	53	IAMs_20	IAMs_20	22 22 46.3	
	comp=Z,1µm,19.0s						
TJX	Tijuana	108.92	52	IAMs_20	IAMs_20	22 23 25.9	
	comp=Z,1µm,19.0s						
TKX	Tecate	109.13	53	IAMs_20	IAMs_20	22 31 13.2	
	comp=Z,2µm,19.0s						
UABX	UABC, Campus M	109.57	54	IAMs_20	IAMs_20	22 22 29.0	
	comp=Z,1µm,18.0s						
214A	Organ Pipe Nat	109.85	56	IAMs_20	IAMs_20	22 25 58.4	
	comp=Z,1µm,18.0s						
PASC	Pasadena Art C	110.08	51	IAMs_20	IAMs_20	22 28 49.6	
	comp=Z,1µm,19.0s						
PFO	Pinyon Flats O	110.13	52	IAMs_20	IAMs_20	22 23 09.9	
	comp=Z,2µm,20.0s						
XPFO	Pion Flat	110.13	52	IAMs_20	IAMs_20	22 23 08.9	
	comp=Z,2µm,19.0s						
GLA	Glamis	110.16	54	IAMs_20	IAMs_20	22 28 59.7	
	comp=Z,1µm,18.0s						
MWC	Mount Wilson	110.17	51	IAMs_20	IAMs_20	22 24 00.9	
	comp=Z,2µm,20.0s						
113A	Mohawk Valley,	110.26	55	IAMs_20	IAMs_20	22 31 43.3	
	comp=Z,1µm,18.0s						
OSI	Osito Audit: C	110.32	50	IAMs_20	IAMs_20	22 26 01.8	
	comp=Z,1µm,19.0s						
319A	Douglas	110.56	59	IAMs_20	IAMs_20	22 33 08.2	
	comp=Z,1µm,19.0s						
PMPB	Monarch Peak	111.14	48	IAMs_20	IAMs_20	22 22 51.6	
	comp=Z,1µm,21.0s						
ISA	Isabella, Lake	111.36	50	IAMs_20	IAMs_20	22 25 30.4	
	comp=Z,1µm,20.0s						
MTDJ	Mount Denham	111.39	93	IAMs_20	IAMs_20	22 25 57.2	
	comp=Z,1µm,18.0s						
KVTX	Kingsville	111.39	71	IAMs_20	IAMs_20	22 29 16.3	
	comp=Z,2µm,18.0s						
SAO	San Andreas Ge	111.45	47	IAMs_20	IAMs_20	22 39 04.7	
	comp=Z,2µm,19.0s						
GSC	Goldstone, Bar	111.57	51	IAMs_20	IAMs_20	22 23 36.8	
	comp=Z,1µm,22.0s						
EPT	El Paso	111.92	61	IAMs_20	IAMs_20	22 27 19.2	
	comp=Z,1µm,18.0s						

121A	**Cookes Peak, D**	**112.14**	**60**	IAMs_20	IAMs_20	22 34 11.1	
	comp=Z,1µm,18.0s						
MNTX	**Cornudas Mount**	**112.26**	**62**	IAMs_20	IAMs_20	22 25 35.4	
	comp=Z,1µm,18.0s						
MCCM	**Marconi Confer**	**112.30**	**45**	IAMs_20	IAMs_20	22 23 31.1	
	comp=Z,2µm,20.0s						
GRGR	**Grenville**	**112.32**	**111**	IAMs_20	IAMs_20	22 30 53.4	
	comp=Z,1µm,19.0s						
W13A	**Hualapai Mount**	**112.34**	**54**	IAMs_20	IAMs_20	22 24 25.5	
	comp=Z,1µm,21.0s						
CD2	**Chengdu**	**112.52**	**295**	PKP	**PKiKP**	**21 48 03.6**	**+3.2**
X16A	**Lo Mia Camp, P**	**112.56**	**56**	IAMs_20	IAMs_20	22 28 16.1	
	comp=Z,2µm,18.0s						
SHPR	**Sheep Range**	**113.20**	**52**	IAMs_20	IAMs_20	22 24 06.2	
	comp=Z,1µm,20.0s						
JKA	**Kamikawa-asahi**	**113.27**	**331**	IAMs_20	IAMs_20	22 32 26.2	
	comp=Z,1µm,20.0s						
KCPM	**Cahto Peak**	**113.52**	**44**	IAMs_20	IAMs_20	22 29 39.5	
	comp=Z,2µm,20.0s						
WUAZ	**Wupatki**	**113.58**	**56**	IAMs_20	IAMs_20	22 29 56.1	
	comp=Z,1µm,18.0s						
AFDM	**Forest Hills D**	**113.61**	**47**	IAMs_20	IAMs_20	22 31 05.9	
	comp=Z,1µm,19.0s						
WAKR	**Walker**	**113.67**	**48**	IAMs_20	IAMs_20	22 28 58.5	
	comp=Z,1µm,20.0s						
LHV	**Little Huntoon**	**113.73**	**49**	IAMs_20	IAMs_20	22 25 01.0	
	comp=Z,1µm,21.0s						
Y22D	**IRIS PASSCAL I**	**113.84**	**60**	IAMs_20	IAMs_20	22 25 13.1	
	comp=Z,1µm,18.0s						
RUBR	**Rubicon Trail**	**113.95**	**47**	IAMs_20	IAMs_20	22 25 40.0	
	comp=Z,1µm,20.0s						
ORV	**Oroville**	**114.01**	**46**	IAMs_20	IAMs_20	22 24 15.5	
	comp=Z,1µm,22.0s						
PRN	**Pahroc Range**	**114.06**	**52**	IAMs_20	IAMs_20	22 24 54.9	
	comp=Z,1µm,20.0s						
RYN	**Ryan**	**114.07**	**49**	IAMs_20	IAMs_20	22 25 10.0	
	comp=Z,1µm,22.0s						
PNTR	**Pine Nut**	**114.16**	**48**	IAMs_20	IAMs_20	22 25 38.4	
	comp=Z,1µm,21.0s						
YERR	**Yerington**	**114.17**	**48**	IAMs_20	IAMs_20	22 25 18.8	
	comp=Z,1µm,20.0s						
VCNR	**Virginia City**	**114.33**	**47**	IAMs_20	IAMs_20	22 25 43.0	
	comp=Z,1µm,20.0s						
435B	**Jarrell**	**114.40**	**69**	IAMs_20	IAMs_20	22 28 22.9	
	comp=Z,1µm,21.0s						
BEKR	**Beckworth**	**114.64**	**47**	IAMs_20	IAMs_20	22 31 39.1	
	comp=Z,1µm,18.0s						
ANMO	**Albuquerque**	**114.79**	**60**	IAMs_20	IAMs_20	22 35 35.3	
	comp=Z,1µm,18.0s						
PAHR	**Pah Rah Range**	**114.79**	**47**	IAMs_20	IAMs_20	22 31 15.2	
	comp=Z,2µm,19.0s						
ABTX	**Abilene, Hawle**	**115.24**	**67**	IAMs_20	IAMs_20	22 37 26.3	
	comp=Z,1µm,19.0s						
MSTX	**Muleshoe**	**115.26**	**63**	IAMs_20	IAMs_20	22 30 26.8	
	comp=Z,1µm,18.0s						
SOCY	**Socotra**	**115.62**	**241**	IAMs_20	IAMs_20	22 36 14.6	
	comp=Z,2µm,19.0s						
YBH	**Yreka Blue Hor**	**115.66**	**44**	IAMs_20	IAMs_20	22 31 41.2	
	comp=Z,2µm,19.0s						
HUMO	**Hull Mountain**	**116.40**	**43**	IAMs_20	IAMs_20	22 29 08.6	
	comp=Z,2µm,19.0s						
BJI	**Beijing**	**116.41**	**309**	PKP	**PKiKP**	**21 48 08.5**	**+1.0**
BJI				PP	**PP**	**21 49 17.7**	**+3.0**
BJI	**Beijing**	**116.41**	**309**	SS	SS	22 05 23.6	+4.6
BJI				pmax	pmax		
	comp=Z,140nm,6.1s						
BJI				LR	LR		
	comp=N,370nm,21.7s						
BJI				LR	LR		
	comp=E,440nm,24.5s						
BJI				LR	LR		
	comp=Z,540nm,20.1s						
AMTX	**Amarillo**	**116.48**	**64**	IAMs_20	IAMs_20	22 30 42.2	
	comp=Z,1µm,19.0s						
MOD	**Modoc Plateau**	**116.53**	**46**	IAMs_20	IAMs_20	22 26 40.0	
	comp=Z,1µm,20.0s						
Z35A	**Perchaven, San**	**116.79**	**68**	IAMs_20	IAMs_20	22 29 50.2	
	comp=Z,1µm,21.0s						
PV18	**Skein Mesa, Pa**	**116.89**	**56**	IAMs_20	IAMs_20	22 32 07.7	
	comp=Z,2µm,22.0s						
PV03	**Paradox Valley**	**116.91**	**56**	IAMs_20	IAMs_20	22 31 01.5	
	comp=Z,1µm,18.0s						
PV19	**Morning Glory**	**116.92**	**56**	IAMs_20	IAMs_20	22 32 10.5	
	comp=Z,2µm,20.0s						
PV16	**Nyswonger Mesa**	**116.94**	**56**	IAMs_20	IAMs_20	22 31 14.5	
	comp=Z,1µm,19.0s						
PV11	**David Mesa, Pa**	**116.94**	**56**	IAMs_20	IAMs_20	22 32 04.3	
	comp=Z,2µm,18.0s						
PV14	**Lion Creek, Pa**	**116.96**	**56**	IAMs_20	IAMs_20	22 32 10.7	
	comp=Z,2µm,18.0s						
ELK	**Elko**	**117.03**	**50**	IAMs_20	IAMs_20	22 28 46.5	
	comp=Z,1µm,20.0s						
PV23	**Carpenter Ridg**	**117.03**	**56**	IAMs_20	IAMs_20	22 36 26.7	
	comp=Z,2µm,22.0s						
K05A	**Summer Lake**	**117.11**	**45**	IAMs_20	IAMs_20	22 27 27.4	
	comp=Z,2µm,21.0s						
PV15	**Paradox Valley**	**117.12**	**57**	IAMs_20	IAMs_20	22 30 34.9	
	comp=Z,1µm,18.0s						
WMOK	**Wichita Mounta**	**117.45**	**66**	IAMs_20	IAMs_20	22 29 39.7	
	comp=Z,1µm,21.0s						
WVOR	**Wild Horse Val**	**117.51**	**47**	IAMs_20	IAMs_20	22 33 41.1	
	comp=Z,1µm,18.0s						
FURI	**Furi**	**117.53**	**224**	IAMs_20	IAMs_20	22 39 04.7	
	comp=Z,2µm,18.0s						
Z38A	**Mt. Pleasant**	**117.61**	**70**	IAMs_20	IAMs_20	22 41 07.9	
	comp=Z,1µm,19.0s						
COR	**Corvallis**	**118.12**	**42**	IAMs_20	IAMs_20	22 31 07.2	
	comp=Z,2µm,21.0s						
OKCFA	**Oklahoma City**	**118.55**	**67**	IAMs_20	IAMs_20	22 38 24.9	
	comp=Z,1µm,20.0s						
X37A	**Clayton**	**118.63**	**69**	IAMs_20	IAMs_20	22 31 27.9	
	comp=Z,1µm,20.0s						
HHC	**Hu-ho-hao-te**	**118.65**	**306**	*e*PKP	**PKiKP**	**21 48 12.7**	**+0.7**
HHC				PP	PP	21 49 44.0	+14
HHC	**Hu-ho-hao-te**	**118.65**	**306**	SS	SS	22 06 00.6	+12
HHC				AMB	AMB		
	comp=Z,150nm,8.2s						
HHC				LR	LR		
	comp=N,570nm,17.5s						
HHC				LR	LR		
	comp=E,410nm,18.4s						
HHC				LR	LR		
	comp=Z,690nm,20.1s						
OK025	**Westminster Rd**	**118.74**	**67**	IAMs_20	IAMs_20	22 31 18.0	
	comp=Z,1µm,19.0s						
I07A	**Izee**	**118.75**	**45**	IAMs_20	IAMs_20	22 32 05.0	
	comp=Z,2µm,20.0s						
ATD	**Arta Tunnel**	**118.78**	**229**	IAMs_20	IAMs_20	22 34 57.9	
	comp=Z,1µm,20.0s						
U32A	**Winter Ranch,**	**118.81**	**65**	IAMs_20	IAMs_20	22 39 15.9	
	comp=Z,1µm,19.0s						
OK029	**Liberty Lake**	**118.89**	**67**	IAMs_20	IAMs_20	22 31 02.8	
	comp=Z,1µm,19.0s						
OK030	**Cody Creek RV**	**119.26**	**67**	IAMs_20	IAMs_20	22 31 31.7	
	comp=Z,1000nm,20.0s						
OK031	**S. Brethren Rd**	**119.26**	**67**	IAMs_20	IAMs_20	22 31 42.7	
	comp=Z,996nm,20.0s						
MFID	**Camas Ranch**	**119.26**	**48**	IAMs_20	IAMs_20	22 28 51.5	
	comp=Z,1µm,20.0s						
ISCO	**Idaho Springs**	**119.42**	**58**	IAMs_20	IAMs_20	22 32 03.9	
	comp=Z,1µm,19.0s						
CCAR	**Cane Creek**	**119.45**	**73**	IAMs_20	IAMs_20	22 42 50.7	
	comp=Z,1µm,19.0s						
BMO	**Blue Mountains**	**120.11**	**47**	IAMs_20	IAMs_20	22 35 37.9	
	comp=Z,2µm,19.0s						
T35A	**Sooner Cattle**	**120.23**	**67**	IAMs_20	IAMs_20	22 32 13.4	
	comp=Z,1µm,19.0s						
LON	**Longmire**	**120.53**	**42**	IAMs_20	IAMs_20	22 33 18.8	
	comp=Z,2µm,19.0s						
U38A	**Gravette**	**120.63**	**69**	IAMs_20	IAMs_20	22 41 10.0	
	comp=Z,1µm,21.0s						
CBKS	**Cedar Bluff**	**120.68**	**63**	IAMs_20	IAMs_20	22 33 33.3	
	comp=Z,1µm,18.0s						
BW06	**Boulder Array**	**120.71**	**54**	IAMs_20	IAMs_20	22 30 47.8	
	comp=Z,1µm,19.0s						
REDW	**Red Top Meadow**	**120.81**	**52**	IAMs_20	IAMs_20	22 33 36.5	
	comp=Z,1µm,20.0s						
HAWA	**Hanford**	**120.85**	**44**	IAMs_20	IAMs_20	22 36 11.4	
	comp=Z,2µm,19.0s						
LOHW	**Long Hollow**	**121.11**	**52**	IAMs_20	IAMs_20	22 33 45.5	
	comp=Z,1µm,20.0s						
U40A	**Yellville**	**121.16**	**70**	IAMs_20	IAMs_20	22 35 33.9	
	comp=Z,934nm,18.0s						
GTA	**Gaotai**	**121.54**	**296**	*e*PKP	PKiKP	21 48 28.2	+10
GTA				pPKP	sPKPdf	21 48 39.6	+19
GTA				PP	**PP**	**21 49 56.2**	**+5.8**
K22A	**Casper**	**121.63**	**56**	IAMs_20	IAMs_20	22 34 57.3	
	comp=Z,1µm,19.0s						
DLMT	**Dillon**	**122.03**	**50**	IAMs_20	IAMs_20	22 33 28.8	
	comp=Z,1µm,20.0s						
MGMO	**Mountain Grove**	**122.08**	**70**	IAMs_20	IAMs_20	22 43 18.4	
	comp=Z,1µm,19.0s						
KSU1	**Kansas State U**	**122.11**	**66**	IAMs_20	IAMs_20	22 31 30.0	
	comp=Z,1µm,20.0s						
PENMO	**Penman**	**122.51**	**73**	IAMs_20	IAMs_20	22 42 38.8	
	comp=Z,1µm,20.0s						
BOZ	**Bozeman (W)**	**122.55**	**50**	IAMs_20	IAMs_20	22 33 45.5	
	comp=Z,1µm,19.0s						
PARMO	**Parma**	**122.64**	**73**	IAMs_20	IAMs_20	22 41 48.4	
	comp=Z,985nm,20.0s						
B08A	**Colville Reser**	**122.69**	**43**	IAMs_20	IAMs_20	22 34 12.0	
	comp=Z,2µm,18.0s						
WVT	**Waverly**	**122.95**	**75**	IAMs_20	IAMs_20	22 44 21.4	
	comp=Z,1µm,20.0s						
N33A	**J Bar K, Exete**	**123.22**	**64**	IAMs_20	IAMs_20	22 34 22.3	
	comp=Z,970nm,20.0s						
CCM	**Cathedral Cave**	**123.26**	**71**	IAMs_20	IAMs_20	22 34 52.7	
	comp=Z,1µm,20.0s						
T45A	**Paducah**	**123.39**	**73**	IAMs_20	IAMs_20	22 44 11.1	
	comp=Z,1µm,21.0s						
BGNE	**Belgrade**	**123.54**	**63**	IAMs_20	IAMs_20	22 32 41.9	
	comp=Z,2µm,20.0s						
JTMT	**Jette**	**123.63**	**47**	IAMs_20	IAMs_20	22 37 20.1	
	comp=Z,2µm,19.0s						
RSSD	**Black Hills**	**123.79**	**57**	IAMs_20	IAMs_20	22 44 39.4	
	comp=Z,1µm,19.0s						
H02S1	**DAWSON INLET T**	**123.81**	**32**	T	T	00 04 12.8	
	SNR=15						
H02N1	**VAN INLET T-PH**	**123.84**	**32**	T	T	00 04 13.7	
	SNR=7.8						
K31A	**O'Neill**	**124.37**	**62**	IAMs_20	IAMs_20	22 36 55.9	
	comp=Z,955nm,19.0s						
L34A	**Svendsen Farm,**	**124.68**	**64**	IAMs_20	IAMs_20	22 33 31.2	
	comp=Z,993nm,20.0s						
OLIL	**Olney**	**125.09**	**73**	IAMs_20	IAMs_20	22 45 01.1	
	comp=Z,913nm,19.0s						
EGMT	**Eagleton**	**125.30**	**51**	IAMs_20	IAMs_20	22 38 38.2	
	comp=Z,1µm,19.0s						
MA2	**Magadan**	**126.84**	**342**	IAMs_20	IAMs_20	22 34 07.0	
	comp=Z,1µm,21.0s						
MBO	**M'Bour**	**127.49**	**159**	IAMs_20	IAMs_20	22 44 04.2	
	comp=Z,1µm,19.0s						
TOC4	**Torodi Ar. Sit**	**127.57**	**181**	IAMs_20	IAMs_20	22 40 05.5	
	comp=Z,1µm,20.0s						
TOC3	**Torodi Ar. Sit**	**127.58**	**182**	IAMs_20	IAMs_20	22 40 05.7	
	comp=Z,1µm,20.0s						
TOB3	**Torodi Ar. Sit**	**127.58**	**181**	IAMs_20	IAMs_20	22 40 05.8	
	comp=Z,1µm,20.0s						
TOB4	**Torodi Ar. Sit**	**127.58**	**181**	IAMs_20	IAMs_20	22 40 05.8	
	comp=Z,1µm,20.0s						
TOA3	**Torodi Ar. Sit**	**127.59**	**181**	IAMs_20	IAMs_20	22 40 05.9	
	comp=Z,1µm,20.0s						
TOA0	**Torodi Ar. Sit**	**127.59**	**181**	PKPdf	**PKPdf**	**21 48 29.5**	**-0.3**
TOA0				IAMs_20	IAMs_20	22 40 07.0	
	comp=Z,1µm,20.0s						
TOA2	**Torodi Ar. Sit**	**127.59**	**181**	IAMs_20	IAMs_20	22 40 06.0	
	comp=Z,2µm,20.0s						
TORD	**Torodi Ar. Bea**	**127.59**	**181**	PKP	**PKPdf**	**21 48 28.4**	**-1.4**
	comp=Z,1.6nm,0.9s,baz=264,slow=1.3,SNR=8.1						
TOB5	**Torodi Ar. Sit**	**127.60**	**181**	IAMs_20	IAMs_20	22 40 06.3	
	comp=Z,2µm,20.0s						
TOC2	**Torodi Ar. Sit**	**127.60**	**182**	IAMs_20	IAMs_20	22 40 06.4	
	comp=Z,1µm,20.0s						
TOB1	**Torodi Ar. Sit**	**127.61**	**181**	IAMs_20	IAMs_20	22 40 06.5	
	comp=Z,1µm,20.0s						
TOC7	**Torodi Ar. Sit**	**127.61**	**181**	IAMs_20	IAMs_20	22 40 06.6	
	comp=Z,1µm,20.0s						
TOC1	**Torodi Ar. Sit**	**127.62**	**181**	IAMs_20	IAMs_20	22 40 06.8	
	comp=Z,2µm,20.0s						
HQIL	**Hanson Quary C**	**127.81**	**71**	IAMs_20	IAMs_20	22 44 24.8	
	comp=Z,1µm,19.0s						
F33A	**5 Mile Ranch,**	**128.04**	**62**	IAMs_20	IAMs_20	22 36 47.0	
	comp=Z,1µm,18.0s						
RAYN	**Ar Rayn**	**129.09**	**237**	IAMs_20	IAMs_20	22 38 52.2	
	comp=Z,1µm,22.0s						
KBL	**Kabul**	**129.70**	**267**	IAMs_20	IAMs_20	22 38 51.8	
	comp=Z,1µm,20.0s						
G40A	**Rib Lake**	**129.84**	**67**	IAMs_20	IAMs_20	22 40 14.6	
	comp=Z,1µm,19.0s						
WMQ	**Urumqi**	**129.97**	**289**	*e*P	**PKiKP**	**21 48 35.6**	**+1.3**
WMQ				pmax	pmax		
	comp=Z,290nm,6.1s						
WMQ				LR	LR		
	comp=N,640nm,29.1s						
WMQ				LR	LR		
	comp=E,420nm,29.3s						
WMQ				LR	LR		
	comp=Z,350nm,20.3s						
AGMN	**Agassiz Nation**	**130.28**	**60**	IAMs_20	IAMs_20	22 35 25.2	
	comp=Z,1µm,20.0s						
ANM	**Nome**	**130.28**	**8**	IAMs_20	IAMs_20	22 34 55.3	
	comp=Z,2µm,22.0s						
ALLY	**Alegheny Colle**	**130.76**	**77**	IAMs_20	IAMs_20	22 36 16.3	
	comp=Z,1µm,22.0s						
TLY	**Talaya**	**130.77**	**307**	*e*PKIKP	**PKiKP**	**21 48 36.5**	**+0.9**
TLY				pmax	pmax		
	comp=Z,6.0nm,1.3s						
B35A	**Bob, Littlefor**	**131.11**	**62**	IAMs_20	IAMs_20	22 38 12.2	
	comp=Z,1µm,20.0s						
BWN	**Browne**	**131.32**	**17**	IAMs_20	IAMs_20	22 34 39.1	
	comp=Z,2µm,20.0s						
EYMN	**Ely**	**131.59**	**64**	IAMs_20	IAMs_20	22 38 35.9	
	comp=Z,2µm,20.0s						
CCB	**Clear Creek Bu**	**131.99**	**18**	IAMs_20	IAMs_20	22 45 16.3	
	comp=Z,1µm,19.0s						
TCOL	**CIGO, UAF Yank**	**132.20**	**18**	IAMs_20	IAMs_20	22 45 22.9	
	comp=Z,2µm,18.0s						
COLA	**College**	**132.20**	**18**	IAMs_20	IAMs_20	22 36 05.4	
	comp=Z,1µm,20.0s						
ILAR	**Eielson Array**	**132.22**	**18**	PKP	**PKPdf**	**21 48 35.8**	**-1.2**
	comp=Z,1.1nm,1.0s,baz=274,slow=2.2,SNR=6.2						
ILAR	**Eielson Array**	**132.22**	**18**	PKIKP	**PKPdf**	**21 48 36.1**	**-0.9**
ILAR	**Eielson Array**	**132.22**	**18**	PKPdf	**PKPdf**	**21 48 36.1**	**-0.9**
HRA	**Herat**	**132.37**	**260**	IAMs_20	IAMs_20	22 41 09.4	
	comp=Z,1µm,21.0s						
POKR	**Poker Plat Res**	**132.48**	**18**	IAMs_20	IAMs_20	22 36 13.5	
	comp=Z,1µm,21.0s						
YLE	**Yale**	**133.44**	**84**	IAMs_20	IAMs_20	22 37 43.0	
	comp=Z,1µm,20.0s						
FYU	**Fort Yukon**	**134.15**	**18**	IAMs_20	IAMs_20	22 43 50.5	
	comp=Z,1µm,19.0s						
AAK	**Ala-Archa**	**134.30**	**278**	*i* PKIKP	**PKPdf**	**21 48 41.4**	**-0.4**
DGZ	**Jazzator, Alta**	**134.93**	**294**	*i* PKIKP	**PKPdf**	**21 48 41.5**	**-1.3**
KKAR	**Karatay Array**	**136.33**	**275**	PKIKP	**PKPdf**	**21 48 44.6**	**-0.8**
KKAR	**Karatay Array**	**136.33**	**275**	PKPdf	**PKPdf**	**21 48 44.5**	**-0.8**
YKA	**Yellowknife Ar**	**136.38**	**38**	PKP	**PKPdf**	**21 48 45.4**	**+0.5**
	comp=Z,0.9nm,0.9s,baz=190,slow=2.1,SNR=7.5						
TAM	**Tamanrasset**	**137.07**	**187**	PKIKP	**PKiKP**	**21 48 49.5**	**+0.1**
TAM				MLR	MLR		
	comp=Z,2µm,20.0s						
TAM	**Tamanrasset**	**137.07**	**187**	PKPdf	**PKiKP**	**21 48 49.5**	**+0.1**
TAM				IAMs_20	IAMs_20	22 49 06.0	
	comp=Z,2µm,20.0s						
GEYT	**Alibeck**	**137.11**	**259**	PKP	**PKPdf**	**21 48 47.0**	**0.0**
	comp=Z,0.9nm,0.5s,baz=230,slow=9.2,SNR=3.6						
GEYT	**Alibeck**	**137.11**	**259**		**PKPdf**	**21 48 46.4**	**-0.6**
GYA0B	**ALIBECK ARRAY**	**137.11**	**259**	IAMs_20	IAMs_20	22 42 11.8	
	comp=Z,1µm,22.0s						
A21K	**Barrow**	**137.56**	**11**	IAMs_20	IAMs_20	22 45 04.4	
	comp=Z,1µm,20.0s						
KURBB	**Kurchatov Arra**	**139.12**	**288**	PKhKP	PKPpre	21 48 37.8	
	comp=Z,0.6nm,0.7s,baz=147,slow=2.1,SNR=5.2						
KURBB				PKP	**PKPdf**	**21 48 49.2**	**-1.0**
	comp=Z,1.0nm,0.9s,baz=154,slow=2.4,SNR=6.2						
KURK	**Kurchatov**	**139.16**	**288**	PKIKP	**PKPdf**	**21 48 49.8**	**-0.5**
KURK				MLR	MLR		
	comp=Z,800nm,22.0s						
KURK	**Kurchatov**	**139.16**	**288**	PKPdf	**PKPdf**	**21 48 49.8**	**-0.5**
TIXI	**Tiksi**	**141.37**	**337**	IAMs_20	IAMs_20	22 43 42.8	
	comp=Z,888nm,21.0s						
BVAR	**Borovoye Array**	**144.21**	**284**	PKP	**PKPab**	**21 48 56.1**	**-1.1**
	comp=Z,2.0nm,1.0s,baz=18,slow=25,SNR=12						
BRVK	**Borovoye**	**144.28**	**284**	PKIKP	**PKPab**	**21 48 56.8**	**-0.6**
BRVK	**Borovoye**	**144.28**	**284**	PKPdf	**PKPab**	**21 48 56.8**	**-0.6**
GNI	**Garni**	**144.32**	**246**	PKP	PKPbc	21 48 58.9	+0.3
	comp=Z,13nm,1.2s,baz=52,slow=2.0,SNR=8.0						
GNI	**Garni**	**144.32**	**246**	PKIKP	**PKPdf**	**21 48 59.5**	**-0.6**
GNI				MLR	MLR		
	comp=Z,1µm,21.0s						
GNI	**Garni**	**144.32**	**246**		**PKPdf**	**21 48 59.5**	**-0.6**
GNI	**Garni**	**144.32**	**246**	IAMs_20	IAMs_20	22 55 33.1	
	comp=Z,1µm,21.0s						
GAZ	**Gaziantep**	**144.41**	**235**	PKPdf	**PKPdf**	**21 48 59.6**	**-0.7**
ABKAR	**Akbulak array**	**145.64**	**271**	PKPdf	**PKPdf**	**21 49 00.8**	**-1.1**
ABKAR	**Akbulak array**	**145.64**	**271**		**PKPdf**	**21 49 01.0**	**-0.9**
MAK	**Makhachkala**	**145.65**	**252**	*e*PKHKP	PKPpre	21 48 57.3	
MAK				pmax	pmax		
	comp=Z,165nm,1.0s						
PMPST	**Porto Santo, M**	**145.88**	**154**	*e*PKPdf	PKiKP	21 49 23.2	+16
ELL	**Elmali**	**146.35**	**225**	PKIKP	**PKPdf**	**21 49 03.1**	**-0.6**
ELL	**Elmali**	**146.35**	**225**		**PKPdf**	**21 49 03.1**	**-0.6**
GROC	**Groznyy**	**146.52**	**250**	*e*PKP2	**PKPbc**	**21 49 04.5**	**-0.6**
GROC				*e*		21 52 36.1	
GROC				pmax	pmax		
	comp=Z,48nm,1.1s						
ZEI	**Tsey**	**146.91**	**248**	*i* PKP2	**PKPbc**	**21 49 05.8**	**-0.7**
ZEI				pmax	pmax		
	comp=Z,14nm,1.0s						
ISP	**Isparta**	**147.16**	**227**	IAMs_20	IAMs_20	22 59 28.3	
	comp=Z,926nm,20.0s						
AKTO	**Aktyubinsk**	**147.35**	**271**	PKPbc	**PKPbc**	**21 49 06.1**	**-1.1**
	comp=Z,6.1nm,1.1s,baz=190,slow=2.7,SNR=7.8						
BR131	**Keskin Array S**	**147.91**	**233**	PKP2	**PKPbc**	**21 49 08.1**	**-1.1**
BR131	**Keskin Array S**	**147.91**	**233**	PKPdf	**PKPbc**	**21 49 08.1**	**-1.1**
BRTR	**Keskin Array B**	**147.91**	**233**	PKPbc	**PKPbc**	**21 49 08.5**	**-0.8**
	comp=Z,9.9nm,0.9s,baz=145,slow=4.5,SNR=17						
BRTR	**Keskin Array B**	**147.91**	**233**	PKP2	**PKPbc**	**21 49 08.2**	**-1.1**
BRTR	**Keskin Array B**	**147.91**	**233**	PKPdf	**PKPbc**	**21 49 08.2**	**-1.1**
KBZ	**Khabaz**	**148.09**	**248**	PKPbc	**PKPbc**	**21 49 08.8**	**-0.6**
	comp=Z,11nm,1.0s,baz=216,slow=1.2,SNR=12						
KIV	**Kislovodsk**	**148.37**	**248**	*i* PKP2	**PKPbc**	**21 49 10.0**	**-0.3**
KIV				pmax	pmax		
	comp=Z,104nm,1.1s						
KIV	**Kislovodsk**	**148.37**	**248**		**PKPbc**	**21 49 09.4**	**-0.8**
KIV				IAMs_20	IAMs_20	23 03 43.3	
	comp=Z,682nm,19.0s						
MANT	**Manisa**	**148.37**	**225**		**PKPbc**	**21 49 10.3**	**-0.3**
ITM	**Ithomi**	**148.88**	**214**	IAMs_20	IAMs_20	22 53 49.0	
	comp=Z,1µm,21.0s						
NRIK	**Noril'sk**	**149.09**	**316**	PKPbc	**PKPbc**	**21 49 09.6**	**-1.6**
	comp=Z,3.3nm,0.7s,baz=217,slow=2.8,SNR=4.0						
NRIK	**Noril'sk**	**149.09**	**316**	PKIKP	**PKPbc**	**21 49 09.1**	**-2.1**
NRIK				MLR	MLR		
	comp=Z,1µm,20.0s						
NRIK	**Noril'sk**	**149.09**	**316**		**PKPbc**	**21 49 09.1**	**-2.1**
NRIK				IAMs_20	IAMs_20	22 59 08.7	
	comp=Z,1µm,20.0s						
SOC	**Sochi**	**149.17**	**244**	*e*PKHKP	PKPpre	21 49 05.0	
SOC				*e*		21 52 42.3	
SOC				*e*PPP	PPP	21 56 05.6	
SOC				*e*SS	SS	22 11 56.1	-0.1
SOC				*e*SSS	SSS	22 17 26.4	
SOC				MLR	MLR		
	comp=Z,415nm,15.0s						
KEST	**Kesra**	**149.63**	**194**	PKPbc	**PKPbc**	**21 49 13.8**	**+0.1**
	comp=Z,10nm,0.9s,baz=326,slow=5.1,SNR=8.0						
KEST	**Kesra**	**149.63**	**194**		**PKPdf**	**21 49 09.9**	**+0.8**
RES	**Resolute Bay**	**150.07**	**32**	PKPbc	**PKPbc**	**21 49 13.0**	**-0.5**
	comp=Z,5.7nm,1.1s,baz=236,slow=7.1,SNR=5.7						
RES				PKPab	**PKPab**	**21 49 18.7**	**-0.8**
	comp=Z,13nm,1.0s,baz=232,slow=5.0,SNR=11						
RES	**Resolute Bay**	**150.07**	**32**	PKIKP	**PKiKP**	**21 49 14.8**	**+0.5**
RES				MLR	MLR		
	comp=Z,3µm,20.0s						
RES	**Resolute Bay**	**150.07**	**32**		**PKiKP**	**21 49 14.8**	**+0.5**
SFS	**San Fernando**	**150.55**	**169**	IAMs_20	IAMs_20	23 01 10.7	
	comp=Z,1µm,20.0s						
PFVI	**Vila Bisbo**	**150.96**	**165**	IAMs_20	IAMs_20	22 51 55.7	
	comp=Z,968nm,20.0s						
PFVI	**Vila Bisbo**	**150.96**	**165**	*e*PKPdf	**PKPab**	**21 49 20.9**	**-3.3**
MORF	**Marmelete**	**151.15**	**165**	*e*PKPdf	**PKiKP**	**21 49 17.6**	**-0.2**
CEL	**Celeste**	**151.18**	**206**	IAMs_20	IAMs_20	22 57 09.7	
	comp=Z,1µm,20.0s						
ALN	**Alexandroupoli**	**151.32**	**223**	IAMs_20	IAMs_20	22 57 26.5	
	comp=Z,1µm,22.0s						
PVAQ	**Vaqueiros**	**151.35**	**166**	IAMs_20	IAMs_20	22 53 00.8	
	comp=Z,922nm,21.0s						
PVAQ	**Vaqueiros**	**151.35**	**166**	*e*PKPdf	**PKPab**	**21 49 24.9**	**-0.9**
PTEO	**Sao Teotonio**	**151.38**	**165**	*e*PKPdf	**PKiKP**	**21 49 19.0**	**+0.8**
ARU	**Arti**	**151.45**	**279**	PKPbc	**PKPbc**	**21 49 15.6**	**-1.6**
	comp=Z,1.6nm,0.8s,baz=196,slow=1.9,SNR=7.1						
ARU	**Arti**	**151.45**	**279**	*i* PKIKP	**PKPbc**	**21 49 16.2**	**-1.0**
ARU						21 52 54.8	
ARU	**Arti**	**151.45**	**279**	PKPdf	**PKPdf**	**21 49 12.9**	**+1.8**
PCVE	**Castro Verde**	**151.54**	**166**	*e*PKPdf	**PKiKP**	**21 49 20.8**	**+2.3**
MESJ	**Messejana**	**151.73**	**165**	*e*PKPdf	**PKPdf**	**21 49 13.4**	**+1.2**
TIP	**Timpagrande**	**151.91**	**208**	IAMs_20	IAMs_20	23 00 26.1	
	comp=Z,1µm,20.0s						
CART	**Cartagena**	**151.92**	**177**	IAMs_20	IAMs_20	23 03 14.7	
	comp=Z,1µm,19.0s						
PBAR	**Barrancos**	**152.18**	**167**	*e*PKPdf	**PKiKP**	**21 49 23.8**	**+4.0**
SCTE	**Santa Cesarea**	**152.43**	**211**	IAMs_20	IAMs_20	22 57 59.7	
	comp=Z,1µm,21.0s						
EVO	**Evora**	**152.44**	**165**	*e*PKPdf	**PKiKP**	**21 49 22.0**	**+1.7**
FNA	**Florina**	**152.44**	**216**	IAMs_20	IAMs_20	22 58 43.1	
	comp=Z,1µm,20.0s						
PMTG	**Montargil**	**152.94**	**165**	*e*PKPdf	**PKPbc**	**21 49 21.1**	**-0.1**
BELG	**Belogornoye**	**153.12**	**264**	PKPbc	**PKPbc**	**21 49 20.6**	**-0.4**
	comp=Z,11nm,0.8s,baz=291,slow=13,SNR=3.8						
TIR	**Tirane**	**153.34**	**214**	IAMs_20	IAMs_20	23 05 00.1	
	comp=Z,940nm,18.0s						
PMRV	**Marv??o**	**153.38**	**166**	*e*PKPdf	**PKPab**	**21 49 29.6**	**-4.7**
VTS	**Vitosha**	**153.69**	**220**	PKIKP	**PKPbc**	**21 49 22.5**	**-0.4**
VTS				MLR	MLR		
	comp=Z,900nm,20.0s						
VTS	**Vitosha**	**153.69**	**220**		**PKPbc**	**21 49 22.5**	**-0.4**
VTS				IAMs_20	IAMs_20	23 02 27.3	
	comp=Z,863nm,20.0s						
PCBR	**Castelo Branco**	**153.78**	**166**	*e*PKPdf	**PKiKP**	**21 49 25.6**	**+2.6**
PCAS	**Casmilo, Conde**	**153.89**	**164**	*e*PKPdf	**PKiKP**	**21 49 24.2**	**+0.9**
ESDC	**Sonseca Array**	**153.90**	**172**	PKP	**PKPdf**	**21 49 14.6**	**-0.7**
	comp=Z,1.7nm,1.2s,baz=272,slow=0.6,SNR=5.5						
ESDC				PKPbc	**PKPbc**	**21 49 22.1**	**-1.2**
	comp=Z,2.8nm,1.0s,baz=256,slow=1.0,SNR=6.9						
ESDC	**Sonseca Array**	**153.90**	**172**		**PKPdf**	**21 49 15.3**	**-0.1**
ESDC					**sPKPdf**	**21 49 20.3**	**+1.8**
ESBB	**Sonseca Array**	**153.90**	**172**	PKPdf	**PKPdf**	**21 49 16.3**	**+1.0**
PAOL	**Paolisi**	**154.11**	**205**	IAMs_20	IAMs_20	23 00 12.3	
	comp=Z,1µm,19.0s						
EUNU	**Eureka**	**154.12**	**23**	IAMs_20	IAMs_20	23 07 33.5	
	comp=Z,1µm,20.0s						
MTE	**Manteigas**	**154.33**	**166**	IAMs_20	IAMs_20	23 10 02.9	
	comp=Z,1µm,19.0s						
PDG	**Podgorica**	**154.50**	**214**	IAMs_20	IAMs_20	22 59 50.7	
	comp=Z,976nm,21.0s						
SGRT	**San Giovanni R**	**154.60**	**207**	IAMs_20	IAMs_20	23 14 47.1	
	comp=Z,1µm,22.0s						
INTR	**Introdacqua**	**155.18**	**204**	IAMs_20	IAMs_20	23 01 48.5	
	comp=Z,1µm,20.0s						
AQU	**L'Aquila**	**155.60**	**204**	IAMs_20	IAMs_20	23 06 01.6	
	comp=Z,1µm,21.0s						
DIVS	**Divibare**	**155.91**	**216**	IAMs_20	IAMs_20	23 04 58.9	
	comp=Z,851nm,20.0s						
CASP	**Castiglione de**	**156.41**	**199**	IAMs_20	IAMs_20	22 56 41.1	
	comp=Z,1µm,21.0s						
TEOL	**Teolo**	**158.81**	**202**	IAMs_20	IAMs_20	22 55 25.5	
	comp=Z,838nm,20.0s						
AKASG	**Malin Array Be**	**159.01**	**239**	PKPab	**PKPab**	**21 49 58.1**	**-0.1**
	comp=Z,0.4nm,0.4s,baz=139,slow=3.2,SNR=4.2						
SOKA	**Soboth**	**159.47**	**210**	*e*P	PKPab	21 50 08.9	+8.6
	comp=Z,8.9nm,1.2s						
CTI	**Castel Tesino**	**159.48**	**203**	IAMs_20	IAMs_20	23 16 20.3	
	comp=Z,1µm,20.0s						
ARSA	**Arzberg**	**159.91**	**211**	*e*P	PKPab	21 50 10.9	+8.7
	comp=Z,15nm,1.6s						
ABTA	**Abfaltersbach**	**160.01**	**205**	*e*P	PKPab	21 50 11.4	+8.7
	comp=Z,8.5nm,1.4s						
CONA	**Conrad Observa**	**160.48**	**212**	*e*P	**PKPab**	**21 50 12.1**	**+7.3**
	comp=Z,14nm,1.9s						
CKRC	**Cesky Krumlov**	**161.66**	**210**	AMS	AMS	23 14 30.0	
	comp=Z,2µm,19.0s						
GERES	**GERESS Array B**	**161.81**	**209**	PKP	**PKPdf**	**21 49 24.2**	**-0.6**
	comp=Z,0.7nm,0.9s,baz=90,slow=1.3,SNR=3.8						
KHC	**Kasperske Hory**	**162.10**	**209**	*e*PKPAB	**PKPab**	**21 50 12.2**	**+0.4**
KHC				AMS	AMS	23 11 30.0	
	comp=Z,2µm,17.6s						
KRLC	**Kraliky**	**162.27**	**216**	*e*PKPAB	**PKPab**	**21 50 14.2**	**+1.7**
KRLC				AMS	AMS	23 11 50.0	
	comp=Z,1µm,16.7s						
DPC	**Dobruska-Polom**	**162.64**	**216**	*e*PKPAB	**PKPab**	**21 50 15.5**	**+1.4**
OSTC	**Ostas**	**162.86**	**216**	*e*PKP	**PKPab**	**21 50 15.2**	**+0.2**
UPC	**Upice**	**162.86**	**215**	AMS	AMS	23 13 00.0	
	comp=Z,2µm,24.6s						
NKC	**Novy Kostel**	**163.38**	**208**	AMS	AMS	23 15 00.0	
	comp=Z,1µm,19.3s						
CLL	**Collm**	**164.29**	**210**	*e*PKPab	**PKPab**	**21 50 24.0**	**+2.8**
CLL				*e*SS	SS	22 14 54.0	+16
CLL				*e*PSS	PSS	22 15 58.0	
CLL				*e*SSS	SSS	22 21 00.0	
CLL				*e*		22 33 18.0	

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CLL	comp=N,2µm,20.6s			Lm	MLR	23 10 00.0	
CLL	comp=E,600nm,21.6s			Lm	MLR	23 10 00.0	
CLL	comp=Z,2µm,19.8s			Lm	MLR	23 10 00.0	

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*SOME **11** 21:46:40.7, 43°.57N×84°.13E, h5km*

*NNC **11** 21:46:46.9±1.9, 43°.76N×84°.05E, h7km±6km, mb3.2, mpv2.9, Error ellipse: s-maj=15.8km s-min=7.5km az=111.0*

ISC 11 21:46:48.7±2.1**, 43°.73N**±0°.08×**84°.14E**±0°.09**, h20km, n22, σ2s.74**/35**, 7C-8D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KTMS	**Ketmen** 2.1nm,0.1s	**2.77**	**266**	*e*P	**Pn**	**21 47 33.0**	**+1.0**
KTMS	35nm,0.3s			*e*S	**Sb**	**21 48 10.6**	**-0.5**
DJR	**Jarkent** 2.5nm,0.2s	**3.20**	**282**	*e*P	**Pn**	**21 47 39.7**	**+1.8**
DJR	24nm,0.3s			*e*S	**Sb**	**21 48 22.4**	**-1.0**
MK31	**Makanchi Array** 0.3nm,0.3s,baz=155,slow=15,SNR=35	**3.34**	**338**	⇑Pn	**Pn**	**21 47 38.3**	**-1.4**
MK31	1.5nm,0.3s,baz=156,slow=17,SNR=23			Pg	**Pb**	**21 47 46.8**	**-0.4**
MK31	0.5nm,0.2s,baz=152,slow=24,SNR=4.3			⇓Sn	**Sn**	**21 48 19.6**	**+0.8**
MK31	2.7nm,0.2s,baz=148,slow=29,SNR=26			⇓Lg	Lg	21 48 31.2	
PDGK	**Podgornoye** 1.4nm,0.3s	**3.41**	**265**	⇑Pn	**Pn**	**21 47 40.3**	**-0.6**
PDGK	2.6nm,0.5s			⇓Pg	**Pb**	**21 47 48.5**	**+0.1**
PDGK	12nm,0.6s			⇑Lg	Lg	21 48 32.3	
MAKZ	**Makanchi** 1.2nm,0.6s	**3.44**	**334**	⇓Pn	**Pn**	**21 47 39.8**	**-1.4**
MAKZ	1.1nm,0.3s			⇑Pg	**Pb**	**21 47 48.8**	**-0.2**
MAKZ	15nm,0.7s			⇑Lg	Lg	21 48 34.3	
SHLS	**Shalkode** 22nm,0.4s	**3.46**	**262**	*e*P	**Pn**	**21 47 40.4**	**-1.1**
SHLS	94nm,0.4s			*e*S	**Sn**	**21 48 23.7**	**+1.8**
ZSN	**Zaisan** 3.6nm,0.3s	**3.76**	**8**	*e*P	**Pb**	**21 47 52.5**	**-1.9**
ZSN	28nm,0.5s			*e*S	**Sb**	**21 48 44.7**	**+5.2**
KAPS	**Kapalarasan** 2.4nm,0.4s	**3.76**	**296**	*e*P	**Pb**	**21 47 53.8**	**-0.7**
KAPS	21nm,0.4s			*e*S	Sb	21 48 46.2	+6.6
UZB	**Uzynbulak** 2.7nm,0.3s	**3.77**	**263**	*e*P	**Pb**	**21 47 51.0**	**-3.7**
UZB	12nm,0.3s			*e*S	**Sb**	**21 48 41.9**	**+1.8**
KPKS	**Kokpek** 3.8nm,0.3s	**3.97**	**268**	*e*P	**Pb**	**21 47 53.5**	**-4.6**
KPKS	27nm,0.4s			*e*S	**Sb**	**21 48 46.2**	**+0.5**
MNBS	**Baschi** 2.4nm,0.2s	**4.16**	**277**	*e*P	Pb	21 47 56.2	-5.2
MNBS	18nm,0.3s			*e*S	**Sb**	**21 48 51.0**	**-0.2**
SATY	**Saty** 2.1nm,0.4s	**4.23**	**263**	*e*P	**Pb**	**21 47 58.6**	**-3.9**
SATY	12nm,0.3s			*e*S	**Sb**	**21 48 55.0**	**+1.8**
KURS	**Kuram** 2.1nm,0.4s	**4.34**	**269**	*e*P	**Pb**	**21 48 02.0**	**-2.4**
KURS	8.6nm,0.8s			*e*S	**Sb**	**21 49 00.3**	**+3.9**
ARXS	**Arharly** 8.9nm,0.2s	**4.58**	**278**	*e*P	**Pb**	**21 48 04.5**	**-4.0**
ARXS	12nm,0.3s			*e*S	**Sb**	**21 49 05.0**	**+1.7**
MDOK	**Medeo** 1.3nm,0.2s	**5.20**	**266**	*e*P	**Pb**	**21 48 17.8**	**-1.2**
MDOK	8.7nm,0.5s			*e*S	Sb	21 49 28.2	+7.2
MDOK	**Medeo** 8.4nm,0.6s	**5.20**	**266**	⇓Lg	Lg	21 49 28.9	
TNSS	**Tian-Shan** 1.7nm,0.2s	**5.29**	**265**	*e*P	**Pb**	**21 48 18.9**	**-1.8**
TNSS	3.6nm,0.4s			*e*S	**Sb**	**21 49 29.6**	**+5.7**
KUU	**Kurty** 1.2nm,0.3s	**5.65**	**274**	*e*P	**Pb**	**21 48 24.7**	**-1.9**
KUU	6.2nm,0.3s			*e*S	**Sb**	**21 49 39.6**	**+5.7**
TKM2	**Tokmak 2** 3.2nm,0.6s	**6.29**	**266**	⇑Lg	Lg	21 50 04.0	
AAK	**Ala-Archa** 2.9nm,0.7s	**7.14**	**265**	⇓Lg	Lg	21 50 30.0	
KSH	**Kashi**	**7.42**	**238**	PKP	**Pn**	**21 48 39.3**	**+3.3**
KSH				PP		21 51 00.4	
KSH	comp=Z,590nm,9.8s			AMB	AMB		
KSH	comp=N,630nm,8.5s			LR	LR		
KSH	comp=E,520nm,9.6s			LR	LR		
KSH	comp=Z,870nm,11.8s			LR	LR		
KURBB	**Kurchatov Arra** comp=Z,4.2nm,1.3s	**7.89**	**333**	⇓Pn	**Pn**	**21 48 39.3**	**-2.9**
KURBB	comp=Z,2.5nm,0.6s			⇓Sn	**Sn**	**21 50 08.4**	**-2.3**
KURBB	comp=Z,10nm,0.6s			⇑Lg	Lg	21 50 55.8	

IDC 11 21:48:09.1±2.2**, 6°.47S**×**129°.80E, h0km, mb3.5**/2**, mb1 3.4**/4**, mb1mx3.2**/38**, mbtmp3.3**/4**, ML3.1**/2**, Error ellipse: s-maj=173.3km s-min=30.3km az=69.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.1nm,0.3s,baz=346,slow=12,SNR=1.7	**14.10**	**162**	Pn	Pn	21 51 31.7	+1.4
WRA	0.3nm,0.3s,baz=334,slow=22,SNR=6.9			Sn	Sn	21 53 51.7	-16
ASAR	**Alice Springs** 0.1nm,0.3s,baz=343,slow=11,SNR=5.9	**17.55**	**167**	P	Pn	21 52 14.3	-1.1
MKAR	**Makanchi Array** 0.2nm,0.3s,baz=114,slow=8.1,SNR=8.0	**67.67**	**327**	P	P	21 59 08.4	+0.3
KURBB	**Kurchatov Arra** 0.4nm,1.0s,baz=128,slow=4.9,SNR=4.0	**71.95**	**328**	P	P	21 59 34.1	-0.3

IDC 11 21:50:02.8±69.0**, 17°.57S**×**178°.24E, h0km, mb3.7**/3**, mb1 3.9**/3**, mb1mx3.6**/30**, mbtmp3.7**/3**, MS4.6**/3**, Ms1 4.6**/3**, ms1mx4.0**/46**, Error ellipse: s-maj=1227.0km s-min=160.5km az=77.0, Fiji Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek** 1.1nm,0.5s,baz=80,slow=6.6,SNR=2.1	**36.02**	**240**	P	P	21 57 06.9	+1.1
WRA	**Warramunga Arr** 0.2nm,0.3s,baz=95,slow=7.7,SNR=5.8	**41.55**	**260**	P	P	21 57 52.7	+0.2
ASAR	**Alice Springs** 0.5nm,0.6s,baz=98,slow=7.7,SNR=6.1	**41.81**	**254**	P	P	21 57 53.2	-1.3
GUMO	**Guam** comp=Z,706nm,21.6s,baz=132,slow=34	**45.21**	**311**	LR	LR	22 15 44.1	
FITZ	**Fitzroy Crossi** comp=Z,713nm,18.7s,baz=60,slow=35	**49.93**	**261**	LR	LR	22 19 27.5	
JNU	**Nakatsue** comp=Z,533nm,21.4s,baz=134,slow=33	**67.73**	**318**	LR	LR	22 27 18.9	

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*IDC **11** 22:24:03.9±0.9, 5°.13S×152°.66E, h0km, mb4.2/17, mb1 4.3/18, mb1mx4.1/57, mbtmp4.2/18, ML2.2/1, Error ellipse: s-maj=32.6km s-min=15.3km az=123.0*

*DJA **11** 22:24:13.6±1.0, 5°S±7°×15°2E±1°9, h45km±7km, M4.6/8, mb4.6/8, mB6.6/1, MLv4.6/2, Mw(mB)6.4/1*

*NEIC **11** 22:24:13.3±1.8, 5°.04S±0°.07×152°.53E±0°.05, h62km±7km, mb4.5/24, Error ellipse: s-maj=10.7km s-min=7.0km az=204.0*

ISC 11 22:24:12.2±0.7**, 5°.12S**±0°.07×**152°.6E**±0°.1**, h55km, n82, σ1s.06**/84**, mb4.4**/34**, New Britain region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**0.99**	**337**		**Pn**	**22 24 29.3**	**-0.8**
RABL				Sn	**Sn**	**22 24 44.9**	**+1.6**
PMG	**Port Moresby** 2.8nm,0.3s,baz=24,slow=9.4,SNR=7.5	**6.83**	**231**	Pn	**Pn**	**22 25 48.3**	**-1.7**
PMG	4.0nm,0.3s,baz=225,slow=15,SNR=6.7			Sn	**Sn**	**22 27 05.6**	**-0.8**
PMG	**Port Moresby**	**6.83**	**231**		**Pn**	**22 25 51.6**	**+1.7**
DZM	**Mont Dzumac**	**21.57**	**143**	P	**P**	**22 28 59.5**	**+2.0**
DZM	comp=Z,19nm,1.1s			IAmb	IAmb	22 28 59.7	
MTN	**Manton Dam**	**22.48**	**249**	P	**P**	**22 29 07.9**	**+0.6**
MTN	comp=Z,7.2nm,0.8s			IAmb	IAmb	22 29 20.9	
WB0	**Warramunga Arr**	**22.90**	**229**	P	**P**	**22 29 11.0**	**-0.7**
WB0	comp=Z,9.1nm,1.0s			IAmb	IAmb	22 29 13.4	
WR0	**Warramunga Arr**	**22.91**	**228**	P	**P**	**22 29 11.2**	**-0.5**
WB2	**Warramunga Arr**	**23.04**	**229**	P	**P**	**22 29 11.8**	**-1.2**
WRA	**Warramunga Arr** comp=Z,3.4nm,0.7s,baz=51,slow=9.5,SNR=30	**23.05**	**229**	P	**P**	**22 29 11.2**	**-1.9**
WRA	**Warramunga Arr**	**23.05**	**229**	P	**P**	**22 29 11.0**	**-2.1**
AS31	**Alice Springs**	**25.74**	**222**	P	**P**	**22 29 39.3**	**+1.4**
ASAR	**Alice Springs** comp=Z,2.4nm,0.5s,baz=58,slow=8.8,SNR=24	**25.75**	**222**	P	**P**	**22 29 36.8**	**-1.2**
ASAR	**Alice Springs**	**25.75**	**222**	P	**P**	**22 29 38.3**	**+0.3**
FITZ	**Fitzroy Crossi** comp=Z,3.2nm,0.5s,baz=59,slow=7.5,SNR=27	**29.29**	**242**	P	**P**	**22 30 08.7**	**-1.0**
FITZ	**Fitzroy Crossi**	**29.29**	**242**	P	**P**	**22 30 08.8**	**-0.8**
FITZ	comp=Z,4.5nm,0.8s			IAmb	IAmb	22 30 18.5	
USRK	**Ussuriysk Ar.** comp=Z,0.6nm,0.6s,baz=186,slow=9.5,SNR=4.4	**52.46**	**341**	P	**P**	**22 33 18.4**	**-1.1**
KLR	**Kul'dur** comp=Z,0.9nm,0.6s,baz=191,slow=2.9,SNR=5.4	**57.08**	**344**	P	**P**	**22 33 51.7**	**-1.0**
CM04	**Chiang Mai Arr**	**57.73**	**295**	P	**P**	**22 33 59.8**	**+1.8**
CM09	**Chiang Mai Arr**	**57.73**	**295**	P	**P**	**22 34 00.2**	**+2.2**
CM01	**Chiang Mai Arr**	**57.76**	**295**	P	**P**	**22 34 00.5**	**+2.4**
CM05	**Chiang Mai Arr**	**57.76**	**295**	P	**P**	**22 34 00.1**	**+1.9**
CM02	**Chiang Mai Arr**	**57.77**	**295**	P	**P**	**22 34 00.5**	**+2.2**
CM31	**Chiang Mai Arr**	**57.78**	**295**	P	**P**	**22 33 58.6**	**+0.2**
CM31	comp=Z,4.8nm,0.6s			IAmb	IAmb	22 34 00.5	
CMAR	**Chiang Mai Arr** comp=Z,4.1nm,0.9s,baz=109,slow=5.3,SNR=20	**57.78**	**295**	P	**P**	**22 33 59.4**	**+1.0**
CMAR	**Chiang Mai Arr**	**57.78**	**295**	P	**P**	**22 33 58.8**	**+0.5**
CM15	**Chiang Mai Arr**	**57.80**	**295**	P	**P**	**22 34 00.1**	**+1.7**
CM13	**Chiang Mai Arr**	**57.80**	**295**	P	**P**	**22 34 00.1**	**+1.6**
CMMT	**Chiang Mai**	**57.89**	**296**	P	**P**	**22 33 59.0**	**-0.1**
CM33	**Chiang Mai Arr**	**57.89**	**296**	P	**P**	**22 34 00.0**	**+0.9**
PEA0B	**Petropavlovsk-**	**58.17**	**4**	P	**P**	**22 34 00.3**	**0.0**
PETK	**Petropavlovsk-** comp=Z,1.8nm,0.4s,baz=159,slow=7.0,SNR=7.0	**58.17**	**4**	P	**P**	**22 34 00.3**	**-0.1**
PETK	**Petropavlovsk-**	**58.17**	**4**	P	**P**	**22 34 00.2**	**-0.2**
SONM	**Songino Array** comp=Z,0.7nm,0.5s,baz=145,slow=5.2,SNR=10.0	**66.46**	**328**	P	**P**	**22 34 56.6**	**+0.5**
TAPN	**Taplejung** comp=Z,15nm,1.0s	**70.35**	**301**	*e*P	**P**	**22 35 21.4**	**+0.3**
ODAN	**Odare** comp=Z,12nm,0.7s	**70.48**	**301**	*e*P	**P**	**22 35 21.9**	**+0.1**
RAMN	**Ramite** comp=Z,5.1nm,0.5s	**71.19**	**301**	*e*P	**P**	**22 35 26.3**	**+0.2**
GUN	**Gumba** comp=Z,15nm,0.7s	**72.07**	**301**	*e*P	**P**	**22 35 31.5**	**0.0**
PKI	**Pulchoki** comp=Z,3.9nm,0.6s	**72.38**	**301**	*e*P	**P**	**22 35 33.2**	**-0.1**
PKIN	**Phulchoki**	**72.39**	**301**	*e*P	**P**	**22 35 32.7**	**-0.6**
KKN	**Kakani** comp=Z,6.6nm,0.5s	**72.55**	**301**	*e*P	**P**	**22 35 34.4**	**+0.2**
DMN	**Daman**	**72.65**	**301**	*e*P	**P**	**22 35 34.8**	**0.0**
GKN	**Gorkha**	**73.15**	**301**	*e*P	**P**	**22 35 37.5**	**-0.2**
DANN	**Dangsing** comp=Z,8.6nm,0.6s	**73.99**	**301**	*e*P	**P**	**22 35 43.0**	**+0.2**
CNPM	**China Poot**	**78.11**	**26**	P	**P**	**22 36 05.4**	**+0.2**
TTA	**Tatalina**	**78.16**	**21**	P	**P**	**22 36 06.0**	**+0.5**
TTA	comp=Z,6.7nm,0.8s			IAmb	IAmb	22 36 06.9	
BRLK	**Bradley Lake**	**78.39**	**26**	P	**P**	**22 36 06.3**	**-0.4**
SUA	**Susitna One**	**79.35**	**24**	P	**P**	**22 36 11.6**	**-0.6**
MK31	**Makanchi Array**	**80.40**	**319**	P	**P**	**22 36 17.6**	**-0.4**
MKAR	**Makanchi Array** comp=Z,0.3nm,0.4s,baz=95,slow=8.1,SNR=12	**80.40**	**319**	P	**P**	**22 36 17.7**	**-0.3**
MKAR	**Makanchi Array**	**80.40**	**319**	P	**P**	**22 36 17.8**	**-0.2**
SML	**Sawmill**	**80.51**	**24**	P	**P**	**22 36 18.5**	**+0.1**
IMAR	**Indian Mountai**	**80.77**	**20**	P	**P**	**22 36 19.8**	**+0.3**
RND	**Reindeer**	**81.11**	**23**	P	**P**	**22 36 20.9**	**-0.6**
RND	comp=Z,13nm,0.8s			IAmb	IAmb	22 36 22.1	
ZAA0	**Zalesovo Array**	**81.27**	**326**	P	**P**	**22 36 21.7**	**-0.8**
ZAA0	comp=Z,2.0nm,0.6s			IAmb	IAmb	22 36 23.2	
ZALV	**Zalesovo Beam** comp=Z,2.0nm,0.7s,baz=118,slow=5.5,SNR=12	**81.27**	**326**	P	**P**	**22 36 21.6**	**-0.8**
IL31		**82.55**	**22**	P	**P**	**22 36 27.9**	**-1.0**
IL31	comp=Z,5.5nm,0.8s			IAmb	IAmb	22 36 28.9	
ILAR	**Eielson Array** comp=Z,5.5nm,0.7s,baz=243,slow=5.7,SNR=56	**82.55**	**22**	P	**P**	**22 36 27.9**	**-1.0**
ILAR	**Eielson Array**	**82.55**	**22**		**P**	**22 36 28.1**	**-0.8**
COLD	**Coldfoot**	**82.64**	**19**	P	**P**	**22 36 30.2**	**+0.9**
COLD	comp=Z,4.9nm,1.0s			IAmb	IAmb	22 36 31.9	
BCAR	**Beaver Creek A**	**83.80**	**25**	P	**P**	**22 36 36.2**	**+0.7**
KURK	**Kurchatov**	**83.86**	**322**	P	**P**	**22 36 35.3**	**-0.7**
KURBB	**Kurchatov Arra** comp=Z,0.6nm,0.7s,baz=108,slow=4.3,SNR=5.2	**83.89**	**322**	P	**P**	**22 36 35.6**	**-0.5**
NIL	**Nilore**	**83.94**	**304**	P	**P**	**22 36 36.7**	**-0.2**
NIL	comp=Z,7.6nm,0.8s			IAmb	IAmb	22 36 38.4	
CHMS	**Chumysh** SNR=6.2	**84.59**	**314**	P	**P**	**22 36 41.1**	**+1.1**
UCH	**Uchtor** SNR=8.3	**84.60**	**313**	P	**P**	**22 36 42.4**	**+1.8**
BMAR	**Burnt Mountain**	**84.63**	**20**		**P**	**22 36 40.3**	**+0.7**
AAK	**Ala-Archa** comp=Z,3.6nm,0.8s,baz=139,slow=4.1,SNR=20	**84.70**	**314**	P	**P**	**22 36 41.2**	**+0.5**
AAK	**Ala-Archa**	**84.70**	**314**	P	**P**	**22 36 41.5**	**+0.8**
AAK	comp=Z,5.4nm,1.1s			IAmb	IAmb	22 36 43.0	
USP	**Ospenovka** SNR=9.8	**84.83**	**314**	P	**P**	**22 36 41.3**	**+0.2**
AML	**Almayashu** SNR=20	**85.18**	**313**	P	**P**	**22 36 45.2**	**+1.8**
EKS2	**Erkin-Say** SNR=7.7	**85.22**	**313**	P	**P**	**22 36 44.8**	**+1.6**
NRIK	**Noril'sk** comp=Z,1.7nm,0.5s,baz=100,slow=7.0,SNR=4.4	**86.18**	**341**	P	**P**	**22 36 46.5**	**-0.7**
NRIK	**Noril'sk**	**86.18**	**341**	P	**P**	**22 36 47.2**	**-0.1**
NRIK	comp=Z,6.9nm,1.5s			IAmb	IAmb	22 37 03.6	
KKAR	**Karatay Array**	**87.66**	**313**	P	**P**	**22 36 55.0**	**-0.1**
INK	**Inuvik** comp=Z,1.2nm,0.6s,baz=239,slow=5.9,SNR=3.7	**88.84**	**21**	P	**P**	**22 36 59.0**	**-1.0**
BVAR	**Borovoye Array** comp=Z,0.2nm,0.3s,baz=98,slow=9.1,SNR=3.5	**89.34**	**323**	P	**P**	**22 37 01.1**	**-1.6**
YKA	**Yellowknife Ar** comp=Z,0.7nm,0.6s,baz=267,slow=3.9,SNR=11	**95.82**	**28**	P	**P**	**22 37 31.9**	**-0.5**
GERES	**GERESS Array B** comp=Z,1.0nm,0.7s,baz=72,slow=0.4,SNR=7.6	**124.19**	**328**	PKP	**PKiKP**	**22 43 05.5**	**+0.1**
TORD	**Torodi Ar. Bea** comp=Z,2.9nm,0.7s,baz=68,slow=2.9,SNR=13	**150.16**	**288**	PKPbc	**PKiKP**	**22 43 57.8**	**-1.2**
TORD	**Torodi Ar. Bea**	**150.16**	**288**		**PKiKP**	**22 43 57.2**	**-1.7**
BDFB	**Brasilia** comp=Z,0.8nm,0.4s,baz=222,slow=8.4,SNR=3.8	**151.02**	**136**	PKPbc	**PKiKP**	**22 44 00.5**	**-0.3**
DBIC	**Dimbokro** comp=Z,6.8nm,1.1s,baz=56,slow=3.0,SNR=6.0	**157.47**	**275**	PKPab	**PKPab**	**22 44 35.5**	**+0.3**

IDC 11 22:27:42.2±1.6**, 23°.19N**×**141°.48E, h224km**±17km**, mb3.3**/6**, mb1 3.5**/7**, mb1mx2.9**/73**, mbtmp3.8**/7**, Error ellipse: s-maj=43.8km s-min=15.6km az=95.0, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima** 7.2nm,0.3s,baz=298,slow=22,SNR=1.8	**3.94**	**9**	P	Pn	22 28 45.4	+1.3
JCJ	14nm,0.3s,baz=281,slow=23,SNR=8.9			S	S	22 29 33.0	+0.2
WRA	**Warramunga Arr** 2.2nm,0.5s,baz=6.7,slow=8.5,SNR=33	**43.43**	**190**	P	P	22 35 22.4	-0.9
ASAR	**Alice Springs** 0.6nm,0.6s,baz=16,slow=13,SNR=8.1	**47.16**	**189**	P	P	22 35 53.1	+0.7
BVAR	**Borovoye Array** 0.2nm,0.3s,baz=78,slow=3.1,SNR=2.6	**60.52**	**319**	P	P	22 37 29.3	+0.6
YKA	**Yellowknife Ar** 0.2nm,0.5s,baz=298,slow=5.4,SNR=2.1	**75.87**	**28**	P	P	22 39 03.1	-0.5
FINES	**FINESS Array B** 2.3nm,0.9s,baz=70,slow=4.7,SNR=6.3	**81.16**	**334**	P	P	22 39 32.1	-0.4
NVAR	**Mina Array Bea** 0.1nm,0.3s,baz=291,slow=6.3,SNR=4.1	**83.44**	**51**	P	P	22 39 45.9	+0.8

JMA 11 22:27:58.4±0.1**, 38°.02N**×**142°.25E, h38km**±2km**, M2.0, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**0.68**	**295**	P	Pn	22 28 11.4	-0.2
JIKH				S	Sn	22 28 21.0	0.0
JIO	**Ouri**	**0.83**	**302**	P	Pn	22 28 13.8	+0.2
JIO				S	Sn	22 28 24.9	+0.3
JKMT	**Kesennumamotoy**	**1.00**	**323**	P	Pn	22 28 16.1	+0.3
JKMT				*e*S	Sn	22 28 28.8	+0.1
JMST	**Minamisoumatoc**	**1.12**	**255**	S	Sn	22 28 31.1	-0.5
JMK	**Ichinoseki**	**1.23**	**319**	P	Pn	22 28 20.2	+1.1
JFK	**Kawauchi**	**1.27**	**240**	P	Pn	22 28 20.1	+0.5
JFK				*e*S	Sn	22 28 34.3	-1.2
JFT	**Otama**	**1.60**	**252**	S	Sn	22 28 45.3	+1.8
JOM	**Ohasama**	**1.63**	**333**	P	Pn	22 28 26.3	+1.7
JOM				*e*S	Sn	22 28 46.2	+1.9

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*IDC **11** 22:34:14.0±3.0, 13°.79S×167°.22E, h0km, mb4.1/5, mb1 4.3/6, mb1mx3.8/48, mbtmp4.2/6, ML5.2/1, MS3.7/2, Ms1 3.7/2, ms1mx3.2/28, Error ellipse: s-maj=69.7km s-min=34.7km az=113.0*

ISC 11 22:34:19.9±2.2**, 13°.8S**±0°.2×**167°.1E**±0°.3**, h35km, n8, σ0s.74**/6**, mb4.1**/5**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HNR	**Honiara** 28nm,0.3s,baz=147,slow=8.8,SNR=2.9	**8.22**	**301**	Pn	**Pn**	**22 36 16.8**	**0.0**
JAY	**Jayapura** comp=Z,133nm,21.1s,baz=199,slow=32	**28.38**	**291**	LR	LR	22 49 33.7	
STKA	**Stephens Creek** 1.8nm,0.5s,baz=36,slow=7.6,SNR=5.6	**29.50**	**228**	P	**P**	**22 40 21.1**	**+0.2**
WRA	**Warramunga Arr** 2.2nm,0.8s,baz=86,slow=9.4,SNR=21	**31.91**	**254**	P	**P**	**22 40 42.2**	**-0.1**
RAR	**Rarotonga** comp=Z,153nm,19.1s,baz=259,slow=33	**32.40**	**108**	LR	LR	22 52 13.1	
ASAR	**Alice Springs** 2.0nm,0.7s,baz=76,slow=9.1,SNR=19	**32.87**	**248**	P	**P**	**22 40 50.6**	**-0.2**
SONM	**Songino Array** 0.1nm,0.4s,baz=130,slow=4.3,SNR=4.7	**81.63**	**324**	P	**P**	**22 46 35.3**	**+0.8**
MKAR	**Makanchi Array** 0.5nm,0.7s,baz=94,slow=6.4,SNR=7.0	**96.40**	**316**	P	**P**	**22 47 44.4**	**-0.9**

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*NIC **11** 22:42:06.2±0.0, 35°.63N×31°.49E, h10km±1km, Ml3.7/5*

*DDA **11** 22:42:06.1, 35°.49N×31°.41E, h18km±2km, ML3.5*

*ISK **11** 22:42:06.8, 35°.48N×31°.58E, h3km, ML3.7/27*

*IDC **11** 22:42:08.3±1.1, 35°.34N×31°.34E, h47km±15km, mb3.5/9, mb1 3.6/14, mb1mx3.4/52, mbtmp3.7/14, ML3.8/5, Error ellipse: s-maj=13.3km s-min=9.6km az=29.0*

*HLW **11** 22:42:08.6, 35°.50N×31°.07E, h6km±21km, Md3.8*

ISC 11 22:42:06.7±1.1**, 35°.51N**±0°.02×**31°.45E**±0°.02**, h18km**±6km**, n123, σ2s.18**/160**, mb3.7**/10**, 2C-1D, Cyprus region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AKMS	**Akamas**	**0.88**	**124**	P	**Pg**	**22 42 23.5**	**-0.3**
AKMS				S	**Sn**	**22 42 37.6**	**+1.2**
AKMS	6.3nm,0.2s			AML	AML	22 42 41.3	
AKMS	6.3nm,0.2s			AML	AML	22 42 41.3	
AKMS	10nm,0.3s			AML	AML	22 42 42.0	
AKMS	10nm,0.3s			AML	AML	22 42 42.0	
ALFC	**Alefka**	**1.00**	**110**	⇑P	**Pg**	**22 42 25.4**	**-0.7**
ALFC				S	**Sg**	**22 42 40.0**	**+0.6**
ALFC	8.0nm,0.6s			AML	AML	22 42 45.5	
ALFC	8.0nm,0.6s			AML	AML	22 42 45.5	
ALFC	7.8nm,0.2s			AML	AML	22 42 46.0	
ALFC	7.8nm,0.2s			AML	AML	22 42 46.0	
GAZI	**Gazipasa**	**1.01**	**44**	PG	**Pg**	**22 42 25.9**	**-0.4**
GAZI				SG	**Sg**	**22 42 39.9**	**+0.4**
GAZI	**Gazipasa**	**1.01**	**44**	*i* P	**Pg**	**22 42 25.6**	**-0.6**
GAZI				*i* S	**Sg**	**22 42 33.7**	**-5.8**
GAZI	comp=E,978nm,0.3s			IAML		22 42 45.0	
ALAN	**Alanya-ANTALYA**	**1.15**	**24**	PN	**Pb**	**22 42 28.3**	**+0.3**
NATA	**Nata**	**1.17**	**128**	P	**Pb**	**22 42 29.1**	**+0.7**
NATA	comp=E,11nm,0.8s			AML	AML	22 42 56.6	
NATA	comp=E,12nm,0.4s			AML	AML	22 42 58.2	
AKUM	**Antalya-Kumluc**	**1.21**	**312**	*i* P	**Pg**	**22 42 29.9**	**-0.1**
AKUM				*i* S	**Sg**	**22 42 45.6**	**-0.3**
LEF	**Lefka**	**1.24**	**108**	PN	**Pn**	**22 42 28.4**	**-0.7**
LEF				SN	**Sb**	**22 42 44.2**	**-1.0**
KEMT	**Kemer-ANTALYA**	**1.31**	**327**	PN	**Pg**	**22 42 33.7**	**+1.7**
BOZY	**Bozyazi-Mersin**	**1.38**	**64**	PN	**Pn**	**22 42 32.4**	**+1.4**
KEPZ	**Antalya-Kepez**	**1.39**	**5**	*i* P	**Pn**	**22 42 31.8**	**+0.5**
KEPZ				*i* S	**Sn**	**22 42 45.4**	**-3.9**
SZAC	**Souni**	**1.40**	**122**	⇓P	**Pn**	**22 42 32.4**	**+1.1**
SZAC				S	**Sb**	**22 42 51.7**	**+2.0**
SZAC	comp=E,3.5nm,0.4s			AML	AML	22 43 06.9	
SZAC	comp=E,3.5nm,0.4s			AML	AML	22 43 06.9	
SZAC	comp=E,4.6nm,0.7s			AML	AML	22 43 08.7	
SZAC	comp=E,4.6nm,0.7s			AML	AML	22 43 08.7	
TEKE	**Tekeli-Mersin**	**1.49**	**65**	PN	**Pn**	**22 42 33.7**	**+1.1**
TEKE				SN	**Sn**	**22 42 54.1**	**+2.5**
ANTB	**Antalya**	**1.53**	**335**	PN	**Pg**	**22 42 36.6**	**+0.5**
ANTB				SN	**Sg**	**22 42 58.5**	**+2.5**
ATHAL	**Athalassa**	**1.63**	**102**	P	**Pn**	**22 42 35.1**	**+0.6**
ATHAL				S	**Sn**	**22 42 56.7**	**+1.6**
CSS	**Mathiatis**	**1.63**	**109**	PN	**Pn**	**22 42 35.6**	**+1.0**
CSS				SN	**Sn**	**22 42 56.6**	**+1.4**
CSS	**Mathiatis**	**1.63**	**109**	⇑P	**Pn**	**22 42 34.5**	**0.0**
CSS				S	**Sn**	**22 42 57.7**	**+2.6**
ASGA	**Asgata**	**1.64**	**116**	P	**Pn**	**22 42 35.5**	**+0.9**
ASGA				S	**Sn**	**22 42 57.8**	**+2.5**
ASGA	comp=E,2.9nm,0.6s			AML	AML	22 43 08.1	
ASGA	comp=E,2.9nm,0.6s			AML	AML	22 43 08.1	
ASGA	comp=E,2.4nm,0.6s			AML	AML	22 43 11.2	
ASGA	comp=E,2.4nm,0.6s			AML	AML	22 43 11.2	
AKAS	**Kas**	**1.66**	**296**	PN	**Pg**	**22 42 39.0**	**+0.3**
AKAS	**Kas**	**1.66**	**296**	*i* P	**Pn**	**22 42 36.3**	**+1.2**
AKAS				*i* S	**Sn**	**22 42 55.3**	**-0.7**
BERE	**Bereket-Mersin**	**1.66**	**59**	PN	**Pn**	**22 42 36.6**	**+1.5**
BERE				SN	**Sn**	**22 42 58.3**	**+2.2**
YORU	**Yoruktepe-Mers**	**1.71**	**67**	PN	**Pn**	**22 42 37.1**	**+1.4**
AKIN	**Akıncılar- Kıb**	**1.72**	**106**	PN	**Pn**	**22 42 36.7**	**+0.9**
KORT	**Korkueli**	**1.73**	**329**	PN	**Pg**	**22 42 39.8**	**-0.2**
KORT	**Korkueli**	**1.73**	**329**	*i* P	**Pb**	**22 42 39.3**	**+1.2**
KORT				*i* S	**Sb**	**22 43 01.5**	**+2.0**
ELL	**Elmali**	**1.75**	**315**	PN	**Pg**	**22 42 40.3**	**-0.2**
OREN	**Orenkoy-Mersin**	**1.77**	**66**	PN	**Pn**	**22 42 38.0**	**+1.6**
AKK1	**Akkuyu-Mersin**	**1.81**	**69**	PN	**Pn**	**22 42 38.8**	**+1.8**
AKK2	**Akkuyu-Mersin**	**1.82**	**69**	PN	**Pn**	**22 42 38.5**	**+1.5**
AKKU	**Akkuyu-Mersin**	**1.83**	**69**	PN	**Pn**	**22 42 38.9**	**+1.7**
TEPK	**Tepekoy-MERSIN**	**1.84**	**67**	PN	**Pn**	**22 42 39.3**	**+1.8**
TEVE	**Tevekalti-Mers**	**1.86**	**60**	PN	**Pn**	**22 42 39.5**	**+1.7**
YESI	**Yesilovacik-Me**	**1.91**	**68**	PN	**Pn**	**22 42 40.1**	**+1.8**
TISA	**Tisan-Mersin**	**1.92**	**70**	PN	**Pn**	**22 42 39.8**	**+1.3**
BUCA	**Burdur, Bucak-**	**1.95**	**339**	*i* P	**Pn**	**22 42 40.5**	**+1.5**
BUCA				*i* S	**Sn**	**22 43 03.7**	**+0.7**
SEDI	**Konya, Seydise**	**1.95**	**7**	*i* P	**Pn**	**22 42 40.8**	**+1.8**
SEDI				*i* S	**Sn**	**22 42 59.1**	**-4.1**
IKL	**Isikli**	**1.96**	**68**	PN	**Pn**	**22 42 40.9**	**+1.9**

KARG	Kargicak-Mersi	1.96	69	PN	Pn	22 42 41.2	+2.2
OSC1	CSNet OBS 1	2.01	184	P	Pn	22 42 41.8	+2.1
KEBE	Keben-Mersin	2.06	62	PN	Pn	22 42 42.8	+2.3
BCK	Bucak	2.07	341	PN	Pb	22 42 44.4	+0.7
KKBE	Karaman, Kazim	2.09	35	*i* P	Pn	22 42 43.9	+3.0
KKBE				*i* S	Sn	22 43 04.5	-2.0
SILI	Silifke-Mersin	2.18	66	PN	Pn	22 42 43.6	+1.5
EREN	Erenkoy	2.22	89	PN	Pn	22 42 43.9	+1.3
EREN	Erenkoy	2.22	89	*i* P	Pn	22 42 44.5	+1.9
EREN				*i* S	Sn	22 43 05.2	-4.3
EREN				IAML		22 43 26.0	
	comp=E,294nm,0.5s						
FETY	Fethiye	2.22	301	PN	Pb	22 42 47.1	+0.8
GOLH	Golhisar	2.30	319	*i* P	Pb	22 42 47.1	-0.6
GOLH				*i* S	Sn	22 43 12.6	+0.9
CAEL	Denizli, Camel	2.35	314	*i* P	Pb	22 42 49.9	+1.2
CAEL				*i* S	Sn	22 43 13.7	+0.6
CAEL				IAML		22 43 46.0	
	comp=N,322nm,0.9s						
CAEL				IAML		22 43 46.0	
	comp=E,243nm,1.5s						
ISP	Isparta	2.42	342	PN	Pb	22 42 49.6	-0.2
BRDR	BURDUR-Merkez	2.45	333	*i* P	Pb	22 42 50.8	+0.6
BRDR				*i* S	Sn	22 43 16.3	+0.8
OSC2	CSNet OBS 4	2.52	164	P	Pn	22 42 48.5	+1.8
BAGO	Egridir - ISPA	2.53	348	*i* P	Pb	22 42 50.9	-0.8
BAGO				*i* S	Sn	22 43 11.9	-5.5
KONT	Konya--Tatoy	2.54	16	PN	Pn	22 42 50.1	+3.1
KONT	Konya--Tatoy	2.54	16	*i* P	Pb	22 42 51.1	-0.6
KONT				*i* S	Sn	22 43 15.4	-2.1
DOGA	KONYA_Doganhis	2.60	4	*i* P	Pn	22 42 50.9	+2.9
DOGA				*i* S	Sn	22 43 17.1	-1.9
DOGA				IAML		22 43 32.0	
	comp=E,204nm,0.4s						
DOGA				IAML		22 43 33.0	
	comp=N,239nm,0.8s						
DALY	Dalyan (Mula)	2.61	301	*i* P	Pn	22 42 49.2	+1.2
DALY				*i* S	Sn	22 43 10.8	-8.4
YVAC	Isparta, Yalva	2.76	357	*i* P	Pn	22 42 52.4	+2.3
YVAC				*i* S	Sn	22 43 14.0	-9.1
LADK	Ladik-KONYA	2.78	15	PN	Pn	22 42 53.9	+3.4
ARG	Arkhangelos	2.79	286	P	Pn	22 42 51.0	+0.6
ARG				S	Sn	22 43 20.9	-2.7
TAVA	DENIZLI_Tavas	2.83	314	*i* P	Pn	22 42 52.7	+1.7
TAVA				*i* S	Sn	22 43 22.0	-2.7
KERG	Konya-Eregli	2.87	48	*i* P	Pn	22 42 54.6	+2.9
KERG				*i* S	Sn	22 43 19.6	-6.3
KERG				IAML		22 43 39.0	
	comp=N,163nm,0.6s						
TURN	Turunc	2.88	297	*i* P	Pn	22 42 52.5	+0.8
YESY	Yesilyurt	2.92	38	PN	Pn	22 42 54.8	+2.4
KZIL	AFYON_Kizioren	2.94	339	*i* P	Pn	22 42 55.3	+2.7
KZIL				*i* S	Sn	22 43 21.5	-5.9
ALIN	Konya, Altinte	3.01	22	*i* P	Pn	22 42 57.2	+3.7
ALIN				*i* S	Sn	22 43 22.4	-6.8
YER	Yerkesik	3.03	303	P	Pn	22 42 55.9	+2.1
KDHN	Kadinhani	3.05	10	*i* P	Pn	22 42 58.4	+4.2
KDHN				*i* S	Sn	22 43 23.2	-7.0
DED	Mersin	3.07	61	*i* P	Pn	22 42 56.6	+2.3
DED				*i* S	Sn	22 43 21.6	-9.0
GULE	Gulek	3.21	56	*i* P	Pn	22 43 00.8	+4.3
GULE				*i* S	Sn	22 43 30.4	-4.0
GULE				IAML		22 43 51.0	
	comp=N,183nm,0.8s						
KRTS	Karatas	3.35	70	PN	Pn	22 43 00.9	+2.7
KARA	Karaisali	3.39	58	PN	Pn	22 43 01.6	+2.9
KARP	Karpathos	3.50	272	P	Pn	22 43 01.1	+0.9
KARP	Karpathos	3.50	272	P	Pn	22 43 01.1	+0.9
CMRD	Camardi-Nigde	3.57	52	PN	Pn	22 43 04.3	+3.0
AKSY	AKSARAY - Alti	3.64	30	*i* P	Pn	22 43 05.3	+3.1
NIDE	Nigde/Merkez-G	3.65	46	*i* P	Pn	22 43 05.8	+3.4
NIDE				*i* S	Sn	22 43 38.0	-7.0
BODT	Bodrum	3.69	296	P	Pn	22 43 02.6	-0.2
CEYT	Ceyhan	3.78	65	PN	Pn	22 43 06.9	+2.8
HWQ	Hawqa	3.90	107	*e*P	Pn	22 43 07.7	+2.0
KOZT	Kozan	4.04	60	PN	Pn	22 43 10.7	+3.1
SGAZ	Eskisehir, Sey	4.04	353	*i* P	Pn	22 43 09.2	+1.5
YAHY	KAYSERI_Yahyal	4.06	49	*i* P	Pn	22 43 11.6	+3.5
MMAI	Mount Meron Ar	4.11	126	P	Pn	22 43 09.1	+0.4
	comp=N,28nm,0.3s,baz=305,slow=12,SNR=138						
MMAI				S	Sn	22 43 55.0	-1.4
	comp=N,18nm,0.3s,baz=318,slow=35,SNR=9.6						
RCY	Rachaya	4.14	118	*e*P	Pn	22 43 09.6	+0.4
MMLI	Mount Malkishu	4.50	132	PN	Pn	22 43 14.7	+0.7
BRTR	Keskin Array B	4.55	22	P	Pn	22 43 16.8	+2.0
	comp=N,1.0nm,0.3s,baz=181,slow=15,SNR=20						
BRTR				S	Sn	22 44 12.4	+5.1
	comp=N,0.8nm,0.3s,baz=217,slow=28,SNR=4.8						
CHOS	Chios island	5.19	305	P	Pn	22 43 24.1	+0.6
IDI	Anoyia	5.36	270	P	Pn	22 43 25.6	-0.3
	comp=N,2.1nm,0.3s,baz=353,slow=6.5,SNR=11						
IDI				S	Sn	22 44 23.5	-3.7
	comp=N,6.5nm,0.3s,baz=262,slow=20,SNR=9.7						
MATC	Matruh	5.45	222	P	Pn	22 43 24.2	-2.8
	baz=219						
MATC				S	Sn	22 44 19.8	-9.4
	baz=219						
HHAG	Hagoal	5.57	174	P	Pn	22 43 29.1	+0.4
	baz=170						
KOT	Kottamia	5.58	177	P	Pn	22 43 29.3	+0.5
	baz=173						
HMYD	Mayadein	5.72	186	P	Pn	22 43 30.8	0.0
	baz=183						
HSAF	As Saff	5.88	179	P	Pn	22 43 33.1	+0.2
	baz=175						
HNAT	Natroun	5.90	187	P	Pn	22 43 34.0	+0.7
	baz=184						
HNAT				S	Sn	22 44 35.0	-5.5
	baz=184						
GLL	Jalalah	5.92	178	P	Pn	22 43 33.7	+0.2
	baz=174						
RYAN	Fayoum	6.49	189	P	Pn	22 43 41.3	+0.1
	baz=187						
EIL	Elat	6.53	152	P	Pn	22 43 42.2	+0.4
	comp=N,1.4nm,0.3s,baz=348,slow=3.3,SNR=14						
EIL				S	Sn	22 44 52.6	-3.3
	comp=N,2.6nm,0.3s,baz=48,slow=8.5,SNR=5.2						
SLUM	Salum	6.57	234	P	Pn	22 43 39.8	-2.6
	baz=233						
HFRF	Wahat Farafira	8.76	199	P	Pn	22 44 11.5	-0.9
	baz=197						
HFRF				S	Sn	22 45 41.9	-8.9
	baz=197						
HDK1	Dakhla	10.09	191	P	Pn	22 44 28.4	-2.3
	baz=189						
GERES	GERESS Array B	18.66	321	P	P	22 46 24.8	+1.1
	comp=N,0.2nm,0.3s,baz=127,slow=9.4,SNR=7.6						
WTTA	Wattenberg	18.88	314	*e*P	Pn	22 46 33.1	+6.3
	comp=N,0.6nm,0.3s						
KHC	Kasperske Hory	18.91	322	*e*P	P	22 46 26.5	+0.2
SQTA	Sankt Quirin	19.11	314	*e*P	P	22 46 29.6	+1.0
	comp=N,0.9nm,0.4s						
MOTA	Moosalm	19.24	314	*e*P	P	22 46 30.4	+0.3
	comp=N,0.6nm,0.3s						
FETA	Feichten	19.30	313	*e*P	Pn	22 46 32.4	+0.6
	comp=N,0.6nm,0.4s						
RETA	Reutte	19.51	314	*e*P	P	22 46 33.2	+0.3
	comp=N,1.1nm,0.3s						
DAVA	Damuels	19.93	313	*e*P	P	22 46 37.6	0.0
	comp=N,4.0nm,0.5s						
BELG	Belogornoye	20.42	29	P	P	22 46 42.9	+0.2
	comp=N,3.4nm,0.4s,baz=29,slow=21,SNR=4.4						
FINES	FINESS Array B	26.18	354	P	P	22 47 37.9	-1.9
	comp=N,1.8nm,0.8s,baz=148,slow=12,SNR=6.2						
HFS	Hagfors	27.19	340	P	P	22 47 48.0	-0.9
	comp=N,0.7nm,0.4s,baz=144,slow=10,SNR=1.3						
ESDC	Sonseca Array	28.25	289	P	P	22 47 57.7	-1.1
	comp=N,0.2nm,0.7s,baz=77,slow=9.9,SNR=2.0						
AAK	Ala-Archa	33.88	65	P	P	22 48 48.3	-0.1
	comp=N,0.5nm,0.5s,baz=210,slow=8.7,SNR=2.2						
KURBB	Kurchatov Arra	36.90	51	P	P	22 49 14.3	+0.2
	comp=N,0.4nm,0.3s,baz=286,slow=11,SNR=2.1						
MKAR	Makanchi Array	39.27	57	P	P	22 49 33.6	-0.7
	comp=N,0.6nm,0.5s,baz=274,slow=7.7,SNR=9.2						
ZALV	Zalesovo Beam	41.05	46	P	P	22 49 47.5	-1.3
	comp=N,0.3nm,0.3s,baz=261,slow=8.1,SNR=2.8						
DANN	Dangsing	44.54	84	*e*P	P	22 50 18.1	+0.3
	comp=N,6.0nm,0.4s						
GKN	Gorkha	45.38	84	*e*P	P	22 50 24.0	-0.4
	comp=N,2.6nm,0.3s						
DMN	Daman	45.92	84	*e*P	P	22 50 28.5	-0.3
PKI	Pulchoki	46.18	84	*e*P	P	22 50 30.5	-0.4
JIRN	Jiri	46.78	84	*e*P	P	22 50 37.0	+1.3
RAMN	Ramite	47.40	84	*e*P	P	22 50 40.2	-0.2
SONM	Songino Array	55.24	52	P	P	22 51 38.2	-0.5
	comp=N,0.3nm,0.5s,baz=280,slow=9.2,SNR=5.2						

AEIC 11 22:47:50±1.3, 67°.44N±0°.03×167°.8W±0°.1, h22^{km}±8^{km}, ML3.7, Error ellipse: s-maj=7.7km s-min=3.7km az=104.0

NEIC 11 22:47:51.7±1.4, 67°.48N±0°.07×167°.9W±0°.2, h40^{km}±9^{km}, Error ellipse: s-maj=14.1km s-min=6.8km az=126.0

IDC 11 22:47:54.9±2.0, 68°.00N×166°.83W, h0^{km}, mb3.6/4, mb1 4.0/6, mb1mx3.5/48, mbtmp3.8/6, ML3.8/2, Error ellipse: s-maj=73.0km s-min=19.0km az=17.0

ISC 11 22:47:52.7±1.2, 67°.36N±0°.07×167°.20W±0°.09, h10^{km}, n39, σ1^{s}.28/42, mb3.5/4, Bering Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RDOG	Red Dog Mine	1.78	65		Pn	22 48 22.7	-0.7
RDOG					Sn	22 48 46.9	+0.9
TNA	Tin City	1.83	190		Pn	22 48 21.9	-2.2
TNA					Sn	22 48 46.9	-0.5
ANM	Nome	2.91	164		Pn	22 48 37.9	-1.1
ANM					Sn	22 49 14.1	+0.2
GAMB	Gambell	4.06	210		Pn	22 48 51.9	-2.8
A21K	Barrow	5.46	38		Pn	22 49 12.9	-0.9
IM03		5.52	98		Pn	22 49 14.7	-0.1
IMAR	Indian Mountai	5.52	98		Pn	22 49 14.4	-0.3
TTA	Tatalina	6.48	128		Pn	22 49 28.3	+0.4
COLD	Coldfoot	6.58	83		Pn	22 49 29.0	-0.3
TOLK	Toolik Lake Re	6.74	71		Pn	22 49 31.3	-0.2
BPAW	Bear Paw Mtn.	7.43	109		Pn	22 49 41.9	+0.9
I23K	Minto, Yukon-K	7.53	99		Pn	22 49 43.0	+0.7
PPLA	Purkeypile	7.74	118		Pn	22 49 46.7	+1.4
KTH	Kantishna Hill	7.77	112		Pn	22 49 46.7	+1.1
MDM	Murphy Dome	8.04	99		Pn	22 49 49.2	-0.1
TRF	Thorofare Moun	8.06	111		Pn	22 49 50.7	+1.0
SVW2	Sparrevohn	8.06	136	Pn	Pn	22 49 51.0	+1.4
TCOL	CIGO, UAF Yank	8.22	99		Pn	22 49 52.6	+0.8
COLA	College	8.22	99		Pn	22 49 51.8	0.0
POKR	Poker Plat Res	8.28	97		Pn	22 49 52.6	0.0
WRH	Wood River Hil	8.32	101	Pn	Pn	22 49 53.8	+0.6
CCB	Clear Creek Bu	8.35	100		Pn	22 49 53.6	+0.1
RND	Reindeer	8.61	109	Pn	Pn	22 49 58.1	+1.0
FYU	Fort Yukon	8.63	85	Pn	Pn	22 49 56.9	-0.5
IL31		8.64	98		Pn	22 49 57.8	+0.3
ILAR	Eielson Array	8.64	98	Pn	Pn	22 49 56.9	-0.6
	2.3nm,0.3s,baz=294,slow=14,SNR=182						
ILAR				Sn	Sn	22 51 31.2	-3.7
	baz=306,slow=26,SNR=1.5						
ILAR	Eielson Array	8.64	98	Pn	Pn	22 49 57.6	+0.1
BM03	Burnt Mountain	8.69	79		Pn	22 49 57.7	-0.5
BMAR	Burnt Mountain	8.69	79		Pn	22 49 57.6	-0.7
HDA	Harding Lake	8.78	100		Pn	22 50 00.2	+0.7
SUA	Susitna One	9.23	122		Pn	22 50 07.2	+1.5
EGAK	Eagle	10.85	92	Pn	Pn	22 50 27.5	-0.2
BCAR	Beaver Creek A	11.45	100	Pn	Pn	22 50 34.9	-1.1
INK	Inuvik	12.65	70	Pn	Pn	22 50 49.6	-2.7
	0.3nm,0.3s,baz=291,slow=11,SNR=6.9						
INK	Inuvik	12.65	70	Pn	Pn	22 50 49.8	-2.5
YKA	Yellowknife Ar	22.21	77	P	P	22 52 49.1	+0.4
	1.4nm,0.7s,baz=306,slow=9.5,SNR=16						
PDAR	Pinedale Array	39.07	99	P	P	22 55 21.6	+2.0
	0.5nm,0.7s,baz=340,slow=6.7,SNR=3.2						
KURBB	Kurchatov Arra	52.45	313	P	P	22 57 05.7	+0.8
	0.9nm,0.2s,baz=31,slow=7.4,SNR=4.8						
MKAR	Makanchi Array	54.78	308	P	P	22 57 24.4	+2.4
	0.3nm,0.8s,baz=42,slow=6.5,SNR=3.7						

IDC 11 23:04:14.9±6.0, 22°.40N×123°.83E, h0^{km}, mb3.5/4, mb1 3.7/5, mb1mx3.5/33, mbtmp3.6/5, ML3.5/1, Error ellipse: s-maj=128.1km s-min=42.1km az=178.0

JMA 11 23:04:18.6±0.3, 22°.80N×123°.81E, h57^{km}, M3.6

ISC 11 23:04:20.7±3.3, 23°.0N±0°.1×123°.85E±0°.06, h15^{km}±16^{km}, n17, σ0^{s}.74/27, mb3.4/4, Southeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HATJ	Hateruma jima	1.06	358	P	Pb	23 04 40.4	-0.4
HATJ				S	Sg	23 04 55.5	+0.4
JKRS	Kuro-shima	1.25	7	P	Pn	23 04 43.1	-0.6
JKRS				S	Sn	23 05 00.9	+0.7
IRIF	Iriomote-Funau	1.34	355	P	Pn	23 04 44.7	-0.2
IRIF				S	Sn	23 05 02.6	+0.1
JIJ	Ishigaki jima	1.39	11	P	Pn	23 04 44.8	-0.8
JIJ				S	Sn	23 05 03.4	-0.4
JISG	Ishigakijimahi	1.64	15	P	Pn	23 04 48.1	-1.0
JISG				*e*S	Sn	23 05 09.7	-0.3
YOJ	Yonaguni jima	1.65	332	P	Pn	23 04 48.9	-0.3
YOJ				S	Sn	23 05 09.4	-0.8
JYNG	Yonagunijimaku	1.67	331	P	Pn	23 04 48.9	-0.6
JYNG				*e*S	Sn	23 05 09.8	-0.9
JTJ	Tarama	1.82	25	P	Pn	23 04 50.8	-0.7
JTJ				S	Sn	23 05 14.9	+0.6
JIRB	Irabujima	2.19	33	P	Pn	23 04 55.6	-1.1
JIRB				S	Sn	23 05 23.7	+0.1
JMJ2	Miyako jima3	2.21	38	P	Pn	23 04 55.8	-1.0
JMJ2				*e*S	Sn	23 05 23.7	-0.2
JOGS	Gusukube	2.27	39	S	Sn	23 05 25.3	-0.1
JIKM	Ikemajima	2.31	33	S	Sn	23 05 26.4	-0.1
MJAR	Matsushiro Arr	18.35	39	P	P	23 08 36.2	+1.5
	0.1nm,0.3s,baz=234,slow=8.4,SNR=6.5						
SONM	Songino Array	28.44	335	P	P	23 10 16.5	+1.4
	0.4nm,0.8s,baz=146,slow=8.2,SNR=3.6						
MKAR	Makanchi Array	40.89	316	P	P	23 12 02.2	-0.1
	0.6nm,0.8s,baz=104,slow=10.0,SNR=6.8						
ZALV	Zalesovo Beam	42.57	327	P	P	23 12 15.6	-0.4
	0.4nm,0.5s,baz=134,slow=10,SNR=2.5						
YKA	Yellowknife Ar	83.10	23	P	P	23 16 45.1	-0.6
	0.1nm,0.3s,baz=303,slow=5.2,SNR=3.7						

IDC 11 23:09:30.9±5.6, 16°.52N×144°.95E, h0^{km}, mb3.5/4, mb1 3.7/4, mb1mx3.4/36, mbtmp3.5/4, Error ellipse: s-maj=185.7km s-min=33.1km az=80.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	37.70	196	P	P	23 16 49.0	+0.6
	0.9nm,0.5s,baz=20,slow=9.0,SNR=19						
FITZ	Fitzroy Crossi	39.30	210	P	P	23 17 01.2	-0.6
	0.4nm,0.3s,baz=45,slow=9.9,SNR=12						
ASAR	Alice Springs	41.37	195	P	P	23 17 18.4	-0.6
	0.4nm,0.6s,baz=15,slow=7.7,SNR=2.1						
MKAR	Makanchi Array	59.47	315	P	P	23 19 35.8	0.0
	0.1nm,0.3s,baz=99,slow=4.7,SNR=1.6						

IDC 11 23:14:08.9±1.5, 5°.19S×152°.72E, h0^{km}, mb3.8/9, mb1 4.1/9, mb1mx3.9/29, mbtmp3.8/9, Error ellipse: s-maj=51.7km s-min=20.9km az=124.0

ISC 11 23:14:14.3±1.5, 5°.2S±0°.2×152°.7E±0°.3, h35^{km}, n11, σ1^{s}.06/11, mb3.8/9, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	6.92	233	Sn	Sn	23 17 11.7	+0.8
	2.3nm,0.3s,baz=132,slow=21,SNR=1.5						
WRA	Warramunga Arr	23.12	229	P	P	23 19 17.2	-0.3
	0.8nm,0.5s,baz=51,slow=9.7,SNR=12						
ASAR	Alice Springs	25.80	223	P	P	23 19 42.5	+0.2
	0.4nm,0.4s,baz=58,slow=8.7,SNR=9.9						
FITZ	Fitzroy Crossi	29.41	242	P	P	23 20 13.7	-1.0
	1.8nm,0.5s,baz=52,slow=7.1,SNR=8.7						
CMAR	Chiang Mai Arr	58.00	295	P	P	23 24 04.2	+0.1
	0.9nm,0.3s,baz=118,slow=5.9,SNR=5.0						
SONM	Songino Array	66.65	328	P	P	23 25 02.9	+1.3
	0.5nm,1.0s,baz=146,slow=5.3,SNR=4.5						
MKAR	Makanchi Array	80.60	319	P	P	23 26 22.9	-0.5
	0.2nm,0.4s,baz=98,slow=7.5,SNR=4.8						
ZALV	Zalesovo Beam	81.47	326	P	P	23 26 26.1	-1.7
	0.8nm,0.6s,baz=102,slow=6.2,SNR=3.7						
ILAR	Eielson Array	82.57	22	P	P	23 26 33.0	-0.5
	1.2nm,0.6s,baz=243,slow=5.8,SNR=14						
YKA	Yellowknife Ar	95.83	28	P	P	23 27 38.1	+1.3
	0.2nm,0.5s,baz=269,slow=4.0,SNR=4.4						
TORD	Torodi Ar. Bea	150.38	287	PKPbc	PKPbc	23 34 02.7	-0.5
	0.4nm,0.4s,baz=87,slow=2.3,SNR=4.6						

MDD 11 23:23:16.1±3.6, 37°.02N×13°.78W, h2^{km}±213^{km}, mb3.7/3, Error ellipse: s-maj=271.0km s-min=30.9km az=66.0, PRXIMO

IGIL 11 23:23:16.9, 36°.98N×13°.77W, h0^{km}, ML2.0

INMG 11 23:23:17.7±1.0, 36°.81N×14°.15W, h10^{km}, ML2.2, Error ellipse: s-maj=8.0km s-min=6.3km az=135.0

ISC 11 23:23:16.5±4.0, 37°.1N±0°.1×13°.7W±0°.2, h10^{km}, n33, σ1^{s}.42/52, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	3.90	89	P	Pn	23 24 16.6	+0.2
	2.4nm,0.2s,SNR=11						
PFVI				S	Sn	23 25 00.5	-1.8
	2.1nm,0.1s,SNR=7.9						
PFVI	Vila Bisbo	3.90	89	*e*P	Pn	23 24 16.6	+0.2
PFVI				S	Sn	23 25 00.3	-2.0
PFVI				A	A	23 25 09.2	
	3.8nm,0.5s						
PMAFR	Mafra	3.93	61	P	Pn	23 24 18.3	+1.4
	1.9nm,0.1s,SNR=7.9						
PMAFR				S	Sn	23 25 03.3	+0.2
	14nm,0.3s,SNR=7.9						
PMAFR	Mafra	3.93	61	*e*P	Pn	23 24 18.3	+1.4
PMAFR				S	Sn	23 25 04.2	+1.1
PMAFR				A	A	23 25 17.6	
	12nm,0.6s						
PTEO	Sao Teotonio	3.99	83	*e*S	Sn	23 25 04.2	-0.3
MORF	Marmelete	4.04	86	*e*P	Pn	23 24 18.7	+0.3
MORF	Marmelete	4.04	86	P	Pn	23 24 18.7	+0.3
MORF	Marmelete	4.04	86	*e*P	Pn	23 24 18.9	+0.5
PNCL	Nicolau / Gran	4.22	75	*e*P	Pn	23 24 21.4	+0.5
PNCL				*e*S	Sn	23 25 10.0	-0.2
PNCL				A	A	23 25 26.5	
	1.0nm,1.0s						
MESJ	Messejana	4.42	79	*e*P	Pn	23 24 24.2	+0.7
MESJ				*e*S	Sn	23 25 13.9	-1.2
MESJ				AML	AML	23 25 19.1	
	comp=N,2.7nm,0.4s						
MESJ	Messejana	4.42	79	P	Pn	23 24 24.2	+0.7
MESJ				S	Sn	23 25 13.9	-1.2
	comp=N,2.7nm,0.4s						
MESJ	Messejana	4.42	79	*e*P	Pn	23 24 24.3	+0.7
MESJ				*e*S	Sn	23 25 16.0	+1.0
MESJ				A	A	23 25 23.0	
	comp=N,1.4nm,0.4s						
PSBE	So Bento	4.53	57	*e*S	Sn	23 25 19.2	+1.4
PCVE	Castro Verde	4.54	82	A	A	23 25 23.7	
	comp=N,1.5nm,0.3s						
PBDV	Barranco-do-Ve	4.61	87	*e*P	Pn	23 24 27.1	+0.8
PBDV				*e*S	Sn	23 25 20.6	+0.7
EVO	Evora	4.71	71	P	Pn	23 24 26.2	-1.5
EVO				S	Sn	23 25 21.7	-0.7
EVO	Evora	4.71	71	P	Pn	23 24 26.2	-1.5
EVO				S	Sn	23 25 21.7	-0.7
EVO	Evora	4.71	71	S	Sn	23 25 21.9	-0.5
PMTG	Montargil	4.73	64	*e*P	Pn	23 24 29.0	+1.2
PMTG				*e*S	Sn	23 25 22.6	-0.2
PMTG				A	A	23 25 36.9	
	comp=N,0.9nm,0.4s						
PVAQ	Vaqueiros	4.78	85	*e*P	Pn	23 24 29.3	+0.7
PVAQ				*e*S	Sn	23 25 22.6	-1.5
PVAQ				A	A	23 25 31.8	
	comp=N,1.2nm,0.5s						
EGRO	El Granado	4.97	84	P	Pn	23 24 31.8	+0.6
	comp=N,0.6nm,0.3s,SNR=7.9						
EGRO				S	Sn	23 25 27.2	-1.5
	comp=N,0.2nm,0.0s,SNR=4.7						
PCAS	Casmilo, Conde	5.01	53	*e*P	Pn	23 24 33.7	+2.0
PCAS				*e*S	Sn	23 25 31.1	+1.5
PESTR	Estremoz	5.13	69	*e*P	Pn	23 24 33.8	+0.5
PESTR				*e*S	Sn	23 25 33.5	+0.9
PBAR	Barrancos	5.39	77	*e*S	Sn	23 25 37.8	-1.2
PMRV	Marv??o	5.47	63	*e*P	Pn	23 24 39.0	+1.0
PMRV				*e*S	Sn	23 25 40.0	-0.9
EMIN	Mina Concepcio	5.63	82	P	Pn	23 24 41.9	+1.7
	comp=N,0.2nm,0.1s,SNR=7.9						
EMIN				S	Sn	23 25 43.3	-1.6
	comp=N,0.0nm,0.2s,SNR=7.9						
ELOB	Lobios	6.43	41	S	Sn	23 26 02.8	-1.8
	comp=N,0.5nm,0.1s,SNR=7.9						
MVO	Moncorvo	6.56	50	S	Sn	23 26 06.1	-1.9
	comp=N,0.4nm,0.1s,SNR=7.9						
ECAB	El Cabril	6.64	79	P	Pn	23 24 55.0	+0.8
	comp=N,0.1nm,0.1s,SNR=7.9						
ECAB				S	Sn	23 26 08.1	-1.9
	comp=N,1.0nm,0.4s,SNR=7.9						
EMAZ	Mazaricos	6.84	31	S	Sn	23 26 09.4	-5.3
	comp=N,0.7nm,0.1s,SNR=7.9						
ECAL	Calabor	7.21	46	S	Sn	23 26 23.1	-0.7
	comp=N,0.8nm,0.2s,SNR=7.9						
EADA	Adamuz	7.31	79	P	Pn	23 25 04.9	+1.6
	comp=N,0.2nm,0.2s,SNR=7.9						
EADA				S	Sn	23 26 24.6	-1.9
	comp=N,0.4nm,0.2s,SNR=7.9						
PAB	San Pablo	7.74	69	P	Pn	23 25 11.1	+1.9
	comp=N,0.1nm,0.2s,SNR=4.0						

IDC 11 23:38:06.2±7.2, 3°.25S×128°.12E, h97^{km}±83^{km}, mb3.1/2, mb1 3.5/4, mb1mx3.1/44, mbtmp3.7/4, ML3.9/2, MS2.3/1, Ms1 2.3/1, ms1mx2.2/16, Error ellipse: s-maj=72.5km s-min=21.3km az=88.0, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	3.93	53	P	Pn	23 39 04.2	-0.3
	16nm,0.3s,baz=249,slow=12,SNR=22						
SIJI				S	Sn	23 39 50.2	+0.6
	5.0nm,0.3s,baz=214,slow=22,SNR=9.6						
DAV	Davao City (W)	10.56	346	LR	LR	23 44 17.2	
	comp=Z,15nm,20.9s,baz=88,slow=35						
WRA	Warramunga Arr	17.67	160	P	P	23 42 04.4	-1.3
	0.3nm,0.3s,baz=340,slow=11,SNR=18						
ASAR	Alice Springs	21.05	165	P	P	23 42 43.0	+0.5
	0.9nm,0.3s,baz=344,slow=11,SNR=19						
MKAR	Makanchi Array	64.08	327	P	P	23 48 30.1	+0.1
	0.1nm,0.5s,baz=133,slow=8.9,SNR=4.0						

IDC 11 23:39:37.0±1.7, 35°.42N×27°.85E, h0^{km}, mb3.5/2, mb1 3.5/5, mb1mx3.2/45, mbtmp3.4/5, ML2.9/3, MS3.5/1, Ms1 3.5/1, ms1mx2.4/42, Error ellipse: s-maj=44.4km s-min=21.8km az=171.0

ISK 11 23:39:38.9, 35°.60N×27°.76E, h6^{km}, ML3.0/14

THE 11 23:39:39.6, 35°.72N×27°.67E, h1^{km}±2^{km}, ML2.7/2, Error ellipse: s-maj=9.8km s-min=0.9km az=142.0

ATH 11 23:39:40.1, 35°.76N×27°.62E, h28^{km}±6^{km}, ML2.7/2, Error ellipse: s-maj=9.3km s-min=1.8km az=142.0

DDA 11 23:39:44.8, 35°.94N×28°.01E, h17^{km}±3^{km}, ML2.6

ISC 11 23:39:38.8±1.2, 35°.64N±0°.04×27°.77E±0°.03, h9^{km}±9^{km}, n48, σ1^{s}.37/65, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KARP	Karpathos	0.51	260	P	Pg	23 39 48.3	-0.3
KARP				S	Sg	23 39 56.3	+1.0
KARP				AML	AML	23 39 58.2	
	comp=N,4021μm,0.5s						
KARP				AML	AML	23 40 00.1	
	comp=E,3916μm,0.3s						
KARP	Karpathos	0.51	260	P	Pg	23 39 48.4	-0.3
KARP				S	Sg	23 39 55.9	+0.6
	comp=E,2μm,0.4s						
KARP	Karpathos	0.51	260	PG	Pg	23 39 48.5	-0.1
KARP				SG	Sg	23 39 56.5	+1.2
ARG	Arkhangelos	0.64	26	P	Pb	23 39 51.9	-0.3
ARG				S	Sb	23 40 01.4	+0.1
ARG				AML	AML	23 40 10.0	
	comp=N,838μm,0.3s						
ARG				AML	AML	23 40 10.4	
	comp=E,1476μm,0.3s						
ARG	Arkhangelos	0.64	26	P	Pb	23 39 51.9	-0.3
ARG				S	Sb	23 40 01.4	+0.1
	comp=E,562nm,0.5s						
ARG	Arkhangelos	0.64	26	PG	Pb	23 39 52.2	0.0
ARG				SG	Sn	23 40 02.4	-2.0
DATC	Datca-Mugla	1.12	355	PN	Pn	23 40 01.9	+1.3
DATC				SN	Sn	23 40 18.0	+1.8
TURN	Turunc	1.20	19	PN	Pn	23 40 03.1	+1.4
TURN				SN	Sn	23 40 20.4	+2.4
TURN	Turunc	1.20	19	*i* P	Pn	23 40 02.5	+0.8
TURN				*i* S	Sn	23 40 17.5	-0.5
KOSK	Kos Island	1.28	330	PN	Pn	23 40 04.1	+1.3
ZKR	Zakros	1.37	248	P	Pn	23 40 03.0	-1.2

ZKR	Zakros	1.37	248	P	Pn	23 40 04.0	-0.1
ZKR	Zakros	1.37	248	PN	Pn	23 40 04.9	+0.8
ZKR				SN	Sb	23 40 23.8	+1.5
DALY	Dalyan (Mula)	1.38	31	PN	Pg	23 40 05.9	+0.7
DALY	Dalyan (Mula)	1.38	31	*i* P	Pn	23 40 03.8	-0.3
DALY				*i* S	Sn	23 40 24.0	+1.6
BDRM	Kayabasi	1.45	350	*i* P	Pg	23 40 05.8	-0.8
BDRM				*i* S	Sb	23 40 21.0	-3.5
BDRM				IAML		23 40 37.0	
	comp=N,125nm,0.8s						
FETY	Fethiye	1.46	47	PN	Pg	23 40 06.6	-0.1
BODT	Bodrum	1.47	345	PN	Pg	23 40 07.1	+0.1
YER	Yerkesik	1.55	15	PN	Pg	23 40 08.4	-0.1
AKAS	Kas	1.60	68	*i* P	Pn	23 40 06.1	-1.3
AKAS				*i* S	Sn	23 40 28.3	0.0
MLSB	Milas	1.65	0	PN	Pg	23 40 09.6	-0.9
MULA	Mugla, Merkez-	1.67	15	*i* P	Pg	23 40 10.9	0.0
MULA				*i* S	Sn	23 40 28.6	-1.4
MULA				IAML		23 40 49.0	
	comp=E,111nm,0.7s						
NPS	Neapolis	1.80	259	P	Pn	23 40 11.0	+1.0
NPS	Neapolis	1.80	259	P	Pn	23 40 10.5	+0.5
LAST	Lasithi	1.93	256	P	Pn	23 40 13.3	+1.5
CAEL	Denizli, Camel	1.94	40	*i* P	Pn	23 40 11.5	-0.5
CAEL				*i* S	Sg	23 40 40.6	-0.5
CAEL				IAML		23 41 06.0	
	comp=N,130nm,0.8s						
CAEL				IAML		23 41 12.0	
	comp=E,132nm,0.8s						
TAVA	DENIZLI_Tavas	2.04	26	*i* P	Pb	23 40 15.0	-1.1
TAVA				*i* S	Sn	23 40 39.1	0.0
ELL	Elmali	2.05	57	PN	Pn	23 40 14.9	+1.3
GCAM	G?zelcaml?	2.10	348	PN	Pb	23 40 16.1	-1.0
GOLH	Golhisar	2.15	42	*i* P	Pb	23 40 17.1	-0.9
GOLH				*i* S	Sn	23 40 42.3	+0.6
GOLH				IAML		23 41 08.0	
	comp=N,62nm,0.8s						
HRKL	Herakleio	2.20	262	PN	Pn	23 40 16.9	+1.4
APE	Apeiranthos	2.30	309	P	Pn	23 40 16.9	0.0
APE	Apeiranthos	2.30	309	P	Pn	23 40 16.7	-0.3
APE	Apeiranthos	2.30	309	PN	Pn	23 40 18.5	+1.5
AYDB	Zeytinkoy-Aydi	2.31	2	PN	Pb	23 40 18.9	-1.7
IDI	Anoyia	2.38	262	Pn	Pn	23 40 17.6	-0.4
	comp=N,2.4nm,0.3s,baz=103,slow=7.9,SNR=12						
IDI				Sn	Sb	23 40 50.9	-0.3
	comp=N,6.1nm,0.3s,baz=309,slow=22,SNR=2.5						
IDI	Anoyia	2.38	262	P	Pn	23 40 19.4	+1.4
KORT	Korkueli	2.49	56	PN	Pn	23 40 21.5	+1.9
SIVA	Sivas	2.50	256	P	Pn	23 40 22.7	+3.1
BASM	Basmaki-Afyon	2.92	38	PN	Pn	23 40 27.9	+2.4
KULA	Kula-Manisa	2.96	14	PN	Pn	23 40 28.0	+2.0
IMMV	Iera Moni Meta	3.10	268	P	Pb	23 40 32.4	-1.6
SIMA	Simav-Kutahya	3.57	15	PN	Pn	23 40 37.1	+2.7
BRTR	Keskin Array B	6.19	47	Pn	Pn	23 41 13.5	+3.0
	comp=N,0.1nm,0.3s,baz=258,slow=19,SNR=1.5						
MMAI	Mount Meron Ar	6.83	110	Pn	Pn	23 41 16.8	-2.5
	comp=N,0.6nm,0.3s,baz=312,slow=12,SNR=5.6						
ESDC	Sonseca Array	25.37	289	P	P	23 45 07.0	+0.7
	comp=N,0.5nm,0.9s,baz=86,slow=8.2,SNR=5.5						
ATD	Arta Tunnel	27.62	147	LR	LR	23 55 12.1	
	comp=N,96nm,18.6s,baz=48,slow=34						
TORD	Torodi Ar. Bea	32.45	233	P	P	23 46 08.6	-0.9
	comp=N,0.4nm,0.3s,baz=35,slow=8.8,SNR=4.0						

TUL ***11*** *23:56:32.3±1.5, 36°.70N±0°.01×97°.824W±0°.006, h6^{km}±6^{km}, ML3.1, mb_Lg3.0/48(NEIC), Error ellipse: s-maj=1.6km s-min=0.5km az=164.0*

ANF ***11*** *23:56:32.8±0.7, 36°.69N×97°.81W, h5^{km}, ML3.5/7, Error ellipse: s-maj=7.9km s-min=6.4km az=115.0*

NEIC ***11*** *23:56:32.4±0.9, 36°.68N±0°.01×97°.818W±0°.006, h3^{km}±7^{km}, Error ellipse: s-maj=1.6km s-min=0.5km az=165.0*

ISC 11 23:56:32.4±1.1**, 36°.68N**±0°.02×**97°.82W**±0°.02**, h5**^{km}±9^{km}**, n58,** σ**0^{s}.60**/57**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CROK	Carrier	0.22	217	Pg	Pg	23 56 37.1	+0.3
CROK				Sg	Sg	23 56 40.7	+1.0
KAN14	Manchester OK	0.30	337		Pg	23 56 38.1	-0.1
KAN14				Sg	Sg	23 56 42.3	+0.1
KAN13	South Haven SW	0.43	39		Pg	23 56 40.7	0.0
KAN13				Sg	Sg	23 56 46.6	+0.3
KAN05	Bluff City Nor	0.43	354		Pg	23 56 40.6	-0.1
KAN05				Sg	Sg	23 56 46.7	+0.3
KAN01	Argonia South	0.47	6		Pg	23 56 41.4	-0.1
KAN01				Sg	Sg	23 56 47.9	+0.2
KAN10	Anthony SW Sta	0.49	333	Pg	Pg	23 56 41.8	-0.2
KAN10				Sg	Sg	23 56 48.5	+0.1
KAN08	Anthony NE Sta	0.56	347		Pg	23 56 43.1	-0.1
KAN08				Sg	Sg	23 56 50.5	+0.1
KAN12	Harper NE Stat	0.63	347		Pg	23 56 44.3	-0.3
KAN12				Sg	Sg	23 56 52.9	+0.1
OK029	Liberty Lake	0.93	162		Pg	23 56 50.2	-0.1
OK029				Sg	Sg	23 57 03.1	+0.7
U32A	Winter Ranch,	1.00	253		Pg	23 56 51.0	-0.6
U32A				Sg	Sg	23 57 04.8	+0.2
QUOK	Quay	1.03	119		Pg	23 56 52.0	-0.2
QUOK				Sg	Sg	23 57 05.7	+0.2
BCOK	Bluff Creek, N	1.04	171		Pg	23 56 52.0	-0.3
T35A	Sooner Cattle	1.07	77		Pg	23 56 52.5	-0.5
OK031	S. Brethren Rd	1.07	132		Pg	23 56 52.8	-0.2
OK030	Cody Creek RV	1.12	132		Pg	23 56 53.7	-0.3
OK025	Westminster Rd	1.17	160		Pg	23 56 54.5	-0.3
OKCFA	Oklahoma City	1.30	167		Pn	23 56 56.7	-0.6
OKCSW	OKLAHOMA CITY	1.31	166		Pn	23 56 57.0	-0.5
FNO	Franklin	1.46	167		Pn	23 56 59.7	+0.2
TUL1	Leonard	1.81	115	P	Pn	23 57 04.9	+0.6
	baz=296						
TUL1				S	Sb	23 57 28.9	-0.1
	baz=296						
TUL1	Leonard	1.81	115	Pn	Pb	23 57 05.2	-0.9
TUL1				IAmb_Lg		23 57 32.0	
	comp=Z,98nm,0.9s						
R32A	Long Quarter,	1.88	338	Pn	Pn	23 57 05.6	+0.3
WMOK	Wichita Mounta	2.09	202	P	Pn	23 57 08.5	+0.3
	baz=21						
WMOK				S	Sb	23 57 36.1	-1.2
	baz=21						
WMOK	Wichita Mounta	2.09	202		Pn	23 57 08.5	+0.3
KSU1	Kansas State U	2.60	21	P	Pn	23 57 15.4	+0.3
	baz=202						
KSU1				S	Sn	23 57 47.6	+0.5
	baz=202						
KSU1	Kansas State U	2.60	21	Pn	Pn	23 57 15.6	+0.4
CBKS	Cedar Bluff	2.62	325	P	Pn	23 57 16.7	+1.3
	baz=144						
CBKS				S	Sn	23 57 47.7	0.0
	baz=144						
CBKS	Cedar Bluff	2.62	325	Pn	Pn	23 57 16.5	+1.1
U38A	Gravette	2.77	94	Pn	Pn	23 57 17.6	0.0
X37A	Clayton	2.89	136		Pn	23 57 19.8	+0.7
HHAR	Hobbs	3.15	96		Pn	23 57 23.5	+0.8
W39A	Magazine	3.59	113	IAmb_Lg		23 58 27.7	
	comp=Z,33nm,0.7s						
AMTX	Amarillo	3.62	241	P	Pn	23 57 29.7	+0.4
	baz=59						
AMTX				S	Sn	23 58 13.1	+0.6
	baz=59						
AMTX	Amarillo	3.62	241	IAmb_Lg		23 58 32.5	
	comp=Z,33nm,0.8s						
S39A	Bolivar	3.73	73	Pn	Pn	23 57 31.5	+0.8
U40A	Yellville	4.01	93	P	Pn	23 57 35.0	+0.4
	baz=276						
U40A				S	Sn	23 58 21.9	-0.1
	baz=276						
U40A	Yellville	4.01	93		Pn	23 57 35.8	+1.2
U40A				IAmb_Lg		23 58 38.4	
	comp=Z,30nm,0.7s						
MIAR	Mount Ida	4.06	120	P	Pn	23 57 35.5	+0.2
	baz=303						
MIAR				S	Sn	23 58 24.2	+1.0
	baz=303						
MIAR	Mount Ida	4.06	120		Pn	23 57 37.3	+2.0
MIAR				IAmb_Lg		23 58 51.1	
	comp=Z,22nm,1.1s						
Z38A	Mt. Pleasant	4.13	145	IAmb_Lg		23 58 49.0	
	comp=Z,46nm,0.8s						
KSCO	Kaye Shedlock’	4.46	303	Pn	Pn	23 57 41.0	0.0
KSCO				IAmb_Lg		23 58 58.8	
	comp=Z,19nm,0.7s						
MGMO	Mountain Grove	4.47	82	IAmb_Lg		23 59 03.7	
	comp=Z,24nm,0.8s						
P38A	Dawn	4.47	48		Pn	23 57 40.4	-0.6
P38A				IAmb_Lg		23 58 54.2	
	comp=Z,18nm,0.8s						
R40A	Maddies Statio	4.70	68	IAmb_Lg		23 59 10.4	
	comp=Z,31nm,0.7s						
BGNE	Belgrade	4.73	357	IAmb_Lg		23 59 02.7	
	comp=Z,24nm,0.8s						
P40A	Paris	5.36	56	IAmb_Lg		23 59 25.5	
	comp=Z,23nm,0.8s						
OGNE	Ogallala	5.38	324	IAmb_Lg		23 59 29.5	
	comp=Z,22nm,0.9s						
L34A	Svendsen Farm,	5.39	11	IAmb_Lg		23 59 28.3	
	comp=Z,28nm,0.7s						
T42A	Van Buren	5.40	84	IAmb_Lg		23 59 33.4	
	comp=Z,15nm,0.9s						
CCM	Cathedral Cave	5.41	73	IAmb_Lg		23 59 29.5	
	comp=Z,38nm,0.7s						
435B	Jarrell	5.89	178	IAmb_Lg		23 59 43.4	
	comp=Z,17nm,0.7s						
PBMO	Poplar Bluff	5.93	87	IAmb_Lg		23 59 44.4	
	comp=Z,19nm,0.7s						
K31A	O'Neill	5.98	353	IAmb_Lg		23 59 52.2	
	comp=Z,31nm,0.8s						
FVM	French Village	6.03	75	IAmb_Lg		23 59 43.4	
	comp=Z,28nm,0.9s						
N41A	Harden Midland	6.77	51	IAmb_Lg		00 00 11.0	
	comp=Z,26nm,0.7s						
W45A	Hickory Valley	7.17	100	IAmb_Lg		00 00 30.0	
	comp=Z,21nm,0.8s						
BLO	Bloomington	9.26	71	IAmb_Lg		00 01 36.5	
	comp=Z,18nm,0.8s						
WCI	Wyandotte Cave	9.29	77	IAmb_Lg		00 01 44.9	
	comp=Z,12nm,1.1s						

IDC ***12*** *00:27:35.9±2.6, 71°.72N×76°.15W, h0^{km}, mb3.1/2, mb1 3.7/5, mb1mx3.3/47, mbtmp3.4/5, ML3.5/3, Error ellipse: s-maj=47.4km s-min=15.9km az=51.0*

DNK ***12*** *00:27:37.2±2.2, 72°.20N×74°.83W, h11^{km}±88^{km}, ML3.2*

OTT ***12*** *00:27:37.9±0.3, 72°.07N×75°.03W, h18^{km}, MN3.7/7, 122km southeast from Pond Inlet, Nu Baffin Island Seismic Zone, Nt.*

ISC 12 00:27:31.6±0.6**, 71°.97N**±0°.05×**75°.23W**±0°.04**, h10**^{km}**, n23,** σ**2^{s}.91**/40**, Baffin Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CLRN	Clyde River	2.62	122	PN	Pb	00 28 19.9	+1.3
CLRN				SN	Sn	00 28 48.9	+3.2
CLRN				Trac		00 28 57.2	
	comp=Z,207nm,0.1s						
TULEG	Thule	4.91	18	PN	Pn	00 28 47.4	+2.1
TULEG				SN	Sn	00 29 40.3	-1.8
TULEG				Trac		00 29 42.1	
	comp=Z,53nm,0.4s						
TULEG	Thule	4.91	18	*i* P	Pn	00 28 47.4	+2.1
TULEG				*i* S	Sn	00 29 39.2	-2.8
TULEG				IAML		00 29 42.4	
	comp=Z,30nm,0.3s						
KULLO	Kullorsuaq	5.81	55	*i* P	Pn	00 28 59.3	+1.7
KULLO				*i* S	Sn	00 30 01.2	-2.9
KULLO	Kullorsuaq	5.81	55	PN	Pn	00 28 59.5	+1.9
KULLO				SN	Sn	00 30 01.6	-2.5
KULLO				Trac		00 30 04.3	
	comp=Z,10nm,0.2s						
KULLO	Kullorsuaq	5.81	55	*i* P	Pn	00 28 59.4	+1.7
KULLO				*i* S	Sn	00 30 01.2	-2.9
KULLO				IAML		00 30 04.7	
	comp=Z,12nm,0.3s						
UPNV	Upernavik	5.85	73	*i* P	Pn	00 29 01.0	+2.8
UPNV				*i* S	Sn	00 30 00.9	-4.3
UPNV				IAML		00 30 05.9	
	comp=Z,13nm,0.4s						
RES	Resolute Bay	6.26	305	Pn	Pn	00 29 06.4	+2.5
	comp=Z,1.0nm,0.3s,baz=93,slow=11,SNR=11						
RES				Pg	Pg	00 29 28.9	-2.4
	comp=Z,2.0nm,0.3s,baz=90,slow=10,SNR=11						
RES				Sn	Sn	00 30 13.8	-1.5
	comp=Z,1.1nm,0.3s,baz=130,slow=8.2,SNR=3.9						
RES				Lg	Lg	00 30 51.3	
	comp=Z,3.4nm,0.3s,baz=172,slow=12,SNR=11						
RES	Resolute Bay	6.26	305	PN	Pn	00 29 06.7	+2.8
RES				SN	Sn	00 30 15.9	+0.6
RES				SN	Sn	00 30 17.1	+1.8
RES				LG	Lg	00 30 54.7	
RES				Trac		00 31 00.8	
	comp=Z,58nm,0.7s						
NUUG	Nuugaatsiaq	6.91	83	*i* P	Pn	00 29 15.5	+2.7
NUUG				*i* S	Sn	00 30 28.2	-3.1
NUUG				IAML		00 30 38.6	
	comp=Z,5.8nm,0.3s						
ILULI	Ilulissat	8.46	97	PN	Pn	00 29 37.2	+3.2
ILULI				SN	Sn	00 31 07.2	-2.1
ILULI				Trac		00 31 10.8	
	comp=Z,2.0nm,0.2s						
EUNU	Eureka	8.54	347	SN	Sn	00 31 07.3	-4.0
FRB	Frobisher Bay	8.63	160	Pn	Pn	00 29 38.6	+2.3
	comp=Z,1.1nm,0.3s,baz=347,slow=13,SNR=14						
FRB				Sn	Sn	00 31 10.1	-3.5
	comp=Z,2.2nm,0.3s,baz=63,slow=12,SNR=4.3						
FRB				Lg	Lg	00 31 57.4	
	comp=Z,11nm,0.3s,baz=76,slow=22,SNR=8.0						
FRB	Frobisher Bay	8.63	160	PN	Pn	00 29 39.2	+2.9
FRB				SN	Sn	00 31 12.7	-0.9
FRB				Trac		00 32 03.1	
	comp=Z,36nm,0.3s						
SFJD	Kangerlussuaq	9.91	108	PN	Pn	00 29 37.2	-17
SUMG	Summit	11.11	69	*i* P	Pn	00 30 11.7	+1.1
SUMG				*i*		00 32 04.9	
SUMG	Summit	11.11	69	*i* P	Pn	00 30 11.7	+1.1
SUMG				*i*		00 32 05.0	
SUMG				IAML		00 32 18.3	
	comp=Z,6.9nm,0.3s						
KAJQ	Kangiqsualujju	13.85	159	PN	Pn	00 30 48.4	+0.6
KAJQ				SN	Sn	00 33 14.7	-6.7
KAJQ				Trac		00 34 47.8	
	comp=Z,0.3nm,0.0s						
KAJQ				LG	Lg	00 34 54.6	
KUKN	Kugluktuk,NWT	14.10	273	PN	Pn	00 30 54.2	+3.1
KUKN				SN	Sn	00 33 24.5	-2.8
KUKN				Trac		00 34 50.9	
	comp=Z,89nm,1.8s						
KUKN				LG	Lg	00 34 52.4	
FCC	Fort Churchill	15.29	220	PN	Pn	00 31 07.0	-0.1
FCC				SN	Sn	00 33 51.1	-5.2
FCC				Trac		00 35 33.5	
	comp=Z,61nm,1.3s						
FCC				LG	Lg	00 35 34.4	
YKA	Yellowknife Ar	17.56	258	Pn	Pn	00 31 33.8	-2.3
	comp=Z,0.2nm,0.3s,baz=38,slow=12,SNR=7.0						
YKA				Sn	Sn	00 34 36.7	-15
	comp=Z,0.2nm,0.3s,baz=37,slow=22,SNR=6.5						
YKA				Lg	Lg	00 36 26.2	
	comp=Z,0.4nm,0.3s,baz=40,slow=30,SNR=5.7						
ILAR	Eielson Array	25.77	291	P	P	00 33 07.0	+5.0
	comp=Z,0.4nm,0.7s,baz=56,slow=6.8,SNR=5.1						
PDAR	Pinedale Array	33.67	229	P	P	00 34 13.7	+1.2
	comp=Z,0.1nm,0.5s,baz=21,slow=11,SNR=1.4						

ISN ***12*** *00:33:51.6±1.3, 32°.76N×47°.70E, h0^{km}±9^{km}, ML3.4*

TEH ***12*** *00:33:55.5, 32°.73N×47°.79E, h8^{km}, ML3.4*

THR ***12*** *00:33:56.8±0.5, 32°.70N×47°.79E, h14^{km}±4^{km}, ML3.7*

ISC 12 00:33:55.8±0.9**, 32°.69N**±0°.03×**47°.76E**±0°.03**, h15**^{km}**, n37,** σ**1^{s}.87**/41**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DHL1	Dehloran	0.40	269	*e*Pg	Pg	00 34 03.9	0.0
IKFM	Kafar-mosalman	0.83	5	*e*Pg	Pg	00 34 11.0	-1.0
IKFM				*e*		00 34 32.3	
	comp=Z,99nm,0.5s						
IKMR	Kamar-syah	0.97	32	*e*Pg	Pb	00 34 13.2	-1.2
IKMR				*e*		00 34 33.3	
	comp=Z,99nm,0.3s						
IDOB	Doab	1.15	18	*e*Pg	Pn	00 34 17.3	-0.2
AHWZ	Ahwaz	1.55	151	*e*Pg	Pg	00 34 26.1	+0.5
IBDR	Badra	1.59	286	*e*Pg	Pb	00 34 25.0	+0.1
	baz=103						
IBDR				*e*Sg	Sg	00 34 48.8	+1.6
IBDR				AML	AML	00 34 52.7	
	comp=N,436nm,0.6s						
IBDR				AML	AML	00 34 56.8	
	comp=E,804nm,0.6s						
HSAM	Samen	1.67	25	*e*Pg	Pg	00 34 27.3	-0.6
KCHF	Cheshme Sefid,	1.69	339	*e*Pg	Pg	00 34 27.6	-0.7
KCHF				*e*		00 34 55.4	
	comp=Z,99nm,0.6s						
KER	Kermanshah	1.77	343	*e*Pg	Pb	00 34 28.6	+0.6
IGHG	Ghaleghazi	1.91	329	*e*Pg	Pg	00 34 31.7	-0.8
KHMZ	Khomeyn	2.12	60	*e*Pn	Pb	00 34 33.7	-0.3
KHMZ				*e*Sg	Sg	00 35 02.9	-1.1
KHMZ	Khomeyn	2.12	60	*e*Pn	Pb	00 34 33.7	-0.3
NSR	Nassriya	2.17	220	*e*Pn	Pn	00 34 30.0	-1.4
NSR				*e*Sn	Sn	00 34 56.0	-2.0
NSR				AML	AML	00 35 09.3	
	comp=E,378nm,0.3s						
IDHR	Dehrash	2.31	331	*e*Pn	Pb	00 34 35.8	-1.4
HAGD	Aghdareh	2.42	28	*e*Pn	Pb	00 34 37.1	-2.0
HAGD				*e*		00 35 18.0	
	comp=Z,99nm,0.6s						
IPIR	Pirpir	2.64	89	*e*Pn	Pb	00 34 40.7	-2.3
IPIR				*e*		00 35 31.2	
	comp=Z,99nm,0.4s						
ASAO	Ashtian	2.65	45	*e*Pn	Pb	00 34 41.1	-1.9
ASAO				*e*Sg	Sg	00 35 18.8	-2.0
ASAO	Ashtian	2.65	45	*e*Pn	Pb	00 34 41.1	-1.9
SHK1	Shahrekord	2.67	97	*e*Pn	Pn	00 34 40.6	+2.2
SHK1				*e*		00 35 27.9	
	comp=Z,99nm,1.0s						
MIB	Mutribah	2.90	187	*e*P		00 34 44.5	
RST	Umm Al-Ruwaisa	3.25	192	*e*P		00 34 49.0	
IKLH	Kolahrood	3.27	78	*e*Pn	Pn	00 34 49.2	+2.5
IKLH				*e*		00 35 47.3	
	comp=Z,99nm,0.8s						
QABG	Abgarm-Qazvin	3.37	26	*e*Pn	Pn	00 34 49.5	+1.4
GHVR	GHOM	3.45	58	*e*S	Sn	00 35 31.1	+1.4
GHVR				IAML		00 35 35.1	
	comp=E,82nm,0.7s						
GHVR				IAML		00 35 35.2	
	comp=N,70nm,0.7s						
IGAR	Gharneh	3.63	93	*e*Pn	Pn	00 34 52.8	+1.2
KLNJ	Kolanjah	3.67	116	*e*Pn	Pn	00 34 54.5	+2.2
RDF	Al-Radifah	3.76	183	*e*P		00 34 56.6	
IMHD	Mahdasht	3.84	38	*e*Pn	Pn	00 34 56.7	+2.3
IZEF	Zefreh	3.85	86	*e*Pn	Pn	00 34 57.7	+2.9
IRAM	Ramesheh	4.01	101	*e*Pn	Pn	00 34 58.5	+1.5
CHTH	Charan	4.25	40	*e*P	Pn	00 35 02.7	+2.5
CHTH	Charan	4.25	40	*e*Pn	Pn	00 35 02.7	+2.5
NASN	Na'in	4.25	87	*e*Pn	Pn	00 35 03.0	+2.6
NASN	Na'in	4.25	87	*e*Pn	Pn	00 35 03.0	+2.6
MAHB	Mahabad	4.40	338	*e*Pn	Pn	00 35 05.1	+2.9
QALM	Alamut, Qazvin	4.43	32	*e*Pn	Pn	00 35 04.2	+1.6
ANAR	Anarak	5.04	83	*e*Pn	Pn	00 35 13.7	+2.7
ILAS	Lasjerd	5.08	57	*e*Pn	Pn	00 35 14.0	+2.3
ISRB	Sarab	5.12	359	*e*Pn	Pn	00 35 14.2	+2.0
IANJ	Anjilo	5.81	60	*e*Pn	Pn	00 35 23.7	+2.1

IDC ***12*** *00:35:17.5±2.1, 6°.03S×129°.78E, h224^{km}±26^{km}, mb3.1/2, mb1 3.5/6, mb1mx3.1/36, mbtmp4.1/6, Error ellipse: s-maj=43.4km s-min=12.8km az=79.0*

DJA ***12*** *00:35:27.7±0.5, 5°S±5°×12°9E±°, h226^{km}±9^{km}, M3.7/7, mb3.6/3, MLv3.8/7, MwMwp6.9/1, Mwp6.8/1*

ISC 12 00:35:19.8±0.8**, 5°.89S**±0°.07×**130°.2E**±0°.1**, h250**^{km}**, n15,** σ**2^{s}.04**/14**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	1.38	349	P	Pn	00 35 59.5	+2.2
MSAI	Masohi	2.81	334	P	Pn	00 36 05.7	-4.6
FAKI	Fak Fak	3.61	35	P	Pn	00 36 25.5	+6.4
NLAI	Namlea	4.03	311	P	Pn	00 36 18.0	-6.0
SIJI	Sorong	5.11	13	P	Pn	00 36 37.3	+0.3
	5.8nm,0.3s,baz=205,slow=23,SNR=20						
SIJI				S	S	00 37 38.8	+0.3
	21nm,0.3s,baz=88,slow=22,SNR=21						
SWI	Sorong	5.11	12	P	Pn	00 36 37.4	+0.4
EDFI	Ende, Flores	8.87	251	P	Pn	00 37 27.8	+3.5
	2.5nm,1.6s						
APSI	Ampana	9.83	300	P	Pn	00 37 29.9	-6.4
	15nm,1.0s						
BKSI	Bulukumba	10.01	273	P	Pn	00 37 36.8	-1.8
	15nm,1.0s						
WSI	Waingapu	10.47	248	P	P	00 37 48.8	-0.6
FITZ	Fitzroy Crossi	12.91	200	P	Pn	00 38 09.3	-5.4
	0.9nm,0.3s,baz=31,slow=9.9,SNR=32						
WRA	Warramunga Arr	14.55	164	P	P	00 38 34.9	+0.2
	0.7nm,0.3s,baz=340,slow=11,SNR=42						
WRA				S	S	00 41 16.8	+1.1
	0.3nm,0.3s,baz=335,slow=21,SNR=8.5						
ASAR	Alice Springs	18.04	169	P	P	00 39 13.2	+0.3
	1.2nm,0.3s,baz=349,slow=12,SNR=65						
ASAR				S	S	00 42 25.3	-1.3
	0.3nm,0.3s,baz=346,slow=21,SNR=13						
STKA	Stephens Creek	27.98	159	P	P	00 40 47.0	-0.6
	0.6nm,0.3s,baz=331,slow=13,SNR=1.5						
MKAR	Makanchi Array	67.39	326	P	P	00 45 48.9	+0.5
	0.2nm,0.5s,baz=123,slow=8.1,SNR=5.0						

HEL ***12*** *00:37:13.7, 67°.83N×20°.53E, h0^{km}, ML1.7, Explosion*

UPP 12 00:37:12.8±0.0**, 67°.85N**×**20°.19E, h0**^{km}**, ML2.4, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	Kurravaara	0.12	27	P	Pg	00 37 15.3	+0.2
KUA				S	Sg	00 37 16.9	+0.3
KUA	Kurravaara	0.12	27	*i* P	Pg	00 37 15.3	+0.2
KUA				*i* S	Sg	00 37 16.9	+0.3
RATU	Laukkuluspa	0.23	264	P	Pg	00 37 17.4	+0.2
RATU	Laukkuluspa	0.23	264	*i* P	Pg	00 37 17.4	+0.2
KOVU	Salmi	0.38	358	P	Pg	00 37 20.0	0.0
KOVU	Salmi	0.38	358	*i* P	Pg	00 37 20.0	0.0
NIKU	Nikkaluokta	0.44	273	P	Pg	00 37 21.3	+0.1
NIKU	Nikkaluokta	0.44	273	*i* P	Pg	00 37 21.3	+0.1
LANU	Lannavaara	0.71	73	P	Pg	00 37 26.2	-0.1
LANU	Lannavaara	0.71	73	*e*P	Pg	00 37 26.1	-0.2
	baz=252						
LANU				*e*S	Sg	00 37 32.3	-3.1
DUNU	Dundret	0.74	169	P	Pg	00 37 26.6	-0.4
DUNU	Dundret	0.74	169	*i* P	Pg	00 37 26.6	-0.4
MASU	Masugnsbyn	0.80	119	P	Pg	00 37 27.8	-0.2
MASU	Masugnsbyn	0.80	119	*i* P	Pg	00 37 27.8	-0.2
KIF	Kilpisjarvi	1.18	11	*e*P	Pn	00 37 36.8	+0.2
KIF	Kilpisjarvi	1.18	11	*e*PB	Pg	00 37 35.6	+0.1
	baz=191						
KIF				MSG		00 37 50.8	
	comp=Z,6.4nm,0.2s						
KIF				*e*SB	Sb	00 37 52.0	+0.1
PAJU	Pajala	1.40	125	P	Pn	00 37 38.3	-1.2
PAJU	Pajala	1.40	125	*e*PG	Pn	00 37 38.3	-1.3
PAJU				*e*SB	Sg	00 37 56.9	-0.7
ERTU	Ertsjaerv	1.52	148	P	Pn	00 37 40.4	-0.7
ERTU	Ertsjaerv	1.52	148	*e*PG	Pn	00 37 40.7	-0.4
	baz=326						
ERTU				*e*SN	Sn	00 38 01.6	+0.1
TOF	Tornio	2.41	136	*e*PB	Pn	00 37 55.0	+1.6
	baz=326						
TOF				MSG		00 38 22.1	
	comp=Z,2.5nm,0.2s						
TOF				*e*SG	Sb	00 38 27.7	+0.6
SGF	Sodankyl	2.46	97	*e*PG	Pb	00 37 56.7	-1.1
	baz=288						
ARA0	ARCESS Array S	2.58	46	*e*P	Pn	00 37 56.9	+1.2
RNF	Rovaniemi	2.58	116	*e*PB	Pb	00 37 58.0	-1.9
RNF				*e*SB	Sb	00 38 31.0	-1.2

UPP 12 00:37:19.6±0.1**, 67°.92N**×**20°.10E, h0**^{km}**, ML2.3, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	Kurravaara	0.10	67	P	Pg	00 37 21.7	+0.3
	baz=231						
KUA				S	Sg	00 37 23.3	+0.6
RATU	Laukkuluspa	0.22	244	P	Pg	00 37 24.0	+0.3
RATU				S	Sg	00 37 27.2	+0.7
LANU	Lannavaara	0.72	79	S	Sg	00 37 43.2	+0.5

DJA ***12*** *01:01:45.4±0.9, 2°S±4°×10°1E±°, h14^{km}±6^{km}, M4.5/12, mb4.8/3, mB5.1/1, MLv4.3/12, Mw(mB)4.5/1*

NEIC ***12*** *01:01:47.0±0.7, 2°.29S±0°.07×100°.69E±0°.09, h69^{km}±7^{km}, mb4.3/22, Error ellipse: s-maj=14.9km s-min=8.0km*

az=59.0

*IDC **12** 01:01:51.3±3.9, 2°.26S×100°.82E, h97^{km}±33^{km}, mb3.9/12, mb1 4.0/13, mb1mx3.6/39, mbtmp4.2/13, MS3.2/1, Ms1 3.1/1, ms1mx2.6/27, Error ellipse: s-maj=54.8km s-min=13.0km az=53.0*

ISC 12 01:01:47.5±0.6**, 2°.32S**±0°.07×**100°.68E**±0°.09**, h69^{km}, n74, σ1^s.20**/72**, mb4.4**/29**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRJI	Kerinci	0.81	74	P	Pn	01 02 02.2	-1.6
PDSI	Padang	1.41	351	P	Pn	01 02 10.5	-0.8
SDSI	Sungai Dareh	1.57	29	P	Pn	01 02 13.0	-0.3
BKNI	Bangkinang	2.65	8		Pn	01 02 27.4	-0.5
BKNI				Sn	Sn	01 02 57.6	-1.4
BKNI	Bangkinang	2.65	8	P	Pn	01 02 28.3	+0.3
MNAI	Manna	3.05	132		Pn	01 02 33.1	-0.3
MNAI				Sn	Sn	01 03 09.4	+0.7
MNAI	Manna	3.05	132	P	Pn	01 02 33.5	+0.1
LHSI	Lahat	3.21	118	P	Pn	01 02 37.6	+2.0
MNSI	Mandailing Nat	3.28	340	P	Pn	01 02 39.4	+2.8
MDSI	Maura Dua	4.10	122	P	Pn	01 02 51.5	+3.7
LWLI	Liwa	4.31	129	P	Pn	01 03 06.5	+16
GSI	Gunungsitoli	4.75	319		Pn	01 02 55.9	-0.8
GSI	Gunungsitoli	4.75	319	P	Pn	01 02 56.3	-0.3
MYKOM	Kota Tinggi	5.17	38		Pn	01 03 01.8	-0.6
RPSI	Rantau Prapat	5.28	341		Pn	01 03 03.0	-0.9
PSI	Prapat	5.38	341	P	Pn	01 03 07.8	+2.5
	1.4nm,0.3s,baz=180,slow=10.0,SNR=5.8						
PPBI	Pangkal Pinang	5.46	88	P	Pn	01 03 06.8	+0.5
TPTI		6.55	328	P	Pn	01 03 21.0	-0.3
	0.0nm9.7nm,0.9s						
TNG	Tangerang	7.08	123	P	Pn	01 03 29.2	+0.8
TOLI2	Tolitoli	20.39	81	P	P	01 06 17.4	-1.5
TOLI2				IAmb	IAmb	01 06 20.6	
	comp=Z,10.0nm,0.9s						
CMAR	Chiang Mai Arr	20.71	355	P	P	01 06 23.6	+1.2
	comp=Z,1.1nm,0.3s,baz=188,slow=8.2,SNR=6.2						
CMAR	Chiang Mai Arr	20.71	355	P	P	01 06 21.4	-1.0
MBWA	Marble Bar	26.37	137	P	P	01 07 17.0	-0.4
FITZ	Fitzroy Crossi	29.07	124	P	P	01 07 41.1	-0.5
ODAN	Odare	31.72	337	*e*P	P	01 08 07.3	+2.1
	comp=Z,24nm,0.6s						
TAPN	Taplejung	32.03	338	*e*P	P	01 08 10.1	+2.1
	comp=Z,16nm,0.4s						
RAMN	Ramite	32.11	336	*e*P	P	01 08 11.2	+2.5
	comp=Z,7.7nm,0.4s						
PKI	Pulchoki	33.16	335	*e*P	P	01 08 19.3	+1.4
	comp=Z,6.0nm,0.5s						
GUN	Gumba	33.26	336	*e*P	P	01 08 20.1	+1.3
	comp=Z,8.5nm,0.2s						
KKN	Kakani	33.40	335	*e*P	P	01 08 21.5	+1.6
	comp=Z,5.8nm,0.3s						
GKN	Gorkha	33.87	334	*e*P	P	01 08 25.6	+1.7
	comp=Z,9.9nm,0.3s						
DANN	Dangsing	34.55	333	*e*P	P	01 08 31.8	+1.8
	comp=Z,22nm,0.4s						
H01W3	Cape Leeuwin H	34.74	160	T	T	01 45 08.7	
	baz=331,slow=74,SNR=3.7						
H01W2	Cape Leeuwin H	34.75	160	T	T	01 45 10.4	
	baz=331,slow=74,SNR=3.2						
H01W1	Cape Leeuwin H	34.75	160	T	T	01 45 13.1	
	baz=331						
WB0	Warramunga Arr	37.22	120	P	P	01 08 51.7	-0.9
WB0				IAmb	IAmb	01 09 01.1	
	comp=Z,4.5nm,1.1s						
WRA	Warramunga Arr	37.25	121	P	P	01 08 52.6	-0.2
	comp=Z,1.4nm,0.5s,baz=308,slow=9.7,SNR=27						
WRA	Warramunga Arr	37.25	121	P	P	01 08 52.2	-0.6
WB2	Warramunga Arr	37.26	121	P	P	01 08 52.0	-0.9
WB2				IAmb	IAmb	01 08 55.9	
	comp=Z,2.6nm,0.9s						
WC3	Warramunga Arr	37.28	121	P	P	01 08 52.4	-0.7
WC3				IAmb	IAmb	01 09 07.8	
	comp=Z,5.2nm,1.1s						
WR0	Warramunga Arr	37.43	120	P	P	01 08 53.1	-1.3
WR0				IAmb	IAmb	01 09 03.6	
	comp=Z,2.5nm,1.1s						
ASAR	Alice Springs	38.52	126	P	P	01 09 04.0	+0.5
	comp=Z,3.1nm,0.6s,baz=302,slow=7.9,SNR=37						
ASAR	Alice Springs	38.52	126	P	P	01 09 02.8	-0.8
AS31	Alice Springs	38.52	126	P	P	01 09 02.9	-0.6
HHC	Hu-ho-hao-te	44.10	12	*e*P	P	01 09 50.2	+1.2
HHC				pmax	pmax		
	comp=Z,7.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,79nm,6.6s						
NIL	Nilore	44.14	327	P	P	01 09 48.3	-1.1
WMQ	Urumqi	47.39	347	*e*P	P	01 10 17.3	+2.4
WMQ	Urumqi	47.39	347	P	P	01 10 13.9	-1.0
KSH	Kashi	47.41	334	P	P	01 10 15.5	+0.3
KSH				pP	pP	01 10 31.8	-0.7
KSH				PcP	PcP	01 11 44.6	-0.3
KSH				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KSH				pmax	pmax		
	comp=Z,200nm,5.4s						
STKA	Stephens Creek	48.43	132	P	P	01 10 23.8	+0.7
	comp=Z,1.0nm,0.3s,baz=330,slow=7.8,SNR=4.6						
STKA				LR	LR	01 32 28.1	
	comp=Z,27nm,19.6s,baz=45,slow=38						
STKA	Stephens Creek	48.43	132	P	P	01 10 22.7	-0.5
SONM	Songino Array	50.20	5	P	P	01 10 37.1	+0.7
	comp=Z,0.9nm,0.5s,baz=187,slow=8.6,SNR=7.9						
SONM	Songino Array	50.20	5	P	P	01 10 35.8	-0.6
UOSS	Minazif	50.92	305	P	P	01 10 41.1	-1.1
UOSS				IAmb	IAmb	01 10 43.8	
	comp=Z,4.1nm,1.1s						
MK31	Makanchi Array	51.52	344	P	P	01 10 45.5	-0.7
MKAR	Makanchi Array	51.52	344	P	P	01 10 47.1	+0.8
	comp=Z,4.3nm,0.4s,baz=159,slow=9.2,SNR=92						
MKAR	Makanchi Array	51.52	344	P	P	01 10 45.5	-0.7
MAKZ	Makanchi	51.62	344	P	P	01 10 46.4	-0.6
MAKZ				IAmb	IAmb	01 10 48.9	
	comp=Z,3.9nm,1.1s						
KURK	Kurchatov	56.10	343	P	P	01 11 19.0	-0.6
KURK				IAmb	IAmb	01 11 21.3	
	comp=Z,3.3nm,0.8s						
GEYT	Alibeck	56.12	320	P	P	01 11 21.4	+1.4
	comp=Z,1.4nm,0.8s,baz=138,slow=11,SNR=3.1						
GEYT	Alibeck	56.12	320	P	P	01 11 19.2	-0.9
ZAA0	Zalesovo Array	57.61	349	P	P	01 11 29.8	-0.3
ZALV	Zalesovo Beam	57.61	349	P	P	01 11 30.5	+0.3
	comp=Z,2.5nm,0.3s,baz=178,slow=5.5,SNR=29						
ZALV	Zalesovo Beam	57.61	349	P	P	01 11 29.9	-0.3
ABKAR	Akbulak array	62.24	331	P	P	01 12 01.4	-0.6
ABKAR				IAmb	IAmb	01 12 03.5	
	comp=Z,3.2nm,0.8s						
ABKAR	Akbulak array	62.24	331	P	P	01 12 01.7	-0.4
KBZ	Khabaz	68.99	319	P	P	01 12 46.5	+0.9
	comp=Z,1.3nm,0.9s,baz=106,slow=7.1,SNR=4.9						
NRIK	Noril'sk	72.07	355	P	P	01 13 03.7	-0.2
	comp=Z,1.3nm,0.3s,baz=148,slow=5.5,SNR=4.3						
NRIK	Noril'sk	72.07	355	P	P	01 13 03.4	-0.5
FINES	FINESS Array B	84.71	332	P	P	01 14 14.5	+0.8
	comp=Z,1.9nm,0.9s,baz=132,slow=2.8,SNR=4.8						
ARCES	ARCESS Array B	87.00	340	P	P	01 14 25.3	+0.4
	comp=Z,3.0nm,0.7s,baz=100,slow=5.0,SNR=7.8						
ARCES	ARCESS Array B	87.00	340	P	P	01 14 24.8	-0.1
TXAR	Lajitas Array	144.53	38	PKP	PKPdf	01 21 17.1	+0.1
	comp=Z,2.3nm,0.7s,baz=321,slow=1.8,SNR=5.6						
TXAR	Lajitas Array	144.53	38		PKPbc	01 21 15.7	0.0

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*ISK **12** 01:46:08.7, 38°.21N×27°.07E, h6^{km}, ML2.5/11*

*DDA **12** 01:46:09.0, 38°.20N×27°.04E, h7^{km}±2^{km}, ML1.9*

ISC 12 01:46:08.3±1.0**, 38°.22N**±0°.02×**27°.08E**±0°.03**, h11^{km}**±9^{km}**, n25, σ2^s.26**/39**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BLCB	Balcova	0.17	350	PG	Pg	01 46 12.7	+0.7
DGB	zmir	0.23	223	*i* P	Pg	01 46 13.3	+0.3
DGB				*i* S	Sg	01 46 15.1	-1.2
DGB				IAML		01 46 17.0	
	comp=E,235nm,0.1s						
ZEYE	Izmir, Urla-Ze	0.45	273	*i* P	Pg	01 46 17.5	+0.3
ZEYE				*i* S	Sg	01 46 21.0	-2.2
ZEYE				IAML		01 46 25.0	
	comp=E,131nm,0.2s						
ZEYE				IAML		01 46 26.0	
	comp=N,169nm,0.3s						
GCAM	G?zelcaml?	0.53	167	PG	Pg	01 46 19.1	+0.4
GCAM				SG	Sg	01 46 26.6	+0.9
GCAM	G?zelcaml?	0.53	167	*i* P	Pg	01 46 19.3	+0.6
GCAM				*i* S	Sg	01 46 23.7	-2.1
GCAM				IAML		01 46 27.0	
	comp=N,64nm,0.2s						
GCAM				IAML		01 46 28.0	
	comp=E,61nm,0.2s						
AYDB	Zeytinkoy-Aydi	0.70	113	PG	Pg	01 46 22.7	+0.9
AYDB				SG	Sg	01 46 32.7	+1.8
ZEDA	zmir-Bergama	0.74	360	*i* P	Pg	01 46 24.4	+1.6
ZEDA				*i* S	Sg	01 46 31.1	-1.4
ZEDA				IAML		01 46 40.0	
	comp=N,54nm,0.9s						
DDIM	Aydin, Didim	0.77	170	*i* P	Pg	01 46 24.2	+1.0
DDIM				*i* S	Sg	01 46 31.2	-2.1
GOMA	Golmarmara-Man	0.82	53	PG	Pg	01 46 25.2	+1.1
GOMA				SG	Sg	01 46 37.3	+2.5
CHOS	Chios island	0.82	282	PG	Pg	01 46 24.9	+0.7
CHOS				SG	Sg	01 46 36.8	+1.8
DKL	Dikili	0.86	351	PG	Pg	01 46 25.9	+1.0
AKHS	Akhisar	0.87	41	*i* S	Sg	01 46 34.1	-2.4
MLSB	Milas	1.08	149	PG	Pg	01 46 29.7	+0.7
BODT	Bodrum	1.17	171	PN	Pg	01 46 31.2	+0.4
BDRM	Kayabasi	1.19	166	*i* P	Pg	01 46 30.9	-0.2
BDRM				*i* S	Sg	01 46 41.8	-4.8
BDRM				IAML		01 46 51.0	
	comp=E,32nm,0.9s						
BDRM				IAML		01 47 03.0	
	comp=N,43nm,2.1s						
MANT	Manisa	1.19	76	*i* P	Pg	01 46 32.3	+1.0
MANT				*i* S	Sg	01 46 41.9	-4.9
MANT				IAML		01 46 50.0	
	comp=N,26nm,0.3s						
MANT				IAML		01 46 50.0	
	comp=E,26nm,0.2s						
STEP	BALIKESIR_Sava	1.26	23	*i* P	Pg	01 46 32.9	+0.4
STEP				*i* S	Sg	01 46 43.7	-5.1
STEP				IAML		01 46 54.0	
	comp=E,42nm,0.4s						
STEP				IAML		01 46 55.0	
	comp=N,31nm,0.6s						
KULA	Kula-Manisa	1.28	76	PN	Pg	01 46 33.8	+0.9
BUHA	Balikesir, Bur	1.28	360	*i* P	Pg	01 46 33.6	+0.8
BUHA				*i* S	Sg	01 46 45.2	-4.3
BUHA				IAML		01 46 53.0	
	comp=N,35nm,0.6s						
BUHA				IAML		01 46 53.0	
	comp=E,32nm,0.4s						
SIGR	SIGRI	1.38	316	PN	Pg	01 46 35.1	+0.3
DEMI	Demirci	1.52	57	*i* P	Pn	01 46 38.3	+2.7
DEMI				*i* S	Sg	01 46 50.6	-6.7
DEMI				IAML		01 47 04.0	
	comp=N,14nm,1.0s						
USAK	Uak-Merkez	1.60	71	*i* P	Pn	01 46 39.2	+2.6
USAK				*i* S	Sn	01 46 53.7	-3.6
EZN	Ezine	1.71	340	PN	Pn	01 46 39.9	+1.9
SIMA	Simav-Kutahya	1.72	59	PN	Pn	01 46 40.2	+1.9
TVSB	Tavsanli	2.23	56	PN	Pn	01 46 47.6	+2.3

WEL 12 01:49:56.5±1.3**, 36°S**±24°×**17°9E**±3°3**, h160^{km}**±22^{km}**, M3.6**/14**, ML3.7**/14**, MLv3.6**/14**, Error ellipse: s-maj=0.1km s-min=0.0km az=123.8, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	2.18	200	P	Pn	01 50 33.3	-1.0
HAZ	Te Kaha	2.34	212	P	Pn	01 50 33.8	-2.4
PKGZ	Pakihiroa	2.35	205	P	Pn	01 50 34.1	-2.2
PKGZ				S	Sn	01 51 08.1	+1.0
RUGZ	Raukumara Rang	2.57	211	P	Pn	01 50 37.0	-2.0
TWGZ	Tauwhareparae	2.64	204	P	Pn	01 50 41.1	+1.3
TWGZ				S	Sn	01 51 15.8	+2.4
MWZ	Matawai	2.94	209	P	Pn	01 50 42.2	-1.4
MWZ				S	Sn	01 51 19.8	-0.3
URZ	Urewera	3.06	215	P	Pn	01 50 42.5	-2.5
RAGZ	Rawiri	3.13	209	P	Pn	01 50 47.2	+1.4
MUGZ	Murupara	3.39	216	P	Pn	01 50 50.8	+1.6
SNGZ	Shannon Statio	3.40	207	P	Pn	01 50 50.7	+1.3
RTZ	Ruatahuna	3.41	213	P	Pn	01 50 47.5	-1.9
RAHZ	Arahi	3.62	209	P	Pn	01 50 53.6	+1.5
MTHZ	Maungataniwha	3.67	212	P	Pn	01 50 54.1	+1.4
MTHZ				S	Sn	01 51 38.0	+1.5
BKZ	Black Stump Fm	4.08	213	P	Pn	01 50 58.8	+0.8
TMVZ	Te Maari	4.42	220	P	Pn	01 51 03.7	+1.2
KAHZ	Kahuranaki	4.47	205	P	Pn	01 51 03.4	+0.3
NGZ	Ngauruhoe	4.52	220	P	Pn	01 51 05.2	+1.4
MRZ	Mangatainoka R	5.71	210	P	Pn	01 51 19.8	+0.4
MRZ				S	Sn	01 52 21.1	-3.3

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*ARE **12** 01:59:36±1.2, 9°.22S±0°.07×79°.3W±0°.1, h22^{km}±5^{km}, ML5.0, mb4.6/46(NEIC), Error ellipse: s-maj=16.3km s-min=8.2km az=66.0*

*NEIC **12** 01:59:39.3±1.0, 9°.14S±0°.04×79°.2W±0°.1, h47^{km}±7^{km}, Error ellipse: s-maj=17.2km s-min=1.7km az=71.0*

*IDC **12** 01:59:42.8±2.0, 9°.24S×79°.13W, h63^{km}±16^{km}, mb4.0/12, mb1 4.2/17, mb1mx4.0/52, mbtmp4.3/17, MS3.9/11, Ms1 3.9/11, ms1mx3.6/29, Error ellipse: s-maj=23.1km s-min=8.3km az=73.0*

*VAO **12** 01:59:52.0±0.9, 8°.75S×78°.60W, h117^{km}, mb4.7*

ISC 12 01:59:39.4±0.5**, 9°.24S**±0°.05×**79°.32W**±0°.07**, h45^{km}, n150, σ1^s.89**/141**, mb4.5**/30**, MS4.1**/8**, 1D, Off coast of northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATAH	Atahualpa	2.28	24	P	Pn	02 00 17.8	+2.8
	114nm,0.3s,baz=188,slow=5.4,SNR=547						
ATAH				S	Sn	02 00 45.7	+3.7
	111nm,0.3s,baz=46,slow=9.9,SNR=4.9						
ATAH				LR	LR	02 01 17.9	
	comp=Z,4μm,18.5s,baz=201,slow=43						
NNA	Nana	3.66	139	P	Pn	02 00 34.6	+1.0
	45nm,0.3s,baz=327,slow=13,SNR=54						
NNA				S	Sn	02 01 16.0	+0.5
	119nm,0.3s,baz=236,slow=6.2,SNR=6.2						
NNA				LR	LR	02 01 54.4	
	comp=Z,467nm,21.9s,baz=308,slow=37						
NNA	Nana	3.66	139	Pn	Pn	02 00 33.5	-0.1
NNA					Sn	02 01 15.6	+0.1
CZSB	Cruzeiro do Su	6.71	78	*e*P	Pn	02 01 16.6	+1.2
OTAV	Otavalo	9.45	5	Pn	Pn	02 01 50.3	-3.2
OTAV				Sn	Sn	02 03 35.9	-2.8
OTAV	Otavalo	9.45	5	*e*P	Pn	02 01 57.6	+4.1
PTLC	Puerto Leguiza	10.37	26	*e*P	Pn	02 01 59.6	-6.1
GCUF	Volcan Galeras	10.58	11	*e*P	Pn	02 02 11.8	+2.9
FLOC	Florencia	11.35	19	*e*P	Pn	02 02 16.8	-2.3
BBAC	Balboa, Cauca	11.37	11	*e*P	Pn	02 02 18.3	-1.2
SOTA	Rioblanco	11.62	14	*e*P	Pn	02 02 24.1	+1.0
GARC	Garzon, Huila	11.97	19	*e*P	Pn	02 02 26.2	-1.5
MARP	Paez Belalcaza	12.46	16	*e*P	Pn	02 02 34.8	+0.3
MACC	Macarena, Meta	12.55	26	*e*P	Pn	02 02 33.0	-2.5
LPAZ	La Paz	12.96	124	P	Pn	02 02 44.5	+2.9
	0.3nm,0.3s,baz=319,slow=13,SNR=3.7						
LPAZ	La Paz	12.96	124	Pn	Pn	02 02 39.6	-2.0
PB16	IPOC Station P	13.13	135	Pn	Pn	02 02 42.6	-1.2
YOTC	Yotoco, Valle	13.46	13	*e*P	Pn	02 02 45.0	-3.0
PAYG	Puerto Ayora	13.84	307	Pn	Pn	02 02 52.5	-0.6
ANIL	Santa Ana	14.18	16	*e*P	P	02 03 05.3	+0.9
TOLC	Tolima	14.30	16	*e*P	Pn	02 02 58.3	-1.3
RREF	El Recreo	14.59	16	*e*P	P	02 03 08.9	-0.4
PB08	IPOC Station P	14.62	139	Pn	Pn	02 03 01.5	-2.5
ROSC	El Rosal	14.84	20	P	P	02 03 13.4	+1.5
	2.1nm,0.3s,baz=199,slow=9.1,SNR=5.6						
ROSC				LR	LR	02 09 59.9	
	comp=Z,931nm,19.3s,baz=218,slow=42						
CHIC	Chingaza	14.86	22	*e*P	Pn	02 03 06.6	-0.5
GUY2C	Guyana, Caldas	14.90	15	*e*P	P	02 03 14.0	+1.4
CBOC	Ciudad Bolivar	15.36	12	*e*P	P	02 03 16.3	-1.1
SPBC	San Pablo de B	15.69	20	*e*P	P	02 03 19.1	-1.9
PB09	IPOC Station P	15.80	143	Pn	Pn	02 03 17.1	-2.0
SAML	Samuel	15.93	90	Pn	Pn	02 03 17.3	-3.3
SAML				IAmb	IAmb	02 03 23.3	
	comp=Z,63nm,0.8s						
RUSC	La Rusia	16.26	23	*e*P	Pn	02 03 24.4	-0.8
DBBC	Dabeiba	16.44	11	*e*P	P	02 03 29.3	0.0
LVC	Limon Verde	16.63	144	P	P	02 03 37.4	+5.8
	comp=Z,0.2nm,0.3s,baz=333,slow=6.8,SNR=2.9						
LVC	Limon Verde	16.63	144	Pn	Pn	02 03 27.5	-2.2
LVC	Limon Verde	16.63	144	*e*P	P	02 03 38.4	+6.8
BARC	Barichara	16.87	21	*e*P	P	02 03 35.3	+1.0
BRRC	Barranca, Sant	17.17	19	*e*P	Pn	02 03 29.2	-7.0
UREC	San Jos de Ur	17.29	13	*e*P	Pn	02 03 34.1	-3.6
GO02	Mina Guanaco	18.34	151		P	02 03 48.9	-1.7
SMLC	San Martn de	18.66	16	*e*P	P	02 03 52.2	-1.6
SIV	San Ignacio	19.02	112	P	P	02 03 57.6	-0.1
	comp=Z,0.3nm,0.3s,baz=295,slow=12,SNR=22						
VILB	Vilhena	19.11	103	*e*P	P	02 03 58.8	0.0
MACA	Manacapuru-AM	19.47	73	*e*P	P	02 04 01.2	-1.5
SDV	Santo Domingo	19.97	26	P	P	02 04 07.6	-0.7
	comp=Z,0.5nm,0.3s,baz=223,slow=11,SNR=13						
SDV	Santo Domingo	19.97	26	P	P	02 04 05.5	-2.7
SDV	Santo Domingo	19.97	26	*e*P	P	02 04 06.1	-2.2
SDV	Santo Domingo	19.97	26	*e*P	P	02 04 07.1	-1.2
AC02	Maricunga	19.98	152	P	P	02 04 07.1	-1.6
PTGA	Pitinga	21.03	67	P	P	02 04 19.1	-0.5
	comp=Z,51nm,0.7s,baz=248,slow=12,SNR=127						
PTGA	Pitinga	21.03	67	P	P	02 04 19.7	+0.1
PTGA	Pitinga	21.03	67	*e*P	P	02 04 19.5	-0.1
AC05	El Transito	21.27	158	P	P	02 04 21.1	-1.0
AC05				IAmb	IAmb	02 04 41.0	
	comp=Z,8.6nm,0.7s						
LCO	Las Campanas	21.27	159	P	P	02 04 21.4	-0.9
URIC	Uribia, Colomb	22.04	19	*e*P	P	02 04 23.3	-7.0
GO04	Tololo Observa	22.30	160	P	P	02 04 32.2	-1.1
GO04				IAmb	IAmb	02 04 50.9	
	comp=Z,18nm,0.9s						
NPGB	Novo Progresso	23.81	87	*e*P	P	02 04 47.4	-1.1
ITTB	Itaituba	23.90	80	*e*P	P	02 04 47.8	-1.5
H03N2	Juan Fernandez	24.09	179	T	T	02 29 48.0	
	baz=359,slow=76,SNR=114						
H03N1	Juan Fernandez	24.09	179	T	T	02 29 49.3	
	baz=359,slow=76,SNR=105						
H03N3	Juan Fernandez	24.11	179	T	T	02 29 45.9	
	baz=359,slow=76,SNR=108						
TGUH	Tegucigalpa,Un	24.45	341	P	P	02 04 52.5	-1.9
TGUH				IAmb	IAmb	02 04 59.8	
	comp=Z,29nm,1.1s						
MT02	Curacav	25.07	164	P	P	02 04 58.5	-1.2
MT02				IAmb	IAmb	02 05 18.0	
	comp=Z,12nm,1.1s						
MTO3	Montecristo	25.51	337	P	P	02 05 02.0	-2.1
MALB	Monte Alegre	25.97	75	*e*P	P	02 05 06.5	-1.6
CPUP	Villa Florida	26.89	132	P	P	02 05 17.4	+1.1
	comp=Z,1.3nm,0.7s,baz=288,slow=11,SNR=3.9						
CPUP				LR	LR	02 18 52.7	
	comp=Z,234nm,20.3s,baz=322,slow=43						
CPUP	Villa Florida	26.89	132	P	P	02 05 15.4	-0.8
SNDB	Serra Nova Dou	27.67	98	*e*P	P	02 05 23.8	+0.4
MCPB	Macapa, AP	28.53	74	*e*P	P	02 05 30.8	-0.3
PEXB	Peixe	30.60	98	*e*P	P	02 05 49.6	+0.2
BDFB	Brasilia	31.20	105	P	P	02 05 54.1	-0.7
	comp=Z,3.5nm,0.7s,baz=264,slow=11,SNR=5.7						
BDFB				LR	LR	02 19 12.0	
	comp=Z,506nm,20.1s,baz=292,slow=38						
BDFB	Brasilia	31.20	105	P	P	02 05 53.2	-1.6
BDFB				IAmb	IAmb	02 06 10.9	
	comp=Z,7.2nm,1.1s						
SMTB	Santa Maria do	31.33	92	*e*P	P	02 05 56.4	+0.6
TMAB	Tom-Au,PA,Br	31.78	80	*e*P	P	02 05 59.1	-0.7
PLCA	Paso Flores	32.32	167	P	P	02 06 07.5	+3.2
	comp=Z,1.6nm,0.8s,baz=338,slow=11,SNR=2.1						
SDBA	SAO DESIDERIO	33.93	98	*e*P	P	02 06 18.5	-0.2
JANB	Januaria	34.67	103	*e*P	P	02 06 24.8	-0.3
ROSB	Rosrio	35.53	82	*e*P	P	02 06 32.1	-0.4
GDU01	Guandu, BA	39.17	100	*e*P	P	02 07 03.1	-0.1
KMSC	Kings Mountain	44.18	358	P	P	02 07 43.1	-0.9
KMSC				IAmb	IAmb	02 07 46.0	
	comp=Z,15nm,1.0s						
V48A	Smith Brothers	45.29	351	P	P	02 07 52.0	-0.8
V48A				IAmb	IAmb	02 07 54.7	
	comp=Z,7.6nm,0.8s						
X37A	Clayton	46.17	342	P	P	02 07 59.1	-0.6
FCAR	Ozark Folk Cen	46.48	346	P	P	02 08 01.5	-0.6
FCAR				IAmb	IAmb	02 08 04.7	
	comp=Z,10nm,0.8s						
U40A	Yellville	47.11	345	P	P	02 08 06.5	-0.6
U38A	Gravette	47.59	344	P	P	02 08 10.2	-0.6
U38A				IAmb	IAmb	02 08 13.7	
	comp=Z,7.7nm,0.9s						
SIUC	Southern Illin	47.62	349	P	P	02 08 10.3	-0.7
MGMO	Mountain Grove	47.72	346	P	P	02 08 11.2	-0.7
MGMO				IAmb	IAmb	02 08 28.9	
	comp=Z,5.5nm,0.9s						
CCM	Cathedral Cave	48.35	347	P	P	02 08 16.1	-0.5
CCM				IAmb	IAmb	02 08 19.6	
	comp=Z,7.3nm,0.7s						
S39A	Bolivar	48.49	345	P	P	02 08 17.1	-0.7
R40A	Maddies Statio	48.80	346	P	P	02 08 19.3	-0.8
N49A	Columbus Grove	50.11	355	P	P	02 08 29.3	-0.8
ANMO	Albuquerque	50.90	331	P	P	02 08 36.1	-0.3
ANMO				IAmb	IAmb	02 08 39.9	
	comp=Z,2.4nm,0.6s						
W18A	Petrified Fore	52.66	329	P	P	02 08 49.4	-0.1
W18A				IAmb	IAmb	02 08 53.5	
	comp=Z,11nm,0.8s						
WUAZ	Wupatki	53.82	328	P	P	02 08 57.5	-0.5
WUAZ				IAmb	IAmb	02 09 02.6	
	comp=Z,5.2nm,1.0s						
PV01	Paradox Valley	54.47	332	P	P	02 09 02.2	-0.5
PV01				IAmb	IAmb	02 09 06.3	
	comp=Z,2.6nm,0.8s						
PV13	Radium Mtn., P	54.61	332	P	P	02 09 03.3	-0.5
PV13				IAmb	IAmb	02 09 07.1	
	comp=Z,4.0nm,1.0s						
DUG	Dugway, Tooele	58.13	330	P	P	02 09 27.9	-0.8
DUG				IAmb	IAmb	02 09 32.7	
	comp=Z,3.1nm,0.9s						
PD31	Pinedale Array	58.66	334	P	P	02 09 32.0	-0.5
PDAR	Pinedale Array	58.66	334	P	P	02 09 34.0	+1.6
	comp=Z,1.1nm,0.9s,baz=126,slow=7.5,SNR=8.2						
PDAR				PcP	PcP	02 10 22.6	+0.5
	comp=Z,0.6nm,0.6s,baz=164,slow=4.7,SNR=3.6						
PDAR	Pinedale Array	58.66	334	P	P	02 09 32.0	-0.5
HVU	Hansel Valley	59.33	331	P	P	02 09 36.6	-0.4
NVAR	Mina Array Bea	59.74	325	P	P	02 09 42.8	+2.8
	comp=Z,1.4nm,0.8s,baz=133,slow=6.9,SNR=9.2						
NVAR	Mina Array Bea	59.74	325	P	P	02 09 40.1	+0.1
YNE	Yellowstone No	60.67	335	P	P	02 09 45.7	-0.6
YHH	Holmes Hill	60.84	335	P	P	02 09 47.0	-0.5
ULM	Lac du Bonnet	60.98	348	P	P	02 09 48.7	+0.8
	comp=Z,2.2nm,0.5s,baz=149,slow=3.9,SNR=7.6						
ULM	Lac du Bonnet	60.98	348	P	P	02 09 47.6	-0.3
ULM				IAmb	IAmb	02 09 49.9	
	comp=Z,5.2nm,1.0s						
YHL	Hebgen Lake	61.04	335	P	P	02 09 48.4	-0.4
HLID	Hailey	61.47	332	P	P	02 09 51.5	-0.2
PPT	Papeete	68.54	255	LR	LR	02 32 37.5	
	comp=Z,210nm,18.0s,baz=117,slow=29						
DBIC	Dimbokro	75.86	81	P	P	02 11 23.2	+1.5
	comp=Z,4.0nm,0.7s,baz=207,slow=2.8,SNR=4.2						
DBIC				LR	LR	02 43 56.1	
	comp=Z,70nm,18.0s,baz=302,slow=35						
DBIC	Dimbokro	75.86	81	P	P	02 11 20.6	-1.1
DBIC				IAmb	IAmb	02 11 21.3	
	comp=Z,8.8nm,1.1s						
YKA	Yellowknife Ar	76.53	344	P	P	02 11 25.9	+1.4
	comp=Z,1.9nm,0.7s,baz=137,slow=6.7,SNR=14						
MORF	Marmelete	80.54	50	*e*P	P	02 11 48.4	+1.2
MORF				AMb	AMB	02 12 05.7	
	comp=Z,31nm,2.7s						
MORF	Marmelete	80.54	50	*e*P	P	02 11 50.0	+2.8
QSPA	South Pole Qui	80.88	180	P	P	02 11 49.6	+0.9
PNCL	Nicolau / Gran	80.89	49	*e*P	P	02 11 51.5	+2.5
PCVE	Castro Verde	81.11	50	*e*P	P	02 11 53.0	+2.8
PMTG	Montargil	81.43	48	*e*P	P	02 11 53.6	+1.7
PCAS	Casmilo, Conde	81.56	47	*e*P	P	02 11 55.1	+2.5
COI	Coimbra	81.67	47	P	P	02 11 53.0	-0.1
COI	Coimbra	81.67	47	*e*P	P	02 11 55.2	+2.1
PBAR	Barrancos	82.03	49	*e*P	P	02 11 57.0	+2.0
PVIS	Viseu	82.22	47	*e*P	P	02 11 57.6	+1.6
PCBR	Castelo Branco	82.23	48	*e*P	P	02 11 58.6	+2.5
MVO	Moncorvo	82.98	46	*e*P	P	02 12 02.0	+2.0
PBRG	Braganca	83.39	46	*e*P	P	02 12 04.5	+2.4
TORD	Torodi Ar. Bea	83.44	76	P	P	02 12 03.8	+0.9
	comp=Z,5.6nm,0.9s,baz=265,slow=4.6,SNR=16						
TORD				LR	LR	02 48 08.3	
	comp=Z,67nm,19.2s,baz=265,slow=35						
TORD	Torodi Ar. Bea	83.44	76	P	P	02 12 01.8	-1.1
PAB	San Pablo	84.44	49	P	P	02 12 06.8	-0.8
PAB				IAmb	IAmb	02 12 10.3	
	comp=Z,6.6nm,1.0s						
ESDC	Sonseca Array	84.76	49	P	P	02 12 09.9	+0.8
	comp=Z,3.1nm,0.9s,baz=262,slow=5.4,SNR=24						

ESDC	**Sonseca Array**	**84.76**	**49**	P	**P**	**02 12 07.8**	**-1.3**
BCAR	**Beaver Creek A**	**86.23**	**336**	P	**P**	**02 12 16.4**	**+0.5**
VNDA	**Vanda**	**87.01**	**191**	LR	LR	02 43 33.0	
	comp=Z,80nm,19.2s,baz=144,slow=30						
ILAR	**Eielson Array**	**89.01**	**337**	P	**P**	**02 12 30.4**	**+1.3**
	comp=Z,0.8nm,0.8s,baz=148,slow=3.8,SNR=8.1						
ILAR	**Eielson Array**	**89.01**	**337**	P	**P**	**02 12 29.6**	**+0.5**
MDM	**Murphy Dome**	**89.61**	**337**	P	**P**	**02 12 32.4**	**+0.4**
BOSA	**Boshof**	**98.19**	**121**	LR	LR	02 55 49.3	
	comp=Z,68nm,18.9s,baz=12,slow=34						
NOA	**NORSAR Array B**	**98.27**	**29**	LR	LR	02 55 05.4	
	comp=Z,12nm,21.7s,baz=5.0,slow=34						
H11N3	**WAKE ISLAND Hy**	**115.37**	**287**	T	T	04 24 02.5	
	baz=93,slow=74,SNR=11						
H11N2	**WAKE ISLAND Hy**	**115.38**	**287**	T	T	04 24 03.6	
	baz=93,slow=74,SNR=12						
H11N1	**WAKE ISLAND Hy**	**115.39**	**287**	T	T	04 24 00.6	
	baz=93,slow=74,SNR=10						
H11S2	**WAKE ISLAND Hy**	**115.53**	**286**	T	T	04 24 13.4	
	baz=92,slow=75,SNR=19						
H11S1	**WAKE ISLAND Hy**	**115.54**	**286**	T	T	04 24 08.7	
	baz=92,slow=75,SNR=11						
H11S3	**WAKE ISLAND Hy**	**115.55**	**286**	T	T	04 24 14.7	
	baz=92,slow=75,SNR=10						
BVAR	**Borovoye Array**	**129.94**	**23**	PKP	**PKiKP**	**02 18 45.6**	**+0.7**
	comp=Z,0.6nm,0.7s,baz=210,slow=7.8,SNR=5.6						
ZALV	**Zalesovo Beam**	**133.63**	**13**	PKP	**PKiKP**	**02 18 52.4**	**+0.1**
	comp=Z,0.6nm,0.4s,baz=230,slow=1.2,SNR=5.6						
KURBB	**Kurchatov Arra**	**134.86**	**20**	PKP	**PKiKP**	**02 18 54.9**	**0.0**
	comp=Z,1.5nm,0.7s,baz=329,slow=2.3,SNR=19						
WRA	**Warramunga Arr**	**135.97**	**229**	PKP	**PKiKP**	**02 18 58.5**	**+0.4**
	comp=Z,0.5nm,0.6s,baz=123,slow=2.0,SNR=8.1						
MKAR	**Makanchi Array**	**139.42**	**19**	PKP	**PKPdf**	**02 19 02.2**	**+0.2**
	comp=Z,0.6nm,0.7s,baz=354,slow=2.4,SNR=7.8						
GTA	**Gaotai**	**149.94**	**1**	⇓PKPbc	**PKiKP**	**02 19 26.7**	**+0.4**
GTA				pPKP	pPKPbc	02 19 37.0	-2.3
GTA				sPKP		02 19 40.5	

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*IDC **12** 02:06:47.4±1.2, 71°.97N×75°.37W, h0^{km}, mb3.6/4, mb1 3.9/8, mb1mx3.4/67, mbtmp3.7/8, ML3.8/4, Error ellipse: s-maj=22.3km s-min=16.0km az=56.0*

*OTT **12** 02:06:50.1±0.2, 72°.05N×75°.06W, h18^{km}, MN3.8/6, 123km southeast from Pond Inlet, Nu Baffin Island Seismic Zone, Nt.*

ISC 12 02:06:46.4±0.6**, 71°.96N**±0°.05×**75°.01W**±0°.05**, h10**^{km}**, n21, σ2^{s}.38**/31**, mb3.6**/4**, Baffin Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CLRN	**Clyde River**	**2.56**	**123**	PN	**Pb**	**02 07 31.6**	**-0.8**
CLRN				SN	**Sb**	**02 08 02.8**	**-1.1**
CLRN				Trac		02 08 10.7	
	comp=Z,253nm,0.1s						
TULEG	**Thule**	**4.89**	**17**	PN	**Pn**	**02 08 00.9**	**+1.0**
TULEG				SN	**Sn**	**02 08 53.8**	**-2.7**
TULEG				Trac		02 08 55.8	
	comp=Z,119nm,0.4s						
TULEG	**Thule**	**4.89**	**17**	*e*	**Pn**	**02 07 59.7**	**-0.2**
	baz=250,slow=4.4						
TULEG				*i* P	**Pn**	**02 08 00.0**	**+0.1**
TULEG				*i* P	**Pn**	**02 08 01.1**	**+1.2**
TULEG				*i* S	**Sn**	**02 08 54.2**	**-2.2**
TULEG				IAML		02 08 56.3	
	comp=Z,74nm,0.3s						
KULLO	**Kullorsuaq**	**5.75**	**55**	*e*	**Pn**	**02 08 11.8**	**+0.1**
	baz=250,slow=12						
KULLO				*i* P	**Pn**	**02 08 13.1**	**+1.4**
KULLO				*i* S	**Sn**	**02 09 15.0**	**-2.7**
KULLO				IAML		02 09 18.5	
	comp=Z,18nm,0.3s						
RES	**Resolute Bay**	**6.32**	**305**	Pn	**Pn**	**02 08 20.0**	**+0.6**
	comp=Z,1.5nm,0.3s,baz=112,slow=8.7,SNR=39						
RES				Pg	Pb	02 08 42.4	+6.1
	comp=Z,6.5nm,0.3s,baz=104,slow=12,SNR=13						
RES				Lg	Lg	02 10 03.8	
	comp=Z,7.9nm,0.3s,baz=169,slow=17,SNR=9.0						
RES	**Resolute Bay**	**6.32**	**305**	PN	**Pn**	**02 08 20.1**	**+0.6**
RES				SN	**Sn**	**02 09 29.1**	**-2.4**
RES				LG	Lg	02 10 07.9	
RES				Trac		02 10 11.7	
	comp=Z,89nm,0.4s						
ILULI	**Ilulissat**	**8.39**	**98**	SN	**Sn**	**02 10 18.9**	**-3.6**
EUNU	**Eureka**	**8.56**	**347**	PN	**Pn**	**02 08 51.4**	**+1.2**
EUNU				SN	**Sn**	**02 10 21.1**	**-5.5**
EUNU				Trac		02 10 27.8	
	comp=Z,6.0nm,0.5s						
FRB	**Frobisher Bay**	**8.60**	**160**	Pn	**Pn**	**02 08 52.1**	**+1.4**
	comp=Z,1.3nm,0.3s,baz=354,slow=15,SNR=4.2						
FRB				Lg	Lg	02 11 12.0	
	comp=Z,32nm,0.3s,baz=84,slow=21,SNR=18						
FRB	**Frobisher Bay**	**8.60**	**160**	PN	**Pn**	**02 08 52.9**	**+2.2**
FRB				SN	**Sn**	**02 10 26.5**	**-1.1**
FRB				Trac		02 11 13.8	
	comp=Z,139nm,0.5s						
FRB				LG	Lg	02 11 15.7	
SFJD	**Kangerlussuaq**	**9.84**	**108**	PN	**Pn**	**02 09 10.4**	**+2.7**
KUKN	**Kugluktuk,NWT**	**14.17**	**273**	PN	**Pn**	**02 10 05.4**	**-1.3**
KUKN				SN	Sn	02 12 32.2	-12
FCC	**Fort Churchill**	**15.33**	**220**	PN	**Pn**	**02 10 18.8**	**-3.7**
FCC				SN	Sn	02 13 01.8	-10
FCC				LG	Lg	02 14 51.7	
FCC				Trac		02 14 58.4	
	comp=Z,175nm,1.8s						
C36M	**Paulatuk**	**16.09**	**285**	PN	**Pn**	**02 10 31.0**	**-1.2**
C36M				SN	Sn	02 13 17.8	-12
KJKQ	**Kuujjuarapik**	**16.80**	**185**	PN	**Pn**	**02 10 40.1**	**-1.2**
KJKQ				SN	Sn	02 13 37.3	-10
YKA	**Yellowknife Ar**	**17.62**	**258**	Pn	**Pn**	**02 10 46.8**	**-4.8**
	comp=Z,0.4nm,0.3s,baz=45,slow=10,SNR=13						
YKA				Sn	Sn	02 13 51.7	-16
	comp=Z,0.6nm,0.3s,baz=39,slow=22,SNR=9.2						
YKA				Lg	Lg	02 15 43.9	
	comp=Z,2.5nm,0.3s,baz=44,slow=27,SNR=6.7						
INK	**Inuvik**	**19.50**	**288**	P	**P**	**02 11 14.4**	**+1.2**
	comp=Z,0.3nm,0.3s,baz=40,slow=6.5,SNR=4.3						
ILAR	**Eielson Array**	**25.83**	**291**	P	**P**	**02 12 19.0**	**+1.6**
	comp=Z,0.4nm,0.5s,baz=44,slow=8.1,SNR=8.3						
PDAR	**Pinedale Array**	**33.71**	**229**	P	**P**	**02 13 30.9**	**+3.2**
	comp=Z,0.2nm,0.5s,baz=24,slow=8.9,SNR=2.5						
NRIK	**Noril'sk**	**38.47**	**10**	P	**P**	**02 14 09.5**	**+1.7**
	comp=Z,1.0nm,0.5s,baz=18,slow=6.4,SNR=2.2						
ZALV	**Zalesovo Beam**	**53.59**	**15**	P	**P**	**02 16 09.6**	**+2.7**
	comp=Z,0.4nm,0.4s,baz=341,slow=8.5,SNR=4.4						

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*IDC **12** 02:11:39.2±0.4, 71°.96N×75°.38W, h0^{km}, mb4.3/35, mb1 4.4/40, mb1mx4.3/65, mbtmp4.3/40, ML4.5/5, MS4.0/36, Ms1 4.0/36, ms1mx3.9/53, Error ellipse: s-maj=12.5km s-min=9.7km az=145.0*

*BJI **12** 02:11:40.1±0.0, 72°.44N×75°.58W, h13^{km}, mB5.1/26, mb4.7/36, Ms4.8/6, Ms7 4.5/7*

*NEIC **12** 02:11:41.0±0.5, 72°.03N±0°.07×75°.1W±0°.2, h18^{km}±4^{km}, Error ellipse: s-maj=10.6km s-min=8.7km az=207.0*

*GCMT **12** 02:11:41.5±0.4, 72°.03N±0°.04×75°.3W±0°.1, h13^{km}±2^{km}, MW4.8/64, Moment Tensor Solution. s18,c22; s64,c97; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.20±.24; $M_{\theta\theta}$-0.13±.15; $M_{\phi\phi}$1.33±.18; $M_{r\theta}$-0.89±.44; $M_{\theta\phi}$-1.62±.11; $M_{\phi r}$-0.66±.42; Best double couple: $M_0$2.33700×10^{16} NP1:ϕ_s112.00000°,δ59.00000°,λ-145.00000°. NP2: ϕ_s2.00000°,δ61.00000°,λ-36.00000°. Principal axes: T 2.3790, Plg1.0000°, Azm57.0000°; N -0.0810, Plg45.0000°, Azm149.0000°; P -2.2960, Plg45.0000°, Azm326.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*OTT **12** 02:11:41.5±0.2, 72°.05N×75°.09W, h18^{km}, MN4.8/7, 122km southeast from Pond Inlet, Nu Baffin Island Seismic Zone, Nt.*

*DNK **12** 02:11:44.1±2.4, 72°.20N×74°.56W, h111^{km}±27^{km}, ML3.8*

ISC 12 02:11:42.6±0.3**, 71°.93N**±0°.03×**75°.30W**±0°.04**, h32**^{km}**, n469, σ2^{s}.06**/487**, mb4.6**/125**, MS4.0**/32**, 3C, Baffin Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CLRN	**Clyde River**	**2.62**	**121**	PN	**Pn**	**02 12 21.9**	**-0.7**
CLRN				SN	**Sn**	**02 12 53.6**	**+0.5**
CLRN				Trac		02 13 00.8	
	comp=Z,3µm,0.1s						
TULEG	**Thule**	**4.96**	**18**	PN	**Pn**	**02 12 52.0**	**-2.6**
TULEG				SN	**Sn**	**02 13 45.4**	**-5.4**
TULEG				Trac		02 13 49.1	
	comp=Z,700nm,0.6s						
TULEG	**Thule**	**4.96**	**18**		**Pn**	**02 12 51.8**	**-2.8**
TULEG				Sn	**Sn**	**02 13 45.3**	**-5.4**
TULEG	**Thule**	**4.96**	**18**	*i* P	**Pn**	**02 12 51.8**	**-2.8**
TULEG				*i* S	**Sn**	**02 13 45.0**	**-5.8**
TULEG				IAML		02 13 49.5	
	comp=Z,237nm,0.5s						
KULLO	**Kullorsuaq**	**5.85**	**55**	*i* P	**Pn**	**02 13 04.7**	**-2.2**
KULLO				*i* S	**Sn**	**02 14 06.4**	**-6.3**
KULLO	**Kullorsuaq**	**5.85**	**55**	PN	**Pn**	**02 13 04.3**	**-2.6**
KULLO				SN	**Sn**	**02 14 06.5**	**-6.3**
KULLO				Trac		02 14 10.5	
	comp=Z,206nm,0.4s						
KULLO	**Kullorsuaq**	**5.85**	**55**	*i* P	**Pn**	**02 13 04.7**	**-2.2**
KULLO				*i* S	**Sn**	**02 14 06.5**	**-6.3**
KULLO				IAML		02 14 15.7	
	comp=Z,118nm,0.4s						
UPNV	**Upernavik**	**5.88**	**73**	*i* P	**Pn**	**02 13 05.1**	**-2.2**
UPNV				*i* S	**Sn**	**02 14 08.1**	**-5.4**
UPNV				IAML		02 14 14.7	
	comp=Z,135nm,0.4s						
RES	**Resolute Bay**	**6.27**	**305**	Pn	**Pn**	**02 13 10.9**	**-1.7**
	comp=Z,3.0nm,0.3s,baz=96,slow=18,SNR=6.0						
RES				Sn	**Sn**	**02 14 22.2**	**-0.8**
	comp=Z,28nm,0.3s,baz=306,slow=18,SNR=4.9						
RES				Lg	Lg	02 14 54.5	
	comp=Z,54nm,0.3s,baz=174,slow=16,SNR=9.2						
RES				LR	LR	02 15 22.6	
	comp=Z,316nm,20.8s,baz=92,slow=36						
RES	**Resolute Bay**	**6.27**	**305**	PN	**Pn**	**02 13 11.6**	**-1.1**
RES				SN	**Sn**	**02 14 19.9**	**-3.1**
RES				LG	Lg	02 14 56.9	
RES				Trac		02 15 02.7	
	comp=Z,1µm,0.7s						
RES	**Resolute Bay**	**6.27**	**305**	Pn	**Pn**	**02 13 10.9**	**-1.7**
RES				Sn	**Sn**	**02 14 23.4**	**+0.4**
NUUG	**Nuugaatsiaq**	**6.94**	**83**	*i* P	**Pn**	**02 13 19.7**	**-2.2**
NUUG				IAML		02 14 45.9	
	comp=Z,66nm,0.4s						
ILULI	**Ilulissat**	**8.48**	**97**	*i* P	**Pn**	**02 13 41.6**	**-1.3**
ILULI	**Ilulissat**	**8.48**	**97**	PN	**Pn**	**02 13 41.5**	**-1.3**
ILULI				SN	**Sn**	**02 15 11.5**	**-5.7**
ILULI				Trac		02 15 18.2	
	comp=Z,102nm,0.7s						
ILULI	**Ilulissat**	**8.48**	**97**		**Pn**	**02 13 41.1**	**-1.8**
ILULI				Sn	**Sn**	**02 15 12.9**	**-4.3**
ILULI	**Ilulissat**	**8.48**	**97**	*i* P	**Pn**	**02 13 41.6**	**-1.3**
EUNU	**Eureka**	**8.58**	**347**	PN	**Pn**	**02 13 42.5**	**-1.7**
EUNU				SN	**Sn**	**02 15 13.5**	**-6.2**
EUNU				Trac		02 16 43.7	
	comp=Z,718nm,2.0s						
EUNU	**Eureka**	**8.58**	**347**	Pn	**Pn**	**02 13 42.1**	**-2.2**
FRB	**Frobisher Bay**	**8.60**	**160**	Pn	**Pn**	**02 13 42.9**	**-1.6**
	comp=Z,5.3nm,0.3s,baz=350,slow=14,SNR=5.1						
FRB				Sn	**Sn**	**02 15 15.1**	**-5.1**
	comp=Z,31nm,0.3s,baz=92,slow=5.8,SNR=6.8						
FRB				Lg	Lg	02 16 01.5	
	comp=Z,90nm,0.3s,baz=84,slow=17,SNR=22						
FRB				LR	LR	02 17 03.5	
	comp=Z,1µm,20.2s,baz=336,slow=38						
FRB	**Frobisher Bay**	**8.60**	**160**	PN	**Pn**	**02 13 44.4**	**-0.2**
FRB				SN	**Sn**	**02 15 17.8**	**-2.4**
FRB				Trac		02 16 05.7	
	comp=Z,2µm,0.8s						
FRB				LG	Lg	02 16 10.4	
SFJD	**Kangerlussuaq**	**9.92**	**108**	Pn	**Pn**	**02 14 01.2**	**-1.4**
	comp=Z,2.6nm,0.3s,baz=318,slow=13,SNR=11						
SFJD				Sn	**Sn**	**02 15 46.9**	**-5.7**
	comp=Z,14nm,0.3s,baz=30,slow=23,SNR=9.9						
SFJD				LR	LR	02 17 48.0	
	comp=Z,309nm,19.6s,baz=306,slow=37						
SFJD	**Kangerlussuaq**	**9.92**	**108**	*i* P	**Pn**	**02 14 01.1**	**-1.5**
SFJD	**Kangerlussuaq**	**9.92**	**108**	PN	**Pn**	**02 14 01.4**	**-1.2**
SFJD				SN	**Sn**	**02 15 45.5**	**-7.1**
SFJD				Trac		02 15 50.8	
	comp=Z,3.1nm,0.4s						
SFJD	**Kangerlussuaq**	**9.92**	**108**	Pn	**Pn**	**02 14 01.7**	**-0.9**
SFJD	**Kangerlussuaq**	**9.92**	**108**	*i* P	**Pn**	**02 14 01.1**	**-1.5**
SFJD				IAML		02 15 51.1	
	comp=Z,2.1nm,0.3s						
KNGQ	**Kangiqsujuaq**	**10.47**	**171**	PN	**Pn**	**02 14 09.6**	**-0.6**
KNGQ				SN	**Sn**	**02 15 59.3**	**-6.8**
KNGQ				Trac		02 17 01.0	
	comp=Z,15nm,0.0s						
KNGQ				LG	Lg	02 17 09.7	
SUMG	**Summit**	**11.14**	**69**	*i* P	**Pn**	**02 14 15.7**	**-4.0**
SUMG	**Summit**	**11.14**	**69**	Pn	**Pn**	**02 14 15.3**	**-4.4**
SUMG	**Summit**	**11.14**	**69**	*i* P	**Pn**	**02 14 15.7**	**-4.0**
ICESG	**Greenland Ices**	**12.11**	**86**	*i* P	**Pn**	**02 14 30.9**	**-1.9**
ICESG				IAML		02 16 42.4	
	comp=Z,30nm,0.3s						
KUKN	**Kugluktuk,NWT**	**14.08**	**273**	PN	**Pn**	**02 14 57.8**	**-1.6**
KUKN				SN	Sn	02 17 25.1	-9.1
KUKN				Trac		02 18 57.7	
	comp=Z,802nm,0.7s						
KUKN				LG	Lg	02 18 59.4	
ANGG	**Ammassalik, Gr**	**14.79**	**96**		**Pn**	**02 15 06.2**	**-2.8**
FCC	**Fort Churchill**	**15.24**	**220**	PN	**Pn**	**02 15 14.2**	**-0.8**
FCC				SN	**Sn**	**02 17 53.3**	**-9.2**
FCC				Trac		02 18 51.2	
	comp=Z,84nm,0.6s						
FCC				LG	Lg	02 19 44.3	
DAG	**Danmarks Havn**	**15.42**	**46**	*i* P	**Pn**	**02 15 11.1**	**-6.2**
DAG	**Danmarks Havn**	**15.42**	**46**	*i* P	**Pn**	**02 15 11.1**	**-6.2**
DAG				IAML		02 18 03.4	
	comp=Z,0.9nm,0.2s						
DBG	**Daneborg**	**15.68**	**56**	*i* P	**Pn**	**02 15 14.0**	**-6.6**
DBG				IAML		02 18 07.2	
	comp=Z,4.5nm,0.4s						
C36M	**Paulatuk**	**16.01**	**285**	SN	**Sn**	**02 18 10.7**	**-10**
C36M				LG	Lg	02 19 59.0	
C36M				Trac		02 20 01.4	
	comp=Z,946nm,1.5s						
NANL	**Nain**	**16.46**	**153**	PN	**P**	**02 15 32.6**	**-0.5**
NANL				SN	**Sn**	**02 18 23.3**	**-8.9**
SCO	**Scoresbysund**	**16.79**	**69**	*i* P	**Pn**	**02 15 28.8**	**-5.9**
SCO	**Scoresbysund**	**16.79**	**69**	Pn	**Pn**	**02 15 29.3**	**-5.5**
SCO				IAmb	IAmb	02 15 31.2	
	comp=Z,36nm,0.8s						
SCO	**Scoresbysund**	**16.79**	**69**	*i* P	**Pn**	**02 15 28.9**	**-5.9**
YKA	**Yellowknife Ar**	**17.53**	**258**	Pn	**Pn**	**02 15 39.5**	**-4.5**
	comp=Z,2.4nm,0.3s,baz=44,slow=12,SNR=6.7						
YKA				Sn	**Sn**	**02 18 52.8**	**-5.1**
	comp=Z,3.3nm,0.3s,baz=33,slow=21,SNR=4.9						
YKA				Lg	Lg	02 20 35.9	
	comp=Z,8.3nm,0.3s,baz=41,slow=29,SNR=7.5						
YKA				LR	LR	02 22 13.2	
	comp=Z,957nm,18.6s,baz=0.0,slow=36						
SILO	**Sutton Inlier**	**18.00**	**198**	PN	**Pn**	**02 15 49.3**	**-0.6**
SILO				SN	**Sn**	**02 18 60.0**	**-9.3**
SILO				Trac		02 21 04.7	
	comp=Z,2µm,1.3s						
SILO				LG	Lg	02 21 09.3	
NOWN	**Norman Wells,**	**19.29**	**276**	PN	**Pn**	**02 16 05.7**	**+0.3**
NOWN				Trac		02 21 47.6	
	comp=Z,2µm,1.6s						
INK	**Inuvik**	**19.43**	**288**	P	**P**	**02 16 05.6**	**-0.1**
	comp=Z,1.7nm,0.3s,baz=42,slow=10,SNR=7.5						
INK				Lg	Lg	02 21 37.0	
	comp=Z,1.9nm,0.3s,baz=322,slow=17,SNR=6.4						
INK				LR	LR	02 23 32.6	
	comp=Z,455nm,19.4s,baz=42,slow=37						
INK	**Inuvik**	**19.43**	**288**	PN	**Pn**	**02 16 06.2**	**-0.8**
INK				SN	S	02 19 32.0	-11
INK				Trac		02 22 00.9	
	comp=Z,538nm,1.7s						
INK	**Inuvik**	**19.43**	**288**	P	**P**	**02 16 04.0**	**-1.7**
INK				IAmb	IAmb	02 16 10.2	
	comp=Z,19nm,0.8s						
VIMO	**Victor Mine**	**19.53**	**195**	PN	**Pn**	**02 16 09.6**	**+1.1**
VIMO				Trac		02 22 10.9	
	comp=Z,2µm,1.6s						
JMIC	**Jan Mayen**	**20.30**	**60**	LR	LR	02 23 50.0	
	comp=Z,314nm,20.8s,baz=264,slow=36						
BORG	**Borgarnes**	**20.46**	**83**	LR	LR	02 23 40.7	
	comp=Z,302nm,20.1s,baz=320,slow=35						
FFC	**Flin Flon**	**20.67**	**228**	P	**P**	**02 16 20.0**	**+0.7**
SPITS	**Spitsbergen Ar**	**21.91**	**34**	P	**P**	**02 16 33.9**	**+1.4**
	comp=Z,16nm,0.9s,baz=301,slow=11,SNR=2.8						
SPITS				LR	LR	02 24 33.7	
	comp=Z,320nm,21.3s,baz=335,slow=35						
MATQ	**Matagami**	**22.27**	**184**	P	**P**	**02 16 35.1**	**-1.4**
	baz=2.1,SNR=8.7						
LSQQ	**Lebel-sur-Quev**	**22.96**	**183**	P	**P**	**02 16 42.8**	**-1.0**
	baz=1.5						
BMAR	**Burnt Mountain**	**23.21**	**294**	P	**P**	**02 16 45.8**	**-0.6**
ULM	**Lac du Bonnet**	**23.65**	**214**	P	**P**	**02 16 50.6**	**0.0**
	comp=Z,5.2nm,0.5s,baz=357,slow=9.1,SNR=7.8						
ULM				LR	LR	02 26 01.5	
	comp=Z,788nm,18.0s,baz=16,slow=36						
ULM	**Lac du Bonnet**	**23.65**	**214**	P	**P**	**02 16 52.0**	**+1.3**
ULM				IAmb	IAmb	02 17 05.3	
	comp=Z,12nm,0.8s						
TOLK	**Toolik Lake Re**	**23.80**	**299**	P	**P**	**02 16 51.3**	**-0.7**
	baz=48,SNR=9.6						
TOLK	**Toolik Lake Re**	**23.80**	**299**	P	**P**	**02 16 52.4**	**+0.4**
TOLK				IAmb	IAmb	02 16 55.8	
	comp=Z,13nm,1.1s						
A21K	**Barrow**	**23.86**	**308**	P	**P**	**02 16 52.5**	**+0.1**
VLDQ	**Val d'Or**	**23.91**	**184**	P	**P**	**02 16 53.8**	**+0.7**
FYU	**Fort Yukon**	**23.99**	**293**	P	**P**	**02 16 54.4**	**+0.7**
DAWY	**Dawson**	**24.04**	**284**	P	**P**	**02 16 55.0**	**+0.7**
DAWY				IAmb	IAmb	02 16 57.6	
	comp=Z,28nm,0.9s						
EGAK	**Eagle**	**24.06**	**286**	P	**P**	**02 16 55.1**	**+0.7**
EGAK				IAmb	IAmb	02 17 08.9	
	comp=Z,20nm,0.8s						
DRLN	**Deer Lake**	**24.16**	**151**	P	**P**	**02 16 55.1**	**-0.2**
LATQ	**La Tuque**	**24.65**	**176**	P	**P**	**02 17 01.3**	**+1.5**
	baz=358,SNR=9.3						
LATQ	**La Tuque**	**24.65**	**176**	P	**P**	**02 17 01.2**	**+1.4**
LATQ				IAmb	IAmb	02 17 04.1	
	comp=Z,21nm,1.1s						
PRP	**Porcupine Dome**	**24.82**	**291**	P	**P**	**02 17 01.8**	**+0.3**
PRP				IAmb	IAmb	02 17 03.7	
	comp=Z,11nm,0.6s						
D61A	**St Aubert, Com**	**24.92**	**172**	P	**P**	**02 17 04.0**	**+1.7**
	baz=356						
D58A	**Chemin du LacG**	**24.93**	**176**	P	**P**	**02 17 04.4**	**+1.9**
	baz=358,SNR=18						
COLD	**Coldfoot**	**24.94**	**297**	P	**P**	**02 17 02.3**	**-0.1**
	baz=45,SNR=6.2						
COLD	**Coldfoot**	**24.94**	**297**	P	**P**	**02 17 02.8**	**+0.5**
COLD				IAmb	IAmb	02 17 13.8	
	comp=Z,9.6nm,1.1s						
D56A	**ZEC Mazanza, M**	**24.96**	**179**	P	**P**	**02 17 03.2**	**+0.6**
	baz=360,SNR=8.5						
D55A	**Sainte-Anne-du**	**24.98**	**180**	P	**P**	**02 17 04.1**	**+1.2**
	baz=0.3,SNR=11						
D59A	**Saint-Raymond**	**25.05**	**174**	P	**P**	**02 17 04.5**	**+1.0**
	baz=358						
D62A	**Allapoint, All**	**25.09**	**170**	P	**P**	**02 17 04.7**	**+0.9**
	baz=356						
D62A	**Allapoint, All**	**25.09**	**170**	P	**P**	**02 17 05.2**	**+1.3**
BATG	**Bathurst New B**	**25.10**	**165**	P	**P**	**02 17 05.0**	**+1.0**
B35A	**Bob, Littlefor**	**25.12**	**210**	P	**P**	**02 17 05.2**	**+1.0**
D60A	**Saint Jean D'O**	**25.17**	**173**	P	**P**	**02 17 05.2**	**+0.6**
	baz=357						
D63A	**Stockholm**	**25.19**	**168**	P	**P**	**02 17 05.6**	**+0.8**
	baz=355						
EYMN	**Ely**	**25.20**	**206**	P	**P**	**02 17 06.4**	**+1.5**
	baz=12						
EYMN	**Ely**	**25.20**	**206**	P	**P**	**02 17 06.3**	**+1.4**
EYMN				IAmb	IAmb	02 17 19.1	
	comp=Z,13nm,0.8s						
E56A	**St. Veronique**	**25.46**	**180**	P	**P**	**02 17 08.8**	**+1.6**
	baz=360,SNR=11						
DLBC	**Dease Lake**	**25.47**	**267**	P	**P**	**02 17 09.1**	**+1.7**
	comp=Z,3.7nm,0.6s,baz=30,slow=6.7,SNR=12						
DLBC	**Dease Lake**	**25.47**	**267**	P	**P**	**02 17 08.4**	**+1.1**
DLBC				IAmb	IAmb	02 17 25.4	
	comp=Z,10nm,1.1s						
SCRK	**Sand Creek**	**25.49**	**287**	P	**P**	**02 17 07.5**	**0.0**
	baz=42						
BCAR	**Beaver Creek A**	**25.51**	**284**	P	**P**	**02 17 08.3**	**+0.7**
E55A	**Montcerf-Lytto**	**25.55**	**181**	P	**P**	**02 17 09.4**	**+1.4**
	baz=0.7,SNR=8.4						
E57A	**Chemin Saint G**	**25.60**	**178**	P	**P**	**02 17 09.6**	**+1.1**
	baz=359,SNR=17						
E58A	**La Victoria**	**25.65**	**177**	P	**P**	**02 17 10.2**	**+1.3**
	baz=359,SNR=9.2						
POKR	**Poker Plat Res**	**25.66**	**292**	P	**P**	**02 17 09.2**	**+0.2**
	baz=43						
POKR	**Poker Plat Res**	**25.66**	**292**	P	**P**	**02 17 09.5**	**+0.5**
POKR				IAmb	IAmb	02 17 23.4	
	comp=Z,18nm,1.1s						
E61A	**Lac Etchemin**	**25.67**	**172**	P	**P**	**02 17 10.6**	**+1.4**
	baz=357						
E60A	**Ste Agathe de**	**25.70**	**174**	P	**P**	**02 17 10.7**	**+1.3**
	baz=357,SNR=7.7						
DOT	**Dot Lake**	**25.76**	**287**	P	**P**	**02 17 10.7**	**+0.9**
IL31		**25.76**	**291**	P	**P**	**02 17 10.7**	**+0.9**
IL31				IAmb	IAmb	02 17 24.9	
	comp=Z,11nm,0.8s						
ILAR	**Eielson Array**	**25.76**	**291**	P	**P**	**02 17 11.3**	**+1.5**
	comp=Z,2.9nm,0.6s,baz=46,slow=7.7,SNR=55						
ILAR	**Eielson Array**	**25.76**	**291**	P	**P**	**02 17 10.4**	**+0.6**
TRQ	**Mont Tremblant**	**25.78**	**179**	P	**P**	**02 17 11.3**	**+1.0**
E63A	**Oxbow**	**25.79**	**169**	P	**P**	**02 17 11.7**	**+1.5**
	baz=355						
E64A	**Bridgewater**	**25.83**	**168**	P	**P**	**02 17 12.3**	**+1.7**
	baz=355						
RIDG	**Independent Ri**	**25.92**	**288**	P	**P**	**02 17 12.1**	**+0.7**
RIDG				IAmb	IAmb	02 17 17.3	
	comp=Z,16nm,0.8s						
COLA	**College**	**25.96**	**292**	P	**P**	**02 17 12.4**	**+0.8**
TCOL	**CIGO, UAF Yank**	**25.97**	**292**	P	**P**	**02 17 12.9**	**+1.2**
	baz=42						
TCOL	**CIGO, UAF Yank**	**25.97**	**292**	P	**P**	**02 17 12.4**	**+0.8**
E46A	**Sault Ste Mari**	**25.99**	**194**	P	**P**	**02 17 13.7**	**+1.7**
E46A				IAmb	IAmb	02 17 31.6	
	comp=Z,20nm,1.0s						
MDM	**Murphy Dome**	**26.01**	**292**	P	**P**	**02 17 12.8**	**+0.7**
MDM				IAmb	IAmb	02 17 14.9	
	comp=Z,18nm,1.1s						
HDA	**Harding Lake**	**26.05**	**290**	P	**P**	**02 17 13.4**	**+1.0**
	baz=42,SNR=21						
HDA	**Harding Lake**	**26.05**	**290**	P	**P**	**02 17 13.0**	**+0.6**
ALGO	**Algonquin Park**	**26.08**	**184**	P	**P**	**02 17 14.2**	**+1.4**
	baz=2.1,SNR=8.3						
F60A	**Warwick**	**26.08**	**175**	P	**P**	**02 17 14.0**	**+1.1**
	baz=358,SNR=7.1						
CCB	**Clear Creek Bu**	**26.12**	**291**	P	**P**	**02 17 13.6**	**+0.6**
CCB				IAmb	IAmb	02 17 15.5	
	comp=Z,13nm,1.1s						
F59A	**Saint Guilaume**	**26.18**	**176**	P	**P**	**02 17 15.9**	**+2.2**
	baz=358						
F57A	**Harrington**	**26.19**	**179**	P	**P**	**02 17 16.0**	**+2.1**
	baz=360,SNR=8.1						
I23K	**Minto, Yukon-K**	**26.20**	**293**	P	**P**	**02 17 14.7**	**+0.9**
	baz=42,SNR=9.2						
I23K	**Minto, Yukon-K**	**26.20**	**293**	P	**P**	**02 17 14.1**	**+0.3**
I23K				IAmb	IAmb	02 17 28.6	
	comp=Z,15nm,1.0s						
WRH	**Wood River Hil**	**26.33**	**291**	P	**P**	**02 17 15.5**	**+0.6**
WRH				IAmb	IAmb	02 17 32.5	
	comp=Z,15nm,1.0s						
F63A	**Nahmakanta, Br**	**26.47**	**170**	P	**P**	**02 17 17.2**	**+0.8**
	baz=356						
F63A	**Nahmakanta, Br**	**26.47**	**170**	P	**P**	**02 17 17.7**	**+1.4**
E38A	**The Farm, Brul**	**26.52**	**206**	P	**P**	**02 17 18.5**	**+1.6**
E38A				IAmb	IAmb	02 17 22.0	
	comp=Z,12nm,0.6s						
NEA2	**Nenana**	**26.53**	**292**	P	**P**	**02 17 17.3**	**+0.5**
	baz=42,SNR=6.8						
LMN	**Caledonia Moun**	**26.62**	**163**	P	**P**	**02 17 19.0**	**+1.2**
G54A	**Lake Saint Pet**	**26.64**	**184**	P	**P**	**02 17 19.4**	**+1.4**
	baz=2.1						
MLY	**Manley**	**26.68**	**294**	P	**P**	**02 17 17.5**	**-0.7**
	baz=42,SNR=5.1						
PAX	**Paxson**	**26.69**	**287**	P	**P**	**02 17 19.0**	**+0.7**
PAX				IAmb	IAmb	02 17 21.5	
	comp=Z,14nm,1.1s						
MOQ	**Mont Orford**	**26.73**	**175**	P	**P**	**02 17 20.0**	**+1.2**
IMAR	**Indian Mountai**	**26.82**	**297**	P	**P**	**02 17 19.7**	**+0.3**
G58A	**Ormstown**	**26.86**	**178**	P	**P**	**02 17 21.0**	**+1.2**
	baz=359,SNR=5.1						
G62A	**West of Eustis**	**26.88**	**173**	P	**P**	**02 17 20.5**	**+0.4**
	baz=357						
G57A	**Newington**	**26.90**	**180**	P	**P**	**02 17 21.6**	**+1.4**
	baz=360,SNR=13						
BWN	**Browne**	**26.96**	**292**	P	**P**	**02 17 20.9**	**+0.3**
BWN				IAmb	IAmb	02 17 23.5	
	comp=Z,25nm,1.0s						
PLVO	**Plevna**	**26.98**	**183**	P	**P**	**02 17 22.6**	**+1.6**
MCK	**McKinley**	**27.13**	**291**	P	**P**	**02 17 22.6**	**+0.3**
	baz=41						
FRNY	**Flat Rock**	**27.18**	**177**	P	**P**	**02 17 24.2**	**+1.5**
FRNY				IAmb	IAmb	02 17 26.2	

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             comp=Z,20nm,1.1s
SADO   Sadowa             27.30 186  P      P       02 17 25.6 +1.8
             comp=Z,15nm,1.1s,baz=12,slow=12,SNR=4.1
SADO                                 LR     LR      02 28 54.6
             comp=Z,114nm,18.7s,baz=15,slow=38
SADO   Sadowa             27.30 186  P      P       02 17 25.3 +1.5
SADO                                 IAmb   IAmb    02 17 30.0
             comp=Z,19nm,1.1s
H59A   Cadyville          27.37 177  P      P       02 17 24.8 +0.4
             baz=359,SNR=12
LONY   Lake Ozonia        27.39 179  P      P       02 17 25.9 +1.3
             baz=360
LONY   Lake Ozonia        27.39 179  P      P       02 17 26.2 +1.5
N25K   Chitina, Valde     27.47 284  P      P       02 17 24.7  -0.6
             baz=39
H53A   Bobcaygeon         27.48 185  P      P       02 17 26.8 +1.4
             baz=2.3
H66A   Whiting            27.49 168  P      P       02 17 26.8 +1.3
             baz=355
H57A   Richville          27.54 180  P      P       02 17 27.7 +1.7
             baz=0.2
H58A   Gabriels           27.59 178  P      P       02 17 28.0 +1.5
             baz=359
TRF    Thorofare Moun     27.74 291  P      P       02 17 28.3 +0.4
KTH    Kantishna Hill     27.85 292  P      P       02 17 29.1 +0.5
KTH                                  IAmb   IAmb    02 17 31.4
             comp=Z,19nm,1.2s
I57A   Carthage           28.07 181  P      P       02 17 32.2 +1.5
             baz=0.4
SCM    Sheep Creek Mo     28.12 287  P      P       02 17 31.8 +0.6
I60A   Shoreham           28.18 177  P      P       02 17 33.5 +1.9
             baz=359
I58A   Old Forge          28.31 179  P      P       02 17 34.6 +1.6
             baz=360
SML    Sawmill            28.44 287  P      P       02 17 34.7 +0.8
J59A   Piesco             28.54 179  P      P       02 17 35.9 +0.9
             baz=360
CUT    Chulitna           28.54 290  P      P       02 17 34.8   0.0
             baz=39
J57A   Williamstown       28.60 181  P      P       02 17 37.0 +1.6
             baz=0.6
GHO    Glory Hole Cre     28.64 288  P      P       02 17 36.7 +0.9
GHO                                  IAmb   IAmb    02 17 53.1
             comp=Z,11nm,1.2s
J56A   Wolcott            28.74 182  P      P       02 17 37.9 +1.3
             baz=1.1
K59A   Cooperstown        29.23 179  P      P       02 17 42.3 +1.3
             baz=360
K58A   Earlville          29.24 181  P      P       02 17 42.7 +1.5
             baz=0.3
K57A   Scipio Center      29.28 182  P      P       02 17 43.0 +1.6
             baz=0.9
RC01   Rabbit Creek A     29.42 288  P      P       02 17 42.6 +0.1
             baz=37
ARCES  ARCESS Array B     29.69  44  P      P       02 17 46.2 +1.4
             comp=Z,7.8nm,0.8s,baz=336,slow=5.7,SNR=5.5
ARCES                                LR     LR      02 29 12.6
             comp=Z,264nm,21.8s,baz=330,slow=36
ARCES  ARCESS Array B     29.69  44  P      P       02 17 44.2  -0.7
ARCES                                IAmb   IAmb    02 17 47.8
             comp=Z,14nm,1.0s
L58A   Harry Jones Me     29.96 181  P      P       02 17 48.8 +1.3
             baz=0.5
L57A   Andrews Acres      30.01 182  P      P       02 17 49.0 +1.0
             baz=1.1
ECSD   EROS Data Cent     30.09 212  P      P       02 17 49.6 +1.0
             baz=13
M59A   Waymart            30.46 180  P      P       02 17 52.8 +0.8
             baz=0.2
M54A   Oil Creek Stat     30.57 186  P      P       02 17 54.1 +1.1
             baz=2.8
M58A   Price’s Panora     30.64 182  P      P       02 17 54.9 +1.4
             baz=0.8
M57A   Sunshine Farm,     30.68 183  P      P       02 17 54.9 +1.0
             baz=1.2
M60A   Port Jervis        30.68 179  P      P       02 17 55.0 +1.2
             baz=360
M53A   WI Miller and      30.68 188  P      P       02 17 55.3 +1.4
             baz=3.4,SNR=6.3
M53A   WI Miller and      30.68 188  P      P       02 17 55.5 +1.7
GCMT   Greycliff          30.79 230  P      P       02 17 56.5 +1.5
N59A   State Game Lan     31.09 181  P      P       02 17 58.3 +0.8
             baz=0.4
RSSD   Black Hills        31.10 222  P      P       02 17 59.1 +1.2
RSSD                                 IAmb   IAmb    02 18 02.4
             comp=Z,6.5nm,0.7s
N56A   West Decatur       31.12 184  P      P       02 17 58.8 +1.0
             baz=1.9
N54A   Moraine State      31.13 187  P      P       02 17 59.1 +1.2
             baz=2.9
N54A   Moraine State      31.13 187  P      P       02 17 59.3 +1.4
N60A   Cedar Hill Far     31.13 180  P      P       02 17 58.3 +0.4
             baz=0.0
N58A   Sunbury            31.17 182  P      P       02 17 59.4 +1.2
             baz=1.0
N58A   Sunbury            31.17 182  P      P       02 17 59.6 +1.4
SSPA   Standing Stone     31.39 184  P      P       02 18 00.8 +0.7
             baz=1.6
LRM    Limekiln Ridge     31.45 234  P      P       02 18 02.3 +1.3
YNE    Yellowstone No     31.61 230  P      P       02 18 03.7 +1.3
O59A   Robesonia          31.69 181  P      P       02 18 03.4 +0.6
             baz=0.6
O56A   Blue Knob Stat     31.77 185  P      P       02 18 03.5  -0.1
             baz=2.0
O57A   Amberson           31.81 183  P      P       02 18 03.9 +0.1
             baz=1.5
O53A   New Philadelph     31.89 189  P      P       02 18 04.7 +0.1
             baz=3.6
O54A   Avella             31.92 187  P      P       02 18 06.6 +1.8
ACSO   Alum Creek Sta     32.00 191  P      P       02 18 06.3 +0.8
             baz=4.6
ACSO   Alum Creek Sta     32.00 191  P      P       02 18 07.2 +1.7
YHH    Holmes Hill        32.02 231  P      P       02 18 07.2 +1.2
YHL    Hebgen Lake        32.04 232  P      P       02 18 07.5 +1.3
YHL                                  IAmb   IAmb    02 18 11.4
             comp=Z,6.5nm,0.7s
YHB    Horse Butte        32.14 232  P      P       02 18 08.3 +1.3
YHB                                  IAmb   IAmb    02 18 24.6
             comp=Z,4.7nm,0.9s
YMR    Madison River      32.16 231  P      P       02 18 08.5 +1.4
YMR                                  IAmb   IAmb    02 18 12.3
             comp=Z,4.6nm,0.7s
H17A   Grant Village      32.32 231  P      P       02 18 09.8 +1.2
MCWV   Mont Chateau       32.42 187  P      P       02 18 10.9 +1.7
             baz=2.7
YPP    Pitchstone Pla     32.49 231  P      P       02 18 11.2 +1.1
YPP                                  IAmb   IAmb    02 18 16.7
             comp=Z,5.4nm,0.8s
P56A   Dayton Farm, R     32.55 185  P      P       02 18 11.2 +0.9
             baz=2.1
P57A   Homestead Farm     32.55 184  P      P       02 18 11.3 +1.0
             baz=1.7
P52A   Corning            32.55 190  P      P       02 18 11.7 +1.4
             baz=4.0
SDMD   Soldier’s Deli     32.60 182  P      P       02 18 11.7 +1.0
SDMD                                 IAmb   IAmb    02 18 14.4
             comp=Z,12nm,1.0s
FLWY   Flagg Ranch        32.65 231  P      P       02 18 12.4 +1.0
P53A   Whipple            32.66 189  P      P       02 18 12.0 +0.7
P51A   Williamsport       32.75 191  P      P       02 18 13.6 +1.5
P49A   Miami Univ. Ec     32.81 193  P      P       02 18 13.8 +1.2
             baz=5.5
NOA    NORSAR Array B     32.95  63  P      P       02 18 14.6 +1.0
             comp=Z,3.7nm,0.9s,baz=318,slow=8.3,SNR=3.7
NOA                                  LR     LR      02 30 18.8
             comp=Z,159nm,20.9s,baz=320,slow=34
KDAK   Kodiak Island      32.96 286  LR     LR      02 31 56.3
             comp=Z,268nm,19.1s,baz=60,slow=37
MOOW   Moose Ponds        32.97 231  P      P       02 18 15.4 +1.2
Q56A   Snyder Ridge,      33.02 186  P      P       02 18 15.6 +1.3
             baz=2.3
Q56A   Snyder Ridge,      33.02 186  P      P       02 18 15.7 +1.3
K22A   Casper             33.04 225  P      P       02 18 15.9 +1.1
             baz=17
K22A   Casper             33.04 225  P      P       02 18 15.9 +1.1
K22A                                 IAmb   IAmb    02 18 18.2
             comp=Z,6.5nm,0.7s
LOHW   Long Hollow        33.07 230  P      P       02 18 16.4 +1.3
Q58A   Fox Den Farm,      33.08 183  P      P       02 18 16.7 +1.8
             baz=1.5
Q53A   Leroy              33.29 189  P      P       02 18 18.3 +1.5
             baz=3.6
REDW   Red Top Meadow     33.36 230  P      P       02 18 18.7 +1.0
EKA    Eskdalemuir Ar     33.45  81  P      P       02 18 19.6 +1.6
             comp=Z,3.4nm,0.8s,baz=315,slow=8.2,SNR=7.5
BW06   Boulder Array      33.62 228  P      P       02 18 20.3 +0.4
             baz=18,SNR=8.3
BW06   Boulder Array      33.62 228  P      P       02 18 21.1 +1.2
BW06                                 IAmb   IAmb    02 18 25.4
             comp=Z,3.3nm,0.6s
PD31   Pinedale Array     33.62 228  P      P       02 18 21.1 +1.2
PD31                                 IAmb   IAmb    02 18 25.0
             comp=Z,2.8nm,0.6s
PDAR   Pinedale Array     33.62 228  P      P       02 18 21.2 +1.2
             comp=Z,2.5nm,0.5s,baz=30,slow=7.4,SNR=33
PDAR                                 LR     LR      02 32 15.2
             comp=Z,417nm,19.2s,baz=24,slow=37
PDAR   Pinedale Array     33.62 228  P      P       02 18 21.1 +1.2
P38A   Dawn               33.65 206  P      P       02 18 21.4 +1.5
R58A   Rapidan            33.73 184  P      P       02 18 21.7 +1.1
             baz=1.6
R57A   Stanardsville      33.74 185  P      P       02 18 21.9 +1.2
             baz=1.9
R59A   King George, V     33.81 183  P      P       02 18 22.1 +0.8
             baz=1.1
OLIL   Olney              33.89 198  P      P       02 18 23.1 +1.1
R54A   Victor             33.94 188  P      P       02 18 24.0 +1.5
             baz=3.2
R50A   Paris              34.03 193  P      P       02 18 24.5 +1.3
R50A                                 IAmb   IAmb    02 18 26.3
             comp=Z,10.0nm,0.8s
HLID   Hailey             34.06 235  P      P       02 18 24.8 +1.1
             baz=20
HLID   Hailey             34.06 235  P      P       02 18 25.0 +1.4
R58B   Mineral            34.06 184  P      P       02 18 25.0 +1.6
             baz=1.5
S59A   Mechanicsville     34.25 183  P      P       02 18 27.3 +2.2
             baz=1.2
S54A   Dingess, Beckl     34.34 188  P      P       02 18 27.0 +1.1
             baz=3.4
HFS    Hagfors            34.39  62  P      P       02 18 28.3 +2.1
             comp=Z,4.2nm,0.9s,baz=322,slow=6.6,SNR=5.1
MFID   Camas Ranch        34.56 237  P      P       02 18 29.4 +1.4
MFID                                 IAmb   IAmb    02 18 31.7
             comp=Z,2.5nm,0.5s
N23A   Red Feather La     34.60 223  P      P       02 18 29.9 +1.4
             baz=16
KSU1   Kansas State U     34.61 210  P      P       02 18 30.0 +1.8
             baz=12
R40A   Maddies Statio     34.80 204  P      P       02 18 31.4 +1.6
R40A                                 IAmb   IAmb    02 18 33.9
             comp=Z,6.2nm,0.6s
T60A   Surry              34.87 182  P      P       02 18 31.7 +1.2
             baz=0.9
BLA    Blacksburg         34.88 187  P      P       02 18 32.2 +1.5
             baz=2.9
BLA    Blacksburg         34.88 187  P      P       02 18 32.0 +1.4
CCM    Cathedral Cave     34.90 202  P      P       02 18 32.1 +1.4
             baz=8.6
I07A   Izee               34.92 241  P      P       02 18 32.4 +1.3
I07A                                 IAmb   IAmb    02 18 49.5
             comp=Z,5.3nm,1.0s
T56A   Rocky Mt           35.05 187  P      P       02 18 33.2 +1.1
             baz=2.6
T57A   Hurt               35.06 186  P      P       02 18 33.1 +1.0
             baz=2.2
T50A   Nancy              35.32 193  P      P       02 18 36.0 +1.6
CBKS   Cedar Bluff        35.41 214  P      P       02 18 36.6 +1.5
             baz=13
CBKS   Cedar Bluff        35.41 214  P      P       02 18 36.6 +1.5
CBKS                                 IAmb   IAmb    02 18 38.5
             comp=Z,11nm,0.8s
U60A   Pendleton          35.54 183  P      P       02 18 37.9 +1.7
             baz=1.1
ISCO   Idaho Springs      35.58 222  P      P       02 18 38.1 +1.2
PINE   Pine Mountain      35.59 243  P      P       02 18 38.0 +1.1
PINE                                 IAmb   IAmb    02 18 44.6
             comp=Z,5.8nm,1.0s
R32A   Long Quarter,      35.61 212  P      P       02 18 38.4 +1.5
U57A   Blanch             35.62 186  P      P       02 18 38.6 +1.6
             baz=2.2
U54A   Nelsons Funny      35.63 189  P      P       02 18 38.7 +1.5
             baz=3.5
U58A   Oxford             35.64 184  P      P       02 18 39.0 +1.9
             baz=1.8
SPUT   South Promonto     35.69 231  P      P       02 18 38.9 +1.2
TZTN   Tazewell           35.71 191  P      P       02 18 39.5 +1.8
             baz=4.5
KSCO   Kaye Shedlock’     35.74 218  P      P       02 18 39.9 +1.8
             baz=14
KSCO   Kaye Shedlock’     35.74 218  P      P       02 18 39.4 +1.2
O20A   White River Ci     35.82 225  P      P       02 18 40.0 +1.1
             baz=17,SNR=6.6
O20A   White River Ci     35.82 225  P      P       02 18 40.0 +1.1
O20A                                 IAmb   IAmb    02 18 53.0
             comp=Z,11nm,1.1s
MGMO   Mountain Grove     35.92 203  P      P       02 18 41.0 +1.5
MGMO                                 IAmb   IAmb    02 18 41.8
             comp=Z,13nm,1.1s
J05D   Fort Rock, OR      36.14 243  P      P       02 18 42.9 +1.4
             baz=22,SNR=6.4
BGU    Big Grassy Mou     36.19 232  P      P       02 18 43.4 +1.4
V60A   Jim Taylor Roa     36.24 183  P      P       02 18 43.6 +1.4
             baz=1.1
V59A   Middlesex          36.26 184  P      P       02 18 43.8 +1.4
             baz=1.6
I03D   Drain, OR          36.35 246  P      P       02 18 43.9 +0.8
             baz=23
V52A   Sevierville        36.41 191  P      P       02 18 45.2 +1.5
WVT    Waverly            36.45 197  P      P       02 18 45.0 +0.9
             baz=6.6
SMCO   Snowmass           36.46 223  P      P       02 18 45.5 +0.9
SMCO                                 IAmb   IAmb    02 18 49.6
             comp=Z,3.7nm,0.6s
V51A   Loudon             36.50 192  P      P       02 18 46.0 +1.6
FINES  FINESS Array B     36.53  52  P      P       02 18 46.5 +2.1
             comp=Z,3.1nm,1.0s,baz=311,slow=3.8,SNR=5.6
FINES                                PcP    PcP     02 21 09.9 +2.8
             comp=Z,6.2nm,1.0s,baz=323,slow=2.9,SNR=4.8
FINES                                LR     LR      02 31 54.5
             comp=Z,229nm,21.7s,baz=320,slow=33
V53A   Saluda             36.53 190  P      P       02 18 46.2 +1.4
K05A   Summer Lake        36.56 242  P      P       02 18 46.6 +1.4
K05A                                 IAmb   IAmb    02 18 53.1
             comp=Z,14nm,1.1s
V48A   Smith Brothers     36.75 196  P      P       02 18 47.6 +1.0
V48A                                 IAmb   IAmb    02 18 49.7
             comp=Z,12nm,0.8s
DUG    Dugway, Tooele     36.83 231  P      P       02 18 49.5 +2.1
             baz=18,SNR=11
DUG    Dugway, Tooele     36.83 231  P      P       02 18 48.7 +1.3
DUG                                  IAmb   IAmb    02 19 05.3
             comp=Z,6.8nm,1.1s
CPCT   Cooper Cave        36.86 193  P      P       02 18 49.0 +1.5
NLU    North Lily Min     36.88 230  P      P       02 18 49.3 +1.4
W57A   Gilead             36.92 186  P      P       02 18 49.5 +1.4
KAN14  Manchester OK      36.92 211  P      P       02 18 49.7 +1.7
W56A   Indian Trail       36.96 187  P      P       02 18 49.7 +1.3
             baz=2.8
P17A   Butcher Ranch,     37.02 228  P      P       02 18 50.4 +1.3
FCAR   Ozark Folk Cen     37.15 203  P      P       02 18 51.5 +1.6
FCAR                                 IAmb   IAmb    02 18 52.6
             comp=Z,9.9nm,0.8s
MOD    Modoc Plateau      37.16 241  P      P       02 18 51.4 +1.2
MOD                                  IAmb   IAmb    02 18 56.1
             comp=Z,5.4nm,0.6s
W52A   Murphy             37.17 192  P      P       02 18 51.5 +1.2
SWET   Sewanee            37.19 194  P      P       02 18 51.9 +1.4
SWET                                 IAmb   IAmb    02 18 53.3
             comp=Z,13nm,0.8s
BG3    Lake Jocassee      37.21 190  P      P       02 18 52.0 +1.5
BG3                                  IAmb   IAmb    02 18 54.8
             comp=Z,12nm,0.9s
HUMO   Hull Mountain      37.25 244  P      P       02 18 52.1 +1.3
TMUT   Trail Mountain     37.30 229  P      P       02 18 52.7 +1.1
SRU    San Rafael Swe     37.32 228  P      P       02 18 52.9 +1.2
PAULI  Pauline            37.33 189  P      P       02 18 53.2 +1.7
K02D   Willamette Mer     37.37 245  P      P       02 18 53.0 +1.1
             baz=22
L04D   Klamath Falls      37.42 243  P      P       02 18 53.6 +1.2
             baz=22
SDCO   Great Sand Dun     37.53 221  P      P       02 18 54.7 +1.1
PV23   Carpenter Ridg     37.60 226  P      P       02 18 55.2 +1.0
PV23                                 IAmb   IAmb    02 18 58.7
             comp=Z,5.2nm,0.6s
PV04   Paradox Valley     37.64 225  P      P       02 18 55.8 +1.4
PV14   Lion Creek, Pa     37.68 226  P      P       02 18 55.8 +1.0
PV14                                 IAmb   IAmb    02 18 59.8
             comp=Z,7.5nm,0.5s
PV12   Saucer Basin,      37.69 225  P      P       02 18 56.0 +1.2
PV12                                 IAmb   IAmb    02 19 13.6
             comp=Z,4.2nm,0.7s
PV20   West Nyswonger     37.70 225  P      P       02 18 56.4 +1.5
PV20                                 IAmb   IAmb    02 19 00.5
             comp=Z,3.6nm,0.6s
PV16   Nyswonger Mesa     37.72 225  P      P       02 18 56.4 +1.3
PV11   David Mesa, Pa     37.72 225  P      P       02 18 56.3 +1.3
PV11                                 IAmb   IAmb    02 19 01.3
             comp=Z,5.8nm,0.5s
PV03   Paradox Valley     37.76 225  P      P       02 18 56.6 +1.2
PV01   Paradox Valley     37.81 225  P      P       02 18 57.0 +1.1
L02E   Cave Junction      37.84 245  P      P       02 18 56.2 +0.4
             baz=22
PV13   Radium Mtn., P     37.84 225  P      P       02 18 57.2 +1.0
W41B   Gary Mavity, V     37.87 203  P      P       02 18 57.1 +1.1
             baz=8.5
HODGE  Hodges             37.94 189  P      P       02 18 58.1 +1.4
HODGE                                IAmb   IAmb    02 19 00.7
             comp=Z,13nm,1.0s
W39A   Magazine           38.04 205  P      P       02 18 58.7 +1.2
             baz=9.2
Y57A   Sumter             38.07 187  P      P       02 18 59.0 +1.2
OXF    Oxford             38.20 199  P      P       02 19 00.4 +1.5
             baz=7.1
MSU    Marysvale          38.28 229  P      P       02 19 01.2 +1.4
MVU    Marysvale          38.29 229  P      P       02 19 01.0 +1.0
MVU                                  IAmb   IAmb    02 19 15.5
             comp=Z,11nm,1.2s
Y52A   Lilburn            38.41 192  P      P       02 19 02.1 +1.4
NRIK   Noril'sk           38.53  10  LR     LR      02 34 56.0
             comp=Z,189nm,20.1s,baz=3.0,slow=36
X40A   Basin Creek Fa     38.62 203  P      P       02 19 03.8 +1.4
             baz=8.6
MIAR   Mount Ida          38.65 204  P      P       02 19 04.0 +1.3
             baz=9.0
PSUT   Pine Spring        38.66 231  P      P       02 19 04.2 +1.2
MVCO   Mesa Verde         38.68 224  P      P       02 19 04.5 +1.3
             baz=16,SNR=11
MVCO   Mesa Verde         38.68 224  P      P       02 19 04.5 +1.3
MVCO                                 IAmb   IAmb    02 19 10.6
             comp=Z,11nm,0.9s
GOGA   Godfrey            38.82 191  P      P       02 19 05.3 +1.2
             baz=4.1
GOGA   Godfrey            38.82 191  P      P       02 19 05.6 +1.5
GOGA                                 IAmb   IAmb    02 19 08.1
             comp=Z,15nm,0.8s
PAHR   Pah Rah Range      38.97 239  P      P       02 19 06.6 +1.1
WDC    Whiskeytown Da     39.01 243  P      P       02 19 07.0 +1.4
WDC                                  IAmb   IAmb    02 19 09.3
             comp=Z,6.7nm,0.5s
Z51A   Franklin           39.02 193  P      P       02 19 07.3 +1.5
Z51A                                 IAmb   IAmb    02 19 09.4
             comp=Z,15nm,1.1s
O03E   Paynes Creek       39.07 242  P      P       02 19 06.5 +0.3
             baz=21,SNR=6.6
PKCU   Pink Cliffs        39.33 229  P      P       02 19 08.7   0.0
PKCU                                 IAmb   IAmb    02 19 15.0
             comp=Z,12nm,0.7s
SZCU   Shurtz Canyon      39.37 230  P      P       02 19 10.1 +1.1
LRAL   Lakeview Retre     39.45 196  P      P       02 19 10.3 +1.0
             baz=5.7
CCUT   Cedar City         39.48 230  P      P       02 19 11.1 +1.2
PNTR   Pine Nut           39.60 238  P      P       02 19 12.1 +1.2
PNTR                                 IAmb   IAmb    02 19 17.2
             comp=Z,8.8nm,0.8s
RYN    Ryan               39.75 237  P      P       02 19 13.4 +1.3
KNB    Kanab              39.85 230  P      P       02 19 14.0 +1.1
NVAR   Mina Array Bea     39.88 237  P      P       02 19 15.5 +2.3
             comp=Z,1.8nm,0.5s,baz=9.4,slow=4.8,SNR=20
NVAR                                 LR     LR      02 36 27.5
             comp=Z,501nm,18.8s,baz=14,slow=37
NVAR   Mina Array Bea     39.88 237  P      P       02 19 14.3 +1.1
LCMT   Little Creek M     39.96 230  P      P       02 19 15.2 +1.5
LHV    Little Huntoon     40.10 237  P      P       02 19 16.3 +1.6
WAKR   Walker             40.11 238  P      P       02 19 16.4 +1.3
WAKR                                 IAmb   IAmb    02 19 22.8
             comp=Z,8.8nm,1.1s
KLMR   Klimovskoe         40.16  44  eP     P       02 19 13.7  -1.2
KLMR                                 AMP            02 19 18.2
             comp=Z,49nm,1.2s
U15A   North Rim          40.29 229  P      P       02 19 17.9 +1.3
ANMO   Albuquerque        40.43 221  P      P       02 19 19.1 +1.4
TPNV   Topopah Spring     40.76 234  P      P       02 19 21.6 +1.2
MDPB   Devils Postpil     40.84 237  P      P       02 19 22.2 +1.0
WUAZ   Wupatki            40.95 227  P      P       02 19 22.5 +0.6
             baz=16,SNR=7.3
WUAZ   Wupatki            40.95 227  P      P       02 19 23.1 +1.1
WUAZ                                 IAmb   IAmb    02 19 26.8
             comp=Z,6.1nm,0.8s
ABTX   Abilene, Hawle     41.43 212  P      P       02 19 27.9 +2.1
             baz=11
ABTX   Abilene, Hawle     41.43 212  P      P       02 19 27.1 +1.3
ABTX                                 IAmb   IAmb    02 19 38.3
             comp=Z,10.0nm,0.9s
CWC    Cottonwood Cre     41.70 235  P      P       02 19 29.8 +1.7
             baz=18
CLL    Collm              41.81  70  eP     P       02 19 29.0 +0.4
CLL                                  i              02 19 45.9
CLL                                  ePP    PnPn    02 21 08.0  -2.4
CLL                                  eS     S       02 25 52.0 +8.3
CLL                                  e              02 26 19.0
CLL                                  eSSS   SSS     02 29 18.0
MPMC   Manual Prospec     41.91 235  P      P       02 19 31.3 +1.4
             baz=18
X16A   Lo Mia Camp, P     42.02 227  P      P       02 19 32.1 +1.4
GSC    Goldstone, Bar     42.46 233  P      P       02 19 35.6 +1.4
             baz=18
VES    Vestal, Richgr     42.53 236  P      P       02 19 35.5 +0.9
             baz=18
ISA    Isabella, Lake     42.54 235  P      P       02 19 35.7 +0.9
             baz=18,SNR=6.5
ISA    Isabella, Lake     42.54 235  P      P       02 19 36.1 +1.3
ISA                                  IAmb   IAmb    02 19 39.7
             comp=Z,8.3nm,0.9s
GMRC   Granite Mounta     42.67 232  P      P       02 19 37.1 +1.1
             baz=17
PDMCI  Parker Dam,Lak     42.76 230  P      P       02 19 37.9 +1.3
             baz=17
HEC    Hector,Ludlow      42.79 233  P      P       02 19 38.3 +1.4
             baz=17
ECH    Echery             42.80  77  P      P       02 19 36.4  -0.4
HKT    Hockley            43.48 206  P      P       02 19 43.7 +1.4
PCAB   Cabril             43.94  96  eP     P       02 19 49.8 +3.7
GLA    Glamis             44.12 230  P      P       02 19 49.1 +1.6
GLA                                  IAmb   IAmb    02 19 53.3
             comp=Z,5.5nm,0.7s
GERES  GERESS Array B     44.21  71  P      P       02 19 49.7 +1.5
             comp=Z,1.5nm,0.9s,baz=339,slow=7.1,SNR=7.4
GERES                                LR     LR      02 38 44.7
             comp=Z,102nm,19.1s,baz=351,slow=37
KIRV   Kirov              44.26  38  P      P       02 19 51.0 +2.7
             comp=Z,9.5nm,0.8s,baz=91,slow=13,SNR=4.3
POLO   Lamas de Olo       44.32  96  eP     P       02 19 52.4 +3.2
MA2    Magadan            44.96 329  LR     LR      02 41 56.2
             comp=Z,158nm,18.1s,baz=9.0,slow=40
MTE    Manteigas          45.29  96  eP     P       02 20 00.3 +3.5
TX31   Lajitas Ar. Si     45.34 216  P      P       02 19 58.7 +1.3
TX31                                 IAmb   IAmb    02 20 02.6
             comp=Z,8.6nm,0.7s
TX32   Lajitas Array      45.34 216  P      P       02 19 58.9 +1.5
TXAR   Lajitas Array      45.34 216  P      P       02 19 59.2 +1.8
             comp=Z,2.2nm,0.6s,baz=27,slow=6.5,SNR=6.0
TXAR                                 LR     LR      02 39 41.1
             comp=Z,265nm,21.1s,baz=0.0,slow=37
TXAR   Lajitas Array      45.34 216  P      P       02 19 58.8 +1.4
SMOL   Smolenice          45.60  68  eP     P       02 20 02.2 +3.1
MODS   Modra-Piesok       45.68  69  eP     P       02 20 02.0 +2.2
PCBR   Castelo Branco     45.82  96  eP     P       02 20 04.6 +3.6
             comp=Z,16nm,0.9s
CTI    Castel Tesino      46.11  75  P      P       02 20 03.0  -0.4
CTI                                  IAmb   IAmb    02 20 17.9
             comp=Z,7.6nm,1.1s
SPX    San Pedro Mart     46.20 230  P      P       02 20 05.5 +1.1
SPX                                  IAmb   IAmb    02 20 10.0
             comp=Z,5.7nm,0.9s
PMTG   Montargil          46.29  97  eP     P       02 20 07.6 +2.9
             comp=Z,17nm,1.6s
CRVS   Cervenica-Dubn     46.40  65  eP     P       02 20 07.6 +2.1
KOLS   Kolonicke sedl     46.60  64  eP     P       02 20 10.6 +3.6
AKASG  Malin Array Be     46.89  57  P      P       02 20 09.3 +0.1
             comp=Z,0.7nm,0.5s,baz=334,slow=8.0,SNR=6.1
AKASG                                LR     LR      02 38 31.9
             comp=Z,113nm,18.4s,baz=320,slow=34
PAB    San Pablo          47.06  93  P      P       02 20 09.9  -0.9
PAB                                  IAmb   IAmb    02 20 16.5
             comp=Z,8.4nm,1.1s
ESBB   Sonseca Array      47.06  93  P      P       02 20 10.8   0.0
ESBB                                 IAmb   IAmb    02 20 15.3
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	comp=Z,4.0nm,1.1s						
ESDC	**Sonseca Array**	**47.06**	**93**	P	**P**	**02 20 12.3**	**+1.5**
	comp=Z,3.5nm,1.1s,baz=338,slow=7.8,SNR=14						
ESDC	**Sonseca Array**	**47.06**	**93**	P	**P**	**02 20 10.7**	**-0.1**
ESDC				IAmb	IAmb	02 20 21.6	
	comp=Z,5.9nm,1.1s						
PNCL	**Nicolau / Gran**	**47.08**	**98**	*e*P	**P**	**02 20 11.3**	**+0.5**
PBAR	**Barrancos**	**47.48**	**97**	*e*P	**P**	**02 20 17.5**	**+3.5**
ARU	**Arti**	**47.95**	**33**	P	**P**	**02 20 18.6**	**+1.2**
	comp=Z,2.7nm,0.9s,baz=344,slow=7.7,SNR=7.6						
ARU	**Arti**	**47.95**	**33**	P	**P**	**02 20 17.1**	**-0.2**
PETK	**Petropavlovsk-**	**49.85**	**321**	P	**P**	**02 20 32.9**	**+0.8**
	comp=Z,6.1nm,0.9s,baz=81,slow=11,SNR=3.9						
PETK				LR	LR	02 42 38.9	
	comp=Z,108nm,21.5s,baz=20,slow=37						
PETK	**Petropavlovsk-**	**49.85**	**321**	P	**P**	**02 20 32.2**	**+0.1**
BRVK	**Borovoye**	**52.98**	**25**	P	**P**	**02 20 55.2**	**-0.2**
AKTO	**Aktyubinsk**	**53.60**	**35**	P	**P**	**02 21 01.1**	**+1.1**
	comp=Z,1.8nm,0.9s,baz=345,slow=8.3,SNR=4.9						
ZAA0	**Zalesovo Array**	**53.65**	**14**	P	**P**	**02 21 00.1**	**-0.2**
ZAA0				IAmb	IAmb	02 21 04.0	
	comp=Z,13nm,1.1s						
ZALV	**Zalesovo Beam**	**53.65**	**14**	P	**P**	**02 21 01.1**	**+0.8**
	comp=Z,6.4nm,0.7s,baz=350,slow=7.5,SNR=19						
ZALV				LR	LR	02 45 36.0	
	comp=Z,81nm,18.7s,baz=348,slow=38						
ZALV	**Zalesovo Beam**	**53.65**	**14**	P	**P**	**02 20 60.0**	**-0.3**
KEST	**Kesra**	**54.83**	**82**	LR	LR	02 44 50.9	
	comp=Z,150nm,18.7s,baz=306,slow=36						
ABKAR	**Akbulak array**	**55.08**	**34**	P	**P**	**02 21 10.5**	**-0.3**
ABKAR				IAmb	IAmb	02 21 14.8	
	comp=Z,4.1nm,1.1s						
ABKAR	**Akbulak array**	**55.08**	**34**	P	**P**	**02 21 10.4**	**-0.3**
KURK	**Kurchatov**	**56.28**	**20**	P	**P**	**02 21 19.2**	**-0.1**
KURBB	**Kurchatov Arra**	**56.36**	**20**	P	**P**	**02 21 20.5**	**+0.6**
	comp=Z,1.0nm,0.6s,baz=345,slow=7.4,SNR=7.5						
KURBB				PcP	**PcP**	**02 22 19.4**	**+2.7**
	comp=Z,1.2nm,0.8s,baz=346,slow=3.9,SNR=7.8						
TLY	**Talaya**	**56.69**	**1**	LR	LR	02 46 55.7	
	comp=Z,82nm,18.3s,baz=5.5,slow=37						
KBZ	**Khabaz**	**56.81**	**50**	LR	LR	02 46 05.9	
	comp=Z,123nm,18.8s,baz=353,slow=36						
KLR	**Kul'dur**	**57.64**	**339**	P	**P**	**02 21 29.6**	**+0.6**
	comp=Z,3.3nm,0.7s,baz=358,slow=9.2,SNR=12						
KLR				LR	LR	02 48 18.3	
	comp=Z,91nm,18.6s,baz=4.5,slow=38						
MTO3	**Montecristo**	**58.12**	**196**	P	**P**	**02 21 33.9**	**+0.9**
MTO3				IAmb	IAmb	02 21 40.9	
	comp=Z,7.0nm,1.1s						
BRTR	**Keskin Array B**	**58.22**	**59**	P	**P**	**02 21 33.7**	**+0.3**
	comp=Z,1.8nm,0.9s,baz=282,slow=3.0,SNR=2.4						
BRTR				LR	LR	02 48 35.3	
	comp=Z,144nm,18.0s,baz=330,slow=38						
MAKZ	**Makanchi**	**60.48**	**18**	P	**P**	**02 21 48.4**	**-0.3**
MAKZ				IAmb	IAmb	02 21 51.6	
	comp=Z,3.3nm,0.9s						
ULN	**Ulaanbaatar**	**60.50**	**358**	P	**P**	**02 21 48.9**	**-0.1**
ULN				IAmb	IAmb	02 22 04.9	
	comp=Z,3.0nm,0.9s						
MK31	**Makanchi Array**	**60.53**	**18**	P	**P**	**02 21 48.8**	**-0.3**
MKAR	**Makanchi Array**	**60.53**	**18**	P	**P**	**02 21 49.9**	**+0.8**
	comp=Z,1.3nm,0.9s,baz=18,slow=4.3,SNR=10						
MKAR				LR	LR	02 49 54.2	
	comp=Z,101nm,19.2s,baz=348,slow=38						
MKAR	**Makanchi Array**	**60.53**	**18**	P	**P**	**02 21 48.9**	**-0.2**
SONM	**Songino Array**	**60.54**	**359**	P	**P**	**02 21 50.6**	**+1.3**
	comp=Z,2.6nm,1.2s,baz=335,slow=3.4,SNR=9.3						
SONM	**Songino Array**	**60.54**	**359**	P	**P**	**02 21 49.1**	**-0.1**
ASAJ	**Asahikawa**	**61.21**	**330**	LR	LR	02 52 38.4	
	comp=Z,91nm,18.3s,baz=120,slow=40						
USA0B	**Ussuriysk Arra**	**62.58**	**338**	P	**P**	**02 22 02.8**	**0.0**
USA0B				IAmb	IAmb	02 22 03.8	
	comp=Z,7.6nm,1.1s						
USRK	**Ussuriysk Ar.**	**62.58**	**338**	P	**P**	**02 22 03.4**	**+0.5**
	comp=Z,4.3nm,0.8s,baz=348,slow=6.7,SNR=10						
USRK				LR	LR	02 49 32.3	
	comp=Z,140nm,21.6s,baz=357,slow=36						
USRK	**Ussuriysk Ar.**	**62.58**	**338**	P	**P**	**02 22 03.1**	**+0.3**
KK31	**Karatay Array**	**62.76**	**28**	P	**P**	**02 22 03.8**	**-0.4**
KK31				IAmb	IAmb	02 22 22.2	
	comp=Z,4.2nm,1.1s						
KKAR	**Karatay Array**	**62.76**	**28**	P	**P**	**02 22 04.0**	**-0.2**
KKAR				IAmb	IAmb	02 22 22.2	
	comp=Z,4.2nm,1.1s						
KKAR	**Karatay Array**	**62.76**	**28**	P	**P**	**02 22 03.9**	**-0.2**
SDV	**Santo Domingo**	**63.05**	**175**	P	**P**	**02 22 07.4**	**+0.8**
SDV				IAmb	IAmb	02 22 18.1	
	comp=Z,6.0nm,1.0s						
SMLC	**San Martn de**	**63.07**	**179**	*e*P	**P**	**02 22 06.0**	**-0.5**
AAK	**Ala-Archa**	**63.76**	**24**	P	**P**	**02 22 12.4**	**+1.5**
	comp=Z,1.1nm,0.5s,baz=223,slow=4.4,SNR=4.9						
AAK				LR	LR	02 51 32.9	
	comp=Z,153nm,21.6s,baz=346,slow=38						
AAK	**Ala-Archa**	**63.76**	**24**	P	**P**	**02 22 10.7**	**-0.2**
AAK				IAmb	IAmb	02 22 19.9	
	comp=Z,3.4nm,1.1s						
WMQ	**Urumqi**	**63.93**	**14**	*e*P	**P**	**02 22 15.4**	**+3.5**
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,65nm,4.7s						
UREC	**San Jos de Ur**	**64.11**	**180**	*e*P	**P**	**02 22 10.2**	**-3.1**
DBBC	**Dabeiba**	**64.84**	**181**	*e*P	**P**	**02 22 20.2**	**+2.1**
BARC	**Barichara**	**65.28**	**178**	*e*P	**P**	**02 22 21.1**	**-0.1**
PTBC	**PUERTO BERRIO,**	**65.32**	**179**	*e*P	**P**	**02 22 20.4**	**-0.8**
GEYT	**Alibeck**	**65.68**	**39**	P	**P**	**02 22 26.8**	**+3.5**
	comp=Z,1.6nm,0.7s,baz=93,slow=3.0,SNR=4.2						
GEYT				LR	LR	02 53 22.7	
	comp=Z,152nm,19.2s,baz=0.0,slow=38						
GEYT	**Alibeck**	**65.68**	**39**	P	**P**	**02 22 23.1**	**-0.2**
RUSC	**La Rusia**	**65.97**	**178**	*e*P	**P**	**02 22 25.6**	**-0.4**
CBOC	**Ciudad Bolivar**	**65.99**	**181**	*e*P	**P**	**02 22 23.5**	**-2.2**
NORC	**Norcasia**	**66.28**	**180**	*e*P	**P**	**02 22 26.8**	**-0.7**
GUY2C	**Guyana, Caldas**	**66.62**	**180**	*e*P	**P**	**02 22 32.9**	**+2.8**
PLMC	**San Jos del P**	**66.94**	**181**	*e*P	**P**	**02 22 32.1**	**+0.4**
RREF	**El Recreo**	**66.94**	**180**	*e*P	**P**	**02 22 35.2**	**+2.8**
KSH	**Kashi**	**67.02**	**24**	P	**P**	**02 22 35.7**	**+3.6**
KSH				sP	sP	02 22 45.1	-1.0
KSH				PcP	**PcP**	**02 23 00.8**	**+0.6**
KSH				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KSH				pmax	pmax		
	comp=Z,170nm,5.4s						
CHIC	**Chingaza**	**67.22**	**178**	*e*P	**P**	**02 22 32.9**	**-1.0**
TOLC	**Tolima**	**67.26**	**180**	*e*P	**P**	**02 22 35.6**	**+1.6**
HHC	**Hu-ho-hao-te**	**67.42**	**354**	*e*P	**P**	**02 22 36.4**	**+1.8**
HHC				pmax	pmax		
	comp=Z,5.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,110nm,6.6s						
ORTC	**Ortega, Tolima**	**67.93**	**180**	*e*P	**P**	**02 22 39.4**	**+1.5**
PRAC	**Prado**	**68.12**	**180**	*e*P	**P**	**02 22 39.4**	**+0.3**
GTA	**Gaotai**	**68.91**	**4**	⇑P	**P**	**02 22 45.8**	**+1.9**
GTA				pP	pP	02 22 50.4	-3.5
GTA				sP	sP	02 22 52.9	-5.1
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,34nm,4.4s						
GTA				LR	LR		
	comp=Z,130nm,16.7s						
GTA				LR	LR		
	comp=Z,220nm,15.6s						
GTA				LR	LR		
	comp=Z,130nm,17.1s						
MJAR	**Matsushiro Arr**	**69.29**	**332**	P	**P**	**02 22 47.5**	**+1.4**
	comp=Z,0.8nm,0.3s,baz=358,slow=8.8,SNR=4.2						
MJAR				LR	LR	02 54 29.5	
	comp=Z,77nm,21.2s,baz=30,slow=37						
MJAR	**Matsushiro Arr**	**69.29**	**332**	P	**P**	**02 22 46.3**	**+0.2**
POPC	**Popayan, Colom**	**69.29**	**181**	*e*P	**P**	**02 22 48.4**	**+1.8**
PCON	**Cinco Dias**	**69.50**	**181**	*e*P	**P**	**02 22 49.4**	**+1.1**
KSRS	**Korea Array**	**69.69**	**340**	P	**P**	**02 22 49.9**	**+1.3**
	comp=Z,0.8nm,0.3s,baz=18,slow=6.6,SNR=4.6						
SOTA	**Rioblanco**	**69.70**	**181**	*e*P	**P**	**02 22 51.2**	**+1.8**
LZH	**Lanzhou**	**72.28**	**1**	*e*P	**P**	**02 23 07.2**	**+2.6**
LZH				pP	pP	02 23 13.5	-1.1
LZH				sP	sP	02 23 17.1	-1.5
LZH				pmax	pmax		
	comp=Z,12nm,1.2s						
TORD	**Torodi Ar. Bea**	**73.55**	**98**	P	**P**	**02 23 13.3**	**+1.3**
	comp=Z,1.6nm,0.9s,baz=325,slow=6.5,SNR=4.2						
XAN	**Xi'an**	**74.29**	**356**	P	**P**	**02 23 16.2**	**0.0**
XAN				pP	pP	02 23 23.2	-3.1
XAN				pmax	pmax		
	comp=Z,6.0nm,1.3s						
NJ2	**Nanjing**	**75.83**	**348**	*e*P	**P**	**02 23 25.5**	**+0.4**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2	**Chengdu**	**77.45**	**1**	P	**P**	**02 23 31.3**	**-3.0**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
SAML	**Samuel**	**81.10**	**168**	P	**P**	**02 23 55.4**	**+1.2**
SAML				IAmb	IAmb	02 23 57.1	
	comp=Z,10nm,1.0s						
GYA	**Guiyang**	**81.87**	**358**	⇑P	**P**	**02 24 00.0**	**+1.5**
GYA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KMI	**Kunming**	**83.20**	**2**	⇑*e*P	**P**	**02 24 08.4**	**+2.8**
KMI				pmax	pmax		
	comp=Z,9.0nm,1.0s						
LPAZ	**La Paz**	**88.13**	**173**	P	**P**	**02 24 31.6**	**+1.3**
	comp=Z,1.7nm,0.8s,baz=359,slow=6.1,SNR=4.0						
LPAZ				LR	LR	03 06 40.8	
	comp=Z,52nm,18.4s,baz=341,slow=37						
LPAZ	**La Paz**	**88.13**	**173**	P	**P**	**02 24 31.0**	**+0.7**
LPAZ				IAmb	IAmb	02 24 34.7	
	comp=Z,1.7nm,0.8s						
BDFB	**Brasilia**	**89.27**	**154**	P	**P**	**02 24 37.4**	**+2.3**
	comp=Z,1.0nm,0.5s,baz=89,slow=26,SNR=3.0						
CMAR	**Chiang Mai Arr**	**89.76**	**5**	P	**P**	**02 24 38.2**	**+0.8**
	comp=Z,1.5nm,0.4s,baz=346,slow=4.8,SNR=5.8						
CMAR				LR	LR	03 07 46.2	
	comp=Z,70nm,18.2s,baz=15,slow=38						
CMAR	**Chiang Mai Arr**	**89.76**	**5**	P	**P**	**02 24 37.1**	**-0.4**
PB16	**IPOC Station P**	**90.12**	**174**	P	**P**	**02 24 40.2**	**+0.6**
WRA	**Warramunga Arr**	**125.26**	**325**	PKP	**PKiKP**	**02 30 39.7**	**0.0**
	comp=Z,0.6nm,1.0s,baz=354,slow=2.0,SNR=2.5						
ASAR	**Alice Springs**	**128.98**	**325**	PKP	**PKiKP**	**02 30 47.4**	**+0.3**
	comp=Z,0.6nm,0.7s,baz=1.7,slow=2.1,SNR=6.7						
SNAA	**Sanae**	**150.63**	**142**	PKPbc	**PKiKP**	**02 31 30.1**	**+0.3**
	comp=Z,5.9nm,1.0s,baz=176,slow=6.3,SNR=4.1						

IGIL ***12*** *02:34:39.3, 37°.43N×16°.40W, h4^{km}, ML2.8*
MDD ***12*** *02:34:40.4±2.9, 37°.63N×16°.17W, h0^{km}, mb4.2/3, Error ellipse: s-maj=25.9km s-min=23.3km az=57.0, PRXIMO*
INMG ***12*** *02:34:43.4±1.2, 37°.51N×16°.48W, h10^{km}, ML2.6, Error ellipse: s-maj=7.5km s-min=6.4km az=95.0*
ISC 12 02:34:43.4±3.9, **37°.73N**±0°.10×**15°.8W**±0°.2, **h10**^{km}, **n39**, σ**1^{s}.23**/62, **Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMOZ	**Porto Moniz, M**	**5.02**	**193**	S	Sn	02 36 32.2	-25
	SNR=7.9						
PMAFR	**Mafra**	**5.30**	**75**	P	**Pn**	**02 36 04.6**	**+2.1**
	2.1nm,0.2s,SNR=7.9						
PMAFR				S	**Sn**	**02 37 05.1**	**+1.4**
	28nm,0.2s,SNR=8.6						
PMAFR	**Mafra**	**5.30**	**75**	*e*Pn	**Pn**	**02 36 04.8**	**+2.2**
PMAFR				*e*Sn	**Sn**	**02 37 05.3**	**+1.6**
PMAFR				A	A	02 37 10.1	
	17nm,0.3s						
PFVI	**Vila Bisbo**	**5.61**	**94**	P	**Pn**	**02 36 07.0**	**+0.1**
	0.9nm,0.1s,SNR=7.9						
PFVI				S	**Sn**	**02 37 09.7**	**-1.7**
	4.8nm,0.2s,SNR=7.9						
PFVI	**Vila Bisbo**	**5.61**	**94**	*e*Pn	**Pn**	**02 36 06.9**	**0.0**
PFVI				*e*Sn	**Sn**	**02 37 10.3**	**-1.1**
PFVI				A	A	02 37 12.5	
	2.0nm,0.2s						
PTEO	**Sao Teotonio**	**5.65**	**90**	*e*Pn	**Pn**	**02 36 07.9**	**+0.5**
PTEO				*e*Sn	**Sn**	**02 37 11.1**	**-1.2**
PTEO				A	A	02 37 15.9	
	3.6nm,0.2s						
MORF	**Marmelete**	**5.73**	**92**	*e*P	**Pn**	**02 36 08.7**	**+0.2**
MORF	**Marmelete**	**5.73**	**92**	P	**Pn**	**02 36 08.7**	**+0.2**
MORF	**Marmelete**	**5.73**	**92**	*e*Pn	**Pn**	**02 36 08.8**	**+0.3**
MORF				*e*Sn	**Sn**	**02 37 13.7**	**-0.7**
MORF				A	A	02 37 24.5	
	2.7nm,0.1s						
PNCL	**Nicolau / Gran**	**5.79**	**84**	*e*Pn	**Pn**	**02 36 09.9**	**+0.6**
PNCL				*e*Sn	**Sn**	**02 37 15.3**	**-0.5**
PNCL				A	A	02 37 19.4	
	4.4nm,0.1s						
PSBE	**So Bento**	**5.80**	**70**	*e*Sn	**Sn**	**02 37 15.7**	**-0.3**
MESJ	**Messejana**	**6.04**	**87**	*e*P	**Pn**	**02 36 13.4**	**+0.7**
MESJ				*e*S	**Sn**	**02 37 21.8**	**-0.1**
MESJ				AML	AML	02 37 25.6	
	comp=N,8.8nm,0.1s						
MESJ	**Messejana**	**6.04**	**87**	P	**Pn**	**02 36 13.4**	**+0.7**
MESJ				S	**Sn**	**02 37 21.8**	**-0.1**
	comp=N,8.8nm,0.1s						
MESJ	**Messejana**	**6.04**	**87**	*e*Pn	**Pn**	**02 36 14.5**	**+1.8**
MESJ				*e*Sn	**Sn**	**02 37 21.3**	**-0.5**
MESJ				A	A	02 37 27.7	
	comp=N,3.0nm,0.1s						
PMTG	**Montargil**	**6.13**	**75**	*e*Pn	**Pn**	**02 36 15.7**	**+1.8**
PMTG				*e*Sn	**Sn**	**02 37 24.0**	**-0.1**
PMTG				A	A	02 37 29.2	
	comp=N,2.9nm,0.2s						
PCAS	**Casmilo, Conde**	**6.18**	**66**	*e*Pn	**Pn**	**02 36 17.0**	**+2.4**
PCAS				*e*Sn	**Sn**	**02 37 25.3**	**-0.1**
PCAS				A	A	02 37 30.1	
	comp=N,1.3nm,0.2s						
PCVE	**Castro Verde**	**6.19**	**89**	*e*Sn	**Sn**	**02 37 25.0**	**-0.6**
PCVE				A	A	02 37 28.7	
	comp=N,1.9nm,0.2s						
EVO	**Evora**	**6.22**	**80**	*e*Pn	**Pn**	**02 36 17.1**	**+1.9**
EVO				*e*Sn	**Sn**	**02 37 26.5**	**+0.1**
EVO				A	A	02 37 32.0	
	comp=N,6.2nm,0.1s						
PBDV	**Barranco-do-Ve**	**6.31**	**92**	*e*Pn	**Pn**	**02 36 16.5**	**+0.1**
PBDV				*e*Sn	**Sn**	**02 37 27.4**	**-1.2**
PBDV				A	A	02 37 35.2	
	comp=N,2.3nm,0.3s						
PBEJ	**Beja**	**6.32**	**85**	*e*Sn	**Sn**	**02 37 28.2**	**-0.5**
PBEJ				A	A	02 37 31.3	
	comp=N,2.1nm,0.1s						
PVAQ	**Vaqueiros**	**6.46**	**90**	*e*Pn	**Pn**	**02 36 20.1**	**+1.6**
PVAQ				*e*Sn	**Sn**	**02 37 31.2**	**-1.1**
PVAQ				A	A	02 37 37.5	
	comp=N,2.6nm,0.3s						
PESTR	**Estremoz**	**6.59**	**78**	*e*Sn	**Sn**	**02 37 35.7**	**+0.3**
EGRO	**El Granado**	**6.64**	**89**	P	**Pn**	**02 36 21.5**	**+0.6**
	comp=N,0.4nm,0.1s,SNR=7.0						
EGRO				S	**Sn**	**02 37 35.1**	**-1.5**
	comp=N,1.7nm,0.1s,SNR=4.7						
PMRV	**Marv??o**	**6.83**	**73**	*e*Pn	**Pn**	**02 36 24.5**	**+0.9**
PMRV				*e*Sn	**Sn**	**02 37 41.3**	**-0.2**
PMRV				A	A	02 37 43.7	
	comp=N,2.0nm,0.1s						
PCBR	**Castelo Branco**	**6.87**	**70**	*e*Sn	**Sn**	**02 37 42.0**	**-0.2**
PCBR				A	A	02 37 44.8	
	comp=N,1.2nm,0.1s						
MTE	**Manteigas**	**6.98**	**65**	*e*Sn	**Sn**	**02 37 45.6**	**+0.3**
MTE				A	A	02 37 49.4	
	comp=N,2.0nm,0.1s						
PGAV	**Gavieira, Arco**	**7.20**	**52**	*e*Sn	**Sn**	**02 37 50.0**	**-0.6**
PGAV				A	A	02 37 53.9	
	comp=N,2.2nm,0.3s						
EMIN	**Mina Concepcio**	**7.26**	**87**	P	**Pn**	**02 36 30.1**	**+0.6**
	comp=N,0.2nm,0.1s,SNR=7.9						
EMIN				S	**Sn**	**02 37 51.3**	**-0.8**
	comp=N,0.5nm,0.1s,SNR=6.6						
ELOB	**Lobios**	**7.28**	**53**	P	**Pn**	**02 36 30.5**	**+0.7**
	comp=N,0.3nm,0.1s,SNR=7.9						
ELOB				S	**Sn**	**02 37 51.2**	**-1.3**
	comp=N,0.9nm,0.1s,SNR=7.9						
EMAZ	**Mazaricos**	**7.39**	**43**	P	**Pn**	**02 36 31.8**	**+0.5**
	comp=N,1.3nm,0.2s,SNR=7.9						
EMAZ				S	**Sn**	**02 37 53.1**	**-2.2**
	comp=N,0.7nm,0.1s,SNR=7.9						
MVO	**Moncorvo**	**7.63**	**61**	S	**Sn**	**02 37 59.6**	**-1.6**
	comp=N,1.4nm,0.1s,SNR=7.9						
MVO	**Moncorvo**	**7.63**	**61**	*e*Sn	**Sn**	**02 38 00.0**	**-1.2**
MVO				A	A	02 38 04.2	
	comp=N,2.6nm,0.2s						
EAGO	**Agolada(Pontev**	**7.80**	**47**	P	**Pn**	**02 36 36.6**	**-0.2**
	comp=N,0.4nm,0.1s,SNR=7.9						
EAGO				S	**Sn**	**02 38 02.6**	**-2.6**
	comp=N,1.0nm,0.1s,SNR=7.9						
EPLA	**Plasencia**	**7.96**	**70**	S	**Sn**	**02 38 08.6**	**-0.6**
	comp=N,0.9nm,0.1s,SNR=7.9						
ESPR	**Espera**	**8.00**	**93**	S	**Sn**	**02 38 09.4**	**-0.8**
	comp=N,3.7nm,0.2s,SNR=7.9						
ECAL	**Calabor**	**8.17**	**56**	P	**Pn**	**02 36 43.1**	**+1.1**
	comp=N,0.2nm,0.1s,SNR=7.9						
ECAL				S	**Sn**	**02 38 13.6**	**-0.8**
	comp=N,2.2nm,0.2s,SNR=5.3						
ECAB	**El Cabril**	**8.25**	**84**	P	**Pn**	**02 36 44.5**	**+1.4**
	comp=N,0.2nm,0.2s,SNR=7.9						
ECAB				S	**Sn**	**02 38 13.6**	**-2.7**
	comp=N,1.1nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**8.91**	**84**	P	**Pn**	**02 36 53.1**	**+0.9**
	comp=N,0.3nm,0.3s,SNR=4.0						
EADA				S	**Sn**	**02 38 30.7**	**-1.9**
	comp=N,2.9nm,0.3s,SNR=7.9						
PAB	**San Pablo**	**9.17**	**75**	S	**Sn**	**02 38 36.5**	**-2.6**
	comp=N,0.9nm,0.3s,SNR=7.9						

IDC ***12*** *02:36:13.7±1.6, 61°.84N×150°.42W, h62^{km}±21^{km}, mb3.5/5, mb1 3.6/8, mb1mx3.2/49, mbtmp3.7/8, Error ellipse: s-maj=41.0km s-min=9.9km az=114.0*
ANF ***12*** *02:36:14.9±0.3, 61°.86N×150°.40W, h57^{km}±5^{km}, ML4.2/16, Error ellipse: s-maj=5.0km s-min=2.1km az=89.0*
NEIC ***12*** *02:36:14.6±1.1, 61°.84N±0°.03×150°.49W±0°.04, h58^{km}±6^{km}, Error ellipse: s-maj=4.0km s-min=2.6km az=202.0*
AEIC ***12*** *02:36:15±1.2, 61°.82N±0°.03×150°.47W±0°.06, h63^{km}±5^{km}, ML3.8, ML4.0/91(NEIC), Error ellipse: s-maj=4.1km s-min=3.8km az=160.0*
ISC 12 02:36:14.3±0.8, **61°.85N**±0°.03×**150°.47W**±0°.03, **h64**^{km}±6^{km}, **n174**, σ**0^{s}.62**/177, **mb4.1**/7, **Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SUA	**Susitna One**	**0.41**	**199**		**Pn**	**02 36 25.6**	**-0.2**
SUA					**Sn**	**02 36 34.3**	**0.0**
SKT	**Skwentna**	**0.52**	**285**		**Pn**	**02 36 26.4**	**-0.4**
SKT					**Sn**	**02 36 35.3**	**-0.6**
SKT	**Skwentna**	**0.52**	**285**	IAML		02 36 35.7	
	comp=N,12µm,0.2s						
SKT				IAML		02 36 36.0	
	comp=E,9µm,0.4s						
CUT	**Chulitna**	**0.56**	**10**	P	**Pn**	**02 36 27.2**	**-0.1**
	baz=190,SNR=156						
CUT				S	**Sn**	**02 36 36.9**	**+0.2**
	baz=190						
CUT	**Chulitna**	**0.56**	**10**		**Pn**	**02 36 27.2**	**-0.1**
CUT					**Sn**	**02 36 37.0**	**+0.2**
PMR	**Palmer**	**0.69**	**111**		**Pn**	**02 36 28.1**	**-0.5**
PMR					**Sn**	**02 36 39.0**	**-0.1**
PMR	**Palmer**	**0.69**	**111**	IAML		02 36 39.8	
	comp=E,5µm,0.3s						
PMR				IAML		02 36 39.8	
	comp=N,3µm,0.4s						
FIS	**Fire Island**	**0.72**	**170**		**Pn**	**02 36 29.8**	**+0.8**
STLK	**Strandline Lak**	**0.74**	**242**		**Pn**	**02 36 29.0**	**-0.3**
GHO	**Glory Hole Cre**	**0.74**	**95**		**Pn**	**02 36 29.4**	**0.0**
GHO					**Sn**	**02 36 41.0**	**+0.6**
GHO	**Glory Hole Cre**	**0.74**	**95**	IAML		02 36 41.9	
	comp=N,5µm,0.6s						
RC01	**Rabbit Creek A**	**0.84**	**155**	P	**Pn**	**02 36 29.9**	**-0.6**
	baz=335,SNR=108						
RC01				S	**Sn**	**02 36 42.4**	**0.0**
	baz=335						
RC01	**Rabbit Creek A**	**0.84**	**155**		**Pn**	**02 36 29.8**	**-0.7**
RC01					**Sn**	**02 36 42.2**	**-0.2**
SPCG	**Spurr Capps Gl**	**0.93**	**234**		**Pn**	**02 36 31.5**	**-0.2**
SPCG					**Sn**	**02 36 44.5**	**0.0**
SPCP	**Crater Peak Br**	**0.99**	**235**		**Pn**	**02 36 32.4**	**-0.2**
SPCP					**Sn**	**02 36 46.2**	**+0.1**
SML	**Sawmill**	**1.02**	**91**		**Pn**	**02 36 32.6**	**-0.1**
SML					**Sn**	**02 36 47.2**	**+0.7**
SML	**Sawmill**	**1.02**	**91**	IAML		02 36 48.6	
	comp=E,3µm,0.8s						
SML				IAML		02 36 48.6	
	comp=N,3µm,0.3s						
SPCN	**Chakachatna No**	**1.03**	**233**		**Pn**	**02 36 33.4**	**+0.5**
KNK	**Knik Glacier**	**1.06**	**114**		**Pn**	**02 36 33.5**	**+0.2**
KNK	**Knik Glacier**	**1.06**	**114**	IAML		02 36 49.7	
	comp=N,3µm,0.5s						
KNK				IAML		02 36 49.7	
	comp=E,4µm,0.8s						
CKL	**Chakachamna La**	**1.11**	**235**		**Pn**	**02 36 34.1**	**+0.1**
CAPN	**Captain Cook N**	**1.13**	**197**	P	**Pn**	**02 36 35.9**	**+1.7**
	baz=17,SNR=202						
CAPN	**Captain Cook N**	**1.13**	**197**		**Pn**	**02 36 35.9**	**+1.7**
HUR	**Hurricane**	**1.20**	**19**		**Pn**	**02 36 35.7**	**+0.7**
PPLA	**Purkeypile**	**1.32**	**323**		**Pn**	**02 36 36.9**	**0.0**
WAT1	**Susitna Watana**	**1.33**	**42**		**Pn**	**02 36 37.2**	**+0.4**
WAT1					**Sn**	**02 36 54.9**	**+1.1**
SLKM	**Skilak Lake**	**1.35**	**175**		**Pn**	**02 36 36.7**	**-0.4**
O22K	**Cooper Landing**	**1.42**	**165**	P	**Pn**	**02 36 37.7**	**-0.2**
	baz=345						
O22K				S	**Sn**	**02 36 55.7**	**-0.1**
	baz=345						
O22K	**Cooper Landing**	**1.42**	**165**		**Pn**	**02 36 38.2**	**+0.2**
WAT2	**Susitna Watana**	**1.42**	**37**		**Pn**	**02 36 38.7**	**+0.5**
PWL	**Port Wells**	**1.43**	**133**		**Pn**	**02 36 37.7**	**-0.4**
WAT6	**Susitna Watana**	**1.48**	**59**		**Pn**	**02 36 39.2**	**+0.4**
SCM	**Sheep Creek Mo**	**1.49**	**89**		**Pn**	**02 36 39.3**	**+0.3**
SCM	**Sheep Creek Mo**	**1.49**	**89**	IAML		02 37 03.9	
	comp=N,2µm,0.7s						
TRF	**Thorofare Moun**	**1.61**	**3**		**Pn**	**02 36 41.1**	**+0.4**
TRF	**Thorofare Moun**	**1.61**	**3**	IAML		02 37 02.9	
	comp=E,1µm,0.6s						
DFR	**Drift River**	**1.66**	**221**		**Pn**	**02 36 41.7**	**+0.5**
KTH	**Kantishna Hill**	**1.72**	**353**		**Pn**	**02 36 42.8**	**+0.7**
RND	**Reindeer**	**1.73**	**25**		**Pn**	**02 36 42.8**	**+0.5**
RND	**Reindeer**	**1.73**	**25**	IAML		02 37 05.0	
	comp=E,956nm,0.6s						
REF	**Redoubt East F**	**1.74**	**219**		**Pn**	**02 36 42.8**	**+0.4**
NCT	**North Crescent**	**1.76**	**224**		**Pn**	**02 36 43.0**	**+0.4**
RSO	**Redoubt South**	**1.78**	**219**		**Pn**	**02 36 43.4**	**+0.4**
RDSO	**Redoubt South**	**1.78**	**219**		**Pn**	**02 36 43.4**	**+0.4**
RED	**Redoubt Volcan**	**1.82**	**219**		**Pn**	**02 36 43.8**	**+0.4**
SEW	**Seward**	**1.82**	**164**		**Pn**	**02 36 43.6**	**+0.2**
MCK	**McKinley**	**2.02**	**20**	P	**Pn**	**02 36 46.8**	**+0.8**
	baz=201,SNR=174						
MCK				S	**Sn**	**02 37 11.1**	**+0.9**
	baz=201						
MCK	**McKinley**	**2.02**	**20**		**Pn**	**02 36 46.8**	**+0.8**
M24K	**Tolsona, Glenn**	**2.05**	**81**	P	**Pn**	**02 36 47.6**	**+1.1**
	baz=264,SNR=185						
M24K	**Tolsona, Glenn**	**2.05**	**81**		**Pn**	**02 36 47.5**	**+1.1**
BRLK	**Bradley Lake**	**2.10**	**186**		**Pn**	**02 36 47.4**	**+0.2**
BRLK				IAML		02 37 18.8	
	comp=E,558nm,0.5s						
BRLK				IAML		02 37 20.5	
	comp=N,605nm,0.7s						
VMT	**TAPS TI Valdez**	**2.12**	**110**		**Pn**	**02 36 46.8**	**-0.5**
BRSE	**Bradley Lake S**	**2.12**	**184**		**Pn**	**02 36 46.8**	**-0.6**
KLU	**Klutina**	**2.20**	**97**		**Pn**	**02 36 48.4**	**-0.2**
KLU	**Klutina**	**2.20**	**97**	IAML		02 37 20.7	
	comp=N,562nm,0.5s						
KLU				IAML		02 37 23.8	
	comp=E,571nm,0.4s						
CHUM	**Lake Minchumin**	**2.21**	**338**		**Pn**	**02 36 49.1**	**+0.5**
IVE	**Iliamna Volcan**	**2.22**	**215**		**Pn**	**02 36 49.2**	**+0.4**
BPAW	**Bear Paw Mtn.**	**2.27**	**354**		**Pn**	**02 36 49.5**	**0.0**
BPAW	**Bear Paw Mtn.**	**2.27**	**354**	IAML		02 37 19.4	
	comp=N,472nm,0.6s						
BPAW				IAML		02 37 19.7	
	comp=E,499nm,0.7s						
HOM	**Homer**	**2.27**	**195**	P	**Pn**	**02 36 50.8**	**+1.4**
	baz=14,SNR=7.8						
HOM				S	**Sn**	**02 37 18.7**	**+2.4**
	baz=14						
ILS	**Iliamna Low So**	**2.28**	**215**		**Pn**	**02 36 50.4**	**+0.7**
CNPM	**China Poot**	**2.36**	**189**		**Pn**	**02 36 50.2**	**-0.5**
CNPM	**China Poot**	**2.36**	**189**	IAML		02 37 26.4	
	comp=E,1µm,0.4s						
CNPM				IAML		02 37 27.9	
	comp=N,782nm,0.3s						
DIV	**Divide**	**2.37**	**106**		**Pn**	**02 36 50.0**	**-0.8**
PS11	**TAPS Pump St11**	**2.37**	**82**		**Pn**	**02 36 52.0**	**+1.2**
BWN	**Browne**	**2.38**	**11**		**Pn**	**02 36 51.5**	**+0.6**
BWN	**Browne**	**2.38**	**11**	IAML		02 37 36.1	
	comp=N,846nm,0.9s						
BWN				IAML		02 37 36.6	
	comp=E,867nm,1.0s						
HIN	**Hinchinbrook I**	**2.42**	**125**		**Pn**	**02 36 50.8**	**-0.7**
HIN	**Hinchinbrook I**	**2.42**	**125**	IAML		02 37 34.8	
	comp=N,833nm,0.7s						
HIN				IAML		02 37 36.5	
	comp=E,936nm,0.8s						
SVW2	**Sparrevohn**	**2.56**	**255**		**Pn**	**02 36 53.3**	**-0.1**
PS12	**TAPS Pump St12**	**2.57**	**96**		**Pn**	**02 36 53.2**	**-0.3**
PAX	**Paxson**	**2.59**	**62**		**Pn**	**02 36 54.9**	**+1.1**
OPT	**Oil Point**	**2.59**	**213**		**Pn**	**02 36 54.7**	**+0.9**

EYAK	Cordova Ski Ar	2.63	118		Pn	02 36 54.9	+0.6
TT01	Tatalina	2.79	295		Pn	02 36 56.4	-0.1
TTA	Tatalina	2.80	295		Pn	02 36 56.5	-0.1
N25K	Chitina, Valde	2.81	92	P	Pn	02 36 56.7	-0.1
	baz=277,SNR=50						
N25K				S	Sn	02 37 29.3	-0.3
	baz=277						
N25K	Chitina, Valde	2.81	92		Pn	02 36 56.9	0.0
N25K	Chitina, Valde	2.81	92	IAML		02 37 39.8	
	comp=E,734nm,0.5s						
N25K				IAML		02 37 40.5	
	comp=N,483nm,0.5s						
NEA2	Nenana	2.83	12	P	Pn	02 36 56.8	-0.2
	baz=194,SNR=38						
NEA2				S	Sn	02 37 29.5	-0.4
	baz=194						
NEA2	Nenana	2.83	12		Pn	02 36 56.8	-0.2
WRH	Wood River Hil	2.84	21		Pn	02 36 57.5	+0.2
AUL	Augustine Lava	2.87	212		Pn	02 36 57.9	+0.2
AUCH	Augustine Cone	2.89	212		Pn	02 36 58.2	+0.2
BMRM	Bremner River	2.96	105		Pn	02 36 59.7	+0.8
HDA	Harding Lake	3.03	30	P	Pn	02 36 60.0	+0.2
	baz=213,SNR=119						
HDA				S	Sn	02 37 35.1	+0.4
	baz=213						
HDA				S	Sn	02 37 35.1	+0.4
	baz=213						
HDA	Harding Lake	3.03	30		Pn	02 37 00.2	+0.5
HDA	Harding Lake	3.03	30	IAML		02 37 52.8	
	comp=E,512nm,1.1s						
HDA				IAML		02 37 52.8	
	comp=N,589nm,0.8s						
CCB	Clear Creek Bu	3.06	22		Pn	02 37 00.1	0.0
GOAT	Goat Mountain	3.06	112		Pn	02 36 59.6	-0.6
PS08	TAPS Pump Stn8	3.17	30		Pn	02 37 01.9	+0.2
RAGM	Ragged Mountai	3.17	115		Pn	02 37 02.1	+0.3
MLY	Manley	3.20	358	P	Pn	02 37 02.3	+0.1
	baz=178,SNR=315						
MLY				S	Sn	02 37 38.7	-0.3
	baz=178						
MLY	Manley	3.20	358		Pn	02 37 02.2	+0.1
GLB	Gilahina Butte	3.21	94		Pn	02 37 01.9	-0.3
GLB	Gilahina Butte	3.21	94	IAML		02 37 57.3	
	comp=N,267nm,0.4s						
RIDG	Independent Ri	3.21	51		Pn	02 37 03.7	+1.5
RIDG	Independent Ri	3.21	51	IAML		02 37 50.5	
	comp=N,550nm,0.7s						
TCOL	CIGO, UAF Yank	3.25	20	P	Pn	02 37 03.1	+0.3
	baz=202,SNR=46						
TCOL				S	Sn	02 37 40.2	-0.1
	baz=202						
TCOL	CIGO, UAF Yank	3.25	20		Pn	02 37 03.2	+0.4
COLA	College	3.26	20		Pn	02 37 03.0	+0.1
MDM	Murphy Dome	3.28	17		Pn	02 37 03.5	+0.3
MENT	Mentasta	3.33	68		Pn	02 37 04.5	+0.7
MENT				IAML		02 37 56.6	
	comp=E,461nm,0.8s						
I23K	Minto, Yukon-K	3.35	8	P	Pn	02 37 04.4	+0.3
	baz=189,SNR=107						
I23K				S	Sn	02 37 42.7	+0.1
	baz=189						
I23K	Minto, Yukon-K	3.35	8		Pn	02 37 04.3	+0.3
I23K	Minto, Yukon-K	3.35	8	IAML		02 38 01.6	
	comp=N,223nm,0.8s						
IL31		3.35	27		Pn	02 37 04.2	+0.1
ILAR	Eielson Array	3.35	27	P	Pn	02 37 04.2	0.0
	comp=N,16nm,0.3s,baz=209,slow=14,SNR=549						
ILAR				S	Sn	02 37 42.1	-0.5
	comp=N,17nm,0.3s,baz=203,slow=18,SNR=2.8						
ILAR	Eielson Array	3.35	27		Pn	02 37 04.1	0.0
ILAR					Sn	02 37 43.0	+0.4
HMT	Hamilton	3.38	114		Pn	02 37 04.1	-0.4
VRDI	Verde Repeater	3.42	97		Pn	02 37 04.7	-0.5
DOT	Dot Lake	3.46	56	Pn	Pn	02 37 06.4	+0.8
POKR	Poker Plat Res	3.55	21	P	Pn	02 37 07.4	+0.5
	baz=204,SNR=43						
POKR				S	Sn	02 37 48.2	+0.6
	baz=204						
POKR	Poker Plat Res	3.55	21		Pn	02 37 07.4	+0.5
MCARA	McCarthy VSAT	3.59	94		Pn	02 37 07.9	+0.5
MCARA	McCarthy VSAT	3.59	94	IAML		02 38 10.6	
	comp=E,394nm,0.8s						
SCRK	Sand Creek	3.66	51	P	Pn	02 37 09.0	+0.6
	baz=237,SNR=24						
SCRK	Sand Creek	3.66	51		Pn	02 37 09.0	+0.6
CRQM	Cirque	3.70	104		Pn	02 37 09.1	0.0
CRQM	Cirque	3.70	104	IAML		02 38 15.3	
	comp=E,221nm,0.9s						
CRQM				IAML		02 38 15.5	
	comp=N,276nm,0.9s						
KHIT	Khitrov Hills	3.77	109		Pn	02 37 09.6	-0.4
TGL	Tana Glacier	3.85	103		Pn	02 37 10.3	-0.8
TGL	Tana Glacier	3.85	103	IAML		02 38 14.4	
	comp=N,291nm,0.6s						
TGL				IAML		02 38 14.5	
	comp=E,217nm,0.7s						
PTPK	Patty Peak	3.89	96		Pn	02 37 11.8	0.0
BALM	Baldy	3.99	98		Pn	02 37 12.6	-0.4
BALM	Baldy	3.99	98	IAML		02 38 16.1	
	comp=N,178nm,0.8s						
KIAG	Kiagna River	4.01	100		Pn	02 37 12.9	-0.5
PS06	TAPS Pump Stn6	4.04	4		Pn	02 37 13.8	+0.4
KULT	Kultieth River	4.10	110		Pn	02 37 13.7	-0.8
BC03		4.21	69		Pn	02 37 15.5	-0.4
BCAR	Beaver Creek A	4.21	69		Pn	02 37 15.9	-0.1
KDAK	Kodiak Island	4.22	196	P	Pn	02 37 15.3	-0.7
	comp=N,1.8nm,0.3s,baz=61,slow=5.8,SNR=21						
KDAK				S	Sn	02 38 03.4	-0.5
	comp=N,5.6nm,0.3s,baz=190,slow=18,SNR=6.3						
KDAK	Kodiak Island	4.22	196		Sn	02 38 03.8	0.0
KDAK				IAML		02 38 19.2	
	comp=N,102nm,0.6s						
KDAK	Kodiak Island	4.22	196	Pn	Pn	02 37 16.2	+0.2
PRP	Porcupine Dome	4.29	29		Pn	02 37 18.0	+0.9
PRP	Porcupine Dome	4.29	29	IAML		02 38 34.2	
	comp=N,129nm,0.7s						
PRP				IAML		02 38 34.3	
	comp=E,126nm,0.7s						
BARN	Barnard Glacie	4.30	97		Pn	02 37 17.7	+0.4
BARN	Barnard Glacie	4.30	97	IAML		02 38 28.8	
	comp=E,135nm,0.5s						
BARN				IAML		02 38 30.6	
	comp=N,142nm,0.9s						
GRNC	Granite Creek	4.35	101		Pn	02 37 17.3	-0.7
IM03		4.39	342		Pn	02 37 18.7	+0.3
CTGM	Chitina Glacie	4.48	97		Pn	02 37 20.2	+0.4
CTGM	Chitina Glacie	4.48	97	IAML		02 38 31.7	
	comp=N,108nm,1.3s						
BVCY	Beaver Creek	4.55	79		Pn	02 37 20.9	+0.4
YUK2	White River	4.57	87		Pn	02 37 21.0	+0.1
LOGN	Logan Glacier	4.68	99		Pn	02 37 21.8	-0.6
YUK3	Moose Creek	4.75	86		Pn	02 37 23.6	+0.1
OHAK	Old Harbor	4.86	198		Pn	02 37 25.0	+0.3
OHAK	Old Harbor	4.86	198	IAML		02 38 53.4	
	comp=N,99nm,3.4s						
OHAK				IAML		02 39 06.4	
	comp=E,74nm,2.0s						
EGAK	Eagle	5.12	51		Pn	02 37 29.0	+0.7
FYU	Fort Yukon	5.26	23	Pn	Pn	02 37 31.2	+1.1
FYU				IAML		02 39 04.7	
	comp=E,80nm,0.7s						
FYU				IAML		02 40 26.6	
	comp=N,110nm,4.9s						
COLD	Coldfoot	5.40	1	P	Pn	02 37 32.7	+0.6
	baz=181,SNR=26						
COLD				S	Sn	02 38 31.8	-1.0
	baz=181						
COLD	Coldfoot	5.40	1		Pn	02 37 33.0	+0.8
DAWY	Dawson	5.52	61		Pn	02 37 34.0	+0.2
YUK6	Outpost Mounta	5.89	94		Pn	02 37 38.8	-0.3
YUK5	Granite Creek	6.08	91		Pn	02 37 41.2	-0.5
BM03	Burnt Mountain	6.13	22		Pn	02 37 42.2	0.0
BMAR	Burnt Mountain	6.14	22		Pn	02 37 42.9	+0.6
HYT	Haines Junctio	6.33	94		Pn	02 37 44.5	-0.5
TOLK	Toolik Lake Re	6.83	3	P	Pn	02 37 52.9	+1.2
	baz=184,SNR=19						
TOLK				S	Sn	02 39 08.8	+0.8
	baz=184						
TOLK	Toolik Lake Re	6.83	3		Pn	02 37 53.3	+1.6
ANM	Nome	7.26	299		Pn	02 37 58.5	+0.9
WHY	Whitehorse	7.61	92		Pn	02 38 01.9	-0.6
TNA	Tin City	8.58	303	P	Pn	02 38 16.4	+0.9
	baz=108,SNR=22						
TNA	Tin City	8.58	303		Pn	02 38 16.5	+0.9
INK	Inuvik	9.62	40	P	Pn	02 38 29.8	+0.1
	comp=N,0.2nm,0.3s,baz=179,slow=33,SNR=2.0						
INK				S	Sn	02 40 15.3	-0.6
	comp=N,0.2nm,0.3s,baz=248,slow=19,SNR=1.4						
INK	Inuvik	9.62	40		Pn	02 38 30.7	+1.0
YKA	Yellowknife Ar	16.63	72	P	Pn	02 40 03.1	+0.3
	comp=N,0.1nm,0.3s,baz=278,slow=9.4,SNR=2.9						
SONM	Songino Array	54.69	306	P	P	02 45 37.6	+1.1
	comp=N,0.5nm,0.8s,baz=61,slow=6.8,SNR=3.1						
FINES	FINESS Array B	57.00	2	P	P	02 45 51.4	-1.2
	comp=N,3.5nm,1.0s,baz=342,slow=7.7,SNR=3.6						
MKAR	Makanchi Array	63.74	322	P	P	02 46 38.1	-0.7
	comp=N,0.6nm,0.9s,baz=41,slow=8.6,SNR=2.9						
AKASG	Malin Array Be	67.80	0	P	P	02 47 03.8	-1.1
	comp=N,0.8nm,0.4s,baz=2.3,slow=5.8,SNR=4.7						
KBA	Koelnbreinsper	70.65	12	*e*P	P	02 47 23.4	+0.7
	comp=N,2.2nm,0.6s						
OBKA	Obir	71.32	11	*e*P	P	02 47 27.0	+0.3
	comp=N,1.3nm,0.4s						
ESDC	Sonseca Array	75.25	26	P	P	02 47 50.2	+0.3
	comp=N,0.4nm,0.6s,baz=313,slow=4.0,SNR=5.1						

IDC 12 02:40:20.2±8.3**, 12°.13S**×**120°.11E, h0^{km}, mb4.2**/1**,**
mb1 3.7/3**, mb1mx3.3**/40**, mbtmp3.5**/3**, ML3.2**/2**, MS3.2**/1**,**
Ms1 3.2/1**, ms1mx2.5**/34**, Error ellipse: s-maj=124.1km**
s-min=90.5km az=2.0, South of Sumba

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	15.72	121	Pn	Pn	02 44 02.5	-0.7
	0.1nm,0.3s,baz=295,slow=12,SNR=5.4						
WRA				Sn	Sn	02 46 58.9	+0.6
	0.2nm,0.3s,baz=298,slow=20,SNR=2.4						
ASAR	Alice Springs	17.42	133	P	P	02 44 26.8	+0.5
	0.2nm,0.3s,baz=316,slow=8.9,SNR=12						
STKA	Stephens Creek	27.88	138	P	P	02 46 11.4	-0.5
	1.2nm,0.4s,baz=318,slow=15,SNR=2.0						
GUMO	Guam	35.43	45	LR	LR	03 00 37.0	
	comp=Z,39nm,20.4s,baz=92,slow=34						

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*JMA **12** 02:42:35.7±0.1, 39°.48N×143°.87E, h22^{km}, M4.1*
*NIED **12** 02:42:35.8, 39°.48N×143°.87E, h22^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}4.61; $M_{\theta\theta}$0.53; $M_{\phi\phi}$-5.14; $M_{r\theta}$1.11; $M_{\theta\phi}$-1.76; $M_{\phi r}$0.84; Fault plane solution: $M_0$5.34000×10^{14} NP1:ϕ_s27.00000°, δ52.00000°, λ105.00000°. NP2:ϕ_s183.00000°, δ40.00000°, λ71.00000°.*
*IDC **12** 02:42:37.0±2.0, 39°.46N×143°.52E, h0^{km}, mb3.6/6, mb1 3.7/11, mb1mx3.5/53, mbtmp3.7/11, ML3.3/5 Error ellipse: s-maj=37.5km s-min=22.5km az=130.0*
ISC 12 02:42:38.0±2.9**, 39°.46N**±0°.05×**143°.62E**±0°.08**, h12**^{km}±16^{km}**,**
n33, σ1^{s}.59/42**, mb3.7**/7**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MIYJ	Miyakonagasawa	1.40	275	P	Pb	02 43 03.2	-0.8
MIYJ				*e*S	Sg	02 43 23.1	+0.2
JTH	Tanohata	1.43	290	P	Pb	02 43 03.6	-1.0
JTH				*e*S	Sb	02 43 23.1	+0.3
OFUJ	Ofunato	1.56	256	P	Pn	02 43 05.4	-0.1
JKEN	Kujiedanarisaw	1.65	297	P	Pn	02 43 06.2	-0.5
JKEN				*e*S	Sb	02 43 29.2	+0.3
JOM	Ohasama	1.80	271	P	Pb	02 43 09.4	-1.4
JOM				*e*S	Sb	02 43 32.9	-0.4
JANG	Nango	1.85	300	P	Pn	02 43 09.1	-0.5
JMK	Ichinoseki	1.93	255	P	Pn	02 43 10.9	+0.3
JMK				*e*S	Sn	02 43 35.8	+1.0
JYK	Kaneyama	2.59	259	P	Pn	02 43 20.5	+0.8
JOT	Ohata	2.74	315	*e*S	Sn	02 43 55.2	+0.4
JNBK	Urakawa-nobuka	2.89	347	P	Pn	02 43 24.7	+0.9
JNBK				*e*S	Sn	02 43 58.9	+0.5
JKB	Kayabe	3.12	322	P	Pn	02 43 26.8	-0.1
JKB				*e*S	Sn	02 44 04.2	+0.1
JCH	Churui	3.15	357	P	Pn	02 43 26.7	-0.7
JCH				*e*S	Sn	02 44 03.1	-1.9
JFT	Otama	3.22	234	P	Pn	02 43 28.6	+0.2
JAK	Akkeshi	3.62	13	P	Pn	02 43 31.7	-2.1
JAK				*e*S	Sn	02 44 12.9	-3.6
JEW	Eniwo	3.75	335	*e*S	Sn	02 44 19.1	-0.6
JFR	Furan	3.78	349	*e*S	Sn	02 44 18.8	-1.6
JAR	Ashorobuto	3.83	2	P	Pn	02 43 35.6	-1.1
ASAJ	Asahikawa	4.71	351	Pn	Pn	02 43 49.3	+0.5
	2.0nm,0.3s,baz=197,slow=18,SNR=8.5						
ASAJ				Sn	Sn	02 44 43.3	-0.1
	3.8nm,0.3s,baz=68,slow=32,SNR=6.0						
MJAR	Matsushiro Arr	5.17	237	Pn	Pn	02 43 55.9	+0.7
	0.6nm,0.3s,baz=43,slow=12,SNR=16						
MAT	Matsushiro	5.17	237	P	Pn	02 43 56.6	+1.4
MAT				*e*S	Sn	02 44 55.4	+0.6
JHJ	Hachijo jima 2	7.05	207	Pn	Pn	02 44 19.6	-1.3
	7.0nm,0.3s,baz=111,slow=21,SNR=7.7						
JHJ				Sn	Sn	02 45 34.0	-6.9
	14nm,0.3s,baz=226,slow=23,SNR=1.8						
USRK	Ussuriysk Ar.	9.88	302	Pn	Pn	02 45 00.9	+1.2
	baz=98,slow=14,SNR=9.6						
KSRS	Korea Array	12.47	266	Pn	Pn	02 45 36.9	+1.8
	0.3nm,0.3s,baz=94,slow=18,SNR=1.2						
SEY	Seymchan	24.09	10	P	P	02 47 53.8	+0.8
	0.6nm,0.3s,baz=22,slow=19,SNR=1.7						
SONM	Songino Array	27.98	300	P	P	02 48 27.6	-0.9
	0.3nm,0.4s,baz=109,slow=9.2,SNR=4.8						
H11N2	WAKE ISLAND Hy	28.08	128	T	T	03 19 26.2	
	baz=318,slow=75,SNR=18						
H11N1	WAKE ISLAND Hy	28.09	128	T	T	03 19 29.1	
	baz=318,slow=75,SNR=19						
H11N3	WAKE ISLAND Hy	28.10	128	T	T	03 19 31.1	
	baz=318,slow=75,SNR=18						
ZALV	Zalesovo Beam	41.61	310	P	P	02 50 25.5	-0.1
	1.3nm,0.5s,baz=98,slow=8.1,SNR=7.2						
MKAR	Makanchi Array	44.34	300	P	P	02 50 48.5	+0.7
	0.8nm,0.8s,baz=85,slow=10.0,SNR=8.6						
KURBB	Kurchatov Arra	45.92	306	P	P	02 51 00.4	+0.2
	4.0nm,0.2s,baz=80,slow=8.3,SNR=7.2						
ILAR	Eielson Array	46.52	34	P	P	02 51 06.8	+2.0
	0.2nm,0.5s,baz=258,slow=8.0,SNR=2.0						
BVAR	Borovoye Array	50.25	311	P	P	02 51 34.1	+0.3
	0.4nm,0.4s,baz=58,slow=13,SNR=5.1						

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*IDC **12** 02:44:56.2±5.1, 21°.70S×68°.61W, h0^{km}, mb4.4/1, mb1 4.0/2, mb1mx3.5/21, mbtmp4.0/2, ML3.3/1, Error ellipse: s-maj=151.5km s-min=56.7km az=72.0*
*GUC **12** 02:45:12.3±0.6, 20°.64S×68°.90W, h105^{km}±3^{km}, ML3.5*
ISC 12 02:45:11.8±1.0**, 20°.65S**±0°.03×**69°.01W**±0°.08**, h112**^{km}±8^{km}**,**
n19, σ0^{s}.69/35**, 8C, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB08	IPOC Station P	0.53	345	⇑*i*P	Pn	02 45 29.3	-0.3
PB08				*i* S	Sn	02 45 42.1	-0.7
PB08				IAML		02 45 42.9	
	comp=E,4µm,0.2s						
PB01	IPOC Station P	0.60	229	*i* P	Pn	02 45 29.5	-0.2
PB01				*i* S	Sn	02 45 42.9	-0.2
PB01				IAML		02 45 43.6	
	comp=E,3µm,0.2s						
HMBC	Humberstone	0.91	294	⇑*i*P	Pn	02 45 32.3	-0.1
HMBC				*e*S	Sn	02 45 48.0	+0.2
HMBC				IAML		02 45 49.6	
	comp=N,1µm,0.4s						
PATCX	Punta Patache	1.09	261	⇑*i*P	Pn	02 45 34.5	+0.4
PATCX				*i* S	Sn	02 45 51.9	+0.9
PATCX				IAML		02 45 53.7	
	comp=N,895nm,0.4s						
TA01	Diego Aracena	1.10	274	⇑*i*P	Pn	02 45 34.4	+0.2
TA01				*i* S	Sn	02 45 51.8	+0.6
TA01				IAML		02 45 52.7	
	comp=E,705nm,0.5s						
TA02	Huaiquique	1.12	290	*e*P	Pn	02 45 34.9	+0.4
TA02				*e*S	Sn	02 45 52.2	+0.7
PB09	IPOC Station P	1.16	191	⇑*i*P	Pn	02 45 35.4	+0.3
PB09				*i* S	Sn	02 45 53.6	+0.9
PB07	IPOC Station P	1.35	217	⇑*i*P	Pn	02 45 37.6	+0.4
PB07				*i* S	Sn	02 45 56.8	+0.4
PB07				IAML		02 45 58.3	
	comp=E,1µm,0.3s						
PSGC	Pisagua	1.48	315	⇑*i*P	Pn	02 45 38.8	+0.2
PSGC				*i* S	Sn	02 45 58.8	-0.2
PSGC				IAML		02 46 02.5	
	comp=N,476nm,0.3s						
PB03	IPOC Station P	1.56	207	*e*P	Pn	02 45 39.9	+0.4
PB03				*e*S	Sn	02 46 00.9	+0.2
PB03				IAML		02 46 04.3	
	comp=E,431nm,0.3s						
MNMC	Minye Minye	1.61	340	*e*P	Pn	02 45 40.8	+0.4
MNMC				*i* S	Sn	02 46 02.6	+0.6
LVC	Limon Verde	1.95	177	*e*P	Pn	02 45 45.1	+0.4
LVC				*i* S	Sn	02 46 10.3	+0.7
PB04	IPOC Station P	1.98	212	*e*P	Pn	02 45 45.5	+0.6
PB04				*e*S	Sn	02 46 09.3	-0.8
PB04				IAML		02 46 14.3	
	comp=N,307nm,0.4s						
PB06	IPOC Station P	2.11	194	*e*P	Pn	02 45 46.9	+0.4
PB06				*i* S	Sn	02 46 13.5	+0.6
PB06				IAML		02 46 14.2	
	comp=E,293nm,0.4s						
PB05	IPOC Station P	2.46	207	*e*P	Pn	02 45 51.3	+0.4
PB05				*e*S	Sn	02 46 19.1	-1.8
PB05				IAML		02 46 28.2	
	comp=N,155nm,0.4s						
PB15	IPOC Station P	2.58	190	⇑*i*P	Pn	02 45 53.2	+0.6
PB15				*i* S	Sn	02 46 24.4	+0.5
LPAZ	La Paz	4.42	11	Pn	Pn	02 46 18.6	+1.2
	comp=N,0.6nm,0.3s,baz=194,slow=6.8,SNR=6.8						
TORD	Torodi Ar. Bea	77.16	71	P	P	02 56 52.3	-1.4
	comp=N,2.9nm,0.8s,baz=252,slow=4.7,SNR=7.9						
MKAR	Makanchi Array	145.00	35	PKPbc	PKPab	03 04 36.1	+0.6
	comp=N,0.2nm,0.4s,baz=327,slow=1.5,SNR=4.4						

IDC 12 02:48:52.3±2.6**, 7°.20S**×**128°.24E, h0^{km}, mb3.6**/1**,**
mb1 3.7/3**, mb1mx3.4**/39**, mbtmp3.5**/3**, ML3.4**/2**, Error**
ellipse: s-maj=294.2km s-min=32.2km az=65.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	13.98	156	Pn	Pn	02 52 11.9	+0.1
	0.2nm,0.3s,baz=334,slow=13,SNR=5.6						
WRA				Sn	Sn	02 54 32.8	-15
	0.7nm,0.3s,baz=339,slow=22,SNR=7.4						
ASAR	Alice Springs	17.25	162	P	Pn	02 52 54.8	-0.1
	0.2nm,0.3s,baz=339,slow=10,SNR=9.7						
MKAR	Makanchi Array	67.45	328	P	P	02 59 49.9	0.0
	0.3nm,0.5s,baz=111,slow=7.9,SNR=5.2						

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*IDC **12** 02:49:11.7±0.8, 28°.01N×141°.35E, h0^{km}, mb3.8/9, mb1 4.0/12, mb1mx3.8/45, mbtmp3.8/12, ML3.1/3, Error ellipse: s-maj=29.4km s-min=15.5km az=62.0*
ISC 12 02:49:16.4±0.7**, 28°.09N**±0°.10×**141°.4E**±0°.2**, h35^{km}, n14,**
σ1^{s}.98/16**, mb3.8**/10**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	Chichijima	1.21	144	Pn	Pn	02 49 34.5	-2.4
	26nm,0.3s,baz=346,slow=22,SNR=12						
JCJ				Sn	Sn	02 49 50.4	-1.7
	46nm,0.3s,baz=73,slow=23,SNR=9.2						
JCJ				LR	LR	02 49 57.8	
	comp=Z,85nm,18.9s,baz=84,slow=39						
JHJ	Hachijo jima 2	5.20	345	Pn	Pn	02 50 29.6	-2.1
	4.7nm,0.3s,baz=209,slow=19,SNR=1.9						
JHJ				Sn	Sn	02 51 26.6	-3.9
	8.5nm,0.3s,baz=252,slow=19,SNR=1.7						
MJAR	Matsushiro Arr	8.85	343	Pn	Pn	02 51 19.4	-2.5
	0.3nm,0.3s,baz=155,slow=10,SNR=6.2						
USRK	Ussuriysk Ar.	17.76	337	P	Pn	02 53 20.6	-0.2
	baz=142,slow=8.8,SNR=4.9						
KLR	Kul'dur	22.38	343	P	P	02 54 11.9	+0.5
	1.7nm,0.6s,baz=146,slow=11,SNR=6.2						
SONM	Songino Array	33.51	316	P	P	02 55 52.1	-0.6
	0.7nm,0.7s,baz=121,slow=7.5,SNR=6.9						
WRA	Warramunga Arr	48.23	189	P	P	02 57 53.6	-0.2
	2.0nm,0.7s,baz=12,slow=8.3,SNR=9.6						
ZALV	Zalesovo Beam	48.28	319	P	P	02 57 54.7	+0.8
	0.8nm,0.4s,baz=93,slow=7.6,SNR=5.1						
MKAR	Makanchi Array	49.30	309	P	P	02 58 02.7	+0.7
	0.8nm,0.8s,baz=84,slow=10,SNR=8.8						
ILAR	Eielson Array	57.19	29	P	P	02 59 00.1	+0.6
	0.4nm,0.8s,baz=284,slow=7.3,SNR=4.6						
YKA	Yellowknife Ar	71.61	28	P	P	03 00 35.9	+2.0
	0.5nm,0.8s,baz=291,slow=5.1,SNR=7.5						
ARCES	ARCESS Array B	72.38	341	P	P	03 00 40.6	+2.1
	17nm,1.1s,baz=299,slow=2.5,SNR=4.1						
FINES	FINESS Array B	76.75	333	P	P	03 01 05.9	+2.0
	1.3nm,0.8s,baz=84,slow=6.7,SNR=3.7						
NVAR	Mina Array Bea	80.46	52	P	P	03 01 26.4	+1.3
	0.3nm,0.8s,baz=280,slow=5.4,SNR=2.6						

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*BGR **12** 03:03:27.0±0.6, 51°.57N×6°.76E, h1^{km}, ML2.2/3, Error ellipse: s-maj=7.8km s-min=5.6km az=112.0*
*BUG **12** 03:03:26.2±0.0, 51°.59N×6°.83E, h2^{km}±1^{km}, MD2.6/10, ML2.6/5*
*BNS **12** 03:03:28.3±0.5, 51°.52N×6°.87E, h1^{km}, ML1.8*
*LDG **12** 03:03:28.1±0.3, 51°.52N×6°.89E, h1^{km}, Md3.0/1, Ml2.6/14, Error ellipse: s-maj=4.7km s-min=2.9km az=23.0, Suspected Mining induced.*
ISC 12 03:03:25.8±0.8**, 51°.53N**±0°.02×**6°.79E**±0°.02**, h0^{km}, n60,**
σ1^{s}.29/94**, Germany**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BZER	Hlnxe	0.10	31	Pg	Pg	03 03 27.3	-0.4
BZER				Sg	Sg	03 03 28.3	-0.7
LAUG	Laupendahl	0.21	152	*e*Pg	Pg	03 03 31.7	+1.9
BAVN	Auguste-Victor	0.29	45	Pg	Pg	03 03 31.6	+0.2
BAVN				Sg	Sg	03 03 35.8	+0.6
BULI	Ruhr-Universit	0.31	105	Pg	Pg	03 03 32.7	+1.1
BULI				Sg	Sg	03 03 37.1	+1.5
BKLB	Ruhr-Universit	0.32	107	Pg	Pg	03 03 32.9	+1.1
BUG	Bochum--Univer	0.32	107	Pg	Pg	03 03 32.9	+1.1
BUG				Sg	Sg	03 03 38.0	+2.1
BTEZ	Ruhr-Universit	0.32	105	Pg	Pg	03 03 33.1	+1.2
PLH	Pulheim	0.53	178	*e*Pg	Pb	03 03 38.0	0.0
PLH				*e*Sg	Sb	03 03 46.1	+0.1
HMES	Hamm, Michael-	0.60	78	Sg	Sg	03 03 45.5	+0.5
BNS	Bensberg	0.62	157	*e*Pg	Pb	03 03 39.9	+0.4
HOBG	Hohbusch	0.65	148	*e*Pg	Pb	03 03 40.0	0.0
HOBG				*e*Sg	Sb	03 03 49.1	-0.5
	44nm,0.6s						
SORT	Sorpetalsperre	0.76	103	*e*Pg	Pg	03 03 40.9	+0.5
SORT				*e*Sg	Sg	03 03 51.1	+0.8
	52nm,0.2s						
WBS	Wahnbachtalspe	0.79	157	*e*Pg	Pb	03 03 42.5	+0.2
GSH	Grosshau	0.84	198	*e*Pg	Pb	03 03 44.1	+0.9
GSH				*e*Sg	Sn	03 03 56.5	-1.4
	32nm,0.3s						
KLL	Kalltalsperre	0.94	199	*e*Pg	Pn	03 03 46.0	-0.2
DREG	Dreilaegerbach	0.94	202	*e*Pg	Pn	03 03 46.2	0.0
STB	Steinbach	0.94	178	*e*Pg	Pn	03 03 46.3	0.0
TDN	Todenfeld	0.96	174	*e*Pg	Pb	03 03 46.1	+0.7
TDN				*e*Sg	Sn	03 03 59.6	-1.4
	18nm,0.3s						
IBBN	Ibbenburen	0.98	37	Pg	Pg	03 03 44.1	-0.5
IBBN				Sg	Sg	03 03 58.8	+1.5
IBBE	Ibbenbueren Ea	0.99	39	Pg	Pg	03 03 45.5	+0.8
IBBE				Sg	Sg	03 03 59.5	+2.0
AHRW	Bad Neuenahr-A	1.01	169	Pg	Pn	03 03 46.9	-0.3
AHRW				Sg	Sn	03 04 02.9	+0.8
KASTN	Kahler Asten	1.07	107	Pg	Pg	03 03 46.8	+0.5
KASTN				Sg	Sb	03 04 01.9	+0.1
BHE	Schloss Buerre	1.21	168	*e*Pg	Pn	03 03 50.2	+0.3
BHE				*e*Sg	Sn	03 04 07.4	+0.4
	18nm,0.5s						
HILG	Hillesheim	1.25	183	*e*Pg	Pn	03 03 51.2	+0.8
KOE	Koeppel	1.26	151	*e*Pg	Pn	03 03 50.9	+0.3
LOH	Wallersheim-Lo	1.36	187	*e*Pg	Pn	03 03 53.0	+0.9
LOH				*e*Sg	Sn	03 04 11.6	+0.8
	16nm,0.4s						
BGG	Burgeitz	1.37	165	*e*Pg	Pb	03 03 52.8	+0.5
TNS	Taunus Mts	1.68	141	*e*Pn	Pg	03 03 58.1	+0.1
	SNR=4.2						
GIVF	Givet	1.90	222	*e*Pn	Pb	03 04 00.9	-0.4
GIVF	Givet	1.90	222	*e*Pg	Pg	03 04 04.4	+2.3
GIVF				*e*Sn	Sn	03 04 24.5	+0.5
	14nm,0.3s						
GIVF				*e*Sg	Sg	03 04 29.7	+3.0
	19nm,0.3s						
WLF	Walferdange	1.91	192	*e*Pg	Pg	03 04 03.2	+0.8
	SNR=3.7						
BAIF	Baives	2.20	229	*e*Pn	Pn	03 04 04.7	+1.1
BAIF	Baives	2.20	229	*e*Pg	Pg	03 04 10.3	+2.3
BAIF				*e*Sn	Sn	03 04 32.3	+0.8
	5.0nm,0.3s						

BAIF				*e*Sg	Sg	03 04 39.6	+3.1
	5.1nm,0.4s						
PAGF	**Fort de Pagny**	3.06	193	*e*Pn	Pn	03 04 16.0	+0.6
PAGF	**Fort de Pagny**	3.06	193	*e*Pg	Pg	03 04 25.0	+0.6
	baz=17						
PAGF				*e*Sn	Sn	03 04 50.5	-2.1
PAGF				*e*Sg	Sg	03 05 03.6	-0.4
	baz=18						
SAVF	**Savonnieres en**	3.11	201	*e*Pn	Pn	03 04 17.1	+1.0
	baz=23						
SAVF	**Savonnieres en**	3.11	201	*e*Pg	Pg	03 04 26.1	+0.7
	baz=16						
SAVF				*e*Sn	Sn	03 04 52.4	-1.5
SAVF				*e*Sg	Sg	03 05 05.8	+0.1
	6.4nm,0.5s,baz=19						
CDF	**Champ du Feu**	3.14	174	*e*Pn	Pn	03 04 16.5	-0.1
CDF	**Champ du Feu**	3.14	174	*e*Pg	Pg	03 04 25.7	-0.2
CDF				*e*Sg	Sg	03 05 05.3	-1.3
	1.4nm,0.3s						
MEZF	**Maizieres J'vi**	3.23	201	*e*Pn	Pn	03 04 18.9	+1.1
MEZF	**Maizieres J'vi**	3.23	201	*e*Pg	Pg	03 04 28.0	+0.3
MEZF				*e*Sg	Sg	03 05 10.1	+0.5
	4.3nm,0.4s						
SFTF	**Sexfontaines**	3.52	199	*e*Pn	Pn	03 04 22.5	+0.8
	baz=16						
SFTF	**Sexfontaines**	3.52	199	*e*Pg	Pg	03 04 33.0	-0.2
SFTF				*e*Sg	Sg	03 05 18.4	-0.3
	2.5nm,0.3s						
HAU	**Haudompre**	3.54	185	*e*Pg	Pg	03 04 33.8	+0.2
HINF	**Hinteralfeld**	3.72	179	*e*Pn	Pn	03 04 25.1	+0.6
HINF	**Hinteralfeld**	3.72	179	*e*Pg	Pg	03 04 36.8	-0.2
HINF				*e*Sn	Sn	03 05 06.0	-3.0
	0.5nm,0.2s						
LOR	**Lormes**	4.68	205	*e*Pn	Pn	03 04 37.1	-0.5
	baz=28						
LOR	**Lormes**	4.68	205	*e*Pg	Pg	03 04 53.3	-2.1
	baz=28						
LOR				*e*Sn	Sn	03 05 29.2	-3.4
LOR				*e*Sg	Sg	03 05 54.6	-1.3
	2.1nm,0.4s,baz=20						
CABF	**La Chapelle**	4.95	186	*e*Pn	Pn	03 04 41.7	+0.3
CABF	**La Chapelle**	4.95	186	*e*Pg	Pg	03 04 59.8	-0.8
SSF	**Saint Saulge**	4.96	207	*e*Pn	Pn	03 04 40.8	-0.7
HYF	**Humbligny**	5.05	214	*e*Pn	Pn	03 04 43.9	+1.1
AVF	**Avril sur Loir**	5.25	207	*e*Pn	Pn	03 04 45.2	-0.3
SMF	**Signal de Mont**	5.26	203	*e*Pn	Pn	03 04 45.1	-0.5
LDF	**La Druitiere**	5.33	239	*e*Pn	Pn	03 04 46.3	-0.3
LDF				*e*Sn	Sn	03 05 46.4	-2.3
	1.7nm,0.4s						
FLN	**La Foliniere**	5.43	242	*e*Pn	Pn	03 04 48.4	+0.4
	baz=59						
FLN				*e*Sn	Sn	03 05 49.3	-1.8
	1.1nm,0.2s						
BGF	**Bois d'Agland**	5.61	209	*e*Pn	Pn	03 04 49.8	-0.6
BGF				*e*Sn	Sn	03 05 52.1	-3.5
	3.1nm,0.5s						
BGF				*e*Sg	Sg	03 06 24.9	-1.1
GRR	**Gorron**	5.85	240	*e*Pn	Pn	03 04 53.6	-0.1
GRR				*e*Sn	Sn	03 05 58.1	-3.3
	3.3nm,0.3s						
TCF	**Toulx Ste Croi**	6.05	212	*e*Pn	Pn	03 04 55.8	-0.7
ROSF	**Rostrenen**	7.24	248	*e*Pn	Pn	03 05 15.3	+2.6

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*JMA **12** 03:06:29.5, 24°.17N×122°.51E, h39^{km}±2^{km}, M2.3*
*TAP **12** 03:06:30.2, 24°.26N×122°.47E, h45^{km}, ML2.8, C*
ISC 12 03:06:30.1±4.0**, 24°.25N**±0°.03×**122°.51E**±0°.02**, h39**^{km}±10^{km}**, n64, σ0^{s}98**/115**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	0.45	63	P	Pn	03 06 39.9	-0.1
JYNG				*e*S	Sn	03 06 46.9	-0.1
YOJ	**Yonaguni jima**	0.50	65	P	Pn	03 06 40.6	-0.3
YOJ				*e*S	Sn	03 06 48.3	-0.1
TWC	**Suao**	0.70	301	*i* P	Pn	03 06 43.5	-0.1
	baz=302						
TWC				*i* S	Sn	03 06 53.1	-0.1
	baz=302						
ENA	**Nanau**	0.72	284	*i* P	Pn	03 06 43.6	-0.3
	baz=290						
ENA				S	Sn	03 06 54.8	+1.0
	baz=290						
EGS		0.79	319	*e*P	Pn	03 06 45.6	+0.8
	baz=329						
EGS				*e*S	Sn	03 06 56.1	+0.6
	baz=329						
NACB	**Ninganchiao**	0.84	265	P	Pn	03 06 45.0	-0.4
	baz=264						
NACB				S	Sn	03 06 56.2	-0.4
	baz=264						
TWD	**Chiawan**	0.85	259	*e*P	Pn	03 06 45.1	-0.5
	baz=246						
TWD				*e*S	Sn	03 06 56.8	-0.1
	baz=246						
ILA	**Ilan**	0.86	307	*e*S	Sn	03 06 57.9	+0.7
	baz=315						
NTC	**Toucheng**	0.86	314	P	Pn	03 06 45.8	0.0
	baz=324						
NTC				*e*S	Sn	03 06 57.3	+0.1
	baz=324						
TWB1	**Santiao Chiao**	0.89	328	*e*P	Pn	03 06 46.0	-0.2
	baz=340						
TWB1				*e*S	Sn	03 06 57.7	-0.2
	baz=340						
TWE	**Neicheng**	0.90	302	*i* P	Pn	03 06 46.8	+0.5
	baz=302						
TWE				*e*S	Sn	03 06 58.6	+0.5
	baz=302						
ETLH	**Xiulin Townshi**	0.94	268	P	Pn	03 06 46.4	-0.5
	baz=266						
ETLH				*e*S	Sn	03 06 59.3	+0.1
	baz=266						
TIPB	**Shuangxi**	0.95	319	*e*P	Pn	03 06 47.1	0.0
	baz=329						
TIPB				*e*S	Sn	03 06 59.2	-0.2
	baz=329						
NDT	**Datong Townshi**	0.97	291	P	Pn	03 06 48.0	+0.6
	baz=291						
NDT				S	Sn	03 07 00.8	+0.8
	baz=291						
NNSB	**Datong**	1.04	280	P	Pn	03 06 48.3	-0.1
	baz=270						
NNSB				S	Sn	03 07 02.0	+0.2
	baz=270						
NNSH	**Datong**	1.04	280	*e*P	Pn	03 06 48.3	-0.1
	baz=271						
NNSH				*e*S	Sn	03 07 02.0	+0.2
	baz=271						
NWF	**Wu-fen Shan**	1.05	321	*e*P	Pn	03 06 48.4	-0.1
	baz=321						
NWF				*e*S	Sn	03 07 01.6	-0.4
	baz=321						
WFSB	**Wu-fen Shan**	1.05	321	P	Pn	03 06 48.4	0.0
	baz=321						
WFSB				*e*S	Sn	03 07 01.6	-0.3
	baz=321						
NNS	**Nan Shan**	1.05	281	*e*P	Pn	03 06 48.6	+0.1
	baz=270						
NNS				*e*S	Sn	03 07 02.4	+0.3
	baz=270						
NWLT	**Wulai**	1.06	300	P	Pn	03 06 49.2	+0.7
	baz=309						
NWLT				*e*S	Sn	03 07 02.9	+0.9
	baz=309						
ESL	**Shilin**	1.07	247	*e*P	Pn	03 06 48.0	-0.7
	baz=245						
IRIF	**Iriomote-Funau**	1.12	85	P	Pn	03 06 49.1	-0.1
IRIF				*e*S	Sn	03 07 03.6	+0.2
NSK	**Sanguang**	1.13	292	P	Pn	03 06 50.0	+0.5
	baz=280						
NSK				S	Sn	03 07 04.6	+0.7
	baz=280						
WHF	**Hehuan Shan**	1.14	265	*i* P	Pn	03 06 50.0	0.0
	baz=252						
WHF				S	Sn	03 07 05.5	+0.9
	baz=252						
TATO	**Taipei**	1.18	308	*e*S	Sn	03 07 05.6	+0.7
	baz=320						
TDCB	**Techi**	1.23	271	P	Pn	03 06 51.5	+0.5
	baz=269						
TDCB				*e*S	Sn	03 07 07.3	+0.8
	baz=269						
CHGB	**Renai**	1.23	262	P	Pn	03 06 51.3	+0.2
	baz=249						
CHGB				*e*S	Sn	03 07 07.1	+0.4
	baz=249						
HGSD	**Ruisui**	1.25	233	*e*P	Pn	03 06 50.5	-0.6
	baz=223						
HGSD				*e*S	Sn	03 07 07.4	+0.8
	baz=223						
EHY	**Hungye**	1.31	236	*e*P	Pn	03 06 51.3	-0.7
	baz=234						
EHY				*e*S	Sn	03 07 08.1	-0.2
	baz=234						
TWY	**Chenhua**	1.32	321	*e*S	Sn	03 07 09.2	+0.9
	baz=321						
VWDT	**VWDT**	1.34	249	P	Pn	03 06 52.6	+0.2
	baz=247						
VWDT				*e*S	Sn	03 07 08.8	-0.2
	baz=247						
JKRS	**Kuro-shima**	1.37	90	P	Pn	03 06 53.3	+0.6
JKRS				S	Sn	03 07 10.6	+1.0
LIOB	**Emei**	1.42	287	P	Pn	03 06 54.5	+1.1
	baz=285						
LIOB				*e*S	Sn	03 07 12.9	+2.0
	baz=285						
TWF1	**Yuli**	1.43	231	P	Pn	03 06 53.0	-0.5
	baz=243						
TWF1				*e*S	Sn	03 07 10.5	-0.5
	baz=243						
WHP	**Taichung City**	1.43	272	*e*P	Pn	03 06 54.9	+1.3
	baz=270						
WHP				*e*S	Sn	03 07 12.0	+0.8
	baz=270						
PCYT	**Pengchaiyu**	1.43	344	*e*P	Pn	03 06 53.5	-0.1
	baz=345						
PCYT				*e*S	Sn	03 07 11.0	-0.2
	baz=345						
DPDB	**Guoxing**	1.46	262	*e*P	Pn	03 06 54.5	+0.4
	baz=254						
JIJ	**Ishigaki jima**	1.49	85	P	Pn	03 06 54.4	0.0
JIJ				*e*S	Sn	03 07 12.7	0.0
SSLB	**Suanglung**	1.50	252	*e*P	Pn	03 06 54.6	+0.1
	baz=251						
SSLB				*e*S	Sn	03 07 12.6	-0.1
	baz=251						
SMLT	**Sun Moon Lake**	1.52	256	P	Pn	03 06 55.3	+0.5
	baz=255						
FULB	**Fuli**	1.53	227	*e*P	Pn	03 06 54.3	-0.7
	baz=215						
FULB				*e*S	Sn	03 07 12.7	-0.9
	baz=215						
TYC	**Yuchr**	1.55	258	*e*P	Pn	03 06 55.7	+0.5
	baz=247						
TYC				*e*S	Sn	03 07 14.5	+0.5
	baz=247						
CHKT	**Chengkung**	1.55	223	*e*P	Pn	03 06 54.4	-0.9
	baz=213						
CHKT				*e*S	Sn	03 07 12.1	-2.1
	baz=213						
YUS	**Yu-Shan**	1.61	242	P	Pn	03 06 56.9	+0.4
	baz=241						
YUS				S	Sn	03 07 15.8	-0.5
	baz=241						
JISG	**Ishigakijimahi**	1.68	78	P	Pn	03 06 56.6	-0.3
JISG				*e*S	Sn	03 07 16.8	-0.4
ELDTW	**Lidau**	1.73	233	P	Pn	03 06 57.2	-0.6
	baz=221						
ELDTW				*e*S	Sn	03 07 16.8	-1.9
	baz=221						
CHN5	**Tsauling**	1.80	249	*e*P	Pn	03 07 00.1	+1.4
	baz=248						
CHN5				*e*S	Sn	03 07 22.4	+2.0
	baz=248						
STYT	**Tauyuan**	1.94	236	*e*P	Pn	03 07 01.3	+0.8
	baz=235						
STYT				*e*S	Sn	03 07 24.2	+0.5
	baz=235						
TWGBT	**Beinan**	1.94	223	*e*P	Pn	03 06 59.8	-0.8
	baz=231						
TWGBT				*e*S	Sn	03 07 22.7	-1.0
	baz=231						
TWG	**Pinlang**	1.94	223	P	Pn	03 06 59.9	-0.7
	baz=231						
TWG				*e*S	Sn	03 07 21.8	-1.9
	baz=231						
TTN	**Taitung**	1.94	220	*e*P	Pn	03 07 00.6	-0.1
	baz=210						
JTJ	**Tarama**	2.04	78	P	Pn	03 07 02.5	+0.6
JTJ				*e*S	Sn	03 07 27.1	+1.0
TWK	**Hsinying**	2.09	243	P	Pn	03 07 04.6	+1.8
	baz=241						
TWK				*e*S	Sn	03 07 30.7	+3.1
	baz=241						
CHN1	**Nanshi**	2.10	240	*e*P	Pn	03 07 04.8	+2.0
	baz=239						
CHN1				*e*S	Sn	03 07 30.6	+2.9
	baz=239						
SLGT	**Liugui**	2.12	234	*e*P	Pn	03 07 04.4	+1.4
	baz=224						
SLGT				*e*S	Sn	03 07 29.9	+1.8
	baz=224						
SSD	**Sandimen**	2.28	229	*e*P	Pn	03 07 07.2	+1.9
	baz=222						
MASBT	**Mashibuluo**	2.37	227	*e*P	Pn	03 07 07.2	+0.6
	baz=220						
PTTC	**Pingtan**	2.78	297	*e*S	Sn	03 07 42.6	-1.9
	baz=295						
PHUB	**P'eng-hu**	2.79	255	*e*P	Pn	03 07 12.2	0.0
	baz=253						
PHUB				*e*S	Sn	03 07 44.2	-0.4
	baz=253						
VWUC	**VWUC**	2.88	286	*e*P	Pn	03 07 13.0	-0.5
	baz=283						
VWUC				*e*S	Sn	03 07 44.1	-2.8
	baz=283						
MATB	**Ma-tsu**	3.00	310	*e*S	Sn	03 07 48.5	-1.3
	baz=316						
PTMZ	**Houxiangcun**	3.18	285	*e*P	Pn	03 07 17.4	-0.3
	baz=283						
PTMZ				*e*S	Sn	03 07 52.3	-2.1
	baz=283						
MHZQ	**Yeshan**	3.65	301	*e*S	Sn	03 08 03.5	-2.4
	baz=298						
KNMB	**Chin-men Tao**	3.77	274	*e*S	Sn	03 08 07.5	-1.3
	baz=272						

IDC 12 03:15:09.1±20.0**, 17°.56S**×**178°.15W, h604**^{km}±38^{km}**, mb3.2**/4**, mb1 3.3**/5**, mb1mx2.9**/48**, mbtmp4.1**/5**, Error ellipse: s-maj=379.5km s-min=122.5km az=74.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	3.62	267	P	P	03 16 32.5	0.0
	1.2nm,0.3s,baz=302,slow=23,SNR=7.0						
CTA	**Charters Tower**	33.74	260	P	P	03 21 02.5	0.0
	1.5nm,0.4s,baz=84,slow=10,SNR=1.5						
STKA	**Stephens Creek**	39.01	241	P	P	03 21 45.1	-0.4
	1.7nm,0.7s,baz=90,slow=12,SNR=2.3						
WRA	**Warramunga Arr**	44.94	259	P	P	03 22 32.0	0.0
	1.3nm,0.4s,baz=93,slow=7.1,SNR=26						
ASAR	**Alice Springs**	45.12	254	P	P	03 22 33.4	-0.1
	5.0nm,0.6s,baz=90,slow=7.9,SNR=24						

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*NEIC **12** 03:15:15.7±1.0, 22°.5S±0°.2×172°.75E±0°.05, h74^{km}±9^{km}, mb4.3/13, Error ellipse: s-maj=23.2km s-min=3.0km az=164.0*
*IDC **12** 03:15:18.6±4.8, 21°.71S×172°.57E, h84^{km}±31^{km}, mb3.8/4, mb1 3.9/6, mb1mx3.6/47, mbtmp4.1/6, MS3.6/10, Ms1 3.6/10, ms1mx3.2/40, Error ellipse: s-maj=143.0km s-min=19.3km az=162.0*
ISC 12 03:15:09.8±1.4**, 22°.3S**±0°.2×**173°.1E**±0°.1**, h35**^{km}**, n33, σ0^{s}86**/27**, mb4.2**/8**, MS3.7**/7**, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	6.14	270	P	Pn	03 16 39.7	+1.7
	2.2nm,0.3s,baz=130,slow=13,SNR=27						
DZM				S	Sn	03 17 46.5	-0.6
	2.7nm,0.3s,baz=318,slow=22,SNR=1.6						
DZM				LR	LR	03 18 43.2	
	comp=Z,211nm,21.6s,baz=188,slow=36						
DZM	**Mont Dzumac**	6.14	270	*e*Pn	Pn	03 16 39.3	+1.2
	18nm,0.3s						
DZM				*e*Sn	Sn	03 17 46.5	-0.6
	21nm,0.3s						
DZM				*e*LR	LR	03 18 03.9	
	comp=Z,342nm,22.4s						
DZM	**Mont Dzumac**	6.14	270		Pn	03 16 39.8	+1.7
DZM					Sn	03 17 45.9	-1.2
MSVF	**Nonsavu**	6.50	47	P	Pn	03 16 52.1	+9.1
	1.3nm,0.3s,baz=178,slow=8.4,SNR=8.8						
MSVF				LR	LR	03 18 47.8	
	comp=Z,205nm,19.1s,baz=241,slow=32						
MSVF	**Nonsavu**	6.50	47		Pn	03 16 53.8	+11
URZ	**Urewera**	16.33	169	LR	LR	03 23 28.0	
	comp=Z,248nm,21.8s,baz=31,slow=29						
BKZ	**Black Stump Fm**	17.12	171		P	03 19 07.9	+0.1
BKZ				IAmb	IAmb	03 19 09.3	
	comp=Z,22nm,1.2s						
TUWZ	**Tuamarina**	19.14	178	P	Pn	03 19 30.9	0.0
MSWZ	**Moikau Station**	19.20	175	P	P	03 19 29.7	-0.9
LTZ	**Lake Taylor**	20.49	182	P	P	03 19 44.7	0.0
LTZ				IAmb	IAmb	03 19 45.3	
	comp=Z,33nm,1.1s						
ARMA	**Armidale**	20.84	243	P	P	03 19 48.1	-0.5
RPZ	**Rata Peaks**	21.47	184	LR	LR	03 27 02.4	
	comp=Z,285nm,19.7s,baz=5.5,slow=32						
CTA	**Charters Tower**	25.08	270	P	P	03 20 32.5	+1.3
	comp=Z,4.0nm,0.8s,baz=108,slow=6.4,SNR=2.0						
STKA	**Stephens Creek**	29.53	244	LR	LR	03 31 29.7	
	comp=Z,127nm,20.8s,baz=31,slow=33						
COEN	**Coen**	29.54	281	P	P	03 21 10.5	-0.8
WR0	**Warramunga Arr**	35.95	266	P	P	03 22 06.8	-0.5
WR0				IAmb	IAmb	03 22 08.8	
	comp=Z,2.3nm,0.8s						
AS31	**Alice Springs**	36.01	260	P	P	03 22 06.9	-0.9
ASAR	**Alice Springs**	36.01	260	P	P	03 22 08.3	+0.5
	comp=Z,2.7nm,0.9s,baz=88,slow=8.6,SNR=22						
WB0	**Warramunga Arr**	36.12	267	P	P	03 22 09.1	+0.3
WB0				IAmb	IAmb	03 22 24.2	
	comp=Z,3.7nm,1.0s						
WB2	**Warramunga Arr**	36.12	266	P	P	03 22 08.0	-0.9
WB2				IAmb	IAmb	03 22 25.4	
	comp=Z,3.1nm,1.1s						
WRA	**Warramunga Arr**	36.13	266	P	P	03 22 08.7	-0.2
	comp=Z,0.6nm,0.6s,baz=95,slow=8.5,SNR=18						
WRA				LR	LR	03 36 52.8	
	comp=Z,95nm,18.4s,baz=110,slow=36						
FORT	**Forrest**	40.93	248	P	P	03 22 49.4	+0.3
MTN	**Manton Dam**	40.94	276	P	P	03 22 49.3	0.0
MTN				IAmb	IAmb	03 22 50.1	
	comp=Z,7.2nm,1.1s						
FITZ	**Fitzroy Crossi**	44.57	266	P	P	03 23 19.5	+0.8
	comp=Z,3.0nm,0.7s,baz=108,slow=9.8,SNR=15						
FITZ	**Fitzroy Crossi**	44.57	266	P	P	03 23 18.6	-0.1
FITZ				IAmb	IAmb	03 23 21.0	
	comp=Z,3.9nm,0.8s						
MORW	**Morawa**	51.43	250	P	P	03 24 10.7	-1.0
VNDA	**Vanda**	55.59	183	LR	LR	03 45 22.8	
	comp=Z,107nm,19.4s,baz=12,slow=32						
QSPA	**South Pole Qui**	67.82	180	P	P	03 26 04.8	+0.6
LPIG	**La Paz**	87.54	63	LR	LR	04 00 17.8	
	comp=Z,12nm,20.4s,baz=342,slow=31						
NVAR	**Mina Array Bea**	88.16	47	LR	LR	04 00 23.7	
	comp=Z,39nm,18.8s,baz=231,slow=31						
TXAR	**Lajitas Array**	95.09	61	LR	LR	04 02 31.4	
	comp=Z,25nm,20.9s,baz=0.0,slow=30						
GERES	**GERESS Array B**	148.80	333	PKPbc	PKiKP	03 34 54.3	-0.7
	comp=Z,0.1nm,0.3s,baz=23,slow=5.3,SNR=1.9						
GERES	**GERESS Array B**	148.80	333		PKiKP	03 34 54.9	-0.1

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*IDC **12** 03:20:21.6±1.7, 3°.37N×122°.87E, h560^{km}±19^{km}, mb3.2/6, mb1 3.4/7, mb1mx2.9/47, mbtmp4.3/7, Error ellipse: s-maj=70.7km s-min=9.2km az=67.0*
*NEIC **12** 03:20:21.3±1.4, 3°.3N±0°.1×122°.7E±0°.1, h556^{km}±11^{km}, mb4.3/14, Error ellipse: s-maj=23.0km s-min=15.6km az=61.0*
ISC 12 03:20:20.6±0.6**, 3°.4N**±0°.1×**122°.8E**±0°.2**, h545**^{km}**, n33, σ1^{s}11**/40**, mb4.1**/12**, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TOLI2	**Tolitoli**	3.03	222	P	P	03 21 35.7	+0.2
LUWI	**Luwuk**	4.40	180	P	P	03 21 45.3	0.0
MYLDM	**Lahad Datu**	4.64	293	P	P	03 21 49.2	+2.0
TNTI	**Ternate**	5.25	120	P	P	03 21 54.1	+1.8
KKM	**Kota Kinabalu**	7.07	292	P	P	03 22 09.3	0.0
FAKI	**Fak Fak**	11.33	123	P	P	03 22 53.0	+0.6
BATI	**Baumata**	13.53	176	P	P	03 23 15.3	+0.2
	6.8nm,0.3s,baz=314,slow=1.9,SNR=8.2						
MTN	**Manton Dam**	18.13	153	P	P	03 24 00.3	+0.3
MTN				IAmb	IAmb	03 24 04.6	
	comp=Z,13nm,0.6s						
FITZ	**Fitzroy Crossi**	21.53	173	P	P	03 24 30.6	-0.2
	comp=Z,0.7nm,0.4s,baz=8.4,slow=8.8,SNR=7.1						
FITZ	**Fitzroy Crossi**	21.53	173	P	P	03 24 30.5	-0.3
FITZ				IAmb	IAmb	03 24 32.5	
	comp=Z,5.1nm,1.0s						
WB0	**Warramunga Arr**	25.68	154	P	P	03 25 07.2	-0.5
WB0				IAmb	IAmb	03 25 30.6	
	comp=Z,27nm,1.9s						
WRA	**Warramunga Arr**	25.81	154	P	P	03 25 08.2	-0.7
	comp=Z,3.1nm,0.3s,baz=336,slow=9.7,SNR=50						
WRA				S	S	03 28 56.4	-3.9
	comp=Z,0.4nm,0.7s,baz=333,slow=15,SNR=2.5						
WRA				ScP	ScP	03 31 07.3	-1.0
	comp=Z,0.7nm,0.5s,baz=332,slow=2.7,SNR=7.2						
WRA	**Warramunga Arr**	25.81	154	P	P	03 25 07.3	-1.6
WRA					ScP	03 31 06.3	-2.0
WB2	**Warramunga Arr**	25.81	154	P	P	03 25 08.7	-0.2
WB2				IAmb	IAmb	03 25 09.2	
	comp=Z,6.3nm,0.8s						
WR0	**Warramunga Arr**	25.91	154	P	P	03 25 09.4	-0.4
WR0				IAmb	IAmb	03 25 24.3	
	comp=Z,16nm,1.7s						
AS31	**Alice Springs**	28.98	159	P	P	03 25 36.9	+0.2
ASAR	**Alice Springs**	28.99	159	P	P	03 25 37.2	+0.5
	comp=Z,1.4nm,0.4s,baz=341,slow=7.1,SNR=29						
ASAR				S	S	03 29 49.0	-0.9
	comp=Z,0.4nm,0.8s,baz=347,slow=19,SNR=4.5						
ASAR				ScP	ScP	03 31 17.3	-0.9
	comp=Z,0.3nm,0.4s,baz=340,slow=2.8,SNR=4.8						
ASAR	**Alice Springs**	28.99	159	P	P	03 25 36.9	+0.2
ASAR					ScP	03 31 16.3	-1.8
BBOO	**Buckleboo**	38.13	162	P	P	03 26 54.2	+0.8
STKA	**Stephens Creek**	39.36	154	P	P	03 27 04.8	+1.3
	comp=Z,2.3nm,0.5s,baz=329,slow=9.6,SNR=4.4						
STKA	**Stephens Creek**	39.36	154	P	P	03 27 04.0	+0.5
STKA				IAmb	IAmb	03 28 14.9	
	comp=Z,6.1nm,1.8s						
ARMA	**Armidale**	43.46	143	P	P	03 27 36.0	0.0
SONM	**Songino Array**	46.48	345	P	P	03 27 59.5	+0.6
	comp=Z,0.3nm,0.6s,baz=156,slow=7.4,SNR=3.6						
MK31	**Makanchi Array**	55.66	327	P	P	03 29 05.8	+0.4
MKAR	**Makanchi Array**	55.66	327	P	P	03 29 05.8	+0.4
	comp=Z,1.4nm,0.3s,baz=124,slow=7.9,SNR=35						
MKAR				PcP	PcP	03 29 56.5	-0.3
	comp=Z,0.8nm,0.6s,baz=116,slow=4.5,SNR=8.7						
MAKZ	**Makanchi**	55.84	327	P	P	03 29 06.9	+0.3
ZALV	**Zalesovo Beam**	59.17	335	P	P	03 29 28.1	-1.0
	comp=Z,0.4nm,0.3s,baz=135,slow=5.8,SNR=3.6						
ZALV	**Zalesovo Beam**	59.17	335	P	P	03 29 28.4	-0.7
KURK	**Kurchatov**	59.97	329	P	P	03 29 34.8	+0.3
KURK				IAmb	IAmb	03 29 34.9	
	comp=Z,4.2nm,0.4s						
KKAR	**Karatay Array**	60.84	318	P	P	03 29 40.0	-0.4
BKZ	**Black Stump Fm**	65.00	136	P	P	03 30 08.3	+1.0
SPITS	**Spitsbergen Ar**	90.05	349	P	P	03 32 20.9	-1.0
	comp=Z,12nm,1.0s,baz=90,slow=7.9,SNR=10						
TORD	**Torodi Ar. Bea**	119.28	287	PKP	PKPdf	03 38 08.0	-1.2
	comp=Z,0.5nm,0.8s,baz=98,slow=2.7,SNR=5.2						

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*KRSC **12** 03:24:30.3±1.1, 57°.11N×163°.61E, h13^{km}±16^{km}, ML4.5*
*IDC **12** 03:24:32.6±1.5, 57°.04N×163°.54E, h0^{km}, mb3.9/5, mb1 4.3/5, mb1mx3.6/49, mbtmp3.9/5, ML2.0/1, MS3.4/6, Ms1 3.4/6, ms1mx2.8/63, Error ellipse: s-maj=53.2km s-min=27.4km az=155.0*
*MOS **12** 03:24:32.5±0.8, 57°.12N×163°.39E, h15^{km}, mb4.6/2, Error ellipse: s-maj=14.6km s-min=4.6km az=64.6*
*NEIC **12** 03:24:36.1±1.6, 57°.5N±0°.2×162°.5E±0°.5, h38^{km}±8^{km}, mb4.3/16, Error ellipse: s-maj=52.3km s-min=6.8km az=133.0*
ISC 12 03:24:32.4±0.6**, 57°.11N**±0°.04×**163°.36E**±0°.04**, h10**^{km}**, n107, σ1^{s}55**/123**, mb4.2**/13**, MS3.6**/5**, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBG	**Krutoberegovo**	0.93	203	PN	Pg	03 24 49.0	-1.3
KBG				S	Sg	03 25 01.5	-0.9

KBG	Krutoberegovo	0.93	203	*e*P	Pg	03 24 49.0	-1.3
KBG				*e*S	Sg	03 25 01.5	-0.9
KBTR	Krutoberegovo	0.95	198	PN	Pg	03 24 49.4	-1.3
KBTR				S	Sg	03 25 03.6	+0.5
KBTR	Krutoberegovo	0.95	198	*e*P	Pg	03 24 49.4	-1.3
KBTR				*e*S	Sg	03 25 03.6	+0.5
SMKR	Semkarok	1.17	244	PN	Pb	03 24 53.5	-1.2
SMKR				S	Sn	03 25 10.3	-0.5
SMKR	Semkarok	1.17	244	*e*P	Pb	03 24 53.5	-1.2
SMKR				*e*S	Sn	03 25 10.3	-0.5
SRKR	Sorokina	1.29	250	PN	Pn	03 24 54.8	-1.7
SRKR	Sorokina	1.29	250	*e*P	Pn	03 24 54.8	-1.7
BDR	Baidarnaya	1.30	246	PN	Pn	03 24 55.3	-1.4
BDR				S	Sb	03 25 13.5	-0.2
BDR	Baidarnaya	1.30	246	*e*P	Pn	03 24 55.3	-1.4
BDR				*e*S	Sb	03 25 13.5	-0.2
KLY	Klyuchi	1.69	243	PN	Pn	03 25 00.2	-1.8
KLY				S	Sn	03 25 21.5	-2.2
KLY	Klyuchi	1.69	243	*e*P	Pn	03 25 00.2	-1.8
KLY				*e*S	Sn	03 25 21.5	-2.2
KRSR	Krestovskiy	1.78	241	PN	Pn	03 25 03.3	-0.1
KRSR				S	Sb	03 25 27.0	-0.6
KRSR	Krestovskiy	1.78	241	*e*P	Pn	03 25 03.3	-0.1
KRSR				*e*S	Sb	03 25 27.0	-0.6
ZLN	Zelenaya	1.79	233	PN	Pn	03 25 03.9	+0.5
ZLN	Zelenaya	1.79	233	*e*P	Pn	03 25 03.9	+0.5
BZGR	Bezymyannyi-Gr	1.89	233	PN	Pn	03 25 05.3	+0.5
BZGR				S	Sb	03 25 30.8	+0.2
BZGR	Bezymyannyi-Gr	1.89	233	*e*P	Pn	03 25 05.3	+0.5
BZGR				*e*S	Sb	03 25 30.8	+0.2
BZWR	Bezymyannyi-We	1.96	235	PN	Pn	03 25 06.2	+0.4
BZWR				S	Sb	03 25 32.1	-0.6
BZWR	Bezymyannyi-We	1.96	235	*e*P	Pn	03 25 06.2	+0.4
BZWR				*e*S	Sb	03 25 32.1	-0.6
KIRR	Kirishev	2.03	236	PN	Pn	03 25 07.5	+0.6
KIRR				S	Sb	03 25 34.3	-0.6
KIRR	Kirishev	2.03	236	*e*P	Pn	03 25 07.5	+0.6
KIRR				*e*S	Sb	03 25 34.3	-0.6
OSSR	Ossora	2.15	356	PN	Pn	03 25 06.7	-1.6
OSSR	Ossora	2.15	356	*e*P	Pn	03 25 06.7	-1.6
SRDR	Sredinnyy	2.16	250	PN	Pn	03 25 08.4	-0.1
SRDR	Sredinnyy	2.16	250	*e*P	Pn	03 25 08.4	-0.1
KOZ	Kozyrevsk	2.20	243	PN	Pn	03 25 09.6	+0.6
KOZ				S	Sb	03 25 38.5	-1.0
KOZ	Kozyrevsk	2.20	243	*e*P	Pn	03 25 09.6	+0.6
KOZ				*e*S	Sb	03 25 38.5	-1.0
KMNR	Kamenistaya	2.20	233	PN	Pn	03 25 10.2	+1.1
KMNR	Kamenistaya	2.20	233	*e*P	Pn	03 25 10.2	+1.1
BKI	Bering	2.41	141	PN	Pn	03 25 10.4	-1.4
BKI				S	Sn	03 25 39.5	-1.8
BKI	Bering	2.41	141	*e*P	Pn	03 25 10.4	-1.4
BKI				*e*S	Sn	03 25 39.5	-1.8
TUMD	Tumrok D	2.53	222	*e*P	Pn	03 25 14.5	+1.0
TUMD				*e*S	Sn	03 25 46.4	+2.0
TUMR	Tumrok	2.56	226	PN	Pn	03 25 14.5	+0.4
TUMR				S	Sn	03 25 46.4	+1.0
TUMR	Tumrok	2.56	226	*e*P	Pn	03 25 15.2	+1.1
KZV	Kizimen	2.64	222	PN	Pn	03 25 16.6	+1.5
KZV	Kizimen	2.64	222	*e*P	Pn	03 25 16.6	+1.5
PALN	Palana	2.68	319	PN	Pn	03 25 17.4	+1.9
PALN	Palana	2.68	319	*e*P	Pn	03 25 17.4	+1.9
ESO	Esso	2.84	247	PN	Pb	03 25 20.6	-2.6
ESO				S	Sb	03 25 57.1	-0.9
ESO	Esso	2.84	247	*e*P	Pb	03 25 20.6	-2.6
ESO				*e*S	Sb	03 25 57.1	-0.9
TILK	Tilichiki	3.65	22	PN	Pn	03 25 28.1	-0.7
TILK	Tilichiki	3.65	22	*e*P	Pn	03 25 28.1	-0.7
KII	Karymskiy	3.80	217	PN	Pn	03 25 32.9	+1.9
KII	Karymskiy	3.80	217	*e*P	Pn	03 25 32.9	+1.9
SPN	Mys Shipunski	4.45	207	*e*S	Sn	03 26 34.7	+2.9
GNL	Ganaly	4.61	224	PN	Pn	03 25 44.7	+2.5
GNL	Ganaly	4.61	224	*e*P	Pn	03 25 44.7	+2.5
KRX	Arik	4.63	218	PN	Pn	03 25 45.4	+2.9
KRX	Arik	4.63	218	*e*P	Pn	03 25 45.4	+2.9
KRER	Koryakskii	4.64	217	PN	Pn	03 25 45.1	+2.4
KRER	Koryakskii	4.64	217	*e*P	Pn	03 25 45.1	+2.4
SMAR	Somma	4.66	216	PN	Pn	03 25 43.8	+0.9
SMAR	Somma	4.66	216	*e*P	Pn	03 25 43.8	+0.9
AVH	Avacha	4.67	216	PN	Pn	03 25 45.6	+2.5
AVH	Avacha	4.67	216	*e*P	Pn	03 25 45.6	+2.5
KOK	Koryaka	4.69	217	PN	Pn	03 25 46.3	+3.1
KOK	Koryaka	4.69	217	*e*P	Pn	03 25 46.3	+3.1
UGLR	Uglovaya	4.70	215	PN	Pn	03 25 44.4	+1.0
UGLR	Uglovaya	4.70	215	*e*P	Pn	03 25 44.4	+1.0
PET	Petropavlovsk	4.91	215	*e*PN	Pn	03 25 47.5	+1.3
PET				MLR	MLR		
	comp=Z,300nm,15.0s						
PEA0B	Petropavlovsk-	5.16	221	PN	Pn	03 25 50.3	+0.6
PEA0B	Petropavlovsk-	5.16	221	Pn	Pn	03 25 50.3	+0.6
PEA0B				Sn	Sn	03 26 49.0	-0.3
PETK	Petropavlovsk-	5.16	221	Pn	Pn	03 25 51.2	+1.5
	comp=Z,0.3nm,0.3s,baz=61,slow=12,SNR=2.6						
PETK	Petropavlovsk-	5.16	221	PN	Pn	03 25 51.7	+2.0
PETK	Petropavlovsk-	5.16	221		Pn	03 25 51.6	+2.0
GRL	Gorelyy	5.49	216	PN	Pn	03 25 57.2	+2.8
GRL	Gorelyy	5.49	216	*e*P	Pn	03 25 57.2	+2.8
ASAJ	Asahikawa	18.41	234	LR	LR	03 35 49.5	
	comp=Z,49nm,20.3s,baz=151,slow=37						
ERM	Erimo	19.88	229	P	P	03 29 02.1	-1.5
ERM				pmax	pmax		
	comp=Z,9.0nm,0.8s						
ERM	Erimo	19.88	229	P	P	03 29 02.1	-1.5
ERM				IAmb	IAmb	03 29 11.3	
	comp=Z,9.5nm,0.8s						
TTA	Tatalina	20.83	57	P	Pn	03 29 16.7	+0.4
TTA				pmax	pmax		
	comp=Z,9.0nm,1.2s						
TTA	Tatalina	20.83	57	P	Pn	03 29 16.7	+0.4
JTM	Tenmabayashi	21.77	231	P	P	03 29 23.8	-0.3
IMAR	Indian Mountai	21.84	48	P	P	03 29 25.9	+1.2
PPLA	Purkeypile	22.58	57	P	P	03 29 35.0	+2.2
SKT	Skwentna	22.99	59	P	P	03 29 38.7	+1.8
KTH	Kantishna Hill	23.09	55	P	P	03 29 40.0	+2.0
KTH				IAmb	IAmb	03 29 42.2	
	comp=Z,7.9nm,1.2s						
TRF	Thorofare Moun	23.38	55	P	P	03 29 43.0	+2.0
TRF				IAmb	IAmb	03 29 44.3	
	comp=Z,18nm,1.1s						
SUA	Susitna One	23.45	60	P	P	03 29 42.8	+1.1
SUA				IAmb	IAmb	03 29 47.5	
	comp=Z,9.9nm,0.9s						
TOLK	Toolik Lake Re	23.66	42	P	P	03 29 44.8	+1.2
WRH	Wood River Hil	24.25	52	P	P	03 29 50.9	+1.7
WRH				IAmb	IAmb	03 29 52.2	
	comp=Z,14nm,1.0s						
CCB	Clear Creek Bu	24.36	52	P	P	03 29 51.9	+1.8
CCB				IAmb	IAmb	03 29 53.6	
	comp=Z,18nm,1.2s						
KNK	Knik Glacier	24.54	60	P	P	03 29 52.6	+0.8
KNK				IAmb	IAmb	03 30 01.3	
	comp=Z,7.2nm,1.1s						
IL31		24.74	51	P	P	03 29 55.0	+1.5
IL31				IAmb	IAmb	03 29 56.6	
	comp=Z,8.1nm,0.9s						
ILAR	Eielson Array	24.74	51	P	P	03 29 55.2	+1.6
	comp=Z,5.1nm,0.8s,baz=268,slow=8.8,SNR=48						
ILAR	Eielson Array	24.74	51	P	P	03 29 55.0	+1.4
SCM	Sheep Creek Mo	24.98	58	P	P	03 29 57.3	+1.4
SCM				pmax	pmax		
	comp=Z,30nm,0.9s						
SCM	Sheep Creek Mo	24.98	58	P	P	03 29 57.3	+1.4
BMAR	Burnt Mountain	25.50	45	P	P	03 29 59.9	-0.7
MJAR	Matsushiro Arr	26.55	230	LR	LR	03 41 32.8	
	comp=Z,49nm,18.6s,baz=5.0,slow=38						
JSG	Sagara	28.17	228	P	P	03 30 22.6	-2.1
WHY	Whitehorse	31.07	57	P	P	03 30 52.9	+2.5
JSU	Suzuyama	34.20	236	P	P	03 31 16.2	-1.7
H11N2	WAKE ISLAND Hy	37.42	175	T	T	04 10 32.1	
	baz=357,slow=76,SNR=24						
H11N3	WAKE ISLAND Hy	37.43	174	T	T	04 10 38.0	
	baz=357,slow=76,SNR=21						
H11N1	WAKE ISLAND Hy	37.44	175	T	T	04 10 38.2	
	baz=357,slow=76,SNR=19						
YKA	Yellowknife Ar	38.98	47	P	P	03 31 59.4	+1.1
	comp=Z,0.8nm,0.8s,baz=302,slow=7.3,SNR=17						
JOW	Kunigami	39.18	234	LR	LR	03 49 45.9	
	comp=Z,41nm,18.5s,baz=4.0,slow=39						
NVAR	Mina Array Bea	52.75	75	P	P	03 33 48.6	+1.1
	comp=Z,0.8nm,0.8s,baz=304,slow=8.3,SNR=5.8						
NVAR	Mina Array Bea	52.75	75	P	P	03 33 49.0	+1.5
PDAR	Pinedale Array	54.03	65	P	P	03 33 57.9	+1.1
	comp=Z,0.8nm,0.8s,baz=318,slow=1.2,SNR=6.2						
SADO	Sadowa	65.87	44	LR	LR	04 07 35.1	
	comp=Z,70nm,18.1s,baz=328,slow=39						
KBZ	Khabaz	67.87	318	P	P	03 35 33.3	+2.8
	comp=Z,1.4nm,0.8s,baz=41,slow=11,SNR=2.4						
GNI	Garni	70.25	314	LR	LR	04 10 48.3	
	comp=Z,31nm,18.1s,baz=31,slow=39						
WSAR	Wadi Sarin	78.39	295	LR	LR	04 14 50.0	
	comp=Z,34nm,21.4s,baz=246,slow=38						
WB2	Warramunga Arr	80.52	208	P	P	03 36 44.6	+0.2

IDC 12 03:35:33.0±6.0**, 56°.48S**×**150°.99W, h0^{km}, mb3.4**/2**, mb1 3.7**/2**, mb1mx3.6**/20**, mbtmp3.4**/2**, Error ellipse: s-maj=704.9km s-min=90.4km az=170.0, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H03S2	Juan Fernandez	52.89	97	T	T	04 41 46.4	
	baz=219,slow=74,SNR=6.9						
H03S1	Juan Fernandez	52.90	97	T	T	04 41 46.8	
	baz=219,slow=74,SNR=5.9						
H03S3	Juan Fernandez	52.91	97	T	T	04 41 46.7	
	baz=219,slow=74,SNR=5.6						
H03N3	Juan Fernandez	53.18	96	T	T	04 42 07.1	
	baz=222,slow=72,SNR=25						
H03N2	Juan Fernandez	53.19	96	T	T	04 42 06.5	
	baz=222,slow=72,SNR=27						
H03N1	Juan Fernandez	53.20	96	T	T	04 42 10.1	
	baz=222,slow=72,SNR=27						
ASAR	Alice Springs	62.43	268	P	P	03 45 57.5	-0.3
	0.4nm,0.5s,baz=141,slow=6.9,SNR=6.1						
WRA	Warramunga Arr	65.16	271	P	P	03 46 16.2	+0.4
	0.2nm,0.8s,baz=149,slow=7.0,SNR=1.3						
MKAR	Makanchi Array	146.35	276	PKPbc	PKPbc	03 55 14.2	-0.6
	1.2nm,0.8s,baz=123,slow=4.5,SNR=12						
ZALV	Zalesovo Beam	148.80	289	PKPbc	PKPbc	03 55 20.1	-1.0
	0.3nm,0.3s,baz=131,slow=4.4,SNR=1.8						

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*NOU **12** 04:05:33.9, 32°.70S×177°.66W, h332^{km}, mb4.1, South of Kermadec Islands*

WEL 12 04:06:19.2±1.0**, 35°S**±12°×**17°9E**±1°4**, h274^{km}**±8^{km}**, M3.7**/48**, mB4.4**/10**, ML4.1**/32**, MLv4.0**/48**, Mw(mB)3.6**/10**, Error ellipse: s-maj=0.0km s-min=0.0km az=114.4, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	2.23	199	P	Pn	04 07 05.0	-0.6
MXZ				S	S	04 07 39.6	-2.9
WMGZ	Waiomatatini S	2.45	195	P	Pn	04 07 07.9	+0.2
WMGZ				S	S	04 07 45.8	-0.4
HAZ	Te Kaha	2.58	206	P	Pn	04 07 07.8	-0.9
HAZ				S	S	04 07 48.2	-0.1
PKGZ	Pakihiroa	2.60	200	P	Pn	04 07 08.8	-0.4
PKGZ				S	S	04 07 47.6	-1.3
PUZ	Puketiti	2.73	196	P	Pn	04 07 10.2	-0.1
PUZ				S	S	04 07 50.2	-0.9
RUGZ	Raukumara Rang	2.80	206	P	Pn	04 07 10.3	-0.8
RUGZ				S	S	04 07 53.5	+0.9
TWGZ	Tauwhareparae	2.90	200	P	Pn	04 07 12.7	+0.6
TWGZ				S	S	04 07 55.9	+1.7
CNGZ	Carnagh Statio	3.14	195	P	Pn	04 07 15.4	+0.9
TKGZ	Te Karaka	3.18	200	P	Pn	04 07 15.3	+0.3
TKGZ				S	S	04 08 00.2	+0.8
MWZ	Matawai	3.18	205	P	Pn	04 07 15.3	+0.2
MWZ				S	S	04 08 00.3	+0.7
OPRZ	Ohinepanea	3.21	221	P	Pn	04 07 15.0	-0.3
URZ	Urewera	3.28	210	P	Pn	04 07 15.2	-0.8
URZ				S	S	04 08 00.9	-0.3
RAGZ	Rawiri	3.37	205	P	Pn	04 07 17.5	+0.5
RIGZ	Rimuhau	3.46	199	P	Pn	04 07 18.3	+0.3
TARZ	Mount Tarawera	3.53	217	P	Pn	04 07 20.2	+1.3
MUGZ	Murupara	3.60	212	P	Pn	04 07 19.3	-0.2
PRGZ	Paritu Road	3.63	197	P	Pn	04 07 20.6	+0.8
RTZ	Ruatahuna	3.63	209	P	Pn	04 07 19.4	-0.5
SNGZ	Shannon Statio	3.65	204	P	Pn	04 07 20.6	+0.5
SNGZ				S	S	04 08 10.5	+1.8
HSRZ	Hossack Road	3.72	219	P	Pn	04 07 20.0	-0.9
TOZ	Tahuroa Road	3.76	232	P	Pn	04 07 20.9	-0.4
KNZ	Kokohu	3.77	199	P	Pn	04 07 21.4	+0.1
PRRZ	Plateau Road	3.79	216	P	Pn	04 07 21.9	+0.3
MHGZ	Mahia Peninsul	3.84	195	P	Pn	04 07 23.0	+0.8
RAHZ	Arahi	3.86	206	P	Pn	04 07 22.7	+0.3
ALRZ	Allen Road	3.87	216	P	Pn	04 07 23.0	+0.5
MTHZ	Maungataniwha	3.89	208	P	Pn	04 07 22.9	+0.1
WHHZ	Waihua	3.95	203	P	Pn	04 07 24.0	+0.6
NMHZ	Naumai	4.12	207	P	Pn	04 07 26.1	+0.7
BKZ	Black Stump Fm	4.30	210	P	Pn	04 07 27.6	+0.2
MCHZ	McNeill Hill	4.47	206	P	Pn	04 07 30.0	+0.7
KATZ	Kakaramea	4.51	218	P	S	04 08 34.1	+7.6
KATZ				S	S	04 08 38.2	+12
CKHZ	Cape Kidnapper	4.54	201	P	Pn	04 07 30.7	+0.6
KWHZ	Kaweka Forest	4.55	208	P	Pn	04 07 30.5	+0.1
TMVZ	Te Maari	4.61	216	P	Pn	04 07 31.0	-0.2
TMVZ	Te Maari	4.61	216	P	S	04 08 32.1	+3.3
TMVZ				S	S	04 08 33.0	+4.3
ETVZ	East Tongariro	4.62	216	P	Pn	04 07 31.2	-0.1
ETVZ	East Tongariro	4.62	216	P	S	04 08 32.2	+3.2
ETVZ				S	S	04 08 33.3	+4.3
KRVZ	Karewarewa	4.62	217	P	S	04 08 31.9	+2.9
KRVZ				S	S	04 08 33.1	+4.1
HIZ	Hauiti	4.64	227	P	Pn	04 07 33.3	+1.9
WTVZ	West Tongariro	4.67	217	P	S	04 08 32.2	+2.3
OTVZ	Oturere	4.67	216	P	Pn	04 07 31.7	-0.1
OTVZ	Oturere	4.67	216	P	S	04 08 32.1	+2.1
OTVZ				S	S	04 08 33.1	+3.1
NGZ	Ngauruhoe	4.71	217	P	Pn	04 07 33.1	+0.8
NGZ	Ngauruhoe	4.71	217	P	S	04 08 32.5	+1.7
TWVZ	Taurewa	4.71	219	P	Pn	04 07 32.4	+0.1
KAHZ	Kahuranaki	4.72	202	P	Pn	04 07 32.8	+0.5
TUVZ	Tukino	4.75	216	P	Pn	04 07 32.9	+0.1
KRHZ	Kereru	4.76	208	P	Pn	04 07 32.3	-0.5
MOVZ	Moawhango	4.82	214	P	Pn	04 07 32.7	-0.8
WNVZ	Wahianoa	4.83	216	P	Pn	04 07 33.7	-0.1
PXZ	Pawanui	4.94	201	P	Pn	04 07 32.7	-2.2
PNHZ	Pukenui	5.06	207	P	Pn	04 07 35.8	-0.6
PRHZ	Porangahau	5.23	202	P	Pn	04 07 38.7	+0.3
TSZ	Takapari Road	5.28	208	P	Pn	04 07 38.6	-0.3
DVHZ	Dannevirke	5.41	206	P	Pn	04 07 40.1	-0.4
PRWZ	Pori Road	5.71	206	P	Pn	04 07 45.0	+0.9
BFZ	Birch Farm	5.73	203	P	Pn	04 07 44.2	-0.2
TIWZ	Tintock	5.93	205	P	Pn	04 07 46.5	-0.4
MRZ	Mangatainoka R	5.94	208	P	Pn	04 07 46.2	-0.8
CPWZ	Castlepoint	5.95	203	P	Pn	04 07 47.9	+0.9
HOWZ	Holdsworth Sta	6.17	207	P	Pn	04 07 49.1	-0.8
TMWZ	Te Maipa	6.23	204	P	Pn	04 07 50.3	-0.2
OGWZ	Otaki Gorge	6.24	210	P	Pn	04 07 49.9	-0.7
KIW	Kapiti Island	6.38	211	P	Pn	04 07 51.3	-1.1
MTW	Mount Morrison	6.41	206	P	Pn	04 07 52.1	-0.6
CAW	Cannon Point	6.53	209	P	Pn	04 07 53.1	-1.0
TRWZ	Traveller	6.56	204	P	Pn	04 07 54.4	-0.2
PAWZ	Paruwai Farm	6.63	206	P	Pn	04 07 55.0	-0.5
MSWZ	Moikau Station	6.72	206	P	Pn	04 07 55.6	-1.0

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*IDC **12** 04:24:14.8±2.1, 4°.60N×126°.42E, h0^{km}, mb3.4/3, mb1 3.6/3, mb1mx3.3/29, mbtmp3.4/3, Error ellipse: s-maj=171.6km s-min=25.4km az=65.0*

ISC 12 04:24:14.9±1.7**, 5°.0N**±0°.3×**127°.5E**±0°.3**, h10^{km}, n5, σ0^{s}.75**/6**, mb3.5**/3**, 1C, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	Don Marcelino,	2.05	302	*e*P	Pg	04 24 54.5	+0.4
DDMP				*e*S	Sg	04 25 20.1	-0.6
KCP	Kidapawan	3.08	310⥣	*e*P	Pb	04 25 10.1	+0.4
WRA	Warramunga Arr	25.70	165	P	P	04 29 46.3	+0.8
	0.5nm,0.5s,baz=342,slow=10,SNR=6.9						
ASAR	Alice Springs	29.19	168	P	P	04 30 16.3	-0.4
	0.1nm,0.3s,baz=352,slow=6.4,SNR=1.6						
MKAR	Makanchi Array	56.93	324	P	P	04 33 60.0	-0.4
	0.4nm,0.3s,baz=114,slow=7.5,SNR=13						

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*TUL **12** 04:51:50.7±0.7, 36°.19N±0°.01×97°.03W±0°.02, h5^{km}±7^{km}, ML3.2, mb_Lg3.1/78(NEIC), Error ellipse: s-maj=2.6km s-min=1.7km az=77.0*

*NEIC **12** 04:51:50.8±0.5, 36°.19N±0°.01×97°.03W±0°.02, h7^{km}±7^{km}, Error ellipse: s-maj=2.7km s-min=1.8km az=81.0*

*ANF **12** 04:51:51.0±0.8, 36°.20N×97°.00W, h5^{km}, ML3.7/8, Error ellipse: s-maj=10.9km s-min=5.8km az=179.0*

ISC 12 04:51:50.8±1.1**, 36°.20N**±0°.02×**97°.03W**±0°.02**, h4^{km}**±10^{km}**, n77, σ0^{s}.47**/73**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
QUOK	Quay	0.26	95	Pg	Pg	04 51 56.3	+0.3
OK031	S. Brethren Rd	0.29	147		Pg	04 51 56.5	+0.1
OK031				Sg	Sg	04 52 00.6	+0.4
OK030	Cody Creek RV	0.34	143		Pg	04 51 57.4	+0.1
OK030				Sg	Sg	04 52 02.0	+0.4
OK029	Liberty Lake	0.52	221		Pg	04 52 00.8	-0.1
OK029				Sg	Sg	04 52 08.1	+0.4
OK025	Westminster Rd	0.66	202		Pg	04 52 03.4	-0.1
OK025				Sg	Sg	04 52 12.5	+0.4
BCOK	Bluff Creek, N	0.71	221		Pg	04 52 04.2	-0.3
BCOK				Sg	Sg	04 52 13.9	+0.2
CROK	Carrier	0.83	292		Pg	04 52 06.6	-0.1
CROK				Sg	Sg	04 52 17.9	+0.5
T35A	Sooner Cattle	0.83	30		Pg	04 52 06.8	0.0
T35A				Sg	Sg	04 52 17.9	+0.3
T35B	Sooner Cattle	0.83	30	P		04 52 06.8	
	baz=210						
T35B				S		04 52 18.1	
	baz=210						
OKCFA	Oklahoma City	0.85	204		Pg	04 52 06.7	-0.4
OKCFA				Sg	Sg	04 52 18.4	+0.3
OKCSW	OKLAHOMA CITY	0.85	203		Pg	04 52 06.8	-0.4
OKCSW				Sg	Sg	04 52 18.5	+0.2
KAN13	South Haven SW	0.89	336		Pg	04 52 07.9	-0.1
FNO	Franklin	0.98	198		Pg	04 52 09.3	-0.4
TUL1	Leonard	1.04	105	P	Pg	04 52 09.9	-0.9
	baz=286						
TUL1				S	Sg	04 52 24.3	-0.2
	baz=286						
TUL1	Leonard	1.04	105	Pg	Pg	04 52 10.0	-0.9
TUL1	Leonard	1.04	105	P		04 52 09.9	
	baz=286						
TUL1				S		04 52 23.9	
	baz=286						
KAN14	Manchester OK	1.07	316		Pg	04 52 11.0	-0.3
KAN01	Argonia South	1.12	329		Pg	04 52 12.0	-0.3
KAN05	Bluff City Nor	1.13	324		Pg	04 52 12.2	-0.4
KAN10	Anthony SW Sta	1.26	318		Pg	04 52 14.5	-0.5
KAN08	Anthony NE Sta	1.28	324		Pg	04 52 14.8	-0.5
KAN12	Harper NE Stat	1.35	325		Pn	04 52 16.0	-0.5
U32A	Winter Ranch,	1.60	277		Pn	04 52 19.7	-0.3
U32A	Winter Ranch,	1.60	277	P		04 52 19.7	
	baz=96						
U32A				S		04 52 41.8	
	baz=96						
WMOK	Wichita Mounta	2.04	225	P	Pn	04 52 26.4	+0.5
	baz=44						
WMOK				S	Sn	04 52 52.5	+0.6
	baz=44						
WMOK	Wichita Mounta	2.04	225		Pn	04 52 25.6	-0.4
WMOK				IAmb_Lg		04 52 59.0	
	comp=Z,68nm,0.8s						
WMOK	Wichita Mounta	2.04	225	P		04 52 26.3	
	baz=44						
WMOK				S		04 52 53.1	
	baz=44						
X37A	Clayton	2.10	139		Pn	04 52 26.4	-0.4
X37A				IAmb_Lg		04 52 58.6	
	comp=Z,80nm,0.8s						
X37A	Clayton	2.10	139	P		04 52 27.0	
	baz=320						
X37A				S		04 52 53.7	
	baz=320						
U38A	Gravette	2.15	83		Pn	04 52 27.2	-0.4
U38A	Gravette	2.15	83	P		04 52 27.9	
	baz=264						
HHAR	Hobbs	2.50	87		Pn	04 52 31.9	-0.5
HHAR	Hobbs	2.50	87	P		04 52 32.6	
	baz=269						
R32A	Long Quarter,	2.59	329		Pn	04 52 33.6	0.0
R32A	Long Quarter,	2.59	329	P		04 52 34.0	
	baz=149						
W39A	Magazine	2.83	110	P	Pn	04 52 36.9	+0.1
	baz=292						
W39A				S	Sn	04 53 12.1	+0.8
	baz=292						
W39A	Magazine	2.83	110		Pn	04 52 36.7	-0.1
W39A				IAmb_Lg		04 53 26.4	
	comp=Z,48nm,0.8s						
W39A	Magazine	2.83	110	P		04 52 37.1	
	baz=292						
Z35A	Perchaven, San	2.86	184	Pn	Pn	04 52 36.9	-0.4
Z35A	Perchaven, San	2.86	184	P		04 52 37.6	
	baz=3.6						
KSU1	Kansas State U	2.92	6	P	Pn	04 52 38.9	+0.8
	baz=187						
KSU1				S	Sn	04 53 14.6	+1.0
	baz=187						
KSU1	Kansas State U	2.92	6	Pn	Pn	04 52 37.8	-0.3
MIAR	Mount Ida	3.27	119	P	Pn	04 52 43.3	+0.4
	baz=301						
MIAR				S	Sn	04 53 22.5	+0.3
	baz=301						
MIAR	Mount Ida	3.27	119	Pn	Pn	04 52 42.4	-0.5
MIAR	Mount Ida	3.27	119	P		04 52 43.3	
	baz=301						
S39A	Bolivar	3.33	62	Pn	Pn	04 52 43.6	-0.1
Z38A	Mt. Pleasant	3.38	149	Pn	Pn	04 52 43.9	-0.5
Z38A				IAmb_Lg		04 53 46.8	
	comp=Z,45nm,1.0s						
U40A	Yellville	3.38	86	P	Pn	04 52 44.1	-0.4
	baz=268						
U40A				S	Sn	04 53 25.3	+0.2
	baz=268						
U40A	Yellville	3.38	86		Pn	04 52 44.1	-0.4
U40A	Yellville	3.38	86	P		04 52 44.3	
	baz=268						
U40A				P		04 52 44.3	
	baz=268						
CBKS	Cedar Bluff	3.38	321	P	Pn	04 52 44.0	-0.5
	baz=140						
CBKS	Cedar Bluff	3.38	321	Pn	Pn	04 52 44.0	-0.5
CBKS				IAmb_Lg		04 53 45.8	
	comp=Z,43nm,0.7s						
X40A	Basin Creek Fa	3.83	115	P	Pn	04 52 51.1	+0.5
	baz=298						
X40A				S	Sn	04 53 36.6	+0.5
	baz=298						
X40A	Basin Creek Fa	3.83	115	Pn	Pn	04 52 50.1	-0.5
X40A				IAmb_Lg		04 53 57.9	
	comp=Z,51nm,0.9s						
MGMO	Mountain Grove	3.95	75	Pn	Pn	04 52 51.9	-0.3
MGMO				IAmb_Lg		04 53 55.0	
	comp=Z,42nm,0.9s						
WHAR	Wooly Hollow	3.96	102	Pn	Pn	04 52 52.0	-0.4
WHAR				IAmb_Lg		04 53 57.3	
	comp=Z,45nm,1.0s						
FCAR	Ozark Folk Cen	3.99	93	Pn	Pn	04 52 52.3	-0.5
AMTX	Amarillo	4.01	252	Pn	Pn	04 52 52.7	-0.5
AMTX				IAmb_Lg		04 54 01.2	
	comp=Z,32nm,0.8s						
ABTX	Abilene, Hawle	4.17	212	Pn	Pn	04 52 54.6	-0.7
ABTX				IAmb_Lg		04 54 02.6	
	comp=Z,31nm,1.1s						
R40A	Maddies Statio	4.34	60	Pn	Pn	04 52 57.3	-0.3
R40A				IAmb_Lg		04 54 08.0	
	comp=Z,42nm,0.7s						
P38A	Dawn	4.40	38	Pn	Pn	04 52 58.0	-0.4
P38A				IAmb_Lg		04 54 08.6	
	comp=Z,30nm,0.7s						
N35A	Tabor	4.79	13	Pn	Pn	04 53 03.2	-0.5
T42A	Van Buren	4.85	78	Pn	Pn	04 53 04.3	-0.4
T42A				IAmb_Lg		04 54 23.6	
	comp=Z,45nm,0.9s						
CCAR	Cane Creek	4.88	116	IAmb_Lg		04 54 36.2	
	comp=Z,32nm,0.9s						
CCM	Cathedral Cave	4.98	66	Pn	Pn	04 53 06.0	-0.4
CCM				IAmb_Lg		04 54 35.8	
	comp=Z,36nm,0.7s						
P40A	Paris	5.16	48	Pn	Pn	04 53 08.3	-0.6
P40A				IAmb_Lg		04 54 42.2	
	comp=Z,43nm,0.9s						
MSTX	Muleshoe	5.20	246	Pn	Pn	04 53 08.9	-0.7
KSCO	Kaye Shedlock’	5.26	304	Pn	Pn	04 53 09.9	-0.4
KSCO				IAmb_Lg		04 54 50.0	
	comp=Z,32nm,0.8s						
BGNE	Belgrade	5.28	351	IAmb_Lg		04 54 40.6	
	comp=Z,29nm,0.8s						

PBMO	**Poplar Bluff**	**5.35**	**82**	IAmb_Lg		04 54 50.7	
	comp=Z,31nm,0.7s						
435B	**Jarrell**	**5.42**	**185**	Pn	**Pn**	**04 53 11.6**	**-0.8**
N38A	**Joes South For**	**5.47**	**32**	Pn	**Pn**	**04 53 12.6**	**-0.6**
N38A				IAmb_Lg		04 54 46.2	
	comp=Z,42nm,0.8s						
FVM	**French Village**	**5.58**	**69**	IAmb_Lg		04 54 52.7	
	comp=Z,45nm,1.0s						
143A	**Socs Landing,**	**5.81**	**125**	IAmb_Lg		04 55 08.9	
	comp=Z,21nm,0.8s						
OGNE	**Ogallala**	**6.15**	**322**	IAmb_Lg		04 55 23.1	
	comp=Z,32nm,0.8s						
JCT	**Junction City**	**6.15**	**203**	IAmb_Lg		04 55 16.3	
	comp=Z,32nm,1.0s						
S44A	**Carbondale**	**6.41**	**74**	IAmb_Lg		04 55 12.7	
	comp=Z,40nm,0.8s						
SCIA	**State Center**	**6.43**	**26**	IAmb_Lg		04 55 23.5	
	comp=Z,36nm,0.8s						
SIUC	**Southern Illin**	**6.44**	**74**	IAmb_Lg		04 55 20.2	
	comp=Z,23nm,0.8s						
OXF	**Oxford**	**6.45**	**103**	IAmb_Lg		04 55 28.6	
	comp=Z,40nm,1.2s						
W45A	**Hickory Valley**	**6.47**	**97**	IAmb_Lg		04 55 19.3	
	comp=Z,39nm,1.1s						
K31A	**O'Neill**	**6.56**	**349**	IAmb_Lg		04 55 29.5	
	comp=Z,37nm,1.0s						
ANMO	**Albuquerque**	**7.78**	**264**	IAmb_Lg		04 56 04.8	
	comp=Z,3.4nm,0.9s						
O44A	**Mansfield**	**7.82**	**57**	IAmb_Lg		04 56 11.5	
	comp=Z,25nm,0.8s						
T47A	**Sharon Grove**	**8.03**	**81**	IAmb_Lg		04 56 12.2	
	comp=Z,18nm,0.8s						
JFWS	**Jewell Farm**	**8.51**	**36**	IAmb_Lg		04 56 40.1	
	comp=Z,26nm,0.7s						
WCI	**Wyandotte Cave**	**8.80**	**73**	IAmb_Lg		04 56 29.4	
	comp=Z,26nm,1.1s						
RWWY	**Rawlins**	**9.64**	**308**	IAmb_Lg		04 57 19.7	
	comp=Z,15nm,1.3s						
P48A	**Milroy**	**9.74**	**67**	IAmb_Lg		04 57 02.6	
	comp=Z,18nm,0.9s						

SJA ***12*** *04:55:21.8±0.7, 20°.21S×70°.97W, h25^{km}±2^{km}, ML4.4, MW4.5*
IDC ***12*** *04:55:22.6±0.9, 20°.13S×70°.76W, h0^{km}, mb4.1/7, mb1 4.2/10, mb1mx4.0/42, mbtmp4.1/10, ML4.0/3, MS3.9/13, Ms1 3.9/13, ms1mx3.7/24, Error ellipse: s-maj=26.3km s-min=14.9km az=62.0*
NEIC ***12*** *04:55:22.7±1.0, 20°.22S±0°.04×70°.93W±0°.06, h16^{km}±5^{km}, Error ellipse: s-maj=8.8km s-min=5.4km az=70.0*
NEIC ***12*** *04:55:25.2, 20°.21S×70°.79W, h18^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$2.90; M$_{θθ}$-0.02; M$_{φφ}$-2.88; M$_{rθ}$1.15; M$_{θφ}$0.55; M$_{φr}$-4.33; Fault plane solution: M$_0$5.36000×10^{15} NP1:φ$_s$165.75000°, δ73.37000°, λ87.83000°. NP2:φ$_s$353.30000°, δ16.77000°, λ97.23000°. Principal axes: T 5.3245, Plg62.0000°, Azm73.0000°; N 0.0658, Plg2.0000°, Azm166.0000°; P -5.3903, Plg28.0000°, Azm257.0000°;*
GUC ***12*** *04:55:25.8±0.7, 20°.23S×70°.88W, h28^{km}±7^{km}, ML4.3*
VAO ***12*** *04:55:31.8±0.7, 19°.97S×70°.44W, h54^{km}, mb4.3*
ISC 12 04:55:21.9±1.8, **20°.20S**±0°.02×**70°.92W**±0°.05, **h6**^{km}±11^{km}, **n126, σ1^{s}25**/132, **mb4.3**/7, **MS3.9**/10, **4C-5D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TA02	**Huaiquique**	**0.74**	**96**	⇓iP	**Pn**	**04 55 37.8**	**-1.2**
TA02				i S	**Sb**	**04 55 47.8**	**+0.1**
TA02				IAML		04 55 48.5	
	comp=E,31μm,0.2s						
TA01	**Diego Aracena**	**0.78**	**118**	⇓iP	**Pn**	**04 55 38.5**	**-1.0**
TA01				i S	**Sb**	**04 55 48.1**	**-0.7**
TA01				IAML		04 55 51.0	
	comp=N,20μm,0.4s						
TA01	**Diego Aracena**	**0.78**	**118**		**Pn**	**04 55 38.5**	**-1.0**
TA01					**Sb**	**04 55 48.2**	**-0.7**
PATCX	**Punta Patache**	**0.95**	**131**	⇓iP	**Pn**	**04 55 41.2**	**-0.7**
PATCX				i S	**Sb**	**04 55 53.1**	**-0.6**
PATCX				IAML		04 55 55.3	
	comp=E,13μm,0.8s						
PATCX	**Punta Patache**	**0.95**	**131**		**Pn**	**04 55 41.2**	**-0.7**
PATCX					**Sb**	**04 55 53.2**	**-0.5**
PATCX	**Punta Patache**	**0.95**	**131**	eP	**Pn**	**04 55 41.3**	**-0.7**
PATCX				eP	**Pn**	**04 55 41.3**	**-0.7**
PATCX				eP	**Pb**	**04 55 41.4**	**+0.5**
PATCX				eS	**Sn**	**04 55 54.5**	**-1.4**
PSGC	**Pisagua**	**0.96**	**51**	⇓iP	**Pn**	**04 55 41.4**	**-0.7**
PSGC				i S	**Sn**	**04 55 54.2**	**-1.9**
PSGCX	**Pisagua**	**0.96**	**51**	Pn	**Pn**	**04 55 41.4**	**-0.7**
PSGCX	**Pisagua**	**0.96**	**51**	eP	**Pn**	**04 55 41.3**	**-0.8**
PSGCX				eS	**Sn**	**04 55 55.4**	**-0.7**
HMBC	**Humberstone**	**0.97**	**95**	⇓iP	**Pn**	**04 55 41.5**	**-0.8**
HMBC				i S	**Sb**	**04 55 54.1**	**-0.3**
HMBC				IAML		04 55 58.5	
	comp=N,9μm,0.4s						
PB01	**IPOC Station P**	**1.58**	**122**	⇑iP	**Pb**	**04 55 51.2**	**-0.4**
PB01				i S	**Sn**	**04 56 10.6**	**-0.9**
PB01				IAML		04 56 16.3	
	comp=N,8μm,0.6s						
PB01	**IPOC Station P**	**1.58**	**122**	Pn	**Pb**	**04 55 51.0**	**-0.7**
PB01				Sn	**Sn**	**04 56 10.0**	**-1.5**
PB01	**IPOC Station P**	**1.58**	**122**	eP	**Pb**	**04 55 51.3**	**-0.4**
PB01				IAML		04 56 17.8	
	comp=Z,4μm,0.5s						
MNMC	**Minye Minye**	**1.64**	**50**	⇑iP	**Pb**	**04 55 52.4**	**-0.4**
MNMC				i S	**Sg**	**04 56 14.6**	**0.0**
MNMC				IAML		04 56 18.5	
	comp=N,11μm,0.7s						
MNMC	**Minye Minye**	**1.64**	**50**		**Pn**	**04 55 51.5**	**-0.1**
MNMCX	**Minye Minye**	**1.64**	**50**	eP	**Pb**	**04 55 51.9**	**-0.9**
MNMCX				eS	**Sg**	**04 56 14.3**	**-0.3**
PB08	**IPOC Station P**	**1.66**	**88**	⇑iP	**Pb**	**04 55 52.8**	**-0.4**
PB08				i S	**Sg**	**04 56 14.0**	**-1.3**
PB08	**IPOC Station P**	**1.66**	**88**		**Pn**	**04 55 51.5**	**-0.5**
PB08	**IPOC Station P**	**1.66**	**88**	eP	**Pb**	**04 55 52.6**	**-0.5**
PB08				eS	**Sg**	**04 56 15.4**	**+0.1**
PB08				IAML		04 56 20.7	
	comp=Z,2μm,1.1s						
PB07	**IPOC Station P**	**1.80**	**148**		**Pn**	**04 55 52.9**	**-0.8**
PB07	**IPOC Station P**	**1.80**	**148**	eP	**Pn**	**04 55 53.9**	**+0.2**
PB07				eS	Sn	04 55 59.9	-17
PB07				IAML		04 56 31.6	
	comp=Z,4μm,0.5s						
AP01	**Chacalluta**	**1.90**	**17**	eP	**Pb**	**04 55 56.6**	**-0.4**
AP01				i S	**Sg**	**04 56 22.2**	**-0.8**
AP01				IAML		04 56 34.6	
	comp=N,4μm,0.4s						
AP01	**Chacalluta**	**1.90**	**17**		**Pb**	**04 55 56.0**	**-1.1**
PB09	**IPOC Station P**	**2.23**	**136**	⇑iP	**Pb**	**04 56 01.2**	**-1.6**
PB09				i S	**Sg**	**04 56 33.1**	**-0.5**
PB09				IAML		04 56 41.4	
	comp=E,4μm,0.4s						
PB09	**IPOC Station P**	**2.23**	**136**		**Pn**	**04 55 59.7**	**0.0**
PB09	**IPOC Station P**	**2.23**	**136**	eP	**Pn**	**04 56 00.5**	**+0.9**
PB09				eS	**Sg**	**04 56 35.4**	**+1.7**
PB09				IAML		04 56 39.7	
	comp=Z,4μm,0.6s						
PB04	**IPOC Station P**	**2.24**	**161**	eP	**Pn**	**04 55 60.0**	**+0.2**
PB04				IAML		04 56 43.8	
	comp=N,4μm,0.5s						
PB04	**IPOC Station P**	**2.24**	**161**		**Pn**	**04 55 59.2**	**-0.6**
PB04	**IPOC Station P**	**2.24**	**161**	eP	**Pn**	**04 55 59.5**	**-0.3**
PB04				eS	**Sn**	**04 56 25.6**	**-2.3**
PB04				IAML		04 56 38.9	
	comp=Z,3μm,1.3s						
PB05	**IPOC Station P**	**2.72**	**166**	eP	**Pn**	**04 56 05.8**	**-0.5**
PB05				IAML		04 56 59.7	
	comp=N,1μm,0.7s						
PB05	**IPOC Station P**	**2.72**	**166**	eP	**Pn**	**04 56 06.0**	**-0.4**
PB05				IAML		04 57 01.0	
	comp=Z,946nm,1.3s						
PB06	**IPOC Station P**	**2.79**	**154**	eP	**Pn**	**04 56 07.3**	**-0.1**
PB06				IAML		04 56 57.3	
	comp=N,1μm,0.8s						
PB06	**IPOC Station P**	**2.79**	**154**		**Pn**	**04 56 06.8**	**-0.5**
PB06	**IPOC Station P**	**2.79**	**154**	eP	**Pn**	**04 56 07.4**	**+0.1**
PB06				eS	**Sg**	**04 56 55.1**	**+3.4**
PB06				IAML		04 56 59.8	
	comp=Z,2μm,0.8s						
LVC	**Limon Verde**	**3.04**	**142**	Pn	**Pn**	**04 56 12.8**	**+1.8**
	comp=Z,17nm,0.3s,baz=311,slow=10.0,SNR=138						
LVC				Sn	**Sn**	**04 56 48.5**	**+0.5**
	comp=Z,34nm,0.3s,baz=314,slow=8.7,SNR=5.2						
LVC				Lg	Lg	04 56 58.8	
	comp=Z,71nm,0.3s,baz=125,slow=3.2,SNR=7.1						
LVC	**Limon Verde**	**3.04**	**142**	Pn	**Pn**	**04 56 11.7**	**+0.7**
LVC	**Limon Verde**	**3.04**	**142**	eP	**Pn**	**04 56 12.8**	**+1.8**
LVC				eS	**Sg**	**04 56 58.8**	**-0.9**
LVC				IAML		04 57 01.1	
	comp=Z,746nm,1.6s						
PB15	**IPOC Station P**	**3.28**	**156**	eP	**Pn**	**04 56 14.1**	**-0.1**
PB15	**IPOC Station P**	**3.28**	**156**		**Pn**	**04 56 13.5**	**-0.7**
PB15	**IPOC Station P**	**3.28**	**156**	eP	**Pn**	**04 56 14.6**	**+0.4**
PB15				IAML		04 57 12.4	
	comp=Z,2μm,0.7s						
PB10	**IPOC Station P**	**3.31**	**174**	eP	**Pn**	**04 56 13.9**	**-0.6**
PB10	**IPOC Station P**	**3.31**	**174**	Pn	**Pn**	**04 56 13.8**	**-0.6**
PB10	**IPOC Station P**	**3.31**	**174**	eP	**Pn**	**04 56 13.9**	**-0.6**
PB10				eS	**Sn**	**04 56 50.5**	**-3.7**
PB14	**IPOC Station P**	**4.43**	**174**	Pn	**Pn**	**04 56 29.4**	**-0.6**
PB14	**IPOC Station P**	**4.43**	**174**	eP	**Pn**	**04 56 30.0**	**-0.1**
PB14				eS	**Sn**	**04 57 21.3**	**-0.9**
PB14				IAML		04 58 28.6	
	comp=Z,206nm,0.9s						
LPAZ	**La Paz**	**4.71**	**35**	Pn	**Pn**	**04 56 38.0**	**+3.9**
	comp=Z,1.9nm,0.3s,baz=226,slow=8.7,SNR=19						
LPAZ	**La Paz**	**4.71**	**35**		**Pn**	**04 56 35.1**	**+1.0**
GO02	**Mina Guanaco**	**5.09**	**166**	Pn	**Pn**	**04 56 38.5**	**-0.6**
YJA	**Yavi**	**5.41**	**112**	eP	Pb	04 56 49.9	-7.3
YJA				eS	**Sb**	**04 58 05.0**	**+2.4**
AC01	**Pan de Azucar**	**5.93**	**177**		**Pn**	**04 56 50.2**	**-0.2**
AZAP	**Zapla**	**6.74**	**128**	eP	Pn	04 57 06.5	+4.8
AZAP				IAML		04 58 53.4	
	comp=Z,78nm,1.3s						
AC02	**Maricunga**	**6.81**	**166**	Pn	**Pn**	**04 57 03.0**	**+0.2**
ASTB	**Santa Barbara**	**7.06**	**123**	eP	**Pn**	**04 57 07.7**	**+1.6**
AC04	**Llanos de Chal**	**7.97**	**181**	Pn	**Pn**	**04 57 16.7**	**-1.7**
AC05	**El Transito**	**8.62**	**176**		**Pn**	**04 57 26.6**	**-0.8**
LCO	**Las Campanas**	**8.78**	**179**	Pn	**Pn**	**04 57 28.9**	**-0.8**
CO01	**Juntas del Tor**	**9.76**	**176**	Pn	**Pn**	**04 57 42.2**	**-1.0**
NNA	**Nana**	**9.95**	**324**	LR	LR	05 01 26.9	
	comp=Z,140nm,19.3s,baz=156,slow=36						
SIV	**San Ignacio**	**10.25**	**67**	Pn	**Pn**	**04 57 49.9**	**+0.1**
	comp=Z,1.7nm,0.3s,baz=272,slow=9.1,SNR=23						
SIV				LR	LR	05 02 21.5	
	comp=Z,779nm,18.1s,baz=266,slow=42						
ETMB	**Extrema**	**11.28**	**24**	eP	**Pn**	**04 58 05.0**	**+1.2**
VILB	**Vilhena**	**12.54**	**57**	eP	**Pn**	**04 58 21.2**	**0.0**
CPUP	**Villa Florida**	**13.89**	**119**	Pn	**Pn**	**04 58 41.5**	**+2.0**
	comp=Z,0.1nm,0.3s,baz=307,slow=11,SNR=5.1						
CPUP				LR	LR	05 05 00.2	
	comp=Z,234nm,19.6s,baz=297,slow=42						
CPUP	**Villa Florida**	**13.89**	**119**		**Pn**	**04 58 38.7**	**-0.8**
AQDB	**Aquidauana**	**14.28**	**94**	eP	**Pn**	**04 58 45.1**	**+0.2**
H03N1	**Juan Fernandez**	**14.98**	**207**	T	T	05 14 17.9	
	baz=35,slow=74,SNR=128						
H03N2	**Juan Fernandez**	**14.99**	**207**	T	T	05 14 16.6	
	baz=35,slow=74,SNR=134						
H03N3	**Juan Fernandez**	**15.00**	**207**	T	T	05 14 14.6	
	baz=35,SNR=441						
PP1B	**Ponte de Pedra**	**15.40**	**83**	eP	**Pn**	**04 58 59.5**	**-0.4**
BI02	**San Fabin de**	**16.41**	**181**	P	**P**	**04 59 14.8**	**-1.1**
PCMB	**Pacaembu**	**18.42**	**98**	eP	**P**	**04 59 38.5**	**+0.3**
ARAG	**Araguaiana, MT**	**18.71**	**79**	eP	**P**	**04 59 40.7**	**-0.7**
CPSB	**Cacapava Do Su**	**18.77**	**126**	eP	**Pn**	**04 59 44.7**	**+2.4**
ITRB	**Iturama**	**19.33**	**92**	eP	**Pn**	**04 59 49.2**	**0.0**
MACA	**Manacapuru-AM**	**19.66**	**32**	eP	**P**	**04 59 51.7**	**0.0**
NPGB	**Novo Progresso**	**19.96**	**51**	eP	**P**	**04 59 54.3**	**-0.8**
FRTB	**Fartura**	**20.08**	**103**	eP	**P**	**04 59 55.5**	**-0.9**
PLCA	**Paso Flores**	**20.47**	**179**	P	Pn	05 00 02.3	-0.3
	comp=Z,3.5nm,0.8s,baz=350,slow=13,SNR=4.8						
PLCA				LR	LR	05 07 09.2	
	comp=Z,156nm,18.8s,baz=341,slow=34						
PLCA	**Paso Flores**	**20.47**	**179**	P	**P**	**04 59 59.1**	**-1.4**
PLCA				IAmb	IAmb	05 00 07.3	
	comp=Z,9.4nm,1.1s						
PLCA	**Paso Flores**	**20.47**	**179**	eP	Pn	05 00 07.5	+4.9
BB19B	**Bebedouro**	**20.97**	**96**	eP	**P**	**05 00 05.5**	**-0.6**
IPMB	**Ipameri, GO**	**21.57**	**88**	eP	**P**	**05 00 12.1**	**-0.4**
ITTB	**Itaituba**	**21.59**	**45**	eP	**P**	**05 00 11.6**	**-1.1**
PTGA	**Pitinga**	**22.12**	**30**	P	**P**	**05 00 18.4**	**0.0**
	comp=Z,3.3nm,0.4s,baz=322,slow=23,SNR=9.2						
PTGA				LR	LR	05 09 16.2	
	comp=Z,186nm,19.0s,baz=208,slow=38						
PTGA	**Pitinga**	**22.12**	**30**	P	**P**	**05 00 17.3**	**-1.0**
PTGA				IAmb	IAmb	05 00 31.1	
	comp=Z,9.3nm,1.1s						
PTGA	**Pitinga**	**22.12**	**30**	eP	**P**	**05 00 18.2**	**-0.1**
FLOC	**Florencia**	**22.14**	**347**	eP	**P**	**05 00 20.3**	**+1.7**
GCUF	**Volcan Galeras**	**22.21**	**343**	eP	P	05 00 27.2	+7.4
BDFB	**Brasilia**	**22.25**	**82**	P	**P**	**05 00 19.7**	**-0.3**
	comp=Z,2.2nm,0.5s,baz=266,slow=4.5,SNR=5.5						
BDFB				LR	LR	05 10 34.4	
	comp=Z,629nm,18.0s,baz=278,slow=41						
BDFB	**Brasilia**	**22.25**	**82**	P	**P**	**05 00 17.7**	**-2.2**
BDFB				IAmb	IAmb	05 00 25.4	
	comp=Z,8.2nm,1.1s						
GARC	**Garzon, Huila**	**22.70**	**348**	eP	**P**	**05 00 26.9**	**+2.1**
BBAC	**Balboa, Cauca**	**22.94**	**344**	eP	**P**	**05 00 28.4**	**+1.1**
POPC	**Popayan, Colom**	**23.29**	**345**	eP	**P**	**05 00 31.6**	**+0.7**
PRAC	**Prado**	**24.08**	**350**	eP	**P**	**05 00 42.7**	**+4.2**
ORTC	**Ortega, Tolima**	**24.33**	**349**	eP	**P**	**05 00 43.4**	**+2.7**
PRPB	**Parauapebas**	**24.78**	**59**	eP	**P**	**05 00 44.4**	**-0.5**
TOLC	**Tolima**	**25.01**	**350**	eP	**P**	**05 00 49.5**	**+2.3**
ROSC	**El Rosal**	**25.11**	**352**	LR	LR	05 11 59.4	
	comp=Z,276nm,18.8s,baz=184,slow=40						
SMTB	**Santa Maria do**	**25.20**	**67**	eP	**P**	**05 00 48.5**	**-0.1**
PLMC	**San Jos del P**	**25.50**	**348**	eP	**P**	**05 00 51.9**	**+0.5**
GUY2C	**Guyana, Caldas**	**25.64**	**350**	eP	**P**	**05 00 55.8**	**+2.7**
JANB	**Januaria**	**25.85**	**83**	eP	**P**	**05 00 54.0**	**-0.7**
RUSC	**La Rusia**	**26.02**	**355**	eP	**P**	**05 00 54.6**	**-1.9**
CBOC	**Ciudad Bolivar**	**26.38**	**349**	eP	**P**	**05 00 58.2**	**-1.2**
SDV	**Santo Domingo**	**28.90**	**1**	LR	LR	05 12 05.4	
	comp=Z,166nm,21.0s,baz=208,slow=35						
ESQI	**Esquipulas**	**39.00**	**331**	P	**P**	**05 02 48.5**	**-1.0**
ESQI				IAmb	IAmb	05 03 05.4	
	comp=Z,6.3nm,0.9s						
CNNC	**Cliffs of the**	**55.53**	**353**	P	**P**	**05 04 56.9**	**-1.1**
UTMT	**University of**	**58.74**	**343**	P	**P**	**05 05 19.4**	**-1.3**
DBIC	**Dimbokro**	**70.19**	**75**	LR	LR	05 36 07.7	
	comp=Z,86nm,19.0s,baz=180,slow=35						
PDAR	**Pinedale Array**	**72.06**	**331**	P	**P**	**05 06 50.0**	**+2.8**
	comp=Z,0.5nm,0.9s,baz=107,slow=8.6,SNR=4.0						
TORD	**Torodi Ar. Bea**	**78.71**	**71**	P	**P**	**05 07 25.4**	**-0.4**
	comp=Z,7.5nm,0.9s,baz=260,slow=6.0,SNR=9.3						
TORD				LR	LR	05 41 22.7	
	comp=Z,86nm,18.1s,baz=235,slow=35						
FRB	**Frobisher Bay**	**83.69**	**1**	P	**P**	**05 07 51.4**	**+0.2**
	comp=Z,0.8nm,0.4s,baz=101,slow=5.2,SNR=6.1						
BOSA	**Boshof**	**85.72**	**119**	LR	LR	05 43 13.5	
	comp=Z,76nm,18.4s,baz=196,slow=34						
ESDC	**Sonseca Array**	**86.25**	**45**	LR	LR	05 45 37.7	
	comp=Z,35nm,18.2s,baz=5.0,slow=35						
YKA	**Yellowknife Ar**	**89.35**	**341**	P	**P**	**05 08 20.6**	**+1.7**
	comp=Z,3.2nm,1.0s,baz=134,slow=5.5,SNR=25						
RAO	**Raoul Island**	**94.19**	**237**	LR	LR	05 41 16.3	
	comp=Z,330nm,21.8s,baz=168,slow=29						
H11S2	**WAKE ISLAND Hy**	**125.84**	**279**	T	T	07 33 48.6	
	baz=102,slow=74,SNR=63						
H11S1	**WAKE ISLAND Hy**	**125.85**	**279**	T	T	07 33 48.3	
	baz=102,slow=74,SNR=50						
H11S3	**WAKE ISLAND Hy**	**125.86**	**279**	T	T	07 33 49.0	
	baz=102,slow=74,SNR=50						
H11N3	**WAKE ISLAND Hy**	**125.89**	**280**	T	T	07 34 00.3	
	baz=102,slow=74,SNR=9.5						
H11N2	**WAKE ISLAND Hy**	**125.91**	**280**	T	T	07 34 02.4	
	baz=102,slow=74,SNR=12						
H11N1	**WAKE ISLAND Hy**	**125.91**	**280**	T	T	07 34 03.4	
	baz=102,slow=74,SNR=6.8						
ASAR	**Alice Springs**	**130.14**	**210**	PKP	**PKiKP**	**05 14 34.8**	**+0.1**
	comp=Z,0.6nm,0.8s,baz=120,slow=1.6,SNR=4.4						
WRA	**Warramunga Arr**	**133.06**	**213**	PKP	**PKiKP**	**05 14 41.0**	**+0.5**
	comp=Z,0.3nm,0.7s,baz=147,slow=2.3,SNR=2.1						
ZALV	**Zalesovo Beam**	**141.54**	**23**	PKP	**PKiKP**	**05 14 55.8**	**-1.0**
	comp=Z,0.7nm,0.6s,baz=264,slow=3.0,SNR=4.3						
MKAR	**Makanchi Array**	**145.63**	**33**	PKPbc	**PKPab**	**05 15 02.4**	**+0.5**
	comp=Z,8.7nm,1.0s,baz=321,slow=3.1,SNR=42						
SONM	**Songino Array**	**152.35**	**4**	PKPbc	**PKiKP**	**05 15 20.1**	**+0.8**
	comp=Z,1.1nm,1.0s,baz=14,slow=6.6,SNR=4.3						

IDC ***12*** *05:05:14.1±3.8, 20°.50S×71°.49W, h0^{km}, mb3.5/1, mb1 3.7/2, mb1mx3.4/28, mbtmp3.4/2, ML3.1/1, Error ellipse: s-maj=154.8km s-min=64.7km az=142.0*
GUC ***12*** *05:05:18.3±0.8, 20°.24S×70°.90W, h24^{km}±10^{km}, ML3.5*
ISC 12 05:05:14.6±1.8, **20°.21S**±0°.04×**70°.97W**±0°.08, **h13**^{km}±10^{km}, **n17, σ1^{s}12**/25, **6C-4D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TA02	**Huaiquique**	**0.79**	**94**	⇑iP	**Pg**	**05 05 30.6**	**+0.8**
TA02				i S	**Sb**	**05 05 40.5**	**-0.3**
TA02				IAML		05 05 41.7	
	comp=N,6μm,0.2s						
TA01	**Diego Aracena**	**0.82**	**116**	⇓iP	**Pg**	**05 05 31.2**	**+0.7**
TA01				i S	**Sb**	**05 05 41.0**	**-0.7**
TA01				IAML		05 05 43.2	
	comp=N,3μm,0.3s						
PATCX	**Punta Patache**	**0.97**	**129**	⇓iP	**Pn**	**05 05 33.8**	**-0.3**
PATCX				i S	**Sb**	**05 05 45.6**	**-0.7**
PATCX				IAML		05 05 50.7	
	comp=E,1μm,0.3s						
PSGC	**Pisagua**	**1.00**	**53**	⇓iP	**Pg**	**05 05 34.5**	**+0.5**
PSGC				i S	**Sg**	**05 05 47.6**	**+0.5**
PSGC				IAML		05 05 50.1	
	comp=N,1μm,0.2s						
HMBC	**Humberstone**	**1.01**	**94**	⇓iP	**Pb**	**05 05 34.3**	**+0.2**
HMBC				i S	**Sb**	**05 05 46.8**	**-0.7**
HMBC				IAML		05 05 50.5	
	comp=N,2μm,0.2s						
PB01	**IPOC Station P**	**1.61**	**121**	⇑iP	**Pb**	**05 05 44.0**	**-0.3**
PB01				i S	**Sn**	**05 06 03.5**	**-0.2**
PB01				IAML		05 06 11.1	
	comp=E,1μm,0.2s						
MNMC	**Minye Minye**	**1.68**	**50**	eP	**Pb**	**05 05 45.5**	**-0.2**
MNMC				i S	**Sb**	**05 06 07.6**	**+0.8**
MNMC				IAML		05 06 14.2	
	comp=E,2μm,0.3s						
PB08	**IPOC Station P**	**1.71**	**88**	⇑iP	**Pb**	**05 05 45.6**	**-0.5**
PB08				i S	**Sb**	**05 06 07.1**	**-0.5**
PB08				IAML		05 06 10.1	
	comp=N,463nm,0.2s						
PB07	**IPOC Station P**	**1.81**	**146**	⇑iP	**Pn**	**05 05 46.6**	**+0.8**
PB07				IAML		05 06 27.1	
	comp=E,398nm,0.5s						
AP01	**Chacalluta**	**1.92**	**18**	IAML		05 06 27.1	
	comp=E,1μm,0.5s						
PB04	**IPOC Station P**	**2.25**	**160**	IAML		05 06 38.9	
	comp=N,370nm,0.4s						
PB09	**IPOC Station P**	**2.25**	**135**	⇑iP	**Pb**	**05 05 54.0**	**-1.3**
PB09				i S	**Sg**	**05 06 26.7**	**-0.5**
PB09				IAML		05 06 35.6	
	comp=N,489nm,0.5s						
PB05	**IPOC Station P**	**2.72**	**165**	⇑eP	**Pn**	**05 05 58.5**	**+0.2**
PB05				i S	**Sg**	**05 06 41.6**	**-0.7**
PB05				IAML		05 06 52.7	
	comp=N,110nm,0.3s						
PB15	**IPOC Station P**	**3.29**	**155**	eP	**Pn**	**05 06 06.8**	**+0.6**
LPAZ	**La Paz**	**4.74**	**35**	Pn	**Pb**	**05 06 34.6**	**-3.4**
	comp=N,0.4nm,0.3s,baz=222,slow=8.6,SNR=3.4						
YKA	**Yellowknife Ar**	**89.35**	**341**	P	**P**	**05 18 12.5**	**+2.1**
	comp=N,0.3nm,0.6s,baz=134,slow=4.4,SNR=2.9						
MKAR	**Makanchi Array**	**145.67**	**33**	PKPbc	**PKiKP**	**05 24 55.5**	**-1.4**
	comp=N,0.5nm,0.7s,baz=322,slow=4.3,SNR=5.5						

IDC ***12*** *05:21:08.7±2.2, 17°.23S×179°.27W, h552^{km}±19^{km}, mb3.1/7, mb1 3.4/8, mb1mx3.2/29, mbtmp3.9/8, Error ellipse: s-maj=96.9km s-min=17.4km az=147.0*
ISC 12 05:21:08.5±2.0, **17°.1S**±0°.7×**179°.3W**±0°.5, **h550**^{km}**, n9, σ0^{s}69**/9, **mb3.4**/7, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**2.59**	**256**	P	**P**	**05 22 21.9**	**+0.7**
	1.4nm,0.3s,baz=96,slow=10,SNR=5.3						
STKA	**Stephens Creek**	**38.26**	**240**	P	**P**	**05 27 41.7**	**-0.5**
	1.3nm,0.3s,baz=81,slow=14,SNR=5.2						
WRA	**Warramunga Arr**	**43.93**	**259**	P	**P**	**05 28 26.6**	**-0.7**
	0.7nm,0.5s,baz=92,slow=6.9,SNR=15						
ASAR	**Alice Springs**	**44.18**	**254**	P	**P**	**05 28 29.8**	**+0.5**
	6.4nm,0.4s,baz=89,slow=8.1,SNR=76						
NVAR	**Mina Array Bea**	**79.47**	**44**	P	**P**	**05 32 19.1**	**+0.5**
	0.4nm,0.6s,baz=225,slow=8.7,SNR=4.4						
ILAR	**Eielson Array**	**85.33**	**13**	P	**P**	**05 32 47.4**	**+0.1**
	0.3nm,0.4s,baz=224,slow=5.1,SNR=9.9						
PDAR	**Pinedale Array**	**87.39**	**44**	P	**P**	**05 32 57.2**	**-0.6**
	0.3nm,0.5s,baz=200,slow=4.1,SNR=4.8						
YKA	**Yellowknife Ar**	**93.99**	**25**	P	**P**	**05 33 26.9**	**-0.5**
	0.3nm,0.7s,baz=240,slow=4.0,SNR=3.6						
GERES	**GERESS Array B**	**146.64**	**344**	PKPbc	**PKPbc**	**05 39 49.5**	**+0.7**
	0.8nm,0.7s,baz=46,slow=3.9,SNR=4.7						

IDC 12 05:23:54.4±31.0, **27°.92S**×**73°.21E, h0**^{km}**, mb3.9**/3, **mb1 4.2**/3, **mb1mx3.6**/28, **mbtmp3.9**/3, **Error ellipse: s-maj=746.8km s-min=56.5km az=66.0, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S2	**Diego Garcia H**	**20.17**	**358**	T	T	05 48 30.5	
	baz=179,slow=75,SNR=9.0						
H08S1	**Diego Carcia H**	**20.18**	**358**	T	T	05 48 30.1	
	baz=179,slow=75,SNR=7.0						
H08S3	**Diego Garcia H**	**20.19**	**358**	T	T	05 48 32.3	
	baz=179,slow=75,SNR=23						
H01W2	**Cape Leeuwin H**	**35.43**	**112**	T	T	06 08 23.7	
	baz=271,slow=75,SNR=8.1						
H01W3	**Cape Leeuwin H**	**35.43**	**112**	T	T	06 08 21.1	
	baz=271,slow=75,SNR=8.2						
H01W1	**Cape Leeuwin H**	**35.45**	**112**	T	T	06 08 26.9	
	baz=271,slow=75,SNR=9.3						
CMAR	**Chiang Mai Arr**	**52.40**	**31**	P	P	05 33 08.5	-0.1
	1.2nm,0.3s,baz=209,slow=9.0,SNR=1.6						
ASAR	**Alice Springs**	**54.34**	**100**	P	P	05 33 22.9	-0.2
	0.4nm,0.4s,baz=253,slow=6.5,SNR=6.2						
WRA	**Warramunga Arr**	**55.95**	**96**	P	P	05 33 34.9	+0.1
	0.5nm,0.6s,baz=250,slow=7.4,SNR=6.2						

IDC ***12*** *05:30:52.9±1.5, 20°.03S×70°.63W, h0^{km}, mb3.7/4, mb1 3.9/6, mb1mx3.7/28, mbtmp3.8/6, ML3.5/2, MS2.7/2, Ms1 2.7/2, ms1mx2.5/26, Error ellipse: s-maj=38.1km s-min=16.8km az=74.0*
GUC ***12*** *05:30:55.8±0.6, 20°.22S×70°.88W, h27^{km}±8^{km}, ML3.6*
ISC 12 05:30:54.0±1.9, **20°.14S**±0°.04×**70°.79W**±0°.08, **h14**^{km}±10^{km}, **n21, σ0^{s}79**/27, **mb3.9**/3, **5C-5D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TA02	**Huaiquique**	**0.63**	**102**	⇓iP	**Pn**	**05 31 07.8**	**-0.8**
TA02				i S	**Sn**	**05 31 17.7**	**-0.9**
TA01	**Diego Aracena**	**0.71**	**127**	⇓iP	**Pb**	**05 31 08.4**	**+0.1**
TA01				i S	**Sb**	**05 31 18.1**	**+0.1**
TA01				IAML		05 31 20.5	
	comp=N,9μm,0.4s						
PSGC	**Pisagua**	**0.83**	**49**	⇓iP	**Pn**	**05 31 11.8**	**+0.3**
PSGC				eS	**Sn**	**05 31 24.2**	**+0.6**
PSGC				IAML		05 31 27.3	
	comp=N,2μm,0.2s						
HMBC	**Humberstone**	**0.86**	**99**	⇓iP	**Pn**	**05 31 11.6**	**-0.3**
HMBC				i S	**Sn**	**05 31 24.1**	**-0.3**
HMBC				IAML		05 31 25.6	
	comp=N,4μm,0.2s						
PATCX	**Punta Patache**	**0.90**	**139**	⇓iP	**Pg**	**05 31 11.2**	**-0.4**
PATCX				i S	**Sg**	**05 31 23.0**	**-0.4**
PATCX				IAML		05 31 25.0	
	comp=E,3μm,0.4s						
MNMC	**Minye Minye**	**1.51**	**49**	⇑iP	**Pg**	**05 31 22.6**	**-0.5**
MNMC				i S	**Sg**	**05 31 44.4**	**+1.6**
PB01	**IPOC Station P**	**1.52**	**127**	⇑iP	**Pn**	**05 31 21.3**	**+0.4**
PB01				i S	**Sb**	**05 31 41.1**	**-0.2**
PB08	**IPOC Station P**	**1.54**	**90**	⇑iP	**Pb**	**05 31 22.8**	**+0.2**
PB08				i S	**Sg**	**05 31 43.9**	**+0.2**
PB08				IAML		05 31 47.3	
	comp=N,1μm,0.4s						
PB07	**IPOC Station P**	**1.79**	**152**	⇑iP	**Pn**	**05 31 23.8**	**-1.0**
PB07				i S	**Sb**	**05 31 49.9**	**+0.7**
PB07				IAML		05 32 04.4	
	comp=E,893nm,0.5s						
PB09	**IPOC Station P**	**2.19**	**139**	⇑iP	**Pn**	**05 31 31.2**	**+0.9**
PB09				i S	**Sb**	**05 32 02.5**	**+1.6**
PB09				IAML		05 32 10.8	
	comp=E,1μm,0.4s						
LVC	**Limon Verde**	**3.02**	**145**	Pn	**Pn**	**05 31 42.7**	**+0.9**
	comp=E,5.6nm,0.3s,baz=328,slow=9.9,SNR=106						
LVC				Sn	**Sn**	**05 32 19.5**	**+1.4**
	comp=E,15nm,0.3s,baz=150,slow=23,SNR=6.0						
LVC				Lg	Lg	05 32 28.5	

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=E,23nm,0.3s,baz=211,slow=6.1,SNR=12						
LPAZ	La Paz	4.59	34	Pn	Pn	05 32 08.8	+5.1
	comp=E,1.0nm,0.3s,baz=334,slow=2.2,SNR=16						
LPAZ				LR	LR	05 33 30.2	
	comp=E,41nm,19.4s,baz=241,slow=36						
SIV	San Ignacio	10.12	68	Pn	Pn	05 33 18.7	-0.4
	comp=E,0.6nm,0.3s,baz=264,slow=9.6,SNR=13						
SIV				LR	LR	05 37 50.8	
	comp=E,84nm,18.2s,baz=234,slow=42						
H03N1	Juan Fernandez	15.09	207	T	T	05 49 54.2	
	baz=33,slow=72,SNR=90						
H03N2	Juan Fernandez	15.10	207	T	T	05 49 51.2	
	baz=33,slow=72,SNR=61						
H03N3	Juan Fernandez	15.11	207	T	T	05 49 49.9	
	baz=33,slow=72,SNR=72						
PLCA	Paso Flores	20.53	179	P	Pn	05 35 35.7	+1.4
	comp=E,1.6nm,0.9s,baz=6.3,slow=9.2,SNR=3.2						
PTGA	Pitinga	22.01	30	P	P	05 35 47.9	-0.2
	comp=E,1.5nm,0.3s,baz=326,slow=23,SNR=6.7						
TORD	Torodi Ar. Bea	78.58	71	P	P	05 42 55.0	-0.8
	comp=E,0.9nm,0.5s,baz=248,slow=5.0,SNR=7.6						
YKA	Yellowknife Ar	89.33	341	P	P	05 43 49.6	0.0
	comp=E,0.2nm,0.7s,baz=132,slow=4.5,SNR=4.3						
MKAR	Makanchi Array	145.52	33	PKPbc	PKPab	05 50 32.6	+0.3
	comp=E,0.7nm,0.6s,baz=309,slow=2.7,SNR=6.6						

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*DJA **12** 05:51:52.2±0.4, 7°S±4°×10°5E±°, h10^{km}, M4.4/14, mb4.5/3, mB4.9/1, MLv4.3/14, Mw(mB)4.1/1*
*IDC **12** 05:51:55.1±6.6, 6°.90S×105°.34E, h59^{km}±54^{km}, mb3.4/8, mb1 3.6/9, mb1mx3.4/42, mbtmp3.7/9, ML4.1/1, MS2.7/3, Ms1 2.8/3, ms1mx2.6/31, Error ellipse: s-maj=54.6km s-min=18.1km az=57.0*
ISC 12 05:51:55.1±0.8, **7°.0S**±0°.1×**105°.44E**±0°.07, **h56**^{km}, **n25**, σ**1^{s}33**/28, **mb3.6**/8, **Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKJI	Sukabumi	1.11	90	P	Pn	05 52 14.5	0.0
SKJI				S	Sn	05 52 29.2	+0.3
DBJI	Dramaga	1.38	71	P	Pn	05 52 18.2	+0.1
CBJI	Citeko	1.52	68	P	Pn	05 52 20.9	+0.9
BLSI	Bandar Lampung	1.63	353	P	Pn	05 52 23.4	+1.8
KASI	Kota Agung	1.74	327	P	Pn	05 52 23.6	+0.6
LEM	Lembang	2.17	86	P	Pn	05 52 30.5	+1.5
	53nm,0.3s,baz=197,slow=14,SNR=14						
LEM				S	Sn	05 52 57.9	+3.0
	31nm,0.3s,baz=113,slow=21,SNR=11						
LEM				LR	LR	05 53 20.5	
	comp=Z,100nm,21.4s,baz=220,slow=38						
LEM	Lembang	2.17	86	P	Pn	05 52 30.3	+1.3
KLSI		2.40	343	P	Pn	05 52 33.7	+1.6
LWLI	Liwa	2.40	325	P	Pn	05 52 33.9	+1.7
CISI	Cisompet, Garu	2.42	103	P	Pn	05 52 32.0	-0.4
MDSI	Maura Dua	2.79	333	P	Pn	05 52 39.2	+1.8
MNAI	Manna	3.60	317	P	Pn	05 52 49.9	+1.4
LHSI	Lahat	3.69	329	P	Pn	05 52 50.4	+0.8
KSI	Kapahiang	4.37	319	P	Pn	05 53 00.4	+1.3
TPI	Tanjungpandan	4.76	28	P	Pn	05 53 04.0	-0.4
UGM	Wanagama	5.12	101	P	Pn	05 53 10.9	+1.5
	0.6nm108nm,1.9s						
FITZ	Fitzroy Crossi	22.57	121	P	P	05 56 51.7	+0.8
	1.3nm,0.7s,baz=309,slow=12,SNR=3.1						
FITZ				LR	LR	06 06 38.3	
	comp=Z,22nm,20.9s,baz=278,slow=39						
CMAR	Chiang Mai Arr	26.10	346	LR	LR	06 08 03.9	
	comp=Z,28nm,19.2s,baz=170,slow=37						
WRA	Warramunga Arr	30.84	118	P	P	05 58 06.4	+0.2
	0.8nm,0.6s,baz=290,slow=10,SNR=8.3						
ASAR	Alice Springs	31.96	124	P	P	05 58 16.4	+0.3
	0.4nm,0.6s,baz=314,slow=7.9,SNR=5.2						
STKA	Stephens Creek	41.80	131	P	P	05 59 40.6	+1.2
	1.9nm,0.7s,baz=295,slow=14,SNR=3.3						
SONM	Songino Array	54.60	1	P	P	06 01 16.8	-1.2
	0.2nm,0.4s,baz=182,slow=10.0,SNR=4.3						
SONM				PcP	PcP	06 02 20.2	-0.3
	0.2nm,0.4s,baz=190,slow=4.1,SNR=3.7						
MKAR	Makanchi Array	57.38	341	P	P	06 01 36.0	-1.7
	0.5nm,0.6s,baz=157,slow=7.9,SNR=12						
KURBB	Kurchatov Arra	61.93	341	P	P	06 02 07.1	-1.9
	0.2nm,0.5s,baz=158,slow=5.7,SNR=4.7						
KURBB				PcP	PcP	06 02 49.2	0.0
	0.3nm,0.7s,baz=151,slow=3.2,SNR=4.4						
ARU	Arti	73.96	335	P	P	06 03 23.2	-1.2
	1.7nm,0.2s,baz=119,slow=10,SNR=3.3						

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*UCR **12** 05:57:04.8±1.6, 7°.96N×82°.82W, h5^{km}, MW4.0*
*UPA **12** 05:57:05.3±2.4, 8°.07N×82°.63W, h10^{km}±6^{km}, MW3.9*
*INET **12** 05:57:07.1, 8°.24N×82°.40W, h28^{km}, MW3.1*
ISC 12 05:57:04.8±1.3, **8°.02N**±0°.05×**82°.63W**±0°.04, **h24**^{km}±12^{km}, **n43**, σ**0^{s}95**/56, **3C-1D**, **Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SBAR3	San Bartolo, C	0.38	320	*i* P	Pb	05 57 12.9	-0.2
LESP3	La Esperanza,	0.41	338	*i* P	Pb	05 57 13.2	-0.3
PEDE3	Pedregal, Chir	0.42	30	*i* P	Pb	05 57 13.8	+0.3
LOCO3	Loma Colorada,	0.44	29	*i* P	Pb	05 57 14.2	+0.2
BAGA3	Bagala, Chiriq	0.46	13	*i* P	Pb	05 57 14.7	+0.5
BAGA3				*e*S	Sn	05 57 21.6	-1.5
LOMA3	Las Lomas, Chi	0.47	31	*i* P	Pb	05 57 14.7	+0.2
CDITO	Canoas	0.60	337	*i* P	Pb	05 57 16.1	-0.5
CDITO				*e*S	Sb	05 57 24.5	-0.2
GUAL3	Gualaca, Chiri	0.61	33	*i* P	Pb	05 57 16.8	0.0
PTAR3	Potrerillos Ar	0.68	12	*i* P	Pn	05 57 18.3	-0.7
BCO2	Palmira	0.70	9	*i* P	Pb	05 57 18.2	-0.3
BCO2				*e*S	Sn	05 57 28.2	-1.2
PSOM3	Paja de Sombre	0.73	25	*i* P	Pb	05 57 18.5	-0.4
BRU2	Volcan	0.77	356	*i* P	Pb	05 57 19.6	0.0
BRU2				*e*S	Sn	05 57 31.2	+0.1
LNBQ3	Los Naranjos,	0.79	14	*i* P	Pb	05 57 19.4	-0.5
MLIR3	Monte Lirio, C	0.79	346	*e*P	Pn	05 57 20.4	-0.1
BC3P	Paso Ancho	0.79	2	*i* P	Pb	05 57 19.8	-0.2
BC3P				*e*S	Sn	05 57 31.7	0.0
PIRO	Carate, Puerto	0.79	299	*i* P	Pb	05 57 19.1	-0.8
REME3	Remedios, Chir	0.82	76	*i* P	Pb	05 57 19.8	-0.5
EDSV	San Vito	0.86	337	⇑*e*P	Pb	05 57 21.0	-0.2
EDSV				*e*S	Sn	05 57 35.0	+1.6
NANC3	Nancito, Chiri	0.92	76	*e*P	Pb	05 57 21.0	-1.0
LPLA	Las Palmas La	1.07	340	*e*P	Pn	05 57 24.3	-0.1
LPLA				*e*S	Sn	05 57 39.7	+1.1
EDBA	Buenos Aires	1.30	331	*e*P	Pn	05 57 28.0	+0.6
CNI2	El Empalme, Bo	1.40	7	*i* P	Pn	05 57 29.2	+0.4
CNI2				*e*S	Sb	05 57 47.2	-0.6
GMAL	Guarumal, Vera	1.41	100	*e*P	Pn	05 57 28.0	-0.9
GMAL				*e*S	Sb	05 57 47.5	-0.5
MESA3	La Mesa, Verag	1.44	85	*e*P	Pb	05 57 31.4	+0.5
RSUS3	Rio de Jesus,	1.46	91	*e*P	Pb	05 57 32.0	+0.7
EDLM	Las Mercedes	1.57	323	*e*P	Pn	05 57 32.1	+1.0
EDLM				*e*S	Sb	05 57 52.8	+0.3
SFRA3	San Francisco,	1.66	82	*e*P	Pb	05 57 35.0	+0.3
PEZE	Perez Zeledon,	1.70	323	*e*P	Pn	05 57 34.0	+1.0
EDDO	Dominical	1.73	315	*e*P	Pn	05 57 33.3	+0.1
CALO3	Calobre, Verag	1.80	80	*e*P	Pn	05 57 35.3	+1.0
OCU3	Ocu, Herrera	1.84	92	*e*P	Pn	05 57 33.3	-1.6
CACAO	El Cacao, Vera	1.88	111	*e*P	Pb	05 57 38.1	-0.3
CACAO				*e*S	Sb	05 58 04.1	+2.5
CDM	Cerro de Muert	1.89	324	⇑*e*P	Pn	05 57 36.8	+0.9
CDM				*e*S	Sb	05 58 01.5	-0.7
MRVA	Moravia de Chi	1.96	336	⇑*e*P	Pn	05 57 38.2	+1.6
RIMA	Rio Macho	2.12	325	*e*P	Pn	05 57 40.2	+1.4
LCR2	La Lucha 2	2.18	322	*e*P	Pn	05 57 40.7	+1.0
CVTR	Volcan Turrial	2.28	331	*e*P	Pn	05 57 43.2	+2.0
HDC	Heredia	2.45	323	*e*P	Pn	05 57 45.6	+2.2
HDC				*e*S	Sb	05 58 16.5	-1.6
HDC	Heredia	2.45	323	*e*P	Pn	05 57 44.3	+0.9
JACO	JACO, Garabito	2.58	309	⇓*e*P	Pn	05 57 44.8	-0.3
JTS	Las Juntas de	3.21	315	*e*P	Pn	05 57 54.5	+0.7
GRZA	Playa Garza	3.51	303	*e*P	Pn	05 57 57.9	0.0
PLVR	Palo Verde	3.54	311	*e*P	Pn	05 57 57.6	-0.8

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*IDC **12** 06:07:43.6±1.4, 20°.09S×70°.74W, h0^{km}, mb3.8/5, mb1 4.0/7, mb1mx3.8/32, mbtmp3.9/7, ML3.8/2, MS2.6/5, Ms1 2.7/5, ms1mx2.6/34, Error ellipse: s-maj=32.7km s-min=16.6km az=70.0*
*GUC **12** 06:07:46.7±0.7, 20°.20S×70°.88W, h32^{km}±2^{km}, ML3.6*
ISC 12 06:07:43.2±2.5, **20°.12S**±0°.04×**70°.88W**±0°.07, **h7**^{km}±14^{km}, **n30**, σ**1^{s}19**/35, **mb3.9**/4, **8C-6D**, **Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TA02	Huaiquique	0.72	102	⇓*i*P	Pb	06 07 58.9	+0.8
TA02				*i* S	Sn	06 08 08.5	-2.5
TA01	Diego Aracena	0.79	124	⇓*i*P	Pb	06 07 59.5	+0.2
TA01				*i* S	Sb	06 08 09.4	-0.9
TA01				IAML		06 08 11.6	
	comp=N,6μm,0.4s						
PSGC	Pisagua	0.88	54	⇓*i*P	Pn	06 08 02.7	+0.5
PSGC				*e*S	Sn	06 08 14.8	-0.4
PSGC				IAML		06 08 19.8	
	comp=E,2μm,0.5s						
HMBC	Humberstone	0.94	100	⇓*i*P	Pn	06 08 02.6	-0.4
HMBC				*i* S	Sg	06 08 13.8	+0.2
HMBC				IAML		06 08 17.9	
	comp=N,4μm,0.4s						
PATCX	Punta Patache	0.97	136	⇓*i*P	Pb	06 08 02.3	-0.2
PATCX				*i* S	Sb	06 08 14.6	-1.0
PATCX				IAML		06 08 22.4	
	comp=E,2μm,0.5s						
MNMC	Minye Minye	1.56	51	⇑*i*P	Pb	06 08 13.5	+1.0
MNMC				⇓*i*S	Sg	06 08 34.5	+1.2
PB01	IPOC Station P	1.59	125	⇑*i*P	Pn	06 08 12.3	+0.4
PB01				*i* S	Sb	06 08 32.4	-1.1
PB08	IPOC Station P	1.62	91	⇑*i*P	Pb	06 08 13.7	0.0
PB08				*i* S	Sg	06 08 34.8	-0.5
PB08				IAML		06 08 39.6	
	comp=N,914nm,0.3s						
PB07	IPOC Station P	1.85	150	⇑*i*P	Pn	06 08 14.9	-0.6
PB07				*i* S	Sn	06 08 38.4	-1.0
PB07				IAML		06 08 47.9	
	comp=E,1μm,0.4s						
PB09	IPOC Station P	2.26	138	⇑*i*P	Pn	06 08 22.3	+1.1
PB09				*i* S	Sb	06 08 53.4	+0.6
PB04	IPOC Station P	2.31	163	⇑*i*P	Pn	06 08 20.7	-1.2
PB04				*i* S	Sb	06 08 55.3	+1.2
PB04				IAML		06 09 06.2	
	comp=N,659nm,0.7s						
PB05	IPOC Station P	2.79	167	⇑*i*P	Pn	06 08 26.7	-1.8
PB05				IAML		06 09 22.9	
	comp=N,253nm,0.1s						
PB06	IPOC Station P	2.85	155	⇑*i*P	Pn	06 08 28.3	-1.0
LVC	Limon Verde	3.08	144	Pn	Pn	06 08 33.9	+1.2
	comp=N,10nm,0.3s,baz=323,slow=11,SNR=79						
LVC				Sn	Sn	06 09 09.4	-0.7
	comp=N,14nm,0.3s,baz=334,slow=4.0,SNR=5.4						
LVC				Lg	Lg	06 09 20.1	
	comp=N,62nm,0.3s,baz=41,slow=17,SNR=20						
LVC				LR	LR	06 09 29.9	
	comp=N,55nm,19.7s,baz=320,slow=35						
LPAZ	La Paz	4.62	35	Pn	Pb	06 09 01.6	-3.3
	comp=N,2.9nm,0.3s,baz=227,slow=5.5,SNR=17						
LPAZ				LR	LR	06 10 19.0	
	comp=N,38nm,18.7s,baz=253,slow=34						
NNA	Nana	9.91	324	LR	LR	06 13 49.8	
	comp=N,22nm,21.4s,baz=154,slow=37						
SIV	San Ignacio	10.19	68	Pn	Pn	06 10 09.6	-0.4
	comp=N,1.0nm,0.3s,baz=261,slow=11,SNR=22						
SIV				LR	LR	06 14 42.0	
	comp=N,119nm,20.9s,baz=255,slow=42						
H03N1	Juan Fernandez	15.07	207	T	T	06 26 40.3	
	baz=32,slow=72,SNR=38						
H03N2	Juan Fernandez	15.08	207	T	T	06 26 40.0	
	baz=32,slow=72,SNR=41						
H03N3	Juan Fernandez	15.09	207	T	T	06 26 58.7	
	baz=32,slow=72,SNR=36						
PLCA	Paso Flores	20.55	179	P	P	06 12 23.9	+1.4
	comp=N,2.2nm,0.9s,baz=2.3,slow=7.8,SNR=4.9						
PTGA	Pitinga	22.03	30	P	P	06 12 38.3	-0.2
	comp=N,1.6nm,0.3s,baz=213,slow=19,SNR=6.0						
PTGA				LR	LR	06 20 16.5	
	comp=N,33nm,18.1s,baz=123,slow=34						
BDFB	Brasilia	22.20	82	P	P	06 12 41.8	+1.3
	comp=N,1.1nm,0.4s,baz=243,slow=4.5,SNR=2.0						
TORD	Torodi Ar. Bea	78.64	71	P	P	06 19 46.1	-0.4
	comp=N,1.5nm,0.7s,baz=258,slow=5.4,SNR=4.1						
YKA	Yellowknife Ar	89.29	341	P	P	06 20 41.2	+1.6
	comp=N,0.4nm,0.6s,baz=134,slow=4.9,SNR=9.1						
H11S2	WAKE ISLAND Hy	125.86	279	T	T	08 46 09.7	
	baz=101,slow=74,SNR=40						
H11S1	WAKE ISLAND Hy	125.87	279	T	T	08 46 11.3	
	baz=101,slow=74,SNR=14						
H11S3	WAKE ISLAND Hy	125.88	279	T	T	08 46 16.4	
	baz=101,slow=74,SNR=17						
ZALV	Zalesovo Beam	141.45	23	PKP	PKiKP	06 27 16.7	-0.9
	comp=N,0.3nm,0.3s,baz=351,slow=4.8,SNR=2.2						
MKAR	Makanchi Array	145.55	33	PKPbc	PKPab	06 27 23.6	+0.9
	comp=N,1.3nm,0.7s,baz=325,slow=3.5,SNR=14						

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*IDC **12** 06:08:51.0±1.4, 56°.33N×169°.12W, h0^{km}, mb3.9/10, mb1 4.1/13, mb1mx3.8/61, mbtmp3.9/13, ML3.4/3, MS3.4/3, Ms1 3.4/3, ms1mx2.8/42, Error ellipse: s-maj=41.2km s-min=14.3km az=172.0*
*AEIC **12** 06:08:51±3.1, 56°.50N±0°.04×169°.23W±0°.09, h20^{km}±5^{km}, Error ellipse: s-maj=7.8km s-min=4.5km az=58.0*
*NEIC **12** 06:08:52.2±1.3, 56°.56N±0°.05×169°.3W±0°.1, h10^{km}±1^{km}, mb4.3/10, ML4.0(AEIC), Error ellipse: s-maj=11.3km s-min=5.7km az=230.0*
ISC 12 06:08:52.8±0.5, **56°.55N**±0°.06×**169°.24W**±0°.06, **h10**^{km}, **n69**, σ**0^{s}97**/72, **mb3.8**/8, **Pribilof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPIA	Saint Paul Isl	0.84	319		Pg	06 09 09.0	0.0
SPIA	Saint Paul Isl	0.84	319		Sb	06 09 21.4	+0.6
MSW	Makushin Switc	2.99	151		Pn	06 09 40.5	+0.4
MSW					Sn	06 10 15.3	-0.7
AKGG	Akutan Green G	2.99	140		Pn	06 09 39.8	-0.4
AKGG					Sn	06 10 16.3	+0.1
AKRB	Akutan Reef Bi	3.02	142		Pn	06 09 41.0	+0.3
AKRB					Sn	06 10 16.8	0.0
AKLV	Akutan Long Va	3.04	141		Pn	06 09 41.2	+0.4
MNAT	Makushin Natee	3.04	150		Pn	06 09 40.9	0.0
MAPS	Pakushin South	3.04	153		Pn	06 09 40.8	-0.1
MAPS					Sn	06 10 17.0	-0.3
MGOD	Makushin Gods	3.07	153		Pn	06 09 42.5	+1.1
AKBBA	Akutan Broad B	3.10	141		Pn	06 09 41.9	+0.3
AKUT	Akutan	3.12	139		Pn	06 09 42.9	+0.9
AKSA	Akutan Strait	3.15	139		Pn	06 09 43.0	+0.6
OKFG	Magazine Ridge	3.23	166		Pn	06 09 42.9	-0.6
OKFG					Sn	06 10 22.3	+0.3
OKSO	Okmok South	3.26	169		Pn	06 09 43.8	0.0
SSBA	Shishaldin	3.40	119		Pn	06 09 45.6	-0.2
SSLN	Shishaldin Nor	3.44	118		Pn	06 09 46.2	-0.2
NIKH	Nikolski High	3.59	176	Pn	Pn	06 09 48.0	-0.4
FALS	False Pass	3.70	115		Pn	06 09 50.5	+0.5
SDPT	Sand Point	5.07	100		Pn	06 10 06.9	-1.8
CNBA	Chernabura Isl	5.73	104	Pn	Pn	06 10 13.9	-3.8
CHGN	Chignik	6.01	88	Pn	Pn	06 10 19.9	-1.7
ADK	Adak	6.39	226	Pn	Pn	06 10 25.6	-1.3
GAMB	Gambell	7.36	351		Pn	06 10 38.7	-1.3
ANM	Nome	8.27	12	Pn	Pn	06 10 52.8	+0.3
SVW2	Sparrevohn	8.42	52		Pn	06 10 53.6	-1.1
OHAK	Old Harbor	8.76	79	Pn	Pn	06 10 59.4	+0.1
TNA	Tin City	9.07	3		Pn	06 11 01.9	-1.6
KDAK	Kodiak Island	9.13	75	Pn	Pn	06 11 04.3	-0.2
	1.5nm,0.3s,baz=308,slow=11,SNR=8.0						
KDAK	Kodiak Island	9.13	75	Pn	Pn	06 11 04.1	-0.3
TTA	Tatalina	9.23	41		Pn	06 11 03.8	-2.1
RSO	Redoubt South	9.47	59		Pn	06 11 09.2	-0.1
CNPM	China Poot	9.99	65	Pn	Pn	06 11 17.4	+1.1
BRLK	Bradley Lake	10.21	64	Pn	Pn	06 11 18.6	-0.6
SKT	Skwentna	10.55	52	Pn	Pn	06 11 22.4	-1.4
SUA	Susitna One	10.71	55	Pn	Pn	06 11 27.1	+0.9
GHO	Glory Hole Cre	11.64	55	Pn	Pn	06 11 39.2	+0.4
KNK	Knik Glacier	11.75	57	Pn	Pn	06 11 41.4	+1.2
SML	Sawmill	11.92	55	Pn	Pn	06 11 42.9	+0.3
KLU	Klutina	12.95	58	Pn	Pn	06 11 56.3	-0.4
M24K	Tolsona, Glenn	12.98	55	Pn	Pn	06 11 58.1	+1.0
PAX	Paxson	13.54	52	Pn	Pn	06 12 06.1	+1.4
ILAR	Eielson Array	13.64	44	Pn	Pn	06 12 06.5	+0.6
	0.1nm,0.3s,baz=227,slow=10,SNR=11						
ILAR				LR	LR	06 17 28.0	
	comp=Z,127nm,19.3s,baz=246,slow=38						
GLB	Gilahina Butte	13.94	59	Pn	Pn	06 12 10.1	-0.1
MCARA	McCarthy VSAT	14.30	59	Pn	Pn	06 12 16.5	+1.4
BCAR	Beaver Creek A	15.18	53	Pn	Pn	06 12 26.1	-1.0
BMAR	Burnt Mountain	15.76	36		Pn	06 12 34.3	-0.3
DAWY	Dawson	16.45	51	Pn	Pn	06 12 44.2	+0.7
HYT	Haines Junctio	16.94	62		Pn	06 12 50.1	+0.4
HYT				IAmb	IAmb	06 12 56.7	
	comp=Z,27nm,1.5s						
WHY	Whitehorse	18.23	63		P	06 13 05.8	0.0
PETK	Petropavlovsk-	19.25	274	P	P	06 13 17.7	+0.7
	comp=Z,0.4nm,0.3s,baz=95,slow=14,SNR=6.6						
INK	Inuvik	19.93	40	P	P	06 13 24.1	-0.1
	comp=Z,11nm,0.8s,baz=244,slow=11,SNR=6.7						
INK	Inuvik	19.93	40		P	06 13 24.2	-0.1
INK				IAmb	IAmb	06 13 29.3	
	comp=Z,11nm,0.8s						
SEY	Seymchan	20.11	304	P	Pn	06 13 28.3	+0.1
	comp=Z,6.2nm,0.9s,baz=101,slow=11,SNR=8.3						
DLBC	Dease Lake	20.96	68	P	P	06 13 36.0	+0.4
	comp=Z,6.7nm,1.1s,baz=297,slow=16,SNR=5.2						
DLBC	Dease Lake	20.96	68	P	P	06 13 36.2	+0.6
DLBC				IAmb	IAmb	06 13 41.0	
	comp=Z,18nm,1.2s						
YKA	Yellowknife Ar	27.59	55	P	P	06 14 39.5	-0.1
	comp=Z,0.9nm,0.8s,baz=280,slow=8.7,SNR=12						
YKA				PcP	PcP	06 17 57.1	+0.3
	comp=Z,0.6nm,0.8s,baz=286,slow=1.8,SNR=5.3						
PDAR	Pinedale Array	39.72	84	P	P	06 16 25.1	-0.2
	comp=Z,0.2nm,0.6s,baz=271,slow=4.1,SNR=2.6						
X18A	Snowflake	45.30	93	P	P	06 17 10.9	+0.2
X18A				IAmb	IAmb	06 17 11.9	
	comp=Z,4.5nm,0.8s						
SONM	Songino Array	49.31	298	P	P	06 17 43.7	+1.9
	comp=Z,0.6nm,0.8s,baz=46,slow=6.9,SNR=6.9						
MKAR	Makanchi Array	61.03	312	P	P	06 19 06.7	+0.6
	comp=Z,0.6nm,0.9s,baz=41,slow=3.9,SNR=4.8						
HNR	Honiara	70.50	212	LR	LR	06 43 52.0	
	comp=Z,33nm,21.8s,baz=22,slow=30						
AKASG	Malin Array Be	72.03	348	P	P	06 20 15.8	-0.5
	comp=Z,2.0nm,0.5s,baz=14,slow=5.8,SNR=5.9						
AKASG	Malin Array Be	72.03	348	P	P	06 20 15.4	-0.9
AKBB	Malin Array Si	72.03	348	P	P	06 20 15.9	-0.4
CMAR	Chiang Mai Arr	75.80	282	P	P	06 20 40.2	+1.4
	comp=Z,0.9nm,0.3s,baz=19,slow=6.7,SNR=6.6						
CMAR	Chiang Mai Arr	75.80	282	P	P	06 20 37.8	-1.1
MYLDM	Lahad Datu	75.95	258	P	P	06 20 37.7	-2.1
BRTR	Keskin Array B	82.16	342	LR	LR	07 04 08.2	
	comp=Z,20nm,18.6s,baz=320,slow=40						
ESDC	Sonseca Array	83.34	11	P	P	06 21 20.1	+0.4
	comp=Z,0.4nm,0.5s,baz=352,slow=9.0,SNR=4.6						

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*IDC **12** 06:16:18.3±3.1, 11°.11S×161°.94E, h52^{km}±28^{km}, mb3.5/8, mb1 3.8/10, mb1mx3.6/35, mbtmp3.8/10, ML3.9/2, MS3.4/9, Ms1 3.4/9, ms1mx3.1/35, Error ellipse: s-maj=29.1km s-min=22.8km az=117.0*
ISC 12 06:16:16.8±0.8, **11°.1S**±0°.1×**162°.1E**±0°.1, **h36**^{km}, **n15**, σ**1^{s}71**/12, **mb3.7**/8, **MS3.4**/6, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	2.68	308	P	Pn	06 16 57.5	+0.1
	52nm,0.3s,baz=154,slow=2.5,SNR=5.6						
HNR				S	Sn	06 17 31.7	+3.1
	490nm,0.3s,baz=160,slow=17,SNR=10.0						
HNR				LR	LR	06 18 15.4	
	comp=Z,343nm,19.5s,baz=108,slow=46						
DZM	Mont Dzumac	11.69	160	P	Pn	06 19 03.0	+1.8
	0.3nm,0.3s,baz=34,slow=10,SNR=13						
DZM				LR	LR	06 22 49.4	
	comp=Z,102nm,20.5s,baz=5.0,slow=33						
DZM	Mont Dzumac	11.69	160	*e*Pn	Pn	06 19 03.5	+2.3
	1.7nm,0.2s						
DZM				*e*LR	LR	06 21 56.8	
	comp=Z,150nm,22.9s						
PMG	Port Moresby	14.79	275	LR	LR	06 24 55.8	
	comp=Z,147nm,20.3s,baz=151,slow=35						
STKA	Stephens Creek	28.04	219	P	P	06 22 03.9	-0.9
	2.1nm,0.8s,baz=56,slow=16,SNR=3.1						
STKA				LR	LR	06 33 14.3	
	comp=Z,149nm,18.4s,baz=22,slow=36						
WRA	Warramunga Arr	28.12	248	P	P	06 22 04.5	-1.1
	0.6nm,0.5s,baz=77,slow=9.5,SNR=7.1						
WRA				LR	LR	06 33 10.0	
	comp=Z,126nm,18.7s,baz=95,slow=36						
ASAR	Alice Springs	29.60	241	P	P	06 22 16.9	-1.9
	0.5nm,0.6s,baz=66,slow=10.0,SNR=6.1						
ASAR				LR	LR	06 33 08.8	
	comp=Z,87nm,19.8s,baz=55,slow=34						
FITZ	Fitzroy Crossi	35.91	254	LR	LR	06 37 36.7	
	comp=Z,60nm,18.8s,baz=92,slow=36						
BATI	Baumata	37.76	268	LR	LR	06 42 06.8	
	comp=Z,46nm,18.8s,baz=26,slow=41						
KSRS	Korea Array	57.95	328	LR	LR	06 49 54.4	
	comp=Z,14nm,19.7s,baz=120,slow=35						
SONM	Songino Array	76.61	325	P	P	06 28 03.7	-0.2
	0.4nm,0.6s,baz=123,slow=5.3,SNR=3.1						
ILAR	Eielson Array	84.72	20	P	P	06 28 47.0	+0.2
	0.3nm,0.5s,baz=244,slow=5.0,SNR=8.8						
NVAR	Mina Array Bea	88.80	51	P	P	06 29 07.7	+0.2
	0.1nm,0.4s,baz=246,slow=7.8,SNR=2.2						
MKAR	Makanchi Array	91.11	317	P	P	06 29 16.7	-1.1
	0.4nm,0.7s,baz=89,slow=5.9,SNR=2.6						
YKA	Yellowknife Ar	96.66	28	P	P	06 29 42.0	-0.9
	0.1nm,0.3s,baz=257,slow=5.6,SNR=3.0						

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*VAO **12** 06:17:47.3±0.5, 23°.18S×67°.19W, h269^{km}±5^{km}, mb3.9*
*IDC **12** 06:17:47.3±1.0, 23°.08S×66°.60W, h198^{km}±13^{km}, mb3.7/2, mb1 3.6/8, mb1mx3.3/32, mbtmp4.0/8, MS3.3/1, Ms1 3.3/1, ms1mx2.4/28, Error ellipse: s-maj=18.8km s-min=16.7km az=147.0*
*GUC **12** 06:17:48.6±0.5, 23°.10S×67°.12W, h258^{km}±9^{km}, ML4.0*
ISC 12 06:17:47.3±0.6, **23°.07S**±0°.04×**67°.03W**±0°.08, **h248**^{km}±10^{km}, **n65**, σ**1^{s}11**/80, **11C**, **Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	1.80	285	P	Pn	06 18 29.0	+0.7
	30nm,0.3s,baz=92,slow=5.7,SNR=292						
LVC				S	S	06 18 59.5	-0.8
	19nm,0.3s,baz=259,slow=20,SNR=17						
LVC	Limon Verde	1.80	285	*e*P	Pn	06 18 29.0	+0.7
PB15	IPOC Station P	2.25	266	⇑*i*P	Pn	06 18 33.5	+1.3
PB15				*i* S	S	06 19 07.8	+0.3
PB06	IPOC Station P	2.37	278	*e*P	Pn	06 18 34.6	+1.3
PB06				*i* S	S	06 19 09.5	-0.1
PB06				IAML		06 19 14.0	
	comp=N,320nm,0.2s						
PB09	IPOC Station P	2.41	301	⇑*i*P	Pn	06 18 35.4	+1.6
PB09				*e*S	S	06 19 11.1	+0.8
PB09				IAML		06 19 15.7	
	comp=E,213nm,0.4s						
PB05	IPOC Station P	2.93	274	⇑*i*P	Pn	06 18 40.6	+1.5
PB05				*i* S	S	06 19 19.1	-0.8
PB07	IPOC Station P	2.96	296	⇑*i*P	Pn	06 18 41.0	+1.5
PB07				*i* S	S	06 19 20.0	-0.7
PB04	IPOC Station P	2.97	284	*e*P	Pn	06 18 41.0	+1.4
PB04				*e*S	S	06 19 20.8	-0.1
PB01	IPOC Station P	3.05	311	*i* P	Pn	06 18 41.7	+1.4
PB01				*e*S	S	06 19 22.1	-0.1
GO02	Mina Guanaco	3.13	228	⇑*i*P	Pn	06 18 42.3	+0.9
GO02				*i* S	S	06 19 24.5	+0.4
PB10	IPOC Station P	3.27	262	⇑*i*P	Pn	06 18 44.2	+1.6
PB10				*e*S	S	06 19 26.1	-0.4
PB14	IPOC Station P	3.46	243	⇑*i*P	Pn	06 18 46.1	+1.1
PB14				*i* S	S	06 19 29.3	-1.4
PB08	IPOC Station P	3.52	325	⇑*i*P	Pn	06 18 48.0	+2.0
PB08				*e*S	S	06 19 33.2	+0.8
PATCX	Punta Patache	3.67	307	*e*P	Pn	06 18 48.4	+1.2
PATCX				*i* S	S	06 19 34.1	-0.7
HMBC	Humberstone	3.85	316	*e*P	Pn	06 18 49.9	+0.5
HMBC				*i* S	S	06 19 37.5	-1.1
AC02	Maricunga	4.20	207	⇑*i*P	Pn	06 18 54.3	+0.4
AC02				*i* S	S	06 19 45.9	-0.9
AC01	Pan de Azucar	4.46	226	⇑*i*P	Pn	06 18 56.4	-0.1
AC01				*i* S	S	06 19 48.9	-2.7
MNMC	Minye Minye	4.60	328	⇑*i*P	Pn	06 18 59.6	+1.1
MNMC				*i* S	S	06 19 54.1	-0.9
LPAZ	La Paz	6.83	351	P	Pn	06 19 28.5	+2.0
	comp=E,1.3nm,0.3s,baz=173,slow=9.0,SNR=18						
LPAZ				S	S	06 20 45.0	-0.9
	comp=E,0.2nm,0.3s,baz=316,slow=21,SNR=3.8						
LPAZ	La Paz	6.83	351	*e*P	Pn	06 19 28.4	+1.8
SIV	San Ignacio	9.01	40	P	Pn	06 19 50.5	-3.1
	comp=E,1.1nm,0.3s,baz=227,slow=10,SNR=28						
CPUP	Villa Florida	9.40	112	P	Pn	06 19 53.2	-5.1
	comp=E,0.1nm,0.3s,baz=315,slow=11,SNR=3.4						
AQDB	Aquidauana	10.84	78	*e*P	Pn	06 20 16.9	+0.4
VILB	Vilhena	11.97	34	*e*P	P	06 20 33.0	-0.9

TRCB	Terra Rica	13.27	92	eP	P	06 20 48.8	+0.6
PTGB	Pitanga	13.79	100	eP	P	06 20 54.6	+0.5
ITAB	Concordia	14.11	110	eP	P	06 20 57.4	-0.1
CPSB	Cacapava Do Su	14.16	124	eP	Pn	06 20 55.9	-1.6
NNA	Nana	14.45	318	LR	LR	06 27 47.7	
	comp=E,116nm,19.1s,baz=116,slow=41						
PCMB	Pacaembu	14.66	87	eP	Pn	06 21 04.8	+1.1
PLTB	Pedras Altas	14.72	129	eP	Pn	06 21 04.6	+0.3
CNLB	Canela	15.79	117	eP	P	06 21 14.8	-1.3
ITRB	Iturama	15.88	81	eP	P	06 21 17.1	0.0
FRTB	Fartura	16.06	94	eP	P	06 21 19.1	0.0
ARAG	Araguaiana, MT	16.11	66	eP	Pn	06 21 20.4	-0.6
CZSB	Cruzeiro do Su	16.20	339	eP	P	06 21 18.3	-2.3
BB19B	Bebedouro	17.27	87	eP	P	06 21 33.3	+1.0
PLCA	Paso Flores	17.86	189	P	Pn	06 21 42.4	+1.1
	comp=E,0.2nm,0.3s,baz=20,slow=10,SNR=7.6						
SPB	Sao Paulo	18.01	96	eP	P	06 21 40.4	+0.2
PET01	Itanhaem-SP	18.14	98	eP	P	06 21 41.1	-0.5
IPMB	Ipameri, GO	18.33	77	eP	P	06 21 44.0	+0.1
VAO	Valinhos	18.47	94	eP	P	06 21 44.8	-0.6
SNDB	Serra Nova Dou	18.61	56	eP	P	06 21 46.4	-0.4
BDFB	Brasilia	19.39	71	P	P	06 21 55.1	-0.2
	comp=E,0.9nm,0.3s,baz=243,slow=12,SNR=19						
NPGB	Novo Progresso	19.50	37	eP	P	06 21 55.5	-0.9
PARB	Paraibuna	19.68	95	eP	P	06 21 58.0	-0.3
MACA	Manacapuru-AM	20.73	18	eP	P	06 22 09.2	-0.2
BSCB	Bom Sucesso	20.73	89	eP	P	06 22 09.4	-0.1
PEXB	Peixe	20.89	62	eP	P	06 22 10.5	-0.6
MAN01	Angra dos Reis	21.24	94	eP	P	06 22 14.0	-0.6
ITTB	Itaituba	21.57	32	eP	P	06 22 16.8	-0.9
VAS01	Vassouras-RJ	21.77	93	eP	P	06 22 19.9	+0.2
DUB01	Friburgo-RJ	22.78	92	eP	P	06 22 27.9	-1.0
JANB	Januaria	22.88	74	eP	P	06 22 29.7	-0.1
PTGA	Pitinga	23.25	18	eP	P	06 22 35.0	+2.0
SMTB	Santa Maria do	23.39	56	eP	P	06 22 34.8	+0.5
SDBA	SAO DESIDERIO	23.56	67	eP	P	06 22 35.8	-0.1
PRPB	Parauapebas	23.61	47	eP	P	06 22 37.2	+0.8
SJMB	Sao Joao De Ma	24.52	85	eP	P	06 22 44.3	-0.3
NAN01	Guarapari, ES	25.72	83	eP	P	06 22 55.0	-0.4
GDU01	Guandu, BA	27.62	75	eP	P	06 23 12.1	-0.2
SDV	Santo Domingo	31.96	353	eP	P	06 23 49.2	-1.5
TORD	Torodi Ar. Bea	76.26	69	P	P	06 29 11.2	+2.0
	comp=E,1.0nm,0.4s,baz=258,slow=4.3,SNR=2.1						
YKA	Yellowknife Ar	93.25	340	P	P	06 30 38.8	+5.6
	comp=E,0.1nm,0.5s,baz=132,slow=4.3,SNR=5.1						
MKAR	Makanchi Array	145.82	39	PKPbc	PKiKP	06 37 02.4	+1.7
	comp=E,1.0nm,0.7s,baz=319,slow=3.1,SNR=11						

IDC 12 06:19:13.9±4.3**, 1°.17N×98°.39E, h0^{km}, mb3.6**/4**, mb1 3.7**/4**, mb1mx3.5**/38**, mbtmp3.6**/4**, Error ellipse: s-maj=171.2km s-min=31.4km az=56.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	41.02	123	P	P	06 26 59.0	-0.2
	0.2nm,0.5s,baz=302,slow=9.2,SNR=1.6						
SONM	Songino Array	47.00	7	P	P	06 27 47.3	+0.4
	0.6nm,0.6s,baz=201,slow=7.6,SNR=3.6						
MKAR	Makanchi Array	47.56	345	P	P	06 27 51.0	-0.2
	0.4nm,0.4s,baz=153,slow=8.8,SNR=9.6						
ZALV	Zalesovo Beam	53.78	350	P	P	06 28 37.7	-0.3
	0.9nm,0.4s,baz=171,slow=6.1,SNR=5.0						

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*SOF **12** 06:21:50.6, 41°.74N×23°.83E, h14^{km}, MD2.9*
*ATH **12** 06:21:51.6, 41°.71N×23°.81E, h8^{km}±3^{km}, ML2.3/7, Error ellipse: s-maj=4.9km s-min=1.3km az=177.0*
*SKO **12** 06:21:52.2, 41°.73N×23°.81E, h0^{km}*
*BEO **12** 06:21:52.9±0.3, 41°.71N×23°.81E, h0^{km}, ML2.3/11*
ISC 12 06:21:50.8±1.1**, 41°.70N**±0°.02×**23°.77E**±0°.02**, h12**^{km}±10^{km}**, n47, σ1^{s}40**/67**, 11C-10D, Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMB	Musomiste	0.12	194	iP	Pb	06 21 55.4	+0.4
NVR	Nevrokopi	0.36	168	P	Pb	06 21 58.5	-0.7
NVR				S	Sb	06 22 03.8	-0.9
NVR				AML	AML	06 22 04.6	
	comp=E,861µm,0.3s						
NVR				AML	AML	06 22 05.0	
	comp=N,810µm,0.2s						
KKB	Krupnik	0.54	288	iP	Pb	06 22 01.8	-0.4
SRS	Serrai	0.60	193	P	Pb	06 22 03.4	+0.1
SRS				AML	AML	06 22 14.6	
	comp=N,479µm,0.1s						
SRS				AML	AML	06 22 17.9	
	comp=E,422µm,0.1s						
SRS	Serrai	0.60	193	ePg	Pb	06 22 03.3	+0.1
SRS				eSg	Sb	06 22 12.2	+0.5
SRS	Serrai	0.60	193	⇑iPg	Pb	06 22 03.5	+0.3
SRS				iSg	Sb	06 22 12.4	+0.7
RZN	Rozhen	0.71	91	iP	Pg	06 22 04.3	-0.4
PLD	Plovdiv	0.81	60	ePg	Pn	06 22 08.1	+0.1
PLD				eSg	Sg	06 22 16.7	-0.3
KNT	Kendrikon	0.85	231	P	Pn	06 22 08.0	-0.6
KNT				S	Sn	06 22 19.9	-1.1
KNT				AML	AML	06 22 21.2	
	comp=E,272µm,0.1s						
KNT				AML	AML	06 22 22.3	
	comp=N,406µm,0.3s						
KNT	Kendrikon	0.85	231	iPg	Pn	06 22 07.9	-0.7
KNT				iSg	Sn	06 22 19.7	-1.3
KVLA	Kavala	0.90	148	P	Pg	06 22 07.9	-0.2
PGB	Panagyurishte	0.90	19	iP	Pg	06 22 07.2	-1.0
KAVA	Kavala	0.90	141	P	Pg	06 22 07.9	-0.3
KAVA				AML	AML	06 22 23.6	
	comp=E,540µm,0.2s						
KAVA				AML	AML	06 22 24.5	
	comp=N,895µm,0.4s						
SOH	Sokhos	0.93	200	P	Pn	06 22 09.4	-0.4
SOH				AML	AML	06 22 25.9	
	comp=N,515µm,0.4s						
SOH				AML	AML	06 22 26.2	
	comp=E,420µm,0.4s						
SOH	Sokhos	0.93	200	⇓iPg	Pn	06 22 09.4	-0.4
VAY	Valandovo	0.98	247	ePg	Pn	06 22 10.9	+0.6
VAY				eSg	Sn	06 22 25.8	+1.7
VAY	Valandovo	0.98	247	iPg	Pn	06 22 11.3	+1.0
VAY				iSg	Sn	06 22 25.3	+1.2
VAY				eLg	Lg	06 22 26.5	
	comp=N,46nm,0.5s						
VAY				eLg	Lg	06 22 27.0	
	comp=E,20nm,0.4s						
VTS	Vitosha	1.00	337	ePg	Pg	06 22 09.6	-0.4
VTS				eSg	Sn	06 22 24.7	-0.2
VTS	Vitosha	1.00	337	⇑S	Sn	06 22 27.1	+2.2
VTS	Vitosha	1.00	337	iP	Pg	06 22 09.6	-0.4
VTS	Vitosha	1.00	337	⇑iPg	Pg	06 22 09.7	-0.4
STIP	Stip	1.18	270	iPg	Pb	06 22 10.3	-2.9
STIP				iSg	Sb	06 22 24.3	-4.2
HORT	Hortiatis	1.21	205	P	Pg	06 22 14.5	+0.4
HORT				AML	AML	06 22 33.3	
	comp=E,171µm,0.3s						
HORT				AML	AML	06 22 34.0	
	comp=N,254µm,0.4s						
THE	Thessaloniki	1.23	210	P	Pg	06 22 14.8	+0.3
THE	Thessaloniki	1.23	210	⇓iPg	Pg	06 22 14.9	+0.5
THAS	Thassos island	1.31	146	P	Pn	06 22 15.1	+0.2
PLG	Polygyros	1.35	190	P	Pg	06 22 16.6	-0.1
DIM	Dimitrovgrad	1.36	75	iP	Pn	06 22 16.1	+0.4
RDO	Rodhopi	1.44	112	P	Pb	06 22 17.8	+0.2
RDO				AML	AML	06 22 39.2	
	comp=E,465µm,0.2s						
RDO				AML	AML	06 22 39.3	
	comp=N,370µm,0.2s						
ZAPS	Zavoj	1.78	332	ePg	Pg	06 22 25.5	+0.5
ZAPS				eSg	Sg	06 22 50.3	+2.2
PLVB	Pleven	1.80	20	⇑S	Sg	06 22 49.5	+0.8
SMTH	Samothraki Isl	1.81	132	P	Pb	06 22 23.7	-0.3
BARS	Barje	1.83	308	ePn	Pg	06 22 38.3	+12
BARS				eSg	Sg	06 23 19.7	+30
ALN	Alexandroupoli	1.90	114	P	Pb	06 22 25.3	-0.1
BLKB	Belogradchik	2.08	338	ePn	Pg	06 22 29.9	-0.8
BLKB				eSg	Sg	06 22 58.8	+1.1
BLKB	Belogradchik	2.08	338	⇓S	Sg	06 22 57.2	-0.5
ZAGS	Zajecar	2.39	332	ePn	Pb	06 22 34.6	+0.8
ZAGS				eSg	Sg	06 23 09.2	+1.5
BOVS	Bovan	2.46	322	⇓P	Pg	06 22 40.8	+2.9
BOVS				⇑S	Sg	06 23 08.5	-1.3
PUNG	Punghina	2.65	347	⇓P	Pg	06 22 42.0	+0.4
PUNG				⇑S	Sb	06 23 12.0	+1.4
GRUS	Gruza	3.13	315	eSg	Sg	06 23 32.7	+1.3
GRUS	Gruza	3.13	315	⇑P	Pg	06 22 51.4	+0.6
GRUS				⇓S	Sb	06 23 25.6	+1.0
IVAS	Ivanjica	3.26	306	ePn	Pb	06 22 46.1	-2.5
IVAS				eSg	Sg	06 23 36.4	+0.9
HERR	Herculane	3.33	343	⇓P	Pg	06 22 52.3	-2.3
HERR				⇓S	Sb	06 23 28.6	-1.6
MDVR	Moldovita	3.42	335	⇑P	Pb	06 22 52.6	+1.1
MDVR				⇑S	Sb	06 23 30.8	-2.3
TRUS	Trudelj	3.52	317	ePn	Pn	06 22 48.6	+3.2
GZR	Gura Zlata	3.76	349	⇑P	Pb	06 22 56.8	-0.4
GZR				⇓S	Sb	06 23 40.0	-2.7
BZS	Buzias	4.21	339	⇓P	Pb	06 23 04.7	-0.1
BZS				⇑S	Sb	06 23 52.0	-3.6

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*NEIC **12** 06:24:10.7±2.1, 15°.17S±0°.06×70°.75W±0°.09, h179^{km}±5^{km}, mb4.4/69, Error ellipse: s-maj=12.1km s-min=8.4km az=100.0*
*IDC **12** 06:24:11.8±0.8, 15°.04S×70°.58W, h187^{km}±7^{km}, mb4.0/13, mb1 4.2/20, mb1mx4.1/37, mbtmp4.6/20, MS3.0/3, Ms1 3.0/3, ms1mx2.6/32, Error ellipse: s-maj=14.0km s-min=8.9km az=41.0*
*VAO **12** 06:24:12.8±0.6, 15°.18S×70°.61W, h201^{km}±4^{km}, mb4.6*
ISC 12 06:24:11.1±0.4**, 15°.17S**±0°.05×**70°.65W**±0°.06**, h189**^{km}**, n173, σ1^{s}54**/163**, mb4.3**/42**, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	2.67	115	P	Pn	06 24 59.3	+2.4
	baz=300,slow=11						
LPAZ				S	Sn	06 25 34.1	+1.6
	89nm,0.3s,baz=184,slow=24,SNR=20						
LPAZ				LR	LR	06 25 36.9	
	comp=Z,38nm,20.6s,baz=190,slow=32						
LPAZ	La Paz	2.67	115	eP	Pn	06 24 59.5	+2.6
LPAZ				eS	Sn	06 25 34.4	+1.9
AP01	Chacalluta	3.19	175		Pn	06 25 02.9	+0.3
AP01				Sn	Sn	06 25 41.7	-1.1
MNMC	Minye Minye	4.06	166		Pn	06 25 14.2	+0.6
PSGCX	Pisagua	4.43	174	Pn	Pn	06 25 17.3	-0.8
PB08	IPOC Station P	5.14	164		Pn	06 25 27.9	+0.4
TA01	Diego Aracena	5.38	175	Pn	Pn	06 25 29.2	-1.0
PATCX	Punta Patache	5.64	175		Pn	06 25 32.5	-1.1
PB01	IPOC Station P	5.94	169		Pn	06 25 36.8	-0.8
PB07	IPOC Station P	6.56	174		Pn	06 25 45.2	-0.5
PB09	IPOC Station P	6.72	169		Pn	06 25 47.6	-0.2
NNA	Nana	6.80	297	P	Pn	06 25 48.0	-0.8
	47nm,0.3s,baz=132,slow=11,SNR=90						
NNA	Nana	6.80	297	Pn	Pn	06 25 48.2	-0.6
ETMB	Extrema	6.86	40	eP	Pn	06 25 49.6	0.0
PB04	IPOC Station P	7.14	176		Pn	06 25 52.4	-0.9
PB06	IPOC Station P	7.56	172		Pn	06 25 57.9	-0.9
LVC	Limon Verde	7.58	168	P	Pn	06 25 59.3	+0.1
	40nm,0.3s,baz=342,slow=11,SNR=366						
LVC				S	Sn	06 27 19.9	-5.1
	34nm,0.3s,baz=219,slow=21,SNR=25						
LVC	Limon Verde	7.58	168	Pn	Pn	06 25 59.1	-0.1
LVC	Limon Verde	7.58	168	eP	Pn	06 25 59.4	+0.1
PB15	IPOC Station P	8.07	172		Pn	06 26 04.9	-0.6
PB10	IPOC Station P	8.30	179	Pn	Pn	06 26 07.4	-0.9
SIV	San Ignacio	9.26	96	P	Pn	06 26 19.9	-1.1
	3.1nm,0.3s,baz=288,slow=11,SNR=53						
SIV				S	Sn	06 28 02.2	-2.5
	2.9nm,0.3s,baz=163,slow=12,SNR=4.9						
PB14	IPOC Station P	9.41	179	Pn	Pn	06 26 22.0	-1.1
SAML	Samuel	9.57	51		Pn	06 26 24.8	-0.2
GO02	Mina Guanaco	9.99	174	Pn	Pn	06 26 30.1	-0.6
VILB	Vilhena	10.37	79	eP	Pn	06 26 35.2	-0.3
AC01	Pan de Azucar	10.92	180	Pn	Pn	06 26 41.5	-1.0
ATAH	Atahualpa	11.02	316	P	Pn	06 26 43.5	-0.8
	0.3nm,0.3s,baz=146,slow=10,SNR=6.7						
AC02	Maricunga	11.69	173	Pn	Pn	06 26 52.7	-0.2
AC05	El Transito	13.60	179	P	Pn	06 27 17.2	+0.5
LCO	Las Campanas	13.77	180	P	Pn	06 27 19.4	+0.4
AQDB	Aquidauana	15.18	113	eP	P	06 27 37.2	+0.5
PP1B	Ponte de Pedra	15.32	101	eP	P	06 27 39.2	+0.8
MACA	Manacapuru-AM	15.46	40	eP	P	06 27 39.5	-0.4
PTLC	Puerto Leguiza	15.79	345	eP	Pn	06 27 32.9	-11
CPUP	Villa Florida	16.67	134	P	Pn	06 27 54.5	+0.5
	4.7nm,0.3s,baz=311,slow=11,SNR=47						
CPUP	Villa Florida	16.67	134	P	Pn	06 27 53.6	-0.5
NPGB	Novo Progresso	17.03	63	eP	Pn	06 27 58.1	-0.4
OTAV	Otavalo	17.14	333	eP	P	06 27 59.5	+0.5
OTAV	Otavalo	17.14	333	eP	Pn	06 28 00.1	-0.2
FLOC	Florencia	17.37	343	eP	P	06 27 53.2	-7.7
MACC	Macarena, Meta	17.50	349	eP	P	06 27 57.8	-4.6
GCUF	Volcan Galeras	17.59	337	eP	P	06 28 04.2	+0.3
PTGA	Pitinga	17.81	37	P	Pn	06 28 06.6	-1.1
	6.8nm,0.3s,baz=220,slow=12,SNR=86						
PTGA	Pitinga	17.81	37	P	Pn	06 28 06.7	-1.1
PTGA				IAmb	IAmb	06 28 07.5	
	comp=Z,17nm,0.6s						
PTGA	Pitinga	17.81	37	eP	Pn	06 28 06.5	-1.1
GARC	Garzon, Huila	17.90	344	eP	P	06 28 05.3	-1.7
MT02	Curacav	18.01	181	P	Pn	06 28 09.1	-0.8
MT02				IAmb	IAmb	06 28 09.8	
	comp=Z,27nm,1.4s						
ARAG	Araguaiana, MT	18.17	94	eP	Pn	06 28 10.8	-1.0
ITTB	Itaituba	18.18	55	eP	Pn	06 28 11.1	-1.0
BBAC	Balboa, Cauca	18.29	339	eP	P	06 28 11.5	+0.3
PCON	Cinco Dias	18.30	341	eP	P	06 28 11.6	0.0
POPC	Popayan, Colom	18.58	341	eP	P	06 28 14.4	0.0
TRCB	Terra Rica	18.64	117	eP	P	06 28 15.4	+0.7
MARP	Paez Belalcaza	18.65	343	eP	P	06 28 03.4	-12
SNDB	Serra Nova Dou	19.08	83	eP	P	06 28 20.2	+0.6
PRAC	Prado	19.23	347	eP	P	06 28 16.9	-4.3
ITQB	Itaqui	19.37	141	eP	Pn	06 28 24.5	-1.4
PCMB	Pacaembu	19.47	112	eP	P	06 28 24.2	+0.5
ORTC	Ortega, Tolima	19.50	346	eP	P	06 28 21.3	-2.8
BO02	Sierra Bellavi	19.54	180	P	Pn	06 28 26.2	-1.7
YOTC	Yotoco, Valle	19.85	343	eP	P	06 28 12.9	-15
PTGB	Pitanga	19.86	121	eP	P	06 28 28.8	+0.8
ITRB	Iturama	19.87	106	eP	P	06 28 27.5	-0.6
CHIC	Chingaza	19.91	351	eP	P	06 28 26.6	-2.3
PLMC	San Jos del P	20.71	344	eP	P	06 28 32.6	-4.5
GUY2C	Guyana, Caldas	20.80	347	eP	P	06 28 33.3	-5.1
MALB	Monte Alegre	20.89	52	eP	P	06 28 39.1	+0.2
ITAB	Concordia	20.99	128	eP	P	06 28 39.8	-0.1
RUSC	La Rusia	21.07	353	eP	P	06 28 37.1	-4.2
BI02	San Fabin de	21.41	181	P	P	06 28 46.1	+1.8
FRTB	Fartura	21.48	115	eP	P	06 28 44.9	-0.3
TAMC	Tame, Arauca	21.50	357	eP	P	06 28 41.0	-4.4
CBOC	Ciudad Bolivar	21.57	345	eP	P	06 28 43.3	-2.9
IPMB	Ipameri, GO	21.68	101	eP	P	06 28 46.3	-1.0
BB19B	Bebedouro	21.82	109	eP	P	06 28 48.0	-0.6
BDFB	Brasilia	21.83	94	P	P	06 28 48.9	0.0
	comp=Z,14nm,0.6s,baz=265,slow=11,SNR=35						
BDFB				LR	LR	06 37 53.6	
	comp=Z,85nm,20.6s,baz=144,slow=38						
BDFB	Brasilia	21.83	94	P	P	06 28 48.7	-0.1
CPSB	Cacapava Do Su	21.90	137	eP	P	06 28 49.0	-0.2
PEXB	Peixe	21.93	85	eP	P	06 28 50.2	+0.5
PRPB	Parauapebas	22.32	69	eP	P	06 28 53.9	+0.4
PLTB	Pedras Altas	22.69	140	eP	P	06 28 56.9	+0.2
CNLB	Canela	23.05	131	eP	P	06 28 60.0	-0.1
UREC	San Jos de Ur	23.28	348	eP	P	06 28 56.8	-5.3
SMTB	Santa Maria do	23.40	77	eP	P	06 29 04.3	+1.0
MCPB	Macapa, AP	23.54	53	eP	P	06 29 06.3	+1.8
LC01	Cunco	23.66	182	P	P	06 29 05.8	+0.4
LC01				IAmb	IAmb	06 29 27.4	
	comp=Z,11nm,1.3s						
SDV	Santo Domingo	23.90	0	P	P	06 29 08.2	+0.2
	comp=Z,2.8nm,0.3s,baz=152,slow=6.5,SNR=4.6						
SDV	Santo Domingo	23.90	0	eP	P	06 29 03.2	-4.8
SMLC	San Martn de	24.06	352	eP	P	06 29 03.5	-5.7
SDBA	SAO DESIDERIO	25.15	87	eP	P	06 29 19.0	-0.2
BSCB	Bom Sucesso	25.25	107	eP	P	06 29 20.1	-0.1
JANB	Januaria	25.42	93	eP	P	06 29 21.1	-0.6
PLCA	Paso Flores	25.47	180	P	P	06 29 23.7	+1.9
	comp=Z,1.7nm,0.6s,baz=357,slow=11,SNR=11						
PLCA				ScP	ScP	06 36 12.9	+2.8
	comp=Z,1.2nm,0.5s,baz=347,slow=4.6,SNR=7.9						
PLCA	Paso Flores	25.47	180	IAmb	IAmb	06 29 47.4	
	comp=Z,10nm,1.4s						
MDP	Montagnes des	26.91	43	P	P	06 29 35.1	+0.2
	comp=Z,6.9nm,0.9s,baz=208,slow=7.7,SNR=8.0						
BSFB	Barra de Sao F	28.71	102	eP	P	06 29 51.0	+0.1
ROSB	Rosrio	28.84	68	eP	P	06 29 53.2	+1.0
RIB01	Linhares ES	29.16	102	eP	P	06 29 55.1	+0.2
NAN01	Guarapari, ES	29.37	99	eP	P	06 29 57.0	+0.2
GDU01	Guandu, BA	30.11	91	eP	P	06 30 03.1	-0.2
ESPN	Las Esperanzas	30.36	333	P	P	06 30 05.6	+0.1
ESPN				IAmb	IAmb	06 30 15.5	
	comp=Z,15nm,1.0s						
MTO3	Montecristo	34.72	327	P	P	06 30 44.8	+1.1
MTO3				IAmb	IAmb	06 30 45.9	
	comp=Z,4.6nm,0.6s						
CCIG	Comitan	37.77	325	P	P	06 31 10.8	+1.3
TX31	Lajitas Ar. Si	54.54	324	IAmb	IAmb	06 33 21.1	
	comp=Z,6.0nm,0.7s						
TXAR	Lajitas Array	54.54	324	P	P	06 33 20.3	+0.4
	comp=Z,1.6nm,0.5s,baz=153,slow=9.5,SNR=7.2						
PBMO	Poplar Bluff	54.94	341	IAmb	IAmb	06 33 23.7	
	comp=Z,7.2nm,0.8s						
ABTX	Abilene, Hawle	55.03	330	P	P	06 33 23.7	+0.4
OK031	S. Brethren Rd	56.57	335	IAmb	IAmb	06 33 35.0	
	comp=Z,7.7nm,0.6s						
S39A	Bolivar	56.74	339	P	P	06 33 34.7	-0.6
S39A				IAmb	IAmb	06 33 35.5	
	comp=Z,5.9nm,0.5s						
MNTX	Cornudas Mount	57.29	325	P	P	06 33 38.8	-0.4
MNTX				IAmb	IAmb	06 33 40.5	
	comp=Z,3.5nm,0.6s						
ANMO	Albuquerque	60.33	326		P	06 34 01.5	+1.1
ANMO				IAmb	IAmb	06 34 01.9	
	comp=Z,2.7nm,0.6s						
JFWS	Jewell Farm	60.54	344	P	P	06 34 00.8	-0.6
SDCO	Great Sand Dun	61.99	329	IAmb	IAmb	06 34 13.5	
	comp=Z,6.3nm,0.7s						
X16A	Lo Mia Camp, P	62.74	323	IAmb	IAmb	06 34 19.0	
	comp=Z,4.2nm,0.9s						
WUAZ	Wupatki	63.48	323	P	P	06 34 21.8	+0.4
WUAZ				IAmb	IAmb	06 34 23.8	
	comp=Z,3.7nm,0.7s						
ISCO	Idaho Springs	63.65	330		P	06 34 22.0	-0.6
SMCO	Snowmass	63.83	329	IAmb	IAmb	06 34 26.0	
	comp=Z,4.0nm,0.7s						
PV01	Paradox Valley	63.85	327	IAmb	IAmb	06 34 25.9	
	comp=Z,5.1nm,0.7s						
PV22	Blue Mesa, Par	64.26	327	IAmb	IAmb	06 34 28.3	
	comp=Z,3.3nm,0.7s						
PHWY	Pilot Hill	64.77	332	IAmb	IAmb	06 34 31.7	
	comp=Z,2.7nm,0.6s						
PFO	Pinyon Flats O	65.27	319	LR	LR	07 00 50.8	
	comp=Z,44nm,18.8s,baz=316,slow=34						
SHPR	Sheep Range	66.38	322	IAmb	IAmb	06 34 42.1	
	comp=Z,3.1nm,0.6s						
TPNV	Topopah Spring	67.32	322	IAmb	IAmb	06 34 48.8	
	comp=Z,5.6nm,0.9s						
BW06	Boulder Array	67.83	330	P	P	06 34 48.9	-0.2
PD31	Pinedale Array	67.83	330	P	P	06 34 48.9	-0.2
PDAR	Pinedale Array	67.83	330	P	P	06 34 49.5	+0.3
	comp=Z,1.4nm,0.4s,baz=122,slow=8.5,SNR=30						
PDAR	Pinedale Array	67.83	330		P	06 34 48.8	-0.3
MDND	Maddock	67.86	339	P	P	06 34 50.1	+1.2
LIC	Lamto	68.39	77	eP	P	06 34 52.0	-0.9
	comp=Z,11nm,0.4s						
TIC	Toumodi	68.54	76	eP	P	06 34 54.7	+0.8
AHID	Auburn Hatcher	68.58	329	P	P	06 34 54.9	+1.1
AHID				IAmb	IAmb	06 34 55.2	
	comp=Z,4.8nm,0.6s						
DBIC	Dimbokro	68.70	77	P	P	06 34 53.9	-0.9
	comp=Z,8.8nm,0.4s,baz=229,slow=5.5,SNR=31						
DBIC	Dimbokro	68.70	77	P	P	06 34 54.1	-0.7
DBIC				IAmb	IAmb	06 34 54.7	
	comp=Z,13nm,0.9s						
KIC	Kosan Boka	68.71	77	eP	P	06 34 53.8	-1.1
	comp=Z,17nm,0.4s						
SNAA	Sanae	68.77	162	P	P	06 34 56.5	+2.2
SNAA				IAmb	IAmb	06 34 57.4	
	comp=Z,4.8nm,0.8s						
ULM	Lac du Bonnet	68.82	343	P	P	06 34 54.3	-0.5
	comp=Z,5.6nm,0.5s,baz=155,slow=6.7,SNR=25						
ULM	Lac du Bonnet	68.82	343	P	P	06 34 54.2	-0.5
REDW	Red Top Meadow	68.91	330	P	P	06 34 56.8	+1.0
SNOW	Snow King Moun	68.93	330	P	P	06 34 57.4	+1.4
SNOW				IAmb	IAmb	06 34 57.4	
	comp=Z,3.7nm,0.6s						
LOHW	Long Hollow	68.97	330	P	P	06 34 57.2	+1.1
MOOW	Moose Ponds	69.14	330	P	P	06 34 57.7	+0.5
FLWY	Flagg Ranch	69.37	330	IAmb	IAmb	06 35 00.9	
	comp=Z,5.9nm,0.9s						
NVAR	Mina Array Bea	69.52	322	P	P	06 34 59.8	+0.1
	comp=Z,1.1nm,0.7s,baz=115,slow=5.0,SNR=9.4						
NVAR				PcP	PcP	06 35 22.4	+0.8
	comp=Z,0.8nm,0.6s,baz=141,slow=5.3,SNR=4.6						
PAHR	Pah Rah Range	70.99	322	IAmb	IAmb	06 35 11.2	
	comp=Z,5.6nm,0.8s						
EGMT	Eagleton	71.93	334	P	P	06 35 14.6	+0.8
EGMT				IAmb	IAmb	06 35 15.1	
	comp=Z,3.7nm,0.7s						
KOWA	Kowa	72.17	69	P	P	06 35 15.4	-0.4
KOWA				IAmb	IAmb	06 35 16.5	
	comp=Z,6.2nm,0.7s						
WDC	Whiskeytown Da	73.42	321	P	P	06 35 22.5	-0.1
WDC				IAmb	IAmb	06 35 39.5	
	comp=Z,8.3nm,1.4s						
HUMO	Hull Mountain	74.90	323	P	P	06 35 31.7	+0.4
QSPA	South Pole Qui	74.98	180	P	P	06 35 33.4	+1.9
FCC	Fort Churchill	76.13	348	P	P	06 35 37.9	+0.2
FCC				IAmb	IAmb	06 35 40.8	
	comp=Z,8.4nm,1.4s						
TORD	Torodi Ar. Bea	76.91	72	P	P	06 35 42.4	-0.7
	comp=Z,11nm,0.4s,baz=245,slow=4.3,SNR=48						
TORD	Torodi Ar. Bea	76.91	72	P	P	06 35 42.6	-0.5
ESDC	Sonseca Array	82.56	46	P	P	06 36 13.9	+0.9
	comp=Z,0.9nm,0.9s,baz=250,slow=5.4,SNR=5.8						
YKA	Yellowknife Ar	84.70	341	P	P	06 36 23.7	+0.4
	comp=Z,4.6nm,0.6s,baz=130,slow=5.6,SNR=108						
BOSA	Boshof	87.90	119	P	P	06 36 40.5	+0.5
	comp=Z,1.4nm,0.5s,baz=258,slow=3.1,SNR=5.7						
STKA	Stephens Creek	123.93	213	PKP	PKiKP	06 42 48.2	+0.6
	comp=Z,1.7nm,0.6s,baz=108,slow=2.2,SNR=5.3						
BVAR	Borovoye Array	131.36	30	SKPbc	SKPab	06 46 09.9	+1.1
	comp=Z,0.6nm,0.6s,baz=224,slow=6.2,SNR=5.3						
ASAR	Alice Springs	134.54	212	PKP	PKiKP	06 43 08.4	-0.8
	comp=Z,1.5nm,0.4s,baz=121,slow=1.7,SNR=14						
ASAR				SKPbc	SKPbc	06 46 20.9	+0.8
	comp=Z,1.4nm,0.7s,baz=136,slow=3.8,SNR=13						
ASAR	Alice Springs	134.54	212	PKPdf	PKiKP	06 43 08.7	-0.6
KURBB	Kurchatov Arra	136.78	28	SKPbc	SKPbc	06 46 27.0	+1.0
	comp=Z,1.2nm,0.7s,baz=303,slow=3.3,SNR=9.3						
ZALV	Zalesovo Beam	136.80	21	PKP	PKPdf	06 43 11.6	+0.7
	comp=Z,0.7nm,0.4s,baz=180,slow=1.0,SNR=5.9						
WRA	Warramunga Arr	137.32	216	PKhKP	PKPpre	06 43 03.4	
	comp=Z,0.3nm,0.4s,baz=140,slow=2.7,SNR=6.8						
WRA				PKP	PKiKP	06 43 14.2	-0.7
	comp=Z,2.9nm,0.3s,baz=136,slow=1.6,SNR=56						
WRA				SKPbc	SKPbc	06 46 28.8	+0.1
	comp=Z,1.0nm,0.7s,baz=140,slow=2.5,SNR=13						
MKAR	Makanchi Array	141.24	30	PKP	PKPdf	06 43 17.8	-1.6
	comp=Z,0.2nm,0.6s,baz=355,slow=3.7,SNR=8.0						
MKAR				SKPbc	SKPbc	06 46 38.4	-0.1
	comp=Z,2.0nm,0.8s,baz=341,slow=2.5,SNR=18						
KLR	Kul'dur	141.41	336	PKP	PKPdf	06 43 20.3	+0.8
	comp=Z,0.7nm,0.6s,baz=106,slow=3.7,SNR=3.7						
FITZ	Fitzroy Crossi	143.25	206	PKhKP	PKPpre	06 43 21.5	
	comp=Z,1.5nm,0.5s,baz=188,slow=5.6,SNR=14						
USRK	Ussuriysk Ar.	145.25	331	PKPbc	PKPab	06 43 27.6	+0.8
	comp=Z,4.5nm,0.6s,baz=28,slow=4.0,SNR=8.2						
MJAR	Matsushiro Arr	146.64	315	PKPbc	PKPab	06 43 31.7	-0.7
	comp=Z,7.1nm,0.6s,baz=95,slow=2.3,SNR=18						
MJAR	Matsushiro Arr	146.64	315		PKPab	06 43 32.6	+0.1
MAT	Matsushiro	146.64	315	PKP	PKPab	06 43 31.8	-0.6
SONM	Songino Array	147.34	4	PKPbc	PKiKP	06 43 34.0	-0.7
	comp=Z,1.5nm,0.6s,baz=335,slow=2.1,SNR=14						
SONM	Songino Array	147.34	4		PKiKP	06 43 34.1	-0.7
KSRS	Korea Array	152.36	327	PKPbc	PKiKP	06 43 46.6	+1.4
	comp=Z,6.4nm,0.7s,baz=10,slow=1.6,SNR=15						

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*NIC **12** 06:29:55.3±0.0, 35°.62N×32°.42E, h20^{km}, Ml2.5/4*
*ISK **12** 06:29:55.0, 35°.58N×32°.37E, h18^{km}, ML2.6/10*
*DDA **12** 06:30:01.7, 36°.41N×32°.68E, h8^{km}±3^{km}, ML1.7*
ISC 12 06:29:55.1±1.1**, 35°.64N**±0°.02×**32°.34E**±0°.04**, h28**^{km}±11^{km}**, n29, σ1^{s}74**/42**, 1C-1D, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ALFC	Alefka	0.53	156	P	Pb	06 30 05.3	-0.7
ALFC				S	Sb	06 30 13.0	-0.4
ALFC				AML	AML	06 30 14.6	
	1.7nm,0.3s						
ALFC				AML	AML	06 30 14.6	
	1.7nm,0.3s						

ALFC				AML	AML	06 30 15.2	
	1.6nm,0.3s						
ALFC				AML	AML	06 30 15.2	
	1.6nm,0.3s						
GAZI	**Gazipasa**	**0.59**	**358**	PG	**Pn**	**06 30 08.6**	**+0.9**
GAZI				SG	**Sn**	**06 30 18.1**	**+1.6**
GAZI	**Gazipasa**	**0.59**	**358**	*i* P	**Pn**	**06 30 08.7**	**+1.0**
GAZI				*i* S	**Sb**	**06 30 14.8**	**-0.3**
GAZI				IAML		06 30 19.0	
	comp=N,129nm,0.4s						
GAZI				IAML		06 30 19.0	
	comp=E,129nm,0.5s						
AKDN	**Akdeniz- Kıbrı**	**0.62**	**124**	PG	**Pb**	**06 30 07.4**	**0.0**
AKMS	**Akamas**	**0.62**	**180**	⇓P	**Pb**	**06 30 07.1**	**-0.5**
AKMS				AML	AML	06 30 16.5	
	comp=E,0.9nm,0.5s						
AKMS				AML	AML	06 30 16.5	
	comp=E,0.9nm,0.5s						
AKMS				S	**Sb**	**06 30 16.6**	**+0.7**
AKMS				AML	AML	06 30 18.9	
	comp=E,1.0nm,0.4s						
AKMS				AML	AML	06 30 18.9	
	comp=E,1.0nm,0.4s						
LEF	**Lefka**	**0.69**	**139**	PG	**Pb**	**06 30 07.3**	**-1.3**
TEKE	**Tekeli-Mersin**	**0.80**	**51**	PG	**Pn**	**06 30 11.4**	**+0.8**
TEKE				SG	**Sn**	**06 30 23.7**	**+2.1**
NATA	**Nata**	**0.88**	**168**	P	**Pb**	**06 30 11.4**	**-0.4**
NATA				S	**Sn**	**06 30 24.1**	**+0.5**
ALAN	**Alanya-ANTALYA**	**0.94**	**345**	PG	**Pn**	**06 30 14.9**	**+2.3**
SZAC	**Souni**	**0.99**	**153**	⇑P	**Pb**	**06 30 13.3**	**-0.4**
SZAC				S	**Sn**	**06 30 27.1**	**+0.8**
SZAC				AML	AML	06 30 30.0	
	comp=E,0.7nm,0.2s						
SZAC				AML	AML	06 30 30.0	
	comp=E,0.7nm,0.2s						
SZAC				AML	AML	06 30 30.1	
	comp=E,0.5nm,0.3s						
SZAC				AML	AML	06 30 30.1	
	comp=E,0.5nm,0.3s						
BERE	**Bereket-Mersin**	**1.00**	**45**	PG	**Pn**	**06 30 14.9**	**+1.4**
CSS	**Mathiatis**	**1.06**	**130**	PG	**Pn**	**06 30 14.7**	**+0.6**
CSS	**Mathiatis**	**1.06**	**130**	P	**Pb**	**06 30 13.5**	**-1.4**
CSS				S	**Sn**	**06 30 28.3**	**+0.3**
AKK1	**Akkuyu-Mersin**	**1.10**	**63**	PN	**Pb**	**06 30 16.2**	**+0.8**
AKKU	**Akkuyu-Mersin**	**1.11**	**62**	PN	**Pb**	**06 30 16.4**	**+0.7**
GULN	**MERSIN_Gulnar**	**1.12**	**61**	*i* P	**Pb**	**06 30 16.0**	**+0.2**
ASGA	**Asgata**	**1.13**	**139**	P	**Pn**	**06 30 14.9**	**-0.2**
ASGA				S	**Sn**	**06 30 30.4**	**+0.6**
ASGA				AML	AML	06 30 32.6	
	comp=E,0.3nm,0.5s						
ASGA				AML	AML	06 30 32.6	
	comp=E,0.3nm,0.5s						
YESI	**Yesilovacik-Me**	**1.19**	**62**	PN	**Pb**	**06 30 17.6**	**+0.5**
TEVE	**Tevekalti-Mers**	**1.20**	**48**	PN	**Pb**	**06 30 17.8**	**+0.6**
TISA	**Tisan-Mersin**	**1.21**	**64**	PN	**Pb**	**06 30 17.7**	**+0.4**
IKL	**Isikli**	**1.24**	**61**	PN	**Pb**	**06 30 18.1**	**+0.1**
KARG	**Kargicak-Mersi**	**1.24**	**63**	PN	**Pb**	**06 30 17.9**	**-0.1**
KEBE	**Keben-Mersin**	**1.37**	**54**	PN	**Pb**	**06 30 20.3**	**+0.1**
KEPZ	**Antalya-Kepez**	**1.39**	**335**	*i* P	**Pb**	**06 30 20.3**	**-0.2**
KEPZ				*i* S	**Sn**	**06 30 33.0**	**-3.2**
KEPZ				IAML		06 30 50.0	
	comp=N,21nm,1.5s						
KEPZ				IAML		06 30 52.0	
	comp=E,17nm,1.2s						
EREN	**Erenkoy**	**1.50**	**94**	PN	**Pb**	**06 30 21.5**	**-0.7**
KKBE	**Karaman, Kazim**	**1.65**	**17**	*i* P	**Pb**	**06 30 25.2**	**+0.3**
KKBE				*i* S	**Sn**	**06 30 39.8**	**-2.8**
SEDI	**Konya, Seydise**	**1.86**	**346**	*i* P	**Pb**	**06 30 29.3**	**+0.7**
SEDI				*i* S	**Sn**	**06 30 45.5**	**-2.5**
SEDI				IAML		06 30 56.0	
	comp=E,14nm,0.9s						
SEDI				IAML		06 31 00.0	
	comp=N,11nm,0.7s						
KERG	**Konya-Eregli**	**2.28**	**39**	*i* P	**Pb**	**06 30 33.5**	**-2.1**
KERG				*i* S	**Sn**	**06 30 51.2**	**-7.1**
KERG				IAML		06 31 02.0	
	comp=N,12nm,1.8s						
KERG				IAML		06 31 20.0	
	comp=E,9.0nm,1.2s						
CMRD	**Camardi-Nigde**	**2.93**	**46**	PN	**Pn**	**06 30 43.0**	**+3.0**

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*IDC **12** 06:53:40.0±0.9, 52°.03N×171°.85W, h0^{km}, mb4.2/19, mb1 4.2/21, mb1mx4.0/58, mbtmp4.1/21, ML3.3/2, MS3.0/4, Ms1 3.0/4, ms1mx2.7/54, Error ellipse: s-maj=26.7km s-min=13.6km az=7.0*

*AEIC **12** 06:53:46±1.4, 51°.8N±0°.1×171°.69W±0°.08, h37^{km}±7^{km}, ML3.7, mb4.0/9(NEIC), Error ellipse: s-maj=20.7km s-min=5.7km az=166.0*

*NEIC **12** 06:53:47.4±1.6, 52°.0N±0°.2×171°.78W±0°.08, h55^{km}±7^{km}, Error ellipse: s-maj=23.3km s-min=5.4km az=166.0*

ISC 12 06:53:46.9±0.8,**52°.0N**±0°.1×**171°.75W**±0°.05,**h50^{km},n71,** σ1^{s}.**22**/68,**mb4.2**/22,**MS3.0**/4,**Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOFP	**Korovin Flat P**	**1.48**	**283**		**Pn**	**06 54 11.5**	**+0.3**
ATKA	**Atka Island**	**1.53**	**280**	Pn	**Pn**	**06 54 11.5**	**-0.2**
ATKA	**Atka Island**	**1.53**	**280**		**Sn**	**06 54 31.2**	**+0.8**
NIKH	**Nikolski High**	**2.03**	**59**	Pn	**Pn**	**06 54 17.3**	**-1.3**
OKSO	**Okmok South**	**2.59**	**56**		**Pn**	**06 54 24.9**	**-1.3**
OKSO					**Sn**	**06 54 56.8**	**+0.3**
GSMY	**Great Sitkin M**	**2.66**	**273**		**Pn**	**06 54 27.3**	**+0.1**
GSMY					**Sn**	**06 55 00.4**	**+2.1**
GSTR	**Great Sitkin T**	**2.67**	**274**	Pn	**Pn**	**06 54 27.3**	**0.0**
GSTD	**Great Sitkin T**	**2.72**	**273**		**Pn**	**06 54 28.4**	**+0.3**
GSTD					**Sn**	**06 55 00.7**	**+1.0**
OKFG	**Magazine Ridge**	**2.74**	**57**		**Pn**	**06 54 27.9**	**-0.4**
ADK	**Adak**	**3.06**	**270**	Pn	**Pn**	**06 54 32.3**	**-0.4**
ADK				Sn	**Sn**	**06 55 08.0**	**+0.1**
KIMD	**Kanaga Island**	**3.41**	**269**		**Pn**	**06 54 37.4**	**-0.1**
MAPS	**Pakushin South**	**3.44**	**56**		**Pn**	**06 54 37.9**	**0.0**
MAPS					**Sn**	**06 55 19.4**	**+1.9**
MGOD	**Makushin Gods**	**3.47**	**56**		**Pn**	**06 54 38.2**	**-0.1**
MREP	**Makushin Rep't**	**3.54**	**57**		**Pn**	**06 54 39.8**	**+0.4**
MSW	**Makushin Switc**	**3.58**	**55**		**Pn**	**06 54 39.9**	**0.0**
MNAT	**Makushin Natee**	**3.61**	**56**		**Pn**	**06 54 40.4**	**+0.1**
MNAT					**Sn**	**06 55 24.3**	**+2.7**
UNV	**Unalaska Valle**	**3.69**	**57**	Pn	**Pn**	**06 54 40.5**	**-0.7**
UNV	**Unalaska Valle**	**3.69**	**57**		**Sn**	**06 55 24.4**	**+1.0**
AKBBA	**Akutan Broad B**	**4.11**	**56**		**Pn**	**06 54 47.5**	**+0.5**
AKUT	**Akutan**	**4.21**	**57**	Pn	**Pn**	**06 54 47.1**	**-1.2**
AKUT				Sn	**Sn**	**06 55 37.2**	**+1.0**
CESW	**Semis' Southwe**	**5.38**	**273**		**Pn**	**06 55 04.7**	**+0.2**
AMKA	**Amchitka**	**5.60**	**267**	Pn	**Pn**	**06 55 04.9**	**-2.6**
FALS	**False Pass**	**5.76**	**57**	Pn	**Pn**	**06 55 11.4**	**+1.8**
SDPT	**Sand Point**	**7.50**	**59**	Pn	**Pn**	**06 55 33.6**	**+0.1**
CNBA	**Chernabura Isl**	**7.81**	**64**	Pn	**Pn**	**06 55 36.3**	**-1.4**
ILAR	**Eielson Array**	**18.11**	**35**	P	**P**	**06 57 51.5**	**-2.8**
	0.2nm,0.3s,baz=228,slow=8.2,SNR=8.0						
PETK	**Petropavlovsk-**	**18.55**	**286**	P	**P**	**06 57 56.6**	**-2.7**
	0.3nm,0.3s,baz=89,slow=14,SNR=4.6						
PETK				LR	LR	07 05 01.3	
	comp=Z,57nm,20.1s,baz=118,slow=37						
TOLK	**Toolik Lake Re**	**19.79**	**24**	P	**P**	**06 58 13.1**	**+0.5**
TOLK				IAmb	IAmb	06 58 18.4	
	comp=Z,6.1nm,0.7s						
EGAK	**Eagle**	**20.27**	**39**	P	**P**	**06 58 18.0**	**+0.2**
EGAK				IAmb	IAmb	06 58 23.4	
	comp=Z,5.1nm,0.9s						
HYT	**Haines Junctio**	**20.69**	**51**	P	**P**	**06 58 24.1**	**+1.4**
HYT				IAmb	IAmb	06 58 29.4	
	comp=Z,7.2nm,0.8s						
DAWY	**Dawson**	**20.70**	**42**	P	**P**	**06 58 22.8**	**+0.2**
SEY	**Seymchan**	**21.88**	**314**	P	**P**	**06 58 34.9**	**-0.2**
	comp=Z,1.2nm,0.6s,baz=98,slow=6.5,SNR=8.3						
DLBC	**Dease Lake**	**24.34**	**58**	P	**P**	**06 59 01.5**	**+1.7**
	comp=Z,3.6nm,0.6s,baz=272,slow=8.0,SNR=11						
INK	**Inuvik**	**24.48**	**34**	P	**P**	**06 59 00.5**	**-0.4**
	comp=Z,3.2nm,0.7s,baz=235,slow=6.9,SNR=10.0						
INK	**Inuvik**	**24.48**	**34**	P	**P**	**06 59 00.5**	**-0.4**
INK				IAmb	IAmb	06 59 01.8	
	comp=Z,5.5nm,1.1s						
YKA	**Yellowknife Ar**	**31.60**	**48**	P	**P**	**07 00 04.5**	**+0.1**
	comp=Z,0.3nm,0.4s,baz=275,slow=7.4,SNR=14						
YAK	**Yakutsk**	**32.33**	**311**	LR	LR	07 13 54.1	
	comp=Z,39nm,18.4s,baz=82,slow=38						
H11N2	**WAKE ISLAND Hy**	**36.26**	**215**	T	T	07 39 19.1	
	baz=22,slow=76,SNR=29						
H11N3	**WAKE ISLAND Hy**	**36.26**	**215**	T	T	07 39 19.6	
	baz=22,slow=76,SNR=37						
H11N1	**WAKE ISLAND Hy**	**36.27**	**215**	T	T	07 39 20.5	
	baz=22,slow=76,SNR=27						
H11S1	**WAKE ISLAND Hy**	**37.45**	**215**	T	T	07 40 47.1	
	baz=22,slow=76,SNR=9.6						
H11S2	**WAKE ISLAND Hy**	**37.47**	**215**	T	T	07 40 44.4	
	baz=22,slow=76,SNR=7.1						
H11S3	**WAKE ISLAND Hy**	**37.47**	**215**	T	T	07 40 43.9	
	baz=22,slow=76,SNR=9.8						
USRK	**Ussuriysk Ar.**	**37.53**	**281**	LR	LR	07 17 15.0	
	comp=Z,20nm,20.7s,baz=31,slow=38						
NVAR	**Mina Array Bea**	**39.13**	**89**	P	**P**	**07 01 10.1**	**+0.4**
	comp=Z,1.5nm,0.8s,baz=291,slow=8.4,SNR=13						
NVAR				PcP	**PcP**	**07 03 18.8**	**+0.5**
	comp=Z,0.4nm,0.8s,baz=302,slow=2.8,SNR=3.5						
NVAR	**Mina Array Bea**	**39.13**	**89**	P	**P**	**07 01 10.0**	**+0.4**
TPNV	**Topopah Spring**	**41.33**	**89**	P	**P**	**07 01 28.4**	**+0.7**
TPNV				IAmb	IAmb	07 01 30.7	
	comp=Z,3.1nm,0.9s						
PDAR	**Pinedale Array**	**41.92**	**77**	P	**P**	**07 01 32.4**	**-0.2**
	comp=Z,1.5nm,0.9s,baz=307,slow=5.4,SNR=9.7						
PDAR	**Pinedale Array**	**41.92**	**77**	P	**P**	**07 01 31.9**	**-0.6**
KSRS	**Korea Array**	**43.99**	**275**	LR	LR	07 19 17.2	
	comp=Z,11nm,21.3s,baz=55,slow=35						
SPITS	**Spitsbergen Ar**	**50.02**	**358**	P	**P**	**07 02 34.6**	**-0.9**
	comp=Z,6.0nm,0.9s,baz=44,slow=6.6,SNR=12						
SONM	**Songino Array**	**50.23**	**300**	P	**P**	**07 02 37.0**	**-0.7**
	comp=Z,0.8nm,0.7s,baz=60,slow=9.4,SNR=4.4						
SONM	**Songino Array**	**50.23**	**300**	IAmb	IAmb	07 02 38.7	
	comp=Z,0.7nm,0.9s						
HHC	**Hu-ho-hao-te**	**51.68**	**290**	*e*P	**P**	**07 02 50.6**	**+1.9**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,79nm,7.6s						
TXAR	**Lajitas Array**	**54.23**	**87**	P	**P**	**07 03 07.0**	**-0.6**
	comp=Z,1.2nm,0.8s,baz=316,slow=7.6,SNR=3.1						
ZALV	**Zalesovo Beam**	**56.71**	**317**	PcP	**PcP**	**07 04 20.3**	**-0.1**
	comp=Z,0.7nm,0.5s,baz=49,slow=5.0,SNR=3.7						
ARCES	**ARCESS Array B**	**58.15**	**353**	P	**P**	**07 03 33.5**	**-1.3**
	comp=Z,12nm,1.1s,baz=10,slow=7.4,SNR=4.3						
ARCES	**ARCESS Array B**	**58.15**	**353**	IAmb	IAmb	07 03 38.8	
	comp=Z,29nm,1.4s						
KURK	**Kurchatov**	**61.68**	**317**	P	**P**	**07 03 59.6**	**+0.3**
KURBB	**Kurchatov Arra**	**61.79**	**317**	P	**P**	**07 03 59.5**	**-0.6**
	comp=Z,3.3nm,0.8s,baz=44,slow=7.0,SNR=23						
WMQ	**Urumqi**	**62.61**	**307**	*e*P	**P**	**07 04 09.1**	**+3.4**
MKAR	**Makanchi Array**	**63.00**	**312**	P	**P**	**07 04 07.7**	**-0.5**
	comp=Z,1.2nm,0.8s,baz=50,slow=6.6,SNR=14						
BVAR	**Borovoye Array**	**63.16**	**323**	P	**P**	**07 04 09.2**	**0.0**
	comp=Z,3.4nm,0.6s,baz=156,slow=11,SNR=24						
BVAR				PcP	**PcP**	**07 04 46.0**	**-0.2**
	comp=Z,1.1nm,0.6s,baz=119,slow=5.1,SNR=4.3						
ARU	**Arti**	**64.29**	**332**	P	**P**	**07 04 16.1**	**-0.4**
	comp=Z,1.3nm,0.3s,baz=21,slow=1.8,SNR=8.1						
FINES	**FINESS Array B**	**66.04**	**351**	P	**P**	**07 04 26.2**	**-1.5**
	comp=Z,2.8nm,0.8s,baz=353,slow=9.6,SNR=4.3						
HFS	**Hagfors**	**68.16**	**357**	P	**P**	**07 04 40.3**	**-0.9**
	comp=Z,1.9nm,0.5s,baz=7.1,slow=3.6,SNR=11						
AKTO	**Aktyubinsk**	**69.60**	**329**	P	**P**	**07 04 50.2**	**-0.1**
	comp=Z,4.9nm,0.5s,baz=61,slow=5.3,SNR=21						
AAK	**Ala-Archa**	**69.73**	**314**	P	**P**	**07 04 52.1**	**+0.6**
	comp=Z,5.2nm,0.6s,baz=172,slow=7.0,SNR=17						
KSH	**Kashi**	**71.55**	**311**	P	**P**	**07 05 06.4**	**+3.9**
KSH				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KSH				pmax	pmax		
	comp=Z,97nm,5.8s						
ASAR	**Alice Springs**	**89.03**	**228**	P	**P**	**07 06 36.2**	**0.0**
	comp=Z,0.7nm,0.6s,baz=30,slow=4.9,SNR=7.1						
VAE	**Valguarnera**	**90.76**	**355**	LR	LR	07 50 20.7	
	comp=Z,393nm,18.8s,baz=342,slow=38						

NNC 12 07:03:18.5±4.1**, 41°.62N×78°.24E, h0^{km}, mb2.7, mpv2.6, 3C-2D, Error ellipse: s-maj=33.2km s-min=14.4km az=169.0, Suspected Mining explosion., Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IZV	**Izvestkoviy**	**1.86**	**320**	P	Pg	07 03 54.3	+0.1
	1.7nm,0.1s						
IZV				S	Sn	07 04 16.5	+0.4
	2.1nm,0.1s						
PDGK	**Podgornoye**	**1.95**	**28**	⇑Pn	Pn	07 03 50.8	-2.1
	1.3nm,0.6s						
PDGK				⇓Sn	Sn	07 04 18.8	+0.6
	1.0nm,0.3s						
TKM2	**Tokmak 2**	**2.36**	**304**	⇓Pg	Pb	07 04 01.8	-0.1
	0.6nm,0.3s						
TKM2				⇑Lg	Lg	07 04 33.4	
	2.2nm,0.4s						
DGS	**Degeres**	**2.45**	**312**	Pg	Pg	07 04 04.5	-0.9
	1.7nm,0.3s						
DGS				Lg	Lg	07 04 34.1	
	2.3nm,0.4s						
MNBS	**Baschi**	**2.46**	**3**	Pg	Pb	07 04 04.3	+0.5
	2.4nm,0.1s						
MNBS				Lg	Lg	07 04 33.6	
	6.0nm,0.2s						
AAK	**Ala-Archa**	**2.97**	**291**	⇑Pg	Pb	07 04 09.8	-2.5
	0.5nm,0.6s						

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*IDC **12** 07:29:49.8±6.2, 9°.00S×152°.53E, h90^{km}±48^{km}, mb3.6/7, mb1 3.8/8, mb1mx3.5/41, mbtmp4.0/8, MS3.6/9, Ms1 3.6/9, ms1mx3.3/23, Error ellipse: s-maj=55.0km s-min=25.7km az=105.0*

ISC 12 07:29:42.7±1.4,**9°.1S**±0°.2×**153°.0E**±0°.2,**h35^{km},n18,** σ1^{s}.**35**/9,**mb3.8**/6,**MS3.6**/8,**D'Entrecasteaux Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.74**	**266**	P	**Pn**	**07 31 06.6**	**+1.1**
	6.6nm,0.3s,baz=71,slow=8.8,SNR=8.9						
PMG				S	Sn	07 32 19.6	+9.5
	1.0nm,0.3s,baz=77,slow=18,SNR=1.9						
PMG				LR	LR	07 33 25.2	
	comp=Z,1μm,18.3s,baz=343,slow=40						
PMG	**Port Moresby**	**5.74**	**266**	P	Pn	07 31 14.7	+9.3
HNR	**Honiara**	**6.91**	**94**	LR	LR	07 34 00.4	
	comp=Z,363nm,18.2s,baz=282,slow=34						
JAY	**Jayapura**	**13.81**	**297**	LR	LR	07 37 48.7	
	comp=Z,158nm,21.7s,baz=288,slow=36						
DZM	**Mont Dzumac**	**18.31**	**136**	*e*LR	LR	07 38 22.4	
	comp=Z,274nm,22.0s						
WRA	**Warramunga Arr**	**21.00**	**237**	P	**P**	**07 34 22.9**	**-0.5**
	4.1nm,0.6s,baz=60,slow=11,SNR=45						
WRA				LR	LR	07 42 04.7	
	comp=Z,200nm,19.6s,baz=55,slow=36						
SIJI	**Sorong**	**23.08**	**289**	LR	LR	07 45 55.2	
	comp=Z,165nm,18.2s,baz=278,slow=43						
ASAR	**Alice Springs**	**23.30**	**229**	P	**P**	**07 34 48.0**	**+0.2**
	2.3nm,0.7s,baz=63,slow=9.8,SNR=20						
ASAR				LR	LR	07 43 28.7	
	comp=Z,285nm,19.3s,baz=56,slow=36						
STKA	**Stephens Creek**	**25.03**	**203**	P	**P**	**07 35 04.2**	**+0.6**
	3.7nm,0.5s,baz=16,slow=9.3,SNR=8.5						
STKA				LR	LR	07 45 29.1	
	comp=Z,208nm,18.2s,baz=26,slow=38						
FITZ	**Fitzroy Crossi**	**28.00**	**248**	P	**P**	**07 35 29.1**	**-1.5**
	1.6nm,0.6s,baz=98,slow=6.3,SNR=8.7						
PPT	**Papeete**	**56.38**	**105**	LR	LR	07 58 29.3	
	comp=Z,31nm,20.8s,baz=280,slow=30						
PPT2	**Papeete2**	**56.38**	**105**	*e*LR	LR	07 56 13.2	
	comp=Z,105nm,24.5s						
TBI	**Tubuai**	**56.75**	**112**	*e*LR	LR	07 56 19.8	
	comp=Z,114nm,30.8s						
PETK	**Petropavlovsk-**	**62.06**	**3**	LR	LR	08 07 23.3	
	comp=Z,9.5nm,18.2s,baz=201,slow=36						
MKAR	**Makanchi Array**	**83.63**	**319**	P	**P**	**07 42 06.2**	**-1.5**
	0.7nm,0.8s,baz=96,slow=6.8,SNR=4.5						
ZALV	**Zalesovo Beam**	**84.77**	**327**	P	**P**	**07 42 12.9**	**-0.4**
	0.4nm,0.5s,baz=106,slow=3.1,SNR=1.9						
ILAR	**Eielson Array**	**86.03**	**22**	P	**P**	**07 42 20.9**	**+1.6**
	0.5nm,0.9s,baz=250,slow=4.4,SNR=4.2						
TORD	**Torodi Ar. Bea**	**151.52**	**281**	PKPbc	**PKPbc**	**07 49 32.9**	**-1.3**
	0.4nm,0.6s,baz=54,slow=4.5,SNR=1.9						

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*IDC **12** 07:35:29.3±0.7, 24°.14N×121°.67E, h0^{km}, mb4.0/16, mb1 4.1/17, mb1mx3.9/50, mbtmp4.0/17, ML3.7/1, MS3.5/10, Ms1 3.6/10, ms1mx3.2/35, Error ellipse: s-maj=21.5km s-min=16.3km az=61.0*

*BJI **12** 07:35:33.4±0.0, 24°.24N×121°.77E, h29^{km}, mB4.5/20, mb4.0/24, ML4.2/9, Ms4.0/12, Ms7 3.8/14*

*JMA **12** 07:35:34.5±0.1, 24°.20N×121°.63E, h35^{km}±1^{km}, M4.0*

*NIED **12** 07:35:34.5, 24°.20N×121°.63E, h35^{km}, MW4.4, Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M_{rr}2.06; $M_{\theta\theta}$-1.54; $M_{\phi\phi}$-0.51; $M_{r\theta}$1.94; $M_{\theta\phi}$-1.28; $M_{\phi r}$3.22; Fault plane solution: $M_0$4.38000×10^{15} NP1:ϕ_s35.00000°, δ76.00000°, λ77.00000°. NP2:ϕ_s257.00000°, δ19.00000°, λ131.00000°.*

*TAP **12** 07:35:35.2, 24°.27N×121°.70E, h30^{km}, ML4.7, B*

*NEIC **12** 07:35:35.1±1.3, 24°.24N±0°.03×121°.69E±0°.04, h32^{km}±4^{km}, mb4.3/15, ML4.5(TAP), Error ellipse: s-maj=5.6km s-min=3.7km az=101.0*

*ASIES **12** 07:35:36.3, 24°.28N×121°.69E, h26^{km}, MW4.1*

ISC 12 07:35:34.9±0.7,**24°.24N**±0°.01×**121°.73E**±0°.02,**h30^{km}**±4^{km}, **n207,** σ1^{s}.**13**/322,**mb4.1**/25,**MS3.6**/8,**12C-29D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NACB	**Ninganchiao**	**0.13**	**243**	⇓*i*P	**Pb**	**07 35 40.8**	**+0.3**
	baz=227						
NACB				*i* S	**Sn**	**07 35 44.8**	**+0.3**
	baz=227						
NACB	**Ninganchiao**	**0.13**	**243**		**Pb**	**07 35 40.8**	**+0.3**
NACB				Sg	**Sn**	**07 35 44.8**	**+0.3**
ENA	**Nanau**	**0.19**	**4**	⇑*i*P	**Pb**	**07 35 41.3**	**+0.2**
	baz=15						
ENA				*i* S	**Sn**	**07 35 45.3**	**-0.7**
	baz=15						
TWD	**Chiawan**	**0.20**	**217**	*i* P	**Pb**	**07 35 41.5**	**+0.4**
	baz=212						
TWD				*i* S	**Sb**	**07 35 46.2**	**+0.9**
	baz=212						
ETLH	**Xiulin Townshi**	**0.22**	**263**	⇓*i*P	**Pb**	**07 35 41.7**	**+0.2**
	baz=248						
ETLH				*i* S	**Sb**	**07 35 46.2**	**+0.2**
	baz=248						
HWA	**Hwalien**	**0.28**	**203**	⇓*i*P	**Pn**	**07 35 43.0**	**+0.1**
	baz=204						
HWA				*i* S	**Sn**	**07 35 48.8**	**+0.7**
	baz=204						
NNSB	**Datong**	**0.37**	**302**	⇓*i*P	**Pb**	**07 35 43.3**	**-0.1**
	baz=299						
NNSB				*i* S	**Sb**	**07 35 48.8**	**-0.4**
	baz=299						
NNSH	**Datong**	**0.37**	**302**	⇓*i*P	**Pb**	**07 35 43.3**	**-0.1**
	baz=303						
NNSH				*e*S	**Sb**	**07 35 48.9**	**-0.3**
	baz=303						
NNS	**Nan Shan**	**0.38**	**302**	⇓*i*P	**Pb**	**07 35 43.5**	**-0.2**
	baz=300						
NNS				*i* S	**Sb**	**07 35 50.1**	**+0.5**
	baz=300						
TWC	**Suao**	**0.39**	**17**	⇑*i*P	**Pb**	**07 35 43.9**	**+0.3**
	baz=19						
TWC				S	**Sb**	**07 35 49.9**	**+0.3**
	baz=19						
NDS	**Dongshan**	**0.40**	**359**	⇓*i*P	**Pb**	**07 35 43.8**	**0.0**
	baz=357						
NDS				S	**Sb**	**07 35 50.2**	**+0.4**
	baz=357						
NDT	**Datong Townshi**	**0.41**	**332**	⇓*i*P	**Pb**	**07 35 43.9**	**-0.1**
	baz=336						
NDT				*i* S	**Sb**	**07 35 50.0**	**-0.2**
	baz=336						
ENTT	**Nioudou**	**0.43**	**340**	⇓*i*P	**Pb**	**07 35 44.1**	**-0.1**
	baz=341						
ENTT				S	**Sb**	**07 35 50.9**	**+0.3**
	baz=341						
FUSS	**Fushou**	**0.44**	**272**	⇓*i*P	**Pb**	**07 35 44.9**	**+0.3**
	baz=267						
FUSS				S	**Sb**	**07 35 51.5**	**+0.3**
	baz=267						
TWE	**Neicheng**	**0.49**	**354**	⇓*i*P	**Pb**	**07 35 45.1**	**0.0**
	baz=354						
TWE				S	**Sb**	**07 35 51.7**	**-0.4**
	baz=354						
ESL	**Shilin**	**0.50**	**213**	P	**Pb**	**07 35 44.9**	**-0.3**
	baz=218						
ESL				*e*S	**Sb**	**07 35 52.2**	**-0.2**
	baz=218						
TWT	**Tachien**	**0.50**	**272**	⇓*i*P	**Pb**	**07 35 46.0**	**+0.5**
	baz=265						
TWT				*i* S	**Sb**	**07 35 53.1**	**+0.4**
	baz=265						
TDCB	**Techi**	**0.52**	**272**	⇓*i*P	**Pb**	**07 35 46.0**	**+0.3**
	baz=266						
TDCB				*i* S	**Sb**	**07 35 53.0**	**-0.1**
	baz=266						
ILA	**Ilan**	**0.53**	**2**	P	**Pb**	**07 35 45.8**	**+0.1**
	baz=359						
ILA				*i* S	**Sn**	**07 35 54.0**	**-0.2**
	baz=359						
CHGB	**Renai**	**0.53**	**251**	⇓*i*P	**Pb**	**07 35 46.2**	**+0.2**
	baz=242						
CHGB				*i* S	**Sb**	**07 35 53.8**	**+0.1**
	baz=242						
YHNB	**Yeheng**	**0.54**	**324**		**Pb**	**07 35 45.7**	**-0.3**
YHNB				Sg	**Sb**	**07 35 52.9**	**-0.7**
NSK	**Sanguang**	**0.55**	**323**	⇓*i*P	**Pb**	**07 35 46.0**	**-0.3**
	baz=315						
NSK				S	**Sb**	**07 35 53.4**	**-0.5**
	baz=315						
NWLT	**Wulai**	**0.58**	**339**	⇓*i*P	**Pb**	**07 35 46.3**	**-0.3**
	baz=334						
NWLT				S	**Sb**	**07 35 53.8**	**-0.8**
	baz=334						
NTC	**Toucheng**	**0.62**	**9**	*e*P	**Pn**	**07 35 47.8**	**+0.2**
	baz=10.0						
NTC				*e*S	**Sb**	**07 35 55.5**	**-0.4**
	baz=10.0						
EGFH	**Guangfu**	**0.63**	**206**	*e*P	**Pb**	**07 35 47.2**	**-0.2**
	baz=212						
EGFH				*e*S	**Sb**	**07 35 55.8**	**-0.2**
	baz=212						
WHP	**Taichung City**	**0.71**	**274**	⇓*i*P	**Pb**	**07 35 49.3**	**+0.4**
	baz=271						
WHP				*i* S	**Sb**	**07 35 58.8**	**+0.4**
	baz=271						
VWDT	**VWDT**	**0.72**	**228**	⇓*i*P	**Pn**	**07 35 49.0**	**+0.1**
	baz=218						
VWDT				S	**Sb**	**07 35 58.9**	**+0.4**
	baz=218						
WPL	**Puli Township**	**0.74**	**253**	*i* P	**Pb**	**07 35 49.6**	**+0.4**
	baz=250						
WPL				S	**Sb**	**07 35 58.8**	**-0.2**
	baz=250						
TIPB	**Shuangxi**	**0.74**	**7**	⇓*i*P	**Pb**	**07 35 49.3**	**0.0**
TIPB				S	**Sb**	**07 35 59.0**	**-0.1**
NHDH	**Xindian Distri**	**0.75**	**346**	⇓*i*P	**Pn**	**07 35 49.3**	**0.0**
	baz=337						
NHDH				*i* S	**Sb**	**07 35 59.1**	**-0.2**
	baz=337						
TWA	**Mucha**	**0.75**	**350**	⇓*i*P	**Pb**	**07 35 49.5**	**0.0**
	baz=351						
TWA				S	**Sb**	**07 35 59.4**	**-0.1**
	baz=351						
DPDB	**Guoxing**	**0.76**	**255**	⇓*i*P	**Pb**	**07 35 50.0**	**+0.4**
	baz=252						
DPDB				S	**Sn**	**07 35 59.7**	**-0.3**
	baz=252						
LIOB	**Emei**	**0.77**	**302**	⇓*i*P	**Pb**	**07 35 50.2**	**+0.4**
	baz=301						
LIOB				S	**Sb**	**07 36 00.9**	**+1.0**
	baz=301						
NJD	**Zhudong**	**0.77**	**311**	⇓*i*P	**Pb**	**07 35 50.5**	**+0.8**
	baz=309						
NJD				S	**Sb**	**07 36 01.0**	**+1.2**
	baz=309						
WCS	**Beigang Elemen**	**0.77**	**257**	*e*P	**Pn**	**07 35 49.9**	**+0.3**
	baz=254						
WCS				*e*S	**Sn**	**07 35 59.6**	**-0.5**
	baz=254						
TATO	**Taipei**	**0.77**	**344**	⇓*i*P	**Pn**	**07 35 49.6**	**0.0**
	baz=344						
TATO	**Taipei**	**0.77**	**344**		**Pn**	**07 35 49.7**	**0.0**
TATO				Sn	**Sn**	**07 35 59.8**	**-0.4**
NSTT	**Nanjuang**	**0.77**	**301**	⇓*i*P	**Pb**	**07 35 50.1**	**+0.3**
	baz=299						
NSTT				S	**Sn**	**07 35 59.9**	**-0.3**
	baz=299						
HGSD	**Ruisui**	**0.79**	**201**	*e*P	**Pn**	**07 35 50.1**	**+0.2**
	baz=213						
HGSD				*e*S	**Sb**	**07 36 03.5**	**+3.0**
	baz=213						
BACT	**New Taipei Cit**	**0.80**	**341**	*e*P	**Pb**	**07 35 50.7**	**+0.4**
	baz=341						
BACT				*e*S	**Sb**	**07 36 01.7**	**+0.8**
	baz=341						
TWB1	**Santiao Chiao**	**0.81**	**17**	⇑*i*P	**Pb**	**07 35 50.6**	**+0.2**

	baz=19						
TWB1				*i* S	Sb	07 36 01.9	+1.0
	baz=19						
EHY	**Hungye**	0.81	207	*e*P	Pn	07 35 49.1	-1.2
	baz=215						
EHY				*e*S	Sn	07 35 59.9	-1.5
	baz=215						
TAP	**Taipei**	0.82	346	*e*P	Pb	07 35 50.9	+0.2
	baz=346						
TAP				*e*S	Sb	07 36 02.2	+0.7
	baz=346						
SMLT	**Sun Moon Lake**	0.83	245	P	Pb	07 35 51.1	+0.2
	baz=239						
SMLT				*e*S	Sn	07 36 02.0	+0.1
	baz=239						
NWF	**Wu-fen Shan**	0.83	3	⇓*i*P	Pb	07 35 51.2	+0.3
	baz=351						
NWF				*i* S	Sb	07 36 02.9	+1.0
	baz=351						
WFSB	**Wu-fen Shan**	0.83	3	⇓*i*P	Pb	07 35 51.2	+0.3
	baz=351						
WFSB				*i* S	Sb	07 36 02.4	+0.6
	baz=351						
SSLB	**Suanglung**	0.83	238	⇑*i*P	Pn	07 35 50.7	+0.1
	baz=230						
SSLB				*e*S	Sn	07 36 01.3	-0.6
	baz=230						
SSLB	**Suanglung**	0.83	238		Pn	07 35 50.8	+0.2
SSLB				Sn	Sn	07 36 01.0	-0.9
HSN1	**Hsinchu**	0.84	310	⇓*i*P	Pb	07 35 52.0	+1.0
	baz=316						
HSN1				S	Sb	07 36 03.8	+1.9
	baz=316						
NTY	**Taoyuan**	0.85	333	P	Pb	07 35 51.7	+0.4
	baz=333						
NTY				S	Sb	07 36 03.9	+1.5
	baz=333						
TYC	**Yuchr**	0.86	248	P	Pb	07 35 51.5	+0.2
	baz=242						
TYC				*e*S	Sb	07 36 03.6	+1.1
	baz=242						
SBCB	**Hsinchu**	0.87	310	*e*P	Pb	07 35 52.2	+0.7
	baz=315						
SBCB				*i* S	Sb	07 36 04.5	+1.6
	baz=315						
TWQ1	**Liyutan**	0.88	278	P	Pb	07 35 52.6	+1.0
	baz=275						
TWQ1				S	Sb	07 36 03.7	+0.7
	baz=275						
NCUH	**Zhongli**	0.88	326	*e*P	Pb	07 35 52.0	+0.4
	baz=325						
NCUH				S	Sb	07 36 04.2	+1.2
	baz=325						
NCU	**National Centr**	0.88	326	*e*P	Pb	07 35 51.9	+0.3
	baz=325						
NCU				S	Sb	07 36 04.5	+1.4
	baz=325						
NJN	**Zhunan**	0.90	300	*e*P	Pb	07 35 52.8	+0.9
	baz=298						
NJN				*e*S	Sb	07 36 05.3	+1.8
	baz=298						
NSY	**Sanyi**	0.90	282	P	Pb	07 35 53.0	+1.1
	baz=280						
NSY				S	Sb	07 36 05.7	+2.1
	baz=280						
NMLH	**Miaoli**	0.90	290	⇑*i*P	Pb	07 35 53.0	+0.9
	baz=296						
NMLH				*i* S	Sb	07 36 05.2	+1.4
	baz=296						
TWS1	**Kuangyinshan**	0.91	342	P	Pb	07 35 52.0	-0.1
	baz=352						
TWS1				S	Sb	07 36 04.8	+1.0
	baz=352						
TNOU	**National Taiwa**	0.91	3	*e*P	Pb	07 35 51.9	-0.2
	baz=352						
TNOU				*e*S	Sb	07 36 04.5	+0.5
	baz=352						
YULB	**Yu-li**	0.93	205		Pn	07 35 50.6	-1.2
NTST	**Danshui**	0.96	345	*e*P	Pn	07 35 52.5	+0.2
	baz=354						
NTST				*e*S	Sb	07 36 06.3	+1.0
	baz=354						
EYUL	**Yuli**	0.96	203	*e*P	Pn	07 35 52.9	+0.6
	baz=214						
EYUL				*e*S	Sn	07 36 04.7	-0.2
	baz=214						
TCU	**Taichung**	0.96	265	⇑P	Pb	07 35 54.0	+1.0
	baz=263						
TCU				*i* S	Sb	07 36 07.8	+2.4
	baz=263						
WHYT	**Xinyi Township**	0.96	236	*e*P	Pb	07 35 53.6	+0.5
	baz=233						
WHYT				*e*S	Sb	07 36 06.5	+1.0
	baz=233						
TWF1	**Yuli**	0.96	204	*e*P	Pn	07 35 51.1	-1.3
	baz=213						
TWF1				*e*S	Sn	07 36 05.4	+0.4
	baz=213						
ANP	**Anpu**	0.96	349	*e*P	Pn	07 35 52.1	-0.4
	baz=349						
WDJ	**Dajia District**	1.00	277	⇑P	Pb	07 35 54.3	+0.7
	baz=275						
WDJ				*e*S	Sb	07 36 08.3	+1.9
	baz=275						
WJS	**Zhushan**	1.00	246	⇑P	Pb	07 35 54.6	+1.0
	baz=244						
WJS				S	Sb	07 36 09.1	+2.6
	baz=244						
WNT1	**Nantou City**	1.01	251	*e*P	Pb	07 35 55.0	+1.1
	baz=250						
WNT1				*e*S	Sb	07 36 09.5	+2.7
	baz=250						
WNT	**Mingjian**	1.02	250	*e*P	Pb	07 35 54.5	+0.6
	baz=248						
WNT				*e*S	Sb	07 36 09.2	+2.3
	baz=248						
YUS	**Yu-Shan**	1.03	224	⇑*i*P	Pn	07 35 54.1	+0.4
	baz=213						
TWY	**Chenhua**	1.04	354	*e*P	Pb	07 35 54.0	-0.3
	baz=339						
TWY				*e*S	Sb	07 36 07.2	-0.5
	baz=339						
NSM	**Shimen**	1.05	353	*e*P	Pb	07 35 56.1	+1.6
	baz=352						
WCHH	**Zhanghua**	1.08	262	*e*P	Pb	07 35 55.3	+0.4
	baz=260						
WCHH				S	Sb	07 36 10.3	+1.6
	baz=260						
FULB	**Fuli**	1.11	201	*e*P	Pn	07 35 54.1	-0.2
	baz=213						
FULB				*e*S	Sn	07 36 09.1	+0.6
	baz=213						
ALS	**Alishan**	1.11	230	P	Pb	07 35 55.6	-0.1
	baz=219						
ALS				*e*S	Sn	07 36 09.4	+0.3
	baz=219						
JYNG	**Yonagunijimaku**	1.13	79	P	Pb	07 35 55.6	-0.3
JYNG				*e*S	Sb	07 36 10.9	+0.6
CHN5	**Tsauling**	1.15	237	*e*P	Pb	07 35 56.5	+0.3
	baz=236						
CHN5				S	Sb	07 36 12.6	+1.7
	baz=236						
CHKT	**Chengkung**	1.18	196	*e*P	Pn	07 35 55.4	+0.1
	baz=209						
CHKT				*e*S	Sb	07 36 11.5	-0.1
	baz=209						
YOJ	**Yonaguni jima**	1.19	79	P	Pb	07 35 56.4	-0.5
YOJ				S	Sb	07 36 12.5	+0.5
YOJ	**Yonaguni jima**	1.19	79	Pn	Pb	07 35 56.4	-0.5
WGK	**Gukeng**	1.20	243	*e*P	Pb	07 35 57.8	+0.8
	baz=242						
WGK				*e*S	Sb	07 36 13.1	+1.0
	baz=242						
WDLH	**Douliu**	1.22	244	P	Pb	07 35 58.0	+0.7
	baz=242						
WDLH				S	Sb	07 36 14.3	+1.7
	baz=242						
ELDTW	**Lidau**	1.23	212	*e*P	Pn	07 35 55.6	-0.4
	baz=212						
ELDTW				*e*S	Sn	07 36 12.4	+0.8
	baz=212						
RLNB	**Erlin**	1.29	255	*e*P	Pb	07 35 58.8	+0.2
	baz=253						
EDH	**Donghe**	1.32	197	*e*P	Pn	07 35 56.2	-1.0
	baz=212						
EDH				*e*S	Sn	07 36 14.7	+1.0
	baz=212						
WTK	**Tuku**	1.34	246	*e*P	Pb	07 35 59.4	0.0
	baz=246						
WTK				S	Sb	07 36 18.5	+2.3
	baz=246						
CHN2	**Minshiung**	1.34	239	*e*P	Pb	07 36 00.3	+0.9
	baz=238						
CHN2				S	Sb	07 36 18.7	+2.5
	baz=238						
CHN4	**Tsaushan**	1.36	230	P	Pb	07 35 59.8	+0.1
	baz=221						
CHN4				*e*S	Sb	07 36 19.8	+3.0
	baz=221						
TPUB	**Ta-pu**	1.37	227	⇑*i*P	Pb	07 35 59.8	-0.1
	baz=218						
TPUB				*i* S	Sb	07 36 18.1	+1.1
	baz=218						
TPUB	**Ta-pu**	1.37	227	Pn	Pb	07 35 59.7	-0.1
STYH	**Taoyuan**	1.37	220	*e*P	Pn	07 35 58.9	+1.0
	baz=213						
STYH				*e*S	Sn	07 36 16.4	+1.3
	baz=213						
STYT	**Tauyuan**	1.39	220	*i* P	Pn	07 35 59.5	+1.3
	baz=213						
STYT				*e*S	Sb	07 36 17.2	-0.4
	baz=213						
CHY	**Chiayi**	1.40	239	⇑*e*P	Pb	07 36 00.8	+0.4
	baz=238						
CHY				*e*S	Sb	07 36 20.2	+2.4
	baz=238						
WTP	**Ta-pu**	1.42	226	⇑P	Pb	07 36 00.5	-0.2
	baz=215						
WTP				S	Sb	07 36 19.8	+1.3
	baz=215						
PCYT	**Pengchaiyu**	1.42	13	*e*P	Pn	07 35 59.5	+0.8
	baz=12						
LONT	**Longtian**	1.43	203	*e*P	Pn	07 35 57.8	-1.0
	baz=204						
LONT				*e*S	Sb	07 36 18.7	-0.1
	baz=204						
TWK	**Hsinying**	1.49	230	*i* P	Pb	07 36 01.6	-0.3
	baz=219						
TWK				*e*S	Sb	07 36 21.4	+0.9
	baz=219						
WSF	**Szhu**	1.50	247	*e*P	Pb	07 36 01.7	-0.4
	baz=246						
WSF				*e*S	Sb	07 36 21.7	+1.0
	baz=246						
SNST	**Tainan City**	1.51	228	*e*P	Pb	07 36 02.0	-0.3
	baz=218						
SNST				*e*S	Sb	07 36 22.1	+1.0
	baz=218						
CHN1	**Nanshi**	1.52	227	*e*P	Pb	07 36 01.9	-0.5
	baz=228						
CHN1				*e*S	Sb	07 36 21.8	+0.6
	baz=228						
TWG	**Pinlang**	1.53	203	*e*P	Pn	07 36 01.0	+0.8
	baz=195						
TWG				*e*S	Sb	07 36 21.1	-0.6
	baz=195						
TWG	**Pinlang**	1.53	203	Pn	Pn	07 35 58.9	-1.3
TWGBT	**Beinan**	1.53	203	*e*P	Pn	07 35 58.7	-1.5
	baz=195						
TWGBT				*e*S	Sn	07 36 20.4	+1.3
	baz=195						
SGST	**Jiashian**	1.56	223	*i* P	Pn	07 36 01.6	+1.1
	baz=213						
SGST				*e*S	Sb	07 36 22.4	0.0
	baz=213						
TTN	**Taitung**	1.57	200	*e*P	Pn	07 36 00.6	-0.1
	baz=201						
LDUT	**Ludao**	1.57	189	*e*P	Pn	07 35 59.9	-0.9
	baz=182						
LDUT				*e*S	Sb	07 36 22.1	-0.7
	baz=182						
SLGT	**Liugui**	1.58	219	*e*P	Pb	07 36 03.3	-0.3
	baz=221						
SLGT				*e*S	Sb	07 36 25.1	+1.9
	baz=221						
ICHU	**Yijhu**	1.58	237	*e*P	Pb	07 36 02.7	-0.8
	baz=225						
ICHU				*e*S	Sb	07 36 23.4	+0.2
	baz=225						
CHN8	**Yiju**	1.65	238	*e*P	Pb	07 36 04.3	-0.2
	baz=226						
CHN8				*e*S	Sb	07 36 25.4	+0.5
	baz=226						
CHN3	**Shinhua**	1.70	227	*e*P	Pb	07 36 05.7	+0.3
	baz=230						
CHN3				*e*S	Sb	07 36 28.8	+2.3
	baz=230						
SCST	**Cishan**	1.76	220	*e*P	Pb	07 36 06.0	-0.5
	baz=223						
SCST				*e*S	Sb	07 36 29.6	+1.5
	baz=223						
SCLT	**Jiali**	1.76	233	*e*P	Pb	07 36 05.5	-1.0
	baz=222						
SCLT				*e*S	Sb	07 36 28.3	+0.2
	baz=222						
ECL	**Taimali**	1.78	204	*e*P	Pn	07 36 03.2	-0.3
	baz=195						
SSD	**Sandimen**	1.79	214	*e*P	Pb	07 36 06.0	-1.1
	baz=205						
SSD				*e*S	Sb	07 36 28.2	-0.9
	baz=205						
TSMG	**Majia**	1.82	213	*e*P	Pb	07 36 06.2	-1.2
	baz=205						
TSMG				*e*S	Sb	07 36 29.0	-0.9
	baz=205						
IRIF	**Iriomote-Funau**	1.83	87	P	Pn	07 36 05.1	+0.8
IRIF				S	Sn	07 36 27.4	+1.0
TWM1	**Shoushan**	1.85	221	*e*P	Pb	07 36 07.8	-0.1
	baz=222						
MASBT	**Mashibuluo**	1.90	212	*e*P	Pn	07 36 06.3	+1.1
	baz=217						
MASBT				*e*S	Sb	07 36 32.2	-0.1
	baz=217						
HATJ	**Hateruma jima**	1.91	95	P	Pn	07 36 06.9	+1.6
HATJ				*e*S	Sn	07 36 30.0	+1.7
SNJT	**Kaohsiung City**	1.95	221	*e*P	Pb	07 36 08.8	-0.9
	baz=226						
SNJT				*e*S	Sb	07 36 35.6	+2.0
	baz=226						
EAST	**Anshuo**	2.01	204	*e*P	Pn	07 36 06.5	-0.3
	baz=197						
TAW	**Tawu**	2.02	202	*e*P	Pn	07 36 09.1	+2.2
	baz=194						
SSPT	**Xinbi**	2.04	212	*e*P	Pb	07 36 10.1	-1.3
	baz=218						
SSPT				*e*S	Sb	07 36 36.2	-0.1
	baz=218						
JKRS	**Kuro-shima**	2.08	89	P	Pn	07 36 09.2	+1.5
JKRS				S	Sn	07 36 34.7	+2.0
PNG	**Penghu**	2.10	252	*e*P	Pn	07 36 08.4	+0.6
	baz=250						
PNG				*e*S	Sn	07 36 33.8	+0.9
	baz=250						
PHUB	**P'eng-hu**	2.10	250	*e*P	Pn	07 36 08.1	+0.1
	baz=249						
SCZT	**Fangliau**	2.12	209	*e*P	Pn	07 36 09.9	+1.7
	baz=214						
SCZT				*e*S	Sn	07 36 36.1	+2.6
	baz=214						
WDGT	**Dungji**	2.13	243	*e*P	Pn	07 36 09.6	+1.3
	baz=242						
PTTC	**Pingtan**	2.18	306	*e*P	Pn	07 36 08.7	-0.3
	baz=304						
SLIU	**Shizi**	2.18	203	*e*P	Pn	07 36 11.4	+2.3
	baz=200						
SLIU				*e*S	Sb	07 36 39.0	-1.4
	baz=200						
LAY	**Lan-yu**	2.19	184	*e*P	Pn	07 36 08.8	-0.4
	baz=177						
VWUC	**VWUC**	2.20	290	*e*P	Pn	07 36 09.1	-0.3
	baz=289						
JIJ	**Ishigaki jima**	2.21	86	P	Pn	07 36 09.9	+0.4
JIJ				S	Sn	07 36 36.3	+0.5
WLCH	**Liuqiu**	2.25	214	*e*P	Pb	07 36 15.3	+0.5
	baz=218						
VCHM	**Qimei**	2.34	245	*e*P	Pn	07 36 11.3	+0.1
	baz=231						
JISG	**Ishigakijimahi**	2.38	81	P	Pn	07 36 12.5	+0.7
JISG				*e*S	Sn	07 36 41.0	+1.0
HEN	**Hengchun**	2.40	202	*e*P	Pn	07 36 14.3	+2.2
	baz=195						
TWK1	**Hengchun**	2.43	201	*e*P	Pn	07 36 15.6	+3.0
	baz=193						
TWKBT	**Hengchun**	2.43	200	*e*P	Pn	07 36 13.9	+1.3
	baz=193						
MATB	**Ma-tsu**	2.50	320	*e*P	Pn	07 36 12.3	-1.2
	baz=318						
PTMZ	**Houxiangcun**	2.50	289	*e*P	Pn	07 36 13.1	-0.3
	baz=288						
JTJ	**Tarama**	2.74	81	P	Pn	07 36 18.2	+1.4
JTJ				S	Sn	07 36 51.3	+2.4
LYJJ	**Jianjiangzhen**	2.91	323	*e*P	Pn	07 36 18.6	-0.5
	baz=321						
QZH	**Quanzhou**	2.94	285	Pn	Pn	07 36 19.4	-0.1
QZH				Sn	Sn	07 36 52.1	-1.6
QZH				smax	smax		
	comp=N,430nm,0.7s						
QZH				smax	smax		
	comp=E,300nm,0.5s						
KNM	**Kinmen**	3.01	274	*e*P	Pn	07 36 22.4	+1.9
	baz=272						
KNMB	**Chin-men Tao**	3.05	275	*e*P	Pn	07 36 21.1	0.0
	baz=273						
KNMB	**Chin-men Tao**	3.05	275	Pn	Pn	07 36 20.7	-0.3
MHZQ	**Yeshan**	3.07	308	*e*P	Pn	07 36 21.2	-0.1
	baz=306						
JIKM	**Ikemajima**	3.28	77	P	Pn	07 36 25.8	+1.6
JIKM				S	Sn	07 37 05.2	+3.0
JMJ	**Miyako jima 2**	3.30	79	*e*P	Pn	07 36 26.5	+2.1
	baz=80						
JMJ2	**Miyako jima3**	3.32	81	P	Pn	07 36 27.2	+2.5
JMJ2				*e*S	Sn	07 37 05.8	+2.6
AXDP	**Jialang**	3.48	282	*e*P	Pn	07 36 27.3	+0.4
	baz=280						
JOW	**Kunigami**	6.46	65	Pn	Pn	07 37 07.8	-0.1
	3.5nm,0.3s,baz=229,slow=11,SNR=4.2						
SSE	**Sheshan**	6.85	356	Pn	Pn	07 37 14.7	+1.5
WHN	**Wuhan**	9.08	315	P	Pn	07 37 42.2	-1.6
WHN				S	Sn	07 39 19.8	-5.2
WHN				LR	LR		
	comp=N,1µm,4.7s						
WHN				LR	LR		
	comp=E,730nm,6.9s						
WHN				LR	LR		
	comp=Z,1µm,16.3s						
QIZ	**Qiongzhong**	12.20	247	P	Pn	07 38 26.3	-0.4
QIZ				S	Sn	07 40 42.0	+0.3
QIZ				LR	LR		
	comp=N,190nm,16.8s						
QIZ				LR	LR		
	comp=E,120nm,5.6s						
QIZ				LR	LR		
	comp=Z,160nm,17.7s						
GYA	**Guiyang**	13.80	282	*e*P	Pn	07 38 50.1	+1.5
GYA				S	Sn	07 41 26.3	+5.4
GYA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
GYA				LR	LR		
	comp=Z,340nm,13.2s						
KSRS	**Korea Array**	14.20	20	Pn	P	07 38 58.1	-2.8
	0.4nm,0.3s,baz=200,slow=12,SNR=17						
KSRS				LR	LR	07 44 59.0	
	comp=Z,81nm,18.9s,baz=196,slow=40						
KS19	**Wonju Array Si**	14.23	20	P	P	07 39 01.7	+0.4
HHC	**Hu-ho-hao-te**	18.63	335	*e*P	Pn	07 39 51.6	+1.1
HHC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,69nm,6.6s						
HHC				LR	LR		
	comp=N,210nm,13.3s						
HHC				LR	LR		
	comp=E,98nm,13.3s						
HHC				LR	LR		
	comp=Z,190nm,12.4s						
MJAR	**Matsushiro Arr**	18.75	45	LR	LR	07 47 26.6	
	comp=Z,129nm,19.8s,baz=205,slow=38						
CMAR	**Chiang Mai Arr**	21.97	259	P	P	07 40 25.6	-0.8
	1.5nm,0.4s,baz=61,slow=9.4,SNR=5.2						
CMAR				LR	LR	07 49 41.8	
	comp=Z,97nm,18.9s,baz=127,slow=39						
KLR	**Kul'dur**	26.16	15	P	P	07 41 06.7	+0.3
	4.3nm,0.9s,baz=227,slow=4.4,SNR=12						
SONM	**Songino Array**	26.52	336	LR	LR	07 52 50.5	
	comp=Z,153nm,18.7s,baz=170,slow=39						
WMQ	**Urumqi**	33.98	314	*e*P	P	07 42 17.9	+2.1
MK31	**Makanchi Array**	38.65	316	P	P	07 42 55.1	-0.4
MKAR	**Makanchi Array**	38.65	316	P	P	07 42 55.3	-0.3
	1.8nm,0.7s,baz=106,slow=9.4,SNR=9.4						
MKAR	**Makanchi Array**	38.65	316	P	P	07 42 55.0	-0.6
MAKZ	**Makanchi**	38.85	316	P	P	07 42 57.6	+0.3
MAKZ				IAmb	IAmb	07 43 01.6	
	comp=Z,4.3nm,1.1s						
ZALV	**Zalesovo Beam**	40.47	327	P	P	07 43 08.6	-2.1
	comp=Z,1.4nm,0.6s,baz=102,slow=6.5,SNR=4.6						
ZALV				LR	LR	08 01 24.5	
	comp=Z,68nm,19.1s,baz=144,slow=38						
KSH	**Kashi**	41.29	303	P	P	07 43 23.4	+5.7
KSH				pmax	pmax		
	comp=Z,7.0nm,1.5s						
KSH				pmax	pmax		
	comp=Z,120nm,4.9s						
KSH				LR	LR		
	comp=Z,230nm,6.8s						
KSH				LR	LR		
	comp=Z,160nm,5.3s						
H11S3	**WAKE ISLAND Hy**	42.12	89	T	T	08 28 58.4	
	baz=284,slow=75,SNR=12						
H11S1	**WAKE ISLAND Hy**	42.13	89	T	T	08 28 52.4	
	baz=284,slow=75,SNR=5.1						
H11S2	**WAKE ISLAND Hy**	42.14	89	T	T	08 28 48.4	
	baz=284,slow=75,SNR=4.8						
KURK	**Kurchatov**	42.37	320	P	P	07 43 27.1	+0.9
KURBB	**Kurchatov Arra**	42.39	320	P	P	07 43 26.4	0.0
	comp=Z,0.4nm,0.2s,baz=119,slow=7.6,SNR=2.9						
COEN	**Coen**	43.36	149	P	P	07 43 35.8	+1.2
COEN				IAmb	IAmb	07 43 42.8	
	comp=Z,10nm,1.5s						
WB0	**Warramunga Arr**	45.45	163	P	P	07 43 50.1	-1.1
WB0				IAmb	IAmb	07 44 06.4	
	comp=Z,5.7nm,1.2s						
WRA	**Warramunga Arr**	45.60	163	P	P	07 43 50.0	-2.4
	comp=Z,0.8nm,0.5s,baz=345,slow=8.8,SNR=10						
WRA	**Warramunga Arr**	45.60	163	P	P	07 43 52.2	-0.3
WB2	**Warramunga Arr**	45.60	163	P	P	07 43 51.0	-1.4
WB2				IAmb	IAmb	07 43 59.5	
	comp=Z,2.9nm,1.0s						
WR0	**Warramunga Arr**	45.67	163	P	P	07 43 51.9	-1.0
WR0				IAmb	IAmb	07 44 10.7	
	comp=Z,3.1nm,0.9s						
KKAR	**Karatay Array**	45.83	307	P	P	07 43 55.2	+1.0
BVAR	**Borovoye Array**	47.95	321	P	P	07 44 10.2	-0.3
	comp=Z,0.4nm,0.4s,baz=161,slow=14,SNR=5.1						
ASAR	**Alice Springs**	49.06	165	P	P	07 44 18.2	-1.2
	comp=Z,0.5nm,0.7s,baz=338,slow=7.0,SNR=4.4						
ABKAR	**Akbulak array**	53.76	314	P	P	07 44 54.7	+0.4
GEYT	**Alibeck**	55.20	300	P	P	07 45 03.8	-1.2
	comp=Z,2.1nm,0.6s,baz=214,slow=7.2,SNR=4.3						
GEYT				LR	LR	08 11 29.9	
	comp=Z,48nm,18.6s,baz=175,slow=39						
STKA	**Stephens Creek**	58.94	160	P	P	07 45 29.9	-1.5
	comp=Z,1.0nm,0.7s,baz=31,slow=8.9,SNR=2.9						
TTA	**Tatalina**	65.22	30	P	P	07 46 13.1	-0.1
KBZ	**Khabaz**	65.83	309	P	P	07 46 17.1	-0.3
	comp=Z,3.5nm,1.0s,baz=180,slow=4.3,SNR=5.0						
PPLA	**Purkeypile**	66.96	30	P	P	07 46 24.8	+0.3
TOLK	**Toolik Lake Re**	67.21	23	P	P	07 46 25.9	+0.1
TRF	**Thorofare Moun**	67.72	29	P	P	07 46 31.0	+1.6
MDM	**Murphy Dome**	68.34	27	P	P	07 46 33.4	+0.3
MDM				IAmb	IAmb	07 46 34.5	
	comp=Z,2.9nm,0.9s						
ILAR	**Eielson Array**	68.94	27	P	P	07 46 37.0	+0.3
	comp=Z,0.4nm,0.6s,baz=288,slow=7.5,SNR=5.6						
ILAR				LR	LR	08 17 48.5	
	comp=Z,19nm,20.6s,baz=182,slow=37						
BMAR	**Burnt Mountain**	69.28	24	P	P	07 46 39.6	+0.8
FINES	**FINESS Array B**	71.65	330	P	P	07 46 52.0	-1.3
	comp=Z,6.1nm,1.1s,baz=60,slow=4.6,SNR=4.1						
FINES				LR	LR	08 18 59.7	
	comp=Z,107nm,18.8s,baz=121,slow=36						
DAWY	**Dawson**	72.26	27	P	P	07 46 56.9	-0.2
DAWY				IAmb	IAmb	07 46 57.6	
	comp=Z,2.5nm,0.8s						
INK	**Inuvik**	72.99	22	P	P	07 47 00.8	-0.5
INK				IAmb	IAmb	07 47 09.8	
	comp=Z,6.1nm,1.5s						
AKASG	**Malin Array Be**	73.16	318	P	P	07 47 01.2	-1.4
	comp=Z,1.4nm,0.7s,baz=60,slow=5.6,SNR=2.4						
C36M	**Paulatuk**	75.59	20	P	P	07 47 15.4	-0.9
NOA	**NORSAR Array B**	78.41	332	LR	LR	08 25 11.5	
	comp=Z,61nm,18.6s,baz=5.0,slow=38						
YKA	**Yellowknife Ar**	82.73	23	P	P	07 47 54.9	-0.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,0.7nm,0.6s,baz=317,slow=4.3,SNR=19						
PPT	Papeete	95.89	107	LR	LR	08 23 17.4	
	comp=Z,20nm,19.7s,baz=184,slow=30						
NVAR	Mina Array Bea	96.06	43	P	P	07 49 00.4	+0.5
	comp=Z,0.2nm,0.6s,baz=289,slow=5.7,SNR=3.6						

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*IDC **12** 08:19:27.6±1.1, 33°.88N×73°.75E, h0^{km}, mb3.7/9, mb1 3.8/13, mb1mx3.6/61, mbtmp3.7/13, ML3.4/4, Error ellipse: s-maj=28.4km s-min=21.1km az=70.0*

*NDI **12** 08:19:34.2±3.1, 34°.74N×74°.97E, h15^{km}±702^{km}, ML3.6*

ISC 12 08:19:33.6±0.7, **34°.00N**±0°.07×**73°.6E**±0°.1, **h35**^{km}, **n20**, σ**1^{s}92**/26, **mb3.7**/8, **Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMU	Jammu	1.68	139	eP	Pn	08 19 56.5	-4.0
JMU				eS	Sn	08 20 19.0	-1.8
THN	Thein Dam	2.37	131	eP	Pn	08 20 14.0	+4.1
THN				eS	Sn	08 20 42.5	+4.8
DHRM	DHARAMSHALA	2.86	127	eP	Pn	08 20 16.0	-0.9
DHRM				eS	Sn	08 20 50.5	+0.1
DHRM				IAML		08 20 55.7	
	comp=E,470nm,0.6s						
DHRM				IAML		08 20 56.0	
	comp=N,421nm,0.8s						
SMLA	Simla	4.16	133	eP	Pn	08 20 35.1	+0.6
SMLA				eS	Sn	08 21 20.2	-1.7
SMLA				IAML		08 21 38.6	
	comp=E,205nm,0.0s						
SMLA				IAML		08 21 40.1	
	comp=N,191nm,0.5s						
AYAN	Aya Nagar	6.28	150	eS	Sn	08 22 14.7	+0.5
KUDL	Kundal	6.34	156	eP	Pn	08 21 06.7	+2.1
KUDL				eS	Sn	08 22 17.0	+1.1
SONA	Sohna	6.46	152	eP	Pn	08 21 12.2	+5.9
SONA				eS	Sn	08 22 19.1	+0.3
AAK	Ala-Archa	8.65	4	Pn	Pn	08 21 37.3	+1.0
	comp=N,0.3nm,0.3s,baz=173,slow=13,SNR=4.0						
AAK				Sn	Sn	08 23 13.3	+0.5
	baz=332,slow=24,SNR=1.6						
MKAR	Makanchi Array	14.38	25	Pn	Pn	08 22 53.9	-0.6
	comp=N,0.1nm,0.3s,baz=205,slow=11,SNR=9.0						
KURBB	Kurchatov Arra	17.00	11	P	Pn	08 23 26.4	-2.1
	comp=N,0.1nm,0.3s,baz=197,slow=11,SNR=4.0						
BVAR	Borovoye Array	19.15	354	P	Pn	08 23 54.2	-0.7
	comp=N,0.4nm,0.3s,baz=130,slow=8.5,SNR=4.8						
AKTO	Aktyubinsk	20.00	330	P	Pn	08 24 05.3	+0.4
	comp=N,1.1nm,0.3s,baz=145,slow=10,SNR=6.7						
ZALV	Zalesovo Beam	21.46	18	P	P	08 24 18.4	-0.4
	comp=N,1.6nm,0.5s,baz=215,slow=10,SNR=6.0						
AKASG	Malin Array Be	36.18	311	P	P	08 26 31.4	-1.2
	comp=N,0.4nm,0.4s,baz=85,slow=6.3,SNR=2.0						
FINES	FINESS Array B	40.73	327	P	P	08 27 11.4	+0.7
	comp=N,2.3nm,0.8s,baz=116,slow=13,SNR=1.6						
ARCES	ARCESS Array B	44.26	338	P	P	08 27 41.1	+1.9
	comp=N,2.3nm,0.7s,baz=125,slow=7.8,SNR=1.4						
TORD	Torodi Ar. Bea	67.84	271	P	P	08 30 28.7	+0.1
	comp=N,0.6nm,0.4s,baz=43,slow=6.3,SNR=5.7						
WRA	Warramunga Arr	78.86	123	P	P	08 31 32.1	-1.3
	comp=N,0.2nm,0.6s,baz=326,slow=4.9,SNR=4.6						
ASAR	Alice Springs	81.08	126	P	P	08 31 44.0	-1.3
	comp=N,0.3nm,0.7s,baz=308,slow=4.6,SNR=2.7						
YKA	Yellowknife Ar	83.61	4	P	P	08 31 57.8	-0.2
	comp=N,0.1nm,0.5s,baz=353,slow=5.3,SNR=2.7						

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*SJA **12** 08:34:01.9±0.6, 22°.68S×66°.04W, h278^{km}±4^{km}, ML4.0, MW3.8*

*IDC **12** 08:34:02.9±1.9, 22°.56S×65°.99W, h242^{km}±19^{km}, mb3.3/3, mb1 3.4/6, mb1mx3.2/25, mbtmp3.8/6, Error ellipse: s-maj=33.5km s-min=18.8km az=121.0*

ISC 12 08:34:03.3±0.9, **22°.55S**±0°.07×**66°.16W**±0°.06, **h251**^{km}, **n21**, σ**1^{s}74**/32, **mb3.8**/3, **Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YJA	Yavi	0.70	58	eP	Pn	08 34 39.7	+2.1
YJA				eS	S	08 35 07.5	+3.0
LVC	Limon Verde	2.54	268	P	Pn	08 34 53.3	+1.8
	12nm,0.3s,baz=76,slow=6.2,SNR=103						
LVC				S	S	08 35 30.7	+1.2
	13nm,0.3s,baz=305,slow=22,SNR=49						
LVC	Limon Verde	2.54	268	eP	Pn	08 34 53.2	+1.8
LVC				eS	S	08 35 31.7	+2.2
PB09	IPOC Station P	2.96	284	eP	Pn	08 34 57.8	+2.2
PB09				eS	S	08 35 39.0	+2.1
PB15	IPOC Station P	3.13	257	eP	Pn	08 34 59.6	+2.1
PB15				eS	S	08 35 41.3	+1.0
PB06	IPOC Station P	3.16	267	eS	S	08 35 41.7	+0.8
PB06				IAML		08 35 45.9	
	comp=Z,157nm,0.2s						
PB01	IPOC Station P	3.44	295	eP	Pn	08 35 01.8	+0.9
PB01				eS	S	08 35 46.0	-0.4
PB01				IAML		08 35 47.8	
	comp=Z,155nm,0.2s						
FSA	Cafayete	3.55	177	eP	Pn	08 35 03.8	+1.7
PB04	IPOC Station P	3.70	273	eP	Pn	08 35 05.3	+1.4
PB04				eS	S	08 35 51.5	-0.4
PB04				IAML		08 35 53.5	
	comp=Z,228nm,0.2s						
PB05	IPOC Station P	3.75	265	eP	Pn	08 35 05.6	+1.2
PB05				eS	S	08 35 51.8	-1.0
PB05				IAML		08 35 55.9	
	comp=Z,94nm,0.4s						
PB10	IPOC Station P	4.16	256	eP	Pn	08 35 10.1	+1.0
PB10				eS	S	08 36 00.1	-1.3
PB10				IAML		08 36 01.6	
	comp=Z,101nm,0.3s						
AHML	Horco Molle	4.28	170	eP	Pn	08 35 12.7	+2.2
PB14	IPOC Station P	4.41	241	eP	Pn	08 35 13.2	+0.9
PB14				eS	S	08 36 05.4	-1.8
PB14				IAML		08 36 10.1	
	comp=Z,112nm,0.2s						
VCA	Vinchina	6.43	196	eP	Pn	08 35 38.3	+1.3
LPAZ	La Paz	6.50	343	P	Pn	08 35 39.2	+0.7
	comp=Z,0.6nm,0.3s,baz=161,slow=11,SNR=5.2						
LPAZ				S	S	08 36 53.2	-1.3
	comp=Z,0.3nm,0.3s,baz=314,slow=15,SNR=8.4						
ACLC	CERRO LA CRUZ	6.88	186	eP	Pn	08 35 42.8	+0.1
SIV	San Ignacio	8.10	37	P	Pn	08 35 56.7	-1.4
	comp=Z,1.6nm,0.3s,baz=240,slow=13,SNR=48						
PTGA	Pitinga	22.51	16	P	P	08 38 44.0	+2.0
	comp=Z,1.2nm,0.3s,baz=338,slow=14,SNR=4.4						
TORD	Torodi Ar. Bea	75.33	69	P	P	08 45 17.6	-2.0
	comp=Z,0.7nm,0.4s,baz=253,slow=6.2,SNR=4.1						
YKA	Yellowknife Ar	93.04	340	P	P	08 46 48.4	+0.5
	comp=Z,0.1nm,0.6s,baz=123,slow=5.4,SNR=4.1						
MKAR	Makanchi Array	144.91	39	PKP	PKiKP	08 53 10.8	-3.6
	comp=Z,0.5nm,0.5s,baz=308,slow=3.8,SNR=9.1						

IDC 12 08:49:54.7±5.4, **3°.35S**×**127°.61E**, **h115**^{km}±62^{km}, **mb3.0**/2, **mb1 3.4**/5, **mb1mx3.1**/49, **mbtmp3.7**/5, **MS2.8**/1, **Ms1 2.8**/1, **ms1mx2.1**/16, **Error ellipse: s-maj=55.9km s-min=20.3km az=93.0, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	4.41	56	P	Pn	08 50 58.9	-0.7
	9.7nm,0.3s,baz=222,slow=23,SNR=18						
SIJI				S	Sn	08 51 50.9	+0.9
	7.0nm,0.3s,baz=212,slow=22,SNR=12						
FITZ	Fitzroy Crossi	14.79	187	P	Pn	08 53 16.8	-1.2
	0.2nm,0.3s,baz=358,slow=12,SNR=3.8						
WRA	Warramunga Arr	17.75	159	P	P	08 53 54.2	+0.4
	0.4nm,0.3s,baz=340,slow=11,SNR=19						
ASAR	Alice Springs	21.10	164	P	P	08 54 30.5	+0.4
	1.3nm,0.6s,baz=347,slow=12,SNR=20						
GUMO	Guam	24.01	45	LR	LR	09 04 16.7	
	comp=Z,21nm,19.3s,baz=126,slow=36						
MKAR	Makanchi Array	63.89	327	P	P	09 00 15.0	-0.2
	0.1nm,0.5s,baz=133,slow=7.8,SNR=1.9						

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*IDC **12** 08:53:30.0±3.5, 7°.55S×149°.15E, h94^{km}±18^{km}, mb3.6/3, mb1 3.9/6, mb1mx3.5/40, mbtmp4.1/6, MS2.8/4, Ms1 2.8/4, ms1mx2.5/31, Error ellipse: s-maj=55.3km s-min=18.4km az=115.0*

ISC 12 08:53:21.9±2.2, **7°.5S**±0°.2×**149°.6E**±0°.3, **h35**^{km}, **n9**, σ**3^{s}10**/9, **mb4.0**/3, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.08	232	P	Pn	08 54 12.1	+4.0
	48nm,0.3s,baz=58,slow=4.9,SNR=42						
PMG				S	Sn	08 54 44.4	+0.6
	18nm,0.3s,baz=337,slow=23,SNR=3.3						
PMG				LR	LR	08 55 22.9	
	comp=Z,62nm,20.8s,baz=109,slow=42						
JAY	Jayapura	10.16	299	LR	LR	08 59 28.0	
	comp=Z,61nm,21.4s,baz=170,slow=37						
WRA	Warramunga Arr	19.30	229	P	P	08 57 42.4	-1.7
	0.4nm,0.3s,baz=55,slow=12,SNR=13						
SIJI	Sorong	19.44	289	P	P	08 57 44.5	-1.1
	0.9nm,0.3s,baz=305,slow=2.9,SNR=3.7						
ASAR	Alice Springs	22.04	221	P	P	08 58 14.3	+0.6
	3.2nm,0.5s,baz=53,slow=9.4,SNR=58						
ASAR				S	S	09 02 09.8	-5.2
	1.2nm,1.1s,baz=44,slow=24,SNR=4.8						
FITZ	Fitzroy Crossi	25.61	243	P	P	08 58 45.2	-3.0
	3.1nm,0.4s,baz=50,slow=8.0,SNR=27						
FITZ				LR	LR	09 10 17.7	
	comp=Z,16nm,19.1s,baz=131,slow=40						
TLY	Talaya	70.87	332	LR	LR	09 35 07.5	
	comp=Z,16nm,19.5s,baz=6.0,slow=35						
MKAR	Makanchi Array	80.30	320	P	P	09 05 30.1	+0.7
	0.3nm,0.7s,baz=97,slow=6.0,SNR=2.6						
TORD	Torodi Ar. Bea	147.96	283	PKPbc	PKPbc	09 13 04.3	-0.4
	0.4nm,0.8s,baz=89,slow=2.8,SNR=1.3						

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*MOS **12** 08:55:00.4±1.1, 49°.11N×155°.96E, h18^{km}, mb4.5/10, Error ellipse: s-maj=13.5km s-min=4.1km az=75.6*

*KRSC **12** 08:55:05.3±2.8, 49°.40N×156°.85E, h16^{km}±36^{km}, ML4.8*

*NEIC **12** 08:55:07.6±1.1, 49°.5N±0°.1×155°.5E±0°.2, h64^{km}±6^{km}, mb4.5/26, Error ellipse: s-maj=20.5km s-min=11.3km az=133.0*

*IDC **12** 08:55:08.3±2.4, 49°.44N×155°.61E, h72^{km}±21^{km}, mb3.7/15, mb1 3.9/21, mb1mx3.8/48, mbtmp4.0/21, MS3.2/10, Ms1 3.2/10, ms1mx3.0/53, Error ellipse: s-maj=20.3km s-min=11.5km az=142.0*

ISC 12 08:55:06.4±0.6, **49°.34N**±0°.07×**155°.75E**±0°.06, **h54**^{km}, **n149**, σ**1^{s}40**/155, **mb4.2**/34, **MS3.2**/7, **6C-4D**, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.37	10	ePN	Pn	08 55 27.1	-2.0
SKR				eS	Sn	08 55 44.2	-1.8
SKR				pmax	pmax		
	comp=Z,168nm,0.5s						
SKR				smax	smax		
	comp=E,915nm,0.4s						
SKR				smax	smax		
	comp=N,2μm,0.5s						
SKR	Severo-Kuril's	1.37	10	eP	Pn	08 55 27.6	-1.5
SKR				eS	Sn	08 55 44.3	-1.8
PAU	Pauzhetka	2.24	17	PN	Pn	08 55 40.0	-0.9
PAU	Pauzhetka	2.24	17	eP	Pn	08 55 40.0	-0.9
PAU				eS	Sn	08 56 06.6	-0.7
KDTR	Khodutka, Kamc	2.88	30	PN	Pn	08 55 47.9	-1.9
KDTR	Khodutka, Kamc	2.88	30	eP	Pn	08 55 47.9	-1.9
KDTR				eS	Sn	08 56 20.3	-2.9
MTVR	Mutnovka	3.50	25	PN	Pn	08 55 58.3	-0.1
MTVR	Mutnovka	3.50	25	eP	Pn	08 55 58.3	-0.1
MTVR				eS	Sn	08 56 38.6	-0.1
GRL	Gorelyy	3.54	24	PN	Pn	08 55 58.6	-0.2
GRL	Gorelyy	3.54	24	eP	Pn	08 55 58.6	-0.2
GRL				eS	Sn	08 56 38.2	-1.2
RUS	Russkaya	3.56	28	PN	Pn	08 55 57.8	-1.2
RUS	Russkaya	3.56	28	eP	Pn	08 55 57.8	-1.2
RUS				eS	Sn	08 56 37.3	-2.4
APC	Apacha	3.70	13	PN	Pn	08 56 02.2	+1.3
APC	Apacha	3.70	13	eP	Pn	08 56 02.2	+1.3
KRMR	Karymshinskiy	3.80	22	PN	Pn	08 56 03.7	+1.3
KRMR	Karymshinskiy	3.80	22	eP	Pn	08 56 03.7	+1.3
PEA0B	Petropavlovsk-	3.97	17	PN	Pn	08 56 05.5	+0.9
PEA0B	Petropavlovsk-	3.97	17	Pn	Pn	08 56 05.5	+0.9
PETK	Petropavlovsk-	3.97	17	P	Pn	08 56 05.0	+0.4
	comp=N,6.1nm,0.3s,baz=174,slow=11,SNR=159						
PETK				LR	LR	08 57 55.0	
	comp=N,270nm,18.4s,baz=195,slow=43						
PETK	Petropavlovsk-	3.97	17	PN	Pn	08 56 05.4	+0.8
PETK	Petropavlovsk-	3.97	17	Pn	Pn	08 56 05.4	+0.8
PET	Petropavlovsk	4.12	25	PN	Pn	08 56 06.6	-0.1
PET	Petropavlovsk	4.12	25	eP	Pn	08 56 06.6	-0.1
PET				eS	Sn	08 56 52.7	-0.8
PET	Petropavlovsk	4.12	25		Pn	08 56 06.6	-0.1
DALK	Dalny	4.15	26	PN	Pn	08 56 07.2	+0.1
DALK	Dalny	4.15	26	eP	Pn	08 56 07.2	+0.1
DALK				eS	Sn	08 56 53.7	-0.6
UGLR	Uglovaya	4.33	25	PN	Pn	08 56 10.4	+0.7
UGLR	Uglovaya	4.33	25	eP	Pn	08 56 10.4	+0.7
UGLR				eS	Sn	08 56 59.3	+0.4
KOK	Koryaka	4.35	23	PN	Pn	08 56 11.4	+1.4
KOK	Koryaka	4.35	23	eP	Pn	08 56 11.4	+1.4
AVH	Avacha	4.36	24	PN	Pn	08 56 11.0	+1.0
AVH	Avacha	4.36	24	eP	Pn	08 56 11.0	+1.0
AVH				eS	Sn	08 57 00.3	+0.8
SMAR	Somma	4.37	25	PN	Pn	08 56 11.7	+1.3
SMAR	Somma	4.37	25	eP	Pn	08 56 11.7	+1.3
SMAR				eS	Sn	08 57 01.9	+1.9
KRER	Koryakskii	4.39	24	PN	Pn	08 56 11.8	+1.2
KRER	Koryakskii	4.39	24	eP	Pn	08 56 11.8	+1.2
KRX	Arik	4.42	23	PN	Pn	08 56 11.9	+1.0
KRX	Arik	4.42	23	eP	Pn	08 56 11.9	+1.0
KRX				eS	Sn	08 57 01.8	+0.7
NLC	Nalytchevo	4.45	29	PN	Pn	08 56 09.5	-1.7
NLC	Nalytchevo	4.45	29	eP	Pn	08 56 09.5	-1.7
NLC				eS	Sn	08 56 57.8	-3.9
GNL	Ganaly	4.57	17	PN	Pn	08 56 13.9	+0.9
GNL	Ganaly	4.57	17	eP	Pn	08 56 13.9	+0.9
SPN	Mys Shipunski	4.62	34	PN	Pn	08 56 12.5	-1.1
SPN	Mys Shipunski	4.62	34	eP	Pn	08 56 12.5	-1.1
SPN				eS	Sn	08 57 03.8	-2.1
KZV	Kizimen	6.42	24	PN	Pn	08 56 39.3	+0.9
KZV	Kizimen	6.42	24	eP	Pn	08 56 39.3	+0.9
TUMD	Tumrok D	6.53	24	eP	Pn	08 56 41.9	+2.2
TUMR	Tumrok	6.53	23	PN	Pn	08 56 41.9	+2.0
TUMR	Tumrok	6.53	23	eP	Pn	08 56 41.8	+1.9
BKI	Bering	8.59	43	eS	Sn	08 58 32.6	-10
YSS	Yuzh-Sakhalins	9.01	260⇑	ePN	Pn	08 57 12.1	-1.6
YSS				pmax	pmax		
	comp=Z,10.0nm,0.3s						
YSS	Yuzh-Sakhalins	9.01	260	Pn	Pn	08 57 13.7	0.0
JKA	Kamikawa-asahi	10.42	245	Pn	Pn	08 57 35.8	+2.7
ASAJ	Asahikawa	10.43	245	P	Pn	08 57 34.2	+1.2
	comp=Z,2.2nm,0.3s,baz=68,slow=14,SNR=12						
ASAJ				LR	LR	09 01 32.5	
	comp=Z,54nm,20.9s,baz=9.0,slow=37						
ASAJ	Asahikawa	10.43	245	PN	Pn	08 57 35.8	+2.8
MA2	Magadan	10.65	346	P	Pn	08 57 36.3	+0.2
	comp=Z,1.9nm,0.3s,baz=155,slow=13,SNR=6.7						
MA2				LR	LR	09 01 50.6	
	comp=Z,91nm,18.6s,baz=224,slow=38						
ERM	Erimo	11.44	235⇑	ePN	Pn	08 57 46.4	-0.6
ERM	Erimo	11.44	235	Pn	Pn	08 57 46.3	-0.6
SEY	Seymchan	13.75	354	P	Pn	08 58 19.6	+1.3
	comp=Z,0.4nm,0.3s,baz=185,slow=10.0,SNR=6.7						
KLR	Kul'dur	15.65	279	P	Pn	08 58 44.6	+1.4
	comp=Z,0.1nm,0.3s,baz=82,slow=15,SNR=3.6						
KLR	Kul'dur	15.65	279⇓	eP	Pn	08 58 45.1	+1.9
KLR				pmax	pmax		
	comp=Z,14nm,3.6s						
USA0B	Ussuriysk Arra	17.04	261⇓	eP	Pn	08 59 02.3	+1.6
MAT	Matsushiro	18.07	231	P	P	08 59 12.8	-0.4
MJAR	Matsushiro Arr	18.07	231	P	P	08 59 14.1	+0.8
	comp=Z,0.1nm,0.3s,baz=16,slow=14,SNR=5.2						
MDJ	Mudanjiang	18.42	265	P	P	08 59 15.3	-1.7
MDJ				pP	Pn	08 59 23.7	+6.1
MDJ				sP	pP	08 59 29.0	+0.1
MDJ				S	Sn	09 02 35.9	-6.6
MDJ				sS	S	09 02 45.1	+0.7
MDJ				ScP	ScP	09 07 19.8	+3.6
MDJ				PcS	PcS	09 07 26.5	+4.4
MDJ	Mudanjiang	18.42	265	ScS	ScS	09 11 02.2	+5.2
MDJ				pmax	pmax		
	comp=Z,9.0nm,1.9s						
MDJ				pmax	pmax		
	comp=Z,230nm,3.6s						
MDJ				LR	LR		
	comp=N,240nm,4.7s						
MDJ				LR	LR		
	comp=E,120nm,4.6s						
MDJ				LR	LR		
	comp=Z,200nm,5.6s						
JGF	Kuroka	19.23	231	P	P	08 59 25.8	-0.2
YAK	Yakutsk	19.25	321⇑	eP	P	08 59 26.8	+0.8
YAK				pmax	pmax		
	comp=Z,14nm,0.7s						
INU	Inuyama	19.60	231	P	P	08 59 30.2	+0.2
INU				IAmb	IAmb	08 59 31.4	
	comp=Z,48nm,1.5s						
KSRS	Korea Array	23.31	250	P	P	09 00 10.1	+0.7
	comp=Z,2.0nm,0.7s,baz=46,slow=9.5,SNR=5.5						
KSRS				LR	LR	09 08 37.5	
	comp=Z,22nm,19.7s,baz=70,slow=35						
JNU	Nakatsue	24.58	238	P	P	09 00 21.1	-0.1
TNA	Tin City	24.89	36	P	P	09 00 23.6	-0.1
ANM	Nome	25.56	39	P	P	09 00 30.2	+0.4
ANM				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ANM	Nome	25.56	39	P	P	09 00 30.2	+0.4
TTA	Tatalina	29.32	44	P	P	09 01 03.6	+0.1
TTA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
TTA	Tatalina	29.32	44	P	P	09 01 03.6	+0.1
H11N2	WAKE ISLAND Hy	30.86	159	T	T	09 34 09.0	
	baz=346,slow=76,SNR=77						
H11N1	WAKE ISLAND Hy	30.88	159	T	T	09 34 11.6	
	baz=346,slow=76,SNR=63						
H11N3	WAKE ISLAND Hy	30.88	159	T	T	09 34 10.2	
	baz=346,slow=76,SNR=132						
HHC	Hu-ho-hao-te	31.93	272	eP	P	09 01 28.0	+1.2
HHC				pmax	pmax		
	comp=Z,4.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,60nm,7.6s						
H11S1	WAKE ISLAND Hy	32.00	160	T	T	09 35 36.0	
	baz=347,slow=76,SNR=2229						
H11S3	WAKE ISLAND Hy	32.01	160	T	T	09 35 32.6	
	baz=347,slow=76,SNR=3459						
H11S2	WAKE ISLAND Hy	32.02	160	T	T	09 35 24.9	
	baz=347,slow=76,SNR=1503						
COLD	Coldfoot	32.20	36	P	P	09 01 29.1	+0.3
COLD				IAmb	IAmb	09 01 29.3	
	comp=Z,3.4nm,0.6s						
SONM	Songino Array	32.22	286	LR	LR	09 14 33.1	
	comp=Z,42nm,18.2s,baz=40,slow=36						
NJ2	Nanjing	32.47	252	eP	P	09 01 31.3	-0.1
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
RND	Reindeer	32.58	43	P	P	09 01 31.6	-0.6
RND				pmax	pmax		
	comp=Z,4.0nm,0.8s						
RND	Reindeer	32.58	43	P	P	09 01 31.6	-0.6
RND				IAmb	IAmb	09 01 32.3	
	comp=Z,4.4nm,0.8s						
TOLK	Toolik Lake Re	32.61	34	P	P	09 01 32.3	-0.1
TOLK				IAmb	IAmb	09 01 33.0	
	comp=Z,4.5nm,0.6s						
TLY	Talaya	32.64	294	LR	LR	09 14 38.5	
	comp=Z,44nm,20.9s,baz=54,slow=36						
TLY	Talaya	32.64	294⇑	eP	P	09 01 34.9	+2.1
TLY				pmax	pmax		
	comp=Z,2.0nm,0.6s						
SML	Sawmill	32.89	46	P	P	09 01 34.8	-0.1
COLA	College	33.01	41	d iP	P	09 01 36.2	+0.3
COLA				pmax	pmax		
	comp=Z,9.0nm,0.7s						
CCB	Clear Creek Bu	33.03	41	P	P	09 01 36.0	-0.1
CCB				IAmb	IAmb	09 01 36.7	
	comp=Z,4.9nm,1.0s						
HDA	Harding Lake	33.41	42	P	P	09 01 39.2	-0.1
HDA				IAmb	IAmb	09 01 40.0	
	comp=Z,5.2nm,0.6s						
ILAR	Eielson Array	33.43	41	P	P	09 01 39.0	-0.5
	comp=Z,2.2nm,0.7s,baz=257,slow=6.1,SNR=29						
PRP	Porcupine Dome	33.99	40	P	P	09 01 44.6	0.0
BMAR	Burnt Mountain	34.38	36	P	P	09 01 48.3	+0.5
N25K	Chitina, Valde	34.68	46	P	P	09 01 50.7	+0.2
BCAR	Beaver Creek A	35.80	44	P	P	09 02 00.7	+0.7
EGAK	Eagle	35.88	41	P	P	09 02 00.4	-0.3
EGAK				IAmb	IAmb	09 02 00.7	
	comp=Z,5.8nm,0.7s						
INK	Inuvik	38.51	34	P	P	09 02 22.6	-0.2
	comp=Z,2.6nm,0.6s,baz=337,slow=8.5,SNR=7.0						
INK	Inuvik	38.51	34	P	P	09 02 23.4	+0.5
INK				pmax	pmax		
	comp=Z,11nm,1.5s						
INK	Inuvik	38.51	34	P	P	09 02 23.4	+0.5
INK				IAmb	IAmb	09 02 25.4	
	comp=Z,11nm,1.4s						
C36M	Paulatuk	41.69	32	P	P	09 02 49.5	+0.4
C36M				IAmb	IAmb	09 02 50.1	
	comp=Z,11nm,1.0s						
DLBC	Dease Lake	42.54	48	P	P	09 02 57.6	+1.3
DLBC				IAmb	IAmb	09 03 16.2	
	comp=Z,8.1nm,1.4s						
ZALV	Zalesovo Beam	42.57	304	P	P	09 02 53.7	-2.8
	comp=Z,0.4nm,0.3s,baz=78,slow=4.2,SNR=1.8						
ZALV				PcP	PcP	09 04 46.8	-1.1
	comp=Z,0.8nm,0.4s,baz=100,slow=1.7,SNR=5.4						
ZALV				LR	LR	09 22 29.5	
	comp=Z,27nm,18.1s,baz=72,slow=39						
WMQ	Urumqi	45.66	290	eP	P	09 03 22.5	+1.0
EUNU	Eureka	46.23	12	P	P	09 03 25.3	-0.1
MK31	Makanchi Array	47.35	296⇑	eP	P	09 03 32.0	-2.6
MKAR	Makanchi Array	47.35	296	P	P	09 03 32.6	-1.9
	comp=Z,0.7nm,0.7s,baz=68,slow=7.2,SNR=5.9						
MKAR				PcP	PcP	09 05 03.5	-1.1
	comp=Z,0.5nm,0.8s,baz=71,slow=4.2,SNR=2.5						
MKAR				LR	LR	09 24 14.7	
	comp=Z,85nm,18.9s,baz=14,slow=37						
KURK	Kurchatov	47.43	303⇑	eP	P	09 03 33.5	-1.6
KURK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
YKA	Yellowknife Ar	47.79	39	P	P	09 03 38.0	+0.2
	comp=Z,0.8nm,0.7s,baz=298,slow=6.3,SNR=16						
YKA	Yellowknife Ar	47.79	39	P	P	09 03 38.0	+0.2
BRVK	Borovoye	50.63	309	P	P	09 03 57.8	-1.8
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BRVK	Borovoye	50.63	309	P	P	09 03 57.8	-1.8
ARU	Arti	54.30	317	d iP	P	09 04 24.5	-2.2
ARU				S	S	09 11 59.5	-0.6
ARU				pmax	pmax		
	comp=Z,40nm,3.5s						
ARU	Arti	54.30	317	P	P	09 04 25.1	-1.6
CMAR	Chiang Mai Arr	54.69	257	P	P	09 04 30.8	+0.8
	comp=Z,2.5nm,0.6s,baz=31,slow=6.9,SNR=11						
ABKAR	Akbulak array	58.12	310	P	P	09 04 52.2	-1.8
NVAR	Mina Array Bea	59.70	65	P	P	09 05 06.0	+0.6
	comp=Z,0.7nm,0.6s,baz=296,slow=7.5,SNR=9.2						
YHH	Holmes Hill	59.77	55	P	P	09 05 06.2	+0.3
PDAR	Pinedale Array	61.81	56	P	P	09 05 20.4	+0.6
	comp=Z,1.6nm,0.8s,baz=317,slow=2.0,SNR=11						
FINES	FINESS Array B	62.44	335	P	P	09 05 23.8	+0.5
	comp=Z,0.9nm,0.5s,baz=20,slow=6.1,SNR=7.3						
FINES	FINESS Array B	62.44	335	eP	P	09 05 25.1	+1.8
FINES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
RSSD	Black Hills	63.82	52	P	P	09 05 33.3	+0.3
RSSD				pmax	pmax		
	comp=Z,5.0nm,0.8s						
RSSD	Black Hills	63.82	52	P	P	09 05 33.3	+0.3
RSSD				IAmb	IAmb	09 05 34.0	
	comp=Z,4.6nm,0.8s						
PV17	East Wray Mesa	65.22	60	P	P	09 05 42.5	+0.3
PV17				IAmb	IAmb	09 05 43.5	
	comp=Z,4.4nm,0.8s						
NOA	NORSAR Array B	66.33	342	LR	LR	09 39 08.8	
	comp=Z,28nm,18.1s,baz=15,slow=40						
KBZ	Khabaz	70.31	315	P	P	09 06 12.9	-1.0
	comp=Z,1.6nm,0.8s,baz=38,slow=3.0,SNR=5.4						
WRA	Warramunga Arr	71.55	201	P	P	09 06 20.7	-0.8
	comp=Z,1.6nm,0.8s,baz=18,slow=6.6,SNR=7.1						
GNI	Garni	72.18	311	LR	LR	09 40 31.2	
	comp=Z,33nm,18.4s,baz=23,slow=38						
KOLS	Kolonicke sedl	74.22	330	eP	P	09 06 37.4	+0.2
KOLS	Kolonicke sedl	74.22	330	eP	P	09 06 37.4	+0.2
BURAR	Bucovina Array	74.37	328	P	P	09 06 37.1	-1.1
TX31	Lajitas Ar. Si	74.71	63	P	P	09 06 41.0	+0.6
TX31				IAmb	IAmb	09 06 41.3	
	comp=Z,7.4nm,1.2s						
TX32	Lajitas Array	74.71	63	P	P	09 06 40.7	+0.3
TXAR	Lajitas Array	74.71	63	P	P	09 06 40.2	-0.2
	comp=Z,0.9nm,0.6s,baz=295,slow=5.3,SNR=4.9						
TXAR	Lajitas Array	74.71	63	P	P	09 06 40.9	+0.5
TXAR	Lajitas Array	74.71	63	P	P	09 06 40.9	+0.5
ASAR	Alice Springs	75.24	201	P	P	09 06 43.5	+0.3

	comp=Z,1.1nm,0.6s,baz=13,slow=5.3,SNR=19						
ASAR	**Alice Springs**	**75.24**	**201**	P	**P**	**09 06 43.9**	**+0.7**
ASAR	**Alice Springs**	**75.24**	**201**	P	**P**	**09 06 43.9**	**+0.7**
MODS	**Modra-Piesok**	**76.28**	**333**	*e*P	**P**	**09 06 47.1**	**-1.9**
MODS	**Modra-Piesok**	**76.28**	**333**	*e*P	**P**	**09 06 47.1**	**-1.9**
GERES	**GERESS Array B** comp=Z,0.4nm,0.5s,baz=45,slow=4.0,SNR=3.9	**76.87**	**335**	P	**P**	**09 06 50.4**	**-2.0**
H03N2	**Juan Fernandez** baz=313,slow=77,SNR=12	**136.98**	**89**	T	T	11 46 39.4	
H03N1	**Juan Fernandez** baz=313,slow=77,SNR=14	**136.99**	**89**	T	T	11 46 46.8	
H03N3	**Juan Fernandez** baz=313,slow=77,SNR=14	**136.99**	**89**	T	T	11 46 35.0	

KRNET ***12*** *09:31:58.9±0.1, 39°.07N×70°.81E, mb3.3*

NNC ***12*** *09:31:59.6±4.2, 38°.98N×70°.57E, h0^{km}, mb3.7, mpv3.3, Error ellipse: s-maj=41.0km s-min=22.3km az=166.0*

ISC 12 09:32:01.8±2.2**, 39°.2N**±0°.1×**70°.83E**±0°.06**, h10**^{km}**, n24, σ3^s.03**/39**, 18C-12D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	**Karamyk** baz=62	**0.80**	**69**	⇑*i*P	**Pg**	**09 32 15.7**	**-1.7**
DRK	baz=62			⇑*i*S	**Sg**	**09 32 27.6**	**-0.3**
BTK	**Batken** baz=0.0	**0.86**	**359**	⇑*i*P	**Pg**	**09 32 17.3**	**-1.2**
BTK	baz=0.0			⇑*i*S	**Sb**	**09 32 31.7**	**+1.1**
SFK	**Sufi-Kurgan** baz=65	**2.22**	**68**	⇑*i*P	**Pn**	**09 32 39.9**	**+1.0**
SFK	baz=65			⇑*i*S	**Sb**	**09 33 09.6**	**-0.2**
TRKS	**Terek-Say** baz=7.0	**2.34**	**6**	⇑*i*P	**Pn**	**09 32 41.4**	**+0.8**
TRKS	baz=7.0			⇑*i*S	**Sn**	**09 33 11.4**	**+1.9**
ARSB	**Arslanbob** baz=36	**2.69**	**37**	⇑*i*P	**Pn**	**09 32 46.7**	**+1.4**
ARSB	baz=36			⇑*i*S	**Sb**	**09 33 21.9**	**-1.3**
MNAS	**Manas** baz=20	**3.52**	**21**	⇓*i*P	**Pn**	**09 32 58.7**	**+1.9**
MNAS	baz=20			⇓*i*S	**Sn**	**09 33 43.0**	**+4.4**
AML	**Almayashu** baz=35	**3.65**	**36**	⇑*i*P	**Pn**	**09 33 00.3**	**+1.5**
AML	baz=35			⇑*i*S	**Sn**	**09 33 45.5**	**+3.4**
AML	**Almayashu** SNR=30	**3.65**	**36**	P	**Pn**	**09 33 02.1**	**+3.4**
ARLS	**Aral** baz=43	**3.77**	**44**	⇓*e*P	**Pn**	**09 33 01.7**	**+1.6**
ARLS	baz=43			⇓*i*S	**Sn**	**09 33 47.3**	**+2.8**
KK31	**Karatay Array** 0.9nm,0.3s,baz=190,slow=15,SNR=32	**3.91**	**357**	⇓Pn	**Pn**	**09 33 05.1**	**+3.1**
KK31	10nm,0.6s,baz=179,slow=29,SNR=6.8			⇑Sn	**Sb**	**09 33 54.1**	**-4.2**
EKS2	**Erkin-Say** baz=31	**4.12**	**32**	⇓*i*P	**Pn**	**09 33 06.8**	**+1.9**
EKS2	baz=31			⇓*i*S	**Sn**	**09 33 56.6**	**+3.4**
EKS2	**Erkin-Say** SNR=12	**4.12**	**32**	P	**Pn**	**09 33 08.5**	**+3.6**
UCH	**Uchtor** baz=41	**4.12**	**42**	⇑*i*P	**Pn**	**09 33 06.7**	**+1.4**
UCH	baz=41			⇑*i*S	**Sn**	**09 33 55.5**	**+1.7**
UCH	**Uchtor** SNR=13	**4.12**	**42**	P	**Pn**	**09 33 09.2**	**+3.9**
AAK	**Ala-Archa** SNR=7.8	**4.42**	**38**	P	**Pn**	**09 33 12.1**	**+3.0**
AAK	**Ala-Archa** 2.2nm,0.4s	**4.42**	**38**	⇑Pn	**Pn**	**09 33 11.9**	**+2.8**
AAK	6.6nm,0.6s			Sn	**Sb**	**09 34 07.2**	**-5.8**
KBK	**Karagaybulak** baz=40	**4.66**	**41**	⇓*i*P	**Pn**	**09 33 14.1**	**+1.7**
KBK	baz=40			⇓*i*S	**Sn**	**09 34 09.1**	**+2.6**
KBK	**Karagaybulak** SNR=14	**4.66**	**41**	P	**Pn**	**09 33 16.2**	**+3.9**
CHMS	**Chumysh** SNR=12	**4.82**	**37**	P	**Pn**	**09 33 18.3**	**+3.9**
USP	**Ospenovka** baz=32	**4.92**	**33**	⇓*i*P	**Pn**	**09 33 17.8**	**+2.0**
USP	baz=32			⇓*i*S	**Sn**	**09 34 15.4**	**+2.6**
USP	**Ospenovka** SNR=15	**4.92**	**33**	P	**Pn**	**09 33 19.4**	**+3.5**
TKM2	**Tokmak 2** SNR=6.8	**5.18**	**43**	P	**Pn**	**09 33 23.8**	**+4.3**
TKM2	**Tokmak 2** 2.7nm,0.3s	**5.18**	**43**	⇑Pn	**Pn**	**09 33 22.6**	**+3.0**
TKM2	4.7nm,0.8s			⇑Sn	**Sb**	**09 34 28.8**	**-6.1**
AB31	**Akbulak array** 1.1nm,0.6s,baz=150,slow=12,SNR=24	**12.72**	**326**	⇓P	**Pn**	**09 35 00.2**	**-2.5**

IDC ***12*** *09:36:12.0±1.3, 24°.91N×123°.55E, h0^{km}, mb3.4/4, mb1 3.6/4, mb1mx3.3/63, mbtmp3.4/4, Error ellipse: s-maj=92.8km s-min=26.2km az=78.0*

JMA ***12*** *09:36:13.6±0.2, 24°.83N×123°.23E, h27^{km}, M2.8*

ISC 12 09:36:13.5±1.4**, 24°.78N**±0°.08×**123°.34E**±0°.05**, h13**^{km}±9^{km}**, n12, σ0^s.61**/20**, mb3.4**/4**, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.44**	**224**	P	**Pg**	**09 36 22.3**	**+0.1**
YOJ				*e*S	**Sg**	**09 36 28.1**	**0.0**
JYNG	**Yonagunijimaku**	**0.49**	**228**	P	**Pg**	**09 36 23.0**	**-0.1**
JYNG				S	**Sg**	**09 36 29.4**	**-0.2**
IRIF	**Iriomote-Funau**	**0.56**	**141**	P	**Pn**	**09 36 26.5**	**-0.8**
IRIF				*e*S	**Sn**	**09 36 35.7**	**-0.8**
JKRS	**Kuro-shima**	**0.81**	**132**	P	**Pn**	**09 36 30.5**	**-0.2**
JKRS				*e*S	**Sn**	**09 36 42.4**	**-0.2**
HATJ	**Hateruma jima**	**0.83**	**150**	P	**Pn**	**09 36 30.8**	**-0.2**
HATJ				*e*S	**Sn**	**09 36 42.9**	**-0.2**
JIJ	**Ishigaki jima**	**0.84**	**119**	P	**Pn**	**09 36 30.5**	**-0.5**
JIJ				*e*S	**Sn**	**09 36 43.4**	**+0.2**
JISG	**Ishigakijimahi**	**0.90**	**102**	P	**Pn**	**09 36 31.3**	**-0.6**
JISG				S	**Sn**	**09 36 44.5**	**-0.3**
JTJ	**Tarama**	**1.24**	**96**	P	**Pg**	**09 36 37.2**	**-0.2**
JTJ				*e*S	**Sg**	**09 36 54.4**	**+0.8**
SONM	**Songino Array** 0.8nm,0.8s,baz=150,slow=8.5,SNR=3.7	**26.64**	**334**	P	**P**	**09 41 52.4**	**+0.3**
WRA	**Warramunga Arr** 0.3nm,0.5s,baz=345,slow=8.8,SNR=2.8	**45.72**	**165**	P	**P**	**09 44 35.3**	**+0.7**
ASAR	**Alice Springs** 0.2nm,0.5s,baz=351,slow=7.5,SNR=4.7	**49.23**	**167**	P	**P**	**09 45 03.4**	**+1.4**
YKA	**Yellowknife Ar** 0.2nm,0.6s,baz=310,slow=4.6,SNR=6.2	**81.65**	**23**	P	**P**	**09 48 30.6**	**-0.7**

IDC ***12*** *09:39:21.5±1.5, 11°.56S×162°.18E, h0^{km}, mb3.8/5, mb1 3.9/7, mb1mx3.7/53, mbtmp3.8/7, ML3.5/2, MS3.2/5, Ms1 3.1/5, ms1mx2.7/34, Error ellipse: s-maj=35.0km s-min=27.8km az=77.0*

ISC 12 09:39:26.9±1.1**, 11°.6S**±0°.1×**162°.2E**±0°.2**, h39**^{km}**, n11, σ0^s.79**/8**, mb3.7**/5**, MS3.0**/4**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara** 6.8nm,0.3s,baz=211,slow=8.2,SNR=1.0	**3.05**	**314**	Pn	**Pn**	**09 40 12.6**	**-0.2**
HNR	21nm,0.3s,baz=199,slow=21,SNR=2.1			Sn	**Sn**	**09 40 47.7**	**-0.4**
DZM	**Mont Dzumac** 0.2nm,0.3s,baz=195,slow=5.0,SNR=3.0	**11.20**	**159**	Pn	**Pn**	**09 42 04.5**	**-0.1**
PMG	**Port Moresby** comp=Z,57nm,18.1s,baz=174,slow=33	**14.91**	**277**	LR	LR	09 47 36.6	
STKA	**Stephens Creek** comp=Z,37nm,21.1s,baz=24,slow=33	**27.70**	**220**	LR	LR	09 54 26.4	
WRA	**Warramunga Arr** 0.3nm,0.6s,baz=80,slow=9.6,SNR=2.0	**28.00**	**249**	P	**P**	**09 45 14.3**	**-0.1**
WRA	comp=Z,29nm,21.4s,baz=45,slow=35			LR	LR	09 55 42.9	
ASAR	**Alice Springs** 0.6nm,0.7s,baz=62,slow=9.5,SNR=12	**29.42**	**242**	P	**P**	**09 45 27.1**	**0.0**
PETK	**Petropavlovsk-** comp=Z,11nm,18.3s,baz=93,slow=36	**64.55**	**357**	LR	LR	10 18 17.1	

SONM	**Songino Array** 0.8nm,0.6s,baz=140,slow=5.9,SNR=4.6	**77.06**	**325**	P	**P**	**09 51 17.7**	**+1.5**
MKAR	**Makanchi Array** 0.3nm,0.7s,baz=113,slow=5.2,SNR=3.5	**91.52**	**317**	P	**P**	**09 52 29.2**	**-0.3**
INK	**Inuvik** comp=Z,41nm,19.6s,baz=49,slow=34	**91.57**	**20**	LR	LR	10 30 54.2	
YKA	**Yellowknife Ar** 0.2nm,0.8s,baz=246,slow=4.5,SNR=3.6	**97.07**	**28**	P	**P**	**09 52 53.9**	**-0.6**

IDC ***12*** *09:45:34.8±1.2, 37°.82N×142°.54E, h0^{km}, mb3.4/6, mb1 3.6/9, mb1mx3.4/65, mbtmp3.5/9, ML3.4/3, Error ellipse: s-maj=30.9km s-min=21.1km az=114.0*

JMA ***12*** *09:45:38.5±0.1, 37°.89N×142°.49E, h39^{km}±2^{km}, M4.0*

NIED ***12*** *09:45:38.6, 37°.89N×142°.49E, h39^{km}, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}1.77; $M_{\theta\theta}$-2.35; $M_{\phi\phi}$0.58; $M_{r\theta}$0.12; $M_{\theta\phi}$1.33; $M_{\phi r}$-1.61; Fault plane solution: $M_0$2.98000×10^{14} NP1: ϕ_s143.00000°, δ64.00000°, λ132.00000°. NP2: ϕ_s259.00000°, δ48.00000°, λ37.00000°.*

ISC 12 09:45:38.1±1.4**, 37°.88N**±0°.05×**142°.5E**±0°.1**, h20**^{km}±9^{km}**, n22, σ1^s.40**/36**, mb3.4**/6**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**0.90**	**299**	P	**Pb**	**09 45 55.0**	**0.0**
JIKH				S	**Sb**	**09 46 07.0**	**+0.4**
JIO	**Ouri**	**1.05**	**303**	P	**Pn**	**09 45 57.4**	**-0.3**
JIO				S	**Sb**	**09 46 10.7**	**-0.2**
JKMT	**Kesennumamotoy**	**1.22**	**320**	P	**Pn**	**09 45 59.6**	**-0.3**
JKMT				*e*S	**Sn**	**09 46 14.7**	**-1.1**
JMST	**Minamisoumatoc**	**1.26**	**263**	P	**Pn**	**09 46 00.2**	**-0.3**
JMST				*e*S	**Sn**	**09 46 15.5**	**-1.4**
JMM	**Marumori**	**1.32**	**270**	P	**Pn**	**09 46 01.3**	**-0.1**
JMM				S	**Sn**	**09 46 17.9**	**-0.6**
JFK	**Kawauchi**	**1.36**	**248**	P	**Pn**	**09 46 01.5**	**-0.5**
JFK				S	**Sn**	**09 46 18.3**	**-1.2**
JMK	**Ichinoseki**	**1.45**	**318**	P	**Pn**	**09 46 03.2**	**0.0**
JMK				*e*S	**Sn**	**09 46 20.9**	**-0.7**
JOU	**Okura**	**1.50**	**289**	P	**Pn**	**09 46 04.4**	**+0.5**
JOU				S	**Sn**	**09 46 23.6**	**+0.7**
JFT	**Otama**	**1.73**	**259**	P	**Pn**	**09 46 07.8**	**+0.8**
JFT				S	**Sn**	**09 46 29.5**	**+1.0**
JOM	**Ohasama**	**1.84**	**330**	P	**Pn**	**09 46 08.5**	**0.0**
JOM				*e*S	**Sn**	**09 46 31.4**	**+0.2**
JYS	**Shirataka**	**1.93**	**281**	P	**Pn**	**09 46 10.4**	**+0.7**
JYS				*e*S	**Sn**	**09 46 34.6**	**+1.2**
JYK	**Kaneyama**	**1.96**	**303**	P	**Pn**	**09 46 11.0**	**+0.9**
MJAR	**Matsushiro Arr** 0.5nm,0.3s,baz=76,slow=14,SNR=22	**3.65**	**250**	Pn	**Pn**	**09 46 34.4**	**+1.0**
MAT	**Matsushiro**	**3.65**	**250**	P	**Pn**	**09 46 35.9**	**+2.4**
MAT				*e*S	**Sn**	**09 47 17.0**	**+1.0**
JHJ	**Hachijo jima 2** 23nm,0.3s,baz=152,slow=23,SNR=26	**5.23**	**206**	Pn	**Pn**	**09 46 53.9**	**-1.2**
JHJ	16nm,0.3s,baz=80,slow=22,SNR=1.7			Sn	**Sn**	**09 47 49.9**	**-4.9**
ASAJ	**Asahikawa** 1.0nm,0.3s,baz=223,slow=10,SNR=6.7	**6.23**	**1**	Pn	**Pn**	**09 47 07.0**	**-1.9**
ASAJ	1.2nm,0.3s,baz=74,slow=25,SNR=3.8			Sn	**Sn**	**09 48 16.8**	**-2.7**
ZALV	**Zalesovo Beam** 0.2nm,0.3s,baz=111,slow=3.2,SNR=1.8	**41.97**	**312**	P	**P**	**09 53 28.1**	**+0.7**
MKAR	**Makanchi Array** 0.2nm,0.6s,baz=92,slow=8.6,SNR=3.0	**44.39**	**302**	P	**P**	**09 53 48.1**	**+1.0**
KURBB	**Kurchatov Arra** 0.6nm,0.5s,baz=82,slow=8.0,SNR=6.6	**46.15**	**307**	P	**P**	**09 54 00.1**	**-0.9**
ILAR	**Eielson Array** 0.3nm,0.7s,baz=252,slow=7.0,SNR=4.1	**48.33**	**33**	P	**P**	**09 54 17.2**	**-0.6**
WRA	**Warramunga Arr** 0.3nm,0.6s,baz=6.4,slow=7.0,SNR=4.8	**58.02**	**189**	P	**P**	**09 55 28.2**	**-1.3**
YKA	**Yellowknife Ar** 0.1nm,0.3s,baz=312,slow=6.4,SNR=1.9	**62.66**	**31**	P	**P**	**09 56 02.6**	**+1.8**

KRNET ***12*** *09:50:19.8±0.1, 41°.10N×76°.05E, h16^{km}, mb2.6*

SOME ***12*** *09:50:19.1, 41°.03N×76°.05E, h10^{km}*

NNC ***12*** *09:50:20.7±1.3, 41°.07N×76°.12E, h0^{km}, mb3.6, mpv3.2, Error ellipse: s-maj=8.6km s-min=5.6km az=173.0*

KNET ***12*** *09:50:22.0±0.4, 41°.22N×76°.10E, h0^{km}, ml2.2, Error ellipse: s-maj=3.8km s-min=2.0km az=118.0*

ISC 12 09:50:21.1±1.6**, 41°.11N**±0°.05×**76°.09E**±0°.03**, h6**^{km}±13^{km}**, n54, σ1^s.01**/87**, 39C-7D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ULHL	**Ulahol** baz=7.0	**1.15**	**6**	⇑*i*P	**Pb**	**09 50 41.6**	**-1.8**
ULHL	baz=7.0			⇑*i*S	**Sg**	**09 50 57.6**	**-0.4**
ULHL	**Ulahol** 9.9nm,0.1s,SNR=54	**1.15**	**6**	⇓P	**Pb**	**09 50 41.7**	**-1.7**
ULHL	12nm,0.2s			⇓S	**Sg**	**09 50 57.6**	**-0.4**
KDJ	**Kajisay** baz=40	**1.31**	**38**	⇓*i*P	**Pn**	**09 50 45.3**	**-0.8**
KDJ	baz=40			⇓*i*S	**Sg**	**09 51 03.4**	**+0.1**
ARLS	**Aral** baz=1.0	**1.53**	**300**	⇑*i*P	**Pn**	**09 50 47.8**	**-1.2**
ARLS	baz=1.0			⇑*i*S	**Sb**	**09 51 08.9**	**-0.6**
UCH	**Uchtor** baz=15	**1.63**	**314**	⇑*i*P	**Pn**	**09 50 49.8**	**-0.9**
UCH	baz=15			⇑*i*S	**Sb**	**09 51 12.0**	**-0.7**
UCH	**Uchtor** SNR=11	**1.63**	**314**	P	**Pb**	**09 50 51.1**	**-0.7**
KBK	**Karagaybulak** baz=32	**1.77**	**332**	⇑*i*P	**Pn**	**09 50 52.5**	**+0.1**
KBK	baz=32			⇑*i*S	**Sb**	**09 51 16.5**	**0.0**
KBK	**Karagaybulak** 6.7nm,0.1s,SNR=17	**1.77**	**332**	P	**Pb**	**09 50 53.7**	**-0.4**
KBK	48nm,0.2s			⇓S	**Sg**	**09 51 17.8**	**-0.1**
TKM2	**Tokmak 2** baz=50	**1.85**	**349**	⇑*i*P	**Pb**	**09 50 54.4**	**-1.1**
TKM2	baz=50			⇑*i*S	**Sg**	**09 51 19.4**	**-1.2**
TKM2	**Tokmak 2** 3.9nm,0.1s,SNR=9.2	**1.85**	**349**	⇑P	**Pb**	**09 50 55.0**	**-0.5**
TKM2	15nm,0.1s			⇑S	**Sg**	**09 51 21.0**	**+0.4**
TKM2	**Tokmak 2** 1.3nm,0.2s	**1.85**	**349**	⇑Pg	**Pg**	**09 50 57.7**	**+1.1**
TKM2	3.9nm,0.2s			⇑Lg	Lg	09 51 21.0	
AAK	**Ala-Archa** baz=23	**1.94**	**323**	⇑*e*P	**Pb**	**09 50 55.6**	**-1.3**
AAK	baz=23			⇑*i*S	**Sb**	**09 51 21.6**	**+0.2**
AAK	**Ala-Archa** 3.9nm,0.2s,SNR=12	**1.94**	**323**	⇑P	**Pb**	**09 50 57.0**	**+0.1**
AAK	**Ala-Archa** 2.4nm,0.3s	**1.94**	**323**	⇓Pg	**Pg**	**09 50 59.3**	**+1.0**
AAK	9.5nm,0.4s			⇑Lg	Lg	09 51 23.5	
KST	**Kastek** 6.5nm,0.2s	**1.94**	**357**	*e*P	**Pb**	**09 50 56.8**	**-0.1**
KST	8.9nm,0.4s			*e*S	**Sg**	**09 51 23.9**	**+0.5**
KST	**Kastek** 6.5nm,0.2s	**1.94**	**357**	Pg	**Pb**	**09 50 56.7**	**-0.1**
KST	8.9nm,0.4s			Lg	Lg	09 51 24.0	
IZV	**Izvestkoviy** 13nm,0.2s	**1.97**	**11**	*e*P	**Pb**	**09 50 57.6**	**+0.2**
IZV	5.0nm,0.1s			*e*S	**Sg**	**09 51 25.4**	**+1.0**
IZV	**Izvestkoviy** 13nm,0.2s	**1.97**	**11**	Pg	**Pb**	**09 50 57.7**	**+0.2**
IZV	5.0nm,0.1s			Lg	Lg	09 51 25.4	
TNSS	**Tian-Shan** 3.5nm,0.2s	**2.03**	**18**	*e*P	**Pb**	**09 50 58.1**	**-0.5**
TNSS	3.3nm,0.3s			*e*S	**Sg**	**09 51 26.0**	**-0.5**
TNSS	**Tian-Shan** 3.5nm,0.2s	**2.03**	**18**	Pg	**Pb**	**09 50 58.2**	**-0.5**
TNSS	3.3nm,0.3s			Lg	Lg	09 51 26.0	
ANVS	**Anan'yevo** baz=35	**2.05**	**35**	⇑*i*P	**Pb**	**09 50 57.9**	**-0.9**
ANVS	baz=35			⇑*i*S	**Sg**	**09 51 25.9**	**-1.1**
AML	**Almayashu** baz=1.0	**2.07**	**301**	⇑*i*P	**Pb**	**09 50 57.6**	**-1.6**
AML	baz=1.0			⇑*i*S	**Sb**	**09 51 25.3**	**0.0**
CHMS	**Chumysh** baz=33	**2.14**	**333**	⇑*i*P	**Pb**	**09 50 58.5**	**-1.7**
CHMS	baz=33			⇑*i*S	**Sb**	**09 51 27.0**	**0.0**
CHMS	**Chumysh** 4.6nm,0.2s,SNR=6.0	**2.14**	**333**	⇓P	**Pb**	**09 51 00.5**	**+0.3**
DGS	**Degeres** 7.3nm,0.5s	**2.15**	**354**	*e*P	**Pb**	**09 51 00.5**	**+0.1**
DGS	18nm,0.5s			*e*S	**Sg**	**09 51 30.6**	**+0.5**
DGS	**Degeres** 7.3nm,0.5s	**2.15**	**354**	Pg	**Pb**	**09 51 00.6**	**+0.1**
DGS	18nm,0.5s			Lg	Lg	09 51 30.7	
MDOK	**Medeo** 6.2nm,0.4s	**2.18**	**19**	*e*P	**Pb**	**09 51 00.5**	**-0.5**
MDOK	3.8nm,0.3s			*e*S	**Sg**	**09 51 30.4**	**-0.7**
MDOK	**Medeo** 6.2nm,0.4s	**2.18**	**19**	Pg	**Pb**	**09 51 00.6**	**-0.4**
MDOK	3.8nm,0.3s			Lg	Lg	09 51 30.4	
PRZ	**Przheval'sk** baz=51	**2.21**	**51**	⇑*i*P	**Pb**	**09 51 00.4**	**-1.2**
PRZ	baz=51			⇑*i*S	**Sb**	**09 51 29.4**	**+0.1**
SFK	**Sufi-Kurgan** baz=42	**2.25**	**242**	⇑*i*P	**Pn**	**09 51 00.0**	**+0.9**
SFK	baz=42			⇑*i*S	**Sb**	**09 51 29.0**	**-1.5**
KOTS	**Kotyrbulak** 17nm,0.3s	**2.26**	**19**	*e*P	**Pb**	**09 51 02.2**	**-0.2**
KOTS	8.5nm,0.4s			*e*S	**Sg**	**09 51 33.4**	**-0.3**
KOTS	**Kotyrbulak** 17nm,0.3s	**2.26**	**19**	Pg	**Pb**	**09 51 02.2**	**-0.2**
KOTS	8.5nm,0.4s			Lg	Lg	09 51 33.4	
EKS2	**Erkin-Say** baz=13	**2.32**	**313**	⇑*i*P	**Pn**	**09 51 00.9**	**+0.9**
EKS2	baz=13			⇑*i*S	**Sb**	**09 51 30.8**	**-1.6**
EKS2	**Erkin-Say** 5.3nm,0.4s,SNR=6.8	**2.32**	**313**	⇑P	**Pb**	**09 51 03.5**	**0.0**
ARSB	**Arslanbob** baz=76	**2.35**	**276**	⇑*i*P	**Pn**	**09 51 01.3**	**+0.9**
ARSB	baz=76			⇑*i*S	**Sb**	**09 51 31.6**	**-1.7**
USP	**Ospenovka** baz=32	**2.46**	**332**	⇑*i*P	**Pn**	**09 51 02.7**	**+0.9**
USP	baz=32			⇑*i*S	**Sb**	**09 51 34.4**	**-1.9**
SGDS	**Sogindy** 3.4nm,0.3s	**2.58**	**336**	Pg	**Pb**	**09 51 08.4**	**+0.5**
SGDS	14nm,0.4s			Lg	Lg	09 51 43.6	
SATY	**Saty** 2.7nm,0.3s	**2.61**	**41**	*e*P	**Pb**	**09 51 08.1**	**-0.2**
SATY	5.9nm,0.5s			*e*S	**Sg**	**09 51 43.6**	**-1.3**
SATY	**Saty** 2.7nm,0.3s	**2.61**	**41**	Pg	**Pb**	**09 51 08.1**	**-0.2**
SATY	5.9nm,0.5s			Lg	Lg	09 51 43.6	
KRBS	**Karabastau** 6.4nm,0.2s	**2.61**	**353**	*e*P	**Pb**	**09 51 08.6**	**+0.3**
KRBS	9.3nm,0.3s			*e*S	**Sg**	**09 51 44.4**	**-0.4**
KRBS	**Karabastau** 6.4nm,0.2s	**2.61**	**353**	Pg	**Pb**	**09 51 08.6**	**+0.3**
KRBS	9.3nm,0.3s			Lg	Lg	09 51 44.4	
KTBS	**Karatobe** 6.7nm,0.2s	**2.64**	**9**	*e*P	**Pb**	**09 51 09.4**	**+0.6**
KTBS	11nm,0.5s			*e*S	**Sg**	**09 51 45.7**	**-0.3**
KTBS	**Karatobe** 6.7nm,0.2s	**2.64**	**9**	Pg	**Pb**	**09 51 09.4**	**+0.6**
KTBS	11nm,0.5s			Lg	Lg	09 51 45.7	
MRKS	**Merke** 2.3nm,0.2s	**2.69**	**308**	*e*P	**Pb**	**09 51 09.2**	**-0.6**
MRKS	8.8nm,0.3s			*e*S	**Sg**	**09 51 45.2**	**-2.3**
MRKS	**Merke** 2.3nm,0.2s	**2.69**	**308**	Pg	**Pb**	**09 51 09.2**	**-0.6**
MRKS	8.8nm,0.3s			Lg	Lg	09 51 45.2	
UZB	**Uzynbulak** 2.6nm,0.2s	**2.99**	**46**	*e*P	**Pb**	**09 51 15.8**	**+1.0**
UZB	3.3nm,0.4s			*e*S	**Sg**	**09 51 56.4**	**-0.7**
UZB	**Uzynbulak** 2.6nm,0.2s	**2.99**	**46**	Pg	**Pb**	**09 51 15.9**	**+1.0**
UZB	3.3nm,0.4s			Lg	Lg	09 51 56.4	
MNAS	**Manas** baz=99	**3.01**	**298**	⇑*i*P	**Pn**	**09 51 10.2**	**+0.7**
MNAS	baz=99			⇑*i*S	**Sn**	**09 51 47.4**	**+1.4**
KPKS	**Kokpek** 5.1nm,0.2s	**3.05**	**38**	*e*P	**Pb**	**09 51 16.1**	**+0.3**
KPKS	16nm,0.6s			*e*S	**Sg**	**09 51 57.0**	**-1.9**
ARXS	**Arharly** 3.2nm,0.4s	**3.36**	**22**	*e*P	**Pb**	**09 51 20.9**	**-0.3**
ARXS	2.6nm,0.3s			*e*S	**Sg**	**09 52 05.4**	**-3.7**
ARXS	**Arharly** 3.2nm,0.4s	**3.36**	**22**	Pg	**Pb**	**09 51 20.9**	**-0.3**
ARXS	2.6nm,0.3s			Lg	Lg	09 52 05.4	
MNBS	**Baschi** 3.3nm,0.3s	**3.43**	**29**	*e*P	**Pb**	**09 51 23.7**	**+1.4**
MNBS	5.5nm,0.4s			*e*S	**Sg**	**09 52 10.1**	**-1.1**
MNBS	**Baschi** 3.3nm,0.3s	**3.43**	**29**	Pg	**Pb**	**09 51 23.7**	**+1.4**
MNBS	5.5nm,0.4s			Lg	Lg	09 52 10.1	
KK31	**Karatay Array** 0.2nm,0.3s,baz=120,slow=16,SNR=6.6	**4.60**	**298**	⇑Pg	**Pb**	**09 51 43.5**	**+1.2**
KK31	0.4nm,0.4s,baz=108,slow=28,SNR=4.0			⇑Lg	Lg	09 52 46.9	

WEL 12 09:50:27.1, 40°S±1°×**176°.4E**±1°.0**, h15**^{km}±3^{km}**, M1.2**/6**, ML1.5**/6**, MLv1.2**/6**, Error ellipse: s-maj=0.0km s-min=0.0km az=23.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVHZ	**Dannevirke**	**0.16**	**270**	P	Pb	09 50 32.0	+0.1
DVHZ				S	Sb	09 50 35.6	+0.6
ANWZ	**Angora Road**	**0.18**	**156**	P	Pb	09 50 37.1	+5.0
PRHZ	**Porangahau**	**0.20**	**81**	P	Pb	09 50 32.4	0.0
PRHZ				S	Sb	09 50 36.4	+0.4
WPHZ	**Waipukurau**	**0.24**	**11**	P	Pb	09 50 33.1	-0.1
WPHZ				S	Sb	09 50 37.8	+0.6
TSZ	**Takapari Road**	**0.40**	**307**	P	Pb	09 50 35.8	-0.1
TSZ				S	Sb	09 50 42.5	+0.7
PNHZ	**Pukenui**	**0.41**	**340**	P	Pb	09 50 35.9	-0.1
PNHZ				S	Sb	09 50 42.7	+0.6
POWZ	**Post Office Ro**	**0.48**	**258**	P	Pb	09 50 38.2	+1.0
POWZ				S	Sb	09 50 45.3	+1.3
MRZ	**Mangatainoka R**	**0.71**	**239**	P	Pb	09 50 41.7	+0.5
MRZ				S	Sb	09 50 51.9	+1.1

WEL 12 09:50:31.3, 39°S±2°×**17°3E**±°**, h11**^{km}±2^{km}**, M1.9**/7**, ML2.0**/7**, MLv1.9**/7**, Error ellipse: s-maj=0.0km s-min=0.0km az=174.1, Off west coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NMEZ	**Namu Road**	**0.31**	**99**	P	Pb	09 50 38.4	-0.5
NMEZ				S	Sb	09 50 43.8	-0.2
NMEZ	**Namu Road**	**0.31**	**99**	S	Sb	09 50 43.7	-0.3
NBEZ	**Newall Road No**	**0.32**	**72**	P	Pb	09 50 38.7	-0.3
KHEZ	**Kahui Hut**	**0.42**	**80**	P	Pb	09 50 40.5	-0.3
PKE	**Pukeiti**	**0.43**	**67**	P	Pb	09 50 40.7	-0.2

PKE				S	Sb	09 50 47.7	+0.2
PKE	**Pukeiti**	**0.43**	**67**	S	Sb	09 50 47.7	+0.2
NEZ	**North Egmont**	**0.49**	**79**	P	Pb	09 50 41.5	-0.4
NEZ				S	Sb	09 50 48.9	-0.3
NEZ	**North Egmont**	**0.49**	**79**	S	Sb	09 50 48.8	-0.3
PREZ	**Palmer Road**	**0.53**	**88**	P	Pb	09 50 42.5	-0.1
PREZ				S	Sb	09 50 50.7	+0.4
LREZ	**Lake Rotokare**	**0.72**	**98**	S	Sb	09 50 56.9	+1.1
VRZ	**Vera Road**	**1.02**	**77**	P	Pg	09 50 50.7	-0.3

IDC 12 09:56:30.8±2.6, 10°.41S×122°.76E, h0km, mb3.4/1, mb1 3.3/3, mb1mx3.2/31, mbtmp3.1/3, ML3.1/2, Error ellipse: s-maj=221.0km s-min=34.9km az=52.0, Savu Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.64**	**132**	Pn	Pn	09 59 58.9	-0.6
	0.1nm,0.3s,baz=304,slow=14,SNR=5.4						
WRA				Sn	Sn	10 02 32.3	-10
	0.2nm,0.3s,baz=300,slow=23,SNR=8.0						
ASAR	**Alice Springs**	**16.93**	**143**	Pn	Pn	10 00 29.9	+0.5
	0.1nm,0.3s,baz=318,slow=12,SNR=4.7						
ASAR				Sn	Sn	10 03 31.4	-7.0
	0.1nm,0.3s,baz=308,slow=21,SNR=4.6						
MKAR	**Makanchi Array**	**67.43**	**331**	P	P	10 07 28.3	0.0
	0.3nm,0.8s,baz=128,slow=7.8,SNR=2.7						

UPP 12 10:00:04.3±3.0, 64°.58N×31°.31E, h0km, ML1.7, Suspected explosion
HEL 12 10:00:07.1±0.1, 64°.76N×30°.63E, h0km, ML2.0, Explosion
KOLA 12 10:00:07.5, 64°.78N×30°.24E, h0km, ML2.4, Karelia,Finland, Oulu area
IDC 12 10:00:08.3±2.5, 64°.75N×30°.88E, h0km, mb1 3.0/3, mb1mx2.9/43, mbtmp2.9/3, ML2.0/3, Error ellipse: s-maj=38.4km s-min=9.0km az=101.0
ISC 12 10:00:05.6±1.0, 64°.87N±0°.02×31°.23E±0°.05, h0km, n38, σ1ˢ42/57, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KU6	**Riekki**	**1.29**	**335**	PG	**Pb**	**10 00 30.5**	**-0.3**
	baz=170						
KU6				MSG		10 00 46.5	
	comp=Z,8.4nm,0.2s						
KU6				SG	**Sb**	**10 00 47.8**	**-0.1**
MSF	**Maaselka**	**1.39**	**320**	PG	**Pn**	**10 00 31.0**	**-1.3**
	baz=152						
MSF				SN	**Sn**	**10 00 51.5**	**+0.1**
OLKF	**Oulanka, Finla**	**1.65**	**333**	PG	**Pb**	**10 00 36.6**	**-0.2**
OLKF				SN	**Sg**	**10 00 58.5**	**+0.1**
JOF	**Joensuu**	**1.96**	**179**	PG	**Pb**	**10 00 40.8**	**-1.2**
JOF				SG	**Sb**	**10 01 06.2**	**-0.7**
OUL	**Oulu**	**2.28**	**278**	PG	**Pn**	**10 00 43.8**	**-0.7**
OUL				SG	**Sn**	**10 01 09.6**	**-3.5**
RNF	**Rovaniemi**	**2.77**	**311**	PB	**Pn**	**10 00 52.4**	**+1.1**
	baz=129						
RNF				SB	**Sn**	**10 01 27.7**	**+2.3**
APA0	**Apatity Array**	**2.84**	**14**	P	**Pb**	**10 00 56.3**	**-0.9**
APA0				S	**Sb**	**10 01 32.8**	**+0.3**
OUF	**Merijarvi**	**2.84**	**263**	PB	**Pn**	**10 00 51.9**	**-0.3**
OUF				MSG		10 01 23.0	
	comp=Z,12nm,0.2s						
OUF				SG	**Sn**	**10 01 26.7**	**-0.4**
APA	**Apatity**	**2.85**	**17**	P	**Pb**	**10 00 56.7**	**-0.7**
VRF	**Varrio**	**2.97**	**348**	PB	**Pb**	**10 00 57.9**	**-1.4**
VRF				MSG		10 01 36.0	
	comp=Z,2.6nm,0.2s						
OBF0	**Syolatti, Pyha**	**3.03**	**266**	PB	**Pn**	**10 00 54.7**	**0.0**
OBF0				SG	**Sn**	**10 01 33.1**	**+1.5**
SUF	**Sumiainen**	**3.12**	**229**	PB	**Pn**	**10 00 56.2**	**+0.2**
SUF				MSG		10 01 31.3	
	comp=Z,5.5nm,0.2s						
SUF				SG	**Sn**	**10 01 34.9**	**+1.0**
TOF	**Tornio**	**3.13**	**296**	MSG		10 01 33.6	
	comp=Z,5.4nm,0.2s						
TOF				SB	**Sn**	**10 01 34.9**	**+0.8**
SGF	**Sodankyl**	**3.21**	**326**	PN	**Pn**	**10 00 58.8**	**+1.5**
SGF				SB	**Sb**	**10 01 40.9**	**-2.3**
KALU	**Kalix**	**3.44**	**290**	P	**Pn**	**10 01 00.6**	**+0.1**
KALU				S	**Sn**	**10 01 43.6**	**+1.7**
KALU	**Kalix**	**3.44**	**290**	PB	**Pn**	**10 01 03.5**	**+3.0**
KAF	**Kangasniemi**	**3.54**	**221**	PB	**Pn**	**10 01 02.9**	**+1.1**
	baz=38						
KAF				SG	**Sn**	**10 01 46.9**	**+2.7**
KEF	**Keuruu**	**3.93**	**229**	PB	**Pn**	**10 01 07.9**	**+0.8**
PAJU	**Pajala**	**3.97**	**307**	P	**Pn**	**10 01 07.9**	**+0.3**
PAJU	**Pajala**	**3.97**	**307**	PN	**Pn**	**10 01 09.0**	**+1.3**
PAJU				SG	**Sb**	**10 02 05.2**	**+0.4**
ERTU	**Ertsjaerv**	**4.10**	**298**	P	**Pn**	**10 01 10.6**	**+1.1**
ERTU	**Ertsjaerv**	**4.10**	**298**	PB	**Pn**	**10 01 12.2**	**+2.7**
ERTU				SG	**Sb**	**10 02 09.4**	**+0.8**
SJUU	**Sjulsmark**	**4.11**	**283**	P	**Pn**	**10 01 09.0**	**-0.5**
FIA0	**FINESS Array S**	**4.15**	**217**	PN	**Pn**	**10 01 10.3**	**+0.1**
	baz=30						
FIA0				SG	**Sb**	**10 02 09.7**	**-0.5**
FINES	**FINESS Array B**	**4.15**	**217**	Pn	**Pn**	**10 01 09.3**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=36,slow=13,SNR=5.9						
FINES				Pg	**Pb**	**10 01 18.8**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=30,slow=15,SNR=11						
FINES				Lg	Lg	10 02 10.9	
	comp=Z,1.5nm,0.3s,baz=35,slow=28,SNR=11						
VAF	**Ylistaro**	**4.19**	**248**	PB	**Pn**	**10 01 13.8**	**+3.1**
BURU	**Burvik**	**4.24**	**271**	P	**Pn**	**10 01 09.8**	**-1.5**
BURU	**Burvik**	**4.24**	**271**	PG	**Pb**	**10 01 20.4**	**-0.4**
BURU				SG	**Sb**	**10 02 11.8**	**-0.6**
HARU	**Harads**	**4.46**	**292**	P	**Pn**	**10 01 14.6**	**+0.2**
ODEU	**Stanfors**	**4.55**	**269**	P	**Pn**	**10 01 13.1**	**-2.5**
MASU	**Masugnsbyn**	**4.56**	**309**	P	**Pn**	**10 01 17.2**	**+1.4**
VJF	**Virojoki**	**4.66**	**203**	SG	**Sb**	**10 02 26.7**	**+2.0**
UMAU	**Umeaa**	**4.69**	**263**	SG	**Sb**	**10 02 26.0**	**+0.5**
LILU	**Lilltraesk**	**4.83**	**280**	P	**Pn**	**10 01 19.4**	**-0.2**
DUNU	**Dundret**	**4.91**	**302**	P	**Pn**	**10 01 20.7**	**+0.2**
SVAU	**Svanoeiden**	**5.02**	**271**	P	**Pn**	**10 01 22.0**	**0.0**
ARCES	**ARCESS Array B**	**5.19**	**337**	Pn	**Pn**	**10 01 25.3**	**+0.9**
	baz=154,slow=12,SNR=16						
ARCES				Sn	**Sn**	**10 02 24.0**	**-0.9**
	baz=161,slow=23,SNR=1.8						
ARCES				Lg	Lg	10 02 45.6	
	baz=152,slow=37,SNR=2.7						
NOA	**NORSAR Array B**	**9.87**	**256**	Pn	**Pn**	**10 02 25.5**	**-3.1**
	comp=Z,0.0nm,0.3s,baz=57,slow=12,SNR=1.0						

SNET 12 10:02:22.9±1.8, 13°.65N×90°.40W, h57km±13km, ML3.2
GCG 12 10:02:32.4±0.3, 14°.35N×90°.63W, h50km, MD3.5
ISC 12 10:02:25.4±2.2, 13°.6N±0°.1×90°.32W±0°.09, h44km±43km, n20, σ1ˢ26/32, 2C, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEVE	**Cerro Verde**	**0.71**	**72**	⇑*i*P	**Pn**	**10 02 38.5**	**-0.8**
CEVE				*e*S	**Sn**	**10 02 50.8**	**+1.5**
CEVE				IAML		10 02 52.6	
	comp=Z,2μm,0.3s						
RTR	**El Retiro**	**0.71**	**66**	*e*P	**Pn**	**10 02 38.8**	**-0.5**
SBLS	**San Blas**	**0.71**	**71**	*e*P	**Pn**	**10 02 38.7**	**-0.7**
SNJE	**San Jose**	**0.74**	**70**	*e*P	**Pn**	**10 02 38.9**	**-0.7**
PCG	**Pacaya**	**0.83**	**340**	*e*P	**Pn**	**10 02 41.0**	**+0.1**
JAYA	**Jayaque - finc**	**0.85**	**87**	⇑*i*P	**Pn**	**10 02 39.8**	**-1.2**
JAYA				*e*S	**Sn**	**10 02 52.4**	**-0.1**
JAYA				IAML		10 02 53.7	
	comp=Z,2μm,0.2s						
CEDA	**San Andres**	**0.92**	**78**	*e*P	**Pn**	**10 02 40.9**	**-1.0**
CEDA				*e*S	**Sn**	**10 02 55.2**	**+1.2**
NBG	**Las Nubes**	**0.97**	**358**	*e*P	**Pn**	**10 02 43.1**	**+0.2**
FUG	**Fuego 3**	**0.97**	**329**	*e*P	**Pn**	**10 02 41.5**	**-1.4**
LALI	**Alcalda de L**	**0.98**	**97**	*e*P	**Pn**	**10 02 41.5**	**-1.1**
LALI				*e*S	**Sn**	**10 02 54.8**	**-0.6**
TACO	**Tacachico**	**1.00**	**69**	*e*P	**Pn**	**10 02 41.5**	**-1.6**
TACO				*e*S	**Sn**	**10 02 56.2**	**+0.1**
BOQS	**Boqueron**	**1.02**	**83**	*e*P	**Pn**	**10 02 42.3**	**-1.2**
UEES	**Universidad Ev**	**1.06**	**84**	*e*P	**Pn**	**10 02 42.6**	**-1.3**
UEES				*e*S	**Sn**	**10 02 58.5**	**+1.1**
UEES				IAML		10 03 00.1	
	comp=Z,727nm,0.2s						
SNET	**Serv Nac Est T**	**1.06**	**86**	*e*P	**Pn**	**10 02 42.7**	**-1.2**
SNET				*e*S	**Sn**	**10 02 58.2**	**+0.7**
SNET				IAML		10 03 02.5	
	comp=Z,504nm,0.2s						
LFRS	**El Faro**	**1.22**	**89**	*e*P	**Pn**	**10 02 45.3**	**-0.8**
LFRS				*e*S	**Sn**	**10 03 02.6**	**+1.0**
LBRS	**Las Brisas**	**1.25**	**84**	*e*P	**Pn**	**10 02 45.3**	**-1.1**
ESQI	**Esquipulas**	**1.34**	**45**	*e*P	**Pn**	**10 02 46.3**	**-1.4**
ESQI				*e*S	**Sn**	**10 03 04.2**	**-0.2**
ESQI				IAML		10 03 07.1	
	comp=Z,46nm,0.5s						
COEG	**Centro de Oper**	**1.40**	**89**	*e*P	**Pn**	**10 02 47.5**	**-1.0**
COEG				*e*S	**Sn**	**10 03 07.0**	**+1.2**
COEG				IAML		10 03 11.3	
	comp=Z,498nm,0.3s						
PQSS	**Presa 15 de Se**	**1.71**	**89**	*e*P	**Pn**	**10 02 51.4**	**-1.3**
PQSS				*e*S	**Sn**	**10 03 14.2**	**+0.8**
PQSS				IAML		10 03 19.6	
	comp=Z,82nm,0.2s						
PACA	**Pacayal**	**1.95**	**94**	*e*P	**Pn**	**10 02 56.6**	**+0.5**
PACA				*e*S	**Sn**	**10 03 23.1**	**+3.7**

IDC 12 10:29:45.6±0.8, 6°.69S×108°.20E, h158km±13km, mb3.5/5, mb1 3.8/6, mb1mx3.2/51, mbtmp4.2/6, MS3.4/1, Ms1 3.4/1, ms1mx2.4/32, Error ellipse: s-maj=65.0km s-min=17.5km az=44.0
DJA 12 10:29:45.8±0.4, 7°S±6°×10°8E±°, h150km±4km, M4.2/12, mB5.5/2, mb4.6/3, MLv4.0/12, Mw(mB)5.0/2
ISC 12 10:29:45.8±0.9, 7°.4S±0°.2×107°.8E±0°.1, h150km, n17, σ0ˢ90/19, mb3.8/4, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CISI	**Cisompet, Garu**	**0.11**	**186**	P	**Pn**	**10 30 07.2**	**+1.2**
LEM	**Lembang**	**0.65**	**341**	P	**Pn**	**10 30 09.2**	**+1.0**
	153nm,0.3s,baz=3.6,slow=0.6,SNR=85						
LEM				S	**Sn**	**10 30 27.1**	**+1.9**
	69nm,0.3s,baz=340,slow=21,SNR=8.5						
LEM	**Lembang**	**0.65**	**341**	P	**Pn**	**10 30 09.0**	**+0.8**
LEM				S	**Sn**	**10 30 25.5**	**+0.3**
DBJI	**Dramaga**	**1.39**	**309**	P	**Pn**	**10 30 14.5**	**+0.3**
UGM	**Wanagama**	**2.71**	**100**	P	**Pn**	**10 30 29.9**	**+0.3**
KASI	**Kota Agung**	**3.82**	**300**	P	**Pn**	**10 30 44.2**	**+0.5**
KLSI		**4.12**	**311**	P	**Pn**	**10 30 47.3**	**-0.4**
MDSI	**Maura Dua**	**4.67**	**309**	P	**Pn**	**10 30 55.0**	**+0.1**
MNAI	**Manna**	**5.73**	**302**	P	**Pn**	**10 31 08.0**	**-1.0**
	1.6nm6μm152nm,0.9s						
SRBI	**Singaraja**	**7.35**	**95**	P	**Pn**	**10 31 30.5**	**0.0**
BATI	**Baumata**	**15.89**	**101**	P	**Pn**	**10 33 20.2**	**-1.1**
	6.4nm,0.3s,baz=288,slow=1.5,SNR=4.2						
FITZ	**Fitzroy Crossi**	**20.32**	**123**	P	**P**	**10 34 10.9**	**+0.6**
	2.3nm,0.6s,baz=295,slow=7.1,SNR=8.4						
WRA	**Warramunga Arr**	**28.54**	**118**	P	**P**	**10 35 27.1**	**-0.6**
	1.1nm,0.5s,baz=302,slow=8.7,SNR=30						
WRA				PcP	**PcP**	**10 38 34.3**	**-1.3**
	0.2nm,0.3s,baz=313,slow=2.1,SNR=7.0						
ASAR	**Alice Springs**	**29.77**	**126**	P	**P**	**10 35 38.6**	**+0.2**
	1.0nm,0.5s,baz=305,slow=9.2,SNR=20						
ASAR				PcP	**PcP**	**10 38 37.7**	**-1.0**
	0.6nm,0.7s,baz=314,slow=2.2,SNR=5.0						
STKA	**Stephens Creek**	**39.74**	**132**	P	**P**	**10 37 04.3**	**+0.4**
	3.8nm,0.6s,baz=305,slow=8.7,SNR=10						
MKAR	**Makanchi Array**	**58.58**	**340**	P	P	10 39 21.7	-5.1
	0.4nm,0.5s,baz=156,slow=8.3,SNR=6.1						
TLY	**Talaya**	**59.00**	**357**	LR	LR	11 06 08.0	
	comp=Z,28nm,19.6s,baz=26,slow=38						

DDA 12 10:34:49.7, 37°.21N×30°.45E, h98km±1km, ML1.8
ISK 12 10:34:49.1, 37°.10N×30°.36E, h106km, ML2.4/6
ISC 12 10:34:50.2±1.8, 37°.13N±0°.07×30°.40E±0°.04, h101km±10km, n19, σ0ˢ74/34, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KORT	**Korkueli**	**0.13**	**195**	PG	**Pn**	**10 35 04.3**	**-0.2**
KORT				SG	**Sn**	**10 35 15.3**	**+0.2**
KORT	**Korkueli**	**0.13**	**195**	*i* P	**Pn**	**10 35 04.5**	**0.0**
KORT				*i* S	**Sn**	**10 35 13.9**	**-1.2**
KORT	**Korkueli**	**0.13**	**195**	*i* P	**Pn**	**10 35 04.5**	**0.0**
KORT				*i* S	**Sn**	**10 35 15.3**	**+0.2**
KORT				IAML		10 35 18.0	
	comp=N,21nm,0.6s						
KORT				IAML		10 35 19.0	
	comp=E,31nm,0.5s						
BUCA	**Burdur, Bucak-**	**0.24**	**34**	*i* P	**Pn**	**10 35 03.4**	**-1.3**
BUCA				*i* S	**Sn**	**10 35 15.1**	**-0.5**
ELL	**Elmali**	**0.55**	**226**	PG	**Pn**	**10 35 06.3**	**-0.2**
GOLH	**Golhisar**	**0.67**	**279**	*i* P	**Pn**	**10 35 08.0**	**+0.5**
GOLH				*i* S	**Sn**	**10 35 21.2**	**+0.6**
GOLH				IAML		10 35 22.0	
	comp=N,45nm,0.3s						
GOLH				IAML		10 35 24.0	
	comp=E,30nm,0.4s						
GOLH	**Golhisar**	**0.67**	**279**	*i* P	**Pn**	**10 35 08.1**	**+0.5**
GOLH				*i* S	**Sn**	**10 35 21.5**	**+0.9**
AKUM	**Antalya-Kumluc**	**0.81**	**183**	*i* P	**Pn**	**10 35 08.9**	**+0.3**
AKUM				*i* S	**Sn**	**10 35 24.4**	**+1.9**
CAEL	**Denizli, Camel**	**0.86**	**270**	*i* P	**Pn**	**10 35 09.8**	**+0.5**
CAEL				*i* S	**Sn**	**10 35 25.4**	**+1.7**
CAEL				IAML		10 35 29.0	
	comp=E,42nm,0.6s						
CAEL				IAML		10 35 31.0	
	comp=N,40nm,0.7s						
CAEL	**Denizli, Camel**	**0.86**	**270**	*i* P	**Pn**	**10 35 10.0**	**+0.7**
CAEL				*i* S	**Sn**	**10 35 24.7**	**+1.0**
CAEL				IAML		10 35 31.0	
	comp=N,40nm,0.7s						
CAEL				IAML		10 35 32.0	
	comp=E,40nm,0.6s						
KEPZ	**Antalya-Kepez**	**0.99**	**103**	*i* P	**Pn**	**10 35 10.3**	**-0.3**
KEPZ				IAML		10 35 26.0	
	comp=N,27nm,0.9s						
KEPZ				IAML		10 35 26.0	
	comp=E,15nm,0.9s						
KEPZ				*i* S	**Sn**	**10 35 26.1**	**0.0**
AKAS	**Kas**	**1.10**	**216**	PG	**Pn**	**10 35 11.3**	**-0.6**
AKAS				SG	**Sn**	**10 35 27.5**	**-0.7**
FETY	**Fethiye**	**1.16**	**245**	PN	**Pn**	**10 35 12.0**	**-0.5**
FETY				SN	**Sn**	**10 35 28.5**	**-0.8**
TAVA	**DENIZLI_Tavas**	**1.23**	**286**	*i* P	**Pn**	**10 35 13.4**	**+0.1**
TAVA				*i* S	**Sn**	**10 35 30.4**	**-0.4**
TAVA	**DENIZLI_Tavas**	**1.23**	**286**	*i* P	**Pn**	**10 35 13.2**	**-0.1**
TAVA				IAML		10 35 30.0	
	comp=N,12nm,0.2s						
TAVA				*i* S	**Sn**	**10 35 30.2**	**-0.6**
TAVA				IAML		10 35 31.0	
	comp=E,19nm,0.7s						
YER	**Yerkesik**	**1.69**	**271**	PN	**Pn**	**10 35 18.5**	**-0.4**
TURN	**Turunc**	**1.76**	**259**	PN	**Pn**	**10 35 19.3**	**-0.4**
TURN				SN	**Sn**	**10 35 41.5**	**-0.6**
KONT	**Konya--Tatoy**	**1.76**	**62**	PN	**Pn**	**10 35 20.2**	**+0.4**
GAZI	**Gazipasa**	**1.78**	**119**	PN	**Pn**	**10 35 20.2**	**+0.2**

NNC 12 10:42:42.1±1.4, 51°.82N×75°.54E, h0km, mb3.3, mpv2.9, Error ellipse: s-maj=68.0km s-min=7.4km az=27.0, Suspected Mining explosion.
IDC 12 10:42:45.0±1.0, 51°.68N×75°.54E, h0km, mb1 2.8/4, mb1mx2.7/44, mbtmp2.8/4, ML2.6/4, Error ellipse: s-maj=31.1km s-min=8.1km az=31.0
ISC 12 10:42:40.9±1.0, 52°.33N±0°.09×76°.18E±0°.06, h0km, n10, σ1ˢ14/11, 5C-3D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURK	**Kurchatov**	**2.22**	**136**	⇓Pg	**Pb**	**10 43 22.5**	**+0.6**
	2.9nm,0.4s						
KURK				⇑Lg	Lg	10 43 50.7	
	9.2nm,0.6s						
KURBB	**Kurchatov Arra**	**2.26**	**138**	Pn	**Pb**	**10 43 21.8**	**-0.7**
	0.9nm,0.3s,baz=302,slow=18,SNR=80						
KURBB				Lg	Lg	10 43 53.7	
	1.1nm,0.3s,baz=300,slow=13,SNR=5.4						
KURBB	**Kurchatov Arra**	**2.26**	**138**	⇑Pg	**Pg**	**10 43 23.7**	**-0.4**
	3.6nm,0.2s						
KURBB				⇓Lg	Lg	10 43 52.6	
	38nm,0.6s						
BVAR	**Borovoye Array**	**3.59**	**283**	Pn	**Pn**	**10 43 38.7**	**+0.9**
	0.6nm,0.3s,baz=108,slow=16,SNR=6.9						
BVAR				Sn	**Sn**	**10 44 21.8**	**+0.8**
	1.4nm,0.3s,baz=87,slow=30,SNR=7.2						
BVAR				Lg	Lg	10 44 27.7	
	2.3nm,0.3s,baz=92,slow=28,SNR=6.4						
BVA3	**Borovoye Array**	**3.60**	**283**	⇑Pg	**Pb**	**10 43 44.1**	**-1.3**
	2.6nm,0.5s						
BVA3				⇑Lg	Lg	10 44 27.5	
	9.2nm,0.4s						
I46RU	**ZALESOVO INFRA**	**5.45**	**69**	*i*		11 21 09.8	
	baz=247,slow=278,SNR=2.2						
ZALV	**Zalesovo Beam**	**5.45**	**69**	Pn	**Pb**	**10 44 16.3**	**-0.5**
	0.8nm,0.3s,baz=256,slow=14,SNR=11						
MK31	**Makanchi Array**	**6.82**	**142**	Pn	**Pn**	**10 44 23.2**	**+1.0**
	0.1nm,0.2s,baz=310,slow=12,SNR=11						
MK31				⇓Sn	**Sn**	**10 45 39.8**	**-0.6**
	0.3nm,0.3s,baz=323,slow=17,SNR=5.2						
MK31				⇑Lg	Lg	10 46 11.3	
	1.6nm,0.5s,baz=318,slow=28,SNR=6.0						
MKAR	**Makanchi Array**	**6.82**	**142**	Pn	**Pn**	**10 44 22.8**	**+0.6**
	0.2nm,0.3s,baz=318,slow=14,SNR=8.1						
MKAR				Sn	**Sn**	**10 45 38.4**	**-2.0**
	0.4nm,0.3s,baz=321,slow=18,SNR=8.1						
MKAR				Lg	Lg	10 46 11.6	
	0.4nm,0.3s,baz=317,slow=28,SNR=3.8						
AAK	**Ala-Archa**	**9.77**	**187**	Lg	Lg	10 47 31.4	
	0.2nm,0.3s,baz=205,slow=19,SNR=5.6						

TAP 12 11:39:29.7, 24°.71N×121°.73E, h56km, ML3.6, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWE	**Neicheng**	**0.06**	**283**	*i* P	Pn	11 39 38.6	+0.4
	baz=283						
TWE				*i* S	Sn	11 39 45.2	+1.0
	baz=283						
NDS	**Dongshan**	**0.08**	**187**	P	Pn	11 39 38.4	+0.1
	baz=186						
NDS				S	Sn	11 39 44.8	+0.5
	baz=186						
TWC	**Suao**	**0.15**	**132**	*e*P	Pn	11 39 38.5	0.0
	baz=129						
TWC				*e*S	Sn	11 39 45.5	+0.7
	baz=129						
ENTT	**Nioudou**	**0.16**	**245**	P	Pn	11 39 39.0	+0.5
	baz=242						
ENTT				S	Sn	11 39 45.7	+0.7
	baz=242						
NTC	**Toucheng**	**0.17**	**33**	*e*P	Pn	11 39 39.0	+0.4
	baz=33						
NTC				*e*S	Sn	11 39 45.7	+0.8
	baz=33						
NWLT	**Wulai**	**0.21**	**289**	*e*P	Pn	11 39 39.0	+0.1
	baz=288						
NWLT				*e*S	Sn	11 39 45.6	+0.1
	baz=288						
NDT	**Datong Townshi**	**0.22**	**241**	P	Pn	11 39 39.4	+0.5
	baz=241						
NDT				S	Sn	11 39 46.0	+0.6
	baz=241						
TIPB	**Shuangxi**	**0.28**	**19**	P	Pn	11 39 39.7	+0.4
	baz=19						
TIPB				S	Sn	11 39 46.9	+0.6
	baz=19						
ENA	**Nanau**	**0.28**	**177**	P	Pn	11 39 39.4	+0.1
	baz=175						
ENA				*e*S	Sn	11 39 46.2	+0.1
	baz=175						
TWA	**Mucha**	**0.30**	**334**	*e*P	Pn	11 39 39.8	+0.3
	baz=335						
TWA				*e*S	Sn	11 39 47.0	+0.5
	baz=335						
NHDH	**Xindian Distri**	**0.31**	**324**	P	Pn	11 39 39.8	+0.3
	baz=324						
NHDH				S	Sn	11 39 47.2	+0.6
	baz=324						
NSK	**Sanguang**	**0.34**	**264**	P	Pn	11 39 40.0	+0.2
	baz=263						
NSK				S	Sn	11 39 47.6	+0.4
	baz=263						
TATO	**Taipei**	**0.34**	**321**	*e*P	Pn	11 39 40.1	+0.3
	baz=321						
TATO				*e*S	Sn	11 39 47.4	+0.3
	baz=321						
NWF	**Wu-fen Shan**	**0.36**	**8**	P	Pn	11 39 40.5	+0.4
	baz=8.0						
NWF				S	Sn	11 39 48.3	+0.7
	baz=8.0						
WFSB	**Wu-fen Shan**	**0.36**	**8**	P	Pn	11 39 40.4	+0.4
	baz=7.0						
WFSB				S	Sn	11 39 48.3	+0.9
	baz=7.0						
TWB1	**Santiao Chiao**	**0.38**	**39**	*e*P	Pn	11 39 40.3	+0.1
	baz=39						
TWB1				*e*S	Sn	11 39 47.7	0.0
	baz=39						
NNS	**Nan Shan**	**0.42**	**230**	P	Pn	11 39 41.0	+0.4
	baz=229						
NNS				S	Sn	11 39 49.5	+0.9
	baz=229						
NNSB	**Datong**	**0.42**	**228**	P	Pn	11 39 41.0	+0.3
	baz=228						
NNSB				S	Sn	11 39 48.9	+0.4
	baz=228						
NNSH	**Datong**	**0.42**	**228**	P	Pn	11 39 41.0	+0.3
	baz=228						
NNSH				*e*S	Sn	11 39 49.1	+0.5
	baz=228						
TWS1	**Kuangyinshan**	**0.48**	**324**	*e*P	Pn	11 39 41.3	+0.1
	baz=324						
TWS1				*e*S	Sn	11 39 49.6	+0.2
	baz=324						
ANP	**Anpu**	**0.51**	**339**	*e*P	Pn	11 39 41.7	+0.1
	baz=339						
ANP				*e*S	Sn	11 39 51.0	+0.8
	baz=339						
NTST	**Danshui**	**0.52**	**331**	*e*P	Pn	11 39 42.2	+0.6
	baz=331						
NTST				*e*S	Sn	11 39 51.4	+1.2
	baz=331						
NACB	**Ninganchiao**	**0.55**	**193**	*e*P	Pn	11 39 41.5	-0.4
	baz=192						
NACB				*e*S	Sn	11 39 50.7	-0.1
	baz=192						
ETLH	**Xiulin Townshi**	**0.55**	**204**	*e*P	Pn	11 39 41.8	-0.2
	baz=203						
ETLH				*e*S	Sn	11 39 52.0	+1.0
	baz=203						
FUSS	**Fushou**	**0.64**	**224**	*e*P	Pn	11 39 43.6	+0.4
	baz=223						
FUSS				*e*S	Sn	11 39 53.6	+0.6
	baz=223						
LIOB	**Emei**	**0.65**	**265**	*e*P	Pn	11 39 43.6	+0.4
	baz=264						
LIOB				*e*S	Sn	11 39 54.0	+1.1
	baz=264						
NSTT	**Nanjuang**	**0.66**	**263**	*e*P	Pn	11 39 43.5	+0.2
	baz=263						
NSTT				*e*S	Sn	11 39 54.5	+1.3
	baz=263						
TWT	**Tachien**	**0.68**	**228**	*e*P	Pn	11 39 44.6	+1.0
	baz=228						
TWT				*e*S	Sn	11 39 55.4	+1.7
	baz=228						
TDCB	**Techi**	**0.69**	**229**	*e*P	Pn	11 39 44.3	+0.5
	baz=228						
TDCB				*e*S	Sn	11 39 54.9	+0.9
	baz=228						
WHF	**Hehuan Shan**	**0.70**	**217**	*e*P	Pn	11 39 44.4	+0.2
	baz=216						
HWA	**Hwalien**	**0.74**	**189**	*e*P	Pn	11 39 45.2	+1.0
	baz=187						
CHGB	**Renai**	**0.82**	**218**	*e*P	Pn	11 39 46.0	+0.5
	baz=217						
WHP	**Taichung City**	**0.83**	**239**	*e*P	Pn	11 39 46.2	+0.8
	baz=238						
WHP				*e*S	Sn	11 39 57.7	+0.7
	baz=238						
WCS	**Beigang Elemen**	**0.99**	**229**	*e*P	Pn	11 39 48.3	+0.9
	baz=228						
WPL	**Puli Township**	**0.99**	**225**	*e*P	Pn	11 39 48.4	+1.0
	baz=225						
WPL				*e*S	Sn	11 40 01.8	+1.3
	baz=225						
VWDT	**VWDT**	**1.09**	**209**	*e*P	Pn	11 39 49.2	+0.4
	baz=209						
SMLT	**Sun Moon Lake**	**1.12**	**223**	*e*P	Pn	11 39 50.2	+1.0
	baz=222						
SMLT				*e*S	Sn	11 40 05.3	+1.5
	baz=222						
TYC	**Yuchr**	**1.13**	**225**	*e*P	Pn	11 39 51.0	+1.7
	baz=224						
TYC				*e*S	Sn	11 40 05.7	+1.9
	baz=224						
SSLB	**Suanglung**	**1.16**	**218**	*e*P	Pn	11 39 50.5	+0.8

	baz=217						
SSLB				*e*S	Sn	11 40 05.9	+1.3
	baz=217						
HGSD	**Ruisui**	**1.24**	**193**	*e*P	Pn	11 39 51.7	+0.9
	baz=192						
HGSD				*e*S	Sn	11 40 07.1	+0.5
	baz=192						

TAP 12 11:39:47.3, 23°.92N×121°.54E, h24km, ML2.0, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.08**	**48**	*e*P	Pb	11 39 52.5	+0.7
	baz=52						
HWA				S	Sb	11 39 56.2	+1.5
	baz=52						
HWA	**Hwalien**	**0.08**	**48**	*e*S	Sb	11 39 56.3	+1.6
	baz=187						
ESL	**Shilin**	**0.15**	**222**	P	Pb	11 39 52.3	0.0
	baz=219						
ESL				*e*S	Sb	11 39 55.7	0.0
	baz=219						
TWD	**Chiawan**	**0.16**	**18**	*e*S	Pb	11 39 52.9	+0.4
	baz=190						
TWD	**Chiawan**	**0.16**	**18**	P	Pb	11 39 53.1	+0.6
	baz=20						
TWD				S	Sb	11 39 57.0	+1.0
	baz=20						
NACB	**Ninganchiao**	**0.25**	**11**	P	Pb	11 39 53.9	+0.3
	baz=11						
NACB				*e*S	Sb	11 39 59.0	+1.1
	baz=11						
EGFH	**Guangfu**	**0.27**	**202**	*e*P	Pb	11 39 53.9	0.0
	baz=202						
EGFH				*e*S	Sb	11 39 59.1	+0.7
	baz=202						
ETLH	**Xiulin Townshi**	**0.29**	**349**	P	Pb	11 39 54.6	+0.4
	baz=349						
ETLH				S	Sb	11 39 59.3	+0.4
	baz=349						
WHF	**Hehuan Shan**	**0.33**	**311**	P	Pb	11 39 55.5	+0.3
	baz=311						
WHF				S	Sb	11 40 01.1	+0.6
	baz=311						
WHF	**Hehuan Shan**	**0.33**	**311**	*e*S	Pb	11 39 55.5	+0.3
	baz=216						
CHGB	**Renai**	**0.36**	**292**	P	Pb	11 39 56.1	+0.7
	baz=292						
CHGB				S	Sb	11 40 01.8	+0.9
	baz=292						
CHGB	**Renai**	**0.36**	**292**	*e*S	Pb	11 39 56.5	+1.1
	baz=217						
VWDT	**VWDT**	**0.40**	**245**	P	Pb	11 39 56.4	+0.5
	baz=245						
VWDT				S	Sb	11 40 03.0	+1.3
	baz=245						
VWDT	**VWDT**	**0.40**	**245**	*e*S	Sn	11 40 03.2	-1.1
	baz=209						
FUSS	**Fushou**	**0.42**	**320**	*e*P	Pb	11 39 57.2	+0.8
	baz=319						
FUSS				*e*S	Sn	11 40 04.3	-1.0
	baz=319						
HGSD	**Ruisui**	**0.44**	**194**	P	Pn	11 39 57.4	-0.7
	baz=193						
HGSD				*e*S	Sb	11 40 04.1	+1.3
	baz=193						
EHY	**Hungye**	**0.46**	**206**	*e*P	Pb	11 39 57.2	+0.3
	baz=204						
EHY				*e*S	Sn	11 40 04.6	-1.2
	baz=204						
TDCB	**Techi**	**0.48**	**313**	*e*P	Pb	11 39 57.8	+0.6
	baz=313						
TDCB				*e*S	Sb	11 40 05.1	+1.1
	baz=313						
NNSB	**Datong**	**0.52**	**344**	*e*P	Pb	11 39 58.4	+0.4
	baz=344						
NNSB				*e*S	Sb	11 40 06.2	+1.0
	baz=344						
NNSH	**Datong**	**0.52**	**344**	P	Pb	11 39 58.5	+0.5
	baz=344						
NNSH				S	Sb	11 40 06.1	+0.9
	baz=344						
ENA	**Nanau**	**0.53**	**20**	*e*P	Pb	11 39 58.6	+0.5
	baz=20						
ENA				*e*S	Sn	11 40 06.8	-0.9
	baz=20						
NNS	**Nan Shan**	**0.54**	**343**	P	Pb	11 39 58.8	+0.6
	baz=344						
NNS				S	Sb	11 40 06.5	+0.8
	baz=344						
WPL	**Puli Township**	**0.54**	**279**	*e*P	Pn	11 39 59.7	+0.2
	baz=279						
WPL				*e*S	Sn	11 40 07.6	-0.2
	baz=279						
SSLB	**Suanglung**	**0.55**	**256**	*e*P	Pb	11 39 58.9	+0.4
	baz=255						
SSLB				*e*S	Sb	11 40 06.5	+0.5
	baz=255						
SMLT	**Sun Moon Lake**	**0.59**	**266**	*e*P	Pn	11 39 60.0	-0.3
	baz=265						
SMLT				*e*S	Sn	11 40 08.4	-0.7
	baz=265						
WCS	**Beigang Elemen**	**0.59**	**283**	*e*P	Pn	11 39 59.9	-0.2
	baz=283						
WCS				*e*S	Sn	11 40 08.3	-0.7
	baz=283						
WCS	**Beigang Elemen**	**0.59**	**283**	*e*S	Pn	11 40 00.2	+0.1
	baz=228						
EYUL	**Yuli**	**0.61**	**199**	*e*P	Pb	11 39 59.8	+0.4
	baz=199						
EYUL				*e*S	Sn	11 40 08.6	-0.9
	baz=199						
TWF1	**Yuli**	**0.61**	**201**	*e*P	Pb	11 39 59.7	+0.3
	baz=200						
TWF1				*e*S	Sn	11 40 08.8	-0.7
	baz=200						
TYC	**Yuchr**	**0.62**	**268**	*e*P	Pb	11 39 59.6	0.0
	baz=268						
TYC				*e*S	Sn	11 40 09.0	-0.9
	baz=268						
WHP	**Taichung City**	**0.65**	**303**	*e*P	Pb	11 39 60.0	-0.1
	baz=302						
WHP				*e*S	Sn	11 40 10.1	-0.4
	baz=302						
NDT	**Datong Townshi**	**0.68**	**358**	*e*P	Pb	11 39 59.8	-0.7
	baz=357						
NDT				*e*S	Sb	11 40 09.4	-0.1
	baz=357						
YUS	**Yu-Shan**	**0.69**	**231**	*e*P	Pb	11 40 01.4	+0.3
	baz=231						
YUS				*e*S	Sn	11 40 11.9	-0.3
	baz=231						
ENTT	**Nioudou**	**0.71**	**2**	*e*P	Pb	11 40 01.3	+0.2
	baz=2.0						
ENTT				*e*S	Sn	11 40 11.7	-0.4
	baz=2.0						
NDS	**Dongshan**	**0.72**	**13**	*e*P	Pb	11 40 01.6	+0.3
	baz=12						
NDS				*e*S	Sb	11 40 11.5	+0.6
	baz=12						
FULB	**Fuli**	**0.76**	**197**	*e*P	Pb	11 40 02.0	+0.1
	baz=197						
FULB				*e*S	Sn	11 40 13.3	+0.1
	baz=197						
NSK	**Sanguang**	**0.77**	**348**	*e*P	Pn	11 40 02.6	-0.1
	baz=347						
NSK				*e*S	Sn	11 40 13.1	-0.4
	baz=347						
ALS	**Alishan**	**0.79**	**239**	*e*P	Pn	11 40 03.3	+0.1
	baz=238						
ALS				*e*S	Sn	11 40 13.7	-0.6
	baz=238						
CHN5	**Tsauling**	**0.85**	**248**	*e*P	Pn	11 40 03.8	-0.1
	baz=247						
CHN5				*e*S	Sn	11 40 16.1	+0.5
	baz=247						
ELDTW	**Lidau**	**0.88**	**213**	*e*P	Pb	11 40 03.9	0.0
	baz=212						
ELDTW				*e*S	Sn	11 40 16.2	0.0
	baz=212						
EDH	**Donghe**	**0.97**	**193**	*e*P	Pn	11 40 05.1	-0.3
	baz=192						
EDH				*e*S	Sn	11 40 19.1	+0.6
	baz=192						

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*ECX **12** 11:57:31.4±0.6, 31°.43N×115°.34W, h5km±3km, MD2.0, ML2.2*

*MEX **12** 11:57:33.2±0.8, 31°.37N×115°.36W, h5km, MD3.6*

ISC 12 11:57:30.4±1.0, **31°.43N**±0°.04×**115°.32W**±0°.03, **h12**km±9km, **n13**, σ**0ˢ.61**/25, **7C-1D, Baja California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ECBX	**El Chinero**	**0.23**	**79**	⇑*i*P	**Pg**	**11 57 34.8**	**-0.5**
ECBX				*e*S	**Sg**	**11 57 38.1**	**-0.5**
VTX	**Valle De La Tr**	**0.40**	**265**	⇑*i*P	**Pg**	**11 57 38.5**	**+0.2**
VTX				*e*S	**Sg**	**11 57 43.8**	**+0.1**
SPIG	**San Pedro Mart**	**0.40**	**198**	⇑*i*P	**Pg**	**11 57 38.9**	**+0.4**
	baz=16,slow=10						
SPIG				*i* S	**Sg**	**11 57 44.5**	**+0.6**
SPIG	**San Pedro Mart**	**0.40**	**198**	⇑*e*P	**Pg**	**11 57 38.6**	**+0.1**
SPIG				*e*S	**Sg**	**11 57 44.5**	**+0.6**
SPX	**San Pedro Mart**	**0.41**	**198**	⇑*i*P	**Pg**	**11 57 38.9**	**+0.2**
SPX				*e*S	**Sg**	**11 57 44.5**	**+0.3**
SPX				⇑*e*		11 57 46.7	
SPX				IAML		11 57 46.7	
	comp=N,144nm,0.1s						
SFX	**San Felipe**	**0.56**	**134**	*e*P	**Pg**	**11 57 41.7**	**+0.4**
SFX				*e*S	**Sg**	**11 57 49.4**	**+0.6**
SJX	**San Joaquin**	**0.64**	**302**	*e*P	**Pb**	**11 57 45.1**	**+1.5**
SJX				*e*S	**Sn**	**11 57 55.5**	**+0.1**
SJX				IAML		11 57 58.4	
	comp=N,254nm,0.1s						
SVX	**San Vicente**	**0.80**	**263**	*e*P	**Pg**	**11 57 45.2**	**-0.7**
SVX				*e*S	**Sg**	**11 57 55.7**	**-0.7**
SQX	**San Quintin**	**0.97**	**210**	⇑*e*P	**Pb**	**11 57 48.5**	**-0.8**
SQX				*e*S	**Sb**	**11 58 01.1**	**-1.0**
IKP	**In-Ko-Pah, Jac**	**1.39**	**331**	*e*P	**Pn**	**11 57 55.7**	**-0.1**
CBX	**Cerro Bola**	**1.44**	**308**	*e*P	**Pn**	**11 57 56.1**	**-0.5**
CBX				*e*S	**Sn**	**11 58 15.7**	**+0.1**
CBX				⇓*e*		11 58 17.4	
CBX				IAML		11 58 17.4	
	comp=N,44nm,0.3s						
TJIG	**Tijuana**	**1.53**	**311**	*e*P	**Pn**	**11 57 58.1**	**+0.5**
TJIG				*e*S	**Sn**	**11 58 17.1**	**-0.3**
TJIG	**Tijuana**	**1.53**	**311**	*e*P	**Pn**	**11 57 57.6**	**0.0**
TJIG				*e*S	**Sn**	**11 58 17.3**	**-0.1**

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*KRNET **12** 11:57:55.7±0.1, 39°.73N×77°.51E, mb3.2*

*SOME **12** 11:57:58.5, 40°.00N×77°.00E, h0km*

*NNC **12** 11:57:58.5±3.6, 39°.93N×76°.68E, h0km, mb3.7, mpv3.4, Error ellipse: s-maj=24.0km s-min=21.9km az=142.0*

ISC 12 11:58:00.9±2.0, **39°.86N**±0°.09×**77°.31E**±0°.06, **h10**km, **n50**, σ**1ˢ.73**/81, **30C-4D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDJ	**Kajisay**	**2.27**	**358**	⇑*i*P	**Pn**	**11 58 38.2**	**-0.4**
	baz=54						
KDJ				⇑*i*S	**Sn**	**11 59 08.4**	**+1.6**
	baz=54						
ULHL	**Ulahol**	**2.52**	**342**	⇑*i*P	**Pn**	**11 58 41.5**	**-0.5**
	baz=39						
ULHL				⇑*i*S	**Sn**	**11 59 15.0**	**+2.1**
	baz=39						
ULHL	**Ulahol**	**2.52**	**342**	P	**Pn**	**11 58 42.4**	**+0.3**
	SNR=14						
PRZ	**Przheval'sk**	**2.75**	**17**	⇑*i*P	**Pn**	**11 58 44.0**	**-1.2**
	baz=13						
PRZ				⇑*i*S	**Sn**	**11 59 19.2**	**+0.6**
	baz=13						
SFK	**Sufi-Kurgan**	**2.93**	**274**	⇑*i*P	**Pn**	**11 58 47.6**	**-0.1**
	baz=77						
SFK				⇑*i*S	**Sn**	**11 59 25.1**	**+2.0**
	baz=77						
ANVS	**Anan'yevo**	**2.93**	**5**	⇑*i*P	**Pn**	**11 58 47.1**	**-0.7**
	baz=2.0						
ANVS				⇑*i*S	**Sn**	**11 59 23.8**	**+0.7**
	baz=2.0						
ARLS	**Aral**	**3.02**	**312**	⇑*i*P	**Pn**	**11 58 49.1**	**+0.2**
	baz=12						
ARLS				⇑*i*S	**Sn**	**11 59 28.6**	**+3.4**
	baz=12						
UCH	**Uchtor**	**3.17**	**319**	⇓*i*P	**Pn**	**11 58 51.1**	**-0.2**
	baz=19						
UCH				⇓*i*S	**Sn**	**11 59 32.2**	**+2.8**
	baz=19						
UCH	**Uchtor**	**3.17**	**319**	P	**Pn**	**11 58 51.0**	**-0.2**
	SNR=8.8						
TNSS	**Tian-Shan**	**3.19**	**355**	*e*P	**Pb**	**11 58 56.3**	**-1.5**
	4.2nm,0.3s						
TNSS				*e*S	**Sb**	**11 59 38.0**	**+1.1**
	12nm,0.7s						
TNSS	**Tian-Shan**	**3.19**	**355**	Pg	**Pn**	**11 58 53.2**	**+1.8**
	4.2nm,0.3s						
TNSS				Lg	Lg	11 59 32.5	
	12nm,0.7s						
IZV	**Izvestkoviy**	**3.22**	**351**	*e*P	**Pb**	**11 58 55.9**	**-2.3**
	6.0nm,0.6s						
IZV				*e*S	**Sb**	**11 59 37.3**	**-0.2**
	16nm,0.5s						
SATY	**Saty**	**3.30**	**14**	*e*P	**Pb**	**11 58 58.9**	**-0.8**
	15nm,1.3s						
SATY				*e*S	**Sb**	**11 59 42.0**	**+2.0**
	14nm,0.7s						
MDOK	**Medeo**	**3.31**	**357**	*e*P	**Pb**	**11 58 58.3**	**-1.4**
	5.4nm,0.5s						
MDOK				*e*S	**Sb**	**11 59 41.2**	**+1.2**
	19nm,1.0s						
MDOK	**Medeo**	**3.31**	**357**	⇓Pg	**Pb**	**11 58 58.8**	**-0.9**
	7.0nm,0.6s						
MDOK				⇑Lg	Lg	11 59 40.3	
	30nm,0.8s						
MDOK	**Medeo**	**3.31**	**357**	Pg	**Pb**	**11 58 60.0**	**+0.2**
	5.4nm,0.5s						
MDOK				Lg	Lg	11 59 43.9	
	19nm,1.0s						
KBK	**Karagaybulak**	**3.31**	**328**	⇑*i*P	**Pn**	**11 58 53.2**	**+0.3**
	baz=27						
KBK				⇑*i*S	**Sn**	**11 59 35.5**	**+3.0**
	baz=27						
KBK	**Karagaybulak**	**3.31**	**328**	P	**Pb**	**11 58 58.1**	**-1.7**
	SNR=12						
TKM2	**Tokmak 2**	**3.32**	**338**	⇑*e*P	**Pn**	**11 58 53.0**	**-0.1**
	baz=36						
TKM2				⇑*i*S	**Sn**	**11 59 35.1**	**+2.4**
	baz=36						
TKM2	**Tokmak 2**	**3.32**	**338**	P	**Pn**	**11 58 53.7**	**+0.6**
	SNR=6.5						
TKM2	**Tokmak 2**	**3.32**	**338**	⇑Pg	**Pn**	**11 58 53.6**	**+0.5**
	3.4nm,0.5s						
TKM2				⇑Lg	Lg	11 59 37.8	
	8.3nm,0.7s						
MTBS	**Maitube**	**3.33**	**349**	*e*P	**Pb**	**11 58 57.8**	**-2.3**
	5.2nm,0.5s						
MTBS				*e*S	**Sb**	**11 59 40.6**	**-0.2**
	6.8nm,0.6s						
KST	**Kastek**	**3.34**	**343**	*e*P	**Pb**	**11 58 57.5**	**-2.8**
	7.4nm,0.5s						
KST				*e*S	**Sb**	**11 59 40.0**	**-1.0**
	16nm,0.7s						
KST	**Kastek**	**3.34**	**343**	Pg	**Pb**	**11 58 58.3**	**-2.0**
	7.4nm,0.5s						
KST				Lg	Lg	11 59 41.0	
	16nm,0.7s						
KOTS	**Kotyrbulak**	**3.38**	**358**	*e*P	**Pb**	**11 58 59.3**	**-1.6**
	8.9nm,0.4s						
KOTS				*e*S	**Sb**	**11 59 43.1**	**+1.1**
	31nm,0.9s						
KOTS	**Kotyrbulak**	**3.38**	**358**	Pg	**Pb**	**11 58 59.3**	**-1.6**
	8.9nm,0.4s						
KOTS				Lg	Lg	11 59 43.2	
	31nm,0.9s						
AAK	**Ala-Archa**	**3.49**	**324**	⇑*i*P	**Pn**	**11 58 55.3**	**-0.1**
	baz=23						
AAK				⇑*i*S	**Sn**	**11 59 39.3**	**+2.4**
	baz=23						
AAK	**Ala-Archa**	**3.49**	**324**	⇓Pg	**Pn**	**11 58 55.3**	**-0.1**
	5.3nm,0.5s						
AAK				⇑Lg	Lg	11 59 44.3	
	18nm,0.8s						
UZB	**Uzynbulak**	**3.53**	**21**	*e*P	**Pb**	**11 59 02.5**	**-1.0**
	8.2nm,0.6s						
UZB				*e*S	**Sb**	**11 59 48.3**	**+1.9**
	6.9nm,0.6s						
AML	**Almayashu**	**3.55**	**311**	*i* P	**Pn**	**11 58 56.6**	**+0.1**
	baz=11						
AML				*i* S	**Sn**	**11 59 40.8**	**+2.1**
	baz=11						
AML	**Almayashu**	**3.55**	**311**	P	**Pn**	**11 58 57.4**	**+0.9**
	SNR=6.4						
DGS	**Degeres**	**3.57**	**342**	*e*P	**Pb**	**11 59 01.3**	**-2.9**
	11nm,0.7s						
DGS				*e*S	**Sb**	**11 59 46.8**	**-0.9**
	17nm,1.0s						
DGS	**Degeres**	**3.57**	**342**	Pg	**Pb**	**11 59 02.2**	**-2.0**
	11nm,0.7s						
DGS				Lg	Lg	11 59 48.2	
	17nm,1.0s						
ARSB	**Arslanbob**	**3.60**	**295**	⇑*i*P	**Pn**	**11 58 57.1**	**+0.2**
	baz=96						
ARSB				⇑*i*S	**Sn**	**11 59 41.9**	**+2.3**
	baz=96						
CHMS	**Chumysh**	**3.68**	**329**	⇑*i*P	**Pn**	**11 58 57.8**	**0.0**
	baz=28						
CHMS				⇑*i*S	**Sn**	**11 59 43.7**	**+2.4**
	baz=28						
KURS	**Kuram**	**3.68**	**10**	*e*P	**Pb**	**11 59 03.7**	**-2.4**
	9.5nm,0.6s						
KURS				*e*S	**Sb**	**11 59 50.6**	**-0.2**
	8.3nm,1.0s						
KURS	**Kuram**	**3.68**	**10**	Pg	**Pb**	**11 59 05.0**	**-1.1**
	9.5nm,0.6s						
KURS				Lg	Lg	11 59 52.7	
	8.3nm,1.0s						
EKS2	**Erkin-Say**	**3.86**	**318**	⇑*e*P	**Pn**	**11 59 00.9**	**+0.4**
	baz=17						
EKS2				⇑*i*S	**Sn**	**11 59 48.1**	**+2.2**
	baz=17						
EKS2	**Erkin-Say**	**3.86**	**318**	P	**Pn**	**11 59 01.6**	**+1.1**
	SNR=10						
KTBS	**Karatobe**	**3.88**	**353**	*e*P	**Pb**	**11 59 09.8**	**+0.5**
	3.0nm,0.6s						
KTBS				*e*S	**Sb**	**12 00 01.0**	**+4.6**
	11nm,1.0s						
KTBS	**Karatobe**	**3.88**	**353**	Pg	**Pb**	**11 59 06.7**	**-2.7**
	1.4nm,0.9s						
KTBS				Lg	Lg	11 59 55.5	
	11nm,1.0s						
CHKK	**Chushkaly**	**4.00**	**357**	*e*P	**Pb**	**11 59 10.4**	**-1.0**
	8.3nm,0.7s						
CHKK				*e*S	**Sb**	**12 00 02.1**	**+2.2**
	7.1nm,0.3s						
USP	**Ospenovka**	**4.00**	**329**	⇑*i*P	**Pn**	**11 59 02.4**	**+0.1**
	baz=28						
USP				⇑*i*S	**Sn**	**11 59 51.1**	**+1.8**
	baz=28						
KRBS	**Karabastau**	**4.02**	**343**	*e*P	**Pb**	**11 59 10.2**	**-1.7**
	5.1nm,0.5s						
KRBS				*e*S	**Sb**	**12 00 01.8**	**+1.2**
	3.6nm,0.6s						
KRBS	**Karabastau**	**4.02**	**343**	Pg	**Pb**	**11 59 09.8**	**-2.1**
	5.1nm,0.5s						
KRBS				Lg	Lg	12 00 01.1	
	3.6nm,0.6s						
KUU	**Kurty**	**4.09**	**350**	*e*P	**Pb**	**11 59 11.8**	**-1.2**
	5.8nm,0.7s						
KUU				*e*S	**Sb**	**12 00 04.5**	**+1.9**
	11nm,1.2s						
MRKS	**Merke**	**4.21**	**314**	*e*P	**Pb**	**11 59 12.4**	**-2.8**
	2.5nm,0.6s						
MRKS				*e*S	**Sb**	**12 00 05.5**	**-0.6**
	2.8nm,0.5s						
MRKS	**Merke**	**4.21**	**314**	Pg	**Pn**	**11 59 05.7**	**+0.5**
	4.9nm,0.3s						
MRKS				Lg	Lg	11 59 53.9	
	3.1nm,0.4s						
MNBS	**Baschi**	**4.29**	**11**	*e*P	**Pb**	**11 59 17.5**	**+1.0**
	4.0nm,0.5s						
MNBS				*e*S	**Sg**	**12 00 14.3**	**-4.5**
	8.7nm,0.5s						
MNBS	**Baschi**	**4.29**	**11**	Pg	**Pb**	**11 59 17.5**	**+1.0**
	4.0nm,0.5s						
MNBS				Lg	Lg	12 00 14.1	
	8.7nm,0.5s						

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*OTT **12** 12:04:28.6±0.1, 48°.42N×83°.29W, h4km, MN2.5/10, 65km northeast from Chapleau, On*

*NEIC **12** 12:04:30.0±2.2, 48°.42N±0°.05×83°.32W±0°.06, h15km±8km, Error ellipse: s-maj=7.0km s-min=6.1km az=176.0*

ISC 12 12:04:27.1±3.4, **48°.49N**±0°.04×**83°.21W**±0°.03, **h5**km±24km, **n24**, σ**1ˢ.25**/33, **Ontario**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPO	**Kapuskasing**	**1.06**	**26**	PG	**Pn**	**12 04 49.2**	**+0.6**
KAPO				SG	**Sn**	**12 05 04.5**	**+0.7**
KAPO				Trac		12 05 09.5	
	comp=Z,21nm,0.1s						
KAPO	**Kapuskasing**	**1.06**	**26**	Pg	**Pn**	**12 04 49.2**	**+0.6**
PNPO	**Pukaskwa Natio**	**2.04**	**274**	PN	**Pn**	**12 05 03.0**	**+0.8**
PNPO				SN	**Sn**	**12 05 28.5**	**+0.5**
PNPO				Trac		12 05 30.1	
	comp=Z,8.2nm,0.2s						
PNPO	**Pukaskwa Natio**	**2.04**	**274**		**Pn**	**12 05 03.0**	**+0.8**
SUNO	**Sudbury Onapin**	**2.24**	**145**	PN	**Pn**	**12 05 05.6**	**+0.8**
SUNO				SN	**Sn**	**12 05 32.9**	**0.0**
SUNO				Trac		12 05 36.1	
	comp=Z,5.0nm,0.1s						
SUNO	**Sudbury Onapin**	**2.24**	**145**		**Pn**	**12 05 05.6**	**+0.8**
E46A	**Sault Ste Mari**	**2.25**	**200**	Pn	**Pn**	**12 05 04.2**	**-0.7**
KILO	**Kirkland Lake**	**2.32**	**89**	PN	**Pb**	**12 05 08.6**	**-0.7**
KILO				SN	**Sb**	**12 05 37.5**	**-0.8**
KILO				Trac		12 05 42.5	
	comp=Z,4.0nm,0.1s						
KILO	**Kirkland Lake**	**2.32**	**89**		**Pb**	**12 05 08.6**	**-0.7**
MALO	**McAlpine Lake**	**2.73**	**55**	PN	**Pb**	**12 05 16.2**	**-0.1**
MALO				SN	**Sb**	**12 05 48.2**	**-1.9**
MALO				LG	Lg	12 05 56.4	
MALO				Trac		12 05 59.5	
	comp=Z,3.6nm,0.1s						
MALO	**McAlpine Lake**	**2.73**	**55**		**Pb**	**12 05 16.2**	**-0.1**
GTO	**Geraldton**	**2.77**	**298**	PN	**Pn**	**12 05 13.2**	**+1.1**
GTO				SN	**Sn**	**12 05 46.5**	**+0.7**
GTO				Trac		12 05 54.0	
	comp=Z,4.2nm,0.1s						
GTO	**Geraldton**	**2.77**	**298**		**Pn**	**12 05 13.2**	**+1.1**
E43A	**Lone Tree Farm**	**3.33**	**232**	Pn	**Pn**	**12 05 20.9**	**+1.1**
EEO	**Eldee**	**3.36**	**122**	PN	**Pn**	**12 05 21.6**	**+1.4**
EEO				SN	**Sn**	**12 05 59.8**	**-0.6**
EEO				Trac		12 06 11.6	
	comp=Z,1.3nm,0.1s						
EEO	**Eldee**	**3.36**	**122**		**Pn**	**12 05 21.6**	**+1.4**
VLDQ	**Val d'Or**	**3.86**	**94**	PN	**Pn**	**12 05 27.1**	**+0.1**
VLDQ				Trac		12 06 26.6	
	comp=Z,39nm,0.9s						
VLDQ	**Val d'Or**	**3.86**	**94**	Pn	**Pn**	**12 05 28.1**	**+1.0**
TBO	**Thunder Bay**	**4.12**	**274**	PN	**Pn**	**12 05 31.6**	**+1.0**
TBO				SN	**Sn**	**12 06 17.2**	**-2.0**
TBO				Trac		12 06 37.2	
	comp=Z,1.2nm,0.1s						
TBO	**Thunder Bay**	**4.12**	**274**		**Pn**	**12 05 31.6**	**+1.0**
SADO	**Sadowa**	**4.66**	**142**	PN	**Pn**	**12 05 39.8**	**+1.7**
SADO				Trac		12 06 56.1	
	comp=Z,562nm,3.7s						
SADO	**Sadowa**	**4.66**	**142**		**Pn**	**12 05 39.8**	**+1.7**
CRLO	**Chalk River**	**4.67**	**120**	PN	**Pn**	**12 05 40.8**	**+2.6**
CRLO				SN	**Sn**	**12 06 32.0**	**-0.6**
CRLO				Trac		12 06 53.1	
	comp=Z,0.9nm,0.1s						
CRLO	**Chalk River**	**4.67**	**120**		**Pn**	**12 05 40.8**	**+2.6**

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*VAO **12** 12:09:44.6±1.1, 22°.50S×70°.57W, h93km, mb4.4*

*NEIC **12** 12:09:47.6±2.1, 22°.18S±0°.05×70°.3W±0°.1, h75km±3km, mb4.4/6, ML4.2(GUC), Error ellipse: s-maj=15.6km s-min=6.5km az=83.0*

*SJA **12** 12:09:47.3±0.7, 22°.19S×70°.16W, h73km±2km, ML4.1, MW4.2*

*GUC **12** 12:09:49.1±0.8, 22°.21S×70°.10W, h67km±4km, ML4.2*

*IDC **12** 12:09:50.7±1.4, 22°.11S×69°.90W, h91km±10km, mb4.1/8, mb1 4.0/12, mb1mx3.9/26, mbtmp4.3/12, MS3.0/5, Ms1 3.0/5, ms1mx2.9/21, Error ellipse: s-maj=22.3km s-min=15.5km az=76.0*

ISC 12 12:09:47.6±0.6, **22°.20S**±0°.03×**70°.19W**±0°.04, **h73**km±5km, **n134**, σ**1ˢ.28**/148, **mb4.3**/10, **2C-7D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB04	**IPOC Station P**	**0.14**	**164**	⇑*i*P	**Pn**	**12 09 59.9**	**+1.3**
PB04				*i* S	**Sn**	**12 10 07.9**	**+1.2**
PB04				IAML		12 10 08.9	
	comp=E,25μm,0.2s						
PB04	**IPOC Station P**	**0.14**	**164**		**Pn**	**12 09 59.6**	**+1.0**

PB04	**IPOC Station P**	**0.14**	**164**	eP	**Pn**	**12 09 59.9**	**+1.3**
PB04				eS	**Sn**	**12 10 07.3**	**+0.6**
PB04				IAML		12 10 09.9	
	comp=Z,13µm,0.2s						
PB03	**IPOC Station P**	**0.43**	**70**	⇓iP	**Pn**	**12 10 01.0**	**+0.7**
PB03				i S	**Sn**	**12 10 09.8**	**+0.2**
PB03	**IPOC Station P**	**0.43**	**70**	eP	**Pn**	**12 10 01.0**	**+0.7**
PB03				eS	**Sn**	**12 10 10.1**	**+0.4**
PB03				IAML		12 10 11.2	
	comp=Z,15µm,0.3s						
PB07	**IPOC Station P**	**0.55**	**31**	⇓iP	**Pn**	**12 10 02.2**	**+0.7**
PB07				eS	**Sn**	**12 10 11.8**	**+0.3**
PB07				IAML		12 10 13.2	
	comp=E,36µm,0.7s						
PB07	**IPOC Station P**	**0.55**	**31**	Pn	**Pn**	**12 10 02.1**	**+0.7**
PB07	**IPOC Station P**	**0.55**	**31**	eP	**Pn**	**12 10 02.1**	**+0.7**
PB07				eS	**Sn**	**12 10 11.9**	**+0.4**
PB07				IAML		12 10 12.2	
	comp=Z,11µm,0.2s						
PB05	**IPOC Station P**	**0.66**	**181**	⇑iP	**Pn**	**12 10 03.7**	**+1.2**
PB05				i S	**Sn**	**12 10 14.5**	**+1.1**
PB05				IAML		12 10 15.2	
	comp=E,8µm,0.3s						
PB05	**IPOC Station P**	**0.66**	**181**	eP	**Pn**	**12 10 03.6**	**+1.2**
PB05				eS	**Sn**	**12 10 14.7**	**+1.4**
PB05				IAML		12 10 15.2	
	comp=Z,3µm,0.3s						
PB06	**IPOC Station P**	**0.77**	**132**	⇓iP	**Pn**	**12 10 04.3**	**+0.6**
PB06				i S	**Sn**	**12 10 15.6**	**0.0**
PB06				IAML		12 10 16.3	
	comp=E,19µm,0.3s						
PB06	**IPOC Station P**	**0.77**	**132**		**Pn**	**12 10 04.3**	**+0.6**
PB06	**IPOC Station P**	**0.77**	**132**	eP	**Pn**	**12 10 04.2**	**+0.6**
PB06				eS	**Sn**	**12 10 15.8**	**+0.2**
PB06				IAML		12 10 16.0	
	comp=Z,7µm,0.2s						
PB09	**IPOC Station P**	**0.97**	**66**	⇓iP	**Pn**	**12 10 07.0**	**+0.9**
PB09				eS	**Sn**	**12 10 20.4**	**+0.6**
PB09				IAML		12 10 21.1	
	comp=N,10µm,0.3s						
PB09	**IPOC Station P**	**0.97**	**66**		**Pn**	**12 10 07.0**	**+0.9**
PB09	**IPOC Station P**	**0.97**	**66**	eP	**Pn**	**12 10 07.0**	**+0.9**
PB09				eS	**Sn**	**12 10 20.6**	**+0.8**
PB09				IAML		12 10 21.0	
	comp=Z,10µm,0.2s						
PB15	**IPOC Station P**	**1.21**	**147**	i P	**Pn**	**12 10 09.6**	**+0.5**
PB15				eS	**Sn**	**12 10 25.3**	**+0.1**
PB15	**IPOC Station P**	**1.21**	**147**		**Pn**	**12 10 09.7**	**+0.6**
PB15	**IPOC Station P**	**1.21**	**147**	eP	**Pn**	**12 10 09.8**	**+0.6**
PB15				eS	**Sn**	**12 10 26.3**	**+1.1**
PB15				IAML		12 10 31.4	
	comp=Z,6µm,0.3s						
LVC	**Limon Verde**	**1.26**	**109**	P	**Pn**	**12 10 11.2**	**+1.4**
	comp=Z,370nm,0.3s,baz=349,slow=5.3,SNR=2745						
LVC				S	**Sn**	**12 10 27.1**	**+0.6**
	comp=Z,788nm,0.3s,baz=158,slow=18,SNR=90						
LVC	**Limon Verde**	**1.26**	**109**	eP	**Pn**	**12 10 11.3**	**+1.4**
LVC				eS	**Sn**	**12 10 27.1**	**+0.6**
LVC	**Limon Verde**	**1.26**	**109**	Pn	**Pn**	**12 10 11.1**	**+1.3**
LVC	**Limon Verde**	**1.26**	**109**	eP	**Pn**	**12 10 11.2**	**+1.3**
LVC				eS	**Sn**	**12 10 27.5**	**+1.0**
LVC				IAML		12 10 28.5	
	comp=Z,1µm,0.3s						
LVC	**Limon Verde**	**1.26**	**109**	eP	**Pn**	**12 10 11.4**	**+1.5**
PB01	**IPOC Station P**	**1.32**	**30**	⇓iP	**Pn**	**12 10 11.2**	**+0.8**
PB01				eS	**Sn**	**12 10 27.4**	**-0.2**
PB01	**IPOC Station P**	**1.32**	**30**		**Pn**	**12 10 11.3**	**+0.8**
PB01	**IPOC Station P**	**1.32**	**30**	eP	**Pn**	**12 10 10.9**	**+0.5**
PB01				eS	**Sn**	**12 10 28.4**	**+0.8**
PB01				IAML		12 10 29.7	
	comp=Z,4µm,0.1s						
PB10	**IPOC Station P**	**1.35**	**194**	eP	**Pn**	**12 10 11.7**	**+0.9**
PB10				i S	**Sn**	**12 10 28.1**	**-0.2**
PB10	**IPOC Station P**	**1.35**	**194**	Pn	**Pn**	**12 10 11.9**	**+1.1**
PB10	**IPOC Station P**	**1.35**	**194**	eP	**Pn**	**12 10 11.8**	**+0.9**
PB10				eS	**Sn**	**12 10 28.1**	**-0.2**
PATCX	**Punta Patache**	**1.37**	**2**	i P	**Pn**	**12 10 11.6**	**+0.5**
PATCX				eS	**Sn**	**12 10 28.9**	**+0.2**
PATCX				IAML		12 10 30.1	
	comp=N,6µm,0.2s						
PATCX	**Punta Patache**	**1.37**	**2**		**Pn**	**12 10 11.6**	**+0.5**
PATCX	**Punta Patache**	**1.37**	**2**	eP	**Pn**	**12 10 11.5**	**+0.5**
PATCX				eS	**Sn**	**12 10 27.9**	**-0.8**
TA01	**Diego Aracena**	**1.62**	**0**	⇓iP	**Pn**	**12 10 14.5**	**+0.1**
TA01				IAML		12 10 35.0	
	comp=N,3µm,0.2s						
TA01	**Diego Aracena**	**1.62**	**0**		**Pn**	**12 10 14.4**	**+0.1**
PB14	**IPOC Station P**	**2.43**	**185**	⇓iP	**Pn**	**12 10 25.6**	**+0.2**
PB14				IAML		12 10 54.7	
	comp=E,491nm,0.4s						
PB14	**IPOC Station P**	**2.43**	**185**	Pn	**Pn**	**12 10 25.6**	**+0.2**
PB14	**IPOC Station P**	**2.43**	**185**	eP	**Pn**	**12 10 25.7**	**+0.3**
PB14				eS	**Sn**	**12 10 54.1**	**-0.2**
PB14				IAML		12 10 54.9	
	comp=Z,461nm,0.3s						
PSGC	**Pisagua**	**2.58**	**1**	i P	**Pn**	**12 10 27.2**	**-0.1**
PSGC				IAML		12 11 16.5	
	comp=E,1µm,0.6s						
PSGCX	**Pisagua**	**2.58**	**1**	Pn	**Pn**	**12 10 27.3**	**-0.1**
PSGCX	**Pisagua**	**2.58**	**1**	eP	**Pn**	**12 10 27.1**	**-0.3**
GO02	**Mina Guanaco**	**3.00**	**170**	eP	**Pn**	**12 10 34.4**	**+1.1**
GO02	**Mina Guanaco**	**3.00**	**170**	Pn	**Pn**	**12 10 34.4**	**+1.1**
MNMC	**Minye Minye**	**3.10**	**10**	eP	**Pn**	**12 10 34.9**	**+0.4**
MNMC				IAML		12 11 32.4	
	comp=E,2µm,0.7s						
MNMC	**Minye Minye**	**3.10**	**10**	Pn	**Pn**	**12 10 35.1**	**+0.6**
MNMCX	**Minye Minye**	**3.10**	**10**	eP	**Pn**	**12 10 34.9**	**+0.4**
MNMCX				eP	**Pn**	**12 10 35.0**	**+0.5**
AC01	**Pan de Azucar**	**3.95**	**185**	Pn	**Pn**	**12 10 45.2**	**-0.7**
YJA	**Yavi**	**4.33**	**91**	eP	**Pn**	**12 10 55.7**	**+4.2**
AC02	**Maricunga**	**4.72**	**168**	Pn	**Pn**	**12 10 58.3**	**+1.5**
AZAP	**Zapla**	**5.13**	**114**	eP	**Pn**	**12 11 04.7**	**+2.6**
GO03	**Copiap**	**5.38**	**180**		**Pn**	**12 11 05.1**	**-0.3**
GO03	**Copiap**	**5.38**	**180**	eP	**Pn**	**12 11 06.0**	**+0.6**
GO03				eS	**Sn**	**12 12 05.5**	**-0.4**
FSA	**Cafayete**	**5.48**	**136**	eP	**Pn**	**12 11 09.0**	**+2.2**
ASTB	**Santa Barbara**	**5.56**	**109**	eP	**Pn**	**12 11 10.1**	**+2.0**
AC04	**Llanos de Chal**	**6.04**	**187**		**Pn**	**12 11 11.6**	**-2.7**
LPAZ	**La Paz**	**6.19**	**19**	P	**Pn**	**12 11 18.4**	**+1.4**
	comp=E,1.4nm,0.3s,baz=260,slow=3.1,SNR=28						
LPAZ	**La Paz**	**6.19**	**19**	Pn	**Pn**	**12 11 19.9**	**+2.9**
LPAZ	**La Paz**	**6.19**	**19**	eP	**Pn**	**12 11 18.7**	**+1.7**
AC05	**El Transito**	**6.61**	**181**		**Pn**	**12 11 21.4**	**-0.9**
VCA	**Vinchina**	**6.76**	**165**	eP	**Pn**	**12 11 26.7**	**+2.4**
VCA				eS	**Sn**	**12 12 44.4**	**+4.5**
VCA				IAML		12 13 28.7	
	comp=Z,39nm,1.1s						
LCO	**Las Campanas**	**6.80**	**184**	Pn	**Pn**	**12 11 23.4**	**-1.6**
CO01	**Juntas del Tor**	**7.75**	**179**	Pn	**Pn**	**12 11 37.0**	**-1.0**
ACLC	**CERRO LA CRUZ**	**7.77**	**159**	eP	**Pn**	**12 11 38.4**	**+0.2**
ACLC				eS	**Sn**	**12 13 02.7**	**-2.0**
ACLC				IAML		12 13 04.3	
	comp=Z,12nm,0.4s						
GO04	**Tololo Observa**	**7.96**	**184**	Pn	**Pn**	**12 11 38.8**	**-2.1**
AROD	**Rodeo**	**7.97**	**176**	eP	**Pn**	**12 11 41.4**	**+0.4**
ACDV	**Cuesta del Vie**	**8.00**	**173**	eP	**Pn**	**12 11 42.2**	**+0.9**
ACDV				eS	**Sn**	**12 13 13.9**	**+3.5**
ACDV				IAML		12 13 58.2	
	comp=Z,13nm,1.3s						
ACCO	**Cerro Coronel**	**8.42**	**173**	eP	**Pn**	**12 11 46.9**	**-0.3**
ACCO				IAML		12 14 20.9	
	comp=Z,15nm,2.6s						
CO03	**El Pedregal**	**8.62**	**183**	Pn	**Pn**	**12 11 47.8**	**-1.9**
SIV	**San Ignacio**	**10.60**	**56**	P	**Pn**	**12 12 14.6**	**-2.1**
	comp=Z,2.2nm,0.3s,baz=247,slow=14,SNR=50						
SIV				S	Sn	12 14 03.4	-10
	baz=263,slow=20,SNR=1.0						
SIV				LR	LR	12 15 55.3	
	comp=Z,54nm,20.4s,baz=242,slow=35						
NNA	**Nana**	**11.97**	**327**	LR	LR	12 16 36.1	
	comp=Z,59nm,19.5s,baz=161,slow=34						
CPUP	**Villa Florida**	**12.43**	**112**	P	**Pn**	**12 12 39.8**	**-1.8**
	comp=Z,0.1nm,0.3s,baz=321,slow=12,SNR=4.0						
CPUP				LR	LR	12 16 49.3	
	comp=Z,73nm,21.2s,baz=290,slow=34						
CPUP	**Villa Florida**	**12.43**	**112**	eP	**Pn**	**12 12 39.5**	**-2.2**
ETMB	**Extrema**	**12.89**	**18**	eP	**Pn**	**12 12 48.6**	**+0.7**
H03N1	**Juan Fernandez**	**13.60**	**213**	T	T	12 27 19.8	
	baz=37,slow=72,SNR=27						
H03N2	**Juan Fernandez**	**13.60**	**213**	T	T	12 27 17.0	
	baz=37,slow=72,SNR=29						
H03N3	**Juan Fernandez**	**13.61**	**213**	T	T	12 27 17.0	
	baz=37,slow=72,SNR=5.5						
AQDB	**Aquidauana**	**13.61**	**85**	eP	**Pn**	**12 12 59.6**	**+2.1**
SAML	**Samuel**	**14.79**	**28**	eP	**P**	**12 13 16.2**	**-0.8**
PP1B	**Ponte de Pedra**	**15.11**	**75**	eP	**Pn**	**12 13 18.1**	**+1.1**
TRCB	**Terra Rica**	**16.24**	**95**	eP	**Pn**	**12 13 31.7**	**+0.4**
PTGB	**Pitanga**	**16.82**	**102**	eP	**Pn**	**12 13 38.0**	**-0.6**
CPSB	**Cacapava Do Su**	**17.09**	**122**	eP	**Pn**	**12 13 39.8**	**-1.9**
ITAB	**Concordia**	**17.16**	**111**	eP	**Pn**	**12 13 41.1**	**-1.5**
PLTB	**Pedras Altas**	**17.57**	**126**	eP	**Pn**	**12 13 44.7**	**-3.0**
PCMB	**Pacaembu**	**17.58**	**92**	eP	**Pn**	**12 13 47.4**	**-0.4**
PLCA	**Paso Flores**	**18.48**	**181**	P	**Pn**	**12 13 59.6**	**+0.9**
	comp=Z,0.1nm,0.3s,baz=359,slow=6.4,SNR=3.7						
PLCA	**Paso Flores**	**18.48**	**181**	IAmb	IAmb	12 14 03.3	
	comp=Z,14nm,1.4s						
ARAG	**Araguaiana, MT**	**18.54**	**73**	eP	**P**	**12 13 58.8**	**+0.4**
ITRB	**Iturama**	**18.69**	**86**	eP	**P**	**12 13 59.9**	**-0.3**
CNLB	**Canela**	**18.79**	**116**	eP	**P**	**12 13 58.7**	**-2.6**
FRTB	**Fartura**	**19.06**	**97**	eP	**P**	**12 14 02.1**	**-2.1**
SNDB	**Serra Nova Dou**	**20.70**	**64**	eP	**P**	**12 14 22.4**	**+0.4**
NPGB	**Novo Progresso**	**20.77**	**46**	eP	**P**	**12 14 22.2**	**-0.7**
MACA	**Manacapuru-AM**	**21.05**	**27**	eP	**P**	**12 14 25.6**	**-0.2**
IPMB	**Ipameri, GO**	**21.06**	**82**	eP	**P**	**12 14 24.9**	**-1.0**
VAO	**Valinhos**	**21.46**	**97**	eP	**P**	**12 14 27.8**	**-2.4**
BDFB	**Brasilia**	**21.95**	**77**	P	**P**	**12 14 34.2**	**-1.4**
	comp=Z,4.9nm,0.6s,baz=254,slow=12,SNR=6.3						
BDFB				LR	LR	12 24 07.4	
	comp=Z,92nm,21.2s,baz=311,slow=40						
BDFB	**Brasilia**	**21.95**	**77**	IAmb	IAmb	12 15 01.0	
	comp=Z,17nm,1.5s						
ITTB	**Itaituba**	**22.59**	**40**	eP	**P**	**12 14 41.4**	**-0.9**
PEXB	**Peixe**	**23.17**	**68**	eP	**P**	**12 14 46.5**	**-1.6**
PTGA	**Pitinga**	**23.54**	**26**	P	**P**	**12 14 50.7**	**-0.8**
	comp=Z,5.3nm,0.4s,baz=205,slow=14,SNR=16						
PTGA	**Pitinga**	**23.54**	**26**	P	**P**	**12 14 50.4**	**-1.1**
PTGA				IAmb	IAmb	12 14 52.6	
	comp=Z,16nm,1.2s						
PTGA	**Pitinga**	**23.54**	**26**	eP	**P**	**12 14 50.9**	**-0.7**
BSCB	**Bom Sucesso**	**23.66**	**92**	eP	**P**	**12 14 51.6**	**-1.1**
SMTB	**Santa Maria do**	**25.44**	**62**	eP	**P**	**12 15 08.2**	**-0.7**
MALB	**Monte Alegre**	**25.47**	**40**	eP	**P**	**12 15 08.8**	**-0.3**
JANB	**Januaria**	**25.51**	**78**	eP	**P**	**12 15 08.7**	**-0.8**
SDBA	**SAO DESIDERIO**	**25.99**	**72**	eP	**P**	**12 15 13.1**	**-0.8**
MCPB	**Macapa, AP**	**27.98**	**42**	eP	**P**	**12 15 30.5**	**-1.1**
GDU01	**Guandu, BA**	**30.27**	**79**	eP	**P**	**12 15 51.0**	**-1.0**
H06E1	**SOCORRO T-PHAS**	**56.97**	**312**	T	T	13 21 20.0	
	SNR=5.3						
TXAR	**Lajitas Array**	**60.53**	**326**	P	**P**	**12 19 52.4**	**+1.9**
	comp=Z,0.3nm,0.6s,baz=116,slow=3.3,SNR=1.8						
SNAA	**Sanae**	**62.02**	**161**	P	**P**	**12 20 00.8**	**+0.9**
	comp=Z,3.1nm,0.7s,baz=1.7,slow=18,SNR=7.9						
DBIC	**Dimbokro**	**70.07**	**74**	P	**P**	**12 20 51.9**	**-0.5**
	comp=Z,6.3nm,0.7s,baz=214,slow=6.1,SNR=8.6						
DBIC				LR	LR	12 51 36.4	
	comp=Z,14nm,18.4s,baz=101,slow=36						
DBIC	**Dimbokro**	**70.07**	**74**	IAmb	IAmb	12 20 53.4	
	comp=Z,7.5nm,0.8s						
PDAR	**Pinedale Array**	**74.12**	**331**	P	**P**	**12 21 17.4**	**+1.1**
	comp=Z,0.1nm,0.5s,baz=92,slow=5.6,SNR=1.9						
NVAR	**Mina Array Bea**	**75.31**	**323**	P	**P**	**12 21 25.1**	**+1.8**
	comp=Z,0.1nm,0.5s,baz=136,slow=6.9,SNR=1.9						
TORD	**Torodi Ar. Bea**	**78.71**	**71**	P	**P**	**12 21 42.4**	**-0.1**
	comp=Z,7.2nm,0.6s,baz=259,slow=5.1,SNR=38						
TORD	**Torodi Ar. Bea**	**78.71**	**71**	P	**P**	**12 21 42.2**	**-0.3**
BOSA	**Boshof**	**84.17**	**118**	P	**P**	**12 22 12.2**	**+0.8**
	comp=Z,4.7nm,0.8s,baz=262,slow=4.0,SNR=7.4						
BOSA	**Boshof**	**84.17**	**118**	IAmb	IAmb	12 22 12.8	
	comp=Z,6.1nm,0.8s						
YKA	**Yellowknife Ar**	**91.45**	**341**	P	**P**	**12 22 46.5**	**+1.2**
	comp=Z,0.7nm,0.6s,baz=134,slow=5.0,SNR=19						
H11S2	**WAKE ISLAND Hy**	**126.78**	**277**	T	T	14 48 36.7	
	baz=105,slow=75,SNR=63						
H11S1	**WAKE ISLAND Hy**	**126.79**	**277**	T	T	14 48 33.9	
	baz=105,slow=75,SNR=62						
H11S3	**WAKE ISLAND Hy**	**126.80**	**277**	T	T	14 48 38.0	
	baz=105,slow=75,SNR=52						
H11N3	**WAKE ISLAND Hy**	**126.88**	**279**	T	T	14 48 42.1	
	baz=103,slow=75,SNR=64						
H11N2	**WAKE ISLAND Hy**	**126.90**	**279**	T	T	14 48 43.2	
	baz=103,slow=75,SNR=62						
H11N1	**WAKE ISLAND Hy**	**126.90**	**279**	T	T	14 48 43.5	
	baz=103,slow=75,SNR=31						
ASAR	**Alice Springs**	**128.74**	**209**	PKP	**PKiKP**	**12 28 47.7**	**-0.3**
	comp=Z,0.3nm,0.7s,baz=143,slow=1.8,SNR=5.6						
WRA	**Warramunga Arr**	**131.75**	**212**	PKP	**PKiKP**	**12 28 54.4**	**+0.3**
	comp=Z,0.4nm,0.6s,baz=157,slow=2.0,SNR=6.1						
ZALV	**Zalesovo Beam**	**143.08**	**25**	PKP	PKPbc	12 29 11.0	+1.2
	comp=Z,1.1nm,0.6s,baz=315,slow=1.7,SNR=7.6						
MKAR	**Makanchi Array**	**146.89**	**36**	PKPbc	**PKPbc**	**12 29 20.8**	**-0.8**
	comp=Z,3.5nm,0.8s,baz=347,slow=1.2,SNR=32						
MKAR	**Makanchi Array**	**146.89**	**36**		**PKPbc**	**12 29 21.0**	**-0.7**
SONM	**Songino Array**	**154.27**	**5**	PKP	**PKPdf**	**12 29 32.3**	**+1.1**
	comp=Z,0.1nm,0.4s,baz=5.7,slow=2.9,SNR=2.7						
SONM				PKPbc	**PKPbc**	**12 29 39.4**	**-0.1**
	comp=Z,0.4nm,1.0s,baz=291,slow=0.6,SNR=3.8						

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*IDC **12** 12:13:55.9±1.2, 26°.50N×130°.17E, h0^{km}, mb3.4/4, mb1 3.6/4, mb1mx3.3/34, mbtmp3.4/4, Error ellipse: s-maj=32.9km s-min=22.8km az=67.0*

*JMA **12** 12:13:57.9, 26°.56N×130°.17E, h47^{km}, M3.7*

ISC 12 12:13:59.3±1.0**, 26°.56N**±0°.05×**130°.17E**±0°.04**, h37^{km}, n19, σ0^{s}95**/31**, mb3.5**/4**, Southeast of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKDJ	**Kitadaitoujima**	**1.19**	**121**	P	**Pn**	**12 14 18.6**	**-0.7**
JKDJ				S	**Sn**	**12 14 33.7**	**-0.5**
JMZ	**Minamidaito 2**	**1.20**	**128**	P	**Pn**	**12 14 18.6**	**-1.0**
JMZ				S	**Sn**	**12 14 33.3**	**-1.4**
JYRO	**Yoronjima**	**1.60**	**287**	P	**Pn**	**12 14 24.5**	**-0.6**
JYRO				S	**Sn**	**12 14 43.2**	**-1.3**
JTK	**Tokunoshima**	**1.63**	**319**	P	**Pn**	**12 14 25.2**	**-0.3**
JTK				eS	**Sn**	**12 14 44.4**	**-0.8**
JOKE	**Okinoerabujima**	**1.63**	**300**	P	**Pn**	**12 14 25.3**	**-0.2**
JOKE				eS	**Sn**	**12 14 44.3**	**-0.9**
JOW	**Kunigami**	**1.71**	**279**	Pn	**Pn**	**12 14 26.0**	**-0.6**
	92nm,0.3s,baz=106,slow=25,SNR=130						
JOW				Sn	**Sn**	**12 14 45.4**	**-1.8**
	36nm,0.3s,baz=279,slow=28,SNR=22						
JOW	**Kunigami**	**1.71**	**279**	P	**Pn**	**12 14 26.4**	**-0.2**
JOW				eS	**Sn**	**12 14 46.5**	**-0.8**
JZK	**Kikaishima**	**1.75**	**354**	eS	**Sn**	**12 14 48.1**	**-0.1**
JAMN	**Amaminishikomi**	**1.89**	**332**	P	**Pn**	**12 14 28.4**	**-0.6**
JAMN				S	**Sn**	**12 14 50.1**	**-1.5**
JAM	**Amami Oshima**	**1.91**	**345**	P	**Pn**	**12 14 28.8**	**-0.5**
JAM				S	**Sn**	**12 14 50.4**	**-1.6**
JNTH	**Nagotoyohara**	**1.92**	**269**	P	**Pn**	**12 14 28.9**	**-0.6**
JNTH				S	**Sn**	**12 14 50.9**	**-1.5**
JIH	**Iheya**	**2.02**	**284**	P	**Pn**	**12 14 30.8**	**0.0**
JIH				S	**Sn**	**12 14 54.6**	**-0.2**
JJT3	**Tamagusuku3**	**2.18**	**259**	P	**Pn**	**12 14 33.1**	**+0.1**
JJT3				S	**Sn**	**12 14 58.5**	**-0.2**
JAGN	**Aguni-jima**	**2.62**	**271**	P	**Pn**	**12 14 39.0**	**-0.1**
JAGN				eS	**Sn**	**12 15 08.7**	**-0.9**
JKE	**Kume jima 2**	**3.04**	**266**	P	**Pn**	**12 14 44.0**	**-0.8**
JKE				S	**Sn**	**12 15 19.1**	**-0.9**
MKAR	**Makanchi Array**	**42.61**	**311**	P	P	12 21 55.8	+3.9
	0.3nm,0.6s,baz=98,slow=8.8,SNR=3.5						
WRA	**Warramunga Arr**	**46.41**	**175**	P	**P**	**12 22 23.1**	**+0.8**
	0.5nm,0.7s,baz=354,slow=8.6,SNR=8.0						
ASAR	**Alice Springs**	**50.07**	**176**	P	P	12 22 53.4	+2.8
	0.3nm,0.6s,baz=6.5,slow=14,SNR=6.4						
YKA	**Yellowknife Ar**	**77.48**	**25**	P	**P**	**12 25 52.3**	**+1.6**
	0.3nm,0.7s,baz=310,slow=5.1,SNR=5.8						

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*SOME **12** 12:37:29.9, 40°.97N×69°.78E, h5^{km}*

*NNC **12** 12:37:29.2±3.4, 40°.82N×69°.79E, h0^{km}, mb3.3, mpv3.3, Error ellipse: s-maj=24.9km s-min=15.3km az=47.0*

*KRNET **12** 12:37:29.3±0.1, 41°.13N×69°.66E, mb2.6*

ISC 12 12:37:31.5±1.7**, 40°.97N**±0°.05×**69°.44E**±0°.08**, h32^{km}**±14^{km}**, n22, σ1^{s}52**/39**, 23C-6D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IUG	**Iuzhnay**	**1.25**	**20**	eP	**Pn**	**12 37 52.5**	**-0.4**
	76nm,0.2s						
IUG				eS	**Sn**	**12 38 09.1**	**+0.3**
	48nm,0.4s						
IUG	**Iuzhnay**	**1.25**	**20**	P	**Pb**	**12 37 55.2**	**+0.5**
	76nm,0.2s						
IUG				S	**Sb**	**12 38 14.3**	**+3.7**
	48nm,0.4s						
BTK	**Batken**	**1.39**	**131**	⇑iP	**Pb**	**12 37 55.7**	**-1.3**
	baz=40						
BTK				⇑iS	**Sb**	**12 38 15.2**	**+0.8**
	baz=40						
TRKS	**Terek-Say**	**1.40**	**66**	⇑iP	**Pn**	**12 37 52.0**	**-2.9**
	baz=73						
TRKS				⇑iS	**Sn**	**12 38 08.6**	**-3.7**
	baz=73						
BRLS	**Borolday**	**2.08**	**8**	eP	**Pn**	**12 38 03.8**	**-0.4**
	16nm,0.3s						
BRLS				eS	**Sn**	**12 38 28.8**	**-0.2**
	62nm,0.3s						
BRLS	**Borolday**	**2.08**	**8**	Pg	**Pn**	**12 38 03.8**	**-0.4**
	16nm,0.3s						
BRLS				Lg	Lg	12 38 29.4	
	62nm,0.3s						
KK31	**Karatay Array**	**2.27**	**20**	⇓Pg	**Pb**	**12 38 11.0**	**-1.0**
	2.1nm,0.3s,baz=201,slow=14,SNR=77						
KK31				Lg	Lg	12 38 41.3	
	7.0nm,0.5s,baz=202,slow=29,SNR=15						
DRK	**Karamyk**	**2.34**	**129**	⇑iP	**Pb**	**12 38 11.0**	**-2.2**
	baz=34						
DRK				⇑iS	**Sb**	**12 38 41.6**	**-0.2**
	baz=34						
OHH	**Osh**	**2.58**	**99**	⇑iP	**Pn**	**12 38 12.5**	**+1.4**
	baz=3.0						
OHH				⇑iS	**Sn**	**12 38 44.0**	**+2.6**
	baz=3.0						
ARSB	**Arslanbob**	**2.69**	**81**	⇑iP	**Pn**	**12 38 13.6**	**+0.8**
	baz=85						
ARSB				⇑iS	**Sn**	**12 38 46.0**	**+1.6**
	baz=85						
MNAS	**Manas**	**2.75**	**56**	⇑eP	**Pn**	**12 38 13.8**	**+0.3**
	baz=57						
MNAS				⇑iS	**Sn**	**12 38 46.2**	**+0.6**
	baz=57						
SFK	**Sufi-Kurgan**	**3.24**	**106**	⇑iP	**Pn**	**12 38 22.2**	**+1.9**
	baz=10.0						
SFK				⇑iS	**Sn**	**12 39 00.6**	**+2.7**
	baz=10.0						
MRKS	**Merke**	**3.33**	**57**	eP	**Pb**	**12 38 28.3**	**-1.8**
	2.7nm,0.5s						
MRKS				eS	**Sb**	**12 39 10.8**	**+0.6**
	6.7nm,0.4s						
MRKS	**Merke**	**3.33**	**57**	Pg	**Pb**	**12 38 28.3**	**-1.8**
	2.7nm,0.5s						
MRKS				Lg	Lg	12 39 10.8	
	6.7nm,0.4s						
AML	**Almayashu**	**3.39**	**69**	⇑iP	**Pn**	**12 38 23.2**	**+0.6**
	baz=70						
AML				⇑iS	**Sn**	**12 39 02.4**	**+0.5**
	baz=70						
EKS2	**Erkin-Say**	**3.65**	**61**	⇑iP	**Pn**	**12 38 26.4**	**+0.5**
	baz=62						
EKS2				⇑iS	**Sn**	**12 39 07.9**	**0.0**
	baz=62						
ARLS	**Aral**	**3.77**	**75**	⇑iP	**Pn**	**12 38 28.5**	**+0.9**
	baz=77						
ARLS				⇑iS	**Sn**	**12 39 11.8**	**+0.8**
	baz=77						
UCH	**Uchtor**	**4.00**	**70**	⇑iP	**Pn**	**12 38 31.8**	**+0.8**
	baz=72						
UCH				⇑iS	**Sn**	**12 39 17.2**	**+0.1**
	baz=72						
AAK	**Ala-Archa**	**4.12**	**65**	⇓iP	**Pn**	**12 38 33.0**	**+0.5**
	baz=66						
AAK				⇓iS	**Sn**	**12 39 19.5**	**-0.2**
	baz=66						
AAK	**Ala-Archa**	**4.12**	**65**	Pg	**Pb**	**12 38 42.4**	**-1.2**
	1.5nm,0.5s						
AAK				Lg	Lg	12 39 32.5	
	1.9nm,0.6s						
USP	**Ospenovka**	**4.40**	**57**	⇓iP	**Pn**	**12 38 36.5**	**+0.3**
	baz=58						
USP				⇓iS	**Sn**	**12 39 25.8**	**-0.6**
	baz=58						
TKM2	**Tokmak 2**	**4.98**	**65**	⇑Pg	**Pb**	**12 38 57.1**	**-1.1**
	0.7nm,0.5s						
TKM2				⇓Lg	Lg	12 39 59.7	
	3.6nm,0.8s						

IDC 12 12:39:40.2±2.4**, 4°.76N**×**127°.47E, h0^{km}, mb3.4**/3**, mb1 3.6**/3**, mb1mx3.3**/34**, mbtmp3.4**/3**, Error ellipse: s-maj=179.9km s-min=26.7km az=66.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**25.46**	**165**	P	P	12 45 11.1	+1.0
	0.5nm,0.6s,baz=345,slow=10.0,SNR=8.1						
ASAR	**Alice Springs**	**28.95**	**168**	P	P	12 45 40.4	-1.1
	0.3nm,0.7s,baz=350,slow=6.9,SNR=6.6						
MKAR	**Makanchi Array**	**57.14**	**325**	P	P	12 49 28.7	-0.1
	0.3nm,0.6s,baz=117,slow=6.3,SNR=5.7						

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*IDC **12** 13:25:55.3±2.0, 5°.18S×151°.42E, h0^{km}, mb3.7/5, mb1 3.9/6, mb1mx3.7/28, mbtmp3.7/6, ML1.6/1, Error ellipse: s-maj=75.1km s-min=23.9km az=121.0*

ISC 12 13:25:59.9±2.0**, 5°.4S**±0°.3×**151°.5E**±0°.4**, h35^{km}, n6, σ1^{s}31**/7**, mb3.5**/5**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.91**	**227**	Pn	**Pn**	**13 27 23.1**	**-1.9**
	1.0nm,0.3s,baz=136,slow=8.9,SNR=2.3						
PMG				Sn	**Sn**	**13 28 32.3**	**+0.8**
	0.4nm,0.3s,baz=273,slow=11,SNR=1.9						
WRA	**Warramunga Arr**	**22.13**	**228**	P	**P**	**13 30 52.9**	**+0.2**
	1.2nm,0.6s,baz=51,slow=10,SNR=9.9						
ASAR	**Alice Springs**	**24.89**	**221**	P	**P**	**13 31 20.8**	**+1.1**
	2.7nm,0.7s,baz=57,slow=9.1,SNR=50						
FITZ	**Fitzroy Crossi**	**28.27**	**241**	P	**P**	**13 31 51.3**	**+1.1**
	0.7nm,0.3s,baz=55,slow=7.5,SNR=6.8						
SONM	**Songino Array**	**66.12**	**329**	P	**P**	**13 36 43.5**	**-0.3**
	0.2nm,0.6s,baz=134,slow=6.2,SNR=1.7						
ILAR	**Eielson Array**	**83.15**	**22**	P	**P**	**13 38 22.0**	**0.0**
	0.2nm,0.6s,baz=239,slow=5.2,SNR=4.3						

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*ATH **12** 13:30:12.9, 35°.78N×25°.48E, h42^{km}±4^{km}, ML3.7/7, Error ellipse: s-maj=4.5km s-min=0.8km az=169.0*

*ISK **12** 13:30:13.5, 35°.78N×25°.53E, h11^{km}, ML3.8/12*

*THE **12** 13:30:13.8, 35°.77N×25°.51E, h10^{km}±1^{km}, ML3.7/7, Error ellipse: s-maj=1.4km s-min=0.4km az=100.0*

*IDC **12** 13:30:17.6±2.4, 35°.68N×25°.60E, h48^{km}±24^{km}, mb3.7/10, mb1 3.8/15, mb1mx3.6/52, mbtmp3.9/15, ML3.9/5, Error ellipse: s-maj=22.8km s-min=17.3km az=4.0*

*DDA **12** 13:30:18.0, 35°.68N×25°.61E, h78^{km}±93^{km}, MW4.0*

ISC 12 13:30:12.4±1.1**, 35°.80N**±0°.02×**25°.54E**±0°.02**, h7^{km}**±8^{km}**, n119, σ1^{s}40**/149**, mb4.0**/10**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NPS	**Neapolis**	**0.54**	**174**	P	**Pb**	**13 30 24.2**	**0.0**
NPS				S	**Sb**	**13 30 32.5**	**+0.4**
NPS				AML	AML	13 30 33.4	
	comp=N,22829µm,0.4s						
NPS				AML	AML	13 30 33.5	
	comp=E,27679µm,0.7s						
NPS	**Neapolis**	**0.54**	**174**	P	**Pb**	**13 30 24.1**	**0.0**
NPS				S	**Sb**	**13 30 32.4**	**+0.4**
	comp=E,12µm,0.6s						
THR6	**Thira Island,**	**0.57**	**348**	P	**Pb**	**13 30 24.6**	**-0.1**
SANT	**Santorini**	**0.58**	**353**	PG	**Pb**	**13 30 25.4**	**+0.6**
SANT				SG	**Sb**	**13 30 34.3**	**+1.0**
HRKL	**Herakleio**	**0.60**	**217**	P	**Pb**	**13 30 25.2**	**0.0**
HRKL	**Herakleio**	**0.60**	**217**	PG	**Pb**	**13 30 25.1**	**-0.1**
THR8	**Santorini-Mono**	**0.61**	**355**	P	**Pb**	**13 30 25.3**	**-0.1**
SNT5	**Nea Kammeni, S**	**0.62**	**349**	P	**Pb**	**13 30 25.2**	**-0.3**
SNT5	**Nea Kammeni, S**	**0.62**	**349**	P	**Pb**	**13 30 25.6**	**+0.1**
SNT5				S	**Sn**	**13 30 36.5**	**-1.2**
IACM	**Heraklion**	**0.62**	**218**	P	**Pb**	**13 30 25.1**	**-0.4**
IACM	**Heraklion**	**0.62**	**218**	P	**Pb**	**13 30 25.4**	**-0.1**
THR3	**Thira Island,**	**0.62**	**350**	P	**Pb**	**13 30 25.6**	**0.0**
KSTL	**Kastelli Herak**	**0.62**	**218**	P	**Pb**	**13 30 25.2**	**-0.4**
KSTL				S	**Sg**	**13 30 33.1**	**+0.6**
SNT1	**Gialos, Santor**	**0.62**	**352**	P	**Pb**	**13 30 25.9**	**+0.3**
SNT1	**Gialos, Santor**	**0.62**	**352**	P	**Pb**	**13 30 25.9**	**+0.3**
SNT1				S	**Sb**	**13 30 35.5**	**+0.9**
SFIR	**Foira Santorin**	**0.63**	**352**	P	**Pb**	**13 30 26.3**	**+0.6**
SFIR				S	**Sb**	**13 30 36.1**	**+1.3**
THR7	**Fira-Santorini**	**0.63**	**352**	P	**Pb**	**13 30 26.1**	**+0.3**
LAST	**Lasithi**	**0.64**	**185**	P	**Pb**	**13 30 25.7**	**-0.1**
LAST				S	**Sb**	**13 30 34.7**	**-0.2**
LAST				AML	AML	13 30 35.5	
	comp=E,10804µm,0.5s						

LAST				AML	AML	13 30 36.6	
	comp=N,15039µm,0.6s						
LAST	**Lasithi**	**0.64**	**185**	P	**Pb**	**13 30 25.7**	**-0.1**
LAST				S	**Sb**	**13 30 34.8**	**-0.2**
	comp=N,6µm,0.5s						
THR5	**Thira Island,**	**0.64**	**346**	P	**Pb**	**13 30 26.0**	**+0.1**
THT2	**Imerovigli**	**0.64**	**351**	P	**Pb**	**13 30 26.5**	**+0.5**
THT2				S	**Sn**	**13 30 36.9**	**-1.5**
	comp=N,11µm,0.3s						
THT2	**Imerovigli**	**0.64**	**351**	PG	**Pb**	**13 30 26.7**	**+0.7**
THT2				SG	**Sb**	**13 30 36.5**	**+1.3**
THR2	**Thira island,**	**0.65**	**353**	P	**Pb**	**13 30 26.2**	**+0.1**
SAP3	**Santorini-Thir**	**0.66**	**346**	P	**Pb**	**13 30 26.3**	**+0.1**
SAP3				S	**Sb**	**13 30 37.0**	**+1.4**
SAP3	**Santorini-Thir**	**0.66**	**346**	P	**Pb**	**13 30 26.3**	**+0.1**
SAP3				S	**Sb**	**13 30 36.9**	**+1.4**
SAP4	**Santorini-Oia**	**0.69**	**349**	P	**Pn**	**13 30 27.5**	**-1.0**
IDI	**Anoyia**	**0.73**	**226**	P	**Pg**	**13 30 26.9**	**+0.3**
IDI				S	**Sg**	**13 30 36.6**	**+0.6**
IDI				AML	AML	13 30 40.3	
	comp=N,8861µm,0.4s						
IDI				AML	AML	13 30 40.5	
	comp=E,6512µm,0.4s						
IDI	**Anoyia**	**0.73**	**226**	P	**Pg**	**13 30 26.8**	**+0.3**
IDI				S	**Sb**	**13 30 37.2**	**-0.6**
	comp=E,4µm,0.4s						
STIA	**Sitia Lasithi**	**0.74**	**143**	P	**Pb**	**13 30 27.9**	**+0.3**
STIA				S	**Sb**	**13 30 38.0**	**0.0**
FRMA	**Ierapetra Chan**	**0.80**	**169**	P	**Pn**	**13 30 30.0**	**0.0**
FRMA				S	**Sb**	**13 30 40.7**	**+1.2**
	comp=E,4µm,0.5s						
ZKR	**Zakros**	**0.88**	**141**	P	**Pn**	**13 30 31.1**	**0.0**
ZKR				S	**Sb**	**13 30 42.6**	**+0.7**
ZKR				AML	AML	13 30 45.4	
	comp=E,13068µm,0.5s						
ZKR				AML	AML	13 30 45.5	
	comp=N,5693µm,0.6s						
ZKR	**Zakros**	**0.88**	**141**	P	**Pn**	**13 30 31.0**	**-0.2**
ZKR				S	**Sb**	**13 30 42.5**	**+0.7**
	comp=N,5µm,0.5s						
ZKR	**Zakros**	**0.88**	**141**	PG	**Pn**	**13 30 30.9**	**-0.2**
ZKR				SG	**Sb**	**13 30 43.2**	**+1.4**
TMBK	**Timbaki Herakl**	**0.96**	**221**	P	**Pb**	**13 30 32.0**	**+0.7**
TMBK				S	**Sb**	**13 30 44.3**	**+0.1**
SIVA	**Sivas**	**0.98**	**218**	P	**Pb**	**13 30 31.5**	**-0.1**
SIVA				AML	AML	13 30 48.1	
	comp=N,11273µm,0.6s						
SIVA				AML	AML	13 30 51.3	
	comp=E,11595µm,0.6s						
SIVA	**Sivas**	**0.98**	**218**	P	**Pb**	**13 30 31.7**	**+0.1**
SIVA				S	**Sb**	**13 30 44.8**	**0.0**
	comp=E,6µm,0.6s						
VAM	**Vamos**	**1.16**	**251**	P	**Pg**	**13 30 33.5**	**-1.1**
VAM	**Vamos**	**1.16**	**251**	P	**Pg**	**13 30 34.3**	**-0.3**
VAM				S	**Sg**	**13 30 49.5**	**-0.2**
APE	**Apeiranthos**	**1.27**	**360**	P	**Pg**	**13 30 35.9**	**-0.9**
APE				AML	AML	13 30 58.7	
	comp=E,6562µm,0.4s						
APE				AML	AML	13 30 58.7	
	comp=N,4978µm,0.2s						
APE	**Apeiranthos**	**1.27**	**360**	P	**Pb**	**13 30 36.2**	**-0.5**
APE	**Apeiranthos**	**1.27**	**360**	PN	**Pn**	**13 30 37.8**	**+1.2**
MHLO	**Agia Marina, M**	**1.28**	**314**	P	**Pg**	**13 30 36.3**	**-0.7**
MHLO				S	**Sg**	**13 30 53.1**	**-0.5**
MHLO	**Agia Marina, M**	**1.28**	**314**	P	**Pn**	**13 30 36.9**	**+0.2**
MHLO				S	**Sn**	**13 30 54.6**	**+0.5**
MHLA	**Plaka, Milos I**	**1.31**	**317**	P	**Pb**	**13 30 37.0**	**-0.3**
IMMV	**Iera Moni Meta**	**1.31**	**256**	P	**Pg**	**13 30 36.0**	**-1.6**
IMMV	**Iera Moni Meta**	**1.31**	**256**	P	**Pg**	**13 30 36.8**	**-0.8**
IMMV	**Iera Moni Meta**	**1.31**	**256**	PN	**Pb**	**13 30 38.4**	**+1.0**
KARP	**Karpathos**	**1.34**	**100**	P	**Pb**	**13 30 37.8**	**0.0**
KARP				AML	AML	13 31 00.9	
	comp=E,4093µm,0.3s						
KARP				AML	AML	13 31 03.5	
	comp=N,4528µm,0.3s						
KARP	**Karpathos**	**1.34**	**100**	P	**Pb**	**13 30 37.9**	**0.0**
KARP				S	**Sn**	**13 30 55.9**	**+0.2**
KARP	**Karpathos**	**1.34**	**100**	PN	**Pb**	**13 30 39.1**	**+1.2**
KOSK	**Kos Island**	**1.50**	**50**	P	**Pg**	**13 30 40.4**	**-0.8**
KOSK	**Kos Island**	**1.50**	**50**	PN	**Pg**	**13 30 41.7**	**+0.5**
GVDS	**Gavdos**	**1.52**	**232**	PN	**Pg**	**13 30 41.7**	**+0.2**
GVD	**Gavdhos**	**1.52**	**232**	PN	**Pg**	**13 30 41.4**	**-0.2**
BODT	**Bodrum**	**1.91**	**48**	PN	**Pb**	**13 30 46.6**	**-0.9**
BDRM	**Kayabasi**	**1.99**	**50**	*i* P	**Pb**	**13 30 47.5**	**-1.4**
KTHA	**Kythira Island**	**2.06**	**284**	P	**Pn**	**13 30 47.3**	**-0.1**
KTHA	**Kythira Island**	**2.06**	**284**	P	**Pn**	**13 30 47.6**	**+0.2**
KTHA	**Kythira Island**	**2.06**	**284**	PN	**Pn**	**13 30 48.7**	**+1.3**
KTHR	**Kythira**	**2.11**	**283**	P	**Pn**	**13 30 48.6**	**+0.5**
ARG	**Arkhangelos**	**2.14**	**78**	P	**Pb**	**13 30 50.0**	**-1.4**
ARG	**Arkhangelos**	**2.14**	**78**	PN	**Pb**	**13 30 50.1**	**-1.4**
SMG	**Samos**	**2.17**	**28**	P	**Pn**	**13 30 49.2**	**+0.2**
VLI	**Veliai**	**2.30**	**294**	P	**Pn**	**13 30 50.8**	**+0.1**
VLI	**Veliai**	**2.30**	**294**	P	**Pn**	**13 30 50.7**	**+0.1**
MRSB	**Marmaris-Mugla**	**2.33**	**66**	PN	**Pb**	**13 30 53.1**	**-1.7**
GCAM	**G?zelcaml?**	**2.34**	**35**	*i* P	**Pg**	**13 30 57.4**	**+0.2**
GCAM				IAML		13 31 35.0	
	comp=N,282nm,0.8s						
GCAM				IAML		13 31 38.0	
	comp=E,410nm,0.5s						
MLSB	**Milas**	**2.34**	**50**	PN	**Pb**	**13 30 53.2**	**-1.7**
TURN	**Turunc**	**2.39**	**65**	PN	**Pn**	**13 30 53.5**	**+1.5**
TURN	**Turunc**	**2.39**	**65**	*i* P	**Pn**	**13 30 53.4**	**+1.4**
TURN				IAML		13 31 29.0	
	comp=E,118nm,0.3s						
TURN				IAML		13 31 32.0	
	comp=N,130nm,0.3s						
DGB	**zmir**	**2.50**	**25**	*i* P	**Pb**	**13 30 56.5**	**-1.0**
YER	**Yerkesik**	**2.58**	**58**	PN	**Pb**	**13 30 57.0**	**-2.0**
DION	**Dionisos Attik**	**2.62**	**331**	P	**Pn**	**13 30 56.2**	**+1.1**
CHOS	**Chios island**	**2.62**	**9**	PN	**Pn**	**13 30 56.3**	**+1.1**
MULA	**Mugla, Merkez-**	**2.67**	**56**	*i* P	**Pb**	**13 31 00.7**	**+0.2**
MULA				IAML		13 31 47.0	
	comp=N,29nm,0.8s						
MULA				IAML		13 31 53.0	
	comp=E,80nm,0.6s						
DALY	**Dalyan (Mula)**	**2.71**	**67**	PN	**Pb**	**13 30 58.7**	**-2.5**
DALY	**Dalyan (Mula)**	**2.71**	**67**	*i* P	**Pb**	**13 30 59.4**	**-1.8**
DALY				*i* S	**Sn**	**13 31 29.1**	**-0.3**
DALY				IAML		13 31 40.0	
	comp=N,126nm,0.4s						
DALY				IAML		13 31 40.0	
	comp=E,79nm,0.4s						
BLCB	**Balcova**	**2.85**	**24**	PN	**Pn**	**13 31 00.5**	**+2.3**
AYDB	**Zeytinkoy-Aydi**	**2.86**	**41**	PN	**Pb**	**13 31 01.1**	**-2.6**
FETY	**Fethiye**	**2.98**	**73**	PN	**Pn**	**13 31 01.8**	**+1.7**
TAVA	**DENIZLI_Tavas**	**3.18**	**57**	*i* P	**Pb**	**13 31 06.3**	**-3.0**
TAVA				*i* S	**Sb**	**13 31 47.7**	**-0.6**
TAVA				IAML		13 31 58.0	
	comp=N,34nm,0.5s						
TAVA				IAML		13 32 00.0	
	comp=E,33nm,0.8s						
ITM	**Ithomi**	**3.22**	**296**	PN	**Pn**	**13 31 05.8**	**+2.4**
CAEL	**Denizli, Camel**	**3.32**	**65**	*i* P	**Pb**	**13 31 08.4**	**-3.3**
CAEL				IAML		13 32 07.0	
	comp=E,203nm,0.7s						
CAEL				IAML		13 32 17.0	
	comp=N,209nm,1.1s						
AKAS	**Kas**	**3.32**	**81**	PN	**Pn**	**13 31 06.4**	**+1.5**
AKAS	**Kas**	**3.32**	**81**	*i* P	**Pn**	**13 31 06.7**	**+1.7**
AKAS				IAML		13 31 50.0	
	comp=E,46nm,0.4s						
AKAS				IAML		13 31 58.0	
	comp=N,64nm,0.5s						
SIGR	**SIGRI**	**3.42**	**4**	PN	**Pn**	**13 31 06.7**	**+0.6**
GOLH	**Golhisar**	**3.54**	**65**	*i* P	**Pb**	**13 31 11.5**	**-4.0**
GOLH				*i* S	**Sn**	**13 31 52.0**	**+1.9**
GOLH				IAML		13 32 02.0	
	comp=E,59nm,0.5s						
GOLH				IAML		13 32 20.0	
	comp=N,77nm,1.1s						
MANT	**Manisa**	**3.61**	**41**	*i* P	**Pn**	**13 31 10.7**	**+1.8**
MANT				IAML		13 32 20.0	
	comp=N,25nm,1.0s						
MANT				IAML		13 32 22.0	
	comp=E,23nm,0.7s						
AKUM	**Antalya-Kumluc**	**3.93**	**81**	*i* P	**Pn**	**13 31 15.2**	**+2.2**
AKUM				IAML		13 32 06.0	
	comp=E,67nm,0.7s						
AKUM				IAML		13 32 07.0	
	comp=N,30nm,0.4s						
STEP	**BALIKESIR_Sava**	**3.97**	**25**	*i* P	**Pg**	**13 31 28.2**	**-0.3**
USAK	**Uak-Merkez**	**4.02**	**43**	*i* P	**Pn**	**13 31 16.6**	**+2.2**
KORT	**Korkueli**	**4.06**	**71**	*i* P	**Pn**	**13 31 18.4**	**+3.4**
KORT				IAML		13 32 14.0	
	comp=N,36nm,0.4s						
KORT				IAML		13 32 31.0	
	comp=E,50nm,0.9s						
KHAL	**Karahalli**	**4.07**	**50**	*i* P	**Pn**	**13 31 18.7**	**+3.6**
BRDR	**BURDUR-Merkez**	**4.10**	**61**	*i* P	**Pn**	**13 31 17.3**	**+1.8**
AGG	**Agios Georgios**	**4.11**	**323**	PN	**Pn**	**13 31 18.7**	**+3.1**
BUCA	**Burdur, Bucak-**	**4.32**	**68**	*i* P	**Pn**	**13 31 22.4**	**+3.9**
KEPZ	**Antalya-Kepez**	**5.02**	**76**	*i* P	**Pn**	**13 31 31.4**	**+3.3**
YVAC	**Isparta, Yalva**	**5.18**	**60**	*i* P	**Pn**	**13 31 33.5**	**+3.0**
DOGA	**KONYA_Doganhis**	**5.42**	**63**	*i* P	**Pn**	**13 31 36.9**	**+3.2**
DOGA				IAML		13 32 50.0	
	comp=E,8.0nm,0.6s						
DOGA				IAML		13 32 52.0	
	comp=N,7.1nm,0.5s						
KDHN	**Kadinhani**	**5.91**	**61**	*i* P	**Pn**	**13 31 43.3**	**+2.8**
ERMK	**Ermenek**	**6.02**	**80**	*i* P	**Pn**	**13 31 43.9**	**+1.9**
ERMK				IAML		13 33 00.0	
	comp=E,38nm,0.6s						
ERMK				IAML		13 33 18.0	
	comp=N,45nm,1.4s						
KKBE	**Karaman, Kazim**	**6.13**	**74**	*i* P	**Pn**	**13 31 46.1**	**+2.7**
KKBE				IAML		13 33 04.0	
	comp=E,15nm,1.3s						
KKBE				IAML		13 33 21.0	
	comp=N,17nm,2.0s						
KERG	**Konya-Eregli**	**7.09**	**74**	*i* P	**Pn**	**13 31 58.5**	**+1.8**
BRTR	**Keskin Array B**	**7.52**	**56**	P	**Pn**	**13 32 05.6**	**+3.1**
	comp=N,0.4nm,0.3s,baz=221,slow=14,SNR=8.3						
MMAI	**Mount Meron Ar**	**8.61**	**106**	P	**Pn**	**13 32 18.0**	**+0.5**
	comp=N,3.1nm,0.3s,baz=306,slow=11,SNR=9.2						
MMAI				S	**Sn**	**13 33 52.4**	**-2.4**
	comp=N,6.7nm,0.3s,baz=316,slow=26,SNR=5.7						
EIL	**Elat**	**10.00**	**125**	P	**Pn**	**13 32 35.8**	**-0.7**
	comp=N,0.5nm,0.3s,baz=339,slow=2.9,SNR=6.5						
EIL				S	Sn	13 34 20.4	-8.7
	comp=N,1.7nm,0.3s,baz=357,slow=11,SNR=6.9						
AKASG	**Malin Array Be**	**15.13**	**9**	P	**P**	**13 33 50.9**	**-0.8**
	comp=N,2.2nm,0.3s,baz=199,slow=11,SNR=9.0						
KBZ	**Khabaz**	**15.50**	**54**	P	**P**	**13 33 56.2**	**+0.4**
	comp=N,0.2nm,0.3s,baz=249,slow=5.4,SNR=10.0						
GERES	**GERESS Array B**	**15.68**	**330**	P	**P**	**13 33 57.9**	**-0.1**
	comp=N,0.1nm,0.3s,baz=146,slow=12,SNR=9.7						
GEYT	**Alibeck**	**26.08**	**76**	P	**P**	**13 35 47.8**	**+1.2**
	comp=N,5.4nm,0.5s,baz=274,slow=8.2,SNR=11						
EKA	**Eskdalemuir Ar**	**27.70**	**324**	P	**P**	**13 36 03.4**	**+2.4**
	comp=N,1.4nm,0.6s,baz=119,slow=8.7,SNR=5.2						
TORD	**Torodi Ar. Bea**	**31.14**	**230**	P	**P**	**13 36 31.8**	**0.0**
	comp=N,1.7nm,0.6s,baz=32,slow=8.3,SNR=11						
MKAR	**Makanchi Array**	**43.17**	**57**	P	**P**	**13 38 13.9**	**+0.3**
	comp=N,1.8nm,0.3s,baz=265,slow=8.5,SNR=48						
ZALV	**Zalesovo Beam**	**44.34**	**47**	P	**P**	**13 38 22.0**	**-0.9**
	comp=N,1.4nm,0.4s,baz=269,slow=8.9,SNR=8.0						
SONM	**Songino Array**	**58.84**	**51**	P	**P**	**13 40 11.2**	**-0.5**
	comp=N,0.3nm,0.5s,baz=272,slow=6.9,SNR=3.5						
CMAR	**Chiang Mai Arr**	**66.19**	**84**	P	**P**	**13 41 01.9**	**+0.9**
	comp=N,0.6nm,0.3s,baz=295,slow=8.7,SNR=4.7						
YKA	**Yellowknife Ar**	**76.94**	**342**	P	**P**	**13 42 03.5**	**-1.6**
	comp=N,0.2nm,0.4s,baz=38,slow=5.9,SNR=5.4						
ILAR	**Eielson Array**	**79.59**	**357**	P	**P**	**13 42 19.1**	**-0.7**
	comp=N,0.1nm,0.6s,baz=86,slow=12,SNR=2.2						
PDAR	**Pinedale Array**	**91.72**	**329**	P	**P**	**13 43 20.7**	**-0.3**
	comp=N,0.2nm,0.7s,baz=69,slow=4.9,SNR=2.4						

DJA ***12*** *13:38:45.2±0.4, 9°S±9°×11°5E±°, h148^{km}±4^{km}, M3.7/10, mb4.1/4, mB5.3/1, MLv3.5/10, Mw(mB)4.7/1*

IDC ***12*** *13:38:47.5±10.0, 8.°10S×115.°07E, h167^{km}±105^{km}, mb2.7/3, mb1 3.0/4, mb1mx2.9/35, mbtmp3.4/4, Error ellipse: s-maj=141.0km s-min=32.4km az=49.0*

ISC 12 13:38:45.0±0.9**, 8.°7S**±0.°1×**114.°70E**±0.°08**, h150**^{km}**, n12, σ1.^{s}39**/15**, mb3.1**/3**, Bali region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DNP	**Denpasar**	**0.51**	**90**	P	**Pn**	**13 39 08.1**	**+1.7**
JAGI	**Jajag, Banyuwa**	**0.57**	**291**	P	**Pn**	**13 39 07.7**	**+1.0**
JAGI				S	**Sn**	**13 39 23.2**	**-0.1**
SRBI	**Singaraja**	**0.78**	**41**	P	**Pn**	**13 39 09.1**	**+1.0**
SRBI				S	**Sn**	**13 39 26.1**	**+0.5**
TWSI	**Taliwang, Sumb**	**2.16**	**92**	P	**Pn**	**13 39 22.9**	**+0.9**
PLAI	**Plampang**	**3.05**	**93**	P	**Pn**	**13 39 34.0**	**+1.0**
UGM	**Wanagama**	**4.20**	**280**	P	**Pn**	**13 39 47.7**	**-0.2**
CISI	**Cisompet, Garu**	**6.90**	**279**	P	**Pn**	**13 40 24.1**	**+0.3**
	0.3nm4µm33nm,1.4s						
EDFI	**Ende, Flores**	**6.92**	**91**	P	**Pn**	**13 40 22.7**	**-1.4**
	0.0nm2.7nm,1.5s						
FITZ	**Fitzroy Crossi**	**14.17**	**132**	P	**P**	**13 42 02.0**	**0.0**
	0.3nm,0.3s,baz=315,slow=7.9,SNR=21						
FITZ				S	**Sn**	**13 44 34.0**	**-2.3**
	0.1nm,0.3s,baz=181,slow=22,SNR=6.2						
WRA	**Warramunga Arr**	**22.05**	**123**	P	**P**	**13 43 29.1**	**+1.1**
	0.3nm,0.6s,baz=300,slow=12,SNR=8.2						
ASAR	**Alice Springs**	**23.67**	**131**	P	**P**	**13 43 45.2**	**+2.2**
	0.4nm,0.6s,baz=307,slow=9.1,SNR=11						
MKAR	**Makanchi Array**	**62.31**	**335**	P	**P**	**13 48 49.5**	**-1.8**
	0.1nm,0.4s,baz=142,slow=8.4,SNR=4.6						

IDC ***12*** *13:40:32.4±0.5, 12.°45S×166.°87E, h211^{km}±4^{km}, mb4.3/24, mb1 4.4/28, mb1mx4.4/35, mbtmp4.8/28, Error ellipse: s-maj=8.7km s-min=7.8km az=135.0*

GCMT ***12*** *13:40:32.3±0.4, 12.°27S±0.°03×166.°79E±0.°03, h213^{km}±4^{km}, MW4.9/73, Moment Tensor Solution. s21,c22; s73,c88; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.03±.15; M$_{θθ}$0.38±.16; M$_{φφ}$-2.41±.16; M$_{rθ}$1.03±.13; M$_{θφ}$-0.45±.16; M$_{φr}$-1.77±.13; Best double couple: M$_{0}$3.07100×10^{16} NP1:φ$_{s}$33.00000°, δ32.00000°, λ134.00000°. NP2: φ$_{s}$164.00000°, δ67.00000°, λ67.00000°. Principal axes: T 3.1100, Plg61.0000°, Azm39.0000°; N -0.0800, Plg22.0000°, Azm174.0000°; P -3.0320, Plg19.0000°, Azm272.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***12*** *13:40:32.3±1.4, 12.°37S±0.°02×167.°0E±0.°1, h209^{km}±7^{km}, mb4.9/108 Error ellipse: s-maj=15.1km s-min=3.3km az=84.0*

BJI ***12*** *13:40:33.3±0.0, 11.°80S×166.°80E, h207^{km}, mB4.9/38, mb4.8/56*

NOU ***12*** *13:40:35.1, 12.°39S×166.°88E, h222^{km}, mb4.7, Santa Cruz Islands*

ISC 12 13:40:32.5±0.4**, 12.°46S**±0.°05×**166.°94E**±0.°05**, h216**^{km}±3^{km}**, h216**^{km}**:pP-P, n360, σ1.^{s}15**/368**, mb4.9**/97**, 1C-6D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**2.98**	**175**	Pn	**Pn**	**13 41 23.8**	**+1.1**
SANVU	**Saraoutou**	**2.98**	**175**	P	**Pn**	**13 41 25.2**	**+2.5**
HNR	**Honiara**	**7.50**	**293**	P	**Pn**	**13 42 18.4**	**-0.9**
	5.9nm,0.3s,baz=290,slow=2.3,SNR=8.7						
HNR				S	**S**	**13 43 45.0**	**+0.4**
	baz=241,slow=7.4,SNR=1.0						
HNR	**Honiara**	**7.50**	**293**		**Pn**	**13 42 18.1**	**-1.3**
HNR	**Honiara**	**7.50**	**293**	P	**Pn**	**13 42 21.1**	**+1.8**
DZM	**Mont Dzumac**	**9.57**	**183**	P	**Pn**	**13 42 47.7**	**+1.7**
	1.9nm,0.3s,baz=156,slow=23,SNR=25						
DZM				S	**S**	**13 44 35.0**	**+1.4**
	2.0nm,0.3s,baz=32,slow=22,SNR=1.9						
DZM	**Mont Dzumac**	**9.57**	**183**	*e*Pn	**P**	**13 42 51.5**	**-2.5**
	7.7nm,0.2s						
DZM				*e*Sn	**S**	**13 44 33.4**	**-0.1**
	4.9nm,0.3s						
DZM				*e*LR	LR	13 45 04.6	
	comp=Z,205nm,24.2s						
MSVF	**Nonsavu**	**11.93**	**117**	P	**P**	**13 43 19.0**	**-1.5**
	0.3nm,0.3s,baz=283,slow=10,SNR=5.3						
MSVF	**Nonsavu**	**11.93**	**117**		**P**	**13 43 20.4**	**-0.1**
MSVF	**Nonsavu**	**11.93**	**117**	P	**P**	**13 43 20.9**	**+0.4**
FUNA	**Funafuti**	**12.67**	**73**	P	**Pn**	**13 43 26.2**	**+0.8**
RABL	**Rabaul**	**16.77**	**298**	P	**P**	**13 44 14.1**	**+0.1**
RABL	**Rabaul**	**16.77**	**298**	P	**Pn**	**13 44 16.2**	**+0.8**
PMG	**Port Moresby**	**19.66**	**277**	P	**P**	**13 44 46.4**	**+1.1**
	3.3nm,0.3s,baz=75,slow=16,SNR=15						
PMG	**Port Moresby**	**19.66**	**277**	P	**P**	**13 44 46.2**	**+0.9**
PMG				IAmb	IAmb	13 44 47.9	
	comp=Z,64nm,0.9s						
PMG	**Port Moresby**	**19.66**	**277**	P	**P**	**13 44 47.3**	**+2.0**
EIDS	**Eidsvold**	**19.72**	**227**	P	**Pn**	**13 44 48.2**	**-1.9**
AFI	**Afiamalu**	**20.77**	**96**	P	**P**	**13 44 56.7**	**-0.5**
AFI				IAmb	IAmb	13 44 58.3	
	comp=Z,38nm,1.0s						
AFI	**Afiamalu**	**20.77**	**96**	P	Pn	13 45 00.7	-2.5
	comp=Z,44nm,1.1s						
CTAO	**Charters Tower**	**21.24**	**246**	P	**P**	**13 45 02.8**	**+0.7**
ARMA	**Armidale**	**22.81**	**216**	P	**P**	**13 45 18.7**	**+1.8**
COEN	**Coen**	**23.19**	**264**	P	**P**	**13 45 21.7**	**+1.4**
COEN				IAmb	IAmb	13 45 22.8	
	comp=Z,49nm,1.0s						
OMRZ	**Omania**	**26.89**	**163**	P	**P**	**13 45 58.3**	**+4.8**
HAZ	**Te Kaha**	**26.99**	**161**	P	**P**	**13 45 56.6**	**+2.3**
PKGZ	**Pakihiroa**	**27.20**	**160**	P	**P**	**13 45 57.9**	**+1.6**
URZ	**Urewera**	**27.24**	**162**	P	**P**	**13 45 57.3**	**+0.7**
	comp=Z,7.5nm,0.6s,baz=275,slow=20,SNR=12						
URZ	**Urewera**	**27.24**	**162**	P	**P**	**13 45 57.8**	**+1.2**
PRRZ	**Plateau Road**	**27.26**	**164**	P	**P**	**13 46 00.7**	**+3.9**
MUGZ	**Murupara**	**27.35**	**163**	P	**P**	**13 45 58.8**	**+1.2**
TWGZ	**Tauwhareparae**	**27.43**	**161**	P	**P**	**13 45 58.8**	**+0.4**
HATZ	**Hinemaiaia**	**27.55**	**164**	P	**P**	**13 46 02.6**	**+3.3**
MRHZ	**Matea Rd**	**27.58**	**164**	P	**P**	**13 46 02.7**	**+3.0**
TKGZ	**Te Karaka**	**27.63**	**161**	P	**P**	**13 46 01.3**	**+1.2**
SNGZ	**Shannon Statio**	**27.79**	**162**	P	**P**	**13 46 03.2**	**+1.7**
BKZ	**Black Stump Fm**	**27.91**	**164**	P	**P**	**13 46 03.8**	**+1.1**
BFZ	**Birch Farm**	**29.27**	**165**	P	**P**	**13 46 16.0**	**+1.4**
BFZ				IAmb	IAmb	13 46 17.4	
	comp=Z,33nm,0.7s						
TUWZ	**Tuamarina**	**29.50**	**169**	P	**P**	**13 46 17.5**	**+0.9**
THZ	**Tophouse**	**29.65**	**171**	P	**P**	**13 46 19.1**	**+1.1**
THZ				IAmb	IAmb	13 46 20.2	
	comp=Z,36nm,0.8s						
MSWZ	**Moikau Station**	**29.75**	**167**	P	**P**	**13 46 19.5**	**+0.7**
BSWZ	**Blackbirch Sta**	**29.76**	**170**	P	**P**	**13 46 20.4**	**+1.5**
PLWZ	**Palliser**	**29.89**	**167**	P	**P**	**13 46 20.2**	**+0.1**
STKA	**Stephens Creek**	**30.27**	**226**	P	**P**	**13 46 24.7**	**+1.2**
	comp=Z,4.6nm,0.6s,baz=59,slow=8.2,SNR=9.8						
STKA				pP	**pP**	**13 47 06.4**	**-0.1**
	comp=Z,5.4nm,0.8s,baz=20,slow=7.0,SNR=3.6						
STKA				PcP	**PcP**	**13 49 18.6**	**-0.1**
	comp=Z,3.4nm,0.7s,baz=95,slow=1.4,SNR=4.6						
STKA	**Stephens Creek**	**30.27**	**226**	P	**P**	**13 46 24.5**	**+1.0**
KHZ	**Kahutara**	**30.39**	**170**	P	**P**	**13 46 25.5**	**+1.1**
KHZ				IAmb	IAmb	13 46 27.1	
	comp=Z,38nm,1.1s						
LTZ	**Lake Taylor**	**30.56**	**172**	P	**P**	**13 46 27.4**	**+1.5**
FOZ	**Fox Glacier**	**31.06**	**176**	P	**P**	**13 46 32.1**	**+1.9**
OXZ	**Oxford**	**31.07**	**173**	P	**P**	**13 46 31.6**	**+1.3**
RPZ	**Rata Peaks**	**31.34**	**174**	P	**P**	**13 46 33.8**	**+1.0**
	comp=Z,32nm,0.6s,baz=329,slow=2.1,SNR=31						
RPZ	**Rata Peaks**	**31.34**	**174**	P	**P**	**13 46 33.2**	**+0.5**
MQZ	**McQueen's Vall**	**31.52**	**172**	P	**P**	**13 46 35.0**	**+0.8**
LBZ	**Lake Benmore**	**31.93**	**176**	P	**P**	**13 46 39.1**	**+1.2**
LBZ				IAmb	IAmb	13 46 40.2	
	comp=Z,25nm,0.7s						
WR0	**Warramunga Arr**	**31.95**	**252**	P	**P**	**13 46 38.1**	**-0.4**
WR0				IAmb	IAmb	13 46 38.5	
	comp=Z,9.5nm,0.4s						
WB0	**Warramunga Arr**	**32.06**	**253**	P	**P**	**13 46 39.2**	**-0.2**
WB0				IAmb	IAmb	13 46 39.9	
	comp=Z,20nm,0.8s						
WRAB	**Tennant Creek**	**32.12**	**252**	P	**P**	**13 46 39.0**	**-1.0**
WRAB				IAmb	IAmb	13 46 40.0	
	comp=Z,10nm,0.5s						
WB2	**Warramunga Arr**	**32.13**	**252**	P	**P**	**13 46 39.6**	**-0.3**
WRA	**Warramunga Arr**	**32.14**	**252**	P	**P**	**13 46 39.7**	**-0.4**
	comp=Z,5.2nm,0.4s,baz=79,slow=9.0,SNR=81						
WRA				pP	**pP**	**13 47 22.1**	**-0.9**
	comp=Z,1.7nm,0.6s,baz=84,slow=8.6,SNR=2.1						
WRA				PP	**PP**	**13 47 58.9**	**+1.5**
	comp=Z,4.3nm,1.0s,baz=78,slow=10,SNR=5.4						
WRA				S	**S**	**13 51 33.5**	**-3.1**
	comp=Z,2.8nm,0.8s,baz=82,slow=14,SNR=6.1						
WRA				ScP	**ScP**	**13 52 46.8**	**-0.2**
	comp=Z,1.7nm,0.9s,baz=78,slow=3.7,SNR=5.1						
WRA	**Warramunga Arr**	**32.14**	**252**	P	**P**	**13 46 39.6**	**-0.4**
WKZ	**Wanaka**	**32.30**	**177**	P	**P**	**13 46 43.0**	**+1.8**
WKZ				IAmb	IAmb	13 46 44.6	
	comp=Z,26nm,0.7s						
AS31	**Alice Springs**	**33.24**	**246**	P	**P**	**13 46 49.5**	**-0.2**
ASAR	**Alice Springs**	**33.24**	**246**	P	**P**	**13 46 49.3**	**-0.4**
	comp=Z,8.3nm,0.3s,baz=70,slow=10,SNR=275						
ASAR				pP	**pP**	**13 47 31.2**	**-1.6**
	comp=Z,18nm,0.7s,baz=72,slow=9.5,SNR=14						
ASAR				S	**S**	**13 51 50.8**	**-3.0**
	comp=Z,2.5nm,1.0s,baz=76,slow=16,SNR=9.8						
ASAR				ScP	**ScP**	**13 52 50.6**	**-0.2**
	comp=Z,3.3nm,1.0s,baz=82,slow=3.4,SNR=10						
ASAR	**Alice Springs**	**33.24**	**246**	P	**P**	**13 46 49.1**	**-0.6**
BBOO	**Buckleboo**	**34.76**	**229**	P	**P**	**13 47 03.8**	**+1.2**
MTN	**Manton Dam**	**34.93**	**265**	P	**P**	**13 47 04.9**	**+0.8**
MTN				IAmb	IAmb	13 47 52.9	
	comp=Z,20nm,0.7s						
SIJI	**Sorong**	**37.20**	**285**	P	**P**	**13 47 23.9**	**+0.5**
	comp=Z,12nm,0.3s,baz=150,slow=22,SNR=18						
FITZ	**Fitzroy Crossi**	**40.17**	**257**	P	**P**	**13 47 48.4**	**+0.3**
	comp=Z,5.5nm,0.3s,baz=72,slow=8.2,SNR=60						
FITZ				pP	**pP**	**13 48 30.4**	**-1.7**
	comp=Z,4.7nm,0.6s,baz=114,slow=7.0,SNR=2.8						
FITZ	**Fitzroy Crossi**	**40.17**	**257**	P	**P**	**13 47 48.6**	**+0.5**
FORT	**Forrest**	**40.22**	**237**	P	**P**	**13 47 50.5**	**+2.2**
FORT				IAmb	IAmb	13 48 01.0	
	comp=Z,30nm,0.9s						
BATI	**Baumata**	**42.46**	**268**	P	**P**	**13 48 08.2**	**+1.4**
	comp=Z,20nm,0.5s,baz=162,slow=2.6,SNR=9.7						
BATI				pP	**pP**	**13 48 51.8**	**+0.8**
	comp=Z,20nm,0.6s,baz=114,slow=2.6,SNR=3.4						
BATI	**Baumata**	**42.46**	**268**	P	**P**	**13 48 07.1**	**+0.3**
	comp=Z,21nm,1.1s						
TBI	**Tubuai**	**42.72**	**111**	*e*LR	LR	14 00 25.2	
	comp=Z,252nm,33.0s						
BNSI	**Bone**	**46.96**	**276**	P	**P**	**13 48 42.1**	**-0.1**
	comp=Z,17nm,1.8s						
NWAO	**Narrogin (SRO)**	**49.67**	**237**	P	**P**	**13 49 02.6**	**-0.1**
	comp=Z,5.3nm,0.6s,baz=76,slow=5.3,SNR=7.6						
MJAR	**Matsushiro Arr**	**55.76**	**332**	P	**P**	**13 49 46.1**	**-1.0**
	comp=Z,8.9nm,0.7s,baz=172,slow=8.0,SNR=20						
MJAR	**Matsushiro Arr**	**55.76**	**332**	P	**P**	**13 49 46.4**	**-0.7**
MAJO	**Matsushiro**	**55.77**	**332**	P	**P**	**13 49 46.6**	**-0.5**
MAJO				IAmb	IAmb	13 49 47.1	
	comp=Z,16nm,0.6s						
MAT	**Matsushiro**	**55.77**	**332**	P	**P**	**13 49 46.1**	**-1.0**
ERM	**Erimo**	**58.46**	**339**	P	**P**	**13 50 06.9**	**+1.1**
ERM				IAmb	IAmb	13 50 09.2	
	comp=Z,13nm,0.7s						
JKA	**Kamikawa-asahi**	**60.51**	**340**	P	**P**	**13 50 20.6**	**+0.8**
JKA				IAmb	IAmb	13 50 21.7	
	comp=Z,25nm,0.6s						
KSRS	**Korea Array**	**61.70**	**325**	P	**P**	**13 50 28.6**	**+0.7**
	comp=Z,4.8nm,0.8s,baz=136,slow=7.1,SNR=12						
YSS	**Yuzh-Sakhalins**	**62.99**	**342**	P	**P**	**13 50 37.1**	**+0.8**
YSS				IAmb	IAmb	13 50 38.3	
	comp=Z,34nm,0.9s						
NJ2	**Nanjing**	**63.85**	**315**	⇑P	**P**	**13 50 42.8**	**+0.6**
NJ2				pmax	pmax		
	comp=Z,17nm,0.6s						
USA0B	**Ussuriysk Arra**	**64.73**	**333**	P	**P**	**13 50 49.0**	**+1.3**
USA0B				IAmb	IAmb	13 50 49.3	
	comp=Z,20nm,0.9s						
USRK	**Ussuriysk Ar.**	**64.73**	**333**	P	**P**	**13 50 48.2**	**+0.6**
	comp=Z,19nm,1.0s,baz=140,slow=6.8,SNR=14						
VNDA	**Vanda**	**65.11**	**181**	P	**P**	**13 50 50.6**	**+1.0**
	comp=Z,3.6nm,0.6s,baz=346,slow=7.4,SNR=16						
PETK	**Petropavlovsk-**	**65.79**	**354**	P	**P**	**13 50 54.7**	**+0.4**
	comp=Z,14nm,0.8s,baz=144,slow=6.6,SNR=19						
PETK				PcP	**PcP**	**13 51 23.9**	**+0.3**
	comp=Z,1.4nm,0.6s,baz=100,slow=4.5,SNR=4.2						
PETK	**Petropavlovsk-**	**65.79**	**354**	P	**P**	**13 50 55.0**	**+0.8**
MDJ	**Mudanjiang**	**66.14**	**332**	P	**P**	**13 50 55.5**	**-1.2**
MDJ				pmax	pmax		
	comp=Z,21nm,1.7s						
MDJ				pmax	pmax		
	comp=Z,68nm,4.1s						
DL2	**Dalian**	**66.31**	**323**	P	**P**	**13 50 55.4**	**-2.5**
DL2				pmax	pmax		
	comp=Z,26nm,0.6s						
CN2	**Changchun**	**67.55**	**329**	*e*P	**P**	**13 51 06.0**	**+0.4**
CN2				pmax	pmax		
	comp=Z,20nm,0.8s						
PSI	**Prapat**	**69.22**	**278**	P	**P**	**13 51 16.4**	**-0.3**
	comp=Z,12nm,0.8s,baz=180,slow=2.4,SNR=7.6						
GSI	**Gunungsitoli**	**70.17**	**276**	P	**P**	**13 51 22.9**	**+0.4**
GSI				IAmb	IAmb	13 51 23.7	
	comp=Z,22nm,0.7s						
GSI	**Gunungsitoli**	**70.17**	**276**	P	**P**	**13 51 22.8**	**+0.4**
	comp=Z,32nm,0.7s						
GYA	**Guiyang**	**70.18**	**304**	*e*P	**P**	**13 51 22.9**	**+0.6**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.7s						

BJI	Beijing	70.31	321	P	P	13 51 23.3	+0.6
BJI				ScS	ScS	14 01 03.7	-1.1
BJI				pmax	pmax		
	comp=Z,11nm,0.6s						
BJI				pmax	pmax		
	comp=Z,100nm,3.8s						
XAN	Xi'an	71.94	312	P	P	13 51 33.2	+0.6
XAN				pP	pP	13 52 20.2	-2.2
XAN				pmax	pmax		
	comp=Z,18nm,0.8s						
XAN				LR	LR		
	comp=Z,140nm,15.2s						
XAN				LR	LR		
	comp=Z,130nm,15.2s						
XAN				LR	LR		
	comp=Z,200nm,17.4s						
SUKH	Sukhothai	72.81	293	P	P	13 51 39.5	+1.4
CM04	Chiang Mai Arr	73.70	294	P	P	13 51 44.7	+1.4
CM09	Chiang Mai Arr	73.70	294	P	P	13 51 45.1	+1.8
CM01	Chiang Mai Arr	73.72	294	P	P	13 51 44.9	+1.5
CM05	Chiang Mai Arr	73.73	293	P	P	13 51 44.9	+1.4
CM02	Chiang Mai Arr	73.74	294	P	P	13 51 45.0	+1.5
CM31	Chiang Mai Arr	73.75	294	P	P	13 51 45.0	+1.4
CMAR	Chiang Mai Arr	73.75	294	P	P	13 51 44.2	+0.7
	comp=Z,9.1nm,0.9s,baz=121,slow=4.4,SNR=38						
CMAR				pP	pP	13 52 32.3	-0.3
	comp=Z,0.9nm,0.4s,baz=104,slow=31,SNR=2.2						
CM15	Chiang Mai Arr	73.77	294	P	P	13 51 45.0	+1.4
CM13	Chiang Mai Arr	73.77	294	P	P	13 51 45.0	+1.4
CMMT	Chiang Mai	73.86	294	P	P	13 51 44.2	0.0
CM32	Chiang Mai Arr	73.90	294	P	P	13 51 46.0	+1.6
CD2	Chengdu	74.39	307	⇓*i*P	P	13 51 47.8	+0.7
CD2				S	S	14 01 03.2	-0.7
CD2				pmax	pmax		
	comp=Z,20nm,0.7s						
CD2				pmax	pmax		
	comp=Z,90nm,6.6s						
LZH	Lanzhou	76.57	312	*e*P	P	13 52 01.1	+1.6
LZH				pP	pP	13 52 47.5	-2.8
LZH				pmax	pmax		
	comp=Z,30nm,1.2s						
LZH				pmax	pmax		
	comp=Z,160nm,6.0s						
QSPA	South Pole Qui	77.55	180	P	P	13 52 05.5	+1.1
QSPA				IAmb	IAmb	13 52 06.4	
	comp=Z,18nm,0.8s						
GAMB	Gambell	77.76	10	P	P	13 52 05.9	+0.7
GAMB				IAmb	IAmb	13 52 06.7	
	comp=Z,26nm,0.9s						
RSO	Redoubt South	79.46	19	P	P	13 52 14.7	-0.2
ANM	Nome	79.62	12	P	P	13 52 16.4	+1.0
TNA	Tin City	80.04	10	P	P	13 52 17.5	-0.1
	baz=205						
ULN	Ulaanbaatar	80.13	324	P	P	13 52 18.9	+0.1
CAPN	Captain Cook N	80.21	19	P	P	13 52 19.5	+0.9
	baz=221						
TTA	Tatalina	80.44	16	P	P	13 52 20.4	+0.5
O22K	Cooper Landing	80.47	20	P	P	13 52 20.0	+0.1
	baz=223						
O22K	Cooper Landing	80.47	20	P	P	13 52 20.2	+0.2
SONM	Songino Array	80.50	323	P	P	13 52 21.0	+0.4
	comp=Z,1.5nm,0.3s,baz=133,slow=5.5,SNR=20						
SONM				PKKPbc	PKKPbc	14 11 00.2	-2.6
	comp=Z,0.5nm,0.8s,baz=59,slow=3.8,SNR=4.8						
SONM	Songino Array	80.50	323	P	P	13 52 21.1	+0.5
SUA	Susitna One	80.86	19	P	P	13 52 21.9	-0.3
SUA				IAmb	IAmb	13 52 25.3	
	comp=Z,24nm,1.1s						
GTA	Gaotai	80.88	314	P	P	13 52 24.0	+1.1
GTA				pP	pP	13 53 13.3	-0.7
GTA				sP	sP	13 53 35.1	-1.9
GTA				pmax	pmax		
	comp=Z,11nm,1.1s						
GTA				pmax	pmax		
	comp=Z,110nm,5.5s						
GTA				LR	LR		
	comp=Z,170nm,18.5s						
GTA				LR	LR		
	comp=Z,290nm,18.5s						
GTA				LR	LR		
	comp=Z,230nm,18.9s						
Q23K	Middleton Isla	80.91	22	P	P	13 52 22.2	-0.1
	baz=226						
RC01	Rabbit Creek A	80.92	20	P	P	13 52 22.6	+0.2
	baz=223						
SKT	Skwentna	81.01	18	P	P	13 52 22.8	0.0
PMR	Palmer	81.48	20	IAmb	IAmb	13 52 27.7	
	comp=Z,19nm,0.7s						
PPLA	Purkeypile	81.51	18	P	P	13 52 25.7	+0.1
KNK	Knik Glacier	81.58	20	IAmb	IAmb	13 52 26.6	
	comp=Z,21nm,0.6s						
GHO	Glory Hole Cre	81.68	20	IAmb	IAmb	13 52 28.1	
	comp=Z,19nm,0.8s						
CUT	Chulitna	81.72	19	P	P	13 52 26.2	-0.3
	baz=222						
SML	Sawmill	81.90	20	IAmb	IAmb	13 52 28.3	
	comp=Z,17nm,0.6s						
KTH	Kantishna Hill	82.38	18	IAmb	IAmb	13 52 31.0	
	comp=Z,16nm,0.8s						
TRF	Thorofare Moun	82.49	18	IAmb	IAmb	13 52 32.2	
	comp=Z,26nm,0.8s						
KLU	Klutina	82.49	21	IAmb	IAmb	13 52 32.8	
	comp=Z,27nm,1.1s						
M24K	Tolsona, Glenn	82.83	20	P	P	13 52 33.2	+0.8
	baz=226						
RND	Reindeer	82.90	18	P	P	13 52 32.9	+0.2
CRQM	Cirque	82.99	22	P	P	13 52 33.6	+0.2
CRQM				IAmb	IAmb	13 52 34.7	
	comp=Z,36nm,1.1s						
N25K	Chitina, Valde	83.03	21	P	P	13 52 34.0	+0.5
	baz=227						
N25K	Chitina, Valde	83.03	21	IAmb	IAmb	13 52 34.9	
	comp=Z,38nm,0.9s						
TGL	Tana Glacier	83.11	22	IAmb	IAmb	13 52 35.2	
	comp=Z,25nm,0.9s						
MCK	McKinley	83.11	18	P	P	13 52 33.4	-0.3
	baz=223,SNR=13						
RDOG	Red Dog Mine	83.18	11	IAmb	IAmb	13 52 35.9	
	comp=Z,26nm,0.8s						
VRDI	Verde Repeater	83.19	22	IAmb	IAmb	13 52 35.0	
	comp=Z,13nm,0.7s						
GLB	Gilahina Butte	83.20	22	IAmb	IAmb	13 52 36.2	
	comp=Z,28nm,1.0s						
O02D	Mt. Diablo Mer	83.40	47	P	P	13 52 37.0	+1.1
	baz=248,SNR=16						
BALM	Baldy	83.47	22	P	P	13 52 35.9	+0.2
BALM				IAmb	IAmb	13 52 36.9	
	comp=Z,21nm,0.8s						
IMAR	Indian Mountai	83.47	15	P	P	13 52 36.6	+1.1
MLY	Manley	83.55	17	P	P	13 52 35.8	-0.2
	baz=221,SNR=10						
L02E	Cave Junction	83.60	44	P	P	13 52 37.4	+0.6
	baz=247						
NEA2	Nenana	83.70	18	P	P	13 52 36.1	-0.6
	baz=223,SNR=12						
SMMC	Simmler	83.72	52	P	P	13 52 37.2	-0.4
	baz=250						
BARN	Barnard Glacie	83.74	22	P	P	13 52 37.8	+0.5
BARN				IAmb	IAmb	13 52 38.6	
	comp=Z,28nm,0.8s						
N02D	Trinity Center	83.77	46	P	P	13 52 38.8	+1.1
	baz=248,SNR=7.9						
K02D	Willamette Mer	83.77	44	P	P	13 52 38.5	+0.8
	baz=247,SNR=6.3						
J01E	Myrtle Point	83.77	43	P	P	13 52 37.9	+0.4
	baz=247						
CTGM	Chitina Glacie	83.80	23	IAmb	IAmb	13 52 38.8	
	comp=Z,27nm,0.7s						
M02C	Callahan	83.82	45	P	P	13 52 39.2	+1.2
	baz=248,SNR=8.5						
WRH	Wood River Hil	83.90	18	P	P	13 52 37.5	-0.2
I23K	Minto, Yukon-K	84.03	17	P	P	13 52 37.9	-0.4
	baz=223,SNR=7.4						
I23K	Minto, Yukon-K	84.03	17	P	P	13 52 38.0	-0.2
YBH	Yreka Blue Hor	84.05	45	IAmb	IAmb	13 52 41.2	
	comp=Z,17nm,0.9s						
O03E	Paynes Creek	84.15	47	P	P	13 52 39.9	+0.3
	baz=248,SNR=11						
HDA	Harding Lake	84.21	18	P	P	13 52 39.3	0.0
	baz=225,SNR=85						
HDA	Harding Lake	84.21	18	P	P	13 52 39.5	+0.2
MDM	Murphy Dome	84.22	18	P	P	13 52 38.9	-0.4
MENT	Mentasta	84.24	20	P	P	13 52 39.8	+0.3
MENT				IAmb	IAmb	13 52 41.0	
	comp=Z,13nm,0.7s						
TCOL	CIGO, UAF Yank	84.26	18	P	P	13 52 39.1	-0.4
	baz=224,SNR=23						
COLA	College	84.27	18	P	P	13 52 39.2	-0.2
I03D	Drain, OR	84.37	43	P	P	13 52 40.8	+0.3
	baz=247						
ILAR	Eielson Array	84.48	18	P	P	13 52 40.4	-0.3
	comp=Z,42nm,0.6s,baz=247,slow=5.1,SNR=574						
ILAR				PKKPbc	PKKPdf	14 10 49.5	+3.8
	comp=Z,0.3nm,1.0s,baz=14,slow=5.8,SNR=4.1						
ILAR	Eielson Array	84.48	18	P	P	13 52 40.5	-0.2
L04D	Klamath Falls	84.51	45	P	P	13 52 42.1	+0.6
	baz=248,SNR=7.3						
FMP	Fort Macarthur	84.52	54	P	P	13 52 41.9	+0.4
	baz=251						
POKR	Poker Plat Res	84.56	18	P	P	13 52 40.5	-0.6
	baz=224,SNR=18						
DOT	Dot Lake	84.60	20	IAmb	IAmb	13 52 42.5	
	comp=Z,21nm,0.7s						
M04C	Macdoel	84.67	45	P	P	13 52 43.0	+0.7
	baz=248,SNR=7.9						
SCRK	Sand Creek	84.85	20	P	P	13 52 42.7	+0.1
	baz=228,SNR=24						
BCAR	Beaver Creek A	84.99	21	P	P	13 52 43.5	+0.2
ISA	Isabella, Lake	85.01	52	P	P	13 52 44.0	0.0
	baz=251						
G03D	McMinnville, O	85.02	42	P	P	13 52 44.3	+0.5
	baz=247						
BEKR	Beckworth	85.03	48	P	P	13 52 44.6	+0.4
J04D	Umpqua Nationa	85.03	44	P	P	13 52 44.3	+0.2
	baz=248,SNR=5.8						
I04A	Tendick Farm,	85.04	43	P	P	13 52 44.1	+0.2
	baz=248,SNR=5.6						
H04D	Lebanon	85.10	43	P	P	13 52 44.5	+0.4
	baz=247						
EDW2	Edwards Air Fo	85.13	53	P	P	13 52 45.0	+0.3
	baz=251						
HYT	Haines Junctio	85.19	24	P	P	13 52 44.3	-0.2
HYT				IAmb	IAmb	13 52 45.6	
	comp=Z,13nm,0.8s						
COLD	Coldfoot	85.34	15	P	P	13 52 45.9	+1.0
	baz=222						
COLD	Coldfoot	85.34	15	IAmb	IAmb	13 52 47.2	
	comp=Z,25nm,0.9s						
MLAC	Mammoth, Mammo	85.38	50	P	P	13 52 46.0	-0.1
	baz=251						
LRMC	Laurel Mtn Rad	85.56	52	P	P	13 52 46.9	0.0
	baz=251						
CWC	Cottonwood Cre	85.56	51	P	P	13 52 46.7	-0.2
	baz=251						
J05D	Fort Rock, OR	85.64	44	P	P	13 52 47.9	+0.8
	baz=248,SNR=14						
K05A	Summer Lake	85.67	45	IAmb	IAmb	13 52 48.7	
	comp=Z,17nm,0.8s						
MONP2	Monument Peak	85.75	55	P	P	13 52 48.2	+0.3
	baz=252						
LHV	Little Huntoon	85.83	50	P	P	13 52 47.8	-0.1
MPMC	Manual Prospec	85.89	52	P	P	13 52 49.0	+0.4
	baz=252						
TPFO	Pinon Flats	85.94	54	P	P	13 52 48.3	-0.5
	baz=252						
I05D	Terrebonne, OR	85.96	43	P	P	13 52 49.1	+0.6
	baz=248						
E04D	Cinebar	85.99	41	P	P	13 52 49.0	+0.5
	baz=247						
PINE	Pine Mountain	86.02	44	IAmb	IAmb	13 52 50.9	
	comp=Z,14nm,0.8s						
D03D	Eldon	86.04	40	P	P	13 52 49.2	+0.4
	baz=247						
NVAR	Mina Array Bea	86.04	49	P	P	13 52 49.5	+0.2
	comp=Z,4.7nm,0.9s,baz=233,slow=8.6,SNR=25						
NVAR				pP	pP	13 53 42.1	+1.1
	comp=Z,3.6nm,0.8s,baz=234,slow=7.2,SNR=10						
NVAR	Mina Array Bea	86.04	49	P	P	13 52 49.9	+0.7
D04E	Lakebay	86.10	40	P	P	13 52 49.5	+0.5
	baz=247						
GSC	Goldstone, Bar	86.19	53	P	P	13 52 49.7	-0.2
	baz=252						
G05D	Wamic, OR	86.30	42	P	P	13 52 50.3	+0.2
	baz=248						
TAPN	Taplejung	86.31	299	*e*P	P	13 52 51.0	+0.1
	comp=Z,15nm,0.7s						
BELC	Belle Mtn. Jos	86.42	54	P	P	13 52 51.7	+0.6
	baz=252						
F05D	White Salmon	86.45	42	P	P	13 52 51.2	+0.5
	baz=248						
ODAN	Odare	86.45	298	*e*P	P	13 52 51.8	+0.3
	comp=Z,55nm,0.9s						
FURC	Furnace Creek,	86.50	52	P	P	13 52 51.7	+0.5
	baz=252						
TOLK	Toolik Lake Re	86.56	15	P	P	13 52 51.6	+0.8
	baz=222						
TOLK	Toolik Lake Re	86.56	15	IAmb	IAmb	13 52 52.9	
	comp=Z,20nm,1.1s						
A04D	Lummi Island	86.74	39	P	P	13 52 52.9	+0.8
	baz=247						
BC3	Big Chuckawall	86.75	55	P	P	13 52 53.2	+0.5
	baz=253						
SHOC	Shoshone, Teco	86.78	52	P	P	13 52 52.7	0.0
	baz=252						
GMRC	Granite Mounta	86.92	54	P	P	13 52 53.7	+0.2
	baz=253						
B05A	Bryant	86.94	39	P	P	13 52 53.7	+0.6
	baz=248,SNR=6.6						
BMAR	Burnt Mountain	87.01	17	P	P	13 52 54.0	+0.9
GLA	Glamis	87.08	55	P	P	13 52 54.8	+0.6
	baz=253						
I07A	Izee	87.10	44	IAmb	IAmb	13 52 55.9	
	comp=Z,14nm,0.9s						
TPNV	Topopah Spring	87.12	51	P	P	13 52 54.5	+0.1
	baz=252						
A21K	Barrow	87.12	11	P	P	13 52 54.2	+0.8
	baz=216						
IRM	Iron Mountain	87.15	54	P	P	13 52 55.2	+0.8
	baz=253						
RAMN	Ramite	87.16	298	*e*P	P	13 52 55.0	0.0
	comp=Z,15nm,0.5s						
LTY	Liberty	87.46	41	IAmb	IAmb	13 52 56.4	
	comp=Z,8.8nm,0.8s						
PDMCI	Parker Dam,Lak	87.98	54	P	P	13 52 58.6	+0.2
	baz=254						
GUN	Gumba	88.03	299	*e*P	P	13 52 59.3	+0.1
	comp=Z,25nm,0.8s						
R11A	Troy Canyon, C	88.05	50	P	P	13 52 59.5	+0.6
	baz=253						
PKI	Pulchoki	88.34	299	*e*P	P	13 53 00.5	-0.1
	comp=Z,28nm,0.7s						
PKIN	Phulchoki	88.36	299	*e*P	P	13 53 00.4	-0.2
	comp=Z,27nm,0.6s						
214A	Organ Pipe Nat	88.41	57	P	P	13 53 01.1	+0.6
	baz=254						
KKN	Kakani	88.51	299	*e*P	P	13 53 00.9	-0.4
	comp=Z,30nm,0.7s						
DMN	Daman	88.61	299	*e*P	P	13 53 01.8	0.0
	comp=Z,59nm,0.7s						
BELA	Belgrano 2	88.99	176	P	P	13 53 02.2	-0.2
GKN	Gorkha	89.11	299	*e*P	P	13 53 03.6	-0.4
	comp=Z,38nm,0.8s						
F10A	Beach Ranch, E	89.25	43	IAmb	IAmb	13 53 05.0	
	comp=Z,13nm,0.7s						
DANN	Dangsing	89.95	299	*e*P	P	13 53 07.2	-0.9
	comp=Z,24nm,0.7s						
NEW	Newport	90.05	40	P	P	13 53 08.1	+0.3
	baz=251,SNR=9.2						
NEW	Newport	90.05	40	P	P	13 53 07.3	-0.5
NEW				IAmb	IAmb	13 53 09.1	
	comp=Z,11nm,0.9s						
TUC	Tucson	90.16	57	P	P	13 53 09.4	+0.7
	baz=256						
HLID	Hailey	90.43	45	P	P	13 53 10.7	+0.8
	baz=253						
WUAZ	Wupatki	90.50	54	P	P	13 53 10.8	+0.4
	baz=255						
DUG	Dugway, Tooele	90.63	49	P	P	13 53 11.2	+0.3
	baz=254						
SYO	Syowa Base	90.77	197	⇓*e*P	P	13 53 11.0	+0.3
WMQ	Urumqi	90.92	315	*e*P	P	13 53 11.6	-0.4
WMQ				pmax	pmax		
	comp=Z,14nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,190nm,4.5s						
W18A	Petrified Fore	91.70	55	P	P	13 53 16.2	+0.2
	baz=256						
JTMT	Jette	91.71	41	P	P	13 53 14.5	-1.1
121A	Cookes Peak, D	92.68	57	P	P	13 53 20.7	+0.1
	baz=257						
BOZ	Bozeman (W)	92.89	44	P	P	13 53 21.9	+0.7
	baz=255						
H17A	Grant Village	93.32	45	P	P	13 53 24.2	+0.9
	baz=256						
BW06	Boulder Array	93.65	47	P	P	13 53 25.1	+0.3
	baz=256						
PDAR	Pinedale Array	93.65	47	P	P	13 53 24.5	-0.3
	comp=Z,0.5nm,0.7s,baz=202,slow=2.7,SNR=5.8						
PDAR				pP	pP	13 54 16.3	-0.9
	comp=Z,0.1nm,0.4s,baz=235,slow=5.2,SNR=1.4						
PDAR				PKKPbc	PKKPdf	14 10 28.1	-1.1
	comp=Z,0.1nm,0.3s,baz=126,slow=7.7,SNR=3.4						
ZSN	Zaisan	93.79	318	*e*P	P	13 53 24.5	-0.6
	baz=318						
O20A	White River Ci	94.01	50	P	P	13 53 26.3	-0.2
	baz=257						
ANMO	Albuquerque	94.28	55	P	P	13 53 28.1	+0.2
	baz=258						
C36M	Paulatuk	94.37	19	P	P	13 53 25.8	-1.3
	baz=246						
C36M	Paulatuk	94.37	19	IAmb	IAmb	13 53 26.9	
	comp=Z,8.0nm,0.8s						
RLMT	Red Lodge	94.39	45	P	P	13 53 28.7	+0.6
	baz=257						
MNTX	Cornudas Mount	94.49	59	P	P	13 53 28.6	-0.1
	baz=258						
S22A	4UR Ranch, Cre	94.58	53	P	P	13 53 29.4	+0.2
	baz=258						
EGMT	Eagleton	94.73	42	P	P	13 53 30.0	+0.6
	baz=257						
MK31	Makanchi Array	95.35	317	P	P	13 53 32.5	+0.3
MK31				IAmb	IAmb	13 53 33.4	
	comp=Z,9.8nm,1.1s						
MKAR	Makanchi Array	95.35	317	P	P	13 53 32.4	+0.1
	comp=Z,7.2nm,0.7s,baz=92,slow=6.3,SNR=76						
MKAR				pP	pP	13 54 22.5	-2.3
	comp=Z,0.7nm,0.5s,baz=91,slow=5.9,SNR=2.3						
MKAR				PKiKP	PKiKP	13 58 10.7	-1.0
	comp=Z,0.2nm,0.5s,baz=62,slow=2.8,SNR=1.8						
MKAR				PKKPbc	PKKPbc	14 10 23.2	-2.7
	comp=Z,3.1nm,0.6s,baz=268,slow=3.1,SNR=37						
MKAR	Makanchi Array	95.35	317	P	P	13 53 32.6	+0.4
ZALV	Zalesovo Beam	95.39	324	P	P	13 53 31.4	-0.7
	comp=Z,2.3nm,0.7s,baz=112,slow=4.0,SNR=13						
ZALV				PKKPbc	PKKPdf	14 10 23.3	-2.7
	comp=Z,2.0nm,0.5s,baz=291,slow=2.8,SNR=10						
TXAR	Lajitas Array	95.48	61	P	P	13 53 33.3	0.0
	comp=Z,1.7nm,0.8s,baz=225,slow=4.8,SNR=7.7						
SDCO	Great Sand Dun	95.61	53	P	P	13 53 33.8	-0.1
	baz=259						
YKA	Yellowknife Ar	95.69	27	P	P	13 53 32.2	-1.1
	comp=Z,4.5nm,0.6s,baz=254,slow=4.1,SNR=66						
YKA				pP	pP	13 54 25.5	-0.1
	comp=Z,0.3nm,0.7s,baz=263,slow=8.1,SNR=1.5						
YKA				PKiKP	PKiKP	13 58 10.8	-0.9
	comp=Z,0.3nm,0.5s,baz=248,slow=0.7,SNR=7.0						
YKA				PKKPbc	PKKPbc	14 10 21.8	-3.8
	comp=Z,0.2nm,0.6s,baz=83,slow=3.4,SNR=4.5						
SNAA	Sanae	95.78	183	P	P	13 53 33.5	-0.3
Q24A	Divide	96.11	52	P	P	13 53 36.6	+0.3
	baz=259						
VNA3	Neumayer Olymp	96.46	181	P	P	13 53 36.6	-0.2
SHLS	Shalkode	96.59	313	*e*P	P	13 53 36.1	-1.9
	baz=313						
VNA2	Neumayer--Watz	96.72	182	P	P	13 53 37.9	-0.1
	baz=165,slow=4.7						
LAO	LASA Array	96.80	44	P	P	13 53 40.1	+1.3
	baz=259						
KPKS	Kokpek	97.20	313	*e*P	P	13 53 39.7	-1.1
	baz=313						
SEM	Semipalatinsk	97.40	320	*e*P	P	13 53 39.8	-1.9
	baz=320						
NRIK	Noril'sk	97.85	339	P	P	13 53 42.8	-0.1
	comp=Z,2.3nm,0.6s,baz=80,slow=6.1,SNR=4.5						
KURBB	Kurchatov Arra	98.52	320	PKKPbc	PKKPbc	14 10 14.3	-3.0
	comp=Z,1.3nm,0.6s,baz=278,slow=3.0,SNR=12						
AAK	Ala-Archa	100.11	312	PKKPbc	PKKPbc	14 10 11.5	-1.2
	comp=Z,0.6nm,0.6s,baz=214,slow=3.6,SNR=9.1						
SGDS	Sogindy	100.12	312	*e*P	Pdif	13 53 53.1	-0.7
	baz=312						
BTLS	Baital	100.73	314	*e*P	Pdif	13 53 55.9	-0.5
	baz=314						
BVAR	Borovoye Array	103.78	322	PKKPbc	PKKPbc	14 10 00.5	-1.8
	comp=Z,0.4nm,0.5s,baz=10,slow=9.3,SNR=5.9						
ARU	Arti	110.45	326	PKKPbc	PKKPbc	14 09 38.8	-2.8
	comp=Z,0.3nm,0.3s,baz=5.7,slow=10,SNR=3.8						
AKTO	Aktyubinsk	111.56	319	PKKPbc	PKKPbc	14 09 34.5	-3.2
	comp=Z,1.6nm,0.7s,baz=188,slow=0.8,SNR=7.0						
MATQ	Matagami	115.79	41	P	PKPdf	13 58 48.5	-0.8
	baz=282						
LSQQ	Lebel-sur-Quev	116.36	41	P	PKPdf	13 58 49.8	-0.6
	baz=282						
D55A	Sainte-Anne-du	117.76	43	P	PKPdf	13 58 52.7	-0.4
	baz=282						
ARCES	ARCESS Array B	117.99	346	PKP	PKPdf	13 58 52.9	0.0
	comp=Z,7.6nm,0.4s,baz=79,slow=2.2,SNR=36						
LPAZ	La Paz	118.51	116	PKP	PKPdf	13 58 56.2	-0.1
	comp=Z,1.8nm,0.5s,baz=153,slow=1.3,SNR=6.6						
D58A	Chemin du LacG	119.47	43	P	PKPdf	13 58 56.1	-0.4
	baz=284						
F59A	Saint Guilaume	119.83	44	P	PKPdf	13 58 57.1	0.0
	baz=284						
I60A	Shoreham	119.92	46	P	PKPdf	13 58 56.8	-0.5
	baz=282						
F60A	Warwick	120.37	44	P	PKPdf	13 58 57.8	-0.4
	baz=284						
E60A	Ste Agathe de	120.61	43	P	PKPdf	13 58 57.9	-0.7
	baz=285						
D60A	Saint Jean D’O	120.81	43	P	PKPdf	13 58 58.3	-0.7
	baz=286						
D61A	St Aubert, Com	121.22	42	P	PKPdf	13 58 59.2	-0.6
	baz=286						
E61A	Lac Etchemin	121.23	43	P	PKPdf	13 58 59.8	-0.1
	baz=286						
K63A	Dunstable	121.43	47	P	PKPdf	13 58 59.6	-0.7
	baz=283						
G62A	West of Eustis	121.53	44	P	PKPdf	13 59 00.2	-0.2
	baz=285						
G63A	Kingsbury	122.17	44	P	PKPdf	13 59 01.7	0.0
	baz=286						
CPUP	Villa Florida	122.21	132	PKP	PKPdf	13 59 01.7	-0.7
	comp=Z,3.3nm,0.7s,baz=254,slow=2.7,SNR=10						
PKME	Peaks-Kenny Pk	122.36	44	P	PKPdf	13 59 01.8	-0.2
	baz=286						
E63A	Oxbow	122.61	43	P	PKPdf	13 59 02.5	0.0
	baz=288						
G64A	Maxfield	122.72	44	P	PKiKP	13 59 02.8	-0.1
	baz=287						
F64A	Sherman	122.82	43	P	PKPdf	13 59 02.7	-0.2
	baz=287						
KBZ	Khabaz	122.97	314	PKP	PKiKP	13 59 04.0	+0.5
	comp=Z,1.4nm,0.6s,baz=100,slow=8.0,SNR=4.2						
FINES	FINESS Array B	123.51	339	PKP	PKPdf	13 59 03.7	0.0
	comp=Z,8.5nm,0.8s,baz=64,slow=1.4,SNR=26						
FINES				PKKPbc	PKKPab	14 08 53.3	+0.6
	comp=Z,3.4nm,0.8s,baz=222,slow=2.6,SNR=3.7						
G65A	Princeton	123.55	44	P	PKPdf	13 59 03.4	-0.9
	baz=288						
NACGM	Naroch	127.46	332	*i* PKP	PKPdf	13 59 07.9	-3.6
NACGM				*i* PKP	PKPdf	13 59 07.9	-3.6
NACGM				*i* PKP	PKPdf	13 59 07.9	-3.6
NACGM				*i* pPKP	pPKPdf	14 00 02.1	-4.3
NACGM				*i* PP	PP	14 01 21.3	+7.0
NACGM				*i* PPP	PPP	14 04 09.9	
NACGM				*i* SKS	SKSdf	14 05 59.5	-3.0
NACGM				*i* sSKS		14 08 27.9	
NACGM				*i* SKKS		14 11 06.3	
NACGM				*i* SSS	SSS	14 22 14.8	
NB2	NORSAR Subarra	128.37	345	PKPdf	PKiKP	13 59 13.5	-0.2
	comp=Z,1.9nm,0.6s,baz=31,slow=1.9						
NOA	NORSAR Array B	128.37	345	PKP	PKiKP	13 59 13.6	-0.2
	comp=Z,3.3nm,0.6s,baz=30,slow=2.0,SNR=15						
AKASG	Malin Array Be	128.69	327	PKP	PKiKP	13 59 14.3	-0.3
	comp=Z,0.6nm,0.4s,baz=49,slow=2.4,SNR=8.3						
OSTC	Ostas	135.12	334	*e*PKPDF	PKiKP	13 59 28.7	+1.0
DPC	Dobruska-Polom	135.23	333	*e*PKPDF	PKPdf	13 59 27.0	+0.6
BDFB	Brasilia	135.54	128	PKP	PKPdf	13 59 28.1	0.0
	comp=Z,5.3nm,0.6s,baz=257,slow=2.6,SNR=8.6						
BRG	Berggiesshubel	135.83	336	*e*PKP	PKiKP	13 59 30.0	+0.9
BRG				Amp		13 59 30.4	
	comp=Z,5.5nm,1.0s						
CONA	Conrad Observa	137.20	331	*e*P	PKiKP	13 59 32.8	+0.7
	comp=Z,7.7nm,1.3s						
CKRC	Cesky Krumlov	137.24	333	*e*PKPDF	PKPdf	13 59 29.3	-0.9
KHC	Kasperske Hory	137.32	334	*e*PKPDF	PKiKP	13 59 31.4	-0.8
GERES	GERESS Array B	137.49	334	PKP	PKPdf	13 59 29.7	-1.0
	comp=Z,1.1nm,0.6s,baz=31,slow=3.4,SNR=7.6						
BTNL	Ternell	138.87	341	*d*PKPdf	PKPdf	13 59 32.7	-0.4
BTNL				*d*PKiKP	PKiKP	13 59 35.7	+0.3
MEM	Membach	138.89	342	*d*PKiKP	PKiKP	13 59 35.8	+0.5
BMRD	Maredsous	139.54	342	*d*PKiKP	PKiKP	13 59 37.2	+0.5

WATA	Walderalm	139.56	334	eP	PKiKP	13 59 37.8	+0.8
	comp=Z,4.8nm,0.6s						
WTTA	Wattenberg	139.59	334	eP	PKiKP	13 59 36.4	-0.8
	comp=Z,12nm,1.1s						
ABTA	Abfaltersbach	139.60	333	eP	PKPdf	13 59 34.0	-0.7
	comp=Z,5.9nm,0.6s						
RETA	Reutte	139.78	335	eP	PKiKP	13 59 37.5	+0.2
	comp=Z,5.3nm,1.3s						
SQTA	Sankt Quirin	139.81	334	eP	PKPdf	13 59 35.2	+0.1
	comp=Z,5.3nm,0.8s						
FETA	Feichten	140.16	334	eP	PKPdf	13 59 36.7	+0.9
	comp=Z,11nm,1.3s						
DAVA	Damuels	140.30	335	eP	PKPdf	13 59 35.5	-0.5
	comp=Z,4.6nm,0.7s						
KEST	Kesra	149.25	323	PKPbc	PKiKP	13 59 57.0	-0.2
	comp=Z,26nm,0.6s,baz=253,slow=0.6,SNR=31						
PBRG	Braganca	150.25	350	ePKP	PKiKP	13 59 58.9	-0.1
PBRG				i -		14 00 06.0	
PGAV	Gavieira, Arco	150.31	353	ePKP	PKiKP	13 59 59.1	-0.1
POLO	Lamas de Olo	150.83	352	ePKP	PKiKP	14 00 00.7	+0.4
POLO				i -		14 00 07.1	
PVRL	Vila Real	150.92	352	ePKP	PKiKP	14 00 00.9	+0.5
PVRL				i -		14 00 09.1	
MVO	Moncorvo	150.92	351	ePKP	PKiKP	14 00 01.1	+0.6
PTO	Porto	151.17	353	ePKP	PKPbc	14 00 00.4	0.0
PVIS	Viseu	151.49	352	ePKP	PKiKP	14 00 02.0	+0.4
ESDC	Sonseca Array	151.73	345	PKPbc	PKiKP	14 00 02.5	+0.3
	comp=Z,14nm,0.8s,baz=10,slow=2.5,SNR=61						
ESDC				PKPab	PKPab	14 00 12.0	+0.7
	comp=Z,3.0nm,0.8s,baz=217,slow=31,SNR=4.8						
MTE	Manteigas	151.75	351	ePKP	PKiKP	14 00 02.8	+0.6
COI	Coimbra	152.06	352	ePKP	PKiKP	14 00 03.2	+0.5
PCAS	Casmilo, Conde	152.23	352	ePKP	PKiKP	14 00 03.5	+0.4
PCBR	Castelo Branco	152.29	351	ePKP	PKiKP	14 00 03.7	+0.5
PMRV	Marv??o	152.68	350	ePKP	PKiKP	14 00 04.7	+0.6
PSBE	So Bento	152.79	353	ePKP	PKiKP	14 00 05.0	+0.7
PMTG	Montargil	153.16	352	ePKP	PKiKP	14 00 05.5	+0.5
PMTG				i -		14 00 18.2	
PESTR	Estremoz	153.26	350	ePKP	PKiKP	14 00 05.6	+0.3
PESTR				i -		14 00 19.1	
PMAFR	Mafra	153.40	353	ePKP	PKiKP	14 00 06.3	+0.7
PMAFR				i -		14 00 19.8	
PBAR	Barrancos	153.84	349	ePKP	PKiKP	14 00 06.9	+0.4
PBAR				i -		14 00 21.3	
PBEJ	Beja	154.12	351	ePKP	PKPbc	14 00 05.3	-1.8
PBEJ				i -		14 00 23.1	
PNCL	Nicolau / Gran	154.14	352	ePKP	PKiKP	14 00 07.5	+0.4
PNCL				i -		14 00 23.6	
MESJ	Messejana	154.36	351	ePKP	PKiKP	14 00 08.6	+1.0
MESJ				i -		14 00 23.7	
PCVE	Castro Verde	154.54	351	ePKP	PKiKP	14 00 08.9	+1.0
PCVE				i -		14 00 24.8	
PVAQ	Vaqueiros	154.71	350	ePKP	PKiKP	14 00 09.5	+1.2
PVAQ				i -		14 00 25.2	
PTEO	Sao Teotonio	154.72	352	ePKP	PKiKP	14 00 09.6	+1.3
PTEO				i -		14 00 25.5	
MORF	Marmelete	154.95	352	ePKP	PKiKP	14 00 09.9	+1.0
MORF				i -		14 00 26.4	
PFVI	Vila Bisbo	155.14	352	ePKP	PKPdf	14 00 10.4	+10
PFVI				i -		14 00 27.3	
TORD	Torodi Ar. Bea	165.60	274	PKP	PKPdf	14 00 10.9	-1.3
	comp=Z,1.7nm,1.0s,baz=157,slow=1.1,SNR=4.6						
TORD				PKPab	PKPab	14 01 12.0	-0.2
	comp=Z,6.5nm,0.9s,baz=74,slow=5.1,SNR=20						

IDC 12 13:56:00.0±3.5, 11°.20S×161°.17E, h0^{km}, mb3.7/4, mb1 3.8/5, mb1mx3.5/55, mbtmp3.7/5, ML3.5/1, MS3.0/2, Ms1 3.0/2, ms1mx2.5/41, Error ellipse: s-maj=68.5km s-min=28.5km az=93.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	2.13	326	Pn	Pn	13 56 37.8	+0.9
	17nm,0.3s,baz=194,slow=15,SNR=6.1						
HNR				Sn	Sn	13 57 04.2	+0.1
	99nm,0.3s,baz=118,slow=23,SNR=12						
HNR				LR	LR	13 57 35.9	
	comp=Z,119nm,18.4s,baz=81,slow=45						
WRA	Warramunga Arr	27.23	248	P	P	14 01 45.2	-0.8
	0.9nm,0.9s,baz=79,slow=9.6,SNR=3.8						
STKA	Stephens Creek	27.38	218	LR	LR	14 12 05.2	
	comp=Z,74nm,19.5s,baz=27,slow=35						
ASAR	Alice Springs	28.75	241	P	P	14 02 01.1	+1.6
	0.4nm,0.8s,baz=67,slow=9.5,SNR=2.8						
FITZ	Fitzroy Crossi	35.00	254	P	P	14 02 53.8	-0.7
	1.6nm,0.8s,baz=45,slow=4.3,SNR=1.7						
SONM	Songino Array	76.19	325	P	P	14 07 50.1	-0.2
	0.6nm,0.7s,baz=135,slow=4.5,SNR=5.2						

ANF 12 14:09:06.7±1.8, 41°.72N×126°.90W, h0^{km}, ML3.2/3, Error ellipse: s-maj=30.9km s-min=5.5km az=43.0

NEIC 12 14:09:08.6±3.0, 41°.39N±0°.05×127°.0W±0°.2, h11^{km}±10^{km}, ML2.8/16, Error ellipse: s-maj=25.5km s-min=6.6km az=93.0

IDC 12 14:09:08.9±3.1, 41°.63N×126°.86W, h0^{km}, mb3.2/2, mb1 3.5/5, mb1mx3.3/66, mbtmp3.1/5, ML3.2/3, MS3.3/12, Ms1 3.3/12, ms1mx3.2/21, Error ellipse: s-maj=55.0km s-min=19.3km az=39.0

ISC 12 14:09:09.7±2.0, 41°.5N±0°.1×127°.0W±0°.2, h11^{km}, n31, σ1^{s}94/22, MS2.9/6, Off coast of northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHMM	Horse Mountain	2.52	104		Pn	14 09 49.4	-1.3
KHMM				IAML		14 10 10.9	
	comp=E,43nm,4.8s						
KHMM				IAML		14 10 53.2	
	comp=N,53nm,3.3s						
L02E	Cave Junction	2.58	75	Pb	Pn	14 09 51.6	+0.1
	baz=261,SNR=6.2						
M02C	Callahan	3.09	91	P	Pn	14 09 56.3	-2.2
	baz=278,SNR=9.9						
HUMO	Hull Mountain	3.17	69		Pn	14 09 59.3	-0.2
YBH	Yreka Blue Hor	3.19	85	Pn	Pn	14 09 59.5	-0.4
	comp=N,1.0nm,0.3s,baz=295,slow=9.8,SNR=20						
YBH	Yreka Blue Hor	3.19	85		Pn	14 09 56.4	-3.4
YBH				IAML		14 10 18.7	
	comp=N,18nm,2.1s						
N02D	Trinity Center	3.25	98	P	Pn	14 09 58.8	-1.9
	baz=285						
O02D	Mt. Diablo Mer	3.44	112	P	Pn	14 10 01.4	-1.8
	baz=298,SNR=8.7						
O02D				S	Sn	14 10 45.0	+0.9
	baz=298						
WDC	Whiskeytown Da	3.47	104		Pn	14 09 58.9	-4.7
WDC				IAML		14 11 13.6	
	comp=N,15nm,3.9s						
L04D	Klamath Falls	3.54	77	P	Pn	14 10 01.9	-2.9
	baz=263,SNR=15						
M04C	Macdoel	3.84	85	P	Pn	14 10 06.5	-2.4
	baz=271,SNR=16						
O03E	Paynes Creek	4.10	106	P	Pn	14 10 10.8	-1.5
	baz=292						
ORV	Oroville	4.60	114	Pn	Pn	14 10 17.8	-1.4
ORV				IAML		14 11 38.4	
	comp=N,8.3nm,4.9s						
ORV				IAML		14 11 53.0	
	comp=E,8.9nm,4.5s						
K05A	Summer Lake	4.67	73		Pn	14 10 21.2	+1.0
MOD	Modoc Plateau	5.00	83		Pn	14 10 24.9	+0.2
MOD				IAML		14 11 32.7	
	comp=N,7.9nm,3.8s						
BEKR	Beckworth	5.28	106		Pn	14 10 28.9	+0.2
BEKR				IAML		14 11 42.1	
	comp=E,6.4nm,1.8s						
WVOR	Wild Horse Val	6.27	79		Pn	14 10 40.6	-1.5
NVAR	Mina Array Bea	7.33	112	Pn	Pn	14 10 58.5	+1.7
	comp=E,0.2nm,0.3s,baz=286,slow=14,SNR=5.5						
NVAR				LR	LR	14 14 03.2	
	comp=E,385nm,18.4s,baz=269,slow=40						
ELK	Elko	8.88	91	LR	LR	14 14 28.0	
	comp=E,180nm,20.7s,baz=270,slow=36						
NEW	Newport	9.69	43	LR	LR	14 15 12.2	
	comp=E,225nm,21.7s,baz=236,slow=38						
PFO	Pinyon Flats O	11.47	130	LR	LR	14 16 19.1	
	comp=E,126nm,20.3s,baz=312,slow=37						
PDAR	Pinedale Array	12.98	79	Pn	Pn	14 12 18.1	+3.9
	comp=E,0.0nm,0.3s,baz=287,slow=32,SNR=2.1						
PDAR				LR	LR	14 17 40.8	
	comp=E,210nm,18.5s,baz=254,slow=40						
PDAR	Pinedale Array	12.98	79		Pn	14 12 11.8	-2.3
ANMO	Albuquerque	17.38	106	LR	LR	14 20 28.3	
	comp=E,181nm,18.4s,baz=299,slow=39						
LPIG	La Paz	22.24	136	LR	LR	14 21 58.7	
	comp=E,33nm,21.2s,baz=46,slow=35						
YKA	Yellowknife Ar	22.25	15	P	P	14 14 06.6	+0.3
	comp=E,1.1nm,1.0s,baz=199,slow=9.8,SNR=9.7						
TXAR	Lajitas Array	22.47	115	LR	LR	14 23 19.0	
	comp=E,37nm,19.3s,baz=0.0,slow=38						
KDAK	Kodiak Island	23.02	324	LR	LR	14 20 49.6	
	comp=E,62nm,19.6s,baz=175,slow=30						
ILAR	Eielson Array	25.94	340	P	P	14 14 41.4	-0.3
	comp=E,0.4nm,0.8s,baz=157,slow=12,SNR=4.5						
ILAR				LR	LR	14 22 07.6	
	comp=E,25nm,21.5s,baz=130,slow=30						
SADO	Sadowa	34.64	68	LR	LR	14 30 27.6	
	comp=E,83nm,21.4s,baz=85,slow=37						
FRB	Frobisher Bay	39.96	36	LR	LR	14 33 21.0	
	comp=E,87nm,18.3s,baz=249,slow=36						

IDC 12 14:09:19.7±6.3, 10°.94S×161°.40E, h70^{km}±45^{km}, mb3.1/5, mb1 3.3/6, mb1mx3.2/49, mbtmp3.5/6, ML3.5/1, Error ellipse: s-maj=52.7km s-min=27.8km az=109.0

ISC 12 14:09:14.5±1.4, 10°.9S±0°.2×161°.5E±0°.2, h28^{km}, n6, σ0^{s}74/7, mb3.5/5, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	2.12	314	P	Pb	14 09 52.2	0.0
	16nm,0.3s,baz=235,slow=16,SNR=10						
HNR				S	Sb	14 10 17.8	-0.2
	48nm,0.3s,baz=25,slow=16,SNR=7.4						
WRA	Warramunga Arr	27.62	248	P	P	14 15 00.5	+0.5
	0.2nm,0.5s,baz=75,slow=9.8,SNR=2.0						
ASAR	Alice Springs	29.16	241	P	P	14 15 13.3	-0.3
	0.3nm,0.8s,baz=63,slow=11,SNR=5.0						
SONM	Songino Array	76.14	325	P	P	14 21 01.1	+1.1
	0.6nm,0.7s,baz=144,slow=5.3,SNR=5.0						
ILAR	Eielson Array	84.77	20	P	P	14 21 45.6	-0.2
	0.2nm,0.6s,baz=235,slow=5.5,SNR=1.6						
MKAR	Makanchi Array	90.59	318	P	P	14 22 13.5	-0.8
	0.2nm,0.7s,baz=90,slow=4.3,SNR=2.6						

BJI 12 14:33:05.7±0.0, 24°.13N×93°.92E, h60^{km}, mB4.9/44, mb4.7/63, ML4.5/5, Ms4.2/47, Ms7 3.9/47

NEIC 12 14:33:07.8±1.5, 24°.00N±0°.09×93°.92E±0°.08, h66^{km}±7^{km}, mb4.8/48, Error ellipse: s-maj=16.0km s-min=1.5km az=220.0

NDI 12 14:33:08.3±3.3, 24°.10N×93°.83E, h60^{km}, mb4.5, ML4.7, mb4.8(NEIC)

IDC 12 14:33:08.4±0.3, 24°.06N×94°.08E, h72^{km}±2^{km}, mb4.2/44, mb1 4.3/45, mb1mx4.2/78, mbtmp4.5/45, MS3.7/22, Ms1 3.7/22, ms1mx3.5/50, Error ellipse: s-maj=11.3km s-min=7.6km az=56.0

GCMT 12 14:33:09.8±0.4, 23°.97N±0°.02×93°.93E±0°.03, h96^{km}±4^{km}, MW5.0/60, Moment Tensor Solution. s36,c41; s60,c74; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.70±.20; $M_{\theta\theta}$-2.07±.18; $M_{\phi\phi}$1.37±.18; $M_{r\theta}$-1.49±.20; $M_{\theta\phi}$4.16±.18; $M_{\phi r}$0.57±.23; Best double couple: $M_0$4.72500×10^{16} NP1:ϕ_s170.00000°, δ75.00000°, λ-174.00000°. NP2: ϕ_s78.00000°, δ84.00000°, λ-15.00000°. Principal axes: T 4.1900, Plg6.0000°, Azm125.0000°; N 1.0730, Plg74.0000°, Azm237.0000°; P -5.2600, Plg15.0000°, Azm33.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 12 14:33:08.1±0.3, 24°.07N±0°.03×93°.85E±0°.03, h75^{km}±2^{km}, h75^{km}:pP-P, n258, σ2^{s}29/338, mb4.7/74, 9C-12D, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SILR	SILCHAR	1.19	307	eP	Pn	14 33 29.2	0.0
KOHI	KOHIMA	1.66	8	eP	Pn	14 33 35.5	-0.1
KOHI				eS	Sn	14 33 56.4	0.0
KOHI				IAML		14 33 59.7	
	comp=N,12μm,0.2s						
SAIH	SAIHA	1.76	207	eP	Pn	14 33 37.1	+0.3
SAIH				eS	Sn	14 33 59.2	+0.7
SAIH				IAML		14 34 04.6	
	comp=N,4μm,0.7s						
MOKO	MOKOCHONG	2.33	15	eP	Pn	14 33 44.2	-0.2
MOKO				eS	Sn	14 34 11.4	-0.7
MOKO				IAML		14 34 14.6	
	comp=E,7μm,0.3s						
SHL	Shillong	2.33	310	eP	Pn	14 33 44.1	-0.4
SHL				eS	Sn	14 34 10.4	-1.8
SHL				IAML		14 34 12.7	
	comp=N,2μm,0.1s						
SHL	Shillong	2.33	310	Pn	Pn	14 33 43.4	-1.1
BELO	BELONIA	2.35	250	eP	Pn	14 33 44.6	+0.1
BELO				eS	Sn	14 34 13.7	+1.3
AGT	Agartala	2.38	266	i P	Pn	14 33 45.7	+0.7
AGT				eS	Sn	14 34 14.3	+1.0
AGT				IAML		14 34 16.3	
	comp=E,11μm,0.6s						
JORH	JORHAT	2.69	8	eP	Pn	14 33 49.1	0.0
JORH				eS	Sn	14 34 19.6	-1.1
TEZP	TEZPUR	2.71	340	eP	Pn	14 33 48.3	-1.2
TEZP				eS	Sn	14 34 18.1	-3.1
GUWA	GUWAHATI	2.88	318	eP	Pn	14 33 50.4	-1.4
GUWA				eS	Sn	14 34 21.5	-3.9
ZIRO	ZIRO	3.45	0	eP	Pn	14 33 58.3	-1.3
ZIRO				ex	x	14 34 32.8	
ZIRO				IAML		14 34 38.3	
	comp=E,14μm,0.5s						
DIBR	DIBRUGARH	3.52	16	eP	Pn	14 33 59.3	-1.2
DIBR				eS	Sn	14 34 38.9	-2.1
GTK	Tadong	5.74	305	eP	Pn	14 34 31.0	+0.2
GTK				ex	x	14 35 34.2	
LSA	Lhasa	6.11	337	P	Pn	14 34 38.2	+2.0
LSA				S	Sn	14 35 36.0	-8.9
LSA				smax	smax		
	comp=E,1μm,0.6s						
LSA				smax	smax		
	comp=E,1μm,0.7s						
LSA	Lhasa	6.11	337	Pn	Pn	14 34 37.8	+1.6
TAPN	Taplejung	6.43	302	ePn	Pn	14 34 39.8	-0.7
TAPN				eSn	Sn	14 35 48.7	-3.9
	comp=E,777nm,0.5s						
ODAN	Odare	6.47	297	ePn	Pn	14 34 40.5	-0.4
ODAN				eSn	Sn	14 35 49.5	-3.9
	comp=E,467nm,0.4s						
MHMT	Maesarieng	6.99	146	P	Pn	14 34 47.6	-0.2
	comp=E,0.9nmcomp=E,2μmcomp=E,115nm,0.8s						
CM33	Chiang Mai Arr	7.06	137	P	Pn	14 34 48.0	-0.8
CHTO	Chiang Mai	7.06	137	Pn	Pn	14 34 48.0	-0.8
CMMT	Chiang Mai	7.06	137	P	Pn	14 34 47.2	-1.7
	comp=E,0.2nmcomp=E,404nmcomp=E,22nm,0.5s						
CM32	Chiang Mai Arr	7.12	138	P	Pn	14 34 49.0	-0.7
RAMN	Ramite	7.15	295	ePn	Pn	14 34 49.6	-0.7
RAMN				eSn	Sn	14 36 06.6	-3.5
	comp=E,338nm,0.4s						
CM34	Chiang Mai Arr	7.16	135	P	Pn	14 34 49.0	-1.2
BOK	Bokaro	7.29	269	eP	Pn	14 34 51.4	-0.5
BOK				i x	x	14 34 58.8	
BOK				ex	x	14 36 09.6	
CM35	Chiang Mai Arr	7.29	136	P	Pn	14 34 51.0	-1.0
CM15	Chiang Mai Arr	7.32	139	P	Pn	14 34 52.0	-0.4
	comp=E,0.2nmcomp=E,629nmcomp=E,59nm,0.7s						
CM31	Chiang Mai Arr	7.33	139	P	Pn	14 34 52.3	-0.2
	comp=E,8.1nmcomp=E,26μmcomp=E,2μm,0.7s						
CM31	Chiang Mai Arr	7.33	139	Pn	Pn	14 34 47.5	-5.0
CMAR	Chiang Mai Arr	7.33	139	P	Pn	14 34 50.6	-1.9
	comp=E,6.4nm,0.3s,baz=313,slow=14,SNR=127						
CMAR				LR	LR	14 38 24.2	
	comp=E,810nm,19.9s,baz=315,slow=44						
CM13	Chiang Mai Arr	7.33	139	P	Pn	14 34 52.0	-0.6
	comp=E,0.2nmcomp=E,498nmcomp=E,48nm,0.7s						
CM02	Chiang Mai Arr	7.35	139	P	Pn	14 34 52.0	-0.8
	comp=E,0.3nmcomp=E,715nmcomp=E,40nm,0.6s						
CM01	Chiang Mai Arr	7.37	139	P	Pn	14 34 52.0	-1.0
	comp=E,0.4nmcomp=E,988nmcomp=E,49nm,0.7s						
CM09	Chiang Mai Arr	7.37	138	P	Pn	14 34 52.0	-1.0
	comp=E,0.3nmcomp=E,612nmcomp=E,62nm,0.7s						
CM05	Chiang Mai Arr	7.37	139	P	Pn	14 34 52.0	-1.1
	comp=E,0.2nmcomp=E,470nmcomp=E,44nm,0.7s						
CM36	Chiang Mai Arr	7.38	137	P	Pn	14 34 52.0	-1.1
CM04	Chiang Mai Arr	7.39	139	P	Pn	14 34 53.1	-0.3
	comp=E,0.3nmcomp=E,687nmcomp=E,72nm,0.7s						
LAMP	Lampang	7.71	135	P	Pn	14 34 58.2	+0.4
	comp=E,0.5nmcomp=E,1μmcomp=E,128nm,0.8s						
GUN	Gumba	8.13	300	ePn	Pn	14 35 03.0	-0.7
GUN				eSn	Sn	14 36 30.5	-3.7
	comp=E,289nm,0.3s						
KMI	Kunming	8.16	81	⇓P	Pn	14 35 06.7	+2.7
KMI				S	Sn	14 36 36.7	+1.8
KMI				pmax	pmax		
	comp=E,36nm,1.0s						
KMI				LR	LR		
	comp=E,2μm,13.8s						
KMI				LR	LR		
	comp=E,1μm,6.5s						
KMI				LR	LR		
	comp=E,1μm,16.0s						
NANT	Nan	8.26	128	P	Pn	14 35 03.6	-1.5
	comp=E,8.3nmcomp=E,28μmcomp=E,2μm,0.6s						
BWNR	Bhubaneshwar	8.34	245	eP	Pn	14 35 04.7	-1.6
BWNR				eS	Sn	14 36 31.0	-8.0
PKI	Pulchoki	8.37	296	ePn	Pn	14 35 05.8	-1.1
PKI				eSn	Sn	14 36 35.1	-4.9
	comp=E,318nm,0.4s						
PKIN	Phulchoki	8.38	296	ePn	Pn	14 35 05.9	-1.2
PKIN				eSn	Sn	14 36 35.3	-4.9
	comp=E,203nm,0.5s						
SUKH	Sukhothai	8.49	139	P	Pn	14 35 08.7	+0.3
	comp=E,0.3nmcomp=E,53nm,0.7s						
KKN	Kakani	8.56	297	ePn	Pn	14 35 08.1	-1.4
KKN				eSn	Sn	14 36 39.8	-4.7
	comp=E,425nm,0.5s						
DMN	Daman	8.63	296	ePn	Pn	14 35 08.7	-1.8
DMN				eSn	Sn	14 36 42.0	-4.4
	comp=E,183nm,0.5s						
UTTA	Uttaradit	8.88	134	P	Pn	14 35 13.0	-0.6
	comp=E,0.4nmcomp=E,1μmcomp=E,103nm,0.5s						
UMPA	Umpang Tak	9.13	148	P	Pn	14 35 20.7	+3.7
	comp=E,0.3nmcomp=E,603nmcomp=E,46nm,0.7s						
GKN	Gorkha	9.16	297	ePn	Pn	14 35 16.1	-1.6
GKN				eSn	Sn	14 36 54.0	-5.3
	comp=E,199nm,0.4s						
PHIT	Phitsanulok	9.20	137	P	Pn	14 35 18.4	+0.4
	comp=E,0.9nmcomp=E,3μmcomp=E,284nm,0.6s						
SLVN	Son La	9.67	104	Pn	Pn	14 35 25.2	+0.6
DANN	Dangsing	10.01	297	ePn	Pn	14 35 27.3	-2.1
DANN				eSn	Sn	14 37 14.5	-5.7
	comp=E,243nm,0.5s						
DGPR	DIGLIPUR	10.87	185	eP	Pn	14 35 39.5	-1.2
SRDT	SRDT	10.87	152	P	Pn	14 35 41.5	+0.7
	comp=E,10μmcomp=E,26nm,1.8s						
CD2	Chengdu	11.12	50	P	Pn	14 35 45.0	+0.7
CD2				S	Sn	14 37 46.0	-1.0
CD2				pmax	pmax		
	comp=E,20nm,0.5s						
CD2				pmax	pmax		
	comp=E,110nm,6.3s						
CD2				LR	LR		
	comp=E,920nm,13.9s						
CD2				LR	LR		
	comp=E,930nm,12.4s						
CD2				LR	LR		
	comp=E,630nm,10.8s						
CHAI	Chaiyaphum	11.15	135	P	Pn	14 35 46.0	+1.3
	comp=E,520nmcomp=E,46nm,0.6s						
GYA	Guiyang	11.84	76	eP	Pn	14 35 54.4	+0.2
GYA				S	Sn	14 38 04.7	+0.1
GYA				pmax	pmax		
	comp=E,8.0nm,0.7s						
GYA				LR	LR		
	comp=E,340nm,7.3s						
GYA				LR	LR		
	comp=E,500nm,7.4s						
GYA				LR	LR		
	comp=E,520nm,11.2s						
SRAK	Srakaew	12.64	141	P	P	14 36 11.6	-2.0
NGP	Nagpur	13.97	261	eP	Pn	14 36 21.6	-1.1
NGP				ex	x	14 38 45.5	
NGP				IAML		14 38 53.2	
	comp=E,112nm,0.5s						
NGP				IAML		14 38 54.0	
	comp=N,108nm,0.5s						
LZH	Lanzhou	14.77	33	eP	Pn	14 36 30.8	-2.2
LZH				pmax	pmax		
	comp=N,64nm,1.1s						
LZH				pmax	pmax		
	comp=N,190nm,4.3s						
LZH				LR	LR		
	comp=N,510nm,13.0s						
LZH				LR	LR		
	comp=N,520nm,11.9s						
LZH				LR	LR		
	comp=N,610nm,14.2s						
BHPL	Bhopal	15.07	270	eP	Pn	14 36 33.8	-3.2
BHPL				i x	x	14 36 42.3	
BHPL				ex	x	14 38 42.1	
BHPL				ex	x	14 39 14.2	
BHPL				⇓ex	x	14 53 28.1	
ENH	Enshi	15.22	63	Pn	Pn	14 36 36.1	-2.8
ENH				IAmb	IAmb	14 36 54.1	
	comp=Z,53nm,0.7s						
DDI	Dehra Dun	15.37	297	ex	Pn	14 36 37.5	-3.2
NDI	New Delhi	15.60	291	eP	Pn	14 36 41.5	-2.1
NDI				eS	Sn	14 39 25.3	-10
QIZ	Qiongzhong	15.70	106	P	Pn	14 36 43.5	-1.4
QIZ				S	Sn	14 39 35.9	-2.3
QIZ				pmax	pmax		
	comp=Z,8.0nm,3.2s						
QIZ				LR	LR		
	comp=Z,150nm,7.4s						
QIZ				LR	LR		
	comp=Z,530nm,13.0s						
QIZ				LR	LR		
	comp=Z,290nm,12.7s						
SURT	Suratani	15.75	162	P	P	14 36 53.7	+5.7
	comp=Z,0.9nm,1.1s						
HYB	Hyderabad	15.76	248	i P	Pn	14 36 45.0	-0.7
HYB				eS	Sn	14 39 44.0	+4.4
HYB	Hyderabad	15.76	248	ex	x	14 36 49.4	
HYB				ex	x	14 39 24.9	
HYB				IAmb	IAmb	14 39 28.0	
	comp=N,28nm,0.8s						
GTA	Gaotai	16.11	17	⇑P	Pn	14 36 48.9	-1.2
GTA				S	Sn	14 39 49.6	+1.5
GTA				ScS	ScS	14 48 49.9	+1.3
GTA				pmax	pmax		
	comp=N,8.0nm,1.1s						
GTA				pmax	pmax		
	comp=N,110nm,4.7s						
GTA				LR	LR		
	comp=N,190nm,14.5s						
GTA				LR	LR		
	comp=N,270nm,12.4s						
GTA				LR	LR		
	comp=N,250nm,11.3s						
SMLA	Simla	16.37	299	ex	Pn	14 36 50.7	-2.5
SMLA				IAmb	IAmb	14 36 52.3	
	comp=Z,84nm,0.6s						
SMLA				ex	x	14 39 43.6	
XAN	Xi'an	16.49	50	P	Pn	14 36 52.0	-2.8
XAN				pP	pP	14 37 05.7	-5.6
XAN				S	Sn	14 39 54.5	-2.7
XAN				pmax	pmax		
	comp=Z,25nm,1.0s						
XAN				LR	LR		
	comp=Z,360nm,11.9s						
XAN				LR	LR		
	comp=Z,450nm,14.1s						
XAN				LR	LR		
	comp=Z,420nm,14.1s						
KRAB	Krabi	16.57	161	P	P	14 37 01.0	+3.9
	comp=Z,31μm,1.0s						
TRTT	Trang	17.08	160	P	P	14 37 04.7	+1.9
DHRM	DHARAMSHALA	17.48	302	ex	Pn	14 37 03.1	-4.0
DHRM				IAmb	IAmb	14 37 05.9	
	comp=Z,52nm,0.7s						
DHRM				i x	x	14 37 08.3	
DHRM				ex	x	14 40 08.9	
LHMI	Lhok Sumawe	18.96	170		P	14 37 21.5	-2.0
WHN	Wuhan	19.32	66	⇑P	P	14 37 26.6	-0.6
WHN				S	S	14 40 58.4	-3.6
WHN				LR	LR		
	comp=Z,1μm,12.7s						
WHN				LR	LR		
	comp=Z,650nm,8.6s						
WHN				LR	LR		
	comp=Z,870nm,8.5s						
POO	Poona	19.42	257	eP	P	14 37 29.0	+0.4
	comp=Z,30nm,0.7s						

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POO                             i S    S        14 40 56.0 -8.5
KULM  Kulim           19.78 160   P    P        14 37 33.0 +0.5
KULM                              IAmb IAmb     14 37 36.5
      comp=Z,39nm,1.1s
WMQ   Urumqi          20.34 347   P    Pn       14 37 40.6 -0.5
WMQ                               pP   pP       14 37 52.3 -1.7
WMQ                               sP   sP       14 38 04.2 +0.6
WMQ                               S    S        14 41 22.8 +0.6
WMQ                               SS   SnSn     14 41 53.7 +7.6
WMQ                               pmax pmax
      comp=Z,50nm,1.1s
WMQ                               pmax pmax
      comp=Z,300nm,5.9s
WMQ                               LR   LR
      comp=Z,340nm,17.3s
WMQ                               LR   LR
      comp=Z,580nm,16.3s
WMQ                               LR   LR
      comp=Z,280nm,22.7s
WMQ   Urumqi          20.34 347   P    P        14 37 39.5 +1.2
WMQ                               IAmb IAmb     14 37 41.6
      comp=Z,36nm,0.9s
NIL   Nilore          20.38 303   P    P        14 37 40.0 +1.2
TIY   Taiyuan         20.91  45 eP     P        14 37 39.1 -5.5
TIY                               PP   sP       14 38 09.0 -0.6
TIY                               S    S        14 41 31.5 -2.0
TIY                               sS   sS       14 41 50.8 -8.7
TIY                               SS   SnSn     14 42 06.1 +6.2
TIY                               pmax pmax
      comp=Z,130nm,3.7s
TIY                               LR   LR
      comp=N,160nm,6.5s
TIY                               LR   LR
      comp=E,140nm,5.0s
TIY                               LR   LR
      comp=Z,160nm,6.6s
PALK  Pallekele       20.92 219   P    P        14 37 46.7 +1.9
      comp=Z,5.0nm,0.6s,baz=120,slow=14,SNR=5.4
PALK                              S    S        14 41 28.1 -5.9
      comp=Z,3.9nm,0.5s,baz=217,slow=19,SNR=5.6
PALK                              LR   LR       14 45 58.9
      comp=Z,230nm,21.9s,baz=142,slow=37
TSI   Tuntungan       20.95 167   P    P        14 37 45.5 +0.5
      comp=Z,163nm,1.1s
THW   Thamme Wali     21.27 299   P    P        14 37 48.8 +0.4
BTO   Baotou          21.36  36 eP     P        14 37 47.8 -1.6
CEP   Cherat          21.48 302   P    P        14 37 49.9 -0.9
KSH   Kashi           21.57 320   P    P        14 37 53.1 +1.4
KSH                               pP   pP       14 38 06.3 -1.0
KSH                               S    S        14 41 42.3 -4.5
KSH                               pmax pmax
      comp=Z,12nm,0.9s
KSH                               pmax pmax
      comp=Z,390nm,3.1s
PSI   Prapat          21.70 166   P    P        14 37 54.2 +1.0
      comp=Z,35nm,0.6s,baz=360,slow=9.7,SNR=29
PSI                               LR   LR       14 47 46.5
      comp=Z,107nm,21.1s,baz=274,slow=40
HHC   Hu-ho-hao-te    22.37  37 eP     P        14 38 01.0 +0.8
HHC                               sP   pP       14 38 17.2 +1.3
HHC                               S    S        14 42 03.7 +2.5
HHC                               pmax pmax
      comp=Z,19nm,0.6s
HHC                               pmax pmax
      comp=Z,100nm,6.6s
HHC                               LR   LR
      comp=Z,330nm,12.8s
HHC                               LR   LR
      comp=Z,180nm,13.5s
HHC                               LR   LR
      comp=Z,390nm,18.0s
SHLS  Shalkode        22.44 332 eP     P        14 38 00.5 -0.4
      comp=Z,12nm,1.1s,baz=332
SHLS                            i S    S        14 42 02.7 +0.4
      baz=332
UZB   Uzynbulak       22.62 331 eP     P        14 38 04.4 +1.5
      baz=331
UZB                             eS     S        14 42 08.9 +3.5
      baz=331
SATY  Saty            22.83 330 eP     P        14 38 06.0 +0.9
      baz=330
SATY                            eS     S        14 42 11.8 +3.1
      baz=330
GSI   Gunungsitoli    22.91 170   P    P        14 38 07.8 +1.9
GSI                               IAmb IAmb     14 38 11.5
      comp=Z,70nm,1.0s
GSI   Gunungsitoli    22.91 170   P    P        14 38 06.9 +0.9
      comp=Z,1µmcomp=Z,72nm,1.1s
KPKS  Kokpek          23.03 331 eP     P        14 38 07.5 +0.5
      comp=Z,9.0nm,0.6s,baz=331
NJ2   Nanjing         23.42  65 eP     P        14 38 08.9 -1.8
NJ2                               sP   sP       14 38 33.0 -3.3
NJ2                               PP   PnPn     14 38 41.4 +0.7
NJ2                               S    S        14 42 16.0 -2.2
NJ2                               sS   Sn       14 42 37.5 -6.0
NJ2                               SS   SnSn     14 42 57.5 -3.6
NJ2                               pmax pmax
      comp=Z,17nm,0.6s
NJ2                               pmax pmax
      comp=Z,140nm,4.0s
NJ2                               LR   LR
      comp=Z,460nm,14.2s
NJ2                               LR   LR
      comp=Z,270nm,12.8s
NJ2                               LR   LR
      comp=Z,370nm,17.1s
TIA   Tai'an          23.42  54   P    P        14 38 08.4 -2.3
TIA                               S    S        14 42 09.2 -9.0
TIA                               pmax pmax
      comp=Z,10.0nm,0.8s
TNSS  Tian-Shan       23.51 328 eP     P        14 38 13.5 +1.7
      baz=327
MDOK  Medeo           23.55 328 eP     P        14 38 13.8 +1.8
      baz=328
AAA   Alma-Ata        23.65 328 eP     P        14 38 14.6 +1.8
      comp=Z,24nm,0.9s,baz=328
MNSI  Mandailing Nat  23.79 166   P    P        14 38 13.3 -0.8
      comp=Z,22nm,0.6s
MTBS  Maitube         23.83 327 eP     P        14 38 16.4 +2.0
      baz=327
KBL   Kabul           23.96 301   P    P        14 38 17.6 +1.8
TKM2  Tokmak 2        24.10 326   P    P        14 38 20.1 +3.2
      SNR=25
CHKK  Chushkaly       24.10 329 eP     P        14 38 18.1 +1.3
      baz=329
MYKOM Kota Tinggi     24.17 155   P    P        14 38 18.0 +0.5
MYKOM                             IAmb IAmb     14 38 21.8
      comp=Z,35nm,0.9s
UCH   Uchtor          24.20 323   P    P        14 38 21.3 +3.2
      SNR=20
KBK   Karagaybulak    24.25 324   P    P        14 38 21.5 +3.2
      SNR=16
TDK   Taldyqorghan    24.37 333 eP     P        14 38 20.4 +1.2
      baz=332
ZSN   Zaisan          24.41 345 eP     P        14 38 21.1 +1.6
      baz=345
KUU   Kurty           24.44 328 eP     P        14 38 21.0 +1.2
      baz=328
AAK   Ala-Archa       24.48 324   P    P        14 38 23.5 +3.1
      comp=Z,12nm,0.7s,baz=135,slow=6.2,SNR=49
AAK                               LR   LR       14 49 43.8
      comp=Z,160nm,20.1s,baz=117,slow=40
AAK   Ala-Archa       24.48 324   P    P        14 38 23.6 +3.3
      SNR=18
AAK   Ala-Archa       24.48 324   P    P        14 38 23.2 +2.8
MK31  Makanchi Array  24.50 341   P    P        14 38 22.0 +1.7
MKAR  Makanchi Array  24.50 341   P    P        14 38 22.2 +1.9
      comp=Z,12nm,0.6s,baz=151,slow=10,SNR=172
MKAR                              ScP  ScP      14 45 30.6 +1.4
      comp=Z,0.2nm,0.5s,baz=224,slow=5.1,SNR=2.0
MKAR  Makanchi Array  24.50 341   P    P        14 38 22.0 +1.7
AML   Almayashu       24.59 322   P    P        14 38 24.6 +3.0
      SNR=32
CHMS  Chumysh         24.60 325   P    P        14 38 23.7 +2.5
      SNR=14
MAKZ  Makanchi        24.61 340   P    P        14 38 22.9 +1.6
BJI   Beijing         24.63  44   P    P        14 38 22.4 +0.9
BJI                               pmax pmax
      comp=Z,5.0nm,0.7s
BJI                               pmax pmax
      comp=Z,75nm,5.1s
EKS2  Erkin-Say       24.89 323   P    P        14 38 27.2 +3.2
      SNR=44
USP   Ospenovka       24.91 325   P    P        14 38 26.6 +2.5
      SNR=25
SGDS  Sogindy         24.98 325 eP     P        14 38 27.0 +2.3
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      baz=325
PDSI  Padang          25.65 165   P    P        14 38 32.2 +1.2
SONM  Songino Array   25.73  20   P    P        14 38 32.3 +0.6
      comp=Z,36nm,0.8s,baz=198,slow=8.5,SNR=156
SONM                              ScP  ScP      14 45 33.3 +0.5
      comp=Z,1.3nm,0.7s,baz=199,slow=3.2,SNR=8.3
SONM                              LR   LR       14 50 00.3
      comp=Z,202nm,21.0s,baz=212,slow=39
SONM  Songino Array   25.73  20   P    P        14 38 32.7 +1.1
ULN   Ulaanbaatar     25.97  21   P    P        14 38 34.2 +0.4
BTLS  Baital          26.40 327 eP     P        14 38 38.2 +0.6
      baz=327
IUG   Iuzhnay         26.75 318 eP     P        14 38 43.0 +2.1
      comp=Z,10.0nm,0.7s,baz=318
KK31  Karatay Array   27.02 320   P    P        14 38 45.4 +2.2
KKAR  Karatay Array   27.02 320   P    P        14 38 45.4 +2.2
SEM   Semipalatinsk   28.34 342 eP     P        14 38 55.5 +0.4
      baz=341
KURBB Kurchatov Arra  29.05 340   P    P        14 39 02.9 +1.8
      comp=Z,9.2nm,0.7s,baz=154,slow=8.1,SNR=65
KURK  Kurchatov       29.11 340   P    P        14 39 02.9 +1.4
MDSI  Maura Dua       30.11 159   P    P        14 39 11.8 +1.0
      comp=Z,11nm,0.7s
ZAA0  Zalesovo Array  30.60 350   P    P        14 39 16.5 +1.7
ZAA0                              IAmb IAmb     14 39 17.9
      comp=Z,10nm,0.7s
ZALV  Zalesovo Beam   30.60 350   P    P        14 39 16.4 +1.6
      comp=Z,7.5nm,0.4s,baz=172,slow=8.4,SNR=56
ZALV                              ScP  ScP      14 45 47.8 +0.2
      comp=Z,0.7nm,0.4s,baz=174,slow=5.3,SNR=3.7
ZALV                              LR   LR       14 53 38.2
      comp=Z,71nm,18.8s,baz=176,slow=40
BRZS  Berezniki       30.69 333 eP     P        14 39 17.3 +1.7
      comp=Z,7.5nm,1.0s,baz=333
KSRS  Korea Array     31.99  57   LR   LR       14 53 56.4
      comp=Z,129nm,19.4s,baz=244,slow=39
GEYT  Alibeck         33.39 303   P    P        14 39 41.3 +1.8
      comp=Z,2.9nm,0.8s,baz=108,slow=3.3,SNR=6.2
GEYT                              LR   LR       14 55 19.8
      comp=Z,68nm,20.7s,baz=225,slow=40
JNU   Nakatsue        33.60  66   LR   LR       14 53 24.6
      comp=Z,123nm,19.9s,baz=262,slow=36
BRVK  Borovoye        34.00 334   P    P        14 39 46.2 +1.7
BBKI  Banjar Baru     34.15 140   P    P        14 39 47.0 +0.8
      comp=Z,6µmcomp=Z,30nm,1.1s
ABKAR Akbulak array   36.54 322   P    P        14 40 08.7 +2.3
ABKAR                             IAmb IAmb     14 40 27.0
      comp=Z,7.6nm,0.8s
ABKAR Akbulak array   36.54 322   P    P        14 40 08.5 +2.1
USRK  Ussuriysk Ar.   36.98  48   P    P        14 40 08.3 -1.9
      comp=Z,1.5nm,0.8s,baz=263,slow=7.5,SNR=4.1
USRK                              LR   LR       14 56 26.7
      comp=Z,82nm,19.3s,baz=188,slow=38
AKTO  Aktyubinsk      38.22 323   P    P        14 40 22.1 +1.6
      comp=Z,4.6nm,0.6s,baz=115,slow=8.4,SNR=19
AKTO                              LR   LR       14 58 00.8
      comp=Z,116nm,18.3s,baz=123,slow=39
KLR   Kul'dur         38.83  40   P    P        14 40 25.4 -0.3
      comp=Z,2.2nm,0.6s,baz=265,slow=8.9,SNR=12
MAT   Matsushiro      39.94  61   P    P        14 40 33.3 -1.9
MJAR  Matsushiro Arr  39.94  61   P    P        14 40 33.8 -1.4
      comp=Z,1.0nm,0.5s,baz=89,slow=14,SNR=4.2
MJAR                              LR   LR       15 00 08.8
      comp=Z,72nm,18.2s,baz=285,slow=41
PLAI  Plampang        40.19 142   P    P        14 40 38.0 +0.7
      comp=Z,27nm,0.6s
ARU   Arti            41.26 331   P    P        14 40 47.3 +1.5
      comp=Z,3.1nm,0.5s,baz=135,slow=7.6,SNR=14
ARU                               LR   LR       15 00 07.4
      comp=Z,149nm,18.2s,baz=156,slow=39
ARU   Arti            41.26 331   P    P        14 40 47.0 +1.2
ARU                               IAmb IAmb     14 40 48.2
      comp=Z,8.8nm,0.5s
ASAJ  Asahikawa       44.32  51   P    P        14 41 09.8 -0.8
      comp=Z,2.9nm,0.8s,baz=309,slow=34,SNR=3.3
BATI  Baumata         44.82 136   P    P        14 41 13.6 -1.4
      comp=Z,16nm,0.4s,baz=66,slow=1.5,SNR=4.6
SOEI  Soe             44.87 135   P    P        14 41 14.4 -1.0
SOEI  Soe             44.87 135   P    P        14 41 15.7 +0.3
      comp=Z,33nm,1.2s
YAK   Yakutsk         45.01  23   P    P        14 41 15.3 -0.5
      comp=Z,23nm,0.7s,baz=212,slow=2.1,SNR=22
YAK   Yakutsk         45.01  23   P    P        14 41 15.1 -0.7
NRIK  Noril'sk        45.45 357   P    P        14 41 19.6 +0.4
      comp=Z,5.7nm,0.8s,baz=157,slow=5.8,SNR=13
KBZ   Khabaz          45.83 308   P    P        14 41 24.2 +1.6
      comp=Z,2.1nm,0.8s,baz=113,slow=7.4,SNR=3.7
KBZ                               LR   LR       15 02 49.1
      comp=Z,60nm,19.2s,baz=84,slow=39
TIXI  Tiksi           51.56  13   P    P        14 42 06.5 +0.4
TIXI                              IAmb IAmb     14 42 09.2
      comp=Z,7.9nm,0.8s
PSA00 Pilbara Seismi  51.94 149   P    P        14 42 09.4 -0.1
KLMR  Klimovskoe      52.08 330 eP     P        14 42 10.5 +0.4
KLMR                              AMP           14 42 12.2
      comp=Z,10.0nm,0.7s
FITZ  Fitzroy Crossi  52.14 141   P    P        14 42 10.6 -0.5
      comp=Z,2.7nm,0.4s,baz=341,slow=5.7,SNR=37
FITZ  Fitzroy Crossi  52.14 141   P    P        14 42 10.9 -0.1
FITZ                              IAmb IAmb     14 42 12.9
      comp=Z,9.2nm,1.1s
BRTR  Keskin Array B  52.53 303   LR   LR       15 10 21.7
      comp=Z,32nm,18.2s,baz=98,slow=42
MA2   Magadan         52.92  32   P    P        14 42 16.0 -0.4
      comp=Z,9.5nm,0.8s,baz=257,slow=7.0,SNR=8.2
SEY   Seymchan        54.63  29   P    P        14 42 28.6 -0.2
      comp=Z,1.6nm,0.6s,baz=286,slow=6.1,SNR=4.2
PETK  Petropavlovsk-  55.50  41   P    P        14 42 33.8 -1.5
      comp=Z,4.4nm,0.9s,baz=276,slow=3.1,SNR=6.8
PETK                              LR   LR       15 09 08.7
      comp=Z,69nm,18.6s,baz=266,slow=39
AKASG Malin Array Be  55.80 316   P    P        14 42 37.9 +0.5
      comp=Z,1.8nm,0.4s,baz=81,slow=6.6,SNR=5.4
AKASG                             pP   pP       14 42 55.8 -0.9
      comp=Z,1.5nm,0.4s,baz=75,slow=7.4,SNR=3.4
AKASG                             LR   LR       15 10 01.6
      comp=Z,69nm,19.0s,baz=20,slow=40
SORM  Soroca          56.29 313 ⇑P     pP       14 43 00.9 +0.6
TLBR  Topalu          56.54 309 ⇓P     pP       14 43 00.7 -1.5
MNK   Minsk           56.87 320 i P    P        14 42 43.9 -1.1
      comp=E,3.0nm,1.4s
MNK                             i P    P        14 42 43.9 -1.1
      comp=N,18nm,1.0s
MNK                             i P    P        14 42 43.9 -1.1
      comp=Z,14nm,0.8s
MNK                             i pP   pP       14 43 01.9 -2.5
MNK                             i PcP  PcP      14 43 38.0 -1.7
MNK                             i PP   PP       14 44 51.2 -0.6
MNK                             i PPP  PPP      14 46 08.1
MNK                             i S    S        14 50 32.9 +0.1
MNK                             i sS   sS       14 51 05.0 -0.7
MNK                             i ScS  ScS      14 52 26.5 -0.7
MNK                             i SS   SS       14 54 24.7 +3.0
MNK                             i SSS  SSS      14 56 51.6
MNK                             i LQ   LQ       15 03 17.4
MNK                             i LR   LR       15 07 38.0
MNK                             i LRM  MLR      15 10 36.1
      comp=Z,148nm,17.2s
MNK                             i LRM  MLR      15 10 38.3
      comp=N,88nm,14.3s
MNK                             i LRM  MLR      15 10 41.8
      comp=E,7.0nm,13.7s
VRI   Vrincioaia      57.42 310 ⇓P     P        14 42 51.6 +2.5
PLOR  Plostina        57.48 310 ⇑P     P        14 42 52.2 +2.7
NACGM Naroch          57.54 321 i P    P        14 42 50.3 +0.7
NACGM                           i P    P        14 42 50.3 +0.7
NACGM                           i P    P        14 42 50.3 +0.7
NACGM                           i PP   PP       14 44 46.2  -12
NACGM                           i PPP  PPP      14 46 09.6
NACGM                           i S    S        14 50 33.9 -7.6
NACGM                           i sS   sS       14 51 20.8 +6.2
NACGM                           i SS   SS       14 54 19.0  -13
NACGM                           i SSS  SSS      14 56 36.8
BIZ   Bicaz           57.82 311 ⇓P     P        14 42 53.4 +1.6
MLR   Muntele Rosu    57.99 310   P    P        14 42 55.3 +2.1
      comp=E,11nm,0.8s,baz=266,slow=1.6,SNR=11
MLR   Muntele Rosu    57.99 310 ⇑P     P        14 42 55.0 +1.8
DOPR  Dopca           58.35 310 ⇓P     P        14 42 59.0 +3.4
BURAR Bucovina Array  58.40 312 ⇑P     P        14 42 56.9 +1.0
BURAR Bucovina Array  58.40 312   P    P        14 42 56.5 +0.5
FINES FINESS Array B  58.55 329   P    P        14 42 58.0 +1.4
      comp=E,3.4nm,0.7s,baz=95,slow=6.2,SNR=9.1
FINES                             pP   pP       14 43 17.4 +1.3
      comp=E,3.4nm,0.6s,baz=100,slow=6.2,SNR=3.1
FINES                             LR   LR       15 11 15.7
      comp=E,161nm,18.9s,baz=107,slow=39
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VOIR                  58.62 310 ⇑P     P        14 42 58.4 +0.9
WB0   Warramunga Arr  58.81 134   P    P        14 42 58.7 -0.3
WRA   Warramunga Arr  58.90 134   P    P        14 42 59.4 -0.2
      comp=E,19nm,0.6s,baz=324,slow=7.4,SNR=350
WRA   Warramunga Arr  58.90 134   P    P        14 42 59.2 -0.5
WRAB  Tennant Creek   58.90 134   P    P        14 42 57.2 -2.4
WB2   Warramunga Arr  58.91 134   P    P        14 42 59.5 -0.1
ARR   Arges           58.92 310 ⇓P     P        14 42 55.2 -4.3
WR0   Warramunga Arr  59.05 134   P    P        14 43 00.3 -0.4
KWP   Kalwaria Pacla  59.99 315 eP     P        14 43 09.0 +2.2
ARCES ARCESS Array B  60.12 338   P    P        14 43 09.1 +1.8
      comp=E,2.8nm,0.6s,baz=96,slow=7.4,SNR=6.4
DRGR                  60.15 311 ⇑P     P        14 43 09.7 +1.7
VTS   Vitosha         60.16 307 ⇑P     P        14 43 10.4 +2.1
GZR   Gura Zlata      60.22 310 ⇓P     P        14 43 10.5 +2.0
KOLS  Kolonicke sedl  60.31 314 eP     P        14 43 12.9 +3.9
HERR  Herculane       60.52 309 ⇓P     P        14 43 12.4 +1.9
CRVS  Cervenica-Dubn  60.84 314 eP     P        14 43 15.8 +3.2
NWAO  Narrogin (SRO)  60.91 158   P    P        14 43 12.9 -0.2
      comp=E,2.3nm,0.2s,baz=144,slow=1.6,SNR=11
MDVR  Moldovita       61.03 309 ⇓P     P        14 43 15.7 +1.7
AS31  Alice Springs   61.34 138   P    P        14 43 15.9 -0.3
AS31                              IAmb IAmb     14 43 17.6
      comp=Z,5.8nm,0.5s
ASAR  Alice Springs   61.34 138   P    P        14 43 16.3  0.0
      comp=Z,12nm,0.5s,baz=320,slow=6.9,SNR=534
ASAR                              pP   pP       14 43 35.2 -0.4
      comp=Z,4.0nm,0.7s,baz=319,slow=6.7,SNR=4.0
ASAR  Alice Springs   61.34 138   P    P        14 43 15.7 -0.6
NIE   Niedzica        61.57 315 eP     P        14 43 20.3 +2.8
NIE                             esP    pP       14 43 39.1 +2.0
MORH  Mrgy, Hungar    63.01 311 ⇓P     P        14 43 23.6 -3.5
MORC  Moravsky Berou  63.32 315 ⇓P     P        14 43 30.3 +1.1
VRAC  Vranov          63.99 315   P    P        14 43 34.4 +0.8
      comp=Z,6.6nm,0.8s,baz=114,slow=3.9,SNR=6.7
VRAC                              pP   pP       14 43 54.5 +1.2
      comp=Z,9.1nm,0.7s,baz=97,slow=5.2,SNR=6.2
DPC   Dobruska-Polom  64.03 316 eP     P        14 43 35.3 +1.4
DPC                             epP    pP       14 43 53.4 -0.3
HFS   Hagfors         64.58 327   P    P        14 43 38.4 +1.2
      comp=Z,3.8nm,0.6s,baz=129,slow=4.0,SNR=10
HFS                               pP   pP       14 43 57.5 +0.5
      comp=Z,6.9nm,0.6s,baz=79,slow=7.9,SNR=6.2
NB2   NORSAR Subarra  65.72 328   P    P        14 43 45.3 +0.7
      comp=Z,6.6nm,1.2s,baz=90,slow=6.2
NOA   NORSAR Array B  65.72 328   P    P        14 43 45.6 +0.9
      comp=Z,1.6nm,0.6s,baz=85,slow=6.3,SNR=8.7
NOA                               pP   pP       14 44 04.5 +0.1
      comp=Z,2.7nm,0.8s,baz=89,slow=6.1,SNR=5.3
NOA                               LR   LR       15 13 15.4
      comp=Z,46nm,20.3s,baz=15,slow=37
GERES GERESS Array B  65.94 315   P    P        14 43 48.0 +1.7
      comp=Z,3.5nm,0.6s,baz=77,slow=6.0,SNR=26
GERES                             pP   pP       14 44 06.8 +0.6
      comp=Z,5.0nm,0.8s,baz=79,slow=6.9,SNR=11
GERES                             LR   LR       15 18 35.9
      comp=Z,61nm,18.4s,baz=61,slow=41
GERES GERESS Array B  65.94 315   P    P        14 43 47.7 +1.4
KHC   Kasperske Hory  65.97 315 eP     P        14 43 47.1 +0.6
KHC                             epP    pP       14 44 03.5 -2.8
CLL   Collm           65.99 317 eP     P        14 43 47.0 +0.5
DAVOX Davos/Dischmat  68.86 313   P    P        14 44 06.1 +1.1
      comp=Z,2.2nm,0.4s,baz=102,slow=9.1,SNR=5.5
DAVOX                             pP   pP       14 44 24.9  0.0
      comp=Z,2.7nm,0.6s,baz=103,slow=12,SNR=3.4
STKA  Stephens Creek  71.95 139   P    P        14 44 23.2 -0.5
      comp=Z,2.2nm,0.4s,baz=326,slow=5.8,SNR=16
STKA  Stephens Creek  71.95 139   P    P        14 44 23.4 -0.2
KEST  Kesra           72.12 302   P    P        14 44 27.1 +2.2
      comp=Z,4.9nm,0.7s,baz=288,slow=6.4,SNR=5.2
KEST                              pP   pP       14 44 45.1 +0.1
      comp=Z,14nm,1.1s,baz=355,slow=6.6,SNR=5.2
ANM   Nome            73.03  26   P    P        14 44 30.9 +1.3
EKA   Eskdalemuir Ar  74.39 324   P    P        14 44 38.3 +0.5
      comp=Z,0.5nm,0.4s,baz=74,slow=6.2,SNR=6.6
EKA                               pP   pP       14 44 58.8 +0.8
      comp=Z,4.9nm,0.8s,baz=72,slow=6.9,SNR=8.4
EUNU  Eureka          76.09   0   P    P        14 44 49.4 +2.2
EUNU                              IAmb IAmb     14 45 04.6
      comp=Z,6.4nm,0.6s
TOLK  Toolik Lake Re  76.85  20   P    P        14 44 53.1 +1.4
TOLK                              IAmb IAmb     14 44 54.4
      comp=Z,7.9nm,0.7s
IMAR  Indian Mountai  76.86  23   P    P        14 44 52.5 +0.9
COLD  Coldfoot        77.42  21   P    P        14 44 55.6 +0.8
BMAR  Burnt Mountain  79.09  20   P    P        14 45 06.7 +2.6
MDM   Murphy Dome     79.35  22   P    P        14 45 06.7 +1.2
MDM                               IAmb IAmb     14 45 07.9
      comp=Z,15nm,0.8s
SKT   Skwentna        79.77  26   P    P        14 45 08.7 +0.8
SKT                               IAmb IAmb     14 45 09.0
      comp=Z,7.3nm,0.8s
IL31                  79.93  22   P    P        14 45 08.5  0.0
ILAR  Eielson Array   79.93  22   P    P        14 45 08.6  0.0
      comp=Z,3.2nm,0.7s,baz=300,slow=4.9,SNR=38
ILAR                              pP   pP       14 45 28.4 -0.6
      comp=Z,2.0nm,1.0s,baz=294,slow=11,SNR=4.2
ILAR                              PP   PP       14 48 10.8 +0.3
      comp=Z,0.6nm,0.7s,baz=300,slow=7.1,SNR=4.8
ILAR                              LR   LR       15 24 31.9
      comp=Z,40nm,18.4s,baz=284,slow=39
ILAR  Eielson Array   79.93  22   P    P        14 45 08.4 -0.2
ESDC  Sonseca Array   80.68 309   P    P        14 45 14.0 +0.8
      comp=Z,0.9nm,0.9s,baz=54,slow=9.6,SNR=5.0
ESDC                              pP   pP       14 45 33.7 +0.1
      comp=Z,3.1nm,1.1s,baz=63,slow=4.3,SNR=6.2
RIDG  Independent Ri  81.26  23   P    P        14 45 14.9 -0.9
RIDG                              IAmb IAmb     14 45 18.2
      comp=Z,12nm,0.8s
INK   Inuvik          81.59  16   P    P        14 45 18.5 +1.2
      comp=Z,6.9nm,0.5s
INK   Inuvik          81.59  16   P    P        14 45 18.4 +1.0
INK                               IAmb IAmb     14 45 19.3
      comp=Z,8.5nm,0.9s
EGAK  Eagle           81.85  21   P    P        14 45 19.1 +0.3
MENT  Mentasta        82.16  23   P    P        14 45 22.3 +1.7
MENT                              IAmb IAmb     14 45 28.4
      comp=Z,6.4nm,0.8s
KLU   Klutina         82.24  25   P    P        14 45 22.5 +1.5
KLU                               IAmb IAmb     14 45 23.2
      comp=Z,12nm,0.7s
N25K  Chitina, Valde  82.67  24   P    P        14 45 25.2 +1.9
N25K                              IAmb IAmb     14 45 25.8
      comp=Z,12nm,0.7s
BCAR  Beaver Creek A  82.76  22   P    P        14 45 25.4 +1.7
C36M  Paulatuk        82.92  13   P    P        14 45 24.9 +0.6
C36M                              IAmb IAmb     14 45 25.7
      comp=Z,12nm,0.8s
TGL   Tana Glacier    83.88  24   P    P        14 45 31.0 +1.4
BOSA  Boshof          84.25 235   P    P        14 45 33.5 +1.6
      comp=Z,3.0nm,0.5s,baz=50,slow=3.2,SNR=13
BOSA                              pP   pP       14 45 54.3 +1.7
      comp=Z,4.8nm,0.6s,baz=92,slow=3.9,SNR=4.6
BOSA                              LR   LR       15 21 45.3
      comp=Z,33nm,18.1s,baz=19,slow=35
BOSA  Boshof          84.25 235   P    P        14 45 32.5 +0.5
BOSA                              IAmb IAmb     14 45 34.6
      comp=Z,6.9nm,1.0s
TORD  Torodi Ar. Bea  86.66 283   P    P        14 45 46.2 +2.1
      comp=Z,1.5nm,0.8s,baz=46,slow=8.4,SNR=2.8
TORD                              pP   pP       14 46 05.2 +0.4
      comp=Z,3.2nm,1.0s,baz=41,slow=4.9,SNR=4.4
YKA   Yellowknife Ar  90.80  13   P    P        14 46 02.6 -0.1
      comp=Z,0.8nm,0.7s,baz=334,slow=4.1,SNR=15
YKA                               pP   pP       14 46 22.6 -1.0
      comp=Z,0.3nm,0.5s,baz=344,slow=4.7,SNR=3.3
YKA                               PP   PP       14 49 37.1 -1.3
      comp=Z,0.5nm,0.8s,baz=337,slow=7.6,SNR=4.7
KOWA  Kowa            91.16 286   P    P        14 46 07.4 +2.1
      comp=Z,1.2nm,0.7s,baz=58,slow=5.0,SNR=5.4
TXAR  Lajitas Array  124.30  19   PKP  PKiKP    14 51 59.7 +0.4
      comp=Z,0.6nm,0.5s,baz=51,slow=9.9,SNR=3.7
TXAR                              pPKP pPKPdf   14 52 19.8 -0.9
      comp=Z,0.5nm,0.4s,baz=2.7,slow=3.8,SNR=3.2
SDV   Santo Domingo  143.91 333   PKP  PKPbc    14 52 34.3 +0.5
      comp=Z,17nm,0.4s,baz=90,slow=3.5,SNR=25
SDV                               pPKP pPKPdf   14 52 55.4 -2.3
      comp=Z,11nm,0.6s,baz=36,slow=6.1,SNR=3.8
PTGA  Pitinga        145.62 309   PKPbc PKPab   14 52 40.0 +0.6
      comp=Z,2.1nm,0.4s,baz=305,slow=22,SNR=2.7
PTGA                              pPKPbc pPKPdf 14 53 00.2 -0.2
      comp=Z,2.1nm,0.3s,baz=175,slow=23,SNR=3.4
ROSC  El Rosal       149.04 337   PKPbc PKiKP   14 52 50.6 +0.3
      comp=Z,17nm,0.6s,baz=164,slow=20,SNR=4.4
ROSC                              pPKPbc pPKPbc 14 53 11.6 +1.1
      comp=Z,32nm,1.0s,baz=169,slow=6.8,SNR=3.5
```

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CPUP	Villa Florida	153.84	259	PKPbc	PKPbc	14 52 59.0	-0.3
	comp=Z,0.6nm,0.4s,baz=177,slow=7.1,SNR=3.4						
CPUP				pPKPbc	sPKPdf	14 53 19.6	-1.5
	comp=Z,1.9nm,0.6s,baz=53,slow=2.9,SNR=3.4						

IDC ***12*** *14:42:05.7±0.9, 38°.06N×144°.76E, h0^{km}, mb3.6/8, mb1 3.8/11, mb1mx3.6/58, mbtmp3.7/11, ML3.6/3, MS3.2/2, Ms1 3.2/2, ms1mx2.5/64, Error ellipse: s-maj=23.3km s-min=17.4km az=105.0*

NEIC ***12*** *14:42:07.6±1.6, 38°.15N±0°.09×144°.7E±0°.2, h19^{km}±6^{km}, mb4.3/4, Error ellipse: s-maj=23.5km s-min=11.7km az=109.0*

JMA ***12*** *14:42:10.2±0.1, 38°.22N×144°.51E, h44^{km}, M4.3*

NIED ***12*** *14:42:10.2, 38°.22N×144°.51E, h44^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-5.52; $M_{\theta\theta}$1.01; $M_{\phi\phi}$4.51; $M_{r\theta}$0.31; $M_{\theta\phi}$0.30; $M_{\phi r}$2.67; Fault plane solution: $M_0$5.70000×10^{14} NP1: ϕ_s186.00000°, δ59.00000°, λ-89.00000°. NP2: ϕ_s4.00000°, δ31.00000°, λ-91.00000°.*

ISC 12 14:42:10.6±0.8**, 38°.21N**±0°.05×**144°.64E**±0°.07**, h35^{km}, n52, σ1^{s}.94**/69**, mb3.7**/11**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OFUJ	Ofunato	2.48	291	P	Pn	14 42 48.2	-0.3
OFUJ				eS	Sn	14 43 16.2	-1.4
JIKH	Ishinomakikobu	2.50	273	P	Pn	14 42 48.0	-0.7
JIKH				S	Sn	14 43 16.1	-1.9
JKMT	Kesennumamotoy	2.55	285	P	Pn	14 42 48.9	-0.6
JKMT				S	Sn	14 43 17.8	-1.5
MIYJ	Miyakonagasawa	2.59	303	P	Pn	14 42 49.4	-0.6
MIYJ				S	Sn	14 43 19.1	-1.1
JIO	Ouri	2.60	276	P	Pn	14 42 49.6	-0.5
JIO				S	Sn	14 43 18.9	-1.5
JMK	Ichinoseki	2.78	287	P	Pn	14 42 52.5	-0.1
JMK				S	Sn	14 43 23.8	-1.1
JOM	Ohasama	2.90	297	P	Pn	14 42 54.3	0.0
JOM				S	Sn	14 43 27.4	-0.5
JMM	Marumori	3.05	265		Pn	14 42 55.6	-0.8
JANG	Nango	3.25	313	eS	Sn	14 43 35.2	-1.3
JYK	Kaneyama	3.43	283	P	Pn	14 43 02.1	+0.6
JYK				eS	Sn	14 43 41.1	+0.2
JFT	Otama	3.47	260	P	Pn	14 43 02.5	+0.3
JFT				S	Sn	14 43 41.5	-0.5
JTM	Tenmabayashi	3.78	314	Pn	Pn	14 43 07.3	+1.0
ERM	Erimo	3.97	344		Pn	14 43 08.6	-0.3
JYT	Yasato	4.06	242		Pn	14 43 08.9	-1.3
JOT	Ohata	4.21	320	P	Pn	14 43 11.8	-0.4
JOT				S	Sn	14 43 57.3	-2.8
JCH	Churui	4.51	348	P	Pn	14 43 14.6	-1.8
JCH				eS	Sn	14 44 05.1	-2.4
JKB	Kayabe	4.60	324	eS	Sn	14 44 06.7	-3.1
BSO1	Boso 1	4.61	221	P	Pn	14 43 16.1	-1.2
BSO1				eS	Sn	14 44 07.4	-2.0
JRY	Ryogami san	5.08	246	P	Pn	14 43 23.8	-0.4
JRY				S	Sn	14 44 17.6	-4.1
NEM2	Nemuro 2	5.22	9	P	Pn	14 43 23.1	-3.0
NEM2				eS	Sn	14 44 19.0	-6.0
JEW	Eniwo	5.23	333		Pn	14 43 23.9	-2.3
JOD2	Odawara 2	5.34	238	P	Pn	14 43 27.4	-0.4
JOD2				S	Sn	14 44 23.6	-4.5
MJAR	Matsushiro Arr	5.38	254	Pn	Pn	14 43 28.4	-0.1
	0.5nm,0.3s,baz=79,slow=15,SNR=17						
MJAR				Sn	Sn	14 44 29.9	+0.7
	0.2nm,0.3s,baz=303,slow=22,SNR=1.4						
MJAR				LR	LR	14 45 50.4	
	comp=Z,95nm,21.0s,baz=70,slow=42						
MJAR	Matsushiro Arr	5.38	254		Pn	14 43 28.5	+0.1
MAJO	Matsushiro	5.38	254		Pn	14 43 27.6	-0.8
MAT	Matsushiro	5.38	254	P	Pn	14 43 29.5	+1.1
MAT				eS	Sn	14 44 28.3	-0.9
JOSM	Okushiri--Mats	5.53	316	P	Pn	14 43 31.3	+0.9
JTKR	Abashiri--Toko	5.78	355	P	Pn	14 43 32.4	-1.5
JTKR				eS	Sn	14 44 34.4	-4.5
JKA	Kamikawa-asahi	6.10	346		Pn	14 43 37.9	-0.3
ASAJ	Asahikawa	6.10	346	Pn	Pn	14 43 38.1	-0.1
	1.7nm,0.3s,baz=186,slow=12,SNR=25						
ASAJ				Sn	Sn	14 44 44.5	-2.3
	1.2nm,0.3s,baz=127,slow=28,SNR=4.6						
JGF	Kuroka	6.39	248	Pn	Pn	14 43 41.0	-1.3
JHJ	Hachijo jima 2	6.43	219	Pn	Pn	14 43 41.5	-1.3
	6.1nm,0.3s,baz=21,slow=14,SNR=1.3						
JHJ				Sn	Sn	14 44 48.0	-7.0
	12nm,0.3s,baz=185,slow=20,SNR=1.6						
JWT	Wachi	7.97	251	Pn	Pn	14 44 05.0	+1.1
KLR	Kul'dur	14.41	324	Pn	P	14 45 38.8	+0.5
	0.1nm,0.3s,baz=128,slow=9.4,SNR=4.9						
YULB	Yu-li	24.80	240	P	P	14 47 27.9	-1.5
YULB				IAmb	IAmb	14 47 36.2	
	comp=Z,38nm,1.5s						
SEY	Seymchan	25.20	8	P	P	14 47 34.0	+1.4
	comp=Z,1.8nm,0.8s,baz=138,slow=15,SNR=7.1						
H11N2	WAKE ISLAND Hy	26.68	127	T	T	15 15 29.8	
	baz=319,slow=75,SNR=3.7						
H11N1	WAKE ISLAND Hy	26.69	127	T	T	15 15 26.9	
	baz=319,slow=75,SNR=6.7						
H11N3	WAKE ISLAND Hy	26.70	127	T	T	15 15 26.9	
	baz=319,slow=75,SNR=5.6						
SONM	Songino Array	29.30	302	P	P	14 48 11.4	+1.7
	comp=Z,0.3nm,0.6s,baz=88,slow=8.8,SNR=2.2						
ZALV	Zalesovo Beam	43.03	312	P	P	14 50 08.2	+1.6
	comp=Z,0.8nm,0.3s,baz=61,slow=9.2,SNR=4.6						
MK31	Makanchi Array	45.67	302	P	P	14 50 27.9	+0.1
MK31				IAmb	IAmb	14 50 30.1	
	comp=Z,0.9nm,0.8s						
MKAR	Makanchi Array	45.67	302	P	P	14 50 29.4	+1.5
	comp=Z,0.9nm,0.7s,baz=86,slow=9.2,SNR=10						
MKAR	Makanchi Array	45.67	302	P	P	14 50 28.4	+0.5
KAPI	Kappang	48.82	214	LR	LR	15 10 28.7	
	comp=Z,59nm,19.5s,baz=59,slow=35						
WRA	Warramunga Arr	58.64	191	P	P	14 52 03.0	-1.3
	comp=Z,0.5nm,0.5s,baz=8.7,slow=7.1,SNR=8.1						
WRA	Warramunga Arr	58.64	191	P	P	14 52 02.9	-1.5
ABKAR	Akbulak array	59.13	311	P	P	14 52 08.8	+1.3
ABKAR				IAmb	IAmb	14 52 14.0	
	comp=Z,4.1nm,1.4s						
ABKAR	Akbulak array	59.13	311	P	P	14 52 08.0	+0.5
YKA	Yellowknife Ar	61.49	31	P	P	14 52 23.3	-0.1
	comp=Z,0.2nm,0.6s,baz=315,slow=6.9,SNR=4.4						
ASAR	Alice Springs	62.37	191	P	P	14 52 28.9	-0.8
	comp=Z,0.4nm,0.7s,baz=8.8,slow=7.2,SNR=7.5						
ASAR				PcP	PcP	14 53 09.9	+0.9
	comp=Z,0.3nm,0.6s,baz=5.3,slow=5.4,SNR=4.8						
NVAR	Mina Array Bea	72.23	55	P	P	14 53 34.2	+1.8
	comp=Z,0.2nm,0.7s,baz=300,slow=7.2,SNR=2.1						

NEIC ***12*** *14:56:11.0±1.8, 43°.15N±0°.08×126°.8W±0°.1, h10^{km}±2^{km}, ML3.0/34, Error ellipse: s-maj=15.9km s-min=12.1km az=240.0*

ANF ***12*** *14:56:12.4±1.3, 43°.17N×126°.50W, h5^{km}, ML3.2/10, Error ellipse: s-maj=12.9km s-min=8.6km az=72.0*

IDC ***12*** *14:56:12.1±2.4, 43°.52N×126°.29W, h0^{km}, mb2.8/2, mb1 3.3/5, mb1mx3.2/51, mbtmp2.9/5, ML3.1/3, MS3.1/3, Ms1 3.1/3, ms1mx2.7/15, Error ellipse: s-maj=49.4km s-min=16.2km az=50.0*

ISC 12 14:56:11.5±1.6**, 43°.15N**±0°.05×**126°.62W**±0°.08**, h14^{km}, n57, σ1^{s}.49**/57**, Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KEBM	Edson Butte	1.70	99		Pn	14 56 40.6	-0.2
KEBM				Sn	Sb	14 57 03.7	-0.1
KEBM				IAML		14 57 04.1	
	comp=E,165nm,0.7s						
KEBM				IAML		14 57 11.8	
	comp=N,108nm,0.8s						
J01E	Myrtle Point	1.97	89	P	Pn	14 56 44.2	-0.2
	baz=271,SNR=30						
J01E				S	Sb	14 57 09.7	-1.7
	baz=271						
KBO	Bosley Butte	2.00	117	Pn	Pn	14 56 45.2	+0.3
KBO				IAML		14 57 29.9	
	comp=N,98nm,2.9s						
KBO				IAML		14 57 33.1	
	comp=E,93nm,3.1s						
K02D	Willamette Mer	2.22	101	P	Pn	14 56 48.1	+0.1
	baz=284,SNR=62						
K02D				S	Sn	14 57 15.9	+0.7
	baz=284						
I02D	Swisshome	2.23	64	P	Pn	14 56 47.9	-0.2
	baz=245,SNR=21						
I02D				S	Sb	14 57 16.6	-2.4
	baz=245						
L02E	Cave Junction	2.44	113	P	Pn	14 56 51.6	+0.7
	baz=296,SNR=15						
L02E				S	Sb	14 57 22.3	-2.6
	baz=296						
I03D	Drain, OR	2.44	76	P	Pn	14 56 51.3	+0.3
	baz=258,SNR=58						
I03D				S	Sn	14 57 21.4	+0.8
	baz=258						
KRMB	Red Mountain	2.58	128	Pn	Pn	14 56 53.8	+0.8
HUMO	Hull Mountain	2.75	100	Pn	Pn	14 56 55.9	+0.7
COR	Corvallis	2.80	58		Pn	14 56 56.4	+0.6
COR				IAML		14 58 02.8	
	comp=E,47nm,4.0s						
COR				IAML		14 58 29.3	
	comp=E,54nm,5.0s						
H04D	Lebanon	3.13	63	P	Pn	14 57 01.5	+1.1
	baz=245,SNR=12						
KHMM	Horse Mountain	3.13	136	Pn	Pn	14 57 00.5	-0.1
KHMM				IAML		14 58 37.3	
	comp=E,30nm,4.9s						
KHMM				IAML		14 59 00.4	
	comp=N,29nm,4.7s						
I04A	Tendick Farm,	3.13	77	P	Pn	14 57 01.6	+1.2
	baz=260,SNR=50						
I04A				S	Sn	14 57 39.3	+1.7
	baz=260						
G03D	McMinnville, O	3.18	48	P	Pn	14 57 01.5	+0.4
	baz=230,SNR=20						
G03D				S	Sn	14 57 39.4	+0.7
	baz=230						
YBH	Yreka Blue Hor	3.22	115	Pn	Pn	14 57 03.7	+1.9
	comp=N,0.4nm,0.3s,baz=294,slow=13,SNR=9.5						
YBH				Sn	Sb	14 57 43.4	-4.2
	comp=N,0.5nm,0.3s,baz=117,slow=17,SNR=4.3						
YBH	Yreka Blue Hor	3.22	115	Pn	Pn	14 57 03.8	+2.0
J04D	Umpqua Nationa	3.30	87	P	Pn	14 57 05.0	+2.0
	baz=270,SNR=16						
L04D	Klamath Falls	3.31	105	P	Pn	14 57 05.0	+2.0
	baz=288,SNR=18						
H04A	Detroit Lake	3.55	63	Pn	Pn	14 57 07.8	+1.6
H04A				IAML		14 57 55.6	
	comp=E,28nm,0.6s						
H04A				IAML		14 57 57.1	
	comp=N,32nm,0.4s						
J05D	Fort Rock, OR	3.94	86	P	Pn	14 57 12.7	+1.0
	baz=270,SNR=14						
I05D	Terrebonne, OR	4.01	71	P	Pn	14 57 13.7	+1.1
	baz=254,SNR=7.9						
E03A	Lebam	4.03	32	Pn	Pn	14 57 11.7	-1.1
PINE	Pine Mountain	4.18	79	Pn	Pn	14 57 16.7	+1.6
PINE				IAML		14 58 06.7	
	comp=E,19nm,4.6s						
PINE				IAML		14 59 01.7	
	comp=N,18nm,4.9s						
K05A	Summer Lake	4.22	94	Pn	Pn	14 57 17.6	+1.9
K05A				IAML		14 58 29.9	
	comp=E,20nm,3.7s						
K05A				IAML		14 59 40.4	
	comp=N,17nm,4.8s						
G05D	Wamic, OR	4.35	59	P	Pn	14 57 18.4	+1.2
	baz=243						
E04D	Cinebar	4.46	39	P	Pn	14 57 19.8	+1.1
	baz=221,SNR=20						
F05D	White Salmon	4.59	52	P	Pn	14 57 22.0	+1.5
	baz=235,SNR=17						
NLWA	Neilton Lookou	4.67	24	Pn	Pn	14 57 22.3	+0.7
LON	Longmire	4.96	42		Pn	14 57 27.4	+1.8
LON				IAML		14 58 33.2	
	comp=E,14nm,4.8s						
LON				IAML		14 58 40.0	
	comp=N,14nm,2.6s						
D05A	Enumclaw	5.20	37	Pn	Pn	14 57 29.8	+1.0
I07A	Izee	5.25	77	Pn	Pn	14 57 31.2	+1.5
ORV	Oroville	5.26	131	Pn	Pn	14 57 32.5	+2.7
F07A	Phinny Hill Vi	5.52	58		Pn	14 57 34.1	+0.9
LTY	Liberty	5.88	44		Pn	14 57 40.2	+2.0
E07A	Sunnyside	5.89	52	Pn	Pn	14 57 40.2	+1.7
G08A	Pilot Rock	5.91	66		Pn	14 57 40.4	+1.7
PGC	Sidney	5.93	21	Pn	Pn	14 57 38.8	-0.1
HAWA	Hanford	6.00	55	Pn	Pn	14 57 41.0	+1.2
PNTR	Pine Nut	6.67	125	Pn	Pn	14 57 50.5	+1.2
D08A	Wollman Farm,	6.70	52	Pn	Pn	14 57 49.6	+0.1
BMO	Blue Mountains	6.93	73		Pn	14 57 54.4	+1.6
F10A	Beach Ranch, E	7.28	64	Pn	Pn	14 57 59.5	+2.0
B08A	Colville Reser	7.29	42	Pn	Pn	14 57 57.6	+0.1
C09A	Chrisman Ranch	7.49	49	Pn	Pn	14 58 01.9	+1.7
NVAR	Mina Array Bea	7.87	124	Pn	Pn	14 58 10.9	+5.1
	comp=N,0.0nm,0.3s,baz=299,slow=14,SNR=1.9						
NEW	Newport	8.38	49	LR	LR	15 01 32.5	
	comp=N,136nm,19.4s,baz=302,slow=40						
NEW	Newport	8.38	49	Pn	Pn	14 58 12.3	-0.3
BBB	Bella Bella	9.10	354	LR	LR	15 01 10.9	
	comp=N,84nm,20.1s,baz=235,slow=34						
PDAR	Pinedale Array	12.51	86	Pn	Pn	14 59 11.7	+2.4
	comp=N,0.1nm,0.3s,baz=277,slow=12,SNR=5.0						
PDAR				LR	LR	15 04 35.9	
	comp=N,94nm,20.8s,baz=272,slow=41						
YKA	Yellowknife Ar	20.63	16	P	P	15 00 49.7	-0.5
	comp=N,0.1nm,0.5s,baz=201,slow=11,SNR=2.0						
ILAR	Eielson Array	24.51	339	P	P	15 01 29.9	-0.1
	comp=N,0.4nm,0.8s,baz=133,slow=7.8,SNR=4.2						
H11N3	WAKE ISLAND Hy	59.75	269	T	T	16 10 39.1	
	baz=51,slow=75,SNR=87						
H11N2	WAKE ISLAND Hy	59.75	269	T	T	16 10 46.8	
	baz=51,slow=75,SNR=76						
H11N1	WAKE ISLAND Hy	59.77	269	T	T	16 10 45.6	
	baz=51,slow=75,SNR=66						
H11S1	WAKE ISLAND Hy	60.66	268	T	T	16 11 43.5	
	baz=50,slow=75,SNR=316						
H11S2	WAKE ISLAND Hy	60.67	268	T	T	16 11 52.1	
	baz=50,slow=75,SNR=272						
H11S3	WAKE ISLAND Hy	60.68	268	T	T	16 11 49.0	
	baz=50,slow=75,SNR=190						

IDC ***12*** *15:01:08.0±0.4, 1°.59N×126°.33E, h0^{km}, mb4.5/22, mb1 4.5/25, mb1mx4.5/40, mbtmp4.5/25, ML4.1/3, MS3.5/16, Ms1 3.5/16, ms1mx3.3/39, Error ellipse: s-maj=18.2km s-min=10.5km az=71.0*

NEIC ***12*** *15:01:13.9±2.1, 1°.57N±0°.06×126°.40E±0°.05, h46^{km}±5^{km}, mb4.9/119, Error ellipse: s-maj=8.9km s-min=6.7km az=200.0*

GCMT ***12*** *15:01:13.9±0.4, 1°.72N±0°.02×126°.42E±0°.03, h35^{km}, MW4.8/49, Moment Tensor Solution. s35,c40; s49,c62; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.23±.14; $M_{\theta\theta}$-0.66±.08; $M_{\phi\phi}$-1.57±.10; $M_{r\theta}$-0.13±.09; $M_{\theta\phi}$-1.06±.06; $M_{\phi r}$-0.22±.11; Best double couple: $M_0$2.26300×10^{16} NP1: ϕ_s34.00000°, δ42.00000°, λ91.00000°. NP2: ϕ_s213.00000°, δ48.00000°, λ89.00000°. Principal axes: T 2.2440, Plg87.0000°, Azm116.0000°; N 0.0390, Plg0.0000°, Azm213.0000°; P -2.2820, Plg3.0000°, Azm303.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

BJI ***12*** *15:01:14.8±0.0, 1°.68N×126°.42E, h55^{km}, mB5.0/38, mb4.6/52, Ms4.2/10, Ms7 4.0/10*

KLM ***12*** *15:01:15, 1°.79N×126°.29E, h80^{km}, mb4.8*

DJA ***12*** *15:01:15.0±0.2, 2°N±2°×12°6E±°, h49^{km}±3^{km}, M4.7/28, mb4.8/28, mB5.2/11, MLv4.7/16, Mw(mB)4.6/11, MwMwp4.5/2, Mwp4.9/2*

ISC 12 15:01:14.4±0.8**, 1°.57N**±0°.03×**126°.42E**±0°.04**, h49^{km}**±7^{km}**, n255, σ1^{s}.43**/268**, mb4.8**/95**, MS3.6**/18**, 3C-1D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TNTI	Ternate	1.23	130	Pn	Pn	15 01 34.6	-0.7
TNTI					Sn	15 01 51.4	+0.6
TNTI	Ternate	1.23	130	P	Pn	15 01 34.2	-1.1
SGSI	Sangihe	2.28	337	P	Pn	15 01 48.8	-0.9
KMSI	Cibinong	2.63	248	P	Pn	15 01 54.7	+0.3
GTOI	Gorontalo	3.53	255	P	Pn	15 02 08.0	+1.2
SANI	Sanana	3.62	187	P	Pn	15 02 08.0	0.0
LUWI	Luwuk	4.47	235	Pn	Pn	15 02 19.9	+0.2
LUWI				Sn	Sn	15 03 11.7	+1.2
LUWI	Luwuk	4.47	235	P	Pn	15 02 22.0	+2.3
DDMP	Don Marcelino,	4.56	351	eP	Pn	15 02 18.7	-2.3
DDMP				eS	Sn	15 03 16.4	+3.7
MRSI	Marisa	4.61	256	P	Pn	15 02 23.0	+1.4
NLAI	Namlea	4.82	172	P	Pn	15 02 25.3	+0.8
SKMP	Bagumbayan, Su	5.26	339	eP	Pn	15 02 30.0	-0.5
SKMP				eS	Sn	15 03 28.4	-1.6
MATI	Mati	5.34	358	eP	Pn	15 02 29.6	-2.1
APSI	Ampana	5.37	243	P	Pn	15 02 35.5	+3.5
	1.3nm4μm394nm,0.7s						
SWI	Sorong	5.41	116	P	Pn	15 02 33.5	+0.9
	0.2nm2μm1μm77nm,0.7s						
SIJI	Sorong	5.42	117	Pn	Pn	15 02 33.5	+0.8
	3.7nm,0.3s,baz=314,slow=9.3,SNR=9.5						
SIJI				LR	LR	15 05 06.4	
	comp=Z,1μm,20.5s,baz=2.5,slow=43						
MSAI	Masohi	5.49	153	P	Pn	15 02 37.0	+3.3
	0.1nm38nm,0.7s						
DAV	Davao City (W)	5.53	351	LR	LR	15 04 54.5	
	comp=Z,673nm,20.1s,baz=138,slow=41						
DAV	Davao City (W)	5.53	351	Pn	Pn	15 02 33.7	-0.5
KCP	Kidapawan	5.56	346	⇑eP	Pn	15 02 35.7	+0.9
TOLI2	Tolitoli	5.65	265	Pn	Pn	15 02 34.6	-1.4
PAGZ	Pagadian	6.93	334	eP	Pn	15 02 51.1	-2.4
CGP	Cagayan de Oro	7.05	346	⇓eP	Pn	15 03 03.8	+8.6
FAKI	Fak Fak	7.34	127	Pn	Pn	15 03 00.3	+1.2
FAKI	Fak Fak	7.34	127	P	Pn	15 03 01.7	+2.6
	0.4nm137nm,0.9s						
TTSI	Tana Toraja	8.03	235	P	Pn	15 03 07.8	-0.8
	927nm104nm,1.0s						
SPSI	Sidrap Palu	8.62	230	P	Pn	15 03 18.8	+2.1
	862nm54nm,0.8s						
MSLP	Maasin	8.65	350	eP	Pn	15 03 21.9	+4.8
BNSI	Bone	8.66	227	P	Pn	15 03 18.5	+1.4
	78nm,0.9s						
MYLDM	Lahad Datu	8.68	295	Pn	Pn	15 03 18.2	+0.7
BKSI	Bulukumba	9.29	223	P	Pn	15 03 27.0	+1.1
	36nm,0.6s						
KAPI	Kappang	9.33	225	Pn	Pn	15 03 27.6	+1.2
	3.3nm,0.3s,baz=327,slow=8.9,SNR=3.5						
KAPI	Kappang	9.33	225	Pn	Pn	15 03 26.4	0.0
BAKI	Biak	10.07	106	P	Pn	15 03 46.7	+10
SPMM	Sapulut	10.42	288	P	Pn	15 03 42.0	+0.7
SAUI	Saumlaki	10.66	153	Pn	Pn	15 03 42.9	-1.7
KKM	Kota Kinabalu	11.11	294	Pn	Pn	15 03 51.5	+0.7
EDFI	Ende, Flores	11.28	205	P	Pn	15 03 54.2	+1.0
	10.0nm,0.8s						
SOEI	Soe	11.45	191	Pn	Pn	15 03 58.1	+2.6
SOEI	Soe	11.45	191	P	Pn	15 04 03.5	+8.0
MTKI	Muara Teweh, K	11.79	258	P	Pn	15 04 09.0	+9.0
BATI	Baumata	12.01	193	Pn	Pn	15 04 02.9	-0.2
	0.9nm,0.3s,baz=36,slow=17,SNR=1.8						
BATI	Baumata	12.01	193	P	P	15 04 11.5	-3.3
PLAI	Plampang	13.45	220	P	P	15 04 32.9	+2.2
TGY	Tagaytay City	13.58	337	LR	LR	15 09 43.7	
	comp=Z,347nm,20.9s,baz=146,slow=38						
TWSI	Taliwang, Sumb	13.97	223	P	P	15 04 38.4	+1.9
SBUM	Sibu	14.22	274		P	15 04 39.2	0.0
JAY	Jayapura	14.85	106	LR	LR	15 10 03.8	
	comp=Z,287nm,19.7s,baz=288,slow=36						
MTN	Manton Dam	15.06	162	Pn	Pn	15 04 42.7	-1.6
JAGI	Jajag, Banyuwa	15.78	231		P	15 04 55.7	-0.9
KSM	Kuching	16.11	270	P	P	15 05 01.0	+0.7
SZP	Santa	16.93	340		P	15 05 08.6	-0.7
SZP				IAmb	IAmb	15 05 11.6	
	comp=Z,75nm,1.1s						
UGM	Wanagama	18.44	239	P	P	15 05 24.4	-1.7
UGM				IAmb	IAmb	15 06 01.9	
	comp=Z,220nm,1.5s						
FITZ	Fitzroy Crossi	19.56	182	P	P	15 05 37.3	-0.9
	comp=Z,0.6nm,0.3s,baz=13,slow=10,SNR=24						
FITZ	Fitzroy Crossi	19.56	182	P	P	15 05 37.2	-1.0
DLV	T Lat	20.55	301	P	P	15 05 50.1	+0.7
DLV				IAmb	IAmb	15 05 58.5	
	comp=Z,38nm,1.0s						
CISI	Cisompet, Garu	20.65	244	P	P	15 05 49.0	-1.3
CISI				IAmb	IAmb	15 06 34.1	
	comp=Z,132nm,1.8s						
TWG	Pinlang	21.75	347	P	P	15 05 59.6	-2.4
TWG				IAmb	IAmb	15 06 07.4	
	comp=Z,24nm,0.6s						
GUMO	Guam	21.81	56	P	P	15 06 00.8	-1.9
YULB	Yu-li	22.26	347	P	P	15 06 05.2	-2.2
TPUB	Ta-pu	22.32	346	P	P	15 06 06.0	-2.0
TPUB				IAmb	IAmb	15 06 12.5	
	comp=Z,52nm,0.9s						
MYKOM	Kota Tinggi	22.56	271	P	P	15 06 09.2	-1.5
WB0	Warramunga Arr	22.60	160	P	P	15 06 09.9	-1.2
WB0				IAmb	IAmb	15 06 13.3	
	comp=Z,38nm,0.6s						
COEN	Coen	22.66	133	P	P	15 06 10.4	-1.4
SSLB	Suanglung	22.71	347	P	P	15 06 10.7	-1.5
SSLB				IAmb	IAmb	15 06 15.7	
	comp=Z,19nm,0.6s						
WRAB	Tennant Creek	22.74	160	P	P	15 06 10.9	-1.7
WRAB				IAmb	IAmb	15 06 17.2	
	comp=Z,44nm,0.8s						
WRA	Warramunga Arr	22.75	160	P	P	15 06 11.6	-1.0
	comp=Z,40nm,0.6s,baz=340,slow=11,SNR=118						
WRA				PcP	PcP	15 10 03.8	+0.5
	comp=Z,1.0nm,0.7s,baz=330,slow=2.4,SNR=5.0						
WRA				S	S	15 10 16.1	-1.9
	comp=Z,6.3nm,0.8s,baz=330,slow=18,SNR=8.7						
WRA	Warramunga Arr	22.75	160	P	P	15 06 10.9	-1.7
WB2	Warramunga Arr	22.75	160	P	P	15 06 11.2	-1.4
WB2				IAmb	IAmb	15 06 16.3	
	comp=Z,54nm,0.7s						
WR0	Warramunga Arr	22.83	160	P	P	15 06 11.0	-2.5
WR0				IAmb	IAmb	15 06 17.1	
	comp=Z,30nm,0.7s						
NACB	Ninganchiao	22.95	349	P	P	15 06 14.4	-0.3
PMG	Port Moresby	23.36	118	P	P	15 06 19.6	+0.8
	comp=Z,15nm,0.9s,baz=268,slow=4.5,SNR=3.6						
PMG				LR	LR	15 17 56.6	
	comp=Z,154nm,18.9s,baz=292,slow=43						
PMG	Port Moresby	23.36	118	P	P	15 06 18.0	-0.8
PMG				IAmb	IAmb	15 06 28.3	
	comp=Z,52nm,1.4s						
YHNB	Yeheng	23.48	348	P	P	15 06 17.7	-2.2
YHNB				IAmb	IAmb	15 06 22.3	
	comp=Z,35nm,1.3s						
QIZ	Qiongzhong	23.77	318	P	P	15 06 28.6	+6.0
QIZ				S	S	15 10 46.4	+12
QIZ				LR	LR		
	comp=N,160nm,18.8s						
QIZ				LR	LR		
	comp=E,80nm,4.2s						
QIZ				LR	LR		
	comp=Z,160nm,21.2s						
QIZ	Qiongzhong	23.77	318	P	P	15 06 20.6	-2.0
QIZ				IAmb	IAmb	15 06 26.9	
	comp=Z,55nm,1.6s						
PSA00	Pilbara Seismi	23.88	195	P	P	15 06 22.2	-1.4
PSA00	Pilbara Seismi	23.88	195	P	P	15 06 23.4	-0.2
PSA00				IAmb	IAmb	15 06 40.0	
	comp=Z,8.3nm,0.8s						
KNMB	Chin-men Tao	24.05	342	P	P	15 06 25.7	+0.6
KNMB				IAmb	IAmb	15 06 54.0	
	comp=Z,46nm,1.2s						
MNAI	Manna	24.17	256	P	P	15 06 26.9	+0.5
JMZ	Minamidaito 2	24.55	10	P	P	15 06 30.9	+1.3
BKNI	Bangkinang	25.41	267	P	P	15 06 37.8	+0.2
BKNI				IAmb	IAmb	15 07 17.3	
	comp=Z,42nm,0.9s						
IPM	Ipoh	25.52	277	P	P	15 06 35.7	-3.0
KULM	Kulim	25.98	279	P	P	15 06 42.5	-0.4
AS31	Alice Springs	26.12	164	P	P	15 06 43.2	-0.7
ASAR	Alice Springs	26.12	164	P	P	15 06 43.9	-0.1
	comp=Z,9.2nm,0.7s,baz=348,slow=6.3,SNR=128						
ASAR				PcP	PcP	15 10 11.2	+0.6
	comp=Z,2.3nm,0.8s,baz=349,slow=2.6,SNR=6.7						
ASAR				S	S	15 11 11.0	-1.2
	comp=Z,2.6nm,1.0s,baz=348,slow=21,SNR=8.9						
ASAR	Alice Springs	26.12	164	P	P	15 06 43.4	-0.6
GIRL	Giralia	26.84	206	P	P	15 06 51.0	+0.5
PSI	Prapat	27.50	273	P	P	15 06 56.1	-0.6
	comp=Z,6.3nm,0.8s,baz=179,slow=6.0,SNR=5.6						
PSI				PcP	PcP	15 10 14.4	+0.2
	comp=Z,1.6nm,0.4s,baz=180,slow=22,SNR=3.5						
GSI	Gunungsitoli	28.84	270	P	P	15 07 08.5	+0.1
GSI				IAmb	IAmb	15 07 10.1	
	comp=Z,26nm,1.1s						
GSI	Gunungsitoli	28.84	270	P	P	15 07 10.4	+2.0
	comp=Z,24nm,0.9s						
WHN	Wuhan	31.01	340	⇑P	P	15 07 32.1	+4.7
NJ2	Nanjing	31.15	348	eP	P	15 07 29.8	+1.2
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						

GYA	Guiyang	31.19	324	⇑P	P	15 07 31.8	+2.5
GYA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
CMAR	Chiang Mai Arr	31.75	304	P	P	15 07 33.6	-0.5
	comp=Z,0.5nm,0.5s,baz=134,slow=6.5,SNR=7.9						
CMAR				PcP	PcP	15 10 25.9	+1.0
	comp=Z,1.2nm,0.5s,baz=170,slow=1.9,SNR=11						
CMAR				LR	LR	15 21 27.9	
	comp=Z,45nm,19.5s,baz=105,slow=38						
CMAR	Chiang Mai Arr	31.75	304	P	P	15 07 33.2	-0.9
CHTO	Chiang Mai	31.92	304	P	P	15 07 34.4	-1.2
MORW	Morawa	32.04	197	P	P	15 07 36.1	-0.4
MORW				IAmb	IAmb	15 07 40.6	
	comp=Z,30nm,1.4s						
FORT	Forrest	32.20	177	P	P	15 07 38.0	+0.1
FORT				IAmb	IAmb	15 07 44.6	
	comp=Z,24nm,0.8s						
COCO	West Island	32.41	244	P	P	15 07 38.9	-1.0
ENH	Enshi	32.76	332	P	P	15 07 43.0	+0.1
ENH				IAmb	IAmb	15 07 47.0	
	comp=Z,12nm,0.8s						
JWT	Wachi	34.57	13	P	P	15 07 57.4	-1.1
JSG	Sagara	34.72	17	P	P	15 08 00.7	+1.0
HNR	Honiara	35.14	109	LR	LR	15 21 53.3	
	comp=Z,66nm,21.2s,baz=240,slow=35						
BBOO	Buckleboo	35.39	166	P	P	15 08 05.4	-0.2
BBOO				IAmb	IAmb	15 08 08.6	
	comp=Z,18nm,1.0s						
NWAO	Narrogin (SRO)	35.39	193	P	P	15 08 05.6	0.0
NWAO	Narrogin (SRO)	35.39	193	P	P	15 08 05.3	-0.3
NWAO				IAmb	IAmb	15 08 07.5	
	comp=Z,52nm,1.6s						
KSRS	Korea Array	35.74	2	P	P	15 08 07.8	-0.7
	comp=Z,1.1nm,0.5s,baz=143,slow=40,SNR=3.4						
XAN	Xi'an	36.21	335	P	P	15 08 12.9	+0.2
XAN				pP	pwP	15 08 27.0	-0.2
XAN				pmax	pmax		
	comp=Z,11nm,0.8s						
XAN				LR	LR		
	comp=Z,170nm,15.2s						
XAN				LR	LR		
	comp=Z,170nm,15.2s						
XAN				LR	LR		
	comp=Z,160nm,16.3s						
CD2	Chengdu	36.22	326	P	P	15 08 12.9	+0.1
CD2				S	S	15 13 50.7	+0.9
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,110nm,5.1s						
CD2				LR	LR		
	comp=Z,150nm,8.0s						
CD2				LR	LR		
	comp=Z,250nm,11.8s						
CD2				LR	LR		
	comp=Z,340nm,11.8s						
STKA	Stephens Creek	36.24	158	P	P	15 08 12.7	-0.2
	comp=Z,15nm,0.7s,baz=329,slow=8.6,SNR=36						
STKA				PcP	PcP	15 10 39.1	+1.7
	comp=Z,2.9nm,0.6s,baz=318,slow=3.0,SNR=3.5						
STKA	Stephens Creek	36.24	158	P	P	15 08 12.8	-0.1
MAT	Matsushiro	36.47	16	P	P	15 08 13.0	-1.8
MJAR	Matsushiro Arr	36.47	16	P	P	15 08 14.0	-0.8
	comp=Z,4.1nm,0.9s,baz=181,slow=9.5,SNR=8.9						
MJAR				PcP	PcP	15 10 39.6	+1.6
	comp=Z,3.7nm,1.0s,baz=175,slow=2.7,SNR=4.9						
MJAR				LR	LR	15 22 29.4	
	comp=Z,60nm,21.4s,baz=215,slow=35						
JMM	Marumori	38.46	18	P	P	15 08 31.8	+0.1
BJT	Baijiatuau	39.39	348	P	P	15 08 39.3	-0.1
ARMA	Armidale	39.86	145	P	P	15 08 44.7	+1.1
ARMA				IAmb	IAmb	15 08 51.9	
	comp=Z,14nm,0.8s						
LZH	Lanzhou	40.22	331	*e*P	P	15 08 48.7	+2.2
LZH				pP	pwP	15 09 00.8	-0.4
LZH				sP	sP	15 09 07.1	+2.3
LZH				pmax	pmax		
	comp=Z,13nm,1.4s						
LZH				pmax	pmax		
	comp=Z,78nm,6.5s						
LZH				LR	LR		
	comp=Z,120nm,15.7s						
LZH				LR	LR		
	comp=Z,160nm,16.1s						
LZH				LR	LR		
	comp=Z,180nm,16.2s						
SHL	Shillong	40.94	309	P	P	15 08 51.1	-1.5
SHL				IAmb	IAmb	15 09 00.1	
	comp=Z,8.7nm,0.5s						
JTM	Tenmabayashi	41.23	17	P	P	15 08 55.9	+1.3
HHC	Hu-ho-hao-te	41.35	343	*e*P	P	15 08 56.7	+1.0
HHC				pmax	pmax		
	comp=Z,5.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,100nm,7.6s						
CAN	Canberra	42.34	152	P	P	15 09 06.0	+2.2
CAN				IAmb	IAmb	15 09 48.7	
	comp=Z,48nm,1.4s						
USRK	Ussuriysk Ar.	42.74	6	P	P	15 09 06.9	+0.1
	comp=Z,5.2nm,0.8s,baz=223,slow=35,SNR=5.9						
USRK				LR	LR	15 25 25.0	
	comp=Z,37nm,21.9s,baz=177,slow=34						
USRK	Ussuriysk Ar.	42.74	6	P	P	15 09 06.2	-0.6
USA0B	Ussuriysk Arra	42.74	6	P	P	15 09 06.0	-0.9
TOO	Toolangi	42.76	158	P	P	15 09 07.5	+0.3
TOO				IAmb	IAmb	15 09 44.2	
	comp=Z,46nm,1.6s						
H11S3	WAKE ISLAND Hy	42.91	64	T	T	15 55 59.7	
	baz=252,slow=75,SNR=34						
H11S2	WAKE ISLAND Hy	42.93	64	T	T	15 56 03.3	
	baz=252,slow=75,SNR=15						
H11S1	WAKE ISLAND Hy	42.93	64	T	T	15 56 02.9	
	baz=252,slow=75,SNR=11						
MDJ	Mudanjiang	42.96	3	P	P	15 09 09.2	+0.6
MDJ				ScP	ScP	15 14 48.4	+2.8
MDJ				PcS	PcS	15 14 51.7	+1.0
MDJ				S	S	15 15 33.6	+3.3
MDJ				sS	sS	15 15 48.4	-3.3
MDJ				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,210nm,5.4s						
MDJ				LR	LR		
	comp=Z,310nm,4.6s						
MDJ				LR	LR		
	comp=Z,140nm,3.7s						
MDJ				LR	LR		
	comp=Z,200nm,5.1s						
MDJ	Mudanjiang	42.96	3	P	P	15 09 08.3	-0.3
ERM	Erimo	42.99	18	P	P	15 09 09.0	+0.2
ERM				IAmb	IAmb	15 09 14.2	
	comp=Z,24nm,1.1s						
JEM	Erimo	42.99	18	P	P	15 09 23.6	+15
JEM				IAmb	IAmb	15 09 40.4	
	comp=Z,14nm,1.0s						
WAKE	Wake Island	43.13	63	P	P	15 09 08.4	-1.9
LSA	Lhasa	43.66	313	P	P	15 09 14.3	-0.7
SANVU	Saraoutou	43.72	114	P	P	15 09 13.6	-1.6
ASAJ	Asahikawa	44.74	17	P	P	15 09 23.7	+0.8
	comp=Z,9.3nm,0.8s,baz=217,slow=14,SNR=11						
JKA	Kamikawa-asahi	44.74	17	P	P	15 09 23.9	+1.0
JKA				IAmb	IAmb	15 09 25.4	
	comp=Z,14nm,0.9s						
GTA	Gaotai	44.80	331	P	P	15 09 24.5	+0.9
GTA				pP	pwP	15 09 38.0	-0.5
GTA				sP	sP	15 09 44.3	+2.3
GTA				PcP	PcP	15 11 06.6	+1.6
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,98nm,5.1s						
GTA				LR	LR		
	comp=Z,92nm,18.5s						
GTA				LR	LR		
	comp=Z,83nm,18.2s						
GTA				LR	LR		
	comp=Z,150nm,18.9s						
TAPN	Taplejung	45.07	308	*e*P	P	15 09 23.0	-3.2
	comp=Z,24nm,1.1s						
ODAN	Odare	45.10	307	*e*P	P	15 09 25.5	-0.8
	comp=Z,16nm,0.8s						
RAMN	Ramite	45.77	307	*e*P	P	15 09 30.9	-0.8
	comp=Z,14nm,0.8s						
GUN	Gumba	46.77	308	*e*P	P	15 09 38.5	-1.1
	comp=Z,43nm,0.9s						
PKI	Pulchoki	46.99	307	*e*P	P	15 09 40.2	-1.2
	comp=Z,18nm,1.1s						
PKIN	Phulchoki	47.00	307	*e*P	P	15 09 40.1	-1.3
	comp=Z,9.1nm,0.7s						
KKN	Kakani	47.19	307	*e*P	P	15 09 41.8	-1.0
DMN	Daman	47.25	307	*e*P	P	15 09 43.1	-0.2
YSS	Yuzh-Sakhalins	47.40	15	P	P	15 09 44.3	+0.6
YSS				IAmb	IAmb	15 09 45.4	
	comp=Z,18nm,1.2s						
GKN	Gorkha	47.79	307	*e*P	P	15 09 46.2	-1.2
	comp=Z,16nm,0.9s						
HIA	Hailar	47.86	354	P	P	15 09 48.0	+0.6
HIA				IAmb	IAmb	15 09 54.0	
	comp=Z,14nm,1.3s						
DANN	Dangsing	48.64	307	*e*P	P	15 09 52.8	-1.3
	comp=Z,21nm,0.6s						
ULN	Ulaanbaatar	49.07	343	P	P	15 09 57.2	+0.3
ULN				PcP	PcP	15 11 19.6	-0.4
SONM	Songino Array	49.24	342	P	P	15 09 58.3	+0.1
	comp=Z,4.5nm,0.9s,baz=158,slow=8.8,SNR=18						
SONM				PcP	PcP	15 11 21.2	+0.6
	comp=Z,2.9nm,0.8s,baz=159,slow=4.4,SNR=7.8						
SONM				LR	LR	15 34 05.8	
	comp=Z,64nm,19.9s,baz=170,slow=40						
SONM	Songino Array	49.24	342	P	P	15 09 58.3	+0.1
SONM					PcP	15 11 20.7	+0.1
WMQ	Urumqi	54.32	326	*e*P	P	15 10 38.3	+2.3
WMQ				pP	pwP	15 10 51.3	+0.1
WMQ				pmax	pmax		
	comp=Z,20nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,180nm,5.3s						
WMQ	Urumqi	54.32	326	P	P	15 10 35.2	-0.8
WMQ				IAmb	IAmb	15 10 40.6	
	comp=Z,9.8nm,0.8s						
MSVF	Nonsavu	54.33	113	P	P	15 10 37.8	+1.3
	comp=Z,8.7nm,0.8s,baz=338,slow=22,SNR=2.5						
MSVF	Nonsavu	54.33	113	P	P	15 10 37.0	+0.5
MSVF				IAmb	IAmb	15 10 43.3	
	comp=Z,29nm,1.2s						
PETK	Petropavlovsk-	57.54	22	P	P	15 10 59.8	+1.0
	comp=Z,5.3nm,0.7s,baz=180,slow=3.7,SNR=16						
PETK				LR	LR	15 36 23.8	
	comp=Z,12nm,19.9s,baz=204,slow=37						
PETK	Petropavlovsk-	57.54	22	P	P	15 10 60.0	+1.2
PET	Petropavlovsk	57.83	22	P	P	15 11 01.7	+0.9
ZSN	Zaisan	58.15	328	*e*P	P	15 11 03.2	0.0
	baz=328						
SHLS	Shalkode	58.81	321	*e*P	P	15 11 05.4	-2.6
	comp=Z,5.0nm,0.9s,baz=322						
NIL	Nilore	59.01	309	P	P	15 11 08.7	-0.8
NIL				IAmb	IAmb	15 11 19.3	
	comp=Z,9.0nm,0.7s						
UZB	Uzynbulak	59.09	321	*e*P	P	15 11 09.5	-0.4
	baz=321						
MK31	Makanchi Array	59.15	326	P	P	15 11 09.3	-1.0
MK31				IAmb	IAmb	15 11 14.1	
	comp=Z,9.9nm,1.2s						
MK31				PcP	PcP	15 11 55.8	-2.6
MKAR	Makanchi Array	59.15	326	P	P	15 11 09.7	-0.5
	comp=Z,5.5nm,0.7s,baz=120,slow=7.9,SNR=51						
MKAR				PcP	PcP	15 11 58.1	-0.3
	comp=Z,3.4nm,0.8s,baz=116,slow=5.5,SNR=4.7						
MKAR				LR	LR	15 37 02.5	
	comp=Z,95nm,21.4s,baz=90,slow=36						
MKAR	Makanchi Array	59.15	326	P	P	15 11 09.0	-1.3
MKAR				PcP	PcP	15 11 58.1	-0.3
MAKZ	Makanchi	59.34	326	P	P	15 11 10.8	-0.7
MAKZ				IAmb	IAmb	15 11 15.3	
	comp=Z,12nm,1.1s						
KSH	Kashi	59.36	316	P	P	15 11 16.2	+4.3
KSH				sP	sP	15 11 33.6	+3.0
KSH				pmax	pmax		
	comp=Z,9.0nm,1.2s						
KSH				pmax	pmax		
	comp=Z,410nm,5.5s						
SATY	Saty	59.43	321	*e*P	P	15 11 11.6	-0.7
	comp=Z,5.3nm,0.8s,baz=321						
KPKS	Kokpek	59.46	321	*e*P	P	15 11 11.7	-0.8
	comp=Z,5.9nm,0.8s,baz=321						
WKZ	Wanaka	59.70	146	P	P	15 11 14.6	+0.6
LBZ	Lake Benmore	60.09	145	P	P	15 11 16.2	-0.5
THZ	Tophouse	60.21	141	P	P	15 11 17.7	+0.1
THZ				IAmb	IAmb	15 12 03.1	
	comp=Z,17nm,1.1s						
MDOK	Medeo	60.34	320	*e*P	P	15 11 18.2	-0.5
	baz=320						
TNSS	Tian-Shan	60.35	320	*e*P	P	15 11 18.5	-0.5
	baz=320						
YAK	Yakutsk	60.36	2	P	P	15 11 18.4	+0.2
TDK	Taldyqorghan	60.42	323	*e*P	P	15 11 18.9	-0.1
	comp=Z,6.0nm,0.7s,baz=323						
CHKK	Chushkaly	60.72	321	*e*P	P	15 11 20.5	-0.5
	baz=321						
MA2	Magadan	60.86	14	P	P	15 11 22.8	+1.2
MA2				IAmb	IAmb	15 11 28.7	
	comp=Z,11nm,0.8s						
KUU	Kurty	61.15	321	*e*P	P	15 11 23.2	-0.7
	comp=Z,16nm,1.0s,baz=321						
URZ	Urewera	61.20	136	P	P	15 11 24.9	+0.6
BKZ	Black Stump Fm	61.21	137	P	P	15 11 23.9	-0.6
AAK	Ala-Archa	61.76	319	LR	LR	15 41 33.2	
	comp=Z,27nm,18.7s,baz=102,slow=39						
AAK	Ala-Archa	61.76	319	P	P	15 11 28.3	+0.1
KNTN	Kanton	61.99	94	P	P	15 11 29.9	-0.2
SEM	Semipalatinsk	62.37	329	*e*P	P	15 11 32.0	-0.2
	baz=329						
ZAA0	Zalesovo Array	62.37	334	P	P	15 11 30.9	-1.0
ZAA0				IAmb	IAmb	15 11 58.7	
	comp=Z,5.9nm,1.0s						
ZALV	Zalesovo Beam	62.37	334	P	P	15 11 31.9	0.0
	comp=Z,2.1nm,0.6s,baz=120,slow=5.0,SNR=9.2						
ZALV	Zalesovo Beam	62.37	334	P	P	15 11 30.4	-1.5
KBL	Kabul	62.60	308	P	P	15 11 31.9	-2.2
KBL				IAmb	IAmb	15 11 37.6	
	comp=Z,11nm,0.8s						
AFI	Afiamalu	63.12	106	P	P	15 11 36.8	-0.8
BTLS	Baital	63.14	321	*e*P	P	15 11 36.9	-0.4
	baz=321						
KURK	Kurchatov	63.39	328	P	P	15 11 38.0	-0.7
KURK				IAmb	IAmb	15 11 48.2	
	comp=Z,13nm,0.7s						
SMY	Shemya	64.48	30	P	P	15 11 46.3	+0.5
IUG	Iuzhnay	64.55	317	*e*P	P	15 11 46.7	0.0
	baz=317						
KK31	Karatay Array	64.60	318	P	P	15 11 46.1	-0.8
KKAR	Karatay Array	64.60	318	P	P	15 11 45.8	-1.1
KKAR	Karatay Array	64.60	318	P	P	15 11 46.1	-0.8
KKAR				IAmb	IAmb	15 11 50.5	
	comp=Z,5.7nm,1.0s						
BRZS	Berezniki	66.27	325	*e*P	P	15 11 56.8	-0.7
	baz=325						
BRVK	Borovoye	69.03	328	P	P	15 12 14.6	-0.3
BRVK				IAmb	IAmb	15 12 19.2	
	comp=Z,24nm,1.6s						
TIXI	Tiksi	69.99	1	P	P	15 12 20.1	-0.3
TIXI				IAmb	IAmb	15 12 21.8	
	comp=Z,11nm,1.1s						
UOSS	Minazif	71.42	296	P	P	15 12 28.6	-1.5
GEYT	Alibeck	72.01	309	P	P	15 12 33.3	-0.1
	comp=Z,2.2nm,0.6s,baz=166,slow=7.6,SNR=4.4						
GYA0B	ALIBECK ARRAY	72.01	309	P	P	15 12 33.2	-0.2
NRIK	Noril'sk	72.44	346	P	P	15 12 35.6	+0.3
	comp=Z,11nm,0.8s,baz=132,slow=6.5,SNR=22						
NRIK				LR	LR	15 47 12.2	
	comp=Z,47nm,19.1s,baz=152,slow=38						
NRIK	Noril'sk	72.44	346	P	P	15 12 35.6	+0.3
NRIK				IAmb	IAmb	15 12 36.6	
	comp=Z,12nm,0.8s						
SOCY	Socotra	72.50	282	P	P	15 12 35.4	-1.4
SOCY				IAmb	IAmb	15 12 38.3	
	comp=Z,17nm,1.0s						
ABKAR	Akbulak array	73.62	321	P	P	15 12 42.0	-0.7
ABKAR	Akbulak array	73.62	321	P	P	15 12 41.7	-1.0
AKUT	Akutan	75.87	34	P	P	15 12 55.4	-0.1
GAMB	Gambell	76.49	24	P	P	15 12 59.5	+0.7
GAMB				IAmb	IAmb	15 13 01.8	
	comp=Z,10nm,1.0s						
ARU	Arti	76.59	328	P	P	15 12 59.3	-0.3
ARU				IAmb	IAmb	15 13 03.4	
	comp=Z,9.9nm,0.8s						
ANM	Nome	79.35	24	P	P	15 13 15.1	+0.3
RAYN	Ar Rayn	81.05	293	P	P	15 13 24.5	-0.3
VNDA	Vanda	81.33	173	P	P	15 13 26.6	+1.4
	comp=Z,2.9nm,0.6s,baz=308,slow=6.3,SNR=10						
VNDA				LR	LR	15 51 16.6	
	comp=Z,25nm,19.0s,baz=321,slow=37						
VNDA	Vanda	81.33	173	P	P	15 13 25.8	+0.6
VNDA				IAmb	IAmb	15 13 27.5	
	comp=Z,32nm,1.8s						
RDOG	Red Dog Mine	81.40	21	P	P	15 13 25.9	+0.1
RDOG				IAmb	IAmb	15 13 28.7	
	comp=Z,22nm,1.5s						
MAW	Mawson	81.63	200	LR	LR	15 50 12.8	
	comp=Z,22nm,20.8s,baz=206,slow=36						
TTA	Tatalina	82.96	27	P	P	15 13 35.6	+1.6
TTA				IAmb	IAmb	15 13 37.0	
	comp=Z,14nm,1.0s						
OHAK	Old Harbor	83.43	33	P	P	15 13 38.3	+1.9
GEVA	Gevas	83.82	308	P	P	15 13 39.1	0.0
GEVA				IAmb	IAmb	15 13 43.5	
	comp=Z,18nm,1.0s						
RSO	Redoubt South	84.11	29	P	P	15 13 40.4	+0.2
KBZ	Khabaz	84.23	314	P	P	15 13 41.1	+0.2
	comp=Z,2.9nm,0.8s,baz=112,slow=6.5,SNR=5.8						
A21K	Barrow	84.35	18	P	P	15 13 42.4	+1.5
KIV	Kislovodsk	84.40	314	P	P	15 13 40.7	-1.2
KIV				IAmb	IAmb	15 13 47.4	
	comp=Z,6.1nm,0.7s						
CNPM	China Poot	84.76	30	P	P	15 13 43.6	+0.3
SKT	Skwentna	84.88	28	P	P	15 13 44.0	+0.2
SKT				IAmb	IAmb	15 14 07.5	
	comp=Z,12nm,1.2s						
BRLK	Bradley Lake	84.97	30	P	P	15 13 45.0	+0.6
SUA	Susitna One	85.20	29	P	P	15 13 46.5	+0.9
SUA				IAmb	IAmb	15 13 48.3	
	comp=Z,14nm,0.8s						
COLD	Coldfoot	85.99	23	P	P	15 13 50.1	+0.9
COLD				IAmb	IAmb	15 13 52.1	
	comp=Z,7.6nm,0.9s						
I23K	Minto, Yukon-K	86.15	25	P	P	15 13 50.6	+0.6
I23K				IAmb	IAmb	15 13 52.0	
	comp=Z,5.1nm,0.8s						
KNK	Knik Glacier	86.29	29	P	P	15 13 51.9	+1.0
TOLK	Toolik Lake Re	86.36	21	P	P	15 13 51.4	+0.3
TOLK				IAmb	IAmb	15 13 53.8	
	comp=Z,5.4nm,0.8s						
CCB	Clear Creek Bu	86.78	25	P	P	15 13 52.9	-0.2
KLMR	Klimovskoe	87.12	331	*e*P	P	15 13 51.7	-3.2
KLMR				AMP		15 13 59.0	
	comp=Z,19nm,1.0s						
HDA	Harding Lake	87.14	26	P	P	15 13 54.4	-0.5
HDA				IAmb	IAmb	15 13 56.2	
	comp=Z,4.1nm,0.8s						
ILAR	Eielson Array	87.18	25	P	P	15 13 54.1	-1.0
	comp=Z,0.8nm,0.7s,baz=244,slow=5.2,SNR=9.3						
DOT	Dot Lake	88.39	27	P	P	15 14 01.4	+0.5
KMBO	Kilima Mbogo	89.20	269	P	P	15 14 07.0	+0.9
	comp=Z,2.0nm,0.6s,baz=57,slow=5.8,SNR=5.4						
FINES	FINESS Array B	93.58	332	P	P	15 14 26.2	+1.2
	comp=Z,2.1nm,0.8s,baz=42,slow=3.1,SNR=1.9						
MNK	Minsk	93.70	325	*i* P	P	15 14 23.9	-1.8
	comp=E,3.0nm,1.2s						
MNK				*i* P	P	15 14 23.9	-1.8
	comp=N,21nm,1.4s						
MNK				*i* P	P	15 14 23.9	-1.8
	comp=Z,4.0nm,0.6s						
MNK				*i* PP	PP	15 18 07.7	-3.4
MNK				*i* PPP	PPP	15 20 10.1	
MNK				*i* S	SKSac	15 24 52.8	-3.5
MNK				*i* SS	SS	15 31 48.5	-1.1
MNK				*i* SSS	SSS	15 35 29.7	
MNK				*i* LQ	LQ	15 50 50.6	
MNK				*i* LR	LR	15 55 45.7	
MNK				*i* LRM	MLR	15 57 00.5	
	comp=Z,150nm,16.8s						
MNK				*i* LRM	MLR	15 57 05.0	
	comp=N,233nm,15.4s						
MNK				*i* LRM	MLR	15 57 37.0	
	comp=E,13nm,14.2s						
NACGM	Naroch	94.27	325	*i* P	P	15 14 38.0	+10
NACGM				*i* P	P	15 14 38.0	+10
NACGM				*i* P	P	15 14 38.0	+10
NACGM				*i* PP	PP	15 18 19.9	+4.3
NACGM				*i* PPP	PPP	15 20 21.9	
NACGM				*i* S	S	15 25 56.2	+20
NACGM				*i* PS	PS	15 27 03.5	+6.2
NACGM				*i* SS	SS	15 32 26.7	+29
NACGM				*i* SSS	SSS	15 35 44.4	
NACGM				*i* SKKS	SKKSdf	15 38 50.7	+14
NACGM				*i* LQ	LQ	15 50 14.9	
NACGM				*i* LR	LR	15 58 25.6	
C36M	Paulatuk	95.34	20	P	P	15 14 32.8	-0.1
C36M				IAmb	IAmb	15 14 34.4	
	comp=Z,5.4nm,0.9s						
BURAR	Bucovina Array	96.39	318	P	P	15 14 37.9	-0.5
KOLS	Kolonicke sedl	98.09	320	*e*PDIFF	Pdif	15 14 49.0	+3.1
YKA	Yellowknife Ar	101.58	24	P	Pdif	15 15 01.4	+0.3
	comp=Z,0.3nm,0.5s,baz=299,slow=3.7,SNR=5.7						
TXAR	Lajitas Array	123.15	53	PKP	PKiKP	15 20 07.4	+0.7
	comp=Z,0.9nm,0.7s,baz=198,slow=1.4,SNR=6.4						
TORD	Torodi Ar. Bea	123.27	287	PKP	PKPdf	15 20 06.8	-0.2
	comp=Z,2.0nm,0.8s,baz=47,slow=2.0,SNR=10						
TORD	Torodi Ar. Bea	123.27	287	PKPdf	PKPdf	15 20 06.6	-0.4
TKL	Tuckaleechee C	133.46	34	PKP	PKiKP	15 20 27.3	+0.2
	comp=Z,4.5nm,0.7s,baz=165,slow=3.0,SNR=4.8						
TKL	Tuckaleechee C	133.46	34		PKiKP	15 20 27.5	+0.4
LPAZ	La Paz	159.52	136	PKP	PKPdf	15 21 09.9	+0.5
	comp=Z,1.0nm,0.6s,baz=19,slow=3.6,SNR=3.6						
SIV	San Ignacio	163.88	153	PKP	PKPdf	15 21 14.2	+0.9
	comp=Z,1.2nm,0.7s,baz=285,slow=4.6,SNR=5.9						
SIV				PKPab	PKPab	15 22 06.8	+1.1
	comp=Z,1.6nm,0.8s,baz=201,slow=9.8,SNR=5.4						

SNET ***12*** *15:07:33.6±1.3, 17°.37N×88°.82W, h34^{km}±816^{km}, ML4.0*
UCR ***12*** *15:07:34.2±1.1, 17°.34N×88°.89W, h34^{km}±727^{km}, ML3.7*
GCG ***12*** *15:07:36.9±1.2, 16°.04N×87°.60W, h31^{km}±999^{km}, MD4.3*
ISC 12 15:07:33.8±4.7, **17°.3N**±0°.2×**88°.4W**±0°.2, **h35**^{km}, **n15,**
σ**1^{s}.31**/17, **Belize**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MRL	Marmol	2.55	209	*e*P	Pn	15 08 10.7	-2.2
MRL	Marmol	2.55	209	*e*P	Pn	15 08 10.7	-2.2
MRL	Marmol	2.55	209	*e*P	Pn	15 08 11.7	-1.3
ESQI	Esquipulas	2.90	198	*e*P	Pn	15 08 16.6	-1.0
MTO3	Montecristo	3.06	198	IAML		15 08 52.9	
	comp=Z,228nm,0.5s						
MTO3	Montecristo	3.06	198	IAML		15 08 52.9	
	comp=Z,228nm,0.5s						
NBG	Las Nubes	3.31	215	*e*P	Pn	15 08 23.6	+0.2
NBG				*e*S	Sn	15 08 59.6	-2.0
PCG	Pacaya	3.61	216	*e*P	Pn	15 08 28.5	+1.0
CEVE	Cerro Verde	3.67	199	*e*P	Pn	15 08 28.8	+0.4
CEVE				*e*S	Sn	15 09 10.9	+0.2
CEVE				IAML		15 09 14.9	
	comp=Z,509nm,0.5s						
CEVE	Cerro Verde	3.67	199	*e*P	Pn	15 08 28.8	+0.4
CEVE				*e*S	Sn	15 09 10.9	+0.2
CEVE				IAML		15 09 14.9	
	comp=Z,509nm,0.5s						
FUG	Fuego 3	3.71	220	*e*P	Pn	15 08 30.5	+1.7
FUG				*e*S	Sn	15 09 12.2	+0.9
COEG	Centro de Oper	3.71	187	*e*S	Sn	15 09 12.5	+1.1
COEG	Centro de Oper	3.71	187	*e*S	Sn	15 09 12.5	+1.1
JAYA	Jayaque - finc	3.79	196	*e*P	Pn	15 08 29.7	-0.1
JAYA	Jayaque - finc	3.79	196	*e*P	Pn	15 08 29.7	-0.1

IDC ***12*** *15:10:03.7±0.8, 6°.76N×73°.01W, h160^{km}±12^{km}, mb3.2/4, mb1 3.6/6, mb1mx3.2/49, mbtmp3.8/6, Error ellipse: s-maj=37.6km s-min=9.5km az=130.0*
RSNC ***12*** *15:10:05.3±1.8, 6°.82N×73°.10W, h148^{km}±7^{km}, ML3.5, Mw3.7, Fault plane solution: NP1:ϕ_s108.00000°, δ72.00000°, λ-122.00000°.*
ISC 12 15:10:03.4±0.8, **6°.82N**±0°.03×**73°.07W**±0°.03, **h155**^{km}±6^{km},
n41, σ**1^{s}.54**/73, **mb3.3**/4, **5C-6D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	Barichara	0.25	207	⇓*i*P	Pn	15 10 25.6	+0.8
BARC				*e*S	Sn	15 10 40.5	-0.5
BARC				*i*		15 10 43.2	
	comp=Z,834nm,0.3s						
BRRC	Barranca, Sant	0.70	294	⇓*e*P	Pn	15 10 27.5	+1.0
BRRC				*e*S	Sn	15 10 43.5	-0.6
BRRC				*i*		15 10 49.7	
	comp=Z,398nm,0.1s						

RUSC	La Rusia	0.92	181	⇓iP	Pn	15 10 29.4	+0.7
RUSC				i		15 10 30.4	
	comp=Z,289nm,0.4s						
RUSC				eS	Sn	15 10 47.9	0.0
TAMC	Tame, Arauca	1.32	107	⇓iP	Pn	15 10 33.7	+2.1
TAMC				i		15 10 33.9	
	comp=Z,358nm,0.3s						
TAMC				eS	Sn	15 10 54.5	+1.2
OCAC	Ocana	1.44	350	⇑eP	Pn	15 10 33.6	+0.7
OCAC				eS	Sn	15 10 55.5	0.0
OCAC				i		15 11 02.0	
	comp=Z,389nm,0.5s						
SPBC	San Pablo de B	1.53	221	eP	Pn	15 10 34.4	+0.6
SPBC				eS	Sn	15 10 56.9	-0.2
SPBC				i		15 11 03.6	
	comp=Z,789nm,0.4s						
ZARC	Zaragoza, Cauc	1.90	291	eP	Pn	15 10 38.0	+0.3
ZARC				eS	Sn	15 11 03.6	-0.5
ZARC				i		15 11 10.0	
	comp=Z,466nm,0.2s						
NORC	Norcasia	2.18	235	eP	Pn	15 10 41.2	+0.2
NORC				eS	Sn	15 11 09.7	-0.3
NORC				i		15 11 13.2	
	comp=Z,330nm,0.3s						
SMLC	San Martn de	2.21	333	eP	Pn	15 10 41.6	+0.3
SMLC				eS	Sn	15 11 11.0	+0.4
SMLC				i		15 11 12.6	
	comp=Z,381nm,0.4s						
CHIC	Chingaza	2.27	197	⇓eP	Pn	15 10 43.2	+0.7
CHIC				i		15 10 44.4	
	comp=Z,157nm,0.5s						
CHIC				eS	Sn	15 11 13.2	+0.6
ROSC	El Rosal	2.33	212	P	Pn	15 10 44.9	+1.8
	comp=Z,97nm,0.3s,baz=176,slow=1.0,SNR=79						
ROSC				S	Sn	15 11 14.0	+0.3
	comp=Z,34nm,0.3s,baz=336,slow=17,SNR=5.7						
UREC	San Jos de Ur	2.62	291	eP	Pn	15 10 45.5	-0.7
UREC				eS	Sn	15 11 16.4	-2.9
SOCV	Socops	2.63	56	eP	Pn	15 10 47.9	+1.4
SOCV				eS	Sn	15 11 20.0	+0.2
PTGC	Puerto Gaitan,	2.76	160	⇓iP	Pn	15 10 48.5	+0.5
PTGC				eS	Sn	15 11 21.4	-1.2
GUY2C	Guyana, Caldas	2.78	235	eP	Pn	15 10 49.5	+0.8
GUY2C				eS	Sn	15 11 24.4	+0.8
GUY2C				i		15 11 32.4	
	comp=Z,410nm,0.8s						
RREF	El Recreo	2.96	230	eP	Pn	15 10 52.6	+1.5
RREF				eS	Sn	15 11 28.8	+0.9
RREF				i		15 11 37.3	
	comp=Z,228nm,0.5s						
DBBC	Dabeiba	3.12	274	⇑iP	Pn	15 10 53.1	+0.5
TOLC	Tolima	3.15	225	eP	Pn	15 10 54.2	+0.9
TOLC				eS	Sn	15 11 32.6	+0.8
SDV	Santo Domingo	3.17	49	P	Pn	15 10 54.8	+1.4
	comp=Z,69nm,0.3s,baz=214,slow=4.9,SNR=145						
SDV				S	Sn	15 11 32.3	+0.3
	comp=Z,16nm,0.3s,baz=47,slow=17,SNR=2.6						
SDV	Santo Domingo	3.17	49	⇑eP	Pn	15 10 54.7	+1.4
SDV				i		15 10 55.6	
	comp=Z,165nm,0.2s						
SDV				eS	Sn	15 11 32.5	+0.5
ARGC	Ariguani, Magd	3.24	339	⇑eP	Pn	15 10 55.7	+1.7
ARGC				eS	Sn	15 11 32.8	-0.5
ARGC				i		15 11 46.2	
	comp=Z,106nm,0.4s						
ANIL	Santa Ana	3.28	225	eP	Pn	15 10 56.2	+1.4
ANIL				eS	Sn	15 11 35.7	+1.1
ANIL				i		15 11 39.6	
	comp=Z,60nm,0.4s						
ELOV	Elorza	3.56	87	⇑iP	Pn	15 10 59.5	+1.3
ELOV				eS	Sn	15 11 38.1	-2.6
ORTC	Ortega, Tolima	3.61	217	eP	Pn	15 10 59.6	+0.8
ORTC				eS	Sn	15 11 42.6	+0.7
ORTC				i		15 11 50.2	
	comp=Z,155nm,0.6s						
YOTC	Yotoco, Valle	4.31	229	eP	Pn	15 11 08.1	+0.1
YOTC				i		15 11 12.1	
	comp=Z,24nm,0.5s						
YOTC				eS	Sn	15 11 58.4	+0.1
PIZC	Pizarro, Choco	4.65	247	eP	Pn	15 11 14.0	+1.7
PIZC				i		15 11 18.0	
	comp=Z,39nm,0.4s						
PIZC				eS	Sn	15 12 07.8	+1.8
MACC	Macarena, Meta	4.71	190	eP	Pn	15 11 12.1	-1.0
MACC				i		15 11 12.8	
	comp=Z,71nm,0.3s						
MACC				eS	Sn	15 12 02.5	-4.9
DABV	Dabajuro	4.73	30	eP	Pn	15 11 13.6	+0.2
DABV				eS	Sn	15 12 04.7	-3.4
BETC	Betania	4.74	210	eP	Pn	15 11 13.4	-0.2
MARP	Paez Belalcaza	4.88	216	eP	Pn	15 11 16.0	+0.3
MARP				eS	Sn	15 12 08.3	-3.7
URIC	Uribia, Colomb	4.97	12	eP	Pn	15 11 15.8	-0.7
URIC				i		15 11 16.3	
	comp=Z,22nm,0.2s						
URIC				eS	Sn	15 12 09.0	-4.6
MALC	Bahia Malaga	5.08	237	eP	Pn	15 11 19.8	+1.8
MALC				i		15 11 21.7	
	comp=Z,52nm,0.5s						
MALC				eS	Sn	15 12 15.9	-0.3
GARC	Garzon, Huila	5.20	208	eP	Pn	15 11 19.3	-0.5
GARC				eS	Sn	15 12 15.2	-4.2
GARC				i		15 12 18.1	
	comp=Z,43nm,0.2s						
PCON	Cinco Dias	5.56	217	eP	Pn	15 11 26.6	+1.8
PCON				i		15 11 30.9	
	comp=Z,14nm,0.4s						
PCON				eS	Sn	15 12 27.4	-1.1
POPC	Popayan, Colom	5.56	220	eP	Pn	15 11 25.2	+0.5
ULM	Lac du Bonnet	47.31	340	P	P	15 18 20.8	-0.5
	comp=Z,0.7nm,0.4s,baz=146,slow=7.5,SNR=3.0						
PDAR	Pinedale Array	48.11	324	P	P	15 18 28.2	+0.3
	comp=Z,0.2nm,0.5s,baz=104,slow=4.7,SNR=4.7						
NVAR	Mina Array Bea	51.52	315	P	P	15 18 55.0	+1.3
	comp=Z,0.2nm,0.6s,baz=244,slow=34,SNR=2.1						
YKA	Yellowknife Ar	63.29	340	P	P	15 20 15.5	+0.2
	comp=Z,0.9nm,0.6s,baz=126,slow=7.6,SNR=16						
ASAR	Alice Springs	149.15	234	PKPbc	PKPbc	15 29 33.8	-0.6
	comp=Z,0.3nm,0.9s,baz=120,slow=3.2,SNR=4.0						
WRA	Warramunga Arr	150.38	241	PKPbc	PKiKP	15 29 36.8	-1.3
	comp=Z,0.2nm,0.5s,baz=110,slow=2.4,SNR=6.7						

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*UCR **12** 15:17:11.3±1.8, 7°.45N×82°.25W, h10^{km}, MW4.6*

ISC 12 15:17:07.4±1.5**, 7°.6N**±0°.1×**81°.89W**±0°.04**, h18^{km}, n30, σ2^{s}.08**/34**, 1C-1D, Panama**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CCOL	Caracol de Cor	1.37	309	⇓eP	Pb	15 17 33.3	+0.7
CDITO	Canoas	1.41	316	⇑eP	Pg	15 17 33.8	-0.9
AZU	Azuero	1.62	81	eP	Pn	15 17 36.5	+1.5
AZU				eS	Sb	15 17 57.5	+0.7
EDSV	San Vito	1.66	320	eP	Pg	15 17 39.2	-0.2
PIRO	Carate, Puerto	1.67	301	eP	Pn	15 17 35.8	0.0
PNME	Penonome	1.81	59	eP	Pn	15 17 38.1	+0.5
LPLA	Las Palmas La	1.84	323	eP	Pn	15 17 39.3	+0.9
LPLA				eS	Sg	15 18 04.9	-2.0
POTG	Potrero Grande	1.93	321	eP	Pn	15 17 40.6	+1.2
RIOS	Rincon, Osa	1.98	306	eP	Pn	15 17 41.1	+1.1
EDBA	Buenos Aires	2.11	320	eP	Pb	15 17 45.2	0.0
RGM0	Gandoca	2.15	341	eP	Pb	15 17 46.2	+0.4
DRK0	Durika	2.17	322	eP	Pb	15 17 44.7	-1.6
EDLM	Las Mercedes	2.41	316	eP	Pb	15 17 49.0	-1.3
PEZE	Perez Zeledon,	2.54	316	eP	Pb	15 17 51.3	-1.3
EDDO	Dominical	2.59	311	eP	Pn	15 17 50.6	+2.2
BCIP	Isla Barro Col	2.59	51	eP	Pb	15 17 51.7	-1.6
BCIP				eS	Sb	15 18 25.2	+0.4
CDM	Cerro de Muert	2.72	317	eP	Pn	15 17 52.9	+2.2
UPA	Univ. de Panam	2.73	58	eP	Pb	15 17 54.0	-1.7
UPA				eS	Sb	15 18 29.2	+0.3
MRVA	Moravia de Chi	2.73	326	eP	Pb	15 17 53.4	-2.5
RIMA	Rio Macho	2.94	319	eP	Pn	15 17 56.0	+2.4
LCR2	La Lucha 2	3.02	316	eP	Pn	15 17 56.9	+2.3
HDC	Heredia	3.28	318	eP	Pb	15 18 02.2	-3.1
JACO	JACO, Garabito	3.45	308	eP	Pn	15 18 02.8	+2.4
LAFE	Finca La Fe, P	3.74	307	eP	Pn	15 18 07.4	+3.1
UPD2	Meteti	3.96	75	eP	Pn	15 18 11.8	+4.5
PTAC	Punta Ardita,	4.07	95	eP	Pn	15 18 07.4	-1.4
JTS	Las Juntas de	4.07	312	eP	Pn	15 18 12.8	+3.9
PLVR	Palo Verde	4.41	309	eP	Pn	15 18 14.5	+0.9
CUI	Cuipilapa	4.47	314	eP	Pn	15 18 17.6	+3.1
DBBC	Dabeiba	5.66	95	eP	Pn	15 18 34.0	+3.2

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*IDC **12** 15:33:42.3±1.7, 23°.78N×93°.64E, h0^{km}, mb3.5/6, mb1 3.6/7, mb1mx3.4/36, mbtmp3.5/7, ML3.8/1, Error ellipse: s-maj=87.0km s-min=17.7km az=63.0*

*NEIC **12** 15:33:50.1±1.3, 23°.8N±0°.1×93°.7E±0°.2, h55^{km}±11^{km}, mb4.4/15, Error ellipse: s-maj=22.4km s-min=12.9km az=65.0*

*NDI **12** 15:33:52.4±2.5, 24°.15N×93°.88E, h39^{km}±21^{km}, ML3.6*

ISC 12 15:33:51.1±1.1**, 24°.07N**±0°.05×**93°.83E**±0°.06**, h60^{km}**±13^{km}**, n45, σ1^{s}.78**/52**, mb3.9**/13**, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOHI	KOHIMA	1.67	9	eP	Pn	15 34 19.3	+1.1
KOHI				eS	Sn	15 34 39.6	+1.0
KOHI				IAML		15 34 40.8	
	comp=E,591nm,0.5s						
SAIH	SAIHA	1.75	206	eP	Pn	15 34 20.5	+1.2
SAIH				eS	Sn	15 34 42.6	+2.1
SAIH				IAML		15 34 46.3	
	comp=E,528nm,0.5s						
SHL	Shillong	2.31	311	eP	Pn	15 34 27.9	+0.9
SHL				i x	x	15 34 29.9	
SHL				eS	Sn	15 34 54.1	-0.3
SHL				IAML		15 34 55.3	
	comp=N,557nm,0.1s						
SHL				IAML		15 34 56.5	
	comp=E,475nm,0.2s						
SHL	Shillong	2.31	311	Pn	Pn	15 34 27.9	+0.9
MOKO	MOKOCHONG	2.33	15	eP	Pn	15 34 28.4	+1.2
MOKO				IAML		15 34 58.3	
	comp=N,173nm,0.1s						
AGT	Agartala	2.36	266	eP	Pn	15 34 29.6	+2.1
AGT				eS	Sn	15 34 58.7	+3.4
TEZP	TEZPUR	2.70	340	eP	Pn	15 34 32.2	0.0
TEZP				eS	Sn	15 35 00.2	-3.5
TEZP				IAML		15 35 03.2	
	comp=E,584nm,0.0s						
GUWA	GUWAHATI	2.87	318	eS	Sn	15 35 05.6	-2.1
ZIRO	ZIRO	3.45	0	eS	Sn	15 35 19.2	-3.0
ZIRO				IAML		15 35 21.1	
	comp=E,458nm,0.6s						
GTK	Tadong	5.72	306	eP	Pn	15 35 14.7	+1.2
GTK				ex	x	15 36 18.4	
LSA	Lhasa	6.10	338	Pn	Pn	15 35 21.4	+2.4
TAPN	Taplejung	6.41	302	eP	Pn	15 35 24.4	+1.2
	comp=E,34nm,0.2s						
ODAN	Odare	6.45	297	eP	Pn	15 35 24.3	+0.7
	comp=E,53nm,0.3s						
ODAN				eS	Sn	15 36 34.7	-1.3
RAMN	Ramite	7.13	295	eP	Pn	15 35 33.8	+0.8
	comp=E,76nm,0.4s						
CMAR	Chiang Mai Arr	7.34	139	Pn	Pn	15 35 31.5	-4.2
	comp=E,0.4nm,0.3s,baz=323,slow=16,SNR=3.1						
GUN	Gumba	8.11	300	eP	Pn	15 35 46.5	0.0
	comp=E,46nm,0.3s						
GUN				eS	Sn	15 37 13.7	-3.2
PKI	Pulchoki	8.35	296	eP	Pn	15 35 49.5	-0.2
	comp=E,25nm,0.3s						
PKI				eS	Sn	15 37 20.4	-2.3
PKIN	Phulchoki	8.36	296	eP	Pn	15 35 50.1	+0.3
	comp=E,42nm,0.2s						
KKN	Kakani	8.54	298	eP	Pn	15 35 51.6	-0.6
	comp=E,20nm,0.2s						
KKN				eS	Sn	15 37 24.8	-2.4
DMN	Daman	8.61	296	eP	Pn	15 35 53.0	-0.3
	comp=E,13nm,0.3s						
GKN	Gorkha	9.14	297	eP	Pn	15 35 59.9	-0.6
	comp=E,86nm,0.3s						
DANN	Dangsing	9.99	297	eP	Pn	15 36 10.8	-1.4
	comp=E,26nm,0.3s						
GSI	Gunungsitoli	22.92	170		P	15 38 47.7	-2.5
GSI				IAmb	IAmb	15 38 49.8	
	comp=Z,24nm,1.4s						
MK31	Makanchi Array	24.50	341	P	P	15 39 05.8	+1.2
MKAR	Makanchi Array	24.50	341	P	P	15 39 05.5	+0.9
	comp=Z,0.4nm,0.4s,baz=150,slow=9.8,SNR=10.0						
MKAR	Makanchi Array	24.50	341	P	P	15 39 05.3	+0.7
TPUB	Ta-pu	24.55	86	P	P	15 39 06.0	+0.6
MAKZ	Makanchi	24.60	340	P	P	15 39 06.5	+0.9
NACB	Ninganchiao	25.33	84	P	P	15 39 13.3	+0.9
NACB				IAmb	IAmb	15 39 34.7	
	comp=Z,40nm,1.5s						
SONM	Songino Array	25.74	20	P	P	15 39 17.6	+1.5
	comp=Z,0.3nm,0.4s,baz=206,slow=9.5,SNR=1.8						
SONM	Songino Array	25.74	20	IAmb	IAmb	15 39 21.9	
	comp=Z,2.0nm,1.6s						
KURBB	Kurchatov Arra	29.05	340	P	P	15 39 46.5	+1.0
	comp=Z,0.4nm,0.6s,baz=150,slow=8.4,SNR=4.6						
KURK	Kurchatov	29.10	340	P	P	15 39 47.7	+1.8
KURK				IAmb	IAmb	15 39 48.5	
	comp=Z,0.9nm,0.9s						
ZALV	Zalesovo Beam	30.60	350	P	P	15 39 59.2	+0.1
	comp=Z,0.5nm,0.5s,baz=173,slow=8.4,SNR=2.8						
GEYT	Alibeck	33.37	303	P	P	15 40 23.9	+0.2
BKB	Balikpapan	33.70	135	P	P	15 40 24.7	-2.0
MDJ	Mudanjiang	35.56	46	P	P	15 40 45.6	+3.2
ABKAR	Akbulak array	36.53	322	P	P	15 40 52.2	+1.5
ABKAR	Akbulak array	36.53	322	P	P	15 40 52.2	+1.5
ABKAR				IAmb	IAmb	15 40 52.5	
	comp=Z,3.3nm,1.5s						
WB0	Warramunga Arr	58.83	134	P	P	15 43 41.9	-1.7
WB0				IAmb	IAmb	15 43 55.3	
	comp=Z,5.9nm,1.2s						
WRA	Warramunga Arr	58.92	134	P	P	15 43 42.6	-1.7
	comp=Z,0.5nm,0.5s,baz=322,slow=7.4,SNR=12						
WRA	Warramunga Arr	58.92	134	IAmb	IAmb	15 43 47.9	
	comp=Z,0.3nm,1.4s						
WB2	Warramunga Arr	58.92	134	P	P	15 43 43.0	-1.3
WB2				IAmb	IAmb	15 44 03.4	
	comp=Z,8.1nm,1.4s						
WR0	Warramunga Arr	59.06	134	P	P	15 43 44.0	-1.3
WR0				IAmb	IAmb	15 43 56.0	
	comp=Z,11nm,1.5s						
ASAR	Alice Springs	61.35	138	P	P	15 43 59.5	-1.4
	comp=Z,0.4nm,0.5s,baz=319,slow=6.7,SNR=18						

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*IDC **12** 15:50:53.1±0.5, 19°.10N×105°.96W, h0^{km}, mb4.7/27, mb1 4.8/32, mb1mx4.8/42, mbtmp4.7/32, ML4.3/5, MS4.8/26, Ms1 4.8/26, ms1mx4.7/30, Error ellipse: s-maj=21.5km s-min=11.1km az=59.0*

*MEX **12** 15:50:56.0±1.6, 19°.16N×105°.91W, h15^{km}, MD5.5*

*GCMT **12** 15:50:56.9±0.1, 19°.37N±0°.01×105°.84W±0°.01, h12^{km}, MW5.5/147, Moment Tensor Solution. s132,c208; s147,c266; Duration: 1^{s}3 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.95±.02; $M_{\theta\theta}$-0.09±.02; $M_{\phi\phi}$1.04±.02; $M_{r\theta}$0.24±.05; $M_{\theta\phi}$-1.80±.02; $M_{\phi r}$0.38±.05; Best double couple: $M_0$2.01300×10^{17} NP1:ϕ_s283.00000°,δ67.00000°, λ-159.00000°. NP2:ϕ_s184.00000°,δ71.00000°, λ-25.00000°. Principal axes: T 2.3710, Plg3.0000°, Azm234.0000°; N -0.7160, Plg59.0000°, Azm329.0000°; P -1.6550, Plg31.0000°, Azm142.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*MOS **12** 15:50:58.5±1.0, 19°.35N×105°.63W, h40^{km}, mb5.4/35, MS4.8/15 Error ellipse: s-maj=8.1km s-min=4.8km az=94.0*

*NEIC **12** 15:50:59.7, 19°.31N×105°.76W, h13^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.38; $M_{\theta\theta}$-1.26; $M_{\phi\phi}$0.89; $M_{r\theta}$0.35; $M_{\theta\phi}$-2.02; $M_{\phi r}$-0.14; Fault plane solution: $M_0$2.34000×10^{17} NP1:ϕ_s103.63000°, δ86.48000°,λ169.88000°. NP2:ϕ_s194.26000°,δ79.90000°, λ3.57000°. Principal axes: T 2.1528, Plg10.0000°, Azm59.0000°; N 0.3432, Plg79.0000°, Azm265.0000°; P -2.4960, Plg5.0000°, Azm149.0000°;*

*NEIC **12** 15:50:59, 19°.33N×105°.83W, h12^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-1.11; $M_{\theta\theta}$-0.12; $M_{\phi\phi}$1.23; $M_{r\theta}$-0.45; $M_{\theta\phi}$-2.06; $M_{\phi r}$0.69; Fault plane solution: $M_0$2.51000×10^{17} NP1:ϕ_s278.00000°, δ77.00000°,λ177.00000°. NP2:ϕ_s9.00000°,δ87.00000°, λ13.00000°. Principal axes: T 2.8917, Plg12.0000°, Azm234.0000°; N -1.2747, Plg77.0000°, Azm23.0000°; P -1.6170, Plg7.0000°, Azm143.0000°;*

*NEIC **12** 15:50:59.9±2.3, 19°.36N±0°.06×105°.74W±0°.07, h42^{km}±4^{km}, mb5.2/528, Ms_20 5.0/506, Mwb5.5/17, Md5.2/92(MEX), Mwc5.5(GCMT) Error ellipse: s-maj=11.1km s-min=7.1km az=224.0*

*BGR **12** 15:51:05.8±0.0, 19°.68N×104°.75W, h33^{km}, mb5.0, Ms5.3*

ISC 12 15:50:57.8±0.6**, 19°.22N**±0°.04×**105°.89W**±0°.04**, h30^{km}**±3^{km}**, h30^{km}:pP-P, n1274, σ1^{s}.65**/961**, mb5.2**/296**, MS5.0**/289**, 13C-22D, Near coast of Jalisco**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PUVA	Puert Vallarta	1.53	24	i P	Pn	15 51 20.0	-3.1
PUVA				i S	Sn	15 51 38.9	-3.2
PUVA	Puert Vallarta	1.53	24		Pn	15 51 20.0	-3.1
PUVA					Sn	15 51 38.9	-3.2
R15V		1.80	91	eP	Pn	15 51 22.9	-3.9
R15V				i S	Sn	15 51 44.5	-4.2
R15V		1.80	91		Pn	15 51 23.3	-3.6
COIG	Colima	2.08	91	eP	Pn	15 51 27.3	-3.4
COIG				i S	Sn	15 51 52.0	-3.6
EZ5V		2.17	83	⇑eP	Pn	15 51 30.1	-2.1
EZ5V				eS	Sn	15 51 55.4	-2.9
EZ5V		2.17	83		Pn	15 51 30.1	-2.1
ANIG	Ahuacatlan	2.23	35	⇑iP	Pn	15 51 30.3	-2.5
ANIG				eS	Sn	15 51 56.8	-2.6
ANIG	Ahuacatlan	2.23	35		Pn	15 51 30.3	-2.5
ANIG					Sn	15 51 57.8	-1.6
MMIG	Aquila	2.58	111	eP	Pn	15 51 33.5	-4.0
MMIG				eS	Sn	15 52 00.6	-7.3
MAIG	Mazatlaan	3.98	353	⇑eP	Pn	15 51 54.0	-2.8
MAIG				eS	Sn	15 52 36.0	-6.4
MAIG	Mazatlaan	3.98	353		Pn	15 51 54.0	-2.8
MAIG					Sn	15 52 36.0	-6.4
AAIG	Aguscalientes	4.27	50	⇑eP	Pn	15 51 59.7	-1.4
AAIG				eS	Sn	15 52 49.3	-0.7
MOIG	Morelia	4.46	83	Pn	Pn	15 52 02.1	-1.4
IGIG	Irapuato, Guan	4.55	70	eP	Pn	15 52 03.8	-1.0
IGIG				eS	Sn	15 52 56.3	-0.5
IGIG	Irapuato, Guan	4.55	70		Pn	15 52 03.8	-1.0
IGIG					Sn	15 52 56.3	-0.5
ZAIG	Zacatecas	4.70	41	⇑eP	Pn	15 52 06.0	-1.0
ZAIG				eS	Sn	15 53 00.2	-0.4
ZAIG	Zacatecas	4.70	41		Pn	15 52 06.0	-1.0
ZAIG					Sn	15 53 00.2	-0.4
H06E		4.78	266	i P	Pn	15 52 03.5	-4.3
H06E				eS	Sn	15 52 56.0	-6.2
H06E1	SOCORRO T-PHAS	4.79	266	T	T	15 57 55.5	
	SNR=21						
H06S1	SOCORRO T	4.82	265	T	T	15 57 09.9	
	SNR=6.1						
H06S		4.83	265	i P	Pn	15 52 04.6	-3.8
H06N1	SOCORRO T-PHAS	4.84	267	T	T	15 57 12.5	
	SNR=3.0						
H06N	Isla Socorro	4.84	267	i P	Pn	15 52 05.7	-2.9
ARIG	Puente Sto Nin	5.33	99	eP	Pn	15 52 14.1	-1.3
ARIG				eS	Sn	15 53 13.8	-2.1
ARIG	Puente Sto Nin	5.33	99		Pn	15 52 14.1	-1.3
ARIG					Sn	15 53 13.8	-2.1
SSIG	Sanalona	5.69	348	eP	Pn	15 52 19.2	-1.1
SSIG				eS	Sn	15 53 21.9	-2.7
ACIG	Acambay	5.71	81	i P	Pn	15 52 21.2	+0.4
CAIG	El Cayaco	5.76	111	⇓eP	Pn	15 52 19.8	-1.5
CAIG				eS	Sn	15 53 24.2	-2.3
CAIG	El Cayaco	5.76	111		Pn	15 52 19.8	-1.5
CAIG					Sn	15 53 24.2	-2.3
SLBS	Sierra La Lagu	5.83	320	Pn	Pn	15 52 22.7	+0.4
TOVM	TOLUCA	5.87	88	eP	Pn	15 52 22.4	-0.6
TOVM	TOLUCA	5.87	88		Pn	15 52 22.4	-0.6
MAVM	Malinalco, Edo	6.05	91	eP	Pn	15 52 25.1	-0.4
MAVM	Malinalco, Edo	6.05	91		Pn	15 52 25.1	-0.4
RPIG	Rio Verde	6.13	63	eP	Pn	15 52 25.9	-0.6
RPIG				eS	Sn	15 53 35.9	+0.2
UNM	Universidad Na	6.34	88	P	Pn	15 52 28.9	-0.6
UNM	Universidad Na	6.34	88	Pn	Pn	15 52 28.9	-0.6
LPIG	La Paz	6.36	321	Pn	Pn	15 52 30.7	+1.2
	15nm,0.3s,baz=349,slow=7.7,SNR=9.7						
LPIG				LR	LR	15 54 34.0	
	comp=Z,10μm,18.6s,baz=160,slow=34						
PBVM	Pinon	6.43	87	eP	Pn	15 52 29.2	-1.2
PBVM	Pinon	6.43	87		Pn	15 52 29.2	-1.2
YAIG	Yautepec	6.46	92	eP	Pn	15 52 30.8	-0.3
YAIG				i S	Sn	15 53 43.2	-0.7
YAIG	Yautepec	6.46	92		Pn	15 52 30.8	-0.3
YAIG					Sn	15 53 43.2	-0.7
DEIG	Demacu	6.54	79	eP	Pn	15 52 31.4	-0.8
DEIG				eS	Sn	15 53 45.4	-0.5
PPM	Popocatepetl	6.87	90	eP	Pn	15 52 36.6	-0.3
CRIG	Cruz Grande	6.89	110	eP	Pn	15 52 35.7	-1.0
HMTT	Tlapaneco	7.09	100		Sn	15 53 58.6	-0.8
TLIG	Tlapa	7.14	102	Pn	Pn	15 52 40.0	-0.4
GTIG	Gomez Farias	7.34	57	eP	Pn	15 52 42.5	-0.6
GTIG				eS	Sn	15 54 05.6	+0.2
FTIG	Fresnillo de T	7.47	99	eP	Pn	15 52 44.7	-0.2
HPIG		7.68	1		Pn	15 52 47.7	-0.1
PNIG	Pinotepa	7.91	110	i P	Pn	15 52 50.1	-0.7
PNIG	Pinotepa	7.91	110		Pn	15 52 50.1	-0.7
TXIG	Tlaxiaco	7.96	103	eP	Pn	15 52 51.8	0.0
MNIG	Monterrey	8.20	38	eP	Pn	15 52 54.0	-0.8
YOIG	Yosondua	8.28	105	eP	Pn	15 52 56.2	+0.1
TOIG	Toxpalan	8.44	96	eP	Pn	15 52 58.4	+0.3
PEIG	Puerto Escondi	8.93	110	i P	Pn	15 53 04.5	-0.3
VHO	Vista Hermosa	8.96	102	i P	Pn	15 53 05.9	+0.5
HUIG	Huatulco	9.94	109	eP	Pn	15 53 18.6	-0.1
HUIG	Huatulco	9.94	109		Pn	15 53 18.6	-0.1
SRIG	Santa Rosalia	9.95	325	Pn	Pn	15 53 21.5	+2.7
TX31	Lajitas Ar. Si	10.27	11		Pn	15 53 23.0	-0.2
TX32	Lajitas Array	10.27	11		Pn	15 53 23.8	+0.6
TXAR	Lajitas Array	10.27	11	Pn	Pn	15 53 23.6	+0.3
	0.7nm,0.3s,baz=200,slow=12,SNR=35						
TXAR				Lg	Lg	15 56 13.2	
	0.6nm,0.3s,baz=43,slow=22,SNR=2.4						
TXAR				LR	LR	15 57 57.4	
	comp=Z,4μm,21.1s,baz=0.0,slow=41						
TXAR	Lajitas Array	10.27	11	P	Pn	15 53 22.7	-0.5
TXAR	Lajitas Array	10.27	11	Pn	Pn	15 53 22.7	-0.5
CMIG	Matias Romero	10.67	100	Pn	Pn	15 53 28.6	-0.1
	14nm,0.3s,baz=280,slow=10,SNR=175						
CMIG				Lg	Lg	15 56 13.6	
	baz=192,slow=22,SNR=5.1						
CMIG				LR	LR	15 57 48.1	
	comp=Z,11μm,19.3s,baz=272,slow=39						
CMIG	Matias Romero	10.67	100	eP	Pn	15 53 28.2	-0.5
CMIG	Matias Romero	10.67	100		Pn	15 53 28.2	-0.5
HSIG		10.79	336	Pn	Pn	15 53 33.1	+2.9
833A	Chaparral WMA,	10.83	32	P	Pn	15 53 33.2	+2.3
	baz=214,SNR=21						
NZIG	Nacozari, Sono	11.59	344	eP	Pn	15 53 42.4	+1.0
735A	Kenedy	12.10	36		Pn	15 53 49.2	+1.1
MNTX	Cornudas Mount	12.43	2	P	Pn	15 53 54.5	+1.7
	baz=181,SNR=19						
MNTX	Cornudas Mount	12.43	2	Pn	Pn	15 53 54.4	+1.7
319A	Douglas	12.48	346		Pn	15 53 56.3	+2.7
JCT	Junction City	12.49	25	P	Pn	15 53 55.1	+1.5
	baz=207,SNR=44						
JCT	Junction City	12.49	25	P	Pn	15 53 55.1	+1.5
JCT	Junction City	12.49	25	Pn	Pn	15 53 55.1	+1.5
GDL2	Guadalupe Moun	13.00	6		Pn	15 54 01.9	+1.4
CLNB	Carlsbad	13.11	8	Pn	Pn	15 54 03.6	+1.5
121A	Cookes Peak, D	13.37	353	P	Pn	15 54 08.2	+2.6
	baz=171,SNR=60						
121A	Cookes Peak, D	13.37	353	Pn	Pn	15 54 07.6	+1.9
CCIG	Comitan	13.42	100		Pn	15 54 05.7	-0.7
435B	Jarrell	13.74	32	P	Pn	15 54 10.7	0.0
	baz=214,SNR=6.3						
435B	Jarrell	13.74	32		Pn	15 54 11.0	+0.4
TUC	Tucson	13.76	342	P	Pn	15 54 13.0	+2.2
	baz=159						
TUC	Tucson	13.76	342	P	Pn	15 54 13.6	+2.7
TUC	Tucson	13.76	342	eP	Pn	15 54 14.4	+3.6
TUC	Tucson	13.76	342	Pn	Pn	15 54 13.6	+2.7
CPRX	Cap Rock	13.87	7		Pn	15 54 10.2	-2.3
HKT	Hockley	14.05	39	c iP	Pn	15 54 13.7	-1.1
HKT				pmax	pmax		
	comp=Z,76nm,1.0s						
HKT	Hockley	14.05	39	Pn	Pn	15 54 13.6	-1.2
PIX	Pinacate	14.06	332	Pn	Pn	15 54 17.5	+2.7
214A	Organ Pipe Nat	14.13	335	P	Pn	15 54 16.7	+0.8
	baz=151,SNR=8.8						
214A	Organ Pipe Nat	14.13	335	Pn	Pn	15 54 18.4	+2.5
HUEH	Huehuetenango	14.28	104	Pn	Pn	15 54 19.2	+1.1
SFX	San Felipe	14.28	327	Pn	Pn	15 54 16.4	-1.6
RTAL	Retalhuleu	14.36	107		Pn	15 54 19.0	-0.1
ABTX	Abilene, Hawle	14.47	22	P	Pn	15 54 20.3	-0.4
	baz=204,SNR=11						
ABTX	Abilene, Hawle	14.47	22		Pn	15 54 20.2	-0.4
SPX	San Pedro Mart	14.61	326		Pn	15 54 24.4	+1.7

WHTX	**Lake Whitney,**	**14.81**	**29**	P	**Pn**	**15 54 24.4**	**-0.7**
	baz=212,SNR=16						
WHTX	**Lake Whitney,**	**14.81**	**29**	Pn	**Pn**	**15 54 24.8**	**-0.3**
Y22D	**IRIS PASSCAL I**	**14.82**	**357**	Pn	**Pn**	**15 54 25.4**	**-0.1**
BNM	**Barren Site**	**14.88**	**358**	Pn	**Pn**	**15 54 28.3**	**+1.9**
LENM	**Lemitar**	**14.92**	**356**		**Pn**	**15 54 27.8**	**+1.0**
MSTX	**Muleshoe**	**14.95**	**10**	P	**Pn**	**15 54 27.2**	**+0.1**
	baz=191,SNR=135						
MSTX	**Muleshoe**	**14.95**	**10**		**Pn**	**15 54 28.0**	**+0.9**
113A	**Mohawk Valley,**	**15.23**	**334**	Pn	**Pn**	**15 54 32.6**	**+2.0**
PETF	**Flores**	**15.41**	**96**		**Pn**	**15 54 29.6**	**-3.5**
ESJX	**Sierra Juarez**	**15.62**	**327**	Pn	**Pn**	**15 54 37.8**	**+1.9**
237A	**Washetta, Mont**	**15.63**	**34**		**Pn**	**15 54 34.4**	**-1.5**
X18A	**Snowflake**	**15.67**	**347**		**Pn**	**15 54 37.6**	**+1.0**
ANMO	**Albuquerque**	**15.67**	**358**	Pn	**Pn**	**15 54 38.7**	**+2.0**
	comp=Z,0.2nm,0.3s,baz=178,slow=13,SNR=34						
ANMO				LR	LR	16 00 48.3	
	comp=Z,5µm,19.4s,baz=178,slow=38						
ANMO	**Albuquerque**	**15.67**	**358**	P	**P**	**15 54 38.9**	**-1.5**
	baz=177						
ANMO	**Albuquerque**	**15.67**	**358**	*c i*P	**Pn**	**15 54 38.7**	**+2.0**
ANMO				pmax	pmax		
	comp=Z,63nm,1.0s						
ANMO	**Albuquerque**	**15.67**	**358**	Pn	**Pn**	**15 54 38.1**	**+1.5**
CCX	**Cicese**	**15.90**	**324**		**Pn**	**15 54 39.9**	**+0.5**
X16A	**Lo Mia Camp, P**	**15.92**	**343**	P	**P**	**15 54 42.1**	**-1.1**
GLA	**Glamis**	**15.93**	**332**	P	**P**	**15 54 42.0**	**-1.2**
	baz=147						
GLA	**Glamis**	**15.93**	**332**	P	**Pn**	**15 54 40.7**	**+0.9**
GLA				pmax	pmax		
	comp=Z,48nm,1.0s						
GLA	**Glamis**	**15.93**	**332**	P	**Pn**	**15 54 40.7**	**+0.9**
Z35A	**Perchaven, San**	**16.03**	**27**		**Pn**	**15 54 39.4**	**-1.7**
AMTX	**Amarillo**	**16.04**	**13**	P	**Pn**	**15 54 40.9**	**-0.4**
	baz=194						
AMTX	**Amarillo**	**16.04**	**13**	Pn	**Pn**	**15 54 41.1**	**-0.2**
AMTX				IAmb	IAmb	15 54 47.0	
	comp=Z,141nm,0.8s						
RMX	**La Rumorosa**	**16.16**	**328**	Pn	**Pn**	**15 54 42.1**	**-0.8**
W18A	**Petrified Fore**	**16.20**	**349**	P	**P**	**15 54 45.7**	**-0.6**
	baz=166,SNR=25						
W18A	**Petrified Fore**	**16.20**	**349**	P	**P**	**15 54 45.0**	**-1.3**
IKP	**In-Ko-Pah, Jac**	**16.21**	**328**	P	**P**	**15 54 45.8**	**-0.6**
	baz=142						
CBX	**Cerro Bola**	**16.24**	**326**	P	**P**	**15 54 46.6**	**-0.1**
441A	**DeRidder**	**16.24**	**43**		**Pn**	**15 54 42.0**	**-1.7**
441A				IAmb	IAmb	15 54 48.7	
	comp=Z,197nm,0.8s						
SWSC	**Sam W. Stewart**	**16.30**	**329**	P	**Pn**	**15 54 45.2**	**+0.8**
	baz=144,SNR=8.0						
TKX	**Tecate**	**16.41**	**326**	Pn	**P**	**15 54 47.4**	**-1.1**
ESQI	**Esquipulas**	**16.50**	**104**		**Pn**	**15 54 47.3**	**+0.1**
ESQI				IAmb	IAmb	15 54 55.1	
	comp=Z,223nm,1.2s						
BAR	**Barrett**	**16.53**	**326**		**P**	**15 54 50.2**	**+0.4**
MTO3	**Montecristo**	**16.53**	**104**		**Pn**	**15 54 47.7**	**-0.1**
MTO3				IAmb	IAmb	15 54 55.4	
	comp=Z,134nm,1.1s						
MONP2	**Monument Peak**	**16.57**	**327**	P	**P**	**15 54 49.7**	**-0.7**
	baz=142						
TEIG	**Tepich**	**16.61**	**84**	Pn	**Pn**	**15 54 44.4**	**-4.1**
	comp=Z,4.9nm,0.3s,baz=218,slow=1.3,SNR=19						
TEIG				LR	LR	16 01 25.7	
	comp=Z,5µm,20.7s,baz=270,slow=38						
TEIG	**Tepich**	**16.61**	**84**	Pn	**Pn**	**15 54 44.1**	**-4.5**
TEIG	**Tepich**	**16.61**	**84**	*e*P	**Pn**	**15 54 44.1**	**-4.5**
WMOK	**Wichita Mounta**	**16.69**	**21**	P	**Pn**	**15 54 47.5**	**-2.0**
	baz=203,SNR=60						
WMOK	**Wichita Mounta**	**16.69**	**21**	P	**Pn**	**15 54 47.0**	**-2.5**
WMOK				pmax	pmax		
	comp=Z,64nm,0.9s						
WMOK	**Wichita Mounta**	**16.69**	**21**		**Pn**	**15 54 47.0**	**-2.5**
BC3	**Big Chuckawall**	**16.72**	**331**	P	**P**	**15 54 52.0**	**0.0**
	baz=146,SNR=12						
PDMCI	**Parker Dam,Lak**	**16.72**	**336**	P	**P**	**15 54 51.0**	**-0.9**
	baz=151,SNR=12						
X34A	**Smith Ranch, M**	**16.91**	**23**		**Pn**	**15 54 51.3**	**-0.9**
X34A				IAmb	IAmb	15 54 58.4	
	comp=Z,108nm,0.8s						
109C	**Camp Elliot, M**	**16.92**	**326**	P	**P**	**15 54 53.7**	**-0.4**
	baz=140						
109C	**Camp Elliot, M**	**16.92**	**326**	P	**P**	**15 54 55.1**	**+1.0**
109C				IAmb	IAmb	15 54 58.6	
	comp=Z,380nm,2.0s						
WUAZ	**Wupatki**	**16.94**	**344**	P	**P**	**15 54 55.4**	**+0.9**
	baz=161,SNR=34						
WUAZ	**Wupatki**	**16.94**	**344**	P	**P**	**15 54 55.7**	**+1.1**
IRM	**Iron Mountain**	**17.01**	**333**	P	**P**	**15 54 55.5**	**+0.3**
	baz=148,SNR=28						
Z38A	**Mt. Pleasant**	**17.04**	**33**		**Pn**	**15 54 52.4**	**-1.5**
TPFO	**Pinon Flats**	**17.15**	**329**	P	**P**	**15 54 57.8**	**+1.0**
	baz=143,SNR=12						
PFO	**Pinyon Flats O**	**17.16**	**329**	P	**P**	**15 54 57.1**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=148,slow=11,SNR=15						
PFO				LR	LR	16 01 06.0	
	comp=Z,2µm,18.1s,baz=150,slow=36						
PFO	**Pinyon Flats O**	**17.16**	**329**	P	**P**	**15 54 57.8**	**+0.9**
	baz=143,SNR=11						
PFO	**Pinyon Flats O**	**17.16**	**329**	*d i*P	**P**	**15 54 57.8**	**+0.9**
PFO				pmax	pmax		
	comp=Z,141nm,1.9s						
PFO	**Pinyon Flats O**	**17.16**	**329**	P	**P**	**15 54 57.1**	**+0.2**
342A	**Flagon Creek P**	**17.21**	**43**	Pn	**Pn**	**15 54 54.0**	**-1.9**
BELC	**Belle Mtn. Jos**	**17.26**	**331**	P	**P**	**15 54 59.0**	**+1.0**
	baz=145,SNR=14						
NEE2	**Needles Airpor**	**17.32**	**335**	P	**P**	**15 54 59.4**	**+0.9**
	baz=150						
W13A	**Hualapai Mount**	**17.33**	**337**	P	**P**	**15 54 59.4**	**+0.5**
MURC	**Murrieta**	**17.52**	**327**	P	**P**	**15 55 01.7**	**+0.9**
	baz=141						
545A	**Edgard**	**17.64**	**49**	P	**P**	**15 55 02.2**	**0.0**
FNO	**Franklin**	**17.65**	**23**	P	**Pn**	**15 55 01.9**	**+0.4**
GMRC	**Granite Mounta**	**17.76**	**333**	P	**P**	**15 55 04.9**	**+1.4**
	baz=148,SNR=18						
OKCSW	**OKLAHOMA CITY**	**17.77**	**23**	P	**Pn**	**15 55 01.8**	**-1.1**
OKCFA	**Oklahoma City**	**17.77**	**23**		**Pn**	**15 55 01.3**	**-1.6**
SCI2	**San Clemente I**	**17.78**	**323**	P	**P**	**15 55 05.5**	**+1.8**
	baz=137						
T25A	**Trinidad**	**17.90**	**4**	P	**P**	**15 55 06.2**	**+1.1**
	baz=184,SNR=70						
BBRC	**Big Bear Solar**	**17.91**	**329**	P	**P**	**15 55 07.3**	**+2.0**
	baz=143						
BCOK	**Bluff Creek, N**	**17.93**	**22**	P	**Pn**	**15 55 03.6**	**-1.3**
X37A	**Clayton**	**17.93**	**29**	P	**Pn**	**15 55 03.4**	**-1.5**
X37A				IAmb	IAmb	15 55 22.5	
	comp=Z,113nm,0.8s						
OK025	**Westminster Rd**	**17.96**	**23**		**Pn**	**15 55 03.0**	**-2.3**
OK025				IAmb	IAmb	15 55 07.0	
	comp=Z,178nm,0.9s						
U15A	**North Rim**	**18.04**	**343**	P	**P**	**15 55 08.8**	**+2.0**
MVCO	**Mesa Verde**	**18.07**	**353**	P	**P**	**15 55 07.9**	**+0.9**
	baz=171,SNR=20						
MVCO	**Mesa Verde**	**18.07**	**353**	P	**P**	**15 55 07.3**	**+0.2**
HEC	**Hector,Ludlow**	**18.10**	**331**	P	**P**	**15 55 09.3**	**+2.1**
	baz=146,SNR=11						
OK029	**Liberty Lake**	**18.11**	**23**	P	**Pn**	**15 55 05.7**	**-1.4**
OK029				IAmb	IAmb	15 55 08.2	
	comp=Z,223nm,0.7s						
U32A	**Winter Ranch,**	**18.14**	**18**		**Pn**	**15 55 06.2**	**-1.2**
U32A				IAmb	IAmb	15 55 09.5	
	comp=Z,160nm,0.9s						
FMP	**Fort Macarthur**	**18.19**	**325**	P	**P**	**15 55 09.8**	**+1.7**
	baz=139						
Z41A	**Richland Creek**	**18.23**	**37**	P	**Pn**	**15 55 06.5**	**-2.0**
	baz=223,SNR=16						
BFSC	**Mount Baldy Ra**	**18.26**	**327**	P	**Pn**	**15 55 11.5**	**+2.4**
	baz=141,SNR=17						
344A	**Westbrook Farm**	**18.30**	**45**	P	**P**	**15 55 08.3**	**-1.1**
344A				IAmb	IAmb	15 55 09.9	
	comp=Z,242nm,0.9s						
WLAR	**White Oak Lake**	**18.37**	**36**	P	**P**	**15 55 08.8**	**-1.3**
WLAR				IAmb	IAmb	15 55 10.8	
	comp=Z,219nm,0.9s						
RRX	**Edison Barstow**	**18.44**	**330**	P	**Pn**	**15 55 11.9**	**+0.7**
	baz=144						
MWC	**Mount Wilson**	**18.45**	**327**	P	**Pn**	**15 55 13.8**	**+2.3**
MWC				pmax	pmax		
	comp=Z,39nm,0.9s						
MWC	**Mount Wilson**	**18.45**	**327**	P	**Pn**	**15 55 13.8**	**+2.3**
SDCO	**Great Sand Dun**	**18.46**	**1**	P	**Pn**	**15 55 12.7**	**+1.0**
	baz=180,SNR=77						
SDCO	**Great Sand Dun**	**18.46**	**1**	P	**P**	**15 55 11.1**	**-0.4**
S22A	**4UR Ranch, Cre**	**18.48**	**358**	P	**Pn**	**15 55 12.7**	**+0.9**
	baz=176,SNR=46						
OK030	**Cody Creek RV**	**18.48**	**24**	P	**P**	**15 55 10.4**	**-0.9**
OK030				IAmb	IAmb	15 55 20.1	
	comp=Z,129nm,0.6s						
OK031	**S. Brethren Rd**	**18.48**	**24**	P	**P**	**15 55 10.4**	**-0.9**
OK031				IAmb	IAmb	15 55 12.2	
	comp=Z,145nm,0.7s						
PASC	**Pasadena Art C**	**18.48**	**326**		**Pn**	**15 55 12.9**	**+1.3**
SNCC	**San Nicolas Is**	**18.54**	**322**	P	**Pn**	**15 55 13.3**	**+0.9**
	baz=135						
TGUH	**Tegucigalpa,Un**	**18.55**	**103**		**Pn**	**15 55 13.5**	**+0.8**
TGUH				IAmb	IAmb	15 55 17.5	
	comp=Z,271nm,1.4s						
TGUH	**Tegucigalpa,Un**	**18.55**	**103**	*e*P	**Pn**	**15 55 13.1**	**+0.3**
CROK	**Carrier**	**18.57**	**20**	P	**P**	**15 55 11.2**	**-1.1**
CROK				IAmb	IAmb	15 55 14.5	
	comp=Z,187nm,0.7s						
DECC	**Green Verdugo**	**18.62**	**326**	P	**Pn**	**15 55 14.8**	**+1.4**
	baz=140						
GSC	**Goldstone, Bar**	**18.70**	**331**	P	**Pn**	**15 55 16.7**	**+2.2**
	baz=145,SNR=14						
GSC	**Goldstone, Bar**	**18.70**	**331**	P	**Pn**	**15 55 16.1**	**+1.7**
GSC				pmax	pmax		
	comp=Z,46nm,1.2s						
GSC	**Goldstone, Bar**	**18.70**	**331**		**Pn**	**15 55 16.1**	**+1.7**
QUOK	**Quay**	**18.72**	**24**	P	**P**	**15 55 12.8**	**-1.2**
QUOK				IAmb	IAmb	15 55 15.6	
	comp=Z,189nm,0.9s						
KNB	**Kanab**	**18.74**	**342**	P	**Pn**	**15 55 14.9**	**-0.1**
KNB				pmax	pmax		
	comp=Z,54nm,1.1s						
KNB	**Kanab**	**18.74**	**342**	P	**Pn**	**15 55 14.9**	**-0.1**
MIAR	**Mount Ida**	**18.77**	**33**	P	**P**	**15 55 13.0**	**-1.6**
	baz=218,SNR=158						
MIAR	**Mount Ida**	**18.77**	**33**	P	**P**	**15 55 13.1**	**-1.5**
MIAR				pmax	pmax		
	comp=Z,253nm,0.8s						
MIAR	**Mount Ida**	**18.77**	**33**	P	**P**	**15 55 13.1**	**-1.5**
TUL1	**Leonard**	**18.86**	**26**	P	**P**	**15 55 14.7**	**-0.8**
	baz=210,SNR=56						
TUL1	**Leonard**	**18.86**	**26**	P	**P**	**15 55 14.6**	**-0.9**
LCMT	**Little Creek M**	**18.86**	**342**	P	**Pn**	**15 55 17.4**	**+1.0**
VBMS	**Vicksburg**	**18.92**	**44**	P	**P**	**15 55 15.0**	**-1.2**
	baz=230						
VBMS	**Vicksburg**	**18.92**	**44**	P	**P**	**15 55 14.0**	**-2.2**
EDW2	**Edwards Air Fo**	**18.93**	**328**	P	**P**	**15 55 16.5**	**+0.1**
	baz=142,SNR=12						
KAN14	**Manchester OK**	**18.99**	**20**	P	**P**	**15 55 15.9**	**-1.0**
PV01	**Paradox Valley**	**18.99**	**353**	P	**Pn**	**15 55 18.5**	**+0.5**
PV05	**Paradox Valley**	**19.00**	**352**	P	**Pn**	**15 55 18.7**	**+0.6**
PKCU	**Pink Cliffs**	**19.00**	**344**		**Pn**	**15 55 20.2**	**+1.9**
PV13	**Radium Mtn., P**	**19.04**	**353**	P	**Pn**	**15 55 18.6**	**0.0**
SHPR	**Sheep Range**	**19.05**	**337**	P	**Pn**	**15 55 19.1**	**+0.4**
PV02	**Paradox Valley**	**19.08**	**353**	P	**Pn**	**15 55 19.5**	**+0.4**
KAN10	**Anthony SW Sta**	**19.10**	**19**	P	**P**	**15 55 17.5**	**-0.6**
OSI	**Osito Audit: C**	**19.10**	**326**	P	**Pn**	**15 55 20.3**	**+1.1**
	baz=140						
OSI	**Osito Audit: C**	**19.10**	**326**	P	**Pn**	**15 55 20.1**	**+0.9**
X40A	**Basin Creek Fa**	**19.12**	**35**	P	**P**	**15 55 16.5**	**-1.9**
	baz=220,SNR=33						
X40A	**Basin Creek Fa**	**19.12**	**35**	P	**P**	**15 55 16.7**	**-1.7**
346A	**Big Creek Wild**	**19.13**	**48**	P	**P**	**15 55 17.1**	**-1.4**
346A				IAmb	IAmb	15 55 22.1	
	comp=Z,307nm,1.3s						
PV18	**Skein Mesa, Pa**	**19.14**	**353**	P	**P**	**15 55 19.0**	**+0.3**
PV03	**Paradox Valley**	**19.14**	**353**	P	**Pn**	**15 55 19.5**	**-0.3**
PV17	**East Wray Mesa**	**19.18**	**353**	P	**Pn**	**15 55 19.9**	**-0.3**
W39A	**Magazine**	**19.18**	**32**	P	**P**	**15 55 18.6**	**-0.4**
	baz=217,SNR=84						
W39A	**Magazine**	**19.18**	**32**	P	**P**	**15 55 18.4**	**-0.6**
W39A				IAmb	IAmb	15 55 19.7	
	comp=Z,185nm,0.8s						
PV15	**Paradox Valley**	**19.19**	**354**	P	**Pn**	**15 55 20.6**	**+0.2**
PV15				IAmb	IAmb	15 55 25.2	
	comp=Z,126nm,1.1s						
PV11	**David Mesa, Pa**	**19.19**	**353**	P	**Pn**	**15 55 19.9**	**-0.4**
PV11				IAmb	IAmb	15 55 37.8	
	comp=Z,248nm,1.7s						
PV12	**Saucer Basin,**	**19.20**	**353**	P	**P**	**15 55 19.7**	**+0.3**
KAN13	**South Haven SW**	**19.20**	**21**	P	**P**	**15 55 18.0**	**-1.2**
PV16	**Nyswonger Mesa**	**19.20**	**353**	P	**P**	**15 55 20.0**	**+0.5**
PV19	**Morning Glory**	**19.21**	**353**	P	**Pn**	**15 55 20.7**	**+0.1**
KAN01	**Argonia South**	**19.23**	**20**	P	**P**	**15 55 18.6**	**-1.0**
PV20	**West Nyswonger**	**19.24**	**353**	P	**Pn**	**15 55 21.4**	**+0.5**
LRMC	**Laurel Mtn Rad**	**19.26**	**330**	P	**Pn**	**15 55 21.4**	**+0.2**
	baz=144,SNR=15						
PV14	**Lion Creek, Pa**	**19.28**	**353**	P	**Pn**	**15 55 21.4**	**-0.1**
PV10	**Paradox Valley**	**19.28**	**352**	P	**P**	**15 55 20.1**	**-0.3**
PV10				IAmb	IAmb	15 55 37.9	
	comp=Z,86nm,0.9s						
PV04	**Paradox Valley**	**19.28**	**353**	P	**Pn**	**15 55 21.6**	**+0.2**
PV04				IAmb	IAmb	15 55 26.1	
	comp=Z,129nm,1.3s						
KAN12	**Harper NE Stat**	**19.29**	**19**	P	**P**	**15 55 19.5**	**-0.7**
PV07	**Paradox Valley**	**19.30**	**353**	P	**Pn**	**15 55 21.4**	**-0.3**
PV23	**Carpenter Ridg**	**19.35**	**353**	P	**Pn**	**15 55 22.4**	**0.0**
SZCU	**Shurtz Canyon**	**19.36**	**343**	P	**Pn**	**15 55 23.2**	**+0.8**
CCUT	**Cedar City**	**19.40**	**342**	Pn	**Pn**	**15 55 23.6**	**+0.7**
PV22	**Blue Mesa, Par**	**19.41**	**353**	P	**P**	**15 55 22.4**	**+0.7**
T35A	**Sooner Cattle**	**19.45**	**23**	P	**P**	**15 55 20.8**	**-1.2**
T35A				IAmb	IAmb	15 55 24.7	
	comp=Z,120nm,0.8s						
SBC	**Santa Barbara**	**19.51**	**324**	P	**Pn**	**15 55 24.8**	**+0.8**
	baz=137						
MTPU	**Mount Pierson**	**19.54**	**345**	P	**Pn**	**15 55 24.4**	**-0.4**
ARVC	**Arvin**	**19.55**	**327**	P	**Pn**	**15 55 25.6**	**+1.0**
	baz=140						
MPMC	**Manual Prospec**	**19.64**	**331**	P	**Pn**	**15 55 25.9**	**+0.1**
	baz=145,SNR=31						
Q24A	**Divide**	**19.68**	**2**	P	**Pn**	**15 55 26.4**	**0.0**
	baz=182,SNR=32						
FURC	**Furnace Creek,**	**19.70**	**333**	P	**Pn**	**15 55 26.3**	**0.0**
	baz=147						
ISA	**Isabella, Lake**	**19.79**	**328**	P	**Pn**	**15 55 27.1**	**-0.3**
	baz=142,SNR=13						
ISA	**Isabella, Lake**	**19.79**	**328**	P	**Pn**	**15 55 27.3**	**-0.2**
ISA				pmax	pmax		
	comp=Z,40nm,1.2s						
ISA	**Isabella, Lake**	**19.79**	**328**	P	**Pn**	**15 55 27.3**	**-0.2**
PRN	**Pahroc Range**	**19.81**	**338**		**Pn**	**15 55 28.8**	**+1.1**
TPNV	**Topopah Spring**	**19.86**	**335**	P	**Pn**	**15 55 28.5**	**+0.1**
	baz=149,SNR=37						
TPNV	**Topopah Spring**	**19.86**	**335**	P	**Pn**	**15 55 28.3**	**0.0**
TPNV				pmax	pmax		
	comp=Z,312nm,1.9s						
TPNV	**Topopah Spring**	**19.86**	**335**	P	**Pn**	**15 55 28.3**	**0.0**
TPNV				IAmb	IAmb	15 55 35.8	
	comp=Z,312nm,1.9s						
PKM	**Mcpherson Peak**	**19.90**	**324**	P	**Pn**	**15 55 28.6**	**-0.3**
	baz=138,SNR=7.0						
SMCO	**Snowmass**	**19.91**	**358**	Pn	**Pn**	**15 55 29.3**	**+0.1**
U38A	**Gravette**	**19.91**	**28**	P	**P**	**15 55 25.8**	**-1.2**
KSCO	**Kaye Shedlock’**	**19.92**	**7**	P	**P**	**15 55 27.7**	**+0.5**
	baz=188						
KSCO	**Kaye Shedlock’**	**19.92**	**7**	P	**P**	**15 55 27.8**	**+0.5**
KSCO				IAmb	IAmb	15 55 35.8	
	comp=Z,123nm,0.9s						
W41B	**Gary Mavity, V**	**19.96**	**34**	P	**P**	**15 55 26.4**	**-1.0**
	baz=220,SNR=60						
HHAR	**Hobbs**	**19.98**	**29**	P	**P**	**15 55 26.8**	**-1.0**
MSU	**Marysvale**	**19.98**	**345**	P	**Pn**	**15 55 30.5**	**+0.6**
MSU	**Marysvale**	**19.98**	**345**	P	**Pn**	**15 55 30.5**	**+0.6**
MVU	**Marysvale**	**19.98**	**345**	P	**Pn**	**15 55 29.5**	**-0.4**
MVU				IAmb	IAmb	15 55 36.3	
	comp=Z,174nm,1.0s						
WHAR	**Wooly Hollow**	**20.02**	**34**	P	**P**	**15 55 27.2**	**-1.0**
WHAR				IAmb	IAmb	15 55 28.6	
	comp=Z,184nm,0.9s						
R32A	**Long Quarter,**	**20.12**	**17**	P	**P**	**15 55 28.1**	**-1.2**
R32A				IAmb	IAmb	15 55 32.4	
	comp=Z,185nm,0.8s						
TCRU	**Three Creeks R**	**20.14**	**345**	P	**P**	**15 55 30.1**	**+0.4**
146A	**Union**	**20.15**	**45**	P	**P**	**15 55 28.2**	**-1.4**
Q16A	**Castle Valley**	**20.16**	**348**	P	Pn	15 55 31.6	-0.3
SRU	**San Rafael Swe**	**20.22**	**350**	P	Pn	15 55 32.0	-0.6
SRU				pmax	pmax		
	comp=Z,31nm,0.8s						
SRU	**San Rafael Swe**	**20.22**	**350**	P	Pn	15 55 32.0	-0.7
CWC	**Cottonwood Cre**	**20.23**	**330**	P	Pn	15 55 32.5	-0.2
	baz=144						
VES	**Vestal, Richgr**	**20.24**	**328**	P	Pn	15 55 32.2	-0.4
	baz=141,SNR=15						
CBKS	**Cedar Bluff**	**20.24**	**14**	P	**P**	**15 55 30.2**	**-0.4**
	baz=196,SNR=51						
CBKS	**Cedar Bluff**	**20.24**	**14**	P	**P**	**15 55 30.2**	**-0.4**
CBKS				pmax	pmax		
	comp=Z,245nm,0.9s						
CBKS				MLR	MLR		
	comp=Z,8µm,22.0s						
CBKS	**Cedar Bluff**	**20.24**	**14**	P	**P**	**15 55 30.2**	**-0.4**
CBKS				IAMs_20	IAMs_20	16 03 38.0	
	comp=Z,8µm,22.0s						
SMMC	**Simmler**	**20.31**	**325**	P	Pn	15 55 33.2	-0.4
	baz=138						
GRAC	**Grapevine Rang**	**20.37**	**333**	P	Pn	15 55 33.5	-0.6
	baz=147						
PSUT	**Pine Spring**	**20.45**	**342**	P	Pn	15 55 35.2	-0.2
ISCO	**Idaho Springs**	**20.51**	**1**	P	**P**	**15 55 34.8**	**+0.9**
	baz=180,SNR=71						
ISCO	**Idaho Springs**	**20.51**	**1**	P	Pn	15 55 35.1	-1.0
ISCO				pmax	pmax		
	comp=Z,80nm,1.0s						
ISCO				MLR	MLR		
	comp=Z,600nm,19.0s						
ISCO	**Idaho Springs**	**20.51**	**1**	P	Pn	15 55 35.1	-1.0
ISCO				IAmb	IAmb	15 55 39.0	
	comp=Z,80nm,0.9s						
TMUT	**Trail Mountain**	**20.53**	**348**	P	Pn	15 55 35.5	-0.9
U40A	**Yellville**	**20.56**	**31**	P	**P**	**15 55 32.9**	**-1.2**
	baz=217,SNR=237						
U40A	**Yellville**	**20.56**	**31**	P	**P**	**15 55 32.5**	**-1.6**
U40A				IAMs_20	IAMs_20	16 04 18.7	
	comp=Z,7µm,19.0s						
FCAR	**Ozark Folk Cen**	**20.57**	**33**	P	**P**	**15 55 33.1**	**-1.0**
FCAR				IAMs_20	IAMs_20	16 04 13.8	
	comp=Z,7µm,20.0s						
Y45A	**Yeager Farm, C**	**20.61**	**42**	P	**P**	**15 55 33.0**	**-1.6**
P17A	**Butcher Ranch,**	**20.61**	**349**	P	Pn	15 55 36.3	-0.8
BRAL	**Brewton**	**20.75**	**51**	P	**P**	**15 55 35.2**	**-0.9**
	baz=239,SNR=11						
BRAL	**Brewton**	**20.75**	**51**	P	**P**	**15 55 34.5**	**-1.7**
PAGB	**Antelope Grade**	**20.76**	**325**	P	**P**	**15 55 37.1**	**+0.9**
TIN	**Tinemaha, Big**	**20.80**	**331**	P	Pn	15 55 38.6	-0.7
	baz=145						
R11A	**Troy Canyon, C**	**20.84**	**338**	P	Pn	15 55 39.7	-0.1
	baz=153,SNR=37						
R11A	**Troy Canyon, C**	**20.84**	**338**	P	Pn	15 55 39.2	-0.7
O20A	**White River Ci**	**20.94**	**355**	P	Pn	15 55 40.1	-0.9
	baz=173,SNR=29						
O20A	**White River Ci**	**20.94**	**355**	P	**P**	**15 55 39.5**	**+1.1**
O20A				IAmb	IAmb	15 55 53.0	
	comp=Z,104nm,0.8s						
SPR3	**Spring Creek 3**	**21.02**	**341**	P	**P**	**15 55 40.3**	**+0.9**
HBAR	**Harrisburg**	**21.11**	**36**	P	**P**	**15 55 38.4**	**-1.6**
OXF	**Oxford**	**21.12**	**41**	P	**P**	**15 55 38.2**	**-1.9**
	baz=228,SNR=25						
OXF	**Oxford**	**21.12**	**41**	P	**P**	**15 55 38.1**	**-1.9**
OXF				pmax	pmax		
	comp=Z,281nm,1.1s						
OXF	**Oxford**	**21.12**	**41**	P	**P**	**15 55 38.1**	**-1.9**
ACON	**Acoyapa**	**21.20**	**107**	P	**P**	**15 55 41.4**	**+0.3**
ACON				IAmb	IAmb	15 56 04.1	
	comp=Z,189nm,1.1s						
MET	**Memphis--Engin**	**21.22**	**38**	IAMs_20	IAMs_20	16 04 36.0	
	comp=Z,4µm,19.0s						
MPU	**Maple Canyon**	**21.31**	**348**	P	**P**	**15 55 43.3**	**+1.0**
NLU	**North Lily Min**	**21.34**	**347**	P	**P**	**15 55 43.8**	**+1.2**
LPAR	**Lepanto**	**21.35**	**37**	IAMs_20	IAMs_20	16 04 34.3	
	comp=Z,5µm,21.0s						
KSU1	**Kansas State U**	**21.38**	**20**	P	**P**	**15 55 42.1**	**-0.7**
	baz=204,SNR=36						
KSU1	**Kansas State U**	**21.38**	**20**	P	**P**	**15 55 41.8**	**-1.1**
KSU1	**Kansas State U**	**21.38**	**20**	IAMs_20	IAMs_20	16 03 54.8	
	comp=Z,4µm,19.0s						
PMPB	**Monarch Peak**	**21.42**	**325**	IAmb	IAmb	15 56 19.9	
	comp=Z,156nm,1.5s						
S39A	**Bolivar**	**21.42**	**28**	IAMs_20	IAMs_20	16 04 18.6	
	comp=Z,8µm,18.0s						
451A	**Vernon**	**21.46**	**54**	P	**P**	**15 55 42.2**	**-1.6**
MGMO	**Mountain Grove**	**21.48**	**31**	P	**P**	**15 55 42.2**	**-1.8**
MGMO				IAmb	IAmb	15 55 45.2	
	comp=Z,149nm,0.8s						
RDMU	**Red Mountain**	**21.51**	**352**	P	**P**	**15 55 45.1**	**+0.6**
MLAC	**Mammoth, Mammo**	**21.55**	**331**	P	**P**	**15 55 44.7**	**-0.2**
	baz=144						
N23A	**Red Feather La**	**21.60**	**360**	P	**P**	**15 55 45.9**	**+0.4**
	baz=179,SNR=22						
OMMB	**Old Mammoth Mi**	**21.61**	**331**	P	**P**	**15 55 47.0**	**+1.3**
W45A	**Hickory Valley**	**21.69**	**40**	P	**P**	**15 55 44.6**	**-1.6**
DUG	**Dugway, Tooele**	**21.74**	**346**	P	**P**	**15 55 47.7**	**+0.9**
	baz=162,SNR=29						
DUG	**Dugway, Tooele**	**21.74**	**346**	P	**P**	**15 55 48.3**	**+1.5**
DUG				pmax	pmax		
	comp=Z,52nm,1.1s						
DUG				MLR	MLR		
	comp=Z,2µm,19.0s						
DUG	**Dugway, Tooele**	**21.74**	**346**	P	**P**	**15 55 48.3**	**+1.5**
GNAR	**Gosnell**	**21.77**	**37**	IAMs_20	IAMs_20	16 05 12.4	
	comp=Z,7µm,18.0s						
LRAL	**Lakeview Retre**	**21.79**	**47**	P	**P**	**15 55 44.3**	**-3.0**
	baz=235,SNR=36						
LRAL	**Lakeview Retre**	**21.79**	**47**	IAmb	IAmb	15 55 48.6	
	comp=Z,161nm,1.3s						
OGNE	**Ogallala**	**21.90**	**8**	P	**P**	**15 55 48.7**	**+0.1**
	baz=189,SNR=20						
ESPN	**Las Esperanzas**	**21.91**	**105**	P	**P**	**15 55 49.6**	**+0.9**
ESPN				IAMs_20	IAMs_20	16 05 26.9	
	comp=Z,4µm,18.0s						
PEBM	**Pemiscott Bayo**	**21.96**	**37**	IAMs_20	IAMs_20	16 05 18.6	
	comp=Z,6µm,18.0s						
NVAR	**Mina Array Bea**	**21.97**	**333**	P	**P**	**15 55 51.2**	**+1.8**
	comp=Z,9.7nm,0.9s,baz=158,slow=9.6,SNR=46						
NVAR				PcP	**PcP**	**15 59 47.6**	**+0.1**
	comp=Z,1.4nm,1.0s,baz=153,slow=4.3,SNR=4.2						
NVAR				LR	LR	16 04 25.3	
	comp=Z,2µm,18.5s,baz=150,slow=37						
NVAR	**Mina Array Bea**	**21.97**	**333**	P	**P**	**15 55 46.9**	**-2.6**
T42A	**Van Buren**	**21.97**	**33**	IAmb	IAmb	15 55 49.1	
	comp=Z,147nm,0.8s						
T42A				IAMs_20	IAMs_20	16 04 57.2	
	comp=Z,7µm,21.0s						
PHWY	**Pilot Hill**	**22.01**	**1**	P	**P**	**15 55 50.4**	**+0.4**
PHWY				IAmb	IAmb	15 55 56.4	
	comp=Z,85nm,0.8s						
JTS	**Las Juntas de**	**22.08**	**111**	P	**P**	**15 55 51.3**	**+0.6**
	comp=Z,30nm,0.8s,baz=17,slow=10,SNR=14						
JTS				LR	LR	16 03 36.2	
	comp=Z,2µm,20.6s,baz=352,slow=34						
JTS	**Las Juntas de**	**22.08**	**111**	*de*P	**P**	**15 55 51.4**	**+0.8**
JTS				pmax	pmax		
	comp=Z,137nm,1.5s						
JTS	**Las Juntas de**	**22.08**	**111**	P	**P**	**15 55 48.2**	**-2.4**
JTS				IAmb	IAmb	15 56 02.5	
	comp=Z,182nm,1.5s						
JTS	**Las Juntas de**	**22.08**	**111**	*e*P	**P**	**15 55 50.6**	**0.0**
PBMO	**Poplar Bluff**	**22.13**	**35**	IAmb	IAmb	15 55 51.5	
	comp=Z,115nm,0.9s						
PBMO				IAMs_20	IAMs_20	16 05 12.2	
	comp=Z,7µm,20.0s						
LNXT	**Lenox**	**22.16**	**37**	IAMs_20	IAMs_20	16 05 26.9	
	comp=Z,8µm,20.0s						
SAO	**San Andreas Ge**	**22.18**	**325**	P	**P**	**15 55 52.9**	**+1.4**
SAO				pmax	pmax		
	comp=Z,23nm,1.0s						
SAO				MLR	MLR		
	comp=Z,2µm,20.0s						
SAO	**San Andreas Ge**	**22.18**	**325**		**P**	**15 55 52.9**	**+1.4**
PVMO	**Portageville**	**22.27**	**36**	IAMs_20	IAMs_20	16 05 26.8	
	comp=Z,6µm,19.0s						
553A	**Crawfordville**	**22.30**	**57**	IAmb	IAmb	15 55 52.1	
	comp=Z,68nm,0.7s						
PENMO	**Penman**	**22.33**	**36**	IAMs_20	IAMs_20	16 05 28.4	
	comp=Z,5µm,20.0s						
R40A	**Maddies Statio**	**22.39**	**29**	IAMs_20	IAMs_20	16 04 09.2	
	comp=Z,7µm,22.0s						
GLAT	**Glass**	**22.40**	**37**	IAMs_20	IAMs_20	16 05 08.1	
	comp=Z,4µm,19.0s						
PARMO	**Parma**	**22.42**	**36**	IAMs_20	IAMs_20	16 05 09.7	
	comp=Z,5µm,20.0s						
352A	**Blakely**	**22.49**	**53**	P	**P**	**15 55 52.8**	**-2.0**
WAKR	**Walker**	**22.53**	**331**	IAmb	IAmb	15 56 09.7	
	comp=Z,78nm,1.4s						
X48A	**Hartselle**	**22.59**	**44**	IAmb	IAmb	15 55 54.8	
	comp=Z,53nm,0.8s						
HENM	**Henderson Moun**	**22.61**	**36**	P	**P**	**15 55 55.1**	**-1.0**
HENM				IAMs_20	IAMs_20	16 05 35.8	
	comp=Z,5µm,20.0s						
HICK	**Hickman**	**22.62**	**37**	IAMs_20	IAMs_20	16 05 39.1	
	comp=Z,5µm,20.0s						
N33A	**J Bar K, Exete**	**22.63**	**17**	IAmb	IAmb	15 55 56.8	
	comp=Z,122nm,0.8s						
N33A				IAMs_20	IAMs_20	16 05 01.1	

	comp=Z,9µm,19.0s						
Y49A	Blount Mountai	22.66	46	IAmb	IAmb	15 55 55.8	
	comp=Z,73nm,0.8s						
CCM	Cathedral Cave	22.69	31	P	P	15 55 55.1	-1.8
	baz=218						
CCM	Cathedral Cave	22.69	31	P	P	15 55 54.5	-2.4
CCM				pmax	pmax		
	comp=Z,88nm,0.8s						
CCM				MLR	MLR		
	comp=Z,8µm,22.0s						
CCM	Cathedral Cave	22.69	31	P	P	15 55 54.5	-2.4
CCM				IAmb	IAmb	15 56 01.6	
	comp=Z,88nm,0.8s						
CCM	Cathedral Cave	22.69	31	IAMs_20	IAMs_20	16 05 08.0	
	comp=Z,8µm,22.0s						
YERR	Yerington	22.84	332	IAMs_20	IAMs_20	16 04 05.1	
	comp=Z,3µm,21.0s						
ELK	Elko	22.90	342	P	P	15 56 00.5	+1.1
	comp=Z,6.5nm,0.7s,baz=165,slow=7.5,SNR=28						
ELK				LR	LR	16 04 26.1	
	comp=Z,2µm,19.7s,baz=166,slow=35						
P38A	Dawn	22.96	25	IAMs_20	IAMs_20	16 04 41.4	
	comp=Z,5µm,18.0s						
FVM	French Village	23.04	33	IAmb	IAmb	15 56 04.9	
	comp=Z,57nm,0.8s						
FVM				IAMs_20	IAMs_20	16 05 31.3	
	comp=Z,7µm,22.0s						
BGNE	Belgrade	23.08	15	P	P	15 56 00.5	-0.5
	baz=198,SNR=24						
BGNE	Belgrade	23.08	15	IAMs_20	IAMs_20	16 05 26.1	
	comp=Z,8µm,18.0s						
PNTR	Pine Nut	23.09	332	P	P	15 56 02.4	+1.1
WVT	Waverly	23.16	40	P	P	15 55 59.1	-2.6
	baz=228						
WVT	Waverly	23.16	40	P	P	15 55 58.6	-3.2
WVT				pmax	pmax		
	comp=Z,33nm,0.8s						
WVT				MLR	MLR		
	comp=Z,3µm,18.0s						
WVT	Waverly	23.16	40	P	P	15 55 58.6	-3.2
WVT	Waverly	23.16	40	IAMs_20	IAMs_20	16 05 52.2	
	comp=Z,3µm,18.0s						
152A	Waverly Hall	23.22	51	IAmb	IAmb	15 56 01.4	
	comp=Z,102nm,0.8s						
Z51A	Franklin	23.22	49	IAmb	IAmb	15 56 11.0	
	comp=Z,88nm,0.8s						
N35A	Tabor	23.29	20	IAmb	IAmb	15 56 07.7	
	comp=Z,71nm,0.8s						
T45A	Paducah	23.29	37	IAMs_20	IAMs_20	16 05 58.7	
	comp=Z,5µm,21.0s						
RUBR	Rubicon Trail	23.30	331	IAmb	IAmb	15 56 16.9	
	comp=Z,49nm,0.9s						
K22A	Casper	23.36	359	P	P	15 56 04.1	+0.2
	baz=178,SNR=7.2						
K22A	Casper	23.36	359	IAmb	IAmb	15 56 16.2	
	comp=Z,61nm,0.8s						
K22A				IAMs_20	IAMs_20	16 05 14.8	
	comp=Z,7µm,20.0s						
S44A	Carbondale	23.44	35	IAmb	IAmb	15 56 05.8	
	comp=Z,100nm,0.8s						
S44A				IAMs_20	IAMs_20	16 05 53.8	
	comp=Z,6µm,21.0s						
SIUC	Southern Illin	23.48	35	IAmb	IAmb	15 56 06.0	
	comp=Z,97nm,0.8s						
SIUC				IAMs_20	IAMs_20	16 05 54.3	
	comp=Z,6µm,21.0s						
TIGA	Tifton	23.49	54	P	P	15 56 02.5	-2.6
	baz=244						
P40A	Paris	23.50	28	P	P	15 56 02.9	-2.2
P40A				IAmb	IAmb	15 56 04.8	
	comp=Z,106nm,0.8s						
P40A				IAMs_20	IAMs_20	16 05 06.7	
	comp=Z,4µm,18.0s						
656A	Willston	23.52	60	IAmb	IAmb	15 56 29.7	
	comp=Z,128nm,1.1s						
V48A	Smith Brothers	23.53	42	IAmb	IAmb	15 56 12.5	
	comp=Z,51nm,0.8s						
PDAR	Pinedale Array	23.68	353	P	P	15 56 07.0	0.0
	comp=Z,6.4nm,0.6s,baz=160,slow=10.0,SNR=21						
PDAR	Pinedale Array	23.68	353	P	P	15 56 06.2	-0.9
BW06	Boulder Array	23.68	353	P	P	15 56 06.9	-0.2
	baz=171,SNR=22						
SWET	Sewanee	23.78	44	IAmb	IAmb	15 56 18.3	
	comp=Z,44nm,0.7s						
AHID	Auburn Hatcher	23.88	350	IAmb	IAmb	15 56 11.9	
	comp=Z,98nm,1.8s						
DWPF	Disney Wildern	24.05	64	P	P	15 56 08.2	-2.2
	baz=254						
DWPF	Disney Wildern	24.05	64	P	P	15 56 09.5	-0.9
CLTN	Cedars of Leba	24.06	42	IAmb	IAmb	15 56 09.7	
	comp=Z,141nm,1.0s						
N38A	Joes South For	24.08	24	IAMs_20	IAMs_20	16 05 01.1	
	comp=Z,5µm,20.0s						
K31A	O'Neill	24.10	13	IAMs_20	IAMs_20	16 04 27.2	
	comp=Z,4µm,21.0s						
W50A	Signal Mountai	24.18	45	P	P	15 56 09.4	-2.2
PRVC	Isla de Provid	24.23	100	*e*P	P	15 56 14.5	+2.4
Y52A	Lilburn	24.30	49	IAmb	IAmb	15 56 11.7	
	comp=Z,50nm,0.8s						
Y52A				IAMs_20	IAMs_20	16 07 03.2	
	comp=Z,3µm,20.0s						
ORV	Oroville	24.34	330	IAmb	IAmb	15 56 18.8	
	comp=Z,71nm,1.6s						
GDXM	Geysers	24.41	327	IAMs_20	IAMs_20	16 04 41.1	
	comp=Z,4µm,21.0s						
456A	Hilliard	24.42	57	P	P	15 56 12.1	-1.7
REDW	Red Top Meadow	24.43	351	IAmb	IAmb	15 56 20.1	
	comp=Z,58nm,0.9s						
GOGA	Godfrey	24.50	50	P	P	15 56 12.5	-2.0
	baz=240,SNR=34						
GOGA	Godfrey	24.50	50	P	P	15 56 12.7	-1.8
GOGA				pmax	pmax		
	comp=Z,79nm,0.8s						
GOGA	Godfrey	24.50	50	P	P	15 56 12.7	-1.8
GOGA				IAmb	IAmb	15 56 13.8	
	comp=Z,79nm,0.8s						
USIN	University of	24.51	37	IAMs_20	IAMs_20	16 06 36.2	
	comp=Z,4µm,21.0s						
SNOW	Snow King Moun	24.51	351	P	P	15 56 15.0	+0.1
SNOW				IAmb	IAmb	15 56 21.5	
	comp=Z,115nm,0.9s						
LOHW	Long Hollow	24.64	352	IAmb	IAmb	15 56 21.1	
	comp=Z,52nm,0.8s						
U49A	Red Boiling Sp	24.67	42	IAmb	IAmb	15 56 17.4	
	comp=Z,237nm,1.9s						
HOPS	Hopland Field	24.69	327	IAMs_20	IAMs_20	16 04 27.6	
	comp=Z,4µm,22.0s						
CPCT	Cooper Cave	24.85	45	IAmb	IAmb	15 56 18.7	
	comp=Z,93nm,0.9s						
CPCT				IAMs_20	IAMs_20	16 05 50.8	
	comp=Z,3µm,22.0s						
RSSD	Black Hills	24.88	3	P	P	15 56 17.5	-0.6
	baz=184						
RSSD	Black Hills	24.88	3	P	P	15 56 17.9	-0.1
RSSD				pmax	pmax		
	comp=Z,65nm,0.9s						
RSSD				MLR	MLR		
	comp=Z,4µm,20.0s						
RSSD	Black Hills	24.88	3	P	P	15 56 17.9	-0.1
RSSD				IAmb	IAmb	15 56 21.6	
	comp=Z,65nm,0.9s						
RSSD	Black Hills	24.88	3	IAMs_20	IAMs_20	16 06 17.5	
	comp=Z,4µm,20.0s						
PAYG	Puerto Ayora	25.01	140	IAMs_20	IAMs_20	16 03 27.0	
	comp=Z,3µm,22.0s						
SCIA	State Center	25.05	23	P	P	15 56 18.5	-0.9
	baz=209,SNR=7.6						
SCIA	State Center	25.05	23	IAMs_20	IAMs_20	16 05 56.9	
	comp=Z,5µm,22.0s						
O03E	Paynes Creek	25.06	330	P	P	15 56 20.9	+1.3
	baz=142,SNR=25						
FLWY	Flagg Ranch	25.11	352	IAmb	IAmb	15 56 33.5	
	comp=Z,58nm,0.9s						
HLID	Hailey	25.31	345	P	P	15 56 22.8	+0.9
	baz=160,SNR=29						
YPP	Pitchstone Pla	25.31	352	P	P	15 56 22.8	+0.7
H17A	Grant Village	25.41	352	P	P	15 56 23.8	+0.9
	baz=169,SNR=22						
H17A	Grant Village	25.41	352	IAMs_20	IAMs_20	16 05 56.4	
	comp=Z,4µm,19.0s						
TKL	Tuckaleechee C	25.47	45	P	P	15 56 21.7	-1.6
	comp=Z,38nm,0.9s,baz=220,slow=11,SNR=22						
TKL	Tuckaleechee C	25.47	45	IAmb	IAmb	15 56 28.0	
	comp=Z,39nm,0.8s						
WCI	Wyandotte Cave	25.48	38	P	P	15 56 21.7	-1.5
	baz=227						
WCI	Wyandotte Cave	25.48	38	P	P	15 56 22.2	-1.1
WCI				pmax	pmax		
	comp=Z,160nm,0.8s						
WCI				MLR	MLR		
	comp=Z,5µm,19.0s						
WCI	Wyandotte Cave	25.48	38	P	P	15 56 22.2	-1.1
WCI				IAMs_20	IAMs_20	16 07 27.6	
	comp=Z,5µm,19.0s						
MFID	Camas Ranch	25.53	343	P	P	15 56 24.7	+0.8
LKWY	Lake	25.55	353	IAmb	IAmb	15 56 37.9	
	comp=Z,42nm,0.9s						
LKWY				IAMs_20	IAMs_20	16 06 47.2	
	comp=Z,6µm,19.0s						
T50A	Nancy	25.57	42	IAMs_20	IAMs_20	16 07 09.2	
	comp=Z,3µm,21.0s						
HDIL	Hopedale	25.59	30	P	P	15 56 22.7	-1.6
	baz=218,SNR=17						
HDIL	Hopedale	25.59	30	IAMs_20	IAMs_20	16 06 47.7	
	comp=Z,7µm,21.0s						
ECSD	EROS Data Cent	25.65	16	P	P	15 56 24.0	-0.8
	baz=200,SNR=42						
ECSD	EROS Data Cent	25.65	16	IAmb	IAmb	15 56 30.7	
	comp=Z,40nm,0.8s						
O44A	Mansfield	25.68	32	P	P	15 56 24.0	-1.1
BG3	Lake Jocassee	25.68	48	IAmb	IAmb	15 56 30.1	
	comp=Z,37nm,0.8s						
V52A	Sevierville	25.69	45	P	P	15 56 22.1	-3.2
V52A				IAmb	IAmb	15 56 26.1	
	comp=Z,58nm,0.8s						
SUSD	Miller	25.81	11	P	P	15 56 25.5	-0.7
	baz=195,SNR=9.2						
SUSD	Miller	25.81	11	IAMs_20	IAMs_20	16 07 19.5	
	comp=Z,6µm,18.0s						
K38A	Parkersburg	25.86	23	P	P	15 56 25.7	-1.0
K38A				IAmb	IAmb	15 56 30.9	
	comp=Z,112nm,0.9s						
K38A				IAMs_20	IAMs_20	16 06 09.2	
	comp=Z,4µm,20.0s						
P46A	Rosedale	25.94	34	IAmb	IAmb	15 56 55.6	
	comp=Z,66nm,0.8s						
P46A				IAMs_20	IAMs_20	16 06 47.9	
	comp=Z,5µm,21.0s						
YNE	Yellowstone No	25.94	353	P	P	15 56 27.8	0.0
RLMT	Red Lodge	25.98	355	P	P	15 56 28.3	+0.2
	baz=172,SNR=15						
BLO	Bloomington	25.99	36	IAmb	IAmb	15 56 46.1	
	comp=Z,71nm,0.8s						
BLO				IAMs_20	IAMs_20	16 07 33.4	
	comp=Z,5µm,20.0s						
Z56A	Williston	26.00	52	P	P	15 56 25.9	-2.2
N02D	Trinity Center	26.02	330	P	P	15 56 28.6	+0.3
	baz=141						
TZTN	Tazewell	26.12	44	P	P	15 56 27.3	-1.9
	baz=234,SNR=28						
TZTN	Tazewell	26.12	44	IAmb	IAmb	15 56 31.8	
	comp=Z,98nm,0.9s						
TZTN				IAMs_20	IAMs_20	16 08 14.6	
	comp=Z,3µm,18.0s						
V53A	Saluda	26.13	46	IAmb	IAmb	15 56 31.4	
	comp=Z,77nm,1.0s						
R49A	Shelbyville	26.18	39	IAMs_20	IAMs_20	16 07 51.2	
	comp=Z,5µm,22.0s						
PAULI	Pauline	26.38	49	P	P	15 56 29.6	-2.0
PAULI				IAmb	IAmb	15 56 34.2	
	comp=Z,82nm,1.2s						
PAULI				IAMs_20	IAMs_20	16 08 03.5	
	comp=Z,3µm,22.0s						
M02C	Callahan	26.42	330	P	P	15 56 31.4	-0.5
	baz=141						
KHMM	Horse Mountain	26.44	329	IAMs_20	IAMs_20	16 06 09.6	
	comp=Z,3µm,21.0s						
JCC	Jacoby Creek,	26.54	328	IAMs_20	IAMs_20	16 05 48.4	
	comp=Z,3µm,20.0s						
SFIN	Lafayette	26.55	33	P	P	15 56 31.5	-1.4
	baz=223,SNR=12						
SFIN	Lafayette	26.55	33	IAmb	IAmb	15 56 35.5	
	comp=Z,89nm,0.9s						
L42A	Oliver, Polo	26.57	28	IAmb	IAmb	15 56 34.3	
	comp=Z,107nm,0.9s						
L42A				IAMs_20	IAMs_20	16 07 43.7	
	comp=Z,6µm,18.0s						
YBH	Yreka Blue Hor	26.62	331	P	P	15 56 33.1	-0.5
	comp=Z,1.7nm,0.7s,baz=100,slow=8.1,SNR=5.1						
YBH				LR	LR	16 06 41.7	
	comp=Z,1µm,20.3s,baz=151,slow=36						
YBH	Yreka Blue Hor	26.62	331	P	P	15 56 33.2	-0.5
YBH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
K05A	Summer Lake	26.65	335	IAmb	IAmb	15 56 45.9	
	comp=Z,97nm,1.7s						
DLMT	Dillon	26.66	349	IAMs_20	IAMs_20	16 07 43.6	
	comp=Z,3µm,19.0s						
R50A	Paris	26.68	40	IAmb	IAmb	15 56 57.0	
	comp=Z,56nm,0.8s						
R50A				IAMs_20	IAMs_20	16 07 25.4	
	comp=Z,3µm,21.0s						
BOZ	Bozeman (W)	26.73	351	P	P	15 56 34.5	-0.2
	baz=167,SNR=12						
S51A	Beattyville	26.74	42	IAmb	IAmb	15 56 35.8	
	comp=Z,78nm,0.8s						
P48A	Milroy	26.81	37	P	P	15 56 34.7	-0.7
P48A				IAMs_20	IAMs_20	16 08 06.9	
	comp=Z,4µm,19.0s						
NHSC	New Hope	26.81	54	P	P	15 56 34.1	-1.4
	baz=245,SNR=5.3						
L04D	Klamath Falls	26.82	332	P	P	15 56 35.8	+0.2
	baz=143						
M44A	Midewin, Midew	26.83	31	IAMs_20	IAMs_20	16 07 36.6	
	comp=Z,7µm,22.0s						
I37A	Lemond, Waseca	26.84	20	P	P	15 56 34.6	-1.0
KMSC	Kings Mountain	26.89	49	P	P	15 56 34.2	-1.9
	baz=240,SNR=18						
KMSC	Kings Mountain	26.89	49	IAmb	IAmb	15 56 37.6	
	comp=Z,55nm,0.8s						
KMSC				IAMs_20	IAMs_20	16 08 16.8	
	comp=Z,4µm,21.0s						
Y57A	Sumter	27.04	52	IAmb	IAmb	15 56 42.3	
	comp=Z,82nm,0.8s						
JFWS	Jewell Farm	27.06	26	P	P	15 56 34.8	-2.8
	baz=214,SNR=30						
JFWS	Jewell Farm	27.06	26	IAMs_20	IAMs_20	16 07 08.0	
	comp=Z,5µm,18.0s						
LRM	Limekiln Ridge	27.08	350	P	P	15 56 38.2	+0.2
BCIP	Isla Barro Col	27.12	108	IAMs_20	IAMs_20	16 08 17.9	
	comp=Z,3µm,19.0s						
BCIP	Isla Barro Col	27.12	108	*e*P	P	15 56 39.4	+1.0
HQIL	Hanson Quary C	27.24	30	IAMs_20	IAMs_20	16 07 49.4	
	comp=Z,6µm,20.0s						
J05D	Fort Rock, OR	27.25	335	P	P	15 56 40.1	+0.6
	baz=146						
U54A	Nelsons Funny	27.26	46	P	P	15 56 36.9	-2.7
	baz=237						
U54A	Nelsons Funny	27.26	46	IAmb	IAmb	15 56 42.8	
	comp=Z,28nm,0.7s						
P49A	Miami Univ. Ec	27.26	38	P	P	15 56 36.9	-2.6
	baz=228,SNR=12						
P49A	Miami Univ. Ec	27.26	38	P	P	15 56 37.5	-1.9
P49A				IAmb	IAmb	15 56 40.7	
	comp=Z,49nm,0.8s						
V55A	Taylorsville	27.33	48	IAMs_20	IAMs_20	16 09 26.5	
	comp=Z,3µm,19.0s						
AZU	Azuero	27.33	111	*e*P	P	15 56 40.4	+0.2
L02E	Cave Junction	27.36	331	P	P	15 56 39.0	-1.3
	baz=141						
LAO	LASA Array	27.40	359	P	P	15 56 38.9	-1.8
	baz=179						
LAO	LASA Array	27.40	359	IAmb	IAmb	15 56 46.9	
	comp=Z,40nm,1.0s						
LAO				IAMs_20	IAMs_20	16 07 59.4	
	comp=Z,6µm,19.0s						
W56A	Indian Trail	27.42	50	P	P	15 56 38.2	-2.7
	baz=241,SNR=7.8						
HUMO	Hull Mountain	27.42	332	IAMs_20	IAMs_20	16 07 17.4	
	comp=Z,3µm,20.0s						
X57A	Johnson Farm,	27.46	51	P	P	15 56 39.4	-1.9
	baz=243						
L44A	Lake County Fo	27.50	30	IAMs_20	IAMs_20	16 07 57.4	
	comp=Z,7µm,22.0s						
Z59A	Georgetown, SC	27.55	54	P	P	15 56 39.0	-3.1
	baz=246						
E28A	Huff	27.61	8	P	P	15 56 41.4	-1.1
E28A				IAmb	IAmb	15 56 53.1	
	comp=Z,45nm,0.7s						
E28A				IAMs_20	IAMs_20	16 08 12.6	
	comp=Z,4µm,19.0s						
N47A	Urbana	27.65	34	IAmb	IAmb	15 56 45.4	
	comp=Z,74nm,1.1s						
F33A	5 Mile Ranch,	27.71	15	P	P	15 56 41.8	-1.5
F33A				IAmb	IAmb	15 56 49.8	
	comp=Z,34nm,0.9s						
I40A	Norwalk	27.73	24	IAmb	IAmb	15 56 45.0	
	comp=Z,77nm,0.8s						
Q51A	Peebles	27.75	40	IAmb	IAmb	15 56 45.6	
	comp=Z,49nm,0.8s						
Q51A				IAMs_20	IAMs_20	16 08 52.6	
	comp=Z,5µm,22.0s						
V56A	Mocksville	27.81	48	P	P	15 56 41.8	-2.5
	baz=240,SNR=14						
K02D	Willamette Mer	27.81	331	P	P	15 56 43.9	-0.5
	baz=141						
W57A	Gilead	27.85	50	IAMs_20	IAMs_20	16 08 32.4	
	comp=Z,3µm,21.0s						
O49A	Covington	27.92	37	IAmb	IAmb	15 56 44.9	
	comp=Z,59nm,0.8s						
O49A				IAMs_20	IAMs_20	16 08 43.3	
	comp=Z,5µm,22.0s						
SPMN	Marine on St.	28.12	20	P	P	15 56 45.6	-1.3
	baz=207,SNR=7.0						
SPMN	Marine on St.	28.12	20	P	P	15 56 45.7	-1.3
SPMN				IAmb	IAmb	15 56 48.9	
	comp=Z,55nm,0.7s						
SPMN				IAMs_20	IAMs_20	16 07 49.1	
	comp=Z,4µm,21.0s						
I04A	Tendick Farm,	28.15	334	P	P	15 56 46.6	-0.8
	baz=145						
U56A	King	28.16	47	P	P	15 56 45.4	-2.1
	baz=239						
U56A	King	28.16	47	IAmb	IAmb	15 56 48.7	
	comp=Z,32nm,0.7s						
U56A				IAMs_20	IAMs_20	16 09 59.5	
	comp=Z,3µm,19.0s						
I05D	Terrebonne, OR	28.18	336	P	P	15 56 48.5	+0.9
	baz=147,SNR=8.0						
R53A	Hurricane	28.19	42	IAmb	IAmb	15 56 49.4	
	comp=Z,58nm,0.7s						
P51A	Williamsport	28.20	39	P	P	15 56 46.0	-1.9
P51A				IAmb	IAmb	15 56 50.2	
	comp=Z,62nm,0.7s						
P51A				IAMs_20	IAMs_20	16 09 21.8	
	comp=Z,5µm,18.0s						
S54A	Dingess, Beckl	28.30	44	P	P	15 56 46.4	-2.4
	baz=236						
MSO	Missoula	28.32	348	P	P	15 56 49.2	+0.3
	baz=163,SNR=16						
W58A	Raeford	28.35	51	P	P	15 56 46.8	-2.3
	baz=243						
V57A	Coltrane Farms	28.36	49	P	P	15 56 47.1	-2.2
	baz=241,SNR=16						
Q52A	Bidwell	28.37	41	IAmb	IAmb	15 56 59.7	
	comp=Z,32nm,0.9s						
I42A	Draeger Farm,	28.42	26	P	P	15 56 48.5	-1.2
I42A				IAmb	IAmb	15 56 50.6	
	comp=Z,61nm,0.8s						
I42A				IAMs_20	IAMs_20	16 07 36.5	
	comp=Z,4µm,22.0s						
N49A	Columbus Grove	28.50	36	IAmb	IAmb	15 56 55.5	
	comp=Z,69nm,0.8s						
BLA	Blacksburg	28.58	46	P	P	15 56 49.2	-2.1
	baz=238						
X59A	McDuffie Farm,	28.62	52	P	P	15 56 49.4	-2.1
	baz=245						
R54A	Victor	28.73	44	P	P	15 56 51.0	-1.6
	baz=236						
ACSO	Alum Creek Sta	28.73	38	P	P	15 56 50.8	-1.7
	baz=230						
ACSO	Alum Creek Sta	28.73	38	P	P	15 56 50.8	-1.7
ACSO				IAMs_20	IAMs_20	16 09 18.7	
	comp=Z,3µm,22.0s						
T56A	Rocky Mt	28.75	47	P	P	15 56 50.8	-1.9
	baz=239						
Q53A	Leroy	28.77	42	P	P	15 56 50.7	-2.3
	baz=234						
P52A	Corning	28.86	40	P	P	15 56 51.3	-2.4
	baz=232,SNR=5.9						
P52A	Corning	28.86	40	IAmb	IAmb	15 56 54.3	
	comp=Z,30nm,0.8s						
P52A				IAMs_20	IAMs_20	16 08 55.1	
	comp=Z,2µm,19.0s						
EGMT	Eagleton	28.90	355	IAMs_20	IAMs_20	16 09 03.7	
	comp=Z,4µm,19.0s						
U57A	Blanch	28.93	48	P	P	15 56 52.3	-2.1
	baz=241						
MDND	Maddock	29.01	9	IAMs_20	IAMs_20	16 09 04.5	
	comp=Z,4µm,18.0s						
G40A	Rib Lake	29.06	23	P	P	15 56 53.7	-1.7
G40A				IAMs_20	IAMs_20	16 08 31.9	
	comp=Z,3µm,18.0s						
L48A	N Adams	29.07	34	IAmb	IAmb	15 57 40.1	
	comp=Z,45nm,0.8s						
COR	Corvallis	29.17	334	IAMs_20	IAMs_20	16 08 40.6	
	comp=Z,2µm,18.0s						
DGMT	Dagmar	29.21	2	IAmb	IAmb	15 57 01.8	
	comp=Z,38nm,0.8s						
DGMT	Dagmar	29.21	2	IAMs_20	IAMs_20	16 09 37.2	
	comp=Z,2µm,18.0s						
P53A	Whipple	29.23	41	IAmb	IAmb	15 56 57.9	
	comp=Z,34nm,0.8s						
P53A				IAMs_20	IAMs_20	16 09 16.8	
	comp=Z,2µm,18.0s						
JTMT	Jette	29.26	348	P	P	15 56 57.6	+0.3
T57A	Hurt	29.27	47	P	P	15 56 55.4	-1.9
	baz=240,SNR=9.7						
T57A	Hurt	29.27	47	IAmb	IAmb	15 57 00.5	
	comp=Z,40nm,0.9s						
Q54A	Coxs Mills	29.28	42	IAMs_20	IAMs_20	16 10 47.3	
	comp=Z,3µm,18.0s						
HAWA	Hanford	29.34	341	IAMs_20	IAMs_20	16 09 48.2	
	comp=Z,2µm,18.0s						
O52A	Adamsville	29.34	40	IAmb	IAmb	15 56 58.7	
	comp=Z,41nm,0.8s						
H43A	Windswept, Lux	29.37	27	IAMs_20	IAMs_20	16 08 28.0	
	comp=Z,4µm,21.0s						
S56A	Natural Bridge	29.40	46	P	P	15 56 56.5	-2.0
	baz=238,SNR=6.1						
V59A	Middlesex	29.41	50	P	P	15 56 55.4	-3.1
	baz=243						
U58A	Oxford	29.47	49	P	P	15 56 57.6	-1.5
	baz=242						
W60A	Pink Hill	29.48	52	P	P	15 56 57.7	-1.6
	baz=245						
N51A	Ashland	29.52	38	IAmb	IAmb	15 57 01.8	
	comp=Z,62nm,0.8s						
N51A				IAMs_20	IAMs_20	16 09 51.7	
	comp=Z,4µm,22.0s						
E07A	Sunnyside	29.59	340	IAMs_20	IAMs_20	16 09 55.8	
	comp=Z,3µm,18.0s						
AAM	Ann Arbor	29.73	34	P	P	15 57 00.6	-0.8
	baz=226						
AAM	Ann Arbor	29.73	34	IAMs_20	IAMs_20	16 09 02.4	
	comp=Z,5µm,20.0s						
E38A	The Farm, Brul	29.75	20	IAmb	IAmb	15 57 01.6	
	comp=Z,58nm,1.1s						
T58A	Grand View Acr	29.75	48	P	P	15 56 59.8	-1.7
	baz=241,SNR=7.9						
O53A	New Philadelph	29.80	40	P	P	15 56 59.8	-2.2
	baz=232,SNR=5.6						
O53A	New Philadelph	29.80	40	IAmb	IAmb	15 57 02.5	
	comp=Z,30nm,0.8s						
O53A				IAMs_20	IAMs_20	16 10 04.9	
	comp=Z,6µm,22.0s						
S57A	Dark Hollow, R	29.86	46	P	P	15 57 00.7	-1.9
	baz=239,SNR=8.3						
S57A	Dark Hollow, R	29.86	46	P	P	15 57 01.1	-1.4
S57A				IAmb	IAmb	15 57 03.4	
	comp=Z,22nm,0.7s						
S57A				IAMs_20	IAMs_20	16 10 07.5	
	comp=Z,3µm,18.0s						
U59A	Littleton	29.99	50	IAMs_20	IAMs_20	16 11 11.1	
	comp=Z,2µm,19.0s						
V60A	Jim Taylor Roa	30.12	51	IAMs_20	IAMs_20	16 10 29.4	
	comp=Z,2µm,19.0s						
AGMN	Agassiz Nation	30.12	13	IAmb	IAmb	15 57 05.5	
	comp=Z,70nm,0.9s						
COWI	Conover	30.16	24	P	P	15 57 04.0	-1.1
COWI				IAmb	IAmb	15 57 06.1	
	comp=Z,43nm,0.7s						
COWI				IAMs_20	IAMs_20	16 08 11.0	
	comp=Z,4µm,18.0s						
F42A	Maple Grove Fa	30.26	25	IAMs_20	IAMs_20	16 09 06.7	
	comp=Z,4µm,18.0s						
MCWV	Mont Chateau	30.30	42	P	P	15 57 04.4	-2.0
	baz=235						
N53A	Lisbon	30.36	39	IAMs_20	IAMs_20	16 10 29.9	
	comp=Z,4µm,18.0s						
NEW	Newport	30.37	345	P	P	15 57 07.1	+0.1
	baz=158,SNR=8.9						

Q56A	Snyder Ridge,	30.38	44	P	P	15 57 05.3	-1.9
	baz=237,SNR=6.3						
Q56A	Snyder Ridge,	30.38	44	IAmb	IAmb	15 57 18.4	
	comp=Z,21nm,0.7s						
Q56A				IAMs_20	IAMs_20	16 10 03.3	
	comp=Z,3µm,20.0s						
S58A	Poland Farm, P	30.41	47	P	P	15 57 04.8	-2.6
	baz=240						
LON	Longmire	30.41	338	IAMs_20	IAMs_20	16 09 29.8	
	comp=Z,3µm,19.0s						
R57A	Stanardsville	30.43	46	P	P	15 57 05.6	-2.0
	baz=239,SNR=8.0						
LTY	Liberty	30.46	340	IAMs_20	IAMs_20	16 10 13.0	
	comp=Z,2µm,20.0s						
M52A	Chesterland	30.51	38	P	P	15 57 06.7	-1.6
M52A				IAmb	IAmb	15 57 17.9	
	comp=Z,44nm,0.8s						
M52A				IAMs_20	IAMs_20	16 10 33.9	
	comp=Z,4µm,18.0s						
K50A	Casco	30.61	35	P	P	15 57 07.6	-1.5
K50A				IAmb	IAmb	15 57 10.3	
	comp=Z,67nm,0.9s						
K50A				IAMs_20	IAMs_20	16 10 05.7	
	comp=Z,5µm,21.0s						
V61A	Roper	30.63	51	IAMs_20	IAMs_20	16 11 37.2	
	comp=Z,3µm,19.0s						
R58B	Mineral	30.70	47	P	P	15 57 08.0	-1.9
	baz=240						
R58A	Rapidan	30.78	46	P	P	15 57 08.7	-2.0
	baz=240						
M53A	WI Miller and	30.85	39	P	P	15 57 09.3	-2.0
	baz=232						
M53A	WI Miller and	30.85	39	P	P	15 57 09.1	-2.2
M53A				IAmb	IAmb	15 57 52.1	
	comp=Z,52nm,0.9s						
M53A				IAMs_20	IAMs_20	16 10 44.7	
	comp=Z,3µm,18.0s						
D05A	Enumclaw	30.85	338	IAMs_20	IAMs_20	16 09 42.4	
	comp=Z,2µm,20.0s						
P56A	Dayton Farm, R	30.86	43	P	P	15 57 08.8	-2.5
	baz=237,SNR=16						
E03A	Lebam	30.88	336	IAmb	IAmb	15 57 17.6	
	comp=Z,38nm,1.1s						
Q57A	Strasburg	30.89	44	P	P	15 57 10.1	-1.6
	baz=238,SNR=8.4						
EYMN	Ely	30.95	19	P	P	15 57 11.2	-0.9
	baz=207,SNR=138						
U61A	Possum Corner	30.96	50	IAMs_20	IAMs_20	16 10 02.6	
	comp=Z,2µm,22.0s						
N54A	Moraine State	30.97	40	P	P	15 57 10.0	-2.4
	baz=233						
N54A	Moraine State	30.97	40	IAmb	IAmb	15 57 13.0	
	comp=Z,25nm,0.7s						
N54A				IAMs_20	IAMs_20	16 10 57.9	
	comp=Z,5µm,18.0s						
B08A	Colville Reser	31.04	342	IAmb	IAmb	15 57 23.4	
	comp=Z,39nm,1.1s						
MOTC	Monteria, Cord	31.05	105	eP	P	15 57 12.9	-0.4
GLMI	Grayling	31.07	30	P	P	15 57 11.4	-1.8
	baz=221						
GLMI	Grayling	31.07	30	IAMs_20	IAMs_20	16 09 26.8	
	comp=Z,5µm,21.0s						
T60A	Surry	31.11	49	P	P	15 57 11.6	-2.0
	baz=243						
T60A	Surry	31.11	49	IAmb	IAmb	15 57 15.8	
	comp=Z,56nm,0.8s						
CBN	Corbin Frederi	31.16	47	P	P	15 57 12.7	-1.4
	baz=240						
D41A	Chassel	31.18	23	IAMs_20	IAMs_20	16 10 42.0	
	comp=Z,4µm,18.0s						
PIZC	Pizarro, Choco	31.21	113	eP	P	15 57 17.1	+2.3
E43A	Lone Tree Farm	31.23	26	IAmb	IAmb	15 57 15.0	
	comp=Z,57nm,0.8s						
E43A				IAMs_20	IAMs_20	16 09 12.2	
	comp=Z,4µm,20.0s						
DBBC	Dabeiba	31.28	109	eP	P	15 57 17.1	+1.6
ALLY	Alegheny Colle	31.29	39	P	P	15 57 13.6	-1.6
ALLY				IAmb	IAmb	15 57 58.6	
	comp=Z,46nm,0.8s						
Q58A	Fox Den Farm,	31.32	45	P	P	15 57 13.9	-1.6
	baz=239						
P57A	Homestead Farm	31.39	44	P	P	15 57 14.4	-1.6
	baz=238						
P57A	Homestead Farm	31.39	44	IAMs_20	IAMs_20	16 10 41.9	
	comp=Z,4µm,22.0s						
L53A	Girard	31.41	38	P	P	15 57 14.4	-1.8
	baz=231						
O56A	Blue Knob Stat	31.45	42	IAMs_20	IAMs_20	16 10 18.7	
	comp=Z,2µm,20.0s						
M54A	Oil Creek Stat	31.49	39	P	P	15 57 14.8	-2.1
	baz=233,SNR=16						
M54A	Oil Creek Stat	31.49	39	P	P	15 57 15.0	-1.9
M54A				IAMs_20	IAMs_20	16 11 12.8	
	comp=Z,4µm,19.0s						
GR1C	Gorgona, Isla	31.53	117	eP	P	15 57 18.7	+1.1
SMRC	Santa Marta, M	31.55	100	eP	P	15 57 18.7	+1.0
UREC	San Jos de Ur	31.58	107	eP	P	15 57 17.2	-0.8
ERPA	Erie	31.67	38	P	P	15 57 16.3	-2.2
	baz=232						
ERPA	Erie	31.67	38	IAmb	IAmb	15 58 01.6	
	comp=Z,23nm,0.8s						
ERPA				IAMs_20	IAMs_20	16 11 09.5	
	comp=Z,4µm,18.0s						
B06A	Marblemount	31.84	340	IAmb	IAmb	15 57 31.9	
	comp=Z,42nm,0.9s						
P58A	Pank, Wackersv	31.86	45	P	P	15 57 18.6	-1.6
	baz=239,SNR=13						
ARGC	Ariguani, Magd	31.96	102	eP	P	15 57 26.0	+4.6
CBOC	Ciudad Bolivar	31.97	111	eP	P	15 57 21.2	-0.4
ULM	Lac du Bonnet	31.97	12	P	P	15 57 20.2	-0.8
	comp=Z,67nm,0.9s,baz=197,slow=9.1,SNR=120						
ULM				LR	LR	16 11 10.8	
	comp=Z,4µm,22.0s,baz=198,slow=38						
ULM	Lac du Bonnet	31.97	12c	iP	P	15 57 19.6	-1.4
N56A	West Decatur	31.99	42	P	P	15 57 18.6	-2.8
	baz=236						
M55A	Ridgway	32.01	40	IAmb	IAmb	15 57 22.1	
	comp=Z,30nm,0.7s						
O57A	Amberson	32.02	43	P	P	15 57 19.5	-2.1
	baz=237,SNR=20						
SSPA	Standing Stone	32.09	42	P	P	15 57 20.1	-2.1
	baz=236						
SSPA	Standing Stone	32.09	42	P	P	15 57 20.3	-1.9
SSPA				IAmb	IAmb	15 57 21.9	
	comp=Z,26nm,0.8s						
SSPA	Standing Stone	32.09	42	IAMs_20	IAMs_20	16 10 11.5	
	comp=Z,3µm,22.0s						
SDMD	Soldier's Deli	32.12	45	IAMs_20	IAMs_20	16 12 10.6	
	comp=Z,2µm,18.0s						
I51A	Listowel	32.17	35	P	P	15 57 20.7	-2.2
	baz=228,SNR=8.3						
PLMC	San Jos del P	32.18	112	eP	P	15 57 23.4	0.0
ZARC	Zaragoza, Cauc	32.30	107	eP	P	15 57 24.9	+0.6
N57A	Milroy	32.37	42	P	P	15 57 22.4	-2.2
	baz=237,SNR=14						
E46A	Sault Ste Mari	32.38	28	IAmb	IAmb	15 57 35.2	
	comp=Z,24nm,0.8s						
E46A				IAMs_20	IAMs_20	16 10 08.5	
	comp=Z,5µm,20.0s						
M56A	Emporium	32.38	41	P	P	15 57 22.2	-2.5
	baz=235						
O58A	Lewisberry	32.44	44	P	P	15 57 23.1	-2.1
	baz=238,SNR=8.9						
P59A	Jarrettsville	32.50	45	P	P	15 57 23.4	-2.4
	baz=240						
SMLC	San Martn de	32.50	104	eP	P	15 57 26.1	0.0
YOTC	Yotoco, Valle	32.57	114	eP	P	15 57 26.7	-0.1
Q60A	Greensboro	32.60	46	IAMs_20	IAMs_20	16 10 52.0	
	comp=Z,3µm,22.0s						
PAGS	Pennsylvania G	32.62	44	IAmb	IAmb	15 57 26.2	
	comp=Z,27nm,0.8s						
PAGS				IAMs_20	IAMs_20	16 11 55.6	
	comp=Z,4µm,20.0s						
GRTK	Grand Turk	32.62	80	IAMs_20	IAMs_20	16 11 27.4	
	comp=Z,5µm,21.0s						
WVNY	West Valley, N	32.66	39	IAmb	IAmb	15 57 27.7	
	comp=Z,32nm,0.8s						
WVNY				IAMs_20	IAMs_20	16 11 50.8	
	comp=Z,4µm,18.0s						
SDDR	Presa de Saban	32.66	85	P	P	15 57 27.7	+0.2
SDDR				IAmb	IAmb	15 57 29.0	
	comp=Z,23nm,1.0s						
SDDR				IAMs_20	IAMs_20	16 11 50.7	
	comp=Z,2µm,18.0s						
MVL	Millersville	32.75	44	IAmb	IAmb	15 57 29.1	
	comp=Z,17nm,0.7s						
MVL				IAMs_20	IAMs_20	16 10 35.0	
	comp=Z,2µm,19.0s						
BBAC	Balboa, Cauca	32.83	118⇓	eP	P	15 57 30.3	+1.1
GUY2C	Guyana, Caldas	32.83	111	eP	P	15 57 27.4	-2.1
CRJC	Cerrejon, Guaj	32.84	100	eP	P	15 57 30.2	+1.1
OTAV	Otavalo	32.86	122	P	P	15 57 30.8	+1.1
OTAV				pmax	pmax		
	comp=Z,91nm,1.4s						
OTAV	Otavalo	32.86	122	P	P	15 57 30.8	+1.1
OTAV	Otavalo	32.86	122	eP	P	15 57 30.9	+1.2
N58A	Sunbury	32.95	43	P	P	15 57 26.7	-3.0
	baz=238,SNR=6.8						
N58A	Sunbury	32.95	43	IAmb	IAmb	15 57 30.7	
	comp=Z,27nm,0.8s						
N58A				IAMs_20	IAMs_20	16 11 28.2	
	comp=Z,3µm,20.0s						
M57A	Sunshine Farm,	32.95	42	P	P	15 57 27.6	-2.2
	baz=236,SNR=6.9						
M57A	Sunshine Farm,	32.95	42	IAmb	IAmb	15 57 31.3	
	comp=Z,34nm,0.8s						
RREF	El Recreo	33.00	112	eP	P	15 57 32.5	+1.4
O59A	Robesonia	33.02	44	P	P	15 57 28.2	-2.2
	baz=239,SNR=12						
POPC	Popayan, Colom	33.03	117	eP	P	15 57 29.4	-1.6
PTBC	PUERTO BERRIO,	33.06	108	eP	P	15 57 31.9	+0.9
NORC	Norcasia	33.12	110	eP	P	15 57 31.1	-0.5
P60A	Greenville	33.13	45	P	P	15 57 29.1	-2.2
	baz=240						
P60A	Greenville	33.13	45	IAMs_20	IAMs_20	16 10 35.1	
	comp=Z,3µm,19.0s						
L56A	Greenwood	33.13	40	P	P	15 57 29.3	-2.1
	baz=235,SNR=5.4						
L56A	Greenwood	33.13	40	IAmb	IAmb	15 57 30.4	
	comp=Z,20nm,0.7s						
L56A				IAMs_20	IAMs_20	16 12 16.2	
	comp=Z,4µm,19.0s						
ANIL	Santa Ana	33.14	112	eP	P	15 57 32.5	+0.5
SC01	Santiago de lo	33.15	84	IAMs_20	IAMs_20	16 13 25.4	
	comp=Z,3µm,22.0s						
TOLC	Tolima	33.17	112	eP	P	15 57 34.0	+1.7
GCUF	Volcan Galeras	33.19	119	eP	P	15 57 33.6	+1.0
MMNY	Mt. Morris Dam	33.27	39	IAmb	IAmb	15 57 31.9	
	comp=Z,27nm,1.0s						
PSUB	Penn St. - Bra	33.31	45	IAmb	IAmb	15 57 34.1	
	comp=Z,29nm,0.8s						
PSUB				IAMs_20	IAMs_20	16 10 40.9	
	comp=Z,2µm,19.0s						
PCON	Cinco Dias	33.38	117	eP	P	15 57 35.6	+1.2
M58A	Price's Panora	33.39	42	P	P	15 57 31.0	-2.6
	baz=237						
OCAC	Ocana	33.40	105	eP	P	15 57 34.4	+0.2
URIC	Uribia, Colomb	33.47	98	eP	P	15 57 32.4	-2.1
MARP	Paez Belalcaza	33.48	115	eP	P	15 57 36.0	+1.0
BRRC	Barranca, Sant	33.49	107	eP	P	15 57 33.5	-1.2
L57A	Andrews Acres	33.49	41	P	P	15 57 32.3	-2.2
	baz=236,SNR=8.3						
O60A	Telford	33.53	45	P	P	15 57 33.5	-1.4
	baz=240,SNR=7.0						
ORTC	Ortega, Tolima	33.56	113	eP	P	15 57 36.4	+0.9
N59A	State Game Lan	33.60	43	P	P	15 57 33.3	-2.1
	baz=239,SNR=5.7						
N59A	State Game Lan	33.60	43	IAMs_20	IAMs_20	16 11 59.5	
	comp=Z,4µm,21.0s						
K56A	Middlesex	33.60	40	P	P	15 57 33.6	-1.9
	baz=234,SNR=19						
P61A	Hammonton	33.63	46	IAMs_20	IAMs_20	16 13 10.4	
	comp=Z,3µm,18.0s						
J55A	Hilton	33.64	38	P	P	15 57 33.3	-2.4
J55A				IAMs_20	IAMs_20	16 11 30.6	
	comp=Z,2µm,18.0s						
LUPA	Lehigh Univers	33.70	44	IAmb	IAmb	15 57 37.6	
	comp=Z,20nm,0.8s						
SPBC	San Pablo de B	33.78	109	eP	P	15 57 29.4	-8.0
ROSC	El Rosal	33.93	111	IAMs_20	IAMs_20	16 12 37.2	
	comp=Z,2µm,19.0s						
KSPA	Keystone Colle	33.93	42	IAMs_20	IAMs_20	16 11 15.4	
	comp=Z,3µm,19.0s						
PRAC	Prado	33.97	113	eP	P	15 57 36.0	-3.0
H53A	Bobcaygeon	34.01	36	P	P	15 57 37.2	-1.7
	baz=231,SNR=8.6						
BETC	Betania	34.01	115	eP	P	15 57 38.5	-0.9
N60A	Cedar Hill Far	34.01	44	P	P	15 57 36.5	-2.5
	baz=240						
K57A	Scipio Center	34.11	40	P	P	15 57 37.7	-2.1
	baz=236						
BINY	Binghamton	34.14	41	P	P	15 57 38.3	-1.8
	baz=237,SNR=9.0						
BINY	Binghamton	34.14	41	IAMs_20	IAMs_20	16 12 57.8	
	comp=Z,4µm,18.0s						
M59A	Waymart	34.14	43	P	P	15 57 37.9	-2.2
	baz=238						
L58A	Harry Jones Me	34.14	42	P	P	15 57 38.4	-1.7
	baz=237,SNR=7.9						
BARC	Barichara	34.18	107	eP	P	15 57 38.4	-2.6
J56A	Wolcott	34.21	39	P	P	15 57 38.6	-2.0
	baz=234						
J56A	Wolcott	34.21	39	IAmb	IAmb	15 58 11.4	
	comp=Z,34nm,0.8s						
J56A				IAMs_20	IAMs_20	16 12 47.8	
	comp=Z,4µm,20.0s						
GARC	Garzon, Huila	34.22	116	eP	P	15 57 40.9	-0.4
BRNJ	Basking Ridge	34.27	45	P	P	15 57 39.6	-1.6
PAMC	Pamplona, Colo	34.32	106	eP	P	15 57 42.9	+0.4
FLOC	Florencia	34.40	117	eP	P	15 57 43.1	+0.4
ODNJ	Ogdensburg	34.44	44	IAmb	IAmb	15 57 44.6	
	comp=Z,26nm,0.9s						
ODNJ				IAMs_20	IAMs_20	16 13 01.8	
	comp=Z,4µm,21.0s						
N61A	South Mountain	34.48	45	P	P	15 57 41.0	-2.1
	baz=241						
DELO	Deloro Mine	34.51	37	IAmb	IAmb	15 57 44.3	
	comp=Z,22nm,0.8s						
PECO	Prince Edward	34.52	38	IAMs_20	IAMs_20	16 11 57.9	
	comp=Z,2µm,18.0s						
CHIC	Chingaza	34.55	111	eP	P	15 57 44.2	-0.2
M60A	Port Jervis	34.55	44	P	P	15 57 41.7	-2.0
	baz=240						
RUSC	La Rusia	34.56	108	eP	P	15 57 44.2	-0.4
K58A	Earlville	34.66	41	P	P	15 57 42.6	-2.0
	baz=237						
K58A	Earlville	34.66	41	IAmb	IAmb	15 57 46.9	
	comp=Z,39nm,1.1s						
K58A				IAMs_20	IAMs_20	16 11 59.5	
	comp=Z,2µm,18.0s						
L59A	Walton	34.73	42	P	P	15 57 43.5	-1.8
	baz=238,SNR=7.2						
L59A	Walton	34.73	42	IAmb	IAmb	15 57 47.3	
	comp=Z,38nm,0.8s						
G54A	Lake Saint Pet	34.80	35	P	P	15 57 43.8	-2.0
	baz=230,SNR=12						
J57A	Williamstown	34.80	40	P	P	15 57 42.9	-2.9
	baz=235,SNR=8.6						
J57A	Williamstown	34.80	40	IAMs_20	IAMs_20	16 13 07.4	
	comp=Z,4µm,22.0s						
PAL	Palisades	34.86	45	P	P	15 57 44.5	-1.8
	baz=241						
PAL	Palisades	34.86	45	IAmb	IAmb	15 57 46.2	
	comp=Z,34nm,0.8s						
PAL				IAMs_20	IAMs_20	16 12 57.0	
	comp=Z,3µm,20.0s						
DABV	Dabajuro	34.97	98	eP	P	15 57 48.4	+0.9
M61A	Granite Spring	35.10	44	P	P	15 57 46.3	-2.1
	baz=241,SNR=7.4						
N62A	Caumsett State	35.12	45	P	P	15 57 46.2	-2.3
	baz=242						
PLVO	Plevna	35.13	36	IAmb	IAmb	15 57 50.0	
	comp=Z,28nm,0.9s						
L60A	Shokan	35.15	43	P	P	15 57 47.1	-1.7
	baz=239,SNR=12						
K59A	Cooperstown	35.16	41	P	P	15 57 47.2	-1.7
	baz=238						
ALGO	Algonquin Park	35.17	34	P	P	15 57 47.5	-1.5
	baz=230						
WSPT	Westport, CT	35.33	45	IAmb	IAmb	15 57 49.9	
	comp=Z,31nm,0.8s						
KSCT	Kent School, K	35.49	44	IAmb	IAmb	15 57 52.4	
	comp=Z,36nm,0.7s						
KSCT				IAMs_20	IAMs_20	16 13 15.6	
	comp=Z,3µm,20.0s						
TAMC	Tame, Arauca	35.50	106	eP	P	15 57 53.7	+1.4
FFC	Flin Flon	35.57	4	P	P	15 57 51.3	-0.9
FFC				pmax	pmax		
	comp=Z,28nm,0.9s						
FFC				MLR	MLR		
	comp=Z,3µm,19.0s						
FFC	Flin Flon	35.57	4	P	P	15 57 51.3	-0.9
FFC				IAmb	IAmb	15 57 55.2	
	comp=Z,28nm,0.9s						
FFC	Flin Flon	35.57	4	IAMs_20	IAMs_20	16 10 48.3	
	comp=Z,3µm,19.0s						
I58A	Old Forge	35.58	40	P	P	15 57 50.6	-1.9
	baz=236,SNR=5.3						
SDV	Santo Domingo	35.64	102	P	P	15 57 54.4	+0.8
SDV	Santo Domingo	35.64	102	IAMs_20	IAMs_20	16 13 07.5	
	comp=Z,2µm,20.0s						
SDV	Santo Domingo	35.64	102	eP	P	15 57 44.5	-9.1
MACC	Macarena, Meta	35.65	115	eP	P	15 57 54.0	+0.6
SOCV	Socops	35.65	103	eP	P	15 57 54.4	+0.9
YLE	Yale	35.66	45	IAMs_20	IAMs_20	16 13 20.9	
	comp=Z,3µm,19.0s						
L61A	Hillsdale 1, H	35.68	43	P	P	15 57 51.4	-2.0
	baz=240,SNR=9.4						
J59A	Piesco	35.74	40	P	P	15 57 51.8	-2.2
	baz=237,SNR=5.9						
J59A	Piesco	35.74	40	IAMs_20	IAMs_20	16 13 47.2	
	comp=Z,3µm,20.0s						
M62A	Hamden	35.74	44	P	P	15 57 51.8	-2.1
	baz=242						
H57A	Richville	35.76	38	P	P	15 57 52.3	-1.7
	baz=235,SNR=5.3						
TRY	Troy	35.88	42	IAmb	IAmb	15 57 57.0	
	comp=Z,34nm,0.7s						
PTLC	Puerto Leguiza	35.89	118	eP	P	15 57 57.4	+1.9
K61A	Williamstown	36.10	42	P	P	15 57 55.4	-1.6
	baz=240,SNR=9.3						
PTGC	Puerto Gaitan,	36.16	110	eP	P	15 57 57.4	-0.4
L62A	Suffield	36.18	44	P	P	15 57 55.8	-1.9
	baz=241						
L62A	Suffield	36.18	44	IAMs_20	IAMs_20	16 13 37.8	
	comp=Z,3µm,21.0s						
NCB	Newcomb	36.19	40	IAmb	IAmb	15 57 57.0	
	comp=Z,13nm,0.7s						
NCB				IAMs_20	IAMs_20	16 13 19.0	
	comp=Z,2µm,19.0s						
ACCN	Adirondack Com	36.21	41	IAmb	IAmb	15 58 00.1	
	comp=Z,18nm,0.8s						
M63A	Gales Ferry	36.29	45	P	P	15 57 57.1	-1.4
	baz=243,SNR=7.3						
M63A	Gales Ferry	36.29	45	IAMs_20	IAMs_20	16 13 50.7	
	comp=Z,3µm,18.0s						
J60A	Lant Hill Farm	36.30	42	P	P	15 57 56.4	-2.3
	baz=239						
LONY	Lake Ozonia	36.33	39	P	P	15 57 56.2	-2.7
	baz=236,SNR=7.1						
LONY	Lake Ozonia	36.33	39	IAmb	IAmb	15 57 59.2	
	comp=Z,24nm,0.9s						
UCCT	U. Connecticut	36.35	44	P	P	15 57 57.4	-1.7
UCCT				IAmb	IAmb	15 57 59.5	
	comp=Z,42nm,0.8s						
UCCT				IAMs_20	IAMs_20	16 13 49.4	
	comp=Z,2µm,18.0s						
G57A	Newington	36.37	38	P	P	15 57 57.0	-2.1
	baz=235,SNR=13						
L61B	Northampton	36.37	43	P	P	15 57 57.4	-1.9
	baz=241						
H58A	Gabriels	36.45	39	P	P	15 57 57.9	-2.1
	baz=236						
QUA2	Belchertown	36.50	44	IAmb	IAmb	15 58 01.5	
	comp=Z,32nm,0.8s						
QUA2				IAMs_20	IAMs_20	16 13 46.2	
	comp=Z,3µm,20.0s						
GUVC	San Jose del G	36.50	113	eP	P	15 58 01.3	+0.5
E55A	Montcerf-Lytto	36.56	35	P	P	15 57 58.8	-2.1
	baz=232						
I60A	Shoreham	36.69	41	P	P	15 57 59.9	-2.0
	baz=238						
K62A	Royalston	36.76	43	P	P	15 57 59.9	-2.7
	baz=241,SNR=6.3						
K62A	Royalston	36.76	43	IAmb	IAmb	15 58 03.0	
	comp=Z,30nm,0.8s						
K62A				IAMs_20	IAMs_20	16 13 44.2	
	comp=Z,3µm,21.0s						
L63A	North Scituate	36.79	45	P	P	15 58 00.7	-2.1
	baz=242						
L63A	North Scituate	36.79	45	IAMs_20	IAMs_20	16 14 04.0	
	comp=Z,2µm,18.0s						
BRYW	Bryant College	36.86	45	IAMs_20	IAMs_20	16 14 06.9	
	comp=Z,3µm,18.0s						
H59A	Cadyville	36.87	39	P	P	15 58 00.9	-2.7
	baz=237,SNR=5.1						
J61A	Chester	36.89	42	P	P	15 58 01.6	-2.1
	baz=240,SNR=8.8						
M64A	Tiverton	36.92	45	P	P	15 58 02.4	-1.6
	baz=243						
M64A	Tiverton	36.92	45	IAMs_20	IAMs_20	16 10 13.3	
	comp=Z,2µm,19.0s						
G58A	Ormstown	36.93	38	P	P	15 58 02.4	-1.6
	baz=236,SNR=16						
FRNY	Flat Rock	37.04	39	IAmb	IAmb	15 58 05.1	
	comp=Z,20nm,0.8s						
HRV	Adam Dziewonsk	37.12	44	P	P	15 58 04.1	-1.6
	baz=242						
HRV	Adam Dziewonsk	37.12	44	P	P	15 58 04.4	-1.3
HRV				pmax	pmax		
	comp=Z,176nm,1.9s						
HRV				MLR	MLR		
	comp=Z,3µm,18.0s						
HRV	Adam Dziewonsk	37.12	44	P	P	15 58 04.4	-1.3
HRV	Adam Dziewonsk	37.12	44	IAMs_20	IAMs_20	16 14 13.5	
	comp=Z,3µm,18.0s						
E56A	St. Veronique	37.18	36	P	P	15 58 04.7	-1.4
	baz=233						
OBIP	Obispado Ponce	37.19	85	IAmb	IAmb	15 58 08.3	
	comp=Z,29nm,0.8s						
WES	Weston	37.22	44	IAMs_20	IAMs_20	16 14 09.4	
	comp=Z,2µm,21.0s						
D55A	Sainte-Anne-du	37.23	35	P	P	15 58 05.2	-1.3
	baz=232,SNR=14						
K63A	Dunstable	37.23	43	P	P	15 58 04.9	-1.6
	baz=242						
K63A	Dunstable	37.23	43	IAMs_20	IAMs_20	16 14 15.6	
	comp=Z,2µm,18.0s						
HNH	Hanover	37.24	42	IAmb	IAmb	15 58 07.3	
	comp=Z,20nm,0.9s						
VT1	Waterbury	37.27	40	IAmb	IAmb	15 58 26.5	
	comp=Z,96nm,1.7s						
VT1				IAMs_20	IAMs_20	16 14 33.7	
	comp=Z,3µm,18.0s						
M65A	Busby, Falmout	37.30	46	IAMs_20	IAMs_20	16 16 13.7	
	comp=Z,2µm,21.0s						
J62A	Henniker	37.30	43	P	P	15 58 06.3	-1.0
	baz=241						
L64A	Middleborough	37.34	45	P	P	15 58 05.9	-1.6
	baz=243,SNR=6.4						
L64A	Middleborough	37.34	45	IAmb	IAmb	15 58 07.9	
	comp=Z,47nm,0.8s						
L64A				IAMs_20	IAMs_20	16 14 22.4	
	comp=Z,3µm,18.0s						
ELOV	Elorza	37.39	104	eP	P	15 58 09.0	+0.7
H60A	Morristown	37.43	40	P	P	15 58 06.5	-1.7
	baz=238						
E57A	Chemin Saint G	37.60	37	P	P	15 58 07.8	-2.0
	baz=234,SNR=9.8						
SJG	San Juan	37.61	85	P	P	15 58 09.4	-0.7
SJG				pmax	pmax		
	comp=Z,59nm,1.1s						
SJG				MLR	MLR		
	comp=Z,2µm,21.0s						
SJG	San Juan	37.61	85	P	P	15 58 09.4	-0.7
SJG				IAmb	IAmb	15 58 13.6	
	comp=Z,59nm,1.1s						
SJG	San Juan	37.61	85	IAMs_20	IAMs_20	16 14 49.7	
	comp=Z,2µm,21.0s						
D56A	ZEC Mazanza, M	37.64	35	P	P	15 58 08.8	-1.2
	baz=233						
LBNH	Lisbon	37.73	41	P	P	15 58 09.2	-1.6
	baz=239						
LBNH	Lisbon	37.73	41	IAmb	IAmb	15 58 10.5	
	comp=Z,48nm,1.3s						
PDPR	Patillas Dam,	37.74	85	P	P	15 58 09.9	-1.3
LSQQ	Lebel-sur-Quev	37.76	31	P	P	15 58 09.9	-1.1
	baz=228						
J63A	Strafford	37.80	43	P	P	15 58 10.2	-1.2
	baz=242						
H61A	Lyndonville	37.88	41	P	P	15 58 11.3	-0.8
	baz=239,SNR=5.4						
MATQ	Matagami	37.91	30	P	P	15 58 10.9	-1.4
	baz=226,SNR=8.3						
I62A	Tamworth	37.92	42	P	P	15 58 11.3	-1.2
	baz=240						
I62A	Tamworth	37.92	42	IAmb	IAmb	15 58 12.7	
	comp=Z,40nm,1.0s						
G60A	Masonville	37.93	40	P	P	15 58 11.4	-1.1
	baz=238						
F59A	Saint Guilaume	38.07	38	P	P	15 58 12.3	-1.3
	baz=237						

E58A	La Victoria	38.07	37	P	P	15 58 11.6	-2.1
	baz=235						
H62A	Milan	38.38	41	P	P	15 58 14.9	-1.4
	baz=240,SNR=5.6						
I63A	Otisfield	38.48	42	P	P	15 58 15.5	-1.6
	baz=241						
G61A	St-Isidore-de-	38.51	40	P	P	15 58 15.8	-1.6
	baz=239						
F60A	Warwick	38.62	39	P	P	15 58 16.4	-1.9
	baz=238,SNR=8.9						
D58A	Chemin du LacG	38.70	37	P	P	15 58 17.4	-1.6
	baz=235						
CDVI	St. Croix	38.96	85	P	P	15 58 20.4	-1.1
G62A	West of Eustis	39.09	40	P	P	15 58 21.0	-1.2
	baz=240						
G62A	West of Eustis	39.09	40	IAmb	IAmb	15 58 22.9	
	comp=Z,27nm,0.8s						
H63A	New Sharon	39.12	41	P	P	15 58 21.3	-1.2
	baz=241						
E60A	Ste Agathe de	39.13	38	P	P	15 58 20.8	-1.8
	baz=238,SNR=6.5						
F61A	St Evariste	39.19	39	P	P	15 58 21.8	-1.2
	baz=239						
WVL	Waterville	39.31	42	IAMs_20	IAMs_20	16 14 17.7	
	comp=Z,3µm,21.0s						
G63A	Kingsbury	39.60	41	P	P	15 58 25.3	-1.2
	baz=241						
H64A	Troy	39.62	42	P	P	15 58 25.5	-1.2
	baz=242						
D60A	Saint Jean D'O	39.72	38	P	P	15 58 26.2	-1.3
	baz=238						
E61A	Lac Etchemin	39.73	39	P	P	15 58 26.5	-1.0
	baz=239						
PKME	Peaks-Kenny Pk	39.87	41	P	P	15 58 27.3	-1.4
	baz=241						
F63A	Nahmakanta, Br	40.20	41	P	P	15 58 29.9	-1.5
	baz=241						
F63A	Nahmakanta, Br	40.20	41	P	P	15 58 30.1	-1.4
F63A				IAmb	IAmb	15 58 31.8	
	comp=Z,21nm,0.8s						
G64A	Maxfield	40.20	41	P	P	15 58 29.9	-1.5
	baz=242						
D61A	St Aubert, Com	40.30	38	P	P	15 58 30.6	-1.6
	baz=238						
FCC	Fort Churchill	40.42	9	IAmb	IAmb	15 58 42.2	
	comp=Z,44nm,0.8s						
FCC				IAMs_20	IAMs_20	16 14 31.2	
	comp=Z,3µm,20.0s						
SEUS	St. Eustatius	40.69	85	IAMs_20	IAMs_20	16 17 51.2	
	comp=Z,1µm,19.0s						
F64A	Sherman	40.74	41	P	P	15 58 34.6	-1.3
	baz=242						
EMMW	East Machias	40.78	43	IAMs_20	IAMs_20	16 16 53.5	
	comp=Z,3µm,18.0s						
H66A	Whiting	40.90	43	P	P	15 58 36.0	-1.2
	baz=244						
G65A	Princeton	40.93	42	P	P	15 58 36.2	-1.2
	baz=243						
G65A	Princeton	40.93	42	P	P	15 58 36.8	-0.6
G65A				IAmb	IAmb	15 59 22.6	
	comp=Z,154nm,1.9s						
G65A				IAMs_20	IAMs_20	16 17 38.4	
	comp=Z,2µm,19.0s						
SKI	Saint Kitts	40.94	85	P	P	15 58 37.5	-0.5
SKI	Saint Kitts	40.94	85	P	P	15 58 37.5	-0.5
E63A	Oxbow	40.96	40	P	P	15 58 36.6	-1.2
	baz=241						
E63A	Oxbow	40.96	40	IAmb	IAmb	15 58 41.0	
	comp=Z,116nm,1.8s						
E63A				IAMs_20	IAMs_20	16 14 56.4	
	comp=Z,3µm,20.0s						
E64A	Bridgewater	41.32	40	P	P	15 58 39.5	-1.2
	baz=242						
PQI	Presque Isle	41.33	40	IAmb	IAmb	15 59 25.8	
	comp=Z,94nm,1.8s						
GGN	Saint George	41.35	42	IAMs_20	IAMs_20	16 16 10.1	
	comp=Z,2µm,20.0s						
D63A	Stockholm	41.45	39	P	P	15 58 40.6	-1.2
	baz=241						
ANWB	Willy Bob	41.78	85	P	P	15 58 43.0	-1.8
ANWB				IAmb	IAmb	15 58 46.5	
	comp=Z,68nm,0.8s						
NNA	Nana	42.20	135⇑	*e*P	P	15 58 47.9	-0.4
NNA				pmax	pmax		
	comp=Z,59nm,1.5s						
CZSB	Cruzeiro do Su	42.27	126	*e*P	P	15 58 49.8	+1.0
BATG	Bathurst New B	42.79	40	IAmb	IAmb	15 58 53.0	
	comp=Z,38nm,0.8s						
DLBC	Dease Lake	42.95	342	IAMs_20	IAMs_20	16 17 52.3	
	comp=Z,2µm,18.0s						
LMN	Caledonia Moun	42.96	42	IAmb	IAmb	15 58 56.4	
	comp=Z,35nm,0.8s						
GRGR	Grenville	43.08	93	P	P	15 58 55.0	-0.4
GRGR				IAMs_20	IAMs_20	16 16 18.0	
	comp=Z,2µm,22.0s						
HAL	Halifax	43.27	45	IAMs_20	IAMs_20	16 17 03.4	
	comp=Z,2µm,21.0s						
YKA	Yellowknife Ar	43.66	354	P	P	15 58 59.1	-0.3
	comp=Z,6.2nm,0.8s,baz=160,slow=8.1,SNR=38						
YKA				PP	PcP	16 00 46.8	+0.5
	comp=Z,1.9nm,1.0s,baz=156,slow=10,SNR=3.9						
YKA				LR	LR	16 16 57.7	
	comp=Z,2µm,19.0s,baz=0.0,slow=36						
TAOE	Nuku Hiva Isla	43.80	233	*e*T	T	16 45 32.7	
	comp=Z,26nm,0.3s						
JIS	Juneau Island	44.22	339	IAMs_20	IAMs_20	16 16 06.4	
	comp=Z,1µm,21.0s						
BBGH	Gun Hill	44.80	91	IAMs_20	IAMs_20	16 17 22.6	
	comp=Z,2µm,21.0s						
TABL	Table Mountain	48.18	337	IAMs_20	IAMs_20	16 21 23.9	
	comp=Z,948nm,20.0s						
ETMB	Extrema	48.60	123	*e*P	P	15 59 37.4	-1.6
TGL	Tana Glacier	49.01	337	IAmb	IAmb	15 59 54.5	
	comp=Z,24nm,1.0s						
PTGA	Pitinga	49.22	108	P	P	15 59 43.2	-0.6
PTGA				IAmb	IAmb	16 00 02.9	
	comp=Z,18nm,0.8s						
PTGA	Pitinga	49.22	108	*e*P	P	15 59 43.4	-0.4
MCARA	McCarthy VSAT	49.50	338	IAmb	IAmb	15 59 58.3	
	comp=Z,17nm,0.8s						
VRDI	Verde Repeater	49.55	337	IAmb	IAmb	16 00 02.3	
	comp=Z,14nm,0.8s						
MACA	Manacapuru-AM	49.69	112	*e*P	P	15 59 46.3	-1.1
GLB	Gilahina Butte	49.82	337	IAmb	IAmb	16 00 00.6	
	comp=Z,19nm,0.8s						
GLB				IAMs_20	IAMs_20	16 21 34.3	
	comp=Z,962nm,19.0s						
EYAK	Cordova Ski Ar	49.99	336	IAmb	IAmb	16 00 01.5	
	comp=Z,22nm,0.8s						
DAWY	Dawson	50.18	342	IAmb	IAmb	15 59 55.8	
	comp=Z,13nm,0.8s						
BCAR	Beaver Creek A	50.21	340	P	P	15 59 51.4	+0.7
N25K	Chitina, Valde	50.22	337	P	P	15 59 50.3	-0.5
	baz=130,SNR=7.9						
N25K	Chitina, Valde	50.22	337	IAmb	IAmb	16 00 03.9	
	comp=Z,24nm,0.8s						
SAML	Samuel	50.54	120	P	P	15 59 51.3	-2.5
SAML				pmax	pmax		
	comp=Z,33nm,1.1s						
SAML				MLR	MLR		
	comp=Z,800nm,21.0s						
SAML	Samuel	50.54	120	P	P	15 59 51.3	-2.5
SAML				IAmb	IAmb	16 00 11.6	
	comp=Z,33nm,1.1s						
SAML	Samuel	50.54	120	*e*P	P	15 59 52.3	-1.5
SAML	Samuel	50.54	120	*e*P	P	15 59 51.9	-2.0
KLU	Klutina	50.64	336	IAmb	IAmb	16 00 06.9	
	comp=Z,30nm,0.8s						
RKT	Rikitea	50.77	215	*e*S	S	16 07 09.4	+0.2
	comp=Z,1µm,27.0s						
RKT				*e*LR	LR	16 14 35.4	
	comp=Z,2µm,42.0s						
MENT	Mentasta	50.77	339	IAMs_20	IAMs_20	16 19 03.3	
	comp=Z,952nm,22.0s						
M24K	Tolsona, Glenn	51.11	337	P	P	15 59 57.7	+0.1
	baz=128,SNR=6.4						
M24K	Tolsona, Glenn	51.11	337	P	P	15 59 58.5	+1.0
LPAZ	La Paz	51.23	131	P	P	15 59 58.7	-0.9
	comp=Z,11nm,1.0s,baz=344,slow=9.0,SNR=17						
LPAZ				LR	LR	16 20 54.4	
	comp=Z,736nm,18.3s,baz=320,slow=35						
LPAZ	La Paz	51.23	131	*e*P	P	15 59 59.6	0.0
EGAK	Eagle	51.23	341	IAmb	IAmb	16 00 03.5	
	comp=Z,17nm,0.8s						
C36M	Paulatuk	51.36	352	P	P	15 59 58.5	-0.7
	baz=158,SNR=6.4						
C36M	Paulatuk	51.36	352	IAMs_20	IAMs_20	16 21 07.6	
	comp=Z,2µm,18.0s						
DOT	Dot Lake	51.36	339	IAmb	IAmb	16 00 06.3	
	comp=Z,18nm,1.0s						
DOT				IAMs_20	IAMs_20	16 23 46.9	
	comp=Z,1µm,19.0s						
SCM	Sheep Creek Mo	51.38	336	IAmb	IAmb	16 00 14.8	
	comp=Z,21nm,0.8s						
PAX	Paxson	51.40	338	IAmb	IAmb	16 00 11.6	
	comp=Z,19nm,0.8s						
KDAK	Kodiak Island	51.43	330⇑	*e*P	P	16 00 03.0	+3.2
KDAK				pmax	pmax		
	comp=Z,55nm,1.3s						
SCRK	Sand Creek	51.56	340	P	P	16 00 01.0	0.0
	baz=132,SNR=14						
KNK	Knik Glacier	51.57	335	IAmb	IAmb	16 00 13.1	
	comp=Z,21nm,0.8s						
PB16	IPOC Station P	51.66	134	P	P	16 00 03.2	+0.4
PB16				IAmb	IAmb	16 00 16.4	
	comp=Z,41nm,1.4s						
RIDG	Independent Ri	51.69	339	IAMs_20	IAMs_20	16 25 45.6	
	comp=Z,982nm,19.0s						
RC01	Rabbit Creek A	51.89	335	P	P	16 00 03.3	0.0
	baz=123						
PMR	Palmer	51.93	335	IAmb	IAmb	16 00 15.0	
	comp=Z,24nm,0.7s						
PMR				IAMs_20	IAMs_20	16 24 01.5	
	comp=Z,1µm,18.0s						
INK	Inuvik	52.05	347	IAmb	IAmb	16 00 14.4	
	comp=Z,40nm,0.9s						
INK				IAMs_20	IAMs_20	16 22 28.1	
	comp=Z,1µm,20.0s						
MNMC	Minye Minye	52.16	135	P	P	16 00 06.0	-0.2
MNMC				IAmb	IAmb	16 00 08.5	
	comp=Z,32nm,1.2s						
HDA	Harding Lake	52.83	339	P	P	16 00 10.5	+0.2
	baz=129,SNR=6.8						
HDA	Harding Lake	52.83	339	IAMs_20	IAMs_20	16 26 16.6	
	comp=Z,900nm,19.0s						
RND	Reindeer	52.88	337	IAmb	IAmb	16 00 25.3	
	comp=Z,29nm,0.8s						
RND				IAMs_20	IAMs_20	16 23 26.3	
	comp=Z,866nm,21.0s						
IL31		53.04	339	IAmb	IAmb	16 00 21.8	
	comp=Z,26nm,0.9s						
ILAR	Eielson Array	53.04	339	P	P	16 00 12.2	+0.4
	comp=Z,8.8nm,0.8s,baz=149,slow=6.4,SNR=75						
ILAR				LR	LR	16 25 31.4	
	comp=Z,457nm,19.4s,baz=127,slow=39						
PRP	Porcupine Dome	53.08	341	P	P	16 00 12.1	-0.1
PRP				IAmb	IAmb	16 00 17.6	
	comp=Z,28nm,0.8s						
PRP				IAMs_20	IAMs_20	16 23 22.0	
	comp=Z,1µm,20.0s						
SKT	Skwentna	53.10	335	IAmb	IAmb	16 00 23.7	
	comp=Z,30nm,0.8s						
MCK	McKinley	53.11	338	P	P	16 00 12.4	+0.1
	baz=126,SNR=10						
PB08	IPOC Station P	53.16	135	P	P	16 00 13.7	0.0
PB08				IAmb	IAmb	16 00 15.2	
	comp=Z,22nm,0.9s						
WRH	Wood River Hil	53.26	339	IAMs_20	IAMs_20	16 25 26.9	
	comp=Z,1µm,18.0s						
CCB	Clear Creek Bu	53.27	339	IAmb	IAmb	16 00 24.0	
	comp=Z,15nm,0.8s						
COLA	College	53.42	339⇓	*e*P	P	16 00 15.6	+1.1
COLA				pmax	pmax		
	comp=Z,24nm,2.1s						
COLA	College	53.42	339	P	P	16 00 15.4	+0.9
POKR	Poker Plat Res	53.44	340	P	P	16 00 14.8	+0.1
	baz=128,SNR=9.3						
POKR	Poker Plat Res	53.44	340	IAmb	IAmb	16 00 26.1	
	comp=Z,18nm,0.8s						
POKR				IAMs_20	IAMs_20	16 23 03.6	
	comp=Z,1µm,20.0s						
PB01	IPOC Station P	53.58	136	P	P	16 00 16.1	-0.3
PB01				IAmb	IAmb	16 00 18.8	
	comp=Z,30nm,1.0s						
MDM	Murphy Dome	53.60	339	IAmb	IAmb	16 00 31.2	
	comp=Z,14nm,0.8s						
NEA2	Nenana	53.67	339	P	P	16 00 16.4	0.0
	baz=126,SNR=18						
FYU	Fort Yukon	53.69	342	IAmb	IAmb	16 00 27.0	
	comp=Z,36nm,1.0s						
FYU				IAMs_20	IAMs_20	16 26 25.2	
	comp=Z,1µm,18.0s						
KTH	Kantishna Hill	53.73	337	IAmb	IAmb	16 00 28.5	
	comp=Z,23nm,0.9s						
PB07	IPOC Station P	53.82	137	P	P	16 00 17.8	-0.4
PB07				IAmb	IAmb	16 00 19.6	
	comp=Z,26nm,0.8s						
BPAW	Bear Paw Mtn.	54.06	337	IAmb	IAmb	16 00 31.7	
	comp=Z,17nm,0.8s						
BPAW				IAMs_20	IAMs_20	16 26 06.5	
	comp=Z,1µm,21.0s						
BMAR	Burnt Mountain	54.09	343	P	P	16 00 19.9	+0.4
I23K	Minto, Yukon-K	54.10	339	P	P	16 00 20.0	+0.5
	baz=126,SNR=18						
I23K	Minto, Yukon-K	54.10	339	IAmb	IAmb	16 00 29.9	
	comp=Z,27nm,1.0s						
I23K				IAMs_20	IAMs_20	16 23 15.2	
	comp=Z,810nm,18.0s						
PB09	IPOC Station P	54.28	137	P	P	16 00 21.9	+0.3
SVW2	Sparrevohn	54.34	333	IAmb	IAmb	16 00 31.9	
	comp=Z,16nm,1.0s						
MLY	Manley	54.50	338	P	P	16 00 22.8	+0.3
	baz=125,SNR=18						
ITTB	Itaituba	54.62	110	*e*P	P	16 00 22.9	-1.2
MALB	Monte Alegre	54.84	107	*e*P	P	16 00 25.8	+0.1
LVC	Limon Verde	55.08	137	P	P	16 00 28.0	+0.4
LVC				pmax	pmax		
	comp=Z,20nm,1.1s						
LVC	Limon Verde	55.08	137	P	P	16 00 28.0	+0.4
LVC				IAmb	IAmb	16 00 30.7	
	comp=Z,20nm,1.1s						
LVC	Limon Verde	55.08	137	*e*P	P	16 00 27.3	-0.4
VILB	Vilhena	55.20	122	*e*P	P	16 00 27.5	-0.7
TTA	Tatalina	55.38	335	IAmb	IAmb	16 00 39.8	
	comp=Z,33nm,0.9s						
COLD	Coldfoot	55.62	341	P	P	16 00 31.3	+0.8
	baz=127,SNR=13						
RES	Resolute Bay	55.81	4	IAMs_20	IAMs_20	16 22 39.3	
	comp=Z,2µm,19.0s						
IMAR	Indian Mountai	56.08	339	P	P	16 00 33.5	-0.3
NPGB	Novo Progresso	56.20	113	*e*P	P	16 00 33.7	-1.7
TOLK	Toolik Lake Re	56.30	342	P	P	16 00 36.1	+0.7
	baz=128,SNR=25						
TOLK	Toolik Lake Re	56.30	342	IAmb	IAmb	16 00 53.0	
	comp=Z,23nm,0.9s						
PPT	Papeete	56.38	232	LR	LR	16 18 10.7	
	comp=Z,708nm,21.1s,baz=42,slow=29						
PPT2	Papeete2	56.40	232	*e*S	S	16 08 25.8	-0.1
	comp=Z,2µm,25.0s						
PPT2				*e*SS	SS	16 12 25.3	+12
	comp=Z,537nm,26.2s						
PPT2				*e*LR	LR	16 16 55.5	
	comp=Z,5µm,27.5s,baz=42						
GO02	Mina Guanaco	56.51	140	IAmb	IAmb	16 00 39.1	
	comp=Z,19nm,0.9s						
AC02	Maricunga	58.03	141	IAmb	IAmb	16 00 50.9	
	comp=Z,12nm,0.8s						
AC02				IAMs_20	IAMs_20	16 20 11.9	
	comp=Z,936nm,19.0s						
H03N2	Juan Fernandez	58.35	154	T	T	17 03 48.8	
	baz=298,slow=74,SNR=14						
H03N1	Juan Fernandez	58.35	154	T	T	17 03 46.5	
	baz=324,slow=74,SNR=21						
H03N3	Juan Fernandez	58.36	154	T	T	17 03 44.4	
	SNR=19						
LCO	Las Campanas	58.77	144	P	P	16 00 53.8	+0.3
LCO				pmax	pmax		
	comp=Z,38nm,1.3s						
LCO	Las Campanas	58.77	144	P	P	16 00 53.8	+0.3
LCO				IAmb	IAmb	16 00 56.1	
	comp=Z,38nm,1.3s						
AC05	El Transito	58.87	143	P	P	16 00 54.8	+0.7
SFJD	Kangerlussuaq	59.17	22	P	P	16 00 55.5	0.0
	comp=Z,10nm,0.8s,baz=203,slow=3.4,SNR=6.5						
SFJD	Kangerlussuaq	59.17	22	P	P	16 00 55.6	+0.2
SFJD	Kangerlussuaq	59.17	22	P	P	16 00 55.6	+0.2
SFJD				IAmb	IAmb	16 01 12.9	
	comp=Z,15nm,0.8s						
GO04	Tololo Observa	59.61	145	P	P	16 00 59.5	+0.2
A21K	Barrow	59.83	343	P	P	16 00 58.8	-1.2
	baz=122						
A21K	Barrow	59.83	343	IAMs_20	IAMs_20	16 27 59.3	
	comp=Z,761nm,18.0s						
ANM	Nome	59.84	335	IAmb	IAmb	16 01 12.1	
	comp=Z,14nm,1.0s						
CO01	Juntas del Tor	59.84	144	IAmb	IAmb	16 01 04.6	
	comp=Z,14nm,1.0s						
ILULI	Ilulissat	59.98	20	*i* P	P	16 01 00.7	-0.4
	comp=Z,22nm,0.8s						
ILULI	Ilulissat	59.98	20	*i* P	P	16 01 00.7	-0.4
ILULI				pmax	pmax		
	comp=Z,22nm,0.8s						
ILULI	Ilulissat	59.98	20	IAmb	IAmb	16 01 02.4	
	comp=Z,22nm,0.8s						
ILULI	Ilulissat	59.98	20	*i* P	P	16 01 00.7	-0.4
ILULI				IAmb	IAmb	16 01 02.1	
	comp=Z,22nm,0.8s						
TBI	Tubuai	59.98	227	*e*S	S	16 09 12.6	+0.1
	comp=Z,2µm,27.5s						
TBI				*e*LR	LR	16 18 29.5	
	comp=Z,4µm,29.0s,baz=46						
RDOG	Red Dog Mine	60.23	339	P	P	16 01 02.9	+0.1
RDOG				IAmb	IAmb	16 01 12.6	
	comp=Z,23nm,1.0s						
RDOG				IAMs_20	IAMs_20	16 28 05.1	
	comp=Z,665nm,19.0s						
CO02	Combarbal	60.30	146	IAmb	IAmb	16 01 05.9	
	comp=Z,24nm,0.8s						
TULEG	Thule	60.34	9	IAmb	IAmb	16 01 59.7	
	comp=Z,10nm,0.9s						
TULEG	Thule	60.34	9	*i* P	P	16 01 03.5	+0.1
TULEG				IAmb	IAmb	16 01 05.2	
	comp=Z,7.7nm,0.9s						
UPNV	Upernavik	60.38	15	*i* P	P	16 01 03.8	0.0
UPNV				IAmb	IAmb	16 01 05.2	
	comp=Z,34nm,0.8s						
NUUG	Nuugaatsiaq	60.48	17	*i* P	P	16 01 04.4	-0.1
NUUG				IAmb	IAmb	16 01 05.7	
	comp=Z,36nm,0.8s						
PRPB	Parauapebas	60.70	109	*e*P	P	16 01 07.2	+0.4
KULLO	Kullorsuaq	61.16	13	*i* P	P	16 01 08.6	-0.4
	comp=Z,29nm,0.8s						
KULLO	Kullorsuaq	61.16	13	*i* P	P	16 01 08.6	-0.4
KULLO				pmax	pmax		
	comp=Z,29nm,0.8s						
KULLO	Kullorsuaq	61.16	13	*i* P	P	16 01 08.6	-0.4
KULLO				IAmb	IAmb	16 01 10.4	
	comp=Z,29nm,0.8s						
TNA	Tin City	61.19	335	P	P	16 01 09.4	0.0
	baz=108,SNR=8.8						
TNA	Tin City	61.19	335	P	P	16 01 09.8	+0.5
TNA				IAmb	IAmb	16 01 20.4	
	comp=Z,16nm,0.9s						
TNA				IAMs_20	IAMs_20	16 30 32.0	
	comp=Z,601nm,19.0s						
EUNU	Eureka	61.50	4	IAmb	IAmb	16 01 14.2	
	comp=Z,12nm,0.8s						
VA03	San Esteban	61.76	146	P	P	16 01 14.3	+0.6
ZON	Zonda	61.83	144	IAmb	IAmb	16 01 16.5	
	comp=Z,24nm,0.9s						
PP1B	Ponte de Pedra	62.05	123	*e*P	P	16 01 15.8	-0.1
SNDB	Serra Nova Dou	62.08	115	*e*P	P	16 01 15.9	-0.2
AQDB	Aquidauana	63.03	126	*e*P	P	16 01 21.3	-1.1
BO02	Sierra Bellavi	63.23	148	IAmb	IAmb	16 01 24.8	
	comp=Z,21nm,0.8s						
ARAG	Araguaiana, MT	63.52	119	*e*P	P	16 01 25.3	-0.4
ICESG	Greenland Ices	63.76	21	*i* P	P	16 01 26.4	-0.6
ICESG				IAmb	IAmb	16 01 29.5	
	comp=Z,44nm,0.8s						
SMTB	Santa Maria do	63.86	111	*e*P	P	16 01 28.6	+0.5
BI02	San Fabin de	64.48	150	P	P	16 01 32.0	+0.2
BI02				IAmb	IAmb	16 01 33.6	
	comp=Z,28nm,0.9s						
ROSB	Rosrio	64.53	103	*e*P	P	16 01 32.6	+0.2
PEXB	Peixe	64.71	114	*e*P	P	16 01 33.2	-0.4
SUMG	Summit	65.08	18	*i* P	P	16 01 35.3	-0.3
	comp=Z,94nm,0.7s						
SUMG	Summit	65.08	18	*i* P	P	16 01 35.3	-0.3
SUMG				pmax	pmax		
	comp=Z,94nm,0.7s						
SUMG	Summit	65.08	18	P	P	16 01 34.9	-0.7
SUMG	Summit	65.08	18	*i* P	P	16 01 35.3	-0.3
SUMG				IAmb	IAmb	16 01 36.8	
	comp=Z,94nm,0.7s						
CPUP	Villa Florida	65.36	132	P	P	16 01 36.7	-0.9
	comp=Z,12nm,0.9s,baz=326,slow=6.9,SNR=18						
CPUP				LR	LR	16 29 58.4	
	comp=Z,402nm,19.3s,baz=330,slow=36						
CPUP	Villa Florida	65.36	132	IAmb	IAmb	16 01 39.1	
	comp=Z,18nm,1.1s						
CPUP	Villa Florida	65.36	132	*e*P	P	16 01 37.0	-0.5
LC01	Cunco	66.01	151	IAmb	IAmb	16 01 42.4	
	comp=Z,14nm,0.8s						
BDFB	Brasilia	66.64	117	P	P	16 01 46.2	+0.1
	comp=Z,6.5nm,0.7s,baz=290,slow=6.6,SNR=7.9						
BDFB	Brasilia	66.64	117	P	P	16 01 45.6	-0.5
BDFB				pmax	pmax		
	comp=Z,16nm,0.9s						
BDFB				MLR	MLR		
	comp=Z,900nm,20.0s						
BDFB	Brasilia	66.64	117	P	P	16 01 45.6	-0.5
BDFB				IAmb	IAmb	16 01 58.2	
	comp=Z,16nm,0.9s						
BDFB				IAMs_20	IAMs_20	16 33 14.4	
	comp=Z,863nm,20.0s						
TRCB	Terra Rica	66.69	126	*e*P	P	16 01 46.1	-0.2
ITRB	Iturama	66.78	122	*e*P	P	16 01 46.8	-0.1
PCMB	Pacaembu	67.09	125	*e*P	P	16 01 48.3	-0.5
NBPS	Pedro II - PI	67.57	103	*e*P	P	16 01 52.3	+0.2
IPMB	Ipameri, GO	67.64	120	*e*P	P	16 01 52.1	-0.3
SDBA	SAO DESIDERIO	67.80	113	*e*P	P	16 01 54.0	+0.6
ITQB	Itaqui	67.94	135	*e*P	P	16 01 54.2	+0.2
PLCA	Paso Flores	68.09	152	P	P	16 01 55.3	+0.5
	comp=Z,16nm,0.8s,baz=329,slow=8.3,SNR=25						
PLCA				LR	LR	16 25 52.6	
	comp=Z,629nm,18.1s,baz=345,slow=31						
PLCA	Paso Flores	68.09	152	P	P	16 01 55.5	+0.7
PLCA				pmax	pmax		
	comp=Z,16nm,0.9s						
PLCA	Paso Flores	68.09	152	P	P	16 01 55.5	+0.7
PLCA				IAmb	IAmb	16 01 56.4	
	comp=Z,16nm,0.8s						
PLCA	Paso Flores	68.09	152	*e*P	P	16 01 55.9	+1.1
PTGB	Pitanga	68.21	128	*e*P	P	16 01 55.5	-0.4
BB19B	Bebedouro	68.96	123	*e*P	P	16 02 02.6	+2.1
FRTB	Fartura	69.35	125	*e*P	P	16 02 03.0	0.0
JANB	Januaria	69.51	115	*e*P	P	16 02 04.1	0.0
ITAB	Concordia	69.61	130	*e*P	P	16 02 04.7	+0.3
SCO	Scoresbysund	70.02	21	*i* P	P	16 02 06.2	0.0
	comp=Z,10nm,1.0s						
SCO	Scoresbysund	70.02	21	*i* P	P	16 02 06.2	0.0
SCO				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SCO	Scoresbysund	70.02	21	IAmb	IAmb	16 02 20.5	
	comp=Z,19nm,1.2s						
SCO	Scoresbysund	70.02	21	*i* P	P	16 02 06.3	0.0
SCO				IAmb	IAmb	16 02 09.1	
	comp=Z,10nm,1.0s						
DBG	Daneborg	70.47	17	*i* P	P	16 02 08.1	-0.8
DBG				IAmb	IAmb	16 02 12.1	
	comp=Z,7.1nm,0.8s						
BORG	Borgarnes	70.49	27	P	P	16 02 10.6	+1.4
	comp=Z,20nm,0.8s,baz=151,slow=5.6,SNR=3.8						
CPSB	Cacapava Do Su	70.56	133	*e*P	P	16 02 09.8	-0.4
DAG	Danmarks Havn	70.79	14	*i* P	P	16 02 10.1	-0.8
	comp=Z,22nm,0.7s						
DAG	Danmarks Havn	70.79	14	*i* P	P	16 02 10.1	-0.8
DAG				pmax	pmax		
	comp=Z,22nm,0.7s						
DAG	Danmarks Havn	70.79	14	*i* P	P	16 02 10.2	-0.8
DAG				IAmb	IAmb	16 02 12.4	
	comp=Z,22nm,0.7s						
SPB	Sao Paulo	71.14	124	P	P	16 02 13.8	-0.1
SPB				IAmb	IAmb	16 02 15.4	
	comp=Z,28nm,0.8s						
SPB				IAMs_20	IAMs_20	16 36 32.1	
	comp=Z,771nm,21.0s						
SPB	Sao Paulo	71.14	124	*e*P	P	16 02 14.2	+0.4
VAO	Valinhos	71.20	124	*e*P	P	16 02 14.8	+0.5
PLTB	Pedras Altas	71.28	135	*e*P	P	16 02 14.7	+0.2
PET01	Itanhaem-SP	71.63	125	*e*P	P	16 02 17.3	+0.6
CNLB	Canela	71.73	131	*e*P	P	16 02 17.4	0.0
BSCB	Bom Sucesso	71.94	121	*e*P	P	16 02 19.2	+0.4
NBPA	Parau_RN	72.07	103	*e*P	P	16 02 21.2	+1.5
PARB	Paraibuna	72.43	123	*e*P	P	16 02 22.6	+0.9
NBLI	Livramento-PB	72.83	104	*e*P	P	16 02 25.0	+0.7
GDU01	Guandu, BA	73.03	111	*e*P	P	16 02 25.4	+0.1
ESAR	Angra dos Reis	73.21	122	*e*P	P	16 02 27.3	+1.0
RCBR	Riachuelo	73.22	102	IAMs_20	IAMs_20	16 34 23.6	

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      comp=Z,665nm,20.0s
BSFB  Barra de Sao F   74.18 117  eP       P        16 02 31.9 -0.1
NAN01 Guarapari, ES    74.35 116  eP       P        16 02 33.4 +0.4
SPITS Spitsbergen Ar   77.51  10   P       P        16 02 51.3 +1.2
      comp=Z,8.9nm,0.5s,baz=297,slow=0.4,SNR=26
SACV  Santiago Islan   78.07  78   IAMs_20 IAMs_20  16 34 09.4
      comp=Z,730nm,19.0s
PET   Petropavlovsk    78.08 322  eP       P        16 02 55.6 +1.9
PET                               eS       S        16 12 45.0 -0.7
PET                               ePS      PnS      16 13 28.5 -0.4
PET                               ePPS     PPS      16 13 42.8
PET                               eSS      SS       16 17 45.8 -1.2
PET                                pmax    pmax
      comp=Z,100nm,11.0s
SEY   Seymchan         78.28 333⇑iP       P        16 02 56.6 +2.0
PETK  Petropavlovsk-   78.61 322   P       P        16 02 57.6 +0.9
      comp=Z,7.1nm,0.8s,baz=81,slow=8.1,SNR=12
PETK                               LR      LR       16 30 08.9
      comp=Z,193nm,21.7s,baz=55,slow=30
PETK  Petropavlovsk-   78.61 322   P       P        16 02 57.4 +0.8
PETK  Petropavlovsk-   78.61 322   P       P        16 02 57.4 +0.8
PMOZ  Porto Moniz, M   78.77  59  eP       P        16 03 01.6 +3.5
      comp=Z,111nm,2.0s
PMPST Porto Santo, M   79.40  59  eP       P        16 03 06.0 +4.6
      comp=Z,106nm,1.5s
KPL   Plockton         79.40  33  eP       P        16 03 01.6 +0.8
LAWE  Loch Awe, Argy   79.89  34  eP       P        16 03 04.3 +0.8
MA2   Magadan          80.17 330⇓eP       P        16 03 06.5 +1.5
MA2                                pmax    pmax
      comp=Z,25nm,1.9s
DSB   Dublin           80.34  37   IAMs_20 IAMs_20  16 34 04.0
      comp=Z,1µm,22.0s
EAB   Aberfoyle        80.47  34  eP       P        16 03 07.1 +0.5
PGBU  Gleniﬀerbraes    80.52  34  eP       P        16 03 08.2 +1.3
PGBU                               IAmb    IAmb     16 03 12.1
      comp=Z,59nm,1.0s
DRUM  Mains of Drumt   81.17  33  eP       P        16 03 11.5 +1.1
DRUM                               IAmb    IAmb     16 03 12.7
      comp=Z,43nm,0.9s
H11N3 WAKE ISLAND Hy   81.19 288   T       T        17 32 11.0
H11N2 WAKE ISLAND Hy   81.20 288   T       T        17 32 11.0
      baz=343,slow=74,SNR=6.0
H11N1 WAKE ISLAND Hy   81.21 288   T       T        17 32 11.0
      baz=51,slow=74,SNR=6.6
EBL   Broad Law        81.30  34  eP       P        16 03 12.3 +1.2
ESK   Eskdalemuir      81.38  34   P       P        16 03 12.3 +0.8
ESK                                pmax    pmax
      comp=Z,28nm,0.8s
ESK   Eskdalemuir      81.38  34   P       P        16 03 12.3 +0.8
ESK                                IAmb    IAmb     16 03 23.3
      comp=Z,28nm,0.8s
EKA   Eskdalemuir Ar   81.40  34   P       P        16 03 12.6 +0.9
      comp=Z,8.8nm,0.8s,baz=302,slow=4.7,SNR=14
ESY   Stoneypath       81.47  34  eP       P        16 03 13.7 +1.7
H11S1 WAKE ISLAND Hy   81.74 287   T       T        17 33 16.4
      baz=52,slow=75,SNR=7.3
H11S2 WAKE ISLAND Hy   81.74 287   T       T        17 33 09.4
      baz=52,slow=75,SNR=5.0
H11S3 WAKE ISLAND Hy   81.75 287   T       T        17 33 11.1
      baz=52,slow=75,SNR=5.8
TIXI  Tiksi            82.09 345⇑eP       P        16 03 15.6 +0.6
TIXI                               pmax    pmax
      comp=Z,40nm,0.8s
TIXI  Tiksi            82.09 345   P       P        16 03 15.0  0.0
TIXI                               IAMs_20 IAMs_20  16 41 37.8
      comp=Z,666nm,20.0s
MCH1  Michaelchurch    82.71  37  eP       P        16 03 20.2 +1.7
MCH1                               IAmb    IAmb     16 03 20.4
      comp=Z,30nm,0.9s
HPK   Haverah Park     82.74  35  eP       P        16 03 20.8 +2.1
HPK                                IAmb    IAmb     16 03 21.4
      comp=Z,32nm,1.0s
PGAV  Gavieira, Arco   82.84  48  eP       P        16 03 23.5 +3.8
      comp=Z,39nm,1.4s
LBWR  Ladybower, Pea   82.90  36  eP       P        16 03 22.0 +2.4
LBWR                               IAmb    IAmb     16 03 23.2
      comp=Z,50nm,1.0s
PCAB  Cabril           83.10  48  eP       P        16 03 24.3 +3.4
      comp=Z,37nm,1.5s
PMAFR Mafra            83.10  51  eP       P        16 03 23.6 +2.7
      comp=Z,58nm,1.2s
PSBE  So Bento         83.27  51  eP       P        16 03 23.9 +2.1
      comp=Z,42nm,1.1s
PCAS  Casmilo, Conde   83.31  50  eP       P        16 03 24.6 +2.6
      comp=Z,36nm,2.3s
POLO  Lamas de Olo     83.38  49  eP       P        16 03 23.4 +1.0
      comp=Z,13nm,1.3s
PVRL  Vila Real        83.46  49  eP       P        16 03 25.6 +2.8
      comp=Z,35nm,1.7s
PVIS  Viseu            83.53  49  eP       P        16 03 24.3 +1.2
      comp=Z,20nm,1.8s
PMTG  Montargil        83.84  51  eP       P        16 03 25.5 +0.8
      comp=Z,42nm,2.2s
MTE   Manteigas        83.88  49   IAmb    IAmb     16 03 29.8
      comp=Z,20nm,0.9s
MTE                                IAMs_20 IAMs_20  16 38 06.2
      comp=Z,980nm,22.0s
MTE   Manteigas        83.88  49  eP       P        16 03 25.8 +0.8
      comp=Z,31nm,2.2s
PNCL  Nicolau / Gran   83.93  52  eP       P        16 03 27.6 +2.4
      comp=Z,31nm,1.6s
PBRG  Braganca         83.97  48  eP       P        16 03 29.0 +3.6
      comp=Z,16nm,2.2s
PTEO  Sao Teotonio     83.98  52  eP       P        16 03 26.5 +1.1
      comp=Z,55nm,1.8s
MVO   Moncorvo         83.99  49  eP       P        16 03 27.1 +1.6
      comp=Z,26nm,1.0s
PFVI  Vila Bisbo       84.04  53  eP       P        16 03 27.3 +1.5
      comp=Z,43nm,1.2s
MORF  Marmelete        84.11  53  eP       P        16 03 26.0 -0.3
MORF                               AMS     AMS      16 41 08.9
      comp=Z,1µm,18.7s
MORF  Marmelete        84.11  53  eP       P        16 03 25.9 -0.3
MORF  Marmelete        84.11  53  eP       P        16 03 29.3 +3.1
      comp=Z,36nm,1.6s
PCBR  Castelo Branco   84.12  50  eP       P        16 03 29.5 +3.4
      comp=Z,24nm,2.0s
EVO   Evora            84.17  51  eP       P        16 03 29.8 +3.4
      comp=Z,42nm,1.8s
MESJ  Messejana        84.25  52  eP       P        16 03 26.6 -0.2
MESJ                               AMS     AMS      16 41 58.7
      comp=Z,629nm,18.5s
MESJ  Messejana        84.25  52  eP       P        16 03 26.6 -0.2
MESJ  Messejana        84.25  52  eP       P        16 03 30.3 +3.5
      comp=Z,31nm,1.5s
PMRV  Marv??o          84.33  50  eP       P        16 03 27.8 +0.6
      comp=Z,40nm,1.8s
PESTR Estremoz         84.37  51   P       P        16 03 27.2 -0.2
PESTR                              IAmb    IAmb     16 03 32.4
      comp=Z,36nm,1.7s
PESTR                              IAMs_20 IAMs_20  16 38 51.3
      comp=Z,460nm,20.0s
PESTR Estremoz         84.37  51  eP       P        16 03 30.4 +2.9
      comp=Z,33nm,1.3s
PBEJ  Beja             84.45  52  eP       P        16 03 32.0 +4.1
      comp=Z,16nm,1.5s
PCVE  Castro Verde     84.46  52  eP       P        16 03 31.4 +3.5
      comp=Z,45nm,1.6s
WACR  West Acre        84.47  36  eP       P        16 03 29.3 +1.7
WACR                               IAmb    IAmb     16 03 31.1
      comp=Z,94nm,0.9s
PBDV  Barranco-do-Ve   84.67  53  eP       P        16 03 33.2 +4.2
      comp=Z,44nm,1.6s
PVAQ  Vaqueiros        84.78  52   IAmb    IAmb     16 03 42.3
      comp=Z,27nm,1.1s
PVAQ                               IAMs_20 IAMs_20  16 40 52.1
      comp=Z,728nm,20.0s
PVAQ  Vaqueiros        84.78  52  eP       P        16 03 31.9 +2.4
      comp=Z,38nm,1.3s
PBAR  Barrancos        85.02  51  eP       P        16 03 31.6 +0.9
      comp=Z,28nm,1.4s
ARCES ARCESS Array B   85.03  15   P       P        16 03 31.8 +1.6
      comp=Z,8.5nm,0.7s,baz=307,slow=4.4,SNR=5.7
ARCES                              LR      LR       16 42 16.0
      comp=Z,1µm,19.3s,baz=310,slow=36
NB2   NORSAR Subarra   85.62  26   P       P        16 03 35.6 +2.3
      comp=Z,15nm,1.1s,baz=302,slow=5.3
NB2   NORSAR Subarra   85.62  26   P       P        16 03 35.6 +2.3
      baz=302,slow=5.3
NOA   NORSAR Array B   85.62  26   P       P        16 03 35.5 +2.3
      comp=Z,4.6nm,0.8s,baz=302,slow=4.9,SNR=24
NOA                                LR      LR       16 41 50.2
      comp=Z,413nm,19.3s,baz=315,slow=36
KONO  Kongsberg        85.67  27   P       P        16 03 35.8 +2.3
KONO                               pmax    pmax
      comp=Z,37nm,1.1s
KONO  Kongsberg        85.67  27   P       P        16 03 35.8 +2.3
PAB   San Pablo        86.48  49   P       P        16 03 38.6 +0.6
PAB                                pmax    pmax
      comp=Z,28nm,1.2s
PAB                                MLR     MLR
      comp=Z,900nm,21.0s
PAB   San Pablo        86.48  49   P       P        16 03 38.6 +0.6
PAB                                IAmb    IAmb     16 03 43.6
      comp=Z,28nm,1.1s
PAB   San Pablo        86.48  49   IAMs_20 IAMs_20  16 39 56.0
      comp=Z,869nm,21.0s
HFS   Hagfors          87.14  26   P       P        16 03 41.7 +0.9
      comp=Z,2.6nm,0.8s,baz=270,slow=16,SNR=2.8
DOU   Dourbes          87.86  37  dx       x        16 03 51.7
BMRD  Maredsous        87.86  37  dPcP     P        16 03 45.1 +0.7
BMRD                              dx       x        16 03 53.3
YAK   Yakutsk          87.90 337  eP       P        16 03 44.4 +0.1
YAK                               e                 16 03 52.9
YAK                               e*PP     pwP      16 03 58.8 +0.7
YAK                               eS       SKSac    16 14 07.5 -2.8
YAK                               eSS      SS       16 20 13.8 +2.1
YAK                                pmax    pmax
      comp=Z,34nm,1.4s
YAK                                pmax    pmax
      comp=N,3.0nm,1.5s
YAK                                pmax    pmax
      comp=E,3.0nm,1.3s
YAK                                pmax    pmax
      comp=Z,137nm,5.1s
YAK                                pmax    pmax
      comp=N,161nm,5.2s
YAK                                pmax    pmax
      comp=E,115nm,4.0s
YAK                                smax    smax
      comp=E,71nm,3.5s
YAK                                smax    smax
      comp=N,73nm,4.2s
YAK   Yakutsk          87.90 337   P       P        16 03 45.0 +0.8
YAK                                IAMs_20 IAMs_20  16 44 23.7
      comp=Z,380nm,20.0s
BGES  Gesves           88.00  37  dPcP     P        16 03 45.2 +0.2
BGES                              dx       x        16 03 49.1
BCLA  Clavier          88.11  37  dP       P        16 03 45.2 -0.4
BCLA                              dx       x        16 03 54.7
MEM   Membach          88.41  36  dPcP     P        16 03 47.7 +0.7
MEM                               dx       x        16 03 56.7
BTNL  Ternell          88.49  36  dPcP     P        16 03 47.8 +0.4
BTNL                              dx       x        16 03 57.0
MDT   Midelt           88.81  56   P       P        16 03 50.3 +0.9
      comp=Z,7.1nm,0.9s,baz=356,slow=3.2,SNR=8.1
WLF   Walferdange      88.95  37  dPcP     PcP      16 03 50.6 -0.5
WLF                               dx       x        16 03 57.2
WLF   Walferdange      88.95  37   IAmb    IAmb     16 04 00.3
      comp=Z,14nm,0.8s
BSEG  Bad Segeberg     89.02  32  eL       L        16 41 51.5
      comp=Z,735nm,22.0s
KASTN Kahler Asten     89.44  35  eL       L        16 43 52.4
      comp=Z,2µm,18.7s
CART  Cartagena        89.66  50   IAMs_20 IAMs_20  16 42 07.2
      comp=Z,611nm,20.0s
YSS   Yuzh-Sakhalins   89.85 320  eP       P        16 03 54.0 +0.2
YSS                               eS       S        16 14 38.5 -5.6
YSS                               ePS      PS       16 16 01.4 +8.2
YSS                                pmax    pmax
      comp=Z,10.0nm,0.9s
YSS                                pmax    pmax
      comp=Z,200nm,7.2s
YSS                                MLR     MLR
      comp=Z,300nm,18.0s
YSS   Yuzh-Sakhalins   89.85 320           P        16 03 53.9 +0.2
YSS                                IAmb    IAmb     16 04 05.9
      comp=Z,11nm,0.9s
TNS   Taunus Mts       89.96  36  eL       L        16 42 55.7
      comp=Z,1µm,21.3s
BFO   Black Forest     90.86  37  eL       L        16 43 47.3
      comp=Z,2µm,20.6s
FINES FINESS Array B   90.95  21   P       P        16 03 59.9 +1.2
      comp=Z,3.5nm,0.9s,baz=24,slow=5.2,SNR=5.3
FINES                              LR      LR       16 45 15.2
      comp=Z,1µm,18.3s,baz=314,slow=36
FINES FINESS Array B   90.95  21  i P      P        16 04 01.3 +2.7
FINES                              pmax    pmax
      comp=Z,4.0nm,0.9s
NRIK  Noril'sk         91.16 355   P       P        16 04 00.1 +0.6
      comp=Z,5.6nm,0.8s,baz=31,slow=2.9,SNR=11
NRIK                               LR      LR       16 47 20.2
      comp=Z,563nm,18.5s,baz=16,slow=37
NRIK  Noril'sk         91.16 355deP       P        16 04 00.3 +0.8
NRIK                               pmax    pmax
      comp=Z,10.0nm,1.0s
NRIK  Noril'sk         91.16 355   IAmb    IAmb     16 04 09.8
      comp=Z,9.6nm,0.8s
NRIK                               IAMs_20 IAMs_20  16 52 01.9
      comp=Z,699nm,21.0s
GRF   Grafenberg Arr   91.76  35  eP       P        16 04 04.9 +2.2
      comp=Z,6.1nm,0.8s,baz=294,slow=5.1
GRF                               eL       L        16 44 03.2
      comp=Z,1µm,21.1s
GRFO  Grafenberg       91.76  35   IAMs_20 IAMs_20  16 44 04.1
      comp=Z,375nm,19.0s
CLL   Collm            91.82  33  epP      pP       16 04 14.0 +3.0
CLL                               ePS      PS       16 16 13.0 -1.9
CLL                               ePPS     PPS      16 16 48.0
CLL                               eSS      SS       16 21 00.0 -9.1
CLL                               eSSS     SSS      16 24 48.0
CLL                               eSSSS             16 28 06.0
CLL                                Lm      MLR      16 46 00.0
      comp=N,500nm,18.0s
CLL                                Lm      MLR      16 46 00.0
      comp=E,900nm,21.3s
CLL   Collm            91.82  33  eL       L        16 42 18.9
      comp=E,890nm,21.4s
DAVOX Davos/Dischmat   92.56  38   P       P        16 04 08.7 +2.0
      comp=E,0.6nm,0.4s,baz=42,slow=6.4,SNR=3.4
FUR   Furstenfeldbru   92.62  37  eL       L        16 44 05.5
      comp=E,828nm,21.1s
FETA  Feichten         92.92  38  eP       P        16 04 10.5 +2.2
      comp=E,5.9nm,1.6s
FETA                              eP       sP       16 04 18.4 -0.9
      comp=E,6.4nm,1.1s
MOTA  Moosalm          92.96  37  eP       P        16 04 10.3 +1.8
      comp=E,3.9nm,0.8s
WET   Wettzell         92.97  35  eL       L        16 44 49.9
      comp=E,1µm,20.8s
SQTA  Sankt Quirin     93.09  37  eP       P        16 04 11.2 +2.2
      comp=E,8.0nm,1.2s
WATA  Walderalm        93.24  37  eP       P        16 04 10.8 +1.1
      comp=E,11nm,1.3s
WATA                              eP       sP       16 04 20.3 -0.5
      comp=E,17nm,1.3s
WTTA  Wattenberg       93.31  37  eP       P        16 04 12.5 +2.4
      comp=E,14nm,1.7s
WTTA                              eP       sP       16 04 20.8 -0.3
      comp=E,16nm,1.3s
GEC2  GERESS Array S   93.59  35  eL       L        16 45 17.9
      comp=E,1µm,19.8s
GERES GERESS Array B   93.59  35   P       P        16 04 11.7 +0.4
      comp=E,0.3nm,0.5s,baz=214,slow=40,SNR=3.7
GERES                              LR      LR       16 45 38.9
      comp=E,1µm,20.2s,baz=304,slow=35
GERES GERESS Array B   93.59  35   P       P        16 04 10.7 -0.5
GERES GERESS Array B   93.59  35   P       P        16 04 10.7 -0.5
ABTA  Abfaltersbach    94.10  37  eP       P        16 04 15.3 +1.7
      comp=E,13nm,1.5s
ABTA                              eP       sP       16 04 24.2 -0.4
      comp=E,15nm,1.0s
VLC   Villacollemand   94.24  40   IAMs_20 IAMs_20  16 45 53.8
      comp=Z,767nm,21.0s
KBA   Koelnbreinsper   94.39  37  eP       P        16 04 17.1 +2.1
      comp=Z,12nm,1.0s
MOA   Molln            94.46  36  eP       P        16 04 16.7 +1.5
      comp=Z,12nm,1.0s
MYKA  Terra Mystica    94.81  37  eP       P        16 04 18.0 +1.1
      comp=Z,9.1nm,1.5s
MYKA                              eP       pP       16 04 26.3 +1.3
      comp=Z,8.3nm,1.0s
KLR   Kul'dur          94.84 326⇑eP       P        16 04 17.4 +0.5
KLR                                pmax    pmax
      comp=Z,10.0nm,2.9s
ROBS  Robic            94.95  37  eP       P        16 04 18.2 +0.8
DZM   Mont Dzumac      94.97 248  ePS      PS       16 16 54.4 +3.1
      comp=Z,289nm,28.9s
DZM   Mont Dzumac      94.97 248  eLQ      LQ       16 31 06.9
      comp=Z,679nm,31.1s
DZM                               eLR      LR       16 35 09.2
      comp=Z,3µm,30.6s
OSSC  Osservatorio P   95.10  41   IAMs_20 IAMs_20  16 46 58.7
      comp=Z,812nm,20.0s
CONA  Conrad Observa   95.29  35  eP       P        16 04 19.3 +0.2
      comp=Z,3.0nm,1.0s
OBKA  Obir             95.39  37  eP       P        16 04 20.3 +0.7
      comp=Z,17nm,1.2s
OBKA                              eP       sP       16 04 30.0 -0.6
      comp=Z,17nm,1.0s
SOKA  Soboth           95.57  36  eP       P        16 04 21.3 +1.0
      comp=Z,11nm,1.3s
SOKA                              eP       P        16 04 21.5 +1.2
SOKA                              eP       sP       16 04 30.0 -1.4
      comp=Z,20nm,0.9s
PERS  Pernice          95.64  36  epP      pP       16 04 30.0 +1.2
NACGM Naroch           95.90  25  i P      P        16 04 31.1  +10
NACGM                             i P      P        16 04 31.1  +10
NACGM                             i P      P        16 04 31.1  +10
NACGM                             i PP     PP       16 08 09.7 -3.3
NACGM                             i PPP    PPP      16 10 51.9
NACGM                             i S      SKSac    16 15 05.3  +10
NACGM                             i PS     PS       16 17 27.4  +28
NACGM                             i SS     SS       16 22 30.3  +23
NACGM                             i SSS    SSS      16 25 38.1
NACGM                             i LQ     LQ       16 41 53.4
NACGM                             i LR     LR       16 49 50.6
VSL   Villasalto       96.01  45   IAMs_20 IAMs_20  16 47 15.1
      comp=Z,805nm,20.0s
MNK   Minsk            96.63  25  i P      P        16 04 22.7 -2.2
      comp=E,1.0nm,0.9s
MNK                               i P      P        16 04 22.7 -2.2
      comp=N,22nm,1.5s
MNK                               i P      P        16 04 22.7 -2.2
      comp=Z,5.0nm,0.8s
MNK                               i PP     PP       16 08 15.4 -3.4
MNK                               i PPP    PPP      16 10 20.4
MNK                               i S      SKSac    16 14 56.5 -3.0
MNK                               i SS     SS       16 22 16.3 -0.8
MNK                               i SSS    SSS      16 26 01.4
MNK                               i LQ     LQ       16 42 02.8
MNK                               i LR     LR       16 47 58.9
MNK                               i LRM    MLR      16 49 02.8
      comp=E,44nm,18.5s
MNK                               i LRM    MLR      16 49 06.0
      comp=Z,494nm,19.8s
MNK                               i LRM    MLR      16 49 19.4
      comp=N,476nm,20.4s
KEST  Kesra            97.90  48   P       P        16 04 31.2 +0.1
      comp=N,5.7nm,0.8s,baz=240,slow=3.9,SNR=6.5
KEST                               LR      LR       16 49 07.1
      comp=N,536nm,18.8s,baz=254,slow=36
MJAR  Matsushiro Arr   97.96 313   LR      LR       16 38 49.4
      comp=N,101nm,20.7s,baz=105,slow=29
MJB9  Matsu-Tunnel     97.96 313   IAMs_20 IAMs_20  16 48 00.0
      comp=Z,484nm,20.0s
DBIC  Dimbokro         98.15  80   P       Pdif     16 04 33.1 +0.6
      comp=Z,4.1nm,0.9s,baz=299,slow=7.4,SNR=4.7
DBIC                               LR      LR       16 48 19.0
      comp=Z,416nm,19.5s,baz=270,slow=35
DBIC  Dimbokro         98.15  80   IAmb    IAmb     16 04 42.4
      comp=Z,10nm,0.9s
UZH   Uzhgorod         98.20  32  eP       Pdif     16 04 33.6 +1.5
UZH                               i                 16 04 46.7
PAOL  Paolisi          98.53  41   IAMs_20 IAMs_20  16 52 03.2
      comp=Z,699nm,19.0s
DIVS  Divibare         99.91  36   IAMs_20 IAMs_20  16 46 53.6
      comp=Z,764nm,22.0s
HIA   Hailar          100.70 332   IAMs_20 IAMs_20  16 56 00.7
      comp=Z,402nm,18.0s
TAM   Tamanrasset     101.09  61   IAMs_20 IAMs_20  16 47 31.0
      comp=Z,675nm,22.0s
TOC7  Torodi Ar. Sit  101.75  72   IAMs_20 IAMs_20  16 55 05.7
      comp=Z,717nm,20.0s
TOB5  Torodi Ar. Sit  101.76  72   IAMs_20 IAMs_20  16 55 35.9
      comp=Z,734nm,20.0s
TOB1  Torodi Ar. Sit  101.77  72   IAMs_20 IAMs_20  16 55 06.1
      comp=Z,686nm,20.0s
TOB4  Torodi Ar. Sit  101.77  72   IAMs_20 IAMs_20  16 55 17.1
      comp=Z,717nm,20.0s
TOA0  Torodi Ar. Sit  101.78  72   IAMs_20 IAMs_20  16 55 16.3
      comp=Z,695nm,20.0s
TOA3  Torodi Ar. Sit  101.78  72   IAMs_20 IAMs_20  16 55 16.3
      comp=Z,688nm,20.0s
TOA2  Torodi Ar. Sit  101.78  72   IAMs_20 IAMs_20  16 55 46.4
      comp=Z,727nm,20.0s
TOB3  Torodi Ar. Sit  101.79  72   IAMs_20 IAMs_20  16 55 36.6
      comp=Z,702nm,20.0s
TOC4  Torodi Ar. Sit  101.79  72   IAMs_20 IAMs_20  16 55 16.6
      comp=Z,724nm,20.0s
TOC2  Torodi Ar. Sit  101.80  72   IAMs_20 IAMs_20  16 55 46.2
      comp=Z,713nm,20.0s
TOC3  Torodi Ar. Sit  101.80  72   IAMs_20 IAMs_20  16 55 16.4
      comp=Z,692nm,20.0s
JMN   Monobe          102.45 312   IAMs_20 IAMs_20  16 53 54.1
      comp=Z,709nm,22.0s
VTS   Vitosha         102.67  36   IAMs_20 IAMs_20  16 48 51.7
      comp=Z,745nm,21.0s
TLY   Talaya          104.82 341   IAMs_20 IAMs_20  16 59 24.7
      comp=Z,384nm,20.0s
BELG  Belogornoye     105.05  16   PP      PP       16 09 17.9 -4.2
      comp=Z,14nm,1.0s,baz=355,slow=2.1,SNR=5.7
ZAA0  Zalesovo Array  106.55 353   IAMs_20 IAMs_20  17 01 40.0
      comp=Z,524nm,20.0s
ULN   Ulaanbaatar     106.98 337   IAMs_20 IAMs_20  16 59 08.4
      comp=Z,517nm,19.0s
SONM  Songino Array   107.24 338   PP      PP       16 09 44.2 +5.5
      comp=Z,0.2nm,0.4s,baz=34,slow=43,SNR=2.0
BJT   Baijiatuau      109.22 327   IAMs_20 IAMs_20  17 02 10.3
      comp=Z,423nm,20.0s
SOC   Sochi           109.99  26  eP       Pdif     16 05 23.4 -1.2
SOC                               e                 16 10 08.4
SOC                               ePPP     PPP      16 12 18.7
SOC                               eSS      SS       16 25 19.2 -2.0
SOC                                MLR     MLR
      comp=Z,1µm,20.0s
KURBB Kurchatov Arra  110.36 357   PP      PP       16 09 57.7 -3.2
      comp=Z,0.7nm,0.8s,baz=4.4,slow=6.4,SNR=5.7
HHC   Hu-ho-hao-te    110.84 330  ePKP     PKiKP    16 09 28.4 +0.1
KIV   Kislovodsk      110.85  24  i PKIKP  PKiKP    16 09 27.7 -0.5
KIV                                pmax    pmax
      comp=Z,15nm,1.1s
KIV                                MLR     MLR
      comp=Z,2µm,21.0s
KIV   Kislovodsk      110.85  24   IAMs_20 IAMs_20  16 54 48.7
      comp=Z,586nm,20.0s
TOKA  Tokat           111.17  30   IAMs_20 IAMs_20  16 55 18.4
      comp=Z,679nm,22.0s
SNAA  Sanae           112.21 161   IAMs_20 IAMs_20  16 45 20.9
      comp=Z,374nm,21.0s
NJ2   Nanjing         113.40 319  eP       PKiKP    16 09 38.7 +5.4
NJ2                                pmax    pmax
      comp=Z,5.0nm,0.6s
CSS   Mathiatis       113.64  36   IAMs_20 IAMs_20  16 57 25.1
      comp=Z,561nm,20.0s
MKAR  Makanchi Array  113.88 354   PKKPbc  PKKPbc   16 20 22.1 +4.9
      comp=Z,1.7nm,1.0s,baz=204,slow=5.3,SNR=8.0
MKAR  Makanchi Array  113.88 354           PKKPbc   16 20 21.4 +4.2
WMQ   Urumqi          116.04 349  ePKP     PKPdf    16 09 38.7 +0.5
WMQ                                AMB     AMB
      comp=Z,250nm,5.7s
WMQ                                LR      LR
      comp=Z,910nm,17.1s
WMQ                                LR      LR
      comp=Z,1µm,18.5s
WMQ                                LR      LR
      comp=Z,600nm,18.9s
GTA   Gaotai          116.92 338  ePKP     PKiKP    16 09 41.4 +1.3
GTA                                LR      LR
      comp=Z,160nm,19.6s
GTA                                LR      LR
      comp=Z,230nm,21.1s
GTA                                LR      LR
      comp=Z,280nm,21.1s
SSLB  Suanglung       117.44 311   IAMs_20 IAMs_20  17 06 52.7
      comp=Z,354nm,20.0s
XAN   Xi'an           117.51 328   PKP     PKiKP    16 09 53.9  +13
XAN                                pPKP    sPKPdf   16 10 01.4 +8.8
XAN                                LR      LR
      comp=N,600nm,16.3s
XAN                                LR      LR
      comp=E,270nm,18.4s
XAN                                LR      LR
      comp=Z,580nm,18.4s
STKA  Stephens Creek  118.68 244   PKP     PKPdf    16 09 41.9 -1.4
      comp=Z,3.0nm,0.9s,baz=348,slow=4.2,SNR=3.8
STKA                               PKKPbc  PKKPab   16 20 08.8 +7.5
      comp=Z,3.8nm,0.8s,baz=207,slow=3.5,SNR=6.0
STKA  Stephens Creek  118.68 244   PKIKP   PKPdf    16 09 42.4 -0.9
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STKA	Stephens Creek	118.68	244		PKPdf	16 09 42.4	-0.9
KNMB	Chin-men Tao	118.80	313	IAMs_20	IAMs_20	17 11 10.8	
	comp=Z,252nm,19.0s						
GEYT	Alibeck	121.20	15	PKP	PKPdf	16 09 47.8	-0.5
	comp=Z,3.9nm,0.8s,baz=79,slow=3.9,SNR=5.8						
GEYT	Alibeck	121.20	15		PKPdf	16 09 48.2	0.0
WRAB	Tennant Creek	123.52	258	⇓*i*PKIKP	PKPdf	16 09 52.8	-0.2
WRAB	Tennant Creek	123.52	258		PKPdf	16 09 52.1	-0.9
WRA	Warramunga Arr	123.53	258	PKP	PKPdf	16 09 51.6	-1.5
	comp=Z,2.7nm,0.6s,baz=80,slow=2.4,SNR=42						
WRA				PKKPbc	PKKPbc	16 19 43.0	+1.9
	comp=Z,0.6nm,0.8s,baz=259,slow=2.6,SNR=6.8						
WRA	Warramunga Arr	123.53	258	PKIKP	PKPdf	16 09 51.9	-1.1
WRA	Warramunga Arr	123.53	258		PKPdf	16 09 51.9	-1.1
ASAR	Alice Springs	124.51	254	PKP	PKPdf	16 09 54.0	-0.9
	comp=Z,2.5nm,0.7s,baz=81,slow=2.5,SNR=27						
ASAR				PKKPbc	PKKPbc	16 19 40.5	+3.1
	comp=Z,0.4nm,0.8s,baz=273,slow=3.4,SNR=4.7						
ASAR	Alice Springs	124.51	254	PKIKP	PKPdf	16 09 53.8	-1.1
ASAR	Alice Springs	124.51	254	PKPdf	PKPdf	16 09 53.8	-1.1
GYA	Guiyang	124.68	324	*e*PKP	PKPdf	16 09 55.1	-0.2
SYO	Syowa Base	125.86	165	⇓*e*Pdiff	Pdif	16 06 33.2	-1.3
KMI	Kunming	127.86	327	IAMs_20	IAMs_20	17 15 05.8	
	comp=Z,314nm,19.0s						
QIZ	Qiongzhong	128.29	315	PKP	PKPdf	16 10 00.3	-1.9
QIZ				SS	SS	16 29 17.2	-1.6
QIZ				LR	LR		
	comp=Z,260nm,18.7s						
QIZ				LR	LR		
	comp=Z,200nm,22.9s						
QIZ				LR	LR		
	comp=Z,230nm,17.2s						
QIZ	Qiongzhong	128.29	315	IAMs_20	IAMs_20	17 16 06.5	
	comp=Z,244nm,20.0s						
LSA	Lhasa	128.66	341	IAMs_20	IAMs_20	17 16 45.8	
	comp=Z,353nm,20.0s						
RAYN	Ar Rayn	129.17	35	IAMs_20	IAMs_20	17 06 18.1	
	comp=Z,413nm,22.0s						
SLVN	Son La	130.25	323	IAMs_20	IAMs_20	17 16 29.3	
	comp=Z,380nm,19.0s						
UOSS	Minazif	132.76	22	IAMs_20	IAMs_20	17 12 37.7	
	comp=Z,307nm,21.0s						
BOSA	Boshof	134.63	112	PKP	PKPdf	16 10 14.2	+0.2
	comp=Z,6.5nm,0.9s,baz=88,slow=0.5,SNR=8.5						
BOSA	Boshof	134.63	112	PKIKP	PKiKP	16 10 15.1	-0.4
BOSA	Boshof	134.63	112		PKiKP	16 10 15.1	-0.4
CM34	Chiang Mai Arr	134.88	326	P	PKiKP	16 10 16.0	-0.1
CM33	Chiang Mai Arr	135.02	326	P	PKiKP	16 10 16.0	-0.4
CMMT	Chiang Mai	135.02	326	P	PKPdf	16 10 15.0	0.0
CHTO	Chiang Mai	135.03	326	PKIKP	PKPdf	16 10 15.4	+0.5
CHTO				MLR	MLR		
	comp=Z,300nm,18.0s						
CHTO	Chiang Mai	135.03	326		PKPdf	16 10 15.4	+0.5
CHTO	Chiang Mai	135.03	326	IAMs_20	IAMs_20	17 20 28.1	
	comp=Z,286nm,18.0s						
CM35	Chiang Mai Arr	135.03	325	P	PKiKP	16 10 16.0	-0.4
WSAR	Wadi Sarin	135.17	20	PKP	PKPdf	16 10 15.6	+0.5
	comp=Z,3.6nm,0.8s,baz=37,slow=2.0,SNR=4.4						
CM36	Chiang Mai Arr	135.19	325	P	PKiKP	16 10 18.0	+1.2
CM32	Chiang Mai Arr	135.21	326	P	PKiKP	16 10 17.0	+0.2
FURI	Furi	135.28	54	IAMs_20	IAMs_20	17 12 56.2	
	comp=Z,432nm,20.0s						
CM09	Chiang Mai Arr	135.30	325	P	PKiKP	16 10 18.8	+1.8
CMAR	Chiang Mai Arr	135.32	325	PKP	PKiKP	16 10 16.4	-0.7
	comp=Z,2.2nm,0.8s,baz=348,slow=2.3,SNR=18						
CMAR	Chiang Mai Arr	135.32	325	PKIKP	PKPdf	16 10 16.2	+0.7
CMAR	Chiang Mai Arr	135.32	325		PKPdf	16 10 16.2	+0.7
CM15	Chiang Mai Arr	135.33	325	P	PKiKP	16 10 18.2	+1.1
CM02	Chiang Mai Arr	135.34	325	P	PKiKP	16 10 18.2	+1.2
CM01	Chiang Mai Arr	135.34	325	P	PKiKP	16 10 18.0	+0.9
CM04	Chiang Mai Arr	135.35	325	P	PKiKP	16 10 18.2	+1.2
CM05	Chiang Mai Arr	135.36	325	P	PKiKP	16 10 18.0	+0.9
CM13	Chiang Mai Arr	135.37	325	P	PKiKP	16 10 17.9	+0.8
DAMY	Dhamar	135.46	43	IAMs_20	IAMs_20	17 11 36.7	
	comp=Z,354nm,21.0s						
ATD	Arta Tunnel	136.60	48	IAMs_20	IAMs_20	17 14 25.5	
	comp=Z,324nm,20.0s						
KSM	Kuching	138.94	296	IAMs_20	IAMs_20	17 19 14.9	
	comp=Z,194nm,18.0s						
SOCY	Socotra	143.02	34	IAMs_20	IAMs_20	17 20 35.8	
	comp=Z,355nm,20.0s						
MYKOM	Kota Tinggi	144.09	302	IAMs_20	IAMs_20	17 29 34.3	
	comp=Z,344nm,20.0s						
LEM	Lembang	145.19	286	PKPbc	PKPdf	16 10 34.2	+0.6
	comp=Z,19nm,0.9s,baz=14,slow=20,SNR=2.8						
PSI	Prapat	147.23	309	PKPbc	PKPbc	16 10 38.5	-0.9
	comp=Z,22nm,1.0s,baz=359,slow=2.1,SNR=13						
GSI	Gunungsitoli	149.23	309		PKPbc	16 10 44.1	-0.3
PALK	Pallekele	152.88	346	PKPbc	PKiKP	16 10 53.5	+0.2
	comp=Z,5.5nm,0.9s,baz=30,slow=7.2,SNR=2.1						

NEIC ***12*** *16:14:08.7±1.8, 32°.23N±0°.02×115°.23W±0°.03, h20^{km}±4^{km}, Error ellipse: s-maj=3.4km s-min=2.9km az=69.0*
ANF ***12*** *16:14:08.1±0.7, 32°.27N×115°.22W, h25^{km}±4^{km}, ML2.8/10, Error ellipse: s-maj=5.7km s-min=3.9km az=13.0*
PAS ***12*** *16:14:08.9±2.5, 32°.21N±0°.03×115°.23W±0°.02, h21^{km}±6^{km}, ML3.1/51, ML3.0(ECX), ML2.9/64(NEIC), Error ellipse: s-maj=4.0km s-min=2.6km az=152.0*
SCEDC ***12*** *16:14:08.9, 32°.21N×115°.23W, h21^{km}*
ECX ***12*** *16:14:09.4±0.7, 32°.18N×115°.25W, h10^{km}±3^{km}, MD3.1, ML3.3*
MEX ***12*** *16:14:10.1±0.3, 32°.22N×115°.12W, h15^{km}, MD3.4*
ISC 12 16:14:08.0±0.9, **32°.19N**±0°.02×**115°.23W**±0°.02, **h20**^{km}±1^{km}, **n88,** σ1^{s}.**02**/120, **3C-4D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUVIX	Guadalupe Vict	0.17	48		Pb	16 14 13.3	-0.3
GUVIX					Sb	16 14 17.0	-0.6
GUVIX	Guadalupe Vict	0.17	48	⇑*e*P	Pb	16 14 13.3	-0.3
MBIG	Mexicali	0.22	7	*i* P	Pb	16 14 14.2	+0.3
MBIG				*e*S	Sb	16 14 17.4	-0.5
MBIG	Mexicali	0.22	7	*e*P	Pb	16 14 14.1	+0.3
CPBX	Cerro Prieto	0.24	345		Pb	16 14 13.9	-0.1
CPBX				Sg	Sb	16 14 18.5	+0.3
CPBX	Cerro Prieto	0.24	345	*e*P	Pb	16 14 13.9	-0.1
CPBX				⇓*e*		16 14 20.3	
CPBX				IAML		16 14 20.3	
	comp=N,13µm,0.2s						
CPBX				IAML		16 14 23.0	
	comp=E,14µm,0.2s						
CTLX	Tlaxcala, TLX	0.29	14	*e*P	Pb	16 14 15.1	+0.5
CTLX				*i* S	Sb	16 14 21.0	+1.8
POT2	Potabilizadora	0.46	343	*e*P	Pb	16 14 18.1	+0.8
UABX	UABC, Campus M	0.48	338	Pg	Pb	16 14 18.0	+0.3
UABX				Sg	Sb	16 14 23.6	-0.7
EMSC	East Mesa	0.59	20		Pb	16 14 20.0	+0.3
EMSC					Sb	16 14 28.6	+0.9
EMSC	East Mesa	0.59	20	*e*P	Pb	16 14 19.9	+0.3
SGL	Mount Signal	0.62	318		Pb	16 14 20.4	+0.1
SGL					Sb	16 14 28.8	+0.2
SGL	Mount Signal	0.62	318	⇓*i*P	Pb	16 14 20.4	+0.1
SGL				*i* S	Sb	16 14 29.1	+0.5
ESJX	Sierra Juarez	0.64	254		Pb	16 14 20.8	+0.2
ESJX				IAML		16 14 30.4	
	comp=N,954nm,0.1s						
ESJX				IAML		16 14 30.5	
	comp=E,1µm,0.3s						
DREC	Desert Rsrch C	0.64	343		Pb	16 14 21.1	+0.5
COA	Coachella	0.68	8		Pb	16 14 21.2	0.0
COA					Sb	16 14 30.6	+0.4
COA	Coachella	0.68	8	*e*P	Pb	16 14 21.3	0.0
YMD	Yuma Desert	0.69	58		Pb	16 14 21.3	0.0
SNR	Schaffner Ranc	0.69	345		Pb	16 14 21.9	+0.4
WESC	Westside Schoo	0.71	323		Pb	16 14 22.1	+0.4
WESC	Westside Schoo	0.71	323	*e*P	Pb	16 14 22.1	+0.4
ECBX	El Chinero	0.73	168	*e*P	Pb	16 14 21.1	-0.9
ECBX				*e*S	Sb	16 14 30.9	-0.6
YUH	Yuha Desert	0.74	308		Pb	16 14 22.0	-0.3
YUH					Sb	16 14 32.0	-0.1
SJX	San Joaquin	0.75	236	⇑*i*P	Pb	16 14 21.0	-1.4
SJX				*e*S	Sb	16 14 29.3	-2.8
SJX				IAML		16 14 30.4	
	comp=N,1µm,0.1s						
SJX				*e*		16 14 30.4	
SJX				IAML		16 14 30.5	
	comp=E,2µm,0.1s						
SJX				⇓*e*		16 14 30.5	
COK2	Cook Ranch 2	0.78	328		Pb	16 14 23.1	+0.1
RUN	Ruthven	0.81	15		Pb	16 14 22.8	-0.7
RMX	La Rumorosa	0.83	300		Pb	16 14 22.9	-0.9
RMX					Sb	16 14 32.9	-1.7
RMX				IAML		16 14 33.4	
	comp=E,574nm,0.3s						
RMX				IAML		16 14 33.9	
	comp=N,768nm,0.3s						
RMX	La Rumorosa	0.83	300	*e*P	Pb	16 14 22.9	-0.9
RMX				*i* S	Sb	16 14 32.7	-1.9
IKP	In-Ko-Pah, Jac	0.88	302	P	Pb	16 14 24.2	-0.4
	baz=121,SNR=24						
IKP				S	Sb	16 14 36.0	0.0
	baz=121						
IKP	In-Ko-Pah, Jac	0.88	302		Pb	16 14 24.7	+0.1
IKP					Sb	16 14 35.9	0.0
IKP	In-Ko-Pah, Jac	0.88	302	*e*P	Pb	16 14 24.4	-0.2
SWSC	Sam W. Stewart	0.90	328	P	Pb	16 14 23.8	-1.1
	baz=147,SNR=19						
SWSC				S	Sb	16 14 34.9	-1.4
	baz=147						
SWSC	Sam W. Stewart	0.90	328		Pb	16 14 25.0	+0.1
VTX	Valle De La Tr	0.92	211	*e*P	Pb	16 14 25.6	+0.3
VTX				*e*S	Sb	16 14 38.3	+1.0
GLA	Glamis	0.93	21	P	Pb	16 14 24.6	-0.8
	baz=202,SNR=40						
GLA				S	Sb	16 14 36.3	-1.0
	baz=202						
GLA	Glamis	0.93	21		Pb	16 14 24.6	-0.8
GLA				Sg	Sb	16 14 36.2	-1.1
GLA				IAML		16 14 38.2	
	comp=E,570nm,0.7s						
GLA				IAML		16 14 38.9	
	comp=N,463nm,0.5s						
CRR	Carrizo Plain	0.94	318		Pb	16 14 25.7	+0.1
CRR					Sb	16 14 38.3	+0.8
CRR	Carrizo Plain	0.94	318	⇓*i*P	Pb	16 14 25.7	+0.1
CBKC	Canebrake	1.12	310		Pn	16 14 28.0	-0.5
SPIG	San Pedro Mart	1.16	190	*e*P	Pn	16 14 29.1	-0.2
SPIG				*e*S	Sb	16 14 43.8	-0.4
SPIG	San Pedro Mart	1.16	190	*e*P	Pn	16 14 29.0	-0.4
SPX	San Pedro Mart	1.17	190		Pn	16 14 29.0	-0.4
SPX					Sb	16 14 45.8	+1.4
SPX				IAML		16 14 46.4	
	comp=E,216nm,0.6s						
SPX	San Pedro Mart	1.17	190	*e*P	Pn	16 14 29.1	-0.4
SFX	San Felipe	1.19	164		Pn	16 14 30.7	+1.2
SFX					Sn	16 14 46.8	+1.8
SFX	San Felipe	1.19	164	*e*P	Pn	16 14 30.9	+1.4
SFX				*e*S	Sn	16 14 46.9	+1.8
CBX	Cerro Bola	1.22	276		Pn	16 14 30.7	+0.7
CBX				Sg	Sb	16 14 46.1	+0.3
CBX				IAML		16 14 49.5	
	comp=E,277nm,0.6s						
CBX	Cerro Bola	1.22	276	*e*P	Pn	16 14 30.7	+0.7
CBX				*e*S	Sb	16 14 46.0	+0.1
CBX				IAML		16 14 47.9	
	comp=N,908nm,0.5s						
CBX				*e*		16 14 47.9	
CBX				⇑*e*		16 14 48.9	
CBX				IAML		16 14 48.9	
	comp=E,512nm,0.5s						
TKX	Tecate	1.23	288		Pn	16 14 30.8	+0.7
TKX				Sg	Sb	16 14 46.3	+0.4
MONP2	Monument Peak	1.23	305	P	Pn	16 14 29.4	-0.7
	baz=124,SNR=19						
MONP2				S	Sb	16 14 46.2	0.0
	baz=124						
MONP2	Monument Peak	1.23	305		Pn	16 14 29.5	-0.7
MONP2	Monument Peak	1.23	305	*e*P	Pn	16 14 30.9	+0.7
TJIG	Tijuana	1.25	282	*e*P	Pn	16 14 30.6	+0.3
TJIG				*i* S	Sn	16 14 47.0	+0.5
CCX	Cicese	1.26	256		Pn	16 14 31.7	+1.3
BAR	Barrett	1.31	292		Pn	16 14 31.0	-0.3
BAR	Barrett	1.31	292		Sb	16 14 49.1	+0.6
BAR	Barrett	1.31	292	IAML		16 14 50.0	
	comp=N,494nm,0.3s						
BAR				IAML		16 14 50.5	
	comp=E,370nm,0.2s						
113A	Mohawk Valley,	1.36	65		Pn	16 14 31.5	-0.4
113A				IAML		16 14 58.4	
	comp=N,152nm,0.8s						
BC3	Big Chuckawall	1.48	353	S	Sn	16 14 50.4	-1.9
	baz=172						
OLP	Otay Lakes Par	1.50	287	*e*P	Pn	16 14 35.0	+1.2
TJX	Tijuana	1.58	282		Pn	16 14 34.4	-0.4
PIX	Pinacate	1.63	112		Pn	16 14 34.6	-0.9
109C	Camp Elliot, M	1.73	294	Pb	Pb	16 14 38.9	-0.2
	baz=113						
109C				Sb	Sb	16 15 00.9	+0.5
	baz=113						
109C	Camp Elliot, M	1.73	294		Pn	16 14 35.5	-1.4
PFO	Pinyon Flats O	1.76	324	P	Pn	16 14 36.4	-1.0
	baz=143						
PFO				S	Sn	16 14 57.6	-1.7
	baz=143						
PFO	Pinyon Flats O	1.76	324		Pn	16 14 36.7	-0.8
214A	Organ Pipe Nat	2.06	96	S	Sn	16 15 06.7	-0.1
	baz=278						
214A	Organ Pipe Nat	2.06	96	*i* P	Pn	16 14 40.9	-0.7
214A				*i* S	Sn	16 15 03.4	-3.3
214A	Organ Pipe Nat	2.06	96		Pn	16 14 40.9	-0.7
214A				IAML		16 15 16.2	
	comp=N,64nm,0.6s						
214A				IAML		16 15 32.0	
	comp=E,62nm,0.6s						
MURC	Murrieta	2.17	311	Sb	Sb	16 15 15.2	+2.0
	baz=130						
DANC	Danby, Needles	2.45	357		Pb	16 14 50.5	-0.8
NEE2	Needles Airpor	2.62	11	S	Sn	16 15 19.4	-1.0
	baz=191						
W13A	Hualapai Mount	3.11	21		Pn	16 14 56.8	+0.7
W13A				IAML		16 15 52.3	
	comp=E,20nm,0.9s						
MWC	Mount Wilson	3.12	311	Pn	Pn	16 14 58.8	+2.6
MWC				IAML		16 15 47.6	
	comp=N,30nm,1.3s						
MWC				IAML		16 15 53.7	
	comp=E,33nm,1.1s						
GSC	Goldstone, Bar	3.37	338	Pn	Pn	16 14 59.7	+0.1
GSC				IAML		16 16 47.3	
	comp=E,16nm,4.5s						
TUC	Tucson	3.77	87		Pn	16 15 06.5	+1.5
TUC				IAML		16 16 15.0	
	comp=E,21nm,0.6s						
X16A	Lo Mia Camp, P	3.87	54		Pn	16 15 07.2	+0.6
X16A				IAML		16 16 20.9	
	comp=N,11nm,1.0s						
SHPR	Sheep Range	4.31	1	Pn	Pn	16 15 11.8	-0.7
SHPR				IAML		16 16 34.2	
	comp=E,9.3nm,1.2s						
ISA	Isabella, Lake	4.39	323	Pn	Pn	16 15 14.1	+0.5
ISA				IAML		16 16 31.0	
	comp=E,8.7nm,3.9s						
WUAZ	Wupatki	4.62	43	Pn	Pn	16 15 16.4	-0.3
WUAZ				IAML		16 16 52.1	
	comp=E,14nm,2.4s						
WUAZ				IAML		16 16 57.2	
	comp=E,12nm,1.5s						
TPNV	Topopah Spring	4.82	350		Pn	16 15 20.5	+0.9
TPNV				IAML		16 16 44.0	
	comp=E,11nm,4.9s						
TPNV				IAML		16 17 40.4	
	comp=E,7.8nm,4.9s						
U15A	North Rim	4.88	29		Pn	16 15 22.9	+2.4
U15A				IAML		16 16 48.4	
	comp=E,13nm,2.8s						
U15A				IAML		16 17 16.8	
	comp=N,7.4nm,4.5s						
X18A	Snowflake	5.00	61		Pn	16 15 23.4	+1.4
X18A				IAML		16 16 37.9	
	comp=E,8.3nm,5.0s						
X18A				IAML		16 17 13.6	
	comp=N,9.9nm,4.9s						
LCMT	Little Creek M	5.08	18	Pn	Pn	16 15 25.1	+2.0
PRN	Pahroc Range	5.21	2	Pn	Pn	16 15 27.3	+2.4
PRN				IAML		16 16 15.1	
	comp=E,10nm,5.0s						
PRN				IAML		16 17 12.7	
	comp=N,8.0nm,1.8s						
KNB	Kanab	5.21	22	Pn	Pn	16 15 26.7	+1.7
W18A	Petrified Fore	5.43	56		Pn	16 15 29.5	+1.5
R11A	Troy Canyon, C	6.15	357		Pn	16 15 37.9	0.0
121A	Cookes Peak, D	6.31	85	Pn	Pn	16 15 40.7	+0.7

SOME ***12*** *16:27:59.9, 42°.15N×83°.60E, h10^{km}*
NNC ***12*** *16:28:01.6±1.3, 42°.25N×83°.61E, h0^{km}, mb3.9, mpv3.5, Error ellipse: s-maj=10.6km s-min=6.4km az=159.0*
ISC 12 16:28:02.4±2.0, **42°.21N**±0°.08×**83°.57E**±0°.07, **h15**^{km}, **n46,** σ**2**^{s}.**79**/66, **13C-4D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTMS	Ketmen	2.67	299	*e*P	Pb	16 28 50.2	+0.3
	3.2nm,0.3s						
KTMS				*e*S	Sg	16 29 27.1	-1.0
	302nm,0.4s						
KTMS	Ketmen	2.67	299	Pg	Pb	16 28 50.2	+0.3
	3.2nm,0.3s						
KTMS				Lg	Lg	16 29 27.6	
	302nm,0.4s						
SHLS	Shalkode	3.17	289	*e*P	Pn	16 28 54.8	+3.0
	36nm,0.3s						
SHLS				*e*S	Sb	16 29 35.0	-2.0
	186nm,0.4s						
SHLS	Shalkode	3.17	289	Pg	Pn	16 28 54.8	+3.0
	36nm,0.3s						
SHLS				Lg	Lg	16 29 35.0	
	186nm,0.4s						
PDGK	Podgornoye	3.20	292	Pg	Pb	16 28 59.9	+0.9
	4.5nm,0.3s						
PDGK				Lg	Lg	16 29 43.7	
	42nm,0.4s						
PDGK	Podgornoye	3.20	292	⇓Pn	Pn	16 28 53.4	+1.2
	1.1nm,0.3s						
PDGK				⇑Pg	Pg	16 29 01.4	-2.4
	2.1nm,0.2s						
PDGK				⇓Lg	Lg	16 29 43.8	
	59nm,0.5s						
DJR	Jarkent	3.48	309	*e*P	Pb	16 29 03.2	-0.5
	9.0nm,0.3s						
DJR				*e*S	Sb	16 29 49.3	+3.5
	30nm,0.4s						
DJR	Jarkent	3.48	309	Pg	Pb	16 29 03.2	-0.5
	9.0nm,0.3s						
DJR				Lg	Lg	16 29 49.3	
	30nm,0.4s						
UZB	Uzynbulak	3.48	287	*e*P	Pb	16 29 04.2	+0.5
	12nm,0.2s						
UZB				*e*S	Sg	16 29 50.6	-3.5
	60nm,0.5s						
UZB	Uzynbulak	3.48	287	Pg	Pb	16 29 04.2	+0.5
	12nm,0.2s						
UZB				Lg	Lg	16 29 50.6	
	60nm,0.5s						
KPKS	Kokpek	3.80	291	*e*P	Pb	16 29 10.6	+1.3
	24nm,0.2s						
KPKS				*e*S	Sg	16 30 02.0	-2.5
	84nm,0.4s						
SATY	Saty	3.90	284	*e*P	Pb	16 29 13.1	+2.2
	3.5nm,0.1s						
SATY				*e*S	Sg	16 30 06.3	-1.3
	31nm,0.2s						
SATY	Saty	3.90	284	Pg	Pb	16 29 13.1	+2.2
	3.5nm,0.1s						
SATY				Lg	Lg	16 30 06.3	
	31nm,0.2s						
KURS	Kuram	4.17	290	*e*P	Pg	16 29 18.8	-3.4
	5.9nm,0.5s						
KURS				*e*S	Sg	16 30 16.3	+0.1
	36nm,0.5s						
KURS	Kuram	4.17	290	Pg	Pg	16 29 18.8	-3.4
	5.9nm,0.5s						
KURS				Lg	Lg	16 30 16.3	
	36nm,0.5s						
MNBS	Baschi	4.22	298	*e*P	Pb	16 29 18.3	+2.0
	9.4nm,0.3s						
MNBS				*e*S	Sg	16 30 15.4	-2.3
	41nm,0.5s						
MNBS	Baschi	4.22	298	Pg	Pb	16 29 18.3	+2.0
	9.4nm,0.3s						
MNBS				Lg	Lg	16 30 15.4	
	41nm,0.5s						
KAPS	Kapalarasan	4.33	317	*e*P	Pb	16 29 21.2	+3.1
	5.1nm,0.3s						
KAPS				*e*S	Sg	16 30 20.2	-1.1
	28nm,0.5s						
KAPS	Kapalarasan	4.33	317	Pg	Pb	16 29 21.2	+3.1
	5.1nm,0.3s						
KAPS				Lg	Lg	16 30 20.2	
	28nm,0.5s						
ARXS	Arharly	4.65	297	*e*P	Pb	16 29 25.8	+2.2
	11nm,0.3s						
ARXS				*e*S	Sg	16 30 28.1	-3.5
	35nm,0.6s						
ARXS	Arharly	4.65	297	Pg	Pb	16 29 25.8	+2.2
	11nm,0.3s						
ARXS				Lg	Lg	16 30 28.1	
	35nm,0.6s						
MK31	Makanchi Array	4.67	349	⇓Pn	Pn	16 29 12.2	-0.2
	0.2nm,0.2s,baz=300,slow=27,SNR=19						
MK31				⇑Pg	Pg	16 29 28.9	-2.9
	1.0nm,0.3s,baz=167,slow=16,SNR=12						
MK31				⇑Lg	Lg	16 30 27.4	
	7.7nm,0.4s,baz=164,slow=36,SNR=9.4						
TDK	Taldyqorghan	4.67	308	*e*P	Pg	16 29 30.1	-1.7
	22nm,0.3s						
TDK				*e*S	Sg	16 30 35.5	+3.2
	61nm,0.5s						
TDK	Taldyqorghan	4.67	308	Pg	Pg	16 29 30.1	-1.7
	22nm,0.3s						
TDK				Lg	Lg	16 30 35.5	
	61nm,0.5s						
MAKZ	Makanchi	4.74	347	⇑Pn	Pn	16 29 12.9	-0.4
	0.3nm,0.3s						
MAKZ				⇑Pg	Pb	16 29 28.1	+3.0
	2.1nm,0.4s						
MAKZ				⇑Lg	Lg	16 30 29.4	
	10nm,0.6s						
KOTS	Kotyrbulak	4.86	284	*e*P	Pb	16 29 25.7	-1.6
	7.2nm,0.3s						
KOTS				*e*S	Sb	16 30 27.5	+1.7
	19nm,0.7s						
MDOK	Medeo	4.90	283	*e*P	Pg	16 29 32.7	-3.5
	4.6nm,0.5s						
MDOK				*e*S	Sg	16 30 39.8	+0.2
	16nm,0.5s						
MDOK	Medeo	4.90	283	⇑Pg	Pb	16 29 31.7	+3.7
	1.7nm,0.3s						
MDOK				⇑Lg	Lg	16 30 37.4	
	10nm,0.6s						
MDOK	Medeo	4.90	283	Pg	Pg	16 29 32.7	-3.5
	4.6nm,0.5s						
MDOK				Lg	Lg	16 30 39.8	
	16nm,0.5s						
TNSS	Tian-Shan	4.95	282	*e*P	Pb	16 29 29.9	+0.8
	2.8nm,0.4s						
TNSS				*e*S	Sb	16 30 35.0	+6.5
	8.0nm,0.4s						
TNSS	Tian-Shan	4.95	282	Pg	Pb	16 29 29.9	+0.8
	2.8nm,0.4s						
TNSS				Lg	Lg	16 30 35.0	
	8.0nm,0.4s						
IZV	Izvestkoviy	5.20	281	*e*P	Pb	16 29 36.6	+3.6
	1.6nm,0.3s						
IZV				*e*S	Sg	16 30 46.2	-2.9
	13nm,0.8s						
KTBS	Karatobe	5.27	289	*e*P	Pb	16 29 37.7	+3.5
	3.1nm,0.5s						
KTBS				*e*S	Sg	16 30 48.5	-3.0
	27nm,0.6s						
KTBS	Karatobe	5.27	289	Pg	Pb	16 29 37.7	+3.5
	3.1nm,0.5s						
KTBS				Lg	Lg	16 30 48.5	
	27nm,0.6s						
ZSN	Zaisan	5.32	10	*e*P	Pb	16 29 37.7	+2.7
	8.1nm,0.5s						
ZSN				*e*S	Sg	16 30 48.1	-5.0
	56nm,0.7s						
ZSN	Zaisan	5.32	10	Pg	Pb	16 29 37.7	+2.7
	8.1nm,0.5s						
ZSN				Lg	Lg	16 30 48.1	
	56nm,0.7s						
KUU	Kurty	5.56	290	*e*P	Pg	16 29 43.8	-4.9
	2.2nm,0.4s						
KUU				*e*S	Sg	16 30 59.0	-1.7
	14nm,0.7s						
KUU	Kurty	5.56	290	Pg	Pg	16 29 43.8	-4.9
	2.2nm,0.4s						
KUU				Lg	Lg	16 30 59.0	
	14nm,0.7s						
KST	Kastek	5.67	281	*e*P	Pg	16 29 46.4	-4.6
	5.3nm,0.6s						

KST				eS	Sg	16 31 03.3	-1.0
	12nm,0.7s						
KST	**Kastek**	**5.67**	**281**	Pg	**Pg**	**16 29 46.4**	**-4.6**
	5.3nm,0.6s						
KST				Lg	Lg	16 31 03.3	
	12nm,0.7s						
DGS	**Degeres**	**5.83**	**283**	eP	**Pg**	**16 29 50.1**	**-3.9**
	2.0nm,0.5s						
DGS				eS	**Sg**	**16 31 09.5**	**0.0**
	14nm,0.6s						
TKM2	**Tokmak 2**	**5.93**	**280**	⇑Pn	**Pn**	**16 29 31.8**	**+2.0**
	1.2nm,0.3s						
TKM2				⇑Pg	**Pg**	**16 29 51.5**	**-4.4**
	1.3nm,0.5s						
TKM2				⇑Lg	Lg	16 31 10.3	
	4.0nm,0.4s						
KRBS	**Karabastau**	**5.98**	**287**	eP	**Pb**	**16 29 50.0**	**+3.7**
	1.6nm,0.7s						
KRBS				eS	**Sg**	**16 31 09.4**	**-4.8**
	4.2nm,0.4s						
AAK	**Ala-Archa**	**6.73**	**277**	⇓Lg	Lg	16 31 35.1	
	6.3nm,0.6s						
KURBB	**Kurchatov Arra**	**9.10**	**339**	⇑Lg	Lg	16 32 49.0	
	13nm,0.7s						
KURK	**Kurchatov**	**9.16**	**340**	⇑Lg	Lg	16 32 49.7	
	13nm,1.0s						

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*IDC **12** 16:44:49.9±2.2, 5°.94S×128°.69E, h0km, mb3.4/1, mb1 3.8/3, mb1mx3.5/27, mbtmp3.6/3, ML3.8/2, Error ellipse: s-maj=119.6km s-min=31.9km az=67.0*
*NEIC **12** 16:45:07.6±2.3, 6°.32S±0°.10×129°.44E±0°.06, h174km±18km, mb4.5/5, Error ellipse: s-maj=14.2km s-min=8.7km az=169.0*

ISC 12 16:45:07.3±0.8**, 6°.35S**±0°.08×**129°.40E**±0°.09**, h165km, n19, σ1ˢ77**/20**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.49**	**131**	Pn	**Pn**	**16 45 51.6**	**+2.6**
FAKI	**Fak Fak**	**4.43**	**40**		**Pn**	**16 46 13.0**	**-0.6**
SOEI	**Soe**	**6.11**	**236**	Pn	**Pn**	**16 46 36.5**	**+0.7**
MTN	**Manton Dam**	**6.68**	**165**	Pn	**Pn**	**16 46 44.0**	**+0.9**
LUWI	**Luwuk**	**8.46**	**308**	Pn	**Pn**	**16 47 05.9**	**-0.8**
FITZ	**Fitzroy Crossi**	**12.24**	**197**	Pn	**Pn**	**16 47 54.9**	**-1.4**
WB0	**Warramunga Arr**	**14.19**	**160**	Pn	**Pn**	**16 48 20.3**	**-0.8**
WRA	**Warramunga Arr**	**14.34**	**161**	Pn	**Pn**	**16 48 24.4**	**+1.5**
	0.4nm,0.3s,baz=338,slow=13,SNR=25						
WRA				Sn	Sn	16 50 53.6	-8.8
	0.6nm,0.3s,baz=328,slow=22,SNR=7.4						
WRA	**Warramunga Arr**	**14.34**	**161**		**Pn**	**16 48 23.3**	**+0.4**
WB2	**Warramunga Arr**	**14.34**	**161**	Pn	**Pn**	**16 48 22.0**	**-1.0**
WR0	**Warramunga Arr**	**14.42**	**160**	Pn	**Pn**	**16 48 23.2**	**-0.7**
JAGI	**Jajag, Banyuwa**	**15.27**	**261**		**Pn**	**16 48 36.7**	**+2.2**
JAGI				IAmb	IAmb	16 49 18.6	
	comp=Z,18nm,0.8s						
COEN	**Coen**	**15.52**	**120**		**Pn**	**16 48 38.0**	**+0.5**
MYLDM	**Lahad Datu**	**15.80**	**316**		**P**	**16 48 44.8**	**+3.4**
MYLDM				IAmb	IAmb	16 48 50.4	
	comp=Z,24nm,1.3s						
ASAR	**Alice Springs**	**17.76**	**166**	P	**P**	**16 49 04.8**	**+1.9**
	comp=Z,0.2nm,0.3s,baz=344,slow=9.4,SNR=26						
ASAR				S	**S**	**16 52 15.5**	**-3.4**
	comp=Z,0.1nm,0.3s,baz=350,slow=24,SNR=5.1						
ASAR	**Alice Springs**	**17.76**	**166**	P	**P**	**16 49 03.0**	**+0.1**
FORT	**Forrest**	**24.34**	**183**	P	**P**	**16 50 10.1**	**+0.2**
NWAO	**Narrogin (SRO)**	**28.77**	**202**	P	**P**	**16 50 48.6**	**-0.9**
NWAO				IAmb	IAmb	16 50 52.7	
	comp=Z,24nm,1.4s						
MKAR	**Makanchi Array**	**67.36**	**327**	P	**P**	**16 55 42.4**	**-2.3**
	comp=Z,0.2nm,0.6s,baz=132,slow=6.8,SNR=3.6						

JMA 12 17:01:00.2, 24°.33N×123°.53E, h18km±1km, M2.1, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	**0.18**	**88**	P	Pb	17 01 04.7	0.0
IRIF				S	Sg	17 01 08.1	+0.1
HATJ	**Hateruma jima**	**0.37**	**137**	P	Pg	17 01 07.6	-0.3
HATJ				S	Sg	17 01 13.2	0.0
JKRS	**Kuro-shima**	**0.45**	**102**	P	Pg	17 01 09.2	-0.1
JKRS				S	Sb	17 01 16.1	+0.2
YOJ	**Yonaguni jima**	**0.49**	**286**	P	Pg	17 01 10.0	-0.1
YOJ				eS	Sg	17 01 16.7	-0.1
JYNG	**Yonagunijimaku**	**0.55**	**283**	P	Pg	17 01 11.0	-0.1
JYNG				S	Sg	17 01 18.5	0.0
JIJ	**Ishigaki jima**	**0.56**	**86**	P	Pg	17 01 10.7	-0.7
JIJ				S	Sg	17 01 18.7	-0.2
JISG	**Ishigakijimahi**	**0.76**	**70**	P	Pb	17 01 14.5	-0.3
JISG				eS	Sb	17 01 24.9	+0.1
JTJ	**Tarama**	**1.11**	**74**	P	Pn	17 01 20.8	-0.1
JTJ				eS	Sb	17 01 35.3	+0.3

TAP 12 17:01:07.0, 24°.36N×121°.41E, h4km±1km, ML0.3, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNSH	**Datong**	**0.07**	**342**	i P	Pg	17 01 08.8	+0.2
	baz=336						
NNSH				i S	Sg	17 01 09.9	+0.2
	baz=336						
NNSB	**Datong**	**0.07**	**342**	P	Pg	17 01 08.9	+0.3
	baz=342						
NNSB				S	Sg	17 01 09.9	+0.3
	baz=342						
NNS	**Nan Shan**	**0.08**	**338**	i P	Pg	17 01 09.1	+0.2
	baz=343						
NNS				S	Sg	17 01 10.5	+0.4
	baz=343						
ETLH	**Xiulin Townshi**	**0.17**	**156**	P	Pg	17 01 11.2	+0.8
	baz=163						
ETLH				S	Sg	17 01 13.9	+1.2
	baz=163						
FUSS	**Fushou**	**0.19**	**232**	P	Pg	17 01 11.5	+0.7
	baz=232						
FUSS				S	Sg	17 01 14.5	+1.2
	baz=232						

IDC 12 17:18:09.0±1.4**, 6°.57S×27°.53E, h0km, mb3.6**/4**, mb1 3.7**/5**, mb1mx3.5**/32**, mbtmp3.6**/5**, ML3.2**/1**, Error ellipse: s-maj=31.8km s-min=26.6km az=136.0, Zaire**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMBO	**Kilima Mbogo**	**11.10**	**61**	Pn	Pn	17 20 50.7	+1.3
	0.2nm,0.3s,baz=229,slow=22,SNR=2.4						
KMBO				Sn	Sn	17 22 46.5	-8.0
	0.4nm,0.3s,baz=235,slow=8.0,SNR=4.2						
KMBO				Lg	Lg	17 24 01.2	
	0.7nm,0.3s,baz=147,slow=20,SNR=7.3						
BOSA	**Boshof**	**22.03**	**185**	P	P	17 23 05.4	+0.1
	1.9nm,0.9s,baz=15,slow=12,SNR=5.1						
TORD	**Torodi Ar. Bea**	**32.29**	**307**	P	P	17 24 39.7	-0.1
	1.5nm,0.6s,baz=122,slow=8.2,SNR=9.7						
GERES	**GERESS Array B**	**56.50**	**349**	P	P	17 27 53.4	+0.4
	0.5nm,0.7s,baz=169,slow=7.6,SNR=4.1						
MKAR	**Makanchi Array**	**71.87**	**36**	P	P	17 29 33.3	-0.6
	0.3nm,0.7s,baz=244,slow=5.4,SNR=4.3						

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*IDC **12** 17:30:29.8±1.5, 2°.99N×129°.07E, h0km, mb3.8/6, mb1 4.0/6, mb1mx3.7/38, mbtmp3.9/6, Error ellipse: s-maj=87.3km s-min=17.5km az=65.0*

ISC 12 17:30:36.0±1.4**, 2°.9N**±0°.3×**129°.0E**±0°.5**, h44km, n6, σ0ˢ62**/6**, mb3.8**/6**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.32**	**167**	P	**P**	**17 35 40.3**	**-0.2**
	2.3nm,0.5s,baz=344,slow=11,SNR=38						
ASAR	**Alice Springs**	**26.86**	**170**	P	**P**	**17 36 12.6**	**-0.2**
	1.0nm,0.5s,baz=353,slow=7.7,SNR=37						
CMAR	**Chiang Mai Arr**	**33.24**	**300**	P	**P**	**17 37 09.7**	**+0.3**
	0.7nm,0.6s,baz=117,slow=7.4,SNR=8.3						
STKA	**Stephens Creek**	**36.62**	**162**	P	**P**	**17 37 38.5**	**+0.3**
	1.5nm,0.3s,baz=340,slow=7.9,SNR=6.0						
SONM	**Songino Array**	**48.80**	**340**	P	**P**	**17 39 17.5**	**+0.5**
	0.3nm,0.6s,baz=136,slow=7.4,SNR=2.4						
MKAR	**Makanchi Array**	**59.52**	**325**	P	**P**	**17 40 34.1**	**-0.8**
	0.6nm,0.4s,baz=117,slow=8.3,SNR=19						

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*IDC **12** 17:36:27.6±7.7, 52°.80N×175°.91E, h0km, mb3.4/5, mb1 3.6/6, mb1mx3.4/49, mbtmp3.5/6, ML2.3/1, Error ellipse: s-maj=205.4km s-min=25.7km az=167.0*
*AEIC **12** 17:36:27±1.5, 51°.73N±0°.10×176°.14E±0°.05, h41km±8km, ML3.5/15, mb4.1/16(NEIC), Error ellipse: s-maj=14.3km s-min=4.5km az=178.0*
*NEIC **12** 17:36:28.0±1.6, 51°.7N±0°.1×176°.14E±0°.09, h41km±7km, Error ellipse: s-maj=21.9km s-min=6.1km az=192.0*

ISC 12 17:36:25.4±1.1**, 51°.7N**±0°.2×**176°.09E**±0°.05**, h25km, n42, σ1ˢ47**/39**, mb4.1**/11**, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSSA	**Little Sitkin**	**1.53**	**78**		**Pn**	**17 36 51.8**	**+0.7**
LSSA					**Sb**	**17 37 11.2**	**-0.9**
LSNW	**Little Sitkin**	**1.54**	**77**		**Pb**	**17 36 52.4**	**-0.8**
LSSE	**Little Sitkin**	**1.56**	**79**		**Pb**	**17 36 52.6**	**-0.9**
LSPA	**Little Sitkin**	**1.57**	**78**		**Pb**	**17 36 52.8**	**-0.9**
LSPA					**Sb**	**17 37 13.7**	**+0.6**
SMY	**Shemya**	**1.63**	**312**		**Pn**	**17 36 53.7**	**+1.2**
SMY	**Shemya**	**1.63**	**312**		**Sb**	**17 37 15.0**	**+0.2**
AMKA	**Amchitka**	**2.02**	**97**		**Pn**	**17 36 58.5**	**+0.6**
AMKA					**Sb**	**17 37 24.9**	**-1.3**
CESW	**Semis' Southwe**	**2.17**	**82**		**Pn**	**17 37 01.1**	**+1.3**
CEAP	**Semis' Anvil P**	**2.19**	**80**		**Pn**	**17 37 01.7**	**+1.5**
CERAA	**Semis' Rag'd T**	**2.25**	**82**		**Pn**	**17 37 02.0**	**+1.1**
KIMD	**Kanaga Island**	**4.15**	**86**		**Pn**	**17 37 29.0**	**+1.9**
ADK	**Adak**	**4.49**	**84**		**Pn**	**17 37 32.6**	**+0.9**
PETK	**Petropavlovsk-**	**11.34**	**285**	Pn	**Pn**	**17 39 08.2**	**+2.6**
	0.1nm,0.3s,baz=101,slow=19,SNR=7.5						
PETK				Sn	**Sn**	**17 41 05.2**	**-6.2**
	0.1nm,0.3s,baz=250,slow=7.1,SNR=1.6						
OHAK	**Old Harbor**	**18.55**	**61**	P	**P**	**17 40 38.4**	**-1.5**
CNPM	**China Poot**	**19.90**	**54**	P	**P**	**17 40 53.9**	**-0.8**
BRLK	**Bradley Lake**	**20.11**	**53**	P	**P**	**17 40 56.7**	**-0.3**
PPLA	**Purkeypile**	**20.26**	**44**	P	**P**	**17 40 58.5**	**-0.3**
PPLA				IAmb	IAmb	17 41 09.4	
	comp=Z,12nm,1.4s						
SKT	**Skwentna**	**20.28**	**47**	P	**P**	**17 40 59.7**	**+0.8**
SKT				IAmb	IAmb	17 41 28.9	
	comp=Z,11nm,1.5s						
SUA	**Susitna One**	**20.51**	**49**	P	**P**	**17 41 01.0**	**-0.5**
IMAR	**Indian Mountai**	**20.90**	**35**	P	Pn	17 41 06.6	-1.5
SCM	**Sheep Creek Mo**	**22.18**	**48**	P	**P**	**17 41 18.1**	**-1.3**
MDM	**Murphy Dome**	**22.59**	**40**	P	**P**	**17 41 24.0**	**+0.3**
KLU	**Klutina**	**22.79**	**50**	P	**P**	**17 41 25.6**	**-0.3**
KLU				IAmb	IAmb	17 41 47.8	
	comp=Z,8.5nm,1.4s						
ILAR	**Eielson Array**	**23.08**	**41**	P	**P**	**17 41 26.3**	**-2.4**
	comp=Z,0.2nm,0.6s,baz=239,slow=14,SNR=1.6						
N25K	**Chitina, Valde**	**23.43**	**50**	P	**P**	**17 41 32.2**	**-0.1**
N25K				IAmb	IAmb	17 41 53.2	
	comp=Z,13nm,1.2s						
TOLK	**Toolik Lake Re**	**23.60**	**31**	P	**P**	**17 41 35.0**	**+1.1**
GLB	**Gilahina Butte**	**23.79**	**50**	P	**P**	**17 41 36.3**	**+0.5**
GLB				IAmb	IAmb	17 41 59.6	
	comp=Z,12nm,1.4s						
VRDI	**Verde Repeater**	**23.94**	**51**	P	**P**	**17 41 37.3**	**0.0**
VRDI				IAmb	IAmb	17 41 38.5	
	comp=Z,7.9nm,1.1s						
BALM	**Baldy**	**24.46**	**51**	P	**P**	**17 41 42.1**	**0.0**
BALM				IAmb	IAmb	17 41 55.7	
	comp=Z,6.3nm,1.1s						
BARN	**Barnard Glacie**	**24.80**	**51**	P	**P**	**17 41 45.3**	**+0.1**
BARN				IAmb	IAmb	17 42 03.9	
	comp=Z,7.1nm,1.0s						
BMAR	**Burnt Mountain**	**24.82**	**36**	P	**P**	**17 41 45.7**	**+0.6**
BCAR	**Beaver Creek A**	**24.92**	**46**	P	**P**	**17 41 46.7**	**+0.6**
H11N2	**WAKE ISLAND Hy**	**32.67**	**196**	T	T	18 17 28.3	
	baz=11,slow=76,SNR=82						
H11N3	**WAKE ISLAND Hy**	**32.68**	**196**	T	T	18 17 35.1	
	baz=11,slow=76,SNR=70						
H11N1	**WAKE ISLAND Hy**	**32.69**	**196**	T	T	18 17 30.4	
	baz=11,slow=76,SNR=60						
H11S1	**WAKE ISLAND Hy**	**33.90**	**196**	T	T	18 19 08.7	
	baz=10,slow=76,SNR=24						
H11S3	**WAKE ISLAND Hy**	**33.92**	**196**	T	T	18 19 09.7	
	baz=10,slow=76,SNR=16						
H11S2	**WAKE ISLAND Hy**	**33.92**	**196**	T	T	18 19 10.4	
	baz=10,slow=76,SNR=9.2						
YKA	**Yellowknife Ar**	**37.34**	**46**	P	**P**	**17 43 35.5**	**+0.3**
	comp=Z,0.2nm,0.6s,baz=290,slow=7.8,SNR=3.3						
SONM	**Songino Array**	**43.64**	**294**	P	**P**	**17 44 28.9**	**+1.3**
	comp=Z,0.4nm,0.4s,baz=57,slow=9.1,SNR=4.5						
MKAR	**Makanchi Array**	**57.31**	**305**	P	**P**	**17 46 10.8**	**0.0**
	comp=Z,0.4nm,0.5s,baz=57,slow=6.9,SNR=6.3						
FINES	**FINESS Array B**	**64.74**	**345**	P	**P**	**17 46 59.9**	**-1.0**
	comp=Z,1.3nm,0.9s,baz=21,slow=8.1,SNR=1.4						

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*IDC **12** 17:39:53.1±4.5, 17°.73N×104°.55W, h0km, mb3.3/4, mb1 3.7/6, mb1mx3.5/34, mbtmp3.3/6, ML3.5/2, MS3.3/1, Ms1 3.3/1, ms1mx2.6/17, Error ellipse: s-maj=94.3km s-min=38.5km az=29.0*
*MEX **12** 17:40:10.3±1.1, 18°.79N×105°.79W, h10km, MD4.0*
*NEIC **12** 17:40:13.8±2.3, 19°.20N±0°.04×105°.60W±0°.09, h36km±17km, mb4.0/12, Md4.0/27(MEX), Error ellipse: s-maj=13.5km s-min=4.2km az=67.0*

ISC 12 17:40:08.3±3.5**, 19°.09N**±0°.08×**105°.71W**±0°.07**, h11km**±23km**, n36, σ1ˢ94**/38**, mb3.2**/4**, Near coast of Jalisco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
R15V		**1.63**	**87**	eP	**Pn**	**17 40 37.0**	**-0.1**
R15V				i S	**Sn**	**17 40 58.2**	**0.0**
R15V		**1.63**	**87**		**Pn**	**17 40 37.1**	**0.0**
COIG	**Colima**	**1.91**	**87**	eP	**Pn**	**17 40 41.3**	**+0.4**
COIG				i S	**Sb**	**17 41 05.8**	**-1.4**
EZ5V		**2.03**	**78**	eP	**Pb**	**17 40 44.0**	**-1.3**
EZ5V				eS	**Sb**	**17 41 10.7**	**0.0**
EZ5V		**2.03**	**78**		**Pb**	**17 40 44.0**	**-1.3**
ANIG	**Ahuacatlan**	**2.25**	**29**	i P	**Pn**	**17 40 44.5**	**-1.2**
ANIG				i S	**Sn**	**17 41 13.2**	**-0.3**
ANIG	**Ahuacatlan**	**2.25**	**29**		**Pn**	**17 40 44.5**	**-1.2**
ANIG					**Sn**	**17 41 13.2**	**-0.3**
MMIG	**Aquila**	**2.38**	**109**	eP	**Pn**	**17 40 47.3**	**+0.1**
MMIG				eS	**Sn**	**17 41 15.7**	**-0.7**
MMIG	**Aquila**	**2.38**	**109**		**Pn**	**17 40 47.3**	**+0.1**
MMIG					**Sn**	**17 41 15.7**	**-0.7**
ARIG	**Puente Sto Nin**	**5.14**	**98**	eP	**Pn**	**17 41 28.6**	**+3.2**
ARIG	**Puente Sto Nin**	**5.14**	**98**		**Pn**	**17 41 28.6**	**+3.2**
SLBS	**Sierra La Lagu**	**6.04**	**320**	Pn	**Pn**	**17 41 38.7**	**+0.9**
TLIG	**Tlapa**	**6.95**	**101**		**Pn**	**17 41 53.7**	**+3.4**
TXAR	**Lajitas Array**	**10.37**	**10**	Pn	**Pn**	**17 42 41.4**	**+4.2**
	0.1nm,0.3s,baz=194,slow=15,SNR=1.9						
121A	**Cookes Peak, D**	**13.52**	**352**	Pn	**Pn**	**17 43 22.6**	**+2.3**
ABTX	**Abilene, Hawle**	**14.54**	**21**	Pn	**Pn**	**17 43 35.2**	**+1.1**
BNM	**Barren Site**	**15.03**	**357**	Pn	**Pn**	**17 43 40.5**	**-0.4**
MSTX	**Muleshoe**	**15.05**	**9**	Pn	**Pn**	**17 43 42.2**	**+1.1**
113A	**Mohawk Valley,**	**15.43**	**334**	Pn	**Pn**	**17 43 46.2**	**+0.2**
113A				IAmb	IAmb	17 43 56.7	
	comp=Z,13nm,1.6s						
ANMO	**Albuquerque**	**15.81**	**358**	Pn	**Pn**	**17 43 52.7**	**+1.5**
X18A	**Snowflake**	**15.84**	**347**		**P**	**17 43 55.0**	**-0.3**
X18A				IAmb	IAmb	17 44 04.5	
	comp=Z,20nm,2.0s						
WUAZ	**Wupatki**	**17.12**	**344**	Pn	**Pn**	**17 44 08.7**	**+0.9**
WUAZ				IAmb	IAmb	17 44 17.0	
	comp=Z,13nm,1.6s						
PASC	**Pasadena Art C**	**18.69**	**326**	P	**Pn**	**17 44 28.6**	**+1.7**
PASC				IAmb	IAmb	17 44 33.0	
	comp=Z,8.1nm,0.5s						
Q16A	**Castle Valley**	**20.32**	**348**	P	**P**	**17 44 38.4**	**-6.4**
FCAR	**Ozark Folk Cen**	**20.59**	**33**	P	**P**	**17 44 47.7**	**+0.3**
FCAR				IAmb	IAmb	17 44 48.3	
	comp=Z,6.5nm,0.7s						
PSUT	**Pine Spring**	**20.63**	**342**	P	Pn	17 44 53.0	+2.6
TMUT	**Trail Mountain**	**20.70**	**348**	P	Pn	17 44 50.5	-0.7
P17A	**Butcher Ranch,**	**20.78**	**349**	P	Pn	17 44 51.2	-0.8
CTU	**Camp Tracy**	**22.15**	**348**	P	**P**	**17 45 06.1**	**+1.8**
NVAR	**Mina Array Bea**	**22.17**	**333**	P	**P**	**17 45 06.7**	**+2.0**
	comp=Z,0.1nm,0.4s,baz=157,slow=12,SNR=2.1						
PDAR	**Pinedale Array**	**23.83**	**353**	P	**P**	**17 45 22.2**	**+0.5**
	comp=Z,0.6nm,0.8s,baz=156,slow=8.1,SNR=4.3						
LOHW	**Long Hollow**	**24.80**	**352**	P	**P**	**17 45 32.2**	**+1.6**
MOOW	**Moose Ponds**	**24.95**	**351**		P	17 45 42.1	+10
TKL	**Tuckaleechee C**	**25.44**	**45**	LR	LR	17 55 17.8	
	comp=Z,72nm,20.1s,baz=296,slow=36						
YKA	**Yellowknife Ar**	**43.81**	**354**	P	**P**	**17 48 13.5**	**-0.5**
	comp=Z,0.3nm,0.8s,baz=158,slow=7.3,SNR=3.1						
ILAR	**Eielson Array**	**53.22**	**339**	P	**P**	**17 49 24.9**	**-1.6**
	comp=Z,0.4nm,0.7s,baz=152,slow=7.7,SNR=5.6						

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*NEIC **12** 17:45:09.9±1.0, 36°.88N±0°.02×97°.89W±0°.06, h5km±7km, Error ellipse: s-maj=6.5km s-min=2.5km az=77.0*
*TUL **12** 17:45:09.7±1.3, 36°.89N±0°.02×97°.89W±0°.06, h3km±7km, ML3.5, mb_Lg3.4/117(NEIC), Error ellipse: s-maj=6.4km s-min=2.7km az=73.0*
*ANF **12** 17:45:10.1±0.5, 36°.90N×97°.89W, h5km, ML4.3/8, Error ellipse: s-maj=7.0km s-min=5.9km az=39.0*

ISC 12 17:45:09.9±1.0**, 36°.89N**±0°.02×**97°.88W**±0°.03**, h6km**±8km**, n104, σ0ˢ65**/87**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAN14	**Manchester OK**	**0.10**	**316**	Pg	**Pg**	**17 45 11.9**	**-0.1**
KAN05	**Bluff City Nor**	**0.22**	**1**	Pg	**Pg**	**17 45 14.4**	**+0.2**
KAN05				Sg	**Sg**	**17 45 17.8**	**+0.6**
KAN01	**Argonia South**	**0.28**	**20**		**Pg**	**17 45 14.4**	**-1.0**
KAN01				Sg	**Sg**	**17 45 19.9**	**+0.7**
KAN10	**Anthony SW Sta**	**0.29**	**324**		**Pg**	**17 45 15.6**	**0.0**
KAN13	**South Haven SW**	**0.34**	**68**		**Pg**	**17 45 16.9**	**+0.3**
KAN08	**Anthony NE Sta**	**0.35**	**348**		**Pg**	**17 45 16.7**	**+0.1**
KAN08				Sg	**Sg**	**17 45 21.6**	**+0.4**
CROK	**Carrier**	**0.39**	**193**		**Pg**	**17 45 17.6**	**+0.2**
CROK				Sg	**Sg**	**17 45 23.2**	**+0.7**
KAN12	**Harper NE Stat**	**0.42**	**347**		**Pg**	**17 45 18.1**	**+0.1**
U32A	**Winter Ranch,**	**1.03**	**241**	Pg	**Pg**	**17 45 28.9**	**-0.8**
U32A	**Winter Ranch,**	**1.03**	**241**	P		17 45 28.9	
	baz=60						
U32A				S		17 45 43.4	
	baz=60						
T35A	**Sooner Cattle**	**1.09**	**88**		**Pg**	**17 45 30.6**	**-0.2**
T35B	**Sooner Cattle**	**1.10**	**88**	P		17 45 30.7	
	baz=269,SNR=275						
T35B				S		17 45 45.1	
	baz=269						
OK029	**Liberty Lake**	**1.14**	**162**		**Pg**	**17 45 31.4**	**-0.4**
QUOK	**Quay**	**1.18**	**127**	Pg	**Pg**	**17 45 32.2**	**-0.3**
BCOK	**Bluff Creek, N**	**1.25**	**170**	Pg	**Pg**	**17 45 33.1**	**-0.7**
OK031	**S. Brethren Rd**	**1.25**	**138**		**Pg**	**17 45 33.4**	**-0.5**
OK030	**Cody Creek RV**	**1.30**	**137**		**Pn**	**17 45 34.1**	**-0.5**
OK030				Sg	**Sg**	**17 45 51.8**	**+0.1**
OK025	**Westminster Rd**	**1.37**	**161**		**Pn**	**17 45 35.5**	**-0.1**
OKCFA	**Oklahoma City**	**1.51**	**167**		**Pn**	**17 45 37.7**	**+0.2**
OKCSW	**OKLAHOMA CITY**	**1.52**	**166**		**Pn**	**17 45 37.9**	**+0.3**
OKCSW				Sg	**Sg**	**17 45 59.3**	**+0.6**
R32A	**Long Quarter,**	**1.67**	**337**	Pn	**Pn**	**17 45 40.2**	**+0.4**
R32A	**Long Quarter,**	**1.67**	**337**	P		17 45 40.2	
	baz=157,SNR=101						
R32A				S		17 46 02.5	
	baz=157						
FNO	**Franklin**	**1.67**	**166**		**Pb**	**17 45 40.6**	**-0.4**
TUL1	**Leonard**	**1.94**	**119**	P	**Pn**	**17 45 44.1**	**+0.6**
	baz=301						
TUL1				S	**Sb**	**17 46 09.8**	**-0.4**
	baz=301						
TUL1	**Leonard**	**1.94**	**119**		**Pn**	**17 45 44.0**	**+0.6**
TUL1	**Leonard**	**1.94**	**119**	P		17 45 44.1	
	baz=301,SNR=56						
TUL1				S		17 46 11.1	
	baz=301						
WMOK	**Wichita Mounta**	**2.27**	**199**	P	**Pn**	**17 45 48.3**	**+0.4**
	baz=18						
WMOK				S	**Sn**	**17 46 17.7**	**+1.6**
	baz=18						
WMOK	**Wichita Mounta**	**2.27**	**199**		**Pn**	**17 45 48.1**	**+0.2**
WMOK	**Wichita Mounta**	**2.27**	**199**	P		17 45 48.2	
	baz=18,SNR=20						
CBKS	**Cedar Bluff**	**2.42**	**323**	P	**Pn**	**17 45 50.1**	**0.0**
	baz=142						
CBKS				S	**Sn**	**17 46 21.0**	**+0.8**
	baz=142						
CBKS	**Cedar Bluff**	**2.42**	**323**	Pn	**Pn**	**17 45 50.4**	**+0.2**
CBKS				IAmb_Lg		17 46 27.0	
	comp=Z,113nm,0.8s						
CBKS	**Cedar Bluff**	**2.42**	**323**	P		17 45 50.1	
	baz=142,SNR=19						
KSU1	**Kansas State U**	**2.43**	**24**	P	**Pn**	**17 45 50.9**	**+0.7**
	baz=205						
KSU1				S	**Sn**	**17 46 21.4**	**+1.2**
	baz=205						
KSU1	**Kansas State U**	**2.43**	**24**	Pn	**Pn**	**17 45 50.7**	**+0.6**
KSU1	**Kansas State U**	**2.43**	**24**	P		17 45 50.8	
	baz=205,SNR=13						
KSU1				S		17 46 25.1	
	baz=205						
U38A	**Gravette**	**2.84**	**98**		**Pn**	**17 45 56.5**	**+0.6**
U38A	**Gravette**	**2.84**	**98**	P		17 45 56.8	
	baz=280,SNR=11						
X37A	**Clayton**	**3.07**	**138**		**Pn**	**17 45 59.7**	**+0.8**
X37A				IAmb_Lg		17 46 51.9	
	comp=Z,154nm,0.9s						
X37A	**Clayton**	**3.07**	**138**	P		17 45 59.9	
	baz=319						
HHAR	**Hobbs**	**3.23**	**100**	P		17 46 02.0	
	baz=282						
Z35A	**Perchaven, San**	**3.58**	**172**		**Pn**	**17 46 06.2**	**+0.2**
Z35A	**Perchaven, San**	**3.58**	**172**	P		17 46 06.6	
	baz=352						
Z35A				S		17 46 49.7	
	baz=352						
AMTX	**Amarillo**	**3.68**	**238**	P	**Pn**	**17 46 08.0**	**+0.7**
	baz=56						
AMTX				S	**Sn**	**17 46 52.4**	**+1.3**
	baz=56						
AMTX	**Amarillo**	**3.68**	**238**	Pn	**Pn**	**17 46 07.5**	**+0.1**
AMTX				IAmb_Lg		17 47 11.5	
	comp=Z,95nm,0.9s						
AMTX	**Amarillo**	**3.68**	**238**	P		17 46 09.6	
	baz=56,SNR=9.5						
S39A	**Bolivar**	**3.72**	**76**		**Pn**	**17 46 08.2**	**+0.3**
S39A	**Bolivar**	**3.72**	**76**	P		17 46 08.3	
	baz=259,SNR=20						
W39A	**Magazine**	**3.72**	**116**	P	**Pn**	**17 46 09.2**	**+1.3**
	baz=298						
W39A				S	**Sn**	**17 46 52.4**	**+0.4**
	baz=298						
W39A	**Magazine**	**3.72**	**116**	Pn	**Pn**	**17 46 07.8**	**-0.1**
N33A	**J Bar K, Exete**	**3.86**	**5**		**Pn**	**17 46 07.9**	**-2.0**
U40A	**Yellville**	**4.08**	**96**	P	**Pn**	**17 46 13.2**	**+0.4**
	baz=279						
U40A				S	**Sn**	**17 47 00.8**	**0.0**
	baz=279						
U40A	**Yellville**	**4.08**	**96**		**Pn**	**17 46 13.1**	**+0.4**
U40A				IAmb_Lg		17 47 27.9	
	comp=Z,89nm,0.8s						
U40A	**Yellville**	**4.08**	**96**	P		17 46 13.2	
	baz=279,SNR=22						
U40A				P		17 46 13.2	
	baz=279,SNR=22						
MIAR	**Mount Ida**	**4.21**	**122**	P	**Pn**	**17 46 15.6**	**+0.9**
	baz=305						
MIAR				S	**Sn**	**17 47 05.3**	**+1.2**
	baz=305						
MIAR	**Mount Ida**	**4.21**	**122**	Pn	**Pn**	**17 46 15.5**	**+0.9**
MIAR				IAmb_Lg		17 47 27.2	
	comp=Z,79nm,0.7s						
KSCO	**Kaye Shedlock'**	**4.31**	**301**		**Pn**	**17 46 16.3**	**+0.2**
KSCO				IAmb_Lg		17 47 28.4	
	comp=Z,81nm,0.8s						
Z38A	**Mt. Pleasant**	**4.33**	**146**		**Pn**	**17 46 16.5**	**+0.3**
Z38A				IAmb_Lg		17 47 31.1	
	comp=Z,81nm,0.8s						
N35A	**Tabor**	**4.34**	**23**		**Pn**	**17 46 16.5**	**+0.2**
P38A	**Dawn**	**4.38**	**50**		**Pn**	**17 46 17.3**	**+0.4**
P38A				IAmb_Lg		17 47 36.6	
	comp=Z,58nm,0.8s						
P38A	**Dawn**	**4.38**	**50**	P		17 46 17.4	
	baz=233,SNR=7.8						
ABTX	**Abilene, Hawle**	**4.49**	**199**	IAmb_Lg		17 47 37.4	
	comp=Z,50nm,0.8s						
MGMO	**Mountain Grove**	**4.50**	**85**		**Pn**	**17 46 19.0**	**+0.4**
MGMO				IAmb_Lg		17 47 34.9	
	comp=Z,96nm,0.7s						
BGNE	**Belgrade**	**4.52**	**357**		**Pn**	**17 46 18.9**	**-0.1**
BGNE	**Belgrade**	**4.52**	**357**	P		17 46 19.2	
	baz=177						
R40A	**Maddies Statio**	**4.67**	**71**		**Pn**	**17 46 20.9**	**0.0**
R40A				IAmb_Lg		17 47 40.2	
	comp=Z,50nm,0.8s						
R40A	**Maddies Statio**	**4.67**	**71**	P		17 46 21.1	
	baz=254,SNR=16						
FCAR	**Ozark Folk Cen**	**4.75**	**100**	IAmb_Lg		17 47 44.9	

	comp=Z,104nm,0.7s						
X40A	**Basin Creek Fa**	**4.75**	**119**		**Pn**	**17 46 21.6**	**-0.5**
X40A				IAmb_Lg		17 47 49.7	
	comp=Z,60nm,0.8s						
WHAR	**Wooly Hollow**	**4.80**	**108**		**Pn**	**17 46 22.5**	**-0.2**
WHAR				IAmb_Lg		17 47 51.6	
	comp=Z,95nm,0.9s						
WHTX	**Lake Whitney,**	**4.89**	**176**		**Pn**	**17 46 23.2**	**-0.8**
WHTX	**Lake Whitney,**	**4.89**	**176**	P		17 46 24.1	
	baz=356						
MSTX	**Muleshoe**	**4.94**	**235**		**Pn**	**17 46 24.0**	**-0.8**
WLAR	**White Oak Lake**	**5.04**	**128**	IAmb_Lg		17 47 59.0	
	comp=Z,95nm,1.0s						
237A	**Washetta, Mont**	**5.16**	**160**	Pn	**Pn**	**17 46 27.1**	**-0.6**
237A				IAmb_Lg		17 48 05.3	
	comp=Z,56nm,1.1s						
OGNE	**Ogallala**	**5.19**	**323**		**Pn**	**17 46 27.1**	**-1.1**
OGNE				IAmb_Lg		17 48 04.1	
	comp=Z,71nm,0.7s						
L34A	**Svendsen Farm,**	**5.21**	**12**		**Pn**	**17 46 27.1**	**-1.2**
P40A	**Paris**	**5.29**	**58**		**Pn**	**17 46 29.3**	**-0.2**
P40A				IAmb_Lg		17 48 01.7	
	comp=Z,93nm,0.9s						
N38A	**Joes South For**	**5.33**	**41**		**Pn**	**17 46 29.9**	**0.0**
N38A	**Joes South For**	**5.33**	**41**	P		17 46 30.0	
	baz=224,SNR=7.4						
CCM	**Cathedral Cave**	**5.40**	**76**	Pn	**Pn**	**17 46 31.2**	**+0.1**
CCM				IAmb_Lg		17 48 07.0	
	comp=Z,72nm,0.7s						
T42A	**Van Buren**	**5.44**	**86**		**Pn**	**17 46 32.3**	**+0.8**
T42A				IAmb_Lg		17 48 12.9	
	comp=Z,45nm,0.9s						
K31A	**O'Neill**	**5.77**	**354**		**Pn**	**17 46 35.3**	**-0.8**
PBMO	**Poplar Bluff**	**5.97**	**89**	IAmb_Lg		17 48 23.8	
	comp=Z,64nm,0.7s						
FVM	**French Village**	**6.03**	**77**		**Pn**	**17 46 39.5**	**-0.1**
FVM				IAmb_Lg		17 48 21.5	
	comp=Z,82nm,0.9s						
435B	**Jarrell**	**6.09**	**178**	IAmb_Lg		17 48 33.5	
	comp=Z,62nm,0.9s						
SDCO	**Great Sand Dun**	**6.14**	**280**	Pn	**Pn**	**17 46 40.9**	**-0.5**
SCIA	**State Center**	**6.18**	**34**	Pn	**Pn**	**17 46 41.4**	**-0.2**
SLM	**Saint Louis**	**6.30**	**72**	IAmb_Lg		17 48 30.2	
	comp=Z,58nm,0.8s						
JCT	**Junction City**	**6.59**	**195**	IAmb_Lg		17 48 52.5	
	comp=Z,64nm,0.9s						
N41A	**Harden Midland**	**6.68**	**53**	Pn	**Pn**	**17 46 48.8**	**+0.3**
N41A				IAmb_Lg		17 48 44.4	
	comp=Z,67nm,0.8s						
ISCO	**Idaho Springs**	**6.74**	**298**	Pn	**Pn**	**17 46 48.3**	**-1.4**
ISCO				IAmb_Lg		17 48 44.3	
	comp=Z,45nm,1.0s						
ECSD	**EROS Data Cent**	**6.91**	**8**	Pn	**Pn**	**17 46 50.9**	**-0.8**
ECSD				IAmb_Lg		17 48 58.8	
	comp=Z,31nm,0.7s						
P43A	**Skaggs, Pawnee**	**7.13**	**65**	Pn	**Pn**	**17 46 54.2**	**-0.4**
P43A				IAmb_Lg		17 48 57.0	
	comp=Z,67nm,0.8s						
342A	**Flagon Creek P**	**7.17**	**138**	IAmb_Lg		17 49 18.2	
	comp=Z,28nm,0.8s						
ANMO	**Albuquerque**	**7.22**	**257**	IAmb_Lg		17 49 00.8	
	comp=Z,15nm,0.8s						
Q44A	**Meyer Farm, Va**	**7.29**	**71**	IAmb_Lg		17 49 15.1	
	comp=Z,52nm,0.9s						
PHWY	**Pilot Hill**	**7.36**	**309**	IAmb_Lg		17 49 08.1	
	comp=Z,27nm,0.7s						
SUSD	**Miller**	**7.59**	**354**	IAmb_Lg		17 49 15.1	
	comp=Z,52nm,0.8s						
HDIL	**Hopedale**	**7.64**	**59**	Pn	**Pn**	**17 47 01.8**	**+0.1**
O44A	**Mansfield**	**8.06**	**63**	Pn	**Pn**	**17 47 07.3**	**-0.2**
O44A				IAmb_Lg		17 49 48.2	
	comp=Z,38nm,0.8s						
MNTX	**Cornudas Mount**	**8.08**	**232**	Pn	**Pn**	**17 47 07.7**	**-0.2**
WVT	**Waverly**	**8.13**	**92**	Pn	**Pn**	**17 47 07.7**	**-0.7**
WVT				IAmb_Lg		17 49 30.2	
	comp=Z,26nm,0.8s						
L42A	**Oliver, Polo**	**8.15**	**49**	Pn	**Pn**	**17 47 08.3**	**-0.4**
L42A				IAmb_Lg		17 49 29.6	
	comp=Z,56nm,1.0s						
PLAL	**Pickwick Lake**	**8.18**	**101**	IAmb_Lg		17 49 27.2	
	comp=Z,30nm,0.8s						
USIN	**University of**	**8.20**	**79**	IAmb_Lg		17 49 41.3	
	comp=Z,54nm,1.1s						
JFWS	**Jewell Farm**	**8.40**	**42**	Pn	**Pn**	**17 47 11.6**	**-0.6**
JFWS				IAmb_Lg		17 49 37.4	
	comp=Z,44nm,0.8s						
T47A	**Sharon Grove**	**8.63**	**86**	IAmb_Lg		17 49 50.4	
	comp=Z,42nm,0.9s						
RWWY	**Rawlins**	**8.68**	**306**	IAmb_Lg		17 49 51.9	
	comp=Z,30nm,1.0s						
K22A	**Casper**	**8.80**	**314**	IAmb_Lg		17 49 59.3	
	comp=Z,31nm,0.9s						
P46A	**Rosedale**	**8.83**	**69**	IAmb_Lg		17 50 05.5	
	comp=Z,36nm,0.8s						
PV11	**David Mesa, Pa**	**8.84**	**282**	IAmb_Lg		17 50 01.2	
	comp=Z,31nm,1.2s						
Z47A	**Carrollton**	**8.84**	**112**	IAmb_Lg		17 50 02.8	
	comp=Z,25nm,0.9s						
PV16	**Nyswonger Mesa**	**8.88**	**283**	IAmb_Lg		17 50 09.8	
	comp=Z,22nm,1.3s						
PV23	**Carpenter Ridg**	**8.97**	**283**	IAmb_Lg		17 50 04.7	
	comp=Z,19nm,0.9s						
SFIN	**Lafayette**	**9.13**	**64**	IAmb_Lg		17 50 02.6	
	comp=Z,29nm,0.8s						
X48A	**Hartselle**	**9.14**	**102**	IAmb_Lg		17 50 03.3	
	comp=Z,32nm,0.8s						
SPMN	**Marine on St.**	**9.17**	**23**	IAmb_Lg		17 50 12.2	
	comp=Z,23nm,0.8s						
WCI	**Wyandotte Cave**	**9.30**	**78**	IAmb_Lg		17 50 19.9	
	comp=Z,27nm,0.7s						
CLTN	**Cedars of Leba**	**9.33**	**91**	IAmb_Lg		17 50 12.3	
	comp=Z,18nm,0.8s						
U49A	**Red Boiling Sp**	**9.72**	**89**	IAmb_Lg		17 50 19.9	
	comp=Z,26nm,1.2s						
SWET	**Sewanee**	**9.82**	**96**	IAmb_Lg		17 50 19.1	
	comp=Z,32nm,1.1s						
Y49A	**Blount Mountai**	**9.84**	**105**	IAmb_Lg		17 50 33.0	
	comp=Z,26nm,0.8s						
E28A	**Huff**	**9.91**	**349**	IAmb_Lg		17 50 42.0	
	comp=Z,30nm,0.9s						

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*IDC **12** 18:01:05.2±1.7, 36°.12N×139°.49E, h108^{km}±12^{km}, mb3.0/5, mb1 3.2/6, mb1mx2.9/45, mbtmp3.4/6, Error ellipse: s-maj=36.8km s-min=10.7km az=67.0*

*JMA **12** 18:01:05.3±0.1, 36°.17N×139°.64E, h94^{km}±1^{km}, M2.9*

ISC 12 18:01:04.7±0.9**, 36°.18N**±0°.04×**139°.58E**±0°.06**, h103**^{km}±8^{km}**, n22,** σ0^{s}**72**/30**, mb3.4**/5**, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JRY	**Ryogami san**	**0.57**	**254**	P	**Pn**	**18 01 21.6**	**+0.3**
JRY				S	**Sn**	**18 01 33.4**	**-0.4**
JKT	**Katashina**	**0.65**	**336**	P	**Pn**	**18 01 21.9**	**-0.1**
JKT				S	**Sn**	**18 01 34.9**	**-0.1**
JOD2	**Odawara 2**	**1.00**	**204**	P	**Pn**	**18 01 25.0**	**-0.3**
JOD2				S	**Sn**	**18 01 40.5**	**-0.3**
JYN	**Shimob**	**1.08**	**231**	P	**Pn**	**18 01 26.7**	**+0.4**
JYN				S	**Sn**	**18 01 42.7**	**+0.2**
MJAR	**Matsushiro Arr**	**1.17**	**289**	P	**Pn**	**18 01 27.5**	**+0.4**
	2.0nm,0.3s,baz=108,slow=9.8,SNR=86						
MJAR				S	**Sn**	**18 01 43.7**	**-0.4**
	1.4nm,0.3s,baz=291,slow=41,SNR=5.1						
MAT	**Matsushiro**	**1.17**	**289**	P	**Pn**	**18 01 27.6**	**+0.4**
MAT				*e*S	**Sn**	**18 01 44.2**	**+0.1**
MAT	**Matsushiro**	**1.17**	**289**	P	**Pn**	**18 01 27.6**	**+0.4**
MAT				*e*S	**Sn**	**18 01 44.9**	**+0.8**
JFNN	**Fujinakano**	**1.22**	**217**	P	**Pn**	**18 01 28.6**	**+0.8**
JFNN				S	**Sn**	**18 01 45.7**	**+0.5**
JFY	**Yanaizu**	**1.23**	**5**	P	**Pn**	**18 01 28.3**	**+0.4**
JFY				*e*S	**Sn**	**18 01 46.6**	**+1.1**
JFT	**Otama**	**1.47**	**24**	P	**Pn**	**18 01 31.1**	**+0.4**
JFT				*e*S	**Sn**	**18 01 51.3**	**+0.9**
JNS	**Sasagawa**	**1.65**	**353**	P	**Pn**	**18 01 33.4**	**+0.5**
BSO1	**Boso 1**	**1.90**	**143**	P	**Pn**	**18 01 35.5**	**-0.1**
JHJ	**Hachijo jima 2**	**3.06**	**177**	P	**Pn**	**18 01 51.9**	**+0.6**
	21nm,0.3s,baz=355,slow=15,SNR=1.9						
JHJ				S	**Sn**	**18 02 27.1**	**0.0**
	19nm,0.3s,baz=72,slow=22,SNR=1.4						
ASAJ	**Asahikawa**	**8.26**	**15**	P	**Pn**	**18 02 59.0**	**-2.6**
	0.2nm,0.3s,baz=180,slow=33,SNR=6.0						
ASAJ				S	Sn	18 04 24.6	-8.4
	0.1nm,0.3s,baz=163,slow=30,SNR=2.0						
H11N2	**WAKE ISLAND Hy**	**29.03**	**117**	T	T	18 36 56.3	
	baz=313						
H11N1	**WAKE ISLAND Hy**	**29.03**	**117**	T	T	18 37 17.4	
	baz=313						
H11N3	**WAKE ISLAND Hy**	**29.04**	**117**	T	T	18 37 05.9	
	baz=313						
ZALV	**Zalesovo Beam**	**41.41**	**313**	P	**P**	**18 08 40.8**	**+0.1**
	0.3nm,0.3s,baz=104,slow=6.1,SNR=2.2						
MKAR	**Makanchi Array**	**43.33**	**303**	P	**P**	**18 08 56.1**	**-0.3**
	0.2nm,0.5s,baz=82,slow=8.7,SNR=3.6						
ILAR	**Eielson Array**	**51.00**	**32**	P	**P**	**18 09 56.0**	**+0.3**
	0.2nm,0.6s,baz=278,slow=6.3,SNR=2.2						
WRA	**Warramunga Arr**	**56.03**	**186**	P	**P**	**18 10 31.9**	**-0.9**
	0.2nm,0.5s,baz=1.8,slow=7.6,SNR=7.3						
ASAR	**Alice Springs**	**59.76**	**186**	P	**P**	**18 10 58.9**	**+0.1**
	0.4nm,1.1s,baz=344,slow=3.1,SNR=1.7						

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*IDC **12** 18:11:24.9±0.8, 28°.33N×66°.50E, h0^{km}, mb4.1/27, mb1 4.2/28, mb1mx4.0/59, mbtmp4.1/28, ML4.0/1, MS3.4/14, Ms1 3.4/14, ms1mx3.1/54, Error ellipse: s-maj=18.7km s-min=13.8km az=6.0*

*NEIC **12** 18:11:27.9±2.1, 28°.30N±0°.07×66°.44E±0°.09, h24^{km}±5^{km}, mb4.1/16, Error ellipse: s-maj=14.5km s-min=4.7km az=130.0*

*MOS **12** 18:11:29.3±1.1, 28°.49N×66°.55E, h34^{km}, mb4.3/15, Error ellipse: s-maj=9.1km s-min=5.0km az=78.7*

ISC 12 18:11:28.2±0.5**, 28°.39N**±0°.06×**66°.56E**±0°.05**, h20**^{km}**, n144,** σ1^{s}**30**/145**, mb4.1**/46**, MS3.3**/12**, 5C-10D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BHUJ	**Bhuj**	**5.82**	**151**	*e*P	**Pn**	**18 12 56.6**	**+3.2**
BHUJ				*e*S	**Sn**	**18 14 01.3**	**+1.7**
BHUJ				IAML		18 14 03.2	
	comp=E,94nm,0.3s						
BHUJ				IAML		18 14 03.9	
	comp=N,87nm,0.0s						
SARP	**Sargodha**	**6.36**	**55**	P	**Pn**	**18 13 00.7**	**-0.1**
KBL	**Kabul**	**6.49**	**18**	P	**Pn**	**18 13 03.7**	**+0.9**
KBL	**Kabul**	**6.49**	**18**	Pn	**Pn**	**18 13 03.7**	**+0.9**
KBL	**Kabul**	**6.49**	**18**	P	**Pn**	**18 13 03.9**	**+1.1**
HRA	**Herat**	**7.02**	**329**	Pn	**Pn**	**18 13 08.9**	**-1.2**
NIL	**Nilore**	**7.78**	**46**	P	**Pn**	**18 13 20.2**	**-0.1**
NIL	**Nilore**	**7.78**	**46**	Pn	**Pn**	**18 13 20.2**	**-0.1**
NIL	**Nilore**	**7.78**	**46**	P	**Pn**	**18 13 21.3**	**+1.0**
NIL				P	**Pn**	**18 13 21.3**	**+1.0**
KUDL	**Kundal**	**8.76**	**89**	*e*P	**Pn**	**18 13 36.4**	**+2.6**
KUDL				*e*S	**Sn**	**18 15 08.4**	**-3.6**
WSAR	**Wadi Sarin**	**8.79**	**236**	Pn	**Pn**	**18 13 30.9**	**-3.3**
	comp=N,1.5nm,0.3s,baz=65,slow=6.7,SNR=14						
WSAR				Sn	Sn	18 14 58.2	-14
	comp=N,0.5nm,0.3s,baz=78,slow=19,SNR=1.4						
WSAR				LR	LR	18 17 37.9	
	comp=N,95nm,21.3s,baz=84,slow=43						
WBK	**Wadi Bani Khal**	**8.94**	**232**	P	**Pn**	**18 13 33.7**	**-2.6**
JLN	**Jalan Bani Buh**	**8.96**	**228**	P	**Pn**	**18 13 33.5**	**-3.0**
JLN				P	**Pn**	**18 13 33.5**	**-3.0**
DHRM	**DHARAMSHALA**	**9.26**	**63**	*e*P	**Pn**	**18 13 40.8**	**0.0**
DHRM				*e*S	**Sn**	**18 15 24.1**	**-0.4**
DHRM				IAML		18 15 26.9	
	comp=N,208nm,0.7s						
DHRM				IAML		18 15 27.4	
	comp=E,231nm,0.7s						
SMDO	**Samad**	**9.32**	**237**	P	**Pn**	**18 13 39.6**	**-2.0**
BANOM	**Banah**	**9.46**	**257**	P	**Pn**	**18 13 44.0**	**+0.6**
SHME	**Shamm**	**9.56**	**258**	P	**Pn**	**18 13 44.8**	**+0.1**
HOQ	**Hoqain**	**9.59**	**242**	P	**Pn**	**18 13 43.7**	**-1.5**
HOQ				P	**Pn**	**18 13 43.7**	**-1.5**
MDH	**Madha**	**9.66**	**254**	P	**Pn**	**18 13 45.3**	**-0.8**
MDH				P	**Pn**	**18 13 45.3**	**-0.8**
JMDO	**Jabal Madar**	**9.71**	**234**	P	**Pn**	**18 13 45.8**	**-1.0**
JMDO				P	**Pn**	**18 13 45.8**	**-1.0**
MASF	**Masafi**	**9.76**	**254**	P	**Pn**	**18 13 48.4**	**+1.0**
UOSS	**Minazif**	**9.87**	**252**		**Pn**	**18 13 46.6**	**-2.4**
UOSS	**Minazif**	**9.87**	**252**	P	**Pn**	**18 13 47.2**	**-1.8**
SOHO	**SOHO**	**9.94**	**247**	P	**Pn**	**18 13 49.7**	**-0.2**
SOHO				P	**Pn**	**18 13 49.7**	**-0.2**
ASHO	**Ashiyiah**	**10.10**	**251**	P	**Pn**	**18 13 52.9**	**+0.8**
ASHO				P	**Pn**	**18 13 52.9**	**+0.8**
BSY	**Bisya**	**10.14**	**238**	P	**Pn**	**18 13 51.9**	**-0.8**
BSY				P	**Pn**	**18 13 51.9**	**-0.8**
ARQ	**Araqi**	**10.34**	**243**	P	**Pn**	**18 13 55.7**	**+0.2**
BHPL	**Bhopal**	**11.05**	**115**	*e*S	**Sn**	**18 16 05.5**	**-2.7**
GEYT	**Alibeck**	**11.85**	**326**	LR	LR	18 19 19.1	
	comp=E,127nm,19.5s,baz=195,slow=40						
KSH	**Kashi**	**13.57**	**33**	P	Pn	18 14 35.0	-4.6
KSH				pP	P	18 14 43.5	-5.0
KSH				S	Sn	18 16 59.3	-11
KSH				pmax	pmax		
	comp=Z,17nm,0.4s						
KSH				pmax	pmax		
	comp=Z,140nm,5.2s						
KSH				LR	LR		
	comp=N,450nm,7.8s						
KSH				LR	LR		
	comp=E,230nm,6.6s						
KSH				LR	LR		
	comp=Z,490nm,15.4s						
IUG	**Iuzhnay**	**14.02**	**11**	*e*P	**Pn**	**18 14 45.1**	**-0.6**
	baz=11						
IUG	**Iuzhnay**	**14.02**	**11**	*e*P	**Pn**	**18 14 45.1**	**-0.6**
KKAR	**Karatay Array**	**15.03**	**11**	P	**Pn**	**18 14 58.8**	**-0.6**
KKAR	**Karatay Array**	**15.03**	**11**		**Pn**	**18 14 58.8**	**-0.6**
DANN	**Dangsing**	**15.15**	**86**	*e*P	**Pn**	**18 14 59.2**	**-2.2**
	comp=Z,8.6nm,0.3s						
AAK	**Ala-Archa**	**15.61**	**22**	Pn	**Pn**	**18 15 04.9**	**-2.2**
	comp=Z,0.4nm,0.3s,baz=160,slow=7.1,SNR=9.6						
AAK				LR	LR	18 22 24.1	
	comp=Z,166nm,18.5s,baz=217,slow=42						
AAK	**Ala-Archa**	**15.61**	**22**	⇓*e*P	**Pn**	**18 15 05.1**	**-2.0**
AAK	**Ala-Archa**	**15.61**	**22**	Pn	**Pn**	**18 15 04.5**	**-2.6**
GKN	**Gorkha**	**15.95**	**87**	*e*P	**Pn**	**18 15 09.7**	**-2.0**
DMN	**Daman**	**16.41**	**88**	*e*P	**Pn**	**18 15 16.6**	**-1.0**
KKN	**Kakani**	**16.54**	**88**	*e*P	**Pn**	**18 15 17.3**	**-1.9**
	comp=Z,19nm,0.6s						
PKIN	**Phulchoki**	**16.67**	**88**	*e*P	**Pn**	**18 15 20.4**	**-0.5**
	comp=Z,9.2nm,0.4s						
PKI	**Pulchoki**	**16.68**	**88**	*e*P	**Pn**	**18 15 19.8**	**-1.3**
	comp=Z,7.2nm,0.4s						
MDOK	**Medeo**	**17.00**	**27**	*e*P	**Pn**	**18 15 25.9**	**+0.9**
	baz=27						
MDOK	**Medeo**	**17.00**	**27**	*e*P	**Pn**	**18 15 25.8**	**+0.9**
GUN	**Gumba**	**17.05**	**87**	*e*P	**Pn**	**18 15 25.1**	**-0.8**
	comp=Z,56nm,0.7s						
KUU	**Kurty**	**17.35**	**24**	*e*P	**P**	**18 15 30.4**	**0.0**
	comp=Z,8.6nm,1.0s,baz=25						
KUU	**Kurty**	**17.35**	**24**	*e*P	**P**	**18 15 30.4**	**0.0**
KUU				pmax	pmax		
	comp=Z,9.0nm,1.0s						
SATY	**Saty**	**17.49**	**30**	*e*P	**P**	**18 15 32.2**	**+0.1**
	baz=30						
SATY	**Saty**	**17.49**	**30**	*e*P	**P**	**18 15 32.2**	**+0.1**
CHKK	**Chushkaly**	**17.56**	**26**	*e*P	**Pn**	**18 15 32.2**	**+0.5**
	baz=26						
CHKK	**Chushkaly**	**17.56**	**26**	*e*P	**Pn**	**18 15 32.2**	**+0.5**
RAMN	**Ramite**	**17.82**	**90**	*e*P	**Pn**	**18 15 34.5**	**-0.7**
	comp=Z,22nm,0.6s						
KPKS	**Kokpek**	**17.94**	**30**	*e*P	**Pn**	**18 15 36.3**	**-0.2**
	comp=Z,7.9nm,0.8s,baz=30						
KPKS	**Kokpek**	**17.94**	**30**	*e*P	**Pn**	**18 15 36.3**	**-0.2**
KPKS				pmax	pmax		
	comp=Z,8.0nm,0.8s						
SHLS	**Shalkode**	**18.05**	**32**	*e*P	**P**	**18 15 40.0**	**+1.7**
	baz=33						
SHLS	**Shalkode**	**18.05**	**32**	*e*P	**P**	**18 15 39.9**	**+1.7**
ODAN	**Odare**	**18.53**	**90**	*e*P	**P**	**18 15 42.8**	**-0.9**
	comp=Z,18nm,0.7s						
TAPN	**Taplejung**	**18.73**	**88**	*e*P	**P**	**18 15 45.2**	**-0.9**
	comp=Z,12nm,0.7s						
GNI	**Garni**	**21.45**	**309**	P	**P**	**18 16 16.7**	**+1.4**
	comp=Z,4.9nm,0.7s,baz=226,slow=20,SNR=2.5						
GNI				LR	LR	18 25 38.9	
	comp=Z,46nm,19.4s,baz=98,slow=40						
GNI	**Garni**	**21.45**	**309**	P	P	18 16 06.9	-8.4
GNI				IAmb	IAmb	18 16 29.9	
	comp=Z,7.7nm,0.8s						
ABKAR	**Akbulak array**	**21.45**	**348**		**P**	**18 16 12.8**	**-2.3**
ABKAR				IAmb	IAmb	18 16 30.4	
	comp=Z,6.1nm,1.0s						
ABKAR	**Akbulak array**	**21.45**	**348**	P	**P**	**18 16 13.1**	**-2.0**
LSA	**Lhasa**	**21.54**	**81**	P	**P**	**18 16 19.0**	**+2.3**
LSA				pmax	pmax		
	comp=Z,12nm,1.0s						
LSA	**Lhasa**	**21.54**	**81**	P	**P**	**18 16 17.3**	**+0.6**
LSA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
LSA	**Lhasa**	**21.54**	**81**	P	**P**	**18 16 17.3**	**+0.6**
LSA				IAmb	IAmb	18 16 29.3	
	comp=Z,5.1nm,0.8s						
MAKZ	**Makanchi**	**22.01**	**29**	P	**P**	**18 16 20.7**	**-0.4**
MAKZ				pmax	pmax		
	comp=Z,7.0nm,0.5s						
MAKZ	**Makanchi**	**22.01**	**29**	P	**P**	**18 16 20.7**	**-0.4**
BRZS	**Berezniki**	**22.07**	**11**	*e*P	**P**	**18 16 22.2**	**+0.5**
	baz=11						
BRZS	**Berezniki**	**22.07**	**11**	*e*P	**P**	**18 16 22.2**	**+0.5**
MK31	**Makanchi Array**	**22.13**	**30**	*de*P	**P**	**18 16 21.4**	**-1.1**
MK31	**Makanchi Array**	**22.13**	**30**	P	**P**	**18 16 21.2**	**-1.3**
MK31				IAmb	IAmb	18 16 24.9	
	comp=Z,3.8nm,0.6s						
MKAR	**Makanchi Array**	**22.13**	**30**	P	**P**	**18 16 21.6**	**-0.9**
	comp=Z,3.7nm,0.6s,baz=209,slow=9.7,SNR=32						
MKAR				LR	LR	18 26 42.2	
	comp=Z,187nm,21.3s,baz=219,slow=41						
MKAR	**Makanchi Array**	**22.13**	**30**	P	**P**	**18 16 20.9**	**-1.5**
SHL	**Shillong**	**22.74**	**91**	P	**P**	**18 16 27.7**	**-1.6**
SHL				pmax	pmax		
	comp=Z,7.0nm,1.0s						
SHL	**Shillong**	**22.74**	**91**	P	**P**	**18 16 27.7**	**-1.6**
SHL				IAmb	IAmb	18 16 44.2	
	comp=Z,7.2nm,1.0s						
WMQ	**Urumqi**	**22.90**	**42**	*e*P	**P**	**18 16 30.7**	**-0.1**
WMQ				pP	pP	18 16 37.0	0.0
WMQ				sP	sP	18 16 43.9	+4.1
WMQ				pmax	pmax		
	comp=Z,22nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,220nm,4.5s						
AKTO	**Aktyubinsk**	**22.95**	**346**	P	**P**	**18 16 29.9**	**-1.3**
	comp=Z,0.8nm,0.6s,baz=297,slow=20,SNR=2.5						
AKTO				LR	LR	18 26 54.8	
	comp=Z,73nm,19.4s,baz=172,slow=40						
ZEI	**Tsey**	**23.27**	**314**	*e*P	**P**	**18 16 36.2**	**+1.6**
ZEI				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KURBB	**Kurchatov Arra**	**23.99**	**19**	P	**P**	**18 16 41.6**	**+0.2**
	comp=Z,2.4nm,0.7s,baz=211,slow=9.0,SNR=27						
KURK	**Kurchatov**	**24.10**	**19**	⇓*e*P	**P**	**18 16 43.0**	**+0.7**
KURK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KURK	**Kurchatov**	**24.10**	**19**		**P**	**18 16 42.8**	**+0.4**
NEY	**Neytrino**	**24.25**	**314**	⇑*e*P	**P**	**18 16 43.1**	**-0.9**
SEM	**Semipalatinsk**	**24.33**	**22**	*e*P	**P**	**18 16 44.5**	**-0.2**
	comp=Z,1.8nm,0.6s,baz=22						
SEM	**Semipalatinsk**	**24.33**	**22**	*e*P	**P**	**18 16 44.5**	**-0.2**
SEM				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KBZ	**Khabaz**	**24.38**	**315**	P	**P**	**18 16 45.5**	**+0.5**
	comp=Z,3.4nm,0.7s,baz=130,slow=8.1,SNR=10						
KBZ	**Khabaz**	**24.38**	**315**	*e*P	**P**	**18 16 46.2**	**+1.2**
KBZ				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KVAR	**Kislovodsk Arr**	**24.62**	**315**	P	**P**	**18 16 47.6**	**+0.3**
	comp=Z,1.6nm,0.5s,baz=129,slow=9.2,SNR=1.4						
KIV	**Kislovodsk**	**24.63**	**315**	*e*P	**P**	**18 16 48.7**	**+1.3**
KIV				pmax	pmax		
	comp=Z,22nm,1.0s						
KIV				MLR	MLR		
	comp=Z,70nm,15.0s						
BVAR	**Borovoye Array**	**24.78**	**6**	P	**P**	**18 16 48.5**	**0.0**
	comp=Z,1.4nm,0.5s,baz=156,slow=7.7,SNR=11						
BRVK	**Borovoye**	**24.80**	**5**	⇓*e*P	**P**	**18 16 50.3**	**+1.6**
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BRVK	**Borovoye**	**24.80**	**5**	P	**P**	**18 16 47.3**	**-1.4**
BRVK				IAmb	IAmb	18 16 51.3	
	comp=Z,7.1nm,1.1s						
PALK	**Pallekele**	**24.90**	**145**	LR	LR	18 28 23.3	
	comp=Z,68nm,18.1s,baz=71,slow=41						
DGZ	**Jazzator, Alta**	**26.59**	**31**	⇓*e*P	**P**	**18 17 06.2**	**+1.1**
DGZ				pmax	pmax		
	comp=Z,8.0nm,1.4s						
EIL	**Elat**	**27.62**	**280**	LR	LR	18 31 26.4	
	comp=Z,24nm,20.2s,baz=111,slow=44						
BELG	**Belogornoye**	**27.81**	**335**	P	**P**	**18 17 15.9**	**0.0**
	comp=Z,5.8nm,0.6s,baz=191,slow=5.2,SNR=3.2						
ZAA0	**Zalesovo Array**	**28.83**	**23**	P	**P**	**18 17 25.1**	**+0.2**
ZALV	**Zalesovo Beam**	**28.83**	**23**	P	**P**	**18 17 25.2**	**+0.3**
	comp=Z,1.0nm,0.5s,baz=232,slow=11,SNR=6.3						
ZALV				LR	LR	18 30 13.8	
	comp=Z,122nm,18.7s,baz=306,slow=39						
ZALV	**Zalesovo Beam**	**28.83**	**23**	P	**P**	**18 17 24.4**	**-0.5**
GTA	**Gaotai**	**29.56**	**59**	*e*P	P	18 17 38.2	+6.4
GTA				pP	sP	18 17 44.6	+3.4
GTA				sP	pP	18 17 48.7	+10
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KIRV	**Kirov**	**32.45**	**343**	⇓*e*P	**P**	**18 17 55.8**	**-0.9**
AKASG	**Malin Array Be**	**35.85**	**319**	P	**P**	**18 18 26.1**	**-0.4**
	comp=Z,0.9nm,0.5s,baz=118,slow=7.0,SNR=3.7						
AKBB	**Malin Array Si**	**35.85**	**319**	⇑*e*P	**P**	**18 18 25.7**	**-0.7**
AKBB				pmax	pmax		
	comp=Z,6.0nm,1.1s						
TLY	**Talaya**	**36.13**	**40**	P	**P**	**18 18 30.5**	**+1.7**
	comp=Z,2.2nm,0.4s,baz=102,slow=20,SNR=3.3						
TLY	**Talaya**	**36.13**	**40**	⇓*i*P	**P**	**18 18 29.9**	**+1.1**
TLY				pmax	pmax		
	comp=Z,2.0nm,0.6s						
TLY	**Talaya**	**36.13**	**40**	P	**P**	**18 18 30.4**	**+1.5**
MLR	**Muntele Rosu**	**36.23**	**309**	P	**P**	**18 18 30.8**	**+0.9**
	comp=Z,7.9nm,1.0s,baz=201,slow=0.5,SNR=6.0						
MLR	**Muntele Rosu**	**36.23**	**309**	P	**P**	**18 18 29.9**	**0.0**
SONM	**Songino Array**	**36.36**	**47**	P	**P**	**18 18 32.4**	**+1.4**
	comp=Z,1.8nm,0.8s,baz=252,slow=9.0,SNR=9.4						
SONM				LR	LR	18 36 49.0	
	comp=Z,44nm,20.8s,baz=324,slow=42						
SONM	**Songino Array**	**36.36**	**47**	P	**P**	**18 18 31.3**	**+0.3**
ULN	**Ulaanbaatar**	**36.79**	**47**	⇑*e*P	**P**	**18 18 35.8**	**+1.1**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BURAR	**Bucovina Array**	**37.26**	**312**	P	**P**	**18 18 38.0**	**-0.7**
HHC	**Hu-ho-hao-te**	**38.67**	**59**	*e*P	**P**	**18 18 51.3**	**+0.6**
HHC				pmax	pmax		
	comp=Z,8.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,120nm,7.6s						
WHN	**Wuhan**	**41.43**	**75**	⇓P	P	18 19 20.2	+6.7
FINES	**FINESS Array B**	**42.54**	**333**	P	**P**	**18 19 22.6**	**+0.4**
	comp=Z,2.0nm,0.6s,baz=126,slow=9.7,SNR=8.5						
FINES				LR	LR	18 40 27.2	
	comp=Z,90nm,18.6s,baz=286,slow=41						
FINES	**FINESS Array B**	**42.54**	**333**	P	**P**	**18 19 22.4**	**+0.2**
NRIK	**Noril'sk**	**42.77**	**11**	P	**P**	**18 19 24.4**	**+0.5**
	comp=Z,1.8nm,0.4s,baz=180,slow=2.9,SNR=2.3						
NRIK	**Noril'sk**	**42.77**	**11**	⇓*e*P	**P**	**18 19 25.1**	**+1.2**
NRIK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
NRIK	**Noril'sk**	**42.77**	**11**	P	**P**	**18 19 24.8**	**+0.8**
NRIK				IAmb	IAmb	18 19 30.4	
	comp=Z,3.9nm,1.1s						
GERES	**GERESS Array B**	**45.05**	**312**	P	**P**	**18 19 42.4**	**-0.2**
	comp=Z,1.4nm,0.8s,baz=92,slow=6.9,SNR=7.7						
KHC	**Kasperske Hory**	**45.16**	**312**	⇑*e*P	**P**	**18 19 43.7**	**+0.2**
KHC				pmax	pmax		
	comp=Z,18nm,2.4s						
DAVOX	**Davos/Dischmat**	**47.45**	**309**	P	**P**	**18 20 00.6**	**-1.1**
	comp=Z,0.7nm,0.4s,baz=153,slow=6.8,SNR=2.4						
HFS	**Hagfors**	**47.49**	**327**	P	**P**	**18 20 01.5**	**-0.1**
	comp=Z,4.2nm,0.7s,baz=108,slow=9.5,SNR=11						
KEST	**Kesra**	**48.45**	**294**	P	**P**	**18 20 10.6**	**+1.1**
	comp=Z,3.6nm,0.9s,baz=96,slow=10,SNR=4.3						
NB2	**NORSAR Subarra**	**48.93**	**328**	P	**P**	**18 20 11.9**	**-0.8**
	comp=Z,3.2nm,0.8s,baz=108,slow=7.9						
NB2	**NORSAR Subarra**	**48.93**	**328**	P	**P**	**18 20 12.6**	**-0.1**
	comp=Z,3.1nm,0.8s,baz=108,slow=7.9						
NOA	**NORSAR Array B**	**48.93**	**328**	P	**P**	**18 20 12.5**	**-0.2**
	comp=Z,1.6nm,0.7s,baz=108,slow=7.4,SNR=10						
KSRS	**Korea Array**	**51.51**	**63**	P	**P**	**18 20 33.0**	**+0.5**
	comp=Z,1.7nm,0.6s,baz=263,slow=6.4,SNR=7.0						
YAK	**Yakutsk**	**52.78**	**32**	⇑*e*P	**P**	**18 20 44.4**	**+2.8**
YAK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KLR	**Kul'dur**	**53.17**	**48**	⇓*e*P	**P**	**18 20 45.4**	**+0.7**
KLR				pmax	pmax		
	comp=Z,6.0nm,2.0s						
JNU	**Nakatsue**	**54.72**	**68**	LR	LR	18 46 28.7	
	comp=Z,112nm,19.4s,baz=294,slow=38						
EKA	**Eskdalemuir Ar**	**55.76**	**320**	P	**P**	**18 21 02.0**	**-1.4**
	comp=Z,0.5nm,0.3s,baz=101,slow=7.9,SNR=2.6						
EKA	**Eskdalemuir Ar**	**55.76**	**320**	P	**P**	**18 21 02.0**	**-1.4**
MDT	**Midelt**	**60.35**	**294**	LR	LR	18 52 48.0	

	comp=Z,22nm,18.2s,baz=140,slow=41						
TORD	Torodi Ar. Bea	61.87	270	P	P	18 21 45.6	-0.8
	comp=Z,1.7nm,0.8s,baz=68,slow=7.2,SNR=8.0						
TORD	Torodi Ar. Bea	61.87	270	P	P	18 21 45.1	-1.4
BORG	Borgarnes	63.82	331	LR	LR	18 51 35.0	
	comp=Z,46nm,18.3s,baz=51,slow=38						
WRA	Warramunga Arr	81.20	118	P	P	18 23 43.2	+0.3
	comp=Z,1.3nm,0.8s,baz=317,slow=5.0,SNR=9.7						
WRA	Warramunga Arr	81.20	118	*e*P	P	18 23 45.8	+2.9
WRA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
WRA	Warramunga Arr	81.20	118	P	P	18 23 42.7	-0.2
ASAR	Alice Springs	82.97	122	P	P	18 23 52.2	+0.1
	comp=Z,1.3nm,0.5s,baz=307,slow=5.1,SNR=23						
ASAR	Alice Springs	82.97	122	P	P	18 23 51.1	-1.1
ILAR	Eielson Array	83.56	14	P	P	18 23 53.8	-0.7
	comp=Z,0.5nm,0.6s,baz=305,slow=3.2,SNR=2.3						
YKA	Yellowknife Ar	89.43	1	P	P	18 24 23.7	+0.3
	comp=Z,1.4nm,0.9s,baz=357,slow=4.7,SNR=7.2						

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*IDC **12** 18:18:56.5±1.3, 41°.15S×86°.13W, h0^{km}, mb4.2/10, mb1 4.4/10, mb1mx4.2/28, mbtmp4.2/10, MS4.1/22, Ms1 4.1/22, ms1mx4.0/27, Error ellipse: s-maj=33.5km s-min=28.7km az=108.0*

*GCMT **12** 18:18:59.2±0.3, 41°.41S±0°.02×86°.37W±0°.02, h19^{km}±1^{km}, MW5.0/96, Moment Tensor Solution. s27,c32; s96,c123; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.68±.15; M$_{\theta\theta}$0.47±.13; M$_{\phi\phi}$0.21±.14; M$_{r\theta}$-0.07±.25; M$_{\theta\phi}$-3.13±.10; M$_{\phi r}$1.00±.26; Best double couple: M$_0$3.29900×10^{16} NP1:φ$_s$269.00000°, δ71.00000°, λ-175.00000°. NP2: φ$_s$178.00000°, δ85.00000°, λ-19.00000°. Principal axes: T 3.6060, Plg10.0000°, Azm225.0000°; N -0.6140, Plg70.0000°, Azm345.0000°; P -2.9910, Plg17.0000°, Azm132.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **12** 18:19:03.2±1.6, 40°.22S±0°.10×85°.9W±0°.2, h10^{km}±2^{km}, mb4.6/33 Error ellipse: s-maj=24.1km s-min=10.1km az=232.0*

ISC 12 18:18:58.9±1.0**, 41°.0S**±0°.2×**85°.9W**±0°.1**, h10^{km}, n70, σ1^{s}.35**/47**, mb4.5**/20**, MS4.0**/21**, West Chile Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H03S2	Juan Fernandez	9.00	40	T	T	18 31 05.5	
	baz=214,slow=73,SNR=345						
H03S1	Juan Fernandez	9.01	40	T	T	18 31 03.0	
	baz=214,slow=73,SNR=277						
H03S3	Juan Fernandez	9.02	40	T	T	18 31 09.0	
	baz=214,slow=73,SNR=483						
H03N3	Juan Fernandez	9.31	39	T	T	18 31 30.3	
	baz=214,slow=72,SNR=113						
H03N2	Juan Fernandez	9.32	38	T	T	18 31 25.5	
	baz=214,slow=72,SNR=114						
H03N1	Juan Fernandez	9.33	39	T	T	18 31 27.4	
	baz=214,slow=72,SNR=66						
PLCA	Paso Flores	11.59	94	Pn	Pn	18 21 51.4	+7.0
	0.1nm,0.3s,baz=274,slow=15,SNR=4.4						
PLCA				LR	LR	18 25 22.8	
	comp=Z,977nm,19.6s,baz=262,slow=33						
PLCA	Paso Flores	11.59	94	Pn	Pn	18 21 51.7	+7.3
BI02	San Fabin de	12.15	74		Pn	18 21 52.4	+0.2
VA03	San Esteban	14.72	61		Pn	18 22 27.2	0.0
ZON	Zonda	16.72	61	P	P	18 22 55.7	+0.1
ZON				IAmb	IAmb	18 23 04.0	
	comp=Z,52nm,1.3s						
CO01	Juntas del Tor	16.86	54	P	P	18 22 57.0	-0.3
LCO	Las Campanas	17.19	51		Pn	18 22 57.5	-1.9
LCO				IAmb	IAmb	18 23 07.3	
	comp=Z,84nm,1.8s						
AC05	El Transito	17.57	51	P	Pn	18 23 04.3	+0.3
AC02	Maricunga	19.74	50	P	P	18 23 28.9	-0.4
GO02	Mina Guanaco	20.79	46	P	P	18 23 40.8	+0.3
GO02				IAmb	IAmb	18 23 50.9	
	comp=Z,92nm,1.4s						
PB14	IPOC Station P	20.79	43	P	P	18 23 39.3	-1.3
PB10	IPOC Station P	21.63	41	P	P	18 23 47.3	-2.0
PB10				IAmb	IAmb	18 24 10.3	
	comp=Z,56nm,1.4s						
PB15	IPOC Station P	22.43	43	P	P	18 23 56.7	-1.4
LVC	Limon Verde	23.22	43	P	P	18 24 09.6	+3.1
	comp=Z,7.9nm,0.8s,baz=221,slow=9.8,SNR=3.6						
LVC				LR	LR	18 31 07.3	
	comp=Z,525nm,19.2s,baz=224,slow=31						
LVC	Limon Verde	23.22	43	P	P	18 24 04.4	-2.1
LVC				IAmb	IAmb	18 24 14.2	
	comp=Z,39nm,1.6s						
PB07	IPOC Station P	23.47	40	P	P	18 24 04.7	-4.1
PB07				IAmb	IAmb	18 24 14.4	
	comp=Z,22nm,1.2s						
RPN	Rapa Nui	23.77	298	LR	LR	18 30 48.5	
	comp=Z,559nm,20.1s,baz=136,slow=30						
PMSA	Palmer Station	26.94	159	LR	LR	18 31 55.3	
	comp=Z,226nm,21.3s,baz=322,slow=29						
CPUP	Villa Florida	27.72	67	P	P	18 24 47.1	-0.4
	comp=Z,1.4nm,0.4s,baz=236,slow=11,SNR=3.1						
CPUP				LR	LR	18 35 25.0	
	comp=Z,608nm,18.3s,baz=238,slow=35						
CPUP	Villa Florida	27.72	67	P	P	18 24 46.9	-0.6
LPAZ	La Paz	28.98	37	P	P	18 25 02.0	+2.5
	comp=Z,8.0nm,1.3s,baz=211,slow=6.1,SNR=6.8						
LPAZ				LR	LR	18 34 38.7	
	comp=Z,188nm,18.1s,baz=182,slow=32						
LPAZ	La Paz	28.98	37	P	P	18 24 57.3	-2.2
LPAZ				IAmb	IAmb	18 25 06.9	
	comp=Z,10nm,1.3s						
NNA	Nana	29.94	18	LR	LR	18 34 16.6	
	comp=Z,291nm,18.8s,baz=194,slow=30						
SIV	San Ignacio	32.85	48	P	P	18 25 34.8	+1.8
	comp=Z,4.2nm,1.0s,baz=238,slow=8.3,SNR=11						
ATAH	Atahualpa	34.35	13	LR	LR	18 36 27.3	
	comp=Z,384nm,21.2s,baz=211,slow=30						
SAML	Samuel	37.70	39	P	P	18 26 14.5	-0.1
BDFB	Brasilia	41.31	64	LR	LR	18 43 42.4	
	comp=Z,371nm,19.0s,baz=227,slow=36						
PTGA	Pitinga	46.41	37	P	P	18 27 26.5	+0.8
	comp=Z,9.1nm,0.8s,baz=209,slow=9.5,SNR=13						
PTGA	Pitinga	46.41	37	P	P	18 27 26.5	+0.8
PTGA				IAmb	IAmb	18 27 27.6	
	comp=Z,6.6nm,0.8s						
ROSC	El Rosal	46.80	16	LR	LR	18 44 44.0	
	comp=Z,442nm,21.8s,baz=224,slow=33						
SNAA	Sanae	49.55	156	P	P	18 27 49.0	-0.5
	comp=Z,6.2nm,1.1s,baz=304,slow=17,SNR=4.1						
SDV	Santo Domingo	51.56	19	P	P	18 28 04.7	-0.7
SDV				IAmb	IAmb	18 28 25.0	
	comp=Z,14nm,1.5s						
VNDA	Vanda	54.90	194	LR	LR	18 47 08.4	
	comp=Z,150nm,20.1s,baz=125,slow=31						
PPT	Papeete	58.96	273	LR	LR	18 46 32.6	
	comp=Z,104nm,22.0s,baz=63,slow=28						
RAR	Rarotonga	64.49	263	LR	LR	18 49 10.7	
	comp=Z,150nm,20.3s,baz=68,slow=28						
MAW	Mawson	69.18	168	LR	LR	18 58 13.4	
	comp=Z,69nm,20.0s,baz=238,slow=34						
URZ	Urewera	70.75	236	LR	LR	18 53 51.7	
	comp=Z,185nm,19.7s,baz=211,slow=30						
RPZ	Rata Peaks	71.01	228	LR	LR	18 53 57.8	
	comp=Z,159nm,18.9s,baz=122,slow=30						
TX31	Lajitas Ar. Si	71.88	344	P	P	18 30 22.3	+0.2
TX32	Lajitas Array	71.88	344	P	P	18 30 22.0	0.0
TX32				IAmb	IAmb	18 30 41.5	
	comp=Z,5.3nm,1.2s						
TXAR	Lajitas Array	71.88	344	P	P	18 30 22.4	+0.4
	comp=Z,0.6nm,0.9s,baz=153,slow=10,SNR=2.8						
TXAR				LR	LR	18 57 15.9	
	comp=Z,85nm,18.2s,baz=0.0,slow=32						
TXAR	Lajitas Array	71.88	344	P	P	18 30 21.6	-0.4
TIGA	Tifton	72.08	2	P	P	18 30 23.5	+0.4
WHTX	Lake Whitney,	73.39	350	P	P	18 30 29.6	-1.3
Y49A	Blount Mountai	74.47	360	P	P	18 30 38.0	+0.8
Y52A	Lilburn	74.49	2	P	P	18 30 38.4	+1.1
Y52A				IAmb	IAmb	18 30 54.4	
	comp=Z,16nm,1.4s						
MSTX	Muleshoe	76.19	346	P	P	18 30 47.7	+0.5
MSTX				IAmb	IAmb	18 31 04.3	
	comp=Z,9.5nm,1.1s						
ANMO	Albuquerque	77.89	343	P	P	18 30 57.6	+0.8
ANMO				IAmb	IAmb	18 31 07.9	
	comp=Z,4.2nm,1.1s						
N58A	Sunbury	81.86	7	P	P	18 31 17.8	-0.1
PRN	Pahroc Range	82.46	337	P	P	18 31 19.8	-1.6
PRN				IAmb	IAmb	18 31 34.6	
	comp=Z,9.7nm,1.3s						
TMUT	Trail Mountain	83.17	340	P	P	18 31 25.2	0.0
R11A	Troy Canyon, C	83.49	337	P	P	18 31 27.5	+0.8
NVAR	Mina Array Bea	84.41	335	P	P	18 31 29.9	-1.6
	comp=Z,0.1nm,0.3s,baz=155,slow=8.8,SNR=2.6						
K22A	Casper	85.31	345	P	P	18 31 35.9	+0.1
ELK	Elko	85.61	338	P	P	18 31 38.2	+0.7
ELK				IAmb	IAmb	18 31 49.1	
	comp=Z,4.4nm,1.2s						
BOSA	Boshof	85.90	125	LR	LR	19 04 38.0	
	comp=Z,83nm,18.6s,baz=200,slow=32						
PDAR	Pinedale Array	86.07	343	P	P	18 31 39.5	-0.2
	comp=Z,0.6nm,0.8s,baz=156,slow=4.6,SNR=3.7						
PDAR				LR	LR	19 03 40.6	
	comp=Z,55nm,18.9s,baz=144,slow=31						
DBIC	Dimbokro	87.57	79	LR	LR	19 06 10.8	
	comp=Z,56nm,19.6s,baz=198,slow=32						
HLID	Hailey	88.00	340	P	P	18 31 49.9	+0.9
HLID				IAmb	IAmb	18 31 54.4	
	comp=Z,4.0nm,1.1s						
DZM	Mont Dzumac	88.26	242	LR	LR	19 02 57.4	
	comp=Z,116nm,19.1s,baz=118,slow=30						
YHH	Holmes Hill	88.28	342	P	P	18 31 51.7	+1.3
TORD	Torodi Ar. Bea	96.66	78	P	P	18 32 27.8	-1.8
	comp=Z,0.6nm,0.8s,baz=230,slow=3.0,SNR=2.5						
TORD				LR	LR	19 11 46.0	
	comp=Z,60nm,21.8s,baz=245,slow=33						
TORD	Torodi Ar. Bea	96.66	78	P	P	18 32 31.5	+1.9
MKAR	Makanchi Array	169.66	52	PKP	PKPdf	18 39 05.8	-0.3
	comp=Z,0.8nm,1.1s,baz=107,slow=1.5,SNR=3.7						

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*IDC **12** 18:20:39.9±1.4, 23°.82S×66°.69W, h209^{km}±12^{km}, mb3.3/2, mb1 3.3/7, mb1mx3.2/32, mbtmp3.7/7, Error ellipse: s-maj=25.4km s-min=16.5km az=3.0*

*GUC **12** 18:20:40.9±0.5, 23°.92S×67°.06W, h243^{km}±9^{km}, ML4.4*

ISC 12 18:20:39.2±0.8**, 23°.91S**±0°.06×**66°.78W**±0°.08**, h216^{km}**±10^{km}**, n25, σ1^{s}.16**/40**, 6C, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	2.35	303	P	Pn	18 21 24.4	+1.5
	32nm,0.3s,baz=121,slow=7.2,SNR=217						
LVC				S	S	18 21 57.3	+0.7
	22nm,0.3s,baz=263,slow=21,SNR=25						
LVC	Limon Verde	2.35	303	*e*P	Pn	18 21 24.3	+1.5
LVC				*e*S	S	18 21 57.1	+0.6
PB15	IPOC Station P	2.56	285	⇑*i*P	Pn	18 21 26.5	+1.5
PB15				*i* S	S	18 22 01.0	+0.5
PB06	IPOC Station P	2.83	294	⇑*i*P	Pn	18 21 29.2	+1.3
PB06				*e*S	S	18 22 05.6	-0.1
PB06				IAML		18 22 06.9	
	comp=N,389nm,0.4s						
GO02	Mina Guanaco	2.85	243	⇑*i*P	Pn	18 21 29.2	+1.0
GO02				*e*S	S	18 22 06.7	+0.4
GO02				IAML		18 22 07.3	
	comp=N,1μm,0.3s						
PB09	IPOC Station P	3.09	312	*e*P	Pn	18 21 32.7	+1.7
PB09				*e*S	S	18 22 12.1	+0.9
PB03	IPOC Station P	3.31	303	⇑*i*P	Pn	18 21 34.5	+1.0
PB03				*e*S	S	18 22 15.0	-0.6
PB05	IPOC Station P	3.31	288	*e*P	Pn	18 21 34.3	+0.8
PB05				*e*S	S	18 22 14.2	-1.5
PB04	IPOC Station P	3.48	296	⇑*e*P	Pn	18 21 36.4	+1.0
PB10	IPOC Station P	3.48	276	⇑*i*P	Pn	18 21 36.1	+0.8
PB10				*e*S	S	18 22 17.5	-1.5
PB07	IPOC Station P	3.59	307	*e*P	Pn	18 21 37.8	+0.9
PB07				*e*S	S	18 22 20.6	-1.2
PB01	IPOC Station P	3.79	318	*i* P	Pn	18 21 40.0	+0.8
PB01				*e*S	S	18 22 25.2	-0.8
PB02	IPOC Station P	3.86	311	*e*P	Pn	18 21 40.5	+0.5
PB02				*e*S	S	18 22 25.6	-2.0
AC01	Pan de Azucar	4.12	236	*e*P	Pn	18 21 42.7	-0.3
AC01				*e*S	S	18 22 30.7	-2.4
PATCX	Punta Patache	4.38	314	*e*P	Pn	18 21 46.2	-0.1
PATCX				*e*S	S	18 22 36.8	-2.2
LPAZ	La Paz	7.69	350	P	Pn	18 22 29.3	+0.2
	comp=N,0.2nm,0.3s,baz=173,slow=8.1,SNR=2.2						
LPAZ				S	S	18 23 55.9	-0.7
	comp=N,0.1nm,0.3s,baz=333,slow=16,SNR=1.7						
CPUP	Villa Florida	8.90	108	P	Pn	18 22 43.0	-1.0
	comp=N,0.2nm,0.3s,baz=300,slow=9.3,SNR=5.7						
SIV	San Ignacio	9.53	35	P	Pn	18 22 50.8	-1.4
	comp=N,0.2nm,0.3s,baz=215,slow=16,SNR=3.7						
BDFB	Brasilia	19.46	68	P	P	18 24 50.7	+0.7
	comp=N,0.5nm,0.3s,baz=262,slow=11,SNR=5.4						
TORD	Torodi Ar. Bea	76.35	69	P	P	18 32 05.9	+0.9
	comp=N,0.6nm,0.6s,baz=239,slow=5.9,SNR=2.7						
YKA	Yellowknife Ar	94.11	340	P	P	18 33 33.1	+0.6
	comp=N,0.2nm,0.6s,baz=131,slow=4.6,SNR=4.3						
ASAR	Alice Springs	128.62	204	PKP	PKiKP	18 39 22.9	+0.9
	comp=N,0.2nm,0.6s,baz=110,slow=0.9,SNR=4.9						
WRA	Warramunga Arr	131.80	207	PKP	PKiKP	18 39 29.3	+0.9
	comp=N,0.4nm,0.9s,baz=157,slow=1.8,SNR=1.9						
ZALV	Zalesovo Beam	143.22	28	PKP	PKPdf	18 39 47.0	-0.2
	comp=N,0.3nm,0.3s,baz=270,slow=1.4,SNR=2.4						
MKAR	Makanchi Array	146.32	40	PKPbc	PKPab	18 39 55.0	-0.7
	comp=N,0.6nm,0.6s,baz=305,slow=2.6,SNR=11						

MAN 12 18:31:44.4, 17°.51N×120°.18E, h29^{km}, mb4.9, ML3.8, MS3.8, 2C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIPP	Brgy, Tapao	0.49	33	⇑*e*P	Pn	18 31 55.4	0.0
SIPP				*e*S	Sn	18 32 04.3	+1.4
APYP	Conner	1.07	71	*e*P	Pn	18 32 03.4	0.0
APYP				*e*S	Sn	18 32 16.8	-0.6
BOLP	Bolinao	1.15	193	*e*P	Pn	18 32 04.2	-0.4
BOLP				*e*S	Sb	18 32 20.1	-0.2
SMPP	San Manuel, Pa	1.44	160	*e*P	Pn	18 32 06.5	-2.0
SMPP				*e*S	Sn	18 32 26.3	-0.1
CVP	Callao Caves	1.58	83	⇑*e*P	Pn	18 32 11.1	+0.7
CAUP	Cauayan	1.67	110	*e*P	Pn	18 32 12.6	+1.0
CAUP				*e*S	Sn	18 32 32.6	+0.5
SGCP	Mt. Cagua	1.92	68	*e*P	Pn	18 32 15.6	+0.5
SGCP				*e*S	Sn	18 32 39.3	+1.0
BALP	Baler	2.21	143	*e*P	Pn	18 32 20.1	+0.9
BALP				*e*S	Sn	18 32 47.5	+2.0

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*LDG **12** 18:39:08.6±0.2, 51°.57N×15°.99E, h1^{km}, Ml3.8/18, Error ellipse: s-maj=5.6km s-min=3.1km az=14.0, Suspected Mining induced.*

*IDC **12** 18:39:10.0±0.6, 51°.56N×15°.90E, h0^{km}, mb3.1/1, mb1 3.4/8, mb1mx3.2/54, mbtmp3.4/8, ML2.9/6, MS3.0/1, Ms1 3.0/1, ms1mx2.2/28, Error ellipse: s-maj=9.5km s-min=5.6km az=106.0*

*IPEC **12** 18:39:09.0±0.3, 51°.58N×16°.11E, h0^{km}±1^{km}, ML3.4/3, Error ellipse: s-maj=3.7km s-min=1.7km az=61.0*

*DNK **12** 18:39:10.7±6.3, 51°.68N×15°.23E, h0^{km}±154^{km}, ML2.5*

*BGR **12** 18:39:10.7±0.4, 51°.52N×16°.00E, h1^{km}, ML3.4/9, Error ellipse: s-maj=4.4km s-min=2.2km az=42.0*

*UPP **12** 18:39:12.7±2.4, 51°.81N×15°.50E, h0^{km}, ML2.4, Suspected explosion*

ISC 12 18:39:07.3±0.6**, 51°.57N**±0°.02×**15°.97E**±0°.02**, h0^{km}, n135, σ2^{s}.36**/222**, 5C, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.76	164	*e*Pg	Pb	18 39 23.6	+0.2
KSP				*i* Sg	Sg	18 39 33.5	+1.8
KSP	Ksiaz	0.76	164	*e*Pg	Pb	18 39 23.8	+0.4
	SNR=75						
KSP				*e*Sg	Sg	18 39 33.6	+2.0
	SNR=15						
CHVC	Chvalec	0.99	177	*e*PG	Pb	18 39 28.2	+0.9
CHVC				*e*SG	Sg	18 39 40.1	+1.1
	comp=Z,446nm,0.5s						
OSTC	Ostas	1.03	171	*e*PG	Pb	18 39 28.8	+0.8
OSTC				*e*SG	Sg	18 39 41.1	+0.7
	comp=Z,457nm,0.3s						
UPC	Upice	1.07	179	*e*PG	Pb	18 39 29.4	+0.7
UPC				*e*SG	Sg	18 39 42.8	+1.2
	comp=Z,603nm,0.4s						
DPC	Dobruska-Polom	1.24	170	*e*PG	Pn	18 39 32.5	+0.5
DPC				*e*SG	Sg	18 39 48.2	+0.9
	comp=Z,566nm,0.5s						
DPC	Dobruska-Polom	1.24	170	*e*Pg	Pn	18 39 32.9	+0.8
	SNR=122						
DPC				*e*Sg	Sg	18 39 48.0	+0.7
	SNR=3.1						
PVCC	Panska Ves	1.37	221	*e*PG	Pb	18 39 35.3	+1.4
PVCC				*e*SG	Sn	18 39 52.9	+0.3
	comp=Z,2μm,1.0s						
PVCC	Panska Ves	1.37	221	*e*Pg	Pb	18 39 35.7	+1.9
	SNR=161						
BRG	Berggiesshubel	1.46	242	Pn	Pb	18 39 36.0	+0.7
BRG				Pg	Pg	18 39 37.5	+2.3
BRG				Sg	Sn	18 39 57.3	+2.6
BRG				Amp		18 39 57.7	
	comp=Z,794nm,0.3s						
KRLC	Kraliky	1.58	161	*e*PG	Pg	18 39 38.5	+0.8
KRLC				*e*SG	Sb	18 39 58.9	+0.8
	comp=Z,299nm,0.7s						
RUE	Ruedersdorf	1.63	305	*e*P	Pb	18 39 38.3	+0.1
RUE				*e*S	Sg	18 40 03.7	+4.0
RUE	Ruedersdorf	1.63	305	*e*Sg	Sg	18 40 03.2	+3.5
	SNR=6.7						
FBE	Freiberg	1.77	249	*e*Pg	Pg	18 39 43.0	+1.8
	SNR=17						
FBE				*e*Sg	Sg	18 40 06.9	+2.7
	SNR=2.7						
PRA	Prague	1.79	214	*e*PG	Pb	18 39 41.2	+0.1
PRA				*e*SG	Sg	18 40 05.4	+0.5
	comp=Z,376nm,1.4s						
PRU	Pruhonice	1.83	210	*e*PG	Pg	18 39 42.7	+0.3
PRU				*e*SG	Sg	18 40 07.2	+1.2
	comp=Z,310nm,0.6s						
GKP	Gorka Klasztor	1.87	24	*e*P	Pg	18 39 47.7	+4.6
CLL	Collm	1.88	263	*i* Pn	Pb	18 39 42.0	-0.5
	comp=Z,40nm,0.4s						
CLL				*i* Pg	Pg	18 39 44.8	+1.5
CLL				*e*		18 39 46.0	
CLL				*i*		18 39 48.5	
CLL				*i* Sg	Sg	18 40 09.6	+2.0
	comp=Z,127nm,0.5s						
CLL	Collm	1.88	263	*e*Pn	Pn	18 39 41.9	+1.2
	SNR=27						
MORC	Moravsky Berou	2.06	150	*e*PN	Pn	18 39 44.1	+0.9
MORC				*e*SG	Sb	18 40 12.3	+0.6
MORC	Moravsky Berou	2.06	150	*e*Pn	Pn	18 39 44.1	+0.9
	baz=334						
MORC				*e*Sg	Sb	18 40 12.2	+0.6
	comp=Z,220nm,0.6s,baz=334						
MORC	Moravsky Berou	2.06	150	*e*Pn	Pn	18 39 44.3	+1.1
	SNR=18						
OKC	Ostrava-Krasne	2.22	141	*e*PG	Pg	18 39 50.0	+0.1
OKC				*e*SG	Sg	18 40 18.9	+0.3
	comp=Z,208nm,0.5s						
OKC	Ostrava-Krasne	2.22	141	*e*Sg	Sg	18 40 19.3	+0.7
	SNR=5.6						
PBCC	Pribram	2.27	214	*e*PG	Pg	18 39 51.6	+0.8
PBCC				*e*SG	Sg	18 40 20.1	-0.2
TREC	Trest	2.30	188	*e*PG	Pg	18 39 51.4	0.0
TREC				*e*SG	Sg	18 40 21.5	+0.2
	comp=Z,168nm,0.7s						
TREC	Trest	2.30	188	*e*Pg	Pg	18 39 52.6	+1.2
	SNR=1.3						
VRAC	Vranov	2.30	170	Pn	Pb	18 39 48.9	-0.9
	comp=Z,3.0nm,0.3s,baz=345,slow=15,SNR=37						
VRAC				Pg	Pg	18 39 53.9	+2.5
	comp=Z,4.7nm,0.3s,baz=347,slow=15,SNR=17						
VRAC				Lg	Lg	18 40 21.6	
	comp=Z,42nm,0.3s,baz=76,slow=20,SNR=16						
VRAC	Vranov	2.30	170	*e*PN	Pn	18 39 48.2	+1.7
VRAC				*e*SG	Sg	18 40 21.0	-0.3
VRAC	Vranov	2.30	170	*e*Pn	Pn	18 39 48.2	+1.7
	baz=352						
VRAC				*e*Sg	Sg	18 40 20.9	-0.3
	comp=Z,176nm,0.5s,baz=352						
VRAC	Vranov	2.30	170	*e*Pn	Pb	18 39 49.0	-0.7
	SNR=14						
VRAC				*e*Sg	Sg	18 40 22.1	+0.9
	SNR=4.2						
TANN	Tannenbergstha	2.50	244	*e*Pn	Pn	18 39 51.4	+2.0
	SNR=60						
KRUC	Moravsky	2.53	174	*e*PN	Pn	18 39 51.4	+1.8
KRUC				*e*SG	Sg	18 40 28.1	-0.4
KRUC	Moravsky	2.53	174	*e*Pn	Pn	18 39 51.4	+1.8
	baz=356						
KRUC				*e*Sg	Sg	18 40 28.1	-0.4
	comp=Z,229nm,0.8s,baz=356						
GUNZ	Gunzen	2.60	244	*e*Pn	Pn	18 39 52.6	+1.9
	SNR=29						
NKC	Novy Kostel	2.60	240	*e*PN	Pn	18 39 52.7	+2.0
NKC				*e*PG	Pg	18 39 57.2	0.0
NKC				*e*SG	Sg	18 40 32.0	+1.0
	comp=Z,237nm,0.3s						
NKC	Novy Kostel	2.60	240	*e*Pn	Pn	18 39 52.9	+2.2
	SNR=120						
WERN	Wernitzgruen	2.62	242	*e*Pn	Pn	18 39 53.1	+2.2
	SNR=65						
PLN	Plauen	2.64	247	*e*Pn	Pn	18 39 53.0	+1.8
	SNR=12						
OJC	Ojcow	2.77	118	*e*Pn	Pn	18 39 52.3	-0.8
OJC				*e*Pg	Pg	18 40 01.3	+0.8
OJC				*e*Sn	Sn	18 40 25.7	-1.5
OJC				*e*Sg	Sg	18 40 37.3	+0.8
KHC	Kasperske Hory	2.89	213	*e*PN	Pn	18 39 56.2	+1.6
KHC				*e*PG	Pg	18 40 02.5	-0.1
KHC				*e*SN	Sn	18 40 31.6	+1.6
KHC				*e*SG	Sg	18 40 39.9	-0.1
	comp=Z,94nm,0.4s						
KHC	Kasperske Hory	2.89	213	*e*Pn	Pn	18 39 56.1	+1.5
	SNR=18						
MANZ	Manzenberg	2.92	239	*e*Pn	Pn	18 39 57.1	+2.0
	SNR=35						
JAVC	Velka Javorina	2.93	157	*e*PN	Pn	18 39 56.9	+1.7
CKRC	Cesky Krumlov	2.96	202	*e*PN	Pn	18 39 58.0	+2.5
CKRC				*e*PG	Pg	18 40 03.5	-0.5
CKRC				*e*SG	Sg	18 40 42.4	+0.1
ROTZ	Rotzenmuhle	3.00	234	*e*Pn	Pn	18 39 58.0	+1.9
	SNR=64						
GEC2	GERESS Array S	3.10	209	*e*Pn	Pn	18 39 59.7	+2.2
	SNR=11						
GERES	GERESS Array B	3.10	209	Pn	Pn	18 39 59.7	+2.2
	comp=Z,4.0nm,0.3s,baz=32,slow=13,SNR=106						
GERES				Pg	Pb	18 40 05.2	+1.9
	comp=Z,12nm,0.3s,baz=28,slow=17,SNR=33						
GERES				Sn	Sn	18 40 36.5	+1.3
	comp=Z,12nm,0.3s,baz=27,slow=20,SNR=7.3						
GERES				Lg	Lg	18 40 45.8	
	comp=Z,21nm,0.3s,baz=34,slow=26,SNR=7.3						
WET	Wettzell	3.14	220	*e*Pn	Pn	18 40 00.1	+2.1
	SNR=14						
SMOL	Smolenice	3.20	162	*e*PN	Pn	18 40 02.1	+3.2
SMOL				*e*PG	Pg	18 40 12.2	+3.5
SMOL				*e*SG	Sg	18 40 50.8	+0.6
SMOL				*e*LG	Lg	18 40 57.0	
LANS	Liptovska Anna	3.30	136	*e*PN	Pn	18 40 01.7	+1.4
LANS				*e*PG	Pg	18 40 11.2	+0.7
LANS				*e*SG	Sg	18 40 55.4	+2.1
LANS				*e*LG	Lg	18 41 02.1	
MODS	Modra-Piesok	3.31	165	*e*PN	Pn	18 40 01.9	+1.5
MODS				*e*PG	Pg	18 40 12.1	+1.3
MODS				*e*SG	Sg	18 40 56.6	+2.9
MODS				*e*LG	Lg	18 41 01.2	
ZST	Bratislava	3.46	167	*e*SG	Sg	18 40 59.6	+1.2
ZST				*e*LG	Lg	18 41 04.1	
CLZ	Clausthal	3.50	277	*e*Pn	Pn	18 40 05.7	+2.8
	SNR=9.0						
NIE	Niedzica	3.50	126	*e*Pg	Pg	18 40 15.1	+0.7
NIE				*e*Sg	Sg	18 41 00.6	+0.7
GRF	Grafenberg Arr	3.56	240	*e*Pn	Pn	18 40 06.1	+2.2
	SNR=22						
VYHS	Vyhne	3.59	148	*e*PN	Pn	18 40 05.6	+1.3
VYHS				*e*PG	Pg	18 40 22.2	+6.0
VYHS				*e*SG	Sg	18 41 04.8	+2.1
BSD	Bornholm Skovb	3.60	350	*e*	Pn	18 40 04.7	+0.4
	baz=225,slow=18						
BSD				*i* P	Pb	18 40 05.3	-6.5
BSD				*i* S	Sn	18 40 45.5	-2.1
BSD				IAML		18 41 11.2	
	comp=Z,6.7nm,0.4s						
CONA	Conrad Observa	3.65	181	*i* Pn	Pn	18 40 07.4	+2.3
	comp=Z,2.9nm,0.3s,SNR=9.8						
CONA				*i* Sg	Sg	18 41 06.6	+2.0
	comp=Z,120nm,0.5s						
UBBA	Unterbreizbach	3.83	261	*e*Pn	Pn	18 40 09.4	+2.0
	SNR=1.5						
MOA	Molln	3.89	197	*i* Pn	Pn	18 40 10.5	+2.1
	comp=Z,7.9nm,0.3s,SNR=22						
MOA				*e*Sg	Sg	18 41 14.0	+1.8
	comp=Z,86nm,0.5s						
LUNU	Lund	4.34	341	P	Pn	18 40 14.7	+0.2

LUNU				S	Sn	18 41 03.0	-2.6
ARSA	Arzberg	4.34	184	*i* Pn	Pn	18 40 18.7	+4.1
	comp=Z,2.1nm,0.3s						
ARSA				*e*Sg	Sg	18 41 26.3	-0.3
	comp=Z,46nm,0.5s						
CRVS	Cervenica-Dubn	4.42	125	*e*PN	Pn	18 40 17.0	+1.3
CRVS				*e*PG	Pg	18 40 33.9	+1.9
CRVS				*e*SG	Sg	18 41 31.3	+2.0
BLEU	Blekinge	4.74	359	P	Pn	18 40 21.2	+1.2
BLEU				S	Sn	18 41 12.3	-3.3
KASTN	Kahler Asten	4.75	268	*e*Pn	Pn	18 40 21.8	+1.7
	SNR=5.8						
KBA	Koelnbreinsper	4.82	202	*i* Pn	Pn	18 40 23.6	+2.4
	comp=Z,7.6nm,0.6s,SNR=13						
KBA				*e*Sg	Sg	18 41 44.7	+2.7
	comp=Z,48nm,0.6s						
KOLS	Kolonicke sedl	4.83	121	*e*PN	Pn	18 40 23.3	+2.0
KOLS				*e*PG	Pg	18 40 46.0	+6.2
KOLS				*e*SG	Sg	18 41 46.5	+4.1
BJUU	Bjuv	4.84	340	P	Pn	18 40 21.3	0.0
BJUU				S	Sn	18 41 14.4	-3.6
SOKA	Soboth	4.94	188	*i* Sg	Sg	18 41 44.4	-1.5
	comp=Z,18nm,0.7s						
SUW	Suwalki	5.01	58	*e*P	Pn	18 40 25.3	+1.6
DEL	Delary	5.06	347	P	Pn	18 40 24.7	+0.3
DEL				S	Sn	18 41 19.8	-3.7
WATA	Walderalm	5.12	216	*i* Pn	Pn	18 40 28.4	+3.0
	comp=Z,2.7nm,0.2s,SNR=4.7						
WATA				*i* Sn	Sn	18 41 26.9	+1.7
	comp=Z,6.9nm,0.3s						
OBKA	Obir	5.15	191	Pn	Pn	18 40 29.3	+3.5
	comp=Z,1.1nm,0.3s						
OBKA				*e*Sg	Sg	18 41 55.4	+2.6
	comp=Z,27nm,0.6s						
WTTA	Wattenberg	5.16	215	*i* Pn	Pn	18 40 29.0	+3.0
	comp=Z,1.6nm,0.2s,SNR=4.6						
WTTA				*e*Sn	Sn	18 41 30.5	+4.3
	comp=Z,8.1nm,0.5s						
WTTA				*e*Sg	Sg	18 41 54.8	+1.8
	comp=Z,28nm,0.5s						
MYKA	Terra Mystica	5.18	198	*e*Sg	Sg	18 41 55.8	+2.2
	comp=Z,15nm,0.5s						
MOTA	Moosalm	5.29	219	*i* Pn	Pn	18 40 30.0	+2.2
	comp=Z,2.8nm,0.3s,SNR=4.9						
MOTA				*e*Sg	Sg	18 42 00.6	+3.4
	comp=Z,12nm,0.3s						
ABTA	Abfaltersbach	5.34	207	*e*Sg	Sg	18 42 00.6	+1.9
	comp=Z,44nm,0.7s						
SQTA	Sankt Quirin	5.35	217	*i* Pn	Pn	18 40 31.1	+2.6
	comp=Z,4.2nm,0.2s,SNR=8.2						
SQTA				Sg	Sg	18 42 03.5	+4.3
	comp=Z,25nm,0.5s						
VXJU	Vaexsjoe	5.39	354	P	Pn	18 40 30.0	+1.1
VXJU				S	Sn	18 41 28.3	-3.4
VXJU	Vaexsjoe	5.39	354	P	Pn	18 40 30.0	+1.1
VXJU				S	Sn	18 41 28.3	-3.4
OSKU	Oskarshamn	5.63	1	P	Pn	18 40 33.5	+1.2
OSKU				S	Sn	18 41 34.6	-2.9
OSKU	Oskarshamn	5.63	1	P	Pn	18 40 33.5	+1.2
OSKU				S	Sn	18 41 34.6	-2.9
MORH	Mrgy, Hungar	5.64	161	⇑P	Pn	18 40 34.2	+1.8
FETA	Feichten	5.70	219	*i* Pn	Pn	18 40 35.9	+2.5
	comp=Z,1.2nm,0.4s						
FETA				Sg	Sg	18 42 15.5	+5.1
	comp=Z,7.6nm,0.4s						
AHRW	Bad Neuenahr-A	5.71	263	*e*Pn	Pn	18 40 35.9	+2.7
	SNR=3.7						
FABU	Falkenberg	5.76	342	P	Pn	18 40 34.4	+0.4
FABU				S	Sn	18 41 36.7	-4.0
DAVA	Damuels	5.85	225	*e*Pn	Pn	18 40 37.2	+1.8
	comp=Z,4.1nm,0.3s,SNR=6.5						
DAVA				*e*Sg	Sg	18 42 21.7	+6.6
	comp=Z,19nm,0.5s						
GNOU	Gnosjoe	5.87	348	P	Pn	18 40 36.7	+1.1
GNOU	Gnosjoe	5.87	348	P	Pn	18 40 36.7	+1.1
PABE	Paberze	6.18	47	*e*P	Pn	18 40 41.9	+2.1
DAVOX	Davos/Dischmat	6.24	222	Pn	Pn	18 40 42.0	+1.2
	comp=Z,0.5nm,0.3s,baz=24,slow=16,SNR=3.7						
DAVOX				Sn	Sn	18 41 50.0	-2.9
	comp=Z,0.6nm,0.3s,baz=344,slow=18,SNR=1.5						
DAVOX				Lg	Lg	18 42 26.5	
	comp=Z,1.0nm,0.3s,baz=12,slow=16,SNR=3.1						
BMR	Baia Mare	6.25	126	⇑P	Pb	18 40 55.8	-1.2
MUD	Monsted U'grnd	6.32	323	*i* P	Pn	18 40 41.7	+0.1
MUD	Monsted U'grnd	6.32	323	*e*P	Pn	18 40 41.8	+0.1
CDF	Champ du Feu	6.44	244	*e*Pn	Pn	18 40 43.6	+0.2
CDF	Champ du Feu	6.44	244	*e*Pg	Pg	18 41 11.2	+0.6
CDF				*e*Sg	Sg	18 42 30.5	-3.5
	comp=Z,51nm,0.9s						
DRGR		6.51	135	⇑P	Pn	18 40 46.1	+1.7
HINF	Hinteralfeld	7.01	241	*e*Pn	Pn	18 40 50.4	-0.8
HINF	Hinteralfeld	7.01	241	*e*Pg	Pg	18 41 19.8	-1.7
HINF				*e*Sg	Sg	18 42 47.4	-4.9
	comp=Z,31nm,0.8s						
BZS	Buzias	7.04	146	⇑P	Pn	18 40 54.7	+3.2
SLIT	Slitere, Latvi	7.09	29	*e*P	Pn	18 40 53.3	+1.1
HAU	Haudompre	7.18	244	*e*Pn	Pn	18 40 53.1	-0.4
HAU				*e*Sg	Sg	18 42 53.2	-4.6
	comp=Z,37nm,0.9s						
BURAR	Bucovina Array	7.20	120	⇑P	Pn	18 40 55.4	+1.6
GIVF	Givet	7.21	263	*e*Pn	Pn	18 40 53.7	-0.3
GIVF				*e*Sg	Sg	18 42 54.4	-4.5
	comp=Z,25nm,0.8s						
PAGF	Fort de Pagny	7.25	249	*e*Pn	Pn	18 40 52.6	-1.9
	baz=83						
PAGF				*e*Sg	Sg	18 42 54.4	-5.8
	comp=Z,38nm,0.8s						
NACGM	Naroch	7.29	59	*i* P	Pg	18 41 28.3	+1.3
NACGM				*i* P	Pg	18 41 28.3	+1.3
NACGM				*i* P	Pg	18 41 28.3	+1.3
NACGM				*i* S	Sg	18 43 11.1	+10
NACGM				*i* LR	LR	18 44 22.7	
SAVF	Savonnieres en	7.58	251	*e*Sg	Sg	18 43 03.7	-6.9
	comp=Z,38nm,1.1s						
BAIF	Baives	7.61	263	*e*Pn	Pn	18 40 57.1	-2.3
BAIF				*e*Sg	Sg	18 43 06.8	-4.7
	comp=Z,16nm,0.8s						
MEZF	Maizieres J'vi	7.67	251	*e*Sg	Sg	18 43 08.4	-5.2
	comp=Z,24nm,0.8s						
SFTF	Sexfontaines	7.83	249	*e*Pn	Pn	18 40 59.7	-2.7
SFTF				*e*Sg	Sg	18 43 14.5	-4.0
	comp=Z,22nm,0.8s						
CABF	La Chapelle	8.17	236	*e*Sg	Sg	18 43 23.9	-5.6
	comp=Z,36nm,0.9s						
AKASG	Malin Array Be	8.38	91	Pn	Pn	18 41 09.5	-0.4
	comp=Z,3.3nm,0.3s,baz=279,slow=12,SNR=19						
AKASG				Sn	Sn	18 42 41.1	-4.2
	comp=Z,1.0nm,0.3s,baz=278,slow=8.7,SNR=1.7						
AKASG				Lg	Lg	18 43 34.5	
	baz=269,slow=26,SNR=2.0						
MTSE	Matsula	8.44	29	*e*P	Pn	18 41 11.8	+1.0
LPL	La Plagne	8.62	229	*e*Pn	Pn	18 41 12.7	-0.7
LPG	La Plagne	8.62	229	*e*Pn	Pn	18 41 13.7	+0.1
LPG				*e*Sg	Sg	18 43 41.6	-2.4
	comp=Z,26nm,1.3s						
HFS	Hagfors	8.68	352	Pn	Pn	18 41 14.4	+0.5
	comp=Z,0.2nm,0.3s,baz=174,slow=15,SNR=6.1						
HFS				Sn	Sn	18 42 49.1	-3.3
	comp=Z,0.4nm,0.3s,baz=168,slow=23,SNR=4.2						
HFS				LR	LR	18 45 25.9	
	comp=Z,91nm,18.1s,baz=52,slow=43						
AAL	Aland	8.91	13	*e*P	Pn	18 41 18.9	+1.7
LOR	Lormes	8.99	246	*e*Pn	Pn	18 41 18.4	0.0
	baz=66						
LOR				*e*Sg	Sg	18 43 49.3	-6.6
	comp=Z,4.9nm,0.5s						
MBDF	Montbardon	9.20	225	*e*Pn	Pn	18 41 22.6	+1.2
MBDF	Montbardon	9.20	225	*e*Pg	Pn	18 41 55.1	+34
MBDF				*e*Sg	Sn	18 43 55.3	+50
	comp=Z,10nm,0.9s						
VSU	Vasula	9.26	38	*e*P	Pn	18 41 24.0	+2.1
SSF	Saint Saulge	9.31	246	*e*Pn	Pn	18 41 21.6	-1.1
SSF				*e*Sg	Sn	18 44 01.0	+53
	comp=Z,15nm,1.0s						
SMF	Signal de Mont	9.36	243	*e*Sg	Sn	18 44 00.8	+52
	comp=Z,13nm,0.8s						
ORIF	Oris-en-Rattie	9.46	229	*e*Pn	Pn	18 41 26.8	+1.9
ORIF				*e*Sg	Sn	18 44 03.9	+52
	comp=Z,22nm,1.2s						
AVF	Avril sur Loir	9.55	245	*e*Pn	Pn	18 41 24.7	-1.2
AVF				*e*Sg	Sn	18 44 07.4	+54
	comp=Z,9.6nm,0.9s						
SBF	Sospel	9.62	220	*e*Pn	Pn	18 41 24.8	-2.2
NOA	NORSAR Array B	9.85	346	Pn	Pn	18 41 29.6	-0.5
	comp=Z,0.0nm,0.3s,baz=155,slow=13,SNR=4.0						
NOA				Sn	Sn	18 43 13.6	-7.6
	comp=Z,0.0nm,0.3s,baz=190,slow=10.0,SNR=1.3						
BGF	Bois d'Agland	9.97	245	*e*Pn	Pn	18 41 30.5	-1.2
BGF				*e*Sg	Sn	18 44 19.9	+56
	comp=Z,10nm,0.6s						
FRF	La Foret Royal	10.19	222	*e*Pn	Pn	18 41 33.2	-1.6
SMRF	Simiane la Rot	10.32	227	*e*Pn	Pn	18 41 37.2	+0.6
LMR	La Mourre	10.43	221	*e*Pn	Pn	18 41 36.1	-2.0
FINES	FINESS Array B	11.34	25	Pn	Pn	18 41 49.6	-0.8
	comp=Z,0.3nm,0.3s,baz=220,slow=11,SNR=15						
FINES				Sn	Sn	18 43 50.1	-7.6
	comp=Z,0.4nm,0.3s,baz=209,slow=22,SNR=4.3						
EKA	Eskdalemuir Ar	12.00	296	Pn	Pn	18 41 57.0	-2.5
	baz=103,slow=14,SNR=2.5						
MKAR	Makanchi Array	42.27	69	P	P	18 47 04.6	+2.4
	comp=Z,0.2nm,0.6s,baz=308,slow=7.7,SNR=2.5						

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*ISK **12** 18:52:05.7, 38°.12N×38°.45E, h7^{km}, ML3.7/25*
*IDC **12** 18:52:06.5±1.3, 38°.06N×38°.36E, h0^{km}, mb3.2/3, mb1 3.3/6, mb1mx3.1/32, mbtmp3.2/6, ML2.1/2, MS2.2/2, Ms1 2.2/2, ms1mx2.1/18, Error ellipse: s-maj=21.6km s-min=12.9km az=4.0*
*DDA **12** 18:52:06.0, 38°.15N×38°.48E, h15^{km}±1^{km}, MW3.8*
ISC 12 18:52:06.0±1.2**, 38°.13N**±0°.02×**38°.47E**±0°.02**, h2**^{km}±10^{km}**, n66, σ0^{s}.84**/76**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MALT	Malatya	0.19	351	PG	Pg	18 52 10.4	+0.7
MALT				SG	Sg	18 52 13.7	+1.5
AKCD	Akcadag	0.46	292	*i* P	Pg	18 52 15.5	+0.7
AKCD				*i* S	Sb	18 52 22.4	-1.9
AKCD				IAML		18 52 23.0	
	comp=N,30µm,0.5s						
AKCD				IAML		18 52 24.0	
	comp=E,10µm,0.7s						
ELZG	Elazig	0.55	47	*i* P	Pg	18 52 16.4	-0.1
ELZG				*i* S	Sg	18 52 24.2	+0.5
ELZG				IAML		18 52 25.0	
	comp=N,9µm,0.5s						
ELZG				IAML		18 52 27.0	
	comp=E,11µm,0.5s						
ATAB	Bozova	0.67	192	*i* P	Pb	18 52 19.8	-0.6
URFA	Urfa	0.74	158	PG	Pg	18 52 20.1	0.0
URFA				SG	Sb	18 52 31.3	-0.9
HEKM	Malatya_Hekimh	0.85	332	*i* P	Pg	18 52 22.0	-0.3
DARE	Darende-Malaty	0.89	300	PG	Pg	18 52 22.7	-0.4
DARE				SG	Sb	18 52 35.4	-1.3
ARPR	Arapgir-MALATY	0.97	354	PG	Pg	18 52 23.9	-0.7
ARPR				SG	Sb	18 52 38.8	-0.2
SANL	SANLIURFA_Merk	1.04	156	*i* P	Pb	18 52 26.5	-0.2
SANL				*i* S	Sb	18 52 40.8	0.0
SANL				IAML		18 52 41.0	
	comp=E,1µm,0.6s						
SANL				IAML		18 52 44.0	
	comp=N,1µm,0.4s						
GZT	Gaziantep	1.05	223	*i* P	Pb	18 52 26.3	-0.7
ELBS	KAHRAMANMARAS	1.07	281	*i* P	Pg	18 52 26.4	0.0
CUGUR	Gurin_SVAS	1.11	303	*i* P	Pb	18 52 27.4	-0.6
KEMA	Kemaliye	1.14	1	*i* P	Pg	18 52 26.4	-1.4
KOVA	Elazig, Kovanc	1.21	61	*i* P	Pg	18 52 28.1	-1.0
SURC	SANLIURFA_SURC	1.25	175	*i* P	Pn	18 52 30.5	0.0
REFA	Refahiye_ERZN	1.29	10	*i* P	Pg	18 52 38.5	+7.8
TNCL	Tunceli-Merkez	1.30	40	*i* P	Pn	18 52 29.2	-2.1
KAHM	Kahramanmaras,	1.32	243	*i* P	Pn	18 52 30.8	-0.7
DIYA	Diyarbakir	1.32	98	*i* P	Pn	18 52 30.9	-0.6
DYBB	Diyarbakir	1.33	97	PN	Pn	18 52 31.2	-0.5
DYBB				SN	Sn	18 52 49.5	-0.6
GAZ	Gaziantep	1.38	227	PN	Pb	18 52 31.9	-0.6
GAZ				SN	Sn	18 52 51.2	0.0
KMRS	Kahramanmaras	1.39	244	PN	Pn	18 52 31.8	-0.6
KMRS				SN	Sg	18 52 51.2	+0.7
CUKAN	kangal_SIVAS	1.42	327	*i* P	Pn	18 52 32.2	-0.8
HCB	Kahramanmara	1.46	238	*i* P	Pn	18 52 32.6	-0.9
HANI	Diyarbakir_Han	1.55	79	*i* P	Pn	18 52 34.0	-0.7
SARI	SarD1z-Kayseri	1.64	281	PN	Pn	18 52 35.3	-0.7
SARI				SN	Sb	18 52 57.4	-0.8
MAZI	Mazidag	1.70	112	PN	Pn	18 52 36.8	-0.1
KAMA	Osmaniye	1.71	237	*i* P	Pb	18 52 37.3	-0.9
KUZU	Kuzuini	1.75	220	*i* P	Pg	18 52 40.8	+1.3
ERZN	Erzincan	1.76	34	PN	Pn	18 52 37.4	-0.2
ERZN				SN	Sn	18 53 00.6	-0.1
CUALT	Altinyayla-SIV	1.76	311	*i* P	Pb	18 52 38.8	-0.3
ANDN	Andirin	1.77	253	*i* P	Pn	18 52 36.8	-0.9
CUZAR	Zara_SIVAS	1.84	343	*i* P	Pb	18 52 40.2	-0.3
BNGB	Bingl	1.94	63	PN	Pn	18 52 40.4	+0.3
MARD	Mardin	2.00	113	*i* P	Pg	18 52 43.8	-0.6
YEDI	Yedisu-Bingol	2.09	50	PN	Pn	18 52 42.3	+0.1
KELT	Kelkit	2.11	17	*i* P	Pb	18 52 44.7	-0.5
SVAN	Silvan-Diyarba	2.15	88	PN	Pn	18 52 43.4	+0.4
BNN	Bunyan	2.18	290	PN	Pn	18 52 43.4	0.0
KOZT	Kozan	2.19	254	PN	Pn	18 52 43.0	-0.4
BTMN	Batman	2.23	95	*i* P	Pb	18 52 45.9	-1.1
ALUC	Giresun/Alucra	2.23	6	*i* P	Pn	18 52 44.9	+0.8
KARO	Karliova-Bingo	2.34	59	PN	Pn	18 52 45.9	+0.2
CEYT	Ceyhan	2.43	244	PN	Pn	18 52 46.9	+0.2
MIDY	Mardin/Midyat-	2.43	106	*i* P	Pb	18 52 51.1	+0.6
RSDY	Resadiye-TOKAT	2.44	339	PN	Pn	18 52 46.9	+0.1
MUSM	Mu-Merkez	2.46	75	*i* P	Pn	18 52 46.9	-0.4
VRTB	Varto-Mus	2.56	65	PN	Pn	18 52 49.2	+0.6
TOKT	Tokat	2.65	326	PN	Pn	18 52 50.3	+0.5
CMRD	Camardi-Nigde	2.79	262	PN	Pn	18 52 51.6	-0.2
ESPY	Espiye-Giresun	2.79	4	PN	Pn	18 52 52.4	+0.6
KARA	Karaisali	2.84	253	PN	Pn	18 52 52.6	+0.2
KRTS	Karatas	2.91	239	PN	Pn	18 52 53.9	+0.6
NIDE	Nigde/Merkez-G	2.92	269	*i* P	Pn	18 52 54.4	+0.9
KOZK	Kozakli-Nevseh	3.02	292	PN	Pn	18 52 54.7	-0.2
KTUT	Trabzon	3.03	19	PN	Pn	18 52 55.9	+0.9
SIRN	Sırnak	3.19	100	*i* P	Pn	18 52 56.6	-0.7
PERV	Siirt/Pervari-	3.22	92	*i* P	Pn	18 52 56.6	-1.1
KOPR	Koprukoy-ERZUR	3.23	54	PN	Pn	18 52 58.6	+0.7
BRTR	Keskin Array B	4.09	294	Pn	Pn	18 53 10.8	+1.2
	comp=N,1.0nm,0.3s,baz=118,slow=8.4,SNR=17						
BRTR				Pg	Pg	18 53 22.0	-2.3
	comp=N,2.0nm,0.3s,baz=124,slow=19,SNR=13						
BRTR				Lg	Lg	18 54 12.9	
	baz=240,slow=31,SNR=1.7						
BRTR				LR	LR	18 55 12.1	
	comp=N,37nm,20.9s,baz=338,slow=46						
GNI	Garni	5.28	66	Pn	Pn	18 53 30.7	+4.6
	comp=N,0.3nm,0.3s,baz=212,slow=18,SNR=1.6						
GNI				LR	LR	18 55 49.3	
	comp=N,22nm,18.0s,baz=357,slow=41						
MMAI	Mount Meron Ar	5.68	207	Pn	Pn	18 53 32.5	+1.1
	comp=N,1.6nm,0.3s,baz=18,slow=14,SNR=8.3						
MMAI				Pg	Pg	18 53 53.0	-1.7
	comp=N,4.6nm,0.3s,baz=47,slow=17,SNR=5.6						
MMAI				Lg	Lg	18 55 02.2	
	comp=N,3.9nm,0.3s,baz=31,slow=45,SNR=2.9						
EIL	Elat	8.93	200	Lg	Lg	18 56 45.4	
	comp=N,0.2nm,0.3s,baz=253,slow=19,SNR=1.5						
GERES	GERESS Array B	20.83	309	P	Pn	18 56 49.6	-1.7
	comp=N,0.1nm,0.3s,baz=96,slow=8.0,SNR=2.0						
FINES	FINESS Array B	24.59	346	P	P	18 57 28.2	+1.1
	comp=N,0.9nm,0.5s,baz=147,slow=11,SNR=7.1						
MKAR	Makanchi Array	33.11	61	P	P	18 58 44.6	+1.3
	comp=N,0.2nm,0.7s,baz=265,slow=9.8,SNR=3.0						

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*IDC **12** 19:00:37.1±6.1, 56°.29S×150°.47W, h0^{km}, mb4.1/3, mb1 4.3/3, mb1mx4.0/23, mbtmp4.1/3, MS3.7/10, Ms1 3.7/10, ms1mx3.5/19, Error ellipse: s-maj=561.2km s-min=51.3km az=165.0*
*NEIC **12** 19:00:38.7±3.0, 56°.3S±0°.2×150°.3W±0°.3, h10^{km}±1^{km}, mb4.3/6, Error ellipse: s-maj=37.4km s-min=25.1km az=5.0*
ISC 12 19:00:38.2±1.0**, 56°.3S**±0°.2×**150°.3W**±0°.2**, h10**^{km}**, n45, σ0^{s}.92**/18**, mb4.2**/7**, MS3.8**/12**, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	Vanda	26.89	201	LR	LR	19 13 58.8	
	comp=Z,206nm,21.6s,baz=72,slow=30						
VNDA	Vanda	26.89	201	P	P	19 06 20.6	+1.9
VNDA				IAmb	IAmb	19 06 23.0	
	comp=Z,15nm,1.4s						
RPZ	Rata Peaks	27.48	281	LR	LR	19 15 12.4	
	comp=Z,118nm,18.9s,baz=119,slow=32						
TBI	Tubuai	32.94	1	*e*T	T	19 42 25.1	
	comp=Z,26nm,0.3s						
QSPA	South Pole Qui	33.82	180	P	P	19 07 19.3	-1.0
QSPA				IAmb	IAmb	19 07 32.4	
	comp=Z,3.7nm,1.1s						
PPT2	Papeete2	38.67	1	*e*LR	LR	19 18 37.0	
	comp=Z,138nm,26.5s						
VAH	Vaihoa	41.06	4	*e*T	T	19 52 36.8	
	comp=Z,85nm,0.3s						
DZM	Mont Dzumac	46.66	299	*e*LR	LR	19 22 32.4	
	comp=Z,97nm,23.4s						
PLCA	Paso Flores	52.01	108	LR	LR	19 27 06.3	
	comp=Z,39nm,18.1s,baz=182,slow=30						
STKA	Stephens Creek	52.21	268	P	P	19 09 49.2	+0.2
	comp=Z,2.1nm,0.8s,baz=118,slow=4.6,SNR=4.3						
STKA				LR	LR	19 28 10.7	
	comp=Z,42nm,19.0s,baz=178,slow=32						
STKA	Stephens Creek	52.21	268	P	P	19 09 49.3	+0.2
H03S2	Juan Fernandez	52.50	96	T	T	20 06 48.6	
	baz=219,slow=74,SNR=95						
H03S1	Juan Fernandez	52.51	96	T	T	20 06 47.9	
	baz=219,slow=74,SNR=99						
H03S3	Juan Fernandez	52.52	96	T	T	20 06 47.9	
	baz=219,slow=74,SNR=146						
H03N3	Juan Fernandez	52.79	96	T	T	20 07 03.7	
	baz=222,slow=72,SNR=291						
H03N2	Juan Fernandez	52.80	96	T	T	20 07 02.0	
	baz=222,slow=72,SNR=549						
H03N1	Juan Fernandez	52.80	96	T	T	20 07 01.4	
	baz=222,slow=72,SNR=260						
MAW	Mawson	53.96	195	LR	LR	19 30 04.5	
	comp=Z,110nm,20.2s,baz=218,slow=33						
AS31	Alice Springs	62.84	268	P	P	19 11 03.9	-0.3
AS31				IAmb	IAmb	19 11 10.8	
	comp=Z,0.9nm,0.9s						
ASAR	Alice Springs	62.84	268	P	P	19 11 03.9	-0.3
	comp=Z,2.6nm,0.8s,baz=139,slow=6.4,SNR=20						
ASAR	Alice Springs	62.84	268	P	P	19 11 03.7	-0.5
H01W1	Cape Leeuwin H	64.64	245	T	T	20 21 15.8	
	baz=141,slow=76,SNR=19						
H01W2	Cape Leeuwin H	64.65	245	T	T	20 21 18.1	
	baz=141,slow=76,SNR=19						
H01W3	Cape Leeuwin H	64.66	245	T	T	20 21 20.7	
	baz=141,slow=76,SNR=22						
WRA	Warramunga Arr	65.57	271	P	P	19 11 21.2	-0.8
	comp=Z,1.3nm,0.8s,baz=155,slow=5.3,SNR=3.8						
WB0	Warramunga Arr	65.68	271	P	P	19 11 21.9	-0.9
WB0				IAmb	IAmb	19 11 28.9	
	comp=Z,3.3nm,1.1s						
FITZ	Fitzroy Crossi	71.89	265	LR	LR	19 43 15.6	
	comp=Z,58nm,18.6s,baz=144,slow=36						
LPAZ	La Paz	72.25	93	P	P	19 12 04.1	-0.3
JAY	Jayapura	76.39	286	LR	LR	19 43 43.6	
	comp=Z,46nm,18.1s,baz=78,slow=34						
TXAR	Lajitas Array	94.04	39	LR	LR	19 47 11.2	
	comp=Z,45nm,21.8s,baz=0.0,slow=30						
BOSA	Boshof	95.31	176	LR	LR	19 51 28.5	
	comp=Z,38nm,20.6s,baz=192,slow=32						
NVAR	Mina Array Bea	98.21	25	LR	LR	19 49 58.6	
	comp=Z,73nm,18.3s,baz=242,slow=30						
H10S3	ASCENSION HYDR	105.35	134	T	T	21 12 49.7	
	baz=204,slow=74,SNR=27						
H10S2	ASCENSION HYDR	105.35	134	T	T	21 12 51.2	
	baz=16,slow=74,SNR=10						
H10N3	ASCENSION HYDR	106.43	134	T	T	21 14 17.3	
	baz=203,slow=75,SNR=42						
H10N1	ASCENSION HYDR	106.43	134	T	T	21 14 17.7	
	baz=203,slow=75,SNR=51						
H10N2	ASCENSION HYDR	106.44	134	T	T	21 14 18.7	
	baz=203,slow=75,SNR=36						
ILAR	Eielson Array	120.80	2	PKP	PKiKP	19 19 29.4	+0.4
	comp=Z,0.3nm,0.6s,baz=194,slow=3.3,SNR=4.1						
ILAR	Eielson Array	120.80	2		PKiKP	19 19 31.3	+2.2
MK31	Makanchi Array	146.74	276		PKPbc	19 20 19.3	-0.1
MKAR	Makanchi Array	146.74	276	PKPbc	PKPbc	19 20 18.9	-0.6
	comp=Z,1.6nm,0.8s,baz=117,slow=4.6,SNR=21						
MKAR	Makanchi Array	146.74	276		PKPbc	19 20 19.1	-0.3
MAKZ	Makanchi	146.92	276		PKPab	19 20 20.9	-0.4
ZALV	Zalesovo Beam	149.13	289	PKPbc	PKPbc	19 20 25.1	-0.4
	comp=Z,0.5nm,0.6s,baz=126,slow=2.6,SNR=4.1						
ZALV	Zalesovo Beam	149.13	289		PKPbc	19 20 25.9	+0.4

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*SNET **12** 19:24:17.0±0.8, 13°.56N×90°.51W, h30^{km}±53^{km}, ML2.0*
*GCG **12** 19:24:19.7±0.3, 13°.65N×90°.57W, h32^{km}±1^{km}, MD3.3*
ISC 12 19:24:16.9±3.0**, 13°.5N**±0°.1×**90°.6W**±0°.1**, h32**^{km}±17^{km}**, n9, σ0^{s}.45**/14**, 1C-1D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCG	Pacaya	0.90	357	*e*P	Pb	19 24 34.7	+0.5
PCG				*e*S	Sn	19 24 46.2	+0.6
SBLS	San Blas	0.98	69	*e*P	Pn	19 24 34.2	-0.4
RTR	El Retiro	0.98	65	*e*P	Pn	19 24 34.5	0.0
RTR				*e*S	Sn	19 24 47.7	+0.2
FUG	Fuego 3	0.99	344	*e*P	Pb	19 24 35.7	0.0
FUG				*e*S	Sb	19 24 48.4	-0.2
SNJE	San Jose	1.00	68	*e*P	Pn	19 24 35.0	+0.1
NBG	Las Nubes	1.11	11	*e*P	Pb	19 24 37.8	0.0
NBG				*e*S	Sb	19 24 52.0	-0.1
LFRS	El Faro	1.46	85	*e*P	Pn	19 24 41.0	-0.2
LFRS				*e*S	Sn	19 24 59.7	+0.4
MTO3	Montecristo	1.48	52	⇑*i*P	Pn	19 24 40.5	-0.9
MTO3				IAML		19 25 05.9	
	comp=Z,24nm,0.8s						
MRL	Marmol	1.80	28	⇓*i*P	Pn	19 24 45.5	-0.4

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*IDC **12** 19:33:36.4±2.2, 8°.18S×121°.46E, h201^{km}±17^{km}, mb3.3/3, mb1 3.5/7, mb1mx3.2/33, mbtmp4.0/7, Error ellipse: s-maj=74.2km s-min=16.0km az=60.0*
*NEIC **12** 19:33:36.8±1.4, 8°.4S±0°.1×121°.3E±0°.1, h206^{km}±9^{km}, mb4.1/9, Error ellipse: s-maj=19.5km s-min=13.3km az=214.0*
*DJA **12** 19:33:37.8±0.5, 8°S±7°×12°1E±°, h192^{km}±4^{km}, M3.9/8, mb3.9/1, MLv3.9/8*
ISC 12 19:33:36.2±0.8**, 8°.47S**±0°.07×**121°.30E**±0°.06**, h200**^{km}**, n31, σ1^{s}.68**/39**, mb3.7**/4**, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDFI	Ende, Flores	0.48	126	P	Pn	19 34 04.6	+1.2
EDFI				S	Sn	19 34 24.6	+0.2
MMRI	Maumere	0.95	100		Pn	19 34 07.1	+1.4
MMRI	Maumere	0.95	100	P	Pn	19 34 07.0	+1.4
MMRI				S	Sn	19 34 29.0	+0.6
WSI	Waingapu	1.55	219	P	Pn	19 34 11.3	+0.9
BASI	Baing, Sumba	1.88	202	P	Pn	19 34 14.4	+0.9
BASI				S	Sn	19 34 43.8	+1.1
BATI	Baumata	2.91	127	P	Pn	19 34 26.5	+1.7
	35nm,0.3s,baz=342,slow=13,SNR=90						
BATI				S	Sn	19 35 04.2	+1.4
	58nm,0.3s,baz=60,slow=24,SNR=15						
BATI	Baumata	2.91	127	P	Pn	19 34 26.2	+1.4
SOEI	Soe	3.20	114		Pn	19 34 29.7	+1.3
SOEI	Soe	3.20	114	P	Pn	19 34 29.7	+1.3
PLAI	Plampang	3.50	264	P	Pn	19 34 33.8	+1.9
TWSI	Taliwang, Sumb	4.37	266	P	Pn	19 34 44.3	+1.6
JAGI	Jajag, Banyuwa	7.07	269	Pn	Pn	19 35 17.5	+0.1
LUWI	Luwuk	7.52	11	Pn	Pn	19 35 24.4	+1.0
FITZ	Fitzroy Crossi	10.46	157	P	Pn	19 36 03.0	+1.5
	0.3nm,0.3s,baz=338,slow=12,SNR=12						
FITZ				S	Sn	19 37 54.3	-4.0
	0.4nm,0.3s,baz=26,slow=12,SNR=2.7						
FITZ	Fitzroy Crossi	10.46	157		Pn	19 36 02.5	+1.0
MTN	Manton Dam	10.60	115		Pn	19 36 03.3	0.0
WB0	Warramunga Arr	16.94	133	P	P	19 37 21.9	+1.3
WRA	Warramunga Arr	17.01	133	P	P	19 37 22.7	+1.3
	0.8nm,0.3s,baz=310,slow=12,SNR=26						
WRA				S	S	19 40 24.4	-4.2
	0.2nm,0.3s,baz=297,slow=22,SNR=5.9						
WRA	Warramunga Arr	17.01	133	P	P	19 37 22.3	+0.8
WRAB	Tennant Creek	17.02	133	P	P	19 37 22.8	+1.4
WB2	Warramunga Arr	17.02	133	P	P	19 37 22.8	+1.3
WB2				IAmb	IAmb	19 37 29.7	
	comp=Z,13nm,1.5s						
WR0	Warramunga Arr	17.17	133	P	P	19 37 24.6	+1.5
WR0				IAmb	IAmb	19 37 25.2	
	comp=Z,7.0nm,0.8s						
AS31	Alice Springs	19.34	143	P	P	19 37 48.5	+1.7
AS31				IAmb	IAmb	19 37 49.6	
	comp=Z,2.6nm,0.4s						
ASAR	Alice Springs	19.34	143	P	P	19 37 48.6	+1.9
	comp=Z,1.0nm,0.3s,baz=319,slow=9.8,SNR=70						
ASAR				S	S	19 41 13.8	-1.1
	comp=Z,0.0nm,0.3s,baz=316,slow=23,SNR=4.3						
ASAR				ScP	ScP	19 45 15.2	-2.1

	comp=Z,0.0nm,0.3s,baz=320,slow=2.0,SNR=5.2						
ASAR	Alice Springs	19.34	143	P	P	19 37 48.7	+2.0
COEN	Coen	22.14	106	P	P	19 38 16.5	+0.5
COEN				IAmb	IAmb	19 38 24.6	
	comp=Z,6.9nm,1.2s						
BBOO	Buckleboo	27.82	153	P	P	19 39 06.9	0.0
STKA	Stephens Creek	29.98	144	P	P	19 39 27.8	+1.7
	comp=Z,3.3nm,0.4s,baz=322,slow=8.6,SNR=19						
STKA	Stephens Creek	29.98	144	P	P	19 39 28.1	+2.0
SONM	Songino Array	57.59	348	P	P	19 43 03.0	-2.2
	comp=Z,0.2nm,0.3s,baz=163,slow=5.4,SNR=2.2						
MKAR	Makanchi Array	65.05	332	P	P	19 43 54.2	-0.9
	comp=Z,0.4nm,0.6s,baz=137,slow=8.0,SNR=6.3						

IDC 12 19:48:48.4±1.9**,48°.80S**×**106°.35E,h0**^{km}**,mb3.7**/3**, mb1 3.9**/3**,mb1mx3.7**/16**,mbtmp3.7**/3**,MS3.4**/9**,Ms1 3.3**/9**, ms1mx3.2**/20**,Error ellipse: s-maj=58.2km s-min=48.6km az=115.0,Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H01W2	Cape Leeuwin H	15.04	25	T	T	20 07 42.1	
	baz=199,slow=74,SNR=26						
H01W1	Cape Leeuwin H	15.05	25	T	T	20 07 43.9	
	baz=199,slow=74,SNR=26						
H01W3	Cape Leeuwin H	15.06	25	T	T	20 07 41.2	
	baz=199,slow=74,SNR=28						
NWAO	Narrogin (SRO)	17.84	31	LR	LR	19 58 15.3	
	comp=Z,72nm,19.3s,baz=220,slow=32						
MAW	Mawson	28.74	213	LR	LR	20 03 15.5	
	comp=Z,84nm,21.4s,baz=290,slow=30						
STKA	Stephens Creek	31.39	71	LR	LR	20 05 17.7	
	comp=Z,46nm,20.6s,baz=203,slow=32						
ASAR	Alice Springs	33.18	51	P	P	19 55 26.6	-0.1
	1.1nm,1.0s,baz=220,slow=6.3,SNR=5.7						
ASAR				LR	LR	20 07 42.5	
	comp=Z,51nm,18.5s,baz=190,slow=34						
VNDA	Vanda	35.54	162	LR	LR	20 08 40.5	
	comp=Z,73nm,20.7s,baz=296,slow=34						
WRA	Warramunga Arr	36.52	48	P	P	19 55 55.6	0.0
	0.8nm,0.8s,baz=208,slow=8.7,SNR=5.8						
LEM	Lembang	41.84	2	LR	LR	20 10 53.4	
	comp=Z,60nm,18.3s,baz=202,slow=32						
BOSA	Boshof	63.42	256	LR	LR	20 21 59.5	
	comp=Z,30nm,19.5s,baz=178,slow=31						
CMAR	Chiang Mai Arr	67.28	352	P	P	19 59 44.8	+0.1
	0.2nm,0.6s,baz=182,slow=6.9,SNR=4.2						
CMAR				LR	LR	20 28 11.3	
	comp=Z,19nm,18.6s,baz=52,slow=35						
KSRS	Korea Array	88.00	17	LR	LR	20 40 58.6	
	comp=Z,15nm,21.5s,baz=34,slow=36						
NVAR	Mina Array Bea	146.49	91	PKPbc	PKPbc	20 08 31.1	-0.2
	0.9nm,0.9s,baz=228,slow=5.5,SNR=4.7						
TXAR	Lajitas Array	149.94	119	PKPbc	PKPbc	20 08 39.8	-0.7
	0.6nm,0.8s,baz=177,slow=2.3,SNR=4.9						
YKA	Yellowknife Ar	153.68	43	PKPab	PKPab	20 08 59.8	-0.9
	0.3nm,0.8s,baz=293,slow=3.3,SNR=3.5						

IDC ***12*** *20:19:28.4±1.9,6°.17S×130°.09E,h0^{km},mb4.1/1, mb1 3.6/3,mb1mx3.4/36,mbtmp3.5/3,ML3.3/2,Error ellipse: s-maj=91.8km s-min=31.0km az=69.0*

NEIC ***12*** *20:19:39.7±1.5,6°.13S±0°.08×130°.98E±0°.08,h121^{km}±13^{km}, mb4.2/4,Error ellipse: s-maj=13.4km s-min=8.0km az=137.0*

DJA ***12*** *20:19:39.3±0.5,6°S±3°×13°1E±°,h131^{km}±11^{km},M4.0/7, mb3.9/4,mB5.0/3,MLv4.0/7,Mw(mB)4.4/3*

ISC 12 20:19:37.8±0.7**,6°.21S**±0°.05×**130°.94E**±0°.08**,h100**^{km}**,n23,** σ**2ˢ.78**/27**,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	Saumlaki	1.80	168		Pn	20 20 11.5	+3.6
SAUI	Saumlaki	1.80	168	P	Pn	20 20 11.4	+3.6
BNDI	Bandanaira	1.97	328	P	Pn	20 20 12.6	+2.6
BNDI				S	Sn	20 20 37.2	+2.7
MSAI	Masohi	3.48	325	P	Pn	20 20 30.8	+0.8
FAKI	Fak Fak	3.52	22	Pn	Pn	20 20 31.9	+1.3
FAKI				Sn	Sn	20 21 08.5	-2.9
FAKI	Fak Fak	3.52	22	P	Pn	20 20 32.0	+1.4
SWI	Sorong	5.32	3	P	Pn	20 20 55.0	+0.1
	0.3nm2µm17nm,0.7s						
MTN	Manton Dam	6.59	178	Pn	Pn	20 21 16.1	+3.9
MTN				Sn	Sn	20 22 27.0	+1.0
SOEI	Soe	7.48	242	Pn	Pn	20 21 26.8	+2.3
FITZ	Fitzroy Crossi	12.90	203	Pn	Pn	20 22 35.8	-1.6
WB0	Warramunga Arr	13.89	166	Pn	Pn	20 22 50.6	+0.2
WRA	Warramunga Arr	14.04	167	Pn	Pn	20 22 52.7	+0.3
	0.2nm,0.3s,baz=344,slow=12,SNR=13						
WRA				Sn	Sn	20 25 18.1	-9.0
	0.3nm,0.3s,baz=341,slow=24,SNR=4.8						
WRA	Warramunga Arr	14.04	167		Pn	20 22 53.2	+0.7
WB2	Warramunga Arr	14.05	167	Pn	Pn	20 22 54.7	+2.2
WR0	Warramunga Arr	14.11	166	Pn	Pn	20 22 53.9	+0.7
COEN	Coen	14.29	124		P	20 23 00.3	+0.5
JAGI	Jajag, Banyuwa	16.80	261	P	Pn	20 23 24.2	-2.9
JAGI				IAmb	IAmb	20 23 38.5	
	comp=Z,38nm,0.7s						
ASAR	Alice Springs	17.59	171	P	Pn	20 23 37.3	+0.6
	comp=Z,0.1nm,0.3s,baz=347,slow=9.8,SNR=1.4						
ASAR				S	Sn	20 26 43.2	-9.5
	comp=Z,0.1nm,0.3s,baz=354,slow=24,SNR=5.2						
ASAR	Alice Springs	17.59	171	P	P	20 23 36.6	+0.3
JMN	Monobe	39.82	4	P	P	20 27 03.2	+1.8
MK31	Makanchi Array	68.08	326	P	P	20 30 26.6	-0.3
MK31				IAmb	IAmb	20 30 27.2	
	comp=Z,0.6nm,0.5s						
MKAR	Makanchi Array	68.08	326	P	P	20 30 26.9	+0.1
	comp=Z,0.8nm,0.4s,baz=114,slow=8.2,SNR=26						
MAKZ	Makanchi	68.27	326	P	P	20 30 27.3	-0.7

IDC 12 20:25:21.5±6.6**,18°.69S**×**177°.62W,h581**^{km}±38^{km}**, mb2.9**/2**,mb1 3.1**/3**,mb1mx2.7**/41**,mbtmp3.8**/3**,Error ellipse: s-maj=192.3km s-min=42.1km az=145.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	4.22	282	P	P	20 26 47.3	0.0
	0.6nm,0.3s,baz=127,slow=7.7,SNR=4.8						
WRA	Warramunga Arr	45.23	260	P	P	20 32 47.7	-0.5
	0.5nm,0.4s,baz=96,slow=7.1,SNR=21						
ASAR	Alice Springs	45.30	255	P	P	20 32 49.0	+0.2
	1.1nm,0.4s,baz=93,slow=7.6,SNR=25						
ASAR				PcP	PcP	20 34 15.9	-0.1
	0.2nm,0.5s,baz=97,slow=3.4,SNR=1.8						
GERES	GERESS Array B	148.56	346	PKPbc	PKPbc	20 44 03.1	-0.6
	0.3nm,0.5s,baz=341,slow=2.1,SNR=2.1						

IDC ***12*** *20:33:45.1±4.6,17°.75N×147°.96E,h24^{km}±29^{km},mb3.6/13, mb1 3.8/14,mb1mx3.7/44,mbtmp3.8/14,ML4.3/1,MS2.7/1, Ms1 2.7/1,ms1mx2.2/35,Error ellipse: s-maj=26.9km s-min=17.2km az=102.0*

NEIC ***12*** *20:33:48.0±1.9,17°.69N±0°.08×147°.90E±0°.10,h52^{km}±8^{km}, mb4.3/17,Error ellipse: s-maj=17.5km s-min=2.9km az=131.0*

ISC 12 20:33:44.3±0.6**,17°.72N**±0°.08×**147°.9E**±0°.1**,h21**^{km}**,n41,** σ**1ˢ.21**/41**,mb4.0**/20**,Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANA2	Anatahan	2.51	237	Pn	Pn	20 34 25.0	+1.2
GUMO	Guam	5.04	216	Pn	Pn	20 35 01.2	+2.5
	12nm,0.3s,baz=82,slow=8.3,SNR=5.1						
GUMO				Sn	Sn	20 35 53.0	-3.3
	8.4nm,0.3s,baz=192,slow=20,SNR=1.9						
GUMO	Guam	5.04	216		Pn	20 35 01.0	+2.3
MJAR	Matsushiro Arr	20.62	337	P	P	20 38 20.8	-1.5
	1.6nm,0.7s,baz=141,slow=11,SNR=2.2						
MJAR	Matsushiro Arr	20.62	337	IAmb	IAmb	20 38 23.2	
	comp=Z,4.0nm,1.1s						
DAV	Davao City (W)	24.21	247	LR	LR	20 48 43.9	
	comp=Z,19nm,19.5s,baz=88,slow=37						
KSRS	Korea Array	26.36	322	P	P	20 39 21.1	+2.1
	comp=Z,0.7nm,0.5s,baz=142,slow=8.5,SNR=2.1						
ASAJ	Asahikawa	26.70	351	P	P	20 39 23.1	+1.2
	comp=Z,3.0nm,0.8s,baz=91,slow=34,SNR=2.0						
WB0	Warramunga Arr	39.54	200	P	P	20 41 14.6	+0.7
WB0				IAmb	IAmb	20 41 28.5	
	comp=Z,8.0nm,1.4s						
WR0	Warramunga Arr	39.68	200	P	P	20 41 15.0	0.0
WR0				IAmb	IAmb	20 41 30.1	
	comp=Z,11nm,1.4s						
WB2	Warramunga Arr	39.72	200	P	P	20 41 14.9	-0.5
WB2				IAmb	IAmb	20 41 19.6	
	comp=Z,5.2nm,1.1s						
WRA	Warramunga Arr	39.73	200	P	P	20 41 16.6	+1.2
	comp=Z,0.5nm,0.4s,baz=25,slow=8.9,SNR=8.3						
WRA	Warramunga Arr	39.73	200	P	P	20 41 16.2	+0.8
FUNA	Funafuti	40.44	128	P	P	20 41 21.1	-0.4
FITZ	Fitzroy Crossi	41.79	213	P	P	20 41 33.1	+0.6
FITZ				IAmb	IAmb	20 41 59.6	
	comp=Z,9.7nm,1.4s						
ASAR	Alice Springs	43.34	199	P	P	20 41 44.3	-0.9
	comp=Z,0.2nm,0.6s,baz=32,slow=8.8,SNR=2.0						
ASAR				ScP	ScP	20 47 24.0	0.0
	comp=Z,0.2nm,0.5s,baz=355,slow=1.3,SNR=5.4						
SONM	Songino Array	45.22	321	P	P	20 42 00.0	-0.1
	comp=Z,1.2nm,0.8s,baz=145,slow=8.8,SNR=6.8						
SONM	Songino Array	45.22	321	P	P	20 41 59.8	-0.3
CMAR	Chiang Mai Arr	46.44	279	P	P	20 42 10.1	+0.1
	comp=Z,0.4nm,0.3s,baz=76,slow=7.2,SNR=5.7						
CMAR	Chiang Mai Arr	46.44	279	P	P	20 42 09.8	-0.1
ZAA0	Zalesovo Array	60.07	323	P	P	20 43 50.7	+1.0
ZAA0				IAmb	IAmb	20 44 03.5	
	comp=Z,4.6nm,1.5s						
ZALV	Zalesovo Beam	60.07	323	P	P	20 43 50.5	+0.8
	comp=Z,0.9nm,0.6s,baz=101,slow=7.7,SNR=6.1						
ZALV	Zalesovo Beam	60.07	323	P	P	20 43 50.8	+1.1
MK31	Makanchi Array	60.65	314	P	P	20 43 54.0	+0.1
MKAR	Makanchi Array	60.65	314	P	P	20 43 54.0	+0.1
	comp=Z,0.5nm,0.6s,baz=90,slow=6.9,SNR=8.3						
MKAR	Makanchi Array	60.65	314	P	P	20 43 54.6	+0.7
MAKZ	Makanchi	60.87	314	P	P	20 43 56.5	+1.2
MAKZ				IAmb	IAmb	20 44 10.9	
	comp=Z,1.7nm,0.9s						
KURK	Kurchatov	63.40	318	P	P	20 44 12.4	+0.2
ILAR	Eielson Array	63.60	26	P	P	20 44 12.8	-0.5
	comp=Z,0.7nm,0.9s,baz=253,slow=5.6,SNR=4.5						
ILAR	Eielson Array	63.60	26	P	P	20 44 12.7	-0.6
DOT	Dot Lake	64.54	27	P	P	20 44 19.4	-0.2
BRVK	Borovoye	68.63	321	P	P	20 44 44.9	-0.9
BRVK				IAmb	IAmb	20 44 48.4	
	comp=Z,3.0nm,0.9s						
KK31	Karatay Array	69.01	310	P	P	20 44 49.7	+1.3
KKAR	Karatay Array	69.01	310	P	P	20 44 49.8	+1.4
KKAR	Karatay Array	69.01	310	P	P	20 44 49.7	+1.3
KKAR				IAmb	IAmb	20 45 04.3	
	comp=Z,1.4nm,0.8s						
KBL	Kabul	71.18	301	P	P	20 45 00.0	-2.1
KBL				IAmb	IAmb	20 45 18.3	
	comp=Z,2.8nm,1.2s						
ABKAR	Akbulak array	75.48	317	P	P	20 45 26.3	-0.7
YKA	Yellowknife Ar	77.86	28	P	P	20 45 39.7	-0.4
	comp=Z,0.6nm,0.7s,baz=288,slow=5.0,SNR=11						
NVAR	Mina Array Bea	82.08	52	P	P	20 46 04.8	+1.1
	comp=Z,0.4nm,0.6s,baz=263,slow=7.1,SNR=4.3						
NVAR	Mina Array Bea	82.08	52	P	P	20 46 02.8	-0.9
FINES	FINESS Array B	88.64	336	P	P	20 46 34.8	-0.8
	comp=Z,2.4nm,1.0s,baz=27,slow=0.4,SNR=1.5						

DJA ***12*** *20:46:53.0±2.9,3°N±6°×9°4E±2°6,h10^{km},M4.1/6,mb4.4/4, MLv3.9/6*

IDC ***12*** *20:46:54.3±2.2,2°.53N×94°.52E,h0^{km},mb3.9/5,mb1 3.9/7, mb1mx3.6/39,mbtmp3.8/7,ML3.9/2,MS3.0/2,Ms1 3.1/2, ms1mx2.6/37,Error ellipse: s-maj=62.9km s-min=22.3km az=55.0*

NEIC ***12*** *20:46:57.5±1.1,2°.5N±0°.1×94°.5E±0°.1,h29^{km}±6^{km}, mb4.2/11,Error ellipse: s-maj=21.8km s-min=12.2km az=60.0*

ISC 12 20:46:57.1±1.0**,2°.58N**±0°.10×**94°.67E**±0°.10**,h21**^{km}**,n36,** σ**1ˢ.56**/34**,mb4.2**/9**,Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TPTI		2.59	75	P	Pn	20 47 39.7	+1.8
GSI	Gunungsitoli	3.17	113		Pn	20 47 47.6	+1.9
GSI	Gunungsitoli	3.17	113	P	Pn	20 47 47.8	+2.0
LHMI	Lhok Sumawe	3.48	41	Pn	Pn	20 47 52.6	+2.6
LHMI	Lhok Sumawe	3.48	41	P	Pn	20 47 51.5	+1.4
RPSI	Rantau Prapat	4.25	88		Pn	20 48 03.3	+2.7
RPSI					Sn	20 48 47.0	-2.6
PSI	Prapat	4.25	87	Pn	Pn	20 48 03.3	+2.5
	1.9nm,0.3s,baz=359,slow=2.0,SNR=12						
PSI				Sn	Sn	20 48 47.0	-2.9
	0.4nm,0.3s,baz=360,slow=5.1,SNR=1.2						
KULM	Kulim	6.54	65		Pn	20 48 35.0	+2.7
IPM	Ipoh	6.62	73		Pn	20 48 35.8	+2.5
CM31	Chiang Mai Arr	16.33	15	P	P	20 50 48.7	+0.6
CM31				IAmb	IAmb	20 51 14.2	
	comp=Z,6.9nm,0.3s						
CMAR	Chiang Mai Arr	16.33	15	Pn	Pn	20 50 44.9	-0.4
	comp=Z,0.3nm,0.3s,baz=210,slow=10,SNR=12						
CMAR				LR	LR	20 57 50.8	
	comp=Z,38nm,18.7s,baz=218,slow=40						
CMAR	Chiang Mai Arr	16.33	15	Pn	Pn	20 50 45.2	-0.1
CHTO	Chiang Mai	16.67	14	P	P	20 50 52.0	+0.1
SHL	Shillong	23.02	354	P	P	20 52 00.0	-1.1
SHL				IAmb	IAmb	20 52 01.0	
	comp=Z,6.0nm,0.6s						
KMI	Kunming	23.73	18	P	P	20 52 08.9	+0.7
KMI				IAmb	IAmb	20 52 21.9	
	comp=Z,8.2nm,1.1s						
LSA	Lhasa	27.18	353	P	P	20 52 39.4	-0.5
LSA				IAmb	IAmb	20 52 45.1	
	comp=Z,3.4nm,0.6s						
H01W3	Cape Leeuwin H	41.50	156	T	T	21 39 06.3	
	baz=331,slow=76,SNR=13						
H01W2	Cape Leeuwin H	41.51	156	T	T	21 39 05.0	
	baz=331,slow=76,SNR=16						
H01W1	Cape Leeuwin H	41.52	156	T	T	21 39 05.3	
	baz=331,slow=76,SNR=15						
WRA	Warramunga Arr	44.90	122	P	P	20 55 11.2	+0.5
	comp=Z,0.6nm,0.6s,baz=299,slow=8.6,SNR=2.6						
WRA	Warramunga Arr	44.90	122	P	P	20 55 10.8	+0.1
MK31	Makanchi Array	45.34	348	P	P	20 55 14.1	+0.3
MK31				IAmb	IAmb	20 55 14.8	
	comp=Z,1.5nm,0.6s						
MKAR	Makanchi Array	45.34	348	P	P	20 55 14.4	+0.6
	comp=Z,2.0nm,0.5s,baz=167,slow=8.5,SNR=45						
MKAR	Makanchi Array	45.34	348	P	P	20 55 14.0	+0.2
MAKZ	Makanchi	45.42	348	P	P	20 55 15.0	+0.6
KKAR	Karatay Array	45.73	335	P	P	20 55 16.7	-0.3
SONM	Songino Array	46.21	11	P	P	20 55 21.8	+1.0
	comp=Z,1.0nm,0.5s,baz=190,slow=8.9,SNR=8.5						
SONM	Songino Array	46.21	11	P	P	20 55 20.9	+0.1
KS19	Wonju Array Si	46.22	37	P	P	20 55 20.2	-0.7
KSRS	Korea Array	46.22	37	LR	LR	21 15 14.5	
	comp=Z,18nm,19.1s,baz=350,slow=37						
ASAR	Alice Springs	46.24	127	P	P	20 55 22.6	+1.3
	comp=Z,0.4nm,0.8s,baz=278,slow=9.0,SNR=2.7						
ASAR	Alice Springs	46.24	127	P	P	20 55 19.1	-2.2
ZAA0	Zalesovo Array	51.84	353	P	P	20 56 03.6	0.0
ZALV	Zalesovo Beam	51.84	353	P	P	20 56 04.3	+0.6
	comp=Z,2.4nm,0.5s,baz=182,slow=6.9,SNR=15						
ZALV	Zalesovo Beam	51.84	353	P	P	20 56 03.4	-0.3
ABKAR	Akbulak array	55.13	333	P	P	20 56 26.4	-1.5

SJA ***12*** *20:59:36.7±0.7,23°.13S×66°.77W,h224^{km}±6^{km},ML4.2, MW4.0*

IDC ***12*** *20:59:37.3±0.8,23°.08S×66°.70W,h203^{km}±8^{km},mb3.6/11, mb1 3.8/17,mb1mx3.7/30,mbtmp4.1/17,MS2.0/2, Ms1 2.1/2,ms1mx2.0/24,Error ellipse: s-maj=14.2km s-min=12.1km az=176.0*

NEIC ***12*** *20:59:37.1±1.6,23°.14S±0°.07×66°.6W±0°.1,h201^{km}±6^{km}, mb4.1/9,Error ellipse: s-maj=13.6km s-min=10.6km az=85.0*

GUC ***12*** *20:59:39.0±0.5,23°.06S×67°.19W,h257^{km}±8^{km},ML4.4*

VAO ***12*** *20:59:40.1±1.0,23°.05S×66°.74W,h247^{km},mb4.4*

ISC 12 20:59:37.3±0.6**,23°.11S**±0°.04×**66°.74W**±0°.05**,h208**^{km}±7^{km}**, n137,** σ**1ˢ.40**/174**,mb4.0**/14**,10C,Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YJA	Yavi	1.46	51	*e*P	Pn	21 00 13.8	+1.8
AZAP	Zapla	1.89	126	*e*P	Pn	21 00 16.5	+0.8
SLA	San Lorenzo	1.96	145	*e*P	Pn	21 00 18.2	+1.9
LVC	Limon Verde	2.06	283	P	Pn	21 00 18.6	+1.2
	115nm,0.3s,baz=97,slow=6.4,SNR=445						
LVC				S	S	21 00 48.5	+0.3
	44nm,0.3s,baz=321,slow=20,SNR=17						
LVC				LR	LR	21 01 18.2	
	comp=Z,10nm,22.0s,baz=26,slow=48						
ASTB	Santa Barbara	2.26	112	*e*P	Pn	21 00 20.3	+1.0
PB15	IPOC Station P	2.52	267	⇑*i*P	Pn	21 00 23.0	+0.9
PB15				*e*S	S	21 00 57.1	+0.6
PB15	IPOC Station P	2.52	267		Pn	21 00 22.9	+0.7
PB15	IPOC Station P	2.52	267	*e*P	Pn	21 00 23.0	+0.9
PB15				*e*S	S	21 00 57.3	+0.7
PB06	IPOC Station P	2.64	278	⇑*i*P	Pn	21 00 24.2	+0.7
PB06				*e*S	S	21 00 58.7	-0.3
PB06				IAML		21 01 00.9	
	comp=E,1µm,0.1s						
PB06	IPOC Station P	2.64	278		Pn	21 00 24.2	+0.7
PB06	IPOC Station P	2.64	278	*e*P	Pn	21 00 24.2	+0.7
PB06				*e*S	S	21 01 00.1	+1.1
PB06				IAML		21 01 00.9	
	comp=Z,401nm,0.1s						
PB09	IPOC Station P	2.66	299	⇑*i*P	Pn	21 00 25.2	+1.5
PB09				*e*S	S	21 01 00.1	+0.8
PB09				IAML		21 01 02.3	
	comp=E,492nm,0.7s						
PB09	IPOC Station P	2.66	299		Pn	21 00 25.2	+1.5
PB09	IPOC Station P	2.66	299	*e*P	Pn	21 00 25.3	+1.6
PB09				*e*S	S	21 00 59.4	+0.1
PB09				IAML		21 01 02.1	
	comp=Z,550nm,0.7s						
PB03	IPOC Station P	2.98	290	⇑*i*P	Pn	21 00 28.0	+0.6
PB03				*i* S	S	21 01 04.7	-1.2
PB03	IPOC Station P	2.98	290	*e*P	Pn	21 00 27.9	+0.6
PB03				*e*S	S	21 01 05.7	-0.2
PB03				IAML		21 01 07.2	
	comp=Z,946nm,0.2s						
FSA	Cafayete	3.07	167	*e*P	Pn	21 00 29.5	+1.1
PB05	IPOC Station P	3.20	274	*e*P	Pn	21 00 30.2	+0.3
PB05				*e*S	S	21 01 10.1	-0.4
PB05				IAML		21 01 11.0	
	comp=Z,264nm,0.4s						
PB07	IPOC Station P	3.22	295	⇑*i*P	Pn	21 00 30.7	+0.6
PB07				*e*S	S	21 01 09.5	-1.5
PB07	IPOC Station P	3.22	295		Pn	21 00 30.4	+0.2
PB07	IPOC Station P	3.22	295	*e*P	Pn	21 00 30.8	+0.6
PB07				*e*S	S	21 01 09.9	-1.1
PB07				IAML		21 01 10.9	
	comp=Z,907nm,0.4s						
PB04	IPOC Station P	3.24	283	⇑*i*P	Pn	21 00 30.9	+0.4
PB04				*e*S	S	21 01 10.1	-1.4
PB04	IPOC Station P	3.24	283		Pn	21 00 30.6	+0.1
PB04	IPOC Station P	3.24	283	*e*P	Pn	21 00 30.9	+0.4
PB04				*e*S	S	21 01 10.8	-0.7
PB04				IAML		21 01 14.3	
	comp=Z,694nm,0.1s						
PB01	IPOC Station P	3.27	308	*i* P	Pn	21 00 31.5	+0.7
PB01				*e*S	S	21 01 11.7	-0.4
PB01	IPOC Station P	3.27	308		Pn	21 00 31.4	+0.7
PB01	IPOC Station P	3.27	308	*e*P	Pn	21 00 31.4	+0.7
PB01				*e*S	S	21 01 13.4	+1.3
PB01				IAML		21 01 17.0	
	comp=Z,367nm,0.5s						
GO02	Mina Guanaco	3.31	231	⇑*i*P	Pn	21 00 31.7	+0.3
GO02				*e*S	S	21 01 13.1	-0.1
GO02	Mina Guanaco	3.31	231		Pn	21 00 31.7	+0.3
PB02	IPOC Station P	3.42	301	⇑*i*P	Pn	21 00 32.9	+0.3
PB02				*e*S	S	21 01 13.7	-1.6
PB02	IPOC Station P	3.42	301	*e*P	Pn	21 00 32.7	+0.2
PB02				*e*S	S	21 01 14.8	-0.4
PB02				IAML		21 01 17.3	
	comp=Z,732nm,0.3s						
PB10	IPOC Station P	3.53	263	⇑*i*P	Pn	21 00 34.1	+0.4
PB10				*e*S	S	21 01 14.6	-2.8
PB10	IPOC Station P	3.53	263		Pn	21 00 34.0	+0.4
PB10	IPOC Station P	3.53	263	*e*P	Pn	21 00 34.1	+0.4
PB10				*e*S	S	21 01 15.7	-1.7
PB10				IAML		21 01 19.2	
	comp=Z,157nm,0.2s						
PB14	IPOC Station P	3.68	245		Pn	21 00 35.5	-0.2
PB14	IPOC Station P	3.68	245	*e*P	Pn	21 00 35.7	-0.1
PB14				*e*S	S	21 01 19.9	-1.3
PB14				IAML		21 01 21.5	
	comp=Z,196nm,0.2s						
PB08	IPOC Station P	3.71	322	⇑*i*P	Pn	21 00 38.0	+1.7
PB08				*e*S	S	21 01 22.6	+0.6
PB08	IPOC Station P	3.71	322		Pn	21 00 37.8	+1.5
PB08	IPOC Station P	3.71	322	*e*P	Pn	21 00 38.0	+1.7
PB08				*e*S	S	21 01 23.4	+1.4
PB08				IAML		21 01 27.1	
	comp=Z,155nm,0.2s						
AHML	Horco Molle	3.88	161	*e*P	Pn	21 00 39.2	+1.3
PATCX	Punta Patache	3.90	305	*e*P	Pn	21 00 38.2	-0.1
PATCX				*e*S	S	21 01 23.4	-2.4
PATCX	Punta Patache	3.90	305		Pn	21 00 38.1	-0.1
HMBC	Humberstone	4.06	313	*e*P	Pn	21 00 40.1	-0.2
HMBC				*e*S	S	21 01 27.0	-2.4
TA01	Diego Aracena	4.08	308	*e*P	Pn	21 00 39.9	-0.5
TA01				*i* S	S	21 01 26.9	-2.7
TA01	Diego Aracena	4.08	308	Pn	Pn	21 00 39.8	-0.6
AC02	Maricunga	4.30	210		Pn	21 00 43.8	+0.2
AC01	Pan de Azucar	4.64	228	*e*P	Pn	21 00 46.0	-1.4
AC01				*e*S	S	21 01 38.4	-3.8
AC01	Pan de Azucar	4.64	228		Pn	21 00 45.8	-1.5
PSGCX	Pisagua	4.71	317		Pn	21 00 47.0	-1.3
PSGCX	Pisagua	4.71	317	*e*P	Pn	21 00 47.5	-0.9
PSGCX				*e*S	S	21 01 40.9	-3.1
PSGC	Pisagua	4.71	317	*e*P	Pn	21 00 47.4	-1.0
PSGC				*e*S	S	21 01 39.9	-4.1
MNMC	Minye Minye	4.77	325	*e*P	Pn	21 00 49.9	+0.5
MNMC				*e*S	S	21 01 44.1	-1.7
MNMC	Minye Minye	4.77	325		Pn	21 00 49.7	+0.3
MNMCX	Minye Minye	4.77	325	*e*P	Pn	21 00 50.0	+0.6
MNMCX				*e*S	S	21 01 44.6	-1.2
PB16	IPOC Station P	5.41	331	*e*P	Pn	21 00 58.7	+1.0
PB16				*e*S	S	21 01 59.0	-1.9
PB16	IPOC Station P	5.41	331		Pn	21 00 58.5	+0.8
PB16	IPOC Station P	5.41	331	*e*P	Pn	21 00 58.8	+1.0
PB16				*e*S	S	21 02 00.2	-0.7
GO03	Copiap	5.47	215	*e*P	Pn	21 00 56.2	-1.8
GO03	Copiap	5.47	215		Pn	21 00 55.9	-2.1
GO03	Copiap	5.47	215	*e*P	Pn	21 00 56.4	-1.6
GO03				*e*S	S	21 01 57.8	-3.7
AC04	Llanos de Chal	6.41	217		Pn	21 01 07.6	-2.4
AC05	El Transito	6.53	208		Pn	21 01 09.5	-2.2
LCO	Las Campanas	6.87	210	Pn	Pn	21 01 13.6	-2.6
LPAZ	La Paz	6.91	349	P	Pn	21 01 18.4	+1.3
	comp=Z,1.1nm,0.3s,baz=148,slow=6.5,SNR=14						
LPAZ				S	S	21 02 33.0	-3.2
	baz=186,slow=17,SNR=1.1						
LPAZ	La Paz	6.91	349		Pn	21 01 17.4	+0.3
CO01	Juntas del Tor	7.47	203	Pn	Pn	21 01 20.7	-3.2
GO04	Tololo Observa	7.92	206		Pn	21 01 26.4	-3.3
CO03	El Pedregal	8.47	204		Pn	21 01 33.4	-3.2
SIV	San Ignacio	8.87	38	P	Pn	21 01 41.1	-0.9
	comp=Z,4.3nm,0.3s,baz=224,slow=13,SNR=59						
SIV				S	S	21 03 15.6	-6.2
	comp=Z,0.3nm,0.3s,baz=186,slow=22,SNR=4.2						
CO02	Combarbal	8.91	204	Pn	Pn	21 01 39.7	-2.8
CPUP	Villa Florida	9.14	112	P	Pn	21 01 43.0	-2.2
	comp=Z,0.4nm,0.3s,baz=279,slow=9.5,SNR=4.0						
CPUP				LR	LR	21 05 14.6	
	comp=Z,38nm,19.3s,baz=318,slow=37						
AQDB	Aquidauana	10.59	78	*e*P	Pn	21 02 04.9	+0.8
RFA	San Rafael	11.72	187	*e*P	Pn	21 02 17.3	-1.1
VILB	Vilhena	11.86	33	*e*P	Pn	21 02 22.2	+1.9
PP1B	Ponte de Pedra	12.40	66	*e*P	Pn	21 02 26.6	-0.5
TRCB	Terra Rica	13.00	91	*e*P	P	21 02 36.9	-0.7
ETMB	Extrema	13.23	2	*e*P	Pn	21 02 37.2	-0.2
PTGB	Pitanga	13.52	100	*e*P	P	21 02 42.8	-0.6
ITAB	Concordia	13.85	110	*e*P	P	21 02 47.0	+0.1
CPSB	Cacapava Do Su	13.92	124	*e*P	Pn	21 02 46.2	+0.3
PCMB	Pacaembu	14.40	87	*e*P	P	21 02 52.7	-0.4
SAML	Samuel	14.49	14	P	Pn	21 02 53.3	+0.2
PLTB	Pedras Altas	14.49	129	*e*P	P	21 02 54.8	+0.8
CNLB	Canela	15.53	117	*e*P	Pn	21 03 05.2	-0.5
ITRB	Iturama	15.62	81	*e*P	Pn	21 03 07.6	+0.7
FRTB	Fartura	15.79	94	*e*P	Pn	21 03 09.7	+0.8
ARAG	Araguaiana, MT	15.88	65	*e*P	Pn	21 03 09.9	0.0
BB19B	Bebedouro	17.00	87	*e*P	P	21 03 21.6	-0.2
PLCA	Paso Flores	17.86	189	P	P	21 03 31.5	+0.4
	comp=Z,0.4nm,0.3s,baz=7.3,slow=11,SNR=6.9						
PLCA	Paso Flores	17.86	189	P	P	21 03 31.5	+0.4
IPMB	Ipameri, GO	18.08	77	*e*P	P	21 03 34.4	+0.7
VAO	Valinhos	18.20	94	*e*P	P	21 03 35.3	+0.3
SNDB	Serra Nova Dou	18.41	56	*e*P	P	21 03 37.3	+0.2

BDFB	Brasilia	19.15	71	P	P	21 03 46.1	+0.8
	comp=Z,2.1nm,0.3s,baz=250,slow=11,SNR=54						
BDFB	Brasilia	19.15	71	P	P	21 03 45.2	-0.1
NPGB	Novo Progresso	19.36	36	*e*P	P	21 03 46.2	-1.3
PARB	Paraibuna	19.41	95	*e*P	P	21 03 47.9	-0.1
PEXB	Peixe	20.68	61	*e*P	P	21 04 01.1	-0.5
ITTB	Itaituba	21.45	31	*e*P	P	21 04 08.5	-1.1
VAS01	Vassouras-RJ	21.51	92	*e*P	P	21 04 10.1	0.0
DUB01	Friburgo-RJ	22.51	92	*e*P	P	21 04 19.6	-0.2
JANB	Januaria	22.64	73	*e*P	P	21 04 20.3	-0.6
SMTB	Santa Maria do	23.18	55	*e*P	P	21 04 26.0	+0.2
PTGA	Pitinga	23.20	17	P	P	21 04 25.6	-0.3
	comp=Z,2.5nm,0.3s,baz=197,slow=11,SNR=11						
PTGA	Pitinga	23.20	17	P	P	21 04 25.1	-0.8
SDBA	SAO DESIDERIO	23.33	67	*e*P	P	21 04 27.3	+0.1
PRPB	Parauapebas	23.44	47	*e*P	P	21 04 27.8	-0.4
SJMB	Sao Joao De Ma	24.26	84	*e*P	P	21 04 35.0	-0.5
BSFB	Barra de Sao F	24.54	85	*e*P	P	21 04 37.6	-0.4
NAN01	Guarapari, ES	25.46	83	*e*P	P	21 04 45.4	-1.0
MCPB	Macapa, AP	26.74	34	*e*P	P	21 04 57.9	0.0
GDU01	Guandu, BA	27.37	75	*e*P	P	21 05 02.5	-1.0
MDP	Montagnes des	31.24	28	P	P	21 05 36.6	-1.0
	comp=Z,27nm,1.1s,baz=200,slow=9.2,SNR=5.6						
NBLI	Livramento-PB	32.62	66	*e*P	P	21 05 49.2	-0.6
RCBR	Riachuelo	34.32	65	P	P	21 06 04.7	+0.2
	comp=Z,6.8nm,0.6s,baz=317,slow=5.0,SNR=5.6						
SNAA	Sanae	60.11	161	P	P	21 09 23.8	+1.4
	comp=Z,1.5nm,0.8s,baz=268,slow=2.2,SNR=1.4						
SNAA	Sanae	60.11	161	P	P	21 09 23.6	+1.2
SNAA				IAmb	IAmb	21 09 46.4	
	comp=Z,14nm,1.5s						
TXAR	Lajitas Array	63.10	324	P	P	21 09 43.8	+0.8
	comp=Z,0.3nm,0.5s,baz=155,slow=7.7,SNR=5.5						
TXAR	Lajitas Array	63.10	324	P	P	21 09 44.1	+1.2
KOWA	Kowa	71.84	65	P	P	21 10 37.5	-0.4
	comp=Z,1.2nm,0.5s,baz=254,slow=2.8,SNR=5.6						
CCUT	Cedar City	74.59	323	P	P	21 10 57.4	+3.5
CCUT				IAmb	IAmb	21 10 58.1	
	comp=Z,3.3nm,0.9s						
TOA0	Torodi Ar. Sit	76.03	69	P	P	21 11 01.9	-0.2
TOA0				IAmb	IAmb	21 11 05.2	
	comp=Z,2.9nm,0.9s						
TORD	Torodi Ar. Bea	76.03	69	P	P	21 11 02.0	-0.1
	comp=Z,1.7nm,0.3s,baz=261,slow=5.3,SNR=45						
TORD	Torodi Ar. Bea	76.03	69	P	P	21 11 01.8	-0.4
PDAR	Pinedale Array	76.51	329	P	P	21 11 05.1	+0.5
	comp=Z,0.6nm,0.6s,baz=143,slow=7.7,SNR=1.1						
NVAR	Mina Array Bea	78.00	321	P	P	21 11 13.4	+0.5
	comp=Z,0.2nm,0.5s,baz=148,slow=5.3,SNR=2.4						
HLID	Hailey	79.47	327	P	P	21 11 23.8	+2.9
HLID				IAmb	IAmb	21 11 24.6	
	comp=Z,2.8nm,0.8s						
BOSA	Boshof	80.92	117	P	P	21 11 29.3	+0.3
	comp=Z,1.7nm,0.9s,baz=202,slow=4.8,SNR=3.6						
BOSA	Boshof	80.92	117	P	P	21 11 29.1	+0.1
BOSA				IAmb	IAmb	21 11 54.2	
	comp=Z,5.2nm,1.4s						
YKA	Yellowknife Ar	93.37	340	P	P	21 12 27.2	-1.0
	comp=Z,0.3nm,0.4s,baz=129,slow=4.7,SNR=5.6						
ASAR	Alice Springs	129.36	205	PKP	PKPdf	21 18 21.5	-0.3
	comp=Z,0.5nm,0.8s,baz=140,slow=1.8,SNR=3.7						
WRA	Warramunga Arr	132.53	207	PKP	PKPdf	21 18 28.7	+0.9
	comp=Z,0.2nm,0.2s,baz=161,slow=1.6,SNR=1.8						
WRA	Warramunga Arr	132.53	207		PKPdf	21 18 28.1	+0.2
MKAR	Makanchi Array	145.68	39	PKPbc	PKPbc	21 18 52.4	+0.7
	comp=Z,1.4nm,0.8s,baz=342,slow=2.3,SNR=18						
MKAR	Makanchi Array	145.68	39		PKPab	21 18 52.5	+0.2
CMAR	Chiang Mai Arr	165.84	106	PKPab	PKPab	21 20 19.0	+0.3
	comp=Z,0.5nm,0.5s,baz=246,slow=5.7,SNR=5.1						
CMAR	Chiang Mai Arr	165.84	106		PKPab	21 20 19.8	+1.0

IDC 12 21:48:48.2±1.9**, 13.00N×91.22W, h0^{km}, mb3.4**/3**, mb1 3.7**/5**, mb1mx3.5**/37**, mbtmp3.4**/5**, ML3.7**/1**, Error ellipse: s-maj=70.9km s-min=28.9km az=58.0, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	5.39	319	Sn	Sn	21 51 02.9	-10
	0.3nm,0.3s,baz=343,slow=13,SNR=1.7						
TEIG	Tepich	7.72	21	Pn	Pn	21 50 42.7	+0.7
	1.2nm,0.3s,baz=180,slow=12,SNR=3.2						
TXAR	Lajitas Array	19.95	327	P	Pn	21 53 23.2	-0.5
	baz=155,slow=13,SNR=2.5						
SIV	San Ignacio	41.45	133	P	P	21 56 37.2	0.0
	0.5nm,0.4s,baz=310,slow=7.9,SNR=2.1						
YKA	Yellowknife Ar	52.17	347	P	P	21 57 59.2	-1.2
	0.1nm,0.5s,baz=146,slow=7.8,SNR=2.2						
ILAR	Eielson Array	64.06	337	P	P	21 59 23.8	+0.1
	0.2nm,0.6s,baz=134,slow=5.2,SNR=4.6						

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*BGR **12** 21:59:17.9±0.0, 20.86S×176.99W, h33^{km}, Ms4.7*

*NEIC **12** 22:00:16.9±1.4, 19.9S±0.1×177.5W±0.1, h542^{km}±8^{km}, mb4.6/42, Error ellipse: s-maj=21.4km s-min=17.7km az=125.0*

*NOU **12** 22:00:16.8, 19.80S×177.32W, h560^{km}, mb4.5, Fiji Islands Region*

*IDC **12** 22:00:17.1±1.5, 19.96S×177.54W, h539^{km}±15^{km}, mb3.8/17, mb1 3.9/20, mb1mx3.8/32, mbtmp4.7/20, Error ellipse: s-maj=18.3km s-min=11.5km az=144.0*

ISC 12 22:00:17.7±0.5**, 19.86S**±0.09×**177.50W**±0.08**, h550^{km}, n177, σ1^{s}08**/174**, mb4.6**/42**, 30C-9D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.72	296	P	P	22 01 45.0	-0.3
	15nm,0.3s,baz=172,slow=21,SNR=41						
MSVF	Nonsavu	4.72	296	P	P	22 01 44.9	-0.5
MSVF	Nonsavu	4.72	296	P	P	22 01 45.2	-0.1
NIUE	Niue	7.18	85	P	P	22 02 06.3	-1.2
NIUE	Niue	7.18	85	P	P	22 02 06.4	-1.1
AFI	Afiamalu	8.06	44	P	P	22 02 13.5	-2.7
FUNA	Funafuti	11.71	344		P	22 02 52.7	-0.6
DZM	Mont Dzumac	15.16	259	P	P	22 03 28.0	-1.0
	2.0nm,0.3s,baz=110,slow=21,SNR=14						
DZM	Mont Dzumac	15.16	259	P	P	22 03 29.4	+0.5
DZM				IAmb	IAmb	22 03 31.7	
	comp=Z,18nm,0.9s						
DZM	Mont Dzumac	15.16	259	P	P	22 03 29.9	+0.9
KOUNC	Koumac, New Ca	17.11	265	P	P	22 03 49.2	+1.7
OUZ	Omahuta	17.21	205	P	P	22 03 47.3	-0.8
OUZ				IAmb	IAmb	22 03 47.6	
	comp=Z,23nm,1.2s						
WIAZ	Waiheke Island	18.07	199	P	P	22 03 57.8	+1.8
WMGZ	Waiomatatini S	18.25	190	P	P	22 03 58.1	+0.5
HAZ	Te Kaha	18.30	192	P	P	22 03 57.3	-0.9
MKAZ	Moumakai	18.34	199	P	P	22 03 60.0	+1.4
PKGZ	Pakihiroa	18.38	191	P	P	22 04 00.9	+2.0
RUGZ	Raukumara Rang	18.52	192	P	P	22 04 01.3	+1.0
EDRZ	Edgecumbe	18.86	194	P	P	22 03 57.9	-5.5
MWZ	Matawai	18.91	192	P	P	22 04 03.0	-0.7
URZ	Urewera	18.93	193	P	P	22 04 01.9	-1.9
	comp=Z,2.9nm,0.3s,baz=285,slow=3.9,SNR=11						
URZ	Urewera	18.93	193	P	P	22 04 02.3	-1.5
URZ				IAmb	IAmb	22 04 17.8	
	comp=Z,25nm,1.0s						
URZ	Urewera	18.93	193	P	P	22 04 02.9	-0.9
CNGZ	Carnagh Statio	18.93	190	P	P	22 04 06.3	+2.4
HIZ	Hauiti	19.74	198	P	P	22 04 12.0	+0.8
BKZ	Black Stump Fm	19.93	194	P	P	22 04 11.8	-1.2
BKZ				IAmb	IAmb	22 04 14.4	
	comp=Z,4.6nm,0.5s						
BKZ	Black Stump Fm	19.93	194	P	P	22 04 11.9	-1.2
TMVZ	Te Maari	20.07	196	P	P	22 04 13.6	-0.8
ETVZ	East Tongariro	20.09	196	P	P	22 04 13.8	-0.7
OTVZ	Oturere	20.12	196	P	P	22 04 14.3	-0.7
BHHZ	Black Hill Sta	20.34	194	P	P	22 04 15.8	-0.9
BFZ	Birch Farm	21.44	193		P	22 04 23.6	-2.9
BFZ				IAmb	IAmb	22 04 38.4	
	comp=Z,24nm,1.2s						
MSWZ	Moikau Station	22.36	194	P	P	22 04 33.9	-0.9
SNZO	South Karori	22.39	196	P	P	22 04 37.1	+2.0
BHW	Baring Head	22.44	195	P	P	22 04 34.4	-1.1
PLWZ	Palliser	22.50	194	P	P	22 04 37.5	+1.4
QRZ	Quartz Range	22.57	200	P	P	22 04 36.1	-0.6
QRZ				IAmb	IAmb	22 04 43.6	
	comp=Z,23nm,1.1s						
NNZ	Nelson	22.67	198	P	P	22 04 37.1	-0.4
THZ	Tophouse	23.31	198	P	P	22 04 42.5	-0.8
THZ				IAmb	IAmb	22 04 43.7	
	comp=Z,13nm,1.0s						
KHZ	Kahutara	23.73	197	P	P	22 04 46.6	-0.4
LTZ	Lake Taylor	24.43	198	P	P	22 04 51.1	-2.2
RPZ	Rata Peaks	25.65	199	P	P	22 05 02.0	-2.0
	comp=Z,7.7nm,0.8s,baz=0.0,slow=12,SNR=2.1						
RPZ	Rata Peaks	25.65	199	P	P	22 05 03.7	-0.3
RPZ				IAmb	IAmb	22 05 04.8	
	comp=Z,26nm,1.2s						
FOZ	Fox Glacier	25.89	201	P	P	22 05 05.3	-0.8
FOZ				IAmb	IAmb	22 05 22.3	
	comp=Z,15nm,1.0s						
WHZ	Wether Hill Ro	28.60	202	P	P	22 05 30.4	+0.6
WHZ				IAmb	IAmb	22 05 31.2	
	comp=Z,20nm,1.0s						
EIDS	Eidsvold	29.48	253	P	P	22 05 37.0	-0.7
EIDS				IAmb	IAmb	22 05 37.8	
	comp=Z,7.2nm,0.8s						
ARMA	Armidale	29.77	243	P	P	22 05 40.6	+0.3
CTAO	Charters Tower	34.03	263	P	P	22 06 16.7	+0.1
TOO	Toolangi	36.66	233	P	P	22 06 38.2	0.0
TOO				IAmb	IAmb	22 06 39.2	
	comp=Z,13nm,0.8s						
COEN	Coen	38.02	273	P	P	22 06 49.7	+0.2
COEN				IAmb	IAmb	22 06 50.5	
	comp=Z,15nm,0.8s						
STKA	Stephens Creek	38.49	244	P	P	22 06 53.1	-0.2
	comp=Z,15nm,1.0s,baz=90,slow=11,SNR=7.3						
STKA	Stephens Creek	38.49	244	P	P	22 06 53.6	+0.3
BBOO	Buckleboo	43.26	243	P	P	22 07 31.1	0.0
JAY	Jayapura	44.29	288	P	P	22 07 39.3	-0.1
	comp=Z,41nm,0.6s,baz=150,slow=4.5,SNR=21						
WR0	Warramunga Arr	44.97	261	P	P	22 07 43.9	-0.6
WR0				IAmb	IAmb	22 07 45.3	
	comp=Z,14nm,1.0s						
AS31	Alice Springs	45.13	256	P	P	22 07 45.4	-0.3
ASAR	Alice Springs	45.13	256	P	P	22 07 45.5	-0.2
	comp=Z,34nm,0.8s,baz=87,slow=8.6,SNR=246						
ASAR				PcP	PcP	22 09 14.8	+0.4
	comp=Z,3.3nm,0.6s,baz=104,slow=4.7,SNR=6.8						
ASAR				ScP	ScP	22 12 17.4	+2.5
	comp=Z,0.5nm,0.8s,baz=100,slow=3.9,SNR=2.9						
ASAR				S	S	22 13 44.9	-0.5
	comp=Z,1.2nm,0.7s,baz=95,slow=16,SNR=10						
ASAR	Alice Springs	45.13	256	P	P	22 07 44.9	-0.7
WB0	Warramunga Arr	45.14	262	P	P	22 07 45.0	-0.8
WB0				IAmb	IAmb	22 07 45.8	
	comp=Z,23nm,0.7s						
WB2	Warramunga Arr	45.15	261	IAmb	IAmb	22 07 46.0	
	comp=Z,27nm,0.9s						
WRAB	Tennant Creek	45.15	261	P	P	22 07 45.2	-0.7
WRA	Warramunga Arr	45.16	261	P	P	22 07 45.1	-0.9
	comp=Z,12nm,0.6s,baz=97,slow=8.4,SNR=122						
WRA				PcP	PcP	22 09 14.4	-0.2
	comp=Z,1.3nm,0.6s,baz=96,slow=3.2,SNR=3.3						
WRA	Warramunga Arr	45.16	261	P	P	22 07 44.0	-1.9
MTN	Manton Dam	49.63	270	P	P	22 08 19.5	0.0
MTN				IAmb	IAmb	22 08 25.6	
	comp=Z,24nm,1.1s						
SIJI	Sorong	53.53	284	P	P	22 08 47.4	-0.3
	comp=Z,28nm,0.8s,baz=73,slow=9.5,SNR=8.7						
FITZ	Fitzroy Crossi	53.58	262	P	P	22 08 47.9	-0.1
	comp=Z,4.0nm,0.5s,baz=67,slow=4.4,SNR=36						
FITZ	Fitzroy Crossi	53.58	262	P	P	22 08 48.2	+0.3
SOEI	Soe	56.96	271	P	P	22 09 11.1	-0.5
	comp=Z,68nm,1.0s						
BATI	Baumata	57.39	270	P	P	22 09 15.8	+1.3
	comp=Z,11nm,0.5s,baz=63,slow=20,SNR=3.8						
PSA00	Pilbara Seismi	58.27	256	P	P	22 09 19.0	-1.4
PSA00	Pilbara Seismi	58.27	256	IAmb	IAmb	22 09 20.7	
	comp=Z,25nm,0.7s						
NWAO	Narrogin (SRO)	59.08	243	P	P	22 09 25.2	-0.3
	comp=Z,6.6nm,0.7s,baz=65,slow=7.8,SNR=3.5						
NWAO	Narrogin (SRO)	59.08	243	P	P	22 09 25.5	-0.1
NWAO	Narrogin (SRO)	59.08	243	P	P	22 09 25.3	-0.3
NWAO				IAmb	IAmb	22 09 27.2	
	comp=Z,8.9nm,0.9s						
EDFI	Ende, Flores	59.68	271	P	P	22 09 29.5	-0.5
	comp=Z,299nmcomp=Z,9.4nm,1.0s						
MORW	Morawa	60.51	247	P	P	22 09 34.3	-0.9
GIRL	Giralia	63.18	254	P	P	22 09 53.9	+1.3
PLAI	Plampang	63.34	270	P	P	22 09 53.5	-0.3
	comp=Z,36nm,0.9s						
TWSI	Taliwang, Sumb	64.21	270	P	P	22 09 59.2	-0.1
	comp=Z,19nm,0.9s						
MJAR	Matsushiro Arr	69.98	323	P	P	22 10 34.1	-0.1
	comp=Z,4.4nm,0.7s,baz=156,slow=6.2,SNR=9.8						
UGM	Wanagama	70.45	268	P	P	22 10 37.7	+0.1
	comp=Z,54nm,1.4s						
JKA	Kamikawa-asahi	73.39	331	P	P	22 10 55.2	+1.3
JKA				IAmb	IAmb	22 10 56.7	
	comp=Z,9.9nm,0.7s						
PETK	Petropavlovsk-	75.78	345	P	P	22 11 06.7	-0.4
	comp=Z,6.2nm,0.9s,baz=110,slow=8.5,SNR=4.9						
KSRS	Korea Array	76.72	318	P	P	22 11 13.4	+0.8
	comp=Z,1.3nm,0.8s,baz=98,slow=2.3,SNR=2.4						
KASI	Kota Agung	76.88	269	P	P	22 11 13.5	-0.6
	comp=Z,50nm,0.8s						
MDSI	Maura Dua	77.52	270	P	P	22 11 16.8	-0.7
	comp=Z,16nm,0.8s						
USRK	Ussuriysk Ar.	78.70	326	P	P	22 11 24.5	+1.3
	comp=Z,4.9nm,0.8s,baz=136,slow=5.0,SNR=8.3						
KSI	Kapahiang	79.28	270	P	P	22 11 26.8	-0.3
	comp=Z,28nm,0.5s						
NVAR	Mina Array Bea	80.24	43	P	P	22 11 32.9	+1.2
	comp=Z,0.3nm,0.5s,baz=221,slow=7.9,SNR=3.6						
IPM	Ipoh	83.52	277	P	P	22 11 49.4	+0.7
M24K	Tolsona, Glenn	85.40	14	P	P	22 11 56.0	-0.8
M24K				IAmb	IAmb	22 12 06.4	
	comp=Z,14nm,0.9s						
TXAR	Lajitas Array	86.31	57	P	P	22 12 04.2	+2.1
	comp=Z,0.6nm,0.7s,baz=242,slow=2.7,SNR=8.0						
CCB	Clear Creek Bu	87.29	12	P	P	22 12 05.8	+0.2
ILAR	Eielson Array	87.59	13	P	P	22 12 06.9	-0.1
	comp=Z,1.1nm,0.7s,baz=220,slow=5.6,SNR=15						
PDAR	Pinedale Array	88.17	43	P	P	22 12 11.3	+0.7
	comp=Z,0.5nm,0.6s,baz=215,slow=4.2,SNR=5.7						
CMAR	Chiang Mai Arr	90.35	289	P	P	22 12 22.5	+1.6
	comp=Z,3.5nm,0.8s,baz=115,slow=2.5,SNR=27						
CHTO	Chiang Mai	90.47	290	P	P	22 12 22.5	+1.0
CHTO				IAmb	IAmb	22 12 23.8	
	comp=Z,5.2nm,0.8s						
ZALV	Zalesovo Beam	110.29	321	PKiKP	PKiKP	22 17 46.3	-0.8
	comp=Z,0.6nm,0.6s,baz=45,slow=0.8,SNR=2.7						
MKAR	Makanchi Array	111.10	314	PKiKP	PKiKP	22 17 48.5	-0.4
	comp=Z,0.7nm,0.6s,baz=162,slow=0.5,SNR=12						
KKAR	Karatay Array	119.21	309		PKPdf	22 18 04.4	-0.2
ARCES	ARCESS Array B	128.38	350	PKP	PKPdf	22 18 21.6	+0.3
	comp=Z,15nm,1.2s,baz=19,slow=3.3,SNR=5.9						
FINES	FINESS Array B	135.29	344	PKhKP	PKPpre	22 18 21.2	
	comp=Z,0.9nm,0.8s,baz=21,slow=12,SNR=1.0						
FINES				PKP	PKPdf	22 18 35.4	+0.8
	comp=Z,0.7nm,0.4s,baz=54,slow=5.4,SNR=8.4						
NOA	NORSAR Array B	138.40	354	PKhKP	PKPpre	22 18 27.4	
	comp=Z,0.3nm,0.6s,baz=36,slow=10,SNR=1.1						
AKASG	Malin Array Be	142.68	332	PKhKP	PKPpre	22 18 45.3	
	comp=Z,5.7nm,0.7s,baz=42,slow=4.6,SNR=22						
AKASG				PKP	PKPdf	22 18 49.0	+0.7
	comp=Z,1.6nm,0.5s,baz=38,slow=3.3,SNR=4.5						
AKASG	Malin Array Be	142.68	332	PKPdf	PKPdf	22 18 45.0	-3.4
SORM	Soroca	144.90	329	⇑P	PKPbc	22 18 53.1	+0.2
BSEG	Bad Segeberg	145.46	352	*e*PKPbc	PKPbc	22 18 55.2	+0.9
	baz=16,slow=2.5						
MILM	Milestii Mici	145.51	328	⇑P	PKPbc	22 18 55.0	+0.3
VASR	Vaslui	146.21	328	⇑P	PKPbc	22 18 57.7	+0.9
TLCR		146.66	325	⇓P	PKPbc	22 18 58.4	+0.5
BURAR	Bucovina Array	146.73	332	⇑P	PKPbc	22 18 59.5	+1.2
BURAR	Bucovina Array	146.73	332		PKPbc	22 18 59.0	+0.7
BRTR	Keskin Array B	146.75	313	PKPbc	PKPbc	22 18 58.5	-0.2
	comp=Z,3.0nm,0.5s,baz=134,slow=5.0,SNR=9.4						
BRTR	Keskin Array B	146.75	313		PKPbc	22 18 58.8	+0.2
GHRR		146.81	328	⇑P	PKiKP	22 18 60.0	-0.3
BIZ	Bicaz	146.82	330	⇓P	PKPbc	22 18 59.2	+0.8
VRI	Vrincioaia	147.28	328	⇓P	PKPbc	22 19 00.6	+0.9
BMR	Baia Mare	147.44	333	⇑P	PKPdf	22 18 52.9	-3.7
OSTC	Ostas	147.49	344	⇑*e*PKP	PKPbc	22 19 00.9	+0.8
CHVC	Chvalec	147.51	344	⇑*e*PKP	PKPbc	22 19 01.1	+1.0
CLL	Collm	147.54	348	⇓*i*PKPbc	PKPbc	22 19 00.9	+0.7
	comp=Z,12nm,0.8s						
CLL	Collm	147.54	348	*e*PKPbc	PKPbc	22 19 00.8	+0.7
	baz=16,slow=2.5						
UPC	Upice	147.59	344	⇑*e*PKP	PKPbc	22 19 00.9	+0.6
DPC	Dobruska-Polom	147.65	343	⇑*e*PKP	PKiKP	22 19 01.8	-0.2
BRG	Berggiesshubel	147.75	346	*e*PKPbc	PKPbc	22 19 01.7	+1.0
	baz=16,slow=2.5						
KRLC	Kraliky	147.78	343	⇑*e*PKP	PKPbc	22 19 01.5	+0.7
MORC	Moravsky Berou	147.82	342	⇑P	PKiKP	22 19 02.1	-0.3
DOPR	Dopca	147.87	329	⇓P	PKiKP	22 19 02.3	-0.3
PVCC	Panska Ves	147.93	345	⇑*e*PKP	PKiKP	22 19 02.2	-0.3
MLR	Muntele Rosu	147.94	328	⇑P	PKPbc	22 19 02.0	+0.5
LTVH	Ltavrtes, Hu	148.32	335	⇑P	PKiKP	22 19 03.7	+0.3
VOIR		148.41	329	⇑P	PKiKP	22 19 03.8	0.0
PRU	Pruhonice	148.44	345	⇑*e*PKP	PKiKP	22 19 03.6	0.0
DRGR		148.46	333	⇓P	PKiKP	22 19 03.8	-0.1
PLN	Plauen	148.49	348	*e*PKPbc	PKiKP	22 19 03.5	-0.2
	baz=16,slow=2.5						
TANN	Tannenbergstha	148.50	348	*e*PKPbc	PKiKP	22 19 03.6	-0.2
	baz=16,slow=2.5						
VRAC	Vranov	148.52	342	⇓P	PKPdf	22 18 55.4	-2.9
GUNZ	Gunzen	148.57	348	*e*PKPbc	PKiKP	22 19 03.8	-0.1
	baz=16,slow=2.5						
WERN	Wernitzgruen	148.64	348	*e*PKPbc	PKiKP	22 19 03.9	-0.1
	baz=16,slow=2.5						
ARR	Arges	148.67	329	⇓P	PKiKP	22 19 04.9	+0.6
NKC	Novy Kostel	148.68	348	⇑*e*PKP	PKPbc	22 19 03.7	+0.7
KRUC	Moravsky	148.80	342	*e*PKP	PKiKP	22 19 04.2	-0.2
TREC	Trest	148.84	343	⇑*e*PKP	PKiKP	22 19 04.3	-0.2
PBCC	Pribram	148.85	346	⇑*e*PKP	PKiKP	22 19 04.4	-0.1
MANZ	Manzenberg	148.98	348	*e*PKPbc	PKiKP	22 19 04.9	+0.2
	baz=16,slow=2.5						
LOT	Lotru	149.01	330	⇑P	PKiKP	22 19 07.7	+2.6
ROTZ	Rotzenmuhle	149.17	348	*e*PKPbc	PKiKP	22 19 05.1	0.0
	baz=16,slow=2.5						
SIRR	Siria	149.32	334	⇑P	PKiKP	22 19 05.7	+0.2
TNS	Taunus Mts	149.33	353	*e*L	L	23 04 40.1	
	comp=Z,128nm,19.9s						
GRF	Grafenberg Arr	149.43	349	*e*L	L	23 05 57.0	
	comp=Z,135nm,18.9s						
KHC	Kasperske Hory	149.47	346	⇑*e*PKP	PKPbc	22 19 05.6	+0.6
KHC				*e*PKPAB	PKPab	22 19 13.0	+0.8
GZR	Gura Zlata	149.51	331	⇓P	PKPbc	22 19 05.5	+0.2
CKRC	Cesky Krumlov	149.58	345	⇑*e*PKP	PKPbc	22 19 05.8	+0.5
WET	Wettzell	149.62	346	*e*L	L	23 06 20.4	
	comp=Z,133nm,20.5s						
GEC2	GERESS Array S	149.71	345	*e*PKPbc	PKPbc	22 19 06.2	+0.5
	baz=16,slow=2.5						
GEC2				*e*L	L	23 06 10.5	
	comp=Z,113nm,19.7s						
GERES	GERESS Array B	149.71	345	PKPbc	PKiKP	22 19 06.3	0.0
	comp=Z,5.3nm,0.8s,baz=32,slow=2.7,SNR=39						
BZS	Buzias	149.85	333	⇑P	PKiKP	22 19 06.7	+0.1
CONA	Conrad Observa	149.97	342	*e*P	PKiKP	22 19 07.3	+0.4
	comp=Z,7.3nm,0.7s						
PLVB	Pleven	150.09	327	⇑P	PKiKP	22 19 07.6	+0.5
WLF	Walferdange	150.12	355	*e*PKPbc	PKiKP	22 19 08.0	+1.0
	baz=16,slow=2.5						
MDVR	Moldovita	150.47	332	⇑P	PKiKP	22 19 08.1	+0.1
MOA	Molln	150.49	344	*e*P	PKiKP	22 19 08.4	+0.5
	comp=Z,10nm,1.8s						
MORH	Mrgy, Hungar	150.55	337	⇑P	PKiKP	22 19 08.2	+0.1
FUR	Furstenfeldbru	150.88	348	*e*L	L	23 05 52.1	
	comp=Z,102nm,18.2s						
FRGS	Fruska Gora	150.98	334	⇑P	PKiKP	22 19 09.3	+0.3
BFO	Black Forest	151.21	352	*e*L	L	23 02 10.0	
	comp=Z,100nm,21.4s						
SOKA	Soboth	151.35	342	*i* P	PKPbc	22 19 09.8	+0.3
	comp=Z,5.6nm,1.1s,SNR=4.3						
VTS	Vitosha	151.35	327	⇑P	PKiKP	22 19 10.5	+0.4
KBA	Koelnbreinsper	151.44	344	*e*P	PKPbc	22 19 10.2	+0.4
	comp=Z,3.5nm,0.6s						
UBR	Ueberruh	151.56	349	*e*PKPbc	PKiKP	22 19 10.5	+0.3
	baz=16,slow=2.5						
WATA	Walderalm	151.61	347	*e*P	PKPbc	22 19 10.6	+0.4
	comp=Z,1.5nm,0.4s						
RETA	Reutte	151.63	348	*e*P	PKiKP	22 19 10.8	+0.4
	comp=Z,1.6nm,0.5s						
OBKA	Obir	151.64	342	*e*P	PKPbc	22 19 10.5	+0.3
	comp=Z,6.4nm,1.4s						
WTTA	Wattenberg	151.66	347	*i* P	PKPbc	22 19 10.7	+0.4
	comp=Z,3.2nm,0.4s,SNR=5.3						
MOTA	Moosalm	151.70	348	*e*P	PKPbc	22 19 10.8	+0.4
	comp=Z,2.8nm,0.6s						
SQTA	Sankt Quirin	151.80	347	*e*P	PKPbc	22 19 10.9	+0.4
	comp=Z,3.4nm,0.7s						
ABTA	Abfaltersbach	151.95	345	*i* P	PKPbc	22 19 11.0	+0.1
	comp=Z,12nm,1.2s,SNR=5.2						

IDC 12 22:01:32.7±2.4**, 20.48S×139.04E, h0^{km}, mb3.3**/1**, mb1 3.1**/4**, mb1mx3.1**/23**, mbtmp3.0**/4**, ML2.4**/3**, MS2.7**/2**, Ms1 2.7**/2**, ms1mx2.3**/13**, Error ellipse: s-maj=24.4km s-min=22.8km az=132.0, Queensland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	4.45	276	Pn	Pn	22 02 41.8	+0.4
	0.0nm,0.3s,baz=92,slow=13,SNR=1.4						
WRA				Sn	Sn	22 03 35.8	+1.9
	0.1nm,0.3s,baz=94,slow=25,SNR=2.5						
WRA				LR	LR	22 03 51.6	
	comp=Z,28nm,19.5s,baz=90,slow=31						
WRA				Lg	Lg	22 03 55.5	
	0.4nm,0.3s,baz=101,slow=27,SNR=8.3						
ASAR	Alice Springs	5.72	235	Pn	Pn	22 02 57.1	-1.9
	0.1nm,0.3s,baz=55,slow=15,SNR=5.7						
ASAR				Sn	Sn	22 04 05.2	-0.3
	0.3nm,0.3s,baz=54,slow=25,SNR=10.0						
ASAR				Lg	Lg	22 04 35.1	
	0.3nm,0.3s,baz=55,slow=28,SNR=6.8						
STKA	Stephens Creek	11.58	169	Pn	Pn	22 04 18.9	-0.4
	0.1nm,0.3s,baz=337,slow=15,SNR=1.9						
DZM	Mont Dzumac	25.58	99	LR	LR	22 17 52.1	
	comp=Z,43nm,18.0s,baz=123,slow=38						
MKAR	Makanchi Array	84.23	325	P	P	22 14 06.4	+0.3
	0.2nm,0.7s,baz=112,slow=4.8,SNR=1.6						

RSNC 12 22:20:40.0±1.0**, 4.60N×76.08W, h50^{km}±6^{km}, ML2.3, 1C-1D, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLMC	San Jos del P	0.36	326	⇑*e*P	Pn	22 20 49.2	-0.6
PLMC				*e*S	Sn	22 20 57.5	+0.6
YOTC	Yotoco, Valle	0.67	204	*e*P	Pn	22 20 52.5	-1.0
YOTC				*e*S	Sn	22 21 03.0	-0.3
YOTC				*i*		22 21 04.0	
	comp=Z,103nm,0.2s						
ANIL	Santa Ana	0.68	99	*e*P	Pn	22 20 52.9	-0.9
ANIL				*e*S	Sn	22 21 03.8	+0.1
ANIL				*i*		22 21 04.3	
	comp=N,117nm,0.2s						
TOLC	Tolima	0.75	91	*e*P	Pn	22 20 53.9	-0.9
TOLC				*e*S	Sn	22 21 05.7	+0.2
TOLC				*i*		22 21 07.8	
	comp=E,338nm,0.5s						
RREF	El Recreo	0.79	68	*e*P	Pn	22 20 54.6	-0.8
RREF				*e*S	Sn	22 21 06.7	0.0
RREF				*i*		22 21 07.9	
	comp=Z,112nm,0.2s						
GUY2C	Guyana, Caldas	0.94	49	⇓*i*P	Pn	22 20 56.3	-1.1
GUY2C				*e*S	Sn	22 21 10.1	0.0
GUY2C				*i*		22 21 12.8	
	comp=Z,40nm,0.6s						
ORTC	Ortega, Tolima	1.08	130	*e*P	Pn	22 20 58.3	-0.5
ORTC				*i*		22 21 15.9	
	comp=Z,36nm,0.3s						
CBOC	Ciudad Bolivar	1.25	3	*e*P	Pn	22 21 00.9	-0.5
CBOC				*e*S	Sn	22 21 17.2	-0.1
CBOC				*i*		22 21 22.3	
	comp=Z,91nm,0.3s						
MALC	Bahia Malaga	1.39	245	*e*P	Pn	22 21 03.2	+0.3
PRAC	Prado	1.48	127	*e*P	Pn	22 21 04.3	0.0
PRAC				*e*S	Sn	22 21 23.0	+0.4
PRAC				*i*		22 21 26.7	
	comp=Z,24nm,0.3s						
NORC	Norcasia	1.54	52	*e*P	Pn	22 21 04.7	-0.4
NORC				*e*S	Sn	22 21 23.8	-0.1
NORC				*i*		22 21 27.6	
	comp=Z,20nm,0.4s						
POPC	Popayan, Colom	2.13	196	*e*P	Pn	22 21 12.7	-0.7
POPC				*e*S	Sn	22 21 38.7	-0.2
POPC				*i*		22 21 44.0	
	comp=E,16nm,0.3s						

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*UCR **12** 22:21:28.5±3.8, 6.96N×82.00W, h35^{km}±74^{km}, mb4.8(NEIC)*

*IDC **12** 22:21:29.7±0.6, 7.62N×81.84W, h0^{km}, mb4.4/19, mb1 4.6/26, mb1mx4.5/33, mbtmp4.4/26, ML3.7/6, MS3.9/22, Ms1 3.9/22, ms1mx3.7/40, Error ellipse: s-maj=20.1km s-min=11.0km az=48.0*

INET **12** *22:21:29.8, 7°.17N×82°.00W, h15^{km}, MW4.4*

UPA **12** *22:21:30.2±4.2, 7°.56N×81°.89W, h0^{km}±8^{km}, MW4.7, Fault plane solution: NP1:ϕ_s60.07000°, δ79.53000°, λ34.64000°.*

BGR **12** *22:21:35.7±0.0, 7°.42N×81°.70W, h33^{km}, mb4.9, Ms4.0*

GCMT **12** *22:21:35.2±0.3, 7°.71N±0°.01×81°.78W±0°.02, h20^{km}±1^{km}, MW4.8/92, Moment Tensor Solution. s12,c16; s92,c115; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.79±.10; $M_{\theta\theta}$-0.26±.07; $M_{\phi\phi}$-0.53±.10; $M_{r\theta}$-0.04±.14; $M_{\theta\phi}$1.75±.07; $M_{\phi r}$0.37±.14; Best double couple: $M_0$1.80900×10^{16} NP1:ϕ_s93.00000°, δ72.00000°, λ10.00000°. NP2: ϕ_s0.00000°, δ81.00000°, λ162.00000°. Principal axes: T 1.4380, Plg19.0000°, Azm316.0000°; N 0.7430, Plg70.0000°, Azm153.0000°; P -2.1800, Plg6.0000°, Azm48.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC **12** *22:21:36.2±1.9, 7°.61N±0°.07×81°.82W±0°.07, h41^{km}±7^{km}, mb4.8/141 Error ellipse: s-maj=11.3km s-min=8.1km az=222.0*

ISC 12 22:21:30.9±1.2, **7°.57N**±0°.03×**81°.87W**±0°.02, **h7**^{km}±7^{km}, **n400,** σ1^{s}44/421, **mb4.8**/101, **MS3.8**/17, **13C-19D, Fault plane solution: NP1:**ϕ_s108.92983°, δ73.37793°, λ39.45802°. **NP2:**ϕ_s5.68053°, δ52.48593°, λ158.86076°. **Principal axes:** T Plg39.2622°, Azm334.0900°; N Plg47.7166°, Azm128.0939°; P Plg13.1984°, Azm233.0384°; **Panama**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PVID3	Puerto Vidal,	0.55	29	⇓iP	Pg	22 21 41.4	0.0
PVID3				i S	Sb	22 21 49.8	-1.2
REME3	Remedios, Chir	0.66	4	⇓iP	Pg	22 21 43.5	-0.1
REME3				i S	Sb	22 21 54.6	+0.5
GMAL	Guarumal, Vera	0.66	73	⇓iP	Pg	22 21 43.2	-0.5
GMAL				i S	Sb	22 21 53.0	-1.3
NANC3	Nancito, Chiri	0.68	12	⇓iP	Pg	22 21 43.6	-0.5
RSUS3	Rio de Jesus,	0.82	60	⇓iP	Pg	22 21 45.9	-0.8
MARI3	Mariato, Verag	0.88	85	⇓iP	Pg	22 21 47.9	0.0
MARI3				i S	Sn	22 22 01.6	-1.2
MESA3	La Mesa, Verag	0.89	50	⇓iP	Pg	22 21 47.0	-1.2
CHIR3	Chiriqui UPA,	0.94	331	⇑eP	Pg	22 21 47.8	-1.2
CHIR3				i S	Sb	22 22 03.0	+0.8
PONU3	Ponuga, Veragu	0.94	70	i P	Pg	22 21 48.9	-0.1
PONU3				i S	Sb	22 22 02.4	0.0
PEDE3	Pedregal, Chir	0.98	326	eP	Pg	22 21 47.3	-2.4
LOCO3	Loma Colorada,	0.99	327	eP	Pg	22 21 47.3	-2.7
LOMA3	Las Lomas, Chi	1.00	329	eP	Pg	22 21 48.3	-1.8
CNAZ3	Canazas, Verag	1.02	40	⇓iP	Pg	22 21 48.9	-1.6
CACAO	El Cacao, Vera	1.03	102	⇓eP	Pg	22 21 50.0	-0.7
CACAO				i S	Sb	22 22 04.6	-0.2
STIA3	Santiago, Vera	1.04	59	⇓iP	Pg	22 21 49.5	-1.4
STIA3				i S	Sb	22 22 05.5	+0.4
GUAL3	Gualaca, Chiri	1.05	336	i P	Pg	22 21 49.8	-1.2
GUAL3				i S	Sn	22 22 06.4	-0.5
BAGA3	Bagala, Chiriq	1.10	324	eP	Pg	22 21 51.4	-0.8
SFRA3	San Francisco,	1.12	53	⇓iP	Pg	22 21 50.9	-1.6
SFRA3				i S	Sb	22 22 07.2	-0.3
OCU3	Ocu, Herrera	1.15	71	i P	Pg	22 21 51.5	-1.6
PSOM3	Paja de Sombre	1.20	338	i P	Pg	22 21 52.0	-1.9
PSOM3				i S	Sg	22 22 08.3	-1.1
LESP3	La Esperanza,	1.23	313	eP	Pg	22 21 52.2	-2.4
CALO3	Calobre, Verag	1.27	54	⇓iP	Pg	22 21 53.1	-2.2
PTAR3	Potrerillos Ar	1.28	331	eP	Pg	22 21 53.2	-2.3
BCO2	Palmira	1.31	330	⇓iP	Pg	22 21 54.2	-2.0
BCO2				eS	Sg	22 22 12.0	-1.3
LNBQ3	Los Naranjos,	1.34	335	i P	Pn	22 21 54.1	-2.1
LNBQ3				i S	Sn	22 22 14.4	0.0
CHGR2	Aguacate	1.39	349	⇓iP	Pn	22 21 54.7	-2.1
CHGR2				i S	Sb	22 22 14.1	-1.1
CDITO	Canoas	1.41	315	⇑eP	Pn	22 21 56.3	-0.7
CRIS3	El Cristo, Coc	1.42	61	⇓eP	Pn	22 21 55.1	-2.1
BC3P	Paso Ancho	1.44	330	⇑eP	Pn	22 21 56.4	-1.2
BRU2	Volcan	1.46	326	⇑eP	Pn	22 21 55.9	-2.1
CHIT3	Chitre	1.49	75	⇓iP	Pn	22 21 56.7	-1.5
CHIT3				i S	Sn	22 22 17.0	-1.0
MLIR3	Monte Lirio, C	1.54	322	i P	Pn	22 21 59.2	+0.3
MLIR3	Monte Lirio, C	1.54	322	i S	Sg	22 22 22.0	+1.5
AZU	Azuero	1.60	82	⇓iP	Pn	22 21 58.9	-0.8
AZU				i S	Sn	22 22 20.1	-0.5
AZU				i S	Sg	22 22 21.9	-0.5
AZU	Azuero	1.60	82	eP	Pn	22 21 58.5	-1.2
EDSV	San Vito	1.65	319	eP	Pn	22 22 00.5	0.0
EDSV				eS	Sg	22 22 27.2	+3.1
PIRO	Carate, Puerto	1.67	300	⇑iP	Pn	22 21 58.7	-1.9
PIRO	Carate, Puerto	1.67	300	eP	Pn	22 21 58.8	-1.9
PNME	Penonome	1.78	59	i P	Pn	22 22 01.5	-0.7
PNME				i S	Sb	22 22 26.5	-0.1
LPLA	Las Palmas La	1.83	322	eP	Pn	22 22 02.1	-1.0
POTG	Potrero Grande	1.92	320	eP	Pn	22 22 04.3	+0.1
CNI2	El Empalme, Bo	1.94	342	⇑eP	Pn	22 22 05.2	+0.9
CNI2				i S	Sg	22 22 33.5	+0.3
RIOS	Rincon, Osa	1.98	305	eP	Pn	22 22 03.5	-1.4
VTON	El Valle, Cocl	2.03	59	i P	Pn	22 22 06.1	+0.5
VTON				i S	Sg	22 22 35.0	-1.2
VTON				i S	Sb	22 22 35.3	+1.6
EDPN	Palmar Norte	2.09	312	eP	Pn	22 22 06.0	-0.4
EDBA	Buenos Aires	2.11	319	eP	Pn	22 22 07.8	+1.1
RGM0	Gandoca	2.14	340	eP	Pn	22 22 08.4	+1.3
RGM0	Gandoca	2.14	340	eP	Pn	22 22 08.4	+1.3
RGM0				eS	Sg	22 22 40.4	+0.7
DRK0	Durika	2.16	321	i P	Pn	22 22 07.5	-0.1
DRK0	Durika	2.16	321	eP	Pn	22 22 07.7	+0.1
EDLM	Las Mercedes	2.40	315	eP	Pn	22 22 11.6	+0.8
EDLM				eS	Sb	22 22 44.1	-0.4
ZANG	Zanguenga, Cho	2.42	55	i P	Pn	22 22 12.0	+1.1
ZANG	Zanguenga, Cho	2.42	55	eP	Pn	22 22 12.2	+1.2
CHOR3	La Chorrera	2.47	58	⇑iP	Pb	22 22 13.6	-2.1
PEZE	Perez Zeledon,	2.54	315	eP	Pn	22 22 12.9	+0.2
BCIP	Isla Barro Col	2.56	52	⇓iP	Pn	22 22 14.1	+1.1
BCIP				i S	Sb	22 22 49.2	0.0
BCIP	Isla Barro Col	2.56	52	eP	Pn	22 22 13.4	+0.5
BCIP	Isla Barro Col	2.56	52	Pn	Pn	22 22 13.7	+0.7
BCIP	Isla Barro Col	2.56	52	eP	Pn	22 22 13.8	+0.9
BCIP				eS	Sb	22 22 48.0	-1.2
EDDO	Dominical	2.58	311	eP	Pn	22 22 13.6	+0.3
ARRA3	Arraijan, Pana	2.60	58	⇑iP	Pn	22 22 15.0	+1.6
ARRA3				i S	Sb	22 22 47.8	-2.2
TABO3	Taboga, Panama	2.60	62	i P	Pn	22 22 15.0	+1.6
TABO3				i S	Sb	22 22 49.6	-0.5
MLIR	Monte Lirio	2.60	50	⇑iP	Pn	22 22 15.2	+1.8
PML3	Paraiso	2.66	57	eP	Pn	22 22 15.7	+1.4
MFS3	Miraflores	2.67	58	eP	Pn	22 22 16.6	+2.2
MFS3				eS	Sb	22 22 51.6	-0.5
FLAM	Flamenco Islan	2.67	60	i P	Pn	22 22 16.3	+1.8
FRIJ	El Hiral	2.69	52	eP	Pn	22 22 16.0	+1.4
UPA	Univ. de Panam	2.71	59	i P	Pn	22 22 15.4	+0.4
UPA				i S	Sb	22 22 51.3	-1.9
SABA3	Sabanitas, Col	2.71	49	eP	Pn	22 22 16.8	+1.8
SABA3				i S	Sb	22 22 51.5	-1.8
CDM	Cerro de Muert	2.72	317	eP	Pn	22 22 15.6	+0.1
MRVA	Moravia de Chi	2.73	325	eP	Pn	22 22 15.9	+0.6
MAD3	Madden Dam	2.77	54	eP	Pn	22 22 16.2	+0.4
BATAN	Batan	2.92	330	eP	Pn	22 22 20.2	+2.3
BATAN	Batan	2.92	330	eP	Pn	22 22 19.6	+1.7
RIMA	Rio Macho	2.94	318	eP	Pn	22 22 18.7	+0.4
LCR2	La Lucha 2	3.02	316	eP	Pn	22 22 19.1	-0.3
CVTR	Volcan Turrial	3.07	323	eP	Pn	22 22 21.6	+1.3
VTUC	Crater, Volcan	3.07	323	eP	Pn	22 22 21.2	+0.9
CHPO	Chepo, Panama	3.16	60	⇑iP	Pn	22 22 21.9	+0.8
SJS	Escuela Geolog	3.19	318	eP	Pn	22 22 22.5	+0.7
MIRA3	Miramar, Colon	3.21	51	eP	Pn	22 22 24.0	+2.2
HDC3	Heredia 3	3.28	318	eP	Pn	22 22 23.3	+0.4
HDC	Heredia	3.28	318	⇑iP	Pn	22 22 23.8	+0.9
HDC				eP	Pb	22 22 24.4	-5.2
HDC				eS	Sn	22 23 06.2	+4.0
HDC	Heredia	3.28	318	eP	Pn	22 22 23.5	+0.6
HDC	Heredia	3.28	318		Pn	22 22 23.9	+1.0
CNTA3	Canitas, Panam	3.38	61	eP	Pn	22 22 22.4	-1.8
JACO	JACO, Garabito	3.45	307	eP	Pn	22 22 23.9	-1.3
UPD2	Meteti	3.94	75	⇓iP	Pn	22 22 33.8	+1.8
COVE	Coope Vega, Sa	4.00	322	eP	Pn	22 22 34.1	+1.3
ARE1	Arenal 1	4.02	316	eP	Pn	22 22 34.3	+1.3
PTAC	Punta Ardita,	4.05	96	eP	Pn	22 22 32.1	-1.3
PTAC				eS	Sn	22 23 16.3	-4.9
JTS	Las Juntas de	4.07	312	Pn	Pn	22 22 34.7	+0.9
	154nm,0.3s,baz=186,slow=11,SNR=48						
JTS				Lg	Lg	22 23 31.1	
	baz=45,slow=19,SNR=0.9						
JTS	Las Juntas de	4.07	312	⇑eP	Pn	22 22 34.4	+0.7
JTS				eS	Sb	22 23 31.4	-1.2
JTS	Las Juntas de	4.07	312	eP	Pn	22 22 33.6	-0.1
GRZA	Playa Garza	4.39	302	eP	Pn	22 22 36.6	-1.5
PLVR	Palo Verde	4.41	309	eP	Pn	22 22 37.4	-1.1
CUI	Cuipilapa	4.47	314	eP	Pn	22 22 40.3	+1.1
SOLC	Bahia Solano	4.63	106	eP	Pn	22 22 40.1	-1.3
ESPN	Las Esperanzas	5.18	333		Pn	22 22 50.4	+1.4
ACON	Acoyapa	5.45	324	eP	Pn	22 22 54.7	+2.0
ACON	Acoyapa	5.45	324		Pn	22 22 54.6	+2.0
DBBC	Dabeiba	5.64	95	eP	Pn	22 22 55.7	+0.3
PRVC	Isla de Provid	5.79	5	⇑iP	Pn	22 22 58.5	+1.1
PRVC				eS	Sn	22 24 04.1	0.0
PRVC	Isla de Provid	5.79	5	eP	Pn	22 22 56.9	-0.5
CBOC	Ciudad Bolivar	6.06	106	eP	Pn	22 23 02.5	+1.2
PLMC	San Jos del P	6.16	115	eP	Pn	22 23 00.5	-2.0
MOTC	Monteria, Cord	6.26	79	eP	Pn	22 23 05.8	+2.0
MONA	Monteria	6.27	79	eP	Pn	22 23 04.6	+0.7
UREC	San Jos de Ur	6.29	88	eP	Pn	22 23 05.0	+0.7
YOTC	Yotoco, Valle	6.55	123	eP	Pn	22 23 07.6	-0.3
GUY2C	Guyana, Caldas	6.88	109	eP	Pn	22 23 14.4	+1.8
RREF	El Recreo	7.01	112	eP	Pn	22 23 17.1	+2.4
ANIL	Santa Ana	7.12	115	eP	Pn	22 23 18.3	+2.3
TOLC	Tolima	7.16	114	eP	Pn	22 23 17.9	+1.5
BBAC	Balboa, Cauca	7.18	140	eP	Pn	22 23 18.1	+1.4
POPC	Popayan, Colom	7.19	134	eP	Pn	22 23 18.1	+1.2
CRIN	San Cristobal	7.21	315		Pn	22 23 19.5	+2.5
NORC	Norcasia	7.24	106	eP	Pn	22 23 20.1	+2.8
PTBC	PUERTO BERRIO,	7.43	97	eP	Pn	22 23 21.7	+1.7
ORTC	Ortega, Tolima	7.53	119	eP	Pn	22 23 22.2	+0.9
GCUF	Volcan Galeras	7.75	144	eP	Pn	22 23 26.6	+1.9
SMLC	San Martn de	7.82	80	eP	Pn	22 23 26.0	+0.7
ARGC	Ariguani, Magd	7.88	73	eP	Pn	22 23 29.0	+3.0
PRAC	Prado	7.94	118	eP	Pn	22 23 28.3	+1.4
ROSC	El Rosal	7.98	109	Pn	Pn	22 23 31.6	+3.7
	3.5nm,0.3s,baz=307,slow=20,SNR=23						
ROSC				Sn	Sn	22 25 04.9	+6.2
	2.0nm,0.3s,baz=247,slow=22,SNR=4.7						
ROSC				LR	LR	22 26 09.8	
	comp=Z,1μm,20.2s,baz=293,slow=35						
ROSC	El Rosal	7.98	109	Pn	Pn	22 23 31.2	+3.3
ROSC					Sn	22 25 03.8	+5.1
ROSC	El Rosal	7.98	109	eP	Pn	22 23 33.3	+5.4
BETC	Betania	8.04	127	eP	Pn	22 23 31.1	+2.8
OTAV	Otavalo	8.04	155	Pn	Pn	22 23 29.8	+1.0
GARC	Garzon, Huila	8.30	130	eP	Pn	22 23 34.5	+2.4
TGUH	Tegucigalpa,Un	8.35	321		Pn	22 23 35.8	+3.2
OCAC	Ocana	8.50	85	eP	Pn	22 23 36.2	+1.5
FLOC	Florencia	8.59	134	eP	Pn	22 23 37.8	+2.0
CHIC	Chingaza	8.61	109	eP	Pn	22 23 40.5	+4.1
BARC	Barichara	8.68	96	eP	Pn	22 23 39.0	+1.7
SNET	Serv Nac Est T	9.45	311	Pn	Pn	22 23 50.8	+3.1
MTO3	Montecristo	10.00	313		Pn	22 23 58.4	+3.0
ESQI	Esquipulas	10.10	314	Pn	Pn	22 23 58.8	+2.2
URIC	Uribia, Colomb	10.57	66	eP	Pn	22 24 03.1	+0.1
SDV	Santo Domingo	11.20	83	Pn	Pn	22 24 12.7	+0.9
	2.1nm,0.3s,baz=266,slow=7.2,SNR=30						
SDV				Sn	Sn	22 26 15.7	-1.8
	2.1nm,0.3s,baz=60,slow=20,SNR=2.1						
SDV				LR	LR	22 29 50.7	
	comp=Z,1μm,18.2s,baz=263,slow=45						
SDV	Santo Domingo	11.20	83	eP	Pn	22 24 12.6	+0.7
MTDJ	Mount Denham	11.40	21	Pn	Pn	22 24 14.9	+0.4
CBCY	The Bluff, Cay	12.27	9		Pn	22 24 26.5	+0.3
GTBY	Guantanamo Bay	13.93	27		Pn	22 24 50.4	+1.5
JAKH	Jacmel	13.98	40		Pn	22 24 50.7	+1.1
TEIG	Tepich	14.03	334	Pn	Pn	22 24 50.3	0.0
	0.3nm,0.3s,baz=124,slow=18,SNR=2.3						
TEIG				LR	LR	22 30 17.2	
	comp=Z,403nm,19.3s,baz=146,slow=38						
TEIG	Tepich	14.03	334	Pn	Pn	22 24 51.3	+1.0
LGNH	Logne	14.13	39		Pn	22 24 52.6	+1.0
ATAH	Atahualpa	15.01	167	Pn	Pn	22 25 04.9	+0.8
	0.2nm,0.3s,baz=354,slow=10,SNR=3.3						
ATAH				LR	LR	22 30 15.6	
	comp=Z,387nm,19.6s,baz=343,slow=35						
SDDR	Presa de Saban	15.31	41	Pn	Pn	22 25 08.0	+0.2
CMIG	Matias Romero	15.84	308	Pn	Pn	22 25 14.8	+0.2
	0.3nm,0.3s,baz=113,slow=13,SNR=3.2						
PCRV	Puerto La Cruz	17.23	80	P	Pn	22 25 31.1	-1.2
	0.4nm,0.3s,baz=262,slow=6.6,SNR=10						
PLCV	Puerto La Cruz	17.27	80	P	Pn	22 25 31.1	-1.7
CZSB	Cruzeiro do Su	17.73	149	eP	Pn	22 25 38.2	-0.4
MLPR	Magueyes Islan	17.76	53	P	Pn	22 25 39.2	+0.3
MLPR				IAmb	IAmb	22 25 42.5	
	comp=Z,107nm,1.3s						
ICMP	Isla Caja de M	18.13	54		P	22 25 44.6	+0.9
ICMP				IAmb	IAmb	22 25 48.7	
	comp=Z,67nm,1.1s						
OBIP	Obispado Ponce	18.15	54	P	P	22 25 45.2	+1.1
OBIP				IAmb	IAmb	22 25 49.1	
	comp=Z,72nm,1.4s						
AOPR	Arecibo Observ	18.20	52		P	22 25 45.3	+0.7
AOPR				IAmb	IAmb	22 25 48.1	
	comp=Z,73nm,0.9s						
SJG	San Juan	18.55	54	P	P	22 25 48.0	-0.5
	comp=Z,1.1nm,0.3s,baz=264,slow=7.1,SNR=6.8						
SJG				LR	LR	22 32 03.5	
	comp=Z,268nm,19.5s,baz=230,slow=34						
SJG	San Juan	18.55	54	P	Pn	22 25 48.9	+0.3
PDPR	Patillas Dam,	18.61	55	P	P	22 25 48.8	-0.2
GCPR	Guaynabo City	18.71	54	P	Pn	22 25 50.8	+0.2
GCPR				IAmb	IAmb	22 25 53.7	
	comp=Z,83nm,1.2s						
HUMP	Col San Antoni	18.81	54	P	P	22 25 51.2	-0.1
MTP	Monte Pirata	19.03	55	P	P	22 25 53.8	+0.1
MTP				IAmb	IAmb	22 25 57.8	
	comp=Z,41nm,1.0s						
TLIG	Tlapa	19.07	303	P	Pn	22 25 56.3	+1.3
CUPR	Culebra, Puert	19.36	55		P	22 25 55.0	-2.3
CUPR				IAmb	IAmb	22 26 03.8	
	comp=Z,84nm,1.4s						
CDVI	St. Croix	19.50	57	P	P	22 25 59.0	+0.1
CDVI				IAmb	IAmb	22 26 07.9	
	comp=Z,66nm,0.9s						
NNA	Nana	20.06	166	P	P	22 26 05.5	+0.5
	comp=Z,7.5nm,0.5s,baz=360,slow=8.7,SNR=4.4						
NNA				LR	LR	22 33 58.9	
	comp=Z,185nm,18.1s,baz=326,slow=37						
NNA	Nana	20.06	166	P	P	22 26 05.9	+0.8
SVB	Belmont	21.05	73	P	P	22 26 15.8	0.0
MCLT	Moule a Chique	21.45	72	P	P	22 26 24.0	+3.9
DLPL	La Plaine	21.62	67	P	P	22 26 20.9	-1.1
ETMB	Extrema	23.27	138	eP	P	22 26 39.7	+0.3
PTGA	Pitinga	23.35	110	P	P	22 26 39.4	-0.9
	comp=Z,9.4nm,0.6s,baz=294,slow=12,SNR=15						
PTGA				LR	LR	22 35 54.7	
	comp=Z,334nm,19.1s,baz=292,slow=37						
PTGA	Pitinga	23.35	110	P	P	22 26 39.8	-0.5
PTGA				IAmb	IAmb	22 26 44.0	
	comp=Z,42nm,1.4s						
PTGA	Pitinga	23.35	110	eP	P	22 26 41.6	+1.3
MACA	Manacapuru-AM	23.68	116	eP	P	22 26 42.3	-1.2
TIGA	Tifton	23.80	356	P	P	22 26 45.9	+1.4
SAML	Samuel	24.82	131	P	P	22 26 53.5	-0.6
SAML				IAmb	IAmb	22 26 58.0	
	comp=Z,29nm,1.4s						
154A	Montrose	24.95	358	P	P	22 26 55.8	+0.7
152A	Waverly Hall	25.11	354	P	P	22 26 57.3	+0.7
152A				IAmb	IAmb	22 27 06.1	
	comp=Z,25nm,1.0s						
344A	Westbrook Farm	25.16	342	P	P	22 26 57.1	+0.1
441A	DeRidder	25.38	337	P	P	22 26 59.8	+0.9
GOGA	Godfrey	25.76	357	P	P	22 27 03.5	+1.2
Y52A	Lilburn	26.25	356	P	P	22 27 07.6	+0.8
Y52A				IAmb	IAmb	22 27 19.9	
	comp=Z,16nm,1.1s						
HODGE	Hodges	26.54	359	P	P	22 27 10.4	+1.0
HODGE				IAmb	IAmb	22 27 24.2	
	comp=Z,23nm,1.1s						
BIRD	Birdtown, Kers	26.98	3	P	P	22 27 15.7	+2.3
BIRD				IAmb	IAmb	22 27 20.6	
	comp=Z,25nm,1.2s						
LPAZ	La Paz	27.33	150	P	P	22 27 18.1	+0.7
	comp=Z,3.2nm,0.9s,baz=354,slow=8.0,SNR=6.7						
LPAZ				LR	LR	22 39 17.7	
	comp=Z,182nm,20.6s,baz=322,slow=39						
LPAZ	La Paz	27.33	150	P	P	22 27 17.7	+0.3
LPAZ	La Paz	27.33	150	eP	P	22 27 17.2	-0.2
OXF	Oxford	27.70	347	P	P	22 27 21.0	+1.1
OXF				IAmb	IAmb	22 27 23.3	
	comp=Z,33nm,1.1s						
TKL	Tuckaleechee C	28.01	357	P	P	22 27 25.1	+2.5
	comp=Z,2.1nm,0.5s,baz=203,slow=15,SNR=1.3						
TKL				LR	LR	22 38 24.0	
	comp=Z,278nm,19.0s,baz=179,slow=36						
TKL	Tuckaleechee C	28.01	357	IAmb	IAmb	22 27 42.6	
	comp=Z,20nm,1.4s						
JCT	Junction City	28.32	326	P	P	22 27 26.1	+0.6
V60A	Jim Taylor Roa	28.38	8	P	P	22 27 26.5	+0.6
PB16	IPOC Station P	28.48	155	P	P	22 27 28.7	+1.0
ITTB	Itaituba	28.65	114	eP	P	22 27 29.3	+0.6
MALB	Monte Alegre	29.09	108	eP	P	22 27 33.6	+1.0
MDP	Montagnes des	29.15	93	P	P	22 27 33.2	+0.1
	comp=Z,10nm,0.8s,baz=267,slow=13,SNR=1.7						
MDP				LR	LR	22 40 38.9	
	comp=Z,348nm,18.0s,baz=276,slow=40						
MNMC	Minye Minye	29.16	156	P	P	22 27 34.2	+0.9
MNMC				IAmb	IAmb	22 27 38.1	
	comp=Z,13nm,0.8s						
WHAR	Wooly Hollow	29.20	342	P	P	22 27 32.9	-0.4
WHAR				IAmb	IAmb	22 27 35.0	
	comp=Z,10nm,0.7s						
W39A	Magazine	29.59	340	P	P	22 27 36.9	+0.1
W39A				IAmb	IAmb	22 27 39.2	
	comp=Z,10nm,0.9s						
VILB	Vilhena	29.65	133	eP	P	22 27 37.8	+0.3
FCAR	Ozark Folk Cen	29.71	343	P	P	22 27 37.3	-0.5
TXAR	Lajitas Array	29.82	319	P	P	22 27 39.1	+0.2
	comp=Z,0.8nm,0.8s,baz=122,slow=9.2,SNR=6.6						
TXAR				LR	LR	22 41 06.7	
	comp=Z,136nm,18.5s,baz=0.0,slow=40						
TXAR	Lajitas Array	29.82	319	P	P	22 27 38.6	-0.4
NPGB	Novo Progresso	30.17	118	eP	P	22 27 41.9	-0.2
H06E1	SOCORRO T-PHAS	30.35	294	T	T	22 59 14.6	
	SNR=29						
U40A	Yellville	30.36	342	P	P	22 27 43.2	-0.3
U40A				IAmb	IAmb	22 27 46.5	
	comp=Z,8.6nm,0.7s						
T42A	Van Buren	30.50	345	P	P	22 27 44.6	-0.2
T42A				IAmb	IAmb	22 27 46.1	
	comp=Z,8.1nm,0.8s						
PB01	IPOC Station P	30.93	157	P	P	22 27 48.6	-0.1
PB01				IAmb	IAmb	22 27 51.2	
	comp=Z,19nm,1.1s						
MGMO	Mountain Grove	30.93	344	P	P	22 27 48.6	0.0
Q52A	Bidwell	31.26	359	P	P	22 27 52.2	+0.8
Q54A	Coxs Mills	31.29	2	P	P	22 27 52.8	+1.1
SLBS	Sierra La Lagu	31.33	304	P	P	22 27 52.4	+0.1
SLBS				IAmb	IAmb	22 27 57.5	
	comp=Z,15nm,1.1s						
Q56A	Snyder Ridge,	31.43	4	P	P	22 27 54.7	+1.8
Q56A				IAmb	IAmb	22 27 57.3	
	comp=Z,28nm,1.2s						
CCM	Cathedral Cave	31.52	346	P	P	22 27 52.8	-0.9
CCM				IAmb	IAmb	22 27 55.5	
	comp=Z,16nm,1.2s						
S39A	Bolivar	31.73	343	P	P	22 27 54.8	-0.9
T35A	Sooner Cattle	32.11	338	P	P	22 27 58.0	-1.0
T35A				IAmb	IAmb	22 28 00.8	
	comp=Z,10nm,0.9s						
LVC	Limon Verde	32.57	157	P	P	22 28 04.2	+0.7
LVC				IAmb	IAmb	22 28 06.6	
	comp=Z,15nm,1.1s						
P60A	Greenville	32.59	9	P	P	22 28 03.6	+0.5
P43A	Skaggs, Pawnee	32.66	349	P	P	22 28 03.8	0.0
P43A				IAmb	IAmb	22 28 07.3	
	comp=Z,34nm,1.4s						
MVL	Millersville	32.67	8	P	P	22 28 04.6	+0.8
MVL				IAmb	IAmb	22 28 07.9	
	comp=Z,24nm,1.0s						
LUPA	Lehigh Univers	33.40	9	P	P	22 28 10.9	+0.8
M57A	Sunshine Farm,	33.89	6	P	P	22 28 15.3	+0.8
N41A	Harden Midland	33.96	348	P	P	22 28 14.5	-0.6
KSPA	Keystone Colle	34.28	8	P	P	22 28 18.9	+1.1
N38A	Joes South For	34.60	345	P	P	22 28 19.6	-1.0
L40A	Anamosa	35.34	348	P	P	22 28 26.2	-0.7
L40A				IAmb	IAmb	22 28 30.2	
	comp=Z,23nm,1.2s						
K58A	Earlville	35.48	8	P	P	22 28 29.1	+0.8
SCIA	State Center	35.64	345	P	P	22 28 29.0	-0.6
SCIA				IAmb	IAmb	22 28 30.6	
	comp=Z,20nm,1.1s						
SADO	Sadowa	37.13	3	LR	LR	22 44 50.6	
	comp=Z,185nm,18.1s,baz=242,slow=38						
LONY	Lake Ozonia	37.45	9	P	P	22 28 45.7	+0.6
PLVO	Plevna	37.56	6	P	P	22 28 46.5	+0.5
PLVO				IAmb	IAmb	22 28 48.4	
	comp=Z,20nm,1.1s						
214A	Organ Pipe Nat	37.65	314	P	P	22 28 47.7	+0.8
214A				IAmb	IAmb	22 28 52.1	
	comp=Z,12nm,1.1s						
ARAG	Araguaiana, MT	37.70	128	eP	P	22 28 46.5	-1.0
SMTB	Santa Maria do	37.86	115	eP	P	22 28 49.0	+0.1
AC05	El Transito	37.88	163	P	P	22 28 48.7	-0.2
AC05				IAmb	IAmb	22 28 51.5	
	comp=Z,15nm,0.8s						
AQDB	Aquidauana	37.94	138	eP	P	22 28 48.9	-0.5
PEXB	Peixe	38.68	120	eP	P	22 28 55.8	0.0
113A	Mohawk Valley,	38.77	315	P	P	22 28 58.4	+2.1
G62A	West of Eustis	38.78	13	P	P	22 28 56.7	+0.5
TRQ	Mont Tremblant	39.02	8	P	P	22 28 59.4	+1.0
ROSB	Rosrio	39.07	104	eP	P	22 28 59.5	+0.4
SPX	San Pedro Mart	39.10	311	P	P	22 29 00.6	+1.0
CO02	Combarbal	39.93	165	P	P	22 29 07.2	+1.1
CO02				IAmb	IAmb	22 29 08.5	
	comp=Z,22nm,0.8s						
E63A	Oxbow	40.40	14	P	P	22 29 11.3	+1.6
E63A				IAmb	IAmb	22 29 15.4	
	comp=Z,36nm,1.4s						
LATQ	La Tuque	40.43	10	P	P	22 29 10.6	+0.7
LATQ				IAmb	IAmb	22 29 13.1	
	comp=Z,10nm,1.0s						
BDFB	Brasilia	40.70	125	P	P	22 29 11.5	-1.2
	comp=Z,1.2nm,0.4s,baz=298,slow=12,SNR=4.4						
BDFB				LR	LR	22 46 42.1	
	comp=Z,538nm,18.1s,baz=309,slow=37						
BDFB	Brasilia	40.70	125	IAmb	IAmb	22 29 13.5	
	comp=Z,4.1nm,0.9s						
PQI	Presque Isle	40.74	15	P	P	22 29 13.4	+1.0
PQI				IAmb	IAmb	22 29 15.2	
	comp=Z,28nm,1.4s						
D62A	Allapoint, All	40.87	13	P	P	22 29 14.4	+0.8
D62A				IAmb	IAmb	22 29 17.7	
	comp=Z,18nm,1.0s						
ZON	Zonda	40.89	163	P	P	22 29 14.9	+1.0
ZON				IAmb	IAmb	22 29 19.0	
	comp=Z,25nm,1.3s						
LMN	Caledonia Moun	40.89	18	P	P	22 29 14.6	+0.9
LMN				IAmb	IAmb	22 29 19.7	
	comp=Z,34nm,1.3s						
XPFO	Pion Flat	41.13	314	P	P	22 29 17.1	+1.1
PFO	Pinyon Flats O	41.13	314	P	P	22 29 17.4	+1.3
CPUP	Villa Florida	41.27	146	P	P	22 29 15.3	-1.8
	comp=Z,3.4nm,0.9s,baz=345,slow=8.4,SNR=5.2						
CPUP				LR	LR	22 47 49.3	
	comp=Z,125nm,21.4s,baz=330,slow=38						
SHPR	Sheep Range	41.82	318	P	P	22 29 22.6	+0.9
IPMB	Ipameri, GO	41.82	128	eP	P	22 29 21.0	-0.9
TCUT	Toone Canyon	42.49	327	P	P	22 29 27.8	+0.5
MWC	Mount Wilson	42.59	314	P	P	22 29 29.2	+1.1
MWC				IAmb	IAmb	22 29 32.5	
	comp=Z,18nm,1.2s						
PD31	Pinedale Array	42.69	330	P	P	22 29 29.1	+0.2
PDAR	Pinedale Array	42.69	330	P	P	22 29 28.1	-0.9
	comp=Z,1.7nm,1.0s,baz=163,slow=3.8,SNR=8.6						
PDAR				PcP	PcP	22 31 20.6	-0.1
	comp=Z,1.5nm,1.0s,baz=131,slow=4.1,SNR=4.0						
PDAR				LR	LR	22 49 51.7	
	comp=Z,104nm,18.2s,baz=134,slow=40						
PDAR	Pinedale Array	42.69	330	P	P	22 29 28.0	-0.9
BW06	Boulder Array	42.69	330	P	P	22 29 29.1	+0.2
TPNV	Topopah Spring	42.79	318	P	P	22 29 31.0	+1.3
MDND	Maddock	42.88	342	P	P	22 29 29.8	-0.2
MDND				IAmb	IAmb	22 29 31.3	
	comp=Z,20nm,0.8s						
ISA	Isabella, Lake	43.61	315	P	P	22 29 36.9	+0.7
REDW	Red Top Meadow	43.78	329	P	P	22 29 37.6	0.0
LOHW	Long Hollow	43.83	330	P	P	22 29 38.6	+0.5
TPH	Tonopah	44.07	319	P	P	22 29 40.5	+0.5
TPH				IAmb	IAmb	22 29 45.5	
	comp=Z,33nm,1.2s						
ULM	Lac du Bonnet	44.12	347	P	P	22 29 37.7	-2.3
	comp=Z,6.5nm,0.6s,baz=163,slow=8.1,SNR=15						
ULM	Lac du Bonnet	44.12	347	P	P	22 29 38.2	-1.7

ULM				IAmb	IAmb	22 29 42.5	
	comp=Z,9.3nm,0.9s						
NV11	**Mina Array Sit**	**44.88**	**319**	P	**P**	**22 29 47.9**	**+1.5**
PAGB	**Antelope Grade**	**44.89**	**314**	P	**P**	**22 29 46.7**	**+0.3**
PAGB				IAmb	IAmb	22 29 50.8	
	comp=Z,23nm,1.0s						
DGMT	**Dagmar**	**44.93**	**339**	P	**P**	**22 29 46.9**	**+0.4**
DGMT				IAmb	IAmb	22 29 49.1	
	comp=Z,12nm,0.8s						
BI03	**Tigo**	**44.95**	**170**	P	**P**	**22 29 46.9**	**+0.1**
NVAR	**Mina Array Bea**	**44.97**	**319**	P	**P**	**22 29 47.7**	**+0.4**
	comp=Z,2.3nm,0.8s,baz=126,slow=6.1,SNR=13						
NVAR				PcP	**PcP**	**22 31 29.8**	**+1.3**
	comp=Z,0.4nm,0.6s,baz=134,slow=2.6,SNR=2.1						
NVAR				LR	LR	22 50 48.7	
	comp=Z,136nm,19.2s,baz=142,slow=39						
NVAR	**Mina Array Bea**	**44.97**	**319**	P	**P**	**22 29 48.0**	**+0.8**
OMMB	**Old Mammoth Mi**	**44.99**	**317**	P	**P**	**22 29 48.8**	**+1.2**
OMMB				IAmb	IAmb	22 29 52.4	
	comp=Z,12nm,1.3s						
LHV	**Little Huntoon**	**45.00**	**318**	P	**P**	**22 29 49.0**	**+1.8**
YHL	**Hebgen Lake**	**45.02**	**331**	P	**P**	**22 29 48.9**	**+1.3**
MDPB	**Devils Postpil**	**45.05**	**317**	P	**P**	**22 29 49.7**	**+1.7**
MDPB				IAmb	IAmb	22 29 53.4	
	comp=Z,8.0nm,1.0s						
BI02	**San Fabin de**	**45.11**	**168**	P	**P**	**22 29 48.1**	**0.0**
BI02				IAmb	IAmb	22 29 49.4	
	comp=Z,11nm,0.9s						
QLMT	**Earthquake Lak**	**45.12**	**330**	P	**P**	**22 29 50.0**	**+1.7**
WAKR	**Walker**	**45.76**	**318**	P	**P**	**22 29 54.6**	**+1.1**
WAKR				IAmb	IAmb	22 29 59.2	
	comp=Z,14nm,1.4s						
DRLN	**Deer Lake**	**46.33**	**22**	P	**P**	**22 29 58.3**	**+0.7**
CPSB	**Cacapava Do Su**	**46.58**	**146**	*e*P	**P**	**22 29 59.3**	**-0.5**
LC01	**Cunco**	**47.15**	**169**	P	**P**	**22 30 04.6**	**+0.5**
WVOR	**Wild Horse Val**	**47.47**	**323**	P	**P**	**22 30 07.0**	**+0.2**
WVOR				IAmb	IAmb	22 30 09.5	
	comp=Z,14nm,1.3s						
PLTB	**Pedras Altas**	**47.53**	**147**	*e*P	**P**	**22 30 06.9**	**-0.3**
ORV	**Oroville**	**47.67**	**318**	P	**P**	**22 30 09.0**	**+0.8**
ORV				IAmb	IAmb	22 30 14.4	
	comp=Z,6.9nm,1.1s						
SJMB	**Sao Joao De Ma**	**47.87**	**124**	*e*P	**P**	**22 30 09.7**	**-0.4**
BSFB	**Barra de Sao F**	**48.21**	**124**	*e*P	**P**	**22 30 12.5**	**-0.2**
RIB01	**Linhares ES**	**48.82**	**124**	*e*P	**P**	**22 30 17.0**	**-0.3**
PLCA	**Paso Flores**	**49.18**	**169**	P	**P**	**22 30 20.2**	**+0.4**
	comp=Z,7.7nm,0.7s,baz=344,slow=8.0,SNR=28						
PLCA	**Paso Flores**	**49.18**	**169**	P	**P**	**22 30 20.7**	**+0.9**
PLCA				IAmb	IAmb	22 30 20.8	
	comp=Z,11nm,0.8s						
FFC	**Flin Flon**	**49.71**	**345**	P	**P**	**22 30 23.3**	**-0.4**
FCC	**Fort Churchill**	**51.93**	**352**	P	**P**	**22 30 40.8**	**+0.6**
FCC				IAmb	IAmb	22 30 44.9	
	comp=Z,15nm,1.5s						
YKA	**Yellowknife Ar**	**59.80**	**343**	P	**P**	**22 31 35.5**	**-1.1**
	comp=Z,4.8nm,0.9s,baz=131,slow=7.7,SNR=20						
INK	**Inuvik**	**69.50**	**342**	P	**P**	**22 32 40.3**	**+0.4**
INK				IAmb	IAmb	22 32 43.8	
	comp=Z,6.9nm,1.1s						
BCAR	**Beaver Creek A**	**69.95**	**335**	P	**P**	**22 32 42.8**	**0.0**
SUMG	**Summit**	**70.02**	**13**	*i* P	**P**	**22 32 42.0**	**-1.5**
	comp=Z,31nm,1.0s						
SUMG	**Summit**	**70.02**	**13**	P	**P**	**22 32 42.1**	**-1.4**
SUMG				IAmb	IAmb	22 32 43.4	
	comp=Z,7.2nm,1.0s						
SUMG	**Summit**	**70.02**	**13**	*i* P	**P**	**22 32 42.0**	**-1.5**
SUMG				IAmb	IAmb	22 32 45.6	
	comp=Z,31nm,1.0s						
MORF	**Marmelete**	**72.11**	**53**	*e*P	**P**	**22 32 56.7**	**+0.2**
MORF				AMb	AMB	22 33 03.6	
	comp=Z,42nm,1.4s						
MORF	**Marmelete**	**72.11**	**53**	*e*P	**P**	**22 32 57.7**	**+1.2**
	comp=Z,42nm,1.4s						
PCAS	**Casmilo, Conde**	**72.45**	**50**	*e*P	**P**	**22 32 59.9**	**+1.5**
	comp=Z,29nm,1.4s						
MESJ	**Messejana**	**72.49**	**53**	*e*P	**P**	**22 32 58.9**	**+0.3**
MESJ				AMb	AMB	22 33 03.2	
	comp=Z,18nm,1.6s						
MESJ	**Messejana**	**72.49**	**53**	*e*P	**P**	**22 32 59.9**	**+1.2**
	comp=Z,19nm,1.3s						
EUNU	**Eureka**	**72.50**	**359**	IAmb	IAmb	22 32 60.0	
	comp=Z,7.5nm,1.1s						
PMTG	**Montargil**	**72.58**	**52**	*e*P	**P**	**22 32 59.9**	**+0.7**
	comp=Z,18nm,1.2s						
HDA	**Harding Lake**	**72.58**	**336**	IAmb	IAmb	22 33 01.4	
	comp=Z,7.4nm,0.9s						
ILAR	**Eielson Array**	**72.68**	**336**	P	**P**	**22 32 58.8**	**-0.5**
	comp=Z,3.0nm,0.9s,baz=108,slow=4.5,SNR=20						
ILAR				LR	LR	23 11 33.3	
	comp=Z,38nm,19.6s,baz=122,slow=41						
BMAR	**Burnt Mountain**	**72.77**	**339**	P	**P**	**22 32 59.7**	**-0.2**
PVIS	**Viseu**	**72.96**	**50**	*e*P	**P**	**22 33 02.2**	**+0.7**
	comp=Z,19nm,2.0s						
PESTR	**Estremoz**	**73.06**	**52**	IAmb	IAmb	22 33 05.5	
	comp=Z,15nm,1.2s						
RND	**Reindeer**	**73.06**	**334**	P	**P**	**22 33 03.0**	**+1.3**
RND				IAmb	IAmb	22 33 07.4	
	comp=Z,5.7nm,0.8s						
PCBR	**Castelo Branco**	**73.21**	**51**	*e*P	**P**	**22 33 03.9**	**+1.0**
	comp=Z,24nm,1.5s						
PMRV	**Marv??o**	**73.25**	**51**	*e*P	**P**	**22 33 03.9**	**+0.7**
	comp=Z,18nm,1.5s						
PBAR	**Barrancos**	**73.44**	**53**	*e*P	**P**	**22 33 05.5**	**+1.2**
	comp=Z,20nm,1.4s						
MVO	**Moncorvo**	**73.65**	**49**	*e*P	**P**	**22 33 06.3**	**+0.7**
	comp=Z,18nm,1.5s						
I23K	**Minto, Yukon-K**	**73.80**	**336**	IAmb	IAmb	22 33 09.9	
	comp=Z,7.8nm,1.1s						
COLD	**Coldfoot**	**74.75**	**338**	P	**P**	**22 33 12.7**	**+1.3**
COLD				IAmb	IAmb	22 33 17.7	
	comp=Z,9.5nm,1.4s						
PAB	**San Pablo**	**75.61**	**51**	P	**P**	**22 33 18.3**	**+1.3**
PAB				IAmb	IAmb	22 33 20.6	
	comp=Z,20nm,1.5s						
ESDC	**Sonseca Array**	**75.91**	**51**	P	**P**	**22 33 19.1**	**+0.3**
	comp=Z,7.0nm,1.0s,baz=260,slow=4.2,SNR=19						
TIC	**Toumodi**	**76.17**	**85**	*e*PKIKP	**P**	**22 33 22.7**	**+2.1**
LIC	**Lamto**	**76.21**	**85**	*e*PKIKP	**P**	**22 33 22.9**	**+2.1**
	comp=Z,64nm,1.1s						
DBIC	**Dimbokro**	**76.33**	**85**	P	**P**	**22 33 21.8**	**+0.3**
	comp=Z,11nm,0.8s,baz=253,slow=6.0,SNR=11						
DBIC	**Dimbokro**	**76.33**	**85**	P	**P**	**22 33 21.7**	**+0.3**
DBIC				IAmb	IAmb	22 33 24.4	
	comp=Z,17nm,1.0s						
KOWA	**Kowa**	**76.44**	**77**	P	**P**	**22 33 22.3**	**+0.3**
KOWA				IAmb	IAmb	22 33 25.7	
	comp=Z,11nm,0.7s						
KIC	**Kosan Boka**	**76.48**	**85**	*e*PKIKP	**P**	**22 33 22.4**	**+0.1**
	comp=Z,12nm,0.7s						
DAG	**Danmarks Havn**	**76.69**	**12**	*i* P	**P**	**22 33 20.6**	**-1.7**
DAG	**Danmarks Havn**	**76.69**	**12**	*e*P	**P**	**22 33 20.7**	**-1.7**
CLF	**Chambon-Foret**	**80.50**	**43**	P	**P**	**22 33 44.9**	**+1.0**
TOA0	**Torodi Ar. Sit**	**82.08**	**78**	P	**P**	**22 33 52.1**	**-0.8**
TORD	**Torodi Ar. Bea**	**82.08**	**78**	P	**P**	**22 33 53.1**	**+0.2**
	comp=Z,2.4nm,0.6s,baz=291,slow=5.4,SNR=10.0						
TORD				LR	LR	23 11 22.3	
	comp=Z,24nm,19.2s,baz=185,slow=36						
TORD	**Torodi Ar. Bea**	**82.08**	**78**	P	**P**	**22 33 53.5**	**+0.5**
SENIN	**Lac Senin/Sane**	**84.01**	**44**	IAmb	IAmb	22 34 05.9	
	comp=Z,4.9nm,0.9s						
TAM	**Tamanrasset**	**84.72**	**68**	P	**P**	**22 34 08.0**	**+1.4**
NB2	**NORSAR Subarra**	**84.93**	**29**	P	**P**	**22 34 06.6**	**-0.1**
	comp=Z,10nm,1.2s,baz=278,slow=5.1						
NOA	**NORSAR Array B**	**84.93**	**29**	P	**P**	**22 34 06.4**	**-0.3**
	comp=Z,2.8nm,0.9s,baz=276,slow=4.8,SNR=7.6						
NOA				LR	LR	23 10 18.2	
	comp=Z,30nm,19.3s,baz=270,slow=34						
DAVA	**Damuels**	**85.69**	**43**	*e*P	**P**	**22 34 12.2**	**+1.3**
	comp=Z,17nm,0.8s						
FLTG	**Flechtingen**	**85.97**	**38**	*e*L	L	23 14 32.6	
	comp=Z,58nm,19.9s						
RETA	**Reutte**	**86.26**	**43**	*e*P	**P**	**22 34 16.1**	**+2.4**
	comp=Z,12nm,1.2s						
GRFO	**Grafenberg**	**86.29**	**41**	P	**P**	**22 34 14.3**	**+0.7**
GRA1	**Grafenberg Arr**	**86.29**	**41**	P	**P**	**22 34 14.2**	**+0.5**
GRF	**Grafenberg Arr**	**86.29**	**41**	*e*P	**P**	**22 34 14.3**	**+0.5**
	comp=Z,10nm,1.0s,baz=266,slow=6.1						
FETA	**Feichten**	**86.30**	**43**	*e*P	**P**	**22 34 14.6**	**+0.6**
	comp=Z,9.4nm,1.0s						
MOTA	**Moosalm**	**86.51**	**43**	*e*P	**P**	**22 34 15.4**	**+0.4**
	comp=Z,11nm,1.1s						
SQTA	**Sankt Quirin**	**86.59**	**43**	*e*P	**P**	**22 34 16.3**	**+0.9**
	comp=Z,12nm,1.4s						
WATA	**Walderalm**	**86.83**	**43**	*e*P	**P**	**22 34 17.4**	**+0.9**
	comp=Z,6.0nm,1.0s						
WTTA	**Wattenberg**	**86.88**	**43**	*e*P	**P**	**22 34 19.0**	**+2.2**
	comp=Z,6.7nm,1.0s						
NKC	**Novy Kostel**	**87.00**	**40**	*e*P	**P**	**22 34 18.4**	**+1.2**
CLL	**Collm**	**87.19**	**39**	*i* P	**P**	**22 34 18.5**	**+0.5**
	comp=Z,11nm,0.9s						
CLL				*e*PP	**PP**	**22 37 46.0**	**+4.4**
CLL	**Collm**	**87.19**	**39**	P	**P**	**22 34 18.6**	**+0.5**
ABTA	**Abfaltersbach**	**87.54**	**43**	*e*P	**P**	**22 34 20.2**	**+0.2**
	comp=Z,11nm,0.9s						
LATE	**Laterza**	**87.63**	**48**	P	**P**	**22 34 22.6**	**+2.2**
LATE				IAmb	IAmb	22 34 27.0	
	comp=Z,5.5nm,1.2s						
STAL	**STALIGIAL**	**87.75**	**44**	P	**P**	**22 34 21.0**	**+0.1**
BRG	**Berggiesshubel**	**87.85**	**39**	*e*P	**P**	**22 34 22.0**	**+0.8**
BRG				Amp		22 34 24.6	
	comp=Z,8.5nm,1.1s						
KHC	**Kasperske Hory**	**87.89**	**41**	*e*P	**P**	**22 34 21.6**	**+0.1**
KHC	**Kasperske Hory**	**87.89**	**41**	IAmb	IAmb	22 34 24.9	
	comp=Z,4.8nm,0.9s						
GEC2	**GERESS Array S**	**88.02**	**41**	P	**P**	**22 34 21.6**	**-0.6**
GEC2				IAmb	IAmb	22 34 29.1	
	comp=Z,5.0nm,1.0s						
GERES	**GERESS Array B**	**88.02**	**41**	P	**P**	**22 34 22.2**	**0.0**
	comp=Z,1.9nm,0.7s,baz=298,slow=2.9,SNR=15						
GERES				LR	LR	23 07 43.8	
	comp=Z,52nm,21.8s,baz=262,slow=32						
GERES	**GERESS Array B**	**88.02**	**41**	P	**P**	**22 34 21.9**	**-0.4**
KBA	**Koelnbreinsper**	**88.06**	**43**	*e*P	**P**	**22 34 22.4**	**-0.2**
	comp=Z,12nm,1.2s						
MOA	**Molln**	**88.55**	**42**	*e*P	**P**	**22 34 26.9**	**+2.3**
	comp=Z,5.3nm,1.0s						
ARCES	**ARCESS Array B**	**88.95**	**20**	LR	LR	23 14 26.7	
	comp=Z,42nm,18.0s,baz=65,slow=36						
OBKA	**Obir**	**88.97**	**43**	*e*P	P	22 34 31.9	+5.1
	comp=Z,4.2nm,0.9s						
CHVC	**Chvalec**	**89.22**	**39**	*e*P	**P**	**22 34 28.3**	**+0.5**
SOKA	**Soboth**	**89.27**	**43**	*e*P	**P**	**22 34 28.6**	**+0.5**
	comp=Z,4.6nm,1.1s						
OSTC	**Ostas**	**89.33**	**39**	*e*P	**P**	**22 34 28.7**	**+0.5**
DPC	**Dobruska-Polom**	**89.43**	**39**	*e*P	**P**	**22 34 29.2**	**+0.4**
CONA	**Conrad Observa**	**89.59**	**42**	*e*P	**P**	**22 34 29.2**	**-0.5**
	comp=Z,4.8nm,0.8s						
ZST	**Bratislava**	**90.36**	**41**	*e*P	**P**	**22 34 34.7**	**+1.6**
MODS	**Modra-Piesok**	**90.44**	**41**	*e*P	**P**	**22 34 33.7**	**+0.2**
LANS	**Liptovska Anna**	**91.68**	**40**	*e*P	**P**	**22 34 40.5**	**+1.2**
FINES	**FINESS Array B**	**91.84**	**27**	P	**P**	**22 34 38.9**	**-0.8**
	comp=Z,2.2nm,0.9s,baz=316,slow=3.8,SNR=1.7						
FINES				LR	LR	23 17 24.0	
	comp=Z,77nm,18.2s,baz=296,slow=36						
MKAR	**Makanchi Array**	**124.07**	**13**	PKP	**PKPdf**	**22 40 28.8**	**-1.8**
	comp=Z,0.4nm,0.7s,baz=13,slow=2.4,SNR=5.5						
SONM	**Songino Array**	**124.36**	**353**	PKP	**PKPdf**	**22 40 30.0**	**-1.2**
	comp=Z,1.0nm,0.8s,baz=280,slow=0.5,SNR=5.5						
WMQ	**Urumqi**	**127.99**	**10**	*e*PKP	**PKiKP**	**22 40 38.8**	**0.0**
WMQ				AMB	AMB		
	comp=Z,65nm,4.7s						
KSH	**Kashi**	**128.85**	**22**	PKP	**PKPdf**	**22 40 38.6**	**-1.4**
HHC	**Hu-ho-hao-te**	**130.26**	**347**	*e*PKP	**PKPdf**	**22 40 40.4**	**-2.2**
NJ2	**Nanjing**	**135.91**	**334**	*e*PKP	**PKPdf**	**22 40 52.1**	**-1.2**
DANN	**Dangsing**	**141.69**	**21**	*e*P	**PKPdf**	**22 41 01.0**	**-3.4**
ASAR	**Alice Springs**	**142.16**	**241**	PKhKP	PKPpre	22 40 59.1	
	comp=Z,0.7nm,0.9s,baz=131,slow=3.5,SNR=4.4						
ASAR	**Alice Springs**	**142.16**	**241**	PKPdf	**PKPdf**	**22 41 02.0**	**-3.0**
KOLN	**Koldanda**	**142.16**	**21**	*e*P	**PKPdf**	**22 41 00.7**	**-4.5**
GKN	**Gorkha**	**142.31**	**20**	*e*P	**PKPdf**	**22 41 01.2**	**-4.2**
GUN	**Gumba**	**142.79**	**18**	*e*P	**PKPdf**	**22 41 01.7**	**-4.8**
	comp=Z,6.7nm,0.6s						
WRA	**Warramunga Arr**	**142.83**	**247**	PKhKP	PKPpre	22 41 01.7	
	comp=Z,0.9nm,0.6s,baz=97,slow=2.2,SNR=9.8						
PKI	**Pulchoki**	**142.96**	**19**	*e*P	**PKPdf**	**22 41 02.1**	**-4.7**
	comp=Z,10.0nm,0.8s						
TAPN	**Taplejung**	**143.85**	**16**	*e*P	PKPab	22 41 03.0	-2.2
	comp=Z,13nm,0.8s						
RAMN	**Ramite**	**143.91**	**18**	*e*P	PKPab	22 41 03.8	-1.6
ODAN	**Odare**	**144.23**	**17**	*e*P	**PKPab**	**22 41 03.2**	**-3.4**
	comp=Z,20nm,1.0s						
GYA	**Guiyang**	**145.18**	**347**	PKPbc	**PKPbc**	**22 41 09.4**	**-0.5**
H01W1	**Cape Leeuwin H**	**149.07**	**206**	T	T	01 28 25.4	
	baz=143,slow=76						
H01W2	**Cape Leeuwin H**	**149.07**	**206**	T	T	01 28 23.9	
	baz=143,slow=76						
H01W3	**Cape Leeuwin H**	**149.08**	**206**	T	T	01 28 26.6	
	baz=143,slow=76						
CMAR	**Chiang Mai Arr**	**154.13**	**358**	PKP	**PKPdf**	**22 41 23.6**	**-0.9**
	comp=Z,0.8nm,0.4s,baz=318,slow=1.0,SNR=6.9						
CMAR				PKPab	**PKPab**	**22 41 45.0**	**-1.1**
	comp=Z,1.8nm,0.6s,baz=338,slow=3.9,SNR=7.7						

MOS ***12*** *22:38:01.9±0.9, 44.°08N×146.°33E, h151^{km}, mb3.9/2 Error ellipse: s-maj=14.1km s-min=11.5km az=105.7*

SKHL ***12*** *22:38:03.4±0.4, 44.°10N×146.°30E, h145^{km}±4^{km}, mb4.6/8, msha5.5/4*

IDC ***12*** *22:38:04.4±1.7, 44.°21N×146.°21E, h160^{km}±14^{km}, mb3.2/11, mb1 3.4/13, mb1mx3.2/51, mbtmp3.7/13, Error ellipse: s-maj=26.5km s-min=15.6km az=163.0*

JMA ***12*** *22:38:04.2±0.3, 44.°04N×146.°31E, h139^{km}±3^{km}, M3.6*

NIED ***12*** *22:38:04.2, 44.°04N×146.°31E, h139^{km}, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-2.09; $M_{\theta\theta}$2.15; $M_{\phi\phi}$-0.05; $M_{r\theta}$1.09; $M_{\theta\phi}$-1.49; $M_{\phi r}$0.98; Fault plane solution: $M_0$2.98000×10^{14} NP1: ϕ_s269.00000°, δ59.00000°, λ-127.00000°. NP2: ϕ_s145.00000°, δ47.00000°, λ-45.00000°.*

ISC 12 22:38:02.6±0.7**, 44.°08N**±0.°06×**146.°38E**±0.°05**, h146**^{km}±5^{km}**, n59, σ0.^{s}92**/77**, mb3.5**/12**, 5C-6D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YUK	**Yuzh-Kuril'sk**	**0.38**	**263**	*d i*PN	**Pn**	**22 38 23.2**	**+0.3**
YUK				*i* S	**Sn**	**22 38 38.3**	**+0.1**
YUK				pmax	pmax		
	comp=Z,917nm,0.2s						
YUK				pmax	pmax		
	comp=N,87nm,0.1s						
YUK				pmax	pmax		
	comp=E,226nm,0.1s						
YUK				smax	smax		
	comp=E,1µm,0.4s						
YUK				smax	smax		
	comp=N,2µm,0.5s						
YUK	**Yuzh-Kuril'sk**	**0.38**	**263**	⇑*i*P	**Pn**	**22 38 23.4**	**+0.5**
YUK				AMB	AMB	22 38 24.0	
	comp=N,90nm,0.4s						
YUK				AMB	AMB	22 38 24.0	
	comp=N,230nm,0.4s						
YUK				AMB	AMB	22 38 24.0	
	comp=N,920nm,0.4s						
YUK				⇑*i*S	**Sn**	**22 38 38.5**	**+0.3**
YUK				A	A	22 38 39.0	
	comp=N,2µm,0.5s						
YUK				A	A	22 38 39.0	
	comp=N,1µm,0.5s						
GRPR	**Tuman**	**0.45**	**259**	*e*PN	**Pn**	**22 38 23.7**	**+0.5**
GRPR				*i* S	**Sn**	**22 38 38.7**	**-0.1**
GRPR				pmax	pmax		
	comp=Z,745nm,0.2s						
GRPR				pmax	pmax		
	comp=N,221nm,0.1s						
GRPR				pmax	pmax		
	comp=E,203nm,0.2s						
GRPR				smax	smax		
	comp=N,2µm,0.3s						
GRPR				smax	smax		
	comp=E,1µm,0.3s						
GRPR	**Tuman**	**0.45**	**259**	*e*P	**Pn**	**22 38 23.7**	**+0.5**
GRPR				AMB	AMB	22 38 24.0	
	comp=E,750nm,0.3s						
GRPR				*i* S	**Sn**	**22 38 38.7**	**-0.1**
GRPR				A	A	22 38 39.0	
	comp=E,2µm,0.4s						
GRPR				A	A	22 38 39.0	
	comp=E,1µm,0.4s						
GLVR	**Golovnino**	**0.71**	**241**	*d i*PN	**Pn**	**22 38 25.7**	**+1.0**
GLVR				*i* S	**Sn**	**22 38 42.7**	**+1.3**
GLVR				pmax	pmax		
	comp=Z,802nm,0.2s						
GLVR				pmax	pmax		
	comp=N,18nm,0.1s						
GLVR				smax	smax		
	comp=N,5µm,0.3s						
GLVR				smax	smax		
	comp=E,8µm,0.4s						
GLVR	**Golovnino**	**0.71**	**241**	*i* P	**Pn**	**22 38 25.7**	**+1.0**
GLVR				AMB	AMB	22 38 26.0	
	comp=E,800nm,0.4s						
GLVR				*i* S	**Sn**	**22 38 42.4**	**+1.0**
GLVR				A	A	22 38 43.0	
	comp=E,3µm,0.6s						
GLVR				A	A	22 38 43.0	
	comp=E,5µm,0.6s						
NEM2	**Nemuro 2**	**0.85**	**213**	P	**Pn**	**22 38 26.0**	**+0.3**
NEM2				*e*S	**Sn**	**22 38 42.6**	**-0.7**
NMR	**Nemuro--Hokkai**	**0.85**	**214**	⇑*i*PN	**Pn**	**22 38 26.0**	**+0.2**
NMR				*i* S	**Sn**	**22 38 42.6**	**-0.7**
NMR	**Nemuro--Hokkai**	**0.85**	**214**	*i* P	**Pn**	**22 38 26.0**	**+0.2**
NMR				*i* S	**Sn**	**22 38 42.6**	**-0.7**
JRA	**Rausu**	**0.92**	**262**	P	**Pn**	**22 38 26.8**	**+0.6**
JRA				*e*S	**Sn**	**22 38 44.3**	**+0.1**
JNSB	**Nemuroshibetsu**	**1.04**	**253**	P	**Pn**	**22 38 28.2**	**+0.9**
JNK	**Nakash**	**1.30**	**248**	P	**Pn**	**22 38 30.5**	**+0.7**
JKHN	**Kushirohamanak**	**1.33**	**222**	P	**Pn**	**22 38 30.7**	**+0.6**
JKHN				*e*S	**Sn**	**22 38 50.8**	**-0.2**
KUR	**Kuril'sk**	**1.57**	**42**	*e*PN	**Pn**	**22 38 32.8**	**+0.3**
KUR				*i* S	**Sn**	**22 38 55.9**	**+0.4**
KUR				pmax	pmax		
	comp=Z,118nm,0.3s						
KUR				smax	smax		
	comp=N,190nm,0.6s						
KUR				smax	smax		
	comp=E,102nm,0.3s						
KUR	**Kuril'sk**	**1.57**	**42**	*e*P	**Pn**	**22 38 33.0**	**+0.5**
KUR				AMB	AMB	22 38 33.0	
	comp=E,120nm,0.3s						
KUR				*e*S	**Sn**	**22 38 55.7**	**+0.2**
KUR				A	A	22 38 58.2	
	comp=E,250nm,0.4s						
KUR				A	A	22 38 58.2	
	comp=E,200nm,0.4s						
JAK	**Akkeshi**	**1.63**	**229**	P	**Pn**	**22 38 33.8**	**+0.5**
JAK				*e*S	**Sn**	**22 38 56.3**	**-0.4**
JTKR	**Abashiri--Toko**	**1.79**	**267**	P	**Pn**	**22 38 35.5**	**+0.6**
JAR	**Ashorobuto**	**2.05**	**248**	P	**Pn**	**22 38 39.4**	**+1.4**
JMP	**Maruseppu**	**2.18**	**269**	P	**Pn**	**22 38 40.2**	**+0.6**
JOB	**Onbets**	**2.19**	**238**	P	**Pn**	**22 38 40.7**	**+0.9**
JOB				*e*S	**Sn**	**22 39 08.0**	**-0.3**
HRK	**Horoka**	**2.43**	**257**	*e*P	**Pn**	**22 38 44.0**	**+1.3**
JKK2	**Kamakawa 2**	**2.63**	**267**	P	**Pn**	**22 38 46.1**	**+1.0**
JCH	**Churui**	**2.64**	**237**	P	**Pn**	**22 38 45.8**	**+0.5**
JCH				*e*S	**Sn**	**22 39 16.5**	**-1.6**
ASAJ	**Asahikawa**	**2.72**	**272**	P	**Pn**	**22 38 47.4**	**+1.2**
	comp=E,16nm,0.3s,baz=79,slow=16,SNR=81						
ASAJ				S	**Sn**	**22 39 20.7**	**+0.8**
	comp=E,2.0nm,0.3s,baz=287,slow=22,SNR=7.3						
ASAJ	**Asahikawa**	**2.72**	**272**	P	**Pn**	**22 38 47.5**	**+1.2**
JSE	**Soyaes**	**2.85**	**289**	P	**Pn**	**22 38 48.1**	**+0.2**
JFR	**Furan**	**2.90**	**253**	P	**Pn**	**22 38 50.1**	**+1.6**
ERM	**Erimo**	**3.13**	**230**	*d e*PN	**Pn**	**22 38 52.3**	**+0.8**
ERM				*i* S	**Sn**	**22 39 30.6**	**+1.3**
ERM	**Erimo**	**3.13**	**230**	*e*P	**Pn**	**22 38 52.3**	**+0.8**
YSS	**Yuzh-Sakhalins**	**3.84**	**320**	⇓*e*PN	**Pn**	**22 38 59.9**	**-0.7**
YSS	**Yuzh-Sakhalins**	**3.84**	**320**	*e*P	**Pn**	**22 39 00.8**	**+0.2**
YSS				AMB	AMB	22 39 03.5	
	comp=E,30nm,0.6s						
KLR	**Kul'dur**	**11.29**	**302**	⇑*e*PN	**Pn**	**22 40 38.7**	**-0.9**
KLR				pmax	pmax		
	comp=Z,12nm,3.0s						
KLR	**Kul'dur**	**11.29**	**302**	*e*P	**Pn**	**22 40 38.7**	**-0.9**
KLR				AMB	AMB	22 40 42.9	
	comp=Z,30nm,0.8s						
PETK	**Petropavlovsk-**	**11.72**	**36**	P	**Pn**	**22 40 46.1**	**+0.8**
	comp=Z,0.5nm,0.3s,baz=14,slow=12,SNR=8.9						
EKMR	**Ekimchan**	**12.63**	**320**	*e*P	**Pn**	**22 40 56.0**	**-1.0**
EKMR				AMB	AMB	22 40 56.9	
	comp=Z,10.0nm,0.7s						
BMKR	**Bomnak**	**15.56**	**319**	*e*P	**Pn**	**22 41 32.0**	**-1.9**
BMKR				AMB	AMB	22 41 33.2	
	comp=Z,10.0nm,0.6s						
ZEA	**Zeya**	**15.81**	**314**	*e*P	**P**	**22 41 38.1**	**+0.3**
ZEA				pmax	pmax		
	comp=N,10.0nm,0.4s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.4s						
ZEA	**Zeya**	**15.81**	**314**	*e*P	**Pn**	**22 41 35.2**	**-1.8**
ZEA				AMB	AMB	22 41 38.8	
	comp=Z,10.0nm,0.4s						
ZEA				AMB	AMB	22 41 38.8	
	comp=Z,10.0nm,0.4s						
KROS	**Kirovskiy**	**16.31**	**316**	*e*P	**Pn**	**22 41 41.2**	**-1.9**
SONM	**Songino Array**	**27.83**	**292**	P	**P**	**22 43 37.9**	**-0.3**
	comp=Z,0.3nm,0.4s,baz=87,slow=8.4,SNR=2.9						
ILAR	**Eielson Array**	**41.55**	**36**	P	**P**	**22 45 35.4**	**0.0**
	comp=Z,0.9nm,0.9s,baz=274,slow=11,SNR=8.8						
MK31	**Makanchi Array**	**43.94**	**297**	*d e*P	**P**	**22 45 54.8**	**0.0**
MKAR	**Makanchi Array**	**43.94**	**297**	P	**P**	**22 45 54.4**	**-0.4**
	comp=Z,0.9nm,0.8s,baz=78,slow=8.1,SNR=8.4						
MKAR	**Makanchi Array**	**43.94**	**297**	*e*P	**P**	**22 45 55.1**	**+0.3**
MKAR	**Makanchi Array**	**43.94**	**297**	*e*P	**P**	**22 45 55.1**	**+0.3**
KURK	**Kurchatov**	**44.88**	**304**	⇓*e*P	**P**	**22 46 02.1**	**-0.1**
KURK				pmax	pmax		
	comp=Z,2.0nm,1.6s						
KURK	**Kurchatov**	**44.88**	**304**	*e*P	**P**	**22 46 02.1**	**-0.1**
KURBB	**Kurchatov Arra**	**44.97**	**303**	P	**P**	**22 46 01.5**	**-1.4**
	comp=Z,0.5nm,0.5s,baz=72,slow=8.7,SNR=5.6						
BRVK	**Borovoye**	**48.91**	**309**	⇑*e*P	**P**	**22 46 33.2**	**-0.2**
BRVK	**Borovoye**	**48.91**	**309**	*e*P	**P**	**22 46 33.2**	**-0.2**
YKA	**Yellowknife Ar**	**55.84**	**34**	P	**P**	**22 47 24.7**	**+0.4**
	comp=Z,0.1nm,0.4s,baz=305,slow=5.9,SNR=4.1						
YKA	**Yellowknife Ar**	**55.84**	**34**	*e*P	**P**	**22 47 25.2**	**+0.9**
FINES	**FINESS Array B**	**64.33**	**333**	P	**P**	**22 48 20.4**	**-1.7**
	comp=Z,2.3nm,0.9s,baz=54,slow=7.1,SNR=2.1						
FINES	**FINESS Array B**	**64.33**	**333**	*e*P	**P**	**22 48 25.1**	**+3.0**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.9s						
WRA	**Warramunga Arr**	**64.66**	**193**	P	**P**	**22 48 25.3**	**+0.6**
	comp=Z,0.6nm,0.8s,baz=9.5,slow=7.2,SNR=3.5						
NOA	**NORSAR Array B**	**69.09**	**338**	P	**P**	**22 48 50.9**	**-1.5**
	comp=Z,0.8nm,1.0s,baz=43,slow=8.5,SNR=1.4						
PDAR	**Pinedale Array**	**70.12**	**49**	P	**P**	**22 48 59.6**	**+0.4**
	comp=Z,0.3nm,0.7s,baz=270,slow=0.9,SNR=4.4						
AKASG	**Malin Array Be**	**70.98**	**323**	P	**P**	**22 49 02.9**	**-1.0**
	comp=Z,0.4nm,0.4s,baz=34,slow=6.4,SNR=4.5						
TXAR	**Lajitas Array**	**82.93**	**56**	P	**P**	**22 50 11.8**	**+0.5**
	comp=Z,0.4nm,0.6s,baz=288,slow=4.0,SNR=6.8						

IDC ***12*** *22:52:56.1±2.2, 3.°33N×96.°83E, h0^{km}, mb3.4/5, mb1 3.5/6, mb1mx3.4/33, mbtmp3.4/6, ML3.3/1, Error ellipse: s-maj=68.3km s-min=20.2km az=47.0*

DJA ***12*** *22:53:04.4±0.4, 4°N±4°×9°8E±°, h13^{km}±5^{km}, M3.4/6, MLv3.4/6*

ISC 12 22:53:07.2±0.9**, 4.°30N**±0.°06×**98.°02E**±0.°07**, h35**^{km}**, n10, σ2.^{s}83**/14**, mb3.1**/5**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TSI	**Tuntungan**	**0.96**	**146**	P	**Pn**	**22 53 23.6**	**-0.7**
TSI				S	**Sn**	**22 53 38.1**	**+1.4**
TPTI		**1.33**	**219**	P	**Pn**	**22 53 29.1**	**-0.2**
TPTI				S	**Sn**	**22 53 46.1**	**+0.3**
LHMI	**Lhok Sumawe**	**1.41**	**311**	P	**Pn**	**22 53 30.5**	**0.0**
LHMI				S	**Sn**	**22 53 50.8**	**+2.9**
PSI	**Prapat**	**1.74**	**149**	Pn	**Pn**	**22 53 34.6**	**-0.5**
	7.9nm,0.3s,baz=360,slow=9.2,SNR=28						
PSI				Sn	**Sn**	**22 54 03.2**	**+7.0**
	7.3nm,0.3s,baz=180,slow=23,SNR=7.9						
GSI	**Gunungsitoli**	**3.01**	**188**	P	**Pn**	**22 53 53.2**	**+0.7**
WRA	**Warramunga Arr**	**43.06**	**125**	P	**P**	**23 01 01.5**	**-2.6**
	0.2nm,0.6s,baz=303,slow=9.0,SNR=1.7						
SONM	**Songino Array**	**43.97**	**8**	P	**P**	**23 01 12.7**	**+1.6**
	0.3nm,0.6s,baz=186,slow=9.1,SNR=2.3						
MKAR	**Makanchi Array**	**44.47**	**345**	P	**P**	**23 01 14.5**	**-0.5**
	0.1nm,0.4s,baz=164,slow=7.9,SNR=2.6						
ASAR	**Alice Springs**	**44.68**	**130**	P	**P**	**23 01 12.9**	**-4.2**
	0.1nm,0.3s,baz=298,slow=7.0,SNR=2.1						
ZALV	**Zalesovo Beam**	**50.66**	**350**	P	**P**	**23 02 03.2**	**+0.2**
	0.8nm,0.4s,baz=173,slow=5.7,SNR=5.2						

IDC ***12*** *23:05:56.6±4.7, 35.°78N×140.°38E, h54^{km}±33^{km}, mb3.3/5, mb1 3.5/6, mb1mx3.2/60, mbtmp3.6/6, ML3.6/1, MS2.6/1, Ms1 2.6/1, ms1mx2.3/23, Error ellipse: s-maj=51.8km s-min=9.9km az=63.0*

JMA ***12*** *23:05:57.0±0.1, 35.°84N×140.°27E, h45^{km}±1^{km}, M2.8*

ISC 12 23:05:56.4±0.9**, 35.°82N**±0.°05×**140.°33E**±0.°07**, h52**^{km}±8^{km}**, n17, σ0.^{s}85**/22**, mb3.6**/5**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSMT	**Sammumatsuo**	**0.20**	**151**	P	**Pn**	**23 06 05.5**	**+0.5**
JIHU	**Itakohorinouch**	**0.22**	**48**	P	**Pn**	**23 06 05.4**	**+0.3**
JIHU				*e*S	**Sn**	**23 06 11.7**	**+0.5**
JYT	**Yasato**	**0.42**	**345**	P	**Pn**	**23 06 06.6**	**-0.3**
JYT				S	**Sn**	**23 06 13.4**	**-1.0**
JAG	**Ashikaga**	**0.93**	**311**	P	**Pn**	**23 06 12.9**	**-0.3**
BSO3	**Boso 3**	**1.03**	**171**	P	**Pn**	**23 06 14.2**	**-0.1**
JOD2	**Odawara 2**	**1.15**	**242**	P	**Pn**	**23 06 16.1**	**-0.1**
JOD2				S	**Sn**	**23 06 30.1**	**-0.9**
JRY	**Ryogami san**	**1.17**	**280**	P	**Pn**	**23 06 16.9**	**+0.4**
JKT	**Katashina**	**1.28**	**318**	P	**Pn**	**23 06 18.4**	**+0.3**
MJAR	**Matsushiro Arr**	**1.86**	**293**	P	**Pn**	**23 06 26.8**	**+1.0**
	0.9nm,0.3s,baz=102,slow=14,SNR=22						
MJAR				S	**Sn**	**23 06 49.3**	**+1.1**
	1.0nm,0.3s,baz=137,slow=17,SNR=4.2						
MAT	**Matsushiro**	**1.86**	**293**	P	**Pn**	**23 06 27.1**	**+1.2**
MAT				*e*S	**Sn**	**23 06 47.4**	**-0.8**
JHJ	**Hachijo jima 2**	**2.73**	**190**	P	**Pn**	**23 06 38.5**	**+0.7**
	23nm,0.3s,baz=75,slow=20,SNR=1.9						
JHJ				S	**Sn**	**23 07 09.1**	**-0.5**
	14nm,0.3s,baz=73,slow=19,SNR=1.9						
KSRS	**Korea Array**	**10.10**	**283**	LR	LR	23 11 53.2	
	comp=Z,33nm,20.5s,baz=41,slow=35						
SONM	**Songino Array**	**27.76**	**306**	P	**P**	**23 11 41.8**	**+1.5**
	0.3nm,0.7s,baz=108,slow=6.6,SNR=2.3						
ZALV	**Zalesovo Beam**	**42.10**	**313**	P	**P**	**23 13 41.6**	**-1.5**
	0.6nm,0.7s,baz=90,slow=10,SNR=1.5						
FITZ	**Fitzroy Crossi**	**55.40**	**197**	P	**P**	**23 15 25.4**	**0.0**
	1.0nm,0.6s,baz=9.8,slow=9.4,SNR=1.6						
WRA	**Warramunga Arr**	**55.75**	**187**	P	**P**	**23 15 27.4**	**-0.5**
	0.5nm,0.4s,baz=1.5,slow=7.6,SNR=14						
ASAR	**Alice Springs**	**59.48**	**187**	P	**P**	**23 15 54.5**	**+0.4**
	0.3nm,0.6s,baz=1.3,slow=8.3,SNR=4.7						

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*IDC **12** 23:31:23.3±0.7, 28°.43N×139°.75E, h455km±10km, mb3.0/9, mb1 3.1/12, mb1mx3.0/33, mbtmp3.8/12, Error ellipse: s-maj=24.3km s-min=11.2km az=78.0*

*NEIC **12** 23:31:23.6±1.2, 28°.4N±0°.1×139°.8E±0°.2, h463km±5km, mb4.0/11, Error ellipse: s-maj=21.5km s-min=16.7km az=61.0*

*JMA **12** 23:31:25.0±0.1, 28°.74N×140°.42E, h465km, M3.8*

ISC 12 23:31:23.0±0.6**, 28°.49N**±0°.07×**139°.8E**±0°.1**, h450km, n34,** σ**1s.35**/39**, mb3.8**/15**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**2.55**	**122**	P	**P**	**23 32 28.8**	**+1.9**
CBIJ				*e*S	**S**	**23 33 18.9**	**+0.2**
JCJ	**Chichijima**	**2.55**	**122**	P	**P**	**23 32 27.9**	**+1.0**
	8.0nm,0.3s,baz=298,slow=23,SNR=5.4						
JCJ				S	**S**	**23 33 19.5**	**+0.8**
	33nm,0.3s,baz=288,slow=21,SNR=6.9						
JHH2	**Haha-jima-NKT2**	**2.82**	**130**	*e*S	**S**	**23 33 23.7**	**+1.6**
BSO3	**Boso 3**	**6.33**	**6**	P	**P**	**23 33 00.7**	**+0.4**
JIE	**Ise**	**6.44**	**337**	P	**P**	**23 33 05.5**	**+3.7**
JKN2	**Miekihoku**	**6.47**	**333**	P	P	23 33 06.1	+4.1
JRY	**Ryogami san**	**7.54**	**355**	P	**P**	**23 33 15.2**	**+1.8**
JRY				*e*S	**S**	**23 34 42.5**	**-1.5**
JAG	**Ashikaga**	**7.92**	**358**	P	**P**	**23 33 18.0**	**+0.6**
JAG				*e*S	**S**	**23 34 47.7**	**-3.6**
JHO	**Hitachi**	**8.13**	**5**	P	**P**	**23 33 21.5**	**+1.8**
JHO				*e*S	**S**	**23 34 53.9**	**-1.6**
KSRS	**Korea Array**	**13.37**	**315**	P	**P**	**23 34 17.4**	**+0.9**
	0.1nm,0.3s,baz=128,slow=11,SNR=2.6						
USRK	**Ussuriysk Ar.**	**16.87**	**340**	P	**P**	**23 34 56.2**	**+2.5**
	baz=154,slow=10,SNR=3.9						
KLR	**Kul'dur**	**21.61**	**346**	P	**P**	**23 35 40.0**	**+1.3**
	1.7nm,0.5s,baz=169,slow=5.8,SNR=13						
SONM	**Songino Array**	**32.23**	**316**	P	**P**	**23 37 12.8**	**+0.1**
	0.6nm,0.4s,baz=122,slow=9.0,SNR=10.0						
MKAR	**Makanchi Array**	**47.94**	**309**	P	**P**	**23 39 18.6**	**-0.6**
	0.3nm,0.4s,baz=89,slow=9.5,SNR=11						
MKAR				PcP	**PcP**	**23 40 38.5**	**-0.7**
	0.1nm,0.4s,baz=125,slow=3.1,SNR=1.8						
WR0	**Warramunga Arr**	**48.43**	**187**	P	**P**	**23 39 22.7**	**-0.3**
WR0				IAmb	IAmb	23 39 23.2	
	comp=Z,4.0nm,0.8s						
WB2	**Warramunga Arr**	**48.43**	**187**	P	**P**	**23 39 22.7**	**-0.3**
WB2				IAmb	IAmb	23 39 23.2	
	comp=Z,4.4nm,0.9s						
WRA	**Warramunga Arr**	**48.43**	**187**	P	**P**	**23 39 22.6**	**-0.4**
	comp=Z,1.6nm,0.3s,baz=2.0,slow=8.0,SNR=52						
WRA				PcP	**PcP**	**23 40 40.3**	**-0.8**
	comp=Z,0.2nm,0.4s,baz=0.8,slow=4.2,SNR=1.5						
WRA	**Warramunga Arr**	**48.43**	**187**	P	**P**	**23 39 22.0**	**-1.1**
SDPT	**Sand Point**	**50.00**	**40**	P	**P**	**23 39 35.0**	**+0.7**
KURK	**Kurchatov**	**50.49**	**314**	P	**P**	**23 39 37.2**	**-0.8**
ASAR	**Alice Springs**	**52.16**	**187**	P	**P**	**23 39 50.0**	**-0.5**
	comp=Z,1.2nm,0.6s,baz=16,slow=12,SNR=20						
PSA00	**Pilbara Seismi**	**53.36**	**203**	P	**P**	**23 39 58.5**	**-0.6**
PSA00				IAmb	IAmb	23 40 07.7	
	comp=Z,11nm,1.1s						
SII	**Sitkinak Islan**	**53.63**	**39**	P	**P**	**23 40 00.2**	**-0.4**
SII				IAmb	IAmb	23 40 08.6	
	comp=Z,26nm,0.8s						
RSO	**Redoubt South**	**54.60**	**34**	P	P	23 40 03.6	-4.1
IMAR	**Indian Mountai**	**54.78**	**27**	P	**P**	**23 40 09.8**	**+1.2**
BRLK	**Bradley Lake**	**55.50**	**35**	P	**P**	**23 40 13.3**	**-0.5**
BRLK				IAmb	IAmb	23 40 25.6	
	comp=Z,14nm,1.2s						
SUA	**Susitna One**	**55.64**	**33**	P	**P**	**23 40 15.1**	**+0.2**
SUA				IAmb	IAmb	23 40 16.6	
	comp=Z,5.7nm,1.2s						
KNTN	**Kanton**	**55.96**	**115**	P	**P**	**23 40 16.5**	**-1.2**
KKAR	**Karatay Array**	**56.54**	**305**	P	**P**	**23 40 21.6**	**+0.3**
IL31		**57.53**	**29**	P	**P**	**23 40 28.0**	**+0.3**
ILAR	**Eielson Array**	**57.53**	**29**	P	**P**	**23 40 27.9**	**+0.2**
	comp=Z,0.3nm,0.6s,baz=113,slow=29,SNR=5.3						
YKA	**Yellowknife Ar**	**71.93**	**28**	P	**P**	**23 41 59.7**	**+0.5**
	comp=Z,0.6nm,1.0s,baz=305,slow=5.2,SNR=2.0						
FINES	**FINESS Array B**	**75.75**	**333**	P	**P**	**23 42 20.7**	**-0.3**
	comp=Z,0.6nm,0.3s,baz=81,slow=5.4,SNR=9.5						
NOA	**NORSAR Array B**	**81.52**	**337**	P	**P**	**23 42 50.9**	**-1.2**
	comp=Z,0.8nm,0.7s,baz=53,slow=6.4,SNR=1.8						

IDC 13 00:01:19.1±2.2**, 0°.46N**×**126°.66E, h0km, mb3.2**/3**, mb1 3.4**/3**, mb1mx3.3**/23**, mbtmp3.2**/3**, Error ellipse: s-maj=192.9km s-min=28.5km az=65.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.63**	**160**	P	P	00 06 10.6	-0.5
	1.1nm,0.7s,baz=339,slow=12,SNR=3.2						
ASAR	**Alice Springs**	**24.99**	**164**	P	P	00 06 45.3	+0.4
	0.1nm,0.4s,baz=345,slow=12,SNR=2.9						
MKAR	**Makanchi Array**	**60.20**	**326**	P	P	00 11 29.0	-0.1
	0.1nm,0.5s,baz=131,slow=8.7,SNR=4.4						

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*IDC **13** 00:23:42.6±1.1, 2°.51N×94°.52E, h0km, mb4.0/9, mb1 4.1/12, mb1mx3.8/45, mbtmp4.0/12, ML3.8/3, MS3.6/12, Ms1 3.6/12, ms1mx3.3/41, Error ellipse: s-maj=33.8km s-min=16.4km az=51.0*

*DJA **13** 00:23:45.6±2.4, 3°N±5°×9°4E±°, h29km±26km, M4.5/6, mb4.7/6, mB5.0/3, MLv4.4/6, Mw(mB)4.4/3*

*NEIC **13** 00:23:46.1±0.8, 2°.45N±0°.09×94°.5E±0°.1, h28km±5km, mb4.4/22, Error ellipse: s-maj=17.0km s-min=11.3km az=64.0*

ISC 13 00:23:45.6±0.7**, 2°.48N**±0°.08×**94°.48E**±0°.07**, h21km, n70,** σ**0s.90**/65**, mb4.3**/26**, MS3.9**/15**, 2C, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPTI		**2.81**	**74**	P	**Pn**	**00 24 28.3**	**-1.0**
GSI	**Gunungsitoli**	**3.31**	**111**	Pn	**Pn**	**00 24 36.3**	**+0.1**
GSI	**Gunungsitoli**	**3.31**	**111**	P	**Pn**	**00 24 36.3**	**+0.1**
LHMI	**Lhok Sumawe**	**3.68**	**42**		**Pn**	**00 24 41.8**	**+0.4**
LHMI	**Lhok Sumawe**	**3.68**	**42**	P	**Pn**	**00 24 40.9**	**-0.4**
RPSI	**Rantau Prapat**	**4.45**	**87**		**Pn**	**00 24 52.0**	**+0.1**
RPSI					**Sn**	**00 25 44.1**	**+1.1**
RPSI	**Rantau Prapat**	**4.45**	**87**	Pn	**Pn**	**00 24 51.8**	**-0.1**
PSI	**Prapat**	**4.46**	**86**	Pn	**Pn**	**00 24 52.0**	**-0.1**
	1.7nm,0.3s,baz=360,slow=1.1,SNR=21						
PSI				Sn	**Sn**	**00 25 44.1**	**+0.7**
	2.6nm,0.3s,baz=0.9,slow=1.8,SNR=1.9						
PSI				LR	LR	00 26 38.4	
	comp=Z,281nm,21.1s,baz=99,slow=40						
MNSI	**Mandailing Nat**	**5.37**	**108**	P	**Pn**	**00 25 05.2**	**+0.7**
	0.7nm3µm112nm,0.6s						
KULM	**Kulim**	**6.76**	**65**	Pn	**Pn**	**00 25 23.5**	**-0.3**
IPM	**Ipoh**	**6.83**	**73**	Pn	**Pn**	**00 25 24.8**	**+0.1**
MNAI	**Manna**	**10.86**	**129**	Pn	**Pn**	**00 26 18.6**	**-1.4**
MDSI	**Maura Dua**	**11.91**	**125**	P	**Pn**	**00 26 34.9**	**+0.6**
	19nm,1.2s						
PALK	**Pallekele**	**14.52**	**290**	Pn	**Pn**	**00 27 10.0**	**-0.1**
	0.1nm,0.3s,baz=194,slow=19,SNR=2.1						
PALK				Sn	Sn	00 29 36.1	-15
	0.9nm,0.3s,baz=330,slow=2.8,SNR=2.1						
PALK				LR	LR	00 31 54.7	
	comp=Z,106nm,19.7s,baz=214,slow=34						
CMAR	**Chiang Mai Arr**	**16.48**	**15**	Pn	**Pn**	**00 27 34.0**	**-1.6**
	0.6nm,0.3s,baz=210,slow=12,SNR=12						
CMAR				LR	LR	00 34 39.2	
	comp=Z,153nm,18.5s,baz=236,slow=40						
SLVN	**Son La**	**20.87**	**25**	P	**P**	**00 28 26.4**	**-0.1**
KKM	**Kota Kinabalu**	**21.96**	**80**	P	**P**	**00 28 37.9**	**-0.5**
QIZ	**Qiongzhong**	**22.29**	**41**	P	**P**	**00 28 41.7**	**-0.1**
QIZ				S	**S**	**00 32 46.7**	**+0.5**
QIZ				LR	LR		
	comp=N,360nm,16.0s						
QIZ				LR	LR		
	comp=E,380nm,17.6s						
QIZ				LR	LR		
	comp=Z,370nm,17.2s						
SHL	**Shillong**	**23.09**	**354**	P	**P**	**00 28 48.4**	**-2.0**
SHL				IAmb	IAmb	00 28 50.6	
	comp=Z,22nm,1.2s						
KMI	**Kunming**	**23.89**	**19**	⇑P	**P**	**00 28 58.9**	**+0.7**
KMI				pP	pwP	00 29 08.6	-0.6
KMI				sP	sP	00 29 11.9	+6.2
KMI				S	**S**	**00 33 15.6**	**+2.0**
KMI				sS	Sn	00 33 33.9	-2.8
KMI				SS	SnSn	00 34 10.2	+17
KMI				pmax	pmax		
	comp=Z,10.0nm,2.0s						
KMI				pmax	pmax		
	comp=Z,170nm,3.5s						
KMI				LR	LR		
	comp=N,450nm,11.7s						
KMI				LR	LR		
	comp=E,270nm,15.0s						
KMI				LR	LR		
	comp=Z,490nm,10.8s						
KMI	**Kunming**	**23.89**	**19**	P	**P**	**00 28 58.5**	**+0.4**
KMI				IAmb	IAmb	00 29 09.4	
	comp=Z,9.9nm,0.9s						
MYLDM	**Lahad Datu**	**24.12**	**83**	P	**P**	**00 29 00.7**	**+0.5**
TOLI2	**Tolitoli**	**26.33**	**92**	P	**P**	**00 29 19.9**	**-0.4**
TOLI2				IAmb	IAmb	00 29 22.5	
	comp=Z,8.8nm,0.9s						
GYA	**Guiyang**	**26.56**	**25**	⇑P	**P**	**00 29 23.6**	**+1.2**
GYA				pmax	pmax		
	comp=Z,5.0nm,1.3s						
GYA				LR	LR		
	comp=N,260nm,10.9s						
GYA				LR	LR		
	comp=E,170nm,11.9s						
GYA				LR	LR		
	comp=Z,260nm,14.3s						
LSA	**Lhasa**	**27.26**	**354**	P	**P**	**00 29 32.8**	**+3.7**
LSA				pmax	pmax		
	comp=Z,29nm,0.7s						
LSA	**Lhasa**	**27.26**	**354**	P	**P**	**00 29 30.0**	**+1.0**
LSA				IAmb	IAmb	00 29 34.0	
	comp=Z,8.4nm,0.9s						
CD2	**Chengdu**	**29.61**	**16**	P	**P**	**00 29 49.0**	**-0.5**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				LR	LR		
	comp=N,310nm,15.9s						
CD2				LR	LR		
	comp=E,520nm,13.3s						
CD2				LR	LR		
	comp=Z,510nm,10.6s						
KNMB	**Chin-men Tao**	**31.79**	**45**	P	**P**	**00 30 08.4**	**-0.4**
XAN	**Xi'an**	**34.18**	**22**	P	**P**	**00 30 28.3**	**-1.3**
XAN				pP	pP	00 30 35.2	+0.6
XAN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
XAN				LR	LR		
	comp=N,340nm,12.6s						
XAN				LR	LR		
	comp=E,190nm,13.5s						
XAN				LR	LR		
	comp=Z,410nm,11.8s						
NIL	**Nilore**	**36.82**	**330**	P	**P**	**00 30 52.1**	**-0.2**
NIL				IAmb	IAmb	00 31 02.6	
	comp=Z,3.3nm,0.7s						
FITZ	**Fitzroy Crossi**	**36.88**	**125**	P	**P**	**00 30 52.8**	**-0.2**
	comp=Z,0.9nm,0.8s,baz=280,slow=11,SNR=1.7						
GTA	**Gaotai**	**37.08**	**7**	*e*P	**P**	**00 30 53.8**	**-0.8**
GTA				pP	pwP	00 31 06.7	+0.8
GTA				sP	sP	00 31 12.2	+10
GTA				pmax	pmax		
	comp=Z,2.0nm,1.2s						
KSH	**Kashi**	**40.53**	**338**	P	**P**	**00 31 22.4**	**-1.1**
KSH				pmax	pmax		
	comp=Z,69nm,2.3s						
KSH				pmax	pmax		
	comp=Z,69nm,6.9s						
HHC	**Hu-ho-hao-te**	**41.20**	**20**	*e*P	**P**	**00 31 30.0**	**+1.0**
HHC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,130nm,6.6s						
H01W3	**Cape Leeuwin H**	**41.49**	**155**	T	T	01 16 10.7	
	baz=332,slow=76,SNR=54						
H01W2	**Cape Leeuwin H**	**41.50**	**155**	T	T	01 16 19.9	
	baz=332,slow=76,SNR=58						
H01W1	**Cape Leeuwin H**	**41.51**	**155**	T	T	01 16 15.7	
	baz=332,slow=76,SNR=57						
WMQ	**Urumqi**	**41.61**	**353**	*e*P	**P**	**00 31 34.6**	**+2.4**
WMQ				pmax	pmax		
	comp=Z,11nm,0.6s						
WMQ				pmax	pmax		
	comp=Z,75nm,3.7s						
WMQ				LR	LR		
	comp=N,470nm,29.2s						
WMQ				LR	LR		
	comp=E,620nm,29.3s						
WMQ				LR	LR		
	comp=Z,120nm,29.2s						
WRA	**Warramunga Arr**	**45.02**	**122**	P	**P**	**00 32 00.1**	**0.0**
	comp=Z,1.0nm,0.9s,baz=301,slow=8.3,SNR=6.2						
WRAB	**Tennant Creek**	**45.02**	**121**	P	**P**	**00 31 58.7**	**-1.4**
WB2	**Warramunga Arr**	**45.03**	**122**	P	**P**	**00 32 00.2**	**+0.1**
WB2				IAmb	IAmb	00 32 10.0	
	comp=Z,4.1nm,0.9s						
WR0	**Warramunga Arr**	**45.20**	**121**	P	**P**	**00 32 01.8**	**+0.3**
WR0				IAmb	IAmb	00 32 11.6	
	comp=Z,3.9nm,0.9s						
MK31	**Makanchi Array**	**45.40**	**348**	P	**P**	**00 32 03.1**	**+0.4**
MKAR	**Makanchi Array**	**45.40**	**348**	P	**P**	**00 32 02.9**	**+0.1**
	comp=Z,1.9nm,0.3s,baz=169,slow=8.0,SNR=71						
MKAR				LR	LR	00 53 28.7	
	comp=Z,81nm,18.2s,baz=258,slow=39						
KK31	**Karatay Array**	**45.74**	**335**	P	**P**	**00 32 05.2**	**-0.3**
KKAR	**Karatay Array**	**45.74**	**335**	P	**P**	**00 32 05.5**	**0.0**
KKAR	**Karatay Array**	**45.74**	**335**	P	**P**	**00 32 05.2**	**-0.3**
KKAR				IAmb	IAmb	00 32 16.0	
	comp=Z,2.5nm,1.0s						
ASAR	**Alice Springs**	**46.34**	**126**	P	**P**	**00 32 10.7**	**+0.2**
	comp=Z,0.5nm,0.8s,baz=285,slow=4.8,SNR=4.5						
ASAR	**Alice Springs**	**46.34**	**126**	P	**P**	**00 32 09.8**	**-0.7**
SONM	**Songino Array**	**46.34**	**11**	P	**P**	**00 32 10.3**	**0.0**
	comp=Z,1.2nm,0.4s,baz=188,slow=9.0,SNR=22						
SONM				PcP	**PcP**	**00 33 45.9**	**+0.6**
	comp=Z,0.5nm,0.7s,baz=191,slow=3.7,SNR=2.4						
SONM				LR	LR	00 53 35.7	
	comp=Z,72nm,19.1s,baz=198,slow=39						
SONM	**Songino Array**	**46.34**	**11**	P	**P**	**00 32 10.1**	**-0.2**
KSRS	**Korea Array**	**46.42**	**37**	LR	LR	00 54 28.1	
	comp=Z,105nm,18.0s,baz=241,slow=40						
KURK	**Kurchatov**	**49.90**	**347**		**P**	**00 32 37.6**	**0.0**
KURK	**Kurchatov**	**49.90**	**347**	P	**P**	**00 32 37.4**	**-0.1**
KURK				IAmb	IAmb	00 32 38.8	
	comp=Z,4.5nm,0.9s						
ZAA0	**Zalesovo Array**	**51.92**	**353**	P	**P**	**00 32 52.3**	**-0.4**
ZAA0				IAmb	IAmb	00 32 53.5	
	comp=Z,5.8nm,1.0s						
ZALV	**Zalesovo Beam**	**51.92**	**353**	P	**P**	**00 32 52.7**	**0.0**
	comp=Z,3.2nm,0.3s,baz=185,slow=6.9,SNR=25						
ZALV				LR	LR	00 58 35.7	
	comp=Z,57nm,18.6s,baz=86,slow=40						
ZALV	**Zalesovo Beam**	**51.92**	**353**	P	**P**	**00 32 53.0**	**+0.3**
MJAR	**Matsushiro Arr**	**52.64**	**44**	LR	LR	00 57 36.8	
	comp=Z,108nm,18.1s,baz=250,slow=39						
USRK	**Ussuriysk Ar.**	**53.14**	**33**	LR	LR	00 57 28.2	
	comp=Z,105nm,18.3s,baz=205,slow=38						
BRVK	**Borovoye**	**54.25**	**342**	P	**P**	**00 33 09.9**	**0.0**
BRVK				IAmb	IAmb	00 33 10.1	
	comp=Z,2.8nm,0.8s						
ABKAR	**Akbulak array**	**55.13**	**333**	P	**P**	**00 33 16.0**	**-0.4**
ABKAR	**Akbulak array**	**55.13**	**333**	P	**P**	**00 33 15.4**	**-1.0**
ABKAR				IAmb	IAmb	00 33 26.9	
	comp=Z,2.6nm,0.9s						
STKA	**Stephens Creek**	**56.23**	**131**	P	**P**	**00 33 24.6**	**0.0**
	comp=Z,1.9nm,0.9s,baz=311,slow=11,SNR=2.0						
KLR	**Kul'dur**	**56.39**	**28**	P	**P**	**00 33 24.8**	**-0.6**
	comp=Z,0.8nm,0.5s,baz=243,slow=8.9,SNR=5.4						
KMBO	**Kilima Mbogo**	**57.32**	**267**	LR	LR	00 54 55.5	
	comp=Z,28nm,19.3s,baz=94,slow=33						
LHI	**Lord Howe Isla**	**69.89**	**125**	P	**P**	**00 34 55.2**	**-0.1**
PETK	**Petropavlovsk-**	**72.21**	**34**	LR	LR	01 08 48.6	
	comp=Z,65nm,19.3s,baz=211,slow=38						
BOSA	**Boshof**	**73.07**	**239**	LR	LR	01 01 48.3	
	comp=Z,33nm,19.4s,baz=188,slow=31						
GERES	**GERESS Array B**	**82.07**	**319**	P	**P**	**00 36 05.2**	**+0.5**
	comp=Z,0.8nm,0.9s,baz=126,slow=6.9,SNR=4.4						
TXAR	**Lajitas Array**	**143.91**	**27**	PKhKP	PKPpre	00 43 16.0	
	comp=Z,0.2nm,0.8s,baz=26,slow=2.3,SNR=2.2						

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*IDC **13** 00:26:12.1±1.8, 22°.51S×66°.46W, h251km±21km, mb3.0/1, mb1 3.1/5, mb1mx3.0/26, mbtmp3.7/5, Error ellipse: s-maj=32.2km s-min=25.8km az=113.0*

ISC 13 00:26:11.1±1.1**, 22°.6S**±0°.1×**66°.5W**±0°.1**, h245km, n6,** σ**1s.48**/8**, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**2.21**	**269**	P	**Pn**	**00 26 57.5**	**+2.0**
	21nm,0.3s,baz=89,slow=6.9,SNR=65						
LVC				S	**S**	**00 27 27.8**	**-2.5**
	5.7nm,0.3s,baz=300,slow=18,SNR=3.7						
LPAZ	**La Paz**	**6.46**	**346**	P	**Pn**	**00 27 46.0**	**+0.4**
	0.6nm,0.3s,baz=164,slow=5.5,SNR=10						
LPAZ				S	**S**	**00 29 01.2**	**+0.1**
	baz=110,slow=3.9,SNR=1.6						
SIV	**San Ignacio**	**8.35**	**39**	P	**Pn**	**00 28 08.6**	**-0.3**
	0.3nm,0.3s,baz=242,slow=12,SNR=4.0						
BDFB	**Brasilia**	**18.80**	**72**	P	**P**	**00 30 12.8**	**0.0**
	0.3nm,0.3s,baz=235,slow=12,SNR=7.1						
TORD	**Torodi Ar. Bea**	**75.66**	**69**	P	**P**	**00 37 29.5**	**-0.4**
	0.2nm,0.3s,baz=258,slow=5.8,SNR=6.0						
MKAR	**Makanchi Array**	**145.16**	**39**	PKPbc	**PKPbc**	**00 45 19.2**	**-0.3**
	0.1nm,0.5s,baz=313,slow=2.8,SNR=2.2						

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*IDC **13** 01:00:44.4±0.7, 30°.11N×57°.59E, h0km, mb3.8/16, mb1 3.9/21, mb1mx3.7/48, mbtmp3.8/21, ML3.4/4, MS3.2/8, Ms1 3.3/8, ms1mx2.9/45, Error ellipse: s-maj=19.6km s-min=14.7km az=116.0*

*TEH **13** 01:00:44.8, 30°.17N×57°.52E, h12km, ML4.3*

*BJI **13** 01:00:44.3±0.0, 29°.95N×57°.06E, h29km, mB4.7/6, mb3.9/7, Ms4.3/2*

*THR **13** 01:00:45.2±0.8, 30°.19N×57°.56E, h14km±6km, ML4.3*

*NEIC **13** 01:00:46.2±2.2, 30°.19N±0°.06×57°.45E±0°.06, h10km±1km, Error ellipse: s-maj=11.4km s-min=8.0km az=155.0*

*OMAN **13** 01:00:48.3, 30°.29N×57°.76E, h21km, mb5.2/12, ml4.2/3, ms2.7/1*

*MOS **13** 01:00:48.0±1.6, 30°.11N×57°.75E, h31km, mb4.0/7, Error ellipse: s-maj=11.3km s-min=7.3km az=92.9*

*DSN **13** 01:00:55.1±1.7, 29°.70N×57°.31E, h10km, ML4.2/10, Error ellipse: s-maj=26.2km s-min=15.4km az=88.0*

ISC 13 01:00:47.3±0.4**, 30°.21N**±0°.04×**57°.54E**±0°.03**, h15km, n160,** σ**1s.90**/162**, mb3.9**/23**, MS3.1**/6**, 2C-2D, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHMN	**Cheshme madani**	**0.35**	**181**	*e*Pg	**Pg**	**01 00 51.1**	**-3.5**
TVBK	**TV Kerman**	**0.71**	**252**	Pg	**Pg**	**01 00 58.5**	**-2.8**
TVBK	**TV Kerman**	**0.71**	**252**	*e*Pg	**Pg**	**01 00 58.6**	**-2.8**
TVBK				*e*		01 01 12.4	
	comp=Z,99nm,0.3s						
KRBR	**Kerman**	**0.71**	**252**	*e*Pg	**Pg**	**01 00 58.7**	**-2.6**
KRBR				IAML		01 01 09.3	
	comp=N,10µm,0.3s						
KRBR				IAML		01 01 12.2	
	comp=E,8µm,0.4s						
KRBR	**Kerman**	**0.71**	**252**	*e*Pn	**Pg**	**01 00 58.7**	**-2.6**
NGRK	**Negar Kerman**	**0.90**	**232**	Pg	**Pb**	**01 01 01.9**	**-2.9**
NGRK	**Negar Kerman**	**0.90**	**232**	*e*Pg	**Pb**	**01 01 02.0**	**-2.9**
KHGB	**Koh Gabri**	**0.94**	**280**	Pg	**Pb**	**01 01 01.9**	**-3.5**
KHGB	**Koh Gabri**	**0.94**	**280**	*e*Sg	**Sb**	**01 01 13.7**	**-4.1**
KHGB				*e*Pg	**Pb**	**01 01 02.1**	**-3.3**
KHGB				*e*		01 01 21.4	
	comp=Z,99nm,0.3s						
KBAM	**BAM**	**1.33**	**143**	*e*		01 01 32.0	
	comp=Z,99nm,0.3s						
KBAM				*e*Pg	**Pn**	**01 01 09.0**	**-2.4**
IBAF	**Bafgh**	**2.19**	**310**	*e*Pn	**Pn**	**01 01 24.2**	**+0.9**
BSRN	**Basiran**	**2.22**	**37**	*e*Pn	**Pn**	**01 01 23.7**	**0.0**
BSRN				*e*Sg	**Sb**	**01 01 55.0**	**+0.5**
BSRN				IAML		01 01 56.8	
	comp=N,3µm,0.2s						
BSRN	**Basiran**	**2.22**	**37**	*e*Pn	**Pn**	**01 01 23.7**	**0.0**
KHNJ	**Kahnooj**	**2.26**	**176**	Pn	**Pn**	**01 01 23.6**	**-0.5**
KHNJ	**Kahnooj**	**2.26**	**176**	*e*Pn	**Pn**	**01 01 23.8**	**-0.3**
NHDN	**Nehbandan**	**2.46**	**61**	*e*Pn	**Pn**	**01 01 26.9**	**-0.1**
IKOO	**Kooshah**	**2.54**	**29**	*e*Pn	**Pn**	**01 01 27.8**	**-0.4**
IMEH	**Mehriz**	**2.78**	**296**	*e*Pn	**Pn**	**01 01 32.8**	**+1.2**
IMEH				*e*		01 01 38.1	
	comp=Z,99nm,0.3s						
ZHSF	**Zahedan**	**2.87**	**101**	*e*Pn	**Pn**	**01 01 32.2**	**-0.5**
ZHSF	**Zahedan**	**2.87**	**101**	*e*Pn	**Pn**	**01 01 32.2**	**-0.5**
ITEG	**Tejag**	**2.87**	**21**	*e*Pn	**Pn**	**01 01 32.1**	**-0.6**
TPRV	**Parvadeh(Tabas**	**2.91**	**346**	*e*Pn	**Pn**	**01 01 33.3**	**+0.2**
GENO	**Geno**	**3.05**	**204**	Pn	**Pn**	**01 01 34.3**	**-0.8**
GENO	**Geno**	**3.05**	**204**	*e*Pn	**Pn**	**01 01 35.2**	**+0.1**
GENO				*e*		01 01 40.5	
	comp=Z,99nm,0.3s						
BNDS	**Bandar-Abbas**	**3.05**	**204**	*e*Pn	**Pn**	**01 01 35.4**	**+0.3**
BNDS	**Bandar-Abbas**	**3.05**	**204**	*e*Pn	**Pn**	**01 01 35.4**	**+0.3**
IDAH	**Dahanechah**	**3.21**	**38**	*e*Pn	**Pn**	**01 01 37.9**	**+0.4**
IDAH				*e*		01 02 32.4	
	comp=Z,99nm,0.3s						
YZKH	**Yazd**	**3.33**	**311**	*e*Pn	**Pn**	**01 01 39.5**	**+0.5**
YZKH				IAML		01 02 37.5	
	comp=E,700nm,0.4s						
YZKH				IAML		01 02 40.0	
	comp=N,569nm,0.6s						
YZKH	**Yazd**	**3.33**	**311**	*e*Pn	**Pn**	**01 01 39.5**	**+0.5**
ICHK	**Chekchek**	**3.37**	**308**	*e*Pn	**Pn**	**01 01 40.3**	**+0.7**
ICHK				*e*		01 02 35.3	
	comp=Z,99nm,0.6s						
TKDS	**Koohdasht(Taba**	**3.41**	**354**	*e*Pn	**Pn**	**01 01 40.5**	**+0.4**
AFRZ	**Afriz**	**3.44**	**21**	*e*Pn	**Pn**	**01 01 39.8**	**-0.7**
TABS	**Tabas**	**3.45**	**354**	*e*Pn	**Pn**	**01 01 41.1**	**+0.5**
TABS	**Tabas**	**3.45**	**354**	*e*Pn	**Pn**	**01 01 41.1**	**+0.5**
IMON	**Monand**	**3.48**	**31**	*e*Pn	**Pn**	**01 01 40.5**	**-0.7**
IMON				*e*		01 02 42.6	
	comp=Z,99nm,0.4s						
ISAD	**Sadrabad**	**3.72**	**298**	*e*Pn	**Pn**	**01 01 45.8**	**+1.3**
ISAD				*e*		01 02 52.8	
	comp=Z,99nm,0.5s						
LAR1	**LAR**	**3.76**	**228**	*e*Pn	**Pn**	**01 01 45.4**	**+0.6**
LAR1				*e*		01 02 58.4	
	comp=Z,99nm,0.8s						
TNSJ	**Nastanj**	**3.83**	**348**	*e*Pn	**Pn**	**01 01 46.2**	**+0.4**
JHRM	**Jahrom**	**3.86**	**245**	Pn	**Pn**	**01 01 47.3**	**+1.1**
JHRM	**Jahrom**	**3.86**	**245**	*e*Pn	**Pn**	**01 01 46.9**	**+0.7**
SHRT	**Shahrakht**	**4.15**	**34**	*e*Pn	**Pn**	**01 01 50.3**	**+0.1**
SHRT	**Shahrakht**	**4.15**	**34**	*e*Pn	**Pn**	**01 01 50.3**	**+0.1**
SHME	**Shamm**	**4.32**	**197**	*i* P	**Pn**	**01 01 53.2**	**+0.7**
	SNR=23						
SHME	**Shamm**	**4.32**	**197**	P	**Pn**	**01 01 54.2**	**+1.7**
	SNR=10.0						
ANAR	**Anarak**	**4.41**	**313**	*e*Pn	**Pn**	**01 01 54.4**	**+0.6**
BANOM	**Banah**	**4.41**	**195**	*i* P	**Pn**	**01 01 55.3**	**+1.5**
	SNR=34						
BANOM	**Banah**	**4.41**	**195**	P	**Pn**	**01 01 55.5**	**+1.8**
	SNR=16						
BANOM				S	**Sn**	**01 02 49.4**	**+4.6**

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IRAM   Ramesheh            4.71 291  ePn    Pn     01 01 59.0 +1.0
NASN   Na'in               4.80 304  ePn    Pn     01 02 00.2 +0.8
NASN   Na'in               4.80 304  ePn    Pn     01 02 00.2 +0.8
MASF   Masafi              4.97 195   P     Pn     01 02 04.2 +2.7
       SNR=5.5
MSFE   Esma-Masafi         4.98 195  i P    Pn     01 02 03.0 +1.4
       SNR=15
MSFE                                  S     Sn     01 02 55.7  -3.3
IGAR   Gharneh             5.19 296  ePn    Pn     01 02 05.6 +0.9
IZEF   Zefreh              5.20 302  ePn    Pn     01 02 05.7 +1.0
UOSS   Minazif             5.38 193  i P    Pn     01 02 09.1 +2.1
       SNR=6.1
UOSS   Minazif             5.38 193   Pn    Pn     01 02 08.5 +1.5
UOSS   Minazif             5.38 193   P     Pn     01 02 10.3 +3.3
UOSS                                  S     Sn     01 03 13.9 +5.2
NAZ    Nazwa, Dubai        5.46 198  i P    Pn     01 02 09.7 +1.5
       SNR=17
HATD   Hatta, Dubai        5.51 193  i P    Pn     01 02 11.5 +2.7
       SNR=10.0
HATD   Hatta, Dubai        5.51 193   P     Pn     01 02 11.9 +3.1
ASHO   Ashiyiah            5.66 194  i P    Pn     01 02 12.4 +1.4
       SNR=15
ASHO   Ashiyiah            5.66 194   P     Pn     01 02 13.6 +2.7
ASHO                                  S     Sn     01 03 20.0 +4.3
FAQ    Al Faqa, Dubai      5.71 198  i P    Pn     01 02 14.0 +2.4
       SNR=26
FAQ    Al Faqa, Dubai      5.71 198   P     Pn     01 02 13.1 +1.5
FAQ                                   S     Sn     01 03 19.3 +2.4
HRA    Herat               5.76  42   Pn    Pn     01 02 12.8 +0.4
ASUD   Al Ashush, Dub      5.90 200  i P    Pn     01 02 16.3 +2.2
       SNR=12
ASUD   Al Ashush, Dub      5.90 200   P     Pn     01 02 16.4 +2.2
ASUD                                  S     Sn     01 03 27.3 +5.8
IKLH   Kolahrood           5.95 303  ePn    Pn     01 02 17.6 +2.5
IANJ   Anjilo              6.07 331  ePn    Pn     01 02 18.1 +1.4
SOHO   SOHO                6.12 189  i P    Pn     01 02 18.3 +1.1
       SNR=9.6
SOHO   SOHO                6.12 189   P     Pn     01 02 19.1 +1.9
SBZV   Sabzevar            6.16   1  ePn    Pn     01 02 19.1 +1.1
QAM    Ghamsar             6.28 306  ePn    Pn     01 02 20.7 +1.1
IPAY   Payeh               6.34  11  ePn    Pn     01 02 20.8 +0.3
HOQ    Hoqain              6.60 182   P     Pn     01 02 24.4 +0.5
       SNR=7.5
HOQ                                   S     Sn     01 03 40.7 +1.7
IFIR   Firoozkooh          6.75 325  ePn    Pn     01 02 27.5 +1.4
IKRD   Kardeh              6.75  14  ePn    Pn     01 02 26.8 +2.8
ARQ    Araqi               6.91 188   P     Pn     01 02 30.0 +2.0
       SNR=6.4
IGLO   Ghaloghah           7.00 335  ePn    Pn     01 02 31.5 +2.0
WSAR   Wadi Sarin          7.01 172   Pn    Pn     01 02 27.9  -1.6
       comp=Z,1.2nm,0.3s,baz=18,slow=13,SNR=26
WSAR                                  Sn    Sn     01 03 33.5   -15
       baz=83,slow=16,SNR=0.9
IMND   Minoodasht          7.25 346  ePn    Pn     01 02 34.0 +1.3
IPRN   Peran               7.43 325  ePn    Pn     01 02 36.5 +1.2
BSY    Bisya               7.44 182   P     Pn     01 02 37.3 +1.9
       SNR=6.3
GEYT   Alibeck             7.72   3   Pn    Pn     01 02 39.9 +0.7
       comp=Z,1.6nm,0.3s,baz=184,slow=18,SNR=15
GEYT                                  Sn    Sn     01 04 05.5  -0.8
       baz=176,slow=22,SNR=1.1
GEYT                                  Lg    Lg     01 04 47.3
       baz=176,slow=23,SNR=2.1
GEYT   Alibeck             7.72   3   Pn    Pn     01 02 39.1   0.0
GYA0B  ALIBECK ARRAY       7.72   3   Pn    Pn     01 02 39.4 +0.3
JLN    Jalan Bani Buh      8.20 168   P     Pn     01 02 44.1  -1.6
JLN                                   P     Pn     01 02 44.1  -1.6
QABG   Abgarm-Qazvin       8.65 311  ePn    Pn     01 02 52.6 +0.5
MHTO   MHTO                9.19 178   P     Pn     01 03 02.3 +3.0
DOK    Doka               11.95 196   P     Pn     01 03 35.5  -1.7
SHAO   Shalim             12.26 189   P     Pn     01 03 41.2  -0.2
RAYN   Ar Rayn            12.64 241   P     Pn     01 03 44.9  -1.7
RAYN   Ar Rayn            12.64 241   Pn    Pn     01 03 44.9  -1.7
GNI    Garni              14.41 317   Pn    Pn     01 04 14.1 +3.3
       comp=Z,0.1nm,0.3s,baz=219,slow=5.9,SNR=3.0
GNI                                   LR    LR     01 09 46.1
       comp=Z,73nm,18.7s,baz=98,slow=37
GNI    Garni              14.41 317⇓ eP     Pn     01 04 12.2 +1.4
GNI    Garni              14.41 317   Pn    Pn     01 04 10.1  -0.7
GROC   Groznyy            16.01 327  eP     P      01 04 36.0 +0.7
GROC                                  pmax  pmax
       comp=Z,26nm,0.6s
KK31   Karatay Array      16.52  35   P     Pn     01 04 36.6  -1.9
KK31                                  pmax  pmax
       comp=Z,3.0nm,1.0s
KK31   Karatay Array      16.52  35   Pn    Pn     01 04 36.6  -1.9
KK31                                  IAmb  IAmb   01 04 44.2
       comp=Z,3.3nm,0.9s
KKAR   Karatay Array      16.52  35   P     Pn     01 04 37.1  -1.4
KKAR                                  pmax  pmax
       comp=Z,3.0nm,1.0s
KKAR   Karatay Array      16.52  35   Pn    Pn     01 04 36.8  -1.7
KKAR   Karatay Array      16.52  35   Pn    Pn     01 04 37.1  -1.4
KKAR                                  IAmb  IAmb   01 04 44.3
       comp=Z,3.3nm,0.9s
ZEI    Tsey               16.64 323  eP     P      01 04 44.4 +1.8
ZEI                                   pmax  pmax
       comp=Z,5.0nm,0.7s
NCK    Nalchik            17.30 324⇑ eP     P      01 04 52.3 +2.6
NCK                                   pmax  pmax
       comp=Z,63nm,2.6s
KSH    Kashi              17.72  53   P     Pn     01 04 52.8  -0.8
KSH                                   pmax  pmax
       comp=Z,3.0nm,1.1s
KSH                                   pmax  pmax
       comp=Z,130nm,6.7s
KBZ    Khabaz             17.82 323   P     P      01 04 55.6 +0.2
       comp=Z,0.0nm,0.3s,baz=124,slow=15,SNR=1.6
KIV    Kislovodsk         18.09 323  eP     P      01 05 02.2 +3.7
KIV                                   pmax  pmax
       comp=Z,23nm,1.1s
KIV    Kislovodsk         18.09 323         Pn     01 04 55.5  -2.7
KIV                                   IAmb  IAmb   01 05 06.2
       comp=Z,9.2nm,1.1s
AAK    Ala-Archa          18.39  43   P     P      01 05 01.5  -0.4
       comp=Z,0.1nm,0.3s,baz=208,slow=12,SNR=4.2
AAK                                   LR    LR     01 11 51.4
       comp=Z,32nm,21.3s,baz=250,slow=36
ABKAR  Akbulak array      19.11   5   P     P      01 05 09.6 +0.1
AKTO   Aktyubinsk         20.21   1   P     P      01 05 21.7 +0.2
       comp=Z,4.0nm,0.7s,baz=192,slow=10.0,SNR=10
AKTO                                  LR    LR     01 13 38.3
       comp=Z,84nm,20.0s,baz=196,slow=38
BR131  Keskin Array S     21.71 302   P     P      01 05 38.4 +0.4
BR131                                 pmax  pmax
       comp=Z,28nm,1.4s
BR131  Keskin Array S     21.71 302   P     P      01 05 38.4 +0.4
BRTR   Keskin Array B     21.71 302   P     P      01 05 38.2 +0.2
       comp=Z,2.7nm,0.8s,baz=83,slow=11,SNR=9.7
BRTR                                  LR    LR     01 14 58.9
       comp=Z,86nm,19.4s,baz=110,slow=39
BRTR   Keskin Array B     21.71 302   P     P      01 05 39.9 +1.9
BRTR   Keskin Array B     21.71 302   P     P      01 05 39.9 +1.9
ATD    Arta Tunnel        23.06 219   LR    LR     01 16 34.5
       comp=Z,31nm,18.0s,baz=166,slow=41
BELG   Belogornoye        23.34 345   P     P      01 05 56.1 +1.3
       comp=Z,15nm,1.0s,baz=69,slow=3.6,SNR=3.2
BELG   Belogornoye        23.34 345⇓ eP     P      01 05 58.7 +3.9
BELG                                  pmax  pmax
       comp=Z,3.0nm,1.0s
BRVK   Borovoye           24.66  19   P     P      01 06 07.3   0.0
BRVK                                  pmax  pmax
       comp=Z,4.0nm,1.1s
BRVK   Borovoye           24.66  19   P     P      01 06 07.3   0.0
BRVK                                  IAmb  IAmb   01 06 16.6
       comp=Z,3.6nm,1.1s
BVAR   Borovoye Array     24.66  19   P     P      01 06 06.3  -1.1
       comp=Z,1.6nm,0.8s,baz=147,slow=3.0,SNR=10
MAKZ   Makanchi           25.15  42   P     P      01 06 11.7  -0.1
MAKZ                                  pmax  pmax
       comp=Z,7.0nm,0.8s
MAKZ   Makanchi           25.15  42   P     P      01 06 11.7  -0.1
MAKZ                                  IAmb  IAmb   01 06 17.8
       comp=Z,6.5nm,0.8s
MK31   Makanchi Array     25.32  42   P     P      01 06 13.8 +0.4
MK31                                  pmax  pmax
       comp=Z,2.0nm,0.7s
MK31   Makanchi Array     25.32  42   P     P      01 06 13.8 +0.4
MK31                                  IAmb  IAmb   01 06 14.3
       comp=Z,1.8nm,0.7s
MKAR   Makanchi Array     25.32  42   P     P      01 06 13.5 +0.1
       comp=Z,1.8nm,0.6s,baz=229,slow=7.6,SNR=19
KURBB  Kurchatov Arra     25.74  32   P     P      01 06 17.8 +0.7
       comp=Z,0.5nm,0.8s,baz=230,slow=9.2,SNR=6.3
KURK   Kurchatov          25.85  32   P     P      01 06 17.8  -0.2
KURK   Kurchatov          25.85  32   P     P      01 06 17.8  -0.2
KURK   Kurchatov          25.85  32   IAmb  IAmb   01 06 27.7
       comp=Z,4.8nm,1.4s
WMQ    Urumqi             27.47  52  eP     P      01 06 34.7 +1.8
WMQ                                   sP    sP     01 06 44.7 +5.0
WMQ                                   pmax  pmax
       comp=Z,8.0nm,0.7s
WMQ                                   pmax  pmax
       comp=Z,180nm,5.5s
WMQ                                   LR    LR
       comp=Z,250nm,5.1s
WMQ                                   LR    LR
       comp=Z,190nm,5.5s
BURAR  Bucovina Array     30.28 314   P     P      01 06 59.4 +1.6
ZALV   Zalesovo Beam      30.84  32   P     P      01 07 01.8  -0.7
       comp=Z,0.7nm,0.6s,baz=238,slow=8.4,SNR=4.1
ZALV   Zalesovo Beam      30.84  32  i P    P      01 07 02.9 +0.3
ZALV                                  pmax  pmax
       comp=Z,1.0nm,0.6s
ZALV   Zalesovo Beam      30.84  32   P     P      01 07 01.6  -1.0
KOLS   Kolonicke sedl     32.60 315  eP     P      01 07 26.0 +7.8
KOLS   Kolonicke sedl     32.60 315  eP     P      01 07 26.0 +7.8
VYHS   Vyhne              34.60 313  eP     P      01 07 42.0 +6.4
VYHS   Vyhne              34.60 313  eP     P      01 07 42.0 +6.4
GTA    Gaotai             35.63  63  eP     P      01 07 50.9 +6.2
GTA                                   pP    sP     01 08 00.2 +8.4
GTA                                   sP    pP     01 08 04.2   +14
GTA                                   pmax  pmax
       comp=Z,2.0nm,1.2s
KMBO   Kilima Mbogo       36.68 215   P     P      01 07 53.0  -0.9
       comp=Z,0.5nm,0.6s,baz=10,slow=11,SNR=1.7
FINES  FINESS Array B     37.45 336   P     P      01 07 59.7  -0.1
       comp=Z,3.4nm,1.0s,baz=129,slow=11,SNR=3.1
FINES  FINESS Array B     37.45 336  i P    P      01 08 04.3 +4.5
FINES                                 pmax  pmax
       comp=Z,2.0nm,0.7s
CMAR   Chiang Mai Arr     39.29  98   LR    LR     01 27 28.8
       comp=Z,20nm,19.0s,baz=290,slow=41
SONM   Songino Array      41.09  51   P     P      01 08 30.6 +0.1
       comp=Z,0.2nm,0.6s,baz=256,slow=5.8,SNR=2.3
HHC    Hu-ho-hao-te       44.60  61  eP     P      01 08 59.6 +0.5
HHC                                   pmax  pmax
       comp=Z,3.0nm,0.7s
HHC                                   pmax  pmax
       comp=Z,76nm,7.6s
TOA0   Torodi Ar. Sit     54.09 264   P     P      01 10 12.5 +0.7
TORD   Torodi Ar. Bea     54.09 264   P     P      01 10 10.8  -1.0
       comp=Z,3.4nm,0.7s,baz=58,slow=6.8,SNR=14
TORD   Torodi Ar. Bea     54.09 264   P     P      01 10 11.0  -0.8
ZEA    Zeya               54.47  43  eP     P      01 10 09.7  -4.3
ZEA                                   pmax  pmax
       comp=N,10.0nm,0.4s
ZEA                                   pmax  pmax
       comp=E,10.0nm,0.4s
ZEA                                   pmax  pmax
       comp=Z,10.0nm,0.4s
COCO   West Island        56.63 132  i P    P      01 10 32.0 +2.0
BOSA   Boshof             66.11 211   P     P      01 11 33.4  -0.7
       comp=Z,2.8nm,1.1s,baz=23,slow=7.7,SNR=3.3
BOSA                                  LR    LR     01 42 25.4
       comp=Z,32nm,18.1s,baz=194,slow=38
ASAJ   Asahikawa          66.36  52   LR    LR     01 42 24.1
       comp=Z,75nm,18.3s,baz=168,slow=38
ILAR   Eielson Array      83.42  10   P     P      01 13 12.9  -0.8
       comp=Z,0.4nm,0.7s,baz=328,slow=5.0,SNR=1.6
YKA    Yellowknife Ar     87.41 356   P     P      01 13 35.0 +1.4
       comp=Z,0.4nm,0.7s,baz=1.7,slow=4.5,SNR=8.2
YKA    Yellowknife Ar     87.41 356ceP      P      01 13 37.7 +4.1
WRA    Warramunga Arr     89.07 114   P     P      01 13 40.4  -1.9
       comp=Z,0.3nm,0.8s,baz=313,slow=4.1,SNR=1.6
ASAR   Alice Springs      90.72 117   P     P      01 13 49.3  -0.6
       comp=Z,0.3nm,0.7s,baz=297,slow=4.1,SNR=2.3
FFC    Flin Flon          93.59 348  i P    P      01 14 07.2 +4.5
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IDC ***13*** *01:07:18.6±2.0, 49°.07N×91°.50E, h0km, mb3.0/1, mb1 3.0/5, mb1mx2.8/47, mbtmp3.0/5, ML2.7/4, MS3.5/2, Ms1 3.5/2, ms1mx2.7/24, Error ellipse: s-maj=26.8km s-min=21.9km az=12.0*

ASRS ***13*** *01:07:20.5±0.4, 49°N±2°×9°2E±°, h0km, MLh3.9/16, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/iasp91 confirmed*

NNC ***13*** *01:07:32.2±9.6, 48°.00N×90°.81E, h3km±52km, mb3.7, mpv3.4, Error ellipse: s-maj=64.6km s-min=41.4km az=72.0*

ISC 13 01:07:19.7±1.5, **49°.21N**±0°.05×**91°.52E**±0°.03, **h13**km±14km, **n42**, σ**2s.01**/57, **7C-2D, Mongolia**

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Code   Station Name         Δ°   AZ°    Phase ID          Time     Res
                                       Op     ISC       h  m  s    ISC
TEL    Teeli               2.00 335   Pg    Pg     01 08 01.3 +3.1
TEL                                   Sg    Sg     01 08 28.4 +4.3
CUR    Chagan-Uzun         2.25 295   Pg    Pg     01 08 02.5  -0.3
CUR                                   Sg    Sg     01 08 33.2 +1.3
ULGR   Ulagan, Altay       2.70 303   Pg    Pg     01 08 11.5   0.0
ULGR                                  Sg    Sg     01 08 47.9 +1.3
DGZ    Jazzator, Alta      2.71 282   Pg    Pg     01 08 11.4  -0.3
DGZ                                   Sg    Sg     01 08 45.9  -1.0
CHBI   Chibit, Altay       2.83 295   Pg    Pg     01 08 13.2  -0.8
CHBI                                  Sg    Sg     01 08 50.3  -0.3
KZLR   Kyzyl               3.12  36   Pg    Pg     01 08 18.0  -1.5
KZLR                                  Sg    Sg     01 09 00.2 +0.1
DJO    Djoy, Khakassi      3.58 357   Pg    Pg     01 08 29.6 +1.2
DJO                                   Sg    Sg     01 09 15.2 +0.5
ARDR   Aradan              3.59  19   Pn    Pb     01 08 20.7  -2.3
ARDR                                  Pg    Pg     01 08 25.0  -3.4
ARDR                                  Sg    Sg     01 09 14.4  -0.4
DJOS   Djoyskaya Sosn      3.59 359   Pg    Pg     01 08 32.2 +3.7
DJOS                                  Sg    Sg     01 09 16.7 +1.7
CERR   Cheremushki         3.65 359   Pg    Pg     01 08 35.0 +5.3
CERR                                  Sg    Sg     01 09 17.9 +1.0
ARTR   Artybash            3.75 315   Pg    Pg     01 08 31.6 +0.2
ARTR                                  Sg    Sg     01 09 22.5 +2.5
TBTR   Tabat               3.76 353   Pg    Pg     01 08 32.4 +0.6
TBTR                                  Sg    Sg     01 09 21.4 +0.9
BLRR   Bol'shaya Rech      3.88   8   Pg    Pg     01 08 33.6  -0.4
BLRR                                  Sg    Sg     01 09 23.6  -0.6
KNGR   Kungurtug, Tuv      4.12  68   Pg    Pg     01 08 41.8 +3.2
KNGR                                  Sg    Sg     01 09 32.2 +0.2
TASR   Tashtagol           4.24 329   Pg    Pg     01 08 40.9 +0.1
TASR                                  Sg    Sg     01 09 37.3 +1.7
TDJR   Todzha              4.32  41   Pg    Pg     01 08 43.6 +1.2
TDJR                                  Sg    Sg     01 09 36.2  -2.1
GALT   Gorno-Altaysk,      4.49 310   Sg    Sg     01 09 47.2 +3.3
UKR    Ust'-Kan            4.68 294   Pg    Pg     01 08 47.2  -2.1
UKR                                   Sg    Sg     01 09 48.0  -1.8
ELT    Eltsovka            5.24 323   Pg    Pg     01 08 57.7  -2.3
ELT                                   Sg    Sg     01 10 06.9  -1.0
SHRR   Shira               5.36 351   Sg    Sg     01 10 10.7  -1.0
KTRR   Kuturchin           5.97  15   Pg    Pg     01 09 11.3  -2.7
KTRR                                  Sg    Sg     01 10 28.8  -2.6
BJR3   Bachatsky-3 (S      6.03 328   Pg    Pg     01 09 12.4  -2.7
BJR3                                  Sg    Sg     01 10 33.7 +0.6
BJR4   Bachatsky-4, K      6.05 329   Sg    Sg     01 10 33.9 +0.2
POMOR  Pomortsevo, Ku      6.06 331   Sg    Sg     01 10 36.8 +2.8
BJR1   Bachatsky 1, K      6.08 328   Sg    Sg     01 10 37.7 +3.0
BJR2   Bachatsky-2, K      6.08 329   Sg    Sg     01 10 38.1 +3.3
ZAA0   Zalesovo Array      6.32 321  ⇑Pn    Pg     01 09 17.0  -3.6
       0.8nm,0.8s
ZAA0                                 ⇑Sn    Sg     01 10 40.1  -2.4
       6.4nm,1.4s
ZALV   Zalesovo Beam       6.32 321   Pn    Pn     01 08 54.9 +2.4
       0.2nm,0.3s,baz=142,slow=13,SNR=2.4
ZALV                                  Pg    Pg     01 09 15.5  -5.2
       1.0nm,0.3s,baz=134,slow=15,SNR=15
ZALV                                  Lg    Lg     01 10 42.8
       0.7nm,0.3s,baz=138,slow=33,SNR=1.9
SALR   Pechorkino, Sa      6.34 328   Pg    Pg     01 09 18.4  -2.7
SALR                                  Sg    Sg     01 10 41.7  -1.4
MOY    Mondy               6.53  64   Sg    Sg     01 10 47.5  -1.8
MK31   Makanchi Array      6.65 252   Pg    Pg     01 09 21.9  -5.1
       2.5nm,0.5s,baz=78,slow=18,SNR=13
MK31                                 ⇑Lg    Lg     01 10 42.3
       11nm,0.6s,baz=72,slow=30,SNR=3.7
MKAR   Makanchi Array      6.65 252   Pn    Pn     01 08 58.1 +1.1
       0.3nm,0.3s,baz=64,slow=22,SNR=9.2
MKAR                                  Pg    Pg     01 09 20.5  -6.4
       1.2nm,0.3s,baz=73,slow=18,SNR=18
MKAR                                  Lg    Lg     01 10 41.8
       0.8nm,0.3s,baz=68,slow=31,SNR=3.4
BRCR   Berchikul'          6.73 344   Sg    Sg     01 10 54.7  -1.0
MAKZ   Makanchi            6.84 253  ⇑Pg    Pg     01 09 24.1  -6.4
       2.3nm,0.5s
MAKZ                                 ⇑Lg    Lg     01 10 46.5
       19nm,1.0s
TLY    Talaya              8.13  68   Lg    Lg     01 11 33.3
       0.0nm,0.3s,baz=143,slow=4.5,SNR=6.0
KURK   Kurchatov           8.46 285  ⇑Pn    Pn     01 09 32.6   +11
       1.2nm,0.7s
KURK                                 ⇓Lg    Lg     01 11 57.7
       18nm,0.7s
KURBB  Kurchatov Arra      8.50 284   Pn    Pn     01 09 23.1 +0.6
       0.1nm,0.3s,baz=95,slow=14,SNR=11
KURBB                                 Lg    Lg     01 11 44.0
       0.1nm,0.3s,baz=101,slow=29,SNR=1.7
KURBB  Kurchatov Arra      8.50 284  ⇑Pn    Pn     01 09 33.5   +11
       0.8nm,0.3s
KURBB                                ⇓Lg    Lg     01 11 57.9
       59nm,0.8s
SONM   Songino Array       9.97  92   Pn    Pn     01 09 42.9 +0.2
       0.1nm,0.3s,baz=277,slow=15,SNR=2.3
SONM                                  Pg           01 10 20.9
       0.1nm,0.3s,baz=284,slow=18,SNR=1.3
SONM                                  Lg    Lg     01 12 30.6
       0.4nm,0.3s,baz=282,slow=30,SNR=11
ARU    Arti               21.03 303   P     P      01 12 03.9 +1.1
       0.4nm,0.5s,baz=89,slow=12,SNR=1.6
KBZ    Khabaz             33.46 279   LR    LR     01 30 49.0
       comp=Z,50nm,20.5s,baz=347,slow=42
FINES  FINESS Array B     37.53 314   LR    LR     01 29 48.9
       comp=Z,126nm,18.3s,baz=22,slow=36
```

IDC ***13*** *01:26:09.1±1.3, 26°.22N×127°.42E, h0km, mb3.8/8, mb1 3.9/8, mb1mx3.6/40, mbtmp3.8/8, MS2.6/1, Ms1 2.6/1, ms1mx2.2/47, Error ellipse: s-maj=28.9km s-min=22.7km az=1.0*

JMA ***13*** *01:26:12.2±0.2, 26°.14N×127°.46E, h20km±2km, M3.5*

JMA Felt II J1.

NIED ***13*** *01:26:12.2, 26°.14N×127°.46E, h20km, MW3.7, Moment Tensor Solution. s2 Moment tensor: Scale 10^{14}Nm; M_{rr}0.09; $M_{\theta\theta}$-0.54; $M_{\phi\phi}$0.45; $M_{r\theta}$-0.39; $M_{\theta\phi}$-4.53; $M_{\phi r}$0.61; Fault plane solution: $M_0$4.61000×10^{14} NP1:ϕ_s3.00000°, δ85.00000°, λ7.00000°. NP2:ϕ_s273.00000°, δ83.00000°, λ175.00000°.*

ISC 13 01:26:10.8±1.7, **26°.15N**±0°.07×**127°.47E**±0°.04, **h12**km±11km, **n17**, σ**0s.64**/24, **mb3.7**/8, **Ryukyu Islands**

```
Code   Station Name         Δ°   AZ°    Phase ID          Time     Res
                                       Op     ISC       h  m  s    ISC
JJT3   Tamagusuku3         0.29  92   P     Pb     01 26 18.6 +0.7
JJT3                                  S     Sb     01 26 23.4 +0.7
JAGN   Aguni-jima          0.48 335   P     Pb     01 26 22.2 +1.0
JAGN                                  S     Sb     01 26 29.1 +0.9
JNTH   Nagotoyohara        0.62  54   P     Pb     01 26 23.7 +0.1
JNTH                                  S     Sg     01 26 31.5 +0.5
JKE    Kume jima 2         0.63 286   P     Pb     01 26 24.3 +0.5
JKE                                   S     Sb     01 26 32.8 +0.1
JIH    Iheya               0.98  27   P     Pn     01 26 30.4  -0.1
JIH                                  eS     Sb     01 26 43.5 +0.7
JOW    Kunigami            0.99  47   Pn    Pg     01 26 29.7  -0.2
       260nm,0.3s,baz=141,slow=27,SNR=590
JOW                                   Sn    Sg     01 26 41.8  -1.0
       206nm,0.3s,baz=118,slow=26,SNR=6.6
JOW                                   LR    LR     01 26 53.6
       comp=Z,219nm,19.6s,baz=234,slow=46
JOW    Kunigami            0.99  47   P     Pb     01 26 30.2 +0.3
JOW                                   S     Sg     01 26 42.5  -0.3
JYRO   Yoronjima           1.24  45   P     Pg     01 26 34.5  -0.1
JYRO                                  S     Sb     01 26 50.2 +0.1
MJAR   Matsushiro Arr     13.83  39   LR    LR     01 34 47.5
       comp=Z,23nm,18.4s,baz=345,slow=38
SONM   Songino Array      27.25 328   P     P      01 31 54.2  -0.7
       0.3nm,0.4s,baz=145,slow=11,SNR=6.9
MKAR   Makanchi Array     41.07 312   P     P      01 33 53.7  -0.7
       0.6nm,0.5s,baz=99,slow=11,SNR=10
ZALV   Zalesovo Beam      41.89 323   P     P      01 34 00.8  -0.2
       0.7nm,0.4s,baz=104,slow=8.6,SNR=4.8
KURBB  Kurchatov Arra     44.44 317   P     P      01 34 20.4  -1.1
       1.3nm,0.7s,baz=104,slow=8.1,SNR=11
WRA    Warramunga Arr     46.30 171   P     P      01 34 37.0 +0.4
       0.4nm,0.8s,baz=351,slow=9.0,SNR=2.3
FINES  FINESS Array B     72.59 330   P     P      01 37 37.5  -0.3
       2.9nm,0.9s,baz=46,slow=5.5,SNR=6.1
YKA    Yellowknife Ar     78.88  25   P     P      01 38 14.4 +0.7
       0.4nm,0.7s,baz=300,slow=4.8,SNR=8.1
NOA    NORSAR Array B     79.08 334   P     P      01 38 14.5  -0.4
       1.6nm,0.9s,baz=54,slow=5.0,SNR=3.2
```

NEIC ***13*** *01:40:34.5±1.2, 16°.9S±0°.2×179°.2W±0°.2, h558km±9km, mb4.1/12, Error ellipse: s-maj=37.1km s-min=19.1km az=155.0*

IDC ***13*** *01:40:35.4±1.1, 16°.83S×179°.17W, h565km±10km, mb3.4/10, mb1 3.7/11, mb1mx3.4/36, mbtmp4.2/11, Error ellipse: s-maj=44.1km s-min=13.8km az=152.0*

ISC 13 01:40:32.8±0.7, **16°.8S**±0°.2×**179°.1W**±0°.1, **h533**km, **n38**, σ**1s.07**/36, **mb3.8**/13, **Fiji Islands region**

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Code   Station Name         Δ°   AZ°    Phase ID          Time     Res
                                       Op     ISC       h  m  s    ISC
MSVF   Nonsavu             2.87 250   P     P      01 41 49.4 +3.7
       5.4nm,0.3s,baz=106,slow=4.5,SNR=60
MSVF                                  S     S      01 42 53.4 +8.4
       baz=320,slow=23,SNR=0.8
SANVU  Saraoutou          13.21 274   P     P      01 43 24.7 +0.8
DZM    Mont Dzumac        14.60 247   P     P      01 43 38.9 +0.4
       0.2nm,0.3s,baz=85,slow=22,SNR=0.9
EIDS   Eidsvold           29.04 248   P     P      01 45 48.9  -1.1
ARMA   Armidale           29.94 238   P     P      01 45 56.5  -1.3
STKA   Stephens Creek     38.59 240   P     P      01 47 09.2  -1.1
       3.2nm,0.4s,baz=88,slow=8.7,SNR=7.6
STKA   Stephens Creek     38.59 240   IAmb  IAmb   01 47 09.9
       comp=Z,2.0nm,1.1s
BBOO   Buckleboo          43.37 240   P     P      01 47 46.5  -1.7
WB0    Warramunga Arr     44.14 259   P     P      01 47 54.4   0.0
WB0                                   IAmb  IAmb   01 48 12.6
       comp=Z,18nm,1.6s
WRA    Warramunga Arr     44.18 258   P     P      01 47 54.0  -0.7
       comp=Z,1.6nm,0.5s,baz=95,slow=7.0,SNR=34
AS31   Alice Springs      44.45 253   P     P      01 47 56.3  -0.4
AS31                                  IAmb  IAmb   01 47 57.0
       comp=Z,5.9nm,0.6s
ASAR   Alice Springs      44.45 253   P     P      01 47 56.3  -0.5
       comp=Z,19nm,0.6s,baz=88,slow=8.1,SNR=268
ASAR   Alice Springs      44.45 253   P     P      01 47 55.9  -0.9
FORT   Forrest            49.88 244   P     P      01 48 35.4  -2.1
FITZ   Fitzroy Crossi     52.55 260   P     P      01 48 57.5 +0.5
       comp=Z,1.2nm,0.4s,baz=95,slow=7.8,SNR=8.8
FITZ   Fitzroy Crossi     52.55 260   IAmb  IAmb   01 50 51.2
       comp=Z,23nm,1.8s
NVAR   Mina Array Bea     79.09  44   P     P      01 51 42.3  -0.1
       comp=Z,1.1nm,0.7s,baz=223,slow=8.7,SNR=12
X16A   Lo Mia Camp, P     81.99  51   P     P      01 51 57.5   0.0
ELK    Elko               82.30  44   P     P      01 51 58.8  -0.2
ELK                                   IAmb  IAmb   01 51 59.9
       comp=Z,2.0nm,0.9s
ILAR   Eielson Array      84.94  13   P     P      01 52 11.4 +0.2
       comp=Z,0.6nm,0.4s,baz=224,slow=5.3,SNR=10
MCMT   McKenzie Canyo     85.83  41   P     P      01 52 16.3 +0.1
TX31   Lajitas Ar. Si     85.97  58   P     P      01 52 17.1   0.0
TXAR   Lajitas Array      85.97  58   P     P      01 52 17.0  -0.1
       comp=Z,1.2nm,0.7s,baz=214,slow=6.2,SNR=20
PDAR   Pinedale Array     87.00  44   P     P      01 52 20.8  -1.1
       comp=Z,0.9nm,0.5s,baz=208,slow=2.9,SNR=4.2
BMAR   Burnt Mountain     87.71  13   P     P      01 52 25.3 +1.0
PLCA   Paso Flores        92.60 134   P     P      01 52 48.9 +1.1
       comp=Z,0.8nm,0.6s,baz=338,slow=5.4,SNR=1.4
YKA    Yellowknife Ar     93.59  25   P     P      01 52 49.4  -2.1
       comp=Z,0.5nm,0.7s,baz=240,slow=4.2,SNR=8.2
CLL    Collm             144.21 347  ePKPbc PKPab  01 59 08.0 +0.2
GERES  GERESS Array B    146.34 345   PKPbc PKPbc  01 59 14.6 +0.5
       comp=Z,1.0nm,0.5s,baz=21,slow=3.3,SNR=12
GERES  GERESS Array B    146.34 345         PKPbc  01 59 14.4 +0.4
CONA   Conrad Observa    146.58 342  eP     PKPbc  01 59 15.6 +0.9
       comp=Z,1.5nm,0.5s
SOKA   Soboth            147.95 341  eP     PKPbc  01 59 18.2  -0.1
       comp=Z,0.8nm,0.6s
KBA    Koelnbreinsper    148.07 344  eP     PKPbc  01 59 18.5  -0.2
       comp=Z,1.0nm,0.5s
OBKA   Obir              148.25 342  eP     PKPbc  01 59 18.4  -0.6
       comp=Z,0.2nm,0.2s
WTTA   Wattenberg        148.32 346  eP     PKPbc  01 59 19.5 +0.2
SQTA   Sankt Quirin      148.46 346  eP     PKPbc  01 59 20.0 +0.4
       comp=Z,2.6nm,0.6s
ABTA   Abfaltersbach     148.59 345  eP     PKPbc  01 59 19.8  -0.1
       comp=Z,1.3nm,0.4s
```

FNA	Florina	150.23	328		PKPbc	01 59 23.8	-0.2

IDC 13 01:44:58.4±3.0, 6°.75S×129°.73E, h124^{km}±42^{km}, mb2.8/1, mb1 3.0/5, mb1mx2.9/31, mbtmp3.4/5, Error ellipse: s-maj=74.1km s-min=22.8km az=90.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	6.04	15	P	Pn	01 46 25.4	0.0
	1.1nm,0.3s,baz=180,slow=20,SNR=1.3						
SIJI				S	Sn	01 47 28.1	-5.2
	1.4nm,0.3s,baz=214,slow=23,SNR=1.3						
FITZ	Fitzroy Crossi	11.97	199	P	Pn	01 47 45.6	+0.6
	0.1nm,0.3s,baz=28,slow=13,SNR=8.8						
FITZ				S	Sn	01 49 48.7	-8.2
	0.1nm,0.3s,baz=197,slow=18,SNR=1.6						
WRA	Warramunga Arr	13.86	162	P	Pn	01 48 08.3	-1.4
	0.2nm,0.3s,baz=341,slow=12,SNR=1.7						
WRA				S	Sn	01 50 36.0	-6.8
	0.3nm,0.3s,baz=338,slow=21,SNR=7.0						
ASAR	Alice Springs	17.30	167	P	Pn	01 48 52.4	+0.1
	baz=345,slow=13,SNR=4.2						
MKAR	Makanchi Array	67.86	327	P	P	01 55 43.3	0.0
	0.1nm,0.6s,baz=130,slow=7.8,SNR=2.0						

NNC 13 02:02:57.4±6.7, 38°.37N×71°.29E, h271^{km}±67^{km}, mb2.4, mpv3.6, Error ellipse: s-maj=70.2km s-min=40.0km az=17.0

ISC 13 02:02:50.9±2.9, 37°.9N±0°.2×70°.58E±0°.10, h150^{km}, n12, σ3^{s}.19/17, 5C-5D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	4.84	29	P	Pn	02 04 02.8	+0.3
	SNR=11						
KK31	Karatay Array	5.18	359	⇓P	Pn	02 04 07.5	+0.9
	2.1nm,0.2s,baz=186,slow=14,SNR=77						
KK31				⇓S	Sn	02 05 12.4	+6.6
	7.7nm,0.6s,baz=179,slow=30,SNR=7.1						
UCH	Uchtor	5.25	34	P	Pn	02 04 10.6	+2.6
	SNR=6.1						
EKS2	Erkin-Say	5.33	26	P	Pn	02 04 11.4	+2.7
	SNR=7.3						
AAK	Ala-Archa	5.58	31	P	Pn	02 04 13.4	+1.3
	SNR=8.9						
AAK	Ala-Archa	5.58	31	⇓P	Pn	02 04 13.8	+1.7
	5.6nm,0.5s						
AAK				⇑S	Sn	02 05 13.1	-2.5
	6.5nm,0.6s						
KBK	Karagaybulak	5.79	34	P	Pn	02 04 18.8	+3.9
	SNR=16						
CHMS	Chumysh	5.99	31	P	Pn	02 04 19.8	+2.4
	SNR=9.4						
TKM2	Tokmak 2	6.29	36	P	Pn	02 04 24.6	+2.9
	SNR=9.1						
TKM2	Tokmak 2	6.29	36	⇓P	Pn	02 04 24.5	+2.9
	4.9nm,0.6s						
TKM2				⇑S	Sn	02 05 27.6	-5.0
	4.4nm,0.6s						
AB31	Akbulak array	13.69	329	⇑P	P	02 06 01.0	-1.4
	2.2nm,0.8s,baz=164,slow=10,SNR=20						
AB31				⇓S	Sn	02 08 28.2	-1.9
	1.2nm,0.6s,baz=147,slow=24,SNR=2.9						
AKTO	Aktyubinsk	15.39	328	⇑P	Pn	02 06 19.5	-0.5
	1.0nm,0.7s						
AKTO				⇑S	Sn	02 09 08.9	-2.1
	3.5nm,1.1s						

IDC 13 02:08:43.5±2.4, 7°.78S×129°.89E, h0^{km}, mb3.2/1, mb1 3.6/3, mb1mx3.3/29, mbtmp3.4/3, ML3.3/2, Error ellipse: s-maj=135.3km s-min=33.8km az=68.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	12.83	161	Pn	Pn	02 11 46.1	-1.3
	0.2nm,0.3s,baz=343,slow=13,SNR=6.6						
WRA				Sn	Sn	02 13 57.3	-14
	0.1nm,0.3s,baz=337,slow=22,SNR=1.8						
ASAR	Alice Springs	16.25	167	Pn	Pn	02 12 34.8	+1.4
	0.1nm,0.3s,baz=344,slow=11,SNR=12						
ASAR				Sn	Sn	02 15 21.6	-13
	0.1nm,0.3s,baz=345,slow=28,SNR=2.8						
MKAR	Makanchi Array	68.82	327	P	P	02 19 49.8	0.0
	0.2nm,0.7s,baz=113,slow=7.6,SNR=2.0						

IDC 13 02:34:04.0±0.9, 2°.43N×125°.76E, h0^{km}, mb3.9/8, mb1 4.1/9, mb1mx3.9/37, mbtmp3.9/9, ML4.0/1, MS3.1/6, Ms1 3.2/6, ms1mx2.8/48, Error ellipse: s-maj=46.0km s-min=16.2km az=79.0

NEIC 13 02:34:09.3±1.1, 2°.34N±0°.09×125°.58E±0°.09, h35^{km}±6^{km}, mb4.3/12, Error ellipse: s-maj=14.9km s-min=9.3km az=225.0

DJA 13 02:34:10.5±0.8, 2°N±3°×12°6E±°, h34^{km}±12^{km}, M4.6/12, mb4.8/6, mB5.5/3, MLv4.5/12, Mw(mB)5.0/3

ISC 13 02:34:09.6±0.6, 2°.40N±0°.05×125°.50E±0°.08, h35^{km}, n48, σ2^{s}.25/49, mb4.1/11, MS3.0/4, 1D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	1.28	1	P	Pn	02 34 31.6	+0.6
KMSI	Cibinong	2.36	220	P	Pn	02 34 47.1	+1.1
TNTI	Ternate	2.47	131	Pn	Pn	02 34 45.4	-2.1
TNTI	Ternate	2.47	131	P	Pn	02 34 48.2	+0.7
GTOI	Gorontalo	3.04	235	P	Pn	02 34 56.0	+0.7
DDMP	Don Marcelino,	3.69	3	*e*P	Pn	02 35 05.0	+0.9
DDMP				*e*S	Sn	02 35 50.8	+4.4
MRSI	Marisa	4.04	242	P	Pn	02 35 09.0	0.0
SKMP	Bagumbayan, Su	4.20	347	*e*P	Pn	02 35 11.0	-0.3
SKMP				*e*S	Sn	02 35 53.5	-5.6
LUWI	Luwuk	4.37	219	Pn	Pn	02 35 12.7	-1.0
LUWI	Luwuk	4.37	219	P	Pn	02 35 16.0	+2.4
SANI	Sanana	4.45	174	P	Pn	02 35 15.6	+0.9
KCP	Kidapawan	4.59	355	⇓*e*P	Pn	02 35 19.3	+2.6
KCP				*e*S	Sn	02 36 16.6	+7.6
DAV	Davao City (W)	4.64	1	LR	LR	02 37 26.4	
	comp=Z,337nm,19.2s,baz=33,slow=44						
TOLI2	Tolitoli	4.88	255	Pn	Pn	02 35 17.7	-2.9
APSI	Ampana	5.06	229	P	Pn	02 35 24.5	+1.4
	0.5nm2µm172nm,0.6s						
PAGZ	Pagadian	5.80	339	*e*P	Pn	02 35 31.5	-1.8
PAGZ				*e*S	Sn	02 36 36.1	-2.6
NLAI	Namlea	5.83	164	P	Pn	02 35 34.5	+0.9
	0.5nm29nm,0.5s						
MYLDM	Lahad Datu	7.51	292	Pn	Pn	02 35 57.4	+0.7
TTSI	Tana Toraja	7.84	226	P	Pn	02 36 03.6	+2.3
	0.2nm38nm,0.8s						
BNSI	Bone	8.64	219	P	Pn	02 36 20.8	+8.5
KAPI	Kappang	9.34	218	Pn	Pn	02 36 22.9	+1.1
	1.3nm,0.3s,baz=291,slow=16,SNR=5.4						
KAPI				LR	LR	02 40 14.2	
	comp=Z,105nm,20.1s,baz=50,slow=39						
KKM	Kota Kinabalu	9.94	292	Pn	Pn	02 36 31.5	+1.3
PLAI	Plampang	13.55	215	P	P	02 37 29.8	+1.7
MTN	Manton Dam	16.15	160	Pn	Pn	02 37 51.1	-3.0
MTN				IAmb	IAmb	02 37 57.5	
	comp=Z,52nm,1.4s						
FITZ	Fitzroy Crossi	20.37	180	P	P	02 38 42.0	-1.4
	comp=Z,5.4nm,0.7s,baz=12,slow=8.3,SNR=22						
FITZ	Fitzroy Crossi	20.37	180	P	P	02 38 43.7	+0.3
FITZ				IAmb	IAmb	02 38 47.9	
	comp=Z,6.4nm,0.8s						
WB0	Warramunga Arr	23.70	159	P	P	02 39 17.3	-1.2
WRA	Warramunga Arr	23.84	159	P	P	02 39 18.6	-1.2
	comp=Z,4.4nm,0.3s,baz=334,slow=11,SNR=51						
WRA				S	S	02 43 33.2	-0.4
	comp=Z,2.6nm,1.0s,baz=344,slow=17,SNR=6.2						
WRA	Warramunga Arr	23.84	159	P	P	02 39 18.9	-0.9
WB2	Warramunga Arr	23.85	159	P	P	02 39 18.8	-1.1
WR0	Warramunga Arr	23.93	159	P	P	02 39 19.5	-1.1
WR0				IAmb	IAmb	02 39 33.7	
	comp=Z,8.6nm,0.8s						
MBWA	Marble Bar	24.09	193	P	P	02 39 22.2	+0.1
PSI	Prapat	26.55	271	LR	LR	02 52 12.4	
	comp=Z,59nm,18.4s,baz=269,slow=41						
AS31	Alice Springs	27.17	163	P	P	02 39 50.6	+0.5
AS31				IAmb	IAmb	02 40 05.5	
	comp=Z,2.6nm,0.6s						
ASAR	Alice Springs	27.17	163	P	P	02 39 49.5	-0.5
	comp=Z,1.2nm,0.3s,baz=340,slow=6.8,SNR=20						
ASAR				PcP	PcP	02 43 10.6	+0.5
	comp=Z,0.5nm,0.6s,baz=350,slow=1.6,SNR=2.7						
ASAR				S	S	02 44 33.0	+6.3
	comp=Z,0.4nm,0.8s,baz=349,slow=19,SNR=2.7						
ASAR	Alice Springs	27.17	163	P	P	02 39 48.8	-1.2
CMAR	Chiang Mai Arr	30.52	303	LR	LR	02 53 23.4	
	comp=Z,35nm,18.4s,baz=178,slow=38						
MJAR	Matsushiro Arr	35.95	18	LR	LR	02 54 24.1	
	comp=Z,25nm,21.1s,baz=255,slow=34						
STKA	Stephens Creek	37.36	157	P	P	02 41 16.9	-2.2
	comp=Z,3.3nm,0.7s,baz=330,slow=11,SNR=7.0						
STKA	Stephens Creek	37.36	157	P	P	02 41 17.9	-1.2
SHL	Shillong	39.70	308	P	P	02 41 39.8	+0.8
SHL				IAmb	IAmb	02 41 41.1	
	comp=Z,8.5nm,0.7s						
ASAJ	Asahikawa	44.22	18	LR	LR	03 02 55.9	
	comp=Z,16nm,19.1s,baz=68,slow=39						
KLR	Kul'dur	46.96	6	P	P	02 42 36.0	-1.1
	comp=Z,0.8nm,0.5s,baz=182,slow=8.2,SNR=6.0						
SONM	Songino Array	48.17	343	P	P	02 42 47.0	+0.3
	comp=Z,0.3nm,0.8s,baz=142,slow=7.3,SNR=2.3						
MK31	Makanchi Array	57.95	326	P	P	02 43 58.1	-0.5
MKAR	Makanchi Array	57.95	326	P	P	02 43 58.5	-0.1
	comp=Z,0.3nm,0.5s,baz=124,slow=8.4,SNR=6.0						
KBL	Kabul	61.36	308	P	P	02 44 22.9	+0.3
KBL				IAmb	IAmb	02 44 30.7	
	comp=Z,2.0nm,0.7s						
ILAR	Eielson Array	86.82	25	P	P	02 46 49.4	-0.9
	comp=Z,0.2nm,0.7s,baz=235,slow=4.3,SNR=2.5						

NOU 13 02:53:43.8, 20°.55S×168°.70E, h0^{km}, MLv3.3, Loyalty Islands

IDC 13 02:53:35.0±7.0, 19°.91S×168°.51E, h247^{km}±31^{km}, mb3.6/3, mb1 3.7/4, mb1mx3.3/37, mbtmp4.1/4, Error ellipse: s-maj=98.3km s-min=74.8km az=106.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LIFNC	LIFOU	1.47	234	P	Pn	02 54 09.2	-3.6
YATNC	Mamie plateau,	2.62	215	P	Pn	02 54 22.3	-1.0
DZM	Mont Dzumac	2.89	221	P	Pn	02 54 26.5	+0.3
	4.2nm,0.3s,baz=56,slow=18,SNR=34						
DZM				S	S	02 55 06.9	+0.2
	1.7nm,0.3s,baz=72,slow=16,SNR=1.8						
DZM	Mont Dzumac	2.89	221	P	Pn	02 54 27.1	+0.9
OUENC	Ouen Island, N	2.94	212	P	Pn	02 54 26.1	-0.6
NOUC	Port Laguerre	3.00	223	P	Pn	02 54 28.3	+1.0
ONTNC	Ouen Toro	3.06	218	P	Pn	02 54 28.5	+0.5
STKA	Stephens Creek	26.91	238	P	P	02 58 53.5	0.0
	3.3nm,0.7s,baz=78,slow=9.6,SNR=8.6						
WRA	Warramunga Arr	32.09	264	P	P	02 59 38.9	-0.5
	0.7nm,0.8s,baz=93,slow=7.5,SNR=10						
ASAR	Alice Springs	32.30	257	P	P	02 59 41.5	+0.3
	5.3nm,0.7s,baz=86,slow=9.4,SNR=72						

ISC 13 03:01:20.9±1.1, 44°.62N±0°.03×16°.79E±0°.04, h9^{km}±10^{km}, n12, σ0^{s}.90/20, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BLY	Banja Luka	0.31	66	*e*Pg	Pg	03 01 27.0	-0.1
BLY				*e*Sg	Sg	03 01 31.4	+0.1
KIJV	Kijevo	0.68	204	*i* Pg	Pg	03 01 33.4	-0.5
KIJV				Sg	Sg	03 01 43.0	+0.2
UDBI	Udbina	0.74	263	*i* Pg	Pg	03 01 34.1	-1.1
UDBI				Sg	Sg	03 01 45.1	+0.3
MOSL	Moslavina	0.99	359	*e*Pg	Pg	03 01 39.8	-0.2
MOSL				Sg	Sb	03 01 53.6	+0.1
MORI	Morici	1.08	226	*e*Pg	Pg	03 01 41.2	-0.6
MORI				Sg	Sg	03 01 55.6	-0.2
RICI	Ricice	1.16	167	*e*Pn	Pg	03 01 42.7	-0.4
RICI				Sg	Sn	03 01 59.9	+0.7
ZIRJ	Zirje	1.27	221	Sg	Sb	03 02 01.4	0.0
OZLJ	Ozalj	1.36	317	*i* Pg	Pn	03 01 45.4	-0.7
NVLJ	Novalja	1.37	268	*e*Pn	Pb	03 01 46.6	-0.1
NVLJ				Sg	Sg	03 02 07.4	+2.5
DUGI	Dugi Otok	1.39	244	*e*Pn	Pn	03 01 45.9	-0.6
DUGI				Sg	Sg	03 02 07.5	+1.8
HVAR	Hvar	1.47	190	*e*Pn	Pg	03 01 49.3	+0.3
KALN	Kalnik	1.53	351	*e*Pn	Pn	03 01 48.1	-0.3

KRSC 13 03:08:21.8±1.2, 53°.49N×161°.44E, h40^{km}±18^{km}, ML4.2

MOS 13 03:08:22.9±0.7, 53°.43N×161°.47E, h47^{km}, mb4.2/3, Error ellipse: s-maj=7.5km s-min=5.4km az=85.0

NEIC 13 03:08:24.1±2.1, 53°.7N±0°.2×161°.27E±0°.04, h40^{km}±9^{km}, mb4.1/5, Error ellipse: s-maj=26.6km s-min=2.7km az=175.0

IDC 13 03:08:31.4±5.5, 53°.94N×160°.26E, h73^{km}±35^{km}, mb3.6/6, mb1 3.7/7, mb1mx3.3/53, mbtmp3.9/7, ML3.5/1, MS3.3/2, Ms1 3.3/2, ms1mx2.7/42, Error ellipse: s-maj=69.1km s-min=28.8km az=120.0

ISC 13 03:08:23.9±1.1, 53°.48N±0°.04×161°.45E±0°.04, h42^{km}±12^{km}, n96, σ1^{s}.33/120, mb4.1/8, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	Mys Shipunski	0.93	247	PN	Pn	03 08 39.4	-1.1
SPN				S	Sn	03 08 52.4	-0.3
SPN	Mys Shipunski	0.93	247	*e*P	Pn	03 08 39.4	-1.1
SPN				*e*S	Sn	03 08 52.4	-0.3
MKZ	Mys Kozlova	1.09	9	PN	Pn	03 08 41.4	-1.3
MKZ				S	Sn	03 08 54.1	-2.5
MKZ	Mys Kozlova	1.09	9	*e*P	Pn	03 08 41.4	-1.3
MKZ				*e*S	Sn	03 08 54.1	-2.5
NLC	Nalytchevo	1.30	257	PN	Pn	03 08 45.4	-0.1
NLC				S	Sn	03 09 01.5	-0.1
NLC	Nalytchevo	1.30	257	*e*P	Pn	03 08 45.4	-0.1
NLC				*e*S	Sn	03 09 01.5	-0.1
KII	Karymskiy	1.31	296	PN	Pn	03 08 44.1	-1.7
KII	Karymskiy	1.31	296	*e*P	Pn	03 08 44.1	-1.7
SDLR	Sedlovina	1.55	264	PN	Pn	03 08 48.5	-0.5
SDLR	Sedlovina	1.55	264	*i* P	Pn	03 08 48.5	-0.5
UGLR	Uglovaya	1.59	261	PN	Pn	03 08 49.4	-0.3
UGLR				S	Sn	03 09 08.7	-0.4
UGLR	Uglovaya	1.59	261	*i* P	Pn	03 08 49.4	-0.3
UGLR				*e*S	Sn	03 09 08.7	-0.4
SMAR	Somma	1.60	263	PN	Pn	03 08 49.2	-0.6
SMAR	Somma	1.60	263	*e*P	Pn	03 08 49.2	-0.6
KRER	Koryakskii	1.62	265	PN	Pn	03 08 49.9	-0.3
KRER				S	Sn	03 09 09.2	-0.8
KRER	Koryakskii	1.62	265	*i* P	Pn	03 08 49.9	-0.3
KRER				*e*S	Sn	03 09 09.2	-0.8
AVH	Avacha	1.64	264	PN	Pn	03 08 50.2	0.0
AVH				S	Sn	03 09 09.5	-0.6
AVH	Avacha	1.64	264	*i* P	Pn	03 08 50.2	0.0
AVH				*e*S	Sn	03 09 09.5	-0.6
DALK	Dalny	1.68	256	PN	Pn	03 08 50.2	-0.5
DALK	Dalny	1.68	256	*e*P	Pn	03 08 50.2	-0.5
KRX	Arik	1.68	267	PN	Pn	03 08 50.3	-0.5
KRX	Arik	1.68	267	*e*P	Pn	03 08 50.3	-0.5
KOK	Koryaka	1.69	265	PN	Pn	03 08 50.6	-0.4
KOK	Koryaka	1.69	265	*i* P	Pn	03 08 50.6	-0.4
PET	Petropavlovsk	1.74	256	*e*PN	Pn	03 08 51.0	-0.5
PET				*e*S	Sn	03 09 12.2	-0.2
PET				smax	smax		
	comp=E,461nm,0.5s						
PET				smax	smax		
	comp=N,446nm,0.6s						
PET	Petropavlovsk	1.74	256	*e*P	Pn	03 08 51.3	-0.2
PET				*e*S	Sn	03 09 12.3	-0.2
PET	Petropavlovsk	1.74	256		Pn	03 08 51.1	-0.4
KZV	Kizimen	1.77	338	PN	Pn	03 08 52.0	-0.2
KZV				S	Sn	03 09 13.0	-0.6
KZV	Kizimen	1.77	338	*e*P	Pn	03 08 52.0	-0.2
KZV				*e*S	Sn	03 09 13.0	-0.6
TUMD	Tumrok D	1.83	341	*e*P	Pn	03 08 52.2	-0.7
TUMD				*e*S	Sn	03 09 13.9	-1.0
TUMR	Tumrok	1.96	338	PN	Pn	03 08 54.9	+0.2
TUMR				S	Sn	03 09 17.9	-0.3
TUMR	Tumrok	1.96	338	*e*P	Pn	03 08 54.9	+0.2
TUMR				*e*S	Sn	03 09 17.9	-0.3
RUS	Russkaya	2.06	241	PN	Pn	03 08 57.1	+1.2
RUS				S	Sn	03 09 21.7	+1.4
RUS	Russkaya	2.06	241	*e*P	Pn	03 08 57.1	+1.2
RUS				*e*S	Sn	03 09 21.7	+1.4
KRMR	Karymshinskiy	2.10	253	PN	Pn	03 08 57.7	+1.2
KRMR	Karymshinskiy	2.10	253	*e*P	Pn	03 08 57.7	+1.2
GNL	Ganaly	2.10	277	PN	Pn	03 08 56.9	+0.3
GNL	Ganaly	2.10	277	*e*P	Pn	03 08 56.9	+0.3
MTVR	Mutnovka	2.21	245	PN	Pn	03 08 59.1	+1.0
MTVR	Mutnovka	2.21	245	*e*P	Pn	03 08 59.1	+1.0
GRL	Gorelyy	2.24	247	PN	Pn	03 08 59.1	+0.6
GRL	Gorelyy	2.24	247	*i* P	Pn	03 08 59.1	+0.6
PEA0B	Petropavlovsk-	2.28	262	PN	Pn	03 08 59.2	+0.2
PEA0B	Petropavlovsk-	2.28	262		Pn	03 08 59.2	+0.2
PETK	Petropavlovsk-	2.28	262	P	Pn	03 08 59.3	+0.3
	comp=N,11nm,0.3s,baz=92,slow=21,SNR=228						
PETK				S	Sn	03 09 21.2	-4.6
	comp=N,8.4nm,0.3s,baz=43,slow=18,SNR=5.0						
PETK				LR	LR	03 10 00.8	
	comp=N,108nm,20.9s,baz=81,slow=52						
KMNR	Kamenistaya	2.39	343	PN	Pn	03 09 01.8	+1.2
KMNR				S	Sn	03 09 29.4	+0.7
KMNR	Kamenistaya	2.39	343	*i* P	Pn	03 09 01.8	+1.2
KMNR				*e*S	Sn	03 09 29.4	+0.7
BZGR	Bezymyannyi-Gr	2.51	350	PN	Pn	03 09 04.4	+2.2
BZGR	Bezymyannyi-Gr	2.51	350	*e*P	Pn	03 09 04.4	+2.2
BZMR	Bezymyannaya	2.52	348	PN	Pn	03 09 04.9	+2.4
BZMR	Bezymyannaya	2.52	348	*e*P	Pn	03 09 04.9	+2.4
KIRR	Kirishev	2.56	346	PN	Pn	03 09 03.5	+0.5
KIRR	Kirishev	2.56	346	*e*P	Pn	03 09 03.5	+0.5
APC	Apacha	2.64	260	PN	Pn	03 09 05.5	+1.6
APC				S	Sn	03 09 36.1	+1.5
APC	Apacha	2.64	260	*e*P	Pn	03 09 05.5	+1.6
APC				*e*S	Sn	03 09 36.1	+1.5
KDTR	Khodutka, Kamc	2.65	232	PN	Pn	03 09 05.2	+1.2
KDTR	Khodutka, Kamc	2.65	232	*e*P	Pn	03 09 05.2	+1.2
KOZ	Kozyrevsk	2.74	341	PN	Pn	03 09 06.1	+0.8
KOZ	Kozyrevsk	2.74	341	*e*P	Pn	03 09 06.1	+0.8
KBTR	Krutoberegovo	2.85	16	PN	Pn	03 09 07.4	+0.6
KBTR	Krutoberegovo	2.85	16	*e*P	Pn	03 09 07.4	+0.6
KLY	Klyuchi	2.88	351	PN	Pn	03 09 08.9	+1.7
KLY				S	Sn	03 09 43.3	+2.8
KLY	Klyuchi	2.88	351	*e*P	Pn	03 09 08.9	+1.7
KLY				*e*S	Sn	03 09 43.3	+2.8
ESO	Esso	2.92	328	PN	Pn	03 09 08.7	+0.9
ESO	Esso	2.92	328	*e*P	Pn	03 09 08.7	+0.9
SRDR	Sredinnyy	3.02	341	PN	Pn	03 09 09.5	+0.4
SRDR	Sredinnyy	3.02	341	*e*P	Pn	03 09 09.5	+0.4
BDR	Baidarnaya	3.10	358	PN	Pn	03 09 13.3	+3.0
BDR				S	Sn	03 09 49.7	+3.6
BDR	Baidarnaya	3.10	358	*e*P	Pn	03 09 13.3	+3.0
BDR				*e*S	Sn	03 09 49.7	+3.6
BKI	Bering	3.17	55	PN	Pn	03 09 11.7	+0.6
BKI				S	Sn	03 09 45.4	-2.1
BKI	Bering	3.17	55	*e*P	Pn	03 09 11.7	+0.6
BKI				*e*S	Sn	03 09 45.4	-2.1
SRKR	Sorokina	3.19	357	PN	Pn	03 09 13.2	+1.7
SRKR	Sorokina	3.19	357	*e*P	Pn	03 09 13.2	+1.7
MA2	Magadan	8.49	320	LR	LR	03 13 20.0	
	comp=N,35nm,18.6s,baz=164,slow=38						
AMKA	Amchitka	11.10	94	Pn	Pn	03 11 01.7	+1.8
JKA	Kamikawa-asahi	15.51	240		Pn	03 11 59.3	-0.1
JKA	Kamikawa-asahi	15.51	240	IAmb	IAmb	03 12 12.8	
	comp=Z,15nm,1.3s						
ASAJ	Asahikawa	15.51	240	P	Pn	03 11 59.3	-0.1
	comp=Z,0.3nm,0.3s,baz=289,slow=7.8,SNR=1.9						
KLR	Kul'dur	18.95	269	P	Pn	03 12 43.3	+1.1
	comp=Z,0.2nm,0.3s,baz=63,slow=10,SNR=5.5						
MJAR	Matsushiro Arr	23.42	233	P	P	03 13 31.2	+2.1
	comp=Z,2.5nm,0.7s,baz=26,slow=9.1,SNR=4.4						
H11N2	WAKE ISLAND Hy	33.95	171	T	T	03 51 48.5	
	baz=354,slow=76,SNR=56						
H11N3	WAKE ISLAND Hy	33.96	171	T	T	03 51 42.4	
	baz=354,slow=76,SNR=35						
H11N1	WAKE ISLAND Hy	33.96	171	T	T	03 52 01.0	
	baz=354,slow=76,SNR=43						
KURK	Kurchatov	48.22	302	P	P	03 16 58.1	-1.8
KURK				pmax	pmax		
	comp=Z,3.0nm,1.2s						
KURK	Kurchatov	48.22	302	P	P	03 16 58.1	-1.8
KURK				IAmb	IAmb	03 16 59.6	
	comp=Z,2.8nm,1.1s						
MK31	Makanchi Array	48.72	296	P	P	03 17 02.2	-1.6
MK31	Makanchi Array	48.72	296	P	P	03 17 02.2	-1.6
MKAR	Makanchi Array	48.72	296	P	P	03 17 00.5	-3.4
	comp=Z,0.1nm,0.4s,baz=57,slow=7.5,SNR=2.4						
CHTO	Chiang Mai	58.77	259	P	P	03 18 17.4	-0.3
CHTO				pmax	pmax		
	comp=Z,3.0nm,0.6s						
CHTO	Chiang Mai	58.77	259	P	P	03 18 17.4	-0.3
CMAR	Chiang Mai Arr	59.05	259	P	P	03 18 20.2	+0.6
	comp=Z,1.4nm,0.3s,baz=23,slow=6.9,SNR=6.5						
FINES	FINESS Array B	60.09	337	P	P	03 18 26.1	0.0
	comp=Z,1.0nm,0.5s,baz=27,slow=9.0,SNR=10						
NOA	NORSAR Array B	63.40	344	P	P	03 18 48.0	-0.5
	comp=Z,0.9nm,0.9s,baz=16,slow=5.6,SNR=5.5						
NOA	NORSAR Array B	63.40	344	P	P	03 18 48.0	-0.5
GEYT	Alibeck	67.56	304	LR	LR	03 52 22.1	
	comp=Z,125nm,18.2s,baz=35,slow=39						
AKASG	Malin Array Be	68.70	330	P	P	03 19 21.9	-0.7
	comp=Z,0.7nm,0.4s,baz=28,slow=6.8,SNR=4.0						

IDC 13 03:11:58.4±2.0, 7°.41S×147°.79E, h77^{km}±18^{km}, mb3.7/8, mb1 3.8/10, mb1mx3.6/37, mbtmp4.0/10, MS2.9/2, Ms1 2.9/2, ms1mx2.5/33, Error ellipse: s-maj=33.8km s-min=14.1km az=111.0

NEIC 13 03:11:59.2±1.2, 7°.48S±0°.09×147°.7E±0°.2, h84^{km}±9^{km}, mb4.2/10, Error ellipse: s-maj=26.5km s-min=9.3km az=113.0

ISC 13 03:11:59.5±0.6, 7°.42S±0°.08×147°.6E±0°.1, h84^{km}, n28, σ0^{s}.73/28, mb4.0/11, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	2.03	193	P	Pn	03 12 31.9	-0.1
	32nm,0.3s,baz=351,slow=5.1,SNR=28						
PMG				S	Sn	03 12 56.8	+0.1
	48nm,0.3s,baz=350,slow=15,SNR=3.9						
PMG				LR	LR	03 13 27.0	
	comp=Z,172nm,19.7s,baz=38,slow=43						
RABL	Rabaul	5.53	55		Pn	03 13 20.2	+0.8
COEN	Coen	7.84	214	Pn	Pn	03 13 49.8	-1.1
WR0	Warramunga Arr	17.79	224	P	P	03 16 00.6	-0.8
WR0				IAmb	IAmb	03 16 54.9	
	comp=Z,5.5nm,0.8s						
WRA	Warramunga Arr	17.92	225	P	Pn	03 16 03.1	-0.3
	comp=Z,0.7nm,0.3s,baz=39,slow=14,SNR=5.2						
WRA				S	Sn	03 19 11.4	-12
	comp=Z,0.1nm,0.3s,baz=44,slow=24,SNR=1.9						
WRA				PcP	PcP	03 20 35.5	+0.3
	comp=Z,0.0nm,0.3s,baz=43,slow=1.4,SNR=1.4						
AS31	Alice Springs	20.85	218	P	P	03 16 34.6	-0.1
ASAR	Alice Springs	20.85	218	P	P	03 16 35.2	+0.5
	comp=Z,1.1nm,0.4s,baz=55,slow=8.7,SNR=16						
ASAR				S	S	03 20 25.1	+2.4
	comp=Z,1.0nm,0.8s,baz=26,slow=24,SNR=4.0						
ASAR	Alice Springs	20.85	218	P	Pn	03 16 36.2	-1.7
FITZ	Fitzroy Crossi	23.90	242	LR	LR	03 26 51.1	
	comp=Z,37nm,19.7s,baz=116,slow=37						
FITZ	Fitzroy Crossi	23.90	242	P	P	03 17 05.6	-0.2
FITZ				IAmb	IAmb	03 17 46.5	
	comp=Z,30nm,1.9s						
STKA	Stephens Creek	24.98	192	P	P	03 17 15.2	-0.2
	comp=Z,1.3nm,0.6s,baz=11,slow=11,SNR=3.1						
CMAR	Chiang Mai Arr	54.48	299	P	P	03 21 19.8	+0.9
	comp=Z,1.2nm,0.4s,baz=110,slow=5.5,SNR=4.8						
LSA	Lhasa	65.59	307	P	P	03 22 35.5	+0.2
LSA				IAmb	IAmb	03 22 38.0	
	comp=Z,3.0nm,0.9s						
SONM	Songino Array	65.94	331	P	P	03 22 36.9	+0.1
	comp=Z,0.6nm,0.9s,baz=142,slow=7.3,SNR=3.6						
SONM	Songino Array	65.94	331	IAmb	IAmb	03 22 38.5	
	comp=Z,1.7nm,1.4s						
MK31	Makanchi Array	78.98	320	P	P	03 23 54.3	0.0
MK31				IAmb	IAmb	03 25 14.9	
	comp=Z,3.6nm,1.6s						
MKAR	Makanchi Array	78.98	320	P	P	03 23 54.4	+0.1
	comp=Z,1.0nm,0.5s,baz=98,slow=8.6,SNR=19						
ZALV	Zalesovo Beam	80.54	328	P	P	03 24 01.4	-1.0
	comp=Z,0.6nm,0.4s,baz=109,slow=6.4,SNR=3.2						
NIL	Nilore	81.26	306	P	P	03 24 07.3	+0.5
KK31	Karatay Array	85.72	314	P	P	03 24 29.1	-0.3
KK31				IAmb	IAmb	03 27 06.6	
	comp=Z,4.7nm,1.4s						
KKAR	Karatay Array	85.72	314	P	P	03 24 29.1	-0.3
IL31		86.53	23	P	P	03 24 32.0	-0.8
ILAR	Eielson Array	86.53	23	P	P	03 24 32.0	-0.9
	comp=Z,1.1nm,0.8s,baz=248,slow=4.7,SNR=9.5						
NRIK	Noril'sk	86.81	342	P	P	03 24 34.2	+0.1
	comp=Z,2.6nm,0.5s,baz=135,slow=5.9,SNR=4.9						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
TORD	**Torodi Ar. Bea**	**146.03**	**282**	PKPbc	**PKPbc**	**03 31 30.8**	**0.0**
	comp=Z,1.1nm,0.5s,baz=82,slow=3.6,SNR=7.5						
TORD	**Torodi Ar. Bea**	**146.03**	**282**		**PKPab**	**03 31 31.1**	**-0.4**
BDFB	**Brasilia**	**152.34**	**146**	PKPbc	**PKPbc**	**03 31 46.3**	**-0.7**
	comp=Z,1.9nm,0.5s,baz=180,slow=4.0,SNR=4.0						
DBIC	**Dimbokro**	**152.69**	**270**	PKPbc	**PKPbc**	**03 31 47.3**	**-0.3**
	comp=Z,0.9nm,0.4s,baz=164,slow=2.8,SNR=4.3						

MOS 13 03:18:53.7±0.0**, 44°.50N×41°.27E, h28^{km}, ML2.0**/5**, MPVA2.8, 2C, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AHMR	**Akhmetovskaya**	**0.38**	**206**	*i* Pg	Pb	03 19 01.9	-0.2
AHMR				*i* Sg	Sb	03 19 08.3	+0.5
ARXR	**Arkhyz**	**0.93**	**180**	*i* Pg	Pn	03 19 11.2	+0.1
	6.0nm,0.1s						
ARXR				*i* Sg	Sn	03 19 24.3	+0.7
	45nm,0.2s						
GUZR	**Guzeripl'**	**0.97**	**239**	*i* Pg	Pn	03 19 11.5	0.0
	7.5nm,0.6s						
GUZR				*i* Sg	Sn	03 19 24.6	+0.3
	31nm,0.2s						
RPOR	**Krasnaya Polya**	**1.08**	**223**	*e*Pg	Pb	03 19 13.5	-0.2
	1.6nm,0.2s						
RPOR				*i* Sg	Sb	03 19 27.8	+0.4
	30nm,0.2s						
KIV	**Kislovodsk**	**1.15**	**117**	*i* Pg	Pb	03 19 14.7	-0.3
KIV				*i* Sg	Sb	03 19 30.3	+0.7
KIV0	**Kislovodsk Arr**	**1.16**	**117**	*e*Pg	Pn	03 19 14.5	+0.4
KIV0				*e*Sg	Sb	03 19 30.0	+0.3
BEYR	**Belyy Ugol+**	**1.21**	**113**	*i* Pg	Pb	03 19 16.1	+0.1
BEYR				*e*Sg	Sb	03 19 31.3	+0.1
SHA1	**Shidzhatmaz**	**1.25**	**127**	*i* Pg	Pb	03 19 16.4	-0.4
	2.5nm,0.6s						
SHA1				*i* Sg	Sb	03 19 32.8	+0.2
	38nm,0.5s						
PYA1	**Pyatigorsk**	**1.38**	**108**	*i* S	Sb	03 19 36.4	+0.3
PYA1	**Pyatigorsk**	**1.38**	**108**	*i* Pg	Pb	03 19 18.7	-0.1
PYA1				*i* Sg	Sb	03 19 36.4	+0.3
PYA1	**Pyatigorsk**	**1.38**	**108**	⇑*i*P	Pb	03 19 18.7	-0.2
KBZ	**Khabaz**	**1.40**	**123**	*e*S	Sb	03 19 37.3	+0.7
KBZ	**Khabaz**	**1.40**	**123**	*e*Pg	Pb	03 19 19.3	+0.2
KBZ				*i* Sg	Sb	03 19 36.8	+0.2
KBZ	**Khabaz**	**1.40**	**123**	⇑*e*P	Pb	03 19 19.6	+0.5
NEY	**Neytrino**	**1.63**	**139**	*e*Pg	Pb	03 19 22.8	-0.4
	3.6nm,0.8s						
NEY				*i* Sg	Sb	03 19 44.0	+0.7
	9.4nm,0.3s						

IDC ***13*** *03:21:41.1±0.5, 2°.94N×92°.88E, h0^{km}, mb4.4/27, mb1 4.5/31, mb1mx4.5/50, mbtmp4.5/31, ML4.9/4, MS3.7/23, Ms1 3.7/23, ms1mx3.6/42, Error ellipse: s-maj=15.7km s-min=11.3km az=43.0*

NEIC ***13*** *03:21:42.7±1.1, 2°.93N±0°.08×92°.87E±0°.06, h10^{km}±1^{km}, mb4.8/56, Error ellipse: s-maj=12.9km s-min=9.9km az=190.0*

KLM ***13*** *03:21:44, 2°.92N×92°.86E, h10^{km}, mb5.4*

GCMT ***13*** *03:21:45.7±0.3, 3°.05N±0°.02×92°.86E±0°.02, h22^{km}±1^{km}, MW4.8/102, Moment Tensor Solution. s19,c21; s102,c123; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.09±.11; $M_{\theta\theta}$-1.01±.09; $M_{\phi\phi}$1.10±.10; $M_{r\theta}$-0.60±.14; $M_{\theta\phi}$-1.71±.08; $M_{\phi r}$-0.73±.15; Best double couple: $M_0$2.21500×10^{16} NP1:ϕ_s108.00000°,δ68.00000°, λ-171.00000°. NP2:ϕ_s14.00000°,δ82.00000°, λ-23.00000°. Principal axes: T 2.1120, Plg10.0000°, Azm63.0000°; N 0.2060, Plg66.0000°, Azm175.0000°; P -2.3170, Plg22.0000°, Azm329.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

DJA ***13*** *03:21:47.4±0.4, 3°N±3°×9°3E±°, h55^{km}±6^{km}, M5.4/24, mb5.6/24, mB5.7/18, MLv5.6/10, Mw(mB)5.3/18*

ISC 13 03:21:46.1±0.4**, 2°.89N**±0°.05×**92°.91E**±0°.05**, h35^{km}, n267,** σ1ˢ33/262**, mb4.6**/77**, MS3.8**/29**, 8C-5D, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MLSI	**Meulaboh, Aceh**	**3.75**	**68**	P	**Pn**	**03 22 40.8**	**-0.7**
CMBY	**CAMPBELL BAY**	**4.22**	**14**	*e*P	**Pn**	**03 22 44.1**	**-3.9**
CMBY				*e*S	Sn	03 23 25.6	-10
TPTI		**4.28**	**85**	P	**Pn**	**03 22 49.1**	**+0.3**
TPTI				S	**Sn**	**03 23 32.1**	**-5.4**
LHMI	**Lhok Sumawe**	**4.65**	**60**	Pn	**Pn**	**03 22 54.7**	**+0.8**
LHMI	**Lhok Sumawe**	**4.65**	**60**	P	**Pn**	**03 22 53.8**	**-0.1**
GSI	**Gunungsitoli**	**4.92**	**109**	Pn	**Pn**	**03 22 57.9**	**+0.3**
GSI	**Gunungsitoli**	**4.92**	**109**	P	**Pn**	**03 22 58.3**	**+0.7**
TSI	**Tuntungan**	**5.68**	**84**	P	**Pn**	**03 23 08.2**	**+0.2**
	4.2nm1μm,0.7s						
PSI	**Prapat**	**6.01**	**91**	Pn	**Pn**	**03 23 13.0**	**+0.3**
	47nm,0.3s,baz=360,slow=5.7,SNR=91						
PSI				Sn	**Sn**	**03 24 17.9**	**-2.5**
	76nm,0.3s,baz=0.4,slow=6.8,SNR=14						
RPSI	**Rantau Prapat**	**6.01**	**92**		**Pn**	**03 23 13.4**	**+0.8**
RPSI	**Rantau Prapat**	**6.01**	**92**		**Pn**	**03 23 13.0**	**+0.4**
PBSI	**Pulau Batu**	**6.11**	**118**	P	**Pn**	**03 23 14.5**	**+0.5**
	17nm60μm4μm,0.8s						
PBSI				S	**Sn**	**03 24 16.2**	**-6.6**
	17nm60μm4μm,0.8s						
MNSI	**Mandailing Nat**	**6.98**	**107**	P	**Pn**	**03 23 26.3**	**+0.3**
	6.9nm12μm585nm,0.6s						
MNSI				S	**Sn**	**03 24 39.9**	**-4.3**
	6.9nm12μm585nm,0.6s						
PKDT	**Phuket**	**7.34**	**47**	P	**Pn**	**03 23 29.4**	**-1.5**
SISI	**Saibi**	**7.46**	**124**	P	**Pn**	**03 23 32.8**	**+0.2**
	0.9nm3μm302nm,0.8s						
KULM	**Kulim**	**8.08**	**73**	Pn	**Pn**	**03 23 40.7**	**-0.3**
KULM	**Kulim**	**8.08**	**73**	P	**Pn**	**03 23 41.0**	**0.0**
IPM	**Ipoh**	**8.25**	**79**	Pn	**Pn**	**03 23 43.1**	**-0.3**
IPM	**Ipoh**	**8.25**	**79**	P	**Pn**	**03 23 44.0**	**+0.6**
TRTT	**Trang**	**8.35**	**54**	P	**Pn**	**03 23 43.0**	**-1.8**
	1.0nm3μm322nm,0.8s						
PDSI	**Padang**	**8.44**	**116**	P	**Pn**	**03 23 46.7**	**+0.7**
	5μm85nm,0.5s						
BKNI	**Bangkinang**	**8.52**	**107**	Pn	**Pn**	**03 23 48.0**	**+1.0**
BKNI	**Bangkinang**	**8.52**	**107**	P	**Pn**	**03 23 47.4**	**+0.4**
	293nm,0.8s						
PBA	**Port Blair**	**8.71**	**359**	*e*P	Pn	03 23 47.4	-2.3
PBA				*e*S	Sn	03 25 18.8	-8.0
PBA	**Port Blair**	**8.71**	**359**	Pn	Pn	03 23 48.0	-1.7
SDSI	**Sungai Dareh**	**9.32**	**114**	P	**Pn**	**03 23 58.2**	**+0.1**
	64nm,0.6s						
KRJI	**Kerinci**	**9.88**	**120**	P	**Pn**	**03 24 06.3**	**+0.5**
	36μm1μm,0.6s						
KRJI				S	Sn	03 25 46.5	-9.1
	36μm1μm,0.6s						
DGPR	**DIGLIPUR**	**10.22**	**0**	*e*P	**Pn**	**03 24 08.0**	**-2.4**
DGPR				*e*S	Sn	03 25 52.6	-11
MYKOM	**Kota Tinggi**	**10.98**	**95**	P	**Pn**	**03 24 21.0**	**+0.1**
KSI	**Kapahiang**	**11.66**	**124**	P	**Pn**	**03 24 30.8**	**+0.7**
	428nm,0.8s						
PHET	**Kaeng Krachan**	**11.97**	**33**	P	**Pn**	**03 24 35.0**	**+0.6**
	915nm50nm,0.8s						
MNAI	**Manna**	**12.35**	**126**	Pn	**Pn**	**03 24 39.3**	**-0.3**
MNAI	**Manna**	**12.35**	**126**	P	**Pn**	**03 24 40.3**	**+0.7**
	6μm286nm,0.5s						
LHSI	**Lahat**	**12.53**	**122**	P	**Pn**	**03 24 41.8**	**-0.2**
	4μm232nm,0.9s						
PATY	**Pattaya**	**12.70**	**38**	P	**Pn**	**03 24 47.8**	**+3.4**
PALK	**Pallekele**	**12.91**	**290**	Pn	**Pn**	**03 24 46.2**	**-1.1**
	9.2nm,0.3s,baz=210,slow=12,SNR=39						
PALK				Sn	Sn	03 26 55.9	-14
	26nm,0.3s,baz=162,slow=7.6,SNR=11						
PALK				LR	LR	03 29 11.5	
	comp=Z,429nm,18.1s,baz=214,slow=35						
MDSI	**Maura Dua**	**13.43**	**123**	P	**Pn**	**03 24 54.9**	**+0.5**
	111nm,0.6s						
LWLI	**Liwa**	**13.63**	**125**	P	**Pn**	**03 24 56.7**	**-0.4**
	10μm316nm,0.8s						
KLSI		**14.01**	**122**	P	**Pn**	**03 25 02.5**	**+0.3**
	431nm33nm,0.6s						
UTHA	**Uthaitani**	**14.14**	**27**	P	**Pn**	**03 25 03.6**	**-0.4**
	333nm45nm,0.7s						
SRAK	**Srakaew**	**14.27**	**39**	P	**P**	**03 25 11.6**	**-0.9**
	26μm2μm,0.7s						
KASI	**Kota Agung**	**14.28**	**126**	P	**Pn**	**03 25 05.9**	**0.0**
	1μm98nm,1.1s						
UMPA	**Umpang Tak**	**14.47**	**23**	P	**Pn**	**03 25 08.9**	**+0.4**
	13μm31nm,0.9s						
CHAI	**Chaiyaphum**	**15.72**	**34**	P	**Pn**	**03 25 24.9**	**-0.2**
	832nm51nm,0.8s						
PBKT	**Sadao Pong**	**15.74**	**30**	P	**Pn**	**03 25 23.8**	**-1.4**
	171nm9.6nm,1.0s						
SUKH	**Sukhothai**	**15.93**	**24**	P	**P**	**03 25 30.6**	**-0.5**
	52nm,0.7s						
MHMT	**Maesarieng**	**15.97**	**18**	P	**P**	**03 25 31.8**	**+0.4**
	885nm91nm,0.7s						
PHIT	**Phitsanulok**	**16.01**	**27**	P	**Pn**	**03 25 28.0**	**-0.8**
	161nm,0.9s						
CM05	**Chiang Mai Arr**	**16.51**	**21**	P	**Pn**	**03 25 34.0**	**-1.2**
	253nm35nm,0.8s						
CM13	**Chiang Mai Arr**	**16.52**	**20**	P	**Pn**	**03 25 34.0**	**-1.3**
	240nm27nm,0.7s						
CM04	**Chiang Mai Arr**	**16.52**	**21**	P	**Pn**	**03 25 34.0**	**-1.3**
	341nm42nm,0.6s						
CM01	**Chiang Mai Arr**	**16.54**	**21**	P	**P**	**03 25 38.5**	**+0.7**
	689nm34nm,0.7s						
CM02	**Chiang Mai Arr**	**16.54**	**21**	P	**Pn**	**03 25 35.0**	**-0.6**
	281nm38nm,0.8s						
KHON	**Khomkaen**	**16.54**	**35**	P	**P**	**03 25 37.0**	**-0.8**
	118nm,0.9s						
CM15	**Chiang Mai Arr**	**16.55**	**20**	P	**P**	**03 25 43.2**	**+5.3**
CM31	**Chiang Mai Arr**	**16.56**	**20**	P	**P**	**03 25 43.5**	**+5.4**
CMAR	**Chiang Mai Arr**	**16.56**	**20**	Pn	**Pn**	**03 25 34.4**	**-1.5**
	0.9nm,0.3s,baz=220,slow=14,SNR=18						
CMAR				LR	LR	03 32 31.3	
	comp=Z,102nm,18.8s,baz=258,slow=39						
CM09	**Chiang Mai Arr**	**16.57**	**21**	P	**P**	**03 25 39.0**	**+0.9**
	303nm40nm,1.1s						
CM36	**Chiang Mai Arr**	**16.67**	**21**	P	**Pn**	**03 25 37.0**	**-0.2**
DBJI	**Dramaga**	**16.70**	**124**	P	**P**	**03 25 38.8**	**-0.8**
	8μm189nm,1.3s						
CM32	**Chiang Mai Arr**	**16.71**	**20**	P	**Pn**	**03 25 38.0**	**+0.3**
CM35	**Chiang Mai Arr**	**16.84**	**21**	P	**Pn**	**03 25 38.0**	**-1.3**
LAMP	**Lampang**	**16.88**	**22**	P	**P**	**03 25 42.5**	**+1.1**
	43nm,0.9s						
CHTO	**Chiang Mai**	**16.89**	**20**	Pn	**Pn**	**03 25 37.5**	**-2.5**
CM33	**Chiang Mai Arr**	**16.90**	**20**	P	**Pn**	**03 25 38.0**	**-2.0**
CM34	**Chiang Mai Arr**	**17.00**	**21**	P	**P**	**03 25 43.0**	**+0.1**
KSM	**Kuching**	**17.44**	**94**	P	**P**	**03 25 48.0**	**+0.2**
UBPT	**Khong Chiam**	**17.46**	**44**	P	**Pn**	**03 25 46.9**	**-0.1**
	664nm73nm,1.0s						
UBPT	**Khong Chiam**	**17.46**	**44**	Pn	**Pn**	**03 25 45.0**	**-2.0**
VIS	**Vishakhapatnam**	**17.48**	**328**	*e*P	**Pn**	**03 25 47.1**	**-0.2**
VIS				*i* P	**Pn**	**03 25 47.1**	**-0.2**
LEM	**Lembang**	**17.57**	**123**	P	**Pn**	**03 25 48.9**	**+0.4**
	4.5nm,0.3s,baz=316,slow=11,SNR=4.9						
LEM				LR	LR	03 31 57.5	
	comp=Z,138nm,21.9s,baz=270,slow=35						
DLV	**T Lat**	**17.86**	**59**		**Pn**	**03 25 51.2**	**-1.0**
DLV				IAmb	IAmb	03 25 56.2	
	comp=Z,62nm,0.8s						
NONG	**Nongkai**	**18.11**	**33**	P	**Pn**	**03 25 54.2**	**-0.9**
	comp=Z,89nm,0.9s						
CISI	**Cisompet, Garu**	**18.13**	**125**		**Pn**	**03 25 55.4**	**0.0**
CISI				IAmb	IAmb	03 25 59.5	
	comp=Z,56nm,0.6s						
CISI	**Cisompet, Garu**	**18.13**	**125**	P	**P**	**03 25 58.5**	**+3.0**
	comp=Z,2μmcomp=Z,93nm,0.7s						
BWNR	**Bhubaneshwar**	**18.64**	**339**	*e*P	**P**	**03 25 58.4**	**-2.5**
BWNR				IAmb	IAmb	03 26 01.5	
	comp=Z,197nm,0.4s						
SBUM	**Sibu**	**19.29**	**91**	P	**Pn**	**03 26 09.5**	**0.0**
SBUM	**Sibu**	**19.29**	**91**	P	**Pn**	**03 26 11.0**	**+1.6**
SAIH	**SAIHA**	**19.48**	**0**	*e*P	**P**	**03 26 10.8**	**+0.5**
SAIH				*i* x	x	03 26 17.4	
HYB	**Hyderabad**	**20.18**	**317**	*i* P	Pn	03 26 19.0	-0.9
	comp=Z,50nm,1.0s						
HYB	**Hyderabad**	**20.18**	**317**	*e*P	**P**	**03 26 16.7**	**-1.1**
HYB				IAmb	IAmb	03 26 19.4	
	comp=Z,30nm,0.8s						
SLVN	**Son La**	**21.23**	**29**	P	**P**	**03 26 28.7**	**-0.5**
SLVN				IAmb	IAmb	03 26 33.5	
	comp=Z,17nm,0.7s						
IMP	**Imphal**	**21.84**	**3**	*e*P	**P**	**03 26 35.7**	**0.0**
IMP				*i* x	x	03 26 46.8	
BOK	**Bokaro**	**21.87**	**342**	*e*P	**P**	**03 26 37.1**	**+1.2**
BOK				IAmb	IAmb	03 26 39.6	
	comp=Z,48nm,0.9s						
BOK				*i* x	x	03 26 46.4	
SHL	**Shillong**	**22.57**	**358**	*e*P	**P**	**03 26 42.7**	**-1.0**
SHL				IAmb	IAmb	03 26 48.5	
	comp=Z,32nm,0.8s						
SHL	**Shillong**	**22.57**	**358**	P	**P**	**03 26 42.3**	**-1.4**
NGP	**Nagpur**	**22.62**	**324**	*e*P	**P**	**03 26 44.8**	**+0.8**
NGP				IAmb	IAmb	03 26 45.7	
	comp=Z,27nm,1.1s						
KOHI	**KOHIMA**	**22.73**	**3**	*e*P	**P**	**03 26 44.3**	**-1.1**
BBKI	**Banjar Baru**	**22.81**	**106**	P	P	03 27 03.1	+17
QIZ	**Qiongzhong**	**23.06**	**45**	P	**P**	**03 26 48.1**	**-0.6**
QIZ				S	**S**	**03 31 00.0**	**+2.6**
QIZ				LR	LR		
	comp=Z,300nm,19.8s						
QIZ				LR	LR		
	comp=Z,370nm,18.1s						
QIZ				LR	LR		
	comp=Z,240nm,16.2s						
GUWA	**GUWAHATI**	**23.20**	**357**	*e*P	**P**	**03 26 49.5**	**-0.4**
GUWA				IAmb	IAmb	03 26 50.8	
	comp=Z,24nm,0.4s						
MOKO	**MOKOCHONG**	**23.35**	**4**	*e*P	**P**	**03 26 51.3**	**-0.4**
KKM	**Kota Kinabalu**	**23.44**	**82**	P	**P**	**03 26 53.2**	**+0.5**
KKM				IAmb	IAmb	03 27 08.4	
	comp=Z,53nm,1.3s						
TEZP	**TEZPUR**	**23.59**	**360**	*e*P	**P**	**03 26 53.5**	**-0.3**
TEZP				*i* x	x	03 27 09.5	
KMI	**Kunming**	**24.05**	**22**	⇑P	**P**	**03 27 00.8**	**+2.4**
KMI				pP	pP	03 27 04.4	-2.7
KMI				sP	sP	03 27 06.3	-4.5
KMI				PP	**PnPn**	**03 27 33.8**	**+5.6**
KMI				S	**S**	**03 31 13.1**	**-0.6**
KMI				sS	sS	03 31 20.1	-7.9
KMI				SS	**SnSn**	**03 32 04.4**	**+8.1**
KMI				pmax	pmax		
	comp=Z,7.0nm,1.8s						
KMI				pmax	pmax		
	comp=Z,44nm,3.5s						
KMI				LR	LR		
	comp=Z,190nm,18.3s						
KMI				LR	LR		
	comp=Z,490nm,16.3s						
KMI				LR	LR		
	comp=Z,230nm,13.6s						
KMI	**Kunming**	**24.05**	**22**	P	**P**	**03 26 58.6**	**+0.2**
ODAN	**Odare**	**24.42**	**348**	*e*P	**P**	**03 27 01.8**	**0.0**
	comp=Z,36nm,0.6s						
RAMN	**Ramite**	**24.68**	**346**	*e*P	**P**	**03 27 04.6**	**+0.5**
	comp=Z,90nm,0.6s						
TAPN	**Taplejung**	**24.83**	**349**	*e*P	**P**	**03 27 06.2**	**+0.6**
	comp=Z,88nm,1.1s						
PKI	**Pulchoki**	**25.57**	**344**	*e*P	**P**	**03 27 12.5**	**+0.2**
PKIN	**Phulchoki**	**25.58**	**344**	*e*P	**P**	**03 27 12.7**	**+0.4**
DMN	**Daman**	**25.69**	**344**	*e*P	**P**	**03 27 13.7**	**+0.4**
	comp=Z,81nm,0.7s						
GUN	**Gumba**	**25.77**	**346**	*e*P	**P**	**03 27 14.8**	**+0.6**
	comp=Z,101nm,0.8s						
KKN	**Kakani**	**25.81**	**344**	*e*P	**P**	**03 27 14.5**	**+0.1**
GKN	**Gorkha**	**26.19**	**343**	*e*P	**P**	**03 27 18.3**	**+0.5**
	comp=Z,114nm,0.7s						
LSA	**Lhasa**	**26.72**	**357**	P	**P**	**03 27 24.5**	**+1.7**
LSA	**Lhasa**	**26.72**	**357**	P	**P**	**03 27 23.2**	**+0.4**
DANN	**Dangsing**	**26.78**	**342**	*e*P	**P**	**03 27 23.7**	**+0.5**
	comp=Z,88nm,0.6s						
GYA	**Guiyang**	**26.90**	**28**	*e*P	**P**	**03 27 26.5**	**+2.4**
GYA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
GYA				LR	LR		
	comp=Z,230nm,17.4s						
GYA				LR	LR		
	comp=Z,260nm,16.1s						
GYA				LR	LR		
	comp=Z,220nm,15.7s						
TOLI2	**Tolitoli**	**27.91**	**93**	P	**P**	**03 27 34.3**	**+1.1**
TOLI2				IAmb	IAmb	03 27 54.9	
	comp=Z,16nm,0.7s						
KAPI	**Kappang**	**27.94**	**106**	P	**P**	**03 27 34.2**	**+0.7**
KAPI				IAmb	IAmb	03 27 58.4	
	comp=Z,22nm,1.2s						
MRSI	**Marisa**	**29.11**	**94**	P	P	03 28 01.4	+17
CD2	**Chengdu**	**29.70**	**19**	P	**P**	**03 27 51.3**	**+2.4**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CD2				LR	LR		
	comp=Z,370nm,12.9s						
CD2				LR	LR		
	comp=Z,290nm,12.4s						
CD2				LR	LR		
	comp=Z,280nm,12.9s						
LUWI	**Luwuk**	**30.11**	**97**	P	**P**	**03 27 54.6**	**+1.9**
LUWI	**Luwuk**	**30.11**	**97**	P	P	03 28 00.8	+8.1
SMLA	**Simla**	**31.78**	**334**	*e*P	**P**	**03 28 07.7**	**+0.4**
SMLA				*i* x	x	03 28 19.2	
WHN	**Wuhan**	**34.17**	**34**	⇑P	**P**	**03 28 29.0**	**+0.8**
XAN	**Xi'an**	**34.41**	**24**	P	**P**	**03 28 28.8**	**-1.4**
XAN				pmax	pmax		
	comp=Z,10.0nm,0.8s						
XAN				LR	LR		
	comp=Z,360nm,20.6s						
XAN				LR	LR		
	comp=Z,430nm,18.4s						
XAN				LR	LR		
	comp=Z,420nm,15.7s						
XAN	**Xi'an**	**34.41**	**24**	P	**P**	**03 28 30.1**	**-0.1**
XAN				IAmb	IAmb	03 28 55.0	
	comp=Z,10nm,0.7s						
NIL	**Nilore**	**35.69**	**331**	P	**P**	**03 28 41.1**	**-0.2**
GTA	**Gaotai**	**36.89**	**9**	⇓P	**P**	**03 28 51.9**	**+0.3**
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,78nm,5.5s						
GTA				LR	LR		
	comp=Z,99nm,18.5s						
GTA				LR	LR		
	comp=Z,110nm,20.7s						
GTA				LR	LR		
	comp=Z,110nm,19.3s						
NJ2	**Nanjing**	**37.90**	**37**	*e*P	**P**	**03 29 01.3**	**+1.2**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,100nm,5.5s						
NJ2				LR	LR		
	comp=Z,460nm,16.6s						
NJ2				LR	LR		
	comp=Z,660nm,15.2s						
NJ2				LR	LR		
	comp=Z,490nm,19.9s						
FITZ	**Fitzroy Crossi**	**38.40**	**124**	P	**P**	**03 29 04.6**	**+0.1**
	baz=38,SNR=6.8						
FITZ	**Fitzroy Crossi**	**38.40**	**124**	P	**P**	**03 29 04.3**	**-0.2**
	comp=Z,5.5nm,0.7s,baz=287,slow=5.4,SNR=21						
FITZ	**Fitzroy Crossi**	**38.40**	**124**	P	**P**	**03 29 04.2**	**-0.2**
MEEK	**Meekatharra**	**38.45**	**141**	P	**P**	**03 29 06.7**	**+1.9**
	baz=39,SNR=4.9						
KBL	**Kabul**	**38.54**	**328**	P	**P**	**03 29 05.3**	**-0.4**
KSH	**Kashi**	**39.58**	**339**	P	**P**	**03 29 11.9**	**-2.3**
KSH				sP	pP	03 29 22.6	-0.5
KSH				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KSH				pmax	pmax		
	comp=Z,290nm,5.1s						
WMQ	**Urumqi**	**41.02**	**354**	*e*P	**P**	**03 29 27.3**	**+1.3**
WMQ				sP	sP	03 29 38.6	-0.1
WMQ				pmax	pmax		
	comp=Z,15nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,77nm,3.8s						
WMQ				LR	LR		
	comp=Z,580nm,28.9s						
WMQ				LR	LR		
	comp=Z,590nm,29.0s						
WMQ				LR	LR		
	comp=Z,150nm,29.1s						
WMQ	**Urumqi**	**41.02**	**354**	P	**P**	**03 29 26.4**	**+0.4**
WMQ				IAmb	IAmb	03 29 39.3	
	comp=Z,15nm,0.7s						
HHC	**Hu-ho-hao-te**	**41.37**	**22**	*e*P	**P**	**03 29 29.4**	**+0.4**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,72nm,6.6s						
HHC				LR	LR		
	comp=Z,210nm,11.4s						
HHC				LR	LR		
	comp=Z,390nm,16.1s						
HHC				LR	LR		
	comp=Z,220nm,13.3s						
SHLS	**Shalkode**	**41.85**	**345**	*e*P	**P**	**03 29 32.1**	**-0.8**
	comp=Z,9.4nm,0.6s,baz=346						
UZB	**Uzynbulak**	**41.95**	**345**	*e*P	**P**	**03 29 33.6**	**-0.2**
	baz=345						
SATY	**Saty**	**42.03**	**344**	*e*P	**P**	**03 29 34.6**	**+0.2**
	baz=344						
KPKS	**Kokpek**	**42.34**	**345**	*e*P	**P**	**03 29 36.9**	**+0.1**
	comp=Z,4.6nm,0.5s,baz=345						
HRA	**Herat**	**42.39**	**321**	P	**P**	**03 29 36.7**	**-0.8**
NWAO	**Narrogin (SRO)**	**42.41**	**149**	P	**P**	**03 29 38.5**	**+1.0**
	comp=Z,7.9nm,0.8s,baz=322,slow=11,SNR=3.6						
NWAO	**Narrogin (SRO)**	**42.41**	**149**	IAmb	IAmb	03 30 00.3	
	comp=Z,31nm,1.5s						
TNSS	**Tian-Shan**	**42.43**	**343**	*e*P	**P**	**03 29 37.7**	**-0.3**
	baz=343						
UCH	**Uchtor**	**42.49**	**340**	P	**P**	**03 29 39.1**	**+0.6**
	SNR=8.3						
MDOK	**Medeo**	**42.52**	**343**	*e*P	**P**	**03 29 38.5**	**+0.1**
	baz=343						
H01W3	**Cape Leeuwin H**	**42.53**	**154**	T	T	04 15 25.1	
	baz=331,slow=76,SNR=16						
H01W2	**Cape Leeuwin H**	**42.55**	**154**	T	T	04 15 28.4	
	baz=331,slow=76,SNR=8.5						
BJT	**Baijiatuau**	**42.55**	**27**	P	**P**	**03 29 38.0**	**-0.5**
H01W1	**Cape Leeuwin H**	**42.55**	**154**	T	T	04 15 37.2	
	baz=331,slow=76,SNR=7.8						
AAA	**Alma-Ata**	**42.60**	**343**	*e*P	**P**	**03 29 39.1**	**+0.2**
	comp=Z,7.9nm,0.5s,baz=343						
AML	**Almayashu**	**42.69**	**339**	P	**P**	**03 29 40.9**	**+0.7**
	SNR=11						
KBK	**Karagaybulak**	**42.72**	**340**	P	**P**	**03 29 41.1**	**+1.1**
	SNR=8.2						
TKM2	**Tokmak 2**	**42.75**	**341**	P	**P**	**03 29 40.7**	**+0.4**
	SNR=5.5						
AAK	**Ala-Archa**	**42.86**	**340**	P	**P**	**03 29 41.5**	**+0.3**
KUU	**Kurty**	**43.39**	**343**	*e*P	**P**	**03 29 44.5**	**-0.8**
	comp=Z,15nm,1.0s,baz=343						
USP	**Ospenovka**	**43.41**	**340**	P	**P**	**03 29 45.2**	**-0.3**
	SNR=10						
SGDS	**Sogindy**	**43.54**	**341**	*e*P	**P**	**03 29 46.1**	**-0.4**
	baz=341						
TDK	**Taldyqorghan**	**43.84**	**345**	*e*P	**P**	**03 29 49.3**	**+0.4**
	comp=Z,6.1nm,0.6s,baz=345						
IUG	**Iuzhnay**	**44.13**	**335**	*e*P	**P**	**03 29 51.0**	**-0.4**
	baz=336						
WRKA	**Warakurna**	**44.15**	**131**	P	**P**	**03 29 52.7**	**+1.0**
	baz=44,SNR=4.9						
DZA	**Taraz**	**44.23**	**337**	*e*P	**P**	**03 29 51.3**	**-0.8**
	baz=337						
MK31	**Makanchi Array**	**44.70**	**350**	P	**P**	**03 29 55.6**	**-0.1**
MKAR	**Makanchi Array**	**44.70**	**350**	P	**P**	**03 29 56.1**	**+0.4**
	comp=Z,9.8nm,0.5s,baz=169,slow=8.6,SNR=114						
MKAR				LR	LR	03 52 40.4	
	comp=Z,88nm,18.1s,baz=156,slow=42						
MKAR	**Makanchi Array**	**44.70**	**350**	P	**P**	**03 29 55.7**	**0.0**
KK31	**Karatay Array**	**44.73**	**337**	P	**P**	**03 29 56.0**	**-0.1**
KK31				IAmb	IAmb	03 30 08.2	
	comp=Z,10nm,0.8s						
KKAR	**Karatay Array**	**44.73**	**337**	P	**P**	**03 29 55.6**	**-0.4**
MAKZ	**Makanchi**	**44.77**	**349**	P	**P**	**03 29 56.2**	**-0.1**
MAKZ				IAmb	IAmb	03 30 09.0	
	comp=Z,12nm,0.7s						
ZSN	**Zaisan**	**44.93**	**352**	*e*P	**P**	**03 29 58.4**	**+0.9**
	comp=Z,7.8nm,0.7s,baz=352						
BRLS	**Borolday**	**44.94**	**336**	*e*P	**P**	**03 29 56.7**	**-1.1**
	comp=Z,7.5nm,0.7s,baz=336						
BTLS	**Baital**	**45.14**	**341**	*e*P	**P**	**03 29 58.7**	**-0.5**
	comp=Z,3.0nm,0.7s,baz=341						
SONM	**Songino Array**	**46.26**	**13**	P	**P**	**03 30 08.8**	**+0.5**
	comp=Z,3.4nm,0.8s,baz=194,slow=8.2,SNR=20						
SONM				LR	LR	03 51 19.2	
	comp=Z,101nm,19.1s,baz=196,slow=38						
SONM	**Songino Array**	**46.26**	**13**	P	**P**	**03 30 08.4**	**+0.1**
ULN	**Ulaanbaatar**	**46.44**	**13**	P	**P**	**03 30 09.6**	**-0.1**
ULN				IAmb	IAmb	03 30 37.0	
	comp=Z,4.5nm,0.8s						
JNU	**Nakatsue**	**46.53**	**45**	LR	LR	03 52 31.0	
	comp=Z,88nm,19.4s,baz=246,slow=40						
WB0	**Warramunga Arr**	**46.54**	**121**	P	**P**	**03 30 11.1**	**+0.4**
WRA	**Warramunga Arr**	**46.57**	**121**	P	**P**	**03 30 11.4**	**+0.5**
	comp=Z,12nm,0.8s,baz=300,slow=8.7,SNR=67						
WRA				LR	LR	03 52 50.8	
	comp=Z,61nm,19.2s,baz=295,slow=40						
WRA	**Warramunga Arr**	**46.57**	**121**	P	**P**	**03 30 11.2**	**+0.3**

WB2	Warramunga Arr	46.58	121	P	P	03 30 11.5	+0.5
KSRS	Korea Array	47.06	39	P	P	03 30 13.7	-0.8
	comp=Z,2.2nm,0.8s,baz=231,slow=9.5,SNR=6.2						
KSRS				LR	LR	03 51 32.0	
	comp=Z,88nm,18.4s,baz=226,slow=38						
GEYT	Alibeck	47.22	322	P	P	03 30 15.9	+0.2
	comp=Z,12nm,0.7s,baz=145,slow=9.0,SNR=17						
GEYT	Alibeck	47.22	322	P	P	03 30 16.0	+0.2
GYA0B	ALIBECK ARRAY	47.22	322	P	P	03 30 15.9	+0.1
FORT	Forrest	47.36	138	P	P	03 30 18.0	+1.1
AS31	Alice Springs	47.84	126	P	P	03 30 21.0	+0.1
ASAR	Alice Springs	47.84	126	P	P	03 30 21.5	+0.7
	comp=Z,3.1nm,0.8s,baz=307,slow=7.6,SNR=26						
SEM	Semipalatinsk	48.55	349	*e*P	P	03 30 25.5	-0.5
	comp=Z,2.5nm,0.7s,baz=349						
KURK	Kurchatov	49.16	348	P	P	03 30 30.2	-0.2
KURK				IAmb	IAmb	03 30 31.8	
	comp=Z,16nm,1.1s						
OPO	Ambohidratompo	49.79	243	P	P	03 30 36.7	+0.6
	comp=Z,2.5nm,0.6s,baz=80,slow=15,SNR=2.5						
ABPO	Ambohimpanom	49.91	242	P	P	03 30 36.8	-0.2
ABPO				IAmb	IAmb	03 30 39.9	
	comp=Z,7.2nm,0.8s						
BRZS	Berezniki	49.97	343	*e*P	P	03 30 36.1	-0.6
	comp=Z,5.6nm,1.1s,baz=343						
RAYN	Ar Rayn	50.19	298	P	P	03 30 39.2	+0.4
RAYN				IAmb	IAmb	03 30 46.4	
	comp=Z,5.5nm,0.8s						
ZALV	Zalesovo Beam	51.33	354	P	P	03 30 47.3	+0.5
	comp=Z,16nm,0.7s,baz=186,slow=8.7,SNR=69						
ZALV				LR	LR	03 57 23.7	
	comp=Z,105nm,18.2s,baz=167,slow=42						
HIA	Hailar	51.57	22	P	P	03 30 49.0	+0.3
HIA				IAmb	IAmb	03 31 16.3	
	comp=Z,6.0nm,0.8s						
BRVK	Borovoye	53.39	343	P	P	03 31 01.4	-0.7
BRVK				IAmb	IAmb	03 31 13.8	
	comp=Z,6.2nm,0.8s						
MJAR	Matsushiro Arr	53.46	45	P	P	03 31 03.2	+0.2
	comp=Z,1.5nm,0.6s,baz=242,slow=7.0,SNR=2.2						
MJAR				LR	LR	03 55 33.9	
	comp=Z,55nm,18.6s,baz=285,slow=38						
MJAR	Matsushiro Arr	53.46	45	IAmb	IAmb	03 31 09.6	
	comp=Z,2.8nm,1.0s						
USRK	Ussuriysk Ar.	53.67	34	P	P	03 31 04.4	0.0
	comp=Z,0.7nm,0.6s,baz=212,slow=5.1,SNR=1.5						
ABKAR	Akbulak array	54.07	334	P	P	03 31 06.7	-0.5
KMBO	Kilima Mbogo	55.78	267	P	P	03 31 20.5	0.0
	comp=Z,1.8nm,0.9s,baz=63,slow=14,SNR=4.0						
KMBO				LR	LR	03 52 14.3	
	comp=Z,79nm,19.6s,baz=96,slow=33						
KLR	Kul'dur	56.79	29	P	P	03 31 27.0	+0.2
	comp=Z,1.3nm,0.9s,baz=250,slow=12,SNR=3.0						
STKA	Stephens Creek	57.68	131	P	P	03 31 34.5	+1.1
	baz=58,SNR=5.8						
STKA	Stephens Creek	57.68	131	P	P	03 31 34.0	+0.7
	comp=Z,5.0nm,0.7s,baz=309,slow=7.5,SNR=10						
STKA	Stephens Creek	57.68	131	P	P	03 31 34.2	+0.8
MARD	Mardin	58.73	313	P	P	03 31 41.2	+0.4
ASAJ	Asahikawa	59.99	39	P	P	03 31 49.4	+0.1
	comp=Z,3.4nm,0.7s,baz=200,slow=12,SNR=2.2						
JKA	Kamikawa-asahi	59.99	39	P	P	03 31 49.4	+0.1
KBZ	Khabaz	60.02	320	P	P	03 31 49.4	0.0
	comp=Z,5.5nm,0.8s,baz=131,slow=6.7,SNR=12						
KBZ				LR	LR	03 58 47.7	
	comp=Z,53nm,18.9s,baz=54,slow=37						
KIV	Kislovodsk	60.26	320	P	P	03 31 51.1	-0.1
BRTR	Keskin Array B	64.82	313	P	P	03 32 21.9	+0.1
	comp=Z,2.1nm,0.7s,baz=135,slow=6.7,SNR=6.2						
BRTR				LR	LR	04 03 33.8	
	comp=Z,77nm,18.6s,baz=124,slow=39						
BRTR	Keskin Array B	64.82	313	P	P	03 32 21.4	-0.4
NRIK	Noril'sk	66.44	358	P	P	03 32 30.4	-1.0
	comp=Z,3.8nm,0.6s,baz=163,slow=6.2,SNR=6.7						
NRIK				LR	LR	04 03 00.5	
	comp=Z,98nm,18.1s,baz=222,slow=37						
NRIK	Noril'sk	66.44	358	P	P	03 32 31.3	-0.2
NRIK				IAmb	IAmb	03 32 32.4	
	comp=Z,9.6nm,1.1s						
OBN	Obninsk	68.96	329	LR	LR	04 06 38.4	
	comp=Z,17nm,19.1s,baz=127,slow=39						
TPGR	Topolog	70.06	317	⇑P	P	03 33 09.7	+15
KLMR	Klimovskoe	70.41	335	*e*P	P	03 32 54.9	-1.6
KLMR				AMP		03 33 01.1	
	comp=Z,17nm,1.3s						
LBTB	Lobatse	70.83	242	P	P	03 32 60.0	+0.1
LBTB				IAmb	IAmb	03 33 02.0	
	comp=Z,9.9nm,0.8s						
SORM	Soroca	71.06	320	⇓P	P	03 33 00.4	-0.3
AKASG	Malin Array Be	71.33	323	P	P	03 33 01.5	-0.7
	comp=Z,2.9nm,0.6s,baz=91,slow=4.8,SNR=9.7						
AKASG				LR	LR	04 07 52.5	
	comp=Z,24nm,18.6s,baz=215,slow=39						
AKASG	Malin Array Be	71.33	323	P	P	03 33 01.5	-0.7
VRI	Vrincioaia	71.48	318	⇑P	P	03 33 04.6	+1.2
PLOR	Plostina	71.53	318	⇑P	P	03 33 04.2	+0.6
TESR	Tescani	71.71	318	⇑P	P	03 33 05.4	+0.7
MLR	Muntele Rosu	71.91	317	LR	LR	04 09 02.1	
	comp=Z,86nm,18.1s,baz=42,slow=40						
MLR	Muntele Rosu	71.91	317	⇓P	P	03 33 07.2	+1.1
MLR	Muntele Rosu	71.91	317	P	P	03 33 05.8	-0.2
BOSA	Boshof	71.94	239	P	P	03 33 07.5	+0.9
	comp=Z,4.7nm,0.6s,baz=84,slow=4.9,SNR=20						
BOSA				LR	LR	04 02 21.6	
	comp=Z,35nm,18.8s,baz=56,slow=34						
PLVB	Pleven	72.33	315	⇑P	P	03 33 09.3	+0.9
TIXI	Tiksi	72.33	11	P	P	03 33 07.7	-0.2
VOIR		72.51	317	⇓P	P	03 33 09.7	+0.1
PETK	Petropavlovsk-	72.76	35	LR	LR	04 08 21.8	
	comp=Z,58nm,18.4s,baz=220,slow=38						
BURAR	Bucovina Array	72.94	319	⇑P	P	03 33 13.2	+1.0
BURAR	Bucovina Array	72.94	319	P	P	03 33 12.9	+0.8
BUR08	Bucovina Ar. S	72.96	319	P	P	03 33 13.2	+1.0
BUR08				IAmb	IAmb	03 33 25.2	
	comp=Z,4.5nm,0.9s						
VTS	Vitosha	73.15	314	⇓P	P	03 33 13.4	-0.1
SEY	Seymchan	73.94	24	P	P	03 33 18.2	+0.7
	comp=Z,0.6nm,0.3s,baz=266,slow=15,SNR=1.8						
NACGM	Naroch	74.08	327	*i* P	P	03 33 18.8	+0.3
NACGM				*i* P	P	03 33 18.8	+0.3
NACGM				*i* P	P	03 33 18.8	+0.3
NACGM				*i* PcP	sP	03 33 31.1	-0.5
NACGM				*i* PP	PP	03 36 02.9	-1.2
NACGM				*i* PPP	PPP	03 37 48.0	
NACGM				*i* S	S	03 42 47.4	-1.4
NACGM				*i* PS		03 44 41.4	
NACGM				*i* SS	SS	03 47 52.7	+18
NACGM				*i* SSS	SSS	03 50 50.9	
NACGM				*i* LR	LR	04 06 24.2	
IDID	Didziasalis	74.23	327	*e*P	P	03 33 18.9	-0.5
IIGN	Ignalina	74.52	327	*e*P	P	03 33 21.0	-0.1
ISAL	Salakas	74.64	327	*e*P	P	03 33 21.4	-0.4
KWP	Kalwaria Pacla	75.05	321	*e*P	P	03 33 24.9	+0.6
KOLS	Kolonicke sedl	75.17	320	*e*P	P	03 33 26.1	+1.1
KOLS				*e*		03 33 38.1	
PABE	Paberze	75.80	327	*e*P	P	03 33 27.8	-0.6
SUW	Suwalki	75.84	325	*e*P	P	03 33 28.6	-0.1
SUW	Suwalki	75.84	325	P	P	03 33 28.6	-0.1
FINES	FINESS Array B	76.54	333	P	P	03 33 31.9	-0.7
	comp=Z,4.4nm,0.8s,baz=87,slow=5.4,SNR=13						
PBUR	Paburge	77.05	327	*e*P	P	03 33 35.3	-0.1
VYHS	Vyhne	77.31	319	*e*P	P	03 33 38.5	+1.3
VYHS				*e*		03 33 49.8	
MODS	Modra-Piesok	78.31	319	*e*P	P	03 33 42.6	-0.2
MODS				*e*		03 33 54.8	
KRLC	Kraliky	78.90	320	*e*P	P	03 33 46.9	+0.9
KRLC				*e*x	x	03 33 59.0	
VRAC	Vranov	78.90	320	LR	LR	04 12 45.6	
	comp=Z,43nm,18.2s,baz=43,slow=39						
DPC	Dobruska-Polom	79.23	321	*e*P	P	03 33 47.9	+0.1
DPC				*e*x	x	03 34 00.7	
CHVC	Chvalec	79.44	321	*e*P	P	03 33 49.7	+0.8
ARCES	ARCESS Array B	79.52	341	P	P	03 33 49.7	+0.7
	comp=Z,5.5nm,1.0s,baz=113,slow=2.1,SNR=2.0						
ARCES				LR	LR	04 12 56.0	
	comp=Z,107nm,18.2s,baz=75,slow=39						
SOKA	Soboth	79.59	317	*e*P	P	03 33 50.6	+0.7
	comp=Z,2.5nm,0.7s						
CKRC	Cesky Krumlov	80.33	319	*e*P	P	03 33 52.9	-0.9
GEC2	GERESS Array S	80.73	319	IAmb	IAmb	03 34 12.3	
	comp=Z,19nm,1.5s						
GERES	GERESS Array B	80.73	319	P	P	03 33 56.6	+0.6
	comp=Z,3.4nm,0.8s,baz=100,slow=5.5,SNR=26						
BRG	Berggiesshubel	80.80	321	*e*P	P	03 33 57.4	+1.2
BRG				Amp		03 33 59.1	
	comp=Z,3.6nm,0.8s						
KHC	Kasperske Hory	80.84	319	*e*P	P	03 33 55.8	-0.7
KHC				*e*x	x	03 34 09.0	
CLL	Collm	81.44	321	*e*P	P	03 34 00.0	+0.4
WTTA	Wattenberg	81.96	317	*e*P	P	03 34 02.8	+0.1
	comp=Z,5.5nm,0.8s						
WATA	Walderalm	82.01	317	*e*P	P	03 34 02.8	-0.1
	comp=Z,1.2nm,0.3s						
SQTA	Sankt Quirin	82.25	317	*e*P	P	03 34 04.3	+0.2
	comp=Z,2.2nm,0.5s						
RETA	Reutte	82.57	317	*e*P	P	03 34 06.1	+0.3
	comp=Z,1.2nm,0.3s						
KEST	Kesra	83.10	305	P	P	03 34 07.8	-1.0
	comp=Z,2.0nm,0.7s,baz=90,slow=7.5,SNR=1.9						
DAVA	Damuels	83.16	317	*e*P	P	03 34 10.1	+1.2
	comp=Z,2.2nm,0.6s						
NB2	NORSAR Subarra	83.46	331	P	P	03 34 09.2	-0.8
	comp=Z,2.4nm,0.9s,baz=94,slow=6.2						
NOA	NORSAR Array B	83.46	331	P	P	03 34 09.3	-0.7
	comp=Z,1.6nm,0.7s,baz=95,slow=5.7,SNR=5.4						
NOA				LR	LR	04 14 13.1	
	comp=Z,22nm,20.7s,baz=40,slow=38						
DBIC	Dimbokro	97.37	277	LR	LR	04 15 03.3	
	comp=Z,34nm,21.9s,baz=18,slow=33						
NVAR	Mina Array Bea	129.78	32	PKP	PKPdf	03 40 51.6	-1.0
	comp=Z,0.1nm,0.3s,baz=292,slow=2.6,SNR=1.3						
PDAR	Pinedale Array	130.22	22	PKP	PKPdf	03 40 53.2	-0.1
	comp=Z,0.1nm,0.4s,baz=282,slow=1.8,SNR=1.6						

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*IDC **13** 03:25:52.2±11.0, 10°.02N×87°.91W, h0^{km}, mb3.3/4, mb1 3.7/4, mb1mx3.5/27, mbtmp3.3/4, Error ellipse: s-maj=291.9km s-min=118.2km az=22.0*

*INET **13** 03:26:17.7, 12°.40N×88°.24W, h20^{km}, MW4.0*

*UCR **13** 03:26:19.4±0.7, 12°.53N×88°.23W, h36^{km}±509^{km}, ML3.9*

*SNET **13** 03:26:19.5±0.9, 12°.58N×88°.24W, h28^{km}±7^{km}, ML4.0*

ISC 13 03:26:15.5±2.3**, 12°.3N**±0°.2×**88°.17W**±0°.07**, h35^{km}, n44, σ1^{s}.01**/49**, mb3.3**/4**, 2C-2D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNCH	Conchagua	1.03	18	*e*P	Pn	03 26 34.5	+0.9
CNCH				*e*S	Sn	03 26 46.8	-0.1
CNCH	Conchagua	1.03	18	*e*P	Pn	03 26 34.5	+0.9
CNCH				*e*S	Sn	03 26 46.8	-0.1
LCND	La Caada	1.05	15	⇑*e*P	Pn	03 26 34.5	+0.7
LCND				IAML		03 26 51.0	
	comp=Z,6μm,0.3s						
LCND	La Caada	1.05	15	⇑*e*P	Pn	03 26 34.5	+0.7
LCND				IAML		03 26 51.0	
	comp=Z,6μm,0.3s						
LCY	Lacayo	1.13	354	*e*P	Pn	03 26 35.5	+0.5
LCY	Lacayo	1.13	354	*e*P	Pn	03 26 35.5	+0.5
VSM	San Miguel	1.13	355	*e*P	Pn	03 26 36.2	+1.1
VSM	San Miguel	1.13	355	*e*P	Pn	03 26 36.2	+1.1
PACA	Pacayal	1.18	353	*e*P	Pn	03 26 36.5	+0.9
PACA	Pacayal	1.18	353	*e*P	Pn	03 26 36.5	+0.9
TECA	Tecapa	1.24	345	⇓*e*P	Pn	03 26 37.1	+0.5
TECA	Tecapa	1.24	345	⇓*e*P	Pn	03 26 37.1	+0.5
PQSS	Presa 15 de Se	1.38	344	*e*P	Pn	03 26 39.3	+1.0
COEG	Centro de Oper	1.49	332	*e*P	Pn	03 26 40.7	+0.8
COEG				IAML		03 26 59.9	
	comp=Z,2μm,0.3s						
COEG	Centro de Oper	1.49	332	*e*P	Pn	03 26 40.7	+0.8
COEG				IAML		03 26 59.9	
	comp=Z,2μm,0.3s						
LFRS	El Faro	1.58	327	*e*P	Pn	03 26 42.0	+0.7
LFRS	El Faro	1.58	327	*e*P	Pn	03 26 42.0	+0.7
LALI	Alcalda de L	1.64	317	*e*P	Pn	03 26 42.5	+0.6
LALI	Alcalda de L	1.64	317	*e*P	Pn	03 26 42.5	+0.6
LBRS	Las Brisas	1.67	329	*e*P	Pn	03 26 43.7	+1.3
LBRS	Las Brisas	1.67	329	*e*P	Pn	03 26 43.7	+1.3
LFU	La Fuente	1.72	328	*e*P	Pn	03 26 44.3	+1.2
LFU	La Fuente	1.72	328	*e*P	Pn	03 26 44.3	+1.2
SNET	Serv Nac Est T	1.73	323	*e*P	Pn	03 26 44.0	+0.7
SNET				IAML		03 27 06.0	
	comp=Z,1μm,0.3s						
SNET	Serv Nac Est T	1.73	323	*e*P	Pn	03 26 44.0	+0.7
SNET				IAML		03 27 06.0	
	comp=Z,1μm,0.3s						
OPAM	Oficina de Pla	1.73	325	*e*P	Pn	03 26 43.9	+0.7
OPAM				IAML		03 27 06.4	
	comp=Z,2μm,0.3s						
OPAM	Oficina de Pla	1.73	325	*e*P	Pn	03 26 43.9	+0.7
OPAM				IAML		03 27 06.4	
	comp=Z,2μm,0.3s						
UEES	Universidad Ev	1.76	324	*e*P	Pn	03 26 44.4	+0.8
UEES				IAML		03 27 10.3	
	comp=Z,2μm,0.2s						
UEES	Universidad Ev	1.76	324	*e*P	Pn	03 26 44.4	+0.8
UEES				IAML		03 27 10.3	
	comp=Z,2μm,0.2s						
BOQS	Boqueron	1.80	323	*e*P	Pn	03 26 45.4	+1.1
BOQS				*e*S	Sn	03 27 05.6	-0.4
BOQS	Boqueron	1.80	323	*e*P	Pn	03 26 45.4	+1.1
BOQS				*e*S	Sn	03 27 05.6	-0.4
JAYA	Jayaque - finc	1.84	317	*e*P	Pn	03 26 45.6	+0.8
JAYA				*e*S	Sn	03 27 05.9	-1.1
JAYA				IAML		03 27 08.1	
	comp=Z,2μm,0.2s						
JAYA	Jayaque - finc	1.84	317	*e*P	Pn	03 26 45.6	+0.8
JAYA				*e*S	Sn	03 27 05.9	-1.1
JAYA				IAML		03 27 08.1	
	comp=Z,2μm,0.2s						
TACO	Tacachico	2.03	325	*e*P	Pn	03 26 48.5	+1.2
TACO	Tacachico	2.03	325	*e*P	Pn	03 26 48.5	+1.2
CEVE	Cerro Verde	2.08	317	*e*P	Pn	03 26 50.2	+2.0
CEVE				IAML		03 27 23.4	
	comp=Z,2μm,0.3s						
CEVE	Cerro Verde	2.08	317	*e*P	Pn	03 26 50.2	+2.0
CEVE				IAML		03 27 23.4	
	comp=Z,2μm,0.3s						
MTO3	Montecristo	2.40	331	*e*P	Pn	03 26 53.7	+1.2
MTO3	Montecristo	2.40	331	*e*P	Pn	03 26 53.7	+1.2
ESQI	Esquipulas	2.53	333	*e*P	Pn	03 26 55.3	+1.1
TXAR	Lajitas Array	22.26	322	P	P	03 31 10.8	+1.1
	comp=Z,1.3nm,0.6s,baz=138,slow=11,SNR=20						
PDAR	Pinedale Array	35.58	333	P	P	03 33 09.7	-0.2
	comp=Z,0.1nm,0.5s,baz=124,slow=8.8,SNR=1.2						
YKA	Yellowknife Ar	53.58	345	P	P	03 35 31.2	-1.6
	comp=Z,0.1nm,0.4s,baz=131,slow=8.8,SNR=7.8						
ILAR	Eielson Array	65.88	336	P	P	03 36 53.1	-4.3
	comp=Z,0.2nm,0.6s,baz=134,slow=5.2,SNR=4.3						

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*IDC **13** 03:26:39.3±0.6, 1°.56N×126°.49E, h0^{km}, mb4.2/10, mb1 4.3/11, mb1mx4.0/42, mbtmp4.2/11, ML4.3/1, MS2.8/3, Ms1 2.8/3, ms1mx2.6/40, Error ellipse: s-maj=51.5km s-min=11.5km az=77.0*

*DJA **13** 03:26:44.8±0.2, 1°N±2°×12°7E±°, h10^{km}, M4.4/11, mb4.9/1, mB5.7/1, MLv4.2/11, Mw(mB)5.2/1*

*NEIC **13** 03:26:45.0±1.2, 1°.53N±0°.10×126°.44E±0°.09, h40^{km}±5^{km}, mb4.6/16, Error ellipse: s-maj=15.1km s-min=11.2km az=214.0*

ISC 13 03:26:46.0±0.5**, 1°.54N**±0°.05×**126°.61E**±0°.06**, h47^{km}, n44, σ1^{s}.53**/48**, mb4.4**/17**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.07	135		Pn	03 27 05.0	+0.4
TNTI	Ternate	1.07	135	P	Pn	03 27 05.1	+0.4
TNTI				S	Sn	03 27 20.0	+1.6
SGSI	Sangihe	2.39	333	P	Pn	03 27 24.1	+1.4
SGSI				S	Sn	03 27 55.1	+4.3
KMSI	Cibinong	2.80	250	P	Pn	03 27 28.9	+0.6
KMSI				S	Sn	03 28 03.1	+2.2
SANI	Sanana	3.62	190	P	Pn	03 27 40.1	+0.5
GTOI	Gorontalo	3.71	256	P	Pn	03 27 43.0	+2.2
LUWI	Luwuk	4.62	236	Pn	Pn	03 27 51.6	-1.7
LUWI	Luwuk	4.62	236	P	Pn	03 27 54.0	+0.7
NLAI	Namlea	4.77	174	P	Pn	03 27 56.1	+0.7
MRSI	Marisa	4.79	257	P	Pn	03 27 55.9	+0.3
APSI	Ampana	5.53	244	P	Pn	03 28 17.4	+12
DAV	Davao City (W)	5.59	349	LR	LR	03 29 41.2	
	comp=Z,24nm,20.1s,baz=152,slow=33						
FAKI	Fak Fak	7.17	128	Pn	Pn	03 28 31.2	+2.9
KAPI	Kappang	9.45	226	Pn	Pn	03 29 00.3	+0.7
	1.7nm,0.3s,baz=41,slow=9.3,SNR=1.8						
JAY	Jayapura	14.65	106	LR	LR	03 35 58.3	
	comp=Z,80nm,21.9s,baz=190,slow=38						
JAGI	Jajag, Banyuwa	15.91	231	Pn	Pn	03 30 23.4	-3.5
FITZ	Fitzroy Crossi	19.54	183	P	P	03 31 08.3	-1.5
	0.6nm,0.3s,baz=2.5,slow=11,SNR=8.5						
WB0	Warramunga Arr	22.51	161	P	P	03 31 41.6	-0.3
WB0				IAmb	IAmb	03 31 43.0	
	comp=Z,27nm,0.6s						
WRA	Warramunga Arr	22.66	161	P	P	03 31 43.0	-0.4
	comp=Z,16nm,0.5s,baz=338,slow=11,SNR=48						
WRA				PcP	PcP	03 35 35.5	+0.5
	comp=Z,0.4nm,0.6s,baz=346,slow=1.8,SNR=2.1						
WRA	Warramunga Arr	22.66	161	P	P	03 31 42.5	-0.9
WR0	Warramunga Arr	22.74	160	P	P	03 31 43.7	-0.6
WR0				IAmb	IAmb	03 31 46.8	
	comp=Z,13nm,0.6s						
PMG	Port Moresby	23.18	118	LR	LR	03 43 30.8	
	comp=Z,46nm,18.7s,baz=308,slow=43						
AS31	Alice Springs	26.04	165	P	P	03 32 15.3	+0.3
AS31				IAmb	IAmb	03 32 21.5	
	comp=Z,4.5nm,0.6s						
ASAR	Alice Springs	26.04	165	P	P	03 32 15.2	+0.2
	comp=Z,4.2nm,0.6s,baz=349,slow=13,SNR=35						
ASAR				PcP	PcP	03 35 42.6	+0.3
	comp=Z,0.4nm,0.4s,baz=352,slow=2.4,SNR=3.6						
ASAR				S	S	03 36 48.6	+5.7
	comp=Z,1.6nm,0.8s,baz=348,slow=22,SNR=9.2						
FORT	Forrest	32.17	178	P	P	03 33 09.3	-0.1
BBOO	Buckleboo	35.31	166	P	P	03 33 36.4	-0.3
KSRS	Korea Array	35.76	2	P	P	03 33 39.5	-1.0
	comp=Z,0.9nm,0.5s,baz=184,slow=10,SNR=2.9						
STKA	Stephens Creek	36.15	158	P	P	03 33 43.7	-0.2
	comp=Z,2.3nm,0.6s,baz=343,slow=7.8,SNR=5.3						
STKA				PcP	PcP	03 36 09.1	+0.2
	comp=Z,0.8nm,0.4s,baz=274,slow=2.6,SNR=3.0						
MJAR	Matsushiro Arr	36.44	16	P	P	03 33 44.9	-1.5
	comp=Z,1.2nm,0.5s,baz=190,slow=9.4,SNR=4.1						
ARMA	Armidale	39.73	145	P	P	03 34 14.9	+0.6
ARMA				IAmb	IAmb	03 34 51.2	
	comp=Z,28nm,1.4s						
KLR	Kul'dur	47.71	5	P	P	03 35 18.9	+0.8
	comp=Z,1.6nm,0.4s,baz=173,slow=9.0,SNR=9.1						
SONM	Songino Array	49.33	342	P	P	03 35 30.2	-0.4
	comp=Z,0.7nm,0.4s,baz=152,slow=8.7,SNR=4.4						
SONM				PcP	PcP	03 36 52.5	-0.2
	comp=Z,0.5nm,0.6s,baz=151,slow=3.3,SNR=1.9						
SONM	Songino Array	49.33	342	P	P	03 35 29.9	-0.7
MK31	Makanchi Array	59.28	326	P	P	03 36 42.3	-0.7
MK31				IAmb	IAmb	03 36 44.4	
	comp=Z,1.6nm,0.4s						
MKAR	Makanchi Array	59.28	326	P	P	03 36 42.2	-0.7
	comp=Z,2.3nm,0.4s,baz=120,slow=8.1,SNR=48						
MKAR	Makanchi Array	59.28	326	P	P	03 36 41.6	-1.4
ZALV	Zalesovo Beam	62.48	334	P	P	03 37 03.7	-0.7
	comp=Z,0.4nm,0.3s,baz=131,slow=7.4,SNR=2.4						
KURK	Kurchatov	63.52	328	P	P	03 37 10.5	-0.9
KK31	Karatay Array	64.75	318	P	P	03 37 18.8	-0.9
KK31				IAmb	IAmb	03 38 22.7	
	comp=Z,7.0nm,1.6s						
KKAR	Karatay Array	64.75	318	P	P	03 37 19.2	-0.6
BRVK	Borovoye	69.16	327	P	P	03 37 47.2	-0.2
ABKAR	Akbulak array	73.77	321	P	P	03 38 15.0	-0.3
ABKAR				IAmb	IAmb	03 40 01.1	
	comp=Z,11nm,1.9s						
VNDA	Vanda	81.28	173	P	P	03 38 56.8	0.0
	comp=Z,2.2nm,0.8s,baz=311,slow=6.6,SNR=6.1						
TORD	Torodi Ar. Bea	123.46	287	PKP	PKiKP	03 45 39.0	-0.4
	comp=Z,0.9nm,0.9s,baz=108,slow=1.6,SNR=2.4						

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*UCR **13** 03:33:55.2±2.2, 7°.19N×82°.06W, h20^{km}±391^{km}, MW4.3*

ISC 13 03:33:53.5±1.4**, 7°.2N**±0°.1×**82°.0W**±0°.1**, h10^{km}, n32, σ1^{s}.83**/31**, 1C, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CDITO	Canoas	1.63	329	*e*P	Pn	03 34 21.2	-1.1
CDITO				*e*S	Sn	03 34 43.0	-0.3
PIRO	Carate, Puerto	1.79	314	*e*P	Pn	03 34 22.8	-1.6
LPLA	Las Palmas La	2.09	332	*e*P	Pn	03 34 26.5	-2.2
RIOS	Rincon, Osa	2.12	316	*e*P	Pn	03 34 29.1	+0.1
POTG	Potrero Grande	2.16	330	⇑*i*P	Pn	03 34 28.6	-1.1
POTG				*e*S	Sn	03 34 55.5	-1.1
EDPN	Palmar Norte	2.28	322	*e*P	Pn	03 34 30.9	-0.2
EDBA	Buenos Aires	2.34	328	*e*P	Pn	03 34 32.3	+0.3
RGM0	Gandoca	2.48	347	*e*P	Pn	03 34 33.6	-0.3
EDLM	Las Mercedes	2.61	324	*e*P	Pn	03 34 35.7	-0.1
PEZE	Perez Zeledon,	2.74	324	*e*P	Pn	03 34 37.6	0.0
CDM	Cerro de Muert	2.93	324	*e*P	Pn	03 34 40.5	0.0
BCIP	Isla Barro Col	2.94	47	*e*P	Pn	03 34 38.4	-2.0
RIMA	Rio Macho	3.16	325	*e*P	Pn	03 34 43.8	+0.4
LCR2	La Lucha 2	3.22	323	*e*P	Pn	03 34 44.3	0.0
CVTR	Volcan Turrial	3.31	329	*e*P	Pn	03 34 47.2	+1.5
HDC	Heredia	3.49	324	*e*P	Pn	03 34 49.0	+0.9
JACO	JACO, Garabito	3.59	314	*e*P	Pn	03 34 53.0	+3.7
ARE1	Arenal 1	4.22	321	*e*P	Pn	03 35 01.1	+3.2
COVE	Coope Vega, Sa	4.24	327	*e*P	Pn	03 35 00.9	+2.7
PLVR	Palo Verde	4.56	314	*e*P	Pn	03 35 02.5	-0.2
SOLC	Bahia Solano	4.68	101	*e*P	Pn	03 35 03.2	-1.1
DBBC	Dabeiba	5.78	91	*e*P	Pn	03 35 18.9	-0.6
CBOC	Ciudad Bolivar	6.12	102	*e*P	Pn	03 35 21.8	-2.4
GUY2C	Guyana, Caldas	6.90	106	*e*P	Pn	03 35 40.3	+5.1
BBAC	Balboa, Cauca	6.99	137	*e*P	Pn	03 35 38.3	+2.1
RREF	El Recreo	7.02	108	*e*P	Pn	03 35 37.4	+0.4
POPC	Popayan, Colom	7.04	130	*e*P	Pn	03 35 40.7	+3.8
NORC	Norcasia	7.29	102	*e*P	Pn	03 35 41.0	+0.8
PCON	Cinco Dias	7.39	130	*e*P	Pn	03 35 49.0	+7.0
ORTC	Ortega, Tolima	7.49	115	*e*P	Pn	03 35 38.8	-4.1
GCUF	Volcan Galeras	7.53	141	*e*P	Pn	03 35 40.7	-3.1
PTBC	PUERTO BERRIO,	7.54	94	*e*P	Pn	03 35 46.5	+2.8

IDC 13 03:52:58.9±1.5**, 3°.41N×126°.26E, h0^{km}, mb3.5**/6**, mb1 3.7**/6**, mb1mx3.5**/45**, mbtmp3.6**/6**, Error ellipse: s-maj=115.0km s-min=19.3km az=67.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	21.38	182	P	P	03 57 48.2	0.0
	1.0nm,0.9s,baz=346,slow=8.3,SNR=1.6						
WRA	Warramunga Arr	24.53	161	P	P	03 58 19.7	-0.7
	1.4nm,0.4s,baz=340,slow=11,SNR=20						
ASAR	Alice Springs	27.93	165	P	P	03 58 52.4	+1.3
	0.3nm,0.3s,baz=343,slow=10,SNR=1.8						
STKA	Stephens Creek	38.00	159	P	P	04 00 18.9	0.0
	0.8nm,0.4s,baz=338,slow=8.5,SNR=3.7						
MKAR	Makanchi Array	57.55	326	P	P	04 02 50.4	0.0
	0.2nm,0.6s,baz=115,slow=7.2,SNR=5.6						
KURBB	Kurchatov Arra	61.75	328	P	P	04 03 18.9	-0.3
	0.4nm,0.6s,baz=130,slow=6.5,SNR=6.5						

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*IDC **13** 04:10:54.8±1.0, 6°.62S×70°.49E, h0^{km}, mb3.9/9, mb1 4.1/10, mb1mx3.7/56, mbtmp3.9/10, ML4.1/1, MS3.5/6, Ms1 3.5/6, ms1mx3.0/47, Error ellipse: s-maj=30.2km s-min=22.2km az=63.0*

*NEIC **13** 04:10:58.2±1.3, 6°.4S±0°.1×70°.8E±0°.2, h15^{km}±4^{km}, mb4.3/8, Error ellipse: s-maj=32.3km s-min=13.4km az=54.0*

ISC 13 04:10:56.3±0.8**, 6°.6S**±0°.1×**70°.65E**±0°.10**, h10^{km}, n42, σ0^{s}.87**/38**, mb4.2**/20**, MS3.6**/5**, Chagos Archipelago region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DGAR	Diego Garcia	1.96	115		Pn	04 11 29.2	-0.5
H08S3	Diego Garcia H	2.09	120	Pn	Pn	04 11 31.2	0.0
	baz=323,slow=20,SNR=3450						
H08S3				Sn	Sb	04 12 00.2	+0.1
H08S1	Diego Carcia H	2.09	120	Pn	Pn	04 11 31.2	0.0
	baz=323,slow=20,SNR=30						
H08S1				Sn	Sb	04 12 00.2	+0.1
H08S2	Diego Garcia H	2.10	120	Pn	Pn	04 11 31.2	-0.2
	baz=323,slow=20,SNR=158						
H08S2				Sn	Sb	04 12 00.2	-0.3
PALK	Pallekele	17.04	36	Pn	P	04 14 55.7	-1.0
	0.7nm,0.3s,baz=267,slow=9.7,SNR=1.7						
PALK				LR	LR	04 19 16.2	
	comp=Z,76nm,20.4s,baz=319,slow=29						
PALK	Pallekele	17.04	36	Pn	Pn	04 14 52.6	-2.3
PALK				IAmb	IAmb	04 15 03.8	
	comp=Z,26nm,1.4s						
UOSS	Minazif	34.36	336	P	P	04 17 42.7	-0.9
UOSS				IAmb	IAmb	04 17 45.1	
	comp=Z,5.8nm,1.1s						
CMAR	Chiang Mai Arr	37.40	48	LR	LR	04 33 03.4	
	comp=Z,24nm,19.2s,baz=330,slow=35						
KBL	Kabul	40.94	358	P	P	04 18 39.5	+0.1

KBL				IAmb	IAmb	04 18 49.3	
	comp=Z,4.4nm,0.8s						
BOSA	**Boshof**	**48.11**	**237**	P	**P**	**04 19 34.6**	**-2.2**
	comp=Z,4.1nm,1.0s,baz=49,slow=6.6,SNR=3.1						
BOSA				LR	LR	04 37 03.2	
	comp=Z,33nm,19.1s,baz=194,slow=33						
H01W3	**Cape Leeuwin H**	**48.89**	**131**	T	T	05 11 29.7	
	baz=296,slow=75,SNR=6.6						
H01W2	**Cape Leeuwin H**	**48.89**	**131**	T	T	05 11 31.2	
	baz=296,slow=75,SNR=6.5						
H01W1	**Cape Leeuwin H**	**48.90**	**131**	T	T	05 11 32.4	
	baz=296,slow=75,SNR=6.2						
KK31	**Karatay Array**	**49.46**	**360**	P	**P**	**04 19 48.2**	**+1.4**
KK31				IAmb	IAmb	04 19 54.1	
	comp=Z,6.8nm,1.7s						
KKAR	**Karatay Array**	**49.46**	**360**	P	**P**	**04 19 47.4**	**+0.6**
MK31	**Makanchi Array**	**54.15**	**10**	P	**P**	**04 20 21.4**	**-0.3**
MKAR	**Makanchi Array**	**54.15**	**10**	P	**P**	**04 20 21.2**	**-0.4**
	comp=Z,1.0nm,1.0s,baz=201,slow=6.1,SNR=5.2						
KBZ	**Khabaz**	**56.03**	**336**	P	**P**	**04 20 36.0**	**+0.7**
	comp=Z,1.8nm,0.7s,baz=134,slow=12,SNR=4.4						
ABKAR	**Akbulak array**	**56.40**	**352**	P	**P**	**04 20 37.8**	**0.0**
BRTR	**Keskin Array B**	**57.37**	**327**	LR	LR	04 43 39.5	
	comp=Z,46nm,20.2s,baz=84,slow=34						
KURBB	**Kurchatov Arra**	**57.39**	**6**	P	**P**	**04 20 44.6**	**-0.2**
	comp=Z,1.2nm,0.9s,baz=198,slow=7.2,SNR=6.3						
KURK	**Kurchatov**	**57.49**	**6**	P	**P**	**04 20 45.8**	**+0.3**
KURK				IAmb	IAmb	04 20 53.8	
	comp=Z,3.9nm,0.9s						
AKTO	**Aktyubinsk**	**57.84**	**350**	P	**P**	**04 20 48.1**	**+0.1**
	comp=Z,1.3nm,0.8s,baz=193,slow=5.2,SNR=3.5						
ZAA0	**Zalesovo Array**	**61.49**	**9**	P	**P**	**04 21 13.3**	**+0.3**
ZALV	**Zalesovo Beam**	**61.49**	**9**	P	**P**	**04 21 12.3**	**-0.7**
	comp=Z,0.7nm,0.6s,baz=207,slow=9.3,SNR=4.7						
ZALV	**Zalesovo Beam**	**61.49**	**9**	P	**P**	**04 21 12.6**	**-0.5**
SONM	**Songino Array**	**62.68**	**26**	P	**P**	**04 21 22.4**	**+1.0**
	comp=Z,1.6nm,1.0s,baz=211,slow=7.8,SNR=11						
SONM	**Songino Array**	**62.68**	**26**	P	**P**	**04 21 22.0**	**+0.6**
ASAR	**Alice Springs**	**62.90**	**113**	P	**P**	**04 21 24.7**	**+1.4**
	comp=Z,0.6nm,0.6s,baz=281,slow=6.1,SNR=9.5						
WRA	**Warramunga Arr**	**63.07**	**109**	P	**P**	**04 21 25.1**	**+0.7**
	comp=Z,1.2nm,0.8s,baz=281,slow=6.5,SNR=8.7						
ABTA	**Abfaltersbach**	**73.87**	**323**	eP	**P**	**04 22 32.4**	**+0.8**
	comp=Z,1.9nm,0.6s						
WTTA	**Wattenberg**	**74.64**	**323**	eP	**P**	**04 22 36.6**	**+0.4**
	comp=Z,2.0nm,0.5s						
SQTA	**Sankt Quirin**	**74.88**	**323**	i P	**P**	**04 22 38.1**	**+0.7**
	comp=Z,4.6nm,0.7s						
MOTA	**Moosalm**	**75.00**	**323**	eP	**P**	**04 22 38.7**	**+0.5**
	comp=Z,1.8nm,0.6s						
FETA	**Feichten**	**75.08**	**322**	eP	**P**	**04 22 39.6**	**+0.9**
	comp=Z,1.7nm,0.7s						
RETA	**Reutte**	**75.27**	**323**	eP	**P**	**04 22 40.6**	**+0.9**
	comp=Z,1.4nm,0.5s						
DAVA	**Damuels**	**75.72**	**322**	eP	**P**	**04 22 43.6**	**+1.3**
	comp=Z,4.0nm,0.7s						
ASAJ	**Asahikawa**	**81.80**	**44**	LR	LR	04 59 39.1	
	comp=Z,83nm,20.4s,baz=197,slow=36						
YAK	**Yakutsk**	**81.93**	**24**	LR	LR	04 59 00.9	
	comp=Z,54nm,18.0s,baz=112,slow=35						
PDAR	**Pinedale Array**	**143.97**	**0**	PKP	**PKPdf**	**04 30 33.6**	**+0.8**
	comp=Z,0.1nm,0.5s,baz=90,slow=1.8,SNR=1.6						
NVAR	**Mina Array Bea**	**147.28**	**13**	PKPbc	**PKPab**	**04 30 42.0**	**-0.5**
	comp=Z,0.3nm,0.7s,baz=310,slow=0.7,SNR=2.3						
TXAR	**Lajitas Array**	**156.75**	**347**	PKPab	**PKPab**	**04 31 22.7**	**+0.7**
	comp=Z,0.5nm,0.7s,baz=40,slow=1.5,SNR=6.7						

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*IDC **13** 04:34:01.4±2.8, 25°.10S×67°.90W, h91^{km}±26^{km}, mb3.8/5, mb1 3.9/9, mb1mx3.6/32, mbtmp4.2/9, Error ellipse: s-maj=39.0km s-min=28.9km az=98.0*

*GUC **13** 04:34:02.9±0.6, 25°.05S×68°.56W, h147^{km}±5^{km}, ML4.1*

*NEIC **13** 04:34:02.8±3.0, 25°.08S±0°.06×68°.5W±0°.2, h133^{km}±9^{km}, Error ellipse: s-maj=19.8km s-min=8.8km az=94.0*

*VAO **13** 04:34:06.6±0.6, 24°.85S×68°.02W, h137^{km}±6^{km}, mb4.0*

ISC 13 04:34:02.2±0.7**, 25°.06S**±0°.04×**68°.28W**±0°.07**, h120**^{km}±9^{km}**, n85, σ1^{s}.44**/93**, mb4.0**/5**, 2C-5D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO02	**Mina Guanaco**	**1.20**	**265**	⇓iP	**Pn**	**04 34 28.1**	**+1.5**
GO02				eS	**Sn**	**04 34 46.9**	**+1.9**
GO02				IAML		04 34 49.0	
	comp=N,4μm,0.3s						
GO02	**Mina Guanaco**	**1.20**	**265**	Pn	**Pn**	**04 34 27.9**	**+1.3**
AC02	**Maricunga**	**1.93**	**203**	⇑iP	**Pn**	**04 34 36.8**	**+1.5**
AC02				eS	**Sn**	**04 35 03.7**	**+3.3**
AC02				IAML		04 35 06.3	
	comp=E,316nm,0.1s						
AC02	**Maricunga**	**1.93**	**203**	Pn	**Pn**	**04 34 36.4**	**+1.1**
PB14	**IPOC Station P**	**1.98**	**282**	eP	**Pn**	**04 34 36.4**	**+0.6**
PB14				eS	**Sn**	**04 35 01.4**	**0.0**
PB14	**IPOC Station P**	**1.98**	**282**	Pn	**Pn**	**04 34 36.2**	**+0.4**
PB15	**IPOC Station P**	**2.14**	**329**	⇓iP	**Pn**	**04 34 39.4**	**+1.6**
PB15				eS	**Sn**	**04 35 06.7**	**+1.9**
PB15	**IPOC Station P**	**2.14**	**329**		**Pn**	**04 34 38.9**	**+1.1**
AC01	**Pan de Azucar**	**2.36**	**242**	⇓iP	**Pn**	**04 34 40.5**	**+0.3**
AC01				i S	**Sn**	**04 35 08.6**	**-0.8**
AC01				IAML		04 35 12.8	
	comp=N,1μm,0.3s						
AC01	**Pan de Azucar**	**2.36**	**242**	Pn	**Pn**	**04 34 40.2**	**0.0**
LVC	**Limon Verde**	**2.51**	**347**	P	**Pn**	**04 34 43.4**	**+0.9**
	comp=N,61nm,0.3s,baz=165,slow=9.9,SNR=448						
LVC				S	**Sn**	**04 35 12.3**	**-1.1**
	comp=N,126nm,0.3s,baz=128,slow=23,SNR=43						
LVC	**Limon Verde**	**2.51**	**347**	eP	**Pn**	**04 34 44.7**	**+2.1**
LVC				eS	**Sn**	**04 35 14.7**	**+1.3**
LVC	**Limon Verde**	**2.51**	**347**	Pn	**Pn**	**04 34 44.1**	**+1.5**
LVC	**Limon Verde**	**2.51**	**347**	eP	**Pn**	**04 34 44.5**	**+2.0**
PB10	**IPOC Station P**	**2.59**	**306**	⇓iP	**Pn**	**04 34 43.2**	**0.0**
PB10				eS	**Sn**	**04 35 14.2**	**-0.5**
PB10	**IPOC Station P**	**2.59**	**306**	Pn	**Pn**	**04 34 44.1**	**+0.9**
PB06	**IPOC Station P**	**2.63**	**333**	⇓iP	**Pn**	**04 34 45.6**	**+1.7**
PB06				i S	**Sn**	**04 35 17.1**	**+1.2**
PB06				IAML		04 35 18.7	
	comp=E,1μm,0.1s						
PB06	**IPOC Station P**	**2.63**	**333**		**Pn**	**04 34 45.3**	**+1.4**
PB05	**IPOC Station P**	**2.82**	**321**	eP	**Pn**	**04 34 47.8**	**+1.5**
PB05				i S	**Sn**	**04 35 20.6**	**+0.4**
PB05				IAML		04 35 24.9	
	comp=E,661nm,0.4s						
GO03	**Copiap**	**3.07**	**214**	eP	**Pn**	**04 34 49.6**	**+0.1**
GO03				eS	**Sn**	**04 35 25.5**	**-0.5**
GO03				IAML		04 35 27.6	
	comp=N,332nm,0.2s						
GO03	**Copiap**	**3.07**	**214**		**Pn**	**04 34 49.6**	**+0.1**
PB04	**IPOC Station P**	**3.21**	**327**		**Pn**	**04 34 51.5**	**-0.1**
PB09	**IPOC Station P**	**3.37**	**345**	⇑iP	**Pn**	**04 34 55.5**	**+1.9**
PB09				eS	**Sn**	**04 35 36.1**	**+2.9**
PB09				IAML		04 35 40.0	
	comp=E,418nm,0.7s						
PB09	**IPOC Station P**	**3.37**	**345**		**Pn**	**04 34 55.0**	**+1.4**
PB07	**IPOC Station P**	**3.63**	**336**	eP	**Pn**	**04 34 58.2**	**+1.1**
PB07				eS	**Sn**	**04 35 37.4**	**-2.1**
PB07	**IPOC Station P**	**3.63**	**336**	Pn	**Pn**	**04 34 57.9**	**+0.8**
AC04	**Llanos de Chal**	**4.01**	**218**	Pn	**Pn**	**04 35 00.8**	**-1.1**
PB01	**IPOC Station P**	**4.15**	**344**		**Pn**	**04 35 03.1**	**-0.8**
AC05	**El Transito**	**4.16**	**205**		**Pn**	**04 35 03.5**	**-0.6**
LCO	**Las Campanas**	**4.49**	**208**	Pn	**Pn**	**04 35 07.4**	**-1.1**
PATCX	**Punta Patache**	**4.56**	**337**		**Pn**	**04 35 08.6**	**-0.9**
TA01	**Diego Aracena**	**4.81**	**338**	Pn	**Pn**	**04 35 11.8**	**-0.9**
PB08	**IPOC Station P**	**4.96**	**350**		**Pn**	**04 35 14.3**	**-0.8**
CO01	**Juntas del Tor**	**5.16**	**198**	Pn	**Pn**	**04 35 17.2**	**-0.3**
GO04	**Tololo Observa**	**5.56**	**203**	Pn	**Pn**	**04 35 21.1**	**-1.9**
PSGCX	**Pisagua**	**5.70**	**342**	Pn	**Pn**	**04 35 22.6**	**-2.2**
MNMC	**Minye Minye**	**6.03**	**348**		**Pn**	**04 35 27.6**	**-1.8**
ZON	**Zonda**	**6.47**	**183**	Pn	**Pn**	**04 35 34.4**	**-0.7**
LPAZ	**La Paz**	**8.73**	**1**	P	**Pn**	**04 36 05.9**	**-0.3**
	comp=E,2.1nm,0.3s,baz=156,slow=6.1,SNR=32						
LPAZ	**La Paz**	**8.73**	**1**	Pn	**Pn**	**04 36 05.5**	**-0.7**
LPAZ	**La Paz**	**8.73**	**1**	eP	**Pn**	**04 36 07.6**	**+1.4**
CPUP	**Villa Florida**	**9.96**	**100**	P	**Pn**	**04 36 19.6**	**-2.6**
	comp=E,0.1nm,0.3s,baz=268,slow=11,SNR=3.7						
SIV	**San Ignacio**	**11.27**	**38**	P	**Pn**	**04 36 36.2**	**-3.7**
	comp=E,4.5nm,0.3s,baz=248,slow=10,SNR=59						
BI02	**San Fabin de**	**11.85**	**192**		**Pn**	**04 36 44.9**	**-2.5**
CPSB	**Cacapava Do Su**	**14.17**	**115**	eP	**P**	**04 37 20.4**	**-0.9**
VILB	**Vilhena**	**14.26**	**34**	eP	**Pn**	**04 37 17.6**	**-1.1**
ITAB	**Concordia**	**14.66**	**102**	eP	**P**	**04 37 26.3**	**-0.5**
ETMB	**Extrema**	**15.29**	**8**	eP	**P**	**04 37 33.9**	**0.0**
PLCA	**Paso Flores**	**15.74**	**186**	P	**Pn**	**04 37 36.1**	**-1.2**
	comp=E,0.1nm,0.3s,baz=352,slow=10,SNR=5.9						
PLCA	**Paso Flores**	**15.74**	**186**	IAmb	IAmb	04 37 43.4	
	comp=Z,9.1nm,1.3s						
PLCA	**Paso Flores**	**15.74**	**186**	eP	**P**	**04 37 43.3**	**+4.5**
PCMB	**Pacaembu**	**16.00**	**81**	eP	**P**	**04 37 42.2**	**+0.5**
CNLB	**Canela**	**16.07**	**109**	eP	**Pn**	**04 37 42.2**	**+0.8**
SAML	**Samuel**	**16.74**	**18**	eP	**Pn**	**04 37 50.2**	**+0.5**
FRTB	**Fartura**	**17.16**	**88**	eP	**Pn**	**04 37 55.5**	**+0.7**
ITRB	**Iturama**	**17.40**	**76**	eP	**P**	**04 37 57.7**	**+0.5**
BB19B	**Bebedouro**	**18.60**	**82**	eP	**P**	**04 38 09.1**	**-1.3**
SPB	**Sao Paulo**	**19.05**	**90**	eP	**P**	**04 38 15.6**	**+0.3**
VAO	**Valinhos**	**19.57**	**88**	eP	**P**	**04 38 20.5**	**-0.5**
IPMB	**Ipameri, GO**	**19.94**	**73**	eP	**P**	**04 38 24.4**	**-0.5**
PARB	**Paraibuna**	**20.73**	**90**	eP	**P**	**04 38 33.7**	**+0.3**
BDFB	**Brasilia**	**21.16**	**68**	P	**P**	**04 38 36.6**	**-1.5**
	comp=Z,1.2nm,0.4s,baz=244,slow=10.0,SNR=3.4						
NPGB	**Novo Progresso**	**21.76**	**37**	eP	**P**	**04 38 43.7**	**-0.8**
ESAR	**Angra dos Reis**	**21.86**	**90**	eP	**P**	**04 38 46.5**	**+1.0**
BSCB	**Bom Sucesso**	**22.00**	**84**	eP	**P**	**04 38 45.9**	**-1.1**
PEXB	**Peixe**	**22.86**	**59**	eP	**P**	**04 38 55.0**	**-0.6**
MACA	**Manacapuru-AM**	**22.97**	**20**	eP	**P**	**04 38 56.1**	**-0.5**
ITTB	**Itaituba**	**23.85**	**32**	eP	**P**	**04 39 03.8**	**-0.9**
DUB01	**Friburgo-RJ**	**23.91**	**88**	eP	**P**	**04 39 07.3**	**+2.0**
JANB	**Januaria**	**24.58**	**71**	eP	**P**	**04 39 10.7**	**-0.6**
CAM01	**Campos-RJ**	**24.62**	**88**	eP	**P**	**04 39 11.6**	**0.0**
SDBA	**SAO DESIDERIO**	**25.41**	**65**	eP	**P**	**04 39 18.5**	**-0.4**
PTGA	**Pitinga**	**25.49**	**20**	P	**P**	**04 39 20.1**	**+0.6**
	comp=Z,1.6nm,0.3s,baz=200,slow=12,SNR=5.4						
PTGA	**Pitinga**	**25.49**	**20**	IAmb	IAmb	04 39 21.0	
	comp=Z,4.0nm,0.8s						
PTGA	**Pitinga**	**25.49**	**20**	eP	**P**	**04 39 20.1**	**+0.6**
NAN01	**Guarapari, ES**	**27.13**	**80**	eP	**P**	**04 39 33.9**	**-0.4**
DBIC	**Dimbokro**	**69.24**	**72**	P	**P**	**04 44 57.1**	**+0.4**
	comp=Z,3.7nm,0.8s,baz=187,slow=8.3,SNR=3.6						
DBIC	**Dimbokro**	**69.24**	**72**	IAmb	IAmb	04 45 02.4	
	comp=Z,14nm,1.4s						
TORD	**Torodi Ar. Bea**	**78.03**	**69**	P	**P**	**04 45 48.8**	**+0.7**
	comp=Z,0.9nm,0.5s,baz=260,slow=4.9,SNR=10						
TORD	**Torodi Ar. Bea**	**78.03**	**69**	IAmb	IAmb	04 45 49.5	
	comp=Z,1.0nm,0.6s						
BOSA	**Boshof**	**81.28**	**117**	P	**P**	**04 46 07.5**	**+1.8**
	comp=Z,2.1nm,0.8s,baz=281,slow=5.2,SNR=3.8						
BOSA	**Boshof**	**81.28**	**117**	IAmb	IAmb	04 46 17.3	
	comp=Z,17nm,1.5s						
ZALV	**Zalesovo Beam**	**144.87**	**28**	PKP	**PKPdf**	**04 53 26.1**	**+1.3**
	comp=Z,0.8nm,0.5s,baz=323,slow=3.8,SNR=2.8						
ZALV	**Zalesovo Beam**	**144.87**	**28**		**PKPab**	**04 53 20.5**	**-3.6**
MKAR	**Makanchi Array**	**148.08**	**40**	PKPbc	**PKPbc**	**04 53 35.1**	**+1.4**
	comp=Z,0.3nm,0.5s,baz=303,slow=2.9,SNR=3.0						

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*MAN **13** 04:36:08.3, 6°.17N×127°.15E, h69^{km}, mb5.1, ML4.0, MS4.1*

*IDC **13** 04:36:13.0±2.0, 6°.46N×127°.07E, h64^{km}±17^{km}, mb3.8/14, mb1 4.0/16, mb1mx3.8/46, mbtmp4.2/16, MS3.3/14, Ms1 3.4/14, ms1mx3.2/37, Error ellipse: s-maj=21.6km s-min=11.5km az=62.0*

*NEIC **13** 04:36:13.9±0.8, 6°.39N±0°.09×126°.93E±0°.08, h79^{km}±7^{km}, mb4.4/22, Error ellipse: s-maj=16.1km s-min=8.2km az=218.0*

*DJA **13** 04:36:14.1±1.1, 7°N±7°×12°7E±°, h43^{km}±11^{km}, M4.6/13, mB5.0/6, mb4.7/13, MLv4.7/6, Mw(mB)4.2/6*

ISC 13 04:36:14.1±0.9**, 6°.38N**±0°.05×**126°.97E**±0°.07**, h81**^{km}±8^{km}**, n77, σ1^{s}.90**/77**, mb4.2**/19**, 1C-2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**1.28**	**258**	eP	**Pn**	**04 36 32.8**	**-3.9**
DDMP				eS	**Sn**	**04 36 52.1**	**-1.5**
DAV	**Davao City (W)**	**1.54**	**297**	P	**Pn**	**04 36 39.1**	**-0.9**
	379nm,0.3s,baz=76,slow=2.6,SNR=27						
DAV				S	**Sn**	**04 36 58.9**	**-0.7**
	249nm,0.3s,baz=102,slow=24,SNR=18						
DAV				LR	LR	04 37 39.0	
	comp=Z,2μm,19.8s,baz=109,slow=54						
DAV	**Davao City (W)**	**1.54**	**297**		**Pn**	**04 36 39.5**	**-0.5**
KCP	**Kidapawan**	**1.97**	**289**	⇑iP	**Pn**	**04 36 44.2**	**-1.5**
KCP				i S	**Sn**	**04 37 14.7**	**+4.9**
SKMP	**Bagumbayan, Su**	**2.41**	**273**	eP	**Pn**	**04 36 48.7**	**-2.9**
SKMP				eS	**Sn**	**04 37 21.4**	**+1.1**
BUTP	**Butuan**	**2.90**	**333**	eP	**Pn**	**04 36 58.2**	**+0.1**
BUTP				eS	**Sn**	**04 37 36.2**	**+4.1**
SGSI	**Sangihe**	**3.03**	**208**	P	**Pn**	**04 37 02.0**	**+2.0**
CGP	**Cagayan de Oro**	**3.06**	**313**	⇓eP	**Pn**	**04 37 00.3**	**0.0**
CGP				eS	**Sn**	**04 37 37.3**	**+1.4**
GLSP	**General Luna,**	**3.48**	**346**	eP	**Pn**	**04 37 04.8**	**-1.3**
GLSP				eS	**Sn**	**04 37 52.5**	**+6.2**
PAGZ	**Pagadian**	**3.85**	**293**	eP	**Pn**	**04 37 09.3**	**-1.7**
LLP	**Lapu-Lapu**	**4.91**	**323**	eP	**Pn**	**04 37 27.8**	**+2.2**
LLP				eS	**Sn**	**04 38 23.4**	**+2.3**
CNOP	**Candoni, Negro**	**5.49**	**309**	eP	**Pn**	**04 37 33.2**	**-0.2**
TNTI	**Ternate**	**5.58**	**176**	Pn	**Pn**	**04 37 34.2**	**-0.5**
KMSI	**Cibinong**	**6.49**	**207**	P	**Pn**	**04 37 49.4**	**+2.3**
	0.6nm105nm,0.8s						
GTOI	**Gorontalo**	**6.94**	**215**	P	**Pn**	**04 37 53.2**	**0.0**
	0.2nm533nm52nm,0.8s						
MRSI	**Marisa**	**7.71**	**221**	P	**Pn**	**04 38 04.7**	**+0.9**
	0.5nm1μm166nm,0.9s						
TOLI2	**Tolitoli**	**8.09**	**230**	Pn	**Pn**	**04 38 07.2**	**-1.8**
SIJI	**Sorong**	**8.38**	**149**	P	**Pn**	**04 38 12.5**	**-0.4**
	8.8nm,0.3s,baz=27,slow=16,SNR=8.6						
SANI	**Sanana**	**8.43**	**187**	P	**Pn**	**04 38 15.0**	**+1.4**
	15nm,0.8s						
LUWI	**Luwuk**	**8.48**	**210**	Pn	**Pn**	**04 38 14.7**	**+0.5**
LUWI	**Luwuk**	**8.48**	**210**	P	**Pn**	**04 38 16.2**	**+2.0**
	2μm122nm,1.2s						
APSI	**Ampana**	**8.98**	**216**	P	**Pn**	**04 38 23.4**	**+2.3**
	569nm68nm,1.1s						
LQP	**Lukban**	**9.36**	**326**	⇓eP	Pn	04 38 18.9	-7.5
FAKI	**Fak Fak**	**10.63**	**150**	Pn	**Pn**	**04 38 43.0**	**-0.7**
TTSI	**Tana Toraja**	**11.77**	**218**	P	**Pn**	**04 39 02.8**	**+3.7**
	52nm,0.8s						
KAPI	**Kappang**	**13.41**	**213**	P	**Pn**	**04 39 21.2**	**0.0**
	0.3nm,0.3s,baz=13,slow=11,SNR=12						
KAPI				LR	LR	04 45 29.6	
	comp=Z,110nm,18.6s,baz=37,slow=41						
SBUM	**Sibu**	**15.21**	**256**	Pn	**Pn**	**04 39 42.9**	**-1.7**
SBUM				IAmb	IAmb	04 40 06.6	
	comp=Z,19nm,0.9s						
EDFI	**Ende, Flores**	**15.92**	**199**	P	**P**	**04 39 57.7**	**+2.0**
	comp=Z,268nmcomp=Z,7.9nm,0.8s						
JAY	**Jayapura**	**16.31**	**122**	LR	LR	04 46 48.4	
	comp=Z,112nm,18.4s,baz=193,slow=39						
BATI	**Baumata**	**16.80**	**191**	LR	LR	04 47 12.2	
	comp=Z,130nm,20.9s,baz=352,slow=39						
BATI	**Baumata**	**16.80**	**191**	P	**P**	**04 40 10.7**	**+5.3**
	comp=Z,22nm,0.9s						
MTN	**Manton Dam**	**19.54**	**168**	P	**Pn**	**04 40 37.2**	**-0.3**
MTN				IAmb	IAmb	04 40 41.9	
	comp=Z,32nm,1.4s						
MANU	**Manus Island**	**22.02**	**112**	P	**P**	**04 40 57.1**	**-5.1**
FITZ	**Fitzroy Crossi**	**24.36**	**183**	P	**P**	**04 41 26.0**	**+1.3**
	comp=Z,2.0nm,0.7s,baz=13,slow=12,SNR=7.7						
JNU	**Nakatsue**	**26.86**	**7**	LR	LR	04 53 09.4	
	comp=Z,49nm,21.3s,baz=180,slow=38						
WB0	**Warramunga Arr**	**26.99**	**164**	P	**P**	**04 41 49.2**	**+0.6**
WRA	**Warramunga Arr**	**27.14**	**165**	P	**P**	**04 41 50.3**	**+0.4**
	comp=Z,1.0nm,0.5s,baz=347,slow=10,SNR=3.9						
WRA				PcP	**PcP**	**04 45 10.4**	**+1.4**
	comp=Z,0.2nm,0.6s,baz=346,slow=2.7,SNR=1.8						
WRA				ScP	**ScP**	**04 48 46.0**	**+3.7**
	comp=Z,0.3nm,0.6s,baz=344,slow=3.4,SNR=2.2						
WRA				LR	LR	04 55 14.4	
	comp=Z,16nm,18.5s,baz=355,slow=42						
WRA	**Warramunga Arr**	**27.14**	**165**	P	**P**	**04 41 50.0**	**0.0**
WR0	**Warramunga Arr**	**27.21**	**164**	P	**P**	**04 41 50.7**	**+0.1**
PBKT	**Sadao Pong**	**27.38**	**294**		**S**	**04 46 24.0**	**-2.6**
PSI	**Prapat**	**28.17**	**264**	LR	LR	04 55 37.5	
	comp=Z,60nm,20.3s,baz=272,slow=41						
ENH	**Enshi**	**28.90**	**327**	P	**P**	**04 42 04.4**	**-1.2**
ENH				IAmb	IAmb	04 42 06.8	
	comp=Z,5.2nm,0.6s						
CMAR	**Chiang Mai Arr**	**29.83**	**296**	LR	LR	04 54 41.3	
	comp=Z,93nm,19.3s,baz=154,slow=37						
ASAR	**Alice Springs**	**30.62**	**167**	P	**P**	**04 42 21.4**	**+0.6**
	comp=Z,0.7nm,0.6s,baz=340,slow=7.5,SNR=3.4						
ASAR				PcP	**PcP**	**04 45 18.8**	**+1.1**
	comp=Z,0.7nm,0.7s,baz=342,slow=2.3,SNR=7.9						
KSRS	**Korea Array**	**30.95**	**1**	LR	LR	04 57 38.9	
	comp=Z,43nm,18.9s,baz=174,slow=42						
XAN	**Xi'an**	**32.20**	**331**	P	**P**	**04 42 33.7**	**-1.0**
XAN				IAmb	IAmb	04 42 35.4	
	comp=Z,6.2nm,0.7s						
BJT	**Baijiatuau**	**34.87**	**345**	P	**P**	**04 42 56.9**	**-0.9**
BJT				IAmb	IAmb	04 43 23.8	
	comp=Z,5.7nm,0.8s						
FORT	**Forrest**	**36.96**	**178**	P	**P**	**04 43 15.6**	**-0.1**
USRK	**Ussuriysk Ar.**	**37.93**	**6**	P	**P**	**04 43 23.4**	**-0.3**
	comp=Z,2.6nm,0.8s,baz=186,slow=9.9,SNR=3.6						
SHL	**Shillong**	**38.56**	**304**	P	**P**	**04 43 28.6**	**-0.9**
STKA	**Stephens Creek**	**40.52**	**161**	LR	LR	05 02 42.9	
	comp=Z,31nm,21.3s,baz=24,slow=39						
KLR	**Kul'dur**	**42.90**	**5**	P	**P**	**04 44 04.4**	**-0.2**
	comp=Z,2.0nm,0.6s,baz=177,slow=3.8,SNR=8.6						
KLR				LR	LR	05 06 52.3	
	comp=Z,34nm,18.0s,baz=259,slow=43						
SONM	**Songino Array**	**44.89**	**340**	P	**P**	**04 44 20.8**	**0.0**
	comp=Z,0.5nm,0.5s,baz=153,slow=6.1,SNR=4.1						
SONM				PcP	**PcP**	**04 46 01.8**	**+0.7**
	comp=Z,0.5nm,0.6s,baz=142,slow=4.1,SNR=3.0						
SONM				LR	LR	05 03 52.0	
	comp=Z,91nm,18.0s,baz=152,slow=37						
PALK	**Pallekele**	**45.93**	**274**	LR	LR	05 05 23.1	
	comp=Z,30nm,18.2s,baz=204,slow=38						
MK31	**Makanchi Array**	**55.55**	**324**	P	**P**	**04 45 41.1**	**-0.1**
MK31				IAmb	IAmb	04 45 42.3	
	comp=Z,1.7nm,0.7s						
MKAR	**Makanchi Array**	**55.55**	**324**	P	**P**	**04 45 41.5**	**+0.3**
	comp=Z,2.6nm,0.6s,baz=122,slow=8.2,SNR=43						
MKAR				PcP	**PcP**	**04 46 40.8**	**+0.6**
	comp=Z,1.0nm,0.7s,baz=108,slow=4.3,SNR=3.7						
MKAR	**Makanchi Array**	**55.55**	**324**	P	**P**	**04 45 41.2**	**0.0**
NIL	**Nilore**	**56.53**	**306**	P	**P**	**04 45 47.9**	**-0.5**
KURK	**Kurchatov**	**59.66**	**327**	P	**P**	**04 46 10.0**	**0.0**
KBL	**Kabul**	**60.13**	**306**	P	**P**	**04 46 13.6**	**-0.2**
KBL				IAmb	IAmb	04 46 14.5	
	comp=Z,3.4nm,0.7s						
KK31	**Karatay Array**	**61.49**	**316**	P	**P**	**04 46 21.4**	**-1.2**
KKAR	**Karatay Array**	**61.49**	**316**	P	**P**	**04 46 22.4**	**-0.2**
BRVK	**Borovoye**	**65.33**	**326**	P	**P**	**04 46 47.4**	**-0.3**
BRVK				IAmb	IAmb	04 46 48.6	
	comp=Z,5.2nm,0.8s						
NRIK	**Noril'sk**	**67.93**	**346**	P	**P**	**04 47 03.9**	**0.0**
	comp=Z,1.4nm,0.4s,baz=109,slow=3.7,SNR=3.7						
NRIK	**Noril'sk**	**67.93**	**346**	IAmb	IAmb	04 47 06.0	
	comp=Z,5.9nm,1.4s						
ABKAR	**Akbulak array**	**70.27**	**320**	P	**P**	**04 47 18.6**	**-0.3**
KDAK	**Kodiak Island**	**79.54**	**32**	P	**P**	**04 48 12.8**	**+0.7**
	comp=Z,3.8nm,0.6s,baz=243,slow=4.5,SNR=1.6						
KIV	**Kislovodsk**	**81.50**	**313**	P	**P**	**04 48 22.6**	**-0.4**
ILAR	**Eielson Array**	**82.63**	**26**	P	**P**	**04 48 28.4**	**0.0**
	comp=Z,0.5nm,0.6s,baz=260,slow=5.1,SNR=16						
INK	**Inuvik**	**87.63**	**22**	P	**P**	**04 48 53.4**	**+0.2**
	comp=Z,0.8nm,0.6s,baz=304,slow=2.3,SNR=4.0						
INK	**Inuvik**	**87.63**	**22**	IAmb	IAmb	04 49 01.1	
	comp=Z,1.1nm,1.0s						
ARCES	**ARCESS Array B**	**88.06**	**340**	P	**P**	**04 48 55.0**	**-0.4**
	comp=Z,16nm,1.2s,baz=95,slow=6.4,SNR=2.1						
BRTR	**Keskin Array B**	**88.53**	**310**	LR	LR	05 33 26.8	
	comp=Z,29nm,19.8s,baz=30,slow=39						
AKASG	**Malin Array Be**	**90.00**	**321**	P	**P**	**04 49 04.3**	**-0.4**
	comp=Z,0.6nm,0.5s,baz=69,slow=4.5,SNR=3.0						
NOA	**NORSAR Array B**	**96.53**	**334**	LR	LR	05 38 29.4	
	comp=Z,41nm,20.0s,baz=40,slow=39						
YKA	**Yellowknife Ar**	**97.00**	**24**	P	Pdif	04 49 37.2	+0.5
	comp=Z,0.1nm,0.5s,baz=299,slow=3.9,SNR=3.2						
YKA				PKKPbc	**PKKPdf**	**05 06 19.4**	**-1.1**
	comp=Z,0.3nm,0.8s,baz=114,slow=2.9,SNR=3.9						
TORD	**Torodi Ar. Bea**	**122.29**	**290**	PKP	**PKiKP**	**04 55 01.1**	**0.0**
	comp=Z,0.7nm,0.7s,baz=42,slow=1.4,SNR=2.3						

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*IDC **13** 04:40:10.8±5.7, 6°.68N×127°.26E, h56^{km}±53^{km}, mb3.3/5, mb1 3.5/5, mb1mx3.2/45, mbtmp3.6/5, Error ellipse: s-maj=51.4km s-min=18.9km az=66.0*

*MAN **13** 04:40:19.1, 6°.72N×126°.01E, h1^{km}, mb4.4, ML3.2, MS3.0*

ISC 13 04:40:12.5±1.0**, 6°.18N**±0°.07×**126°.75E**±0°.08**, h50**^{km}**, n13, σ3^{s}.20**/18**, mb3.4**/5**, 1C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATI	**Mati**	**0.91**	**327**	eP	**Pn**	**04 40 25.2**	**-3.8**
MATI				eS	**Sn**	**04 40 38.6**	**-2.6**
DDMP	**Don Marcelino,**	**1.04**	**266**	eP	**Pn**	**04 40 31.4**	**+0.6**
DDMP				eS	**Sn**	**04 40 47.3**	**+3.0**
DAV	**Davao City (W)**	**1.46**	**307**	P	**Pn**	**04 40 37.6**	**+1.0**
	93nm,0.3s,baz=90,slow=4.0,SNR=2.2						
DAV				S	**Sn**	**04 40 59.7**	**+5.0**
	64nm,0.3s,baz=72,slow=19,SNR=1.6						
KCP	**Kidapawan**	**1.85**	**297**	⇑eP	Pn	04 40 57.2	+15
SKMP	**Bagumbayan, Su**	**2.22**	**279**	eP	**Pn**	**04 40 47.2**	**+0.3**
SKMP				eS	**Sn**	**04 41 07.1**	**-6.1**
CGP	**Cagayan de Oro**	**3.05**	**318**	⇓eP	**Pn**	**04 41 01.3**	**+3.1**
CGP				eS	**Sn**	**04 41 38.2**	**+4.7**
GLSP	**General Luna,**	**3.63**	**350**	eP	**Pn**	**04 41 09.3**	**+2.9**
GLSP				eS	**Sn**	**04 41 47.2**	**-0.8**
PAGZ	**Pagadian**	**3.73**	**297**	eP	**Pn**	**04 41 07.6**	**-0.1**
FITZ	**Fitzroy Crossi**	**24.15**	**183**	P	**P**	**04 45 25.9**	**+1.8**
	0.5nm,0.4s,baz=354,slow=10,SNR=1.7						
WRA	**Warramunga Arr**	**27.01**	**164**	P	**P**	**04 45 51.8**	**+1.7**
	0.4nm,0.3s,baz=341,slow=11,SNR=6.5						
ASAR	**Alice Springs**	**30.47**	**167**	P	**P**	**04 46 21.1**	**+0.3**
	0.4nm,0.6s,baz=346,slow=7.9,SNR=2.2						
ASAR				PcP	**PcP**	**04 49 17.9**	**-1.5**
	0.3nm,0.5s,baz=353,slow=2.5,SNR=4.6						
MKAR	**Makanchi Array**	**55.58**	**324**	P	**P**	**04 49 40.1**	**-3.0**
	0.5nm,0.4s,baz=120,slow=7.4,SNR=8.9						
ILAR	**Eielson Array**	**82.90**	**26**	P	P	04 52 25.3	-6.4
	0.2nm,0.5s,baz=260,slow=4.9,SNR=5.5						

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*IDC **13** 04:45:26.4±0.5, 6°.76N×72°.95W, h154^{km}±4^{km}, mb4.0/17, mb1 4.1/23, mb1mx4.0/32, mbtmp4.4/23, MS3.0/1, Ms1 3.0/1, ms1mx2.6/22, Error ellipse: s-maj=9.2km s-min=7.0km az=122.0*

*VAO **13** 04:45:27.6±0.5, 6°.70N×73°.03W, h145^{km}±7^{km}, mb4.5*

*NEIC **13** 04:45:27.6±1.5, 6°.76N±0°.07×73°.01W±0°.08, h166^{km}±6^{km}, mb4.5/167, Mwr4.3(CAR), Error ellipse: s-maj=11.2km s-min=10.4km az=94.0*

*RSNC **13** 04:45:27.4±1.1, 6°.82N×73°.18W, h152^{km}±4^{km}, ML4.7, Mw4.7, Fault plane solution: NP1:ϕ_s77.00000°, δ64.00000°, λ-180.00000°.*

ISC 13 04:45:26.6±0.4**, 6°.80N**±0°.03×**73°.10W**±0°.03**, h156**^{km}±4^{km}**, n477, σ1^{s}.73**/498**, mb4.5**/100**, 48C-16D, Fault plane solution: NP1:**ϕ_s150.70833°**,**δ86.35239°**,**λ49.28832°. **NP2:**ϕ_s56.47990°**,**δ40.84639°**,**λ174.41783°. **Principal axes:** T Plg35.4427°, Azm26.2285°**;** N Plg40.6119°, Azm153.8418°**;** P Plg29.3351°, Azm272.6498°**; Fault plane solution: NP1:**ϕ_s174.51694°**,**δ64.95243°, λ22.74937°. **NP2:**ϕ_s74.45018°**,**δ69.49225°**,**λ153.12682°. **Principal axes:** T Plg33.1677°, Azm33.3459°**;** N Plg56.6656°, Azm219.7922°**;** P Plg2.9603°, Azm125.2828°**; Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.22**	**202**	⇑iP	**Pn**	**04 45 48.2**	**+0.3**
BARC				eS	**Sn**	**04 46 03.7**	**-0.6**
BARC				i		04 46 05.3	
	comp=Z,11μm,0.3s						
PAMC	**Pamplona, Colo**	**0.67**	**36**	⇓iP	**Pn**	**04 45 51.0**	**+0.9**
PAMC				eS	**Sn**	**04 46 07.5**	**-0.6**
PAMC				i		04 46 10.4	
	comp=Z,11μm,0.5s						
BRRC	**Barranca, Sant**	**0.68**	**297**	⇑iP	**Pn**	**04 45 50.0**	**+0.3**
BRRC				eS	**Sn**	**04 46 06.4**	**-0.8**
BRRC				i		04 46 10.8	
	comp=Z,8μm,0.4s						
RUSC	**La Rusia**	**0.90**	**179**	⇑iP	**Pn**	**04 45 52.2**	**+0.4**
RUSC				eS	**Sn**	**04 46 10.9**	**0.0**
RUSC				i		04 46 12.7	
	comp=Z,9μm,0.4s						
TAMC	**Tame, Arauca**	**1.35**	**105**	⇓iP	**Pn**	**04 45 56.7**	**+1.5**
TAMC				eS	**Sn**	**04 46 17.4**	**+0.4**
TAMC				i		04 46 19.2	
	comp=Z,3μm,0.4s						
PTBC	**PUERTO BERRIO,**	**1.37**	**259**	⇑iP	**Pn**	**04 45 54.6**	**-0.8**
PTBC				eS	**Sn**	**04 46 15.6**	**-1.7**
PTBC				i		04 46 23.1	
	comp=Z,10μm,0.5s						
OCAC	**Ocana**	**1.45**	**351**	⇑iP	**Pn**	**04 45 56.3**	**0.0**
OCAC				eS	**Sn**	**04 46 18.0**	**-1.1**
OCAC				i		04 46 23.4	
	comp=Z,7μm,0.4s						
SPBC	**San Pablo de B**	**1.49**	**220**	⇑iP	**Pn**	**04 45 57.0**	**+0.3**
SPBC				eS	**Sn**	**04 46 18.7**	**-1.1**
SPBC				i		04 46 27.1	
	comp=Z,6μm,0.4s						

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ZARC  Zaragoza, Cauc    1.88 292⇓iP   Pn   04 46 00.3 -0.4
ZARC                             eS   Sn   04 46 25.6 -1.4
ZARC                             i         04 46 32.2
      comp=Z,6μm,0.4s
NORC  Norcasia          2.15 235⇑iP   Pn   04 46 03.8 -0.1
NORC                             eS   Sn   04 46 30.8 -1.7
NORC                             i         04 46 37.1
      comp=Z,3μm,0.4s
SMLC  San Martn de      2.21 334 eP   Pn   04 46 04.0 -0.6
SMLC                             eS   Sn   04 46 32.2 -1.7
SMLC                             i         04 46 40.4
      comp=Z,4μm,0.3s
CHIC  Chingaza          2.25 196⇑iP   Pn   04 46 06.1 +0.7
CHIC                             eS   Sn   04 46 34.9 -0.4
CHIC                             i         04 46 39.2
      comp=Z,5μm,0.4s
ROSC  El Rosal          2.29 212  P   Pn   04 46 07.4 +1.4
      comp=Z,1μm,0.3s,baz=104,slow=8.3,SNR=751
ROSC                              S   Sn   04 46 36.3  0.0
      comp=Z,1μm,0.3s,baz=113,slow=23,SNR=4.1
ROSC                              LR  LR   04 47 14.8
      comp=Z,325nm,20.6s,baz=64,slow=46
ROSC  El Rosal          2.29 212      Pn   04 46 07.7 +1.7
ROSC  El Rosal          2.29 212⇑iP   Pn   04 46 07.7 +1.7
ROSC                             eS   Sn   04 46 37.1 +0.9
ROSC                             i         04 46 42.9
      comp=Z,8μm,0.4s
CBOG1 Bogota, SGC       2.35 205 eP   Pn   04 46 08.6 +1.9
CBOG1                            eS   Sn   04 46 38.7 +1.2
UREC  San Jos de Ur     2.59 292⇓eP   Pn   04 46 07.8 -1.4
UREC                             eS   Sn   04 46 39.7 -2.4
GUY2C Guyana, Caldas    2.74 235⇑iP   Pn   04 46 12.0 +0.5
GUY2C                            eS   Sn   04 46 45.0 -1.1
GUY2C                            i         04 46 56.1
      comp=Z,4μm,0.6s
PTGC  Puerto Gaitan,    2.76 160⇓eP   Pn   04 46 11.5 +0.3
PTGC                             eS   Sn   04 46 43.6 -2.1
PTGC                             i         04 46 47.5
      comp=Z,3μm,0.3s
RREF  El Recreo         2.92 230⇑iP   Pn   04 46 14.2 +0.3
RREF                             eS   Sn   04 46 50.7 +0.3
RREF                             i         04 47 00.0
      comp=Z,3μm,0.4s
CMAN1 Manizales, Cal    2.96 235 eP   Pn   04 46 15.4 +1.4
CMAN1                            eS   Sn   04 46 52.1 +1.4
CBOC  Ciudad Bolivar    3.04 252⇑iP   Pn   04 46 15.5 +0.6
CBOC                             eS   Sn   04 46 50.3 -1.9
CBOC                             i         04 47 09.5
      comp=Z,1μm,0.5s
DBBC  Dabeiba           3.10 274⇓iP   Pn   04 46 15.6 +0.1
DBBC                             eS   Sn   04 46 51.5 -1.9
TOLC  Tolima            3.12 225 eP   Pn   04 46 16.5 +0.4
TOLC                             eS   Sn   04 46 54.4 +0.1
TOLC                             i         04 47 08.1
      comp=Z,3μm,0.5s
CIBA1 Ibague, SGC       3.16 222 eP   Pn   04 46 18.1 +1.7
CIBA1                            eS   Sn   04 46 55.0  0.0
SDV   Santo Domingo     3.21  50  P   Pn   04 46 17.4 +0.4
      comp=Z,274nm,0.3s,baz=179,slow=4.4,SNR=921
SDV                               S   Sn   04 46 54.2 -1.9
      comp=Z,792nm,0.3s,baz=253,slow=23,SNR=51
SDV   Santo Domingo     3.21  50  Pn  Pn   04 46 17.6 +0.7
SDV   Santo Domingo     3.21  50⇑iP   Pn   04 46 17.7 +0.7
SDV                              eS   Sn   04 46 53.8 -2.3
SDV                              i         04 47 00.5
      comp=Z,2μm,0.6s
SDV   Santo Domingo     3.21  50 eP   Pn   04 46 17.7 +0.7
ANIL  Santa Ana         3.24 225⇑eP   Pn   04 46 17.9 +0.3
ANIL                             eS   Sn   04 46 56.2 -0.9
ANIL                             i         04 47 09.5
      comp=Z,615nm,0.5s
ARGC  Ariguani, Magd    3.24 340⇓iP   Pn   04 46 18.2 +0.9
ARGC                             eS   Sn   04 46 55.1 -1.6
ARGC                             i         04 47 10.3
      comp=Z,2μm,0.3s
PRAC  Prado             3.54 210⇑iP   Pn   04 46 21.1 -0.1
PRAC                             eS   Sn   04 47 03.6  0.0
PRAC                             i         04 47 08.6
      comp=Z,4μm,0.5s
ORTC  Ortega, Tolima    3.58 217⇑iP   Pn   04 46 21.9 +0.3
ORTC                             eS   Sn   04 47 03.0 -1.4
ORTC                             i         04 47 10.8
      comp=Z,2μm,0.5s
PLMC  San Jos del P     3.68 239 eP   Pn   04 46 23.2 +0.2
PLMC                             eS   Sn   04 47 04.0 -2.9
PLMC                             i         04 47 12.7
      comp=Z,1μm,0.5s
CVALL Valledupar, Ce    3.69 358 eP   Pn   04 46 22.1 -0.9
CVALL                            eS   Sn   04 47 03.1 -3.9
CVALL                            i         04 47 11.9
      comp=Z,1μm,0.4s
GUVC  San Jose del G    4.25 174 eP   Pn   04 46 30.1 -0.3
GUVC                             eS   Sn   04 47 18.4 -1.7
GUVC                             i         04 47 22.8
      comp=Z,2μm,0.3s
YOTC  Yotoco, Valle     4.27 229⇑iP   Pn   04 46 30.4 -0.4
YOTC                             eS   Sn   04 47 21.1 +0.4
SOLC  Bahia Solano      4.32 263 eS   Sn   04 47 19.6 -1.9
SMRC  Santa Marta, M    4.48 346 eP   Pn   04 46 32.6 -0.7
SMRC                             eS   Sn   04 47 20.8 -4.5
SMRC                             i         04 47 25.3
      comp=Z,651nm,0.3s
PIZC  Pizarro, Choco    4.61 247 eP   Pn   04 46 36.0 +0.9
PIZC                             eS   Sn   04 47 24.1 -4.4
PIZC                             i         04 47 43.6
      comp=Z,428nm,0.5s
MACC  Macarena, Meta    4.68 189⇑iP   Pn   04 46 35.1 -0.9
MACC                             eS   Sn   04 47 25.7 -4.5
MACC                             i         04 47 34.4
      comp=Z,940nm,0.5s
PTAC  Punta Ardita,     4.69 275 eP   Pn   04 46 35.4 -0.7
PTAC                             eS   Sn   04 47 25.4 -4.8
PTAC                             i         04 47 36.4
      comp=Z,834nm,0.3s
BETC  Betania           4.71 210⇑eP   Pn   04 46 35.6 -0.9
BETC                             eS   Sn   04 47 26.3 -4.6
MARP  Paez Belalcaza    4.85 216 eP   Pn   04 46 38.1 -0.4
MARP                             eS   Sn   04 47 29.0 -5.5
URIC  Uribia, Colomb    4.99  13⇑iP   Pn   04 46 38.5 -1.6
URIC                             eS   Sn   04 47 30.9 -6.6
URIC                             i         04 47 39.0
      comp=Z,280nm,0.5s
URIC                             i         04 47 39.0
      comp=Z,280nm,0.5s
MALC  Bahia Malaga      5.04 237⇑eP   Pn   04 46 41.8 +1.0
MALC                            ⇑eP   Pn   04 46 41.8 +1.0
MALC                             eS   Sn   04 47 35.2 -3.5
MALC                             eS   Sn   04 47 35.2 -3.5
MALC                             i         04 47 54.0
      comp=Z,317nm,0.6s
MALC                             i         04 47 54.0
      comp=Z,317nm,0.6s
GARC  Garzon, Huila     5.17 208⇑eP   Pn   04 46 41.8 -0.9
GARC                            ⇑eP   Pn   04 46 41.8 -0.9
GARC                             eS   Sn   04 47 37.7 -4.2
GARC                             eS   Sn   04 47 37.7 -4.2
GARC                             i         04 47 44.5
      comp=Z,496nm,0.3s
GARC                             i         04 47 44.5
      comp=Z,496nm,0.3s
PCON  Cinco Dias        5.53 217 eP   Pn   04 46 48.9 +1.2
PCON                             eP   Pn   04 46 48.9 +1.2
PCON                             eS   Sn   04 47 47.8 -3.2
PCON                             eS   Sn   04 47 47.8 -3.2
PCON                             i         04 48 20.5
      comp=Z,224nm,0.5s
PCON                             i         04 48 20.5
      comp=Z,224nm,0.5s
POPC  Popayan, Colom    5.53 220⇑iP   Pn   04 46 47.7 +0.2
POPC                            ⇑iP   Pn   04 46 47.7 +0.2
POPC                             eS   Sn   04 47 48.4 -2.2
POPC                             eS   Sn   04 47 48.4 -2.2
FLOC  Florencia         5.77 206⇑iP   Pn   04 46 50.3 -0.2
FLOC                            ⇑iP   Pn   04 46 50.3 -0.2
FLOC                             eS   Sn   04 47 46.0  -10
FLOC                             eS   Sn   04 47 46.0  -10
FLOC                             i         04 48 21.3
      comp=Z,186nm,0.5s
FLOC                             i         04 48 21.3
      comp=Z,186nm,0.5s
SOTA  Rioblanco         5.80 217 eS   Sn   04 47 51.6 -5.9
SOTA                             eS   Sn   04 47 51.6 -5.9
BBAC  Balboa, Cauca     6.29 221 eP   Pn   04 46 56.8 -0.7
BBAC                             eP   Pn   04 46 56.8 -0.7
BBAC                             eS   Sn   04 48 04.8 -4.0
BBAC                             eS   Sn   04 48 04.8 -4.0
BBAC                             i         04 48 16.9
      comp=Z,132nm,0.4s
BBAC                             i         04 48 16.9
      comp=Z,132nm,0.4s
GR1C  Gorgona, Isla     6.30 233 eP   Pn   04 46 56.3 -1.2
GR1C                             eP   Pn   04 46 56.3 -1.2
GR1C                             eS   Sn   04 48 04.3 -4.3
GR1C                             eS   Sn   04 48 04.3 -4.3
GR1C                             i         04 48 13.8
      comp=Z,670nm,0.4s
GR1C                             i         04 48 13.8
      comp=Z,670nm,0.4s
PTLC  Puerto Leguiza    6.80 194 eP   Pn   04 47 07.3 +3.2
PTLC                             eP   Pn   04 47 07.3 +3.2
PTLC                             eS   Sn   04 48 39.6  +19
PTLC                             eS   Sn   04 48 39.6  +19
PTLC                             i         04 49 08.3
      comp=Z,229nm,0.5s
PTLC                             i         04 49 08.3
      comp=Z,229nm,0.5s
CPAS2 Pasto             6.92 217 eP   Pn   04 47 08.3 +2.3
CPAS2                            eP   Pn   04 47 08.3 +2.3
CPAS2                            eS   Sn   04 48 21.6 -2.2
CPAS2                            eS   Sn   04 48 21.6 -2.2
GCUF  Volcan Galeras    6.97 218 eP   Pn   04 47 08.1 +1.3
GCUF                             eP   Pn   04 47 08.1 +1.3
GCUF                             eS   Sn   04 48 23.3 -2.0
GCUF                             eS   Sn   04 48 23.3 -2.0
GCUF                             i         04 48 38.0
      comp=Z,57nm,0.6s
GCUF                             i         04 48 38.0
      comp=Z,57nm,0.6s
BCIP  Isla Barro Col    7.08 290  Pn  Pn   04 47 06.2 -1.5
BCIP  Isla Barro Col    7.08 290 eP   Pn   04 47 05.3 -2.4
BCIP                             eP   Pn   04 47 05.3 -2.4
BCIP                             eS   Sn   04 48 19.9 -7.3
BCIP                             eS   Sn   04 48 19.9 -7.3
BCIP                             i         04 48 40.5
      comp=Z,91nm,0.8s
BCIP                             i         04 48 40.5
      comp=Z,91nm,0.8s
OTAV  Otavalo           8.43 220  Pn  Pn   04 47 25.3 -0.8
OTAV  Otavalo           8.43 220⇑iP   Pn   04 47 25.5 -0.7
OTAV                            ⇑iP   Pn   04 47 25.5 -0.7
OTAV                             eS   Sn   04 48 54.1 -6.2
OTAV                             eS   Sn   04 48 54.1 -6.2
OTAV  Otavalo           8.43 220 eP   Pn   04 47 25.7 -0.5
PCRV  Puerto La Cruz    9.02  68  P   Pn   04 47 31.3 -2.3
      comp=Z,4.2nm,0.3s,baz=214,slow=7.4,SNR=16
PCRV                              S   Sn   04 49 11.3 -2.6
      comp=Z,7.9nm,0.3s,baz=148,slow=19,SNR=4.6
PRVC  Isla de Provid   10.43 309 eP   Pn   04 47 48.4 -3.9
PRVC                             eP   Pn   04 47 48.4 -3.9
PRVC                             eS   Sn   04 49 39.7 -8.3
PRVC                             eS   Sn   04 49 39.7 -8.3
PRVC                             i         04 49 45.4
      comp=Z,50nm,0.4s
PRVC                             i         04 49 45.4
      comp=Z,50nm,0.4s
HDC   Heredia          11.35 287  Pn  Pn   04 48 05.3 +0.8
JAKH  Jacmel           11.38   3  Pn  Pn   04 48 05.1 +0.3
PCJ   Portland Cotta   11.57 340⇓iP   P    04 48 18.9 +4.4
LGNH  Logne            11.65   2  Pn  Pn   04 48 07.2 -1.1
HOJ   Hope             11.69 343 i P  Pn   04 48 12.2 +3.4
HOJ                              i P  P    04 48 13.8 -2.0
CMJ   Castle Mountai   11.71 344 i P  Pn   04 48 12.1 +3.0
STH   Stony Hill       11.78 342 i P  Pn   04 48 12.1 +2.1
MCJ   Malvern          11.93 338 i P  Pn   04 48 14.4 +2.4
MCJ                              i P  P    04 48 16.1 -2.3
MCJ                              i S  Sn   04 50 14.6 -9.5
MTDJ  Mount Denham     12.15 340  Pn  Pn   04 48 16.1 +1.2
BBJ   Bamboo Saint A   12.21 341 i P  Pn   04 48 18.7 +3.1
BBJ                              i S  Sn   04 50 19.9  -11
JTS   Las Juntas de    12.22 287  Pn  Pn   04 48 17.8 +2.0
SDDR  Presa de Saban   12.24   8  Pn  Pn   04 48 16.6 +0.7
ESPN  Las Esperanzas   12.28 297  Pn  Pn   04 48 16.2 -0.2
GRGR  Grenville        12.47  64  Pn  Pn   04 48 17.1 -1.8
NEJ   Negril           12.47 336 i P  Pn   04 48 21.9 +3.0
MPR   Mayaguez         12.74  27      Pn   04 48 20.6 -1.8
ICMP  Isla Caja de M   12.75  30  Pn  Pn   04 48 20.4 -2.1
ACON  Acoyapa          12.97 294      Pn   04 48 25.7 +0.4
PDPR  Patillas Dam,    13.11  31      Pn   04 48 25.4 -1.8
SJG   San Juan         13.13  30  P   Pn   04 48 24.3 -3.0
      comp=Z,12nm,0.3s,baz=192,slow=8.0,SNR=26
SJG   San Juan         13.13  30      Pn   04 48 25.8 -1.5
SVB   Belmont          13.32  60  Pn  Pn   04 48 28.2 -1.6
GCPR  Guaynabo City    13.33  30      Pn   04 48 28.4 -1.5
CBYP  Canovanas        13.41  31      Pn   04 48 29.7 -1.3
CZSB  Cruzeiro do Su   14.44 178 eP   Pn   04 48 44.6 +0.7
ATAH  Atahualpa        14.81 201  P   Pn   04 48 50.5 +1.5
      comp=Z,0.4nm,0.3s,baz=69,slow=6.5,SNR=4.5
PTGA  Pitinga          15.09 119  P   Pn   04 48 50.5 -1.5
      comp=Z,1.0nm,0.3s,baz=324,slow=22,SNR=15
PTGA                              S   Sn   04 51 34.3 -5.7
      comp=Z,0.7nm,0.3s,baz=319,slow=19,SNR=1.8
PTGA  Pitinga          15.09 119  Pn  Pn   04 48 50.2 -1.9
PTGA  Pitinga          15.09 119 eP   Pn   04 48 51.1 -1.0
MACA  Manacapuru-AM    15.86 128 eP   Pn   04 49 01.7 +0.2
ETMB  Extrema          17.88 157 eP   P    04 49 24.4 +0.1
SAML  Samuel           18.50 148  P   P    04 49 30.6 -0.6
SAML                              IAmb IAmb 04 49 32.5
      comp=Z,16nm,0.7s
NNA   Nana             19.03 191  P   P    04 49 37.0 +0.1
      comp=Z,0.8nm,0.3s,baz=350,slow=10,SNR=4.3
NNA   Nana             19.03 191  IAmb IAmb 04 49 41.8
      comp=Z,28nm,1.4s
PETF  Flores           19.23 303  P   P    04 49 40.7 +1.7
TEIG  Tepich           19.87 314  P   P    04 49 47.4 +1.5
      comp=Z,49nm,0.5s,baz=42,slow=1.5,SNR=31
TEIG  Tepich           19.87 314  P   P    04 49 47.1 +1.2
MDP   Montagnes des    20.42  94  P   P    04 49 53.6 +1.8
      comp=Z,16nm,0.8s,baz=275,slow=9.4,SNR=5.3
ITTB  Itaituba         20.58 122 eP   P    04 49 54.7 +1.1
MALB  Monte Alegre     20.67 114 eP   P    04 49 56.0 +1.5
CCIG  Comitan          20.88 298  IAmb IAmb 04 50 01.2
      comp=Z,21nm,0.7s
MCPB  Macapa, AP       22.17 108 eP   P    04 50 10.8 +0.5
NPGB  Novo Progresso   22.41 128 eP   P    04 50 12.7 +0.1
VILB  Vilhena          23.44 147 eP   P    04 50 22.6 +0.5
LPAZ  La Paz           23.46 168  P   P    04 50 22.5 -0.4
      comp=Z,3.0nm,0.6s,baz=332,slow=4.2,SNR=12
LPAZ  La Paz           23.46 168  P   P    04 50 22.8 -0.1
LPAZ  La Paz           23.46 168 eP   P    04 50 22.8 -0.1
CMIG  Matias Romero    23.61 298  P   P    04 50 20.9 -2.7
      comp=Z,2.5nm,0.4s,baz=113,slow=7.7,SNR=4.4
SIV   San Ignacio      25.59 152  P   P    04 50 39.9 -1.7
      comp=Z,2.8nm,0.8s,baz=342,slow=7.9,SNR=15
SIV                               pP  pP   04 51 12.8 -1.9
      comp=Z,3.7nm,0.6s,baz=342,slow=12,SNR=5.5
PRPB  Parauapebas      26.57 119 eP   P    04 50 50.0 -0.5
NHSC  New Hope         26.99 347  P   P    04 50 56.6 +2.7
      baz=164
TLIG  Tlapa            27.05 296  P   P    04 50 55.8 +0.9
TLIG                              IAmb IAmb 04 51 04.3
      comp=Z,18nm,1.2s
152A  Waverly Hall     27.92 339  IAmb IAmb 04 51 05.9
      comp=Z,19nm,1.2s
GOGA  Godfrey          28.17 341  P   P    04 51 05.4 +0.9
      baz=158
W58A  Raeford          28.65 349  P   P    04 51 09.1 +0.4
      baz=167
Z51A  Franklin         28.67 339  IAmb IAmb 04 51 19.8
      comp=Z,9.1nm,1.0s
V62A  Hyde County Ai   28.75 355  P   P    04 51 11.2 +1.7
      baz=174
V60A  Jim Taylor Roa   29.08 353  P   P    04 51 14.3 +1.8
      baz=171
LRAL  Lakeview Retre   29.12 336  P   P    04 51 14.3 +1.4
      baz=151
V59A  Middlesex        29.21 351  P   P    04 51 14.1 +0.5
      baz=169
SMTB  Santa Maria do   29.81 121 eP   P    04 51 19.2  0.0
U58A  Oxford           29.88 351  P   P    04 51 21.3 +1.8
      baz=169
U57A  Blanch           30.04 350  P   P    04 51 22.5 +1.5
      baz=167
PP1B  Ponte de Pedra   30.20 144 eP   P    04 51 23.9 +1.3
T58A  Grand View Acr   30.41 351  P   P    04 51 25.6 +1.4
      baz=169
T57A  Hurt             30.58 350  P   P    04 51 27.8 +2.1
      baz=168
U54A  Nelsons Funny    30.64 346  P   P    04 51 28.1 +1.8
      baz=163
ARAG  Araguaiana, MT   30.73 137 eP   P    04 51 29.9 +2.6
S59A  Mechanicsville   31.06 354  P   P    04 51 31.8 +1.9
      baz=172
PLAL  Pickwick Lake    31.26 336  IAmb IAmb 04 51 34.5
      comp=Z,7.1nm,0.7s
S57A  Dark Hollow, R   31.28 351  P   P    04 51 33.4 +1.6
      baz=169
R58B  Mineral          31.32 353  P   P    04 51 33.8 +1.6
      baz=171
OXF   Oxford           31.42 334  P   P    04 51 33.8 +0.6
      baz=148
R60A  Leonardtown, M   31.49 355  P   P    04 51 35.5 +1.9
      baz=173
R58A  Rapidan          31.67 353  P   P    04 51 36.1 +0.9
      baz=171
R57A  Stanardsville    31.74 352  P   P    04 51 38.2 +2.3
      baz=170
Q61A  Milford          32.00 357  P   P    04 51 37.2 -0.9
      baz=176
Z41A  Richland Creek   32.05 328  P   P    04 51 40.2 +1.5
      baz=141
WVT   Waverly          32.16 337  P   P    04 51 40.8 +1.2
      baz=152
WVT   Waverly          32.16 337  P   P    04 51 40.3 +0.7
WVT                               IAmb IAmb 04 51 42.4
      comp=Z,20nm,1.1s
Q57A  Strasburg        32.45 352  P   P    04 51 44.1 +2.0
      baz=170
P58A  Pank, Wackersv   32.77 354  P   P    04 51 46.6 +1.8
      baz=172
833A  Chaparral WMA,   32.82 314  P   P    04 51 45.5  0.0
      baz=126
P56A  Dayton Farm, R   32.97 352  P   P    04 51 49.2 +2.6
      baz=169
X40A  Basin Creek Fa   33.03 329  P   P    04 51 48.2 +1.0
      baz=142
X40A  Basin Creek Fa   33.03 329  IAmb IAmb 04 51 49.1
      comp=Z,9.0nm,1.0s
435B  Jarrell          33.10 319  P   P    04 51 49.0 +1.1
      baz=131
O61A  Allentown        33.18 358  P   P    04 51 49.9 +1.5
      baz=177
W41B  Gary Mavity, V   33.28 331  P   P    04 51 50.3 +0.9
      baz=144
O58A  Lewisberry       33.36 355  P   P    04 51 51.7 +1.7
      baz=173
BDFB  Brasilia         33.38 132  P   P    04 51 51.1 +0.4
      comp=Z,3.1nm,0.6s,baz=303,slow=9.5,SNR=7.5
BDFB  Brasilia         33.38 132  IAmb IAmb 04 51 52.5
      comp=Z,10nm,1.4s
WHAR  Wooly Hollow     33.40 331  IAmb IAmb 04 51 52.7
      comp=Z,9.5nm,0.6s
O60A  Telford          33.44 357  P   P    04 51 52.4 +1.8
      baz=176
MIAR  Mount Ida        33.46 328  P   P    04 51 51.5 +0.6
      baz=141
WCI   Wyandotte Cave   33.50 341  P   P    04 51 52.5 +1.3
      baz=156
LCAR  Lake Charles     33.50 333  IAmb IAmb 04 51 53.2
      comp=Z,5.8nm,0.7s
O57A  Amberson         33.52 354  P   P    04 51 53.6 +2.2
      baz=172
O56A  Blue Knob Stat   33.68 352  P   P    04 51 54.5 +1.7
      baz=170
P52A  Corning          33.69 347  P   P    04 51 54.3 +1.5
      baz=164
USIN  University of    33.72 339  P   P    04 51 54.6 +1.4
PBMO  Poplar Bluff     33.77 335  IAmb IAmb 04 51 55.8
      comp=Z,11nm,0.6s
FCAR  Ozark Folk Cen   33.80 332  IAmb IAmb 04 51 55.2
      comp=Z,10.0nm,0.5s
N61A  South Mountain   33.83 358  P   P    04 51 55.7 +1.7
      baz=178
WHTX  Lake Whitney,    33.83 321  P   P    04 51 55.2 +1.0
      baz=133
N60A  Cedar Hill Far   33.97 357  P   P    04 51 56.9 +1.6
      baz=176
N57A  Milroy           34.05 354  P   P    04 51 57.8 +1.9
      baz=172
N59A  State Game Lan   34.06 356  P   P    04 51 58.4 +2.4
      baz=175
W39A  Magazine         34.07 329  P   P    04 51 57.1 +0.9
      baz=141,SNR=5.0
W39A  Magazine         34.07 329  IAmb IAmb 04 51 58.1
      comp=Z,11nm,0.7s
PAL   Palisades        34.07 359  P   P    04 51 57.9 +1.9
      baz=178
O53A  New Philadelph   34.09 349  P   P    04 51 57.6 +1.3
      baz=165
T42A  Van Buren        34.27 334  IAmb IAmb 04 51 59.9
      comp=Z,19nm,1.1s
N56A  West Decatur     34.29 353  P   P    04 51 59.3 +1.2
      baz=171
JCT   Junction City    34.39 317  P   P    04 52 00.3 +1.2
      baz=128
M60A  Port Jervis      34.41 358  P   P    04 52 00.6 +1.5
      baz=177
M66A  Nantucket        34.42   4  P   P    04 52 00.7 +1.6
      baz=185
M63A  Gales Ferry      34.47   1  P   P    04 52 01.2 +1.6
      baz=182
M62A  Hamden           34.50   0  P   P    04 52 01.3 +1.6
      baz=180
U40A  Yellville        34.52 331  P   P    04 52 01.1 +1.0
      baz=144,SNR=17
M58A  Price’s Panora   34.56 356  P   P    04 52 02.6 +2.2
      baz=174
N54A  Moraine State    34.57 351  P   P    04 52 02.2 +1.7
      baz=168
M57A  Sunshine Farm,   34.58 355  P   P    04 52 02.6 +2.1
      baz=173
M64A  Tiverton         34.65   2  P   P    04 52 03.2 +2.2
      baz=183
M59A  Waymart          34.66 357  P   P    04 52 03.3 +2.1
      baz=176
M56A  Emporium         34.83 353  P   P    04 52 04.7 +2.0
      baz=171
HHAR  Hobbs            35.00 330  IAmb IAmb 04 52 05.2
      comp=Z,6.6nm,0.6s
M54A  Oil Creek Stat   35.05 351  P   P    04 52 06.3 +1.7
      baz=168
L60A  Shokan           35.06 359  P   P    04 52 06.0 +1.4
      baz=178
L58A  Harry Jones Me   35.18 356  P   P    04 52 07.9 +2.2
      baz=175
CCM   Cathedral Cave   35.20 335  P   P    04 52 06.9 +1.0
      baz=148
CCM   Cathedral Cave   35.20 335  P   P    04 52 06.4 +0.5
L57A  Andrews Acres    35.21 355  P   P    04 52 08.0 +2.0
      baz=173
L61A  Hillsdale 1, H   35.25 359  P   P    04 52 08.5 +2.2
      baz=179
L59A  Walton           35.29 358  P   P    04 52 08.4 +1.8
      baz=176
U38A  Gravette         35.34 330  IAmb IAmb 04 52 08.4
      comp=Z,14nm,1.4s
BINY  Binghamton       35.35 356  P   P    04 52 09.1 +2.0
      baz=175
L56A  Greenwood        35.41 354  P   P    04 52 09.5 +1.8
      baz=172
L61B  Northampton      35.51   1  P   P    04 52 09.8 +1.4
      baz=181
L53A  Girard           35.58 351  P   P    04 52 10.9 +1.8
      baz=168
HRV   Adam Dziewonsk   35.59   2  P   P    04 52 10.6 +1.5
      baz=182
ABTX  Abilene, Hawle   35.63 320  P   P    04 52 10.3 +0.6
      baz=130,SNR=6.4
ABTX  Abilene, Hawle   35.63 320  IAmb IAmb 04 52 11.4
      comp=Z,13nm,0.9s
TUL1  Leonard          35.66 328  P   P    04 52 10.1 +0.2
      baz=139
TUL1  Leonard          35.66 328  P   P    04 52 10.0 +0.2
TUL1                              IAmb IAmb 04 52 10.8
      comp=Z,9.3nm,0.7s
SFIN  Lafayette        35.71 342  P   P    04 52 11.3 +1.1
      baz=156,SNR=7.4
K61A  Williamstown     35.72 360  P   P    04 52 10.6 +0.3
      baz=180
K62A  Royalston        35.73   1  P   P    04 52 12.1 +1.8
      baz=181
K63A  Dunstable        35.77   2  P   P    04 52 12.5 +1.9
      baz=182
S39A  Bolivar          35.82 332  IAmb IAmb 04 52 13.1
      comp=Z,6.4nm,0.7s
K59A  Cooperstown      35.86 358  P   P    04 52 13.1 +1.6
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           baz=177
K58A  Earlville         35.89 357   P        P         04 52 13.6 +1.9
           baz=176
K57A  Scipio Center     35.91 356   P        P         04 52 14.1 +2.2
           baz=174
K56A  Middlesex         35.95 355   P        P         04 52 13.6 +1.4
           baz=173
J62A  Henniker          36.30   2   P        P         04 52 17.2 +2.1
           baz=182
J60A  Lant Hill Farm    36.30 360   P        P         04 52 17.3 +2.2
           baz=179
J63A  Strafford         36.38   2   P        P         04 52 15.4  -0.4
           baz=183
J61A  Chester           36.40   1   P        P         04 52 18.3 +2.2
           baz=181
TXAR  Lajitas Array     36.49 312   P        P         04 52 17.6 +0.5
           comp=Z,5.5nm,0.6s,baz=129,slow=9.1,SNR=72
TXAR                                PcP      PcP       04 54 39.5 +1.8
           comp=Z,0.6nm,0.5s,baz=142,slow=5.1,SNR=5.4
TXAR  Lajitas Array     36.49 312   P        P         04 52 17.9 +0.8
TX32  Lajitas Array     36.49 312   IAmb     IAmb      04 52 18.9
           comp=Z,5.5nm,0.7s
WMOK  Wichita Mounta    36.51 323   P        P         04 52 17.0  -0.2
           baz=134,SNR=5.8
WMOK  Wichita Mounta    36.51 323   IAmb     IAmb      04 52 17.8
           comp=Z,5.9nm,0.7s
J59A  Piesco            36.54 358   P        P         04 52 18.9 +1.7
           baz=178
J57A  Williamstown      36.55 356   P        P         04 52 18.2 +0.9
           baz=175
HDIL  Hopedale          36.60 339   P        P         04 52 18.3 +0.5
           baz=152
P40A  Paris             36.78 335   IAmb     IAmb      04 52 20.4
           comp=Z,9.7nm,0.6s
I58A  Old Forge         36.78 358   P        P         04 52 20.4 +1.1
           baz=177
T35A  Sooner Cattle     36.80 328   IAmb     IAmb      04 52 21.0
           comp=Z,14nm,1.1s
I60A  Shoreham          36.90 360   P        P         04 52 20.2   0.0
           baz=180
I61A  Oroboro, Fairl    36.99   1   P        P         04 52 22.4 +1.4
           baz=181
I64A  Boothbay          37.10   4   P        P         04 52 23.5 +1.7
           baz=186
I63A  Otisfield         37.17   3   P        P         04 52 24.5 +2.0
           baz=184
LBNH  Lisbon            37.31   1   P        P         04 52 26.1 +2.4
           baz=182
H58A  Gabriels          37.48 359   P        P         04 52 27.0 +1.9
           baz=178
I51A  Listowel          37.51 351   P        P         04 52 25.4 +0.1
           baz=167
H57A  Richville         37.57 357   P        P         04 52 27.7 +1.8
           baz=176
L44A  Lake County Fo    37.60 342   P        P         04 52 26.0  -0.2
           baz=155
H61A  Lyndonville       37.60   1   P        P         04 52 27.8 +1.7
           baz=182
H60A  Morristown        37.62   0   P        P         04 52 28.4 +2.1
           baz=180
H62A  Milan             37.67   2   P        P         04 52 28.2 +1.5
           baz=183
H59A  Cadyville         37.70 359   P        P         04 52 27.9 +0.9
           baz=179
H63A  New Sharon        37.81   4   P        P         04 52 29.9 +2.1
           baz=185
H64A  Troy              37.85   5   P        P         04 52 29.8 +1.6
           baz=186
FRNY  Flat Rock         37.89 359   IAmb     IAmb      04 52 33.7
           comp=Z,13nm,1.1s
H65A  Eastbrook         37.99   6   P        P         04 52 31.4 +2.0
           baz=188
G60A  Masonville        38.16   1   P        P         04 52 32.9 +2.1
           baz=181
H66A  Whiting           38.17   7   P        P         04 52 32.7 +1.8
           baz=189
G57A  Newington         38.19 358   P        P         04 52 32.7 +1.7
           baz=177,SNR=5.9
G58A  Ormstown          38.21 359   P        P         04 52 33.1 +1.9
           baz=178
G63A  Kingsbury         38.29   4   P        P         04 52 33.8 +1.9
           baz=185
G62A  West of Eustis    38.34   3   P        P         04 52 34.3 +2.0
           baz=184,SNR=5.2
G62A  West of Eustis    38.34   3   P        P         04 52 33.7 +1.4
G61A  St-Isidore-de-    38.36   2   P        P         04 52 34.1 +1.6
           baz=182
MOQ   Mont Orford       38.37   1   P        P         04 52 33.1 +0.4
AMTX  Amarillo          38.38 321   P        P         04 52 34.3 +1.3
           baz=130
AMTX  Amarillo          38.38 321   IAmb     IAmb      04 52 34.8
           comp=Z,20nm,1.0s
PKME  Peaks-Kenny Pk    38.46   4   P        P         04 52 34.6 +1.3
           baz=186
G64A  Maxfield          38.49   5   P        P         04 52 35.2 +1.6
           baz=187
MSTX  Muleshoe          38.51 319   P        P         04 52 34.4 +0.3
           baz=128,SNR=5.1
MSTX  Muleshoe          38.51 319   P        P         04 52 34.0  -0.1
MSTX                                IAmb     IAmb      04 52 35.0
           comp=Z,8.2nm,0.6s
KSU1  Kansas State U    38.52 330   P        P         04 52 33.8  -0.1
           baz=140
KSU1  Kansas State U    38.52 330   IAmb     IAmb      04 52 34.5
           comp=Z,13nm,0.7s
G65A  Princeton         38.56   6   P        P         04 52 35.9 +1.8
           baz=189
GGN   Saint George      38.56   7   P        P         04 52 34.9 +0.8
L40A  Anamosa           38.62 338   IAmb     IAmb      04 52 44.1
           comp=Z,6.0nm,0.9s
G54A  Lake Saint Pet    38.70 354   P        P         04 52 36.6 +1.3
           baz=172,SNR=6.3
F59A  Saint Guilaume    38.91   0   P        P         04 52 38.5 +1.5
           baz=180
F63A  Nahmakanta, Br    38.91   4   P        P         04 52 38.4 +1.4
           baz=186
MNTX  Cornudas Mount    39.00 314   P        P         04 52 39.0 +0.9
           baz=123,SNR=28
MNTX  Cornudas Mount    39.00 314   P        P         04 52 38.9 +0.8
MNTX                                IAmb     IAmb      04 52 40.7
           comp=Z,12nm,0.8s
JFWS  Jewell Farm       39.02 340   P        P         04 52 38.6 +0.6
           baz=152,SNR=6.4
F60A  Warwick           39.03   1   P        P         04 52 39.3 +1.2
           baz=182
F61A  St Evariste       39.07   2   P        P         04 52 39.7 +1.3
           baz=183
F64A  Sherman           39.13   5   P        P         04 52 40.4 +1.5
           baz=187
ALGO  Algonquin Park    39.24 355   P        P         04 52 41.3 +1.5
           baz=172,SNR=5.9
SCIA  State Center      39.26 336   P        P         04 52 40.7 +0.7
           baz=147
E58A  La Victoria       39.43 360   P        P         04 52 42.8 +1.5
           baz=180
E60A  Ste Agathe de     39.45   2   P        P         04 52 42.6 +1.1
           baz=182
E57A  Chemin Saint G    39.48 359   P        P         04 52 43.5 +1.7
           baz=178
E61A  Lac Etchemin      39.55   3   P        P         04 52 44.5 +2.1
           baz=184
E55A  Montcerf-Lytto    39.59 357   P        P         04 52 44.2 +1.5
           baz=175,SNR=7.2
E56A  St. Veronique     39.63 358   P        P         04 52 44.3 +1.2
           baz=177
E63A  Oxbow             39.68   5   P        P         04 52 44.8 +1.4
           baz=187,SNR=5.0
E63A  Oxbow             39.68   5   P        P         04 52 44.4 +0.9
E64A  Bridgewater       39.73   6   P        P         04 52 45.4 +1.5
           baz=188,SNR=5.8
CBKS  Cedar Bluff       39.92 327   P        P         04 52 45.8 +0.2
           baz=136
D60A  Saint Jean D’O    40.01   2   P        P         04 52 47.8 +1.7
           baz=183
D55A  Sainte-Anne-du    40.12 357   P        P         04 52 49.0 +1.9
           baz=176
D56A  ZEC Mazanza, M    40.13 358   P        P         04 52 48.9 +1.8
           baz=177
D58A  Chemin du LacG    40.15   0   P        P         04 52 49.0 +1.7
           baz=180
D62A  Allapoint, All    40.29   4   P        P         04 52 50.3 +1.9
           baz=186
D62A  Allapoint, All    40.29   4   P        P         04 52 49.4 +1.0
D63A  Stockholm         40.32   5   P        P         04 52 50.6 +1.9
           baz=188,SNR=9.4
D61A  St Aubert, Com    40.33   3   P        P         04 52 51.3 +2.5
           baz=184,SNR=15
LATQ  La Tuque          40.44   0   P        P         04 52 51.6 +1.9
           baz=180,SNR=7.6
LATQ  La Tuque          40.44   0   P        P         04 52 51.1 +1.5
LATQ                                IAmb     IAmb      04 52 52.3
           comp=Z,16nm,1.1s
E46A  Sault Ste Mari    40.59 348   IAmb     IAmb      04 52 53.5
           comp=Z,31nm,1.2s
BATG  Bathurst New B    40.78   7   P        P         04 52 53.2 +0.7
G40A  Rib Lake          41.10 342   P        P         04 52 55.8 +0.6
121A  Cookes Peak, D    41.17 313   P        P         04 52 57.8 +1.6
           baz=121
VLDQ  Val d'Or          41.33 356   P        P         04 52 58.3 +1.3
VLDQ                                IAmb     IAmb      04 53 00.8
           comp=Z,10nm,0.6s
T25A  Trinidad          41.52 321   P        P         04 53 00.4 +1.4
           baz=129
ANMO  Albuquerque       41.54 317   P        P         04 53 00.5 +1.3
           baz=125
ANMO  Albuquerque       41.54 317   P        P         04 52 59.8 +0.7
KSCO  Kaye Shedlock’    41.67 325   P        P         04 53 01.3 +1.2
           baz=133
319A  Douglas           41.71 311   IAmb     IAmb      04 53 03.3
           comp=Z,9.7nm,0.8s
SPMN  Marine on St.     41.93 339   P        P         04 53 02.2 +0.3
           baz=150
ECSD  EROS Data Cent    42.18 334   P        P         04 53 04.1 +0.2
           baz=144,SNR=5.7
ECSD  EROS Data Cent    42.18 334   P        P         04 53 03.9   0.0
LSQQ  Lebel-sur-Quev    42.24 356   P        P         04 53 05.9 +1.5
           baz=174
SDCO  Great Sand Dun    42.58 321   P        P         04 53 09.3 +1.7
           baz=128,SNR=9.5
MATQ  Matagami          42.98 356   P        P         04 53 11.7 +1.3
           baz=173,SNR=7.9
Q24A  Divide            43.13 323   P        P         04 53 13.0 +1.0
           baz=130
TUC   Tucson            43.28 311   P        P         04 53 14.4 +1.4
           baz=118
TUC   Tucson            43.28 311   P        P         04 53 14.0 +0.9
S22A  4UR Ranch, Cre    43.41 320   P        P         04 53 15.8 +1.4
           baz=127,SNR=7.2
X18A  Snowflake         43.74 314   IAmb     IAmb      04 53 19.7
           comp=Z,6.0nm,0.8s
SUSD  Miller            43.77 333   P        P         04 53 16.6  -0.1
           baz=141,SNR=5.0
W18A  Petrified Fore    43.90 315   P        P         04 53 20.2 +2.0
           baz=121,SNR=5.4
W18A  Petrified Fore    43.90 315   IAmb     IAmb      04 53 21.0
           comp=Z,12nm,0.9s
EYMN  Ely               43.90 342   P        P         04 53 18.2 +0.5
           baz=153,SNR=13
ISCO  Idaho Springs     43.94 323   P        P         04 53 20.0 +1.5
           baz=130,SNR=7.1
MVCO  Mesa Verde        44.19 318   P        P         04 53 21.9 +1.4
           baz=124
MVCO  Mesa Verde        44.19 318   P        P         04 53 21.2 +0.8
MVCO                                IAmb     IAmb      04 53 22.6
           comp=Z,4.1nm,0.6s
214A  Organ Pipe Nat    44.66 309   P        P         04 53 25.6 +1.6
           baz=116
PV15  Paradox Valley    44.82 320   IAmb     IAmb      04 53 28.3
           comp=Z,15nm,1.0s
N23A  Red Feather La    44.83 324   P        P         04 53 26.6 +1.0
           baz=130
PV02  Paradox Valley    44.91 319   IAmb     IAmb      04 53 28.6
           comp=Z,9.7nm,0.7s
PV13  Radium Mtn., P    44.93 319   IAmb     IAmb      04 53 28.8
           comp=Z,12nm,0.6s
B35A  Bob, Littlefor    44.97 341   IAmb     IAmb      04 53 27.0
           comp=Z,4.9nm,0.5s
WUAZ  Wupatki           45.25 315   P        P         04 53 30.9 +2.0
           baz=120,SNR=14
WUAZ  Wupatki           45.25 315   IAmb     IAmb      04 53 32.0
           comp=Z,16nm,0.9s
AGMN  Agassiz Nation    45.65 339   P        P         04 53 32.2 +0.6
           baz=148,SNR=7.3
AGMN  Agassiz Nation    45.65 339   P        P         04 53 32.0 +0.4
AGMN                                IAmb     IAmb      04 53 32.9
           comp=Z,7.2nm,0.6s
O20A  White River Ci    45.73 322   P        P         04 53 33.9 +1.4
           baz=127,SNR=5.4
RSSD  Black Hills       45.97 329   P        P         04 53 35.1 +0.7
           baz=135
K22A  Casper            46.30 326   P        P         04 53 37.9 +0.9
           baz=131
U15A  North Rim         46.35 315   IAmb     IAmb      04 53 40.3
           comp=Z,9.0nm,1.0s
SRU   San Rafael Swe    46.57 319   IAmb     IAmb      04 53 41.3
           comp=Z,7.1nm,0.9s
GLA   Glamis            46.66 310   P        P         04 53 41.6 +1.8
           baz=115
MDND  Maddock           46.72 336   P        P         04 53 40.8 +0.8
           baz=142
P17A  Butcher Ranch,    46.91 320   IAmb     IAmb      04 53 44.0
           comp=Z,6.5nm,0.8s
KNB   Kanab             47.01 316   IAmb     IAmb      04 53 45.4
           comp=Z,11nm,0.8s
ESJX  Sierra Juarez     47.11 308   P        P         04 53 44.7 +1.2
ESJX                                IAmb     IAmb      04 53 48.8
           comp=Z,7.1nm,0.8s
LCMT  Little Creek M    47.30 315   IAmb     IAmb      04 53 47.5
           comp=Z,8.6nm,0.9s
ULM   Lac du Bonnet     47.31 340   P        P         04 53 44.2  -0.2
           comp=Z,9.2nm,0.4s,baz=145,slow=7.3,SNR=47
ULM   Lac du Bonnet     47.31 340   IAmb     IAmb      04 53 45.5
           comp=Z,12nm,0.5s
PLCA  Paso Flores       47.35 177   P        P         04 53 43.2  -1.8
           comp=Z,2.4nm,1.1s,baz=338,slow=9.0,SNR=4.4
PLCA                                ScP      ScP       04 58 51.3  -1.5
           comp=Z,2.7nm,0.9s,baz=37,slow=5.1,SNR=3.9
SWSC  Sam W. Stewart    47.37 309   P        P         04 53 46.6 +1.5
           baz=114
IRM   Iron Mountain     47.37 311   P        P         04 53 46.5 +1.3
           baz=115
SZCU  Shurtz Canyon     47.48 316   IAmb     IAmb      04 53 47.8
           comp=Z,5.3nm,0.5s
TCRU  Three Creeks R    47.57 318   IAmb     IAmb      04 53 49.5
           comp=Z,12nm,0.9s
MPU   Maple Canyon      47.78 320   IAmb     IAmb      04 53 50.6
           comp=Z,5.2nm,0.7s
BELC  Belle Mtn. Jos    47.95 310   P        P         04 53 50.9 +1.1
           baz=114
GMRC  Granite Mounta    48.02 312   P        P         04 53 51.3 +0.9
           baz=115
BW06  Boulder Array     48.11 324   P        P         04 53 51.3 +0.3
           baz=128
PDAR  Pinedale Array    48.11 324   P        P         04 53 51.6 +0.6
           comp=Z,1.7nm,0.5s,baz=126,slow=9.0,SNR=26
PDAR                                pP       pP        04 54 26.9 +0.7
           comp=Z,0.5nm,0.6s,baz=107,slow=6.0,SNR=1.6
PDAR                                ScP      ScP       04 58 56.8 +0.5
           comp=Z,0.5nm,0.8s,baz=116,slow=6.8,SNR=3.7
PDAR  Pinedale Array    48.11 324   P        P         04 53 50.8  -0.2
TPFO  Pinon Flats       48.13 310   P        P         04 53 53.1 +1.8
           baz=114
HEC   Hector,Ludlow     48.54 311   P        P         04 53 56.0 +1.7
           baz=115,SNR=6.0
DUG   Dugway, Tooele    48.64 319   P        P         04 53 56.6 +1.5
           baz=122,SNR=8.4
MURC  Murrieta          48.70 309   P        P         04 53 57.1 +1.7
           baz=113
BBRC  Big Bear Solar    48.75 310   P        P         04 53 57.7 +1.6
           baz=114
LAO   LASA Array        48.87 330   P        P         04 53 57.2 +0.6
           baz=134
LAO   LASA Array        48.87 330   P        P         04 53 56.9 +0.4
GSC   Goldstone, Bar    49.09 312   P        P         04 54 00.1 +1.6
           baz=115,SNR=7.7
GSC   Goldstone, Bar    49.09 312   IAmb     IAmb      04 54 00.7
           comp=Z,5.5nm,0.7s
DGMT  Dagmar            49.18 333   P        P         04 54 00.3 +1.5
           baz=137,SNR=13
REDW  Red Top Meadow    49.22 324   IAmb     IAmb      04 54 01.4
           comp=Z,8.1nm,0.6s
SNOW  Snow King Moun    49.23 324   IAmb     IAmb      04 54 02.8
           comp=Z,6.2nm,0.6s
LOHW  Long Hollow       49.23 324   IAmb     IAmb      04 54 01.4
           comp=Z,4.7nm,0.6s
BFSC  Mount Baldy Ra    49.30 310   P        P         04 54 01.6 +1.4
           baz=113
TPNV  Topopah Spring    49.40 314   P        P         04 54 02.7 +1.9
           baz=117,SNR=9.8
RLMT  Red Lodge         49.41 327   P        P         04 54 01.4 +0.5
           baz=130
R11A  Troy Canyon, C    49.57 316   P        P         04 54 03.6 +1.4
           baz=118,SNR=7.2
FMP   Fort Macarthur    49.59 309   P        P         04 54 04.1 +2.0
           baz=112
FURC  Furnace Creek,    49.63 313   P        P         04 54 04.1 +1.8
           baz=116
EDW2  Edwards Air Fo    49.81 311   P        P         04 54 05.0 +1.1
           baz=114
MPMC  Manual Prospec    49.91 312   P        P         04 54 05.8 +0.9
           baz=115
YMR   Madison River     50.07 325   IAmb     IAmb      04 54 08.3
           comp=Z,4.6nm,0.6s
YHH   Holmes Hill       50.08 325   P        P         04 54 07.7 +1.6
YHL   Hebgen Lake       50.31 325   IAmb     IAmb      04 54 10.9
           comp=Z,7.5nm,1.2s
ISA   Isabella, Lake    50.48 311   P        P         04 54 10.5 +1.5
           baz=114
CWC   Cottonwood Cre    50.51 312   P        P         04 54 10.6 +1.3
           baz=115
TPH   Tonopah           50.59 315   IAmb     IAmb      04 54 12.1
           comp=Z,15nm,0.9s
TIN   Tinemaha, Big     50.87 313   P        P         04 54 13.9 +1.9
           baz=115
VES   Vestal, Richgr    51.01 311   P        P         04 54 14.5 +1.7
           baz=113
BOZ   Bozeman (W)       51.01 326   P        P         04 54 14.0 +1.2
           baz=127,SNR=5.4
BOZ   Bozeman (W)       51.01 326   IAmb     IAmb      04 54 14.7
           comp=Z,3.8nm,0.6s
HLID  Hailey            51.47 322   P        P         04 54 17.6 +1.3
           baz=123,SNR=7.5
SMMC  Simmler           51.49 310   P        P         04 54 18.1 +1.6
           baz=112
NVAR  Mina Array Bea    51.51 315   P        P         04 54 17.4 +0.6
           comp=Z,2.0nm,0.7s,baz=126,slow=6.7,SNR=22
NVAR                                PcP      PcP       04 55 29.9 +1.1
           comp=Z,0.4nm,0.4s,baz=130,slow=5.4,SNR=5.3
NVAR                                ScP      ScP       04 59 13.0 +2.0
           comp=Z,0.1nm,0.3s,baz=116,slow=2.1,SNR=2.1
NVAR  Mina Array Bea    51.51 315   P        P         04 54 17.8 +1.0
EGMT  Eagleton          51.54 329   P        P         04 54 17.4 +0.7
           baz=131
LHV   Little Huntoon    51.58 314   IAmb     IAmb      04 54 19.6
           comp=Z,8.7nm,1.4s
MFID  Camas Ranch       52.26 321   IAmb     IAmb      04 54 25.1
           comp=Z,6.3nm,0.7s
YERR  Yerington         52.41 315   IAmb     IAmb      04 54 25.6
           comp=Z,4.9nm,0.6s
PNTR  Pine Nut          52.71 315   IAmb     IAmb      04 54 32.4
           comp=Z,5.3nm,0.8s
VCNR  Virginia City     52.83 315   IAmb     IAmb      04 54 29.4
           comp=Z,3.5nm,0.7s
MSO   Missoula          53.03 326   P        P         04 54 28.8 +1.0
           baz=126
WVOR  Wild Horse Val    53.56 319   IAmb     IAmb      04 54 34.4
           comp=Z,7.4nm,1.1s
JTMT  Jette             53.76 327   IAmb     IAmb      04 54 35.1
           comp=Z,4.5nm,0.8s
FCC   Fort Churchill    54.30 347   P        P         04 54 37.0 +0.5
FCC                                 IAmb     IAmb      04 54 37.6
           comp=Z,13nm,1.2s
F10A  Beach Ranch, E    54.45 323   P        P         04 54 38.0   0.0
F10A                                IAmb     IAmb      04 54 39.2
           comp=Z,5.7nm,0.6s
O03E  Paynes Creek      54.76 315   P        P         04 54 41.0 +0.7
           baz=114
I07A  Izee              54.90 320   IAmb     IAmb      04 54 43.1
           comp=Z,3.7nm,0.5s
G08A  Pilot Rock        55.15 322   IAmb     IAmb      04 54 44.8
           comp=Z,7.7nm,0.6s
M04C  Macdoel           55.40 317   P        P         04 54 46.0 +1.1
           baz=115
O02D  Mt. Diablo Mer    55.40 315   P        P         04 54 44.4  -0.6
           baz=113
NEW   Newport           55.62 326   P        P         04 54 46.9 +0.5
           baz=123
J05D  Fort Rock, OR     55.65 319   P        P         04 54 47.8 +1.0
           baz=116,SNR=6.0
N02D  Trinity Center    55.66 316   P        P         04 54 45.9  -0.9
           baz=114
PINE  Pine Mountain     55.68 319   IAmb     IAmb      04 54 49.4
           comp=Z,11nm,0.8s
L04D  Klamath Falls     55.90 317   P        P         04 54 49.3 +0.8
           baz=115
M02C  Callahan          55.93 316   P        P         04 54 48.8 +0.1
           baz=114
C09A  Chrisman Ranch    56.02 325   IAmb     IAmb      04 54 51.3
           comp=Z,5.9nm,0.7s
J04D  Umpqua Nationa    56.20 318   P        P         04 54 51.9 +1.2
           baz=116
I04A  Tendick Farm,     56.64 319   P        P         04 54 53.8 +0.2
           baz=116
L02E  Cave Junction     56.75 317   P        P         04 54 54.6 +0.2
           baz=114
H04A  Detroit Lake      56.88 320   IAmb     IAmb      04 54 59.4
           comp=Z,7.0nm,0.8s
B08A  Colville Reser    56.92 325   IAmb     IAmb      04 54 56.8
           comp=Z,4.6nm,0.8s
F05D  White Salmon      56.97 321   P        P         04 54 55.9   0.0
           baz=118
K02D  Willamette Mer    57.01 317   P        P         04 54 57.1 +0.8
           baz=114
I03D  Drain, OR         57.21 318   P        P         04 54 58.7 +1.1
           baz=115
YKA   Yellowknife Ar    63.29 340   P        P         04 55 38.8 +0.3
           comp=Z,6.4nm,0.5s,baz=128,slow=7.3,SNR=148
ILULI Ilulissat         63.99   9   P        P         04 55 42.9  -0.1
ICESG Greenland Ices    65.97  13 i P        P         04 55 56.3   0.0
ICESG                               IAmb     IAmb      04 55 57.8
           comp=Z,24nm,0.8s
TIC   Toumodi           67.56  86 eP        P         04 56 05.4  -1.5
LIC   Lamto             67.58  86 eP        P         04 56 05.8  -1.3
           comp=Z,34nm,0.6s
DBIC  Dimbokro          67.72  86   P        P         04 56 06.3  -1.5
           comp=Z,7.3nm,0.6s,baz=279,slow=5.0,SNR=16
DBIC  Dimbokro          67.72  86   P        P         04 56 06.6  -1.3
DBIC                                IAmb     IAmb      04 56 07.5
           comp=Z,7.1nm,0.7s
KIC   Kosan Boka        67.86  86 eP        P         04 56 07.5  -1.3
           comp=Z,27nm,0.6s
KULLO Kullorsuaq        68.35   5 i P        P         04 56 09.2  -1.5
           comp=Z,41nm,0.9s
KULLO Kullorsuaq        68.35   5 i P        P         04 56 09.3  -1.5
KULLO                               IAmb     IAmb      04 56 11.7
           comp=Z,41nm,0.9s
SUMG  Summit            69.01  11⇑iP        P         04 56 15.9 +0.6
           comp=Z,120nm,0.6s
SUMG  Summit            69.01  11   P        P         04 56 15.3   0.0
SUMG  Summit            69.01  11⇑iP        P         04 56 15.9 +0.6
SUMG                                IAmb     IAmb      04 56 16.6
           comp=Z,120nm,0.6s
TULEG Thule             69.73   1   P        P         04 56 19.0  -0.2
TULEG                               IAmb     IAmb      04 56 21.1
           comp=Z,8.0nm,0.6s
INK   Inuvik            73.06 340   P        P         04 56 39.5 +0.2
TORD  Torodi Ar. Bea    73.72  78   P        P         04 56 42.1  -2.1
           comp=Z,1.0nm,0.5s,baz=286,slow=6.4,SNR=8.6
TORD  Torodi Ar. Bea    73.72  78   IAmb     IAmb      04 56 45.2
           comp=Z,0.8nm,0.8s
DBG   Daneborg          73.96  13 i P        P         04 56 44.9 +0.4
DBG                                 IAmb     IAmb      04 56 46.7
           comp=Z,3.7nm,0.8s
BCAR  Beaver Creek A    74.39 334   P        P         04 56 48.8 +1.6
SCRK  Sand Creek        75.58 335   P        P         04 56 54.1  -0.1
           baz=104
DAG   Danmarks Havn     75.67  11⇑iP        P         04 56 54.0  -0.2
           comp=Z,9.9nm,0.8s
DAG   Danmarks Havn     75.67  11⇑iP        P         04 56 54.1  -0.2
DAG                                 IAmb     IAmb      04 56 54.8
           comp=Z,9.9nm,0.8s
PRP   Porcupine Dome    76.59 336   P        P         04 57 00.1 +0.3
HDA   Harding Lake      76.94 335   P        P         04 57 02.6 +0.9
           baz=102
IL31                    76.99 335   P        P         04 57 01.7  -0.1
ILAR  Eielson Array     76.99 335   P        P         04 57 02.2 +0.3
           comp=Z,0.8nm,0.6s,baz=108,slow=4.7,SNR=14
ILAR                                pP       pP        04 57 40.5 +0.2
           comp=Z,0.7nm,0.8s,baz=127,slow=6.0,SNR=2.6
RND   Reindeer          77.58 333   P        P         04 57 06.3 +0.9
RND                                 IAmb     IAmb      04 57 07.7
           comp=Z,6.9nm,0.6s
RC01  Rabbit Creek A    77.62 331   P        P         04 57 06.6 +1.1
           baz=98
SUA   Susitna One       78.16 331   IAmb     IAmb      04 57 10.2
           comp=Z,6.0nm,0.6s
COLD  Coldfoot          78.78 337   P        P         04 57 12.5 +0.8
           baz=99
TOLK  Toolik Lake Re    78.78 339   P        P         04 57 12.4 +0.6
           baz=100
PPLA  Purkeypile        79.01 333   IAmb     IAmb      04 57 14.8
           comp=Z,8.5nm,0.6s
NB2   NORSAR Subarra    81.34  29   P        P         04 57 26.0 +0.4
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      comp=Z,5.5nm,0.8s,baz=267,slow=5.3
NOA   NORSAR Array B   81.34  29 P       P        04 57 25.9 +0.2
      comp=Z,1.8nm,0.5s,baz=267,slow=5.4,SNR=11
GERES GERESS Array B   82.83  42 P       P        04 57 32.8 -1.0
      comp=Z,1.3nm,0.7s,baz=257,slow=2.3,SNR=14
GERES GERESS Array B   82.83  42 P       P        04 57 33.5 -0.3
ARCES ARCESS Array B   86.69  20 P       P        04 57 52.6 +0.1
      comp=Z,6.2nm,0.9s,baz=285,slow=4.6,SNR=9.6
FINES FINESS Array B   88.45  28 P       P        04 58 01.1 +0.1
      comp=Z,1.0nm,0.7s,baz=291,slow=8.3,SNR=5.3
ZALV  Zalesovo Beam   116.69  14 PKP     PKPdf    05 03 52.3  0.0
      comp=Z,1.8nm,0.4s,baz=261,slow=2.4,SNR=9.1
ZALV  Zalesovo Beam   116.69  14         PKPdf    05 03 48.6 -3.8
MKAR  Makanchi Array  122.33  20 PKP     PKPdf    05 04 03.0 -0.5
      comp=Z,1.2nm,0.4s,baz=293,slow=2.8,SNR=17
MKAR  Makanchi Array  122.33  20         PKPdf    05 04 03.1 -0.4
SONM  Songino Array   125.60   0 PKP     PKPdf    05 04 10.5 +0.6
      comp=Z,1.5nm,0.5s,baz=301,slow=0.8,SNR=12
KSH   Kashi           125.76  29 PKP     PKPdf    05 04 08.9 -1.5
AS31  Alice Springs   149.11 234 PKPbc   PKPdf    05 04 56.5 +3.3
ASAR  Alice Springs   149.12 234 PKP     PKPdf    05 04 53.1 -0.1
      comp=Z,2.2nm,0.5s,baz=142,slow=1.6,SNR=6.8
ASAR                             PKPbc   PKPbc    05 04 57.0 -0.5
      comp=Z,2.9nm,0.5s,baz=115,slow=3.6,SNR=17
ASAR                             pPKPbc  pPKPdf   05 05 37.6 +2.8
      comp=Z,2.7nm,0.7s,baz=123,slow=3.3,SNR=5.5
ASAR  Alice Springs   149.12 234 PKPbc   PKPbc    05 04 57.0 -0.5
WRA   Warramunga Arr  150.34 241 PKP     PKPdf    05 04 55.1  0.0
      comp=Z,0.9nm,0.5s,baz=110,slow=2.5,SNR=5.1
WRA                              PKPbc   PKPbc    05 04 59.9 -0.6
      comp=Z,2.9nm,0.4s,baz=109,slow=2.6,SNR=22
WRA                              pPKPbc  pPKPbc   05 05 41.1 -0.8
      comp=Z,2.3nm,0.5s,baz=108,slow=2.6,SNR=4.0
CMAR  Chiang Mai Arr  153.70  17 PKPbc   PKPbc    05 05 08.4 +0.3
      comp=Z,1.6nm,0.3s,baz=316,slow=2.8,SNR=5.9
CMAR                             PKPab   PKPab    05 05 20.6 -0.7
      comp=Z,1.7nm,0.5s,baz=331,slow=5.2,SNR=1.5
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NEIC 13 04:57:11.0±1.2,7°.0S±0°.2×125°.7E±0°.2,h524^{km}±22^{km}, mb4.2/6 Error ellipse: s-maj=28.9km s-min=25.3km az=74.0

IDC 13 04:57:12.1±2.3,7°.04S×125°.56E,h533^{km}±32^{km},mb3.2/1, mb1 3.3/6,mb1mx2.8/35,mbtmp4.2/6,Error ellipse: s-maj=69.5km s-min=25.7km az=70.0

ISC 13 04:57:11.6±1.1,7°.0S±0°.1×125°.7E±0°.1,h511^{km},n15, σ0^s.93/20,Banda Sea

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Code  Station Name     Δ°  AZ°   Phase ID            Time     Res
                                 Op      ISC       h  m  s    ISC
SOEI  Soe               3.13 207 P       P        04 58 25.8 +1.3
SOEI                             S       S        04 59 24.4 +0.7
BATI  Baumata           3.82 212 P       P        04 58 31.0 +1.6
      14nm,0.3s,baz=350,slow=3.6,SNR=5.4
BATI                             S       S        04 59 33.8 +1.1
      7.3nm,0.3s,baz=324,slow=19,SNR=3.7
KAPI  Kappang           6.25 288 P       P        04 58 50.8  0.0
      1.5nm,0.3s,baz=144,slow=10,SNR=12
KAPI  Kappang           6.25 288 P       P        04 58 50.3 -0.6
FAKI  Fak Fak           7.64  59 P       P        04 59 05.0 +0.3
MTN   Manton Dam        7.90 138 P       P        04 59 08.5 +1.2
FITZ  Fitzroy Crossi   11.07 180 P       P        04 59 40.4 +0.1
      0.7nm,0.3s,baz=14,slow=8.8,SNR=27
FITZ                             S       S        05 01 41.5 -1.2
      0.1nm,0.3s,baz=270,slow=20,SNR=7.0
WB0   Warramunga Arr   15.26 147 P       P        05 00 23.7 -0.7
WB0                              IAmb    IAmb     05 00 25.9
      comp=Z,4.6nm,0.8s
WRA   Warramunga Arr   15.37 148 P       P        05 00 24.6 -0.9
      comp=Z,1.2nm,0.3s,baz=325,slow=11,SNR=51
WRA                              S       S        05 03 06.4 +0.9
      comp=Z,0.1nm,0.3s,baz=330,slow=17,SNR=2.4
WB2   Warramunga Arr   15.38 148 P       P        05 00 25.0 -0.7
WB2                              IAmb    IAmb     05 00 32.5
      comp=Z,12nm,1.4s
WR0   Warramunga Arr   15.49 147 P       P        05 00 26.3 -0.5
AS31  Alice Springs    18.37 156 P       P        05 00 54.6 -0.3
ASAR  Alice Springs    18.37 156 P       P        05 00 54.5 -0.4
      comp=Z,0.8nm,0.3s,baz=328,slow=7.7,SNR=30
ASAR                             S       S        05 03 55.6 -1.1
      comp=Z,0.0nm,0.3s,baz=338,slow=20,SNR=6.5
COEN  Coen             18.50 113 P       P        05 00 55.3 -0.8
COEN                             IAmb    IAmb     05 01 17.7
      comp=Z,8.1nm,1.2s
STKA  Stephens Creek   28.87 151 P       P        05 02 28.2 -0.2
      comp=Z,1.7nm,0.5s,baz=322,slow=12,SNR=5.4
```

NEIC 13 05:27:46.0±1.5,17°.6S±0°.1×178°.3W±0°.1,h587^{km}±10^{km}, mb4.6/22,Error ellipse: s-maj=19.4km s-min=13.5km az=205.0

IDC 13 05:27:47.3±1.3,17°.69S×178°.52W,h586^{km}±11^{km},mb3.4/8, mb1 3.7/10,mb1mx3.3/29,mbtmp4.4/10,Error ellipse: s-maj=24.4km s-min=18.4km az=133.0

ISC 13 05:27:43.4±0.5,17°.53S±0°.09×178°.48W±0°.08,h547^{km}, n60,σ1^s.61/62,mb4.4/23,1C,Fiji Islands region

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Code  Station Name     Δ°  AZ°   Phase ID            Time     Res
                                 Op      ISC       h  m  s    ISC
MSVF  Nonsavu           3.31 266 P       P        05 29 06.3 +6.0
      17nm,0.3s,baz=119,slow=5.3,SNR=97
MSVF                             S       S        05 30 13.0  +10
      baz=114,slow=20,SNR=5.6
MSVF  Nonsavu           3.31 266 P       P        05 29 06.7 +6.4
MSVF                             S       S        05 30 13.3  +10
AFI   Afiamalu          7.39  62 P       P        05 29 36.7 +1.5
NIUE  Niue              8.27 102 P       P        05 29 46.5 +2.7
DZM   Mont Dzumac      14.88 250 P       P        05 30 53.0 +1.1
      1.4nm,0.3s,baz=122,slow=17,SNR=10
DZM   Mont Dzumac      14.88 250 P       P        05 30 54.7 +2.7
DZM                              IAmb    IAmb     05 31 08.6
      comp=Z,30nm,1.2s
RAR   Rarotonga        18.03 105 P       P        05 31 19.2 -2.6
OUZ   Omahuta          18.98 200 P       P        05 31 33.3 +3.1
OUZ                              IAmb    IAmb     05 31 34.7
      comp=Z,18nm,0.8s
URZ   Urewera          21.01 190 P       P        05 31 47.5 -1.2
      comp=Z,12nm,1.1s,baz=84,slow=17,SNR=2.6
URZ                              S       S        05 34 59.7 -7.2
      comp=Z,5.4nm,1.0s,baz=12,slow=20,SNR=1.8
WKZ   Wanaka           29.17 198 P       P        05 32 59.3 -1.4
EIDS  Eidsvold         29.33 249 P       P        05 33 03.2 +0.9
EIDS                             IAmb    IAmb     05 33 31.4
      comp=Z,37nm,1.5s
MLZ   Mavora Lakes     29.93 199 P       P        05 33 07.7 +0.4
ARMA  Armidale         30.07 239 P       P        05 33 10.2 +1.4
ARMA                             IAmb    IAmb     05 33 10.6
      comp=Z,6.7nm,0.6s
CAN   Canberra         33.88 232 P       P        05 33 42.3 +1.2
COEN  Coen             37.03 270 P       P        05 34 08.8 +1.3
COEN                             IAmb    IAmb     05 34 09.8
      comp=Z,14nm,0.9s
TOO   Toolangi         37.36 230 P       P        05 34 10.8 +0.9
TOO                              IAmb    IAmb     05 34 11.4
      comp=Z,16nm,0.9s
STKA  Stephens Creek   38.75 241 P       P        05 34 22.1 +0.9
      comp=Z,10nm,0.5s,baz=86,slow=9.4,SNR=31
STKA  Stephens Creek   38.75 241 P       P        05 34 22.5 +1.3
JAY   Jayapura         42.73 286 P       P        05 34 54.7 +1.5
      comp=Z,14nm,0.8s,baz=177,slow=17,SNR=2.0
BBOO  Buckleboo        43.53 241 P       P        05 34 59.9 +0.8
BBOO                             IAmb    IAmb     05 35 00.4
      comp=Z,27nm,0.9s
WR0   Warramunga Arr   44.44 259 P       P        05 35 06.0 -0.4
WR0                              IAmb    IAmb     05 35 07.1
      comp=Z,12nm,1.2s
WB0   Warramunga Arr   44.60 259 P       P        05 35 07.5 -0.1
WB0                              IAmb    IAmb     05 35 08.2
      comp=Z,11nm,0.8s
WB2   Warramunga Arr   44.62 259 P       P        05 35 07.5 -0.2
WB2                              IAmb    IAmb     05 35 08.4
      comp=Z,13nm,0.6s
WRA   Warramunga Arr   44.63 259 P       P        05 35 07.4 -0.5
      comp=Z,8.1nm,0.5s,baz=95,slow=6.8,SNR=189
WRA                              PcP     PcP      05 36 38.7 -0.1
      comp=Z,0.3nm,0.4s,baz=91,slow=3.4,SNR=4.8
AS31  Alice Springs    44.83 254 P       P        05 35 09.8 +0.5
AS31                             IAmb    IAmb     05 35 10.3
      comp=Z,19nm,0.7s
ASAR  Alice Springs    44.83 254 P       P        05 35 09.8 +0.4
      comp=Z,62nm,0.5s,baz=88,slow=8.1,SNR=977
ASAR                             PcP     PcP      05 36 39.3 -0.2
      comp=Z,2.1nm,0.6s,baz=98,slow=4.0,SNR=5.1
ASAR                             S       S        05 41 03.5 -3.8
      comp=Z,0.3nm,0.7s,baz=86,slow=15,SNR=4.1
ASAR  Alice Springs    44.83 254 P       P        05 35 09.4 +0.1
FORT  Forrest          50.11 244 P       P        05 35 48.4 -0.4
FITZ  Fitzroy Crossi   53.02 260 P       P        05 36 10.6 +0.7
MORW  Morawa           60.57 246 P       P        05 37 01.4 -0.2
VNDA  Vanda            60.82 185 P       P        05 37 03.1 +0.8
      comp=Z,0.7nm,0.6s,baz=18,slow=3.2,SNR=1.7
VNDA  Vanda            60.82 185 P       P        05 37 03.5 +1.2
QSPA  South Pole Qui   72.53 180 P       P        05 38 15.4 +0.5
NJ2   Nanjing          77.64 309 eP      P        05 38 43.3 -0.5
NJ2                              pmax    pmax
      comp=Z,6.0nm,0.5s
TRF   Thorofare Moun   83.65  12 P       P        05 39 13.9 -0.6
RND   Reindeer         83.92  13 P       P        05 39 15.7  0.0
RND                              IAmb    IAmb     05 39 16.7
      comp=Z,6.6nm,1.2s
ILAR  Eielson Array    85.53  13 P       P        05 39 22.8 -0.7
      comp=Z,0.3nm,0.4s,baz=225,slow=5.2,SNR=8.9
TXAR  Lajitas Array    85.85  58 P       P        05 39 27.5 +1.6
      comp=Z,0.5nm,0.7s,baz=224,slow=6.3,SNR=5.1
XAN   Xi'an            85.97 307 P       P        05 39 28.0 +1.7
XAN                              pP      PcP      05 39 33.8 +5.7
XAN                              pmax    pmax
      comp=Z,6.0nm,1.0s
XAN                              LR      LR
      comp=N,170nm,15.2s
XAN                              LR      LR
      comp=E,140nm,14.1s
XAN                              LR      LR
      comp=Z,210nm,17.4s
HHC   Hu-ho-hao-te     86.95 314 eP      P        05 39 28.3 -2.6
HHC                              pmax    pmax
      comp=Z,4.0nm,0.8s
HHC                              pmax    pmax
      comp=Z,110nm,5.7s
KMI   Kunming          87.59 297 ⇑P      P        05 39 31.3 -3.1
KMI                              pmax    pmax
      comp=Z,5.0nm,0.7s
CMAR  Chiang Mai Arr   88.69 290 P       P        05 39 40.6 +1.3
      comp=Z,1.1nm,0.3s,baz=95,slow=2.9,SNR=5.8
SNAA  Sanae            90.98 179 P       P        05 39 48.7 -0.4
VNA3  Neumayer Olymp   91.12 176 P       P        05 39 49.3 -0.3
KOLS  Kolonicke sedl  144.43 336 ePKP    PKPab    05 46 18.0  0.0
BRTR  Keskin Array B  144.46 315 PKP     PKPab    05 46 17.9 -0.7
      comp=Z,2.1nm,0.7s,baz=146,slow=2.4,SNR=6.5
CLL   Collm           145.08 347 i PKPbc PKPab    05 46 19.4 -1.0
DPC   Dobruska-Polom  145.16 343 ePKP    PKPab    05 46 20.4 -0.4
KRLC  Kraliky         145.28 343 ePKP    PKPab    05 46 21.0 -0.3
VYHS  Vyhne           146.04 339 ePKP    PKPab    05 46 22.9 -1.4
KHC   Kasperske Hory  146.99 345 ePKP    PKPbc    05 46 25.0 +0.1
CKRC  Cesky Krumlov   147.10 344 ePKP    PKiKP    05 46 25.6 -1.4
GERES GERESS Array B  147.23 345 PKPbc   PKPbc    05 46 25.8 +0.2
      comp=Z,1.7nm,0.6s,baz=21,slow=2.9,SNR=15
CONA  Conrad Observa  147.48 342 eP      PKiKP    05 46 26.9 -0.9
      comp=Z,2.0nm,0.5s
KBA   Koelnbreinsper  148.95 344 eP      PKPbc    05 46 29.4 -0.7
      comp=Z,1.3nm,0.4s
WTTA  Wattenberg      149.19 346 eP      PKiKP    05 46 30.7 -0.8
      comp=Z,2.4nm,0.3s
MOTA  Moosalm         149.23 347 eP      PKiKP    05 46 31.0 -0.6
      comp=Z,1.7nm,0.4s
MYKA  Terra Mystica   149.29 344 eP      PKPbc    05 46 30.1 -0.7
      comp=Z,1.6nm,0.3s
SQTA  Sankt Quirin    149.33 347 eP      PKiKP    05 46 31.0 -0.8
      comp=Z,1.5nm,0.4s
ABTA  Abfaltersbach   149.47 345 eP      PKPbc    05 46 30.7 -0.5
      comp=Z,2.0nm,0.5s
```

IDC 13 05:40:21.7±8.8,36°.31N×70°.83E,h170^{km}±104^{km},mb3.1/3, mb1 3.2/5,mb1mx2.9/30,mbtmp3.6/5,MS3.7/1,Ms1 3.7/1, ms1mx2.7/14,Error ellipse: s-maj=89.4km s-min=30.7km az=136.0

NNC 13 05:40:24.0±8.6,36°.84N×70°.44E,h140^{km}±145^{km},mb2.8, mpv3.5,Error ellipse: s-maj=70.4km s-min=48.2km az=22.0

ISC 13 05:40:20.9±1.2,36°.63N±0°.09×70°.72E±0°.07,h150^{km},n11, σ2^s.24/16,2C-4D,Hindu Kush region

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Code  Station Name     Δ°  AZ°   Phase ID            Time     Res
                                 Op      ISC       h  m  s    ISC
KK31  Karatay Array     6.46 359 ⇑P      Pn       05 41 55.9 +2.2
      0.9nm,0.3s,baz=177,slow=12,SNR=20
KK31                             ⇓S      Sn       05 43 06.6 +0.1
      1.7nm,0.4s,baz=188,slow=24,SNR=7.2
AAK   Ala-Archa         6.67  25 P       Pn       05 41 57.3 +0.8
      1.6nm,0.4s
AAK                              S       Sn       05 43 11.7 +0.2
      5.4nm,0.7s
TKM2  Tokmak 2          7.32  29 P       Pn       05 42 06.9 +1.6
      3.0nm,0.5s
TKM2                             S       Sn       05 43 28.5 +1.4
      3.1nm,0.7s
GEYT  Alibeck          10.13 281 P       Pn       05 42 45.6 +3.1
      0.7nm,0.3s,baz=103,slow=15,SNR=1.7
GEYT                             S       Sn       05 44 34.1 -0.5
      0.5nm,0.3s,baz=110,slow=25,SNR=2.0
MKAR  Makanchi Array   13.32  37 P       P        05 43 28.7 +0.4
      0.1nm,0.3s,baz=220,slow=14,SNR=5.1
AB31  Akbulak array    14.86 331 ⇓P      P        05 43 45.9 +0.6
      0.2nm,0.3s,baz=153,slow=12,SNR=21
AB31                             ⇓S      Sn       05 46 26.3 -1.9
      0.4nm,0.3s
AKTO  Aktyubinsk       16.55 330 ⇓P      Pn       05 44 03.8 -0.3
      0.6nm,0.7s
AKTO                             ⇑S      S        05 47 02.6 -5.3
      0.5nm,0.7s
ZALV  Zalesovo Beam    19.89  25 P       P        05 44 40.9 +0.5
      1.4nm,0.4s,baz=227,slow=11,SNR=7.6
FINES FINESS Array B   37.25 326 LR      LR       06 05 36.0
      comp=Z,90nm,18.3s,baz=14,slow=40
WRA   Warramunga Arr   82.25 122 P       P        05 52 23.0 -2.7
      0.3nm,0.7s,baz=327,slow=5.1,SNR=2.6
ASAR  Alice Springs    84.52 125 P       P        05 52 34.8 -2.4
      0.2nm,0.4s,baz=324,slow=4.6,SNR=2.1
```

KRSC 13 06:40:00.6±1.1,57°.10N×163°.63E,h22^{km}±20^{km},ML5.2

IDC 13 06:40:01.3±0.5,57°.12N×163°.12E,h0^{km},mb4.3/24, mb1 4.6/27,mb1mx4.5/42,mbtmp4.4/27,ML3.5/2,MS3.9/22, Ms1 3.9/22,ms1mx3.8/36,Error ellipse: s-maj=16.8km s-min=10.4km az=155.0

MOS 13 06:40:02.6±0.9,57°.16N×163°.30E,h18^{km},mb5.1/47, MS4.2/18,Error ellipse: s-maj=7.2km s-min=3.3km az=72.6

GCMT 13 06:40:03.1±0.3,57°.08N±0°.02×162°.94E±0°.05,h21^{km}±1^{km}, MW4.9/77,Moment Tensor Solution. s19,c25; s77,c101; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.22±.18; $M_{\theta\theta}$-2.41±.12; $M_{\phi\phi}$0.18±.10; $M_{r\theta}$0.60±.15; $M_{\theta\phi}$-0.04±.06; $M_{\phi r}$-1.75±.23; Best double couple: $M_0$2.89000×10^{16} NP1:ϕ_s246.00000°,δ44.00000°,λ47.00000°. NP2: ϕ_s118.00000°,δ60.00000°,λ123.00000°. Principal axes: T 3.2780, Plg60.0000°, Azm79.0000°; N -0.7790, Plg28.0000°, Azm280.0000°; P -2.5030, Plg9.0000°, Azm185.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

NEIC 13 06:40:03.1±1.2,57°.08N±0°.07×163°.3E±0°.1,h10^{km}±1^{km}, mb5.0/140 Error ellipse: s-maj=14.6km s-min=7.8km az=133.0

ISC 13 06:40:05.6±0.5,57°.08N±0°.03×163°.35E±0°.03,h32^{km}±3^{km}, n615,σ1^s.31/631,mb5.0/133,MS4.2/40,34C-26D,Near east coast of Kamchatka Peninsula

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Code  Station Name     Δ°  AZ°   Phase ID            Time     Res
                                 Op      ISC       h  m  s    ISC
KBG   Krutoberegovo     0.90 204 PN      Pb       06 40 19.4 -3.2
KBG                              S       Sb       06 40 32.2 -2.0
KBG   Krutoberegovo     0.90 204 eP      Pb       06 40 19.4 -3.2
KBG                              eS      Sb       06 40 32.2 -2.0
KBTR  Krutoberegovo     0.92 199 PN      Pn       06 40 19.8 -2.5
KBTR  Krutoberegovo     0.92 199 eP      Pn       06 40 19.8 -2.5
SRKR  Sorokina          1.27 251 PN      Pn       06 40 25.1 -2.1
SRKR  Sorokina          1.27 251 eP      Pn       06 40 25.1 -2.1
BDR   Baidarnaya        1.28 247 PN      Pn       06 40 25.9 -1.4
BDR   Baidarnaya        1.28 247 eP      Pn       06 40 25.9 -1.4
KLY   Klyuchi           1.67 244 PN      Pn       06 40 30.5 -2.1
KLY                              S       Sn       06 40 52.3 -0.6
KLY   Klyuchi           1.67 244 eP      Pn       06 40 30.5 -2.1
KLY                              eS      Sn       06 40 52.3 -0.6
CIRR  Tsirk             1.73 237 PN      Pn       06 40 33.6  0.0
CIRR  Tsirk             1.73 237 eP      Pn       06 40 33.6  0.0
KRSR  Krestovskiy       1.76 242 PN      Pn       06 40 33.0 -1.0
KRSR                             S       Sb       06 40 57.9 -1.1
KRSR  Krestovskiy       1.76 242 eP      Pn       06 40 33.0 -1.0
KRSR                             eS      Sb       06 40 57.9 -1.1
ZLN   Zelenaya          1.76 234 PN      Pn       06 40 33.4 -0.6
ZLN   Zelenaya          1.76 234 eP      Pn       06 40 33.4 -0.6
BZGR  Bezymyannyi-Gr    1.86 233 PN      Pn       06 40 35.0 -0.3
BZGR                             S       Sb       06 41 00.8 -1.0
BZGR  Bezymyannyi-Gr    1.86 233 eP      Pn       06 40 35.0 -0.3
BZGR                             eS      Sb       06 41 00.8 -1.0
BZWR  Bezymyannyi-We    1.93 236 eP      Pn       06 40 35.9 -0.5
BZMR  Bezymyannaya      1.95 235 PN      Pn       06 40 36.3 -0.3
BZMR  Bezymyannaya      1.95 235 eP      Pn       06 40 36.3 -0.3
KIRR  Kirishev          2.01 237 PN      Pn       06 40 36.9 -0.5
KIRR                             S       Sn       06 41 03.0 +1.5
KIRR  Kirishev          2.01 237 eP      Pn       06 40 36.9 -0.5
KIRR                             eS      Sn       06 41 03.0 +1.5
SRDR  Sredinnyy         2.14 251 PN      Pn       06 40 38.8 -0.4
SRDR  Sredinnyy         2.14 251 eP      Pn       06 40 38.8 -0.4
KMNR  Kamenistaya       2.18 234 PN      Pn       06 40 39.7  0.0
KMNR  Kamenistaya       2.18 234 eP      Pn       06 40 39.7  0.0
KOZ   Kozyrevsk         2.18 243 PN      Pn       06 40 39.7 +0.1
KOZ                              S       Sb       06 41 08.3 -2.5
KOZ   Kozyrevsk         2.18 243 eP      Pn       06 40 39.7 +0.1
KOZ                              eS      Sb       06 41 08.3 -2.5
OSSR  Ossora            2.19 356 PN      Pn       06 40 37.0 -2.7
OSSR  Ossora            2.19 356 eP      Pn       06 40 37.0 -2.7
BKI   Bering            2.38 141 PN      Pn       06 40 40.7 -1.7
BKI   Bering            2.38 141 eP      Pn       06 40 40.7 -1.7
BKI                              eS      Sn       06 41 09.4 -1.1
TUMD  Tumrok D          2.50 223 eP      Pn       06 40 45.0 +1.0
TUMR  Tumrok            2.54 226 PN      Pn       06 40 45.4 +0.8
TUMR  Tumrok            2.54 226 eP      Pn       06 40 45.4 +0.8
KZV   Kizimen           2.61 222 PN      Pn       06 40 46.8 +1.2
KZV   Kizimen           2.61 222 eP      Pn       06 40 46.8 +1.2
MKZ   Mys Kozlova       2.69 201 PN      Pn       06 40 46.7 +0.2
MKZ   Mys Kozlova       2.69 201 eP      Pn       06 40 46.7 +0.2
PALN  Palana            2.70 320 PN      Pn       06 40 47.3 +0.6
PALN  Palana            2.70 320 eP      Pn       06 40 47.3 +0.6
ESO   Esso              2.82 248 PN      Pn       06 40 50.7 +2.2
ESO   Esso              2.82 248 eP      Pn       06 40 50.7 +2.2
TILK  Tilichiki         3.68  22 PN      Pn       06 40 59.0 -1.2
TILK  Tilichiki         3.68  22 eP      Pn       06 40 59.0 -1.2
KII   Karymskiy         3.77 218 PN      Pn       06 41 01.9 +0.4
KII   Karymskiy         3.77 218 eP      Pn       06 41 01.9 +0.4
SPN   Mys Shipunski     4.42 207 PN      Pn       06 41 09.8 -0.6
SPN   Mys Shipunski     4.42 207 eP      Pn       06 41 09.8 -0.6
GNL   Ganaly            4.58 225 PN      Pn       06 41 14.0 +1.3
GNL   Ganaly            4.58 225 eP      Pn       06 41 14.0 +1.3
SDLR  Sedlovina         4.58 216 PN      Pn       06 41 13.8 +1.0
SDLR  Sedlovina         4.58 216 eP      Pn       06 41 13.8 +1.0
KRX   Arik              4.59 218 PN      Pn       06 41 15.0 +2.1
KRX   Arik              4.59 218 eP      Pn       06 41 15.0 +2.1
KRER  Koryakskii        4.61 217 PN      Pn       06 41 14.5 +1.3
KRER  Koryakskii        4.61 217 eP      Pn       06 41 14.5 +1.3
SMAR  Somma             4.62 216 PN      Pn       06 41 14.6 +1.2
SMAR  Somma             4.62 216 eP      Pn       06 41 14.6 +1.2
KOK   Koryaka           4.65 217 PN      Pn       06 41 15.9 +2.2
KOK   Koryaka           4.65 217 eP      Pn       06 41 15.9 +2.2
UGLR  Uglovaya          4.66 216 PN      Pn       06 41 15.6 +1.8
UGLR  Uglovaya          4.66 216 eP      Pn       06 41 15.6 +1.8
DALK  Dalny             4.84 215 PN      Pn       06 41 17.0 +0.9
DALK  Dalny             4.84 215 eP      Pn       06 41 17.0 +0.9
PET   Petropavlovsk     4.88 216 ePN     Pn       06 41 17.7 +1.1
PET                              pmax    pmax
      comp=Z,150nm,0.5s
PET                              MLR     MLR
      comp=Z,5µm,13.0s
PET                              MLR     MLR
      comp=Z,8µm,10.0s
PET   Petropavlovsk     4.88 216         Pn       06 41 17.9 +1.3
PEA0B Petropavlovsk-    5.13 222 dePN    Pn       06 41 21.6 +1.4
PEA0B Petropavlovsk-    5.13 222 Pn      Pn       06 41 20.6 +0.4
PETK  Petropavlovsk-    5.13 222 Pn      Pn       06 41 20.6 +0.5
      comp=Z,2.3nm,0.3s,baz=62,slow=16,SNR=14
PETK                             Lg      Lg       06 42 35.8
      baz=16,slow=41,SNR=1.6
PETK                             LR      LR       06 43 44.6
      comp=Z,3µm,19.9s,baz=40,slow=44
PETK  Petropavlovsk-    5.13 222 PN      Pn       06 41 21.0 +0.8
PETK  Petropavlovsk-    5.13 222 Pn      Pn       06 41 21.0 +0.8
KRMR  Karymshinskiy     5.21 217 PN      Pn       06 41 23.1 +1.9
KRMR  Karymshinskiy     5.21 217 eP      Pn       06 41 23.1 +1.9
GRL   Gorelyy           5.46 216 PN      Pn       06 41 26.8 +2.0
GRL   Gorelyy           5.46 216 eP      Pn       06 41 26.8 +2.0
APC   Apacha            5.47 223 PN      Pn       06 41 26.8 +1.9
APC   Apacha            5.47 223 eP      Pn       06 41 26.8 +1.9
MTVR  Mutnovka          5.49 215 PN      Pn       06 41 26.5 +1.3
MTVR  Mutnovka          5.49 215 eP      Pn       06 41 26.5 +1.3
KMSK  Kamenskaya        5.60  14 PN      Pn       06 41 25.7 -0.8
KMSK  Kamenskaya        5.60  14 eP      Pn       06 41 25.7 -0.8
MA2   Magadan           7.08 296 Pn      Pn       06 41 50.2 +3.3
      comp=Z,1.2nm,0.3s,baz=94,slow=12,SNR=12
MA2                              Sn      Sn       06 43 07.3 +1.2
      comp=Z,1.1nm,0.3s,baz=90,slow=14,SNR=1.7
MA2                              Lg      Lg       06 43 34.9
      comp=Z,0.5nm,0.3s,baz=62,slow=7.6,SNR=4.0
MA2                              LR      LR       06 44 21.6
      comp=Z,200nm,19.1s,baz=104,slow=38
MA2   Magadan           7.08 296 PN      Pn       06 41 49.2 +2.3
MA2   Magadan           7.08 296 Pn      Pn       06 41 49.2 +2.3
SEY   Seymchan          8.03 321 Pn      Pn       06 42 02.1 +2.2
      comp=Z,0.6nm,0.3s,baz=136,slow=15,SNR=1.8
SEY                              Lg      Lg       06 44 11.1
      comp=Z,0.4nm,0.3s,baz=178,slow=23,SNR=1.3
SEY                              LR      LR       06 45 36.6
      comp=Z,857nm,19.4s,baz=116,slow=42
SEY   Seymchan          8.03 321 ePN     Pn       06 42 02.3 +2.4
OKH   Okha             12.14 262 dePN    Pn       06 43 00.5 +4.4
OKH                              MLR     MLR
      comp=N,800nm,13.0s
OKH                              MLR     MLR
      comp=Z,800nm,12.0s
OKH                              MLR     MLR
      comp=E,600nm,11.0s
TYV   Tymovskoe        13.64 252 eP      P        06 43 22.4 -2.7
TYV                              eS      Sn       06 45 57.4  +10
TYV                              pmax    pmax
      comp=Z,12nm,1.3s
TYV                              pmax    pmax
      comp=Z,200nm,2.1s
TYV                              smax    smax
      comp=E,7.0nm,1.0s
TYV                              MLR     MLR
      comp=Z,800nm,15.0s
TYV                              MLR     MLR
      comp=E,2µm,14.0s
GAMB  Gambell          13.96  51 Pn      Pn       06 43 21.6 +0.7
KUR   Kuril'sk         15.28 226 ⇓eP     Pn       06 43 40.3 +1.6
KUR                              MLR     MLR
      comp=Z,1µm,13.0s
TNA   Tin City         16.05  46 P       Pn       06 43 49.8 +1.2
      baz=252,SNR=21
TNA   Tin City         16.05  46         P        06 43 50.4 -1.3
YSS   Yuzh-Sakhalins   16.16 240 eP      P        06 43 52.1 -0.9
YSS                              eS      Sn       06 46 47.9 -0.3
YSS                              pmax    pmax
      comp=Z,20nm,1.1s
YSS                              MLR     MLR
      comp=Z,1µm,13.0s
ANM   Nome             16.84  51 P       P        06 44 00.7 +0.3
ANM                              pmax    pmax
      comp=Z,59nm,1.2s
ANM   Nome             16.84  51         P        06 44 00.7 +0.3
GRNR  Gornyy           16.99 260 eP      Pn       06 43 53.0 -7.7
GRNR                             MLR     MLR
      comp=E,520nm,12.0s
GRNR                             MLR     MLR
      comp=N,280nm,14.0s
GRNR                             MLR     MLR
      comp=Z,600nm,11.0s
YUK   Yuzh-Kuril'sk    17.07 228 eP      P        06 44 06.8 +3.7
YUK                              eS      S        06 47 14.9 -4.3
YUK                              MLR     MLR
      comp=Z,879nm,12.0s
YAK   Yakutsk          17.62 300 P       Pn       06 44 08.0 -0.3
      comp=Z,0.4nm,0.3s,baz=2.1,slow=1.3,SNR=1.7
YAK                              LR      LR       06 51 50.2
      comp=Z,220nm,19.1s,baz=98,slow=40
YAK   Yakutsk          17.62 300 eP      P        06 44 08.3 -0.8
YAK                              eS      S        06 47 27.3 -2.9
YAK                              pmax    pmax
      comp=Z,37nm,1.0s
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YAK				pmax	pmax		
	comp=N,4.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,19nm,1.3s						
YAK				pmax	pmax		
	comp=Z,178nm,1.9s						
YAK				pmax	pmax		
	comp=N,59nm,1.8s						
YAK				pmax	pmax		
	comp=E,170nm,2.0s						
YAK				smax	smax		
	comp=N,85nm,2.8s						
YAK				smax	smax		
	comp=E,40nm,2.7s						
YAK				MLR	MLR		
	comp=Z,416nm,9.0s						
YAK				MLR	MLR		
	comp=E,293nm,8.0s						
YAK				MLR	MLR		
	comp=N,144nm,8.0s						
YAK	**Yakutsk**	**17.62**	**300**	P	**P**	**06 44 08.3**	**-0.8**
ASAJ	**Asahikawa**	**18.39**	**234**	P	**P**	**06 44 17.4**	**-0.3**
	comp=N,0.5nm,0.3s,baz=33,slow=8.3,SNR=6.4						
ASAJ				LR	LR	06 51 37.9	
	comp=N,659nm,19.7s,baz=52,slow=38						
RDOG	**Red Dog Mine**	**18.74**	**41**	P	**Pn**	**06 44 22.7**	**+0.7**
ERM	**Erimo**	**19.85**	**229⇑**	*e*P	**P**	**06 44 33.0**	**-0.7**
ERM				MLR	MLR		
	comp=Z,812nm,12.0s						
KLR	**Kul'dur**	**20.36**	**261**	P	**P**	**06 44 39.2**	**+0.1**
	comp=Z,3.0nm,1.0s,baz=41,slow=16,SNR=7.6						
KLR				LR	LR	06 52 58.7	
	comp=Z,191nm,18.4s,baz=58,slow=38						
KLR	**Kul'dur**	**20.36**	**261⇓**	*e*P	**P**	**06 44 39.0**	**-0.1**
KLR				pmax	pmax		
	comp=Z,6.0nm,1.4s						
TIXI	**Tiksi**	**20.42**	**329***c*	*i*P	Pn	06 44 40.2	-1.6
TIXI				pmax	pmax		
	comp=Z,286nm,1.3s						
TIXI	**Tiksi**	**20.42**	**329**	P	**P**	**06 44 39.8**	**+0.2**
TIXI				IAmb	IAmb	06 44 41.6	
	comp=Z,70nm,1.2s						
ZEA	**Zeya**	**20.61**	**276**	*e*P	**P**	**06 44 41.7**	**-0.1**
ZEA				*e**SP	**sP**	**06 44 57.1**	**+2.9**
ZEA				*e*S	S	06 48 18.0	-12
ZEA				pmax	pmax		
	comp=E,30nm,1.6s						
ZEA				pmax	pmax		
	comp=Z,50nm,1.3s						
ZEA				smax	smax		
	comp=E,200nm,5.5s						
ZEA				MLR	MLR		
	comp=E,500nm,13.0s						
ZEA				MLR	MLR		
	comp=N,600nm,12.0s						
ZEA				MLR	MLR		
	comp=Z,600nm,12.0s						
TTA	**Tatalina**	**20.86**	**57**	P	Pn	06 44 46.6	-0.5
TTA				pmax	pmax		
	comp=Z,124nm,1.2s						
TTA	**Tatalina**	**20.86**	**57**	P	Pn	06 44 46.6	-0.5
TTA				IAmb	IAmb	06 44 48.0	
	comp=Z,124nm,1.2s						
SVW2	**Sparrevohn**	**21.22**	**62**	P	**P**	**06 44 50.0**	**+1.7**
SVW2				IAmb	IAmb	06 44 51.8	
	comp=Z,73nm,1.3s						
IMAR	**Indian Mountai**	**21.87**	**48**	P	**P**	**06 44 56.9**	**+1.7**
A21K	**Barrow**	**21.91**	**34**	P	**P**	**06 44 55.8**	**+0.2**
	baz=250,SNR=18						
A21K	**Barrow**	**21.91**	**34**	P	**P**	**06 44 55.3**	**-0.4**
A21K				IAmb	IAmb	06 45 10.7	
	comp=Z,96nm,1.1s						
PPLA	**Purkeypile**	**22.60**	**57**	P	**P**	**06 45 04.2**	**+0.9**
PPLA				IAmb	IAmb	06 45 23.1	
	comp=Z,66nm,1.2s						
RSO	**Redoubt South**	**22.69**	**63**	P	**P**	**06 45 05.3**	**+1.0**
SKT	**Skwentna**	**23.02**	**59**	P	**P**	**06 45 08.1**	**+0.6**
BPAW	**Bear Paw Mtn.**	**23.04**	**53**	P	**P**	**06 45 08.9**	**+1.1**
BPAW				IAmb	IAmb	06 45 11.5	
	comp=Z,96nm,1.2s						
MLY	**Manley**	**23.11**	**51**	P	**P**	**06 45 09.6**	**+1.2**
	baz=272,SNR=54						
KTH	**Kantishna Hill**	**23.11**	**55**	P	**P**	**06 45 09.8**	**+1.3**
COLD	**Coldfoot**	**23.35**	**45**	P	**P**	**06 45 11.5**	**+0.8**
	baz=267,SNR=24						
COLD	**Coldfoot**	**23.35**	**45**	P	**P**	**06 45 11.0**	**+0.2**
TRF	**Thorofare Moun**	**23.41**	**55**	P	**P**	**06 45 12.4**	**+0.9**
USRK	**Ussuriysk Ar.**	**23.45**	**250**	P	**P**	**06 45 11.6**	**-0.3**
	comp=Z,1.9nm,0.7s,baz=74,slow=6.2,SNR=2.3						
USRK	**Ussuriysk Ar.**	**23.45**	**250**	P	**P**	**06 45 10.9**	**-1.0**
SUA	**Susitna One**	**23.47**	**60**	P	**P**	**06 45 12.9**	**+0.8**
CUT	**Chulitna**	**23.54**	**58**	P	**P**	**06 45 13.1**	**+0.5**
	baz=278,SNR=14						
I23K	**Minto, Yukon-K**	**23.68**	**51**	P	**P**	**06 45 15.1**	**+1.1**
	baz=273,SNR=64						
I23K	**Minto, Yukon-K**	**23.68**	**51**	P	**P**	**06 45 15.0**	**+1.0**
TOLK	**Toolik Lake Re**	**23.69**	**42**	P	**P**	**06 45 14.6**	**+0.5**
	baz=264,SNR=89						
TOLK	**Toolik Lake Re**	**23.69**	**42**	P	**P**	**06 45 14.6**	**+0.5**
BWN	**Browne**	**23.70**	**53**	P	**P**	**06 45 15.8**	**+1.6**
BRLK	**Bradley Lake**	**23.75**	**64**	P	**P**	**06 45 14.5**	**-0.2**
BRLK				IAmb	IAmb	06 45 23.1	
	comp=Z,35nm,1.0s						
NEA2	**Nenana**	**23.84**	**52**	P	**P**	**06 45 16.3**	**+0.8**
	baz=274,SNR=27						
MCK	**McKinley**	**23.98**	**54**	P	**P**	**06 45 17.3**	**+0.5**
	baz=276,SNR=44						
RC01	**Rabbit Creek A**	**24.02**	**61**	P	**P**	**06 45 17.2**	**0.0**
	baz=282,SNR=5.6						
RND	**Reindeer**	**24.05**	**55**	P	**P**	**06 45 17.6**	**0.0**
RND				pmax	pmax		
	comp=Z,42nm,0.8s						
RND	**Reindeer**	**24.05**	**55**	P	**P**	**06 45 17.6**	**0.0**
RND				IAmb	IAmb	06 45 19.6	
	comp=Z,42nm,0.8s						
O22K	**Cooper Landing**	**24.15**	**62**	P	**P**	**06 45 19.0**	**+0.6**
MDM	**Murphy Dome**	**24.18**	**51**	P	**P**	**06 45 19.0**	**+0.3**
MDM				IAmb	IAmb	06 45 21.4	
	comp=Z,48nm,1.0s						
PMR	**Palmer**	**24.21**	**59**	P	**P**	**06 45 18.5**	**-0.3**
PMR				pmax	pmax		
	comp=Z,18nm,1.0s						
PMR	**Palmer**	**24.21**	**59**	P	**P**	**06 45 18.5**	**-0.3**
WRH	**Wood River Hil**	**24.27**	**52**	P	**P**	**06 45 20.3**	**+0.8**
TCOL	**CIGO, UAF Yank**	**24.34**	**51**	P	**P**	**06 45 20.3**	**+0.3**
	baz=275,SNR=22						
TCOL	**CIGO, UAF Yank**	**24.34**	**51**	P	**P**	**06 45 20.9**	**+0.9**
COLA	**College**	**24.34**	**51***c*	*i*P	**P**	**06 45 20.5**	**+0.4**
COLA				*i* *PP	**sP**	**06 45 30.2**	**-1.7**
COLA				pmax	pmax		
	comp=Z,100nm,1.1s						
COLA				MLR	MLR		
	comp=Z,234nm,17.0s						
COLA	**College**	**24.34**	**51**	P	**P**	**06 45 20.9**	**+0.8**
CCB	**Clear Creek Bu**	**24.38**	**52**	P	**P**	**06 45 20.9**	**+0.4**
POKR	**Poker Plat Res**	**24.50**	**51**	P	**P**	**06 45 22.7**	**+1.1**
	baz=274,SNR=30						
POKR	**Poker Plat Res**	**24.50**	**51**	P	**P**	**06 45 22.4**	**+0.8**
POKR				IAmb	IAmb	06 45 24.8	
	comp=Z,59nm,0.9s						
SML	**Sawmill**	**24.54**	**59**	P	**P**	**06 45 22.7**	**+0.7**
SML				IAmb	IAmb	06 45 31.1	
	comp=Z,55nm,0.9s						
KNK	**Knik Glacier**	**24.56**	**60**	P	**P**	**06 45 22.4**	**+0.3**
KNK				IAmb	IAmb	06 45 42.5	
	comp=Z,47nm,1.1s						
IL31		**24.76**	**51**	P	**P**	**06 45 24.3**	**+0.4**
ILAR	**Eielson Array**	**24.76**	**51**	P	**P**	**06 45 24.2**	**+0.3**
	comp=Z,56nm,0.8s,baz=266,slow=8.2,SNR=224						
ILAR				LR	LR	06 57 00.6	
	comp=Z,201nm,18.1s,baz=286,slow=41						
ILAR	**Eielson Array**	**24.76**	**51**	P	**P**	**06 45 24.1**	**+0.1**
HDA	**Harding Lake**	**24.77**	**52**	P	**P**	**06 45 24.0**	**-0.1**
	baz=276,SNR=28						
HDA	**Harding Lake**	**24.77**	**52**	P	**P**	**06 45 24.0**	**-0.1**
HDA				IAmb	IAmb	06 45 26.8	
	comp=Z,31nm,0.8s						
SCM	**Sheep Creek Mo**	**25.00**	**58**	P	**P**	**06 45 26.9**	**+0.7**
SCM				pmax	pmax		
	comp=Z,222nm,0.8s						
SCM	**Sheep Creek Mo**	**25.00**	**58**	P	**P**	**06 45 26.9**	**+0.7**
PRP	**Porcupine Dome**	**25.27**	**49**	P	**P**	**06 45 29.1**	**+0.5**
FYU	**Fort Yukon**	**25.31**	**47**	P	**P**	**06 45 30.0**	**+1.2**
M24K	**Tolsona, Glenn**	**25.48**	**57**	P	**P**	**06 45 31.8**	**+1.3**
	baz=282,SNR=26						
M24K	**Tolsona, Glenn**	**25.48**	**57**	P	**P**	**06 45 31.5**	**+1.0**
BMAR	**Burnt Mountain**	**25.53**	**45**	P	**P**	**06 45 32.1**	**+1.2**
PAX	**Paxson**	**25.64**	**55**	P	**P**	**06 45 32.2**	**+0.3**
PAX				pmax	pmax		
	comp=Z,78nm,1.2s						
PAX	**Paxson**	**25.64**	**55**	P	**P**	**06 45 32.2**	**+0.3**
KLU	**Klutina**	**25.73**	**59**	P	**P**	**06 45 33.3**	**+0.5**
KLU				IAmb	IAmb	06 45 52.8	
	comp=Z,46nm,1.0s						
RIDG	**Independent Ri**	**25.78**	**54**	P	**P**	**06 45 33.1**	**-0.1**
RIDG				IAmb	IAmb	06 45 34.1	
	comp=Z,62nm,1.2s						
BOD	**Bodaibo**	**26.09**	**293**	*e*P	**P**	**06 45 35.1**	**-0.9**
BOD				pmax	pmax		
	comp=Z,30nm,1.8s						
SCRK	**Sand Creek**	**26.12**	**53**	P	**P**	**06 45 36.0**	**-0.4**
	baz=280,SNR=65						
DOT	**Dot Lake**	**26.14**	**54**	P	**P**	**06 45 36.6**	**+0.1**
DOT				IAmb	IAmb	06 45 49.4	
	comp=Z,22nm,0.8s						
N25K	**Chitina, Valde**	**26.32**	**58**	P	**P**	**06 45 39.3**	**+1.1**
	baz=284,SNR=14						
N25K	**Chitina, Valde**	**26.32**	**58**	P	**P**	**06 45 38.4**	**+0.3**
N25K				IAmb	IAmb	06 45 45.3	
	comp=Z,30nm,1.0s						
MENT	**Mentasta**	**26.43**	**55**	P	**P**	**06 45 39.2**	**+0.1**
MENT				IAmb	IAmb	06 45 52.0	
	comp=Z,45nm,1.4s						
MJAR	**Matsushiro Arr**	**26.52**	**230**	P	**P**	**06 45 40.5**	**+0.4**
	comp=Z,1.3nm,0.3s,baz=0.3,slow=7.8,SNR=4.6						
MJAR				LR	LR	06 57 14.1	
	comp=Z,720nm,19.1s,baz=45,slow=39						
GLB	**Gilahina Butte**	**26.73**	**58**	P	**P**	**06 45 42.6**	**+0.8**
GLB				IAmb	IAmb	06 45 44.1	
	comp=Z,49nm,1.2s						
VRDI	**Verde Repeater**	**26.95**	**59**	P	**P**	**06 45 44.6**	**+0.6**
VRDI				IAmb	IAmb	06 46 10.3	
	comp=Z,48nm,1.4s						
MCARA	**McCarthy VSAT**	**27.11**	**58**	P	**P**	**06 45 46.2**	**+1.1**
MCARA				IAmb	IAmb	06 46 10.3	
	comp=Z,54nm,1.0s						
EGAK	**Eagle**	**27.19**	**51**	P	**P**	**06 45 45.6**	**-0.2**
EGAK				IAmb	IAmb	06 45 46.9	
	comp=Z,40nm,1.1s						
CRQM	**Cirque**	**27.22**	**60**	P	**P**	**06 45 47.5**	**+1.1**
BCAR	**Beaver Creek A**	**27.26**	**54**	P	**P**	**06 45 47.6**	**+1.0**
BARN	**Barnard Glacie**	**27.83**	**59**	P	**P**	**06 45 52.9**	**+1.1**
CTGM	**Chitina Glacie**	**28.01**	**59**	P	**P**	**06 45 53.6**	**+0.2**
CTGM				IAmb	IAmb	06 46 00.3	
	comp=Z,31nm,1.1s						
TABL	**Table Mountain**	**28.26**	**60**	P	**P**	**06 45 56.0**	**+0.3**
TABL				IAmb	IAmb	06 46 12.5	
	comp=Z,43nm,1.2s						
INK	**Inuvik**	**29.61**	**42**	P	**P**	**06 46 08.4**	**+1.1**
	comp=Z,7.9nm,1.1s,baz=278,slow=7.8,SNR=14						
INK	**Inuvik**	**29.61**	**42**	P	**P**	**06 46 07.4**	**+0.1**
INK				IAmb	IAmb	06 46 17.6	
	comp=Z,34nm,1.2s						
HYT	**Haines Junctio**	**29.83**	**58**	P	**P**	**06 46 10.3**	**+0.7**
HYT				IAmb	IAmb	06 46 12.4	
	comp=Z,26nm,1.0s						
KSRS	**Korea Array**	**30.52**	**245**	P	**P**	**06 46 13.8**	**-1.9**
	comp=Z,0.8nm,0.6s,baz=46,slow=8.3,SNR=2.1						
JNU	**Nakatsue**	**32.62**	**237**	LR	LR	06 59 44.3	
	comp=Z,450nm,20.1s,baz=50,slow=36						
C36M	**Paulatuk**	**32.73**	**39**	P	**P**	**06 46 35.4**	**+0.7**
	baz=286,SNR=20						
C36M	**Paulatuk**	**32.73**	**39**	P	**P**	**06 46 34.9**	**+0.2**
C36M				IAmb	IAmb	06 46 36.2	
	comp=Z,18nm,0.7s						
JCJ	**Chichijima**	**33.54**	**216**	LR	LR	06 59 50.0	
	comp=Z,76nm,21.6s,baz=154,slow=36						
NRIK	**Noril'sk**	**33.82**	**322**	P	**P**	**06 46 43.7**	**-0.6**
	comp=Z,4.6nm,0.8s,baz=75,slow=5.6,SNR=5.7						
NRIK				LR	LR	07 01 25.8	
	comp=Z,329nm,21.9s,baz=74,slow=38						
NRIK	**Noril'sk**	**33.82**	**322⇓**	*e*P	**P**	**06 46 44.4**	**+0.1**
NRIK				pmax	pmax		
	comp=Z,13nm,1.3s						
TLY	**Talaya**	**34.20**	**287⇓**	*e*P	**P**	**06 46 49.6**	**+1.8**
TLY				pmax	pmax		
	comp=Z,9.0nm,1.5s						
TLY				MLR	MLR		
	comp=Z,198nm,15.0s						
TLY	**Talaya**	**34.20**	**287**	P	**P**	**06 46 48.4**	**+0.6**
ULN	**Ulaanbaatar**	**34.57**	**279⇓**	*e*P	**P**	**06 46 50.8**	**-0.4**
ULN				pmax	pmax		
	comp=Z,4.0nm,1.3s						
ULN				MLR	MLR		
	comp=Z,269nm,14.0s						
SONM	**Songino Array**	**34.95**	**280**	P	**P**	**06 46 53.4**	**-1.0**
	comp=Z,0.8nm,0.8s,baz=48,slow=11,SNR=4.9						
SONM				PcP	**PcP**	**06 49 24.8**	**-1.4**
	comp=Z,0.4nm,0.6s,baz=70,slow=1.7,SNR=3.7						
SONM				LR	LR	07 01 47.0	
	comp=Z,133nm,19.6s,baz=32,slow=38						
SONM	**Songino Array**	**34.95**	**280**	P	**P**	**06 46 53.7**	**-0.8**
ZAK	**Zakamensk**	**35.12**	**285**	*e*P	P	06 46 48.4	-7.4
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
HHC	**Hu-ho-hao-te**	**36.67**	**266**	*e*P	**P**	**06 47 11.3**	**+2.1**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,95nm,7.6s						
HHC				LR	LR		
	comp=Z,600nm,16.0s						
HHC				LR	LR		
	comp=Z,590nm,13.6s						
HHC				LR	LR		
	comp=Z,610nm,14.1s						
H11N2	**WAKE ISLAND Hy**	**37.38**	**174**	T	T	07 26 11.5	
	baz=357,slow=76,SNR=389						
H11N3	**WAKE ISLAND Hy**	**37.40**	**174**	T	T	07 26 08.5	
	baz=357,slow=76,SNR=277						
H11N1	**WAKE ISLAND Hy**	**37.40**	**174**	T	T	07 26 08.9	
	baz=357,slow=76,SNR=321						
EUNU	**Eureka**	**37.62**	**16**	P	**P**	**06 47 17.3**	**+0.5**
H11S1	**WAKE ISLAND Hy**	**38.59**	**175**	T	T	07 27 43.5	
	baz=348,slow=76						
H11S3	**WAKE ISLAND Hy**	**38.60**	**175**	T	T	07 27 43.3	
	baz=348,slow=76						
H11S2	**WAKE ISLAND Hy**	**38.61**	**175**	T	T	07 27 54.5	
	baz=348,slow=76						
RES	**Resolute Bay**	**38.92**	**24**	P	**P**	**06 47 27.9**	**+0.2**
	comp=Z,3.7nm,0.9s,baz=316,slow=8.8,SNR=8.9						
YKA	**Yellowknife Ar**	**39.01**	**47**	P	**P**	**06 47 29.4**	**+0.8**
	comp=Z,8.7nm,0.8s,baz=301,slow=7.4,SNR=118						
YKA				LR	LR	07 04 24.0	
	comp=Z,76nm,20.7s,baz=0.0,slow=37						
YKA	**Yellowknife Ar**	**39.01**	**47**	*i* P	**P**	**06 47 29.8**	**+1.2**
YKA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
JOW	**Kunigami**	**39.15**	**234**	LR	LR	07 03 50.8	
	comp=Z,186nm,21.8s,baz=75,slow=37						
NJ2	**Nanjing**	**39.36**	**250**	*e*P	**P**	**06 47 32.4**	**+0.6**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,90nm,3.8s						
NJ2				LR	LR		
	comp=Z,610nm,14.2s						
NJ2				LR	LR		
	comp=Z,410nm,12.8s						
NJ2				LR	LR		
	comp=Z,510nm,14.7s						
ZALV	**Zalesovo Beam**	**42.28**	**301**	P	**P**	**06 47 54.0**	**-1.6**
	comp=Z,0.3nm,0.3s,baz=51,slow=9.4,SNR=1.9						
WHN	**Wuhan**	**42.88**	**253**	⇓P	P	06 47 55.8	-5.0
A04D	**Lummi Island**	**43.31**	**68**	P	**P**	**06 48 04.8**	**+0.8**
	baz=310						
DGZ	**Jazzator, Alta**	**43.66**	**294⇓**	*e*P	**P**	**06 48 07.1**	**0.0**
DGZ				pmax	pmax		
	comp=Z,7.0nm,1.0s						
DGZ				MLR	MLR		
	comp=Z,371nm,15.0s						
D03D	**Eldon**	**43.88**	**70**	P	**P**	**06 48 09.8**	**+1.2**
	baz=311						
B05A	**Bryant**	**43.91**	**68**	P	**P**	**06 48 10.9**	**+2.0**
	baz=311,SNR=6.5						
B06A	**Marblemount**	**44.05**	**68**	P	**P**	**06 48 11.2**	**+1.2**
B06A				IAmb	IAmb	06 48 12.7	
	comp=Z,36nm,1.3s						
GTA	**Gaotai**	**44.09**	**275**	⇓P	**P**	**06 48 10.3**	**-0.3**
GTA				pmax	pmax		
	comp=Z,5.0nm,1.5s						
GTA				pmax	pmax		
	comp=Z,100nm,5.8s						
GTA				LR	LR		
	comp=Z,630nm,16.7s						
GTA				LR	LR		
	comp=Z,710nm,17.4s						
GTA				LR	LR		
	comp=Z,590nm,16.4s						
D04E	**Lakebay**	**44.28**	**70**	P	**P**	**06 48 13.5**	**+1.6**
	baz=311						
LZH	**Lanzhou**	**44.30**	**268**	*e*P	**P**	**06 48 12.8**	**+0.5**
LZH				pmax	pmax		
	comp=Z,20nm,1.1s						
LZH				pmax	pmax		
	comp=Z,140nm,4.9s						
LZH				LR	LR		
	comp=Z,800nm,13.6s						
LZH				LR	LR		
	comp=Z,480nm,14.1s						
LZH				LR	LR		
	comp=Z,740nm,14.6s						
E04D	**Cinebar**	**44.80**	**70**	P	**P**	**06 48 17.9**	**+1.9**
	baz=312,SNR=5.7						
B08A	**Colville Reser**	**45.24**	**66**	P	**P**	**06 48 20.4**	**+0.9**
B08A				IAmb	IAmb	06 48 22.1	
	comp=Z,18nm,1.0s						
LTY	**Liberty**	**45.30**	**68**	P	**P**	**06 48 20.9**	**+0.8**
LTY				IAmb	IAmb	06 48 22.7	
	comp=Z,18nm,1.2s						
GUMO	**Guam**	**45.64**	**206**	LR	LR	07 05 17.8	
	comp=Z,100nm,21.2s,baz=20,slow=33						
F05D	**White Salmon**	**45.82**	**70**	P	**P**	**06 48 25.6**	**+1.5**
	baz=313						
KULLO	**Kullorsuaq**	**45.88**	**14⇑**	*i*P	**P**	**06 48 24.7**	**+0.5**
	comp=Z,52nm,1.0s						
KULLO	**Kullorsuaq**	**45.88**	**14⇑**	*i*P	**P**	**06 48 24.7**	**+0.5**
KULLO				pmax	pmax		
	comp=Z,53nm,1.0s						
KULLO	**Kullorsuaq**	**45.88**	**14⇑**	*i*P	**P**	**06 48 24.7**	**+0.5**
KULLO				IAmb	IAmb	06 48 25.6	
	comp=Z,52nm,1.0s						
H04D	**Lebanon**	**46.08**	**73**	P	**P**	**06 48 27.4**	**+1.2**
	baz=313						
C09A	**Chrisman Ranch**	**46.14**	**66**	P	**P**	**06 48 26.6**	**0.0**
C09A				IAmb	IAmb	06 48 28.9	
	comp=Z,12nm,0.9s						
E07A	**Sunnyside**	**46.18**	**69**	P	**P**	**06 48 28.3**	**+1.3**
E07A				IAmb	IAmb	06 48 29.7	
	comp=Z,17nm,1.1s						
G05D	**Wamic, OR**	**46.33**	**71**	P	**P**	**06 48 29.5**	**+1.3**
	baz=313						
I03D	**Drain, OR**	**46.33**	**74**	P	**P**	**06 48 29.6**	**+1.4**
	baz=314						
J01E	**Myrtle Point**	**46.40**	**75**	P	**P**	**06 48 30.2**	**+1.6**
	baz=314						
NEW	**Newport**	**46.41**	**65**	P	**P**	**06 48 29.8**	**+1.0**
	baz=312,SNR=7.2						
NEW	**Newport**	**46.41**	**65**	P	**P**	**06 48 29.6**	**+0.8**
NEW				pmax	pmax		
	comp=Z,9.0nm,1.1s						
NEW	**Newport**	**46.41**	**65**	P	**P**	**06 48 29.6**	**+0.8**
DAG	**Danmarks Havn**	**46.41**	**1⇑**	*i*P	**P**	**06 48 28.3**	**0.0**
	comp=Z,26nm,1.2s						
DAG	**Danmarks Havn**	**46.41**	**1⇑**	*i*P	**P**	**06 48 28.3**	**0.0**
DAG				pmax	pmax		
	comp=Z,26nm,1.2s						
DAG	**Danmarks Havn**	**46.41**	**1⇑**	*i*P	**P**	**06 48 28.4**	**0.0**
DAG				IAmb	IAmb	06 48 29.3	
	comp=Z,26nm,1.2s						
HAWA	**Hanford**	**46.46**	**69**	P	**P**	**06 48 30.1**	**+0.9**
HAWA				IAmb	IAmb	06 48 43.0	
	comp=Z,16nm,1.2s						
F07A	**Phinny Hill Vi**	**46.59**	**69**	P	**P**	**06 48 31.1**	**+0.9**
E08A	**Dider Farm, El**	**46.63**	**68**	P	**P**	**06 48 31.2**	**+0.7**
E08A				IAmb	IAmb	06 48 32.7	
	comp=Z,16nm,1.1s						
I04A	**Tendick Farm,**	**46.76**	**73**	P	**P**	**06 48 32.6**	**+1.0**
	baz=314						
K02D	**Willamette Mer**	**46.86**	**75**	P	**P**	**06 48 33.1**	**+0.6**
	baz=314						
I05D	**Terrebonne, OR**	**46.94**	**72**	P	**P**	**06 48 34.0**	**+1.0**
	baz=314						
E09A	**Wood Farm, Sta**	**47.08**	**68**	P	**P**	**06 48 34.9**	**+0.9**
KURK	**Kurchatov**	**47.27**	**300***c*	*i*P	**P**	**06 48 34.2**	**-1.2**
KURK				pmax	pmax		
	comp=Z,16nm,1.3s						
KURK				MLR	MLR		
	comp=Z,256nm,15.0s						
L02E	**Cave Junction**	**47.27**	**76**	P	**P**	**06 48 36.8**	**+1.2**
	baz=315						
J04D	**Umpqua Nationa**	**47.30**	**73**	P	**P**	**06 48 37.5**	**+1.5**
	baz=314,SNR=8.0						
WALA	**Waterton Lakes**	**47.44**	**62**	P	**P**	**06 48 37.7**	**+0.8**
WMQ	**Urumqi**	**47.47**	**288**	*e*P	**P**	**06 48 36.8**	**-0.4**
WMQ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,140nm,3.7s						
WMQ				LR	LR		
	comp=Z,780nm,29.1s						
WMQ				LR	LR		
	comp=Z,1μm,29.1s						
WMQ				LR	LR		
	comp=Z,230nm,19.3s						
G08A	**Pilot Rock**	**47.51**	**69**	P	**P**	**06 48 38.2**	**+0.7**
PINE	**Pine Mountain**	**47.52**	**72**	P	**P**	**06 48 38.8**	**+1.1**
J05D	**Fort Rock, OR**	**47.72**	**73**	P	**P**	**06 48 40.7**	**+1.4**
	baz=314,SNR=20						
L04D	**Klamath Falls**	**47.91**	**75**	P	**P**	**06 48 41.7**	**+1.0**
	baz=315,SNR=11						
F10A	**Beach Ranch, E**	**47.91**	**67**	P	**P**	**06 48 40.9**	**+0.3**
F10A				IAmb	IAmb	06 48 42.9	
	comp=Z,14nm,1.0s						
K04D	**Chiloquin, OR**	**47.91**	**74**	P	**P**	**06 48 42.0**	**+1.3**
	baz=315						
JTMT	**Jette**	**48.16**	**64**	P	**P**	**06 48 43.1**	**+0.5**
MKAR	**Makanchi Array**	**48.16**	**294**	P	**P**	**06 48 40.3**	**-2.2**
	comp=Z,0.3nm,0.5s,baz=37,slow=7.7,SNR=3.6						
M02C	**Callahan**	**48.21**	**76**	P	**P**	**06 48 44.5**	**+1.6**
	baz=315,SNR=5.4						
CD2	**Chengdu**	**48.26**	**263**	P	**P**	**06 48 43.1**	**-0.3**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CD2				LR	LR		
	comp=Z,410nm,16.3s						
CD2				LR	LR		
	comp=Z,540nm,14.5s						
CD2				LR	LR		
	comp=Z,640nm,11.4s						
M04C	**Macdoel**	**48.47**	**75**	P	**P**	**06 48 46.6**	**+1.6**
	baz=315						
N02D	**Trinity Center**	**48.58**	**76**	P	**P**	**06 48 47.5**	**+1.7**
	baz=316,SNR=8.0						
BMO	**Blue Mountains**	**48.65**	**69**	P	**P**	**06 48 47.1**	**+0.8**
BMO				pmax	pmax		
	comp=Z,17nm,1.2s						
BMO	**Blue Mountains**	**48.65**	**69**	P	**P**	**06 48 47.1**	**+0.8**
BMO				IAmb	IAmb	06 48 48.9	
	comp=Z,17nm,1.1s						
DBG	**Daneborg**	**48.87**	**1**	*i* P	**P**	**06 48 47.4**	**-0.1**
DBG				IAmb	IAmb	06 48 48.2	
	comp=Z,12nm,0.9s						
WDC	**Whiskeytown Da**	**48.95**	**76**	P	**P**	**06 48 48.9**	**+0.4**
WDC				pmax	pmax		
	comp=Z,23nm,1.4s						
WDC	**Whiskeytown Da**	**48.95**	**76**	P	**P**	**06 48 48.9**	**+0.4**
WDC				IAmb	IAmb	06 48 53.8	
	comp=Z,22nm,1.4s						
MSO	**Missoula**	**48.96**	**65**	P	**P**	**06 48 49.5**	**+0.8**
	baz=314,SNR=11						
MSO	**Missoula**	**48.96**	**65**	P	**P**	**06 48 49.2**	**+0.6**
MSO				IAmb	IAmb	06 48 51.0	
	comp=Z,27nm,1.3s						
O02D	**Mt. Diablo Mer**	**49.11**	**77**	P	**P**	**06 48 52.0**	**+2.2**
	baz=316,SNR=6.2						
MOD	**Modoc Plateau**	**49.19**	**73**	P	**P**	**06 48 51.6**	**+1.1**
MOD				IAmb	IAmb	06 48 53.3	
	comp=Z,34nm,1.2s						
FCC	**Fort Churchill**	**49.23**	**42**	P	**P**	**06 48 50.9**	**+0.5**
FCC				pmax	pmax		
	comp=Z,26nm,1.1s						
FCC	**Fort Churchill**	**49.23**	**42**	P	**P**	**06 48 50.9**	**+0.5**
FCC				IAmb	IAmb	06 48 52.1	
	comp=Z,26nm,1.1s						
BRVK	**Borovoye**	**49.44**	**307***d*	*i*P	**P**	**06 48 51.9**	**-0.2**
BRVK				pmax	pmax		
	comp=Z,28nm,2.5s						
BRVK				MLR	MLR		

	comp=Z,421nm,15.0s						
BRVK	**Borovoye**	**49.44**	**307**	P	**P**	**06 48 51.6**	**-0.5**
O03E	**Paynes Creek**	**49.55**	**76**	P	**P**	**06 48 54.4**	**+1.1**
	baz=316,SNR=23						
WVOR	**Wild Horse Val**	**49.68**	**72**	P	**P**	**06 48 54.9**	**+0.7**
WVOR				pmax	pmax		
	comp=Z,16nm,1.1s						
WVOR	**Wild Horse Val**	**49.68**	**72**	P	**P**	**06 48 54.9**	**+0.7**
WVOR				IAmb	IAmb	06 48 56.9	
	comp=Z,16nm,1.1s						
SUMG	**Summit**	**49.76**	**8**⇑	*i*P	**P**	**06 48 55.4**	**+0.7**
	comp=Z,111nm,1.2s						
SUMG	**Summit**	**49.76**	**8**⇑	*i*P	**P**	**06 48 55.4**	**+0.7**
SUMG				pmax	pmax		
	comp=Z,110nm,1.2s						
SUMG	**Summit**	**49.76**	**8**	P	**P**	**06 48 55.2**	**+0.5**
SUMG	**Summit**	**49.76**	**8**⇑	*i*P	**P**	**06 48 55.4**	**+0.7**
SUMG				IAmb	IAmb	06 48 56.4	
	comp=Z,111nm,1.2s						
ARCES	**ARCESS Array B**	**50.07**	**342**	LR	LR	07 13 28.7	
	comp=Z,108nm,18.8s,baz=40,slow=40						
HRY	**Holter Researc**	**50.08**	**63**	P	**P**	**06 48 58.2**	**+1.0**
EGMT	**Eagleton**	**50.15**	**61**	P	**P**	**06 48 58.5**	**+0.7**
	baz=315,SNR=9.0						
EGMT	**Eagleton**	**50.15**	**61**	P	**P**	**06 48 57.9**	**+0.2**
EGMT				IAmb	IAmb	06 49 10.9	
	comp=Z,15nm,1.0s						
GYA	**Guiyang**	**50.20**	**257**	*e*P	P	06 49 08.3	+10
GYA				S	**S**	**06 56 12.9**	**+4.7**
GYA				ScS	**ScS**	**06 58 47.3**	**+0.2**
GYA				pmax	pmax		
	comp=Z,5.0nm,1.5s						
GYA				LR	LR		
	comp=N,410nm,13.8s						
GYA				LR	LR		
	comp=E,300nm,15.1s						
GYA				LR	LR		
	comp=Z,330nm,17.9s						
MFID	**Camas Ranch**	**50.42**	**69**	P	**P**	**06 49 00.8**	**+1.0**
MFID				IAmb	IAmb	06 49 02.3	
	comp=Z,16nm,1.1s						
BEKR	**Beckworth**	**50.62**	**75**	P	**P**	**06 49 02.8**	**+1.3**
DLMT	**Dillon**	**50.66**	**65**	P	**P**	**06 49 03.1**	**+1.4**
MCMT	**McKenzie Canyo**	**50.91**	**66**	P	**P**	**06 49 04.3**	**+0.6**
BOZ	**Bozeman (W)**	**50.97**	**64**	P	**P**	**06 49 04.7**	**+0.7**
	baz=316,SNR=9.1						
BOZ	**Bozeman (W)**	**50.97**	**64**	P	**P**	**06 49 04.7**	**+0.7**
BOZ				pmax	pmax		
	comp=Z,14nm,1.3s						
BOZ	**Bozeman (W)**	**50.97**	**64**	P	**P**	**06 49 04.7**	**+0.7**
BCYI	**Bear Canyon**	**51.00**	**67**	P	**P**	**06 49 04.3**	**-0.1**
HLID	**Hailey**	**51.03**	**68**	P	**P**	**06 49 05.9**	**+1.4**
	baz=316,SNR=11						
PAHR	**Pah Rah Range**	**51.25**	**75**	P	**P**	**06 49 07.3**	**+1.1**
RUBR	**Rubicon Trail**	**51.32**	**76**	P	**P**	**06 49 07.8**	**+1.0**
VCNR	**Virginia City**	**51.41**	**75**	P	**P**	**06 49 08.7**	**+1.3**
ILULI	**Ilulissat**	**51.55**	**15**	*i* P	**P**	**06 49 06.6**	**-1.2**
	comp=Z,23nm,0.9s						
ILULI	**Ilulissat**	**51.55**	**15**	*i* P	**P**	**06 49 06.6**	**-1.2**
ILULI				pmax	pmax		
	comp=Z,23nm,0.9s						
ILULI	**Ilulissat**	**51.55**	**15**	*i* P	**P**	**06 49 06.7**	**-1.2**
ILULI				IAmb	IAmb	06 49 08.3	
	comp=Z,23nm,0.9s						
QLMT	**Earthquake Lak**	**51.61**	**65**	P	**P**	**06 49 09.6**	**+0.7**
YHL	**Hebgen Lake**	**51.72**	**65**	P	**P**	**06 49 11.1**	**+1.3**
ARU	**Arti**	**51.75**	**317***c*	*i*P	**P**	**06 49 09.2**	**-0.2**
ARU				S	**S**	**06 56 29.2**	**+0.5**
ARU				SS	**SS**	**07 00 01.0**	**-3.6**
ARU				pmax	pmax		
	comp=Z,28nm,1.2s						
YHB	**Horse Butte**	**51.79**	**65**	P	**P**	**06 49 11.3**	**+1.1**
YERR	**Yerington**	**51.86**	**75**	P	**P**	**06 49 11.8**	**+1.0**
YHH	**Holmes Hill**	**51.93**	**64**	P	**P**	**06 49 12.2**	**+0.8**
CMB	**Columbia Colle**	**51.95**	**77**	P	**P**	**06 49 12.3**	**+1.0**
CMB				pmax	pmax		
	comp=Z,8.0nm,1.2s						
CMB	**Columbia Colle**	**51.95**	**77**	P	**P**	**06 49 12.3**	**+1.0**
YMR	**Madison River**	**51.96**	**65**	P	**P**	**06 49 12.6**	**+1.1**
H17A	**Grant Village**	**52.35**	**65**	P	**P**	**06 49 16.8**	**+2.4**
	baz=317,SNR=13						
H17A	**Grant Village**	**52.35**	**65**	P	**P**	**06 49 16.8**	**+2.4**
H17A				IAmb	IAmb	06 49 18.6	
	comp=Z,21nm,1.1s						
DGMT	**Dagmar**	**52.43**	**57**	P	**P**	**06 49 15.8**	**+1.0**
	baz=317						
RLMT	**Red Lodge**	**52.46**	**63**	P	**P**	**06 49 16.9**	**+1.6**
	baz=317,SNR=22						
RLMT	**Red Lodge**	**52.46**	**63**	P	**P**	**06 49 15.9**	**+0.7**
RLMT				IAmb	IAmb	06 49 18.2	
	comp=Z,24nm,1.0s						
SCO	**Scoresbysund**	**52.68**	**2**	*i* P	**P**	**06 49 16.6**	**+0.4**
	comp=Z,7.9nm,1.1s						
SCO	**Scoresbysund**	**52.68**	**2**	*i* P	**P**	**06 49 16.6**	**+0.4**
SCO				pmax	pmax		
	comp=Z,8.0nm,1.1s						
SCO	**Scoresbysund**	**52.68**	**2**	*i* P	**P**	**06 49 16.6**	**+0.4**
SCO				IAmb	IAmb	06 49 18.1	
	comp=Z,7.9nm,1.1s						
NVAR	**Mina Array Bea**	**52.76**	**75**	P	**P**	**06 49 19.5**	**+2.0**
	comp=Z,10nm,1.0s,baz=300,slow=7.3,SNR=48						
NVAR				PcP	**PcP**	**06 50 28.1**	**+1.3**
	comp=Z,1.7nm,0.8s,baz=292,slow=4.2,SNR=4.4						
NVAR	**Mina Array Bea**	**52.76**	**75**	P	**P**	**06 49 18.8**	**+1.3**
LAO	**LASA Array**	**52.79**	**60**	P	**P**	**06 49 18.7**	**+1.3**
	baz=317,SNR=8.9						
LAO	**LASA Array**	**52.79**	**60**	P	**P**	**06 49 18.9**	**+1.5**
LAO				IAmb	IAmb	06 49 20.2	
	comp=Z,28nm,1.1s						
LHV	**Little Huntoon**	**52.79**	**75**	P	**P**	**06 49 19.1**	**+1.7**
LHV				IAmb	IAmb	06 49 21.2	
	comp=Z,28nm,1.2s						
NV11	**Mina Array Sit**	**52.84**	**75**	P	**P**	**06 49 20.0**	**+2.0**
LOHW	**Long Hollow**	**52.91**	**65**	P	**P**	**06 49 20.0**	**+1.5**
LOHW				IAmb	IAmb	06 49 21.6	
	comp=Z,18nm,1.1s						
MDPB	**Devils Postpil**	**52.94**	**76**	P	**P**	**06 49 20.1**	**+1.2**
MDPB				IAmb	IAmb	06 49 22.9	
	comp=Z,21nm,1.0s						
OMMB	**Old Mammoth Mi**	**53.00**	**76**	P	**P**	**06 49 20.4**	**+1.1**
ICESG	**Greenland Ices**	**53.03**	**10**	*i* P	**P**	**06 49 19.0**	**-0.2**
ICESG				IAmb	IAmb	06 49 20.7	
	comp=Z,36nm,1.2s						
MLAC	**Mammoth, Mammo**	**53.07**	**76**	P	**P**	**06 49 22.2**	**+2.4**
	baz=318						
HVU	**Hansel Valley**	**53.16**	**68**	P	**P**	**06 49 21.4**	**+1.1**
HVU				pmax	pmax		
	comp=Z,12nm,1.1s						
HVU	**Hansel Valley**	**53.16**	**68**	P	**P**	**06 49 21.4**	**+1.1**
AHID	**Auburn Hatcher**	**53.28**	**66**	P	**P**	**06 49 22.3**	**+1.0**
KIRV	**Kirov**	**53.30**	**323**⇓	*e*P	**P**	**06 49 21.0**	**+0.1**
KMI	**Kunming**	**53.37**	**260**	⇑P	**P**	**06 49 23.3**	**+1.2**
KMI				S	**S**	**06 56 56.9**	**+4.9**
KMI				pmax	pmax		
	comp=Z,6.0nm,1.8s						
KMI				pmax	pmax		
	comp=Z,97nm,3.9s						
KMI				LR	LR		
	comp=Z,260nm,18.7s						
KMI				LR	LR		
	comp=Z,360nm,16.5s						
KMI				LR	LR		
	comp=Z,240nm,16.4s						
TIN	**Tinemaha, Big**	**53.82**	**76**	P	**P**	**06 49 27.0**	**+1.8**
	baz=319						
BW06	**Boulder Array**	**54.05**	**65**	P	**P**	**06 49 28.3**	**+1.4**
	baz=318,SNR=14						
PDAR	**Pinedale Array**	**54.05**	**65**	P	**P**	**06 49 28.6**	**+1.7**
	comp=Z,9.2nm,0.9s,baz=324,slow=3.1,SNR=58						
PDAR				PcP	**PcP**	**06 50 30.5**	**-1.0**
	comp=Z,1.9nm,0.9s,baz=3.8,slow=2.7,SNR=1.9						
PDAR	**Pinedale Array**	**54.05**	**65**	P	**P**	**06 49 27.8**	**+0.9**
SMMC	**Simmler**	**54.19**	**79**	P	**P**	**06 49 29.8**	**+2.0**
	baz=319,SNR=5.1						
R11A	**Troy Canyon, C**	**54.25**	**73**	P	**P**	**06 49 29.8**	**+1.4**
	baz=318,SNR=9.0						
VES	**Vestal, Richgr**	**54.28**	**78**	P	**P**	**06 49 29.8**	**+1.5**
	baz=319						
DUG	**Dugway, Tooele**	**54.31**	**70**	P	**P**	**06 49 30.5**	**+1.7**
	baz=318,SNR=12						
GRAC	**Grapevine Rang**	**54.32**	**76**	P	**P**	**06 49 30.9**	**+2.1**
	baz=319						
CWC	**Cottonwood Cre**	**54.36**	**77**	P	**P**	**06 49 31.1**	**+1.9**
	baz=319						
KLMR	**Klimovskoe**	**54.43**	**330**	*e*P	P	06 49 39.6	+10
KLMR				pmax	pmax		
	comp=Z,19nm,1.5s						
KLMR	**Klimovskoe**	**54.43**	**330**	*e*P	P	06 49 39.7	+11
KLMR				AMP		06 49 47.3	
	comp=Z,19nm,1.5s						
CTU	**Camp Tracy**	**54.48**	**69**	P	**P**	**06 49 30.4**	**+0.4**
PKM	**Mcpherson Peak**	**54.61**	**79**	P	**P**	**06 49 32.8**	**+1.8**
	baz=319,SNR=8.1						
QIZ	**Qiongzhong**	**54.63**	**249**	P	**P**	**06 49 31.5**	**+0.4**
QIZ				S	**S**	**06 57 11.8**	**+3.0**
QIZ				LR	LR		
	comp=Z,230nm,12.0s						
QIZ				LR	LR		
	comp=Z,75nm,7.5s						
QIZ				LR	LR		
	comp=Z,250nm,14.4s						
ISA	**Isabella, Lake**	**54.74**	**77**	P	**P**	**06 49 32.8**	**+1.0**
	baz=319,SNR=11						
ULM	**Lac du Bonnet**	**54.78**	**51**	P	**P**	**06 49 32.9**	**+1.1**
	comp=Z,9.8nm,1.0s,baz=303,slow=9.6,SNR=15						
ULM	**Lac du Bonnet**	**54.78**	**51**⇑	*e*P	**P**	**06 49 32.6**	**+0.8**
TPNV	**Topopah Spring**	**54.95**	**75**	P	**P**	**06 49 35.5**	**+2.0**
	baz=319,SNR=21						
MPMC	**Manual Prospec**	**54.96**	**76**	P	**P**	**06 49 35.5**	**+1.9**
	baz=319,SNR=18						
FURC	**Furnace Creek,**	**54.99**	**76**	P	**P**	**06 49 35.3**	**+1.8**
	baz=319,SNR=23						
AAK	**Ala-Archa**	**55.01**	**296**	LR	LR	07 15 38.2	
	comp=Z,183nm,19.8s,baz=36,slow=39						
LRMC	**Laurel Mtn Rad**	**55.30**	**77**	P	**P**	**06 49 37.4**	**+1.4**
	baz=319,SNR=8.7						
EDW2	**Edwards Air Fo**	**55.59**	**78**	P	**P**	**06 49 39.4**	**+1.5**
	baz=320,SNR=14						
K22A	**Casper**	**55.62**	**63**	P	**P**	**06 49 39.3**	**+1.1**
	baz=319,SNR=5.6						
RSSD	**Black Hills**	**55.72**	**61**	P	**P**	**06 49 39.8**	**+0.8**
	baz=319						
SHOC	**Shoshone, Teco**	**55.73**	**76**	P	**P**	**06 49 40.9**	**+2.0**
	baz=320,SNR=9.6						
MSU	**Marysvale**	**55.89**	**71**	P	**P**	**06 49 42.3**	**+2.0**
MSU	**Marysvale**	**55.89**	**71**	P	**P**	**06 49 42.3**	**+2.0**
GSC	**Goldstone, Bar**	**55.90**	**76**	P	**P**	**06 49 40.6**	**+0.4**
	baz=320,SNR=19						
SNCC	**San Nicolas Is**	**56.01**	**80**	P	**P**	**06 49 41.9**	**+1.0**
	baz=320						
MWC	**Mount Wilson**	**56.05**	**78**	P	**P**	**06 49 43.6**	**+2.2**
MWC				pmax	pmax		
	comp=Z,25nm,1.2s						
MWC	**Mount Wilson**	**56.05**	**78**	P	**P**	**06 49 43.6**	**+2.2**
MWC				IAmb	IAmb	06 49 44.4	
	comp=Z,25nm,1.2s						
LSA	**Lhasa**	**56.07**	**273**	P	**P**	**06 49 42.3**	**+0.4**
LSA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
LSA	**Lhasa**	**56.07**	**273**	P	**P**	**06 49 42.3**	**+0.4**
BFSC	**Mount Baldy Ra**	**56.25**	**78**	P	**P**	**06 49 44.1**	**+1.3**
	baz=320						
AGMN	**Agassiz Nation**	**56.27**	**52**	P	**P**	**06 49 43.4**	**+0.8**
	baz=320,SNR=5.8						
SRU	**San Rafael Swe**	**56.29**	**69**	P	**P**	**06 49 44.7**	**+1.6**
SRU				pmax	pmax		
	comp=Z,38nm,1.0s						
SRU	**San Rafael Swe**	**56.29**	**69**	P	**P**	**06 49 44.7**	**+1.6**
LCMT	**Little Creek M**	**56.48**	**73**	P	**P**	**06 49 46.4**	**+2.1**
HEC	**Hector,Ludlow**	**56.51**	**77**	P	**P**	**06 49 46.0**	**+1.5**
	baz=320						
KK31	**Karatay Array**	**56.59**	**299**	P	**P**	**06 49 44.3**	**-0.7**
KK31				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KK31	**Karatay Array**	**56.59**	**299**	P	**P**	**06 49 44.3**	**-0.7**
KKAR	**Karatay Array**	**56.59**	**299**	P	**P**	**06 49 44.1**	**-0.9**
KKAR	**Karatay Array**	**56.59**	**299**	P	**P**	**06 49 44.1**	**-0.9**
KSH	**Kashi**	**56.61**	**292**	P	**P**	**06 49 48.0**	**+2.7**
KSH				pmax	pmax		
	comp=Z,10.0nm,1.2s						
KSH				pmax	pmax		
	comp=Z,140nm,3.0s						
BBRC	**Big Bear Solar**	**56.63**	**77**	P	**P**	**06 49 47.2**	**+1.5**
	baz=320						
ABKAR	**Akbulak array**	**56.64**	**310**	P	**P**	**06 49 44.6**	**-0.5**
O20A	**White River Ci**	**56.67**	**67**	P	**P**	**06 49 47.5**	**+1.8**
	baz=319,SNR=24						
GMRC	**Granite Mounta**	**56.90**	**76**	P	**P**	**06 49 49.2**	**+1.8**
	baz=320,SNR=9.0						
MURC	**Murrieta**	**56.99**	**78**	P	**P**	**06 49 49.5**	**+1.6**
	baz=320						
FINES	**FINESS Array B**	**57.19**	**337**	P	**P**	**06 49 48.5**	**-0.4**
	comp=Z,5.2nm,0.9s,baz=43,slow=8.6,SNR=7.8						
FINES	**FINESS Array B**	**57.19**	**337**	P	**P**	**06 49 48.6**	**-0.2**
FINES	**FINESS Array B**	**57.19**	**337**	P	**P**	**06 49 48.6**	**-0.2**
N23A	**Red Feather La**	**57.23**	**64**	P	**P**	**06 49 51.2**	**+1.3**
	baz=320,SNR=8.0						
BELC	**Belle Mtn. Jos**	**57.32**	**77**	P	**P**	**06 49 51.5**	**+1.1**
	baz=320						
PFO	**Pinyon Flats O**	**57.37**	**78**	P	**P**	**06 49 52.4**	**+1.7**
	baz=320						
TPFO	**Pinon Flats**	**57.38**	**78**	P	**P**	**06 49 52.4**	**+1.6**
	baz=320						
W13A	**Hualapai Mount**	**57.60**	**74**	P	**P**	**06 49 53.2**	**+0.8**
IRM	**Iron Mountain**	**57.65**	**76**	P	**P**	**06 49 54.3**	**+1.7**
	baz=320,SNR=12						
BC3	**Big Chuckawall**	**57.87**	**77**	P	**P**	**06 49 55.7**	**+1.5**
	baz=321						
MONP2	**Monument Peak**	**57.95**	**78**	P	**P**	**06 49 56.4**	**+1.5**
	baz=321						
SMCO	**Snowmass**	**58.03**	**66**	P	**P**	**06 49 57.2**	**+1.6**
SMCO				IAmb	IAmb	06 49 58.6	
	comp=Z,20nm,1.1s						
PDMCI	**Parker Dam,Lak**	**58.07**	**75**	P	**P**	**06 49 57.1**	**+1.6**
	baz=320						
ISCO	**Idaho Springs**	**58.23**	**65**	P	**P**	**06 49 58.8**	**+1.9**
	baz=320,SNR=12						
SWSC	**Sam W. Stewart**	**58.24**	**78**	P	**P**	**06 49 58.2**	**+1.6**
	baz=321						
IKP	**In-Ko-Pah, Jac**	**58.30**	**78**	P	**P**	**06 49 58.9**	**+1.7**
	baz=321						
EYMN	**Ely**	**58.39**	**50**	P	**P**	**06 49 59.0**	**+1.5**
	baz=322,SNR=7.6						
WUAZ	**Wupatki**	**58.59**	**72**	P	**P**	**06 50 01.6**	**+2.3**
	baz=320,SNR=6.8						
GLA	**Glamis**	**58.67**	**77**	P	**P**	**06 50 01.2**	**+1.5**
	baz=321,SNR=7.1						
MVCO	**Mesa Verde**	**58.77**	**69**	P	**P**	**06 50 02.3**	**+1.7**
	baz=320						
BELG	**Belogornoye**	**58.88**	**320***c*	*i*P	**P**	**06 50 00.5**	**-0.3**
BELG				pmax	pmax		
	comp=Z,10.0nm,1.1s						
SHL	**Shillong**	**58.91**	**270**	P	**P**	**06 50 01.6**	**-0.1**
SHL				pmax	pmax		
	comp=Z,8.0nm,0.9s						
SHL	**Shillong**	**58.91**	**270**	P	**P**	**06 50 01.6**	**-0.1**
S22A	**4UR Ranch, Cre**	**59.20**	**67**	P	**P**	**06 50 06.2**	**+2.5**
	baz=321						
ECSD	**EROS Data Cent**	**59.46**	**56**	P	**P**	**06 50 06.2**	**+1.1**
	baz=322						
W18A	**Petrified Fore**	**59.75**	**71**	P	**P**	**06 50 09.4**	**+2.0**
	baz=321						
W18A	**Petrified Fore**	**59.75**	**71**	P	**P**	**06 50 08.7**	**+1.3**
SDCO	**Great Sand Dun**	**59.87**	**66**	P	**P**	**06 50 10.2**	**+1.9**
	baz=321,SNR=6.4						
SDCO	**Great Sand Dun**	**59.87**	**66**	P	**P**	**06 50 09.3**	**+1.0**
SPMN	**Marine on St.**	**59.98**	**52**	P	**P**	**06 50 09.1**	**+0.5**
	baz=322						
X18A	**Snowflake**	**60.09**	**72**	P	**P**	**06 50 11.3**	**+1.5**
X18A				IAmb	IAmb	06 50 13.3	
	comp=Z,19nm,1.1s						
OBN	**Obninsk**	**60.14**	**328***d*	*e*P	**P**	**06 50 09.9**	**+0.4**
OBN				*e*		06 50 54.7	
OBN				*e*		06 52 21.5	
OBN				*e*PPP	PPP	06 53 44.9	
OBN				pmax	pmax		
	comp=Z,40nm,1.7s						
MTSE	**Matsula**	**60.15**	**337**	*e*P	**P**	**06 50 07.4**	**-2.0**
NB2	**NORSAR Subarra**	**60.21**	**345**	P	**P**	**06 50 09.6**	**-0.3**
	comp=Z,2.0nm,0.6s,baz=18,slow=6.9						
NOA	**NORSAR Array B**	**60.21**	**345**	P	**P**	**06 50 09.8**	**-0.2**
	comp=Z,7.4nm,0.9s,baz=18,slow=6.9,SNR=16						
NOA				LR	LR	07 17 57.3	
	comp=Z,101nm,19.0s,baz=25,slow=38						
KSCO	**Kaye Shedlock’**	**60.31**	**63**	P	**P**	**06 50 12.7**	**+1.6**
	baz=321						
CHTO	**Chiang Mai**	**60.53**	**259**	P	**P**	**06 50 14.2**	**+1.6**
CHTO				pmax	pmax		
	comp=Z,4.0nm,1.0s						
CHTO	**Chiang Mai**	**60.53**	**259**	P	**P**	**06 50 14.2**	**+1.6**
BGNE	**Belgrade**	**60.58**	**59**	P	**P**	**06 50 13.7**	**+0.9**
	baz=322						
214A	**Organ Pipe Nat**	**60.59**	**76**	P	**P**	**06 50 14.8**	**+1.9**
	baz=322,SNR=5.3						
214A	**Organ Pipe Nat**	**60.59**	**76**	P	**P**	**06 50 14.2**	**+1.2**
214A				IAmb	IAmb	06 50 16.1	
	comp=Z,13nm,1.1s						
CMAR	**Chiang Mai Arr**	**60.82**	**259**	P	**P**	**06 50 15.6**	**+1.0**
	comp=Z,1.0nm,0.3s,baz=25,slow=6.9,SNR=1.3						
CMAR	**Chiang Mai Arr**	**60.82**	**259**	P	**P**	**06 50 16.8**	**+2.2**
CMAR	**Chiang Mai Arr**	**60.82**	**259**	P	**P**	**06 50 16.8**	**+2.2**
T25A	**Trinidad**	**60.89**	**66**	P	**P**	**06 50 16.7**	**+1.6**
	baz=322						
TUC	**Tucson**	**61.38**	**74**	P	**P**	**06 50 20.2**	**+1.8**
	baz=322						
ANMO	**Albuquerque**	**61.57**	**69**	P	**P**	**06 50 21.2**	**+1.4**
	baz=322						
ANMO	**Albuquerque**	**61.57**	**69**	*e*P	**P**	**06 50 18.0**	**-1.8**
ANMO				pmax	pmax		
	comp=Z,5.0nm,1.0s						
LPSR	**Galich'ya Gora**	**61.60**	**325**	*e*P	**P**	**06 50 17.8**	**-1.6**
LPSR				pmax	pmax		
	comp=Z,20nm,0.8s						
CBKS	**Cedar Bluff**	**61.86**	**62**	P	**P**	**06 50 22.1**	**+0.6**
	baz=322,SNR=5.0						
VRH	**Novokhopyorsk**	**61.90**	**323**	*e*P	**P**	**06 50 19.8**	**-1.7**
VRH				pmax	pmax		
	comp=Z,20nm,0.7s						
N35A	**Tabor**	**62.17**	**57**	P	**P**	**06 50 24.5**	**+1.0**
ISAL	**Salakas**	**62.49**	**334**	*e*P	**P**	**06 50 25.7**	**+0.3**
NIL	**Nilore**	**62.53**	**290**	P	**P**	**06 50 25.4**	**-0.6**
NIL				pmax	pmax		
	comp=Z,27nm,1.2s						
NIL	**Nilore**	**62.53**	**290**	P	**P**	**06 50 25.4**	**-0.6**
IDID	**Didziasalis**	**62.58**	**334**	*e*P	**P**	**06 50 26.2**	**+0.3**
VSR	**Storozhevoye**	**62.72**	**324**	*e*P	**P**	**06 50 25.5**	**-1.5**
VSR				pmax	pmax		
	comp=Z,20nm,0.9s						
121A	**Cookes Peak, D**	**62.78**	**72**	P	**P**	**06 50 30.2**	**+2.3**
	baz=322						
NACGM	**Naroch**	**62.94**	**334**	*i* P	**P**	**06 50 28.9**	**+0.5**
NACGM				*i* P	**P**	**06 50 28.9**	**+0.5**
NACGM				*i* P	**P**	**06 50 28.9**	**+0.5**
NACGM				*i* PcP	PcP	06 51 16.9	+11
NACGM				*i* PP	PP	06 52 35.2	-11
NACGM				*i* PPP	PPP	06 54 12.1	
NACGM				*i* S	S	06 58 42.0	-14
NACGM				*i* PS	PnS	07 00 09.4	+55
NACGM				*i* SS	**SS**	**07 02 52.3**	**-8.0**
NACGM				*i* SSS	SSS	07 05 40.5	
NACGM				*i* LQ	LQ	07 12 09.1	
NACGM				*i* LR	LR	07 16 56.9	
MNK	**Minsk**	**63.04**	**333**	*i* P	**P**	**06 50 26.0**	**-3.0**
	comp=E,3.0nm,0.9s						
MNK				*i* P	**P**	**06 50 26.0**	**-3.0**
	comp=N,27nm,0.9s						
MNK				*i* P	**P**	**06 50 26.0**	**-3.0**
	comp=Z,26nm,0.8s						
MNK				*i* pP	**sP**	**06 50 40.0**	**-2.4**
MNK				*i* PcP	**PcP**	**06 51 03.5**	**-3.1**
MNK				*i* PP	**PP**	**06 52 44.8**	**-2.4**
MNK				*i* PPP	PPP	06 54 13.3	
MNK				*i* S	**S**	**06 58 51.9**	**-5.0**
MNK				*i* sS	**sS**	**06 59 16.9**	**+4.0**
MNK				*i* ScS	**SKKSac**	**07 00 14.2**	**-4.8**
MNK				*i* SS	**SS**	**07 03 00.0**	**-1.8**
MNK				*i* SSS	SSS	07 05 56.3	
MNK				*i* LQ	LQ	07 13 42.2	
MNK				*i* LR	LR	07 18 11.8	
MNK				*i* LRM	MLR	07 20 41.9	
	comp=E,25nm,13.0s						
MNK				*i* LRM	MLR	07 21 04.3	
	comp=Z,213nm,14.5s						
MNK				*i* LRM	MLR	07 21 08.0	
	comp=N,184nm,14.5s						
LSQQ	**Lebel-sur-Quev**	**63.06**	**40**	P	**P**	**06 50 29.3**	**0.0**
	baz=328						
PABE	**Paberze**	**63.06**	**335**	*e*P	**P**	**06 50 29.1**	**0.0**
KSU1	**Kansas State U**	**63.12**	**59**	P	**P**	**06 50 30.2**	**+0.3**
	baz=323						
P38A	**Dawn**	**64.13**	**57**	P	**P**	**06 50 36.5**	**+0.1**
P38A				IAmb	IAmb	06 50 37.9	
	comp=Z,13nm,1.1s						
MSTX	**Muleshoe**	**64.20**	**67**	P	**P**	**06 50 38.4**	**+1.2**
	baz=323						
L44A	**Lake County Fo**	**64.53**	**51**	P	**P**	**06 50 39.1**	**+0.1**
	baz=325						
SUW	**Suwalki**	**64.61**	**335**	*e*P	**P**	**06 50 39.0**	**-0.4**
SUW	**Suwalki**	**64.61**	**335**	*e*P	**P**	**06 50 38.6**	**-0.7**
MNTX	**Cornudas Mount**	**64.68**	**71**	P	**P**	**06 50 41.9**	**+1.7**
	baz=323,SNR=21						
MNTX	**Cornudas Mount**	**64.68**	**71**	P	**P**	**06 50 41.7**	**+1.5**
MNTX				IAmb	IAmb	06 50 43.3	
	comp=Z,15nm,1.0s						
HDIL	**Hopedale**	**65.27**	**53**	P	**P**	**06 50 43.5**	**-0.4**
	baz=325						
ALGO	**Algonquin Park**	**65.30**	**42**	P	**P**	**06 50 43.2**	**-0.8**
	baz=328						
D55A	**Sainte-Anne-du**	**65.32**	**40**	P	**P**	**06 50 44.3**	**+0.2**
	baz=329						
D56A	**ZEC Mazanza, M**	**65.55**	**40**	P	**P**	**06 50 45.5**	**-0.2**
	baz=330						
WMOK	**Wichita Mounta**	**65.57**	**64**	P	**P**	**06 50 46.6**	**+0.6**
	baz=324,SNR=13						
WMOK	**Wichita Mounta**	**65.57**	**64**	P	**P**	**06 50 46.8**	**+0.9**
WMOK				pmax	pmax		
	comp=Z,20nm,1.1s						
WMOK	**Wichita Mounta**	**65.57**	**64**	P	**P**	**06 50 46.8**	**+0.9**
WMOK				IAmb	IAmb	06 50 48.1	
	comp=Z,20nm,1.1s						
LATQ	**La Tuque**	**65.94**	**38**	P	**P**	**06 50 48.3**	**+0.2**
	baz=330						
TUL1	**Leonard**	**66.07**	**61**	P	**P**	**06 50 49.4**	**+0.3**
	baz=324						
AKASG	**Malin Array Be**	**66.12**	**330**	P	**P**	**06 50 49.0**	**-0.2**
	comp=Z,5.9nm,0.7s,baz=29,slow=6.5,SNR=16						
AKASG	**Malin Array Be**	**66.12**	**330**	P	**P**	**06 50 48.9**	**-0.3**
AKBB	**Malin Array Si**	**66.12**	**330**⇓	*i*P	**P**	**06 50 49.0**	**-0.2**
AKBB				pmax	pmax		
	comp=Z,21nm,1.4s						
AKBB	**Malin Array Si**	**66.12**	**330**	P	**P**	**06 50 48.6**	**-0.6**
AKBB				IAmb	IAmb	06 50 49.8	
	comp=Z,20nm,1.2s						
D58A	**Chemin du LacG**	**66.15**	**38**	P	**P**	**06 50 49.6**	**+0.1**
	baz=330						
E57A	**Chemin Saint G**	**66.31**	**40**	P	**P**	**06 50 50.4**	**-0.2**
	baz=330						
CCM	**Cathedral Cave**	**66.44**	**56**	P	**P**	**06 50 51.5**	**0.0**
	baz=325						
GEYT	**Alibeck**	**66.46**	**304**	P	**P**	**06 50 51.5**	**-0.2**
	comp=Z,3.2nm,0.6s,baz=316,slow=6.2,SNR=6.2						
GEYT				LR	LR	07 21 50.2	
	comp=Z,158nm,18.8s,baz=15,slow=38						
GEYT	**Alibeck**	**66.46**	**304**	P	**P**	**06 50 51.7**	**0.0**
GYA0B	**ALIBECK ARRAY**	**66.46**	**304**	P	**P**	**06 50 51.2**	**-0.4**
GYA0B				IAmb	IAmb	06 50 52.8	
	comp=Z,13nm,1.1s						
E58A	**La Victoria**	**66.65**	**39**	P	**P**	**06 50 52.5**	**-0.1**
	baz=330						
ABTX	**Abilene, Hawle**	**66.84**	**66**	P	**P**	**06 50 54.8**	**+0.6**
	baz=324,SNR=8.8						
ABTX	**Abilene, Hawle**	**66.84**	**66**	P	**P**	**06 50 55.0**	**+0.8**
ABTX				IAmb	IAmb	06 50 57.1	
	comp=Z,19nm,1.1s						
D61A	**St Aubert, Com**	**66.95**	**37**	P	**P**	**06 50 54.7**	**+0.1**
	baz=332						
D60A	**Saint Jean D’O**	**66.97**	**37**	P	**P**	**06 50 54.4**	**-0.2**
	baz=331						
U40A	**Yellville**	**67.09**	**58**	P	**P**	**06 50 55.8**	**+0.2**
	baz=325						
G57A	**Newington**	**67.14**	**41**	P	**P**	**06 50 55.3**	**-0.5**
	baz=330						
F59A	**Saint Guilaume**	**67.27**	**39**	P	**P**	**06 50 56.7**	**+0.1**
	baz=331						
E60A	**Ste Agathe de**	**67.27**	**38**	P	**P**	**06 50 56.4**	**-0.2**
	baz=331						
D62A	**Allapoint, All**	**67.43**	**36**	P	**P**	**06 50 57.9**	**+0.3**
	baz=332						
TX31	**Lajitas Ar. Si**	**67.45**	**71**	P	**P**	**06 50 59.3**	**+1.2**
TX32	**Lajitas Array**	**67.45**	**71**	P	**P**	**06 50 58.9**	**+0.7**
TX32				IAmb	IAmb	06 51 01.0	
	comp=Z,18nm,1.1s						
TXAR	**Lajitas Array**	**67.45**	**71**	P	**P**	**06 50 59.5**	**+1.3**
	comp=Z,11nm,0.9s,baz=303,slow=4.4,SNR=75						
TXAR	**Lajitas Array**	**67.45**	**71**	P	**P**	**06 50 58.9**	**+0.7**
E61A	**Lac Etchemin**	**67.53**	**37**	P	**P**	**06 50 59.2**	**+0.8**
	baz=332						

H57A	Richville	67.55	41	P	P	06 50 57.9	-0.5
	baz=330						
W39A	Magazine	67.60	60	P	P	06 50 59.4	+0.6
	baz=325						
F61A	St Evariste	67.77	38	P	P	06 51 00.3	+0.5
	baz=332						
KIV	Kislovodsk	67.77	318	*e*P	P	06 51 00.5	+0.6
KIV				pmax	pmax		
	comp=Z,16nm,0.9s						
KIV				MLR	MLR		
	comp=Z,364nm,17.0s						
ERPA	Erie	67.83	46	P	P	06 51 00.0	-0.2
	baz=328						
L53A	Girard	67.86	46	P	P	06 51 00.5	0.0
	baz=328						
KBZ	Khabaz	67.89	318	P	P	06 51 01.3	+0.7
	comp=Z,9.0nm,0.9s,baz=44,slow=3.4,SNR=13						
KBZ	Khabaz	67.89	318	*d i*P	P	06 51 01.2	+0.7
KBZ				pmax	pmax		
	comp=Z,15nm,1.0s						
P49A	Miami Univ. Ec	68.08	51	P	P	06 51 01.8	0.0
	baz=327						
G60A	Masonville	68.08	39	P	P	06 51 01.7	0.0
	baz=331						
M53A	WI Miller and	68.13	47	P	P	06 51 02.4	+0.3
	baz=328						
ACSO	Alum Creek Sta	68.22	49	P	P	06 51 02.3	-0.4
	baz=328						
MIAR	Mount Ida	68.23	60	P	P	06 51 03.2	+0.4
	baz=325						
ZEI	Tsey	68.32	316	*e*P	P	06 51 02.7	-0.9
ZEI				pmax	pmax		
	comp=Z,9.0nm,1.0s						
W41B	Gary Mavity, V	68.34	59	P	P	06 51 03.9	+0.4
	baz=325						
E64A	Bridgewater	68.41	35	P	P	06 51 04.5	+0.8
	baz=333						
H60A	Morristown	68.42	40	P	P	06 51 03.6	-0.4
	baz=331						
M54A	Oil Creek Stat	68.47	46	P	P	06 51 04.3	0.0
	baz=329						
JCT	Junction City	68.50	67	P	P	06 51 05.4	+0.8
	baz=324						
JCT	Junction City	68.50	67	P	P	06 51 04.5	-0.1
JCT				pmax	pmax		
	comp=Z,15nm,1.1s						
JCT	Junction City	68.50	67	P	P	06 51 04.5	-0.1
JCT				IAmb	IAmb	06 51 06.5	
	comp=Z,15nm,1.1s						
X40A	Basin Creek Fa	68.63	59	P	P	06 51 06.1	+0.8
	baz=325						
F63A	Nahmakanta, Br	68.63	37	P	P	06 51 05.5	+0.3
	baz=332						
SORM	Soroca	68.69	329	⇑P	P	06 51 05.0	-0.5
SORM	Soroca	68.69	329	⇑P	P	06 51 05.0	-0.5
H61A	Lyndonville	68.71	39	P	P	06 51 06.2	+0.4
	baz=331						
F64A	Sherman	68.73	36	P	P	06 51 06.0	+0.2
	baz=333						
L56A	Greenwood	68.75	44	P	P	06 51 05.8	-0.2
	baz=329						
KWP	Kalwaria Pacla	68.78	334	*e*P	P	06 51 06.9	+0.8
N54A	Moraine State	68.81	47	P	P	06 51 06.4	+0.1
	baz=329						
OJC	Ojcow	68.91	336	*e*P	P	06 51 07.5	+0.7
O53A	New Philadelph	68.92	48	P	P	06 51 07.0	-0.1
	baz=328						
H62A	Milan	68.94	39	P	P	06 51 07.4	+0.2
	baz=332						
LBNH	Lisbon	68.97	39	P	P	06 51 07.8	+0.5
	baz=331						
M56A	Emporium	69.07	45	P	P	06 51 07.7	-0.3
	baz=329						
SOC	Sochi	69.16	320	*e*P	P	06 51 08.8	+0.3
SOC				*e*		06 53 37.6	
SOC				*e*PPP	PPP	06 55 29.7	
SOC				*e*S	S	07 00 13.7	+2.0
SOC				*e*		07 01 02.8	
SOC				MLR	MLR		
	comp=Z,275nm,13.0s						
CLL	Collm	69.25	341	*e*P	P	06 51 09.0	+0.1
	comp=Z,32nm,1.7s						
CLL				Lm	MLR	07 23 00.0	
	comp=Z,200nm,21.3s						
CLL	Collm	69.25	341	*e*P	P	06 51 09.0	+0.1
CLL				pmax	pmax		
	comp=Z,32nm,1.7s						
N56A	West Decatur	69.51	45	P	P	06 51 10.8	0.0
	baz=329						
DPC	Dobruska-Polom	69.53	338	*e*P	P	06 51 11.7	+1.0
DPC	Dobruska-Polom	69.53	338	*e*P	P	06 51 11.7	+1.0
KOLS	Kolonicke sedl	69.54	334	*e*P	P	06 51 11.4	+0.6
KOLS	Kolonicke sedl	69.54	334	*e*P	P	06 51 11.4	+0.6
WVT	Waverly	69.57	55	P	P	06 51 11.8	+0.7
	baz=327						
G65A	Princeton	69.58	36	P	P	06 51 11.5	+0.5
	baz=333						
M57A	Sunshine Farm,	69.60	44	P	P	06 51 11.1	-0.2
	baz=330						
AKH	Akhalkalaki	69.66	316	⇑P	P	06 51 12.4	+0.6
KRLC	Kraliky	69.69	338	*e*P	P	06 51 12.2	+0.4
KRLC	Kraliky	69.69	338	*e*P	P	06 51 12.2	+0.4
MORC	Moravsky Berou	69.82	337	⇑P	P	06 51 13.4	+0.9
MORC	Moravsky Berou	69.82	337	*e*P	P	06 51 12.8	+0.3
MORC	Moravsky Berou	69.82	337	⇑P	P	06 51 13.4	+0.9
N57A	Milroy	69.94	45	P	P	06 51 13.4	+0.1
	baz=330						
O56A	Blue Knob Stat	69.96	46	P	P	06 51 13.5	-0.1
	baz=329						
MCWV	Mont Chateau	69.98	47	P	P	06 51 13.6	0.0
	baz=329						
Q53A	Leroy	69.98	49	P	P	06 51 13.4	-0.2
	baz=328						
LANS	Liptovska Anna	69.99	336	*e*P	P	06 51 14.8	+1.2
LANS				pmax	pmax		
	comp=Z,11nm,1.1s						
LANS	Liptovska Anna	69.99	336	*e*P	P	06 51 14.8	+1.2
BUR08	Bucovina Ar. S	69.99	331	P	P	06 51 13.7	-0.1
BURAR	Bucovina Array	70.02	331	⇑P	P	06 51 14.2	+0.3
BURAR	Bucovina Array	70.02	331	⇑P	P	06 51 14.2	+0.3
BURAR	Bucovina Array	70.02	331	P	P	06 51 14.0	+0.2
OXF	Oxford	70.20	57	P	P	06 51 15.6	+0.6
	baz=326						
GNI	Garni	70.27	314	P	P	06 51 16.9	+1.3
GNI				pmax	pmax		
	comp=Z,16nm,1.0s						
GNI	Garni	70.27	314	P	P	06 51 16.9	+1.3
GNI				IAmb	IAmb	06 51 22.7	
	comp=Z,16nm,1.0s						
O57A	Amberson	70.38	45	P	P	06 51 16.7	+0.6
	baz=330						
VRAC	Vranov	70.46	338	*e*P	P	06 51 16.8	+0.4
P56A	Dayton Farm, R	70.51	47	P	P	06 51 17.1	+0.2
	baz=329						
TESR	Tescani	70.65	330	⇑P	P	06 51 17.6	0.0
JAVC	Velka Javorina	70.66	337	*e*P	P	06 51 19.1	+1.4
VYHS	Vyhne	70.75	336	*e*P	P	06 51 19.0	+0.8
VYHS	Vyhne	70.75	336	*e*P	P	06 51 19.0	+0.8
P57A	Homestead Farm	70.86	46	P	P	06 51 19.0	0.0
	baz=330						
S54A	Dingess, Beckl	70.97	49	P	P	06 51 19.6	-0.1
	baz=329						
MEM	Membach	71.06	345	*d*P	P	06 51 20.3	+0.2
MEM				*d*PcP	PcP	06 51 41.1	+1.0
BTNL	Ternell	71.06	345	*d*P	P	06 51 20.2	+0.1
PAL	Palisades	71.09	42	P	P	06 51 20.1	-0.2
	baz=331						
KHC	Kasperske Hory	71.23	340	*e*P	P	06 51 22.3	+1.2
KHC	Kasperske Hory	71.23	340	*e*P	P	06 51 22.3	+1.2
CFR	Carcaliu	71.45	328	⇓P	P	06 51 23.1	+0.7
CFR	Carcaliu	71.45	328	⇓P	P	06 51 23.1	+0.7
GERES	GERESS Array B	71.48	339	P	P	06 51 22.9	+0.2
	comp=Z,1.5nm,0.9s,baz=36,slow=5.0,SNR=9.1						
DOPR	Dopca	71.49	330	⇓P	P	06 51 23.6	+0.8
TPGR	Topolog	71.66	328	⇑P	P	06 51 23.7	-0.1
MLR	Muntele Rosu	71.78	330	⇓P	P	06 51 25.6	+1.0
MLR	Muntele Rosu	71.78	330	⇓P	P	06 51 25.6	+1.0
ISR	Istrita	71.96	329	⇑P	P	06 51 27.2	+1.6
ISR	Istrita	71.96	329	⇑P	P	06 51 27.2	+1.6
S57A	Dark Hollow, R	71.96	48	P	P	06 51 25.9	+0.3
	baz=330						
VOIR		72.07	331	⇑P	P	06 51 27.9	+1.6
VOIR		72.07	331	⇑P	P	06 51 27.9	+1.6
SIRR	Siria	72.17	333	⇑P	P	06 51 28.3	+1.5
ARR	Arges	72.25	331	⇑P	P	06 51 27.6	+0.3
LRAL	Lakeview Retre	72.53	56	P	P	06 51 29.0	-0.2
	baz=328						
GZR	Gura Zlata	72.71	332	⇑P	P	06 51 30.3	+0.2
GZR	Gura Zlata	72.71	332	⇑P	P	06 51 30.3	+0.2
BZS	Buzias	72.79	333	⇓P	P	06 51 31.3	+0.8
BZS	Buzias	72.79	333	⇓P	P	06 51 31.3	+0.8
V57A	Coltrane Farms	73.24	49	P	P	06 51 33.5	+0.2
	baz=330						
W56A	Indian Trail	73.55	50	P	P	06 51 35.1	0.0
	baz=329						
FRGS	Fruska Gora	73.66	334	⇓P	P	06 51 36.4	+0.7
U61A	Possum Corner	74.20	46	P	P	06 51 39.1	+0.2
	baz=331						
BRTR	Keskin Array B	74.68	322	P	P	06 51 42.2	+0.3
	comp=Z,3.4nm,0.9s,baz=42,slow=6.9,SNR=7.6						
BRTR	Keskin Array B	74.68	322	*i* P	P	06 51 42.4	+0.5
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BRTR	Keskin Array B	74.68	322	P	P	06 51 41.6	-0.2
NRCA	Norcia	77.36	338	P	P	06 51 57.8	+0.9
DZM	Mont Dzumac	78.88	177	*e*LR	LR	07 16 24.0	
	comp=Z,124nm,29.8s						
TLIG	Tlapa	79.75	74	P	P	06 52 11.1	+0.6
TLIG				IAmb	IAmb	06 52 17.3	
	comp=Z,22nm,1.3s						
WRA	Warramunga Arr	80.49	208	P	P	06 52 13.7	-0.4
	comp=Z,2.7nm,1.0s,baz=16,slow=5.9,SNR=11						
WRA				LR	LR	07 25 32.4	
	comp=Z,80nm,21.9s,baz=55,slow=34						
WRA	Warramunga Arr	80.49	208	P	P	06 52 14.6	+0.4
PPT2	Papeete2	84.08	135	*e*LR	LR	07 18 56.2	
	comp=Z,145nm,27.2s						
CCIG	Comitan	84.15	69	P	P	06 52 34.8	+1.0
ASAR	Alice Springs	84.17	207	P	P	06 52 33.8	+0.5
	comp=Z,5.9nm,1.2s,baz=14,slow=4.5,SNR=12						
ASAR				LR	LR	07 27 46.2	
	comp=Z,56nm,21.8s,baz=14,slow=34						
ASAR	Alice Springs	84.17	207	P	P	06 52 34.7	+1.4
KEST	Kesra	84.97	339	LR	LR	07 35 04.4	
	comp=Z,144nm,18.6s,baz=288,slow=39						
TBI	Tubuai	89.38	138	*e*LR	LR	07 21 31.9	
	comp=Z,73nm,26.2s						
TORD	Torodi Ar. Bea	108.40	341	PP	PP	06 58 53.0	-1.4
	comp=Z,0.6nm,0.8s,baz=22,slow=6.4,SNR=3.7						
QSPA	South Pole Qui	146.83	180	PKPdf	PKPbc	06 59 43.1	+0.1

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*IDC **13** 06:41:57.0±1.5, 57°.08N×162°.87E, h0^{km}, mb3.8/4, mb1 4.0/4, mb1mx3.5/40, mbtmp3.8/4, Error ellipse: s-maj=50.5km s-min=29.7km az=153.0*

*KRSC **13** 06:41:57.5±1.0, 57°.18N×163°.65E, h14^{km}±11^{km}, ML4.3*

*MOS **13** 06:41:58.2±1.9, 57°.18N×163°.50E, h14^{km}, mb3.9/1, Error ellipse: s-maj=35.0km s-min=13.2km az=71.2*

ISC 13 06:41:57.8±1.5, **57°.20N**±0°.04×**163°.41E**±0°.05, **h8**^{km}±10^{km}, **n25,** σ**1^{s}.26**/37, **mb3.6**/4, **Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBG	Krutoberegovo	1.02	202	PN	Pg	06 42 17.2	-0.2
KBG				S	Sn	06 42 31.1	-1.8
KBG	Krutoberegovo	1.02	202	*e*P	Pg	06 42 17.2	-0.2
KBG				*e*S	Sn	06 42 31.1	-1.8
KBTR	Krutoberegovo	1.05	198	PN	Pb	06 42 17.4	-0.7
KBTR				S	Sn	06 42 31.6	-1.9
KBTR	Krutoberegovo	1.05	198	*e*P	Pb	06 42 17.4	-0.7
KBTR				*e*S	Sn	06 42 31.6	-1.9
SRKR	Sorokina	1.34	247	S	Sg	06 42 41.7	+0.8
BDR	Baidarnaya	1.36	243	S	Sg	06 42 42.6	+1.0
KLY	Klyuchi	1.76	241	PN	Pn	06 42 28.1	-0.4
KLY				S	Sn	06 42 50.1	-0.9
KLY	Klyuchi	1.76	241	*e*P	Pn	06 42 28.1	-0.4
KLY				*e*S	Sn	06 42 50.1	-0.9
KRSR	Krestovskiy	1.85	239	*e*S	Sb	06 42 54.9	-0.3
ZLN	Zelenaya	1.86	232	*e*S	Sb	06 42 56.4	+0.8
LGNR	Loginova	1.87	234	S	Sg	06 42 57.3	-0.6
BZGR	Bezymyannyi-Gr	1.96	231	S	Sb	06 42 59.4	+1.0
OSSR	Ossora	2.06	355	PN	Pb	06 42 34.4	-1.0
OSSR				S	Sb	06 43 00.1	-1.0
OSSR	Ossora	2.06	355	*e*P	Pb	06 42 34.4	-1.0
OSSR				*e*S	Sb	06 43 00.1	-1.0
KIRR	Kirishev	2.11	235	*e*S	Sb	06 43 02.5	-0.1
SRDR	Sredinnyy	2.22	248	PN	Pb	06 42 38.0	-0.1
SRDR				S	Sb	06 43 05.8	+0.2
SRDR	Sredinnyy	2.22	248	*e*P	Pb	06 42 38.0	-0.1
SRDR				*e*S	Sb	06 43 05.8	+0.2
KOZ	Kozyrevsk	2.26	241	PN	Pb	06 42 38.4	-0.4
KOZ				S	Sb	06 43 08.4	+1.5
KOZ	Kozyrevsk	2.26	241	P	Pb	06 42 38.4	-0.4
KOZ				*e*S	Sb	06 43 08.4	+1.5
BKI	Bering	2.46	143	*e*S	Sn	06 43 07.1	-1.2
TUMD	Tumrok D	2.61	221	S	Sb	06 43 15.7	-1.3
ILAR	Eielson Array	24.66	52	P	P	06 47 21.6	+3.1
	3.3nm,0.7s,baz=260,slow=8.2,SNR=4.4						
YKA	Yellowknife Ar	38.90	47	P	P	06 49 26.1	+2.9
	0.7nm,0.8s,baz=300,slow=7.4,SNR=2.2						
ZALV	Zalesovo Beam	42.24	300	P	P	06 49 49.2	-1.7
	0.7nm,0.4s,baz=62,slow=10.0,SNR=5.3						
WRA	Warramunga Arr	80.61	208	P	P	06 54 10.4	-0.2
	0.3nm,0.8s,baz=14,slow=6.4,SNR=1.6						

IDC 13 06:44:45.3±3.3, **17°.31S**×**178°.85W**, **h554**^{km}±19^{km}, **mb2.8**/4, **mb1 3.2**/5, **mb1mx2.9**/34, **mbtmp3.7**/5, **Error ellipse: s-maj=167.1km s-min=23.8km az=149.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	2.99	261	P	P	06 46 00.6	0.0
	1.3nm,0.3s,baz=63,slow=11,SNR=12						
WRA	Warramunga Arr	44.33	259	P	P	06 52 06.3	-0.5
	0.3nm,0.3s,baz=95,slow=8.1,SNR=9.9						
ASAR	Alice Springs	44.55	254	P	P	06 52 08.7	+0.2
	2.3nm,0.3s,baz=89,slow=8.1,SNR=44						
NVAR	Mina Array Bea	79.29	44	P	P	06 55 54.3	+0.2
	0.2nm,0.6s,baz=215,slow=7.7,SNR=2.3						
ILAR	Eielson Array	85.40	13	P	P	06 56 23.6	-0.4
	0.2nm,0.4s,baz=201,slow=4.8,SNR=1.6						

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*KRSC **13** 06:51:06.1±1.1, 57°.14N×163°.62E, h9^{km}±17^{km}, ML4.3*

*MOS **13** 06:51:07.6±1.2, 57°.15N×163°.47E, h11^{km}, mb3.9/1, Error ellipse: s-maj=15.4km s-min=6.1km az=66.8*

*IDC **13** 06:51:08.2±1.4, 57°.36N×163°.23E, h0^{km}, mb3.6/6, mb1 3.9/7, mb1mx3.6/38, mbtmp3.6/7, Error ellipse: s-maj=49.5km s-min=25.5km az=159.0*

ISC 13 06:51:07.2±1.5, **57°.11N**±0°.04×**163°.40E**±0°.04, **h1**^{km}±10^{km}, **n49,** σ**1^{s}.44**/71, **mb3.6**/6, **Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBG	Krutoberegovo	0.94	204	PN	Pg	06 51 25.4	+0.2
KBG				S	Sn	06 51 39.8	-1.8
KBG	Krutoberegovo	0.94	204	*e*P	Pg	06 51 25.4	+0.2
KBG				*e*S	Sn	06 51 39.8	-1.8
KBTR	Krutoberegovo	0.96	200	PN	Pg	06 51 25.8	+0.2
KBTR				S	Sn	06 51 40.2	-1.9
KBTR	Krutoberegovo	0.96	200	*e*P	Pg	06 51 25.8	+0.2
KBTR				*e*S	Sn	06 51 40.2	-1.9
SRKR	Sorokina	1.31	250	PN	Pn	06 51 31.4	-1.3
SRKR				S	Sg	06 51 50.1	+0.9
SRKR	Sorokina	1.31	250	*e*P	Pn	06 51 31.4	-1.3
SRKR				*e*S	Sg	06 51 50.1	+0.9
BDR	Baidarnaya	1.32	247	PN	Pn	06 51 31.9	-1.0
BDR				S	Sg	06 51 50.9	+1.3
BDR	Baidarnaya	1.32	247	*e*P	Pn	06 51 31.9	-1.0
BDR				*e*S	Sg	06 51 50.9	+1.3
KLY	Klyuchi	1.71	243	PN	Pn	06 51 36.7	-1.5
KLY				S	Sn	06 51 58.5	-2.1
KLY	Klyuchi	1.71	243	*e*P	Pn	06 51 36.7	-1.5
KLY				*e*S	Sn	06 51 58.5	-2.1
KRSR	Krestovskiy	1.80	241	PN	Pb	06 51 40.3	-0.8
KRSR				S	Sg	06 52 04.5	-0.6
KRSR	Krestovskiy	1.80	241	*e*P	Pb	06 51 40.3	-0.8
KRSR				*e*S	Sg	06 52 04.5	-0.6
LGNR	Loginova	1.82	237	*e*S	Sg	06 52 05.3	-0.3
BZGR	Bezymyannyi-Gr	1.90	233	PN	Pb	06 51 42.0	-0.8
BZGR				S	Sb	06 52 07.0	0.0
BZGR	Bezymyannyi-Gr	1.90	233	*e*P	Pb	06 51 42.0	-0.8
BZGR				*e*S	Sb	06 52 07.0	0.0
BZWR	Bezymyannyi-We	1.98	236	*e*S	Sb	06 52 09.5	+0.3
KIRR	Kirishev	2.05	237	PN	Pb	06 51 43.8	-1.6
KIRR				S	Sb	06 52 11.0	-0.4
KIRR	Kirishev	2.05	237	*e*P	Pb	06 51 43.8	-1.6
KIRR				*e*S	Sb	06 52 11.0	-0.4
OSSR	Ossora	2.15	355	PN	Pn	06 51 43.0	-1.2
OSSR	Ossora	2.15	355	*e*P	Pn	06 51 43.0	-1.2
SRDR	Sredinnyy	2.18	250	PN	Pn	06 51 45.2	+0.5
SRDR	Sredinnyy	2.18	250	*e*P	Pn	06 51 45.2	+0.5
KOZ	Kozyrevsk	2.22	243	PN	Pb	06 51 46.4	-1.7
KOZ				S	Sb	06 52 15.3	-0.7
KOZ	Kozyrevsk	2.22	243	*e*P	Pb	06 51 46.4	-1.7
KOZ				*e*S	Sb	06 52 15.3	-0.7
KMNR	Kamenistaya	2.22	234	PN	Pb	06 51 47.9	-0.3
KMNR	Kamenistaya	2.22	234	*e*P	Pb	06 51 47.9	-0.3
BKI	Bering	2.39	142	PN	Pn	06 51 46.7	-0.8
BKI				S	Sn	06 52 15.5	-1.9
BKI	Bering	2.39	142	*e*P	Pn	06 51 46.7	-0.8
BKI				*e*S	Sn	06 52 15.5	-1.9
TUMD	Tumrok D	2.54	223	*e*P	Pn	06 51 50.8	+1.2
TUMR	Tumrok	2.58	226	PN	Pb	06 51 51.7	-2.6
TUMR	Tumrok	2.58	226	*e*P	Pb	06 51 51.7	-2.6
PALN	Palana	2.69	319	PN	Pn	06 51 52.4	+0.8
PALN	Palana	2.69	319	*e*P	Pn	06 51 52.4	+0.8
MKZ	Mys Kozlova	2.73	201	PN	Pn	06 51 52.5	+0.4
MKZ	Mys Kozlova	2.73	201	P	Pn	06 51 52.5	+0.4
ESO	Esso	2.86	247	PN	Pb	06 51 57.4	-1.7
ESO				S	Sb	06 52 34.3	-0.3
ESO	Esso	2.86	247	*e*P	Pb	06 51 57.4	-1.7
ESO				*e*S	Sb	06 52 34.3	-0.3
TILK	Tilichiki	3.64	22	PN	Pn	06 52 05.3	+0.7
TILK	Tilichiki	3.64	22	*e*P	Pn	06 52 05.3	+0.7
SDLR	Sedlovina	4.63	216	PN	Pn	06 52 20.6	+2.2
SDLR	Sedlovina	4.63	216	*e*P	Pn	06 52 20.6	+2.2
PET	Petropavlovsk	4.92	216	*e*PN	Pn	06 52 27.1	+4.9
PET				*e*S	Sn	06 53 24.7	+5.0
PET				smax	smax		
	comp=N,24nm,0.7s						
PET				smax	smax		
	comp=E,23nm,0.7s						
PETK	Petropavlovsk-	5.17	222	Pn	Pn	06 52 28.9	+3.1
	baz=67,slow=16,SNR=2.3						
ILAR	Eielson Array	24.72	51	P	P	06 56 30.1	+0.4
	comp=E,3.0nm,0.7s,baz=264,slow=8.9,SNR=38						
YKA	Yellowknife Ar	38.97	47	P	P	06 58 35.1	+0.7
	comp=E,0.5nm,0.7s,baz=302,slow=7.2,SNR=7.4						
ZALV	Zalesovo Beam	42.28	301	P	P	06 59 01.1	-0.8
	comp=E,0.4nm,0.4s,baz=46,slow=8.3,SNR=2.0						
NVAR	Mina Array Bea	52.72	75	P	P	07 00 25.0	+1.5
	comp=E,0.1nm,0.3s,baz=298,slow=7.7,SNR=2.9						
PDAR	Pinedale Array	54.01	65	P	P	07 00 32.9	-0.1
	comp=E,0.5nm,0.7s,baz=329,slow=3.2,SNR=5.8						
TXAR	Lajitas Array	67.41	71	P	P	07 02 05.7	+1.4
	comp=E,0.5nm,0.8s,baz=309,slow=5.7,SNR=6.5						

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*MOS **13** 07:00:26.8±0.8, 41°.60N×142°.00E, h75^{km}, mb4.4/5, Error ellipse: s-maj=9.6km s-min=7.0km az=80.6*

*NEIC **13** 07:00:27.4±1.4, 41°.51N±0°.06×141°.85E±0°.07, h63^{km}±8^{km}, mb4.3/10, Error ellipse: s-maj=9.2km s-min=6.5km az=142.0*

*JMA **13** 07:00:27.3±0.1, 41°.58N×141°.91E, h67^{km}±2^{km}, M4.0 Broadband fault plane solution: P waves. NP1: ϕ_s158.00000°, δ14.00000°, λ40.00000°. NP2: ϕ_s30.00000°, δ81.00000°, λ101.00000°. Principal axes: T Plg53.0000°, Azm313.0000°; N Plg11.0000°, Azm208.0000°; P Plg35.0000°, Azm110.0000°;*

JMA Felt I J1.

*IDC **13** 07:00:28.1±1.8, 41°.56N×141°.93E, h72^{km}±15^{km}, mb3.7/18, mb1 3.8/22, mb1mx3.6/53, mbtmp3.9/22 Error ellipse: s-maj=18.0km s-min=12.3km az=121.0*

ISC 13 07:00:27.6±0.8, **41°.56N**±0°.03×**141°.95E**±0°.03, **h65**^{km}±7^{km}, **n93,** σ**1^{s}.07**/101, **mb4.2**/24, **3C-9D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAHD	Aomorihigashid	0.55	238	⇓P	Pn	07 00 40.5	+0.1
JAHD				*e*S	Sn	07 00 50.1	+0.3
JOT	Ohata	0.70	255	⇓P	Pn	07 00 41.7	-0.4
JOT				*e*S	Sn	07 00 52.3	-0.6
JARK	Aomorirokkasho	0.71	219	P	Pn	07 00 41.8	-0.4
JARK				*e*S	Sn	07 00 52.3	-0.7
JKB	Kayabe	0.76	296	⇓P	Pn	07 00 42.0	-0.8
JKB				*e*S	Sn	07 00 53.1	-1.0
JSHD	Hidakashinhida	0.93	24	P	Pn	07 00 45.2	+0.3
JNBK	Urakawa-nobuka	0.93	40	P	Pn	07 00 44.2	-0.8
ERM	Erimo	1.01	63	P	Pn	07 00 46.4	+0.5
ERM	Erimo	1.01	63		Pn	07 00 46.4	+0.5
JEM	Erimo	1.01	63	P	Pn	07 00 45.9	0.0
JEM				*e*S	Sn	07 00 59.4	-0.1
JTM	Tenmabayashi	1.02	221	⇓P	Pn	07 00 46.2	+0.1
JTM				*e*S	Sn	07 00 59.4	-0.4
JTM	Tenmabayashi	1.02	221		Pn	07 00 46.5	+0.4
JIAM	Iburiatsuma	1.06	359	P	Pn	07 00 46.9	+0.3
JNB	Noboribetsu	1.13	323	⇓P	Pn	07 00 46.5	-1.0
JNB				*e*S	Sn	07 01 00.9	-1.5
JSR	Shiriuchi	1.15	269	⇓P	Pn	07 00 47.3	-0.5
JANG	Nango	1.23	196	P	Pn	07 00 48.6	-0.2
JANG				*e*S	Sn	07 01 03.9	-0.8
JBT2	Biratori 2	1.25	14	P	Pn	07 00 49.3	+0.2
JBT2				*e*S	Sn	07 01 06.1	+0.9
JYM2	Yakumo 2	1.31	296	⇓P	Pn	07 00 49.8	0.0
JEW	Eniwo	1.33	344	⇓P	Pn	07 00 50.0	-0.1
JEW				*e*S	Sn	07 01 06.2	-0.8
JEW	Eniwo	1.33	344		Pn	07 00 50.3	+0.2
JOMM	Oshimamatsumae	1.46	269	P	Pn	07 00 51.3	-0.5
JCH	Churui	1.49	44	P	Pn	07 00 52.8	+0.6
JCH				*e*S	Sn	07 01 11.6	+0.9
JFR	Furan	1.67	16	P	Pn	07 00 54.6	-0.1
JOSM	Okushiri--Mats	1.92	287	⇓P	Pn	07 00 57.2	-0.8
ASAJ	Asahikawa	2.60	10	P	Pn	07 01 08.2	+1.0
	6.6nm,0.3s,baz=231,slow=11,SNR=46						
ASAJ				S	Sn	07 01 38.8	+1.2
	8.8nm,0.3s,baz=173,slow=32,SNR=9.7						
JKA	Kamikawa-asahi	2.60	10		Pn	07 01 08.7	+1.5
NMR	Nemuro--Hokkai	3.33	56	*e*P	Pn	07 01 15.3	-1.8
NMR				*e*S	Sn	07 01 51.6	-3.8
GLVR	Golovnino	3.41	49	*e*P	Pn	07 01 18.1	-0.2
GLVR				*e*S	Sn	07 01 55.6	-1.9
GLVR				smax	smax		
	comp=N,310nm,0.4s						
GLVR				smax	smax		
	comp=E,169nm,0.3s						
GRPR	Tuman	3.72	48	*e*P	Pn	07 01 22.1	-0.3
GRPR				*e*S	Sn	07 02 02.2	-2.8
GRPR				smax	smax		
	comp=N,315nm,0.2s						
GRPR				smax	smax		
	comp=E,321nm,0.5s						
YUK	Yuzh-Kuril'sk	3.79	48	*e*P	Pn	07 01 23.4	-0.1
YUK				*e*S	Sn	07 02 04.4	-2.4
YUK				pmax	pmax		
	comp=E,40nm,0.3s						
YUK				pmax	pmax		
	comp=Z,247nm,0.3s						
YUK				smax	smax		
	comp=E,213nm,0.6s						
YUK				smax	smax		
	comp=N,357nm,0.5s						
JMM	Marumori	3.80	194	Pn	Pn	07 01 24.1	+0.5
YSS	Yuzh-Sakhalins	5.42	6	*e*P	Pn	07 01 48.2	+2.5
KUR	Kuril'sk	5.66	48	*i* P	Pn	07 01 47.9	-1.1
MAJO	Matsushiro	5.80	211	*e*P	Pn	07 01 54.5	+3.5
MJAR	Matsushiro Arr	5.80	211	P	Pn	07 01 52.6	+1.6
	comp=N,0.2nm,0.3s,baz=20,slow=14,SNR=2.2						
USA0B	Ussuriysk Arra	7.78	293	*i* P	Pn	07 02 18.2	+0.2
USRK	Ussuriysk Ar.	7.78	293	P	Pn	07 02 18.6	+0.6
	baz=91,slow=14,SNR=6.9						
USRK	Ussuriysk Ar.	7.78	293		Pn	07 02 17.5	-0.5
MSHR	Mys Shultsa	8.10	281	*c i*P	Pn	07 02 24.2	+1.9
KLR	Kul'dur	10.49	320	P	Pn	07 02 56.8	+1.8
	comp=N,0.4nm,0.3s,baz=124,slow=14,SNR=8.2						
KLR	Kul'dur	10.49	320	*c i*P	Pn	07 02 57.0	+2.0
KSRS	Korea Array	11.59	254	P	Pn	07 03 16.0	+6.0
	comp=N,0.4nm,0.3s,baz=63,slow=14,SNR=6.3						
KSRS	Korea Array	11.59	254	*e*P	Pn	07 03 16.0	+6.0
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.6s						
HIA	Hailar	17.35	304	*e*P	P	07 04 25.9	+0.2
HIA				pmax	pmax		
	comp=Z,4.0nm,0.9s						

SEY	Seymchan	22.28	13	P	P	07 05 17.2	-1.8
	comp=Z,1.1nm,0.2s,baz=183,slow=8.8,SNR=4.3						
SONM	Songino Array	25.88	296	P	P	07 05 53.3	+0.1
	comp=Z,0.6nm,0.4s,baz=81,slow=8.5,SNR=5.0						
SONM	Songino Array	25.88	296	eP	P	07 05 53.9	+0.7
SONM				pmax	pmax		
	comp=Z,1.0nm,0.4s						
H11N2	WAKE ISLAND Hy	30.37	128	T	T	07 39 13.2	
	baz=321,slow=76,SNR=38						
H11N1	WAKE ISLAND Hy	30.38	128	T	T	07 39 06.2	
	baz=321,slow=76,SNR=36						
H11N3	WAKE ISLAND Hy	30.39	128	T	T	07 39 06.2	
	baz=321,slow=76,SNR=24						
TIXI	Tiksi	30.86	352	eP	P	07 06 36.9	-0.2
H11S1	WAKE ISLAND Hy	31.21	130	T	T	07 40 08.4	
	baz=323,slow=76,SNR=43						
H11S3	WAKE ISLAND Hy	31.22	130	T	T	07 40 07.5	
	baz=323,slow=76,SNR=30						
H11S2	WAKE ISLAND Hy	31.23	130	T	T	07 40 08.4	
	baz=323,slow=76,SNR=28						
TNA	Tin City	36.76	32	P	P	07 07 29.8	+1.5
ZALV	Zalesovo Beam	39.30	308	P	P	07 07 49.1	-0.7
	comp=Z,1.6nm,0.3s,baz=79,slow=9.0,SNR=1.1						
TTA	Tatalina	41.52	38	P	P	07 08 09.5	+1.4
TTA				pmax	pmax		
	comp=Z,6.0nm,1.5s						
TTA	Tatalina	41.52	38	P	P	07 08 09.5	+1.4
KURK	Kurchatov	43.59	305	P	P	07 08 25.3	+0.3
KURBB	Kurchatov Arra	43.67	304	P	P	07 08 25.3	-0.2
	comp=Z,2.2nm,0.3s,baz=80,slow=9.7,SNR=1.8						
ILAR	Eielson Array	45.49	35	P	P	07 08 40.2	+0.2
	comp=Z,1.4nm,0.8s,baz=263,slow=5.6,SNR=16						
ILAR	Eielson Array	45.49	35	P	P	07 08 40.7	+0.8
ILAR	Eielson Array	45.49	35	P	P	07 08 40.7	+0.8
HDA	Harding Lake	45.50	35	P	P	07 08 40.9	+0.9
PRP	Porcupine Dome	45.99	34	P	P	07 08 44.9	+0.8
PRP				IAmb	IAmb	07 08 46.3	
	comp=Z,3.1nm,0.9s						
BMAR	Burnt Mountain	46.20	31	P	P	07 08 46.8	+1.2
BVAR	Borovoye Array	47.93	309	P	P	07 08 58.5	-0.7
	comp=Z,0.6nm,0.3s,baz=108,slow=5.0,SNR=5.7						
BRVK	Borovoye	47.98	310	P	P	07 08 59.3	-0.2
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BRVK	Borovoye	47.98	310	P	P	07 08 59.3	-0.2
BRVK				IAmb	IAmb	07 09 07.2	
	comp=Z,2.9nm,0.9s						
AAK	Ala-Archa	48.83	295	P	P	07 09 05.7	-0.7
	comp=Z,1.0nm,0.3s,baz=162,slow=4.6,SNR=4.6						
AAK	Ala-Archa	48.83	295	P	P	07 09 06.2	-0.2
AAK				pmax	pmax		
	comp=Z,5.0nm,1.5s						
AAK	Ala-Archa	48.83	295	P	P	07 09 06.2	-0.2
AAK				IAmb	IAmb	07 09 23.5	
	comp=Z,4.7nm,1.4s						
INK	Inuvik	50.19	29	P	P	07 09 16.7	+0.5
	comp=Z,2.1nm,0.5s,baz=296,slow=6.3,SNR=18						
INK	Inuvik	50.19	29	P	P	07 09 16.9	+0.7
INK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
INK	Inuvik	50.19	29	P	P	07 09 16.9	+0.7
INK				IAmb	IAmb	07 09 17.4	
	comp=Z,2.6nm,0.7s						
KKAR	Karatay Array	51.32	297	P	P	07 09 24.7	-0.4
KKAR	Karatay Array	51.32	297	P	P	07 09 24.7	-0.4
ABKAR	Akbulak array	55.41	308	P	P	07 09 54.9	0.0
ABKAR				IAmb	IAmb	07 09 55.4	
	comp=Z,1.7nm,0.6s						
EUNU	Eureka	55.65	9	P	P	07 09 56.3	0.0
EUNU				IAmb	IAmb	07 09 56.5	
	comp=Z,2.0nm,0.7s						
AKTO	Aktyubinsk	56.03	310	P	P	07 09 58.9	-0.4
	comp=Z,0.9nm,0.6s,baz=66,slow=10.0,SNR=2.8						
YKA	Yellowknife Ar	59.71	32	P	P	07 10 25.3	+0.4
	comp=Z,0.1nm,0.4s,baz=304,slow=5.9,SNR=5.2						
ARCES	ARCESS Array B	59.92	339	P	P	07 10 27.4	+1.1
	comp=Z,5.8nm,1.0s,baz=28,slow=4.1,SNR=1.6						
WR0	Warramunga Arr	61.59	188	P	P	07 10 37.3	-0.8
WRA	Warramunga Arr	61.60	188	P	P	07 10 36.8	-1.4
	comp=Z,0.2nm,0.3s,baz=6.1,slow=7.0,SNR=6.7						
WRA	Warramunga Arr	61.60	188	eP	P	07 10 39.1	+0.9
OBN	Obninsk	64.75	322c	iP	P	07 10 58.7	0.0
OBN				pmax	pmax		
	comp=Z,2.0nm,0.8s						
FIA1	FINESS Array S	65.02	332	P	P	07 11 00.1	-0.2
FINES	FINESS Array B	65.02	332	P	P	07 10 59.9	-0.4
	comp=Z,2.2nm,0.6s,baz=39,slow=8.6,SNR=14						
ASAR	Alice Springs	65.32	188	P	P	07 11 02.6	-0.2
	comp=Z,0.3nm,0.8s,baz=9.2,slow=6.7,SNR=4.2						
KBZ	Khabaz	68.31	310	P	P	07 11 22.3	+0.7
	comp=Z,2.2nm,0.9s,baz=11,slow=5.2,SNR=2.5						
NB2	NORSAR Subarra	70.18	337	P	P	07 11 32.4	-0.6
	comp=Z,0.3nm,0.4s,baz=31,slow=6.5						
NOA	NORSAR Array B	70.18	337	P	P	07 11 31.8	-1.2
	comp=Z,0.3nm,0.5s,baz=41,slow=5.9,SNR=4.1						
AKASG	Malin Array Be	70.99	322	P	P	07 11 37.4	-0.6
	comp=Z,1.1nm,0.4s,baz=43,slow=6.6,SNR=9.5						
PDAR	Pinedale Array	74.22	47	P	P	07 11 57.8	+0.2
	comp=Z,0.4nm,0.7s,baz=48,slow=1.3,SNR=2.7						

NNC 13 07:04:26.5±1.6, 49°.93N×87°.75E, h0^{km}, mb4.0, mpv3.6, 10C-7D, Error ellipse: s-maj=14.3km s-min=5.9km az=102.0, Kazakhstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	4.42	337	⇑Pn	Pn	07 05 34.1	-0.6
	0.5nm,0.3s						
ZAA0				⇑Sn	Sn	07 06 28.2	+1.4
	2.3nm,0.3s						
ZAA0				⇓Lg	Lg	07 06 50.8	
	2.0nm,0.4s						
MK31	Makanchi Array	4.80	231	⇓Pn	Pn	07 05 40.0	0.0
	3.4nm,0.4s,baz=56,slow=13,SNR=108						
MK31				⇑Pg	Pb	07 05 54.1	+2.7
	8.3nm,0.5s,baz=55,slow=14,SNR=12						
MK31				⇓Sn	Sn	07 06 38.9	+2.5
	3.8nm,0.4s,baz=56,slow=23,SNR=4.1						
MK31				⇑Lg	Lg	07 06 56.7	
	16nm,0.6s,baz=55,slow=29,SNR=6.8						
MAKZ	Makanchi	4.95	233	⇓Pn	Pn	07 05 42.1	0.0
	5.0nm,0.7s						
MAKZ				⇑Pg	Pb	07 05 57.4	+3.3
	3.3nm,0.4s						
MAKZ				⇓Sn	Sn	07 06 41.4	+1.3
	3.7nm,0.3s						
MAKZ				⇓Lg	Lg	07 06 59.3	
	16nm,0.7s						
KURK	Kurchatov	5.90	281	⇑Pn	Pn	07 05 54.1	-1.0
	8.5nm,0.7s						
KURK				⇑Sn	Sn	07 07 03.5	+0.2
	14nm,0.8s						
KURK				⇑Lg	Lg	07 07 33.9	
	19nm,0.6s						
KURBB	Kurchatov Arra	5.95	280	⇑Pn	Pn	07 05 55.5	-0.3
	19nm,0.6s						
KURBB				⇑Sn	Sn	07 07 05.8	+1.1
	30nm,0.5s						
KURBB				⇓Lg	Lg	07 07 37.0	
	60nm,0.7s						

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*IDC **13** 07:07:27.9±1.9, 20°.22S×70°.89W, h0^{km}, mb3.8/2, mb1 3.8/4, mb1mx3.6/27, mbtmp3.7/4, ML3.4/2, MS2.6/4, Ms1 2.6/4, ms1mx2.5/32, Error ellipse: s-maj=56.6km s-min=18.7km az=58.0*

*GUC **13** 07:07:31.4±0.5, 20°.22S×70°.86W, h30^{km}±5^{km}, ML3.5*

ISC 13 07:07:29.4±2.0, 20°.26S±0°.04×70°.89W±0°.08, h11^{km}±11^{km}, n24, σ1^{s}15/25, 3C-5D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TA02	Huaiquique	0.72	91	eP	Pb	07 07 44.0	+0.1
TA02				eS	Sb	07 07 53.6	0.0
TA01	Diego Aracena	0.74	115	⇓iP	Pb	07 07 44.6	+0.4
TA01				eS	Sb	07 07 54.5	+0.3
TA01				IAML		07 07 56.7	
	comp=N,5μm,0.4s						
PATCX	Punta Patache	0.89	129	⇓iP	Pg	07 07 47.3	+0.7
PATCX				i S	Sn	07 07 59.9	-1.0
PATCX				IAML		07 08 01.4	
	comp=E,2μm,0.4s						
HMBC	Humberstone	0.94	91	⇓iP	Pg	07 07 47.7	+0.1
HMBC				i S	Sg	07 08 00.1	+0.1
HMBC				IAML		07 08 03.1	
	comp=N,3μm,0.4s						
PSGC	Pisagua	0.98	48	⇓iP	Pg	07 07 47.8	-0.4
PSGC				i S	Sg	07 08 00.7	-0.3
PSGC				IAML		07 08 03.5	
	comp=E,2μm,0.3s						
PB01	IPOC Station P	1.53	121	⇑iP	Pb	07 07 57.5	-0.4
PB01				i S	Sb	07 08 17.5	+0.2
PB01				IAML		07 08 21.9	
	comp=N,3μm,0.4s						
PB08	IPOC Station P	1.64	86	⇑iP	Pb	07 07 58.9	-0.9
PB08				eS	Sb	07 08 20.1	-0.6
PB08				IAML		07 08 24.1	
	comp=E,785nm,0.6s						
MNMC	Minye Minye	1.66	48	⇑iP	Pb	07 07 58.8	-1.3
MNMC				i S	Sb	07 08 20.9	-0.2
PB07	IPOC Station P	1.74	147	⇓iP	Pn	07 07 59.2	-0.4
PB07				IAML		07 08 32.8	
	comp=E,602nm,0.1s						
AP01	Chacalluta	1.95	16	eP	Pb	07 08 03.8	-1.0
PB09	IPOC Station P	2.17	135	IAML		07 08 47.0	
	comp=E,1μm,0.7s						
LVC	Limon Verde	2.98	142	Pn	Pn	07 08 18.1	+1.1
	comp=E,2.1nm,0.3s,baz=22,slow=23,SNR=8.8						
LVC				Sn	Sn	07 08 54.0	+1.2
	comp=E,13nm,0.3s,baz=61,slow=16,SNR=2.3						
LVC				Lg	Lg	07 09 03.5	
	comp=E,35nm,0.3s,baz=59,slow=22,SNR=9.6						
LVC				LR	LR	07 09 24.2	
	comp=E,42nm,21.0s,baz=318,slow=39						
LPAZ	La Paz	4.74	34	Pn	Pn	07 08 45.2	+3.9
	comp=E,0.9nm,0.3s,baz=184,slow=3.4,SNR=20						
LPAZ				LR	LR	07 10 13.8	
	comp=E,57nm,20.1s,baz=345,slow=35						
SIV	San Ignacio	10.26	67	Pn	Pn	07 09 58.0	+1.5
	comp=E,0.8nm,0.3s,baz=257,slow=14,SNR=8.1						
SIV				LR	LR	07 14 37.2	
	comp=E,86nm,18.8s,baz=252,slow=42						
CPUP	Villa Florida	13.85	118	LR	LR	07 16 43.9	
	comp=E,33nm,21.4s,baz=309,slow=40						
H03N1	Juan Fernandez	14.95	207	T	T	07 26 37.4	
	baz=33,slow=72,SNR=27						
H03N2	Juan Fernandez	14.95	207	T	T	07 26 48.1	
	baz=33,slow=72,SNR=19						
H03N3	Juan Fernandez	14.96	207	T	T	07 26 46.0	
	baz=33,slow=72,SNR=17						
TORD	Torodi Ar. Bea	78.70	71	P	P	07 19 31.0	-1.2
	comp=E,1.0nm,0.7s,baz=256,slow=5.1,SNR=5.0						
YKA	Yellowknife Ar	89.41	341	P	P	07 20 25.9	+0.3
	comp=E,0.2nm,0.7s,baz=131,slow=5.2,SNR=5.5						
H11S2	WAKE ISLAND Hy	125.87	279	T	T	09 46 06.5	
	baz=101,slow=74,SNR=8.1						
H11S1	WAKE ISLAND Hy	125.88	279	T	T	09 46 07.0	
	baz=101,slow=74,SNR=7.8						
H11S3	WAKE ISLAND Hy	125.89	279	T	T	09 46 07.8	
	baz=101,slow=74,SNR=8.8						
MKAR	Makanchi Array	145.67	33	PKPbc	PKPab	07 27 08.8	+0.3
	comp=E,1.2nm,0.9s,baz=332,slow=4.1,SNR=6.0						

IDC 13 07:13:27.5±1.5, 7°.99S×158°.13E, h0^{km}, mb3.7/4, mb1 3.9/5, mb1mx3.6/25, mbtmp3.8/5, ML4.4/1, MS3.9/1, Ms1 3.9/1, ms1mx2.7/39, Error ellipse: s-maj=35.5km s-min=30.0km az=35.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	2.30	129	Pn	Pn	07 14 06.7	0.0
	100nm,0.3s,baz=225,slow=5.6,SNR=31						
HNR				Sn	Sn	07 14 26.8	-8.9
	79nm,0.3s,baz=344,slow=24,SNR=6.4						
WRA	Warramunga Arr	25.92	240	P	P	07 19 02.3	+0.7
	1.1nm,0.9s,baz=66,slow=8.8,SNR=6.9						
H11S3	WAKE ISLAND Hy	27.64	18	T	T	07 48 09.0	
	baz=196,slow=75,SNR=20						
H11S2	WAKE ISLAND Hy	27.64	18	T	T	07 48 21.7	
	baz=196,slow=75,SNR=29						
H11S1	WAKE ISLAND Hy	27.66	18	T	T	07 48 05.7	
	baz=196,slow=75,SNR=18						
ASAR	Alice Springs	27.96	233	P	P	07 19 19.4	-0.6
	0.5nm,0.4s,baz=62,slow=9.7,SNR=13						
H11N1	WAKE ISLAND Hy	28.85	17	T	T	07 49 55.9	
	baz=195,slow=76,SNR=12						
H11N3	WAKE ISLAND Hy	28.86	17	T	T	07 49 58.4	
	baz=195,slow=76,SNR=10						
H11N2	WAKE ISLAND Hy	28.87	17	T	T	07 49 53.8	
	baz=195,slow=76,SNR=14						
ASAJ	Asahikawa	53.74	346	LR	LR	07 46 26.2	
	comp=Z,109nm,18.6s,baz=167,slow=37						
SONM	Songino Array	71.87	326	P	P	07 24 53.2	+0.7
	0.4nm,0.4s,baz=137,slow=7.4,SNR=3.1						
MKAR	Makanchi Array	86.21	318	P	P	07 26 10.2	-0.8
	0.1nm,0.4s,baz=104,slow=6.1,SNR=2.3						

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*SOME **13** 07:28:17.6, 43°.95N×83°.65E, h5^{km}*

*NNC **13** 07:28:18.3±1.5, 43°.95N×83°.65E, h11^{km}±9^{km}, mb3.9, mpv3.6, Error ellipse: s-maj=12.7km s-min=5.2km az=128.0*

ISC 13 07:28:18.0±1.9, 43°.83N±0°.08×84°.00E±0°.09, h20^{km}, n37, σ1^{s}81/52, 8C-7D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	Ketmen	2.68	263	eP	Pb	07 29 03.0	-2.3
	6.9nm,0.1s						
KTMS				eS	Sb	07 29 36.2	-1.7
	139nm,0.4s						
KTMS	Ketmen	2.68	263	Pg	Pb	07 29 03.0	-2.3
	6.9nm,0.1s						
KTMS				Lg	Lg	07 29 36.2	
	139nm,0.4s						
DJR	Jarkent	3.08	281	eP	Pb	07 29 10.7	-1.4
	17nm,0.3s						
DJR				eS	Sb	07 29 49.3	+0.1
	130nm,0.4s						
MK31	Makanchi Array	3.20	338	⇑Pn	Pn	07 29 06.2	-1.0
	0.4nm,0.2s,baz=156,slow=14,SNR=297						
MK31				⇑Pg	Pb	07 29 13.6	-0.6
	2.6nm,0.2s,baz=158,slow=18,SNR=59						
MK31				Lg	Lg	07 29 52.2	
	18nm,0.4s,baz=160,slow=29,SNR=11						
MAKZ	Makanchi	3.30	335	⇓Pn	Pn	07 29 07.7	-0.9
	1.2nm,0.3s						
MAKZ				⇑Pg	Pb	07 29 14.7	-1.2
	7.3nm,0.5s						
MAKZ				⇑Lg	Lg	07 29 55.8	
	57nm,0.7s						
PDGK	Podgornoye	3.32	263	Pg	Pb	07 29 15.6	-0.6
	4.3nm,0.4s						
PDGK				Lg	Lg	07 29 57.6	
	37nm,0.5s						
PDGK	Podgornoye	3.32	263	⇓Pg	Pb	07 29 11.8	-4.5
	5.9nm,0.8s						
PDGK				⇓Lg	Lg	07 29 56.5	
	31nm,0.6s						
SHLS	Shalkode	3.37	260	eP	Pn	07 29 10.1	+0.4
	28nm,0.4s						
SHLS				eS	Sn	07 29 48.1	-1.1
	203nm,0.6s						
SHLS	Shalkode	3.37	260	Pg	Pn	07 29 10.1	+0.4
	28nm,0.4s						
SHLS				Lg	Lg	07 29 48.1	
	203nm,0.6s						
KAPS	Kapalarasan	3.63	295	eP	Pb	07 29 20.6	-0.8
	12nm,0.2s						
KAPS				eS	Sb	07 30 05.9	+0.9
	101nm,0.5s						
KAPS	Kapalarasan	3.63	295	Pg	Pb	07 29 20.6	-0.8
	12nm,0.2s						
KAPS				Lg	Lg	07 30 05.9	
	101nm,0.5s						
ZSN	Zaisan	3.67	9	eP	Pb	07 29 22.9	+0.7
	26nm,0.3s						
ZSN				eS	Sb	07 30 09.5	+3.2
	92nm,0.5s						
ZSN	Zaisan	3.67	9	Pg	Pb	07 29 22.9	+0.7
	26nm,0.3s						
ZSN				Lg	Lg	07 30 09.5	
	92nm,0.5s						
UZB	Uzynbulak	3.69	261	eP	Pb	07 29 21.5	-1.1
	4.0nm,0.3s						
UZB				eS	Sb	07 30 07.2	+0.3
	42nm,0.4s						
UZB	Uzynbulak	3.69	261	Pg	Pb	07 29 21.5	-1.1
	4.0nm,0.3s						
UZB				Lg	Lg	07 30 07.2	
	42nm,0.4s						
KPKS	Kokpek	3.88	266	eP	Pb	07 29 25.7	-0.1
	16nm,0.2s						
KPKS				eS	Sb	07 30 15.5	+3.2
	98nm,0.4s						
MNBS	Baschi	4.05	275	eP	Pb	07 29 28.6	-0.2
	7.8nm,0.2s						
MNBS				eS	Sb	07 30 19.3	+2.0
	98nm,0.4s						
MNBS	Baschi	4.05	275	Pg	Pb	07 29 28.6	-0.2
	7.8nm,0.2s						
MNBS				Lg	Lg	07 30 19.3	
	98nm,0.4s						
SATY	Saty	4.15	261	eP	Pb	07 29 30.8	+0.4
	14nm,0.4s						
SATY				eS	Sb	07 30 24.1	+4.0
	52nm,0.2s						
SATY	Saty	4.15	261	Pg	Pb	07 29 30.8	+0.4
	14nm,0.4s						
SATY				Lg	Lg	07 30 24.1	
	52nm,0.2s						
TDK	Taldyqorghan	4.18	288	eP	Pb	07 29 32.4	+1.5
	47nm,0.3s						
TDK				eS	Sb	07 30 26.2	+5.4
	295nm,0.5s						
TDK	Taldyqorghan	4.18	288	Pg	Pb	07 29 32.4	+1.5
	47nm,0.3s						
TDK				Lg	Lg	07 30 26.2	
	295nm,0.5s						
KURS	Kuram	4.25	267	eP	Pb	07 29 31.3	-0.8
	7.6nm,0.5s						
KURS				eS	Sb	07 30 24.0	+1.1
	24nm,0.5s						
KURS	Kuram	4.25	267	Pg	Pb	07 29 31.3	-0.8
	7.6nm,0.5s						
KURS				Lg	Lg	07 30 24.0	
	24nm,0.5s						
ARXS	Arharly	4.47	277	eP	Pb	07 29 35.1	-0.8
	8.3nm,0.3s						
ARXS				eS	Sb	07 30 30.9	+1.5
	50nm,0.3s						
ARXS	Arharly	4.47	277	Pg	Pb	07 29 35.1	-0.8
	8.3nm,0.3s						
ARXS				Lg	Lg	07 30 30.9	
	50nm,0.3s						
CHKK	Chushkaly	5.08	273	eP	Pb	07 29 47.0	+0.9
	3.5nm,0.4s						
CHKK				eS	Sb	07 30 51.2	+4.5
	59nm,0.5s						
CHKK	Chushkaly	5.08	273	Pg	Pb	07 29 47.0	+0.9
	3.5nm,0.4s						
CHKK				Lg	Lg	07 30 51.2	
	59nm,0.5s						
MDOK	Medeo	5.10	265	Pg	Pb	07 29 47.1	+0.4
	5.1nm,0.5s						
MDOK				Lg	Lg	07 30 51.7	
	18nm,0.7s						
KUU	Kurty	5.54	273	eP	Pb	07 29 53.9	-0.2
	2.4nm,0.6s						
KUU				eS	Sb	07 31 02.8	+2.7
	43nm,0.5s						
KUU	Kurty	5.54	273	Pg	Pb	07 29 53.9	-0.2
	2.4nm,0.6s						
KUU				Lg	Lg	07 31 02.8	
	43nm,0.5s						
KST	Kastek	5.91	265	eP	Pb	07 30 00.4	+0.1
	5.8nm,0.6s						
KST				eS	Sb	07 31 14.1	+3.4
	7.7nm,0.5s						
KST	Kastek	5.91	265	Pg	Pb	07 30 00.4	+0.1
	5.8nm,0.6s						
KST				Lg	Lg	07 31 14.1	
	7.7nm,0.5s						
TKM2	Tokmak 2	6.19	264	⇓Pg	Pb	07 30 07.0	+1.7
	2.6nm,0.5s						
TKM2				⇓Lg	Lg	07 31 26.8	
	6.2nm,0.5s						
AAK	Ala-Archa	7.05	264	⇓Pg	Pb	07 30 25.0	+5.2
	1.8nm,0.6s						
AAK				⇑Lg	Lg	07 31 51.0	
	13nm,1.1s						
KURBB	Kurchatov Arra	7.75	333	⇓Pn	Pn	07 30 06.8	-2.8
	1.2nm,0.3s						
KURBB				⇑Lg	Lg	07 32 13.3	
	17nm,0.7s						
KURK	Kurchatov	7.80	334	⇑Pn	Pn	07 30 07.0	-3.2
	0.4nm,0.3s						
KURK				⇑Lg	Lg	07 32 14.6	
	12nm,0.8s						

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*IDC **13** 07:37:03.9±2.2, 1°.77S×77°.73W, h155^{km}±21^{km}, mb3.5/12, mb1 3.8/17, mb1mx3.6/45, mbtmp4.0/17, Error ellipse: s-maj=18.9km s-min=12.3km az=64.0*

*IGQ **13** 07:37:04±0.4, 2°S±2°×7°8W±°, h155^{km}*

*NEIC **13** 07:37:05.0±1.9, 1°.76S±0°.09×77°.7W±0°.2, h162^{km}±3^{km}, mb4.0/15, Error ellipse: s-maj=23.6km s-min=10.8km az=73.0*

ISC 13 07:37:03.1±0.6, 1°.94S±0°.04×77°.92W±0°.05, h155^{km}±5^{km}, n125, σ1^{s}36/137, mb3.9/18, Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PUYO	Puyo, Santa Ro	0.46	347	P	Pn	07 37 25.0	0.0
APUY	Puyo	0.48	351	P	Pn	07 37 25.0	-0.1
APUY				S	Sn	07 37 42.0	+0.1
PAT1	Patacocha	0.67	310	P	Pn	07 37 27.0	+0.4
ARRY	Arrayan	0.69	309	P	Pn	07 37 27.0	+0.5
BMAS	Trigal station	0.71	308	P	Pn	07 37 27.0	+0.3
BMAS				S	Sn	07 37 45.0	+0.4
RETU	Refugio	0.72	313	P	Pn	07 37 27.0	+0.1
RUN5	Runtun	0.72	316	P	Pn	07 37 27.0	+0.3
JUI6	Juive	0.75	313	P	Pn	07 37 27.0	+0.2
PIS1	Pisayambo	0.99	332	P	Pn	07 37 29.0	+0.1
PIS1				S	Sn	07 37 50.0	+1.4
PIAT	Ana Tenorio	1.00	340	P	Pn	07 37 29.0	+0.2
PIAT				S	Sn	07 37 49.0	+0.6
CHSH	Refugio Sur-Vo	1.05	295	P	Pn	07 37 29.0	-0.4
SAGO	Sagoatoa	1.08	316	P	Pn	07 37 30.0	+0.3
BMOR	Cotopaxi Volca	1.32	336	P	Pn	07 37 33.0	+1.2
BOSC	San Juan Bosco	1.34	206	P	Pn	07 37 33.0	+1.4
BTAM	Cotopaxi Volca	1.34	339	P	Pn	07 37 33.0	+0.9
BREF	Cotopaxi Volca	1.36	337	P	Pn	07 37 34.0	+1.6
VC1	Cotopaxi 1	1.38	339	P	Pn	07 37 33.0	+0.6
BNAS	Cotopaxi Volca	1.38	336	P	Pn	07 37 33.0	+0.6
CAMI	Rancho Maria	1.38	335	P	Pn	07 37 33.0	+0.6
ACUE	Ecuador-Cuenca	1.42	227	P	Pn	07 37 34.0	+1.4
ANTM	Antisana-La Mi	1.43	348	P	Pn	07 37 33.0	+0.1
COHC	Cochancay	1.44	249	P	Pn	07 37 33.0	+0.6
COHC				S	Sn	07 37 55.0	+0.2
ANTS	Antisana-Sarah	1.45	350	P	Pn	07 37 34.0	+0.8
ILLI	Illinizas Sur	1.46	326	P	Pn	07 37 33.0	-0.2
PITA	Cotopaxi Volc	1.46	339	P	Pn	07 37 34.0	+0.8
ANTG	Antisana-Guama	1.47	347	P	Pn	07 37 34.0	+0.7
MILO	Milagro-Astudi	1.67	258	P	Pn	07 37 34.0	-0.8
MILO				S	Sn	07 37 58.0	-1.2
AMIL	Milagro (Trans	1.69	263	P	Pn	07 37 34.0	-1.0
AMIL				S	Sn	07 37 58.0	-1.5
GGPT	Toaza - Volcan	1.84	338	P	Pn	07 37 37.0	-0.2
LAV4	Lava4-Reventad	1.86	9	P	Pn	07 37 37.0	-0.2
GGPC	Guagua Pichinc	1.88	339	P	Pn	07 37 38.0	+0.3
GGP	Refugio Guagua	1.88	339	P	Pn	07 37 38.0	+0.2
TERV	Terraza Guagua	1.88	339	P	Pn	07 37 38.0	+0.2
PINO	Pino	1.90	339	P	Pn	07 37 38.0	0.0
YANA	Yana	1.92	340	P	Pn	07 37 38.0	-0.2
GYE3	Ecuador-Guayaq	1.99	264	P	Pn	07 37 37.0	-1.4
PULU	Pululahua	2.03	343	P	Pn	07 37 39.0	-0.3
AGUAY	Guayaquil	2.04	267	P	Pn	07 37 37.0	-1.9
LOJ1	Universidad t	2.08	192	P	Pn	07 37 44.0	+4.3
IMBA	Imbabura, San	2.22	353	P	Pn	07 37 41.0	-0.6
OTAV	Otavalo	2.23	346		Pn	07 37 41.9	+0.3
OTAV				Sn	Sn	07 38 11.3	-0.1
OTAV	Otavalo	2.23	346	eP	Pn	07 37 41.8	+0.2
OTAV	Otavalo	2.23	346	P	Pn	07 37 41.0	-0.7
CUSW	Cuicocha Oeste	2.25	349	P	Pn	07 37 43.0	+1.1
CUIC	Cuicocha-Domo	2.27	349	P	Pn	07 37 42.0	-0.1
CUSE	Cuicocha Este	2.28	348	P	Pn	07 37 43.0	+0.7
YAHU	Yahuarcocha	2.30	356	P	Pn	07 37 42.0	-0.5
ACH2	Ecuador-Machal	2.30	235	P	Pn	07 37 40.0	-2.1
PAC1	Pacto, Paraso	2.36	338	P	Pn	07 37 43.0	+0.1
URCU	Urcuqui	2.38	352	P	Pn	07 37 44.0	+0.5
PECV	Mancha de Ca P	2.42	298	P	Pn	07 37 47.0	+3.4
BV15	Puerto Quito-O	2.46	328	P	Pn	07 37 44.0	0.0
ISPG	Isla Puna-Puer	2.47	245	P	Pn	07 37 44.0	-0.2

MORR	**Playas El Morr**	**2.52**	**254**	P	**Pn**	**07 37 44.0**	**-0.7**
MAG1	**Magdalena**	**2.62**	**315**	P	**Pn**	**07 37 46.0**	**0.0**
ARNL	**Arenillas**	**2.68**	**233**	P	**Pn**	**07 37 45.0**	**-1.6**
CHL1	**Volc¡n Chiles**	**2.71**	**359**	P	**Pn**	**07 37 48.0**	**+0.4**
GONZ	**Gonzanam**	**2.72**	**213**	P	**Pn**	**07 37 48.0**	**+0.4**
CHL2	**Volc¡n Chiles**	**2.72**	**0**	P	**Pn**	**07 37 48.0**	**+0.3**
ECEN	**Cerro Negro**	**2.74**	**359**	P	**Pn**	**07 37 48.0**	**0.0**
CHMA	**Chilma**	**2.79**	**357**	P	**Pn**	**07 37 48.0**	**-0.3**
PPLP	**Puerto Lpez**	**2.88**	**278**	P	**Pn**	**07 37 47.0**	**-2.2**
CAB1	**Cabo Pasado-Ma**	**2.95**	**302**	P	**Pn**	**07 37 50.0**	**0.0**
CABP	**Cabo Pasado**	**2.95**	**302**	P	**Pn**	**07 37 50.0**	**0.0**
SALI	**Salinas**	**3.08**	**265**	P	**Pn**	**07 37 50.0**	**-1.7**
MCRA	**Macar, Loja**	**3.16**	**220**	P	**Pn**	**07 37 51.0**	**-1.7**
GCUF	**Volcan Galeras**	**3.19**	**10**	*e*P	**Pn**	**07 37 54.6**	**+1.0**
CRUC	**La Cruz**	**3.61**	**16**	*e*P	**Pn**	**07 37 59.9**	**+1.0**
PTLC	**Puerto Leguiza**	**3.76**	**56**	*e*P	**Pn**	**07 37 58.1**	**-2.3**
BBAC	**Balboa, Cauca**	**3.99**	**10**	*e*P	**Pn**	**07 38 03.5**	**-0.1**
FLOC	**Florencia**	**4.17**	**33**	*e*P	**Pn**	**07 38 05.2**	**-0.5**
PCON	**Cinco Dias**	**4.50**	**20**	*e*P	**Pn**	**07 38 11.8**	**+1.2**
POPC	**Popayan, Colom**	**4.62**	**16**	*e*P	**Pn**	**07 38 11.4**	**-0.5**
MARP	**Paez Belalcaza**	**5.14**	**22**	*e*P	**Pn**	**07 38 19.2**	**+0.5**
ATAH	**Atahualpa**	**5.18**	**185**	P	**Pn**	**07 38 21.7**	**+2.2**
	4.5nm,0.3s,baz=4.3,slow=10.0,SNR=58						
ATAH				S	**Sn**	**07 39 18.2**	**-0.9**
	3.2nm,0.3s,baz=340,slow=20,SNR=4.5						
BETC	**Betania**	**5.21**	**28**	*e*P	**Pn**	**07 38 20.6**	**+1.0**
MACC	**Macarena, Meta**	**5.75**	**45**	*e*P	**Pn**	**07 38 25.9**	**-0.7**
YOTC	**Yotoco, Valle**	**6.09**	**15**	*e*P	**Pn**	**07 38 28.6**	**-2.6**
PRAC	**Prado**	**6.38**	**28**	*e*P	**Pn**	**07 38 35.1**	**+0.1**
ORTC	**Ortega, Tolima**	**6.39**	**25**	*e*P	**Pn**	**07 38 37.6**	**+2.5**
GUVC	**San Jose del G**	**6.91**	**50**	*e*P	**Pn**	**07 38 42.0**	**-0.1**
NNA	**Nana**	**10.04**	**174**	P	**Pn**	**07 39 25.7**	**+2.0**
	2.7nm,0.3s,baz=351,slow=10,SNR=7.0						
NNA				S	**Sn**	**07 41 07.9**	**-7.1**
	1.2nm,0.3s,baz=246,slow=21,SNR=1.8						
NNA	**Nana**	**10.04**	**174**	Pn	**Pn**	**07 39 27.3**	**+3.6**
SDV	**Santo Domingo**	**12.97**	**34**	P	**Pn**	**07 40 00.1**	**-2.0**
	1.6nm,0.3s,baz=213,slow=13,SNR=4.0						
SDV	**Santo Domingo**	**12.97**	**34**	Pn	**Pn**	**07 40 00.5**	**-1.6**
SAML	**Samuel**	**16.23**	**116**		**P**	**07 40 43.6**	**+0.9**
LPAZ	**La Paz**	**17.21**	**147**	P	**Pn**	**07 40 56.2**	**+1.3**
	0.2nm,0.3s,baz=340,slow=14,SNR=7.1						
LPAZ	**La Paz**	**17.21**	**147**		**Pn**	**07 40 54.5**	**-0.4**
LPAZ				IAmb	IAmb	07 41 01.6	
	comp=Z,5.3nm,1.0s						
PTGA	**Pitinga**	**17.99**	**86**	P	**P**	**07 41 01.1**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=285,slow=16,SNR=4.9						
PTGA	**Pitinga**	**17.99**	**86**	P	**P**	**07 41 00.6**	**-1.4**
PTGA				IAmb	IAmb	07 41 09.1	
	comp=Z,9.3nm,1.1s						
SIV	**San Ignacio**	**21.69**	**131**	P	**P**	**07 41 43.0**	**+1.1**
	comp=Z,3.8nm,1.0s,baz=327,slow=11,SNR=13						
MDP	**Montagnes des**	**26.20**	**74**	P	**P**	**07 42 22.8**	**-0.9**
	comp=Z,9.8nm,0.8s,baz=255,slow=9.2,SNR=8.1						
PLCA	**Paso Flores**	**39.19**	**171**	P	**P**	**07 44 18.6**	**+2.5**
	comp=Z,2.7nm,0.8s,baz=356,slow=12,SNR=6.4						
PLCA	**Paso Flores**	**39.19**	**171**	P	**P**	**07 44 19.2**	**+3.1**
PLCA				IAmb	IAmb	07 44 34.6	
	comp=Z,2.8nm,1.1s						
TX32	**Lajitas Array**	**39.68**	**324**	P	**P**	**07 44 21.7**	**+1.4**
TXAR	**Lajitas Array**	**39.68**	**324**	P	**P**	**07 44 21.9**	**+1.6**
	comp=Z,0.3nm,0.4s,baz=145,slow=7.8,SNR=12						
TXAR				PcP	**PcP**	**07 46 24.8**	**+0.7**
	comp=Z,0.4nm,0.7s,baz=160,slow=5.8,SNR=4.1						
TXAR	**Lajitas Array**	**39.68**	**324**	P	**P**	**07 44 22.2**	**+1.9**
TX31	**Lajitas Ar. Si**	**39.68**	**324**	P	**P**	**07 44 21.8**	**+1.5**
ABTX	**Abilene, Hawle**	**40.05**	**331**	P	**P**	**07 44 24.7**	**+1.4**
PBMO	**Poplar Bluff**	**40.24**	**344**	P	**P**	**07 44 23.7**	**-1.0**
ANMO	**Albuquerque**	**45.40**	**327**	P	**P**	**07 45 08.4**	**+1.8**
ANMO				IAmb	IAmb	07 45 08.9	
	comp=Z,5.1nm,0.7s						
TUC	**Tucson**	**46.13**	**320**	P	**P**	**07 45 12.3**	**+0.1**
WUAZ	**Wupatki**	**48.64**	**323**	P	**P**	**07 45 32.6**	**+1.0**
WUAZ				IAmb	IAmb	07 45 34.3	
	comp=Z,4.1nm,0.9s						
PV03	**Paradox Valley**	**49.14**	**328**	P	**P**	**07 45 36.6**	**+1.2**
PV03				IAmb	IAmb	07 45 37.4	
	comp=Z,3.3nm,0.8s						
LATQ	**La Tuque**	**49.32**	**5**	P	**P**	**07 45 36.7**	**+0.3**
LATQ				IAmb	IAmb	07 45 37.2	
	comp=Z,6.2nm,1.1s						
PDAR	**Pinedale Array**	**52.85**	**331**	P	**P**	**07 46 03.5**	**+0.4**
	comp=Z,0.4nm,0.5s,baz=131,slow=9.3,SNR=7.1						
USHA	**Ushuaia**	**53.29**	**173**	P	**P**	**07 46 06.8**	**+1.1**
	comp=Z,16nm,0.3s,baz=29,slow=3.0,SNR=3.2						
ULM	**Lac du Bonnet**	**54.23**	**346**	P	**P**	**07 46 11.2**	**-1.5**
	comp=Z,1.2nm,0.5s,baz=164,slow=8.2,SNR=6.6						
ULM	**Lac du Bonnet**	**54.23**	**346**	P	**P**	**07 46 11.1**	**-1.5**
ULM				IAmb	IAmb	07 46 11.5	
	comp=Z,3.1nm,1.1s						
NVAR	**Mina Array Bea**	**54.75**	**321**	P	**P**	**07 46 18.5**	**+1.5**
	comp=Z,0.8nm,0.6s,baz=123,slow=7.1,SNR=8.4						
NVAR				PcP	**PcP**	**07 47 18.6**	**+1.0**
	comp=Z,0.5nm,0.7s,baz=134,slow=5.1,SNR=2.8						
QLMT	**Earthquake Lak**	**55.30**	**331**	P	**P**	**07 46 21.6**	**+0.8**
YERR	**Yerington**	**55.67**	**321**	P	**P**	**07 46 25.2**	**+1.6**
YERR				IAmb	IAmb	07 46 28.9	
	comp=Z,4.4nm,1.4s						
YKA	**Yellowknife Ar**	**69.98**	**343**	P	**P**	**07 47 57.0**	**-0.5**
	comp=Z,0.5nm,0.6s,baz=138,slow=6.3,SNR=12						
DLBC	**Dease Lake**	**72.89**	**334**	P	**P**	**07 48 16.0**	**+0.9**
	comp=Z,1.8nm,0.8s,baz=162,slow=3.2,SNR=2.0						
INK	**Inuvik**	**79.71**	**342**	P	**P**	**07 48 52.8**	**-0.4**
	comp=Z,1.8nm,0.7s,baz=109,slow=4.8,SNR=7.1						
TORD	**Torodi Ar. Bea**	**80.33**	**76**	P	**P**	**07 48 56.4**	**-1.3**
	comp=Z,0.4nm,0.6s,baz=283,slow=6.3,SNR=1.7						
ILAR	**Eielson Array**	**82.91**	**336**	P	**P**	**07 49 10.3**	**+0.1**
	comp=Z,0.9nm,0.7s,baz=128,slow=4.2,SNR=12						
KURBB	**Kurchatov Arra**	**127.55**	**19**	PKP	**PKiKP**	**07 55 50.1**	**-0.2**
	comp=Z,0.4nm,0.6s,baz=281,slow=1.7,SNR=4.4						
MKAR	**Makanchi Array**	**132.11**	**18**	PKP	**PKiKP**	**07 55 58.7**	**-1.0**
	comp=Z,0.1nm,0.4s,baz=265,slow=1.4,SNR=3.6						
SONM	**Songino Array**	**134.13**	**356**	PKP	**PKiKP**	**07 56 03.0**	**-1.0**
	comp=Z,0.2nm,0.5s,baz=359,slow=3.7,SNR=2.5						
KSRS	**Korea Array**	**137.41**	**329**	PKP	**PKiKP**	**07 56 09.5**	**-1.2**
	comp=Z,1.4nm,0.7s,baz=33,slow=1.7,SNR=4.4						
ASAR	**Alice Springs**	**139.93**	**229**	PKhKP	PKPpre	07 56 06.8	
	comp=Z,0.5nm,0.7s,baz=124,slow=3.5,SNR=4.7						
ASAR				PKP	**PKPdf**	**07 56 13.1**	**-0.8**
	comp=Z,0.6nm,0.6s,baz=115,slow=2.9,SNR=4.2						
WRA	**Warramunga Arr**	**141.60**	**234**	PKhKP	PKPpre	07 56 11.8	
	comp=Z,0.8nm,0.6s,baz=111,slow=2.6,SNR=7.6						
WRA				PKP	**PKPdf**	**07 56 17.3**	**+0.4**
	comp=Z,0.9nm,0.6s,baz=113,slow=2.2,SNR=4.8						
MTN	**Manton Dam**	**147.64**	**242**	PKPbc	**PKiKP**	**07 56 31.5**	**-0.8**
FITZ	**Fitzroy Crossi**	**149.43**	**228**	PKPbc	**PKiKP**	**07 56 35.6**	**-0.3**
	comp=Z,3.4nm,0.9s,baz=166,slow=4.4,SNR=6.4						

IDC 13 07:46:08.5±1.4, 3°.16S×147°.45E, h0^{km}, mb4.0/5, mb1 4.3/5, mb1mx3.7/46, mbtmp4.0/5, MS3.1/10, Ms1 3.1/10, ms1mx2.9/35, Error ellipse: s-maj=101.4km s-min=22.9km az=125.0, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.21**	**183**	LR	LR	07 49 59.9	
	comp=Z,58nm,19.1s,baz=62,slow=37						
JAY	**Jayapura**	**6.77**	**275**	LR	LR	07 50 05.5	
	comp=Z,233nm,21.7s,baz=14,slow=35						
HNR	**Honiara**	**13.89**	**117**	LR	LR	07 54 42.0	
	comp=Z,59nm,18.8s,baz=315,slow=37						
WRA	**Warramunga Arr**	**21.03**	**217**	P	P	07 50 54.7	+0.6
	4.4nm,0.7s,baz=43,slow=11,SNR=40						
WRA				LR	LR	08 00 18.3	
	comp=Z,78nm,19.6s,baz=40,slow=40						
DAV	**Davao City (W)**	**24.08**	**295**	LR	LR	08 01 05.8	
	comp=Z,30nm,18.2s,baz=168,slow=37						
ASAR	**Alice Springs**	**24.23**	**212**	P	P	07 51 27.8	+0.4
	3.9nm,0.8s,baz=40,slow=7.8,SNR=25						
FITZ	**Fitzroy Crossi**	**26.02**	**234**	P	P	07 51 42.8	-0.8
	2.2nm,0.7s,baz=47,slow=8.6,SNR=7.0						
FITZ				LR	LR	08 02 56.0	
	comp=Z,159nm,18.4s,baz=76,slow=39						
DZM	**Mont Dzumac**	**26.33**	**137**	LR	LR	08 00 48.6	
	comp=Z,78nm,20.6s,baz=321,slow=33						
KAPI	**Kappang**	**27.69**	**265**	LR	LR	08 04 41.4	
	comp=Z,24nm,18.4s,baz=72,slow=40						
H11S3	**WAKE ISLAND Hy**	**28.67**	**41**	T	T	08 21 52.9	
	baz=222,slow=76						
H11S2	**WAKE ISLAND Hy**	**28.68**	**41**	T	T	08 21 53.6	
	baz=222,slow=76						
H11S1	**WAKE ISLAND Hy**	**28.69**	**41**	T	T	08 21 55.3	
	baz=222,slow=76						
STKA	**Stephens Creek**	**29.09**	**190**	LR	LR	08 04 11.9	
	comp=Z,29nm,20.7s,baz=24,slow=37						
H11N1	**WAKE ISLAND Hy**	**29.69**	**39**	T	T	08 23 13.4	
	baz=222,slow=76						
H11N3	**WAKE ISLAND Hy**	**29.70**	**39**	T	T	08 23 12.3	
	baz=222,slow=76						
H11N2	**WAKE ISLAND Hy**	**29.71**	**39**	T	T	08 23 11.7	
	baz=222,slow=76						
KSRS	**Korea Array**	**44.29**	**338**	LR	LR	08 12 08.8	
	comp=Z,33nm,18.6s,baz=339,slow=35						
ILAR	**Eielson Array**	**82.71**	**23**	P	P	07 58 33.9	0.0
	0.6nm,0.8s,baz=256,slow=5.4,SNR=5.7						
YKA	**Yellowknife Ar**	**96.46**	**28**	P	P	07 59 39.4	-0.2
	0.6nm,0.8s,baz=274,slow=3.8,SNR=9.5						

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*IDC **13** 07:48:08.4±1.5, 53°.22N×166°.82W, h0^{km}, mb3.2/5, mb1 3.6/7, mb1mx3.3/73, mbtmp3.3/7, ML3.2/1, Error ellipse: s-maj=37.5km s-min=23.0km az=169.0*

*NEIC **13** 07:48:12.5±1.4, 53°.15N±0°.07×166°.70W±0°.04, h25^{km}±12^{km}, Error ellipse: s-maj=10.1km s-min=2.0km az=164.0*

*AEIC **13** 07:48:12±1.4, 53°.15N±0°.06×166°.71W±0°.05, h22^{km}±8^{km}, ML3.4, Error ellipse: s-maj=9.5km s-min=2.2km az=154.0*

ISC 13 07:48:12.5±1.6, 53°.14N±0°.07×166°.71W±0°.05, h27^{km}±12^{km}, n49, σ1^{s}.33/52, mb3.4/6, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MGOD	**Makushin Gods**	**0.66**	**351**		**Pn**	**07 48 25.9**	**-0.3**
MGOD					**Sn**	**07 48 35.6**	**-0.1**
MREP	**Makushin Rep't**	**0.67**	**358**		**Pn**	**07 48 26.1**	**-0.2**
MAPS	**Pakushin South**	**0.68**	**348**		**Pn**	**07 48 26.3**	**-0.1**
MAPS					**Sn**	**07 48 36.3**	**+0.2**
UNV	**Unalaska Valle**	**0.72**	**10**		**Pb**	**07 48 26.1**	**-0.2**
MNAT	**Makushin Natee**	**0.74**	**1**		**Pn**	**07 48 26.9**	**-0.3**
MNAT					**Sn**	**07 48 37.5**	**-0.2**
OKFG	**Magazine Ridge**	**0.77**	**291**		**Pb**	**07 48 26.9**	**-0.4**
MSW	**Makushin Switc**	**0.78**	**357**		**Pn**	**07 48 27.5**	**-0.2**
MSW					**Sn**	**07 48 38.7**	**+0.2**
OKSO	**Okmok South**	**0.90**	**285**		**Pb**	**07 48 28.5**	**-0.9**
OKSO					**Sb**	**07 48 40.8**	**-0.3**
OKSP	**Okmok Steeple**	**0.96**	**277**		**Pn**	**07 48 30.4**	**+0.2**
AKMO	**Akutan Morgan**	**1.04**	**23**		**Pn**	**07 48 30.9**	**-0.4**
AKMO					**Sn**	**07 48 45.7**	**+0.8**
ZRO	**Akutan Zero**	**1.05**	**24**		**Pn**	**07 48 31.1**	**-0.3**
AKRB	**Akutan Reef Bi**	**1.06**	**21**		**Pb**	**07 48 31.8**	**-0.4**
AKRB					**Sn**	**07 48 46.0**	**+0.5**
AKBBA	**Akutan Broad B**	**1.06**	**25**		**Pn**	**07 48 31.1**	**-0.6**
AKLV	**Akutan Long Va**	**1.12**	**23**		**Pn**	**07 48 31.9**	**-0.5**
AKLV					**Sn**	**07 48 47.0**	**+0.1**
AKUT	**Akutan**	**1.14**	**29**		**Pn**	**07 48 32.4**	**-0.2**
AKGG	**Akutan Green G**	**1.14**	**22**		**Pn**	**07 48 31.8**	**-0.9**
AKSA	**Akutan Strait**	**1.17**	**31**		**Pn**	**07 48 32.5**	**-0.5**
AKSA	**Akutan Strait**	**1.17**	**31**		**Pn**	**07 48 32.2**	**-0.7**
NIKH	**Nikolski High**	**1.31**	**263**		**Pn**	**07 48 35.1**	**+0.2**
WESP	**Westdahl Peak**	**1.79**	**40**		**Pn**	**07 48 42.2**	**+0.5**
WEBT	**Westdahl Beart**	**1.86**	**38**		**Pn**	**07 48 43.3**	**+0.8**
WTUG	**Tugumak**	**2.19**	**38**		**Pn**	**07 48 47.5**	**+0.4**
SSBA	**Shishaldin**	**2.24**	**42**		**Pn**	**07 48 48.4**	**+0.6**
SSLW	**Shishaldin Wes**	**2.24**	**42**		**Pn**	**07 48 48.6**	**+0.8**
SSLS	**Shishaldin Sou**	**2.25**	**44**		**Pn**	**07 48 49.1**	**+1.2**
SSLN	**Shishaldin Nor**	**2.32**	**43**		**Pn**	**07 48 50.2**	**+1.4**
FALS	**False Pass**	**2.59**	**47**		**Pn**	**07 48 54.3**	**+1.7**
CHGN	**Chignik**	**5.75**	**53**	Pn	**Pn**	**07 49 37.8**	**+1.9**
OHAK	**Old Harbor**	**8.70**	**57**	Pn	**Pn**	**07 50 16.6**	**+0.3**
KDAK	**Kodiak Island**	**9.27**	**54**	Pn	**Pn**	**07 50 24.2**	**+0.1**
	0.3nm,0.3s,baz=119,slow=14,SNR=1.6						
KDAK				Sn	**Sn**	**07 52 00.5**	**-6.8**
	0.2nm,0.3s,baz=13,slow=8.6,SNR=2.4						
KDAK	**Kodiak Island**	**9.27**	**54**		**Pn**	**07 50 24.4**	**+0.2**
GAMB	**Gambell**	**10.98**	**348**	Pn	**Pn**	**07 50 50.0**	**+2.5**
TTA	**Tatalina**	**11.31**	**26**	Pn	**Pn**	**07 50 54.4**	**+2.2**
HIN	**Hinchinbrook I**	**13.21**	**49**	Pn	**Pn**	**07 51 17.6**	**-0.5**
GLB	**Gilahina Butte**	**14.84**	**47**	Pn	**Pn**	**07 51 41.2**	**+1.0**
VRDI	**Verde Repeater**	**14.91**	**48**	Pn	**Pn**	**07 51 41.9**	**+0.5**
ILAR	**Eielson Array**	**15.41**	**33**	Pn	**Pn**	**07 51 45.5**	**-2.3**
	baz=228,slow=11,SNR=1.8						
INK	**Inuvik**	**21.81**	**33**	P	**P**	**07 53 02.8**	**+0.7**
	1.3nm,0.6s,baz=248,slow=7.2,SNR=6.7						
YKA	**Yellowknife Ar**	**28.51**	**50**	P	**P**	**07 54 05.1**	**-0.1**
	0.2nm,0.6s,baz=273,slow=8.0,SNR=2.4						
NVAR	**Mina Array Bea**	**36.08**	**94**	P	**P**	**07 55 12.6**	**+0.7**
	0.1nm,0.4s,baz=305,slow=11,SNR=1.7						
H11N2	**WAKE ISLAND Hy**	**39.09**	**222**	T	T	08 37 18.8	
	baz=25,slow=76,SNR=83						
H11N3	**WAKE ISLAND Hy**	**39.09**	**222**	T	T	08 37 18.5	
	baz=25,slow=76,SNR=100						
H11N1	**WAKE ISLAND Hy**	**39.10**	**222**	T	T	08 37 21.1	
	baz=25,slow=76,SNR=66						
H11S1	**WAKE ISLAND Hy**	**40.27**	**221**	T	T	08 38 47.2	
	baz=24,slow=76,SNR=111						
H11S2	**WAKE ISLAND Hy**	**40.28**	**221**	T	T	08 38 58.8	
	baz=24,slow=76,SNR=127						
H11S3	**WAKE ISLAND Hy**	**40.28**	**221**	T	T	08 39 00.4	
	baz=24,slow=76,SNR=47						
TXAR	**Lajitas Array**	**51.13**	**92**	P	**P**	**07 57 13.4**	**+0.5**
	0.4nm,0.8s,baz=302,slow=4.1,SNR=4.4						
MKAR	**Makanchi Array**	**64.43**	**315**	P	**P**	**07 58 44.6**	**-1.4**
	0.2nm,0.6s,baz=56,slow=4.8,SNR=2.1						
CMAR	**Chiang Mai Arr**	**78.01**	**285**	P	**P**	**08 00 08.7**	**+0.2**
	1.4nm,0.3s,baz=24,slow=5.4,SNR=4.7						

BUC 13 08:08:02.9±0.5, 45°.45N×26°.22E, h135^{km}±3^{km}, ml3.5/22, 58C-42D, Error ellipse: s-maj=2.9km s-min=2.3km az=166.0, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEHR	**Nehoiu**	**0.06**	**112**	⇓P	Pn	08 08 21.9	+0.7
NEHR				⇓S	Sn	08 08 35.8	+0.8
NEHR	**Nehoiu**	**0.06**	**112**	⇓P	Pn	08 08 21.9	+0.7
NEHR				⇓S	Sn	08 08 35.8	+0.8
MLR	**Muntele Rosu**	**0.20**	**282**	⇑P	Pn	08 08 22.2	+0.6
MLR				⇓S	Sn	08 08 36.3	+0.7
MLR	**Muntele Rosu**	**0.20**	**282**	⇑P	Pn	08 08 22.2	+0.6
MLR				⇓S	Sn	08 08 36.3	+0.7
ISR	**Istrita**	**0.40**	**145**	⇓P	Pn	08 08 22.6	+0.5
ISR				⇓S	Sn	08 08 37.8	+1.1
ISR	**Istrita**	**0.40**	**145**	⇓P	Pn	08 08 22.6	+0.5
ISR				⇓S	Sn	08 08 37.8	+1.1
PLOR	**Plostina**	**0.50**	**37**	⇑P	Pn	08 08 22.9	+0.3
PLOR				⇑S	Sn	08 08 37.7	+0.1
PLOR	**Plostina**	**0.50**	**37**	⇑P	Pn	08 08 22.9	+0.3
PLOR				⇑S	Sn	08 08 37.7	+0.1
GRER		**0.54**	**97**	⇑P	Pn	08 08 23.1	+0.4
GRER				⇓S	Sn	08 08 38.8	+1.0
GRER		**0.54**	**97**	⇑P	Pn	08 08 23.1	+0.4
GRER				⇓S	Sn	08 08 38.8	+1.0
VRI	**Vrincioaia**	**0.55**	**40**	⇑P	Pn	08 08 23.4	+0.6
VRI				⇑S	Sn	08 08 39.0	+1.0
VRI	**Vrincioaia**	**0.55**	**40**	⇑P	Pn	08 08 23.4	+0.6
VRI				⇑S	Sn	08 08 39.0	+1.0
ODBI	**Odobesti**	**0.67**	**62**	⇓P	Pn	08 08 24.9	+1.4
ODBI				⇑S	Sn	08 08 40.1	+0.9
ODBI	**Odobesti**	**0.67**	**62**	⇓P	Pn	08 08 24.9	+1.4
ODBI				⇑S	Sn	08 08 40.1	+0.9
OZUR		**0.71**	**335**	⇑P	Pn	08 08 24.2	+0.3
OZUR				⇑S	Sn	08 08 39.3	-0.7
OZUR		**0.71**	**335**	⇑P	Pn	08 08 24.2	+0.3
OZUR				⇑S	Sn	08 08 39.3	-0.7
PETR	**Petresti**	**0.76**	**69**	⇓P	Pn	08 08 25.1	+0.9
PETR				⇓S	Sn	08 08 41.4	+1.0
PETR	**Petresti**	**0.76**	**69**	⇓P	Pn	08 08 25.1	+0.9
PETR				⇓S	Sn	08 08 41.4	+1.0
PGOR	**Pogoanele**	**0.77**	**135**	⇓S	Sn	08 08 42.0	+1.5
PGOR	**Pogoanele**	**0.77**	**135**	⇓S	Sn	08 08 42.0	+1.5
SULR		**0.77**	**178**	⇑P	Pn	08 08 25.0	+0.7
SULR				⇑S	Sn	08 08 41.8	+1.3
SULR		**0.77**	**178**	⇑P	Pn	08 08 25.0	+0.7
SULR				⇑S	Sn	08 08 41.8	+1.3
DOPR	**Dopca**	**0.78**	**312**	⇑P	Pn	08 08 24.7	+0.3
DOPR				⇑S	Sn	08 08 40.9	+0.1
DOPR	**Dopca**	**0.78**	**312**	⇑P	Pn	08 08 24.7	+0.3
DOPR				⇑S	Sn	08 08 40.9	+0.1
VOIR		**0.82**	**270**	⇑P	Pn	08 08 25.2	+0.4
VOIR				⇓S	Sn	08 08 41.2	-0.3
VOIR		**0.82**	**270**	⇑P	Pn	08 08 25.2	+0.4
VOIR				⇓S	Sn	08 08 41.2	-0.3
GHRR		**1.03**	**53**	⇑P	Pn	08 08 27.3	+0.7
GHRR				⇑S	Sn	08 08 44.6	+0.1
GHRR		**1.03**	**53**	⇑P	Pn	08 08 27.3	+0.7
GHRR				⇑S	Sn	08 08 44.6	+0.1
LEHL	**Lehliu**	**1.06**	**156**	⇓S	Sn	08 08 45.5	+0.5
LEHL	**Lehliu**	**1.06**	**156**	⇓S	Sn	08 08 45.5	+0.5
TESR	**Tescani**	**1.10**	**16**	⇓P	Pn	08 08 27.5	+0.3
TESR				⇑S	Sn	08 08 44.8	-1.0
TESR	**Tescani**	**1.10**	**16**	⇓P	Pn	08 08 27.5	+0.3
TESR				⇑S	Sn	08 08 44.8	-1.0
BUC1	**Bucharest**	**1.11**	**187**	⇓S	Sn	08 08 45.9	+0.1
BUC1	**Bucharest**	**1.11**	**187**	⇓S	Sn	08 08 45.9	+0.1
ARR	**Arges**	**1.12**	**266**	⇑P	Pn	08 08 27.9	+0.5
ARR				⇑S	Sn	08 08 45.8	-0.2
ARR	**Arges**	**1.12**	**266**	⇑P	Pn	08 08 27.9	+0.5
ARR				⇑S	Sn	08 08 45.8	-0.2
VARL	**Varlezi**	**1.23**	**68**	⇑S	Sn	08 08 47.5	-0.4
VARL	**Varlezi**	**1.23**	**68**	⇑S	Sn	08 08 47.5	-0.4
SGRR	**Singureni**	**1.24**	**188**	⇓S	Sn	08 08 47.5	-0.5
SGRR	**Singureni**	**1.24**	**188**	⇓S	Sn	08 08 47.5	-0.5
BIR	**Birlad**	**1.28**	**50**	⇓S	Sn	08 08 48.8	0.0
BIR	**Birlad**	**1.28**	**50**	⇓S	Sn	08 08 48.8	0.0
CFR	**Carcaliu**	**1.38**	**101**	⇓P	Pn	08 08 29.9	0.0
CFR	**Carcaliu**	**1.38**	**101**	⇓P	Pn	08 08 29.9	0.0
COPA	**Copaceanca**	**1.50**	**209**	⇑S	Sn	08 08 52.5	-0.4
COPA	**Copaceanca**	**1.50**	**209**	⇑S	Sn	08 08 52.5	-0.4
VASR	**Vaslui**	**1.62**	**42**	⇑P	Pn	08 08 33.0	+0.3
VASR				⇓S	Sn	08 08 54.6	-0.8
VASR	**Vaslui**	**1.62**	**42**	⇑P	Pn	08 08 33.0	+0.3
VASR				⇓S	Sn	08 08 54.6	-0.8
TPGR	**Topolog**	**1.67**	**110**	⇓P	Pn	08 08 33.2	0.0
TPGR				⇑S	Sn	08 08 54.8	-1.6
TPGR	**Topolog**	**1.67**	**110**	⇓P	Pn	08 08 33.2	0.0
TPGR				⇑S	Sn	08 08 54.8	-1.6
CVDA	**Cernavoda**	**1.71**	**130**	⇑S	Sn	08 08 56.6	-0.6
CVDA	**Cernavoda**	**1.71**	**130**	⇑S	Sn	08 08 56.6	-0.6
LOT	**Lotru**	**1.72**	**271**	⇑S	Sn	08 08 57.3	-0.3
LOT	**Lotru**	**1.72**	**271**	⇑S	Sn	08 08 57.3	-0.3
TIRR	**Tirgusor**	**1.85**	**122**	⇓P	Pn	08 08 35.2	-0.1
TIRR	**Tirgusor**	**1.85**	**122**	⇓P	Pn	08 08 35.2	-0.1
TLCR		**1.85**	**97**	⇑P	Pn	08 08 35.5	+0.2
TLCR				⇑S	Sn	08 08 59.3	-0.8
TLCR		**1.85**	**97**	⇑P	Pn	08 08 35.5	+0.2
TLCR				⇑S	Sn	08 08 59.3	-0.8
MILM	**Milestii Mici**	**2.33**	**50**	⇓P	Pn	08 08 41.1	0.0
MILM	**Milestii Mici**	**2.33**	**50**	⇓P	Pn	08 08 41.1	0.0
GZR	**Gura Zlata**	**2.42**	**270**	⇑P	Pn	08 08 42.8	+0.4
GZR				⇑S	Sn	08 09 12.8	+0.1
GZR	**Gura Zlata**	**2.42**	**270**	⇑P	Pn	08 08 42.8	+0.4
GZR				⇑S	Sn	08 09 12.8	+0.1

NNC 13 08:22:32.2±4.6, 37°.56N×71°.53E, h104^{km}±97^{km}, mb3.1, mpv3.6, 4C-6D, Error ellipse: s-maj=36.2km s-min=28.9km az=15.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**5.56**	**23**	⇓P	Pn	08 23 52.3	-0.3
	4.6nm,0.7s						
AAK				⇓S	Sn	08 24 55.1	-0.2
	3.0nm,0.5s						
KK31	**Karatay Array**	**5.60**	**352**	⇑P	Pn	08 23 54.9	+1.9
	6.0nm,0.3s,baz=168,slow=12,SNR=72						
KK31				⇓S	Sn	08 24 56.5	+0.6
	1.8nm,0.3s,baz=168,slow=21,SNR=9.9						
TKM2	**Tokmak 2**	**6.20**	**29**	⇑P	Pn	08 23 59.0	-2.2
	2.0nm,0.6s						
TKM2				⇓S	Sn	08 25 13.1	+2.3
	1.8nm,0.8s						
AB31	**Akbulak array**	**14.39**	**328**	⇑P	Pn	08 25 50.4	-0.4
	0.2nm,0.3s,baz=169,slow=8.8,SNR=18						
AB31				⇓S	Sn	08 28 28.4	-0.8
	1.6nm,0.8s,baz=146,slow=23,SNR=3.8						
AKTO	**Aktyubinsk**	**16.10**	**327**	⇓P	P	08 26 14.6	+1.0
	2.5nm,0.9s						
AKTO				⇑S	Sn	08 29 07.7	-2.8
	1.6nm,1.1s						

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*IDC **13** 08:27:37.3±3.1, 14°.95S×167°.07E, h0^{km}, mb3.8/4, mb1 4.0/5, mb1mx3.7/40, mbtmp3.9/5, ML4.1/1, MS4.0/1, Ms1 4.0/1, ms1mx2.8/28, Error ellipse: s-maj=65.0km s-min=38.8km az=94.0*

*NOU **13** 08:27:50.4, 15°.67S×167°.69E, h105^{km}, MLv4.8, Vanuatu Islands*

ISC 13 08:27:48.5±1.6, 15°.64S±0°.09×167°.7E±0°.2, h124^{km}, n14, σ1^{s}.35/14, mb3.5/4, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**0.49**	**292**	P	**Pn**	**08 28 08.1**	**+1.2**
DVP	**Devils Point**	**2.14**	**167**	P	**Pn**	**08 28 24.6**	**+0.7**
KOUNC	**Koumac, New Ca**	**5.86**	**213**	P	**Pn**	**08 29 14.8**	**+1.8**
YATNC	**Mamie plateau,**	**6.43**	**187**	P	**Pn**	**08 29 21.7**	**+0.9**
DZM	**Mont Dzumac**	**6.51**	**190**	Pn	**Pn**	**08 29 22.6**	**+0.7**
	3.4nm,0.3s,baz=59,slow=9.9,SNR=57						
DZM				Sn	**Sn**	**08 30 33.7**	**-1.2**
	2.4nm,0.3s,baz=125,slow=23,SNR=7.8						
DZM	**Mont Dzumac**	**6.51**	**190**	P	**Pn**	**08 29 22.5**	**+0.6**
NOUC	**Port Laguerre**	**6.56**	**191**	P	**Pn**	**08 29 23.6**	**+1.0**
ONTNC	**Ouen Toro**	**6.74**	**190**	P	**Pn**	**08 29 26.8**	**+1.9**
OUENC	**Ouen Island, N**	**6.79**	**187**	P	**Pn**	**08 29 27.6**	**+1.9**
WRA	**Warramunga Arr**	**32.00**	**257**	P	**P**	**08 34 01.7**	**-1.6**
	0.3nm,0.6s,baz=86,slow=8.8,SNR=3.1						
ASAR	**Alice Springs**	**32.73**	**251**	P	**P**	**08 34 08.7**	**-1.0**
	0.3nm,0.3s,baz=76,slow=9.1,SNR=8.7						
GUMO	**Guam**	**36.77**	**321**	LR	LR	08 50 21.1	
	comp=Z,212nm,18.9s,baz=313,slow=38						
FITZ	**Fitzroy Crossi**	**40.24**	**260**	P	**P**	**08 35 13.1**	**-0.4**
	1.2nm,0.4s,baz=79,slow=7.8,SNR=6.4						
SONM	**Songino Array**	**83.45**	**324**	P	**P**	**08 40 02.3**	**0.0**
	0.3nm,0.4s,baz=133,slow=5.4,SNR=4.7						

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*IDC **13** 08:30:24.1±1.1, 3°.35S×147°.92E, h0^{km}, mb3.9/10, mb1 4.2/10, mb1mx4.0/39, mbtmp3.9/10, MS3.3/13, Ms1 3.4/13, ms1mx3.2/38, Error ellipse: s-maj=39.6km s-min=19.7km az=117.0*

*NEIC **13** 08:30:25.3±0.9, 2°.80S±0°.07×147°.3E±0°.3, h10^{km}±2^{km}, mb4.2/5, Error ellipse: s-maj=52.4km s-min=9.5km az=98.0*

ISC 13 08:30:26.1±0.8, 3°.2S±0°.1×147°.9E±0°.2, h10^{km}, n32, σ1^{s}.27/19, mb3.9/12, MS3.4/10, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANU	**Manus Island**	**1.29**	**336**	Pn	Pn	08 30 41.9	-8.4
JAY	**Jayapura**	**7.21**	**276**	LR	LR	08 34 31.2	
	comp=Z,224nm,18.9s,baz=32,slow=34						
COEN	**Coen**	**11.62**	**203**	Pn	**Pn**	**08 33 14.1**	**+1.8**
HNR	**Honiara**	**13.47**	**118**	LR	LR	08 38 47.9	
	comp=Z,54nm,21.7s,baz=11,slow=38						
GUMO	**Guam**	**16.98**	**350**	LR	LR	08 41 05.3	
	comp=Z,91nm,18.3s,baz=130,slow=38						
WR0	**Warramunga Arr**	**21.12**	**217**	P	**P**	**08 35 09.6**	**-1.6**
WR0				IAmb	IAmb	08 35 20.3	
	comp=Z,9.5nm,0.8s						
WB2	**Warramunga Arr**	**21.22**	**217**	P	**P**	**08 35 11.2**	**-1.1**
WB2				IAmb	IAmb	08 35 26.9	
	comp=Z,7.0nm,0.8s						
WRA	**Warramunga Arr**	**21.23**	**217**	P	**P**	**08 35 11.2**	**-1.1**
	comp=Z,3.3nm,0.8s,baz=41,slow=11,SNR=24						
WRA				LR	LR	08 44 07.6	
	comp=Z,144nm,18.7s,baz=60,slow=39						
AS31	**Alice Springs**	**24.40**	**212**	P	**P**	**08 35 44.4**	**-0.5**
ASAR	**Alice Springs**	**24.40**	**212**	P	**P**	**08 35 44.4**	**-0.5**
	comp=Z,2.7nm,0.7s,baz=38,slow=7.1,SNR=28						
ASAR				LR	LR	08 46 06.2	
	comp=Z,73nm,18.9s,baz=31,slow=39						
ASAR	**Alice Springs**	**24.40**	**212**	P	**P**	**08 35 44.6**	**-0.3**
FITZ	**Fitzroy Crossi**	**26.33**	**234**	P	**P**	**08 35 59.9**	**-2.6**
	comp=Z,2.4nm,0.7s,baz=78,slow=9.6,SNR=5.8						
FITZ				LR	LR	08 47 04.1	
	comp=Z,184nm,19.4s,baz=80,slow=38						
FITZ	**Fitzroy Crossi**	**26.33**	**234**	P	**P**	**08 36 01.3**	**-1.2**
FITZ				IAmb	IAmb	08 36 02.1	
	comp=Z,8.2nm,1.2s						
H11S3	**WAKE ISLAND Hy**	**28.45**	**40**	T	T	09 06 09.9	
	baz=220,slow=76						
H11S2	**WAKE ISLAND Hy**	**28.45**	**40**	T	T	09 06 09.0	
	baz=220,slow=76						
H11S1	**WAKE ISLAND Hy**	**28.46**	**40**	T	T	09 06 10.3	
	baz=220,slow=76						
H11N1	**WAKE ISLAND Hy**	**29.48**	**39**	T	T	09 07 25.6	
	baz=221,slow=76						

H11N3	WAKE ISLAND Hy	29.49	39	T	T	09 07 26.3	
	baz=221,slow=76						
H11N2	WAKE ISLAND Hy	29.49	39	T	T	09 07 26.4	
	baz=221,slow=76						
JCJ	Chichijima	30.65	350	LR	LR	08 46 24.5	
	comp=Z,89nm,21.5s,baz=76,slow=31						
MJAR	Matsushiro Arr	40.59	348	LR	LR	08 53 26.7	
	comp=Z,38nm,18.4s,baz=165,slow=34						
KSRS	Korea Array	44.53	337	P	P	08 38 39.2	+1.1
	comp=Z,0.8nm,0.5s,baz=146,slow=8.8,SNR=4.4						
KSRS				LR	LR	08 55 26.0	
	comp=Z,31nm,18.4s,baz=123,slow=34						
CMAR	Chiang Mai Arr	52.79	296	P	P	08 39 42.4	+0.4
	comp=Z,1.0nm,0.3s,baz=110,slow=8.0,SNR=1.4						
CMAR				LR	LR	08 59 48.0	
	comp=Z,7.9nm,21.8s,baz=305,slow=33						
SONM	Songino Array	62.46	330	P	P	08 40 50.2	+0.4
	comp=Z,0.2nm,0.3s,baz=132,slow=6.4,SNR=4.3						
SONM				LR	LR	09 05 58.4	
	comp=Z,26nm,21.5s,baz=98,slow=34						
MKAR	Makanchi Array	75.96	320	P	P	08 42 13.4	0.0
	comp=Z,0.5nm,0.8s,baz=109,slow=6.8,SNR=4.9						
ZALV	Zalesovo Beam	77.17	327	LR	LR	09 17 35.1	
	comp=Z,33nm,19.0s,baz=85,slow=37						
IMAR	Indian Mountai	80.61	21	P	P	08 42 37.5	-1.2
ILAR	Eielson Array	82.61	23	P	P	08 42 47.6	-1.7
	comp=Z,0.7nm,0.8s,baz=249,slow=5.0,SNR=7.8						
QSPA	South Pole Qui	86.71	180	P	P	08 43 09.6	-0.6
NVAR	Mina Array Bea	94.98	52	P	P	08 43 51.0	+1.4
	comp=Z,0.1nm,0.3s,baz=280,slow=5.4,SNR=1.8						
NVAR				LR	LR	09 19 54.3	
	comp=Z,23nm,19.1s,baz=226,slow=31						
YKA	Yellowknife Ar	96.33	28	P	P	08 43 54.7	-0.1
	comp=Z,0.5nm,0.7s,baz=271,slow=3.8,SNR=10						
TORD	Torodi Ar. Bea	145.17	288	PKPbc	PKPdf	08 50 05.0	-0.2
	comp=Z,0.4nm,0.7s,baz=60,slow=3.5,SNR=4.0						

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*SKO **13** 08:31:29.2, 40°.65N×19°.54E, h3^{km}*
*TIR **13** 08:31:30.5, 40°.79N×19°.70E, h4^{km}±3^{km}, Md3.2*
*PDG **13** 08:31:30.4±0.5, 40°.75N×19°.50E, h18^{km}±1^{km}, ML2.9/12, Error ellipse: s-maj=1.6km s-min=1.7km az=0.0*
*THE **13** 08:31:31.8, 40°.80N×19°.65E, h7^{km}±2^{km}, ML2.9/5, Error ellipse: s-maj=2.1km s-min=0.8km az=250.0*
*BEO **13** 08:31:31.6±0.6, 40°.80N×19°.72E, h0^{km}, ML2.7/10*
ISC 13 08:31:30.3±1.1**, 40°.79N**±0°.02×**19°.57E**±0°.02**, h9**^{km}±9^{km}**, n85,** σ1§**09**/129**, 14C-8D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VLO	Vlora	0.32	190	P	Pb	08 31 38.2	0.0
VLO				S	Sb	08 31 43.9	+0.4
VLO	Vlora	0.32	190	P	Pb	08 31 38.4	+0.1
	baz=206						
VLO				S	Sb	08 31 43.4	-0.1
	baz=206						
TIR	Tirane	0.60	22	P	Pb	08 31 43.1	+0.1
TIR	Tirane	0.60	22	ePg	Pg	08 31 42.0	+0.1
TIR				eSg	Sg	08 31 49.8	0.0
TIR	Tirane	0.60	22	⇑P	Pb	08 31 42.8	-0.2
TIR	Tirane	0.60	22	P	Pb	08 31 43.2	+0.1
	baz=12						
TIR	Tirane	0.60	22	i Pg	Pb	08 31 42.4	-0.6
KBN	Korca	0.94	100	P	Pg	08 31 47.4	-0.9
KBN				S	Sb	08 32 01.1	-0.3
	502nm,0.5s						
KBN	Korca	0.94	100	P	Pg	08 31 47.0	-1.3
	baz=101						
KBN				S	Sg	08 31 60.0	-0.5
	baz=101						
SRN	Sarande	0.96	160	P	Pb	08 31 49.4	+0.3
SRN				S	Sn	08 32 04.0	+0.2
	355nm,0.4s						
SRN	Sarande	0.96	160	P	Pb	08 31 49.6	+0.5
	baz=165						
SRN				S	Sn	08 32 03.4	-0.4
	baz=165						
OHR	Ohrid	0.98	70	i Pg	Pg	08 31 47.8	-1.4
OHR				i Sg	Sn	08 32 03.3	-1.2
OHR				eLg	Lg	08 32 06.1	
	comp=N,247nm,0.6s						
LSK	Leskovik	1.01	129	P	Pg	08 31 49.1	-0.6
LSK				S	Sn	08 32 04.9	-0.2
	comp=N,638nm,0.5s						
LSK	Leskovik	1.01	129	P	Pg	08 31 49.4	-0.3
	baz=132						
KEK	Kerkira	1.09	171	P	Pn	08 31 52.0	+0.3
KEK				S	Sn	08 32 07.8	+0.9
	comp=N,802nm,0.4s						
PHP	Peshkopia	1.11	36	P	Pg	08 31 50.7	-0.9
	baz=31						
ULC	Ulcinj	1.20	348	i Pg	Pg	08 31 53.5	+0.1
ULC	Ulcinj	1.20	348	⇑iPg	Pg	08 31 53.4	+0.1
ULC				eSg	Sn	08 32 10.8	+1.1
PUK	Puka	1.28	11	P	Pg	08 31 55.4	+0.6
	baz=6.0						
PUK				S	Sn	08 32 14.2	+2.5
	baz=6.0						
PENT	Pentalofos	1.33	116	P	Pb	08 31 55.5	0.0
FNA	Florina	1.37	90	P	Pn	08 31 54.8	-0.9
FNA				S	Sg	08 32 14.4	+0.1
	comp=N,732nm,0.4s						
FNA	Florina	1.37	90	i Pn	Pn	08 31 54.3	-1.3
FNA				i Sn	Sg	08 32 15.9	+1.6
DRME	Dracevica, Mon	1.43	348	ePn	Pn	08 31 56.5	+0.1
DRME	Dracevica, Mon	1.43	348	⇑iPg	Pn	08 31 56.7	+0.3
DRME				eSg	Sg	08 32 17.8	+1.6
BUM	Brajici-Budva	1.59	342	⇓iPn	Pn	08 31 59.0	+0.2
BUM				eSn	Sg	08 32 23.6	+2.0
KPRO	Kipourio	1.60	121	P	Pb	08 31 59.9	-0.2
BCI	Bajram Curri	1.62	13	P	Pg	08 32 01.1	-0.2
	baz=9.0						
PDG	Podgorica	1.66	352	ePn	Pb	08 32 00.8	-0.2
PDG				eSn	Sg	08 32 23.4	-0.2
PDG	Podgorica	1.66	352	⇑P	Pg	08 32 01.7	-0.4
PDG				⇑S	Sg	08 32 23.7	+0.1
PDG	Podgorica	1.66	352	ePn	Pb	08 32 00.8	-0.2
PDG	Podgorica	1.66	352	i Pn	Pb	08 32 01.2	+0.2
PDG				i Sn	Sg	08 32 23.6	+0.1
TTG	Podgorica	1.66	352	⇓iPn	Pb	08 32 00.7	-0.2
TTG				eSn	Sg	08 32 24.0	+0.4
PRZK	Prizren	1.68	32	i Pn	Pg	08 32 01.8	-0.7
CEME	Cevo	1.82	345	⇑iPn	Pn	08 32 01.8	-0.1
CEME				eSn	Sb	08 32 26.1	-0.8
PVY	Plav	1.83	9	⇑iPn	Pb	08 32 03.1	-0.9
PVY				eSn	Sb	08 32 27.6	+0.6
SKO	Skopje	1.84	49	ePn	Pb	08 32 03.7	-0.4
SKO				eSg	Sn	08 32 25.6	+0.2
SKO	Skopje	1.84	49	i Pn	Pn	08 32 01.8	-0.2
SKO				i Sn	Sb	08 32 27.6	+0.4
SKO				eLg	Lg	08 32 29.0	
	comp=N,15nm,0.5s						
HCY	Herceg Novi	1.84	334	ePn	Pn	08 32 01.8	-0.3
HCY	Herceg Novi	1.84	334	⇓iPn	Pn	08 32 01.9	-0.2
HCY				eSn	Sn	08 32 26.1	+0.5
PEJK	Peje	1.93	16	i Pn	Pb	08 32 05.6	0.0
PEJK				i Sn	Sg	08 32 32.5	+0.3
NKME	Niksic	2.03	347	⇑iPn	Pn	08 32 05.2	+0.5
NKME				eSn	Sb	08 32 31.7	-1.1
KOME	Kolasin	2.06	359	⇑iPn	Pn	08 32 06.2	+1.0
KOME				eSn	Sb	08 32 34.1	+0.4
NKY	Niksic	2.07	348	⇑iPn	Pb	08 32 08.6	+0.5
NKY				eSn	Sb	08 32 32.9	-1.1
IVA	Berane	2.10	6	⇓iPn	Pb	08 32 07.8	-0.7
IVA				eSn	Sb	08 32 33.7	-1.0
TREB	Trebinje	2.13	335	ePn	Pb	08 32 09.9	+0.8
TREB				eSn	Sb	08 32 35.9	+0.2
TREB	Trebinje	2.13	335	ePn	Pn	08 32 05.3	-0.8
GRG	Griva	2.15	85	P	Pn	08 32 06.9	+0.5
GRG	Griva	2.15	85	i Pn	Pn	08 32 06.8	+0.5
GRG				i Sn	Sb	08 32 34.9	-1.3
LKD2	Lefkada island	2.17	157	P	Pn	08 32 06.8	+0.3
STIP	Stip	2.17	64	i Pn	Pb	08 32 09.9	+0.2
STIP				eLg	Lg	08 32 47.7	
	comp=N,14nm,0.4s						
MATE	Matera	2.18	267	⇑P	Pg	08 32 12.1	0.0
BRY	Bratogost	2.25	340	ePn	Pn	08 32 09.1	+1.3
BRY	Bratogost	2.25	340	⇑iPn	Pn	08 32 07.6	-0.2
BRY				eSn	Sn	08 32 36.9	+1.1
VAY	Valandovo	2.33	76	ePn	Pn	08 32 09.3	+0.5
VAY				eSn	Sn	08 32 37.1	-0.4
VAY	Valandovo	2.33	76	i Pn	Pn	08 32 09.3	+0.5
VAY				i Sn	Sn	08 32 38.3	+0.8
VAY				eLg	Lg	08 32 38.7	
	comp=N,21nm,0.7s						
UPM	Unac-Piva	2.46	349	ePn	Pb	08 32 13.9	-0.9
UPM	Unac-Piva	2.46	349	⇓iPn	Pb	08 32 13.8	-1.0
UPM				eSn	Sn	08 32 42.7	+1.6
KNT	Kendrikon	2.55	80	P	Pn	08 32 11.9	+0.1
BARS	Barje	2.63	39	ePn	Pg	08 32 29.8	+9.1
MAKR	Makrakomi, Fth	2.65	131	P	Pn	08 32 14.8	+1.6
TIP	Timpagrande	2.69	234	⇑P	Pb	08 32 19.0	+0.4
AGG	Agios Georgios	2.76	129	P	Pn	08 32 15.8	+1.1
BOSS	Bosilegrad	2.77	51	ePn	Pn	08 32 15.5	+0.7
BOSS				eSn	Sn	08 32 48.7	+0.3
IVAS	Ivanjica	2.82	9	ePn	Pn	08 32 17.5	+1.9
IVAS				eSn	Sb	08 32 52.6	-2.9
ANX	Ano Chora	2.84	140	P	Pn	08 32 17.7	+1.8
BBLS	Lazići	3.08	358	ePn	Pn	08 32 21.9	+2.7
BBLS	Lazići	3.08	358	ePn	Pb	08 32 25.1	-0.2
RICI	Ricice	3.26	327	ePn	Pn	08 32 21.4	-0.2
RICI				Sn	Sn	08 32 59.4	-1.0
VTS	Vitosha	3.30	55	⇑P	Pn	08 32 23.9	+1.7
DIVS	Divibare	3.32	5	ePn	Pn	08 32 23.9	+1.4
DIVS	Divibare	3.32	5	ePn	Pn	08 32 23.0	+0.5
HAPS	Han Pijesak,Bl	3.33	352	ePn	Pn	08 32 25.9	+3.3
ZAPS	Zavoj	3.37	42	ePn	Pn	08 32 24.1	+0.9
ZAPS				eSn	Sn	08 33 03.8	+0.5
TRUS	Trudelj	3.49	10	ePn	Pn	08 32 25.4	+0.7
ZAGS	Zajecar	3.61	32	ePn	Pn	08 32 27.4	+1.0
ZAGS				eSn	Sn	08 33 10.6	+1.5
KIJV	Kijevo	3.98	325	Sn	Sn	08 33 17.2	-1.0
ZIRJ	Zirje	4.09	316	ePn	Pn	08 32 32.7	-0.2
ZIRJ				Sn	Sn	08 33 19.4	-1.4
MORI	Morici	4.20	318	ePn	Pn	08 32 35.0	+0.5
MORI				Sn	Sn	08 33 22.2	-1.5
FRGS	Fruska Gora	4.37	2	⇓P	Pn	08 32 40.3	+3.4
DUGI	Dugi Otok	4.63	315	ePn	Pn	08 32 40.7	+0.3
DUGI				Sn	Sn	08 33 32.8	-1.4
BZS	Buzias	5.05	17	⇓P	Pn	08 32 48.6	+2.4
NVLJ	Novalja	5.12	319	ePn	Pn	08 32 47.1	0.0
NVLJ				Sn	Sn	08 33 43.5	-2.8
GZR	Gura Zlata	5.17	26	⇓P	Pn	08 32 49.6	+1.7
CRES	Cresnjev	5.86	331	ePn	Pn	08 32 54.8	-2.5
CEY	Cerknica	6.21	325	ePn	Pn	08 32 59.6	-2.5

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*NEIC **13** 08:35:23.8±2.2, 0°.28S±0°.10×29°.70E±0°.06, h10^{km}±2^{km}, mb4.4/10, Error ellipse: s-maj=18.3km s-min=6.7km az=204.0*
*IDC **13** 08:35:25.2±0.8, 0°.31S×29°.74E, h22^{km}±5^{km}, mb3.8/8, mb1 3.9/9, mb1mx3.7/38, mbtmp4.0/9, ML3.8/1, MS3.2/5, Ms1 3.2/5, ms1mx2.9/41, Error ellipse: s-maj=17.8km s-min=9.9km az=24.0*
*EAF **13** 08:35:27.8±2.2, 0°.15N×29°.63E, h0^{km}±34^{km}, MD3.3*
ISC 13 08:35:23.9±0.6**, 0°.27S**±0°.09×**29°.73E**±0°.05**, h10**^{km}**, n27,** σ1§**25**/33**, mb4.2**/10**, MS3.2**/4**, Zaire**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MBAR	Mbarara	1.06	108	Pg	Pg	08 35 44.4	+0.1
	3μm,0.3s,baz=277,slow=18,SNR=3766						
MBAR				Lg	Lg	08 35 57.7	
	7μm,0.3s,baz=172,slow=22,SNR=16						
MBAR	Mbarara	1.06	108		Pg	08 35 44.7	+0.4
MBAR					Sg	08 35 58.2	+0.1
MBAR	Mbarara	1.06	108	eP	Pg	08 35 44.4	+0.1
MBAR				eS	Sg	08 35 57.3	-0.8
TEBE	Entebbe	2.76	83	eP	Pg	08 36 15.9	-0.9
TEBE				eS	Sb	08 36 47.2	-0.1
KMBO	Kilima Mbogo	7.57	96	Pn	Pn	08 37 15.4	+0.8
	1.6nm,0.3s,baz=262,slow=14,SNR=15						
KMBO				Sn	Sn	08 38 39.0	-1.7
	3.0nm,0.3s,baz=313,slow=20,SNR=6.8						
KMBO				Lg	Lg	08 39 17.8	
	3.5nm,0.3s,baz=216,slow=19,SNR=4.7						
KMBO				LR	LR	08 39 39.5	
	comp=Z,64nm,20.8s,baz=270,slow=34						
ATD	Arta Tunnel	17.53	48	Pn	Pn	08 39 27.7	-0.9
MATP	Matopo	20.07	183	P	P	08 39 58.5	+0.8
	4.7nm,0.9s,baz=2.5,slow=12,SNR=9.3						
TSUM	Tsumeb	22.27	212	LR	LR	08 49 43.7	
	comp=Z,63nm,19.8s,baz=332,slow=39						
LBTB	Lobatse	24.92	189	P	P	08 40 47.3	-0.2
	5.3nm,0.7s,baz=6.6,slow=11,SNR=7.1						
LBTB	Lobatse	24.92	189	P	P	08 40 47.5	0.0
LBTB				IAmb	IAmb	08 40 49.5	
	comp=Z,9.1nm,0.9s						
ABPO	Ambohimpanom	25.33	138	P	P	08 40 50.9	-0.5
ABPO				IAmb	IAmb	08 40 52.2	
	comp=Z,14nm,1.4s						
BOSA	Boshof	28.51	188	P	P	08 41 17.7	-2.1
	comp=Z,2.0nm,0.8s,baz=24,slow=10.0,SNR=3.6						
BOSA				LR	LR	08 52 43.3	
	comp=Z,101nm,19.0s,baz=14,slow=36						
BOSA	Boshof	28.51	188	P	P	08 41 18.1	-1.7
BOSA				IAmb	IAmb	08 41 33.7	
	comp=Z,6.9nm,1.1s						
TOA0	Torodi Ar. Sit	30.83	297	P	P	08 41 38.6	-1.8
TORD	Torodi Ar. Bea	30.83	297	P	P	08 41 39.2	-1.2
	comp=Z,1.6nm,0.7s,baz=108,slow=6.8,SNR=8.6						
TORD				pP	sP	08 41 46.3	+1.2
	comp=Z,4.2nm,0.6s,baz=106,slow=7.3,SNR=13						
TORD				LR	LR	08 53 32.9	
	comp=Z,85nm,20.4s,baz=95,slow=35						
TORD	Torodi Ar. Bea	30.83	297	P	P	08 41 39.5	-0.9
TORD				IAmb	IAmb	08 41 47.1	
	comp=Z,2.9nm,0.6s						
DBIC	Dimbokro	35.20	282	LR	LR	08 59 16.6	
	comp=Z,29nm,18.2s,baz=98,slow=41						
DBIC	Dimbokro	35.20	282	P	P	08 42 17.2	-1.4
DBIC				IAmb	IAmb	08 42 41.5	
	comp=Z,10nm,1.4s						
BRTR	Keskin Array B	39.97	5	P	P	08 42 59.5	+0.6
AKASG	Malin Array Be	50.78	360	P	P	08 44 22.2	-2.1
	comp=Z,0.2nm,0.2s,baz=188,slow=7.3,SNR=1.3						
AKASG				pP	sP	08 44 30.7	+1.7
	comp=Z,0.4nm,0.4s,baz=182,slow=6.9,SNR=2.3						
FINES	FINESS Array B	61.62	358	P	P	08 45 41.0	-0.5
	comp=Z,1.0nm,0.7s,baz=156,slow=7.0,SNR=1.5						
FINES				pP	sP	08 45 48.4	+2.1
	comp=Z,2.0nm,0.9s,baz=145,slow=7.0,SNR=1.9						
MK31	Makanchi Array	65.53	37	P	P	08 46 07.9	+0.3
MK31				IAmb	IAmb	08 46 15.8	
	comp=Z,1.2nm,0.8s						
MKAR	Makanchi Array	65.53	37	P	P	08 46 07.2	-0.4
	comp=Z,0.8nm,0.7s,baz=236,slow=5.1,SNR=6.9						
MKAR				pP	sP	08 46 14.8	+2.3
	comp=Z,1.2nm,0.7s,baz=240,slow=6.3,SNR=9.0						
MKAR	Makanchi Array	65.53	37	P	P	08 46 07.8	+0.1
SONM	Songino Array	81.26	42	P	P	08 47 42.0	+1.4
	comp=Z,0.6nm,0.7s,baz=224,slow=6.0,SNR=4.9						
SONM	Songino Array	81.26	42	P	P	08 47 41.6	+1.1
QSPA	South Pole Qui	89.76	180	P	P	08 48 24.2	+1.7

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*DJA **13** 09:07:33.9±0.3, 2°S±2°×11°9E±°, h10^{km}, M3.9/12, MLv3.9/12*
*IDC **13** 09:07:33.9±1.3, 2°.44S×119°.62E, h0^{km}, mb3.3/4, mb1 3.5/5, mb1mx3.4/50, mbtmp3.4/5, ML3.7/1, MS2.7/1, Ms1 2.7/1, ms1mx2.3/20, Error ellipse: s-maj=69.6km s-min=19.4km az=72.0*
ISC 13 09:07:34.9±0.9**, 2°.46S**±0°.05×**119°.51E**±0°.06**, h10**^{km}**, n14,** σ1§**03**/17**, mb3.4**/4**, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TTSI	Tana Toraja	0.66	152	P	Pg	09 07 46.5	-1.2
SPSI	Sidrap Palu	1.52	170	P	Pn	09 08 00.9	-1.2
SPSI				S	Sn	09 08 22.5	+0.6
BNSI	Bone	2.02	163	P	Pn	09 08 08.3	-0.7
BNSI				S	Sn	09 08 35.3	+1.0
KAPI	Kappang	2.55	175	Pn	Pn	09 08 16.6	+0.2
	14nm,0.3s,baz=356,slow=14,SNR=22						
KAPI				Sn	Sn	09 08 49.4	+1.9
	44nm,0.3s,baz=86,slow=22,SNR=11						
KAPI				LR	LR	09 09 29.2	
	comp=Z,152nm,20.6s,baz=338,slow=45						
APSI	Ampana	2.63	54	P	Pn	09 08 17.0	-0.5
BKB	Balikpapan	2.87	294	P	Pn	09 08 20.3	-0.5
BKSI	Bulukumba	2.91	168	P	Pn	09 08 20.6	-0.7
KBKI	Kotabaru	3.44	256	P	Pn	09 08 27.3	-1.4
LUWI	Luwuk	3.55	67	P	Pn	09 08 29.4	-0.7
MRSI	Marisa	3.80	40	P	Pn	09 08 32.7	-0.8
WRA	Warramunga Arr	22.62	141	P	P	09 12 35.4	-0.8
	0.8nm,0.8s,baz=319,slow=11,SNR=6.6						
ASAR	Alice Springs	25.27	148	P	P	09 13 02.5	+0.9
	0.3nm,0.7s,baz=325,slow=9.0,SNR=4.5						
SONM	Songino Array	51.39	349	P	P	09 16 40.5	+0.5
	0.6nm,0.9s,baz=159,slow=8.6,SNR=3.9						
MKAR	Makanchi Array	58.96	331	P	P	09 17 35.4	+0.8
	0.4nm,0.7s,baz=131,slow=6.5,SNR=2.6						

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*KRNET **13** 09:45:23.7±0.1, 43°.87N×69°.44E, mb3.2*
*SOME **13** 09:45:23.8, 43°.75N×69°.67E*
*NNC **13** 09:45:25.8±0.8, 43°.69N×69°.73E, h0^{km}, mb3.6, mpv3.2, Error ellipse: s-maj=4.8km s-min=3.0km az=135.0, Suspected Mining explosion.*
ISC 13 09:45:27.3±2.3**, 43°.63N**±0°.08×**69°.64E**±0°.09**, h0**^{km}**, n25,** σ1§**23**/39**, 21C-5D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRLS	Borolday	0.62	167	P	Pb	09 45 41.5	+0.5
	26nm,0.3s						
BRLS				S	Sn	09 45 54.9	+0.9
	27nm,0.2s						
KK31	Karatay Array	0.82	130	⇑P	Pg	09 45 41.7	-1.4
	1.9nm,0.3s,baz=317,slow=17,SNR=196						
KK31				⇓S	Sg	09 45 52.9	-0.9
	32nm,0.7s,baz=317,slow=27,SNR=102						
IUG	Iuzhnay	1.51	169	P	Pn	09 45 54.5	-1.2
	23nm,0.2s						
IUG				S	Sn	09 46 17.3	+1.1
	69nm,0.4s						
TRKS	Terek-Say	2.38	152	⇓iP	Pb	09 46 09.7	-1.4
	baz=51						
TRKS				⇓iS	Sg	09 46 43.1	-0.5
	baz=51						
MNAS	Manas	2.39	118	⇑iP	Pn	09 46 08.3	+0.4
	baz=21						
MNAS				⇑iS	Sb	09 46 41.0	-0.4
	baz=21						
MRKS	Merke	2.77	107	Pg	Pb	09 46 15.9	-1.8
	5.9nm,0.5s						
MRKS				Lg	Lg	09 46 54.3	
	12nm,0.4s						
EKS2	Erkin-Say	3.18	106	⇑iP	Pn	09 46 18.8	+0.1
	baz=9.0						
EKS2				⇑iS	Sn	09 46 59.2	+1.9
	baz=9.0						
AML	Almayashu	3.33	115	⇓iP	Pn	09 46 21.7	+0.6
	baz=18						
AML				⇓iS	Sn	09 47 03.5	+1.9
	baz=18						
ARSB	Arslanbob	3.38	132	⇑eP	Pn	09 46 22.6	+1.1
	baz=33						
ARSB				⇑iS	Sn	09 47 05.3	+2.9
	baz=33						
USP	Ospenovka	3.56	94	⇑iP	Pn	09 46 23.7	-0.1
	baz=98						
USP				⇑iS	Sn	09 47 07.2	+0.7
	baz=98						
SGDS	Sogindy	3.63	91	Pg	Pb	09 46 30.8	-1.6
	4.6nm,0.3s						
SGDS				Lg	Lg	09 47 18.9	
	5.9nm,0.4s						
BTK	Batken	3.68	166	⇑iP	Pn	09 46 26.4	+0.9
	baz=64						
BTK				⇑iS	Sn	09 47 12.2	+2.6
	baz=64						
AAK	Ala-Archa	3.69	104	⇑eP	Pn	09 46 25.9	+0.2
	baz=7.0						
AAK				⇑iS	Sn	09 47 11.4	+1.4
	baz=7.0						
AAK	Ala-Archa	3.69	104	Pg	Pb	09 46 32.1	-1.4
	4.8nm,0.5s						
AAK				Lg	Lg	09 47 23.1	
	3.8nm,0.7s						
UCH	Uchtor	3.84	110	⇑iP	Pn	09 46 28.6	+0.5
	baz=12						
UCH				⇑iS	Sn	09 47 15.8	+1.6
	baz=12						
ARLS	Aral	3.87	116	⇑eP	Pn	09 46 28.6	+0.3
	baz=18						
ARLS				⇑iS	Sn	09 47 16.1	+1.5
	baz=18						
KBK	Karagaybulak	4.00	102	⇑iP	Pn	09 46 30.2	+0.1
	baz=5.0						
KBK				⇑iS	Sn	09 47 18.7	+0.9
	baz=5.0						
KRBS	Karabastau	4.38	87	Pg	Pb	09 46 45.6	+0.5
	6.8nm,0.9s						
KRBS				Lg	Lg	09 47 44.2	
	11nm,0.4s						
TKM2	Tokmak 2	4.40	97	⇑Pg	Pb	09 46 45.1	-0.5
	3.2nm,0.7s						
TKM2				⇑Lg	Lg	09 47 44.9	
	3.5nm,0.6s						
DGS	Degeres	4.48	93	Pg	Pb	09 46 46.2	-0.7
	1.5nm,0.6s						
DGS				Lg	Lg	09 47 45.7	
	12nm,0.5s						
KST	Kastek	4.65	95	Pg	Pb	09 46 50.6	+0.9
	4.9nm,0.5s						
KST				Lg	Lg	09 47 53.1	
	8.5nm,0.6s						
KUU	Kurty	4.86	85	Pg	Pb	09 46 53.4	+0.1
	1.3nm,0.4s						
KUU				Lg	Lg	09 47 57.6	
	8.8nm,0.5s						
KTBS	Karatobe	5.11	87	Pg	Pb	09 46 56.7	-0.8
	1.4nm,0.6s						
KTBS				Lg	Lg	09 48 03.5	
	13nm,0.6s						
IZV	Izvestkoviy	5.12	94	Pg	Pb	09 46 58.5	+0.7
	2.0nm,0.5s						
IZV				Lg	Lg	09 48 06.7	
	10nm,0.5s						
TNSS	Tian-Shan	5.36	94	Pg	Pb	09 47 03.4	+1.3
	2.4nm,0.5s						
TNSS				Lg	Lg	09 48 14.7	
	3.1nm,0.5s						

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*IDC **13** 09:48:01.2±1.4, 17°.83N×81°.69W, h0^{km}, mb3.6/6, mb1 4.1/9, mb1mx3.8/36, mbtmp3.8/9, ML4.1/2, MS3.1/4, Ms1 3.0/4, ms1mx2.8/38, Error ellipse: s-maj=40.7km s-min=27.8km az=60.0*
*NEIC **13** 09:48:03.0±1.7, 17°.88N±0°.06×81°.59W±0°.08, h10^{km}±1^{km}, mb4.2/27, Error ellipse: s-maj=13.5km s-min=8.7km az=118.0*
ISC 13 09:48:03.9±0.7**, 17°.92N**±0°.07×**81°.70W**±0°.06**, h18**^{km}**, n51,** σ1§**53**/47**, mb4.1**/11**, North of Honduras**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FSCY	Frank Sound, G	1.47	19	Pn	Pn	09 48 27.9	-1.6
FSCY				Sn	Sn	09 48 45.1	-3.1
LCCY	Blossom Villag	2.31	41	Pn	Pn	09 48 40.7	-0.4
CBCY	The Bluff, Cay	2.58	45	Pn	Pn	09 48 44.1	-0.6
MTDJ	Mount Denham	3.97	85	Pn	Pn	09 49 02.5	-1.5
ESPN	Las Esperanzas	6.22	204		Pn	09 49 34.8	-0.1
GTBY	Guantanamo Bay	6.54	71	Pn	Pn	09 49 39.0	-0.3
TGUH	Tegucigalpa,Un	6.60	235	Pn	Pn	09 49 39.2	-0.9
TEIG	Tepich	6.63	291	Pn	Pn	09 49 39.8	-0.7
	7.4nm,0.3s,baz=113,slow=16,SNR=24						
TEIG				Sn	Sn	09 50 50.8	-4.9
	1.7nm,0.3s,baz=349,slow=19,SNR=1.6						
TEIG				LR	LR	09 51 59.9	
	comp=Z,234nm,20.4s,baz=127,slow=36						
TEIG	Tepich	6.63	291		Pn	09 49 39.7	-0.8
SDDR	Presa de Saban	9.93	82	Pn	Pn	09 50 26.6	+0.7
SDV	Santo Domingo	14.01	128	Pn	Pn	09 51 20.7	-1.1
	0.2nm,0.3s,baz=308,slow=17,SNR=1.3						
SDV				LR	LR	09 56 31.0	
	comp=Z,80nm,20.9s,baz=316,slow=36						
SJG	San Juan	14.79	87	LR	LR	09 56 32.4	
	comp=Z,136nm,18.8s,baz=254,slow=35						
GOGA	Godfrey	15.51	354	Pn	Pn	09 51 42.6	+0.9
GOGA				IAmb	IAmb	09 51 49.4	
	comp=Z,14nm,1.0s						
V53A	Saluda	17.71	357	Pn	Pn	09 52 07.7	-2.0
V53A				IAmb	IAmb	09 52 14.8	
	comp=Z,14nm,1.0s						
TKL	Tuckaleechee C	17.77	354	P	P	09 52 11.3	+0.2
	comp=Z,0.3nm,0.3s,baz=178,slow=13,SNR=5.1						
TKL	Tuckaleechee C	17.77	354		Pn	09 52 07.1	-3.2
TKL				IAmb	IAmb	09 52 16.8	
	comp=Z,27nm,1.4s						

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
OTAV	Otavalo	17.86	169	Pn	Pn	09 52 03.5	-8.6
OTAV				IAmb	IAmb	09 52 28.7	
	comp=Z,14nm,1.0s						
V55A	Taylorsville	17.87	1		P	09 52 13.0	+0.9
V55A				IAmb	IAmb	09 52 30.3	
	comp=Z,26nm,1.5s						
TZTN	Tazewell	18.62	355	P	Pn	09 52 21.6	+0.7
TZTN				IAmb	IAmb	09 52 38.5	
	comp=Z,14nm,1.3s						
WVT	Waverly	18.93	345	P	Pn	09 52 25.5	+0.9
T50A	Nancy	19.23	352	P	Pn	09 52 30.9	+2.7
T50A				IAmb	IAmb	09 52 32.6	
	comp=Z,14nm,0.8s						
MIAR	Mount Ida	19.66	330	P	Pn	09 52 33.9	+0.6
S51A	Beattyville	19.72	356	P	Pn	09 52 34.9	+0.9
FCAR	Ozark Folk Cen	20.14	335	P	Pn	09 52 39.3	+0.2
FCAR				IAmb	IAmb	09 52 43.9	
	comp=Z,6.0nm,0.7s						
PBMO	Poplar Bluff	20.30	339	P	Pn	09 52 41.2	+0.3
PBMO				IAmb	IAmb	09 52 46.0	
	comp=Z,12nm,0.7s						
JCT	Junction City	20.68	311	P	Pn	09 52 45.4	0.0
T42A	Van Buren	20.76	338	P	Pn	09 52 45.0	-1.3
T42A				IAmb	IAmb	09 52 49.3	
	comp=Z,6.8nm,0.8s						
FVM	French Village	21.40	341	P	P	09 52 53.0	+2.2
FVM				IAmb	IAmb	09 52 53.5	
	comp=Z,8.7nm,0.7s						
CCM	Cathedral Cave	21.73	339	P	P	09 52 56.1	+1.8
CCM				IAmb	IAmb	09 52 59.0	
	comp=Z,12nm,0.8s						
S39A	Bolivar	22.18	335	P	P	09 53 02.3	+3.2
S39A				IAmb	IAmb	09 53 03.4	
	comp=Z,9.2nm,0.9s						
R40A	Maddies Statio	22.30	338	P	P	09 53 00.8	+0.4
R40A				IAmb	IAmb	09 53 04.8	
	comp=Z,7.1nm,0.9s						
TXAR	Lajitas Array	23.07	304	P	P	09 53 09.4	+0.7
	comp=Z,1.6nm,0.9s,baz=119,slow=8.5,SNR=14						
TXAR				LR	LR	10 02 13.8	
	comp=Z,13nm,20.5s,baz=0.0,slow=37						
TXAR	Lajitas Array	23.07	304	P	P	09 53 09.8	+1.1
TX31	Lajitas Ar. Si	23.07	304	P	P	09 53 09.4	+0.7
TX31				IAmb	IAmb	09 53 33.7	
	comp=Z,19nm,1.5s						
TX32	Lajitas Array	23.07	304	P	P	09 53 09.4	+0.7
P38A	Dawn	23.94	337	P	P	09 53 18.6	+1.5
N41A	Harden Midland	24.04	343	P	P	09 53 19.4	+1.5
L40A	Anamosa	25.40	343	P	P	09 53 31.5	+1.2
JFWS	Jewell Farm	25.95	346	P	P	09 53 36.7	+1.4
F36A	Milaca	29.55	343	P	P	09 54 08.3	+0.8
AGMN	Agassiz Nation	32.43	342	P	P	09 54 33.3	+0.5
ULM	Lac du Bonnet	34.20	344	P	P	09 54 49.0	+0.8
	comp=Z,3.3nm,0.7s,baz=151,slow=8.3,SNR=9.6						
ULM	Lac du Bonnet	34.20	344	P	P	09 54 48.6	+0.3
PDAR	Pinedale Array	34.23	322	P	P	09 54 50.1	+1.1
	comp=Z,0.6nm,0.7s,baz=123,slow=11,SNR=6.0						
NVAR	Mina Array Bea	37.86	310	P	P	09 55 20.8	+0.8
	comp=Z,0.4nm,0.8s,baz=113,slow=8.0,SNR=4.3						
YKA	Yellowknife Ar	50.06	341	P	P	09 56 57.9	+0.6
	comp=Z,0.5nm,0.8s,baz=131,slow=8.6,SNR=11						
ILAR	Eielson Array	63.42	334	P	P	09 58 32.6	+0.4
	comp=Z,0.1nm,0.5s,baz=96,slow=5.6,SNR=2.3						
WRA	Warramunga Arr	145.89	261	PKPbc	PKPbc	10 07 42.8	-0.3
	comp=Z,1.3nm,0.6s,baz=86,slow=3.5,SNR=24						
WRA	Warramunga Arr	145.89	261		PKPab	10 07 43.3	-0.3
ASAR	Alice Springs	146.29	254	PKPbc	PKPbc	10 07 43.5	-0.7
	comp=Z,1.0nm,0.6s,baz=98,slow=3.3,SNR=10						
ASAR	Alice Springs	146.29	254		PKPdf	10 07 43.2	0.0

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*MEX **13** 09:55:32.9±1.3, 14.°63N×92.°48W, h83^{km}±13^{km}, MD4.0*
*GCG **13** 09:55:33.7±0.3, 14.°43N×92.°59W, h51^{km}±77^{km}, MD4.2*
ISC 13 09:55:33.8±1.5**, 14.°67N**±0.°08×**92.°65W**±0.°05**, h59**^{km}±14^{km}**,**
n11, σ1.^{s}66/19**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.44	58	*e*P	Pn	09 55 44.1	-0.9
THIG				*i* S	Sn	09 55 53.8	+0.6
PCIG		1.16	332	*i* P	Pn	09 55 53.7	-0.3
PCIG				*i* S	Sn	09 56 10.2	+1.2
CCIG	Comitan	1.67	17	*e*P	Pn	09 56 02.7	+1.7
CCIG				*i* S	Sn	09 56 23.5	+2.0
FUG	Fuego 3	1.76	97	*e*P	Pn	09 56 01.5	-0.7
FUG				*e*S	Sn	09 56 23.4	-0.3
PCG	Pacaya	2.00	98	*e*S	Sn	09 56 29.5	0.0
TGIG		2.14	348	*e*P	Pn	09 56 07.5	+0.3
TGIG				*i* S	Sn	09 56 33.4	+0.6
NBG	Las Nubes	2.23	92	*e*P	Pn	09 56 08.8	+0.1
NBG				*e*S	Sn	09 56 36.0	+0.8
MRL	Marmol	2.89	82	*e*P	Pn	09 56 18.2	+0.6
CMIG	Matias Romero	3.23	318	*e*P	Pn	09 56 22.0	0.0
CMIG				*e*S	Sn	09 56 56.3	-2.9
HUIG	Huatulco	3.51	288	*e*P	Pn	09 56 28.1	+2.1
HUIG				*e*S	Sn	09 57 04.8	-1.6
SCIG	Sabancuy	4.49	18	*i* S	Sn	09 57 26.6	-3.8

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*ATH **13** 10:21:37.4, 38.°50N×20.°62E, h9^{km}±2^{km}, ML2.5/2, Error ellipse: s-maj=3.8km s-min=0.7km az=290.0*
*THE **13** 10:21:37.6, 38.°52N×20.°55E, h8^{km}±1^{km}, ML2.5/12, Error ellipse: s-maj=1.0km s-min=0.3km az=111.0*
ISC 13 10:21:37.1±0.8**, 38.°51N**±0.°02×**20.°58E**±0.°03**, h11**^{km}±5^{km}**,**
n41, σ0.^{s}53/66**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FSK	Fiskardo	0.06	198	P	Pg	10 21 39.4	+0.1
FSK				S	Sg	10 21 40.4	-0.6
FSK				AML	AML	10 21 41.2	
	comp=N,12580µm,0.4s						
FSK				AML	AML	10 21 41.4	
	comp=E,38435µm,0.3s						
FSK	Fiskardo	0.06	198	P	Pg	10 21 39.4	+0.1
FSK				S	Sg	10 21 40.9	0.0
	comp=E,13µm,0.3s						
VSK1	VASILIKIADES	0.11	189	P	Pg	10 21 40.0	+0.1
VSK1				S	Sg	10 21 41.9	-0.1
EVGI	Lefkada island	0.12	28	P	Pg	10 21 40.5	+0.3
EVGI				S	Sg	10 21 42.0	-0.3
EVGI	Lefkada island	0.12	28	P	Pg	10 21 40.5	+0.3
EVGI				S	Sg	10 21 42.9	+0.6
	comp=E,3µm,0.1s						
NYDR	Nydri-Lefkada	0.22	24	P	Pg	10 21 42.0	+0.3
NYDR				S	Sg	10 21 44.6	-0.2
NYDR	Nydri-Lefkada	0.22	24	P	Pg	10 21 41.9	+0.2
NYDR				S	Sg	10 21 45.8	+0.9
	comp=E,3µm,0.3s						
KEF5	Kardakata, Kep	0.25	201	P	Pg	10 21 42.5	+0.2
KEF5				S	Sg	10 21 46.3	+0.5
KEF5	Kardakata, Kep	0.25	201	P	Pg	10 21 42.7	+0.3
KEF5				S	Sg	10 21 47.0	+1.1
	comp=E,2µm,0.3s						
LKD2	Lefkada island	0.28	12	P	Pg	10 21 43.0	+0.1
LKD2				S	Sg	10 21 46.5	-0.3
LKD2				AML	AML	10 21 48.3	
	comp=E,1390µm,0.3s						
LKD2				AML	AML	10 21 49.7	
	comp=N,1753µm,0.3s						
LKD2	Lefkada island	0.28	12	P	Pg	10 21 43.0	+0.1
LKD2				S	Sg	10 21 47.5	+0.8
	comp=N,782nm,0.3s						
KEF4	Livadi, Kephal	0.28	206	P	Pg	10 21 43.1	+0.2
KEF4				S	Sg	10 21 47.5	+0.7
KEF4	Livadi, Kephal	0.28	206	P	Pg	10 21 43.3	+0.4
KEF4				S	Sg	10 21 48.1	+1.3
	comp=N,5µm,0.4s						
TSLK	Tsoukalades, L	0.32	10	P	Pg	10 21 43.7	+0.2
TSLK				S	Sg	10 21 48.3	+0.5
TSLK	Tsoukalades, L	0.32	10	P	Pg	10 21 43.7	+0.2
TSLK				S	Sg	10 21 48.6	+0.8
	comp=N,658nm,0.2s						
DMLN	Damoulianata-K	0.32	211	P	Pg	10 21 43.7	+0.1
DMLN	Damoulianata-K	0.32	211	P	Pg	10 21 43.8	+0.1
DMLN				S	Sg	10 21 48.9	+1.0
	comp=N,852nm,0.4s						
ARG2	Argostoli	0.34	193	P	Pg	10 21 44.4	+0.4
ARG2				S	Sg	10 21 49.5	+0.9
	comp=N,2µm,0.2s						
ARGA	Argostoli. Kep	0.35	194	P	Pg	10 21 44.1	+0.1
ARGA				S	Sg	10 21 49.0	+0.3
KEF3	Kipouria, Keph	0.36	211	P	Pg	10 21 44.0	-0.4
KEF3				S	Sg	10 21 48.8	-0.4
KEF3	Kipouria, Keph	0.36	211	P	Pg	10 21 44.2	-0.1
KEF3				S	Sg	10 21 49.4	+0.2
	comp=N,2µm,0.2s						
AST1	Astakos	0.40	86	P	Pg	10 21 45.7	+0.7
AST1				S	Sb	10 21 52.5	+0.2
PSDA	Pessada-Kefalo	0.40	180	P	Pg	10 21 44.9	-0.1
PSDA				S	Sg	10 21 50.5	+0.2
PSDA	Pessada-Kefalo	0.40	180	P	Pg	10 21 45.2	+0.2
PSDA				S	Sb	10 21 52.0	-0.3
PDO	Prodromos	0.48	80	P	Pg	10 21 46.9	+0.4
VLMS	Volimes, Zakyn	0.64	174	P	Pg	10 21 49.5	-0.1
VLMS				S	Sb	10 21 59.8	+0.5
	comp=N,552nm,0.4s						
RLS	Riolos of Patr	0.83	123	P	Pg	10 21 53.7	+0.5
RLS				S	Sn	10 22 07.2	+0.2
	comp=N,132nm,0.3s						
EFP	Efpalio	1.04	94	P	Pg	10 21 56.6	-0.6
LAKA	Lakka	1.13	104	P	Pg	10 21 57.8	-1.1
LAKA	Lakka	1.13	104	P	Pg	10 21 58.2	-0.7
SERG	Sergoula	1.16	95	P	Pb	10 21 58.6	-0.6
KALE	Kalithea	1.23	95	P	Pb	10 21 59.5	-0.9
KALE	Kalithea	1.23	95	P	Pb	10 21 59.7	-0.7
MAKR	Makrakomi, Fth	1.31	67	P	Pn	10 22 01.6	+0.2
MAKR	Makrakomi, Fth	1.31	67	P	Pn	10 22 01.9	+0.5
AGG	Agios Georgios	1.46	69	P	Pn	10 22 04.3	+0.9
RICI	Ricice	5.62	333	*i* Pn	Pn	10 23 00.1	-0.5
KIJV	Kijevo	6.32	331	*i* Pn	Pn	10 23 10.3	0.0
ZIRJ	Zirje	6.35	326	*i* Pn	Pn	10 23 10.6	+0.1
MORI	Morici	6.49	327	*e*Pn	Pn	10 23 12.2	-0.3
DUGI	Dugi Otok	6.88	324	*i* Pn	Pn	10 23 17.5	-0.4

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*GCG **13** 10:29:06.2±0.6, 13.°02N×90.°96W, h14^{km}±14^{km}, MD3.9*
*SNET **13** 10:29:11.3±0.5, 13.°50N×90.°62W, h14^{km}±7^{km}, ML3.1*
ISC 13 10:29:09.1±3.1**, 13.°1N**±0.°1×**90.°62W**±0.°09**, h28**^{km}±16^{km}**,**
n14, σ0.^{s}94/21**, 2D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEVE	Cerro Verde	1.19	55	*e*P	Pn	10 29 30.2	0.0
CEVE				*e*S	Sb	10 29 45.5	-0.8
RTR	El Retiro	1.21	51	*e*P	Pn	10 29 30.1	-0.3
SNJE	San Jose	1.23	54	*e*P	Pn	10 29 30.9	+0.2
SNJE				*e*S	Sn	10 29 45.9	-0.5
PCG	Pacaya	1.25	1	*i* P	Pb	10 29 31.4	-0.8
JAYA	Jayaque - finc	1.25	66	*e*P	Pn	10 29 31.2	+0.3
JAYA				IAML		10 29 55.5	
	comp=Z,673nm,0.2s						
FUG	Fuego 3	1.32	351	*e*P	Pn	10 29 32.1	+0.2
FUG				*e*S	Sb	10 29 51.3	+1.3
UNIC	Universidad Ca	1.34	51	*e*P	Pn	10 29 31.7	-0.3
UNIC				IAML		10 29 35.1	
	comp=Z,174nm,0.2s						
PMON	Piamonte	1.40	66	*e*P	Pb	10 29 34.7	+0.1
PMON				*e*S	Sb	10 29 52.2	+0.1
SNET	Serv Nac Est T	1.46	68	*e*P	Pb	10 29 35.6	-0.1
SNET				*e*S	Sb	10 29 54.0	+0.2
SNET				IAML		10 30 08.7	
	comp=Z,429nm,0.4s						
UEES	Universidad Ev	1.46	67	*e*P	Pb	10 29 35.5	-0.3
UEES				IAML		10 30 03.9	
	comp=Z,385nm,0.3s						
NBG	Las Nubes	1.47	10	*e*P	Pb	10 29 35.3	-0.6
TACO	Tacachico	1.48	56	⇓*e*P	Pn	10 29 34.5	+0.5
TACO				⇓*e*		10 29 34.5	
TACO				*e*S	Sn	10 29 52.5	0.0
TACO				IAML		10 30 02.4	
	comp=Z,228nm,0.5s						
LFRS	El Faro	1.59	72	*e*P	Pb	10 29 38.0	+0.1
MRL	Marmol	2.14	25	*e*P	Pb	10 29 45.5	-1.8
MRL				*e*S	Sb	10 30 16.2	+2.8

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*IDC **13** 10:39:42.6±1.3, 9.°88N×126.°24E, h0^{km}, mb3.5/5, mb1 3.7/5, mb1mx3.4/38, mbtmp3.5/5, MS2.8/4, Ms1 2.9/4, ms1mx2.4/37, Error ellipse: s-maj=81.7km s-min=25.0km az=75.0*
*MAN **13** 10:39:47.9, 9.°87N×126.°24E, h10^{km}, mb4.3, ML3.2, MS2.9*
ISC 13 10:39:46.0±1.8**, 9.°96N**±0.°06×**126.°3E**±0.°1**, h23**^{km}±11^{km}**,**
n20, σ1.^{s}10/16**, mb3.4**/5**, MS2.8**/3**, 2C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLSP	General Luna,	0.27	230	*e*P	Pb	10 39 52.5	+0.1
GLSP				*e*S	Sb	10 39 56.9	+0.2
MSLP	Maasin	1.46	277	*e*P	Pn	10 40 11.3	+0.3
MSLP				*e*S	Sb	10 40 31.7	+0.9
OCLP	Ormoc	2.02	303	*e*P	Pb	10 40 21.9	-0.1
OCLP				*e*S	Sb	10 40 47.6	+1.0
CGP	Cagayan de Oro	2.20	227	⇑*e*P	Pn	10 40 22.4	+1.2
CGP				*e*S	Sb	10 40 49.9	-2.1
LLP	Lapu-Lapu	2.36	279	⇑*e*P	Pb	10 40 27.1	-0.7
LLP				*i* S	Sb	10 40 55.6	-1.0
PVCP	Virac	4.20	330	*e*P	Pb	10 40 57.7	-1.4
KAPI	Kappang	16.25	204	LR	LR	10 50 38.7	
	comp=Z,20nm,20.4s,baz=41,slow=41						
CMAR	Chiang Mai Arr	27.83	291	LR	LR	10 56 31.5	
	comp=Z,19nm,18.9s,baz=284,slow=36						
FITZ	Fitzroy Crossi	27.89	181	P	P	10 45 34.5	+0.2
	1.3nm,1.0s,baz=0.0,slow=6.1,SNR=1.7						
PSI	Prapat	28.14	257	LR	LR	10 58 17.3	
	comp=Z,21nm,18.9s,baz=104,slow=40						
WRA	Warramunga Arr	30.74	165	P	P	10 45 58.7	-0.9
	0.4nm,0.9s,baz=344,slow=9.3,SNR=2.0						
ASAR	Alice Springs	34.23	168	P	P	10 46 29.3	-0.9
	0.2nm,0.4s,baz=353,slow=7.5,SNR=5.5						
ASAR				LR	LR	11 02 09.2	
	comp=Z,27nm,18.0s,baz=30,slow=39						
H11S3	WAKE ISLAND Hy	39.95	73	T	T	11 30 14.7	
	baz=262,slow=75,SNR=22						
H11S1	WAKE ISLAND Hy	39.96	73	T	T	11 30 15.4	
	baz=262,slow=75,SNR=9.9						
H11S2	WAKE ISLAND Hy	39.97	73	T	T	11 30 13.2	
	baz=262,slow=75,SNR=7.9						
H11N1	WAKE ISLAND Hy	40.29	71	T	T	11 30 42.4	
	baz=265,slow=74,SNR=23						
H11N2	WAKE ISLAND Hy	40.30	71	T	T	11 30 40.6	
	baz=265,slow=74,SNR=17						
H11N3	WAKE ISLAND Hy	40.31	71	T	T	11 30 40.8	
	baz=265,slow=74,SNR=20						
MKAR	Makanchi Array	52.31	323	P	P	10 48 55.9	-0.1
	0.2nm,0.4s,baz=116,slow=6.7,SNR=4.4						
YKA	Yellowknife Ar	94.01	24	P	P	10 53 03.2	+1.1
	0.3nm,0.7s,baz=298,slow=3.9,SNR=4.0						

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*KRSC **13** 10:56:05.5±1.2, 57.°15N×163.°62E, h11^{km}±16^{km}, ML4.2*
*MOS **13** 10:56:07.8±0.8, 57.°08N×163.°43E, h12^{km}, mb3.7/2, Error ellipse: s-maj=13.8km s-min=5.8km az=64.9*
*IDC **13** 10:56:08.7±1.6, 56.°94N×163.°74E, h0^{km}, mb3.7/5, mb1 4.0/7, mb1mx3.5/44, mbtmp3.5/7, ML2.3/2, Error ellipse: s-maj=35.7km s-min=26.1km az=179.0*
*NEIC **13** 10:56:10.1±1.2, 57.°0N±0.°1×163.°6E±0.°1, h10^{km}±1^{km}, mb4.2/16, Error ellipse: s-maj=21.6km s-min=5.0km az=147.0*
ISC 13 10:56:08.8±0.7**, 57.°08N**±0.°03×**163.°41E**±0.°04**, h10**^{km}**, n81,**
σ1.^{s}55/100**, mb4.2**/14**, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBG	Krutoberegovo	0.92	205	PN	Pg	10 56 25.2	-1.2
KBG				S	Sn	10 56 39.9	-0.9
KBG	Krutoberegovo	0.92	205	*e*P	Pg	10 56 25.2	-1.2
KBG				*e*S	Sn	10 56 39.9	-0.9
KBTR	Krutoberegovo	0.93	201	PN	Pg	10 56 25.7	-1.0
KBTR				S	Sn	10 56 40.1	-1.2
KBTR	Krutoberegovo	0.93	201	*e*P	Pg	10 56 25.7	-1.0
KBTR				*e*S	Sn	10 56 40.1	-1.2
SRKR	Sorokina	1.30	252	PN	Pn	10 56 30.9	-2.2
SRKR				S	Sb	10 56 49.7	-0.5
SRKR	Sorokina	1.30	252	*e*P	Pn	10 56 30.9	-2.2
SRKR				*e*S	Sb	10 56 49.7	-0.5
BDR	Baidarnaya	1.32	248	PN	Pn	10 56 31.6	-1.7
BDR	Baidarnaya	1.32	248	*e*P	Pn	10 56 31.6	-1.7
KLY	Klyuchi	1.71	244	PN	Pn	10 56 36.3	-2.2
KLY				S	Sn	10 56 58.3	-2.1
KLY	Klyuchi	1.71	244	*e*P	Pn	10 56 36.3	-2.2
KLY				*e*S	Sn	10 56 58.3	-2.1
KRSR	Krestovskiy	1.79	242	PN	Pn	10 56 39.1	-0.8
KRSR				S	Sb	10 57 03.8	-0.5
KRSR	Krestovskiy	1.79	242	*e*P	Pn	10 56 39.1	-0.8
KRSR				*e*S	Sb	10 57 03.8	-0.5
ZLN	Zelenaya	1.79	235	PN	Pn	10 56 40.2	+0.3
ZLN	Zelenaya	1.79	235	*e*P	Pn	10 56 40.2	+0.3
BZGR	Bezymyannyi-Gr	1.89	234	PN	Pn	10 56 41.4	+0.2
BZGR				S	Sb	10 57 07.5	+0.4
BZGR	Bezymyannyi-Gr	1.89	234	*e*P	Pn	10 56 41.4	+0.2
BZGR				*e*S	Sb	10 57 07.5	+0.4
BZWR	Bezymyannyi-We	1.96	236	PN	Pn	10 56 42.3	0.0
BZWR	Bezymyannyi-We	1.96	236	*e*P	Pn	10 56 42.3	0.0
BZMR	Bezymyannaya	1.98	236	PN	Pn	10 56 42.6	+0.1
BZMR	Bezymyannaya	1.98	236	*e*P	Pn	10 56 42.6	+0.1
KIRR	Kirishev	2.04	238	PN	Pn	10 56 43.9	+0.6
KIRR				S	Sb	10 57 11.2	-0.3
KIRR	Kirishev	2.04	238	*e*P	Pn	10 56 43.9	+0.6
KIRR				*e*S	Sb	10 57 11.2	-0.3
SRDR	Sredinnyy	2.18	251	PN	Pn	10 56 44.9	-0.2
SRDR	Sredinnyy	2.18	251	*e*P	Pn	10 56 44.9	-0.2
OSSR	Ossora	2.18	355	PN	Pn	10 56 42.6	-2.5
OSSR				S	Sn	10 57 09.4	-2.8
OSSR	Ossora	2.18	355	*e*P	Pn	10 56 42.6	-2.5
OSSR				*e*S	Sn	10 57 09.4	-2.8
KMNR	Kamenistaya	2.21	234	PN	Pn	10 56 45.6	0.0
KMNR	Kamenistaya	2.21	234	*e*P	Pn	10 56 45.6	0.0
KOZ	Kozyrevsk	2.21	244	PN	Pn	10 56 45.5	0.0
KOZ	Kozyrevsk	2.21	244	*e*P	Pn	10 56 45.5	0.0
BKI	Bering	2.37	142	PN	Pn	10 56 46.7	-0.9
BKI				S	Sn	10 57 15.7	-0.9
BKI	Bering	2.37	142	*e*P	Pn	10 56 46.7	-0.9
BKI				*e*S	Sn	10 57 15.7	-0.9
TUMD	Tumrok D	2.53	223	*e*P	Pn	10 56 50.2	+0.3
TUMD				*e*S	Sb	10 57 22.7	-2.6
TUMR	Tumrok	2.56	227	PN	Pn	10 56 50.2	-0.3
TUMR				S	Sn	10 57 22.7	+0.9
TUMR	Tumrok	2.56	227	*e*P	Pn	10 56 51.3	+0.8
MKZ	Mys Kozlova	2.70	201	PN	Pn	10 56 51.9	-0.3
MKZ	Mys Kozlova	2.70	201	*e*P	Pn	10 56 51.9	-0.3
PALN	Palana	2.72	319	PN	Pn	10 56 52.8	+0.3
PALN	Palana	2.72	319	*e*P	Pn	10 56 52.8	+0.3
ESO	Esso	2.86	248	PN	Pn	10 56 56.7	+2.3
ESO				S	Sb	10 57 32.1	-2.7
ESO	Esso	2.86	248	*e*P	Pn	10 56 56.7	+2.3
ESO				*e*S	Sb	10 57 32.1	-2.7
TILK	Tilichiki	3.66	22	PN	Pn	10 57 04.5	-0.9
TILK	Tilichiki	3.66	22	*e*P	Pn	10 57 04.5	-0.9
PET	Petropavlovsk	4.90	216	*e*PN	Pb	10 57 28.7	-5.9
PET				*e*S	Sb	10 58 27.8	-5.7
PET				smax	smax		
	comp=N,30nm,0.6s						
PET				smax	smax		
	comp=E,36nm,0.6s						
PET				MLR	MLR		
	comp=Z,200nm,12.0s						
PEA0B	Petropavlovsk-	5.16	222	PN	Pn	10 57 27.6	+1.6
PEA0B	Petropavlovsk-	5.16	222	Pn	Pn	10 57 27.6	+1.6
PETK	Petropavlovsk-	5.16	222	Pn	Pn	10 57 27.1	+1.2
	comp=Z,0.3nm,0.3s,baz=64,slow=14,SNR=5.1						
PETK	Petropavlovsk-	5.16	222		Pn	10 57 26.3	+0.3
SEY	Seymchan	8.05	321	Pn	Pn	10 58 08.9	+3.3
	comp=Z,0.1nm,0.3s,baz=59,slow=19,SNR=1.6						
SEY	Seymchan	8.05	321	PN	Pn	10 58 09.0	+3.3
IMAR	Indian Mountai	21.84	48	P	P	11 01 01.7	+0.7
PPLA	Purkeypile	22.57	57	P	P	11 01 10.2	+1.2
PPLA				IAmb	IAmb	11 01 22.4	
	comp=Z,16nm,1.4s						
KTH	Kantishna Hill	23.08	55	P	P	11 01 15.5	+1.2
COLD	Coldfoot	23.32	45	P	P	11 01 17.8	+1.2
TRF	Thorofare Moun	23.37	55	P	P	11 01 18.9	+1.5
SUA	Susitna One	23.43	60	P	P	11 01 19.6	+1.7
I23K	Minto, Yukon-K	23.66	51	P	P	11 01 21.1	+1.2
I23K				IAmb	IAmb	11 01 27.1	
	comp=Z,8.6nm,1.2s						
TOLK	Toolik Lake Re	23.67	42	P	P	11 01 21.1	+1.0
TOLK				IAmb	IAmb	11 01 26.6	
	comp=Z,5.7nm,0.8s						
MDM	Murphy Dome	24.14	51	P	P	11 01 26.3	+1.7
WRH	Wood River Hil	24.24	52	P	P	11 01 25.2	-0.3
WRH				IAmb	IAmb	11 01 28.5	
	comp=Z,10.0nm,1.1s						
CCB	Clear Creek Bu	24.35	52	P	P	11 01 27.9	+1.5
SML	Sawmill	24.51	59	P	P	11 01 29.1	+1.1
SML				IAmb	IAmb	11 01 29.4	
	comp=Z,7.3nm,0.9s						
KNK	Knik Glacier	24.52	60	P	P	11 01 28.9	+0.8
KNK				IAmb	IAmb	11 01 30.3	
	comp=Z,4.5nm,0.9s						
IL31		24.73	51	P	P	11 01 31.3	+1.5
IL31				IAmb	IAmb	11 01 32.3	
	comp=Z,5.3nm,0.8s						
ILAR	Eielson Array	24.73	51	P	P	11 01 31.1	+1.2
	comp=Z,3.6nm,0.7s,baz=265,slow=9.0,SNR=45						
ILAR	Eielson Array	24.73	51	P	P	11 01 32.2	+2.3
ILAR	Eielson Array	24.73	51	P	P	11 01 32.2	+2.3
SCM	Sheep Creek Mo	24.97	58	P	P	11 01 33.0	+0.8
SCM				pmax	pmax		
	comp=Z,15nm,0.8s						
SCM	Sheep Creek Mo	24.97	58	P	P	11 01 33.0	+0.8
PRP	Porcupine Dome	25.24	49	P	P	11 01 36.5	+1.9
PRP				IAmb	IAmb	11 01 41.1	
	comp=Z,4.5nm,1.1s						
M24K	Tolsona, Glenn	25.45	58	P	P	11 01 39.8	+3.3
BMAR	Burnt Mountain	25.50	45	P	P	11 01 37.6	+0.7
H11N2	WAKE ISLAND Hy	37.39	175	T	T	11 42 14.3	
	baz=357,slow=76,SNR=16						
H11N3	WAKE ISLAND Hy	37.40	175	T	T	11 42 12.3	
	baz=357,slow=76,SNR=16						
H11N1	WAKE ISLAND Hy	37.40	175	T	T	11 42 28.4	
	baz=357,slow=76,SNR=17						
YKA	Yellowknife Ar	38.98	47	P	P	11 03 35.2	+0.6
	comp=Z,0.7nm,0.7s,baz=301,slow=7.3,SNR=13						
NVAR	Mina Array Bea	52.73	75	P	P	11 05 24.5	+0.9
	comp=Z,0.5nm,0.7s,baz=320,slow=6.7,SNR=4.4						
PDAR	Pinedale Array	54.01	65	P	P	11 05 33.7	+0.6
	comp=Z,0.3nm,0.5s,baz=316,slow=4.1,SNR=4.1						
PDAR	Pinedale Array	54.01	65	P	P	11 05 34.2	+1.1
TXAR	Lajitas Array	67.42	71	P	P	11 07 05.1	+0.7
	comp=Z,0.6nm,0.9s,baz=290,slow=3.2,SNR=5.5						
TXAR	Lajitas Array	67.42	71	P	P	11 07 06.5	+2.1

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*BJI **13** 11:28:16.0±0.0, 38.°20N×144.°80E, h10^{km}, mB4.9/11, mb4.4/20, Ms4.2/4, Ms7 3.9/4*
*IDC **13** 11:28:16.5±0.6, 38.°08N×144.°72E, h0^{km}, mb4.1/18, mb1 4.3/24, mb1mx4.1/54, mbtmp4.1/24, ML3.8/6, MS3.4/22, Ms1 3.5/22, ms1mx3.2/48, Error ellipse: s-maj=17.0km s-min=13.7km az=136.0*
*JMA **13** 11:28:20.2±0.1, 38.°21N×144.°53E, h42^{km}, M4.8*
*NIED **13** 11:28:20.2, 38.°21N×144.°53E, h42^{km}, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-2.96; $M_{\theta\theta}$0.29; $M_{\phi\phi}$2.67; $M_{r\theta}$-0.54; $M_{\theta\phi}$0.91; $M_{\phi r}$2.87; Fault plane solution: $M_0$4.15000×10^{15} NP1: ϕ_s180.00000°, δ68.00000°, λ-105.00000°. NP2: ϕ_s34.00000°, δ27.00000°, λ-58.00000°.*
*MOS **13** 11:28:20.1±1.5, 38.°30N×144.°75E, h35^{km}, mb4.6/16 Error ellipse: s-maj=8.6km s-min=4.9km az=106.6*
*NEIC **13** 11:28:21.3±2.2, 38.°21N±0.°07×144.°6E±0.°1, h27^{km}±2^{km}, mb4.8/29, Error ellipse: s-maj=14.2km s-min=7.9km az=125.0*
ISC 13 11:28:20.6±1.3**, 38.°25N**±0.°05×**144.°69E**±0.°05**, h23**^{km}±8^{km}**,**
n193, σ2.^{s}18/209**, mb4.5**/60**, MS3.7**/17**, 9C-5D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	2.51	290	P	Pn	11 28 58.4	-1.5
OFUJ				S	Sn	11 29 26.9	-2.9
JIKH	Ishinomakikobu	2.54	272	P	Pn	11 28 58.3	-2.1
JIKH				*e*S	Sn	11 29 26.3	-4.3
JKMT	Kesennumamotoy	2.58	284	P	Pn	11 28 59.2	-1.8
JKMT				*e*S	Sn	11 29 28.1	-3.6
MIYJ	Miyakonagasawa	2.60	302	P	Pn	11 28 59.9	-1.4
MIYJ				S	Sn	11 29 29.2	-3.0
JIO	Ouri	2.63	275	P	Pn	11 29 00.0	-1.7
JIO				S	Sn	11 29 29.0	-3.9
JMK	Ichinoseki	2.81	286	P	Pn	11 29 02.7	-1.4
JMK				S	Sn	11 29 34.5	-2.7
JOM	Ohasama	2.92	296	P	Pn	11 29 04.5	-1.1
JOM				S	Sn	11 29 37.8	-2.2
JMM	Marumori	3.10	264	Pn	Pn	11 29 06.3	-1.7

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JMM                                  Sn     Sn     11 29 40.2 -4.2
JANG   Nango              3.25 312   P      Pn     11 29 09.3 -0.9
JANG                                eS      Sn     11 29 45.4 -2.8
JYK    Kaneyama           3.46 282   P      Pn     11 29 12.5 -0.5
JYK                                 eS      Sn     11 29 51.4 -1.9
JFT    Otama              3.52 259   P      Pn     11 29 12.9 -1.0
JFT                                  S      Sn     11 29 51.8 -3.1
JTM    Tenmabayashi       3.78 313   Pn     Pn     11 29 17.6 +0.3
JTM                                  Sn     Sn     11 29 58.7 -2.4
ERM    Erimo              3.94 343   P      Pn     11 29 19.2 -0.4
ERM                                                11 30 01.5
ERM    Erimo              3.94 343   Pn     Pn     11 29 19.2 -0.4
ERM                                  Sn     Sn     11 30 01.5 -3.6
JEM    Erimo              3.94 343   Sn     Sn     11 30 02.2 -2.9
JYT    Yasato             4.12 242   Pn     Pn     11 29 20.0 -2.0
JYT                                  Sn     Sn     11 30 03.2 -6.3
JOT    Ohata              4.20 319   P      Pn     11 29 22.5 -0.7
JOT                                 eS      Sn     11 30 08.1 -3.5
JCH    Churui             4.48 347   P      Pn     11 29 25.8 -1.2
JCH                                 eS      Sn     11 30 14.3 -4.0
JKB    Kayabe             4.59 323   P      Pn     11 29 26.4 -2.2
JKB                                 eS      Sn     11 30 17.1 -4.1
BSO1   Boso 1             4.67 221   P      Pn     11 29 26.1 -3.1
JSD    Sado               5.07 270   Pn     Pn     11 29 35.2  0.0
JRY    Ryogami san        5.13 246   P      Pn     11 29 34.1 -2.0
JRY                                  S      Sn     11 30 27.9 -6.8
NEM2   Nemuro 2           5.17   9   P      Pn     11 29 33.4 -3.1
NEM2                                eS      Sn     11 30 28.9 -6.6
NMR    Nemuro--Hokkai     5.17   8⇓iP       Pn     11 29 33.4 -3.2
NMR                                 i S     Sn     11 30 28.9 -6.6
JEW    Eniwo              5.21 333   Pn     Pn     11 29 37.4 +0.4
JEW                                  Sn     Sn     11 30 33.4 -2.9
JOD2   Odawara 2          5.39 238   P      Pn     11 29 37.2 -2.5
JOD2                                eS      Sn     11 30 34.6 -6.5
MJAR   Matsushiro Arr     5.43 254   Pn     Pn     11 29 38.9 -1.4
       1.8nm,0.3s,baz=17,slow=18,SNR=52
MJAR                                 Sn     Sn     11 30 41.3 -0.8
       0.6nm,0.3s,baz=44,slow=21,SNR=2.0
MJAR   Matsushiro Arr     5.43 254   Pn     Pn     11 29 39.2 -1.1
MAJO   Matsushiro         5.43 254c iP      Pn     11 29 39.9 -0.3
MAJO   Matsushiro         5.43 254   Pn     Pn     11 29 39.9 -0.3
MAT    Matsushiro         5.44 254   P      Pn     11 29 39.8 -0.4
MAT                                  S      Sn     11 30 39.7 -2.4
MJB9   Matsu-Tunnel       5.44 254          Pn     11 29 39.9 -0.4
GLVR   Golovnino          5.52   6  eP      Pn     11 29 38.7 -2.6
GLVR                                i S     Sn     11 30 38.1 -5.9
GLVR                                 pmax   pmax
       comp=Z,331nm,0.2s
GLVR                                 smax   smax
       comp=E,676nm,0.5s
GLVR                                 smax   smax
       comp=N,926nm,0.4s
JOSM   Okushiri--Mats     5.53 315   P      Pn     11 29 41.7 +0.2
JTKR   Abashiri--Toko     5.75 354   P      Pn     11 29 42.8 -1.6
JTKR                                eS      Sn     11 30 45.3 -4.3
GRPR   Tuman              5.79   8⇓iP       Pn     11 29 41.7 -3.4
GRPR                                eS      Sn     11 30 43.8 -7.1
GRPR                                 pmax   pmax
       comp=Z,443nm,0.3s
GRPR                                 pmax   pmax
       comp=N,405nm,0.4s
GRPR                                 pmax   pmax
       comp=E,181nm,0.2s
GRPR                                 smax   smax
       comp=N,1µm,0.5s
GRPR                                 smax   smax
       comp=E,745nm,0.5s
YUK    Yuzh-Kuril'sk      5.85   8d iP      Pn     11 29 43.3 -2.5
YUK                                 i S     Sn     11 30 45.9 -6.2
YUK                                  pmax   pmax
       comp=N,188nm,0.2s
YUK                                  pmax   pmax
       comp=E,204nm,0.2s
YUK                                  pmax   pmax
       comp=Z,734nm,0.2s
YUK                                  smax   smax
       comp=N,992nm,0.5s
YUK                                  smax   smax
       comp=E,724nm,0.4s
JHR    Hokuryu            5.93 339   P      Pn     11 29 47.5 +0.6
JHR                                 eS      Sn     11 30 53.2 -0.9
JKA    Kamikawa-asahi     6.07 346   Pn     Pn     11 29 48.5 -0.4
ASAJ   Asahikawa          6.07 346   Pn     Pn     11 29 48.8 -0.1
       comp=E,14nm,0.3s,baz=201,slow=14,SNR=82
ASAJ                                 Sn     Sn     11 30 55.2 -2.4
       comp=E,4.1nm,0.3s,baz=54,slow=24,SNR=7.9
ASAJ                                 LR     LR     11 32 05.8
       comp=E,138nm,21.2s,baz=213,slow=37
JGF    Kuroka             6.44 248          Pn     11 29 54.6 +0.5
JHJ    Hachijo jima 2     6.49 219   Pn     Pn     11 29 51.5 -3.2
       comp=E,14nm,0.3s,baz=58,slow=19,SNR=1.3
JHJ                                  Sn     Sn     11 30 58.9 -9.2
       comp=E,32nm,0.3s,baz=252,slow=19,SNR=1.8
JWK2   Keihoku            7.36 344   P      Pn     11 30 07.6 +1.0
KUR    Kuril'sk           7.37  18  eP      Pn     11 30 03.7 -3.0
KUR                                 eS      Sn     11 31 22.5 -7.1
KUR                                  pmax   pmax
       comp=Z,100nm,0.3s
KUR                                  pmax   pmax
       comp=E,56nm,0.2s
KUR                                  pmax   pmax
       comp=N,48nm,0.5s
JIE    Ise                7.50 242   P      Pn     11 30 07.3 -1.3
YSS    Yuzh-Sakhalins     8.81 351  eP      Pn     11 30 26.6 +0.1
YSS                                 eS      Sn     11 31 59.4 -5.7
YSS                                  pmax   pmax
       comp=Z,30nm,0.7s
YSS    Yuzh-Sakhalins     8.81 351   Pn     Pn     11 30 26.6 +0.1
TEY    Ternei             9.09 321⇑eP       Pn     11 30 30.4 +0.2
TEY                                  pmax   pmax
       comp=Z,20nm,0.7s
TEY                                  pmax   pmax
       comp=N,40nm,0.4s
TEY                                  pmax   pmax
       comp=E,40nm,0.6s
USA0B  Ussuriysk Arra    11.26 306   P      Pn     11 31 01.4 +1.4
USA0B  Ussuriysk Arra    11.26 306   Pn     Pn     11 31 01.4 +1.4
USRK   Ussuriysk Ar.     11.26 306   Pn     Pn     11 31 00.8 +0.8
       baz=110,slow=14,SNR=7.8
USRK                                 LR     LR     11 34 55.3
       comp=E,228nm,21.8s,baz=122,slow=35
JNU    Nakatsue          12.34 250   LR     LR     11 35 18.4
       comp=E,148nm,21.2s,baz=84,slow=34
KSRS   Korea Array       13.28 272   Pn     Pn     11 31 27.2 -0.4
       comp=E,0.2nm,0.3s,baz=84,slow=13,SNR=4.9
KSRS                                 LR     LR     11 36 03.3
       comp=E,101nm,21.3s,baz=64,slow=35
KLR    Kul'dur           14.40 324   Pn     Pn     11 31 43.5 +0.7
       comp=E,0.1nm,0.3s,baz=132,slow=12,SNR=3.2
KLR                                  LR     LR     11 36 58.5
       comp=E,134nm,21.1s,baz=140,slow=36
PETK   Petropavlovsk-    17.38  27   LR     LR     11 40 39.8
       comp=E,50nm,18.3s,baz=231,slow=42
JOW    Kunigami          17.89 235   LR     LR     11 39 11.1
       comp=E,39nm,21.9s,baz=271,slow=37
ZEA    Zeya              19.58 328  eP      P      11 32 46.4 -0.4
ZEA                                  pmax   pmax
       comp=Z,10.0nm,0.7s
MA2    Magadan           21.70   8   P      P      11 33 11.3 +1.7
       comp=Z,11nm,0.6s,baz=196,slow=9.3,SNR=14
MA2    Magadan           21.70   8   P      P      11 33 11.8 +2.2
MA2                                  pmax   pmax
       comp=Z,14nm,0.7s
MA2    Magadan           21.70   8   P      P      11 33 11.8 +2.2
MA2                                  IAmb   IAmb   11 33 13.3
       comp=Z,14nm,0.7s
SEY    Seymchan          25.15   8   P      P      11 33 44.9 +1.2
       comp=Z,9.3nm,0.7s,baz=186,slow=9.2,SNR=41
YAK    Yakutsk           25.55 344   LR     LR     11 44 36.0
       comp=Z,29nm,18.1s,baz=20,slow=38
YAK    Yakutsk           25.55 344ceP       P      11 33 48.6 +1.3
YAK                                  pmax   pmax
       comp=Z,23nm,1.0s
YAK    Yakutsk           25.55 344   P      P      11 33 47.5 +0.2
YAK                                  IAmb   IAmb   11 33 48.9
       comp=Z,24nm,0.6s
H11N2  WAKE ISLAND Hy    26.68 128   T      T      12 01 33.8
       baz=319,slow=75,SNR=104
H11N1  WAKE ISLAND Hy    26.68 128   T      T      12 01 37.2
       baz=319,slow=75,SNR=87
H11N3  WAKE ISLAND Hy    26.69 128   T      T      12 01 40.0
       baz=319,slow=75,SNR=83
H11S1  WAKE ISLAND Hy    27.48 130   T      T      12 02 40.1
       baz=321,slow=76,SNR=20
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H11S3  WAKE ISLAND Hy    27.48 130   T      T      12 02 40.6
       baz=321,slow=76,SNR=15
H11S2  WAKE ISLAND Hy    27.49 130   T      T      12 02 41.9
       baz=321,slow=76,SNR=19
AMKA   Amchitka          27.56  50   P      P      11 34 06.3 +0.7
AMKA   Amchitka          27.56  50          P      11 34 05.9 +0.3
BOD    Bodaibo           27.97 324  eP      P      11 34 09.4 +0.2
BOD                                  pmax   pmax
       comp=Z,9.0nm,1.6s
ULN    Ulaanbaatar       28.88 302  i P     P      11 34 19.8 +2.2
ULN                                  pmax   pmax
       comp=Z,1.0nm,0.9s
XAN    Xi'an             29.07 273   P      P      11 34 18.8 -0.6
XAN                                  pmax   pmax
       comp=Z,6.0nm,1.1s
XAN    Xi'an             29.07 273   P      P      11 34 18.0 -1.3
XAN                                  pmax   pmax
       comp=Z,4.0nm,0.8s
XAN    Xi'an             29.07 273   P      P      11 34 18.0 -1.3
SONM   Songino Array     29.32 301   P      P      11 34 22.1 +0.7
       comp=Z,0.6nm,0.6s,baz=96,slow=8.5,SNR=5.2
SONM                                 LR     LR     11 45 55.3
       comp=Z,101nm,21.0s,baz=82,slow=36
SONM   Songino Array     29.32 301   P      P      11 34 21.5  0.0
TLY    Talaya            31.55 309   LR     LR     11 47 40.9
       comp=Z,115nm,18.7s,baz=106,slow=37
TIXI   Tiksi             34.44 351ceP       P      11 35 05.6 -0.4
TIXI                                 pmax   pmax
       comp=Z,16nm,1.7s
GTA    Gaotai            34.71 286   P      P      11 35 10.9 +2.1
GTA                                  pP     sP     11 35 15.9 -0.1
GTA                                  sP     pwP    11 35 19.4 -2.2
GTA                                  pmax   pmax
       comp=Z,2.0nm,1.0s
DGZ    Jazzator, Alta    41.81 305d iP      P      11 36 09.8 +1.3
DGZ                                  pmax   pmax
       comp=Z,6.0nm,0.8s
ZAA0   Zalesovo Array    43.04 311   P      P      11 36 18.8 +0.5
ZALV   Zalesovo Beam     43.04 311   P      P      11 36 18.7 +0.4
       comp=Z,2.1nm,0.4s,baz=91,slow=7.1,SNR=12
ZALV                                 PcP    PcP    11 38 07.8 -0.2
       comp=Z,1.5nm,0.5s,baz=94,slow=3.5,SNR=5.6
ZALV                                 LR     LR     11 54 53.2
       comp=Z,71nm,18.1s,baz=82,slow=37
ZALV   Zalesovo Beam     43.04 311   P      P      11 36 18.4 +0.2
NRIK   Noril'sk          43.28 334   LR     LR     11 55 30.4
       comp=Z,106nm,19.9s,baz=87,slow=38
NRIK   Noril'sk          43.28 334⇓iP       P      11 36 20.4 +0.4
NRIK                                 pmax   pmax
       comp=Z,2.0nm,0.6s
ZSN    Zaisan            43.83 302  eP      P      11 36 26.0 +1.2
       baz=302
ZSN    Zaisan            43.83 302  eP      P      11 36 25.9 +1.2
CMAR   Chiang Mai Arr    44.31 257   LR     LR     11 56 19.8
       comp=Z,43nm,19.7s,baz=41,slow=38
KDAK   Kodiak Island     44.45  43  i P     P      11 36 28.7 -0.8
KDAK                                 pmax   pmax
       comp=Z,22nm,0.6s
MK31   Makanchi Array    45.69 302   P      P      11 36 40.3 +0.7
MK31                                 pmax   pmax
       comp=Z,2.0nm,0.8s
MK31   Makanchi Array    45.69 302   P      P      11 36 40.3 +0.7
MKAR   Makanchi Array    45.69 302   P      P      11 36 39.8 +0.2
       comp=Z,2.0nm,0.7s,baz=84,slow=9.1,SNR=23
MKAR                                 LR     LR     11 56 02.5
       comp=Z,88nm,21.9s,baz=54,slow=36
RND    Reindeer          46.20  35   pmax   pmax
       comp=Z,14nm,0.6s
SEM    Semipalatinsk     46.28 307  eP      P      11 36 44.2 -0.2
       baz=307
SEM    Semipalatinsk     46.28 307  eP      P      11 36 44.2 -0.2
MDM    Murphy Dome       46.50  33   P      P      11 36 47.0 +1.3
MDM                                  IAmb   IAmb   11 36 52.7
       comp=Z,12nm,1.0s
WRH    Wood River Hil    46.55  33   IAmb   IAmb   11 36 51.8
       comp=Z,6.9nm,0.7s
COLA   College           46.66  33  i P     P      11 36 47.4 +0.5
CCB    Clear Creek Bu    46.67  33   P      P      11 36 48.0 +1.0
CCB                                  IAmb   IAmb   11 36 52.1
       comp=Z,7.4nm,0.6s
IL31                     47.07  33   P      P      11 36 51.2 +1.1
ILAR   Eielson Array     47.07  33   P      P      11 36 50.4 +0.2
       comp=Z,2.3nm,0.3s,baz=245,slow=9.8,SNR=102
KURK   Kurchatov         47.24 308   P      P      11 36 52.1 +0.5
KURK                                 pmax   pmax
       comp=Z,6.0nm,0.8s
KURK   Kurchatov         47.24 308   P      P      11 36 52.1 +0.5
KURK                                 IAmb   IAmb   11 36 52.8
       comp=Z,5.6nm,0.8s
PAX    Paxson            47.75  35   pmax   pmax
       comp=Z,6.0nm,0.5s
MENT   Mentasta          48.55  35   P      P      11 37 00.2 -1.5
MENT                                 IAmb   IAmb   11 37 05.7
       comp=Z,18nm,1.2s
SHLS   Shalkode          48.58 298  eP      P      11 37 00.5 -1.8
       baz=298
SHLS   Shalkode          48.58 298  eP      P      11 37 00.5 -1.8
UZB    Uzynbulak         48.89 298  eP      P      11 37 05.1 +0.4
       baz=298
UZB    Uzynbulak         48.89 298  eP      P      11 37 05.1 +0.4
KPKS   Kokpek            49.02 298  eP      P      11 37 06.2 +0.4
       baz=298
KPKS   Kokpek            49.02 298  eP      P      11 37 06.1 +0.4
BCAR   Beaver Creek A    49.41  35   P      P      11 37 08.2 -0.2
CHKK   Chushkaly         50.08 299  eP      P      11 37 14.1 +0.4
       baz=299
CHKK   Chushkaly         50.08 299  eP      P      11 37 14.0 +0.4
AAA    Alma-Ata          50.33 298  eP      P      11 37 16.3 +0.7
       baz=298
AAA    Alma-Ata          50.33 298  eP      P      11 37 16.3 +0.7
KUU    Kurty             50.51 299  eP      P      11 37 16.9  0.0
       baz=300
KUU    Kurty             50.51 299  eP      P      11 37 16.9  0.0
BRZS   Berezniki         51.11 308  eP      P      11 37 21.5 +0.2
       baz=308
BRZS   Berezniki         51.11 308  eP      P      11 37 21.5 +0.2
BRVK   Borovoye          51.73 312c iP      P      11 37 27.0 +1.1
BRVK                                 pmax   pmax
       comp=Z,4.0nm,1.0s
HYT    Haines Junctio    51.76  38   P      P      11 37 26.2  0.0
HYT                                  IAmb   IAmb   11 37 34.6
       comp=Z,36nm,1.7s
INK    Inuvik            52.11  28   P      P      11 37 29.4 +0.9
       comp=Z,1.7nm,0.9s,baz=295,slow=8.3,SNR=4.0
AAK    Ala-Archa         52.20 299  i P     P      11 37 29.8 +0.1
DZA    Taraz             54.28 300  eP      P      11 37 45.1 +0.2
       baz=300
DZA    Taraz             54.28 300  eP      P      11 37 45.1 +0.2
WB0    Warramunga Arr    58.51 191   P      P      11 38 13.5 -1.7
WB0                                  IAmb   IAmb   11 38 23.2
       comp=Z,5.5nm,0.6s
WR0    Warramunga Arr    58.68 191   P      P      11 38 14.1 -2.2
WR0                                  IAmb   IAmb   11 38 54.7
       comp=Z,14nm,1.6s
WRAB   Tennant Creek     58.68 191⇑iP       P      11 38 14.5 -1.8
WRAB                                 pmax   pmax
       comp=Z,2.0nm,0.8s
WB2    Warramunga Arr    58.69 191   P      P      11 38 14.4 -2.0
WB2                                  IAmb   IAmb   11 38 24.6
       comp=Z,4.9nm,0.7s
WRA    Warramunga Arr    58.69 191   P      P      11 38 14.4 -2.0
       comp=Z,1.1nm,0.7s,baz=8.9,slow=7.1,SNR=12
WRA    Warramunga Arr    58.69 191   P      P      11 38 14.9 -1.5
WRA    Warramunga Arr    58.69 191   P      P      11 38 14.9 -1.5
FITZ   Fitzroy Crossi    58.84 201   P      P      11 38 16.4 -0.9
ABKAR  Akbulak array     59.14 311   P      P      11 38 19.4 +0.2
ABKAR  Akbulak array     59.14 311   P      P      11 38 19.0 -0.2
ABKAR                                IAmb   IAmb   11 38 20.6
       comp=Z,2.8nm,0.8s
RES    Resolute Bay      60.76  15   P      P      11 38 30.1 +0.2
       comp=Z,2.2nm,0.7s,baz=306,slow=5.9,SNR=11
KIRV   Kirov             60.84 323  eP      P      11 38 31.8 +1.1
YKA    Yellowknife Ar    61.44  31   P      P      11 38 34.4 -0.3
       comp=Z,1.1nm,0.8s,baz=304,slow=6.2,SNR=16
YKA    Yellowknife Ar    61.44  31ceP       P      11 38 34.9 +0.2
YKA                                  pmax   pmax
       comp=Z,1.0nm,0.8s
ASAR   Alice Springs     62.42 191   P      P      11 38 40.2 -1.6
       comp=Z,0.4nm,0.5s,baz=12,slow=7.8,SNR=7.5
ASAR   Alice Springs     62.42 191   P      P      11 38 39.4 -2.3
GEYT   Alibeck           65.50 300   LR     LR     12 09 01.6
       comp=Z,49nm,18.5s,baz=10.0,slow=37
OBN    Obninsk           68.66 324  eP      P      11 39 21.9 +0.2
OBN                                 e              11 39 45.8
OBN                                 e              11 41 51.3
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OBN                                  pmax   pmax
       comp=Z,4.0nm,0.8s
FINES  FINESS Array B    68.93 333   P      P      11 39 23.4 +0.1
       comp=Z,1.7nm,0.6s,baz=39,slow=7.3,SNR=8.0
FINES                                LR     LR     12 11 36.8
       comp=Z,49nm,21.1s,baz=27,slow=38
SUMG   Summit            69.45   1   P      P      11 39 27.5 +0.6
SUMG                                 pmax   pmax
       comp=Z,34nm,2.0s
SUMG   Summit            69.45   1   P      P      11 39 27.5 +0.6
KIV    Kislovodsk        72.05 312  eP      P      11 39 44.3 +1.4
KIV                                  pmax   pmax
       comp=Z,26nm,1.1s
KIV                                  MLR    MLR
       comp=Z,126nm,18.0s
KBZ    Khabaz            72.06 312   P      P      11 39 43.7 +1.0
       comp=Z,3.9nm,0.8s,baz=82,slow=5.1,SNR=7.1
KBZ    Khabaz            72.06 312⇑iP       P      11 39 44.2 +1.5
KBZ                                  pmax   pmax
       comp=Z,6.0nm,0.9s
NVAR   Mina Array Bea    72.17  55   P      P      11 39 44.9 +1.1
       comp=Z,1.1nm,0.8s,baz=282,slow=5.9,SNR=8.3
NVAR   Mina Array Bea    72.17  55   P      P      11 39 45.5 +1.6
MNK    Minsk             72.92 327  i P     P      11 39 45.4 -2.3
       comp=E,3.0nm,0.8s
MNK                                 i P     P      11 39 45.4 -2.3
       comp=N,21nm,0.7s
MNK                                 i P     P      11 39 45.4 -2.3
       comp=Z,12nm,0.7s
MNK                                 i PcP   pwP    11 40 01.9 +1.2
MNK                                 i PP    PP     11 42 27.8 -1.7
MNK                                 i PPP   PPP    11 44 12.4
MNK                                 i S     S      11 49 12.5 -0.2
MNK                                 i SS    SS     11 53 55.3 +3.1
MNK                                 i SSS   SSS    11 57 16.1
MNK                                 i LR    LR     12 12 30.3
MNK                                 i LRM   MLR    12 14 59.5
       comp=E,8.0nm,15.4s
MNK                                 i LRM   MLR    12 15 00.4
       comp=N,80nm,14.5s
MNK                                 i LRM   MLR    12 15 40.2
       comp=Z,100nm,16.3s
WSAR   Wadi Sarin        73.04 286   LR     LR     12 15 10.4
       comp=Z,38nm,18.0s,baz=38,slow=38
NB2    NORSAR Subarra    74.04 338   P      P      11 39 54.2 -0.1
       comp=Z,0.6nm,0.6s,baz=30,slow=6.5
NOA    NORSAR Array B    74.04 338   LR     LR     12 18 06.3
       comp=Z,18nm,18.2s,baz=250,slow=40
AKASG  Malin Array Be    74.90 324   P      P      11 39 59.3 -0.1
       comp=Z,1.8nm,0.5s,baz=45,slow=6.0,SNR=10
AKBB   Malin Array Si    74.90 324⇑iP       P      11 39 55.6 -3.7
AKBB                                 pmax   pmax
       comp=Z,5.0nm,1.1s
BW06   Boulder Array     74.95  47   P      P      11 40 00.6 +0.5
PD31   Pinedale Array    74.95  47   P      P      11 40 00.4 +0.3
PDAR   Pinedale Array    74.95  47   P      P      11 40 00.1  0.0
       comp=Z,1.3nm,0.6s,baz=271,slow=2.2,SNR=16
PDAR   Pinedale Array    74.95  47   P      P      11 40 00.4 +0.3
MTPU   Mount Pierson     76.28  52   P      P      11 40 09.2 +1.2
SRU    San Rafael Swe    76.64  51   P      P      11 40 10.2 +0.4
SRU                                  pmax   pmax
       comp=Z,5.0nm,0.9s
SRU    San Rafael Swe    76.64  51   P      P      11 40 10.2 +0.4
PV17   East Wray Mesa    78.12  51   P      P      11 40 18.7 +0.6
PV17                                 IAmb   IAmb   11 40 19.8
       comp=Z,10.0nm,0.9s
PV16   Nyswonger Mesa    78.12  50   P      P      11 40 18.5 +0.4
PV16                                 IAmb   IAmb   11 40 19.7
       comp=Z,5.8nm,1.0s
BUR08  Bucovina Ar. S    78.92 323   P      P      11 40 23.4 +1.2
BURAR  Bucovina Array    78.94 323   P      P      11 40 23.4 +1.1
BRTR   Keskin Array B    79.96 313   LR     LR     12 21 07.0
       comp=Z,28nm,18.5s,baz=42,slow=40
MLR    Muntele Rosu      80.10 321   LR     LR     12 17 48.7
       comp=Z,52nm,18.8s,baz=47,slow=37
VYHS   Vyhne             81.17 327  eP      P      11 40 35.4 +1.2
VYHS   Vyhne             81.17 327  eP      P      11 40 35.4 +1.2
CLL    Collm             81.30 332  eP      P      11 40 36.0 +1.2
CLL    Collm             81.30 332  eP      P      11 40 36.0 +1.2
VRAC   Vranov            81.48 329   LR     LR     12 22 51.2
       comp=Z,34nm,18.9s,baz=60,slow=40
CONA   Conrad Observa    82.86 328  i P     P      11 40 44.4 +1.2
       comp=Z,4.9nm,1.2s
PPT    Papeete           82.89 119   LR     LR     12 09 59.9
       comp=Z,40nm,20.6s,baz=314,slow=30
GERES  GERESS Array B    83.01 330   P      P      11 40 44.0 +0.1
       comp=Z,0.4nm,0.5s,baz=38,slow=6.8,SNR=5.6
SOKA   Soboth            84.19 328  eP      P      11 40 50.8 +0.7
       comp=Z,2.8nm,0.6s
KBA    Koelnbreinsper    84.57 329  eP      P      11 40 53.8 +1.7
       comp=Z,3.5nm,1.0s
WATA   Walderalm         85.07 330  eP      P      11 40 56.2 +1.6
       comp=Z,5.1nm,0.5s
WTTA   Wattenberg        85.10 330  i P     P      11 40 57.2 +2.4
       comp=Z,2.6nm,0.5s
ABTA   Abfaltersbach     85.18 329  i P     P      11 40 58.3 +3.3
       comp=Z,3.0nm,1.0s
MOTA   Moosalm           85.25 330  eP      P      11 40 58.5 +3.0
       comp=Z,3.2nm,0.7s
RETA   Reutte            85.26 331  i P     P      11 40 56.4 +0.9
       comp=Z,8.1nm,1.1s
SQTA   Sankt Quirin      85.31 330  eP      P      11 40 57.6 +1.8
       comp=Z,2.6nm,0.6s
FETA   Feichten          85.66 330  i P     P      11 40 58.1 +0.6
       comp=Z,2.7nm,0.6s
DAVA   Damuels           85.77 331  eP      P      11 40 58.3 +0.2
       comp=Z,3.9nm,0.7s
TXAR   Lajitas Array     87.31  54   P      P      11 41 05.9  0.0
       comp=Z,1.0nm,0.9s,baz=305,slow=2.6,SNR=9.1
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NEIC ***13*** *11:32:55.8±1.6, 52°7N±0°1×173°31W±0°10, h175^{km}±6^{km}, Error ellipse: s-maj=20.4km s-min=7.0km az=164.0*
AEIC ***13*** *11:32:56±2.8, 52°4N±0°1×173°16W±0°10, h182^{km}±4^{km}, ML4.0, mb4.4/104(NEIC), Error ellipse: s-maj=21.1km s-min=6.9km az=165.0*
IDC ***13*** *11:32:57.5±2.0, 52°80N×173°46W, h192^{km}±17^{km}, mb3.5/11, mb1 3.8/13, mb1mx3.4/55, mbtmp4.0/13, MS2.9/1, Ms1 2.9/1, ms1mx2.4/40, Error ellipse: s-maj=22.1km s-min=12.1km az=174.0*
ISC 13 11:32:58.7±0.6, **52°9N**±0°1×**173°03W**±0°06, **h200**^{km}, **n257**, σ**1^{s}39**/241, **mb4.3**/34, **Andreanof Islands**

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Code   Station Name       Δ°   AZ°     Phase ID        Time      Res
                                      Op     ISC     h  m  s    ISC
KOFP   Korovin Flat P     0.93 225           Pn     11 33 21.0 -7.0
KOWE   Korovin West       0.94 233           Pn     11 33 21.3 -6.8
ATKA   Atka Island        1.02 225           Sn     11 33 40.9  -11
ATKA   Atka Island        1.02 225           Pn     11 33 20.9 -7.6
GSTR   Great Sitkin T     2.03 247           Pn     11 33 30.2 -7.3
GSMY   Great Sitkin M     2.05 246           Pn     11 33 30.3 -7.5
GSTD   Great Sitkin T     2.10 247           Pn     11 33 30.8 -7.5
GSTD                                         Sn     11 33 58.5  -11
ADAG   Mount Adagdak      2.38 248           Pn     11 33 34.6 -6.6
ADK    Adak               2.47 246           Sn     11 34 06.0  -10
ADK    Adak               2.47 246    Pn     Pn     11 33 34.8 -7.4
NIKH   Nikolski High      2.53  87    Pn     Pn     11 33 40.0 -2.7
KIKV   Kanaga Island      2.75 249           Pn     11 33 38.6 -6.7
KIMD   Kanaga Island      2.83 247           Pn     11 33 39.6 -6.7
OKSP   Okmok Steeple      2.88  82           Pn     11 33 45.3 -1.5
OKSO   Okmok South        2.96  80           Pn     11 33 45.3 -2.6
OKSO                                         Sn     11 34 25.9 -0.3
OKFG   Magazine Ridge     3.12  79           Pn     11 33 47.2 -2.4
OKFG                                         Sn     11 34 28.8 -0.7
TAFP   Tanaga Falls P     3.20 253           Pn     11 33 44.2 -6.5
TASE   Tanaga Southea     3.26 252           Pn     11 33 45.4 -6.0
GALAA  Gareloi Lava P     3.71 254           Pn     11 33 50.9 -5.9
MAPS   Pakushin South     3.75  74           Pn     11 33 56.3 -1.0
MAPS                                         Sn     11 34 42.9 -0.4
MGOD   Makushin Gods      3.79  74           Pn     11 33 56.7 -1.1
MSW    Makushin Switc     3.87  73           Pn     11 33 57.8 -0.9
MREP   Makushin Rep't     3.87  74           Pn     11 33 58.0 -0.8
MNAT   Makushin Natee     3.92  73           Pn     11 33 58.8 -0.6
MNAT                                         Sn     11 34 46.9 -0.1
UNV    Unalaska Valle     4.01  74           Pn     11 33 59.4 -1.1
AKMO   Akutan Morgan      4.35  72           Pn     11 34 04.1 -0.6
AKBBA  Akutan Broad B     4.39  72           Pn     11 34 04.9 -0.4
AKUT   Akutan             4.50  72           Pn     11 34 06.4 -0.1
CERAA  Semis' Rag'd T     4.58 260           Pn     11 34 01.9 -5.7
CESW   Semis' Southwe     4.65 260           Pn     11 34 02.9 -5.7
WESP   Westdahl Peak      5.18  69           Pn     11 34 15.0 -0.3
SSBA   Shishaldin         5.58  67           Pn     11 34 20.0 -0.5
SSLW   Shishaldin Wes     5.59  67           Pn     11 34 20.1 -0.4
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FALS	False Pass	6.00	67		Pn	11 34 25.4	-0.4
DT1	Dutton Round H	6.70	67		Pn	11 34 34.1	-0.7
PS4A	Pavlof South-4	7.00	65		Pn	11 34 38.9	+0.2
SDPT	Sand Point	7.76	67		Pn	11 34 47.5	-1.1
CNBA	Chernabura Isl	8.17	71		Pn	11 34 52.1	-1.8
CHGN	Chignik	9.13	62	Pn	Pn	11 35 06.6	+0.2
SVW2	Sparrevohn	12.51	42		P	11 35 52.1	-1.5
KDAK	Kodiak Island	12.59	59	P	P	11 35 54.4	-0.1
	25nm,0.3s,baz=297,slow=10,SNR=32						
KDAK				S	Sn	11 38 03.8	-7.1
	0.6nm,0.3s,baz=170,slow=16,SNR=1.3						
KDAK				LR	LR	11 40 53.2	
	comp=Z,56nm,18.8s,baz=135,slow=37						
TNA	Tin City	12.93	10	P	Pn	11 35 53.1	-1.8
	baz=195						
SKT	Skwentna	14.63	43	P	P	11 36 19.8	+2.7
SKT				IAmb	IAmb	11 36 22.1	
	comp=Z,19nm,1.2s						
SUA	Susitna One	14.72	46	Pn	P	11 36 19.3	+1.0
SUA				IAmb	IAmb	11 36 37.8	
	comp=Z,16nm,1.3s						
O22K	Cooper Landing	14.80	50	P	Pn	11 36 17.6	-0.5
	baz=250,SNR=7.5						
O22K	Cooper Landing	14.80	50		P	11 36 19.7	+0.7
PPLA	Purkeypile	14.83	40	Pn	P	11 36 21.4	+1.9
PPLA				IAmb	IAmb	11 36 26.3	
	comp=Z,16nm,0.6s						
RC01	Rabbit Creek A	15.02	48	P	P	11 36 20.7	-0.8
	baz=248						
CUT	Chulitna	15.35	43	P	P	11 36 24.8	-0.3
	baz=243						
PMR	Palmer	15.48	47		P	11 36 27.8	+1.3
PMR				IAmb	IAmb	11 36 34.9	
	comp=Z,30nm,1.7s						
GHO	Glory Hole Cre	15.64	46		P	11 36 29.0	+0.5
KTH	Kantishna Hill	15.67	39		P	11 36 31.5	+2.8
KTH				IAmb	IAmb	11 36 34.2	
	comp=Z,30nm,0.8s						
KNK	Knik Glacier	15.71	48		P	11 36 29.7	+0.6
TRF	Thorofare Moun	15.86	39	P	Pn	11 36 33.2	+2.1
TRF				IAmb	IAmb	11 36 36.7	
	comp=Z,62nm,1.9s						
BPAW	Bear Paw Mtn.	15.95	37	P	Pn	11 36 35.0	+2.9
BPAW				IAmb	IAmb	11 36 36.7	
	comp=Z,21nm,0.9s						
IMAR	Indian Mountai	16.24	29	P	Pn	11 36 37.1	+1.6
HIN	Hinchinbrook I	16.29	52	P	Pn	11 36 35.8	-0.4
SCM	Sheep Creek Mo	16.37	47	P	Pn	11 36 37.3	+0.1
SCM				IAmb	IAmb	11 36 40.1	
	comp=Z,18nm,1.0s						
RND	Reindeer	16.39	41	P	Pn	11 36 38.0	+0.5
RND				IAmb	IAmb	11 36 39.4	
	comp=Z,14nm,0.6s						
RND	Reindeer	16.39	41	P	Pn	11 36 38.0	+0.5
MCK	McKinley	16.52	40	P	Pn	11 36 38.4	-0.6
	baz=241,SNR=10						
BWN	Browne	16.55	38	P	Pn	11 36 41.2	+2.0
BWN				IAmb	IAmb	11 36 42.8	
	comp=Z,22nm,0.5s						
BWN	Browne	16.55	38	P	Pn	11 36 41.2	+2.0
MLY	Manley	16.58	34	P	Pn	11 36 38.7	-0.9
	baz=234,SNR=12						
KLU	Klutina	16.88	49	P	Pn	11 36 43.4	+0.1
KLU				IAmb	IAmb	11 36 48.3	
	comp=Z,26nm,1.3s						
NEA2	Nenana	16.92	37	P	Pn	11 36 42.8	-0.8
	baz=238,SNR=6.1						
M24K	Tolsona, Glenn	16.98	47	P	P	11 36 43.1	+0.1
	baz=250						
M24K	Tolsona, Glenn	16.98	47	P	Pn	11 36 44.2	-0.2
M24K				IAmb	IAmb	11 36 49.1	
	comp=Z,17nm,0.8s						
I23K	Minto, Yukon-K	17.12	35	P	P	11 36 44.3	-0.2
	baz=236,SNR=16						
I23K	Minto, Yukon-K	17.12	35	P	Pn	11 36 46.0	+0.1
I23K				IAmb	IAmb	11 36 49.0	
	comp=Z,25nm,1.1s						
RAGM	Ragged Mountai	17.17	53	P	Pn	11 36 47.1	+0.4
KAIM	Kayak Island	17.20	55	P	Pn	11 36 46.7	-0.3
WRH	Wood River Hil	17.21	38	P	Pn	11 36 46.8	-0.3
WRH	Wood River Hil	17.21	38		Pn	11 36 46.8	-0.3
HMT	Hamilton	17.36	53	P	Pn	11 36 48.0	-0.8
CCB	Clear Creek Bu	17.41	38	P	Pn	11 36 48.6	-0.7
TCOL	CIGO, UAF Yank	17.51	37	P	Pn	11 36 49.7	-0.8
TCOL				IAmb	IAmb	11 36 53.3	
	comp=Z,8.7nm,0.7s						
COLA	College	17.51	37	P	Pn	11 36 51.5	+1.0
COLA				IAmb	IAmb	11 36 55.6	
	comp=Z,12nm,1.0s						
N25K	Chitina, Valde	17.52	49	P	P	11 36 49.0	0.0
	baz=253,SNR=6.3						
N25K	Chitina, Valde	17.52	49	P	Pn	11 36 51.4	+0.6
N25K				IAmb	IAmb	11 36 53.1	
	comp=Z,11nm,0.8s						
PEA0B	Petropavlovsk-	17.56	282	P	P	11 36 47.9	-1.5
PETK	Petropavlovsk-	17.56	282	P	P	11 36 47.6	-1.8
	comp=Z,0.6nm,0.3s,baz=86,slow=14,SNR=16						
PAX	Paxson	17.59	44	P	Pn	11 36 51.8	+0.1
PAX				IAmb	IAmb	11 36 56.1	
	comp=Z,6.3nm,0.5s						
PAX	Paxson	17.59	44	P	Pn	11 36 51.8	+0.1
HDA	Harding Lake	17.62	39	P	P	11 36 50.2	+0.2
	baz=242,SNR=40						
HDA	Harding Lake	17.62	39	P	Pn	11 36 51.4	-0.4
HDA	Harding Lake	17.62	39	P	Pn	11 36 50.6	-1.2
POKR	Poker Plat Res	17.79	37	P	P	11 36 49.8	-2.1
	baz=239						
POKR	Poker Plat Res	17.79	37	P	P	11 36 49.5	-2.3
ILAR	Eielson Array	17.82	38	P	Pn	11 36 54.4	+0.2
	comp=Z,4.2nm,0.3s,baz=237,slow=11,SNR=34						
ILAR				ScP	ScP	11 44 34.6	+0.1
	comp=Z,0.1nm,0.3s,baz=251,slow=3.5,SNR=4.5						
ILAR	Eielson Array	17.82	38	P	Pn	11 36 54.4	+0.2
GLB	Gilahina Butte	17.84	50		Pn	11 36 54.4	-0.1
GLB				IAmb	IAmb	11 36 56.8	
	comp=Z,9.8nm,0.7s						
CRQM	Cirque	17.99	52	P	Pn	11 36 55.2	-1.3
CRQM				IAmb	IAmb	11 37 07.6	
	comp=Z,17nm,1.0s						
COLD	Coldfoot	18.13	29	P	Pn	11 36 56.2	-1.5
	baz=229,SNR=11						
COLD	Coldfoot	18.13	29	P	Pn	11 36 58.5	+0.8
COLD				IAmb	IAmb	11 37 00.0	
	comp=Z,13nm,1.2s						
TGL	Tana Glacier	18.14	52	P	P	11 36 56.0	+0.2
TGL				IAmb	IAmb	11 36 58.2	
	comp=Z,18nm,1.1s						
RIDG	Independent Ri	18.15	42		Pn	11 36 57.1	-1.0
RIDG				IAmb	IAmb	11 36 58.3	
	comp=Z,25nm,0.8s						
MCARA	McCarthy VSAT	18.19	50	P	P	11 36 56.3	0.0
MCARA				IAmb	IAmb	11 37 02.1	
	comp=Z,20nm,1.0s						
BALM	Baldy	18.43	52	P	P	11 36 58.9	-0.1
BALM				IAmb	IAmb	11 37 03.5	
	comp=Z,41nm,1.9s						
DOT	Dot Lake	18.44	43	P	Pn	11 37 00.3	-1.2
SCRK	Sand Creek	18.60	42	P	Pn	11 37 01.8	-1.7
	baz=247,SNR=110						
PRP	Porcupine Dome	18.68	37	P	Pn	11 37 03.2	-1.3
BARN	Barnard Glacie	18.76	52	P	P	11 37 02.9	+0.2
CTGM	Chitina Glacie	18.90	52	P	P	11 37 04.1	+0.1
CTGM				IAmb	IAmb	11 37 29.2	
	comp=Z,24nm,1.6s						
TOLK	Toolik Lake Re	19.25	26	P	P	11 37 08.3	+0.6
	baz=227,SNR=9.6						
FYU	Fort Yukon	19.32	34	P	Pn	11 37 09.7	-2.1
FYU				IAmb	IAmb	11 37 10.7	
	comp=Z,19nm,1.3s						
BMAR	Burnt Mountain	20.00	33	P	Pn	11 37 17.8	-2.2
EGAK	Eagle	20.04	41	P	P	11 37 17.6	+1.6
EGAK				IAmb	IAmb	11 37 20.5	
	comp=Z,13nm,0.8s						
SEY	Seymchan	20.65	313	P	P	11 37 21.7	-0.8
	comp=Z,2.5nm,0.8s,baz=112,slow=9.4,SNR=6.6						
INK	Inuvik	24.14	35	P	P	11 37 57.5	+1.7
	comp=Z,4.4nm,0.6s,baz=219,slow=9.1,SNR=11						
DLBC	Dease Lake	24.52	60	P	P	11 38 01.5	+2.0
	comp=Z,1.3nm,0.5s,baz=284,slow=4.2,SNR=6.7						
YKA	Yellowknife Ar	31.56	49	P	P	11 39 03.4	+1.6
	comp=Z,0.4nm,0.5s,baz=283,slow=7.7,SNR=9.5						
YKA				ScP	ScP	11 45 14.4	+1.6
	comp=Z,0.2nm,0.6s,baz=288,slow=2.6,SNR=4.8						
B08A	Colville Reser	33.69	76	P	P	11 39 22.7	+2.2
B08A				IAmb	IAmb	11 39 23.4	
	comp=Z,4.9nm,0.8s						
H04A	Detroit Lake	33.85	83	P	P	11 39 24.5	+2.5
H04A				IAmb	IAmb	11 39 37.8	
	comp=Z,21nm,1.7s						
L02E	Cave Junction	34.41	88	P	P	11 39 28.1	+1.3
	baz=306						
NEW	Newport	35.02	75	P	P	11 39 32.7	+0.7
	baz=299						
NEW	Newport	35.02	75	P	P	11 39 33.7	+1.7
NEW				IAmb	IAmb	11 39 34.2	
	comp=Z,5.5nm,0.6s						
J05D	Fort Rock, OR	35.20	85	P	P	11 39 34.6	+0.9
	baz=304						
YBH	Yreka Blue Hor	35.20	88	P	P	11 39 36.2	+2.5
	comp=Z,2.2nm,0.9s,baz=3.5,slow=2.2,SNR=6.0						
YBH	Yreka Blue Hor	35.20	88	P	P	11 39 35.9	+2.3
I07A	Izee	35.79	82	P	P	11 39 41.1	+2.5
O02D	Mt. Diablo Mer	36.09	90	P	P	11 39 43.1	+1.9
	baz=308						
WALA	Waterton Lakes	36.50	72	P	P	11 39 46.3	+1.7
WALA				IAmb	IAmb	11 39 47.3	
	comp=Z,8.4nm,1.1s						
MOD	Modoc Plateau	36.55	86	P	P	11 39 47.6	+2.4
MOD				IAmb	IAmb	11 39 57.8	
	comp=Z,14nm,1.9s						
H11N2	WAKE ISLAND Hy	36.61	213	T	T	12 18 25.4	
	baz=21						
H11N3	WAKE ISLAND Hy	36.62	213	T	T	12 18 24.9	
	baz=21,slow=74,SNR=2.7						
H11N1	WAKE ISLAND Hy	36.63	213	T	T	12 18 24.9	
	baz=21,slow=74,SNR=2.7						
WVOR	Wild Horse Val	37.25	84	P	P	11 39 53.3	+2.3
WVOR				IAmb	IAmb	11 41 06.9	
	comp=Z,18nm,2.0s						
MSO	Missoula	37.61	75	P	P	11 39 53.3	-0.6
	baz=302						
H11S1	WAKE ISLAND Hy	37.81	212	T	T	12 19 31.6	
	baz=19,slow=74,SNR=11						
H11S2	WAKE ISLAND Hy	37.83	212	T	T	12 19 29.7	
	baz=19,slow=74,SNR=3.5						
H11S3	WAKE ISLAND Hy	37.83	212	T	T	12 19 32.6	
	baz=19						
PAHR	Pah Rah Range	38.44	88	P	P	11 40 03.4	+2.4
VCNR	Virginia City	38.53	89	P	P	11 39 59.5	-2.3
PNTR	Pine Nut	38.69	89	P	P	11 40 05.5	+2.3
PNTR				IAmb	IAmb	11 40 06.6	
	comp=Z,7.8nm,0.9s						
HRY	Holter Researc	38.90	74	P	P	11 40 06.9	+2.1
YERR	Yerington	38.97	89	P	P	11 40 07.4	+1.9
HLID	Hailey	39.13	80	P	P	11 40 07.8	+1.1
	baz=305						
HLID	Hailey	39.13	80	P	P	11 40 08.1	+1.3
WAKR	Walker	39.16	90	P	P	11 40 09.0	+2.0
BCYI	Bear Canyon	39.30	78	P	P	11 40 09.8	+1.6
MCMT	McKenzie Canyo	39.34	77	P	P	11 40 09.9	+1.4
EGMT	Eagleton	39.40	71	P	P	11 40 09.2	+0.4
	baz=302						
EGMT	Eagleton	39.40	71	P	P	11 40 09.5	+0.7
EGMT				IAmb	IAmb	11 40 11.0	
	comp=Z,12nm,1.2s						
BOZ	Bozeman (W)	39.62	75	P	P	11 40 12.1	+1.3
	baz=304,SNR=6.4						
BOZ	Bozeman (W)	39.62	75	P	P	11 40 12.3	+1.6
RYN	Ryan	39.63	89	P	P	11 40 13.2	+2.2
NVAR	Mina Array Bea	39.89	89	P	P	11 40 15.3	+2.2
	comp=Z,1.8nm,0.7s,baz=297,slow=7.8,SNR=9.0						
NVAR	Mina Array Bea	39.89	89	P	P	11 40 14.5	+1.4
MDPB	Devils Postpil	39.93	90	P	P	11 40 14.4	+0.9
ELK	Elko	40.30	84	P	P	11 40 19.0	+2.5
YHL	Hebgen Lake	40.30	76	P	P	11 40 18.2	+1.7
PAGB	Antelope Grade	40.48	94	P	P	11 40 17.0	-0.7
PAGB				IAmb	IAmb	11 40 59.2	
	comp=Z,44nm,1.9s						
YHH	Holmes Hill	40.53	76	P	P	11 40 20.3	+1.8
TPH	Tonopah	40.77	88	P	P	11 40 22.6	+2.2
H17A	Grant Village	40.92	76	P	P	11 40 23.0	+1.4
	baz=305						
VES	Vestal, Richgr	41.11	92	P	P	11 40 24.3	+1.5
	baz=312						
HVU	Hansel Valley	41.15	81	P	P	11 40 25.3	+2.0
RLMT	Red Lodge	41.27	74	P	P	11 40 25.7	+1.3
	baz=305						
RLMT	Red Lodge	41.27	74	P	P	11 40 26.2	+1.9
CWC	Cottonwood Cre	41.32	91	P	P	11 40 25.9	+1.1
	baz=311						
R11A	Troy Canyon, C	41.59	87	P	P	11 40 28.5	+1.5
	baz=310						
R11A	Troy Canyon, C	41.59	87	P	P	11 40 29.0	+2.0
ISA	Isabella, Lake	41.59	92	P	P	11 40 28.4	+1.5
	baz=312						
MPMC	Manual Prospec	41.93	91	P	P	11 40 31.2	+1.4
	baz=312						
SPR3	Spring Creek 3	41.93	85	P	P	11 40 32.7	+2.8
FURC	Furnace Creek,	42.04	90	P	P	11 40 32.1	+1.8
	baz=311						
TPNV	Topopah Spring	42.09	89	P	P	11 40 32.6	+1.6
	baz=311,SNR=5.8						
TPNV	Topopah Spring	42.09	89	P	P	11 40 33.3	+2.3
TPNV				IAmb	IAmb	11 40 33.8	
	comp=Z,5.2nm,0.7s						
DUG	Dugway, Tooele	42.10	83	P	P	11 40 32.4	+1.4
	baz=308						
LAO	LASA Array	42.15	71	P	P	11 40 32.3	+1.1
	baz=304						
LAO	LASA Array	42.15	71	P	P	11 40 33.2	+2.0
LAO				IAmb	IAmb	11 40 33.5	
	comp=Z,6.6nm,0.6s						
LRMC	Laurel Mtn Rad	42.20	92	P	P	11 40 32.8	+0.9
	baz=312						
FCC	Fort Churchill	42.28	49	P	P	11 40 32.3	+0.3
FCC				IAmb	IAmb	11 41 14.8	
	comp=Z,15nm,1.7s						
BW06	Boulder Array	42.47	77	P	P	11 40 35.1	+1.0
	baz=307						
BW06	Boulder Array	42.47	77	P	P	11 40 34.7	+0.6
PD31	Pinedale Array	42.47	77	P	P	11 40 35.5	+1.4
PDAR	Pinedale Array	42.47	77	P	P	11 40 35.5	+1.4
	comp=Z,3.1nm,0.7s,baz=310,slow=3.9,SNR=20						
PDAR	Pinedale Array	42.47	77	P	P	11 40 35.1	+1.0
PSUT	Pine Spring	42.52	85	P	P	11 40 36.2	+1.7
PRN	Pahroc Range	42.52	87	P	P	11 40 35.9	+1.5
SHOC	Shoshone, Teco	42.77	90	P	P	11 40 37.7	+1.4
	baz=312						
GSC	Goldstone, Bar	42.85	91	P	P	11 40 38.2	+1.2
	baz=312						
GSC	Goldstone, Bar	42.85	91	P	P	11 40 38.2	+1.2
BFSC	Mount Baldy Ra	43.05	93	P	P	11 40 40.1	+1.4
	baz=313						
HEC	Hector,Ludlow	43.45	91	P	P	11 40 42.6	+0.8
	baz=313						
TMUT	Trail Mountain	43.62	82	P	P	11 40 44.6	+1.2
GMRC	Granite Mounta	43.89	91	P	P	11 40 46.9	+1.5
	baz=313						
BELC	Belle Mtn. Jos	44.22	92	P	P	11 40 49.2	+1.2
	baz=313						
K22A	Casper	44.33	76	P	P	11 40 49.6	+0.8
	baz=308						
IRM	Iron Mountain	44.63	91	P	P	11 40 52.3	+1.2
	baz=313						
MONP2	Monument Peak	44.72	93	P	P	11 40 53.0	+0.9
	baz=314						
U15A	North Rim	44.83	86	P	P	11 40 55.4	+2.4
O20A	White River Ci	44.87	79	P	P	11 40 53.3	+0.1
	baz=309						
O20A	White River Ci	44.87	79	P	P	11 40 54.7	+1.5
RSSD	Black Hills	44.89	72	P	P	11 40 53.3	0.0
	baz=307						
RSSD	Black Hills	44.89	72	P	P	11 40 54.5	+1.2
RSSD				IAmb	IAmb	11 40 54.8	
	comp=Z,21nm,1.9s						
IKP	In-Ko-Pah, Jac	45.08	93	P	P	11 40 55.2	+0.5
	baz=314						
PDMCI	Parker Dam,Lak	45.13	90	P	P	11 40 55.9	+0.9
	baz=313						
WUAZ	Wupatki	45.99	87	P	P	11 41 02.0	0.0
	baz=312						
TUC	Tucson	48.54	89	P	P	11 41 21.9	+0.3
	baz=314						
T25A	Trinidad	49.09	80	P	P	11 41 26.2	+0.4
	baz=312						
ECSD	EROS Data Cent	49.35	68	P	P	11 41 27.2	-0.3
	baz=309						
ECSD	EROS Data Cent	49.35	68	P	P	11 41 27.6	+0.1
HHC	Hu-ho-hao-te	50.63	288	*e*P	P	11 41 37.0	-0.2
HHC				pmax	pmax		
	comp=Z,10.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,170nm,7.6s						
MNTX	Cornudas Mount	52.23	86	P	P	11 41 50.4	+1.3
	baz=315						
E43A	Lone Tree Farm	52.89	60	P	P	11 41 53.5	-0.3
E43A				IAmb	IAmb	11 42 30.4	
	comp=Z,35nm,1.7s						
P38A	Dawn	53.78	70	P	P	11 42 00.3	0.0
P38A				IAmb	IAmb	11 42 01.0	
	comp=Z,8.5nm,0.8s						
WMOK	Wichita Mounta	54.07	78	P	P	11 42 02.8	+0.4
	baz=314						
P40A	Paris	54.69	69	P	P	11 42 06.9	0.0
TX31	Lajitas Ar. Si	54.95	86	P	P	11 42 10.1	+1.1
TX31				IAmb	IAmb	11 42 10.9	
	comp=Z,6.4nm,0.7s						
TX32	Lajitas Array	54.95	86	P	P	11 42 10.1	+1.1
TXAR	Lajitas Array	54.95	86	P	P	11 42 10.2	+1.2
	comp=Z,1.9nm,0.6s,baz=304,slow=5.4,SNR=26						
TXAR				ScP	ScP	11 46 50.5	+3.2
	comp=Z,0.2nm,0.7s,baz=285,slow=2.5,SNR=4.0						
TXAR	Lajitas Array	54.95	86	P	P	11 42 09.9	+0.9
HDIL	Hopedale	55.54	67	P	P	11 42 12.7	-0.2
	baz=313						
CCM	Cathedral Cave	56.16	70	P	P	11 42 16.5	-0.8
	baz=314						
U40A	Yellville	56.42	73	P	P	11 42 18.0	-1.2
	baz=314						
U40A	Yellville	56.42	73	P	P	11 42 18.6	-0.6
U40A				IAmb	IAmb	11 42 30.8	
	comp=Z,18nm,1.6s						
JCT	Junction City	56.46	83	P	P	11 42 20.0	+0.3
	baz=316						
SFIN	Lafayette	56.88	65	P	P	11 42 22.1	-0.2
	baz=314						
T42A	Van Buren	56.96	71	P	P	11 42 22.2	-0.7
T42A				IAmb	IAmb	11 42 22.7	
	comp=Z,7.0nm,1.2s						
FCAR	Ozark Folk Cen	57.16	73	P	P	11 42 24.2	-0.3
FCAR				IAmb	IAmb	11 42 24.5	
	comp=Z,5.5nm,0.9s						
MIAR	Mount Ida	57.27	75	P	P	11 42 25.1	-0.1
	baz=315						
MIAR	Mount Ida	57.27	75	P	P	11 42 26.4	+1.3
MIAR				IAmb	IAmb	11 42 35.5	
	comp=Z,26nm,1.7s						
W41B	Gary Mavity, V	57.59	73	P	P	11 42 27.4	-0.1
	baz=315						
WVT	Waverly	59.45	70	P	P	11 42 40.4	+0.2
	baz=316						
OXF	Oxford	59.70	72	P	P	11 42 41.8	-0.2
	baz=316						
OXF	Oxford	59.70	72	P	P	11 42 42.6	+0.7
K56A	Middlesex	60.43	57	P	P	11 42 46.9	0.0
	baz=316						
T50A	Nancy	60.50	67	P	P	11 42 47.8	+0.5
L56A	Greenwood	60.72	58	P	P	11 42 49.1	+0.3
	baz=316						
L56A	Greenwood	60.72	58	P	P	11 42 49.7	+0.8
WMQ	Urumqi	61.41	306	*e*P	P	11 42 55.3	+1.9
Z47A	Carrollton	61.42	72	P	P	11 42 53.0	-0.6
M57A	Sunshine Farm,	61.52	58	P	P	11 42 54.4	+0.2
TZTN	Tazewell	61.56	66	P	P	11 42 55.3	+0.8
SSPA	Standing Stone	61.64	59	P	P	11 42 56.2	+1.3
H61A	Lyndonville	61.77	53	P	P	11 42 55.2	-0.6
	baz=318						
MKAR	Makanchi Array	61.77	311	P	P	11 42 54.2	-1.6
	comp=Z,0.5nm,0.7s,baz=43,slow=5.5,SNR=4.8						
FPAL	Fort Paine	61.85	69	P	P	11 42 56.5	0.0
G62A	West of Eustis	61.93	51	P	P	11 42 56.0	-0.8
	baz=318						
E63A	Oxbow	62.02	49	P	P	11 42 57.4	0.0
	baz=319						
PKME	Peaks-Kenny Pk	62.48	51	P	P	11 43 02.8	+2.4
V53A	Saluda	62.60	67	P	P	11 43 02.1	+0.6
BLA	Blacksburg	62.79	64	P	P	11 43 02.9	+0.2
	baz=317						
P59A	Jarrettsville	63.15	59	P	P	11 43 05.2	+0.3
	baz=318						
GOGA	Godfrey	63.89	69	P	P	11 43 10.0	+0.1
	baz=318						
U57A	Blanch	63.95	64	P	P	11 43 10.5	+0.3
	baz=318						
HODGE	Hodges	63.96	67	P	P	11 43 11.2	+0.8
T60A	Surry	64.82	61	P	P	11 43 16.1	+0.2
	baz=318						
ABKAR	Akbulak array	68.75	326	P	P	11 43 40.8	+0.3
ABKAR				IAmb	IAmb	11 43 43.6	
	comp=Z,12nm,1.8s						
KK31	Karatay Array	69.85	316	P	P	11 43 46.8	-0.6
KK31				IAmb	IAmb	11 44 53.2	
	comp=Z,7.8nm,1.6s						
KKAR	Karatay Array	69.85	316	P	P	11 43 46.2	-1.2
KSH	Kashi	70.33	310	P	P	11 43 52.8	+2.4
KSH				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KSH				pmax	pmax		
	comp=Z,200nm,5.0s						
MTN	Manton Dam	81.04	235	P	P	11 44 49.5	-1.7
WRA	Warramunga Arr	85.65	229	P	P	11 45 12.3	-2.3
	comp=Z,0.7nm,0.5s,baz=32,slow=5.7,SNR=10						
ASAR	Alice Springs	89.09	227	P	P	11 45 29.6	-1.4
	comp=Z,2.5nm,0.7s,baz=24,slow=4.7,SNR=26						

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*IDC **13** 12:02:53.3±0.8, 30°.79N×141°.14E, h0^{km}, mb3.8/13, mb1 4.0/16, mb1mx3.8/56, mbtmp3.8/16, ML3.1/3, MS3.1/8, Ms1 3.1/8, ms1mx2.8/44, Error ellipse: s-maj=26.6km s-min=15.5km az=75.0*

*NEIC **13** 12:02:54.6±1.4, 30°.8N±0°.1×141°.3E±0°.2, h10^{km}±1^{km}, mb4.3/12, Error ellipse: s-maj=23.1km s-min=16.3km az=72.0*

ISC 13 12:02:54.9±0.7, **30°.94N**±0°.08×**141°.28E**±0°.09, **h10^{km}, n47**, σ1^{s}.51/40, **mb4.0**/18, **MS3.0**/5, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	Mitsune	2.49	331	Pn	Pn	12 03 35.9	+0.3
JHJ	Hachijo jima 2	2.52	330	Pn	Pn	12 03 37.2	+1.4
	12nm,0.3s,baz=77,slow=11,SNR=1.4						
JHJ				Sn	Sn	12 04 02.9	-3.6
	26nm,0.3s,baz=48,slow=15,SNR=2.2						
JGF	Kuroka	5.69	326	Pn	Pn	12 04 22.4	+2.9
MJAR	Matsushiro Arr	6.14	336	Pn	Pn	12 04 28.2	+2.5
	0.2nm,0.3s,baz=160,slow=10,SNR=10						
MJAR	Matsushiro Arr	6.14	336		Pn	12 04 28.9	+3.2
JMM	Marumori	6.92	357	Pn	Pn	12 04 35.9	-0.4
JNU	Nakatsue	9.09	287	Sn	Sn	12 06 47.6	-1.1
	0.8nm,0.3s,baz=173,slow=15,SNR=1.9						
JNU				LR	LR	12 08 43.2	
	comp=Z,150nm,18.7s,baz=66,slow=39						
JOW	Kunigami	12.11	253	LR	LR	12 10 10.1	
	comp=Z,113nm,18.7s,baz=212,slow=37						
KSRS	Korea Array	12.81	304	LR	LR	12 10 20.2	
	comp=Z,79nm,18.0s,baz=128,slow=35						
ASAJ	Asahikawa	13.19	4	Pn	Pn	12 05 59.2	-3.0
	0.4nm,0.3s,baz=232,slow=34,SNR=2.3						
KLR	Kul'dur	19.64	341	P	P	12 07 22.8	-0.8
	0.1nm,0.3s,baz=263,slow=20,SNR=1.7						
PEA0B	Petropavlovsk-	25.17	24	P	P	12 08 21.7	+1.5
PETK	Petropavlovsk-	25.17	24	LR	LR	12 17 51.1	
	comp=Z,30nm,21.2s,baz=266,slow=35						
PETK	Petropavlovsk-	25.17	24	P	P	12 08 18.2	-2.0
H11S3	WAKE ISLAND Hy	26.13	112	T	T	12 35 29.4	
	baz=304,slow=75,SNR=20						
H11S1	WAKE ISLAND Hy	26.13	112	T	T	12 35 27.3	
	baz=304,slow=75,SNR=24						
H11S2	WAKE ISLAND Hy	26.14	112	T	T	12 35 28.3	
	baz=304,slow=75,SNR=21						
SONM	Songino Array	31.47	312	P	P	12 09 17.8	+1.1
	1.0nm,0.8s,baz=108,slow=8.7,SNR=6.7						
SONM	Songino Array	31.47	312	P	P	12 09 17.9	+1.2
SIJI	Sorong	33.04	199	LR	LR	12 21 56.3	
	comp=Z,24nm,19.1s,baz=119,slow=35						
CMAR	Chiang Mai Arr	40.19	262	P	P	12 10 31.1	-0.5
	0.6nm,0.5s,baz=58,slow=6.0,SNR=4.7						
CMAR				LR	LR	12 28 24.1	
	comp=Z,35nm,18.4s,baz=162,slow=38						
CMAR	Chiang Mai Arr	40.19	262	P	P	12 10 30.1	-1.5
PMG	Port Moresby	40.51	171	LR	LR	12 25 10.6	
	comp=Z,20nm,20.8s,baz=347,slow=33						
MK31	Makanchi Array	47.48	307	P	P	12 11 30.2	+0.2
MKAR	Makanchi Array	47.48	307	P	P	12 11 30.2	+0.2
	1.0nm,0.9s,baz=91,slow=9.0,SNR=5.2						
MKAR	Makanchi Array	47.48	307	P	P	12 11 29.8	-0.2

KURK	**Kurchatov**	**49.77**	**312**	P	**P**	**12 11 47.5**	**+0.1**
KURK				IAmb	IAmb	12 12 01.2	
	comp=Z,4.1nm,1.4s						
KURBB	**Kurchatov Arra**	**49.83**	**312**	P	**P**	**12 11 47.0**	**-0.9**
	comp=Z,1.0nm,0.7s,baz=87,slow=7.6,SNR=11						
WB0	**Warramunga Arr**	**50.85**	**188**	P	**P**	**12 11 54.8**	**-1.1**
WB0				IAmb	IAmb	12 12 16.9	
	comp=Z,5.2nm,1.2s						
WR0	**Warramunga Arr**	**51.02**	**188**	P	**P**	**12 11 55.9**	**-1.3**
WR0				IAmb	IAmb	12 12 22.1	
	comp=Z,9.6nm,1.5s						
WB2	**Warramunga Arr**	**51.03**	**188**	P	**P**	**12 11 56.2**	**-1.0**
WB2				IAmb	IAmb	12 12 17.7	
	comp=Z,7.6nm,1.4s						
WRA	**Warramunga Arr**	**51.03**	**188**	P	**P**	**12 11 56.0**	**-1.2**
	comp=Z,1.1nm,0.3s,baz=6.2,slow=7.7,SNR=27						
WRA				LR	LR	12 32 39.9	
	comp=Z,13nm,18.8s,baz=280,slow=35						
WRA	**Warramunga Arr**	**51.03**	**188**	P	**P**	**12 11 55.8**	**-1.5**
AS31	**Alice Springs**	**54.75**	**188**	P	**P**	**12 12 24.1**	**-0.7**
ASAR	**Alice Springs**	**54.76**	**188**	P	**P**	**12 12 23.2**	**-1.6**
	comp=Z,0.7nm,0.5s,baz=358,slow=4.9,SNR=15						
ASAR	**Alice Springs**	**54.76**	**188**	P	**P**	**12 12 24.1**	**-0.6**
KKAR	**Karatay Array**	**56.24**	**304**	P	**P**	**12 12 36.2**	**+0.8**
ABKAR	**Akbulak array**	**61.88**	**313**	P	**P**	**12 13 14.4**	**0.0**
ABKAR				IAmb	IAmb	12 13 27.9	
	comp=Z,3.5nm,1.4s						
STKA	**Stephens Creek**	**62.48**	**180**	P	**P**	**12 13 17.2**	**-1.1**
	comp=Z,1.0nm,0.5s,baz=356,slow=9.1,SNR=3.8						
STKA	**Stephens Creek**	**62.48**	**180**	P	**P**	**12 13 17.9**	**-0.4**
STKA				IAmb	IAmb	12 13 23.7	
	comp=Z,1.1nm,1.3s						
AKTO	**Aktyubinsk**	**62.75**	**314**	P	**P**	**12 13 20.2**	**0.0**
	comp=Z,1.0nm,0.6s,baz=78,slow=11,SNR=4.9						
YKA	**Yellowknife Ar**	**69.16**	**29**	P	**P**	**12 14 02.9**	**+1.8**
	comp=Z,0.2nm,0.6s,baz=300,slow=5.7,SNR=2.2						
KBZ	**Khabaz**	**74.83**	**312**	P	**P**	**12 14 35.8**	**+0.3**
	comp=Z,2.6nm,0.8s,baz=60,slow=2.7,SNR=5.7						
NVAR	**Mina Array Bea**	**78.78**	**52**	P	**P**	**12 14 59.1**	**+0.8**
	comp=Z,0.2nm,0.7s,baz=302,slow=5.2,SNR=1.8						
AKASG	**Malin Array Be**	**79.06**	**323**	P	**P**	**12 14 58.3**	**-0.9**
	comp=Z,0.7nm,0.5s,baz=53,slow=6.1,SNR=7.2						
RAYN	**Ar Rayn**	**82.89**	**293**	P	**P**	**12 15 20.1**	**-0.1**
TXAR	**Lajitas Array**	**93.92**	**52**	P	**P**	**12 16 15.2**	**+1.9**
	comp=Z,0.3nm,0.8s,baz=300,slow=2.5,SNR=3.9						

IDC 13 12:10:05.4±7.2**,17°.82S×175°.39W,h0^{km},mb3.5**/3**, mb1 3.8**/3**,mb1mx3.5**/28**,mbtmp3.5**/3**,Error ellipse: s-maj=314.0km s-min=36.4km az=142.0,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**47.47**	**259**	P	P	12 18 42.5	+0.1
	0.2nm,0.4s,baz=96,slow=7.5,SNR=8.8						
ASAR	**Alice Springs**	**47.58**	**254**	P	P	12 18 43.0	-0.3
	0.4nm,0.5s,baz=90,slow=8.4,SNR=8.4						
ILAR	**Eielson Array**	**85.19**	**12**	P	P	12 22 43.1	0.0
	0.3nm,0.5s,baz=220,slow=6.2,SNR=8.0						

*IDC **13** 12:30:05.8±0.7,27°.25N×140°.26E,h365^{km}±7^{km},mb3.2/11, mb1 3.4/15,mb1mx3.2/41,mbtmp3.9/15,Error ellipse: s-maj=20.4km s-min=10.6km az=80.0*

*NEIC **13** 12:30:06.1±1.8,27°.2N±0°.1×140°.1E±0°.2,h366^{km}±9^{km}, mb4.2/19,Error ellipse: s-maj=22.3km s-min=17.3km az=78.0*

*JMA **13** 12:30:08.5±0.1,27°.64N×141°.07E,h382^{km},M4.0*

ISC 13 12:30:04.7±0.5**,27°.23N**±0°.07×**139°.96E**±0°.10**,h350^{km},n51, σ1^{s}.59**/55**,mb4.1**/19**,Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**1.98**	**93**	P	**Pn**	**12 30 58.3**	**+2.4**
CBIJ				*e*S	**S**	**12 31 37.4**	**+0.4**
JCJ	**Chichijima**	**1.98**	**93**	P	**Pn**	**12 30 58.4**	**+2.5**
	53nm,0.3s,baz=263,slow=23,SNR=8.7						
JCJ				S	**S**	**12 31 37.5**	**+0.5**
	114nm,0.3s,baz=280,slow=23,SNR=13						
JCJ	**Chichijima**	**1.98**	**93**		**Pn**	**12 30 58.3**	**+2.4**
JHH2	**Haha-jima-NKT2**	**2.06**	**106**	P	**Pn**	**12 30 59.5**	**+3.0**
JHH2				*e*S	**S**	**12 31 39.7**	**+1.7**
JHJ	**Hachijo jima 2**	**5.88**	**359**	P	**Pn**	**12 31 37.4**	**+3.4**
	16nm,0.3s,baz=57,slow=16,SNR=1.8						
JHJ				S	**S**	**12 32 48.0**	**+1.6**
	21nm,0.3s,baz=270,slow=22,SNR=1.1						
BSO4	**Boso 4**	**7.75**	**2**	*e*S	**S**	**12 33 20.9**	**-5.2**
JOD2	**Odawara 2**	**8.05**	**355**	P	**P**	**12 32 01.8**	**-0.6**
JRY	**Ryogami san**	**8.81**	**354**	P	**P**	**12 32 10.1**	**-0.7**
JAG	**Ashikaga**	**9.18**	**357**	P	**Pn**	**12 32 13.0**	**+0.2**
MJAR	**Matsushiro Arr**	**9.41**	**351**	P	**P**	**12 32 16.6**	**-0.8**
	0.1nm,0.3s,baz=217,slow=2.0,SNR=1.9						
GUMO	**Guam**	**14.32**	**160**	P	**P**	**12 33 07.7**	**-4.3**
KSRS	**Korea Array**	**14.39**	**318**	P	**Pn**	**12 33 15.4**	**+0.9**
	0.1nm,0.3s,baz=129,slow=10,SNR=4.3						
KSAR	**Wonju Array Be**	**14.41**	**318**		**P**	**12 33 10.7**	**-2.1**
USRK	**Ussuriysk Ar.**	**18.12**	**341**	P	**P**	**12 33 55.5**	**+2.7**
	baz=173,slow=12,SNR=5.3						
KLR	**Kul'dur**	**22.87**	**346**	P	**P**	**12 34 39.6**	**+1.0**
	0.9nm,0.4s,baz=157,slow=15,SNR=4.9						
WB0	**Warramunga Arr**	**47.02**	**187**	P	**P**	**12 38 02.7**	**+0.4**
WB0				IAmb	IAmb	12 38 45.4	
	comp=Z,27nm,2.0s						
WR0	**Warramunga Arr**	**47.20**	**187**	P	**P**	**12 38 04.1**	**+0.5**
WR0				IAmb	IAmb	12 39 49.0	
	comp=Z,26nm,1.9s						
WB2	**Warramunga Arr**	**47.20**	**187**	P	**P**	**12 38 04.2**	**+0.5**
WRA	**Warramunga Arr**	**47.20**	**187**	P	**P**	**12 38 04.0**	**+0.3**
	comp=Z,0.7nm,0.4s,baz=5.8,slow=7.8,SNR=25						
WRA	**Warramunga Arr**	**47.20**	**187**	P	**P**	**12 38 03.6**	**-0.1**
MKAR	**Makanchi Array**	**48.87**	**310**	P	**P**	**12 38 17.1**	**+1.0**
	comp=Z,0.3nm,0.4s,baz=89,slow=10,SNR=4.5						
MKAR	**Makanchi Array**	**48.87**	**310**	P	**P**	**12 38 17.0**	**+0.9**
ASAR	**Alice Springs**	**50.93**	**187**	P	**P**	**12 38 31.6**	**-0.1**
	comp=Z,0.4nm,0.7s,baz=360,slow=4.8,SNR=7.9						
ASAR	**Alice Springs**	**50.93**	**187**	P	**P**	**12 38 32.4**	**+0.8**
KURK	**Kurchatov**	**51.48**	**315**	P	**P**	**12 38 36.3**	**+0.9**
NRIK	**Noril'sk**	**51.81**	**339**	P	**P**	**12 38 37.1**	**-0.4**
	comp=Z,1.8nm,0.6s,baz=117,slow=6.8,SNR=3.9						
IMAR	**Indian Mountai**	**55.82**	**27**	P	**P**	**12 39 06.2**	**-0.1**
KK31	**Karatay Array**	**57.40**	**306**	P	**P**	**12 39 19.2**	**+1.4**
KKAR	**Karatay Array**	**57.40**	**306**	P	**P**	**12 39 19.2**	**+1.5**
RND	**Reindeer**	**57.61**	**30**	P	**P**	**12 39 17.7**	**-1.2**
MDM	**Murphy Dome**	**57.99**	**28**	P	**P**	**12 39 20.6**	**-0.8**
MDM				IAmb	IAmb	12 39 21.4	
	comp=Z,24nm,2.0s						
SCM	**Sheep Creek Mo**	**58.25**	**32**	P	**P**	**12 39 22.6**	**-0.8**
HDA	**Harding Lake**	**58.51**	**29**	P	**P**	**12 39 23.7**	**-1.3**
HDA				IAmb	IAmb	12 39 31.4	
	comp=Z,16nm,1.7s						
IL31		**58.55**	**29**	P	**P**	**12 39 24.3**	**-0.9**
IL31				IAmb	IAmb	12 40 28.1	
	comp=Z,15nm,1.9s						
ILAR	**Eielson Array**	**58.55**	**29**	P	**P**	**12 39 23.9**	**-1.4**
	comp=Z,0.3nm,0.3s,baz=247,slow=5.8,SNR=7.3						
BCAR	**Beaver Creek A**	**60.81**	**31**	P	**P**	**12 39 39.8**	**-0.8**
ABKAR	**Akbulak array**	**63.58**	**314**	P	**P**	**12 39 59.6**	**+0.6**
ABKAR				IAmb	IAmb	12 40 11.8	
	comp=Z,8.6nm,1.7s						
SPA0	**Spitsbergen Ar**	**69.90**	**349**	P	**P**	**12 40 38.9**	**+0.9**
EUNU	**Eureka**	**70.04**	**8**	P	**P**	**12 40 38.7**	**-0.2**
EUNU				IAmb	IAmb	12 41 43.1	
	comp=Z,15nm,1.9s						
BBB	**Bella Bella**	**70.11**	**41**	P	**P**	**12 40 40.6**	**+0.8**
ARCES	**ARCESS Array B**	**72.76**	**340**	P	**P**	**12 40 55.2**	**0.0**
	comp=Z,3.9nm,0.7s,baz=21,slow=7.8,SNR=8.3						
ARCES	**ARCESS Array B**	**72.76**	**340**	P	**P**	**12 40 55.6**	**+0.5**
YKA	**Yellowknife Ar**	**72.96**	**28**	P	**P**	**12 40 55.0**	**-1.4**
	comp=Z,1.0nm,0.4s,baz=300,slow=5.3,SNR=23						
FIA1	**FINESS Array S**	**76.95**	**333**	P	**P**	**12 41 18.4**	**-0.6**
FINES	**FINESS Array B**	**76.95**	**333**	P	**P**	**12 41 18.6**	**-0.4**
	comp=Z,2.2nm,0.4s,baz=66,slow=5.1,SNR=29						
AKASG	**Malin Array Be**	**81.33**	**323**	P	**P**	**12 41 41.2**	**-1.6**
NVAR	**Mina Array Bea**	**81.98**	**51**	P	**P**	**12 41 46.2**	**-0.5**
	comp=Z,0.5nm,0.5s,baz=294,slow=5.4,SNR=8.4						
NVAR	**Mina Array Bea**	**81.98**	**51**	P	**P**	**12 41 46.0**	**-0.7**
NB2	**NORSAR Subarra**	**82.75**	**338**	P	**P**	**12 41 48.7**	**-1.2**
	comp=Z,0.6nm,0.6s,baz=49,slow=4.6						
NOA	**NORSAR Array B**	**82.75**	**338**	P	**P**	**12 41 48.7**	**-1.2**
	comp=Z,0.9nm,0.6s,baz=46,slow=4.9,SNR=4.1						
RLMT	**Red Lodge**	**84.39**	**42**	P	**P**	**12 41 58.8**	**0.0**
RLMT				IAmb	IAmb	12 42 23.1	
	comp=Z,16nm,1.9s						

IDC 13 12:46:04.3±4.9**,18°.62S×178°.66W,h543^{km}±37^{km}, mb3.0**/4**,mb1 3.3**/5**,mb1mx2.9**/41**,mbtmp3.9**/5**,Error ellipse: s-maj=234.2km s-min=26.7km az=158.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.25**	**285**	P	P	12 47 20.5	0.0
	4.1nm,0.3s,baz=135,slow=4.0,SNR=42						
WRA	**Warramunga Arr**	**44.27**	**260**	P	P	12 53 25.4	-0.9
	0.5nm,0.5s,baz=97,slow=6.8,SNR=21						
ASAR	**Alice Springs**	**44.37**	**255**	P	P	12 53 27.2	+0.2
	4.3nm,0.6s,baz=89,slow=8.4,SNR=107						
FITZ	**Fitzroy Crossi**	**52.68**	**261**	P	P	12 54 29.2	+0.6
	0.9nm,0.6s,baz=83,slow=8.4,SNR=1.8						
TXAR	**Lajitas Array**	**86.58**	**58**	P	P	12 57 50.5	-0.1
	0.3nm,0.7s,baz=202,slow=5.4,SNR=5.2						

*IDC **13** 12:46:52.6±1.0,41°.00N×76°.80E,h0^{km},mb3.7/10, mb1 3.9/15,mb1mx3.6/66,mbtmp3.8/15,ML3.0/5,Error ellipse: s-maj=19.1km s-min=14.1km az=31.0*

*BJI **13** 12:46:53.6±0.0,41°.23N×76°.89E,h4^{km},mB4.5/5,mb3.9/8, ML3.8/8,Ms3.7/2,Ms7 3.5/1*

*NNC **13** 12:46:54.6±1.3,41°.21N×76°.91E,h0^{km},mb4.8,mpv4.5, Error ellipse: s-maj=8.9km s-min=6.5km az=176.0*

*SOME **13** 12:46:54.0,41°.25N×76°.78E,h10^{km},MS3.4*

*KRNET **13** 12:46:54.3±0.1,41°.24N×76°.85E,h14^{km},mb4.3*

*KNET **13** 12:46:56.9±0.6,41°.31N×76°.61E,h0^{km},ml3.6,Error ellipse: s-maj=5.6km s-min=2.3km az=85.0*

ISC 13 12:46:54.3±1.3**,41°.21N**±0°.04×**76°.82E**±0°.02**,h1^{km}**±9^{km}**, n114,σ1^{s}.69**/171**,mb3.7**/10**,39C-30D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDJ	**Kajisay**	**0.96**	**16**	⇓*i*P	**Pg**	**12 47 11.8**	**-0.9**
	baz=16						
KDJ				⇓*i*S	**Sg**	**12 47 24.7**	**-0.5**
	baz=16						
ULHL	**Ulahol**	**1.12**	**338**	⇑*i*P	**Pg**	**12 47 14.7**	**-1.2**
	baz=36						
ULHL				⇑*i*S	**Sg**	**12 47 29.2**	**-1.2**
	baz=36						
ULHL	**Ulahol**	**1.12**	**338**	⇓P	**Pg**	**12 47 14.9**	**-1.0**
	68nm,0.2s,SNR=534						
ULHL				⇓S	**Sg**	**12 47 30.1**	**-0.4**
	232nm,0.2s						
ANVS	**Anan'yevo**	**1.70**	**22**	⇓*i*P	**Pb**	**12 47 25.5**	**-0.9**
	baz=21						
ANVS				⇓*i*S	**Sg**	**12 47 48.2**	**-0.7**
	baz=21						
PRZ	**Przheval'sk**	**1.74**	**42**	⇓*e*P	**Pg**	**12 47 26.8**	**-0.8**
	baz=42						
PRZ				⇓*i*S	**Sg**	**12 47 50.2**	**0.0**
	baz=42						
KSH	**Kashi**	**1.81**	**201**	Pn	Pg	12 47 36.0	+7.1
KSH				Sn	Sg	12 48 07.8	+15
KSH				smax	smax		
	comp=N,600nm,0.5s						
KSH				smax	smax		
	comp=E,450nm,0.4s						
TNSS	**Tian-Shan**	**1.83**	**3**	*e*P	**Pb**	**12 47 27.8**	**-1.1**
	526nm,0.5s						
TNSS				*e*S	**Sg**	**12 47 52.2**	**-1.0**
	360nm,0.6s						
TNSS	**Tian-Shan**	**1.83**	**3**	P	**Pb**	**12 47 27.8**	**-1.1**
	526nm,0.5s						
TNSS				S	**Sg**	**12 47 52.2**	**-1.0**
	360nm,0.6s						
IZV	**Izvestkoviy**	**1.83**	**355**	*e*P	**Pb**	**12 47 27.8**	**-0.9**
	327nm,0.5s						
IZV				*e*S	**Sg**	**12 47 52.1**	**-1.1**
	644nm,0.7s						
IZV	**Izvestkoviy**	**1.83**	**355**	P	**Pb**	**12 47 27.9**	**-0.9**
IZV				S	**Sg**	**12 47 52.1**	**-1.1**
	644nm,0.7s						
TKM2	**Tokmak 2**	**1.94**	**332**	⇑*i*P	**Pb**	**12 47 29.5**	**-1.1**
	baz=31						
TKM2				⇑*i*S	**Sb**	**12 47 54.6**	**-0.7**
	baz=31						
TKM2	**Tokmak 2**	**1.94**	**332**	⇓P	**Pb**	**12 47 29.8**	**-0.8**
	243nm,0.3s,SNR=95						
TKM2				⇑S	**Sg**	**12 47 56.8**	**+0.2**
	150nm,0.3s						
TKM2	**Tokmak 2**	**1.94**	**332**	⇑Pn	**Pb**	**12 47 30.1**	**-0.4**
	159nm,0.4s						
TKM2				⇑Lg	Lg	12 48 00.4	
	293nm,0.7s						
KST	**Kastek**	**1.94**	**341**	*e*P	**Pb**	**12 47 29.8**	**-0.8**
	182nm,0.4s						
KST				*e*S	**Sg**	**12 47 55.9**	**-0.8**
	387nm,1.0s						
KST	**Kastek**	**1.94**	**341**	Pg	**Pb**	**12 47 29.7**	**-0.8**
	182nm,0.4s						
KST				Lg	Lg	12 47 55.9	
	387nm,1.0s						
MDOK	**Medeo**	**1.96**	**5**	*e*P	**Pb**	**12 47 30.0**	**-1.0**
	381nm,0.7s						
MDOK				*e*S	**Sg**	**12 47 56.1**	**-1.3**
	444nm,0.8s						
MDOK	**Medeo**	**1.96**	**5**	⇑Pn	**Pb**	**12 47 29.9**	**-1.0**
	188nm,0.5s						
MDOK				⇑Sn	**Sg**	**12 47 56.7**	**-0.7**
	507nm,0.7s						
MDOK	**Medeo**	**1.96**	**5**	Pg	**Pb**	**12 47 30.0**	**-1.0**
	381nm,0.7s						
MDOK				Lg	Lg	12 47 56.6	
	444nm,0.8s						
ARLS	**Aral**	**1.98**	**290**	⇑*i*P	**Pb**	**12 47 30.7**	**-0.6**
	baz=89						
ARLS				⇑*i*S	**Sb**	**12 47 56.9**	**+0.3**
	baz=89						
AAA	**Alma-Ata**	**2.00**	**2**	*e*P	**Pb**	**12 47 31.2**	**-0.4**
	475nm,0.4s						
AAA				*e*S	**Sg**	**12 47 58.5**	**-0.1**
	618nm,0.6s						
AAA	**Alma-Ata**	**2.00**	**2**	Pg	**Pb**	**12 47 31.2**	**-0.4**
	475nm,0.4s						
AAA				Lg	Lg	12 47 58.5	
	618nm,0.6s						
UCH	**Uchtor**	**2.00**	**301**	⇑*i*P	**Pb**	**12 47 31.0**	**-0.8**
	baz=0.0						
UCH				⇑*i*S	**Sb**	**12 47 57.3**	**-0.1**
	baz=0.0						
UCH	**Uchtor**	**2.00**	**301**	⇓P	**Pb**	**12 47 31.3**	**-0.5**
	111nm,0.4s,SNR=80						
UCH				⇓S	**Sb**	**12 47 58.1**	**+0.6**
	157nm,0.3s						
KBK	**Karagaybulak**	**2.01**	**317**	⇑*i*P	**Pb**	**12 47 31.0**	**-0.8**
	baz=16						
KBK				⇑*i*S	**Sb**	**12 47 57.3**	**-0.1**
	baz=16						
KBK	**Karagaybulak**	**2.01**	**317**	⇓P	**Pb**	**12 47 31.4**	**-0.4**
	163nm,0.4s,SNR=138						
KBK				⇑S	**Sg**	**12 47 58.5**	**-0.5**
	581nm,0.4s						
KNDC	**Almaty**	**2.01**	**3**	⇑Pn	**Pb**	**12 47 31.0**	**-0.7**
	696nm,0.5s						
KNDC				⇓Sn	**Sg**	**12 47 59.4**	**+0.4**
	1µm,0.4s						
KOTS	**Kotyrbulak**	**2.04**	**6**	*e*P	**Pb**	**12 47 31.4**	**-0.8**
	722nm,0.6s						
KOTS				*e*S	**Sg**	**12 47 58.6**	**-1.2**
	687nm,0.4s						
KOTS	**Kotyrbulak**	**2.04**	**6**	Pg	**Pb**	**12 47 31.4**	**-0.8**
	722nm,0.6s						
KOTS				Lg	Lg	12 47 58.6	
	687nm,0.4s						
DGS	**Degeres**	**2.18**	**339**	*e*P	**Pb**	**12 47 34.1**	**-0.5**
	261nm,0.5s						
DGS				*e*S	**Sg**	**12 48 03.4**	**-0.9**
	314nm,1.1s						
DGS	**Degeres**	**2.18**	**339**	Pg	**Pg**	**12 47 34.9**	**-1.2**
	261nm,0.5s						
DGS				Lg	Lg	12 48 05.2	
	314nm,1.1s						
SATY	**Saty**	**2.20**	**32**	*e*P	**Pb**	**12 47 34.0**	**-0.9**
	398nm,0.8s						
SATY				*e*S	**Sg**	**12 48 02.9**	**-1.9**
	1µm,0.4s						
SATY	**Saty**	**2.20**	**32**	Pg	**Pb**	**12 47 34.0**	**-0.9**
	398nm,0.8s						
SATY				Lg	Lg	12 48 02.9	
	1µm,0.4s						
AAK	**Ala-Archa**	**2.25**	**310**	Pn	**Pb**	**12 47 35.8**	**0.0**
	35nm,0.3s,baz=134,slow=7.7,SNR=198						
AAK				Lg	Lg	12 48 05.4	
	23nm,0.3s,baz=15,slow=21,SNR=3.5						
AAK	**Ala-Archa**	**2.25**	**310**	⇓*i*P	**Pb**	**12 47 34.4**	**-1.4**
	baz=9.0						
AAK				⇓*i*S	**Sb**	**12 48 03.3**	**-0.9**
	baz=9.0						
AAK	**Ala-Archa**	**2.25**	**310**	P	**Pb**	**12 47 35.8**	**0.0**
	140nm,0.3s,SNR=104						
AAK				⇑S	**Sb**	**12 48 04.5**	**+0.3**
	296nm,0.6s						
AAK	**Ala-Archa**	**2.25**	**310**	⇓Pg	**Pg**	**12 47 39.9**	**+2.5**
	83nm,0.3s						
AAK				⇓Lg	Lg	12 48 05.8	
	361nm,0.9s						
FRU1	**Bishkek**	**2.29**	**315**	⇑*i*P	**Pb**	**12 47 34.6**	**-1.8**
	baz=14						
FRU1				⇑*e*S	**Sb**	**12 48 04.1**	**-1.1**
	baz=14						
ZHN	**Zhinishke**	**2.30**	**31**	*e*P	**Pb**	**12 47 35.9**	**-0.7**
	28nm,0.2s						
ZHN				*e*S	**Sg**	**12 48 06.3**	**-1.9**
	637nm,0.5s						
CHMS	**Chumysh**	**2.36**	**320**	⇑*i*P	**Pb**	**12 47 35.6**	**-2.0**
	baz=19						
CHMS				⇑*i*S	**Sb**	**12 48 05.7**	**-1.6**
	baz=19						
CHMS	**Chumysh**	**2.36**	**320**	⇑P	**Pb**	**12 47 37.5**	**-0.2**
	182nm,0.3s,SNR=86						
CHMS				⇓S	**Sb**	**12 48 08.3**	**+1.1**
	121nm,0.3s						
KURS	**Kuram**	**2.49**	**23**	*e*P	**Pb**	**12 47 39.2**	**-0.6**
	328nm,0.9s						
KURS				*e*S	**Sg**	**12 48 12.1**	**-2.2**
	217nm,0.4s						
KURS	**Kuram**	**2.49**	**23**	Pg	**Pb**	**12 47 39.2**	**-0.6**
	328nm,0.9s						
KURS				Lg	Lg	12 48 12.1	
	217nm,0.4s						
KTBS	**Karatobe**	**2.51**	**358**	*e*P	**Pb**	**12 47 39.5**	**-0.6**
	221nm,0.5s						
KTBS				*e*S	**Sg**	**12 48 13.0**	**-1.8**
	948nm,0.6s						
KTBS	**Karatobe**	**2.51**	**358**	Pg	**Pb**	**12 47 40.1**	**0.0**
	221nm,0.5s						
KTBS				Lg	Lg	12 48 14.1	
	948nm,0.6s						
AML	**Almayashu**	**2.52**	**293**	⇑*e*P	**Pn**	**12 47 38.3**	**+1.6**
	baz=92						
AML				⇑*i*S	**Sb**	**12 48 10.4**	**-1.7**
	baz=92						
AML	**Almayashu**	**2.52**	**293**	⇓P	**Pb**	**12 47 39.6**	**-0.9**
	123nm,0.2s,SNR=97						
UZB	**Uzynbulak**	**2.54**	**39**	*e*P	**Pb**	**12 47 39.6**	**-1.1**
	309nm,0.5s						
UZB				*e*S	**Sb**	**12 48 12.7**	**+0.1**
	936nm,0.6s						
UZB	**Uzynbulak**	**2.54**	**39**	Pg	**Pb**	**12 47 39.6**	**-1.1**
	309nm,0.5s						
UZB				Lg	Lg	12 48 12.7	
	936nm,0.6s						
KRBS	**Karabastau**	**2.63**	**342**	*e*P	**Pb**	**12 47 42.0**	**-0.2**
	213nm,0.6s						
KRBS				*e*S	**Sg**	**12 48 16.8**	**-1.9**
	467nm,0.5s						
KRBS	**Karabastau**	**2.63**	**342**	Pg	**Pb**	**12 47 42.0**	**-0.2**
	213nm,0.6s						
KRBS				Lg	Lg	12 48 16.8	
	467nm,0.5s						
KPKS	**Kokpek**	**2.65**	**31**	*e*P	**Pb**	**12 47 41.6**	**-0.9**
	282nm,0.6s						
KPKS				*e*S	**Sg**	**12 48 16.4**	**-3.0**
	79µm,0.6s						
CHKK	**Chushkaly**	**2.65**	**3**	*e*P	**Pb**	**12 47 42.0**	**-0.6**
	455nm,0.5s						
CHKK				*e*S	**Sb**	**12 48 16.0**	**+0.5**
	465nm,0.3s						
CHKK	**Chushkaly**	**2.65**	**3**	Pg	**Pb**	**12 47 42.0**	**-0.6**
	455nm,0.5s						
CHKK				Lg	Lg	12 48 16.0	
	465nm,0.3s						
USP	**Ospenovka**	**2.68**	**321**	⇓*i*P	**Pn**	**12 47 40.3**	**+1.6**
	baz=20						
USP				⇓*i*S	**Sn**	**12 48 13.2**	**+1.4**
	baz=20						
USP	**Ospenovka**	**2.68**	**321**	⇑P	**Pb**	**12 47 42.2**	**-1.0**
	99nm,0.3s,SNR=181						
EKS2	**Erkin-Say**	**2.69**	**304**	⇑*i*P	**Pn**	**12 47 40.6**	**+1.7**
	baz=3.0						
EKS2				⇑*i*S	**Sn**	**12 48 14.0**	**+1.8**
	baz=3.0						
KUU	**Kurty**	**2.71**	**353**	*e*P	**Pb**	**12 47 42.7**	**-0.9**
	71nm,0.4s						
KUU				*e*S	**Sb**	**12 48 17.9**	**+0.6**
	415nm,0.9s						
KUU	**Kurty**	**2.71**	**353**	Pg	**Pb**	**12 47 42.7**	**-0.9**
	71nm,0.4s						
KUU				Lg	Lg	12 48 17.9	
	415nm,0.9s						
SHLS	**Shalkode**	**2.77**	**44**	*e*P	**Pg**	**12 47 49.1**	**+1.7**
	332nm,0.8s						
SHLS				*e*S	**Sg**	**12 48 29.0**	**+5.8**
	1µm,1.2s						
SHLS	**Shalkode**	**2.77**	**44**	Pg	**Pg**	**12 47 49.1**	**+1.7**
	332nm,0.8s						
SHLS				Lg	Lg	12 48 29.0	
	1µm,1.2s						
SGDS	**Sogindy**	**2.77**	**325**	Pg	**Pb**	**12 47 44.3**	**-0.4**
	221nm,0.6s						
SGDS				Lg	Lg	12 48 20.1	
	158nm,1.0s						
PDGK	**Podgornoye**	**2.90**	**42**	Pg	**Pb**	**12 47 45.2**	**-1.7**
	62nm,0.5s						
PDGK				Lg	Lg	12 48 24.3	
	652nm,0.9s						
PDGK	**Podgornoye**	**2.90**	**42**	⇓Pg	**Pb**	**12 47 45.5**	**-1.5**
	72nm,0.5s						
PDGK				⇑Lg	Lg	12 48 24.9	
	1µm,0.6s						
MRKS	**Merke**	**3.09**	**301**	*e*P	**Pb**	**12 47 51.2**	**+1.1**
	90nm,0.5s						
MRKS				*e*S	**Sg**	**12 48 32.4**	**-1.1**
	79nm,0.8s						
MRKS	**Merke**	**3.09**	**301**	Pg	**Pb**	**12 47 51.2**	**+1.1**
	90nm,0.5s						
MRKS				Lg	Lg	12 48 32.4	
	79nm,0.8s						
ARXS	**Arharly**	**3.10**	**14**	*e*P	**Pb**	**12 47 48.4**	**-1.8**
	314nm,0.8s						
ARXS				*e*S	**Sb**	**12 48 27.5**	**-0.9**
	630nm,0.7s						
ARXS	**Arharly**	**3.10**	**14**	Pg	**Pb**	**12 47 48.4**	**-1.8**
	314nm,0.8s						
ARXS				Lg	Lg	12 48 27.5	
	630nm,0.7s						
MNBS	**Baschi**	**3.10**	**22**	*e*P	**Pb**	**12 47 50.1**	**-0.1**
	131nm,0.8s						
MNBS				*e*S	**Sg**	**12 48 30.4**	**-3.4**
	776nm,0.4s						
MNBS	**Baschi**	**3.10**	**22**	Pg	**Pb**	**12 47 50.1**	**-0.1**
	131nm,0.8s						
MNBS				Lg	Lg	12 48 30.4	
	776nm,0.4s						
OHH	**Osh**	**3.13**	**259**	⇑*e*P	**Pn**	**12 47 47.4**	**+2.5**
	baz=58						
OHH				⇑*i*S	**Sn**	**12 48 25.7**	**+2.7**
	baz=58						
KTMS	**Ketmen**	**3.45**	**48**	*e*P	**Pb**	**12 47 56.2**	**0.0**
	31nm,0.6s						
KTMS				*e*S	**Sg**	**12 48 40.7**	**-4.3**
	343nm,0.6s						
KTMS	**Ketmen**	**3.45**	**48**	Pg	**Pb**	**12 47 56.2**	**0.0**
	31nm,0.6s						
KTMS				Lg	Lg	12 48 40.7	
	343nm,0.6s						
MNAS	**Manas**	**3.47**	**293**	⇓*e*P	**Pn**	**12 47 51.3**	**+1.8**
	baz=93						
MNAS				⇓*i*S	**Sn**	**12 48 32.7**	**+1.4**
	baz=93						
DJR	**Jarkent**	**3.81**	**34**	*e*P	**Pb**	**12 48 02.4**	**0.0**
	26nm,0.9s						
DJR				*e*S	**Sb**	**12 48 51.5**	**+2.3**
	174nm,0.4s						
DJR	**Jarkent**	**3.81**	**34**	Pg	**Pb**	**12 48 02.4**	**0.0**
	26nm,0.9s						
DJR				Lg	Lg	12 48 51.5	
	174nm,0.4s						

TDK	Taldyqorghan	3.97	17	*e*P	Pb	12 48 05.2	+0.2
	128nm,0.5s						
TDK				*e*S	Sb	12 48 56.0	+2.5
	377nm,0.5s						
TDK	Taldyqorghan	3.97	17	Pg	Pb	12 48 05.3	+0.2
	128nm,0.5s						
TDK				Lg	Lg	12 48 56.0	
	377nm,0.5s						
TRKS	Terek-Say	4.29	276	⇑*e*P	Pn	12 48 02.6	+1.8
	baz=75						
TRKS				⇑*i*S	Sn	12 48 52.2	+0.7
	baz=75						
BTLS	Baital	4.34	333	*e*P	Pb	12 48 12.6	+1.4
	55nm,0.8s						
BTLS				*e*S	Sg	12 49 09.0	-4.6
	8.1nm,0.7s						
BTLS	Baital	4.34	333	Pg	Pb	12 48 12.6	+1.4
	55nm,0.8s						
BTLS				Lg	Lg	12 49 09.0	
	8.1nm,0.7s						
KAPS	Kapalarasan	4.48	24	*e*P	Pb	12 48 14.8	+1.0
	54nm,0.8s						
KAPS				*e*S	Sg	12 49 12.2	-5.9
	113nm,0.5s						
KAPS	Kapalarasan	4.48	24	Pg	Pb	12 48 14.8	+1.0
	54nm,0.8s						
KAPS				Lg	Lg	12 49 12.2	
	113nm,0.5s						
BTK	Batken	4.71	258	⇑*e*P	Pn	12 48 09.2	+2.7
	baz=58						
BTK				⇑*e*S	Sn	12 49 03.4	+1.6
	baz=58						
KK31	Karatay Array	5.06	294	⇓Pg	Pb	12 48 26.4	+2.8
	5.6nm,0.4s,baz=118,slow=17,SNR=81						
KK31				⇑Lg	Lg	12 49 35.6	
	16nm,0.6s,baz=119,slow=31,SNR=5.2						
IUG	Iuzhnay	5.17	283	*e*P	Pb	12 48 29.3	+3.7
	7.3nm,0.6s						
IUG				*e*S	Sg	12 49 37.4	-2.9
	72nm,1.1s						
BRLS	Borolday	5.50	292	*e*P	Pg	12 48 36.6	-3.1
	3.1nm,0.3s						
BRLS				*e*S	Sg	12 49 49.9	-1.1
	40nm,0.9s						
MAKZ	Makanchi	6.72	32	⇓Pn	Pn	12 48 37.0	+2.9
	3.6nm,0.8s						
MAKZ				⇓Lg	Lg	12 50 29.6	
	16nm,0.8s						
MK31	Makanchi Array	6.84	33	⇓Pn	Pn	12 48 38.1	+2.4
	12nm,0.8s,baz=206,slow=14,SNR=39						
MK31				⇓Lg	Lg	12 50 31.5	
	11nm,0.7s,baz=220,slow=27,SNR=5.3						
MKAR	Makanchi Array	6.84	33	Pn	Pn	12 48 38.2	+2.6
	0.7nm,0.3s,baz=204,slow=15,SNR=28						
MKAR				Lg	Lg	12 50 23.9	
	2.8nm,0.3s,baz=219,slow=28,SNR=5.5						
CEP	Cherat	8.34	209	P	Pn	12 48 59.5	+3.1
CEP				S	Sn	12 50 32.0	+0.7
WMQ	Urumqi	8.45	68	*e*P	Pn	12 48 59.3	+1.4
WMQ				S	Sn	12 50 34.3	+0.4
WMQ				smax	smax		
	comp=N,24nm,0.9s						
WMQ				smax	smax		
	comp=E,20nm,1.5s						
DHRM	DHARAMSHALA	8.95	183	*e*P	Pn	12 49 05.9	+1.0
DHRM				*e*S	Sn	12 50 44.4	-2.1
THW	Thamme Wali	9.32	207	P	Pn	12 49 12.2	+2.4
KURBB	Kurchatov Arra	9.49	7	Pn	Pn	12 49 11.9	-0.1
	0.1nm,0.3s,baz=192,slow=12,SNR=14						
KURBB				Lg	Lg	12 51 51.6	
	0.2nm,0.3s,baz=190,slow=32,SNR=4.7						
KURBB	Kurchatov Arra	9.49	7	⇑Pn	Pn	12 49 12.4	+0.3
	2.8nm,0.6s						
KURBB				⇑Lg	Lg	12 52 00.8	
	41nm,0.8s						
KURK	Kurchatov	9.59	7	⇓Pn	Pn	12 49 14.7	+1.3
	4.4nm,0.9s						
KURK				⇑Lg	Lg	12 52 01.9	
	47nm,1.0s						
SMLA	Simla	10.06	178	*e*P	Pn	12 49 19.9	0.0
SMLA				*e*S	Sn	12 51 07.5	-5.9
SMLA				IAML		12 51 11.1	
	comp=E,30nm,0.3s						
SMLA				IAML		12 51 14.8	
	comp=N,33nm,0.0s						
BVAR	Borovoye Array	12.60	342	Pn	Pn	12 49 58.5	+4.0
	comp=N,0.2nm,0.3s,baz=77,slow=7.8,SNR=4.0						
BVAR				Lg	Lg	12 53 28.7	
	comp=N,0.3nm,0.3s,baz=326,slow=33,SNR=4.1						
KUDL	Kundal	13.03	181	*e*P	Pn	12 49 58.2	-2.4
ZALV	Zalesovo Beam	13.83	20	Pn	Pn	12 50 12.0	+0.7
	comp=N,0.3nm,0.3s,baz=219,slow=12,SNR=7.3						
ZALV				Lg	Lg	12 54 14.1	
	comp=N,0.1nm,0.3s,baz=215,slow=24,SNR=3.9						
AKTO	Aktyubinsk	15.99	312	Pn	Pn	12 50 39.9	-0.4
	comp=N,0.1nm,0.3s,baz=139,slow=8.8,SNR=4.1						
GTA	Gaotai	17.63	88	*e*P	P	12 51 04.9	+2.6
GTA				sP	sP	12 51 14.3	+10
GTA				pmax	pmax		
	comp=N,2.0nm,1.4s						
BHPL	Bhopal	17.92	178	IAML		12 47 56.4	
	comp=E,1µm,0.0s						
BHPL				IAML		12 47 56.5	
	comp=N,603nm,0.0s						
ARU	Arti	19.31	328	P	Pn	12 51 22.4	+0.9
	comp=N,0.0nm,0.3s,baz=302,slow=16,SNR=1.1						
SONM	Songino Array	22.02	63	P	P	12 51 50.6	+0.5
	comp=N,1.8nm,1.0s,baz=266,slow=11,SNR=18						
BRTR	Keskin Array B	32.64	282	P	P	12 53 28.3	+0.5
	comp=N,1.4nm,0.7s,baz=98,slow=8.9,SNR=3.4						
FINES	FINESS Array B	36.39	321	P	P	12 54 00.5	+0.7
	comp=N,1.4nm,0.9s,baz=116,slow=9.4,SNR=1.3						
ARCES	ARCESS Array B	38.72	334	P	P	12 54 19.7	+0.2
	comp=N,6.3nm,1.0s,baz=106,slow=9.4,SNR=3.6						
INK	Inuvik	68.46	12	P	P	12 57 56.3	-1.1
	comp=N,0.7nm,0.6s,baz=22,slow=2.4,SNR=2.9						
ILAR	Eielson Array	68.95	18	P	P	12 57 59.8	-0.8
	comp=N,0.4nm,0.9s,baz=318,slow=4.9,SNR=4.8						
TORD	Torodi Ar. Bea	70.30	270	P	P	12 58 07.9	-1.7
	comp=N,0.9nm,0.6s,baz=51,slow=5.9,SNR=2.8						
YKA	Yellowknife Ar	76.24	5	P	P	12 58 43.0	-1.0
	comp=N,0.3nm,0.6s,baz=352,slow=5.7,SNR=5.7						
WRA	Warramunga Arr	80.87	127	P	P	12 59 07.7	-2.4
	comp=N,0.2nm,0.8s,baz=310,slow=7.6,SNR=1.3						
ASAR	Alice Springs	83.46	129	P	P	12 59 20.5	-3.1
	comp=N,0.2nm,0.7s,baz=313,slow=5.2,SNR=4.5						

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*SKO **13** 13:13:41.6, 41.°40N×22.°70E, h15^{km}*
*SOF **13** 13:13:41.9, 41.°38N×22.°73E, h10^{km}, MD2.6*
*BEO **13** 13:13:42.6±0.3, 41.°38N×22.°74E, h0^{km}, ML1.8/7, Mining explosion.*
*THE **13** 13:13:42.7, 41.°36N×22.°73E, h7^{km}±6^{km}, ML1.9/5, Error ellipse: s-maj=6.7km s-min=0.8km az=164.0*
*ATH **13** 13:13:42.9, 41.°38N×22.°77E, h8^{km}±4^{km}, ML2.3/2, Error ellipse: s-maj=5.4km s-min=2.1km az=160.0*
ISC 13 13:13:41.9±0.9**, 41.°40N**±0.°02×**22.°72E**±0.°02**, h0**^{km}**, n35, σ0.^{s}61**/54**, 2C-2D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VAY	Valandovo	0.14	234	*e*Pg	Pg	13 13 45.1	+0.6
VAY				*e*Sg	Sg	13 13 47.0	+0.7
VAY	Valandovo	0.14	234	⇓*i*Pg	Pg	13 13 45.2	+0.7
VAY				*i* Sg	Sg	13 13 47.3	+1.1
VAY				*e*Lg	Lg	13 13 47.5	
	comp=E,516nm,0.3s						
KNT	Kendrikon	0.28	150	P	Pg	13 13 47.6	+0.4
KNT				S	Sg	13 13 51.2	+0.4
KNT				AML	AML	13 13 51.7	
	comp=N,2547µm,0.2s						
KNT				AML	AML	13 13 51.7	
	comp=E,2340µm,0.1s						
KNT	Kendrikon	0.28	150	P	Pg	13 13 47.6	+0.4
KNT				S	Sg	13 13 51.1	+0.4
	comp=E,1µm,0.2s						
KNT	Kendrikon	0.28	150	⇑*i*Pg	Pg	13 13 47.6	+0.4
KNT				*i* Sg	Sg	13 13 51.2	+0.4
STIP	Stip	0.49	306	*i* Pg	Pg	13 13 50.3	-1.0
STIP				*i* Sg	Sg	13 13 56.2	-1.6
STIP				*e*Lg	Lg	13 13 56.2	
	comp=E,47nm,0.2s						
GRG	Griva	0.51	208	P	Pg	13 13 51.6	0.0
GRG				S	Sg	13 13 58.4	+0.3
	comp=E,168nm,0.3s						
GRG	Griva	0.51	208	⇑*i*Pg	Pg	13 13 51.6	0.0
GRG				*i* Sg	Sg	13 13 58.6	+0.5
KKB	Krupnik	0.54	30	*i* Pg	Pg	13 13 53.1	+0.9
SRS	Serrai	0.72	113	P	Pg	13 13 55.7	0.0
SRS				S	Sg	13 14 04.6	-0.3
SRS	Serrai	0.72	113	P	Pg	13 13 55.8	+0.2
SRS	Serrai	0.72	113	*e*Pg	Pg	13 13 54.6	-1.0
SRS				*e*Sg	Sg	13 14 04.2	-0.7
SRS	Serrai	0.72	113	*i* Pg	Pg	13 13 55.8	+0.2
SRS				*i* Sg	Sg	13 14 05.3	+0.4
SOH	Sokhos	0.75	140	P	Pg	13 13 56.7	+0.4
SOH				S	Sg	13 14 06.2	+0.1
SOH				AML	AML	13 14 07.8	
	comp=N,371µm,0.5s						
SOH				AML	AML	13 14 08.6	
	comp=E,456µm,0.4s						
SOH	Sokhos	0.75	140	P	Pg	13 13 56.7	+0.4
SOH				S	Sg	13 14 06.4	+0.4
	comp=E,165nm,0.3s						
SOH	Sokhos	0.75	140	⇓*i*Pg	Pg	13 13 56.8	+0.5
SOH				*i* Sg	Sg	13 14 06.5	+0.4
MMB	Musomiste	0.78	76	Pg	Pg	13 13 57.4	+0.6
HORT	Hortiatis	0.85	160	P	Pg	13 13 58.1	-0.2
HORT	Hortiatis	0.85	160	P	Pg	13 13 58.0	-0.2
HORT				S	Sg	13 14 09.6	+0.3
	comp=E,45nm,0.4s						
NVR	Nevrokopi	0.86	93	P	Pg	13 13 58.3	-0.1
NVR	Nevrokopi	0.86	93	P	Pg	13 13 58.6	+0.2
NVR				S	Sg	13 14 10.7	+1.1
	comp=E,40nm,0.1s						
BOSS	Bosilegrad	1.11	351	*e*Pg	Pg	13 14 03.6	+0.5
BOSS				*e*Sg	Sg	13 14 17.2	-0.3
PLG	Polygyros	1.17	152	P	Pg	13 14 04.1	-0.1
PLG	Polygyros	1.17	152	P	Pg	13 14 04.2	0.0
VTS	Vitosha	1.27	17	*e*Pg	Pg	13 14 06.3	0.0
VTS				*e*Sg	Sg	13 14 23.4	+0.6
VTS	Vitosha	1.27	17	P	Pg	13 14 06.6	+0.3
KAVA	Kavala	1.42	106	P	Pn	13 14 08.4	-0.5
OUR	Ouranopolis	1.43	138	P	Pn	13 14 08.7	-0.4
RZN	Rozhen	1.53	79	P	Pg	13 14 11.1	0.0
PLD	Plovdiv	1.64	64	*e*Sg	Sg	13 14 35.2	+0.5
THAS	Thassos island	1.71	117	P	Pn	13 14 12.2	-0.7
ZAPS	Zavoj	1.87	358	*e*Pn	Pb	13 14 16.3	-0.7
ZAPS				*e*Sg	Sg	13 14 41.7	-0.3
MPEP	Malo Peshtene	2.09	21	P	Pg	13 14 22.4	+0.4
ZAGS	Zajecar	2.44	352	*e*Sg	Pn	13 14 24.0	+1.1
ZAGS	Zajecar	2.44	352	*e*Pn	Sg	13 15 01.5	+1.4

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*ISK **13** 13:18:28.0, 35.°31N×26.°06E, h5^{km}, ML3.5/22*
*THE **13** 13:18:28.4, 35.°29N×26.°10E, h4^{km}±3^{km}, ML3.6/9, Error ellipse: s-maj=3.3km s-min=0.5km az=186.0*
*ATH **13** 13:18:28.3, 35.°31N×26.°11E, h12^{km}±3^{km}, ML3.7/10, Error ellipse: s-maj=3.7km s-min=1.0km az=166.0*
*NIC **13** 13:18:28.1±0.0, 35.°26N×26.°09E, h15^{km}, Ml3.7/3*
*IDC **13** 13:18:32.9±2.7, 35.°19N×26.°14E, h40^{km}±24^{km}, mb3.7/11, mb1 3.8/17, mb1mx3.6/45, mbtmp3.9/17, ML3.8/6, MS3.0/3, Ms1 3.0/3, ms1mx2.4/41, Error ellipse: s-maj=21.6km s-min=18.7km az=167.0*
*DDA **13** 13:18:33.0, 35.°60N×26.°06E, h9^{km}±5^{km}, MW3.8*
ISC 13 13:18:28.2±0.9**, 35.°30N**±0.°02×**26.°09E**±0.°02**, h7**^{km}±6^{km}**, n107, σ1.^{s}53**/143**, mb4.0**/11**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STIA	Sitia Lasithi	0.10	182	P	Pg	13 18 29.9	-0.5
STIA				S	Sg	13 18 31.6	-0.4
ZKR	Zakros	0.21	151	P	Pg	13 18 32.8	+0.4
ZKR				S	Sg	13 18 35.7	+0.4
ZKR				AML	AML	13 18 36.9	
	comp=E,66567µm,0.4s						
ZKR				AML	AML	13 18 36.9	
	comp=N,33418µm,0.5s						
ZKR	Zakros	0.21	151	P	Pg	13 18 32.9	+0.5
ZKR				S	Sg	13 18 36.1	+0.9
	comp=N,25µm,0.5s						
ZKR	Zakros	0.21	151	PG	Pg	13 18 33.0	+0.5
ZKR				SG	Sg	13 18 36.7	+1.4
ZKR	Zakros	0.21	151	P	Pg	13 18 32.6	+0.2
ZKR				AML	AML	13 18 35.5	
	comp=N,31nm,0.5s						
ZKR				AML	AML	13 18 35.5	
	comp=N,31nm,0.5s						
ZKR				AML	AML	13 18 35.8	
	comp=N,61nm,0.4s						
ZKR				AML	AML	13 18 35.8	
	comp=N,61nm,0.4s						
ZKR				S	Sg	13 18 36.1	+0.9
NPS	Neapolis	0.40	265	P	Pg	13 18 36.6	+0.6
NPS				S	Sg	13 18 41.8	+0.7
NPS				AML	AML	13 18 42.8	
	comp=E,26312µm,0.5s						
NPS				AML	AML	13 18 43.1	
	comp=N,24050µm,0.8s						
NPS	Neapolis	0.40	265	P	Pg	13 18 36.8	+0.9
NPS				S	Sg	13 18 42.5	+1.4
	comp=N,13µm,0.8s						
FRMA	Ierapetra Chan	0.41	226	P	Pg	13 18 35.2	-1.0
FRMA				S	Sg	13 18 41.0	-0.6
	comp=N,16µm,0.3s						
LAST	Lasithi	0.52	255	P	Pg	13 18 38.7	+0.3
LAST				S	Sg	13 18 46.0	+0.8
LAST				AML	AML	13 18 47.5	
	comp=E,11690µm,0.8s						
LAST				AML	AML	13 18 52.2	
	comp=N,11951µm,0.6s						
LAST	Lasithi	0.52	255	P	Pg	13 18 38.8	+0.5
LAST				S	Sg	13 18 46.4	+1.2
	comp=N,6µm,0.7s						
HRKL	Herakleio	0.81	271	P	Pg	13 18 44.5	+0.7
HRKL				S	Sb	13 18 57.0	+1.3
	comp=N,9µm,0.6s						
HRKL	Herakleio	0.81	271	PG	Pg	13 18 43.7	-0.1
HRKL				SG	Sg	13 18 55.0	+0.6
IACM	Heraklion	0.84	271	P	Pg	13 18 45.3	+1.0
KSTL	Kastelli Herak	0.84	271	P	Pg	13 18 41.2	-3.1
KSTL				S	Sg	13 18 49.7	-5.5
KARP	Karpathos	0.91	74	P	Pg	13 18 45.4	-0.2
KARP				S	Sb	13 18 58.1	-0.4
KARP				AML	AML	13 19 10.7	
	comp=N,10860µm,0.6s						
KARP				AML	AML	13 19 11.9	
	comp=E,9179µm,0.5s						
KARP	Karpathos	0.91	74	P	Pg	13 18 45.4	-0.2
KARP				S	Sb	13 18 58.6	+0.1
	comp=E,5µm,0.5s						
KARP	Karpathos	0.91	74	PG	Pb	13 18 45.9	-0.3
KARP				SG	Sn	13 18 59.9	-0.8
KARP	Karpathos	0.91	74	P	Pg	13 18 45.5	-0.1
KARP				S	Sb	13 18 59.1	+0.6
KARP				AML	AML	13 19 10.0	
	comp=E,11nm,0.6s						
KARP				AML	AML	13 19 10.0	
	comp=E,11nm,0.6s						
KARP				AML	AML	13 19 11.5	
	comp=E,9.3nm,0.5s						
KARP				AML	AML	13 19 11.5	
	comp=E,9.3nm,0.5s						
SIVA	Sivas	1.09	255	P	Pg	13 18 49.2	+0.1
SIVA				S	Sg	13 19 02.9	-0.3
SIVA				AML	AML	13 19 13.6	
	comp=E,14760µm,0.5s						
SIVA				AML	AML	13 19 15.6	
	comp=N,10102µm,0.6s						
SIVA	Sivas	1.09	255	P	Pg	13 18 49.2	+0.1
SIVA				S	Sg	13 19 04.3	+1.1
	comp=N,6µm,0.6s						
SANT	Santorini	1.19	334	P	Pb	13 18 50.1	-1.0
SANT				S	Sb	13 19 05.8	-0.8
SANT				AML	AML	13 19 09.6	
	comp=E,11783µm,0.4s						
SANT				AML	AML	13 19 12.8	
	comp=N,2706µm,0.5s						
SANT	Santorini	1.19	334	P	Pb	13 18 50.1	-1.0
SANT				S	Sn	13 19 07.9	+0.3
	comp=N,4µm,0.5s						
SANT	Santorini	1.19	334	PN	Pb	13 18 50.6	-0.4
SANT				SN	Sn	13 19 06.8	-0.8
SANT	Santorini	1.19	334	*i* P	Pb	13 18 50.3	-0.8
SANT				*i* S	Sb	13 19 06.0	-0.6
THR6	Thira Island,	1.20	332	P	Pn	13 18 50.9	-0.4
THR8	Santorini-Mono	1.21	336	P	Pb	13 18 50.6	-0.8
SNT1	Gialos, Santor	1.24	334	P	Pb	13 18 51.3	-0.6
SNT5	Nea Kammeni, S	1.24	333	P	Pb	13 18 51.1	-0.8
THT2	Imerovigli	1.26	334	PN	Pn	13 18 52.5	+0.3
VAM	Vamos	1.55	274	P	Pn	13 18 56.1	-0.1
VAM				AML	AML	13 19 20.6	
	comp=N,5121µm,0.4s						
VAM				AML	AML	13 19 23.1	
	comp=E,3968µm,0.6s						
VAM	Vamos	1.55	274	P	Pn	13 18 55.8	-0.4
NISR	Nisiros	1.56	32	P	Pb	13 18 56.3	-1.0
NISR				AML	AML	13 19 23.1	
	comp=E,8088µm,0.3s						
NISR				AML	AML	13 19 26.5	
	comp=N,3859µm,0.4s						
KOSK	Kos Island	1.62	26	PN	Pg	13 18 58.2	-1.0
GVDS	Gavdos	1.71	255	PN	Pn	13 18 59.2	+0.9
GVD	Gavdhos	1.71	255	P	Pb	13 19 00.6	+0.7
GVD	Gavdhos	1.71	255	PN	Pn	13 18 58.9	+0.5
IMMV	Iera Moni Meta	1.73	276	P	Pn	13 18 58.6	-0.1
IMMV				AML	AML	13 19 37.3	
	comp=N,3220µm,0.6s						
IMMV				AML	AML	13 19 38.9	
	comp=E,3038µm,0.7s						
IMMV	Iera Moni Meta	1.73	276	PN	Pn	13 18 59.3	+0.6
APE	Apeiranthos	1.82	346	P	Pn	13 18 59.4	-0.6
APE	Apeiranthos	1.82	346	PN	Pn	13 18 59.7	-0.3
APE	Apeiranthos	1.82	346	*i* P	Pn	13 18 59.2	-0.8
APE				*i* S	Sn	13 19 20.0	-3.4
APE	Apeiranthos	1.82	346	P	Pn	13 18 59.3	-0.8
ARG	Arkhangelos	1.89	60	P	Pn	13 19 01.3	+0.4
ARG	Arkhangelos	1.89	60	P	Pn	13 19 01.2	+0.4
ARG				S	Sn	13 19 24.9	0.0
	comp=E,930nm,0.6s						
ARG	Arkhangelos	1.89	60	PN	Pn	13 19 01.6	+0.8
ARG	Arkhangelos	1.89	60	P	Pn	13 19 00.4	-0.4
ARG				S	Sn	13 19 25.3	+0.4
DATC	Datca-Mugla	1.93	41	PN	Pb	13 19 02.7	-1.0
MHLO	Agia Marina, M	1.95	316	P	Pn	13 19 02.4	+0.7
MHLO				AML	AML	13 19 35.9	
	comp=N,4732µm,0.5s						
MHLO				AML	AML	13 19 36.6	
	comp=E,4406µm,0.6s						
BODT	Bodrum	2.02	29	PN	Pb	13 19 03.9	-1.3
BDRM	Kayabasi	2.07	31	*i* P	Pg	13 19 08.8	+0.8
BDRM				*i* S	Sg	13 19 36.5	+1.6
MRSB	Marmaris-Mugla	2.21	50	PN	Pb	13 19 06.9	-1.6
TURN	Turunc	2.28	49	PN	Pn	13 19 06.8	+0.6
TURN	Turunc	2.28	49	*i* P	Pn	13 19 05.6	-0.7
TURN				*i* S	Sn	13 19 34.1	-0.5
DDIM	Aydin, Didim	2.34	23	*i* P	Pg	13 19 11.9	-1.2
DDIM				*i* S	Sg	13 19 48.6	+5.1
MLSB	Milas	2.41	34	PN	Pb	13 19 09.6	-2.3
YER	Yerkesik	2.55	43	PN	Pn	13 19 10.9	+0.9
GCAM	G?zelcaml?	2.56	21	PN	Pb	13 19 11.8	-2.7
GCAM	G?zelcaml?	2.56	21	*i* P	Pb	13 19 13.6	-0.9
DALY	Dalyan (Mula)	2.57	53	PN	Pn	13 19 11.9	+1.7
KTHA	Kythira Island	2.64	292	PN	Pn	13 19 12.2	+1.0
MULA	Mugla, Merkez-	2.66	42	*i* P	Pb	13 19 14.6	-1.5
MULA				*i* S	Sb	13 19 46.5	-2.4
FETY	Fethiye	2.77	60	PN	Pn	13 19 14.6	+1.7
DGB	zmir	2.82	13	*i* P	Pn	13 19 13.1	-0.5
KSL	Kastellorizon	2.96	72	P	Pn	13 19 18.2	+2.6
AYDB	Zeytinkoy-Aydi	3.01	28	PN	Pn	13 19 17.9	+1.5
CHOS	Chios island	3.08	359	PN	Pn	13 19 18.5	+1.2
TAVA	DENIZLI_Tavas	3.14	46	*i* P	Pn	13 19 19.6	+1.5
TAVA				*i* S	Sn	13 19 56.9	+1.0
BLCB	Balcova	3.17	14	PN	Pn	13 19 19.1	+0.6
CAEL	Denizli, Camel	3.18	54	*i* P	Pn	13 19 21.2	+2.5
GOLH	Golhisar	3.40	54	*i* P	Pn	13 19 22.8	+1.1
GOLH				*i* S	Sb	13 20 07.8	-2.7
ELL	Elmali	3.41	64	PN	Pn	13 19 23.7	+1.8
AKUM	Antalya-Kumluc	3.60	72	*i* P	Pn	13 19 23.5	-0.8
MANT	Manisa	3.75	31	*i* P	Pn	13 19 27.9	+1.3
MANT				*i* S	Sn	13 20 13.6	+2.6
KULA	Kula-Manisa	3.81	32	PN	Pn	13 19 29.2	+1.8
KORT	Korkueli	3.84	63	PN	Pn	13 19 29.8	+2.0
KORT	Korkueli	3.84	63	*i* P	Pn	13 19 30.5	+2.7
KORT				*i* S	Sb	13 20 18.4	-4.7
SIGR	SIGRI	3.91	357	PN	Pn	13 19 29.4	+0.8
BASM	Basmaki-Afyon	4.12	49	PN	Pn	13 19 33.7	+2.1
BUHA	Balikesir, Bur	4.27	10	*i* P	Pn	13 19 33.6	0.0
SIMA	Simav-Kutahya	4.42	31	PN	Pn	13 19 37.9	+2.1
BAYC	CANAKKALE_Bayr	4.45	5	*i* P	Pn	13 19 35.3	-0.8
BAYC				*i* S	Sn	13 20 25.4	-2.6
OSC1	CSNet OBS 1	4.64	111	P	Pn	13 19 38.1	-0.6
OSC1				S	Sn	13 20 33.2	+0.3
AKMS	Akamas	5.12	91	P	Pn	13 19 45.3	0.0
AKMS				S	Sn	13 20 44.8	+0.2
AKMS				AML	AML	13 20 46.0	
	comp=E,1.0nm,0.7s						
AKMS				AML	AML	13 20 46.0	
	comp=E,1.0nm,0.7s						
AKMS				AML	AML	13 20 46.5	
	comp=E,0.7nm,0.4s						
AKMS				AML	AML	13 20 46.5	
	comp=E,0.7nm,0.4s						
ALFC	Alefka	5.33	90	P	Pn	13 19 48.0	-0.1
OSC2	CSNet OBS 4	5.58	112	S	Sn	13 20 57.1	+1.3
CSS	Mathiatis	5.94	91	S	Sn	13 21 05.5	+0.6
MVOU	Mavrovouni	6.18	90	P	Pn	13 19 59.5	-0.3
BRTR	Keskin Array B	7.45	51	Pn	Pn	13 20 21.1	+3.8
	comp=E,0.3nm,0.3s,baz=216,slow=9.0,SNR=2.4						
MMAI	Mount Meron Ar	8.04	104	Pn	Pn	13 20 25.9	+0.3
	comp=E,2.0nm,0.3s,baz=309,slow=11,SNR=10						
MMAI				Sn	Sn	13 21 56.1	-0.6
	comp=E,4.4nm,0.3s,baz=315,slow=15,SNR=7.3						
EIL	Elat	9.35	124	Pn	Pn	13 20 42.4	-0.9
	comp=E,0.7nm,0.3s,baz=321,slow=4.7,SNR=7.6						
EIL				Sn	Sn	13 22 22.2	-6.5
	comp=E,0.9nm,0.3s,baz=329,slow=23,SNR=3.2						
MLR	Muntele Rosu	10.18	359	LR	LR	13 25 39.6	
	comp=E,81nm,20.0s,baz=172,slow=41						
VYHS	Vyhne	14.24	340	*e*PN	Pn	13 21 44.7	-5.4
KBZ	Khabaz	15.44	52	Pn	P	13 22 10.4	-0.6
	comp=E,0.1nm,0.3s,baz=226,slow=7.0,SNR=5.3						
AKASG	Malin Array Be	15.56	7	Pn	P	13 22 10.9	-1.3
	comp=E,2.8nm,0.3s,baz=200,slow=11,SNR=7.7						
GERES	GERESS Array B	16.34	330	Pn	P	13 22 22.1	+1.2
	comp=E,0.2nm,0.3s,baz=138,slow=11,SNR=4.4						
GEYT	Alibeck	25.77	75	P	P	13 24 01.6	+2.0
	comp=E,4.1nm,0.5s,baz=295,slow=8.0,SNR=7.0						
FINES	FINESS Array B	26.16	360	P	P	13 24 05.9	+3.1
	comp=E,0.5nm,0.5s,baz=175,slow=17,SNR=1.2						
NOA	NORSAR Array B	27.46	344	LR	LR	13 36 06.7	
	comp=E,20nm,18.6s,baz=235,slow=38						
AKTO	Aktyubinsk	27.59	47	P	P	13 24 16.2	+0.3
	comp=E,0.8nm,0.5s,baz=32,slow=19,SNR=2.8						
TORD	Torodi Ar. Bea	31.17	231	P	P	13 24 48.1	+0.2
	comp=E,2.2nm,0.4s,baz=31,slow=8.3,SNR=14						
TORD				LR	LR	13 39 08.9	
	comp=E,28nm,18.4s,baz=295,slow=40						
MKAR	Makanchi Array	43.06	57	P	P	13 26 28.9	+0.4
	comp=E,1.4nm,0.4s,baz=270,slow=7.8,SNR=22						
ZALV	Zalesovo Beam	44.35	46	P	P	13 26 37.9	-0.9
	comp=E,1.1nm,0.4s,baz=282,slow=7.2,SNR=4.6						
SONM	Songino Array	58.80	51	P	P	13 28 28.0	+0.7
	comp=E,0.4nm,0.6s,baz=289,slow=7.9,SNR=4.0						
CMAR	Chiang Mai Arr	65.80	84	P	P	13 29 14.9	+0.6
	comp=E,0.4nm,0.5s,baz=292,slow=8.5,SNR=4.5						
USRK	Ussuriysk Ar.	76.20	45	P	P	13 30 16.4	-0.7
	comp=E,0.8nm,0.5s,baz=280,slow=4.2,SNR=2.2						
YKA	Yellowknife Ar	77.55	342	P	P	13 30 23.2	-1.1
	comp=E,0.2nm,0.5s,baz=34,slow=5.4,SNR=5.8						
KSRS	Korea Array	77.59	53	P	P	13 30 25.3	+0.3
	comp=E,1.4nm,0.9s,baz=308,slow=4.5,SNR=3.5						

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*SOME **13** 13:36:31.6, 42.°20N×83.°57E, h5^{km}*
*NNC **13** 13:36:34.5±1.4, 42.°19N×83.°41E, h0^{km}, mb3.7, mpv3.4, Error ellipse: s-maj=11.1km s-min=6.1km az=159.0*
ISC 13 13:36:25.4±2.6**, 42.°0N**±0.°1×**83.°69E**±0.°08**, h10**^{km}**, n38, σ1.^{s}36**/51**, 8C-5D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTMS	Ketmen	2.86	302	*e*P	Pg	13 37 20.8	+0.5
	7.4nm,0.2s						
KTMS				*e*S	Sg	13 37 56.7	-0.7
	95nm,0.5s						
KTMS	Ketmen	2.86	302	Pg	Pg	13 37 20.8	+0.5
	7.4nm,0.2s						
KTMS				Lg	Lg	13 37 56.7	
	95nm,0.5s						
SHLS	Shalkode	3.34	292	*e*P	Pb	13 37 25.7	+0.9
	33nm,0.4s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SHLS				*e*S	Sb	13 38 04.7	-0.8
	80nm,0.6s						
SHLS	Shalkode	3.34	292	Pg	Pb	13 37 25.7	+0.9
	33nm,0.4s						
SHLS				Lg	Lg	13 38 04.7	
	80nm,0.6s						
PDGK	Podgornoye	3.38	295	Pg	Pg	13 37 30.6	+0.5
	3.3nm,0.3s						
PDGK				Lg	Lg	13 38 13.3	
	21nm,0.5s						
PDGK	Podgornoye	3.38	295	⇑Pg	Pb	13 37 28.2	+2.7
	3.4nm,0.3s						
PDGK				⇑Lg	Lg	13 38 11.9	
	24nm,0.5s						
UZB	Uzynbulak	3.64	290	*e*P	Pg	13 37 35.1	-0.1
	5.3nm,0.3s						
UZB				*e*S	Sg	13 38 21.0	-1.3
	35nm,0.5s						
UZB	Uzynbulak	3.64	290	Pg	Pg	13 37 35.1	-0.1
	5.3nm,0.3s						
UZB				Lg	Lg	13 38 21.0	
	35nm,0.5s						
DJR	Jarkent	3.70	311	*e*P	Pg	13 37 35.3	-1.0
	1.3nm,0.1s						
DJR				*e*S	Sg	13 38 21.3	-2.8
	21nm,0.3s						
DJR	Jarkent	3.70	311	Pg	Pg	13 37 35.3	-1.0
	1.3nm,0.1s						
DJR				Lg	Lg	13 38 21.3	
	21nm,0.3s						
KPKS	Kokpek	3.98	294	*e*P	Pg	13 37 42.1	+0.5
	7.8nm,0.1s						
KPKS				*e*S	Sg	13 38 32.7	-0.4
	46nm,0.3s						
SATY	Saty	4.05	287	*e*P	Pg	13 37 43.7	+0.6
	3.3nm,0.4s						
SATY				*e*S	Sg	13 38 35.7	+0.2
	18nm,0.1s						
SATY	Saty	4.05	287	Pg	Pg	13 37 43.7	+0.6
	3.3nm,0.4s						
SATY				Lg	Lg	13 38 35.7	
	18nm,0.1s						
KURS	Kuram	4.34	292	*e*P	Pg	13 37 48.6	+0.1
	2.5nm,0.6s						
KURS				*e*S	Sg	13 38 44.1	-0.6
	6.4nm,0.5s						
KURS	Kuram	4.34	292	Pg	Pg	13 37 48.6	+0.1
	2.5nm,0.6s						
KURS				Lg	Lg	13 38 44.1	
	6.4nm,0.5s						
MNBS	Baschi	4.41	300	*e*P	Pg	13 37 48.0	-1.9
	3.3nm,0.1s						
MNBS				*e*S	Sg	13 38 43.0	-3.9
	34nm,0.3s						
MNBS	Baschi	4.41	300	Pg	Pg	13 37 48.0	-1.9
	3.3nm,0.1s						
MNBS				Lg	Lg	13 38 43.0	
	34nm,0.3s						
KAPS	Kapalarasan	4.56	318	*e*P	Pg	13 37 53.8	+1.0
	3.1nm,0.3s						
KAPS				*e*S	Sg	13 38 53.0	+1.2
	17nm,0.7s						
KAPS	Kapalarasan	4.56	318	Pg	Pg	13 37 53.8	+1.0
	3.1nm,0.3s						
KAPS				Lg	Lg	13 38 53.0	
	17nm,0.7s						
ARXS	Arharly	4.84	299	*e*P	Pg	13 37 58.6	+0.5
	6.2nm,0.4s						
ARXS				*e*S	Sg	13 39 00.7	0.0
	17nm,0.5s						
ARXS	Arharly	4.84	299	Pg	Pg	13 37 58.6	+0.5
	6.2nm,0.4s						
ARXS				Lg	Lg	13 39 00.7	
	17nm,0.5s						
MK31	Makanchi Array	4.92	349	⇑Pn	Pb	13 37 47.5	-4.1
	0.3nm,0.3s,baz=174,slow=12,SNR=26						
MK31				⇑Pg	Pg	13 38 00.6	+1.0
	2.0nm,0.4s,baz=168,slow=16,SNR=26						
MK31				⇓Lg	Lg	13 38 59.9	
	10.0nm,0.6s,baz=165,slow=27,SNR=12						
MAKZ	Makanchi	4.98	346	⇓Pn	Pn	13 37 47.7	+7.5
	0.9nm,0.6s						
MAKZ				⇓Pg	Pg	13 37 59.8	-1.0
	0.9nm,0.4s						
MAKZ				⇑Lg	Lg	13 39 03.2	
	3.7nm,0.6s						
MDOK	Medeo	5.04	286	Pg	Pg	13 38 03.1	+1.1
	3.9nm,0.6s						
MDOK				Lg	Lg	13 39 06.0	
	7.1nm,0.6s						
TNSS	Tian-Shan	5.09	284	*e*P	Pg	13 38 01.7	-1.3
	2.4nm,0.5s						
TNSS				*e*S	Sg	13 39 06.6	-2.5
	3.9nm,0.6s						
TNSS	Tian-Shan	5.09	284	Pg	Pg	13 38 01.7	-1.3
	2.4nm,0.5s						
TNSS				Lg	Lg	13 39 06.6	
	3.9nm,0.6s						
CHKK	Chushkaly	5.27	293	*e*P	Pg	13 38 07.9	+1.7
	2.3nm,0.2s						
CHKK				*e*S	Sg	13 39 16.9	+2.4
	12nm,0.3s						
CHKK	Chushkaly	5.27	293	Pg	Pg	13 38 07.9	+1.7
	2.3nm,0.2s						
CHKK				Lg	Lg	13 39 16.9	
	12nm,0.3s						
ZSN	Zaisan	5.53	8	*e*P	Pg	13 38 10.7	-0.7
	2.7nm,0.3s						
ZSN				*e*S	Sg	13 39 22.0	-1.0
	20nm,0.8s						
ZSN	Zaisan	5.53	8	Pg	Pg	13 38 10.7	-0.7
	2.7nm,0.3s						
ZSN				Lg	Lg	13 39 22.0	
	20nm,0.8s						
KUU	Kurty	5.72	292	*e*P	Pg	13 38 14.2	-0.9
	0.9nm,0.1s						
KUU				*e*S	Sg	13 39 27.9	-1.3
	6.4nm,0.2s						
KUU	Kurty	5.72	292	Pg	Pg	13 38 14.1	-0.9
	0.9nm,0.1s						
KUU				Lg	Lg	13 39 27.9	
	6.4nm,0.2s						
KST	Kastek	5.81	283	*e*P	Pg	13 38 16.9	+0.2
	6.8nm,1.0s						
KST				*e*S	Sg	13 39 32.6	+0.7
	5.9nm,0.6s						
KST	Kastek	5.81	283	Pg	Pg	13 38 16.9	+0.2
	6.8nm,1.0s						
KST				Lg	Lg	13 39 32.6	
	5.9nm,0.6s						
TKM2	Tokmak 2	6.06	282	⇓Pg	Pg	13 38 20.7	-0.8
	1.4nm,0.6s						
TKM2				⇓Lg	Lg	13 39 40.2	
	6.1nm,0.8s						
AAK	Ala-Archa	6.85	279	Pg	Pg	13 38 33.8	-2.8
	1.6nm,0.8s						
AAK				⇑Lg	Lg	13 40 06.4	
	4.4nm,0.8s						
KURBB	Kurchatov Arra	9.35	339	⇑Lg	Lg	13 41 21.4	
	6.7nm,0.7s						
KURK	Kurchatov	9.41	340	⇑Lg	Lg	13 41 22.1	
	5.1nm,0.7s						

ASRS 13 13:46:01.6±0.4**, 54˚N**±2˚×**9˚9E**±˚**, h0^{km}, MLh3.1**/8, **smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/iasp91 confirmed, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TDJR	Todzha	1.85	233	Pg	Pg	13 46 39.9	+2.9
TDJR				Sg	Sg	13 47 03.7	+2.8
MOY	Mondy	2.40	140	Pg	Pg	13 46 47.7	+0.1
MOY				Sg	Sg	13 47 18.4	-0.2
ORY	Orie	2.49	308	Pg	Pg	13 46 52.2	+3.0
ORY				Sg	Sg	13 47 25.7	+4.3
KTRR	Kuturchin	2.89	301	Pg	Pg	13 46 57.8	+0.8
KTRR				Sg	Sg	13 47 37.8	+3.4
KNGR	Kungurtug, Tuv	2.99	192	Pg	Pb	13 46 56.0	+0.1
KNGR				Sg	Sg	13 47 41.1	+3.4
KZLR	Kyzyl	3.08	235	Pg	Pg	13 47 01.5	+1.0
KZLR				Sg	Sg	13 47 42.1	+1.7
ARDR	Aradan	3.21	255	Pg	Pg	13 47 03.4	+0.3
ARDR				Sg	Sg	13 47 46.3	+1.5
BLRR	Bol'shaya Rech	3.69	265	Pg	Pg	13 47 12.6	+0.3
BLRR				Sg	Sg	13 48 01.6	+1.6
SHTK	Zheleznogorsk-	3.99	317	Sg	Sg	13 48 10.7	+1.0
CERR	Cheremushki	4.33	264	Sg	Sg	13 48 24.6	+4.1
DJOS	Djoyskaya Sosn	4.35	263	Sg	Sg	13 48 25.6	+4.5
DJO	Djoy, Khakassi	4.46	263	Sg	Sg	13 48 28.5	+3.8
TBTR	Tabat	4.72	266	Pg	Pg	13 47 31.4	-0.7
TBTR				Sg	Sg	13 48 33.3	+0.1
TRG	Tyrgan	4.78	96	Sg	Sb	13 48 29.5	+5.3
SHRR	Shira	5.02	284	Sg	Sg	13 48 46.2	+3.4
LUZB	Luzhba, Kemero	5.73	275	Sg	Sg	13 49 04.9	-0.6
ULGR	Ulagan, Altay	7.13	250	Sg	Sg	13 49 58.7	+8.3

IDC ***13*** *13:50:32.4±1.5, 3˚52S×149˚38E, h0^{km}, mb4.0/7, mb1 4.3/7, mb1mx3.9/28, mbtmp4.0/7, MS3.9/33, Ms1 3.9/33, ms1mx3.8/43, Error ellipse: s-maj=56.8km s-min=22.7km az=120.0*

GCMT ***13*** *13:50:40.0±0.2, 3˚40S±0˚01×149˚24E±0˚01, h16^{km}±1^{km}, MW4.9/113, Moment Tensor Solution. s45,c55; s113,c160; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.00±.09; $M_{\theta\theta}$1.30±.08; $M_{\phi\phi}$-1.30±.08; $M_{r\theta}$-0.00±.21; $M_{\theta\phi}$2.65±.07; $M_{\phi r}$-0.26±.21; Best double couple: $M_0$2.96300×10^{16} NP1:ϕ_s283.00000°, δ85.00000°, λ-1.00000°. NP2:ϕ_s13.00000°, δ89.00000°, λ-175.00000°. Principal axes: T 2.9580, Plg3.0000°, Azm148.0000°; N 0.0060, Plg85.0000°, Azm26.0000°; P -2.9680, Plg4.0000°, Azm238.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 13 13:50:35.6±1.4**, 3˚5S**±0˚2×**149˚3E**±0˚3**, h20^{km}, n45, σ1^{s}11**/8**, mb3.9**/7**, MS4.0**/31**, Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	6.23	200	LR	LR	13 54 38.2	
	comp=Z,858nm,21.4s,baz=1.0,slow=39						
JAY	Jayapura	8.67	276	LR	LR	13 55 36.8	
	comp=Z,605nm,21.7s,baz=74,slow=35						
HNR	Honiara	12.07	120	LR	LR	13 58 16.8	
	comp=Z,534nm,18.5s,baz=309,slow=39						
GUMO	Guam	17.56	345	LR	LR	14 00 06.6	
	comp=Z,405nm,20.9s,baz=130,slow=33						
WRA	Warramunga Arr	21.91	221	P	P	13 55 26.9	-1.0
	4.5nm,1.1s,baz=44,slow=11,SNR=13						
WRA				LR	LR	14 04 41.0	
	comp=Z,513nm,18.5s,baz=60,slow=39						
DZM	Mont Dzumac	24.82	139	LR	LR	14 04 32.1	
	comp=Z,798nm,21.2s,baz=304,slow=34						
DZM	Mont Dzumac	24.82	139	*e*LR	LR	14 02 25.3	
	comp=Z,1μm,22.9s						
ASAR	Alice Springs	24.97	215	P	P	13 55 58.1	+0.1
	5.4nm,1.0s,baz=52,slow=7.9,SNR=23						
ASAR				LR	LR	14 06 41.8	
	comp=Z,519nm,20.1s,baz=42,slow=39						
BATI	Baumata	26.32	254	LR	LR	14 07 56.9	
	comp=Z,559nm,20.0s,baz=92,slow=40						
FITZ	Fitzroy Crossi	27.35	236	P	P	13 56 21.0	+1.4
	11nm,1.0s,baz=61,slow=5.9,SNR=12						
FITZ				LR	LR	14 07 54.3	
	comp=Z,576nm,19.9s,baz=56,slow=38						
H11S3	WAKE ISLAND Hy	27.77	37	T	T	14 25 42.1	
	baz=220,slow=76,SNR=26						
H11S2	WAKE ISLAND Hy	27.77	37	T	T	14 25 41.4	
	baz=220,slow=76,SNR=25						
H11S1	WAKE ISLAND Hy	27.79	37	T	T	14 25 45.5	
	baz=220,slow=76,SNR=24						
H11N1	WAKE ISLAND Hy	28.83	36	T	T	14 27 18.2	
	baz=219,slow=76,SNR=13						
H11N3	WAKE ISLAND Hy	28.84	36	T	T	14 27 19.3	
	baz=219,slow=76,SNR=12						
H11N2	WAKE ISLAND Hy	28.84	36	T	T	14 27 19.5	
	baz=219,slow=76,SNR=21						
STKA	Stephens Creek	29.13	194	LR	LR	14 09 42.5	
	comp=Z,251nm,18.4s,baz=16,slow=40						
KAPI	Kappang	29.53	266	LR	LR	14 09 54.2	
	comp=Z,83nm,19.9s,baz=68,slow=39						
JCJ	Chichijima	31.21	348	LR	LR	14 08 32.9	
	comp=Z,213nm,19.8s,baz=164,slow=35						
MSVF	Nonsavu	31.49	119	LR	LR	14 10 32.7	
	comp=Z,82nm,18.8s,baz=302,slow=38						
TGY	Tagaytay City	33.15	302	LR	LR	14 07 51.1	
	comp=Z,160nm,20.0s,baz=126,slow=31						
JNU	Nakatsue	40.41	336	LR	LR	14 11 14.4	
	comp=Z,114nm,20.2s,baz=166,slow=31						
MJAR	Matsushiro Arr	41.18	346	LR	LR	14 13 44.0	
	comp=Z,76nm,18.1s,baz=170,slow=34						
LEM	Lembang	41.66	264	LR	LR	14 17 51.1	
	comp=Z,100nm,21.8s,baz=75,slow=39						
NWAO	Narrogin (SRO)	41.91	222	LR	LR	14 16 32.9	
	comp=Z,428nm,21.3s,baz=58,slow=37						
URZ	Urewera	42.88	147	LR	LR	14 13 52.2	
	comp=Z,402nm,20.5s,baz=20,slow=33						
RPZ	Rata Peaks	44.41	157	LR	LR	14 15 13.6	
	comp=Z,266nm,21.2s,baz=324,slow=33						
KSRS	Korea Array	45.36	336	LR	LR	14 15 00.1	
	comp=Z,114nm,21.6s,baz=160,slow=32						
USRK	Ussuriysk Ar.	49.99	344	LR	LR	14 20 17.2	
	comp=Z,26nm,18.3s,baz=146,slow=36						
CMAR	Chiang Mai Arr	54.20	296	P	P	14 00 00.3	+0.1
	0.4nm,0.3s,baz=117,slow=3.1,SNR=0.8						
CMAR				LR	LR	14 21 19.4	
	comp=Z,29nm,21.8s,baz=148,slow=34						
PETK	Petropavlovsk-	56.86	6	LR	LR	14 24 21.4	
	comp=Z,16nm,18.4s,baz=200,slow=36						
PPT	Papeete	61.41	108	LR	LR	14 24 23.4	
	comp=Z,36nm,18.9s,baz=110,slow=33						
PPT2	Papeete2	61.41	108	*e*LR	LR	14 19 20.4	
	comp=Z,111nm,27.2s						
TBI	Tubuai	62.24	114	*e*LR	LR	14 19 42.8	
	comp=Z,161nm,30.0s						
SONM	Songino Array	63.43	329	LR	LR	14 26 29.6	
	comp=Z,105nm,22.0s,baz=152,slow=34						
VNDA	Vanda	74.25	177	LR	LR	14 30 25.9	
	comp=Z,72nm,20.4s,baz=354,slow=32						
MKAR	Makanchi Array	77.10	320	P	P	14 02 27.9	+0.2
	0.4nm,0.9s,baz=104,slow=5.5,SNR=3.5						
MKAR				LR	LR	14 34 25.3	
	comp=Z,74nm,22.0s,baz=84,slow=34						
ZALV	Zalesovo Beam	78.19	327	LR	LR	14 36 01.6	
	comp=Z,87nm,21.9s,baz=114,slow=35						
ILAR	Eielson Array	82.31	23	P	P	14 02 55.8	+0.3
	0.5nm,0.9s,baz=261,slow=6.0,SNR=2.9						
NRIK	Noril'sk	83.65	342	LR	LR	14 39 11.3	
	comp=Z,64nm,21.2s,baz=117,slow=35						
MAW	Mawson	85.41	203	LR	LR	14 38 48.8	
	comp=Z,114nm,21.7s,baz=60,slow=34						
GEYT	Alibeck	93.09	308	LR	LR	14 46 15.6	
	comp=Z,48nm,21.4s,baz=15,slow=36						
NVAR	Mina Array Bea	94.02	52	LR	LR	14 38 35.7	
	comp=Z,85nm,21.4s,baz=290,slow=31						
YKA	Yellowknife Ar	95.91	28	P	P	14 04 00.8	+0.1
	0.4nm,0.8s,baz=278,slow=4.1,SNR=5.2						
TORD	Torodi Ar. Bea	146.62	289	PKPbc	PKPab	14 10 16.2	-1.8
	1.6nm,0.9s,baz=56,slow=3.0,SNR=3.8						

IDC 13 13:56:17.8±8.3**, 7˚87S**×**128˚40E, h168^{km}**±89^{km}**, mb3.1**/1**, mb1 3.1**/4**, mb1mx2.9**/33**, mbtmp3.5**/4**, Error ellipse: s-maj=88.6km s-min=24.5km az=38.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	5.22	243	P	Pn	13 57 35.1	+0.7
	40nm,0.3s,baz=126,slow=3.7,SNR=50						
BATI				S	Sn	13 58 34.9	+0.4
	5.3nm,0.3s,baz=246,slow=22,SNR=2.1						
FITZ	Fitzroy Crossi	10.51	195	P	Pn	13 58 42.7	-1.6
	0.2nm,0.3s,baz=28,slow=12,SNR=13						
FITZ				S	Sn	14 00 36.2	-4.7
	0.8nm,0.3s,baz=105,slow=17,SNR=4.3						
WRA	Warramunga Arr	13.31	155	P	Pn	13 59 19.8	-0.6
	0.3nm,0.3s,baz=332,slow=11,SNR=14						
ASAR	Alice Springs	16.57	162	P	Pn	14 00 02.1	+1.4
	0.1nm,0.3s,baz=343,slow=11,SNR=14						
MKAR	Makanchi Array	68.09	328	P	P	14 06 59.3	-0.2
	0.2nm,0.4s,baz=120,slow=7.5,SNR=1.7						

IDC 13 13:56:45.2±4.3**, 3˚49S**×**148˚66E, h0^{km}, mb3.8**/2**, mb1 4.2**/2**, mb1mx3.5**/34**, mbtmp3.9**/2**, Error ellipse: s-maj=159.8km s-min=49.2km az=107.0, Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.50	219	P	P	14 01 35.9	0.0
	4.9nm,0.9s,baz=44,slow=11,SNR=17						
ASAR	Alice Springs	24.61	214	P	P	14 02 07.5	+0.1
	2.4nm,1.0s,baz=51,slow=8.6,SNR=4.2						
TORD	Torodi Ar. Bea	145.98	288	PKPbc	PKPdf	14 16 27.1	-0.2
	2.3nm,0.7s,baz=92,slow=1.9,SNR=7.0						

IDC ***13*** *14:04:28.3±1.2, 7˚13S×120˚76E, h405^{km}±12^{km}, mb3.3/5, mb1 3.3/9, mb1mx3.1/51, mbtmp4.0/9, Error ellipse: s-maj=84.8km s-min=9.7km az=56.0*

ISC 13 14:04:28.0±0.9**, 7˚3S**±0˚2×**120˚7E**±0˚3**, h400^{km}, n20, σ2^{s}39**/19**, mb3.7**/4**, Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDFI	Ende, Flores	1.75	145	P	S	14 06 02.3	-4.4
MMRI	Maumere	2.04	131	P	S	14 06 09.3	-0.3
BKSI	Bulukumba	2.04	344	P	Pn	14 05 24.3	0.0
WSI	Waingapu	2.38	189	P	S	14 06 07.4	-6.4
KAPI	Kappang	2.45	338	P	Pn	14 05 27.6	+0.5
	32nm,0.3s,baz=180,slow=4.4,SNR=41						
BASI	Baing, Sumba	2.90	182	P	S	14 06 14.8	-6.1
BNSI	Bone	2.94	349	P	Pn	14 05 32.5	+1.7
PLAI	Plampang	3.25	242	P	Pn	14 05 58.0	+25
SPSI	Sidrap Palu	3.44	345	P	Pn	14 05 36.2	+1.2
TWSI	Taliwang, Sumb	4.02	249	P	Pn	14 06 03.2	+23
BATI	Baumata	4.13	135	P	Pn	14 05 42.1	+0.7
	15nm,0.3s,baz=270,slow=4.0,SNR=43						
BATI				S	S	14 06 35.5	-5.3
	29nm,0.3s,baz=160,slow=0.9,SNR=7.6						
BATI	Baumata	4.13	135	P	S	14 06 36.6	-4.2
	86nm,0.5s,2μm0.5nm						
SOEI	Soe	4.31	125	P	S	14 06 43.8	-0.4
FITZ	Fitzroy Crossi	11.77	156	P	P	14 07 06.5	+1.3
	0.1nm,0.3s,baz=334,slow=10,SNR=1.3						
WRA	Warramunga Arr	18.26	135	P	P	14 08 16.3	+0.9
	0.7nm,0.3s,baz=318,slow=11,SNR=24						
WRA				S	S	14 11 24.2	+1.0
	0.1nm,0.3s,baz=308,slow=25,SNR=2.7						
ASAR	Alice Springs	20.64	143	P	P	14 08 39.1	+0.7
	2.3nm,0.5s,baz=319,slow=8.2,SNR=50						
ASAR				S	S	14 12 06.2	+3.5
	0.5nm,0.8s,baz=332,slow=24,SNR=2.6						
STKA	Stephens Creek	31.27	144	P	P	14 10 13.8	+0.9
	2.3nm,0.4s,baz=312,slow=8.3,SNR=12						
SONM	Songino Array	56.33	348	P	P	14 13 28.8	-0.4
	0.5nm,0.6s,baz=160,slow=9.0,SNR=2.4						
MKAR	Makanchi Array	63.74	332	P	P	14 14 17.7	-1.0
	0.6nm,0.5s,baz=144,slow=7.4,SNR=16						
ZALV	Zalesovo Beam	68.08	338	P	P	14 14 44.3	-1.5
	1.2nm,0.4s,baz=144,slow=7.0,SNR=5.1						

IDC 13 14:05:35.9±2.6**, 5˚07S**×**149˚54E, h0^{km}, mb3.6**/3**, mb1 3.9**/3**, mb1mx3.4**/36**, mbtmp3.6**/3**, MS3.3**/2**, Ms1 3.3**/2**, ms1mx2.8**/28**, Error ellipse: s-maj=335.7km s-min=36.1km az=127.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	11.19	113	LR	LR	14 13 22.3	
	comp=Z,105nm,18.1s,baz=25,slow=42						
SRPI	Serui, Papua	13.65	283	P	P	14 09 05.6	+5.5
WRA	Warramunga Arr	20.92	224	P	P	14 10 19.8	-0.5
	1.8nm,1.0s,baz=41,slow=11,SNR=5.5						
ASAR	Alice Springs	23.86	218	P	P	14 10 51.5	+0.3
	1.0nm,0.8s,baz=60,slow=7.9,SNR=3.3						
ASAR				LR	LR	14 21 43.3	
	comp=Z,105nm,18.5s,baz=34,slow=41						
H11S3	WAKE ISLAND Hy	28.88	35	T	T	14 40 09.1	
	baz=215						
H11S2	WAKE ISLAND Hy	28.89	35	T	T	14 40 45.0	
	baz=215						
H11S1	WAKE ISLAND Hy	28.90	35	T	T	14 40 51.1	
	baz=215						
H11N1	WAKE ISLAND Hy	29.96	34	T	T	14 41 22.0	
	baz=223						
H11N3	WAKE ISLAND Hy	29.98	34	T	T	14 41 27.1	
	baz=223						
H11N2	WAKE ISLAND Hy	29.98	34	T	T	14 41 27.3	
	baz=223						
YKA	Yellowknife Ar	97.17	28	P	P	14 19 10.0	-0.1
	0.1nm,0.6s,baz=282,slow=4.3,SNR=2.3						

GCMT 13 14:17:45.0±0.3**, 3˚46S**±0˚01×**149˚30E**±0˚02**, h24^{km}**±1^{km}**, MW4.8**/79**, Moment Tensor Solution. s10,c12; s79,c108; Duration: 0 Moment tensor: Scale** 10^{16} **Nm;** M_{rr}0.29±.13; $M_{\theta\theta}$0.59±.09; $M_{\phi\phi}$-0.87±.10; $M_{r\theta}$-0.56±.13; $M_{\theta\phi}$1.85±.07; $M_{\phi r}$0.02±.11; **Best double couple:** $M_0$2.07400×10^{16} **NP1:**ϕ_s190.00000°, δ74.00000°, λ175.00000°. **NP2:**ϕ_s282.00000°, δ85.00000°, λ16.00000°. **Principal axes:** T 1.9670, Plg15.0000°, Azm147.0000°; N 0.2140, Plg73.0000°, Azm299.0000°; P -2.1810, Plg8.0000°, Azm55.0000°; **nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function Bismarck Sea**

IDC 13 14:25:59.0±7.2**, 3˚63S**×**148˚80E, h0^{km}, mb3.9**/4**, mb1 4.1**/4**, mb1mx3.7**/34**, mbtmp3.9**/4 **Error ellipse: s-maj=149.6km s-min=40.6km az=86.0, Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.49	220	P	P	14 30 48.5	-0.9
	4.2nm,0.8s,baz=43,slow=10,SNR=23						
ASAR	Alice Springs	24.57	215	P	P	14 31 20.1	-0.8
	0.9nm,0.7s,baz=46,slow=8.2,SNR=14						
FITZ	Fitzroy Crossi	26.85	236	P	P	14 31 43.2	+1.7
	4.6nm,0.9s,baz=67,slow=6.4,SNR=8.1						
H11S3	WAKE ISLAND Hy	28.18	38	T	T	15 00 28.4	
	baz=220,slow=76						
H11S2	WAKE ISLAND Hy	28.19	38	T	T	15 00 49.1	
	baz=220						
H11S1	WAKE ISLAND Hy	28.20	38	T	T	15 00 44.5	
	baz=220,slow=76						
H11N1	WAKE ISLAND Hy	29.23	37	T	T	15 01 57.3	
	baz=220						
H11N3	WAKE ISLAND Hy	29.25	37	T	T	15 01 47.9	
	baz=220						
H11N2	WAKE ISLAND Hy	29.25	37	T	T	15 01 58.3	
	baz=220						
CMAR	Chiang Mai Arr	53.78	296	P	P	14 35 23.4	-0.4
	0.4nm,0.3s,baz=106,slow=5.7,SNR=4.0						

IDC ***13*** *14:26:08.9±1.0, 35˚26N×26˚15E, h0^{km}, mb3.8/8, mb1 3.8/13, mb1mx3.6/46, mbtmp3.7/13, ML3.4/5, Error ellipse: s-maj=24.5km s-min=19.0km az=171.0*

ISK ***13*** *14:26:08.6, 35˚32N×26˚07E, h3^{km}, ML3.3/11*

NIC ***13*** *14:26:09.0±0.0, 35˚29N×26˚08E, h12^{km}±1^{km}, Ml3.6/3*

THE ***13*** *14:26:09.6, 35˚29N×26˚10E, h4^{km}±2^{km}, ML3.5/8, Error ellipse: s-maj=2.3km s-min=0.3km az=188.0*

ATH ***13*** *14:26:09.7, 35˚32N×26˚10E, h11^{km}±3^{km}, ML3.5/5, Error ellipse: s-maj=3.8km s-min=1.1km az=162.0*

DDA ***13*** *14:26:14.0, 35˚53N×26˚17E, h46^{km}±168^{km}, MW3.6*

ISC 13 14:26:09.4±0.9**, 35˚31N**±0˚03×**26˚08E**±0˚02**, h7^{km}**±6^{km}**, n88, σ1^{s}31**/117**, mb3.9**/8**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STIA	Sitia Lasithi	0.11	177	P	Pg	14 26 11.1	-0.7
STIA				S	Sg	14 26 13.1	-0.3
ZKR	Zakros	0.22	151	P	Pg	14 26 14.1	+0.3
ZKR				S	Sg	14 26 17.3	+0.5
ZKR				AML	AML	14 26 18.1	
	comp=N,17434μm,0.3s						
ZKR				AML	AML	14 26 18.1	
	comp=E,49598μm,0.4s						
ZKR	Zakros	0.22	151	P	Pg	14 26 14.1	+0.3
ZKR				S	Sg	14 26 17.2	+0.5
	comp=E,17μm,0.5s						
ZKR	Zakros	0.22	151	PG	Pg	14 26 14.1	+0.3
ZKR				SG	Sg	14 26 17.9	+1.1
ZKR	Zakros	0.22	151	P	Pg	14 26 14.1	+0.3
ZKR				AML	AML	14 26 16.9	
	comp=E,49nm,0.5s						
ZKR				AML	AML	14 26 16.9	
	comp=E,49nm,0.5s						
ZKR				S	Sg	14 26 17.3	+0.5
NPS	Neapolis	0.39	263	P	Pg	14 26 17.9	+0.9

NPS				S	Sg	14 26 23.3	+1.2
NPS				AML	AML	14 26 24.5	
	comp=E,22203µm,0.2s						
NPS				AML	AML	14 26 24.7	
	comp=N,15812µm,0.3s						
NPS	**Neapolis**	0.39	263	P	Pg	14 26 17.9	+0.9
NPS				S	Sg	14 26 23.7	+1.6
	comp=N,10µm,0.4s						
FRMA	**Ierapetra Chan**	0.41	224	P	Pg	14 26 16.2	-1.2
FRMA				S	Sg	14 26 21.9	-0.9
	comp=N,10µm,0.3s						
LAST	**Lasithi**	0.52	254	P	Pg	14 26 19.9	+0.5
LAST				S	Sg	14 26 26.7	+0.5
LAST				AML	AML	14 26 28.6	
	comp=E,7152µm,0.6s						
LAST				AML	AML	14 26 33.3	
	comp=N,7434µm,0.6s						
LAST	**Lasithi**	0.52	254	P	Pg	14 26 19.9	+0.5
LAST				S	Sg	14 26 27.6	+1.4
	comp=N,4µm,0.6s						
HRKL	**Herakleio**	0.80	270	P	Pg	14 26 25.5	+0.6
HRKL				S	Sn	14 26 38.0	-1.5
	comp=N,4µm,0.5s						
IACM	**Heraklion**	0.83	270	P	Pg	14 26 26.0	+0.6
KSTL	**Kastelli Herak**	0.83	270	P	Pg	14 26 22.2	-3.2
KSTL				S	Sg	14 26 31.2	-4.9
KARP	**Karpathos**	0.91	75	P	Pg	14 26 26.6	-0.4
KARP				S	Sn	14 26 40.3	-1.9
KARP	**Karpathos**	0.91	75	P	Pg	14 26 26.6	-0.4
KARP				S	Sn	14 26 40.2	-2.0
	comp=N,3µm,0.4s						
KARP	**Karpathos**	0.91	75	PG	Pg	14 26 26.6	-0.4
KARP				SG	Sn	14 26 40.2	-2.0
KARP	**Karpathos**	0.91	75	P	Pg	14 26 26.8	-0.2
KARP				S	Sn	14 26 40.2	-2.0
KARP				AML	AML	14 26 44.5	
	comp=N,6.4nm,0.5s						
KARP				AML	AML	14 26 44.5	
	comp=N,6.4nm,0.5s						
KARP				AML	AML	14 26 51.7	
	comp=N,6.8nm,0.5s						
KARP				AML	AML	14 26 51.7	
	comp=N,6.8nm,0.5s						
SIVA	**Sivas**	1.08	255	P	Pb	14 26 30.5	-0.1
SIVA				S	Sg	14 26 45.3	+1.0
SIVA				AML	AML	14 26 50.7	
	comp=E,9070µm,0.6s						
SIVA				AML	AML	14 26 51.4	
	comp=N,5765µm,0.4s						
SIVA	**Sivas**	1.08	255	P	Pb	14 26 30.6	+0.1
SIVA				S	Sn	14 26 45.6	-0.8
	comp=N,4µm,0.7s						
SANT	**Santorini**	1.18	335	P	Pb	14 26 31.4	-0.8
SANT	**Santorini**	1.18	335	P	Pb	14 26 31.6	-0.6
SANT				S	Sn	14 26 49.0	+0.3
	comp=N,2µm,0.5s						
THR6	**Thira Island,**	1.19	332	P	Pb	14 26 32.0	-0.3
THR8	**Santorini-Mono**	1.20	336	P	Pn	14 26 31.6	-1.1
THR9	**Santorini-Faro**	1.20	331	P	Pg	14 26 32.8	+0.3
SNT5	**Nea Kammeni, S**	1.23	333	P	Pn	14 26 32.4	-0.7
THR3	**Thira Island,**	1.23	333	P	Pn	14 26 32.6	-0.5
THR7	**Fira-Santorini**	1.23	335	P	Pn	14 26 32.3	-0.9
THR2	**Thira island,**	1.25	335	P	Pn	14 26 32.6	-0.8
THR5	**Thira Island,**	1.26	332	P	Pn	14 26 32.8	-0.7
THR5	**Thira Island,**	1.26	332	P	Pn	14 26 32.9	-0.6
SAP3	**Santorini-Thir**	1.27	332	P	Pn	14 26 32.7	-1.0
SAP3	**Santorini-Thir**	1.27	332	P	Pn	14 26 33.0	-0.7
VAM	**Vamos**	1.54	274	P	Pn	14 26 37.1	-0.3
VAM				S	Sb	14 26 58.4	+0.3
VAM				AML	AML	14 27 01.6	
	comp=N,3707µm,0.3s						
VAM				AML	AML	14 27 04.0	
	comp=E,2076µm,0.4s						
VAM	**Vamos**	1.54	274	P	Pn	14 26 37.2	-0.3
GVD	**Gavdhos**	1.70	255	P	Pb	14 26 41.5	+0.3
GVD	**Gavdhos**	1.70	255	PN	Pg	14 26 42.2	+0.1
IMMV	**Iera Moni Meta**	1.73	276	P	Pn	14 26 39.9	0.0
IMMV	**Iera Moni Meta**	1.73	276	P	Pn	14 26 39.3	-0.6
IMMV	**Iera Moni Meta**	1.73	276	PN	Pn	14 26 40.2	+0.3
IMMV				SN	Sb	14 27 03.3	-0.1
APE	**Apeiranthos**	1.81	346	P	Pn	14 26 40.5	-0.7
APE	**Apeiranthos**	1.81	346	PN	Pn	14 26 40.7	-0.5
ARG	**Arkhangelos**	1.89	61	P	Pn	14 26 42.6	+0.4
ARG	**Arkhangelos**	1.89	61	P	Pn	14 26 42.2	0.0
ARG				S	Sn	14 27 06.0	-0.3
DATC	**Datca-Mugla**	1.93	41	PN	Pb	14 26 43.5	-1.5
MHLO	**Agia Marina, M**	1.94	316	P	Pn	14 26 43.4	+0.5
BODT	**Bodrum**	2.01	29	PN	Pn	14 26 44.6	+0.7
TURN	**Turunc**	2.28	49	*i* P	Pn	14 26 48.3	+0.7
TURN				*i* S	Sn	14 27 15.3	-0.6
YER	**Yerkesik**	2.55	44	PN	Pn	14 26 52.2	+0.9
DALY	**Dalyan (Mula)**	2.57	53	PN	Pn	14 26 52.4	+0.9
DALY	**Dalyan (Mula)**	2.57	53	*i* P	Pb	14 26 54.3	-1.6
DALY				*i* S	Sn	14 27 21.9	-1.1
KTHA	**Kythira Island**	2.63	292	PN	Pn	14 26 53.2	+0.8
KTHR	**Kythira**	2.68	292	P	Pn	14 26 52.5	-0.5
FETY	**Fethiye**	2.77	61	P	Pn	14 26 55.0	+0.7
FETY	**Fethiye**	2.77	61	PN	Pn	14 26 55.2	+0.9
FETY	**Fethiye**	2.77	61	*i* P	Pn	14 26 54.3	-0.1
DGB	**zmir**	2.81	13	*i* P	Pn	14 26 54.5	-0.3
VLI	**Veliai**	2.91	300	P	Pn	14 26 56.0	-0.3
TAVA	**DENIZLI_Tavas**	3.14	46	*i* P	Pn	14 27 01.6	+2.2
TAVA				*i* S	Sn	14 27 37.3	+0.1
BLCB	**Balcova**	3.17	14	PN	Pn	14 27 00.1	+0.4
CAEL	**Denizli, Camel**	3.18	54	*i* P	Pn	14 27 01.4	+1.3
GOLH	**Golhisar**	3.41	55	*i* P	Pn	14 27 04.5	+1.4
ELL	**Elmali**	3.42	64	PN	Pn	14 27 04.7	+1.4
AKUM	**Antalya-Kumluc**	3.61	72	*i* P	Pn	14 27 06.8	+1.0
KULA	**Kula-Manisa**	3.81	32	PN	Pn	14 27 10.2	+1.6
KORT	**Korkueli**	3.84	63	PN	Pn	14 27 11.0	+1.8
KORT	**Korkueli**	3.84	63	*i* P	Pn	14 27 12.3	+3.2
KORT				*i* S	Sn	14 27 56.4	+1.7
BASM	**Basmaki-Afyon**	4.12	50	PN	Pn	14 27 14.7	+1.8
OSC1	**CSNet OBS 1**	4.66	111	S	Sn	14 28 14.9	+0.4
KEPZ	**Antalya-Kepez**	4.74	69	*i* P	Pn	14 27 25.0	+3.5
KEPZ				*i* S	Sn	14 28 17.4	+0.6
AKMS	**Akamas**	5.13	91	P	Pn	14 27 26.2	-0.5
ALFC	**Alefka**	5.33	90	P	Pn	14 27 29.3	-0.3
ALFC				AML	AML	14 28 31.5	
	comp=E,0.5nm,0.8s						
ALFC				AML	AML	14 28 32.2	
	comp=E,0.5nm,0.7s						
OSC2	**CSNet OBS 4**	5.59	112	S	Sn	14 28 38.6	+1.1
ASGA	**Asgata**	5.90	93	P	Pn	14 27 37.5	+0.2
BRTR	**Keskin Array B**	7.45	51	Pn	Pn	14 28 00.3	+1.6
	comp=E,0.1nm,0.3s,baz=229,slow=13,SNR=1.5						
MMAI	**Mount Meron Ar**	8.05	104	Pn	Pn	14 28 06.2	-0.8
	comp=E,1.6nm,0.3s,baz=298,slow=11,SNR=9.5						
MMAI				Sn	Sn	14 29 35.4	-3.0
	comp=E,3.1nm,0.3s,baz=280,slow=22,SNR=7.2						
EIL	**Elat**	9.36	124	Pn	Pn	14 28 24.1	-0.7
	comp=E,0.4nm,0.3s,baz=332,slow=4.0,SNR=10						
EIL				Sn	Sn	14 30 04.7	-5.7
	comp=E,1.4nm,0.3s,baz=316,slow=15,SNR=7.8						
KBZ	**Khabaz**	15.44	52	Pn	P	14 29 50.9	-1.4
	comp=E,0.1nm,0.3s,baz=271,slow=16,SNR=1.2						
AKASG	**Malin Array Be**	15.55	7	Pn	P	14 29 52.7	-0.8
	comp=E,1.3nm,0.3s,baz=199,slow=11,SNR=5.8						
GERES	**GERESS Array B**	16.32	330	Pn	P	14 30 00.8	-1.4
	comp=E,0.1nm,0.3s,baz=147,slow=11,SNR=1.5						
BELG	**Belogornoye**	22.94	35	P	P	14 31 15.3	+1.2
	comp=E,2.1nm,0.5s,baz=318,slow=23,SNR=1.5						
GEYT	**Alibeck**	25.78	75	P	P	14 31 41.9	+0.8
	comp=E,3.3nm,0.7s,baz=270,slow=13,SNR=3.6						
EKA	**Eskdalemuir Ar**	28.36	324	P	P	14 32 05.4	+1.4
	comp=E,0.4nm,0.4s,baz=111,slow=10.0,SNR=1.8						
TORD	**Torodi Ar. Bea**	31.17	231	P	P	14 32 29.9	+0.7
	comp=E,0.7nm,0.4s,baz=30,slow=8.3,SNR=8.2						
MKAR	**Makanchi Array**	43.06	57	P	P	14 34 10.6	+0.6
	comp=E,1.0nm,0.4s,baz=267,slow=8.6,SNR=25						
ZALV	**Zalesovo Beam**	44.35	46	P	P	14 34 20.1	-0.1
	comp=E,0.8nm,0.4s,baz=280,slow=8.2,SNR=3.2						
CMAR	**Chiang Mai Arr**	65.80	84	P	P	14 36 56.0	+0.3
	comp=E,0.4nm,0.3s,baz=308,slow=7.4,SNR=1.7						
YKA	**Yellowknife Ar**	77.54	342	P	P	14 38 06.7	+1.1
	comp=E,0.1nm,0.5s,baz=32,slow=5.1,SNR=2.3						
ASAR	**Alice Springs**	117.33	101	PKP	PKiKP	14 44 55.6	-0.5
	comp=E,2.5nm,1.4s,baz=320,slow=1.2,SNR=4.1						

IDC 13 14:34:15.4±13.0**,9°.21S**×**113°.62E,h77**^{km}±128^{km}**,mb2.7**/3, **mb1 3.1**/4**,mb1mx2.9**/35**,mbtmp3.2**/4**,MS3.1**/1**,Ms1 3.1**/1, **ms1mx2.5**/8**,Error ellipse: s-maj=235.8km s-min=40.7km az=48.0,South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	14.64	128	P	Pn	14 37 39.7	+1.1
	baz=311,slow=9.3,SNR=2.5						
FITZ				S	Sn	14 40 08.5	-11
	0.0nm,0.3s,baz=176,slow=16,SNR=1.9						
FITZ				LR	LR	14 43 55.4	
	comp=Z,64nm,18.9s,baz=46,slow=40						
WRA	**Warramunga Arr**	22.69	120	P	P	14 39 10.9	+0.1
	0.3nm,0.9s,baz=293,slow=12,SNR=1.5						
ASAR	**Alice Springs**	24.14	129	P	P	14 39 24.2	-0.2
	0.1nm,0.7s,baz=303,slow=8.6,SNR=4.8						
MKAR	**Makanchi Array**	62.36	336	P	P	14 44 29.8	-0.1
	0.1nm,0.4s,baz=162,slow=7.1,SNR=2.2						

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*FUNV **13** 15:57:03.0,12°.14N×69°.99W,h5^{km},MW3.1*

ISC 13 15:57:01.8±1.7**,12°.16N**±0°.08×**69°.98W**±0°.04**,h14**^{km}±8^{km}**,** **n13,**σ1§**17**/25**,Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MONV	**Montecano**	0.20	178	*e*P	Pg	15 57 07.0	+0.6
MONV				*e*S	Sg	15 57 09.3	-0.2
DABV	**Dabajuro**	1.39	208	*e*P	Pg	15 57 27.6	-0.8
DABV	**Dabajuro**	1.39	208	*e*P	Pg	15 57 28.0	-0.4
DABV				*e*S	Sg	15 57 46.0	-0.5
SIQV	**Siquisique**	1.51	174	*e*P	Pg	15 57 29.7	-1.1
SIQV				*e*S	Sg	15 57 49.7	-0.7
URIC	**Uribia, Colomb**	2.02	257	*e*P	Pb	15 57 37.1	-1.2
URIC				*e*S	Sb	15 58 03.5	+0.2
URIC				*i*		15 58 07.3	
	comp=Z,74nm,0.4s						
SANV	**Sanarito**	2.67	171	*e*P	Pn	15 57 46.4	+1.9
SANV				*e*S	Sn	15 58 17.9	+1.0
MAPV	**Macapo**	2.75	147	*e*P	Pn	15 57 46.9	+1.3
MAPV				*e*S	Sn	15 58 19.3	+0.7
CRJC	**Cerrejon, Guaj**	3.06	249	*e*P	Pn	15 57 51.7	+1.9
CRJC				*e*S	Sn	15 58 25.9	-0.4
CRJC				*i*		15 58 45.0	
	comp=Z,29nm,0.6s						
TACV	**Tcata**	3.52	124	*e*P	Pn	15 57 57.5	+1.3
TACV				*e*S	Sn	15 58 37.5	-0.2
BAUV	**El Baul**	3.72	149	*e*P	Pn	15 58 00.3	+1.5
BAUV				*e*S	Sn	15 58 41.7	-0.7
SOCV	**Socops**	3.94	193	*e*P	Pn	15 58 03.9	+2.0
SOCV				*e*S	Sn	15 58 47.7	-0.4
SOCV	**Socops**	3.94	193	*e*P	Pn	15 58 03.3	+1.4
SOCV				*e*S	Sn	15 58 46.8	-1.3
BIRV	**Birongo**	4.00	114	*e*P	Pn	15 58 03.2	+0.5
BIRV				*e*S	Sn	15 58 48.5	-0.9

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*ISK **13** 16:07:59.7,37°.16N×30°.05E,h5^{km},ML3.4/28*

*IDC **13** 16:08:00.4±1.2,37°.19N×30°.11E,h0^{km},mb3.7/4, mb1 3.8/8,mb1mx3.4/65,mbtmp3.7/8,ML3.6/4,Error ellipse: s-maj=21.5km s-min=19.8km az=129.0*

*DDA **13** 16:08:00.2,37°.18N×30°.03E,h7^{km}±2^{km},ML3.3*

ISC 13 16:08:00.3±1.0**,37°.19N**±0°.02×**30°.04E**±0°.02**,h7**^{km}±7^{km}**,** **n68,**σ1§**83**/102**,mb3.8**/4**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KORT	**Korkueli**	0.31	126	PG	Pg	16 08 06.5	+0.1
KORT				SG	Sg	16 08 11.6	+1.1
KORT	**Korkueli**	0.31	126	*i* P	Pg	16 08 06.5	+0.1
KORT				*i* S	Sg	16 08 08.9	-1.6
KORT				IAML		16 08 13.0	
	comp=N,3µm,0.3s						
KORT				IAML		16 08 13.0	
	comp=E,6µm,0.3s						
GOLH	**Golhisar**	0.38	278	*i* P	Pg	16 08 08.5	+0.7
GOLH				*i* S	Sg	16 08 13.7	+0.8
BUCA	**Burdur, Bucak-**	0.44	71	*i* P	Pg	16 08 09.0	+0.2
BUCA				*i* S	Sg	16 08 12.3	-2.3
BUCA				IAML		16 08 17.0	
	comp=N,2µm,0.3s						
ELL	**Elmali**	0.45	193	PG	Pg	16 08 08.8	-0.2
ELL				SG	Sg	16 08 16.1	+1.2
BRDR	**BURDUR-Merkez**	0.51	2	*i* P	Pg	16 08 10.2	0.0
BRDR				*i* S	Sg	16 08 14.9	-2.0
BCK	**Bucak**	0.52	58	PG	Pg	16 08 10.9	+0.6
BCK				SG	Sb	16 08 19.1	-0.5
ANTB	**Antalya**	0.57	120	PG	Pg	16 08 11.7	+0.5
CAEL	**Denizli, Camel**	0.58	264	*i* P	Pg	16 08 11.8	+0.4
CAEL				*i* S	Sg	16 08 17.7	-1.3
CAEL				IAML		16 08 27.0	
	comp=E,2µm,0.3s						
BASM	**Basmaki-Afyon**	0.73	1	PG	Pg	16 08 15.4	+1.0
BASM				SG	Sb	16 08 26.9	+1.1
ISP	**Isparta**	0.74	31	PG	Pg	16 08 15.4	+0.8
ISP				SG	Sb	16 08 26.7	+0.6
AKUM	**Antalya-Kumluc**	0.90	164	*i* P	Pb	16 08 18.6	+0.4
AKUM				*i* S	Sg	16 08 25.1	-4.0
TAVA	**DENIZLI_Tavas**	0.94	288	*i* P	Pg	16 08 17.9	-0.4
TAVA				*i* S	Sg	16 08 27.4	-3.1
FETY	**Fethiye**	0.94	235	PG	Pg	16 08 17.6	-0.7
BAGO	**Egridir - ISPA**	1.00	36	*i* P	Pb	16 08 20.8	+0.7
BAGO				*i* S	Sg	16 08 30.4	-2.1
KZIL	**AFYON_Kizioren**	1.07	4	*i* P	Pg	16 08 20.4	-0.5
KZIL				*i* S	Sg	16 08 32.4	-2.5
DALY	**Dalyan (Mula)**	1.17	252	PN	Pg	16 08 23.1	+0.4
DALY	**Dalyan (Mula)**	1.17	252	*i* P	Pg	16 08 22.5	-0.2
DALY				*i* S	Sg	16 08 36.5	-1.3
DALY				IAML		16 08 45.0	
	comp=N,1µm,0.4s						
DALY				IAML		16 08 46.0	
	comp=E,809nm,0.5s						
KHL	**Karahalli**	1.21	340	PN	Pn	16 08 24.4	+0.7
KHAL	**Karahalli**	1.26	340	*i* P	Pn	16 08 24.7	+0.2
KHAL				*i* S	Sg	16 08 39.5	-1.3
KEPZ	**Antalya-Kepez**	1.28	102	*i* P	Pn	16 08 24.3	-0.4
KEPZ				*i* S	Sb	16 08 37.4	-4.1
MULA	**Mugla, Merkez-**	1.37	273	*i* P	Pg	16 08 27.2	+0.6
MULA				*i* S	Sb	16 08 42.3	-1.9
MULA				IAML		16 08 49.0	
	comp=E,384nm,0.9s						
SEDI	**Konya, Seydise**	1.39	79	*i* P	Pb	16 08 26.9	+0.2
SEDI				*i* S	Sb	16 08 41.8	-3.0
YER	**Yerkesik**	1.40	268	PN	Pb	16 08 27.5	+0.6
SHUT	**Suhut-Afyon**	1.43	16	PN	Pb	16 08 27.8	+0.5
YVAC	**Isparta, Yalva**	1.44	41	*i* P	Pg	16 08 28.2	+0.2
YVAC				*i* S	Sg	16 08 47.0	+0.3
TURN	**Turunc**	1.49	255	*i* P	Pn	16 08 27.7	+0.2
TURN				*i* S	Sn	16 08 42.9	-4.3
MRSB	**Marmaris-Mugla**	1.55	253	PN	Pb	16 08 29.7	+0.4
DOGA	**KONYA_Doganhis**	1.59	54	*i* P	Pg	16 08 31.2	+0.5
DOGA				*i* S	Sn	16 08 45.5	-4.4
AFYO	**Afyonkarahisar**	1.61	7	*i* P	Pb	16 08 30.8	+0.3
AFYO				*i* S	Sn	16 08 49.7	-0.8
KULA	**Kula-Manisa**	1.72	321	PN	Pb	16 08 32.2	0.0
USAK	**Uak-Merkez**	1.73	332	*i* P	Pn	16 08 31.9	+1.0
USAK				*i* S	Sn	16 08 50.5	-2.6
MANT	**Manisa**	1.75	318	*i* P	Pn	16 08 32.1	+0.7
MANT				*i* S	Sn	16 08 50.9	-3.2
MLSB	**Milas**	1.81	274	PN	Pn	16 08 33.4	+1.5
AYDB	**Zeytinkoy-Aydi**	1.87	295	PN	Pn	16 08 34.1	+1.3
KMER	**Konya-Meram**	1.94	72	*i* P	Pb	16 08 36.6	+0.5
KMER				*i* S	Sn	16 08 53.3	-5.3
DATC	**Datca-Mugla**	1.95	258	PN	Pn	16 08 35.4	+1.6
KONT	**Konya--Tatoy**	2.00	67	PN	Pn	16 08 35.9	+1.4
KONT	**Konya--Tatoy**	2.00	67	*i* P	Pb	16 08 37.0	+0.1
KONT				*i* S	Sn	16 08 54.2	-5.5
GAZI	**Gazipasa**	2.06	117	PN	Pn	16 08 36.6	+1.2
GAZI	**Gazipasa**	2.06	117	*i* P	Pb	16 08 38.2	+0.2
GAZI				*i* S	Sn	16 08 58.1	-3.3
LADK	**Ladik-KONYA**	2.10	61	PN	Pn	16 08 37.5	+1.4
KDHN	**Kadinhani**	2.12	50	*i* P	Pb	16 08 38.2	-0.9
KDHN				*i* S	Sn	16 09 01.0	-1.9
BODT	**Bodrum**	2.18	268	PN	Pn	16 08 38.7	+1.6
TVSB	**Tavsanli**	2.31	349	PN	Pn	16 08 40.2	+1.4
CIFT	**Cifteler, Eski**	2.32	20	PN	Pn	16 08 40.5	+1.5
KKBE	**Karaman, Kazim**	2.32	88	*i* P	Pb	16 08 41.9	-0.6
KKBE				*i* S	Sn	16 09 04.5	-3.3
ERMK	**Ermenek**	2.37	102	*i* P	Pb	16 08 43.0	-0.4
ERMK				*i* S	Sn	16 09 10.7	+1.6
SVRH	**Sivrihisar-ESK**	2.54	27	PN	Pn	16 08 43.9	+1.8
BLCB	**Balcova**	2.66	298	PN	Pn	16 08 45.6	+2.0
TEKE	**Tekeli-Mersin**	2.68	112	PN	Pn	16 08 45.6	+1.7
BERE	**Bereket-Mersin**	2.69	107	PN	Pn	16 08 45.5	+1.3
TEVE	**Tevekalti-Mers**	2.83	104	PN	Pn	16 08 47.5	+1.5
KARP	**Karpathos**	2.84	236	PN	Pn	16 08 47.8	+1.7
SRCK	**Saricakaya, Es**	2.89	9	PN	Pn	16 08 47.6	+0.8
IKL	**Isikli**	3.08	107	PN	Pn	16 08 51.4	+2.1
LEF	**Lefka**	3.10	131	PN	Pn	16 08 50.7	+1.1
AFSR	**Afar-Bala (An**	3.28	46	PN	Pn	16 08 54.2	+1.9
YUVA	**Yuva-Kibriscik**	3.45	21	PN	Pn	16 08 57.1	+2.5
CSS	**Mathiatis**	3.47	129	PN	Pn	16 08 56.7	+2.0
BRTR	**Keskin Array B**	3.80	47	Pn	Pn	16 09 01.3	+1.9
	comp=E,0.6nm,0.3s,baz=225,slow=16,SNR=8.6						
BRTR				Sn	Sn	16 09 47.7	+3.3
	comp=E,1.5nm,0.3s,baz=213,slow=26,SNR=13						
MMAI	**Mount Meron Ar**	6.05	132	Pn	Pn	16 09 32.2	+1.9
	comp=E,4.7nm,0.3s,baz=316,slow=12,SNR=39						
MMAI				Sn	Sn	16 10 41.7	+1.8
	comp=E,0.6nm,0.3s,baz=315,slow=26,SNR=1.5						
EIL	**Elat**	8.54	150	Pn	Pn	16 10 05.9	+1.5
	comp=E,0.8nm,0.3s,baz=340,slow=18,SNR=6.8						
EIL				Sn	Sn	16 11 40.0	-1.1
	comp=E,0.2nm,0.3s,baz=62,slow=14,SNR=2.2						
GERES	**GERESS Array B**	16.65	320	Pn	P	16 11 58.8	+2.2
	comp=E,0.1nm,0.3s,baz=114,slow=13,SNR=4.2						
FINES	**FINESS Array B**	24.41	355	P	P	16 13 19.5	+0.4
	comp=E,1.7nm,0.9s,baz=161,slow=13,SNR=2.1						
TORD	**Torodi Ar. Bea**	34.84	234	P	P	16 14 53.5	+1.4
	comp=E,1.6nm,0.6s,baz=27,slow=8.3,SNR=6.7						
MKAR	**Makanchi Array**	39.36	59	P	P	16 15 31.4	+1.2
	comp=E,0.6nm,0.8s,baz=273,slow=8.5,SNR=7.3						
CMAR	**Chiang Mai Arr**	62.47	87	P	P	16 18 23.9	-0.7
	comp=E,0.6nm,0.7s,baz=299,slow=9.1,SNR=4.4						

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*IDC **13** 16:14:02.3±1.6,5°.36S×105°.85E,h207^{km}±8^{km},mb3.7/4, mb1 4.0/7,mb1mx3.2/49,mbtmp4.4/7,Error ellipse: s-maj=69.2km s-min=13.7km az=46.0*

*DJA **13** 16:14:02.8±0.4,6°S±4°×10°6E±°,h183^{km}±4^{km},M4.4/17, mb4.9/2,mB5.2/1,MLv4.2/17,Mw(mB)4.6/1*

ISC 13 16:14:01.5±0.8**,5°.58S**±0°.09×**105°.76E**±0°.07**,h203**^{km}±6^{km}**,** **n24,**σ1§**62**/35**,mb4.0**/5**,Sunda Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BLSI	**Bandar Lampung**	0.55	292	P	Pn	16 14 29.2	0.0
BLSI				S	Sn	16 14 49.7	-0.8
TNG	**Tangerang**	1.06	124	P	Pn	16 14 32.0	0.0
KASI	**Kota Agung**	1.25	272	P	Pn	16 14 33.6	+0.2
KASI				S	Sn	16 14 57.5	-0.6
KLSI		1.35	311	P	Pn	16 14 34.5	+0.3
KLSI				S	Sn	16 14 59.1	-0.5
DBJI	**Dramaga**	1.39	135	P	Pn	16 14 34.4	-0.1
DBJI				S	Sn	16 14 59.0	-1.2
LWLI	**Liwa**	1.78	288	P	Pn	16 14 38.5	+0.3
LEM	**Lembang**	2.23	124	P	Pn	16 14 44.1	+1.3
	21nm,0.3s,baz=328,slow=6.7,SNR=21						
LEM				S	Sn	16 15 17.5	+2.5
	9.9nm,0.3s,baz=15,slow=23,SNR=4.5						
LEM	**Lembang**	2.23	124	P	Pn	16 14 43.0	+0.2
JCJI	**Jatiwangi**	2.66	110	P	Pn	16 14 48.9	+1.5
PMBI	**Palembang**	2.81	340	P	Pn	16 14 50.5	+1.3
PMBI				S	Sn	16 15 26.3	-0.1
LHSI	**Lahat**	2.82	308	P	Pn	16 14 50.3	+1.0
CISI	**Cisompet, Garu**	2.84	134	P	Pn	16 14 49.9	+0.4
CISI				S	Sn	16 15 24.9	-2.2
MNAI	**Manna**	3.04	293	P	Pn	16 14 52.7	+0.9
KSI	**Kapahiang**	3.69	301	P	Pn	16 15 00.8	+1.1
JMBI	**JAMBI**	4.45	332	P	Pn	16 15 10.6	+1.5
SMRI	**Semarang**	4.88	108	P	Pn	16 15 15.7	+1.2
UGM	**Wanagama**	5.27	116	P	Pn	16 15 20.2	+0.6
	0.6nm86nm,0.5s						
UGM				S	Sn	16 16 18.1	-3.0
	0.6nm86nm,0.5s						
PSI	**Prapat**	10.76	320	P	Pn	16 16 27.9	-2.8
	0.7nm,0.3s,baz=179,slow=9.0,SNR=3.7						
BATI	**Baumata**	18.32	106	P	P	16 18 02.1	+1.3
	11nm,0.3s,baz=254,slow=4.4,SNR=11						
BATI				S	S	16 21 14.5	-5.2
	1.1nm,0.3s,baz=41,slow=20,SNR=1.9						
FITZ	**Fitzroy Crossi**	23.07	124	P	P	16 18 50.1	+0.8
	2.0nm,0.5s,baz=300,slow=13,SNR=17						
WRA	**Warramunga Arr**	31.24	120	P	P	16 20 03.1	+0.7
	1.5nm,0.4s,baz=286,slow=9.9,SNR=43						
ASAR	**Alice Springs**	32.52	126	P	P	16 20 14.6	+1.0
	2.0nm,0.5s,baz=296,slow=7.7,SNR=85						
ASAR				S	S	16 25 13.4	-0.3
	1.3nm,0.8s,baz=298,slow=16,SNR=10.0						
ASAR				ScP	ScP	16 26 20.4	+0.3
	0.3nm,1.0s,baz=305,slow=3.3,SNR=4.5						
STKA	**Stephens Creek**	42.51	133	P	P	16 21 39.0	+1.8
	5.8nm,0.6s,baz=304,slow=8.2,SNR=16						
MKAR	**Makanchi Array**	56.14	341	P	P	16 23 18.5	-1.5
	0.3nm,0.9s,baz=143,slow=9.5,SNR=1.8						

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*IDC **13** 16:24:47.6±0.9,52°.65S×18°.12E,h0^{km},mb4.0/7, mb1 4.1/7,mb1mx3.9/32,mbtmp4.0/7,MS3.5/5,Ms1 3.5/5, ms1mx3.1/27,Error ellipse: s-maj=36.6km s-min=21.5km az=87.0*

ISC 13 16:24:49.3±0.9**,52°.7S**±0°.1×**18°.1E**±0°.2**,h10**^{km}**,n15,** σ1§**11**/12**,mb4.0**/6**,MS3.3**/5**,Southwest of Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SUR	**Sutherland**	20.35	7	P	P	16 29 27.0	+1.1
	14nm,1.1s,baz=182,slow=12,SNR=5.0						
SUR				LR	LR	16 35 10.0	
	comp=Z,113nm,18.4s,baz=186,slow=31						
SNAA	**Sanae**	21.21	198	P	P	16 29 36.1	+1.3
SNAA	**Sanae**	21.21	198	P	P	16 29 35.4	+0.6
	4.3nm,0.8s,baz=31,slow=12,SNR=10						
SNAA				LR	LR	16 35 35.8	
	comp=Z,87nm,18.1s,baz=3.0,slow=31						
BOSA	**Boshof**	24.59	15	LR	LR	16 37 55.6	
	comp=Z,92nm,20.1s,baz=180,slow=32						
LBTB	**Lobatse**	28.17	15	LR	LR	16 40 24.3	
	comp=Z,76nm,18.4s,baz=178,slow=33						
QSPA	**South Pole Qui**	37.58	180	P	P	16 32 04.1	+0.5
	4.5nm,0.7s,baz=240,slow=2.3,SNR=41						
VNDA	**Vanda**	48.16	170	LR	LR	16 52 01.4	
	comp=Z,70nm,20.0s,baz=238,slow=34						
CPUP	**Villa Florida**	60.82	264	P	P	16 35 00.6	-0.9
	0.7nm,0.3s,baz=130,slow=7.8,SNR=3.6						
TORD	**Torodi Ar. Bea**	67.03	343	P	P	16 35 43.2	+0.8
	0.7nm,0.9s,baz=160,slow=4.6,SNR=2.1						
LPAZ	**La Paz**	74.95	263	P	P	16 36 31.9	+0.5
	0.9nm,0.5s,baz=117,slow=4.5,SNR=3.0						
ASAR	**Alice Springs**	85.81	124	P	P	16 37 28.2	-0.8
	0.3nm,0.5s,baz=210,slow=4.7,SNR=8.8						
PDAR	**Pinedale Array**	144.14	275	PKP	PKPab	16 44 21.9	-0.6
	1.4nm,0.6s,baz=127,slow=5.7,SNR=16						
NVAR	**Mina Array Bea**	146.85	262	PKPbc	PKPbc	16 44 31.3	-0.1
	2.8nm,0.7s,baz=136,slow=4.7,SNR=29						
YKA	**Yellowknife Ar**	153.39	310	PKPbc	PKPbc	16 44 44.1	-2.2
	0.1nm,0.4s,baz=90,slow=3.7,SNR=2.2						
ILAR	**Eielson Array**	165.61	333	PKPab	PKPab	16 45 51.6	0.0
	0.4nm,0.8s,baz=20,slow=3.8,SNR=5.9						

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*INET **13** 16:26:04.7,10°.79N×87°.02W,h16^{km},MW3.4*

IDC 13 16:25:51.3±8.7**,10°.29N**×**87°.48W,h0**^{km}**,mb3.3**/2**,** **mb1 3.9**/2**,mb1mx3.4**/37**,mbtmp3.4**/2**,Error ellipse: s-maj=582.6km s-min=86.0km az=64.0,Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TXAR	**Lajitas Array**	24.25	324	P	P	16 31 10.2	-0.1
	0.6nm,0.5s,baz=144,slow=9.8,SNR=14						
NVAR	**Mina Array Bea**	39.32	321	P	P	16 33 22.3	-0.3
	0.2nm,0.5s,baz=115,slow=7.5,SNR=2.6						
ASAR	**Alice Springs**	138.40	246	PKP	PKPdf	16 45 19.9	+0.2
	0.3nm,0.5s,baz=100,slow=1.6,SNR=8.4						
H01W1	**Cape Leeuwin H**	148.54	216	T	T	19 31 42.7	
	baz=144,slow=75,SNR=5.5						
H01W2	**Cape Leeuwin H**	148.55	215	T	T	19 31 38.1	
	baz=144,slow=75,SNR=7.2						
H01W3	**Cape Leeuwin H**	148.56	216	T	T	19 31 38.0	
	baz=144,slow=75,SNR=6.1						

IDC 13 16:37:40.7±3.6**,27°.40S**×**66°.58E,h0**^{km}**,mb3.6**/2**,** **mb1 3.8**/2**,mb1mx3.4**/38**,mbtmp3.6**/2**,Error ellipse: s-maj=101.7km s-min=61.3km az=57.0,Indian Ocean Triple Junction**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	55.33	38	P	P	16 47 16.4	-0.1
	0.2nm,0.4s,baz=225,slow=8.9,SNR=2.5						
ASAR	Alice Springs	60.20	103	P	P	16 47 50.8	-0.1
	0.5nm,0.6s,baz=249,slow=6.2,SNR=8.4						
YKA	Yellowknife Ar	144.90	1	PKP	PKPbc	16 57 18.6	+0.3
	0.3nm,0.6s,baz=360,slow=3.2,SNR=8.3						

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*IDC **13** 16:40:57.3±1.4, 25°.62N×141°.00E, h203km±8km, mb3.3/13, mb1 3.5/16, mb1mx3.3/38, mbtmp3.9/16, Error ellipse: s-maj=18.2km s-min=16.9km az=9.0*

*NEIC **13** 16:40:58.2±2.1, 25°.7N±0°.2×140°.84E±0°.10, h210km±8km, mb4.6/7, Error ellipse: s-maj=25.8km s-min=12.5km az=172.0*

*JMA **13** 16:40:59.7±0.3, 25°.80N×140°.36E, h136km, M4.5*

ISC 13 16:40:57.1±0.7, **25°.63N**±0°.08×**140°.91E**±0°.09, **h200km, n39, σ1^{s}14**/43, **mb3.6**/14, **Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHH2	Haha-jima-NKT2	1.51	48	P	Pn	16 41 32.0	+1.2
JHH2				S	Sn	16 41 57.0	-0.1
CBIJ	Chichi jima	1.85	38	P	Pn	16 41 35.5	+1.4
CBIJ				S	Sn	16 42 02.3	-0.6
JCJ	Chichijima	1.85	38	P	Pn	16 41 35.7	+1.6
	48nm,0.3s,baz=291,slow=22,SNR=5.8						
JCJ				S	Sn	16 42 03.0	0.0
	193nm,0.3s,baz=237,slow=23,SNR=23						
JCJ	Chichijima	1.85	38		Pn	16 41 35.5	+1.4
JHJ2	Mitsune	7.51	353	Pn	Pn	16 42 45.4	+1.5
JHJ	Hachijo jima 2	7.52	353	P	Pn	16 42 45.2	+1.1
	22nm,0.3s,baz=85,slow=21,SNR=1.8						
JHJ				S	Sn	16 44 08.2	-1.0
	10nm,0.3s,baz=259,slow=20,SNR=1.5						
BSO3	Boso 3	9.14	358	P	Pn	16 43 04.4	-0.5
BSO4	Boso 4	9.34	357	P	Pn	16 43 07.5	-0.1
JMN	Monobe	10.12	324	Pn	Pn	16 43 16.9	-0.9
JHU	Hanno	10.28	353	P	Pn	16 43 19.5	-0.4
JGF	Kuroka	10.39	344	Pn	Pn	16 43 22.9	+1.5
JAG	Ashikaga	10.83	354	P	Pn	16 43 24.7	-2.2
JHO	Hitachi	10.95	359	P	Pn	16 43 27.0	-1.4
MJAR	Matsushiro Arr	11.12	349	P	Pn	16 43 30.8	+0.2
	0.1nm,0.3s,baz=164,slow=10,SNR=2.7						
MJAR	Matsushiro Arr	11.12	349	Pn	Pn	16 43 31.0	+0.4
JMM	Marumori	12.20	360		Pn	16 43 43.3	-1.0
JTM	Tenmabayashi	15.11	0		Pn	16 44 19.2	-1.4
JTM				IAmb	IAmb	16 44 21.6	
	comp=Z,63nm,1.1s						
KSRS	Korea Array	16.15	320	P	Pn	16 44 35.9	+2.8
	comp=Z,0.6nm,0.3s,baz=137,slow=12,SNR=24						
KS19	Wonju Array Si	16.21	320		P	16 44 32.5	-0.8
KS19				IAmb	IAmb	16 44 39.9	
	comp=Z,21nm,1.0s						
JEW	Eniwo	17.17	1		P	16 44 43.9	+0.2
SSE	Sheshan	18.19	292	P	P	16 44 53.2	-1.7
ASAJ	Asahikawa	18.49	4	P	Pn	16 45 01.0	+0.3
	comp=Z,0.8nm,0.3s,baz=238,slow=14,SNR=9.7						
USRK	Ussuriysk Ar.	19.89	341	P	P	16 45 12.9	-0.2
	baz=175,slow=9.8,SNR=1.8						
KNMB	Chin-men Tao	20.44	272	P	P	16 45 20.4	+1.2
KNMB				IAmb	IAmb	16 45 30.2	
	comp=Z,18nm,1.1s						
KLR	Kul'dur	24.62	345	P	P	16 45 59.6	+0.7
	comp=Z,1.5nm,0.4s,baz=176,slow=5.0,SNR=16						
HIA	Hailar	28.78	331	P	P	16 46 35.5	-0.6
HIA				IAmb	IAmb	16 46 37.7	
	comp=Z,3.6nm,0.5s						
PETK	Petropavlovsk-	30.20	20	P	P	16 46 48.0	-0.5
	comp=Z,7.7nm,1.0s,baz=240,slow=11,SNR=2.0						
SONM	Songino Array	35.01	318	P	P	16 47 31.7	+1.1
	comp=Z,0.3nm,0.6s,baz=116,slow=6.6,SNR=2.1						
CMAR	Chiang Mai Arr	39.42	268	P	P	16 48 09.8	+1.9
	comp=Z,0.4nm,0.5s,baz=66,slow=7.9,SNR=2.7						
WRA	Warramunga Arr	45.75	189	P	P	16 48 57.0	-1.7
	comp=Z,0.3nm,0.4s,baz=9.8,slow=8.8,SNR=2.4						
WRA				pP	pwP	16 49 44.6	+0.1
	comp=Z,1.1nm,0.7s,baz=7.9,slow=9.0,SNR=4.0						
MKAR	Makanchi Array	50.54	311	P	P	16 49 35.5	+0.4
	comp=Z,0.2nm,0.5s,baz=85,slow=10,SNR=5.4						
ILAR	Eielson Array	59.54	28	P	P	16 50 38.4	-0.7
	comp=Z,1.5nm,0.7s,baz=248,slow=5.8,SNR=15						
YKA	Yellowknife Ar	73.96	28	P	P	16 52 10.8	+0.6
	comp=Z,1.6nm,0.7s,baz=296,slow=5.1,SNR=19						
FINES	FINESS Array B	78.75	334	P	P	16 52 36.1	-1.0
	comp=Z,0.6nm,0.4s,baz=70,slow=4.6,SNR=9.1						
NVAR	Mina Array Bea	82.32	51	P	P	16 52 56.8	0.0
	comp=Z,0.4nm,0.6s,baz=292,slow=4.3,SNR=4.2						
AKASG	Malin Array Be	83.11	323	P	P	16 52 59.2	-1.1
	comp=Z,0.3nm,0.3s,baz=49,slow=5.1,SNR=4.4						
PDAR	Pinedale Array	86.05	44	P	P	16 53 15.7	+0.1
	comp=Z,0.3nm,0.6s,baz=270,slow=3.0,SNR=3.4						
ULM	Lac du Bonnet	89.29	32	P	P	16 53 30.3	-0.2
	comp=Z,1.1nm,0.5s,baz=342,slow=3.2,SNR=1.9						
TXAR	Lajitas Array	97.39	53	P	Pdif	16 54 09.9	+1.6
	comp=Z,0.1nm,0.3s,baz=312,slow=9.5,SNR=1.9						

IDC 13 16:41:44.4±2.4, **6°.49S**×**129°.13E, h0km, mb3.4**/1, **mb1 3.8**/3, **mb1mx3.5**/27, **mbtmp3.6**/3, **ML3.8**/2, **MS2.7**/1, **Ms1 2.7**/1, **ms1mx2.2**/21, **Error ellipse: s-maj=152.3km s-min=32.9km az=68.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	5.98	21	LR	LR	16 46 24.7	
	comp=Z,72nm,19.1s,baz=302,slow=47						
FITZ	Fitzroy Crossi	12.03	196	Sn	Sn	16 46 42.7	-10
	0.2nm,0.3s,baz=103,slow=23,SNR=1.6						
WRA	Warramunga Arr	14.30	160	Pn	Pn	16 45 08.0	-0.4
	0.3nm,0.3s,baz=342,slow=12,SNR=10						
WRA				Sn	Sn	16 47 36.2	-12
	0.3nm,0.3s,baz=337,slow=22,SNR=5.8						
ASAR	Alice Springs	17.68	165	P	Pn	16 45 52.6	+0.3
	0.6nm,0.3s,baz=342,slow=10,SNR=104						
ASAR				S	Sn	16 48 58.4	-12
	0.1nm,0.3s,baz=343,slow=24,SNR=1.3						
MKAR	Makanchi Array	67.33	327	P	P	16 52 41.3	0.0
	0.2nm,0.3s,baz=113,slow=7.9,SNR=2.3						

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*IDC **13** 16:56:53.8±1.6, 3°.60S×149°.85E, h0km, mb3.7/6, mb1 4.0/7, mb1mx3.8/32, mbtmp3.9/7, ML5.3/1, Error ellipse: s-maj=38.3km s-min=25.8km az=96.0*

ISC 13 16:56:56.6±1.0, **3°.7S**±0°.2×**149°.9E**±0°.1, **h19km, n13, σ1^{s}24**/7, **mb3.7**/6, **Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	11.53	120	Pn	Pn	16 59 40.3	0.0
	19nm,0.3s,baz=208,slow=3.5,SNR=5.6						
WRA	Warramunga Arr	22.16	222	P	P	17 01 50.2	-1.5
	2.8nm,0.8s,baz=41,slow=12,SNR=14						
ASAR	Alice Springs	25.17	216	P	P	17 02 22.6	+1.5
	2.1nm,0.9s,baz=48,slow=7.9,SNR=13						
H11S3	WAKE ISLAND Hy	27.56	36	T	T	17 31 50.0	
	baz=218						
H11S2	WAKE ISLAND Hy	27.56	36	T	T	17 31 59.0	
	baz=218						
H11S1	WAKE ISLAND Hy	27.57	36	T	T	17 32 00.2	
	baz=218						
FITZ	Fitzroy Crossi	27.73	237	P	P	17 02 44.3	+0.2
	2.8nm,0.7s,baz=66,slow=9.5,SNR=7.0						
H11N1	WAKE ISLAND Hy	28.63	35	T	T	17 33 16.8	
	baz=218						
H11N3	WAKE ISLAND Hy	28.64	35	T	T	17 33 18.8	
	baz=218						
H11N2	WAKE ISLAND Hy	28.65	35	T	T	17 33 20.4	
	baz=218						
CMAR	Chiang Mai Arr	54.76	296	P	P	17 06 26.1	+0.6
	0.5nm,0.9s,baz=120,slow=5.3,SNR=2.6						
SONM	Songino Array	63.83	329	P	P	17 07 28.3	+0.4
	0.2nm,0.4s,baz=130,slow=4.3,SNR=2.1						
MKAR	Makanchi Array	77.56	319	P	P	17 08 50.4	-1.1
	0.4nm,0.8s,baz=99,slow=7.5,SNR=4.4						

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*IDC **13** 16:58:38.4±1.1, 3°.56S×149°.46E, h0km, mb4.2/15, mb1 4.4/17, mb1mx4.2/34, mbtmp4.3/17, ML3.4/2, Error ellipse: s-maj=31.3km s-min=16.0km az=113.0*

*BJI **13** 16:58:39.4±0.0, 3°.30S×149°.26E, h13km, mB5.0/25, mb4.4/40, Ms5.0/12, Ms7 4.8/12*

*NEIC **13** 16:58:40.9±1.8, 3°.39S±0°.08×149°.02E±0°.07, h10km±1km, mb4.7/29, Error ellipse: s-maj=14.9km s-min=9.4km az=215.0*

ISC 13 16:58:41.2±0.5, **3°.40S**±0°.06×**149°.10E**±0°.06, **h10km, n73, σ1^{s}36**/64, **mb4.5**/35, **2C, Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANU	Manus Island	2.20	308		Pn	16 59 15.4	-2.4
RABL	Rabaul	3.15	105		Pn	16 59 30.2	-0.8
RABL	Rabaul	3.15	105	P	Pb	16 59 37.8	+0.4
PMG	Port Moresby	6.28	198	Pn	Pn	17 00 01.9	-12
	0.4nm,0.3s,baz=67,slow=20,SNR=3.0						
PMG				Sn	Sn	17 01 24.4	-1.3
	1.7nm,0.3s,baz=268,slow=22,SNR=3.5						
PMG	Port Moresby	6.28	198	Pn	Pn	17 00 16.3	+2.4
JAY	Jayapura	8.43	276	Pn	Pn	17 00 48.4	+4.7
	0.3nm,0.3s,baz=153,slow=14,SNR=4.5						
SIJI	Sorong	18.00	278	P	P	17 02 55.0	+2.7
	0.2nm,0.3s,baz=159,slow=8.6,SNR=3.4						
MTN	Manton Dam	20.10	241	P	P	17 03 14.6	-0.7
MTN				IAmb	IAmb	17 03 17.0	
	comp=Z,35nm,1.2s						
SANVU	Saraoutou	21.47	125	P	P	17 03 28.7	-1.4
SANVU				IAmb	IAmb	17 03 50.9	
	comp=Z,80nm,1.3s						
WB0	Warramunga Arr	21.70	220	P	P	17 03 30.5	-2.1
WB0				IAmb	IAmb	17 03 51.0	
	comp=Z,24nm,1.0s						
WR0	Warramunga Arr	21.75	220	P	P	17 03 31.0	-2.1
WR0				IAmb	IAmb	17 03 44.5	
	comp=Z,32nm,1.1s						
WRAB	Tennant Creek	21.85	220	P	P	17 03 32.3	-1.9
WRAB				IAmb	IAmb	17 03 39.4	
	comp=Z,19nm,0.8s						
WB2	Warramunga Arr	21.86	220	P	P	17 03 33.0	-1.3
WB2				IAmb	IAmb	17 03 41.0	
	comp=Z,21nm,0.9s						
WRA	Warramunga Arr	21.86	220	P	P	17 03 33.1	-1.2
	comp=Z,12nm,0.9s,baz=43,slow=11,SNR=15						
WRA	Warramunga Arr	21.86	220	P	P	17 03 32.8	-1.6
EIDS	Eidsvold	21.93	175	P	P	17 03 34.0	-1.0
EIDS				IAmb	IAmb	17 03 39.8	
	comp=Z,75nm,1.8s						
TNTI	Ternate	22.12	280	P	P	17 03 36.4	-0.7
AS31	Alice Springs	24.94	215		P	17 04 03.9	-1.0
ASAR	Alice Springs	24.94	215	P	P	17 04 05.0	+0.1
	comp=Z,17nm,1.0s,baz=47,slow=8.2,SNR=14						
ASAR	Alice Springs	24.94	215		P	17 04 03.9	-1.0
DZM	Mont Dzumac	25.06	139	P	P	17 04 06.0	-0.1
DZM				IAmb	IAmb	17 04 24.8	
	comp=Z,34nm,1.2s						
DZM	Mont Dzumac	25.06	139	P	P	17 04 09.1	+3.0
SOEI	Soe	25.46	254	P	P	17 04 08.9	-1.0
BATI	Baumata	26.14	254	P	P	17 04 17.7	+1.8
	comp=Z,4.5nm,0.4s,baz=96,slow=19,SNR=1.8						
ARMA	Armidale	26.98	175	P	P	17 04 23.9	+0.5
ARMA				IAmb	IAmb	17 04 24.1	
	comp=Z,25nm,1.4s						
MMRI	Maumere	27.21	258	P	P	17 04 26.3	+0.7
FITZ	Fitzroy Crossi	27.23	236	P	P	17 04 25.9	+0.2
	comp=Z,28nm,1.0s,baz=67,slow=7.9,SNR=18						
FITZ	Fitzroy Crossi	27.23	236	P	P	17 04 25.6	-0.2
H11S3	WAKE ISLAND Hy	27.81	38	T	T	17 33 30.0	
	baz=220,slow=76,SNR=293						
H11S2	WAKE ISLAND Hy	27.81	38	T	T	17 33 28.4	
	baz=220,slow=76,SNR=265						
H11S1	WAKE ISLAND Hy	27.82	38	T	T	17 33 31.1	
	baz=220,slow=76,SNR=15						
H11N1	WAKE ISLAND Hy	28.86	37	T	T	17 35 04.3	
	baz=219,slow=76,SNR=111						
H11N3	WAKE ISLAND Hy	28.88	37	T	T	17 35 05.4	
	baz=219,slow=76,SNR=105						
H11N2	WAKE ISLAND Hy	28.88	37	T	T	17 35 05.6	
	baz=219,slow=76,SNR=181						
STKA	Stephens Creek	29.20	193	P	P	17 04 40.8	-2.3
	comp=Z,1.6nm,0.9s,baz=341,slow=18,SNR=2.1						
BBOO	Buckleboo	31.71	201	P	P	17 05 02.3	-3.0
BBOO				IAmb	IAmb	17 05 22.8	
	comp=Z,16nm,1.3s						
JNU	Nakatsue	40.21	336	P	P	17 06 18.6	+0.4
	comp=Z,9.2nm,0.9s,baz=129,slow=14,SNR=2.3						
JNU	Nakatsue	40.21	336	IAmb	IAmb	17 06 26.4	
	comp=Z,131nm,1.7s						
KSAR	Wonju Array Be	45.17	336	P	P	17 07 00.7	+2.4
NJ2	Nanjing	45.48	323	*e*P	P	17 07 01.8	+1.0
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
USRK	Ussuriysk Ar.	49.81	344	P	P	17 07 35.0	+0.7
	comp=Z,1.4nm,0.6s,baz=134,slow=8.3,SNR=2.5						
XAN	Xi'an	53.09	318	P	P	17 08 03.9	+4.7
XAN				pP	pwP	17 08 07.3	+2.8
XAN				pmax	pmax		
	comp=Z,4.0nm,1.5s						
KMI	Kunming	53.16	305	⇑P	P	17 08 02.6	+2.6
KMI				pmax	pmax		
	comp=Z,7.0nm,1.8s						
CM31	Chiang Mai Arr	53.95	296	P	P	17 08 05.3	-0.4
CMAR	Chiang Mai Arr	53.95	296	P	P	17 08 08.1	+2.4
	comp=Z,1.6nm,0.9s,baz=120,slow=5.3,SNR=8.1						
CMAR	Chiang Mai Arr	53.95	296	P	P	17 08 03.5	-2.2
HHC	Hu-ho-hao-te	55.80	326	*e*P	P	17 08 18.1	-0.7
HHC				pmax	pmax		
	comp=Z,9.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,120nm,7.6s						
PETK	Petropavlovsk-	56.76	6	P	P	17 08 25.5	+0.2
	comp=Z,4.1nm,0.9s,baz=170,slow=8.8,SNR=1.9						
OPA	Opana	57.41	62	P	P	17 08 30.5	0.0
LZH	Lanzhou	57.68	317	*e*P	P	17 08 34.3	+1.9
LZH				pP	pwP	17 08 40.4	+2.7
LZH				sP	sP	17 08 44.5	+8.6
LZH				pmax	pmax		
	comp=Z,19nm,1.4s						
HIA	Hailar	58.30	338	P	P	17 08 35.6	-0.7
HIA				IAmb	IAmb	17 08 43.0	
	comp=Z,9.0nm,0.9s						
GTA	Gaotai	62.15	318	⇑P	P	17 09 03.3	+0.3
GTA				pP	pwP	17 09 09.0	+0.7
GTA				sP	sP	17 09 13.3	+6.8
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,60nm,5.8s						
GTA				LR	LR		
	comp=Z,340nm,21.8s						
GTA				LR	LR		
	comp=Z,480nm,21.1s						
GTA				LR	LR		
	comp=Z,760nm,21.8s						
ULN	Ulaanbaatar	62.90	330	P	P	17 09 08.6	+0.8
ULN				IAmb	IAmb	17 09 16.8	
	comp=Z,7.1nm,1.4s						
SONM	Songino Array	63.21	329	P	P	17 09 10.6	+0.7
	comp=Z,1.3nm,0.8s,baz=148,slow=5.9,SNR=7.0						
SONM	Songino Array	63.21	329		P	17 09 09.8	-0.1
WMQ	Urumqi	72.23	318	*e*P	P	17 10 08.1	+1.2
MK31	Makanchi Array	76.86	320	P	P	17 10 32.9	-0.8
MKAR	Makanchi Array	76.86	320	P	P	17 10 34.1	+0.5
	comp=Z,1.7nm,0.8s,baz=105,slow=6.8,SNR=11						
MKAR	Makanchi Array	76.86	320	P	P	17 10 33.7	0.0
MAKZ	Makanchi	77.07	320	P	P	17 10 34.8	-0.1
MAKZ				IAmb	IAmb	17 10 57.8	
	comp=Z,15nm,1.7s						
ZAA0	Zalesovo Array	77.96	327	P	P	17 10 38.4	-1.2
ZALV	Zalesovo Beam	77.96	327	P	P	17 10 39.2	-0.4
	comp=Z,1.1nm,0.7s,baz=108,slow=4.7,SNR=4.0						
ZALV	Zalesovo Beam	77.96	327	P	P	17 10 38.7	-0.9
KURK	Kurchatov	80.41	323	P	P	17 10 52.5	-0.6
KURK				IAmb	IAmb	17 11 02.9	
	comp=Z,5.0nm,0.9s						
HIN	Hinchinbrook I	80.61	27	P	P	17 10 53.7	-0.3
ILAR	Eielson Array	82.28	23	P	P	17 11 01.6	-1.1
	comp=Z,0.3nm,0.8s,baz=248,slow=4.8,SNR=2.5						
NRIK	Noril'sk	83.47	342	P	P	17 11 09.6	+0.9
	comp=Z,1.1nm,0.3s,baz=124,slow=4.8,SNR=2.4						
NRIK	Noril'sk	83.47	342	P	P	17 11 09.0	+0.2
KK31	Karatay Array	84.00	314	P	P	17 11 12.0	-0.1
KKAR	Karatay Array	84.00	314	P	P	17 11 11.9	-0.2
KKAR	Karatay Array	84.00	314	P	P	17 11 11.8	-0.4
KKAR				IAmb	IAmb	17 11 33.5	
	comp=Z,17nm,1.8s						
YKA	Yellowknife Ar	95.91	28	P	P	17 12 07.3	-0.7
	comp=Z,0.2nm,0.6s,baz=268,slow=3.9,SNR=4.4						
TORD	Torodi Ar. Bea	146.37	289	PKPbc	PKPbc	17 18 23.2	-0.3
	comp=Z,2.2nm,0.9s,baz=64,slow=6.6,SNR=5.9						

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*IDC **13** 17:02:05.0±0.9, 3°.43S×148°.82E, h0km, mb4.3/17, mb1 4.5/17, mb1mx4.4/30, mbtmp4.3/17, MS4.6/3, Ms1 4.6/3, ms1mx4.3/13, Error ellipse: s-maj=30.4km s-min=14.6km az=103.0*

*MOS **13** 17:02:05.3±1.9, 3°.51S×148°.75E, h10km, mb4.7/17, Error ellipse: s-maj=10.2km s-min=7.5km az=109.0*

*NEIC **13** 17:02:05.9±2.2, 3°.38S±0°.07×148°.86E±0°.06, h10km±1km, mb5.0/55, Error ellipse: s-maj=13.2km s-min=9.2km az=218.0*

*GCMT **13** 17:02:07.9±0.1, 3°.35S±0°.01×149°.06E±0°.01, h12km, MW5.5/157, Moment Tensor Solution. s109, c192; s157, c291; Duration: 1^{s}3 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.09±.03; $M_{\theta\theta}$1.10±.03; $M_{\phi\phi}$-1.01±.03; $M_{r\theta}$-0.12±.06; $M_{\theta\phi}$1.72±.02; $M_{\phi r}$-0.47±.06; Best double couple: $M_0$2.07600×10^{17} NP1:ϕ_s286.00000°, δ76.00000°, λ-1.00000°. NP2:ϕ_s16.00000°, δ89.00000°, λ-166.00000°. Principal axes: T 2.1140, Plg9.0000°, Azm150.0000°; N -0.0770, Plg76.0000°, Azm21.0000°; P -2.0380, Plg10.0000°, Azm242.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BJI **13** 17:02:07.8±0.0, 3°.64S×149°.05E, h40km, mB5.2/48, mb4.6/52, Ms5.2/54, Ms7 5.1/51*

*DJA **13** 17:02:18.3±0.5, 4°S±4°×14°9E±°, h78km±5km, M4.9/21, mb4.8/21, mB5.3/13, MLv5.2/2, Mw(mB)4.7/13, MwMwp5.1/3, Mwp5.3/3*

ISC 13 17:02:08.0±0.3, **3°.46S**±0°.04×**148°.95E**±0°.04, **h19km, n210, σ2^{s}18**/220, **mb4.8**/93, **MS5.0**/27, **9C-7D, Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANU	Manus Island	2.12	312		Pn	17 02 39.8	-2.6
RABL	Rabaul	3.28	103		Pn	17 02 58.3	-0.2
RABL	Rabaul	3.28	103	P	Pg	17 03 10.8	-0.2
PMG	Port Moresby	6.17	197	Pn	Pn	17 03 43.6	+5.4
	1.6nm,0.3s,baz=63,slow=20,SNR=2.1						
PMG				Sn	Sn	17 04 53.5	+5.2
	2.4nm,0.3s,baz=40,slow=14,SNR=1.9						
PMG	Port Moresby	6.17	197	P	Pn	17 03 42.0	+3.8
PMG	Port Moresby	6.17	197	Pn	Pn	17 03 42.0	+3.8
JAY	Jayapura	8.29	276	Pn	Pn	17 04 08.2	+0.9
	0.3nm,0.3s,baz=296,slow=13,SNR=2.8						
JAY	Jayapura	8.29	276	P	Pn	17 04 12.7	+5.4
	33nm,1.0s						
GENI	Genyem	8.82	275	P	Pn	17 04 21.0	+6.5
	9µm87nm,0.7s						
SMPI	Sarmi	10.34	278	P	Pn	17 04 38.8	+3.5
	73nm,1.2s						
COEN	Coen	11.89	208	Pn	Pn	17 04 58.3	+1.6
HNR	Honiara	12.43	119	LR	LR	17 10 03.9	
	comp=Z,6µm,18.7s,baz=290,slow=38						
HNR	Honiara	12.43	119	P	Pn	17 05 03.6	-0.4
HNR	Honiara	12.43	119	Pn	Pn	17 05 03.6	-0.4
SIJI	Sorong	17.86	278	Pn	P	17 06 16.9	+0.7
	0.3nm,0.3s,baz=175,slow=14,SNR=1.8						
SAUI	Saumlaki	18.13	255	P	Pn	17 06 17.0	-1.9
SAUI				IAmb	IAmb	17 06 48.6	
	comp=Z,293nm,1.4s						
SAUI	Saumlaki	18.13	255	P	P	17 06 22.0	+2.9
	comp=Z,4µmcomp=Z,153nm,1.1s						
MTN	Manton Dam	19.94	241		P	17 06 38.3	-0.7
MTN				IAmb	IAmb	17 06 51.4	
	comp=Z,105nm,1.2s						
WB0	Warramunga Arr	21.56	220		P	17 06 55.9	-0.6
WB0				IAmb	IAmb	17 07 11.9	
	comp=Z,118nm,1.5s						
SANVU	Saraoutou	21.56	125	P	P	17 06 55.4	-1.2
SANVU				IAmb	IAmb	17 07 24.4	
	comp=Z,59nm,1.1s						
WR0	Warramunga Arr	21.60	219	P	P	17 06 55.7	-1.3
WRAB	Tennant Creek	21.71	220	*ce*P	P	17 06 58.4	+0.3
WRAB				pmax	pmax		
	comp=Z,58nm,1.3s						
WRAB	Tennant Creek	21.71	220		P	17 06 57.8	-0.3
WRAB				IAmb	IAmb	17 07 11.3	
	comp=Z,62nm,1.1s						
WB2	Warramunga Arr	21.71	220		P	17 06 58.5	+0.3
WRA	Warramunga Arr	21.72	220	P	P	17 06 58.2	-0.1
	comp=Z,29nm,1.0s,baz=42,slow=11,SNR=16						
WRA				S	S	17 10 54.8	-3.3
	comp=Z,1.3nm,1.0s,baz=40,slow=21,SNR=1.5						
WRA	Warramunga Arr	21.72	220	*i* P	P	17 06 58.7	+0.4
WRA				pmax	pmax		
	comp=Z,29nm,1.0s						
WRA	Warramunga Arr	21.72	220	P	P	17 06 58.5	+0.3
EIDS	Eidsvold	21.88	175	P	P	17 07 00.2	+0.3
TNTI	Ternate	21.98	281	P	P	17 06 58.2	-2.9
TNTI				IAmb	IAmb	17 07 41.8	
	comp=Z,92nm,1.5s						
TNTI	Ternate	21.98	281	P	P	17 07 03.6	+2.5
	comp=Z,2µmcomp=Z,989nmcomp=Z,32nm,1.1s						
SANI	Sanana	22.98	273	P	P	17 07 13.8	+2.0
	comp=Z,928nmcomp=Z,17nm,1.0s						
TARA	Tarawa	24.43	79	P	P	17 07 26.6	+0.8
AS31	Alice Springs	24.80	215	P	P	17 07 28.1	-1.0
ASAR	Alice Springs	24.80	215	P	P	17 07 27.7	-1.3
	comp=Z,47nm,1.1s,baz=49,slow=8.3,SNR=22						
ASAR				S	S	17 11 45.9	-5.0
	comp=Z,1.7nm,1.1s,baz=33,slow=26,SNR=1.6						
ASAR	Alice Springs	24.80	215	P	P	17 07 29.4	+0.3
ASAR	Alice Springs	24.80	215	P	P	17 07 29.4	+0.3
DZM	Mont Dzumac	25.11	139	*e*P	P	17 07 34.3	+2.4
	comp=Z,96nm,1.2s						
DZM				*e*LR	LR	17 13 52.2	
	comp=Z,13µm,24.1s						
DZM	Mont Dzumac	25.11	139	P	P	17 07 32.7	+0.8
DZM				IAmb	IAmb	17 07 42.5	
	comp=Z,47nm,1.2s						
KMSI	Cibinong	25.28	279	P	P	17 07 57.3	+24
SOEI	Soe	25.30	254	P	P	17 07 32.4	-1.3
SOEI	Soe	25.30	254	P	P	17 07 35.7	+2.0
	comp=Z,3µmcomp=Z,85nm,1.1s						
BATI	Baumata	25.98	254	P	P	17 07 40.4	+0.6
	comp=Z,67nm,1.1s,baz=143,slow=1.5,SNR=5.9						
BATI	Baumata	25.98	254	P	P	17 07 42.5	+2.7
	comp=Z,954nmcomp=Z,51nm,1.0s						
GTOI	Gorontalo	26.25	278	P	P	17 07 46.8	+4.6
	comp=Z,612nmcomp=Z,36nm,1.1s						
ARMA	Armidale	26.93	175	P	P	17 07 48.4	0.0
ARMA				IAmb	IAmb	17 07 55.7	
	comp=Z,70nm,1.6s						
FITZ	Fitzroy Crossi	27.07	236	P	P	17 07 48.9	-0.7
	comp=Z,79nm,1.0s,baz=59,slow=8.9,SNR=18						
FITZ	Fitzroy Crossi	27.07	236	P	P	17 07 48.3	-1.3
MRSI	Marisa	27.28	278	P	P	17 08 03.1	+12
APSI	Ampana	27.40	275	P	P	17 07 55.3	+2.7
	comp=Z,460nmcomp=Z,32nm,1.6s						
EDFI	Ende, Flores	27.60	258	P	P	17 07 57.3	+2.7
	comp=Z,7.6nm,1.6s						
H11S3	WAKE ISLAND Hy	27.95	38	T	T	17 36 52.7	
	baz=223						
H11S2	WAKE ISLAND Hy	27.95	38	T	T	17 36 49.2	
	baz=223						
H11S1	WAKE ISLAND Hy	27.96	38	T	T	17 36 52.8	
	baz=223						
BNSI	Bone	28.79	267	P	P	17 08 12.2	+7.1
H11N1	WAKE ISLAND Hy	29.00	37	T	T	17 38 06.2	
	baz=218						
H11N3	WAKE ISLAND Hy	29.02	37	T	T	17 38 07.3	
	baz=218						
H11N2	WAKE ISLAND Hy	29.02	37	T	T	17 38 07.5	
	baz=218						
STKA	Stephens Creek	29.10	193	P	P	17 08 07.8	+0.2
	comp=Z,0.8nm,0.5s,baz=344,slow=7.9,SNR=3.3						
BBOO	Buckleboo	31.60	201	P	P	17 08 28.6	-1.0
CAN	Canberra	31.70	180	P	P	17 08 31.3	+0.7
CAN				pmax	pmax		
	comp=Z,42nm,1.6s						
CAN	Canberra	31.70	180	P	P	17 08 31.3	+0.7
CAN				IAmb	IAmb	17 08 31.6	
	comp=Z,42nm,1.6s						
PSA00	Pilbara Seismi	33.52	235	P	P	17 08 44.7	-2.0
FORT	Forrest	33.58	214	P	P	17 08 45.6	-1.5
FORT				IAmb	IAmb	17 09 39.2	
	comp=Z,22nm,0.8s						
JMZ	Minamidaito 2	33.80	330	P	P	17 08 44.5	-4.5
TOO	Toolangi	34.10	185	P	P	17 08 50.6	-0.9
TOO				pmax	pmax		
	comp=Z,49nm,1.8s						
TOO	Toolangi	34.10	185	P	P	17 08 50.6	-0.9
TOO				IAmb	IAmb	17 09 28.8	

	comp=Z,49nm,1.8s						
YULB	**Yu-li**	**37.94**	**316**	P	**P**	**17 09 23.1**	**-1.5**
JNU	**Nakatsue**	**40.20**	**336**	P	**P**	**17 09 43.3**	**-0.1**
	comp=Z,23nm,1.1s,baz=227,slow=18,SNR=3.6						
JNU				LR	LR	17 25 37.2	
	comp=Z,593nm,19.1s,baz=136,slow=35						
JNU	**Nakatsue**	**40.20**	**336**	P	**P**	**17 09 45.3**	**+1.9**
JNU				IAmb	IAmb	17 09 51.4	
	comp=Z,49nm,1.2s						
MORW	**Morawa**	**40.31**	**227**	P	**P**	**17 09 43.3**	**-1.1**
MORW				IAmb	IAmb	17 10 19.1	
	comp=Z,78nm,1.8s						
QZH	**Quanzhou**	**40.82**	**315**	P	**P**	**17 09 49.0**	**+0.4**
QZH				S	**S**	**17 16 04.0**	**+5.1**
QZH				LR	LR		
	comp=Z,1µm,18.9s						
QZH				LR	LR		
	comp=Z,1µm,20.8s						
QZH				LR	LR		
	comp=Z,2µm,19.4s						
MJAR	**Matsushiro Arr**	**41.04**	**347**	P	**P**	**17 09 50.9**	**+0.7**
	comp=Z,2.7nm,1.1s,baz=135,slow=17,SNR=2.1						
CISI	**Cisompet, Garu**	**41.14**	**263**	P	**P**	**17 09 49.1**	**-2.3**
NWAO	**Narrogin (SRO)**	**41.71**	**222**	P	**P**	**17 09 55.1**	**-0.7**
	comp=Z,11nm,1.0s,baz=301,slow=5.9,SNR=2.5						
NWAO	**Narrogin (SRO)**	**41.71**	**222**	P	**P**	**17 09 54.8**	**-1.1**
NWAO				pmax	pmax		
	comp=Z,33nm,1.2s						
NWAO	**Narrogin (SRO)**	**41.71**	**222**	P	**P**	**17 09 54.8**	**-1.1**
NWAO				IAmb	IAmb	17 11 11.0	
	comp=Z,33nm,1.2s						
NWAO	**Narrogin (SRO)**	**41.71**	**222**	P	**P**	**17 09 54.6**	**-1.2**
NWAO				IAmb	IAmb	17 11 11.0	
	comp=Z,30nm,1.2s						
SSE	**Sheshan**	**43.37**	**324**	P	**P**	**17 10 11.8**	**+2.5**
SSE				S	**S**	**17 16 38.9**	**+2.4**
SSE				pmax	pmax		
	comp=Z,2.0nm,0.7s						
SSE				pmax	pmax		
	comp=Z,140nm,4.7s						
SSE				LR	LR		
	comp=Z,500nm,20.9s						
SSE				LR	LR		
	comp=Z,690nm,19.7s						
QIZ	**Qiongzhong**	**44.50**	**302**	P	**P**	**17 10 16.3**	**-2.3**
QIZ				S	**S**	**17 16 50.0**	**-3.2**
QIZ				pmax	pmax		
	comp=Z,6.0nm,1.5s						
QIZ				LR	LR		
	comp=Z,670nm,20.0s						
QIZ				LR	LR		
	comp=Z,1µm,24.8s						
QIZ				LR	LR		
	comp=Z,1µm,28.6s						
QIZ	**Qiongzhong**	**44.50**	**302**	P	**P**	**17 10 15.7**	**-2.9**
QIZ				IAmb	IAmb	17 10 25.9	
	comp=Z,52nm,1.4s						
KSRS	**Korea Array**	**45.16**	**336**	P	**P**	**17 10 22.9**	**-0.6**
	comp=Z,0.8nm,0.7s,baz=72,slow=16,SNR=3.1						
NJ2	**Nanjing**	**45.44**	**323**	*e*P	**P**	**17 10 24.8**	**-1.0**
NJ2				S	**S**	**17 17 06.8**	**+0.3**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,260nm,5.0s						
NJ2				LR	LR		
	comp=Z,1µm,19.2s						
NJ2				LR	LR		
	comp=Z,2µm,18.5s						
NJ2				LR	LR		
	comp=Z,2µm,24.6s						
ERM	**Erimo**	**45.56**	**354**	P	**P**	**17 10 27.9**	**+1.2**
ERM				pmax	pmax		
	comp=Z,202nm,1.5s						
ERM	**Erimo**	**45.56**	**354**	P	**P**	**17 10 27.9**	**+1.2**
WHN	**Wuhan**	**47.27**	**318**	⇓P	**P**	**17 10 43.3**	**+3.0**
WHN				S	**S**	**17 17 37.6**	**+4.8**
WHN				pmax	pmax		
	comp=Z,530nm,5.8s						
WHN				LR	LR		
	comp=Z,5µm,19.6s						
WHN				LR	LR		
	comp=Z,2µm,12.7s						
WHN				LR	LR		
	comp=Z,6µm,19.5s						
KUR	**Kuril'sk**	**48.49**	**359**	P	P	17 10 54.1	+4.7
KUR				PPP	PPP	17 13 36.4	
KUR				S	**S**	**17 17 46.5**	**-3.1**
KUR				MLR	MLR		
	comp=Z,808nm,14.0s						
KUR				MLR	MLR		
	comp=E,568nm,11.0s						
DL2	**Dalian**	**49.12**	**332**	*e*P	**P**	**17 10 54.8**	**+0.4**
DL2				PP	**PP**	**17 12 51.3**	**+3.0**
DL2				S	**S**	**17 18 02.3**	**+3.5**
DL2				SS	**SS**	**17 21 25.1**	**-5.2**
DL2				pmax	pmax		
	comp=E,32nm,1.2s						
DL2				pmax	pmax		
	comp=E,130nm,7.0s						
DL2				LR	LR		
	comp=E,1µm,20.6s						
DL2				LR	LR		
	comp=E,1µm,20.2s						
DL2				LR	LR		
	comp=E,2µm,22.4s						
USRK	**Ussuriysk Ar.**	**49.83**	**344**	P	**P**	**17 11 00.4**	**+0.7**
	comp=E,0.9nm,0.5s,baz=320,slow=18,SNR=3.7						
YSS	**Yuzh-Sakhalins**	**50.49**	**354**	*e*P	**P**	**17 11 06.5**	**+1.8**
YSS				*e*		17 12 58.0	
YSS				*e*S	**S**	**17 18 19.8**	**+2.1**
YSS				*e*PS	PKiKP	17 18 31.9	-36
YSS				*e*SS	**SS**	**17 21 50.0**	**-2.0**
YSS				MLR	MLR		
	comp=Z,1µm,18.0s						
YSS				MLR	MLR		
	comp=N,700nm,19.0s						
GYA	**Guiyang**	**50.55**	**309**	*e*P	P	17 11 13.5	+7.8
GYA				S	**S**	**17 18 24.4**	**+5.0**
SURT	**Suratani**	**51.50**	**284**	P	P	17 11 26.3	+13
	comp=N,0.6nm,1.2s						
GSI	**Gunungsitoli**	**51.57**	**274**	P	**P**	**17 11 11.5**	**-1.9**
GSI				IAmb	IAmb	17 11 31.1	
	comp=Z,29nm,1.2s						
UTTA	**Uttaradit**	**52.16**	**296**	P	**P**	**17 11 20.9**	**+3.2**
	comp=Z,14nm,1.1s						
COCO	**West Island**	**52.28**	**257**	*i* P	**P**	**17 11 15.7**	**-3.0**
UTHA	**Uthaitani**	**52.50**	**292**	P	**P**	**17 11 23.2**	**+2.9**
	comp=Z,14nm,1.3s						
BJI	**Beijing**	**52.70**	**329**	P	**P**	**17 11 23.3**	**+1.9**
BJI				S	**S**	**17 18 53.4**	**+5.0**
BJI				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BJI				pmax	pmax		
	comp=Z,160nm,5.2s						
BJI				LR	LR		
	comp=Z,940nm,22.0s						
BJI				LR	LR		
	comp=Z,780nm,23.1s						
BJI				LR	LR		
	comp=Z,2µm,25.1s						
XAN	**Xi'an**	**53.04**	**318**	P	**P**	**17 11 23.5**	**-0.6**
XAN				pP	pwP	17 11 31.9	0.0
XAN				S	**S**	**17 18 53.4**	**+0.1**
XAN				SS	**SS**	**17 22 31.3**	**-1.6**
XAN				pmax	pmax		
	comp=Z,10.0nm,1.4s						
XAN				pmax	pmax		
	comp=Z,250nm,5.2s						
XAN				LR	LR		
	comp=Z,1µm,20.6s						
XAN				LR	LR		
	comp=Z,880nm,19.5s						
XAN				LR	LR		
	comp=Z,3µm,19.5s						
XAN	**Xi'an**	**53.04**	**318**	P	**P**	**17 11 23.1**	**-1.0**
XAN				pmax	pmax		
	comp=Z,22nm,1.4s						
XAN	**Xi'an**	**53.04**	**318**	P	**P**	**17 11 23.1**	**-1.0**
XAN				IAmb	IAmb	17 12 29.9	
	comp=Z,22nm,1.4s						
KMI	**Kunming**	**53.07**	**305**	⇓P	**P**	**17 11 24.8**	**+0.1**
KMI				pP	pwP	17 11 34.3	+1.8
KMI				sP	sP	17 11 37.6	+5.4
KMI				PP	**PP**	**17 13 31.4**	**+6.7**
KMI				S	**S**	**17 18 52.9**	**-1.5**
KMI				SS	**SS**	**17 22 33.9**	**-0.1**
KMI				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KMI				pmax	pmax		
	comp=Z,83nm,3.7s						
KMI				LR	LR		
	comp=Z,420nm,18.6s						
KMI				LR	LR		
	comp=Z,690nm,20.7s						
KMI				LR	LR		
	comp=Z,1µm,20.5s						
TIY	**Taiyuan**	**53.15**	**324**	*e*P	**P**	**17 11 21.8**	**-3.1**
TIY				S	**S**	**17 18 54.9**	**+0.1**
TIY				SS	**SS**	**17 22 33.3**	**-1.3**
TIY				pmax	pmax		
	comp=Z,130nm,6.3s						
TIY				LR	LR		
	comp=Z,740nm,13.0s						
TIY				LR	LR		
	comp=Z,550nm,14.0s						
TIY				LR	LR		
	comp=Z,2µm,20.4s						
UMPA	**Umpang Tak**	**53.23**	**293**	P	P	17 11 34.2	+8.5
	comp=Z,416nmcomp=Z,17nm,1.3s						
CM04	**Chiang Mai Arr**	**53.79**	**296**	P	**P**	**17 11 33.0**	**+3.2**
	comp=Z,54nmcomp=Z,4.7nm,1.1s						
CM01	**Chiang Mai Arr**	**53.81**	**296**	P	**P**	**17 11 33.6**	**+3.6**
	comp=Z,71nmcomp=Z,7.1nm,1.1s						
CM05	**Chiang Mai Arr**	**53.82**	**296**	P	**P**	**17 11 33.2**	**+3.2**
	comp=Z,44nmcomp=Z,4.3nm,1.1s						
CM02	**Chiang Mai Arr**	**53.83**	**296**	P	P	17 11 38.0	+7.9
	comp=Z,49nmcomp=Z,5.6nm,1.2s						
CM31	**Chiang Mai Arr**	**53.84**	**296**	P	**P**	**17 11 27.6**	**-2.6**
CMAR	**Chiang Mai Arr**	**53.84**	**296**	P	**P**	**17 11 28.1**	**-2.0**
	comp=Z,3.2nm,1.1s,baz=105,slow=5.6,SNR=11						
CMAR	**Chiang Mai Arr**	**53.84**	**296**	P	**P**	**17 11 28.8**	**-1.4**
CMAR	**Chiang Mai Arr**	**53.84**	**296**	P	**P**	**17 11 28.8**	**-1.4**
CM15	**Chiang Mai Arr**	**53.85**	**296**	P	**P**	**17 11 34.0**	**+3.7**
	comp=Z,58nmcomp=Z,6.8nm,1.0s						
CM13	**Chiang Mai Arr**	**53.86**	**296**	P	**P**	**17 11 33.0**	**+2.7**
	comp=Z,54nmcomp=Z,5.5nm,1.1s						
CMMT	**Chiang Mai**	**53.95**	**296**	P	P	17 11 37.5	+6.5
	comp=Z,3.1nm,2.4s						
CHTO	**Chiang Mai**	**53.95**	**296**	P	**P**	**17 11 27.4**	**-3.6**
CHTO				pmax	pmax		
	comp=Z,22nm,1.7s						
CHTO	**Chiang Mai**	**53.95**	**296**	P	**P**	**17 11 27.4**	**-3.6**
KLR	**Kul'dur**	**54.56**	**346**	⇓*e*P	**P**	**17 11 35.9**	**+1.0**
KLR				pmax	pmax		
	comp=Z,3.0nm,1.1s						
CD2	**Chengdu**	**54.97**	**312**	P	**P**	**17 11 37.8**	**-0.5**
CD2				S	**S**	**17 19 16.3**	**-3.3**
CD2				ScS	**ScS**	**17 21 22.3**	**-4.7**
CD2				SS	**SS**	**17 23 00.6**	**-3.0**
CD2				pmax	pmax		
	comp=Z,10.0nm,1.1s						
CD2				pmax	pmax		
	comp=Z,300nm,5.1s						
CD2				LR	LR		
	comp=Z,2µm,19.6s						
CD2				LR	LR		
	comp=Z,2µm,20.6s						
CD2				LR	LR		
	comp=Z,2µm,21.4s						
HHC	**Hu-ho-hao-te**	**55.76**	**326**	*e*P	**P**	**17 11 43.5**	**-0.4**
HHC				S	**S**	**17 19 31.4**	**+1.4**
HHC				pmax	pmax		
	comp=Z,8.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,91nm,8.5s						
HHC				LR	LR		
	comp=Z,1µm,18.0s						
HHC				LR	LR		
	comp=Z,1µm,22.7s						
HHC				LR	LR		
	comp=Z,2µm,19.9s						
PET	**Petropavlovsk**	**56.87**	**7**	*e*P	**P**	**17 11 54.0**	**+2.7**
PET				*e*S	**S**	**17 19 44.7**	**+0.9**
PET				*e*SS	**SS**	**17 23 33.6**	**+1.2**
PET				MLR	MLR		
	comp=Z,1µm,15.0s						
LZH	**Lanzhou**	**57.62**	**317**	*e*P	**P**	**17 11 58.1**	**+0.9**
LZH				pP	pwP	17 12 06.5	+1.4
LZH				sP	sP	17 12 14.1	+9.3
LZH				S	**S**	**17 19 57.4**	**+2.6**
LZH				sS	sS	17 20 10.4	+6.5
LZH				pmax	pmax		
	comp=Z,10.0nm,1.1s						
LZH				pmax	pmax		
	comp=Z,140nm,4.9s						
LZH				LR	LR		
	comp=Z,870nm,13.6s						
LZH				LR	LR		
	comp=Z,750nm,17.9s						
LZH				LR	LR		
	comp=Z,810nm,18.6s						
HIA	**Hailar**	**58.30**	**338**	P	**P**	**17 12 00.1**	**-1.5**
HIA				pmax	pmax		
	comp=Z,16nm,1.2s						
HIA	**Hailar**	**58.30**	**338**	P	**P**	**17 12 00.1**	**-1.5**
HIA				IAmb	IAmb	17 12 59.3	
	comp=Z,16nm,1.2s						
ZEA	**Zeya**	**59.82**	**345**	*e*P	P	17 12 18.3	+6.4
ZEA				*e*S	S	17 20 35.5	+13
ZEA				pmax	pmax		
	comp=N,10.0nm,1.1s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.3s						
ZEA				pmax	pmax		
	comp=E,100nm,5.6s						
ZEA				pmax	pmax		
	comp=N,200nm,6.1s						
ZEA				pmax	pmax		
	comp=Z,100nm,5.9s						
ZEA				smax	smax		
	comp=N,200nm,12.7s						
PPT	**Papeete**	**61.78**	**108**	LR	LR	17 35 58.9	
	comp=N,329nm,20.7s,baz=275,slow=33						
PPT2	**Papeete2**	**61.79**	**108**	*e*S	**S**	**17 20 44.9**	**-4.1**
	comp=N,1µm,25.8s						
PPT2				*e*LQ	LQ	17 28 14.8	
	comp=N,3µm,30.8s						
PPT2				*e*LR	LR	17 30 48.5	
	comp=N,1µm,26.0s						
GTA	**Gaotai**	**62.09**	**318**	⇑P	**P**	**17 12 28.0**	**+0.1**
GTA				S	**S**	**17 20 53.0**	**+0.7**
GTA				pmax	pmax		
	comp=N,2.0nm,1.2s						
GTA				pmax	pmax		
	comp=N,67nm,4.2s						
GTA				LR	LR		
	comp=N,440nm,18.9s						
GTA				LR	LR		
	comp=N,590nm,18.9s						
GTA				LR	LR		
	comp=N,950nm,19.6s						
SHL	**Shillong**	**62.33**	**301**	P	**P**	**17 12 26.9**	**-2.9**
SHL				pmax	pmax		
	comp=Z,12nm,0.4s						
SHL	**Shillong**	**62.33**	**301**	P	**P**	**17 12 26.9**	**-2.9**
TBI	**Tubuai**	**62.60**	**114**	*e*S	**S**	**17 20 57.9**	**-1.0**
	comp=Z,749nm,27.0s						
TBI				*e*LQ	LQ	17 28 31.4	
	comp=Z,2µm,31.5s						
TBI				*e*LR	LR	17 31 15.4	
	comp=Z,1µm,26.2s						
MA2	**Magadan**	**62.86**	**1**	⇓*e*P	P	17 12 38.6	+6.2
MA2				pmax	pmax		
	comp=Z,10.0nm,1.2s						
ULN	**Ulaanbaatar**	**62.87**	**330**	⇑*e*P	**P**	**17 12 32.5**	**-0.5**
ULN				pmax	pmax		
	comp=Z,4.0nm,1.3s						
ULN	**Ulaanbaatar**	**62.87**	**330**	P	**P**	**17 12 32.8**	**-0.2**
SONM	**Songino Array**	**63.19**	**329**	P	**P**	**17 12 32.6**	**-2.4**
	comp=Z,0.8nm,0.7s,baz=145,slow=5.3,SNR=4.1						
SONM	**Songino Array**	**63.19**	**329**	P	**P**	**17 12 34.4**	**-0.6**
SONM				pmax	pmax		
	comp=Z,3.0nm,1.0s						
SONM	**Songino Array**	**63.19**	**329**	P	**P**	**17 12 34.4**	**-0.6**
LSA	**Lhasa**	**64.33**	**305**	P	**P**	**17 12 40.8**	**-2.5**
LSA				pmax	pmax		
	comp=Z,14nm,1.5s						
LSA	**Lhasa**	**64.33**	**305**	P	**P**	**17 12 40.8**	**-2.5**
LSA				IAmb	IAmb	17 12 56.9	
	comp=Z,14nm,1.5s						
SEY	**Seymchan**	**66.26**	**2**	⇑*e*P	P	17 12 59.6	+5.0
ZAK	**Zakamensk**	**66.39**	**330**	*e*P	**P**	**17 12 54.5**	**-1.3**
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.4s						
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.2s						
TAPN	**Taplejung**	**66.44**	**302**	*e*P	**P**	**17 12 58.1**	**+1.3**
	comp=Z,49nm,1.3s						
ODAN	**Odare**	**66.57**	**301**	*e*P	**P**	**17 12 58.4**	**+0.8**
	comp=Z,32nm,1.1s						
YAK	**Yakutsk**	**66.96**	**350**	⇑*e*P	**P**	**17 13 03.0**	**+4.0**
YAK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
RAMN	**Ramite**	**67.27**	**301**	*e*P	**P**	**17 13 03.2**	**+1.1**
GUN	**Gumba**	**68.15**	**302**	*e*P	**P**	**17 13 07.1**	**-0.7**
	comp=Z,77nm,1.4s						
MOY	**Mondy**	**68.32**	**330**	*e*P	P	17 13 14.1	+6.1
MOY				pmax	pmax		
	comp=Z,27nm,1.8s						
PKI	**Pulchoki**	**68.46**	**301**	*e*P	**P**	**17 13 09.8**	**+0.1**
	comp=Z,30nm,1.3s						
PKIN	**Phulchoki**	**68.47**	**301**	*e*P	**P**	**17 13 09.5**	**-0.2**
	comp=Z,36nm,1.3s						
KKN	**Kakani**	**68.63**	**301**	*e*P	**P**	**17 13 10.4**	**-0.2**
	comp=Z,24nm,1.0s						
DMN	**Daman**	**68.73**	**301**	*e*P	**P**	**17 13 11.5**	**+0.2**
	comp=Z,54nm,1.3s						
GKN	**Gorkha**	**69.23**	**302**	*e*P	**P**	**17 13 14.2**	**-0.1**
	comp=Z,47nm,1.4s						
DANN	**Dangsing**	**70.07**	**302**	*e*P	**P**	**17 13 18.2**	**-1.4**
	comp=Z,41nm,1.4s						
TAOE	**Nuku Hiva Isla**	**70.61**	**98**	*e*LR	LR	17 34 51.3	
	comp=Z,1µm,23.1s						
WMQ	**Urumqi**	**72.18**	**318**	*e*P	**P**	**17 13 32.1**	**+0.3**
WMQ				pP	pwP	17 13 39.1	-0.9
WMQ				pmax	pmax		
	comp=Z,12nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,280nm,5.9s						
WMQ				LR	LR		
	comp=Z,660nm,15.3s						
WMQ				LR	LR		
	comp=Z,520nm,12.5s						
WMQ				LR	LR		
	comp=Z,490nm,18.1s						
WMQ	**Urumqi**	**72.18**	**318**	P	**P**	**17 13 28.9**	**-2.9**
WMQ				pmax	pmax		
	comp=Z,14nm,1.1s						
WMQ	**Urumqi**	**72.18**	**318**	P	**P**	**17 13 28.9**	**-2.9**
WMQ				IAmb	IAmb	17 14 25.5	
	comp=Z,14nm,1.1s						
HYB	**Hyderabad**	**72.43**	**289**	*i* P	P	17 13 18.0	-16
VNDA	**Vanda**	**74.33**	**177**	P	**P**	**17 13 43.5**	**-0.2**
	comp=Z,2.4nm,1.1s,baz=316,slow=5.4,SNR=1.6						
DGZ	**Jazzator, Alta**	**74.72**	**324**	⇓*e*P	**P**	**17 13 47.0**	**+0.2**
DGZ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
SBA	**Scott Base**	**74.94**	**176**	P	**P**	**17 13 45.6**	**-1.7**
SBA				pmax	pmax		
	comp=Z,54nm,1.3s						
SBA	**Scott Base**	**74.94**	**176**	P	**P**	**17 13 45.5**	**-1.7**
ANM	**Nome**	**75.69**	**19**	P	**P**	**17 13 52.8**	**+1.0**
ANM				pmax	pmax		
	comp=Z,23nm,1.9s						
ANM	**Nome**	**75.69**	**19**	P	**P**	**17 13 52.8**	**+1.0**
ANM				IAmb	IAmb	17 13 58.4	
	comp=Z,23nm,1.9s						
RKT	**Rikitea**	**75.84**	**113**	*e*LQ	LQ	17 34 04.1	
	comp=Z,2µm,38.5s						
RKT				*e*LR	LR	17 37 19.3	
	comp=Z,1µm,25.2s						
MK31	**Makanchi Array**	**76.81**	**320**	⇓*e*P	**P**	**17 13 58.6**	**0.0**
MK31	**Makanchi Array**	**76.81**	**320**	P	**P**	**17 13 58.4**	**-0.3**
MKAR	**Makanchi Array**	**76.81**	**320**	P	**P**	**17 13 56.7**	**-2.0**
	comp=Z,3.8nm,1.0s,baz=100,slow=6.7,SNR=9.2						
MKAR	**Makanchi Array**	**76.81**	**320**	*i* P	**P**	**17 14 00.2**	**+1.6**
MKAR				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MKAR	**Makanchi Array**	**76.81**	**320**	P	**P**	**17 13 58.1**	**-0.5**
MAKZ	**Makanchi**	**77.02**	**320**	P	**P**	**17 13 58.6**	**-1.2**
MAKZ				pmax	pmax		
	comp=Z,14nm,1.2s						
MAKZ	**Makanchi**	**77.02**	**320**	P	**P**	**17 13 58.6**	**-1.2**
MAKZ				IAmb	IAmb	17 14 10.2	
	comp=Z,14nm,1.1s						
ZAA0	**Zalesovo Array**	**77.93**	**327**	P	**P**	**17 14 03.7**	**-0.9**
ZALV	**Zalesovo Beam**	**77.93**	**327**	P	**P**	**17 14 04.7**	**0.0**
	comp=Z,0.7nm,0.4s,baz=99,slow=9.2,SNR=4.4						
ZALV	**Zalesovo Beam**	**77.93**	**327**	*i* P	**P**	**17 14 06.5**	**+1.8**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ZALV	**Zalesovo Beam**	**77.93**	**327**	P	**P**	**17 14 03.6**	**-1.1**
KSH	**Kashi**	**79.16**	**311**	P	P	17 14 16.8	+4.8
KSH				S	**S**	**17 24 19.1**	**+8.0**
KSH				pmax	pmax		
	comp=Z,20nm,1.5s						
KSH				pmax	pmax		
	comp=Z,160nm,6.3s						
KSH				LR	LR		
	comp=Z,170nm,5.2s						
KSH				LR	LR		
	comp=Z,1µm,17.2s						
KSH				LR	LR		
	comp=Z,640nm,16.4s						
NIL	**Nilore**	**80.06**	**305**	P	**P**	**17 14 15.3**	**-1.6**
NIL				pmax	pmax		
	comp=Z,12nm,0.8s						
NIL	**Nilore**	**80.06**	**305**	P	**P**	**17 14 15.3**	**-1.6**
NIL				IAmb	IAmb	17 15 10.2	
	comp=Z,12nm,0.8s						
KURK	**Kurchatov**	**80.37**	**323**	⇑*e*P	**P**	**17 14 18.7**	**+0.6**
KURK				pmax	pmax		
	comp=Z,17nm,1.7s						
KURK	**Kurchatov**	**80.37**	**323**	P	**P**	**17 14 17.2**	**-0.9**
KURK				IAmb	IAmb	17 14 28.3	
	comp=Z,16nm,1.1s						
AAK	**Ala-Archa**	**80.97**	**314**	⇑*e*P	**P**	**17 14 23.4**	**+1.7**
AAK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
AAK	**Ala-Archa**	**80.97**	**314**	P	**P**	**17 14 21.9**	**+0.2**
RND	**Reindeer**	**81.02**	**24**	P	**P**	**17 14 21.7**	**+0.3**
RND				pmax	pmax		
	comp=Z,20nm,1.4s						
RND	**Reindeer**	**81.02**	**24**	P	**P**	**17 14 21.6**	**+0.3**
RND				IAmb	IAmb	17 15 55.2	
	comp=Z,20nm,1.4s						
COLA	**College**	**82.07**	**23**	⇑*e*P	P	17 14 31.5	+4.7
COLA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ILAR	**Eielson Array**	**82.40**	**23**	P	**P**	**17 14 26.7**	**-1.8**
	comp=Z,0.6nm,0.8s,baz=241,slow=5.9,SNR=3.8						
IL18	**Eielson Array**	**82.43**	**23**	P	**P**	**17 14 27.1**	**-1.7**
NRIK	**Noril'sk**	**83.48**	**342**	P	**P**	**17 14 34.7**	**+0.7**
	comp=Z,0.9nm,0.4s,baz=98,slow=7.1,SNR=2.0						
NRIK	**Noril'sk**	**83.48**	**342**	⇓*e*P	**P**	**17 14 36.4**	**+2.4**
NRIK				pmax	pmax		
	comp=Z,14nm,1.4s						
NRIK	**Noril'sk**	**83.48**	**342**	P	**P**	**17 14 34.1**	**+0.1**
KBL	**Kabul**	**83.65**	**305**	P	**P**	**17 14 34.7**	**-1.3**
KBL				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KBL	**Kabul**	**83.65**	**305**	P	**P**	**17 14 34.7**	**-1.3**
KK06	**Karatay Array**	**83.92**	**314**	P	**P**	**17 14 35.5**	**-1.4**
KK05	**Karatay Array**	**83.93**	**314**	P	**P**	**17 14 35.4**	**-1.5**
KK02	**Karatay Array**	**83.93**	**314**	P	**P**	**17 14 34.8**	**-2.2**
KK31	**Karatay Array**	**83.93**	**314**	P	**P**	**17 14 37.0**	**0.0**
KK31				pmax	pmax		
	comp=Z,19nm,1.4s						
KK31	**Karatay Array**	**83.93**	**314**	P	**P**	**17 14 37.0**	**0.0**
KK31				IAmb	IAmb	17 14 47.8	
	comp=Z,19nm,1.4s						
KKAR	**Karatay Array**	**83.93**	**314**	P	**P**	**17 14 37.0**	**0.0**
KKAR				pmax	pmax		
	comp=Z,19nm,1.4s						
KKAR	**Karatay Array**	**83.93**	**314**	P	**P**	**17 14 37.0**	**0.0**
KKAR	**Karatay Array**	**83.93**	**314**	P	**P**	**17 14 37.0**	**0.0**
KKAR				IAmb	IAmb	17 14 47.8	
	comp=Z,19nm,1.4s						
KK01	**Karatay Array**	**83.94**	**314**	P	**P**	**17 14 35.4**	**-1.7**
BRVK	**Borovoye**	**85.95**	**324**	⇑*e*P	**P**	**17 14 47.6**	**+0.7**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
NVAR	**Mina Array Bea**	**94.28**	**52**	P	**P**	**17 15 29.2**	**+2.5**
	comp=Z,0.4nm,0.7s,baz=287,slow=3.7,SNR=3.2						
YKA	**Yellowknife Ar**	**96.03**	**28**	P	**P**	**17 15 32.8**	**-1.0**
	comp=Z,0.5nm,0.6s,baz=272,slow=4.0,SNR=9.6						
MNK	**Minsk**	**110.44**	**328**	*i* P	**Pdif**	**17 16 36.7**	**-1.5**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=E,3.0nm,1.2s						
MNK				*i* P	Pdif	17 16 36.7	-1.5
	comp=N,8.0nm,0.9s						
MNK				*i* P	Pdif	17 16 36.7	-1.5
	comp=Z,6.0nm,0.7s						
MNK				*i* PKP	PKiKP	17 20 31.9	-7.1
MNK				*i* PP	PP	17 21 13.3	-0.8
MNK				*i* PPP	PPP	17 23 32.2	
MNK				*i* SKS	SKSdf	17 27 52.4	+2.3
MNK				*i* PS	PS	17 30 42.8	-1.6
MNK				*i* SS	SS	17 36 40.8	-0.1
MNK				*i* SSS	SSS	17 40 42.6	
MNK				*i* LQ	LQ	17 59 41.6	
MNK				*i* LR	LR	18 02 35.3	
MNK				*i* LRM	MLR	18 09 16.2	
	comp=N,371nm,20.3s						
MNK				*i* LRM	MLR	18 09 30.7	
	comp=E,77nm,20.2s						
MNK				*i* LRM	MLR	18 09 37.9	
	comp=Z,664nm,18.8s						
PATCX	Punta Patache	134.70	124		PKPdf	17 21 26.1	-0.4
SAML	Samuel	145.67	111	PKIKP	PKPdf	17 21 45.3	-1.0
SAML	Samuel	145.67	111		PKPdf	17 21 45.3	-1.0
TOA0	Torodi Ar. Sit	146.25	289	PKPdf	PKPbc	17 21 47.7	-0.7
TORD	Torodi Ar. Bea	146.25	289	PKPbc	PKPdf	17 21 47.2	-0.1
	comp=Z,2.7nm,0.9s,baz=42,slow=2.8,SNR=6.7						
PTGA	Pitinga	150.80	98		PKPbc	17 21 59.5	-0.9

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*IDC **13** 17:03:00.5±1.1, 2°.94S×148°.50E, h0^{km}, mb4.6/11, mb1 4.8/12, mb1mx4.5/33, mbtmp4.5/12, ML1.9/1, MS4.8/5, Ms1 4.8/5, ms1mx4.5/14, Error ellipse: s-maj=38.0km s-min=19.2km az=112.0*

ISC 13 17:03:03.0±0.8**, 3°.08S**±0°.09×**148°.5E**±0°.2**, h18**^{km}**, n23, σ1ˢ.60**/14**, mb4.4**/11**, MS4.8**/3**, Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	6.43	192	Pn	Pn	17 04 38.7	+1.7
	1.6nm,0.3s,baz=46,slow=11,SNR=2.4						
PMG				Sn	Sn	17 05 47.0	-3.0
	0.9nm,0.3s,baz=224,slow=7.5,SNR=1.2						
JAY	Jayapura	7.85	274	LR	LR	17 07 04.9	
	comp=Z,6µm,21.8s,baz=60,slow=31						
SIJI	Sorong	17.40	277	LR	LR	17 12 48.0	
	comp=Z,5µm,20.2s,baz=88,slow=34						
WRA	Warramunga Arr	21.75	219	P	P	17 07 53.3	-0.5
	31nm,0.8s,baz=43,slow=12,SNR=7.7						
ASAR	Alice Springs	24.88	213	P	P	17 08 27.6	+2.5
	26nm,0.9s,baz=44,slow=9.5,SNR=5.2						
BATI	Baumata	25.69	253	LR	LR	17 20 32.6	
	comp=Z,5µm,18.5s,baz=87,slow=41						
FITZ	Fitzroy Crossi	26.95	235	P	P	17 08 44.1	+0.3
	59nm,1.0s,baz=58,slow=9.2,SNR=6.1						
H11S3	WAKE ISLAND Hy	27.91	39	T	T	17 37 07.6	
	baz=220,slow=76,SNR=28						
H11S2	WAKE ISLAND Hy	27.92	39	T	T	17 37 10.7	
	baz=220,slow=76,SNR=26						
H11S1	WAKE ISLAND Hy	27.93	39	T	T	17 37 07.9	
	baz=220,slow=76,SNR=26						
H11N1	WAKE ISLAND Hy	28.95	38	T	T	17 38 26.1	
	baz=220,slow=76						
H11N3	WAKE ISLAND Hy	28.96	38	T	T	17 38 27.1	
	baz=220,slow=76						
H11N2	WAKE ISLAND Hy	28.97	38	T	T	17 38 29.1	
	baz=220,slow=76						
JCJ	Chichijima	30.62	349	LR	LR	17 20 55.5	
	comp=Z,2µm,19.2s,baz=152,slow=35						
CMAR	Chiang Mai Arr	53.31	296	P	P	17 12 22.2	+0.7
	4.9nm,1.0s,baz=113,slow=5.1,SNR=5.6						
SONM	Songino Array	62.65	329	P	P	17 13 27.5	+0.8
	1.8nm,0.7s,baz=139,slow=6.3,SNR=3.9						
MKAR	Makanchi Array	76.26	320	P	P	17 14 50.4	-0.4
	6.9nm,1.0s,baz=94,slow=8.0,SNR=6.2						
ZALV	Zalesovo Beam	77.39	327	P	P	17 14 55.2	-1.7
	3.2nm,0.9s,baz=108,slow=4.8,SNR=3.7						
ILAR	Eielson Array	82.21	23	P	P	17 15 22.7	-0.1
	2.1nm,0.9s,baz=265,slow=2.0,SNR=2.4						
NRIK	Noril'sk	82.99	342	P	P	17 15 25.5	-1.3
	2.0nm,0.5s,baz=118,slow=4.8,SNR=3.9						
NVAR	Mina Array Bea	94.37	52	P	P	17 16 23.5	+1.2
	1.1nm,0.9s,baz=250,slow=5.9,SNR=4.7						
YKA	Yellowknife Ar	95.89	28	P	P	17 16 28.0	-0.4
	0.8nm,0.7s,baz=273,slow=4.0,SNR=4.1						
YKA				LR	LR	18 03 35.9	
	comp=Z,190nm,18.0s,baz=0.0,slow=38						
TORD	Torodi Ar. Bea	145.74	289	PKPbc	PKPdf	17 22 40.0	-1.6
	5.9nm,1.0s,baz=50,slow=3.8,SNR=4.2						

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*IDC **13** 17:09:03.1±1.2, 3°.52S×148°.80E, h0^{km}, mb4.0/9, mb1 4.3/9, mb1mx4.0/28, mbtmp4.0/9, Error ellipse: s-maj=40.2km s-min=21.8km az=123.0*

*NEIC **13** 17:09:04.3±2.2, 3°.4S±0°.2×148°.6E±0°.1, h8^{km}±6^{km}, mb4.3/6, Error ellipse: s-maj=25.8km s-min=9.6km az=211.0*

ISC 13 17:09:06.3±0.8**, 3°.4S**±0°.1×**148°.69E**±0°.10**, h21**^{km}**, n23, σ1ˢ.54**/16**, mb4.1**/11**, Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANU	Manus Island	1.90	316	Pn	Pn	17 09 34.4	-3.1
RABL	Rabaul	3.55	103	Pn	Pn	17 09 58.0	-2.2
WR0	Warramunga Arr	21.47	219	P	P	17 13 52.3	-1.3
WR0				IAmb	IAmb	17 13 53.9	
	comp=Z,19nm,1.4s						
WB2	Warramunga Arr	21.57	219	P	P	17 13 53.1	-1.6
WB2				IAmb	IAmb	17 14 05.8	
	comp=Z,16nm,1.1s						
WRA	Warramunga Arr	21.58	219	P	P	17 13 53.4	-1.5
	comp=Z,2.7nm,1.0s,baz=41,slow=11,SNR=7.3						
AS31	Alice Springs	24.68	214	P	P	17 14 25.8	-0.3
ASAR	Alice Springs	24.69	214	P	P	17 14 25.6	-0.5
	comp=Z,4.5nm,0.9s,baz=49,slow=8.1,SNR=14						
ASAR	Alice Springs	24.69	214	P	P	17 14 25.2	-0.9
BATI	Baumata	25.73	254	P	P	17 14 37.5	+1.9
	comp=Z,4.7nm,0.6s,baz=93,slow=17,SNR=1.8						
FITZ	Fitzroy Crossi	26.88	235	P	P	17 14 46.9	+1.0
	comp=Z,7.0nm,0.9s,baz=50,slow=7.0,SNR=4.6						
FITZ	Fitzroy Crossi	26.88	235	IAmb	IAmb	17 14 50.5	
	comp=Z,16nm,1.2s						
H11S3	WAKE ISLAND Hy	28.08	39	T	T	17 44 06.3	
	baz=220,slow=76,SNR=21						
H11S2	WAKE ISLAND Hy	28.09	39	T	T	17 44 04.0	
	baz=220,slow=76,SNR=21						
H11S1	WAKE ISLAND Hy	28.10	39	T	T	17 44 04.7	
	baz=220,slow=76,SNR=21						
H11N1	WAKE ISLAND Hy	29.13	37	T	T	17 45 22.0	
	baz=219,slow=76,SNR=32						
H11N3	WAKE ISLAND Hy	29.14	37	T	T	17 45 26.6	
	baz=219,slow=76,SNR=33						
H11N2	WAKE ISLAND Hy	29.14	37	T	T	17 45 23.2	
	baz=219,slow=76,SNR=32						
CMAR	Chiang Mai Arr	53.58	296	P	P	17 18 27.0	+0.7
	comp=Z,0.5nm,0.3s,baz=114,slow=6.1,SNR=5.5						
SONM	Songino Array	63.02	329	P	P	17 19 33.0	+1.1
	comp=Z,0.4nm,0.8s,baz=138,slow=7.3,SNR=1.9						
MKAR	Makanchi Array	76.61	320	P	P	17 20 56.2	+0.7
	comp=Z,1.1nm,1.0s,baz=107,slow=4.8,SNR=4.6						
NVAR	Mina Array Bea	94.46	52	P	P	17 22 25.6	0.0
	comp=Z,0.5nm,0.3s,baz=249,slow=6.7,SNR=22						
YKA	Yellowknife Ar	96.12	28	P	P	17 22 33.4	+1.2
	comp=Z,0.2nm,0.7s,baz=273,slow=3.5,SNR=4.2						
TORD	Torodi Ar. Bea	145.98	288	PKPbc	PKPbc	17 28 45.0	-0.5
	comp=Z,0.5nm,0.3s,baz=31,slow=3.7,SNR=4.1						

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*BJI **13** 17:14:32.1±0.0, 4°.10S×149°.27E, h29^{km}, mB4.9/11, mb4.4/16, Ms4.8/4, Ms7 4.6/4*

*NEIC **13** 17:14:32.8±2.0, 3°.78S±0°.08×148°.97E±0°.08, h10^{km}±1^{km}, mb4.5/14, Error ellipse: s-maj=15.0km s-min=12.0km az=218.0*

*IDC **13** 17:14:34.2±1.5, 3°.52S×148°.17E, h0^{km}, mb3.9/8, mb1 4.1/8, mb1mx3.9/29, mbtmp3.9/8, MS4.3/8, Ms1 4.3/8, ms1mx3.9/42, Error ellipse: s-maj=51.5km s-min=21.6km az=115.0*

*GCMT **13** 17:14:37.8±0.3, 3°.34S±0°.02×149°.05E±0°.02, h12^{km}, MW4.8/100, Moment Tensor Solution. s2,c3; s100,c140; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.17±.10; $M_{\theta\theta}$1.22±.08; $M_{\phi\phi}$-1.06±.09; $M_{r\theta}$-0.58±.26; $M_{\theta\phi}$2.03±.07; $M_{\phi r}$0.08±.26; Best double couple: $M_0$2.40100×10^{16} NP1:ϕ_s195.00000°, δ76.00000°, λ180.00000°. NP2: ϕ_s285.00000°, δ90.00000°, λ14.00000°. Principal axes: T 2.4910, Plg10.0000°, Azm150.0000°; N -0.1860, Plg76.0000°, Azm285.0000°; P -2.3100, Plg10.0000°, Azm59.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 13 17:14:33.1±0.6**, 3°.96S**±0°.08×**148°.92E**±0°.08**, h10**^{km}**, n49, σ1ˢ.65**/37**, mb4.3**/17**, MS4.3**/6**, Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANU	Manus Island	2.45	321		Pn	17 15 11.9	-1.4
RABL	Rabaul	3.25	94	Pn	Pn	17 15 23.1	-1.1
PMG	Port Moresby	5.69	198	Pn	Pb	17 16 08.1	-4.5
	1.5nm,0.3s,baz=23,slow=7.7,SNR=3.4						
PMG				Sn	Sb	17 17 18.6	-2.3
	0.6nm,0.3s,baz=247,slow=11,SNR=3.1						
JAY	Jayapura	8.32	280	LR	LR	17 19 11.6	
	comp=Z,2µm,18.0s,baz=359,slow=37						
HNR	Honiara	12.23	117	LR	LR	17 21 43.9	
	comp=Z,1µm,21.1s,baz=298,slow=33						
GUMO	Guam	17.89	347	LR	LR	17 24 02.9	
	comp=Z,671nm,20.4s,baz=167,slow=33						
MTN	Manton Dam	19.67	242	P	P	17 19 03.0	+0.5
MTN				IAmb	IAmb	17 19 09.1	
	comp=Z,50nm,1.5s						
WB0	Warramunga Arr	21.16	221	P	P	17 19 19.4	+0.8
WB0				IAmb	IAmb	17 19 27.3	
	comp=Z,18nm,1.1s						
WR0	Warramunga Arr	21.20	220	P	P	17 19 19.1	0.0
WR0				IAmb	IAmb	17 19 27.6	
	comp=Z,39nm,1.6s						
WRAB	Tennant Creek	21.30	221	P	P	17 19 21.4	+1.1
WRAB				IAmb	IAmb	17 19 28.8	
	comp=Z,31nm,1.4s						
WB2	Warramunga Arr	21.31	221	P	P	17 19 21.4	+1.1
WB2				IAmb	IAmb	17 19 29.0	
	comp=Z,30nm,1.3s						
WRA	Warramunga Arr	21.32	221	P	P	17 19 21.1	+0.7
	comp=Z,5.0nm,0.9s,baz=42,slow=11,SNR=17						
WRA				LR	LR	17 28 38.6	
	comp=Z,545nm,18.6s,baz=50,slow=40						
WRA	Warramunga Arr	21.32	221	P	P	17 19 22.8	+2.3
AS31	Alice Springs	24.37	215	P	P	17 19 52.9	+1.2
ASAR	Alice Springs	24.38	215	P	P	17 19 53.0	+1.3
	comp=Z,4.0nm,0.9s,baz=47,slow=8.1,SNR=25						
ASAR	Alice Springs	24.38	215	P	P	17 19 52.4	+0.6
DZM	Mont Dzumac	24.76	138	LR	LR	17 28 44.5	
	comp=Z,847nm,19.7s,baz=298,slow=33						
LUWI	Luwuk	26.28	276	P	P	17 20 11.2	+2.2
FITZ	Fitzroy Crossi	26.77	237	P	P	17 20 13.8	+0.3
	comp=Z,13nm,1.1s,baz=58,slow=7.6,SNR=11						
FITZ				LR	LR	17 31 49.6	
	comp=Z,485nm,19.7s,baz=38,slow=39						
FITZ	Fitzroy Crossi	26.77	237	P	P	17 20 15.1	+1.6
H11S3	WAKE ISLAND Hy	28.36	38	T	T	17 49 31.9	
	baz=221,slow=76						
H11S2	WAKE ISLAND Hy	28.37	38	T	T	17 49 32.5	
	baz=221,slow=76						
H11S1	WAKE ISLAND Hy	28.38	38	T	T	17 49 35.4	
	baz=221,slow=76						
H11N1	WAKE ISLAND Hy	29.42	36	T	T	17 50 49.6	
	baz=220,slow=76						
H11N3	WAKE ISLAND Hy	29.43	36	T	T	17 50 51.1	
	baz=220,slow=76						
H11N2	WAKE ISLAND Hy	29.44	36	T	T	17 50 50.8	
	baz=220,slow=76						
JCJ	Chichijima	31.55	348	LR	LR	17 32 11.4	
	comp=Z,588nm,18.1s,baz=164,slow=34						
JAGI	Jajag, Banyuwa	34.84	261	P	P	17 21 25.8	+1.0
NWAO	Narrogin (SRO)	41.32	222	LR	LR	17 39 13.2	
	comp=Z,869nm,19.0s,baz=48,slow=36						
NJ2	Nanjing	45.81	324	*e*P	P	17 22 55.8	+0.4
NJ2				pmax	pmax		
	comp=Z,3.0nm,0.5s						
XAN	Xi'an	53.38	318	P	P	17 23 56.5	+3.3
XAN				pP	pwP	17 24 03.3	+5.3
XAN				pmax	pmax		
	comp=Z,5.0nm,1.4s						
XAN	Xi'an	53.38	318	P	P	17 23 52.0	-1.2
XAN				IAmb	IAmb	17 23 58.3	
	comp=Z,13nm,1.6s						
CMAR	Chiang Mai Arr	54.02	296	P	P	17 23 55.2	-3.0
	comp=Z,0.4nm,0.6s,baz=110,slow=7.0,SNR=1.4						
CMAR	Chiang Mai Arr	54.02	296	P	P	17 23 57.5	-0.6
HHC	Hu-ho-hao-te	56.16	326	*e*P	P	17 24 11.6	-1.7
HHC				pmax	pmax		
	comp=Z,5.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,79nm,8.5s						
GTA	Gaotai	62.44	319	P	P	17 24 57.4	+0.6
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,53nm,5.1s						
GTA				LR	LR		
	comp=Z,270nm,19.6s						
GTA				LR	LR		
	comp=Z,240nm,19.3s						
GTA				LR	LR		
	comp=Z,450nm,19.3s						
SONM	Songino Array	63.59	329	P	P	17 25 02.0	-2.4
	comp=Z,0.4nm,0.7s,baz=142,slow=5.7,SNR=2.8						
WMQ	Urumqi	72.52	318	*e*P	P	17 26 00.6	+0.1
MK31	Makanchi Array	77.17	320	P	P	17 26 27.1	-0.2
MKAR	Makanchi Array	77.17	320	P	P	17 26 24.3	-2.9
	comp=Z,1.1nm,1.0s,baz=104,slow=8.0,SNR=5.9						
MKAR	Makanchi Array	77.17	320	P	P	17 26 27.1	-0.2
MAKZ	Makanchi	77.37	320	P	P	17 26 27.4	-1.1
RSO	Redoubt South	78.46	25	P	P	17 26 31.7	-2.7
KURK	Kurchatov	80.74	323	P	P	17 26 46.6	-0.1
KURK				IAmb	IAmb	17 26 51.6	
	comp=Z,9.6nm,1.5s						
ILAR	Eielson Array	82.87	23	P	P	17 27 00.8	+3.1
	comp=Z,0.6nm,0.9s,baz=240,slow=5.1,SNR=4.1						
KKAR	Karatay Array	84.25	314	P	P	17 27 05.2	0.0
YKA	Yellowknife Ar	96.49	28	P	P	17 28 04.9	+2.4
	comp=Z,0.2nm,0.7s,baz=274,slow=4.5,SNR=3.8						
TORD	Torodi Ar. Bea	146.37	288	PKPbc	PKPdf	17 34 14.5	+0.3
	comp=Z,1.6nm,0.7s,baz=66,slow=2.7,SNR=7.1						
TORD	Torodi Ar. Bea	146.37	288		PKPab	17 34 16.4	+0.1

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*IDC **13** 17:18:09.3±2.0, 3°.84S×148°.40E, h0^{km}, mb3.9/7, mb1 4.1/7, mb1mx3.9/29, mbtmp3.9/7, Error ellipse: s-maj=60.9km s-min=24.6km az=110.0*

*NEIC **13** 17:18:11.3±1.6, 3°.8S±0°.1×148°.4E±0°.2, h10^{km}±2^{km}, mb4.5/8, Error ellipse: s-maj=37.0km s-min=14.9km az=64.0*

ISC 13 17:18:10.9±1.5**, 3°.8S**±0°.2×**148°.4E**±0°.3**, h10**^{km}**, n22, σ0ˢ.99**/15**, mb4.0**/9**, Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANU	Manus Island	2.06	329		Pn	17 18 36.2	-9.4
MTN	Manton Dam	19.31	241	P	P	17 22 36.8	+0.5
MTN				IAmb	IAmb	17 22 49.7	
	comp=Z,44nm,1.4s						
WB0	Warramunga Arr	20.95	220	P	P	17 22 55.5	+1.3
WR0	Warramunga Arr	21.00	219	P	P	17 22 55.1	+0.4
WR0				IAmb	IAmb	17 23 03.1	
	comp=Z,55nm,2.0s						
WRAB	Tennant Creek	21.10	219	P	P	17 22 57.1	+1.3
WB2	Warramunga Arr	21.11	219	P	P	17 22 56.2	+0.4
WB2				IAmb	IAmb	17 23 04.8	
	comp=Z,12nm,1.0s						
WRA	Warramunga Arr	21.12	219	P	P	17 22 55.2	-0.7
	comp=Z,3.7nm,1.0s,baz=42,slow=11,SNR=5.6						
AS31	Alice Springs	24.21	214	P	P	17 23 27.8	-0.2
ASAR	Alice Springs	24.22	214	P	P	17 23 27.1	-1.0
	comp=Z,5.6nm,1.0s,baz=49,slow=8.3,SNR=9.3						
FITZ	Fitzroy Crossi	26.45	236	P	P	17 23 49.1	+0.9
	comp=Z,8.5nm,0.9s,baz=72,slow=9.4,SNR=7.5						
FITZ	Fitzroy Crossi	26.45	236	P	P	17 23 48.8	+0.6
FITZ				IAmb	IAmb	17 23 55.6	
	comp=Z,13nm,1.1s						
H11S3	WAKE ISLAND Hy	28.55	38	T	T	17 53 23.8	
	baz=220,slow=76,SNR=9.5						
H11S2	WAKE ISLAND Hy	28.55	38	T	T	17 53 06.5	
	baz=220,slow=76,SNR=11						
H11S1	WAKE ISLAND Hy	28.57	38	T	T	17 53 13.0	
	baz=220,slow=76,SNR=11						
H11N1	WAKE ISLAND Hy	29.60	37	T	T	17 54 23.3	
	baz=219,slow=76,SNR=30						
H11N3	WAKE ISLAND Hy	29.61	37	T	T	17 54 24.4	
	baz=219,slow=76,SNR=31						
H11N2	WAKE ISLAND Hy	29.61	37	T	T	17 54 24.6	
	baz=219,slow=76,SNR=32						
CMAR	Chiang Mai Arr	53.53	296	P	P	17 27 31.0	-1.2
	comp=Z,0.6nm,0.3s,baz=122,slow=4.6,SNR=4.4						
SONM	Songino Array	63.23	330	P	P	17 28 40.7	+1.1
	comp=Z,0.3nm,0.6s,baz=141,slow=7.4,SNR=1.8						
MKAR	Makanchi Array	76.75	320	P	P	17 30 02.6	0.0
	comp=Z,0.6nm,0.9s,baz=100,slow=6.7,SNR=3.6						
YKA	Yellowknife Ar	96.58	28	P	P	17 31 41.2	+0.4
	comp=Z,0.3nm,1.0s,baz=284,slow=5.0,SNR=3.8						
TORD	Torodi Ar. Bea	145.86	288	PKPbc	PKPdf	17 37 49.5	-1.5
	comp=Z,0.4nm,0.6s,baz=116,slow=5.3,SNR=2.1						

IDC 13 17:21:03.8±9.2**, 3°.04S**×**148°.83E, h0**^{km}**, mb3.2**/3**, mb1 3.4**/3**, mb1mx3.3**/31**, mbtmp3.2**/3**, Error ellipse: s-maj=300.5km s-min=39.1km az=100.0, Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.96	219	P	P	17 26 00.1	+0.7
	0.6nm,0.8s,baz=39,slow=11,SNR=1.6						
ASAR	Alice Springs	25.07	214	P	P	17 26 29.6	-0.6
	0.3nm,0.7s,baz=45,slow=8.0,SNR=1.9						
H11S3	WAKE ISLAND Hy	27.70	39	T	T	17 56 05.5	
	baz=217,slow=76,SNR=12						
H11S2	WAKE ISLAND Hy	27.71	39	T	T	17 56 06.7	
	baz=217,slow=76,SNR=13						
H11S1	WAKE ISLAND Hy	27.72	39	T	T	17 56 06.5	
	baz=217,slow=76,SNR=14						
H11N1	WAKE ISLAND Hy	28.75	37	T	T	17 57 25.2	
	baz=218						
H11N3	WAKE ISLAND Hy	28.76	37	T	T	17 57 26.3	
	baz=218						
H11N2	WAKE ISLAND Hy	28.77	37	T	T	17 57 26.3	
	baz=218						
MKAR	Makanchi Array	76.42	320	P	P	17 32 55.5	+0.1
	0.3nm,0.8s,baz=104,slow=6.1,SNR=2.8						

IDC 13 17:28:46.0±10.0**, 3°.83S**×**149°.44E, h0**^{km}**, mb3.3**/3**, mb1 3.6**/3**, mb1mx3.4**/37**, mbtmp3.4**/3**, Error ellipse: s-maj=332.4km s-min=39.4km az=102.0, Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.76	221	P	P	17 33 39.8	+0.4
	0.8nm,1.0s,baz=40,slow=10,SNR=5.9						
ASAR	Alice Springs	24.78	216	P	P	17 34 09.3	-0.4
	1.1nm,1.1s,baz=53,slow=6.2,SNR=1.9						
H11S3	WAKE ISLAND Hy	27.94	37	T	T	18 03 50.3	
	baz=224						
H11S2	WAKE ISLAND Hy	27.95	37	T	T	18 03 55.0	
	baz=224						
H11S1	WAKE ISLAND Hy	27.96	37	T	T	18 03 48.7	
	baz=224						
H11N1	WAKE ISLAND Hy	29.01	36	T	T	18 05 02.4	
	baz=219						
H11N3	WAKE ISLAND Hy	29.03	36	T	T	18 05 12.6	
	baz=219						
H11N2	WAKE ISLAND Hy	29.03	36	T	T	18 05 12.7	
	baz=219						
MKAR	Makanchi Array	77.41	320	P	P	17 40 43.2	+0.1
	0.5nm,1.0s,baz=127,slow=3.8,SNR=2.5						

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*IDC **13** 17:30:50.7±2.0, 6°.01S×146°.47E, h18^{km}±12^{km}, mb4.4/22, mb1 4.5/24, mb1mx4.4/37, mbtmp4.5/24, ML3.7/2, MS4.1/20, Ms1 4.1/20, ms1mx4.0/42, Error ellipse: s-maj=14.1km s-min=8.1km az=102.0*

*MOS **13** 17:30:51.6±1.1, 6°.02S×146°.51E, h39^{km}, mb4.9/14, Error ellipse: s-maj=10.5km s-min=6.4km az=101.1*

*BJI **13** 17:30:53.0±0.0, 6°.04S×147°.10E, h72^{km}, mB5.3/32, mb4.7/57, Ms4.7/13, Ms7 4.4/11*

*DJA **13** 17:30:55.8±0.3, 6°S±3°×14°7E±°, h59^{km}±4^{km}, M4.8/40, mB5.2/13, mb4.9/40, MLv5.2/6, Mw(mB)4.6/13*

*NEIC **13** 17:30:55.6±2.1, 6°.13S±0°.05×146°.76E±0°.05, h71^{km}±6^{km}, mb5.1/106, Error ellipse: s-maj=9.6km s-min=4.3km az=225.0*

ISC 13 17:30:54.6±0.3**, 6°.07S**±0°.04×**146°.68E**±0°.04**, h52**^{km}**, n339, σ1ˢ.58**/332**, mb4.9**/125**, MS4.3**/21**, 8C-12D, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.35	172	Pn	Pn	17 31 44.5	+0.1
	53nm,0.3s,baz=46,slow=5.9,SNR=102						
PMG				Sn	Sn	17 32 25.0	+2.0
	55nm,0.3s,baz=338,slow=17,SNR=1.4						
PMG				Lg	Lg	17 32 42.3	
	64nm,0.3s,baz=314,slow=19,SNR=6.9						
PMG				LR	LR	17 33 35.1	
	comp=Z,6µm,19.8s,baz=306,slow=48						
PMG	Port Moresby	3.35	172	*d i*P	Pn	17 31 44.5	+0.1
PMG				pmax	pmax		
	comp=Z,125nm,0.6s						
PMG	Port Moresby	3.35	172	P	Pn	17 31 44.8	+0.3
MANU	Manus Island	4.05	10		Pn	17 31 56.1	+2.0
RABL	Rabaul	5.77	71	Pn	Pn	17 32 18.1	+0.4
RABL	Rabaul	5.77	71	P	Pn	17 32 20.6	+2.9
MMPI	Merauke	6.69	249	P	Pn	17 32 33.3	+3.0
	comp=Z,6.5nmcomp=Z,443nm,1.0s						
JAY	Jayapura	6.93	300	Pn	Pn	17 32 35.4	+1.8
	comp=Z,3.0nm,0.3s,baz=120,slow=4.1,SNR=9.7						
JAY				Sn	Sn	17 33 49.0	-2.1
	baz=126,slow=20,SNR=1.2						
JAY				Lg	Lg	17 34 13.4	
	comp=Z,3.9nm,0.3s,baz=300,slow=19,SNR=2.2						
JAY				LR	LR	17 35 00.6	
	comp=Z,736nm,19.6s,baz=139,slow=37						
JAY	Jayapura	6.93	300	P	Pn	17 32 36.0	+2.4
	comp=Z,0.2nmcomp=Z,32nm,0.8s						
GENI	Genyem	7.36	298	P	Pn	17 32 43.2	+3.8
	comp=Z,1.4nmcomp=Z,141nm,0.6s						
COEN	Coen	8.57	204	Pn	Pn	17 32 56.0	0.0
SMPI	Sarmi	8.93	297	P	Pn	17 33 04.3	+3.4
	comp=Z,68nm,1.1s						
SRPI	Serui, Papua	11.22	291	P	Pn	17 33 36.1	+3.7
	comp=Z,95nm,0.7s						
BAKI	Biak	11.61	294	P	Pn	17 33 41.2	+3.5
	comp=Z,80nm,0.8s						
MTSU	Mount Surprise	12.21	191	P	Pn	17 33 46.4	+0.5
	baz=12,SNR=8.1						
HNR	Honiara	13.56	105	Pn	P	17 34 11.9	+0.1
	comp=Z,9.0nm,0.3s,baz=222,slow=4.3,SNR=7.3						
HNR	Honiara	13.56	105	P	Pn	17 34 07.8	+3.5
HNR	Honiara	13.56	105	P	Pn	17 34 07.8	+3.5
FAKI	Fak Fak	14.72	282		P	17 34 24.1	-0.7
SAUI	Saumlaki	15.39	262	P	P	17 34 32.5	+0.3
SAUI				IAmb	IAmb	17 35 17.1	
	comp=Z,101nm,1.0s						
SAUI	Saumlaki	15.39	262	P	Pn	17 34 30.4	+1.9
	comp=Z,115nm,0.9s						
KDU	Kakadu	15.48	244	P	Pn	17 34 29.2	-0.5
	baz=15,SNR=114						
QIS	Mount Isa	15.96	205	P	Pn	17 34 36.3	+0.5
	baz=16,SNR=11						
SIJI	Sorong	16.23	288	Pn	Pn	17 34 40.4	+1.2
	comp=Z,6.7nm,0.3s,baz=143,slow=8.3,SNR=29						
SIJI				LR	LR	17 42 41.7	
	comp=Z,903nm,19.0s,baz=96,slow=44						
SWI	Sorong	16.24	288	P	P	17 34 42.3	+0.7
	comp=Z,2µmcomp=Z,157nm,0.8s						
MTN	Manton Dam	16.75	245	P	Pn	17 34 46.0	+0.3
	baz=17,SNR=17						
MTN	Manton Dam	16.75	245		Pn	17 34 46.0	+0.3
PATS	Pohnpei	17.29	42	P	Pn	17 34 49.3	-3.2
PATS				IAmb	IAmb	17 35 01.9	
	comp=Z,153nm,1.2s						
MSAI	Masohi	17.90	278	P	P	17 35 02.8	+2.7
	comp=Z,1µmcomp=Z,15nm,1.0s						
WB0	Warramunga Arr	18.12	220	P	P	17 35 01.7	-0.7
WR0	Warramunga Arr	18.16	219	P	P	17 35 02.7	-0.2
WRAB	Tennant Creek	18.27	220	*de*P	P	17 35 03.7	-0.4
WRAB				pmax	pmax		
	comp=Z,16nm,1.0s						
WRAB	Tennant Creek	18.27	220	P	P	17 35 04.1	0.0
WB2	Warramunga Arr	18.27	220	P	P	17 35 03.6	-0.5
WB2				IAmb	IAmb	17 35 23.0	
	comp=Z,146nm,1.9s						
WRA	Warramunga Arr	18.28	220	P	P	17 35 02.6	-1.6
	comp=Z,1.0nm,0.3s,baz=40,slow=12,SNR=41						
WRA				S	Sn	17 38 25.2	-2.8
	comp=Z,0.3nm,0.3s,baz=30,slow=23,SNR=3.2						
WRA				PcP	PcP	17 39 36.5	+1.8

	comp=Z,0.3nm,0.3s,baz=30,slow=1.6,SNR=5.0						
WRA				LR	LR	17 43 09.0	
	comp=Z,639nm,18.2s,baz=55,slow=41						
WRA				ScP	ScP	17 43 10.0	+4.0
	comp=Z,0.0nm,0.3s,baz=42,slow=2.6,SNR=4.2						
WRA	Warramunga Arr	18.28	220	P	P	17 35 03.6	-0.6
WRA				pmax	pmax		
	comp=Z,3.0nm,1.8s						
WRA	Warramunga Arr	18.28	220	P	P	17 35 03.6	-0.6
GUMO	Guam	19.61	355	P	Pn	17 35 20.2	-0.3
GUMO				pmax	pmax		
	comp=Z,365nm,1.4s						
GUMO	Guam	19.61	355	P	Pn	17 35 20.1	-0.3
EIDS	Eidsvold	19.65	168	P	Pn	17 35 20.6	-0.3
	baz=20,SNR=6.7						
EIDS	Eidsvold	19.65	168	P	P	17 35 16.5	-2.7
EIDS				IAmb	IAmb	17 35 31.1	
	comp=Z,84nm,1.6s						
NLAI	Namlea	19.72	277	P	Pn	17 35 21.5	-0.3
	comp=Z,43nm,0.6s						
RMQ	Roma	20.40	175	P	Pn	17 35 29.2	-0.6
	baz=20,SNR=16						
TNTI	Ternate	20.45	289	P	Pn	17 35 30.1	-0.3
QLP	Quilpie	20.53	186	P	P	17 35 29.4	+0.6
	baz=20,SNR=9.7						
SANI	Sanana	21.02	280	P	P	17 35 36.6	+2.5
	comp=Z,862nmcomp=Z,57nm,0.6s						
AS31	Alice Springs	21.39	214	P	P	17 35 38.7	+0.7
ASAR	Alice Springs	21.39	214	P	P	17 35 38.4	+0.4
	comp=Z,4.0nm,0.5s,baz=49,slow=8.8,SNR=49						
ASAR				S	S	17 39 35.9	+3.2
	comp=Z,1.4nm,0.8s,baz=42,slow=23,SNR=3.3						
ASAR				ScP	ScP	17 43 17.5	+4.3
	comp=Z,0.9nm,0.8s,baz=20,slow=3.0,SNR=3.6						
ASAR				LR	LR	17 44 33.2	
	comp=Z,683nm,21.6s,baz=33,slow=39						
SOEI	Soe	22.50	259	P	P	17 35 49.9	-0.2
SOEI				IAmb	IAmb	17 36 26.5	
	comp=Z,53nm,0.9s						
SOEI	Soe	22.50	259	P	P	17 35 51.2	+1.1
	comp=Z,59nm,0.7s						
BATI	Baumata	23.15	258	P	P	17 35 57.4	+0.7
	comp=Z,23nm,0.6s,baz=112,slow=5.4,SNR=11						
BATI	Baumata	23.15	258	P	P	17 35 58.8	+2.0
	comp=Z,49nm,0.6s						
KMSI	Cibinong	23.61	285	P	P	17 36 03.9	+2.9
	comp=Z,188nm,0.7s						
FITZ	Fitzroy Crossi	23.76	238	P	P	17 36 00.3	-2.1
	baz=24,SNR=70						
FITZ	Fitzroy Crossi	23.76	238	P	P	17 36 00.4	-2.1
	comp=Z,50nm,0.8s,baz=57,slow=10,SNR=71						
FITZ				S	S	17 40 15.4	+1.0
	comp=Z,1.4nm,0.8s,baz=102,slow=20,SNR=0.9						
FITZ				LR	LR	17 45 25.4	
	comp=Z,442nm,19.0s,baz=59,slow=37						
LUWI	Luwuk	24.38	281	P	P	17 36 09.8	+1.7
LUWI	Luwuk	24.38	281	P	P	17 36 21.9	+14
MMRI	Maumere	24.38	263	P	P	17 36 07.4	-0.7
MMRI	Maumere	24.38	263	P	P	17 36 14.6	+6.5
ARMA	Armidale	24.67	170	P	P	17 36 12.4	+1.7
	baz=25,SNR=7.8						
ARMA	Armidale	24.67	170	P	P	17 36 07.5	-3.2
DAV	Davao City (W)	24.77	301	LR	LR	17 48 06.4	
	comp=Z,199nm,18.2s,baz=140,slow=42						
DZM	Mont Dzumac	24.86	132	P	P	17 36 14.6	+2.1
	comp=Z,9.0nm,0.9s,baz=217,slow=19,SNR=1.8						
DZM	Mont Dzumac	24.86	132	P	P	17 36 12.1	-0.4
EDFI	Ende, Flores	24.93	262	P	P	17 36 14.7	+1.5
	comp=Z,25nm,0.7s						
APSI	Ampana	25.50	281	P	P	17 36 20.4	+2.1
	comp=Z,632nmcomp=Z,65nm,1.4s						
MRSI	Marisa	25.54	284	P	P	17 36 18.8	+0.1
	comp=Z,42nm,0.8s						
WRKA	Warakurna	25.81	221	P	P	17 36 20.1	-1.0
	baz=26,SNR=28						
STKA	Stephens Creek	26.11	190	P	P	17 36 23.6	-0.2
	baz=26,SNR=12						
STKA	Stephens Creek	26.11	190	P	P	17 36 23.0	-0.7
	comp=Z,3.9nm,0.5s,baz=358,slow=9.0,SNR=13						
STKA				LR	LR	17 47 25.5	
	comp=Z,1μm,18.2s,baz=359,slow=38						
STKA	Stephens Creek	26.11	190	⇓eP	P	17 36 23.8	+0.1
STKA	Stephens Creek	26.11	190	P	P	17 36 22.1	-1.6
WSI	Waingapu	26.38	261	P	P	17 36 39.1	+13
BNSI	Bone	26.52	272	P	P	17 36 38.8	+11
KAPI	Kappang	26.83	271	P	P	17 36 28.2	-2.2
	comp=Z,3.5nm,0.5s,baz=226,slow=21,SNR=1.9						
KAPI	Kappang	26.83	271	P	P	17 36 28.8	-1.5
KAPI				pmax	pmax		
	comp=Z,18nm,0.8s						
KAPI	Kappang	26.83	271	P	P	17 36 28.8	-1.5
TOLI2	Tolitoli	26.83	285	P	P	17 36 29.3	-1.0
TOLI2				IAmb	IAmb	17 36 44.1	
	comp=Z,32nm,1.0s						
YNG	Young	28.14	177	P	P	17 36 42.6	+0.8
	baz=28,SNR=8.5						
HTT	Hallett	28.17	194	P	P	17 36 42.3	+0.2
	baz=28,SNR=4.0						
BBOO	Buckleboo	28.39	199	P	P	17 36 41.8	-2.3
CAN	Canberra	29.19	176	P	P	17 36 49.8	-1.4
CAN				pmax	pmax		
	comp=Z,97nm,2.0s						
CAN	Canberra	29.19	176	P	P	17 36 49.8	-1.4
CAN				IAmb	IAmb	17 37 23.8	
	comp=Z,97nm,2.0s						
FORT	Forrest	30.17	213	P	P	17 36 59.6	-0.3
FORT				IAmb	IAmb	17 37 51.0	
	comp=Z,24nm,0.9s						
PSA00	Pilbara Seismi	30.19	237	P	P	17 37 00.4	+0.1
PSA00				IAmb	IAmb	17 37 19.6	
	comp=Z,28nm,1.2s						
PSA00	Pilbara Seismi	30.19	237	P	P	17 37 00.1	-0.2
PSA00				IAmb	IAmb	17 37 20.5	
	comp=Z,7.4nm,0.7s						
MYLDM	Lahad Datu	30.27	291	P	P	17 37 03.1	+2.1
MYLDM				IAmb	IAmb	17 37 03.9	
	comp=Z,46nm,1.4s						
TOO	Toolangi	31.38	182	P	P	17 37 08.3	-2.2
TOO				pmax	pmax		
	comp=Z,60nm,2.0s						
TOO	Toolangi	31.38	182	P	P	17 37 08.3	-2.2
TOO				IAmb	IAmb	17 37 51.7	
	comp=Z,60nm,1.9s						
H11S3	WAKE ISLAND Hy	31.38	39	T	T	18 10 00.8	
	baz=220,slow=76,SNR=5.0						
H11S2	WAKE ISLAND Hy	31.39	39	T	T	18 09 59.0	
	baz=220,slow=76,SNR=5.6						
H11S1	WAKE ISLAND Hy	31.40	39	T	T	18 09 59.9	
	baz=220,slow=76,SNR=6.2						
WAKE	Wake Island	31.96	38	P	P	17 37 15.7	0.0
JAGI	Jajag, Banyuwa	32.35	264	P	P	17 37 16.8	-2.6
JAGI				IAmb	IAmb	17 37 23.2	
	comp=Z,14nm,0.6s						
H11N1	WAKE ISLAND Hy	32.43	37	T	T	18 11 17.7	
	baz=219,slow=75,SNR=29						
H11N3	WAKE ISLAND Hy	32.45	37	T	T	18 11 22.7	
	baz=219,slow=75,SNR=27						
H11N2	WAKE ISLAND Hy	32.45	37	T	T	18 11 19.2	
	baz=219,slow=75,SNR=29						
MSVF	Nonsavu	32.74	113	P	P	17 37 25.2	+2.3
	comp=Z,1.4nm,0.6s,baz=311,slow=20,SNR=1.7						
MEEK	Meekatharra	33.67	229	P	P	17 37 30.9	+0.1
	baz=34,SNR=13						
KMBL	Kambalda	34.25	220	P	P	17 37 36.6	+0.9
	baz=34,SNR=5.9						
SBUM	Sibu	35.44	283	P	P	17 37 44.9	-1.3
SBUM				IAmb	IAmb	17 37 48.7	
	comp=Z,27nm,1.4s						
UGM	Wanagama	35.93	265	P	P	17 37 49.6	-0.8
MORW	Morawa	36.89	228	P	P	17 37 58.8	+0.4
	baz=37,SNR=4.4						
MORW	Morawa	36.89	228	P	P	17 37 58.6	+0.2
MORW				IAmb	IAmb	17 38 17.2	
	comp=Z,47nm,1.6s						
KSM	Kuching	37.08	281	P	P	17 38 02.3	+2.1
KSM				IAmb	IAmb	17 38 07.0	
	comp=Z,24nm,1.2s						
KLBR	Kellerberrin	37.11	223	P	P	17 37 59.8	-0.4
	baz=37,SNR=7.9						
JOW	Kunigami	37.25	332	P	P	17 37 59.9	-1.6
	comp=Z,16nm,0.4s,baz=152,slow=14,SNR=10						
BLDU	Ballidu	37.26	225	P	P	17 38 01.6	+0.1
	baz=37,SNR=12						
TWG	Pinlang	38.10	320	P	P	17 38 07.5	-1.1
TWG				IAmb	IAmb	17 38 08.2	
	comp=Z,24nm,0.6s						
YOJ	Yonaguni jima	38.12	324	P	P	17 38 09.3	+0.5
YOJ				pmax	pmax		
	comp=Z,89nm,1.2s						
YOJ	Yonaguni jima	38.12	324	P	P	17 38 09.3	+0.5
NWAO	Narrogin (SRO)	38.27	222	P	P	17 38 08.6	-1.4
	comp=Z,8.6nm,1.0s,baz=36,slow=12,SNR=1.7						
NWAO	Narrogin (SRO)	38.27	222	P	P	17 38 08.4	-1.6
NWAO				pmax	pmax		
	comp=Z,63nm,1.5s						
NWAO	Narrogin (SRO)	38.27	222	P	P	17 38 08.4	-1.6
NWAO				IAmb	IAmb	17 38 22.4	
	comp=Z,63nm,1.5s						
NWAO	Narrogin (SRO)	38.27	222	P	P	17 38 08.2	-1.8
NWAO				IAmb	IAmb	17 38 22.4	
	comp=Z,77nm,1.5s						
YULB	Yu-li	38.37	321	P	P	17 38 10.3	-0.7
YULB				IAmb	IAmb	17 38 12.1	
	comp=Z,14nm,0.5s						
CISI	Cisompet, Garu	38.61	266	P	P	17 38 12.6	-0.6
TPUB	Ta-pu	38.73	320	P	P	17 38 12.9	-1.1
NACB	Ninganchiao	38.76	322	P	P	17 38 13.8	-0.4
NACB				IAmb	IAmb	17 38 18.7	
	comp=Z,45nm,1.1s						
SSLB	Suanglung	38.87	321	P	P	17 38 14.3	-0.9
SSLB				IAmb	IAmb	17 38 22.1	
	comp=Z,48nm,1.6s						
YHNB	Yeheng	39.26	322	P	P	17 38 18.6	+0.2
TATO	Taipei	39.41	323	P	P	17 38 19.6	0.0
RAO	Raoul Island	40.58	129	P	P	17 38 25.9	-3.4
RAO				pmax	pmax		
	comp=Z,370nm,0.4s						
RAO	Raoul Island	40.58	129	P	P	17 38 25.9	-3.4
KNMB	Chin-men Tao	41.00	319	P	P	17 38 33.1	+0.4
KNMB				IAmb	IAmb	17 38 34.3	
	comp=Z,22nm,0.6s						
JMN	Monobe	41.40	344	P	P	17 38 35.3	-0.6
JNU	Nakatsue	41.77	340	P	P	17 38 39.8	+0.9
	comp=Z,8.7nm,0.8s,baz=153,slow=2.3,SNR=2.4						
JNU	Nakatsue	41.77	340	P	P	17 38 39.9	+0.9
URZ	Urewera	42.28	144	P	P	17 38 41.9	-1.3
URZ				IAmb	IAmb	17 39 46.5	
	comp=Z,105nm,1.9s						
JWT	Wachi	42.48	346	P	P	17 38 43.6	-1.1
THZ	Tophouse	42.51	151	P	P	17 38 41.6	-3.5
BKZ	Black Stump Fm	42.53	145	P	P	17 38 43.2	-2.1
BKZ				IAmb	IAmb	17 38 45.9	
	comp=Z,93nm,1.7s						
TUWZ	Tuamarina	42.78	150	P	P	17 38 47.9	+0.8
JHS	Saijyo	42.80	344	P	P	17 38 47.7	+0.3
LTZ	Lake Taylor	42.99	152	P	P	17 38 48.4	-0.5
LTZ				IAmb	IAmb	17 39 27.7	
	comp=Z,71nm,1.7s						
MJAR	Matsushiro Arr	43.12	350	P	P	17 38 48.4	-1.5
	comp=Z,1.3nm,0.5s,baz=187,slow=6.1,SNR=1.7						
MJAR				LR	LR	17 56 05.8	
	comp=Z,118nm,18.2s,baz=130,slow=35						
MAT	Matsushiro	43.12	350	P	P	17 38 48.6	-1.3
RPZ	Rata Peaks	43.18	154	P	P	17 38 51.5	+1.2
RPZ				IAmb	IAmb	17 40 16.9	
	comp=Z,39nm,1.3s						
MNAI	Manna	43.57	270	P	P	17 38 52.8	-1.1
SSE	Sheshan	44.27	328	P	P	17 38 59.0	-0.2
SSE				IAmb	IAmb	17 39 00.8	
	comp=Z,22nm,1.1s						
NJ2	Nanjing	46.26	327	⇓P	P	17 39 15.8	+0.8
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
PDSI	Padang	46.40	275	P	P	17 39 30.7	+14
KSRS	Korea Array	46.70	339	P	P	17 39 17.8	-0.5
	comp=Z,4.7nm,0.5s,baz=157,slow=9.0,SNR=23						
KSRS				LR	LR	17 57 05.7	
	comp=Z,322nm,20.4s,baz=144,slow=34						
KSAR	Wonju Array Be	46.71	339	P	P	17 39 19.0	+0.6
KSAR	Wonju Array Be	46.71	339	P	P	17 39 19.0	+0.6
KS19	Wonju Array Si	46.77	339	P	P	17 39 18.3	-0.5
IPM	Ipoh	46.78	282	P	P	17 39 19.8	+0.4
IPM				IAmb	IAmb	17 39 21.4	
	comp=Z,34nm,1.3s						
JTM	Tenmabayashi	46.91	354	P	P	17 39 20.0	+0.1
KULM	Kulim	47.32	283	P	P	17 39 24.0	+0.4
KULM				IAmb	IAmb	17 39 38.4	
	comp=Z,22nm,1.1s						
WHN	Wuhan	47.79	321	⇓P	P	17 39 27.8	+0.9
WHN				pP	sP	17 39 48.9	+1.2
WHN				sP	pP	17 39 55.3	+14
TRTT	Trang	48.86	286	P	P	17 39 36.0	+0.5
	comp=Z,19nm,1.3s						
NONG	Nongkai	49.20	300	P	P	17 39 39.0	+1.0
	comp=Z,18nm,0.8s						
CHAI	Chaiyaphum	49.34	297	P	P	17 39 39.5	+0.5
	comp=Z,26nm,0.7s						
GSI	Gunungsitoli	49.57	277	P	P	17 39 40.9	0.0
GSI				IAmb	IAmb	17 39 46.3	
	comp=Z,16nm,0.5s						
GSI	Gunungsitoli	49.57	277	P	P	17 39 45.2	+4.2
	comp=Z,25nm,0.8s						
SLVN	Son La	50.02	304	P	P	17 39 44.5	+0.3
JKA	Kamikawa-asahi	50.09	356	P	P	17 39 45.5	+1.2
JKA				IAmb	IAmb	17 40 51.7	
	comp=Z,27nm,1.2s						
ASAJ	Asahikawa	50.09	356	P	P	17 39 44.5	+0.2
	comp=Z,6.2nm,0.7s,baz=231,slow=9.8,SNR=10						
ASAJ	Asahikawa	50.09	356	P	P	17 39 45.5	+1.2
ASAJ				pmax	pmax		
	comp=Z,27nm,1.2s						
PKDT	Phuket	50.18	285	P	P	17 39 46.1	+0.6
	comp=Z,37nm,0.7s						
TPTI		50.29	279	P	P	17 39 49.7	+3.3
	comp=Z,10nm,0.8s						
PHET	Kaeng Krachan	50.41	292	P	P	17 39 49.2	+2.0
GYA	Guiyang	50.49	312	eP	P	17 39 49.0	+1.2
GYA				pmax	pmax		
	comp=Z,5.0nm,1.5s						
UTTA	Uttaradit	51.32	298	P	P	17 39 55.3	+1.3
	comp=Z,187nmcomp=Z,18nm,1.0s						
UTHA	Uthaitani	51.48	295	P	P	17 39 56.3	+1.0
	comp=Z,291nmcomp=Z,30nm,0.7s						
USRK	Ussuriysk Ar.	51.76	347	P	P	17 39 56.3	-0.5
	comp=Z,3.5nm,0.5s,baz=168,slow=8.1,SNR=20						
USRK	Ussuriysk Ar.	51.76	347	P	P	17 39 56.2	-0.7
USRK	Ussuriysk Ar.	51.76	347	P	P	17 39 56.2	-0.7
USA0B	Ussuriysk Arra	51.76	347	P	P	17 39 56.0	-0.8
USA0B				pmax	pmax		
	comp=Z,55nm,1.9s						
USA0B	Ussuriysk Arra	51.76	347	P	P	17 39 56.0	-0.8
USA0B				IAmb	IAmb	17 41 17.5	
	comp=Z,56nm,1.9s						
SUKH	Sukhothai	52.03	298	P	P	17 40 03.0	+3.7
	comp=Z,15nm,1.3s						
UMPA	Umpang Tak	52.24	296	P	P	17 40 03.1	+2.2
	comp=Z,312nmcomp=Z,30nm,0.8s						
LAMP	Lampang	52.43	299	P	P	17 40 06.0	+3.7
	comp=Z,18nm,1.1s						
MDJ	Mudanjiang	52.74	345	P	P	17 40 05.0	+0.8
MDJ				pmax	pmax		
	comp=Z,9.0nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,300nm,5.0s						
KMI	Kunming	52.79	308	⇓P	P	17 40 06.4	+1.3
KMI				pP	sP	17 40 24.0	-2.6
KMI				sP	pP	17 40 35.0	+15
KMI				pmax	pmax		
	comp=Z,8.0nm,1.2s						
KMI				pmax	pmax		
	comp=Z,220nm,5.6s						
CM36	Chiang Mai Arr	52.90	299	P	P	17 40 07.0	+1.2
YSS	Yuzh-Sakhalins	52.90	357	eP	P	17 40 06.2	+0.9
CM35	Chiang Mai Arr	52.91	299	P	P	17 40 06.0	+0.2
CM04	Chiang Mai Arr	52.95	298	P	P	17 40 08.0	+1.8
	comp=Z,86nmcomp=Z,9.5nm,0.7s						
CM09	Chiang Mai Arr	52.96	298	P	P	17 40 08.0	+1.8
	comp=Z,87nmcomp=Z,11nm,1.0s						
CM01	Chiang Mai Arr	52.98	298	P	P	17 40 08.2	+1.9
	comp=Z,93nmcomp=Z,9.6nm,1.2s						
CM34	Chiang Mai Arr	52.98	299	P	P	17 40 08.0	+1.6
CM05	Chiang Mai Arr	52.98	298	P	P	17 40 08.2	+1.7
	comp=Z,64nmcomp=Z,7.1nm,0.7s						
CM02	Chiang Mai Arr	52.99	298	P	P	17 40 09.1	+2.6
	comp=Z,73nmcomp=Z,8.9nm,1.0s						
CM31	Chiang Mai Arr	53.01	298	P	P	17 40 08.0	+1.4
	comp=Z,3μmcomp=Z,232nm,0.9s						
CM31	Chiang Mai Arr	53.01	298	P	P	17 40 06.9	+0.3
CM31				IAmb	IAmb	17 40 09.8	
	comp=Z,25nm,1.4s						
CMAR	Chiang Mai Arr	53.01	298	P	P	17 40 06.9	+0.3
	comp=Z,4.9nm,0.8s,baz=121,slow=5.5,SNR=33						
CMAR	Chiang Mai Arr	53.01	298	ceP	P	17 40 07.6	+1.0
CMAR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
CMAR	Chiang Mai Arr	53.01	298	P	P	17 40 07.2	+0.6
CM15	Chiang Mai Arr	53.02	298	P	P	17 40 08.3	+1.6
	comp=Z,119nmcomp=Z,11nm,1.1s						
CM13	Chiang Mai Arr	53.02	298	P	P	17 40 08.0	+1.3
	comp=Z,74nmcomp=Z,7.9nm,1.0s						
CMMT	Chiang Mai	53.14	299	P	P	17 40 08.0	+0.5
	comp=Z,172nmcomp=Z,3.9nm,1.0s						
CM33	Chiang Mai Arr	53.14	299	P	P	17 40 09.0	+1.4
CHTO	Chiang Mai	53.14	299	P	P	17 40 08.2	+0.6
CHTO				pmax	pmax		
	comp=Z,32nm,1.8s						
CHTO	Chiang Mai	53.14	299	P	P	17 40 08.2	+0.6
CHTO				IAmb	IAmb	17 40 09.8	
	comp=Z,32nm,1.8s						
CM32	Chiang Mai Arr	53.16	299	P	P	17 40 10.0	+2.3
XAN	Xi'an	53.53	321	P	P	17 40 09.6	-0.7
XAN				pP	sP	17 40 31.3	+0.2
XAN				pmax	pmax		
	comp=Z,24nm,1.4s						
XAN				LR	LR		
	comp=Z,150nm,18.4s						
XAN				LR	LR		
	comp=Z,180nm,16.3s						
XAN	Xi'an	53.53	321	P	P	17 40 09.5	-0.7
XAN				pmax	pmax		
	comp=Z,54nm,1.5s						
XAN	Xi'an	53.53	321	P	P	17 40 09.4	-0.7
XAN				IAmb	IAmb	17 40 11.6	
	comp=Z,54nm,1.5s						
BJT	Baijiatuau	53.80	331	P	P	17 40 11.4	-0.6
BJT				pmax	pmax		
	comp=Z,9.0nm,1.0s						
BJT	Baijiatuau	53.80	331	P	P	17 40 11.4	-0.6
BJI	Beijing	53.81	331	P	P	17 40 11.3	-0.7
BJI				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BJI				pmax	pmax		
	comp=Z,250nm,6.3s						
CD2	Chengdu	55.10	314	P	P	17 40 21.5	-0.2
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KLR	Kul'dur	56.59	348	LR	LR	18 04 17.9	
	comp=Z,156nm,18.1s,baz=172,slow=36						
KLR	Kul'dur	56.59	348	deP	P	17 40 31.9	0.0
HHC	Hu-ho-hao-te	56.73	329	eP	P	17 40 33.4	+0.2
HHC				pP	pP	17 40 49.9	+1.8
HHC				pmax	pmax		
	comp=Z,9.0nm,1.2s						
HHC				pmax	pmax		
	comp=Z,260nm,6.6s						
LZH	Lanzhou	58.06	320	eP	P	17 40 43.5	+0.7
LZH				pP	sP	17 41 01.0	-2.7
LZH				sP	pP	17 41 06.8	+9.2
LZH				pmax	pmax		
	comp=Z,16nm,1.2s						
PEA0B	Petropavlovsk-	59.69	8	P	P	17 40 54.8	+1.3
PEA0B				pmax	pmax		
	comp=Z,284nm,1.9s						
PEA0B	Petropavlovsk-	59.69	8	P	P	17 40 54.8	+1.3
PETK	Petropavlovsk-	59.69	8	P	P	17 40 54.4	+0.9
	comp=Z,12nm,1.1s,baz=162,slow=6.8,SNR=10.0						
PETK				LR	LR	18 02 19.5	
	comp=Z,265nm,21.5s,baz=212,slow=32						
PETK	Petropavlovsk-	59.69	8	P	P	17 40 54.9	+1.4
PETK	Petropavlovsk-	59.69	8	P	P	17 40 54.9	+1.4
PET	Petropavlovsk	59.74	8	eP	P	17 40 55.0	+1.2
PET				pmax	pmax		
	comp=Z,33nm,1.0s						
PET				MLR	MLR		
	comp=Z,300nm,18.0s						
HIA	Hailar	59.91	340	⇓iP	P	17 40 55.2	0.0
HIA				pmax	pmax		
	comp=Z,18nm,1.2s						
HIA	Hailar	59.91	340	P	P	17 40 54.8	-0.4
HIA				IAmb	IAmb	17 40 56.2	
	comp=Z,19nm,1.2s						
SHL	Shillong	61.79	303	P	P	17 41 08.7	+0.1
SHL				pmax	pmax		
	comp=Z,15nm,0.3s						
SHL	Shillong	61.79	303	P	P	17 41 08.7	+0.1
ZEA	Zeya	61.79	347	eP	P	17 41 08.3	+0.5
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GTA	Gaotai	62.59	320	⇑P	P	17 41 13.5	-0.2
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,170nm,5.1s						
GTA				LR	LR		
	comp=Z,160nm,18.9s						
GTA				LR	LR		
	comp=Z,140nm,20.7s						
GTA				LR	LR		
	comp=Z,210nm,19.3s						
PPT	Papeete	63.18	107	LR	LR	18 03 43.5	
	comp=Z,109nm,21.1s,baz=290,slow=31						
ULN	Ulaanbaatar	64.02	331	ceP	P	17 41 22.9	0.0
ULN				pmax	pmax		
	comp=Z,10.0nm,1.3s						
ULN	Ulaanbaatar	64.02	331	P	P	17 41 22.9	0.0
ULN				IAmb	IAmb	17 41 24.5	
	comp=Z,35nm,1.9s						
LSA	Lhasa	64.03	307	P	P	17 41 24.3	+0.5
LSA				pmax	pmax		
	comp=Z,13nm,0.6s						
LSA	Lhasa	64.03	307	P	P	17 41 23.4	-0.4
LSA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
LSA	Lhasa	64.03	307	P	P	17 41 23.4	-0.4
SONM	Songino Array	64.31	331	P	P	17 41 24.5	-0.4
	comp=Z,2.0nm,0.7s,baz=160,slow=8.1,SNR=18						
SONM				LR	LR	18 12 21.1	
	comp=Z,108nm,18.1s,baz=174,slow=39						
SONM	Songino Array	64.31	331	P	P	17 41 24.1	-0.7
SONM				pmax	pmax		
	comp=Z,5.0nm,1.1s						
SONM	Songino Array	64.31	331	P	P	17 41 24.1	-0.7
ODAN	Odare	66.02	303	eP	P	17 41 36.4	-0.1
RAMN	Ramite	66.71	303	eP	P	17 41 42.0	+1.1
ZAK	Zakamensk	67.55	332	eP	P	17 41 44.5	-1.1
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.5s						
GUN	Gumba	67.64	303	eP	P	17 41 44.6	-2.3
PKI	Pulchoki	67.92	303	eP	P	17 41 48.7	+0.1
PKIN	Phulchoki	67.93	303	eP	P	17 41 48.9	+0.2
KKN	Kakani	68.10	303	eP	P	17 41 49.2	-0.4
DMN	Daman	68.18	303	eP	P	17 41 50.5	+0.3
	comp=Z,18nm,0.9s						
TLY	Talaya	68.26	333	⇓eP	P	17 41 50.1	+0.2
TLY				pmax	pmax		
	comp=Z,7.0nm,1.5s						
GKN	Gorkha	68.71	303	eP	P	17 41 53.2	-0.2
	comp=Z,7.5nm,0.5s						
SEY	Seymchan	68.94	3	⇓eP	P	17 41 54.4	+0.5
BOD	Bodaibo	68.95	342	eP	P	17 41 53.0	-1.0
BOD				pmax	pmax		
	comp=Z,10.0nm,1.4s						
YAK	Yakutsk	69.16	352	⇓eP	P	17 41 55.6	+0.4
YAK				pmax	pmax		
	comp=Z,8.0nm,0.6s						
MOY	Mondy	69.48	332	eP	P	17 41 57.5	-0.1
MOY				pmax	pmax		
	comp=Z,17nm,2.0s						
DANN	Dangsing	69.55	303	eP	P	17 41 58.0	-0.8
	comp=Z,13nm,0.7s						
HYB	Hyderabad	71.19	291	i P	P	17 42 11.0	+2.4
UNV	Unalaska Valle	71.42	27	P	P	17 42 08.7	-0.5
VNDA	Vanda	71.86	177	P	P	17 42 11.9	+0.4
	comp=Z,5.0nm,0.9s,baz=334,slow=5.9,SNR=13						
VNDA	Vanda	71.86	177	P	P	17 42 12.4	+0.8
VNDA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
VNDA	Vanda	71.86	177	P	P	17 42 12.4	+0.8
AKUT	Akutan	71.93	27	P	P	17 42 12.3	0.0
WMQ	Urumqi	72.64	319	eP	P	17 42 17.8	+0.9
WMQ				pmax	pmax		
	comp=Z,9.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,61nm,5.9s						
WMQ				LR	LR		
	comp=Z,440nm,29.3s						

WMQ				LR	LR		
	comp=Z,890nm,29.2s						
DGZ	**Jazzator, Alta**	**75.51**	**325**	⇑eP	**P**	**17 42 33.8**	**+0.2**
DGZ				pmax	pmax		
	comp=Z,2.0nm,1.2s						
MK31	**Makanchi Array**	**77.35**	**321**	ceP	**P**	**17 42 43.1**	**-0.8**
MK31	**Makanchi Array**	**77.35**	**321**	P	**P**	**17 42 42.9**	**-1.1**
MKAR	**Makanchi Array**	**77.35**	**321**	P	**P**	**17 42 43.2**	**-0.7**
	comp=Z,0.7nm,0.5s,baz=97,slow=9.2,SNR=21						
MAKZ	**Makanchi**	**77.55**	**321**	P	**P**	**17 42 43.4**	**-1.6**
MAKZ				pmax	pmax		
	comp=Z,14nm,1.8s						
MAKZ	**Makanchi**	**77.55**	**321**	P	**P**	**17 42 43.4**	**-1.6**
TIXI	**Tiksi**	**78.45**	**354**	⇑eP	**P**	**17 42 50.6**	**+1.2**
TIXI				pmax	pmax		
	comp=Z,18nm,1.3s						
TIXI	**Tiksi**	**78.45**	**354**	P	**P**	**17 42 46.8**	**-2.6**
TNA	**Tin City**	**78.75**	**18**	P	**P**	**17 42 50.5**	**-0.7**
	baz=226						
TNA	**Tin City**	**78.75**	**18**	P	**P**	**17 42 51.3**	**+0.1**
ANM	**Nome**	**78.87**	**19**	P	**P**	**17 42 52.7**	**+0.8**
ANM				pmax	pmax		
	comp=Z,9.0nm,1.3s						
ANM	**Nome**	**78.87**	**19**	P	**P**	**17 42 52.7**	**+0.8**
ZALV	**Zalesovo Beam**	**78.90**	**328**	P	**P**	**17 42 50.5**	**-1.8**
	comp=Z,2.5nm,0.5s,baz=117,slow=7.4,SNR=10						
ZALV				LR	LR	18 18 16.7	
	comp=Z,132nm,19.7s,baz=32,slow=36						
ZALV	**Zalesovo Beam**	**78.90**	**328**	P	**P**	**17 42 49.8**	**-2.5**
KSH	**Kashi**	**79.19**	**312**	P	**P**	**17 42 54.6**	**+0.2**
KSH				pP	sP	17 43 15.6	-0.7
KSH				PP	**PP**	**17 45 57.4**	**+2.8**
KSH				S	**S**	**17 52 45.9**	**-4.7**
KSH				pmax	pmax		
	comp=Z,20nm,1.5s						
KSH				pmax	pmax		
	comp=Z,86nm,4.9s						
OHAK	**Old Harbor**	**79.51**	**29**	P	**P**	**17 42 55.8**	**+0.3**
NIL	**Nilore**	**79.71**	**306**	P	**P**	**17 42 56.7**	**-0.5**
NIL				pmax	pmax		
	comp=Z,8.0nm,0.6s						
NIL	**Nilore**	**79.71**	**306**	P	**P**	**17 42 56.7**	**-0.5**
NIL				IAmb	IAmb	17 42 59.2	
	comp=Z,8.0nm,0.6s						
KDAK	**Kodiak Island**	**80.11**	**28**	LR	LR	18 11 18.7	
	comp=Z,99nm,20.1s,baz=269,slow=30						
SVW2	**Sparrevohn**	**80.44**	**25**	P	**P**	**17 43 02.1**	**+1.6**
KURK	**Kurchatov**	**81.08**	**323**	P	**P**	**17 43 02.7**	**-1.4**
KURK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
KURK	**Kurchatov**	**81.08**	**323**	P	**P**	**17 43 02.7**	**-1.4**
AAK	**Ala-Archa**	**81.17**	**315**	ceP	**P**	**17 43 05.1**	**+0.1**
AAK				pmax	pmax		
	comp=Z,25nm,2.5s						
TTA	**Tatalina**	**81.23**	**23**	P	**P**	**17 43 05.9**	**+1.1**
TTA				pmax	pmax		
	comp=Z,17nm,1.8s						
TTA	**Tatalina**	**81.23**	**23**	P	**P**	**17 43 05.9**	**+1.1**
CNPM	**China Poot**	**81.55**	**27**	P	**P**	**17 43 06.8**	**+0.4**
CNPM				IAmb	IAmb	17 43 41.9	
	comp=Z,65nm,1.5s						
BRLK	**Bradley Lake**	**81.81**	**27**	P	**P**	**17 43 08.2**	**+0.3**
PPLA	**Purkeypile**	**82.73**	**24**	P	**P**	**17 43 12.7**	**0.0**
PPLA				IAmb	IAmb	17 43 21.4	
	comp=Z,34nm,1.6s						
KTH	**Kantishna Hill**	**83.54**	**24**	P	**P**	**17 43 15.3**	**-1.5**
KTH				IAmb	IAmb	17 43 16.6	
	comp=Z,38nm,1.8s						
TRF	**Thorofare Moun**	**83.75**	**24**	P	**P**	**17 43 16.7**	**-1.4**
TRF				IAmb	IAmb	17 44 11.7	
	comp=Z,30nm,1.8s						
Q23K	**Middleton Isla**	**83.76**	**28**	P	**P**	**17 43 17.0**	**-0.8**
	baz=247						
SML	**Sawmill**	**83.84**	**26**	P	**P**	**17 43 17.5**	**-0.9**
SML				IAmb	IAmb	17 43 22.6	
	comp=Z,36nm,1.4s						
KKAR	**Karatay Array**	**84.11**	**314**	P	**P**	**17 43 18.8**	**-1.4**
KKAR	**Karatay Array**	**84.11**	**314**	P	**P**	**17 43 18.8**	**-1.4**
SCM	**Sheep Creek Mo**	**84.28**	**26**	P	**P**	**17 43 19.5**	**-1.2**
SCM				pmax	pmax		
	comp=Z,45nm,1.6s						
SCM	**Sheep Creek Mo**	**84.28**	**26**	P	**P**	**17 43 19.5**	**-1.2**
SCM				IAmb	IAmb	17 45 32.4	
	comp=Z,45nm,1.6s						
MLY	**Manley**	**84.30**	**22**	P	**P**	**17 43 19.8**	**-0.9**
	baz=242						
RND	**Reindeer**	**84.31**	**24**	P	**P**	**17 43 19.2**	**-1.5**
RND				pmax	pmax		
	comp=Z,7.0nm,0.7s						
RND	**Reindeer**	**84.31**	**24**	P	**P**	**17 43 19.2**	**-1.5**
RND				IAmb	IAmb	17 43 21.3	
	comp=Z,7.3nm,0.7s						
MCK	**McKinley**	**84.42**	**24**	P	**P**	**17 43 20.3**	**-0.9**
	baz=244						
NEA2	**Nenana**	**84.74**	**23**	P	**P**	**17 43 22.0**	**-0.9**
	baz=244						
I23K	**Minto, Yukon-K**	**84.87**	**22**	P	**P**	**17 43 23.0**	**-0.4**
	baz=244						
I23K	**Minto, Yukon-K**	**84.87**	**22**	P	**P**	**17 43 21.5**	**-1.9**
WRH	**Wood River Hil**	**85.07**	**23**	P	**P**	**17 43 22.2**	**-2.2**
WRH				IAmb	IAmb	17 43 27.5	
	comp=Z,16nm,1.4s						
NRIK	**Noril'sk**	**85.24**	**342**	P	**P**	**17 43 24.5**	**-0.8**
	comp=Z,2.9nm,0.5s,baz=131,slow=5.6,SNR=7.9						
NRIK				LR	LR	18 21 57.6	
	comp=Z,88nm,20.6s,baz=136,slow=36						
NRIK	**Noril'sk**	**85.24**	**342**	deP	**P**	**17 43 24.4**	**-0.8**
NRIK				pmax	pmax		
	comp=Z,14nm,1.5s						
NRIK	**Noril'sk**	**85.24**	**342**	P	**P**	**17 43 23.6**	**-1.6**
NRIK				IAmb	IAmb	17 43 26.1	
	comp=Z,32nm,1.8s						
CCB	**Clear Creek Bu**	**85.26**	**23**	P	**P**	**17 43 23.7**	**-1.6**
CCB				IAmb	IAmb	17 43 24.8	
	comp=Z,51nm,1.8s						
TCOL	**CIGO, UAF Yank**	**85.33**	**23**	P	**P**	**17 43 25.1**	**-0.6**
	baz=245						
TCOL	**CIGO, UAF Yank**	**85.33**	**23**	P	**P**	**17 43 24.1**	**-1.6**
TCOL				IAmb	IAmb	17 43 26.5	
	comp=Z,9.1nm,0.8s						
COLA	**College**	**85.33**	**23**	P	**P**	**17 43 24.9**	**-0.8**
COLA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
COLA	**College**	**85.33**	**23**	P	**P**	**17 43 24.9**	**-0.8**
COLA				IAmb	IAmb	17 43 27.4	
	comp=Z,9.9nm,0.9s						
HDA	**Harding Lake**	**85.50**	**24**	P	**P**	**17 43 25.6**	**-1.0**
	baz=246						
HDA	**Harding Lake**	**85.50**	**24**	P	**P**	**17 43 25.2**	**-1.4**
COLD	**Coldfoot**	**85.51**	**20**	P	**P**	**17 43 26.6**	**0.0**
	baz=243						
COLD	**Coldfoot**	**85.51**	**20**	P	**P**	**17 43 25.5**	**-1.0**
PAX	**Paxson**	**85.53**	**25**	P	**P**	**17 43 24.6**	**-2.3**
PAX				pmax	pmax		
	comp=Z,16nm,1.7s						
PAX	**Paxson**	**85.53**	**25**	P	**P**	**17 43 24.6**	**-2.3**
PAX				IAmb	IAmb	17 44 10.6	
	comp=Z,16nm,1.7s						
POKR	**Poker Plat Res**	**85.60**	**23**	P	**P**	**17 43 26.2**	**-0.9**
	baz=245						
A21K	**Barrow**	**85.61**	**16**	P	**P**	**17 43 27.0**	**0.0**
	baz=236						
A21K	**Barrow**	**85.61**	**16**	P	**P**	**17 43 26.0**	**-1.0**
A21K				IAmb	IAmb	17 44 37.7	
	comp=Z,9.4nm,0.6s						
IL31		**85.67**	**23**	P	**P**	**17 43 25.8**	**-1.6**
IL31				IAmb	IAmb	17 43 27.4	
	comp=Z,7.3nm,0.7s						
ILAR	**Eielson Array**	**85.67**	**23**	P	**P**	**17 43 26.0**	**-1.4**
	comp=Z,5.4nm,0.7s,baz=251,slow=4.6,SNR=72						
ILAR				LR	LR	18 17 15.2	
	comp=Z,124nm,21.4s,baz=248,slow=32						
ILAR	**Eielson Array**	**85.67**	**23**	P	**P**	**17 43 25.5**	**-1.9**
ILAR	**Eielson Array**	**85.67**	**23**	P	**P**	**17 43 25.5**	**-1.9**
EGAK	**Eagle**	**87.95**	**24**	P	**P**	**17 43 38.0**	**-0.5**
EGAK				IAmb	IAmb	17 43 39.3	
	comp=Z,24nm,1.7s						
BBB	**Bella Bella**	**91.81**	**38**	LR	LR	18 15 09.1	
	comp=Z,172nm,20.7s,baz=290,slow=29						
NVAR	**Mina Array Bea**	**97.66**	**52**	P	Pdif	17 44 25.8	+1.5
	comp=Z,0.3nm,0.6s,baz=267,slow=5.6,SNR=4.1						
PFO	**Pinyon Flats O**	**99.03**	**57**	LR	LR	18 20 58.3	
	comp=Z,107nm,18.9s,baz=234,slow=30						
YKA	**Yellowknife Ar**	**99.38**	**28**	P	**Pdif**	**17 44 32.2**	**+1.2**
	comp=Z,0.3nm,0.5s,baz=275,slow=4.2,SNR=8.9						
YKA	**Yellowknife Ar**	**99.38**	**28**	ceP	**Pdif**	**17 44 33.7**	**+2.6**
OBN	**Obninsk**	**106.41**	**326**	eP	**Pdif**	**17 44 59.7**	**-2.8**
OBN				e		17 49 28.1	
OBN				ePPP	PPP	17 51 42.5	
OBN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
OBN				MLR	MLR		
	comp=Z,110nm,16.0s						
CLL	**Collm**	**120.86**	**328**	ePKPdf	**PKPdf**	**17 49 39.0**	**-2.1**
CLL	**Collm**	**120.86**	**328**	ePKIKP	**PKPdf**	**17 49 39.0**	**-2.1**
GERES	**GERESS Array B**	**121.78**	**325**	PKP	**PKPdf**	**17 49 41.7**	**-1.4**
	comp=Z,0.3nm,0.5s,baz=90,slow=2.7,SNR=2.7						
PLCA	**Paso Flores**	**122.24**	**147**	PKP	**PKPdf**	**17 49 44.1**	**-0.1**
	comp=Z,1.3nm,0.5s,baz=276,slow=1.9,SNR=7.3						
LPAZ	**La Paz**	**139.01**	**123**	PKhKP	PKPpre	17 50 12.2	
	comp=Z,1.4nm,0.5s,baz=252,slow=3.2,SNR=4.3						
LPAZ				PKP	**PKiKP**	**17 50 18.6**	**-0.9**
	comp=Z,2.7nm,0.6s,baz=311,slow=4.1,SNR=9.0						
LPAZ				SKPbc	**SKiKP**	**17 53 52.6**	**+1.2**
	comp=Z,1.6nm,0.9s,baz=245,slow=4.6,SNR=4.2						
LPAZ	**La Paz**	**139.01**	**123**	PKIKP	**PKPdf**	**17 50 11.7**	**-5.5**
LPAZ	**La Paz**	**139.01**	**123**	PKPdf	**PKPdf**	**17 50 11.7**	**-5.5**
CPUP	**Villa Florida**	**140.25**	**145**	PKP	**PKPdf**	**17 50 19.3**	**+0.8**
	comp=Z,1.4nm,0.5s,baz=212,slow=7.5,SNR=3.3						
TORD	**Torodi Ar. Bea**	**144.80**	**284**	PKP	**PKPab**	**17 50 25.8**	**0.0**
	comp=Z,10nm,0.7s,baz=66,slow=3.3,SNR=42						
TORD	**Torodi Ar. Bea**	**144.80**	**284**		**PKPab**	**17 50 25.3**	**-0.5**
KIC	**Kosan Boka**	**151.59**	**272**	ePKP1	**PKiKP**	**17 50 44.7**	**+0.1**
	comp=Z,18nm,0.6s						
DBIC	**Dimbokro**	**151.71**	**273**	PKPbc	**PKiKP**	**17 50 45.0**	**+0.2**
	comp=Z,14nm,0.5s,baz=90,slow=2.5,SNR=35						
DBIC	**Dimbokro**	**151.71**	**273**	PKIKP	**PKiKP**	**17 50 45.3**	**+0.4**
DBIC	**Dimbokro**	**151.71**	**273**		**PKiKP**	**17 50 45.3**	**+0.4**
TIC	**Toumodi**	**151.87**	**273**	ePKP1	**PKiKP**	**17 50 45.9**	**+0.7**
LIC	**Lamto**	**151.88**	**272**	ePKP1	**PKiKP**	**17 50 45.2**	**0.0**
	comp=Z,46nm,0.6s						
BDFB	**Brasilia**	**153.98**	**146**	PKPbc	**PKPbc**	**17 50 48.9**	**-0.7**
	comp=Z,3.4nm,0.5s,baz=208,slow=0.9,SNR=5.7						

IDC 13 17:40:16.4±8.9**, 3°.10S**×**149°.51E, h0**^{km}**, mb3.4**/3**, mb1 3.7**/3**, mb1mx3.4**/36**, mbtmp3.4**/3**, Error ellipse: s-maj=287.3km s-min=35.4km az=101.0, Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.36**	**220**	P	P	17 45 16.8	+0.6
	0.8nm,0.7s,baz=36,slow=10,SNR=3.2						
ASAR	**Alice Springs**	**25.42**	**215**	P	P	17 45 45.2	-0.7
	1.4nm,1.2s,baz=46,slow=7.7,SNR=2.8						
SONM	**Songino Array**	**63.16**	**329**	P	P	17 50 46.5	+0.1
	0.2nm,0.4s,baz=144,slow=5.4,SNR=2.1						

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*NEIC **13** 17:42:40.9, 36°.95N×97°.62W, h2^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-1.67; $M_{\theta\theta}$1.44; $M_{\phi\phi}$0.23; $M_{r\theta}$0.31; $M_{\theta\phi}$-0.58; $M_{\phi r}$-0.02; Fault plane solution: $M_0$1.70000×10^{14} NP1:ϕ_s115.00000°, δ40.00000°, λ-85.00000°. NP2:ϕ_s288.00000°, δ50.00000°, λ-94.00000°. Principal axes: T 1.6987, Plg5.0000°, Azm21.0000°; N 0.0018, Plg3.0000°, Azm291.0000°; P -1.7005, Plg84.0000°, Azm169.0000°;*

*IDC **13** 17:42:40.8±1.0, 36°.95N×97°.67W, h0^{km}, mb3.8/1, mb1 3.9/8, mb1mx3.6/46, mbtmp3.6/8, ML3.3/7 Error ellipse: s-maj=12.8km s-min=12.3km az=150.0*

*TUL **13** 17:42:40.9±1.8, 36°.95N±0°.02×97°.62W±0°.02, h7^{km}±5^{km}, ML3.8, mb_Lg3.7/126(NEIC), Mwr3.4/9(SLM), Error ellipse: s-maj=3.0km s-min=1.8km az=218.0*

*NEIC **13** 17:42:41.1±1.5, 36°.94N±0°.02×97°.61W±0°.02, h6^{km}±6^{km}, Error ellipse: s-maj=2.9km s-min=1.8km az=45.0*

*ANF **13** 17:42:41.0±0.7, 36°.93N×97°.63W, h5^{km}, ML4.5/8, Error ellipse: s-maj=8.1km s-min=6.9km az=15.0*

ISC 13 17:42:41.0±1.0**, 36°.93N**±0°.02×**97°.62W**±0°.02**, h7**^{km}±7^{km}**, n155, σ0**^{s}**.96**/156**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAN13	**South Haven SW**	**0.14**	**54**		**Pg**	**17 42 44.1**	**+0.2**
KAN13				Sg	**Sg**	**17 42 46.3**	**+0.4**
KAN01	**Argonia South**	**0.25**	**333**		**Pg**	**17 42 46.0**	**+0.1**
KAN01				Sg	**Sg**	**17 42 49.4**	**+0.2**
KAN05	**Bluff City Nor**	**0.27**	**311**		**Pg**	**17 42 46.3**	**0.0**
KAN05				Sg	**Sg**	**17 42 50.0**	**+0.1**
KAN14	**Manchester OK**	**0.28**	**276**		**Pg**	**17 42 46.5**	**+0.1**
KAN14				Sg	**Sg**	**17 42 50.3**	**+0.2**
KS21	**Milan North St**	**0.36**	**354**		**Pg**	**17 42 47.9**	**-0.1**
KS21				Sg	**Sg**	**17 42 52.9**	**+0.2**
KAN08	**Anthony NE Sta**	**0.41**	**317**		**Pg**	**17 42 48.9**	**0.0**
KAN08				Sg	**Sg**	**17 42 54.5**	**+0.3**
KAN10	**Anthony SW Sta**	**0.43**	**297**		**Pg**	**17 42 49.3**	**+0.1**
KAN12	**Harper NE Stat**	**0.47**	**321**		**Pg**	**17 42 50.1**	**-0.1**
KAN12				Sg	**Sg**	**17 42 56.5**	**+0.1**
CROK	**Carrier**	**0.52**	**215**		**Pg**	**17 42 51.1**	**+0.2**
CROK				Sg	**Sg**	**17 42 58.5**	**+0.8**
T35A	**Sooner Cattle**	**0.89**	**91**		**Pg**	**17 42 57.8**	**-0.2**
T35A				Sg	**Sg**	**17 43 09.5**	**0.0**
T35B	**Sooner Cattle**	**0.89**	**91**	P		17 42 57.8	
	baz=273,SNR=206						
T35B				S		17 43 09.5	
	baz=273						
QUOK	**Quay**	**1.05**	**136**	Pg	**Pg**	**17 43 01.0**	**-0.2**
QUOK				Sg	**Sg**	**17 43 14.9**	**+0.1**
OK029	**Liberty Lake**	**1.14**	**173**		**Pg**	**17 43 02.5**	**-0.3**
OK029				Sg	**Sg**	**17 43 18.0**	**+0.4**
OK031	**S. Brethren Rd**	**1.16**	**147**		**Pg**	**17 43 02.9**	**-0.3**
OK031				Sg	**Sg**	**17 43 18.4**	**+0.2**
OK030	**Cody Creek RV**	**1.21**	**146**		**Pg**	**17 43 03.7**	**-0.4**
U32A	**Winter Ranch,**	**1.24**	**244**		**Pg**	**17 43 04.1**	**-0.7**
U32A	**Winter Ranch,**	**1.24**	**244**	P		17 43 04.0	
	baz=62						
U32A				S		17 43 20.9	
	baz=62						
BCOK	**Bluff Creek, N**	**1.27**	**180**		**Pn**	**17 43 04.9**	**-0.3**
OK025	**Westminster Rd**	**1.37**	**170**		**Pn**	**17 43 06.6**	**+0.1**
OK025				IAmb_Lg		17 43 27.6	
	comp=Z,359nm,0.7s						
OKCFA	**Oklahoma City**	**1.52**	**175**		**Pn**	**17 43 08.9**	**+0.3**
OKCSW	**OKLAHOMA CITY**	**1.53**	**174**		**Pn**	**17 43 09.2**	**+0.4**
FNO	**Franklin**	**1.68**	**174**		**Pn**	**17 43 11.7**	**+0.9**
R32A	**Long Quarter,**	**1.72**	**330**	Pn	**Pn**	**17 43 12.0**	**+0.5**
R32A	**Long Quarter,**	**1.72**	**330**	P		17 43 12.0	
	baz=149,SNR=102						
R32A				S		17 43 33.8	
	baz=149						
TUL1	**Leonard**	**1.79**	**124**	P	**Pn**	**17 43 12.7**	**+0.4**
	baz=306						
TUL1				S	**Sb**	**17 43 37.4**	**+0.6**
	baz=306						
TUL1	**Leonard**	**1.79**	**124**	Pn	**Pn**	**17 43 13.2**	**+0.9**
TUL1	**Leonard**	**1.79**	**124**	P		17 43 13.4	
	baz=306,SNR=30						
TUL1				S		17 43 37.5	
	baz=306						
KSU1	**Kansas State U**	**2.31**	**20**	P	**Pn**	**17 43 20.5**	**+1.0**
	baz=201						
KSU1				S	**Sn**	**17 43 49.4**	**+1.2**
	baz=201						
KSU1	**Kansas State U**	**2.31**	**20**	Pn	**Pn**	**17 43 20.2**	**+0.7**
KSU1				IAmb_Lg		17 43 53.7	
	comp=Z,316nm,1.1s						
KSU1	**Kansas State U**	**2.31**	**20**	P		17 43 20.1	
	baz=201,SNR=30						
KSU1				S		17 43 49.7	
	baz=201						
WMOK	**Wichita Mounta**	**2.38**	**204**	P	**Pn**	**17 43 20.7**	**+0.2**
	baz=23						
WMOK				S	**Sn**	**17 43 51.2**	**+1.3**
	baz=23						
WMOK	**Wichita Mounta**	**2.38**	**204**		**Pn**	**17 43 20.6**	**+0.1**
WMOK	**Wichita Mounta**	**2.38**	**204**	P		17 43 20.8	
	baz=23,SNR=112						
CBKS	**Cedar Bluff**	**2.52**	**319**	P	**Pn**	**17 43 22.7**	**+0.3**
	baz=138						
CBKS				S	**Sn**	**17 43 54.1**	**+0.7**
	baz=138						
CBKS	**Cedar Bluff**	**2.52**	**319**		**Pn**	**17 43 23.4**	**+1.0**
CBKS				IAmb_Lg		17 44 04.7	
	comp=Z,177nm,0.7s						
CBKS	**Cedar Bluff**	**2.52**	**319**	P		17 43 23.1	
	baz=138,SNR=25						
CBKS				S		17 43 58.3	
	baz=138						
U38A	**Gravette**	**2.65**	**100**	Pn	**Pn**	**17 43 25.2**	**+1.1**
X37A	**Clayton**	**2.97**	**141**		**Pn**	**17 43 29.4**	**+0.9**
X37A				IAmb_Lg		17 44 21.9	
	comp=Z,259nm,0.7s						
X37A	**Clayton**	**2.97**	**141**	P		17 43 29.5	
	baz=323						
X37A				S		17 44 12.3	
	baz=323						
HHAR	**Hobbs**	**3.03**	**101**		**Pn**	**17 43 30.5**	**+1.1**
HHAR				IAmb_Lg		17 44 22.8	
	comp=Z,137nm,0.8s						
S39A	**Bolivar**	**3.51**	**76**	Pn	**Pn**	**17 43 36.8**	**+0.8**
S39A				IAmb_Lg		17 44 39.0	
	comp=Z,176nm,0.7s						
S39A	**Bolivar**	**3.51**	**76**	P		17 43 36.5	
	baz=259,SNR=16						
W39A	**Magazine**	**3.56**	**118**	P	**Pn**	**17 43 37.5**	**+0.9**
	baz=301						
W39A				S	**Sn**	**17 44 19.9**	**+1.0**
	baz=301						
W39A	**Magazine**	**3.56**	**118**		**Pn**	**17 43 37.5**	**+0.9**
W39A				IAmb_Lg		17 44 41.2	
	comp=Z,225nm,0.7s						
W39A	**Magazine**	**3.56**	**118**	P		17 43 37.6	
	baz=301						
Z35A	**Perchaven, San**	**3.60**	**175**		**Pn**	**17 43 38.4**	**+1.2**
Z35A				IAmb_Lg		17 44 45.5	
	comp=Z,131nm,0.9s						
N33B	**J Bar K, Exete**	**3.80**	**2**	P		17 43 40.4	
	baz=182,SNR=8.1						
N33B				S		17 44 24.8	
	baz=182						
N33A	**J Bar K, Exete**	**3.81**	**2**	Pn	**Pn**	**17 43 40.4**	**+0.4**
U40A	**Yellville**	**3.88**	**97**	P	**Pn**	**17 43 42.1**	**+1.0**
	baz=280						
U40A				S	**Sn**	**17 44 27.4**	**+0.6**
	baz=280						
U40A	**Yellville**	**3.88**	**97**	Pn	**Pn**	**17 43 42.0**	**+1.0**
U40A	**Yellville**	**3.88**	**97**	P		17 43 42.3	
	baz=280,SNR=43						
U40A				P		17 43 42.3	
	baz=280,SNR=43						
AMTX	**Amarillo**	**3.88**	**239**	P	**Pn**	**17 43 40.7**	**-0.4**
	baz=57						
AMTX				S	**Sn**	**17 44 28.3**	**+1.3**
	baz=57						
AMTX	**Amarillo**	**3.88**	**239**	Pn	**Pn**	**17 43 42.2**	**+1.1**
AMTX				IAmb_Lg		17 44 48.1	
	comp=Z,233nm,0.8s						
MIAR	**Mount Ida**	**4.06**	**125**	P	**Pn**	**17 43 43.7**	**+0.2**
	baz=307						
MIAR				S	**Sn**	**17 44 31.7**	**+0.4**
	baz=307						
MIAR	**Mount Ida**	**4.06**	**125**	Pn	**Pn**	**17 43 44.2**	**+0.7**
MIAR				IAmb_Lg		17 44 52.1	
	comp=Z,264nm,1.2s						
MIAR	**Mount Ida**	**4.06**	**125**	P		17 43 44.0	
	baz=307,SNR=9.8						
MIAR				S		17 44 32.4	
	baz=307						
P38A	**Dawn**	**4.19**	**49**		**Pn**	**17 43 46.2**	**+0.8**
P38A				IAmb_Lg		17 44 56.5	
	comp=Z,278nm,0.8s						
N35A	**Tabor**	**4.22**	**21**		**Pn**	**17 43 46.0**	**+0.3**
N35A	**Tabor**	**4.22**	**21**	P		17 43 45.6	
	baz=202,SNR=7.0						
Z38A	**Mt. Pleasant**	**4.25**	**149**		**Pn**	**17 43 45.8**	**-0.3**
Z38A	**Mt. Pleasant**	**4.25**	**149**	S		17 44 37.6	
	baz=330						
MGMO	**Mountain Grove**	**4.29**	**85**		**Pn**	**17 43 47.7**	**+1.0**
MGMO				IAmb_Lg		17 44 56.0	
	comp=Z,149nm,0.7s						
R40A	**Maddies Statio**	**4.46**	**71**	Pn	**Pn**	**17 43 49.2**	**+0.2**
R40A				IAmb_Lg		17 45 07.3	
	comp=Z,182nm,0.8s						
R40A	**Maddies Statio**	**4.46**	**71**	P		17 43 49.8	
	baz=254,SNR=21						
KSCO	**Kaye Shedlock'**	**4.47**	**299**		**Pn**	**17 43 49.9**	**+0.6**
KSCO	**Kaye Shedlock'**	**4.47**	**299**	P		17 43 49.8	
	baz=116						
BGNE	**Belgrade**	**4.49**	**355**		**Pn**	**17 43 49.9**	**+0.4**
BGNE	**Belgrade**	**4.49**	**355**	P		17 43 49.9	
	baz=175,SNR=9.3						
FCAR	**Ozark Folk Cen**	**4.55**	**102**		**Pn**	**17 43 51.2**	**+0.9**
FCAR				IAmb_Lg		17 45 02.7	
	comp=Z,192nm,0.8s						
X40A	**Basin Creek Fa**	**4.59**	**121**		**Pn**	**17 43 52.0**	**+1.1**
X40A				IAmb_Lg		17 45 12.2	
	comp=Z,127nm,0.8s						
ABTX	**Abilene, Hawle**	**4.61**	**202**		**Pn**	**17 43 50.4**	**-0.7**
WHAR	**Wooly Hollow**	**4.62**	**109**	Pn	**Pn**	**17 43 51.8**	**+0.6**
W41B	**Gary Mavity, V**	**4.69**	**110**	P		17 43 52.5	
	baz=294,SNR=6.4						
WLAR	**White Oak Lake**	**4.90**	**130**		**Pn**	**17 43 56.7**	**+1.6**
WLAR				IAmb_Lg		17 45 29.5	
	comp=Z,141nm,1.0s						
P40A	**Paris**	**5.10**	**58**		**Pn**	**17 43 58.0**	**+0.2**
P40A				IAmb_Lg		17 45 28.6	
	comp=Z,193nm,0.8s						
L34A	**Svendsen Farm,**	**5.12**	**10**		**Pn**	**17 43 57.8**	**-0.4**
L34A				IAmb_Lg		17 45 25.0	
	comp=Z,179nm,0.7s						
237A	**Washetta, Mont**	**5.14**	**163**	Pn	**Pn**	**17 43 58.2**	**-0.1**
237A				IAmb_Lg		17 45 35.3	
	comp=Z,88nm,0.8s						
237A	**Washetta, Mont**	**5.14**	**163**	P		17 43 58.7	
	baz=344						
MSTX	**Muleshoe**	**5.14**	**236**		**Pn**	**17 43 58.4**	**-0.1**
MSTX				IAmb_Lg		17 45 32.9	
	comp=Z,93nm,0.8s						
N38A	**Joes South For**	**5.16**	**40**		**Pn**	**17 43 57.5**	**-1.1**
N38A				IAmb_Lg		17 45 29.5	
	comp=Z,205nm,0.8s						
N38A	**Joes South For**	**5.16**	**40**	P		17 43 58.3	
	baz=223,SNR=5.2						
CCM	**Cathedral Cave**	**5.19**	**76**		**Pn**	**17 43 59.8**	**+0.7**
CCM				IAmb_Lg		17 45 31.1	
	comp=Z,167nm,1.0s						
CCM	**Cathedral Cave**	**5.19**	**76**	P		17 44 00.1	
	baz=260,SNR=6.8						
T42A	**Van Buren**	**5.23**	**87**		**Pn**	**17 44 00.1**	**+0.5**
T42A				IAmb_Lg		17 45 33.4	
	comp=Z,146nm,1.0s						
OGNE	**Ogallala**	**5.28**	**321**	Pn	**Pn**	**17 44 01.2**	**+0.8**
OGNE				IAmb_Lg		17 45 38.6	
	comp=Z,107nm,0.7s						
CCAR	**Cane Creek**	**5.64**	**120**	Pn	**Pn**	**17 44 05.6**	**+0.3**
CCAR				IAmb_Lg		17 45 51.6	
	comp=Z,129nm,1.1s						
NATX	**Nacogdoches**	**5.71**	**154**	Pn	**Pn**	**17 44 07.2**	**+1.0**
K31A	**O'Neill**	**5.75**	**352**		**Pn**	**17 44 05.1**	**-1.7**
K31A				IAmb_Lg		17 45 45.8	
	comp=Z,148nm,0.7s						
K31A	**O'Neill**	**5.75**	**352**	P		17 44 06.0	
	baz=171						
PBMO	**Poplar Bluff**	**5.77**	**89**		**Pn**	**17 44 05.1**	**-1.9**
FVM	**French Village**	**5.82**	**77**		**Pn**	**17 44 07.3**	**-0.4**
SCIA	**State Center**	**6.03**	**33**		**Pn**	**17 44 08.8**	**-1.8**
LPAR	**Lepanto**	**6.06**	**100**	IAmb_Lg		17 45 58.7	
	comp=Z,139nm,0.7s						
SLM	**Saint Louis**	**6.09**	**72**	IAmb_Lg		17 45 52.1	
	comp=Z,116nm,0.8s						
435B	**Jarrell**	**6.13**	**180**	Pn	**Pn**	**17 44 11.9**	**-0.1**
435B				IAmb_Lg		17 46 10.2	
	comp=Z,113nm,0.8s						
435B	**Jarrell**	**6.13**	**180**	P		17 44 11.8	
	baz=360,SNR=5.5						
PEBM	**Pemiscott Bayo**	**6.30**	**95**	Pn	**Pn**	**17 44 14.1**	**-0.2**
SDCO	**Great Sand Dun**	**6.33**	**280**	Pn	**Pn**	**17 44 15.5**	**+0.5**
SDCO	**Great Sand Dun**	**6.33**	**280**	P		17 44 15.8	
	baz=95,SNR=11						
CPRX	**Cap Rock**	**6.44**	**235**	Pn	**Pn**	**17 44 16.1**	**-0.2**
N41A	**Harden Midland**	**6.49**	**52**		**Pn**	**17 44 17.1**	**+0.2**
N41A				IAmb_Lg		17 46 10.8	
	comp=Z,128nm,0.7s						
HENM	**Henderson Moun**	**6.54**	**89**	Pn	**Pn**	**17 44 15.1**	**-2.4**
JCT	**Junction City**	**6.69**	**196**	Pn	**Pn**	**17 44 18.6**	**-1.0**
JCT				IAmb_Lg		17 46 27.9	
	comp=Z,98nm,0.8s						
JCT	**Junction City**	**6.69**	**196**	P		17 44 18.9	
	baz=15,SNR=7.6						
S44A	**Carbondale**	**6.71**	**81**	Pn	**Pn**	**17 44 16.7**	**-3.2**
GLAT	**Glass**	**6.74**	**93**	Pn	**Pn**	**17 44 18.4**	**-1.9**
HICK	**Hickman**	**6.75**	**91**	Pn	**Pn**	**17 44 18.4**	**-2.0**
HALT	**Halls**	**6.75**	**96**	IAmb_Lg		17 46 17.1	
	comp=Z,110nm,0.9s						
K38A	**Parkersburg**	**6.82**	**32**	Pn	**Pn**	**17 44 18.9**	**-2.6**

K38A				IAmb_Lg		17 46 20.8	
	comp=Z,102nm,0.8s						
ECSD	EROS Data Cent	6.84	6	Pn	Pn	17 44 20.0	-1.7
ECSD	EROS Data Cent	6.84	6	P		17 44 20.9	
	baz=187,SNR=16						
ISCO	Idaho Springs	6.90	297	Pn	Pn	17 44 21.5	-1.4
ISCO	Idaho Springs	6.90	297	P		17 44 23.1	
	baz=112						
P43A	Skaggs, Pawnee	6.92	65	Pn	Pn	17 44 23.9	+1.1
W45A	Hickory Valley	7.06	102	Pn	Pn	17 44 22.6	-2.1
W45A				IAmb_Lg		17 46 26.9	
	comp=Z,112nm,0.8s						
Q44A	Meyer Farm, Va	7.08	71	Pn	Pn	17 44 26.5	+1.5
OXF	Oxford	7.10	107		Pn	17 44 26.1	+0.8
OXF				IAmb_Lg		17 46 28.5	
	comp=Z,97nm,0.8s						
L40A	Anamosa	7.12	42		Pn	17 44 25.3	-0.2
GDL2	Guadalupe Moun	7.29	232	Pn	Pn	17 44 28.2	+0.1
ANMO	Albuquerque	7.44	257	Pn	Pn	17 44 31.5	+1.4
	comp=Z,0.1nm,0.3s,baz=59,slow=12,SNR=1.3						
ANMO				Pg	Pg	17 44 58.4	-5.0
	comp=Z,0.9nm,0.3s,baz=72,slow=19,SNR=10						
ANMO				Lg	Lg	17 46 32.1	
	comp=Z,4.3nm,0.3s,baz=332,slow=23,SNR=13						
ANMO	Albuquerque	7.44	257	Pn	Pn	17 44 29.8	-0.4
ANMO	Albuquerque	7.44	257	IAmb_Lg		17 46 40.7	
	comp=Z,33nm,0.8s						
ANMO				IAmb_Lg		17 46 40.7	
	comp=Z,34nm,0.8s						
HDIL	Hopedale	7.45	58	Pn	Pn	17 44 29.6	-0.4
PHWY	Pilot Hill	7.49	308	Pn	Pn	17 44 30.7	-0.3
PHWY				IAmb_Lg		17 46 46.8	
	comp=Z,85nm,1.1s						
SUSD	Miller	7.57	353	IAmb_Lg		17 46 52.0	
	comp=Z,99nm,0.9s						
SMCO	Snowmass	7.71	290	Pn	Pn	17 44 31.8	-2.3
OLIL	Olney	7.75	74	IAmb_Lg		17 46 52.9	
	comp=Z,109nm,0.9s						
I37A	Lemond, Waseca	7.77	23	Pn	Pn	17 44 35.3	+0.8
I37A				IAmb_Lg		17 47 07.9	
	comp=Z,54nm,0.8s						
BNM	Barren Site	7.85	252	Pn	Pn	17 44 35.9	+0.1
O44A	Mansfield	7.86	63	Pn	Pn	17 44 36.8	+1.1
O44A				IAmb_Lg		17 46 47.6	
	comp=Z,112nm,0.8s						
WVT	Waverly	7.92	93	Pn	Pn	17 44 37.2	+0.7
L42A	Oliver, Polo	7.97	48	Pn	Pn	17 44 36.2	-0.9
L42A				IAmb_Lg		17 46 55.3	
	comp=Z,104nm,0.8s						
PLAL	Pickwick Lake	7.98	101	Pn	Pn	17 44 37.6	+0.2
LENM	Lemitar	8.11	253	Pn	Pn	17 44 40.2	+0.9
JFWS	Jewell Farm	8.23	41	Pn	Pn	17 44 40.2	-0.6
JFWS				IAmb_Lg		17 47 07.0	
	comp=Z,84nm,0.9s						
146A	Union	8.24	119	IAmb_Lg		17 47 24.4	
	comp=Z,42nm,0.9s						
MNTX	Cornudas Mount	8.27	233	Pn	Pn	17 44 41.3	-0.1
T47A	Sharon Grove	8.42	86	IAmb_Lg		17 47 11.7	
	comp=Z,78nm,0.9s						
M44A	Midewin, Midew	8.67	56	Pn	Pn	17 44 46.8	0.0
M44A				IAmb_Lg		17 47 19.3	
	comp=Z,92nm,0.9s						
Z47A	Carrollton	8.67	113	IAmb_Lg		17 47 22.3	
	comp=Z,45nm,1.1s						
RSSD	Black Hills	8.68	328	Pn	Pn	17 44 47.6	+0.4
MVCO	Mesa Verde	8.70	275	Pn	Pn	17 44 46.7	-0.8
PV15	Paradox Valley	8.73	283	Pn	Pn	17 44 46.1	-1.8
I40A	Norwalk	8.76	35	Pn	Pn	17 44 48.4	+0.3
I40A				IAmb_Lg		17 47 21.6	
	comp=Z,51nm,0.8s						
V48A	Smith Brothers	8.79	95	Pn	Pn	17 44 49.1	+0.5
V48A				IAmb_Lg		17 47 22.5	
	comp=Z,49nm,0.8s						
RWWY	Rawlins	8.82	306	Pn	Pn	17 44 49.9	+0.8
PV07	Paradox Valley	8.87	283	Pn	Pn	17 44 49.8	0.0
O20A	White River Ci	8.92	294	Pn	Pn	17 44 51.5	+1.1
K22A	Casper	8.92	313	Pn	Pn	17 44 50.2	-0.2
K22A				IAmb_Lg		17 47 48.9	
	comp=Z,56nm,0.8s						
PV02	Paradox Valley	8.92	282	Pn	Pn	17 44 51.5	+1.0
SFIN	Lafayette	8.92	64	Pn	Pn	17 44 51.7	+1.4
SFIN				IAmb_Lg		17 47 31.8	
	comp=Z,96nm,0.9s						
F33A	5 Mile Ranch,	8.96	6	Pn	Pn	17 44 51.4	+0.6
PV12	Saucer Basin,	8.98	282	Pn	Pn	17 44 52.6	+1.2
PV13	Radium Mtn., P	8.98	281	Pn	Pn	17 44 50.8	-0.5
PV22	Blue Mesa, Par	8.99	284	Pn	Pn	17 44 50.7	-0.7
PV03	Paradox Valley	9.01	282	Pn	Pn	17 44 52.5	+0.8
BLO	Bloomington	9.04	72	IAmb_Lg		17 47 51.6	
	comp=Z,73nm,0.8s						
PV18	Skein Mesa, Pa	9.06	282	Pn	Pn	17 44 52.8	+0.4
PV04	Paradox Valley	9.07	283	Pn	Pn	17 44 52.0	-0.4
PV16	Nyswonger Mesa	9.07	282	Pn	Pn	17 44 51.3	-1.2
WCI	Wyandotte Cave	9.09	78	IAmb_Lg		17 47 39.6	
	comp=Z,52nm,0.8s						
PV17	East Wray Mesa	9.10	282	Pn	Pn	17 44 52.0	-0.9
TX31	Lajitas Ar. Si	9.11	216		Pn	17 44 52.9	-0.1
TXAR	Lajitas Array	9.11	216	Pn	Pn	17 44 51.3	-1.7
	comp=Z,0.2nm,0.3s,baz=36,slow=10,SNR=10						
TXAR				Pg		17 45 24.1	
	comp=Z,0.7nm,0.3s,baz=32,slow=12,SNR=3.4						
TXAR				Lg	Lg	17 47 25.3	
	comp=Z,1.4nm,0.3s,baz=34,slow=24,SNR=7.0						
TX32	Lajitas Array	9.11	216		Pn	17 44 52.8	-0.3
PV05	Paradox Valley	9.20	281	Pn	Pn	17 44 54.5	+0.2
121A	Cookes Peak, D	9.45	245	IAmb_Lg		17 48 04.8	
	comp=Z,43nm,1.2s						
U49A	Red Boiling Sp	9.52	89	IAmb_Lg		17 47 43.4	
	comp=Z,72nm,1.2s						
I42A	Draeger Farm,	9.61	41	IAmb_Lg		17 47 48.5	
	comp=Z,51nm,0.9s						
Y49A	Blount Mountai	9.65	105	IAmb_Lg		17 47 48.5	
	comp=Z,34nm,0.8s						
E28A	Huff	9.90	348	IAmb_Lg		17 48 09.9	
	comp=Z,78nm,0.9s						
P48A	Milroy	9.93	72	IAmb_Lg		17 48 03.7	
	comp=Z,73nm,0.8s						
R49A	Shelbyville	9.97	78	IAmb_Lg		17 47 59.5	
	comp=Z,63nm,1.0s						
PDAR	Pinedale Array	10.87	306	Pn	Pn	17 45 16.4	-0.7
	comp=Z,0.2nm,0.3s,baz=118,slow=14,SNR=9.0						
PDAR				Pg		17 46 02.6	
	comp=Z,0.6nm,0.3s,baz=124,slow=14,SNR=5.5						
PDAR				Lg	Lg	17 48 20.1	
	comp=Z,0.8nm,0.3s,baz=111,slow=36,SNR=4.6						
S51A	Beattyville	11.20	82		Pn	17 45 21.2	-0.3
TKL	Tuckaleechee C	11.25	92	Pn	Pn	17 45 21.9	-0.2
	comp=Z,0.3nm,0.3s,baz=131,slow=8.5,SNR=2.3						
TKL				Lg	Lg	17 48 31.7	
	comp=Z,1.3nm,0.3s,baz=1.7,slow=23,SNR=8.3						
ULM	Lac du Bonnet	13.37	5	Pn	Pn	17 45 47.4	-3.7
	comp=Z,0.5nm,0.3s,baz=189,slow=13,SNR=5.1						
ULM				Sn	Sn	17 48 06.0	-14
	comp=Z,0.3nm,0.3s,baz=209,slow=19,SNR=2.5						
ULM				Lg	Lg	17 49 36.1	
	comp=Z,0.2nm,0.3s,baz=91,slow=19,SNR=7.2						
SADO	Sadowa	16.00	55	Lg	Lg	17 50 57.7	
	comp=Z,0.5nm,0.3s,baz=172,slow=15,SNR=7.5						
NVAR	Mina Array Bea	16.45	281	Pn	P	17 46 34.5	-0.7
	comp=Z,0.1nm,0.3s,baz=94,slow=8.8,SNR=2.8						
F10A	Beach Ranch, E	17.22	308	P	P	17 46 44.8	+1.2
YBH	Yreka Blue Hor	19.96	292	P	Pn	17 47 15.2	-0.3
	comp=Z,0.1nm,0.3s,baz=106,slow=8.2,SNR=7.1						
ILAR	Eielson Array	40.13	330	P	P	17 50 17.8	+0.7
	comp=Z,1.1nm,0.7s,baz=113,slow=7.3,SNR=15						
ILAR	Eielson Array	40.13	330	P	P	17 50 17.1	0.0

IDC 13 17:59:33.5±7.5, 4°.61S×147°.22E, h0^{km}, mb3.2/2, mb1 3.4/3, mb1mx3.2/39, mbtmp3.2/3, ML3.0/1, Error ellipse: s-maj=237.3km s-min=37.1km az=100.0, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	19.74	218	P	P	18 04 04.7	-0.4
	0.1nm,0.3s,baz=44,slow=10,SNR=2.3						
ASAR	Alice Springs	22.89	213	P	P	18 04 39.3	+0.3
	0.8nm,0.9s,baz=42,slow=9.5,SNR=6.5						
H11S3	WAKE ISLAND Hy	29.92	39	T	T	18 37 14.5	
	baz=223,slow=76,SNR=19						
H11S2	WAKE ISLAND Hy	29.93	39	T	T	18 37 14.4	
	baz=223,slow=76,SNR=14						
H11S1	WAKE ISLAND Hy	29.94	39	T	T	18 37 15.3	
	baz=223,slow=76,SNR=12						
H11N1	WAKE ISLAND Hy	30.96	38	T	T	18 38 32.0	
	baz=214						
H11N3	WAKE ISLAND Hy	30.98	38	T	T	18 38 32.1	
	baz=214						
H11N2	WAKE ISLAND Hy	30.98	38	T	T	18 38 32.5	
	baz=214						
MKAR	Makanchi Array	76.57	320	P	P	18 11 26.0	0.0
	0.2nm,0.9s,baz=114,slow=7.1,SNR=2.0						

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*JMA **13** 18:01:13.5±0.1, 24°.09N×122°.44E, h60^{km}±3^{km}, M2.4*

*TAP **13** 18:01:14.1, 24°.20N×122°.45E, h64^{km}, ML3.1, D*

ISC 13 18:01:13.7±1.2, 24°.18N±0°.03×122°.46E±0°.02, h63^{km}±9^{km}, n94, σ1°.26/178, 1C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	Yonagunijimaku	0.52	58	P	Pn	18 01 26.4	+0.3
JYNG				S	Sn	18 01 35.9	+0.7
YOJ	Yonaguni jima	0.58	61	P	Pn	18 01 27.0	+0.3
YOJ				S	Sn	18 01 36.7	+0.5
ENA	Nanau	0.70	291	P	Pn	18 01 28.1	0.0
	baz=291						
ENA				*e*S	Sn	18 01 39.1	+0.3
	baz=291						
TWC	Suao	0.70	308	P	Pn	18 01 28.3	+0.1
	baz=315						
TWC				S	Sn	18 01 38.6	-0.2
	baz=315						
NACB	Ninganchiao	0.79	270⇑	*i*P	Pn	18 01 29.0	-0.2
	baz=259						
NACB				*i* S	Sn	18 01 40.1	-0.6
	baz=259						
TWD	Chiawan	0.80	263	P	Pn	18 01 29.0	-0.3
	baz=253						
TWD				*e*S	Sn	18 01 40.2	-0.6
	baz=253						
HWA	Hwalien	0.81	256	*e*P	Pn	18 01 29.5	+0.1
	baz=253						
HWA				*e*S	Sn	18 01 41.6	+0.6
	baz=253						
NDS	Dongshan	0.82	304	P	Pn	18 01 30.1	+0.5
	baz=308						
NDS				*e*S	Sn	18 01 41.9	+0.7
	baz=308						
ILA	Ilan	0.87	312	*e*P	Pn	18 01 29.4	-0.9
	baz=319						
ILA				*e*S	Sn	18 01 43.6	+1.1
	baz=319						
NTC	Toucheng	0.89	320	*e*S	Sn	18 01 42.0	-0.7
	baz=326						
ETLH	Xiulin Townshi	0.89	272	*i* P	Pn	18 01 30.6	0.0
	baz=264						
ETLH				*e*S	Sn	18 01 42.8	-0.4
	baz=264						
TWE	Neicheng	0.90	307	P	Pn	18 01 31.4	+0.8
	baz=314						
TWE				*e*S	Sn	18 01 43.3	+0.2
	baz=314						
TWB1	Santiao Chiao	0.93	333	*e*P	Pn	18 01 30.7	-0.3
	baz=332						
TWB1				*e*S	Sn	18 01 42.4	-1.4
	baz=332						
ENTT	Nioudou	0.94	300	*i* P	Pn	18 01 31.8	+0.7
	baz=298						
ENTT				S	Sn	18 01 44.5	+0.6
	baz=298						
NDT	Datong Townshi	0.96	296	P	Pn	18 01 32.0	+0.7
	baz=295						
NDT				*e*S	Sn	18 01 45.1	+0.6
	baz=295						
TIPB	Shuangxi	0.98	324	P	Pn	18 01 31.9	+0.2
	baz=332						
TIPB				*e*S	Sn	18 01 44.7	-0.2
	baz=332						
ESL	Shilin	1.01	249	P	Pn	18 01 31.5	-0.5
	baz=247						
ESL				*e*S	Sn	18 01 45.0	-0.5
	baz=247						
NNSB	Datong	1.01	284	P	Pn	18 01 32.4	+0.2
	baz=283						
NNSB				*e*S	Sn	18 01 45.5	-0.4
	baz=283						
NNSH	Datong	1.01	284	P	Pn	18 01 32.3	+0.2
	baz=283						
NNSH				*e*S	Sn	18 01 45.8	-0.1
	baz=283						
NNS	Nan Shan	1.03	285	*e*P	Pn	18 01 32.5	+0.1
	baz=283						
NNS				*e*S	Sn	18 01 45.8	-0.3
	baz=283						
NWLT	Wulai	1.06	305	*i* P	Pn	18 01 33.5	+0.9
	baz=311						
NWLT				S	Sn	18 01 47.1	+0.3
	baz=311						
EGFH	Guangfu	1.07	242	*e*P	Pn	18 01 32.7	-0.2
	baz=235						
EGFH				*e*S	Sn	18 01 47.1	+0.1
	baz=235						
WHF	Hehuan Shan	1.09	268	P	Pn	18 01 33.3	-0.1
	baz=259						
WHF				*e*S	Sn	18 01 47.3	-0.8
	baz=259						
FUSS	Fushou	1.11	274	P	Pn	18 01 34.0	+0.4
	baz=265						
FUSS				*e*S	Sn	18 01 48.5	+0.1
	baz=265						
NSK	Sanguang	1.12	296	P	Pn	18 01 34.0	+0.5
	baz=288						
NSK				*e*S	Sn	18 01 48.1	-0.2
	baz=288						
NHDH	Xindian Distri	1.16	313	*e*S	Sn	18 01 48.4	-0.6
	baz=322						
IRIF	Iriomote-Funau	1.17	82	P	Pn	18 01 34.2	+0.1
IRIF				S	Sn	18 01 49.3	+0.1
HGSD	Ruisui	1.17	234	*e*P	Pn	18 01 33.8	-0.3
	baz=228						
HGSD				*e*S	Sn	18 01 48.5	-0.8
	baz=228						
CHGB	Renai	1.18	265	*i* P	Pn	18 01 34.7	+0.2
	baz=257						
CHGB				*e*S	Sn	18 01 50.0	+0.1
	baz=257						
TATO	Taipei	1.19	312	*e*P	Pn	18 01 33.1	-1.3
	baz=322						
TATO				*e*S	Sn	18 01 49.2	-0.5
	baz=322						
TDCB	Techi	1.19	274	P	Pn	18 01 35.0	+0.5
	baz=272						
TDCB				*e*S	Sn	18 01 49.6	-0.4
	baz=272						
HATJ	Hateruma jima	1.23	95	P	Pn	18 01 35.7	+0.8
HATJ				S	Sn	18 01 51.6	+0.8
EHY	Hungye	1.24	238	*e*P	Pn	18 01 34.6	-0.4
	baz=246						
EHY				*e*S	Sn	18 01 49.8	-1.2
	baz=246						
VWDT	VWDT	1.28	251	*i* P	Pn	18 01 36.0	+0.5
	baz=242						
VWDT				*e*S	Sn	18 01 51.4	-0.5
	baz=242						
TWS1	Kuangyinshan	1.32	314	*e*P	Pn	18 01 36.4	+0.3
	baz=323						
TWS1				*e*S	Sn	18 01 53.3	+0.5
	baz=323						
EYUL	Yuli	1.33	232	*e*P	Pn	18 01 36.4	+0.1
	baz=241						
EYUL				*e*S	Sn	18 01 52.8	-0.4
	baz=241						
TWF1	Yuli	1.35	233	*e*P	Pn	18 01 36.3	-0.2
	baz=242						
TWF1				*e*S	Sn	18 01 51.8	-1.7
	baz=242						
NJD	Zhudong	1.37	294	*e*S	Sn	18 01 55.7	+1.7
	baz=303						
WPL	Puli Township	1.38	263	*e*P	Pn	18 01 37.7	+0.7
	baz=257						
WPL				*e*S	Sn	18 01 55.2	+0.8
	baz=257						
WHP	Taichung City	1.39	274	P	Pn	18 01 38.5	+1.4
	baz=273						
WHP				*e*S	Sn	18 01 55.5	+0.9
	baz=273						
LIOB	Emei	1.40	290	*e*P	Pn	18 01 38.5	+1.4
	baz=288						
LIOB				*e*S	Sn	18 01 56.1	+1.5
	baz=288						
NSTT	Nanjuang	1.41	289	*e*P	Pn	18 01 38.7	+1.5
	baz=288						
NSTT				*e*S	Sn	18 01 56.0	+1.1
	baz=288						
DPDB	Guoxing	1.41	264	*e*P	Pn	18 01 38.3	+1.0
	baz=258						
DPDB				*e*S	Sn	18 01 56.0	+1.0
	baz=258						
JKRS	Kuro-shima	1.42	87	P	Pn	18 01 38.2	+0.9
JKRS				S	Sn	18 01 55.7	+0.6
WCS	Beigang Elemen	1.42	265	P	Pn	18 01 38.2	+0.8
	baz=259						
WCS				*e*S	Sn	18 01 56.2	+1.0
	baz=259						
SSLB	Suanglung	1.43	255	*e*P	Pn	18 01 37.8	+0.2
	baz=247						
SSLB				*e*S	Sn	18 01 55.7	+0.1
	baz=247						
FULB	Fuli	1.45	228	*e*P	Pn	18 01 37.2	-0.6
	baz=220						
FULB				*e*S	Sn	18 01 54.9	-1.0
	baz=220						
SMLT	Sun Moon Lake	1.46	259	*e*P	Pn	18 01 38.6	+0.6
	baz=252						
SMLT				*e*S	Sn	18 01 57.0	+0.7
	baz=252						
CHKT	Chengkung	1.47	223	*e*S	Sn	18 01 54.1	-2.3
	baz=215						
YUS	Yu-Shan	1.54	244	*e*P	Pn	18 01 39.6	+0.1
	baz=242						
YUS				*e*S	Sn	18 01 57.9	-1.0
	baz=242						
JIJ	Ishigaki jima	1.55	83	P	Pn	18 01 39.3	+0.2
JIJ				S	Sn	18 01 57.7	-0.5
TWQ1	Liyutan	1.55	277	*e*P	Pn	18 01 40.8	+1.7
	baz=275						
TWQ1				*e*S	Sn	18 02 00.2	+1.9
	baz=275						
NMLH	Miaoli	1.56	284	*e*S	Sn	18 01 60.0	+1.3
	baz=282						
EDH	Donghe	1.60	222	*e*P	Pn	18 01 38.9	-0.9
	baz=216						
EDH				*e*S	Sn	18 01 57.5	-2.0
	baz=216						
WJS	Zhushan	1.62	258	*e*P	Pn	18 01 42.1	+2.0
	baz=256						
WJS				*e*S	Sn	18 02 02.1	+2.0
	baz=256						
TCU	Taichung	1.63	269	*e*S	Sn	18 02 02.4	+2.1
	baz=279						
ELDTW	Lidau	1.65	234	*e*P	Pn	18 01 40.3	-0.3
	baz=232						
ELDTW				*e*S	Sn	18 01 59.4	-1.5
	baz=232						
WNT	Mingjian	1.65	260	*e*P	Pn	18 01 42.2	+1.7
	baz=253						
WNT				*e*S	Sn	18 02 03.2	+2.4
	baz=253						
ALS	Alishan	1.66	247	P	Pn	18 01 41.9	+1.1
	baz=238						
ALS				S	Sn	18 02 01.9	+0.6
	baz=238						
CHN5	Tsauling	1.73	251	*e*P	Pn	18 01 43.2	+1.5
	baz=250						
CHN5				*e*S	Sn	18 02 04.9	+2.1
	baz=250						
JISG	Ishigakijimahi	1.73	76	P	Pn	18 01 41.7	+0.1
JISG				S	Sn	18 02 02.0	-0.8
WCHH	Zhanghua	1.74	267	*e*S	Sn	18 02 04.3	+1.4
	baz=276						
LDUT	Ludao	1.75	211	*e*P	Pn	18 01 40.9	-1.0
	baz=211						
LDUT				*e*S	Sn	18 02 00.8	-2.4
	baz=211						
LONT	Longtian	1.76	224	*e*P	Pn	18 01 41.6	-0.4
	baz=232						
LONT				*e*S	Sn	18 02 02.1	-1.3
	baz=232						
WDLH	Douliu	1.82	255	*e*P	Pn	18 01 44.5	+1.6
	baz=244						
WDLH				*e*S	Sn	18 02 07.6	+2.6
	baz=244						
STYH	Taoyuan	1.84	237	P	Pn	18 01 44.0	+1.0
	baz=236						
STYH				S	Sn	18 02 05.5	+0.2
	baz=236						
TWGBT	Beinan	1.85	223	*e*P	Pn	18 01 43.0	-0.3
	baz=230						
TWGBT				*e*S	Sn	18 02 04.4	-1.3
	baz=230						
TWG	Pinlang	1.86	224	*e*P	Pn	18 01 43.2	-0.1
	baz=230						
TWG				*e*S	Sn	18 02 04.0	-1.8
	baz=230						
STYT	Tauyuan	1.86	237	*e*P	Pn	18 01 44.3	+0.9
	baz=236						
STYT				*e*S	Sn	18 02 07.0	+1.1
	baz=236						
TPUB	Ta-pu	1.89	243	P	Pn	18 01 45.3	+1.5
	baz=242						
TPUB				*e*S	Sn	18 02 08.3	+1.7
	baz=242						
CHN4	Tsaushan	1.90	245	*e*P	Pn	18 01 45.2	+1.3
	baz=238						
CHN4				*e*S	Sn	18 02 09.2	+2.5
	baz=238						
WTP	Ta-pu	1.93	242	*e*P	Pn	18 01 46.3	+1.9
	baz=240						
WTP				*e*S	Sn	18 02 10.0	+2.4
	baz=240						
WTK	Tuku	1.96	256	*e*P	Pn	18 01 46.5	+1.8
	baz=255						
WTK				*e*S	Sn	18 02 11.0	+2.8
	baz=255						
CHY	Chiayi	1.98	250	*e*S	Sn	18 02 10.6	+1.8
	baz=249						
TWK	Hsinying	2.02	244	*e*P	Pn	18 01 47.3	+1.7
	baz=242						
TWK				*e*S	Sn	18 02 12.3	+2.5
	baz=242						
CHN1	Nanshi	2.03	241	*e*P	Pn	18 01 47.7	+2.1
	baz=240						
CHN1				*e*S	Sn	18 02 12.7	+2.8
	baz=240						
SGST	Jiashian	2.04	238	*e*P	Pn	18 01 47.1	+1.4
	baz=237						
SGST				*e*S	Sn	18 02 11.7	+1.5
	baz=237						
JTJ	Tarama	2.10	77	P	Pn	18 01 47.0	+0.5
JTJ				S	Sn	18 02 12.2	+0.7
ECL	Taimali	2.10	222	*e*P	Pn	18 01 45.6	-0.9
	baz=226						
ECL				*e*S	Sn	18 02 09.4	-2.1
	baz=226						
WSF	Szhu	2.12	256	*e*P	Pn	18 01 47.2	+0.4
	baz=254						
WSF				*e*S	Sn	18 02 14.7	+2.6
	baz=254						
SCST	Cishan	2.22	235	*e*P	Pn	18 01 49.1	+1.0
	baz=234						
SCST				*e*S	Sn	18 02 16.4	+2.0
	baz=234						
CHN8	Yiju	2.22	249	*e*S	Sn	18 02 16.6	+2.0
	baz=247						
TSMG	Majia	2.22	229	*e*P	Pn	18 01 49.1	+0.9
	baz=223						
TSMG				*e*S	Sn	18 02 16.6	+2.0
	baz=223						
MASBT	Mashibuluo	2.29	227	*e*P	Pn	18 01 50.1	+0.9
	baz=223						
MASBT				*e*S	Sn	18 02 16.5	+0.2
	baz=223						
EAST	Anshuo	2.32	220	*e*P	Pn	18 01 49.6	-0.1
	baz=212						
EAST				*e*S	Sn	18 02 15.3	-1.8
	baz=212						
SCZT	Fangliau	2.47	224	*e*P	Pn	18 01 53.7	+2.1
	baz=223						
SCZT				*e*S	Sn	18 02 22.1	+1.5
	baz=223						
JIRB	Irabujima	2.55	75	P	Pn	18 01 53.1	+0.4
JIRB				S	Sn	18 02 22.6	-0.1
WDGT	Dungji	2.73	251	*e*P	Pn	18 01 55.6	+0.5
	baz=250						
WDGT				*e*S	Sn	18 02 25.3	-1.6
	baz=250						
PHUB	P'eng-hu	2.73	257	*e*P	Pn	18 01 56.1	+1.0
	baz=266						
PHUB				*e*S	Sn	18 02 25.5	-1.4

	baz=266						
PTTC	Pingtan	2.78	299	*e*P	Pn	18 01 55.2	-0.6
	baz=297						
PTTC				*e*S	Sn	18 02 25.6	-2.6
	baz=297						
MATB	Ma-tsu	3.01	311	*e*P	Pn	18 01 58.8	-0.2
	baz=311						
MATB				*e*S	Sn	18 02 31.7	-2.2
	baz=311						
PTMZ	Houxiangcun	3.16	286	*e*P	Pn	18 02 00.5	-0.5
	baz=285						
PTMZ				*e*S	Sn	18 02 34.4	-3.1
	baz=285						
KNMB	Chin-men Tao	3.73	275	*e*P	Pn	18 02 07.6	-1.1
	baz=274						
KNMB				*e*S	Sn	18 02 48.0	-3.4
	baz=274						
AXDP	Jialang	4.15	281	*e*S	Sn	18 02 58.1	-3.7
	baz=279						

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*IDC **13** 18:09:41.0±1.3, 4.°26S×133.°86E, h0^{km}, mb3.7/3, mb1 4.1/7, mb1mx3.8/36, mbtmp4.0/7, ML3.9/4, MS3.3/7, Ms1 3.3/7, ms1mx3.1/30, Error ellipse: s-maj=33.1km s-min=22.6km az=63.0*

*NEIC **13** 18:09:44.3±3.0, 4.°28S±0.°05×133.°83E±0.°08, h28^{km}±8^{km}, mb4.1/12, Error ellipse: s-maj=11.1km s-min=7.6km az=78.0*

*DJA **13** 18:09:45.4±0.3, 4°S±4°×13°4E±°, h10^{km}, M4.6/11, mb5.0/5, mB5.1/4, MLv4.4/11, Mw(mB)4.4/4*

ISC 13 18:09:43.9±0.6, **4.°34S**±0.°06×**133.°81E**±0.°06, **h21**^{km}, **n46**, σ**1^{s}72**/42, **mb3.8**/5, **Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	Fak Fak	2.10	312		Pn	18 10 17.0	-0.8
FAKI	Fak Fak	2.10	312	P	Pn	18 10 17.5	-0.3
FAKI				S	Sn	18 10 44.1	+0.8
SRPI	Serui, Papua	3.45	45	P	Pn	18 10 34.5	-2.0
BAKI	Biak	3.88	36	P	Pn	18 10 40.6	-1.7
BNDI	Bandanaira	3.90	267	P	Pn	18 10 46.9	+4.4
SIJI	Sorong	4.28	324	Pn	Pn	18 10 45.9	-2.0
	2.6nm,0.3s,baz=133,slow=23,SNR=22						
SIJI				Sn	Sn	18 11 35.6	-1.6
	14nm,0.3s,baz=280,slow=23,SNR=8.9						
SIJI				LR	LR	18 12 52.3	
	comp=Z,301nm,18.0s,baz=51,slow=45						
SWI	Sorong	4.29	324	P	Pn	18 10 47.2	-0.8
SAUI	Saumlaki	4.39	214	Pn	Pn	18 10 48.8	-0.6
SAUI	Saumlaki	4.39	214	P	Pn	18 10 56.9	+7.5
MSAI	Masohi	4.97	281	P	Pn	18 11 00.3	+3.0
GENI	Genyem	6.58	75	P	Pn	18 11 20.3	+0.8
	0.3nm55nm,1.3s						
JAY	Jayapura	7.12	75	Pn	Pn	18 11 26.5	-0.4
	1.4nm,0.3s,baz=200,slow=5.0,SNR=5.0						
JAY				LR	LR	18 14 51.4	
	comp=Z,224nm,18.9s,baz=144,slow=44						
SANI	Sanana	8.13	286	P	Pn	18 11 40.3	-0.5
TNTI	Ternate	8.20	308	Pn	Pn	18 11 40.5	-1.2
MTN	Manton Dam	8.85	197		Pn	18 11 50.9	+0.2
SOEI	Soe	10.89	240		Pn	18 12 18.8	+0.1
LUWI	Luwuk	11.50	286	Pn	Pn	18 12 28.7	+1.8
BATI	Baumata	11.62	239	Pn	Pn	18 12 30.1	+1.4
	2.8nm,0.3s,baz=164,slow=3.8,SNR=7.0						
BATI				LR	LR	18 17 54.0	
	comp=Z,86nm,18.4s,baz=34,slow=42						
BATI	Baumata	11.62	239	P	Pn	18 12 39.6	+11
COEN	Coen	13.29	137	Pn	Pn	18 12 48.6	-2.9
DAV	Davao City (W)	14.00	324	LR	LR	18 18 32.6	
	comp=Z,59nm,21.1s,baz=290,slow=38						
TOLI2	Tolitoli	14.10	292	Pn	Pn	18 13 03.3	+0.8
PMG	Port Moresby	14.18	111	LR	LR	18 20 00.8	
	comp=Z,139nm,19.4s,baz=246,slow=44						
PMG	Port Moresby	14.18	111	Pn	Pn	18 13 05.2	+1.6
WSI	Waingapu	14.41	248	P	P	18 13 13.9	+0.4
WB0	Warramunga Arr	15.35	178		Pn	18 13 16.9	-2.5
WB0				IAmb	IAmb	18 13 43.4	
	comp=Z,14nm,1.3s						
WB2	Warramunga Arr	15.52	178		Pn	18 13 19.4	-2.3
WB2				IAmb	IAmb	18 13 34.6	
	comp=Z,16nm,1.2s						
WRA	Warramunga Arr	15.52	178	Pn	Pn	18 13 18.5	-3.1
	comp=Z,0.3nm,0.3s,baz=353,slow=13,SNR=9.8						
WRA				Sn	Sn	18 16 01.4	-12
	comp=Z,0.1nm,0.3s,baz=352,slow=24,SNR=5.8						
WRA	Warramunga Arr	15.52	178		Pn	18 13 18.9	-2.7
WR0	Warramunga Arr	15.54	177	P	Pn	18 13 20.6	-1.3
WR0				IAmb	IAmb	18 13 35.8	
	comp=Z,13nm,1.0s						
FITZ	Fitzroy Crossi	15.84	210	Pn	Pn	18 13 22.8	-2.9
	comp=Z,0.5nm,0.3s,baz=28,slow=8.9,SNR=25						
FITZ				Sn	Sn	18 16 06.8	-14
	baz=137,slow=14,SNR=3.2						
FITZ	Fitzroy Crossi	15.84	210		Pn	18 13 22.5	-3.2
FITZ				IAmb	IAmb	18 13 49.7	
	comp=Z,4.8nm,0.8s						
AS31	Alice Springs	19.21	180	P	P	18 14 06.9	+0.2
ASAR	Alice Springs	19.21	180	P	P	18 14 06.8	0.0
	comp=Z,0.4nm,0.3s,baz=0.4,slow=11,SNR=34						
ASAR				S	Sn	18 17 41.6	-1.0
	comp=Z,0.1nm,0.3s,baz=358,slow=25,SNR=5.5						
ASAR	Alice Springs	19.21	180	P	P	18 14 08.3	+1.6
CTAO	Charters Tower	19.80	143	P	P	18 14 14.5	+1.4
PSA00	Pilbara Seismi	21.84	217	P	P	18 14 33.5	-1.6
HNR	Honiara	26.43	102	P	P	18 15 18.4	-1.1
STKA	Stephens Creek	28.35	166	P	P	18 15 37.6	+1.1
	comp=Z,1.6nm,0.9s,baz=332,slow=18,SNR=3.0						
DZM	Mont Dzumac	36.20	122	LR	LR	18 32 38.4	
	comp=Z,244nm,18.4s,baz=21,slow=38						
CMAR	Chiang Mai Arr	41.15	304	P	P	18 17 28.1	+1.0
	comp=Z,0.7nm,0.7s,baz=125,slow=7.8,SNR=3.4						
KSRS	Korea Array	41.94	353	LR	LR	18 34 10.6	
	comp=Z,24nm,20.7s,baz=355,slow=35						
MK31	Makanchi Array	68.18	325	P	P	18 20 43.0	+0.2
MK31				IAmb	IAmb	18 20 53.3	
	comp=Z,3.4nm,1.6s						
MKAR	Makanchi Array	68.18	325	P	P	18 20 42.8	+0.1
	comp=Z,0.4nm,0.6s,baz=110,slow=8.3,SNR=4.2						
MKAR	Makanchi Array	68.18	325	P	P	18 20 42.4	-0.4
MAKZ	Makanchi	68.37	324	P	P	18 20 44.0	+0.1
MAKZ				IAmb	IAmb	18 21 24.4	
	comp=Z,2.9nm,1.2s						

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*IDC **13** 18:12:28.9±46.0, 16.°59S×174.°27W, h0^{km}, mb4.0/3, mb1 4.2/3, mb1mx3.6/42, mbtmp4.0/3, Error ellipse: s-maj=883.7km s-min=180.4km az=79.0*

*NEIC **13** 18:12:36.4±2.9, 16.°88S±0.°10×173.°5W±0.°2, h102^{km}±21^{km}, mb4.3/7, Error ellipse: s-maj=27.2km s-min=11.5km az=72.0*

ISC 13 18:12:36.3±0.9, **16.°84S**±0.°07×**173.°41W**±0.°10, **h100**^{km}, **n13**, σ**1^{s}83**/14, **mb4.2**/6, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	3.31	29	Pn	Pn	18 13 28.7	+2.4
AFI				Sn	Sn	18 14 02.5	-2.5
NIUE	Niue	3.99	124	Pn	Pn	18 13 37.3	+1.9
NIUE				Sn	Sn	18 14 18.6	-2.6
QRZ	Quartz Range	26.82	204		P	18 18 09.0	+1.9
LTZ	Lake Taylor	28.60	202	P	P	18 18 24.2	+1.1
STKA	Stephens Creek	43.32	241	P	P	18 20 28.6	0.0
	0.7nm,0.4s,baz=82,slow=17,SNR=3.1						
STKA	Stephens Creek	43.32	241	P	P	18 20 27.1	-1.4
BBOO	Buckleboo	48.09	241	P	P	18 21 06.5	+0.4
WB0	Warramunga Arr	49.48	258	P	P	18 21 15.7	-1.2
WB0				IAmb	IAmb	18 21 34.1	
	comp=Z,4.7nm,1.1s						
WB2	Warramunga Arr	49.51	258	P	P	18 21 15.8	-1.3
WB2				IAmb	IAmb	18 21 29.6	
	comp=Z,7.0nm,1.2s						
WRA	Warramunga Arr	49.52	258	P	P	18 21 15.4	-1.8
	comp=Z,0.5nm,0.5s,baz=96,slow=7.0,SNR=8.3						
WRA	Warramunga Arr	49.52	258	IAmb	IAmb	18 21 18.2	
	comp=Z,0.3nm,1.5s						
AS31	Alice Springs	49.67	253	P	P	18 21 17.6	-0.7
AS31				IAmb	IAmb	18 21 18.2	
	comp=Z,1.2nm,0.7s						
ASAR	Alice Springs	49.67	253	P	P	18 21 17.4	-1.0
	comp=Z,4.6nm,0.6s,baz=88,slow=8.5,SNR=45						

IDC 13 18:33:13.3±5.0, **3.°69S**×**150.°22E**, **h0**^{km}, **mb3.6**/5, **mb1 3.8**/5, **mb1mx3.5**/31, **mbtmp3.6**/5, **MS3.3**/4, **Ms1 3.3**/4, **ms1mx2.9**/38, **Error ellipse: s-maj=145.7km s-min=28.1km az=104.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	6.44	208	LR	LR	18 37 22.4	
	comp=Z,182nm,18.2s,baz=338,slow=39						
HNR	Honiara	11.22	121	LR	LR	18 39 35.5	
	comp=Z,76nm,19.1s,baz=320,slow=34						
WRA	Warramunga Arr	22.37	223	P	P	18 38 12.4	-1.0
	0.8nm,0.5s,baz=47,slow=10,SNR=12						
WRA				LR	LR	18 47 05.5	
	comp=Z,74nm,19.8s,baz=155,slow=37						
DZM	Mont Dzumac	24.12	141	LR	LR	18 47 29.8	
	comp=Z,163nm,18.9s,baz=274,slow=36						
ASAR	Alice Springs	25.35	217	P	P	18 38 42.5	+0.2
	0.9nm,1.0s,baz=48,slow=7.0,SNR=4.0						
H11S3	WAKE ISLAND Hy	27.38	36	T	T	19 08 12.8	
	baz=215,slow=76,SNR=6.9						
H11S2	WAKE ISLAND Hy	27.38	36	T	T	19 08 01.0	
	baz=215						
H11S1	WAKE ISLAND Hy	27.39	36	T	T	19 08 09.3	
	baz=215,slow=76,SNR=5.3						
FITZ	Fitzroy Crossi	28.00	237	P	P	18 39 06.9	+0.7
	3.1nm,1.1s,baz=76,slow=5.2,SNR=3.9						
H11N1	WAKE ISLAND Hy	28.46	35	T	T	19 09 31.9	
	baz=219						
H11N3	WAKE ISLAND Hy	28.47	35	T	T	19 09 25.2	
	baz=219						
H11N2	WAKE ISLAND Hy	28.47	35	T	T	19 09 32.7	
	baz=219						
SONM	Songino Array	64.03	329	P	P	18 43 49.2	+0.1
	0.1nm,0.5s,baz=132,slow=4.1,SNR=1.7						
MKAR	Makanchi Array	77.81	319	P	P	18 45 12.6	-0.1
	0.1nm,0.3s,baz=94,slow=10,SNR=4.1						

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*NEIC **13** 18:45:43.1±2.1, 3.°8S±0.°2×149.°9E±0.°3, h10^{km}±2^{km}, mb4.2/6, Error ellipse: s-maj=52.8km s-min=32.2km az=102.0*

*IDC **13** 18:45:47.0±3.8, 3.°65S×149.°04E, h0^{km}, mb3.8/4, mb1 4.1/4, mb1mx3.6/32, mbtmp3.9/4, MS3.6/11, Ms1 3.6/11, ms1mx3.5/46, Error ellipse: s-maj=117.3km s-min=33.6km az=105.0*

ISC 13 18:45:44.7±3.6, **3.°8S**±0.°3×**149.°7E**±0.°8, **h10**^{km}, **n26**, σ**0^{s}97**/12, **mb4.1**/7, **MS3.6**/8, **Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	6.13	204	LR	LR	18 49 49.7	
	comp=Z,408nm,21.7s,baz=292,slow=40						
HNR	Honiara	11.61	119	LR	LR	18 53 43.6	
	comp=Z,196nm,18.1s,baz=305,slow=39						
GUMO	Guam	17.92	345	LR	LR	18 55 05.4	
	comp=Z,174nm,19.9s,baz=118,slow=32						
WB0	Warramunga Arr	21.80	222	P	P	18 50 37.2	0.0
WB0				IAmb	IAmb	18 50 53.3	
	comp=Z,21nm,1.4s						
WR0	Warramunga Arr	21.84	221	P	P	18 50 37.0	-0.6
WR0				IAmb	IAmb	18 50 38.5	
	comp=Z,12nm,1.3s						
WB2	Warramunga Arr	21.95	222	P	P	18 50 37.8	-1.0
WB2				IAmb	IAmb	18 50 54.1	
	comp=Z,9.3nm,1.1s						
WRA	Warramunga Arr	21.96	222	P	P	18 50 38.9	0.0
	comp=Z,3.1nm,1.0s,baz=44,slow=11,SNR=14						
WRA				LR	LR	18 59 19.8	
	comp=Z,141nm,20.0s,baz=50,slow=38						
WRA	Warramunga Arr	21.96	222	P	P	18 50 38.0	-0.9
DZM	Mont Dzumac	24.37	140	LR	LR	18 59 50.7	
	comp=Z,240nm,19.3s,baz=215,slow=34						
AS31	Alice Springs	24.97	216	P	P	18 51 10.3	+1.6
ASAR	Alice Springs	24.97	216	P	P	18 51 08.9	+0.2
	comp=Z,1.7nm,0.8s,baz=53,slow=7.8,SNR=11						
ASAR				LR	LR	19 01 53.9	
	comp=Z,202nm,19.0s,baz=43,slow=39						
ASAR	Alice Springs	24.97	216	P	P	18 51 07.7	-1.0
BATI	Baumata	26.61	255	LR	LR	19 03 08.1	
	comp=Z,201nm,18.1s,baz=92,slow=40						
FITZ	Fitzroy Crossi	27.52	237	P	P	18 51 32.3	+0.5
	comp=Z,6.8nm,1.1s,baz=62,slow=7.9,SNR=5.6						
FITZ				LR	LR	19 03 15.0	
	comp=Z,249nm,19.0s,baz=42,slow=39						
FITZ	Fitzroy Crossi	27.52	237	P	P	18 51 33.2	+1.4
H11S3	WAKE ISLAND Hy	27.75	37	T	T	19 20 52.2	
	baz=218,slow=76,SNR=14						
H11S2	WAKE ISLAND Hy	27.76	37	T	T	19 20 53.4	
	baz=218						
H11S1	WAKE ISLAND Hy	27.77	37	T	T	19 20 46.2	
	baz=218,slow=76,SNR=5.6						
H11N1	WAKE ISLAND Hy	28.83	35	T	T	19 22 09.0	
	baz=219						
H11N3	WAKE ISLAND Hy	28.84	35	T	T	19 22 19.2	
	baz=219						
H11N2	WAKE ISLAND Hy	28.84	35	T	T	19 22 18.9	
	baz=219						
STKA	Stephens Creek	28.96	194	LR	LR	19 04 39.1	
	comp=Z,74nm,18.1s,baz=22,slow=39						
KAPI	Kappang	29.89	267	LR	LR	19 04 17.3	
	comp=Z,32nm,18.1s,baz=70,slow=38						
JOW	Kunigami	36.83	327	LR	LR	19 04 54.2	
	comp=Z,99nm,19.1s,baz=6.5,slow=32						
MKAR	Makanchi Array	77.55	319	P	P	18 57 40.8	-0.3
	comp=Z,0.6nm,1.0s,baz=101,slow=7.5,SNR=2.0						
TORD	Torodi Ar. Bea	147.06	288	PKPbc	PKiKP	19 05 32.0	+0.4
	comp=Z,1.0nm,0.9s,baz=64,slow=3.4,SNR=3.2						

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*NEIC **13** 18:46:01.9±2.9, 60.°22N±0.°07×60.°3E±0.°1, h10^{km}±5^{km}, mb4.2/12, Error ellipse: s-maj=12.5km s-min=7.6km az=221.0*

*IDC **13** 18:46:01.9±0.9, 60.°21N×60.°09E, h0^{km}, mb3.6/3, mb1 3.8/13, mb1mx3.6/58, mbtmp3.7/13, ML2.7/6, MS3.7/1, Ms1 3.7/1, ms1mx2.5/60, Error ellipse: s-maj=12.9km s-min=9.3km az=43.0*

*NNC **13** 18:46:05.6±12.0, 59.°92N×60.°47E, h0^{km}, mb4.0, mpv3.9, Error ellipse: s-maj=110.8km s-min=70.0km az=161.0*

ISC 13 18:46:00.9±0.6, **60.°20N**±0.°05×**60.°23E**±0.°06, **h10**^{km}, **n40**, σ**2^{s}16**/48, **mb4.0**/6, **4C-2D, Ural Mountains region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARU	Arti	3.88	194	Pn	Pn	18 47 02.5	+2.0
	0.0nm,0.3s,baz=20,slow=9.9,SNR=13						
ARU				Pg	Pg	18 47 14.1	-1.1
	0.0nm,0.3s,baz=13,slow=11,SNR=20						
ARU				Sn	Sb	18 47 53.6	-2.8
	0.0nm,0.3s,baz=325,slow=23,SNR=9.0						
ARU				Lg	Lg	18 48 01.6	
	0.0nm,0.3s,baz=153,slow=20,SNR=8.4						
KIRV	Kirov	5.76	258	Pn	Pn	18 47 28.9	+2.6
	1.5nm,0.3s,baz=90,slow=20,SNR=2.6						
KIRV				Sn	Sn	18 48 32.4	+0.1
	1.7nm,0.3s,baz=350,slow=20,SNR=1.7						
KIRV				Lg	Lg	18 48 55.9	
	2.6nm,0.3s,baz=287,slow=18,SNR=5.7						
BRVK	Borovoye	9.04	138	⇑P	Pn	18 48 13.7	+2.3
	4.1nm,0.9s						
BRVK				⇓S	Sn	18 49 54.8	+1.7
	1.4nm,0.9s						
BRVK	Borovoye	9.04	138		Pn	18 48 13.9	+2.5
BVAR	Borovoye Array	9.10	138	Pn	Pn	18 48 14.5	+2.3
	2.4nm,0.3s,baz=287,slow=9.9,SNR=23						
BVAR				Sn	Sn	18 49 49.0	-5.6
	1.1nm,0.3s,baz=326,slow=29,SNR=5.9						
AKTO	Aktyubinsk	9.87	188	Pn	Pn	18 48 24.4	+1.7
	0.3nm,0.3s,baz=328,slow=7.0,SNR=2.7						
AKTO				Sn	Sn	18 50 12.2	-1.1
	0.1nm,0.3s,baz=93,slow=23,SNR=1.4						
AKTO				Lg	Lg	18 51 12.6	
	baz=130,slow=19,SNR=2.0						
AKTO	Aktyubinsk	9.87	188	⇑P	Pn	18 48 24.1	+1.4
	2.4nm,1.1s						
AKTO				⇑S	Sn	18 50 14.5	+1.2
	2.5nm,0.6s						
BELG	Belogornoye	10.48	227	Pn	Pn	18 48 30.8	-0.2
	1.6nm,0.3s,baz=324,slow=2.4,SNR=24						
BELG				Sn	Sn	18 50 27.1	-1.2
	0.5nm,0.3s,baz=95,slow=18,SNR=2.0						
AB31	Akbulak array	10.97	181	⇓P	Pn	18 48 39.9	+2.2
	2.8nm,0.8s,baz=19,slow=13,SNR=17						
AB31				⇑S	Sn	18 50 41.8	+1.5
	0.7nm,0.5s,baz=11,slow=20						
ABKAR	Akbulak array	10.97	181		Pn	18 48 39.9	+2.2
ABKAR	Akbulak array	10.97	181		Pn	18 48 40.1	+2.4
KURK	Kurchatov	14.06	124		Pn	18 49 19.7	-0.2
KURBB	Kurchatov Arra	14.09	125	Pn	Pn	18 49 20.2	-0.1
	0.0nm,0.3s,baz=320,slow=12,SNR=11						
NRIK	Noril'sk	14.67	40	Pn	Pn	18 49 27.2	-1.0
	0.6nm,0.3s,baz=264,slow=9.2,SNR=2.7						
FIA1	FINESS Array S	16.59	289	Pn	Pn	18 49 50.3	-2.9
FIA1				IAmb	IAmb	18 50 13.4	
	comp=Z,9.9nm,1.2s						
FINES	FINESS Array B	16.59	289	Pn	Pn	18 49 49.4	-3.9
	comp=Z,0.1nm,0.3s,baz=97,slow=16,SNR=4.9						
KEV	Kevo	16.75	319	Pn	Pn	18 49 50.4	-4.9
ARCES	ARCESS Array B	17.19	317	Pn	Pn	18 49 57.6	-3.2
	baz=96,slow=11,SNR=14						
KKAR	Karatay Array	18.23	155	Pn	Pn	18 50 12.0	-1.8
MAKZ	Makanchi	18.51	127	P	P	18 50 17.6	+0.5
MK31	Makanchi Array	18.64	126	P	Pn	18 50 20.7	+1.9
MKAR	Makanchi Array	18.64	126	P	P	18 50 20.0	+1.4
	comp=Z,0.1nm,0.3s,baz=328,slow=7.4,SNR=10.0						
KBZ	Khabaz	19.54	220	P	P	18 50 27.1	-1.2
	comp=Z,0.1nm,0.3s,baz=347,slow=14,SNR=2.0						
AKASG	Malin Array Be	19.80	255	P	P	18 50 31.2	0.0
	comp=Z,0.7nm,0.3s,baz=45,slow=10,SNR=7.2						
AKBB	Malin Array Si	19.80	255	P	P	18 50 30.2	-1.0
AKBB				IAmb	IAmb	18 50 38.1	
	comp=Z,2.2nm,0.8s						
GNI	Garni	22.28	213	LR	LR	18 59 55.5	
	comp=Z,178nm,18.3s,baz=342,slow=38						
HFS	Hagfors	22.78	290	P	P	18 51 04.1	+0.9
	comp=Z,1.8nm,0.7s,baz=84,slow=10.0,SNR=8.6						
NC405	NORSAR Array S	23.36	293	P	P	18 51 09.6	+0.4
NC303	NORSAR Array S	23.49	294	P	P	18 51 11.0	+0.6
NC602	NORSAR Array S	23.57	293	P	P	18 51 11.8	+0.6
NB201	NORSAR Array S	23.58	294	P	P	18 51 12.7	+1.3
NOA	NORSAR Array B	23.62	294	P	P	18 51 13.9	+2.1
	comp=Z,0.7nm,0.7s,baz=76,slow=13,SNR=8.0						
NC204	NORSAR Array S	23.75	294	P	P	18 51 13.7	+0.7
NC204				IAmb	IAmb	18 51 35.5	
	comp=Z,27nm,1.2s						
BUR08	Bucovina Ar. S	23.82	254	P	P	18 51 16.3	+2.4
BUR08				IAmb	IAmb	18 51 37.1	
	comp=Z,11nm,1.6s						
NBO00	NORSAR Array S	23.82	294	P	P	18 51 14.9	+1.2
BURAR	Bucovina Array	23.83	254	P	P	18 51 15.1	+1.1
NAO01	NORSAR Array S	23.84	293	P	P	18 51 16.9	+3.1
GERES	GERESS Array B	28.67	268	P	P	18 52 00.2	+2.5
BNI	Bardonecchia	34.77	269	P	P	18 52 54.1	+2.7
BNI				IAmb	IAmb	18 53 13.4	
	comp=Z,11nm,1.4s						
YKA	Yellowknife Ar	57.57	357	P	P	18 55 51.1	+1.1
	comp=Z,0.4nm,0.7s,baz=5.9,slow=7.2,SNR=6.9						

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*IDC **13** 18:48:15.7±0.4, 52.°58N×31.°91W, h0^{km}, mb4.7/45, mb1 4.8/47, mb1mx4.8/57, mbtmp4.7/47, ML4.9/2, Error ellipse: s-maj=11.9km s-min=8.8km az=5.0*

*MOS **13** 18:48:15.9±1.0, 52.°59N×31.°87W, h13^{km}, mb5.3/42, Error ellipse: s-maj=6.0km s-min=4.3km az=59.5*

*NEIC **13** 18:48:17.9±1.3, 52.°51N±0.°05×31.°9W±0.°1, h18^{km}±3^{km}, mb5.3/459, Error ellipse: s-maj=10.5km s-min=7.2km az=94.0*

*GCMT **13** 18:48:20.9±0.3, 52.°66N±0.°03×31.°83W±0.°04, h14^{km}±3^{km}, MW5.7/59, Moment Tensor Solution. s59,c82; s43,c65; Duration: 1^{s}7 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.67±.16; M$_{\theta\theta}$-0.77±.21; M$_{\phi\phi}$1.43±.18; M$_{r\theta}$1.18±.52; M$_{\theta\phi}$-4.21±.16; M$_{\phi r}$-0.61±.38; Best double couple: M$_{0}$4.52900×10^{17} NP1:ϕ_s188.00000°, δ74.00000°, λ2.00000°. NP2:ϕ_s97.00000°, δ88.00000°, λ164.00000°. Principal axes: T 4.9420, Plg12.0000°, Azm52.0000°; N -0.8310, Plg74.0000°, Azm271.0000°; P -4.1160, Plg10.0000°, Azm144.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*DNK **13** 18:48:23.1±4.2, 52.°62N×31.°91W, h54^{km}±48^{km}, mb5.1*

ISC 13 18:48:17.8±0.5, **52.°64N**±0.°04×**31.°96W**±0.°03, **h12**^{km}±2^{km}, **h12**^{km}**:pP-P**, **n1289**, σ**1^{s}36**/1271, **mb5.3**/401, **42C-68D, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NRS	Narsarsuaq	11.25	325	*i* P	Pn	18 51 01.6	+3.5
	253nm,1.2s						
NRS	Narsarsuaq	11.25	325	*i* P	Pn	18 51 01.6	+3.5
NRS				pmax	pmax		
	comp=Z,250nm,1.2s						
NRS	Narsarsuaq	11.25	325		Pn	18 51 00.0	+1.9
NRS	Narsarsuaq	11.25	325	*i* P	Pn	18 51 01.6	+3.5
NRS				IAmb	IAmb	18 51 06.1	
	comp=Z,253nm,1.2s						
BORG	Borgarnes	13.31	20	Pn	Pn	18 51 29.0	+2.7
	comp=Z,6.1nm,0.3s,baz=211,slow=11,SNR=15						
BORG				Sn	Sn	18 53 51.2	-2.8
	comp=Z,1.9nm,0.3s,baz=140,slow=8.9,SNR=2.9						
BORG	Borgarnes	13.31	20	P	Pn	18 51 27.1	+0.8
BORG	Borgarnes	13.31	20	Pn	Pn	18 51 27.1	+0.8
ANGG	Ammassalik, Gr	13.33	350	Pn	Pn	18 51 27.6	+1.2
ANGG	Ammassalik, Gr	13.33	350	*i* P	Pn	18 51 30.3	+3.8
ANGG				IAmb	IAmb	18 51 31.6	
	comp=Z,364nm,1.6s						
ISOG	Isortoq, Green	13.43	347	*i* P	Pn	18 51 29.9	+2.1
ISOG				IAmb	IAmb	18 51 34.6	
	comp=Z,79nm,0.8s						
PGRA	Graciosa	13.89	167	*e*P	Pn	18 51 35.2	+0.9
	comp=Z,211nm,1.3s						
PAGU	Agualva, Azore	14.27	165	*e*P	Pn	18 51 40.4	+0.9
	comp=Z,55nm,0.4s						
PSCM	Serra do Cume	14.34	165	*e*P	Pn	18 51 41.0	+0.5
	comp=Z,246nm,1.0s						
LEWI	Lewis, Hebride	15.23	59	*e*P	Pn	18 51 54.8	+2.3
DSB	Dublin	15.41	78	Pn	Pn	18 51 53.4	-1.5
DSB				IAmb	IAmb	18 52 05.1	
	comp=Z,167nm,1.2s						
NUUK	Nuuk	15.43	326	*i* P	P	18 51 59.0	-0.5
NUUK				IAmb	IAmb	18 52 04.3	
	comp=Z,139nm,1.2s						
PSET	Sete Cidades	15.45	161	*e*P	Pn	18 51 56.4	+1.0
	comp=Z,626nm,1.5s						
CMLA	Cha da Macela	15.54	161	*e*P	P	18 51 59.6	-1.3
	comp=Z,262nm,1.9s						
CMLA	Cha da Macela	15.54	161	P	Pn	18 51 56.9	+0.3
CMLA				pmax	pmax		
	comp=Z,740nm,1.6s						
CMLA	Cha da Macela	15.54	161	P	Pn	18 51 56.9	+0.3
BART	Pico Bartolome	15.60	160	*e*P	P	18 52 00.1	-1.6
	comp=Z,67nm,1.4s						
KPL	Plockton	15.76	62	*e*P	P	18 52 01.5	-1.7
LAWE	Loch Awe, Argy	15.83	66	*e*P	Pn	18 52 01.0	+0.9
PGBU	Glenifferbraes	16.33	68	*e*P	P	18 52 09.0	-0.5
PGBU				IAmb	IAmb	18 52 14.8	
	comp=Z,295nm,1.0s						
IOMK	Kirk Michael	16.36	73	*e*P	P	18 52 09.9	0.0
PSMN	Pico do Norte,	16.37	160	*e*P	Pn	18 52 07.7	+0.4
	comp=Z,529nm,1.7s						
DRLN	Deer Lake	16.42	268	Pn	Pn	18 52 05.4	-2.3
DRLN				IAmb	IAmb	18 52 09.1	
	comp=Z,98nm,0.5s						
YRC	Rhoscolyn	16.48	77	*e*P	P	18 52 10.6	-0.6
NEWG	New Galloway	16.50	70	*e*P	P	18 52 11.6	+0.2
NEWG				IAmb	IAmb	18 52 17.1	
	comp=Z,393nm,1.2s						
WPS	Cemaes, Angles	16.51	76	*e*P	P	18 52 11.4	-0.1
WPS				IAmb	IAmb	18 52 17.5	
	comp=Z,288nm,0.9s						
INVG	Invergeldie, C	16.58	66	*e*P	P	18 52 12.5	+0.2
WLF1	Llynfaes	16.59	77	*e*P	P	18 52 11.7	-0.6
WLF1				IAmb	IAmb	18 52 17.8	
	comp=Z,630nm,1.1s						
WME	Myndd Eilian	16.62	76	*e*P	Pn	18 52 11.4	+1.0
YLL	Llanberis	16.74	77	*e*P	P	18 52 13.4	-0.7
ICESG	Greenland Ices	16.90	350	*i* P	P	18 52 17.7	+1.6
HTL	Hartland	17.03	85	*e*P	P	18 52 17.0	-0.3
SFJD	Kangerlussuaq	17.06	335	P	Pn	18 52 14.9	-0.9
	comp=Z,2.8nm,0.3s,baz=147,slow=12,SNR=18						
SFJD	Kangerlussuaq	17.06	335	*i* P	Pn	18 52 16.7	+0.9
SFJD	Kangerlussuaq	17.06	335	*i* P	Pn	18 52 16.7	+0.9
SFJD	Kangerlussuaq	17.06	335	Pn	Pn	18 52 16.0	+0.2
SFJD	Kangerlussuaq	17.06	335	*i* P	Pn	18 52 16.7	+0.9
ESK	Eskdalemuir	17.07	70	P	Pn	18 52 15.7	-0.3
ESK				pmax	pmax		
	comp=Z,407nm,1.0s						
ESK	Eskdalemuir	17.07	70	Pn	Pn	18 52 15.7	-0.3
ESK				IAmb	IAmb	18 52 24.3	
	comp=Z,407nm,0.9s						

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EKB1   Eskdalemuir Ar   17.09  70   Pn     Pn     18 52 13.9 -2.4
EKA    Eskdalemuir Ar   17.10  69   P      Pn     18 52 14.8 -1.6
       baz=272,slow=11,SNR=45
EKR10  Eskdalemuir Ar   17.16  70   Pn     Pn     18 52 14.9 -2.2
EKR10                               IAmb   IAmb   18 52 25.2
       comp=Z,315nm,0.9s
KESW   Keswick, Cumbr   17.18  72  eP      P      18 52 19.1 +0.2
MCH1   Michaelchurch    17.67  81  eP      P      18 52 25.5 +1.1
MCH1                                IAmb   IAmb   18 52 28.8
       comp=Z,1µm,2.0s
LBWR   Ladybower, Pea   18.15  76  eP      P      18 52 29.8 +0.1
LBWR                                IAmb   IAmb   18 52 35.2
       comp=Z,372nm,1.1s
STRD   Stroud           18.23  81  eP      P      18 52 31.6 +1.1
STRD                                IAmb   IAmb   18 52 36.7
       comp=Z,791nm,1.5s
SCO    Scoresbysund     18.48  11  i P     Pn     18 52 34.7 +1.4
       comp=Z,25nm,0.9s
SCO    Scoresbysund     18.48  11  i P     Pn     18 52 34.7 +1.4
SCO                                 pmax   pmax
       comp=Z,25nm,0.9s
SCO    Scoresbysund     18.48  11          P      18 52 33.2 +0.1
SCO    Scoresbysund     18.48  11  i P     Pn     18 52 34.8 +1.4
SCO                                 IAmb   IAmb   18 52 44.6
       comp=Z,25nm,0.9s
ILULI  Ilulissat        18.89 339  i P     Pn     18 52 39.5 +1.3
       comp=Z,73nm,0.8s
ILULI  Ilulissat        18.89 339  i P     Pn     18 52 39.5 +1.3
ILULI                               pmax   pmax
       comp=Z,73nm,0.8s
ILULI  Ilulissat        18.89 339          P      18 52 37.2 -0.5
ILULI                               IAmb   IAmb   18 53 04.1
       comp=Z,143nm,1.1s
ILULI  Ilulissat        18.89 339  i P     Pn     18 52 39.6 +1.3
ILULI                               IAmb   IAmb   18 52 43.9
       comp=Z,73nm,0.8s
PGAV   Gavieira, Arco   19.20 114  eP      Pn     18 52 43.0 +0.6
       comp=Z,303nm,1.4s
PGAV                               eS      S      18 56 22.0 +3.3
PCAB   Cabril           19.51 115  eP      Pn     18 52 47.0 +1.0
       comp=Z,232nm,1.7s
WACR   West Acre        19.67  77  eP      Pn     18 52 47.3 -0.4
POLO   Lamas de Olo     19.86 115  eP      Pn     18 52 51.0 +0.7
       comp=Z,152nm,2.0s
PVRL   Vila Real        19.97 115  eP      Pn     18 52 52.5 +1.0
       comp=Z,309nm,2.4s
PBRG   Braganca         20.16 112  eP      Pn     18 52 53.1 -0.6
       comp=Z,194nm,1.7s
SUMG   Summit           20.21 354  i P     P      18 52 52.8 +0.3
       comp=Z,172nm,0.9s
SUMG   Summit           20.21 354   P      P      18 52 52.9 +0.4
SUMG                                pmax   pmax
       comp=Z,341nm,1.7s
SUMG   Summit           20.21 354          P      18 52 52.9 +0.4
SUMG                                IAmb   IAmb   18 53 09.0
       comp=Z,341nm,1.7s
SUMG   Summit           20.21 354  i P     P      18 52 52.9 +0.4
SUMG                                IAmb   IAmb   18 52 55.5
       comp=Z,172nm,0.9s
PVIS   Viseu            20.26 116  eP      Pn     18 52 55.4 +0.5
       comp=Z,211nm,1.2s
COI    Coimbra          20.34 118   P      P      18 52 50.5 -3.2
COI                                 pmax   pmax
       comp=Z,206nm,1.0s
COI    Coimbra          20.34 118          P      18 52 50.5 -3.2
COI                                 IAmb   IAmb   18 53 10.2
       comp=Z,206nm,1.0s
COI    Coimbra          20.34 118  eP      Pn     18 52 58.7 +3.0
       comp=Z,327nm,1.1s
PCAS   Casmilo, Conde   20.40 119  eP      Pn     18 52 55.4 -1.1
       comp=Z,457nm,1.4s
MVO    Moncorvo         20.43 114  eP      Pn     18 52 56.3 -0.6
       comp=Z,295nm,1.6s
MVO                                eS      S      18 56 43.7 +0.5
GBN    Guysborough      20.58 261   P      P      18 52 55.9 -0.4
PSBE   So Bento         20.64 120  eP      Pn     18 52 58.2 -1.1
       comp=Z,402nm,1.2s
MTE    Manteigas        20.67 117   P      P      18 52 55.6 -1.8
MTE                                 IAmb   IAmb   18 53 14.7
       comp=Z,110nm,1.1s
MTE    Manteigas        20.67 117  eP      Pn     18 52 59.4 -0.3
       comp=Z,188nm,1.4s
MTE                                eS      Sn     18 56 52.3 -0.4
PMAFR  Mafra            20.80 122  eP      Pn     18 52 59.8 -1.3
       comp=Z,923nm,1.3s
LIS    Lisbon           21.04 122  eP      P      18 53 02.1 +0.7
LIS                                 AMb    AMB    18 53 17.7
       comp=Z,537nm,1.6s
LIS                                eS      S      18 56 57.4 +2.1
LIS    Lisbon           21.04 122  eP      P      18 53 02.0 +0.7
LIS                                eS      S      18 56 57.3 +2.1
PCBR   Castelo Branco   21.10 118  eP      P      18 53 01.7 -0.3
       comp=Z,118nm,1.4s
NUUG   Nuugaatsiaq      21.17 341  i P     P      18 53 03.0 +0.5
NUUG                                IAmb   IAmb   18 53 09.5
       comp=Z,72nm,0.9s
PMTG   Montargil        21.26 120  eP      P      18 53 03.9 +0.2
       comp=Z,372nm,1.4s
PMRV   Marv??o          21.44 118  eP      P      18 53 07.0 +1.3
       comp=Z,308nm,1.5s
PMRV                               eS      Sn     18 57 08.6 -2.6
SUE    Sulen            21.51  52  eP      P      18 53 05.9 -0.3
ASK    Askoy            21.67  54  eP      P      18 53 07.3 -0.6
FOO    Floro            21.71  51  eP      P      18 53 08.4  0.0
BER    Bergen           21.73  54  eP      P      18 53 08.9 +0.4
PESTR  Estremoz         21.75 120   P      P      18 53 07.5 -1.5
PESTR                               IAmb   IAmb   18 53 18.9
       comp=Z,102nm,1.2s
EVO    Evora            21.77 121  eP      P      18 53 10.1 +0.9
       comp=Z,177nm,1.7s
PNCL   Nicolau / Gran   21.82 122  eP      P      18 53 10.9 +1.2
       comp=Z,225nm,1.3s
FRB    Frobisher Bay    21.91 315   P      P      18 53 10.3 -0.1
       comp=Z,25nm,0.6s,baz=106,slow=10,SNR=27
PTEO   Sao Teotonio     22.15 124  eP      P      18 53 14.0 +0.8
       comp=Z,278nm,1.2s
MESJ   Messejana        22.18 122  eP      P      18 53 14.2 +0.6
MESJ                                AMb    AMB    18 53 32.2
       comp=Z,157nm,1.5s
MESJ                               eS      S      18 57 19.8 +2.2
MESJ   Messejana        22.18 122  eP      P      18 53 14.2 +0.6
MESJ                               eS      S      18 57 19.7 +2.2
MESJ   Messejana        22.18 122  eP      P      18 53 15.2 +1.6
       comp=Z,160nm,1.4s
CLF    Chambon-Foret    22.19  88   P      P      18 53 12.3 -1.3
PBEJ   Beja             22.23 122  eP      P      18 53 16.7 +2.6
       comp=Z,95nm,1.6s
HAL    Halifax          22.24 262   P      P      18 53 12.7 -1.4
HAL                                 pmax   pmax
       comp=Z,118nm,1.0s
HAL    Halifax          22.24 262   P      P      18 53 12.7 -1.4
HAL                                 IAmb   IAmb   18 53 18.2
       comp=Z,118nm,1.0s
BLS5   Blasjo           22.25  57  eP      P      18 53 14.5 +0.2
DBG    Daneborg         22.28   8  i P     P      18 53 16.2 +1.9
DBG                                 IAmb   IAmb   18 53 23.9
       comp=Z,129nm,1.3s
LMN    Caledonia Moun   22.35 266   P      P      18 53 14.0 -1.3
LMN                                 IAmb   IAmb   18 53 25.8
       comp=Z,109nm,0.9s
ODD1   Odda             22.35  56  eP      P      18 53 13.9 -1.4
MORF   Marmelete        22.37 124  eP      P      18 53 16.1 +0.4
MORF                                AMb    AMB    18 53 24.6
       comp=Z,262nm,1.7s
MORF                               eS      S      18 57 23.2 +2.0
MORF   Marmelete        22.37 124  eP      P      18 53 16.1 +0.4
MORF                               eS      S      18 57 23.2 +2.0
MORF   Marmelete        22.37 124  eP      P      18 53 16.3 +0.6
       comp=Z,265nm,1.5s
PFVI   Vila Bisbo       22.42 125   P      P      18 53 15.4 -0.7
PFVI                                IAmb   IAmb   18 53 23.5
       comp=Z,173nm,0.9s
PFVI   Vila Bisbo       22.42 125  eP      P      18 53 16.9 +0.8
       comp=Z,254nm,1.1s
UCC    Uccle            22.43  80  dP      P      18 53 14.9 -1.2
       comp=Z,189nm,1.5s
UCC                                dpP     pP     18 53 18.6 +0.1
UCC    Uccle            22.43  80   P      P      18 53 14.9 -1.2
UCC                                 pmax   pmax
       comp=Z,280nm,1.2s
UCC    Uccle            22.43  80   P      P      18 53 14.9 -1.2
PCVE   Castro Verde     22.43 122  eP      P      18 53 15.6 -0.7
       comp=Z,193nm,1.3s
BATG   Bathurst New B   22.44 270   P      P      18 53 16.0 -0.3
SNF    Seneffe          22.48  81  dP      P      18 53 14.4 -2.2
       comp=Z,288nm,1.3s
SNF                                dpP     sP     18 53 19.6 -0.6
SNF                                dx      x      18 53 28.5
PMOZ   Porto Moniz, M   22.50 146   P      P      18 53 14.9 -2.2
PMOZ   Porto Moniz, M   22.50 146  eS      Sn     18 57 30.2 -6.4
PBAR   Barrancos        22.55 120  eP      P      18 53 17.0 -0.5
       comp=Z,147nm,1.4s
SNART  Snartemo         22.66  60  eP      P      18 53 18.5 -0.1
SNART  Snartemo         22.66  60  eP      P      18 53 17.3 -1.2
AKN    Aaknes           22.70  50  e       P      18 53 29.1  +10
UPNV   Upernavik        22.71 342⇑iP       P      18 53 20.5 +1.6
UPNV                                IAmb   IAmb   18 53 23.3
       comp=Z,95nm,1.1s
PVAQ   Vaqueiros        22.77 122   P      P      18 53 18.6 -1.3
PVAQ                                IAmb   IAmb   18 53 34.4
       comp=Z,80nm,1.0s
PVAQ   Vaqueiros        22.77 122  eP      P      18 53 19.4 -0.5
       comp=Z,168nm,1.4s
PVAQ                               eS      S      18 57 31.1 +2.7
PBDV   Barranco-do-Ve   22.79 123  eP      P      18 53 21.6 +1.5
       comp=Z,222nm,1.3s
DOU    Dourbes          22.81  82  dP      P      18 53 18.6 -1.6
       comp=Z,113nm,1.2s
DOU                                dpP     sP     18 53 23.6 -0.1
BMRD   Maredsous        22.84  81  dP      P      18 53 19.2 -1.3
       comp=Z,152nm,1.2s
BMRD                               dpP     sP     18 53 23.5 -0.6
BGES   Gesves           23.01  81  dP      P      18 53 21.3 -1.0
       comp=Z,165nm,1.2s
PAB    San Pablo        23.03 114   P      P      18 53 21.8 -0.9
PAB                                 pmax   pmax
       comp=Z,33nm,1.0s
PAB    San Pablo        23.03 114   P      P      18 53 21.8 -0.9
BCLA   Clavier          23.12  81  dP      P      18 53 21.7 -1.7
       comp=Z,79nm,1.1s
BCLA                               dsP     pwP    18 53 29.0 -1.8
BCLA                               dPnPn   PnPn   18 53 46.1 -2.4
ESDC   Sonseca Array    23.16 113   P      P      18 53 21.4 -2.6
       comp=Z,23nm,1.0s,baz=313,slow=8.7,SNR=13
RCHB   Rochefort        23.17  81  dpP     pP     18 53 26.8 +0.5
SKAR   Skarslia         23.21  54  eP      P      18 53 23.2 -1.1
BEBN   Eben Emael       23.22  79  dP      P      18 53 23.1 -1.3
BEBN                               dpP     sP     18 53 27.7 -0.3
BSTI   Sart Tilman      23.23  80  dP      P      18 53 23.6 -0.9
       comp=Z,41nm,1.1s
BSTI                               dx      x      18 53 38.1
HOMB   Homborsund       23.35  60  eP      P      18 53 24.9 -0.7
HOMB   Homborsund       23.35  60  i P     P      18 53 24.0 -1.6
HOMB                               eP      pP     18 53 26.9 -1.3
MEM    Membach          23.48  80  dP      P      18 53 26.7 -0.3
       comp=Z,102nm,1.5s
MEM                                dpP     sP     18 53 30.8 +0.2
BTNL   Ternell          23.56  80  dP      P      18 53 27.3 -0.6
       comp=Z,183nm,1.9s
BHOU   Houvegnez        23.57  80  dP      P      18 53 28.1 +0.2
BHOU                               dpP     sP     18 53 31.2 -0.3
DOMB   Dombas           23.66  50  eP      P      18 53 28.9 +0.2
D63A   Stockholm        23.80 271   P      P      18 53 28.5 -1.6
       baz=63
GOET   G??ttrup         23.85  63  i P     P      18 53 31.4 +0.9
       comp=Z,350nm,1.0s
GOET   G??ttrup         23.85  63  i P     P      18 53 31.4 +0.9
GOET                                IAmb   IAmb   18 53 37.5
       comp=Z,351nm,1.0s
KONO   Kongsberg        23.85  56   P      P      18 53 30.7 +0.1
KONO                                pmax   pmax
       comp=Z,585nm,1.8s
KONO   Kongsberg        23.85  56   P      P      18 53 30.7 +0.1
KONO   Kongsberg        23.85  56  eP      P      18 53 30.8 +0.3
MUD    Monsted U'grnd   23.90  64  i P     P      18 53 30.8 -0.2
       comp=Z,151nm,1.0s
MUD    Monsted U'grnd   23.90  64  i P     P      18 53 30.8 -0.2
MUD                                 pmax   pmax
       comp=Z,150nm,1.0s
MUD    Monsted U'grnd   23.90  64  i P     P      18 53 30.6 -0.4
MUD                                i P     P      18 53 30.9 -0.2
MUD                                 IAmb   IAmb   18 53 36.0
       comp=Z,152nm,1.0s
WLF    Walferdange      23.91  82  dP      P      18 53 30.6 -0.5
WLF                                dpP     pP     18 53 34.1 +0.4
WLF    Walferdange      23.91  82   P      P      18 53 30.2 -1.0
WLF                                 pmax   pmax
       comp=Z,125nm,1.0s
WLF    Walferdange      23.91  82   P      P      18 53 30.2 -1.0
WLF                                 IAmb   IAmb   18 53 37.0
       comp=Z,125nm,1.0s
PQI    Presque Isle     23.91 270   P      P      18 53 30.7 -0.5
PQI                                 IAmb   IAmb   18 53 43.6
       comp=Z,258nm,1.7s
E64A   Bridgewater      23.91 269   P      P      18 53 29.4 -1.8
       baz=62,SNR=12
GGN    Saint George     23.95 266   P      P      18 53 29.8 -1.8
GGN                                 IAmb   IAmb   18 53 50.8
       comp=Z,90nm,1.1s
BUG    Bochum--Univer   23.96  77  eP      P      18 53 31.5 -0.1
       comp=Z,60nm,0.8s,baz=279,slow=7.0
AHRW   Bad Neuenahr-A   24.15  79  eP      P      18 53 33.6 +0.2
       comp=Z,39nm,0.9s,baz=279,slow=7.0
SFS    San Fernando     24.27 122   P      P      18 53 32.6 -2.0
SFS                                 pmax   pmax
       comp=Z,88nm,1.0s
SFS    San Fernando     24.27 122   P      P      18 53 32.6 -2.0
SFS                                 IAmb   IAmb   18 53 59.9
       comp=Z,88nm,1.0s
E63A   Oxbow            24.27 270   P      P      18 53 32.8 -1.8
       baz=62,SNR=6.6
E63A   Oxbow            24.27 270   P      P      18 53 33.7 -0.9
E63A                                IAmb   IAmb   18 53 57.3
       comp=Z,122nm,1.1s
KULLO  Kullorsuaq       24.30 344  i P     P      18 53 34.8 +0.3
       comp=Z,76nm,0.9s
KULLO  Kullorsuaq       24.30 344  i P     P      18 53 34.8 +0.3
KULLO                               pmax   pmax
       comp=Z,76nm,0.9s
KULLO  Kullorsuaq       24.30 344  i P     P      18 53 34.9 +0.3
KULLO                               IAmb   IAmb   18 53 37.1
       comp=Z,76nm,0.9s
G65A   Princeton        24.35 267   P      P      18 53 33.9 -1.4
       baz=60
G65A   Princeton        24.35 267   P      P      18 53 34.1 -1.2
G65A                                IAmb   IAmb   18 53 36.5
       comp=Z,53nm,0.8s
H66A   Whiting          24.41 265   P      P      18 53 34.7 -1.1
       baz=59
OSL    Oslo             24.41  56  eP      P      18 53 37.5 +1.8
NC204  NORSAR Array S   24.43  52   P      P      18 53 35.3 -0.7
NBO00  NORSAR Array S   24.43  53   P      P      18 53 35.7 -0.2
NAO01  NORSAR Array S   24.48  53   P      P      18 53 35.2 -1.2
NAO01  NORSAR Array S   24.48  53  eP      P      18 53 36.7 +0.3
F64A   Sherman          24.50 269   P      P      18 53 35.0 -1.7
       baz=61
F64A   Sherman          24.50 269   P      P      18 53 35.3 -1.3
F64A                                IAmb   IAmb   18 53 45.4
       comp=Z,175nm,1.8s
EMMW   East Machias     24.54 265   P      P      18 53 35.9 -1.1
EMMW                                IAmb   IAmb   18 54 09.0
       comp=Z,88nm,1.1s
NB2    NORSAR Subarra   24.64  53   P      P      18 53 37.8 -0.1
       comp=Z,232nm,1.2s,baz=273,slow=10
NB2    NORSAR Subarra   24.64  53   P      P      18 53 37.8 -0.1
       baz=273,slow=10
NOA    NORSAR Array B   24.64  53   P      P      18 53 37.5 -0.4
       comp=Z,19nm,0.9s,baz=272,slow=10,SNR=18
NB201  NORSAR Array S   24.68  53   P      P      18 53 38.5 +0.3
KASTN  Kahler Asten     24.72  77  eP      P      18 53 38.7 +0.1
       comp=Z,69nm,1.0s,baz=279,slow=7.0
NC303  NORSAR Array S   24.72  53   P      P      18 53 38.1 -0.5
NC605  NORSAR Array S   24.74  54   P      P      18 53 38.6 -0.1
NC605                               IAmb   IAmb   18 53 53.3
       comp=Z,64nm,0.9s
DAG    Danmarks Havn    24.75   7  i P     P      18 53 39.1 +0.5
       comp=Z,42nm,1.1s
DAG    Danmarks Havn    24.75   7  i P     P      18 53 39.1 +0.5
DAG                                 pmax   pmax
       comp=Z,42nm,1.1s
DAG    Danmarks Havn    24.75   7  i P     P      18 53 39.1 +0.5
DAG                                 IAmb   IAmb   18 53 54.5
       comp=Z,42nm,1.1s
NC602  NORSAR Array S   24.81  54   P      P      18 53 39.4 +0.1
SSB    Saint Sauveur    24.86  93   P      P      18 53 38.1 -1.9
SSB                                 pmax   pmax
       comp=Z,34nm,1.1s
SSB    Saint Sauveur    24.86  93   P      P      18 53 38.1 -1.9
NC405  NORSAR Array S   24.89  53   P      P      18 53 39.5 -0.6
D61A   St Aubert, Com   24.99 273   P      P      18 53 39.1 -1.9
       baz=63
H65A   Eastbrook        25.03 266   P      P      18 53 40.5 -0.9
       baz=59
F63A   Nahmakanta, Br   25.04 269   P      P      18 53 39.9 -1.6
       baz=61
F63A   Nahmakanta, Br   25.04 269   P      P      18 53 39.7 -1.8
F63A                                IAmb   IAmb   18 53 58.4
       comp=Z,173nm,1.7s
BSEG   Bad Segeberg     25.04  70  eP      P      18 53 41.3 -0.1
       comp=Z,207nm,0.9s,baz=279,slow=7.0
G64A   Maxfield         25.05 268   P      P      18 53 40.1 -1.5
       baz=60
TNS    Taunus Mts       25.08  79  eP      P      18 53 42.2 +0.2
       comp=Z,157nm,1.0s,baz=279,slow=7.0
ECH    Echery           25.09  84   P      P      18 53 40.7 -1.3
ECH                                 pmax   pmax
       comp=Z,145nm,1.1s
ECH    Echery           25.09  84   P      P      18 53 40.7 -1.3
NSS    Namsos           25.22  45  eP      P      18 53 43.4 +0.5
PKME   Peaks-Kenny Pk   25.37 268   P      P      18 53 43.1 -1.4
       baz=60
PKME   Peaks-Kenny Pk   25.37 268   P      P      18 53 44.5  0.0
PKME                                IAmb   IAmb   18 54 08.9
       comp=Z,189nm,1.5s
GTTG   Gottingen        25.53  76  eP      P      18 53 46.2 +0.3
       comp=Z,327nm,1.0s,baz=279,slow=7.0
E61A   Lac Etchemin     25.53 271   P      P      18 53 44.6 -1.4
       baz=62
D60A   Saint Jean D'O   25.57 273   P      P      18 53 44.6 -1.6
       baz=63,SNR=7.0
G63A   Kingsbury        25.64 268   P      P      18 53 46.0 -1.0
       baz=60
H64A   Troy             25.65 267   P      P      18 53 45.5 -1.5
       baz=59
CLZ    Clausthal        25.67  75  eP      P      18 53 47.8 +0.6
       comp=Z,149nm,1.1s,baz=279,slow=7.0
BFO    Black Forest     25.75  83   P      P      18 53 47.0 -1.0
BFO                                 pmax   pmax
       comp=Z,94nm,1.0s
BFO    Black Forest     25.75  83   P      P      18 53 47.0 -1.0
BFO                                 IAmb   IAmb   18 53 53.0
       comp=Z,94nm,1.0s
BFO    Black Forest     25.75  83  eP      P      18 53 47.6 -0.4
       comp=Z,60nm,0.9s,baz=279,slow=7.0
LLD    Lille Linde      25.79  66  i P     P      18 53 48.1 -0.1
LLD    Lille Linde      25.79  66  i P     P      18 53 48.1 -0.1
LLD    Lille Linde      25.79  66  i P     P      18 53 48.1 -0.1
UBBA   Unterbreizbach   25.79  77  eP      P      18 53 48.3 +0.1
       baz=279,slow=7.0
COP    Copenhagen       25.83  65  i P     P      18 53 52.7 +4.1
COP    Copenhagen       25.83  65  eP      P      18 53 52.7 +4.1
COP    Copenhagen       25.83  65  eP      P      18 53 52.7 +4.1
HFS    Hagfors          25.90  55   P      P      18 53 48.6 -0.5
       comp=Z,12nm,0.9s,baz=270,slow=8.9,SNR=11
WVL    Waterville       25.95 267   P      P      18 53 49.6 -0.2
WVL                                 IAmb   IAmb   18 53 53.0
       comp=Z,74nm,0.9s
KONS   Konsvik          25.99  40  eP      P      18 53 50.1 +0.2
SENIN  Lac Senin/Sane   26.01  88   P      P      18 53 50.0 -0.6
SENIN                               IAmb   IAmb   18 53 58.0
       comp=Z,117nm,1.1s
FLTG   Flechtingen      26.02  73  eP      P      18 53 49.7 -0.7
       comp=Z,51nm,0.9s,baz=279,slow=7.0
F61A   St Evariste      26.05 271   P      P      18 53 49.6 -1.1
       baz=61
STU    Stuttgart        26.09  82   P      P      18 53 50.6 -0.5
STU                                 pmax   pmax
       comp=Z,156nm,1.0s
STU    Stuttgart        26.09  82   P      P      18 53 50.6 -0.5
E60A   Ste Agathe de    26.14 272   P      P      18 53 50.0 -1.5
       baz=62
G62A   West of Eustis   26.15 269   P      P      18 53 50.5 -1.1
       baz=60
G62A   West of Eustis   26.15 269   P      P      18 53 51.4 -0.2
G62A                                IAmb   IAmb   18 54 08.2
       comp=Z,58nm,1.1s
BNI    Bardonecchia     26.28  91   P      P      18 53 50.9 -2.1
BNI                                 pmax   pmax
       comp=Z,163nm,1.9s
BNI    Bardonecchia     26.28  91   P      P      18 53 50.9 -2.1
BNI                                 IAmb   IAmb   18 54 13.2
       comp=Z,163nm,1.9s
I64A   Boothbay         26.28 266   P      P      18 53 50.9 -1.9
       baz=58
LOF    Lofoten          26.48  37  eP      P      18 53 54.7 +0.4
RGN    Rugen            26.59  68   P      P      18 53 55.1 -0.4
F60A   Warwick          26.64 272   P      P      18 53 54.4 -1.6
       baz=61
D58A   Chemin du LacG   26.67 275   P      P      18 53 54.8 -1.6
       baz=63
NEUB   Neuenburg        26.71  75  eP      P      18 53 56.4 -0.2
       comp=Z,62nm,0.9s,baz=279,slow=7.0
G61A   St-Isidore-de-   26.72 270   P      P      18 53 56.3 -0.5
       baz=60
I63A   Otisfield        26.79 267   P      P      18 53 56.4 -1.0
       baz=58
I63A   Otisfield        26.79 267   P      P      18 53 54.9 -2.4
I63A                                IAmb   IAmb   18 55 01.3
       comp=Z,226nm,1.9s
H62A   Milan            26.86 268   P      P      18 53 57.2 -0.8
       baz=59
H62A   Milan            26.86 268   P      P      18 53 57.8 -0.2
GRFO   Grafenberg       26.94  79   P      P      18 53 58.1 -0.6
GRFO                                pmax   pmax
       comp=Z,120nm,1.2s
GRFO   Grafenberg       26.94  79   P      P      18 53 58.1 -0.6
GRFO                                IAmb   IAmb   18 54 37.2
       comp=Z,120nm,1.2s
GRA1   Grafenberg Arr   26.94  79   P      P      18 53 58.3 -0.4
GRA1                                IAmb   IAmb   18 54 37.2
       comp=Z,109nm,1.2s
GRF    Grafenberg Arr   26.94  79   P      P      18 53 58.3 -0.4
GRF                                 pmax   pmax
       comp=Z,109nm,1.2s
GRF    Grafenberg Arr   26.94  79  eP      P      18 53 58.7  0.0
       comp=Z,47nm,0.9s,baz=279,slow=7.0
FAUS   Fauske           26.98  39  eP      P      18 53 59.7 +0.8
STEI   Steigen          27.06  38  eP      P      18 53 58.1 -1.4
UBR    Ueberruh         27.11  84  eP      P      18 53 59.9 -0.4
       comp=Z,58nm,0.9s,baz=279,slow=7.0
DAVA   Damuels          27.15  84  eP      P      18 54 00.3 -0.5
       comp=Z,38nm,0.8s
MOQ    Mont Orford      27.15 271   P      P      18 54 00.2 -0.5
F59A   Saint Guilaume   27.20 272   P      P      18 53 60.0 -1.1
       baz=61
TUE    Stuetta          27.20  86   P      P      18 54 00.3 -1.1
TUE                                 IAmb   IAmb   18 54 07.6
       comp=Z,117nm,1.0s
E58A   La Victoria      27.25 273   P      P      18 53 59.8 -1.7
       baz=62,SNR=6.0
G60A   Masonville       27.31 270   P      P      18 54 01.3 -0.8
       baz=60
I62A   Tamworth         27.34 267   P      P      18 54 02.4  0.0
       baz=58
I62A   Tamworth         27.34 267   P      P      18 54 01.2 -1.2
BSD    Bornholm Skovb   27.34  66  i P     P      18 54 00.3 -1.9
       comp=Z,82nm,1.1s
BSD    Bornholm Skovb   27.34  66  eP      P      18 54 01.1 -1.1
BSD    Bornholm Skovb   27.34  66  i P     P      18 54 00.3 -1.9
BSD                                 pmax   pmax
       comp=Z,82nm,1.1s
BSD    Bornholm Skovb   27.34  66  i P     P      18 54 00.3 -1.9
BSD                                 IAmb   IAmb   18 54 06.8
       comp=Z,82nm,1.1s
GUNZ   Gunzen           27.34  77  eP      P      18 54 02.0 -0.4
       comp=Z,24nm,0.9s,baz=279,slow=7.0
H61A   Lyndonville      27.35 269   P      P      18 54 01.6 -0.8
       baz=59
MANZ   Manzenberg       27.36  78  eP      P      18 54 02.7 +0.2
       comp=Z,24nm,1.0s,baz=279,slow=7.0
DAVOX  Davos/Dischmat   27.38  85   P      P      18 54 01.7 -1.3
       comp=Z,41nm,0.9s,baz=310,slow=12,SNR=28
CLL    Collm            27.40  75  eP      P      18 54 02.0 -0.8
       comp=Z,35nm,0.8s
CLL                                i pP    sP     18 54 06.0 -0.4
       comp=Z,85nm,1.0s
CLL                                esP     pwP    18 54 11.0 +0.7
CLL                                e              18 54 29.0
CLL                                ePPP    PPP    18 54 52.0
CLL                                eS      S      18 58 42.0 -0.4
CLL                                e              18 59 18.0
CLL                                eSSS    SSS    19 00 06.0
CLL    Collm            27.40  75  eP      P      18 54 02.0 -0.8
CLL                                i              18 54 06.0
CLL                                e              18 54 11.0
CLL                                eS      S      18 58 42.0 -0.4
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CLL				pmax	pmax		
	comp=Z,85nm,1.0s						
CLL	Collm	27.40	75	P	P	18 54 00.6	-2.2
CLL				IAmb	IAmb	18 54 16.4	
	comp=Z,69nm,0.7s						
CLL	Collm	27.40	75	eP	P	18 54 00.8	-2.0
	comp=Z,63nm,0.7s,baz=279,slow=7.0						
WERN	Wernitzgruen	27.40	77	eP	P	18 54 02.7	-0.2
	comp=Z,38nm,1.2s,baz=279,slow=7.0						
TANN	Tannenbergstha	27.40	77	eP	P	18 54 01.4	-1.5
	baz=279,slow=7.0						
NKC	Novy Kostel	27.46	77	eP	P	18 54 03.6	+0.2
NKC				e		18 54 07.2	
NKC	Novy Kostel	27.46	77	eP	P	18 54 03.6	+0.2
NKC				epP	sP	18 54 07.2	+0.1
ROTZ	Rotzenmuhle	27.50	78	eP	P	18 54 03.0	-0.7
	comp=Z,14nm,1.0s,baz=279,slow=7.0						
LBNH	Lisbon	27.50	268	P	P	18 54 03.1	-0.8
	baz=58						
LBNH	Lisbon	27.50	268	P	P	18 54 03.3	-0.5
LBNH				pmax	pmax		
	comp=Z,171nm,1.9s						
LBNH	Lisbon	27.50	268	P	P	18 54 03.3	-0.5
LBNH				IAmb	IAmb	18 54 12.3	
	comp=Z,171nm,1.9s						
RETA	Reutte	27.59	83	eP	P	18 54 03.5	-1.2
	comp=Z,94nm,1.0s,SNR=33						
FUR	Furstenfeldbru	27.60	82	eP	P	18 54 05.2	+0.5
	comp=Z,135nm,0.9s,baz=279,slow=7.0						
FBE	Freiberg	27.74	75	eP	P	18 54 06.7	+0.8
	comp=Z,68nm,1.0s,baz=279,slow=7.0						
TULEG	Thule	27.74	342	P	P	18 54 05.0	-0.6
TULEG				IAmb	IAmb	18 54 22.6	
	comp=Z,79nm,1.3s						
TULEG	Thule	27.74	342	i P	P	18 54 05.2	-0.4
E57A	Chemin Saint G	27.76	274	P	P	18 54 04.9	-1.2
	baz=62						
FETA	Feichten	27.79	84	P	P	18 54 06.9	+0.3
	comp=Z,71nm,1.2s,SNR=21						
H60A	Morristown	27.81	270	P	P	18 54 05.2	-1.4
	baz=59						
D56A	ZEC Mazanza, M	27.83	276	P	P	18 54 05.0	-1.8
	baz=63,SNR=5.4						
UPP	Uppsala	27.89	55	eP	P	18 54 06.3	-0.7
MDT	Midelt	27.95	124	P	P	18 54 07.1	-0.9
	comp=Z,28nm,1.1s,baz=343,slow=8.4,SNR=14						
SQTA	Sankt Quirin	27.98	84	P	P	18 54 07.3	-0.9
	comp=Z,164nm,1.6s,SNR=26						
J62A	Henniker	27.99	266	P	P	18 54 06.8	-1.4
	baz=56						
TRQ	Mont Tremblant	28.10	274	P	P	18 54 07.8	-1.5
BRG	Berggiesshubel	28.11	75	eP	P	18 54 08.9	-0.2
BRG				Amp		18 54 09.7	
	comp=Z,20nm,0.8s						
BRG				ex	x	18 54 12.8	
BRG				Amp		18 54 14.1	
	comp=Z,66nm,1.2s						
BRG				ex	x	18 54 16.5	
BRG				Amp		18 54 17.9	
	comp=Z,59nm,1.0s						
BRG				ex	x	18 54 20.9	
BRG				Amp		18 54 22.1	
	comp=Z,53nm,0.9s						
BRG	Berggiesshubel	28.11	75	eP	P	18 54 09.2	+0.1
	comp=Z,39nm,0.9s,baz=279,slow=7.0						
K63A	Dunstable	28.11	265	P	P	18 54 08.2	-1.0
	baz=56						
WET	Wettzell	28.15	79	eP	P	18 54 09.4	-0.2
	comp=Z,27nm,1.1s,baz=279,slow=7.0						
WATA	Walderalm	28.16	83	eP	P	18 54 08.4	-1.4
	comp=Z,97nm,1.0s,SNR=28						
FRNY	Flat Rock	28.21	271	P	P	18 54 10.2	+0.1
FRNY				IAmb	IAmb	18 54 36.0	
	comp=Z,89nm,1.9s						
WTTA	Wattenberg	28.22	83	eP	P	18 54 09.4	-1.0
	comp=Z,104nm,1.1s,SNR=33						
HRV	Adam Dziewonsk	28.24	265	P	P	18 54 09.5	-0.8
	baz=55						
E56A	St. Veronique	28.24	275	P	P	18 54 09.0	-1.4
	baz=62						
D55A	Sainte-Anne-du	28.28	276	P	P	18 54 09.3	-1.5
	baz=62						
LSQQ	Lebel-sur-Quev	28.29	281	P	P	18 54 09.8	-1.0
	baz=66						
G58A	Ormstown	28.33	272	P	P	18 54 10.0	-1.1
	baz=60						
SALO	Salr	28.34	87	P	P	18 54 09.8	-1.4
H59A	Cadyville	28.37	271	P	P	18 54 09.8	-1.7
	baz=59						
J61A	Chester	28.37	267	P	P	18 54 10.2	-1.4
	baz=57						
MSSA	Maissana	28.39	90	P	P	18 54 11.8	-0.1
MSSA				IAmb	IAmb	18 54 32.1	
	comp=Z,84nm,1.3s						
MATQ	Matagami	28.40	283	P	P	18 54 10.2	-1.6
	baz=67						
I60A	Shoreham	28.55	269	P	P	18 54 12.4	-0.7
	baz=58						
K62A	Royalston	28.56	266	P	P	18 54 12.6	-0.7
	baz=56						
K62A	Royalston	28.56	266	P	P	18 54 13.6	+0.4
K62A				IAmb	IAmb	18 55 01.6	
	comp=Z,52nm,1.1s						
BRYW	Bryant College	28.57	264	P	P	18 54 13.1	-0.2
KHC	Kasperske Hory	28.57	79	eP	P	18 54 13.6	+0.2
KHC				e		18 54 17.2	
KHC	Kasperske Hory	28.57	79	eP	P	18 54 13.6	+0.2
KHC				epP	sP	18 54 17.2	+0.2
KHC	Kasperske Hory	28.57	79	P	P	18 54 12.4	-1.0
M64A	Tiverton	28.58	263	P	P	18 54 12.6	-0.8
	baz=54						
M64A	Tiverton	28.58	263	P	P	18 54 11.7	-1.7
PBCC	Pribram	28.60	77	eP	P	18 54 13.3	-0.2
PBCC				ex	x	18 54 17.8	
PVCC	Panska Ves	28.61	75	eP	P	18 54 13.9	+0.3
PVCC	Panska Ves	28.61	75	eP	P	18 54 13.9	+0.3
L63A	North Scituate	28.64	264	P	P	18 54 13.2	-0.7
L63A				IAmb	IAmb	18 54 18.1	
	comp=Z,156nm,1.6s						
PRMA	PARMA	28.64	89	P	P	18 54 12.8	-1.1
RJOB	Jochberg	28.71	82	eP	P	18 54 13.4	-1.2
	comp=Z,106nm,0.9s,baz=279,slow=7.0						
GEC2	GERESS Array S	28.77	79	P	P	18 54 13.2	-2.0
GEC2				IAmb	IAmb	18 54 20.4	
	comp=Z,72nm,1.1s						
GEC2	GERESS Array S	28.77	79	eP	P	18 54 13.6	-1.6
	comp=Z,40nm,0.9s,baz=279,slow=7.0						
GEC2B	GERESS ARRAY S	28.77	79	P	P	18 54 13.7	-1.4
GERES	GERESS Array B	28.77	79	P	P	18 54 14.2	-1.0
	comp=Z,13nm,0.9s,baz=302,slow=7.7,SNR=50						
GERES	GERESS Array B	28.77	79	P	P	18 54 12.3	-2.8
H58A	Gabriels	28.79	271	P	P	18 54 14.2	-1.1
	baz=58						
PRU	Pruhonice	28.80	76	eP	P	18 54 15.4	+0.1
PRU				e		18 54 19.3	
PRU	Pruhonice	28.80	76	eP	P	18 54 15.4	+0.1
PRU				epP	sP	18 54 19.3	+0.3
CTI	Castel Tesino	28.81	86	P	P	18 54 13.4	-2.2
CTI				pmax	pmax		
	comp=Z,71nm,1.1s						
CTI	Castel Tesino	28.81	86	P	P	18 54 13.4	-2.2
CTI				IAmb	IAmb	18 54 20.6	
	comp=Z,71nm,1.1s						
G57A	Newington	28.92	272	P	P	18 54 15.2	-1.2
	baz=60						
LONY	Lake Ozonia	28.92	271	P	P	18 54 15.7	-0.8
	baz=59						
LONY	Lake Ozonia	28.92	271	P	P	18 54 16.7	+0.2
I59A	Olmsteadville	28.93	269	P	P	18 54 15.7	-0.8
	baz=58						
L61B	Northampton	28.95	266	P	P	18 54 15.5	-1.2
	baz=55						
J60A	Lant Hill Farm	28.96	268	P	P	18 54 15.6	-1.2
	baz=57						
VLDQ	Val d'Or	28.98	279	P	P	18 54 17.8	+0.8
ABTA	Abfaltersbach	29.00	84	eP	P	18 54 15.7	-1.4
	comp=Z,33nm,1.1s,SNR=7.2						
VLC	Villacollemand	29.00	90	P	P	18 54 15.0	-2.2
VLC				IAmb	IAmb	18 54 28.7	
	comp=Z,59nm,1.1s						
AAL	Aland	29.02	54	eP	P	18 54 14.7	-2.4
ACCN	Adirondack Com	29.03	268	P	P	18 54 17.4	0.0
ACCN				IAmb	IAmb	18 54 47.5	
	comp=Z,77nm,1.6s						
NCB	Newcomb	29.05	270	P	P	18 54 18.3	+0.7
UCCT	U. Connecticut	29.05	264	P	P	18 54 16.9	-0.7
CKRC	Cesky Krumlov	29.14	79	eP	P	18 54 17.5	-0.9
CKRC				ex	x	18 54 22.5	
TEOL	Teolo	29.16	87	P	P	18 54 17.1	-1.5
TEOL				IAmb	IAmb	18 54 23.7	
	comp=Z,76nm,0.9s						
M63A	Gales Ferry	29.17	264	P	P	18 54 18.9	+0.2
M63A				IAmb	IAmb	18 55 15.5	
	comp=Z,156nm,1.7s						
GKP	Gorka Klasztor	29.18	69	eP	P	18 54 18.7	0.0
GKP				epP	sP	18 54 23.1	+0.8
GKP				e		18 54 30.9	
GKP	Gorka Klasztor	29.18	69	eP	P	18 54 18.6	0.0
K61A	Williamstown	29.18	267	P	P	18 54 18.3	-0.5
	baz=56						
ZCCA	Zocca	29.26	89	P	P	18 54 19.4	-0.1
ZCCA				IAmb	IAmb	18 54 32.2	
	comp=Z,73nm,1.1s						
KBA	Koelnbreinsper	29.34	83	eP	P	18 54 20.2	-0.2
	comp=Z,40nm,0.8s,SNR=17						
ZOU	Zoufplan	29.36	84	P	P	18 54 18.6	-2.0
ZOU				IAmb	IAmb	18 54 25.9	
	comp=Z,95nm,1.1s						
TRY	Troy	29.39	267	P	P	18 54 20.1	-0.5
TRY				IAmb	IAmb	18 54 27.5	
	comp=Z,88nm,1.5s						
CHVC	Chvalec	29.46	74	eP	P	18 54 20.2	-1.0
CHVC				ex	x	18 54 25.2	
UPC	Upice	29.46	75	eP	P	18 54 19.0	-2.2
UPC	Upice	29.46	75	eP	P	18 54 19.0	-2.2
J59A	Piesco	29.49	269	P	P	18 54 20.3	-1.3
	baz=57						
J59A	Piesco	29.49	269	P	P	18 54 21.7	+0.2
J59A				IAmb	IAmb	18 54 28.3	
	comp=Z,128nm,1.9s						
KSP	Ksiaz	29.50	74	eP	P	18 54 21.3	-0.2
KSP				epP	sP	18 54 25.1	-0.1
H57A	Richville	29.50	272	P	P	18 54 19.2	-2.3
	baz=58						
MOA	Molln	29.54	81	eP	P	18 54 21.9	-0.1
	comp=Z,83nm,1.3s,SNR=24						
OSTC	Ostas	29.56	74	eP	P	18 54 22.1	0.0
I58A	Old Forge	29.66	270	P	P	18 54 21.2	-1.8
	baz=57						
M62A	Hamden	29.66	264	P	P	18 54 22.7	-0.3
	baz=54						
DPC	Dobruska-Polom	29.71	75	eP	P	18 54 21.5	-1.9
DPC				e		18 54 24.0	
DPC	Dobruska-Polom	29.71	75	eP	P	18 54 21.5	-1.9
DPC				ex	x	18 54 24.0	
MYKA	Terra Mystica	29.73	83	eP	P	18 54 21.9	-1.9
	comp=Z,162nm,1.2s,SNR=52						
YLE	Yale	29.77	264	P	P	18 54 23.9	0.0
KSCT	Kent School, K	29.86	265	P	P	18 54 25.6	+0.8
KSCT				IAmb	IAmb	18 54 30.8	
	comp=Z,118nm,1.7s						
OSSC	Osservatorio P	29.87	90	P	P	18 54 23.7	-1.2
CADS	Cadrg	29.99	84	i P	P	18 54 25.6	-0.3
CADS				i pP	sP	18 54 29.6	0.0
CASP	Castiglione de	30.04	92	P	P	18 54 25.6	-0.8
K59A	Cooperstown	30.09	268	P	P	18 54 24.9	-1.9
	baz=56						
PLVO	Plevna	30.22	274	P	P	18 54 27.3	-0.6
PLVO				IAmb	IAmb	18 54 38.6	
	comp=Z,80nm,1.9s						
TRI	Trieste	30.26	85	P	P	18 54 27.0	-1.3
TRI				pmax	pmax		
	comp=Z,168nm,1.3s						
TRI	Trieste	30.26	85	P	P	18 54 27.0	-1.3
KRUC	Moravsky	30.28	77	eP	P	18 54 27.9	-0.6
VRAC	Vranov	30.30	77	P	P	18 54 28.8	+0.3
	comp=Z,3.8nm,0.3s,baz=308,slow=7.4,SNR=6.7						
VRAC	Vranov	30.30	77	eP	P	18 54 28.4	-0.2
OBKA	Obir	30.34	83	eP	P	18 54 26.6	-2.5
	comp=Z,82nm,1.0s,SNR=30						
ALGO	Algonquin Park	30.36	276	P	P	18 54 27.2	-1.9
	baz=60						
KBS	Kingsbay	30.37	15	P	P	18 54 28.4	-0.5
KBS				pmax	pmax		
	comp=Z,149nm,1.7s						
KBS	Kingsbay	30.37	15	P	P	18 54 28.4	-0.5
J57A	Williamstown	30.43	270	P	P	18 54 28.1	-1.7
	baz=57						
J57A	Williamstown	30.43	270	P	P	18 54 30.1	+0.2
J57A				IAmb	IAmb	18 55 19.1	
	comp=Z,67nm,1.8s						
CONA	Conrad Observa	30.47	79	eP	P	18 54 29.7	-0.4
	comp=Z,29nm,1.2s,SNR=8.9						
L59A	Walton	30.54	267	P	P	18 54 29.9	-0.9
	baz=55						
L59A	Walton	30.54	267	P	P	18 54 30.9	+0.1
SOKA	Soboth	30.55	82	eP	P	18 54 28.1	-2.9
	comp=Z,44nm,0.7s,SNR=42						
LJU	Ljubljana	30.56	84	i P	P	18 54 30.8	-0.1
LJU				i pP	sP	18 54 34.7	+0.2
LJU				e		18 57 36.1	
LJU	Ljubljana	30.56	84	eP	P	18 54 29.9	-1.0
ARSA	Arzberg	30.58	81	eP	P	18 54 30.8	-0.3
	comp=Z,60nm,1.2s,SNR=17						
PERS	Pernice	30.62	82	i P	P	18 54 30.9	-0.7
CEY	Cerknica	30.65	84	⇓iP	P	18 54 31.2	-0.5
G54A	Lake Saint Pet	30.66	275	P	P	18 54 30.7	-1.1
	baz=60						
MORC	Moravsky Berou	30.66	75	⇑P	P	18 54 32.5	+0.7
MORC	Moravsky Berou	30.66	75	eP	P	18 54 30.9	-0.9
MORC	Moravsky Berou	30.66	75	P	P	18 54 30.1	-1.7
MORC				pmax	pmax		
	comp=Z,47nm,1.2s						
MORC	Moravsky Berou	30.66	75	P	P	18 54 30.1	-1.7
MORC				IAmb	IAmb	18 54 36.6	
	comp=Z,47nm,1.2s						
KNDS	Knezji Dol	30.73	85	i P	P	18 54 32.7	+0.2
SPB4	Spitsbergen Ar	30.75	18	P	P	18 54 33.6	+1.2
SPA3	Spitsbergen Ar	30.75	18	P	P	18 54 33.5	+1.2
SPA0	Spitsbergen Ar	30.75	18	eP	P	18 54 31.8	-0.6
SPA2	Spitsbergen Ar	30.75	18	P	P	18 54 33.5	+1.1
SPITS	Spitsbergen Ar	30.75	18	P	P	18 54 33.9	+1.5
	comp=Z,15nm,0.9s,baz=215,slow=7.1,SNR=4.6						
SPB1	Spitsbergen Ar	30.76	18	P	P	18 54 32.8	+0.4
MURB	Monte Urbino	30.79	90	P	P	18 54 31.1	-2.0
MURB				IAmb	IAmb	18 54 39.3	
	comp=Z,39nm,1.0s						
DELO	Deloro Mine	30.83	273	P	P	18 54 32.9	-0.4
DELO				IAmb	IAmb	18 54 39.7	
	comp=Z,63nm,1.5s						
ARD8	ARCESS Array S	30.95	35	P	P	18 54 34.4	+0.2
ARD6	ARCESS Array S	30.96	35	P	P	18 54 34.3	+0.1
ARCES	ARCESS Array B	30.97	35	P	P	18 54 34.1	-0.2
	comp=Z,13nm,0.9s,baz=262,slow=8.2,SNR=16						
ARCES	ARCESS Array B	30.97	35	P	P	18 54 34.5	+0.2
ARCES				pmax	pmax		
	comp=Z,55nm,1.4s						
ARCES	ARCESS Array B	30.97	35	P	P	18 54 34.5	+0.2
J56A	Wolcott	31.03	271	P	P	18 54 34.1	-1.0
	baz=57						
ZST	Bratislava	31.09	78	eP	P	18 54 39.0	+3.5
ZST	Bratislava	31.09	78	e	P	18 54 39.0	+3.5
BINY	Binghamton	31.11	268	P	P	18 54 34.9	-0.9
	baz=55						
MODS	Modra-Piesok	31.11	78	eP	P	18 54 34.7	-1.1
MODS				pmax	pmax		
	comp=Z,49nm,1.3s						
MODS	Modra-Piesok	31.11	78	eP	P	18 54 34.7	-1.1
L58A	Harry Jones Me	31.11	268	P	P	18 54 34.8	-1.1
	baz=55						
JAVC	Velka Javorina	31.13	77	eP	P	18 54 36.3	+0.3
SMOL	Smolenice	31.14	77	eP	P	18 54 36.7	+0.7
SMOL				pmax	pmax		
	comp=Z,22nm,1.3s						
SMOL	Smolenice	31.14	77	eP	P	18 54 36.7	+0.7
MTSE	Matsula	31.22	56	eP	P	18 54 36.5	-0.1
CRES	Cresnjev	31.23	83	⇓iP	P	18 54 34.6	-2.2
BOJS	Bojanci	31.27	84	i P	P	18 54 37.2	0.0
BOJS				i pP	sP	18 54 40.8	0.0
N60A	Cedar Hill Far	31.34	265	P	P	18 54 37.2	-0.7
	baz=53						
H53A	Bobcaygeon	31.38	274	P	P	18 54 37.6	-0.6
	baz=58						
NRCA	Norcia	31.39	90	P	P	18 54 36.5	-1.8
KEV	Kevo	31.50	35	P	P	18 54 39.8	+0.8
KEV				pmax	pmax		
	comp=Z,371nm,2.0s						
KEV	Kevo	31.50	35	P	P	18 54 39.8	+0.8
SADO	Sadowa	31.62	275	P	P	18 54 40.6	+0.3
SADO				IAmb	IAmb	18 54 47.3	
	comp=Z,29nm,1.0s						
K56A	Middlesex	31.64	270	P	P	18 54 39.7	-0.8
	baz=56						
BEHE	Becsehely	31.70	81	eP	P	18 54 42.6	+1.6
BEL	Belsk	31.72	70	eP	P	18 54 40.1	-1.0
BEL				epP	sP	18 54 45.4	+0.6
BEL				e		18 54 53.7	
N59A	State Game Lan	31.72	266	P	P	18 54 39.4	-1.9
	baz=54						
N59A	State Game Lan	31.72	266	P	P	18 54 40.8	-0.5
N59A				IAmb	IAmb	18 54 48.2	
	comp=Z,33nm,1.1s						
L57A	Andrews Acres	31.75	269	P	P	18 54 40.6	-0.8
	baz=55						
FIA1	FINESS Array S	31.75	51	P	P	18 54 41.0	-0.2
FINES	FINESS Array B	31.75	51	P	P	18 54 40.3	-0.9
	comp=Z,20nm,0.8s,baz=288,slow=6.1,SNR=26						
FINES	FINESS Array B	31.75	51	P	P	18 54 40.5	-0.7
FINES	FINESS Array B	31.75	51	P	P	18 54 40.5	-0.7
OJC	Ojcow	31.80	73	eP	P	18 54 41.1	-0.7
OJC				epP	sP	18 54 45.5	0.0
OJC	Ojcow	31.80	73	P	P	18 54 40.3	-1.5
OJC				pmax	pmax		
	comp=Z,60nm,1.0s						
OJC	Ojcow	31.80	73	P	P	18 54 40.3	-1.5
OJC				IAmb	IAmb	18 54 46.9	
	comp=Z,60nm,1.0s						
AQU	L'Aquila	31.84	90	P	P	18 54 40.9	-1.4
AQU				pmax	pmax		
	comp=Z,55nm,1.0s						
AQU	L'Aquila	31.84	90	eP	P	18 54 42.2	-0.1
AQU	L'Aquila	31.84	90	P	P	18 54 40.9	-1.4
AQU				IAmb	IAmb	18 55 02.1	
	comp=Z,55nm,1.0s						
O60A	Telford	31.86	265	P	P	18 54 41.6	-0.9
	baz=53						
M58A	Price’s Panora	31.87	267	P	P	18 54 42.1	-0.5
	baz=54						
VYHS	Vyhne	31.98	77	eP	P	18 54 43.0	-0.5
VYHS				pmax	pmax		
	comp=Z,64nm,1.5s						
VYHS	Vyhne	31.98	77	eP	P	18 54 43.0	-0.5
LANS	Liptovska Anna	32.06	75	eP	P	18 54 45.4	+1.2
LANS				e		18 54 48.8	
LANS				pmax	pmax		
	comp=Z,33nm,1.0s						
LANS	Liptovska Anna	32.06	75	eP	P	18 54 45.4	+1.2
LANS				e		18 54 48.8	
LANS				e		19 04 32.0	
MEDO	Medina	32.07	272	P	P	18 54 43.9	-0.3
PABE	Paberze	32.19	62	eP	P	18 54 43.6	-1.6
SUW	Suwalki	32.26	65	eP	P	18 54 44.9	-0.9
SUW				epP	sP	18 54 49.3	-0.2
SUW				e		18 54 56.9	
SUW	Suwalki	32.26	65	eP	P	18 54 44.5	-1.3
SUW	Suwalki	32.26	65	P	P	18 54 45.0	-0.9
SUW				pmax	pmax		
	comp=Z,297nm,1.1s						
SUW	Suwalki	32.26	65	P	P	18 54 45.0	-0.9
M57A	Sunshine Farm,	32.30	268	P	P	18 54 45.0	-1.3
	baz=54						
P60A	Greenville	32.31	264	P	P	18 54 46.6	+0.2
P60A				IAmb	IAmb	18 55 05.7	
	comp=Z,56nm,1.4s						
INTR	Introdacqua	32.34	91	P	P	18 54 45.3	-1.4
N58A	Sunbury	32.34	267	P	P	18 54 45.3	-1.4
	baz=54						
NIE	Niedzica	32.43	74	eP	P	18 54 47.5	0.0
NIE				epP	sP	18 54 51.9	+0.8
EUNU	Eureka	32.61	345	P	P	18 54 49.2	+0.5
EUNU				IAmb	IAmb	18 55 01.7	
	comp=Z,30nm,1.1s						
VSU	Vasula	32.76	56	eP	P	18 54 49.6	-0.6
VSU	Vasula	32.76	56	⇑eP	P	18 54 47.6	-2.5
VSU				pmax	pmax		
	comp=Z,55nm,1.1s						
BLY	Banja Luka	32.83	84	eP	P	18 54 49.1	-1.8
M56A	Emporium	32.86	269	P	P	18 54 50.1	-1.1
	baz=54						
M56A	Emporium	32.86	269	P	P	18 54 49.9	-1.3
M56A				IAmb	IAmb	18 55 00.8	
	comp=Z,88nm,1.8s						
PSZ	Piszkesteto	32.88	77	⇓P	P	18 54 52.1	+0.7
PSZ	Piszkesteto	32.88	77	P	P	18 54 49.2	-2.2
PSZ				pmax	pmax		
	comp=Z,110nm,1.3s						
PSZ	Piszkesteto	32.88	77	P	P	18 54 49.1	-2.2
N57A	Milroy	32.90	267	P	P	18 54 50.3	-1.3
	baz=53						
O58A	Lewisberry	32.90	266	P	P	18 54 50.3	-1.3
	baz=53						
P59A	Jarrettsville	32.92	265	P	P	18 54 50.8	-0.9
	baz=52						
MGRS	Mrkonjic Grad	32.94	84	eP	P	18 54 52.0	+0.1
MORH	Mrgy, Hungar	32.95	81	⇓P	P	18 54 51.9	-0.1
MORH	Mrgy, Hungar	32.95	81	eP	P	18 54 49.6	-2.4
KECS	Kecovo	32.96	76	eP	P	18 54 52.1	+0.1
KECS				e		18 54 56.3	
KECS	Kecovo	32.96	76	eP	P	18 54 52.1	+0.1
KECS				e		18 54 56.3	
RES	Resolute Bay	33.07	334	P	P	18 54 52.9	+0.2
	comp=Z,14nm,0.7s,baz=95,slow=9.4,SNR=48						
SSPA	Standing Stone	33.18	267	P	P	18 54 54.4	+0.4
M55A	Ridgway	33.22	269	P	P	18 54 54.8	+0.5
M55A				IAmb	IAmb	18 55 04.0	
	comp=Z,118nm,1.9s						
N56A	West Decatur	33.26	268	P	P	18 54 54.1	-0.7
	baz=54						
I51A	Listowel	33.28	275	P	P	18 54 54.5	-0.4
	baz=57						
O57A	Amberson	33.28	267	P	P	18 54 53.6	-1.3
	baz=53						
SDMD	Soldier’s Deli	33.29	265	P	P	18 54 54.7	-0.3
PAOL	Paolisi	33.31	91	P	P	18 54 53.8	-1.4
PAOL				IAmb	IAmb	18 55 01.0	
	comp=Z,72nm,1.7s						
ISAL	Salakas	33.33	61	eP	P	18 54 52.2	-3.0
CRVS	Cervenica-Dubn	33.35	75	eP	P	18 54 55.4	0.0
CRVS				pmax	pmax		
	comp=Z,111nm,1.4s						
CRVS	Cervenica-Dubn	33.35	75	eP	P	18 54 55.4	0.0
IIGN	Ignalina	33.46	62	eP	P	18 54 52.5	-3.7
KEST	Kesra	33.55	104	P	P	18 54 56.0	-1.3
	comp=Z,18nm,1.0s,baz=134,slow=2.4,SNR=10.0						
KEST	Kesra	33.55	104	P	P	18 54 56.4	-1.0
SGRT	San Giovanni R	33.61	89	P	P	18 54 56.3	-1.6
SGRT				IAmb	IAmb	18 55 02.0	
	comp=Z,88nm,1.4s						
IDID	Didziasalis	33.75	62	eP	P	18 54 54.2	-4.5
KWP	Kalwaria Pacla	33.75	73	P	P	18 54 58.9	0.0
KWP				pmax	pmax		
	comp=Z,86nm,1.1s						
KWP	Kalwaria Pacla	33.75	73	P	P	18 54 58.9	0.0
M54A	Oil Creek Stat	33.75	270	P	P	18 54 58.5	-0.5
	baz=54						
KOLS	Kolonicke sedl	33.81	74	eP	P	18 54 59.2	-0.2
KOLS				pmax	pmax		
	comp=Z,38nm,1.3s						
KOLS	Kolonicke sedl	33.81	74	eP	P	18 54 59.2	-0.2
KOLS				e		19 04 46.6	
O56A	Blue Knob Stat	33.81	267	P	P	18 54 57.8	-1.8
	baz=53						
NACGM	Naroch	33.91	62	i P	P	18 55 00.5	+0.3
NACGM				i P	P	18 55 00.5	+0.3
NACGM				i P	P	18 55 00.5	+0.3
NACGM				i PP	PP	18 55 59.5	-17
NACGM				i PPP	PPP	18 56 15.6	
NACGM				i PcP	PcP	18 57 23.7	-15
NACGM				i S	S	19 00 25.5	+1.2
NACGM				i SS	SnSn	19 02 13.6	-16
NACGM				i SSS	SSS	19 03 16.4	
NACGM				i LQ	LQ	19 05 16.5	
NACGM				i LR	LR	19 07 14.7	
E46A	Sault Ste Mari	33.92	281	P	P	18 55 00.8	+0.5
APA	Apatity	33.94	39	⇓iP	P	18 55 00.4	+0.1
APA				i		18 56 08.8	
APA				i		18 57 43.3	
APA				i S	S	19 00 23.0	-1.4
APA				i SS	SnSn	19 02 31.0	+0.9
APA				pmax	pmax		
	comp=Z,73nm,1.0s						
P57A	Homestead Farm	33.96	266	P	P	18 55 00.1	-0.7
	baz=52						
UZH	Uzhgorod	33.96	75	eP	P	18 54 59.7	-1.0

Q58A	Fox Den Farm,	34.09	265	P	P	18 55 01.2	-0.8
	baz=51						
FRGS	Fruska Gora	34.20	81	⇑P	P	18 55 02.4	-0.4
FRGS	Fruska Gora	34.20	81	⇑*i*P	P	18 55 01.1	-1.8
R59A	King George, V	34.22	263	P	P	18 55 02.3	-0.8
	baz=50						
HAPS	Han Pijesak,Bl	34.25	84	*e*P	P	18 55 01.7	-1.7
N54A	Moraine State	34.27	270	P	P	18 55 02.1	-1.3
	baz=54						
TEKS	Tekeris	34.35	83	*e*P	P	18 55 01.7	-2.5
CBN	Corbin Frederi	34.37	264	P	P	18 55 03.8	-0.6
	baz=50						
CBN	Corbin Frederi	34.37	264	P	P	18 55 04.6	+0.2
FCC	Fort Churchill	34.39	305	P	P	18 55 04.0	-0.3
FCC				pmax	pmax		
	comp=Z,40nm,1.1s						
FCC	Fort Churchill	34.39	305	P	P	18 55 04.0	-0.3
FCC				IAmb	IAmb	18 55 21.2	
	comp=Z,40nm,1.1s						
M53A	WI Miller and	34.40	271	P	P	18 55 03.3	-1.4
	baz=54						
LVV	L'vov	34.43	72	*e*P	P	18 55 05.2	+0.4
Q57A	Strasburg	34.48	266	P	P	18 55 03.6	-1.7
	baz=51						
TREB	Trebinje	34.64	86	*e*P	P	18 55 08.0	+1.3
BBLS	Lazići	34.65	84	⇑*i*P	P	18 55 05.4	-1.4
BRY	Bratogost	34.66	86	*e*P	P	18 55 03.7	-3.3
MNK	Minsk	34.66	62	⇑*e*P	P	18 55 05.0	-1.7
MNK				pmax	pmax		
	comp=Z,70nm,1.0s						
MNK	Minsk	34.66	62	*i* P	P	18 55 05.1	-1.6
	comp=E,24nm,1.1s						
MNK				*i* P	P	18 55 05.1	-1.6
	comp=N,155nm,1.4s						
MNK				*i* P	P	18 55 05.1	-1.6
	comp=Z,170nm,1.1s						
MNK				*i* PP	PnPn	18 56 20.2	-1.9
MNK				*i* PPP	PPP	18 56 32.2	
MNK				*i* PcP	PcP	18 57 39.7	-0.7
MNK				*i* S	S	19 00 35.1	-0.7
MNK				*i* SS	SS	19 02 47.0	-19
MNK				*i* SSS	SSS	19 03 03.0	
MNK				*i* ScS	ScS	19 05 27.9	-0.2
MNK				*i* LQ	LQ	19 06 16.8	
MNK				*i* LR	LR	19 07 20.8	
MNK				*i* LRM	MLR	19 10 28.4	
MNK				*i* LRM	MLR	19 10 28.4	
MNK				*i* LRM	MLR	19 10 28.4	
R58A	Rapidan	34.70	264	P	P	18 55 06.0	-1.2
	baz=50						
R58B	Mineral	34.83	264	P	P	18 55 07.2	-1.2
	baz=50						
MATE	Matera	34.84	90	⇓P	P	18 55 06.2	-2.2
DIVS	Divibare	34.87	83	⇑*i*P	P	18 55 07.1	-1.7
DIVS	Divibare	34.87	83	P	P	18 55 07.1	-1.7
BANR	Banloc	34.88	80	⇓P	P	18 55 08.2	-0.5
HCY	Herceg Novi	34.88	86	*e*P	P	18 55 07.1	-1.7
Q56A	Snyder Ridge,	34.95	266	P	P	18 55 08.4	-1.0
	baz=52						
MCWV	Mont Chateau	34.97	268	P	P	18 55 08.6	-0.9
	baz=52						
U61A	Possum Corner	35.04	260	P	P	18 55 09.0	-1.1
	baz=48						
BZS	Buzias	35.05	80	⇑P	P	18 55 09.7	-0.4
DRGR		35.10	77	⇓P	P	18 55 10.6	0.0
BMR	Baia Mare	35.12	75	⇑P	P	18 55 11.2	+0.4
S58A	Poland Farm, P	35.16	263	P	P	18 55 10.7	-0.6
	baz=50						
PDG	Podgorica	35.36	86	⇓P	P	18 55 11.8	-1.0
PDG	Podgorica	35.36	86	*e*P	P	18 55 12.5	-0.3
PDG	Podgorica	35.36	86	P	P	18 55 11.4	-1.4
O53A	New Philadelph	35.44	270	P	P	18 55 13.0	-0.6
	baz=53						
DRME	Dracevica, Mon	35.45	86	*e*P	P	18 55 12.4	-1.3
E43A	Lone Tree Farm	35.52	282	P	P	18 55 14.0	-0.2
MDVR	Moldovita	35.54	81	⇑P	P	18 55 13.7	-0.7
S57A	Dark Hollow, R	35.62	264	P	P	18 55 14.9	-0.2
	baz=50						
CJR	Cluj-Napoca	35.66	77	⇓P	P	18 55 15.2	-0.3
TIP	Timpagrande	35.77	92	⇑P	P	18 55 14.2	-2.4
TIP	Timpagrande	35.77	92	P	P	18 55 14.8	-1.7
TIP				IAmb	IAmb	18 55 21.4	
	comp=Z,97nm,1.8s						
GZR	Gura Zlata	35.86	79	⇓P	P	18 55 16.2	-1.0
T58A	Grand View Acr	35.89	263	P	P	18 55 16.1	-1.4
	baz=49						
HERR	Herculane	35.91	80	⇓P	P	18 55 16.6	-1.0
ARCR	ARCALIA	35.92	76	⇑P	P	18 55 17.7	+0.1
S56A	Natural Bridge	36.04	265	P	P	18 55 18.5	-0.3
	baz=50						
BUR08	Bucovina Ar. S	36.14	74	P	P	18 55 18.0	-1.6
BUR08				IAmb	IAmb	18 55 34.9	
	comp=Z,34nm,0.8s						
BOVS	Bovan	36.16	82	⇑P	P	18 55 18.5	-1.2
BURAR	Bucovina Array	36.17	74	⇓P	P	18 55 18.7	-1.2
BURAR	Bucovina Array	36.17	74	P	P	18 55 18.8	-1.0
U58A	Oxford	36.26	262	P	P	18 55 20.0	-0.6
	baz=49						
T57A	Hurt	36.29	264	P	P	18 55 20.6	-0.3
	baz=49						
T57A	Hurt	36.29	264	P	P	18 55 20.6	-0.3
TIR	Tirane	36.35	87	⇑P	P	18 55 19.7	-1.7
TIR	Tirane	36.35	87	P	P	18 55 20.2	-1.2
TIR				pmax	pmax		
	comp=Z,71nm,0.9s						
TIR	Tirane	36.35	87	P	P	18 55 20.1	-1.2
P52A	Corning	36.37	270	P	P	18 55 21.3	-0.3
	baz=52						
Q53A	Leroy	36.48	268	P	P	18 55 21.0	-1.5
	baz=51						
TMCR	Tamitsa	36.48	44	*e*P	P	18 55 20.6	-1.6
TMCR				pmax	pmax		
	comp=Z,38nm,0.7s						
V59A	Middlesex	36.49	261	P	P	18 55 22.2	-0.4
	baz=48						
PHP	Peshkopia	36.51	86	P	P	18 55 23.1	+0.3
ACSO	Alum Creek Sta	36.53	271	P	P	18 55 21.5	-1.4
	baz=53						
ACSO	Alum Creek Sta	36.53	271	P	P	18 55 22.9	0.0
ACSO				IAmb	IAmb	18 55 36.0	
	comp=Z,74nm,1.4s						
R54A	Victor	36.59	267	P	P	18 55 22.4	-1.0
	baz=51						
U57A	Blanch	36.71	263	P	P	18 55 23.5	-1.0
	baz=49						
T56A	Rocky Mt	36.74	264	P	P	18 55 24.7	-0.1
	baz=49						
N49A	Columbus Grove	36.84	273	P	P	18 55 25.6	0.0
BLA	Blacksburg	36.86	265	P	P	18 55 24.9	-0.9
	baz=50						
BLA	Blacksburg	36.86	265	IAmb	IAmb	18 56 06.9	
	comp=Z,51nm,1.4s						
Q52A	Bidwell	36.87	269	P	P	18 55 25.9	+0.1
Q52A				IAmb	IAmb	18 55 32.9	
	comp=Z,94nm,1.4s						
COWI	Conover	36.93	283	P	P	18 55 25.8	-0.5
SKO	Skopje	36.95	85	*i* P	P	18 55 30.8	+4.3
AKASG	Malin Array Be	37.00	68	P	P	18 55 23.9	-2.8
	comp=Z,30nm,1.0s,baz=299,slow=8.4,SNR=45						
AKASG				PP	PnPn	18 56 51.3	+0.3
	comp=Z,24nm,1.1s,baz=298,slow=11,SNR=6.3						
AKASG	Malin Array Be	37.00	68	*i* P	P	18 55 25.0	-1.8
AKASG				pmax	pmax		
	comp=Z,30nm,1.0s						
AKASG	Malin Array Be	37.00	68	P	P	18 55 23.9	-2.8
AKBB	Malin Array Si	37.00	68	⇑*e*P	P	18 55 24.9	-1.9
AKBB	Malin Array Si	37.00	68	IAmb	IAmb	18 55 39.3	
	comp=Z,77nm,0.9s						
V58A	Windy Hill, Pi	37.00	262	P	P	18 55 25.8	-1.2
S54A	Dingess, Beckl	37.02	266	P	P	18 55 25.5	-1.6
	baz=50						
S54A	Dingess, Beckl	37.02	266	P	P	18 55 26.3	-0.9
S54A				IAmb	IAmb	18 55 34.2	
	comp=Z,149nm,1.8s						
BIZ	Bicaz	37.03	75	⇓P	P	18 55 26.3	-0.8
OHR	Ohrid	37.06	87	*i* P	P	18 55 32.4	+4.8
DOPR	Dopca	37.11	77	⇑P	P	18 55 27.6	-0.2
VOIR		37.19	78	⇑P	P	18 55 27.9	-0.7
OZUR		37.28	76	⇑P	P	18 55 28.9	-0.3
MTUR	Matau	37.31	78	⇓P	P	18 55 28.9	-0.7
V57A	Coltrane Farms	37.34	263	P	P	18 55 29.9	+0.1
	baz=48,SNR=6.7						
KBN	Korca	37.35	87	P	P	18 55 30.1	+0.1
EYMN	Ely	37.37	287	P	P	18 55 29.0	-1.0
	baz=60,SNR=11						
EYMN	Ely	37.37	287	P	P	18 55 29.8	-0.3
EYMN				IAmb	IAmb	18 55 43.9	
	comp=Z,38nm,1.0s						
O49A	Covington	37.38	272	P	P	18 55 30.0	-0.2
O49A				IAmb	IAmb	18 55 36.1	
	comp=Z,79nm,1.6s						
U56A	King	37.40	264	P	P	18 55 29.8	-0.6
	baz=49						
U56A	King	37.40	264	P	P	18 55 30.0	-0.3
Q51A	Peebles	37.49	270	P	P	18 55 31.0	-0.1
Q51A				IAmb	IAmb	18 55 43.5	
	comp=Z,50nm,1.1s						
LSK	Leskovik	37.52	88	P	P	18 55 35.7	+4.3
STIP	Stip	37.56	85	*i* P	P	18 55 33.0	+1.4
TESR	Tescani	37.57	75	⇓P	P	18 55 30.3	-1.4
W58A	Raeford	37.59	261	P	P	18 55 31.0	-1.0
	baz=47						
FNA	Florina	37.61	87	P	P	18 55 31.5	-0.7
FNA	Florina	37.61	87	IAmb	IAmb	18 55 39.2	
	comp=Z,68nm,1.0s						
VTS	Vitosha	37.66	83	⇓P	P	18 55 30.9	-1.8
MLR	Muntele Rosu	37.69	77	P	P	18 55 31.1	-1.8
	comp=Z,18nm,1.0s,baz=142,slow=9.7,SNR=6.3						
MLR	Muntele Rosu	37.69	77	⇑P	P	18 55 32.2	-0.7
MLR	Muntele Rosu	37.69	77	P	P	18 55 32.4	-0.5
MLR				pmax	pmax		
	comp=Z,57nm,1.3s						
MLR	Muntele Rosu	37.69	77	P	P	18 55 32.4	-0.5
MLR				IAmb	IAmb	18 55 38.1	
	comp=Z,57nm,1.3s						
SORM	Soroca	37.73	72	⇓P	P	18 55 32.3	-0.7
V56A	Mocksville	37.83	263	P	P	18 55 33.2	-0.8
	baz=48						
PLOR	Plostina	37.92	76	⇑P	P	18 55 34.4	-0.3
NEHR	Nehoiu	37.94	77	⇑P	P	18 55 34.4	-0.4
VRI	Vrincioaia	37.96	76	⇓P	P	18 55 34.7	-0.3
COPA	Copaceanca	38.00	79	⇑P	P	18 55 34.1	-1.2
G40A	Rib Lake	38.01	283	P	P	18 55 35.2	-0.2
P49A	Miami Univ. Ec	38.01	271	P	P	18 55 33.3	-2.1
	baz=52						
VAY	Valandovo	38.02	85	*i* P	P	18 55 36.1	+0.6
PLVB	Pleven	38.06	81	⇑P	P	18 55 35.0	-0.9
E38A	The Farm, Brul	38.10	285	P	P	18 55 34.9	-1.2
E38A				IAmb	IAmb	18 55 45.6	
	comp=Z,191nm,2.0s						
BISRR	Bisoca	38.12	77	⇓P	P	18 55 35.7	-0.7
GRG	Griva	38.13	86	P	P	18 55 35.9	-0.6
U54A	Nelsons Funny	38.16	265	P	P	18 55 35.4	-1.5
	baz=49						
KLMR	Klimovskoe	38.18	49	*e*P	P	18 55 34.6	-2.0
KLMR				*e*S	S	19 01 28.8	-0.5
KLMR				pmax	pmax		
	comp=Z,207nm,1.3s						
KLMR	Klimovskoe	38.18	49	*e*P	P	18 55 34.7	-1.9
KLMR				AMP		18 55 51.7	
	comp=Z,207nm,1.3s						
KLMR				*e*S	S	19 01 28.9	-0.4
KLMR				*e*S	S	19 01 28.9	-0.4
V55A	Taylorsville	38.23	264	P	P	18 55 38.6	+1.2
V55A				IAmb	IAmb	18 55 48.4	
	comp=Z,55nm,1.4s						
GHRR		38.26	75	⇓P	P	18 55 36.7	-0.8
KNT	Kendrikon	38.31	85	P	P	18 55 38.1	+0.1
W56A	Indian Trail	38.33	263	P	P	18 55 37.0	-1.2
	baz=48						
ZIMR		38.35	80	⇓P	P	18 55 37.4	-0.9
B35A	Bob, Littlefor	38.46	289	P	P	18 55 38.4	-0.8
R50A	Paris	38.55	270	P	P	18 55 40.4	+0.3
R50A				IAmb	IAmb	18 55 53.1	
	comp=Z,51nm,1.1s						
PGOR	Pogoanele	38.63	77	⇑P	P	18 55 38.9	-1.7
ULM	Lac du Bonnet	38.74	293	P	P	18 55 40.5	-1.1
	comp=Z,9.5nm,0.7s,baz=59,slow=9.2,SNR=20						
ULM	Lac du Bonnet	38.74	293	⇑*e*P	P	18 55 40.6	-0.9
ULM	Lac du Bonnet	38.74	293	P	P	18 55 40.6	-0.9
SRS	Serrai	38.76	84	P	P	18 55 41.5	-0.3
KMSC	Kings Mountain	38.78	263	P	P	18 55 41.0	-1.0
	baz=48						
NVR	Nevrokopi	38.78	84	P	P	18 55 41.5	-0.5
SCHL	Schela	38.81	76	⇓P	P	18 55 41.3	-0.7
SFIN	Lafayette	38.94	274	P	P	18 55 42.3	-1.0
	baz=53						
OBN	Obninsk	39.01	58	P	P	18 55 43.5	-0.1
	comp=Z,19nm,0.8s,baz=335,slow=4.8,SNR=11						
OBN	Obninsk	39.01	58	⇓P	P	18 55 43.2	-0.4
OBN	Obninsk	39.01	58	⇑*e*P	P	18 55 43.5	-0.1
OBN				*e*S	S	19 01 42.7	+0.8
OBN				pmax	pmax		
	comp=Z,223nm,1.3s						
OBN				MLR	MLR		
	comp=Z,6µm,18.0s						
OBN	Obninsk	39.01	58	P	P	18 55 42.7	-1.0
EVR	Evrytania	39.01	89	P	P	18 55 44.2	+0.2
RAZG	Razgrad	39.09	79	⇓P	P	18 55 43.5	-1.1
PLG	Polygyros	39.11	86	P	P	18 55 44.4	-0.4
CFR	Carcaliu	39.16	76	⇓P	P	18 55 43.6	-1.5
TZTN	Tazewell	39.20	267	P	P	18 55 44.2	-1.3
	baz=49						
TZTN	Tazewell	39.20	267	IAmb	IAmb	18 55 52.7	
	comp=Z,73nm,1.1s						
AGG	Agios Georgios	39.27	88	P	P	18 55 46.5	+0.4
AGG	Agios Georgios	39.27	88	P	P	18 55 45.6	-0.5
AGG				pmax	pmax		
	comp=Z,85nm,0.9s						
AGG	Agios Georgios	39.27	88	P	P	18 55 45.6	-0.5
AGG				IAmb	IAmb	18 55 54.8	
	comp=Z,85nm,0.9s						
MOS	Moscow	39.28	57	*e*P	P	18 55 45.4	-0.5
MOS				*e*		18 57 15.3	
MOS				*e*S	S	19 01 48.3	+2.3
MOS				pmax	pmax		
	comp=Z,112nm,1.3s						
ANX	Ano Chora	39.28	89	P	P	18 55 46.6	+0.3
PAULI	Pauline	39.29	263	P	P	18 55 45.9	-0.3
PAULI				IAmb	IAmb	18 55 53.0	
	comp=Z,106nm,1.7s						
HARR	Harsova	39.31	77	⇑P	P	18 55 44.8	-1.5
JSC	Jenkinsville	39.32	262	P	P	18 55 46.1	-0.4
JSC				pmax	pmax		
	comp=Z,13nm,0.9s						
JSC	Jenkinsville	39.32	262	P	P	18 55 46.1	-0.4
V53A	Saluda	39.33	265	P	P	18 55 46.2	-0.4
V53A				IAmb	IAmb	18 55 56.6	
	comp=Z,88nm,1.8s						
JFWS	Jewell Farm	39.35	280	P	P	18 55 45.5	-1.2
	baz=55						
EFP	Efpalio	39.38	89	P	P	18 55 48.6	+1.6
TLBR	Topalu	39.46	77	⇓P	P	18 55 46.5	-1.1
NHSC	New Hope	39.48	260	P	P	18 55 46.6	-1.2
	baz=46						
TPGR	Topolog	39.51	76	⇓P	P	18 55 46.5	-1.5
PAIG	Paliouri	39.53	86	P	P	18 55 47.9	-0.3
L42A	Oliver, Polo	39.53	278	P	P	18 55 48.3	+0.1
ICOR	Ion Corvin	39.55	78	⇓P	P	18 55 47.2	-1.2
TLCR		39.56	76	⇓P	P	18 55 47.0	-1.3
SPMN	Marine on St.	39.57	284	P	P	18 55 48.6	+0.1
F36A	Milaca	39.65	286	P	P	18 55 48.5	-0.7
F36A				IAmb	IAmb	18 56 02.1	
	comp=Z,80nm,1.6s						
T50A	Nancy	39.67	268	P	P	18 55 49.3	-0.1
V52A	Sevierville	39.69	266	P	P	18 55 49.3	-0.3
AGMN	Agassiz Nation	39.72	290	P	P	18 55 48.6	-1.1
	baz=59						
TIRR	Tirgusor	39.73	77	⇑P	P	18 55 48.0	-1.8
TIRR	Tirgusor	39.73	77	⇑P	P	18 55 48.0	-1.8
WCI	Wyandotte Cave	39.78	271	P	P	18 55 49.5	-0.9
	baz=51						
BG3	Lake Jocassee	39.85	264	P	P	18 55 50.3	-0.6
RDO	Rodhopi	39.92	83	P	P	18 55 50.7	-0.7
TKL	Tuckaleechee C	39.92	266	P	P	18 55 52.0	+0.5
TKL				pmax	pmax		
	comp=Z,29nm,1.0s						
TKL	Tuckaleechee C	39.92	266	P	P	18 55 52.0	+0.5
FFC	Flin Flon	39.95	302	P	P	18 55 51.9	+0.4
FFC				pmax	pmax		
	comp=Z,15nm,0.8s						
FFC	Flin Flon	39.95	302	P	P	18 55 51.9	+0.4
ALN	Alexandroupoli	40.37	83	P	P	18 55 55.3	+0.1
ALN	Alexandroupoli	40.37	83	P	P	18 55 55.3	+0.1
ALN				IAmb	IAmb	18 56 02.9	
	comp=Z,48nm,0.9s						
L40A	Anamosa	40.43	279	P	P	18 55 55.7	0.0
CPCT	Cooper Cave	40.51	266	P	P	18 55 56.5	+0.1
K38A	Parkersburg	41.02	281	P	P	18 55 59.2	-1.4
K38A				IAmb	IAmb	18 56 19.5	
	comp=Z,98nm,1.0s						
CLTN	Cedars of Leba	41.19	269	IAmb	IAmb	18 56 19.7	
	comp=Z,78nm,1.9s						
GOGA	Godfrey	41.25	263	P	P	18 56 01.7	-0.8
	baz=46						
TAM	Tamanrasset	41.27	122	P	P	18 56 01.6	-1.3
TAM				pmax	pmax		
	comp=Z,117nm,1.8s						
TAM	Tamanrasset	41.27	122	P	P	18 56 01.6	-1.3
TAM				IAmb	IAmb	18 56 17.5	
	comp=Z,117nm,1.8s						
Y52A	Lilburn	41.30	264	P	P	18 56 02.7	-0.2
Y52A				IAmb	IAmb	18 56 09.8	
	comp=Z,128nm,1.6s						
X51A	Calhoun	41.31	266	P	P	18 56 02.8	-0.2
LPSR	Galich'ya Gora	41.41	61	*e*P	P	18 56 03.3	-0.3
LPSR				pmax	pmax		
	comp=Z,100nm,1.0s						
SWET	Sewanee	41.52	267	P	P	18 56 04.5	-0.3
SWET				IAmb	IAmb	18 56 14.7	
	comp=Z,166nm,1.9s						
255A	Hazlehurst	41.69	261	P	P	18 56 06.1	0.0
255A				IAmb	IAmb	18 56 17.2	
	comp=Z,104nm,1.2s						
V48A	Smith Brothers	41.72	269	IAmb	IAmb	18 56 19.4	
	comp=Z,42nm,1.0s						
FPAL	Fort Paine	41.78	266	P	P	18 56 06.6	-0.4
SIUC	Southern Illin	41.89	273	IAmb	IAmb	18 56 21.6	
	comp=Z,39nm,0.8s						
S44A	Carbondale	41.93	273	P	P	18 56 07.6	-0.4
S44A				IAmb	IAmb	18 56 21.8	
	comp=Z,38nm,0.8s						
WVT	Waverly	42.08	270	P	P	18 56 08.3	-0.9
	baz=49						
WVT	Waverly	42.08	270	P	P	18 56 08.5	-0.7
WVT				pmax	pmax		
	comp=Z,23nm,1.1s						
WVT	Waverly	42.08	270	P	P	18 56 08.5	-0.7
VSR	Storozhevoye	42.24	62	*e*P	P	18 56 09.0	-1.4
VSR				pmax	pmax		
	comp=Z,180nm,1.5s						
YKA	Yellowknife Ar	42.40	317	P	P	18 56 11.3	-0.2
	comp=Z,7.7nm,0.9s,baz=64,slow=9.2,SNR=39						
YKA				PcP	PcP	18 58 05.0	+0.5
	comp=Z,2.6nm,0.5s,baz=68,slow=4.4,SNR=8.1						
VORD	Divnogorie	42.43	63	*e*P	P	18 56 11.2	-0.8
VORD				pmax	pmax		
	comp=Z,90nm,0.7s						
P40A	Paris	42.47	277	P	P	18 56 12.3	-0.1
ECSD	EROS Data Cent	42.67	285	P	P	18 56 13.1	-0.9
	baz=54,SNR=18						
ECSD	EROS Data Cent	42.67	285	P	P	18 56 14.2	+0.2
C36M	Paulatuk	42.83	329	P	P	18 56 14.4	-0.5
	baz=64						
H05N1	Guadeloupe/Mar	42.89	223	T	T	19 41 31.5	
	SNR=15						
CCM	Cathedral Cave	42.91	275	P	P	18 56 15.2	-0.8
	baz=50						
CCM	Cathedral Cave	42.91	275	P	P	18 56 15.2	-0.8
CCM				pmax	pmax		
	comp=Z,143nm,1.8s						
CCM	Cathedral Cave	42.91	275	P	P	18 56 15.2	-0.8
CCM				IAmb	IAmb	18 56 26.6	
	comp=Z,143nm,1.8s						
PBMO	Poplar Bluff	43.23	273	P	P	18 56 17.8	-0.8
PBMO				IAmb	IAmb	18 56 28.9	
	comp=Z,69nm,1.4s						
MANT	Manisa	43.38	84	P	P	18 56 18.8	-1.3
E28A	Huff	43.41	291	IAmb	IAmb	18 56 34.5	
	comp=Z,71nm,0.9s						
HUMP	Col San Antoni	43.41	230	P	P	18 56 18.6	-1.6
HUMP				IAmb	IAmb	18 56 33.8	
	comp=Z,60nm,1.1s						
L34A	Svendsen Farm,	43.57	283	IAmb	IAmb	18 56 43.8	
	comp=Z,57nm,0.9s						
PDPR	Patillas Dam,	43.60	231	P	P	18 56 21.2	-0.5
PDPR				IAmb	IAmb	18 56 33.8	
	comp=Z,46nm,0.9s						
VRH	Novokhopyorsk	43.62	61	*e*P	P	18 56 21.4	-0.1
VRH				pmax	pmax		
	comp=Z,240nm,1.6s						
LRAL	Lakeview Retre	43.65	266	P	P	18 56 20.8	-1.2
	baz=46						
KIRV	Kirov	43.68	49	*ce*P	P	18 56 21.8	-0.1
250A	Grady	43.94	264	P	P	18 56 24.3	-0.1
KOWA	Kowa	44.06	139	P	P	18 56 24.7	-0.7
KOWA				IAmb	IAmb	18 56 40.6	
	comp=Z,42nm,0.8s						
OXF	Oxford	44.11	269	P	P	18 56 24.3	-1.4
	baz=48						
OXF	Oxford	44.11	269	IAmb	IAmb	18 56 35.2	
	comp=Z,62nm,1.1s						
Z47A	Carrollton	44.19	267	P	P	18 56 25.8	-0.6
Z47A				IAmb	IAmb	18 56 39.0	
	comp=Z,71nm,1.0s						
DGMT	Dagmar	44.31	295	P	P	18 56 25.4	-1.8
	baz=56						
DGMT	Dagmar	44.31	295	P	P	18 56 28.0	+0.7
DGMT				IAmb	IAmb	18 56 44.8	
	comp=Z,56nm,1.2s						
S39A	Bolivar	44.40	276	P	P	18 56 27.1	-1.0
S39A				IAmb	IAmb	18 56 48.5	
	comp=Z,70nm,1.6s						
H05S1	Guadeloupe/Mar	44.49	222	T	T	19 43 33.2	
	SNR=11						
K31A	O'Neill	44.59	285	IAmb	IAmb	18 56 48.3	
	comp=Z,62nm,1.1s						
Y45A	Yeager Farm, C	44.63	269	IAmb	IAmb	18 56 45.4	
	comp=Z,53nm,0.8s						
FCAR	Ozark Folk Cen	44.85	273	IAmb	IAmb	18 56 52.2	
	comp=Z,44nm,1.5s						
ILGA	Ilgaz	44.88	78	P	P	18 56 32.5	+0.3
ILGA				IAmb	IAmb	18 56 38.4	
	comp=Z,74nm,1.1s						
U40A	Yellville	44.98	274	P	P	18 56 31.8	-0.9
	baz=49						
U40A	Yellville	44.98	274	IAmb	IAmb	18 56 42.4	
	comp=Z,26nm,0.9s						
BR231	Keskin MP Arra	45.08	80	P	P	18 56 31.5	-2.1
WHAR	Wooly Hollow	45.35	272	IAmb	IAmb	18 56 47.8	
	comp=Z,28nm,1.0s						
SDDR	Presa de Saban	45.38	237	P	P	18 56 36.0	0.0
SDDR	Presa de Saban	45.38	237	*e*P	P	18 56 34.3	-1.7
W41B	Gary Mavity, V	45.40	272	P	P	18 56 34.8	-1.1
	baz=48						
KSU1	Kansas State U	45.49	280	P	P	18 56 35.7	-1.0
	baz=51						
KSU1	Kansas State U	45.49	280	IAmb	IAmb	18 56 42.2	
	comp=Z,48nm,0.8s						
BR131	Keskin Array S	45.67	79	*c i*P	P	18 56 39.1	+0.9
BRTR	Keskin Array B	45.67	79	P	P	18 56 36.8	-1.5
	comp=Z,26nm,0.7s,baz=308,slow=6.6,SNR=51						
BRTR	Keskin Array B	45.67	79	P	P	18 56 36.6	-1.6
HHAR	Hobbs	45.69	275	IAmb	IAmb	18 56 50.0	
	comp=Z,73nm,1.6s						
U38A	Gravette	45.86	275	IAmb	IAmb	18 56 49.6	
	comp=Z,80nm,1.9s						
BELG	Belogornoye	46.05	57	P	P	18 56 39.0	-1.9
	comp=Z,124nm,1.1s,baz=73,slow=1.1,SNR=27						
BELG	Belogornoye	46.05	57	⇑*e*P	P	18 56 40.3	-0.6
BELG				pmax	pmax		
	comp=Z,23nm,0.9s						
X40A	Basin Creek Fa	46.22	272	P	P	18 56 41.4	-1.0
	baz=48,SNR=7.9						
X40A	Basin Creek Fa	46.22	272	IAmb	IAmb	18 57 02.9	
	comp=Z,58nm,1.4s						
INK	Inuvik	46.32	330	P	P	18 56 42.5	-0.3
INK				pmax	pmax		
	comp=Z,57nm,1.8s						
INK	Inuvik	46.32	330	P	P	18 56 42.5	-0.3
INK				IAmb	IAmb	18 56 54.9	
	comp=Z,57nm,1.8s						
W39A	Magazine	46.32	273	P	P	18 56 42.4	-0.9
	baz=48						
W39A	Magazine	46.32	273	IAmb	IAmb	18 57 03.1	
	comp=Z,58nm,1.2s						
VBMS	Vicksburg	46.36	268	P	P	18 56 43.2	-0.4
	baz=46						
LAO	LASA Array	46.46	294	P	P	18 56 41.9	-2.4
	baz=54,SNR=8.0						
GTBY	Guantanamo Bay	46.61	242	*e*P	P	18 56 44.9	-0.7
MIAR	Mount Ida	46.63	273	P	P	18 56 44.6	-1.1
	baz=48						
MIAR	Mount Ida	46.63	273	P	P	18 56 45.2	-0.5

MIAR				pmax	pmax		
	comp=Z,33nm,1.1s						
MIAR	**Mount Ida**	**46.63**	**273**	P	**P**	**18 56 45.2**	**-0.5**
MIAR				IAmb	IAmb	18 56 58.2	
	comp=Z,33nm,1.1s						
RSSD	**Black Hills**	**46.75**	**290**	P	**P**	**18 56 44.6**	**-2.2**
	baz=53						
T35A	**Sooner Cattle**	**46.84**	**277**	IAmb	IAmb	18 57 05.7	
	comp=Z,30nm,0.8s						
SOC	**Sochi**	**46.85**	**71**	*e*P	**P**	**18 56 45.0**	**-2.3**
SOC				*e*		18 58 34.1	
SOC				*e*PPP	PPP	18 59 18.3	
SOC				*e*S	**S**	**19 03 37.0**	**-0.4**
Z41A	**Richland Creek**	**47.03**	**271**	P	**P**	**18 56 47.6**	**-1.2**
	baz=47						
TUL1	**Leonard**	**47.06**	**276**	P	**P**	**18 56 47.6**	**-1.5**
	baz=48						
R32A	**Long Quarter,**	**47.18**	**280**	P	**P**	**18 56 49.9**	**-0.1**
CBKS	**Cedar Bluff**	**47.54**	**281**	P	**P**	**18 56 52.2**	**-0.7**
	baz=50						
OGNE	**Ogallala**	**47.55**	**285**	P	**P**	**18 56 51.7**	**-1.2**
	baz=51						
EGMT	**Eagleton**	**47.61**	**297**	P	**P**	**18 56 51.9**	**-1.4**
	baz=54,SNR=15						
TORD	**Torodi Ar. Bea**	**47.68**	**133**	P	**P**	**18 56 51.8**	**-2.2**
	comp=Z,18nm,0.8s,baz=333,slow=6.6,SNR=57						
TORD	**Torodi Ar. Bea**	**47.68**	**133**	P	**P**	**18 56 51.4**	**-2.6**
X37A	**Clayton**	**47.69**	**274**	IAmb	IAmb	18 57 47.4	
	comp=Z,30nm,1.4s						
GOF	**Gofitskoye**	**47.85**	**67**⇑	*e*P	**P**	**18 56 56.4**	**+1.3**
GOF				pmax	pmax		
	comp=Z,147nm,0.8s						
CROK	**Carrier**	**48.00**	**278**	P	**P**	**18 56 55.4**	**-1.0**
KIV	**Kislovodsk**	**48.33**	**69**	P	**P**	**18 57 00.3**	**+1.4**
KIV	**Kislovodsk**	**48.33**	**69**	*e*P	**P**	**18 56 59.7**	**+0.8**
KIV				pmax	pmax		
	comp=Z,78nm,1.0s						
KIV	**Kislovodsk**	**48.33**	**69**	P	**P**	**18 56 57.7**	**-1.2**
KIV				IAmb	IAmb	18 57 14.2	
	comp=Z,51nm,1.0s						
KIV	**Kislovodsk**	**48.33**	**69**	S	**S**	**19 04 01.6**	**+3.0**
KVAR	**Kislovodsk Arr**	**48.33**	**69**	P	**P**	**18 57 00.2**	**+1.3**
	comp=Z,8.8nm,0.9s,baz=288,slow=20,SNR=3.7						
EPYK	**Eagle Plains**	**48.47**	**329**	P	**P**	**18 56 57.1**	**-2.5**
	baz=52,SNR=9.0						
EPYK	**Eagle Plains**	**48.47**	**329**	IAmb	IAmb	18 57 15.1	
	comp=Z,38nm,1.0s						
KBZ	**Khabaz**	**48.59**	**69**	P	**P**	**18 57 01.9**	**+1.2**
	comp=Z,22nm,0.9s,baz=280,slow=9.4,SNR=16						
KBZ	**Khabaz**	**48.59**	**69**	P	**P**	**18 57 02.0**	**+1.2**
CSS	**Mathiatis**	**48.59**	**84**	P	**P**	**18 56 59.4**	**-1.5**
CSS				IAmb	IAmb	18 57 14.8	
	comp=Z,45nm,1.0s						
ARU	**Arti**	**48.99**	**47***c*	*i*P	**P**	**18 57 03.1**	**-0.6**
ARU						18 58 55.3	
ARU				S	**S**	**19 04 09.1**	**+1.7**
ARU				SS	**SS**	**19 07 31.8**	**-5.8**
ARU				pmax	pmax		
	comp=Z,61nm,1.2s						
ARU	**Arti**	**48.99**	**47**	P	**P**	**18 57 03.2**	**-0.6**
K22A	**Casper**	**49.09**	**290**	P	**P**	**18 57 03.9**	**-0.9**
	baz=51						
K22A	**Casper**	**49.09**	**290**	IAmb	IAmb	18 57 19.1	
	comp=Z,39nm,0.9s						
RLMT	**Red Lodge**	**49.10**	**294**	P	**P**	**18 57 03.3**	**-1.7**
	baz=52						
RLMT	**Red Lodge**	**49.10**	**294**	IAmb	IAmb	18 57 32.4	
	comp=Z,54nm,1.4s						
KSCO	**Kaye Shedlock'**	**49.14**	**284**	P	**P**	**18 57 03.9**	**-1.4**
	baz=50						
KSCO	**Kaye Shedlock'**	**49.14**	**284**	P	**P**	**18 57 05.2**	**0.0**
KSCO				IAmb	IAmb	18 57 23.6	
	comp=Z,34nm,0.8s						
WALA	**Waterton Lakes**	**49.21**	**301**	IAmb	IAmb	18 57 20.1	
	comp=Z,36nm,0.9s						
PHWY	**Pilot Hill**	**49.32**	**288**	IAmb	IAmb	18 57 20.3	
	comp=Z,22nm,0.8s						
KOPT	**Kop Dagi**	**49.55**	**74**	P	**P**	**18 57 09.0**	**+0.4**
KOPT				IAmb	IAmb	18 57 25.4	
	comp=Z,58nm,1.1s						
WMOK	**Wichita Mounta**	**49.66**	**277**	P	**P**	**18 57 08.6**	**-0.6**
	baz=47						
SVE	**Sverdlovsk**	**49.68**	**46**	*e*P	**P**	**18 57 09.6**	**+0.7**
SVE				*e*S	**S**	**19 04 21.9**	**+4.9**
SVE				pmax	pmax		
	comp=Z,59nm,1.3s						
ZEI	**Tsey**	**49.75**	**69**	*e*P	**P**	**18 57 09.9**	**0.0**
ZEI				pmax	pmax		
	comp=Z,42nm,1.1s						
N23A	**Red Feather La**	**49.87**	**288**	P	**P**	**18 57 09.4**	**-1.6**
	baz=50,SNR=29						
LKWY	**Lake**	**50.07**	**294**	P	**P**	**18 57 13.8**	**+1.3**
LKWY				pmax	pmax		
	comp=Z,17nm,1.1s						
LKWY	**Lake**	**50.07**	**294**	P	**P**	**18 57 13.8**	**+1.3**
RWWY	**Rawlins**	**50.09**	**289**	IAmb	IAmb	18 57 26.4	
	comp=Z,55nm,1.0s						
BOZ	**Bozeman (W)**	**50.11**	**296**	P	**P**	**18 57 11.4**	**-1.2**
	baz=51,SNR=19						
BOZ	**Bozeman (W)**	**50.11**	**296**	IAmb	IAmb	18 57 27.7	
	comp=Z,51nm,1.6s						
BMAR	**Burnt Mountain**	**50.14**	**332**	P	**P**	**18 57 12.8**	**+0.4**
H17A	**Grant Village**	**50.28**	**294**	P	**P**	**18 57 13.0**	**-1.1**
	baz=51						
A21K	**Barrow**	**50.29**	**340**	P	**P**	**18 57 13.1**	**-0.2**
	baz=41,SNR=6.5						
ISCO	**Idaho Springs**	**50.38**	**286**	P	**P**	**18 57 14.1**	**-0.8**
	baz=49,SNR=9.4						
ISCO	**Idaho Springs**	**50.38**	**286**	P	**P**	**18 57 15.1**	**+0.2**
ISCO				pmax	pmax		
	comp=Z,82nm,1.9s						
ISCO	**Idaho Springs**	**50.38**	**286**	P	**P**	**18 57 15.1**	**+0.2**
ISCO				IAmb	IAmb	18 57 25.6	
	comp=Z,82nm,1.9s						
GROC	**Groznyy**	**50.56**	**68**	*e*P	**P**	**18 57 13.1**	**-2.7**
GROC				*e*		18 58 29.9	
GROC				pmax	pmax		
	comp=Z,43nm,1.0s						
MSO	**Missoula**	**50.59**	**298**	P	**P**	**18 57 15.0**	**-1.2**
	baz=51						
NRIK	**Noril'sk**	**50.60**	**24**	P	**P**	**18 57 17.0**	**+1.2**
	comp=Z,5.7nm,0.8s,baz=316,slow=3.6,SNR=7.8						
NRIK	**Noril'sk**	**50.60**	**24**	P	**P**	**18 57 17.0**	**+1.2**
NRIK	**Noril'sk**	**50.60**	**24**	P	**P**	**18 57 15.9**	**+0.1**
NRIK				IAmb	IAmb	18 57 30.7	
	comp=Z,38nm,1.2s						
TOLK	**Toolik Lake Re**	**50.63**	**335**	P	**P**	**18 57 16.3**	**+0.2**
	baz=44,SNR=12						
BW06	**Boulder Array**	**50.74**	**292**	P	**P**	**18 57 16.2**	**-1.4**
	baz=50,SNR=17						
PD31	**Pinedale Array**	**50.74**	**292**	P	**P**	**18 57 16.0**	**-1.5**
PDAR	**Pinedale Array**	**50.74**	**292**	P	**P**	**18 57 16.2**	**-1.3**
	comp=Z,6.3nm,0.6s,baz=62,slow=8.6,SNR=31						
PDAR	**Pinedale Array**	**50.74**	**292**	P	**P**	**18 57 16.0**	**-1.5**
WHTX	**Lake Whitney,**	**50.74**	**273**	P	**P**	**18 57 16.2**	**-1.1**
	baz=46						
WHTX	**Lake Whitney,**	**50.74**	**273**	IAmb	IAmb	18 57 35.5	
	comp=Z,31nm,1.0s						
TIC	**Toumodi**	**50.89**	**145**	*e*P	**P**	**18 57 18.5**	**-0.1**
EGAK	**Eagle**	**50.91**	**329**	P	**P**	**18 57 18.6**	**+0.4**
DBIC	**Dimbokro**	**50.93**	**144**	P	**P**	**18 57 18.9**	**0.0**
	comp=Z,7.5nm,0.5s,baz=325,slow=8.0,SNR=17						
REDW	**Red Top Meadow**	**51.09**	**293**	IAmb	IAmb	18 57 37.0	
	comp=Z,91nm,1.8s						
KIC	**Kosan Boka**	**51.26**	**144**	*e*P	**P**	**18 57 21.1**	**-0.2**
	comp=Z,24nm,1.2s						
MCMT	**McKenzie Canyo**	**51.26**	**296**	P	**P**	**18 57 21.7**	**+0.3**
LIC	**Lamto**	**51.28**	**145**	*e*P	**P**	**18 57 21.3**	**-0.2**
	comp=Z,217nm,1.3s						
AMTX	**Amarillo**	**51.31**	**279**	P	**P**	**18 57 19.2**	**-2.6**
	baz=47						
AMTX	**Amarillo**	**51.31**	**279**	P	**P**	**18 57 21.8**	**0.0**
NEW	**Newport**	**51.37**	**302**	P	**P**	**18 57 20.4**	**-1.5**
	baz=51						
NEW	**Newport**	**51.37**	**302**	IAmb	IAmb	18 57 38.6	
	comp=Z,64nm,1.6s						
T25A	**Trinidad**	**51.43**	**283**	P	**P**	**18 57 20.5**	**-2.2**
	baz=48						
AHID	**Auburn Hatcher**	**51.61**	**293**	P	**P**	**18 57 23.4**	**-0.7**
ABTX	**Abilene, Hawle**	**51.63**	**275**	P	**P**	**18 57 23.3**	**-0.7**
	baz=46						
SDCO	**Great Sand Dun**	**51.67**	**284**	P	**P**	**18 57 24.2**	**-0.4**
	baz=48,SNR=14						
SDCO	**Great Sand Dun**	**51.67**	**284**	IAmb	IAmb	18 57 35.2	
	comp=Z,57nm,1.9s						
MAK	**Makhachkala**	**51.67**	**67***c*	*i*P	**P**	**18 57 19.6**	**-4.6**
MAK				*e*S	**S**	**19 04 36.5**	**-8.5**
MAK				pmax	pmax		
	comp=Z,304nm,1.4s						
O20A	**White River Ci**	**51.69**	**288**	P	**P**	**18 57 24.0**	**-0.7**
	baz=49,SNR=5.4						
O20A	**White River Ci**	**51.69**	**288**	IAmb	IAmb	18 58 12.3	
	comp=Z,79nm,1.4s						
COLD	**Coldfoot**	**51.82**	**334**	P	**P**	**18 57 24.7**	**-0.3**
	baz=43						
URIC	**Uribia, Colomb**	**51.91**	**233**	*e*P	**P**	**18 57 25.1**	**-1.1**
GNI	**Garni**	**51.93**	**71**	P	**P**	**18 57 27.5**	**+1.2**
	comp=Z,29nm,1.0s,baz=285,slow=3.7,SNR=6.6						
GNI	**Garni**	**51.93**	**71**	P	**P**	**18 57 27.9**	**+1.5**
GNI	**Garni**	**51.93**	**71***d*	*e*P	**P**	**18 57 27.6**	**+1.2**
GNI				pmax	pmax		
	comp=Z,18nm,1.0s						
GNI	**Garni**	**51.93**	**71**	P	**P**	**18 57 27.1**	**+0.7**
GNI	**Garni**	**51.93**	**71**	P	**P**	**18 57 27.3**	**+0.9**
GNI				P	**P**	**18 57 27.3**	**+0.9**
GEVA	**Gevas**	**52.16**	**74**	IAmb	IAmb	18 57 34.9	
	comp=Z,71nm,1.2s						
BCAR	**Beaver Creek A**	**52.28**	**327**	P	**P**	**18 57 29.4**	**+0.9**
S22A	**4UR Ranch, Cre**	**52.45**	**285**	P	**P**	**18 57 29.2**	**-1.2**
	baz=48						
B08A	**Colville Reser**	**52.45**	**303**	IAmb	IAmb	18 57 43.6	
	comp=Z,37nm,1.0s						
POKR	**Poker Plat Res**	**52.59**	**331**	P	**P**	**18 57 30.7**	**0.0**
	baz=44						
POKR	**Poker Plat Res**	**52.59**	**331**	IAmb	IAmb	18 57 44.4	
	comp=Z,68nm,1.4s						
MSTX	**Muleshoe**	**52.59**	**279**	P	**P**	**18 57 30.6**	**-0.7**
	baz=46,SNR=10						
MSTX	**Muleshoe**	**52.59**	**279**	IAmb	IAmb	18 57 44.1	
	comp=Z,68nm,1.1s						
ILAR	**Eielson Array**	**52.68**	**331**	P	**P**	**18 57 32.0**	**+0.7**
	comp=Z,3.2nm,0.7s,baz=40,slow=6.1,SNR=20						
ILAR				PcP	**PcP**	**18 58 42.1**	**+1.1**
	comp=Z,3.8nm,0.9s,baz=34,slow=3.1,SNR=4.1						
ILAR	**Eielson Array**	**52.68**	**331**	P	**P**	**18 57 31.8**	**+0.4**
COLA	**College**	**52.89**	**331**⇑	*e*P	**P**	**18 57 34.8**	**+1.9**
COLA				pmax	pmax		
	comp=Z,28nm,2.5s						
TCOL	**CIGO, UAF Yank**	**52.89**	**331**	P	**P**	**18 57 32.8**	**-0.1**
	baz=43						
CRJC	**Cerrejon, Guaj**	**52.94**	**234**	*e*P	**P**	**18 57 37.3**	**+3.3**
MDM	**Murphy Dome**	**52.94**	**331**	IAmb	IAmb	18 57 46.5	
	comp=Z,42nm,1.4s						
HLID	**Hailey**	**52.94**	**295**	P	**P**	**18 57 33.1**	**-0.8**
	baz=49,SNR=18						
HDA	**Harding Lake**	**52.96**	**330**	P	**P**	**18 57 32.0**	**-1.5**
	baz=44						
HDA	**Harding Lake**	**52.96**	**330**	P	**P**	**18 57 34.1**	**+0.7**
PV15	**Paradox Valley**	**53.02**	**287**	IAmb	IAmb	18 57 59.1	
	comp=Z,27nm,0.9s						
CCB	**Clear Creek Bu**	**53.04**	**331**	IAmb	IAmb	18 57 46.1	
	comp=Z,63nm,1.9s						
PV07	**Paradox Valley**	**53.05**	**287**	P	**P**	**18 57 34.9**	**+0.1**
PV07				IAmb	IAmb	18 57 46.2	
	comp=Z,81nm,1.6s						
PV22	**Blue Mesa, Par**	**53.07**	**287**	IAmb	IAmb	18 58 03.4	
	comp=Z,32nm,1.2s						
I23K	**Minto, Yukon-K**	**53.12**	**332**	P	**P**	**18 57 33.9**	**-0.7**
	baz=42,SNR=8.0						
I23K	**Minto, Yukon-K**	**53.12**	**332**	IAmb	IAmb	18 57 48.3	
	comp=Z,79nm,1.6s						
PV12	**Saucer Basin,**	**53.22**	**287**	P	**P**	**18 57 35.8**	**-0.3**
JCT	**Junction City**	**53.23**	**274**	P	**P**	**18 57 35.2**	**-0.8**
	baz=45						
WRH	**Wood River Hil**	**53.25**	**331**	IAmb	IAmb	18 57 48.8	
	comp=Z,67nm,1.7s						
PV23	**Carpenter Ridg**	**53.25**	**287**	IAmb	IAmb	18 57 54.3	
	comp=Z,60nm,1.4s						
PV02	**Paradox Valley**	**53.26**	**287**	IAmb	IAmb	18 57 49.9	
	comp=Z,36nm,1.1s						
PV03	**Paradox Valley**	**53.29**	**287**	P	**P**	**18 57 36.8**	**+0.3**
PV20	**West Nyswonger**	**53.30**	**287**	IAmb	IAmb	18 57 59.4	
	comp=Z,43nm,0.9s						
PV14	**Lion Creek, Pa**	**53.31**	**287**	P	**P**	**18 57 36.6**	**-0.1**
SPUT	**South Promonto**	**53.32**	**292**	P	**P**	**18 57 36.4**	**-0.2**
PV19	**Morning Glory**	**53.33**	**287**	IAmb	IAmb	18 58 01.3	
	comp=Z,46nm,1.0s						
NEA2	**Nenana**	**53.45**	**331**	P	**P**	**18 57 37.0**	**-0.1**
	baz=42,SNR=5.1						
PAX	**Paxson**	**53.54**	**329**	IAmb	IAmb	18 57 57.4	
	comp=Z,31nm,1.1s						
PV05	**Paradox Valley**	**53.56**	**287**	P	**P**	**18 57 37.9**	**-0.7**
MLY	**Manley**	**53.60**	**332**	P	**P**	**18 57 37.1**	**-1.2**
	baz=42,SNR=7.4						
SRU	**San Rafael Swe**	**53.69**	**289**	P	**P**	**18 57 39.2**	**-0.2**
SRU				pmax	pmax		
	comp=Z,33nm,1.0s						
SRU	**San Rafael Swe**	**53.69**	**289**	P	**P**	**18 57 39.2**	**-0.2**
IMAR	**Indian Mountai**	**53.70**	**334**	P	**P**	**18 57 39.0**	**+0.2**
SDV	**Santo Domingo**	**53.71**	**230**	P	**P**	**18 57 39.5**	**-0.3**
SDV				IAmb	IAmb	18 57 51.9	
	comp=Z,26nm,0.9s						
SDV	**Santo Domingo**	**53.71**	**230**	*e*P	**P**	**18 57 37.3**	**-2.5**
SDV	**Santo Domingo**	**53.71**	**230**	*e*P	**P**	**18 57 39.8**	**0.0**
MVCO	**Mesa Verde**	**53.79**	**286**	P	**P**	**18 57 38.6**	**-1.7**
	baz=47						
MVCO	**Mesa Verde**	**53.79**	**286**	IAmb	IAmb	18 58 01.5	
	comp=Z,33nm,1.1s						
MFID	**Camas Ranch**	**53.81**	**296**	IAmb	IAmb	18 57 48.0	
	comp=Z,35nm,1.6s						
HAWA	**Hanford**	**53.83**	**301**	P	**P**	**18 57 39.4**	**-0.7**
BGU	**Big Grassy Mou**	**53.91**	**292**	P	**P**	**18 57 40.6**	**-0.4**
ANMO	**Albuquerque**	**54.13**	**282**	P	**P**	**18 57 42.0**	**-0.7**
	baz=46						
ANMO	**Albuquerque**	**54.13**	**282**⇓	*e*P	**P**	**18 57 43.5**	**+0.8**
ANMO				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ANMO	**Albuquerque**	**54.13**	**282**	P	**P**	**18 57 42.5**	**-0.2**
ABKAR	**Akbulak array**	**54.15**	**54**	P	**P**	**18 57 41.3**	**-1.1**
ABKAR	**Akbulak array**	**54.15**	**54**	IAmb	IAmb	18 57 47.7	
	comp=Z,54nm,1.2s						
N25K	**Chitina, Valde**	**54.24**	**327**	P	**P**	**18 57 42.5**	**-0.5**
	baz=44						
RND	**Reindeer**	**54.27**	**330**	P	**P**	**18 57 43.8**	**+0.6**
RND				pmax	pmax		
	comp=Z,23nm,1.0s						
RND	**Reindeer**	**54.27**	**330**	P	**P**	**18 57 43.8**	**+0.6**
RND				IAmb	IAmb	18 58 02.6	
	comp=Z,23nm,1.0s						
DUG	**Dugway, Tooele**	**54.27**	**291**	P	**P**	**18 57 43.0**	**-0.6**
	baz=48,SNR=16						
DUG	**Dugway, Tooele**	**54.27**	**291**	IAmb	IAmb	18 58 08.0	
	comp=Z,64nm,1.5s						
SOCV	**Socops**	**54.34**	**230**	*e*P	**P**	**18 57 42.4**	**-1.8**
BPAW	**Bear Paw Mtn.**	**54.38**	**332**	IAmb	IAmb	18 57 56.1	
	comp=Z,72nm,1.8s						
M24K	**Tolsona, Glenn**	**54.40**	**328**	P	**P**	**18 57 43.8**	**-0.3**
	baz=43						
833A	**Chaparral WMA,**	**54.52**	**271**	P	**P**	**18 57 43.9**	**-1.4**
	baz=44						
KTH	**Kantishna Hill**	**54.77**	**331**	P	**P**	**18 57 47.4**	**+0.6**
KTH				IAmb	IAmb	18 57 58.0	
	comp=Z,78nm,1.4s						
ELOV	**Elorza**	**54.84**	**228**	*e*P	P	18 57 42.7	-5.1
D03D	**Eldon**	**54.90**	**304**	P	**P**	**18 57 46.5**	**-1.4**
	baz=48						
D04E	**Lakebay**	**54.98**	**304**	P	**P**	**18 57 47.2**	**-1.2**
	baz=48						
F05D	**White Salmon**	**55.17**	**302**	P	**P**	**18 57 48.7**	**-1.2**
	baz=48						
ELK	**Elko**	**55.27**	**293**	IAmb	IAmb	18 58 08.6	
	comp=Z,37nm,1.6s						
TIXI	**Tiksi**	**55.27**	**7***d*	*i*P	**P**	**18 57 51.6**	**+1.4**
TIXI				pmax	pmax		
	comp=Z,81nm,1.0s						
TIXI	**Tiksi**	**55.27**	**7**	P	**P**	**18 57 51.2**	**+1.1**
E04D	**Cinebar**	**55.29**	**303**	P	**P**	**18 57 49.4**	**-1.3**
	baz=48						
SMLC	**San Martn de**	**55.43**	**234**	*e*P	**P**	**18 57 50.1**	**-2.0**
CUT	**Chulitna**	**55.45**	**330**	P	**P**	**18 57 50.8**	**-0.8**
	baz=41						
OCAC	**Ocana**	**55.55**	**232**	*e*P	**P**	**18 57 55.3**	**+2.2**
MNTX	**Cornudas Mount**	**55.75**	**279**	P	**P**	**18 57 53.6**	**-0.6**
	baz=45						
MNTX	**Cornudas Mount**	**55.75**	**279**	P	**P**	**18 57 53.7**	**-0.5**
W18A	**Petrified Fore**	**55.95**	**285**	P	**P**	**18 57 55.9**	**0.0**
	baz=46						
PSUT	**Pine Spring**	**55.99**	**291**	P	**P**	**18 57 56.3**	**+0.2**
WVOR	**Wild Horse Val**	**56.00**	**297**	IAmb	IAmb	18 58 05.8	
	comp=Z,34nm,1.0s						
PAMC	**Pamplona, Colo**	**56.04**	**231**	*e*P	**P**	**18 57 58.1**	**+1.2**
I05D	**Terrebonne, OR**	**56.15**	**300**	P	**P**	**18 57 56.0**	**-1.0**
	baz=47						
NBMO	**Morrinhos-CE**	**56.16**	**190**	*e*P	**P**	**18 57 59.5**	**+2.3**
MOTC	**Monteria, Cord**	**56.24**	**235**	*e*P	**P**	**18 57 58.1**	**+0.3**
PINE	**Pine Mountain**	**56.31**	**300**	IAmb	IAmb	18 58 13.0	
	comp=Z,36nm,0.9s						
BRVK	**Borovoye**	**56.35**	**45**	*i* P	**P**	**18 57 58.3**	**+0.1**
BRVK				pmax	pmax		
	comp=Z,20nm,0.9s						
BRVK	**Borovoye**	**56.35**	**45**	P	**P**	**18 57 58.0**	**-0.2**
BRVK				IAmb	IAmb	18 58 13.3	
	comp=Z,36nm,0.8s						
BRVK	**Borovoye**	**56.35**	**45**	P	**P**	**18 57 58.3**	**+0.1**
BRVK				P	**P**	**18 57 58.3**	**+0.1**
H04A	**Detroit Lake**	**56.36**	**301**	IAmb	IAmb	18 58 04.9	
	comp=Z,48nm,1.7s						
TX31	**Lajitas Ar. Si**	**56.39**	**275**	IAmb	IAmb	18 58 18.4	
	comp=Z,30nm,1.0s						
TXAR	**Lajitas Array**	**56.39**	**275**	P	**P**	**18 57 58.6**	**-0.3**
	comp=Z,2.5nm,0.6s,baz=62,slow=6.3,SNR=13						
TXAR	**Lajitas Array**	**56.39**	**275**	P	**P**	**18 57 58.4**	**-0.6**
TAMC	**Tame, Arauca**	**56.40**	**230**	*e*P	**P**	**18 58 01.0**	**+2.0**
KNB	**Kanab**	**56.44**	**289**	P	**P**	**18 57 58.8**	**-0.5**
KNB				pmax	pmax		
	comp=Z,35nm,1.1s						
KNB	**Kanab**	**56.44**	**289**	P	**P**	**18 57 58.8**	**-0.5**
U15A	**North Rim**	**56.54**	**288**	IAmb	IAmb	18 58 12.3	
	comp=Z,29nm,1.1s						
121A	**Cookes Peak, D**	**56.60**	**281**	P	**P**	**18 58 00.5**	**0.0**
	baz=45						
121A	**Cookes Peak, D**	**56.60**	**281**	IAmb	IAmb	18 58 14.0	
	comp=Z,19nm,0.8s						
WUAZ	**Wupatki**	**56.64**	**286**	P	**P**	**18 58 00.9**	**+0.1**
	baz=46						
WUAZ	**Wupatki**	**56.64**	**286**	IAmb	IAmb	18 58 12.3	
	comp=Z,54nm,1.3s						
J05D	**Fort Rock, OR**	**56.81**	**299**	P	**P**	**18 58 01.5**	**-0.4**
	baz=47,SNR=24						
K05A	**Summer Lake**	**57.02**	**299**	P	**P**	**18 58 03.6**	**+0.2**
K05A				IAmb	IAmb	18 58 22.1	
	comp=Z,56nm,1.1s						
I04A	**Tendick Farm,**	**57.09**	**300**	P	**P**	**18 58 03.0**	**-0.7**
	baz=46						
R11A	**Troy Canyon, C**	**57.10**	**291**	P	**P**	**18 58 03.6**	**-0.4**
	baz=46,SNR=11						
MOD	**Modoc Plateau**	**57.27**	**297**	IAmb	IAmb	18 58 15.9	
	comp=Z,14nm,0.7s						
J04D	**Umpqua Nationa**	**57.31**	**300**	P	**P**	**18 58 04.7**	**-0.7**
	baz=46,SNR=9.6						
TNA	**Tin City**	**57.40**	**340**	P	**P**	**18 58 05.8**	**+0.3**
	baz=30						
TNA	**Tin City**	**57.40**	**340**	IAmb	IAmb	18 58 17.1	
	comp=Z,65nm,1.4s						
X16A	**Lo Mia Camp, P**	**57.45**	**285**	P	**P**	**18 58 06.7**	**+0.2**
X16A				IAmb	IAmb	18 58 20.2	
	comp=Z,41nm,1.1s						
MALB	**Monte Alegre**	**57.45**	**207**	*e*P	**P**	**18 58 06.0**	**-0.4**
PRN	**Pahroc Range**	**57.45**	**290**	IAmb	IAmb	18 58 24.6	
	comp=Z,45nm,1.4s						
PTBC	**PUERTO BERRIO,**	**57.58**	**233**	*e*P	**P**	**18 58 08.0**	**+0.7**
I03D	**Drain, OR**	**57.65**	**301**	P	**P**	**18 58 06.3**	**-1.2**
	baz=46						
DBBC	**Dabeiba**	**58.02**	**235**	*e*P	**P**	**18 58 09.3**	**-1.3**
L04D	**Klamath Falls**	**58.12**	**299**	P	**P**	**18 58 10.1**	**-0.9**
	baz=46						
PTGA	**Pitinga**	**58.13**	**214**	P	**P**	**18 58 09.6**	**-1.6**
PTGA				IAmb	IAmb	18 58 23.0	
	comp=Z,79nm,1.9s						
TGUH	**Tegucigalpa,Un**	**58.13**	**250**	*e*P	**P**	**18 58 12.6**	**+1.2**
SPBC	**San Pablo de B**	**58.16**	**232**	*e*P	**P**	**18 58 11.2**	**-0.3**
M04C	**Macdoel**	**58.18**	**298**	P	**P**	**18 58 10.4**	**-1.1**
	baz=46,SNR=13						
J01E	**Myrtle Point**	**58.32**	**301**	P	**P**	**18 58 11.9**	**-0.4**
	baz=46						
NBPA	**Parau_RN**	**58.33**	**186**	*e*P	**P**	**18 58 14.2**	**+1.6**
TPNV	**Topopah Spring**	**58.45**	**291**	P	**P**	**18 58 12.6**	**-0.9**
	baz=45,SNR=11						
TPNV	**Topopah Spring**	**58.45**	**291**	IAmb	IAmb	18 58 40.3	
	comp=Z,82nm,1.9s						
NV11	**Mina Array Sit**	**58.49**	**293**	IAmb	IAmb	18 58 30.6	
	comp=Z,28nm,1.1s						
K02D	**Willamette Mer**	**58.51**	**300**	P	**P**	**18 58 12.9**	**-0.8**
	baz=46,SNR=9.1						
PTGC	**Puerto Gaitan,**	**58.53**	**229**	*e*P	**P**	**18 58 14.4**	**+0.4**
TUC	**Tucson**	**58.55**	**283**	P	**P**	**18 58 13.8**	**-0.3**
	baz=44						
TUC	**Tucson**	**58.55**	**283**	P	**P**	**18 58 13.9**	**-0.2**
TUC				pmax	pmax		
	comp=Z,42nm,1.7s						
TUC	**Tucson**	**58.55**	**283**	P	**P**	**18 58 13.8**	**-0.2**
TUC				IAmb	IAmb	18 58 24.7	
	comp=Z,42nm,1.7s						
RYN	**Ryan**	**58.56**	**294**	IAmb	IAmb	18 58 26.3	
	comp=Z,17nm,0.9s						
NVAR	**Mina Array Bea**	**58.58**	**293**	P	**P**	**18 58 13.6**	**-0.9**
	comp=Z,1.5nm,0.5s,baz=60,slow=6.5,SNR=18						
NORC	**Norcasia**	**58.62**	**233**	*e*P	**P**	**18 58 15.0**	**+0.3**
BEKR	**Beckworth**	**58.71**	**296**	P	**P**	**18 58 15.3**	**0.0**
BEKR				IAmb	IAmb	18 58 33.1	
	comp=Z,33nm,1.2s						
LHV	**Little Huntoon**	**58.81**	**293**	IAmb	IAmb	18 58 33.6	
	comp=Z,27nm,1.2s						
L02E	**Cave Junction**	**58.85**	**300**	P	**P**	**18 58 15.3**	**-0.7**
	baz=45						
PNME	**Penonome**	**58.89**	**240**	*e*P	P	18 58 28.0	+12
CHIC	**Chingaza**	**58.89**	**231**	*e*P	**P**	**18 58 15.0**	**-2.0**
CBOC	**Ciudad Bolivar**	**58.92**	**234**	*e*P	**P**	**18 58 16.3**	**-0.6**
ROSC	**El Rosal**	**58.99**	**232**	P	**P**	**18 58 18.6**	**+1.0**
	comp=Z,116nm,0.6s,baz=53,slow=9.6,SNR=28						
ROSC	**El Rosal**	**58.99**	**232**	*e*P	**P**	**18 58 18.2**	**+0.6**
M02C	**Callahan**	**58.99**	**299**	P	**P**	**18 58 15.8**	**-1.3**
	baz=45						
GRAC	**Grapevine Rang**	**59.06**	**291**	P	**P**	**18 58 17.0**	**-0.5**
	baz=45						
MTO3	**Montecristo**	**59.06**	**252**	P	**P**	**18 58 16.7**	**-1.3**
PDMCI	**Parker Dam,Lak**	**59.11**	**287**	P	**P**	**18 58 17.4**	**-0.4**
	baz=45						
FURC	**Furnace Creek,**	**59.14**	**291**	P	**P**	**18 58 17.0**	**-1.0**
	baz=45						
GUY2C	**Guyana, Caldas**	**59.16**	**233**	*e*P	**P**	**18 58 19.5**	**+0.6**
O03E	**Paynes Creek**	**59.20**	**297**	P	**P**	**18 58 17.3**	**-1.2**
	baz=45						
N02D	**Trinity Center**	**59.21**	**298**	P	**P**	**18 58 17.6**	**-1.0**
	baz=45						
RREF	**El Recreo**	**59.43**	**233**	*e*P	**P**	**18 58 22.7**	**+1.7**
BRZS	**Berezniki**	**59.60**	**46**	*e*P	**P**	**18 58 19.9**	**-1.1**
	comp=Z,7.2nm,1.0s,baz=46						
BRZS	**Berezniki**	**59.60**	**46**	*e*P	**P**	**18 58 19.9**	**-1.1**
BRZS				pmax	pmax		
	comp=Z,7.0nm,1.0s						
GMRC	**Granite Mounta**	**59.65**	**289**	P	**P**	**18 58 20.4**	**-1.4**
	baz=45						
TOLC	**Tolima**	**59.69**	**232**	*e*P	**P**	**18 58 24.6**	**+2.2**
MPMC	**Manual Prospec**	**59.79**	**291**	P	**P**	**18 58 22.6**	**-0.2**
	baz=45,SNR=19						
IRM	**Iron Mountain**	**59.79**	**288**	P	**P**	**18 58 22.2**	**-0.5**
	baz=44						
ANIL	**Santa Ana**	**59.81**	**232**	*e*P	**P**	**18 58 25.9**	**+2.7**
O02D	**Mt. Diablo Mer**	**59.81**	**298**	P	**P**	**18 58 22.0**	**-0.8**
	baz=45						
CWC	**Cottonwood Cre**	**59.85**	**292**	P	**P**	**18 58 23.2**	**0.0**
	baz=45						
PLMC	**San Jos del P**	**59.88**	**234**	*e*P	**P**	**18 58 26.1**	**+2.6**
GSC	**Goldstone, Bar**	**59.94**	**290**	P	**P**	**18 58 22.9**	**-0.8**
	baz=44						
GSC	**Goldstone, Bar**	**59.94**	**290**	IAmb	IAmb	18 58 37.6	
	comp=Z,21nm,1.1s						
113A	**Mohawk Valley,**	**59.98**	**286**	IAmb	IAmb	18 58 38.7	
	comp=Z,36nm,1.3s						
214A	**Organ Pipe Nat**	**60.00**	**284**	P	**P**	**18 58 23.4**	**-0.7**
	baz=44						
214A	**Organ Pipe Nat**	**60.00**	**284**	IAmb	IAmb	18 58 34.5	
	comp=Z,48nm,1.6s						
HEC	**Hector,Ludlow**	**60.00**	**289**	P	**P**	**18 58 23.0**	**-1.1**
	baz=44						
CMB	**Columbia Colle**	**60.02**	**294**	P	**P**	**18 58 25.9**	**+1.7**
CMB				pmax	pmax		
	comp=Z,28nm,1.5s						
CMB	**Columbia Colle**	**60.02**	**294**	P	**P**	**18 58 25.9**	**+1.7**
CMB				IAmb	IAmb	18 58 41.1	
	comp=Z,28nm,1.4s						
GUVC	**San Jose del G**	**60.21**	**229**	*e*P	P	18 58 11.6	-14
PRAC	**Prado**	**60.24**	**232**	*e*P	**P**	**18 58 25.9**	**0.0**
ORTC	**Ortega, Tolima**	**60.24**	**232**	*e*P	**P**	**18 58 24.6**	**-1.3**
ITTB	**Itaituba**	**60.26**	**208**	*e*P	**P**	**18 58 26.0**	**+0.1**
LRMC	**Laurel Mtn Rad**	**60.31**	**290**	P	**P**	**18 58 25.3**	**-1.0**
	baz=44,SNR=9.9						

BC3	Big Chuckawall	60.33	287	P	P	18 58 25.8	-0.7
	baz=44,SNR=13						
GLA	Glamis	60.40	287	P	P	18 58 26.2	-0.6
	baz=44						
BELC	Belle Mtn. Jos	60.40	288	P	P	18 58 26.7	-0.3
	baz=44,SNR=15						
ISA	Isabella, Lake	60.63	291	P	P	18 58 27.7	-0.7
	baz=44						
ISA	Isabella, Lake	60.63	291	IAmb	IAmb	18 58 46.3	
	comp=Z,27nm,1.1s						
MIB	Mutribah	60.63	79	eP		18 58 28.9	
MACA	Manacapuru-AM	60.65	213	eP	P	18 58 29.2	+0.7
YOTC	Yotoco, Valle	60.71	233	eP	P	18 58 25.1	-4.1
VES	Vestal, Richgr	60.85	292	P	P	18 58 29.0	-0.8
	baz=44						
EDW2	Edwards Air Fo	60.92	290	P	P	18 58 30.4	0.0
	baz=44						
PFO	Pinyon Flats O	60.95	288	P	P	18 58 30.8	+0.2
	baz=44						
PFO	Pinyon Flats O	60.95	288	⇓eP	P	18 58 31.9	+1.2
PFO				pmax	pmax		
	comp=Z,14nm,1.1s						
PFO	Pinyon Flats O	60.95	288	P	P	18 58 30.8	+0.2
PFO				IAmb	IAmb	18 58 44.2	
	comp=Z,29nm,1.1s						
TPFO	Pinon Flats	60.95	288	P	P	18 58 29.9	-0.8
	baz=44						
GEYT	Alibeck	61.01	65	P	P	18 58 32.0	+1.1
	comp=Z,20nm,1.2s,baz=292,slow=7.8,SNR=14						
GEYT	Alibeck	61.01	65	P	P	18 58 30.9	0.0
GYA0B	ALIBECK ARRAY	61.01	65	IAmb	IAmb	18 58 47.2	
	comp=Z,55nm,1.4s						
UMR	Umm Al-Rimmam	61.04	78	eP		18 58 31.5	
SWSC	Sam W. Stewart	61.04	287	P	P	18 58 30.9	-0.2
	baz=44						
MACC	Macarena, Meta	61.13	230	eP	P	18 58 28.0	-3.9
BFSC	Mount Baldy Ra	61.19	289	P	P	18 58 31.6	-0.7
	baz=44						
RDF	Al-Radifah	61.40	79	eP		18 58 34.4	
BETC	Betania	61.41	232	eP	P	18 58 35.7	+1.9
IKP	In-Ko-Pah, Jac	61.43	287	P	P	18 58 33.6	-0.3
	baz=44						
MONP2	Monument Peak	61.44	288	P	P	18 58 34.2	0.0
	baz=44						
ZAA0	Zalesovo Array	61.50	37	IAmb	IAmb	18 58 48.9	
	comp=Z,19nm,0.7s						
ZALV	Zalesovo Beam	61.50	37	P	P	18 58 34.2	+0.3
	comp=Z,7.1nm,0.6s,baz=321,slow=8.0,SNR=22						
ZALV	Zalesovo Beam	61.50	37	P	P	18 58 33.5	-0.4
MARP	Paez Belalcaza	61.51	232	eP	P	18 58 35.7	+0.9
PMPB	Monarch Peak	61.55	293	IAmb	IAmb	18 58 49.2	
	comp=Z,41nm,1.0s						
KURK	Kurchatov	61.59	43	deP	P	18 58 34.5	0.0
KURK				pmax	pmax		
	comp=Z,49nm,1.7s						
KURK	Kurchatov	61.59	43	P	P	18 58 34.3	-0.2
KURK				IAmb	IAmb	18 58 48.3	
	comp=Z,29nm,0.8s						
KURK	Kurchatov	61.59	43	P	P	18 58 35.3	+0.7
KURK				P	P	18 58 35.3	+0.7
KURBB	Kurchatov Arra	61.62	43	P	P	18 58 33.4	-1.4
	comp=Z,8.0nm,0.7s,baz=322,slow=7.2,SNR=65						
KURBB				PP	PP	19 00 48.9	-1.0
	comp=Z,4.5nm,1.0s,baz=316,slow=9.2,SNR=5.4						
BAR	Barrett	61.74	288	IAmb	IAmb	18 59 04.0	
	comp=Z,29nm,1.0s						
PKM	Mcpherson Peak	61.95	291	P	P	18 58 36.4	-1.1
	baz=44						
TLIG	Tlapa	62.05	262	P	P	18 58 37.6	-0.7
TLIG				IAmb	IAmb	18 58 49.0	
	comp=Z,25nm,0.8s						
POPC	Popayan, Colom	62.12	233	eP	P	18 58 38.6	-0.3
PCON	Cinco Dias	62.17	232	eP	P	18 58 41.5	+1.9
FLOC	Florencia	62.47	231	eP	P	18 58 43.4	+2.5
SEM	Semipalatinsk	62.49	42	eP	P	18 58 39.9	-1.0
	comp=Z,3.9nm,1.1s,baz=42						
SEM	Semipalatinsk	62.49	42	eP	P	18 58 39.9	-1.0
SEM				pmax	pmax		
	comp=Z,4.0nm,1.1s						
SMTB	Santa Maria do	62.70	197	eP	P	18 58 44.0	+1.6
NPGB	Novo Progresso	62.71	206	eP	P	18 58 42.6	+0.2
BBAC	Balboa, Cauca	62.85	233	eP	P	18 58 42.5	-1.3
PTLC	Puerto Leguiza	63.30	230	eP	P	18 58 50.2	+3.7
KKAR	Karatay Array	63.68	53	P	P	18 58 48.6	-0.1
KKAR	Karatay Array	63.68	53	P	P	18 58 48.5	-0.1
BTLS	Baital	63.90	49	eP	P	18 58 49.5	-0.5
	comp=Z,3.5nm,1.1s,baz=49						
BTLS	Baital	63.90	49	eP	P	18 58 49.5	-0.5
BTLS				pmax	pmax		
	comp=Z,4.0nm,1.1s						
RAYN	Ar Rayn	64.15	85	i P	P	18 58 52.6	+0.5
	SNR=12						
RAYN	Ar Rayn	64.15	85	P	P	18 58 51.5	-0.6
RAYN				pmax	pmax		
	comp=Z,55nm,1.2s						
RAYN	Ar Rayn	64.15	85	P	P	18 58 51.5	-0.6
IUG	Iuzhnay	64.16	54	eP	P	18 58 51.1	-0.9
	comp=Z,6.9nm,0.9s,baz=54						
IUG	Iuzhnay	64.16	54	eP	P	18 58 51.0	-0.9
IUG				pmax	pmax		
	comp=Z,7.0nm,0.9s						
DZA	Taraz	64.23	53	eP	P	18 58 51.5	-0.9
	baz=53						
DZA	Taraz	64.23	53	eP	P	18 58 51.4	-0.9
SEY	Seymchan	64.72	358	⇑eP	P	18 58 56.3	+1.2
YAK	Yakutsk	64.75	9	P	P	18 58 54.9	-0.4
	comp=Z,5.0nm,0.3s,baz=16,slow=1.6,SNR=2.8						
YAK	Yakutsk	64.75	9	eP	P	18 58 54.2	-1.1
YAK				e		18 59 28.6	
YAK				eS	S	19 07 28.6	-6.5
YAK				e*SS	sS	19 07 53.0	+13
YAK				e		19 08 43.7	
YAK				pmax	pmax		
	comp=Z,14nm,0.9s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.2s						
YAK				pmax	pmax		
	comp=N,6.0nm,1.3s						
YAK				pmax	pmax		
	comp=Z,141nm,4.2s						
YAK				pmax	pmax		
	comp=N,62nm,3.5s						
YAK				pmax	pmax		
	comp=E,87nm,4.1s						
YAK				smax	smax		
	comp=E,59nm,3.8s						
YAK				smax	smax		
	comp=N,37nm,3.3s						
OTAV	Otavalo	64.99	233	P	P	18 58 58.2	+0.1
OTAV				pmax	pmax		
	comp=Z,51nm,1.5s						
OTAV	Otavalo	64.99	233	P	P	18 58 58.2	+0.1
OTAV				IAmb	IAmb	18 59 05.4	
	comp=Z,51nm,1.4s						
OTAV	Otavalo	64.99	233	eP	P	18 58 58.8	+0.8
OTAV	Otavalo	64.99	233	eP	P	18 58 58.0	0.0
SDBA	SAO DESIDERIO	65.74	194	eP	P	18 59 04.0	+1.7
KUU	Kurty	65.83	49	eP	P	18 59 01.7	-1.1
	comp=Z,9.7nm,1.1s,baz=49						
KUU	Kurty	65.83	49	eP	P	18 59 01.6	-1.1
KUU				pmax	pmax		
	comp=Z,10.0nm,1.1s						
DGZ	Jazzator, Alta	65.87	38	deP	P	18 59 04.3	+1.3
DGZ				pmax	pmax		
	comp=Z,15nm,0.9s						
AAK	Ala-Archa	65.94	51	P	P	18 59 04.9	+1.2
	comp=Z,7.5nm,1.2s,baz=315,slow=3.3,SNR=8.7						
AAK	Ala-Archa	65.94	51	i P	P	18 59 04.1	+0.5
	SNR=13						
AAK	Ala-Archa	65.94	51	P	P	18 59 04.1	+0.5
AAK				IAmb	IAmb	18 59 21.8	
	comp=Z,58nm,1.6s						
AAK	Ala-Archa	65.94	51	P	P	18 59 04.8	+1.2
AAK				P	P	18 59 04.8	+1.2
PEXB	Peixe	66.00	198	eP	P	18 59 06.0	+2.0
MAKZ	Makanchi	66.02	43	P	P	18 59 02.8	-1.1
MAKZ				pmax	pmax		
	comp=Z,23nm,1.0s						
MAKZ	Makanchi	66.02	43	P	P	18 59 02.8	-1.1
MAKZ				IAmb	IAmb	18 59 18.0	
	comp=Z,23nm,0.9s						
MK31	Makanchi Array	66.17	43	d iP	P	18 59 04.3	-0.5
MKAR	Makanchi Array	66.17	43	P	P	18 59 03.4	-1.5
	comp=Z,14nm,0.8s,baz=334,slow=5.4,SNR=97						
MKAR	Makanchi Array	66.17	43	P	P	18 59 03.6	-1.2
MKAR	Makanchi Array	66.17	43	P	P	18 59 03.6	-1.2
BOD	Bodaibo	66.45	19	eP	P	18 59 09.3	+2.9
BOD				pmax	pmax		
	comp=Z,26nm,1.6s						
AAA	Alma-Ata	66.63	49	eP	P	18 59 07.5	-0.4
	comp=Z,11nm,0.8s,baz=49						
AAA	Alma-Ata	66.63	49	eP	P	18 59 07.5	-0.4
AAA				pmax	pmax		
	comp=Z,11nm,0.8s						
ZSN	Zaisan	66.69	41	eP	P	18 59 07.9	-0.3
	comp=Z,5.3nm,1.2s,baz=41						
ZSN	Zaisan	66.69	41	eP	P	18 59 07.9	-0.3
ZSN				pmax	pmax		
	comp=Z,5.0nm,1.2s						
MDOK	Medeo	66.72	49	eP	P	18 59 08.5	-0.2
	baz=49						
MDOK	Medeo	66.72	49	eP	P	18 59 08.4	-0.2
TNSS	Tian-Shan	66.77	49	eP	P	18 59 09.9	+0.7
	baz=49						
TNSS	Tian-Shan	66.77	49	eP	P	18 59 09.9	+0.7
SAML	Samuel	66.90	214	P	P	18 59 08.1	-1.6
SAML				pmax	pmax		
	comp=Z,17nm,1.0s						
SAML	Samuel	66.90	214	P	P	18 59 08.1	-1.6
SAML				IAmb	IAmb	18 59 20.0	
	comp=Z,17nm,0.9s						
SAML	Samuel	66.90	214	eP	P	18 59 07.5	-2.2
KPKS	Kokpek	67.23	48	eP	P	18 59 11.2	-0.5
	comp=Z,7.1nm,1.0s,baz=48						
KPKS	Kokpek	67.23	48	eP	P	18 59 11.2	-0.5
KPKS				pmax	pmax		
	comp=Z,7.0nm,1.0s						
SATY	Saty	67.42	48	eP	P	18 59 12.1	-1.0
	comp=Z,6.9nm,1.1s,baz=48						
SATY	Saty	67.42	48	eP	P	18 59 12.0	-1.0
SATY				pmax	pmax		
	comp=Z,7.0nm,1.1s						
UZB	Uzynbulak	67.63	48	eP	P	18 59 13.9	-0.5
	comp=Z,5.4nm,1.1s,baz=48						
UZB	Uzynbulak	67.63	48	eP	P	18 59 13.9	-0.5
UZB				pmax	pmax		
	comp=Z,5.0nm,1.1s						
SHLS	Shalkode	67.82	47	eP	P	18 59 16.4	+0.8
	comp=Z,8.9nm,1.2s,baz=47						
SHLS	Shalkode	67.82	47	eP	P	18 59 16.3	+0.8
SHLS				pmax	pmax		
	comp=Z,9.0nm,1.2s						
MA2	Magadan	68.12	359	P	P	18 59 16.2	-0.7
	comp=Z,4.0nm,0.8s,baz=337,slow=13,SNR=2.3						
MA2	Magadan	68.12	359	⇓eP	P	18 59 17.1	+0.2
MA2				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MA2	Magadan	68.12	359	P	P	18 59 16.3	-0.7
JANB	Januaria	68.26	193	eP	P	18 59 19.6	+1.2
SHME	Shamm	68.63	75	P	P	18 59 20.6	-0.1
MOY	Mondy	68.80	29	eP	P	18 59 22.2	+0.7
MOY				pmax	pmax		
	comp=Z,30nm,2.5s						
BANOM	Banah	68.82	75	i P	P	18 59 22.3	+0.4
	SNR=15						
BANOM	Banah	68.82	75	P	P	18 59 22.5	+0.6
	SNR=17						
KSH	Kashi	69.06	52	P	P	18 59 25.0	+1.6
KSH				sP	pwP	18 59 31.9	+0.9
KSH				S	S	19 08 28.9	+0.7
KSH				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KSH				pmax	pmax		
	comp=Z,250nm,3.0s						
AJN	Ajban	69.07	77	P	P	18 59 26.5	+3.2
	SNR=12						
NAZ	Nazwa, Dubai	69.14	76	P	P	18 59 24.0	+0.1
MASF	Masafi	69.15	75	P	P	18 59 22.4	-1.6
	SNR=13						
MSFE	Esma-Masafi	69.16	75	i P	P	18 59 24.1	+0.1
	SNR=6.5						
ASUD	Al Ashush, Dub	69.22	76	P	P	18 59 24.1	-0.2
ASUD	Al Ashush, Dub	69.22	76	P	P	18 59 24.8	+0.5
	SNR=12						
IRK	Irkutsk	69.23	27	eP	P	18 59 22.8	-1.2
IRK				pmax	pmax		
	comp=Z,40nm,2.8s						
MDH	Madha	69.29	75	P	P	18 59 25.5	+0.7
	SNR=7.8						
FAQ	Al Faqa, Dubai	69.29	76	P	P	18 59 24.2	-0.6
FAQ	Al Faqa, Dubai	69.29	76	P	P	18 59 25.8	+1.0
BDFB	Brasilia	69.40	197	P	P	18 59 25.2	-0.3
	comp=Z,1.0nm,0.4s,baz=28,slow=9.8,SNR=1.6						
KBL	Kabul	69.42	60	P	P	18 59 26.0	+0.2
KBL				pmax	pmax		
	comp=Z,25nm,1.4s						
KBL	Kabul	69.42	60	P	P	18 59 26.0	+0.2
KBL				IAmb	IAmb	18 59 38.4	
	comp=Z,25nm,1.4s						
KBL	Kabul	69.42	60	P	P	18 59 29.7	+3.9
	SNR=11						
UOSS	Minazif	69.50	76	i P	P	18 59 25.7	-0.4
	SNR=19						
UOSS	Minazif	69.50	76	P	P	18 59 24.8	-1.3
UOSS	Minazif	69.50	76	P	P	18 59 25.0	-1.1
UOSS				P	P	18 59 25.0	-1.1
HATD	Hatta, Dubai	69.55	76	i P	P	18 59 25.8	-0.6
	SNR=12						
HATD	Hatta, Dubai	69.55	76	P	P	18 59 25.7	-0.6
	SNR=25						
TLY	Talaya	69.55	28	P	P	18 59 24.7	-1.4
	comp=Z,1.0nm,0.5s,baz=63,slow=2.3,SNR=1.9						
TLY	Talaya	69.55	28	eP	P	18 59 25.7	-0.4
TLY				eS	S	19 08 34.1	+0.7
TLY				pmax	pmax		
	comp=Z,20nm,0.9s						
ASHO	Ashiyiah	69.61	76	i P	P	18 59 25.8	-1.0
	SNR=14						
ASHO	Ashiyiah	69.61	76	P	P	18 59 26.7	-0.1
	SNR=18						
VILB	Vilhena	69.71	209	eP	P	18 59 28.0	+0.7
ALNE	Al Ain	69.90	77	P	P	18 59 28.0	-0.6
	SNR=25						
ARAG	Araguaiana, MT	70.20	200	eP	P	18 59 31.5	+1.2
SOHO	SOHO	70.31	76	i P	P	18 59 30.1	-1.0
	SNR=7.3						
SOHO	SOHO	70.31	76	P	P	18 59 29.7	-1.3
ZAK	Zakamensk	70.61	29	eP	P	18 59 32.4	-0.2
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.5s						
WMQ	Urumqi	70.80	42	eP	P	18 59 35.3	+1.4
WMQ				pP	sP	18 59 39.0	+1.3
WMQ				sP	PcP	18 59 48.3	-6.3
WMQ				PP	PP	19 02 13.8	+3.6
WMQ				S	S	19 08 45.0	-3.4
WMQ				sS	sS	19 09 00.1	+7.2
WMQ				pmax	pmax		
	comp=Z,16nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,190nm,3.7s						
WMQ	Urumqi	70.80	42	IAmb	IAmb	18 59 49.0	
	comp=Z,32nm,0.8s						
ARQ	Araqi	70.91	76	P	P	18 59 34.9	+0.1
	SNR=15						
HOQ	Hoqain	71.19	76	P	P	18 59 38.0	+1.5
	SNR=6.8						
SJMB	Sao Joao De Ma	71.49	189	eP	P	18 59 40.2	+2.1
BSFB	Barra de Sao F	71.59	189	eP	P	18 59 40.8	+2.1
BIDO	Bidbid	71.72	75	P	P	18 59 41.6	+2.0
	SNR=9.1						
IPMB	Ipameri, GO	71.73	196	eP	P	18 59 40.4	+0.8
BSY	Bisya	71.76	76	P	P	18 59 39.4	-0.5
NIL	Nilore	72.31	58	P	P	18 59 42.4	-0.7
NIL				pmax	pmax		
	comp=Z,102nm,1.9s						
NIL	Nilore	72.31	58	P	P	18 59 42.4	-0.7
JMDO	Jabal Madar	72.58	76	P	P	18 59 46.7	+1.9
	SNR=7.8						
ZEA	Zeya	72.58	13	eP	P	18 59 48.4	+4.1
ZEA				pmax	pmax		
	comp=N,10.0nm,0.7s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PP1B	Ponte de Pedra	72.72	203	eP	P	18 59 46.9	+1.4
DOK	Doka	73.08	81	P	P	18 59 50.5	+2.6
	SNR=5.2						
ALF01	Guarapari-ES	73.34	189	eP	P	18 59 50.2	+1.1
WHFO	Wadi Hawf	73.40	82	P	P	18 59 49.6	-0.2
ABTO	Aybut	73.55	83	P	P	18 59 50.3	-0.4
	SNR=13						
MHTO	MHTO	73.56	77	P	P	18 59 50.0	-0.6
	SNR=18						
LODK	Lodwar	73.65	106	P	P	18 59 55.7	+4.4
	SNR=36						
ITRB	Iturama	73.80	198	eP	P	18 59 54.0	+2.2
SONM	Songino Array	73.80	28	P	P	18 59 52.3	+0.5
	comp=Z,9.7nm,0.8s,baz=330,slow=5.9,SNR=40						
SONM	Songino Array	73.80	28	P	P	18 59 51.7	-0.1
ULN	Ulaanbaatar	73.95	27	deP	P	18 59 53.6	+0.8
ULN				pmax	pmax		
	comp=Z,22nm,1.0s						
ULN	Ulaanbaatar	73.95	27	P	P	18 59 52.9	+0.1
ULN				IAmb	IAmb	19 00 03.3	
	comp=Z,31nm,1.1s						
BSCB	Bom Sucesso	74.17	192	eP	P	18 59 57.1	+3.1
MBAR	Mbarara	74.27	113	⇑eP	P	18 59 52.9	-2.1
MBAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
PETK	Petropavlovsk-	74.31	354	P	P	18 59 56.1	+1.5
	comp=Z,5.1nm,1.0s,baz=95,slow=3.8,SNR=4.7						
PETK				PKKPbc	PKKPbc	19 19 20.4	-1.0
	comp=Z,16nm,1.1s,baz=289,slow=4.5,SNR=3.7						
BB19B	Bebedouro	74.80	196	eP	P	18 59 58.1	+0.5
DUB01	Friburgo-RJ	74.95	190	eP	P	19 00 02.0	+3.5
LPAZ	La Paz	75.44	216	P	P	19 00 03.0	+0.9
	comp=Z,4.0nm,0.8s,baz=24,slow=13,SNR=10						
LPAZ	La Paz	75.44	216	P	P	19 00 03.0	+0.9
LPAZ	La Paz	75.44	216	eP	P	19 00 04.3	+2.2
AQDB	Aquidauana	75.68	203	eP	P	19 00 02.9	+0.2
PCMB	Pacaembu	75.82	198	eP	P	19 00 04.5	+1.0
ESAR	Angra dos Reis	76.12	192	eP	P	19 00 08.5	+3.4
VAO	Valinhos	76.45	194	eP	P	19 00 09.7	+2.6
GRNR	Gornyy	76.50	8	⇓iP	P	19 00 01.1	-6.1
GRNR				pmax	pmax		
	comp=Z,1.0nm,1.2s						
SPB	Sao Paulo	77.10	195	eP	P	19 00 11.7	+1.1
FRTB	Fartura	77.20	197	eP	P	19 00 13.9	+2.6
TRCB	Terra Rica	77.25	200	eP	P	19 00 13.6	+2.0
KLR	Kul'dur	77.57	11	P	P	19 00 14.1	+0.9
	comp=Z,2.6nm,0.8s,baz=339,slow=10,SNR=8.6						
PET01	Itanhaem-SP	77.76	194	eP	P	19 00 17.4	+3.0
PB16	IPOC Station P	77.82	216	IAmb	IAmb	19 00 24.1	
	comp=Z,43nm,1.3s						
SOCY	Socotra	77.97	86	P	P	19 00 14.3	-1.7
MNMC	Minye Minye	78.58	216	IAmb	IAmb	19 00 30.8	
	comp=Z,21nm,0.9s						
PTGB	Pitanga	79.00	199	eP	P	19 00 23.9	+2.6
PSGCX	Pisagua	79.20	216	P	P	19 00 22.0	-0.5
GTA	Gaotai	79.23	36	⇓P	P	19 00 23.0	+0.3
GTA				pP	sP	19 00 27.5	+1.0
GTA				sP	pwP	19 00 29.9	-0.5
GTA				pmax	pmax		
	comp=Z,10.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,190nm,5.5s						
PB08	IPOC Station P	79.35	215	IAmb	IAmb	19 00 35.1	
	comp=Z,28nm,0.9s						
YSS	Yuzh-Sakhalins	80.68	4	eP	P	19 00 32.5	+2.3
YSS				pmax	pmax		
	comp=Z,20nm,1.1s						
BTO	Baotou	81.46	28	eP	P	19 00 37.9	+3.2
LVC	Limon Verde	81.55	214	P	P	19 00 34.6	-0.8
LVC				pmax	pmax		
	comp=Z,19nm,0.9s						
LVC	Limon Verde	81.55	214	P	P	19 00 34.6	-0.8
LVC				IAmb	IAmb	19 00 47.9	
	comp=Z,19nm,0.9s						
LVC	Limon Verde	81.55	214	eP	P	19 00 35.4	0.0
HHC	Hu-ho-hao-te	81.67	27	eP	P	19 00 36.8	+1.0
HHC				pmax	pmax		
	comp=Z,5.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,95nm,6.6s						
CPUP	Villa Florida	81.70	203	P	P	19 00 38.1	+2.4
	comp=Z,2.7nm,0.5s,baz=16,slow=6.2,SNR=6.8						
CPUP	Villa Florida	81.70	203	eP	P	19 00 37.6	+1.9
MDJ	Mudanjiang	81.83	13	P	P	19 00 36.0	-0.4
MDJ				S	S	19 10 52.3	+3.1
MDJ				pmax	pmax		
	comp=Z,9.0nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,280nm,3.5s						
MDJ	Mudanjiang	81.83	13	IAmb	IAmb	19 00 47.2	
	comp=Z,26nm,0.9s						
DANN	Dangsing	81.87	53	eP	P	19 00 37.2	-0.1
	comp=Z,67nm,1.1s						
CN2	Changchun	81.98	16	eP	P	19 00 36.6	-0.6
CN2				esP	PcP	19 00 43.6	+0.9
CN2				eS	S	19 10 47.3	-3.5
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
USRK	Ussuriysk Ar.	82.55	12	P	P	19 00 40.5	+0.3
	comp=Z,3.1nm,0.7s,baz=15,slow=6.3,SNR=5.1						
USRK	Ussuriysk Ar.	82.55	12	P	P	19 00 41.1	+0.9
USRK	Ussuriysk Ar.	82.55	12	P	P	19 00 41.1	+0.9
GKN	Gorkha	82.59	53	eP	P	19 00 40.8	0.0
	comp=Z,53nm,0.8s						
KKN	Kakani	83.08	53	eP	P	19 00 44.0	+0.5
	comp=Z,75nm,1.0s						
DMN	Daman	83.14	53	eP	P	19 00 44.4	+0.5
	comp=Z,62nm,1.1s						
CNLB	Canela	83.26	197	eP	P	19 00 45.9	+2.1
GUN	Gumba	83.26	52	eP	P	19 00 44.8	+0.2
	comp=Z,70nm,1.0s						
PKIN	Phulchoki	83.31	53	eP	P	19 00 44.9	+0.2
	comp=Z,47nm,1.1s						
PKI	Pulchoki	83.32	53	eP	P	19 00 45.4	+0.5
	comp=Z,100nm,1.4s						
ASAJ	Asahikawa	83.51	4	P	P	19 00 54.3	+9.2
SNY	Shenyang	83.56	18	⇑P	P	19 00 52.4	+7.0
SNY				pmax	pmax		
	comp=Z,22nm,0.9s						
LZH	Lanzhou	83.62	35	eP	P	19 00 47.3	+1.2
LZH				pP	pwP	19 00 52.8	-1.0
LZH				sP	PcP	19 00 55.0	+4.7
LZH				S	S	19 11 10.6	+2.5
LZH				sS	ScS	19 11 21.4	+0.1
LZH				pmax	pmax		
	comp=Z,19nm,1.2s						
LZH				pmax	pmax		
	comp=Z,190nm,6.0s						
BJI	Beijing	83.64	24	P	P	19 00 46.8	+0.9
BJI				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GLVR	Golovnino	83.97	2	eP	P	19 00 55.4	+7.9
GLVR				pmax	pmax		
	comp=N,16nm,0.1s						
GLVR				pmax	pmax		
	comp=Z,91nm,0.1s						
GLVR				pmax	pmax		
	comp=Z,3µm,1.9s						
LSA	Lhasa	84.19	47	P	P	19 00 54.0	+4.5
NMR	Nemuro--Hokkai	84.35	2	⇓iP	P	19 00 51.0	+1.6
RAMN	Ramite	84.41	52	eP	P	19 00 50.3	-0.1
	comp=Z,42nm,0.8s						
TAPN	Taplejung	84.61	51	eP	P	19 00 52.4	+1.0
	comp=Z,137nm,1.6s						
CPSB	Cacapava Do Su	84.80	199	eP	P	19 00 52.4	+0.8
ODAN	Odare	84.87	51	eP	P	19 00 52.9	+0.3
	comp=Z,58nm,0.8s						
DL2	Dalian	85.98	20	eP	P	19 01 00.8	+3.1
DL2				S	S	19 11 37.3	+6.2
DL2				pmax	pmax		
	comp=Z,59nm,1.0s						
DL2				LR	LR		
	comp=Z,6µm,25.8s						
PLTB	Pedras Altas	86.15	198	eP	P	19 00 59.9	+1.5
XAN	Xi'an	87.18	32	P	P	19 01 03.6	-0.1
XAN				pP	sP	19 01 07.3	-0.3
XAN				pmax	pmax		
	comp=Z,17nm,1.0s						
XAN				pmax	pmax		
	comp=Z,270nm,5.5s						
XAN	Xi'an	87.18	32	IAmb	IAmb	19 01 11.8	
	comp=Z,12nm,0.9s						
TIA	Tai'an	87.51	25	P	P	19 01 05.8	+0.6
TIA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
CD2	Chengdu	88.27	37	P	P	19 01 08.5	-0.5
CD2				sP	pwP	19 01 15.9	-0.8
CD2				PP	PP	19 04 36.5	+1.1
CD2				S	S	19 11 48.1	-5.4
CD2				SS	SS	19 17 42.4	+1.2
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						

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CD2                                  pmax    pmax
        comp=Z,190nm,6.5s
KSRS    Korea Array       88.58  16  P       P        19 01 10.8 +0.6
        comp=Z,1.3nm,0.8s,baz=350,slow=6.2,SNR=4.3
LPA     La Plata          90.08 201  eP      P        19 01 16.3 -0.6
LPA                                  PP      PP       19 04 43.2 -7.6
LPA                                  PPP     PPP      19 06 49.8
LPA                                  SKIKP   SKiKP    19 09 46.4 -0.3
LPA                                  SKS     SKSac    19 11 45.5 -1.7
LPA                                  S       SKKSac   19 12 04.5 +3.9
LPA                                  PS      PS       19 13 18.6 +1.2
NJ2     Nanjing           91.89  24  eP      P        19 01 24.1 -1.7
NJ2                                  pmax    pmax
        comp=Z,3.0nm,0.5s
KMI     Kunming           93.08  40  ⇑P      P        19 01 31.3 -0.4
KMI                                  sP      pwP      19 01 39.6 +0.1
KMI                                  pmax    pmax
        comp=Z,4.0nm,0.9s
GYA     Guiyang           93.36  36  ⇑P      P        19 01 37.9 +5.1
BOSA    Boshof            95.03 132  P       P        19 01 42.8 +2.6
        comp=Z,14nm,1.1s,baz=329,slow=5.7,SNR=8.6
BOSA                                 PP      PP       19 05 31.8 +1.8
        comp=Z,8.4nm,1.1s,baz=14,slow=9.1,SNR=4.2
CMAR    Chiang Mai Arr    97.43  46  P       Pdif     19 01 51.6 +0.2
        comp=Z,0.3nm,0.3s,baz=327,slow=4.8,SNR=1.5
CMAR                                 PP      PP       19 05 46.9 -0.8
        comp=Z,2.8nm,1.0s,baz=315,slow=7.7,SNR=8.0
PLCA    Paso Flores       98.82 209  eP      P        19 01 56.6 -0.4
NONG    Nongkai           99.58  43  P       PKiKP    19 06 22.0 -8.0
VNA1    Neumayer--Stat   124.16 171  PKPdf   PKPdf    19 07 14.6 +0.1
VNA3    Neumayer Olymp   124.60 171  PKPdf   PKiKP    19 07 16.5 +0.8
TTSI    Tana Toraja      125.31  35  PKP     PKiKP    19 07 21.0 +2.1
TTSI                                 PKP     sPKPdf   19 07 40.7  +18
SNAA    Sanae            125.71 169  PKPdf   PKiKP    19 07 18.8 +0.8
SYO     Syowa Base       132.08 153⇓eX       Pdif     19 04 19.0 -5.0
WRAB    Tennant Creek    145.67  23  PKP2    PKPdf    19 07 55.4 -0.6
WRAB    Tennant Creek    145.67  23          PKPdf    19 07 55.4 -0.6
WRA     Warramunga Arr   145.67  23  PKPbc   PKPdf    19 07 56.1 +0.1
        comp=Z,16nm,0.9s,baz=344,slow=3.4,SNR=45
WRA     Warramunga Arr   145.67  23  PKP2    PKPdf    19 07 55.6 -0.4
WRA     Warramunga Arr   145.67  23          PKPdf    19 07 55.6 -0.4
WB2     Warramunga Arr   145.68  23          PKPdf    19 07 55.4 -0.5
WR0     Warramunga Arr   145.74  23          PKPab    19 07 58.3 +1.5
AS31    Alice Springs    149.13  26  PKPdf   PKPdf    19 08 00.1 -1.6
AS31                                         PKiKP    19 08 06.6 -0.5
ASAR    Alice Springs    149.13  26  PKPbc   PKiKP    19 08 06.8 -0.3
        comp=Z,5.0nm,0.7s,baz=349,slow=1.9,SNR=39
ASAR    Alice Springs    149.13  26  PKIKP   PKPdf    19 08 02.7 +1.0
ASAR    Alice Springs    149.13  26          PKPdf    19 08 02.7 +1.0
VNDA    Vanda            154.50 187  PKPbc   PKPbc    19 08 14.2 -2.2
        comp=Z,3.1nm,0.9s,baz=224,slow=0.9,SNR=4.8
STKA    Stephens Creek   158.73  15  PKPab   PKPab    19 08 52.1 +1.7
        comp=Z,2.0nm,0.8s,baz=346,slow=11,SNR=3.7
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VIE 13 18:51:35.9±0.3**, 47°.80N×9°.84E, h27km, mb1.5**/1**, ml1.8**/6**, Error ellipse: s-maj=2.7km s-min=1.7km az=172.0 33 km N of Langen bei Bregenz, Germany**

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Code    Station Name       Δ°   AZ°    Phase ID           Time      Res
                                      Op      ISC       h  m  s    ISC
DAVA    Damuels           0.52 177  i P     Pb        18 51 46.6 +0.1
        0.6nm,0.1s
DAVA                                eS      Sn        18 51 54.8 -0.8
        13nm,0.2s
RETA    Reutte            0.70 116  eP      Pb        18 51 49.0 -0.5
        0.4nm,0.1s
RETA                                i S     Sb        18 51 59.0 +0.2
        3.3nm,0.1s
FETA    Feichten          0.99 142  i Pn    Pn        18 51 54.0 -0.1
        0.1nm,0.1s
FETA                                eSn     Sn        18 52 07.7 +0.4
        2.0nm,0.1s
SQTA    Sankt Quirin      1.10 122  ePn     Pb        18 51 55.9 -0.3
        1.6nm,0.2s
SQTA                                eSn     Sb        18 52 10.5 +0.4
        8.1nm,0.2s
WATA    Walderalm         1.27 111  ePn     Pn        18 51 58.3 +0.4
        0.4nm,0.1s
WATA                                eSn     Sb        18 52 15.3 +0.2
        1.7nm,0.2s
WTTA    Wattenberg        1.33 113  ePn     Pn        18 51 59.2 +0.3
        0.2nm,0.1s
WTTA                                eSn     Sb        18 52 17.4 +0.4
        1.2nm,0.1s
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*BJI **13** 18:58:02.5±0.0, 52°.61N×31°.91W, h6km, mB5.3/13, mb4.7/30*

*IDC **13** 18:58:04.2±0.5, 52°.59N×31°.74W, h0km, mb4.5/38, mb1 4.6/41, mb1mx4.5/57, mbtmp4.5/41, ML4.8/3, MS5.9/1, Ms1 5.9/1, ms1mx4.8/53, Error ellipse: s-maj=13.8km s-min=9.1km az=8.0*

*NEIC **13** 18:58:05.5±1.6, 52°.55N±0°.10×31°.6W±0°.1, h10km±4km, mb4.9/241, Error ellipse: s-maj=14.1km s-min=10.6km az=181.0*

ISC 13 18:58:05.6±0.4**, 52°.53N**±0°.07×**31°.68W**±0°.05**, h12km, n308, σ0.89**/270**, mb4.8**/162**, 2C-9D, Northern Mid-Atlantic Ridge**

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Code    Station Name       Δ°   AZ°    Phase ID           Time      Res
                                      Op      ISC       h  m  s    ISC
NRS     Narsarsuaq       11.43 324          Pn        19 00 47.9 -0.6
BORG    Borgarnes        13.36  20  Pn      Pn        19 01 15.5 +0.8
        1.2nm,0.3s,baz=257,slow=14,SNR=1.7
BORG    Borgarnes        13.36  20  Pn      Pn        19 01 13.9 -0.8
ANGG    Ammassalik, Gr   13.47 349          Pn        19 01 17.0 +0.8
DSB     Dublin           15.27  77  Pn      Pn        19 01 38.0 -2.8
DSB                                 IAmb    IAmb      19 01 40.8
        comp=Z,103nm,1.5s
DRLN    Deer Lake        16.58 269  Pn      Pn        19 01 55.9 -1.8
ESK     Eskdalemuir      16.95  69  Pn      Pn        19 02 01.9 -0.4
ESK                                 IAmb    IAmb      19 02 07.0
        comp=Z,93nm,0.9s
EKA     Eskdalemuir Ar   16.98  69  Pn      Pn        19 02 00.9 -1.8
        baz=273,slow=9.7,SNR=50
ICESG   Greenland Ices   17.03 350  eP      P         19 02 07.3 +1.8
SFJD    Kangerlussuaq    17.23 334  P       Pn        19 02 04.7 -1.1
        comp=Z,1.3nm,0.3s,baz=148,slow=12,SNR=8.3
SFJD    Kangerlussuaq    17.23 334  P       Pn        19 02 04.8 -1.0
SFJD                                IAmb    IAmb      19 02 09.0
        comp=Z,153nm,1.8s
SCO     Scoresbysund     18.56  10          Pn        19 02 22.1  0.0
ILULI   Ilulissat        19.05 339  P       P         19 02 27.3  0.0
COI     Coimbra          20.14 118  P       Pn        19 02 40.7 -0.5
SUMG    Summit           20.33 354  i P     P         19 02 42.5 +0.9
SUMG    Summit           20.33 354  P       P         19 02 41.8 +0.1
SUMG    Summit           20.33 354  i P     P         19 02 42.5 +0.9
MTE     Manteigas        20.47 117  P       Pn        19 02 44.1 -1.1
GBN     Guysborough      20.73 262  P       P         19 02 44.8 -0.9
PESTR   Estremoz         21.54 120  P       P         19 02 55.0 +0.4
CLF     Chambon-Foret    22.02  88  P       P         19 02 59.5 -0.1
CLF                                 IAmb    IAmb      19 03 05.9
        comp=Z,49nm,0.9s
FRB     Frobisher Bay    22.11 315  P       P         19 02 59.4 -1.0
        comp=Z,17nm,0.8s,baz=96,slow=9.3,SNR=12
PFVI    Vila Bisbo       22.22 125  P       P         19 03 01.9 +0.1
UCC     Uccle            22.28  80  P       P         19 03 01.7 -0.7
UCC                                 IAmb    IAmb      19 03 03.1
        comp=Z,28nm,0.9s
SNF     Seneffe          22.33  81  dP      P         19 03 02.8 -0.1
HAL     Halifax          22.39 262  P       P         19 03 03.8 +0.3
LMN     Caledonia Moun   22.51 266  P       P         19 03 03.4 -1.5
LMN                                 IAmb    IAmb      19 03 05.5
        comp=Z,36nm,1.1s
PVAQ    Vaqueiros        22.57 123  P       P         19 03 05.9 +0.3
BATG    Bathurst New B   22.61 270  P       P         19 03 05.7 -0.2
DOU     Dourbes          22.66  82  dP      P         19 03 06.8 +0.4
BMRD    Maredsous        22.69  81  dP      P         19 03 07.0 +0.3
PAB     San Pablo        22.83 114  P       P         19 03 07.6 -0.8
ESDC    Sonseca Array    22.96 113  P       P         19 03 10.2 +0.5
        comp=Z,3.2nm,0.7s,baz=316,slow=9.3,SNR=13
BCLA    Clavier          22.97  80  dx      P         19 03 10.7 +0.9
        comp=Z,12nm,0.8s
BEBN    Eben Emael       23.07  79  dP      P         19 03 10.7  0.0
BSTI    Sart Tilman      23.08  80  dP      P         19 03 11.5 +0.7
MEM     Membach          23.33  80  dP      P         19 03 13.2 -0.2
BTNL    Ternell          23.41  80  dP      P         19 03 14.6 +0.4
WLF     Walferdange      23.75  82  dP      P         19 03 18.1 +0.6
WLF     Walferdange      23.75  82  P       P         19 03 16.9 -0.6
WLF                                 IAmb    IAmb      19 03 19.8
        comp=Z,23nm,1.0s
KONO    Kongsberg        23.77  56  P       P         19 03 16.2 -1.4
KONO                                IAmb    IAmb      19 03 29.9
        comp=Z,85nm,1.6s
SFS     San Fernando     24.07 122  P       P         19 03 20.6  0.0
SFS                                 IAmb    IAmb      19 03 41.8
        comp=Z,39nm,0.9s
PQI     Presque Isle     24.08 271  P       P         19 03 19.6 -1.0
PQI                                 IAmb    IAmb      19 03 28.1
        comp=Z,36nm,1.3s
GGN     Saint George     24.12 266  P       P         19 03 19.9 -1.0
NC204   NORSAR Array S   24.36  52  P       P         19 03 21.9 -1.3
NBO00   NORSAR Array S   24.36  53  P       P         19 03 22.4 -0.8
NBO00                               IAmb    IAmb      19 03 34.6
        comp=Z,28nm,1.0s
NAO01   NORSAR Array S   24.41  53  P       P         19 03 23.5 -0.1
E63A    Oxbow            24.44 270  P       P         19 03 22.9 -1.1
E63A                                IAmb    IAmb      19 03 38.9
        comp=Z,26nm,1.1s
G65A    Princeton        24.51 267  P       P         19 03 22.7 -1.9
NB2     NORSAR Subarra   24.57  53  P       P         19 03 24.8 -0.3
        comp=Z,20nm,1.2s,baz=271,slow=10
NOA     NORSAR Array B   24.57  53  P       P         19 03 24.9 -0.3
        comp=Z,4.4nm,0.8s,baz=271,slow=9.4,SNR=11
NB201   NORSAR Array S   24.61  53  P       P         19 03 25.7 +0.3
NB201                               IAmb    IAmb      19 03 27.0
        comp=Z,44nm,1.0s
NC303   NORSAR Array S   24.65  52  P       P         19 03 25.5 -0.2
NC303                               IAmb    IAmb      19 03 27.3
        comp=Z,32nm,0.8s
F64A    Sherman          24.67 269  P       P         19 03 24.6 -1.4
F64A                                IAmb    IAmb      19 03 39.2
        comp=Z,28nm,1.3s
SSB     Saint Sauveur    24.69  93  P       P         19 03 26.8 +0.6
EMMW    East Machias     24.70 266  P       P         19 03 25.4 -0.9
NC602   NORSAR Array S   24.73  54  P       P         19 03 27.5 +1.1
NC602                               IAmb    IAmb      19 03 29.5
        comp=Z,68nm,1.6s
NC405   NORSAR Array S   24.82  53  P       P         19 03 27.2 -0.1
ECH     Echery           24.93  84  P       P         19 03 28.8 +0.4
ECH                                 IAmb    IAmb      19 03 30.5
        comp=Z,21nm,1.1s
F63A    Nahmakanta, Br   25.20 269  P       P         19 03 29.7 -1.1
F63A                                IAmb    IAmb      19 03 50.6
        comp=Z,29nm,1.1s
BFO     Black Forest     25.59  83  P       P         19 03 34.4  0.0
BFO                                 IAmb    IAmb      19 03 35.9
        comp=Z,26nm,1.2s
HFS     Hagfors          25.82  55  P       P         19 03 36.4 +0.1
        comp=Z,5.9nm,0.7s,baz=255,slow=5.8,SNR=14
SENIN   Lac Senin/Sane   25.84  88  P       P         19 03 38.1 +1.2
SENIN                               IAmb    IAmb      19 03 48.3
        comp=Z,58nm,1.8s
STU     Stuttgart        25.94  82  P       P         19 03 37.6 +0.1
BNI     Bardonecchia     26.11  91  P       P         19 03 40.2 +1.0
G62A    West of Eustis   26.32 270  P       P         19 03 40.4 -0.6
G62A                                IAmb    IAmb      19 03 55.1
        comp=Z,30nm,1.2s
RGN     Rugen            26.48  68  P       P         19 03 42.5 +0.2
GRFO    Grafenberg       26.79  79  P       P         19 03 46.8 +1.5
GRFO                                IAmb    IAmb      19 03 48.0
        comp=Z,16nm,0.9s
GRA1    Grafenberg Arr   26.79  79  P       P         19 03 46.1 +0.8
GRA1                                IAmb    IAmb      19 03 48.0
        comp=Z,16nm,0.9s
GRF     Grafenberg Arr   26.79  79  eP      P         19 03 47.2 +2.0
        baz=293,slow=8.1
DAVA    Damuels          26.99  84  i P     P         19 03 47.8 +0.6
        comp=Z,7.6nm,0.9s
TUE     Stuetta          27.04  86  P       P         19 03 48.6 +0.9
TUE                                 IAmb    IAmb      19 03 50.5
        comp=Z,26nm,0.7s
GRC2    Grafenberg Arr   27.21  80  eP      P         19 03 49.8 +0.8
        comp=Z,48nm,1.0s,baz=293,slow=8.1
DAVOX   Davos/Dischmat   27.22  85  P       P         19 03 51.0 +1.6
        comp=Z,15nm,0.6s,baz=311,slow=9.7,SNR=30
CLL     Collm            27.26  75  i P     P         19 03 49.5 +0.1
        comp=Z,29nm,0.8s
CLL                                 epP     pP        19 03 52.0 +0.2
CLL                                 e                 19 03 59.0
CLL     Collm            27.26  75  P       P         19 03 49.2 -0.1
CLL                                 IAmb    IAmb      19 03 50.6
        comp=Z,27nm,0.7s
NKC     Novy Kostel      27.32  77  eP      P         19 03 49.2 -0.8
MOQ     Mont Orford      27.32 271  P       P         19 03 51.4 +1.3
RETA    Reutte           27.44  83  eP      P         19 03 51.5 +0.4
        comp=Z,29nm,1.1s,SNR=8.7
FETA    Feichten         27.63  84  i P     P         19 03 54.2 +1.3
        comp=Z,10nm,0.7s
MDT     Midelt           27.74 125  P       P         19 03 55.6 +1.6
        comp=Z,1.2nm,0.8s,baz=319,slow=10.0,SNR=3.7
SQTA    Sankt Quirin     27.83  84  eP      P         19 03 55.2 +0.6
        comp=Z,20nm,0.9s,SNR=7.4
TULEG   Thule            27.90 342  P       P         19 03 54.3 -0.6
TULEG                               IAmb    IAmb      19 03 55.3
        comp=Z,17nm,1.3s
BRG     Berggiesshubel   27.97  75  i P     P         19 03 56.2 +0.5
BRG                                 Amp               19 03 57.1
        comp=Z,17nm,0.8s
WATA    Walderalm        28.00  83  eP      P         19 03 57.2 +1.0
        comp=Z,22nm,1.0s,SNR=5.6
WTTA    Wattenberg       28.07  83  eP      P         19 03 58.0 +1.1
        comp=Z,14nm,0.7s,SNR=5.2
MSSA    Maissana         28.22  90  P       P         19 03 57.7 -0.4
TRQ     Mont Tremblant   28.28 274  P       P         19 03 59.4 +0.7
KHC     Kasperske Hory   28.43  79  eP      P         19 03 59.9  0.0
KHC     Kasperske Hory   28.43  79  P       P         19 04 00.1 +0.1
PVCC    Panska Ves       28.47  75  eP      P         19 04 00.5 +0.3
GEC2    GERESS Array S   28.62  79  P       P         19 04 01.9 +0.2
GERES   GERESS Array B   28.62  79  P       P         19 04 02.0 +0.2
        comp=Z,7.8nm,0.7s,baz=298,slow=8.7,SNR=55
GERES   GERESS Array B   28.62  79  P       P         19 04 01.5 -0.2
CTI     Castel Tesino    28.65  86  P       P         19 04 01.9 -0.1
PRU     Pruhonice        28.66  76  eP      P         19 04 01.4 -0.5
ABTA    Abfaltersbach    28.84  84  eP      P         19 04 04.5 +0.9
        comp=Z,7.4nm,1.5s
CKRC    Cesky Krumlov    29.00  79  eP      P         19 04 04.9  0.0
TEOL    Teolo            29.00  87  P       P         19 04 05.2 +0.2
TEOL                                IAmb    IAmb      19 04 06.6
        comp=Z,26nm,0.8s
ZCCA    Zocca            29.09  89  P       P         19 04 06.2 +0.3
KBA     Koelnbreinsper   29.19  83  i P     P         19 04 07.9 +1.0
        comp=Z,8.6nm,0.6s
STAL    STALIGIAL        29.19  84  P       P         19 04 06.9 +0.2
ZOU     Zoufplan         29.21  84  P       P         19 04 07.5 +0.4
UPC     Upice            29.33  75  eP      P         19 04 08.3 +0.5
MOA     Molln            29.39  81  i P     P         19 04 09.3 +0.9
        comp=Z,8.3nm,0.8s
OSTC    Ostas            29.43  74  eP      P         19 04 10.5 +1.8
DPC     Dobruska-Polom   29.57  75  eP      P         19 04 10.2 +0.2
MYKA    Terra Mystica    29.58  83  i P     P         19 04 10.4 +0.3
        comp=Z,42nm,0.6s,SNR=18
KRLC    Kraliky          29.95  75  eP      P         19 04 14.5 +1.1
TRI     Trieste          30.10  85  P       P         19 04 14.7  0.0
TRI                                 IAmb    IAmb      19 04 17.0
        comp=Z,18nm,0.7s
KRUC    Moravsky         30.14  77  eP      P         19 04 15.9 +0.9
OBKA    Obir             30.18  83  i P     P         19 04 15.4 -0.2
        comp=Z,32nm,0.7s,SNR=16
CONA    Conrad Observa   30.32  79  eP      P         19 04 16.8 +0.1
        comp=Z,3.9nm,0.7s
SOKA    Soboth           30.40  82  i P     P         19 04 16.9 -0.5
        comp=Z,11nm,0.5s,SNR=9.9
ARSA    Arzberg          30.42  81  eP      P         19 04 18.3 +0.7
        comp=Z,8.2nm,0.6s
MORC    Moravsky Berou   30.52  75  eP      P         19 04 18.8 +0.4
MORC    Moravsky Berou   30.52  75  P       P         19 04 18.5 +0.1
MORC                                IAmb    IAmb      19 04 20.2
        comp=Z,12nm,0.9s
MURB    Monte Urbino     30.62  90  P       P         19 04 17.9 -1.5
SPA0    Spitsbergen Ar   30.81  17  P       P         19 04 20.7  0.0
SPITS   Spitsbergen Ar   30.81  17  P       P         19 04 21.9 +1.2
        comp=Z,9.5nm,1.0s,baz=224,slow=4.6,SNR=4.0
VSL     Villasalto       30.91  98  P       P         19 04 23.3 +1.3
VSL                                 IAmb    IAmb      19 04 27.2
        comp=Z,17nm,1.1s
ARCES   ARCESS Array B   30.96  35  P       P         19 04 21.5 -0.6
        comp=Z,2.0nm,0.5s,baz=271,slow=7.2,SNR=12
ARCES   ARCESS Array B   30.96  35  P       P         19 04 21.4 -0.6
NRCA    Norcia           31.22  90  P       P         19 04 23.8 -0.9
AQU     L'Aquila         31.66  90  P       P         19 04 29.2 +0.6
OJC     Ojcow            31.66  73  P       P         19 04 28.4  0.0
FINES   FINESS Array B   31.69  51  P       P         19 04 28.4 -0.1
        comp=Z,9.9nm,0.6s,baz=280,slow=7.7,SNR=61
FINES   FINESS Array B   31.69  51  P       P         19 04 28.0 -0.5
FIA1    FINESS Array S   31.69  51  P       P         19 04 28.2 -0.3
SUW     Suwalki          32.15  65  P       P         19 04 31.9 -0.7
INTR    Introdacqua      32.17  91  P       P         19 04 32.4 -0.7
J54A    Appleton         32.29 272  P       P         19 04 34.6 +0.6
J54A                                IAmb    IAmb      19 05 00.2
        comp=Z,11nm,0.6s
P60A    Greenville       32.47 265  P       P         19 04 36.2 +0.6
PSZ     Piszkesteto      32.73  77  P       P         19 04 38.5 +0.5
PSZ                                 IAmb    IAmb      19 04 41.0
        comp=Z,24nm,1.2s
WVNY    West Valley, N   32.76 271  P       P         19 04 39.4 +1.2
EUNU    Eureka           32.76 345  P       P         19 04 38.0 +0.2
PAGS    Pennsylvania G   32.88 266  P       P         19 04 41.0 +1.8
RES     Resolute Bay     33.24 334  P       P         19 04 42.5 +0.6
        comp=Z,8.0nm,0.8s,baz=95,slow=9.0,SNR=17
KEST    Kesra            33.36 104  P       P         19 04 44.3 +0.8
        comp=Z,9.5nm,0.8s,baz=260,slow=6.3,SNR=13
KEST    Kesra            33.36 104  P       P         19 04 44.3 +0.8
KEST                                IAmb    IAmb      19 04 45.7
        comp=Z,15nm,1.0s
SGRT    San Giovanni R   33.44  90  P       P         19 04 43.3 -0.8
KWP     Kalwaria Pacla   33.62  73  P       P         19 04 46.2 +0.7
LVZ     Lovozero         34.35  38  P       P         19 04 52.0 +0.2
FCC     Fort Churchill   34.59 306  P       P         19 04 53.5 -0.4
FCC                                 IAmb    IAmb      19 04 54.9
        comp=Z,18nm,1.2s
DIVS    Divibare         34.72  83  P       P         19 04 55.1 -0.1
DIVS                                IAmb    IAmb      19 04 57.0
        comp=Z,17nm,0.9s
JSRW    J. Sargeant Re   35.16 264  P       P         19 04 57.9 -1.2
PDG     Podgorica        35.19  86  P       P         19 04 59.2  0.0
PDG                                 IAmb    IAmb      19 05 00.7
        comp=Z,23nm,1.1s
RAFF    Raffo Rosso      35.38  97  P       P         19 05 02.6 +1.7
TIP     Timpagrande      35.60  92  P       P         19 05 02.0 -0.9
TIP                                 IAmb    IAmb      19 05 03.0
        comp=Z,33nm,1.9s
BUR08   Bucovina Ar. S   36.01  74  P       P         19 05 07.6 +1.3
BUR08                               IAmb    IAmb      19 05 08.8
        comp=Z,14nm,0.8s
BURAR   Bucovina Array   36.03  74  P       P         19 05 07.2 +0.7
AKASG   Malin Array Be   36.88  68  P       P         19 05 12.9 -0.6
        comp=Z,9.5nm,0.6s,baz=299,slow=8.4,SNR=37
AKASG   Malin Array Be   36.88  68  P       P         19 05 11.9 -1.7
AKBB    Malin Array Si   36.88  68  P       P         19 05 12.5 -1.1
AKBB                                IAmb    IAmb      19 05 14.3
        comp=Z,22nm,0.8s
FNA     Florina          37.45  87  P       P         19 05 19.0 +0.4
FNA                                 IAmb    IAmb      19 05 20.3
        comp=Z,12nm,0.8s
VTS     Vitosha          37.51  83  P       P         19 05 18.9 -0.3
EYMN    Ely              37.57 288  P       P         19 05 19.9 +0.3
I42A    Draeger Farm,    38.18 280  P       P         19 05 25.3 +0.6
E38A    The Farm, Brul   38.29 286  P       P         19 05 25.8 +0.2
E38A                                IAmb    IAmb      19 05 36.9
        comp=Z,67nm,2.0s
OBN     Obninsk          38.92  58  P       P         19 05 30.4 -0.3
ULM     Lac du Bonnet    38.94 293  P       P         19 05 30.4 -0.6
        comp=Z,4.2nm,0.7s,baz=41,slow=9.7,SNR=6.0
ULM     Lac du Bonnet    38.94 293  P       P         19 05 30.9 -0.1
AGG     Agios Georgios   39.10  88  P       P         19 05 33.0 +0.5
AGG                                 IAmb    IAmb      19 05 34.4
        comp=Z,26nm,0.7s
TIRR    Tirgusor         39.58  77  P       P         19 05 35.3 -1.1
RGRS    Roger Stewart    39.78 260  P       P         19 05 41.1 +2.9
F36A    Milaca           39.84 286  P       P         19 05 40.2 +1.6
BG3     Lake Jocassee    40.01 265  P       P         19 05 41.1 +1.0
BG3                                 IAmb    IAmb      19 06 06.9
        comp=Z,30nm,1.7s
ITM     Ithomi           40.02  91  P       P         19 05 39.5 -0.6
TKL     Tuckaleechee C   40.08 266  P       P         19 05 42.0 +1.3
        comp=Z,2.2nm,0.5s,baz=79,slow=5.2,SNR=1.7
TKL     Tuckaleechee C   40.08 266  IAmb    IAmb      19 05 54.6
        comp=Z,42nm,1.9s
FFC     Flin Flon        40.15 302  P       P         19 05 40.5 -0.5
ALN     Alexandroupoli   40.22  83  P       P         19 05 41.7  0.0
ALN                                 IAmb    IAmb      19 05 43.6
        comp=Z,15nm,0.8s
YKA     Yellowknife Ar   42.59 317  P       P         19 06 00.7 -0.3
        comp=Z,5.1nm,0.9s,baz=66,slow=8.8,SNR=20
ECSD    EROS Data Cent   42.86 285  P       P         19 06 03.9 +0.5
CCM     Cathedral Cave   43.09 275  P       P         19 06 04.2 -1.1
CCM                                 IAmb    IAmb      19 06 29.9
        comp=Z,58nm,1.9s
MANT    Manisa           43.23  84  P       P         19 06 06.5 -0.2
MDUB    Mudurnu          43.59  80  P       P         19 06 08.8 -0.7
KOWA    Kowa             43.87 140  P       P         19 06 11.6 -0.2
KOWA                                IAmb    IAmb      19 06 23.6
        comp=Z,8.7nm,0.7s
ILGA    Ilgaz            44.74  78  P       P         19 06 19.1 +0.2
ILGA                                IAmb    IAmb      19 06 21.4
        comp=Z,22nm,0.9s
BR231   Keskin MP Arra   44.93  80  P       P         19 06 21.1 +0.9
BR131   Keskin Array S   45.52  79  P       P         19 06 25.3 +0.4
BRTR    Keskin Array B   45.52  79  P       P         19 06 26.2 +1.3
        comp=Z,29nm,0.7s,baz=301,slow=6.3,SNR=103
BRTR    Keskin Array B   45.52  79  P       P         19 06 25.5 +0.6
X40A    Basin Creek Fa   46.39 272  P       P         19 06 32.2 +0.5
X40A                                IAmb    IAmb      19 06 59.9
        comp=Z,7.4nm,0.8s
INK     Inuvik           46.50 330  P       P         19 06 30.7 -1.3
        comp=Z,2.7nm,0.8s,baz=45,slow=11,SNR=6.5
INK     Inuvik           46.50 330  IAmb    IAmb      19 06 41.7
        comp=Z,11nm,1.4s
MIAR    Mount Ida        46.81 273  P       P         19 06 36.5 +1.6
MIAR                                IAmb    IAmb      19 06 39.4
        comp=Z,26nm,1.6s
TOKA    Tokat            46.84  77  P       P         19 06 35.4 +0.2
TOA0    Torodi Ar. Sit   47.48 133  P       P         19 06 40.6 +0.3
TORD    Torodi Ar. Bea   47.48 133  P       P         19 06 40.6 +0.3
        comp=Z,9.9nm,0.8s,baz=332,slow=8.7,SNR=42
TORD                                LR      LR        19 26 06.7
        comp=Z,14µm,20.7s,baz=290,slow=35
TORD    Torodi Ar. Bea   47.48 133  P       P         19 06 39.4 -0.9
EGMT    Eagleton         47.81 298  IAmb    IAmb      19 06 49.6
        comp=Z,14nm,0.9s
KIV     Kislovodsk       48.20  69  P       P         19 06 46.5 +0.7
KIV                                 IAmb    IAmb      19 06 48.1
        comp=Z,9.7nm,0.8s
KBZ     Khabaz           48.46  69  P       P         19 06 49.6 +1.9
        comp=Z,5.9nm,0.9s,baz=280,slow=7.7,SNR=12
EPYK    Eagle Plains     48.65 329  IAmb    IAmb      19 06 49.9
        comp=Z,19nm,1.2s
ARU     Arti             48.94  47  P       P         19 06 51.0 -0.2
K22A    Casper           49.28 290  IAmb    IAmb      19 07 06.3
        comp=Z,11nm,0.8s
RLMT    Red Lodge        49.30 294  IAmb    IAmb      19 07 05.4
        comp=Z,38nm,2.0s
KOPT    Kop Dagi         49.41  74  IAmb    IAmb      19 07 08.7
        comp=Z,14nm,0.9s
WALA    Waterton Lakes   49.41 301  P       P         19 06 54.6 -0.5
WALA                                IAmb    IAmb      19 07 05.7
        comp=Z,15nm,0.9s
HRY     Holter Researc   49.73 297  P       P         19 06 57.8 +0.3
YNE     Yellowstone No   49.78 295  P       P         19 06 57.8 -0.2
YMP     Mirror Lake Pl   50.03 294  P       P         19 07 00.3 +0.2
RWWY    Rawlins          50.29 289  IAmb    IAmb      19 07 13.7
        comp=Z,18nm,0.9s
BMAR    Burnt Mountain   50.31 332  P       P         19 07 02.0 +0.5
JTMT    Jette            50.41 300  IAmb    IAmb      19 07 02.8
        comp=Z,5.6nm,0.6s
ISCO    Idaho Springs    50.58 287  P       P         19 07 05.9 +1.7
NRIK    Noril'sk         50.63  24  P       P         19 07 05.3 +1.5
        comp=Z,4.0nm,0.7s,baz=307,slow=1.8,SNR=5.9
NRIK    Noril'sk         50.63  24  P       P         19 07 04.5 +0.6
DBIC    Dimbokro         50.74 145  P       P         19 07 06.2 +1.0
        comp=Z,2.3nm,0.6s,baz=340,slow=6.3,SNR=4.7
TOLK    Toolik Lake Re   50.80 335  IAmb    IAmb      19 07 16.4
        comp=Z,36nm,1.7s
PD31    Pinedale Array   50.94 292  P       P         19 07 06.1 -0.8
PDAR    Pinedale Array   50.94 292  P       P         19 07 05.9 -1.0
        comp=Z,1.6nm,0.6s,baz=69,slow=6.5,SNR=19
DLMT    Dillon           50.99 296  IAmb    IAmb      19 07 20.4
        comp=Z,28nm,1.9s
LOHW    Long Hollow      50.99 293  IAmb    IAmb      19 07 23.5
        comp=Z,21nm,2.0s
EGAK    Eagle            51.09 329  P       P         19 07 07.6 +0.3
EGAK                                IAmb    IAmb      19 07 17.9
        comp=Z,16nm,1.3s
FYU     Fort Yukon       51.09 332  IAmb    IAmb      19 07 18.8
        comp=Z,20nm,1.1s
DLBC    Dease Lake       51.19 318  P       P         19 07 08.7 +0.4
        comp=Z,4.5nm,0.9s,baz=59,slow=12,SNR=3.8
MARD    Mardin           51.34  77  P       P         19 07 10.8 +1.0
MARD                                IAmb    IAmb      19 07 12.1
        comp=Z,15nm,0.7s
NEW     Newport          51.58 302  P       P         19 07 10.7 -0.6
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                comp=Z,3.0nm,0.7s,baz=8.0,slow=4.8,SNR=4.3
NEW    Newport           51.58 302  IAmb      IAmb      19 07 24.3
                comp=Z,18nm,1.5s
COLD   Coldfoot          52.00 334  P         P         19 07 14.1   0.0
BCAR   Beaver Creek A    52.47 327  P         P         19 07 18.4  +0.7
B08A   Colville Reser    52.66 303  P         P         19 07 18.6  -0.7
B08A                                IAmb      IAmb      19 07 29.7
                comp=Z,8.9nm,0.8s
POKR   Poker Plat Res    52.77 331  IAmb      IAmb      19 07 31.3
                comp=Z,22nm,1.2s
MSTX   Muleshoe          52.78 279  P         P         19 07 20.8  +0.3
MSTX                                IAmb      IAmb      19 07 33.1
                comp=Z,12nm,0.9s
ILAR   Eielson Array     52.85 331  P         P         19 07 21.1  +0.5
                comp=Z,1.6nm,0.8s,baz=44,slow=5.4,SNR=17
ILAR   Eielson Array     52.85 331  P         P         19 07 20.2  -0.3
F10A   Beach Ranch, E    53.09 300  IAmb      IAmb      19 07 33.4
                comp=Z,11nm,1.1s
MDM    Murphy Dome       53.11 332  P         P         19 07 23.1  +0.6
MDM                                 IAmb      IAmb      19 07 34.0
                comp=Z,12nm,1.0s
CCB    Clear Creek Bu    53.22 331  IAmb      IAmb      19 07 26.2
                comp=Z,19nm,1.8s
I23K   Minto, Yukon-K    53.30 332  P         P         19 07 24.2  +0.5
I23K                                IAmb      IAmb      19 07 35.2
                comp=Z,16nm,1.1s
PV12   Saucer Basin,     53.42 287  P         P         19 07 26.0  +0.7
PV12                                IAmb      IAmb      19 07 38.5
                comp=Z,17nm,0.8s
PV04   Paradox Valley    53.43 287  IAmb      IAmb      19 07 37.0
                comp=Z,18nm,1.1s
PV02   Paradox Valley    53.45 287  IAmb      IAmb      19 07 39.2
                comp=Z,12nm,0.8s
PV03   Paradox Valley    53.49 287  P         P         19 07 27.0  +1.1
PV03                                IAmb      IAmb      19 07 38.8
                comp=Z,16nm,1.0s
PV14   Lion Creek, Pa    53.51 287  IAmb      IAmb      19 07 39.0
                comp=Z,16nm,0.9s
SPUT   South Promonto    53.52 292  P         P         19 07 26.8  +0.8
IMAR   Indian Mountai    53.87 335  P         P         19 07 27.7  -0.3
LTY    Liberty           54.05 303  IAmb      IAmb      19 07 29.4
                comp=Z,8.5nm,0.8s
ABKAR  Akbulak array     54.07  54  P         P         19 07 29.4  -0.2
ABKAR  Akbulak array     54.07  54  IAmb      IAmb      19 07 31.1
                comp=Z,8.0nm,0.8s
RND    Reindeer          54.45 331  P         P         19 07 32.2  -0.1
RND                                 IAmb      IAmb      19 07 42.9
                comp=Z,12nm,1.0s
G08A   Pilot Rock        54.46 300  IAmb      IAmb      19 07 42.7
                comp=Z,11nm,1.4s
LON    Longmire          54.98 303  P         P         19 07 35.0  -1.3
TIXI   Tiksi             55.35   7  P         P         19 07 39.6  +1.0
PKCU   Pink Cliffs       56.05 289  P         P         19 07 45.1  +0.6
WVOR   Wild Horse Val    56.20 297  IAmb      IAmb      19 07 56.5
                comp=Z,14nm,0.8s
BRVK   Borovoye          56.30  45  P         P         19 07 45.9  +0.2
BRVK                                IAmb      IAmb      19 07 47.6
                comp=Z,13nm,0.8s
BVAR   Borovoye Array    56.37  45  P         P         19 07 46.2   0.0
                comp=Z,8.1nm,0.7s,baz=256,slow=6.0,SNR=54
PINE   Pine Mountain     56.52 300  IAmb      IAmb      19 08 01.2
                comp=Z,12nm,0.9s
TX31   Lajitas Ar. Si    56.57 276  IAmb      IAmb      19 08 10.8
                comp=Z,31nm,1.8s
TXAR   Lajitas Array     56.57 276  P         P         19 07 47.8  -0.3
                comp=Z,0.6nm,0.6s,baz=54,slow=7.6,SNR=6.8
U15A   North Rim         56.74 288  P         P         19 07 49.9  +0.5
U15A                                IAmb      IAmb      19 08 01.2
                comp=Z,8.2nm,0.8s
TNA    Tin City          57.56 340  P         P         19 07 54.8  +0.4
TNA                                 IAmb      IAmb      19 08 05.6
                comp=Z,22nm,1.4s
X16A   Lo Mia Camp, P    57.64 286  IAmb      IAmb      19 08 09.6
                comp=Z,10nm,0.8s
ANM    Nome              57.87 338  IAmb      IAmb      19 08 07.6
                comp=Z,12nm,1.4s
PAHR   Pah Rah Range     58.49 295  P         P         19 08 02.2  +0.7
PAHR                                IAmb      IAmb      19 08 14.7
                comp=Z,9.4nm,0.8s
NV11   Mina Array Sit    58.69 293  IAmb      IAmb      19 08 15.3
                comp=Z,6.7nm,0.8s
RYN    Ryan              58.76 294  IAmb      IAmb      19 08 15.6
                comp=Z,7.7nm,0.8s
NVAR   Mina Array Bea    58.78 294  P         P         19 08 04.9  +1.2
                comp=Z,0.7nm,0.6s,baz=58,slow=6.3,SNR=6.1
NVAR   Mina Array Bea    58.78 294  P         P         19 08 05.2  +1.5
BEKR   Beckworth         58.91 296  IAmb      IAmb      19 08 17.2
                comp=Z,7.2nm,1.0s
LHV    Little Huntoon    59.02 294  IAmb      IAmb      19 08 18.1
                comp=Z,6.7nm,0.9s
PNTR   Pine Nut          59.04 295  IAmb      IAmb      19 08 17.9
                comp=Z,9.7nm,0.7s
ROSC   El Rosal          59.06 232  P         P         19 08 07.2  +1.2
                comp=Z,16nm,0.5s,baz=98,slow=8.1,SNR=6.0
ROSC   El Rosal          59.06 232            P         19 08 06.7  +0.7
ORV    Oroville          59.76 297  P         P         19 08 10.0  -0.1
ORV                                 IAmb      IAmb      19 08 15.6
                comp=Z,8.2nm,1.3s
MIB    Mutribah          60.49  79 eP                   19 08 15.7
RST    Umm Al-Ruwaisa    60.50  79 eP                   19 08 15.4
ISA    Isabella, Lake    60.83 291  P         P         19 08 15.2  -2.4
ISA                                 IAmb      IAmb      19 08 31.1
                comp=Z,7.1nm,0.8s
UMR    Umm Al-Rimmam     60.90  79 eP                   19 08 18.3
GEYT   Alibeck           60.90  65  P         P         19 08 18.4  +0.4
                comp=Z,3.9nm,0.8s,baz=292,slow=7.8,SNR=9.1
GEYT   Alibeck           60.90  65  P         P         19 08 18.7  +0.7
GYA0B  ALIBECK ARRAY     60.90  65  IAmb      IAmb      19 08 20.1
                comp=Z,22nm,1.5s
ZAA0   Zalesovo Array    61.48  37  P         P         19 08 21.9  +0.3
ZAA0                                IAmb      IAmb      19 08 23.5
                comp=Z,6.9nm,0.7s
ZALV   Zalesovo Beam     61.48  37  P         P         19 08 22.1  +0.5
                comp=Z,8.0nm,0.6s,baz=315,slow=7.7,SNR=23
ZALV   Zalesovo Beam     61.48  37  P         P         19 08 21.4  -0.2
KURK   Kurchatov         61.55  43  P         P         19 08 22.0  -0.1
KURK                                IAmb      IAmb      19 08 23.4
                comp=Z,8.4nm,0.9s
KURBB  Kurchatov Arra    61.58  43  P         P         19 08 22.7  +0.3
                comp=Z,6.5nm,0.7s,baz=323,slow=7.3,SNR=37
TLIG   Tlapa             62.21 263  P         P         19 08 27.1   0.0
KK31   Karatay Array     63.61  53  P         P         19 08 36.2  +0.2
KK31                                IAmb      IAmb      19 08 37.8
                comp=Z,4.7nm,0.8s
KKAR   Karatay Array     63.61  53  P         P         19 08 36.2  +0.2
KKAR   Karatay Array     63.61  53  IAmb      IAmb      19 08 37.8
                comp=Z,4.7nm,0.8s
RAYN   Ar Rayn           63.99  85  P         P         19 08 39.5  +0.6
AAK    Ala-Archa         65.88  51  P         P         19 08 51.8  +0.8
                comp=Z,1.3nm,0.5s,baz=227,slow=12,SNR=4.7
MAKZ   Makanchi          65.98  44  P         P         19 08 51.7  +0.2
MAKZ                                IAmb      IAmb      19 08 53.0
                comp=Z,7.4nm,0.9s
MK31   Makanchi Array    66.13  43  IAmb      IAmb      19 08 53.7
                comp=Z,6.9nm,0.8s
MKAR   Makanchi Array    66.13  43  P         P         19 08 52.5  +0.1
                comp=Z,7.8nm,0.7s,baz=330,slow=5.9,SNR=56
MKAR   Makanchi Array    66.13  43  P         P         19 08 52.6  +0.2
KSH    Kashi             69.00  52  P         P         19 09 13.3  +2.5
KSH                                 sP        pwP       19 09 19.3  +0.8
KSH                                 pmax      pmax
                comp=Z,13nm,1.2s
KSH                                 pmax      pmax
                comp=Z,140nm,7.4s
UOSS   Minazif           69.36  76  P         P         19 09 12.2  -0.9
WMQ    Urumqi            70.77  42 eP         P         19 09 23.1  +1.6
WMQ                                 pmax      pmax
                comp=Z,9.0nm,0.7s
WMQ                                 pmax      pmax
                comp=Z,100nm,4.5s
NIL    Nilore            72.22  58  P         P         19 09 29.7  -0.7
NIL                                 IAmb      IAmb      19 09 41.4
                comp=Z,14nm,1.1s
SONM   Songino Array     73.81  28  P         P         19 09 40.4  +0.6
                comp=Z,4.8nm,0.8s,baz=332,slow=6.5,SNR=34
SONM   Songino Array     73.81  28  P         P         19 09 40.1  +0.4
ULN    Ulaanbaatar       73.97  28  P         P         19 09 41.4  +0.8
ULN                                 IAmb      IAmb      19 09 42.7
                comp=Z,10nm,1.2s
LPAZ   La Paz            75.45 216  P         P         19 09 50.3  +0.3
                comp=Z,0.6nm,0.4s,baz=357,slow=8.3,SNR=2.8
SOCY   Socotra           77.81  86  P         P         19 09 59.9  -3.0
SOCY                                IAmb      IAmb      19 10 18.6
                comp=Z,13nm,0.9s
GTA    Gaotai            79.22  36 ⇑P         P         19 10 10.8  +0.3
GTA                                 pP        sP        19 10 14.8  +0.7
GTA                                 sP        pwP       19 10 17.3  -0.8
GTA                                 pmax      pmax
                comp=Z,5.0nm,1.0s
HHC    Hu-ho-hao-te      81.69  27 eP         P         19 10 24.8  +1.1
HHC                                 pmax      pmax
                comp=Z,4.0nm,0.9s
HHC                                 pmax      pmax
                comp=Z,120nm,6.6s
MDJ    Mudanjiang        81.90  13  P         P         19 10 24.8  +0.2
USRK   Ussuriysk Ar.     82.62  12  P         P         19 10 25.6  -2.8
XAN    Xi'an             87.19  32  P         P         19 10 51.4  -0.2
XAN                                 pP        sP        19 10 54.9  -0.3
XAN                                 pmax      pmax
                comp=Z,6.0nm,1.0s
KSRS   Korea Array       88.64  16  P         P         19 10 57.7  -0.7
                comp=Z,0.8nm,0.6s,baz=354,slow=5.1,SNR=4.8
NJ2    Nanjing           91.92  25 eP         P         19 11 13.6  -0.2
NJ2                                 pmax      pmax
                comp=Z,5.0nm,0.5s
SYO    Syowa Base       131.90 153⇑eP         PKPdf     19 17 04.8  -12
WRA    Warramunga Arr   145.70  24  PKPbc     PKPdf     19 17 43.8   0.0
                comp=Z,2.5nm,0.9s,baz=345,slow=3.2,SNR=13
WRA    Warramunga Arr   145.70  24            PKPbc     19 17 44.4  +0.2
ASAR   Alice Springs    149.15  26  PKPbc     PKPbc     19 17 53.0  -0.7
                comp=Z,1.5nm,0.6s,baz=353,slow=1.7,SNR=10
ASAR   Alice Springs    149.15  26            PKPab     19 17 56.9  -1.1
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*DNK **13** 18:59:05.1±6.0, 51°80N×32°42W, h0^{km}±193^{km}, Ms6.7*

*BJI **13** 18:59:10.4±0.0, 52°60N×31°95W, h10^{km}, mB6.4/70, mb5.5/58, Ms6.9/91, Ms7 6.8/83*

*MOS **13** 18:59:10.1±1.4, 52°60N×31°95W, h11^{km}, mb6.4/32, Error ellipse: s-maj=6.1km s-min=4.7km az=135.9*

*IDC **13** 18:59:11.0±0.3, 52°59N×32°10W, h0^{km}, mb5.2/43, mb1 5.3/46, mb1mx5.3/48, mbtmp5.2/46, ML5.1/3, MS6.7/54, Ms1 6.7/54, ms1mx6.6/61, Error ellipse: s-maj=10.5km s-min=8.6km az=3.0*

*NEIC **13** 18:59:12.2±1.6, 52°65N±0°06×31°90W±0°09, h17^{km}±1^{km}, mb6.5/760, Ms_20 7.0/892, Mwb7.0/84, Mwc7.0/165, Mww7.1, Mwc7.1(GCMT), Error ellipse: s-maj=9.4km s-min=8.3km az=175.0*

*NEIC **13** 18:59:12.5, 52°66N×31°91W, h22^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{19}Nm; M$_{rr}$-0.25; M$_{\theta\theta}$-0.84; M$_{\phi\phi}$1.09; M$_{r\theta}$0.38; M$_{\theta\phi}$-3.62; M$_{\phi r}$0.16; Fault plane solution: M$_0$3.78000×10^{19} NP1:φ$_s$277.64000°, δ86.33000°, λ-174.29000°. NP2:φ$_s$187.28000°, δ84.31000°, λ-3.68000°. Principal axes: T 3.8749, Plg1.0000°, Azm52.0000°; N -0.2025, Plg83.0000°, Azm310.0000°; P -3.6724, Plg7.0000°, Azm143.0000°;*

*BGR **13** 18:59:16.2±0.0, 52°75N×31°57W, h10^{km}, mb6.8, mB_BB7.0, Ms6.2*

*NEIC **13** 18:59:24, 52°59N×32°74W, h22^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{19}Nm; M$_{rr}$-0.46; M$_{\theta\theta}$-1.06; M$_{\phi\phi}$1.52; M$_{r\theta}$0.24; M$_{\theta\phi}$-4.77; M$_{\phi r}$0.94; Fault plane solution: M$_0$5.05000×10^{19} NP1:φ$_s$278.00000°, δ79.00000°, λ-177.00000°. NP2:φ$_s$187.00000°, δ87.00000°, λ-11.00000°. Principal axes: T 5.2366, Plg6.0000°, Azm233.0000°; N -0.3870, Plg78.0000°, Azm354.0000°; P -4.8496, Plg10.0000°, Azm142.0000°;*

*GCMT **13** 18:59:27.2±0.1, 52°70N×32°74W, h25^{km}, MW7.1/173, Moment Tensor Solution. s172,c407; s173,c783; Duration: 8^{s}4 Moment tensor: Scale 10^{19}Nm; M$_{rr}$-0.38±.02; M$_{\theta\theta}$-1.03±.02; M$_{\phi\phi}$1.41±.02; M$_{r\theta}$0.89±.09; M$_{\theta\phi}$-4.91±.01; M$_{\phi r}$-0.05±.08; Best double couple: M$_0$5.13900×10^{19} NP1:φ$_s$187.00000°, δ80.00000°, λ-2.00000°. NP2:φ$_s$277.00000°, δ88.00000°, λ-170.00000°. Principal axes: T 5.3110, Plg6.0000°, Azm52.0000°; N -0.3420, Plg80.0000°, Azm286.0000°; P -4.9680, Plg8.0000°, Azm142.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=150s. Triangular moment-rate function*

*NEIC **13** 18:59:27, 52°62N×32°77W, h24^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{19}Nm; M$_{rr}$-0.37; M$_{\theta\theta}$-0.96; M$_{\phi\phi}$1.33; M$_{r\theta}$0.83; M$_{\theta\phi}$-4.83; M$_{\phi r}$0.13; Fault plane solution: M$_0$5.04000×10^{19} NP1:φ$_s$186.00000°, δ80.00000°, λ-4.00000°. NP2:φ$_s$277.00000°, δ87.00000°, λ-170.00000°. Principal axes: T 5.1784, Plg4.0000°, Azm51.0000°; N -0.2802, Plg80.0000°, Azm297.0000°; P -4.8981, Plg9.0000°, Azm142.0000°;*

*NEIC **13** 18:59:34.2, 52°61N×32°80W, h10^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{19}Nm; M$_{rr}$-0.28; M$_{\theta\theta}$-0.79; M$_{\phi\phi}$1.07; M$_{r\theta}$-0.09; M$_{\theta\phi}$-4.24; M$_{\phi r}$0.45; Fault plane solution: M$_0$4.36000×10^{19} NP1:φ$_s$276.09000°, δ84.35000°, λ178.78000°. NP2:φ$_s$6.21000°, δ88.78000°, λ5.66000°. Principal axes: T 4.5107, Plg5.0000°, Azm231.0000°; N -0.3002, Plg84.0000°, Azm18.0000°; P -4.2105, Plg3.0000°, Azm141.0000°;*

ISC 13 18:59:13.5±0.3, **52°51N**±0°03×**32°02W**±0°02, **h17^{km}**±1^{km}, **h17^{km}:pP-P, n2616,** σ**2^{s}37**/2281, **mb6.5**/587, **MS7.0**/586, **70C-75D, Reykjanes Ridge**

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Code   Station Name        Δ°   AZ°     Phase ID            Time      Res
                                    Op        ISC       h  m  s     ISC
NRS    Narsarsuaq        11.33 325 i P        Pn        19 01 57.3  +2.9
NRS    Narsarsuaq        11.33 325 i P        Pn        19 01 57.3  +2.9
NRS    Narsarsuaq        11.33 325            Pn        19 01 53.5  -0.9
NRS    Narsarsuaq        11.33 325 i P        Pn        19 01 57.4  +2.9
H07N1  FLORES T-PHASE    12.84 177 eP         Pn        19 02 19.3  +4.2
H07N1  FLORES T-PHASE    12.84 177 eT         T         19 15 03.9
H07N1  FLORES T-PHASE    12.84 177  Pn        P         19 02 22.4  -3.5
                SNR=50
H07N1                               T         T         19 16 21.1
                SNR=31
H07S1  FLORES T-PHASE    13.15 177 eP         Pn        19 02 20.3  +1.0
H07S1  FLORES T-PHASE    13.15 177  Pn        Pn        19 02 23.2  +3.9
                SNR=145
H07S1                               T         T         19 16 30.1
                SNR=12
BORG   Borgarnes         13.45  20  Pn        Pn        19 02 22.6  -0.7
                2.2nm,0.3s,baz=202,slow=12,SNR=2.9
BORG                                Sn        Sn        19 04 47.2  -4.9
                4.9nm,0.3s,baz=41,slow=20,SNR=1.5
BORG   Borgarnes         13.45  20  Pn        Pn        19 02 21.7  -1.6
ANGG   Ammassalik, Gr    13.45 350  Pn        Pn        19 02 20.3  -3.0
ANGG   Ammassalik, Gr    13.45 350 i P        Pn        19 02 24.7  +1.4
ANGG                                IAMs_20   IAMs_20   19 18 46.3
                comp=Z,127µm,10.1s
ISOG   Isortoq, Green    13.54 348 i P        Pn        19 02 25.6  +1.0
ISOG                               eP         Pn        19 02 26.1  +1.5
SRBC   Serra Branca      13.76 167 eP         P         19 02 39.5  +3.4
                comp=Z,5µm,2.4s
PGRA   Graciosa          13.77 167 eP         Pn        19 02 24.9  -2.9
                comp=Z,3µm,2.3s
ROSA   Rosais            14.04 168 eP         P         19 02 39.7  +0.4
                comp=Z,3µm,1.6s
ROSA   Rosais            14.04 168            Pn        19 02 35.2  +3.7
PCED   Cedros            14.07 169 eP         Pn        19 02 32.4  +0.4
                comp=Z,5µm,1.8s
PMAN   Manadas           14.14 167 eP         P         19 02 38.5  -2.0
                comp=Z,3µm,2.0s
PAGU   Agualva, Azore    14.15 164 eP         P         19 02 40.1  -0.4
                comp=Z,3µm,1.8s
PSCM   Serra do Cume     14.22 164 eP         Pn        19 02 37.3  +3.2
                comp=Z,3µm,1.7s
PICO   Pico              14.23 168 eP         P         19 02 38.5  -3.0
                comp=Z,5µm,1.9s
ADH    Angra Heroismo    14.25 165 eP         P         19 02 39.3  -2.3
                comp=Z,3µm,1.5s
PCAN   Candelaria        14.26 169 eP         P         19 02 42.4  +0.6
                comp=Z,5µm,2.1s
PPNO   Prainha do Nor    14.28 168 eP         P         19 02 38.9  -3.1
                comp=Z,5µm,1.5s
PID    Ribeirinha        14.33 168 eP         P         19 02 44.2  +1.7
                comp=Z,4µm,1.5s
LEWI   Lewis, Hebride    15.33  58 eP         Pn        19 02 47.4  -1.5
LEWI                                IAMs_20   IAMs_20   19 06 45.9
                comp=Z,627µm,33.7s
PSET   Sete Cidades      15.33 161 eP         Pn        19 02 51.3  +2.3
                comp=Z,4µm,1.5s
PCALD  Caldeiras da R    15.41 160 eP         Pn        19 02 50.3  +0.3
                comp=Z,3µm,1.4s
GRON   Grota Negra       15.43 160 eP         P         19 02 53.1  -1.6
                comp=Z,3µm,1.7s
CMLA   Cha da Macela     15.43 160 eP         P         19 02 54.5  -0.3
                comp=Z,4µm,1.8s
CMLA   Cha da Macela     15.43 160  P         P         19 02 54.2  -0.6
CMLA                                pmax      pmax
                comp=Z,16µm,2.4s
CMLA   Cha da Macela     15.43 160  P         P         19 02 54.2  -0.6
DSB    Dublin            15.48  77  Pn        Pn        19 02 49.5  -1.3
DSB                                 IAmb      IAmb      19 03 15.0
                comp=Z,5µm,2.1s
BART   Pico Bartolome    15.49 159 eP         Pn        19 02 51.6  +0.4
                comp=Z,4µm,1.4s
NUUK   Nuuk              15.52 327 i P        Pn        19 02 51.5  +0.2
KPL    Plockton          15.86  62 eP         Pn        19 02 54.8  -0.8
KPL                                 IAMs_20   IAMs_20   19 07 00.3
                comp=Z,598µm,34.6s
LAWE   Loch Awe, Argy    15.91  66 eP         Pn        19 02 55.7  -0.6
LAWE                                IAMs_20   IAMs_20   19 07 03.9
                comp=Z,410µm,31.0s
PSMA   Santa Maria       16.25 160 eP         P         19 03 06.0  +2.1
                comp=Z,3µm,1.6s
PSMN   Pico do Norte,    16.26 160 eP         P         19 03 03.0  -0.9
                comp=Z,4µm,1.8s
GAL1   Galloway          16.31  71 eP         Pn        19 02 59.1  -2.3
GAL1                                IAMs_20   IAMs_20   19 07 13.9
                comp=Z,346µm,32.6s
DRLN   Deer Lake         16.38 269  Pn        Pn        19 02 58.1  -4.2
DRLN                                IAmb      IAmb      19 03 04.6
                comp=Z,3µm,0.8s
WIM    Isle of Man       16.38  73 eP         Pn        19 03 02.6  +0.2
PGBU   Glenifferbraes    16.41  67 eP         Pn        19 03 02.4  -0.4
PGBU                                IAMs_20   IAMs_20   19 07 17.3
                comp=Z,347µm,32.1s
IOMK   Kirk Michael      16.43  73 eP         Pn        19 03 01.9  -1.2
IOMK                                IAMs_20   IAMs_20   19 07 15.2
                comp=Z,796µm,38.2s
EAB    Aberfoyle         16.50  66 eP         Pn        19 03 03.6  -0.3
YRC    Rhoscolyn         16.55  77 eP         Pn        19 03 04.7  +0.1
NEWG   New Galloway      16.57  70 eP         Pn        19 03 03.4  -1.4
NEWG                                IAMs_20   IAMs_20   19 07 17.7
                comp=Z,387µm,40.2s
WPS    Cemaes, Angles    16.57  76 eP         Pn        19 03 02.9  -1.9
WPS                                 IAMs_20   IAMs_20   19 07 39.2
                comp=Z,307µm,29.9s
WLF1   Llynfaes          16.65  76 eP         Pn        19 03 04.7  -1.1
WLF1                                IAMs_20   IAMs_20   19 07 41.3
                comp=Z,598µm,29.6s
INVG   Invergeldie, C    16.67  65 eP         Pn        19 03 05.8  -0.2
INVG                                IAMs_20   IAMs_20   19 07 25.9
                comp=Z,408µm,30.8s
WME    Myndd Eilian      16.69  76 eP         Pn        19 03 05.1  -1.2
YLL    Llanberis         16.81  77 eP         Pn        19 03 08.1  +0.3
ICESG  Greenland Ices    17.02 351 i P        P         19 03 13.2  +0.7
EDI    Edinburgh         17.14  67 eP         Pn        19 03 10.5  -1.5
EDI                                 IAMs_20   IAMs_20   19 07 38.5
                comp=Z,344µm,31.5s
ESK    Eskdalemuir       17.15  69 eP         Pn        19 03 11.6  -0.5
ESK                                 IAMs_20   IAMs_20   19 07 36.9
                comp=Z,332µm,35.7s
ESK    Eskdalemuir       17.15  69  P         Pn        19 03 10.6  -1.5
ESK                                 pmax      pmax
                comp=Z,10µm,2.1s
ESK    Eskdalemuir       17.15  69            Pn        19 03 10.6  -1.5
ESK                                 IAmb      IAmb      19 03 33.2
                comp=Z,10µm,2.0s
EKB    Eskdalemuir       17.16  69  P         Pn        19 03 11.3  -0.9
EKB                                 IAmb      IAmb      19 03 33.3
                comp=Z,9µm,1.9s
EKR1   Eskdalemuir Ar    17.16  69  P         Pn        19 03 10.5  -1.8
EKR1                                IAmb      IAmb      19 03 33.4
                comp=Z,5µm,1.6s
SFJD   Kangerlussuaq     17.17 335  Pn        Pn        19 03 10.9  -1.3
                comp=Z,7.4nm,0.3s,baz=148,slow=12,SNR=25
SFJD                                Sn        Sn        19 06 08.6  -14
                comp=Z,1.6nm,0.3s,baz=337,slow=17,SNR=0.8
SFJD                                LR        LR        19 08 33.4
                comp=Z,1222µm,20.4s,baz=144,slow=33
SFJD   Kangerlussuaq     17.17 335 i P        Pn        19 03 09.8  -2.4
SFJD   Kangerlussuaq     17.17 335  P         Pn        19 03 10.3  -1.9
SFJD                                IAmb      IAmb      19 03 21.5
                comp=Z,7µm,1.4s
SFJD   Kangerlussuaq     17.17 335 i P        Pn        19 03 09.9  -2.4
EKB2   Eskdalemuir Ar    17.17  69  P         Pn        19 03 10.9  -1.4
EKA    Eskdalemuir Ar    17.18  69  P         Pn        19 03 11.6  -0.8
                baz=272,slow=14,SNR=22
EKA                                 LR        LR        19 08 38.2
                comp=Z,76µm,21.4s,baz=270,slow=33
EBL    Broad Law         17.23  68 eP         Pn        19 03 11.5  -1.6
EKR10  Eskdalemuir Ar    17.23  69  P         Pn        19 03 11.8  -1.4
KESW   Keswick, Cumbr    17.26  72 eP         Pn        19 03 12.1  -1.3
KESW                                IAMs_20   IAMs_20   19 07 58.9
                comp=Z,237µm,27.0s
ESY    Stoneypath        17.47  67 eP         Pn        19 03 14.3  -1.8
DRUM   Mains of Drumt    17.55  64  IAMs_20   IAMs_20   19 08 06.1
                comp=Z,444µm,29.7s
HLM1   Long Mynd         17.69  78 eP         Pn        19 03 18.4  -0.5
HLM1                                IAMs_20   IAMs_20   19 08 11.0
                comp=Z,277µm,29.4s
MCH1   Michaelchurch     17.73  80 eP         Pn        19 03 18.6  -0.8
EDMD   Edmundbyers       17.89  71 eP         Pn        19 03 20.1  -1.3
EDMD                                IAMs_20   IAMs_20   19 07 58.4
                comp=Z,281µm,32.8s
HPK    Haverah Park      18.19  73 eP         Pn        19 03 24.3  -0.6
HPK                                 IAMs_20   IAMs_20   19 08 24.1
                comp=Z,277µm,30.9s
LBWR   Ladybower, Pea    18.21  75 eP         Pn        19 03 25.1  -0.2
LBWR                                IAMs_20   IAMs_20   19 08 25.0
                comp=Z,302µm,32.6s
STRD   Stroud            18.28  80 eP         Pn        19 03 25.7  -0.4
STRD                                IAMs_20   IAMs_20   19 08 27.5
                comp=Z,274µm,38.0s
SWN1   Swindon           18.57  81 eP         P         19 03 28.8  -0.5
SWN1                                IAMs_20   IAMs_20   19 08 35.8
                comp=Z,252µm,37.1s
CWF    Charnwood Fore    18.58  77 eP         P         19 03 26.9  -2.6
CWF                                 IAMs_20   IAMs_20   19 08 35.5
                comp=Z,298µm,33.2s
LRW    Lerwick           18.59  54 eP         P         19 03 28.3  -1.2
LRW                                 IAMs_20   IAMs_20   19 08 17.1
                comp=Z,478µm,33.3s
GDLE   Glaisdale, N Y    18.60  72 eP         P         19 03 29.6  -0.1
GDLE                                IAMs_20   IAMs_20   19 08 33.8
                comp=Z,288µm,35.5s
SCO    Scoresbysund      18.61  11 i P        Pn        19 03 35.6  +5.6
SCO    Scoresbysund      18.61  11 i P        Pn        19 03 35.6  +5.6
SCO    Scoresbysund      18.61  11  P         P         19 03 29.5  -0.2
SCO    Scoresbysund      18.61  11 i P        Pn        19 03 35.7  +5.6
ILULI  Ilulissat         19.00 339 i P        Pn        19 03 34.9  +0.3
ILULI  Ilulissat         19.00 339 i P        Pn        19 03 34.9  +0.3
ILULI  Ilulissat         19.00 339  P         P         19 03 31.9  -2.0
ILULI                               IAmb      IAmb      19 03 49.1
                comp=Z,4µm,1.4s
ILULI  Ilulissat         19.00 339 i P        Pn        19 03 35.0  +0.3
LMK    Market Rasen      19.03  74 eP         P         19 03 34.1  -0.3
LMK                                 IAMs_20   IAMs_20   19 08 48.9
                comp=Z,268µm,29.4s
PGAV   Gavieira, Arco    19.18 114 eP         Pn        19 03 38.5  +1.3
                comp=Z,2µm,1.7s
PGAV                               eS         S         19 07 30.8  +18
PGAV                                A         A         19 10 28.4
                comp=Z,62µm,18.0s
PGAV   Gavieira, Arco    19.18 114 eT         T         19 22 27.4
PCAB   Cabril            19.48 114 eP         Pn        19 03 41.4  +0.6
                comp=Z,4µm,1.8s
PCAB                               eS         S         19 07 41.2  +22
PCAB                                A         A         19 10 44.0
                comp=Z,36µm,17.6s
PCAB   Cabril            19.48 114 eT         T         19 22 02.6
PTO    Porto             19.55 116 eP         Pn        19 03 45.2  +3.7
                comp=Z,4µm,1.8s
PTO                                 A         A         19 10 34.8
                comp=Z,16µm,17.5s
PTO    Porto             19.55 116 eT         T         19 22 46.7
WACR   West Acre         19.74  76 eP         P         19 03 42.1   0.0
WACR                                IAMs_20   IAMs_20   19 09 09.9
                comp=Z,296µm,32.9s
POLO   Lamas de Olo      19.84 115 eP         Pn        19 03 46.5  +1.4
                comp=Z,2µm,2.1s
POLO                               eS         Sn        19 07 41.1  +14
POLO                                A         A         19 10 48.3
                comp=Z,31µm,17.7s
POLO   Lamas de Olo      19.84 115 eT         T         19 22 14.7
PVRL   Vila Real         19.95 115 eP         Pn        19 03 47.4  +1.1
                comp=Z,3µm,1.6s
PVRL                               eS         Sn        19 07 44.7  +15
PVRL                                A         A         19 10 58.2
                comp=Z,41µm,17.2s
PVRL   Vila Real         19.95 115 eT         T         19 22 34.8
HMNX   Herstmonceux      20.04  82 eP         P         19 03 46.1  +0.6
HMNX                                IAMs_20   IAMs_20   19 09 18.4
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	comp=Z,243µm,31.2s						
PBRG	**Braganca**	**20.15**	**112**	*e*P	Pn	19 03 48.7	+0.1
	comp=Z,1µm,1.9s						
PBRG				*e*S	Sn	19 07 45.8	+11
PBRG				A	A	19 11 08.2	
	comp=Z,91µm,17.5s						
PBRG	**Braganca**	**20.15**	**112**	*e*T	T	19 22 50.8	
PVIS	**Viseu**	**20.23**	**116**	*e*P	Pn	19 03 48.9	-0.8
	comp=Z,2µm,1.6s						
PVIS				*e*S	Sn	19 07 51.7	+15
PVIS				A	A	19 11 06.0	
	comp=Z,32µm,17.3s						
PVIS	**Viseu**	**20.23**	**116**	*e*T	T	19 22 45.4	
COI	**Coimbra**	**20.31**	**118**	P	**P**	**19 03 48.3**	**-0.1**
COI				pmax	pmax		
	comp=Z,2µm,1.2s						
COI				MLR	MLR		
	comp=Z,63µm,22.0s						
COI	**Coimbra**	**20.31**	**118**	P	**P**	**19 03 48.3**	**-0.1**
COI	**Coimbra**	**20.31**	**118**	*e*P	Pn	19 03 50.0	-0.4
	comp=Z,3µm,1.3s						
COI				*e*S	Sn	19 07 52.0	+13
COI				A	A	19 10 59.8	
	comp=Z,57µm,17.9s						
COI	**Coimbra**	**20.31**	**118**	*e*T	T	19 23 51.9	
SUMG	**Summit**	**20.33**	**354**	*i* P	Pn	19 03 50.0	-1.0
SUMG	**Summit**	**20.33**	**354**	*i* P	Pn	19 03 50.0	-1.0
SUMG	**Summit**	**20.33**	**354**	P	**P**	**19 03 45.7**	**-3.2**
SUMG				IAmb	IAmb	19 04 11.0	
	comp=Z,3µm,1.2s						
SUMG	**Summit**	**20.33**	**354**	*i* P	Pn	19 03 50.1	-0.9
PCAS	**Casmilo, Conde**	**20.37**	**118**	*e*P	**P**	**19 03 47.9**	**-1.2**
	comp=Z,3µm,1.7s						
PCAS				*e*S	Sn	19 07 54.2	+14
PCAS				A	A	19 11 04.2	
	comp=Z,57µm,17.9s						
PCAS	**Casmilo, Conde**	**20.37**	**118**	*e*T	T	19 23 30.8	
MVO	**Moncorvo**	**20.41**	**114**	*e*P	Pn	19 03 50.8	-0.9
	comp=Z,2µm,1.2s						
MVO				*e*S	Sn	19 07 52.0	+11
MVO				A	A	19 11 15.2	
	comp=Z,56µm,17.6s						
MVO	**Moncorvo**	**20.41**	**114**	*e*T	T	19 22 41.2	
GBN	**Guysborough**	**20.52**	**262**	P	**P**	**19 03 50.4**	**-0.3**
GBN				IAMs_20	IAMs_20	19 10 52.6	
	comp=Z,917µm,18.0s						
PSBE	**So Bento**	**20.60**	**120**	*e*P	**P**	**19 03 49.9**	**-1.7**
	comp=Z,2µm,1.8s						
PSBE				*e*S	Sn	19 08 00.1	+14
PSBE				A	A	19 11 20.6	
	comp=Z,44µm,17.3s						
PSBE	**So Bento**	**20.60**	**120**	*e*T	T	19 24 06.2	
MTE	**Manteigas**	**20.64**	**116**	P	**P**	**19 03 52.3**	**+0.2**
MTE	**Manteigas**	**20.64**	**116**	*e*P	Pn	19 03 54.0	-0.5
	comp=Z,2µm,1.4s						
MTE				*e*S	Sn	19 08 03.0	+16
MTE				A	A	19 11 13.9	
	comp=Z,47µm,17.7s						
MTE	**Manteigas**	**20.64**	**116**	*e*T	T	19 23 05.8	
PMAFR	**Mafra**	**20.75**	**122**	*e*P	Pn	19 03 55.1	-0.6
	comp=Z,5µm,1.3s						
PMAFR				*e*S	Sn	19 08 03.0	+14
PMAFR				A	A	19 09 42.6	
	comp=Z,30µm,23.9s						
PMAFR	**Mafra**	**20.75**	**122**	*e*T	T	19 24 05.7	
LIS	**Lisbon**	**21.00**	**122**	*e*P	**P**	**19 03 56.5**	**+0.6**
LIS				AMb	AMB	19 04 20.9	
	comp=Z,5µm,2.6s						
LIS	**Lisbon**	**21.00**	**122**	*e*P	**P**	**19 03 56.5**	**+0.6**
LIS	**Lisbon**	**21.00**	**122**	*e*S	Sn	19 08 09.9	+15
LIS				*e*P	**P**	**19 03 57.8**	**+1.9**
	comp=Z,5µm,1.7s						
LIS				A	A	19 10 02.6	
	comp=Z,30µm,23.8s						
PCBR	**Castelo Branco**	**21.07**	**117**	*e*P	**P**	**19 03 58.7**	**+2.0**
	comp=Z,3µm,1.7s						
PCBR				*e*S	Sn	19 08 09.6	+13
PCBR				A	A	19 11 32.3	
	comp=Z,32µm,17.6s						
PCBR	**Castelo Branco**	**21.07**	**117**	*e*T	T	19 23 41.5	
PMTG	**Montargil**	**21.23**	**120**	*e*P	**P**	**19 03 58.7**	**+0.3**
	comp=Z,4µm,1.5s						
PMTG				*e*S	Sn	19 08 14.3	+14
PMTG				A	A	19 11 40.9	
	comp=Z,49µm,17.8s						
PMTG	**Montargil**	**21.23**	**120**	*e*T	T	19 24 17.8	
NUUG	**Nuugaatsiaq**	**21.28**	**342**	*i* P	**P**	**19 03 58.1**	**-0.6**
JMIC	**Jan Mayen**	**21.34**	**21**	P	**P**	**19 03 59.9**	**+0.6**
	comp=Z,45nm,0.6s,baz=180,slow=7.1,SNR=3.9						
JMIC				S	**S**	**19 07 58.7**	**+3.4**
	comp=Z,22nm,0.4s,baz=109,slow=10.0,SNR=1.5						
JMIC				LR	LR	19 09 49.1	
	comp=Z,106µm,22.0s,baz=217,slow=30						
JMIC	**Jan Mayen**	**21.34**	**21**	*e*	P	19 04 15.9	+17
JMIC				*e*S	**S**	**19 07 53.5**	**-1.8**
PMRV	**Marv??o**	**21.41**	**118**	*e*P	**P**	**19 04 02.1**	**+1.7**
	comp=Z,2µm,1.9s						
PMRV				*e*S	Sn	19 08 15.4	+10
PMRV				A	A	19 11 45.8	
	comp=Z,48µm,17.8s						
PMRV	**Marv??o**	**21.41**	**118**	*e*T	T	19 22 52.3	
SUE	**Sulen**	**21.62**	**52**	*e*P	**P**	**19 04 01.5**	**-0.8**
SUE				IVmB_BB		19 04 17.3	
	comp=Z,41µm,2.6s						
SUE				*e*S	**S**	**19 08 00.8**	**-0.2**
SUE				*i*		19 09 39.7	
PESTR	**Estremoz**	**21.71**	**119**	P	**P**	**19 04 02.7**	**-0.9**
PESTR	**Estremoz**	**21.71**	**119**	*e*P	**P**	**19 04 04.8**	**+1.2**
	comp=Z,2µm,1.4s						
PESTR				*e*S	Sn	19 08 19.4	+7.0
PESTR				A	A	19 12 03.4	
	comp=Z,54µm,17.3s						
PESTR	**Estremoz**	**21.71**	**119**	*e*T	T	19 24 14.8	
PESTR	**Estremoz**	**21.71**	**119**	P		19 04 04.6	
KMY	**Karmoy**	**21.73**	**57**	*e*P	**P**	**19 04 02.5**	**-1.1**
KMY				IVmB_BB		19 04 18.1	
	comp=Z,41µm,2.3s						
KMY				*e*S	**S**	**19 08 03.1**	**0.0**
EVO	**Evora**	**21.73**	**120**	P	P	19 04 11.2	+7.4
EVO				S	**S**	**19 07 54.7**	**-8.9**
EVO	**Evora**	**21.73**	**120**	*e*P	**P**	**19 04 04.7**	**+0.9**
	comp=Z,1µm,1.6s						
EVO				*e*S	Sn	19 08 19.4	+6.5
EVO				A	A	19 12 29.3	
	comp=Z,35µm,17.0s						
EVO	**Evora**	**21.73**	**120**	*e*T	T	19 24 06.3	
ASK	**Askoy**	**21.77**	**54**	*e*P	**P**	**19 04 04.0**	**-0.1**
PNCL	**Nicolau / Gran**	**21.78**	**122**	*e*P	**P**	**19 04 05.4**	**+1.1**
	comp=Z,1µm,1.4s						
PNCL				*e*S	Sn	19 08 22.7	+8.7
PNCL				A	A	19 10 26.8	
	comp=Z,34µm,21.3s						
PNCL	**Nicolau / Gran**	**21.78**	**122**	*e*T	T	19 24 32.3	
FOO	**Floro**	**21.82**	**51**	*e*P	**P**	**19 04 03.9**	**-0.7**
FOO				*e*pP	**sP**	**19 04 11.3**	**+0.9**
FOO				IVmB_BB		19 04 15.9	
	comp=Z,28µm,1.5s						
FOO				*e*S	**S**	**19 08 03.4**	**-1.5**
BER	**Bergen**	**21.84**	**54**	*e*P	**P**	**19 04 04.1**	**-0.6**
FRB	**Frobisher Bay**	**21.98**	**315**	P	**P**	**19 04 04.2**	**-2.0**
	comp=Z,182nm,1.2s,baz=101,slow=10,SNR=38						
FRB				S	**S**	**19 08 02.3**	**-5.5**
	comp=Z,77nm,1.0s,baz=245,slow=22,SNR=1.7						
FRB				LR	LR	19 10 45.1	
	comp=Z,232µm,20.6s,baz=100,slow=32						
PTEO	**Sao Teotonio**	**22.11**	**123**	*e*P	**P**	**19 04 10.1**	**+2.3**
	comp=Z,1µm,1.3s						
PTEO				*e*S	Sn	19 08 35.0	+13
PTEO				A	A	19 10 53.4	
	comp=Z,14µm,21.1s						
PTEO	**Sao Teotonio**	**22.11**	**123**	*e*T	T	19 25 26.9	
MESJ	**Messejana**	**22.14**	**122**	*e*P	**P**	**19 04 08.7**	**+0.5**
MESJ				AMb	AMB	19 04 44.1	
	comp=Z,2µm,1.8s						
MESJ				*e*S	**S**	**19 08 14.1**	**+2.6**
MESJ	**Messejana**	**22.14**	**122**	*e*P	**P**	**19 04 08.7**	**+0.5**
MESJ				*e*S	**S**	**19 08 14.0**	**+2.6**
MESJ	**Messejana**	**22.14**	**122**	*e*P	**P**	**19 04 08.8**	**+0.5**
	comp=Z,2µm,1.5s						
MESJ				*e*S	Sn	19 08 25.5	+2.8
MESJ				A	A	19 10 36.4	
	comp=Z,35µm,21.9s						
MESJ	**Messejana**	**22.14**	**122**	*e*T	T	19 24 36.4	
HAL	**Halifax**	**22.18**	**262**	P	**P**	**19 04 08.0**	**-0.6**
HAL				pmax	pmax		
	comp=Z,5µm,1.2s						
HAL				MLR	MLR		
	comp=Z,750µm,18.0s						
HAL	**Halifax**	**22.18**	**262**	P	**P**	**19 04 08.0**	**-0.6**
HAL				IAMs_20	IAMs_20	19 11 53.4	
	comp=Z,750µm,18.0s						
PBEJ	**Beja**	**22.19**	**121**	*e*P	**P**	**19 04 09.9**	**+1.2**
	comp=Z,877nm,1.7s						
PBEJ				*e*S	Sn	19 08 37.7	+14
PBEJ				A	A	19 10 46.0	
	comp=Z,5µm,21.3s						
PBEJ	**Beja**	**22.19**	**121**	*e*T	T	19 25 03.1	
CLF	**Chambon-Foret**	**22.23**	**88**	P	**P**	**19 04 08.2**	**-0.9**
CLF				IAmb	IAmb	19 04 46.0	
	comp=Z,1µm,1.0s						
LMN	**Caledonia Moun**	**22.30**	**266**	P	**P**	**19 04 06.5**	**-3.3**
LMN				IAMs_20	IAMs_20	19 12 10.3	
	comp=Z,407µm,19.0s						
MORF	**Marmelete**	**22.33**	**124**	*e*P	**P**	**19 04 10.8**	**+0.5**
MORF				AMb	AMB	19 04 30.1	
	comp=Z,2µm,1.2s						
MORF				*e*S	**S**	**19 08 17.9**	**+2.8**
MORF	**Marmelete**	**22.33**	**124**	*e*P	**P**	**19 04 10.7**	**+0.5**
MORF				*e*S	**S**	**19 08 17.8**	**+2.8**
MORF	**Marmelete**	**22.33**	**124**	*e*P	**P**	**19 04 10.9**	**+0.6**
	comp=Z,2µm,1.9s						
MORF				*e*S	Sn	19 08 28.2	+0.9
MORF				A	A	19 11 04.2	
	comp=Z,23µm,20.8s						
MORF	**Marmelete**	**22.33**	**124**	*e*T	T	19 25 19.1	
BLS5	**Blasjo**	**22.36**	**57**	*e*P	**P**	**19 04 08.9**	**-1.4**
BLS5				*e*		19 08 28.9	
PFVI	**Vila Bisbo**	**22.37**	**124**	P	**P**	**19 04 09.8**	**-0.9**
PFVI	**Vila Bisbo**	**22.37**	**124**	*e*P	**P**	**19 04 09.5**	**-1.2**
	comp=Z,2µm,1.7s						
PFVI				*e*S	Sn	19 08 26.6	-1.7
PFVI				A	A	19 10 52.8	
	comp=Z,29µm,20.2s						
PFVI	**Vila Bisbo**	**22.37**	**124**	P		19 04 11.9	
PCVE	**Castro Verde**	**22.39**	**122**	*e*P	**P**	**19 04 09.4**	**-1.5**
	comp=Z,1µm,1.5s						
PCVE				*e*S	Sn	19 08 34.1	+5.3
PCVE				A	A	19 10 56.1	
	comp=Z,36µm,20.4s						
PCVE	**Castro Verde**	**22.39**	**122**	*e*T	T	19 24 59.9	
BATG	**Bathurst New B**	**22.41**	**270**	P	**P**	**19 04 09.8**	**-1.2**
BATG				IAmb	IAmb	19 04 25.1	
	comp=Z,3µm,1.1s						
BATG				IAMs_20	IAMs_20	19 12 23.7	
	comp=Z,482µm,18.0s						
PMOZ	**Porto Moniz, M**	**22.41**	**146**	P	**P**	**19 04 11.0**	**-0.3**
PMOZ	**Porto Moniz, M**	**22.41**	**146**	*e*P	**P**	**19 04 15.9**	**+4.7**
	comp=Z,2µm,1.5s						
PMOZ				*e*S	Sn	19 08 27.4	-1.9
PMOZ				A	A	19 10 50.9	
	comp=Z,76µm,21.8s						
PMOZ	**Porto Moniz, M**	**22.41**	**146**	*e*T	T	19 26 51.9	
DBG	**Daneborg**	**22.42**	**8**	*i* P	**P**	**19 04 13.1**	**+2.3**
DBG				IAMs_20	IAMs_20	19 14 23.6	
	comp=Z,287µm,9.6s						
ODD1	**Odda**	**22.45**	**55**	*e*P	**P**	**19 04 08.9**	**-2.5**
ODD1				IVmB_BB		19 04 28.1	
	comp=Z,36µm,3.9s						
PMPST	**Porto Santo, M**	**22.48**	**144**	*e*P	**P**	**19 04 12.9**	**+1.0**
	comp=Z,2µm,1.6s						
PMPST				*e*S	Sn	19 08 41.2	+10
PMPST				A	A	19 10 53.5	
	comp=Z,71µm,22.2s						
UCC	**Uccle**	**22.49**	**80**	*d*P	**P**	**19 04 10.4**	**-1.4**
UCC	**Uccle**	**22.49**	**80**	P	**P**	**19 04 10.1**	**-1.7**
UCC				pmax	pmax		
	comp=Z,16µm,3.1s						
UCC				MLR	MLR		
	comp=Z,102µm,22.0s						
UCC	**Uccle**	**22.49**	**80**	P	**P**	**19 04 10.1**	**-1.7**
PMPS	**Porto Santo**	**22.50**	**144**	*e*P	**P**	**19 04 14.4**	**+2.3**
	comp=Z,3µm,1.6s						
PMPS				A	A	19 11 00.5	
	comp=Z,38µm,21.5s						
PBAR	**Barrancos**	**22.51**	**120**	*e*P	**P**	**19 04 12.2**	**0.0**
	comp=Z,1µm,1.7s						
PBAR				*e*S	Sn	19 08 32.1	+0.5
PBAR				A	A	19 12 28.1	
	comp=Z,55µm,17.7s						
PBAR	**Barrancos**	**22.51**	**120**	*e*T	T	19 24 44.9	
SNF	**Seneffe**	**22.54**	**81**	*d*pP	**P**	**19 04 12.5**	**+0.1**
SNF	**Seneffe**	**22.54**	**81**	*d*P	**P**	**19 04 09.1**	**-3.2**
PMAR	**Madeira**	**22.60**	**145**	*e*P	**P**	**19 04 16.1**	**+2.8**
	comp=Z,1µm,1.7s						
PMAR				*e*S	Sn	19 08 49.9	+16
PMAR				A	A	19 11 03.5	
	comp=Z,41µm,21.3s						
PMAR	**Madeira**	**22.60**	**145**	*e*T	T	19 27 27.2	
FUL	**Funchal**	**22.67**	**145**	*e*P	**P**	**19 04 17.1**	**+3.2**
	comp=Z,2µm,1.8s						
FUL				A	A	19 11 07.5	
	comp=Z,44µm,21.1s						
PVAQ	**Vaqueiros**	**22.73**	**122**	P	**P**	**19 04 13.1**	**-1.5**
PVAQ				IAmb	IAmb	19 04 36.1	
	comp=Z,6µm,2.6s						
PVAQ	**Vaqueiros**	**22.73**	**122**	*e*P	**P**	**19 04 16.0**	**+1.5**
	comp=Z,1µm,1.8s						
PVAQ				*e*S	Sn	19 08 29.9	-7.0
PVAQ				A	A	19 11 05.4	
	comp=Z,38µm,21.4s						
PVAQ	**Vaqueiros**	**22.73**	**122**	*e*T	T	19 24 56.8	
PVAQ	**Vaqueiros**	**22.73**	**122**	P		19 04 15.8	
PBDV	**Barranco-do-Ve**	**22.75**	**123**	*e*P	**P**	**19 04 17.3**	**+2.6**
	comp=Z,1µm,1.5s						
PBDV				*e*S	Sn	19 08 33.7	-3.5
PBDV				A	A	19 11 04.3	
	comp=Z,31µm,21.5s						
PBDV	**Barranco-do-Ve**	**22.75**	**123**	*e*T	T	19 25 29.3	
SNART	**Snartemo**	**22.76**	**60**	*e*P	**P**	**19 04 12.5**	**-2.1**
SNART				*e*S	**S**	**19 08 28.3**	**+5.9**
SNART	**Snartemo**	**22.76**	**60**	*i* P	**P**	**19 04 11.9**	**-2.7**
AKN	**Aaknes**	**22.82**	**50**	IVmB_BB		19 04 31.8	
	comp=Z,51µm,3.5s						
AKN				*e*S	**S**	**19 08 22.5**	**-1.0**
UPNV	**Upernavik**	**22.82**	**342**	*i* P	**P**	**19 04 14.2**	**-1.0**
DOU	**Dourbes**	**22.86**	**81**	*d*P	**P**	**19 04 15.6**	**-0.2**
BMRD	**Maredsous**	**22.90**	**81**	*d*P	**P**	**19 04 14.3**	**-1.8**
PAB	**San Pablo**	**23.01**	**113**	P	**P**	**19 04 16.8**	**-0.7**
PAB				pmax	pmax		
	comp=Z,6µm,2.7s						
PAB				MLR	MLR		
	comp=Z,76µm,18.0s						
PAB	**San Pablo**	**23.01**	**113**	P	**P**	**19 04 16.8**	**-0.7**
PAB				IAmb	IAmb	19 04 40.6	
	comp=Z,6µm,2.6s						
PAB	**San Pablo**	**23.01**	**113**	P		19 04 20.2	
BGES	**Gesves**	**23.06**	**80**	*d*sP	sP	19 04 23.7	+0.2
BGES	**Gesves**	**23.06**	**80**	*d*P	**P**	**19 04 16.1**	**-1.8**
BGES	**Gesves**	**23.06**	**80**	*d*pP	**P**	**19 04 19.3**	**+1.4**
UCM	**Universidad Co**	**23.12**	**110**	P	**P**	**19 04 24.2**	**+5.6**
UCM				S	**S**	**19 08 36.4**	**+7.3**
ESDC	**Sonseca Array**	**23.14**	**113**	P	**P**	**19 04 20.9**	**+2.2**
	comp=Z,17nm,0.8s,baz=316,slow=6.9,SNR=10						
ESDC				LR	LR	19 11 53.1	
	comp=Z,35µm,21.1s,baz=320,slow=33						
BCLA	**Clavier**	**23.18**	**80**	*d*sP	sP	19 04 26.3	+1.6
BCLA	**Clavier**	**23.18**	**80**	*d*P	**P**	**19 04 18.9**	**-0.2**
RCHB	**Rochefort**	**23.23**	**81**	*d*x	P	19 04 26.8	+7.3
RCHB	**Rochefort**	**23.23**	**81**	*d*P	**P**	**19 04 17.1**	**-2.4**
RCHB	**Rochefort**	**23.23**	**81**	*d*pP	**P**	**19 04 20.1**	**+0.7**
BEBN	**Eben Emael**	**23.28**	**79**	*d*sP	sP	19 04 27.2	+1.5
BEBN	**Eben Emael**	**23.28**	**79**	*d*P	**P**	**19 04 18.2**	**-1.8**
BSTI	**Sart Tilman**	**23.29**	**80**	*d*x	x	19 04 27.6	
BSTI	**Sart Tilman**	**23.29**	**80**	*d*P	**P**	**19 04 17.6**	**-2.4**
SKAR	**Skarslia**	**23.32**	**54**	*e*P	**P**	**19 04 20.2**	**-0.2**
SKAR				IVmB_BB		19 04 37.2	
	comp=Z,46µm,3.1s						
SKAR				*e*S	**S**	**19 08 31.1**	**-0.9**
HOMB	**Homborsund**	**23.45**	**60**	*e*P	**P**	**19 04 21.1**	**-0.5**
HOMB				IVmB_BB		19 04 37.0	
	comp=Z,51µm,2.6s						
HOMB				*e*S	**S**	**19 08 34.6**	**+0.6**
HOMB	**Homborsund**	**23.45**	**60**	*e*P	**P**	**19 04 19.8**	**-1.8**
MEM	**Membach**	**23.54**	**79**	*d*sP	sP	19 04 30.1	+1.8
MEM	**Membach**	**23.54**	**79**	*d*P	**P**	**19 04 22.3**	**-0.3**
BTNL	**Ternell**	**23.62**	**79**	*d*pP	**P**	**19 04 23.5**	**+0.1**
BTNL	**Ternell**	**23.62**	**79**	*d*P	**P**	**19 04 21.2**	**-2.2**
BHOU	**Houvegnez**	**23.63**	**80**	*d*P	**P**	**19 04 23.3**	**-0.2**
HLG	**Helgoland**	**23.66**	**70**	*e*P	**P**	**19 04 23.9**	**+0.1**
	comp=Z,10µm,2.0s,baz=292,slow=8.2						
HORN	**Hornachuelos**	**23.71**	**118**	P		19 04 26.6	
D63A	**Stockholm**	**23.76**	**271**	P	**P**	**19 04 26.0**	**+1.2**
	baz=63,SNR=53						
DOMB	**Dombas**	**23.77**	**50**	*e*P	**P**	**19 04 25.1**	**+0.4**
DOMB				IVmB_BB		19 04 40.1	
	comp=Z,42µm,2.5s						
DOMB				*e*S	**S**	**19 08 38.9**	**-0.3**
PQI	**Presque Isle**	**23.87**	**270**	P	**P**	**19 04 24.5**	**-1.4**
PQI				IAMs_20	IAMs_20	19 13 34.9	
	comp=Z,369µm,18.0s						
E64A	**Bridgewater**	**23.88**	**270**	P	**P**	**19 04 25.9**	**0.0**
	baz=62,SNR=36						
GGN	**Saint George**	**23.91**	**266**		**P**	**19 04 24.6**	**-1.5**
GGN				IAMs_20	IAMs_20	19 12 16.5	
	comp=Z,320µm,20.0s						
GOET	**G??ttrup**	**23.94**	**63**	*i* P	**P**	**19 04 26.7**	**+0.3**
GOET	**G??ttrup**	**23.94**	**63**	*i* P	**P**	**19 04 26.7**	**+0.3**
KONO	**Kongsberg**	**23.96**	**56**	P	**P**	**19 04 24.8**	**-1.7**
KONO				pmax	pmax		
	comp=Z,8µm,2.2s						
KONO				MLR	MLR		
	comp=Z,101µm,21.0s						
KONO	**Kongsberg**	**23.96**	**56**	P	**P**	**19 04 24.8**	**-1.7**
KONO	**Kongsberg**	**23.96**	**56**	*e*P	**P**	**19 04 25.6**	**-0.9**
KONO				*e*P	**pP**	**19 04 26.8**	**-3.8**
KONO				IVmB_BB		19 04 43.4	
	comp=Z,47µm,4.8s						
KONO				*e*		19 08 58.7	
WLF	**Walferdange**	**23.96**	**81**	*d*PnPn	P	19 04 53.6	+27
WLF	**Walferdange**	**23.96**	**81**	P	**P**	**19 04 24.4**	**-2.3**
WLF				pmax	pmax		
	comp=Z,677nm,1.0s						
WLF				MLR	MLR		
	comp=Z,112µm,21.0s						
WLF	**Walferdange**	**23.96**	**81**	P	**P**	**19 04 24.4**	**-2.3**
WLF	**Walferdange**	**23.96**	**81**	*e*P	**P**	**19 04 24.4**	**-2.3**
	comp=Z,42µm,4.6s,baz=292,slow=8.2						
WLF	**Walferdange**	**23.96**	**81**	*d*P	**P**	**19 04 24.2**	**-2.4**
WLF	**Walferdange**	**23.96**	**81**	*d*pP	**P**	**19 04 27.4**	**+0.7**
MUD	**Monsted U'grnd**	**23.99**	**64**	*i* P	**P**	**19 04 23.6**	**-3.2**
	comp=Z,172µm,21.0s						
MUD	**Monsted U'grnd**	**23.99**	**64**	*e*P	**P**	**19 04 23.6**	**-3.2**
MUD				MLR	MLR		
	comp=Z,170µm,21.0s						
MUD	**Monsted U'grnd**	**23.99**	**64**	*e*P	**P**	**19 04 22.3**	**-4.5**
MUD				*e*P	**P**	**19 04 23.7**	**-3.2**
MUD				IAMs_20	IAMs_20	19 13 34.3	
	comp=Z,172µm,21.2s						
BUG	**Bochum--Univer**	**24.03**	**77**	*e*P	**P**	**19 04 25.7**	**-1.6**
	comp=Z,12µm,2.3s,baz=292,slow=8.2						
IBBN	**Ibbenburen**	**24.06**	**74**	*e*P	**P**	**19 04 25.9**	**-1.6**
	comp=Z,32µm,3.1s,baz=292,slow=8.2						
AHRW	**Bad Neuenahr-A**	**24.20**	**79**	*e*P	**P**	**19 04 28.4**	**-0.5**
	comp=Z,23µm,3.6s,baz=292,slow=8.2						
SFS	**San Fernando**	**24.23**	**121**	P	**P**	**19 04 30.0**	**+0.7**
SFS				pmax	pmax		
	comp=Z,5µm,1.6s						
SFS	**San Fernando**	**24.23**	**121**	P	**P**	**19 04 31.6**	**+2.3**
SFS				S	**S**	**19 08 55.3**	**+8.4**
SFS	**San Fernando**	**24.23**	**121**	P	**P**	**19 04 30.0**	**+0.7**
E63A	**Oxbow**	**24.24**	**270**	P	**P**	**19 04 29.5**	**+0.2**
	baz=62,SNR=44						
E63A	**Oxbow**	**24.24**	**270**	P	**P**	**19 04 28.1**	**-1.2**
G65A	**Princeton**	**24.31**	**267**	P	**P**	**19 04 31.2**	**+1.3**
	baz=59,SNR=47						
G65A	**Princeton**	**24.31**	**267**	P	**P**	**19 04 30.8**	**+0.9**
LIJA	**Lijar**	**24.32**	**119**	P	**P**	**19 04 32.9**	**+2.7**
H66A	**Whiting**	**24.37**	**266**	P	**P**	**19 04 30.9**	**+0.4**
	baz=58,SNR=60						
CNIL	**Conil**	**24.38**	**121**	P	**P**	**19 04 34.5**	**+3.8**
KULLO	**Kullorsuaq**	**24.41**	**344**	*i* P	**P**	**19 04 30.2**	**-0.4**
	comp=Z,795µm,16.0s						
KULLO	**Kullorsuaq**	**24.41**	**344**	*i* P	**P**	**19 04 30.2**	**-0.4**
KULLO				MLR	MLR		
	comp=Z,800µm,16.0s						
KULLO	**Kullorsuaq**	**24.41**	**344**	*i* P	**P**	**19 04 30.3**	**-0.4**
KULLO				IAMs_20	IAMs_20	19 12 39.7	
	comp=Z,795µm,16.3s						
TBLU	**Trondheim**	**24.43**	**47**	*e*P	**P**	**19 04 31.6**	**+0.7**
TBLU				IVmB_BB		19 04 47.3	
	comp=Z,39µm,4.9s						
TBLU				*e*S	**S**	**19 08 49.5**	**-0.3**
SKMB	**Sankelmark Bun**	**24.44**	**68**	*e*P	**P**	**19 04 31.2**	**+0.2**
	comp=Z,45µm,3.1s,baz=292,slow=8.2						
F64A	**Sherman**	**24.46**	**269**	P	**P**	**19 04 31.5**	**+0.3**
	baz=61,SNR=26						
F64A	**Sherman**	**24.46**	**269**	P	**P**	**19 04 30.0**	**-1.3**
F64A				IAmb	IAmb	19 04 45.3	
	comp=Z,2µm,1.1s						
F64A				IAMs_20	IAMs_20	19 13 44.1	
	comp=Z,277µm,18.0s						
ALJ	**Aljibe**	**24.48**	**120**	P	**P**	**19 04 34.0**	**+2.5**
EMMW	**East Machias**	**24.50**	**266**	P	**P**	**19 04 31.5**	**-0.1**
EMMW				IAMs_20	IAMs_20	19 13 20.3	
	comp=Z,371µm,18.0s						
OSL	**Oslo**	**24.52**	**55**	*e*P	**P**	**19 04 32.6**	**+0.9**
OSL				*e*sP	**sP**	**19 04 38.2**	**+0.6**
OSL				IVmB_BB		19 04 48.8	
	comp=Z,42µm,4.5s						
NC204	**NORSAR Array S**	**24.54**	**52**	P	**P**	**19 04 29.8**	**-2.1**
NBO00	**NORSAR Array S**	**24.54**	**53**	P	**P**	**19 04 28.9**	**-3.0**
NAO01	**NORSAR Array S**	**24.59**	**53**	P	**P**	**19 04 30.5**	**-1.9**
NAO01	**NORSAR Array S**	**24.59**	**53**	*e*P	**P**	**19 04 33.6**	**+1.2**
REAL	**Reales**	**24.74**	**120**	P	**P**	**19 04 37.0**	**+2.9**
NB2	**NORSAR Subarra**	**24.75**	**53**	P	**P**	**19 04 31.3**	**-2.6**
	comp=Z,7µm,2.5s,baz=273,slow=10						
NB2	**NORSAR Subarra**	**24.75**	**53**	P	**P**	**19 04 31.3**	**-2.6**
	baz=273,slow=10						
NOA	**NORSAR Array B**	**24.75**	**53**	P	**P**	**19 04 33.0**	**-0.9**
	comp=Z,82nm,0.9s,baz=274,slow=11,SNR=42						
NOA				LR	LR	19 13 33.8	
	comp=Z,89µm,19.6s,baz=270,slow=35						
NOA	**NORSAR Array B**	**24.75**	**53**	P	**P**	**19 04 33.0**	**-0.9**
KASTN	**Kahler Asten**	**24.79**	**77**	*e*P	**P**	**19 04 33.4**	**-0.8**
	comp=Z,9µm,2.9s,baz=292,slow=8.2						
NB201	**NORSAR Array S**	**24.79**	**53**	P	**P**	**19 04 31.6**	**-2.6**
STRU	**Stroemstad**	**24.79**	**58**	*e*P	**P**	**19 04 35.3**	**+1.1**
NC303	**NORSAR Array S**	**24.83**	**52**	P	**P**	**19 04 32.2**	**-2.3**
NC303				IAmb	IAmb	19 04 58.6	
	comp=Z,2µm,1.2s						
DAG	**Danmarks Havn**	**24.89**	**7**	*i* P	**P**	**19 04 40.2**	**+5.4**
	comp=Z,232µm,14.0s						
DAG	**Danmarks Havn**	**24.89**	**7**	*i* P	**P**	**19 04 40.2**	**+5.4**
DAG				MLR	MLR		
	comp=Z,230µm,14.0s						
DAG	**Danmarks Havn**	**24.89**	**7**	*i* P	**P**	**19 04 40.2**	**+5.4**
DAG				IAMs_20	IAMs_20	19 12 41.8	
	comp=Z,232µm,13.6s						
SSB	**Saint Sauveur**	**24.89**	**92**	P	**P**	**19 04 35.2**	**-0.1**
SSB				pmax	pmax		
	comp=Z,3µm,2.7s						
SSB				MLR	MLR		
	comp=Z,47µm,19.0s						
SSB	**Saint Sauveur**	**24.89**	**92**	P	**P**	**19 04 35.1**	**-0.1**
SSB				IAmb	IAmb	19 05 41.2	
	comp=Z,3µm,2.7s						
NC602	**NORSAR Array S**	**24.91**	**54**	P	**P**	**19 04 33.7**	**-1.6**
NC602				IAmb	IAmb	19 05 01.7	
	comp=Z,2µm,1.4s						
NC602	**NORSAR Array S**	**24.91**	**54**	*e*P	**P**	**19 04 35.0**	**-0.2**
NC602				IVmB_BB		19 04 52.7	
	comp=Z,29µm,3.6s						
NC602				*e*S	**S**	**19 08 58.0**	**+0.5**
D61A	**St Aubert, Com**	**24.96**	**273**	P	**P**	**19 04 36.8**	**+1.0**
	baz=63,SNR=28						
H65A	**Eastbrook**	**24.98**	**266**	P	**P**	**19 04 36.4**	**+0.4**
	baz=58,SNR=20						
NC405	**NORSAR Array S**	**25.00**	**53**	P	**P**	**19 04 32.9**	**-3.1**
NC405				IAmb	IAmb	19 05 00.4	
	comp=Z,3µm,1.4s						
F63A	**Nahmakanta, Br**	**25.00**	**269**	P	**P**	**19 04 37.1**	**+0.9**
	baz=60,SNR=44						
F63A	**Nahmakanta, Br**	**25.00**	**269**	P	**P**	**19 04 35.7**	**-0.5**
F63A				IAMs_20	IAMs_20	19 14 00.4	
	comp=Z,282µm,19.0s						
G64A	**Maxfield**	**25.01**	**268**	P	**P**	**19 04 36.3**	**0.0**
	baz=60,SNR=33						
CEU	**Ceuta**	**25.10**	**121**	P	**P**	**19 04 40.2**	**+3.1**
CEU				S	**S**	**19 09 05.5**	**+4.7**
BSEG	**Bad Segeberg**	**25.12**	**70**	*e*P	**P**	**19 04 35.7**	**-1.4**
	comp=Z,11µm,2.6s,baz=292,slow=8.2						
BSEG				*e*L	L	19 13 26.1	
	comp=Z,55µm,21.2s						
ECH	**Echery**	**25.14**	**84**	P	**P**	**19 04 35.5**	**-2.0**

ECH				pmax	pmax		
	comp=Z,620nm,1.0s						
ECH				MLR	MLR		
	comp=Z,87µm,18.0s						
ECH	Echery	25.14	84	P	P	19 04 35.5	-2.0
TNS	Taunus Mts	25.14	79	eP	P	19 04 36.9	-0.5
	comp=Z,5µm,2.2s,baz=292,slow=8.2						
TNS				eL	L	19 13 16.8	
	comp=Z,82µm,19.6s						
PKME	Peaks-Kenny Pk	25.33	268	P	P	19 04 38.7	-0.4
NSS	Namsos	25.34	45	eP	P	19 04 39.1	+0.1
NSS				IVmB_BB		19 04 58.0	
	comp=Z,29µm,4.0s						
NSS				eS	S	19 09 02.6	-1.5
E61A	Lac Etchemin	25.50	272	P	P	19 04 41.4	+0.7
	baz=62,SNR=16						
D60A	Saint Jean D'O	25.54	273	P	P	19 04 39.8	-1.2
	baz=62,SNR=66						
GTTG	Gottingen	25.59	75	eP	P	19 04 39.7	-1.8
	comp=Z,4µm,1.5s,baz=292,slow=8.2						
H64A	Troy	25.61	267	P	P	19 04 41.7	+0.1
	baz=58,SNR=78						
G63A	Kingsbury	25.61	268	P	P	19 04 42.0	+0.3
	baz=59,SNR=23						
CHEFC	Chefchaouen	25.72	122	P		19 04 45.2	
CLZ	Clausthal	25.74	74	eP	P	19 04 41.5	-1.4
	comp=Z,2µm,1.5s,baz=292,slow=8.2						
BFO	Black Forest	25.80	83	P	P	19 04 41.4	-2.1
BFO				pmax	pmax		
	comp=Z,1µm,1.4s						
BFO				MLR	MLR		
	comp=Z,89µm,20.0s						
BFO	Black Forest	25.80	83		P	19 04 41.4	-2.1
BFO				IAmb	IAmb	19 05 00.8	
	comp=Z,1µm,1.4s						
BFO	Black Forest	25.80	83	eP	P	19 04 42.0	-1.5
	comp=Z,883nm,1.2s,baz=292,slow=8.2						
BFO				eL	L	19 14 23.6	
	comp=Z,84µm,20.6s						
ASSE	Asse, Remlinge	25.82	74	eP	P	19 04 42.7	-0.8
	comp=Z,2µm,1.8s,baz=292,slow=8.2						
RTC	Rabat Centre	25.84	126	P	P	19 04 44.4	+0.6
RTC	Rabat Centre	25.84	126	P		19 04 45.4	
LLD	Lille Linde	25.87	66	i P	P	19 04 40.1	-3.8
LLD	Lille Linde	25.87	66	eP	P	19 04 40.1	-3.8
LLD	Lille Linde	25.87	66	i P	P	19 04 39.7	-4.3
LLD				eP	P	19 04 40.1	-3.8
WVL	Waterville	25.91	267	P	P	19 04 43.6	-0.8
WVL				IAmb	IAmb	19 05 11.2	
	comp=Z,1µm,0.8s						
COP	Copenhagen	25.92	65	i P	P	19 04 45.2	+0.8
	comp=Z,99µm,21.0s						
COP	Copenhagen	25.92	65	i P	P	19 04 45.2	+0.8
COP				MLR	MLR		
	comp=Z,99µm,21.0s						
COP	Copenhagen	25.92	65	i P	P	19 04 44.5	+0.1
COP				i P	P	19 04 45.2	+0.8
COP				IAMs_20	IAMs_20	19 14 33.9	
	comp=Z,99µm,21.2s						
N2RO	R¸st	25.93	38	eP	P	19 04 43.2	-1.2
HFS	Hagfors	26.00	55	P	P	19 04 45.6	+0.5
	comp=Z,29nm,0.8s,baz=267,slow=8.9,SNR=16						
HFS				LR	LR	19 13 53.6	
	comp=Z,120µm,20.7s,baz=287,slow=34						
HFS				P3KPbc		19 37 47.6	
	comp=Z,5.1nm,0.9s,baz=352,slow=3.0,SNR=4.2						
F61A	St Evariste	26.02	271	P	P	19 04 44.0	-1.5
	baz=61,SNR=29						
SENIN	Lac Senin/Sane	26.05	88	P	P	19 04 45.0	-1.0
D59A	Saint-Raymond	26.05	274	P	P	19 04 44.4	-1.3
	baz=63,SNR=31						
H63A	New Sharon	26.09	268	P	P	19 04 42.3	-3.8
	baz=58,SNR=44						
FLTG	Flechtingen	26.09	73	eP	P	19 04 46.0	0.0
	comp=Z,10µm,3.3s,baz=292,slow=8.2						
E60A	Ste Agathe de	26.11	272	P	P	19 04 45.4	-0.9
	baz=62,SNR=27						
G62A	West of Eustis	26.11	269	P	P	19 04 43.0	-3.3
	baz=60,SNR=40						
G62A	West of Eustis	26.11	269	P	P	19 04 44.6	-1.7
G62A				IAmb	IAmb	19 05 15.8	
	comp=Z,1µm,1.1s						
KONS	Konsvik	26.11	40	eP	P	19 04 45.1	-1.0
AVE	Averroes	26.12	128	P	P	19 04 50.5	+4.1
AVE				S	S	19 09 11.8	-5.3
STU	Stuttgart	26.14	82	P	P	19 04 44.6	-1.9
STU				pmax	pmax		
	comp=Z,2µm,1.3s						
STU				MLR	MLR		
	comp=Z,103µm,22.0s						
STU	Stuttgart	26.14	82	P	P	19 04 44.6	-1.9
STU				IAmb	IAmb	19 05 09.5	
	comp=Z,2µm,1.3s						
STU	Stuttgart	26.14	82	eP	P	19 04 45.2	-1.3
	comp=Z,1µm,1.2s,baz=292,slow=8.2						
N2VA	Vr¸y	26.18	38	eP	P	19 04 49.0	+2.3
PVLZ	Peæn de	26.22	120	P	P	19 04 52.7	+5.4
PVLZ				S	S	19 09 24.3	+5.7
I64A	Boothbay	26.24	266	P	P	19 04 48.5	+1.1
	baz=57,SNR=44						
CART	Cartagena	26.25	112	P	P	19 04 54.4	+6.8
CART				S	S	19 09 27.2	+8.1
CART	Cartagena	26.25	112	P	P	19 04 47.7	+0.1
CART				IAmb	IAmb	19 05 11.9	
	comp=Z,4µm,2.4s						
BNI	Bardonecchia	26.31	91	P	P	19 04 47.7	-0.5
BNI				pmax	pmax		
	comp=Z,840nm,1.5s						
BNI				MLR	MLR		
	comp=Z,54µm,18.0s						
BNI	Bardonecchia	26.31	91	P	P	19 04 47.7	-0.5
ZHG	ZHG	26.38	126	P		19 04 50.0	
NBB30	Finnes	26.44	39	eP	P	19 04 49.5	+0.5
LATQ	La Tuque	26.46	275	P	P	19 04 49.0	-0.4
	baz=63,SNR=20						
LATQ	La Tuque	26.46	275	P	P	19 04 48.4	-1.0
NBB05	Inndyr	26.56	39	eP	P	19 04 53.4	+3.3
SRHM	Skhour des Reh	26.57	129	P		19 04 52.0	
LOF	Lofoten	26.60	37	eP	P	19 04 53.2	+2.8
LOF				esP	pwP	19 04 59.9	+1.7
LOF				IVmB_BB		19 05 15.2	
	comp=Z,12µm,2.0s						
F60A	Warwick	26.61	272	P	P	19 04 51.2	+0.4
	baz=61,SNR=74						
D58A	Chemin du LacG	26.65	275	P	P	19 04 51.7	+0.5
	baz=63,SNR=91						
RGN	Rugen	26.68	67	P	P	19 04 48.6	-2.7
RGN				IAmb	IAmb	19 05 14.0	
	comp=Z,2µm,1.3s						
RGN	Rugen	26.68	67	eP	P	19 04 51.2	0.0
	comp=Z,2µm,1.2s,baz=292,slow=8.2						
G61A	St-Isidore-de-	26.69	270	P	P	19 04 52.9	+1.4
	baz=60,SNR=49						
E59A	St. Maurice	26.71	273	P	P	19 04 52.6	+1.0
	baz=62,SNR=7.7						
I63A	Otisfield	26.75	267	P	P	19 04 53.3	+1.3
	baz=58,SNR=15						
I63A	Otisfield	26.75	267	P	P	19 04 50.7	-1.2
I63A				IAmb	IAmb	19 05 33.1	
	comp=Z,1µm,1.1s						
NEUB	Neuenburg	26.77	75	eP	P	19 04 53.2	+1.1
	comp=Z,12µm,3.1s,baz=292,slow=8.2						
H62A	Milan	26.82	269	P	P	19 04 53.9	+1.2
	baz=58,SNR=19						
H62A	Milan	26.82	269	P	P	19 04 51.3	-1.4
H62A				IAmb	IAmb	19 05 24.4	
	comp=Z,2µm,1.1s						
H62A				IAMs_20	IAMs_20	19 16 06.7	
	comp=Z,244µm,18.0s						
MACI	Morro de la Ar	26.84	148	P	P	19 04 53.5	+0.3
MELI	Melilla	26.85	118	P	P	19 05 01.0	+8.0
MELI				S	S	19 09 36.6	+8.0
NBB08	Skaug oppvekst	26.86	38	eP	P	19 04 53.2	+0.5
N2VI	Vinje	26.88	36	eP	P	19 04 56.5	+3.5
AKLM	AKL	26.96	121	P		19 04 56.0	
GRA1	Grafenberg Arr	27.00	79	P	P	19 04 52.0	-2.3
GRA1				IAmb	IAmb	19 05 19.0	
	comp=Z,4µm,2.1s						
GRF	Grafenberg Arr	27.00	79	P	P	19 04 52.0	-2.3
GRF				pmax	pmax		
	comp=Z,4µm,2.1s						
GRF				MLR	MLR		
	comp=Z,60µm,19.0s						
GRF	Grafenberg Arr	27.00	79	eP	P	19 04 54.6	+0.4
	comp=Z,5µm,2.2s,baz=292,slow=8.2						
GRF				eL	L	19 14 54.8	
	comp=Z,55µm,19.9s						
GRFO	Grafenberg	27.00	79	P	P	19 04 51.2	-3.1
GRFO				pmax	pmax		
	comp=Z,4µm,2.1s						
GRFO				MLR	MLR		
	comp=Z,16µm,20.0s						
GRFO	Grafenberg	27.00	79	P	P	19 04 51.2	-3.1
GRFO				IAmb	IAmb	19 05 18.9	
	comp=Z,4µm,2.1s						
N2TV	T¥rnvik	27.08	38	epP	pP	19 04 59.1	+0.1
IFR	Ifrane	27.08	124	P	P	19 05 03.8	+8.5
IFR				S	S	19 09 37.5	+4.9
LCRM	LCR	27.08	123	P		19 04 57.0	
FAUS	Fauske	27.11	39	eP	P	19 04 55.3	+0.4
FAUS				eS	S	19 09 28.0	-4.1
FAUS				eScP	ScP	19 11 57.4	+2.9
MOQ	Mont Orford	27.12	271	P	P	19 04 54.4	-1.0
UBR	Ueberruh	27.16	83	eP	P	19 04 54.0	-1.8
	comp=Z,3µm,2.0s,baz=292,slow=8.2						
F59A	Saint Guilaume	27.18	272	P	P	19 04 56.5	+0.7
	baz=60,SNR=22						
STEI	Steigen	27.18	37	eP	P	19 04 56.2	+0.5
STEI				esP	pwP	19 05 05.9	+2.5
STEI				eS	S	19 09 33.8	+0.5
DAVA	Damuels	27.20	84	i P	P	19 04 56.9	+0.7
	comp=Z,379nm,1.2s,SNR=11						
N2ST	Straumen	27.22	39	epP	pP	19 05 00.5	+0.1
E58A	La Victoria	27.23	274	P	P	19 04 56.9	+0.6
	baz=61,SNR=24						
TUE	Stuetta	27.25	86	P	P	19 04 54.7	-2.1
TUE				IAmb	IAmb	19 05 20.3	
	comp=Z,1µm,1.2s						
PLN	Plauen	27.26	76	eP	P	19 04 54.2	-2.3
	comp=Z,2µm,1.9s,baz=292,slow=8.2						
G60A	Masonville	27.27	271	P	P	19 04 57.8	+1.1
	baz=59,SNR=48						
I62A	Tamworth	27.30	267	P	P	19 04 57.0	0.0
	baz=57,SNR=27						
I62A	Tamworth	27.30	267	P	P	19 04 56.1	-0.9
I62A				IAmb	IAmb	19 05 30.6	
	comp=Z,2µm,1.4s						
H61A	Lyndonville	27.31	269	P	P	19 04 55.7	-1.4
	baz=58,SNR=18						
GUNZ	Gunzen	27.41	77	eP	P	19 04 55.7	-2.2
	comp=Z,594nm,1.3s,baz=292,slow=8.2						
MANZ	Manzenberg	27.42	77	eP	P	19 04 57.0	-1.0
	comp=Z,825nm,1.7s,baz=292,slow=8.2						
DAVOX	Davos/Dischmat	27.43	85	P	P	19 04 58.3	0.0
	comp=Z,79nm,0.9s,baz=305,slow=14,SNR=12						
DAVOX				S	S	19 09 36.1	-1.8
	comp=Z,27nm,1.2s,baz=6.0,slow=3.9,SNR=1.0						
DAVOX				LR	LR	19 15 40.6	
	comp=Z,60µm,19.6s,baz=298,slow=36						
BSD	Bornholm Skovb	27.43	66	i P	P	19 04 59.4	+1.4
	comp=Z,102µm,19.0s						
BSD	Bornholm Skovb	27.43	66	eP	P	19 04 57.7	-0.3
BSD	Bornholm Skovb	27.43	66	i P	P	19 04 59.4	+1.4
BSD				MLR	MLR		
	comp=Z,100µm,19.0s						
BSD	Bornholm Skovb	27.43	66	i P	P	19 04 59.5	+1.4
BSD				IAMs_20	IAMs_20	19 15 38.2	
	comp=Z,102µm,19.4s						
N2IH	Innhavet	27.45	37	eP	P	19 04 58.5	+0.5
WERN	Wernitzgruen	27.46	77	eP	P	19 04 57.0	-1.4
	comp=Z,2µm,2.3s,baz=292,slow=8.2						
CLL	Collm	27.46	74	eP	P	19 04 55.0	-3.4
CLL				⇑ipP	pP	19 04 58.9	-3.5
	comp=Z,115nm,0.9s						
CLL				i sP	sP	19 05 04.7	+0.5
	comp=Z,929nm,1.5s						
CLL				e		19 05 19.0	
	comp=Z,828nm,1.2s						
CLL				ePPP	PPP	19 05 48.0	
CLL				e(PPPP)		19 06 03.0	
CLL				e		19 07 45.0	
CLL				eS	S	19 09 36.0	-2.0
CLL				eSSS	SSS	19 11 00.0	
CLL				Lmax		19 12 00.0	
CLL				LmV		19 15 00.0	
	comp=Z,74µm,19.2s						
CLL	Collm	27.46	74	eP	P	19 04 55.0	-3.4
CLL				i		19 04 58.9	
CLL				eS	S	19 09 36.0	-2.0
CLL				pmax	pmax		
	comp=Z,929nm,1.5s						
CLL				MLR	MLR		
	comp=Z,74µm,19.2s						
CLL	Collm	27.46	74	P	P	19 04 54.7	-3.7
CLL	Collm	27.46	74	eP	P	19 04 55.5	-2.9
	comp=Z,828nm,1.2s,baz=292,slow=8.2						
CLL				eL	L	19 15 30.6	
	comp=Z,74µm,19.2s						
TANN	Tannenbergstha	27.47	76	eP	P	19 04 57.3	-1.2
	comp=Z,4µm,2.4s,baz=292,slow=8.2						
J63A	Strafford	27.47	266	P	P	19 04 58.5	+0.1
	baz=56,SNR=9.1						
LBNH	Lisbon	27.47	269	P	P	19 04 58.7	+0.2
	baz=58,SNR=19						
LBNH	Lisbon	27.47	269	P	P	19 04 58.1	-0.4
LBNH				pmax	pmax		
	comp=Z,1µm,1.3s						
LBNH				MLR	MLR		
	comp=Z,183µm,18.0s						
LBNH	Lisbon	27.47	269	P	P	19 04 58.1	-0.4
LBNH				IAmb	IAmb	19 05 25.1	
	comp=Z,1µm,1.2s						
TAF	Taforalt	27.50	118	P		19 05 02.0	
NKC	Novy Kostel	27.53	77	eP	P	19 04 59.5	+0.5
NKC				MLR	MLR		
	comp=Z,67µm,18.3s						
NKC	Novy Kostel	27.53	77	eP	P	19 04 59.5	+0.5
NKC				AMS	AMS	19 15 00.0	
	comp=Z,67µm,18.3s						
RUE	Ruedersdorf	27.53	72	eP	P	19 04 58.0	-0.9
	comp=Z,7µm,3.0s,baz=292,slow=8.2						
L65A	Cape Cod Natio	27.55	263	P	P	19 04 59.5	+0.3
	baz=54						
ROTZ	Rotzenmuhle	27.56	78	eP	P	19 04 58.5	-0.8
	comp=Z,6µm,3.0s,baz=292,slow=8.2						
RETA	Reutte	27.64	83	i P	P	19 04 57.4	-2.7
	comp=Z,496nm,1.0s,SNR=36						
FUR	Furstenfeldbru	27.66	82	eP	P	19 04 58.0	-2.2
	comp=Z,2µm,1.4s,baz=292,slow=8.2						
FUR				eL	L	19 15 17.7	
	comp=Z,73µm,21.0s						
FFD	Franklin Falls	27.71	267	P	P	19 05 01.1	+0.4
FFD				IAmb	IAmb	19 05 41.3	
	comp=Z,986nm,0.9s						
FFD				IAMs_20	IAMs_20	19 14 19.4	
	comp=Z,263µm,21.0s						
E57A	Chemin Saint G	27.74	274	P	P	19 05 01.8	+0.8
	baz=61,SNR=39						
H60A	Morristown	27.77	270	P	P	19 05 02.3	+1.1
	baz=58,SNR=23						
MAHO	Mahon	27.79	102	P	P	19 05 05.5	+4.1
MAHO				S	S	19 09 56.4	+13
F58A	St-Lin Laurent	27.80	273	P	P	19 05 03.0	+1.6
	baz=60						
G59A	Clarenceville	27.80	271	P	P	19 05 03.1	+1.7
	baz=59						
FBE	Freiberg	27.81	75	eP	P	19 04 59.8	-1.7
	comp=Z,1µm,1.5s,baz=292,slow=8.2						
D56A	ZEC Mazanza, M	27.81	276	P	P	19 05 02.3	+0.8
	baz=62,SNR=22						
USTO	Oran	27.83	115	P	P	19 05 15.0	+13
FETA	Feichten	27.83	84	i P	P	19 05 01.2	-0.7
	comp=Z,420nm,2.2s,SNR=11						
TULEG	Thule	27.86	343	P	P	19 04 59.8	-1.8
TULEG				IAmb	IAmb	19 05 36.2	
	comp=Z,1µm,1.3s						
TULEG				IAMs_20	IAMs_20	19 14 50.9	
	comp=Z,552µm,19.0s						
TULEG	Thule	27.86	343	i P	P	19 04 59.9	-1.8
TULEG				IAMs_20	IAMs_20	19 14 45.3	
	comp=Z,555µm,18.9s						
MDT	Midelt	27.90	124	P	P	19 05 02.7	+0.2
	comp=Z,27nm,0.9s,baz=340,slow=8.7,SNR=22						
MDT				S	S	19 09 45.8	+0.4
	comp=Z,8.8nm,1.0s,baz=326,slow=20,SNR=1.3						
MDT	Midelt	27.90	124	P		19 05 04.3	
VT1	Waterbury	27.93	269	P	P	19 05 02.3	-0.3
VT1				IAMs_20	IAMs_20	19 16 44.9	
	comp=Z,252µm,18.0s						
J62A	Henniker	27.94	267	P	P	19 05 03.1	+0.3
	baz=56,SNR=14						
HNH	Hanover	27.97	268	P	P	19 05 02.7	-0.3
HNH				IAmb	IAmb	19 05 41.2	
	comp=Z,890nm,1.0s						
UPP	Uppsala	27.99	55	eP	P	19 05 03.7	+0.7
SQTA	Sankt Quirin	28.03	83	i P	P	19 05 01.8	-1.9
	comp=Z,904nm,1.5s,SNR=32						
BCX	Boston College	28.05	265	P	P	19 05 03.7	0.0
BCX				IAmb	IAmb	19 05 39.0	
	comp=Z,1µm,1.3s						
BCX				IAMs_20	IAMs_20	19 14 40.5	
	comp=Z,404µm,22.0s						
M66A	Nantucket	28.05	262	P	P	19 05 04.6	+0.9
	baz=53						
K63A	Dunstable	28.07	265	P	P	19 05 02.7	-1.2
	baz=55,SNR=5.2						
K63A	Dunstable	28.07	265	P	P	19 05 04.2	+0.3
K63A				IAmb	IAmb	19 05 36.8	
	comp=Z,2µm,1.4s						
TRQ	Mont Tremblant	28.08	274	P	P	19 05 03.5	-0.5
L64A	Middleborough	28.08	264	P	P	19 05 05.6	+1.7
	baz=54						
L64A	Middleborough	28.08	264	P	P	19 05 03.5	-0.5
L64A				IAmb	IAmb	19 05 41.7	
	comp=Z,834nm,0.9s						
L64A				IAMs_20	IAMs_20	19 15 03.4	
	comp=Z,504µm,20.0s						
WES	Weston	28.12	265	P	P	19 05 04.3	0.0
WES				pmax	pmax		
	comp=Z,2µm,0.9s						
WES				MLR	MLR		
	comp=Z,377µm,21.0s						
WES	Weston	28.12	265	P	P	19 05 04.3	0.0
WES				IAMs_20	IAMs_20	19 14 42.2	
	comp=Z,377µm,21.0s						
BRG	Berggiesshubel	28.17	75	i P	P	19 05 01.3	-3.4
BRG				Amp		19 05 03.1	
	comp=Z,11nm,0.8s						
BRG				i x	x	19 05 05.3	
BRG				Amp		19 05 06.5	
	comp=Z,82nm,1.0s						
BRG				ex	x	19 05 11.7	
BRG				Amp		19 05 17.7	
	comp=Z,937nm,1.9s						
BRG				ex	x	19 05 20.9	
BRG				Amp		19 05 25.0	
	comp=Z,930nm,1.5s						
BRG				PP	PnPn	19 05 59.4	+6.9
BRG				Amp		19 06 01.4	
	comp=Z,619nm,1.4s						
BRG				⇑PP	PcP	19 08 34.5	+16
BRG				Amp		19 08 38.7	
	comp=Z,53nm,0.9s						
BRG				S	S	19 09 54.0	+4.8
BRG				Amp		19 15 46.0	
	comp=E,70nm,16.3s						
BRG				Amp		19 15 47.0	
	comp=Z,86nm,18.3s						
BRG				Amp		19 15 53.0	
	comp=N,62nm,13.9s						
BRG	Berggiesshubel	28.17	75	eP	P	19 05 02.8	-2.0
	comp=N,937nm,1.5s,baz=292,slow=8.2						
FRNY	Flat Rock	28.17	271	P	P	19 05 04.4	-0.4
M65A	Busby, Falmout	28.18	263	P	P	19 05 05.7	+0.8
	baz=54						
M65A	Busby, Falmout	28.18	263	P	P	19 05 04.8	-0.1
M65A				IAmb	IAmb	19 05 30.4	
	comp=Z,697nm,0.8s						
M65A				IAMs_20	IAMs_20	19 15 25.1	
	comp=Z,558µm,20.0s						
HRV	Adam Dziewonsk	28.19	265	P	P	19 05 04.7	-0.3
	baz=55						
HRV	Adam Dziewonsk	28.19	265	P	P	19 05 05.0	0.0
HRV				pmax	pmax		
	comp=Z,584nm,1.0s						
HRV				MLR	MLR		
	comp=Z,405µm,21.0s						
HRV	Adam Dziewonsk	28.19	265	P	P	19 05 05.0	0.0
HRV	Adam Dziewonsk	28.19	265	IAMs_20	IAMs_20	19 15 36.2	
	comp=Z,405µm,21.0s						
WATA	Walderalm	28.20	83	i P	P	19 05 03.1	-2.1
	comp=Z,399nm,1.3s,SNR=12						
WET	Wettzell	28.21	79	eP	P	19 05 04.8	-0.4
	comp=Z,6µm,3.3s,baz=292,slow=8.2						
WET				eL	L	19 15 11.4	
	comp=Z,56µm,21.1s						
E56A	St. Veronique	28.22	275	P	P	19 05 04.7	-0.4
	baz=62,SNR=23						
D55A	Sainte-Anne-du	28.26	276	P	P	19 05 05.7	+0.1
	baz=62,SNR=34						
WTTA	Wattenberg	28.27	83	i P	P	19 05 04.0	-1.9
	comp=Z,574nm,1.4s,SNR=15						
OKGL	Djebel Kef Gue	28.28	113	P	P	19 05 10.0	+4.1
LSQQ	Lebel-sur-Quev	28.28	281	P	P	19 05 05.5	-0.2
	baz=65						
G58A	Ormstown	28.30	272	P	P	19 05 05.6	-0.2
	baz=59,SNR=53						
J61A	Chester	28.33	267	P	P	19 05 06.2	0.0
	baz=56,SNR=17						
H59A	Cadyville	28.33	271	P	P	19 05 05.7	-0.5
	baz=58,SNR=26						
F57A	Harrington	28.36	274	P	P	19 05 06.1	-0.3
	baz=60,SNR=23						
SALO	Salr	28.38	87		P	19 05 04.2	-2.4
SALO				IAmb	IAmb	19 05 30.8	
	comp=Z,857nm,1.0s						
MATQ	Matagami	28.39	283	P	P	19 05 07.1	+0.4
	baz=66,SNR=17						
OUZM	OUZ	28.40	130	P		19 05 08.0	
MSSA	Maissana	28.43	90	P	P	19 05 05.6	-1.6
MSSA				IAmb	IAmb	19 05 32.1	
	comp=Z,1µm,1.8s						
I60A	Shoreham	28.51	269	P	P	19 05 09.0	+1.2
	baz=57,SNR=30						
K62A	Royalston	28.51	266	P	P	19 05 08.5	+0.7
	baz=55,SNR=35						
K62A	Royalston	28.51	266	P	P	19 05 08.1	+0.3
K62A				IAmb	IAmb	19 05 45.7	
	comp=Z,1µm,1.0s						
K62A				IAMs_20	IAMs_20	19 15 54.6	
	comp=Z,482µm,18.0s						
BRYW	Bryant College	28.52	264	P	P	19 05 08.4	+0.5
BRYW				IAmb	IAmb	19 05 42.1	
	comp=Z,705nm,1.0s						
BRYW				IAMs_20	IAMs_20	19 15 04.8	
	comp=Z,469µm,21.0s						
M64A	Tiverton	28.53	263	P	P	19 05 07.6	-0.4
	baz=54,SNR=30						
M64A	Tiverton	28.53	263	P	P	19 05 08.0	+0.1
M64A				IAMs_20	IAMs_20	19 15 26.3	
	comp=Z,558µm,20.0s						
L63A	North Scituate	28.59	264	P	P	19 05 08.1	-0.5
	baz=54,SNR=7.6						
L63A	North Scituate	28.59	264	P	P	19 05 08.8	+0.3
L63A				IAMs_20	IAMs_20	19 15 06.8	
	comp=Z,488µm,22.0s						
EANR	'Ain N'Sour	28.60	112	P	P	19 05 16.0	+7.2
EBNR	Beni Rached	28.61	111	P	P	19 05 15.4	+6.6
ECHA	Ech Chlef	28.61	112	P	P	19 05 17.7	+9.0
KHC	Kasperske Hory	28.64	78	eP	P	19 05 06.4	-2.5
KHC				e		19 05 15.7	
KHC				MLR	MLR		
	comp=Z,58µm,18.8s						
KHC	Kasperske Hory	28.64	78	eP	P	19 05 06.4	-2.5
KHC				epP	sP	19 05 15.7	+1.0
KHC				AMS	AMS	19 15 10.0	
	comp=Z,58µm,18.8s						
KHC	Kasperske Hory	28.64	78	P	P	19 05 06.1	-2.8
PBCC	Pribram	28.66	77	eP	P	19 05 10.3	+1.2
PBCC				ex	x	19 05 16.8	
PVCC	Panska Ves	28.67	75	eP	P	19 05 06.3	-2.9
PVCC				MLR	MLR		
	comp=Z,81µm,18.0s						
PVCC	Panska Ves	28.67	75	eP	P	19 05 06.3	-2.9
PVCC				AMS	AMS	19 15 50.0	
	comp=Z,81µm,18.0s						
PRMA	PARMA	28.68	89	P	P	19 05 08.1	-1.2
PRMA				IAmb	IAmb	19 06 44.9	
	comp=Z,2µm,1.5s						
OJGS	Djebel Guires	28.73	113	P	P	19 05 17.0	+7.1
H58A	Gabriels	28.75	271	P	P	19 05 09.7	-0.2
	baz=58,SNR=82						
RJOB	Jochberg	28.76	81	eP	P	19 05 08.5	-1.6
	comp=Z,19µm,3.3s,baz=292,slow=8.2						
PRA	Prague	28.77	76	eP	P	19 05 11.0	+1.0
PRA				MLR	MLR		
	comp=Z,31µm,17.5s						

PRA	**Prague**	**28.77**	**76**	*e*P	**P**	**19 05 11.0**	**+1.0**
PRA				AMS	AMS	19 15 30.0	
	comp=Z,31µm,17.5s						
QUA2	**Belchertown**	**28.80**	**265**	P	**P**	**19 05 10.0**	**-0.4**
QUA2				IAmb	IAmb	19 05 38.7	
	comp=Z,1µm,1.3s						
QUA2				IAMs_20	IAMs_20	19 15 03.3	
	comp=Z,276µm,19.0s						
TRO	**Tromso**	**28.81**	**34**	*e*P	**P**	**19 05 10.9**	**+0.7**
TRO				IVmB_BB		19 05 28.7	
	comp=Z,12µm,4.9s						
GEC2	**GERESS Array S**	**28.83**	**79**		**P**	**19 05 08.2**	**-2.5**
GEC2	**GERESS Array S**	**28.83**	**79**	*e*P	**P**	**19 05 08.8**	**-1.9**
	comp=Z,5µm,3.0s,baz=292,slow=8.2						
GEC2				*e*L	L	19 15 40.1	
	comp=Z,50µm,21.0s						
GERES	**GERESS Array B**	**28.83**	**79**	P	**P**	**19 05 10.0**	**-0.7**
	comp=Z,41nm,0.9s,baz=298,slow=8.5,SNR=22						
GERES				S	**S**	**19 09 56.3**	**-3.5**
	comp=Z,5.7nm,1.0s,baz=251,slow=8.2,SNR=1.2						
GERES				LR	LR	19 15 51.1	
	comp=Z,48µm,20.8s,baz=298,slow=35						
GERES				P3KPbc		19 37 44.5	
	comp=Z,0.4nm,0.7s,baz=156,slow=1.3,SNR=3.7						
GERES	**GERESS Array B**	**28.83**	**79**	P	**P**	**19 05 10.0**	**-0.7**
GERES	**GERESS Array B**	**28.83**	**79**	P	**P**	**19 05 08.0**	**-2.8**
CTI	**Castel Tesino**	**28.85**	**85**	P	**P**	**19 05 08.0**	**-2.9**
CTI				pmax	pmax		
	comp=Z,292nm,0.8s						
CTI				MLR	MLR		
	comp=Z,72µm,19.0s						
CTI	**Castel Tesino**	**28.85**	**85**	P	**P**	**19 05 08.0**	**-2.9**
PRU	**Pruhonice**	**28.86**	**76**	*e*P	**P**	**19 05 11.8**	**+0.9**
PRU				*e*		19 05 16.3	
PRU				MLR	MLR		
	comp=Z,64µm,17.3s						
PRU	**Pruhonice**	**28.86**	**76**	*e*P	**P**	**19 05 11.8**	**+0.9**
PRU				*e*pP	**sP**	**19 05 16.3**	**-0.4**
PRU				AMS	AMS	19 15 30.0	
	comp=Z,64µm,17.3s						
E55A	**Montcerf-Lytto**	**28.88**	**276**	P	**P**	**19 05 11.2**	**+0.2**
	baz=61,SNR=19						
G57A	**Newington**	**28.89**	**273**	P	**P**	**19 05 10.5**	**-0.6**
	baz=59,SNR=23						
LONY	**Lake Ozonia**	**28.89**	**271**	P	**P**	**19 05 11.6**	**+0.4**
	baz=58,SNR=31						
LONY	**Lake Ozonia**	**28.89**	**271**	P	**P**	**19 05 10.8**	**-0.4**
LONY				IAMs_20	IAMs_20	19 16 21.5	
	comp=Z,262µm,20.0s						
I59A	**Olmsteadville**	**28.89**	**269**	P	**P**	**19 05 10.4**	**-0.8**
	baz=57,SNR=33						
L61B	**Northampton**	**28.91**	**266**	P	**P**	**19 05 07.9**	**-3.5**
	baz=55,SNR=14						
J60A	**Lant Hill Farm**	**28.92**	**268**	P	**P**	**19 05 12.0**	**+0.6**
	baz=56,SNR=23						
VLDQ	**Val d'Or**	**28.97**	**280**		**P**	**19 05 11.8**	**0.0**
VLDQ				IAMs_20	IAMs_20	19 15 38.2	
	comp=Z,473µm,18.0s						
ACCN	**Adirondack Com**	**28.99**	**268**	P	**P**	**19 05 10.9**	**-1.2**
ACCN				IAmb	IAmb	19 05 44.2	
	comp=Z,2µm,1.9s						
ACCN				IAMs_20	IAMs_20	19 14 32.1	
	comp=Z,279µm,21.0s						
UCCT	**U. Connecticut**	**29.01**	**265**	P	**P**	**19 05 12.8**	**+0.6**
UCCT				IAmb	IAmb	19 05 44.8	
	comp=Z,848nm,1.0s						
UCCT				IAMs_20	IAMs_20	19 15 18.8	
	comp=Z,418µm,21.0s						
NCB	**Newcomb**	**29.01**	**270**	P	**P**	**19 05 11.3**	**-1.0**
NCB				IAmb	IAmb	19 05 45.2	
	comp=Z,726nm,1.1s						
NCB				IAMs_20	IAMs_20	19 16 40.8	
	comp=Z,216µm,18.0s						
VLC	**Villacollemand**	**29.04**	**90**	P	**P**	**19 05 10.5**	**-2.1**
VLC				IAmb	IAmb	19 05 44.0	
	comp=Z,969nm,1.3s						
ABTA	**Abfaltersbach**	**29.04**	**83**	*i* P	**P**	**19 05 13.6**	**+1.0**
	comp=Z,183nm,1.2s,SNR=7.2						
TZRR	**Tazzarine**	**29.07**	**128**	P		19 05 15.0	
ETRT	**Tiaret**	**29.12**	**113**	P	**P**	**19 05 16.4**	**+3.0**
M63A	**Gales Ferry**	**29.12**	**264**	P	**P**	**19 05 14.4**	**+1.2**
	baz=54						
M63A	**Gales Ferry**	**29.12**	**264**	P	**P**	**19 05 11.3**	**-2.0**
M63A				IAMs_20	IAMs_20	19 15 33.0	
	comp=Z,535µm,22.0s						
L62A	**Suffield**	**29.13**	**265**	P	**P**	**19 05 11.5**	**-1.8**
	baz=54,SNR=6.5						
L62A	**Suffield**	**29.13**	**265**	P	**P**	**19 05 12.5**	**-0.8**
L62A				IAmb	IAmb	19 05 24.2	
	comp=Z,616nm,0.9s						
L62A				IAMs_20	IAMs_20	19 15 13.1	
	comp=Z,315µm,20.0s						
K61A	**Williamstown**	**29.14**	**267**	P	**P**	**19 05 13.4**	**0.0**
	baz=56,SNR=20						
CKRC	**Cesky Krumlov**	**29.20**	**78**	*e*P	**P**	**19 05 11.2**	**-2.7**
CKRC				AMS	AMS	19 14 30.0	
	comp=Z,88µm,27.4s						
ARF	**Arif**	**29.20**	**125**	P		19 05 16.0	
TEOL	**Teolo**	**29.20**	**86**	P	**P**	**19 05 11.5**	**-2.5**
GKP	**Gorka Klasztor**	**29.26**	**69**	*e*P	**P**	**19 05 15.7**	**+1.3**
GKP				*e*pP	**pwP**	**19 05 22.0**	**-1.1**
GKP	**Gorka Klasztor**	**29.26**	**69**	*e*P	**P**	**19 05 12.4**	**-1.9**
ZCCA	**Zocca**	**29.30**	**89**	P	**P**	**19 05 16.8**	**+2.0**
ZCCA				IAmb	IAmb	19 06 08.6	
	comp=Z,923nm,1.2s						
TRY	**Troy**	**29.35**	**267**	P	**P**	**19 05 15.6**	**+0.4**
TRY				IAmb	IAmb	19 06 19.1	
	comp=Z,1µm,1.2s						
TRY				IAMs_20	IAMs_20	19 16 34.7	
	comp=Z,263µm,18.0s						
KBA	**Koelnbreinsper**	**29.39**	**82**	*i* P	**P**	**19 05 13.9**	**-1.9**
	comp=Z,364nm,1.3s,SNR=10						
STAL	**STALIGIAL**	**29.40**	**84**	P	**P**	**19 05 12.7**	**-3.0**
ZOU	**Zoufplan**	**29.41**	**83**	IAmb	IAmb	19 05 40.6	
	comp=Z,622nm,0.9s						
J59A	**Piesco**	**29.46**	**269**	P	**P**	**19 05 18.9**	**+2.7**
	baz=57,SNR=30						
J59A	**Piesco**	**29.46**	**269**	IAmb	IAmb	19 05 28.1	
	comp=Z,836nm,1.2s						
H57A	**Richville**	**29.47**	**272**	P	**P**	**19 05 16.0**	**-0.3**
	baz=58,SNR=29						
CHVC	**Chvalec**	**29.52**	**74**	AMS	AMS	19 16 10.0	
	comp=Z,74µm,18.5s						
UPC	**Upice**	**29.53**	**74**	*e*P	**P**	**19 05 14.0**	**-2.8**
UPC				MLR	MLR		
	comp=Z,81µm,17.7s						
UPC	**Upice**	**29.53**	**74**	*e*P	**P**	**19 05 14.0**	**-2.8**
UPC				AMS	AMS	19 16 20.0	
	comp=Z,81µm,17.7s						
K60A	**Five Rivers En**	**29.55**	**267**	P	**P**	**19 05 18.9**	**+1.9**
	baz=56						
KSP	**Ksiaz**	**29.57**	**74**	*e*P	**P**	**19 05 16.9**	**-0.3**
KSP				*e*pP	**sP**	**19 05 24.0**	**+1.1**
KSP				*e*S	**S**	**19 10 16.0**	**+4.9**
L61A	**Hillsdale 1, H**	**29.59**	**266**	P	**P**	**19 05 18.6**	**+1.3**
	baz=55,SNR=32						
ZGR	**Zagora**	**29.60**	**129**	P		19 05 20.0	
MOA	**Molln**	**29.60**	**80**	*i* P	**P**	**19 05 15.7**	**-1.8**
	comp=Z,362nm,1.6s,SNR=15						
M62A	**Hamden**	**29.62**	**265**	P	**P**	**19 05 17.1**	**-0.5**
	baz=54,SNR=14						
I58A	**Old Forge**	**29.62**	**270**	P	**P**	**19 05 18.8**	**+1.0**
	baz=57,SNR=19						
OSTC	**Ostas**	**29.63**	**74**	*e*P	**P**	**19 05 19.0**	**+1.3**
OSTC				AMS	AMS	19 16 20.0	
	comp=Z,72µm,17.8s						
N63A	**Mattituck**	**29.66**	**263**	P	**P**	**19 05 18.3**	**+0.3**
	baz=53						
TREC	**Trest**	**29.71**	**77**	*e*P	**P**	**19 05 17.6**	**-0.8**
TREC				MLR	MLR		
	comp=Z,67µm,18.9s						
TREC	**Trest**	**29.71**	**77**	*e*P	**P**	**19 05 17.6**	**-0.8**
TREC				AMS	AMS	19 16 00.0	
	comp=Z,67µm,18.9s						
YLE	**Yale**	**29.72**	**264**	IAmb	IAmb	19 05 49.6	
	comp=Z,1µm,1.1s						
YLE				IAMs_20	IAMs_20	19 15 48.7	
	comp=Z,419µm,20.0s						
DPC	**Dobruska-Polom**	**29.77**	**75**	*e*P	**P**	**19 05 16.3**	**-2.7**
DPC				MLR	MLR		
	comp=Z,67µm,18.5s						
DPC	**Dobruska-Polom**	**29.77**	**75**	*e*P	**P**	**19 05 16.3**	**-2.7**
DPC				AMS	AMS	19 16 30.0	
	comp=Z,67µm,18.5s						
MYKA	**Terra Mystica**	**29.79**	**83**	*i* P	**P**	**19 05 16.4**	**-2.7**
	comp=Z,779nm,0.9s,SNR=42						
KSCT	**Kent School, K**	**29.81**	**266**	IAmb	IAmb	19 05 54.9	
	comp=Z,750nm,1.1s						
KSCT				IAMs_20	IAMs_20	19 17 08.0	
	comp=Z,434µm,18.0s						
OSSC	**Osservatorio P**	**29.90**	**90**	P	**P**	**19 05 19.9**	**-0.2**
OSSC				IAmb	IAmb	19 06 08.2	
	comp=Z,2µm,2.3s						
CADS	**Cadrg**	**30.04**	**84**	*i* P	**P**	**19 05 18.0**	**-3.4**
CADS				*i*		19 05 21.7	
BJO1	**Bjornoya**	**30.04**	**25**	*e*P	**P**	**19 05 20.5**	**-0.5**
BJO1				*e*S	**S**	**19 10 14.8**	**-3.1**
BJO1				*e*		19 12 17.1	
WSPT	**Westport, CT**	**30.04**	**264**	IAmb	IAmb	19 06 09.2	
	comp=Z,806nm,1.0s						
WSPT				IAMs_20	IAMs_20	19 15 59.4	
	comp=Z,388µm,20.0s						
K59A	**Cooperstown**	**30.05**	**268**	P	**P**	**19 05 22.3**	**+0.8**
	baz=56,SNR=26						
CASP	**Castiglione de**	**30.07**	**92**		**P**	**19 05 21.6**	**-0.1**
L60A	**Shokan**	**30.11**	**267**	P	**P**	**19 05 24.9**	**+2.8**
	baz=55,SNR=5.7						
KRLC	**Kraliky**	**30.16**	**75**	*e*P	**P**	**19 05 20.5**	**-1.9**
KRLC				*e*		19 05 23.7	
KRLC				MLR	MLR		
	comp=Z,70µm,17.7s						
KRLC	**Kraliky**	**30.16**	**75**	*e*P	**P**	**19 05 20.5**	**-1.9**
KRLC				*e*pP	**pP**	**19 05 23.7**	**-2.7**
KRLC				AMS	AMS	19 16 50.0	
	comp=Z,70µm,17.7s						
FIGM	**Figuig**	**30.17**	**120**	P		19 05 25.0	
HSPB	**Hornsund (broa**	**30.20**	**19**	*e*P	**P**	**19 05 24.4**	**+2.0**
HSPB				*e*S	**S**	**19 10 13.4**	**-7.1**
HSPB	**Hornsund (broa**	**30.20**	**19**	*e*P	**P**	**19 05 23.4**	**+1.0**
HSPB				IVmB_BB		19 05 29.4	
	comp=Z,4µm,3.0s						
HSPB				*e*S	**S**	**19 10 19.7**	**-0.8**
HSPB				*e*		19 12 17.6	
PLVO	**Plevna**	**30.20**	**274**	IAMs_20	IAMs_20	19 16 57.1	
	comp=Z,286µm,18.0s						
M61A	**Granite Spring**	**30.23**	**265**	P	**P**	**19 05 22.2**	**-0.9**
	baz=54,SNR=10						
KTK1	**Kautokeino**	**30.25**	**36**	*e*P	**P**	**19 05 22.9**	**-0.1**
N62A	**Caumsett State**	**30.27**	**264**	P	**P**	**19 05 25.0**	**+1.6**
	baz=53						
TRI	**Trieste**	**30.31**	**84**	P	**P**	**19 05 21.1**	**-2.6**
TRI				pmax	pmax		
	comp=Z,609nm,1.0s						
TRI				MLR	MLR		
	comp=Z,72µm,19.0s						
TRI	**Trieste**	**30.31**	**84**		**P**	**19 05 21.1**	**-2.6**
TRI				IAmb	IAmb	19 05 41.2	
	comp=Z,609nm,1.0s						
ALGO	**Algonquin Park**	**30.33**	**276**	P	**P**	**19 05 23.7**	**-0.2**
	baz=60,SNR=17						
KRUC	**Moravsky**	**30.35**	**77**	*e*P	**P**	**19 05 23.1**	**-0.9**
KRUC				*e*S	**S**	**19 10 29.6**	**+6.2**
VRAC	**Vranov**	**30.36**	**76**	⇑P	**P**	**19 05 23.4**	**-0.7**
VRAC	**Vranov**	**30.36**	**76**	*e*P	**P**	**19 05 23.4**	**-0.7**
VRAC				*e*S	**S**	**19 10 28.5**	**+4.9**
OBKA	**Obir**	**30.39**	**82**	*i* P	**P**	**19 05 21.2**	**-3.3**
	comp=Z,719nm,1.1s,SNR=44						
J57A	**Williamstown**	**30.40**	**270**	P	**P**	**19 05 25.9**	**+1.4**
	baz=57,SNR=21						
PAL	**Palisades**	**30.49**	**265**	P	**P**	**19 05 28.3**	**+2.9**
	baz=53						
PAL	**Palisades**	**30.49**	**265**	P	**P**	**19 05 25.8**	**+0.4**
PAL				pmax	pmax		
	comp=Z,446nm,1.1s						
PAL				MLR	MLR		
	comp=Z,339µm,20.0s						
PAL	**Palisades**	**30.49**	**265**	P	**P**	**19 05 25.8**	**+0.4**
PAL				IAMs_20	IAMs_20	19 18 00.1	
	comp=Z,339µm,20.0s						
L59A	**Walton**	**30.50**	**268**	P	**P**	**19 05 26.0**	**+0.5**
	baz=55,SNR=20						
L59A	**Walton**	**30.50**	**268**	IAMs_20	IAMs_20	19 17 29.3	
	comp=Z,333µm,18.0s						
KBS	**Kingsbay**	**30.50**	**15**	*e*P	**P**	**19 05 25.3**	**+0.2**
KBS				IVmB_BB		19 05 30.8	
	comp=Z,3µm,4.8s						
KBS				*e*sP	**pwP**	**19 05 32.6**	**-1.1**
KBS				*e*S	**S**	**19 10 24.7**	**-0.6**
KBS				*e*		19 12 07.8	
CONA	**Conrad Observa**	**30.52**	**79**	*i* P	**P**	**19 05 26.3**	**+0.6**
	comp=Z,145nm,1.5s,SNR=9.8						
K58A	**Earlville**	**30.54**	**269**	P	**P**	**19 05 27.6**	**+1.7**
	baz=56,SNR=12						
K58A	**Earlville**	**30.54**	**269**	IAmb	IAmb	19 06 57.7	
	comp=Z,925nm,1.4s						
HAMF	**Hammerfest**	**30.57**	**33**	*e*P	**P**	**19 05 26.6**	**+0.9**
HAMF				IVmB_BB		19 05 35.2	
	comp=Z,8µm,4.1s						
HAMF				*e*S	**S**	**19 10 30.4**	**+4.0**
TRNY	**Table Rock, Ra**	**30.60**	**265**	P	**P**	**19 05 26.1**	**-0.3**
TRNY				IAmb	IAmb	19 06 22.7	
	comp=Z,704nm,1.2s						
LJU	**Ljubljana**	**30.61**	**83**	*i* P	**P**	**19 05 23.3**	**-3.1**
LJU				*i*		19 05 27.1	
LJU				*i*		19 05 33.9	
LJU				*e*		19 05 42.2	
LJU				*e*		19 08 14.4	
LJU				*e*		19 10 36.7	
LJU	**Ljubljana**	**30.61**	**83**	*e*P	**P**	**19 05 23.2**	**-3.1**
SOKA	**Soboth**	**30.61**	**82**	*i* P	**P**	**19 05 22.7**	**-3.7**
	comp=Z,357nm,1.3s,SNR=27						
ARSA	**Arzberg**	**30.63**	**81**	*i* P	**P**	**19 05 24.2**	**-2.4**
	comp=Z,227nm,1.3s,SNR=7.5						
G54A	**Lake Saint Pet**	**30.64**	**275**	P	**P**	**19 05 27.7**	**+1.1**
	baz=59,SNR=20						
CPNY	**Central Park**	**30.65**	**264**	IAmb	IAmb	19 06 21.9	
	comp=Z,2µm,1.8s						
CPNY				IAMs_20	IAMs_20	19 17 08.6	
	comp=Z,412µm,18.0s						
CEY	**Cerknica**	**30.70**	**84**	*i* P	**P**	**19 05 25.0**	**-2.2**
CEY				*i*		19 05 28.0	
CEY				*i*		19 05 35.2	
CEY				*e*		19 08 15.4	
CEY				*e*		19 10 39.0	
CEY	**Cerknica**	**30.70**	**84**	*e*P	**P**	**19 05 24.3**	**-2.9**
MORC	**Moravsky Berou**	**30.73**	**75**	⇓P	**P**	**19 05 25.6**	**-1.8**
MORC	**Moravsky Berou**	**30.73**	**75**	*e*P	**P**	**19 05 24.3**	**-3.1**
MORC				*e*S	**S**	**19 10 31.7**	**+2.3**
MORC	**Moravsky Berou**	**30.73**	**75**	P	**P**	**19 05 24.8**	**-2.6**
MORC				pmax	pmax		
	comp=Z,635nm,1.3s						
MORC				MLR	MLR		
	comp=Z,62µm,18.0s						
MORC	**Moravsky Berou**	**30.73**	**75**		**P**	**19 05 24.8**	**-2.6**
PECO	**Prince Edward**	**30.73**	**272**	P	**P**	**19 05 27.3**	**-0.1**
PECO				IAMs_20	IAMs_20	19 16 09.2	
	comp=Z,247µm,19.0s						
M60A	**Port Jervis**	**30.74**	**266**	P	**P**	**19 05 27.9**	**+0.3**
	baz=54,SNR=22						
SLIT	**Slitere, Latvi**	**30.80**	**59**	*e*P	**P**	**19 05 27.6**	**-0.2**
DELO	**Deloro Mine**	**30.80**	**273**	P	**P**	**19 05 28.3**	**+0.3**
DELO				IAMs_20	IAMs_20	19 17 24.0	
	comp=Z,313µm,19.0s						
MURB	**Monte Urbino**	**30.83**	**89**	P	**P**	**19 05 27.4**	**-1.0**
ODNJ	**Ogdensburg**	**30.87**	**265**	IAmb	IAmb	19 06 26.3	
	comp=Z,2µm,1.8s						
ODNJ				IAMs_20	IAMs_20	19 18 05.4	
	comp=Z,413µm,19.0s						
N61A	**South Mountain**	**30.88**	**265**	P	**P**	**19 05 29.5**	**+0.7**
	baz=53,SNR=10						
SPA0	**Spitsbergen Ar**	**30.89**	**17**	IAmb	IAmb	19 05 57.9	
	comp=Z,966nm,1.5s						
SPA0	**Spitsbergen Ar**	**30.89**	**17**	*e*P	**P**	**19 05 30.3**	**+1.8**
SPITS	**Spitsbergen Ar**	**30.89**	**17**	P	**P**	**19 05 26.3**	**-2.2**
	comp=Z,51nm,1.1s,baz=278,slow=8.2,SNR=3.7						
SET	**Setif**	**30.90**	**107**	P	P	19 05 40.0	+11
RIY	**Rijeka**	**30.94**	**85**	*e*P	**P**	**19 05 27.0**	**-2.2**
RIY	**Rijeka**	**30.94**	**85**	*e*P	**P**	**19 05 26.7**	**-2.5**
DFRA	**Djebel Bou Aff**	**30.95**	**106**	P	P	19 05 37.7	+8.1
J56A	**Wolcott**	**31.00**	**271**	P	**P**	**19 05 31.5**	**+1.7**
	baz=56,SNR=11						
BBSR	**BB Station**	**31.01**	**242**	P	**P**	**19 05 30.8**	**+0.8**
PBUR	**Paburge**	**31.03**	**62**	*e*P	**P**	**19 05 27.2**	**-2.8**
OKC	**Ostrava-Krasne**	**31.06**	**75**	*e*P	**P**	**19 05 28.1**	**-2.2**
OKC				MLR	MLR		
	comp=Z,49µm,21.6s						
OKC	**Ostrava-Krasne**	**31.06**	**75**	*e*P	**P**	**19 05 28.1**	**-2.2**
OKC				AMS	AMS	19 17 20.0	
	comp=Z,49µm,21.6s						
BINY	**Binghamton**	**31.07**	**268**	P	**P**	**19 05 30.3**	**-0.2**
	baz=55,SNR=8.4						
BINY	**Binghamton**	**31.07**	**268**	P	**P**	**19 05 30.1**	**-0.4**
BINY				IAMs_20	IAMs_20	19 17 41.4	
	comp=Z,322µm,18.0s						
L58A	**Harry Jones Me**	**31.07**	**268**	P	**P**	**19 05 32.0**	**+1.5**
	baz=55,SNR=18						
BRNJ	**Basking Ridge**	**31.09**	**265**	IAMs_20	IAMs_20	19 16 32.1	
	comp=Z,323µm,21.0s						
K57A	**Scipio Center**	**31.09**	**270**	P	**P**	**19 05 31.9**	**+1.2**
	baz=56,SNR=36						
ARA0	**ARCESS Array S**	**31.09**	**35**	*e*P	**P**	**19 05 30.6**	**+0.1**
ARCES	**ARCESS Array B**	**31.09**	**35**	P	**P**	**19 05 26.7**	**-3.7**
	comp=Z,42nm,0.8s,baz=264,slow=8.2,SNR=20						
ARCES				S	**S**	**19 10 29.5**	**-5.2**
	comp=Z,11nm,0.9s,baz=214,slow=17,SNR=1.5						
ARCES				LR	LR	19 15 31.5	
	comp=Z,99µm,19.1s,baz=270,slow=32						
ARCES	**ARCESS Array B**	**31.09**	**35**	P	**P**	**19 05 29.4**	**-1.0**
ARCES				pmax	pmax		
	comp=Z,219nm,1.0s						
ARCES	**ARCESS Array B**	**31.09**	**35**		**P**	**19 05 29.4**	**-1.0**
CKHR	**Kef el Ahmar**	**31.10**	**107**	P	P	19 05 38.9	+8.0
M59A	**Waymart**	**31.11**	**267**	P	**P**	**19 05 30.4**	**-0.4**
	baz=54,SNR=18						
ZST	**Bratislava**	**31.15**	**78**	*e*P	**P**	**19 05 30.9**	**-0.2**
ZST				pmax	pmax		
	comp=Z,16µm,3.1s						
ZST	**Bratislava**	**31.15**	**78**	*e*P	**P**	**19 05 30.8**	**-0.3**
ZST				*e*S	S	19 10 48.9	+13
MODS	**Modra-Piesok**	**31.17**	**78**	*e*P	**P**	**19 05 30.6**	**-0.7**
MODS				pmax	pmax		
	comp=Z,5µm,3.1s						
MODS	**Modra-Piesok**	**31.17**	**78**	*e*P	**P**	**19 05 30.6**	**-0.7**
MODS				*e*S	**S**	**19 10 44.6**	**+8.2**
MODS				*e*SS	**SS**	**19 12 41.6**	**-7.8**
MODS				*e*L	L	19 15 12.8	
JAVC	**Velka Javorina**	**31.19**	**77**	*e*P	**P**	**19 05 32.7**	**+1.1**
JAVC				*e*S	S	19 10 50.0	+13
SMOL	**Smolenice**	**31.20**	**77**	*e*P	**P**	**19 05 32.1**	**+0.5**
SMOL				pmax	pmax		
	comp=Z,159nm,1.2s						
SMOL	**Smolenice**	**31.20**	**77**	*e*P	**P**	**19 05 32.1**	**+0.5**
CRES	**Cresnjev**	**31.28**	**83**	*e*P	**P**	**19 05 29.4**	**-2.9**
N60A	**Cedar Hill Far**	**31.30**	**266**	P	**P**	**19 05 32.8**	**+0.4**
	baz=53,SNR=16						
KSPA	**Keystone Colle**	**31.30**	**267**	IAMs_20	IAMs_20	19 18 00.7	
	comp=Z,342µm,18.0s						
MTSE	**Matsula**	**31.32**	**56**	*e*P	**P**	**19 05 32.6**	**+0.1**
H53A	**Bobcaygeon**	**31.36**	**274**	P	**P**	**19 05 32.8**	**-0.1**
	baz=58,SNR=22						
ALE	**Alert**	**31.36**	**353**	IAMs_20	IAMs_20	19 16 53.8	
	comp=Z,487µm,18.0s						
CAEH	**'Ain El Ouahch**	**31.36**	**105**	P	P	19 05 45.6	+12
OZLJ	**Ozalj**	**31.39**	**83**	*e*P	**P**	**19 05 29.8**	**-3.4**
O61A	**Allentown**	**31.43**	**264**	P	**P**	**19 05 35.3**	**+1.6**
	baz=52						
CASM	**Ain Smara**	**31.50**	**106**	P	P	19 05 43.8	+9.4
CKFL	**Kef-Lekhel**	**31.54**	**105**	P	P	19 05 44.8	+10
PTJ	**Puntijarka**	**31.55**	**83**	*e*P	**P**	**19 05 31.2**	**-3.5**
NVLJ	**Novalja**	**31.57**	**86**	*e*P	**P**	**19 05 30.7**	**-4.1**
J55A	**Hilton**	**31.59**	**272**		**P**	**19 05 34.2**	**-0.8**
J55A				IAmb	IAmb	19 06 00.9	
	comp=Z,578nm,1.2s						
J55A				IAMs_20	IAMs_20	19 16 44.1	
	comp=Z,288µm,18.0s						
SADO	**Sadowa**	**31.60**	**275**	IAmb	IAmb	19 05 56.0	
	comp=Z,914nm,1.1s						
SADO				IAMs_20	IAMs_20	19 17 31.1	
	comp=Z,331µm,20.0s						
ZAG	**Zagreb**	**31.60**	**83**	*e*P	**P**	**19 05 35.3**	**+0.2**
K56A	**Middlesex**	**31.60**	**270**	P	**P**	**19 05 37.1**	**+1.9**
	baz=56,SNR=20						
LUPA	**Lehigh Univers**	**31.63**	**265**	IAmb	IAmb	19 05 47.0	
	comp=Z,542nm,1.0s						
LUPA				IAMs_20	IAMs_20	19 16 39.4	
	comp=Z,405µm,20.0s						
KEV	**Kevo**	**31.63**	**35**	P	**P**	**19 05 33.3**	**-1.8**
KEV				pmax	pmax		
	comp=Z,420nm,1.1s						
KEV				MLR	MLR		
	comp=Z,88µm,20.0s						
KEV	**Kevo**	**31.63**	**35**	P	**P**	**19 05 33.3**	**-1.8**
N59A	**State Game Lan**	**31.68**	**266**	P	**P**	**19 05 37.1**	**+1.2**
	baz=53,SNR=19						
N59A	**State Game Lan**	**31.68**	**266**	P	**P**	**19 05 35.1**	**-0.8**
N59A				IAMs_20	IAMs_20	19 16 28.9	
	comp=Z,413µm,22.0s						
L57A	**Andrews Acres**	**31.71**	**269**	P	**P**	**19 05 38.5**	**+2.3**
	baz=55,SNR=41						
KALN	**Kalnik**	**31.73**	**82**	*e*P	**P**	**19 05 32.2**	**-4.0**
BEHE	**Becsehely**	**31.76**	**81**	*e*P	**P**	**19 05 36.5**	**0.0**
BEL	**Belsk**	**31.80**	**70**	*e*P	**P**	**19 05 37.9**	**+1.2**
BEL				*e*pP	**sP**	**19 05 43.9**	**+1.3**
CMAH	**Djebel Manchou**	**31.80**	**104**	P	P	19 05 46.1	+9.0
O60A	**Telford**	**31.82**	**265**	P	**P**	**19 05 36.5**	**-0.6**
	baz=52,SNR=10						
M58A	**Price’s Panora**	**31.83**	**268**	P	**P**	**19 05 38.1**	**+0.8**
	baz=54,SNR=31						
FINES	**FINESS Array B**	**31.86**	**51**	P	**P**	**19 05 33.8**	**-3.5**
	comp=Z,64nm,0.9s,baz=284,slow=7.7,SNR=14						
FINES				LR	LR	19 17 16.8	
	comp=Z,103µm,21.2s,baz=277,slow=34						
FINES	**FINESS Array B**	**31.86**	**51**	P	**P**	**19 05 33.4**	**-3.8**
FINES	**FINESS Array B**	**31.86**	**51**		**P**	**19 05 33.4**	**-3.8**
OJC	**Ojcow**	**31.87**	**73**	*e*P	**P**	**19 05 38.0**	**+0.6**
OJC				*e*pP	**sP**	**19 05 43.5**	**+0.3**
OJC				*e*S	S	19 10 57.6	+10
AQU	**L'Aquila**	**31.87**	**90**	*e*P	**P**	**19 05 35.9**	**-1.7**
MMNY	**Mt. Morris Dam**	**31.94**	**271**	IAmb	IAmb	19 05 55.0	
	comp=Z,585nm,1.0s						
MMNY				IAMs_20	IAMs_20	19 16 47.4	
	comp=Z,191µm,19.0s						
DUGI	**Dugi Otok**	**31.98**	**86**	*e*P	**P**	**19 05 38.8**	**+0.4**
MEDO	**Medina**	**32.04**	**272**	IAmb	IAmb	19 06 10.7	
	comp=Z,481nm,1.0s						
MEDO				IAMs_20	IAMs_20	19 16 56.3	
	comp=Z,206µm,20.0s						
VYHS	**Vyhne**	**32.05**	**76**	*e*P	**P**	**19 05 39.1**	**+0.1**
VYHS				pmax	pmax		
	comp=Z,662nm,1.5s						
VYHS	**Vyhne**	**32.05**	**76**	*e*P	**P**	**19 05 39.1**	**+0.1**
VYHS				*e*S	**S**	**19 10 57.5**	**+7.5**
VYHS				*e*SS	**SS**	**19 13 08.9**	**+1.6**
VYHS				*e*L	L	19 15 41.3	
L56A	**Greenwood**	**32.06**	**270**	P	**P**	**19 05 39.3**	**0.0**
	baz=55,SNR=26						
L56A	**Greenwood**	**32.06**	**270**	P	**P**	**19 05 38.4**	**-0.9**
L56A				IAMs_20	IAMs_20	19 18 05.8	
	comp=Z,356µm,18.0s						
HOPEN	**Hopen**	**32.07**	**22**	*e*P	**P**	**19 05 39.2**	**+0.3**
HOPEN				IVmB_BB		19 05 54.6	
	comp=Z,10µm,3.9s						
HOPEN				*e*		19 13 10.2	
PSUB	**Penn St. - Bra**	**32.08**	**264**	IAMs_20	IAMs_20	19 17 11.6	
	comp=Z,405µm,20.0s						
J54A	**Appleton**	**32.09**	**272**	IAMs_20	IAMs_20	19 16 14.3	
	comp=Z,228µm,21.0s						
UDBI	**Udbina**	**32.13**	**85**	*e*P	**P**	**19 05 39.4**	**-0.5**
LANS	**Liptovska Anna**	**32.13**	**75**	*e*P	**P**	**19 05 37.9**	**-1.9**
LANS				pmax	pmax		
	comp=Z,229nm,1.0s						
LANS	**Liptovska Anna**	**32.13**	**75**	*e*P	**P**	**19 05 37.9**	**-1.9**
MOSL	**Moslavina**	**32.17**	**83**	*e*P	P	19 05 35.0	-5.1
WUPA	**West Chester U**	**32.17**	**265**	IAMs_20	IAMs_20	19 17 15.8	
	comp=Z,239µm,20.0s						
M57A	**Sunshine Farm,**	**32.26**	**268**	P	**P**	**19 05 41.8**	**+0.8**
	baz=54,SNR=14						
M57A	**Sunshine Farm,**	**32.26**	**268**	IAmb	IAmb	19 06 40.1	
	comp=Z,712nm,1.3s						
M57A				IAMs_20	IAMs_20	19 18 33.1	
	comp=Z,308µm,18.0s						
P60A	**Greenville**	**32.27**	**264**	P	**P**	**19 05 41.4**	**+0.4**
	baz=52,SNR=17						
P60A	**Greenville**	**32.27**	**264**	P	**P**	**19 05 40.1**	**-0.9**
P60A				IAMs_20	IAMs_20	19 17 17.4	
	comp=Z,409µm,20.0s						
PABE	**Paberze**	**32.28**	**62**	*e*P	**P**	**19 05 40.8**	**-0.2**
O59A	**Robesonia**	**32.30**	**266**	P	**P**	**19 05 41.9**	**+0.6**
	baz=52,SNR=15						
N58A	**Sunbury**	**32.30**	**267**	P	**P**	**19 05 41.6**	**+0.2**
	baz=53,SNR=19						
N58A	**Sunbury**	**32.30**	**267**	P	**P**	**19 05 40.4**	**-0.9**
N58A				IAmb	IAmb	19 06 10.6	
	comp=Z,655nm,1.1s						
N58A				IAMs_20	IAMs_20	19 18 38.3	
	comp=Z,369µm,18.0s						

SUW	Suwalki	32.35	65	*e*P	P	19 05 41.7	+0.1
SUW				*e*pP	sP	19 05 47.5	+0.1
SUW				*e*		19 05 55.4	
SUW				*e*S	S	19 10 58.6	+4.0
SUW	Suwalki	32.35	65	*e*P	P	19 05 38.8	-2.8
SUW	Suwalki	32.35	65	P	P	19 05 37.7	-3.9
SUW				pmax	pmax		
	comp=Z,2µm,1.0s						
SUW				MLR	MLR		
	comp=Z,96µm,20.0s						
SUW	Suwalki	32.35	65	P	P	19 05 37.6	-3.9
MORI	Morici	32.44	86	*e*P	P	19 05 38.8	-3.7
PRIJ	Prijedor	32.47	84	*e*P	P	19 05 52.0	+9.3
NIE	Niedzica	32.50	74	*e*P	P	19 05 44.3	+1.2
NIE				*e*pP	sP	19 05 50.2	+1.4
NIE				*e*S	S	19 11 06.8	+10
ZIRJ	Zirje	32.52	86	*e*P	P	19 05 39.5	-3.6
WVNY	West Valley, N	32.55	271	IAmb	IAmb	19 06 10.0	
	comp=Z,861nm,1.2s						
WVNY				IAMs_20	IAMs_20	19 17 05.6	
	comp=Z,239µm,21.0s						
MVL	Millersville	32.59	265	IAmb	IAmb	19 06 16.4	
	comp=Z,560nm,1.2s						
MVL				IAMs_20	IAMs_20	19 17 08.7	
	comp=Z,484µm,22.0s						
Q61A	Milford	32.66	263	P	P	19 05 44.6	+0.2
	baz=51						
PAGS	Pennsylvania G	32.67	266	P	P	19 05 44.0	-0.5
PAGS				IAMs_20	IAMs_20	19 17 10.2	
	comp=Z,397µm,22.0s						
EUNU	Eureka	32.72	345	P	P	19 05 43.0	-1.7
EUNU				IAMs_20	IAMs_20	19 17 46.3	
	comp=Z,347µm,19.0s						
KIJV	Kijevo	32.80	85	*e*P	P	19 05 42.8	-2.8
M56A	Emporium	32.82	269	P	P	19 05 45.9	+0.1
	baz=54,SNR=35						
M56A	Emporium	32.82	269	IAmb	IAmb	19 06 35.6	
	comp=Z,685nm,1.1s						
M56A				IAMs_20	IAMs_20	19 18 54.9	
	comp=Z,340µm,19.0s						
O58A	Lewisberry	32.86	266	P	P	19 05 46.8	+0.6
	baz=52,SNR=26						
N57A	Milroy	32.86	267	P	P	19 05 46.7	+0.5
	baz=53,SNR=26						
VSU	Vasula	32.86	56	*e*P	P	19 05 46.5	+0.5
VSU	Vasula	32.86	56	*ce*P	P	19 05 45.1	-0.9
VSU				pmax	pmax		
	comp=Z,2µm,1.4s						
VSU				MLR	MLR		
	comp=Z,238µm,20.0s						
P59A	Jarrettsville	32.87	265	P	P	19 05 47.9	+1.6
	baz=52,SNR=23						
BLY	Banja Luka	32.88	84	*e*P	P	19 05 43.8	-2.5
PSZ	Piszkesteto	32.94	77	⇑P	P	19 05 46.1	-0.9
PSZ	Piszkesteto	32.94	77	IAmb	IAmb	19 06 12.7	
	comp=Z,891nm,1.3s						
MGRS	Mrkonjic Grad	32.99	84	*e*P	P	19 05 48.6	+1.3
MORH	Mrgy, Hungar	33.01	80	⇓P	P	19 05 47.0	-0.4
MORH	Mrgy, Hungar	33.01	80	*e*P	P	19 05 43.9	-3.5
KECS	Kecovo	33.03	76	*e*P	P	19 05 47.1	-0.5
KECS				pmax	pmax		
	comp=Z,155nm,1.1s						
KECS	Kecovo	33.03	76	*e*P	P	19 05 47.1	-0.5
SSPA	Standing Stone	33.14	268	IAMs_20	IAMs_20	19 18 56.5	
	comp=Z,198µm,18.0s						
RES	Resolute Bay	33.17	334	P	P	19 05 47.8	-0.8
	comp=Z,66nm,1.0s,baz=97,slow=8.8,SNR=33						
RES				S	S	19 10 59.6	-7.3
	comp=Z,37nm,0.9s,baz=226,slow=22,SNR=2.1						
M55A	Ridgway	33.19	270	P	P	19 05 48.4	-0.7
M55A				IAmb	IAmb	19 06 00.8	
	comp=Z,464nm,0.9s						
M55A				IAMs_20	IAMs_20	19 18 58.5	
	comp=Z,336µm,20.0s						
N56A	West Decatur	33.22	268	P	P	19 05 50.1	+0.7
	baz=53,SNR=12						
O57A	Amberson	33.24	267	P	P	19 05 49.4	-0.1
	baz=52,SNR=21						
SDMD	Soldier’s Deli	33.24	265	IAMs_20	IAMs_20	19 17 47.3	
	comp=Z,239µm,20.0s						
I51A	Listowel	33.25	275	P	P	19 05 51.6	+2.0
	baz=57,SNR=8.4						
CRVS	Cervenica-Dubn	33.41	74	*e*P	P	19 05 51.5	+0.5
CRVS				pmax	pmax		
	comp=Z,2µm,1.7s						
CRVS	Cervenica-Dubn	33.41	74	*e*P	P	19 05 51.5	+0.5
CRVS				*e*S	S	19 11 22.1	+11
CRVS				*e*SS	SS	19 13 38.3	+3.1
CRVS				*e*L	L	19 16 15.6	
ISAL	Salakas	33.42	61	*e*P	P	19 05 48.8	-2.2
Q59A	Harwood	33.47	264	P	P	19 05 53.5	+2.0
	baz=51						
P58A	Pank, Wackersv	33.48	265	P	P	19 05 50.3	-1.3
	baz=52,SNR=23						
RICI	Ricice	33.52	86	*e*P	P	19 05 48.6	-3.4
IIGN	Ignalina	33.55	61	*e*P	P	19 05 52.5	+0.4
KEST	Kesra	33.55	103	P	P	19 05 50.2	-2.2
	comp=Z,46nm,1.0s,baz=264,slow=1.4,SNR=14						
KEST				S	S	19 11 12.0	-1.8
	comp=Z,5.3nm,0.9s,baz=332,slow=2.7,SNR=1.2						
KEST				LR	LR	19 18 49.2	
	comp=Z,25µm,18.6s,baz=270,slow=35						
KEST				P3KPbc		19 37 14.1	
	comp=Z,8.5nm,1.1s,baz=315,slow=3.1,SNR=5.2						
KEST	Kesra	33.55	103	P	P	19 05 50.2	-2.2
KEST				IAmb	IAmb	19 06 21.0	
	comp=Z,598nm,0.8s						
MAKA	Makarska	33.56	86	*e*P	P	19 05 48.7	-3.5
ERPA	Erie	33.56	271	P	P	19 05 53.2	+0.9
	baz=55,SNR=13						
ERPA	Erie	33.56	271	P	P	19 05 51.6	-0.7
ERPA				IAmb	IAmb	19 06 09.2	
	comp=Z,436nm,0.9s						
ERPA				IAMs_20	IAMs_20	19 18 50.3	
	comp=Z,244µm,18.0s						
SGRT	San Giovanni R	33.64	89	IAmb	IAmb	19 06 16.2	
	comp=Z,874nm,1.5s						
M54A	Oil Creek Stat	33.71	270	P	P	19 05 54.9	+1.2
	baz=54,SNR=14						
M54A	Oil Creek Stat	33.71	270	P	P	19 05 52.8	-0.9
M54A				IAmb	IAmb	19 06 26.0	
	comp=Z,1µm,1.6s						
M54A				IAMs_20	IAMs_20	19 19 18.4	
	comp=Z,338µm,18.0s						
O56A	Blue Knob Stat	33.77	268	P	P	19 05 56.2	+2.0
	baz=53,SNR=12						
O56A	Blue Knob Stat	33.77	268	IAmb	IAmb	19 07 25.5	
	comp=Z,2µm,1.7s						
O56A				IAMs_20	IAMs_20	19 20 41.2	
	comp=Z,214µm,18.0s						
R60A	Leonardtown, M	33.80	263	P	P	19 05 56.0	+1.6
	baz=50						
KWP	Kalwaria Pacla	33.82	73	*e*P	P	19 05 55.7	+1.2
KWP				*e*pP	sP	19 06 01.0	+0.7
KWP	Kalwaria Pacla	33.82	73	IAmb	IAmb	19 06 17.0	
	comp=Z,931nm,1.3s						
L53A	Girard	33.82	271	P	P	19 05 54.8	+0.2
	baz=55,SNR=17						
IDID	Didziasalis	33.84	61	*e*P	P	19 05 54.7	+0.2
KOLS	Kolonicke sedl	33.88	74	*e*P	P	19 05 53.1	-1.9
KOLS				pmax	pmax		
	comp=Z,404nm,1.3s						
KOLS	Kolonicke sedl	33.88	74	*e*P	P	19 05 53.1	-1.9
KOLS				*e*S	S	19 11 28.8	+10
KOLS				*e*SS	SS	19 13 57.4	+13
KOLS				*e*L	L	19 16 35.1	
E46A	Sault Ste Mari	33.91	281	P	P	19 05 54.9	-0.4
E46A				IAmb	IAmb	19 06 19.9	
	comp=Z,1µm,1.6s						
E46A				IAMs_20	IAMs_20	19 17 39.9	
	comp=Z,361µm,21.0s						
P57A	Homestead Farm	33.91	266	P	P	19 05 56.6	+1.2
	baz=52,SNR=16						
P57A	Homestead Farm	33.91	266	IAMs_20	IAMs_20	19 19 52.0	
	comp=Z,351µm,18.0s						
ALLY	Alegheny Colle	33.92	271	IAmb	IAmb	19 06 07.2	
	comp=Z,533nm,1.0s						
ALLY				IAMs_20	IAMs_20	19 19 09.0	
	comp=Z,305µm,18.0s						
NACGM	Naroch	34.01	62	*i* P	P	19 05 56.5	+0.4
NACGM				*i* P	P	19 05 56.5	+0.4
NACGM				*i* P	P	19 05 56.5	+0.4
NACGM				*i* PP	PP	19 07 09.0	-3.9
NACGM				*i* PPP	PPP	19 07 20.8	
NACGM				*i* PcP	PcP	19 08 09.2	-24
NACGM				*i* S	S	19 11 24.6	+4.3
NACGM				*i* SS	SnSn	19 13 33.1	+6.2
NACGM				*i* SSS	SSS	19 13 49.9	
NACGM				*i* LQ	LQ	19 16 02.2	
NACGM				*i* LR	LR	19 16 57.3	
UZH	Uzhgorod	34.03	74	⇑*i*P	P	19 05 57.2	+0.9
UZH				*e*		19 06 02.9	
UZH				*e*S	S	19 11 21.2	+0.5
UZH				MLR	MLR		
	comp=N,14µm,17.0s						
UZH				MLR	MLR		
	comp=E,7µm,17.0s						
UZH				MLR	MLR		
	comp=Z,7µm,17.0s						
Q58A	Fox Den Farm,	34.05	265	P	P	19 05 56.9	+0.3
	baz=51,SNR=21						
APA	Apatity	34.06	39	⇓*i*P	P	19 06 01.0	+4.6
APA				*i*		19 08 37.0	
APA				*i* SS	SS	19 13 23.0	-25
R59A	King George, V	34.17	263	P	P	19 05 59.1	+1.5
	baz=50						
AMBH	Ambrzfalva	34.20	79	⇓P	P	19 05 57.6	-0.1
S60A	Water View	34.21	262	P	P	19 05 58.6	+0.7
	baz=50						
N54A	Moraine State	34.23	270	P	P	19 05 57.2	-0.9
	baz=54,SNR=37						
N54A	Moraine State	34.23	270	P	P	19 05 57.3	-0.9
N54A				IAmb	IAmb	19 06 10.2	
	comp=Z,802nm,1.0s						
N54A				IAMs_20	IAMs_20	19 19 42.1	
	comp=Z,357µm,18.0s						
FRGS	Fruska Gora	34.25	81	⇑P	P	19 05 56.0	-2.3
FRGS	Fruska Gora	34.25	81	*e*P	P	19 05 54.2	-4.1
HAPS	Han Pijesak,Bl	34.30	83	*e*P	P	19 05 58.9	+0.1
CBN	Corbin Frederi	34.32	264	P	P	19 06 00.9	+2.0
	baz=50						
CBN	Corbin Frederi	34.32	264	IAmb	IAmb	19 07 16.6	
	comp=Z,860nm,1.4s						
CBN				IAMs_20	IAMs_20	19 19 31.0	
	comp=Z,440µm,19.0s						
M53A	WI Miller and	34.37	271	P	P	19 05 58.3	-1.0
	baz=54,SNR=25						
M53A	WI Miller and	34.37	271	P	P	19 05 59.0	-0.3
M53A				IAmb	IAmb	19 06 11.0	
	comp=Z,508nm,1.0s						
M53A				IAMs_20	IAMs_20	19 19 30.7	
	comp=Z,360µm,18.0s						
LTVH	Ltavrtes, Hu	34.39	77	⇓P	P	19 05 58.4	-0.9
TEKS	Tekeris	34.40	82	*e*P	P	19 05 57.7	-1.9
P56A	Dayton Farm, R	34.41	267	P	P	19 06 00.8	+1.1
	baz=52,SNR=18						
Q57A	Strasburg	34.43	266	P	P	19 06 00.2	+0.2
	baz=51,SNR=10						
FCC	Fort Churchill	34.44	305	IAMs_20	IAMs_20	19 18 15.2	
	comp=Z,168µm,18.0s						
LVZ	Lovozero	34.49	38	P	P	19 05 57.4	-2.8
LVZ				pmax	pmax		
	comp=Z,314nm,0.8s						
LVZ				MLR	MLR		
	comp=Z,121µm,22.0s						
LVZ	Lovozero	34.49	38	P	P	19 05 57.4	-2.8
LVV	L'vov	34.50	72	*e*P	P	19 06 00.8	+0.4
LVV				*e*		19 07 21.6	
LVV				*e*PPP	PPP	19 07 30.9	
LVV				*e*S	S	19 11 25.0	-3.0
LVV				*e*SS	SS	19 13 31.7	-26
LVV				*e*SSS	SSS	19 14 04.7	
LVV				pmax	pmax		
	comp=Z,8µm,3.7s						
LVV				MLR	MLR		
	comp=N,46µm,14.0s						
LVV				MLR	MLR		
	comp=E,24µm,14.0s						
LVV				MLR	MLR		
	comp=Z,58µm,14.0s						
S59A	Mechanicsville	34.56	263	P	P	19 06 02.0	+1.1
	baz=50,SNR=13						
T60A	Surry	34.62	262	P	P	19 06 02.4	+0.8
	baz=49,SNR=10						
T60A	Surry	34.62	262	IAmb	IAmb	19 06 17.3	
	comp=Z,495nm,0.8s						
R58A	Rapidan	34.65	264	P	P	19 06 02.7	+1.0
	baz=50,SNR=20						
TREB	Trebinje	34.69	86	*e*P	P	19 06 02.6	+0.5
BBLS	Lazići	34.70	83	*e*P	P	19 05 59.5	-2.7
BRY	Bratogost	34.70	85	*e*P	P	19 05 58.9	-3.4
BRY	Bratogost	34.70	85	*e*P	P	19 05 59.6	-2.7
M52A	Chesterland	34.73	272		P	19 06 02.3	-0.1
M52A				IAMs_20	IAMs_20	19 19 44.2	
	comp=Z,306µm,19.0s						
MNK	Minsk	34.75	62	⇓*i*P	P	19 06 02.0	-0.4
MNK				*i*		19 06 10.0	
MNK				*i*		19 06 10.0	
MNK				*e*		19 07 16.0	
MNK				*e*		19 07 36.0	
MNK				*e*S	S	19 11 32.0	+0.3
MNK				*e*		19 13 48.0	
MNK				*e*		19 14 04.0	
MNK				pmax	pmax		
	comp=Z,3µm,1.0s						
MNK				pmax	pmax		
	comp=N,3µm,1.0s						
MNK				pmax	pmax		
	comp=E,3µm,1.0s						
MNK				pmax	pmax		
	comp=Z,12µm,4.0s						
MNK				pmax	pmax		
	comp=Z,20µm,4.0s						
MNK				pmax	pmax		
	comp=Z,12µm,4.0s						
MNK				pmax	pmax		
	comp=Z,20µm,4.0s						
MNK				smax	smax		
	comp=E,23µm,8.0s						
MNK				smax	smax		
	comp=E,56µm,8.0s						
MNK				smax	smax		
	comp=N,15µm,8.0s						
MNK				smax	smax		
	comp=N,16µm,8.0s						
MNK				MLR	MLR		
	comp=Z,73µm,14.0s						
MNK				MLR	MLR		
	comp=Z,72µm,12.0s						
MNK				MLR	MLR		
	comp=N,50µm,12.0s						
MNK				MLR	MLR		
	comp=N,50µm,14.0s						
MNK				MLR	MLR		
	comp=E,49µm,14.0s						
MNK				MLR	MLR		
	comp=E,60µm,12.0s						
MNK	Minsk	34.75	62	*i* P	P	19 05 59.1	-3.3
	comp=E,24nm,1.0s						
MNK				*i* P	P	19 05 59.1	-3.3
	comp=N,77nm,0.9s						
MNK				*i* P	P	19 05 59.1	-3.3
	comp=Z,235nm,0.9s						
MNK				*i* PP	PnPn	19 07 14.7	-3.7
MNK				*i* PPP	PPP	19 07 26.8	
MNK				*i* PcP	PcP	19 08 33.3	-2.3
MNK				*i* S	S	19 11 27.7	-4.0
MNK				*i* PcS	PcS	19 12 19.9	-2.0
MNK				*i* SS	SnSn	19 13 41.9	-3.0
MNK				*i* SSS	SSS	19 13 57.9	
MNK				*i* LQ	LQ	19 17 29.8	
MNK				*i* LR	LR	19 20 07.7	
MNK				*i* LRM	MLR	19 21 25.2	
	comp=E,597nm,14.4s						
MNK				*i* LRM	MLR	19 21 25.2	
	comp=N,26µm,15.4s						
MNK				*i* LRM	MLR	19 21 25.4	
	comp=Z,7µm,17.2s						
UPM	Unac-Piva	34.75	85	*e*P	P	19 06 00.4	-2.5
UPM	Unac-Piva	34.75	85	*e*P	P	19 06 00.1	-2.8
R58B	Mineral	34.78	264	P	P	19 06 03.6	+0.7
	baz=50,SNR=17						
R58B	Mineral	34.78	264	IAmb	IAmb	19 07 09.6	
	comp=Z,1µm,1.5s						
K50A	Casco	34.80	274	IAmb	IAmb	19 06 14.9	
	comp=Z,494nm,1.1s						
K50A				IAMs_20	IAMs_20	19 19 25.8	
	comp=Z,372µm,19.0s						
SIRR	Siria	34.80	78	⇓P	P	19 06 01.3	-1.7
N53A	Lisbon	34.84	270	P	P	19 06 02.7	-0.7
N53A				IAmb	IAmb	19 06 30.3	
	comp=Z,896nm,1.1s						
MATE	Matera	34.88	90	⇑P	P	19 06 03.3	-0.4
GLMI	Grayling	34.89	279	P	P	19 06 04.9	+1.1
	baz=58						
GLMI	Grayling	34.89	279	IAmb	IAmb	19 06 22.1	
	comp=Z,1µm,1.0s						
Q56A	Snyder Ridge,	34.90	266	IAmb	IAmb	19 06 32.9	
	comp=Z,2µm,1.8s						
Q56A				IAMs_20	IAMs_20	19 18 41.1	
	comp=Z,358µm,21.0s						
DIVS	Divibare	34.92	83	*e*P	P	19 06 00.7	-3.5
DIVS	Divibare	34.92	83	P	P	19 06 01.4	-2.8
MCWV	Mont Chateau	34.93	268	P	P	19 06 05.2	+1.1
	baz=52,SNR=10						
MCWV	Mont Chateau	34.93	268	P	P	19 06 03.6	-0.5
HCY	Herceg Novi	34.93	86	*e*P	P	19 06 00.9	-3.2
HCY	Herceg Novi	34.93	86	*e*P	P	19 06 00.2	-3.9
O54A	Avella	34.93	269	IAmb	IAmb	19 07 41.9	
	comp=Z,1µm,1.6s						
O54A				IAMs_20	IAMs_20	19 20 17.8	
	comp=Z,250µm,18.0s						
BANR	Banloc	34.94	80	⇑P	P	19 06 02.2	-2.0
R57A	Stanardsville	34.97	265	P	P	19 06 05.4	+0.9
	baz=50,SNR=20						
PLE	Pljevlja	34.98	84	*e*P	P	19 06 04.0	-0.7
U61A	Possum Corner	34.98	260	P	P	19 06 05.9	+1.2
	baz=48,SNR=19						
U61A	Possum Corner	34.98	260	P	P	19 06 04.3	-0.3
U61A				IAmb	IAmb	19 06 27.8	
	comp=Z,855nm,0.9s						
NKY	Niksic	35.02	85	*e*P	P	19 06 03.4	-1.7
NKME	Niksic	35.03	85	*e*P	P	19 06 02.2	-2.9
BZS	Buzias	35.10	79	⇓P	P	19 06 03.9	-1.7
S58A	Poland Farm, P	35.12	264	P	P	19 06 04.9	-0.9
	baz=50,SNR=15						
S58A	Poland Farm, P	35.12	264	P	P	19 06 05.1	-0.7
S58A				IAmb	IAmb	19 07 14.2	
	comp=Z,1µm,1.4s						
CEME	Cevo	35.13	86	*e*P	P	19 06 03.2	-2.8
DRGR		35.16	77	⇑P	P	19 06 04.7	-1.5
BMR	Baia Mare	35.19	75	⇓P	P	19 06 05.1	-1.3
V62A	Hyde County Ai	35.20	259	P	P	19 06 07.0	+0.4
	baz=47						
T59A	Double "B" Far	35.23	262	IAmb	IAmb	19 07 40.1	
	comp=Z,3µm,2.4s						
BUM	Brajici-Budva	35.25	86	*e*P	P	19 06 06.5	-0.5
U60A	Pendleton	35.32	261	P	P	19 06 08.4	+0.9
	baz=48,SNR=11						
KOME	Kolasin	35.32	85	*e*P	P	19 06 05.5	-2.2
PDG	Podgorica	35.40	86	⇑P	P	19 06 06.5	-1.7
PDG	Podgorica	35.40	86	*e*P	P	19 06 05.4	-2.8
PDG	Podgorica	35.40	86	P	P	19 06 05.1	-3.1
TTG	Podgorica	35.40	86	*e*P	P	19 06 05.0	-3.2
G45A	Suttons Bay	35.40	280	IAmb	IAmb	19 06 20.5	
	comp=Z,506nm,0.9s						
G45A				IAMs_20	IAMs_20	19 18 37.5	
	comp=Z,192µm,22.0s						
O53A	New Philadelph	35.40	270	P	P	19 06 08.9	+0.6
	baz=53,SNR=40						
O53A	New Philadelph	35.40	270	IAmb	IAmb	19 06 35.3	
	comp=Z,1µm,1.2s						
O53A				IAMs_20	IAMs_20	19 20 28.2	
	comp=Z,305µm,18.0s						
V61A	Roper	35.42	260	IAmb	IAmb	19 06 25.1	
	comp=Z,1µm,1.5s						
DRME	Dracevica, Mon	35.50	86	*e*P	P	19 06 06.5	-2.5
DRME	Dracevica, Mon	35.50	86	*e*P	P	19 06 06.7	-2.3
E43A	Lone Tree Farm	35.51	283	P	P	19 06 08.2	-1.0
IVA	Berane	35.54	85	*e*P	P	19 06 07.1	-2.4
S57A	Dark Hollow, R	35.57	265	P	P	19 06 11.0	+1.3
	baz=50,SNR=22						
RAFF	Raffo Rosso	35.58	97	IAmb	IAmb	19 06 38.3	
	comp=Z,623nm,0.9s						
MDVR	Moldovita	35.60	81	⇓P	P	19 06 07.6	-2.3
ULC	Ulcinj	35.66	86	*e*P	P	19 06 09.9	-0.6
AAM	Ann Arbor	35.69	274	P	P	19 06 11.6	+0.9
	baz=55						
AAM	Ann Arbor	35.69	274	IAMs_20	IAMs_20	19 19 32.5	
	comp=Z,364µm,20.0s						
N51A	Ashland	35.71	272		P	19 06 10.0	-1.0
N51A				IAmb	IAmb	19 06 37.6	
	comp=Z,967nm,1.1s						
N51A				IAMs_20	IAMs_20	19 20 22.3	
	comp=Z,317µm,19.0s						
CJR	Cluj-Napoca	35.73	77	⇑P	P	19 06 09.9	-1.1
DEV	Deva	35.74	78	⇓P	P	19 06 10.2	-0.8
PVY	Plav	35.74	85	*e*P	P	19 06 09.6	-1.7
U59A	Littleton	35.78	262	IAmb	IAmb	19 06 27.6	
	comp=Z,827nm,1.4s						
TIP	Timpagrande	35.80	92	⇑P	P	19 06 11.1	-0.7
M50A	Fremont	35.84	273	IAmb	IAmb	19 06 38.8	
	comp=Z,948nm,1.0s						
T58A	Grand View Acr	35.84	263	P	P	19 06 12.7	+0.7
	baz=49,SNR=14						
V60A	Jim Taylor Roa	35.85	260	P	P	19 06 13.3	+1.2
	baz=48,SNR=14						
V60A	Jim Taylor Roa	35.85	260	IAmb	IAmb	19 06 28.3	
	comp=Z,479nm,0.9s						
O52A	Adamsville	35.86	270	IAmb	IAmb	19 06 39.3	
	comp=Z,1µm,1.4s						
O52A				IAMs_20	IAMs_20	19 20 33.4	
	comp=Z,309µm,19.0s						
J47A	Sunmer	35.87	277	IAMs_20	IAMs_20	19 19 31.2	
	comp=Z,298µm,20.0s						
GZR	Gura Zlata	35.92	79	⇓P	P	19 06 10.8	-1.9
Q54A	Coxs Mills	35.94	268	P	P	19 06 12.2	-0.7
Q54A				IAmb	IAmb	19 06 25.0	
	comp=Z,980nm,1.4s						
Q54A				IAMs_20	IAMs_20	19 20 44.6	
	comp=Z,248µm,19.0s						
HERR	Herculane	35.97	80	⇑P	P	19 06 11.1	-1.9
P53A	Whipple	35.97	269	IAMs_20	IAMs_20	19 18 39.3	
	comp=Z,257µm,22.0s						
ARCR	ARCALIA	35.99	76	⇑P	P	19 06 11.3	-1.9
S56A	Natural Bridge	35.99	265	P	P	19 06 15.2	+1.8
	baz=50,SNR=15						
W61A	Ground Anchor	36.08	259	P	P	19 06 16.8	+2.7
	baz=47						
D41A	Chassel	36.10	285	IAmb	IAmb	19 06 27.4	
	comp=Z,645nm,0.9s						
U58A	Oxford	36.21	262	P	P	19 06 17.2	+2.0
	baz=48,SNR=34						
BUR08	Bucovina Ar. S	36.21	74	IAmb	IAmb	19 06 33.2	
	comp=Z,863nm,1.4s						
BOVS	Bovan	36.22	82	⇑P	P	19 06 14.6	-0.6
BURAR	Bucovina Array	36.23	74	⇓P	P	19 06 14.1	-1.4
BURAR	Bucovina Array	36.23	74	P	P	19 06 12.9	-2.5
T57A	Hurt	36.24	264	P	P	19 06 17.1	+1.6
	baz=49,SNR=28						
I45A	Fountain	36.29	279	IAMs_20	IAMs_20	19 19 06.1	
	comp=Z,187µm,22.0s						
P52A	Corning	36.34	270	P	P	19 06 16.9	+0.6
	baz=52,SNR=44						
P52A	Corning	36.34	270	IAmb	IAmb	19 06 28.3	
	comp=Z,827nm,1.1s						
P52A				IAMs_20	IAMs_20	19 20 56.9	
	comp=Z,291µm,19.0s						
L48A	N Adams	36.37	275	P	P	19 06 15.8	-0.7
L48A				IAMs_20	IAMs_20	19 19 53.5	
	comp=Z,424µm,21.0s						
TIR	Tirane	36.40	87	P	P	19 06 24.0	+7.2
TIR	Tirane	36.40	87	P	P	19 06 14.5	-2.3
TIR				pmax	pmax		
	comp=Z,5µm,2.2s						
TIR	Tirane	36.40	87	P	P	19 06 14.5	-2.3
V59A	Middlesex	36.44	261	P	P	19 06 19.3	+2.1
	baz=48,SNR=43						
Q53A	Leroy	36.44	268	P	P	19 06 19.2	+2.0
	baz=51,SNR=16						
LOT	Lotru	36.48	78	⇓P	P	19 06 17.1	-0.5
MDB	Medias	36.48	77	⇓P	P	19 06 16.8	-0.7
ACSO	Alum Creek Sta	36.49	271	P	P	19 06 19.4	+1.8
	baz=53,SNR=32						
ACSO	Alum Creek Sta	36.49	271	P	P	19 06 17.3	-0.3
ACSO				IAmb	IAmb	19 06 44.6	
	comp=Z,985nm,1.1s						
ACSO				IAMs_20	IAMs_20	19 20 55.0	
	comp=Z,330µm,19.0s						
R54A	Victor	36.54	267	P	P	19 06 20.4	+2.3
	baz=50,SNR=37						
PHP	Peshkopia	36.55	86	P	P	19 06 16.8	-1.4
SRE	Strehaia	36.56	80	⇑P	P	19 06 17.0	-1.2
CNNC	Cliffs of the	36.58	260	P	P	19 06 21.0	+2.6
	baz=47						
TMCR	Tamitsa	36.60	44	*e*P	P	19 06 17.2	-1.0

TMCR				pmax	pmax		
	comp=Z,671nm,1.0s						
W60A	Pink Hill	36.60	260	P	P	19 06 21.4	+2.8
	baz=47,SNR=12						
PUNG	Punghina	36.60	80	⇓P	P	19 06 16.6	-1.9
U57A	Blanch	36.66	263	P	P	19 06 21.0	+2.0
	baz=48,SNR=48						
T56A	Rocky Mt	36.70	265	P	P	19 06 21.5	+2.2
	baz=49,SNR=26						
BLA	Blacksburg	36.81	265	P	P	19 06 23.2	+2.7
	baz=49,SNR=18						
BLA	Blacksburg	36.81	265	IAmb	IAmb	19 06 42.7	
	comp=Z,761nm,1.1s						
N49A	Columbus Grove	36.82	273	IAmb	IAmb	19 06 47.3	
	comp=Z,831nm,1.1s						
Q52A	Bidwell	36.83	269	IAmb	IAmb	19 06 56.9	
	comp=Z,2µm,1.4s						
Q52A				IAMs_20	IAMs_20	19 19 05.1	
	comp=Z,284µm,22.0s						
COWI	Conover	36.93	283	P	P	19 06 20.4	-0.9
V58A	Windy Hill, Pi	36.95	262	IAmb	IAmb	19 06 49.9	
	comp=Z,3µm,2.0s						
W59A	Clinton	36.97	261	P	P	19 06 23.7	+2.1
	baz=47						
H43A	Windswept, Lux	36.98	280	IAMs_20	IAMs_20	19 20 07.2	
	comp=Z,195µm,20.0s						
S54A	Dingess, Beckl	36.98	267	P	P	19 06 23.5	+1.7
	baz=50,SNR=18						
S54A	Dingess, Beckl	36.98	267	P	P	19 06 21.2	-0.6
S54A				IAmb	IAmb	19 06 34.1	
	comp=Z,1µm,1.4s						
S54A				IAMs_20	IAMs_20	19 19 56.1	
	comp=Z,418µm,21.0s						
SKO	Skopje	36.99	85	*i* P	P	19 06 23.2	+1.4
P51A	Williamsport	37.00	270	IAmb	IAmb	19 06 54.4	
	comp=Z,1µm,1.4s						
P51A				IAMs_20	IAMs_20	19 19 53.3	
	comp=Z,166µm,18.0s						
R53A	Hurricane	37.03	268	IAmb	IAmb	19 06 34.4	
	comp=Z,1µm,1.5s						
R53A				IAMs_20	IAMs_20	19 20 02.5	
	comp=Z,327µm,20.0s						
ARR	Arges	37.04	78	⇑P	P	19 06 21.3	-1.0
AKASG	Malin Array Be	37.08	68	P	P	19 06 18.2	-4.2
	comp=Z,56nm,0.9s,baz=300,slow=8.4,SNR=27						
AKASG				S	S	19 12 03.5	-3.9
	comp=Z,1.1nm,0.5s,baz=230,slow=36,SNR=1.2						
AKASG				LR	LR	19 22 07.5	
	comp=Z,44µm,18.0s,baz=305,slow=37						
AKASG	Malin Array Be	37.08	68	*ce*P	P	19 06 18.7	-3.7
AKASG				pmax	pmax		
	comp=Z,57nm,0.9s						
AKASG	Malin Array Be	37.08	68	P	P	19 06 19.6	-2.8
AKBB	Malin Array Si	37.08	68	⇓*e*P	P	19 06 18.7	-3.7
AKBB	Malin Array Si	37.08	68	IAmb	IAmb	19 06 47.0	
	comp=Z,730nm,1.0s						
X60A	Albert Glenn T	37.09	260	P	P	19 06 24.5	+1.9
	baz=46,SNR=14						
BIZ	Bicaz	37.10	75	⇑P	P	19 06 21.1	-1.6
OHR	Ohrid	37.11	86	*i* P	P	19 06 24.7	+1.8
DOPR	Dopca	37.17	77	⇓P	P	19 06 22.6	-0.8
VOIR		37.25	77	⇑P	P	19 06 23.1	-1.0
V57A	Coltrane Farms	37.29	263	P	P	19 06 25.1	+0.7
	baz=48,SNR=39						
KEK	Kerkira	37.33	89	P	P	19 06 25.9	+1.2
OZUR		37.34	76	⇓P	P	19 06 22.6	-2.2
O49A	Covington	37.35	272	P	P	19 06 24.3	-0.6
O49A				IAmb	IAmb	19 06 51.8	
	comp=Z,718nm,1.1s						
O49A				IAMs_20	IAMs_20	19 23 12.5	
	comp=Z,312µm,19.0s						
U56A	King	37.35	264	P	P	19 06 23.7	-1.3
	baz=48,SNR=15						
U56A	King	37.35	264	IAmb	IAmb	19 06 37.4	
	comp=Z,856nm,1.2s						
SRN	Sarande	37.35	89	P	P	19 06 25.1	+0.2
MTUR	Matau	37.37	78	⇑P	P	19 06 24.5	-0.7
EYMN	Ely	37.38	287	P	P	19 06 24.7	-0.4
	baz=60,SNR=56						
EYMN	Ely	37.38	287	IAmb	IAmb	19 06 42.7	
	comp=Z,908nm,1.3s						
KBN	Korca	37.39	87	P	P	19 06 26.1	+0.8
L46A	Eue Claire	37.47	276	IAmb	IAmb	19 06 58.5	
	comp=Z,870nm,1.2s						
X59A	McDuffie Farm,	37.47	260	P	P	19 06 27.6	+1.7
	baz=47						
STFAR	Stefanesti-Arg	37.51	78	⇓P	P	19 06 25.5	-0.7
W58A	Raeford	37.54	261	P	P	19 06 28.0	+1.4
	baz=47,SNR=20						
LSK	Leskovik	37.56	88	P	P	19 06 27.0	+0.3
STIP	Stip	37.61	85	*i* P	P	19 06 25.6	-1.5
TESR	Tescani	37.64	75	⇓P	P	19 06 26.7	-0.5
VLAD	Vladila	37.64	80	⇑P	P	19 06 26.4	-0.9
FNA	Florina	37.65	86	P	P	19 06 27.2	-0.3
NEST	Nestorio	37.67	87	P	P	19 06 36.2	+8.5
HUMR	Humele	37.70	79	⇓P	P	19 06 26.8	-1.0
VTS	Vitosha	37.71	83	⇑P	P	19 06 27.7	-0.4
VTS	Vitosha	37.71	83	P	P	19 06 25.1	-3.0
VTS				pmax	pmax		
	comp=Z,2µm,1.9s						
VTS				MLR	MLR		
	comp=Z,24µm,20.0s						
VTS	Vitosha	37.71	83	P	P	19 06 25.1	-3.0
VTS				IAmb	IAmb	19 06 52.1	
	comp=Z,2µm,1.9s						
MLR	Muntele Rosu	37.76	77	⇑P	P	19 06 27.9	-0.5
N47A	Urbana	37.76	274	IAmb	IAmb	19 06 54.3	
	comp=Z,1µm,1.5s						
IGT	Igoumenitsa	37.77	89	P	P	19 06 28.9	+0.4
V56A	Mocksville	37.78	263	P	P	19 06 30.8	+2.3
	baz=48,SNR=44						
SORM	Soroca	37.81	72	⇑P	P	19 06 28.0	-0.6
IAS	Iasi	37.82	74	⇓P	P	19 06 28.8	0.0
PENT	Pentalofos	37.86	87	P	P	19 06 31.2	+1.9
W57A	Gilead	37.91	262	IAmb	IAmb	19 06 46.4	
	comp=Z,716nm,1.2s						
P49A	Miami Univ. Ec	37.98	272	P	P	19 06 31.6	+1.4
	baz=52,SNR=12						
P49A	Miami Univ. Ec	37.98	272	IAmb	IAmb	19 06 56.0	
	comp=Z,3µm,2.3s						
I42A	Draeger Farm,	37.98	280	IAMs_20	IAMs_20	19 21 09.8	
	comp=Z,265µm,18.0s						
PLOR	Plostina	37.98	76	⇓P	P	19 06 29.8	-0.4
NEHR	Nehoiu	38.00	77	⇑P	P	19 06 29.7	-0.6
G40A	Rib Lake	38.00	283	P	P	19 06 28.9	-1.4
VRI	Vrincioaia	38.02	76	⇑P	P	19 06 29.2	-1.3
COPA	Copaceanca	38.06	79	⇑P	P	19 06 30.0	-0.8
VAY	Valandovo	38.06	85	*i* P	P	19 06 28.3	-2.6
SECR		38.08	77	⇑P	P	19 06 30.8	-0.2
E38A	The Farm, Brul	38.10	286		P	19 06 29.3	-1.9
U54A	Nelsons Funny	38.12	265	P	P	19 06 33.8	+2.4
	baz=49,SNR=13						
U54A	Nelsons Funny	38.12	265	IAmb	IAmb	19 08 26.9	
	comp=Z,2µm,1.8s						
PLVB	Pleven	38.12	81	⇑P	P	19 06 30.3	-1.0
KPRO	Kipourio	38.14	87	P	P	19 06 30.9	-0.8
GRG	Griva	38.17	85	P	P	19 06 32.8	+0.9
BISRR	Bisoca	38.18	76	⇓P	P	19 06 31.5	-0.5
V55A	Taylorsville	38.19	264	IAmb	IAmb	19 06 44.3	
	comp=Z,904nm,1.3s						
V55A				IAMs_20	IAMs_20	19 21 55.2	
	comp=Z,379µm,19.0s						
VASR	Vaslui	38.24	74	⇑P	P	19 06 31.6	-0.7
W56A	Indian Trail	38.28	263	P	P	19 06 35.1	+2.3
	baz=47,SNR=19						
KLMR	Klimovskoe	38.29	49	*e*P	P	19 06 29.4	-3.1
KLMR				*e*S	S	19 12 22.5	-3.0
KLMR				pmax	pmax		
	comp=Z,2µm,1.5s						
KLMR	Klimovskoe	38.29	49	*e*P	P	19 06 29.5	-3.1
KLMR				AMP		19 06 48.1	
	comp=Z,2µm,1.5s						
KLMR				*e*S	S	19 12 22.5	-3.0
KLMR				*e*S	S	19 12 22.5	-3.0
KLMR				LQ	LQ	19 17 27.5	
KLMR				LQ	LQ	19 17 27.5	
KLMR				LR	LR	19 18 25.0	
K43A	Burlington	38.30	278	P	P	19 06 31.4	-1.5
K43A				IAmb	IAmb	19 06 51.8	
	comp=Z,953nm,1.1s						
K43A				IAMs_20	IAMs_20	19 21 09.3	
	comp=Z,338µm,18.0s						
ISR	Istrita	38.31	77	⇓P	P	19 06 31.2	-1.8
GHRR		38.32	75	⇑P	P	19 06 32.6	-0.4
L44A	Lake County Fo	38.35	277	P	P	19 06 34.1	+0.8
	baz=54,SNR=16						
L44A	Lake County Fo	38.35	277	IAmb	IAmb	19 06 52.0	
	comp=Z,889nm,1.1s						
L44A				IAMs_20	IAMs_20	19 21 11.7	
	comp=Z,357µm,18.0s						
KNT	Kendrikon	38.35	85	P	P	19 06 33.4	0.0
SULR		38.38	78	⇑P	P	19 06 32.4	-1.1
PETR	Petresti	38.40	76	⇑P	P	19 06 33.3	-0.4
LKD2	Lefkada island	38.43	89	P	P	19 06 34.4	+0.4
GRER		38.43	76	⇑P	P	19 06 33.5	-0.4
X57A	Johnson Farm,	38.44	261	P	P	19 06 36.5	+2.4
	baz=47,SNR=11						
P48A	Milroy	38.46	272	IAmb	IAmb	19 06 59.9	
	comp=Z,2µm,1.8s						
P48A				IAMs_20	IAMs_20	19 23 54.8	
	comp=Z,270µm,19.0s						
B35A	Bob, Littlefor	38.47	289	P	P	19 06 32.1	-2.1
B35A				IAmb	IAmb	19 06 48.9	
	comp=Z,3µm,2.2s						
S51A	Beattyville	38.48	268	IAMs_20	IAMs_20	19 20 45.6	
	comp=Z,341µm,21.0s						
R50A	Paris	38.52	270	P	P	19 06 34.0	-0.8
R50A				IAmb	IAmb	19 06 47.5	
	comp=Z,863nm,1.1s						
R50A				IAMs_20	IAMs_20	19 19 55.6	
	comp=Z,273µm,22.0s						
EVGI	Lefkada island	38.53	90	P	P	19 06 35.5	+0.6
HQIL	Hanson Quary C	38.53	277	pP	pP	19 06 39.3	+0.3
HQIL				IAMs_20	IAMs_20	19 21 10.6	
	comp=Z,186µm,21.0s						
BIRD	Birdtown, Kers	38.54	262	IAmb	IAmb	19 06 51.8	
	comp=Z,2µm,1.7s						
Y58A	Scranton	38.56	260	IAmb	IAmb	19 06 52.2	
	comp=Z,2µm,1.4s						
FSK	Fiskardo	38.58	90	P	P	19 06 34.6	-0.6
KEF3	Kipouria, Keph	38.60	90	P	P	19 06 36.2	+0.7
KEF5	Kardakata, Kep	38.63	90	P	P	19 06 36.0	+0.3
KIS	Kishinev	38.66	73	*e*P	P	19 06 36.0	+0.2
	comp=Z,2µm,3.8s						
KIS	Kishinev	38.66	73	*e*PP	PP	19 08 03.0	-1.2
	comp=Z,5µm,9.9s						
KIS	Kishinev	38.66	73	*e*PcP	PcP	19 08 48.0	+0.4
KIS				*e*S	S	19 12 26.0	-5.5
	comp=Z,4µm,24.2s						
KIS				*e*SS	SS	19 15 30.0	+8.5
KIS				*e*LR	LR	19 21 03.0	
	comp=Z,19µm,17.0s						
KIS	Kishinev	38.66	73	*e*P	P	19 06 36.0	+0.2
KIS				*e*		19 08 03.0	
KIS				*e*PPP	PPP	19 08 32.0	
KIS				*e*		19 08 48.0	
KIS				*e*S	S	19 12 26.0	-5.5
KIS				pmax	pmax		
	comp=Z,2µm,3.8s						
KIS				pmax	pmax		
	comp=Z,5µm,9.9s						
KIS				smax	smax		
	comp=E,4µm,24.2s						
KIS				MLR	MLR		
	comp=Z,19µm,17.0s						
KIS				MLR	MLR		
	comp=E,14µm,16.0s						
VARL	Varlezi	38.67	75	⇑P	P	19 06 34.5	-1.4
PGOR	Pogoanele	38.69	77	⇑P	P	19 06 36.1	-0.1
MILM	Milestii Mici	38.70	73	⇑P	P	19 06 34.4	-1.7
THE	Thessaloniki	38.71	85	P	P	19 06 36.7	+0.4
KMSC	Kings Mountain	38.73	263	P	P	19 06 38.5	+1.9
	baz=48,SNR=16						
KMSC	Kings Mountain	38.73	263	IAMs_20	IAMs_20	19 22 35.7	
	comp=Z,265µm,18.0s						
ULM	Lac du Bonnet	38.76	293	P	P	19 06 34.6	-2.1
	comp=Z,115nm,1.0s,baz=70,slow=9.0,SNR=19						
ULM				LR	LR	19 21 02.2	
	comp=Z,305µm,18.7s,baz=63,slow=34						
ULM	Lac du Bonnet	38.76	293	*i* P	P	19 06 37.0	+0.3
ULM	Lac du Bonnet	38.76	293	P	P	19 06 35.0	-1.7
ULM				IAMs_20	IAMs_20	19 20 41.4	
	comp=Z,290µm,20.0s						
VLS	Valsamata	38.77	90	P	P	19 06 35.8	-1.1
THL	Klokotos Trika	38.78	87	P	P	19 06 37.2	+0.3
Z59A	Georgetown, SC	38.79	259	P	P	19 06 39.2	+2.2
	baz=46						
SRS	Serrai	38.80	84	P	P	19 06 36.1	-1.0
PSDA	Pessada-Kefalo	38.81	90	P	P	19 06 37.3	+0.2
HORT	Hortiatis	38.81	85	P	P	19 06 37.3	0.0
NVR	Nevrokopi	38.83	84	P	P	19 06 37.2	-0.2
SOH	Sokhos	38.83	85	P	P	19 06 37.5	+0.1
PDO	Prodromos	38.87	89	P	P	19 06 37.6	-0.1
SCHL	Schela	38.87	76	⇓P	P	19 06 37.9	+0.3
M44A	Midewin, Midew	38.89	276	IAmb	IAmb	19 07 07.7	
	comp=Z,1µm,1.2s						
M44A				IAMs_20	IAMs_20	19 22 26.1	
	comp=Z,259µm,22.0s						
SFIN	Lafayette	38.92	274	P	P	19 06 37.1	-0.9
	baz=53,SNR=24						
SFIN	Lafayette	38.92	274	IAmb	IAmb	19 07 04.3	
	comp=Z,2µm,1.6s						
Y57A	Sumter	38.92	261	IAmb	IAmb	19 06 55.0	
	comp=Z,2µm,1.6s						
VLMS	Volimes, Zakyn	39.00	91	P	P	19 06 39.2	+0.3
R49A	Shelbyville	39.03	270	IAMs_20	IAMs_20	19 21 57.1	
	comp=Z,210µm,20.0s						
EVR	Evrytania	39.05	88	P	P	19 06 40.6	+1.3
AMRR	Amara	39.06	77	⇓P	P	19 06 39.0	-0.2
OBN	Obninsk	39.10	58	⇑P	P	19 06 39.4	0.0
OBN	Obninsk	39.10	58	⇑*e*P	P	19 06 35.8	-3.6
OBN				*e*		19 08 05.3	
OBN				*e*		19 08 50.7	
OBN				*e*S	S	19 12 37.5	-0.4
OBN				pmax	pmax		
	comp=Z,2µm,1.0s						
OBN				pmax	pmax		
	comp=Z,8µm,1.9s						
OBN	Obninsk	39.10	58		P	19 06 35.9	-3.5
RAZG	Razgrad	39.15	79	⇓P	P	19 06 40.2	+0.2
TZTN	Tazewell	39.15	267	P	P	19 06 42.1	+2.0
	baz=49,SNR=42						
TZTN	Tazewell	39.15	267	P	P	19 06 39.6	-0.6
TZTN				IAmb	IAmb	19 06 57.8	
	comp=Z,1µm,1.1s						
PLG	Polygyros	39.16	85	P	P	19 06 38.2	-2.0
RASA	Rasa	39.17	78	⇓P	P	19 06 39.7	-0.4
LTHK	Lithakia	39.22	91	P	P	19 06 40.8	+0.2
PAULI	Pauline	39.24	263	P	P	19 06 39.9	-1.0
PAULI				IAMs_20	IAMs_20	19 23 00.1	
	comp=Z,238µm,18.0s						
JSC	Jenkinsville	39.27	262	IAMs_20	IAMs_20	19 22 34.0	
	comp=Z,285µm,18.0s						
AGG	Agios Georgios	39.30	88	P	P	19 06 41.8	+0.4
AGG	Agios Georgios	39.30	88	IAmb	IAmb	19 07 17.9	
	comp=Z,744nm,1.0s						
ANX	Ano Chora	39.32	89	P	P	19 06 42.6	+1.0
JFWS	Jewell Farm	39.34	280	P	P	19 06 43.5	+1.9
	baz=55,SNR=14						
JFWS	Jewell Farm	39.34	280	IAMs_20	IAMs_20	19 21 59.6	
	comp=Z,285µm,18.0s						
MOS	Moscow	39.38	57	*e*P	P	19 06 40.2	-1.5
MOS				*e*		19 08 13.8	
MOS				*e*S	S	19 12 46.4	+4.3
MOS				*e*		19 16 47.6	
MOS				pmax	pmax		
	comp=Z,686nm,1.3s						
MOS				pmax	pmax		
	comp=E,397nm,1.3s						
MOS				pmax	pmax		
	comp=N,378nm,1.3s						
MOS				MLR	MLR		
	comp=N,70µm,20.0s						
MOS				MLR	MLR		
	comp=Z,64µm,20.0s						
EFP	Efpalio	39.42	89	P	P	19 06 43.4	+1.1
NHSC	New Hope	39.42	260	P	P	19 06 44.2	+1.8
	baz=46,SNR=23						
KAVA	Kavala	39.44	84	P	P	19 06 43.4	+1.0
L42A	Oliver, Polo	39.52	278		P	19 06 42.5	-0.6
L42A				IAmb	IAmb	19 07 09.3	
	comp=Z,834nm,1.1s						
L42A				IAMs_20	IAMs_20	19 21 55.4	
	comp=Z,346µm,18.0s						
SERG	Sergoula	39.52	89	P	P	19 06 44.4	+1.2
TLBR	Topalu	39.52	77	⇑P	P	19 06 43.0	-0.1
TRIZ	Trizonia	39.56	89	P	P	19 06 45.3	+1.9
PAIG	Paliouri	39.57	86	P	P	19 06 42.4	-1.1
TPGR	Topolog	39.57	76	⇑P	P	19 06 42.4	-1.1
SPMN	Marine on St.	39.57	284	P	P	19 06 43.9	+0.4
	baz=56,SNR=13						
LAKA	Lakka	39.58	89	P	P	19 06 44.8	+1.1
KALE	Kalithea	39.58	89	P	P	19 06 45.3	+1.6
ICOR	Ion Corvin	39.62	78	⇓P	P	19 06 42.9	-0.9
TLCR		39.63	76	⇓P	P	19 06 42.0	-1.9
T50A	Nancy	39.63	269	P	P	19 06 42.5	-1.6
V52A	Sevierville	39.64	266	IAmb	IAmb	19 06 56.2	
	comp=Z,1µm,1.2s						
F36A	Milaca	39.65	286	IAMs_20	IAMs_20	19 21 36.5	
	comp=Z,322µm,19.0s						
AXAR	Agios Charalam	39.66	88	P	P	19 06 44.8	+0.4
NEO	Neokhori	39.67	87	P	P	19 06 42.6	-1.9
AGMN	Agassiz Nation	39.73	290	P	P	19 06 45.8	+1.1
	baz=59,SNR=50						
AGMN	Agassiz Nation	39.73	290	IAmb	IAmb	19 06 59.9	
	comp=Z,2µm,2.0s						
WCI	Wyandotte Cave	39.75	271	P	P	19 06 47.4	+2.4
	baz=51						
WCI	Wyandotte Cave	39.75	271	P	P	19 06 44.7	-0.4
WCI				pmax	pmax		
	comp=Z,548nm,0.9s						
WCI				MLR	MLR		
	comp=Z,500nm,20.0s						
WCI	Wyandotte Cave	39.75	271		P	19 06 44.6	-0.4
TIRR	Tirgusor	39.79	77	⇑P	P	19 06 44.1	-1.2
TIRR	Tirgusor	39.79	77	P	P	19 06 43.6	-1.7
TIRR				pmax	pmax		
	comp=Z,814nm,1.1s						
TIRR				MLR	MLR		
	comp=Z,127µm,19.0s						
TIRR	Tirgusor	39.79	77	P	P	19 06 43.6	-1.7
TIRR				IAMs_20	IAMs_20	19 24 12.8	
	comp=Z,127µm,19.0s						
THAS	Thassos island	39.79	84	P	P	19 06 43.9	-1.5
BG3	Lake Jocassee	39.80	265	IAMs_20	IAMs_20	19 22 47.0	
	comp=Z,217µm,19.0s						
TKL	Tuckaleechee C	39.87	266	P	P	19 06 49.3	+3.1
	comp=Z,75nm,0.9s,baz=73,slow=7.1,SNR=20						
TKL				LR	LR	19 22 47.6	
	comp=Z,490µm,19.6s,baz=63,slow=36						
O44A	Mansfield	39.89	275	P	P	19 06 45.6	-0.6
O44A				IAMs_20	IAMs_20	19 21 58.5	
	comp=Z,267µm,20.0s						
JURR	Jurilovca	39.89	76	⇓P	P	19 06 44.3	-1.8
HODGE	Hodges	39.91	263	IAMs_20	IAMs_20	19 22 27.8	
	comp=Z,304µm,20.0s						
SMIA	Simia	39.93	87	P	P	19 06 44.7	-1.9
ATAL	Atalanti	39.93	88	P	P	19 06 46.0	-0.6
LKR	Lokris	39.95	88	P	P	19 06 47.0	+0.3
MFTR	Murfatlar	39.95	77	⇑P	P	19 06 45.6	-1.0
RDO	Rodhopi	39.97	83	P	P	19 06 46.0	-0.8
FFC	Flin Flon	39.98	302	P	P	19 06 45.7	-1.1
FFC				pmax	pmax		
	comp=Z,2µm,1.7s						
FFC				MLR	MLR		
	comp=Z,184µm,19.0s						
FFC	Flin Flon	39.98	302	P	P	19 06 45.7	-1.1
FFC				IAmb	IAmb	19 08 27.6	
	comp=Z,2µm,1.6s						
FFC	Flin Flon	39.98	302	IAMs_20	IAMs_20	19 21 15.0	
	comp=Z,184µm,19.0s						
Z56A	Williston	39.99	261	IAmb	IAmb	19 06 59.3	
	comp=Z,1µm,1.2s						
EFOR	EFORIE	40.13	77	⇑P	P	19 06 47.6	-0.5
HDIL	Hopedale	40.15	276	S	S	19 12 53.9	0.0
	baz=53						
HDIL	Hopedale	40.15	276	IAmb	IAmb	19 07 20.8	
	comp=Z,1µm,1.2s						
HDIL				IAMs_20	IAMs_20	19 22 20.3	
	comp=Z,323µm,18.0s						
HDIL	Hopedale	40.15	276	P	P	19 06 50.8	+2.4
	baz=53,SNR=9.1						
ITM	Ithomi	40.22	90	P	P	19 06 50.3	+1.3
ITM	Ithomi	40.22	90	P	P	19 06 47.5	-1.5
MANR	Mangalia	40.25	77	⇓P	P	19 06 48.1	-1.1
PYL	PYLOS	40.29	91	P	P	19 06 49.6	0.0
LTK	Loutraki	40.32	89	P	P	19 06 49.9	+0.1
W52A	Murphy	40.34	266	IAmb	IAmb	19 07 02.1	
	comp=Z,924nm,1.2s						
SMTH	Samothraki Isl	40.37	84	P	P	19 06 51.1	+0.9
VLX	Vlachokerasia	40.38	90	P	P	19 06 51.1	+0.7
L40A	Anamosa	40.42	279	IAmb	IAmb	19 07 23.3	
	comp=Z,2µm,1.5s						
L40A				IAMs_20	IAMs_20	19 22 42.3	
	comp=Z,170µm,18.0s						
ALN	Alexandroupoli	40.42	83	P	P	19 06 50.9	+0.3
ALN	Alexandroupoli	40.42	83	P	P	19 06 48.5	-2.1
ALN				pmax	pmax		
	comp=Z,374nm,1.0s						
ALN				MLR	MLR		
	comp=Z,40µm,21.0s						
ALN	Alexandroupoli	40.42	83	P	P	19 06 48.5	-2.1
VILL	Villia	40.44	88	P	P	19 06 52.5	+1.6
CPCT	Cooper Cave	40.47	266		P	19 06 50.8	-0.3
CPCT				IAmb	IAmb	19 07 03.5	
	comp=Z,1µm,1.3s						
LIA	Limnos Island	40.51	85	P	P	19 06 52.5	+1.2
U49A	Red Boiling Sp	40.54	269	IAMs_20	IAMs_20	19 24 12.1	
	comp=Z,313µm,19.0s						
ENEZ	Enez	40.59	83	P	P	19 06 52.6	+0.7
ENEZ	Enez	40.59	83	*e*P	P	19 06 58.9	+7.0
I37A	Lemond, Waseca	40.60	283		P	19 06 51.7	-0.4
I37A				IAmb	IAmb	19 07 07.7	
	comp=Z,1µm,1.4s						
257A	Skidaway Islan	40.73	259		pP	19 06 58.3	+0.6
257A				IAMs_20	IAMs_20	19 21 53.7	
	comp=Z,308µm,20.0s						
USIN	University of	40.76	272	IAmb	IAmb	19 07 05.9	
	comp=Z,942nm,1.1s						
USIN				IAMs_20	IAMs_20	19 23 37.8	
	comp=Z,306µm,18.0s						
GADA	Gvkgeada	40.76	84	P	P	19 06 54.4	+1.0
KRND	KRANIDI	40.84	89	P	P	19 06 53.6	-0.5
P43A	Skaggs, Pawnee	40.84	275	IAMs_20	IAMs_20	19 22 36.8	
	comp=Z,277µm,18.0s						
ERIK	Erikli-Kesan	40.84	83	*e*P	P	19 06 54.9	+0.8
ATHU	Athens Univers	40.85	88	P	P	19 06 54.6	+0.4
PHSR	Pinarhisar	40.88	81	*e*P	P	19 06 54.6	+0.2
Q44A	Meyer Farm, Va	40.99	274	IAmb	IAmb	19 07 07.8	
	comp=Z,948nm,1.1s						
D32A	Dogwood Acres,	41.00	289	IAmb	IAmb	19 07 10.5	
	comp=Z,3µm,2.3s						
N41A	Harden Midland	41.00	278	IAmb	IAmb	19 07 28.4	
	comp=Z,1µm,1.2s						
N41A				IAMs_20	IAMs_20	19 22 43.9	
	comp=Z,218µm,19.0s						
K38A	Parkersburg	41.01	281	P	P	19 06 55.0	-0.5
K38A				IAmb	IAmb	19 07 28.2	
	comp=Z,2µm,1.2s						
BOZC	Bozcaada	41.07	84	*e*P	P	19 06 52.5	-3.4
W50A	Signal Mountai	41.12	267	IAmb	IAmb	19 07 08.9	
	comp=Z,974nm,1.3s						
CLTN	Cedars of Leba	41.15	269	IAMs_20	IAMs_20	19 24 30.4	
	comp=Z,304µm,18.0s						
LPK	Lapseki	41.17	83	*e*P	P	19 06 57.0	+0.2
GOGA	Godfrey	41.20	263	S	S	19 13 09.2	-0.5
	baz=46						
GOGA	Godfrey	41.20	263	P	P	19 06 56.5	-0.6
GOGA				pmax	pmax		
	comp=Z,568nm,1.3s						
GOGA				MLR	MLR		
	comp=Z,377µm,19.0s						
GOGA	Godfrey	41.20	263	P	P	19 06 56.5	-0.6
GOGA	Godfrey	41.20	263	P	P	19 06 59.3	+2.3
	baz=46,SNR=16						
TAM	Tamanrasset	41.23	121	P	P	19 06 56.6	-1.0
TAM				pmax	pmax		
	comp=Z,1µm,2.0s						
TAM				MLR	MLR		
	comp=Z,15µm,18.0s						
TAM	Tamanrasset	41.23	121	P	P	19 06 56.6	-1.0
RKY	Sarkoy-Tekirda	41.24	82	*e*P	P	19 06 58.1	+0.7
EZN	Ezine	41.24	84	*e*P	P	19 06 57.7	+0.3
Y52A	Lilburn	41.25	264	IAmb	IAmb	19 07 09.7	
	comp=Z,984nm,1.2s						
Y52A				IAMs_20	IAMs_20	19 24 30.4	
	comp=Z,221µm,18.0s						
X51A	Calhoun	41.26	266	IAmb	IAmb	19 07 09.7	
	comp=Z,789nm,1.1s						
CTYL	Yalikoy Yolu	41.44	81	*e*P	P	19 06 59.0	+0.1
SWET	Sewanee	41.48	267	P	P	19 06 58.8	-0.7
KRBG	Karabiga-Canak	41.49	83	*e*P	P	19 07 00.4	+1.0
LPSR	Galich'ya Gora	41.51	60	*e*P	P	19 06 59.4	0.0
LPSR				*e**SP	sP	19 07 06.4	+1.1
LPSR				*e*S	S	19 13 16.3	+2.4

LPSR				eSS	SS	19 16 10.4	-7.7
LPSR				pmax	pmax		
	comp=Z,210nm,0.8s						
LPSR				smax	smax		
	comp=E,27µm,14.7s						
154A	Montrose	41.53	262	IAmb	IAmb	19 07 26.6	
	comp=Z,1µm,1.2s						
SLVT	Silivri	41.53	81	eP	P	19 06 59.5	-0.2
MRMT	Marmara Adasi	41.54	82	eP	P	19 06 58.2	-1.7
V48A	Smith Brothers	41.68	269	IAmb	IAmb	19 07 13.3	
	comp=Z,759nm,1.0s						
V48A				IAMs_20	IAMs_20	19 22 33.4	
	comp=Z,315µm,22.0s						
SCIA	State Center	41.71	281	S	S	19 13 15.2	-2.0
	baz=53						
SCIA	State Center	41.71	281	P	P	19 07 00.8	-0.4
SCIA				IAMs_20	IAMs_20	19 22 53.4	
	comp=Z,319µm,19.0s						
SCIA	State Center	41.71	281	P	P	19 07 02.4	+1.2
	baz=53,SNR=9.6						
SIUC	Southern Illin	41.86	273	P	P	19 07 02.0	-0.5
SIUC				IAmb	IAmb	19 07 13.7	
	comp=Z,872nm,0.9s						
ANWB	Willy Bob	41.88	225	eP	P	19 07 01.5	-1.2
ANWB	Willy Bob	41.88	225	IAMs_20	IAMs_20	19 20 10.3	
	comp=Z,184µm,22.0s						
S44A	Carbondale	41.90	273	P	P	19 07 02.8	0.0
S44A				IAmb	IAmb	19 07 15.2	
	comp=Z,1µm,1.1s						
SLM	Saint Louis	41.90	275	IAmb	IAmb	19 07 29.1	
	comp=Z,1µm,1.2s						
BGKT	Bogazkoy	41.90	81	eP	P	19 07 04.9	+2.1
T45A	Paducah	41.96	272	IAMs_20	IAMs_20	19 23 26.7	
	comp=Z,255µm,20.0s						
WVT	Waverly	42.04	270	S	S	19 13 23.2	+1.0
	baz=49						
WVT	Waverly	42.04	270	IAMs_20	IAMs_20	19 23 37.8	
	comp=Z,348µm,20.0s						
WVT	Waverly	42.04	270	P	P	19 07 04.1	+0.1
	baz=49						
DKL	Dikili	42.06	84	eP	P	19 07 02.4	-1.7
MDND	Maddock	42.10	292	S	S	19 13 20.0	-2.8
	baz=57						
MDND	Maddock	42.10	292	IAmb	IAmb	19 07 21.3	
	comp=Z,1µm,1.4s						
MDND	Maddock	42.10	292	P	P	19 07 04.9	+0.6
	baz=57,SNR=36						
VORR	Voronezh	42.12	62	eP	P	19 07 01.0	-3.4
VORR				pmax	pmax		
	comp=Z,1µm,1.2s						
KAVV	Kandilli-Istan	42.15	81	eP	P	19 07 05.4	+0.6
KCTX	Karacabey (Bur	42.21	82	eP	P	19 07 05.6	+0.3
456A	Hilliard	42.21	259		pP	19 07 10.6	+0.7
456A				IAMs_20	IAMs_20	19 23 06.1	
	comp=Z,330µm,20.0s						
Z51A	Franklin	42.30	265	P	P	19 07 05.8	-0.4
Z51A				IAMs_20	IAMs_20	19 22 39.2	
	comp=Z,265µm,21.0s						
VSR	Storozhevoye	42.33	62	eP	P	19 07 05.4	-0.7
VSR				e*SP	sP	19 07 11.7	-0.3
VSR				eS	S	19 13 23.9	-2.2
VSR				eSS	SS	19 16 32.3	-2.1
VSR				pmax	pmax		
	comp=Z,230nm,0.9s						
VSR				smax	smax		
	comp=E,32µm,15.1s						
ARMT	Armutlu	42.33	81	eP	P	19 07 06.9	+0.6
N38A	Joes South For	42.39	279	IAmb	IAmb	19 07 39.5	
	comp=Z,815nm,1.1s						
N38A				IAMs_20	IAMs_20	19 25 28.5	
	comp=Z,189µm,21.0s						
ANBD	Bethesda, Anti	42.42	225	eP	P	19 06 58.3	-8.8
FVM	French Village	42.43	274	IAmb	IAmb	19 07 19.2	
	comp=Z,889nm,1.1s						
P40A	Paris	42.45	277	IAMs_20	IAMs_20	19 23 39.1	
	comp=Z,282µm,20.0s						
BPA	Boggy Peak	42.46	225	eP	P	19 07 06.9	-0.6
MDNY	Mudanya-Bursa	42.46	81	eP	P	19 07 08.4	+1.1
YKA	Yellowknife Ar	42.47	317	P	P	19 07 06.1	-1.0
	comp=Z,44nm,0.9s,baz=65,slow=8.9,SNR=45						
YKA				PP	PP	19 08 48.1	+2.7
	comp=Z,44nm,0.9s,baz=32,slow=7.4,SNR=2.8						
YKA				LR	LR	19 22 57.1	
	comp=Z,115µm,20.5s,baz=0.0,slow=34						
YKA				P3KPbc		19 36 44.9	
	comp=Z,0.3nm,0.8s,baz=270,slow=4.9,SNR=4.0						
YKA				P3KP		19 38 06.9	
	comp=Z,0.4nm,0.7s,baz=293,slow=1.7,SNR=4.3						
152A	Waverly Hall	42.47	264	P	P	19 07 06.8	-0.7
152A				IAmb	IAmb	19 07 19.8	
	comp=Z,920nm,1.3s						
APE	Apeiranthos	42.49	88	⇓P	P	19 07 07.5	-0.2
APE	Apeiranthos	42.49	88	⇓eP	P	19 07 08.3	+0.6
APE				pmax	pmax		
	comp=Z,299nm,0.8s						
APE				MLR	MLR		
	comp=Z,30µm,21.0s						
VORD	Divnogorie	42.52	62	eP	P	19 07 07.2	-0.5
VORD				e*SP	sP	19 07 12.9	-0.7
VORD				eS	S	19 13 33.4	+4.4
VORD				pmax	pmax		
	comp=Z,250nm,0.8s						
VORD				smax	smax		
	comp=N,2µm,6.0s						
SEUS	St. Eustatius	42.55	227	eP	P	19 07 10.4	+2.1
SEUS	St. Eustatius	42.55	227	IAMs_20	IAMs_20	19 21 12.2	
	comp=Z,176µm,21.0s						
SABA	Saba	42.56	227	eP	P	19 07 10.4	+2.1
SABA	Saba	42.56	227	IAmb	IAmb	19 07 25.5	
	comp=Z,1µm,1.7s						
SABA				IAMs_20	IAMs_20	19 20 31.3	
	comp=Z,172µm,21.0s						
BLCB	Balcova	42.58	85	eP	P	19 07 09.3	+1.0
SKI	Saint Kitts	42.59	226	eP	P	19 07 09.9	+1.3
SKI	Saint Kitts	42.59	226	P	P	19 07 08.6	0.0
SKI				pmax	pmax		
	comp=Z,920nm,0.9s						
SKI				MLR	MLR		
	comp=Z,204µm,20.0s						
SKI	Saint Kitts	42.59	226	P	P	19 07 08.6	0.0
SKI				IAmb	IAmb	19 07 26.7	
	comp=Z,920nm,0.9s						
SKI				IAMs_20	IAMs_20	19 20 59.1	
	comp=Z,204µm,20.0s						
GEMT	Gemlik	42.61	81	eP	P	19 07 09.6	+1.1
HICK	Hickman	42.63	271	IAmb	IAmb	19 09 02.4	
	comp=Z,1µm,1.2s						
HICK				IAMs_20	IAMs_20	19 23 56.3	
	comp=Z,249µm,19.0s						
YLV	Yalova	42.64	81	eP	P	19 07 09.4	+0.5
TIGA	Tifton	42.65	261	S	S	19 13 33.9	+2.7
	baz=45						
TIGA	Tifton	42.65	261	P	P	19 07 10.0	+1.1
	baz=45,SNR=8.0						
HRT	Hereke	42.66	80	eP	P	19 07 10.3	+1.3
HENM	Henderson Moun	42.66	272	IAMs_20	IAMs_20	19 23 55.2	
	comp=Z,253µm,19.0s						
ECSD	EROS Data Cent	42.67	285	S	S	19 13 32.5	+1.2
	baz=54						
ECSD	EROS Data Cent	42.67	285	P	P	19 07 10.3	+1.3
	baz=54,SNR=44						
H05N1	Guadeloupe/Mar	42.77	223	P	P	19 07 16.2	+6.2
	SNR=30						
H05N1				T	T	19 52 20.2	
	SNR=262						
ABD	La Joyeuse, An	42.81	224	eP	P	19 07 10.9	+0.6
GLAT	Glass	42.84	271	IAMs_20	IAMs_20	19 24 11.9	
	comp=Z,282µm,18.0s						
SIM	Simferopol'	42.87	73	P	P	19 07 11.5	+0.9
SIM				eS	S	19 13 42.5	+8.2
SIM				pmax	pmax		
	comp=Z,2µm,2.8s						
SIM				MLR	MLR		
	comp=Z,34µm,21.0s						
CCM	Cathedral Cave	42.88	275	S	S	19 13 34.4	-0.2
	baz=50						
CCM	Cathedral Cave	42.88	275	P	P	19 07 09.3	-1.5
CCM				pmax	pmax		
	comp=Z,1µm,1.3s						
CCM				MLR	MLR		
	comp=Z,231µm,20.0s						
CCM	Cathedral Cave	42.88	275		P	19 07 09.3	-1.5
CCM				IAmb	IAmb	19 07 37.0	
	comp=Z,1µm,1.2s						
CCM	Cathedral Cave	42.88	275	IAMs_20	IAMs_20	19 25 33.8	
	comp=Z,231µm,20.0s						
CCM	Cathedral Cave	42.88	275	P	P	19 07 11.5	+0.8
	baz=50						
MLYT	Lee's Yard	42.89	225	eP	P	19 07 13.7	+2.7
CUPR	Culebra, Puert	42.89	230	P	P	19 07 10.3	-0.7
CUPR				IAmb	IAmb	19 09 06.5	
	comp=Z,1µm,1.9s						
SANT	Santorini	42.90	89	IAmb	IAmb	19 07 33.4	
	comp=Z,838nm,1.0s						
C36M	Paulatuk	42.93	329	S	S	19 13 31.0	-3.4
	baz=64						
C36M	Paulatuk	42.93	329	IAmb	IAmb	19 07 44.2	
	comp=Z,2µm,2.5s						
C36M	Paulatuk	42.93	329	P	P	19 07 11.7	+1.0
	baz=64,SNR=9.4						
PENMO	Penman	42.93	272	IAMs_20	IAMs_20	19 24 13.3	
	comp=Z,276µm,18.0s						
ADVT	Abdulvahap	42.94	81	eP	P	19 07 10.9	-0.3
PVMO	Portageville	43.00	272	IAMs_20	IAMs_20	19 24 06.1	
	comp=Z,285µm,20.0s						
LNXT	Lenox	43.07	271	IAmb	IAmb	19 07 24.8	
	comp=Z,2µm,1.3s						
LNXT				IAMs_20	IAMs_20	19 24 20.1	
	comp=Z,285µm,19.0s						
GRTK	Grand Turk	43.10	239		pP	19 07 17.8	+0.6
SAUV	Serdivan-Sakar	43.11	80	eP	P	19 07 14.2	+1.6
SPNC	Sapanca-Adapaz	43.13	80	eP	P	19 07 14.8	+2.1
MAGL	Barre de l'ile	43.19	223	eP	P	19 07 15.3	+1.8
MTP	Monte Pirata	43.20	230	IAmb	IAmb	19 07 24.0	
	comp=Z,2µm,2.2s						
PBMO	Poplar Bluff	43.21	273	P	P	19 07 12.9	-0.5
PBMO				IAmb	IAmb	19 07 25.1	
	comp=Z,2µm,1.4s						
CBE	Ff, Capester	43.22	224	eP	P	19 07 15.3	+1.6
P38A	Dawn	43.29	278	IAmb	IAmb	19 07 45.8	
	comp=Z,2µm,1.6s						
P38A				IAMs_20	IAMs_20	19 26 22.3	
	comp=Z,120µm,19.0s						
SIMA	Simav-Kutahya	43.32	83	eP	P	19 07 14.4	0.0
R40A	Maddies Statio	43.36	276	P	P	19 07 13.6	-1.0
R40A				IAMs_20	IAMs_20	19 24 59.3	
	comp=Z,268µm,18.0s						
AYDB	Zeytinkoy-Aydi	43.37	85	eP	P	19 07 14.4	-0.5
TVSB	Tavsanli	43.38	82	eP	P	19 07 15.3	+0.4
352A	Blakely	43.43	262	IAmb	IAmb	19 07 42.2	
	comp=Z,999nm,1.2s						
KDZE	Karadeniz Ereo	43.43	79	⇑P	P	19 07 14.6	-0.6
KDZE	Karadeniz Ereo	43.43	79	eP	P	19 07 15.9	+0.7
TDBA	Terre de Bas,	43.43	224	eP	P	19 07 16.4	+1.0
TBG	Guadaloupe-3	43.43	224	eP	P	19 07 17.3	+1.9
SJG	San Juan	43.47	231	P	P	19 07 14.9	-0.7
	comp=Z,42nm,0.9s,baz=64,slow=6.6,SNR=9.6						
SJG	San Juan	43.47	231	P	P	19 07 15.5	-0.2
SJG				pmax	pmax		
	comp=Z,293nm,1.0s						
SJG				MLR	MLR		
	comp=Z,162µm,22.0s						
SJG	San Juan	43.47	231	P	P	19 07 15.5	-0.2
SJG	San Juan	43.47	231	IAMs_20	IAMs_20	19 20 57.8	
	comp=Z,162µm,22.0s						
SJG	San Juan	43.47	231	eP	P	19 07 15.4	-0.2
KULA	Kula-Manisa	43.48	84	eP	P	19 07 16.9	+1.2
GNAR	Gosnell	43.48	271	P	P	19 07 15.1	-0.6
L34A	Svendsen Farm,	43.57	283	IAmb	IAmb	19 07 49.4	
	comp=Z,1µm,1.0s						
BODT	Bodrum	43.59	86	eP	P	19 07 22.3	+5.8
GEDZ	Gediz	43.60	83	eP	P	19 07 17.4	+0.7
LRAL	Lakeview Retre	43.61	266	S	S	19 13 43.7	-1.6
	baz=46						
LRAL	Lakeview Retre	43.61	266	IAmb	IAmb	19 07 50.1	
	comp=Z,906nm,1.2s						
LRAL	Lakeview Retre	43.61	266	P	P	19 07 17.5	+0.8
	baz=46,SNR=52						
SUSD	Miller	43.63	287	S	S	19 13 46.0	+0.5
	baz=54						
SUSD	Miller	43.63	287	P	P	19 07 17.7	+0.9
	baz=54						
DSLB	Salisbury	43.71	223	eP	P	19 07 17.6	0.0
VRH	Novokhopyorsk	43.71	61	eP	P	19 07 17.3	0.0
VRH				e*SP	sP	19 07 23.3	+0.1
VRH				eS	S	19 13 51.5	+5.2
VRH				pmax	pmax		
	comp=Z,170nm,0.7s						
VRH				smax	smax		
	comp=E,16µm,10.0s						
SRCK	Saricakaya, Es	43.72	81	eP	P	19 07 18.4	+0.9
MLSB	Milas	43.72	86	eP	P	19 07 28.5	+11
DLPL	La Plaine	43.73	223	eP	P	19 07 18.3	+0.5
DLPL	La Plaine	43.73	223	IAMs_20	IAMs_20	19 22 47.5	
	comp=Z,176µm,20.0s						
OBIP	Obispado Ponce	43.75	231	IAMs_20	IAMs_20	19 21 30.1	
	comp=Z,181µm,22.0s						
DWPF	Disney Wildern	43.76	256	S	S	19 13 50.2	+2.7
	baz=42						
DWPF	Disney Wildern	43.76	256		P	19 07 17.8	-0.2
DWPF				IAmb	IAmb	19 07 45.3	
	comp=Z,2µm,1.9s						
DWPF	Disney Wildern	43.76	256	IAMs_20	IAMs_20	19 25 00.3	
	comp=Z,229µm,19.0s						
DWPF	Disney Wildern	43.76	256	P	P	19 07 21.3	+3.3
	baz=42						
KIRV	Kirov	43.79	48	P	P	19 07 18.0	+0.2
	comp=Z,78nm,0.9s,baz=66,slow=0.2,SNR=19						
MDUB	Mudurnu	43.80	80	eP	P	19 07 19.3	+1.0
MDUB	Mudurnu	43.80	80	IAMs_20	IAMs_20	19 24 30.1	
	comp=Z,120µm,21.0s						
N35A	Tabor	43.80	281	P	P	19 07 17.1	-1.0
N35A				IAmb	IAmb	19 07 50.5	
	comp=Z,876nm,0.9s						
ICMP	Isla Caja de M	43.84	231	IAmb	IAmb	19 07 43.1	
	comp=Z,1µm,1.4s						
MPR	Mayaguez	43.86	232	IAmb	IAmb	19 07 36.7	
	comp=Z,955nm,1.2s						
KURC	Kurucasile-Bar	43.88	77	eP	P	19 07 18.5	-0.3
250A	Grady	43.89	264	P	P	19 07 18.5	-0.5
LPAR	Lepanto	43.90	271	IAMs_20	IAMs_20	19 24 52.9	
	comp=Z,301µm,19.0s						
KOWA	Kowa	43.98	139	P	P	19 07 19.1	-0.7
MET	Memphis--Engin	43.99	270	IAMs_20	IAMs_20	19 23 15.4	
	comp=Z,211µm,21.0s						
MLPR	Magueyes Islan	44.02	232	P	P	19 07 19.5	-0.6
MLPR				IAmb	IAmb	19 07 37.4	
	comp=Z,753nm,1.1s						
553A	Crawfordville	44.04	261	pP	pP	19 07 24.2	-0.6
553A				IAMs_20	IAMs_20	19 24 02.5	
	comp=Z,296µm,21.0s						
HDBT	Hernando Brdge	44.05	271	IAMs_20	IAMs_20	19 23 15.9	
	comp=Z,155µm,21.0s						
ILAM	Ilet Lapin Mar	44.08	222	eP	P	19 07 19.9	-0.6
OXF	Oxford	44.08	269	S	S	19 13 50.1	-2.0
	baz=47						
OXF	Oxford	44.08	269	P	P	19 07 20.4	0.0
	baz=47,SNR=31						
MGMO	Mountain Grove	44.09	274	IAMs_20	IAMs_20	19 24 29.7	
	comp=Z,281µm,19.0s						
YER	Yerkesik	44.13	86	eP	P	19 07 25.1	+4.2
FDF	Fort de France	44.23	222	eP	P	19 07 22.2	+0.4
FDF	Fort de France	44.23	222	P	P	19 07 21.8	0.0
FDF				pmax	pmax		
	comp=Z,691nm,0.7s						
FDF				MLR	MLR		
	comp=Z,192µm,20.0s						
FDF	Fort de France	44.23	222		P	19 07 21.8	0.0
FDF				IAmb	IAmb	19 07 38.9	
	comp=Z,691nm,0.7s						
FDF				IAMs_20	IAMs_20	19 22 12.6	
	comp=Z,192µm,20.0s						
DGMT	Dagmar	44.34	295	S	S	19 13 56.4	+0.8
	baz=56						
DGMT	Dagmar	44.34	295	IAmb	IAmb	19 07 38.8	
	comp=Z,756nm,1.1s						
DGMT	Dagmar	44.34	295	P	P	19 07 22.5	+0.1
	baz=56,SNR=36						
TURN	Turunc	44.34	86	eP	P	19 07 26.6	+4.1
MPOM	Morne Pois Mar	44.37	222	eP	P	19 07 21.8	-1.1
H05S1	Guadeloupe/Mar	44.38	222	P	P	19 07 23.8	+0.9
H05S1				T	T	19 54 22.9	
	SNR=57						
S39A	Bolivar	44.38	276	IAmb	IAmb	19 07 55.5	
	comp=Z,685nm,1.1s						
S39A				IAMs_20	IAMs_20	19 27 46.4	
	comp=Z,233µm,20.0s						
BIM	Bigot	44.39	222	eP	P	19 07 23.4	+0.3
CIFT	Cifteler, Eski	44.40	81	eP	P	19 07 24.4	+1.3
451A	Vernon	44.53	262	IAmb	IAmb	19 07 40.6	
	comp=Z,921nm,0.8s						
DALY	Dalyan (Mula)	44.56	86	eP	P	19 07 23.8	-0.5
K31A	O'Neill	44.59	285		P	19 07 23.4	-1.1
Y45A	Yeager Farm, C	44.59	269	IAmb	IAmb	19 07 57.5	
	comp=Z,825nm,0.8s						
SHUT	Suhut-Afyon	44.60	82	eP	P	19 07 26.2	+1.4
SVRH	Sivrihisar-ESK	44.63	81	eP	P	19 07 25.9	+1.0
SLBI	Saint Lucia, B	44.79	222	eP	P	19 07 29.1	+2.8
ANN	Anapa	44.88	71	eP	P	19 07 25.9	-0.8
ANN				eS	S	19 14 05.6	+2.1
ANN				eSS	ScS	19 17 20.5	-2.5
ANN				pmax	pmax		
	comp=N,66nm,1.3s						
ANN				pmax	pmax		
	comp=Z,806nm,1.8s						
ANN				pmax	pmax		
	comp=E,17nm,0.6s						
ANN				pmax	pmax		
	comp=E,999nm,3.8s						
ANN				pmax	pmax		
	comp=Z,5µm,3.4s						
ANN				pmax	pmax		
	comp=N,2µm,3.9s						
ANN				smax	smax		
	comp=E,4µm,5.6s						
ANN				smax	smax		
	comp=Z,26µm,19.5s						
ANN				smax	smax		
	comp=N,36µm,19.8s						
ANN				MLR	MLR		
	comp=E,57µm,19.0s						
ANN				MLR	MLR		
	comp=Z,79µm,19.0s						
ANN				MLR	MLR		
	comp=N,24µm,12.0s						
BRAL	Brewton	44.94	264	S	S	19 14 07.1	+2.6
	baz=45						
BRAL	Brewton	44.94	264		pP	19 07 31.6	+0.1
BRAL	Brewton	44.94	264	P	P	19 07 28.8	+1.4
	baz=45						
ILGA	Ilgaz	44.95	77	P	P	19 07 25.3	-2.3
ILGA				IAmb	IAmb	19 07 51.4	
	comp=Z,788nm,1.3s						
N33A	J Bar K, Exete	44.96	282	IAmb	IAmb	19 07 54.7	
	comp=Z,630nm,0.8s						
U40A	Yellville	44.96	274	S	S	19 14 04.4	-0.6
	baz=49						
U40A	Yellville	44.96	274	IAmb	IAmb	19 08 00.3	
	comp=Z,1µm,1.1s						
U40A	Yellville	44.96	274	P	P	19 07 25.9	-1.6
	baz=49,SNR=52						
BGNE	Belgrade	44.96	283	S	S	19 14 02.1	-2.8
	baz=52						
BGNE	Belgrade	44.96	283	P	P	19 07 27.2	-0.3
	baz=52,SNR=11						
X43A	Marvell	44.97	271	S	S	19 14 01.8	-3.3
	baz=47						
X43A	Marvell	44.97	271	P	P	19 07 28.1	+0.6
	baz=47						
BBSP	Saint Philip	45.02	219	eP	P	19 07 33.5	+5.4
BBGH	Gun Hill	45.03	220	eP	P	19 07 30.2	+2.0
BBGH	Gun Hill	45.03	220	IAMs_20	IAMs_20	19 22 36.9	
	comp=Z,289µm,21.0s						
MCLT	Moule a Chique	45.06	222	eP	P	19 07 30.5	+2.0
MCLT	Moule a Chique	45.06	222		P	19 07 26.8	-1.7
MCLT				IAMs_20	IAMs_20	19 21 22.4	
	comp=Z,169µm,22.0s						
LOD	Lodumlu	45.10	79	eP	P	19 07 29.3	+0.7
061Z	Ochoppi	45.13	253	pP	pP	19 07 34.3	+0.8
061Z				IAMs_20	IAMs_20	19 24 05.7	
	comp=Z,274µm,20.0s						
BR231	Keskin MP Arra	45.13	79	P	P	19 07 26.9	-2.1
BR231				IAmb	IAmb	19 07 52.7	
	comp=Z,505nm,0.9s						
CANT	Cankiri	45.16	78	eP	P	19 07 30.9	+1.8
SNOP	Sinop	45.24	75	eP	P	19 07 34.9	+5.3
SDDR	Presa de Saban	45.28	237	IAmb	IAmb	19 07 48.4	
	comp=Z,576nm,1.0s						
SDDR				IAMs_20	IAMs_20	19 22 13.4	
	comp=Z,229µm,22.0s						
SDDR	Presa de Saban	45.28	237	eP	P	19 07 29.8	-0.4
WHAR	Wooly Hollow	45.32	272		P	19 07 29.8	-0.5
WHAR				IAmb	IAmb	19 08 02.9	
	comp=Z,798nm,1.1s						
BCK	Bucak	45.32	84	eP	P	19 07 31.2	+0.7
W41B	Gary Mavity, V	45.37	272	S	S	19 14 10.0	-0.8
	baz=48						
W41B	Gary Mavity, V	45.37	272	P	P	19 07 29.6	-1.2
	baz=48,SNR=29						
ELL	Elmali	45.37	85	IAMs_20	IAMs_20	19 29 01.1	
	comp=Z,109µm,21.0s						
KSU1	Kansas State U	45.47	280	S	S	19 14 11.5	-0.7
	baz=50						
KSU1	Kansas State U	45.47	280	IAmb	IAmb	19 08 04.7	
	comp=Z,909nm,0.9s						
KSU1	Kansas State U	45.47	280	IAMs_20	IAMs_20	19 24 50.0	
	comp=Z,241µm,21.0s						
KSU1	Kansas State U	45.47	280	P	P	19 07 30.6	-1.0
	baz=50,SNR=29						
KORT	Korkueli	45.48	84	eP	P	19 07 33.0	+1.3
SVV	Soufriere Volc	45.53	222	e	P	19 07 35.3	+3.2
AFSR	Afar-Bala (An	45.56	80	eP	P	19 07 31.8	-0.5
SVB	Belmont	45.59	222	eP	P	19 07 31.9	-0.7
SVB	Belmont	45.59	222	P	P	19 07 32.2	-0.4
SVB				IAMs_20	IAMs_20	19 22 41.7	
	comp=Z,120µm,21.0s						
HHAR	Hobbs	45.67	275	IAMs_20	IAMs_20	19 25 19.0	
	comp=Z,142µm,21.0s						
BR131	Keskin Array S	45.73	79	ceP	P	19 07 31.3	-2.4
BRTR	Keskin Array B	45.73	79	P	P	19 07 34.9	+1.2
	comp=Z,93nm,0.9s,baz=306,slow=5.6,SNR=30						
BRTR				LR	LR	19 28 28.9	
	comp=Z,31µm,19.4s,baz=320,slow=38						
BRTR	Keskin Array B	45.73	79	P	P	19 07 31.6	-2.1
U38A	Gravette	45.84	275	IAmb	IAmb	19 08 06.9	
	comp=Z,1µm,1.6s						
U38A				IAMs_20	IAMs_20	19 28 34.0	
	comp=Z,221µm,18.0s						
CCAR	Cane Creek	45.92	271	IAMs_20	IAMs_20	19 24 24.6	
	comp=Z,190µm,19.0s						
LADK	Ladik-KONYA	45.92	81	eP	P	19 07 36.8	+1.5
KAMT	Kaman	45.99	79	eP	P	19 07 37.5	+1.7
KONT	Konya--Tatoy	46.09	82	eP	P	19 07 38.2	+1.8
BELG	Belogornoye	46.15	57	ceP	P	19 07 33.4	-3.2
BELG				pmax	pmax		
	comp=Z,187nm,1.0s						
BELG				MLR	MLR		
	comp=Z,8µm,18.0s						
SERE	Sereflikochisa	46.17	80	eP	P	19 07 37.9	+0.7
X40A	Basin Creek Fa	46.19	272	S	S	19 14 21.1	-1.5
	baz=47						
X40A	Basin Creek Fa	46.19	272	P	P	19 07 35.9	-1.3
X40A				IAmb	IAmb	19 08 09.7	
	comp=Z,696nm,1.1s						
X40A	Basin Creek Fa	46.19	272	P	P	19 07 35.7	-1.5
	baz=47,SNR=52						
W39A	Magazine	46.29	273	S	S	19 14 23.0	-1.1
	baz=48						
W39A	Magazine	46.29	273	P	P	19 07 37.0	-1.0
W39A	Magazine	46.29	273	P	P	19 07 39.0	+1.0
	baz=48,SNR=21						
KVT	Kavak	46.31	76	eP	P	19 07 40.3	+2.1
VBMS	Vicksburg	46.32	268	S	S	19 14 21.9	-2.6
	baz=46						
VBMS	Vicksburg	46.32	268	P	P	19 07 39.3	+1.0
	baz=46,SNR=19						
YAYX	Yaylak	46.33	80	eP	P	19 07 39.8	+1.4
LGNH	Logne	46.35	239		P	19 07 38.4	-0.2
GCMP	Grenada, Carri	46.37	221	eP	P	19 07 39.7	+1.0
INK	Inuvik	46.42	330	P	P	19 07 37.2	-1.4
	comp=Z,35nm,1.1s,baz=37,slow=9.3,SNR=26						
INK				PP	PP	19 09 29.2	+1.9
	comp=Z,158nm,1.0s,baz=33,slow=10.0,SNR=5.1						
INK				LR	LR	19 26 09.8	
	comp=Z,472µm,20.2s,baz=40,slow=35						
INK				PKPPKP	P'P'df	19 39 05.2	-6.1
	comp=Z,3.4nm,1.1s,baz=148,slow=1.4,SNR=3.1						
INK	Inuvik	46.42	330		P	19 07 35.6	-3.0
LAO	LASA Array	46.48	294	S	S	19 14 26.7	0.0
	baz=54						
LAO	LASA Array	46.48	294	IAMs_20	IAMs_20	19 25 21.4	
	comp=Z,253µm,19.0s						
LAO	LASA Array	46.48	294	P	P	19 07 40.5	+1.1
	baz=54,SNR=71						
GTBY	Guantanamo Bay	46.52	242	P	P	19 07 39.7	-0.2
GTBY	Guantanamo Bay	46.52	242	eP	P	19 07 37.5	-2.5
143A	Socs Landing,	46.52	269		pP	19 07 44.7	+0.6
MIAR	Mount Ida	46.60	273	S	S	19 14 27.8	-0.7

	baz=47						
MIAR	**Mount Ida**	**46.60**	**273**	IAmb	IAmb	19 08 13.5	
	comp=Z,902nm,1.1s						
MIAR	**Mount Ida**	**46.60**	**273**	P	**P**	**19 07 40.2**	**-0.2**
	baz=47,SNR=46						
RSSD	**Black Hills**	**46.76**	**290**	S	**S**	**19 14 31.5**	**+0.4**
	baz=53						
RSSD	**Black Hills**	**46.76**	**290**	P	**P**	**19 07 40.8**	**-1.1**
RSSD				pmax	pmax		
	comp=Z,2µm,2.8s						
RSSD				MLR	MLR		
	comp=Z,408µm,18.0s						
RSSD	**Black Hills**	**46.76**	**290**		**P**	**19 07 40.8**	**-1.1**
RSSD				IAmb	IAmb	19 08 07.4	
	comp=Z,2µm,2.8s						
RSSD	**Black Hills**	**46.76**	**290**	P	**P**	**19 07 42.0**	**+0.1**
	baz=53						
GRGR	**Grenville**	**46.78**	**222**	*e*P	**P**	**19 07 40.4**	**-1.6**
GRGR	**Grenville**	**46.78**	**222**	P	**P**	**19 07 41.8**	**-0.1**
GRGR				IAMs_20	IAMs_20	19 22 49.3	
	comp=Z,110µm,22.0s						
T35A	**Sooner Cattle**	**46.82**	**277**	IAmb	IAmb	19 08 07.9	
	comp=Z,616nm,1.1s						
T35A				IAMs_20	IAMs_20	19 27 44.8	
	comp=Z,199µm,18.0s						
SOC	**Sochi**	**46.93**	**71**	*e*P	**P**	**19 07 42.9**	**0.0**
SOC				*e*		19 09 29.4	
SOC				*e*PPP	PPP	19 10 12.8	
SOC				*e*S	**S**	**19 14 35.3**	**+2.3**
SOC				*e*SSS	SSS	19 18 57.3	
SOC				pmax	pmax		
	comp=Z,582nm,1.6s						
GULA	**Gulagac**	**46.96**	**80**	*e*P	**P**	**19 07 44.9**	**+1.5**
Z41A	**Richland Creek**	**47.00**	**271**	S	**S**	**19 14 32.8**	**-1.4**
	baz=46						
Z41A	**Richland Creek**	**47.00**	**271**	P	**P**	**19 07 44.4**	**+0.9**
	baz=46,SNR=21						
TUL1	**Leonard**	**47.04**	**276**	S	**S**	**19 14 31.1**	**-3.8**
	baz=48						
TUL1	**Leonard**	**47.04**	**276**	IAmb	IAmb	19 08 16.2	
	comp=Z,643nm,1.0s						
TUL1				IAMs_20	IAMs_20	19 29 20.8	
	comp=Z,212µm,20.0s						
TUL1	**Leonard**	**47.04**	**276**	P	**P**	**19 07 43.8**	**-0.1**
	baz=48,SNR=10						
TOKA	**Tokat**	**47.04**	**76**	IAmb	IAmb	19 08 08.3	
	comp=Z,578nm,1.1s						
TOKT	**Tokat**	**47.09**	**76**	*e*P	**P**	**19 07 46.1**	**+1.8**
R32A	**Long Quarter,**	**47.17**	**280**	P	**P**	**19 07 43.5**	**-1.5**
GAZI	**Gazipasa**	**47.17**	**84**	*e*P	**P**	**19 07 44.0**	**-0.9**
KS21	**Milan North St**	**47.27**	**278**	IAMs_20	IAMs_20	19 27 35.8	
	comp=Z,265µm,21.0s						
BOT	**Bacolet**	**47.28**	**220**	*e*P	P	19 07 52.5	+6.6
TPR	**Prospect**	**47.29**	**220**	*e*P	**P**	**19 07 49.1**	**+3.2**
KAN01	**Argonia South**	**47.42**	**278**	P	**P**	**19 07 45.6**	**-1.3**
QUOK	**Quay**	**47.43**	**277**	IAmb	IAmb	19 08 12.8	
	comp=Z,585nm,1.0s						
QUOK				IAMs_20	IAMs_20	19 29 56.9	
	comp=Z,218µm,18.0s						
KAN12	**Harper NE Stat**	**47.47**	**279**	IAmb	IAmb	19 08 19.6	
	comp=Z,762nm,1.0s						
RSDY	**Resadiye-TOKAT**	**47.50**	**76**	*e*P	**P**	**19 07 49.3**	**+1.8**
CBKS	**Cedar Bluff**	**47.54**	**282**	S	**S**	**19 14 38.0**	**-3.9**
	baz=50						
CBKS	**Cedar Bluff**	**47.54**	**282**	IAmb	IAmb	19 08 25.4	
	comp=Z,472nm,0.9s						
CBKS	**Cedar Bluff**	**47.54**	**282**	P	**P**	**19 07 47.3**	**-0.5**
	baz=50,SNR=20						
OGNE	**Ogallala**	**47.55**	**285**	S	**S**	**19 14 40.2**	**-1.9**
	baz=51						
OGNE	**Ogallala**	**47.55**	**285**	P	**P**	**19 07 47.2**	**-0.8**
	baz=51,SNR=9.3						
BNN	**Bunyan**	**47.60**	**78**	*e*P	**P**	**19 07 48.3**	**-0.1**
TORD	**Torodi Ar. Bea**	**47.61**	**133**	P	**P**	**19 07 49.5**	**+0.9**
	comp=Z,56nm,0.9s,baz=329,slow=8.4,SNR=37						
TORD				S	**S**	**19 14 46.6**	**+3.4**
	comp=Z,3.7nm,0.9s,baz=330,slow=8.6,SNR=2.1						
TORD				PKPPKP	**P'P'df**	**19 38 56.1**	**-2.1**
	comp=Z,1.7nm,0.9s,baz=48,slow=4.3,SNR=4.5						
OK030	**Cody Creek RV**	**47.63**	**276**	P	**P**	**19 07 47.3**	**-1.2**
OK030				IAMs_20	IAMs_20	19 29 35.4	
	comp=Z,249µm,18.0s						
EGMT	**Eagleton**	**47.64**	**297**	S	**S**	**19 14 43.1**	**-0.1**
	baz=54						
EGMT	**Eagleton**	**47.64**	**297**	IAMs_20	IAMs_20	19 26 14.9	
	comp=Z,177µm,19.0s						
EGMT	**Eagleton**	**47.64**	**297**	P	**P**	**19 07 47.5**	**-1.0**
	baz=54,SNR=89						
KAN10	**Anthony SW Sta**	**47.64**	**279**		pP	19 07 52.0	-0.8
BERE	**Bereket-Mersin**	**47.65**	**83**	*e*P	**P**	**19 07 47.9**	**-0.9**
OK031	**S. Brethren Rd**	**47.65**	**277**	IAMs_20	IAMs_20	19 29 36.9	
	comp=Z,243µm,19.0s						
X37A	**Clayton**	**47.67**	**274**	IAmb	IAmb	19 08 15.0	
	comp=Z,417nm,1.3s						
KAN14	**Manchester OK**	**47.67**	**278**	P	**P**	**19 07 47.7**	**-1.1**
TEKE	**Tekeli-Mersin**	**47.72**	**83**	*e*P	**P**	**19 07 48.3**	**-0.8**
TEVE	**Tevekalti-Mers**	**47.72**	**83**	*e*P	**P**	**19 07 52.8**	**+3.5**
KEBE	**Keben-Mersin**	**47.88**	**82**	*e*P	**P**	**19 07 51.2**	**+0.7**
GOF	**Gofitskoye**	**47.93**	**67**	⇑*e*P	**P**	**19 07 48.5**	**-2.2**
GOF				pmax	pmax		
	comp=Z,250nm,0.8s						
AKKU	**Akkuyu-Mersin**	**47.97**	**83**	*e*P	**P**	**19 07 50.7**	**-0.4**
CROK	**Carrier**	**47.98**	**278**	P	**P**	**19 07 49.8**	**-1.4**
IKL	**Isikli**	**48.00**	**83**	*e*P	**P**	**19 07 52.7**	**+1.4**
ESPY	**Espiye-Giresun**	**48.00**	**74**	*e*P	**P**	**19 07 52.5**	**+1.2**
342A	**Flagon Creek P**	**48.01**	**269**	IAmb	IAmb	19 08 24.4	
	comp=Z,778nm,1.2s						
TRN	**Trinidad (W)**	**48.02**	**220**	*e*P	**P**	**19 07 52.3**	**+0.6**
TBH	**Brigand Hill**	**48.04**	**220**	*e*P	P	19 07 56.6	+4.8
SILI	**Silifke-Mersin**	**48.06**	**82**	*e*P	**P**	**19 07 55.9**	**+4.1**
OK029	**Liberty Lake**	**48.13**	**277**	IAMs_20	IAMs_20	19 30 04.5	
	comp=Z,236µm,20.0s						
KARA	**Karaisali**	**48.16**	**81**	*e*P	**P**	**19 07 56.1**	**+3.5**
OK025	**Westminster Rd**	**48.20**	**277**	IAMs_20	IAMs_20	19 30 01.4	
	comp=Z,204µm,19.0s						
LEF	**Lefka**	**48.26**	**84**	⇓P	**P**	**19 07 52.6**	**-0.8**
Z38A	**Mt. Pleasant**	**48.33**	**272**		**P**	**19 07 52.8**	**-1.1**
Z38A				IAmb	IAmb	19 08 52.2	
	comp=Z,491nm,0.9s						
TPP	**Pointe-a-Pierr**	**48.34**	**220**	*e*P	**P**	**19 07 57.8**	**+3.7**
OKCFA	**Oklahoma City**	**48.38**	**276**	pP	**pP**	**19 07 58.4**	**-0.2**
OKCFA				IAMs_20	IAMs_20	19 30 07.2	
	comp=Z,221µm,19.0s						
KIV	**Kislovodsk**	**48.40**	**69**	*i* P	**P**	**19 07 55.4**	**+0.9**
	SNR=61						
KIV	**Kislovodsk**	**48.40**	**69**	*e*P	**P**	**19 07 55.1**	**+0.6**
KIV				*e*		19 09 48.1	
KIV				*e*S	**S**	**19 14 54.6**	**+0.4**
KIV				pmax	pmax		
	comp=Z,1µm,4.7s						
KIV				pmax	pmax		
	comp=Z,413nm,1.1s						
KIV	**Kislovodsk**	**48.40**	**69**	P	**P**	**19 07 51.9**	**-2.6**
KIV	**Kislovodsk**	**48.40**	**69**	P	**P**	**19 07 54.2**	**-0.3**
KIV				P	**P**	**19 07 54.2**	**-0.3**
KOZT	**Kozan**	**48.48**	**80**	*e*P	**P**	**19 07 55.4**	**+0.4**
EPYK	**Eagle Plains**	**48.56**	**329**	S	**S**	**19 14 55.9**	**+0.1**
	baz=52						
EPYK	**Eagle Plains**	**48.56**	**329**	P	**P**	**19 07 53.5**	**-1.8**
EPYK	**Eagle Plains**	**48.56**	**329**	P	**P**	**19 07 54.0**	**-1.3**
	baz=52,SNR=52						
KTUT	**Trabzon**	**48.57**	**74**	*e*P	**P**	**19 07 57.2**	**+1.6**
CSS	**Mathiatis**	**48.63**	**84**	P	**P**	**19 07 54.8**	**-1.5**
CSS				IAmb	IAmb	19 08 24.0	
	comp=Z,428nm,1.2s						
CMJ	**Castle Mountai**	**48.66**	**242**	*i* P	**P**	**19 07 57.2**	**+0.5**
KBZ	**Khabaz**	**48.66**	**69**	P	**P**	**19 07 55.9**	**-0.5**
	comp=Z,42nm,1.0s,baz=302,slow=7.3,SNR=22						
KBZ				S	**S**	**19 15 03.0**	**+5.4**
	comp=Z,12nm,1.0s,baz=99,slow=21,SNR=3.0						
KBZ				LR	LR	19 28 36.9	
	comp=Z,29µm,21.1s,baz=318,slow=36						
KBZ	**Khabaz**	**48.66**	**69**	⇑*e*P	**P**	**19 07 56.3**	**0.0**
KBZ				pmax	pmax		
	comp=Z,254nm,1.2s						
U32A	**Winter Ranch,**	**48.68**	**279**	IAMs_20	IAMs_20	19 26 52.8	
	comp=Z,271µm,21.0s						
DARE	**Darende-Malaty**	**48.76**	**78**	*e*P	**P**	**19 07 55.6**	**-1.7**
CHVG	**Ch'k'valeri**	**48.83**	**70**	⇓P	**P**	**19 07 56.8**	**-0.8**
BBJ	**Bamboo Saint A**	**48.95**	**243**	*i* P	**P**	**19 08 03.5**	**+4.6**
STH	**Stony Hill**	**48.95**	**243**	*i* P	**P**	**19 08 03.2**	**+4.4**
K22A	**Casper**	**49.10**	**290**	S	**S**	**19 15 00.5**	**-3.6**
	baz=51						
K22A	**Casper**	**49.10**	**290**	P	**P**	**19 07 59.8**	**-0.1**
	baz=51,SNR=44						
ARU	**Arti**	**49.11**	**47**	*d i*P	**P**	**19 07 56.6**	**-3.0**
ARU						19 09 49.4	
ARU				PPP	PPP	19 10 42.6	
ARU				S	**S**	**19 15 00.0**	**-3.5**
ARU				SS	SS	19 18 22.8	-11
ARU				pmax	pmax		
	comp=Z,152nm,0.8s						
ARU				pmax	pmax		
	comp=Z,9µm,12.4s						
ARU				smax	smax		
	comp=N,45µm,23.5s						
ARU				MLR	MLR		
	comp=Z,76µm,18.0s						
ARU	**Arti**	**49.11**	**47**	P	**P**	**19 07 56.0**	**-3.6**
ARU				IAMs_20	IAMs_20	19 28 10.3	
	comp=Z,82µm,18.0s						
RLMT	**Red Lodge**	**49.12**	**294**	S	**S**	**19 15 03.3**	**-1.1**
	baz=52						
RLMT	**Red Lodge**	**49.12**	**294**	P	**P**	**19 08 01.7**	**+1.5**
	baz=52,SNR=77						
KSCO	**Kaye Shedlock'**	**49.13**	**284**	S	**S**	**19 15 00.6**	**-4.0**
	baz=49						
KSCO	**Kaye Shedlock'**	**49.13**	**284**		**P**	**19 07 58.4**	**-1.8**
KSCO				IAmb	IAmb	19 08 33.2	
	comp=Z,886nm,1.2s						
KSCO	**Kaye Shedlock'**	**49.13**	**284**	P	**P**	**19 08 01.1**	**+0.9**
	baz=49,SNR=15						
NATX	**Nacogdoches**	**49.17**	**271**	S	**S**	**19 15 05.7**	**+0.8**
	baz=46						
NATX	**Nacogdoches**	**49.17**	**271**	P	**P**	**19 07 59.5**	**-0.9**
NATX				IAmb	IAmb	19 08 33.4	
	comp=Z,916nm,1.2s						
NATX				IAMs_20	IAMs_20	19 28 25.5	
	comp=Z,206µm,19.0s						
NATX	**Nacogdoches**	**49.17**	**271**	P	**P**	**19 08 01.6**	**+1.2**
	baz=46,SNR=5.5						
MTDJ	**Mount Denham**	**49.22**	**244**		**P**	**19 08 00.9**	**-0.1**
MTDJ				IAmb	IAmb	19 08 21.7	
	comp=Z,676nm,1.1s						
MTDJ	**Mount Denham**	**49.22**	**244**	*e*P	**P**	**19 08 02.9**	**+1.9**
WALA	**Waterton Lakes**	**49.24**	**301**	IAMs_20	IAMs_20	19 27 20.5	
	comp=Z,202µm,18.0s						
GAZ	**Gaziantep**	**49.51**	**79**	*e*P	**P**	**19 08 04.8**	**+1.8**
MCJ	**Malvern**	**49.55**	**243**	*i* P	**P**	**19 08 08.2**	**+4.7**
YNE	**Yellowstone No**	**49.60**	**294**	IAmb	IAmb	19 08 19.9	
	comp=Z,536nm,0.9s						
KOPT	**Kop Dagi**	**49.61**	**74**	IAmb	IAmb	19 08 38.5	
	comp=Z,791nm,1.3s						
WMOK	**Wichita Mounta**	**49.64**	**277**	S	**S**	**19 15 11.9**	**+0.2**
	baz=47						
WMOK	**Wichita Mounta**	**49.64**	**277**	IAMs_20	IAMs_20	19 30 58.4	
	comp=Z,209µm,20.0s						
WMOK	**Wichita Mounta**	**49.64**	**277**	P	**P**	**19 08 04.1**	**+0.1**
	baz=47,SNR=49						
Z35A	**Perchaven, San**	**49.67**	**274**	P	**P**	**19 08 03.0**	**-1.2**
Z35A				IAmb	IAmb	19 08 36.6	
	comp=Z,698nm,1.5s						
237A	**Washetta, Mont**	**49.70**	**272**	IAmb	IAmb	19 08 37.3	
	comp=Z,495nm,1.1s						
SVE	**Sverdlovsk**	**49.79**	**46**	*de*P	**P**	**19 08 05.4**	**+0.6**
SVE				*e*		19 10 06.7	
SVE				*e*PPP	PPP	19 10 54.9	
SVE				*e*S	**S**	**19 15 20.6**	**+7.5**
SVE				pmax	pmax		
	comp=Z,767nm,1.5s						
SVE				pmax	pmax		
	comp=Z,10µm,19.4s						
ZEI	**Tsey**	**49.82**	**69**	*e*P	**P**	**19 08 03.2**	**-2.3**
ZEI				pmax	pmax		
	comp=Z,494nm,1.8s						
YMP	**Mirror Lake Pl**	**49.85**	**294**	P	**P**	**19 08 04.7**	**-1.2**
YMP				IAmb	IAmb	19 08 17.2	
	comp=Z,588nm,1.0s						
N23A	**Red Feather La**	**49.87**	**288**	S	**S**	**19 15 15.8**	**+0.6**
	baz=50						
N23A	**Red Feather La**	**49.87**	**288**	P	**P**	**19 08 06.8**	**+0.8**
	baz=50,SNR=96						
YEDI	**Yedisu-Bingol**	**50.02**	**75**	*e*P	**P**	**19 08 09.2**	**+2.2**
LKWY	**Lake**	**50.10**	**294**	IAmb	IAmb	19 08 29.2	
	comp=Z,396nm,1.0s						
RWWY	**Rawlins**	**50.10**	**289**	P	**P**	**19 08 06.1**	**-1.6**
BOZ	**Bozeman (W)**	**50.13**	**296**	S	**S**	**19 15 19.1**	**+0.6**
	baz=51						
BOZ	**Bozeman (W)**	**50.13**	**296**	IAmb	IAmb	19 08 23.9	
	comp=Z,510nm,1.0s						
BOZ	**Bozeman (W)**	**50.13**	**296**	P	**P**	**19 08 07.7**	**-0.1**
	baz=51,SNR=91						
YNR	**Norris Junctio**	**50.16**	**294**		pP	19 08 11.0	-1.4
YNM	**Yellowstone No**	**50.16**	**294**		**P**	**19 08 06.3**	**-1.8**
YNM				IAmb	IAmb	19 08 40.1	
	comp=Z,830nm,1.6s						
JTMT	**Jette**	**50.24**	**300**	IAmb	IAmb	19 08 24.8	
	comp=Z,778nm,1.5s						
JTMT				IAMs_20	IAMs_20	19 28 09.0	
	comp=Z,204µm,18.0s						
ORIV	**Oritupano**	**50.26**	**222**	*e*P	**P**	**19 08 05.7**	**-3.2**
H17A	**Grant Village**	**50.30**	**294**	S	**S**	**19 15 23.9**	**+2.8**
	baz=51						
H17A	**Grant Village**	**50.30**	**294**	P	**P**	**19 08 11.6**	**+2.4**
	baz=51,SNR=45						
YMR	**Madison River**	**50.35**	**295**	P	**P**	**19 08 08.2**	**-1.3**
SENK	**Senkaya-Erzuru**	**50.35**	**72**	*e*P	**P**	**19 08 11.8**	**+2.3**
BNGB	**Bingl**	**50.38**	**75**	*e*P	**P**	**19 08 11.4**	**+1.7**
ISCO	**Idaho Springs**	**50.38**	**286**	S	**S**	**19 15 21.5**	**-0.9**
	baz=49						
ISCO	**Idaho Springs**	**50.38**	**286**	P	**P**	**19 08 09.4**	**-0.5**
ISCO				pmax	pmax		
	comp=Z,680nm,1.5s						
ISCO				MLR	MLR		
	comp=Z,100µm,21.0s						
ISCO	**Idaho Springs**	**50.38**	**286**		**P**	**19 08 09.4**	**-0.5**
ISCO				IAmb	IAmb	19 08 41.9	
	comp=Z,680nm,1.4s						
ISCO				IAMs_20	IAMs_20	19 26 51.2	
	comp=Z,100µm,21.0s						
ISCO	**Idaho Springs**	**50.38**	**286**	P	**P**	**19 08 12.1**	**+2.1**
	baz=49,SNR=54						
A21K	**Barrow**	**50.40**	**340**	S	**S**	**19 15 19.4**	**-1.7**
	baz=41						
A21K	**Barrow**	**50.40**	**340**	IAmb	IAmb	19 08 40.5	
	comp=Z,736nm,1.2s						
A21K				IAMs_20	IAMs_20	19 29 50.7	
	comp=Z,179µm,20.0s						
A21K	**Barrow**	**50.40**	**340**	P	**P**	**19 08 08.7**	**-0.5**
	baz=41,SNR=17						
YHB	**Horse Butte**	**50.42**	**295**	IAmb	IAmb	19 08 27.1	
	comp=Z,2µm,2.2s						
KOPR	**Koprukoy-ERZUR**	**50.43**	**73**	*e*P	**P**	**19 08 12.6**	**+2.5**
FLWY	**Flagg Ranch**	**50.57**	**294**	IAmb	IAmb	19 08 27.4	
	comp=Z,450nm,1.1s						
MSO	**Missoula**	**50.62**	**298**	S	**S**	**19 15 26.1**	**+0.9**
	baz=51						
MSO	**Missoula**	**50.62**	**298**	IAmb	IAmb	19 08 28.9	
	comp=Z,515nm,1.2s						
MSO	**Missoula**	**50.62**	**298**	P	**P**	**19 08 11.0**	**-0.4**
	baz=51,SNR=45						
GROC	**Groznyy**	**50.64**	**68**	*e*P	**P**	**19 08 11.9**	**+0.5**
GROC				*e*		19 09 28.4	
GROC				*e*		19 10 05.3	
GROC				*e*S	**S**	**19 15 22.9**	**-2.3**
GROC				pmax	pmax		
	comp=Z,450nm,1.5s						
WHTX	**Lake Whitney,**	**50.71**	**273**	S	**S**	**19 15 24.9**	**-1.7**
	baz=46						
WHTX	**Lake Whitney,**	**50.71**	**273**	IAmb	IAmb	19 08 45.0	
	comp=Z,409nm,0.9s						
WHTX				IAMs_20	IAMs_20	19 28 40.2	
	comp=Z,248µm,20.0s						
WHTX	**Lake Whitney,**	**50.71**	**273**	P	**P**	**19 08 12.8**	**+0.7**
	baz=46,SNR=31						
KARS	**Kars**	**50.73**	**72**	*e*P	**P**	**19 08 14.4**	**+2.1**
VRTB	**Varto-Mus**	**50.73**	**74**	*e*P	**P**	**19 08 15.5**	**+3.1**
NRIK	**Noril'sk**	**50.74**	**23**	P	**P**	**19 08 13.1**	**+1.3**
	comp=Z,34nm,1.1s,baz=314,slow=5.2,SNR=21						
NRIK				S	**S**	**19 15 31.6**	**+5.7**
	comp=Z,3.9nm,0.8s,baz=26,slow=17,SNR=1.3						
NRIK				LR	LR	19 30 35.5	
	comp=Z,43µm,18.2s,baz=330,slow=37						
NRIK	**Noril'sk**	**50.74**	**23**	P	**P**	**19 08 09.9**	**-1.9**
TOLK	**Toolik Lake Re**	**50.74**	**335**	S	**S**	**19 15 26.7**	**+0.6**
	baz=44						
TOLK	**Toolik Lake Re**	**50.74**	**335**	IAmb	IAmb	19 08 29.4	
	comp=Z,669nm,1.1s						
TOLK	**Toolik Lake Re**	**50.74**	**335**	P	**P**	**19 08 12.0**	**+0.1**
	baz=44,SNR=100						
BW06	**Boulder Array**	**50.76**	**292**	S	**S**	**19 15 26.3**	**-1.1**
	baz=50						
BW06	**Boulder Array**	**50.76**	**292**	P	**P**	**19 08 12.7**	**0.0**
	baz=50,SNR=56						
PD31	**Pinedale Array**	**50.76**	**292**	P	**P**	**19 08 09.9**	**-2.8**
PDAR	**Pinedale Array**	**50.76**	**292**	P	**P**	**19 08 11.9**	**-0.7**
	comp=Z,48nm,0.8s,baz=65,slow=6.5,SNR=95						
PDAR				S	**S**	**19 15 24.1**	**-3.4**
	comp=Z,1.6nm,0.8s,baz=225,slow=50,SNR=2.0						
PDAR				LR	LR	19 28 37.5	
	comp=Z,254µm,18.3s,baz=54,slow=35						
PDAR				PKPPKP	P'P'df	19 38 47.8	-15
	comp=Z,1.8nm,1.0s,baz=151,slow=3.4,SNR=4.9						
PDAR	**Pinedale Array**	**50.76**	**292**	P	**P**	**19 08 09.8**	**-2.8**
TIC	**Toumodi**	**50.81**	**144**	*e*P	**P**	**19 08 13.0**	**+0.1**
DLMT	**Dillon**	**50.81**	**296**	IAMs_20	IAMs_20	19 28 09.1	
	comp=Z,173µm,21.0s						
DBIC	**Dimbokro**	**50.84**	**144**	P	**P**	**19 08 14.2**	**+1.0**
	comp=Z,33nm,0.9s,baz=330,slow=7.7,SNR=16						
DBIC				S	**S**	**19 15 32.7**	**+4.2**
	comp=Z,4.7nm,0.9s,baz=104,slow=19,SNR=1.0						
DBIC				LR	LR	19 27 24.3	
	comp=Z,54µm,20.8s,baz=322,slow=33						
DBIC	**Dimbokro**	**50.84**	**144**	P	**P**	**19 08 12.5**	**-0.6**
DBIC				IAmb	IAmb	19 08 26.1	
	comp=Z,625nm,1.1s						
EGAK	**Eagle**	**51.00**	**329**	IAmb	IAmb	19 08 29.8	
	comp=Z,501nm,1.0s						
EGAK				IAMs_20	IAMs_20	19 28 38.5	
	comp=Z,225µm,21.0s						
FYU	**Fort Yukon**	**51.02**	**332**	IAMs_20	IAMs_20	19 28 39.7	
	comp=Z,238µm,21.0s						
DLBC	**Dease Lake**	**51.07**	**318**	P	**P**	**19 08 14.8**	**+0.2**
	comp=Z,75nm,1.0s,baz=42,slow=6.9,SNR=33						
DLBC				LR	LR	19 28 49.3	
	comp=Z,106µm,21.5s,baz=42,slow=35						
HKT	**Hockley**	**51.15**	**270**	P	**P**	**19 08 14.8**	**-0.5**
HKT				pmax	pmax		
	comp=Z,2µm,2.2s						
HKT				MLR	MLR		
	comp=Z,228µm,21.0s						
HKT	**Hockley**	**51.15**	**270**		**P**	**19 08 14.8**	**-0.5**
HKT				IAmb	IAmb	19 08 47.7	
	comp=Z,2µm,2.2s						
HKT	**Hockley**	**51.15**	**270**	IAMs_20	IAMs_20	19 28 14.9	
	comp=Z,228µm,21.0s						
KIC	**Kosan Boka**	**51.17**	**144**	*e*P	**P**	**19 08 15.6**	**-0.1**
	comp=Z,62nm,1.2s						
LIC	**Lamto**	**51.19**	**145**	*e*P	**P**	**19 08 16.2**	**+0.4**
	comp=Z,104nm,0.9s						
SVAN	**Silvan-Diyarba**	**51.24**	**75**	*e*P	**P**	**19 08 17.6**	**+1.5**
AMTX	**Amarillo**	**51.30**	**279**	S	**S**	**19 15 35.8**	**+1.0**
	baz=47						
AMTX	**Amarillo**	**51.30**	**279**	IAmb	IAmb	19 08 49.6	
	comp=Z,841nm,0.9s						
AMTX				IAMs_20	IAMs_20	19 28 47.1	
	comp=Z,234µm,21.0s						
AMTX	**Amarillo**	**51.30**	**279**	P	**P**	**19 08 18.9**	**+2.3**
	baz=47						
AGRB	**Hanur-Agry**	**51.36**	**73**	*e*P	**P**	**19 08 19.4**	**+2.2**
MLAZ	**Malazgirt-MUS**	**51.39**	**74**	*e*P	**P**	**19 08 19.3**	**+2.0**
NEW	**Newport**	**51.41**	**302**	P	**P**	**19 08 16.5**	**-0.7**
	comp=Z,49nm,1.0s,baz=63,slow=8.2,SNR=24						
NEW				S	**S**	**19 15 37.6**	**+1.7**
	comp=Z,9.8nm,1.0s,baz=78,slow=20,SNR=2.5						
NEW	**Newport**	**51.41**	**302**	S	**S**	**19 15 35.3**	**-0.6**
	baz=51						
NEW	**Newport**	**51.41**	**302**	IAmb	IAmb	19 08 33.9	
	comp=Z,937nm,1.4s						
NEW	**Newport**	**51.41**	**302**	P	**P**	**19 08 17.4**	**+0.1**
	baz=51,SNR=50						
T25A	**Trinidad**	**51.42**	**283**	S	**S**	**19 15 36.5**	**-0.2**
	baz=48						
T25A	**Trinidad**	**51.42**	**283**	P	**P**	**19 08 18.5**	**+0.8**
	baz=48,SNR=92						
GURO	**Guroymak-BITLI**	**51.47**	**75**	*e*P	**P**	**19 08 19.4**	**+1.5**
MARD	**Mardin**	**51.55**	**77**	IAmb	IAmb	19 08 42.6	
	comp=Z,577nm,1.2s						
SMCO	**Snowmass**	**51.59**	**287**	IAMs_20	IAMs_20	19 27 20.0	
	comp=Z,125µm,21.0s						
ECR	**Eagle Creek**	**51.60**	**293**	P	**P**	**19 08 17.6**	**-1.3**
ABTX	**Abilene, Hawle**	**51.61**	**275**	S	**S**	**19 15 36.1**	**-2.9**
	baz=46						
ABTX	**Abilene, Hawle**	**51.61**	**275**	P	**P**	**19 08 19.4**	**+0.6**
	baz=46,SNR=13						
435B	**Jarrell**	**51.64**	**272**	S	**S**	**19 15 38.2**	**-1.1**
	baz=45						
435B	**Jarrell**	**51.64**	**272**	P	**P**	**19 08 20.0**	**+1.0**
	baz=45						
SDCO	**Great Sand Dun**	**51.67**	**284**	S	**S**	**19 15 41.7**	**+1.5**
	baz=48						
SDCO	**Great Sand Dun**	**51.67**	**284**	IAmb	IAmb	19 08 52.6	
	comp=Z,2µm,2.4s						
SDCO	**Great Sand Dun**	**51.67**	**284**	P	**P**	**19 08 18.7**	**-0.9**
	baz=48,SNR=55						
O20A	**White River Ci**	**51.70**	**288**	S	**S**	**19 15 42.8**	**+2.4**
	baz=49						
O20A	**White River Ci**	**51.70**	**288**		**P**	**19 08 19.0**	**-0.7**
O20A				IAmb	IAmb	19 08 53.2	
	comp=Z,646nm,1.1s						
O20A	**White River Ci**	**51.70**	**288**	P	**P**	**19 08 20.3**	**+0.6**
	baz=49,SNR=28						
MAK	**Makhachkala**	**51.76**	**67**	*e*P	P	19 08 13.4	-6.4
MAK				*e*		19 10 12.6	
MAK				*e*S	**S**	**19 15 32.6**	**-8.0**
MAK				*e*SSS	SSS	19 20 47.7	
MAK				pmax	pmax		
	comp=Z,1µm,1.1s						
MAK				pmax	pmax		
	comp=Z,6µm,2.5s						
MAK				smax	smax		
	comp=N,23µm,10.2s						
MAK				smax	smax		
	comp=E,13µm,8.3s						
MAK				MLR	MLR		
	comp=E,41µm,19.0s						
MAK				MLR	MLR		
	comp=Z,44µm,18.0s						
MAK				MLR	MLR		
	comp=N,84µm,18.0s						
URIC	**Uribia, Colomb**	**51.81**	**233**	*e*P	**P**	**19 08 17.4**	**-3.1**
TASB	**TASBURUN-IGDIR**	**51.82**	**72**	*e*P	**P**	**19 08 22.3**	**+1.9**
DABV	**Dabajuro**	**51.83**	**231**	*e*P	**P**	**19 08 18.3**	**-2.3**
COLD	**Coldfoot**	**51.93**	**334**	S	**S**	**19 15 46.6**	**+4.2**
	baz=43						
COLD	**Coldfoot**	**51.93**	**334**	P	**P**	**19 08 21.0**	**+0.2**
	baz=43,SNR=67						
GNI	**Garni**	**52.00**	**71**	P	**P**	**19 08 24.5**	**+2.6**
GNI	**Garni**	**52.00**	**71**	*ce*P	**P**	**19 08 20.9**	**-1.0**
GNI				pmax	pmax		
	comp=Z,330nm,1.1s						
GNI	**Garni**	**52.00**	**71**	P	**P**	**19 08 19.9**	**-2.0**
GNI				IAmb	IAmb	19 08 46.6	
	comp=Z,2µm,1.4s						
GNI	**Garni**	**52.00**	**71**	P	**P**	**19 08 24.7**	**+2.8**
GNI				P	**P**	**19 08 24.7**	**+2.8**
AKDM	**Akdamar-Van**	**52.18**	**74**	*e*P	**P**	**19 08 25.5**	**+2.3**
RDMU	**Red Mountain**	**52.18**	**290**	IAmb	IAmb	19 08 55.4	
	comp=Z,589nm,1.1s						
CLDR	**Caldiran**	**52.19**	**73**	*e*P	**P**	**19 08 24.1**	**+0.8**
GEVA	**Gevas**	**52.23**	**74**	IAmb	IAmb	19 08 48.3	
	comp=Z,745nm,1.1s						
VANB	**Van**	**52.24**	**74**	*e*P	**P**	**19 08 25.8**	**+2.2**
C09A	**Chrisman Ranch**	**52.30**	**302**		**P**	**19 08 21.9**	**-1.9**
C09A				IAmb	IAmb	19 08 38.0	
	comp=Z,493nm,1.1s						
BAUV	**El Baul**	**52.36**	**227**	*e*P	**P**	**19 08 23.6**	**-1.0**
HYT	**Haines Junctio**	**52.41**	**323**	IAmb	IAmb	19 08 41.4	
	comp=Z,813nm,1.1s						
S22A	**4UR Ranch, Cre**	**52.45**	**285**	S	**S**	**19 15 53.8**	**+2.9**
	baz=48						
S22A	**4UR Ranch, Cre**	**52.45**	**285**	P	**P**	**19 08 26.7**	**+1.3**
	baz=48,SNR=35						
B08A	**Colville Reser**	**52.49**	**303**	IAmb	IAmb	19 08 41.8	
	comp=Z,1µm,1.2s						
SKAG	**Skagway**	**52.51**	**321**	IAmb	IAmb	19 08 44.6	
	comp=Z,2µm,2.1s						
SKAG				IAMs_20	IAMs_20	19 29 51.0	
	comp=Z,116µm,18.0s						
MSTX	**Muleshoe**	**52.58**	**279**	S	**S**	**19 15 54.0**	**+1.6**
	baz=46						
MSTX	**Muleshoe**	**52.58**	**279**		**P**	**19 08 25.2**	**-1.0**
MSTX				IAMs_20	IAMs_20	19 29 28.0	
	comp=Z,235µm,20.0s						
MSTX	**Muleshoe**	**52.58**	**279**	P	**P**	**19 08 27.4**	**+1.2**
	baz=46,SNR=80						
POKR	**Poker Plat Res**	**52.69**	**331**	S	**S**	**19 15 57.5**	**+4.6**
	baz=44						

POKR	Poker Plat Res	52.69	331	P	P	19 08 26.0	-0.4
	baz=44,SNR=53						
DOT	Dot Lake	52.70	329	IAMs_20	IAMs_20	19 29 30.6	
	comp=Z,194µm,21.0s						
IL31		52.77	331	IAmb	IAmb	19 08 44.6	
	comp=Z,2µm,2.0s						
ILAR	Eielson Array	52.77	331	P	P	19 08 26.7	-0.4
	comp=Z,38nm,1.1s,baz=42,slow=5.3,SNR=38						
ILAR				S	S	19 15 56.1	+2.0
	comp=Z,1.8nm,1.1s,baz=73,slow=7.1,SNR=1.7						
ILAR				LR	LR	19 30 29.4	
	comp=Z,200µm,18.1s,baz=46,slow=36						
ILAR				PKPPKP	P'P'df	19 38 41.8	-21
	comp=Z,0.9nm,0.9s,baz=212,slow=2.8,SNR=4.1						
ILAR	Eielson Array	52.77	331		P	19 08 25.4	-1.7
CRJC	Cerrejon, Guaj	52.83	234	eP	P	19 08 28.3	+0.2
TCUT	Toone Canyon	52.88	291	P	P	19 08 27.2	-1.2
TCUT				IAmb	IAmb	19 08 46.8	
	comp=Z,668nm,1.0s						
BESE	Bessie Mountai	52.91	320	IAMs_20	IAMs_20	19 31 08.7	
	comp=Z,131µm,19.0s						
F10A	Beach Ranch, E	52.93	299	IAMs_20	IAMs_20	19 29 45.1	
	comp=Z,141µm,19.0s						
JIS	Juneau Island	52.93	320	IAMs_20	IAMs_20	19 29 34.2	
	comp=Z,138µm,20.0s						
HLID	Hailey	52.96	295	S	S	19 16 04.0	+6.4
	baz=49						
HLID	Hailey	52.96	295	IAmb	IAmb	19 08 46.5	
	comp=Z,1µm,1.7s						
HLID	Hailey	52.96	295	P	P	19 08 29.6	+0.6
	baz=49,SNR=85						
COLA	College	52.99	331	deP	P	19 08 29.3	+0.7
COLA				pmax	pmax		
	comp=Z,687nm,1.2s						
COLA	College	52.99	331	P	P	19 08 27.6	-1.0
COLA				IAmb	IAmb	19 08 45.2	
	comp=Z,575nm,1.1s						
COLA	College	52.99	331	IAMs_20	IAMs_20	19 29 36.8	
	comp=Z,259µm,22.0s						
TCOL	CIGO, UAF Yank	52.99	331	S	S	19 16 01.5	+4.5
	baz=43						
TCOL	CIGO, UAF Yank	52.99	331	IAmb	IAmb	19 08 45.2	
	comp=Z,581nm,1.1s						
TCOL	CIGO, UAF Yank	52.99	331	P	P	19 08 28.9	+0.3
	baz=43,SNR=14						
PV15	Paradox Valley	53.02	287	P	P	19 08 27.6	-2.0
PV15				IAMs_20	IAMs_20	19 29 55.0	
	comp=Z,200µm,19.0s						
HDA	Harding Lake	53.05	330	P	P	19 08 27.5	-1.6
HDA				IAmb	IAmb	19 08 46.6	
	comp=Z,718nm,0.8s						
HDA				IAMs_20	IAMs_20	19 29 57.6	
	comp=Z,195µm,20.0s						
HDA	Harding Lake	53.05	330	P	P	19 08 29.4	+0.3
	baz=44,SNR=107						
HDA	Harding Lake	53.05	330	S	S	19 16 02.0	+4.1
	baz=44						
HDA	Harding Lake	53.05	330	S	S	19 16 02.0	+4.1
	baz=44						
E09A	Wood Farm, Sta	53.06	300	IAMs_20	IAMs_20	19 29 22.6	
	comp=Z,115µm,18.0s						
PV22	Blue Mesa, Par	53.07	287	IAmb	IAmb	19 08 46.2	
	comp=Z,1µm,1.6s						
MENT	Mentasta	53.10	328	IAMs_20	IAMs_20	19 29 32.6	
	comp=Z,200µm,21.0s						
D08A	Wollman Farm,	53.12	301	IAMs_20	IAMs_20	19 29 42.0	
	comp=Z,148µm,18.0s						
735A	Kenedy	53.14	271	IAmb	IAmb	19 08 43.0	
	comp=Z,822nm,1.1s						
CCB	Clear Creek Bu	53.14	331	IAMs_20	IAMs_20	19 29 39.8	
	comp=Z,236µm,22.0s						
JCT	Junction City	53.20	274	S	S	19 16 00.2	-0.7
	baz=45						
JCT	Junction City	53.20	274	IAmb	IAmb	19 08 42.8	
	comp=Z,591nm,1.2s						
JCT				IAMs_20	IAMs_20	19 29 10.0	
	comp=Z,216µm,20.0s						
JCT	Junction City	53.20	274	P	P	19 08 31.7	+1.0
	baz=45,SNR=28						
PV01	Paradox Valley	53.21	287	IAmb	IAmb	19 09 03.3	
	comp=Z,2µm,2.1s						
I23K	Minto, Yukon-K	53.22	332	S	S	19 16 04.4	+4.2
	baz=42						
I23K	Minto, Yukon-K	53.22	332	P	P	19 08 28.5	-1.8
I23K	Minto, Yukon-K	53.22	332	P	P	19 08 30.3	0.0
	baz=42,SNR=41						
PV12	Saucer Basin,	53.23	287	IAmb	IAmb	19 08 48.9	
	comp=Z,1µm,1.1s						
PV04	Paradox Valley	53.24	287	IAmb	IAmb	19 09 03.3	
	comp=Z,1µm,1.3s						
JLU	Jordanelle	53.24	291	P	P	19 08 30.0	-1.2
JLU				IAmb	IAmb	19 09 04.1	
	comp=Z,1µm,2.2s						
PV23	Carpenter Ridg	53.26	287	IAmb	IAmb	19 09 03.4	
	comp=Z,938nm,1.4s						
PV02	Paradox Valley	53.26	287	P	P	19 08 30.9	-0.4
PV02				IAmb	IAmb	19 09 03.5	
	comp=Z,1µm,1.5s						
CUKT	Cukurca	53.27	75	eP	P	19 08 28.2	-3.1
PV14	Lion Creek, Pa	53.32	287	IAmb	IAmb	19 08 48.0	
	comp=Z,1µm,1.2s						
PV10	Paradox Valley	53.33	287	P	P	19 08 30.9	-1.0
WRAK	Wrangell Islan	53.33	317	IAmb	IAmb	19 09 05.9	
	comp=Z,668nm,1.4s						
WRAK	Wrangell Islan	53.33	317	IAMs_20	IAMs_20	19 29 37.2	
	comp=Z,107µm,20.0s						
PV19	Morning Glory	53.34	287	IAmb	IAmb	19 09 04.0	
	comp=Z,776nm,1.1s						
SPUT	South Promonto	53.34	292	P	P	19 08 29.5	-2.3
WRH	Wood River Hil	53.35	331	IAmb	IAmb	19 08 47.6	
	comp=Z,512nm,1.0s						
WRH				IAMs_20	IAMs_20	19 30 07.4	
	comp=Z,207µm,20.0s						
CTU	Camp Tracy	53.35	291	IAmb	IAmb	19 08 47.5	
	comp=Z,1µm,2.1s						
SMRC	Santa Marta, M	53.38	235	eP	P	19 08 27.5	-4.6
CVALL	Valledupar, Ce	53.46	234	eP	P	19 08 39.4	+6.7
A05A	Maple Falls	53.48	305	IAMs_20	IAMs_20	19 29 40.1	
	comp=Z,76µm,18.0s						
B06A	Marblemount	53.49	304		pP	19 08 36.7	-0.2
B06A				IAMs_20	IAMs_20	19 29 31.5	
	comp=Z,152µm,21.0s						
NEA2	Nenana	53.55	331	S	S	19 16 09.1	+4.4
	baz=42						
NEA2	Nenana	53.55	331	P	P	19 08 32.7	-0.1
	baz=42,SNR=116						
E08A	Dider Farm, El	53.56	301	P	P	19 08 31.6	-1.4
E08A				IAmb	IAmb	19 08 47.9	
	comp=Z,2µm,2.4s						
E08A				IAMs_20	IAMs_20	19 29 55.7	
	comp=Z,157µm,18.0s						
C06D	Leavenworth	53.58	303	S	S	19 16 05.7	+0.3
	baz=49						
C06D	Leavenworth	53.58	303	P	P	19 08 34.4	+1.2
	baz=49						
SDV	Santo Domingo	53.60	230	PKPPKP	P'P'df	19 38 45.7	-4.9
	comp=Z,2.2nm,0.4s,baz=9.2,slow=5.5,SNR=3.5						
SDV	Santo Domingo	53.60	230		P	19 08 33.7	-0.3
SDV				IAmb	IAmb	19 09 05.0	
	comp=Z,900nm,1.7s						
SDV	Santo Domingo	53.60	230	IAMs_20	IAMs_20	19 26 46.9	
	comp=Z,92µm,22.0s						
SDV	Santo Domingo	53.60	230	eP	P	19 08 33.8	-0.1
SDV	Santo Domingo	53.60	230	eP	P	19 08 34.4	+0.4
PAX	Paxson	53.64	329	IAMs_20	IAMs_20	19 30 12.1	
	comp=Z,181µm,21.0s						
CTGM	Chitina Glacie	53.68	325	IAMs_20	IAMs_20	19 30 29.3	
	comp=Z,195µm,20.0s						
BMO	Blue Mountains	53.70	298	P	P	19 08 31.9	-2.4
BMO				pmax	pmax		
	comp=Z,227nm,1.0s						
BMO				MLR	MLR		
	comp=Z,154µm,18.0s						
BMO	Blue Mountains	53.70	298		P	19 08 31.9	-2.4
BMO				IAMs_20	IAMs_20	19 30 28.6	
	comp=Z,154µm,18.0s						
SRU	San Rafael Swe	53.70	289	IAmb	IAmb	19 09 07.3	
	comp=Z,367nm,1.0s						
MLY	Manley	53.70	332	S	S	19 16 10.8	+4.0
	baz=42						
MLY	Manley	53.70	332	P	P	19 08 34.1	+0.2
	baz=42,SNR=60						
BARN	Barnard Glacie	53.73	325	IAMs_20	IAMs_20	19 30 30.1	
	comp=Z,210µm,20.0s						
MPU	Maple Canyon	53.73	290	IAmb	IAmb	19 09 15.5	
	comp=Z,642nm,1.7s						
TEIG	Tepich	53.78	255	P	P	19 08 34.2	-0.8
TEIG				IAmb	IAmb	19 09 01.7	
	comp=Z,858nm,1.4s						
TEIG	Tepich	53.78	255	eP	P	19 08 37.1	+2.1
MVCO	Mesa Verde	53.79	286	S	S	19 16 11.2	+2.1
	baz=47						
MVCO	Mesa Verde	53.79	286	IAmb	IAmb	19 09 09.3	
	comp=Z,435nm,0.9s						
MVCO	Mesa Verde	53.79	286	P	P	19 08 37.2	+2.0
	baz=47,SNR=50						
MFID	Camas Ranch	53.84	296		P	19 08 34.2	-1.2
MFID				IAmb	IAmb	19 08 52.7	
	comp=Z,667nm,1.4s						
MFID				IAMs_20	IAMs_20	19 30 06.5	
	comp=Z,162µm,20.0s						
HAWA	Hanford	53.87	301	IAMs_20	IAMs_20	19 29 56.9	
	comp=Z,120µm,18.0s						
LTY	Liberty	53.89	303	IAMs_20	IAMs_20	19 29 30.4	
	comp=Z,140µm,21.0s						
E07A	Sunnyside	53.93	301	IAMs_20	IAMs_20	19 30 07.4	
	comp=Z,115µm,19.0s						
B05A	Bryant	53.96	304	S	S	19 16 13.2	+2.6
	baz=49						
B05A	Bryant	53.96	304	P	P	19 08 37.2	+1.2
	baz=49						
MCARA	McCarthy VSAT	53.97	326	IAmb	IAmb	19 08 52.3	
	comp=Z,753nm,1.2s						
MCARA				IAMs_20	IAMs_20	19 30 54.1	
	comp=Z,151µm,19.0s						
TMUT	Trail Mountain	53.97	290	P	P	19 08 35.2	-1.4
TMUT				IAmb	IAmb	19 09 11.1	
	comp=Z,456nm,1.3s						
A04D	Lummi Island	53.97	305	S	S	19 16 08.6	-2.1
	baz=49						
A04D	Lummi Island	53.97	305	P	P	19 08 34.9	-1.1
	baz=49						
BWN	Browne	53.98	331	IAMs_20	IAMs_20	19 30 04.3	
	comp=Z,223µm,22.0s						
BALM	Baldy	53.98	326	IAMs_20	IAMs_20	19 30 47.0	
	comp=Z,230µm,20.0s						
TABL	Table Mountain	53.98	325	IAMs_20	IAMs_20	19 30 42.7	
	comp=Z,169µm,19.0s						
SIT	Sitka	54.12	319	P	P	19 08 36.1	-0.9
SIT				pmax	pmax		
	comp=Z,471nm,1.5s						
SIT				MLR	MLR		
	comp=Z,115µm,22.0s						
SIT	Sitka	54.12	319		P	19 08 36.1	-0.9
SIT				IAMs_20	IAMs_20	19 29 48.9	
	comp=Z,115µm,22.0s						
ANMO	Albuquerque	54.12	282	LR	LR	19 30 37.9	
	comp=Z,453µm,19.8s,baz=47,slow=35						
ANMO	Albuquerque	54.12	282	S	S	19 16 17.9	+4.3
	baz=46						
ANMO	Albuquerque	54.12	282	i P	P	19 08 38.4	+0.8
ANMO	Albuquerque	54.12	282		P	19 08 36.9	-0.8
ANMO	Albuquerque	54.12	282	P	P	19 08 40.1	+2.4
	baz=46						
KVTX	Kingsville	54.13	270		pP	19 08 41.7	0.0
GLB	Gilahina Butte	54.19	327	IAMs_20	IAMs_20	19 30 10.7	
	comp=Z,173µm,22.0s						
VRDI	Verde Repeater	54.22	326	IAMs_20	IAMs_20	19 29 46.9	
	comp=Z,159µm,22.0s						
SOCV	Socops	54.23	230	eP	P	19 08 33.9	-4.5
ABKAR	Akbulak array	54.25	54		P	19 08 35.0	-3.1
ABKAR	Akbulak array	54.25	54	IAmb	IAmb	19 08 55.9	
	comp=Z,485nm,1.1s						
BBB	Bella Bella	54.29	311	S	S	19 16 17.1	+2.3
	comp=Z,26nm,1.2s,baz=185,slow=11,SNR=1.5						
BBB				LR	LR	19 30 52.2	
	comp=Z,84µm,19.2s,baz=46,slow=35						
BBB	Bella Bella	54.29	311	IAmb	IAmb	19 08 54.0	
	comp=Z,2µm,2.0s						
BBB				IAMs_20	IAMs_20	19 30 31.9	
	comp=Z,91µm,20.0s						
DUG	Dugway, Tooele	54.29	291	S	S	19 16 16.8	+1.2
	baz=48						
DUG	Dugway, Tooele	54.29	291	IAmb	IAmb	19 08 53.5	
	comp=Z,1µm,1.6s						
DUG	Dugway, Tooele	54.29	291	P	P	19 08 38.6	-0.1
	baz=48,SNR=85						
G08A	Pilot Rock	54.29	300	IAmb	IAmb	19 08 54.4	
	comp=Z,789nm,1.6s						
G08A				IAMs_20	IAMs_20	19 30 47.2	
	comp=Z,228µm,21.0s						
CRAG	Craig	54.30	317		P	19 08 37.0	-1.3
CRAG				IAMs_20	IAMs_20	19 30 05.6	
	comp=Z,98µm,20.0s						
RDOG	Red Dog Mine	54.34	340	IAmb	IAmb	19 08 56.3	
	comp=Z,1µm,1.5s						
RDOG				IAMs_20	IAMs_20	19 31 00.8	
	comp=Z,200µm,22.0s						
N25K	Chitina, Valde	54.34	327	S	S	19 16 19.0	+3.5
	baz=44						
N25K	Chitina, Valde	54.34	327	IAMs_20	IAMs_20	19 30 14.8	
	comp=Z,208µm,21.0s						
N25K	Chitina, Valde	54.34	327	P	P	19 08 38.6	-0.1
	baz=44,SNR=17						
TGL	Tana Glacier	54.35	326	IAMs_20	IAMs_20	19 30 59.4	
	comp=Z,206µm,20.0s						
RND	Reindeer	54.37	330	IAmb	IAmb	19 08 54.8	
	comp=Z,595nm,1.0s						
RND				IAMs_20	IAMs_20	19 30 48.4	
	comp=Z,201µm,20.0s						
PGC	Sidney	54.39	305	P	P	19 08 38.0	-1.1
PGC				IAMs_20	IAMs_20	19 33 00.2	
	comp=Z,91µm,19.0s						
F07A	Phinny Hill Vi	54.40	301	IAmb	IAmb	19 08 56.0	
	comp=Z,1µm,1.7s						
F07A				IAMs_20	IAMs_20	19 30 40.1	
	comp=Z,150µm,18.0s						
CRQM	Cirque	54.45	326	IAMs_20	IAMs_20	19 31 01.2	
	comp=Z,197µm,20.0s						
833A	Chaparral WMA,	54.49	271	S	S	19 16 17.8	-0.4
	baz=44						
833A	Chaparral WMA,	54.49	271	P	P	19 08 41.3	+1.2
	baz=44,SNR=46						
M24K	Tolsona, Glenn	54.49	328	S	S	19 16 21.8	+4.3
	baz=43						
M24K	Tolsona, Glenn	54.49	328	IAMs_20	IAMs_20	19 30 39.7	
	comp=Z,139µm,21.0s						
M24K	Tolsona, Glenn	54.49	328	P	P	19 08 40.6	+0.9
	baz=43,SNR=21						
ARGC	Ariguani, Magd	54.51	234	eP	P	19 08 42.9	+2.6
D05A	Enumclaw	54.62	303	P	P	19 08 38.9	-1.9
D05A				IAMs_20	IAMs_20	19 30 05.4	
	comp=Z,146µm,20.0s						
ELOV	Elorza	54.73	228	eP	P	19 08 42.0	0.0
LON	Longmire	54.81	303	IAmb	IAmb	19 08 57.2	
	comp=Z,550nm,1.4s						
LON				IAMs_20	IAMs_20	19 30 10.7	
	comp=Z,156µm,19.0s						
KLU	Klutina	54.86	328	IAmb	IAmb	19 09 04.3	
	comp=Z,343nm,1.0s						
KLU				IAMs_20	IAMs_20	19 30 40.5	
	comp=Z,183µm,21.0s						
KTH	Kantishna Hill	54.87	331	IAMs_20	IAMs_20	19 30 44.2	
	comp=Z,240µm,22.0s						
D03D	Eldon	54.95	304	S	S	19 16 26.7	+2.8
	baz=48						
D03D	Eldon	54.95	304	P	P	19 08 41.4	-1.8
	baz=48,SNR=19						
LENM	Lemitar	54.97	282		pP	19 08 46.8	-1.3
Y22D	IRIS PASSCAL I	55.00	282	S	S	19 16 30.1	+4.8
	baz=46						
Y22D	IRIS PASSCAL I	55.00	282	P	P	19 08 44.7	+0.7
	baz=46						
D04E	Lakebay	55.02	304	S	S	19 16 27.3	+2.4
	baz=48						
D04E	Lakebay	55.02	304	P	P	19 08 43.9	+0.2
	baz=48,SNR=25						
MSU	Marysvale	55.05	289	P	P	19 08 43.2	-1.2
MSU	Marysvale	55.05	289		P	19 08 43.2	-1.2
SCM	Sheep Creek Mo	55.06	328	IAmb	IAmb	19 09 48.7	
	comp=Z,1µm,1.5s						
SCM				IAMs_20	IAMs_20	19 31 17.8	
	comp=Z,141µm,20.0s						
HMT	Hamilton	55.14	326	IAMs_20	IAMs_20	19 31 34.3	
	comp=Z,164µm,18.0s						
F05D	White Salmon	55.21	302	S	S	19 16 32.8	+5.2
	baz=48						
F05D	White Salmon	55.21	302	P	P	19 08 45.4	+0.2
	baz=48,SNR=9.8						
RAGM	Ragged Mountai	55.25	326	IAmb	IAmb	19 08 54.0	
	comp=Z,1µm,1.2s						
RAGM				IAMs_20	IAMs_20	19 31 38.0	
	comp=Z,174µm,19.0s						
PRVC	Isla de Provid	55.28	244	eP	P	19 08 49.2	+3.2
ELK	Elko	55.29	293	IAmb	IAmb	19 09 02.7	
	comp=Z,665nm,1.4s						
SMLC	San Martn de	55.33	234	eP	P	19 08 45.8	-0.5
E04D	Cinebar	55.33	303	S	S	19 16 34.7	+5.6
	baz=48						
E04D	Cinebar	55.33	303	P	P	19 08 44.6	-1.4
	baz=48,SNR=9.4						
MTPU	Mount Pierson	55.38	289	IAmb	IAmb	19 09 03.6	
	comp=Z,1µm,1.5s						
I07A	Izee	55.39	299	IAMs_20	IAMs_20	19 31 25.2	
	comp=Z,154µm,18.0s						
SML	Sawmill	55.40	329	IAmb	IAmb	19 09 02.9	
	comp=Z,937nm,1.1s						
SML				IAMs_20	IAMs_20	19 31 27.7	
	comp=Z,141µm,20.0s						
TIXI	Tiksi	55.40	7	P	P	19 08 44.0	-2.1
TIXI				pmax	pmax		
	comp=Z,615nm,0.7s						
TIXI	Tiksi	55.40	7	P	P	19 08 44.0	-2.1
OCAC	Ocana	55.45	232	eP	P	19 08 49.8	+2.5
EYAK	Cordova Ski Ar	55.49	327	IAmb	IAmb	19 09 05.6	
	comp=Z,392nm,1.0s						
KAIM	Kayak Island	55.49	326	IAMs_20	IAMs_20	19 32 15.5	
	comp=Z,169µm,18.0s						
CUT	Chulitna	55.55	330	S	S	19 16 30.6	-0.9
	baz=41						
CUT	Chulitna	55.55	330	P	P	19 08 47.0	-0.3
	baz=41,SNR=18						
H02N1	VAN INLET T-PH	55.56	314	P	P	19 08 46.9	-0.7
DIB	Dawson Inlet,	55.56	314	P	P	19 08 46.8	-0.7
DIB				IAMs_20	IAMs_20	19 31 25.3	
	comp=Z,128µm,18.0s						
H02S1	DAWSON INLET T	55.56	314	P	P	19 08 47.6	+0.1
G05D	Wamic, OR	55.57	301	S	S	19 16 32.5	+0.1
	baz=48						
G05D	Wamic, OR	55.57	301	P	P	19 08 46.7	-1.0
	baz=48						
GHO	Glory Hole Cre	55.61	329	IAMs_20	IAMs_20	19 31 45.4	
	comp=Z,144µm,19.0s						
MNTX	Cornudas Mount	55.73	279	S	S	19 16 35.6	+0.7
	baz=45						
MNTX	Cornudas Mount	55.73	279		P	19 08 48.2	-0.9
MNTX				IAMs_20	IAMs_20	19 30 57.6	
	comp=Z,139µm,20.0s						
MNTX	Cornudas Mount	55.73	279	P	P	19 08 49.5	+0.4
	baz=45,SNR=43						
PPLA	Purkeypile	55.74	331	IAMs_20	IAMs_20	19 31 23.7	
	comp=Z,220µm,22.0s						
PMR	Palmer	55.81	329	IAmb	IAmb	19 09 05.9	
	comp=Z,1µm,1.4s						
PMR				IAMs_20	IAMs_20	19 31 41.6	
	comp=Z,137µm,20.0s						
PMR					P'P'bc	19 38 56.8	-14
E03A	Lebam	55.85	304	IAMs_20	IAMs_20	19 30 57.0	
	comp=Z,166µm,20.0s						
HIN	Hinchinbrook I	55.86	327		pP	19 08 54.1	0.0
F04D	Rainier, OR	55.88	303	S	S	19 16 41.0	+4.6
	baz=47						
F04D	Rainier, OR	55.88	303	P	P	19 08 50.1	+0.2
	baz=47,SNR=7.9						
PAMC	Pamplona, Colo	55.93	231	eP	P	19 08 51.2	+0.1
W18A	Petrified Fore	55.95	285	S	S	19 16 39.1	+1.0
	baz=46						
W18A	Petrified Fore	55.95	285	P	P	19 08 49.9	-0.9
W18A				IAmb	IAmb	19 09 06.9	
	comp=Z,586nm,1.1s						
W18A	Petrified Fore	55.95	285	P	P	19 08 51.4	+0.5
	baz=46,SNR=26						
SPR3	Spring Creek 3	55.96	291	IAmb	IAmb	19 09 08.9	
	comp=Z,1µm,1.9s						
SPR3				IAMs_20	IAMs_20	19 31 32.2	
	comp=Z,189µm,20.0s						
WVOR	Wild Horse Val	56.03	297	IAMs_20	IAMs_20	19 31 42.4	
	comp=Z,132µm,18.0s						
MOTC	Monteria, Cord	56.14	235	eP	P	19 08 53.7	+1.6
I05D	Terrebonne, OR	56.19	300	S	S	19 16 45.6	+4.9
	baz=47						
I05D	Terrebonne, OR	56.19	300	P	P	19 08 51.2	-1.0
	baz=47,SNR=33						
SZCU	Shurtz Canyon	56.20	289	IAmb	IAmb	19 09 08.9	
	comp=Z,1µm,1.6s						
SKT	Skwentna	56.26	330	IAMs_20	IAMs_20	19 32 07.9	
	comp=Z,208µm,20.0s						
TAMC	Tame, Arauca	56.29	230	eP	P	19 08 52.4	-0.8
TMAB	Tom-Au,PA,Br	56.34	199	eP	P	19 08 55.5	+2.0
PINE	Pine Mountain	56.35	300	IAmb	IAmb	19 09 28.1	
	comp=Z,539nm,0.9s						
TX32	Lajitas Array	56.37	276	IAmb	IAmb	19 09 26.6	
	comp=Z,1µm,2.1s						
TXAR	Lajitas Array	56.37	276	P	P	19 08 54.0	+0.2
	comp=Z,19nm,0.7s,baz=57,slow=6.2,SNR=55						
TXAR				S	S	19 16 40.5	-3.1
	comp=Z,0.9nm,0.9s,baz=69,slow=4.5,SNR=0.8						
TXAR				LR	LR	19 33 11.4	
	comp=Z,245µm,18.1s,baz=0.0,slow=36						
TXAR				PKPPKP	P'P'df	19 38 48.6	-3.9
	comp=Z,2.4nm,1.1s,baz=258,slow=3.7,SNR=6.9						
TXAR	Lajitas Array	56.37	276	P	P	19 08 53.7	-0.1
RC01	Rabbit Creek A	56.38	329	S	S	19 16 43.6	+0.8
	baz=40						
RC01	Rabbit Creek A	56.38	329	P	P	19 08 53.0	-0.3
	baz=40,SNR=28						
H04A	Detroit Lake	56.40	301	IAmb	IAmb	19 09 09.6	
	comp=Z,566nm,1.4s						
H04A				IAMs_20	IAMs_20	19 30 58.8	
	comp=Z,105µm,21.0s						
SUA	Susitna One	56.41	330	IAmb	IAmb	19 09 11.6	
	comp=Z,680nm,1.0s						
SUA				IAMs_20	IAMs_20	19 32 11.2	
	comp=Z,130µm,19.0s						
KNB	Kanab	56.45	289	IAmb	IAmb	19 09 27.4	
	comp=Z,474nm,1.1s						
BRVK	Borovoye	56.47	45	ceP	P	19 08 54.8	+0.8
BRVK				pmax	pmax		
	comp=Z,988nm,1.8s						
BRVK	Borovoye	56.47	45	P	P	19 08 51.2	-2.8
BRVK				IAmb	IAmb	19 09 16.9	
	comp=Z,530nm,1.1s						
BRVK					P'P'df	19 38 50.2	-5.9
BRVK	Borovoye	56.47	45	IAMs_20	IAMs_20	19 31 42.8	
	comp=Z,108µm,20.0s						
BRVK	Borovoye	56.47	45	P	P	19 08 55.3	+1.3
BRVK				P	P	19 08 55.3	+1.3
BRVK				P	P	19 08 55.3	+1.3
MID	Middleton Isla	56.52	326	IAMs_20	IAMs_20	19 32 19.7	
	comp=Z,131µm,18.0s						
Q23K	Middleton Isla	56.52	326	S	S	19 16 49.3	+4.7
	baz=42						
Q23K	Middleton Isla	56.52	326	IAMs_20	IAMs_20	19 32 19.4	
	comp=Z,141µm,18.0s						
Q23K	Middleton Isla	56.52	326	P	P	19 08 53.9	-0.4
	baz=42						
BVAR	Borovoye Array	56.53	45	P	P	19 08 55.4	+0.9
	comp=Z,58nm,0.7s,baz=285,slow=5.8,SNR=57						
U15A	North Rim	56.55	288	IAMs_20	IAMs_20	19 31 45.6	
	comp=Z,183µm,21.0s						
121A	Cookes Peak, D	56.59	281	S	S	19 16 49.7	+3.0
	baz=45						
121A	Cookes Peak, D	56.59	281	IAmb	IAmb	19 09 31.0	
	comp=Z,1µm,1.8s						
121A	Cookes Peak, D	56.59	281	P	P	19 08 56.2	+0.8
	baz=45,SNR=47						
G03D	McMinnville, O	56.60	302	S	S	19 16 46.8	+0.8
	baz=47						
G03D	McMinnville, O	56.60	302	P	P	19 08 55.6	+0.6
	baz=47,SNR=9.2						
BRRC	Barranca, Sant	56.62	232	eP	P	19 08 54.9	-0.6
WUAZ	Wupatki	56.64	286	S	S	19 16 51.4	+4.3
	baz=46						
WUAZ	Wupatki	56.64	286	IAmb	IAmb	19 09 28.4	
	comp=Z,672nm,1.3s						
WUAZ				IAMs_20	IAMs_20	19 31 43.8	
	comp=Z,103µm,19.0s						
WUAZ	Wupatki	56.64	286	P	P	19 08 57.2	+1.4
	baz=46,SNR=68						
H04D	Lebanon	56.80	301	S	S	19 16 49.9	+1.3
	baz=47						
H04D	Lebanon	56.80	301	P	P	19 08 55.8	-0.7
	baz=47,SNR=9.2						
TTA	Tatalina	56.81	333	P	P	19 08 55.2	-1.2
TTA				pmax	pmax		
	comp=Z,2µm,1.8s						
TTA				MLR	MLR		
	comp=Z,262µm,22.0s						
TTA	Tatalina	56.81	333		P	19 08 55.2	-1.2
BARC	Barichara	56.81	231	eP	P	19 08 57.2	+0.1
O22K	Cooper Landing	56.84	328	S	S	19 16 49.7	+1.0

	baz=40						
O22K	Cooper Landing	56.84	328	IAMs_20	IAMs_20	19 32 25.7	
	comp=Z,135µm,20.0s						
O22K	Cooper Landing	56.84	328	P	P	19 08 56.6	+0.1
	baz=40,SNR=10.0						
J05D	Fort Rock, OR	56.85	299	S	S	19 16 53.9	+4.2
	baz=47						
J05D	Fort Rock, OR	56.85	299	P	P	19 08 56.3	-0.8
	baz=47,SNR=59						
UREC	San Jos de Ur	56.95	234	eP	P	19 08 59.5	+1.6
SEW	Seward	57.05	328	IAMs_20	IAMs_20	19 32 33.4	
	comp=Z,145µm,20.0s						
COR	Corvallis	57.05	302	P	P	19 08 57.8	-0.5
COR				pmax	pmax		
	comp=Z,2µm,1.6s						
COR				MLR	MLR		
	comp=Z,97µm,18.0s						
COR	Corvallis	57.05	302	P	P	19 08 57.8	-0.5
COR	Corvallis	57.05	302	IAMs_20	IAMs_20	19 32 15.0	
	comp=Z,97µm,18.0s						
K05A	Summer Lake	57.05	299	IAMs_20	IAMs_20	19 32 30.3	
	comp=Z,136µm,18.0s						
CAPN	Captain Cook N	57.08	329	S	S	19 16 53.1	+1.3
	baz=39						
CAPN	Captain Cook N	57.08	329	P	P	19 08 55.9	-2.3
	baz=39						
R11A	Troy Canyon, C	57.12	292	S	S	19 16 55.6	+2.2
	baz=46						
R11A	Troy Canyon, C	57.12	292	IAmb	IAmb	19 09 15.0	
	comp=Z,588nm,1.6s						
R11A				IAMs_20	IAMs_20	19 31 06.4	
	comp=Z,161µm,22.0s						
R11A	Troy Canyon, C	57.12	292	P	P	19 09 00.2	+1.2
	baz=46,SNR=85						
I04A	Tendick Farm,	57.12	300	S	S	19 16 54.6	+1.5
	baz=46						
I04A	Tendick Farm,	57.12	300	P	P	19 08 58.8	-0.1
	baz=46,SNR=41						
MOD	Modoc Plateau	57.30	298	IAMs_20	IAMs_20	19 32 20.9	
	comp=Z,126µm,18.0s						
PETF	Flores	57.30	254	IAmb	IAmb	19 09 28.4	
	comp=Z,606nm,1.6s						
MALB	Monte Alegre	57.32	207	eP	P	19 09 00.8	+0.4
J04D	Umpqua Nationa	57.34	300	S	S	19 17 01.4	+5.1
	baz=46						
J04D	Umpqua Nationa	57.34	300	P	P	19 08 59.8	-0.9
	baz=46,SNR=35						
RUSC	La Rusia	57.37	231	eP	P	19 09 00.1	-1.3
X16A	Lo Mia Camp, P	57.45	285	IAmb	IAmb	19 09 19.9	
	comp=Z,429nm,0.9s						
PTBC	PUERTO BERRIO,	57.47	233	eP	P	19 09 01.7	+0.1
TNA	Tin City	57.51	340	S	S	19 17 00.5	+3.1
	baz=30						
TNA	Tin City	57.51	340		P	19 08 59.3	-1.9
TNA				IAMs_20	IAMs_20	19 33 39.5	
	comp=Z,141µm,21.0s						
TNA					P'P'bc	19 39 00.4	-7.1
TNA	Tin City	57.51	340	P	P	19 09 00.4	-0.7
	baz=30,SNR=34						
UPD2	Meteti	57.53	237	eP	P	19 09 07.6	+5.6
K04D	Chiloquin, OR	57.58	299	S	S	19 17 02.5	+3.3
	baz=46						
K04D	Chiloquin, OR	57.58	299	P	P	19 09 01.8	-0.4
	baz=46,SNR=5.9						
I02D	Swisshome	57.66	302	S	S	19 17 03.0	+3.0
	baz=46						
I02D	Swisshome	57.66	302	P	P	19 09 02.9	+0.3
	baz=46,SNR=6.6						
I03D	Drain, OR	57.68	301	S	S	19 17 02.6	+2.3
	baz=46						
I03D	Drain, OR	57.68	301	P	P	19 09 01.8	-0.9
	baz=46,SNR=28						
BRLK	Bradley Lake	57.77	328	IAmb	IAmb	19 09 19.5	
	comp=Z,747nm,1.1s						
BRLK				IAMs_20	IAMs_20	19 31 38.6	
	comp=Z,128µm,22.0s						
ANM	Nome	57.81	338	P	P	19 09 01.9	-1.5
ANM				pmax	pmax		
	comp=Z,1µm,1.8s						
ANM				MLR	MLR		
	comp=Z,272µm,20.0s						
ANM	Nome	57.81	338		P	19 09 01.9	-1.5
ANM				IAmb	IAmb	19 09 21.2	
	comp=Z,1µm,1.8s						
ANM					P'P'bc	19 38 52.7	-14
ESPN	Las Esperanzas	57.88	246	IAmb	IAmb	19 09 19.9	
	comp=Z,475nm,1.0s						
ESPN				IAMs_20	IAMs_20	19 29 23.7	
	comp=Z,194µm,22.0s						
DBBC	Dabeiba	57.92	235	eP	P	19 09 03.8	-1.0
UPA	Univ. de Panam	57.96	239	eP	P	19 09 08.6	+3.7
BCIP	Isla Barro Col	57.96	240	IAmb	IAmb	19 09 27.1	
	comp=Z,1µm,1.9s						
BCIP	Isla Barro Col	57.96	240	eP	P	19 09 10.4	+5.5
PTGA	Pitinga	58.00	214	LR	LR	19 30 22.3	
	comp=Z,40µm,21.9s,baz=22,slow=32						
PTGA				PKPPKP	P'P'bc	19 38 57.6	+4.2
	comp=Z,2.2nm,0.8s,baz=143,slow=3.6,SNR=4.2						
PTGA	Pitinga	58.00	214	P	P	19 09 04.1	-1.1
PTGA				IAmb	IAmb	19 09 21.3	
	comp=Z,485nm,1.1s						
PTGA					P'P'bc	19 38 54.3	+0.8
SPBC	San Pablo de B	58.05	232	eP	P	19 09 02.3	-3.4
TGUH	Tegucigalpa,Un	58.06	250		pP	19 09 10.3	-0.2
TGUH				IAMs_20	IAMs_20	19 30 21.3	
	comp=Z,104µm,21.0s						
TGUH	Tegucigalpa,Un	58.06	250	eP	P	19 09 08.6	+2.8
CNPM	China Poot	58.07	328	IAMs_20	IAMs_20	19 32 35.0	
	comp=Z,104µm,22.0s						
HOM	Homer	58.09	329	S	S	19 17 09.5	+4.3
	baz=38						
HOM	Homer	58.09	329	P	P	19 09 05.2	-0.2
	baz=38,SNR=7.1						
SVW2	Sparrevohn	58.15	332	IAMs_20	IAMs_20	19 33 11.1	
	comp=Z,178µm,21.0s						
L04D	Klamath Falls	58.16	299	S	S	19 17 10.0	+3.2
	baz=46						
L04D	Klamath Falls	58.16	299	P	P	19 09 04.6	-1.7
	baz=46,SNR=39						
NBPA	Parau_RN	58.20	186	eP	P	19 09 07.8	+1.2
RCBR	Riachuelo	58.21	185	P	P	19 09 09.3	+2.7
RCBR				pmax	pmax		
	comp=Z,384nm,1.4s						
RCBR				MLR	MLR		
	comp=Z,25µm,20.0s						
RCBR	Riachuelo	58.21	185		P	19 09 09.3	+2.7
RCBR	Riachuelo	58.21	185	eP	P	19 09 09.4	+2.7
M04C	Macdoel	58.21	298	S	S	19 17 11.0	+3.5
	baz=46						
M04C	Macdoel	58.21	298	P	P	19 09 05.9	-0.7
	baz=46,SNR=43						
HUMO	Hull Mountain	58.23	300	IAMs_20	IAMs_20	19 32 57.1	
	comp=Z,122µm,18.0s						
PAHR	Pah Rah Range	58.31	295		P	19 09 06.7	-0.7
PAHR				IAmb	IAmb	19 09 25.1	
	comp=Z,888nm,1.3s						
PAHR				IAMs_20	IAMs_20	19 32 41.6	
	comp=Z,179µm,20.0s						
PAHR					P'P'bc	19 38 59.1	-4.0
J01E	Myrtle Point	58.36	301	S	S	19 17 12.6	+3.4
	baz=46						
J01E	Myrtle Point	58.36	301	P	P	19 09 05.6	-1.9
	baz=46,SNR=23						
W13A	Hualapai Mount	58.40	288	P	P	19 09 06.8	-1.4
W13A					P'P'bc	19 38 55.1	-7.0
J27D	J27D	58.41	304	S	S	19 17 16.3	+7.3
J27D				P	P	19 09 15.7	+8.3
J27D				PP	PP	19 11 33.6	+17
J27D				SS	SS	19 21 15.2	+15
PTGC	Puerto Gaitan,	58.41	229	eP	P	19 09 06.8	-1.4
TPNV	Topopah Spring	58.47	291	S	S	19 17 12.1	+1.0
	baz=45						
TPNV	Topopah Spring	58.47	291	IAMs_20	IAMs_20	19 33 20.2	
	comp=Z,183µm,19.0s						
TPNV	Topopah Spring	58.47	291	P	P	19 09 08.5	0.0
	baz=45,SNR=94						
NV11	Mina Array Sit	58.51	293	IAmb	IAmb	19 09 25.6	
	comp=Z,899nm,1.6s						
NORC	Norcasia	58.52	233	eP	P	19 09 06.7	-2.2
TUC	Tucson	58.54	283	S	S	19 17 17.2	+5.2
	baz=44						
TUC	Tucson	58.54	283	P	P	19 09 08.6	-0.5
TUC				pmax	pmax		
	comp=Z,242nm,1.2s						
TUC				MLR	MLR		
	comp=Z,572µm,19.0s						
TUC	Tucson	58.54	283		P	19 09 08.6	-0.5
TUC	Tucson	58.54	283	P	P	19 09 10.3	+1.2
	baz=44						
K02D	Willamette Mer	58.55	300	S	S	19 17 12.1	+0.4
	baz=46						
K02D	Willamette Mer	58.55	300	P	P	19 09 08.2	-0.7
	baz=46,SNR=45						
ACON	Acoyapa	58.55	247	P	P	19 09 09.9	+0.8
RYN	Ryan	58.58	294	IAMs_20	IAMs_20	19 33 02.9	
	comp=Z,184µm,20.0s						
NVAR	Mina Array Bea	58.60	293	P	P	19 09 10.2	+0.7
	comp=Z,9.2nm,0.5s,baz=49,slow=6.3,SNR=43						
NVAR				S	S	19 17 08.9	-3.9
	comp=Z,0.4nm,0.6s,baz=63,slow=32,SNR=2.4						
NVAR				LR	LR	19 33 20.4	
	comp=Z,232µm,18.3s,baz=48,slow=35						
NVAR				PKPPKP	P'P'df	19 38 54.7	+3.4
	comp=Z,2.3nm,0.9s,baz=199,slow=4.1,SNR=4.8						
NVAR	Mina Array Bea	58.60	293		P'P'bc	19 38 50.5	-12
NVAR	Mina Array Bea	58.60	293	P	P	19 09 02.2	-7.3
PTAC	Punta Ardita,	58.62	236	eP	P	19 09 10.3	+0.7
YBH	Yreka Blue Hor	58.71	299	S	S	19 17 16.1	+2.1
	comp=Z,0.5nm,0.3s,baz=285,slow=18,SNR=1.3						
YBH				LR	LR	19 33 19.2	
	comp=Z,94µm,19.7s,baz=40,slow=35						
YBH				PKPPKP	P'P'df	19 38 57.7	+6.2
	comp=Z,1.0nm,0.4s,baz=311,slow=5.9,SNR=3.4						
YBH	Yreka Blue Hor	58.71	299	IAMs_20	IAMs_20	19 33 42.9	
	comp=Z,140µm,18.0s						
J28D	J28D	58.72	304	S	S	19 17 19.1	+6.2
J28D				P	P	19 09 18.8	+9.4
J28D				PP	PP	19 11 28.2	+9.2
J28D				SS	SS	19 21 12.5	+7.1
YERR	Yerington	58.73	294	IAMs_20	IAMs_20	19 33 05.9	
	comp=Z,198µm,20.0s						
BEKR	Beckworth	58.74	296	IAmb	IAmb	19 09 27.7	
	comp=Z,527nm,1.1s						
BEKR				IAMs_20	IAMs_20	19 33 14.9	
	comp=Z,118µm,18.0s						
VCNR	Virginia City	58.74	295	IAmb	IAmb	19 09 29.8	
	comp=Z,407nm,0.9s						
VCNR				IAMs_20	IAMs_20	19 32 56.1	
	comp=Z,181µm,20.0s						
KEBM	Edson Butte	58.77	301	IAMs_20	IAMs_20	19 32 34.4	
	comp=Z,65µm,18.0s						
CHIC	Chingaza	58.78	231	eP	P	19 09 11.3	+0.1
PNME	Penonome	58.79	240	eP	P	19 09 14.6	+3.9
CBOC	Ciudad Bolivar	58.82	234	eP	P	19 09 11.3	+0.1
ESQI	Esquipulas	58.85	252	IAMs_20	IAMs_20	19 32 07.2	
	comp=Z,153µm,20.0s						
PNTR	Pine Nut	58.86	295	P	P	19 09 10.0	-1.3
J19D	J19D	58.86	303	S	S	19 17 20.5	+5.6
J19D				P	P	19 09 13.4	+2.9
J19D				PP	PP	19 11 31.3	+11
J19D				SS	SS	19 21 19.4	+12
ROSC	El Rosal	58.88	232	P	P	19 09 12.9	+1.1
	comp=Z,218nm,0.6s,baz=72,slow=3.3,SNR=35						
ROSC				S	S	19 17 13.3	-3.9
	comp=Z,6.0nm,0.4s,baz=279,slow=19,SNR=1.4						
ROSC				LR	LR	19 30 47.3	
	comp=Z,136µm,21.9s,baz=27,slow=32						
ROSC				PKPPKP		19 39 02.0	
	comp=Z,8.5nm,0.4s,baz=61,slow=12,SNR=3.8						
ROSC	El Rosal	58.88	232	IAMs_20	IAMs_20	19 31 20.4	
	comp=Z,159µm,22.0s						
ROSC	El Rosal	58.88	232	eP	P	19 09 10.7	-1.2
L02E	Cave Junction	58.89	300	S	S	19 17 18.6	+2.5
	baz=45						
L02E	Cave Junction	58.89	300	P	P	19 09 09.0	-2.2
	baz=45,SNR=43						
EKNA	AfricaArray -	58.96	130⇓	eP	P	19 09 18.0	+6.0
MTO3	Montecristo	58.99	252	IAmb	IAmb	19 09 47.7	
	comp=Z,610nm,1.2s						
MTO3				IAMs_20	IAMs_20	19 31 10.9	
	comp=Z,172µm,21.0s						
CRIN	San Cristobal	59.02	249	P	P	19 09 13.1	+0.6
CRIN				IAMs_20	IAMs_20	19 32 48.9	
	comp=Z,100µm,21.0s						
M02C	Callahan	59.02	299	S	S	19 17 18.5	+0.4
	baz=45						
M02C	Callahan	59.02	299	P	P	19 09 10.4	-1.9
	baz=45,SNR=30						
GUY2C	Guyana, Caldas	59.05	233	eP	P	19 09 13.4	+0.2
NEE2	Needles Airpor	59.06	288	S	S	19 17 19.9	+1.4
	baz=45						
NEE2	Needles Airpor	59.06	288	P	P	19 09 13.8	+1.3
	baz=45,SNR=6.3						
GRAC	Grapevine Rang	59.07	292	S	S	19 17 20.4	+1.6
	baz=45						
GRAC	Grapevine Rang	59.07	292	P	P	19 09 13.7	+1.0
	baz=45,SNR=50						
PDMCI	Parker Dam,Lak	59.11	287	S	S	19 17 22.6	+3.5
	baz=45						
PDMCI	Parker Dam,Lak	59.11	287	P	P	19 09 14.2	+1.4
	baz=45,SNR=80						
FURC	Furnace Creek,	59.16	291	S	S	19 17 22.7	+3.1
	baz=45						
FURC	Furnace Creek,	59.16	291	P	P	19 09 13.7	+0.6
	baz=45,SNR=46						
J20D	J20D	59.16	304	S	S	19 17 26.0	+7.3
J20D				P	P	19 09 14.9	+2.4
J20D				PP	PP	19 11 36.0	+13
J20D				SS	SS	19 21 11.1	-1.3
KBO	Bosley Butte	59.18	300		P	19 09 13.3	0.0
KBO				IAMs_20	IAMs_20	19 36 49.2	
	comp=Z,95µm,18.0s						
RUBR	Rubicon Trail	59.20	295	IAmb	IAmb	19 09 30.3	
	comp=Z,466nm,1.2s						
RUBR				IAMs_20	IAMs_20	19 33 22.0	
	comp=Z,181µm,20.0s						
SOLC	Bahia Solano	59.20	235	eP	P	19 09 14.5	+0.9
SHOC	Shoshone, Teco	59.22	290	S	S	19 17 23.8	+3.2
	baz=45						
SHOC	Shoshone, Teco	59.22	290	P	P	19 09 15.1	+1.5
	baz=45,SNR=9.9						
O03E	Paynes Creek	59.23	297	S	S	19 17 21.7	+1.0
	baz=45						
O03E	Paynes Creek	59.23	297	P	P	19 09 12.8	-0.9
	baz=45,SNR=54						
N02D	Trinity Center	59.24	298	S	S	19 17 20.5	-0.3
	baz=45						
N02D	Trinity Center	59.24	298	P	P	19 09 12.2	-1.5
	baz=45,SNR=56						
RREF	El Recreo	59.32	233	eP	P	19 09 16.4	+1.2
AZU	Azuero	59.35	239	eP	P	19 09 08.8	-5.9
J11D	J11D	59.36	303	S	S	19 17 26.0	+4.7
J11D				P	P	19 09 17.3	+3.3
J11D				PP	PP	19 11 36.0	+11
J11D				PPP	PPP	19 13 01.5	
WDC	Whiskeytown Da	59.43	298	P	P	19 09 13.5	-1.5
WDC				pmax	pmax		
	comp=Z,220nm,1.2s						
WDC				MLR	MLR		
	comp=Z,88µm,18.0s						
WDC	Whiskeytown Da	59.43	298		P	19 09 13.4	-1.5
WDC				IAMs_20	IAMs_20	19 33 22.9	
	comp=Z,88µm,18.0s						
MLAC	Mammoth, Mammo	59.46	293	S	S	19 17 27.6	+3.5
	baz=45						
MLAC	Mammoth, Mammo	59.46	293	P	P	19 09 16.9	+1.4
	baz=45,SNR=17						
SNET	Serv Nac Est T	59.48	252	P	P	19 09 14.9	-0.8
SNET				IAMs_20	IAMs_20	19 30 33.0	
	comp=Z,205µm,22.0s						
KRMB	Red Mountain	59.50	299	IAMs_20	IAMs_20	19 34 08.6	
	comp=Z,164µm,20.0s						
TIN	Tinemaha, Big	59.52	292	S	S	19 17 28.1	+3.4
	baz=45						
TIN	Tinemaha, Big	59.52	292	P	P	19 09 16.4	+0.6
	baz=45,SNR=17						
OMMB	Old Mammoth Mi	59.56	293	IAmb	IAmb	19 09 33.2	
	comp=Z,424nm,1.4s						
HDC	Heredia	59.57	244	IAMs_20	IAMs_20	19 32 37.7	
	comp=Z,76µm,20.0s						
ORV	Oroville	59.58	296	IAMs_20	IAMs_20	19 33 50.2	
	comp=Z,136µm,18.0s						
TOLC	Tolima	59.59	232	eP	P	19 09 17.8	+1.1
MDPB	Devils Postpil	59.59	293	IAmb	IAmb	19 09 33.3	
	comp=Z,1µm,2.2s						
GMRC	Granite Mounta	59.65	289	S	S	19 17 29.8	+3.3
	baz=44						
GMRC	Granite Mounta	59.65	289	P	P	19 09 17.2	+0.5
	baz=44,SNR=83						
ANIL	Santa Ana	59.71	232	eP	P	19 09 18.1	+0.6
BRZS	Berezniki	59.71	46	eP	P	19 09 13.5	-3.4
	comp=Z,168nm,1.1s,baz=46						
BRZS	Berezniki	59.71	46	eP	P	19 09 13.4	-3.4
BRZS				pmax	pmax		
	comp=Z,168nm,1.1s						
AFDM	Forest Hills D	59.72	295	IAmb	IAmb	19 10 59.0	
	comp=Z,277nm,0.8s						
AFDM				IAMs_20	IAMs_20	19 33 26.9	
	comp=Z,82µm,20.0s						
PLMC	San Jos del P	59.78	234	eP	P	19 09 17.8	+0.1
NBLI	Livramento-PB	59.79	186	eP	P	19 09 19.8	+2.1
JTS	Las Juntas de	59.80	245	P	P	19 09 18.9	+1.1
JTS				pmax	pmax		
	comp=Z,436nm,1.4s						
JTS				MLR	MLR		
	comp=Z,138µm,22.0s						
JTS	Las Juntas de	59.80	245	P	P	19 09 18.9	+1.1
JTS				IAmb	IAmb	19 09 47.8	
	comp=Z,436nm,1.4s						
JTS	Las Juntas de	59.80	245	IAMs_20	IAMs_20	19 30 31.7	
	comp=Z,138µm,22.0s						
JTS	Las Juntas de	59.80	245	eP	P	19 09 19.1	+1.3
IRM	Iron Mountain	59.80	288	S	S	19 17 30.8	+2.7
	baz=44						
IRM	Iron Mountain	59.80	288	P	P	19 09 18.6	+1.0
	baz=44,SNR=101						
MPMC	Manual Prospec	59.80	291	S	S	19 17 31.2	+2.7
	baz=44						
MPMC	Manual Prospec	59.80	291	P	P	19 09 18.5	+0.6
	baz=44,SNR=168						
O02D	Mt. Diablo Mer	59.84	298	S	S	19 17 30.0	+1.3
	baz=45						
O02D	Mt. Diablo Mer	59.84	298	P	P	19 09 17.7	-0.2
	baz=45,SNR=5.4						
KHMM	Horse Mountain	59.86	299	IAmb	IAmb	19 09 46.5	
	comp=Z,633nm,1.1s						
GAMB	Gambell	59.87	341	IAmb	IAmb	19 09 35.4	
	comp=Z,872nm,1.6s						
GAMB				IAMs_20	IAMs_20	19 34 58.6	
	comp=Z,109µm,21.0s						
CWC	Cottonwood Cre	59.87	292	S	S	19 17 32.8	+3.5
	baz=44						
CWC	Cottonwood Cre	59.87	292	P	P	19 09 19.9	+1.6
	baz=44						
KDAK	Kodiak Island	59.88	328	P	P	19 09 17.7	0.0
	comp=Z,50nm,1.0s,baz=60,slow=5.3,SNR=6.2						
KDAK				LR	LR	19 35 13.8	
	comp=Z,107µm,18.6s,baz=66,slow=36						
KDAK	Kodiak Island	59.88	328	ceP	P	19 09 21.8	+4.0
KDAK				pmax	pmax		
	comp=Z,747nm,1.3s						
KDAK				MLR	MLR		
	comp=Z,136µm,17.0s						
KDAK	Kodiak Island	59.88	328	P	P	19 09 17.4	-0.4
KDAK				IAmb	IAmb	19 09 34.2	
	comp=Z,500nm,1.1s						
KDAK	Kodiak Island	59.88	328	IAMs_20	IAMs_20	19 35 02.9	
	comp=Z,121µm,19.0s						
GSC	Goldstone, Bar	59.95	290	S	S	19 17 32.3	+2.1
	baz=44						
GSC	Goldstone, Bar	59.95	290	P	P	19 09 18.2	-0.6
GSC				pmax	pmax		
	comp=Z,441nm,1.4s						
GSC				MLR	MLR		
	comp=Z,412µm,18.0s						
GSC	Goldstone, Bar	59.95	290		P	19 09 18.1	-0.6
GSC				IAmb	IAmb	19 09 35.4	
	comp=Z,441nm,1.4s						
GSC	Goldstone, Bar	59.95	290	P	P	19 09 18.6	-0.2
	baz=44,SNR=71						
113A	Mohawk Valley,	59.98	286	IAmb	IAmb	19 09 35.5	
	comp=Z,585nm,1.4s						
214A	Organ Pipe Nat	60.00	284	S	S	19 17 34.1	+3.4
	baz=44						
214A	Organ Pipe Nat	60.00	284	IAmb	IAmb	19 09 35.5	
	comp=Z,353nm,1.1s						
214A	Organ Pipe Nat	60.00	284	P	P	19 09 20.5	+1.5
	baz=44,SNR=51						
HEC	Hector,Ludlow	60.01	289	S	S	19 17 34.5	+3.5
	baz=44						
HEC	Hector,Ludlow	60.01	289	P	P	19 09 20.0	+0.8
	baz=44,SNR=84						
CMB	Columbia Colle	60.04	294	IAmb	IAmb	19 09 35.5	
	comp=Z,682nm,1.7s						
CMB				IAMs_20	IAMs_20	19 33 48.5	
	comp=Z,176µm,20.0s						
JCC	Jacoby Creek,	60.06	299	IAMs_20	IAMs_20	19 34 37.6	
	comp=Z,153µm,21.0s						
G35D	G35D	60.08	302	S	S	19 17 44.8	+14
G35D				P	P	19 09 21.1	+2.3
G35D				PP	PP	19 11 42.2	+11
G35D				PPP	PPP	19 13 04.0	
G35D				SS	SS	19 21 18.0	-8.8
GUVC	San Jose del G	60.10	229	eP	P	19 09 17.9	-1.9
PRAC	Prado	60.13	232	eP	P	19 09 16.0	-4.1
ORTC	Ortega, Tolima	60.14	232	eP	P	19 09 20.2	0.0
RTAL	Retalhuleu	60.26	254	P	P	19 09 22.8	+1.9
RTAL				IAMs_20	IAMs_20	19 34 48.3	
	comp=Z,140µm,20.0s						
PIZC	Pizarro, Choco	60.26	235	eP	P	19 09 27.3	+6.4
LRMC	Laurel Mtn Rad	60.33	291	S	S	19 17 38.3	+3.2
	baz=44						
LRMC	Laurel Mtn Rad	60.33	291	P	P	19 09 22.1	+0.7
	baz=44,SNR=86						
BC3	Big Chuckawall	60.34	288	S	S	19 17 38.6	+3.4
	baz=44						
BC3	Big Chuckawall	60.34	288	P	P	19 09 23.0	+1.5
	baz=44,SNR=159						
RRX	Edison Barstow	60.36	290	S	S	19 17 40.3	+5.0
	baz=44						
RRX	Edison Barstow	60.36	290	P	P	19 09 23.9	+2.4
	baz=44						
PRPB	Parauapebas	60.39	200	eP	P	19 09 21.7	0.0
G36D	G36D	60.40	302	S	S	19 17 48.1	+14
G36D				P	P	19 09 26.6	+5.6
G36D				PP	PP	19 11 43.0	+9.2
G36D				PPP	PPP	19 13 09.5	
GLA	Glamis	60.40	287	S	S	19 17 39.1	+3.1
	baz=44						
GLA	Glamis	60.40	287	P	P	19 09 23.5	+1.7
	baz=44,SNR=49						
BELC	Belle Mtn. Jos	60.41	288	S	S	19 17 41.3	+5.1
	baz=44						
BELC	Belle Mtn. Jos	60.41	288	P	P	19 09 23.1	+1.1
	baz=44,SNR=103						
G37D	G37D	60.49	302	S	S	19 17 46.7	+11
G37D				P	P	19 09 23.5	+1.8
G37D				PP	PP	19 11 43.0	+8.3
G37D				PPP	PPP	19 13 10.3	
G37D				SS	SS	19 21 26.3	-7.0
MACA	Manacapuru-AM	60.52	213	eP	P	19 09 22.9	+0.3
OHAK	Old Harbor	60.55	328	IAMs_20	IAMs_20	19 35 32.8	
	comp=Z,125µm,19.0s						
YOTC	Yotoco, Valle	60.60	233	eP	P	19 09 21.3	-2.1
KCPM	Cahto Peak	60.62	298	IAmb	IAmb	19 09 40.6	
	comp=Z,705nm,1.0s						
FS16D	FS16D	60.64	299	S	S	19 17 45.3	+7.0
ISA	Isabella, Lake	60.65	291	S	S	19 17 42.8	+3.7
	baz=44						
ISA	Isabella, Lake	60.65	291		P	19 09 23.0	-0.5
ISA				IAmb	IAmb	19 09 40.5	
	comp=Z,612nm,1.4s						
ISA				IAMs_20	IAMs_20	19 36 15.8	
	comp=Z,99µm,19.0s						
ISA					P'P'bc	19 38 55.2	-1.7
ISA	Isabella, Lake	60.65	291	P	P	19 09 25.2	+1.7
	baz=44,SNR=70						
PIX	Pinacate	60.67	284	IAMs_20	IAMs_20	19 34 35.8	
	comp=Z,142µm,19.0s						
FS10D	FS10D	60.69	299	S	S	19 17 45.7	+6.7
FS10D				PPP	PPP	19 13 21.2	
MIB	Mutribah	60.69	78	eP		19 09 24.2	
VOG	Valley Oaks Go	60.69	292	S	S	19 17 41.3	+1.9
	baz=44						
VOG	Valley Oaks Go	60.69	292	P	P	19 09 24.6	+0.9
	baz=44						
FS13D	FS13D	60.70	299	S	S	19 17 48.1	+9.3
FS13D				P	P	19 09 25.8	+2.5
FS13D				PPP	PPP	19 13 22.7	
RST	Umm Al-Ruwaisa	60.71	79	eP		19 09 24.8	
FS07D	FS07D	60.74	299	S	S	19 17 45.3	+5.8
FS07D				PPP	PPP	19 13 25.1	
FS09D	FS09D	60.74	299	S	S	19 17 45.3	+6.0
FS09D				PPP	PPP	19 13 21.2	
BBRC	Big Bear Solar	60.76	289	S	S	19 17 45.4	+4.6
	baz=44						
BBRC	Big Bear Solar	60.76	289	P	P	19 09 26.7	+2.3
	baz=44,SNR=14						

FS06D	FS06D	60.79	299	S	S	19 17 45.3	+5.3
FS02D	FS02D	60.82	299	S	S	19 17 45.3	+4.7
HOPS	Hopland Field	60.84	297		P	19 09 24.4	-0.3
VES	Vestal, Richgr	60.87	292	S	S	19 17 44.3	+2.6
	baz=44						
VES	Vestal, Richgr	60.87	292	P	P	19 09 26.0	+1.2
	baz=44,SNR=60						
G10D	G10D	60.89	300	S	S	19 17 49.4	+8.4
G10D				P	P	19 09 27.4	+2.9
G10D				PP	PP	19 11 50.0	+12
G10D				SS	SS	19 21 15.2	-24
EDW2	Edwards Air Fo	60.93	290	S	S	19 17 45.9	+3.3
	baz=44						
EDW2	Edwards Air Fo	60.93	290	P	P	19 09 26.9	+1.5
	baz=44,SNR=78						
G29D	G29D	60.94	302	S	S	19 17 50.9	+9.2
G29D				P	P	19 09 26.6	+1.8
G29D				PP	PP	19 11 48.4	+10
G29D				PPP	PPP	19 13 07.1	
G29D				SS	SS	19 21 06.9	-33
G01D	G01D	60.95	299	S	S	19 17 41.2	-1.1
G01D				SS	SS	19 21 16.6	-24
XPFO	Pion Flat	60.95	288	IAMs_20	IAMs_20	19 35 55.1	
	comp=Z,94µm,18.0s						
PFO	Pinyon Flats O	60.95	288	LR	LR	19 34 49.3	
	comp=Z,77µm,19.6s,baz=43,slow=35						
PFO	Pinyon Flats O	60.95	288	S	S	19 17 47.9	+4.8
	baz=44						
PFO	Pinyon Flats O	60.95	288	P	P	19 09 25.2	-0.5
PFO				pmax	pmax		
	comp=Z,592nm,1.3s						
PFO				MLR	MLR		
	comp=Z,95µm,18.0s						
PFO	Pinyon Flats O	60.95	288	P	P	19 09 25.2	-0.5
PFO				IAmb	IAmb	19 10 09.9	
	comp=Z,592nm,1.2s						
PFO	Pinyon Flats O	60.95	288	IAMs_20	IAMs_20	19 35 55.2	
	comp=Z,95µm,18.0s						
PFO	Pinyon Flats O	60.95	288	P	P	19 09 27.5	+1.8
	baz=44,SNR=74						
TPFO	Pinon Flats	60.95	288	S	S	19 17 48.0	+4.8
	baz=44						
TPFO	Pinon Flats	60.95	288	P	P	19 09 27.8	+2.1
	baz=44,SNR=79						
MACC	Macarena, Meta	61.02	230	*e*P	P	19 09 27.5	+1.4
UNM	Universidad Na	61.02	264	IAMs_20	IAMs_20	19 37 52.6	
	comp=Z,112µm,20.0s						
SWSC	Sam W. Stewart	61.05	287	S	S	19 17 48.6	+4.6
	baz=44						
SWSC	Sam W. Stewart	61.05	287	P	P	19 09 28.2	+2.0
	baz=44,SNR=42						
UABX	UABC, Campus M	61.06	287	IAMs_20	IAMs_20	19 34 43.3	
	comp=Z,180µm,20.0s						
MALC	Bahia Malaga	61.07	234	*e*P	P	19 09 25.3	-1.2
GEYT	Alibeck	61.10	65	P	P	19 09 25.8	-0.7
	comp=Z,28nm,1.0s,baz=293,slow=7.7,SNR=19						
GEYT				S	S	19 17 48.3	+3.6
	comp=Z,1.4nm,0.6s,baz=163,slow=31,SNR=1.1						
GEYT				PKPPKP		19 38 55.5	
	comp=Z,2.6nm,0.9s,baz=158,slow=4.3,SNR=5.3						
GEYT				LR	LR	19 39 31.0	
	comp=Z,26µm,19.0s,baz=330,slow=40						
GEYT	Alibeck	61.10	65	P	P	19 09 23.5	-3.0
GYA0B	ALIBECK ARRAY	61.10	65	IAmb	IAmb	19 09 53.5	
	comp=Z,714nm,1.6s						
UMR	Umm Al-Rimmam	61.10	78	*e*P		19 09 26.8	
G20D	G20D	61.11	301	S	S	19 17 52.7	+9.0
G20D				P	P	19 09 28.2	+2.2
G20D				PP	PP	19 11 50.8	+11
G20D				PPP	PPP	19 13 17.9	
CPBX	Cerro Prieto	61.13	286	IAMs_20	IAMs_20	19 34 43.2	
	comp=Z,87µm,19.0s						
BFSC	Mount Baldy Ra	61.20	289	S	S	19 17 50.1	+3.9
	baz=44						
BFSC	Mount Baldy Ra	61.20	289	P	P	19 09 29.1	+1.7
	baz=44,SNR=42						
ARVC	Arvin	61.23	291	S	S	19 17 51.4	+5.0
	baz=44						
ARVC	Arvin	61.23	291	P	P	19 09 30.2	+2.8
	baz=44,SNR=8.3						
BETC	Betania	61.30	232	*e*P	P	19 09 28.1	+0.1
MCCM	Marconi Confer	61.34	296	pP	pP	19 09 33.4	+1.0
SII	Sitkinak Islan	61.38	328	IAMs_20	IAMs_20	19 35 33.1	
	comp=Z,153µm,19.0s						
MURC	Murrieta	61.39	289	S	S	19 17 49.1	+0.7
	baz=44						
MURC	Murrieta	61.39	289	P	P	19 09 30.4	+1.9
	baz=44,SNR=45						
MARP	Paez Belalcaza	61.41	232	*e*P	P	19 09 28.1	-1.0
MWC	Mount Wilson	61.44	290	IAmb	IAmb	19 09 53.3	
	comp=Z,324nm,1.2s						
IKP	In-Ko-Pah, Jac	61.44	287	S	S	19 17 50.7	+1.5
	baz=44						
IKP	In-Ko-Pah, Jac	61.44	287	P	P	19 09 29.9	+1.0
	baz=44,SNR=64						
MONP2	Monument Peak	61.45	288	S	S	19 17 53.1	+3.5
	baz=44						
MONP2	Monument Peak	61.45	288	P	P	19 09 31.5	+2.4
	baz=44,SNR=78						
RDF	Al-Radifah	61.46	79	*e*P		19 09 28.4	
RMX	La Rumorosa	61.46	287	IAmb	IAmb	19 09 46.1	
	comp=Z,492nm,1.2s						
SAO	San Andreas Ge	61.54	294	P	P	19 09 27.7	-1.7
SAO				pmax	pmax		
	comp=Z,204nm,1.0s						
SAO	San Andreas Ge	61.54	294		P	19 09 27.7	-1.7
OSI	Osito Audit: C	61.54	291	S	S	19 17 54.1	+3.7
	baz=44						
OSI	Osito Audit: C	61.54	291		pP	19 09 32.7	-1.2
OSI	Osito Audit: C	61.54	291	P	P	19 09 32.3	+2.7
	baz=44,SNR=8.2						
PASC	Pasadena Art C	61.55	290		pP	19 09 32.3	-1.7
DECC	Green Verdugo	61.58	290	S	S	19 17 52.1	+1.2
	baz=44						
DECC	Green Verdugo	61.58	290	P	P	19 09 31.2	+1.5
	baz=44						
PAGB	Antelope Grade	61.61	292	P	P	19 09 27.3	-2.6
PAGB				IAmb	IAmb	19 09 48.5	
	comp=Z,799nm,2.0s						
PAGB				IAMs_20	IAMs_20	19 35 28.1	
	comp=Z,103µm,18.0s						
ZAA0	Zalesovo Array	61.62	37	P	P	19 09 26.9	-2.8
ZALV	Zalesovo Beam	61.62	37	P	P	19 09 29.2	-0.5
	comp=Z,28nm,0.7s,baz=317,slow=6.4,SNR=28						
ZALV				LR	LR	19 36 34.7	
	comp=Z,32µm,20.2s,baz=322,slow=36						
ZALV				PKPPKP		19 39 05.5	
	comp=Z,0.7nm,0.3s,baz=162,slow=0.9,SNR=4.4						
ZALV	Zalesovo Beam	61.62	37	P	P	19 09 26.7	-3.0
G21D	G21D	61.65	301	S	S	19 17 60.0	+9.4
G21D				P	P	19 09 31.3	+1.8
G21D				PP	PP	19 11 55.4	+11
G21D				PPP	PPP	19 13 23.5	
KURK	Kurchatov	61.71	43	P	P	19 09 30.2	-0.1
KURK	Kurchatov	61.71	43		P	19 09 27.2	-3.1
KURK				IAmb	IAmb	19 09 48.3	
	comp=Z,429nm,1.1s						
KURK					P'P'bc	19 38 48.4	-7.9
KURK	Kurchatov	61.71	43	IAMs_20	IAMs_20	19 34 49.3	
	comp=Z,89µm,22.0s						
KURK	Kurchatov	61.71	43	P	P	19 09 30.9	+0.6
KURK				P	P	19 09 30.9	+0.6
KURK				P	P	19 09 30.9	+0.6
G22D	G22D	61.72	302	S	S	19 17 58.6	+7.1
G22D				P	P	19 09 32.1	+2.0
G22D				PP	PP	19 11 53.1	+7.6
G22D				PPP	PPP	19 13 18.1	
G03D7	G03D7	61.74	300	S	S	19 18 07.4	+16
G03D7				PP	PP	19 11 55.4	+10
G03D7				PPP	PPP	19 13 25.1	
KURBB	Kurchatov Arra	61.74	43	P	P	19 09 30.2	-0.4
	comp=Z,47nm,0.8s,baz=322,slow=7.2,SNR=47						
GARC	Garzon, Huila	61.76	231	*e*P	P	19 09 31.4	0.0
SMMC	Simmler	61.76	292	S	S	19 17 53.2	0.0
	baz=44						
SMMC	Simmler	61.76	292	P	P	19 09 32.7	+1.7
	baz=44,SNR=10						
TKX	Tecate	61.79	287	P	P	19 09 31.8	+0.6
ESJX	Sierra Juarez	61.81	287		pP	19 09 34.7	-1.2
ESJX				IAMs_20	IAMs_20	19 35 15.0	
	comp=Z,109µm,20.0s						
109C	Camp Elliot, M	61.85	288	S	S	19 17 57.5	+3.3
	baz=43						
109C	Camp Elliot, M	61.85	288	P	P	19 09 31.6	+0.1
109C				IAMs_20	IAMs_20	19 35 03.9	
	comp=Z,140µm,21.0s						
109C	Camp Elliot, M	61.85	288	P	P	19 09 32.7	+1.2
	baz=43						
SFX	San Felipe	61.86	285		pP	19 09 34.9	-1.2
SFX				IAMs_20	IAMs_20	19 34 41.6	
	comp=Z,136µm,21.0s						
FMP	Fort Macarthur	61.94	290	S	S	19 17 56.3	+0.9
	baz=43						
FMP	Fort Macarthur	61.94	290	P	P	19 09 34.6	+2.5
	baz=43						
H10N2	ASCENSION HYDR	61.94	160	P	P	19 09 41.1	+9.2
	baz=350,slow=5.9,SNR=3.4						
H10N2				T	T	20 17 13.0	
	baz=349,slow=75,SNR=7.5						
H10N3	ASCENSION HYDR	61.95	160	P	P	19 09 41.9	+10
	baz=350,slow=5.9,SNR=3.0						
H10N3				T	T	20 17 10.4	
	baz=349,slow=75,SNR=9.5						
H10N1	ASCENSION HYDR	61.96	160	P	P	19 09 40.9	+8.9
	baz=350,slow=5.9,SNR=5.8						
H10N1				T	T	20 17 14.4	
	baz=349,slow=75,SNR=7.1						
PKM	Mcpherson Peak	61.97	291	S	S	19 17 55.2	-0.9
	baz=44						
PKM	Mcpherson Peak	61.97	291	P	P	19 09 33.5	+0.9
	baz=44,SNR=31						
MOIG	Morelia	61.98	266	P	P	19 09 33.1	+0.2
MOIG				IAmb	IAmb	19 09 50.4	
	comp=Z,627nm,1.0s						
G04D	G04D	62.00	300	S	S	19 18 07.4	+13
G04D				PP	PP	19 11 55.4	+7.6
G04D				PPP	PPP	19 13 27.4	
CBX	Cerro Bola	62.01	287	P	P	19 09 30.9	-1.9
POPC	Popayan, Colom	62.02	233	*e*P	P	19 09 32.2	-1.0
PCON	Cinco Dias	62.07	232	*e*P	P	19 09 33.6	-0.2
G13D	G13D	62.17	301	S	S	19 18 06.0	+8.8
G13D				P	P	19 09 35.2	+2.1
G13D				PP	PP	19 11 51.6	+2.0
G13D				PPP	PPP	19 13 24.3	
SPX	San Pedro Mart	62.23	285	IAmb	IAmb	19 09 51.4	
	comp=Z,477nm,1.5s						
SPX				IAMs_20	IAMs_20	19 35 22.0	
	comp=Z,156µm,20.0s						
SBC	Santa Barbara	62.23	291	S	S	19 18 01.6	+2.6
	baz=43						
SBC	Santa Barbara	62.23	291	P	P	19 09 37.0	+2.9
	baz=43						
CIS	Catalina Islan	62.24	289	S	S	19 18 00.6	+1.4
	baz=43						
CIS	Catalina Islan	62.24	289	P	P	19 09 36.7	+2.5
	baz=43,SNR=38						
CCX	Cicese	62.33	287	P	P	19 09 34.1	-0.7
CCX				IAmb	IAmb	19 09 51.6	
	comp=Z,539nm,1.4s						
SOTA	Rioblanco	62.34	232	*e*P	P	19 09 37.4	+1.8
GR1C	Gorgona, Isla	62.35	234	*e*P	P	19 09 34.6	-0.5
FLOC	Florencia	62.36	231	*e*P	P	19 09 33.8	-1.4
SCZ2	Santa Cruz Isl	62.51	291	S	S	19 18 02.9	+0.4
	baz=43						
SCZ2	Santa Cruz Isl	62.51	291	P	P	19 09 37.2	+1.2
	baz=43,SNR=7.9						
G05D7	G05D7	62.56	301	S	S	19 18 21.2	+20
G05D7				PP	PP	19 12 03.2	+11
G05D7				PPP	PPP	19 13 32.1	
G05D7				SS	SS	19 21 15.2	-50
SMTB	Santa Maria do	62.57	197	*e*P	P	19 09 36.5	+0.1
SEM	Semipalatinsk	62.61	42	*e*P	P	19 09 34.2	-2.5
	comp=Z,153nm,1.3s,baz=42						
SEM				*e*S	S	19 18 02.2	-1.7
	baz=42						
SEM				LR	LR	19 33 55.1	
	comp=Z,18µm,19.5s,baz=42						
SEM	Semipalatinsk	62.61	42	*e*P	P	19 09 34.1	-2.5
SEM				*e*S	S	19 18 02.1	-1.7
SEM				pmax	pmax		
	comp=Z,153nm,1.3s						
SCI2	San Clemente I	62.62	289	S	S	19 18 06.6	+2.7
	baz=43						
SCI2	San Clemente I	62.62	289	P	P	19 09 39.0	+2.3
	baz=43,SNR=8.9						
BBAC	Balboa, Cauca	62.74	233	*e*P	P	19 09 39.8	+1.8
CHGN	Chignik	62.94	330	P	P	19 09 37.5	-0.9
SNCC	San Nicolas Is	62.99	290	S	S	19 18 11.4	+2.8
	baz=43						
SNCC	San Nicolas Is	62.99	290	P	P	19 09 41.2	+2.0
	baz=43						
CRUC	La Cruz	63.00	232	*e*P	P	19 09 42.3	+2.5
H10S3	ASCENSION HYDR	63.00	161	T	T	20 18 32.4	
	baz=349,slow=74,SNR=8.0						
H10S2	ASCENSION HYDR	63.01	161	T	T	20 18 46.5	
	baz=231,slow=74,SNR=2.3						
PTLC	Puerto Leguiza	63.19	230	*e*P	P	19 09 41.7	+1.0
GCUF	Volcan Galeras	63.48	233	*e*P	P	19 09 46.8	+3.6
TUMC	Tumaco	63.65	234	*e*P	P	19 09 44.1	+0.5
KK31	Karatay Array	63.78	53	P	P	19 09 42.2	-2.1
KK31				pmax	pmax		
	comp=Z,933nm,1.9s						
KK31	Karatay Array	63.78	53	P	P	19 09 42.2	-2.1
KK31				IAmb	IAmb	19 10 07.6	
	comp=Z,933nm,1.9s						
KK31					P'P'bc	19 38 45.9	-4.3
KKAR	Karatay Array	63.78	53	P	P	19 09 41.1	-3.2
KKAR	Karatay Array	63.78	53	P	P	19 09 41.1	-3.2
KKAR					P'P'bc	19 38 46.9	-3.3
KKAR	Karatay Array	63.78	53	IAmb	IAmb	19 10 07.6	
	comp=Z,933nm,1.9s						
BTLS	Baital	64.01	49	*e*P	P	19 09 43.8	-1.9
	comp=Z,96nm,1.4s,baz=49						
BTLS	Baital	64.01	49	*e*P	P	19 09 43.8	-1.9
BTLS				pmax	pmax		
	comp=Z,97nm,1.4s						
RAYN	Ar Rayn	64.20	85	*i* P	P	19 09 48.6	+1.3
	SNR=13						
RAYN	Ar Rayn	64.20	85	P	P	19 09 44.2	-3.1
RAYN				pmax	pmax		
	comp=Z,3µm,2.5s						
RAYN				MLR	MLR		
	comp=Z,15µm,20.0s						
RAYN	Ar Rayn	64.20	85	P	P	19 09 44.2	-3.1
RAYN					P'P'bc	19 38 45.3	-0.7
LPIG	La Paz	64.23	276	LR	LR	19 37 25.6	
	comp=Z,152µm,18.0s,baz=43,slow=36						
IUG	Iuzhnay	64.26	54	*e*P	P	19 09 45.7	-2.0
	comp=Z,231nm,1.4s,baz=54						
IUG	Iuzhnay	64.26	54	*e*P	P	19 09 45.6	-2.0
IUG				pmax	pmax		
	comp=Z,231nm,1.4s						
SLBS	Sierra La Lagu	64.32	276	P	P	19 09 47.4	-0.7
SLBS				IAmb	IAmb	19 10 02.9	
	comp=Z,447nm,1.1s						
DZA	Taraz	64.34	52	*e*P	P	19 09 45.9	-2.2
	comp=Z,116nm,1.1s,baz=52						
DZA	Taraz	64.34	52	*e*P	P	19 09 45.8	-2.2
DZA				pmax	pmax		
	comp=Z,117nm,1.1s						
SDPT	Sand Point	64.37	330	P	P	19 09 46.4	-1.5
SDPT				IAMs_20	IAMs_20	19 37 31.4	
	comp=Z,137µm,19.0s						
CNBA	Chernabura Isl	64.55	329	P	P	19 09 47.5	-1.5
CNBA				IAMs_20	IAMs_20	19 38 22.9	
	comp=Z,120µm,20.0s						
SEY	Seymchan	64.85	358	LR	LR	19 38 45.5	
	comp=Z,41µm,20.0s,baz=14,slow=37						
SEY				PKPPKP	P'P'df	19 38 40.7	-3.3
	comp=Z,2.5nm,0.8s,baz=16,slow=2.0,SNR=4.3						
SEY	Seymchan	64.85	358⇑	*e*P	P	19 09 51.3	+0.4
OTAV	Otavalo	64.88	233	P	P	19 09 51.0	-1.3
OTAV				IAmb	IAmb	19 10 27.1	
	comp=Z,539nm,1.3s						
OTAV					P'P'bc	19 38 39.9	+0.8
OTAV	Otavalo	64.88	233	IAMs_20	IAMs_20	19 34 44.4	
	comp=Z,107µm,22.0s						
OTAV	Otavalo	64.88	233	*e*P	P	19 09 49.9	-2.4
OTAV	Otavalo	64.88	233	*e*P	P	19 09 52.8	+0.4
YAK	Yakutsk	64.89	9	P	P	19 09 49.5	-1.7
	baz=152,slow=3.2						
YAK				PKPPKP	P'P'df	19 38 45.5	+1.7
	comp=Z,5.7nm,0.3s,baz=158,slow=3.2,SNR=5.1						
YAK	Yakutsk	64.89	9	*e*P	P	19 09 50.2	-1.0
YAK				*e**PP	sP	19 09 57.4	0.0
YAK				*e*		19 10 21.5	
YAK				*e*		19 12 22.5	
YAK				*e*S	S	19 18 33.0	+1.8
YAK				*e*		19 19 48.0	
YAK				*e*SS	SS	19 22 41.7	+0.1
YAK				pmax	pmax		
	comp=Z,65nm,1.4s						
YAK				pmax	pmax		
	comp=N,44nm,1.4s						
YAK				pmax	pmax		
	comp=E,15nm,1.5s						
YAK				pmax	pmax		
	comp=Z,1µm,5.1s						
YAK				pmax	pmax		
	comp=N,531nm,4.2s						
YAK				smax	smax		
	comp=E,2µm,4.7s						
YAK				smax	smax		
	comp=N,840nm,4.9s						
YAK				MLR	MLR		
	comp=Z,32µm,18.0s						
YAK				MLR	MLR		
	comp=N,25µm,20.0s						
YAK				MLR	MLR		
	comp=E,17µm,19.0s						
YAK	Yakutsk	64.89	9	P	P	19 09 49.1	-2.1
YAK				IAmb	IAmb	19 10 15.2	
	comp=Z,268nm,0.8s						
SDBA	SAO DESIDERIO	65.60	194	*e*P	P	19 09 59.2	+2.8
FALS	False Pass	65.67	332	IAMs_20	IAMs_20	19 37 49.2	
	comp=Z,160µm,21.0s						
PEXB	Peixe	65.86	197	*e*P	P	19 09 58.5	+0.4
KUU	Kurty	65.94	49	*e*P	P	19 09 56.4	-2.0
	comp=Z,373nm,1.7s,baz=49						
KUU	Kurty	65.94	49	*e*P	P	19 09 56.3	-2.0
KUU				pmax	pmax		
	comp=Z,373nm,1.7s						
HRA	Herat	65.96	65		P	19 10 00.3	+1.4
DGZ	Jazzator, Alta	66.00	38⇑	*e*P	P	19 09 56.6	-2.2
DGZ				pmax	pmax		
	comp=Z,411nm,2.1s						
DGZ				MLR	MLR		
	comp=Z,50µm,19.0s						
TDK	Taldyqorghan	66.02	47	*e*P	P	19 09 57.2	-1.6
	comp=Z,170nm,1.1s,baz=47						
TDK				*e*S	S	19 18 43.5	-2.2
	baz=47						
TDK				LR	LR	19 37 13.1	
	comp=Z,39µm,18.1s,baz=47						
TDK	Taldyqorghan	66.02	47	*e*P	P	19 09 57.2	-1.6
TDK				*e*S	S	19 18 43.5	-2.2
TDK				pmax	pmax		
	comp=Z,170nm,1.1s						
TDK				MLR	MLR		
	comp=Z,39µm,18.0s						
AAK	Ala-Archa	66.05	51	P	P	19 09 58.8	-0.5
	comp=Z,5.3nm,0.4s,baz=314,slow=4.5,SNR=13						
AAK	Ala-Archa	66.05	51	*i* P	P	19 10 01.6	+2.3
	SNR=48						
AAK	Ala-Archa	66.05	51⇓	*e*P	P	19 10 00.7	+1.4
AAK				pmax	pmax		
	comp=Z,943nm,1.4s						
AAK	Ala-Archa	66.05	51	P	P	19 09 56.4	-2.8
AAK				IAmb	IAmb	19 10 23.9	
	comp=Z,614nm,1.6s						
AAK	Ala-Archa	66.05	51	P	P	19 10 00.8	+1.6
AAK				P	P	19 10 00.8	+1.6
MAKZ	Makanchi	66.14	43	P	P	19 09 56.4	-3.2
MAKZ				pmax	pmax		
	comp=Z,527nm,1.2s						
MAKZ				MLR	MLR		
	comp=Z,82µm,22.0s						
MAKZ	Makanchi	66.14	43	P	P	19 09 56.4	-3.2
MAKZ				IAmb	IAmb	19 10 17.8	
	comp=Z,526nm,1.2s						
MAKZ				IAMs_20	IAMs_20	19 37 32.6	
	comp=Z,82µm,22.0s						
CHKK	Chushkaly	66.27	48	*e*P	P	19 09 59.3	-1.3
	baz=48						
CHKK	Chushkaly	66.27	48	*e*P	P	19 09 59.2	-1.3
MK31	Makanchi Array	66.28	43*c*	*i*P	P	19 09 57.3	-3.2
MK31	Makanchi Array	66.28	43	P	P	19 09 57.1	-3.5
MK31				IAmb	IAmb	19 10 18.5	
	comp=Z,473nm,1.3s						
MK31					P'P'df	19 38 33.1	-7.2
MK31				P'P'bc	P'P'bc	19 38 40.0	-3.9
MKAR	Makanchi Array	66.28	43	P	P	19 10 00.2	-0.4
	comp=Z,54nm,0.8s,baz=330,slow=5.8,SNR=41						
MKAR				LR	LR	19 38 10.8	
	comp=Z,59µm,21.9s,baz=323,slow=35						
MKAR				PKPPKP	P'P'df	19 38 37.4	-2.9
	comp=Z,1.2nm,0.9s,baz=95,slow=2.6,SNR=3.9						
MKAR	Makanchi Array	66.28	43	P	P	19 09 57.3	-3.2
BOD	Bodaibo	66.59	19	*e*P	P	19 10 02.0	-0.2
BOD				pmax	pmax		
	comp=Z,321nm,2.0s						
AAA	Alma-Ata	66.74	49	*e*P	P	19 10 02.1	-1.4
	comp=Z,425nm,1.9s,baz=49						
AAA				LR	LR	19 37 36.1	
	comp=Z,21µm,17.2s,baz=49						
AAA	Alma-Ata	66.74	49	*e*P	P	19 10 02.1	-1.4
AAA				pmax	pmax		
	comp=Z,425nm,1.9s						
AAA				MLR	MLR		
	comp=Z,21µm,17.0s						
SAML	Samuel	66.77	214	P	P	19 10 02.2	-1.7
SAML				IAmb	IAmb	19 10 19.7	
	comp=Z,413nm,1.3s						
SAML				P'P'df	P'P'bc	19 38 25.8	-5.3
SAML					P'P'bc	19 38 37.9	+6.8
SAML	Samuel	66.77	214	IAMs_20	IAMs_20	19 34 34.7	
	comp=Z,103µm,22.0s						
SAML	Samuel	66.77	214	*e*P	P	19 10 03.4	-0.5
ZSN	Zaisan	66.82	41	*e*P	P	19 10 01.1	-2.9
	comp=Z,83nm,0.9s,baz=41						
ZSN	Zaisan	66.82	41	*e*P	P	19 10 01.0	-2.9
ZSN				pmax	pmax		
	comp=Z,83nm,0.9s						
MDOK	Medeo	66.83	49	*e*P	P	19 10 02.8	-1.5
	baz=49						
MDOK				LR	LR	19 37 32.6	
	comp=Z,20µm,16.5s,baz=49						
MDOK	Medeo	66.83	49	*e*P	P	19 10 02.7	-1.5
MDOK				MLR	MLR		
	comp=Z,20µm,16.0s						
AKUT	Akutan	66.97	332	IAMs_20	IAMs_20	19 38 26.0	
	comp=Z,70µm,20.0s						
KPKS	Kokpek	67.34	48	*e*P	P	19 10 05.7	-1.8
	comp=Z,256nm,1.4s,baz=48						
KPKS	Kokpek	67.34	48	*e*P	P	19 10 05.6	-1.8
KPKS				pmax	pmax		
	comp=Z,255nm,1.4s						
UNV	Unalaska Valle	67.43	333	P	P	19 10 07.3	-0.3
UNV				IAmb	IAmb	19 10 23.2	
	comp=Z,472nm,1.0s						
UNV				IAMs_20	IAMs_20	19 40 32.2	
	comp=Z,91µm,18.0s						
SLWR	Sila	67.53	79	P	P	19 10 09.6	+0.8
SATY	Saty	67.54	48	*e*P	P	19 10 06.8	-2.0
	baz=48						
SATY	Saty	67.54	48	*e*P	P	19 10 06.7	-2.0
JRN	Qarnain Island	67.57	78	P	P	19 10 10.8	+1.8
	SNR=24						
SHLS	Shalkode	67.94	47	*e*P	P	19 10 10.2	-1.0
	comp=Z,241nm,1.6s,baz=47						
SHLS	Shalkode	67.94	47	*e*P	P	19 10 10.2	-1.0
SHLS				pmax	pmax		
	comp=Z,241nm,1.6s						
MA2	Magadan	68.25	358	S	S	19 19 14.4	+2.4
	comp=Z,2.2nm,0.8s,baz=170,slow=21,SNR=1.2						
MA2				PKPPKP		19 38 36.2	
	comp=Z,8.8nm,0.8s,baz=198,slow=7.6,SNR=4.7						
MA2				LR	LR	19 40 57.0	
	comp=Z,37µm,19.1s,baz=17,slow=37						
MA2	Magadan	68.25	358	*de*P	P	19 10 13.2	+0.5
MA2				pmax	pmax		
	comp=Z,48nm,1.3s						
MA2				MLR	MLR		
	comp=Z,44µm,18.0s						
MA2	Magadan	68.25	358	P	P	19 10 11.7	-1.1
MA2				IAMs_20	IAMs_20	19 42 32.2	
	comp=Z,55µm,19.0s						
SHME	Shamm	68.69	75	*i* P	P	19 10 16.2	+0.2
	SNR=9.6						
SHME	Shamm	68.69	75	P	P	19 10 17.2	+1.2
	SNR=24						
SHME				P	P	19 10 17.2	+1.2
	SNR=24						
UMQ	Umm Al-Quwin	68.81	76	*i* P	P	19 10 21.2	+4.5
	SNR=23						
UMQ	Umm Al-Quwin	68.81	76	P	P	19 10 18.1	+1.4

	SNR=16						
NIKH	**Nikolski High**	**68.86**	**334**	P	**P**	**19 10 15.3**	**-1.3**
NIKH				IAmb	IAmb	19 10 31.4	
	comp=Z,342nm,0.8s						
BANOM	**Banah**	**68.88**	**75**	*i* P	**P**	**19 10 17.9**	**+0.6**
	SNR=14						
BANOM	**Banah**	**68.88**	**75**	P	**P**	**19 10 18.1**	**+0.8**
	SNR=48						
MOY	**Mondy**	**68.93**	**29**	*e*P	**P**	**19 10 17.8**	**+0.6**
MOY				pmax	pmax		
	comp=Z,370nm,3.0s						
AJN	**Ajban**	**69.13**	**77**	*i* P	**P**	**19 10 19.6**	**+0.9**
	SNR=42						
AJN	**Ajban**	**69.13**	**77**	P	**P**	**19 10 19.5**	**+0.7**
	SNR=25						
KSH	**Kashi**	**69.17**	**52**	P	**P**	**19 10 18.8**	**-0.2**
KSH				sP	pwP	19 10 28.3	+0.6
KSH				S	**S**	**19 19 17.1**	**-6.8**
KSH				pmax	pmax		
	comp=Z,940nm,7.6s						
KSH				LR	LR		
	comp=Z,74µm,20.1s						
KSH				LR	LR		
	comp=Z,70µm,20.4s						
KSH				LR	LR		
	comp=Z,215µm,31.1s						
NAZ	**Nazwa, Dubai**	**69.21**	**76**	*i* P	**P**	**19 10 19.7**	**+0.4**
	SNR=31						
NAZ	**Nazwa, Dubai**	**69.21**	**76**	P	**P**	**19 10 19.7**	**+0.4**
	SNR=24						
NAZ				P	**P**	**19 10 19.7**	**+0.4**
	SNR=24						
MASF	**Masafi**	**69.22**	**75**	P	**P**	**19 10 20.9**	**+1.6**
	SNR=53						
MASF				P	**P**	**19 10 20.9**	**+1.6**
	SNR=53						
MSFE	**Esma-Masafi**	**69.23**	**75**	*i* P	**P**	**19 10 19.6**	**+0.2**
	SNR=10						
BDFB	**Brasilia**	**69.27**	**196**	P	P	19 10 24.9	+5.3
	comp=Z,68nm,0.9s,baz=8.0,slow=5.2,SNR=19						
BDFB				S	**S**	**19 19 22.8**	**-2.4**
	comp=Z,2.3nm,0.3s,baz=91,slow=17,SNR=1.2						
BDFB				LR	LR	19 36 13.1	
	comp=Z,39µm,20.7s,baz=357,slow=32						
BDFB				PKPPKP	P'P'bc	19 38 41.3	+19
	comp=Z,8.9nm,1.0s,baz=168,slow=0.8,SNR=6.7						
BDFB	**Brasilia**	**69.27**	**196**	P	**P**	**19 10 19.3**	**-0.3**
BDFB				pmax	pmax		
	comp=Z,947nm,1.9s						
BDFB				MLR	MLR		
	comp=Z,48µm,19.0s						
BDFB	**Brasilia**	**69.27**	**196**	P	**P**	**19 10 19.3**	**-0.3**
BDFB				IAmb	IAmb	19 10 39.9	
	comp=Z,947nm,1.9s						
BDFB				P'P'bc	**P'P'bc**	**19 38 24.4**	**+1.9**
BDFB					P'P'df	19 38 38.0	+15
ASUD	**Al Ashush, Dub**	**69.29**	**76**	*i* P	**P**	**19 10 20.5**	**+0.8**
	SNR=10						
ASUD	**Al Ashush, Dub**	**69.29**	**76**	P	**P**	**19 10 21.4**	**+1.7**
	SNR=20						
ASUD				P	**P**	**19 10 21.4**	**+1.7**
	SNR=20						
FAQ	**Al Faqa, Dubai**	**69.35**	**76**	*i* P	**P**	**19 10 20.0**	**-0.1**
	SNR=8.4						
FAQ	**Al Faqa, Dubai**	**69.35**	**76**	P	**P**	**19 10 22.0**	**+1.8**
	SNR=32						
FAQ				P	**P**	**19 10 22.0**	**+1.8**
	SNR=32						
MDH	**Madha**	**69.35**	**75**	*i* P	**P**	**19 10 22.0**	**+1.8**
	SNR=5.8						
MDH	**Madha**	**69.35**	**75**	P	**P**	**19 10 21.6**	**+1.5**
	SNR=46						
MDH				P	**P**	**19 10 21.6**	**+1.5**
	SNR=46						
IRK	**Irkutsk**	**69.36**	**27**	*e*P	**P**	**19 10 19.7**	**-0.1**
IRK				pmax	pmax		
	comp=Z,730nm,2.1s						
KBL	**Kabul**	**69.52**	**60**	P	**P**	**19 10 19.0**	**-2.3**
KBL				pmax	pmax		
	comp=Z,348nm,1.3s						
KBL	**Kabul**	**69.52**	**60**	P	**P**	**19 10 18.9**	**-2.3**
KBL				IAmb	IAmb	19 10 47.4	
	comp=Z,348nm,1.3s						
KBL					P'P'df	19 38 20.6	-13
KBL					P'P'df	19 38 31.6	-2.1
KBL	**Kabul**	**69.52**	**60**	P	**P**	**19 10 22.9**	**+1.6**
	SNR=61						
KBL				P	**P**	**19 10 22.9**	**+1.6**
	SNR=61						
UOSS	**Minazif**	**69.56**	**76**	*i* P	**P**	**19 10 20.9**	**-0.6**
	SNR=52						
UOSS	**Minazif**	**69.56**	**76**	P	**P**	**19 10 17.8**	**-3.7**
UOSS				IAmb	IAmb	19 10 43.2	
	comp=Z,514nm,1.0s						
UOSS				P'P'bc	P'P'df	19 38 21.0	-11
UOSS					P'P'df	19 38 33.6	+1.8
UOSS	**Minazif**	**69.56**	**76**	P	**P**	**19 10 21.8**	**+0.3**
UOSS				P	**P**	**19 10 21.8**	**+0.3**
VILB	**Vilhena**	**69.58**	**209**	*e*P	**P**	**19 10 21.9**	**+0.4**
HATD	**Hatta, Dubai**	**69.61**	**76**	*i* P	**P**	**19 10 21.4**	**-0.3**
	SNR=12						
HATD	**Hatta, Dubai**	**69.61**	**76**	P	**P**	**19 10 23.1**	**+1.3**
	SNR=51						
HATD				P	**P**	**19 10 23.1**	**+1.3**
	SNR=51						
ASHO	**Ashiyiah**	**69.68**	**76**	*i* P	**P**	**19 10 22.0**	**-0.2**
	SNR=10						
ASHO	**Ashiyiah**	**69.68**	**76**	P	**P**	**19 10 23.0**	**+0.8**
	SNR=39						
TLY	**Talaya**	**69.69**	**28**	PKPPKP		19 38 33.6	
	comp=Z,0.3nm,0.4s,baz=170,slow=8.4,SNR=3.7						
TLY	**Talaya**	**69.69**	**28***c*	*i*P	**P**	**19 10 26.2**	**+4.4**
TLY				*e*S	**S**	**19 19 32.0**	**+2.6**
TLY				*e*		19 20 22.1	
TLY				pmax	pmax		
	comp=Z,371nm,1.1s						
TLY				MLR	MLR		
	comp=Z,39µm,12.0s						
TLY	**Talaya**	**69.69**	**28**	P	**P**	**19 10 21.0**	**-0.8**
TLY	**Talaya**	**69.69**	**28**	P	**P**	**19 10 26.3**	**+4.5**
TLY				P	**P**	**19 10 26.3**	**+4.5**
TLY				P	**P**	**19 10 26.3**	**+4.5**
ALNE	**Al Ain**	**69.97**	**76**	*i* P	**P**	**19 10 24.8**	**+0.9**
	SNR=10						
ALNE	**Al Ain**	**69.97**	**76**	P	**P**	**19 10 25.5**	**+1.6**
	SNR=40						
ARAG	**Araguaiana, MT**	**70.06**	**200**	*e*P	**P**	**19 10 24.7**	**+0.3**
SOHO	**SOHO**	**70.37**	**76**	*i* P	**P**	**19 10 26.1**	**-0.3**
	SNR=9.9						
ZAK	**Zakamensk**	**70.74**	**28**	*e*P	**P**	**19 10 29.4**	**+1.0**
WMQ	**Urumqi**	**70.92**	**42**	P	**P**	**19 10 31.1**	**+1.5**
WMQ				sP	sP	19 10 36.5	+0.8
WMQ				PcP	**PcP**	**19 10 46.8**	**-3.2**
WMQ				S	**S**	**19 19 40.5**	**-3.7**
WMQ				sS	sS	19 19 56.8	+4.9
WMQ				SS	**SS**	**19 24 20.0**	**+4.1**
WMQ				pmax	pmax		
	comp=Z,1µm,3.7s						
WMQ				LR	LR		
	comp=Z,64µm,22.3s						
WMQ				LR	LR		
	comp=Z,44µm,23.9s						
WMQ				LR	LR		
	comp=Z,58µm,27.1s						
WMQ	**Urumqi**	**70.92**	**42**	P	**P**	**19 10 26.7**	**-2.9**
WMQ				pmax	pmax		
	comp=Z,2µm,2.0s						
WMQ				MLR	MLR		
	comp=Z,56µm,21.0s						
WMQ	**Urumqi**	**70.92**	**42**	P	**P**	**19 10 26.7**	**-2.9**
WMQ	**Urumqi**	**70.92**	**42**	IAMs_20	IAMs_20	19 40 56.8	
	comp=Z,56µm,21.0s						
ARQ	**Araqi**	**70.97**	**76**	P	**P**	**19 10 31.0**	**+0.9**
	SNR=25						
ARQ				P	**P**	**19 10 31.0**	**+0.9**
	SNR=25						
HOQ	**Hoqain**	**71.25**	**76**	P	**P**	**19 10 31.3**	**-0.5**
	SNR=44						
ATAH	**Atahualpa**	**71.29**	**229**	LR	LR	19 40 58.1	
	comp=Z,40µm,21.5s,baz=7.6,slow=35						
ATAH				PKPPKP	P'P'df	19 38 32.0	+9.5
	comp=Z,3.7nm,0.6s,baz=145,slow=15,SNR=3.5						
SJMB	**Sao Joao De Ma**	**71.36**	**189**	*e*P	**P**	**19 10 34.8**	**+2.6**
IPMB	**Ipameri, GO**	**71.59**	**196**	*e*P	**P**	**19 10 34.4**	**+0.6**
BIDO	**Bidbid**	**71.78**	**75**	P	**P**	**19 10 35.0**	**0.0**
	SNR=35						
PAYG	**Puerto Ayora**	**71.81**	**244**	P	**P**	**19 10 33.6**	**-1.5**
PAYG				IAmb	IAmb	19 10 50.7	
	comp=Z,1µm,1.4s						
PAYG	**Puerto Ayora**	**71.81**	**244**	IAMs_20	IAMs_20	19 38 38.1	
	comp=Z,58µm,21.0s						
PAYG	**Puerto Ayora**	**71.81**	**244**	*e*P	P	19 10 40.1	+4.9
ADK	**Adak**	**71.82**	**338**	P	**P**	**19 10 34.1**	**-0.6**
ADK				pmax	pmax		
	comp=Z,1µm,2.3s						
ADK				MLR	MLR		
	comp=Z,112µm,22.0s						
ADK	**Adak**	**71.82**	**338**	P	**P**	**19 10 34.1**	**-0.6**
ADK				IAmb	IAmb	19 10 50.6	
	comp=Z,1µm,2.2s						
ADK	**Adak**	**71.82**	**338**	IAMs_20	IAMs_20	19 42 08.8	
	comp=Z,112µm,22.0s						
BSY	**Bisya**	**71.82**	**76**	P	**P**	**19 10 37.4**	**+2.2**
	SNR=36						
RIB01	**Linhares ES**	**71.89**	**188**	*e*P	**P**	**19 10 37.4**	**+2.0**
CIT	**Chita**	**71.90**	**22**	*e*P	**P**	**19 10 35.6**	**+0.3**
CIT				*e*S	**S**	**19 20 02.5**	**+7.4**
CIT				pmax	pmax		
	comp=Z,520nm,2.3s						
SMDO	**Samad**	**72.09**	**75**	P	**P**	**19 10 36.8**	**-0.1**
	SNR=41						
NIL	**Nilore**	**72.41**	**58**	P	**P**	**19 10 35.7**	**-2.9**
NIL				pmax	pmax		
	comp=Z,419nm,1.1s						
NIL				MLR	MLR		
	comp=Z,46µm,22.0s						
NIL	**Nilore**	**72.41**	**58**	P	**P**	**19 10 35.7**	**-2.9**
NIL				IAmb	IAmb	19 11 02.2	
	comp=Z,419nm,1.1s						
PP1B	**Ponte de Pedra**	**72.58**	**203**	*e*P	**P**	**19 10 40.9**	**+1.3**
JMDO	**Jabal Madar**	**72.65**	**76**	P	**P**	**19 10 41.8**	**+1.6**
	SNR=50						
SIV	**San Ignacio**	**72.71**	**209**	LR	LR	19 38 42.8	
	comp=Z,150µm,20.1s,baz=32,slow=33						
ZEA	**Zeya**	**72.72**	**13**	*e*P	**P**	**19 10 41.8**	**+1.7**
ZEA				*e*S	**S**	**19 20 06.8**	**+2.5**
ZEA				pmax	pmax		
	comp=E,200nm,3.7s						
ZEA				pmax	pmax		
	comp=N,500nm,8.7s						
ZEA				pmax	pmax		
	comp=Z,1µm,6.5s						
ZEA				pmax	pmax		
	comp=Z,60nm,1.4s						
ZEA				pmax	pmax		
	comp=E,400nm,6.9s						
ZEA				pmax	pmax		
	comp=Z,1µm,7.7s						
ZEA				smax	smax		
	comp=E,10µm,17.6s						
ZEA				MLR	MLR		
	comp=N,11µm,18.0s						
ZEA				MLR	MLR		
	comp=Z,16µm,17.0s						
SMY	**Shemya**	**72.87**	**344**	IAMs_20	IAMs_20	19 42 48.2	
	comp=Z,60µm,20.0s						
WBK	**Wadi Bani Khal**	**72.97**	**75**	P	**P**	**19 10 43.8**	**+1.6**
	SNR=29						
DOK	**Doka**	**73.14**	**81**	P	**P**	**19 10 47.4**	**+4.3**
	SNR=28						
ALF01	**Guarapari-ES**	**73.21**	**189**	*e*P	**P**	**19 10 46.0**	**+2.8**
WHFO	**Wadi Hawf**	**73.46**	**82**	P	**P**	**19 10 46.0**	**+0.9**
	SNR=32						
JLN	**Jalan Bani Buh**	**73.59**	**75**	P	**P**	**19 10 48.7**	**+3.0**
	SNR=32						
ABTO	**Aybut**	**73.60**	**83**	P	**P**	**19 10 47.0**	**+1.0**
	SNR=30						
MHTO	**MHTO**	**73.62**	**77**	P	**P**	**19 10 46.0**	**0.0**
	SNR=50						
LODK	**Lodwar**	**73.65**	**106**	P	**P**	**19 10 50.5**	**+4.2**
	SNR=68						
ITRB	**Iturama**	**73.66**	**198**	*e*P	**P**	**19 10 47.4**	**+1.4**
SONM	**Songino Array**	**73.93**	**28**	P	**P**	**19 10 48.5**	**+1.0**
	comp=Z,29nm,0.9s,baz=328,slow=5.8,SNR=34						
SONM				PKPPKP	P'P'df	19 38 15.0	-13
	comp=Z,0.5nm,0.9s,baz=191,slow=4.0,SNR=3.6						
SONM				LR	LR	19 43 31.0	
	comp=Z,34µm,21.3s,baz=348,slow=36						
SONM	**Songino Array**	**73.93**	**28**	P	**P**	**19 10 44.3**	**-3.2**
SONM				IAmb	IAmb	19 11 06.3	
	comp=Z,332nm,0.9s						
BSCB	**Bom Sucesso**	**74.03**	**192**	*e*P	**P**	**19 10 50.1**	**+1.9**
RBK	**Rabkut**	**74.04**	**82**	P	**P**	**19 10 52.3**	**+3.9**
	SNR=32						
ULN	**Ulaanbaatar**	**74.08**	**27***c*	*e*P	**P**	**19 10 45.9**	**-2.6**
ULN				pmax	pmax		
	comp=Z,996nm,1.7s						
ULN	**Ulaanbaatar**	**74.08**	**27**	P	**P**	**19 10 45.2**	**-3.3**
ULN				IAmb	IAmb	19 11 09.0	
	comp=Z,1µm,1.4s						
ULN	**Ulaanbaatar**	**74.08**	**27**	P	**P**	**19 10 51.0**	**+2.5**
DQM	**DQM**	**74.18**	**78**	P	**P**	**19 10 52.3**	**+3.1**
	SNR=28						
MBAR	**Mbarara**	**74.25**	**113**⇓	*e*P	**P**	**19 10 51.9**	**+2.1**
MBAR				pmax	pmax		
	comp=Z,12nm,1.0s						
MBAR	**Mbarara**	**74.25**	**113**	P	**P**	**19 10 46.6**	**-3.2**
MBAR				IAmb	IAmb	19 11 13.5	
	comp=Z,1µm,2.1s						
PEA0B	**Petropavlovsk-**	**74.44**	**354**⇑	*e*P	**P**	**19 10 51.1**	**+0.9**
PEA0B	**Petropavlovsk-**	**74.44**	**354**		**P**	**19 10 49.6**	**-0.6**
PEA0B				IAmb	IAmb	19 11 12.6	
	comp=Z,587nm,1.4s						
PEA0B				IAMs_20	IAMs_20	19 43 50.1	
	comp=Z,78µm,20.0s						
PETK	**Petropavlovsk-**	**74.44**	**354**	P	**P**	**19 10 50.0**	**-0.2**
	comp=Z,9.0nm,0.8s,baz=74,slow=5.1,SNR=5.6						
PETK				LR	LR	19 43 50.9	
	comp=Z,77µm,20.3s,baz=8.6,slow=36						
PETK	**Petropavlovsk-**	**74.44**	**354**	P	**P**	**19 10 49.0**	**-1.2**
PET	**Petropavlovsk**	**74.46**	**353***d*	*i*P	**P**	**19 10 52.4**	**+2.1**
PET				*e*		19 13 41.2	
PET				*e*S	**S**	**19 20 19.9**	**-4.1**
PET				*e*PS		19 20 52.8	
PET				*e*PPS	PPS	19 21 08.5	
PET				pmax	pmax		
	comp=Z,2µm,15.3s						
PET				pmax	pmax		
	comp=Z,425nm,1.0s						
PET				smax	smax		
	comp=E,35µm,21.5s						
PET				smax	smax		
	comp=E,18µm,13.8s						
PET				MLR	MLR		
	comp=Z,74µm,18.0s						
PET				MLR	MLR		
	comp=Z,66µm,17.0s						
PET	**Petropavlovsk**	**74.46**	**353**	IAMs_20	IAMs_20	19 47 41.7	
	comp=Z,58µm,18.0s						
CAM01	**Campos-RJ**	**74.49**	**189**	*e*P	**P**	**19 10 52.8**	**+2.1**
SHAO	**Shalim**	**74.50**	**81**	P	**P**	**19 10 53.6**	**+2.5**
BB19B	**Bebedouro**	**74.66**	**196**	*e*P	**P**	**19 10 54.8**	**+3.0**
NNA	**Nana**	**74.88**	**226**	LR	LR	19 42 56.5	
	comp=Z,61µm,20.6s,baz=351,slow=35						
NNA	**Nana**	**74.88**	**226**	P	**P**	**19 10 52.4**	**-0.8**
NNA				pmax	pmax		
	comp=Z,293nm,1.2s						
NNA				MLR	MLR		
	comp=Z,66µm,20.0s						
NNA	**Nana**	**74.88**	**226**	P	**P**	**19 10 52.4**	**-0.8**
NNA	**Nana**	**74.88**	**226**	IAMs_20	IAMs_20	19 42 53.8	
	comp=Z,66µm,20.0s						
DHRM	**DHARAMSHALA**	**75.08**	**56**	*e*P	**P**	**19 10 57.3**	**+2.7**
DHRM				*e*PP	**PP**	**19 13 48.1**	**+6.0**
DHRM				IAMs_20	IAMs_20	19 41 11.7	
	comp=Z,45µm,26.3s						
LPAZ	**La Paz**	**75.31**	**216**	P	**P**	**19 10 56.2**	**-0.1**
	comp=Z,14nm,1.0s,baz=25,slow=8.0,SNR=17						
LPAZ				S	**S**	**19 20 29.7**	**-5.7**
	comp=Z,1.2nm,0.6s,baz=52,slow=17,SNR=1.6						
LPAZ				PKPPKP		19 38 27.1	
	comp=Z,2.3nm,0.7s,baz=261,slow=3.2,SNR=6.2						
LPAZ				LR	LR	19 42 28.4	
	comp=Z,44µm,18.3s,baz=358,slow=34						
LPAZ	**La Paz**	**75.31**	**216**	*e*P	**P**	**19 10 56.1**	**-0.1**
LPAZ	**La Paz**	**75.31**	**216**	IAmb	IAmb	19 11 14.4	
	comp=Z,594nm,1.3s						
LPAZ	**La Paz**	**75.31**	**216**	*e*P	**P**	**19 10 56.3**	**-0.1**
LPAZ	**La Paz**	**75.31**	**216**	*e*P	**P**	**19 10 56.1**	**-0.3**
AQDB	**Aquidauana**	**75.55**	**203**	*e*P	**P**	**19 10 57.5**	**+0.7**
PCMB	**Pacaembu**	**75.69**	**198**	*e*P	**P**	**19 10 58.0**	**+0.4**
MAN01	**Angra dos Reis**	**75.77**	**191**	*e*P	**P**	**19 11 01.1**	**+3.0**
HIA	**Hailar**	**75.80**	**19***c*	*i*P	**P**	**19 10 59.1**	**+0.9**
HIA				pmax	pmax		
	comp=Z,92nm,0.9s						
HIA	**Hailar**	**75.80**	**19**		**P**	**19 10 59.6**	**+1.5**
ESAR	**Angra dos Reis**	**75.99**	**192**	*e*P	**P**	**19 11 02.3**	**+3.0**
VAO	**Valinhos**	**76.31**	**194**	*e*P	**P**	**19 11 03.1**	**+1.9**
SMLA	**Simla**	**76.42**	**56**	*e*P	**P**	**19 11 06.5**	**+4.6**
SMLA				*e*PP	PP	19 14 03.2	+10
PARB	**Paraibuna**	**76.45**	**193**	*e*P	**P**	**19 11 02.3**	**+0.3**
GRNR	**Gornyy**	**76.63**	**8**⇑	*i*P	**P**	**19 11 04.3**	**+1.4**
GRNR				*e*S	**S**	**19 20 54.7**	**+6.5**
GRNR				pmax	pmax		
	comp=E,2.0nm,0.9s						
GRNR				pmax	pmax		
	comp=N,2.0nm,1.2s						
GRNR				pmax	pmax		
	comp=Z,4.0nm,1.1s						
GRNR				smax	smax		
	comp=N,1.0nm,1.0s						
GRNR				MLR	MLR		
	comp=E,12µm,17.0s						
GRNR				MLR	MLR		
	comp=N,19µm,19.0s						
GRNR				MLR	MLR		
	comp=Z,26µm,19.0s						
TYV	**Tymovskoe**	**76.90**	**3**	*e*P	**P**	**19 11 03.8**	**-0.5**
TYV				*e*S	**S**	**19 20 54.3**	**+3.2**
TYV				pmax	pmax		
	comp=Z,15nm,1.3s						
TYV				smax	smax		
	comp=E,27nm,2.8s						
TYV				smax	smax		
	comp=E,1µm,6.1s						
TYV				MLR	MLR		
	comp=N,40µm,18.0s						
TYV				MLR	MLR		
	comp=Z,39µm,20.0s						
SKR	**Severo-Kuril's**	**76.95**	**355**	*e*P	P	19 10 57.2	-7.4
SKR				*e*		19 13 59.9	
SKR				*e*S	**S**	**19 20 57.1**	**+5.5**
SKR				pmax	pmax		
	comp=Z,141nm,1.5s						
SKR				pmax	pmax		
	comp=Z,400nm,2.3s						
SKR				pmax	pmax		
	comp=Z,800nm,3.4s						
SKR				MLR	MLR		
	comp=Z,31µm,18.0s						
SKR				MLR	MLR		
	comp=Z,29µm,17.0s						
SPB	**Sao Paulo**	**76.96**	**194**	IAMs_20	IAMs_20	19 41 11.0	
	comp=Z,59µm,20.0s						
SPB	**Sao Paulo**	**76.96**	**194**	*e*P	**P**	**19 11 06.6**	**+1.8**
FRTB	**Fartura**	**77.07**	**197**	*e*P	**P**	**19 11 05.7**	**+0.2**
TRCB	**Terra Rica**	**77.11**	**199**	*e*P	**P**	**19 11 07.6**	**+1.8**
DDI	**Dehra Dun**	**77.52**	**56**	*e*P	**P**	**19 11 12.2**	**+4.0**
DDI				IAMs_20	IAMs_20	19 41 02.3	
	comp=Z,81µm,32.6s						
PET01	**Itanhaem-SP**	**77.62**	**194**	*e*P	**P**	**19 11 10.0**	**+1.5**
PB16	**IPOC Station P**	**77.69**	**216**	*e*P	**P**	**19 11 09.2**	**-0.5**
PB16	**IPOC Station P**	**77.69**	**216**	P	**P**	**19 11 08.9**	**-0.8**
PB16				IAmb	IAmb	19 11 27.3	
	comp=Z,559nm,1.1s						
PB16				IAMs_20	IAMs_20	19 44 55.6	
	comp=Z,47µm,20.0s						
KLR	**Kul'dur**	**77.70**	**11**	S	**S**	**19 20 58.9**	**-1.0**
	comp=Z,1.5nm,0.9s,baz=76,slow=14,SNR=1.9						
KLR				LR	LR	19 43 02.6	
	comp=Z,8µm,21.2s,baz=358,slow=34						
KLR	**Kul'dur**	**77.70**	**11**⇓	*e*P	**P**	**19 11 09.5**	**+0.6**
KLR				pmax	pmax		
	comp=Z,187nm,1.2s						
SOCY	**Socotra**	**78.02**	**86**	IAmb	IAmb	19 11 32.0	
	comp=Z,506nm,0.9s						
SOCY	**Socotra**	**78.02**	**86**	P	**P**	**19 11 15.2**	**+4.0**
	SNR=35						
AP01	**Chacalluta**	**78.03**	**217**	IAMs_20	IAMs_20	19 45 10.5	
	comp=Z,46µm,20.0s						
NDI	**New Delhi**	**78.41**	**58**	*e*P	**P**	**19 11 15.0**	**+1.9**
NDI				*e*SS	SS	19 26 12.0	+1.9
KMBO	**Kilima Mbogo**	**78.42**	**107**	P	**P**	**19 11 15.2**	**+1.7**
	comp=Z,7.6nm,1.0s,baz=351,slow=7.2,SNR=6.5						
KMBO				S	**S**	**19 21 13.0**	**+4.1**
	comp=Z,0.8nm,0.3s,baz=70,slow=23,SNR=1.9						
KMBO				LR	LR	19 46 31.4	
	comp=Z,7µm,21.5s,baz=316,slow=36						
MNMC	**Minye Minye**	**78.45**	**216**	IAmb	IAmb	19 11 31.4	
	comp=Z,887nm,1.5s						
MNMC				IAMs_20	IAMs_20	19 44 37.9	
	comp=Z,78µm,21.0s						
BHUJ	**Bhuj**	**78.64**	**67**	*e*P	**P**	**19 11 14.7**	**+0.3**
BHUJ				IAmb	IAmb	19 11 28.1	
	comp=Z,287nm,1.3s						
BHUJ				*e*PP	PP	19 14 22.4	+10
PTGB	**Pitanga**	**78.87**	**199**	*e*P	**P**	**19 11 17.4**	**+1.8**
PSGC	**Pisagua**	**79.07**	**216**	*e*P	P	19 11 07.8	-9.0
PB08	**IPOC Station P**	**79.23**	**215**	*e*P	**P**	**19 11 17.4**	**-0.6**
PB08	**IPOC Station P**	**79.23**	**215**	IAmb	IAmb	19 11 35.7	
	comp=Z,498nm,1.1s						
PB08				IAMs_20	IAMs_20	19 43 30.4	
	comp=Z,44µm,21.0s						
GTA	**Gaotai**	**79.36**	**36**	P	**P**	**19 11 15.5**	**-2.9**
GTA				pP	pP	19 11 22.3	-0.6
GTA				sP	PcP	19 11 25.9	-0.6
GTA				S	**S**	**19 21 21.6**	**+3.4**
GTA				SKS	**SKSac**	**19 21 28.9**	**-5.0**
GTA				sS	SKKSac	19 21 33.6	-1.7
GTA				pmax	pmax		
	comp=Z,43nm,1.1s						
GTA				pmax	pmax		
	comp=Z,4µm,8.4s						
GTA				LR	LR		
	comp=Z,34µm,19.3s						
GTA				LR	LR		
	comp=Z,22µm,18.2s						
GTA				LR	LR		
	comp=Z,52µm,17.8s						
KIBK	**Kibwezi**	**79.86**	**107**	P	P	19 11 29.6	+8.3
	SNR=32						
TA01	**Diego Aracena**	**79.98**	**216**	IAMs_20	IAMs_20	19 46 10.4	
	comp=Z,51µm,19.0s						
PB01	**IPOC Station P**	**80.18**	**215**	*e*P	**P**	**19 11 22.4**	**-0.3**
PB01	**IPOC Station P**	**80.18**	**215**	P	**P**	**19 11 21.2**	**-1.5**
PB01				IAmb	IAmb	19 11 42.1	
	comp=Z,2µm,2.6s						
PB01				IAMs_20	IAMs_20	19 45 26.5	
	comp=Z,50µm,20.0s						
PATCX	**Punta Patache**	**80.21**	**216**	*e*P	**P**	**19 11 19.6**	**-3.3**
PATCX	**Punta Patache**	**80.21**	**216**	IAmb	IAmb	19 11 40.0	
	comp=Z,418nm,1.1s						
PATCX				IAMs_20	IAMs_20	19 46 15.4	
	comp=Z,38µm,19.0s						
PB09	**IPOC Station P**	**80.78**	**215**	*e*P	**P**	**19 11 28.1**	**+2.0**
PB09	**IPOC Station P**	**80.78**	**215**	IAmb	IAmb	19 11 44.0	
	comp=Z,381nm,1.1s						
PB09				IAMs_20	IAMs_20	19 46 13.7	
	comp=Z,46µm,20.0s						
YSS	**Yuzh-Sakhalins**	**80.81**	**4**	*e*P	**P**	**19 11 27.4**	**+1.5**
YSS				*i* S	**S**	**19 21 30.6**	**-2.3**
YSS				*e*PS	**PnS**	**19 22 15.8**	**-3.3**
YSS				pmax	pmax		
	comp=Z,3µm,6.7s						
YSS				pmax	pmax		
	comp=Z,250nm,1.4s						
YSS				smax	smax		
	comp=E,8µm,11.8s						
YSS				MLR	MLR		
	comp=Z,31µm,19.0s						
YSS				MLR	MLR		
	comp=N,20µm,17.0s						
YSS	**Yuzh-Sakhalins**	**80.81**	**4**	P	**P**	**19 11 22.9**	**-2.9**
YSS				IAMs_20	IAMs_20	19 51 17.8	
	comp=Z,59µm,19.0s						
PB07	**IPOC Station P**	**80.95**	**215**	*e*P	**P**	**19 11 26.9**	**-0.1**
PB07	**IPOC Station P**	**80.95**	**215**	IAmb	IAmb	19 11 44.2	
	comp=Z,443nm,1.1s						
PB07				IAMs_20	IAMs_20	19 44 55.9	
	comp=Z,59µm,20.0s						
PB03	**IPOC Station P**	**81.20**	**215**	*e*P	**P**	**19 11 28.6**	**+0.4**
LVC	**Limon Verde**	**81.42**	**214**	PKKPbc	PKKPbc	19 30 16.7	+14
	comp=Z,2.6nm,0.7s,baz=258,slow=13,SNR=3.8						
LVC				LR	LR	19 45 20.0	
	comp=Z,52µm,20.3s,baz=2.0,slow=34						
LVC	**Limon Verde**	**81.42**	**214**	P	**P**	**19 11 28.4**	**-1.3**
LVC				pmax	pmax		
	comp=Z,396nm,1.2s						

LVC				MLR	MLR		
	comp=Z,64µm,19.0s						
LVC	**Limon Verde**	**81.42**	**214**	P	**P**	**19 11 28.4**	**-1.3**
LVC				IAmb	IAmb	19 11 47.6	
	comp=Z,396nm,1.1s						
LVC	**Limon Verde**	**81.42**	**214**	IAMs_20	IAMs_20	19 47 01.6	
	comp=Z,64µm,19.0s						
LVC	**Limon Verde**	**81.42**	**214**	*e*P	**P**	**19 11 30.8**	**+1.1**
CPUP	**Villa Florida**	**81.56**	**203**	P	**P**	**19 11 29.9**	**0.0**
	comp=Z,36nm,0.9s,baz=20,slow=6.0,SNR=14						
CPUP				S	**S**	**19 21 35.2**	**-5.7**
	comp=Z,1.7nm,0.7s,baz=169,slow=20,SNR=1.7						
CPUP				PKKPbc	PKKPbc	19 30 15.6	+13
	comp=Z,2.6nm,0.8s,baz=350,slow=1.9,SNR=4.8						
CPUP				PKPPKP	P'P'df	19 38 17.6	+16
	comp=Z,5.0nm,0.9s,baz=165,slow=2.7,SNR=5.1						
CPUP				LR	LR	19 44 35.4	
	comp=Z,29µm,20.5s,baz=18,slow=33						
BTO	**Baotou**	**81.59**	**28**	*e*P	**P**	**19 11 28.3**	**-2.0**
PB04	**IPOC Station P**	**81.60**	**215**	IAMs_20	IAMs_20	19 45 43.2	
	comp=Z,66µm,20.0s						
PB06	**IPOC Station P**	**81.74**	**215**	*e*P	**P**	**19 11 32.2**	**+1.1**
PB06	**IPOC Station P**	**81.74**	**215**	IAMs_20	IAMs_20	19 45 01.9	
	comp=Z,43µm,22.0s						
HHC	**Hu-ho-hao-te**	**81.80**	**27**	*e*P	**P**	**19 11 32.8**	**+1.4**
HHC				pP	pP	19 11 36.4	+0.5
HHC				S	**S**	**19 21 47.3**	**+3.6**
HHC				pmax	pmax		
	comp=Z,25nm,1.1s						
HHC				pmax	pmax		
	comp=Z,4µm,10.4s						
HHC				LR	LR		
	comp=Z,31µm,16.9s						
HHC				LR	LR		
	comp=Z,28µm,18.1s						
HHC				LR	LR		
	comp=Z,41µm,19.9s						
MDJ	**Mudanjiang**	**81.97**	**13**	P	**P**	**19 11 29.3**	**-2.7**
MDJ				S	**S**	**19 21 42.3**	**-2.7**
MDJ				pmax	pmax		
	comp=Z,37nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,3µm,7.6s						
MDJ				LR	LR		
	comp=Z,23µm,19.9s						
MDJ				LR	LR		
	comp=Z,75µm,19.9s						
MDJ				LR	LR		
	comp=Z,90µm,14.2s						
DANN	**Dangsing**	**81.98**	**53**	*e*P	**P**	**19 11 31.1**	**-1.7**
	comp=Z,257nm,1.0s						
PB05	**IPOC Station P**	**82.09**	**215**	*e*P	**P**	**19 11 32.9**	**0.0**
CN2	**Changchun**	**82.12**	**16**	*e*P	**P**	**19 11 33.8**	**+0.9**
CN2				pP	PcP	19 11 38.4	+0.1
CN2				sP	pwP	19 11 40.8	-0.5
CN2				S	**S**	**19 21 46.5**	**-0.1**
CN2				pmax	pmax		
	comp=Z,20nm,1.1s						
CN2				LR	LR		
	comp=Z,18µm,22.0s						
CN2				LR	LR		
	comp=Z,27µm,20.0s						
CN2				LR	LR		
	comp=Z,26µm,23.0s						
PB15	**IPOC Station P**	**82.17**	**214**	IAmb	IAmb	19 11 50.7	
	comp=Z,377nm,1.2s						
PB15				IAMs_20	IAMs_20	19 45 40.3	
	comp=Z,60µm,21.0s						
TEY	**Ternei**	**82.34**	**8**	⇑*e*P	**P**	**19 11 31.5**	**-2.5**
TEY				pmax	pmax		
	comp=Z,10.0nm,2.0s						
KUR	**Kuril'sk**	**82.64**	**0**	*e*P	**P**	**19 11 34.5**	**-1.0**
KUR				*e*		19 14 53.8	
KUR				*e*S	**S**	**19 21 54.5**	**+2.7**
KUR				*e*SS	**SS**	**19 27 21.7**	**+10**
KUR				*e*SSS	SSS	19 30 42.4	
KUR				pmax	pmax		
	comp=E,148nm,1.6s						
KUR				pmax	pmax		
	comp=Z,606nm,1.6s						
KUR				pmax	pmax		
	comp=N,90nm,1.8s						
KUR				pmax	pmax		
	comp=Z,3µm,7.0s						
KUR				MLR	MLR		
	comp=Z,36µm,19.0s						
KUR				MLR	MLR		
	comp=E,28µm,18.0s						
KUR				MLR	MLR		
	comp=N,10µm,15.0s						
USA0B	**Ussuriysk Arra**	**82.69**	**12**	*ce*P	**P**	**19 11 36.4**	**+0.6**
USA0B	**Ussuriysk Arra**	**82.69**	**12**	P	**P**	**19 11 34.6**	**-1.2**
USA0B				IAmb	IAmb	19 11 57.9	
	comp=Z,375nm,1.3s						
USA0B				IAMs_20	IAMs_20	19 54 47.0	
	comp=Z,37µm,19.0s						
USRK	**Ussuriysk Ar.**	**82.69**	**12**	P	**P**	**19 11 36.4**	**+0.6**
	comp=Z,7.8nm,0.9s,baz=347,slow=7.8,SNR=15						
USRK				S	**S**	**19 21 47.8**	**-4.6**
	comp=Z,0.6nm,0.5s,baz=233,slow=41,SNR=1.2						
USRK	**Ussuriysk Ar.**	**82.69**	**12**	P	**P**	**19 11 35.0**	**-0.8**
GKN	**Gorkha**	**82.69**	**53**	*e*P	**P**	**19 11 33.7**	**-2.6**
	comp=Z,122nm,1.0s						
BHPL	**Bhopal**	**82.91**	**61**	*e*P	**P**	**19 11 36.6**	**-0.8**
BHPL				IAmb	IAmb	19 11 53.1	
	comp=Z,372nm,1.2s						
KKN	**Kakani**	**83.18**	**52**	*e*P	**P**	**19 11 36.4**	**-2.6**
	comp=Z,391nm,1.1s						
DMN	**Daman**	**83.25**	**53**	*e*P	**P**	**19 11 38.1**	**-1.2**
	comp=Z,462nm,1.1s						
TSUM	**Tsumeb**	**83.36**	**134**	P	**P**	**19 11 38.2**	**-1.4**
TSUM				IAmb	IAmb	19 12 08.3	
	comp=Z,705nm,2.5s						
GUN	**Gumba**	**83.37**	**52**	*e*P	**P**	**19 11 37.7**	**-2.4**
	comp=Z,385nm,1.0s						
PKIN	**Phulchoki**	**83.42**	**52**	*e*P	**P**	**19 11 38.6**	**-1.6**
	comp=Z,206nm,1.1s						
PKI	**Pulchoki**	**83.43**	**52**	*e*P	**P**	**19 11 38.2**	**-2.2**
	comp=Z,291nm,1.1s						
ASAJ	**Asahikawa**	**83.64**	**4**	S	**S**	**19 22 00.8**	**-1.3**
	comp=Z,10nm,1.0s,baz=272,slow=24,SNR=2.3						
JKA	**Kamikawa-asahi**	**83.64**	**4**	IAMs_20	IAMs_20	19 49 05.2	
	comp=Z,53µm,21.0s						
SNY	**Shenyang**	**83.69**	**18**	⇓P	**P**	**19 11 41.6**	**+0.6**
SNY				S	**S**	**19 22 00.1**	**-2.5**
SNY				pmax	pmax		
	comp=Z,29nm,1.3s						
SNY				pmax	pmax		
	comp=Z,790nm,3.5s						
SNY				LR	LR		
	comp=Z,24µm,21.8s						
SNY				LR	LR		
	comp=Z,20µm,19.0s						
SNY				LR	LR		
	comp=Z,39µm,24.7s						
LZH	**Lanzhou**	**83.75**	**35**	*e*P	**P**	**19 11 42.8**	**+1.1**
LZH				sP	pwP	19 11 49.8	-0.7
LZH				PP	**PP**	**19 14 55.6**	**+1.7**
LZH				pmax	pmax		
	comp=Z,87nm,1.2s						
LZH				pmax	pmax		
	comp=Z,4µm,7.0s						
LZH				LR	LR		
	comp=Z,32µm,14.6s						
LZH				LR	LR		
	comp=Z,28µm,17.9s						
LZH				LR	LR		
	comp=Z,29µm,17.8s						
BJI	**Beijing**	**83.78**	**24**	P	**P**	**19 11 42.4**	**+0.9**
BJI				PP	**PP**	**19 14 53.0**	**-0.7**
BJI				S	**S**	**19 21 57.5**	**-6.0**
BJI				SS	**SS**	**19 27 27.5**	**-1.7**
BJI				pmax	pmax		
	comp=Z,12nm,0.8s						
BJI				pmax	pmax		
	comp=Z,490nm,3.5s						
BJI				LR	LR		
	comp=Z,47µm,22.7s						
BJI				LR	LR		
	comp=Z,14µm,22.7s						
BJI				LR	LR		
	comp=Z,49µm,21.6s						
BJT	**Baijiatuau**	**83.80**	**24**	IAMs_20	IAMs_20	19 49 27.1	
	comp=Z,63µm,22.0s						
PB14	**IPOC Station P**	**83.80**	**215**	*e*P	P	19 11 49.1	+7.1
YUK	**Yuzh-Kuril'sk**	**83.82**	**2**	*d i*P	**P**	**19 11 45.2**	**+3.6**
YUK				*e*		19 14 55.3	
YUK				*e*PPP	PPP	19 16 49.1	
YUK				*i* S	**S**	**19 22 05.1**	**+1.3**
YUK				*e*SSS	SSS	19 31 00.2	
YUK				pmax	pmax		
	comp=Z,2µm,2.4s						
YUK				pmax	pmax		
	comp=E,399nm,1.0s						
YUK				pmax	pmax		
	comp=Z,954nm,1.0s						
YUK				pmax	pmax		
	comp=N,868nm,1.1s						
YUK				MLR	MLR		
	comp=Z,38µm,20.0s						
YUK				MLR	MLR		
	comp=N,19µm,21.0s						
YUK				MLR	MLR		
	comp=E,34µm,19.0s						
GO02	**Mina Guanaco**	**84.01**	**214**	*e*P	**P**	**19 11 43.1**	**+0.1**
GO02	**Mina Guanaco**	**84.01**	**214**	IAmb	IAmb	19 12 00.6	
	comp=Z,297nm,1.1s						
GO02				IAMs_20	IAMs_20	19 47 09.2	
	comp=Z,80µm,20.0s						
MSHR	**Mys Shultsa**	**84.18**	**12**	*ce*P	**P**	**19 11 45.1**	**+1.6**
MSHR				pmax	pmax		
	comp=Z,65nm,1.3s						
LSA	**Lhasa**	**84.31**	**47**	P	**P**	**19 11 46.6**	**+1.6**
LSA				pmax	pmax		
	comp=Z,38nm,0.9s						
LSA				LR	LR		
	comp=Z,268µm,18.5s						
LSA	**Lhasa**	**84.31**	**47**	IAMs_20	IAMs_20	19 50 34.8	
	comp=Z,59µm,21.0s						
ITZ	**Itezhi-Tezhi**	**84.37**	**125**	*e*P	P	19 11 51.0	+6.2
ITZ				*i*		19 11 51.2	
	baz=349,slow=8.6						
ITZ				*e*S	S	19 22 21.0	+11
RAMN	**Ramite**	**84.52**	**52**	*e*P	**P**	**19 11 43.4**	**-2.5**
	comp=Z,204nm,1.0s						
TAPN	**Taplejung**	**84.72**	**51**	*e*P	**P**	**19 11 44.4**	**-2.5**
	comp=Z,292nm,1.1s						
POO	**Poona**	**84.75**	**66**	*e*P	**P**	**19 11 48.8**	**+1.9**
POO				*e*PP	PP	19 15 13.0	+10
JEW	**Eniwo**	**84.86**	**5**	P	**P**	**19 11 44.8**	**-2.1**
TIY	**Taiyuan**	**84.97**	**28**	*e*P	**P**	**19 11 52.4**	**+4.7**
TIY				S	**S**	**19 22 19.4**	**+3.7**
TIY				sS	**ScS**	**19 22 27.4**	**+0.9**
TIY				pmax	pmax		
	comp=Z,110nm,1.2s						
TIY				LR	LR		
	comp=Z,15µm,16.6s						
TIY				LR	LR		
	comp=Z,14µm,15.4s						
TIY				LR	LR		
	comp=Z,28µm,19.7s						
ODAN	**Odare**	**84.98**	**51**	*e*P	**P**	**19 11 45.7**	**-2.4**
	comp=Z,209nm,1.2s						
GTK	**Tadong**	**85.16**	**50**	*e*P	**P**	**19 11 53.5**	**+4.6**
AC01	**Pan de Azucar**	**85.26**	**214**	IAMs_20	IAMs_20	19 49 13.3	
	comp=Z,57µm,19.0s						
AC02	**Maricunga**	**85.40**	**213**	IAmb	IAmb	19 12 23.5	
	comp=Z,337nm,1.2s						
AC02				IAMs_20	IAMs_20	19 47 31.1	
	comp=Z,56µm,20.0s						
ERM	**Erimo**	**85.76**	**4**	P	**P**	**19 11 48.8**	**-2.6**
ERM				pmax	pmax		
	comp=Z,868nm,1.3s						
ERM				MLR	MLR		
	comp=Z,45µm,20.0s						
ERM	**Erimo**	**85.76**	**4**	P	**P**	**19 11 48.8**	**-2.6**
ERM	**Erimo**	**85.76**	**4**	IAMs_20	IAMs_20	19 57 34.4	
	comp=Z,45µm,20.0s						
DL2	**Dalian**	**86.12**	**20**	P	**P**	**19 11 54.8**	**+1.5**
DL2				sP	**pwP**	**19 12 03.3**	**+1.2**
DL2				PP	**PP**	**19 15 16.8**	**+4.1**
DL2				S	**S**	**19 22 28.4**	**+1.6**
DL2				SS	**SS**	**19 28 06.8**	**+3.2**
DL2				pmax	pmax		
	comp=Z,46nm,0.9s						
DL2				pmax	pmax		
	comp=Z,630nm,5.8s						
DL2				LR	LR		
	comp=Z,12µm,24.7s						
DL2				LR	LR		
	comp=Z,31µm,24.3s						
DL2				LR	LR		
	comp=Z,45µm,27.5s						
GO03	**Copiap**	**86.47**	**213**	IAMs_20	IAMs_20	19 49 56.3	
	comp=Z,36µm,20.0s						
BOK	**Bokaro**	**86.82**	**54**	*e*P	**P**	**19 11 58.1**	**+1.2**
BOK				IAmb	IAmb	19 12 15.1	
	comp=Z,604nm,1.4s						
JTM	**Tenmabayashi**	**86.89**	**5**	IAMs_20	IAMs_20	19 55 11.5	
	comp=Z,41µm,21.0s						
GOA	**Goa**	**87.18**	**68**	*e*P	**P**	**19 12 01.9**	**+3.1**
GOA				IAmb	IAmb	19 12 15.9	
	comp=Z,113nm,0.5s						
XAN	**Xi'an**	**87.31**	**32**	P	**P**	**19 11 59.3**	**0.0**
XAN				pP	PcP	19 12 02.3	+0.9
XAN				pmax	pmax		
	comp=Z,310nm,1.1s						
XAN				pmax	pmax		
	comp=Z,3µm,7.5s						
XAN				LR	LR		
	comp=Z,26µm,29.3s						
XAN				LR	LR		
	comp=Z,36µm,21.7s						
XAN				LR	LR		
	comp=Z,63µm,31.4s						
XAN	**Xi'an**	**87.31**	**32**	IAmb	IAmb	19 12 29.1	
	comp=Z,229nm,0.9s						
AC04	**Llanos de Chal**	**87.32**	**214**	IAMs_20	IAMs_20	19 48 57.5	
	comp=Z,46µm,21.0s						
ZIRO	**ZIRO**	**87.37**	**46**	*e*P	P	19 12 05.1	+5.3
ZIRO				*e*PP	PP	19 15 33.5	+10
GUWA	**GUWAHATI**	**87.55**	**48**	*e*P	**P**	**19 12 02.8**	**+2.3**
GUWA				*e*PP	PP	19 15 34.9	+10
AC05	**El Transito**	**87.63**	**213**	IAMs_20	IAMs_20	19 48 02.0	
	comp=Z,87µm,21.0s						
TIA	**Tai'an**	**87.64**	**25**	P	**P**	**19 12 02.3**	**+1.5**
TIA				S	**S**	**19 22 41.3**	**-0.4**
TIA				pmax	pmax		
	comp=Z,22nm,1.1s						
TIA				LR	LR		
	comp=Z,14µm,21.4s						
TIA				LR	LR		
	comp=Z,29µm,23.5s						
TIA				LR	LR		
	comp=Z,12µm,21.4s						
TEZP	**TEZPUR**	**87.69**	**47**	*e*P	**P**	**19 12 03.2**	**+2.1**
TEZP				*e*PP	PP	19 15 34.9	+9.0
LCO	**Las Campanas**	**87.94**	**213**	P	**P**	**19 12 02.1**	**-0.2**
LCO				pmax	pmax		
	comp=Z,209nm,1.1s						
LCO				MLR	MLR		
	comp=Z,52µm,20.0s						
LCO	**Las Campanas**	**87.94**	**213**	P	**P**	**19 12 02.1**	**-0.2**
LCO				IAmb	IAmb	19 12 29.2	
	comp=Z,209nm,1.1s						
LCO	**Las Campanas**	**87.94**	**213**	IAMs_20	IAMs_20	19 49 15.1	
	comp=Z,52µm,20.0s						
SHL	**Shillong**	**88.18**	**49**	*e*x	**P**	**19 12 03.0**	**-0.8**
SHL				IAmb	IAmb	19 12 17.5	
	comp=Z,68nm,0.8s						
SHL	**Shillong**	**88.18**	**49**	IAmb	IAmb	19 12 24.7	
	comp=Z,253nm,1.1s						
SHL	**Shillong**	**88.18**	**49**	P	**P**	**19 12 08.2**	**+4.4**
	SNR=48						
JORH	**JORHAT**	**88.23**	**46**	*e*P	**P**	**19 12 08.3**	**+4.6**
JORH				*e*x	x	19 15 37.6	
HYB	**Hyderabad**	**88.26**	**63**	*e*SP	SP	19 24 04.0	+14
HYB	**Hyderabad**	**88.26**	**63**	*e*P	**P**	**19 12 07.1**	**+3.1**
HYB	**Hyderabad**	**88.26**	**63**	*i* P	**P**	**19 12 02.0**	**-2.0**
	comp=Z,429nm,1.5s						
HYB	**Hyderabad**	**88.26**	**63**	*e*PP	PP	19 15 30.0	-0.9
HYB	**Hyderabad**	**88.26**	**63**	*e*PPP	PPP	19 17 32.0	
HYB	**Hyderabad**	**88.26**	**63**	*e*SKKS	**S**	**19 22 40.0**	**-8.1**
CD2	**Chengdu**	**88.39**	**37**	P	**P**	**19 12 01.6**	**-2.9**
CD2				SKS	**SKSac**	**19 22 27.3**	**-5.4**
CD2				S	**SKKSac**	**19 22 43.0**	**-0.4**
CD2				pmax	pmax		
	comp=Z,230nm,0.9s						
CD2				pmax	pmax		
	comp=Z,4µm,8.8s						
CD2				LR	LR		
	comp=Z,45µm,20.8s						
CD2				LR	LR		
	comp=Z,67µm,27.7s						
CD2				LR	LR		
	comp=Z,57µm,20.4s						
LKP	**Lekhapani**	**88.41**	**45**	*e*P	**P**	**19 12 08.7**	**+4.1**
LKP				*e*x	x	19 15 44.5	
CO01	**Juntas del Tor**	**88.62**	**212**	IAMs_20	IAMs_20	19 48 35.4	
	comp=Z,94µm,22.0s						
KS19	**Wonju Array Si**	**88.66**	**16**		pP	19 12 08.1	-2.2
KSRS	**Korea Array**	**88.72**	**16**	P	**P**	**19 12 06.1**	**+0.3**
	comp=Z,3.8nm,0.7s,baz=346,slow=5.1,SNR=9.6						
KSRS				S	**S**	**19 22 47.4**	**-4.5**
	comp=Z,0.8nm,0.7s,baz=97,slow=40,SNR=1.4						
KSRS				PKKPbc	PKKPbc	19 29 57.2	+13
	comp=Z,2.3nm,0.9s,baz=182,slow=3.3,SNR=4.9						
KSRS				PKPPKP		19 38 09.2	
	comp=Z,2.0nm,0.9s,baz=180,slow=2.8,SNR=4.5						
KSRS				LR	LR	19 52 56.1	
	comp=Z,13µm,18.9s,baz=335,slow=36						
KSAR	**Wonju Array Be**	**88.72**	**16**	P	**P**	**19 12 04.0**	**-1.9**
KSAR	**Wonju Array Be**	**88.72**	**16**	P	**P**	**19 12 04.0**	**-1.9**
KOHI	**KOHIMA**	**89.05**	**47**	*e*P	**P**	**19 12 11.3**	**+3.5**
KOHI				*e*x	x	19 15 45.8	
AGT	**Agartala**	**89.33**	**50**	IAmb	IAmb	19 12 28.4	
	comp=Z,103nm,0.9s						
AGT				*i* x	PP	19 15 49.2	+10
CO03	**El Pedregal**	**89.61**	**213**	IAMs_20	IAMs_20	19 49 04.6	
	comp=Z,67µm,22.0s						
ZON	**Zonda**	**89.62**	**211**	IAMs_20	IAMs_20	19 49 24.3	
	comp=Z,43µm,22.0s						
TJN	**Taejon**	**89.67**	**17**	⇑*e*P	**P**	**19 12 12.0**	**+1.7**
BWNR	**Bhubaneshwar**	**89.71**	**56**	*e*x	**P**	**19 12 11.8**	**+1.0**
LPA	**La Plata**	**89.95**	**201**	*e*P	**P**	**19 12 10.4**	**-0.8**
LPA				PP	**PP**	**19 15 37.9**	**-6.8**
LPA				pPP		19 15 47.2	
LPA				PKIKP	**PKiKP**	**19 17 07.8**	**+0.3**
LPA				PPP	PPP	19 17 34.4	
LPA				SKS	**SKSac**	**19 22 40.9**	**+0.1**
LPA				S	**SKKSac**	**19 22 56.4**	**+2.4**
LPA				PS	PS	19 24 11.0	0.0
LPA				SS	**SS**	**19 28 52.8**	**-9.0**
LPA				SSS	SSS	19 32 30.7	
BELO	**BELONIA**	**89.96**	**50**	*e*x	x	19 15 51.3	
CO02	**Combarbal**	**90.05**	**213**	IAMs_20	IAMs_20	19 49 49.2	
	comp=Z,52µm,21.0s						
H09W1	**TRISTAN DA CUN**	**90.87**	**164**	P	P	19 12 24.0	+8.5
MAJO	**Matsushiro**	**90.91**	**8**	P	**P**	**19 12 16.1**	**-0.1**
MAJO				pmax	pmax		
	comp=Z,81nm,1.3s						
MAJO				MLR	MLR		
	comp=Z,32µm,21.0s						
MAJO	**Matsushiro**	**90.91**	**8**	P	**P**	**19 12 16.1**	**-0.1**
MAT	**Matsushiro**	**90.91**	**8**	P	**P**	**19 12 17.2**	**+1.1**
MAT				S	**S**	**19 23 11.6**	**-0.7**
MJAR	**Matsushiro Arr**	**90.91**	**8**	P	**P**	**19 12 15.7**	**-0.4**
	comp=Z,1.7nm,0.7s,baz=350,slow=4.9,SNR=3.1						
MJAR				PKKPbc	PKKPbc	19 29 53.8	+15
	comp=Z,3.7nm,0.9s,baz=169,slow=3.6,SNR=4.0						
ENH	**Enshi**	**90.97**	**33**	IAmb	IAmb	19 12 56.9	
	comp=Z,332nm,1.4s						
SAIH	**SAIHA**	**91.33**	**49**	*e*P	**P**	**19 12 19.7**	**+1.2**
SAIH				*e*x	x	19 16 02.2	
VA03	**San Esteban**	**91.34**	**212**	IAMs_20	IAMs_20	19 50 49.7	
	comp=Z,77µm,20.0s						
PEL	**Peldehue**	**91.74**	**212**	IAMs_20	IAMs_20	19 50 41.1	
	comp=Z,62µm,20.0s						
JGF	**Kuroka**	**91.77**	**9**	IAMs_20	IAMs_20	19 57 42.3	
	comp=Z,39µm,21.0s						
MT05	**Renca**	**91.98**	**212**	IAMs_20	IAMs_20	19 50 37.7	
	comp=Z,57µm,22.0s						
MT02	**Curacav**	**91.99**	**212**	IAMs_20	IAMs_20	19 52 07.8	
	comp=Z,38µm,20.0s						
NJ2	**Nanjing**	**92.03**	**24**	*e*P	**P**	**19 12 22.9**	**+1.5**
NJ2				PP	**PP**	**19 16 05.3**	**+5.2**
NJ2				SKS	**SKSac**	**19 22 52.0**	**-1.6**
NJ2				S	**ScS**	**19 23 24.4**	**-0.6**
NJ2				sS	**pS**	**19 23 28.0**	**-0.3**
NJ2				SS	**SS**	**19 29 31.3**	**+1.6**
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,370nm,3.8s						
NJ2				LR	LR		
	comp=Z,12µm,23.7s						
NJ2				LR	LR		
	comp=Z,51µm,24.2s						
NJ2				LR	LR		
	comp=Z,37µm,23.7s						
WHN	**Wuhan**	**92.22**	**29**	⇑P	P	19 12 28.9	+6.6
WHN				pP	pwP	19 12 34.8	+3.6
WHN				PP	PP	19 16 09.9	+8.2
WHN	**Wuhan**	**92.22**	**29**	S	**S**	**19 23 27.8**	**+3.5**
HLK	**Haleakala**	**92.46**	**309**	IAMs_20	IAMs_20	19 50 51.3	
	comp=Z,38µm,21.0s						
OPA	**Opana**	**92.48**	**311**	IAMs_20	IAMs_20	19 55 20.7	
	comp=Z,39µm,19.0s						
KIP	**Kipapa**	**92.71**	**311**	IAMs_20	IAMs_20	19 55 24.8	
	comp=Z,33µm,20.0s						
MDRS	**Chennai**	**92.74**	**65**	*e*P	**P**	**19 12 25.6**	**+0.8**
POHA	**Pohakuloa**	**92.97**	**308**	IAMs_20	IAMs_20	19 51 32.1	
	comp=Z,39µm,21.0s						
MLOA	**Mauna Loa Obse**	**93.18**	**308**	IAMs_20	IAMs_20	19 52 49.7	
	comp=Z,39µm,19.0s						
KMI	**Kunming**	**93.21**	**40**	⇑P	**P**	**19 12 26.3**	**-0.9**
KMI				pP	sP	19 12 34.0	+0.7
KMI				sP	pwP	19 12 37.4	+1.2
KMI				PP	**PP**	**19 16 13.0**	**+3.1**
KMI				SKS	**SKSac**	**19 23 02.0**	**+1.1**
KMI				S	**S**	**19 23 28.4**	**-5.3**
KMI				SS	**SS**	**19 29 47.6**	**0.0**
KMI				pmax	pmax		
	comp=Z,45nm,1.0s						
KMI				pmax	pmax		
	comp=Z,1µm,6.5s						
KMI				LR	LR		
	comp=Z,10µm,34.6s						
KMI				LR	LR		
	comp=Z,25µm,26.5s						
KMI				LR	LR		
	comp=Z,34µm,27.9s						
JMN	**Monobe**	**93.24**	**12**	IAMs_20	IAMs_20	19 56 40.3	
	comp=Z,37µm,19.0s						
BO02	**Sierra Bellavi**	**93.29**	**211**	IAMs_20	IAMs_20	19 51 31.2	
	comp=Z,52µm,20.0s						
KHLU	**Kahalu`u**	**93.29**	**308**	IAMs_20	IAMs_20	19 51 41.4	
	comp=Z,44µm,21.0s						
KHU	**Kahuku**	**93.45**	**308**	IAMs_20	IAMs_20	19 53 05.8	
	comp=Z,44µm,18.0s						
GYA	**Guiyang**	**93.48**	**36**	⇓P	**P**	**19 12 28.8**	**+0.4**
GYA				S	**S**	**19 23 41.3**	**+5.4**
GYA				pmax	pmax		
	comp=Z,1µm,5.6s						
GYA				LR	LR		
	comp=Z,20µm,26.7s						
GYA				LR	LR		
	comp=Z,9µm,20.1s						
GYA				LR	LR		
	comp=Z,35µm,27.5s						
SSE	**Sheshan**	**93.51**	**23**	P	**P**	**19 12 26.3**	**-1.9**
SSE				PP	**PP**	**19 16 09.1**	**-2.6**
SSE				pmax	pmax		
	comp=Z,80nm,3.1s						
SSE	**Sheshan**	**93.51**	**23**	IAMs_20	IAMs_20	19 55 11.2	
	comp=Z,36µm,22.0s						
MIDW	**Midway**	**94.10**	**330**	IAMs_20	IAMs_20	19 51 13.3	
	comp=Z,64µm,21.0s						
TRD	**Trivandrum**	**94.61**	**70**	*e*x	x	19 16 28.2	
BOSA	**Boshof**	**94.97**	**132**	P	**P**	**19 12 36.1**	**+1.3**
	comp=Z,3.5nm,1.1s,baz=0.0,slow=7.1,SNR=1.7						
BOSA				PP	PP	19 16 35.0	+10
	comp=Z,26nm,1.1s,baz=338,slow=7.2,SNR=4.3						
BOSA				LR	LR	19 54 08.3	
	comp=Z,22µm,19.2s,baz=331,slow=35						
BOSA	**Boshof**	**94.97**	**132**	P	**P**	**19 12 34.2**	**-0.6**
BOSA				IAmb	IAmb	19 12 59.6	
	comp=Z,278nm,1.6s						
BI02	**San Fabin de**	**95.16**	**211**	IAMs_20	IAMs_20	19 52 01.9	
	comp=Z,69µm,22.0s						
BI03	**Tigo**	**95.89**	**212**	IAMs_20	IAMs_20	19 54 11.0	
	comp=Z,51µm,20.0s						
SLVN	**Son La**	**97.07**	**41**	P	**P**	**19 12 42.8**	**-1.9**
CHTO	**Chiang Mai**	**97.23**	**46**	P	**P**	**19 12 43.2**	**-2.2**
CHTO				pmax	pmax		
	comp=Z,73nm,1.4s						
CHTO				MLR	MLR		

	comp=Z,23µm,21.0s						
CHTO	**Chiang Mai**	**97.23**	**46**	P	**P**	**19 12 43.2**	**-2.2**
CMMT	**Chiang Mai**	**97.23**	**46**	P	Pdif	19 12 46.2	+0.7
	comp=Z,520nmcomp=Z,15nm,1.3s						
LC01	**Cunco**	**97.40**	**210**	IAMs_20	IAMs_20	19 54 35.2	
	comp=Z,37µm,20.0s						
CMAR	**Chiang Mai Arr**	**97.54**	**46**	P	Pdif	19 12 47.2	+0.3
	comp=Z,1.4nm,0.8s,baz=315,slow=6.0,SNR=10						
CMAR				PP	**PP**	**19 16 47.5**	**+4.0**
	comp=Z,8.7nm,1.0s,baz=332,slow=8.1,SNR=5.4						
CMAR				PKKPbc	PKKPdf	19 29 31.8	+10
	comp=Z,2.5nm,0.9s,baz=176,slow=3.3,SNR=4.2						
CMAR				LR	LR	19 59 32.8	
	comp=Z,16µm,21.5s,baz=355,slow=37						
CMAR	**Chiang Mai Arr**	**97.54**	**46**	P	**P**	**19 12 43.3**	**-3.5**
CMAR						19 16 45.7	
CMAR	**Chiang Mai Arr**	**97.54**	**46**	P	**P**	**19 12 43.3**	**-3.5**
CMAR				PP	**PP**	**19 16 45.7**	**+2.2**
CM05	**Chiang Mai Arr**	**97.59**	**46**	P	Pdif	19 12 53.5	+6.3
	comp=Z,184nmcomp=Z,22nm,1.0s						
CM04	**Chiang Mai Arr**	**97.61**	**46**	P	Pdif	19 12 53.0	+5.8
	comp=Z,302nmcomp=Z,36nm,1.1s						
LAMP	**Lampang**	**97.79**	**46**	P	Pdif	19 12 59.4	+11
	comp=Z,19nm,1.3s						
PLCA	**Paso Flores**	**98.69**	**209**	P	Pdif	19 12 57.6	+6.3
	comp=Z,2.9nm,1.0s,baz=0.0,slow=3.0,SNR=3.3						
PLCA				LR	LR	19 55 36.9	
	comp=Z,37µm,20.7s,baz=20,slow=34						
PLCA	**Paso Flores**	**98.69**	**209**	*e*P	Pdif	19 12 51.9	+0.6
SUKH	**Sukhothai**	**98.71**	**46**	P	Pdif	19 13 03.0	+11
	comp=Z,26nm,1.0s						
QZH	**Quanzhou**	**98.72**	**27**	*e*P	Pdif	19 12 53.3	+1.3
QZH				PP	**PP**	**19 16 55.9**	**+3.8**
QZH				SKS	**SKSac**	**19 23 26.8**	**-2.5**
QZH				S	**S**	**19 24 20.3**	**-0.5**
QZH				SS	**SS**	**19 31 01.3**	**-3.5**
QZH				LR	LR		
	comp=Z,28µm,18.5s						
QZH				LR	LR		
	comp=Z,30µm,19.4s						
QZH				LR	LR		
	comp=Z,30µm,18.5s						
UTTA	**Uttaradit**	**98.88**	**45**	P	Pdif	19 13 04.1	+11
	comp=Z,166nmcomp=Z,12nm,1.3s						
GZH	**Guangzhou**	**98.89**	**32**	P	**P**	**19 12 51.0**	**-1.7**
GZH				PP	**PP**	**19 16 52.0**	**-1.5**
GZH				SKS	**SKSac**	**19 23 30.8**	**+0.6**
GZH				S	**S**	**19 24 17.6**	**-4.7**
GZH				SS	**SS**	**19 31 01.8**	**-5.6**
GZH				pmax	pmax		
	comp=Z,1µm,13.9s						
GZH				LR	LR		
	comp=Z,15µm,24.3s						
GZH				LR	LR		
	comp=Z,12µm,22.2s						
PHIT	**Phitsanulok**	**99.31**	**46**	P	**Pdif**	**19 13 11.0**	**+16**
	comp=Z,117nm,1.0s						
TATO	**Taipei**	**99.45**	**24**	IAMs_20	IAMs_20	19 59 17.1	
	comp=Z,32µm,22.0s						
YHNB	**Yeheng**	**99.71**	**24**	IAMs_20	IAMs_20	19 59 26.0	
	comp=Z,29µm,20.0s						
YOJ	**Yonaguni jima**	**100.31**	**23**	IAMs_20	IAMs_20	20 07 22.7	
	comp=Z,55µm,20.0s						
UTHA	**Uthaitani**	**100.32**	**47**	P	**Pdif**	**19 13 13.2**	**+14**
	comp=Z,270nmcomp=Z,20nm,0.8s						
SSLB	**Suanglung**	**100.45**	**25**	IAMs_20	IAMs_20	20 06 49.1	
	comp=Z,53µm,20.0s						
YULB	**Yu-li**	**100.91**	**25**	IAMs_20	IAMs_20	19 59 06.2	
	comp=Z,39µm,22.0s						
QIZ	**Qiongzhong**	**101.44**	**37**	P	**Pdif**	**19 13 01.8**	**-2.4**
QIZ				PP	**PP**	**19 17 09.9**	**-3.1**
QIZ				S	**Sdif**	**19 24 40.6**	**-3.1**
QIZ				SS	**SS**	**19 31 40.8**	**-2.4**
QIZ				pmax	pmax		
	comp=Z,120nm,3.9s						
GO07	**Milladeo Hill,**	**101.80**	**210**	IAMs_20	IAMs_20	19 58 19.3	
	comp=Z,45µm,20.0s						
JOHN	**Johnston Islan**	**101.85**	**319**	IAMs_20	IAMs_20	19 54 30.5	
	comp=Z,40µm,20.0s						
PHET	**Kaeng Krachan**	**102.73**	**48**	P	**PKiKP**	**19 17 28.0**	**-2.6**
	comp=Z,1µmcomp=Z,49nm,1.2s						
SRAK	**Srakaew**	**102.83**	**46**	P	**PKiKP**	**19 17 29.0**	**-1.8**
	comp=Z,5µmcomp=Z,320nm,1.2s						
UBPT	**Khong Chiam**	**103.15**	**42**	P	**PKiKP**	**19 17 37.2**	**+5.8**
	comp=Z,1µmcomp=Z,28nm,1.8s						
PATY	**Pattaya**	**103.28**	**47**	P	**PKiKP**	**19 17 35.8**	**+4.2**
	comp=Z,5µmcomp=Z,76nm,1.2s						
RPN	**Rapa Nui**	**103.85**	**244**	IAMs_20	IAMs_20	19 52 21.3	
	comp=Z,36µm,22.0s						
EFI	**East Falkland**	**106.10**	**197**	IAMs_20	IAMs_20	20 00 58.0	
	comp=Z,37µm,20.0s						
WAKE	**Wake Island**	**106.69**	**342**	IAMs_20	IAMs_20	20 00 35.1	
	comp=Z,30µm,20.0s						
TAOE	**Nuku Hiva Isla**	**108.00**	**279**	*e*S	**Sdif**	**19 25 27.6**	**-11**
	comp=Z,9µm,27.2s						
TAOE				*e*SP	SP	19 27 23.5	-0.5
	comp=Z,5µm,29.7s						
TAOE				*e*SS	**SS**	**19 33 19.4**	**+4.6**
	comp=Z,15µm,30.5s						
TAOE	**Nuku Hiva Isla**	**108.00**	**279**	*e*LR	LR	19 49 24.3	
	comp=Z,115µm,22.4s						
TAOE	**Nuku Hiva Isla**	**108.00**	**279**	IAMs_20	IAMs_20	19 57 05.8	
	comp=Z,72µm,21.0s						
GO09	**Cerro Castillo**	**108.85**	**205**	IAMs_20	IAMs_20	20 00 27.7	
	comp=Z,44µm,21.0s						
XMAS	**Kiritimati**	**109.03**	**301**	IAMs_20	IAMs_20	19 57 14.2	
	comp=Z,41µm,21.0s						
TPTI		**109.94**	**55**	P	**PKiKP**	**19 17 51.1**	**+7.1**
GO10	**Punta Arenas**	**110.24**	**204**	IAMs_20	IAMs_20	20 01 17.4	
	comp=Z,44µm,21.0s						
GSI	**Gunungsitoli**	**111.81**	**56**	P	PKiKP	19 18 00.9	+13
PTCN	**Pitcairn Islan**	**114.29**	**260**	IAMs_20	IAMs_20	20 02 02.7	
	comp=Z,40µm,20.0s						
PDSI	**Padang**	**115.17**	**55**	P	**PKiKP**	**19 18 01.4**	**+7.4**
KKM	**Kota Kinabalu**	**115.72**	**36**	IAMs_20	IAMs_20	20 17 25.3	
	comp=Z,50µm,21.0s						
RKT	**Rikitea**	**115.79**	**265**	*e*SP	SP	19 28 37.8	+0.4
	comp=Z,18µm,29.2s						
RKT				*e*SS	**SS**	**19 35 03.3**	**+4.7**
	comp=Z,39µm,34.2s						
RKT	**Rikitea**	**115.79**	**265**	*e*LQ	LQ	19 48 01.7	
	comp=Z,63µm,43.5s						
RKT				*e*LR	LR	19 52 56.7	
	comp=Z,67µm,26.5s						
KWAJ	**Kwajalein Atol**	**116.66**	**338**	IAMs_20	IAMs_20	20 06 51.6	
	comp=Z,26µm,20.0s						
SBUM	**Sibu**	**117.51**	**41**	IAMs_20	IAMs_20	20 18 40.3	
	comp=Z,33µm,22.0s						
KSI	**Kapahiang**	**118.59**	**54**	P	PKiKP	19 18 13.6	+13
LHSI	**Lahat**	**119.19**	**53**	P	PKiKP	19 18 10.5	+8.7
PATS	**Pohnpei**	**120.23**	**348**	IAMs_20	IAMs_20	20 06 42.5	
	comp=Z,51µm,21.0s						
KNTN	**Kanton**	**120.24**	**312**	IAMs_20	IAMs_20	20 07 12.8	
	comp=Z,33µm,20.0s						
PPTF	**Pamatai, Papee**	**120.48**	**281**	IAMs_20	IAMs_20	20 04 28.5	
	comp=Z,53µm,19.0s						
PPT2	**Papeete2**	**120.49**	**281**	*e*SP	SP	19 29 18.9	-1.1
	comp=Z,7µm,29.0s						
PPT2				*e*SS	**SS**	**19 36 03.7**	**+4.2**
	comp=Z,59µm,31.2s						
PPT2	**Papeete2**	**120.49**	**281**	*e*LQ	LQ	19 49 36.2	
	comp=Z,146µm,35.8s						
PPT2				*e*LR	LR	19 55 17.8	
	comp=Z,93µm,25.2s,baz=33						
KLSI		**120.53**	**52**	P	PKiKP	19 18 14.9	+11
KASI	**Kota Agung**	**121.14**	**53**	P	PKiKP	19 18 15.8	+10
TOLI2	**Tolitoli**	**121.89**	**33**	PKPdf	**PKPdf**	**19 18 05.9**	**-1.0**
TOLI2				IAMs_20	IAMs_20	20 19 14.7	
	comp=Z,47µm,22.0s						
TARA	**Tarawa**	**122.37**	**330**	IAMs_20	IAMs_20	20 08 48.0	
	comp=Z,47µm,20.0s						
BKB	**Balikpapan**	**122.72**	**38**	IAMs_20	IAMs_20	20 21 58.7	
	comp=Z,28µm,18.0s						
DBJI	**Dramaga**	**123.12**	**51**	P	PKiKP	19 18 17.7	+8.2
VNA1	**Neumayer--Stat**	**124.04**	**171**	P	**PKPdf**	**19 18 08.0**	**-1.2**
VNA3	**Neumayer Olymp**	**124.47**	**171**	P	**PKPdf**	**19 18 09.5**	**-0.5**
LUWI	**Luwuk**	**124.56**	**31**	IAMs_20	IAMs_20	20 22 55.1	
	comp=Z,26µm,19.0s						
SNAA	**Sanae**	**125.59**	**169**	P	**PKPdf**	**19 18 12.0**	**-0.3**
SNAA	**Sanae**	**125.59**	**169**	PKIKP	**PKPdf**	**19 18 11.9**	**-0.3**
SNAA	**Sanae**	**125.59**	**169**	PKPdf	**PKPdf**	**19 18 11.9**	**-0.4**
NLAI	**Namlea**	**127.92**	**27**	P	**PKPdf**	**19 18 18.5**	**+0.1**
FAKI	**Fak Fak**	**128.87**	**20**	IAMs_20	IAMs_20	20 24 30.2	
	comp=Z,24µm,20.0s						
RAR	**Rarotonga**	**129.34**	**287**	IAMs_20	IAMs_20	20 09 43.2	
	comp=Z,26µm,20.0s						
TWSI	**Taliwang, Sumb**	**129.56**	**41**	P	PKiKP	19 18 32.4	+10
AFI	**Afiamalu**	**129.95**	**305**	IAMs_20	IAMs_20	20 16 44.0	
	comp=Z,34µm,18.0s						
EDFI	**Ende, Flores**	**131.40**	**36**	P	**PKiKP**	**19 18 33.8**	**+7.7**
RABL	**Rabaul**	**131.72**	**354**	IAMs_20	IAMs_20	20 14 27.5	
	comp=Z,31µm,21.0s						
SYO	**Syowa Base**	**131.98**	**153**	⇑*e*P	PKPdf	19 18 09.6	-15
SYO	**Syowa Base**	**131.98**	**153**	⇑*e*P	**PKiKP**	**19 18 32.0**	**+6.6**
NIUE	**Niue**	**133.32**	**299**	IAMs_20	IAMs_20	20 11 39.2	
	comp=Z,47µm,21.0s						
BATI	**Baumata**	**133.44**	**34**	PKP	**PKiKP**	**19 18 32.0**	**+1.9**
	comp=Z,12nm,0.6s,baz=18,slow=3.2,SNR=1.3						
PMG	**Port Moresby**	**137.01**	**1**	IAMs_20	IAMs_20	20 17 25.0	
	comp=Z,22µm,20.0s						
MSVF	**Nonsavu**	**138.05**	**314**	PKIKP	**PKPdf**	**19 18 36.8**	**-0.6**
MSVF				MLR	MLR		
	comp=Z,92µm,20.0s						
MSVF	**Nonsavu**	**138.05**	**314**	PKPdf	**PKPdf**	**19 18 36.8**	**-0.6**
MSVF	**Nonsavu**	**138.05**	**314**	P	PKiKP	19 18 51.3	+12
MTN	**Manton Dam**	**138.19**	**25**	PKPdf	**PKPdf**	**19 18 35.9**	**-1.7**
MTN				IAMs_20	IAMs_20	20 27 06.1	
	comp=Z,18µm,22.0s						
SANVU	**Saraoutou**	**140.00**	**330**	IAMs_20	IAMs_20	20 19 03.4	
	comp=Z,27µm,20.0s						
SANVU	**Saraoutou**	**140.00**	**330**	P	PKiKP	19 18 56.9	+14
FITZ	**Fitzroy Crossi**	**141.45**	**35**	PKP	**PKPdf**	**19 18 41.0**	**-2.5**
	comp=Z,3.2nm,0.8s,baz=257,slow=3.0,SNR=6.0						
WB0	**Warramunga Arr**	**145.65**	**23**	PKPdf	**PKPdf**	**19 18 47.9**	**-3.0**
RAO	**Raoul Island**	**145.80**	**299**	IAMs_20	IAMs_20	20 26 44.7	
	comp=Z,31µm,18.0s						
WRAB	**Tennant Creek**	**145.80**	**23**	PKIKP	**PKPdf**	**19 18 48.1**	**-3.0**
WRAB				MLR	MLR		
	comp=Z,12µm,21.0s						
WRAB	**Tennant Creek**	**145.80**	**23**		**PKPdf**	**19 18 48.1**	**-3.0**
WRA	**Warramunga Arr**	**145.81**	**23**	PKP	**PKPdf**	**19 18 48.4**	**-2.7**
	comp=Z,30nm,0.8s,baz=345,slow=3.6,SNR=13						
WRA				PKPbc	**PKPab**	**19 18 52.3**	**+0.3**
	comp=Z,30nm,0.8s,baz=345,slow=3.6,SNR=24						
WRA				SKKPbc	SKKPbc	19 29 53.8	-26
	comp=Z,2.2nm,0.9s,baz=166,slow=2.6,SNR=4.6						
YATNC	**Mamie plateau,**	**146.30**	**327**	P	**PKiKP**	**19 19 02.9**	**+6.8**
DZM	**Mont Dzumac**	**146.45**	**328**	PKPbc	**PKiKP**	**19 18 55.8**	**-0.8**
	comp=Z,35nm,0.8s,baz=272,slow=6.7,SNR=14						
DZM	**Mont Dzumac**	**146.45**	**328**	*e*PKPbc	**PKPdf**	**19 18 52.3**	**+0.1**
	comp=Z,2µm,1.5s						
DZM	**Mont Dzumac**	**146.45**	**328**	*e*SS	SS	19 41 26.3	+14
	comp=Z,24µm,30.1s						
DZM	**Mont Dzumac**	**146.45**	**328**	*e*LQ	LQ	20 01 03.6	
	comp=Z,51µm,38.2s						
DZM				*e*LR	LR	20 07 28.8	
	comp=Z,113µm,30.1s						
DZM	**Mont Dzumac**	**146.45**	**328**	P	**PKiKP**	**19 18 56.7**	**+0.1**
DZM	**Mont Dzumac**	**146.45**	**328**	P	**PKiKP**	**19 18 58.5**	**+1.9**
NOUC	**Port Laguerre**	**146.53**	**328**	P	**PKiKP**	**19 18 58.4**	**+1.8**
NOUC	**Port Laguerre**	**146.53**	**328**	P	**PKiKP**	**19 19 03.1**	**+6.5**
OUENC	**Ouen Island, N**	**146.65**	**327**	P	**PKiKP**	**19 19 04.6**	**+7.8**
ONTNC	**Ouen Toro**	**146.67**	**328**	P	**PKiKP**	**19 19 01.9**	**+5.0**
CTAO	**Charters Tower**	**147.61**	**3**	IAMs_20	IAMs_20	20 32 16.6	
	comp=Z,17µm,21.0s						
ASAR	**Alice Springs**	**149.26**	**26**	PKPbc	**PKPbc**	**19 19 00.5**	**-0.6**
	comp=Z,7.7nm,0.6s,baz=352,slow=2.0,SNR=15						
NWAO	**Narrogin (SRO)**	**150.46**	**61**	PKPbc	**PKPbc**	**19 19 03.2**	**-0.5**
	comp=Z,24nm,1.0s,baz=305,slow=6.4,SNR=4.9						
NWAO				PKPab	**PKPab**	**19 19 10.6**	**+0.3**
	comp=Z,67nm,0.7s,baz=52,slow=1.0,SNR=16						
NWAO	**Narrogin (SRO)**	**150.46**	**61**	PKIKP	**PKPbc**	**19 19 03.5**	**-0.2**
NWAO						20 18 57.1	
NWAO				MLR	MLR		
	comp=Z,14µm,22.0s						
NWAO	**Narrogin (SRO)**	**150.46**	**61**	PKPdf	**PKPdf**	**19 18 57.1**	**-1.3**
NWAO					**PKPbc**	**19 19 03.5**	**-0.2**
EIDS	**Eidsvold**	**152.79**	**354**	PKPdf	**PKPdf**	**19 19 02.4**	**+0.3**
EIDS				PKPab	**sPKPbc**	**19 19 16.8**	**+1.4**
EIDS				IAMs_20	IAMs_20	20 22 16.4	
	comp=Z,44µm,22.0s						
FORT	**Forrest**	**153.84**	**42**	IAMs_20	IAMs_20	20 43 48.1	
	comp=Z,24µm,21.0s						
MXZ	**Matakaoa Point**	**154.12**	**293**	IAMs_20	IAMs_20	20 29 10.1	
	comp=Z,33µm,19.0s						
VNDA	**Vanda**	**154.37**	**187**	PKPbc	**PKPbc**	**19 19 09.7**	**-1.4**
	comp=Z,6.6nm,1.0s,baz=90,slow=3.8,SNR=8.3						
VNDA				PKPab	**PKPab**	**19 19 26.6**	**+1.2**
	comp=Z,68nm,1.0s,baz=255,slow=3.5,SNR=17						
VNDA	**Vanda**	**154.37**	**187**	PKIKP	**PKPdf**	**19 19 04.1**	**+1.3**
VNDA	**Vanda**	**154.37**	**187**	PKPdf	**PKPdf**	**19 19 04.1**	**+1.3**
OUZ	**Omahuta**	**154.91**	**303**	IAMs_20	IAMs_20	20 27 34.8	
	comp=Z,23µm,19.0s						
URZ	**Urewera**	**155.28**	**294**	PKP	**PKPdf**	**19 19 05.8**	**+0.6**
	comp=Z,6.3nm,0.8s,baz=67,slow=16,SNR=2.2						
URZ	**Urewera**	**155.28**	**294**	PKPdf	**PKPdf**	**19 19 04.5**	**-0.7**
URZ					**sPKPdf**	**19 19 13.7**	**+2.4**
BKZ	**Black Stump Fm**	**156.26**	**293**	IAMs_20	IAMs_20	20 22 03.8	
	comp=Z,37µm,21.0s						
HIZ	**Hauiti**	**156.71**	**296**	IAMs_20	IAMs_20	20 29 28.3	
	comp=Z,34µm,20.0s						
CASY	**Casey**	**156.95**	**141**	IAMs_20	IAMs_20	20 44 18.1	
	comp=Z,28µm,22.0s						
BFZ	**Birch Farm**	**157.42**	**290**	IAMs_20	IAMs_20	20 32 44.8	
	comp=Z,35µm,19.0s						
LHI	**Lord Howe Isla**	**157.52**	**335**	IAMs_20	IAMs_20	20 23 25.0	
	comp=Z,35µm,22.0s						
ARMA	**Armidale**	**157.76**	**352**	IAMs_20	IAMs_20	20 27 01.2	
	comp=Z,33µm,21.0s						
BBOO	**Buckleboo**	**158.50**	**28**	PKPdf	**PKPdf**	**19 19 08.4**	**-1.1**
BBOO				IAMs_20	IAMs_20	20 43 56.7	
	comp=Z,21µm,19.0s						
STKA	**Stephens Creek**	**158.86**	**15**	PKP	**PKPdf**	**19 19 10.6**	**+0.6**
	comp=Z,0.5nm,0.3s,baz=112,slow=5.4,SNR=1.5						
STKA	**Stephens Creek**	**158.86**	**15**	PKPdf	**PKPdf**	**19 19 07.5**	**-2.5**
NNZ	**Nelson**	**159.40**	**293**	IAMs_20	IAMs_20	20 29 30.9	
	comp=Z,23µm,20.0s						
QRZ	**Quartz Range**	**159.61**	**295**	IAMs_20	IAMs_20	20 28 39.2	
	comp=Z,35µm,19.0s						
RPZ	**Rata Peaks**	**162.32**	**291**	PKP	**PKPdf**	**19 19 14.7**	**+1.4**
	comp=Z,8.8nm,0.9s,baz=337,slow=13,SNR=1.9						
RPZ				PKPab	**PKPab**	**19 20 01.1**	**+0.3**
	comp=Z,28nm,0.8s,baz=263,slow=1.6,SNR=5.1						

IDC ***13*** *18:59:43.3±2.2, 39.°23N×143.°40E, h45^{km}±20^{km}, mb3.6/8, mb1 3.8/12, mb1mx3.7/53, mbtmp3.9/12, ML3.5/4, MS2.5/1, Ms1 2.5/1, ms1mx2.3/64, Error ellipse: s-maj=27.3km s-min=13.5km az=99.0*

NEIC ***13*** *18:59:44.2±2.8, 39.°20N±0.°06×143.°2E±0.°1, h52^{km}±5^{km}, mb4.3/8, Error ellipse: s-maj=13.2km s-min=7.4km az=111.0*

JMA ***13*** *18:59:45.3±0.1, 39.°22N×142.°93E, h53^{km}±2^{km}, M4.2*

NIED ***13*** *18:59:45.4, 39.°22N×142.°93E, h53^{km}, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}6.51; $M_{\theta\theta}$0.67; $M_{\phi\phi}$-7.18; $M_{r\theta}$-1.86; $M_{\theta\phi}$-0.41; $M_{\phi r}$4.71; Fault plane solution: $M_0$8.54000×10^{14} NP1: ϕ_s348.00000°, δ64.00000°, λ76.00000°. NP2: ϕ_s198.00000°, δ30.00000°, λ116.00000°.*

ISC 13 18:59:42.5±0.8**, 39.°18N**±0.°04×**143.°20E**±0.°07**, h35^{km}, n58, σ1.^{s}72**/69**, mb4.0**/14**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MIYJ	**Miyakonagasawa**	**1.14**	**291**	P	**Pn**	**19 00 02.4**	**+0.4**
MIYJ				S	**Sn**	**19 00 14.6**	**-1.9**
OFUJ	**Ofunato**	**1.20**	**266**	P	**Pn**	**19 00 03.3**	**+0.5**
OFUJ				*e*S	**Sn**	**19 00 16.2**	**-1.6**
JTH	**Tanohata**	**1.28**	**307**	P	**Pn**	**19 00 04.5**	**+0.5**
JTH				*e*S	**Sn**	**19 00 18.2**	**-1.7**
JKMT	**Kesennumamotoy**	**1.40**	**255**	P	**Pn**	**19 00 06.1**	**+0.6**
JOM	**Ohasama**	**1.51**	**282**	P	**Pn**	**19 00 07.6**	**+0.5**
JOM				*e*S	**Sn**	**19 00 23.9**	**-1.7**
JMK	**Ichinoseki**	**1.56**	**262**	P	**Pn**	**19 00 08.5**	**+0.7**
JMK				S	**Sn**	**19 00 25.9**	**-0.9**
JIO	**Ouri**	**1.62**	**244**	P	**Pn**	**19 00 09.3**	**+0.7**
JIO				S	**Sn**	**19 00 26.3**	**-1.9**
JANG	**Nango**	**1.76**	**313**	P	**Pn**	**19 00 10.9**	**+0.3**
JANG				*e*S	**Sn**	**19 00 30.4**	**-1.4**
JRG	**Rokugo**	**2.00**	**277**	P	**Pn**	**19 00 14.4**	**+0.5**
JOU	**Okura**	**2.15**	**248**	P	**Pn**	**19 00 16.9**	**+1.0**
JOU				S	**Sn**	**19 00 40.6**	**-0.7**
JAH	**Hinai**	**2.22**	**298**	P	**Pn**	**19 00 17.7**	**+0.8**
JAH				S	**Sn**	**19 00 42.1**	**-1.0**
JYK	**Kaneyama**	**2.23**	**264**	P	**Pn**	**19 00 18.0**	**+1.0**
JYK				*e*S	**Sn**	**19 00 42.5**	**-0.8**
JTM	**Tenmabayashi**	**2.29**	**315**	P	**Pn**	**19 00 18.6**	**+0.7**
JTM				S	**Sn**	**19 00 43.1**	**-1.8**
JTM	**Tenmabayashi**	**2.29**	**315**		**Pn**	**19 00 18.6**	**+0.7**
JTM				Sn	**Sn**	**19 00 42.6**	**-2.2**
JMM	**Marumori**	**2.30**	**236**	P	**Pn**	**19 00 18.7**	**+0.8**
JMM				S	**Sn**	**19 00 43.0**	**-2.1**
JMM	**Marumori**	**2.30**	**236**		**Pn**	**19 00 18.8**	**+0.8**
JMM				Sn	**Sn**	**19 00 42.7**	**-2.4**
ERM	**Erimo**	**2.83**	**359**	Pn	**Pn**	**19 00 27.3**	**+2.1**
ERM				Sn	**Sn**	**19 00 58.1**	**+0.1**
JEM	**Erimo**	**2.83**	**359**	Pn	**Pn**	**19 00 27.8**	**+2.5**
JYT	**Yasato**	**3.79**	**220**		**Pn**	**19 00 39.4**	**+0.9**
JEW	**Eniwo**	**3.89**	**341**	Pn	**Pn**	**19 00 41.9**	**+2.1**
JSD	**Sado**	**4.04**	**255**	Pn	**Pn**	**19 00 43.3**	**+1.4**
MJAR	**Matsushiro Arr**	**4.75**	**238**	P	**Pn**	**19 00 54.4**	**+2.7**
	0.7nm,0.3s,baz=39,slow=13,SNR=45						
MJAR	**Matsushiro Arr**	**4.75**	**238**		**Pn**	**19 00 54.1**	**+2.4**
MAJO	**Matsushiro**	**4.75**	**238**		**Pn**	**19 00 54.7**	**+3.0**
MAT	**Matsushiro**	**4.75**	**238**	P	**Pn**	**19 00 54.2**	**+2.5**
MAT				*e*S	**Sn**	**19 01 47.3**	**+1.8**
MJB9	**Matsu-Tunnel**	**4.75**	**238**	Pn	**Pn**	**19 00 52.6**	**+1.0**
ASAJ	**Asahikawa**	**4.95**	**355**	P	**Pn**	**19 00 56.1**	**+1.7**
	1.2nm,0.3s,baz=208,slow=10,SNR=6.4						
ASAJ				S	**Sn**	**19 01 50.4**	**0.0**
	3.4nm,0.3s,baz=281,slow=9.8,SNR=8.6						
ASAJ				LR	LR	19 03 06.3	
	comp=Z,52nm,19.1s,baz=222,slow=41						
JKA	**Kamikawa-asahi**	**4.95**	**355**		**Pn**	**19 00 54.3**	**-0.1**
JGF	**Kuroka**	**5.87**	**234**	Pn	**Pn**	**19 01 10.1**	**+3.0**
INU	**Inuyama**	**6.24**	**234**	Pn	**Pn**	**19 01 15.6**	**+3.5**
JHJ2	**Mitsune**	**6.65**	**205**	Pn	**Pn**	**19 01 19.1**	**+1.4**
JHJ	**Hachijo jima 2**	**6.65**	**206**	P	**Pn**	**19 01 18.8**	**+1.0**
	23nm,0.3s,baz=139,slow=19,SNR=7.9						
JHJ				S	**Sn**	**19 02 27.2**	**-5.1**
	43nm,0.3s,baz=93,slow=22,SNR=6.2						
JWT	**Wachi**	**7.34**	**240**	Pn	**Pn**	**19 01 30.6**	**+3.5**
JHS	**Saijyo**	**9.07**	**246**	Pn	**Pn**	**19 01 54.9**	**+3.9**
KSRS	**Korea Array**	**12.13**	**267**	P	**Pn**	**19 02 35.1**	**+2.3**
	0.1nm,0.3s,baz=72,slow=14,SNR=2.2						
SSLB	**Suanglung**	**24.31**	**237**	P	**P**	**19 04 55.8**	**-1.1**
SSLB				IAmb	IAmb	19 05 09.8	
	comp=Z,12nm,1.0s						
SEY	**Seymchan**	**24.42**	**10**	P	**P**	**19 04 57.8**	**+0.3**
	comp=Z,1.8nm,0.8s,baz=221,slow=20,SNR=2.8						
ULN	**Ulaanbaatar**	**27.40**	**300**	P	**P**	**19 05 25.5**	**+0.6**
ULN				IAmb	IAmb	19 05 37.8	
	comp=Z,5.9nm,1.4s						
SONM	**Songino Array**	**27.84**	**300**	P	**P**	**19 05 29.4**	**+0.6**
	comp=Z,0.9nm,0.6s,baz=91,slow=8.8,SNR=8.0						
SONM	**Songino Array**	**27.84**	**300**	P	**P**	**19 05 28.9**	**+0.2**
H11N2	**WAKE ISLAND Hy**	**28.16**	**127**	T	T	19 36 16.4	
	baz=318,slow=75,SNR=74						
H11N1	**WAKE ISLAND Hy**	**28.17**	**127**	T	T	19 36 24.1	
	baz=318,slow=75,SNR=67						
H11N3	**WAKE ISLAND Hy**	**28.18**	**127**	T	T	19 36 13.2	
	baz=318,slow=75,SNR=62						
H11S1	**WAKE ISLAND Hy**	**28.97**	**129**	T	T	19 37 27.6	
	baz=318,slow=76,SNR=10						
H11S3	**WAKE ISLAND Hy**	**28.97**	**129**	T	T	19 37 16.5	
	baz=318,slow=76,SNR=3.8						
H11S2	**WAKE ISLAND Hy**	**28.98**	**129**	T	T	19 37 21.3	
	baz=318,slow=76,SNR=10						
ZALV	**Zalesovo Beam**	**41.55**	**311**	P	**P**	**19 07 27.0**	**+0.6**
	comp=Z,1.2nm,0.3s,baz=96,slow=11,SNR=4.8						
CMAR	**Chiang Mai Arr**	**43.42**	**255**	P	**P**	**19 07 42.7**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=34,slow=6.5,SNR=4.7						
MK31	**Makanchi Array**	**44.21**	**301**	P	**P**	**19 07 48.6**	**+0.5**
MKAR	**Makanchi Array**	**44.21**	**301**	P	**P**	**19 07 48.3**	**+0.2**
	comp=Z,0.8nm,0.8s,baz=82,slow=8.7,SNR=6.3						
MAKZ	**Makanchi**	**44.42**	**301**	P	**P**	**19 07 49.3**	**-0.5**
MAKZ				IAmb	IAmb	19 07 58.3	
	comp=Z,2.8nm,1.2s						
BRLK	**Bradley Lake**	**45.31**	**41**	P	**P**	**19 07 56.5**	**-0.2**
BRLK				IAmb	IAmb	19 08 03.5	
	comp=Z,43nm,1.6s						
KURK	**Kurchatov**	**45.75**	**307**	P	**P**	**19 07 59.9**	**-0.3**
KURK				IAmb	IAmb	19 08 07.9	
	comp=Z,5.1nm,1.3s						
KURBB	**Kurchatov Arra**	**45.83**	**307**	P	**P**	**19 08 01.0**	**+0.2**
	comp=Z,1.7nm,0.7s,baz=80,slow=8.2,SNR=13						
WRA	**Warramunga Arr**	**59.40**	**190**	P	**P**	**19 09 41.9**	**+0.5**
	comp=Z,1.1nm,0.4s,baz=6.5,slow=6.8,SNR=4.9						
ASAR	**Alice Springs**	**63.12**	**190**	P	**P**	**19 10 07.3**	**+0.6**
	comp=Z,0.5nm,0.7s,baz=360,slow=4.1,SNR=0.7						
ULM	**Lac du Bonnet**	**76.94**	**34**	P	**P**	**19 11 28.3**	**-2.9**
	comp=Z,61nm,0.9s,baz=284,slow=8.0,SNR=3.0						
ULM	**Lac du Bonnet**	**76.94**	**34**	IAmb	IAmb	19 11 29.6	
	comp=Z,104nm,1.1s						

SEA ***13*** *19:02:42.8±1.3, 48.°03N±0.°03×122.°59W±0.°04, h59^{km}±3^{km}, ML2.6/72, ML2.6/38(NEIC), Error ellipse: s-maj=4.4km s-min=4.0km az=121.0*

NEIC ***13*** *19:02:42.7±1.1, 48.°03N±0.°02×122.°63W±0.°04, h61^{km}±3^{km}, Error ellipse: s-maj=4.3km s-min=2.2km az=82.0*

ANF ***13*** *19:02:43.7±0.2, 48.°04N×122.°57W, h40^{km}±5^{km}, ML2.5/6, Error ellipse: s-maj=2.8km s-min=1.8km az=117.0*

ISC 13 19:02:43.9±1.2**, 48.°04N**±0.°02×**122.°59W**±0.°02**, h35^{km}, n69, σ1.^{s}20**/92**, Washington**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SWID	**South Whidbey**	**0.13**	**106**		**Pn**	**19 02 51.5**	**+1.5**
SWID					**Sn**	**19 02 58.5**	**+4.1**
BEVT	**Boeing Everett**	**0.25**	**119**		**Pn**	**19 02 52.2**	**+1.0**
BEVT					**Sn**	**19 02 59.6**	**+3.4**
BLN	**Blyn Mountain**	**0.26**	**262**		**Pn**	**19 02 52.0**	**+0.7**
EVCC	**Everett Colleg**	**0.26**	**98**		**Pn**	**19 02 52.5**	**+1.1**
KINR	**Kitsap County**	**0.29**	**187**		**Pn**	**19 02 52.7**	**+1.0**
KINR					**Sn**	**19 03 01.0**	**+4.0**
LYNC	**Lynnwood City**	**0.30**	**137**		**Pn**	**19 02 52.6**	**+0.8**
SQM	**Sequim**	**0.31**	**276**		**Pn**	**19 02 53.0**	**+1.2**
B013	**Quilcene**	**0.31**	**223**		**Pn**	**19 02 52.4**	**+0.4**
B013					**Sn**	**19 02 59.8**	**+2.4**
B05A	**Bryant**	**0.40**	**56**	P	**Pn**	**19 02 53.2**	**+0.1**
	baz=235,SNR=183						
B05A				S	**Sn**	**19 02 59.9**	**+0.4**
	baz=235						
B05A	**Bryant**	**0.40**	**56**		**Pn**	**19 02 53.2**	**+0.1**
C04A	**Brinnon**	**0.41**	**218**		**Pn**	**19 02 53.4**	**+0.1**
C04A					**Sn**	**19 03 02.1**	**+2.3**
BLH	**Bald Hill**	**0.43**	**118**		**Pn**	**19 02 53.4**	**-0.1**
JCW	**Jim Creek**	**0.47**	**71**		**Pn**	**19 02 54.0**	**-0.1**
ALKI	**Alki Wastewate**	**0.48**	**166**		**Pn**	**19 02 55.0**	**+0.8**
CMW	**Cultus Mountai**	**0.50**	**40**		**Pn**	**19 02 54.5**	**0.0**
HDW	**Hoodsport**	**0.50**	**218**		**Pn**	**19 02 54.5**	**-0.1**
GNW	**Green Mountain**	**0.50**	**198**		**Pn**	**19 02 54.3**	**-0.3**
GMW	**Gold Mountain**	**0.51**	**195**		**Pn**	**19 02 54.4**	**-0.3**
UWFH	**University of**	**0.58**	**331**		**Pn**	**19 02 55.8**	**+0.2**
UWFH					**Sn**	**19 03 05.4**	**+1.5**
D03D	**Eldon**	**0.61**	**214**	P	**Pn**	**19 02 55.9**	**-0.1**
	baz=34,SNR=17						
D03D				S	**Sn**	**19 03 05.3**	**+0.6**
	baz=34						
D03D	**Eldon**	**0.61**	**214**		**Pn**	**19 02 55.9**	**-0.1**
D03D					**Sn**	**19 03 05.8**	**+1.2**
B04A	**Port Angeles**	**0.61**	**272**		**Pn**	**19 02 55.6**	**-0.5**
B04A					**Sn**	**19 03 05.6**	**+0.9**
B04A	**Port Angeles**	**0.61**	**272**		**Pn**	**19 02 55.7**	**-0.4**
B04A					**Sn**	**19 03 05.7**	**+1.0**
VGZ	**Gonzales**	**0.61**	**308**		**Pn**	**19 02 55.4**	**-0.7**
VGZ					**Sn**	**19 03 05.4**	**+0.6**
MCW	**Mount Constitu**	**0.66**	**346**		**Pn**	**19 02 56.8**	**0.0**
A04D	**Lummi Island**	**0.68**	**354**	P	**Pn**	**19 02 57.0**	**0.0**
	baz=173,SNR=7.5						
A04D				S	**Sn**	**19 03 07.3**	**+0.9**
	baz=173						
A04D	**Lummi Island**	**0.68**	**354**		**Pn**	**19 02 57.0**	**0.0**
A04D					**Sn**	**19 03 08.0**	**+1.5**
C05A	**Tolt Reservoir**	**0.70**	**119**		**Pn**	**19 02 56.4**	**-0.9**
C05A					**Sn**	**19 03 06.6**	**-0.4**
RATT	**Rattlesnake La**	**0.82**	**139**		**Pn**	**19 02 58.4**	**-0.5**
RPW	**Rockport**	**0.83**	**60**		**Pn**	**19 02 58.8**	**-0.4**
B011	**North Saanich**	**0.83**	**317**		**Pn**	**19 02 58.4**	**-0.7**
D04E	**Lakebay**	**0.87**	**188**	P	**Pn**	**19 02 59.5**	**-0.1**
	baz=8.2,SNR=9.0						
D04E				S	**Sn**	**19 03 12.2**	**+1.1**
	baz=8.2						
MBW	**Mount Baker**	**0.87**	**32**		**Pn**	**19 02 59.4**	**-0.4**
B06A	**Marblemount**	**0.88**	**57**		**Pn**	**19 02 59.3**	**-0.4**
B06A					**Sn**	**19 03 11.3**	**0.0**
D05A	**Enumclaw**	**0.95**	**154**		**Pn**	**19 03 00.4**	**-0.3**
D05A				Sn	**Sn**	**19 03 14.1**	**+1.2**
D05A				IAML		19 03 14.7	
	comp=N,119nm,0.6s						
D05A				IAML		19 03 15.4	

	comp=E,121nm,0.5s						
OLQ	Olympics--Lake	0.97	238		Pn	19 03 00.3	-0.7
GPW	Glacier Peak	0.98	85		Pn	19 03 00.7	-0.6
A05A	Maple Falls	1.01	19	Pn	Pn	19 03 01.4	-0.2
A05A				Sn	Sn	19 03 15.2	+0.6
A05A				IAML		19 03 16.1	
	comp=N,132nm,0.5s						
NLWA	Neilton Lookou	1.08	233		Pn	19 03 01.5	-1.0
NLWA				Sn	Sn	19 03 15.3	-1.0
C06D	Leavenworth	1.15	95	P	Pn	19 03 03.1	-0.3
	baz=276,SNR=5.6						
C06D				S	Sn	19 03 18.1	+0.1
	baz=276						
C06D	Leavenworth	1.15	95		Pn	19 03 03.1	-0.3
WRW	Wenatchee Ridg	1.17	99		Pn	19 03 03.4	-0.4
LON	Longmire	1.40	157		Pn	19 03 06.6	-0.3
E04D	Cinebar	1.49	179	P	Pn	19 03 07.8	-0.3
	baz=360,SNR=14						
E04D				S	Sn	19 03 26.8	+0.5
	baz=360						
LTY	Liberty	1.52	120		Pn	19 03 08.4	-0.3
WPW	White Pass	1.52	152		Pn	19 03 08.8	+0.1
E03A	Lebam	1.64	204	Pn	Pn	19 03 08.6	-1.5
E03A				IAML		19 03 30.6	
	comp=N,33nm,0.3s						
E03A				IAML		19 03 50.2	
	comp=E,38nm,2.1s						
SHB	Sechelt	1.77	332		Pn	19 03 12.0	-0.1
STD	Studebaker Rid	1.82	172		Pn	19 03 12.6	-0.3
F04D	Rainier, OR	1.98	188	P	Pn	19 03 14.8	-0.1
	baz=8.3						
F04D				S	Sn	19 03 39.1	+0.6
	baz=8.3						
ASR	Mount Adams--S	2.01	160		Pn	19 03 15.5	0.0
MTMW	Mount Mitchell	2.04	173		Pn	19 03 15.9	+0.2
B08A	Colville Reser	2.20	81	Pn	Pn	19 03 17.8	-0.2
E07A	Sunnyside	2.38	128	Pn	Pn	19 03 19.6	-0.9
E07A				IAML		19 03 54.0	
	comp=E,21nm,4.0s						
E07A				IAML		19 04 03.5	
	comp=N,17nm,1.5s						
KMOR	Kings Mountain	2.48	195		Pn	19 03 20.5	-1.4
HAWA	Hanford	2.66	127		Pn	19 03 23.9	-0.4
HAWA				IAML		19 03 56.0	
	comp=N,16nm,4.7s						
D08A	Wollman Farm,	2.67	110		Pn	19 03 23.0	-1.5
D08A				IAML		19 04 03.7	
	comp=E,11nm,4.7s						
D08A				IAML		19 04 50.4	
	comp=N,18nm,4.7s						
F07A	Phinny Hill Vi	2.82	139	Pn	Pn	19 03 26.1	-0.3
F07A				IAML		19 04 29.0	
	comp=E,18nm,4.7s						
F07A				IAML		19 04 34.0	
	comp=N,22nm,5.0s						
E08A	Dider Farm, El	2.86	122		Pn	19 03 26.6	-0.4
C09A	Chrisman Ranch	2.92	93		Pn	19 03 26.8	-0.9
C09A				IAML		19 04 01.6	
	comp=E,29nm,0.3s						
C09A				IAML		19 04 21.4	
	comp=N,21nm,0.6s						
H04A	Detroit Lake	3.37	175	Pn	Pn	19 03 33.9	-0.2
H04A				IAML		19 05 01.4	
	comp=E,18nm,4.3s						
H04A				IAML		19 05 27.2	
	comp=N,10nm,2.3s						
H04D	Lebanon	3.52	182	P	Pn	19 03 36.0	-0.1
	baz=1.6						
NEW	Newport	3.67	85	Pn	Pn	19 03 36.8	-1.4
NEW				IAML		19 05 34.6	
	comp=N,13nm,4.6s						
NEW				IAML		19 05 45.3	
	comp=N,15nm,4.4s						
G08A	Pilot Rock	3.72	136	Pn	Pn	19 03 36.5	-2.4
G08A				IAML		19 04 44.4	
	comp=E,13nm,4.9s						
F10A	Beach Ranch, E	4.21	117	Pn	Pn	19 03 45.1	-0.6
I07A	Izee	4.51	150	Pn	Pn	19 03 49.2	-0.5
I07A				IAML		19 04 52.8	
	comp=N,7.3nm,4.3s						
HUMO	Hull Mountain	5.44	183	Pn	Pn	19 03 59.3	-3.1
MOD	Modoc Plateau	6.35	164	Pn	Pn	19 04 11.1	-4.0
KRMB	Red Mountain	6.59	189	Pn	Pn	19 04 17.4	-0.8

MAN 13 19:15:49.0, 5°.21N × 125°.80E, h34^{km}, mb4.4, ML3.3, MS3.0, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	Don Marcelino,	0.90	355	*e*P	Pn	19 16 05.5	+0.3
DDMP				*e*S	Sb	19 16 17.8	0.0
SKMP	Bagumbayan, Su	1.81	316	*e*P	Pn	19 16 19.0	+1.3
SKMP				*e*S	Sn	19 16 41.4	+1.9
KCP	Kidapawan	1.92	339⇑	*e*P	Pn	19 16 20.1	+0.7
PAGZ	Pagadian	3.56	318	*e*P	Pn	19 16 42.5	+0.7
LQP	Lukban	9.79	335⇓	*e*P	Pn	19 18 10.9	+3.2

IDC 13 19:21:02.5±1.8, 2°.97S × 130°.55E, h0^{km}, mb3.6/2, mb1 3.8/4, mb1mx3.5/45, mbtmp3.7/4, ML3.2/2, Error ellipse: s-maj=68.3km s-min=21.5km az=93.0, Seram

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	2.20	19	Pn	Pn	19 21 39.8	-0.7
	8.0nm,0.3s,baz=50,slow=18,SNR=101						
SIJI				Sn	Sn	19 22 09.0	+0.5
	7.6nm,0.3s,baz=147,slow=23,SNR=7.3						
WRA	Warramunga Arr	17.27	168	P	P	19 25 06.2	-0.7
	0.1nm,0.3s,baz=346,slow=10,SNR=1.1						
ASAR	Alice Springs	20.83	171	P	P	19 25 45.3	-0.6
	1.5nm,0.5s,baz=347,slow=9.7,SNR=8.2						
SONM	Songino Array	54.84	340	P	P	19 30 35.3	+0.6
	0.6nm,0.8s,baz=145,slow=5.3,SNR=2.5						

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*NEIC **13** 19:27:31.8±1.7, 56°.75N±0°.05 × 156°.60W±0°.08, h74^{km}±8^{km}, Error ellipse: s-maj=8.1km s-min=5.3km az=142.0*

*AEIC **13** 19:27:33±2.5, 56°.75N±0°.04 × 156°.53W±0°.07, h54^{km}±7^{km}, ML3.7, ML3.9/20(NEIC), Error ellipse: s-maj=6.9km s-min=4.5km az=147.0*

*IDC **13** 19:27:33.1±4.4, 57°.17N × 156°.69W, h62^{km}±38^{km}, mb3.3/5, mb1 3.7/8, mb1mx3.3/72, mbtmp3.7/8, ML3.9/3, Error ellipse: s-maj=42.6km s-min=28.3km az=5.0*

ISC 13 19:27:32.3±0.9, 56°.81N±0°.07 × 156°.62W±0°.05, h82^{km}±9^{km}, n130, σ1^{s}.27/138, mb3.6/5, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLBL	Peulik Blue Cr	0.90	353		Pn	19 27 50.3	+0.1
PLK3	Peulik 3	0.90	12		Pn	19 27 50.3	0.0
PLK3					Sn	19 28 03.9	+0.2
PLK2	Peulik 2	0.97	10		Pn	19 27 51.4	+0.3
PLK1	Peulik 1	0.99	1		Pn	19 27 51.3	0.0
CHGN	Chignik	1.12	243		Pn	19 27 52.0	-0.8
CHGN				Sn	Sn	19 28 06.2	-2.0
CHGN				IAML		19 28 06.6	
	comp=E,3μm,0.3s						
CHGN				IAML		19 28 06.8	
	comp=N,3μm,0.3s						
KJL	Kejulik	1.37	24		Pn	19 27 56.1	+0.1
SII	Sitkinak Islan	1.37	100		Pn	19 27 55.1	-0.9
SII				Sn	Sn	19 28 16.8	+2.9
SII				IAML		19 28 20.2	
	comp=E,2μm,0.5s						
CAHL	Cahill	1.43	29		Pn	19 27 56.8	0.0
KABR	Katmai Barrier	1.60	33		Pn	19 27 58.9	-0.1
KABU	Katmai Buttres	1.63	26		Pn	19 27 59.8	+0.4
KABU					Sn	19 28 20.7	+0.7
KCE	Katmai Mt Cerb	1.63	28		Pn	19 27 59.9	+0.5
KVTA	Katmai Vly 10	1.73	24		Pn	19 28 01.0	+0.3
OHAK	Old Harbor	1.87	76		Pn	19 28 01.9	-0.5
OHAK				Sn	Sn	19 28 23.2	-2.2
OHAK				IAML		19 28 34.1	
	comp=N,614nm,0.6s						
KAHC	Katmai Hardscr	2.03	25		Pn	19 28 05.1	+0.3
KDAK	Kodiak Island	2.40	64	P	Pn	19 28 09.1	-0.4
	comp=N,21nm,0.3s,baz=246,slow=4.7,SNR=400						
KDAK				S	Sn	19 28 36.1	-1.9
	comp=N,19nm,0.3s,baz=308,slow=21,SNR=9.7						
KDAK	Kodiak Island	2.40	64		Pn	19 28 09.3	-0.2
KDAK				Sn	Sn	19 28 35.7	-2.3
CNBA	Chernabura Isl	2.61	221	Pn	Pn	19 28 11.1	-1.2
CNBA				IAML		19 28 52.1	
	comp=N,276nm,0.5s						
CNBA				IAML		19 28 53.1	
	comp=E,309nm,0.4s						
SDPT	Sand Point	2.61	237	Pn	Pn	19 28 12.6	+0.3
SDPT				IAML		19 28 51.5	
	comp=N,431nm,0.8s						
SDPT				IAML		19 28 52.9	
	comp=E,546nm,0.8s						
AUW	Augustine West	3.06	32		Pn	19 28 19.6	+1.1
AUCH	Augustine Cone	3.06	32		Pn	19 28 19.4	+0.9
AUL	Augustine Lava	3.08	32		Pn	19 28 19.8	+1.1
PVV	Pavlof Volcano	3.23	246		Pn	19 28 21.9	+1.2
PS4A	Pavlof South-4	3.28	246		Pn	19 28 22.2	+0.8
HAG	Hague Volcano	3.32	245		Pn	19 28 23.1	+1.2
OPT	Oil Point	3.37	31		Pn	19 28 23.7	+1.1
DT1	Dutton Round H	3.61	244		Pn	19 28 26.6	+0.7
ILS	Iliamna Low So	3.67	29		Pn	19 28 27.7	+0.9
IVE	Iliamna Volcan	3.73	29		Pn	19 28 28.6	+1.0
HOM	Homer	3.88	41		Pn	19 28 30.2	+0.7
CNPM	China Poot	3.94	44	Pn	Pn	19 28 30.5	+0.1
RED	Redoubt Volcan	4.14	27		Pn	19 28 34.5	+1.3
RSO	Redoubt South	4.18	27		Pn	19 28 35.1	+1.2
NCT	North Crescent	4.22	26		Pn	19 28 35.9	+1.6
BRLK	Bradley Lake	4.23	43	Pn	Pn	19 28 34.1	-0.3
BRLK				IAML		19 29 36.1	
	comp=N,129nm,0.4s						
BRLK				IAML		19 29 36.7	
	comp=E,126nm,0.6s						
BRSE	Bradley Lake S	4.27	44		Pn	19 28 34.7	-0.2
FALS	False Pass	4.30	246		Pn	19 28 35.7	+0.5
DFR	Drift River	4.31	27		Pn	19 28 36.9	+1.5
SVW2	Sparrevohn	4.33	7		Pn	19 28 36.0	+0.4
SSLN	Shishaldin Nor	4.62	247		Pn	19 28 40.0	+0.4
SPBG	Spurr Blockage	4.97	24		Pn	19 28 45.4	+0.9
SLKM	Skilak Lake	4.99	39		Pn	19 28 45.1	+0.5
SEW	Seward	5.01	46	Pn	Pn	19 28 44.0	-0.9
SPCP	Crater Peak Br	5.03	25		Pn	19 28 46.7	+1.4
SPCG	Spurr Capps Gl	5.08	26		Pn	19 28 47.3	+1.3
O22K	Cooper Landing	5.15	42		Pn	19 28 47.4	+0.7
STLK	Strandline Lak	5.31	26		Pn	19 28 50.3	+1.3
SUA	Susitna One	5.56	31		Pn	19 28 53.4	+1.0
RC01	Rabbit Creek A	5.58	37		Pn	19 28 52.7	+0.1
SKT	Skwentna	5.80	25	Pn	Pn	19 28 53.3	-2.3
AKSA	Akutan Strait	5.81	246		Pn	19 28 57.6	+1.7
PWL	Port Wells	5.91	43		Pn	19 28 56.6	-0.6
TT01	Tatalina	6.12	3		Pn	19 29 00.7	+0.7
TTA	Tatalina	6.14	3	Pn	Pn	19 29 00.8	+0.4
GHO	Glory Hole Cre	6.34	35		Pn	19 29 02.3	-0.9
UNV	Unalaska Valle	6.37	246	Pn	Pn	19 29 04.0	+0.5
HIN	Hinchinbrook I	6.39	52	Pn	Pn	19 29 03.2	-0.6
MNAT	Makushin Natee	6.44	247		Pn	19 29 05.1	+0.6
MSW	Makushin Switc	6.48	248		Pn	19 29 05.6	+0.7
PPLA	Purkeypile	6.50	18	Pn	Pn	19 29 06.4	+1.1
MREP	Makushin Rep't	6.51	247		Pn	19 29 05.5	0.0
SML	Sawmill	6.56	37	Pn	Pn	19 29 05.7	-0.4
MGOD	Makushin Gods	6.59	247		Pn	19 29 06.8	+0.3
MAPS	Pakushin South	6.61	247		Pn	19 29 07.2	+0.4
EYAK	Cordova Ski Ar	6.79	52	Pn	Pn	19 29 08.7	-0.5
SCM	Sheep Creek Mo	6.92	39	Pn	Pn	19 29 10.4	-0.6
RAGM	Ragged Mountai	7.20	55	Pn	Pn	19 29 14.5	-0.2
KLU	Klutina	7.23	45		Pn	19 29 14.8	-0.4
WAT1	Susitna Watana	7.27	31		Pn	19 29 15.0	-0.8
WAT6	Susitna Watana	7.32	34		Pn	19 29 15.4	-1.1
KTH	Kantishna Hill	7.33	20		Pn	19 29 16.2	-0.4
HMT	Hamilton	7.36	56	Pn	Pn	19 29 15.0	-2.0
TRF	Thorofare Moun	7.37	23		Pn	19 29 17.0	-0.1
WAT2	Susitna Watana	7.37	30		Pn	19 29 16.3	-0.9
SPIA	Saint Paul Isl	7.45	278	Pn	Pn	19 29 19.7	+1.5
BMRM	Bremner River	7.49	51		Pn	19 29 18.3	-0.4
M24K	Tolsona, Glenn	7.51	41	Pn	Pn	19 29 18.9	-0.1
RND	Reindeer	7.66	27	Pn	Pn	19 29 20.8	-0.4
N25K	Chitina, Valde	7.81	47	Pn	Pn	19 29 22.9	-0.3
BPAW	Bear Paw Mtn.	7.82	18	Pn	Pn	19 29 23.2	0.0
MCK	McKinley	7.92	26		Pn	19 29 24.3	-0.2
CRQM	Cirque	8.04	55	Pn	Pn	19 29 24.9	-1.4
GLB	Gilahina Butte	8.05	50	Pn	Pn	19 29 26.0	-0.5
VRDI	Verde Repeater	8.10	51	Pn	Pn	19 29 27.5	+0.3
TGL	Tana Glacier	8.18	55	Pn	Pn	19 29 28.6	+0.5
BWN	Browne	8.18	23	Pn	Pn	19 29 28.0	-0.1
PAX	Paxson	8.33	38	Pn	Pn	19 29 31.0	+0.7
MCARA	McCarthy VSAT	8.36	51	Pn	Pn	19 29 30.1	-0.4
KIAG	Kiagna River	8.46	55		Pn	19 29 31.3	-0.8
BALM	Baldy	8.51	54	Pn	Pn	19 29 32.8	+0.1
PTPK	Patty Peak	8.52	53		Pn	19 29 32.2	-0.7
NEA2	Nenana	8.63	22		Pn	19 29 33.2	-1.0
MLY	Manley	8.72	17		Pn	19 29 36.0	+0.5
WRH	Wood River Hil	8.74	25	Pn	Pn	19 29 33.8	-1.9
BARN	Barnard Glacie	8.82	55	Pn	Pn	19 29 36.4	-0.6
TABL	Table Mountain	8.85	59	Pn	Pn	19 29 37.4	-0.1
ANM	Nome	8.87	335	Pn	Pn	19 29 39.0	+1.5
MENT	Mentasta	8.92	41	Pn	Pn	19 29 38.4	+0.2
CTGM	Chitina Glacie	8.94	56	Pn	Pn	19 29 38.5	0.0
CCB	Clear Creek Bu	8.96	25	Pn	Pn	19 29 37.0	-1.7
HDA	Harding Lake	8.97	28		Pn	19 29 37.2	-1.7
I23K	Minto, Yukon-K	9.07	20	Pn	Pn	19 29 39.1	-1.0
PS08	TAPS Pump Stn8	9.11	28		Pn	19 29 39.3	-1.5
MDM	Murphy Dome	9.13	23	Pn	Pn	19 29 39.7	-1.3
TCOL	CIGO, UAF Yank	9.14	24	Pn	Pn	19 29 40.1	-1.0
COLA	College	9.14	24	Pn	Pn	19 29 40.2	-0.9
DOT	Dot Lake	9.26	37	Pn	Pn	19 29 42.7	-0.1
IL31		9.28	27		Pn	19 29 41.1	-1.9
ILAR	Eielson Array	9.28	27	P	Pn	19 29 41.1	-1.9
	comp=E,1.4nm,0.3s,baz=216,slow=14,SNR=42						
ILAR				S	Sn	19 31 18.6	-7.0
	comp=E,0.3nm,0.3s,baz=220,slow=18,SNR=1.1						
ILAR	Eielson Array	9.28	27	Pn	Pn	19 29 40.8	-2.2
IL18	Eielson Array	9.30	27	Pn	Pn	19 29 41.4	-1.9
IM03		9.30	7		Pn	19 29 43.8	+0.5
IMAR	Indian Mountai	9.30	7		Pn	19 29 43.3	-0.1
YKU2	Yakutat	9.36	66	Pn	Pn	19 29 41.7	-2.4
POKR	Poker Plat Res	9.44	24	Pn	Pn	19 29 44.5	-0.8
BCAR	Beaver Creek A	9.71	44	Pn	Pn	19 29 49.5	+0.4
GAMB	Gambell	10.21	319	Pn	Pn	19 29 56.9	+1.2
PRP	Porcupine Dome	10.23	27	Pn	Pn	19 29 54.6	-1.4
TNA	Tin City	10.31	333	Pn	Pn	19 29 59.4	+2.4
COLD	Coldfoot	10.87	13	Pn	Pn	19 30 03.8	-0.9
EGAK	Eagle	10.96	37	Pn	Pn	19 30 04.2	-1.8
FYU	Fort Yukon	11.15	24	Pn	Pn	19 30 06.3	-2.2
BMAR	Burnt Mountain	12.02	23	Pn	Pn	19 30 16.5	-3.8
TOLK	Toolik Lake Re	12.29	12	Pn	Pn	19 30 25.0	+1.0
EPYK	Eagle Plains	13.40	36	Pn	Pn	19 30 40.2	+1.4
INK	Inuvik	15.55	33	P	Pn	19 31 06.3	-0.1
	comp=E,0.4nm,0.3s,baz=229,slow=18,SNR=7.4						
YKA	Yellowknife Ar	21.66	57	P	P	19 32 16.4	+0.7
	comp=E,0.2nm,0.7s,baz=268,slow=9.0,SNR=3.2						
FRB	Frobisher Bay	40.86	43	P	P	19 35 07.0	+1.4
	comp=E,2.6nm,0.8s,baz=324,slow=7.2,SNR=4.1						
ARCES	ARCESS Array B	53.95	359	P	P	19 36 47.1	+0.2
	comp=E,4.5nm,0.9s,baz=20,slow=7.9,SNR=1.3						
SONM	Songino Array	55.10	305	P	P	19 36 56.8	+1.1
	comp=E,0.5nm,0.8s,baz=39,slow=7.5,SNR=3.6						
MKAR	Makanchi Array	65.69	320	P	P	19 38 07.6	-0.1
	comp=E,0.4nm,0.9s,baz=46,slow=7.0,SNR=2.1						

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*IDC **13** 19:30:57.4±1.4, 52°.62N × 32°.40W, h0^{km}, mb3.8/15, mb1 4.0/17, mb1mx3.8/80, mbtmp3.8/17, ML4.1/2, Error ellipse: s-maj=44.8km s-min=14.9km az=179.0*

*NEIC **13** 19:31:00.2±1.2, 52°.8N±0°.3 × 32°.4W±0°.2, h15^{km}±6^{km}, mb4.5/11, Error ellipse: s-maj=37.5km s-min=13.0km az=179.0*

ISC 13 19:30:59.2±0.9, 52°.7N±0°.2 × 32°.36W±0°.08, h10^{km}, n36, σ0^{s}.88/33, mb4.0/21, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFJD	Kangerlussuaq	16.93	335	Pn	Pn	19 34 56.2	+0.5
	0.4nm,0.3s,baz=233,slow=20,SNR=1.7						
EKA	Eskdalemuir Ar	17.31	70	P	Pn	19 35 00.4	-0.3
	baz=269,slow=9.2,SNR=7.3						
FRB	Frobisher Bay	21.72	315	P	P	19 35 50.0	0.0
	1.1nm,0.5s,baz=94,slow=8.8,SNR=3.1						
NAO01	NORSAR Array S	24.66	54	P	P	19 36 16.7	-2.9
NB2	NORSAR Subarra	24.82	53	P	P	19 36 20.9	-0.2
	comp=Z,1.5nm,0.6s,baz=274,slow=11						
NOA	NORSAR Array B	24.82	53	P	P	19 36 22.1	+1.0
	comp=Z,1.2nm,0.7s,baz=274,slow=11,SNR=4.0						
NC303	NORSAR Array S	24.89	53	P	P	19 36 19.9	-1.9
NC303				IAmb	IAmb	19 36 39.9	
	comp=Z,26nm,1.3s						
HFS	Hagfors	26.07	55	P	P	19 36 33.7	+1.3
	comp=Z,1.9nm,0.9s,baz=284,slow=5.8,SNR=1.8						
GERES	GERESS Array B	29.00	79	P	P	19 36 58.4	-0.5
	comp=Z,0.4nm,0.7s,baz=299,slow=10.0,SNR=3.1						
ARCES	ARCESS Array B	31.07	35	P	P	19 37 16.4	-0.5
	comp=Z,4.4nm,1.0s,baz=262,slow=6.3,SNR=3.7						
FINES	FINESS Array B	31.91	51	P	P	19 37 23.9	-0.5
	comp=Z,1.4nm,0.6s,baz=268,slow=7.4,SNR=11						
FINES	FINESS Array B	31.91	51	P	P	19 37 24.0	-0.3
FIA1	FINESS Array S	31.92	51	P	P	19 37 24.2	-0.1
FCC	Fort Churchill	34.18	305	P	P	19 37 44.4	+0.2
FCC				IAmb	IAmb	19 37 58.0	
	comp=Z,5.5nm,1.2s						
BURAR	Bucovina Array	36.39	74	P	P	19 38 03.8	+0.4
AKASG	Malin Array Be	37.20	68	P	P	19 38 09.3	-1.0
	comp=Z,0.6nm,0.4s,baz=299,slow=8.3,SNR=3.7						
AKASG	Malin Array Be	37.20	68	IAmb	IAmb	19 38 18.3	
	comp=Z,1.1nm,1.1s						
U49A	Red Boiling Sp	40.34	268	P	P	19 38 36.6	0.0
U49A				IAmb	IAmb	19 38 41.8	
	comp=Z,12nm,1.2s						
257A	Skidaway Islan	40.56	259	P	P	19 38 38.7	+0.2
P43A	Skaggs, Pawnee	40.62	275	P	P	19 38 39.2	+0.2
T47A	Sharon Grove	40.84	270	P	P	19 38 40.4	-0.4
T47A				IAmb	IAmb	19 38 55.1	
	comp=Z,17nm,1.2s						
CLTN	Cedars of Leba	40.95	268	P	P	19 38 41.4	-0.3
CLTN				IAmb	IAmb	19 38 42.7	
	comp=Z,8.7nm,1.0s						
YKA	Yellowknife Ar	42.21	317	P	P	19 38 51.5	-0.2
	comp=Z,1.0nm,1.0s,baz=66,slow=9.5,SNR=4.6						
BRTR	Keskin Array B	45.89	79	P	P	19 39 22.7	+0.9
	comp=Z,2.8nm,0.8s,baz=298,slow=2.7,SNR=7.9						
BRTR	Keskin Array B	45.89	79	P	P	19 39 22.5	+0.7
PDAR	Pinedale Array	50.51	291	P	P	19 39 56.8	-0.7
	comp=Z,1.1nm,0.6s,baz=65,slow=7.2,SNR=11						
AKTO	Aktyubinsk	52.60	54	P	P	19 40 12.6	-0.2
	comp=Z,1.6nm,0.7s,baz=312,slow=6.5,SNR=2.5						
PV17	East Wray Mesa	53.10	287	P	P	19 40 17.3	+0.5
PV17				IAmb	IAmb	19 40 19.0	
	comp=Z,4.1nm,0.9s						
TXAR	Lajitas Array	56.15	275	P	P	19 40 38.9	0.0
	comp=Z,0.3nm,0.5s,baz=58,slow=7.5,SNR=1.4						
NVAR	Mina Array Bea	58.34	293	P	P	19 40 54.2	-0.3
	comp=Z,0.3nm,0.5s,baz=49,slow=7.3,SNR=1.2						
RREF	El Recreo	59.26	232	*e*P	P	19 41 09.1	+7.5
ORTC	Ortega, Tolima	60.08	232	*e*P	P	19 41 01.1	-5.4
MK31	Makanchi Array	66.30	43	P	P	19 41 47.7	+0.3
MKAR	Makanchi Array	66.30	43	P	P	19 41 48.0	+0.5
	comp=Z,1.6nm,0.5s,baz=332,slow=4.9,SNR=41						
SONM	Songino Array	73.88	28	P	P	19 42 35.4	+1.4
	comp=Z,0.5nm,1.0s,baz=343,slow=9.0,SNR=2.2						
ASAR	Alice Springs	149.20	25	PKPbc	PKPbc	19 50 46.6	-1.1
	comp=Z,0.5nm,0.9s,baz=342,slow=2.6,SNR=2.5						

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*BGR **13** 19:32:52.8±0.0, 51°.23N × 35°.16W, h10^{km}, mb5.6, Ms5.5*

*BJI **13** 19:33:08.2±0.0, 52°.56N × 32°.01W, h10^{km}, mB5.1/2, mb4.9/48*

*IDC **13** 19:33:08.6±0.3, 52°.64N × 32°.40W, h0^{km}, mb4.8/55, mb1 4.9/57, mb1mx4.8/81, mbtmp4.9/57, ML5.3/2, Error ellipse: s-maj=10.4km s-min=7.7km az=6.0*

*MOS **13** 19:33:08.6±0.9, 52°.64N × 32°.29W, h11^{km}, mb5.4/44, Error ellipse: s-maj=6.2km s-min=4.3km az=54.7*

*NEIC **13** 19:33:10.6±1.1, 52°.62N±0°.08 × 32°.3W±0°.1, h14^{km}±3^{km}, mb5.2/397, Error ellipse: s-maj=11.5km s-min=10.3km az=47.0*

*DNK **13** 19:33:16.4±2.6, 52°.65N × 32°.32W, h63^{km}±30^{km}, mb5.1*

ISC 13 19:33:11.6±0.6, 52°.66N±0°.05 × 32°.35W±0°.04, h18^{km}±2^{km}, h19^{km}:pP-P, n1117, σ1^{s}.08/1047, mb5.2/374, 71C-55D, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NRS	Narsarsuaq	11.09	325	*i* P	Pn	19 35 54.3	+5.3
	154nm,1.0s						
NRS	Narsarsuaq	11.09	325	*i* P	Pn	19 35 54.3	+5.3
NRS				pmax	pmax		
	comp=Z,150nm,1.0s						
NRS	Narsarsuaq	11.09	325		Pn	19 35 51.8	+2.8
NRS	Narsarsuaq	11.09	325	*i* P	Pn	19 35 54.4	+5.4
NRS				IAmb	IAmb	19 35 57.4	
	comp=Z,154nm,1.0s						
ANGG	Ammassalik, Gr	13.27	350		Pn	19 36 21.1	+2.4
ANGG	Ammassalik, Gr	13.27	350	*i* P	Pn	19 36 20.9	+2.4
ISOG	Isortoq, Green	13.35	348	*i* P	Pn	19 36 22.6	+2.7
ISOG				IAmb	IAmb	19 36 23.4	
	comp=Z,135nm,1.1s						
BORG	Borgarnes	13.37	21	Pn	Pn	19 36 23.2	+3.1
	comp=Z,5.9nm,0.3s,baz=204,slow=8.8,SNR=11						
BORG				Sn	Sn	19 38 44.2	-3.8
	comp=Z,2.9nm,0.3s,baz=183,slow=22,SNR=6.9						
BORG	Borgarnes	13.37	21	P	Pn	19 36 22.2	+2.1
BORG						19 38 44.2	
BORG	Borgarnes	13.37	21	Pn	Pn	19 36 22.2	+2.1
NUUK	Nuuk	15.29	327	*i* P	P	19 36 48.6	-2.2
DSB	Dublin	15.64	78	Pn	Pn	19 36 47.4	-3.3
DSB				IAmb	IAmb	19 36 56.3	
	comp=Z,338nm,1.4s						
CMLA	Cha da Macela	15.64	160	P	Pn	19 36 51.7	+0.8
CMLA				pmax	pmax		
	comp=Z,210nm,1.2s						
CMLA	Cha da Macela	15.64	160	Pn	Pn	19 36 51.7	+0.8
CMLA				IAmb	IAmb	19 37 10.2	
	comp=Z,210nm,1.2s						
KPL	Plockton	15.96	62	*e*P	Pn	19 36 52.7	-2.1
KPL				IAmb	IAmb	19 36 59.6	
	comp=Z,239nm,0.9s						
LAWE	Loch Awe, Argy	16.03	66	*e*P	Pn	19 36 54.0	-1.8
LAWE				IAmb	IAmb	19 37 00.5	
	comp=Z,371nm,0.9s						
DRLN	Deer Lake	16.18	268		Pn	19 36 56.3	-1.4
DRLN				IAmb	IAmb	19 36 58.4	
	comp=Z,270nm,1.9s						
GAL1	Galloway	16.45	71	*e*P	Pn	19 37 00.3	-0.8
PGBU	Glenifferbraes	16.54	68	*e*P	Pn	19 36 59.2	-3.0
PGBU				IAmb	IAmb	19 37 02.9	
	comp=Z,311nm,1.1s						
EAB	Aberfoyle	16.62	67	*e*P	Pn	19 37 01.9	-1.4
NEWG	New Galloway	16.71	70	*e*P	Pn	19 37 03.0	-1.3
NEWG				IAmb	IAmb	19 37 08.0	
	comp=Z,983nm,1.9s						
YRC	Rhoscolyn	16.71	77	*e*P	Pn	19 37 01.9	-2.5
WPS	Cemaes, Angles	16.73	76	*e*P	Pn	19 37 01.4	-3.2
WPS				IAmb	IAmb	19 37 08.6	
	comp=Z,380nm,1.1s						
INVG	Invergeldie, C	16.79	66	*e*P	Pn	19 37 04.8	-0.6
INVG				IAmb	IAmb	19 37 09.6	
	comp=Z,515nm,0.9s						
WLF1	Llynfaes	16.81	77	*e*P	Pn	19 37 03.7	-1.9
WLF1				IAmb	IAmb	19 37 09.5	
	comp=Z,630nm,1.1s						
ICESG	Greenland Ices	16.84	351	*i* P	P	19 37 09.3	+1.0
ICESG				IAmb	IAmb	19 37 12.9	
	comp=Z,41nm,0.9s						
WME	Myndd Eilian	16.85	76	*e*P	Pn	19 37 05.0	-1.1
SFJD	Kangerlussuaq	16.94	335	Pn	Pn	19 37 07.0	-0.2
	comp=Z,3.3nm,0.3s,baz=144,slow=12,SNR=12						
SFJD	Kangerlussuaq	16.94	335	*i* P	Pn	19 37 07.9	+0.7
SFJD	Kangerlussuaq	16.94	335	*i* P	Pn	19 37 07.9	+0.7
SFJD	Kangerlussuaq	16.94	335	P	Pn	19 37 07.1	-0.2
SFJD	Kangerlussuaq	16.94	335	*i* P	Pn	19 37 07.9	+0.7
EDI	Edinburgh	17.27	68	*e*P	Pn	19 37 10.4	-1.0
EDI				IAmb	IAmb	19 37 14.5	
	comp=Z,497nm,1.1s						
ESK	Eskdalemuir	17.28	70	*e*P	Pn	19 37 10.4	-1.2
ESK				IAmb	IAmb	19 37 14.6	
	comp=Z,344nm,1.0s						
ESK	Eskdalemuir	17.28	70	P	Pn	19 37 10.3	-1.3
ESK				pmax	pmax		
	comp=Z,310nm,1.0s						
ESK	Eskdalemuir	17.28	70	P	Pn	19 37 10.2	-1.3
ESK				IAmb	IAmb	19 37 14.8	
	comp=Z,310nm,1.0s						
EKA	Eskdalemuir Ar	17.31	69	P	Pn	19 37 11.3	-0.6
	baz=272,slow=13,SNR=67						
EKA				S	Sn	19 40 12.6	-11
	baz=279,slow=27,SNR=5.3						
LLW	Llanuwychllyn	17.32	78	*e*P	Pn	19 37 10.4	-1.7
EKR8	Eskdalemuir Ar	17.35	70	Pn	Pn	19 37 11.4	-1.1
EKR8				IAmb	IAmb	19 37 16.1	
	comp=Z,236nm,0.9s						
EBL	Broad Law	17.36	68	*e*P	Pn	19 37 11.8	-0.7

KESW	Keswick, Cumbr	17.40	72	eP	Pn	19 37 12.1	-1.0
KESW				IAmb	IAmb	19 37 16.1	
	comp=Z,542nm,1.2s						
ESY	Stoneypath	17.59	67	eP	Pn	19 37 14.5	-1.0
DRUM	Mains of Drumt	17.66	64	eP	Pn	19 37 15.1	-1.2
DRUM				IAmb	IAmb	19 37 16.9	
	comp=Z,608nm,1.1s						
HLM1	Long Mynd	17.85	79	eP	Pn	19 37 17.8	-1.0
HLM1				IAmb	IAmb	19 37 19.6	
	comp=Z,184nm,1.1s						
MCH1	Michaelchurch	17.90	80	eP	Pn	19 37 17.6	-1.7
MCH1				IAmb	IAmb	19 37 22.3	
	comp=Z,134nm,1.0s						
EDMD	Edmundbyers	18.03	71	eP	Pn	19 37 18.9	-2.0
EDMD				IAmb	IAmb	19 37 21.3	
	comp=Z,815nm,1.0s						
HPK	Haverah Park	18.34	74	eP	Pn	19 37 24.0	-0.7
HPK				IAmb	IAmb	19 37 26.4	
	comp=Z,554nm,0.8s						
LBWR	Ladybower, Pea	18.37	75	eP	P	19 37 23.6	-1.3
LBWR				IAmb	IAmb	19 37 25.7	
	comp=Z,788nm,1.6s						
STRD	Stroud	18.46	81	eP	P	19 37 25.6	-0.3
STRD				IAmb	IAmb	19 37 26.6	
	comp=Z,705nm,1.1s						
SCO	Scoresbysund	18.50	11	iP	Pn	19 37 29.5	+3.0
SCO	Scoresbysund	18.50	11	iP	Pn	19 37 29.5	+3.0
SCO	Scoresbysund	18.50	11		P	19 37 25.9	-0.3
SCO	Scoresbysund	18.50	11	iP	Pn	19 37 29.5	+3.0
SWN1	Swindon	18.74	81	eP	P	19 37 28.9	-0.1
SWN1				IAmb	IAmb	19 37 30.2	
	comp=Z,740nm,1.2s						
CWF	Charnwood Fore	18.74	77	eP	P	19 37 27.8	-1.3
CWF				IAmb	IAmb	19 37 29.2	
	comp=Z,440nm,1.3s						
GDLE	Glaisdale, N Y	18.74	72	eP	P	19 37 28.4	-0.7
GDLE				IAmb	IAmb	19 37 31.6	
	comp=Z,231nm,0.9s						
ILULI	Ilulissat	18.78	339	iP	Pn	19 37 31.1	+1.2
	comp=Z,66nm,0.6s						
ILULI	Ilulissat	18.78	339	iP	Pn	19 37 31.1	+1.2
ILULI				pmax	pmax		
	comp=Z,66nm,0.6s						
ILULI	Ilulissat	18.78	339	P	P	19 37 29.3	-0.1
ILULI	Ilulissat	18.78	339	iP	Pn	19 37 31.1	+1.2
ILULI				IAmb	IAmb	19 37 31.9	
	comp=Z,66nm,0.6s						
WOL	Wolverton	19.15	82	eP	P	19 37 33.1	-0.3
LMK	Market Rasen	19.18	75	eP	P	19 37 33.5	-0.3
PGAV	Gavieira, Arco	19.43	114	eP	P	19 37 37.0	+0.3
	comp=Z,233nm,1.4s						
PCAB	Cabril	19.73	114	eP	P	19 37 40.6	+0.6
	comp=Z,217nm,1.6s						
PTO	Porto	19.80	116	eP	Pn	19 37 43.2	+0.9
	comp=Z,160nm,1.3s						
WACR	West Acre	19.89	77	eP	P	19 37 40.9	-0.7
WACR				IAmb	IAmb	19 37 44.8	
	comp=Z,560nm,1.0s						
POLO	Lamas de Olo	20.09	114	eP	Pn	19 37 45.4	-0.4
	comp=Z,112nm,1.8s						
SUMG	Summit	20.16	355	iP	Pn	19 37 46.5	-0.3
SUMG	Summit	20.16	355	iP	Pn	19 37 46.5	-0.3
SUMG	Summit	20.16	355		P	19 37 44.7	-0.2
SUMG				IAmb	IAmb	19 38 12.9	
	comp=Z,97nm,1.1s						
SUMG	Summit	20.16	355	iP	Pn	19 37 46.5	-0.2
HMNX	Herstmonceux	20.22	82	eP	P	19 37 44.4	-0.8
GBN	Guysborough	20.35	261	P	P	19 37 45.6	-1.0
GBN				IAmb	IAmb	19 38 03.1	
	comp=Z,201nm,1.3s						
PBRG	Braganca	20.39	112	eP	Pn	19 37 48.7	-0.6
	comp=Z,186nm,1.3s						
PVIS	Viseu	20.48	116	eP	P	19 37 48.5	+0.3
	comp=Z,329nm,1.6s						
COI	Coimbra	20.55	118	P	P	19 37 47.8	-1.1
COI				pmax	pmax		
	comp=Z,304nm,1.3s						
COI	Coimbra	20.55	118		P	19 37 47.8	-1.1
COI	Coimbra	20.55	118	eP	Pn	19 37 51.5	+0.3
	comp=Z,353nm,1.4s						
PCAS	Casmilo, Conde	20.62	118	eP	Pn	19 37 52.3	+0.3
	comp=Z,236nm,1.5s						
MVO	Moncorvo	20.65	114	eP	P	19 37 50.5	+0.4
	comp=Z,304nm,1.4s						
PSBE	So Bento	20.85	120	eP	Pn	19 37 53.6	-1.1
	comp=Z,468nm,1.4s						
MTE	Manteigas	20.89	116		P	19 37 51.8	-0.9
MTE				IAmb	IAmb	19 38 10.6	
	comp=Z,107nm,0.9s						
MTE	Manteigas	20.89	116	eP	P	19 37 52.7	0.0
	comp=Z,163nm,2.5s						
PMAFR	Mafra	21.01	122	eP	P	19 37 54.9	+1.1
	comp=Z,579nm,1.6s						
NUUG	Nuugaatsiaq	21.07	342	iP	P	19 37 54.0	-0.3
NUUG				IAmb	IAmb	19 37 58.4	
	comp=Z,73nm,0.8s						
LIS	Lisbon	21.25	122	eP	P	19 37 55.9	-0.6
LIS				AMb	AMB	19 38 12.1	
	comp=Z,567nm,1.7s						
LIS	Lisbon	21.25	122	eP	P	19 37 55.9	-0.6
PCBR	Castelo Branco	21.32	117	eP	P	19 37 57.1	-0.1
	comp=Z,229nm,1.6s						
PMTG	Montargil	21.48	120	eP	P	19 37 58.7	-0.2
	comp=Z,446nm,1.5s						
PMRV	Marv??o	21.66	118	eP	P	19 38 04.2	+3.3
	comp=Z,379nm,1.5s						
SUE	Sulen	21.68	53	eP	P	19 38 00.8	-0.1
FRB	Frobisher Bay	21.73	315	P	P	19 38 01.9	+0.6
	comp=Z,40nm,0.8s,baz=100,slow=10,SNR=58						
KMY	Karmoy	21.82	58	eP	P	19 38 01.5	-0.8
ASK	Askoy	21.85	54	eP	P	19 38 01.9	-0.8
FOO	Floro	21.88	51	eP	P	19 38 03.2	+0.2
FOO	Floro	21.88	51	eP	P	19 38 03.4	+0.4
BER	Bergen	21.91	54	eP	P	19 38 00.9	-2.4
PESTR	Estremoz	21.96	119	P	P	19 38 03.5	-0.6
PESTR				IAmb	IAmb	19 38 11.9	
	comp=Z,84nm,1.1s						
PESTR	Estremoz	21.96	119	eP	P	19 38 04.1	0.0
	comp=Z,263nm,1.3s						
PESTR	Estremoz	21.96	119	P		19 38 08.6	
EVO	Evora	21.98	120	eP	P	19 38 04.8	+0.5
	comp=Z,145nm,2.0s						
HAL	Halifax	22.01	261	P	P	19 38 03.2	-1.3
HAL				pmax	pmax		
	comp=Z,84nm,0.7s						
HAL	Halifax	22.01	261	P	P	19 38 03.2	-1.3
HAL				IAmb	IAmb	19 38 06.3	
	comp=Z,84nm,0.7s						
PNCL	Nicolau / Gran	22.03	122	eP	P	19 38 05.0	+0.2
	comp=Z,275nm,1.5s						
LMN	Caledonia Moun	22.11	265	P	P	19 38 04.1	-1.6
LMN				IAmb	IAmb	19 38 12.7	
	comp=Z,80nm,0.8s						
BATG	Bathurst New B	22.20	270	P	P	19 38 05.7	-1.0
BATG				IAmb	IAmb	19 38 15.1	
	comp=Z,65nm,1.0s						
DBG	Daneborg	22.30	9	iP	P	19 38 08.3	+1.0
PTEO	Sao Teotonio	22.36	123	eP	P	19 38 08.7	+0.4
	comp=Z,249nm,1.4s						
MESJ	Messejana	22.39	122	eP	P	19 38 08.2	-0.6
MESJ				AMb	AMB	19 38 19.3	
	comp=Z,134nm,1.6s						
MESJ	Messejana	22.39	122	eP	P	19 38 08.1	-0.6
MESJ	Messejana	22.39	122	eP	P	19 38 09.4	+0.7
	comp=Z,138nm,1.3s						
CLF	Chambon-Foret	22.43	88	P	P	19 38 08.3	-0.7
PBEJ	Beja	22.44	121	eP	P	19 38 13.0	+3.8
	comp=Z,93nm,1.3s						
BLS5	Blasjo	22.44	57	eP	P	19 38 08.0	-1.1
ODD1	Odda	22.53	56	eP	P	19 38 09.6	-0.6
MORF	Marmelete	22.58	123	eP	P	19 38 10.2	-0.7
MORF				AMb	AMB	19 38 23.4	
	comp=Z,119nm,2.1s						
MORF	Marmelete	22.58	123	eP	P	19 38 10.1	-0.7
MORF	Marmelete	22.58	123	eP	P	19 38 10.6	-0.2
	comp=Z,111nm,1.4s						
UPNV	Upernavik	22.62	342	iP	P	19 38 11.0	+0.2
PFVI	Vila Bisbo	22.62	124	P	P	19 38 10.8	-0.4
PFVI				IAmb	IAmb	19 38 17.2	
	comp=Z,94nm,1.1s						
PFVI	Vila Bisbo	22.62	124	eP	P	19 38 11.5	+0.3
	comp=Z,127nm,1.4s						
PFVI	Vila Bisbo	22.62	124	P		19 38 13.8	
PCVE	Castro Verde	22.64	122	eP	P	19 38 11.3	-0.1
	comp=Z,192nm,1.6s						
UCC	Uccle	22.66	80	dP	P	19 38 10.0	-1.4
	comp=Z,169nm,1.6s						
UCC	Uccle	22.66	80	P	P	19 38 09.3	-2.2
UCC				pmax	pmax		
	comp=Z,163nm,1.0s						
UCC	Uccle	22.66	80	P	P	19 38 09.2	-2.2
SNF	Seneffe	22.71	81	dP	P	19 38 10.9	-1.1
	comp=Z,356nm,1.0s						
PBAR	Barrancos	22.76	119	eP	P	19 38 12.6	0.0
	comp=Z,161nm,1.6s						
SNART	Snartemo	22.85	60	eP	P	19 38 12.6	-0.8
SNART	Snartemo	22.85	60	iP	P	19 38 13.2	-0.2
AKN	Aaknes	22.87	50	eP	P	19 38 13.9	+0.3
PVAQ	Vaqueiros	22.98	122	P	P	19 38 14.0	-1.0
PVAQ				IAmb	IAmb	19 38 26.7	
	comp=Z,174nm,1.5s						
PVAQ	Vaqueiros	22.98	122	eP	P	19 38 15.4	+0.4
	comp=Z,108nm,1.3s						
PVAQ	Vaqueiros	22.98	122	P		19 38 19.0	
PBDV	Barranco-do-Ve	23.00	122	eP	P	19 38 16.8	+1.7
	comp=Z,165nm,1.4s						
DOU	Dourbes	23.04	82	dP	P	19 38 14.3	-1.1
BMRD	Maredsous	23.07	81	dP	P	19 38 14.6	-1.2
	comp=Z,83nm,1.1s						
BGES	Gesves	23.23	81	dP	P	19 38 15.3	-2.1
PAB	San Pablo	23.25	113	P	P	19 38 17.6	-0.2
PAB				pmax	pmax		
	comp=Z,58nm,1.2s						
PAB	San Pablo	23.25	113	P	P	19 38 17.6	-0.2
PAB				IAmb	IAmb	19 38 28.1	
	comp=Z,58nm,1.2s						
BCLA	Clavier	23.35	80	dP	P	19 38 17.1	-1.5
SKAR	Skarslia	23.39	54	eP	P	19 38 19.1	+0.2
RCHB	Rochefort	23.40	81	dP	P	19 38 17.1	-1.9
BEBN	Eben Emael	23.45	79	dP	P	19 38 17.9	-1.6
BSTI	Sart Tilman	23.45	80	dP	P	19 38 18.5	-1.1
HOMB	Homborsund	23.54	60	eP	P	19 38 20.4	0.0
HOMB	Homborsund	23.54	60	iP	P	19 38 20.7	+0.4
D63A	Stockholm	23.56	271	P	P	19 38 19.8	-0.9
	baz=63						
PQI	Presque Isle	23.67	270	P	P	19 38 19.8	-1.9
PQI				IAmb	IAmb	19 38 32.1	
	comp=Z,52nm,1.1s						
E64A	Bridgewater	23.68	269	P	P	19 38 20.3	-1.5
	baz=62						
MEM	Membach	23.71	80	dP	P	19 38 20.9	-1.2
GGN	Saint George	23.72	265	P	P	19 38 20.6	-1.6
GGN				IAmb	IAmb	19 38 53.6	
	comp=Z,180nm,1.6s						
BTNL	Ternell	23.79	80	dP	P	19 38 21.7	-1.2
	comp=Z,142nm,1.9s						
BHOU	Houvegnez	23.80	80	dP	P	19 38 21.7	-1.2
DOMB	Dombas	23.82	51	eP	P	19 38 23.4	+0.3
HORN	Hornachuelos	23.96	117	P		19 38 28.7	
KONO	Kongsberg	24.04	56	P	P	19 38 24.9	-0.2
KONO				pmax	pmax		
	comp=Z,153nm,1.2s						
KONO	Kongsberg	24.04	56	P	P	19 38 24.9	-0.2
KONO	Kongsberg	24.04	56	eP	P	19 38 24.8	-0.2
E63A	Oxbow	24.04	269	P	P	19 38 23.8	-1.4
	baz=62						
E63A	Oxbow	24.04	269	P	P	19 38 23.8	-1.4
E63A				IAmb	IAmb	19 38 33.0	
	comp=Z,71nm,0.8s						
GOET	G??ttrup	24.05	63	iP	P	19 38 25.3	+0.1
GOET	G??ttrup	24.05	63	iP	P	19 38 25.4	+0.1
MUD	Monsted U'grnd	24.10	64	iP	P	19 38 25.7	0.0
	comp=Z,336nm,1.3s						
MUD	Monsted U'grnd	24.10	64	iP	P	19 38 25.7	0.0
MUD				pmax	pmax		
	comp=Z,340nm,1.3s						
MUD	Monsted U'grnd	24.10	64	iP	P	19 38 25.7	0.0
MUD				IAmb	IAmb	19 38 27.9	
	comp=Z,336nm,1.3s						
G65A	Princeton	24.12	266	P	P	19 38 24.5	-1.5
	baz=59						
G65A	Princeton	24.12	266	P	P	19 38 25.4	-0.5
G65A				IAmb	IAmb	19 38 51.7	
	comp=Z,50nm,0.9s						
WLF	Walferdange	24.14	82	dP	P	19 38 25.3	-0.8
WLF	Walferdange	24.14	82	P	P	19 38 24.7	-1.4
WLF				pmax	pmax		
	comp=Z,126nm,1.1s						
WLF	Walferdange	24.14	82	P	P	19 38 24.7	-1.4
WLF				IAmb	IAmb	19 38 27.9	
	comp=Z,126nm,1.1s						
WLF	Walferdange	24.14	82	eP	P	19 38 25.5	-0.6
	comp=Z,562nm,2.1s,baz=291,slow=8.9						
H66A	Whiting	24.18	265	P	P	19 38 24.3	-2.2
	baz=58						
BUG	Bochum--Univer	24.19	77	eP	P	19 38 26.1	-0.4
	comp=Z,604nm,2.0s,baz=291,slow=8.9						
IBBN	Ibbenburen	24.21	75	eP	P	19 38 26.8	0.0
	comp=Z,256nm,0.9s,baz=291,slow=8.9						
KULLO	Kullorsuaq	24.21	344	iP	P	19 38 26.9	+0.3
	comp=Z,140nm,1.0s						
KULLO	Kullorsuaq	24.21	344	iP	P	19 38 26.9	+0.3
KULLO				pmax	pmax		
	comp=Z,140nm,1.0s						
KULLO	Kullorsuaq	24.21	344	iP	P	19 38 26.9	+0.3
KULLO				IAmb	IAmb	19 38 28.4	
	comp=Z,140nm,1.0s						
F64A	Sherman	24.26	268	P	P	19 38 25.6	-1.7
	baz=61						
F64A	Sherman	24.26	268	P	P	19 38 26.1	-1.2
EMMW	East Machias	24.31	265	P	P	19 38 26.8	-0.9
EMMW				IAmb	IAmb	19 38 39.8	
	comp=Z,53nm,1.0s						
AHRW	Bad Neuenahr-A	24.37	79	eP	P	19 38 28.0	-0.3
	comp=Z,508nm,2.1s,baz=291,slow=8.9						
TBLU	Trondheim	24.48	48	eP	P	19 38 29.8	+0.7
SKMB	Sankelmark Bun	24.57	68	eP	P	19 38 31.8	+1.8
	comp=Z,815nm,1.6s,baz=291,slow=8.9						
OSL	Oslo	24.60	56	eP	P	19 38 29.8	-0.4
NC204	NORSAR Array S	24.60	52	P	P	19 38 30.1	-0.3
NBO00	NORSAR Array S	24.61	53	P	P	19 38 30.1	-0.2
NAO01	NORSAR Array S	24.66	54	P	P	19 38 30.3	-0.5
D61A	St Aubert, Com	24.75	273	P	P	19 38 30.6	-1.1
	baz=63						
DAG	Danmarks Havn	24.76	7	iP	P	19 38 31.1	-0.4
DAG	Danmarks Havn	24.76	7	iP	P	19 38 31.1	-0.4
DAG	Danmarks Havn	24.76	7	iP	P	19 38 31.2	-0.4
H65A	Eastbrook	24.79	266	P	P	19 38 30.9	-1.2
	baz=58						
F63A	Nahmakanta, Br	24.80	269	P	P	19 38 30.7	-1.5
	baz=60						
F63A	Nahmakanta, Br	24.80	269	P	P	19 38 31.8	-0.4
F63A				IAmb	IAmb	19 38 41.6	
	comp=Z,32nm,0.8s						
G64A	Maxfield	24.82	267	P	P	19 38 31.5	-0.8
	baz=60						
NB2	NORSAR Subarra	24.82	53	P	P	19 38 32.0	-0.3
	comp=Z,142nm,1.0s,baz=273,slow=11						
NB2	NORSAR Subarra	24.82	53	P	P	19 38 32.0	-0.3
	baz=273,slow=11						
NOA	NORSAR Array B	24.82	53	P	P	19 38 32.0	-0.3
	comp=Z,63nm,0.9s,baz=272,slow=9.9,SNR=67						
NOA				PP	PnPn	19 39 05.6	+1.0
	comp=Z,5.5nm,0.8s,baz=266,slow=12,SNR=4.6						
NOA	NORSAR Array B	24.82	53	P	P	19 38 32.0	-0.3
NB201	NORSAR Array S	24.86	53	P	P	19 38 32.7	+0.1
NC303	NORSAR Array S	24.89	53	P	P	19 38 33.0	+0.1
NC605	NORSAR Array S	24.92	54	P	P	19 38 33.1	+0.1
NC605				IAmb	IAmb	19 38 45.1	
	comp=Z,99nm,1.4s						
KASTN	Kahler Asten	24.95	77	eP	P	19 38 33.1	-0.4
	comp=Z,131nm,1.3s,baz=291,slow=8.9						
NC602	NORSAR Array S	24.98	54	P	P	19 38 33.5	-0.2
NC602	NORSAR Array S	24.98	54	eP	P	19 38 33.3	-0.4
NC405	NORSAR Array S	25.06	53	P	P	19 38 34.3	-0.2
SSB	Saint Sauveur	25.10	92	P	P	19 38 34.3	-0.6
SSB				pmax	pmax		
	comp=Z,21nm,1.0s						
SSB	Saint Sauveur	25.10	92	P	P	19 38 34.3	-0.6
PKME	Peaks-Kenny Pk	25.14	268	P	P	19 38 34.0	-1.2
	baz=60						
PKME	Peaks-Kenny Pk	25.14	268	P	P	19 38 34.0	-1.2
PKME				IAmb	IAmb	19 38 55.9	
	comp=Z,48nm,1.1s						
BSEG	Bad Segeberg	25.25	70	eP	P	19 38 36.6	+0.4
	comp=Z,399nm,1.0s,baz=291,slow=8.9						
E61A	Lac Etchemin	25.29	271	P	P	19 38 35.2	-1.5
	baz=62						
TNS	Taunus Mts	25.31	79	eP	P	19 38 37.4	+0.6
	comp=Z,332nm,1.1s,baz=291,slow=8.9						
ECH	Echery	25.32	84	P	P	19 38 36.5	-0.4
ECH				pmax	pmax		
	comp=Z,170nm,1.1s						
ECH	Echery	25.32	84	P	P	19 38 36.5	-0.4
D60A	Saint Jean D'O	25.33	272	P	P	19 38 35.9	-1.1
	baz=63						
NSS	Namsos	25.37	45	eP	P	19 38 36.9	-0.3
G63A	Kingsbury	25.41	268	P	P	19 38 35.8	-1.9
	baz=59						
H64A	Troy	25.41	266	P	P	19 38 36.3	-1.4
	baz=58						
WVL	Waterville	25.72	267	P	P	19 38 40.2	-0.3
WVL				IAmb	IAmb	19 38 50.5	
	comp=Z,62nm,1.0s						
GTTG	Gottingen	25.75	75	eP	P	19 38 41.4	+0.7
	comp=Z,625nm,1.1s,baz=291,slow=8.9						
F61A	St Evariste	25.82	271	P	P	19 38 40.7	-0.7
	baz=61						
D59A	Saint-Raymond	25.84	273	P	P	19 38 40.8	-0.8
	baz=63						
CLZ	Clausthal	25.89	75	eP	P	19 38 42.2	+0.1
	comp=Z,276nm,1.3s,baz=291,slow=8.9						
H63A	New Sharon	25.90	267	P	P	19 38 40.7	-1.5
	baz=59						
E60A	Ste Agathe de	25.91	272	P	P	19 38 40.7	-1.5
	baz=62						
G62A	West of Eustis	25.91	269	P	P	19 38 41.2	-1.2
	baz=60						
G62A	West of Eustis	25.91	269	P	P	19 38 43.3	+1.0
G62A				IAmb	IAmb	19 39 16.4	
	comp=Z,149nm,1.7s						
ASSE	Asse, Remlinge	25.97	74	eP	P	19 38 42.3	-0.4
	comp=Z,178nm,1.3s,baz=291,slow=8.9						
BFO	Black Forest	25.98	83	P	P	19 38 41.9	-1.0
BFO				pmax	pmax		
	comp=Z,65nm,0.9s						
BFO	Black Forest	25.98	83	P	P	19 38 41.9	-1.0
BFO				IAmb	IAmb	19 38 54.7	
	comp=Z,65nm,0.9s						
BFO	Black Forest	25.98	83	eP	P	19 38 42.5	-0.4
	comp=Z,88nm,1.1s,baz=291,slow=8.9						
LLD	Lille Linde	25.99	66	iP	P	19 38 43.1	+0.2
LLD	Lille Linde	25.99	66	iP	P	19 38 43.1	+0.2
LLD	Lille Linde	25.99	66	⇑iP	P	19 38 42.9	0.0
LLD				iP	P	19 38 43.1	+0.2
UBBA	Unterbreizbach	26.02	77	eP	P	19 38 42.7	-0.4
	comp=Z,98nm,1.5s,baz=291,slow=8.9						
COP	Copenhagen	26.04	65	iP	P	19 38 43.4	+0.1
COP	Copenhagen	26.04	65	iP	P	19 38 43.4	+0.1
COP	Copenhagen	26.04	65	iP	P	19 38 43.4	+0.1
I64A	Boothbay	26.05	265	P	P	19 38 42.2	-1.3
	baz=57						
HFS	Hagfors	26.07	55	P	P	19 38 43.6	0.0
	comp=Z,21nm,0.8s,baz=268,slow=4.5,SNR=17						
KONS	Konsvik	26.12	40	eP	P	19 38 45.4	+1.4
FLTG	Flechtingen	26.24	73	eP	P	19 38 44.3	-0.9
	comp=Z,136nm,1.1s,baz=291,slow=8.9						
SENIN	Lac Senin/Sane	26.24	88	P	P	19 38 44.6	-0.9
LATQ	La Tuque	26.25	275	P	P	19 38 43.9	-1.3
	baz=63						
STU	Stuttgart	26.32	82	P	P	19 38 45.7	-0.3
STU				pmax	pmax		
	comp=Z,128nm,0.9s						
STU	Stuttgart	26.32	82	P	P	19 38 45.7	-0.3
STU	Stuttgart	26.32	82	eP	P	19 38 45.6	-0.3
	comp=Z,136nm,0.9s,baz=291,slow=8.9						
F60A	Warwick	26.41	271	P	P	19 38 45.2	-1.5
	baz=61						
D58A	Chemin du LacG	26.44	274	P	P	19 38 45.7	-1.4
	baz=63						
G61A	St-Isidore-de-	26.49	270	P	P	19 38 46.9	-0.6
	baz=60						
BNI	Bardonecchia	26.51	91	P	P	19 38 47.3	-0.6
BNI				pmax	pmax		
	comp=Z,31nm,1.0s						
BNI	Bardonecchia	26.51	91	P	P	19 38 47.3	-0.6
I63A	Otisfield	26.55	267	P	P	19 38 47.3	-0.7
	baz=58						
I63A	Otisfield	26.55	267	P	P	19 38 46.9	-1.2
I63A				IAmb	IAmb	19 39 08.5	
	comp=Z,128nm,1.7s						
H62A	Milan	26.63	268	P	P	19 38 48.6	-0.1
H62A				IAmb	IAmb	19 39 01.4	
	comp=Z,55nm,1.1s						
ZHG	ZHG	26.63	126	P		19 38 53.0	
RGN	Rugen	26.80	68	P	P	19 38 50.6	+0.4
MOQ	Mont Orford	26.92	270	P	P	19 38 51.0	-0.4
NEUB	Neuenburg	26.93	75	eP	P	19 38 51.2	-0.2
	comp=Z,62nm,0.8s,baz=291,slow=8.9						
F59A	Saint Guilaume	26.97	272	P	P	19 38 51.5	-0.3
	baz=61						
E58A	La Victoria	27.02	273	P	P	19 38 51.4	-0.8
	baz=62						
G60A	Masonville	27.07	270	P	P	19 38 51.7	-1.0
	baz=59						
I62A	Tamworth	27.11	267	P	P	19 38 51.4	-1.6
I62A				IAmb	IAmb	19 39 12.4	
	comp=Z,127nm,1.8s						
FAUS	Fauske	27.11	39	eP	P	19 38 53.8	+0.9
H61A	Lyndonville	27.12	269	P	P	19 38 51.3	-1.9
	baz=58						
GRFO	Grafenberg	27.16	79	P	P	19 38 53.3	-0.2
GRFO				pmax	pmax		
	comp=Z,72nm,0.9s						
GRFO	Grafenberg	27.16	79	P	P	19 38 53.3	-0.2
GRFO				IAmb	IAmb	19 38 58.8	
	comp=Z,72nm,0.9s						
GRA1	Grafenberg Arr	27.17	79	P	P	19 38 53.3	-0.3
GRA1				IAmb	IAmb	19 38 58.9	
	comp=Z,76nm,0.9s						
GRF	Grafenberg Arr	27.17	79	P	P	19 38 53.3	-0.3
GRF				pmax	pmax		
	comp=Z,76nm,0.9s						
GRF	Grafenberg Arr	27.17	79	eP	P	19 38 53.6	0.0
	comp=Z,306nm,1.9s,baz=291,slow=8.9						
GRF				eL	L	19 53 10.7	
	comp=Z,10µm,18.5s						
AKLM	AKL	27.21	121	P		19 38 57.0	
LBNH	Lisbon	27.27	268	P	P	19 38 52.6	-2.0
	baz=58						
LBNH	Lisbon	27.27	268	P	P	19 38 56.6	+2.0
LBNH				pmax	pmax		
	comp=Z,43nm,1.3s						
LBNH	Lisbon	27.27	268	P	P	19 38 56.6	+2.0
UBR	Ueberruh	27.34	83	eP	P	19 38 55.2	0.0
	comp=Z,102nm,1.4s,baz=291,slow=8.9						
DAVA	Damuels	27.38	84	eP	P	19 38 55.7	0.0
	comp=Z,35nm,1.1s,SNR=9.5						
PLN	Plauen	27.42	77	eP	P	19 38 55.3	-0.5
	comp=Z,65nm,1.2s,baz=291,slow=8.9						
TUE	Stuetta	27.44	86	P	P	19 38 56.4	+0.1
E57A	Chemin Saint G	27.53	274	P	P	19 38 55.7	-1.2
	baz=62						
BSD	Bornholm Skovb	27.55	66	iP	P	19 38 55.8	-1.1
BSD	Bornholm Skovb	27.55	66	eP	P	19 38 56.5	-0.4
BSD	Bornholm Skovb	27.55	66	iP	P	19 38 55.8	-1.1
BSD	Bornholm Skovb	27.55	66	iP	P	19 38 55.9	-1.1
GUNZ	Gunzen	27.57	77	eP	P	19 38 56.9	-0.3
	comp=Z,67nm,1.2s,baz=291,slow=8.9						
MANZ	Manzenberg	27.58	78	eP	P	19 38 57.0	-0.3
	comp=Z,34nm,1.1s,baz=291,slow=8.9						
D56A	ZEC Mazanza, M	27.60	275	P	P	19 38 55.9	-1.5
	baz=62						
DAVOX	Davos/Dischmat	27.61	85	P	P	19 38 58.6	+0.8
	comp=Z,39nm,0.9s,baz=307,slow=8.2,SNR=26						
CLL	Collm	27.62	74	⇑iP	P	19 38 57.2	-0.4
	comp=Z,65nm,0.9s						
CLL				ipP	pP	19 39 00.2	-1.9
CLL				i		19 39 06.6	
CLL	Collm	27.62	74	⇑iP	P	19 38 57.2	-0.4
CLL				i		19 39 00.2	
CLL				pmax	pmax		
	comp=Z,65nm,0.9s						
CLL	Collm	27.62	74	P	P	19 38 56.9	-0.7
CLL				IAmb	IAmb	19 39 01.6	
	comp=Z,55nm,0.7s						
CLL	Collm	27.62	74	eP	P	19 38 57.2	-0.4
	comp=Z,61nm,0.8s,baz=291,slow=8.9						
WERN	Wernitzgruen	27.62	77	eP	P	19 38 57.4	-0.3
	comp=Z,60nm,1.5s,baz=291,slow=8.9						
TANN	Tannenbergstha	27.62	77	eP	P	19 38 57.5	-0.2
	comp=Z,86nm,1.2s,baz=291,slow=8.9						
TULEG	Thule	27.65	343	P	P	19 38 57.4	-0.2
TULEG				IAmb	IAmb	19 38 59.2	
	comp=Z,73nm,1.5s						
TULEG	Thule	27.65	343	iP	P	19 38 57.4	-0.2

RUE	Ruedersdorf	27.67	72	eP	P	19 38 57.7	-0.3
	comp=Z,291nm,2.2s,baz=291,slow=8.9						
NKC	Novy Kostel	27.69	77	eP	P	19 38 58.0	-0.2
NKC	Novy Kostel	27.69	77	eP	P	19 38 58.0	-0.2
ROTZ	Rotzenmuhle	27.72	78	eP	P	19 38 58.4	-0.1
	comp=Z,111nm,1.7s,baz=291,slow=8.9						
RETA	Reutte	27.82	83	eP	P	19 38 59.5	0.0
	comp=Z,91nm,1.3s,SNR=15						
FUR	Furstenfeldbru	27.83	82	eP	P	19 38 59.6	+0.1
	comp=Z,148nm,1.1s,baz=291,slow=8.9						
TRQ	Mont Tremblant	27.87	274	P	P	19 38 59.0	-0.9
FBE	Freiberg	27.96	75	eP	P	19 39 00.6	0.0
	comp=Z,56nm,1.0s,baz=291,slow=8.9						
E56A	St. Veronique	28.00	275	P	P	19 38 59.9	-1.2
	baz=62						
FETA	Feichten	28.02	84	eP	P	19 39 01.7	+0.3
	comp=Z,64nm,1.6s,SNR=11						
JBK	JBK	28.02	119	P		19 39 06.0	
D55A	Sainte-Anne-du	28.05	276	P	P	19 38 59.9	-1.5
	baz=62						
UPP	Uppsala	28.07	55	eP	P	19 39 01.4	-0.1
G58A	Ormstown	28.09	271	P	P	19 39 00.6	-1.2
	baz=59						
H59A	Cadyville	28.13	270	P	P	19 39 01.2	-1.1
	baz=59						
J61A	Chester	28.14	267	P	P	19 39 02.1	-0.2
	baz=56						
MDT	Midelt	28.15	124	P	P	19 39 03.4	+0.7
	comp=Z,16nm,1.1s,baz=334,slow=8.3,SNR=17						
MDT	Midelt	28.15	124	P		19 39 06.1	
MATQ	Matagami	28.16	282	P	P	19 38 59.8	-2.7
	baz=67						
SQTA	Sankt Quirin	28.21	83	eP	P	19 39 03.5	+0.4
	comp=Z,68nm,1.0s,SNR=24						
I60A	Shoreham	28.32	268	P	P	19 39 01.7	-2.1
	baz=57						
BRG	Berggiesshubel	28.33	75	eP	P	19 38 59.4	-4.5
BRG				Amp		19 39 01.0	
	comp=Z,7.6nm,1.2s						
BRG				i x	x	19 39 03.1	
BRG				Amp		19 39 04.7	
	comp=Z,42nm,1.0s						
BRG				ex	x	19 39 08.0	
BRG				Amp		19 39 10.0	
	comp=Z,49nm,0.9s						
BRG				ex	x	19 39 14.1	
BRG				Amp		19 39 14.8	
	comp=Z,48nm,0.9s						
BRG	Berggiesshubel	28.33	75	eP	P	19 39 03.4	-0.5
	comp=Z,42nm,1.0s,baz=291,slow=8.9						
M64A	Tiverton	28.35	263	P	P	19 39 04.0	-0.1
WET	Wettzell	28.38	79	eP	P	19 39 04.0	-0.4
	comp=Z,29nm,1.2s,baz=291,slow=8.9						
WATA	Walderalm	28.39	83	eP	P	19 39 04.7	+0.1
	comp=Z,66nm,1.1s,SNR=13						
L63A	North Scituate	28.41	264	P	P	19 39 03.2	-1.5
	baz=54						
WTTA	Wattenberg	28.45	83	i P	P	19 39 05.3	0.0
	comp=Z,98nm,1.5s,SNR=16						
H58A	Gabriels	28.55	270	P	P	19 39 04.1	-1.9
	baz=58						
SALO	Salr	28.57	87	P	P	19 39 05.5	-0.6
MSSA	Maissana	28.62	90	P	P	19 39 06.3	-0.4
MSSA				IAmb	IAmb	19 39 20.6	
	comp=Z,62nm,1.2s						
OUZM	OUZ	28.65	129	P		19 39 11.0	
G57A	Newington	28.68	272	P	P	19 39 05.6	-1.5
	baz=59						
LONY	Lake Ozonia	28.69	271	P	P	19 39 06.2	-1.1
I59A	Olmsteadville	28.70	269	P	P	19 39 06.4	-0.9
	baz=57						
J60A	Lant Hill Farm	28.72	267	P	P	19 39 06.1	-1.4
	baz=56						
VLDQ	Val d'Or	28.75	279	P	P	19 39 08.1	+0.4
VLDQ				IAmb	IAmb	19 39 43.8	
	comp=Z,92nm,1.9s						
KHC	Kasperske Hory	28.80	78	eP	P	19 39 07.6	-0.6
KHC				e		19 39 14.6	
KHC	Kasperske Hory	28.80	78	eP	P	19 39 07.6	-0.6
KHC				epP	sP	19 39 14.6	+0.1
KHC	Kasperske Hory	28.80	78	P	P	19 39 07.9	-0.3
KHC				IAmb	IAmb	19 39 09.4	
	comp=Z,78nm,1.5s						
TRO	Tromso	28.80	35	eP	P	19 39 08.9	+1.0
NCB	Newcomb	28.82	269	P	P	19 39 08.4	0.0
NCB				IAmb	IAmb	19 39 15.0	
	comp=Z,61nm,1.8s						
PBCC	Pribram	28.82	77	eP	P	19 39 08.6	+0.3
PVCC	Panska Ves	28.83	75	eP	P	19 39 08.1	-0.2
PVCC	Panska Ves	28.83	75	eP	P	19 39 08.1	-0.2
RJOB	Jochberg	28.94	81	eP	P	19 39 09.5	0.0
	comp=Z,177nm,1.2s,baz=291,slow=8.9						
GEC2	GERESS Array S	29.00	79	P	P	19 39 09.6	-0.4
GEC2				IAmb	IAmb	19 39 11.1	
	comp=Z,58nm,1.1s						
GEC2	GERESS Array S	29.00	79	eP	P	19 39 09.8	-0.2
	comp=Z,73nm,1.2s,baz=291,slow=8.9						
GEC2B	GERESS ARRAY S	29.00	79	P	P	19 39 10.1	+0.1
GERES	GERESS Array B	29.00	79	P	P	19 39 10.1	+0.1
	comp=Z,20nm,0.8s,baz=298,slow=8.8,SNR=82						
GERES	GERESS Array B	29.00	79	P	P	19 39 09.5	-0.5
PRU	Pruhonice	29.02	76	eP	P	19 39 09.7	-0.4
PRU				e		19 39 14.6	
PRU	Pruhonice	29.02	76	eP	P	19 39 09.7	-0.4
PRU				epP	pP	19 39 14.6	-0.1
CTI	Castel Tesino	29.04	85	P	P	19 39 09.7	-0.7
CTI				pmax	pmax		
	comp=Z,56nm,1.1s						
CTI	Castel Tesino	29.04	85	P	P	19 39 09.7	-0.7
CTI				IAmb	IAmb	19 39 21.3	
	comp=Z,56nm,1.1s						
AAL	Aland	29.20	54	eP	P	19 39 12.2	+0.7
ABTA	Abfaltersbach	29.23	83	eP	P	19 39 12.2	+0.2
	comp=Z,23nm,1.1s,SNR=7.4						
VLC	Villacollemand	29.24	90	P	P	19 39 11.7	-0.4
VLC				IAmb	IAmb	19 39 23.5	
	comp=Z,57nm,0.9s						
J59A	Piesco	29.26	269	P	P	19 39 11.7	-0.6
	baz=57						
J59A	Piesco	29.26	269	P	P	19 39 12.2	-0.1
H57A	Richville	29.26	271	P	P	19 39 11.4	-0.9
	baz=58						
JETT	Jettan, Norway	29.30	35	eP	P	19 39 13.2	+0.8
CKRC	Cesky Krumlov	29.37	79	eP	P	19 39 13.1	-0.1
CKRC				ex	x	19 39 23.6	
GKP	Gorka Klasztor	29.39	69	eP	P	19 39 14.0	+0.7
GKP	Gorka Klasztor	29.39	69	eP	P	19 39 14.0	+0.7
TEOL	Teolo	29.39	87	P	P	19 39 13.2	-0.3
TEOL				IAmb	IAmb	19 39 24.5	
	comp=Z,60nm,0.9s						
M62A	Hamden	29.43	264	P	P	19 39 13.0	-0.8
	baz=54						
ARF	Arif	29.46	125	P		19 39 18.0	
ZCCA	Zocca	29.50	89	P	P	19 39 14.0	-0.4
ZCCA				IAmb	IAmb	19 39 26.5	
	comp=Z,71nm,1.0s						
KBA	Koelnbreinsper	29.57	82	eP	P	19 39 15.6	+0.3
	comp=Z,29nm,0.9s,SNR=14						
STAL	STALIGIAL	29.58	84	P	P	19 39 14.8	-0.4
ZOU	Zoufplan	29.59	83	P	P	19 39 15.5	0.0
CHVC	Chvalec	29.68	74	eP	P	19 39 15.4	-0.5
UPC	Upice	29.68	75	eP	P	19 39 16.0	0.0
UPC	Upice	29.68	75	eP	P	19 39 16.0	0.0
KSP	Ksiaz	29.72	74	eP	P	19 39 16.0	-0.2
MOA	Molln	29.77	80	eP	P	19 39 16.6	-0.2
	comp=Z,74nm,1.5s,SNR=16						
OSTC	Ostas	29.78	74	eP	P	19 39 16.7	-0.2
DPC	Dobruska-Polom	29.93	75	eP	P	19 39 17.9	-0.3
DPC	Dobruska-Polom	29.93	75	eP	P	19 39 17.9	-0.3
MYKA	Terra Mystica	29.96	83	i P	P	19 39 18.8	+0.2
	comp=Z,79nm,0.7s,SNR=34						
PLVO	Plevna	29.99	273	P	P	19 39 19.5	+0.8
OSSC	Osservatorio P	30.10	90	P	P	19 39 19.4	-0.4
OSSC				IAmb	IAmb	19 39 33.7	
	comp=Z,26nm,1.0s						
ALGO	Algonquin Park	30.12	276	P	P	19 39 18.9	-0.9
	baz=60						
J57A	Williamstown	30.20	270	P	P	19 39 20.8	+0.2
J57A				IAmb	IAmb	19 39 47.9	
	comp=Z,78nm,1.9s						
CADS	Cadrg	30.22	84	i P	P	19 39 20.2	-0.6
KTK1	Kautokeino	30.25	36	eP	P	19 39 21.4	+0.7
CASP	Castiglione de	30.28	92	P	P	19 39 21.3	0.0
CASP				IAmb	IAmb	19 39 31.6	
	comp=Z,30nm,1.1s						
L59A	Walton	30.30	267	P	P	19 39 21.3	-0.3
L59A				IAmb	IAmb	19 39 30.8	
	comp=Z,100nm,1.8s						
KRLC	Kraliky	30.31	75	eP	P	19 39 21.8	+0.3
KRLC	Kraliky	30.31	75	eP	P	19 39 21.8	+0.3
G54A	Lake Saint Pet	30.42	275	P	P	19 39 20.3	-2.2
	baz=60						
TRI	Trieste	30.49	84	P	P	19 39 22.7	-0.4
TRI				pmax	pmax		
	comp=Z,208nm,1.5s						
TRI	Trieste	30.49	84	P	P	19 39 22.7	-0.4
KRUC	Moravsky	30.51	77	eP	P	19 39 22.5	-0.7
VRAC	Vranov	30.52	76	P	P	19 39 23.2	-0.2
	comp=Z,4.9nm,0.6s,baz=298,slow=10						
VRAC	Vranov	30.52	76	⇓P	P	19 39 23.6	+0.2
VRAC	Vranov	30.52	76	eP	P	19 39 22.6	-0.8
HAMF	Hammerfest	30.55	33	eP	P	19 39 24.3	+0.9
OBKA	Obir	30.57	83	eP	P	19 39 23.6	-0.4
	comp=Z,66nm,0.8s,SNR=24						
DELO	Deloro Mine	30.59	273	P	P	19 39 23.8	-0.3
DELO				IAmb	IAmb	19 39 56.6	
	comp=Z,61nm,1.7s						
CONA	Conrad Observa	30.69	79	i P	P	19 39 24.9	-0.1
	comp=Z,31nm,1.4s						
SOKA	Soboth	30.78	82	i P	P	19 39 25.1	-0.7
	comp=Z,47nm,1.2s,SNR=13						
LJU	Ljubljana	30.79	83	i P	P	19 39 25.4	-0.3
LJU				i pP	pwP	19 39 36.1	+1.4
LJU	Ljubljana	30.79	83	⇑iP	P	19 39 25.5	-0.3
ARSA	Arzberg	30.80	81	i P	P	19 39 25.9	0.0
	comp=Z,32nm,1.0s,SNR=11						
SPITS	Spitsbergen Ar	30.80	18	P	P	19 39 27.1	+1.5
	comp=Z,3.5nm,0.7s,baz=212,slow=7.8,SNR=4.9						
CEY	Cerknica	30.88	84	i P	P	19 39 26.7	+0.1
CEY				epP	pwP	19 39 37.4	+1.9
CEY	Cerknica	30.88	84	⇑iP	P	19 39 26.0	-0.6
MORC	Moravsky Berou	30.88	75	⇑P	P	19 39 26.5	-0.1
MORC	Moravsky Berou	30.88	75	eP	P	19 39 26.5	-0.1
MORC	Moravsky Berou	30.88	75	P	P	19 39 26.4	-0.2
MORC				pmax	pmax		
	comp=Z,158nm,1.9s						
MORC	Moravsky Berou	30.88	75	P	P	19 39 26.4	-0.2
K57A	Scipio Center	30.89	269	P	P	19 39 25.5	-1.3
	baz=56						
MURB	Monte Urbino	31.03	89	P	P	19 39 25.9	-2.1
ARD7	ARCESS Array S	31.07	35	P	P	19 39 27.8	-0.2
ARD8	ARCESS Array S	31.07	35	P	P	19 39 27.1	-0.9
ARD9	ARCESS Array S	31.08	35	P	P	19 39 27.3	-0.8
ARC6	ARCESS Array S	31.08	35	P	P	19 39 27.7	-0.3
ARD6	ARCESS Array S	31.08	35	P	P	19 39 27.1	-1.0
ARC7	ARCESS Array S	31.08	35	P	P	19 39 27.6	-0.5
ARB5	ARCESS Array S	31.08	35	P	P	19 39 27.9	-0.2
ARA0	ARCESS Array S	31.08	35	eP	P	19 39 28.3	+0.1
ARCES	ARCESS Array B	31.08	35	P	P	19 39 28.1	-0.1
	comp=Z,22nm,0.9s,baz=251,slow=7.6,SNR=16						
ARCES	ARCESS Array B	31.08	35	P	P	19 39 28.2	+0.1
ARCES				pmax	pmax		
	comp=Z,35nm,1.2s						
ARCES	ARCESS Array B	31.08	35	P	P	19 39 28.2	+0.1
RIY	Rijeka	31.12	85	⇑iP	P	19 39 28.3	-0.4
PBUR	Paburge	31.13	62	eP	P	19 39 28.3	-0.3
H53A	Bobcaygeon	31.15	274	P	P	19 39 28.3	-0.6
	baz=58						
ZST	Bratislava	31.31	78	eP	P	19 39 30.4	+0.1
ZST				pmax	pmax		
	comp=Z,347nm,1.9s						
ZST	Bratislava	31.31	78	eP	P	19 39 30.4	+0.1
MODS	Modra-Piesok	31.33	78	eP	P	19 39 29.4	-1.2
MODS				pmax	pmax		
	comp=Z,85nm,1.6s						
MODS	Modra-Piesok	31.33	78	eP	P	19 39 29.4	-1.2
JAVC	Velka Javorina	31.35	77	eP	P	19 39 30.8	0.0
SMOL	Smolenice	31.36	77	eP	P	19 39 30.7	-0.1
SMOL				pmax	pmax		
	comp=Z,43nm,1.8s						
SMOL	Smolenice	31.36	77	eP	P	19 39 30.7	-0.1
SADO	Sadowa	31.39	274	P	P	19 39 30.8	-0.3
SADO				IAmb	IAmb	19 39 40.6	
	comp=Z,27nm,1.1s						
MTSE	Matsula	31.40	56	eP	P	19 39 31.1	+0.1
K56A	Middlesex	31.40	270	P	P	19 39 30.6	-0.7
	baz=56						
CRES	Cresnjev	31.46	83	eP	P	19 39 30.7	-1.0
L57A	Andrews Acres	31.51	268	P	P	19 39 31.9	-0.3
	baz=55						
NRCA	Norcia	31.62	90	IAmb	IAmb	19 39 45.3	
	comp=Z,24nm,1.1s						
M58A	Price's Panora	31.64	267	P	P	19 39 32.0	-1.3
	baz=54						
FINES	FINESS Array B	31.92	51	P	P	19 39 35.5	-0.1
	comp=Z,44nm,0.9s,baz=284,slow=7.9,SNR=52						
FINES	FINESS Array B	31.92	51	P	P	19 39 35.2	-0.3
BEL	Belsk	31.93	70	eP	P	19 39 35.6	-0.1
BEHE	Becsehely	31.93	81	⇑iP	P	19 39 37.8	+2.0
OJC	Ojcow	32.01	73	eP	P	19 39 36.3	-0.2
OJC	Ojcow	32.01	73	P	P	19 39 36.1	-0.4
OJC				pmax	pmax		
	comp=Z,62nm,1.1s						
OJC	Ojcow	32.01	73	P	P	19 39 36.1	-0.4
AQU	L'Aquila	32.07	90	eP	P	19 39 36.2	-0.9
P60A	Greenville	32.08	264	P	P	19 39 36.9	-0.3
	baz=52						
VYHS	Vyhne	32.20	77	eP	P	19 39 38.0	-0.2
VYHS				pmax	pmax		
	comp=Z,66nm,1.6s						
VYHS	Vyhne	32.20	77	eP	P	19 39 38.0	-0.2
LANS	Liptovska Anna	32.28	75	eP	P	19 39 39.9	+1.0
LANS				pmax	pmax		
	comp=Z,24nm,0.9s						
LANS	Liptovska Anna	32.28	75	eP	P	19 39 39.9	+1.0
PABE	Paberze	32.39	62	eP	P	19 39 40.1	+0.5
SUW	Suwalki	32.47	65	eP	P	19 39 39.9	-0.5
SUW				epP	pwP	19 39 49.1	-0.4
SUW	Suwalki	32.47	65	eP	P	19 39 39.6	-0.8
SUW	Suwalki	32.47	65	P	P	19 39 38.9	-1.5
SUW				pmax	pmax		
	comp=Z,123nm,0.9s						
SUW	Suwalki	32.47	65	P	P	19 39 38.9	-1.5
EUNU	Eureka	32.52	345	P	P	19 39 40.4	-0.3
EUNU				IAmb	IAmb	19 40 39.4	
	comp=Z,38nm,1.3s						
M56A	Emporium	32.62	269	P	P	19 39 41.8	-0.2
	baz=54						
NIE	Niedzica	32.65	74	eP	P	19 39 42.5	+0.4
P59A	Jarrettsville	32.69	264	P	P	19 39 40.6	-1.9
	baz=52						
RES	Resolute Bay	32.95	334	P	P	19 39 45.2	+0.8
	comp=Z,11nm,0.8s,baz=98,slow=8.4,SNR=26						
VSU	Vasula	32.95	56	eP	P	19 39 44.0	-0.6
VSU	Vasula	32.95	56	⇓iP	P	19 39 44.2	-0.3
VSU				pmax	pmax		
	comp=Z,123nm,1.1s						
I51A	Listowel	33.04	274	P	P	19 39 45.2	-0.4
	baz=57						
BLY	Banja Luka	33.06	84	⇑iP	P	19 39 45.5	-0.2
PSZ	Piszkesteto	33.10	77	⇓P	P	19 39 45.2	-0.9
PSZ	Piszkesteto	33.10	77	P	P	19 39 46.1	0.0
PSZ				pmax	pmax		
	comp=Z,73nm,1.2s						
PSZ	Piszkesteto	33.10	77	P	P	19 39 46.1	0.0
MGRS	Mrkonjic Grad	33.17	84	⇑iP	P	19 39 46.6	-0.1
MORH	Mrgy, Hungar	33.18	80	⇑P	P	19 39 46.1	-0.7
MORH	Mrgy, Hungar	33.18	80	⇑iP	P	19 39 45.9	-0.8
KECS	Kecovo	33.19	76	eP	P	19 39 47.0	+0.2
KECS				pmax	pmax		
	comp=Z,14nm,1.0s						
KECS	Kecovo	33.19	76	eP	P	19 39 47.0	+0.2
P58A	Pank, Wackersv	33.29	265	P	P	19 39 46.9	-0.9
	baz=52						
ISAL	Salakas	33.52	61	eP	P	19 39 50.0	+0.3
PAOL	Paolisi	33.55	91	P	P	19 39 48.8	-1.3
PAOL				IAmb	IAmb	19 40 17.0	
	comp=Z,33nm,1.4s						
CRVS	Cervenica-Dubn	33.57	74	eP	P	19 39 50.3	+0.2
CRVS				pmax	pmax		
	comp=Z,148nm,1.8s						
CRVS	Cervenica-Dubn	33.57	74	eP	P	19 39 50.3	+0.2
L53A	Girard	33.62	271	P	P	19 39 50.5	-0.1
	baz=55						
IIGN	Ignalina	33.65	62	eP	P	19 39 51.0	+0.3
KEST	Kesra	33.78	103	P	P	19 39 51.6	-0.6
	comp=Z,48nm,0.9s,baz=267,slow=1.6,SNR=38						
SGRT	San Giovanni R	33.84	89	P	P	19 39 51.4	-1.3
IDID	Didziasalis	33.94	61	eP	P	19 39 53.5	+0.3
KWP	Kalwaria Pacla	33.96	73	eP	P	19 39 53.9	+0.4
KWP	Kalwaria Pacla	33.96	73	P	P	19 39 52.6	-1.0
KWP				pmax	pmax		
	comp=Z,164nm,1.7s						
KWP	Kalwaria Pacla	33.96	73	P	P	19 39 52.6	-1.0
KOLS	Kolonicke sedl	34.03	74	eP	P	19 39 54.0	-0.1
KOLS				pmax	pmax		
	comp=Z,46nm,1.4s						
KOLS	Kolonicke sedl	34.03	74	eP	P	19 39 54.0	-0.1
N54A	Moraine State	34.03	269	P	P	19 39 53.3	-0.9
	baz=54						
APA	Apatity	34.07	39	⇓iP	P	19 39 54.1	-0.1
APA				pmax	pmax		
	comp=Z,68nm,0.9s						
NACGM	Naroch	34.11	62	i P	P	19 39 54.4	-0.3
NACGM				i P	P	19 39 54.4	-0.3
NACGM				i P	P	19 39 54.4	-0.3
NACGM				i PP	PnPn	19 41 08.8	+0.6
NACGM				i PPP	PPP	19 41 20.6	
NACGM				i S	S	19 45 22.7	+3.2
NACGM				SS	SnSn	19 47 34.6	+7.5
NACGM				i SSS	SSS	19 48 18.6	
NACGM				i LQ	LQ	19 51 16.0	
NACGM				i LR	LR	19 52 20.9	
UZH	Uzhgorod	34.18	74	eP	P	19 39 54.6	-0.8
UZH				e		19 39 58.5	
UZH				e		19 40 03.5	
PUL	Pulkovo	34.35	53	⇑eP	P	19 39 57.6	+0.8
PUL				pmax	pmax		
	comp=Z,59nm,0.3s						
AMBH	Ambrzfalva	34.36	79	⇓P	P	19 39 56.9	-0.1
FRGS	Fruska Gora	34.43	81	⇓P	P	19 39 57.5	-0.1
FRGS	Fruska Gora	34.43	81	⇑iP	P	19 39 57.3	-0.3
R58A	Rapidan	34.46	264	P	P	19 39 56.7	-1.3
	baz=50						
HAPS	Han Pijesak,Bl	34.48	83	eP	P	19 39 57.2	-1.0
TEKS	Tekeris	34.58	82	eP	P	19 39 58.2	-0.8
LVV	L'vov	34.65	72	eP	P	19 39 58.5	-0.9
MCWV	Mont Chateau	34.73	267	P	P	19 40 00.5	+0.2
	baz=52						
MNK	Minsk	34.85	62	⇑eP	P	19 39 58.0	-3.2
MNK				pmax	pmax		
	comp=Z,520nm,1.0s						
MNK	Minsk	34.85	62	i P	P	19 40 00.5	-0.6
	comp=E,20nm,1.1s						
MNK				i P	P	19 40 00.5	-0.6
	comp=N,71nm,1.1s						
MNK				i P	P	19 40 00.5	-0.6
	comp=Z,162nm,0.9s						
MNK				i PP	PP	19 41 16.7	-3.4
MNK				i PPP	PPP	19 41 29.0	
MNK				i PcP	PcP	19 42 33.7	0.0
MNK				i S	S	19 45 31.2	+0.2
MNK				i SS	SnSn	19 47 46.4	+1.2
MNK				i SSS	SSS	19 48 02.5	
MNK				i ScS	ScS	19 50 22.5	+1.4
MNK				i LQ	LQ	19 51 34.7	
MNK				i LR	LR	19 54 01.9	
MNK				i LRM	MLR	19 55 21.5	
	comp=N,4µm,18.8s						
MNK				i LRM	MLR	19 55 31.2	
	comp=E,257nm,15.9s						
MNK				i LRM	MLR	19 55 31.2	
	comp=Z,3µm,17.4s						
BBLS	Lazići	34.88	83	⇑iP	P	19 40 01.6	0.0
TREB	Trebinje	34.88	86	eP	P	19 40 00.5	-1.0
BRY	Bratogost	34.89	85	eP	P	19 40 01.0	-0.8
SIRR	Siria	34.96	78	⇓P	P	19 40 02.6	+0.3
MATE	Matera	35.08	90	⇑P	P	19 40 01.7	-1.5
DIVS	Divibare	35.10	83	⇑iP	P	19 40 03.1	-0.5
BANR	Banloc	35.11	80	⇑P	P	19 40 03.8	+0.4
HCY	Herceg Novi	35.12	86	eP	P	19 40 02.5	-1.1
BZS	Buzias	35.27	79	⇓P	P	19 40 04.7	-0.1
DRGR		35.32	77	⇑P	P	19 40 05.6	+0.2
BMR	Baia Mare	35.35	75	⇑P	P	19 40 05.2	-0.2
PDG	Podgorica	35.59	86	⇓P	P	19 40 06.9	-0.7
PDG	Podgorica	35.59	86	⇑iP	P	19 40 06.9	-0.7
PDG	Podgorica	35.59	86	P	P	19 40 06.5	-1.1
M50A	Fremont	35.63	272	P	P	19 40 08.2	+0.2
M50A				IAmb	IAmb	19 40 18.6	
	comp=Z,30nm,0.8s						
T58A	Grand View Acr	35.66	263	P	P	19 40 08.2	-0.1
	baz=49						
VAE	Valguarnera	35.66	96	P	P	19 40 08.2	-0.2
	comp=Z,15nm,1.0s,baz=200,slow=12,SNR=2.3						
DRME	Dracevica, Mon	35.69	86	⇑iP	P	19 40 08.0	-0.5
MDVR	Moldovita	35.77	81	⇑P	P	19 40 08.9	-0.3
S56A	Natural Bridge	35.81	264	P	P	19 40 09.5	-0.1
	baz=50						
CJR	Cluj-Napoca	35.89	77	⇓P	P	19 40 10.4	+0.2
DEV	Deva	35.90	78	⇓P	P	19 40 10.2	0.0
TIP	Timpagrande	36.01	92	⇓P	P	19 40 09.7	-1.7
TIP	Timpagrande	36.01	92	IAmb	IAmb	19 40 23.6	
	comp=Z,34nm,1.2s						
U58A	Oxford	36.03	262	P	P	19 40 11.4	-0.1
	baz=48						
GZR	Gura Zlata	36.08	79	⇑P	P	19 40 11.8	-0.1
HERR	Herculane	36.14	80	⇑P	P	19 40 11.9	-0.4
ARCR	ARCALIA	36.14	76	⇑P	P	19 40 13.0	+0.6
V59A	Middlesex	36.27	261	P	P	19 40 13.5	0.0
	baz=48						
ACSO	Alum Creek Sta	36.29	271	P	P	19 40 13.4	-0.2
	baz=53						
ACSO	Alum Creek Sta	36.29	271	IAmb	IAmb	19 40 23.6	
	comp=Z,20nm,0.8s						
BUR08	Bucovina Ar. S	36.36	74	IAmb	IAmb	19 40 16.4	
	comp=Z,60nm,1.2s						
BURAR	Bucovina Array	36.39	74	⇓P	P	19 40 14.1	-0.4
BURAR	Bucovina Array	36.39	74	P	P	19 40 14.8	+0.3
BOVS	Bovan	36.39	82	⇓P	P	19 40 14.7	+0.2
U57A	Blanch	36.48	263	P	P	19 40 15.6	+0.3
	baz=48						
T56A	Rocky Mt	36.51	264	P	P	19 40 14.2	-1.4
	baz=49						
TIR	Tirane	36.59	87	⇓P	P	19 40 15.8	-0.4
TIR	Tirane	36.59	87	IAmb	IAmb	19 40 36.0	
	comp=Z,65nm,1.1s						
BLA	Blacksburg	36.63	265	P	P	19 40 14.2	-2.5
	baz=49						
TMCR	Tamitsa	36.63	44	eP	P	19 40 15.9	-0.3
TMCR				pmax	pmax		
	comp=Z,108nm,0.9s						
Q52A	Bidwell	36.64	268	IAmb	IAmb	19 40 47.1	
	comp=Z,29nm,1.1s						
LOT	Lotru	36.65	78	⇓P	P	19 40 16.2	-0.6
SRE	Strehaia	36.73	80	⇑P	P	19 40 17.5	+0.1
PHP	Peshkopia	36.74	86	P	P	19 40 17.6	0.0
PUNG	Punghina	36.78	80	⇑P	P	19 40 17.2	-0.5
S54A	Dingess, Beckl	36.79	266	P	P	19 40 18.0	0.0
	baz=50						
V57A	Coltrane Farms	37.11	262	P	P	19 40 20.3	-0.4
	baz=48						
EYMN	Ely	37.14	287	P	P	19 40 20.5	-0.4
	baz=60,SNR=6.1						
EYMN	Ely	37.14	287	P	P	19 40 20.2	-0.7
BAIL	Bailesti	37.17	81	⇑P	P	19 40 21.4	+0.4
U56A	King	37.17	263	P	P	19 40 19.8	-1.4
	baz=48						
SKO	Skopje	37.18	85	i P	P	19 40 21.5	+0.3
AKASG	Malin Array Be	37.21	68	P	P	19 40 19.6	-1.7
	comp=Z,40nm,0.8s,baz=301,slow=8.3,SNR=34						
AKASG				PP	PP	19 41 44.0	-2.1
	comp=Z,31nm,1.1s,baz=298,slow=11,SNR=9.1						
AKASG	Malin Array Be	37.21	68	P	P	19 40 19.2	-2.1
AKBB	Malin Array Si	37.21	68	ceP	P	19 40 20.5	-0.8
BIZ	Bicaz	37.25	75	⇑P	P	19 40 22.7	+0.9
OHR	Ohrid	37.30	86	i P	P	19 40 22.8	+0.5
DOPR	Dopca	37.33	77	⇓P	P	19 40 22.5	-0.1
W58A	Raeford	37.37	261	P	P	19 40 23.1	+0.3
	baz=47						
VOIR		37.41	77	⇑P	P	19 40 22.7	-0.6
OZUR		37.50	76	⇓P	P	19 40 24.1	+0.1
MTUR	Matau	37.54	78	⇓P	P	19 40 24.4	+0.1
STFAR	Stefanesti-Arg	37.67	78	⇓P	P	19 40 24.5	-0.9
TESR	Tescani	37.79	75	⇓P	P	19 40 26.1	-0.2
STIP	Stip	37.79	84	i P	P	19 40 27.5	+1.0
VLAD	Vladila	37.81	80	⇓P	P	19 40 25.6	-1.0
FNA	Florina	37.84	86	IAmb	IAmb	19 40 38.2	
	comp=Z,60nm,1.0s						
HUMR	Humele	37.87	79	⇓P	P	19 40 25.9	-1.1
VTS	Vitosha	37.89	83	⇑P	P	19 40 27.3	-0.1
VTS	Vitosha	37.89	83	P	P	19 40 26.8	-0.6
VTS				pmax	pmax		

	comp=Z,123nm,1.8s						
VTS	Vitosha	37.89	83	P	P	19 40 26.8	-0.6
VTS				IAmb	IAmb	19 40 28.4	
	comp=Z,123nm,1.8s						
MLR	Muntele Rosu	37.92	77	P	P	19 40 27.0	-0.6
	comp=Z,13nm,0.8s,baz=192,slow=15,SNR=14						
MLR	Muntele Rosu	37.92	77	⇑P	P	19 40 27.0	-0.6
MLR	Muntele Rosu	37.92	77	IAmb	IAmb	19 40 28.6	
	comp=Z,33nm,1.1s						
U54A	Nelsons Funny	37.93	265	P	P	19 40 25.9	-1.8
	baz=49						
SORM	Soroca	37.95	72	⇓P	P	19 40 26.9	-0.8
V55A	Taylorsville	38.00	264	IAmb	IAmb	19 40 42.5	
	comp=Z,61nm,1.4s						
W56A	Indian Trail	38.10	262	P	P	19 40 28.4	-0.7
	baz=47						
L44A	Lake County Fo	38.13	277	P	P	19 40 28.5	-0.8
	baz=54						
PLOR	Plostina	38.14	76	⇓P	P	19 40 29.5	+0.1
NEHR	Nehoiu	38.16	77	⇑P	P	19 40 29.7	+0.2
VRI	Vrincioaia	38.18	76	⇑P	P	19 40 29.2	-0.5
SECR		38.24	77	⇓P	P	19 40 30.3	+0.2
VAY	Valandovo	38.25	85	*i* P	P	19 40 30.2	0.0
X57A	Johnson Farm,	38.26	261	P	P	19 40 29.8	-0.7
	baz=47						
PLVB	Pleven	38.29	81	⇓P	P	19 40 30.3	-0.2
KLMR	Klimovskoe	38.34	49	*e*P	P	19 40 28.4	-2.3
KLMR				*e*		19 41 56.0	
KLMR				pmax	pmax		
	comp=Z,198nm,1.3s						
KLMR	Klimovskoe	38.34	49	*e*P	P	19 40 28.5	-2.3
KLMR				AMP		19 40 32.1	
	comp=Z,198nm,1.3s						
KLMR				*e*PP	PP	19 41 56.0	-2.3
BISRR	Bisoca	38.34	76	⇑P	P	19 40 30.8	-0.2
GRG	Griva	38.36	85	P	P	19 40 31.1	-0.2
VASR	Vaslui	38.39	74	⇑P	P	19 40 31.0	-0.4
ULM	Lac du Bonnet	38.52	293	P	P	19 40 30.2	-2.2
	comp=Z,13nm,0.8s,baz=58,slow=8.1,SNR=18						
ULM	Lac du Bonnet	38.52	293	⇑*e*P	P	19 40 31.7	-0.7
ULM	Lac du Bonnet	38.52	293	P	P	19 40 31.3	-1.1
SULR		38.54	78	⇑P	P	19 40 32.1	-0.6
KMSC	Kings Mountain	38.55	263	P	P	19 40 31.9	-0.9
	baz=48						
ZIMR		38.58	80	⇓P	P	19 40 33.3	+0.3
SFIN	Lafayette	38.71	274	P	P	19 40 33.3	-0.8
	baz=53						
VARL	Varlezi	38.82	75	⇑P	P	19 40 35.2	+0.2
MILM	Milestii Mici	38.85	73	⇑P	P	19 40 34.5	-0.7
PGOR	Pogoanele	38.85	77	⇑P	P	19 40 35.1	-0.1
TZTN	Tazewell	38.96	266	P	P	19 40 36.1	-0.3
	baz=49						
TZTN	Tazewell	38.96	266	P	P	19 40 35.9	-0.4
TZTN				IAmb	IAmb	19 40 51.5	
	comp=Z,43nm,1.1s						
SRS	Serrai	38.99	84	P	P	19 40 36.8	+0.3
SCHL	Schela	39.03	76	⇑P	P	19 40 35.7	-1.1
JFWS	Jewell Farm	39.12	279	P	P	19 40 37.3	-0.2
	baz=55						
OBN	Obninsk	39.19	58	P	P	19 40 38.0	0.0
	comp=Z,48nm,0.8s,baz=277,slow=1.7,SNR=47						
OBN	Obninsk	39.19	58	⇓P	P	19 40 38.0	0.0
OBN	Obninsk	39.19	58	*c i*P	P	19 40 37.7	-0.3
OBN				*e*		19 40 46.2	
OBN				*e*		19 42 06.9	
OBN				*e*PPP	PPP	19 42 28.6	
OBN				*e*		19 42 46.0	
OBN				*e*S	S	19 46 29.3	-7.6
OBN				*e*SS	SS	19 49 24.2	-5.4
OBN				pmax	pmax		
	comp=Z,390nm,1.3s						
OBN				pmax	pmax		
	comp=Z,333nm,0.9s						
OBN				MLR	MLR		
	comp=Z,5µm,15.0s						
OBN	Obninsk	39.19	58	P	P	19 40 37.6	-0.4
AMRR	Amara	39.22	77	⇑P	P	19 40 37.4	-1.0
EVR	Evrytania	39.25	88	P	P	19 40 39.5	+0.7
NHSC	New Hope	39.25	259	P	P	19 40 38.7	0.0
	baz=46						
RAZG	Razgrad	39.32	79	⇑P	P	19 40 38.4	-0.8
PLG	Polygyros	39.35	85	P	P	19 40 39.9	+0.4
V52A	Sevierville	39.45	266	P	P	19 40 40.5	+0.1
V52A				IAmb	IAmb	19 40 55.8	
	comp=Z,50nm,1.4s						
MOS	Moscow	39.46	57	*e*P	P	19 40 39.1	-1.1
MOS				*e*		19 42 10.7	
MOS				*e*S	S	19 46 43.8	+2.8
MOS				pmax	pmax		
	comp=Z,128nm,1.0s						
AGMN	Agassiz Nation	39.49	290	P	P	19 40 40.0	-0.5
	baz=59						
AGG	Agios Georgios	39.50	88	P	P	19 40 41.2	+0.4
ANX	Ano Chora	39.52	89	P	P	19 40 41.8	+0.8
HARR	Harsova	39.53	77	⇓P	P	19 40 39.6	-1.4
WCI	Wyandotte Cave	39.55	271	P	P	19 40 39.7	-1.5
	baz=51						
WCI	Wyandotte Cave	39.55	271	P	P	19 40 41.1	-0.1
WCI				pmax	pmax		
	comp=Z,21nm,0.8s						
WCI	Wyandotte Cave	39.55	271	P	P	19 40 41.1	-0.1
EFP	Efpalio	39.61	89	P	P	19 40 42.3	+0.6
TLBR	Topalu	39.68	77	⇓P	P	19 40 40.8	-1.4
SERG	Sergoula	39.71	89	P	P	19 40 44.3	+1.7
FFC	Flin Flon	39.73	302	P	P	19 40 42.7	+0.1
FFC				pmax	pmax		
	comp=Z,31nm,1.6s						
FFC	Flin Flon	39.73	302	P	P	19 40 42.7	+0.1
PAIG	Paliouri	39.76	86	P	P	19 40 42.9	0.0
ICOR	Ion Corvin	39.78	78	⇓P	P	19 40 42.0	-1.0
KALE	Kalithea	39.78	89	P	P	19 40 45.4	+2.2
XOR	Xorichti	39.81	87	P	P	19 40 43.5	+0.1
AXAR	Agios Charalam	39.86	88	P	P	19 40 46.6	+2.8
TIRR	Tirgusor	39.95	77	⇑P	P	19 40 42.9	-1.5
TIRR	Tirgusor	39.95	77	⇑P	P	19 40 42.9	-1.5
THAS	Thassos island	39.98	84	P	P	19 40 44.8	+0.1
ATAL	Atalanti	40.12	88	P	P	19 40 46.6	+0.6
U49A	Red Boiling Sp	40.34	268	P	P	19 40 48.2	+0.4
ITM	Ithomi	40.42	90	IAmb	IAmb	19 40 59.5	
	comp=Z,35nm,1.0s						
ALN	Alexandroupoli	40.60	83	P	P	19 40 49.9	0.0
ALN				pmax	pmax		
	comp=Z,54nm,0.9s						
ALN	Alexandroupoli	40.60	83	P	P	19 40 49.9	0.0
ALN				IAmb	IAmb	19 40 51.0	
	comp=Z,54nm,0.9s						
Q44A	Meyer Farm, Va	40.78	274	P	P	19 40 51.4	0.0
Q44A				IAmb	IAmb	19 41 11.4	
	comp=Z,46nm,1.1s						
K38A	Parkersburg	40.78	281	IAmb	IAmb	19 41 11.3	
	comp=Z,63nm,0.9s						
GOGA	Godfrey	41.02	263	P	P	19 40 50.8	-2.6
	baz=46						
Y52A	Lilburn	41.07	264	P	P	19 40 53.1	-0.7
TAM	Tamanrasset	41.48	121	P	P	19 40 57.1	-0.4
TAM				pmax	pmax		
	comp=Z,26nm,1.2s						
TAM	Tamanrasset	41.48	121	P	P	19 40 57.0	-0.4
LPSR	Galich'ya Gora	41.60	60	*e*P	P	19 40 58.0	0.0
LPSR				pmax	pmax		
	comp=Z,150nm,0.9s						
SIUC	Southern Illin	41.66	272	IAmb	IAmb	19 41 18.6	
	comp=Z,29nm,0.8s						
S44A	Carbondale	41.69	272	P	P	19 40 58.3	-0.6
S44A				IAmb	IAmb	19 41 18.8	
	comp=Z,32nm,0.8s						
WVT	Waverly	41.84	269	P	P	19 40 59.3	-0.8
	baz=49						
WVT	Waverly	41.84	269	P	P	19 40 59.5	-0.6
WVT				pmax	pmax		
	comp=Z,22nm,1.2s						
WVT	Waverly	41.84	269	P	P	19 40 59.5	-0.6
Z51A	Franklin	42.12	264	IAmb	IAmb	19 41 12.4	
	comp=Z,85nm,1.9s						
YKA	Yellowknife Ar	42.22	317	P	P	19 41 02.9	-0.1
	comp=Z,10nm,0.9s,baz=65,slow=9.1,SNR=42						
YKA				PcP	PcP	19 42 56.0	-0.6
	comp=Z,2.1nm,0.7s,baz=68,slow=4.4,SNR=5.5						
ECSD	EROS Data Cent	42.43	285	P	P	19 41 04.8	-0.1
	baz=54,SNR=17						
VSR	Storozhevoye	42.43	62	*e*P	P	19 41 04.0	-0.8
VSR				pmax	pmax		
	comp=Z,160nm,1.0s						
VORD	Divnogorie	42.63	62	*e*P	P	19 41 05.7	-0.7
VORD				pmax	pmax		
	comp=Z,140nm,0.8s						
CCM	Cathedral Cave	42.67	274	P	P	19 41 06.4	-0.5
	baz=50						
CCM	Cathedral Cave	42.67	274	P	P	19 41 06.6	-0.3
CCM				pmax	pmax		
	comp=Z,24nm,0.9s						
CCM	Cathedral Cave	42.67	274	P	P	19 41 06.6	-0.3
H05N1	Guadeloupe/Mar	42.74	223	T	T	20 26 25.8	
	SNR=12						
PBMO	Poplar Bluff	43.00	272	IAmb	IAmb	19 41 29.2	
	comp=Z,80nm,1.6s						
R40A	Maddies Statio	43.14	275	P	P	19 41 09.9	-0.8
R40A				IAmb	IAmb	19 41 29.2	
	comp=Z,54nm,1.8s						
E28A	Huff	43.18	290	IAmb	IAmb	19 41 12.4	
	comp=Z,74nm,0.9s						
LRAL	Lakeview Retre	43.42	265	P	P	19 41 11.8	-1.2
	baz=46						
LRAL	Lakeview Retre	43.42	265	IAmb	IAmb	19 41 24.9	
	comp=Z,40nm,1.4s						
PDPR	Patillas Dam,	43.43	230	P	P	19 41 13.6	+0.4
PDPR				IAmb	IAmb	19 41 17.3	
	comp=Z,24nm,0.7s						
DWPF	Disney Wildern	43.60	255	P	P	19 41 13.6	-0.9
	baz=42						
MANT	Manisa	43.62	84	P	P	19 41 14.3	-0.5
VRH	Novokhopyorsk	43.81	61	*e*P	P	19 41 16.1	+0.2
VRH				pmax	pmax		
	comp=Z,100nm,0.8s						
KIRV	Kirov	43.84	48	⇑*e*P	P	19 41 16.1	+0.1
MGMO	Mountain Grove	43.87	274	IAmb	IAmb	19 41 35.8	
	comp=Z,63nm,1.8s						
OXF	Oxford	43.88	269	P	P	19 41 15.2	-1.4
	baz=48						
MLPR	Magueyes Islan	43.96	231	P	P	19 41 16.8	-0.5
MLPR				IAmb	IAmb	19 41 30.3	
	comp=Z,47nm,1.0s						
DGMT	Dagmar	44.09	295	P	P	19 41 17.8	-0.5
	baz=56						
DGMT	Dagmar	44.09	295	P	P	19 41 18.7	+0.5
DGMT				IAmb	IAmb	19 41 31.2	
	comp=Z,50nm,1.1s						
KOWA	Kowa	44.23	139	P	P	19 41 19.0	-0.6
	baz=334,slow=11						
KOWA	Kowa	44.23	139	P	P	19 41 19.2	-0.4
KOWA				IAmb	IAmb	19 41 32.5	
	comp=Z,27nm,0.9s						
H05S1	Guadeloupe/Mar	44.36	221	T	T	20 28 22.3	
U40A	Yellville	44.75	274	P	P	19 41 22.6	-1.0
	baz=49,SNR=8.5						
U40A	Yellville	44.75	274	IAmb	IAmb	19 41 43.3	
	comp=Z,33nm,0.9s						
ANN	Anapa	45.02	71	*e*P	P	19 41 24.5	-1.2
ANN				*e*S	S	19 48 06.1	+2.9
ANN				pmax	pmax		
	comp=Z,60nm,1.1s						
WHAR	Wooly Hollow	45.11	272	IAmb	IAmb	19 41 45.2	
	comp=Z,39nm,1.3s						
W41B	Gary Mavity, V	45.16	272	P	P	19 41 25.5	-1.4
	baz=48,SNR=6.4						
SDDR	Presa de Saban	45.19	237	P	P	19 41 27.8	+0.5
SDDR				IAmb	IAmb	19 41 50.1	
	comp=Z,25nm,1.1s						
SDDR	Presa de Saban	45.19	237	*e*P	P	19 41 30.9	+3.6
KSU1	Kansas State U	45.25	279	P	P	19 41 26.0	-1.5
	baz=51						
HHAR	Hobbs	45.46	274	IAmb	IAmb	19 41 47.9	
	comp=Z,46nm,1.4s						
ELL	Elmali	45.56	85	P	P	19 41 30.0	-0.2
ELL				pmax	pmax		
	comp=Z,169nm,1.2s						
ELL	Elmali	45.56	85	P	P	19 41 29.9	-0.2
U38A	Gravette	45.63	275	IAmb	IAmb	19 41 51.0	
	comp=Z,20nm,1.1s						
BR131	Keskin Array S	45.89	79	*c i*P	P	19 41 33.3	+0.5
BRTR	Keskin Array B	45.89	79	P	P	19 41 33.6	+0.8
	comp=Z,64nm,0.8s,baz=305,slow=5.7,SNR=147						
BRTR	Keskin Array B	45.89	79	P	P	19 41 32.9	+0.1
X40A	Basin Creek Fa	45.98	272	P	P	19 41 32.2	-1.2
	baz=48,SNR=10						
X40A	Basin Creek Fa	45.98	272	IAmb	IAmb	19 41 34.0	
	comp=Z,17nm,0.7s						
W39A	Magazine	46.08	273	P	P	19 41 33.2	-1.0
	baz=48,SNR=6.3						
W39A	Magazine	46.08	273	IAmb	IAmb	19 41 53.9	
	comp=Z,47nm,1.1s						
VBMS	Vicksburg	46.12	268	P	P	19 41 36.0	+1.5
	baz=46						
INK	Inuvik	46.18	330	P	P	19 41 32.8	-1.7
	comp=Z,4.6nm,0.8s,baz=25,slow=10.0,SNR=7.6						
INK				PcP	PcP	19 43 09.9	-0.1
	comp=Z,3.3nm,0.7s,baz=24,slow=6.2,SNR=2.3						
INK	Inuvik	46.18	330	P	P	19 41 34.6	+0.1
BELG	Belogornoye	46.23	57	P	P	19 41 34.9	-0.2
	comp=Z,129nm,0.9s,baz=111,slow=1.2,SNR=24						
BELG	Belogornoye	46.23	57	*de*P	P	19 41 35.1	0.0
BELG				pmax	pmax		
	comp=Z,29nm,1.0s						
LAO	LASA Array	46.23	294	P	P	19 41 36.1	+0.7
	baz=54,SNR=8.6						
MIAR	Mount Ida	46.40	272	P	P	19 41 35.9	-0.8
	baz=48						
MIAR	Mount Ida	46.40	272	IAmb	IAmb	19 41 55.6	
	comp=Z,39nm,1.2s						
GTBY	Guantanamo Bay	46.41	242	P	P	19 41 37.0	+0.1
GTBY				IAmb	IAmb	19 41 42.1	
	comp=Z,36nm,0.9s						
RSSD	Black Hills	46.52	290	P	P	19 41 37.2	-0.6
	baz=53						
SOC	Sochi	47.07	71	*e*P	P	19 41 42.0	+0.2
SOC				*e*		19 43 30.9	
SOC				*e*PPP	PPP	19 44 14.4	
SOC				*e*S	S	19 48 34.5	+1.9
SOC				*e*SS	SS	19 51 55.2	-4.0
SOC				pmax	pmax		
	comp=Z,29nm,0.9s						
SOC				MLR	MLR		
	comp=Z,5µm,14.0s						
TOKA	Tokat	47.20	76	P	P	19 41 43.5	+0.5
CBKS	Cedar Bluff	47.31	281	P	P	19 41 41.9	-1.9
	baz=50						
CBKS	Cedar Bluff	47.31	281	IAmb	IAmb	19 42 03.0	
	comp=Z,24nm,0.8s						
EGMT	Eagleton	47.39	297	P	P	19 41 44.6	+0.2
	baz=54,SNR=14						
EGMT	Eagleton	47.39	297	IAmb	IAmb	19 41 45.9	
	comp=Z,34nm,0.9s						
TORD	Torodi Ar. Bea	47.86	133	P	P	19 41 48.4	+0.1
	comp=Z,18nm,0.9s,baz=332,slow=6.1,SNR=30						
TORD	Torodi Ar. Bea	47.86	133	P	P	19 41 48.1	-0.1
GOF	Gofitskoye	48.06	67	⇑*e*P	P	19 41 50.5	+1.0
GOF				pmax	pmax		
	comp=Z,156nm,0.9s						
EPYK	Eagle Plains	48.33	328	P	P	19 41 51.4	0.0
	baz=52,SNR=7.4						
KIV	Kislovodsk	48.53	69	*i* P	P	19 41 53.1	-0.2
	SNR=7.8						
KIV	Kislovodsk	48.53	69	*e*P	P	19 41 54.1	+0.8
KIV				pmax	pmax		
	comp=Z,90nm,1.1s						
KIV	Kislovodsk	48.53	69	P	P	19 41 53.3	0.0
KIV				IAmb	IAmb	19 42 26.5	
	comp=Z,24nm,0.9s						
KBZ	Khabaz	48.80	69	P	P	19 41 56.3	+1.2
	comp=Z,29nm,1.1s,baz=308,slow=6.8,SNR=20						
KBZ	Khabaz	48.80	69	⇓*e*P	P	19 41 56.8	+1.7
KBZ				pmax	pmax		
	comp=Z,52nm,1.2s						
CSS	Mathiatis	48.82	84	P	P	19 41 54.4	-1.1
K22A	Casper	48.86	290	P	P	19 41 55.0	-0.9
	baz=51,SNR=20						
K22A	Casper	48.86	290	IAmb	IAmb	19 41 56.6	
	comp=Z,33nm,0.8s						
RLMT	Red Lodge	48.87	294	P	P	19 41 55.8	-0.3
	baz=52,SNR=9.0						
KSCO	Kaye Shedlock’	48.90	283	P	P	19 41 56.1	-0.1
	baz=50						
KSCO	Kaye Shedlock’	48.90	283	IAmb	IAmb	19 41 56.8	
	comp=Z,23nm,0.9s						
CHVG	Ch'k'valeri	48.96	70	⇑P	P	19 41 56.3	-0.2
WALA	Waterton Lakes	48.99	300	IAmb	IAmb	19 41 57.9	
	comp=Z,25nm,0.8s						
NEY	Neytrino	48.99	69	⇓*e*P	P	19 41 59.0	+2.1
NEY				pmax	pmax		
	comp=Z,9.0nm,1.2s						
PHWY	Pilot Hill	49.09	287	IAmb	IAmb	19 41 58.7	
	comp=Z,20nm,0.8s						
ARU	Arti	49.15	47	*c i*P	P	19 41 58.3	+0.6
ARU				S	S	19 49 04.8	+3.0
ARU				pmax	pmax		
	comp=Z,173nm,1.2s						
ARU	Arti	49.15	47	P	P	19 41 58.0	+0.2
NCK	Nalchik	49.34	69	⇓*e*P	P	19 42 00.9	+1.5
NCK				pmax	pmax		
	comp=Z,23nm,1.0s						
WMOK	Wichita Mounta	49.42	276	P	P	19 41 59.9	-0.3
	baz=47						
WMOK	Wichita Mounta	49.42	276	IAmb	IAmb	19 42 25.3	
	comp=Z,44nm,1.6s						
N23A	Red Feather La	49.64	287	P	P	19 42 02.3	+0.3
	baz=50,SNR=43						
PCRV	Puerto La Cruz	49.75	224	P	P	19 42 02.3	-0.5
	comp=Z,11nm,0.5s,baz=279,slow=1.1,SNR=5.9						
SVE	Sverdlovsk	49.83	46	*e*P	P	19 42 03.3	+0.4
SVE				pmax	pmax		
	comp=Z,81nm,1.2s						
RWWY	Rawlins	49.86	289	P	P	19 42 02.4	-1.3
BOZ	Bozeman (W)	49.89	296	P	P	19 42 03.8	+0.1
	baz=52,SNR=16						
BOZ	Bozeman (W)	49.89	296	IAmb	IAmb	19 42 05.1	
	comp=Z,17nm,0.8s						
ZEI	Tsey	49.96	69	*e*P	P	19 42 04.1	-0.2
ZEI				pmax	pmax		
	comp=Z,35nm,1.2s						
BMAR	Burnt Mountain	50.01	332	P	P	19 42 05.0	+0.8
H17A	Grant Village	50.06	294	P	P	19 42 05.5	+0.4
	baz=51,SNR=10						
H17A	Grant Village	50.06	294	P	P	19 42 05.8	+0.7
ISCO	Idaho Springs	50.15	286	P	P	19 42 05.4	-0.6
	baz=49,SNR=12						
YHB	Horse Butte	50.18	294	P	P	19 42 06.0	0.0
A21K	Barrow	50.19	340	P	P	19 42 05.5	+0.1
	baz=41						
A21K	Barrow	50.19	340	IAmb	IAmb	19 42 24.9	
	comp=Z,36nm,1.1s						
MSO	Missoula	50.38	298	P	P	19 42 06.8	-0.5
	baz=52						
Q24A	Divide	50.42	285	P	P	19 42 06.4	-1.6
	baz=49						
WHTX	Lake Whitney,	50.51	273	P	P	19 42 07.9	-0.5
	baz=46						
WHTX	Lake Whitney,	50.51	273	P	P	19 42 07.4	-0.9
WHTX				IAmb	IAmb	19 42 32.4	
	comp=Z,23nm,0.8s						
TOLK	Toolik Lake Re	50.51	335	P	P	19 42 07.5	-0.5
	baz=45,SNR=6.5						
TOLK	Toolik Lake Re	50.51	335	IAmb	IAmb	19 42 37.7	
	comp=Z,49nm,1.5s						
BW06	Boulder Array	50.52	291	P	P	19 42 07.2	-1.4
	baz=50,SNR=22						
BW06	Boulder Array	50.52	291	IAmb	IAmb	19 42 08.7	
	comp=Z,15nm,0.8s						
PDAR	Pinedale Array	50.52	291	P	P	19 42 07.2	-1.3
	comp=Z,15nm,0.7s,baz=62,slow=8.0,SNR=82						
PDAR	Pinedale Array	50.52	291	P	P	19 42 06.7	-1.9
DLMT	Dillon	50.56	296	IAmb	IAmb	19 42 42.1	
	comp=Z,24nm,1.2s						
NRIK	Noril'sk	50.68	23	P	P	19 42 09.7	+0.6
	comp=Z,4.6nm,0.8s,baz=306,slow=14,SNR=5.4						
NRIK	Noril'sk	50.68	23	P	P	19 42 10.2	+1.1
NRIK				pmax	pmax		
	comp=Z,25nm,1.3s						
NRIK	Noril'sk	50.68	23	P	P	19 42 10.2	+1.1
NRIK				IAmb	IAmb	19 42 36.3	
	comp=Z,24nm,1.3s						
GROC	Groznyy	50.77	68	*e*P	P	19 42 10.1	-0.1
GROC				*e*		19 44 07.4	
GROC				pmax	pmax		
	comp=Z,44nm,1.2s						
EGAK	Eagle	50.77	328	P	P	19 42 09.9	+0.1
DLBC	Dease Lake	50.82	318	P	P	19 42 11.8	+1.3
	comp=Z,9.5nm,0.9s,baz=28,slow=7.2,SNR=8.9						
REDW	Red Top Meadow	50.87	293	IAmb	IAmb	19 42 24.6	
	comp=Z,37nm,1.4s						
TIC	Toumodi	51.05	144	*e*P	P	19 42 15.4	+2.8
AMTX	Amarillo	51.08	279	P	P	19 42 12.4	-0.3
	baz=47						
AMTX	Amarillo	51.08	279	IAmb	IAmb	19 42 33.4	
	comp=Z,40nm,0.8s						
DBIC	Dimbokro	51.08	144	P	P	19 42 12.1	-0.7
	comp=Z,11nm,0.6s,baz=324,slow=7.4,SNR=18						
DBIC	Dimbokro	51.08	144	P	P	19 42 12.4	-0.4
DBIC				pmax	pmax		
	comp=Z,25nm,0.9s						
DBIC	Dimbokro	51.08	144	P	P	19 42 12.4	-0.4
DBIC				IAmb	IAmb	19 42 27.8	
	comp=Z,25nm,0.9s						
NEW	Newport	51.16	301	P	P	19 42 13.3	+0.2
	comp=Z,4.0nm,0.7s,baz=33,slow=7.5,SNR=6.3						
NEW	Newport	51.16	301	P	P	19 42 12.1	-1.1
	baz=51						
NEW	Newport	51.16	301	P	P	19 42 13.1	0.0
NEW				IAmb	IAmb	19 42 50.1	
	comp=Z,36nm,1.8s						
T25A	Trinidad	51.19	283	P	P	19 42 13.9	+0.1
	baz=48,SNR=8.0						
AHID	Auburn Hatcher	51.39	292	P	P	19 42 14.5	-0.6
AHID				IAmb	IAmb	19 42 31.4	
	comp=Z,34nm,1.4s						
ABTX	Abilene, Hawle	51.40	275	P	P	19 42 13.3	-1.8
	baz=46						
MMAI	Mount Meron Ar	51.40	84	P	P	19 42 15.8	+0.6
	comp=Z,33nm,0.8s,baz=358,slow=5.9,SNR=16						
KIC	Kosan Boka	51.41	144	*e*P	P	19 42 16.5	+1.2
	comp=Z,5.9nm,0.5s						
LIC	Lamto	51.43	144	*e*P	P	19 42 18.7	+3.3
	comp=Z,20nm,0.5s						
SDCO	Great Sand Dun	51.44	284	P	P	19 42 15.2	-0.4
	baz=48,SNR=6.7						
O20A	White River Ci	51.46	288	P	P	19 42 16.0	+0.3
	baz=49,SNR=12						
O20A	White River Ci	51.46	288	IAmb	IAmb	19 42 17.7	
	comp=Z,21nm,0.8s						
PRP	Porcupine Dome	51.61	331	IAmb	IAmb	19 42 39.4	
	comp=Z,48nm,2.0s						
COLD	Coldfoot	51.70	334	P	P	19 42 17.5	+0.6
	baz=43,SNR=6.3						
COLD	Coldfoot	51.70	334	P	P	19 42 17.8	+0.9
BCAR	Beaver Creek A	52.14	327	P	P	19 42 20.6	+0.4
GNI	Garni	52.14	71	P	P	19 42 21.7	+1.0
	comp=Z,31nm,1.1s,baz=210,slow=0.2,SNR=11						
GNI	Garni	52.14	71	P	P	19 42 22.2	+1.5
GNI	Garni	52.14	71	⇑*e*P	P	19 42 21.9	+1.1
GNI				pmax	pmax		
	comp=Z,97nm,1.7s						
GNI	Garni	52.14	71	P	P	19 42 21.9	+1.1
S22A	4UR Ranch, Cre	52.22	285	P	P	19 42 21.2	-0.3
	baz=48						
B08A	Colville Reser	52.24	303	P	P	19 42 21.0	-0.3
B08A				IAmb	IAmb	19 42 22.0	
	comp=Z,20nm,0.8s						
SKAG	Skagway	52.26	321	IAmb	IAmb	19 42 22.9	
	comp=Z,16nm,0.8s						
MSTX	Muleshoe	52.36	279	P	P	19 42 22.2	-0.1
	baz=46,SNR=5.8						
MSTX	Muleshoe	52.36	279	IAmb	IAmb	19 43 08.8	
	comp=Z,29nm,1.0s						
GEVA	Gevas	52.38	74	IAmb	IAmb	19 42 36.2	
	comp=Z,35nm,0.9s						
POKR	Poker Plat Res	52.46	331	P	P	19 42 23.4	+0.9
	baz=44						
POKR	Poker Plat Res	52.46	331	IAmb	IAmb	19 42 25.2	
	comp=Z,57nm,1.5s						
IL31		52.54	331	IAmb	IAmb	19 42 25.4	
	comp=Z,50nm,1.7s						
ILAR	Eielson Array	52.54	331	P	P	19 42 23.9	+0.7
	comp=Z,2.9nm,0.7s,baz=42,slow=5.2,SNR=20						
ILAR				PcP	PcP	19 43 33.0	-0.2
	comp=Z,4.0nm,0.7s,baz=356,slow=3.0,SNR=7.9						
ILAR				PKPPKP	P'P'df	20 12 57.1	-3.5
	comp=Z,0.5nm,0.8s,baz=213,slow=2.8,SNR=3.1						
ILAR	Eielson Array	52.54	331	P	P	19 42 23.8	+0.6
AKTO	Aktyubinsk	52.61	54	P	P	19 42 24.1	+0.3
	comp=Z,53nm,0.8s,baz=313,slow=7.1,SNR=102						
F10A	Beach Ranch, E	52.68	299	P	P	19 42 24.3	-0.2
HLID	Hailey	52.72	295	P	P	19 42 25.7	+0.8
	baz=49,SNR=13						
COLA	College	52.76	331	⇑*e*P	P	19 42 26.0	+1.3
COLA				pmax	pmax		
	comp=Z,8.0nm,1.1s						
PV15	Paradox Valley	52.79	287	IAmb	IAmb	19 42 27.0	
	comp=Z,19nm,0.8s						

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MDM    Murphy Dome       52.80 331  P     P     19 42 25.4 +0.3
PV07   Paradox Valley    52.82 287  P     P     19 42 26.3 +0.5
PV07                                IAmb  IAmb  19 42 27.4
       comp=Z,29nm,1.1s
HDA    Harding Lake      52.82 330  P     P     19 42 25.8 +0.6
       baz=44,SNR=7.7
HDA    Harding Lake      52.82 330  IAmb  IAmb  19 42 37.9
       comp=Z,14nm,0.7s
CCB    Clear Creek Bu    52.91 331  P     P     19 42 26.0 +0.2
PV01   Paradox Valley    52.98 286  P     P     19 42 27.2 +0.2
I23K   Minto, Yukon-K    52.99 332  P     P     19 42 27.7 +1.3
       baz=43,SNR=8.7
JCT    Junction City     52.99 273  P     P     19 42 25.5 -1.5
       baz=45
JCT    Junction City     52.99 273  IAmb  IAmb  19 42 45.8
       comp=Z,28nm,1.2s
PV04   Paradox Valley    53.00 287  P     P     19 42 27.5 +0.4
PV04                                IAmb  IAmb  19 42 28.8
       comp=Z,34nm,0.8s
PV23   Carpenter Ridg    53.02 287  IAmb  IAmb  19 43 07.8
       comp=Z,22nm,0.9s
PV02   Paradox Valley    53.03 287  IAmb  IAmb  19 42 29.5
       comp=Z,25nm,0.8s
PV11   David Mesa, Pa    53.05 287  P     P     19 42 27.6 +0.1
PV03   Paradox Valley    53.06 287  IAmb  IAmb  19 42 46.7
       comp=Z,50nm,1.0s
PV16   Nyswonger Mesa    53.06 287  P     P     19 42 28.0 +0.4
PV20   West Nyswonger    53.07 287  IAmb  IAmb  19 42 29.1
       comp=Z,32nm,0.8s
PV14   Lion Creek, Pa    53.08 287  IAmb  IAmb  19 42 29.7
       comp=Z,29nm,0.9s
PV19   Morning Glory     53.10 287  P     P     19 42 28.3 +0.4
PV19                                IAmb  IAmb  19 42 29.3
       comp=Z,35nm,0.7s
WRH    Wood River Hil    53.12 331  P     P     19 42 28.3 +0.9
NEA2   Nenana            53.32 331  P     P     19 42 28.4 -0.5
       baz=43,SNR=6.4
PAX    Paxson            53.40 328  P     P     19 42 30.5 +0.9
PAX                                 pmax  pmax
       comp=Z,20nm,1.1s
PAX    Paxson            53.40 328  P     P     19 42 30.5 +0.9
PAX                                 IAmb  IAmb  19 42 51.1
       comp=Z,20nm,1.1s
MLY    Manley            53.47 332  P     P     19 42 30.3 +0.3
       baz=42,SNR=8.1
EIL    Elat              53.48  88  P     P     19 42 30.6 +0.1
       comp=Z,23nm,1.0s,baz=322,slow=5.8,SNR=13
BARN   Barnard Glacie    53.49 325  IAmb  IAmb  19 42 33.0
       comp=Z,35nm,1.1s
MVCO   Mesa Verde        53.56 286  P     P     19 42 32.0 +0.6
       baz=47,SNR=13
MVCO   Mesa Verde        53.56 286  P     P     19 42 31.9 +0.6
MVCO                                IAmb  IAmb  19 42 50.5
       comp=Z,28nm,1.1s
IMAR   Indian Mountai    53.58 334  P     P     19 42 31.3 +0.6
LTY    Liberty           53.64 302  IAmb  IAmb  19 42 31.9
       comp=Z,21nm,0.8s
BGU    Big Grassy Mou    53.68 292  P     P     19 42 31.8 -0.3
ANMO   Albuquerque       53.90 282  P     P     19 42 34.6 +0.8
       baz=46
ANMO   Albuquerque       53.90 282⇑eP    P     19 42 35.0 +1.2
ANMO                                pmax  pmax
       comp=Z,10.0nm,1.0s
ANMO   Albuquerque       53.90 282  P     P     19 42 34.1 +0.3
G08A   Pilot Rock        54.04 299  IAmb  IAmb  19 42 58.1
       comp=Z,29nm,1.7s
DUG    Dugway, Tooele    54.05 291  P     P     19 42 35.0 +0.3
       baz=48,SNR=15
DUG    Dugway, Tooele    54.05 291  IAmb  IAmb  19 42 36.1
       comp=Z,17nm,0.7s
N25K   Chitina, Valde    54.10 327  P     P     19 42 33.9 -0.8
       baz=44
RDOG   Red Dog Mine      54.12 339  P     P     19 42 35.5 +0.8
RDOG                                IAmb  IAmb  19 42 56.8
       comp=Z,19nm,1.0s
RND    Reindeer          54.13 330  P     P     19 42 35.3 +0.4
RND                                 pmax  pmax
       comp=Z,51nm,1.7s
RND    Reindeer          54.13 330  P     P     19 42 35.3 +0.4
RND                                 IAmb  IAmb  19 43 07.5
       comp=Z,51nm,1.7s
M24K   Tolsona, Glenn    54.25 328  P     P     19 42 35.7 -0.1
       baz=43
ABKAR  Akbulak array     54.32  54  P     P     19 42 36.1 -0.3
ABKAR  Akbulak array     54.32  54  IAmb  IAmb  19 42 38.0
       comp=Z,52nm,1.1s
KLU    Klutina           54.62 327  IAmb  IAmb  19 43 20.8
       comp=Z,18nm,1.0s
KTH    Kantishna Hill    54.64 331  IAmb  IAmb  19 42 59.6
       comp=Z,31nm,1.1s
D03D   Eldon             54.70 304  P     P     19 42 38.4 -0.7
       baz=48
D04E   Lakebay           54.77 303  P     P     19 42 38.7 -1.0
       baz=48
MSU    Marysvale         54.82 289  P     P     19 42 40.7 +0.2
MSU    Marysvale         54.82 289  P     P     19 42 40.7 +0.2
MVU    Marysvale         54.84 289  P     P     19 42 40.9 +0.2
ELK    Elko              55.05 293  P     P     19 42 42.2 +0.1
ELK                                 pmax  pmax
       comp=Z,18nm,1.2s
ELK    Elko              55.05 293  P     P     19 42 42.2 +0.1
E04D   Cinebar           55.08 303  P     P     19 42 40.0 -2.0
       baz=48
SML    Sawmill           55.16 329  IAmb  IAmb  19 42 57.7
       comp=Z,26nm,0.9s
TIXI   Tiksi             55.28   7⇓eP    P     19 42 44.6 +1.6
TIXI                                pmax  pmax
       comp=Z,73nm,0.8s
TIXI   Tiksi             55.28   7  P     P     19 42 44.0 +1.0
TIXI                                IAmb  IAmb  19 43 05.5
       comp=Z,23nm,0.9s
GHO    Glory Hole Cre    55.38 329  IAmb  IAmb  19 42 56.4
       comp=Z,25nm,1.0s
MNTX   Cornudas Mount    55.51 278  P     P     19 42 44.8 -0.5
       baz=45
MNTX   Cornudas Mount    55.51 278  P     P     19 42 44.4 -0.9
PPLA   Purkeypile        55.51 331  IAmb  IAmb  19 43 04.6
       comp=Z,24nm,1.2s
PMR    Palmer            55.58 329  IAmb  IAmb  19 43 07.2
       comp=Z,16nm,0.9s
SPR3   Spring Creek 3    55.72 291  P     P     19 42 48.1 +1.1
SPR3                                IAmb  IAmb  19 42 49.0
       comp=Z,34nm,1.6s
W18A   Petrified Fore    55.72 284  P     P     19 42 47.0 +0.1
       baz=46,SNR=5.8
W18A   Petrified Fore    55.72 284  IAmb  IAmb  19 43 06.3
       comp=Z,23nm,0.8s
PSUT   Pine Spring       55.76 290  P     P     19 42 47.1 -0.1
WVOR   Wild Horse Val    55.78 297  IAmb  IAmb  19 42 48.9
       comp=Z,23nm,0.8s
I05D   Terrebonne, OR    55.94 300  P     P     19 42 47.5 -0.8
       baz=47
PINE   Pine Mountain     56.10 299  IAmb  IAmb  19 42 51.4
       comp=Z,23nm,0.8s
RC01   Rabbit Creek A    56.15 329  P     P     19 42 49.6 +0.2
       baz=41,SNR=5.6
CCUT   Cedar City        56.16 289  P     P     19 42 50.3 +0.2
TXAR   Lajitas Array     56.16 275  P     P     19 42 49.5 -0.6
       comp=Z,3.2nm,0.7s,baz=57,slow=8.0,SNR=28
TXAR   Lajitas Array     56.16 275  P     P     19 42 49.1 -0.9
TX31   Lajitas Ar. Si    56.16 275  IAmb  IAmb  19 43 54.2
       comp=Z,23nm,1.1s
U15A   North Rim         56.31 287  IAmb  IAmb  19 42 52.0
       comp=Z,13nm,0.8s
121A   Cookes Peak, D    56.37 281  P     P     19 42 51.8 +0.1
       baz=45,SNR=5.6
WUAZ   Wupatki           56.41 286  P     P     19 42 51.8  0.0
       baz=46,SNR=8.4
WUAZ   Wupatki           56.41 286  IAmb  IAmb  19 42 53.5
       comp=Z,16nm,1.0s
BRVK   Borovoye          56.50  45⇓eP    P     19 42 53.0 +1.0
BRVK                                pmax  pmax
       comp=Z,92nm,1.7s
BRVK   Borovoye          56.50  45  P     P     19 42 52.4 +0.4
J05D   Fort Rock, OR     56.60 299  P     P     19 42 53.8 +0.7
       baz=47,SNR=22
K05A   Summer Lake       56.80 298  IAmb  IAmb  19 42 56.3
       comp=Z,38nm,1.0s
I04A   Tendick Farm,     56.87 300  P     P     19 42 54.8 -0.1
       baz=47
R11A   Troy Canyon, C    56.88 291  P     P     19 42 55.0 -0.2
       baz=46,SNR=8.1
MOD    Modoc Plateau     57.05 297  IAmb  IAmb  19 42 57.5
       comp=Z,16nm,0.8s
J04D   Umpqua Nationa    57.09 299  P     P     19 42 56.3 -0.4
       baz=46,SNR=9.2
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X16A   Lo Mia Camp, P    57.21 285  IAmb  IAmb  19 43 00.3
       comp=Z,23nm,0.8s
PRN    Pahroc Range      57.22 290  IAmb  IAmb  19 42 59.2
       comp=Z,17nm,1.0s
TNA    Tin City          57.30 340  P     P     19 42 58.8 +1.4
       baz=30,SNR=6.9
TNA    Tin City          57.30 340  IAmb  IAmb  19 43 14.1
       comp=Z,22nm,1.1s
L04D   Klamath Falls     57.91 299  P     P     19 43 00.5 -1.8
       baz=46
M04C   Macdoel           57.96 298  P     P     19 43 02.3 -0.4
       baz=46,SNR=12
TPH    Tonopah           57.99 292  P     P     19 43 03.2 +0.1
TPH                                 pmax  pmax
       comp=Z,90nm,0.8s
TPH    Tonopah           57.99 292  P     P     19 43 03.2 +0.1
PTGA   Pitinga           58.02 213  P     P     19 43 02.2 -1.0
       comp=Z,9.4nm,0.5s,baz=24,slow=9.8,SNR=12
PTGA   Pitinga           58.02 213 eP     P     19 43 03.1 -0.1
PTGA   Pitinga           58.02 213  P     P     19 43 02.6 -0.5
PAHR   Pah Rah Range     58.06 295  IAmb  IAmb  19 43 14.1
       comp=Z,33nm,1.0s
TPNV   Topopah Spring    58.23 290  P     P     19 43 03.8 -0.9
       baz=45,SNR=9.6
TPNV   Topopah Spring    58.23 290  IAmb  IAmb  19 43 14.6
       comp=Z,12nm,0.8s
NV11   Mina Array Sit    58.27 293  IAmb  IAmb  19 43 16.5
       comp=Z,19nm,1.0s
K02D   Willamette Mer    58.30 300  P     P     19 43 04.4 -0.6
       baz=46,SNR=7.5
TUC    Tucson            58.31 283  P     P     19 43 05.2  0.0
       baz=44
TUC    Tucson            58.31 283  P     P     19 43 04.6 -0.6
TUC                                 pmax  pmax
       comp=Z,28nm,1.5s
TUC    Tucson            58.31 283  P     P     19 43 04.6 -0.6
TUC                                 IAmb  IAmb  19 43 24.1
       comp=Z,28nm,1.5s
RYN    Ryan              58.34 293  IAmb  IAmb  19 43 15.4
       comp=Z,20nm,0.9s
NVAR   Mina Array Bea    58.35 293  P     P     19 43 05.3 -0.3
       comp=Z,2.9nm,0.6s,baz=58,slow=6.7,SNR=25
YBH    Yreka Blue Hor    58.46 299  P     P     19 43 04.8 -1.3
       comp=Z,3.4nm,0.7s,baz=61,slow=4.9,SNR=9.8
YERR   Yerington         58.49 294  IAmb  IAmb  19 43 20.9
       comp=Z,20nm,1.3s
BEKR   Beckworth         58.49 296  P     P     19 43 06.8 +0.4
VCNR   Virginia City     58.50 295  IAmb  IAmb  19 43 16.9
       comp=Z,16nm,0.7s
LHV    Little Huntoon    58.59 293  IAmb  IAmb  19 43 22.8
       comp=Z,20nm,1.0s
L02E   Cave Junction     58.64 299  P     P     19 43 06.3 -1.0
       baz=46,SNR=5.3
M02C   Callahan          58.78 298  P     P     19 43 06.7 -1.6
       baz=45,SNR=5.9
ROSC   El Rosal          58.82 231  P     P     19 43 08.9 -0.3
       comp=Z,37nm,0.6s,baz=36,slow=21,SNR=4.5
ROSC   El Rosal          58.82 231  P     P     19 43 09.0 -0.3
GRAC   Grapevine Rang    58.83 291  P     P     19 43 09.1 +0.3
       baz=45,SNR=5.7
MTO3   Montecristo       58.85 252  IAmb  IAmb  19 43 56.8
       comp=Z,26nm,0.9s
PDMCI  Parker Dam,Lak    58.88 287  P     P     19 43 09.7 +0.7
       baz=45,SNR=11
FURC   Furnace Creek,    58.92 290  P     P     19 43 09.0 -0.2
       baz=45
O03E   Paynes Creek      58.98 297  P     P     19 43 09.4 -0.3
       baz=45,SNR=5.5
N02D   Trinity Center    58.99 298  P     P     19 43 08.5 -1.4
       baz=45,SNR=5.7
ORV    Oroville          59.34 296  P     P     19 43 11.8 -0.4
ORV                                 pmax  pmax
       comp=Z,13nm,1.3s
ORV    Oroville          59.34 296  P     P     19 43 11.8 -0.4
GMRC   Granite Mounta    59.42 288  P     P     19 43 13.0  0.0
       baz=45,SNR=5.9
IRM    Iron Mountain     59.56 287  P     P     19 43 14.0 +0.2
       baz=44,SNR=9.0
MPMC   Manual Prospec    59.56 291  P     P     19 43 14.0  0.0
       baz=45,SNR=18
O02D   Mt. Diablo Mer    59.60 297  P     P     19 43 12.3 -1.7
       baz=45
CWC    Cottonwood Cre    59.63 291  P     P     19 43 14.6 +0.1
       baz=45
GSC    Goldstone, Bar    59.71 289  P     P     19 43 14.8  0.0
       baz=44,SNR=7.9
GSC    Goldstone, Bar    59.71 289  IAmb  IAmb  19 43 16.8
       comp=Z,18nm,1.1s
BRZS   Berezniki         59.75  46 eP     P     19 43 13.9 -1.0
       comp=Z,15nm,1.1s,baz=46
BRZS   Berezniki         59.75  46 eP     P     19 43 13.8 -1.1
BRZS                                pmax  pmax
       comp=Z,15nm,1.1s
214A   Organ Pipe Nat    59.77 284  P     P     19 43 15.2  0.0
       baz=44,SNR=7.6
214A   Organ Pipe Nat    59.77 284  IAmb  IAmb  19 43 16.8
       comp=Z,14nm,0.9s
HEC    Hector,Ludlow     59.77 289  P     P     19 43 15.6 +0.3
       baz=44,SNR=12
CMB    Columbia Colle    59.80 294  P     P     19 43 15.2 -0.2
CMB                                 pmax  pmax
       comp=Z,9.0nm,1.1s
CMB    Columbia Colle    59.80 294  P     P     19 43 15.2 -0.2
LRMC   Laurel Mtn Rad    60.09 290  P     P     19 43 17.8 +0.2
       baz=44,SNR=13
BC3    Big Chuckawall    60.10 287  P     P     19 43 18.4 +0.8
       baz=44,SNR=22
GLA    Glamis            60.17 286  P     P     19 43 18.0  0.0
       baz=44
BELC   Belle Mtn. Jos    60.17 288  P     P     19 43 18.7 +0.6
       baz=44,SNR=23
ISA    Isabella, Lake    60.41 291  P     P     19 43 20.6 +1.0
       baz=44,SNR=12
ISA    Isabella, Lake    60.41 291  IAmb  IAmb  19 43 21.6
       comp=Z,14nm,0.8s
VES    Vestal, Richgr    60.62 291  P     P     19 43 20.4 -0.6
       baz=44
EDW2   Edwards Air Fo    60.69 290  P     P     19 43 22.8 +1.3
       baz=44,SNR=16
PFO    Pinyon Flats O    60.72 288  P     P     19 43 22.9 +1.1
       baz=44,SNR=10
PFO    Pinyon Flats O    60.72 288⇑eP    P     19 43 22.8 +1.0
PFO                                 pmax  pmax
       comp=Z,25nm,1.0s
PFO    Pinyon Flats O    60.72 288  P     P     19 43 22.3 +0.4
PFO                                 IAmb  IAmb  19 43 32.5
       comp=Z,17nm,0.9s
TPFO   Pinon Flats       60.72 288  P     P     19 43 22.4 +0.5
       baz=44,SNR=11
SWSC   Sam W. Stewart    60.81 287  P     P     19 43 22.8 +0.4
       baz=44
MIB    Mutribah          60.86  78 eP           19 43 21.9
RST    Umm Al-Ruwaisa    60.88  79 eP           19 43 22.8
BFSC   Mount Baldy Ra    60.96 289  P     P     19 43 24.4 +0.9
       baz=44
MURC   Murrieta          61.15 288  P     P     19 43 24.7  0.0
       baz=44
IKP    In-Ko-Pah, Jac    61.20 287  P     P     19 43 25.9 +0.8
       baz=44,SNR=12
MONP2  Monument Peak     61.21 287  P     P     19 43 26.3 +1.0
       baz=44,SNR=5.8
GEYT   Alibeck           61.21  64  P     P     19 43 25.7 +0.7
       comp=Z,5.9nm,0.7s,baz=302,slow=8.4,SNR=12
GEYT                                PP    PP    19 45 38.5 -1.0
       comp=Z,5.8nm,1.0s,baz=293,slow=15,SNR=3.8
GYA0B  ALIBECK ARRAY     61.21  64  IAmb  IAmb  19 43 38.3
       comp=Z,41nm,1.3s
UMR    Umm Al-Rimmam     61.27  78 eP           19 43 25.2
OSI    Osito Audit: C    61.30 290  P     P     19 43 26.3 +0.6
       baz=44
BAR    Barrett           61.51 287  IAmb  IAmb  19 43 51.9
       comp=Z,34nm,1.1s
ZALV   Zalesovo Beam     61.62  37  P     P     19 43 28.2 +0.7
       comp=Z,7.3nm,0.6s,baz=315,slow=8.0,SNR=16
RDF    Al-Radifah        61.62  79 eP           19 43 27.4
PKM    Mcpherson Peak    61.72 291  P     P     19 43 28.6 -0.2
       baz=44
KURK   Kurchatov         61.73  42⇑eP    P     19 43 28.6 +0.3
KURK                                pmax  pmax
       comp=Z,39nm,1.3s
KURK   Kurchatov         61.73  42  P     P     19 43 27.9 -0.3
KURK                                IAmb  IAmb  19 43 29.7
       comp=Z,30nm,1.0s
CIS    Catalina Islan    62.00 289  P     P     19 43 30.8 +0.4
       baz=43
SCI2   San Clemente I    62.38 289  P     P     19 43 31.7 -1.2
       baz=43
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SEM    Semipalatinsk     62.63  42 eP     P     19 43 33.4 -1.3
       comp=Z,11nm,1.1s,baz=42
SEM    Semipalatinsk     62.63  42 eP     P     19 43 33.3 -1.3
SEM                                 pmax  pmax
       comp=Z,11nm,1.1s
KK31   Karatay Array     63.85  53  IAmb  IAmb  19 43 54.8
       comp=Z,33nm,1.4s
KKAR   Karatay Array     63.85  53  P     P     19 43 42.8 +0.2
KKAR   Karatay Array     63.85  53  P     P     19 43 42.8 +0.2
KKAR   Karatay Array     63.85  53  IAmb  IAmb  19 43 54.8
       comp=Z,33nm,1.4s
BTLS   Baital            64.06  49 eP     P     19 43 43.0 -0.9
       baz=49
BTLS   Baital            64.06  49 eP     P     19 43 42.9 -0.9
IUG    Iuzhnay           64.33  54 eP     P     19 43 44.9 -1.0
       baz=54
IUG    Iuzhnay           64.33  54 eP     P     19 43 44.8 -1.0
RAYN   Ar Rayn           64.38  84  P     P     19 43 46.1 -0.3
RAYN   Ar Rayn           64.38  84  P     P     19 43 46.0 -0.3
RAYN                                pmax  pmax
       comp=Z,12nm,0.8s
RAYN   Ar Rayn           64.38  84  P     P     19 43 46.0 -0.3
RAYN                                IAmb  IAmb  19 43 56.9
       comp=Z,12nm,0.8s
DZA    Taraz             64.41  52 eP     P     19 43 45.8 -0.4
       baz=52
DZA    Taraz             64.41  52 eP     P     19 43 45.8 -0.4
SEY    Seymchan          64.69 358  P     P     19 43 48.5 +0.9
       comp=Z,3.1nm,0.9s,baz=30,slow=7.7,SNR=7.9
YAK    Yakutsk           64.77   9  P     P     19 43 48.1 -0.1
       comp=Z,5.7nm,0.4s,baz=360,slow=0.7,SNR=1.7
YAK    Yakutsk           64.77   9⇓eP    P     19 43 48.8 +0.6
YAK                                 pmax  pmax
       comp=Z,28nm,1.7s
SGDS   Sogindy           65.54  50 eP     P     19 43 52.6 -1.1
       baz=50
SGDS   Sogindy           65.54  50 eP     P     19 43 52.6 -1.1
EKS2   Erkin-Say         65.75  51  P     P     19 43 56.5 +1.4
       SNR=17
CHMS   Chumysh           65.95  50  P     P     19 43 57.1 +0.9
       SNR=8.4
KUU    Kurty             65.99  49 eP     P     19 43 55.5 -1.0
       comp=Z,23nm,1.4s,baz=49
KUU    Kurty             65.99  49 eP     P     19 43 55.5 -1.0
KUU                                 pmax  pmax
       comp=Z,23nm,1.4s
DGZ    Jazzator, Alta    66.00  38⇑eP    P     19 43 58.0 +1.4
DGZ                                 pmax  pmax
       comp=Z,27nm,0.9s
TDK    Taldyqorghan      66.06  47 eP     P     19 43 56.2 -0.8
       comp=Z,11nm,0.8s,baz=47
TDK    Taldyqorghan      66.06  47 eP     P     19 43 56.1 -0.8
TDK                                 pmax  pmax
       comp=Z,11nm,0.8s
HRA    Herat             66.08  64  IAmb  IAmb  19 44 09.9
       comp=Z,33nm,1.9s
AAK    Ala-Archa         66.11  51  P     P     19 43 58.9 +1.5
       SNR=6.2
AAK    Ala-Archa         66.11  51 i P    P     19 43 58.9 +1.5
       SNR=9.7
AAK    Ala-Archa         66.11  51⇓eP    P     19 43 58.7 +1.3
AAK                                 pmax  pmax
       comp=Z,80nm,1.7s
AAK    Ala-Archa         66.11  51  P     P     19 43 58.2 +0.7
AML    Almayashu         66.12  51  P     P     19 43 58.5 +0.7
       SNR=9.4
MK31   Makanchi Array    66.31  43ceP     P     19 43 58.4 -0.1
MKAR   Makanchi Array    66.31  43  P     P     19 43 58.4 -0.1
       comp=Z,24nm,0.7s,baz=330,slow=5.8,SNR=137
CHKK   Chushkaly         66.32  48 eP     P     19 43 58.6 -0.1
       baz=48
CHKK   Chushkaly         66.32  48 eP     P     19 43 58.5 -0.1
TKM2   Tokmak 2          66.40  50  P     P     19 44 00.3 +0.9
       SNR=7.9
UCH    Uchtor            66.43  51  P     P     19 44 01.6 +1.8
       SNR=14
AAA    Alma-Ata          66.79  49 eP     P     19 44 01.2 -0.5
       comp=Z,29nm,1.0s,baz=49
AAA    Alma-Ata          66.79  49 eP     P     19 44 01.1 -0.5
AAA                                 pmax  pmax
       comp=Z,29nm,1.0s
ZSN    Zaisan            66.83  41 eP     P     19 44 01.0 -0.9
       comp=Z,6.7nm,0.8s,baz=41
ZSN    Zaisan            66.83  41 eP     P     19 44 00.9 -0.9
ZSN                                 pmax  pmax
       comp=Z,7.0nm,0.8s
MDOK   Medeo             66.88  49 eP     P     19 44 02.2 -0.2
       baz=49
MDOK   Medeo             66.88  49 eP     P     19 44 02.2 -0.2
TNSS   Tian-Shan         66.94  49 eP     P     19 44 02.4 -0.7
       baz=49
TNSS   Tian-Shan         66.94  49 eP     P     19 44 02.3 -0.7
KPKS   Kokpek            67.39  47 eP     P     19 44 05.1 -0.4
       comp=Z,20nm,1.1s,baz=47
KPKS   Kokpek            67.39  47 eP     P     19 44 05.1 -0.4
KPKS                                pmax  pmax
       comp=Z,20nm,1.1s
SATY   Saty              67.58  48 eP     P     19 44 06.2 -0.6
       comp=Z,10nm,1.0s,baz=48
SATY   Saty              67.58  48 eP     P     19 44 06.2 -0.6
SATY                                pmax  pmax
       comp=Z,10.0nm,1.0s
UZB    Uzynbulak         67.79  47 eP     P     19 44 08.0 -0.1
       comp=Z,9.2nm,1.0s,baz=47
UZB    Uzynbulak         67.79  47 eP     P     19 44 08.0 -0.1
UZB                                 pmax  pmax
       comp=Z,9.0nm,1.0s
SHLS   Shalkode          67.98  47 eP     P     19 44 10.5 +1.2
       comp=Z,13nm,0.7s,baz=47
SHLS   Shalkode          67.98  47 eP     P     19 44 10.4 +1.2
SHME   Shamm             68.85  75  P     P     19 44 14.0 -0.8
MOY    Mondy             68.89  29 eP     P     19 44 15.9 +1.1
MOY                                 pmax  pmax
       comp=Z,37nm,2.6s
BANOM  Banah             69.04  75 i P    P     19 44 15.1 -0.9
       SNR=9.7
BANOM  Banah             69.04  75  P     P     19 44 15.5 -0.5
       SNR=6.7
KSH    Kashi             69.24  52  P     P     19 44 19.5 +2.3
KSH                                 pmax  pmax
       comp=Z,69nm,1.2s
KSH                                 pmax  pmax
       comp=Z,11µm,14.3s
IRK    Irkutsk           69.31  27 eP     P     19 44 17.0 -0.3
IRK                                 pmax  pmax
       comp=Z,50nm,1.7s
BDFB   Brasilia          69.36 196  P     P     19 44 19.3 +1.3
       comp=Z,2.9nm,0.5s,baz=329,slow=4.5,SNR=3.8
MASF   Masafi            69.37  75  P     P     19 44 17.4 -0.7
       SNR=6.3
MSFE   Esma-Masafi       69.38  75  P     P     19 44 17.4 -0.7
ASUD   Al Ashush, Dub    69.44  76 i P    P     19 44 18.3 -0.2
       SNR=6.5
FAQ    Al Faqa, Dubai    69.51  76  P     P     19 44 17.5 -1.4
FAQ    Al Faqa, Dubai    69.51  76  P     P     19 44 17.9 -1.0
KBL    Kabul             69.61  60  P     P     19 44 19.4 -0.3
KBL                                 pmax  pmax
       comp=Z,17nm,1.3s
KBL    Kabul             69.61  60  P     P     19 44 19.4 -0.3
KBL                                 IAmb  IAmb  19 44 31.1
       comp=Z,17nm,1.2s
KBL    Kabul             69.61  60  P     P     19 44 19.0 -0.7
       SNR=6.8
TLY    Talaya            69.64  27  P     P     19 44 19.8 +0.5
       comp=Z,1.8nm,0.7s,baz=330,slow=7.7,SNR=6.2
TLY    Talaya            69.64  27⇑eP    P     19 44 19.7 +0.3
TLY                                 pmax  pmax
       comp=Z,4.0nm,1.1s
UOSS   Minazif           69.72  75 i P    P     19 44 18.9 -1.3
       SNR=12
UOSS   Minazif           69.72  75  P     P     19 44 19.1 -1.1
UOSS                                IAmb  IAmb  19 44 30.4
       comp=Z,28nm,0.9s
HATD   Hatta, Dubai      69.77  75 i P    P     19 44 19.4 -1.1
       SNR=9.5
HATD   Hatta, Dubai      69.77  75  P     P     19 44 19.9 -0.6
       SNR=7.6
ASHO   Ashiyiah          69.83  76 i P    P     19 44 19.6 -1.3
       SNR=12
ASHO   Ashiyiah          69.83  76  P     P     19 44 19.8 -1.2
       SNR=8.7
ALNE   Al Ain            70.13  76  P     P     19 44 22.1 -0.6
ALNE   Al Ain            70.13  76  P     P     19 44 22.3 -0.4
       SNR=8.3
SOHO   SOHO              70.53  76 i P    P     19 44 23.5 -1.7
       SNR=6.5
```

ZAK	Zakamensk	70.70	28	eP	P	19 44 24.5	-1.4
WMQ	Urumqi	70.94	42	eP	P	19 44 29.3	+1.8
WMQ				sP	pwP	19 44 38.5	+1.7
WMQ				PcP	PcP	19 44 49.1	+1.2
WMQ				pmax	pmax		
	comp=Z,29nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,570nm,9.5s						
ARQ	Araqi	71.13	76	P	P	19 44 27.8	-1.0
HOQ	Hoqain	71.41	75	P	P	19 44 28.7	-1.8
WSAR	Wadi Sarin	72.45	75	P	P	19 44 35.3	-1.5
	comp=Z,4.1nm,0.8s,baz=237,slow=3.1,SNR=3.6						
NIL	Nilore	72.50	57	P	P	19 44 36.9	0.0
NIL				pmax	pmax		
	comp=Z,29nm,1.2s						
NIL	Nilore	72.50	57	P	P	19 44 36.9	0.0
NIL				IAmb	IAmb	19 44 48.1	
	comp=Z,29nm,1.1s						
ZEA	Zeya	72.61	13	eP	P	19 44 42.5	+5.3
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
MHTO	MHTO	73.78	77	P	P	19 44 43.5	-1.1
	SNR=8.4						
LODK	Lodwar	73.88	106	P	P	19 44 46.4	+1.0
	SNR=16						
SONM	Songino Array	73.89	28	P	P	19 44 45.7	+0.7
	comp=Z,9.6nm,1.0s,baz=330,slow=6.2,SNR=42						
SONM	Songino Array	73.89	28	P	P	19 44 45.4	+0.3
ULN	Ulaanbaatar	74.04	27	⇑eP	P	19 44 47.0	+1.0
ULN				pmax	pmax		
	comp=Z,23nm,1.3s						
ULN	Ulaanbaatar	74.04	27	P	P	19 44 46.8	+0.8
ULN				IAmb	IAmb	19 45 05.7	
	comp=Z,43nm,1.2s						
PETK	Petropavlovsk-	74.27	354	P	P	19 44 47.9	+0.9
	comp=Z,1.9nm,0.7s,baz=106,slow=3.1,SNR=1.4						
MBAR	Mbarara	74.49	112	P	P	19 44 49.4	+0.4
	comp=Z,6.5nm,0.8s,baz=295,slow=8.1,SNR=7.5						
MBAR	Mbarara	74.49	112	⇓eP	P	19 44 49.6	+0.6
MBAR				pmax	pmax		
	comp=Z,7.0nm,1.1s						
MBAR	Mbarara	74.49	112	P	P	19 44 49.6	+0.6
HIA	Hailar	75.72	18	⇑eP	P	19 44 56.4	+0.9
HIA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KLR	Kul'dur	77.59	11	⇓eP	P	19 45 04.6	-1.4
KLR				pmax	pmax		
	comp=Z,1.0nm,1.1s						
SOCY	Socotra	78.20	85	IAmb	IAmb	19 45 29.5	
	comp=Z,28nm,1.0s						
GTA	Gaotai	79.35	36	⇑P	P	19 45 16.3	+0.2
GTA				pP	sP	19 45 23.4	+0.7
GTA				sP	pwP	19 45 26.3	+0.8
GTA				pmax	pmax		
	comp=Z,9.0nm,1.3s						
YSS	Yuzh-Sakhalins	80.67	3	⇑eP	P	19 45 23.7	+0.8
YSS				pmax	pmax		
	comp=Z,13nm,1.3s						
LVC	Limon Verde	81.44	214	P	P	19 45 28.9	+1.3
	comp=Z,5.0nm,0.7s,baz=64,slow=2.6,SNR=3.1						
CPUP	Villa Florida	81.63	203	P	P	19 45 28.8	+0.8
	comp=Z,4.1nm,1.0s,baz=32,slow=6.6,SNR=4.3						
HHC	Hu-ho-hao-te	81.76	27	eP	P	19 45 29.8	+0.8
HHC				pmax	pmax		
	comp=Z,8.0nm,1.1s						
MDJ	Mudanjiang	81.86	13	P	P	19 45 30.0	+0.7
MDJ				pP	pP	19 45 31.4	-2.9
MDJ				pmax	pmax		
	comp=Z,8.0nm,1.5s						
CN2	Changchun	82.03	16	eP	P	19 45 28.3	-1.9
DANN	Dangsing	82.05	53	eP	P	19 45 31.9	+1.0
	comp=Z,56nm,1.0s						
USA0B	Ussuriysk Arra	82.58	11	⇑eP	P	19 45 32.4	-0.6
USRK	Ussuriysk Ar.	82.58	11	P	P	19 45 32.5	-0.5
	comp=Z,1.2nm,0.7s,baz=339,slow=3.2,SNR=1.7						
USRK	Ussuriysk Ar.	82.58	11	P	P	19 45 32.7	-0.3
USRK	Ussuriysk Ar.	82.58	11	P	P	19 45 32.7	-0.3
GKN	Gorkha	82.76	53	eP	P	19 45 34.7	+0.2
	comp=Z,38nm,0.9s						
KKN	Kakani	83.25	52	eP	P	19 45 37.7	+0.6
	comp=Z,34nm,0.9s						
DMN	Daman	83.31	52	eP	P	19 45 38.2	+0.7
GUN	Gumba	83.43	52	eP	P	19 45 38.9	+0.7
	comp=Z,66nm,1.2s						
PKIN	Phulchoki	83.48	52	eP	P	19 45 38.7	+0.4
	comp=Z,34nm,1.2s						
PKI	Pulchoki	83.49	52	eP	P	19 45 38.8	+0.3
	comp=Z,38nm,1.2s						
BJI	Beijing	83.72	24	P	P	19 45 37.8	-1.2
BJI				pmax	pmax		
	comp=Z,2.0nm,0.5s						
LZH	Lanzhou	83.74	34	eP	P	19 45 40.4	+1.0
LZH				pP	pP	19 45 44.4	0.0
LZH				sP	pwP	19 45 49.8	+1.0
LZH				pmax	pmax		
	comp=Z,16nm,1.1s						
RAMN	Ramite	84.58	52	eP	P	19 45 44.3	+0.3
	comp=Z,36nm,1.1s						
TAPN	Taplejung	84.77	51	eP	P	19 45 45.7	+0.7
	comp=Z,84nm,1.4s						
ODAN	Odare	85.04	51	eP	P	19 45 46.8	+0.6
	comp=Z,45nm,1.1s						
DL2	Dalian	86.04	20	P	P	19 46 01.1	+10
DL2				pmax	pmax		
	comp=Z,55nm,1.0s						
XAN	Xi'an	87.29	31	P	P	19 45 57.0	0.0
XAN				pP	pP	19 46 01.1	-0.9
XAN				pmax	pmax		
	comp=Z,15nm,1.2s						
CD2	Chengdu	88.39	37	P	P	19 46 01.4	-0.9
CD2				pmax	pmax		
	comp=Z,20nm,1.0s						
KSRS	Korea Array	88.62	16	P	P	19 46 04.7	+1.5
	comp=Z,0.6nm,0.6s,baz=352,slow=5.7,SNR=2.4						
NJ2	Nanjing	91.97	24	eP	P	19 46 18.6	-0.3
NJ2				pmax	pmax		
	comp=Z,3.0nm,0.5s						
KMI	Kunming	93.22	40	⇑P	P	19 46 25.6	+0.5
KMI				sP	pwP	19 46 34.3	-0.2
KMI				pmax	pmax		
	comp=Z,3.0nm,0.9s						
CMAR	Chiang Mai Arr	97.58	46	P	Pdif	19 46 44.9	0.0
	comp=Z,0.3nm,0.4s,baz=314,slow=5.6,SNR=4.6						
CMAR				PP	PP	19 50 37.0	-4.5
	comp=Z,1.9nm,1.1s,baz=314,slow=7.4,SNR=5.5						
SNAA	Sanae	125.78	169c	iPKIKP	PKiKP	19 52 16.1	+5.3
SNAA				pmax	pmax		
	comp=Z,16nm,2.5s						
SYO	Syowa Base	132.21	152	⇑ePdiff	Pdif	19 49 15.4	-1.9
WRAB	Tennant Creek	145.74	23	PKP2	PKPdf	19 52 48.5	-0.3
WRAB	Tennant Creek	145.74	23		PKPdf	19 52 48.5	-0.3
WRA	Warramunga Arr	145.74	23	PKPbc	PKPdf	19 52 48.4	-0.4
	comp=Z,4.4nm,0.8s,baz=347,slow=3.7,SNR=22						
WRA	Warramunga Arr	145.74	23		PKPdf	19 52 48.0	-0.8
WR0	Warramunga Arr	145.81	22		PKPdf	19 52 49.0	+0.1
ASAR	Alice Springs	149.21	25	PKPbc	PKPbc	19 52 57.8	-0.9
	comp=Z,2.0nm,0.5s,baz=346,slow=2.3,SNR=36						
ASAR	Alice Springs	149.21	25	PKPdf	PKPdf	19 52 53.7	-0.8
ASAR					PKPbc	19 52 57.7	-1.0
VNDA	Vanda	154.50	187	PKPbc	PKiKP	19 53 09.6	+0.4
	comp=Z,3.1nm,1.1s,baz=104,slow=4.2,SNR=3.7						
STKA	Stephens Creek	158.77	14	PKPab	PKPab	19 53 42.1	-1.1
	comp=Z,1.9nm,1.0s,baz=354,slow=9.4,SNR=2.1						

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*NEIC **13** 19:35:56.9±1.3, 42°.31N±0°.05×143°.04E±0°.07, h68^{km}±5^{km}, mb4.4/9, Error ellipse: s-maj=8.0km s-min=7.3km az=46.0*

*MOS **13** 19:35:56.2±0.9, 42°.27N×143°.03E, h76^{km}, mb5.0/4, Error ellipse: s-maj=11.6km s-min=8.2km az=68.7*

*JMA **13** 19:35:57.2±0.1, 42°.35N×143°.00E, h55^{km}±1^{km}, M3.8 Broadband fault plane solution: P waves. NP1: φs239.00000°, δ31.00000°, λ116.00000°. NP2: φs29.00000°, δ62.00000°, λ76.00000°. Principal axes: T Plg69.0000°, Azm270.0000°; N Plg13.0000°, Azm36.0000°; P Plg16.0000°, Azm130.0000°;*

JMA Felt I J1.

*SKHL **13** 19:35:57.0±0.3, 42°.30N×143°.00E, h74^{km}±5^{km}, mb4.7/9*

*IDC **13** 19:35:57.5±2.3, 42°.40N×143°.15E, h74^{km}±17^{km}, mb3.6/10, mb1 3.6/14, mb1mx3.4/58, mbtmp3.8/14, Error ellipse: s-maj=28.2km s-min=16.3km az=98.0*

ISC 13 19:35:56.8±0.6, **42°.31N**±0°.04×**143°.02E**±0°.03, **h64**^{km}±5^{km}, **n98**, σ1^{s}**10**/111, **mb4.2**/16, **9C-6D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNBK	Urakawa-nobuka	0.20	262	⇑P	Pn	19 36 05.9	-0.8
JNBK				eS	Sn	19 36 12.8	-1.1
MYR	Moyori	0.20	95	iP	Pn	19 36 06.4	-0.3
MYR				iS	Sn	19 36 13.4	-0.5
JTHR	Tokachihiroo	0.21	94	⇑P	Pn	19 36 06.4	-0.4
JTHR				eS	Sn	19 36 13.6	-0.4
JEM	Erimo	0.31	160	⇑P	Pn	19 36 07.5	+0.1
ERM	Erimo	0.31	160		Pn	19 36 07.5	+0.1
ERM				Sn	Sn	19 36 16.2	+1.0
ERM	Erimo	0.31	160	eP	Pn	19 36 07.6	+0.1
ERM				eS	Sn	19 36 15.5	+0.4
JCH	Churui	0.40	40	⇑P	Pn	19 36 07.7	-0.4
JCH				eS	Sn	19 36 15.8	-0.6
JSHD	Hidakashinhida	0.42	284	⇓P	Pn	19 36 07.9	-0.4
JSHD				eS	Sn	19 36 17.2	+0.5
JBT2	Biratori 2	0.67	314	⇓P	Pn	19 36 10.4	-0.6
JBT2				eS	Sn	19 36 21.2	-0.2
JOB	Onbets	0.85	45	⇑P	Pn	19 36 13.6	+0.5
JOB				eS	Sn	19 36 26.5	+1.4
JIAM	Iburiatsuma	0.87	292	⇓P	Pn	19 36 13.9	+0.6
JFR	Furan	0.91	340	⇓P	Pn	19 36 12.5	-1.4
JAR	Ashorobuto	1.13	29	⇑P	Pn	19 36 16.4	-0.3
JAR				eS	Sn	19 36 31.1	-0.5
HRK	Horoka	1.16	4	eP	Pn	19 36 17.2	+0.1
JEW	Eniwo	1.27	295	⇓P	Pn	19 36 18.6	0.0
JEW				eS	Sn	19 36 35.2	+0.3
JEW	Eniwo	1.27	295		Pn	19 36 18.6	0.0
JEW				Sn	Sn	19 36 34.9	0.0
JAB	Ashibetsu	1.33	334	P	Pn	19 36 19.4	+0.1
JAK	Akkeshi	1.42	60	⇑P	Pn	19 36 20.6	+0.2
JAK				eS	Sn	19 36 38.6	+0.4
AKK	Akkeshi	1.52	62	iP	Pn	19 36 22.0	+0.2
AKK				iS	Sn	19 36 41.1	+0.4
JKA	Kamikawa-asahi	1.83	351		Pn	19 36 26.7	+0.6
JKA	Kamikawa-asahi	1.83	351	eP	Pn	19 36 26.7	+0.6
ASAJ	Asahikawa	1.83	351	P	Pn	19 36 26.4	+0.3
	40nm,0.3s,baz=198,slow=9.6,SNR=155						
ASAJ	Asahikawa	1.83	351	PN	Pn	19 36 26.7	+0.6
JTM	Tenmabayashi	2.11	225		Pn	19 36 29.9	+0.2
NMR	Nemuro--Hokkai	2.26	61	⇓iPN	Pn	19 36 31.6	-0.2
NMR				iS	Sn	19 36 57.5	-1.0
NMR	Nemuro--Hokkai	2.26	61	iP	Pn	19 36 31.5	-0.2
NMR				iS	Sn	19 36 57.7	-0.8
GLVR	Golovnino	2.33	51	⇑iPN	Pn	19 36 33.9	+1.3
GLVR				iS	Sn	19 37 01.3	+1.1
GLVR				pmax	pmax		
	comp=Z,141nm,0.1s						
GLVR				pmax	pmax		
	comp=Z,2μm,1.7s						
GLVR				smax	smax		
	comp=N,2μm,1.3s						
GLVR				smax	smax		
	comp=E,2μm,1.1s						
GLVR				smax	smax		
	comp=N,676nm,0.3s						
GLVR				smax	smax		
	comp=E,1μm,0.3s						
GLVR	Golovnino	2.33	51	iP	Pn	19 36 34.0	+1.3
GLVR				AMB	AMB	19 36 34.0	
	comp=E,140nm,0.3s						
GLVR				AMB	AMB	19 36 35.6	
	comp=E,2μm,1.7s						
GLVR				iS	Sn	19 37 01.3	+1.1
GLVR				A	A	19 37 04.0	
	comp=E,2μm,1.3s						
GLVR				A	A	19 37 04.0	
	comp=E,2μm,1.3s						
GLVR				A	A	19 37 05.0	
	comp=E,680nm,0.3s						
GLVR				A	A	19 37 05.0	
	comp=E,1μm,0.3s						
GRPR	Tuman	2.63	49	⇑iPN	Pn	19 36 38.4	+1.6
GRPR				eS	Sn	19 37 08.4	+0.9
GRPR				pmax	pmax		
	comp=Z,130nm,0.3s						
GRPR				pmax	pmax		
	comp=E,41nm,0.2s						
GRPR				pmax	pmax		
	comp=N,41nm,0.1s						
GRPR				pmax	pmax		
	comp=Z,261nm,1.5s						
GRPR				smax	smax		
	comp=N,434nm,0.3s						
GRPR				smax	smax		
	comp=E,763nm,0.3s						
GRPR	Tuman	2.63	49	iP	Pn	19 36 37.8	+1.0
GRPR				AMB	AMB	19 36 40.0	
	comp=E,40nm,0.3s						
GRPR				AMB	AMB	19 36 40.0	
	comp=E,40nm,0.3s						
GRPR				AMB	AMB	19 36 40.0	
	comp=E,130nm,0.3s						
GRPR				AMB	AMB	19 36 41.1	
	comp=E,300nm,1.5s						
GRPR				eS	Sn	19 37 08.0	+0.5
GRPR				A	A	19 37 11.0	
	comp=E,430nm,0.3s						
GRPR				A	A	19 37 11.0	
	comp=E,760nm,0.3s						
YUK	Yuzh-Kuril'sk	2.70	49	ePN	Pn	19 36 39.4	+1.6
YUK				eS	Sn	19 37 10.9	+1.5
YUK				pmax	pmax		
	comp=Z,126nm,0.2s						
YUK				pmax	pmax		
	comp=E,19nm,0.1s						
YUK				pmax	pmax		
	comp=Z,275nm,1.4s						
YUK				smax	smax		
	comp=E,159nm,0.2s						
YUK				smax	smax		
	comp=N,592nm,0.4s						
YUK				smax	smax		
	comp=N,1μm,1.1s						
YUK				smax	smax		
	comp=E,545nm,0.9s						
YUK	Yuzh-Kuril'sk	2.70	49	eP	Pn	19 36 38.8	+1.0
YUK				AMB	AMB	19 36 40.0	
	comp=E,20nm,0.3s						
YUK				AMB	AMB	19 36 40.0	
	comp=E,130nm,0.3s						
YUK				AMB	AMB	19 36 41.3	
	comp=E,300nm,1.4s						
YUK				eS	Sn	19 37 10.0	+0.6
YUK				A	A	19 37 14.0	
	comp=E,590nm,0.4s						
YUK				A	A	19 37 14.0	
	comp=E,160nm,0.4s						
YUK				A	A	19 37 14.7	
	comp=E,1μm,1.0s						
YUK				A	A	19 37 14.7	
	comp=E,600nm,1.0s						
KUR	Kuril'sk	4.57	49	ePN	Pn	19 37 05.0	+1.7
KUR				iS	Sn	19 37 58.6	+3.5
KUR				pmax	pmax		
	comp=Z,209nm,1.3s						
KUR				pmax	pmax		
	comp=Z,27nm,0.3s						
KUR				pmax	pmax		
	comp=N,11nm,0.1s						
KUR				pmax	pmax		
	comp=E,14nm,0.3s						
KUR				smax	smax		
	comp=N,268nm,1.8s						
KUR				smax	smax		
	comp=E,354nm,2.0s						
KUR				smax	smax		
	comp=N,78nm,0.4s						
KUR				smax	smax		
	comp=E,54nm,0.4s						
KUR	Kuril'sk	4.57	49	eP	Pn	19 37 05.0	+1.7
KUR				AMB	AMB	19 37 06.7	
	comp=E,200nm,1.3s						
KUR				AMB	AMB	19 37 09.0	
	comp=E,10.0nm,0.3s						
KUR				AMB	AMB	19 37 09.0	
	comp=E,10.0nm,0.3s						
KUR				AMB	AMB	19 37 09.0	
	comp=E,30nm,0.3s						
KUR				eS	Sn	19 37 56.0	+0.9
KUR				A	A	19 38 02.1	
	comp=E,300nm,2.0s						
KUR				A	A	19 38 02.1	
	comp=E,400nm,2.0s						
KUR				A	A	19 38 04.0	
	comp=E,100nm,0.4s						
KUR				A	A	19 38 04.0	
	comp=E,100nm,0.4s						
YSS	Yuzh-Sakhalins	4.65	358	ePN	Pn	19 37 06.5	+2.1
YSS				eS	Sn	19 37 58.1	+1.0
YSS				pmax	pmax		
	comp=Z,20nm,1.1s						
YSS	Yuzh-Sakhalins	4.65	358	Pn	Pn	19 37 04.5	+0.1
YSS	Yuzh-Sakhalins	4.65	358	eP	Pn	19 37 06.0	+1.6
YSS				AMB	AMB	19 37 07.8	
	comp=Z,30nm,0.8s						
YSS				eS	Sn	19 37 58.0	+1.0
YSS				A	A	19 38 08.5	
	comp=Z,60nm,0.8s						
YSS				A	A	19 38 08.5	
	comp=Z,40nm,0.8s						
JMM	Marumori	4.75	202	Pn	Pn	19 37 05.0	-0.9
JSD	Sado	5.61	222	Pn	Pn	19 37 18.0	+0.4
JYT	Yasato	6.45	201		Pn	19 37 28.3	-0.8
MAJO	Matsushiro	6.86	214	PN	Pn	19 37 34.7	0.0
MAJO	Matsushiro	6.86	214	Pn	Pn	19 37 34.7	0.0
MJAR	Matsushiro Arr	6.86	214	P	Pn	19 37 35.3	+0.6
	comp=Z,0.2nm,0.3s,baz=28,slow=13,SNR=8.1						
MJAR	Matsushiro Arr	6.86	214		Pn	19 37 34.6	-0.1
MJAR	Matsushiro Arr	6.86	214	eP	Pn	19 37 35.3	+0.6
JGF	Kuroka	8.02	215	Pn	Pn	19 37 50.5	-0.1
USRK	Ussuriysk Ar.	8.27	287	P	Pn	19 37 57.2	+3.3
	baz=86,slow=15,SNR=4.1						
INU	Inuyama	8.38	216	Pn	Pn	19 37 55.8	+0.4
JWT	Wachi	9.19	223	Pn	Pn	19 38 07.6	+1.0
JHJ2	Mitsune	9.52	196	Pn	Pn	19 38 07.9	-3.3
KLR	Kul'dur	10.47	315	P	Pn	19 38 26.0	+2.0
	comp=Z,0.1nm,0.3s,baz=113,slow=15,SNR=3.3						
KLR	Kul'dur	10.47	315	PN	Pn	19 38 26.0	+2.0
KLR	Kul'dur	10.47	315	eP	Pn	19 38 26.0	+2.0
JHS	Saijyo	10.63	230	Pn	Pn	19 38 28.0	+1.7
SKR	Severo-Kuril’s	12.30	43	eP	Pn	19 38 48.5	-0.4
KSRS	Korea Array	12.56	252	P	Pn	19 38 53.4	+0.8
	comp=Z,0.1nm,0.3s,baz=69,slow=12,SNR=4.8						
KSRS	Korea Array	12.56	252	eP	Pn	19 38 53.4	+0.8
EKMR	Ekimchan	12.71	331	eP	Pn	19 38 55.0	+0.5
KROS	Kirovskiy	16.10	324	eP	Pn	19 39 36.9	-2.0
KROS				AMB	AMB	19 39 39.1	
	comp=Z,10.0nm,0.8s						
SEY	Seymchan	21.38	12	P	P	19 40 36.7	-2.0
	comp=Z,0.8nm,0.4s,baz=202,slow=18,SNR=7.3						
SONM	Songino Array	26.27	295	P	P	19 41 26.3	+0.2
	comp=Z,1.6nm,0.7s,baz=85,slow=8.0,SNR=8.2						
SONM	Songino Array	26.27	295	IAmb	IAmb	19 41 26.7	
	comp=Z,1.6nm,0.9s						
TLY	Talaya	28.14	303	P	P	19 41 42.3	-0.3
	comp=Z,0.6nm,0.5s,baz=79,slow=23,SNR=4.0						
TLY	Talaya	28.14	303	P	P	19 41 42.3	-0.3
TLY				pmax	pmax		
	comp=Z,2.0nm,0.9s						
TLY	Talaya	28.14	303	IAmb	IAmb	19 41 44.2	
	comp=Z,2.3nm,0.9s						
TLY	Talaya	28.14	303	eP	P	19 41 42.3	-0.3
H11N2	WAKE ISLAND Hy	30.23	131	T	T	20 13 33.6	
	baz=324,slow=76,SNR=110						
H11N1	WAKE ISLAND Hy	30.24	131	T	T	20 13 37.4	
	baz=324,slow=76,SNR=87						
H11N3	WAKE ISLAND Hy	30.25	131	T	T	20 13 34.9	
	baz=324,slow=76,SNR=75						
H11S1	WAKE ISLAND Hy	31.11	132	T	T	20 14 37.2	
	baz=325,slow=76,SNR=127						
H11S3	WAKE ISLAND Hy	31.11	132	T	T	20 14 41.3	
	baz=325,slow=76,SNR=107						
H11S2	WAKE ISLAND Hy	31.12	132	T	T	20 14 40.9	
	baz=325,slow=76,SNR=93						
ZAA0	Zalesovo Array	39.47	308	P	P	19 43 20.2	-0.3
ZALV	Zalesovo Beam	39.47	308	P	P	19 43 20.4	-0.1
	comp=Z,1.5nm,0.4s,baz=85,slow=7.1,SNR=5.7						
MK31	Makanchi Array	42.57	298	P	P	19 43 46.1	0.0
MK31				pmax	pmax		
	comp=Z,20nm,0.8s						
MK31	Makanchi Array	42.57	298	P	P	19 43 46.1	0.0
MKAR	Makanchi Array	42.57	298	P	P	19 43 46.1	0.0
	comp=Z,2.0nm,0.8s,baz=82,slow=9.7,SNR=19						
MKAR	Makanchi Array	42.57	298	P	P	19 43 45.4	-0.7
MKAR	Makanchi Array	42.57	298	eP	P	19 43 46.1	0.0
MAKZ	Makanchi	42.77	298	P	P	19 43 47.7	0.0
MAKZ				pmax	pmax		
	comp=Z,38nm,1.2s						
MAKZ	Makanchi	42.77	298	P	P	19 43 47.7	0.0
CMAR	Chiang Mai Arr	44.20	251	P	P	19 44 00.4	+0.8
	comp=Z,0.4nm,0.4s,baz=45,slow=8.1,SNR=4.8						
SCM	Sheep Creek Mo	44.55	39	P	P	19 43 59.3	-2.6
SCM				pmax	pmax		
	comp=Z,22nm,0.7s						
SCM	Sheep Creek Mo	44.55	39	P	P	19 43 59.2	-2.6
SHLS	Shalkode	45.67	294	pmax	pmax		
	comp=Z,13nm,0.7s						
ABKAR	Akbulak array	55.58	308	P	P	19 45 25.4	-0.1
ABKAR				IAmb	IAmb	19 45 30.2	
	comp=Z,7.5nm,1.2s						
ABKAR	Akbulak array	55.58	308	P	P	19 45 25.3	-0.1
WRA	Warramunga Arr	62.45	189	P	P	19 46 13.2	-0.1
	comp=Z,0.6nm,1.1s,baz=6.2,slow=7.5,SNR=2.0						
WRA	Warramunga Arr	62.45	189	IAmb	IAmb	19 46 16.8	
	comp=Z,0.3nm,1.5s						
FIA1	FINESS Array S	64.74	332	P	P	19 46 27.2	-0.6
FINES	FINESS Array B	64.74	332	P	P	19 46 27.1	-0.8
	comp=Z,2.9nm,0.8s,baz=57,slow=5.8,SNR=13						
SUMG	Summit	65.41	0	P	P	19 46 32.9	+0.3
SUMG				pmax	pmax		
	comp=Z,2.0nm,0.7s						
SUMG	Summit	65.41	0	P	P	19 46 32.9	+0.3
SUMG				IAmb	IAmb	19 46 35.8	
	comp=Z,1.8nm,0.7s						
ASAR	Alice Springs	66.18	189	P	P	19 46 39.6	+2.0
	comp=Z,0.2nm,0.7s,baz=0.9,slow=6.0,SNR=1.5						
HFS	Hagfors	69.80	336	P	P	19 46 58.9	-0.9
	comp=Z,1.3nm,0.5s,baz=45,slow=7.1,SNR=10						
H03N2	Juan Fernandez	146.01	89	T	T	22 38 45.1	
	baz=300						
H03N3	Juan Fernandez	146.02	89	T	T	22 38 44.0	
	baz=300,slow=74,SNR=3.9						
H03N1	Juan Fernandez	146.03	89	T	T	22 38 49.8	
	baz=300,slow=74,SNR=5.6						

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*VAO **13** 19:38:43.8±0.9, 2°.88S×78°.66W, h10^{km}, mb4.9*

*IDC **13** 19:38:51.5±2.3, 2°.89S×78°.47W, h72^{km}±22^{km}, mb4.1/15, mb1 4.3/19, mb1mx4.1/45, mbtmp4.4/19, Error ellipse: s-maj=24.9km s-min=10.1km az=51.0*

*NEIC **13** 19:38:53.7±1.8, 3°.06S±0°.05×78°.43W±0°.10, h98^{km}±4^{km}, mb4.8/122, Error ellipse: s-maj=13.9km s-min=7.7km az=88.0*

*IGQ **13** 19:38:54±0.3, 3°S±3°×7°9W±°, h59^{km}*

ISC 13 19:38:52.2±0.6, **3°.10S**±0°.04×**78°.64W**±0°.04, **h83**^{km}±5^{km}, **n248**, σ1^{s}**46**/245, **mb4.8**/63, **1D, Peru-Ecuador border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOSC	San Juan Bosco	0.15	111	P	Pn	19 39 05.0	+0.5
BOSC				S	Sn	19 39 14.0	+0.5
ACUE	Ecuador-Cuenca	0.37	300	P	Pn	19 39 06.0	+0.3
ACUE				S	Sn	19 39 17.0	+1.3
COHC	Cochancay	0.88	315	P	Pn	19 39 10.0	-0.1
COHC				S	Sn	19 39 23.0	-0.4
LOJ1	Universidad t	0.93	163	P	Pn	19 39 12.0	+1.1
ACH2	Ecuador-Machal	1.18	262	P	Pn	19 39 13.0	-0.7
ACH2				S	Sn	19 39 29.0	-0.8
AMIL	Milagro (Trans	1.35	315	P	Pn	19 39 14.0	-1.8
AMIL				S	Sn	19 39 31.0	-2.6
GONZ	Gonzanam	1.36	214	P	Pn	19 39 17.0	+0.7
ARNL	Arenillas	1.50	253	P	Pn	19 39 17.0	-0.6
ARNL				S	Sn	19 39 35.0	-1.9
ISPG	Isla Puna-Puer	1.54	275	P	Pn	19 39 19.0	+0.8
ARRY	Arrayan	1.59	7	P	Pn	19 39 19.0	-0.2
BMAS	Trigal station	1.59	6	P	Pn	19 39 20.0	+0.7
PAT1	Patacocha	1.59	7	P	Pn	19 39 20.0	+0.6
IGUA	Igualata	1.60	360	P	Pn	19 39 20.0	+0.5
CHSH	Refugio Sur-Vo	1.61	352	P	Pn	19 39 20.0	+0.3
RETU	Refugio	1.65	7	P	Pn	19 39 20.0	-0.1
BULB	Ulba Tungurahu	1.66	8	P	Pn	19 39 20.0	-0.2
JUI6	Juive	1.67	6	P	Pn	19 39 20.0	-0.2
BRUN	Tungurahua Vol	1.68	8	P	Pn	19 39 21.0	+0.6
RUN5	Runtun	1.68	7	P	Pn	19 39 21.0	+0.6
PUYO	Puyo, Santa Ro	1.71	21	P	Pn	19 39 21.0	+0.5

MORR	Playas El Morr	1.76	285	P	Pn	19 39 20.0	-1.0
MCRA	Macar, Loja	1.82	226	P	Pn	19 39 21.0	-1.0
SAGO	Sagoatoa	1.93	359	P	Pn	19 39 25.0	+1.1
PIAT	Ana Tenorio	2.12	10	P	Pn	19 39 27.0	+0.8
BMOR	Cotopaxi Volca	2.36	4	P	Pn	19 39 31.0	+1.5
BNAS	Cotopaxi Volca	2.41	4	P	Pn	19 39 31.0	+0.7
BTAM	Cotopaxi Volca	2.42	6	P	Pn	19 39 31.0	+0.7
BREF	Cotopaxi Volca	2.42	5	P	Pn	19 39 31.0	+0.6
VC1	Cotopaxi 1	2.45	5	P	Pn	19 39 32.0	+1.2
SALI	Salinas	2.52	291	P	Pn	19 39 30.0	-1.2
PITA	Cotopaxi Volc	2.53	5	P	Pn	19 39 33.0	+1.2
ANTM	Antisana-La Mi	2.58	9	P	Pn	19 39 34.0	+1.5
ANTG	Antisana-Guama	2.60	8	P	Pn	19 39 34.0	+1.2
ANTS	Antisana-Sarah	2.62	10	P	Pn	19 39 34.0	+0.9
PPLP	Puerto Lpez	2.63	306	P	Pn	19 39 32.0	-0.8
ANTI	Antisana	2.67	10	P	Pn	19 39 34.0	+0.2
GGP	Refugio Guagua	2.90	1	P	Pn	19 39 38.0	+1.1
TERV	Terraza Guagua	2.90	1	P	Pn	19 39 39.0	+2.1
PINO	Pino	2.92	1	P	Pn	19 39 38.0	+0.9
YANA	Yana	2.96	1	P	Pn	19 39 39.0	+1.4
CAB1	Cabo Pasado-Ma	3.23	326	P	Pn	19 39 40.0	-0.8
CABP	Cabo Pasado	3.23	326	P	Pn	19 39 40.0	-0.8
OTAV	Otavalo	3.32	3		Pn	19 39 44.4	+2.0
OTAV	Otavalo	3.32	3	eP	Pn	19 39 43.4	+1.1
ECEN	Cerro Negro	3.95	10	P	Pn	19 39 53.0	+1.9
ATAH	Atahualpa	4.02	177	P	Pn	19 39 54.4	+2.5
	35nm,0.3s,baz=12,slow=10,SNR=193						
ATAH				S	Sn	19 40 39.2	+1.2
	56nm,0.3s,baz=124,slow=12,SNR=9.3						
GCUF	Volcan Galeras	4.48	17	eP	Pn	19 40 01.3	+3.1
CRUC	La Cruz	4.93	20	eP	Pn	19 40 07.4	+3.2
PTLC	Puerto Leguiza	5.03	50	eP	Pn	19 40 01.1	-4.2
BBAC	Balboa, Cauca	5.27	15	eP	Pn	19 40 09.3	+0.5
PCON	Cinco Dias	5.83	23	eP	Pn	19 40 17.8	+1.0
POPC	Popayan, Colom	5.93	19	eP	Pn	19 40 18.9	+1.1
GARC	Garzon, Huila	6.12	31	eP	Pn	19 40 19.5	-0.8
MARP	Paez Belalcaza	6.48	24	eP	Pn	19 40 26.0	+0.7
BETC	Betania	6.57	29	eP	Pn	19 40 27.3	+1.0
YOTC	Yotoco, Valle	7.40	18	eP	Pn	19 40 27.3	-10
CZSB	Cruzeiro do Su	7.49	128	eP	Pn	19 40 36.5	-2.3
TOLC	Tolima	8.32	23	eP	Pn	19 40 49.2	-1.3
ROSC	El Rosal	8.99	29	Pn	Pn	19 40 57.6	-2.0
NNA	Nana	9.01	169	P	Pn	19 41 00.5	+0.8
	14nm,0.3s,baz=341,slow=14,SNR=11						
NNA				S	Sn	19 42 32.6	-6.9
	17nm,0.3s,baz=247,slow=20,SNR=7.5						
NNA	Nana	9.01	169	Pn	Pn	19 41 01.3	+1.7
NORC	Norcasia	9.39	24	eP	Pn	19 41 01.1	-3.7
RUSC	La Rusia	10.51	32	eP	Pn	19 41 23.0	+2.5
PAYG	Puerto Ayora	11.89	281	Pn	Pn	19 41 40.2	+1.4
ETMB	Extrema	14.03	119	eP	Pn	19 42 03.7	-3.6
SDV	Santo Domingo	14.33	34	P	Pn	19 42 06.7	-4.7
	0.6nm,0.3s,baz=312,slow=14,SNR=1.8						
SDV	Santo Domingo	14.33	34	Pn	Pn	19 42 11.1	-0.3
JTS	Las Juntas de	14.71	335	Pn	Pn	19 42 17.2	+1.1
ESPN	Las Esperanzas	16.20	340	P	P	19 42 37.7	+1.1
ESPN				IAmb	IAmb	19 42 39.9	
	comp=Z,74nm,1.5s						
ACON	Acoyapa	16.32	337	P	P	19 42 39.2	+1.3
SAML	Samuel	16.43	111	Pn	Pn	19 42 33.6	-4.2
SAML				IAmb	IAmb	19 42 51.4	
	comp=Z,46nm,0.8s						
SAML	Samuel	16.43	111	eP	Pn	19 42 32.6	-5.2
SAML	Samuel	16.43	111	eP	Pn	19 42 34.5	-3.3
LPAZ	La Paz	16.69	142	P	P	19 42 42.1	-0.6
	comp=Z,0.4nm,0.3s,baz=349,slow=6.1,SNR=7.8						
LPAZ	La Paz	16.69	142		Pn	19 42 41.3	-0.3
LPAZ	La Paz	16.69	142	eP	Pn	19 42 41.7	0.0
PB16	IPOC Station P	17.59	150	P	Pn	19 42 54.2	+1.6
MACA	Manacapuru-AM	17.93	91	eP	P	19 42 54.8	-0.9
MNMC	Minye Minye	18.23	152	P	Pn	19 43 00.9	+0.8
MNMC				IAmb	IAmb	19 43 04.2	
	comp=Z,25nm,0.7s						
PSGCX	Pisagua	18.39	154	P	Pn	19 43 02.1	+0.3
PTGA	Pitinga	18.80	83	S	S	19 46 22.4	-13
	comp=Z,0.7nm,0.3s,baz=344,slow=22,SNR=3.3						
TGUH	Tegucigalpa,Un	19.07	334	P	P	19 43 08.6	+0.2
TGUH				IAmb	IAmb	19 43 41.6	
	comp=Z,29nm,0.6s						
PB08	IPOC Station P	19.30	152	P	Pn	19 43 13.1	+0.2
PATCX	Punta Patache	19.46	156	P	P	19 43 12.5	-0.1
PATCX				IAmb	IAmb	19 43 20.0	
	comp=Z,49nm,1.5s						
PB01	IPOC Station P	19.94	154	P	Pn	19 43 19.6	-0.6
PB07	IPOC Station P	20.38	156	P	P	19 43 22.6	0.0
PB07				IAmb	IAmb	19 43 26.4	
	comp=Z,32nm,1.0s						
PB09	IPOC Station P	20.71	155	P	P	19 43 27.4	+1.2
PB09				IAmb	IAmb	19 43 32.4	
	comp=Z,46nm,1.3s						
PB04	IPOC Station P	20.82	157	P	Pn	19 43 29.1	-1.5
MTDJ	Mount Denham	21.21	3	P	P	19 43 34.7	+3.2
MTDJ				IAmb	IAmb	19 44 06.1	
	comp=Z,54nm,1.2s						
SIV	San Ignacio	21.52	128	P	P	19 43 34.6	-0.1
	comp=Z,26nm,1.1s,baz=314,slow=11,SNR=18						
SIV				S	S	19 47 31.4	+2.5
	comp=Z,3.8nm,0.7s,baz=3.9,slow=15,SNR=1.7						
LVC	Limon Verde	21.57	155	P	P	19 43 39.5	+4.0
	comp=Z,12nm,0.8s,baz=306,slow=8.2,SNR=11						
LVC	Limon Verde	21.57	155	P	P	19 43 38.1	+2.6
LVC				IAmb	IAmb	19 43 41.4	
	comp=Z,59nm,1.4s						
LVC	Limon Verde	21.57	155	eP	P	19 43 36.2	+0.7
ITTB	Itaituba	22.89	94	eP	P	19 43 47.9	-1.3
NPGB	Novo Progresso	23.51	101	eP	P	19 43 55.0	-0.2
GO02	Mina Guanaco	23.61	159	P	P	19 43 58.2	+2.1
MALB	Monte Alegre	24.38	88	eP	P	19 44 02.3	-0.6
TEIG	Tepich	25.04	338	P	P	19 44 08.0	-0.7
	comp=Z,9.6nm,0.8s,baz=140,slow=13,SNR=3.7						
TEIG	Tepich	25.04	338	P	P	19 44 08.7	0.0
AC02	Maricunga	25.30	160	P	P	19 44 12.8	+1.1
MCPB	Macapa, AP	26.70	85	eP	P	19 44 24.4	+0.4
PP1B	Ponte de Pedra	27.40	123	eP	P	19 44 31.7	+1.5
AQDB	Aquidauana	28.25	129	eP	P	19 44 38.8	+1.0
CPUP	Villa Florida	30.85	141	P	P	19 45 02.8	+2.1
	comp=Z,0.9nm,0.5s,baz=22,slow=11,SNR=2.2						
BDFB	Brasilia	32.62	114	P	P	19 45 17.0	+0.5
	comp=Z,8.5nm,0.9s,baz=265,slow=11,SNR=3.2						
BDFB	Brasilia	32.62	114	IAmb	IAmb	19 45 18.1	
	comp=Z,7.2nm,0.9s						
IPMB	Ipameri, GO	33.28	119	eP	P	19 45 22.1	-0.1
ITQB	Itaqui	33.68	144	eP	P	19 45 26.6	+1.2
BI02	San Fabin de	34.09	169	P	P	19 45 30.0	+1.1
BI02				IAmb	IAmb	19 45 33.8	
	comp=Z,19nm,1.5s						
SDBA	SAO DESIDERIO	34.64	107	eP	P	19 45 34.0	0.0
ITAB	Concordia	34.91	136	eP	P	19 45 36.6	+0.6
CPSB	Cacapava Do Su	36.13	141	eP	P	19 45 47.2	+0.6
LC01	Cunco	36.16	171	P	P	19 45 46.9	+0.2
LC01				IAmb	IAmb	19 45 48.5	
	comp=Z,10nm,0.8s						
344A	Westbrook Farm	36.24	342	P	P	19 45 48.1	+0.7
PLTB	Pedras Altas	36.98	143	eP	P	19 45 54.4	+0.6
PLCA	Paso Flores	38.17	170	P	P	19 46 04.7	+0.9
	comp=Z,3.8nm,0.9s,baz=343,slow=10,SNR=6.2						
PLCA	Paso Flores	38.17	170	P	P	19 46 05.1	+1.4
CPCT	Cooper Cave	38.74	352	P	P	19 46 08.3	-0.1
CPCT				IAmb	IAmb	19 46 33.5	
	comp=Z,10nm,1.2s						
TZTN	Tazewell	39.70	354	P	P	19 46 15.7	-0.7
TXAR	Lajitas Array	40.19	325	P	P	19 46 21.3	+0.5
	comp=Z,2.7nm,1.0s,baz=134,slow=7.2,SNR=5.5						
TXAR				PcP	PcP	19 48 24.2	+0.7
	comp=Z,1.8nm,0.8s,baz=152,slow=6.2,SNR=8.3						
TXAR	Lajitas Array	40.19	325	P	P	19 46 20.7	0.0
TX31	Lajitas Ar. Si	40.19	325	P	P	19 46 20.9	+0.1
TX32	Lajitas Array	40.19	325	P	P	19 46 21.0	+0.2
Z35A	Perchaven, San	40.28	336	P	P	19 46 20.9	-0.4
SLBS	Sierra La Lagu	40.47	313	P	P	19 46 23.9	+0.7
LCAR	Lake Charles	40.68	344	P	P	19 46 22.8	-1.7
LCAR				IAmb	IAmb	19 46 24.1	
	comp=Z,19nm,1.3s						
ABTX	Abilene, Hawle	40.72	332	P	P	19 46 25.6	+0.5
ABTX				IAmb	IAmb	19 47 03.5	
	comp=Z,17nm,1.4s						
S51A	Beattyville	40.79	354	P	P	19 46 23.5	-2.0
S51A				IAmb	IAmb	19 46 54.9	
	comp=Z,14nm,1.3s						
T42A	Van Buren	41.57	345	P	P	19 46 29.7	-2.2
T42A				IAmb	IAmb	19 46 31.0	
	comp=Z,14nm,1.2s						
R49A	Shelbyville	41.62	352	P	P	19 46 29.8	-2.4
R49A				IAmb	IAmb	19 46 37.6	
	comp=Z,4.6nm,0.6s						
SIUC	Southern Illin	41.78	347	P	P	19 46 31.8	-1.7
SIUC				IAmb	IAmb	19 46 32.6	
	comp=Z,28nm,1.3s						
MGMO	Mountain Grove	42.01	344	P	P	19 46 34.0	-1.5
MGMO				IAmb	IAmb	19 46 35.2	
	comp=Z,15nm,1.1s						
FNO	Franklin	42.02	337	P	P	19 46 35.9	+0.4
WMOK	Wichita Mounta	42.13	335	P	P	19 46 36.4	-0.1
WMOK				IAmb	IAmb	19 46 37.9	
	comp=Z,21nm,1.3s						
FVM	French Village	42.31	346	P	P	19 46 35.9	-2.0
FVM				IAmb	IAmb	19 46 36.0	
	comp=Z,34nm,1.7s						
OK030	Cody Creek RV	42.37	338	P	P	19 46 38.3	-0.1
OK031	S. Brethren Rd	42.41	338	P	P	19 46 38.4	-0.4
OK029	Liberty Lake	42.51	337	P	P	19 46 39.5	-0.1
MNTX	Cornudas Mount	42.94	326	P	P	19 46 43.1	0.0
T35A	Sooner Cattle	43.15	339	P	P	19 46 44.7	0.0
ACSO	Alum Creek Sta	43.30	355	P	P	19 46 44.6	-1.2
ACSO				IAmb	IAmb	19 46 45.5	
	comp=Z,12nm,0.8s						
MSTX	Muleshoe	43.32	330	P	P	19 46 46.8	+0.5
CROK	Carrier	43.34	337	P	P	19 46 45.6	-0.6
KAN13	South Haven SW	43.59	338	P	P	19 46 47.0	-1.2
U32A	Winter Ranch,	43.63	336	P	P	19 46 48.7	+0.1
KAN01	Argonia South	43.82	338	P	P	19 46 50.4	+0.3
N59A	State Game Lan	43.88	3	P	P	19 46 50.9	+0.4
319A	Douglas	45.01	322	P	P	19 47 00.8	+1.1
319A				IAmb	IAmb	19 47 02.5	
	comp=Z,14nm,1.1s						
KSU1	Kansas State U	45.14	340	P	P	19 47 00.1	-0.5
KSU1				IAmb	IAmb	19 47 01.0	
	comp=Z,17nm,0.9s						
R32A	Long Quarter,	45.29	338	P	P	19 47 02.4	+0.6
ANMO	Albuquerque	45.98	328	P	P	19 47 08.4	+0.9
CBKS	Cedar Bluff	46.03	337	P	P	19 47 08.5	+0.9
J59A	Piesco	46.50	4	P	P	19 47 09.2	-1.9
214A	Organ Pipe Nat	47.62	320	P	P	19 47 20.8	+0.6
SDCO	Great Sand Dun	47.67	331	P	P	19 47 21.8	+1.1
SDCO				IAmb	IAmb	19 47 23.0	
	comp=Z,15nm,1.3s						
X16A	Lo Mia Camp, P	48.42	323	P	P	19 47 28.1	+1.6
WUAZ	Wupatki	49.14	324	P	P	19 47 33.5	+1.6
WUAZ				IAmb	IAmb	19 47 34.4	
	comp=Z,15nm,0.9s						
PV01	Paradox Valley	49.50	329	P	P	19 47 35.4	+0.7
PV02	Paradox Valley	49.65	329	P	P	19 47 36.8	+0.9
PV02				IAmb	IAmb	19 47 37.7	
	comp=Z,17nm,1.1s						
PV03	Paradox Valley	49.74	329	P	P	19 47 37.2	+0.7
PV03				IAmb	IAmb	19 47 38.2	
	comp=Z,11nm,1.0s						
PV12	Saucer Basin,	49.76	329	P	P	19 47 37.8	+1.1
PV18	Skein Mesa, Pa	49.76	329	P	P	19 47 37.1	+0.4
PV18				IAmb	IAmb	19 47 38.4	
	comp=Z,12nm,0.9s						
PV11	David Mesa, Pa	49.78	329	P	P	19 47 37.4	+0.6
PV17	East Wray Mesa	49.81	329	P	P	19 47 37.4	+0.3
PV17				IAmb	IAmb	19 47 39.3	
	comp=Z,20nm,1.3s						
PV04	Paradox Valley	49.87	329	P	P	19 47 38.3	+0.9
PV04				IAmb	IAmb	19 47 39.3	
	comp=Z,18nm,1.3s						
W13A	Hualapai Mount	50.36	322	IAmb	IAmb	19 47 43.6	
	comp=Z,22nm,1.6s						
SRU	San Rafael Swe	51.25	328	P	P	19 47 48.3	+0.5
CCUT	Cedar City	51.70	325	P	P	19 47 52.3	+1.0
E28A	Huff	53.16	341	P	P	19 48 00.7	-1.0
AGMN	Agassiz Nation	53.35	346	IAmb	IAmb	19 48 02.8	
	comp=Z,15nm,1.1s						
PD31	Pinedale Array	53.52	332	P	P	19 48 04.2	-0.5
PDAR	Pinedale Array	53.52	332	P	P	19 48 04.7	0.0
	comp=Z,2.3nm,0.7s,baz=124,slow=8.4,SNR=13						
PDAR				PcP	PcP	19 49 10.2	-0.3
	comp=Z,1.3nm,0.9s,baz=130,slow=6.0,SNR=4.0						
PDAR	Pinedale Array	53.52	332	P	P	19 48 04.4	-0.2
PDAR				PcP	PcP	19 49 10.1	-0.5
R11A	Troy Canyon, C	53.54	324	P	P	19 48 05.4	+0.6
ISA	Isabella, Lake	53.61	320	P	P	19 48 06.7	+1.4
LOHW	Long Hollow	54.66	332	P	P	19 48 13.1	+0.2
OMMB	Old Mammoth Mi	55.14	321	IAmb	IAmb	19 48 18.8	
	comp=Z,12nm,1.3s						
ULM	Lac du Bonnet	55.17	347	P	P	19 48 14.7	-1.4
	comp=Z,6.4nm,0.5s,baz=162,slow=8.4,SNR=14						
MDPB	Devils Postpil	55.20	321	P	P	19 48 17.6	+0.6
NVAR	Mina Array Bea	55.22	322	P	P	19 48 18.4	+1.4
	comp=Z,3.2nm,1.1s,baz=139,slow=6.5,SNR=8.0						
NVAR	Mina Array Bea	55.22	322	P	P	19 48 17.8	+0.8
RLMT	Red Lodge	55.22	334	IAmb	IAmb	19 48 41.9	
	comp=Z,9.6nm,1.6s						
LKWY	Lake	55.30	333	IAmb	IAmb	19 48 52.2	
	comp=Z,9.2nm,1.3s						
YHL	Hebgen Lake	55.87	332	P	P	19 48 22.6	+0.9
WAKR	Walker	55.96	322	IAmb	IAmb	19 48 24.7	
	comp=Z,20nm,1.6s						
BOZ	Bozeman (W)	56.65	333	P	P	19 48 27.4	+0.3
BEKR	Beckworth	57.36	323	IAmb	IAmb	19 48 34.2	
	comp=Z,5.3nm,1.0s						
ORV	Oroville	57.87	322	P	P	19 48 36.7	+1.2
WVOR	Wild Horse Val	57.98	326	IAmb	IAmb	19 48 37.8	
	comp=Z,19nm,1.4s						
K05A	Summer Lake	59.45	325	P	P	19 48 47.7	+1.0
JTMT	Jette	59.47	333	IAmb	IAmb	19 48 48.0	
	comp=Z,6.3nm,0.9s						
I07A	Izee	59.53	327	P	P	19 48 48.0	+0.9
I07A				IAmb	IAmb	19 48 49.0	
	comp=Z,4.2nm,0.8s						
F10A	Beach Ranch, E	59.61	330	P	P	19 48 48.1	+0.5
F10A				IAmb	IAmb	19 48 55.7	
	comp=Z,16nm,1.6s						
G08A	Pilot Rock	60.04	328	IAmb	IAmb	19 48 52.3	
	comp=Z,11nm,1.2s						
PINE	Pine Mountain	60.15	326	P	P	19 48 51.4	0.0
PINE				IAmb	IAmb	19 48 53.8	
	comp=Z,11nm,0.9s						
WALA	Waterton Lakes	60.28	334	P	P	19 48 52.3	+0.1
WALA				IAmb	IAmb	19 48 53.6	
	comp=Z,10nm,0.8s						
NEW	Newport	61.16	332	P	P	19 48 58.0	-0.1
YKA	Yellowknife Ar	70.87	343	P	P	19 49 59.1	-0.8
	comp=Z,1.8nm,0.7s,baz=137,slow=6.3,SNR=17						
LIC	Lamto	74.08	83	eP	P	19 50 19.5	-0.5
	comp=Z,7.9nm,0.6s						
TIC	Toumodi	74.12	82	eP	P	19 50 19.8	-0.5
DBIC	Dimbokro	74.28	82	P	P	19 50 19.9	-1.3
	comp=Z,5.7nm,0.9s,baz=223,slow=3.0,SNR=4.8						
KIC	Kosan Boka	74.37	83	eP	P	19 50 21.4	-0.4
	comp=Z,18nm,0.9s						
KOWA	Kowa	75.93	74	P	P	19 50 30.5	-0.2
	comp=Z,3.0nm,0.5s,baz=261,slow=4.6,SNR=6.9						
VNA3	Neumayer Olymp	80.40	162	P	P	19 50 55.3	+1.0
INK	Inuvik	80.58	342	P	P	19 50 54.8	-0.4
	comp=Z,9.5nm,1.1s,baz=93,slow=7.0,SNR=11						
BCAR	Beaver Creek A	80.93	336	P	P	19 50 57.2	-0.1
TORD	Torodi Ar. Bea	81.30	76	P	P	19 50 59.5	-0.7
	comp=Z,1.5nm,0.6s,baz=274,slow=5.2,SNR=11						
TORD	Torodi Ar. Bea	81.30	76	P	P	19 50 57.0	-3.2
EGAK	Eagle	81.43	337	P	P	19 50 59.9	+0.1
EGAK				IAmb	IAmb	19 51 00.4	
	comp=Z,8.1nm,0.8s						
PAX	Paxson	82.43	335	IAmb	IAmb	19 51 05.4	
	comp=Z,12nm,1.4s						
SNAA	Sanae	82.62	162	P	P	19 51 06.2	+0.2
HDA	Harding Lake	83.57	336	IAmb	IAmb	19 51 11.6	
	comp=Z,13nm,1.2s						
ILAR	Eielson Array	83.68	336	P	P	19 51 10.9	-0.6
	comp=Z,3.8nm,1.0s,baz=130,slow=2.9,SNR=20						
ILAR				PP	PP	19 54 25.1	-0.2
	comp=Z,1.5nm,1.0s,baz=110,slow=7.3,SNR=8.9						
FYU	Fort Yukon	83.72	338	IAmb	IAmb	19 51 13.7	
	comp=Z,23nm,1.5s						
BMAR	Burnt Mountain	83.82	339	P	P	19 51 12.6	+0.3
MDM	Murphy Dome	84.28	336	P	P	19 51 14.0	-0.7
MDM				IAmb	IAmb	19 51 16.2	
	comp=Z,17nm,1.4s						
BWN	Browne	84.53	335	IAmb	IAmb	19 51 16.2	
	comp=Z,14nm,0.9s						
BPAW	Bear Paw Mtn.	85.14	335	IAmb	IAmb	19 51 19.6	
	comp=Z,13nm,1.1s						
COLD	Coldfoot	85.78	338	P	P	19 51 22.1	0.0
COLD				IAmb	IAmb	19 51 23.6	
	comp=Z,9.3nm,1.4s						
IMAR	Indian Mountai	86.79	337	P	P	19 51 26.6	-0.4
QSPA	South Pole Qui	86.98	180	P	P	19 51 29.5	+1.4
ZALV	Zalesovo Beam	127.52	12	PKP	PKPdf	19 57 47.2	-0.4
	comp=Z,2.6nm,0.4s,baz=329,slow=2.6,SNR=10						
STKA	Stephens Creek	128.34	224	PKP	PKiKP	19 57 50.2	-0.3
	comp=Z,3.2nm,1.0s,baz=50,slow=1.2,SNR=3.6						
STKA	Stephens Creek	128.34	224		PKPdf	19 57 50.1	+0.2
MKAR	Makanchi Array	133.42	18	PKP	PKPdf	19 57 58.8	-0.4
	comp=Z,0.5nm,0.6s,baz=319,slow=2.4,SNR=8.8						
SONM	Songino Array	135.22	355	PKP	PKPdf	19 58 02.8	+0.3
	comp=Z,1.0nm,0.7s,baz=328,slow=1.4,SNR=8.3						
KSH	Kashi	137.04	29	PKP	PKiKP	19 58 08.3	+0.2
KSRS	Korea Array	138.01	328	PKP	PKPdf	19 58 08.2	+0.3
	comp=Z,2.3nm,0.9s,baz=1.8,slow=1.4,SNR=6.3						
ASAR	Alice Springs	138.63	228	PKhKP	PKPpre	19 58 03.2	
	comp=Z,0.4nm,0.6s,baz=117,slow=3.7,SNR=6.7						
ASAR				PKP	PKPdf	19 58 09.1	-0.4
	comp=Z,2.8nm,1.1s,baz=125,slow=2.4,SNR=7.1						
WRA	Warramunga Arr	140.34	233	PKhKP	PKPpre	19 58 04.8	
	comp=Z,1.0nm,0.9s,baz=122,slow=3.2,SNR=5.4						
WRA				PKP	PKPdf	19 58 11.1	-1.6
	comp=Z,1.6nm,0.8s,baz=119,slow=2.1,SNR=14						
WRA	Warramunga Arr	140.34	233		PKPpre	19 58 05.7	
HHC	Hu-ho-hao-te	141.31	348	eP	PKPdf	19 58 13.4	-0.5
GTA	Gaotai	143.83	2	eP	PKPbc	19 58 16.1	-0.2
GTA				pP	PKiKP	19 58 22.1	+0.1
GTA				sP	PKPdf	19 58 25.9	+7.4
NJ2	Nanjing	146.83	332	eP	PKPdf	19 58 22.3	-1.4
LZH	Lanzhou	147.09	356	eP	PKPab	19 58 27.3	-0.7
LZH				pP	PKiKP	19 58 31.8	+3.0
LZH				sP	PKPbc	19 58 36.9	+11
XAN	Xi'an	148.42	348	P	PKPbc	19 58 29.6	-0.3
XAN				pP	PKPab	19 58 32.8	-0.4
DANN	Dangsing	149.80	32	eP	PKPbc	19 58 34.1	+0.3
	comp=Z,63nm,0.9s						
WHN	Wuhan	150.06	337	⇓P	PKPbc	19 58 33.5	-0.5
GKN	Gorkha	150.53	31	eP	PKPbc	19 58 35.5	+0.1
	comp=Z,72nm,1.1s						
KKN	Kakani	151.04	30	eP	PKPbc	19 58 36.6	-0.1
	comp=Z,22nm,0.8s						
DMN	Daman	151.09	31	eP	PKPbc	19 58 36.9	0.0
GUN	Gumba	151.24	29	eP	PKPbc	19 58 37.3	0.0
	comp=Z,38nm,1.1s						
PKIN	Phulchoki	151.27	31	eP	PKPbc	19 58 36.7	-0.6
	comp=Z,23nm,1.1s						
PKI	Pulchoki	151.28	31	eP	PKPbc	19 58 37.0	-0.4
	comp=Z,20nm,1.0s						
RAMN	Ramite	152.39	29	eP	PKPbc	19 58 39.6	-0.2
TAPN	Taplejung	152.57	27	eP	PKPbc	19 58 38.4	-1.9
	comp=Z,4.3nm,0.6s						
ODAN	Odare	152.84	28	eP	PKPbc	19 58 40.5	-0.3
CMAR	Chiang Mai Arr	164.55	9	PKP	PKPdf	19 58 47.5	+0.1
	comp=Z,1.1nm,0.8s,baz=289,slow=2.3,SNR=7.4						
CMAR				PKPab	PKPab	19 59 41.6	-0.7
	comp=Z,1.4nm,0.7s,baz=327,slow=4.8,SNR=8.0						

IDC ***13*** *19:44:04.9±0.8, 52.°58N×33.°47W, h0^{km}, mb3.8/17, mb1 4.0/18, mb1mx3.9/51, mbtmp3.8/18, ML4.1/1, Error ellipse: s-maj=26.1km s-min=14.3km az=14.0*

NEIC ***13*** *19:44:06.4±1.7, 52.°5N±0.°1×33.°5W±0.°1, h10^{km}±1^{km}, mb4.7/29, Error ellipse: s-maj=20.2km s-min=14.8km az=176.0*

ISC 13 19:44:06.4±0.6**, 52.°5N**±0.°1×**33.°48W**±0.°06**, h10**^{km}**, n59,** σ1.^{s}**05**/54**, mb4.1**/30**, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
BORG	Borgarnes	13.78	22	Pn	Pn	19 47 23.0	+1.5
	0.3nm,0.3s,baz=45,slow=19,SNR=3.6						
DRLN	Deer Lake	15.49	267	Pn	Pn	19 47 44.2	-0.5
DRLN				IAmb	IAmb	19 48 08.5	
	comp=Z,69nm,1.7s						
ESK	Eskdalemuir	17.98	69	P	Pn	19 48 15.7	-0.5
ESK				IAmb	IAmb	19 48 26.6	
	comp=Z,70nm,1.6s						
EKA	Eskdalemuir Ar	18.01	69	P	P	19 48 16.4	-0.7
	baz=270,slow=10.0,SNR=11						
FRB	Frobisher Bay	21.36	315	P	P	19 48 53.0	-0.4
	comp=Z,7.1nm,0.5s,baz=104,slow=10.0,SNR=13						
E63A	Oxbow	23.35	269	P	P	19 49 14.3	-0.3
G65A	Princeton	23.42	266	P	P	19 49 15.4	0.0
NOA	NORSAR Array B	25.47	53	P	P	19 49 32.9	-1.3
	comp=Z,2.2nm,1.1s,baz=271,slow=9.3,SNR=4.1						
NC303	NORSAR Array S	25.54	52	P	P	19 49 33.3	-1.5
DAVOX	Davos/Dischmat	28.32	84	P	P	19 50 04.8	+4.6
	comp=Z,1.4nm,0.7s,baz=336,slow=20,SNR=2.0						
GERES	GERESS Array B	29.70	78	P	P	19 50 16.1	+3.7
	comp=Z,0.2nm,0.5s,baz=346,slow=12,SNR=1.5						
ZOU	Zoufplan	30.30	82	P	P	19 50 15.9	-1.9
EUNU	Eureka	32.50	345	P	P	19 50 36.4	-0.2
FINES	FINESS Array B	32.55	50	P	P	19 50 36.7	-0.5
RES	Resolute Bay	32.79	334	P	P	19 50 38.8	-0.4
	comp=Z,5.3nm,0.7s,baz=103,slow=9.9,SNR=12						
FCC	Fort Churchill	33.72	305	P	P	19 50 47.9	+0.5
FCC				IAmb	IAmb	19 50 51.6	
	comp=Z,12nm,1.6s						
AKASG	Malin Array Be	37.90	67	P	P	19 51 23.1	-0.2
	comp=Z,0.2nm,0.3s,baz=300,slow=9.1,SNR=2.4						
AKASG	Malin Array Be	37.90	67	IAmb	IAmb	19 51 23.5	
	comp=Z,4.7nm,1.9s						
ULM	Lac du Bonnet	37.94	292	P	P	19 51 22.9	-0.9
	comp=Z,2.2nm,0.7s,baz=42,slow=11,SNR=3.1						
ULM	Lac du Bonnet	37.94	292	IAmb	IAmb	19 51 23.7	
	comp=Z,4.7nm,1.1s						
W52A	Murphy	39.45	264	P	P	19 51 34.5	-2.1
W52A				IAmb	IAmb	19 51 36.8	
	comp=Z,38nm,1.0s						
CPCT	Cooper Cave	39.58	265	P	P	19 51 41.0	+3.4
CPCT				IAmb	IAmb	19 51 46.3	
	comp=Z,19nm,1.3s						
AGG	Agios Georgios	40.19	87	P	P	19 51 47.7	+5.0
AGG				IAmb	IAmb	19 52 23.8	
	comp=Z,43nm,1.8s						
YKA	Yellowknife Ar	41.87	317	P	P	19 51 56.1	0.0
	comp=Z,1.2nm,0.7s,baz=64,slow=9.3,SNR=7.9						
YKA				PcP	PcP	19 53 50.4	-1.2
	comp=Z,0.2nm,0.5s,baz=71,slow=4.8,SNR=3.1						
INK	Inuvik	45.97	329	P	P	19 52 27.8	-1.2
	comp=Z,1.8nm,0.7s,baz=22,slow=6.2,SNR=3.4						
INK	Inuvik	45.97	329	IAmb	IAmb	19 52 29.2	
	comp=Z,2.8nm,0.8s						
BRTR	Keskin Array B	46.60	78	P	P	19 52 35.3	+0.7
	comp=Z,0.6nm,0.7s,baz=300,slow=6.5,SNR=1.4						
TORD	Torodi Ar. Bea	48.27	131	P	P	19 52 47.7	+0.1
	comp=Z,0.8nm,0.8s,baz=327,slow=7.0,SNR=3.0						
BMAR	Burnt Mountain	49.83	332	P	P	19 52 59.2	+0.3
PDAR	Pinedale Array	49.93	291	P	P	19 53 00.1	-0.3
	comp=Z,0.4nm,0.5s,baz=67,slow=11,SNR=5.0						
DBIC	Dimbokro	51.37	142	P	P	19 53 11.7	+0.6
	comp=Z,1.6nm,0.6s,baz=304,slow=11,SNR=1.9						
DBIC	Dimbokro	51.37	142	IAmb	IAmb	19 53 21.6	
	comp=Z,6.8nm,1.1s						
BCAR	Beaver Creek A	51.89	327	P	P	19 53 15.8	+1.2
ILAR	Eielson Array	52.34	330	P	P	19 53 18.0	+0.2
	comp=Z,0.8nm,0.7s,baz=39,slow=4.8,SNR=10						
ILAR	Eielson Array	52.34	330	P	P	19 53 18.7	+0.8
PV17	East Wray Mesa	52.49	286	P	P	19 53 20.4	+0.8
MDM	Murphy Dome	52.61	331	P	P	19 53 20.1	+0.2
MDM				IAmb	IAmb	19 53 20.4	
	comp=Z,8.9nm,1.5s						
HDA	Harding Lake	52.62	330	P	P	19 53 20.3	+0.4
CCB	Clear Creek Bu	52.71	330	P	P	19 53 20.0	-0.5
CCB				IAmb	IAmb	19 53 20.8	
	comp=Z,12nm,1.7s						
I23K	Minto, Yukon-K	52.81	331	P	P	19 53 21.7	+0.4
I23K				IAmb	IAmb	19 53 54.9	
	comp=Z,18nm,1.8s						
WRH	Wood River Hil	52.92	330	P	P	19 53 22.2	+0.1
WRH				IAmb	IAmb	19 53 22.7	
	comp=Z,9.2nm,1.4s						
CTGM	Chitina Glacie	53.17	325	P	P	19 53 24.9	+0.7
CTGM				IAmb	IAmb	19 53 42.0	
	comp=Z,26nm,1.4s						
BARN	Barnard Glacie	53.22	325	P	P	19 53 23.5	-1.1
BARN				IAmb	IAmb	19 53 33.9	
	comp=Z,22nm,1.5s						
AKTO	Aktyubinsk	53.26	53	P	P	19 53 24.6	-0.2
	comp=Z,1.2nm,0.6s,baz=313,slow=6.0,SNR=4.7						
IMAR	Indian Mountai	53.42	334	P	P	19 53 26.0	+0.3
BALM	Baldy	53.48	325	P	P	19 53 27.1	+0.6
BWN	Browne	53.55	331	P	P	19 53 26.1	-0.7
TGL	Tana Glacier	53.85	325	P	P	19 53 29.2	+0.1
TXAR	Lajitas Array	55.48	274	P	P	19 53 42.5	+1.0
	comp=Z,0.3nm,0.7s,baz=64,slow=8.3,SNR=3.6						
TTA	Tatalina	56.41	332	P	P	19 53 47.6	+0.1

TTA				IAmb	IAmb	19 54 14.0	
	comp=Z,16nm,1.9s						
BRLK	**Bradley Lake**	57.31	328	P	P	19 53 53.6	-0.3
NVAR	**Mina Array Bea**	57.78	292	P	P	19 53 57.6	-0.2
	comp=Z,0.3nm,0.6s,baz=42,slow=7.3,SNR=2.7						
MK31	**Makanchi Array**	66.89	42	P	P	19 54 57.7	-0.7
MKAR	**Makanchi Array**	66.89	42	P	P	19 54 58.6	+0.2
	comp=Z,0.6nm,0.7s,baz=330,slow=6.2,SNR=6.0						
MKAR	**Makanchi Array**	66.89	42	P	P	19 54 58.1	-0.3
SONM	**Songino Array**	74.34	27	P	P	19 55 43.7	-0.2
	comp=Z,0.4nm,0.6s,baz=323,slow=3.8,SNR=2.8						
WRA	**Warramunga Arr**	146.15	21	PKPbc	PKPbc	20 03 46.0	-0.7
	comp=Z,1.9nm,1.0s,baz=344,slow=3.5,SNR=6.9						
WRA	**Warramunga Arr**	146.15	21		PKPbc	20 03 46.3	-0.4
ASAR	**Alice Springs**	149.64	23	PKPbc	PKPbc	20 03 55.0	-1.1
	comp=Z,0.6nm,0.5s,baz=352,slow=2.3,SNR=17						

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*IDC **13** 19:47:40.4±0.7,52°.61N×31°.96W,h0^{km},mb4.2/28, mb1 4.3/31,mb1mx4.2/57,mbtmp4.3/31,ML4.5/3,MS5.5/1, Ms1 5.5/1,ms1mx4.6/66,Error ellipse: s-maj=19.8km s-min=11.0km az=10.0*

*NEIC **13** 19:47:42.0±1.5,52°.67N±0°.10×31°.9W±0°.1,h10^{km}±1^{km}, mb4.8/68,Error ellipse: s-maj=16.2km s-min=13.6km az=179.0*

ISC 13 19:47:42.7±0.5**,52°.72N**±0°.07×**31°.92W**±0°.05**,h13^{km},n162,** σ**1^{s}05**/161**,mb4.6**/70**,6C-10D,Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NRS	**Narsarsuaq**	11.20	324	Pn	Pn	19 50 21.4	-0.9
BORG	**Borgarnes**	13.23	20	Pn	Pn	19 50 52.8	+2.9
	0.8nm,0.3s,baz=148,slow=17,SNR=1.1						
BORG				Sn	Sn	19 53 12.7	-4.1
	0.6nm,0.3s,baz=72,slow=5.6,SNR=1.8						
BORG	**Borgarnes**	13.23	20	Pn	Pn	19 50 47.5	-2.4
DSB	**Dublin**	15.37	78	Pn	Pn	19 51 16.4	-2.6
DSB				IAmb	IAmb	19 51 44.5	
	comp=Z,48nm,1.4s						
DRLN	**Deer Lake**	16.45	268	Pn	Pn	19 51 31.4	-1.6
DRLN				IAmb	IAmb	19 51 51.0	
	comp=Z,115nm,1.9s						
SFJD	**Kangerlussuaq**	17.01	334	P	P	19 51 41.6	-0.1
	comp=Z,0.6nm,0.3s,baz=336,slow=10,SNR=3.7						
ESK	**Eskdalemuir**	17.02	70		P	19 51 41.4	-0.5
EKA	**Eskdalemuir Ar**	17.04	70	P	Pn	19 51 39.4	-1.0
	baz=268,slow=9.2,SNR=34						
SCO	**Scoresbysund**	18.40	11		Pn	19 51 58.8	+1.7
ILULI	**Ilulissat**	18.83	339	P	Pn	19 52 03.5	+1.3
SUMG	**Summit**	20.14	354	*i* P	Pn	19 52 18.0	-0.3
SUMG	**Summit**	20.14	354	P	Pn	19 52 18.3	0.0
SUMG	**Summit**	20.14	354	*i* P	Pn	19 52 18.0	-0.3
PCBR	**Castelo Branco**	21.11	118	*e*P	P	19 52 28.8	+2.0
PMTG	**Montargil**	21.27	120	*e*P	P	19 52 30.1	+1.5
PMRV	**Marv??o**	21.45	118	*e*P	P	19 52 33.3	+2.8
PESTR	**Estremoz**	21.76	120	*e*P	P	19 52 35.7	+1.9
PNCL	**Nicolau / Gran**	21.83	123	*e*P	P	19 52 36.4	+1.8
FRB	**Frobisher Bay**	21.88	315	P	P	19 52 34.9	0.0
	comp=Z,6.3nm,0.9s,baz=92,slow=10.0,SNR=5.4						
MESJ	**Messejana**	22.20	123	*e*P	P	19 52 40.4	+1.9
DBG	**Daneborg**	22.20	8	*i* P	P	19 52 40.0	+1.7
BATG	**Bathurst New B**	22.47	270	P	P	19 52 40.0	-1.4
BATG				IAmb	IAmb	19 53 18.6	
	comp=Z,80nm,2.0s						
KONO	**Kongsberg**	23.79	57	P	P	19 52 54.7	0.0
MUD	**Monsted U'grnd**	23.84	65	*i* P	P	19 52 53.0	-2.1
MUD	**Monsted U'grnd**	23.84	65	*i* P	P	19 52 53.1	-2.1
E63A	**Oxbow**	24.30	270	P	P	19 53 00.5	+0.9
NC204	**NORSAR Array S**	24.36	53	P	P	19 52 59.4	-0.7
NBO00	**NORSAR Array S**	24.36	53	P	P	19 53 00.1	0.0
NB2	**NORSAR Subarra**	24.58	53	P	P	19 53 01.8	-0.2
	comp=Z,24nm,1.2s,baz=271,slow=10						
NOA	**NORSAR Array B**	24.58	53	P	P	19 53 02.0	0.0
	comp=Z,5.0nm,0.9s,baz=273,slow=11,SNR=6.2						
NB201	**NORSAR Array S**	24.61	53	P	P	19 53 02.3	-0.1
NC303	**NORSAR Array S**	24.65	53	P	P	19 53 02.8	+0.1
NC303				IAmb	IAmb	19 53 46.1	
	comp=Z,43nm,1.4s						
NC602	**NORSAR Array S**	24.74	54	P	P	19 53 04.9	+1.5
NC405	**NORSAR Array S**	24.82	53	P	P	19 53 04.4	+0.2
ECH	**Echery**	25.05	85	P	P	19 53 06.4	0.0
ECH				IAmb	IAmb	19 53 07.8	
	comp=Z,17nm,1.2s						
BFO	**Black Forest**	25.71	84	P	P	19 53 12.5	+0.1
BFO				IAmb	IAmb	19 53 18.3	
	comp=Z,55nm,1.9s						
HFS	**Hagfors**	25.83	55	P	P	19 53 13.3	0.0
	comp=Z,1.8nm,0.6s,baz=264,slow=8.6,SNR=7.5						
SENIN	**Lac Senin/Sane**	25.98	88	P	P	19 53 14.8	-0.2
SENIN				IAmb	IAmb	19 53 18.7	
	comp=Z,19nm,1.4s						
GRFO	**Grafenberg**	26.90	79	P	P	19 53 23.2	+0.2
GRFO				IAmb	IAmb	19 53 57.9	
	comp=Z,24nm,1.4s						
GRA1	**Grafenberg Arr**	26.90	79	P	P	19 53 22.9	-0.1
GRA1				IAmb	IAmb	19 53 46.4	
	comp=Z,40nm,1.7s						
DAVA	**Damuels**	27.11	85	*e*P	P	19 53 26.9	+1.7
	comp=Z,7.7nm,0.9s						
TUE	**Stuetta**	27.17	87	P	P	19 53 26.6	+0.8
TUE				IAmb	IAmb	19 53 27.8	
	comp=Z,12nm,0.7s						
MOQ	**Mont Orford**	27.18	271	P	P	19 53 25.4	-0.3
CLL	**Collm**	27.35	75	*i* P	P	19 53 27.1	0.0
	comp=Z,14nm,0.7s						
CLL	**Collm**	27.35	75	P	P	19 53 26.8	-0.3
CLL				IAmb	IAmb	19 53 27.8	
	comp=Z,15nm,0.7s						
DAVOX	**Davos/Dischmat**	27.35	86	P	P	19 53 28.1	+0.8
	comp=Z,10nm,0.8s,baz=312,slow=13,SNR=16						
DAVOX				LR	LR	20 03 31.3	
	comp=Z,10µm,19.2s,baz=320,slow=35						
RETA	**Reutte**	27.55	84	*e*P	P	19 53 29.1	0.0
	comp=Z,15nm,1.2s,SNR=5.0						
FETA	**Feichten**	27.75	85	*e*P	P	19 53 32.3	+1.3
	comp=Z,5.6nm,0.8s,SNR=5.8						
SQTA	**Sankt Quirin**	27.95	84	*e*P	P	19 53 31.7	-1.0
	comp=Z,14nm,0.8s						
BRG	**Berggiesshubel**	28.06	75	*i* P	P	19 53 33.3	-0.1
BRG				Amp		19 53 34.7	
	comp=Z,8.2nm,0.8s						
WATA	**Walderalm**	28.12	83	*i* P	P	19 53 34.4	+0.2
	comp=Z,14nm,1.0s,SNR=4.4						
WTTA	**Wattenberg**	28.19	83	*i* P	P	19 53 35.1	+0.2
	comp=Z,9.2nm,0.7s,SNR=7.1						
KHC	**Kasperske Hory**	28.53	79	*e*P	P	19 53 37.0	-0.7
KHC	**Kasperske Hory**	28.53	79	P	P	19 53 38.4	+0.6
KHC				IAmb	IAmb	19 54 24.3	
	comp=Z,23nm,2.0s						
GEC2	**GERESS Array S**	28.73	79	P	P	19 53 39.8	+0.3
GERES	**GERESS Array B**	28.73	79	P	P	19 53 39.8	+0.3
	comp=Z,3.9nm,0.7s,baz=300,slow=9.0,SNR=30						
CTI	**Castel Tesino**	28.77	86	P	P	19 53 40.2	+0.2
CTI				IAmb	IAmb	19 53 40.7	
	comp=Z,7.6nm,0.7s						
ABTA	**Abfaltersbach**	28.96	84	*i* P	P	19 53 41.4	-0.2
	comp=Z,4.3nm,1.2s						
CKRC	**Cesky Krumlov**	29.10	79	*e*P	P	19 53 42.9	+0.1
TEOL	**Teolo**	29.13	87	P	P	19 53 42.5	-0.6
TEOL				IAmb	IAmb	19 53 43.9	
	comp=Z,12nm,0.7s						
KBA	**Koelnbreinsper**	29.30	83	*e*P	P	19 53 45.1	+0.3
	comp=Z,5.2nm,0.6s,SNR=8.4						
STAL	**STALIGIAL**	29.31	85	P	P	19 53 45.0	+0.3
ZOU	**Zoufplan**	29.33	84	P	P	19 53 44.7	-0.3
UPC	**Upice**	29.41	75	*e*P	P	19 53 45.8	+0.3
MOA	**Molln**	29.50	81	*e*P	P	19 53 47.3	+1.0
	comp=Z,3.7nm,0.8s						
DPC	**Dobruska-Polom**	29.66	75	*e*P	P	19 53 47.5	-0.2
MYKA	**Terra Mystica**	29.70	83	*i* P	P	19 53 48.4	+0.3
	comp=Z,22nm,0.6s,SNR=11						
TRI	**Trieste**	30.22	85	P	P	19 53 53.4	+0.8
TRI				IAmb	IAmb	19 53 54.3	
	comp=Z,29nm,1.5s						
OBKA	**Obir**	30.30	83	*e*P	P	19 53 53.2	-0.3
	comp=Z,18nm,0.8s,SNR=23						
CONA	**Conrad Observa**	30.42	80	*e*P	P	19 53 54.4	-0.1
	comp=Z,3.7nm,1.0s						
SOKA	**Soboth**	30.51	82	*i* P	P	19 53 54.9	-0.5
	comp=Z,5.4nm,0.6s,SNR=11						
ARSA	**Arzberg**	30.53	81	*i* P	P	19 53 55.3	-0.2
	comp=Z,7.9nm,1.1s						
ARCES	**ARCESS Array B**	30.89	35	P	P	19 53 57.8	-0.6
	comp=Z,4.4nm,0.8s,baz=261,slow=2.7,SNR=6.3						
ARCES	**ARCESS Array B**	30.89	35	P	P	19 53 58.5	+0.1
FINES	**FINESS Array B**	31.68	51	P	P	19 54 05.8	+0.4
	comp=Z,3.5nm,0.7s,baz=286,slow=7.7,SNR=18						
FINES	**FINESS Array B**	31.68	51	P	P	19 54 05.6	+0.2
FIA1	**FINESS Array S**	31.68	51	P	P	19 54 06.0	+0.6
FIA1				IAmb	IAmb	19 54 38.9	
	comp=Z,11nm,1.1s						
LANS	**Liptovska Anna**	32.01	75	*e*P	P	19 54 09.6	+1.1
MORH	**Mrgy, Hungar**	32.91	81	⇑P	P	19 54 15.8	-0.5
RES	**Resolute Bay**	33.01	334	P	P	19 54 17.7	+0.8
	comp=Z,1.3nm,0.8s,baz=106,slow=9.6,SNR=3.8						
KEST	**Kesra**	33.54	104	P	P	19 54 22.2	+0.1
	comp=Z,5.8nm,0.8s,baz=339,slow=6.7,SNR=5.2						
KEST	**Kesra**	33.54	104	P	P	19 54 22.1	+0.1
KEST				IAmb	IAmb	19 54 22.9	
	comp=Z,9.7nm,1.0s						
KOLS	**Kolonicke sedl**	33.76	74	*e*P	P	19 54 24.3	+0.6
FRGS	**Fruska Gora**	34.16	82	⇑P	P	19 54 27.2	0.0
FCC	**Fort Churchill**	34.37	305	P	P	19 54 28.7	-0.2
SIRR	**Siria**	34.69	79	⇓P	P	19 54 31.1	-0.8
BZS	**Buzias**	35.00	80	⇓P	P	19 54 35.1	+0.6
DRGR		35.05	77	⇑P	P	19 54 35.7	+0.7
PDG	**Podgorica**	35.32	86	⇓P	P	19 54 37.3	0.0
MDVR	**Moldovita**	35.50	81	⇑P	P	19 54 38.6	-0.3
GZR	**Gura Zlata**	35.81	79	⇓P	P	19 54 41.8	+0.2
HERR	**Herculane**	35.87	80	⇓P	P	19 54 41.2	-0.7
ARCR	**ARCALIA**	35.88	76	⇓P	P	19 54 43.0	+1.0
BUR08	**Bucovina Ar. S**	36.09	75	P	P	19 54 44.7	+0.7
BUR08				IAmb	IAmb	19 54 55.2	
	comp=Z,20nm,1.8s						
BURAR	**Bucovina Array**	36.12	75	⇓P	P	19 54 45.2	+1.1
BURAR	**Bucovina Array**	36.12	75	P	P	19 54 44.3	+0.1
AKASG	**Malin Array Be**	36.94	68	P	P	19 54 50.4	-0.7
	comp=Z,3.3nm,0.5s,baz=298,slow=8.4,SNR=16						
AKASG	**Malin Array Be**	36.94	68	P	P	19 54 49.4	-1.6
AKBB	**Malin Array Si**	36.94	68	P	P	19 54 50.4	-0.6
AKBB				IAmb	IAmb	19 54 51.5	
	comp=Z,22nm,1.2s						
BIZ	**Bicaz**	36.98	75	⇓P	P	19 54 52.9	+1.5
EYMN	**Ely**	37.38	287	P	P	19 54 54.2	-0.6
EYMN				IAmb	IAmb	19 55 04.8	
	comp=Z,36nm,1.9s						
FNA	**Florina**	37.58	87	P	P	19 54 56.0	-0.6
VTS	**Vitosha**	37.62	83	⇑P	P	19 54 55.8	-1.3
MLR	**Muntele Rosu**	37.65	77	P	P	19 54 58.7	+1.5
	comp=Z,1.5nm,0.4s,baz=330,slow=18,SNR=2.3						
MLR	**Muntele Rosu**	37.65	77	P	P	19 54 58.2	+0.9
MLR				IAmb	IAmb	19 55 28.7	
	comp=Z,18nm,1.6s						
PLVB	**Pleven**	38.02	81	⇓P	P	19 55 00.0	-0.2
OBN	**Obninsk**	38.94	58	P	P	19 55 07.5	-0.3
	comp=Z,4.6nm,0.5s,baz=265,slow=3.3,SNR=4.5						
OBN	**Obninsk**	38.94	58	IAmb	IAmb	19 55 08.8	
	comp=Z,21nm,0.7s						
CFR	**Carcaliu**	39.12	76	⇑P	P	19 55 07.8	-1.6
AGG	**Agios Georgios**	39.23	88	P	P	19 55 10.9	+0.4
AGG				IAmb	IAmb	19 55 44.7	
	comp=Z,37nm,1.6s						
HARR	**Harsova**	39.26	77	⇓P	P	19 55 07.8	-2.8
ALN	**Alexandroupoli**	40.34	83	P	P	19 55 20.1	+0.5
YKA	**Yellowknife Ar**	42.36	317	P	P	19 55 35.8	-0.2
	comp=Z,0.8nm,0.8s,baz=63,slow=9.0,SNR=6.5						
YKA				PcP	PcP	19 57 30.3	+1.3
	comp=Z,0.6nm,0.8s,baz=68,slow=4.1,SNR=4.5						
ECSD	**EROS Data Cent**	42.67	285	P	P	19 55 38.7	-0.1
MDUB	**Mudurnu**	43.70	80	P	P	19 55 46.8	-0.4
BR131	**Keskin Array S**	45.62	79	P	P	19 56 02.8	+0.2
BRTR	**Keskin Array B**	45.62	79	P	P	19 56 03.6	+1.0
	comp=Z,13nm,0.8s,baz=303,slow=6.5,SNR=45						
BRTR	**Keskin Array B**	45.62	79	P	P	19 56 02.9	+0.3
BELG	**Belogornoye**	45.98	57	P	P	19 56 05.0	0.0
	comp=Z,17nm,0.9s,baz=327,slow=2.2,SNR=7.5						
TOA0	**Torodi Ar. Sit**	47.71	133	P	P	19 56 17.6	-1.4
TOA0				IAmb	IAmb	19 56 24.4	
	comp=Z,7.6nm,1.3s						
TORD	**Torodi Ar. Bea**	47.71	133	P	P	19 56 17.8	-1.2
	comp=Z,1.7nm,0.4s,baz=333,slow=7.5,SNR=20						
TORD	**Torodi Ar. Bea**	47.71	133	P	P	19 56 17.2	-1.8
KBZ	**Khabaz**	48.53	69	P	P	19 56 26.4	+1.4
	comp=Z,2.5nm,0.8s,baz=289,slow=3.1,SNR=6.8						
ARU	**Arti**	48.92	47	P	P	19 56 28.5	+0.6
BOZ	**Bozeman (W)**	50.10	296	P	P	19 56 36.9	-0.4
BW06	**Boulder Array**	50.74	292	P	P	19 56 41.4	-0.9
PD31	**Pinedale Array**	50.74	292	P	P	19 56 41.1	-1.2
PDAR	**Pinedale Array**	50.74	292	P	P	19 56 40.9	-1.4
	comp=Z,1.3nm,0.7s,baz=66,slow=7.5,SNR=9.7						
DLMT	**Dillon**	50.78	296	P	P	19 56 43.1	+0.7
DBIC	**Dimbokro**	50.97	144	P	P	19 56 42.2	-1.7
	comp=Z,2.1nm,0.5s,baz=297,slow=9.0,SNR=2.0						
DBIC	**Dimbokro**	50.97	144	P	P	19 56 42.2	-1.7
DBIC				IAmb	IAmb	19 56 55.9	
	comp=Z,23nm,1.6s						
RDMU	**Red Mountain**	52.17	290	P	P	19 56 54.1	+1.1
AKTO	**Aktyubinsk**	52.37	54	P	P	19 56 54.4	+0.4
	comp=Z,9.4nm,0.8s,baz=316,slow=7.4,SNR=26						
ILAR	**Eielson Array**	52.63	331	P	P	19 56 55.9	+0.2
	comp=Z,0.3nm,0.7s,baz=51,slow=7.1,SNR=3.1						
ILAR				PcP	PcP	19 58 07.0	+1.5
	comp=Z,0.6nm,0.8s,baz=355,slow=2.4,SNR=4.2						
PV12	**Saucer Basin,**	53.23	287	P	P	19 57 01.0	+0.2
PV11	**David Mesa, Pa**	53.28	287	P	P	19 57 01.5	+0.3
PV03	**Paradox Valley**	53.30	287	P	P	19 57 01.7	+0.4
PV03				IAmb	IAmb	19 57 13.5	
	comp=Z,21nm,1.6s						
PV16	**Nyswonger Mesa**	53.30	287	P	P	19 57 00.9	-0.5
PV16				IAmb	IAmb	19 57 13.2	
	comp=Z,6.8nm,0.8s						
PV18	**Skein Mesa, Pa**	53.34	287	P	P	19 57 01.4	-0.2
PV18				IAmb	IAmb	19 57 11.8	
	comp=Z,12nm,0.9s						
PV17	**East Wray Mesa**	53.35	287	P	P	19 57 01.5	-0.2
ABKAR	**Akbulak array**	54.08	54	P	P	19 57 06.3	-0.3
TIXI	**Tiksi**	55.19	7	P	P	19 57 15.7	+1.4
TIXI				IAmb	IAmb	19 57 16.9	
	comp=Z,6.5nm,0.8s						
ELK	**Elko**	55.27	293	P	P	19 57 16.9	+1.3
	comp=Z,0.9nm,0.7s,baz=90,slow=15,SNR=2.3						
WVOR	**Wild Horse Val**	55.99	297	P	P	19 57 20.8	+0.1
WVOR				IAmb	IAmb	19 57 32.7	
	comp=Z,13nm,1.6s						
BRVK	**Borovoye**	56.27	45	P	P	19 57 22.1	-0.2
BRVK				IAmb	IAmb	19 57 24.2	
	comp=Z,8.0nm,0.8s						
TXAR	**Lajitas Array**	56.41	275	P	P	19 57 23.8	-0.1
	comp=Z,0.5nm,0.8s,baz=59,slow=10,SNR=4.3						
X16A	**Lo Mia Camp, P**	57.45	285	P	P	19 57 33.8	+2.5
NVAR	**Mina Array Bea**	58.58	293	P	P	19 57 38.5	-0.7
	comp=Z,0.6nm,0.8s,baz=46,slow=8.5,SNR=4.3						
NVAR	**Mina Array Bea**	58.58	293	P	P	19 57 39.4	+0.2
MIB	**Mutribah**	60.59	79	*e*P		19 57 52.9	
RST	**Umm Al-Ruwaisa**	60.61	79	*e*P		19 57 52.8	
GEYT	**Alibeck**	60.95	65	P	P	19 57 56.4	+1.1
	comp=Z,2.3nm,0.7s,baz=277,slow=13,SNR=4.8						
ZAA0	**Zalesovo Array**	61.42	37	P	P	19 57 58.2	+0.1
ZAA0				IAmb	IAmb	19 58 00.2	
	comp=Z,4.5nm,0.7s						
ZALV	**Zalesovo Beam**	61.42	37	P	P	19 57 58.4	+0.3
	comp=Z,4.5nm,0.6s,baz=318,slow=8.8,SNR=11						
MK31	**Makanchi Array**	66.09	43	P	P	19 58 28.9	-0.2
MK31				IAmb	IAmb	19 58 30.3	
	comp=Z,4.7nm,0.7s						
MKAR	**Makanchi Array**	66.09	43	P	P	19 58 29.5	+0.5
	comp=Z,4.2nm,0.6s,baz=331,slow=5.8,SNR=38						
MKAR	**Makanchi Array**	66.09	43	P	P	19 58 28.5	-0.6
UOSS	**Minazif**	69.45	76	P	P	19 58 49.5	-1.0
SONM	**Songino Array**	73.72	28	P	P	19 59 16.7	+0.6
	comp=Z,3.9nm,0.9s,baz=330,slow=7.0,SNR=14						
GTA	**Gaotai**	79.16	36	*e*P	P	19 59 47.8	+0.8
GTA				pP	sP	19 59 51.4	+0.1
GTA				sP	pwP	19 59 54.4	-0.3
GTA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
WRA	**Warramunga Arr**	145.59	23	PKPbc	PKPdf	20 07 20.6	0.0
	comp=Z,4.2nm,0.8s,baz=342,slow=2.9,SNR=31						
WRA	**Warramunga Arr**	145.59	23		PKPdf	20 07 19.7	-0.9
ASAR	**Alice Springs**	149.05	26	PKPbc	PKPbc	20 07 29.3	-1.0
	comp=Z,1.7nm,0.8s,baz=351,slow=2.2,SNR=18						
ASAR	**Alice Springs**	149.05	26		PKPbc	20 07 28.8	-1.5

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*LDG **13** 20:02:38.3±0.0,43°.05N×0°.46W,h2^{km},Md0.9/2,Error ellipse: s-maj=1.3km s-min=0.7km az=171.0*

MDD 13 20:02:38.5±0.5**,43°.05N×0°.45W,h0^{km},mbLg0.8**/2**,Error ellipse: s-maj=5.3km s-min=3.1km az=14.0,PRXIMO SIN SOLUCIN,Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ETSF	**Etsaut**	0.17	207	Pg	Pg	20 02 41.8	-0.1
ETSF				Lg	Lg	20 02 44.1	
	4.0nm,0.3s						
ETSF	**Etsaut**	0.17	207	*e*Pg	Pg	20 02 41.8	-0.1
ETSF				*e*Sg	Sg	20 02 44.1	0.0
	8.0nm,0.3s						
ATE	**Arette**	0.19	280	Pg	Pg	20 02 41.7	-0.3
	SNR=7.9						
ATE				Lg	Lg	20 02 44.4	
	8.5nm,0.1s,SNR=7.9						
SJPF	**Ste Jean**	0.57	276	Pg	Pg	20 02 49.2	-0.2
SJPF				Lg	Lg	20 02 56.8	
	0.2nm,0.2s						
SJPF	**Ste Jean**	0.57	276	*e*Pg	Pg	20 02 49.2	-0.2
SJPF				*e*Sg	Sg	20 02 56.8	0.0
	0.4nm,0.2s						
EPF	**Esparros**	0.58	92	Pg	Pg	20 02 49.3	-0.3
EPF	**Esparros**	0.58	92	*e*Pg	Pg	20 02 49.3	-0.3
ECHI	**Chisagues Biel**	0.61	129	Pg	Pg	20 02 50.2	-0.1
	SNR=7.9						
ECHI				Lg	Lg	20 02 57.2	
	0.5nm,0.1s,SNR=7.9						

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*LDG **13** 20:02:47.0±0.1,43°.06N×0°.43W,h2^{km},Md1.3/2,Ml1.5/3, Error ellipse: s-maj=2.3km s-min=1.2km az=167.0*

MDD 13 20:02:47.3±0.5**,43°.07N×0°.43W,h0^{km},mbLg0.9**/6**,Error ellipse: s-maj=4.7km s-min=3.3km az=0.0,PRXIMO, Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ETSF	**Etsaut**	0.20	209	Pg	Pg	20 02 50.8	-0.2
ETSF				Lg	Lg	20 02 53.7	
	4.2nm,0.2s						
ETSF	**Etsaut**	0.20	209	*e*Pg	Pg	20 02 50.8	-0.2
ETSF				*e*Sg	Sg	20 02 53.7	+0.2
	8.5nm,0.2s						
ATE	**Arette**	0.20	275	Pg	Pg	20 02 51.0	0.0
	SNR=7.9						
ATE				Lg	Lg	20 02 53.4	
	19nm,0.1s,SNR=7.9						
EPF	**Esparros**	0.57	94	Lg	Lg	20 03 05.6	
	1.6nm,0.2s						
EPF	**Esparros**	0.57	94	*e*Pg	Pg	20 02 57.0	-1.1
EPF				*e*Sg	Sg	20 03 05.6	+0.1
	3.1nm,0.2s						
EPF	**Esparros**	0.57	94	*e*Sg	Pg	20 02 56.8	-1.3
	1.5nm,0.2s						
SJPF	**Ste Jean**	0.58	275	Pg	Pg	20 02 58.2	-0.3
SJPF				Lg	Lg	20 03 06.1	
	1.2nm,0.2s						
SJPF	**Ste Jean**	0.58	275	*e*Pg	Pg	20 02 58.2	-0.3
SJPF				*e*Sg	Sg	20 03 06.1	+0.1
	2.3nm,0.2s						
ECHI	**Chisagues Biel**	0.61	131	Lg	Lg	20 03 06.6	
	1.1nm,0.1s,SNR=7.9						
EORO	**Oroz-Betelu**	0.67	255	Lg	Lg	20 03 07.7	
	2.2nm,0.1s,SNR=7.9						
CSOR	**Sort**	1.35	120	Lg	Lg	20 03 34.1	
	0.8nm,0.1s,SNR=7.9						
MTLF	**Montolieu**	1.96	81	Pg	Pb	20 03 23.0	-0.8
MTLF				Lg	Lg	20 03 48.3	
	0.2nm,0.2s						
MTLF	**Montolieu**	1.96	81	*e*Pg	Pb	20 03 23.0	-0.8
MTLF				*e*Sg	Sb	20 03 48.3	-0.4
	0.4nm,0.2s						
LFF	**La Frestale**	2.05	24	Pg	Pb	20 03 25.4	0.0
LFF				Lg	Lg	20 03 51.3	
	0.3nm,0.2s						
LFF	**La Frestale**	2.05	24	*e*Pg	Pb	20 03 25.4	0.0
LFF				*e*Sg	Sb	20 03 51.3	-0.2
	0.7nm,0.2s						

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*BJI **13** 20:06:26.6±0.0,22°.60N×121°.50E,h10^{km},mB6.3/57, mb5.2/62,ML5.8/9,Ms6.4/87,Ms7 6.4/81*

*NIED **13** 20:06:30.3,22°.60N×121°.43E,h28^{km},MW6.2,Moment Tensor Solution. s3 Moment tensor: Scale 10^{18}Nm; M_{rr}1.16; $M_{\theta\theta}$0.64; $M_{\phi\phi}$-1.80; $M_{r\theta}$-1.11; $M_{\theta\phi}$-0.30; $M_{\phi r}$-0.96; Fault plane solution: $M_0$2.18000×10^{18} NP1: ϕ_s217.00000°,δ70.00000°,λ121.00000°. NP2: ϕ_s336.00000°,δ36.00000°,λ35.00000°.*

*ASIES **13** 20:06:30.9,22°.66N×121°.46E,h20^{km},MW6.0*

*JMA **13** 20:06:30.2±0.1,22°.60N×121°.43E,h28^{km},M6.2*

JMA Felt I J1.

*NEIC **13** 20:06:31.7,22°.65N×121°.41E,h24^{km},Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}1.02; $M_{\theta\theta}$0.24; $M_{\phi\phi}$-1.26; $M_{r\theta}$-0.56; $M_{\theta\phi}$-0.77; $M_{\phi r}$0.20; Fault plane solution: $M_0$1.51000×10^{18} NP1:ϕ_s232.28000°, δ55.07000°,λ133.70000°. NP2:ϕ_s353.21000°,δ53.65000°, λ45.31000°. Principal axes: T 1.4318, Plg55.0000°, Azm202.0000°; N 0.1503, Plg34.0000°, Azm24.0000°; P -1.5821, Plg1.0000°, Azm293.0000°;*

*TAP **13** 20:06:31.8,22°.66N×121°.40E,h28^{km},ML6.3,C*

*MOS **13** 20:06:32.2±1.0,22°.61N×121°.40E,h39^{km},mb5.9/57, MS6.2/65,Error ellipse: s-maj=5.3km s-min=3.5km az=109.8*

*NEIC **13** 20:06:32.3±2.2,22°.64N±0°.05×121°.43E±0°.06,h30^{km}±3^{km}, mb5.7/353,Ms_20 6.2/245,Mwr6.1/16,Mww6.2, ML6.1(TAP),Mwc6.3(GCMT),Error ellipse: s-maj=7.7km s-min=6.3km az=59.0*

*IDC **13** 20:06:33.2±0.9,22°.58N×121°.42E,h39^{km}±7^{km},mb5.1/53, mb1 5.1/56,mb1mx5.1/62,mbtmp5.3/56,ML4.7/3,MS5.9/40, Ms1 6.0/40,ms1mx5.8/56,Error ellipse: s-maj=9.5km s-min=6.7km az=77.0*

*NEIC **13** 20:06:34,22°.64N×121°.38E,h31^{km},Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}2.30; $M_{\theta\theta}$0.52; $M_{\phi\phi}$-2.82; $M_{r\theta}$-0.96; $M_{\theta\phi}$-1.35; $M_{\phi r}$0.05; Fault plane solution: $M_0$3.08000×10^{18} NP1:ϕ_s355.00000°, δ48.00000°,λ52.00000°. NP2:ϕ_s224.00000°,δ54.00000°, λ124.00000°. Principal axes: T 2.7846, Plg63.0000°, Azm194.0000°; N 0.5269, Plg27.0000°, Azm22.0000°; P -3.3115, Plg3.0000°, Azm290.0000°;*

*GCMT **13** 20:06:35.3±0.2,22°.65N±0°.01×121°.39E±0°.01,h30^{km}, MW6.2/134,Moment Tensor Solution. s53,c70; s134,c288; Duration: 3^{s}2 Moment tensor: Scale 10^{18} Nm; M_{rr}2.22±.11; $M_{\theta\theta}$0.45±.06; $M_{\phi\phi}$-2.67±.07; $M_{r\theta}$-1.03±.10; $M_{\theta\phi}$-1.22±.04; $M_{\phi r}$0.09±.10; Best double couple: $M_0$2.93300×10^{18} NP1:ϕ_s354.00000°,δ49.00000°, λ52.00000°. NP2:ϕ_s224.00000°,δ54.00000°,λ125.00000°. Principal axes: T 2.7630, Plg62.0000°, Azm194.0000°; N 0.3380, Plg28.0000°, Azm21.0000°; P -3.1020, Plg3.0000°, Azm290.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*BGR **13** 20:06:36.3±0.0,23°.09N×121°.32E,h33^{km},mb5.9, mB_BB6.3,Ms6.4*

*NEIC **13** 20:06:37,22°.69N×121°.38E,h22^{km},Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}1.53; $M_{\theta\theta}$0.39; $M_{\phi\phi}$-1.92; $M_{r\theta}$-1.08; $M_{\theta\phi}$-0.95; $M_{\phi r}$0.52; Fault plane solution: $M_0$2.33000×10^{18} NP1:ϕ_s230.00000°, δ53.00000°,λ137.00000°. NP2:ϕ_s349.00000°,δ57.00000°, λ46.00000°. Principal axes: T 2.3848, Plg54.0000°, Azm202.0000°; N -0.1225, Plg36.0000°, Azm17.0000°; P -2.2623, Plg2.0000°, Azm109.0000°;*

ISC 13 20:06:32.5±0.3**,22°.61N**±0°.02×**121°.44E**±0°.02**,h30^{km}**±2^{km}**, h31^{km}:pP-P,n1781,** σ**1^{s}55**/1895**,mb5.8**/420**,MS6.2**/234**, 95C-189D,Fault plane solution: NP1:**ϕ_s359.58490°**,** δ44.54546°**,**λ55.81669°. **NP2:**ϕ_s223.20531°**,**δ54.52898°**,** λ118.94251°. **Principal axes:** T Plg66.1035°**,** Azm190.8492°**;** N Plg23.2110°**,** Azm25.4139°**;** P Plg5.3721°**,** Azm293.1028°**; Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LDUT	**Ludao**	0.07	20	⇑*i*P	Pb	20 06 36.9	-0.8
	baz=65						
LDUT				*i* S	Sb	20 06 40.4	-0.9
	baz=65						
TTN	**Taitung**	0.31	298	⇑*i*P	Pb	20 06 38.9	-1.2

	baz=293						
TTN				S	Sb	20 06 44.5	-0.8
	baz=293						
EDH	**Donghe**	0.38	340	⇑P	Pb	20 06 39.5	-1.6
	baz=349						
EDH				S	Sb	20 06 45.0	-2.0
	baz=349						
TWGBT	**Beinan**	0.39	302	⇓P	Pb	20 06 39.7	-1.6
	baz=299						
TWG	**Pinlang**	0.40	301	⇓*i*P	Pb	20 06 39.8	-1.7
	baz=298						
TWG				*i* S	Sb	20 06 45.2	-2.3
	baz=298						
TWG	**Pinlang**	0.40	301		Pb	20 06 38.6	-2.8
TWG				Sg	Sn	20 06 51.8	+3.1
LONT	**Longtian**	0.41	316	⇑P	Pb	20 06 39.8	-1.8
	baz=316						
ECL	**Taimali**	0.45	268	⇓*i*P	Pb	20 06 40.2	-2.0
	baz=261						
ECL				*i* S	Sb	20 06 45.9	-2.9
	baz=261						
CHKT	**Chengkung**	0.49	352	⇑*i*P	Pb	20 06 41.1	-1.7
	baz=3.0						
CHKT				S	Sb	20 06 47.6	-2.2
	baz=3.0						
TAW	**Tawu**	0.57	244	⇓*i*P	Pb	20 06 42.3	-1.6
	baz=247						
TAW				S	Sb	20 06 49.7	-2.2
	baz=247						
LAY	**Lan-yu**	0.58	170	⇓*i*P	Pb	20 06 43.5	-0.7
	baz=157						
EAST	**Anshuo**	0.60	248	⇓*i*P	Pb	20 06 42.8	-1.7
	baz=241						
EAST				S	Sb	20 06 49.9	-2.9
	baz=241						
FULB	**Fuli**	0.60	347	⇑*i*P	Pb	20 06 42.7	-1.9
	baz=335						
FULB				*e*S	Sb	20 06 50.5	-2.4
	baz=335						
ELDTW	**Lidau**	0.70	326	⇓*i*P	Pb	20 06 43.7	-2.5
	baz=327						
ELDTW				S	Sb	20 06 52.2	-3.5
	baz=327						
SLIU	**Shizi**	0.71	237	⇓P	Pb	20 06 44.6	-1.8
	baz=232						
EYUL	**Yuli**	0.74	351	⇓P	Pn	20 06 44.9	-2.0
	baz=340						
EYUL				*e*S	Sb	20 06 56.4	-0.4
	baz=340						
TSMG	**Majia**	0.74	277	⇓*i*P	Pn	20 06 44.7	-2.2
	baz=272						
TSMG				*e*S	Sb	20 06 53.1	-3.8
	baz=272						
MASBT	**Mashibuluo**	0.75	270	⇓*i*P	Pn	20 06 45.0	-2.0
	baz=264						
MASBT				S	Sb	20 06 54.1	-2.9
	baz=264						
TWF1	**Yuli**	0.75	350	⇓*i*P	Pn	20 06 44.8	-2.2
	baz=339						
TWF1				S	Sb	20 06 55.5	-1.5
	baz=339						
SSD	**Sandimen**	0.76	280	⇓*i*P	Pn	20 06 44.9	-2.3
	baz=275						
SSD				*e*S	Sb	20 06 53.3	-4.1
	baz=275						
YULB	**Yu-li**	0.79	350		Pn	20 06 44.8	-2.8
YULB				Sg	Sb	20 06 55.7	-2.4
SCZT	**Fangliau**	0.80	253	⇓*i*P	Pn	20 06 46.0	-1.6
	baz=243						
SSPT	**Xinbi**	0.82	261	⇓*i*P	Pn	20 06 47.0	-0.9
	baz=255						
SSPT				S	Sb	20 06 57.3	-1.7
	baz=255						
SLGT	**Liugui**	0.83	298	⇓*i*P	Pn	20 06 46.4	-1.7
	baz=296						
STYH	**Taoyuan**	0.83	312	⇓P	Pn	20 06 46.4	-1.7
	baz=312						
STYT	**Tauyuan**	0.84	311	⇓*i*P	Pn	20 06 46.4	-1.9
	baz=310						
STYT				S	Sb	20 06 56.7	-2.9
	baz=310						
TSEB	**Hengchuen, Pin**	0.87	216	⇑*i*P	Pn	20 06 47.9	-0.7
	baz=215						
TSEB				*e*S	Sb	20 07 00.5	+0.2
	baz=215						
HGSD	**Ruisui**	0.88	359	⇑P	Pn	20 06 46.6	-2.1
	baz=11						
HGSD				*e*S	Sb	20 07 01.1	+0.5
	baz=11						
TSPT	**Pingtung City**	0.88	275	⇓P	Pn	20 06 48.1	-0.6
	baz=264						
TSPT				S	Sb	20 07 00.6	0.0
	baz=264						
TWKBT	**Hengchun**	0.89	221	⇑P	Pn	20 06 47.6	-1.2
	baz=210						
SGLT	**Jiouru**	0.89	278	⇓*i*P	Pn	20 06 48.3	-0.6
	baz=277						
HEN	**Hengchun**	0.89	227	⇑*i*P	Pn	20 06 48.0	-0.9
	baz=224						
TWK1	**Hengchun**	0.89	222	⇑*i*P	Pn	20 06 47.7	-1.2
	baz=218						
TWK1				S	Sn	20 07 00.3	-0.5
	baz=218						
EHY	**Hungye**	0.90	353	⇓*i*P	Pn	20 06 46.9	-2.1
	baz=344						
SNW	**Nanwan**	0.91	225	*e*P	Pn	20 06 48.7	-0.5
	baz=221						
SCST	**Cishan**	0.92	288	⇓P	Pn	20 06 48.8	-0.5
	baz=284						
SGST	**Jiashian**	0.92	301	⇓*i*P	Pn	20 06 47.7	-1.7
	baz=299						
SGST				S	Sn	20 06 60.0	-1.7
	baz=299						
TWM1	**Shoushan**	0.97	283	⇓*i*P	Pn	20 06 50.2	+0.2
	baz=280						
TWM1				*e*S	Sb	20 07 05.2	+2.0
	baz=280						
YUS	**Yu-Shan**	0.98	333	⇓*i*P	Pn	20 06 48.9	-1.8
	baz=327						
WTP	**Ta-pu**	0.99	310	⇓*i*P	Pn	20 06 49.6	-0.7
	baz=314						
WTP				S	Sn	20 07 03.0	-0.4
	baz=314						
TPUB	**Ta-pu**	1.02	313	⇓P	Pn	20 06 50.0	-0.7
	baz=312						
TPUB				S	Sn	20 07 02.3	-1.7
	baz=312						
TPUB	**Ta-pu**	1.02	313		Pn	20 06 49.2	-1.5
TPUB					Sn	20 07 02.1	-1.9
WLCH	**Liuqiu**	1.02	256	⇓*e*P	Pb	20 06 52.7	+1.2
	baz=240						
CHN1	**Nanshi**	1.02	304	⇓*i*P	Pn	20 06 50.7	0.0
	baz=308						
CHN1				*i* S	Sn	20 07 03.9	-0.1
	baz=308						
SNJT	**Kaohsiung City**	1.03	278	⇓*e*P	Pb	20 06 52.1	+0.3
	baz=275						
SNJT				S	Sb	20 07 08.0	+3.0
	baz=275						
TWP	**Hsiaoliuchiu**	1.03	255	⇓*e*P	Pb	20 06 52.9	+1.1
	baz=240						
KAU	**Kaohsiung**	1.05	268	*e*P	Pb	20 06 52.8	+0.7
	baz=265						
KAU				*e*S	Sb	20 07 08.0	+2.5
	baz=265						
EGFH	**Guangfu**	1.05	359	*e*P	Pn	20 06 50.1	-1.1
	baz=347						
SNST	**Tainan City**	1.06	305	⇓*i*P	Pn	20 06 51.3	0.0
	baz=312						
ALS	**Alishan**	1.07	327	⇓P	Pn	20 06 50.8	-0.9
	baz=327						
CHN4	**Tsaushan**	1.08	313	⇓*i*P	Pn	20 06 51.2	-0.3
	baz=313						
CHN4				*e*S	Sn	20 07 05.7	+0.3
	baz=313						
TWK	**Hsinying**	1.10	307	⇓*i*P	Pn	20 06 51.6	-0.2
	baz=314						
TWK				S	Sb	20 07 07.0	+0.1
	baz=314						
CHN3	**Shinhua**	1.10	295	⇓*i*P	Pb	20 06 52.9	0.0
	baz=292						
CHN3				S	Sb	20 07 08.7	+1.9
	baz=292						
VWDT	**VWDT**	1.17	346	⇓P	Pn	20 06 51.8	-1.0
	baz=354						
ESL	**Shilin**	1.20	360	⇓P	Pn	20 06 51.0	-2.1
TAI1	**Yung-k'ang**	1.20	291	⇓*i*P	Pb	20 06 54.0	-0.6
	baz=288						
TAI1				S	Sb	20 07 10.4	+0.6
	baz=288						
CHN5	**Tsauling**	1.21	324	⇓*i*P	Pn	20 06 53.4	0.0
	baz=324						
CHN5				*e*S	Sb	20 07 10.6	+0.4
	baz=324						
WHYT	**Xinyi Township**	1.21	333	⇓*i*P	Pn	20 06 53.2	-0.1
	baz=341						
WHYT				S	Sn	20 07 08.8	0.0
	baz=341						
SSLB	**Suanglung**	1.25	339	⇓P	Pn	20 06 53.3	-0.7
	baz=348						
SSLB	**Suanglung**	1.25	339		Pn	20 06 53.1	-0.9
SSLB					Sn	20 07 08.8	-1.1
CHN2	**Minshiung**	1.28	316	⇓*i*P	Pb	20 06 55.2	-0.7
	baz=315						
CHN2				*i* S	Sb	20 07 12.3	+0.2
	baz=315						
SCLT	**Jiali**	1.28	296	⇓*i*P	Pn	20 06 54.9	+0.6
	baz=293						
SCLT				*i* S	Sb	20 07 12.5	+0.4
	baz=293						
CHY	**Chiayi**	1.29	313	⇓*i*P	Pb	20 06 55.2	-0.9
	baz=312						
CHY				*i* S	Sb	20 07 12.0	-0.4
	baz=312						
ICHU	**Yijhu**	1.31	305	⇓*e*P	Pn	20 06 54.9	+0.2
	baz=303						
WGK	**Gukeng**	1.34	323	⇓*i*P	Pb	20 06 56.1	-1.0
	baz=322						
WGK				S	Sb	20 07 14.0	+0.1
	baz=322						
CHN8	**Yiju**	1.35	303	⇓*i*P	Pn	20 06 55.6	+0.3
	baz=301						
CHN8				S	Sn	20 07 12.4	+0.3
	baz=301						
WDLH	**Douliu**	1.36	322	⇓*i*P	Pn	20 06 56.2	+0.9
	baz=321						
WDLH				S	Sb	20 07 14.3	-0.1
	baz=321						
SMLT	**Sun Moon Lake**	1.36	339	⇓*i*P	Pn	20 06 55.4	-0.1
	baz=346						
SMLT				S	Sn	20 07 13.2	+0.6
	baz=346						
HWA	**Hwalien**	1.37	6	⇑P	Pn	20 06 54.4	-1.1
	baz=16						
WJS	**Zhushan**	1.37	331	⇓*i*P	Pb	20 06 56.7	-0.8
	baz=331						
WJS				S	Sb	20 07 14.5	-0.3
	baz=331						
TYC	**Yuchr**	1.40	337	⇓*e*P	Pn	20 06 56.2	+0.4
	baz=338						
TYC				S	Sb	20 07 14.8	-0.5
	baz=338						
WNT	**Mingjian**	1.44	331	⇓*i*P	Pb	20 06 57.8	-1.0
	baz=330						
WNT				S	Sb	20 07 15.8	-1.0
	baz=330						
WTK	**Tuku**	1.45	318	⇓P	Pn	20 06 57.2	+0.6
	baz=316						
WTK				*e*S	Sn	20 07 15.4	+0.9
	baz=316						
CHGB	**Renai**	1.46	350	⇓P	Pn	20 06 56.2	-0.8
	baz=1.0						
WPL	**Puli Township**	1.47	342	⇓P	Pn	20 06 57.0	+0.1
	baz=352						
WPL				S	Sn	20 07 15.9	+0.9
	baz=352						
WNT1	**Nantou City**	1.47	332	⇓P	Pb	20 06 58.2	-1.0
	baz=331						
WNT1				S	Sb	20 07 17.2	-0.3
	baz=331						
TWD	**Chiawan**	1.47	5	P	Pn	20 06 55.5	-1.4
	baz=355						
DPDB	**Guoxing**	1.49	342	⇓P	Pn	20 06 57.8	+0.5
	baz=353						
WSF	**Szhu**	1.52	313	⇓*i*P	Pn	20 06 57.8	+0.2
	baz=311						
WSF				S	Sn	20 07 16.7	+0.3
	baz=311						
WCS	**Beigang Elemen**	1.52	341	⇓P	Pn	20 06 58.1	+0.5
	baz=352						
WHF	**Hehuan Shan**	1.54	354	⇓P	Pn	20 06 56.9	-1.3
	baz=5.0						
NACB	**Ninganchiao**	1.56	5	⇓P	Pn	20 06 56.4	-1.8
	baz=354						
NACB				*e*S	Sn	20 07 14.7	-2.7
	baz=354						
NACB	**Ninganchiao**	1.56	5		Pn	20 06 56.3	-1.8
ETLH	**Xiulin Townshi**	1.59	1	⇓*e*P	Pn	20 06 56.9	-1.7
	baz=1.0						
RLNB	**Erlin**	1.62	322	⇓P	Pn	20 06 59.4	+0.4
	baz=320						
WMLT	**Mailiao**	1.64	317	*e*P	Pn	20 06 58.7	-0.4
	baz=315						
WMLT				*e*S	Sn	20 07 19.5	+0.3
	baz=315						
FUSS	**Fushou**	1.64	354	⇓*e*P	Pn	20 06 58.9	-0.6
	baz=4.0						
TWT	**Tachien**	1.65	351	⇓*i*P	Pn	20 06 59.4	-0.2
	baz=350						
TDCB	**Techi**	1.66	351	⇓P	Pn	20 06 59.3	-0.3
	baz=350						
WCHH	**Zhanghua**	1.67	331	⇓*i*P	Pn	20 07 00.7	+1.0
	baz=318						
WCHH				S	Sb	20 07 21.9	-1.4
	baz=318						
TCU	**Taichung**	1.69	335	⇓P	Pn	20 07 01.1	+1.3
	baz=333						
WHP	**Taichung City**	1.72	345	⇓*e*P	Pn	20 07 01.1	+0.6
	baz=353						
WHP				*e*S	Sn	20 07 23.0	+1.6
	baz=353						
WDGT	**Dungji**	1.77	292	⇓*i*P	Pn	20 07 00.5	-0.5
	baz=288						
WDGT				*i* S	Sn	20 07 20.3	-2.1
	baz=288						
NNSB	**Datong**	1.81	358	⇓P	Pn	20 07 00.8	-0.9
	baz=7.0						
NNSH	**Datong**	1.81	358	⇓*e*P	Pn	20 07 00.8	-0.9
	baz=10.0						
NNS	**Nan Shan**	1.82	358	P	Pn	20 07 01.3	-0.5
	baz=10.0						
ENA	**Nanau**	1.83	9	⇑P	Pn	20 07 00.9	-1.0
	baz=356						
TWQ1	**Liyutan**	1.84	341	⇓*i*P	Pn	20 07 03.0	+1.1
	baz=339						
TWQ1				S	Sb	20 07 26.1	-1.9
	baz=339						
WDJ	**Dajia District**	1.88	337	⇓*e*P	Pn	20 07 03.6	+1.0
	baz=335						
WDJ				S	Sb	20 07 28.2	-1.1
	baz=335						
NSY	**Sanyi**	1.90	341	⇓*i*P	Pn	20 07 04.1	+1.2
	baz=339						
NSY				*i* S	Sb	20 07 28.5	-1.5
	baz=339						
PHUB	**P'eng-hu**	1.94	298	⇓P	Pn	20 07 02.8	-0.6
	baz=295						
PHUB				S	Sn	20 07 25.1	-1.7
	baz=295						
VCHM	**Qimei**	1.95	288	⇓P	Pn	20 07 02.9	-0.6
	baz=285						
VCHM				S	Sn	20 07 25.5	-1.5
	baz=285						
PNG	**Penghu**	1.98	299	⇓*i*P	Pn	20 07 03.5	-0.5
	baz=296						
PNG				*i* S	Sn	20 07 26.2	-1.5
	baz=296						
NDT	**Datong Townshi**	1.98	2	*e*P	Pn	20 07 03.4	-0.6
	baz=1.0						
NMLH	**Miaoli**	2.01	343	⇓*e*P	Pn	20 07 05.2	+0.8
	baz=340						
ENTT	**Nioudou**	2.02	3	*e*P	Pn	20 07 03.9	-0.6
	baz=3.0						
TWC	**Suao**	2.02	10	⇑*i*P	Pn	20 07 04.1	-0.4
	baz=20						
NDS	**Dongshan**	2.03	7	*e*P	Pn	20 07 04.4	-0.2
	baz=356						
YHNB	**Yeheng**	2.05	358	Pn	Pn	20 07 04.6	-0.4
NSTT	**Nanjuang**	2.05	349	*e*P	Pn	20 07 05.7	+0.8
	baz=346						
NSK	**Sanguang**	2.06	358	P	Pn	20 07 05.0	-0.1
	baz=10.0						
LIOB	**Emei**	2.06	349	⇓P	Pn	20 07 06.0	+0.9
	baz=347						
TWE	**Neicheng**	2.11	6	*e*P	Pn	20 07 04.9	-0.8
	baz=5.0						
NJN	**Zhunan**	2.13	346	*e*P	Pn	20 07 06.5	+0.6
	baz=343						
NJD	**Zhudong**	2.14	351	*e*P	Pn	20 07 07.7	+1.5
	baz=336						
NJD				*e*S	Sb	20 07 34.6	-2.2
	baz=336						
NWLT	**Wulai**	2.16	1	*e*P	Pn	20 07 05.9	-0.5
	baz=1.0						
ILA	**Ilan**	2.16	7	*e*P	Pn	20 07 06.8	+0.4
	baz=357						
HSN1	**Hsinchu**	2.19	350	*e*P	Pn	20 07 07.7	+0.9
	baz=347						
BBP	**Basco**	2.21	167	*e*P	Pn	20 07 06.3	-0.8
SBCB	**Hsinchu**	2.21	349	⇓P	Pn	20 07 07.7	+0.6
	baz=347						
HSN	**Hsinchu**	2.23	349	*e*P	Pn	20 07 08.3	+1.0
	baz=347						
NTC	**Toucheng**	2.26	9	*e*P	Pn	20 07 08.3	+0.5
	baz=357						
JYNG	**Yonagunijimaku**	2.29	37	⇓P	Pn	20 07 08.2	0.0
JYNG				*e*S	Sn	20 07 36.1	+0.7
YOJ	**Yonaguni jima**	2.34	38	⇓*e*P	Pn	20 07 09.1	+0.3
	baz=39						
YOJ	**Yonaguni jima**	2.34	38	⇓P	Pn	20 07 09.0	+0.2
YOJ				*e*S	Sn	20 07 37.6	+1.1
YOJ	**Yonaguni jima**	2.34	38	P	Pn	20 07 08.7	-0.1
YOJ	**Yonaguni jima**	2.34	38	Pn	Pn	20 07 08.7	-0.1
NHDH	**Xindian Distri**	2.34	2	*e*P	Pn	20 07 09.0	+0.1
	baz=11						
TATO	**Taipei**	2.35	1	⇓P	Pn	20 07 09.3	+0.2
	baz=10.0						
TATO	**Taipei**	2.35	1		Pn	20 07 08.8	-0.2
NCUH	**Zhongli**	2.36	354	*e*P	Pn	20 07 09.9	+0.7
	baz=336						
NCU	**National Centr**	2.36	354	*e*P	Pn	20 07 09.9	+0.8
	baz=336						
TWA	**Mucha**	2.36	3	*e*P	Pn	20 07 09.2	0.0
	baz=12						
BACT	**New Taipei Cit**	2.38	360	*e*P	Pn	20 07 11.1	+1.7
	baz=11						
TIPB	**Shuangxi**	2.38	8	*e*P	Pn	20 07 09.8	+0.3
	baz=356						
TIPB				*e*S	Sn	20 07 37.0	-0.6
	baz=356						
NTY	**Taoyuan**	2.38	357	*e*P	Pn	20 07 10.7	+1.2
	baz=8.0						
TAP	**Taipei**	2.42	1	*e*P	Pn	20 07 10.1	+0.1
	baz=11						
TWB1	**Santiao Chiao**	2.44	12	*e*P	Pn	20 07 10.4	+0.2
	baz=21						
TWB1				*e*S	Sn	20 07 41.1	+2.1
	baz=21						
NWF	**Wu-fen Shan**	2.47	7	*e*P	Pn	20 07 10.9	+0.2
	baz=6.0						
WFSB	**Wu-fen Shan**	2.47	7	*e*P	Pn	20 07 10.8	+0.2
	baz=4.0						
WFSB				*e*S	Sn	20 07 41.4	+1.6
	baz=4.0						
TWS1	**Kuangyinshan**	2.48	359	*e*P	Pn	20 07 11.3	+0.5
	baz=8.0						
TWS1				*e*S	Sn	20 07 42.1	+2.0
	baz=8.0						
NTST	**Danshui**	2.54	0	*e*P	Pn	20 07 11.8	+0.2
	baz=11						
TNOU	**National Taiwa**	2.55	7	*e*P	Pn	20 07 11.4	-0.3
	baz=5.0						
ANP	**Anpu**	2.56	2	*e*P	Pn	20 07 12.1	+0.1
	baz=14						
HATJ	**Hateruma jima**	2.60	56	⇓P	Pn	20 07 12.5	0.0
HATJ				*e*S	Sn	20 07 43.9	+0.8
TWY	**Chenhua**	2.66	3	*e*P	Pn	20 07 13.5	+0.2
	baz=1.0						
NSM	**Shimen**	2.67	3	*e*P	Pn	20 07 14.2	+0.8
	baz=1.0						
IRIF	**Iriomote-Funau**	2.71	50	P	Pn	20 07 14.1	+0.1
IRIF				*e*S	Sn	20 07 47.1	+1.4
JKRS	**Kuro-shima**	2.86	55	⇓P	Pn	20 07 16.3	+0.3
JKRS				*e*S	Sn	20 07 50.3	+0.9
VWUC	**VWUC**	2.99	323	⇓P	Pn	20 07 17.2	-0.6
	baz=318						
JIJ	**Ishigaki jima**	3.03	54	⇓P	Pn	20 07 18.0	-0.4
JIJ				*e*S	Sn	20 07 53.2	-0.4
PCYT	**Pengchaiyu**	3.06	11	*e*P	Pn	20 07 19.6	+0.9
	baz=358						
PTMZ	**Houxiangcun**	3.22	319	⇓P	Pn	20 07 20.5	-0.5
	baz=314						
PTTC	**Pingtan**	3.26	332	⇓*e*P	Pn	20 07 20.9	-0.6
	baz=331						
PTTC				*e*S	Sn	20 07 57.5	-1.7
	baz=331						
JISG	**Ishigakijimahi**	3.28	53	⇓P	Pn	20 07 21.3	-0.5
JISG				S	Sn	20 07 59.0	-0.9
KNM	**Kinmen**	3.30	304	⇓*i*P	Pn	20 07 22.9	+0.9
	baz=300						
KNM				*e*S	Sn	20 08 00.9	+0.8
	baz=300						
KNMB	**Chin-men Tao**	3.36	304	⇓P	Pn	20 07 22.2	-0.6
	baz=302						
KNMB				*e*S	Sn	20 07 59.3	-2.3
	baz=302						
KNMB	**Chin-men Tao**	3.36	304		Pn	20 07 22.2	-0.6
QZH	**Quanzhou**	3.50	312	⇑*i*Pn	Pn	20 07 23.8	-0.9
QZH				Sn	Sn	20 08 01.3	-3.8
QZH				smax	smax		
	comp=N,9µm,0.6s						
QZH				smax	smax		
	comp=E,11µm,0.7s						
QZH				LR	LR		
	comp=N,344µm,18.9s						
QZH				LR	LR		
	comp=E,288µm,16.3s						
QZH				LR	LR		
	comp=Z,396µm,16.1s						
JTJ	**Tarama**	3.61	55	⇓P	Pn	20 07 26.1	-0.2
JTJ				S	Sn	20 08 08.8	+0.9
MATB	**Ma-tsu**	3.78	339	⇓*e*P	Pn	20 07 27.8	-0.9
	baz=334						
MSUT	**Lienchiang**	3.81	339	*e*P	Pn	20 07 28.2	-0.8
	baz=334						
AXDP	**Jialang**	3.92	306	⇓P	Pn	20 07 30.2	-0.3
	baz=302						
JIRB	**Irabujima**	4.07	56	⇓P	Pn	20 07 32.3	-0.3
JIRB				*e*S	Sn	20 08 19.6	+0.4
MHZQ	**Yeshan**	4.11	328	⇓*e*P	Pn	20 07 32.6	-0.6
	baz=322						
JMJ2	**Miyako jima3**	4.14	58	⇓P	Pn	20 07 33.8	+0.1
JMJ2				*e*S	Sn	20 08 21.0	-0.1
JMJ	**Miyako jima 2**	4.16	57	⇓P	Pn	20 07 33.8	0.0
	baz=61						
JMJ				S	Sn	20 08 21.3	-0.1
	baz=61						
JIKM	**Ikemajima**	4.18	56	P	Pn	20 07 33.9	-0.2
JIKM				*e*S	Sn	20 08 20.8	-1.1
LYJJ	**Jianjiangzhen**	4.21	339	⇓*e*P	Pn	20 07 33.8	-0.8
	baz=335						
JOGS	**Gusukube**	4.22	59	⇓P	Pn	20 07 34.8	+0.1
JOGS				S	Sn	20 08 24.0	+1.1
SGCP	**Mt. Cagua**	4.38	172	*e*P	Pn	20 07 37.5	+0.5
SGCP				*e*S	Sn	20 08 31.5	+4.5
SIPP	**Brgy, Tapao**	4.75	191	⇑*e*P	Pn	20 07 44.1	+2.1
SIPP				*e*S	Sn	20 08 23.0	-13
VDOS	**Pratas Island**	4.78	247	*e*P	Pn	20 07 43.1	+0.7
	baz=251						
CVP	**Callao Caves**	4.89	176	⇑*i*P	Pn	20 07 44.3	+0.3
CVP				*i* S	Sn	20 08 44.8	+5.1
SZP	**Santa**	5.12	191	*e*P	Pn	20 07 50.9	+3.8
	baz=192						
SZP	**Santa**	5.12	191		Pn	20 07 48.7	+1.6
JKE	**Kume jima 2**	6.11	52	⇓P	Pn	20 07 59.2	-1.5
JKE				*e*S	Sn	20 09 05.3	-4.3
BCP	**Baguio City**	6.21	187	⇓*i*P	Pn	20 08 04.9	+2.6
BCP				*i* S	Sn	20 09 04.3	-8.1
BOLP	**Bolinao**	6.36	193	*e*P	Pn	20 08 07.8	+3.5
BOLP				*e*S	Sn	20 09 26.5	+11
SMPP	**San Manuel, Pa**	6.47	187	*e*P	Pn	20 08 06.3	+0.6
JAGN	**Aguni-jima**	6.60	52	P	Pn	20 08 05.9	-1.5
HKC	**Hong Kong Obse**	6.73	269	⇑P	Pn	20 08 10.0	+0.8
HKPS	**Hong Kong Po S**	6.76	269	⇓*e*P	Pn	20 08 09.8	+0.1
	baz=265						
BALP	**Baler**	6.83	179	*e*P	Pn	20 08 13.6	+2.9
BALP				*e*S	Sn	20 09 31.9	+4.4
JNTH	**Nagotoyohara**	7.14	56	P	Pn	20 08 13.6	-1.2
JNTH				*e*S	Sn	20 09 30.9	-4.1
MCO	**Taipa Grande**	7.32	268	P	Pn	20 08 18.0	+0.7
JIH	**Iheya**	7.38	52	P	Pn	20 08 16.4	-1.8

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JIH                              eS    Sn      20 09 36.7 -4.2
GZH   Guangzhou        7.49 275   Pn    Pn      20 08 16.3 -3.3
GZH                               Sn    Sn      20 09 40.3 -3.2
GZH                               smax  smax
      comp=N,4µm,0.8s
GZH                               smax  smax
      comp=E,4µm,0.8s
JOW   Kunigami         7.50  55   Pn    Pn      20 08 16.9 -2.9
      49nm,0.3s,baz=173,slow=15,SNR=102
JOW                               Sn    Sn      20 09 40.8 -3.0
      34nm,0.3s,baz=317,slow=29,SNR=1.5
JOW   Kunigami         7.50  55   P     Pn      20 08 17.4 -2.4
JOW                              eS    Sn      20 09 40.4 -3.4
JOW   Kunigami         7.50  55   Pn    Pn      20 08 18.2 -1.6
JYRO  Yoronjima        7.73  54 ⇓P     Pn      20 08 20.2 -2.8
JYRO                             eS    Sn      20 09 46.2 -3.4
QVP   Quezon City--P   7.96 183  eP    Pn      20 08 30.6 +4.6
JOKE  Okinoerabujima   8.01  52   P     Pn      20 08 24.4 -2.4
MACP  Maragondon, Ca   8.33 185  eP    Pn      20 08 35.7 +4.4
JCNP  Jose Panganiba   8.36 172  eP    Pn      20 08 31.3 -0.3
JCNP                             eS    Sn      20 09 59.0 -6.1
LQP   Lukban           8.45 179⇓eP    Pn      20 08 35.6 +2.5
SSE   Sheshan          8.46 358   P     Pn      20 08 31.3 -1.6
SSE                               S     Sn      20 10 08.8 +1.5
SSE                               pmax  pmax
      comp=Z,4µm,11.6s
SSE   Sheshan          8.46 358   Pn    Pn      20 08 30.7 -2.1
TGY   Tagaytay City    8.48 183   Pn    Pn      20 08 37.7 +4.4
      41nm,0.3s,baz=124,slow=11,SNR=15
TGY                               LR    LR      20 12 38.3
      comp=Z,66µm,21.6s,baz=22,slow=43
TGY   Tagaytay City    8.48 183⇓eP    Pn      20 08 20.8  -12
JTK   Tokunoshima      8.53  51   P     Pn      20 08 30.9 -3.0
GQP   Guinayangan      8.71 174⇓eP    Pn      20 08 39.7 +3.2
GQP                              eS    Sn      20 10 15.3 +1.6
LUBP  Lubang           8.90 188  eP    Pn      20 08 38.7 -0.4
BOAC  Boac             9.11 178  eP    Pn      20 08 49.3 +7.4
SCSP  San Jose Seism   9.12 167  eP    Pn      20 08 46.9 +4.7
JAM   Amami Oshima     9.36  50   P     Pn      20 08 42.1 -3.2
JMZ   Minamidaito 2    9.48  68  eS    Sn      20 10 21.9  -11
JMZ   Minamidaito 2    9.48  68   Pn    Pn      20 08 45.0 -2.0
JKDJ  Kitadaitoujima   9.58  68   P     Pn      20 08 45.1 -3.3
JKDJ                             eS    Sn      20 10 25.6 -9.4
NJ2   Nanjing          9.68 347 ⇓P     Pn      20 08 48.8 -0.9
NJ2                               S     Sn      20 10 37.9 +0.5
NJ2                               pmax  pmax
      comp=Z,18nm,0.5s
NJ2                               smax  smax
      comp=N,3µm,1.1s
NJ2                               smax  smax
      comp=E,2µm,1.4s
NJ2                               LR    LR
      comp=N,246µm,14.2s
NJ2                               LR    LR
      comp=Z,280µm,14.0s
WHN   Wuhan           10.13 323 ⇓P     Pn      20 08 54.3 -1.6
WHN                               pP            20 08 58.8
WHN                               sP            20 09 02.0
WHN                               S     Sn      20 10 50.1 +1.6
WHN                               pmax  pmax
      comp=Z,270nm,0.6s
WHN                               LR    LR
      comp=N,234µm,10.0s
WHN                               LR    LR
      comp=E,370µm,15.4s
WHN                               LR    LR
      comp=Z,366µm,12.6s
BUSP  Coron           10.62 187  eP    Pn      20 09 04.6 +2.0
QIZ   Qiongzhong      11.42 254   P     Pn      20 09 11.8 -1.8
QIZ                               S     Sn      20 11 18.8 -1.3
QIZ                               LR    LR
      comp=N,156µm,14.9s
QIZ                               LR    LR
      comp=E,132µm,15.8s
QIZ                               LR    LR
      comp=Z,180µm,17.5s
QIZ   Qiongzhong      11.42 254   Pn    Pn      20 09 13.9 +0.3
ENPP  El Nido         11.50 190  eP    Pn      20 09 14.6 -0.2
CUYO  Cuyo Island     11.70 182  eP    Pn      20 09 23.9 +6.4
OCLP  Ormoc           11.89 165  eP    Pn      20 09 25.6 +5.6
JSU   Suzuyama        11.95  40   Pn    Pn      20 09 20.1 -0.7
GUIM  Jordan          11.97 175  eP    Pn      20 09 21.5 +0.5
CNOP  Candoni, Negro  12.76 175  eP    Pn      20 09 33.8 +1.8
MSLP  Maasin          12.83 165  eP    Pn      20 09 35.4 +2.5
ENH   Enshi           13.14 308   Pn    Pn      20 09 36.4 -0.7
JNU   Nakatsue        13.38  36   Pn    Pn      20 09 39.3 -1.1
      1.0nm,0.3s,baz=220,slow=11,SNR=8.7
JNU                               Sn    Sn      20 12 11.6 +3.5
      0.8nm,0.3s,baz=203,slow=16,SNR=0.9
JNU                               LR    LR      20 15 40.9
      comp=Z,38µm,21.4s,baz=220,slow=41
JNU   Nakatsue        13.38  36   Pn    Pn      20 09 40.3 -0.1
GLSP  General Luna,   13.52 160  eP    Pn      20 09 46.4 +4.1
JTU   Tsushima        13.77  29   Pn    Pn      20 09 47.9 +2.3
GYA   Guiyang         13.99 289 ⇓P     Pn      20 09 48.6 -0.1
GYA                               LR    LR
      comp=N,93µm,16.6s
GYA                               LR    LR
      comp=Z,166µm,14.9s
TIA   Tai'an          14.06 345   P     Pn      20 09 50.4 +0.8
TIA                               pmax  pmax
      comp=Z,9.0nm,0.5s
TIA                               LR    LR
      comp=N,128µm,12.8s
TIA                               LR    LR
      comp=Z,205µm,12.8s
BUTP  Butuan          14.14 163  eP    Pn      20 09 54.0 +3.2
BATP  Bataraza        14.17 195  eP    Pn      20 09 52.6 +1.4
CGP   Cagayan de Oro  14.42 167⇓eP    P       20 10 01.9 +0.8
TJN   Taejon          14.65  19⇓eP    Pn      20 10 00.3 +2.7
PAGZ  Pagadian        14.80 172  eP    P       20 10 05.0 -0.2
INCN  Inchon          15.48  16   P     Pn      20 10 09.8 +1.1
INCN                              pmax  pmax
      comp=Z,284nm,1.1s
INCN  Inchon          15.48  16   P     Pn      20 10 09.8 +1.1
KSAR  Wonju Array Be  15.79  19   P     P       20 10 15.5 -0.7
KSAR  Wonju Array Be  15.79  19   P     P       20 10 15.5 -0.7
KSRS  Korea Array     15.81  19   Pn    Pn      20 10 14.2 +1.3
      comp=Z,3.5nm,0.3s,baz=193,slow=12,SNR=93
KSRS                              Sn    Sn      20 13 11.7 +4.5
      comp=Z,0.0nm,0.3s,baz=143,slow=21,SNR=2.0
KSRS                              PcP   PcP     20 15 09.7 -1.4
      comp=Z,0.3nm,0.3s,baz=186,slow=1.7,SNR=5.3
KSRS                              LR    LR      20 16 46.1
      comp=Z,32µm,19.4s,baz=206,slow=39
KSRS                              ScP   ScP     20 18 41.2 -2.1
      comp=Z,0.1nm,0.3s,baz=187,slow=1.8,SNR=7.7
XAN   Xi'an           15.83 319   P     Pn      20 10 13.4 +0.2
XAN                               pP    P       20 10 19.6 +2.8
XAN                               S     Sn      20 13 09.3 +1.5
XAN                               pmax  pmax
      comp=Z,490nm,1.6s
XAN                               pmax  pmax
      comp=Z,17µm,9.4s
XAN                               LR    LR
      comp=Z,118µm,15.9s
XAN                               LR    LR
      comp=Z,238µm,15.5s
XAN   Xi'an           15.83 319   P     Pn      20 10 12.9 -0.4
XAN                               pmax  pmax
      comp=Z,962nm,1.5s
XAN   Xi'an           15.83 319   Pn    Pn      20 10 12.9 -0.4
XAN                               IAmb  IAmb    20 10 35.3
      comp=Z,962nm,1.5s
KS19  Wonju Array Si  15.84  19   P     Pn      20 10 14.8 +1.5
KCP   Kidapawan       15.90 167⇓iP    P       20 10 18.8 +1.2
DAV   Davao City (W)  15.96 165   Pn    P       20 10 18.8 +0.6
      comp=Z,19nm,0.3s,baz=310,slow=13,SNR=4.4
DAV                               LR    LR      20 16 18.8
      comp=Z,62µm,21.3s,baz=347,slow=37
DAV   Davao City (W)  15.96 165   IAmb  IAmb    20 11 04.4
      comp=Z,1µm,1.4s
JHS   Saijyo          16.01  37         Pn      20 10 13.1 -2.5
DL2   Dalian          16.25   1   P     P       20 10 21.3 +0.1
DL2                               pmax  pmax
      comp=Z,240nm,1.2s
DL2                               pmax  pmax
      comp=Z,16µm,7.6s
DL2                               LR    LR
      comp=Z,48µm,12.7s
DL2                               LR    LR
      comp=Z,106µm,15.1s
SKMP  Bagumbayan, Su  16.27 169  eP    P       20 10 21.5 -0.2
DLV   T  Lat          16.28 231   P     P       20 10 22.8 +0.8
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SLVN  Son La          16.32 269   P     P       20 10 22.3  0.0
UBPT  Khong Chiam     16.77 247   P     P       20 10 28.2 +1.1
      comp=Z,4µmcomp=Z,152nm,1.6s
UBPT  Khong Chiam     16.77 247         P       20 10 26.9 -0.2
DDMP  Don Marcelino,  16.92 165  eP    P       20 10 30.3 +1.5
TIY   Taiyuan         16.93 335  eP    Pn      20 10 26.5 -0.7
TIY                               pP    pP      20 10 33.9 -2.9
TIY                               sP    sP      20 10 38.8 -1.8
TIY                               PP    PnPn    20 10 42.8 +5.7
TIY                               S     S       20 13 39.6 -4.5
TIY                               sS    sS      20 13 47.4 -9.0
TIY                               SS    SnSn    20 13 56.4 +8.3
TIY                               pmax  pmax
      comp=Z,14µm,7.2s
TIY                               LR    LR
      comp=Z,257µm,13.0s
TIY                               LR    LR
      comp=Z,179µm,11.1s
TIY                               LR    LR
      comp=Z,299µm,13.9s
KKM   Kota Kinabalu   17.23 198   P     P       20 10 32.5 +0.1
KMI   Kunming         17.29 282 ⇓P     Pn      20 10 31.8 -0.1
KMI                               pP    pP      20 10 38.0 -3.0
KMI                               sP    sP      20 10 41.1 -3.8
KMI                               PP    PnPn    20 10 49.3 +7.1
KMI                               S     Sn      20 13 45.9 +2.3
KMI                               pmax  pmax
      comp=Z,130nm,1.6s
KMI                               pmax  pmax
      comp=Z,7µm,5.6s
KMI                               LR    LR
      comp=Z,48µm,17.6s
KMI                               LR    LR
      comp=Z,91µm,15.4s
KMI                               LR    LR
      comp=Z,109µm,15.2s
KMI   Kunming         17.29 282   P     P       20 10 32.7 -0.5
KMI                               pmax  pmax
      comp=Z,239nm,1.1s
KMI   Kunming         17.29 282   P     P       20 10 32.7 -0.5
JWT   Wachi           17.54  41   P     Pn      20 10 34.8 +0.1
MYLDM Lahad Datu      17.56 190   P     P       20 10 38.5 +2.5
MYLDM                             IAmb  IAmb    20 11 17.3
      comp=Z,1µm,1.3s
NONG  Nongkai         17.74 259   P     P       20 10 41.0 +3.1
      comp=Z,306nm,0.8s
CD2   Chengdu         17.81 301⇓iP    Pn      20 10 38.1 -0.1
CD2                               pP    pP      20 10 44.9 -1.5
CD2                               PP    sP      20 10 53.3 +3.1
CD2                               S     Sn      20 13 54.5 -1.4
CD2                               sS    S       20 14 03.5 +1.5
CD2                               SS    SnSn    20 14 15.9 +6.4
CD2                               pmax  pmax
      comp=Z,400nm,1.3s
CD2                               pmax  pmax
      comp=Z,9µm,6.5s
CD2                               LR    LR
      comp=Z,187µm,20.4s
CD2                               LR    LR
      comp=Z,177µm,13.9s
CD2                               LR    LR
      comp=Z,244µm,15.3s
BJT   Baijiatuau      17.92 347   P     P       20 10 40.0 +0.2
BJT                               pmax  pmax
      comp=Z,264nm,1.0s
BJT   Baijiatuau      17.92 347   P     P       20 10 40.0 +0.2
BJI   Beijing         17.94 347   P     P       20 10 41.3 +1.3
BJI                               pmax  pmax
      comp=Z,100nm,1.3s
SPMM  Sapulut         18.44 196   P     Pn      20 10 51.0 +5.1
INU   Inuyama         18.59  44         Pn      20 10 49.0 +1.5
INU                               IAmb  IAmb    20 11 06.2
      comp=Z,652nm,1.0s
JSG   Sagara          18.95  47   P     Pn      20 10 53.3 +1.3
JSG                               IAmb  IAmb    20 11 10.1
      comp=Z,691nm,0.8s
JGF   Kuroka          18.96  43   P     Pn      20 10 53.1 +0.9
JGF                               IAmb  IAmb    20 11 07.3
      comp=Z,369nm,1.1s
SGSI  Sangihe         19.23 168   P     Pn      20 10 56.1 +0.7
      comp=Z,6µmcomp=Z,483nm,0.7s
SNY   Shenyang        19.25   5 ⇑P     Pn      20 10 55.3 -0.1
SNY                               LR    LR
      comp=Z,67µm,13.1s
SNY                               LR    LR
      comp=Z,32µm,13.2s
SNY                               LR    LR
      comp=Z,105µm,13.5s
JHJ   Hachijo jima 2  19.27  53   P     Pn      20 10 57.4 +1.6
      comp=Z,20nm,0.3s,baz=169,slow=5.8,SNR=10
JHJ                               S     S       20 14 38.9 +7.7
      comp=Z,5.3nm,0.3s,baz=156,slow=20,SNR=1.4
JHJ2  Mitsune         19.29  53         Pn      20 10 57.2 +1.2
JCJ   Chichijima      19.34  72   P     Pn      20 10 56.6 -0.1
      comp=Z,16nm,0.3s,baz=228,slow=3.5,SNR=5.8
JCJ                               S     Sn      20 14 39.1 +6.4
      baz=291,slow=23,SNR=1.3
JCJ   Chichijima      19.34  72   P     Pn      20 10 57.0 +0.3
JCJ                               IAmb  IAmb    20 11 36.7
      comp=Z,730nm,1.0s
CHAI  Chaiyaphum      19.53 253   P     Pn      20 10 59.0 -0.1
      comp=Z,4µmcomp=Z,479nm,0.9s
HHC   Hu-ho-hao-te    20.01 338  eP    Pn      20 11 04.8 +0.2
HHC                               pmax  pmax
      comp=Z,140nm,1.5s
HHC                               pmax  pmax
      comp=Z,11µm,6.6s
HHC                               LR    LR
      comp=Z,172µm,15.0s
HHC                               LR    LR
      comp=Z,165µm,18.0s
HHC                               LR    LR
      comp=Z,163µm,16.1s
MAJO  Matsushiro      20.09  43⇑eP    Pn      20 11 06.1 +0.6
MAJO                              pmax  pmax
      comp=Z,49nm,0.8s
MAJO                              MLR   MLR
      comp=Z,30µm,20.0s
MAJO  Matsushiro      20.09  43   P     Pn      20 11 05.4 -0.2
MAJO                              IAmb  IAmb    20 11 19.1
      comp=Z,263nm,0.9s
MAT   Matsushiro      20.09  43   P     P       20 11 04.2 +0.6
MAT                              eS    S       20 14 45.0 -2.8
MJB9  Matsu-Tunnel    20.09  43   P     P       20 11 03.0 -0.6
MJAR  Matsushiro Arr  20.09  43   P     P       20 11 04.0 +0.4
      comp=Z,41nm,0.8s,baz=231,slow=10,SNR=69
MJAR                              S     Sn      20 14 53.1 +2.3
      comp=Z,1.1nm,0.7s,baz=198,slow=7.7,SNR=1.2
MJAR                              ScP   ScP     20 18 51.4 -1.1
      comp=Z,24nm,1.1s,baz=230,slow=3.1,SNR=14
MJAR                              LR    LR      20 19 12.0
      comp=Z,31µm,19.8s,baz=265,slow=38
MJAR  Matsushiro Arr  20.09  43   P     P       20 11 04.0 +0.4
MJAR  Matsushiro Arr  20.09  43   P     P       20 11 04.5 +0.9
MJAR                              ScP   ScP     20 18 51.5 -1.0
UTTA  Uttaradit       20.19 260   P     Pn      20 11 06.7 -0.1
      comp=Z,1µmcomp=Z,145nm,0.8s
SRAK  Srakaew         20.29 248   P     P       20 11 03.2 -2.6
      comp=Z,36µmcomp=Z,4µm,1.0s
LZH   Lanzhou         20.34 315 ⇓P     Pn      20 11 09.0 +0.3
LZH                               pP    sP      20 11 16.5 -1.6
LZH                               S     Sn      20 14 57.3 +0.2
LZH                               pmax  pmax
      comp=Z,180nm,1.4s
LZH                               pmax  pmax
      comp=Z,15µm,8.1s
LZH                               LR    LR
      comp=Z,88µm,12.5s
LZH                               LR    LR
      comp=Z,94µm,15.2s
LZH                               LR    LR
      comp=Z,96µm,15.7s
PHIT  Phitsanulok     20.49 259   P     Pn      20 11 10.2 -0.1
      comp=Z,12µmcomp=Z,2µm,1.0s
LAMP  Lampang         20.82 263   P     Pn      20 11 13.8 -0.4
      comp=Z,5µmcomp=Z,658nm,0.9s
JSD   Sado            21.09  39   P     P       20 11 14.4  0.0
JSD                               IAmb  IAmb    20 11 27.0
      comp=Z,694nm,1.3s
SUKH  Sukhothai       21.11 260   P     P       20 11 16.7 +2.0
      comp=Z,3µmcomp=Z,357nm,1.0s
CM34  Chiang Mai Arr  21.18 264   P     P       20 11 17.0 +1.5
JYT   Yasato          21.18  46   P     P       20 11 14.4 -1.0
CM35  Chiang Mai Arr  21.22 263   P     P       20 11 17.0 +1.1
CM36  Chiang Mai Arr  21.31 263   P     P       20 11 18.0 +1.1
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CM33  Chiang Mai Arr  21.37 264   P     P       20 11 19.0 +1.4
CMMT  Chiang Mai      21.37 264   P     P       20 11 18.1 +0.5
      comp=Z,6µmcomp=Z,189nm,1.2s
CHTO  Chiang Mai      21.38 264   P     P       20 11 18.6 +0.9
CHTO                              pmax  pmax
      comp=Z,354nm,1.1s
CHTO                              MLR   MLR
      comp=Z,134µm,18.0s
CHTO  Chiang Mai      21.38 264   P     P       20 11 18.6 +0.9
CHTO                              IAmb  IAmb    20 11 32.7
      comp=Z,354nm,1.1s
TOLI2 Tolitoli        21.38 182   P     P       20 11 17.8 +0.1
TOLI2                             IAmb  IAmb    20 11 26.7
      comp=Z,392nm,0.9s
CN2   Changchun       21.39   8  eP    P       20 11 16.9 -0.7
CN2                               pP    pP      20 11 21.1 -4.5
CN2                               sP    sP      20 11 23.9 -5.5
CN2                               LR    LR
      comp=Z,41µm,14.0s
CN2                               LR    LR
      comp=Z,99µm,15.0s
CM09  Chiang Mai Arr  21.43 263   P     P       20 11 20.2 +2.0
      comp=Z,2µmcomp=Z,260nm,1.0s
CM04  Chiang Mai Arr  21.45 263   P     P       20 11 20.4 +2.0
      comp=Z,2µmcomp=Z,238nm,0.9s
CM01  Chiang Mai Arr  21.46 263   P     P       20 11 20.6 +2.0
      comp=Z,2µmcomp=Z,276nm,1.0s
CM31  Chiang Mai Arr  21.47 263   P     P       20 11 20.5 +1.9
      comp=Z,49µmcomp=Z,6µm,0.8s
CM31  Chiang Mai Arr  21.47 263   P     P       20 11 20.4 +1.8
CM31                              IAmb  IAmb    20 11 31.2
      comp=Z,220nm,0.8s
CMAR  Chiang Mai Arr  21.47 263   P     P       20 11 20.1 +1.5
      comp=Z,84nm,0.8s,baz=68,slow=9.3,SNR=346
CMAR                              PcP   PcP     20 15 22.0 +0.8
      comp=Z,19nm,0.8s,baz=66,slow=0.4,SNR=15
CMAR                              ScP   ScP     20 18 54.5 -1.6
      comp=Z,4.0nm,1.0s,baz=9.9,slow=1.1,SNR=5.3
CMAR                              LR    LR      20 20 49.2
      comp=Z,103µm,18.4s,baz=107,slow=40
CMAR                              PKiKP PKiKP   20 23 06.0 -2.2
      comp=Z,0.8nm,0.7s,baz=267,slow=1.7,SNR=3.7
CMAR                              P3KP          20 45 58.5
      comp=Z,0.8nm,1.1s,baz=308,slow=4.4,SNR=4.1
CM02  Chiang Mai Arr  21.47 263   P     P       20 11 20.6 +2.0
      comp=Z,2µmcomp=Z,243nm,0.9s
CM05  Chiang Mai Arr  21.48 263   P     P       20 11 20.0 +1.3
      comp=Z,1µmcomp=Z,201nm,0.9s
CM15  Chiang Mai Arr  21.48 263   P     P       20 11 20.0 +1.2
      comp=Z,2µmcomp=Z,278nm,0.9s
MSHR  Mys Shultsa     21.50  20⇑eP    P       20 11 20.4 +1.7
MSHR                              pmax  pmax
      comp=Z,198nm,1.7s
MSHR                              MLR   MLR
      comp=Z,26µm,19.0s
CM32  Chiang Mai Arr  21.51 264   P     P       20 11 20.0 +1.0
CM13  Chiang Mai Arr  21.51 263   P     P       20 11 20.9 +1.9
      comp=Z,1µmcomp=Z,207nm,0.9s
PATY  Pattaya         21.81 247   P     P       20 11 29.2 +6.9
GTOI  Gorontalo       21.90 176   P     P       20 11 22.8 -0.4
      comp=Z,656nm,0.9s
UTHA  Uthaitani       21.93 255   P     P       20 11 25.0 +1.5
      comp=Z,4µmcomp=Z,420nm,0.9s
SBUM  Sibu            21.95 205   P     P       20 11 24.1 +0.3
SBUM                              IAmb  IAmb    20 11 27.5
      comp=Z,397nm,1.0s
SBUM  Sibu            21.95 205   P     P       20 11 24.0 +0.3
MRSI  Marisa          22.00 179   P     P       20 11 25.6 +1.3
      comp=Z,16µmcomp=Z,1µm,1.1s
KMSI  Cibinong        22.04 173   P     P       20 11 25.0 +0.3
      comp=Z,8µmcomp=Z,996nm,1.1s
UMPA  Umpang Tak      22.22 257   P     P       20 11 29.0 +2.3
      comp=Z,6µmcomp=Z,740nm,1.1s
TNTI  Ternate         22.46 164   P     P       20 11 28.0 -1.2
TNTI                              IAmb  IAmb    20 11 32.4
      comp=Z,437nm,0.9s
TNTI  Ternate         22.46 164   P     P       20 11 27.8 -1.4
      comp=Z,581nm,0.9s
MHMT  Maesarieng      22.47 263   P     P       20 11 30.0 +0.6
      comp=Z,10µmcomp=Z,569nm,1.1s
JMM   Marumori        22.53  43   P     P       20 11 28.1 -1.7
JMM                               IAmb  IAmb    20 11 36.2
      comp=Z,333nm,0.8s
PHET  Kaeng Krachan   22.88 249   P     P       20 11 37.3 +3.6
      comp=Z,4µmcomp=Z,367nm,0.8s
MDJ   Mudanjiang      22.95  15   P     P       20 11 34.3 +0.1
MDJ                               pP    pP      20 11 39.3 -3.0
MDJ                               sP    sP      20 11 41.4 -4.6
MDJ                               S     S       20 15 44.3 +2.0
MDJ                               pmax  pmax
      comp=Z,86nm,1.3s
MDJ                               pmax  pmax
      comp=Z,8µm,5.2s
MDJ                               LR    LR
      comp=Z,68µm,15.0s
MDJ                               LR    LR
      comp=Z,46µm,16.4s
MDJ                               LR    LR
      comp=Z,92µm,14.2s
MDJ   Mudanjiang      22.95  15   P     P       20 11 33.8 -0.4
MDJ                               IAmb  IAmb    20 11 42.1
      comp=Z,193nm,0.9s
USA0B Ussuriysk Arra  23.22  20⇑eP    P       20 11 38.3 +1.4
USA0B Ussuriysk Arra  23.22  20   P     P       20 11 36.1 -0.8
USRK  Ussuriysk Ar.   23.22  20   P     P       20 11 36.8 -0.1
      comp=Z,16nm,0.7s,baz=201,slow=11,SNR=34
USRK                              PcP   PcP     20 15 24.1 -0.1
      comp=Z,7.8nm,0.8s,baz=222,slow=2.6,SNR=3.5
USRK                              S     S       20 15 49.1 +2.2
      comp=Z,3.1nm,0.9s,baz=151,slow=23,SNR=1.7
USRK                              ScP   ScP     20 18 57.0 -3.1
      comp=Z,6.8nm,0.7s,baz=248,slow=3.4,SNR=7.5
USRK                              LR    LR      20 21 01.9
      comp=Z,23µm,21.2s,baz=183,slow=37
USRK  Ussuriysk Ar.   23.22  20         ScP     20 18 58.2 -1.9
USRK  Ussuriysk Ar.   23.22  20   P     P       20 11 36.0 -1.0
APSI  Ampana          23.38 179   P     P       20 11 40.0 +1.3
      comp=Z,12µmcomp=Z,794nm,0.9s
LUWI  Luwuk           23.54 177   P     P       20 11 39.2 -1.1
LUWI  Luwuk           23.54 177   P     P       20 11 39.6 -0.7
      comp=Z,2µm,1.0s
KSM   Kuching         23.63 209   P     P       20 11 40.5 -0.7
KSM                               IAmb  IAmb    20 11 45.5
      comp=Z,375nm,1.0s
KSM   Kuching         23.63 209   P     P       20 11 41.0 -0.2
ANA2  Anatahan        23.70 101   P     P       20 11 43.4 +1.6
GUMO  Guam            23.98 108   P     P       20 11 45.0 +0.5
      comp=Z,392nm,0.7s,baz=188,slow=6.0,SNR=18
GUMO                              LR    LR      20 19 38.5
      comp=Z,17µm,20.1s,baz=316,slow=33
GUMO  Guam            23.98 108   P     P       20 11 45.0 +0.5
GUMO  Guam            23.98 108   P     P       20 11 44.6 +0.1
GUMO  Guam            23.98 108   P     P       20 11 46.1 +1.6
BKB   Balikpapan      24.14 191   P     P       20 11 46.2 +0.3
MTKI  Muara Teweh, K  24.26 196   P     P       20 11 47.4 +0.3
      comp=Z,11µmcomp=Z,890nm,1.1s
STKI  Sintang         24.42 205   P     P       20 11 50.4 +1.9
      comp=Z,81nm,0.7s
JTM   Tenmabayashi    24.54  38   P     P       20 11 49.1 -0.4
JTM                               IAmb  IAmb    20 12 01.9
      comp=Z,269nm,0.8s
MOKO  MOKOCHONG       24.77 284  eP    P       20 11 51.6 -0.2
MOKO                              IAmb  IAmb    20 12 09.3
      comp=Z,848nm,1.9s
GTA   Gaotai          24.88 317 ⇓P     P       20 11 53.6 +0.9
GTA                               pP    pP      20 12 01.4 +0.2
GTA                               sP    sP      20 12 05.3 +0.4
GTA                               PcP   PcP     20 15 30.1 +2.0
GTA                               S     S       20 16 12.9 -1.1
GTA                               sS    pS      20 16 21.3 -2.6
GTA                               ScP   ScP     20 19 04.8 -0.2
GTA                               pmax  pmax
      comp=Z,61nm,1.3s
GTA                               pmax  pmax
      comp=Z,7µm,8.0s
GTA                               LR    LR
      comp=Z,39µm,14.2s
GTA                               LR    LR
      comp=Z,67µm,16.4s
GTA                               LR    LR
      comp=Z,83µm,16.7s
SANI  Sanana          24.91 169   P     P       20 11 49.7 -3.2
KOHI  KOHIMA          25.11 283  eP    P       20 11 53.3 -1.7
KOHI                              IAmb  IAmb    20 12 01.5
      comp=Z,126nm,0.5s
SWI   Sorong          25.22 156   P     P       20 11 56.1 +0.4
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      comp=Z,9µmcomp=Z,182nm,1.0s
SIJI  Sorong           25.22 156   P        P         20 11 55.8  0.0
      comp=Z,86nm,0.6s,baz=5.3,slow=8.4,SNR=30
ZIRO  ZIRO             25.44 287  eP        P         20 11 58.9 +1.0
TTSI  Tana Toraja      25.55 184   P        P         20 11 59.1 +0.4
      comp=Z,8µmcomp=Z,449nm,0.9s
TRTT  Trang            25.56 238   P        P         20 11 59.6 +0.7
      comp=Z,127nm,1.1s
TEY   Ternei           25.58  25⇑eP         P         20 11 58.2 -0.6
TEY                                pmax     pmax
      comp=Z,10.0nm,2.0s
TEY                                MLR      MLR
      comp=E,900nm,13.0s
TEY                                MLR      MLR
      comp=N,600nm,15.0s
TEY                                MLR      MLR
      comp=Z,900nm,17.0s
SURT  Suratani         25.62 242   P        P         20 12 03.9 +4.4
      comp=Z,64nmcomp=Z,6.6nm,1.1s
JEW   Eniwo            26.15  35   P        P         20 12 04.6 +0.6
KBKI  Kotabaru         26.26 192   P        P         20 12 07.3 +2.1
      comp=Z,3µmcomp=Z,281nm,0.8s
NLAI  Namlea           26.28 167   P        P         20 12 06.6 +1.3
      comp=Z,850nm,1.0s
TEZP  TEZPUR           26.32 285  eP        P         20 12 06.0 +0.3
TEZP                               IAmb     IAmb      20 12 13.8
      comp=Z,400nm,1.4s
KULM  Kulim            26.46 233   P        P         20 12 07.4 +0.4
KULM  Kulim            26.46 233   P        P         20 12 08.0 +1.0
SPSI  Sidrap Palu      26.46 184   P        P         20 12 07.3 +0.3
      comp=Z,369nm,1.1s
ERM   Erimo            26.54  38   P        P         20 12 08.2 +0.8
ERM                                pmax     pmax
      comp=Z,284nm,0.9s
ERM   Erimo            26.54  38   P        P         20 12 08.2 +0.8
ERM                                IAmb     IAmb      20 12 25.7
      comp=Z,284nm,0.8s
PKDT  Phuket           26.61 240   P        P         20 12 10.8 +2.5
HIA   Hailar           26.64 358⇓eP         P         20 12 09.5 +1.2
HIA                                pmax     pmax
      comp=Z,15nm,1.5s
HIA                                MLR      MLR
      comp=Z,62µm,17.0s
HIA   Hailar           26.64 358   P        P         20 12 08.7 +0.4
HIA                                IAmb     IAmb      20 12 54.1
      comp=Z,210nm,1.5s
HIA   Hailar           26.64 358   IAMs_20  IAMs_20   20 24 03.5
      comp=Z,63µm,18.0s
BBKI  Banjar Baru      26.70 195   P        P         20 12 10.1 +0.9
      comp=Z,7µmcomp=Z,417nm,1.7s
IPM   Ipoh             26.74 231   P        P         20 12 09.1 -0.5
IPM                                IAmb     IAmb      20 12 16.2
      comp=Z,139nm,1.0s
IPM   Ipoh             26.74 231   P        P         20 12 10.0 +0.4
MSAI  Masohi           26.81 163   P        P         20 12 11.1 +0.9
      comp=Z,64nm,1.0s
MYKOM Kota Tinggi      26.84 222   P        P         20 12 10.1 -0.4
MYKOM Kota Tinggi      26.84 222   P        P         20 12 11.0 +0.6
BNSI  Bone             26.88 183   P        P         20 12 11.0 +0.3
      comp=Z,391nm,1.0s
PBKI  Pangkalan Bun    26.91 202   P        P         20 12 12.6 +1.6
      comp=Z,213nm,1.0s
SHL   Shillong         27.12 282   P        P         20 12 12.8 -0.4
SHL                                pmax     pmax
      comp=Z,546nm,0.9s
SHL                                MLR      MLR
      comp=Z,54µm,20.0s
SHL   Shillong         27.12 282  eP        P         20 12 14.6 +1.5
SHL                                IAmb     IAmb      20 12 23.0
      comp=Z,147nm,0.9s
SHL   Shillong         27.12 282   P        P         20 12 12.8 -0.4
SHL                                IAMs_20  IAMs_20   20 24 04.1
      comp=Z,54µm,20.0s
SHL   Shillong         27.12 282   P        P         20 12 15.5 +2.4
      SNR=187
GUWA  GUWAHATI         27.30 284  eP        P         20 12 15.2 +0.6
FAKI  Fak Fak          27.48 156   P        P         20 12 15.8 -0.4
FAKI                               IAmb     IAmb      20 12 19.9
      comp=Z,154nm,0.9s
FAKI  Fak Fak          27.48 156   P        P         20 12 18.6 +2.4
      comp=Z,220nm,0.9s
BRDH  Bariadhala       27.48 276   P        P         20 12 16.7 +0.5
      comp=Z,0.1nm,0.5s,baz=5.7,slow=10
KAPI  Kappang          27.50 184   P        P         20 12 16.4  0.0
      comp=Z,80nm,0.8s,baz=17,slow=5.9,SNR=32
KAPI                               ScP      ScP       20 19 11.1 -1.7
      comp=Z,19nm,0.9s,baz=5.6,slow=3.7,SNR=6.1
KAPI                               LR       LR        20 23 39.4
      comp=Z,19µm,21.9s,baz=3.0,slow=37
KAPI  Kappang          27.50 184   P        P         20 12 15.8 -0.6
KAPI                               IAmb     IAmb      20 12 29.7
      comp=Z,208nm,0.8s
KAPI  Kappang          27.50 184   IAMs_20  IAMs_20   20 24 39.7
      comp=Z,15µm,20.0s
KAPI  Kappang          27.50 184   P        P         20 12 16.3  0.0
KAPI                               P        P         20 12 16.3  0.0
BELO  BELONIA          27.61 277  eP        P         20 12 19.8 +2.4
ASAJ  Asahikawa        27.64  34   P        P         20 12 18.9 +1.5
      comp=Z,52nm,0.7s,baz=237,slow=8.0,SNR=32
ASAJ                               S        S         20 17 03.3 +6.1
      comp=Z,10nm,1.0s,baz=282,slow=23,SNR=1.7
ASAJ                               ScP      ScP       20 19 10.2 -2.6
      comp=Z,25nm,0.9s,baz=273,slow=11,SNR=9.3
ASAJ                               LR       LR        20 23 04.1
      comp=Z,34µm,21.7s,baz=244,slow=36
JKA   Kamikawa-asahi   27.64  34   P        P         20 12 19.0 +1.6
JKA                                IAmb     IAmb      20 12 29.6
      comp=Z,129nm,0.8s
ULN   Ulaanbaatar      27.71 339⇓eP         P         20 12 17.8 -0.4
ULN                                pmax     pmax
      comp=Z,23nm,1.1s
ULN                                MLR      MLR
      comp=Z,135µm,16.0s
ULN   Ulaanbaatar      27.71 339   P        P         20 12 16.9 -1.2
ULN                                IAmb     IAmb      20 12 29.7
      comp=Z,135nm,0.8s
AGT   Agartala         27.75 279  eP        P         20 12 20.1 +1.5
AGT                                IAmb     IAmb      20 12 28.1
      comp=Z,169nm,0.9s
BKSI  Bulukumba        27.79 183   P        P         20 12 20.3 +1.4
      comp=Z,122nm,0.8s
KLR   Kul'dur          27.79  15   P        P         20 12 20.0 +1.3
      comp=Z,15nm,0.5s,baz=198,slow=7.1,SNR=42
KLR                                PcP      PcP       20 15 34.5  0.0
      comp=Z,14nm,0.9s,baz=279,slow=3.9,SNR=3.6
KLR                                S        S         20 17 04.8 +5.3
      comp=Z,2.8nm,0.9s,baz=320,slow=23,SNR=1.1
KLR                                ScP      ScP       20 19 10.8 -2.3
      comp=Z,17nm,0.9s,baz=263,slow=3.5,SNR=13
KLR                                LR       LR        20 24 24.2
      comp=Z,38µm,19.1s,baz=195,slow=38
SONM  Songino Array    27.91 338   P        P         20 12 18.8 -1.1
      comp=Z,18nm,0.8s,baz=152,slow=9.7,SNR=121
SONM                               PcP      PcP       20 15 34.3 -0.7
      comp=Z,22nm,1.2s,baz=168,slow=2.6,SNR=3.1
SONM                               ScP      ScP       20 19 11.4 -2.3
      comp=Z,13nm,1.1s,baz=148,slow=3.0,SNR=7.4
SONM                               PKiKP    PKiKP     20 23 10.7 -0.3
      comp=Z,1.6nm,0.8s,baz=169,slow=4.4,SNR=2.0
SONM                               LR       LR        20 25 02.3
      comp=Z,69µm,18.7s,baz=151,slow=40
SONM                               P3KPbc             20 44 42.0
      comp=Z,0.5nm,0.7s,baz=328,slow=5.1,SNR=3.0
SONM  Songino Array    27.91 338   P        P         20 12 18.4 -1.5
LSA   Lhasa            28.04 291   P        P         20 12 23.6 +2.0
LSA                                S        S         20 17 06.3 +1.5
LSA                                pmax     pmax
      comp=Z,160nm,1.0s
LSA                                LR       LR
      comp=Z,23µm,14.2s
LSA                                LR       LR
      comp=Z,28µm,12.8s
LSA                                LR       LR
      comp=Z,37µm,17.8s
LSA   Lhasa            28.04 291  iP        P         20 12 23.7 +2.0
      SNR=154
LSA   Lhasa            28.04 291   P        P         20 12 23.3 +1.6
LSA                                pmax     pmax
      comp=Z,384nm,0.7s
LSA                                MLR      MLR
      comp=Z,66µm,19.0s
LSA   Lhasa            28.04 291   P        P         20 12 23.3 +1.6
LSA                                IAMs_20  IAMs_20   20 24 16.0
      comp=Z,66µm,19.0s
TPI   Tanjungpandan    28.58 210   P        P         20 12 29.4 +3.4
      comp=Z,203nm,1.1s
BSSI  Bau Bau, Buton   28.59 182   P        P         20 12 37.6  +12
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DGPR  DIGLIPUR         28.66 256  eP        P         20 12 29.5 +2.7
DGPR                               IAmb     IAmb      20 12 39.7
      comp=Z,122nm,0.9s
PPBI  Pangkal Pinang   28.80 213   P        P         20 12 31.7 +3.8
      comp=Z,108nm,1.3s
TSI   Tuntungan        29.19 233   P        P         20 12 35.4 +3.9
      comp=Z,10µmcomp=Z,317nm,0.8s
LHMI  Lhok Sumawe      29.30 238   P        P         20 12 33.2 +0.7
LHMI                               IAmb     IAmb      20 12 47.8
      comp=Z,211nm,0.8s
LHMI  Lhok Sumawe      29.30 238   P        P         20 12 35.0 +2.5
      comp=Z,292nm,0.9s
PSI   Prapat           29.41 231   P        P         20 12 33.9 +0.4
      comp=Z,75nm,1.0s,baz=360,slow=6.2,SNR=25
PSI                                PcP      PcP       20 15 38.8 -0.5
      comp=Z,18nm,0.7s,baz=179,slow=4.1,SNR=4.1
PSI                                ScP      ScP       20 19 16.5 -2.5
      comp=Z,19nm,0.8s,baz=0.2,slow=3.4,SNR=10
PSI                                LR       LR        20 23 38.3
      comp=Z,24µm,21.9s,baz=89,slow=35
PBA   Port Blair       29.45 253   P        P         20 12 33.4 -0.4
PBA                                IAmb     IAmb      20 12 53.6
      comp=Z,117nm,1.0s
RPSI  Rantau Prapat    29.48 231            ScP       20 19 16.5 -2.5
JMBI  JAMBI            29.70 218   P        P         20 12 39.1 +3.2
      comp=Z,7µmcomp=Z,422nm,1.3s
BKNI  Bangkinang       29.75 225   P        P         20 12 36.4 +0.1
BKNI  Bangkinang       29.75 225   P        P         20 12 39.6 +3.2
      comp=Z,6µmcomp=Z,275nm,1.2s
YSS   Yuzh-Sakhalins   29.75  30  eP        P         20 12 37.2 +1.1
YSS                               eS        S         20 17 22.7 -7.6
YSS                                pmax     pmax
      comp=Z,290nm,1.1s
YSS                                pmax     pmax
      comp=Z,5µm,11.7s
YSS                                MLR      MLR
      comp=Z,17µm,16.0s
YSS                                MLR      MLR
      comp=N,10µm,19.0s
YSS   Yuzh-Sakhalins   29.75  30   P        P         20 12 36.4 +0.3
CIT   Chita            29.99 350  eP        P         20 12 43.1 +4.9
CIT                               e                   20 13 41.5
CIT                               e                   20 13 58.1
CIT                               e                   20 15 40.5
CIT                               e                   20 19 08.9
CIT                                pmax     pmax
      comp=Z,163nm,1.9s
GTK   Tadong           30.09 286  eP        P         20 12 40.4 +0.9
PMBI  Palembang        30.15 215   P        P         20 12 41.1 +1.2
PMBI  Palembang        30.15 215   P        P         20 12 44.6 +4.6
TPTI                   30.38 234   P        P         20 12 42.5 +0.5
      comp=Z,27nm,0.9s
GRNR  Gornyy           30.44  19⇑iP         P         20 12 44.1 +1.9
GRNR                              eS        S         20 17 47.9 +6.7
GRNR                               pmax     pmax
      comp=E,3.0nm,0.8s
GRNR                               pmax     pmax
      comp=N,3.0nm,1.2s
GRNR                               pmax     pmax
      comp=Z,4.0nm,1.2s
GRNR                               smax     smax
      comp=N,2.0nm,1.1s
GRNR                               MLR      MLR
      comp=E,8µm,17.0s
GRNR                               MLR      MLR
      comp=N,5µm,20.0s
GRNR                               MLR      MLR
      comp=Z,15µm,15.0s
SDSI  Sungai Dareh     30.46 222   P        P         20 12 44.5 +1.8
      comp=Z,122nm,1.0s
TAPN  Taplejung        30.88 286  eP        P         20 12 47.9 +1.2
      comp=Z,238nm,0.9s
TAPN  Taplejung        30.88 286  eP        ScP       20 19 22.8 -1.0
GENI  Genyem           31.01 142   P        P         20 12 54.5 +7.0
ABJI  Asem Bagus       31.03 194   P        P         20 12 53.8 +6.1
PDSI  Padang           31.06 224   P        P         20 12 48.9 +0.9
      comp=Z,81nm,1.1s
MMRI  Maumere          31.06 178   P        P         20 12 47.4 -0.6
MMRI  Maumere          31.06 178   P        P         20 12 48.1 +0.1
      comp=Z,7µmcomp=Z,509nm,1.4s
SRBI  Singaraja        31.11 192   P        P         20 12 49.2 +0.8
      comp=Z,108nm,1.2s
ZAK   Zakamensk        31.16 337  eP        P         20 12 48.5 -0.1
ZAK                                pmax     pmax
      comp=Z,46nm,1.0s
ODAN  Odare            31.16 285  eP        P         20 12 50.1 +1.0
      comp=Z,146nm,0.9s
ODAN  Odare            31.16 285  eP        ScP       20 19 23.4 -1.3
      comp=Z,281nm,1.2s
EDFI  Ende, Flores     31.17 180   P        P         20 12 48.3 -0.7
      comp=Z,4µmcomp=Z,329nm,1.1s
KUR   Kuril'sk         31.22  37  eP        P         20 12 53.1 +4.1
KUR                                S        S         20 17 58.1 +4.8
KUR                                pmax     pmax
      comp=Z,278nm,1.0s
KUR                                pmax     pmax
      comp=Z,6µm,16.0s
JAY   Jayapura         31.26 141   LR       LR        20 24 05.7
      comp=Z,15µm,21.0s,baz=344,slow=34
SMRI  Semarang         31.38 201   P        P         20 12 52.8 +2.0
ZEA   Zeya             31.39   7  eP        P         20 12 49.5 -1.0
ZEA                               eS        S         20 17 49.7 -6.2
ZEA                                pmax     pmax
      comp=N,10.0nm,0.9s
ZEA                                pmax     pmax
      comp=Z,10.0nm,0.7s
ZEA                                smax     smax
      comp=N,2µm,16.4s
ZEA                                smax     smax
      comp=E,3µm,13.1s
ZEA                                MLR      MLR
      comp=N,41µm,13.0s
ZEA                                MLR      MLR
      comp=Z,37µm,13.0s
GSI   Gunungsitoli     31.41 231   P        P         20 12 50.6 -0.5
GSI                                IAmb     IAmb      20 12 58.2
      comp=Z,56nm,0.7s
GSI   Gunungsitoli     31.41 231   P        P         20 12 52.0 +0.9
      comp=Z,108nm,0.7s
PLAI  Plampang         31.45 187   P        P         20 12 51.6 +0.2
      comp=Z,296nm,0.9s
TWSI  Taliwang, Sumb   31.47 189   P        P         20 12 51.7 +0.1
      comp=Z,152nm,1.9s
LHSI  Lahat            31.58 216   P        P         20 12 54.1 +1.6
      comp=Z,186nm,0.9s
KLSI                   31.68 213   P        P         20 12 55.2 +1.8
      comp=Z,121nm,1.1s
DNP   Denpasar         31.69 192   P        P         20 12 54.3 +0.8
      comp=Z,968nm,0.9s
JAGI  Jajag, Banyuwa   31.70 194   P        P         20 12 53.8 +0.1
JAGI                               IAmb     IAmb      20 12 56.6
      comp=Z,85nm,0.9s
JAGI  Jajag, Banyuwa   31.70 194   P        P         20 12 54.6 +1.0
      comp=Z,144nm,0.9s
MASI  Maura Aman, Be   31.73 219   P        P         20 12 55.6 +1.7
      comp=Z,12µmcomp=Z,1µm,1.2s
RAMN  Ramite           31.87 285  eP        P         20 12 56.6 +1.3
      comp=Z,252nm,0.9s
RAMN  Ramite           31.87 285  eP        ScP       20 19 25.8 -1.3
      comp=Z,207nm,1.2s
SAUI  Saumlaki         31.90 161   P        P         20 12 53.0 -2.3
SAUI                               IAmb     IAmb      20 12 59.6
      comp=Z,143nm,0.8s
SAUI  Saumlaki         31.90 161   P        P         20 12 53.5 -1.8
      comp=Z,9µmcomp=Z,191nm,1.3s
KSI   Kapahiang        31.95 218   P        P         20 12 56.8 +1.0
      comp=Z,7µmcomp=Z,573nm,0.9s
BLSI  Bandar Lampung   32.01 212   P        P         20 12 57.2 +0.9
      comp=Z,158nm,0.7s
TNG   Tangerang        32.06 209   P        P         20 12 57.9 +1.1
      comp=Z,363nm,1.7s
WSI   Waingapu         32.10 182   P        P         20 12 54.2 -2.9
TLY   Talaya           32.12 339   P        P         20 12 56.6 -0.4
      comp=Z,12nm,0.6s,baz=203,slow=3.3,SNR=11
TLY                                PcP      PcP       20 15 45.3 -0.4
      comp=Z,13nm,0.7s,baz=197,slow=4.7,SNR=4.2
TLY                                ScP      ScP       20 19 25.5 -1.6
      comp=Z,3.9nm,0.8s,baz=185,slow=4.6,SNR=3.5
TLY   Talaya           32.12 339⇑eP         P         20 12 56.0 -1.0
TLY                                pmax     pmax
      comp=Z,11nm,0.6s
TLY                                MLR      MLR
      comp=Z,109µm,16.0s
TLY   Talaya           32.12 339   P        P         20 12 56.3 -0.7
UGM   Wanagama         32.16 201   P        P         20 12 58.7 +1.0
UGM   Wanagama         32.16 201   P        P         20 12 58.7 +1.0
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      comp=Z,436nm,1.3s
LEM   Lembang          32.24 206   P        P         20 12 59.4 +0.9
      comp=Z,138nm,0.8s
SOEI  Soe              32.28 175   P        P         20 12 56.2 -2.6
SOEI  Soe              32.28 175   P        P         20 12 57.3 -1.5
      comp=Z,5µmcomp=Z,375nm,0.9s
LWLI  Liwa             32.30 214   P        P         20 13 00.6 +1.6
      comp=Z,5µmcomp=Z,454nm,0.7s
MNAI  Manna            32.33 216   P        P         20 12 59.6 +0.4
MNAI  Manna            32.33 216   P        P         20 13 00.5 +1.4
      comp=Z,10µmcomp=Z,520nm,0.8s
DBJI  Dramaga          32.36 208   P        P         20 13 00.4 +1.0
      comp=Z,299nm,1.8s
IRK   Irkutsk          32.40 340  eP        P         20 13 05.8 +6.4
IRK                                pmax     pmax
      comp=Z,190nm,1.9s
KASI  Kota Agung       32.51 213   P        P         20 13 02.6 +1.9
      comp=Z,295nm,1.0s
GUN   Gumba            32.52 287  eP        P         20 13 02.3 +1.1
      comp=Z,244nm,0.9s
GUN   Gumba            32.52 287  eP        ScP       20 19 27.5 -1.9
      comp=Z,391nm,1.4s
BASI  Baing, Sumba     32.64 182   P        P         20 13 01.3 -0.5
      comp=Z,292nm,1.4s
BOK   Bokaro           32.65 279  eP        P         20 13 02.0  0.0
BOK                                IAmb     IAmb      20 13 14.5
      comp=Z,88nm,0.7s
BATI  Baumata          32.69 176   LR       LR        20 27 47.6
      comp=Z,21µm,20.7s,baz=322,slow=39
BATI  Baumata          32.69 176   P        P         20 13 00.2 -2.1
      comp=Z,3µmcomp=Z,232nm,0.9s
TYV   Tymovskoe        32.69  25  eP        P         20 13 04.1 +2.2
TYV                               eS        S         20 18 23.0 +6.8
TYV                                pmax     pmax
      comp=Z,28nm,2.1s
TYV                                smax     smax
      comp=E,16nm,1.0s
TYV                                MLR      MLR
      comp=E,18µm,15.0s
TYV                                MLR      MLR
      comp=Z,19µm,16.0s
CISI  Cisompet, Garu   32.82 206   P        P         20 13 03.4  0.0
CISI  Cisompet, Garu   32.82 206   P        P         20 13 05.1 +1.6
      comp=Z,200nm,0.9s
PKI   Pulchoki         32.93 286  eP        P         20 13 04.9 +0.1
      comp=Z,268nm,1.1s
PKI   Pulchoki         32.93 286  eP        ScP       20 19 29.1 -1.7
      comp=Z,292nm,1.2s
PKIN  Phulchoki        32.94 286  eP        P         20 13 04.8  0.0
PKIN  Phulchoki        32.94 286  eP        ScP       20 19 29.0 -1.8
      comp=Z,262nm,1.2s
MOY   Mondy            33.04 336  eP        P         20 13 04.6 -0.5
MOY                                pmax     pmax
      comp=Z,111nm,2.1s
KKN   Kakani           33.05 287  eP        P         20 13 06.2 +0.6
      comp=Z,276nm,1.1s
KKN   Kakani           33.05 287  eP        ScP       20 19 29.4 -1.7
      comp=Z,406nm,1.6s
DMN   Daman            33.20 286  eP        P         20 13 07.4 +0.4
      comp=Z,177nm,1.0s
DMN   Daman            33.20 286  eP        ScP       20 19 30.0 -1.7
      comp=Z,388nm,1.6s
BWNR  Bhubaneshwar     33.20 273  eP        P         20 13 06.5 -0.3
BWNR                               IAmb     IAmb      20 13 17.1
      comp=Z,222nm,1.5s
GKN   Gorkha           33.62 287  eP        P         20 13 10.8 +0.2
      comp=Z,68nm,0.8s
GKN   Gorkha           33.62 287  eP        ScP       20 19 31.1 -1.9
      comp=Z,161nm,1.2s
DANN  Dangsing         34.40 287  eP        P         20 13 18.0 +0.5
      comp=Z,216nm,0.9s
WMQ   Urumqi           34.93 315   P        P         20 13 23.6 +2.0
WMQ                                pP       pP        20 13 31.3 +1.0
WMQ                                pmax     pmax
      comp=Z,37nm,1.3s
WMQ                                pmax     pmax
      comp=Z,13µm,11.7s
WMQ                                LR       LR
      comp=Z,27µm,11.9s
WMQ                                LR       LR
      comp=Z,21µm,17.9s
WMQ   Urumqi           34.93 315   P        P         20 13 22.2 +0.6
WMQ                                pmax     pmax
      comp=Z,247nm,1.4s
WMQ                                MLR      MLR
      comp=Z,31µm,20.0s
WMQ   Urumqi           34.93 315   P        P         20 13 22.2 +0.6
WMQ                                IAmb     IAmb      20 13 40.3
      comp=Z,247nm,1.4s
MANU  Manus Island     35.21 131   P        P         20 13 25.8 +1.5
BOD   Bodaibo          35.58 353  eP        P         20 13 33.4 +6.5
BOD                                pmax     pmax
      comp=Z,20nm,1.9s
MTN   Manton Dam       36.49 164   P        P         20 13 31.7 -3.4
MTN                                IAmb     IAmb      20 13 37.1
      comp=Z,59nm,0.8s
DGZ   Jazzator, Alta   37.99 324⇓eP         P         20 13 48.5 +0.7
DGZ                                pmax     pmax
      comp=Z,47nm,0.9s
DGZ                                MLR      MLR
      comp=Z,75µm,17.0s
ZSN   Zaisan           38.34 319  eP        P         20 13 50.1 -0.5
      baz=319
ZSN                               eS        S         20 19 44.6 +1.5
      baz=319
ZSN   Zaisan           38.34 319  eP        P         20 13 50.0 -0.5
ZSN                               eS        S         20 19 44.5 +1.5
KNRA  Kununurra        38.72 169   P        P         20 13 52.1 -1.9
KNRA                               IAmb     IAmb      20 13 58.8
      comp=Z,167nm,1.2s
PATS  Pohnpei          38.81 108   P        P         20 13 55.7 +0.9
SKR   Severo-Kuril's   38.89  35  eP        P         20 13 57.8 +2.8
SKR                               ePPP      PPP       20 15 23.8
SKR                               eS        S         20 19 51.4 +0.3
SKR                               eSSS      SSS       20 22 34.0
SKR                                pmax     pmax
      comp=Z,2µm,5.9s
SKR                                pmax     pmax
      comp=Z,700nm,3.3s
SKR                                pmax     pmax
      comp=Z,318nm,1.3s
SKR                                MLR      MLR
      comp=Z,5µm,17.0s
SKR                                MLR      MLR
      comp=Z,5µm,19.0s
NGP   Nagpur           39.27 276  eP        P         20 13 59.3 +0.6
DDI   Dehra Dun        39.41 291  eP        P         20 14 00.9 +1.1
DDI                                IAmb     IAmb      20 14 13.3
      comp=Z,111nm,0.6s
MK31  Makanchi Array   39.64 317c iP        P         20 14 01.7 +0.2
MK31  Makanchi Array   39.64 317   P        P         20 14 01.5 +0.1
MK31                               IAmb     IAmb      20 14 12.0
      comp=Z,153nm,0.9s
MKAR  Makanchi Array   39.64 317   P        P         20 14 01.7 +0.2
      comp=Z,66nm,0.6s,baz=113,slow=9.4,SNR=177
MKAR                               PcP      PcP       20 16 05.5 -2.5
      comp=Z,22nm,0.8s,baz=92,slow=6.1,SNR=2.0
MKAR                               ScP      ScP       20 19 53.9 -0.9
      comp=Z,9.2nm,1.0s,baz=125,slow=6.1,SNR=4.8
MKAR                               LR       LR        20 30 49.4
      comp=Z,18µm,21.6s,baz=99,slow=37
MKAR                               P3KPbc             20 43 54.1
      comp=Z,0.2nm,0.6s,baz=284,slow=5.2,SNR=1.9
YAK   Yakutsk          39.80   6   P        P         20 14 01.7 -0.8
      comp=Z,12nm,0.6s,baz=201,slow=2.2,SNR=12
YAK                                PcP      PcP       20 16 07.2 -0.9
      comp=Z,16nm,0.4s,baz=135,slow=0.6,SNR=2.8
YAK                                ScP      ScP       20 19 51.6 -3.4
      comp=Z,7.2nm,0.4s,baz=152,slow=2.8,SNR=1.1
YAK                                LR       LR        20 32 12.4
      comp=Z,30µm,18.4s,baz=189,slow=39
YAK   Yakutsk          39.80   6  eP        P         20 14 04.7 +2.2
YAK                               e                   20 15 36.4
YAK                               e                   20 16 09.6
YAK                               eS        S         20 20 10.0 +5.4
YAK                               eSS       SS        20 22 56.5 -4.6
YAK                               e                   20 23 58.6
YAK                                pmax     pmax
      comp=Z,32nm,0.9s
YAK                                pmax     pmax
      comp=N,19nm,1.2s
YAK                                pmax     pmax
      comp=E,6.0nm,1.1s
YAK                                pmax     pmax
      comp=Z,1µm,6.1s
YAK                                pmax     pmax
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       comp=N,593nm,6.4s
YAK                                 pmax      pmax
       comp=E,578nm,6.8s
YAK                                 smax      smax
       comp=E,2µm,6.9s
YAK                                 smax      smax
       comp=N,2µm,8.6s
YAK                                 MLR       MLR
       comp=Z,51µm,15.0s
YAK                                 MLR       MLR
       comp=N,32µm,15.0s
YAK                                 MLR       MLR
       comp=E,12µm,14.0s
YAK    Yakutsk            39.80   6 P         P         20 14 01.3 -1.2
YAK                                 IAMs_20   IAMs_20   20 32 00.6
       comp=Z,30µm,18.0s
MAKZ   Makanchi           39.84 317 P         P         20 14 03.0 -0.2
MAKZ                                pmax      pmax
       comp=Z,190nm,0.9s
MAKZ                                MLR       MLR
       comp=Z,45µm,19.0s
MAKZ   Makanchi           39.84 317 P         P         20 14 03.0 -0.2
MAKZ                                IAmb      IAmb      20 14 13.8
       comp=Z,190nm,0.8s
RABL   Rabaul             40.13 128 P         P         20 14 06.8 +0.9
RABL                                IAmb      IAmb      20 14 28.7
       comp=Z,235nm,0.9s
RABL   Rabaul             40.13 128 P         P         20 14 07.9 +2.0
NDI    New Delhi          40.15 288 eP        P         20 14 09.0 +3.0
SMLA   Simla              40.18 292 eP        P         20 14 07.7 +1.6
SMLA                                IAmb      IAmb      20 14 19.8
       comp=Z,151nm,1.1s
MDRS   Chennai            40.23 264 eP        P         20 14 07.3 +0.5
MDRS                                IAmb      IAmb      20 14 18.1
       comp=Z,59nm,0.9s
SHLS   Shalkode           40.25 311 eP        P         20 14 04.2 -2.6
       comp=Z,61nm,1.0s,baz=311
SHLS                                eS        S         20 20 09.5 -2.8
       baz=311
SHLS   Shalkode           40.25 311 eP        P         20 14 04.1 -2.6
SHLS                                eS        S         20 20 09.4 -2.8
SHLS                                pmax      pmax
       comp=Z,61nm,1.0s
BHPL   Bhopal             40.43 280 eP        P         20 14 07.6 -0.8
BHPL                                IAmb      IAmb      20 14 18.6
       comp=Z,106nm,1.3s
HYB    Hyderabad          40.53 271 i P       P         20 14 09.0 -0.2
HYB    Hyderabad          40.53 271 eP        P         20 14 08.3 -0.9
HYB                                 IAmb      IAmb      20 14 19.2
       comp=Z,273nm,1.6s
UZB    Uzynbulak          40.56 311 eP        P         20 14 08.8 -0.5
       comp=Z,72nm,1.5s,baz=310
UZB                                 eS        S         20 20 18.1 +1.2
       baz=310
UZB    Uzynbulak          40.56 311 eP        P         20 14 08.8 -0.5
UZB                                 eS        S         20 20 18.0 +1.2
UZB                                 pmax      pmax
       comp=Z,72nm,1.5s
PMG    Port Moresby       40.59 139 LR        LR        20 30 04.4
       comp=Z,11µm,20.8s,baz=336,slow=35
PMG    Port Moresby       40.59 139 P         P         20 14 09.8 +0.2
PMG                                 pmax      pmax
       comp=Z,90nm,0.9s
PMG    Port Moresby       40.59 139 P         P         20 14 09.8 +0.2
PMG                                 IAmb      IAmb      20 14 14.9
       comp=Z,90nm,0.8s
PMG    Port Moresby       40.59 139 P         P         20 14 10.0 +0.4
FITZ   Fitzroy Crossi     40.67 174 ScP       ScP       20 19 57.4 -1.6
       comp=Z,13nm,0.8s,baz=333,slow=6.8,SNR=6.0
FITZ   Fitzroy Crossi     40.67 174 P         P         20 14 07.6 -2.5
FITZ                                IAmb      IAmb      20 14 11.6
       comp=Z,127nm,1.1s
FITZ                                ScP       ScP       20 19 58.6 -0.4
KPKS   Kokpek             40.89 311 eP        P         20 14 11.5 -0.4
       comp=Z,59nm,1.3s,baz=311
KPKS                                eS        S         20 20 22.8 +1.1
       baz=311
KPKS   Kokpek             40.89 311 eP        P         20 14 11.5 -0.4
KPKS                                eS        S         20 20 22.7 +1.1
KPKS                                pmax      pmax
       comp=Z,59nm,1.3s
DHRM   DHARAMSHALA        40.95 294 eP        P         20 14 13.8 +1.1
DHRM                                IAmb      IAmb      20 14 28.9
       comp=Z,92nm,0.7s
SATY   Saty               40.97 310 eP        P         20 14 12.7  0.0
       comp=Z,50nm,1.1s,baz=310
SATY                                eS        S         20 20 24.5 +1.6
       baz=310
SATY   Saty               40.97 310 eP        P         20 14 12.7  0.0
SATY                                eS        S         20 20 24.4 +1.6
SATY                                pmax      pmax
       comp=Z,50nm,1.1s
ZHN    Zhinishke          40.98 310 eS        S         20 20 23.2 +0.2
       baz=310
PEA0B  Petropavlovsk-     41.04  33 P         P         20 14 15.9 +3.0
PEA0B                               pmax      pmax
       comp=Z,201nm,1.2s
PEA0B                               MLR       MLR
       comp=Z,15µm,20.0s
PEA0B  Petropavlovsk-     41.04  33 P         P         20 14 15.9 +3.0
PEA0B                               IAmb      IAmb      20 14 24.7
       comp=Z,201nm,1.2s
PETK   Petropavlovsk-     41.04  33 P         P         20 14 13.3 +0.3
       comp=Z,42nm,0.9s,baz=194,slow=5.4,SNR=8.0
PETK                                LR        LR        20 31 22.0
       comp=Z,15µm,20.5s,baz=232,slow=36
PETK   Petropavlovsk-     41.04  33 P         P         20 14 13.1 +0.1
PET    Petropavlovsk      41.48  33⇓iP        P         20 14 17.3 +0.8
PET                                 eS        S         20 20 30.3 +0.5
PET                                 pmax      pmax
       comp=Z,447nm,1.4s
PET                                 pmax      pmax
       comp=Z,12µm,17.4s
PET                                 MLR       MLR
       comp=Z,11µm,20.0s
PET                                 MLR       MLR
       comp=Z,11µm,18.0s
PET    Petropavlovsk      41.48  33 P         P         20 14 16.9 +0.4
TDK    Taldyqorghan       41.53 313 eP        P         20 14 16.4 -0.8
       comp=Z,143nm,1.0s,baz=313
TDK                                 eS        S         20 20 31.8 +0.7
       baz=313
TDK                                 LR        LR        20 31 05.6
       comp=Z,13µm,14.5s,baz=313
TDK    Taldyqorghan       41.53 313 eP        P         20 14 16.3 -0.8
TDK                                 eS        S         20 20 31.7 +0.7
TDK                                 pmax      pmax
       comp=Z,143nm,1.0s
TDK                                 MLR       MLR
       comp=Z,13µm,15.0s
ZAA0   Zalesovo Array     41.70 328 P         P         20 14 17.7 -0.6
ZAA0                                IAMs_20   IAMs_20   20 33 12.1
       comp=Z,33µm,21.0s
ZALV   Zalesovo Beam      41.70 328 P         P         20 14 17.9 -0.4
       comp=Z,99nm,0.7s,baz=112,slow=7.9,SNR=130
ZALV                                PcP       PcP       20 16 13.8 -0.7
       comp=Z,25nm,0.8s,baz=116,slow=3.7,SNR=2.5
ZALV                                ScP       ScP       20 20 00.1 -2.5
       comp=Z,6.7nm,0.8s,baz=107,slow=4.1,SNR=3.9
ZALV                                LR        LR        20 32 43.4
       comp=Z,27µm,18.8s,baz=130,slow=38
ZALV   Zalesovo Beam      41.70 328 P         P         20 14 17.7 -0.6
MDOK   Medeo              41.95 310 eP        P         20 14 21.2 +0.4
       baz=310
MDOK                                eS        S         20 20 39.5 +2.0
       baz=310
MDOK                                LR        LR        20 31 24.0
       comp=Z,11µm,15.5s,baz=310
MDOK   Medeo              41.95 310 eP        P         20 14 21.1 +0.4
MDOK                                eS        S         20 20 39.5 +2.0
MDOK                                MLR       MLR
       comp=Z,11µm,16.0s
KSH    Kashi              41.97 304 P         P         20 14 24.6 +3.7
KSH                                 pP        sP        20 14 32.8 -0.4
KSH                                 S         S         20 20 42.5 +4.7
KSH                                 ScS       ScS       20 24 25.4 +3.8
KSH                                 pmax      pmax
       comp=Z,22nm,0.9s
KSH                                 pmax      pmax
       comp=Z,2µm,3.6s
KSH                                 LR        LR
       comp=Z,13µm,14.9s
KSH                                 LR        LR
       comp=Z,41µm,24.2s
TNSS   Tian-Shan          41.99 310 eP        P         20 14 21.5  0.0
       baz=310
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TNSS   Tian-Shan          41.99 310 eP        P         20 14 21.4  0.0
PALK   Pallekele          42.04 255⇓eP        P         20 14 23.9 +2.2
PALK                                pmax      pmax
       comp=Z,79nm,1.1s
PALK                                MLR       MLR
       comp=Z,40µm,18.0s
PALK   Pallekele          42.04 255 IAMs_20   IAMs_20   20 33 39.4
       comp=Z,35µm,19.0s
AAA    Alma-Ata           42.06 310 eP        P         20 14 21.8 +0.3
       comp=Z,114nm,1.7s,baz=310
AAA                                 eS        S         20 20 40.8 +1.8
       baz=310
AAA                                 LR        LR        20 32 20.1
       comp=Z,11µm,16.2s,baz=310
AAA    Alma-Ata           42.06 310 eP        P         20 14 21.8 +0.3
AAA                                 eS        S         20 20 40.7 +1.8
AAA                                 pmax      pmax
       comp=Z,114nm,1.7s
AAA                                 MLR       MLR
       comp=Z,11µm,16.0s
COEN   Coen               42.12 148 P         P         20 14 21.3 -0.8
COCO   West Island        42.16 217 P         P         20 14 23.9 +1.4
COCO                                pmax      pmax
       comp=Z,652nm,1.5s
COCO                                MLR       MLR
       comp=Z,12µm,18.0s
COCO   West Island        42.16 217 P         P         20 14 23.9 +1.4
CHKK   Chushkaly          42.18 311 eP        P         20 14 22.4 -0.1
       baz=311
CHKK   Chushkaly          42.18 311 eP        P         20 14 22.3 -0.1
WAKE   Wake Island        42.23  86 P         P         20 14 24.2 +1.1
WAKE                                IAmb      IAmb      20 14 31.1
       comp=Z,162nm,0.9s
MA2    Magadan            42.35  22 P         P         20 14 23.2 -0.3
       comp=Z,34nm,0.9s,baz=227,slow=12,SNR=8.4
MA2                                 PcP       PcP       20 16 16.1 -0.4
       comp=Z,16nm,0.7s,baz=201,slow=4.8,SNR=4.4
MA2                                 LR        LR        20 32 38.8
       comp=Z,22µm,19.1s,baz=214,slow=37
MA2    Magadan            42.35  22 P         P         20 14 24.3 +0.8
MA2                                 pmax      pmax
       comp=Z,74nm,0.9s
MA2                                 MLR       MLR
       comp=Z,23µm,19.0s
MA2    Magadan            42.35  22 P         P         20 14 24.3 +0.8
MA2                                 IAMs_20   IAMs_20   20 32 18.3
       comp=Z,23µm,19.0s
H11N1  WAKE ISLAND Hy     42.36  85 T         T         20 59 43.0
       baz=283,slow=75,SNR=7425
H11N2  WAKE ISLAND Hy     42.36  85 T         T         20 59 40.5
       baz=283,slow=75
H11N3  WAKE ISLAND Hy     42.38  85 T         T         20 59 42.1
       baz=283,slow=75
SEM    Semipalatinsk      42.38 321 eP        P         20 14 22.8 -1.5
       comp=Z,78nm,1.0s,baz=321
SEM                                 eS        S         20 20 43.9 +0.2
       baz=321
SEM    Semipalatinsk      42.38 321 eP        P         20 14 22.7 -1.5
SEM                                 eS        S         20 20 43.9 +0.2
SEM                                 pmax      pmax
       comp=Z,78nm,1.0s
H11S3  WAKE ISLAND Hy     42.44  87 T         T         20 59 51.8
       baz=284,slow=75
H11S1  WAKE ISLAND Hy     42.45  87 T         T         20 59 52.0
       baz=284,slow=75,SNR=8490
H11S2  WAKE ISLAND Hy     42.46  87 T         T         20 59 44.4
       baz=284,slow=75,SNR=8956
KUU    Kurty              42.64 311 eP        P         20 14 25.9 -0.3
       comp=Z,88nm,1.0s,baz=311
KUU                                 eS        S         20 20 49.0 +1.6
       baz=311
KUU    Kurty              42.64 311 eP        P         20 14 25.9 -0.3
KUU                                 eS        S         20 20 48.9 +1.6
KUU                                 pmax      pmax
       comp=Z,88nm,1.0s
TKM2   Tokmak 2           42.93 309 P         P         20 14 30.3 +1.5
       SNR=81
KBK    Karagaybulak       43.34 309 P         P         20 14 33.7 +1.7
       SNR=61
KURK   Kurchatov          43.45 321 P         P         20 14 32.7 +0.1
KURK                                pmax      pmax
       comp=Z,168nm,1.1s
KURK                                MLR       MLR
       comp=Z,17µm,20.0s
KURK   Kurchatov          43.45 321 P         P         20 14 32.7 +0.1
KURK                                IAmb      IAmb      20 14 37.5
       comp=Z,168nm,1.1s
KURK   Kurchatov          43.45 321           ScP       20 20 08.1 -1.7
KURK   Kurchatov          43.45 321 P         P         20 14 35.7 +3.1
KURBB  Kurchatov Arra     43.47 321 ScP       ScP       20 20 08.1 -1.8
       comp=Z,4.2nm,0.9s,baz=111,slow=4.3,SNR=5.4
KURBB                               PKPPKP              20 46 21.9
       comp=Z,0.9nm,0.9s,baz=246,slow=2.8,SNR=6.2
KURBB                               P4KPbc              20 52 30.4
       comp=Z,0.7nm,0.7s,baz=109,slow=3.9,SNR=8.3
CHMS   Chumysh            43.55 309 P         P         20 14 34.8 +1.2
       SNR=60
NIL    Nilore             43.56 296 P         P         20 14 33.9 +0.1
NIL                                 pmax      pmax
       comp=Z,202nm,1.0s
NIL    Nilore             43.56 296 P         P         20 14 33.9 +0.1
NIL                                 IAmb      IAmb      20 14 58.2
       comp=Z,202nm,0.9s
UCH    Uchtor             43.56 308 P         P         20 14 36.2 +2.1
       SNR=70
AAK    Ala-Archa          43.66 309 P         P         20 14 36.6 +2.0
       SNR=30
AAK    Ala-Archa          43.66 309 i P       P         20 14 35.7 +1.1
       SNR=48
AAK    Ala-Archa          43.66 309⇑eP        P         20 14 35.9 +1.3
AAK                                 pmax      pmax
       comp=Z,105nm,0.8s
AAK                                 MLR       MLR
       comp=Z,77µm,16.0s
AAK    Ala-Archa          43.66 309 P         P         20 14 35.2 +0.6
AAK    Ala-Archa          43.66 309 IAMs_20   IAMs_20   20 35 19.6
       comp=Z,29µm,18.0s
SGDS   Sogindy            43.74 310 eP        P         20 14 34.7 -0.5
       baz=310
SGDS                                eS        S         20 21 04.8 +1.2
       baz=310
SGDS   Sogindy            43.74 310 eP        P         20 14 34.6 -0.5
SGDS                                eS        S         20 21 04.8 +1.2
USP    Ospenovka          43.79 310 P         P         20 14 36.6 +1.1
       SNR=40
PSAD1  Pilbara Seismi     43.83 182 P         P         20 14 34.4 -1.5
PSAD1                               IAmb      IAmb      20 14 47.7
       comp=Z,155nm,1.0s
PSAA2  Pilbara Seismi     43.93 182 P         P         20 14 35.5 -1.2
PSAA2                               IAmb      IAmb      20 14 48.6
       comp=Z,152nm,0.9s
PSA00  Pilbara Seismi     43.94 182 P         P         20 14 34.6 -2.2
PSA00                               IAmb      IAmb      20 14 48.9
       comp=Z,117nm,1.0s
PSA00  Pilbara Seismi     43.94 182 IAmb      IAmb      20 14 39.2
       comp=Z,190nm,1.1s
PSAD3  Pilbara Seismi     44.02 182 P         P         20 14 35.5 -1.9
PSAD3                               IAmb      IAmb      20 14 39.8
       comp=Z,202nm,1.1s
WRAB   Tennant Creek      44.12 162c iP       P         20 14 36.5 -1.8
WRAB                                pmax      pmax
       comp=Z,109nm,0.9s
WRAB   Tennant Creek      44.12 162 P         P         20 14 36.2 -2.1
WRAB                                IAmb      IAmb      20 14 38.3
       comp=Z,117nm,0.9s
WRA    Warramunga Arr     44.13 162 P         P         20 14 36.7 -1.7
       comp=Z,85nm,0.8s,baz=344,slow=8.5,SNR=286
WRA                                 PcP       PcP       20 16 22.4 -0.7
       comp=Z,10nm,0.6s,baz=342,slow=3.5,SNR=1.7
WRA                                 ScP       ScP       20 20 10.2 -2.7
       comp=Z,13nm,0.9s,baz=332,slow=3.1,SNR=7.7
WRA                                 S         S         20 21 05.2 -4.2
       comp=Z,8.5nm,0.9s,baz=340,slow=14,SNR=6.5
WRA                                 PKPPKP    P'P'df    20 46 14.6 -4.1
       comp=Z,1.9nm,0.8s,baz=135,slow=2.7,SNR=3.3
WRA    Warramunga Arr     44.13 162 P         P         20 14 36.2 -2.2
WB2    Warramunga Arr     44.13 162 P         P         20 14 36.5 -1.8
WB2                                 IAmb      IAmb      20 14 38.3
       comp=Z,123nm,0.9s
AML    Almayashu          44.14 308 P         P         20 14 40.5 +1.8
       SNR=62
WC3    Warramunga Arr     44.15 162 P         P         20 14 36.5 -2.0
WC3                                 IAmb      IAmb      20 14 43.5
       comp=Z,139nm,0.9s
EKS2   Erkin-Say          44.18 309 P         P         20 14 40.7 +1.9
       SNR=36
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WR0    Warramunga Arr     44.20 162 P         P         20 14 36.9 -2.0
WR0                                 IAmb      IAmb      20 14 39.4
       comp=Z,117nm,0.8s
BTLS   Baital             44.52 312 eP        P         20 14 40.6 -0.6
       baz=312
BTLS                                eS        S         20 21 16.0 +1.2
       baz=312
BTLS   Baital             44.52 312 eP        P         20 14 40.6 -0.6
BTLS                                eS        S         20 21 15.9 +1.2
POO    Poona              44.60 274 eP        P         20 14 41.0 -1.3
       comp=Z,30nm,0.2s
POO                                 eP        pP        20 14 41.7 -9.4
POO                                 IAmb      IAmb      20 14 53.1
       comp=Z,223nm,1.2s
TRD    Trivandrum         44.91 259 eP        P         20 14 42.2 -2.5
TRD                                 IAmb      IAmb      20 14 49.1
       comp=Z,180nm,1.5s
SEY    Seymchan           45.37  19 P         P         20 14 48.4 +0.6
       comp=Z,9.6nm,0.8s,baz=234,slow=6.2,SNR=24
SEY                                 PcP       PcP       20 16 26.8 +0.1
       comp=Z,19nm,0.7s,baz=198,slow=4.9,SNR=5.0
SEY                                 ScP       ScP       20 20 15.4 -2.0
       comp=Z,7.2nm,1.0s,baz=238,slow=4.2,SNR=5.0
SEY                                 LR        LR        20 33 26.8
       comp=Z,8µm,21.8s,baz=221,slow=36
GOA    Goa                45.41 270 eP        P         20 14 50.5 +1.7
GIRL   Giralia            45.52 189 P         P         20 14 49.9 +0.5
DZA    Taraz              45.99 308 eP        P         20 14 52.5 -0.6
       baz=308
DZA                                 eS        S         20 21 37.4 +1.2
       baz=308
DZA    Taraz              45.99 308 eP        P         20 14 52.4 -0.6
DZA                                 eS        S         20 21 37.4 +1.2
KWAJ   Kwajalein Atol     46.32 100 P         P         20 14 55.5 -0.4
KWAJ   Kwajalein Atol     46.32 100 P         P         20 14 55.5 -0.4
KK31   Karatay Array      46.62 309 P         P         20 14 58.5 +0.5
KK31                                pmax      pmax
       comp=Z,115nm,1.1s
KK31   Karatay Array      46.62 309 P         P         20 14 58.5 +0.5
KK31                                IAmb      IAmb      20 15 17.6
       comp=Z,115nm,1.1s
KKAR   Karatay Array      46.62 309 P         P         20 14 58.5 +0.5
KKAR                                                    20 16 31.5
KKAR   Karatay Array      46.62 309 P         P         20 14 58.5 +0.5
KKAR                                          PcP       20 16 31.5 -0.1
KKAR   Karatay Array      46.62 309 P         P         20 14 58.6 +0.6
KKAR                                IAmb      IAmb      20 15 17.6
       comp=Z,115nm,1.1s
KKAR                                PcP       PcP       20 16 32.4 +0.8
BRZS   Berezniki          46.75 318 eP        P         20 14 58.5 -0.5
       baz=318
BRZS                                eS        S         20 21 48.2 +1.3
       baz=318
BRZS   Berezniki          46.75 318 eP        P         20 14 58.4 -0.5
BRZS                                eS        S         20 21 48.1 +1.3
IUG    Iuzhnay            46.83 307 eP        P         20 14 59.4 -0.3
       comp=Z,73nm,0.9s,baz=307
IUG                                 eS        S         20 21 49.5 +1.1
       baz=307
IUG    Iuzhnay            46.83 307 eP        P         20 14 59.3 -0.4
IUG                                 eS        S         20 21 49.4 +1.1
IUG                                 pmax      pmax
       comp=Z,73nm,0.9s
KBL    Kabul              47.06 297 P         P         20 15 02.8 +1.0
KBL                                 pmax      pmax
       comp=Z,173nm,1.1s
KBL                                 MLR       MLR
       comp=Z,20µm,22.0s
KBL    Kabul              47.06 297 P         P         20 15 02.8 +1.0
KBL    Kabul              47.06 297 P         P         20 15 03.8 +2.0
       SNR=62
KBL                                 P         P         20 15 03.8 +2.0
       SNR=62
BRLS   Borolday           47.10 308 eP        P         20 15 01.0 -0.8
       baz=308
BRLS                                eS        S         20 21 53.4 +1.4
       baz=308
BRLS   Borolday           47.10 308 eP        P         20 15 00.9 -0.8
BRLS                                eS        S         20 21 53.4 +1.4
CHM    Chimkent           47.17 307 eS        S         20 21 55.0 +2.0
       baz=307
BHUJ   Bhuj               47.49 281 eP        P         20 15 06.3 +1.3
BHUJ                                IAmb      IAmb      20 15 16.6
       comp=Z,114nm,0.4s
AS31   Alice Springs      47.57 164 P         P         20 15 05.0 -0.5
AS31                                PcP       PcP       20 16 34.5 -0.6
ASAR   Alice Springs      47.57 164 P         P         20 15 03.9 -1.6
       comp=Z,56nm,0.9s,baz=343,slow=6.4,SNR=200
ASAR                                ScP       ScP       20 20 24.6 -2.6
       comp=Z,19nm,1.0s,baz=348,slow=4.2,SNR=11
ASAR                                S         S         20 21 56.6 -2.2
       comp=Z,2.0nm,0.7s,baz=336,slow=10,SNR=4.3
ASAR                                ScS       ScS       20 24 53.2 -4.1
       comp=Z,2.3nm,0.8s,baz=333,slow=5.1,SNR=5.1
ASAR                                PKPPKP    P'P'df    20 46 01.9  -12
       comp=Z,1.4nm,0.9s,baz=146,slow=2.8,SNR=6.0
ASAR                                PKP2ab              20 47 17.7
       comp=Z,1.3nm,1.0s,baz=160,slow=3.0,SNR=3.3
ASAR                                P4KPbc              20 52 48.0
       comp=Z,0.6nm,0.7s,baz=351,slow=4.5,SNR=7.5
ASAR   Alice Springs      47.57 164 P         P         20 15 04.1 -1.4
ASAR                                                    20 16 35.3
ASAR                                S         S         20 21 56.7 -2.2
ASAR   Alice Springs      47.57 164 P         P         20 15 04.0 -1.4
ASAR                                PcP       PcP       20 16 35.3 +0.2
MNCY   Minicoy            48.57 261 eP        P         20 15 15.1 +1.6
MNCY                                IAmb      IAmb      20 15 24.9
       comp=Z,185nm,1.0s
BVAR   Borovoye Array     49.04 322 P4KPbc              20 52 53.6
       comp=Z,1.7nm,1.0s,baz=224,slow=30,SNR=6.5
BRVK   Borovoye           49.11 322⇓eP        P         20 15 17.2 +0.1
BRVK                                pmax      pmax
       comp=Z,84nm,0.9s
BRVK                                MLR       MLR
       comp=Z,18µm,16.0s
BRVK   Borovoye           49.11 322 P         P         20 15 17.2 +0.1
BRVK                                IAmb      IAmb      20 15 32.3
       comp=Z,134nm,1.1s
BRVK                                PcP       PcP       20 16 39.8 -0.5
TIXI   Tiksi              49.24   3⇓eP        P         20 15 17.3 -0.5
TIXI                                pmax      pmax
       comp=Z,96nm,1.2s
TIXI   Tiksi              49.24   3 P         P         20 15 16.6 -1.2
TIXI                                IAMs_20   IAMs_20   20 39 03.0
       comp=Z,27µm,20.0s
HNR    Honiara            49.36 126 P         P         20 15 20.6 +1.2
       comp=Z,30nm,0.5s,baz=270,slow=11
HNR    Honiara            49.36 126 P         P         20 15 20.5 +1.1
HNR    Honiara            49.36 126 IAMs_20   IAMs_20   20 28 51.3
       comp=Z,25µm,19.0s
NRIK   Noril'sk           50.98 345 P         P         20 15 29.5 -1.5
       comp=Z,97nm,1.1s,baz=131,slow=6.8,SNR=61
NRIK                                LR        LR        20 38 57.0
       comp=Z,33µm,18.5s,baz=147,slow=38
NRIK   Noril'sk           50.98 345 P         P         20 15 30.1 -0.9
NRIK                                                    20 16 46.8
NRIK                                pmax      pmax
       comp=Z,138nm,1.0s
NRIK                                MLR       MLR
       comp=Z,32µm,18.0s
NRIK   Noril'sk           50.98 345 P         P         20 15 30.1 -0.9
NRIK                                IAmb      IAmb      20 15 36.5
       comp=Z,138nm,1.0s
NRIK                                PcP       PcP       20 16 46.8  0.0
MORW   Morawa             51.64 186 IAmb      IAmb      20 15 36.7
       comp=Z,106nm,0.9s
HRA    Herat              52.68 297 IAMs_20   IAMs_20   20 42 29.6
       comp=Z,18µm,18.0s
AMKA   Amchitka           52.70  42 P         P         20 15 45.3 +1.2
ABKAR  Akbulak array      54.71 315 P         P         20 15 59.1 +0.2
ABKAR                               PcP       PcP       20 16 59.8 -1.4
ABKAR  Akbulak array      54.71 315 IAmb      IAmb      20 16 10.9
       comp=Z,90nm,0.9s
AB09   Akbulak array      54.73 315 P         P         20 15 59.4 +0.5
AB09                                PcP       PcP       20 17 00.0 -1.3
MIDW   Midway             55.05  71 P         P         20 16 01.3 -0.3
ADK    Adak               55.25  42 P         P         20 16 02.7  0.0
ADK                                 pmax      pmax
       comp=Z,153nm,1.2s
ADK    Adak               55.25  42 P         P         20 16 02.7  0.0
ADK                                 IAmb      IAmb      20 16 13.4
       comp=Z,153nm,1.2s
NWAO   Narrogin (SRO)     55.37 184 P         P         20 16 01.8 -1.9
       comp=Z,67nm,0.8s,baz=16,slow=6.6,SNR=19
NWAO   Narrogin (SRO)     55.37 184 P         P         20 16 02.9 -0.8
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NWAO				pmax	pmax		
	comp=Z,148nm,1.1s						
NWAO	**Narrogin (SRO)**	**55.37**	**184**	P	**P**	**20 16 02.9**	**-0.8**
NWAO				IAmb	IAmb	20 16 06.8	
	comp=Z,148nm,1.1s						
NWAO	**Narrogin (SRO)**	**55.37**	**184**	IAmb	IAmb	20 16 06.8	
	comp=Z,118nm,1.1s						
SVE	**Sverdlovsk**	**55.45**	**324**	*de*P	**P**	**20 16 04.4**	**+0.3**
SVE				*e*S	**S**	**20 23 46.4**	**-0.4**
SVE				pmax	pmax		
	comp=Z,251nm,1.0s						
SVE				MLR	MLR		
	comp=Z,24µm,16.0s						
SVE				MLR	MLR		
	comp=E,17µm,16.0s						
GEYT	**Alibeck**	**55.80**	**301**	P	**P**	**20 16 07.5**	**+0.5**
	comp=E,43nm,0.9s,baz=93,slow=3.0,SNR=39						
GEYT				ScP	**ScP**	**20 21 01.9**	**-0.9**
	comp=E,16nm,1.0s,baz=141,slow=5.2,SNR=7.2						
GEYT	**Alibeck**	**55.80**	**301**	P	**P**	**20 16 08.1**	**+1.1**
GEYT				IAmb	IAmb	20 16 19.1	
	comp=Z,44nm,0.8s						
GEYT				ScP	**ScP**	**20 21 03.2**	**+0.4**
GYA0B	**ALIBECK ARRAY**	**55.80**	**301**	P	**P**	**20 16 07.8**	**+0.8**
GYA0B				IAmb	IAmb	20 16 24.3	
	comp=Z,92nm,0.9s						
GYA0B				IAMs_20	IAMs_20	20 43 35.2	
	comp=Z,19µm,21.0s						
ARU	**Arti**	**56.51**	**324**	LR	LR	20 43 55.8	
	comp=Z,13µm,18.7s,baz=80,slow=40						
ARU	**Arti**	**56.51**	**324**	*c i*P	**P**	**20 16 11.4**	**-0.2**
ARU						20 17 05.3	
ARU				PPP	PPP	20 19 34.4	
ARU				S	**S**	**20 24 00.2**	**-0.7**
ARU				SS	**SS**	**20 27 40.1**	**-8.0**
ARU				pmax	pmax		
	comp=Z,125nm,0.7s						
ARU				MLR	MLR		
	comp=Z,16µm,16.0s						
ARU	**Arti**	**56.51**	**324**	P	**P**	**20 16 11.4**	**-0.2**
ARU				IAMs_20	IAMs_20	20 42 31.6	
	comp=Z,21µm,20.0s						
BBOO	**Buckleboo**	**56.85**	**165**	P	**P**	**20 16 13.8**	**-0.5**
JLN	**Jalan Bani Buh**	**56.97**	**282**	P	**P**	**20 16 16.4**	**+0.9**
	SNR=24						
JLN				P	**P**	**20 16 16.4**	**+0.9**
	SNR=24						
WBK	**Wadi Bani Khal**	**57.27**	**283**	P	**P**	**20 16 19.8**	**+2.2**
	SNR=23						
WBK				P	**P**	**20 16 19.8**	**+2.2**
	SNR=23						
STKA	**Stephens Creek**	**57.51**	**160**	P	**P**	**20 16 18.4**	**-0.6**
	comp=Z,30nm,0.9s,baz=340,slow=7.5,SNR=60						
STKA				S	**S**	**20 24 14.0**	**-0.5**
	comp=Z,6.2nm,1.1s,baz=234,slow=8.7,SNR=4.2						
BIDO	**Bidbid**	**57.82**	**284**	P	**P**	**20 16 23.9**	**+2.4**
	SNR=32						
BIDO				P	**P**	**20 16 23.9**	**+2.4**
	SNR=32						
SMDO	**Samad**	**57.99**	**284**	P	**P**	**20 16 23.8**	**+1.0**
	SNR=20						
SMDO				P	**P**	**20 16 23.8**	**+1.0**
	SNR=20						
JMDO	**Jabal Madar**	**58.10**	**283**	P	**P**	**20 16 24.5**	**+1.1**
	SNR=18						
JMDO				P	**P**	**20 16 24.5**	**+1.1**
	SNR=18						
HOQ	**Hoqain**	**58.54**	**285**	P	**P**	**20 16 25.5**	**-1.0**
	SNR=40						
HOQ				P	**P**	**20 16 25.5**	**-1.0**
	SNR=40						
MHTO	**MHTO**	**58.55**	**281**	P	**P**	**20 16 25.4**	**-1.2**
	SNR=19						
MHTO				P	**P**	**20 16 25.4**	**-1.2**
	SNR=19						
SANVU	**Saraoutou**	**58.63**	**126**	P	**P**	**20 16 28.7**	**+1.6**
BSY	**Bisya**	**58.83**	**284**	P	**P**	**20 16 29.7**	**+1.1**
	SNR=19						
BSY				P	**P**	**20 16 29.7**	**+1.1**
	SNR=19						
BANOM	**Banah**	**58.94**	**287**	*i* P	**P**	**20 16 31.0**	**+1.8**
	SNR=17						
BANOM	**Banah**	**58.94**	**287**	P	**P**	**20 16 30.8**	**+1.6**
	SNR=12						
BANOM				P	**P**	**20 16 30.8**	**+1.6**
	SNR=12						
SHME	**Shamm**	**59.05**	**288**	*i* P	**P**	**20 16 32.7**	**+2.7**
	SNR=13						
SHME	**Shamm**	**59.05**	**288**	P	**P**	**20 16 29.9**	**-0.1**
SHME				P	**P**	**20 16 29.9**	**-0.1**
MDH	**Madha**	**59.07**	**287**	*i* P	**P**	**20 16 31.1**	**+1.0**
	SNR=6.9						
MDH	**Madha**	**59.07**	**287**	P	**P**	**20 16 29.9**	**-0.2**
MDH				P	**P**	**20 16 29.9**	**-0.2**
SOHO	**SOHO**	**59.11**	**285**	*i* P	**P**	**20 16 31.6**	**+1.1**
	SNR=7.8						
MASF	**Masafi**	**59.17**	**287**	P	**P**	**20 16 33.3**	**+2.4**
	SNR=12						
MASF				P	**P**	**20 16 33.3**	**+2.4**
	SNR=12						
MSFE	**Esma-Masafi**	**59.18**	**287**	*i* P	**P**	**20 16 33.5**	**+2.5**
	SNR=14						
DQM	**DQM**	**59.21**	**280**	P	**P**	**20 16 31.1**	**0.0**
	SNR=13						
DQM				P	**P**	**20 16 31.1**	**0.0**
	SNR=13						
UOSS	**Minazif**	**59.23**	**286**	*i* P	**P**	**20 16 33.3**	**+2.1**
	SNR=12						
UOSS	**Minazif**	**59.23**	**286**	P	**P**	**20 16 31.1**	**-0.1**
UOSS				IAmb	IAmb	20 17 08.6	
	comp=Z,45nm,1.1s						
UOSS	**Minazif**	**59.23**	**286**	P	**P**	**20 16 31.4**	**+0.2**
UOSS				P	**P**	**20 16 31.4**	**+0.2**
ARQ	**Araqi**	**59.30**	**284**	P	**P**	**20 16 34.4**	**+2.6**
	SNR=26						
ARQ				P	**P**	**20 16 34.4**	**+2.6**
	SNR=26						
HATD	**Hatta, Dubai**	**59.31**	**286**	*i* P	**P**	**20 16 33.4**	**+1.5**
	SNR=12						
HATD	**Hatta, Dubai**	**59.31**	**286**	P	**P**	**20 16 33.3**	**+1.5**
	SNR=16						
HATD				P	**P**	**20 16 33.3**	**+1.5**
	SNR=16						
ASHO	**Ashiyiah**	**59.41**	**286**	*i* P	**P**	**20 16 33.0**	**+0.4**
	SNR=16						
ASHO	**Ashiyiah**	**59.41**	**286**	P	**P**	**20 16 34.4**	**+1.9**
	SNR=25						
ASHO				P	**P**	**20 16 34.4**	**+1.9**
	SNR=25						
UMQ	**Umm Al-Quwin**	**59.58**	**287**	*i* P	**P**	**20 16 35.5**	**+1.9**
	SNR=11						
UMQ	**Umm Al-Quwin**	**59.58**	**287**	P	**P**	**20 16 37.0**	**+3.4**
	SNR=12						
UMQ				P	**P**	**20 16 37.0**	**+3.4**
	SNR=12						
NAZ	**Nazwa, Dubai**	**59.70**	**287**	*i* P	**P**	**20 16 38.0**	**+3.5**
	SNR=16						
NAZ	**Nazwa, Dubai**	**59.70**	**287**	P	**P**	**20 16 36.4**	**+1.9**
	SNR=17						
NAZ				P	**P**	**20 16 36.4**	**+1.9**
	SNR=17						
GAMB	**Gambell**	**59.74**	**28**	P	**P**	**20 16 34.9**	**+0.8**
GAMB				IAmb	IAmb	20 17 01.0	
	comp=Z,86nm,1.2s						
FAQ	**Al Faqa, Dubai**	**59.81**	**286**	*i* P	**P**	**20 16 36.1**	**+0.8**
	SNR=18						
FAQ	**Al Faqa, Dubai**	**59.81**	**286**	P	**P**	**20 16 38.1**	**+2.8**
	SNR=14						
FAQ				P	**P**	**20 16 38.1**	**+2.8**
	SNR=14						
ALNE	**Al Ain**	**59.82**	**285**	*i* P	**P**	**20 16 39.0**	**+3.6**
	SNR=7.6						
ALNE	**Al Ain**	**59.82**	**285**	P	**P**	**20 16 37.5**	**+2.1**
	SNR=36						
ALNE				P	**P**	**20 16 37.5**	**+2.1**
	SNR=36						
KOUNC	**Koumac, New Ca**	**59.90**	**133**	P	**P**	**20 16 37.2**	**+1.4**
ASUD	**Al Ashush, Dub**	**60.07**	**286**	*i* P	**P**	**20 16 39.0**	**+2.0**
	SNR=14						
ASUD	**Al Ashush, Dub**	**60.07**	**286**	P	**P**	**20 16 39.6**	**+2.5**
	SNR=18						
ASUD				P	**P**	**20 16 39.6**	**+2.5**
	SNR=18						
NIKH	**Nikolski High**	**60.11**	**41**	P	**P**	**20 16 37.5**	**+0.7**
ARMA	**Armidale**	**60.17**	**150**	IAmb	IAmb	20 16 51.5	
	comp=Z,78nm,0.8s						
AJN	**Ajban**	**60.39**	**286**	*i* P	**P**	**20 16 42.2**	**+3.0**
	SNR=14						
AJN	**Ajban**	**60.39**	**286**	P	**P**	**20 16 41.4**	**+2.2**
	SNR=15						
AJN				P	**P**	**20 16 41.4**	**+2.2**
	SNR=15						
SHAO	**Shalim**	**61.46**	**279**	P	**P**	**20 16 49.2**	**+2.6**
UNV	**Unalaska Valle**	**61.53**	**40**	P	**P**	**20 16 47.6**	**+1.2**
UNV				IAmb	IAmb	20 17 00.5	
	comp=Z,65nm,0.9s						
TNA	**Tin City**	**61.63**	**26**	P	**P**	**20 16 47.4**	**+0.5**
	baz=262						
TNA	**Tin City**	**61.63**	**26**	P	**P**	**20 16 47.0**	**0.0**
TNA				IAmb	IAmb	20 17 20.0	
	comp=Z,103nm,1.7s						
KIRV	**Kirov**	**61.64**	**326**	LR	LR	20 45 50.7	
	comp=Z,32µm,18.3s,baz=95,slow=38						
KIRV	**Kirov**	**61.64**	**326**	*c i*P	**P**	**20 16 46.5**	**-0.6**
DZM	**Mont Dzumac**	**62.40**	**132**	P	**P**	**20 16 52.4**	**-0.4**
	comp=Z,19nm,0.9s,baz=238,slow=11,SNR=8.9						
DZM	**Mont Dzumac**	**62.40**	**132**	*e*P	**P**	**20 16 55.0**	**+2.2**
	comp=Z,144nm,1.3s						
DZM	**Mont Dzumac**	**62.40**	**132**	P	**P**	**20 16 53.7**	**+0.9**
DZM				IAmb	IAmb	20 17 17.0	
	comp=Z,79nm,1.3s						
ANM	**Nome**	**62.60**	**28**	P	**P**	**20 16 53.7**	**+0.2**
ANM				pmax	pmax		
	comp=Z,51nm,1.0s						
ANM				MLR	MLR		
	comp=Z,7µm,18.0s						
ANM	**Nome**	**62.60**	**28**	P	**P**	**20 16 53.7**	**+0.2**
ANM				IAmb	IAmb	20 17 21.7	
	comp=Z,51nm,1.0s						
BELG	**Belogornoye**	**62.62**	**318**	LR	LR	20 47 47.6	
	comp=Z,10µm,18.5s,baz=80,slow=40						
BELG	**Belogornoye**	**62.62**	**318**	*ce*P	**P**	**20 16 54.8**	**+1.0**
BELG				pmax	pmax		
	comp=Z,47nm,1.4s						
BELG				MLR	MLR		
	comp=Z,1µm,16.0s						
DOK	**Doka**	**62.66**	**280**	P	**P**	**20 16 55.5**	**+0.9**
	SNR=10						
DOK				P	**P**	**20 16 55.5**	**+0.9**
	SNR=10						
RBK	**Rabkut**	**62.91**	**279**	P	**P**	**20 16 56.4**	**0.0**
RBK				P	**P**	**20 16 56.4**	**0.0**
RBK				P	**P**	**20 16 56.6**	**+0.2**
	SNR=25						
RBK				P	**P**	**20 16 56.6**	**+0.2**
	SNR=25						
WHFO	**Wadi Hawf**	**63.19**	**279**	P	**P**	**20 16 57.6**	**-0.6**
WHFO				P	**P**	**20 16 57.6**	**-0.6**
WHFO				P	**P**	**20 16 59.3**	**+1.1**
	SNR=14						
WHFO				P	**P**	**20 16 59.3**	**+1.1**
	SNR=14						
CAN	**Canberra**	**63.26**	**155**	IAmb	IAmb	20 17 06.3	
	comp=Z,60nm,0.8s						
SLWR	**Sila**	**63.43**	**286**	P	**P**	**20 17 00.2**	**+0.6**
MAK	**Makhachkala**	**63.43**	**308**	*e*P	**P**	**20 16 56.3**	**-3.1**
MAK				*e*		20 19 15.6	
MAK				*e*S	**S**	**20 25 26.2**	**-4.1**
MAK				*e*SS	**SS**	**20 29 31.7**	**-5.5**
MAK				pmax	pmax		
	comp=Z,299nm,1.7s						
MAK				MLR	MLR		
	comp=Z,11µm,14.0s						
ABTO	**Aybut**	**63.78**	**279**	P	**P**	**20 17 02.2**	**+0.1**
ABTO				P	**P**	**20 17 02.2**	**+0.1**
ABTO				P	**P**	**20 17 04.1**	**+1.9**
	SNR=26						
ABTO				P	**P**	**20 17 04.1**	**+1.9**
	SNR=26						
RDOG	**Red Dog Mine**	**63.88**	**24**	P	**P**	**20 17 03.2**	**+1.3**
TOO	**Toolangi**	**64.00**	**159**	P	**P**	**20 17 03.3**	**+0.2**
TOO				pmax	pmax		
	comp=Z,112nm,0.9s						
TOO	**Toolangi**	**64.00**	**159**	P	**P**	**20 17 03.3**	**+0.2**
GROC	**Groznyy**	**64.64**	**308**	*e*P	**P**	**20 17 07.3**	**0.0**
GROC				*e*		20 17 40.6	
GROC				*e*S	**S**	**20 25 47.9**	**+2.5**
GROC				*e*		20 26 53.6	
GROC				pmax	pmax		
	comp=Z,112nm,1.0s						
GROC				MLR	MLR		
	comp=Z,11µm,15.0s						
SOCY	**Socotra**	**64.75**	**273**	P	**P**	**20 17 08.3**	**-0.3**
SOCY	**Socotra**	**64.75**	**273**	P	**P**	**20 17 07.7**	**-0.9**
	SNR=12						
SDPT	**Sand Point**	**64.99**	**38**	P	**P**	**20 17 08.5**	**-0.9**
SDPT				IAmb	IAmb	20 17 18.6	
	comp=Z,67nm,0.7s						
CNBA	**Chernabura Isl**	**65.54**	**39**	IAmb	IAmb	20 17 27.2	
	comp=Z,106nm,1.1s						
UMR	**Umm Al-Rimmam**	**65.60**	**293**	*e*P		20 17 12.9	
MIB	**Mutribah**	**65.86**	**294**	*e*P		20 17 14.8	
RDF	**Al-Radifah**	**65.88**	**293**	*e*P		20 17 15.2	
GNI	**Garni**	**65.89**	**305**	P	**P**	**20 17 18.2**	**+2.4**
GNI	**Garni**	**65.89**	**305**	P	**P**	**20 17 15.4**	**-0.3**
GNI				pmax	pmax		
	comp=Z,598nm,2.0s						
GNI				MLR	MLR		
	comp=Z,7µm,22.0s						
GNI	**Garni**	**65.89**	**305**	P	**P**	**20 17 15.4**	**-0.3**
ZEI	**Tsey**	**66.08**	**308**	*e*P	**P**	**20 17 16.2**	**-0.7**
ZEI				pmax	pmax		
	comp=Z,111nm,1.0s						
NCK	**Nalchik**	**66.19**	**309**	⇓*e*P	**P**	**20 17 17.7**	**+0.3**
NCK				pmax	pmax		
	comp=Z,38nm,1.2s						
NCK				MLR	MLR		
	comp=Z,16µm,16.0s						
A21K	**Barrow**	**66.19**	**20**	P	**P**	**20 17 16.7**	**-0.1**
	baz=270,SNR=16						
A21K	**Barrow**	**66.19**	**20**	IAmb	IAmb	20 17 29.8	
	comp=Z,61nm,0.9s						
A21K				IAMs_20	IAMs_20	20 47 30.6	
	comp=Z,16µm,19.0s						
RST	**Umm Al-Ruwaisa**	**66.22**	**293**	*e*P		20 17 16.7	
TASB	**TASBURUN-IGDIR**	**66.30**	**305**	*e*P	**P**	**20 17 19.6**	**+1.3**
GOF	**Gofitskoye**	**66.34**	**311**	⇑*e*P	**P**	**20 17 19.3**	**+1.0**
GOF				pmax	pmax		
	comp=Z,161nm,1.3s						
VRH	**Novokhopyorsk**	**66.37**	**317**	*e*P	**P**	**20 17 17.8**	**-0.5**
VRH				pmax	pmax		
	comp=Z,160nm,0.8s						
KLMR	**Klimovskoe**	**66.62**	**328**	*e*P	**P**	**20 17 16.8**	**-2.9**
KLMR				*e*		20 19 42.8	
KLMR				pmax	pmax		
	comp=Z,407nm,1.3s						
KLMR				MLR	MLR		
	comp=Z,36µm,15.0s						
KLMR	**Klimovskoe**	**66.62**	**328**	*e*P	**P**	**20 17 16.8**	**-2.9**
KLMR				AMP		20 17 22.6	
	comp=Z,407nm,1.3s						
KLMR				*e*PP	**PP**	**20 19 42.9**	**-3.4**
KLMR				LQ	LQ	20 41 17.7	
KLMR				LQ	LQ	20 41 17.7	
KLMR				LR	LR	20 46 40.0	
KLMR				AMP		20 48 56.0	
	comp=Z,36µm,15.3s						
KBZ	**Khabaz**	**66.65**	**309**	P	**P**	**20 17 20.2**	**0.0**
	comp=Z,82nm,1.0s,baz=96,slow=4.4,SNR=49						
KBZ				LR	LR	20 50 42.6	
	comp=Z,7µm,18.9s,baz=67,slow=40						
KBZ	**Khabaz**	**66.65**	**309**	*ce*P	**P**	**20 17 20.4**	**+0.1**
KBZ				pmax	pmax		
	comp=Z,124nm,1.0s						
KBZ				MLR	MLR		
	comp=Z,11µm,19.0s						
CLDR	**Caldiran**	**66.70**	**304**	*e*P	**P**	**20 17 21.4**	**+0.4**
TTA	**Tatalina**	**66.75**	**30**	IAmb	IAmb	20 17 34.2	
	comp=Z,41nm,1.0s						
KIV	**Kislovodsk**	**66.77**	**310**	*i* P	**P**	**20 17 22.1**	**+0.9**
	SNR=60						
KIV	**Kislovodsk**	**66.77**	**310**	*e*P	**P**	**20 17 21.6**	**+0.4**
KIV				*e*		20 19 49.6	
KIV				*e*PPP	PPP	20 21 27.2	
KIV				*e*S	**S**	**20 26 13.4**	**+1.9**
KIV				*e*SS	**SS**	**20 30 34.2**	**+4.9**
KIV				pmax	pmax		
	comp=Z,468nm,1.1s						
KIV				pmax	pmax		
	comp=Z,1µm,4.0s						
KIV				MLR	MLR		
	comp=Z,21µm,17.0s						
KIV	**Kislovodsk**	**66.77**	**310**	P	**P**	**20 17 21.9**	**+0.8**
NEY	**Neytrino**	**66.86**	**309**	⇓*e*P	**P**	**20 17 22.9**	**+1.0**
NEY				pmax	pmax		
	comp=Z,9.0nm,0.8s						
NEY				MLR	MLR		
	comp=Z,5µm,15.0s						
TMCR	**Tamitsa**	**67.04**	**332**	*e*P	**P**	**20 17 22.9**	**+0.5**
TMCR				pmax	pmax		
	comp=Z,258nm,1.3s						
KARS	**Kars**	**67.06**	**306**	*e*P	**P**	**20 17 26.9**	**+3.7**
SVW2	**Sparrevohn**	**67.11**	**32**	P	**P**	**20 17 23.5**	**+0.6**
SVW2				IAmb	IAmb	20 17 34.4	
	comp=Z,33nm,0.8s						
VANB	**Van**	**67.21**	**304**	*e*P	**P**	**20 17 24.9**	**+0.8**
CUKT	**Cukurca**	**67.31**	**302**	*e*P	**P**	**20 17 24.4**	**-0.4**
AGRB	**Hanur-Agry**	**67.32**	**305**	*e*P	**P**	**20 17 26.2**	**+1.3**
GEVA	**Gevas**	**67.52**	**303**	IAmb	IAmb	20 17 56.5	
	comp=Z,73nm,0.9s						
AKDM	**Akdamar-Van**	**67.58**	**304**	*e*P	**P**	**20 17 27.7**	**+1.2**
SENK	**Senkaya-Erzuru**	**67.62**	**306**	*e*P	**P**	**20 17 28.4**	**+1.6**
MLAZ	**Malazgirt-MUS**	**67.75**	**304**	*e*P	**P**	**20 17 28.9**	**+1.3**
VORR	**Voronezh**	**67.86**	**318**	*e*P	**P**	**20 17 27.0**	**-0.8**
VORR				pmax	pmax		
	comp=Z,350nm,1.4s						
LPSR	**Galich'ya Gora**	**67.89**	**319**	*e*P	**P**	**20 17 27.9**	**-0.1**
LPSR				pmax	pmax		
	comp=Z,200nm,0.8s						
VORD	**Divnogorie**	**67.92**	**317**	*e*P	**P**	**20 17 28.1**	**-0.1**
VORD				pmax	pmax		
	comp=Z,70nm,0.5s						
VSR	**Storozhevoye**	**67.96**	**318**	*e*P	**P**	**20 17 28.0**	**-0.4**
VSR				pmax	pmax		
	comp=Z,170nm,0.9s						
LVZ	**Lovozero**	**68.07**	**336**	P	**P**	**20 17 30.4**	**+1.5**
LVZ				pmax	pmax		
	comp=Z,302nm,1.6s						
LVZ				MLR	MLR		
	comp=Z,14µm,18.0s						
LVZ	**Lovozero**	**68.07**	**336**	P	**P**	**20 17 30.4**	**+1.5**
LVZ				IAMs_20	IAMs_20	20 48 42.9	
	comp=Z,14µm,18.0s						
KOPR	**Koprukoy-ERZUR**	**68.10**	**305**	*e*P	**P**	**20 17 30.8**	**+1.0**
SIRT	**Sirnak**	**68.17**	**303**	*e*P	**P**	**20 17 30.9**	**+0.7**
MOS	**Moscow**	**68.19**	**323**	*e*P	**P**	**20 17 28.6**	**-1.2**
MOS				*i*		20 17 45.4	
MOS				*e*S	**S**	**20 26 23.2**	**-4.7**
MOS				*e*		20 27 21.7	
MOS				pmax	pmax		
	comp=Z,246nm,1.0s						
MOS				MLR	MLR		
	comp=E,11µm,18.0s						
MOS				MLR	MLR		
	comp=Z,14µm,18.0s						
GURO	**Guroymak-BITLI**	**68.26**	**304**	*e*P	**P**	**20 17 32.0**	**+1.2**
MSVF	**Nonsavu**	**68.35**	**121**	*ce*P	**P**	**20 17 33.6**	**+2.2**
MSVF				pmax	pmax		
	comp=Z,149nm,2.5s						
MSVF	**Nonsavu**	**68.35**	**121**	P	**P**	**20 17 33.4**	**+2.0**
SII	**Sitkinak Islan**	**68.38**	**36**	P	**P**	**20 17 32.1**	**+1.1**
SII				IAmb	IAmb	20 18 00.3	
	comp=Z,122nm,1.1s						
PPLA	**Purkeypile**	**68.49**	**29**	P	**P**	**20 17 31.9**	**+0.1**
PPLA				IAmb	IAmb	20 18 19.0	
	comp=Z,72nm,1.2s						
RSO	**Redoubt South**	**68.56**	**32**	P	**P**	**20 17 32.6**	**+0.3**
VRTB	**Varto-Mus**	**68.57**	**305**	*e*P	**P**	**20 17 36.5**	**+3.8**
APA	**Apatity**	**68.58**	**336**	⇑*i*P	**P**	**20 17 33.1**	**+1.0**
APA				*i* S	**S**	**20 26 31.0**	**-1.2**
APA				pmax	pmax		
	comp=Z,80nm,0.9s						
APA				MLR	MLR		
	comp=Z,28µm,14.0s						
CHOM	**Cayeli-Rize**	**68.69**	**307**	*e*P	**P**	**20 17 33.9**	**+0.6**
COLD	**Coldfoot**	**68.75**	**25**	P	**P**	**20 17 33.1**	**0.0**
	baz=278,SNR=13						
OHAK	**Old Harbor**	**68.76**	**36**	P	**P**	**20 17 33.7**	**+0.4**
OHAK				IAmb	IAmb	20 17 48.9	
	comp=Z,63nm,1.0s						
TOLK	**Toolik Lake Re**	**68.80**	**23**	P	**P**	**20 17 33.8**	**+0.4**
	baz=278,SNR=21						
TOLK	**Toolik Lake Re**	**68.80**	**23**	IAmb	IAmb	20 18 05.7	
	comp=Z,42nm,0.8s						
MLY	**Manley**	**68.83**	**27**	P	**P**	**20 17 34.1**	**+0.3**
	baz=278,SNR=50						
KARO	**Karliova-Bingo**	**68.85**	**305**	*e*P	**P**	**20 17 36.9**	**+2.4**
BPAW	**Bear Paw Mtn.**	**68.86**	**28**	IAmb	IAmb	20 18 01.5	
	comp=Z,32nm,0.8s						
OBN	**Obninsk**	**68.88**	**322**	LR	LR	20 51 28.2	
	comp=Z,4µm,18.3s,baz=71,slow=39						
OBN	**Obninsk**	**68.88**	**322**	⇓P	**P**	**20 17 34.0**	**-0.1**
OBN	**Obninsk**	**68.88**	**322**	*c i*P	**P**	**20 17 33.2**	**-0.9**
OBN				*e**PP	**pP**	**20 17 42.1**	**-1.2**
OBN				*e**SP	**sP**	**20 17 48.3**	**+1.6**
OBN				*e*		20 17 55.1	
OBN				*e*		20 20 05.3	
OBN				*e*PPP	PPP	20 21 49.1	
OBN				*e*S	**S**	**20 26 37.8**	**+1.7**
OBN				*e*SS	**SS**	**20 31 06.9**	**+5.7**
OBN				*e*SSS	SSS	20 34 08.4	
OBN				pmax	pmax		
	comp=Z,124nm,1.0s						
OBN				pmax	pmax		
	comp=Z,597nm,1.7s						
OBN				MLR	MLR		
	comp=Z,13µm,18.0s						
OBN	**Obninsk**	**68.88**	**322**	P	**P**	**20 17 33.6**	**-0.5**
OBN				IAMs_20	IAMs_20	20 50 42.9	
	comp=Z,14µm,19.0s						
SOC	**Sochi**	**68.95**	**310**	*e*P	**P**	**20 17 33.2**	**-1.6**
SOC				*e*		20 20 02.8	
SOC				*e*PPP	PPP	20 21 44.5	
SOC				*e*S	**SS**	**20 31 09.4**	**+6.6**
SOC				pmax	pmax		
	comp=Z,61nm,0.8s						
SOC				MLR	MLR		
	comp=Z,12µm,22.0s						
KTH	**Kantishna Hill**	**68.97**	**29**	P	**P**	**20 17 34.7**	**0.0**
SVAN	**Silvan-Diyarba**	**68.99**	**304**	*e*P	**P**	**20 17 35.9**	**+0.7**
RAYN	**Ar Rayn**	**69.04**	**288**	*i* P	**P**	**20 17 36.5**	**+0.7**
	SNR=73						
RAYN	**Ar Rayn**	**69.04**	**288**	P	**P**	**20 17 35.5**	**-0.2**
RAYN				pmax	pmax		
	comp=Z,138nm,1.2s						
RAYN				MLR	MLR		
	comp=Z,15µm,20.0s						
RAYN	**Ar Rayn**	**69.04**	**288**	P	**P**	**20 17 35.5**	**-0.2**
RAYN				IAmb	IAmb	20 17 46.7	
	comp=Z,138nm,1.1s						
RAYN				IAMs_20	IAMs_20	20 52 05.4	
	comp=Z,15µm,20.0s						
KDAK	**Kodiak Island**	**69.05**	**35**	P	**P**	**20 17 35.0**	**-0.1**
	comp=Z,33nm,0.8s,baz=317,slow=6.6,SNR=17						
KDAK	**Kodiak Island**	**69.05**	**35**	*de*P	**P**	**20 17 36.4**	**+1.3**
KDAK				pmax	pmax		
	comp=Z,89nm,1.1s						
KDAK	**Kodiak Island**	**69.05**	**35**	P	**P**	**20 17 35.6**	**+0.5**
KDAK				IAmb	IAmb	20 17 57.0	
	comp=Z,53nm,0.8s						
KOPT	**Kop Dagi**	**69.11**	**306**	IAmb	IAmb	20 17 55.5	
	comp=Z,60nm,0.9s						
BNGB	**Bingl**	**69.20**	**305**	*e*P	**P**	**20 17 39.7**	**+3.1**
TRF	**Thorofare Moun**	**69.27**	**29**	IAmb	IAmb	20 18 08.0	
	comp=Z,42nm,0.9s						
SUA	**Susitna One**	**69.37**	**31**	P	**P**	**20 17 37.2**	**0.0**
SUA				IAmb	IAmb	20 17 47.6	
	comp=Z,89nm,0.8s						
I23K	**Minto, Yukon-K**	**69.39**	**27**	P	**P**	**20 17 36.9**	**-0.2**
	baz=279,SNR=17						
I23K	**Minto, Yukon-K**	**69.39**	**27**	IAmb	IAmb	20 18 11.8	
	comp=Z,114nm,1.6s						
TAU	**Tasmania Unive**	**69.42**	**160**	P	**P**	**20 17 38.2**	**+0.8**
TAU				pmax	pmax		
	comp=Z,136nm,1.2s						
TAU	**Tasmania Unive**	**69.42**	**160**	P	**P**	**20 17 38.2**	**+0.8**
TAU				IAmb	IAmb	20 17 44.0	
	comp=Z,136nm,1.1s						
CUT	**Chulitna**	**69.44**	**30**	P	**P**	**20 17 37.0**	**-0.4**
	baz=280,SNR=10						
KTUT	**Trabzon**	**69.45**	**307**	*e*P	**P**	**20 17 40.3**	**+2.4**
BWN	**Browne**	**69.51**	**28**	IAmb	IAmb	20 18 41.5	
	comp=Z,87nm,0.9s						
BRLK	**Bradley Lake**	**69.59**	**33**	IAmb	IAmb	20 17 49.4	
	comp=Z,61nm,0.8s						
NEA2	**Nenana**	**69.61**	**27**	P	**P**	**20 17 38.7**	**+0.2**
	baz=280,SNR=44						

DYBB	Diyarbakir	69.85	304	*e*P	P	20 17 41.7	+1.2
MDM	Murphy Dome	69.90	27	IAmb	IAmb	20 17 45.8	
	comp=Z,90nm,1.2s						
RND	Reindeer	69.91	29	P	P	20 17 39.9	-0.5
RND				pmax	pmax		
	comp=Z,92nm,1.0s						
RND	Reindeer	69.91	29	P	P	20 17 39.9	-0.5
RND				IAmb	IAmb	20 18 09.1	
	comp=Z,92nm,1.0s						
RC01	Rabbit Creek A	69.92	31	P	P	20 17 40.6	+0.2
	baz=280						
O22K	Cooper Landing	70.04	32	P	P	20 17 40.9	-0.2
	baz=281						
WRH	Wood River Hil	70.05	27	IAmb	IAmb	20 18 15.4	
	comp=Z,126nm,1.8s						
TCOL	CIGO, UAF Yank	70.07	27	P	P	20 17 41.4	+0.1
	baz=281,SNR=5.4						
COLA	College	70.07	27	P	P	20 17 41.5	+0.2
COLA				pmax	pmax		
	comp=Z,27nm,0.7s						
COLA	College	70.07	27	P	P	20 17 41.5	+0.2
PMR	Palmer	70.11	31	P	P	20 17 41.0	-0.6
PMR				pmax	pmax		
	comp=Z,43nm,1.0s						
PMR	Palmer	70.11	31	P	P	20 17 41.0	-0.6
PMR				IAmb	IAmb	20 18 08.2	
	comp=Z,43nm,1.0s						
POKR	Poker Plat Res	70.20	27	P	P	20 17 42.1	-0.1
	baz=281,SNR=22						
POKR	Poker Plat Res	70.20	27	IAmb	IAmb	20 17 45.5	
	comp=Z,37nm,0.8s						
ESPY	Espiye-Giresun	70.23	307	*e*P	P	20 17 42.7	-0.1
SEW	Seward	70.24	32	IAmb	IAmb	20 18 13.8	
	comp=Z,125nm,1.2s						
ANN	Anapa	70.30	311	*e*P	P	20 17 42.4	-0.7
ANN				*e*S	S	20 26 53.8	+0.6
ANN				pmax	pmax		
	comp=Z,203nm,0.9s						
ANN				MLR	MLR		
	comp=Z,13µm,16.0s						
SML	Sawmill	70.45	30	IAmb	IAmb	20 18 12.1	
	comp=Z,73nm,1.0s						
ILAR	Eielson Array	70.50	27	P	P	20 17 42.9	-1.1
	comp=Z,5.0nm,0.7s,baz=291,slow=5.8,SNR=32						
ILAR				PP	PP	20 20 27.9	+8.1
	comp=Z,2.7nm,0.9s,baz=288,slow=5.5,SNR=2.7						
ILAR				PKP2bc		20 45 36.1	
	comp=Z,1.0nm,0.9s,baz=105,slow=1.9,SNR=4.8						
ILAR				LR	LR	20 52 44.2	
	comp=Z,3µm,18.1s,baz=294,slow=39						
ILAR	Eielson Array	70.50	27	P	P	20 17 42.2	-1.7
KEV	Kevo	70.52	338	P	P	20 17 44.6	+0.6
KEV				pmax	pmax		
	comp=Z,61nm,0.8s						
KEV				MLR	MLR		
	comp=Z,19µm,19.0s						
KEV	Kevo	70.52	338	P	P	20 17 44.6	+0.6
KEV				IAmb	IAmb	20 17 52.6	
	comp=Z,61nm,0.8s						
HDA	Harding Lake	70.55	27	P	P	20 17 43.5	-0.7
	baz=282,SNR=16						
FYU	Fort Yukon	70.80	25	IAmb	IAmb	20 18 46.2	
	comp=Z,52nm,1.1s						
PRP	Porcupine Dome	70.91	26	IAmb	IAmb	20 18 46.3	
	comp=Z,83nm,1.7s						
SCM	Sheep Creek Mo	70.91	30	P	P	20 17 46.3	-0.3
SCM				pmax	pmax		
	comp=Z,110nm,1.0s						
SCM				MLR	MLR		
	comp=Z,7µm,22.0s						
SCM	Sheep Creek Mo	70.91	30	P	P	20 17 46.3	-0.3
SCM				IAmb	IAmb	20 18 15.1	
	comp=Z,110nm,1.0s						
URFA	Urfa	70.98	303	*e*P	P	20 17 47.5	0.0
SPA0	Spitsbergen Ar	71.06	348	*e*P	P	20 17 47.3	+0.1
SPA0				IVMs_BB	IVMs_BB	20 53 02.9	
	comp=Z,16µm,13.7s						
SPITS	Spitsbergen Ar	71.06	348	LR	LR	20 53 46.6	
	comp=Z,18µm,18.1s,baz=70,slow=40						
MALT	Malatya	71.07	304	*e*P	P	20 17 49.4	+1.3
ARA0	ARCESS Array S	71.08	338	*e*P	P	20 17 48.1	+0.6
ARCES	ARCESS Array B	71.08	338	P	P	20 17 47.1	-0.3
	comp=Z,24nm,1.0s,baz=78,slow=5.7,SNR=21						
ARCES				LR	LR	20 53 36.0	
	comp=Z,16µm,18.6s,baz=325,slow=40						
ARCES	ARCESS Array B	71.08	338	P	P	20 17 47.0	-0.5
PUL	Pulkovo	71.30	328	⇑*e*P	P	20 17 48.6	-0.3
PUL				pmax	pmax		
	comp=Z,279nm,0.9s						
PUL				MLR	MLR		
	comp=Z,40µm,17.0s						
M24K	Tolsona, Glenn	71.38	30	P	P	20 17 49.5	+0.1
	baz=283,SNR=12						
M24K	Tolsona, Glenn	71.38	30	IAmb	IAmb	20 18 30.5	
	comp=Z,80nm,0.8s						
HAMF	Hammerfest	71.41	340	*e*P	P	20 17 49.3	-0.1
KBS	Kingsbay	71.61	349	P	P	20 17 50.6	+0.1
KBS				pmax	pmax		
	comp=Z,83nm,1.3s						
KBS				MLR	MLR		
	comp=Z,41µm,19.0s						
KBS	Kingsbay	71.61	349	P	P	20 17 50.6	+0.1
KBS				IAmb	IAmb	20 18 12.1	
	comp=Z,83nm,1.2s						
KBS	Kingsbay	71.61	349	IVMs_BB	IVMs_BB	20 53 12.7	
	comp=Z,26µm,14.7s						
HSPB	Hornsund (broa	71.64	347	*e*P	P	20 17 51.6	+1.0
HSPB				*e*pP	pP	20 17 58.2	-1.8
HSPB				*e*PcP	PcP	20 18 10.1	+0.4
HSPB				*e*L	L	20 51 32.3	
	comp=Z,28µm,22.6s						
HSPB	Hornsund (broa	71.64	347	*e*P	P	20 17 51.2	+0.5
DARE	Darende-Malaty	71.73	305	*e*P	P	20 17 53.2	+1.2
DOT	Dot Lake	71.95	28	P	P	20 17 52.9	+0.1
TOKT	Tokat	71.99	307	*e*P	P	20 17 54.0	+0.5
KTK1	Kautokeino	72.00	338	*e*P	P	20 17 53.0	+0.1
TOKA	Tokat	72.04	307	P	P	20 17 54.0	+0.2
TOKA				IAmb	IAmb	20 18 16.4	
	comp=Z,94nm,1.3s						
KVT	Kavak	72.16	308	*e*P	P	20 17 55.6	+1.1
N25K	Chitina, Valde	72.22	30	P	P	20 17 53.8	-0.8
	baz=285,SNR=7.9						
MENT	Mentasta	72.28	29	P	P	20 17 54.6	-0.2
MENT				IAmb	IAmb	20 18 23.8	
	comp=Z,63nm,1.1s						
GAZ	Gaziantep	72.29	303	*e*P	P	20 17 56.3	+0.9
GAZ	Gaziantep	72.29	303	IAmb	IAmb	20 18 02.4	
	comp=Z,89nm,1.1s						
RAGM	Ragged Mountai	72.50	31	P	P	20 17 57.3	+1.1
RAGM				IAmb	IAmb	20 18 26.8	
	comp=Z,217nm,1.6s						
SARI	SarD1z-Kayseri	72.58	305	*e*P	P	20 17 57.3	+0.1
DIKM	Dikmen	72.59	308	*e*P	P	20 17 57.5	+0.5
GLB	Gilahina Butte	72.63	30	P	P	20 17 57.5	+0.6
GLB				IAmb	IAmb	20 18 25.1	
	comp=Z,53nm,1.0s						
JETT	Jettan, Norway	72.80	339	*e*P	P	20 17 59.1	+1.3
BNN	Bunyan	72.89	305	*e*P	P	20 17 58.5	-0.5
FIA1	FINESS Array S	72.92	330	P	P	20 17 58.0	-0.5
FIA1				IAmb	IAmb	20 18 01.6	
	comp=Z,145nm,1.1s						
FINES	FINESS Array B	72.92	330	P	P	20 17 58.2	-0.3
	comp=Z,44nm,0.7s,baz=62,slow=5.7,SNR=193						
FINES				LR	LR	20 53 58.5	
	comp=Z,18µm,18.7s,baz=74,slow=39						
FINES	FINESS Array B	72.92	330	P	P	20 17 57.9	-0.7
MCARA	McCarthy VSAT	73.01	30	IAmb	IAmb	20 18 28.1	
	comp=Z,56nm,0.9s						
TRO	Tromso	73.26	339	*e*P	P	20 17 59.5	-0.9
TRO				IVMs_BB	IVMs_BB	20 55 34.9	
	comp=Z,10µm,14.4s						
VSU	Vasula	73.42	327	*e*P	P	20 18 01.9	+0.3
VSU	Vasula	73.42	327	*ce*P	P	20 18 01.3	-0.2
VSU				pmax	pmax		
	comp=Z,592nm,1.1s						
VSU				MLR	MLR		
	comp=Z,60µm,18.0s						
CORM	Corum	73.44	307	*e*P	P	20 18 02.0	-0.2
CEYT	Ceyhan	73.46	304	*e*P	P	20 18 03.1	+0.9
KIP	Kipapa	73.72	73	⇑*e*P	P	20 18 04.4	+0.4
KIP				pmax	pmax		
	comp=Z,74nm,1.1s						
BARN	Barnard Glacie	73.74	30	P	P	20 18 04.7	+1.1
ILGA	Ilgaz	73.87	308	P	P	20 18 05.8	+1.0
ILGA				IAmb	IAmb	20 18 30.1	
	comp=Z,48nm,1.0s						
MNK	Minsk	73.92	323	⇑*e*P	P	20 18 04.0	-0.5
MNK				*e*		20 18 24.0	
MNK				*e*S	S	20 27 33.0	-1.4
MNK				pmax	pmax		
	comp=Z,380nm,1.5s						
MNK				MLR	MLR		
	comp=Z,22µm,16.0s						
MNK				MLR	MLR		
	comp=Z,24µm,16.0s						
MNK				MLR	MLR		
	comp=E,11µm,16.0s						
MNK	Minsk	73.92	323	*i* P	P	20 18 05.2	+0.7
	comp=E,17nm,1.1s						
MNK				*i* P	P	20 18 05.2	+0.7
	comp=N,25nm,1.3s						
MNK				*i* P	P	20 18 05.2	+0.7
	comp=Z,107nm,1.1s						
MNK				*i* PcP	PcP	20 18 20.2	+0.4
MNK				*i* PP	PP	20 20 50.2	+0.9
MNK				*i* PPP	PPP	20 22 35.1	
MNK				*i* S	S	20 27 35.8	+1.4
MNK				*i* ScS	ScS	20 28 14.0	+1.8
MNK				*i* SS	SS	20 32 22.9	+4.5
MNK				*i* SSS	SSS	20 35 44.2	
MNK				*i* LQ	LQ	20 45 41.9	
MNK				*i* LR	LR	20 48 46.3	
MNK				*i* LRM	MLR	20 53 21.3	
	comp=N,8µm,17.4s						
MNK				*i* LRM	MLR	20 53 25.6	
	comp=Z,5µm,15.9s						
MNK				*i* LRM	MLR	20 53 30.0	
	comp=E,1µm,18.8s						
CTGM	Chitina Glacie	73.92	30	IAmb	IAmb	20 18 32.0	
	comp=Z,47nm,0.8s						
CANT	Cankiri	74.06	308	*e*P	P	20 18 06.0	+0.2
EPYK	Eagle Plains	74.13	24	P	P	20 18 04.8	-0.8
	baz=290						
AKASG	Malin Array Be	74.20	319	P	P	20 18 04.6	-1.7
	comp=Z,20nm,0.7s,baz=60,slow=6.4,SNR=70						
AKASG				LR	LR	20 52 53.4	
	comp=Z,11µm,19.9s,baz=85,slow=38						
AKASG	Malin Array Be	74.20	319	P	P	20 18 05.3	-1.0
AKASG				pmax	pmax		
	comp=Z,29nm,1.1s						
AKASG	Malin Array Be	74.20	319	P	P	20 18 05.3	-1.0
AKBB	Malin Array Si	74.20	319	⇓*e*P	P	20 18 05.6	-0.7
AKBB	Malin Array Si	74.20	319	P	P	20 18 05.3	-1.0
GULA	Gulagac	74.24	305	*e*P	P	20 18 07.3	+0.4
BR131	Keskin Array S	74.30	307	*c i*P	P	20 18 06.8	-0.5
BR131	Keskin Array S	74.30	307	IAmb	IAmb	20 18 21.4	
	comp=Z,77nm,0.9s						
BRTR	Keskin Array B	74.30	307	P	P	20 18 06.6	-0.6
	comp=Z,23nm,1.0s,baz=114,slow=6.6,SNR=53						
BRTR				LR	LR	20 54 06.4	
	comp=Z,8µm,21.8s,baz=44,slow=38						
BRTR	Keskin Array B	74.30	307	*i* P	P	20 18 07.1	-0.2
BRTR				pmax	pmax		
	comp=Z,23nm,1.0s						
BRTR	Keskin Array B	74.30	307	P	P	20 18 06.4	-0.8
IDID	Didziasalis	74.32	324	*e*P	P	20 18 07.1	+0.3
KAMT	Kaman	74.34	306	*e*P	P	20 18 08.8	+1.3
KURC	Kurucasile-Bar	74.35	309	*e*P	P	20 18 05.4	-1.9
YAYX	Yaylak	74.39	306	*e*P	P	20 18 08.3	+0.5
NACGM	Naroch	74.41	323	*i* P	P	20 18 07.8	+0.3
NACGM				*i* P	P	20 18 07.8	+0.3
NACGM				*i* P	P	20 18 07.8	+0.3
NACGM				*i* PP	PP	20 21 03.7	+10
NACGM				*i* PPP	PPP	20 22 46.3	
NACGM				*i* S	S	20 27 52.8	+13
NACGM				*i* SS	SS	20 32 35.0	+9.1
NACGM				*i* SSS	SSS	20 35 41.2	
NACGM				*i* LQ	LQ	20 45 13.0	
NACGM				*i* LR	LR	20 52 52.6	
ISAL	Salakas	74.58	324	*e*P	P	20 18 08.8	+0.4
SERE	Sereflikochisa	74.58	306	*e*P	P	20 18 08.9	0.0
INK	Inuvik	74.59	22	P	P	20 18 07.5	-0.6
	comp=Z,19nm,0.7s,baz=301,slow=4.8,SNR=45						
INK				LR	LR	20 53 09.2	
	comp=Z,992nm,21.8s,baz=284,slow=38						
INK	Inuvik	74.59	22	IAmb	IAmb	20 18 38.1	
	comp=Z,65nm,1.2s						
INK				IAMs_20	IAMs_20	20 54 28.5	
	comp=Z,11µm,19.0s						
IIGN	Ignalina	74.59	324	*e*P	P	20 18 08.8	+0.4
AFI	Afiamalu	74.78	112	P	P	20 18 10.7	+0.4
AFI				pmax	pmax		
	comp=Z,88nm,1.1s						
AFI	Afiamalu	74.78	112	P	P	20 18 10.7	+0.4
AFI				IAmb	IAmb	20 18 32.1	
	comp=Z,88nm,1.1s						
AFI	Afiamalu	74.78	112	P	P	20 18 12.4	+2.1
AFSR	Afar-Bala (An	74.80	307	*e*P	P	20 18 09.2	-0.9
MTSE	Matsula	74.81	328	*e*P	P	20 18 09.8	+0.2
N2IH	Innhavet	74.88	338	*e*P	P	20 18 09.1	-0.7
LOD	Lodumlu	74.90	307	*e*P	P	20 18 09.9	-0.8
BR231	Keskin MP Arra	74.90	307	IAmb	IAmb	20 18 17.6	
	comp=Z,80nm,1.1s						
STEI	Steigen	75.14	338	*e*P	P	20 18 11.3	-0.1
KEBE	Keben-Mersin	75.19	304	*e*P	P	20 18 12.2	-0.2
N2ST	Straumen	75.25	337	*e*P	P	20 18 11.3	-0.7
N2TV	T¥rnvik	75.33	338	*e*P	P	20 18 12.1	-0.3
FAUS	Fauske	75.34	337	*e*P	P	20 18 12.0	-0.5
AKKU	Akkuyu-Mersin	75.40	303	*e*P	P	20 18 15.4	+1.9
SORM	Soroca	75.50	316	⇑P	P	20 18 13.3	-0.5
KIS	Kishinev	75.54	315	*e*P	P	20 18 15.0	+0.9
KIS	Kishinev	75.54	315	*e*PcP	PcP	20 18 32.0	+5.0
KIS	Kishinev	75.54	315	*e*PP	PP	20 20 53.0	-10
KIS				*e*LQ	LQ	20 47 35.0	
	comp=Z,2µm,20.0s						
KIS				*e*LR	LR	20 52 15.0	
	comp=Z,3µm,15.0s						
KIS	Kishinev	75.54	315	*e*P	P	20 18 15.0	+0.9
KIS				*e*		20 18 32.0	
KIS				MLR	MLR		
	comp=Z,3µm,15.0s						
KIS				MLR	MLR		
	comp=E,2µm,14.0s						
MILM	Milestii Mici	75.57	315	⇓P	P	20 18 14.0	-0.3
NBB08	Skaug oppvekst	75.57	338	*e*P	P	20 18 13.1	-0.8
BERE	Bereket-Mersin	75.60	304	*e*P	P	20 18 16.9	+2.1
LOF	Lofoten	75.64	338	*e*P	P	20 18 14.6	+0.3
LOF				*e*S	S	20 27 55.1	+2.0
LADK	Ladik-KONYA	75.69	306	*e*P	P	20 18 14.7	-0.6
TEKE	Tekeli-Mersin	75.74	303	*e*P	P	20 18 17.3	+1.8
PABE	Paberze	75.76	324	*e*P	P	20 18 15.4	+0.3
KONT	Konya--Tatoy	75.77	305	*e*P	P	20 18 24.9	+9.2
MDUB	Mudurnu	75.87	308	*e*P	P	20 18 15.1	-1.2
MDUB	Mudurnu	75.87	308	P	P	20 18 15.8	-0.5
SLIT	Slitere, Latvi	75.93	327	*e*P	P	20 18 15.6	-0.4
NBB05	Inndyr	75.93	337	*e*P	P	20 18 15.8	-0.1
SVRH	Sivrihisar-ESK	75.94	307	*e*P	P	20 18 17.3	+0.6
TLCR		76.10	313	⇑P	P	20 18 17.6	+0.3
AAL	Aland	76.15	330	*e*P	P	20 18 16.6	-0.6
JURR	Jurilovca	76.18	313	⇑P	P	20 18 18.1	+0.3
LEF	Lefka	76.23	302	⇓P	P	20 18 18.2	-0.1
LEF	Lefka	76.23	302	*e*P	P	20 18 18.3	0.0
CIFT	Cifteler, Eski	76.31	307	*e*P	P	20 18 18.4	-0.4
VASR	Vaslui	76.32	315	⇑P	P	20 18 18.5	-0.1
GAZI	Gazipasa	76.33	304	*e*P	P	20 18 20.2	+1.3
GULT	Gulveren	76.38	308	*e*P	P	20 18 21.2	+2.1
N2RO	R¸st	76.39	338	*e*P	P	20 18 18.6	0.0
SAUV	Serdivan-Sakar	76.42	309	*e*P	P	20 18 18.9	-0.3
SRCK	Saricakaya, Es	76.42	308	*e*P	P	20 18 21.2	+1.9
EUNU	Eureka	76.44	5	IAMs_20	IAMs_20	20 53 14.8	
	comp=Z,16µm,22.0s						
SPNC	Sapanca-Adapaz	76.45	309	*e*P	P	20 18 21.4	+2.0
TPGR	Topolog	76.47	313	⇑P	P	20 18 19.5	0.0
KONS	Konsvik	76.49	337	*e*P	P	20 18 18.8	-0.3
VARL	Varlezi	76.52	314	⇓P	P	20 18 20.5	+0.9
CFR	Carcaliu	76.55	313	⇓P	P	20 18 20.2	+0.3
TIRR	Tirgusor	76.59	313	⇑P	P	20 18 20.3	+0.2
TIRR	Tirgusor	76.59	313	⇑P	P	20 18 20.3	+0.2
TIRR	Tirgusor	76.59	313	P	P	20 18 20.1	0.0
TIRR				pmax	pmax		
	comp=Z,124nm,1.1s						
TIRR	Tirgusor	76.59	313	P	P	20 18 20.1	0.0
TIRR				IAmb	IAmb	20 18 23.8	
	comp=Z,124nm,1.1s						
SCHL	Schela	76.66	314	⇑P	P	20 18 20.0	-0.4
PBUR	Paburge	76.67	325	*e*P	P	20 18 20.7	+0.4
SUW	Suwalki	76.69	323	*e*P	P	20 18 19.9	-0.6
SUW				*e*pP	pP	20 18 27.5	-2.3
SUW				*e*S	S	20 28 06.8	+1.6
SUW				*e*L	L	20 56 28.1	
	comp=Z,32µm,17.6s						
SUW	Suwalki	76.69	323	*e*P	P	20 18 20.1	-0.4
SILT	Sile	76.78	309	*e*P	P	20 18 23.3	+2.0
TLBR	Topalu	76.82	313	⇓P	P	20 18 21.8	+0.4
HARR	Harsova	76.85	313	⇓P	P	20 18 21.8	+0.3
HRT	Hereke	76.87	309	*e*P	P	20 18 23.7	+1.9
SHUT	Suhut-Afyon	76.94	306	*e*P	P	20 18 22.4	0.0
ADVT	Abdulvahap	76.94	308	*e*P	P	20 18 22.1	-0.1
PETR	Petresti	76.98	314	⇓P	P	20 18 23.7	+1.5
ODBI	Odobesti	77.09	314	⇑P	P	20 18 23.8	+0.9
PRAR	RASCA	77.10	316	⇓P	P	20 18 22.8	-0.2
TESR	Tescani	77.11	315	⇓P	P	20 18 23.3	+0.2
ICOR	Ion Corvin	77.12	312	⇑P	P	20 18 23.9	+0.8
YLV	Yalova	77.16	309	*e*P	P	20 18 25.4	+1.9
ISP	Isparta	77.19	306	IAmb	IAmb	20 18 26.0	
	comp=Z,137nm,1.1s						
C36M	Paulatuk	77.20	19	P	P	20 18 22.7	-0.3
	baz=300						
C36M	Paulatuk	77.20	19	IAmb	IAmb	20 18 51.0	
	comp=Z,69nm,1.1s						
ISK	Istanbul-Kandi	77.23	309	*e*P	P	20 18 25.3	+1.5
KAVV	Kandilli-Istan	77.23	309	*e*P	P	20 18 25.2	+1.4
VRI	Vrincioaia	77.27	314	⇑P	P	20 18 24.4	+0.5
BIZ	Bicaz	77.32	316	⇑P	P	20 18 24.6	+0.4
PLOR	Plostina	77.33	314	⇓P	P	20 18 24.3	0.0
UPP	Uppsala	77.37	330	*e*P	P	20 18 23.9	-0.3
BISRR	Bisoca	77.39	314	⇓P	P	20 18 26.2	+1.5
BGKT	Bogazkoy	77.39	309	*e*P	P	20 18 26.5	+1.8
PGOR	Pogoanele	77.41	313	⇑P	P	20 18 26.2	+1.4
TVSB	Tavsanli	77.46	308	*e*P	P	20 18 24.1	-1.2
ARMT	Armutlu	77.53	309	*e*P	P	20 18 26.7	+1.2
MDNY	Mudanya-Bursa	77.58	309	*e*P	P	20 18 27.7	+1.9
KORT	Korkueli	77.59	305	*e*P	P	20 18 22.9	-3.2
ISR	Istrita	77.64	314	⇓P	P	20 18 27.6	+1.5
LVV	L'vov	77.64	319	*e*P	P	20 18 27.7	+1.8
LVV				MLR	MLR		
	comp=N,6µm,18.0s						
LVV				MLR	MLR		
	comp=E,4µm,18.0s						
LVV				MLR	MLR		
	comp=Z,8µm,19.0s						
BURAR	Bucovina Array	77.66	316	⇓P	P	20 18 26.6	+0.3
BURAR	Bucovina Array	77.66	316	P	P	20 18 25.9	-0.4
LEHL	Lehliu	77.67	313	⇓P	P	20 18 27.2	+1.0
NEHR	Nehoiu	77.70	314	⇓P	P	20 18 27.5	+1.1
NSS	Namsos	77.79	335	*e*P	P	20 18 25.6	-0.9
NSS				IVMs_BB	IVMs_BB	20 56 22.2	
	comp=Z,14µm,12.2s						
OZUR		77.81	315	⇑P	P	20 18 27.8	+0.7
MLR	Muntele Rosu	77.91	314	P	P	20 18 26.7	-1.0
	comp=Z,30nm,0.8s,baz=9.7,slow=2.2,SNR=20						
MLR	Muntele Rosu	77.91	314	⇑P	P	20 18 28.8	+1.1
MLR	Muntele Rosu	77.91	314	IAmb	IAmb	20 18 38.0	
	comp=Z,46nm,0.7s						
MLR				IAMs_20	IAMs_20	20 59 34.3	
	comp=Z,14µm,20.0s						
SIMA	Simav-Kutahya	77.93	307	*e*P	P	20 18 28.3	+0.4
DAG	Danmarks Havn	77.95	351	*i* P	P	20 18 26.5	-0.7
DAG	Danmarks Havn	77.95	351	*i* P	P	20 18 26.5	-0.7
DAG	Danmarks Havn	77.95	351	*i* P	P	20 18 26.5	-0.7
SULR		77.98	313	⇑P	P	20 18 28.6	+0.7
SECR		77.98	314	⇑P	P	20 18 29.3	+1.3
ELL	Elmali	78.00	305	P	P	20 18 27.8	-0.6
ELL				pmax	pmax		
	comp=Z,326nm,0.8s						
ELL	Elmali	78.00	305	P	P	20 18 27.8	-0.6
DOPR	Dopca	78.11	315	⇑P	P	20 18 29.2	+0.6
RAZG	Razgrad	78.19	312	⇑P	P	20 18 29.6	+0.5
EDC	Edincik	78.32	309	*e*P	P	20 18 31.4	+1.5
KULA	Kula-Manisa	78.35	307	P	P	20 18 30.0	-0.2
ARCR	ARCALIA	78.40	316	⇓P	P	20 18 31.2	+1.0
KWP	Kalwaria Pacla	78.51	319	*e*P	P	20 18 31.2	+0.4
KWP				*e*PcP	pP	20 18 40.1	0.0
KWP				*e*S	S	20 28 25.6	+0.5
VOIR		78.52	314	⇑P	P	20 18 31.4	+0.3
MTUR	Matau	78.59	314	⇑P	P	20 18 32.4	+1.0
FETY	Fethiye	78.67	305	P	P	20 18 30.1	-1.8
FETY	Fethiye	78.67	305	*e*P	P	20 18 31.2	-0.7
RKY	Sarkoy-Tekirda	78.70	309	*e*P	P	20 18 34.1	+2.0
KRBG	Karabiga-Canak	78.71	309	*e*P	P	20 18 33.8	+1.8
BMR	Baia Mare	78.73	317	⇑P	P	20 18 32.8	+0.8
HIZ	Hauiti	78.75	140	P	P	20 18 32.9	+0.8
HIZ	Hauiti	78.75	140	P	P	20 18 34.4	+2.3
ARR	Arges	78.82	314	⇑P	P	20 18 33.9	+1.2
BEL	Belsk	78.83	322	*e*P	P	20 18 32.9	+0.4
BEL				*e*PcP	pP	20 18 41.6	-0.1
BEL				*e*SKS	SKSac	20 28 45.3	-0.4
HUMR	Humele	78.89	314	⇓P	P	20 18 32.9	0.0
DALY	Dalyan (Mula)	78.93	305	*e*P	P	20 18 34.9	+1.6
QRZ	Quartz Range	78.96	143	IAmb	IAmb	20 18 45.1	
	comp=Z,127nm,1.1s						
CJR	Cluj-Napoca	79.01	316	⇓P	P	20 18 34.9	+1.2
KOLS	Kolonicke sedl	79.03	318	*e*P	P	20 18 33.6	-0.1
KOLS	Kolonicke sedl	79.03	318	*e*P	P	20 18 33.6	-0.1
TBLU	Trondheim	79.06	335	*e*P	P	20 18 31.6	-1.8
YER	Yerkesik	79.10	306	P	P	20 18 33.0	-1.3
YER	Yerkesik	79.10	306	*e*P	P	20 18 36.6	+2.3
AYDB	Zeytinkoy-Aydi	79.12	307	*e*P	P	20 18 36.9	+2.4
UZH	Uzhgorod	79.13	318	⇓*i*P	P	20 18 35.5	+1.3
UZH				*e*		20 18 44.0	
UZH				*e*		20 18 50.5	
UZH				*e*S	S	20 28 30.8	-0.9
UZH				MLR	MLR		
	comp=N,1µm,18.0s						
UZH				MLR	MLR		
	comp=E,2µm,18.0s						
UZH				MLR	MLR		
	comp=Z,1µm,18.0s						
TURN	Turunc	79.25	305	*e*P	P	20 18 36.3	+1.2
GELI	Tayfur-Gelibol	79.30	309	*e*P	P	20 18 35.8	+0.5
FOZ	Fox Glacier	79.39	146	IAmb	IAmb	20 18 45.2	
	comp=Z,135nm,1.4s						
ENEZ	Enez	79.41	310	*e*P	P	20 18 37.9	+2.0
MLSB	Milas	79.43	306	*e*P	P	20 18 40.2	+4.1
ALN	Alexandroupoli	79.43	310	P	P	20 18 37.1	+1.1
ALN	Alexandroupoli	79.43	310	P	P	20 18 36.6	+0.6
ALN				MLR	MLR		
	comp=Z,5µm,21.0s						
ALN	Alexandroupoli	79.43	310	P	P	20 18 36.6	+0.6
DCZ	Deep Cove	79.48	149	IAmb	IAmb	20 18 51.0	
	comp=Z,74nm,1.0s						
PLVB	Pleven	79.54	313	⇑P	P	20 18 36.7	+0.2
CRVS	Cervenica-Dubn	79.54	319	*e*P	P	20 18 39.2	+2.8
CRVS				pmax	pmax		
	comp=Z,217nm,1.7s						
CRVS	Cervenica-Dubn	79.54	319	*e*P	P	20 18 39.2	+2.8
DRGR		79.55	316	⇓P	P	20 18 36.8	+0.2
WTVZ	West Tongariro	79.58	140	P	P	20 18 38.2	+1.4
BLCB	Balcova	79.59	307	P	P	20 18 38.4	+1.5
BLCB	Balcova	79.59	307	*e*P	P	20 18 38.5	+1.5
EZN	Ezine	79.61	309	*e*P	P	20 18 36.9	0.0
NGZ	Ngauruhoe	79.62	140	P	P	20 18 39.2	+2.2
OTVZ	Oturere	79.66	140	P	P	20 18 38.9	+1.7
NB201	NORSAR Array S	79.68	332	P	P	20 18 35.9	-1.1
GCAM	G?zelcaml?	79.69	306	*e*P	P	20 18 39.8	+2.4
NNZ	Nelson	79.69	143	IAmb	IAmb	20 18 46.4	
	comp=Z,176nm,1.5s						
RDO	Rodhopi	79.70	310	P	P	20 18 38.5	+1.1
NB2	NORSAR Subarra	79.72	332	P	P	20 18 36.4	-0.8
	comp=Z,79nm,1.0s,baz=61,slow=5.6						
NB2	NORSAR Subarra	79.72	332	P	P	20 18 36.4	-0.8
	baz=61,slow=5.6						
NOA	NORSAR Array B	79.72	332	P	P	20 18 35.7	-1.5
	comp=Z,31nm,0.9s,baz=58,slow=5.4,SNR=76						
NOA				LR	LR	20 57 14.2	
	comp=Z,23µm,20.9s,baz=55,slow=38						
WNVZ	Wahianoa	79.72	140	P	P	20 18 39.8	+2.2
NC602	NORSAR Array S	79.72	332	*e*P	P	20 18 37.0	-0.2
NC602				IVMs_BB	IVMs_BB	20 57 19.7	
	comp=Z,38µm,14.5s						
DEV	Deva	79.77	315	⇓P	P	20 18 39.0	+1.3
BOZC	Bozcaada	79.80	309	*e*P	P	20 18 37.6	-0.4
THZ	Tophouse	79.80	144	IAmb	IAmb	20 18 49.1	
	comp=Z,59nm,0.9s						
NC204	NORSAR Array S	79.80	333	P	P	20 18 36.8	-0.8
BODT	Bodrum	79.86	306	*e*P	P	20 18 39.1	+0.7
MOVZ	Moawhango	79.86	140	P	P	20 18 39.0	+0.7
NBO00	NORSAR Array S	79.91	332	IAmb	IAmb	20 18 40.1	
	comp=Z,191nm,1.4s						
URZ	Urewera	79.95	139	P	P	20 18 37.2	-1.4

	comp=Z,15nm,0.7s,baz=254,slow=4.4,SNR=11						
URZ	Urewera	79.95	139	P	P	20 18 39.0	+0.4
NAO01	NORSAR Array S	79.96	332	IAmb	IAmb	20 18 46.9	
	comp=Z,67nm,0.9s						
GZR	Gura Zlata	80.03	315	⇑P	P	20 18 40.5	+1.3
OJC	Ojcow	80.03	320	eP	P	20 18 39.2	+0.1
OJC				ePcP	PcP	20 18 46.5	+0.1
OJC				eL	L	20 54 29.1	
	comp=Z,16µm,22.9s						
OJC	Ojcow	80.03	320	P	P	20 18 38.8	-0.3
OJC				pmax	pmax		
	comp=Z,91nm,0.7s						
OJC	Ojcow	80.03	320	P	P	20 18 38.8	-0.3
OJC				IAmb	IAmb	20 18 48.8	
	comp=Z,91nm,0.7s						
HAZ	Te Kaha	80.04	138	P	P	20 18 39.3	+0.2
NIE	Niedzica	80.05	319	eP	P	20 18 39.8	+0.6
NIE				eL	L	20 58 05.1	
	comp=Z,10µm,19.1s						
DOMB	Dombas	80.13	334	eP	P	20 18 39.0	-0.5
DOMB				IVmB_BB		20 18 43.6	
	comp=Z,3µm,4.2s						
BKZ	Black Stump Fm	80.15	140	IAmb	IAmb	20 19 51.1	
	comp=Z,211nm,1.9s						
LTZ	Lake Taylor	80.15	145	IAmb	IAmb	20 18 53.5	
	comp=Z,68nm,1.0s						
RPZ	Rata Peaks	80.16	146	P	P	20 18 38.6	-1.1
	comp=Z,83nm,0.8s,baz=227,slow=0.2,SNR=22						
RPZ	Rata Peaks	80.16	146	P	P	20 18 39.2	-0.4
RES	Resolute Bay	80.17	9	P	P	20 18 38.5	-0.8
	comp=Z,11nm,0.7s,baz=313,slow=5.0,SNR=27						
DLBC	Dease Lake	80.17	30	P	P	20 18 40.4	+0.6
	comp=Z,7.2nm,0.7s,baz=294,slow=7.3,SNR=11						
WHZ	Wether Hill Ro	80.17	149	IAmb	IAmb	20 18 55.1	
	comp=Z,52nm,0.9s						
DBG	Daneborg	80.18	350	iP	P	20 18 39.1	-0.3
DBG				IAmb	IAmb	20 18 41.7	
	comp=Z,132nm,1.0s						
LBZ	Lake Benmore	80.19	147	IAmb	IAmb	20 18 42.2	
	comp=Z,83nm,0.8s						
GKP	Gorka Klasztor	80.25	324	eP	P	20 18 39.7	-0.4
GKP				eL	L	20 58 03.5	
	comp=Z,39µm,17.2s						
GKP	Gorka Klasztor	80.25	324	eP	P	20 18 39.9	-0.3
MWZ	Matawai	80.25	139	P	P	20 18 40.5	+0.2
KECS	Kecovo	80.30	318	eP	P	20 18 41.7	+1.2
KECS				pmax	pmax		
	comp=Z,42nm,1.6s						
KECS	Kecovo	80.30	318	eP	P	20 18 41.7	+1.2
PUNG	Punghina	80.34	314	⇓P	P	20 18 41.6	+0.8
JMIC	Jan Mayen	80.41	345	P	P	20 18 40.1	-0.5
	comp=Z,101nm,0.9s,baz=113,slow=2.2						
SIRR	Siria	80.42	316	⇓P	P	20 18 41.7	+0.5
HERR	Herculane	80.46	315	⇓P	P	20 18 41.7	+0.2
OSL	Oslo	80.46	331	eP	P	20 18 40.7	-0.4
KAVA	Kavala	80.48	310	P	P	20 18 41.4	-0.2
KARP	Karpathos	80.50	304	P	P	20 18 43.3	+1.4
LANS	Liptovska Anna	80.65	319	eP	P	20 18 43.4	+0.9
LANS	Liptovska Anna	80.65	319	eP	P	20 18 43.4	+0.9
BSD	Bornholm Skovb	80.69	326	iP	P	20 18 42.0	-0.4
	comp=Z,19µm,17.0s						
BSD	Bornholm Skovb	80.69	326	eP	P	20 18 42.9	+0.5
BSD	Bornholm Skovb	80.69	326	iP	P	20 18 42.0	-0.4
BSD				MLR	MLR		
	comp=Z,19µm,17.0s						
BSD	Bornholm Skovb	80.69	326	iP	P	20 18 42.0	-0.4
BSD				IAMs_20	IAMs_20	20 58 26.3	
	comp=Z,19µm,17.0s						
BZS	Buzias	80.70	316	⇑P	P	20 18 42.2	-0.6
VTS	Vitosha	80.76	312	⇑P	P	20 18 44.3	+0.9
NVR	Nevrokopi	80.81	311	P	P	20 18 42.6	-0.9
TULEG	Thule	80.88	2	P	P	20 18 42.4	-0.7
TULEG				IAmb	IAmb	20 18 45.6	
	comp=Z,132nm,1.5s						
TULEG				IAMs_20	IAMs_20	20 57 34.8	
	comp=Z,9µm,21.0s						
TULEG	Thule	80.88	2	iP	P	20 18 41.9	-1.2
PSZ	Piszkesteto	80.89	318	IAmb	IAmb	20 19 16.3	
	comp=Z,103nm,1.5s						
AKN	Aaknes	80.90	334	eP	P	20 18 43.3	-0.2
AKN				IVmB_BB		20 18 49.5	
	comp=Z,2µm,1.4s						
AKN				IVmBBB		20 18 53.9	
	comp=Z,2µm,4.1s						
AKN				IVMs_BB	IVMs_BB	20 58 12.7	
	comp=Z,17µm,13.0s						
BSZH	Besenyszg	80.90	317	⇑P	P	20 18 44.6	+0.8
MDVR	Moldovita	80.96	315	⇑P	P	20 18 43.9	-0.3
BFZ	Birch Farm	80.98	141	P	P	20 18 43.8	-0.3
SRS	Serrai	81.08	311	P	P	20 18 44.0	-0.9
OUR	Ouranopolis	81.10	310	P	P	20 18 44.5	-0.5
KONO	Kongsberg	81.10	332	ceP	P	20 18 46.7	+2.1
KONO				pmax	pmax		
	comp=Z,35nm,1.7s						
KONO	Kongsberg	81.10	332	eP	P	20 18 45.0	+0.4
SKAR	Skarslia	81.14	333	eP	P	20 18 46.6	+1.7
SKAR				IVMs_BB	IVMs_BB	20 58 12.7	
	comp=Z,26µm,14.4s						
OKC	Ostrava-Krasne	81.16	320	AMS	AMS	21 00 30.0	
	comp=Z,10µm,14.6s						
VYHS	Vyhne	81.30	319	eP	P	20 18 46.3	+0.4
VYHS				pmax	pmax		
	comp=Z,239nm,1.9s						
VYHS	Vyhne	81.30	319	eP	P	20 18 46.3	+0.4
SOH	Sokhos	81.36	311	P	P	20 18 45.5	-0.9
BOVS	Bovan	81.41	314	⇑P	P	20 18 47.2	+0.7
PLG	Polygyros	81.46	310	P	P	20 18 46.1	-0.9
PAIG	Paliouri	81.47	310	P	P	20 18 46.3	-0.6
SANT	Santorini	81.49	306	⇑P	P	20 18 47.4	+0.2
MORC	Moravsky Berou	81.54	320	⇓P	P	20 18 47.8	+0.6
MORC	Moravsky Berou	81.54	320	eP	P	20 18 47.1	-0.1
MORC	Moravsky Berou	81.54	320	IAMs_20	IAMs_20	20 54 26.8	
	comp=Z,11µm,18.0s						
KNT	Kendrikon	81.55	311	P	P	20 18 46.7	-0.7
HORT	Hortiatis	81.62	310	P	P	20 18 46.9	-1.0
VAY	Valandovo	81.72	311	iP	P	20 18 49.0	+0.8
KSP	Ksiaz	81.81	322	eL	L	20 59 56.2	
	comp=Z,19µm,19.6s						
KSP	Ksiaz	81.81	322	eP	P	20 18 48.8	+0.3
STIP	Stip	81.84	312	iP	P	20 18 48.0	-0.8
JAVC	Velka Javorina	81.85	320	eP	P	20 18 50.2	+1.3
KRLC	Kraliky	81.86	321	eP	P	20 18 49.1	+0.2
KRLC				MLR	MLR		
	comp=Z,13µm,16.4s						
KRLC	Kraliky	81.86	321	eP	P	20 18 49.1	+0.2
KRLC				AMS	AMS	21 00 10.0	
	comp=Z,13µm,16.4s						
LAST	Lasithi	81.92	305	P	P	20 18 49.5	-0.1
GRG	Griva	81.97	311	P	P	20 18 48.8	-0.9
OSTC	Ostas	81.98	322	eP	P	20 18 51.5	+2.0
OSTC				AMS	AMS	21 00 00.0	
	comp=Z,22µm,16.0s						
FOO	Floro	81.99	334	eP	P	20 18 48.3	-1.0
FOO				IVMs_BB	IVMs_BB	20 58 53.4	
	comp=Z,17µm,13.1s						
DPC	Dobruska-Polom	82.00	321	eP	P	20 18 50.2	+0.6
DPC				MLR	MLR		
	comp=Z,19µm,16.1s						
DPC	Dobruska-Polom	82.00	321	eP	P	20 18 50.2	+0.6
DPC				AMS	AMS	20 59 20.0	
	comp=Z,19µm,16.1s						
FRGS	Fruska Gora	82.05	316	⇑P	P	20 18 50.0	+0.1
FRGS	Fruska Gora	82.05	316	⇑iP	P	20 18 49.7	-0.3
CHVC	Chvalec	82.06	322	eP	P	20 18 50.2	+0.3
CHVC				AMS	AMS	21 00 00.0	
	comp=Z,22µm,16.8s						
UPC	Upice	82.11	322	eP	P	20 18 50.4	+0.2
UPC				MLR	MLR		
	comp=Z,23µm,16.4s						
UPC	Upice	82.11	322	eP	P	20 18 50.4	+0.2
UPC				AMS	AMS	21 00 00.0	
	comp=Z,23µm,16.4s						
SKO	Skopje	82.24	312	iP	P	20 18 51.5	+0.5
ODD1	Odda	82.25	333	eP	P	20 18 48.5	-2.2
ODD1				eS	S	20 29 05.8	+1.8
MODS	Modra-Piesok	82.29	319	eP	P	20 18 52.0	+0.8
MODS				pmax	pmax		
	comp=Z,72nm,1.4s						
MODS	Modra-Piesok	82.29	319	eP	P	20 18 52.0	+0.8
VRAC	Vranov	82.30	320	P	P	20 18 51.4	+0.2
	comp=Z,28nm,0.9s,baz=68,slow=4.7,SNR=30						
VRAC	Vranov	82.30	320	⇑P	P	20 18 51.7	+0.6
VRAC	Vranov	82.30	320	eP	P	20 18 51.4	+0.2
MORH	Mrgy, Hungar	82.36	317	⇓P	P	20 18 51.8	+0.3
MORH	Mrgy, Hungar	82.36	317	⇑iP	P	20 18 51.3	-0.2
DIVS	Divibare	82.36	315	⇑iP	P	20 18 51.2	-0.5
DIVS	Divibare	82.36	315	P	P	20 18 50.8	-0.9
SUE	Sulen	82.41	334	eP	P	20 18 52.3	+0.9
SUE				eS	S	20 29 07.4	+2.1
RUE	Ruedersdorf	82.48	324	eP	P	20 18 52.3	+0.3
	comp=Z,124nm,1.3s,baz=60,slow=5.0						
TEKS	Tekeris	82.48	315	eP	P	20 18 53.5	+1.3
KRUC	Moravsky	82.52	320	eP	P	20 18 52.2	-0.1
BER	Bergen	82.54	333	eP	P	20 18 52.8	+0.6
BER				IVMs_BB	IVMs_BB	20 59 02.8	
	comp=Z,12µm,15.7s						
ASK	Askoy	82.55	333	IVMs_BB	IVMs_BB	20 58 54.4	
	comp=Z,20µm,17.0s						
GOET	G??ttrup	82.58	329	iP	P	20 18 53.3	+0.9
	comp=Z,139nm,0.8s						
	comp=Z,36µm,16.0s						
GOET	G??ttrup	82.58	329	iP	P	20 18 53.4	+0.9
GOET				IAmb	IAmb	20 18 57.0	
	comp=Z,140nm,0.8s						
GOET				IAMs_20	IAMs_20	20 59 11.6	
	comp=Z,36µm,15.9s						
BLS5	Blasjo	82.59	332	eP	P	20 18 52.6	+0.1
KZN	Kozani	82.67	311	P	P	20 18 52.3	-1.1
FNA	Florina	82.76	311	P	P	20 18 52.6	-1.2
FNA	Florina	82.76	311	IAmb	IAmb	20 18 55.4	
	comp=Z,217nm,1.8s						
AGG	Agios Georgios	82.78	309	P	P	20 18 54.1	+0.2
AGG	Agios Georgios	82.78	309	IAmb	IAmb	20 18 54.9	
	comp=Z,108nm,1.2s						
SNART	Snartemo	82.84	331	eP	P	20 18 54.1	+0.4
SNART	Snartemo	82.84	331	iP	P	20 18 53.0	-0.7
SNART	Snartemo	82.84	331	iP	P	20 18 53.6	-0.1
BBLS	Lazići	82.84	315	⇑iP	P	20 18 55.8	+1.6
MUD	Monsted U'grnd	82.91	329	iP	P	20 18 53.9	-0.2
	comp=Z,100nm,0.9s						
	comp=Z,34µm,16.0s						
MUD	Monsted U'grnd	82.91	329	iP	P	20 18 53.9	-0.2
MUD				pmax	pmax		
	comp=Z,100nm,0.9s						
MUD				MLR	MLR		
	comp=Z,35µm,16.0s						
MUD	Monsted U'grnd	82.91	329	iP	P	20 18 53.9	-0.2
MUD				IAmb	IAmb	20 18 57.9	
	comp=Z,100nm,0.9s						
MUD				IAMs_20	IAMs_20	20 59 23.8	
	comp=Z,35µm,16.3s						
IVA	Berane	82.93	313	⇑iP	P	20 18 55.9	+1.2
PVCC	Panska Ves	82.93	322	eP	P	20 18 54.6	+0.2
PVCC				MLR	MLR		
	comp=Z,19µm,15.2s						
PVCC	Panska Ves	82.93	322	eP	P	20 18 54.6	+0.2
PVCC				AMS	AMS	21 00 40.0	
	comp=Z,19µm,15.2s						
TREC	Trest	82.95	321	AMS	AMS	21 01 40.0	
	comp=Z,11µm,15.6s						
OHR	Ohrid	83.03	312	iP	P	20 18 55.4	+0.3
KULLO	Kullorsuaq	83.04	360	iP	P	20 18 54.4	-0.1
	comp=Z,186nm,1.4s						
KULLO	Kullorsuaq	83.04	360	iP	P	20 18 54.4	-0.1
KULLO				pmax	pmax		
	comp=Z,190nm,1.4s						
KULLO	Kullorsuaq	83.04	360	iP	P	20 18 54.5	-0.1
KULLO				IAmb	IAmb	20 18 57.4	
	comp=Z,187nm,1.4s						
PHP	Peshkopia	83.04	312	P	P	20 18 54.6	-0.6
HAPS	Han Pijesak,BI	83.05	315	eP	P	20 18 55.4	+0.1
PLE	Pljevlja	83.08	314	⇑iP	P	20 18 56.8	+1.3
BRG	Berggiesshubel	83.13	323	Amp		21 01 11.0	
	comp=Z,31nm,15.1s						
BRG	Berggiesshubel	83.13	323	eP	P	20 18 55.4	0.0
	comp=Z,134nm,1.7s,baz=60,slow=5.0						
BRG	Berggiesshubel	83.13	323	iP	P	20 18 56.1	+0.7
BRG	Berggiesshubel	83.13	323	Amp		20 18 59.2	
	comp=Z,123nm,1.6s						
BRG	Berggiesshubel	83.13	323	ex	x	20 19 12.5	
BRG	Berggiesshubel	83.13	323	Amp		20 19 13.8	
	comp=Z,33nm,1.2s						
BRG	Berggiesshubel	83.13	323	Amp		21 01 07.0	
	comp=N,11nm,14.6s						
BRG	Berggiesshubel	83.13	323	Amp		21 01 08.0	
	comp=E,20nm,16.0s						
NEST	Nestorio	83.13	311	P	P	20 18 54.8	-1.0
KOME	Kolasin	83.19	314	⇓iP	P	20 18 56.7	+0.7
PRU	Pruhonice	83.19	322	eP	P	20 18 55.8	0.0
PRU				MLR	MLR		
	comp=Z,19µm,15.9s						
PRU	Pruhonice	83.19	322	eP	P	20 18 55.8	0.0
PRU				AMS	AMS	21 00 50.0	
	comp=Z,19µm,15.9s						
EVR	Evrytania	83.19	309	P	P	20 18 54.8	-1.3
PRA	Prague	83.22	322	AMS	AMS	21 00 50.0	
	comp=Z,10µm,15.9s						
KMY	Karmoy	83.22	332	IVMs_BB	IVMs_BB	20 59 27.3	
	comp=Z,31µm,15.1s						
KBN	Korca	83.23	311	P	P	20 18 55.2	-1.1
ANX	Ano Chora	83.24	309	P	P	20 18 55.2	-1.2
CONA	Conrad Observa	83.34	319	iP	P	20 18 57.0	+0.3
	comp=Z,115nm,1.4s,SNR=30						
BEHE	Becsehely	83.42	318	⇑iP	P	20 19 00.0	+3.0
FBE	Freiberg	83.43	323	eP	P	20 18 57.7	+0.7
	comp=Z,230nm,1.5s,baz=60,slow=5.0						
CLL	Collm	83.45	323	⇑iP	P	20 18 56.8	-0.2
	comp=Z,142nm,1.5s						
CLL				ipP	pP	20 19 05.8	-0.6
CLL				ePP	PP	20 22 07.0	-1.8
CLL				Lm	MLR	21 00 00.0	
	comp=Z,39µm,18.0s						
CLL	Collm	83.45	323	⇑iP	P	20 18 56.8	-0.2
CLL				i		20 19 05.8	
CLL				pmax	pmax		
	comp=Z,142nm,1.5s						
CLL				MLR	MLR		
	comp=Z,39µm,18.0s						
CLL	Collm	83.45	323	IAmb	IAmb	20 18 59.6	
	comp=Z,173nm,1.6s						
CLL	Collm	83.45	323	eP	P	20 18 56.8	-0.2
	comp=Z,142nm,1.5s,baz=60,slow=5.0						
CLL				eL	L	21 01 04.1	
	comp=Z,39µm,18.0s						
ABPO	Ambohimpanom	83.45	246	P	P	20 18 58.3	+0.5
ABPO				pmax	pmax		
	comp=Z,59nm,0.9s						
ABPO	Ambohimpanom	83.45	246	P	P	20 18 58.3	+0.5
ABPO				IAmb	IAmb	20 19 08.8	
	comp=Z,59nm,0.9s						
PDG	Podgorica	83.54	313	⇓P	P	20 18 57.8	+0.1
PDG	Podgorica	83.54	313	⇑iP	P	20 18 57.8	+0.1
PDG	Podgorica	83.54	313	P	P	20 18 57.2	-0.4
PDG				IAmb	IAmb	20 19 00.4	
	comp=Z,143nm,1.4s						
TTG	Podgorica	83.54	313	⇓iP	P	20 18 59.7	+2.0
TIR	Tirane	83.57	312	⇑P	P	20 18 58.1	+0.2
TIR	Tirane	83.57	312	IAMs_20	IAMs_20	21 01 56.4	
	comp=Z,12µm,18.0s						
BSEG	Bad Segeberg	83.61	326	eP	P	20 18 58.5	+0.7
	comp=Z,108nm,1.6s,baz=60,slow=5.0						
BSEG				eL	L	20 59 05.5	
	comp=Z,19µm,19.1s						
SCO	Scoresbysund	83.64	348	iP	P	20 18 58.9	+1.3
	comp=Z,124nm,1.2s						
SCO	Scoresbysund	83.64	348	iP	P	20 18 58.9	+1.3
SCO				pmax	pmax		
	comp=Z,120nm,1.2s						
SCO	Scoresbysund	83.64	348	IAmb	IAmb	20 19 00.9	
	comp=Z,123nm,1.2s						
SCO				IAMs_20	IAMs_20	20 59 50.9	
	comp=Z,11µm,18.0s						
SCO	Scoresbysund	83.64	348	iP	P	20 18 58.9	+1.3
SCO				IAmb	IAmb	20 19 00.7	
	comp=Z,124nm,1.2s						
PBCC	Pribram	83.64	321	eP	P	20 18 58.3	+0.2
DRME	Dracevica, Mon	83.69	313	⇑iP	P	20 18 58.3	-0.2
DRME	Dracevica, Mon	83.69	313	⇓iP	P	20 19 00.7	+2.2
CEME	Cevo	83.72	313	⇓iP	P	20 18 58.7	0.0
KOGS	Kog	83.76	318	eP	P	20 18 58.5	-0.2
PDO	Prodromos	83.77	309	P	P	20 18 57.7	-1.3
KALN	Kalnik	83.77	317	iP	P	20 18 58.6	-0.2
RLS	Riolos of Patr	83.78	309	P	P	20 18 58.5	-0.5
MOSL	Moslavina	83.81	317	iP	P	20 18 58.8	-0.2
BRY	Bratogost	83.82	314	eP	P	20 18 58.8	-0.5
BRY	Bratogost	83.82	314	⇑iP	P	20 18 59.8	+0.5
BUM	Brajici-Budva	83.84	313	⇓iP	P	20 19 00.9	+1.6
ARSA	Arzberg	83.85	319	iP	P	20 18 58.4	-0.9
	comp=Z,45nm,1.4s,SNR=15						
CKRC	Cesky Krumlov	83.86	321	eP	P	20 18 59.4	+0.1
CKRC				AMS	AMS	21 01 30.0	
	comp=Z,14µm,17.1s						
BLY	Banja Luka	83.92	316	⇑iP	P	20 19 00.8	+1.2
FLTG	Flechtingen	83.92	325	eP	P	20 18 59.0	-0.4
	comp=Z,128nm,1.6s,baz=60,slow=5.0						
IGT	Igoumenitsa	84.00	310	P	P	20 18 58.6	-1.5
TREB	Trebinje	84.03	314	eP	P	20 19 01.6	+1.4
HCY	Herceg Novi	84.04	314	eP	P	20 18 59.7	-0.6
HCY	Herceg Novi	84.04	314	⇓iP	P	20 19 01.7	+1.4
PYL	PYLOS	84.05	307	P	P	20 18 58.7	-1.7
SUMG	Summit	84.08	354	iP	P	20 18 59.8	-0.6
	comp=Z,236nm,0.9s						
SUMG	Summit	84.08	354	iP	P	20 18 59.8	-0.6
SUMG				pmax	pmax		
	comp=Z,240nm,0.9s						
SUMG	Summit	84.08	354	IAmb	IAmb	20 19 03.2	
	comp=Z,99nm,0.9s						
SUMG	Summit	84.08	354	iP	P	20 18 59.8	-0.6
SUMG				IAmb	IAmb	20 19 03.0	
	comp=Z,237nm,0.9s						
MGRS	Mrkonjic Grad	84.12	316	eP	P	20 19 01.6	+0.9
EVGI	Lefkada island	84.14	309	P	P	20 18 59.6	-1.2
KHC	Kasperske Hory	84.14	321	eP	P	20 19 01.0	+0.3
KHC				e		20 19 13.5	
KHC				MLR	MLR		
	comp=Z,15µm,16.9s						
KHC	Kasperske Hory	84.14	321	eP	P	20 19 01.0	+0.3
KHC				ex	x	20 19 13.5	
KHC				AMS	AMS	21 01 20.0	
	comp=Z,15µm,16.9s						
KHC	Kasperske Hory	84.14	321	IAmb	IAmb	20 19 03.7	
	comp=Z,128nm,1.6s						
NEUB	Neuenburg	84.17	323	eP	P	20 19 01.1	+0.4
	comp=Z,229nm,1.6s,baz=60,slow=5.0						
TANN	Tannenbergstha	84.17	323	eP	P	20 19 01.2	+0.3
	comp=Z,95nm,1.4s,baz=60,slow=5.0						
PTJ	Puntijarka	84.17	317	iP	P	20 19 01.6	+0.6
DBRK	Dubrovnik	84.18	314	iP	P	20 18 59.1	-1.9
ZAG	Zagreb	84.20	317	iP	P	20 19 02.1	+1.1
ZAG	Zagreb	84.20	317	eP	P	20 19 01.4	+0.4
GEC2	GERESS Array S	84.21	321	P	P	20 19 00.7	-0.4
GEC2				IAmb	IAmb	20 19 04.6	
	comp=Z,63nm,1.1s						
GEC2	GERESS Array S	84.21	321	eP	P	20 19 01.1	0.0
	comp=Z,143nm,1.6s,baz=60,slow=5.0						
GEC2				eL	L	21 01 39.1	
	comp=Z,14µm,18.5s						
GERES	GERESS Array B	84.21	321	P	P	20 19 00.4	-0.7
	comp=Z,20nm,0.8s,baz=61,slow=5.0,SNR=123						
GERES				PKKPbc	PKKPbc	20 37 18.6	+3.8
	comp=Z,0.6nm,0.7s,baz=243,slow=1.5,SNR=4.0						
GERES				LR	LR	21 00 36.4	
	comp=Z,11µm,20.0s,baz=62,slow=38						
NKC	Novy Kostel	84.27	322	eP	P	20 19 01.6	+0.3
NKC				MLR	MLR		
	comp=Z,23µm,14.3s						
NKC	Novy Kostel	84.27	322	eP	P	20 19 01.6	+0.3
NKC				AMS	AMS	21 01 30.0	
	comp=Z,23µm,14.3s						
GUNZ	Gunzen	84.27	323	eP	P	20 19 01.5	+0.1
	comp=Z,129nm,1.4s,baz=60,slow=5.0						
WERN	Wernitzgruen	84.28	322	eP	P	20 19 01.6	+0.2
	comp=Z,157nm,1.6s,baz=60,slow=5.0						
KEK	Kerkira	84.30	311	P	P	20 19 00.4	-1.2
PLN	Plauen	84.31	323	eP	P	20 19 01.6	+0.1
	comp=Z,98nm,1.5s,baz=60,slow=5.0						
ASSE	Asse, Remlinge	84.32	325	eP	P	20 19 01.9	+0.5
	comp=Z,120nm,1.6s,baz=60,slow=5.0						
YKA	Yellowknife Ar	84.32	23	P	P	20 18 59.9	-1.4
	comp=Z,20nm,0.9s,baz=320,slow=4.3,SNR=102						
YKA				PKKPbc	PKKPbc	20 37 11.6	-3.3
	comp=Z,1.6nm,0.6s,baz=122,slow=3.3,SNR=8.0						
YKA				SKKPbc	SKKPbc	20 40 46.9	-0.8
	comp=Z,0.3nm,0.7s,baz=115,slow=3.2,SNR=4.1						
YKA				PKPPKP	P'P'df	20 45 11.2	-12
	comp=Z,0.2nm,0.7s,baz=116,slow=3.2,SNR=3.6						
YKA				LR	LR	20 59 43.3	
	comp=Z,3µm,21.4s,baz=0.0,slow=38						
YKA	Yellowknife Ar	84.32	23	iP	P	20 19 00.6	-0.7
YKA				pmax	pmax		
	comp=Z,21nm,0.9s						
MOA	Molln	84.33	320	iP	P	20 19 02.0	+0.3
	comp=Z,121nm,1.4s,SNR=29						
VLS	Valsamata	84.37	309	P	P	20 18 58.9	-3.1
LTHK	Lithakia	84.38	308	P	P	20 19 00.5	-1.6
STON	Ston	84.39	314	iP	P	20 18 60.0	-2.0
PSDA	Pessada-Kefalo	84.40	309	P	P	20 19 01.1	-1.0
SOKA	Soboth	84.41	318	eP	P	20 19 02.0	-0.1
	comp=Z,74nm,1.1s,SNR=38						
KEF5	Kardakata, Kep	84.41	309	P	P	20 19 01.3	-1.0
VLMS	Volimes, Zakyn	84.44	309	P	P	20 19 01.0	-1.4
KEF4	Livadi, Kephal	84.45	309	P	P	20 19 01.6	-0.8
RICI	Ricice	84.49	315	iP	P	20 19 01.7	-0.8
KEF3	Kipouria, Keph	84.53	309	P	P	20 19 01.7	-1.1
CRES	Cresnjev	84.53	318	⇑iP	P	20 19 02.5	-0.2
WET	Wettzell	84.54	321	eP	P	20 19 03.4	+0.7
	comp=Z,88nm,1.5s,baz=60,slow=5.0						
WET				eL	L	20 58 29.5	
	comp=Z,13µm,20.5s						
MANZ	Manzenberg	84.58	322	eP	P	20 19 03.6	+0.7
	comp=Z,91nm,1.5s,baz=60,slow=5.0						
OZLJ	Ozalj	84.62	317	iP	P	20 19 03.1	0.0
CLZ	Clausthal	84.62	324	eP	P	20 19 03.5	+0.4
	comp=Z,251nm,1.7s,baz=60,slow=5.0						
ROTZ	Rotzenmuhle	84.63	322	eP	P	20 19 03.5	+0.3
	comp=Z,134nm,1.5s,baz=60,slow=5.0						
MAKA	Makarska	84.66	315	iP	P	20 19 04.1	+0.7
KIJV	Kijevo	84.74	316	iP	P	20 19 03.4	-0.4
OBKA	Obir	84.78	318	eP	P	20 19 03.8	-0.3
	comp=Z,78nm,1.5s,SNR=26						
KIBK	Kibwezi	84.80	265	P	P	20 19 06.3	+1.6
	SNR=19						
BOJS	Bojanci	84.80	317	iP	P	20 19 04.2	+0.1
UPNV	Upernavik	84.84	359	iP	P	20 19 04.0	+0.3
UPNV				IAmb	IAmb	20 19 05.8	
	comp=Z,116nm,1.3s						
UDBI	Udbina	84.92	316	iP	P	20 19 04.5	-0.3
LSTV	Lastovo	84.97	314	iP	P	20 19 04.1	-0.9
GTTG	Gottingen	84.99	324	eP	P	20 19 05.1	+0.2
	comp=Z,230nm,1.9s,baz=60,slow=5.0						
LJU	Ljubljana	85.01	318	⇑iP	P	20 19 04.8	-0.3
KMBO	Kilima Mbogo	85.06	267	P	P	20 19 06.6	+0.4
	comp=Z,33nm,1.0s,baz=52,slow=6.7,SNR=39						
KMBO				LR	LR	20 57 48.2	
	comp=Z,5µm,19.1s,baz=74,slow=36						
KMBO	Kilima Mbogo	85.06	267	iP	P	20 19 07.9	+1.7
KMBO				pmax	pmax		
	comp=Z,33nm,1.0s						
HVAR	Hvar	85.08	315	iP	P	20 19 03.5	-2.0
LODK	Lodwar	85.08	272	P	P	20 19 09.8	+3.7
	SNR=33						
VOI	Vohitsoka	85.10	244	P	P	20 19 06.5	+0.5
	SNR=8.1						
CEY	Cerknica	85.21	318	iP	P	20 19 06.0	-0.1
CEY	Cerknica	85.21	318	⇑iP	P	20 19 06.0	-0.1
GRA1	Grafenberg Arr	85.22	322	IAmb	IAmb	20 19 16.2	
	comp=Z,124nm,1.4s						
GRF	Grafenberg Arr	85.22	322	eP	P	20 19 06.6	+0.5
	comp=Z,177nm,1.6s,baz=60,slow=5.0						
GRF				eL	L	21 02 03.0	
	comp=Z,16µm,19.0s						
GRFO	Grafenberg	85.23	322	P	P	20 19 06.9	+0.8
GRFO				pmax	pmax		
	comp=Z,334nm,2.0s						
GRFO				MLR	MLR		
	comp=Z,6µm,18.0s						
GRFO	Grafenberg	85.23	322	P	P	20 19 06.9	+0.8
KBA	Koelnbreinsper	85.25	319	eP	P	20 19 05.7	-0.8
	comp=Z,0.1nm,0.2s,SNR=29						
MORI	Morici	85.26	316	iP	P	20 19 06.3	0.0
RJOB	Jochberg	85.26	320	eP	P	20 19 06.7	+0.3
	baz=60,slow=5.0						
MYKA	Terra Mystica	85.28	319	eP	P	20 19 05.1	-1.5
	comp=Z,25nm,0.8s,SNR=9.0						
UBBA	Unterbreizbach	85.34	324	eP	P	20 19 06.9	+0.4
	comp=Z,128nm,1.6s,baz=60,slow=5.0						
RIY	Rijeka	85.37	317	iP	P	20 19 08.1	+1.2
RIY	Rijeka	85.37	317	⇑iP	P	20 19 06.4	-0.5
ZIRJ	Zirje	85.39	316	iP	P	20 19 06.3	-0.7
NVLJ	Novalja	85.47	317	iP	P	20 19 07.0	-0.4
DUGI	Dugi Otok	85.62	316	iP	P	20 19 07.6	-0.6
TRI	Trieste	85.64	318	IAMs_20	IAMs_20	21 01 34.4	
	comp=Z,12µm,20.0s						
ZOU	Zoufplan	85.72	319	P	P	20 19 07.0	-1.9

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ZOU                                IAmb      IAmb      20 19 10.5
      comp=Z,78nm,1.3s
ZOU                                IAMs_20   IAMs_20   20 58 14.5
      comp=Z,12µm,21.0s
IBBN  Ibbenburen        85.77 326  eP        P         20 19 08.8 +0.1
      comp=Z,163nm,1.1s,baz=60,slow=5.0
ABTA  Abfaltersbach     85.91 319  eP        P         20 19 08.9 -0.8
      comp=Z,76nm,1.4s,SNR=21
FUR   Furstenfeldbru    85.95 321  eP        P         20 19 10.4 +0.6
      comp=Z,306nm,1.6s,baz=60,slow=5.0
FUR                                eL        L         21 02 11.8
      comp=Z,15µm,18.9s
KASTN Kahler Asten      86.00 325  eP        P         20 19 10.2 +0.2
      comp=Z,140nm,1.7s,baz=60,slow=5.0
MATE  Matera            86.03 312 ⇑P         P         20 19 10.7 +0.4
WTTA  Wattenberg        86.18 320  eP        P         20 19 10.4 -0.7
      comp=Z,60nm,0.8s,SNR=20
WATA  Walderalm         86.18 320  eP        P         20 19 10.8 -0.3
      comp=Z,56nm,1.2s,SNR=14
SQTA  Sankt Quirin      86.45 320  eP        P         20 19 13.0 +0.6
      comp=Z,54nm,1.0s,SNR=19
BUG   Bochum--Univer    86.49 325  eP        P         20 19 12.4 +0.1
      comp=Z,187nm,1.3s,baz=60,slow=5.0
TNS   Taunus Mts        86.50 324  eP        P         20 19 13.2 +0.7
      comp=Z,88nm,1.5s,baz=60,slow=5.0
TNS                                eL        L         21 06 43.9
      comp=Z,9µm,19.1s
RETA  Reutte            86.58 321  i P       P         20 19 13.5 +0.5
      comp=Z,16nm,1.1s
TIP   Timpagrande       86.65 311 ⇓P         P         20 19 14.0 +0.6
TIP   Timpagrande       86.65 311  IAMs_20   IAMs_20   21 04 27.8
      comp=Z,7µm,19.0s
FETA  Feichten          86.84 320  eP        P         20 19 14.2 -0.1
      comp=Z,47nm,1.0s,SNR=15
UBR   Ueberruh          86.87 321  eP        P         20 19 14.1 -0.2
      comp=Z,72nm,1.2s,baz=60,slow=5.0
AHRW  Bad Neuenahr-A    87.07 324  eP        P         20 19 15.8 +0.6
      comp=Z,101nm,1.4s,baz=60,slow=5.0
TEOL  Teolo             87.09 318  P         P         20 19 15.0 -0.4
TEOL                               IAMs_20   IAMs_20   21 03 35.9
      comp=Z,10µm,21.0s
DAVA  Damuels           87.20 321  i P       P         20 19 16.9 +0.8
      comp=Z,26nm,1.0s
PAOL  Paolisi           87.30 314  IAmb      IAmb      20 19 18.5
      comp=Z,62nm,1.5s
AQU   L'Aquila          87.45 315⇑iP         P         20 19 17.5 +0.2
DAVOX Davos/Dischmat    87.46 320  P         P         20 19 16.7 -0.7
      comp=Z,19nm,0.6s,baz=116,slow=2.1,SNR=34
ICESG Greenland Ices    87.54 353  i P       P         20 19 16.9 -0.6
ICESG                              IAmb      IAmb      20 19 20.3
      comp=Z,91nm,1.0s
BTNL  Ternell           87.56 325  dP        P         20 19 16.2 -1.4
BTNL                               dPcP      PcP       20 19 17.4 -2.1
BFO   Black Forest      87.56 322  P         P         20 19 17.3 -0.3
BFO                                pmax      pmax
      comp=Z,46nm,1.4s
BFO                                MLR       MLR
      comp=Z,18µm,18.0s
BFO   Black Forest      87.56 322  P         P         20 19 17.3 -0.3
BFO                                IAmb      IAmb      20 19 19.9
      comp=Z,46nm,1.4s
BFO   Black Forest      87.56 322  eP        P         20 19 17.5 -0.1
      comp=Z,50nm,1.4s,baz=60,slow=5.0
BFO                                eL        L         21 01 03.8
      comp=Z,15µm,20.5s
MEM   Membach           87.61 325  dP        P         20 19 17.6 -0.2
SALO  Salr              87.67 319  P         P         20 19 18.3 +0.1
BEBN  Eben Emael        87.68 325  dP        P         20 19 17.3 -0.7
BEBN                               dPcP      PcP       20 19 19.6 -0.3
BEBN                               dsP       pP        20 19 28.0 +0.5
BHOU  Houvegnez         87.75 325  dP        P         20 19 18.1 -0.3
BHOU                               dpP       pP        20 19 26.0 -1.9
BSTI  Sart Tilman       87.86 325  dPcP      PcP       20 19 20.3 -0.4
TUE   Stuetta           87.94 320  IAmb      IAmb      20 19 22.2
      comp=Z,82nm,1.2s
WLF   Walferdange       88.05 324  dPcP      PcP       20 19 20.8 -0.9
WLF   Walferdange       88.05 324  P         P         20 19 20.4 +0.5
WLF                                pmax      pmax
      comp=Z,119nm,1.0s
WLF                                MLR       MLR
      comp=Z,21µm,21.0s
WLF   Walferdange       88.05 324  P         P         20 19 20.4 +0.5
WLF   Walferdange       88.05 324  eP        PcP       20 19 20.7 -0.9
      comp=Z,187nm,1.3s,baz=60,slow=5.0
BCLA  Clavier           88.09 325  dPcP      P         20 19 19.8 -0.3
BGES  Gesves            88.22 325  dP        P         20 19 19.5 -1.2
BGES                               dPcP      PcP       20 19 21.8 -0.6
PRMA  PARMA             88.23 318  IAMs_20   IAMs_20   21 03 58.9
      comp=Z,12µm,21.0s
OSSC  Osservatorio P    88.27 317  IAmb      IAmb      20 19 23.9
      comp=Z,51nm,0.9s
OSSC                               IAMs_20   IAMs_20   21 04 12.1
      comp=Z,11µm,19.0s
RCHB  Rochefort         88.27 325  dPcP      P         20 19 21.4 +0.4
ILULI Ilulissat         88.28 357  i P       P         20 19 20.1 -0.5
      comp=Z,77nm,1.2s
ILULI Ilulissat         88.28 357  i P       P         20 19 20.1 -0.5
ILULI                              pmax      pmax
      comp=Z,77nm,1.2s
ILULI Ilulissat         88.28 357  P         P         20 19 19.5 -1.1
ILULI                              IAmb      IAmb      20 19 22.3
      comp=Z,68nm,1.2s
ILULI                              IAMs_20   IAMs_20   21 04 29.5
      comp=Z,8µm,20.0s
ILULI Ilulissat         88.28 357  i P       P         20 19 20.1 -0.5
ILULI                              IAmb      IAmb      20 19 21.9
      comp=Z,77nm,1.2s
UCC   Uccle             88.37 326  IAmb      IAmb      20 19 23.5
      comp=Z,73nm,1.2s
BMRD  Maredsous         88.44 325  dPcP      P         20 19 21.8 +0.1
PGC   Sidney            88.50  37  IAmb      IAmb      20 19 33.5
      comp=Z,41nm,1.0s
SNF   Seneffe           88.58 325  dPcP      P         20 19 22.8 +0.4
DOU   Dourbes           88.64 325  dP        P         20 19 22.9 +0.2
DOU                                dPcP      PcP       20 19 24.6 +0.3
DOU                                dpP       pP        20 19 29.7 -2.4
EBL   Broad Law         88.87 332  eP        P         20 19 23.9 +0.3
A04D  Lummi Island      88.88  37  P         P         20 19 23.0 -0.8
      baz=304
KPL   Plockton          88.91 334  eP        P         20 19 23.9 +0.2
KPL                                IAmb      IAmb      20 19 24.5
      comp=Z,99nm,0.9s
MSSA  Maissana          88.94 318  IAMs_20   IAMs_20   21 05 42.9
      comp=Z,10µm,19.0s
NLWA  Neilton Lookou    88.95  38  IAmb      IAmb      20 19 36.8
      comp=Z,65nm,1.2s
EDMD  Edmundbyers       89.00 331  eP        P         20 19 23.7 -0.6
EDMD                               IAmb      IAmb      20 19 24.4
      comp=Z,230nm,0.9s
A05A  Maple Falls       89.06  36  P         P         20 19 24.9 +0.2
A05A                               IAmb      IAmb      20 19 37.5
      comp=Z,106nm,1.6s
VAE   Valguarnera       89.07 310  P         P         20 19 24.8 -0.2
      comp=Z,31nm,1.1s,baz=29,slow=3.2,SNR=4.5
SENIN Lac Senin/Sane    89.20 321  IAmb      IAmb      20 19 28.5
      comp=Z,34nm,0.9s
EKA   Eskdalemuir Ar    89.20 332  P         P         20 19 25.0 -0.2
      comp=Z,13nm,0.8s,baz=92,slow=5.4,SNR=26
ESK   Eskdalemuir       89.24 332  eP        P         20 19 25.8 +0.5
ESK                                IAmb      IAmb      20 19 26.0
      comp=Z,483nm,2.3s
ESK   Eskdalemuir       89.24 332  P         P         20 19 26.0 +0.6
ESK                                pmax      pmax
      comp=Z,63nm,1.2s
ESK                                MLR       MLR
      comp=Z,32µm,19.0s
ESK   Eskdalemuir       89.24 332  P         P         20 19 26.0 +0.6
ESK                                IAmb      IAmb      20 19 29.1
      comp=Z,63nm,1.2s
D03D  Eldon             89.32  38  P         P         20 19 26.4 +0.5
      baz=304
HPK   Haverah Park      89.40 330  eP        P         20 19 26.2  0.0
PGBU  Glenifferbraes    89.46 333  eP        P         20 19 27.0 +0.6
PGBU                               IAmb      IAmb      20 19 27.5
      comp=Z,98nm,0.9s
B05A  Bryant            89.47  37  P         P         20 19 26.8 +0.2
      baz=304
LAWE  Loch Awe, Argy    89.54 333  eP        P         20 19 27.8 +1.1
LAWE                               IAmb      IAmb      20 19 28.5
      comp=Z,352nm,0.9s
B06A  Marblemount       89.66  36  IAmb      IAmb      20 19 39.2
      comp=Z,78nm,1.1s
D04E  Lakebay           89.70  38  P         P         20 19 28.0 +0.3
      baz=304
LBWR  Ladybower, Pea    89.80 330  eP        P         20 19 28.7 +0.7
LBWR                               IAmb      IAmb      20 19 31.3
      comp=Z,81nm,0.9s
NEWG  New Galloway      89.81 332  eP        P         20 19 28.1 +0.1
NEWG                               IAmb      IAmb      20 19 29.1
      comp=Z,146nm,0.8s
E04D  Cinebar           90.16  38  P         P         20 19 30.0 +0.2
      baz=304
BNI   Bardonecchia      90.27 320  P         P         20 19 30.5 -0.1
BNI                                pmax      pmax
      comp=Z,47nm,1.0s
BNI                                MLR       MLR
      comp=Z,25µm,20.0s
BNI   Bardonecchia      90.27 320  P         P         20 19 30.5 -0.1
BNI                                IAmb      IAmb      20 19 33.7
      comp=Z,48nm,1.0s
SFJD  Kangerlussuaq     90.47 357  P         P         20 19 29.4 -1.4
      comp=Z,29nm,0.9s,baz=9.0,slow=3.1,SNR=11
SFJD  Kangerlussuaq     90.47 357  i P       P         20 19 30.0 -0.9
SFJD  Kangerlussuaq     90.47 357  i P       P         20 19 30.0 -0.9
SFJD  Kangerlussuaq     90.47 357  P         P         20 19 29.7 -1.1
SFJD                               IAmb      IAmb      20 19 32.4
      comp=Z,45nm,1.0s
SFJD  Kangerlussuaq     90.47 357  i P       P         20 19 30.0 -0.9
LON   Longmire          90.48  38  IAmb      IAmb      20 19 43.3
      comp=Z,41nm,1.1s
G03D  McMinnville, O    90.50  40  P         P         20 19 31.2 -0.3
      baz=303
ANGG  Ammassalik, Gr    90.61 351  IAMs_20   IAMs_20   21 04 46.9
      comp=Z,11µm,19.0s
I02D  Swisshome         90.75  41  P         P         20 19 32.6  0.0
      baz=303
MBAR  Mbarara           90.88 270⇓eP         P         20 19 35.7 +1.7
MBAR                               pmax      pmax
      comp=Z,20nm,1.4s
MBAR  Mbarara           90.88 270  P         P         20 19 33.6 -0.4
HLM1  Long Mynd         90.91 330  eP        P         20 19 33.4 +0.2
HLM1                               IAmb      IAmb      20 19 33.8
      comp=Z,140nm,0.9s
B08A  Colville Reser    90.92  36  IAmb      IAmb      20 19 45.2
      comp=Z,46nm,1.1s
WME   Myndd Eilian      90.98 331  eP        P         20 19 34.0 +0.5
STRD  Stroud            91.05 329  eP        P         20 19 33.6 -0.2
F05D  White Salmon      91.17  38  P         P         20 19 34.6  0.0
      baz=305
H04D  Lebanon           91.19  40  P         P         20 19 34.2 -0.5
      baz=304
YRC   Rhoscolyn         91.20 331  eP        P         20 19 35.1 +0.5
J01E  Myrtle Point      91.21  42  P         P         20 19 34.8 -0.1
      baz=303
I03D  Drain, OR         91.28  41  P         P         20 19 35.1 -0.1
      baz=303
SSB   Saint Sauveur     91.40 321  IAmb      IAmb      20 19 38.1
      comp=Z,75nm,1.5s
SSB   Saint Sauveur     91.40 321  IAMs_20   IAMs_20   21 04 55.7
      comp=Z,11µm,20.0s
G05D  Wamic, OR         91.62  39  P         P         20 19 36.9 +0.2
      baz=305
K02D  Willamette Mer    91.63  42  P         P         20 19 36.6 -0.3
      baz=303
E07A  Sunnyside         91.69  37  IAmb      IAmb      20 19 48.6
      comp=Z,34nm,1.1s
I04A  Tendick Farm,     91.79  41  P         P         20 19 37.8 +0.2
      baz=304
C09A  Chrisman Ranch    91.82  36  P         P         20 19 37.8 +0.2
C09A                               IAmb      IAmb      20 19 58.2
      comp=Z,44nm,1.3s
D08A  Wollman Farm,     91.92  36  IAmb      IAmb      20 19 48.7
      comp=Z,23nm,0.9s
L02E  Cave Junction     91.96  42  P         P         20 19 38.5 +0.1
      baz=303
F07A  Phinny Hill Vi    92.04  38  P         P         20 19 38.8 +0.2
F07A                               IAmb      IAmb      20 19 50.9
      comp=Z,30nm,1.0s
I05D  Terrebonne, OR    92.12  40  P         P         20 19 38.9 -0.2
      baz=305
NEW   Newport           92.15  35  P         P         20 19 37.8 -1.4
      comp=Z,8.5nm,1.0s,baz=275,slow=4.2,SNR=7.6
NEW   Newport           92.15  35  P         P         20 19 39.6 +0.5
      baz=308
NEW   Newport           92.15  35  IAmb      IAmb      20 19 50.2
      comp=Z,32nm,1.1s
E08A  Dider Farm, El    92.18  37  P         P         20 19 39.9 +0.6
E08A                               IAmb      IAmb      20 20 25.8
      comp=Z,37nm,1.5s
J04D  Umpqua Nationa    92.28  41  P         P         20 19 40.5 +0.4
      baz=304
PINE  Pine Mountain     92.67  40  IAmb      IAmb      20 19 54.2
      comp=Z,49nm,1.1s
L04D  Klamath Falls     92.73  42  P         P         20 19 42.2 +0.1
      baz=304
YBH   Yreka Blue Hor    92.75  42  P         P         20 19 42.0 -0.1
      comp=Z,7.5nm,1.1s,baz=270,slow=8.0,SNR=8.4
YBH   Yreka Blue Hor    92.75  42  P         P         20 19 42.1 -0.1
YBH                                pmax      pmax
      comp=Z,19nm,1.2s
YBH   Yreka Blue Hor    92.75  42  P         P         20 19 42.1  0.0
J05D  Fort Rock, OR     92.78  41  P         P         20 19 42.4 +0.1
      baz=305
M02C  Callahan          92.85  43  P         P         20 19 42.7 +0.1
      baz=304
N02D  Trinity Center    93.17  43  P         P         20 19 44.6 +0.6
      baz=304
M04C  Macdoel           93.27  42  P         P         20 19 44.7 +0.1
      baz=304
WALA  Waterton Lakes    93.30  33  IAmb      IAmb      20 20 30.8
      comp=Z,25nm,1.1s
K05A  Summer Lake       93.31  41  P         P         20 19 44.8  0.0
K05A                               IAmb      IAmb      20 20 13.1
      comp=Z,54nm,1.1s
KEST  Kesra             93.47 311  P         P         20 19 45.7 +0.2
      comp=Z,54nm,1.1s,baz=163,slow=0.5,SNR=25
KEST                               LR        LR        21 10 32.3
      comp=Z,4µm,18.1s,baz=347,slow=41
WDC   Whiskeytown Da    93.50  43  P         P         20 19 46.2 +0.8
WDC                                pmax      pmax
      comp=Z,7.0nm,0.9s
WDC   Whiskeytown Da    93.50  43  P         P         20 19 46.2 +0.8
O02D  Mt. Diablo Mer    93.56  44  P         P         20 19 45.7 -0.1
      baz=304
FRB   Frobisher Bay     93.57   4  P         P         20 19 43.9 -1.3
      comp=Z,20nm,0.9s,baz=347,slow=5.2,SNR=5.8
FCC   Fort Churchill    93.76  18  P         P         20 19 46.4 +0.2
FCC                                pmax      pmax
      comp=Z,35nm,1.4s
FCC                                MLR       MLR
      comp=Z,9µm,22.0s
FCC   Fort Churchill    93.76  18  P         P         20 19 46.4 +0.2
FCC                                IAmb      IAmb      20 19 55.9
      comp=Z,35nm,1.4s
FCC                                IAMs_20   IAMs_20   21 03 08.6
      comp=Z,9µm,22.0s
O03E  Paynes Creek      94.12  43  P         P         20 19 48.2 -0.3
      baz=304
MOD   Modoc Plateau     94.14  41  IAmb      IAmb      20 20 14.1
      comp=Z,26nm,1.1s
CMAH  Djebel Manchou    94.33 313  P         P         20 19 51.5 +2.0
FFC   Flin Flon         94.47  24  P         P         20 19 48.6 -1.0
FFC                                pmax      pmax
      comp=Z,35nm,1.4s
FFC                                MLR       MLR
      comp=Z,5µm,20.0s
FFC   Flin Flon         94.47  24  P         P         20 19 48.6 -1.0
FFC                                IAmb      IAmb      20 19 59.4
      comp=Z,35nm,1.4s
ORV   Oroville          94.73  44  P         P         20 19 50.1 -1.1
ORV                                pmax      pmax
      comp=Z,13nm,1.1s
ORV   Oroville          94.73  44  P         P         20 19 50.1 -1.1
MSO   Missoula          94.73  35  P         P         20 19 51.1 -0.1
      baz=310
CASM  Ain Smara         95.16 313  P         P         20 19 54.8 +1.5
AFDM  Forest Hills D    95.41  44  IAMs_20   IAMs_20   21 09 30.4
      comp=Z,6µm,18.0s
EGMT  Eagleton          96.05  32  P         P         20 19 56.9 -0.2
      baz=314
EGMT  Eagleton          96.05  32  P         P         20 19 56.9 -0.2
YERR  Yerington         96.49  43  P         P         20 19 59.7 +0.2
HLID  Hailey            96.58  37  P         P         20 19 59.9 +0.1
      baz=310
BOZ   Bozeman (W)       96.75  34  P         P         20 20 00.2 -0.2
      baz=312
RYN   Ryan              97.16  43  P         P         20 20 01.1 -1.3
NVAR  Mina Array Bea    97.41  43  P         Pdif      20 20 03.7  0.0
      comp=Z,1.5nm,0.7s,baz=292,slow=5.4,SNR=12
NVAR                               PP        PP        20 24 01.4 +1.1
      comp=Z,2.5nm,1.0s,baz=247,slow=4.0,SNR=3.7
NVAR                               PKKP      PKKPbc    20 36 40.5 -1.1
      comp=Z,0.3nm,0.6s,baz=104,slow=7.5,SNR=3.4
NVAR  Mina Array Bea    97.41  43  P         P         20 20 03.1 -0.5
YHL   Hebgen Lake       97.49  35  IAmb      IAmb      20 20 16.7
      comp=Z,24nm,1.6s
ELK   Elko              97.88  40  P         Pdif      20 20 07.5 +1.7
      comp=Z,0.5nm,0.5s,baz=292,slow=7.2,SNR=2.2
ELK                                PP        PP        20 24 04.2 +0.5
      comp=Z,1.5nm,1.0s,baz=317,slow=6.5,SNR=2.4
ELK                                PKKP      PKKPbc    20 36 40.9 +0.5
      comp=Z,0.9nm,0.7s,baz=344,slow=3.7,SNR=4.0
ELK   Elko              97.88  40  P         Pdif      20 20 05.9 +0.1
ELK                                pmax      pmax
      comp=Z,9.0nm,1.5s
ELK   Elko              97.88  40  P         Pdif      20 20 05.9 +0.1
TPH   Tonopah           98.31  43  IAmb      IAmb      20 20 40.2
      comp=Z,36nm,1.1s
PKM   Mcpherson Peak    98.49  47  P         Pdif      20 20 09.0 +0.4
      baz=305
R11A  Troy Canyon, C    99.16  42  P         Pdif      20 20 11.2 -0.3
      baz=308
MPMC  Manual Prospec    99.34  45  P         Pdif      20 20 12.7 +0.4
      baz=307
LRMC  Laurel Mtn Rad    99.56  45  P         Pdif      20 20 13.1 -0.1
      baz=307
TPNV  Topopah Spring    99.60  43  P         Pdif      20 20 13.6 +0.2
      baz=308
DUG   Dugway, Tooele    99.66  39  P         Pdif      20 20 13.6  0.0
      baz=311
PDAR  Pinedale Array    99.76  36  PP        PP        20 24 17.2 -0.7
      comp=Z,1.7nm,0.9s,baz=296,slow=4.8,SNR=6.3
PDAR  Pinedale Array    99.76  36            PP        20 24 15.7 -2.3
ULM   Lac du Bonnet    100.29  23  Pdiff     Pdif      20 20 17.7 +1.7
      comp=Z,1.2nm,0.5s,baz=168,slow=5.5,SNR=2.2
ULM                                PP        PP        20 24 25.9 +4.6
      comp=Z,2.2nm,0.8s,baz=348,slow=7.6,SNR=3.2
PFO   Pinyon Flats O   101.49  46  Pdiff     Pdif      20 20 22.7 +0.8
      comp=Z,1.1nm,0.5s,baz=86,slow=3.9,SNR=2.2
PFO   Pinyon Flats O   101.49  46⇓eP         Pdif      20 20 17.9 -3.9
PFO                                pmax      pmax
      comp=Z,3.0nm,1.1s
PESTR Estremoz         102.44 322  IAMs_20   IAMs_20   21 12 40.7
      comp=Z,8µm,19.0s
VNDA  Vanda            102.71 172  Pdiff     Pdif      20 20 27.7 +1.8
      comp=Z,1.5nm,0.8s,baz=291,slow=11,SNR=2.5
VNDA                               PP        PP        20 24 39.3 -0.7
      comp=Z,4.9nm,0.9s,baz=317,slow=8.8,SNR=4.9
VNDA                               PKKPbc    PKKPbc    20 36 25.3 -2.4
      comp=Z,1.8nm,0.7s,baz=175,slow=3.0,SNR=6.3
VNDA                               PKKP      PKKPdf    20 36 35.3 -0.4
      comp=Z,2.6nm,0.8s,baz=227,slow=2.5,SNR=4.3
VNDA  Vanda            102.71 172  P         Pdif      20 20 27.6 +1.6
VNDA  Vanda            102.71 172  Pdif      Pdif      20 20 27.6 +1.6
SFS   San Fernando     103.23 319  IAMs_20   IAMs_20   21 13 04.8
      comp=Z,9µm,20.0s
EYMN  Ely              103.79  22  IAMs_20   IAMs_20   21 13 18.6
      comp=Z,8µm,20.0s
PFVI  Vila Bisbo       104.33 321  IAMs_20   IAMs_20   21 09 24.0
      comp=Z,7µm,21.0s
D41A  Chassel          105.55  21  IAMs_20   IAMs_20   21 10 05.1
      comp=Z,9µm,22.0s
BOSA  Boshof           105.65 245  Pdiff     Pdif      20 20 39.0 -1.3
      comp=Z,3.0nm,1.0s,baz=48,slow=12,SNR=1.8
T25A  Trinidad         106.53  37  P         PKiKP     20 24 54.7 -0.3
      baz=316
F42A  Maple Grove Fa   106.84  21  IAMs_20   IAMs_20   21 13 13.1
      comp=Z,8µm,21.0s
E46A  Sault Ste Mari   107.49  18  IAMs_20   IAMs_20   21 15 55.2
      comp=Z,8µm,21.0s
G45A  Suttons Bay      108.28  20  IAMs_20   IAMs_20   21 12 07.1
      comp=Z,8µm,21.0s
I45A  Fountain         108.99  21  IAMs_20   IAMs_20   21 15 48.0
      comp=Z,6µm,20.0s
K43A  Burlington       109.44  23  IAMs_20   IAMs_20   21 14 20.3
      comp=Z,6µm,21.0s
MSTX  Muleshoe         109.74  38  IAMs_20   IAMs_20   21 16 52.9
      comp=Z,5µm,19.0s
MNTX  Cornudas Mount   109.82  41  P         PKiKP     20 25 01.1 -0.1
      baz=314
U32A  Winter Ranch,    109.98  34  IAMs_20   IAMs_20   21 17 40.8
      comp=Z,6µm,21.0s
L44A  Lake County Fo   110.06  23  IAMs_20   IAMs_20   21 14 48.4
      comp=Z,6µm,21.0s
J47A  Sunmer           110.16  20  IAMs_20   IAMs_20   21 13 04.0
      comp=Z,8µm,21.0s
HDIL  Hopedale         110.95  25  IAMs_20   IAMs_20   21 12 07.3
      comp=Z,5µm,19.0s
DELO  Deloro Mine      110.96  14  IAMs_20   IAMs_20   21 14 42.7
      comp=Z,8µm,20.0s
TORD  Torodi Ar. Bea   111.12 295  Pdiff     Pdif      20 21 04.9 +0.2
      comp=Z,0.2nm,0.5s,baz=48,slow=2.1,SNR=2.1
TORD                               PKiKP     PKiKP     20 25 02.5 -1.4
      comp=Z,7.8nm,0.8s,baz=23,slow=1.8,SNR=21
TORD                               PKKPbc    PKKPbc    20 35 59.5 -0.2
      comp=Z,2.8nm,0.8s,baz=266,slow=3.0,SNR=9.6
TORD                               PKKPab    PKKPab    20 36 10.7 -0.5
      comp=Z,8.4nm,0.9s,baz=256,slow=4.7,SNR=17
TORD                               PKKP      PKKPdf    20 36 15.8 -1.8
      comp=Z,7.6nm,0.9s,baz=268,slow=3.1,SNR=5.7
WMOK  Wichita Mounta   111.36  35  P         PKiKP     20 25 03.4 -0.5
      baz=320
OK031 S. Brethren Rd   111.41  33  IAMs_20   IAMs_20   21 18 35.4
      comp=Z,5µm,21.0s
L48A  N Adams          111.45  20  IAMs_20   IAMs_20   21 18 03.1
      comp=Z,8µm,19.0s
OK030 Cody Creek RV    111.46  33  IAMs_20   IAMs_20   21 18 37.7
      comp=Z,5µm,19.0s
VT1   Waterbury        112.13  11  IAMs_20   IAMs_20   21 15 45.7
      comp=Z,7µm,19.0s
H62A  Milan            112.16  10  IAMs_20   IAMs_20   21 11 50.1
      comp=Z,9µm,22.0s
LBNH  Lisbon           112.36  10  IAMs_20   IAMs_20   21 15 22.5
      comp=Z,7µm,20.0s
J57A  Williamstown     112.38  14  IAMs_20   IAMs_20   21 20 47.1
      comp=Z,6µm,19.0s
M50A  Fremont          112.38  20  IAMs_20   IAMs_20   21 14 39.7
      comp=Z,7µm,21.0s
Q44A  Meyer Farm, Va   112.48  25  IAMs_20   IAMs_20   21 14 36.9
      comp=Z,5µm,20.0s
ABTX  Abilene, Hawle   112.50  37  IAMs_20   IAMs_20   21 21 34.6
      comp=Z,7µm,19.0s
TXAR  Lajitas Array    112.53  42  Pdiff     Pdif      20 21 10.7 -0.3
      comp=Z,0.1nm,0.4s,baz=25,slow=2.4,SNR=1.3
TXAR                               PKiKP     PKiKP     20 25 05.7 -0.7
      comp=Z,5.8nm,0.9s,baz=280,slow=0.4,SNR=14
TXAR                               PKKPbc    PKKPbc    20 35 51.1 -4.5
      comp=Z,0.3nm,0.6s,baz=42,slow=11,SNR=2.5
MGMO  Mountain Grove   112.60  29  IAMs_20   IAMs_20   21 17 29.3
      comp=Z,6µm,20.0s
WVNY  West Valley, N   112.71  16  IAMs_20   IAMs_20   21 20 04.1
      comp=Z,6µm,19.0s
I62A  Tamworth         112.81  10  IAMs_20   IAMs_20   21 16 31.4
      comp=Z,8µm,21.0s
U40A  Yellville        112.99  30  P         PKiKP     20 25 05.9 -1.1
      baz=326
N51A  Ashland          113.03  19  IAMs_20   IAMs_20   21 16 04.8
      comp=Z,5µm,20.0s
O49A  Covington        113.06  21  IAMs_20   IAMs_20   21 19 15.9
      comp=Z,7µm,20.0s
K58A  Earlville        113.07  14  IAMs_20   IAMs_20   21 22 29.5
      comp=Z,5µm,19.0s
L56A  Greenwood        113.22  15  IAMs_20   IAMs_20   21 16 23.7
      comp=Z,8µm,22.0s
P48A  Milroy           113.34  22  IAMs_20   IAMs_20   21 17 43.3
      comp=Z,5µm,19.0s
SIUC  Southern Illin   113.42  26  IAMs_20   IAMs_20   21 18 56.8
      comp=Z,6µm,20.0s
ACSO  Alum Creek Sta   113.46  20  P         PKiKP     20 25 06.6 -1.1
      baz=336
ACSO  Alum Creek Sta   113.46  20  IAMs_20   IAMs_20   21 15 15.4
      comp=Z,8µm,20.0s
W39A  Magazine         113.51  31  P         PKiKP     20 25 06.7 -1.3
      baz=325
P49A  Miami Univ. Ec   113.52  22  IAMs_20   IAMs_20   21 19 34.0
      comp=Z,6µm,19.0s
BINY  Binghamton       113.53  14  P         PKiKP     20 25 06.6 -1.3
      baz=342
FCAR  Ozark Folk Cen   113.71  29  IAMs_20   IAMs_20   21 11 34.8
      comp=Z,6µm,21.0s
USIN  University of    113.82  25  IAMs_20   IAMs_20   21 17 28.4
      comp=Z,6µm,20.0s
K62A  Royalston        113.84  11  IAMs_20   IAMs_20   21 14 52.6
      comp=Z,8µm,22.0s
O52A  Adamsville       113.93  19  IAMs_20   IAMs_20   21 18 15.1
      comp=Z,5µm,18.0s
JCT   Junction City    114.01  39  P         PKiKP     20 25 08.7 -0.5
      baz=318
JCT   Junction City    114.01  39  IAMs_20   IAMs_20   21 21 35.9
      comp=Z,4µm,20.0s
HRV   Adam Dziewonsk   114.11  11  IAMs_20   IAMs_20   21 13 13.7
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	comp=Z,7µm,22.0s						
WCI	Wyandotte Cave	114.11	24	P	PKiKP	20 25 08.0	-1.0
	baz=332						
WCI	Wyandotte Cave	114.11	24	IAMs_20	IAMs_20	21 15 11.9	
	comp=Z,6µm,20.0s						
P51A	Williamsport	114.12	21	IAMs_20	IAMs_20	21 15 48.8	
	comp=Z,8µm,21.0s						
WHAR	Wooly Hollow	114.13	30	IAMs_20	IAMs_20	21 21 05.0	
	comp=Z,5µm,20.0s						
MIAR	Mount Ida	114.14	31	P	PKiKP	20 25 08.0	-1.2
	baz=325						
W41B	Gary Mavity, V	114.25	30	P	PKiKP	20 25 08.4	-0.9
	baz=326						
P52A	Corning	114.28	20	P	PKiKP	20 25 08.3	-1.1
	baz=336						
R49A	Shelbyville	114.47	23	IAMs_20	IAMs_20	21 19 45.2	
	comp=Z,6µm,19.0s						
Q52A	Bidwell	114.85	20	IAMs_20	IAMs_20	21 15 56.0	
	comp=Z,7µm,22.0s						
T47A	Sharon Grove	114.89	25	IAMs_20	IAMs_20	21 13 09.7	
	comp=Z,6µm,22.0s						
N60A	Cedar Hill Far	115.00	14	P	PKiKP	20 25 10.1	-0.6
	baz=343						
KOWA	Kowa	115.10	299	PKP	PKiKP	20 25 10.6	-0.9
	comp=Z,14nm,0.8s,baz=58,slow=2.1,SNR=29						
KOWA	Kowa	115.10	299	IAMs_20	IAMs_20	21 23 38.5	
	comp=Z,7µm,20.0s						
PAL	Palisades	115.12	13	IAMs_20	IAMs_20	21 18 04.7	
	comp=Z,6µm,20.0s						
M65A	Busby, Falmout	115.18	10	IAMs_20	IAMs_20	21 19 41.0	
	comp=Z,7µm,19.0s						
CPNY	Central Park	115.32	13	IAMs_20	IAMs_20	21 16 07.9	
	comp=Z,6µm,21.0s						
WVT	Waverly	115.35	26	P	PKiKP	20 25 10.3	-1.2
	baz=330						
WVT	Waverly	115.35	26	PKIKP	PKiKP	20 25 09.9	-1.6
WVT	Waverly	115.35	26		PKiKP	20 25 09.9	-1.6
R53A	Hurricane	115.52	20	IAMs_20	IAMs_20	21 15 19.9	
	comp=Z,8µm,22.0s						
P57A	Homestead Farm	115.61	17	IAMs_20	IAMs_20	21 23 35.8	
	comp=Z,6µm,20.0s						
T50A	Nancy	115.72	23		PKiKP	20 25 10.6	-1.6
T50A				IAMs_20	IAMs_20	21 20 24.4	
	comp=Z,5µm,20.0s						
R54A	Victor	115.96	20	P	PKiKP	20 25 11.7	-0.9
	baz=337						
OXF	Oxford	116.07	28	P	PKiKP	20 25 11.9	-1.0
	baz=328						
OXF	Oxford	116.07	28	PKIKP	PKiKP	20 25 11.4	-1.5
OXF	Oxford	116.07	28		PKiKP	20 25 11.4	-1.5
V48A	Smith Brothers	116.09	25	IAMs_20	IAMs_20	21 19 20.5	
	comp=Z,6µm,20.0s						
Q58A	Fox Den Farm,	116.20	17	P	PKiKP	20 25 12.3	-0.8
	baz=340						
S54A	Dingess, Beckl	116.21	20	IAMs_20	IAMs_20	21 15 40.1	
	comp=Z,7µm,20.0s						
R57A	Stanardsville	116.58	17	P	PKPdf	20 25 12.5	-1.3
	baz=339						
TZTN	Tazewell	116.61	22	P	PKPdf	20 25 12.4	-1.5
	baz=334						
SWET	Sewanee	116.90	25	IAMs_20	IAMs_20	21 19 31.8	
	comp=Z,5µm,21.0s						
CBN	Corbin Frederi	116.98	17	IAMs_20	IAMs_20	21 18 45.1	
	comp=Z,5µm,20.0s						
BLA	Blacksburg	117.03	19	IAMs_20	IAMs_20	21 24 59.8	
	comp=Z,4µm,19.0s						
R58B	Mineral	117.07	17	P	PKPdf	20 25 14.3	-0.4
	baz=340						
X48A	Hartselle	117.12	26	PKPdf	PKPdf	20 25 13.3	-1.7
R60A	Leonardtown, M	117.12	16	P	PKPdf	20 25 13.6	-1.2
	baz=341						
U54A	Nelsons Funny	117.22	21	IAMs_20	IAMs_20	21 17 22.8	
	comp=Z,7µm,21.0s						
V52A	Sevierville	117.22	23		PKPdf	20 25 13.7	-1.4
T56A	Rocky Mt	117.32	19	P	PKPdf	20 25 14.3	-1.0
	baz=338						
TKL	Tuckaleechee C	117.32	23	PKP	PKPdf	20 25 13.7	-1.6
	comp=Z,8.9nm,0.7s,baz=218,slow=3.4,SNR=9.2						
TKL				PKKPab	PKKPab	20 35 45.1	+0.2
	comp=Z,2.7nm,0.3s,baz=180,slow=20,SNR=11						
TKL	Tuckaleechee C	117.32	23	PKIKP	PKPdf	20 25 14.2	-1.1
TKL				MLR	MLR		
	comp=Z,8µm,20.0s						
TKL	Tuckaleechee C	117.32	23		PKPdf	20 25 14.2	-1.1
VBMS	Vicksburg	117.50	30	P	PKPdf	20 25 15.5	-0.2
	baz=327						
S60A	Water View	117.64	16	P	PKPdf	20 25 14.8	-1.0
	baz=341						
W52A	Murphy	117.77	23		PKPdf	20 25 15.1	-1.2
W52A				IAMs_20	IAMs_20	21 22 23.6	
	comp=Z,7µm,19.0s						
Z47A	Carrollton	117.77	28	IAMs_20	IAMs_20	21 23 06.2	
	comp=Z,4µm,19.0s						
X51A	Calhoun	117.89	24	IAMs_20	IAMs_20	21 19 45.9	
	comp=Z,5µm,21.0s						
V55A	Taylorsville	118.03	21	IAMs_20	IAMs_20	21 24 47.2	
	comp=Z,6µm,20.0s						
U57A	Blanch	118.08	19	P	PKPdf	20 25 15.5	-1.3
	baz=338						
BG3	Lake Jocassee	118.22	23		PKPdf	20 25 16.7	-0.4
BG3				IAMs_20	IAMs_20	21 22 49.5	
	comp=Z,5µm,18.0s						
V56A	Mocksville	118.30	20	P	PKPdf	20 25 16.1	-1.1
	baz=337						
U58A	Oxford	118.35	18	P	PKPdf	20 25 16.0	-1.3
	baz=339						
LRAL	Lakeview Retre	118.37	27	P	PKPdf	20 25 15.7	-1.6
	baz=330						
V57A	Coltrane Farms	118.45	20	P	PKPdf	20 25 16.5	-1.0
	baz=338						
KMSC	Kings Mountain	118.63	21	P	PKPdf	20 25 16.9	-1.0
	baz=336						
KMSC	Kings Mountain	118.63	21	IAMs_20	IAMs_20	21 18 39.3	
	comp=Z,7µm,22.0s						
PAULI	Pauline	118.76	22	IAMs_20	IAMs_20	21 18 12.3	
	comp=Z,7µm,21.0s						
Z51A	Franklin	118.86	25	IAMs_20	IAMs_20	21 22 18.9	
	comp=Z,5µm,20.0s						
V59A	Middlesex	119.02	18	P	PKPdf	20 25 18.5	0.0
	baz=339						
HODGE	Hodges	119.14	22	IAMs_20	IAMs_20	21 17 52.9	
	comp=Z,8µm,22.0s						
BIRD	Birdtown, Kers	119.38	21	IAMs_20	IAMs_20	21 22 19.9	
	comp=Z,6µm,21.0s						
W58A	Raeford	119.42	19	P	PKPdf	20 25 17.9	-1.4
	baz=338						
GOGA	Godfrey	119.44	24	P	PKPdf	20 25 19.4	-0.1
	baz=334						
GOGA	Godfrey	119.44	24	PKIKP	PKPdf	20 25 19.1	-0.3
GOGA	Godfrey	119.44	24		PKPdf	20 25 19.1	-0.3
V61A	Roper	119.46	17	IAMs_20	IAMs_20	21 20 07.9	
	comp=Z,7µm,20.0s						
250A	Grady	119.59	27	IAMs_20	IAMs_20	21 20 54.2	
	comp=Z,6µm,20.0s						
DBIC	Dimbokro	119.95	292	PKP	PKPdf	20 25 20.1	-0.7
	comp=Z,22nm,0.8s,baz=56,slow=1.5,SNR=23						
DBIC				PKKPab	PKKPbc	20 35 30.2	+1.2
	comp=Z,4.0nm,0.8s,baz=225,slow=4.3,SNR=4.4						
DBIC	Dimbokro	119.95	292	PKPdf	PKPdf	20 25 19.8	-1.1
Y57A	Sumter	119.97	21	IAMs_20	IAMs_20	21 17 43.8	
	comp=Z,7µm,22.0s						
KIC	Kosan Boka	120.01	292	*e*PKIKP	PKPdf	20 25 20.7	-0.3
	comp=Z,62nm,0.8s						
TIC	Toumodi	120.11	293	*e*PKIKP	PKPdf	20 25 20.8	-0.4
X60A	Albert Glenn T	120.21	19	P	PKPdf	20 25 20.1	-0.8
	baz=339						
Y58A	Scranton	120.31	20	IAMs_20	IAMs_20	21 17 29.7	
	comp=Z,7µm,22.0s						
LIC	Lamto	120.33	292	*e*PKIKP	PKPdf	20 25 20.6	-1.0
	comp=Z,88nm,0.8s						
Y59A	Loris	120.48	20	IAMs_20	IAMs_20	21 22 05.2	
	comp=Z,5µm,21.0s						
352A	Blakely	120.58	26	IAMs_20	IAMs_20	21 21 51.3	
	comp=Z,6µm,20.0s						
Y60A	Bolivia	120.67	19	IAMs_20	IAMs_20	21 23 55.1	
	comp=Z,5µm,20.0s						
NHSC	New Hope	120.88	21	IAMs_20	IAMs_20	21 17 46.8	
	comp=Z,5µm,21.0s						
TIGA	Tifton	121.15	25	P	PKPdf	20 25 22.1	-0.7
	baz=333						
TIGA	Tifton	121.15	25	IAMs_20	IAMs_20	21 26 11.3	
	comp=Z,5µm,20.0s						
257A	Skidaway Islan	121.62	22	IAMs_20	IAMs_20	21 19 50.5	
	comp=Z,7µm,21.0s						
SNAA	Sanae	121.82	198	PKPdf	PKPdf	20 25 22.0	-0.9
BELA	Belgrano 2	123.52	186	PKPdf	PKPdf	20 25 24.1	-1.8
VNA1	Neumayer--Stat	123.86	198	PKPdf	PKPdf	20 25 26.0	-0.6
VNA3	Neumayer Olymp	123.94	197	PKPdf	PKPdf	20 25 26.1	-0.7
DWPF	Disney Wildern	124.95	25	P	PKPdf	20 25 29.1	-1.0
	baz=334						
CMIG	Matias Romero	126.89	45	PKP	PKPdf	20 25 33.3	-0.8
	comp=Z,15nm,1.0s,baz=334,slow=2.2,SNR=7.9						
CMIG				PP	PP	20 27 29.6	-1.4
	comp=Z,5.3nm,0.9s,baz=352,slow=14,SNR=2.1						
SACV	Santiago Islan	129.34	314	IAMs_20	IAMs_20	21 25 14.1	
	comp=Z,6µm,21.0s						
SJG	San Juan	138.85	11	PKP	PKPdf	20 25 55.8	-0.8
	comp=Z,6.6nm,0.3s,baz=300,slow=22,SNR=1.8						
SJG	San Juan	138.85	11	IAMs_20	IAMs_20	21 30 55.1	
	comp=Z,4µm,22.0s						
BBGH	Gun Hill	144.45	2	IAMs_20	IAMs_20	21 32 14.1	
	comp=Z,6µm,22.0s						
MOTC	Monteria, Cord	144.59	30	*e*P	PKPab	20 26 05.2	-0.2
PTAC	Punta Ardita,	144.93	35	*e*P	PKPab	20 26 03.6	-3.1
GRGR	Grenville	145.34	5		PKPbc	20 26 06.9	-1.1
DBBC	Dabeiba	145.86	32	*e*P	PKPdf	20 26 09.3	+0.1
SOLC	Bahia Solano	145.91	35	*e*P	PKPbc	20 26 09.7	-0.1
ZARC	Zaragoza, Cauc	146.09	30	*e*P	PKPdf	20 26 05.8	-3.8
OCAC	Ocana	146.10	27	*e*P	PKPdf	20 26 09.7	0.0
SDV	Santo Domingo	146.54	22	PKPbc	PKPdf	20 26 09.7	-0.8
	comp=Z,136nm,0.7s,baz=336,slow=0.7,SNR=84						
SDV				SKP	SKPdf	20 29 42.3	-0.3
	comp=Z,18nm,0.9s,baz=339,slow=5.8,SNR=2.7						
SDV				SKPbc	SKPbc	20 29 47.4	-1.4
	comp=Z,50nm,0.9s,baz=270,slow=7.1,SNR=7.9						
SDV	Santo Domingo	146.54	22	PKPdf	PKPdf	20 26 09.4	-1.1
SDV	Santo Domingo	146.54	22	*e*P	PKPdf	20 26 10.1	-0.4
SDV	Santo Domingo	146.54	22	*e*P	PKPdf	20 26 09.8	-0.7
PCRV	Puerto La Cruz	146.88	11	PKPbc	PKPdf	20 26 09.4	-1.5
	comp=Z,32nm,0.6s,baz=348,slow=0.8,SNR=4.8						
CBOC	Ciudad Bolivar	146.94	33	*e*P	PKPdf	20 26 07.2	-4.0
BRRC	Barranca, Sant	146.95	28	*e*P	PKPdf	20 26 09.4	-1.6
USHA	Ushuaia	146.98	170	PKPbc	PKPdf	20 26 10.6	+0.8
	comp=Z,34nm,0.6s,baz=148,slow=0.4,SNR=2.6						
PTBC	PUERTO BERRIO,	147.11	30	*e*P	PKPdf	20 26 08.1	-3.2
PAMC	Pamplona, Colo	147.17	27	*e*P	PKPbc	20 26 14.2	+0.1
PLMC	San Jos del P	147.62	35	*e*P	PKPdf	20 26 12.9	+0.7
BARC	Barichara	147.64	28	*e*P	PKPdf	20 26 11.5	-0.9
NORC	Norcasia	147.77	32	*e*P	PKPdf	20 26 12.0	-0.4
MALC	Bahia Malaga	147.80	37	*e*P	PKPdf	20 26 13.7	+1.3
GUY2C	Guyana, Caldas	147.82	33	*e*P	PKPdf	20 26 14.4	+1.4
GO10	Punta Arenas	148.05	166		PKPbc	20 26 15.6	+0.8
SPBC	San Pablo de B	148.07	30	*e*P	PKPdf	20 26 12.2	-0.8
RREF	El Recreo	148.11	33	*e*P	PKPdf	20 26 12.9	-0.9
GR1C	Gorgona, Isla	148.15	39	*e*P	PKPdf	20 26 12.3	-0.7
RUSC	La Rusia	148.31	28	*e*P	PKPdf	20 26 12.0	-1.9
TAMC	Tame, Arauca	148.36	26	*e*P	PKPdf	20 26 15.1	+1.7
YOTC	Yotoco, Valle	148.36	36	*e*P	PKPdf	20 26 05.1	-8.4
TOLC	Tolima	148.39	33	*e*P	PKPdf	20 26 13.5	-0.3
ANIL	Santa Ana	148.43	33	*e*P	PKPdf	20 26 13.8	0.0
ROSC	El Rosal	148.66	31	PKPbc	PKPdf	20 26 14.6	+0.3
	comp=Z,63nm,0.8s,baz=227,slow=4.4,SNR=17						
ROSC	El Rosal	148.66	31	*e*P	PKPdf	20 26 14.1	-0.2
ORTC	Ortega, Tolima	149.00	34	*e*P	PKPdf	20 26 15.2	+0.7
CHIC	Chingaza	149.13	31	*e*P	PKPdf	20 26 11.2	-3.9
POPC	Popayan, Colom	149.38	38	*e*P	PKPdf	20 26 14.2	-1.1
GO09	Cerro Castillo	149.45	163		PKPbc	20 26 18.4	0.0
PCON	Cinco Dias	149.71	37	*e*P	PKPdf	20 26 16.5	+0.3
BETC	Betania	149.94	35	*e*P	PKPdf	20 26 15.9	0.0
GCUF	Volcan Galeras	150.05	40	*e*P	PKPdf	20 26 17.1	+0.4
OTAV	Otavalo	150.15	43	PKIKP	PKPdf	20 26 16.2	-0.6
OTAV	Otavalo	150.15	43	PKPdf	PKPdf	20 26 16.2	-0.6
OTAV	Otavalo	150.15	43	*e*P	PKPdf	20 26 13.9	-2.9
OTAV	Otavalo	150.15	43	*e*P	PKPdf	20 26 16.6	-0.2
PTGC	Puerto Gaitan,	150.23	28	*e*P	PKPdf	20 26 13.7	-2.6
GARC	Garzon, Huila	150.32	36	*e*P	PKPdf	20 26 16.6	-0.3
FLOC	Florencia	150.74	37	*e*P	PKiKP	20 26 23.1	-0.3
MACC	Macarena, Meta	151.22	33	*e*P	PKPdf	20 26 17.5	-0.4
GUVC	San Jose del G	151.47	31	*e*P	PKPdf	20 26 17.1	-1.2
GUVC				*e*P	PKPbc	20 26 23.8	-0.6
MDP	Montagnes des	151.86	347	PKP	PKPdf	20 26 17.6	-1.3
	comp=Z,27nm,0.9s,baz=80,slow=1.4,SNR=5.4						
MDP				PKPbc	PKPbc	20 26 25.1	-0.1
	comp=Z,54nm,0.9s,baz=46,slow=3.2,SNR=11						
MDP				PKPab	PKPab	20 26 33.4	-0.7
	comp=Z,36nm,0.8s,baz=324,slow=2.3,SNR=7.7						
PTLC	Puerto Leguiza	152.38	37	*e*P	PKPdf	20 26 19.3	-0.4
NBPV	Pedro Velho	152.39	302	*e*P	PKPdf	20 26 19.6	0.0
RCBR	Riachuelo	152.49	304	PKP	PKPdf	20 26 18.9	-0.9
	comp=Z,18nm,0.9s,baz=328,slow=5.4,SNR=4.3						
RCBR				PKPbc	PKPbc	20 26 26.6	-0.1
	comp=Z,43nm,0.8s,baz=317,slow=1.6,SNR=17						
RCBR				PKPab	PKPab	20 26 36.7	-0.3
	comp=Z,23nm,0.5s,baz=319,slow=4.0,SNR=13						
RCBR	Riachuelo	152.49	304		PKPbc	20 26 26.4	-0.3
RCBR	Riachuelo	152.49	304	*e*P	PKPdf	20 26 19.7	-0.1
NBPA	Parau_RN	153.36	306	*e*P	PKPdf	20 26 21.3	+0.3
NBRF	Rio Formoso -	153.59	298	*e*P	PKPdf	20 26 22.5	+1.2
NBMO	Morrinhos-CE	153.73	314	*e*P	PKPdf	20 26 21.6	+0.1
NBLI	Livramento-PB	154.26	303	*e*P	PKPdf	20 26 22.4	0.0
NBPS	Pedro II - PI	155.46	315	*e*P	PKPdf	20 26 24.0	-0.1
ATAH	Atahualpa	155.47	54	PKP	PKPdf	20 26 24.8	+0.3
	comp=Z,14nm,1.1s,baz=90,slow=0.8,SNR=14						
ROSB	Rosrio	155.92	322	*e*P	PKPdf	20 26 24.8	+0.2
MCPB	Macapa, AP	157.00	343	*e*P	PKPdf	20 26 26.5	+0.5
TMAB	Tom-Au,PA,Br	157.46	332	*e*P	PKPdf	20 26 27.7	+1.1
PTGA	Pitinga	158.21	4	PKP	PKPdf	20 26 26.4	-1.1
	comp=Z,16nm,0.8s,baz=16,slow=2.6,SNR=23						
PTGA				PKPab	PKPab	20 27 00.9	-0.2
	comp=Z,16nm,0.9s,baz=4.7,slow=4.1,SNR=9.5						
PTGA	Pitinga	158.21	4	PKPdf	PKPdf	20 26 26.4	-1.1
PTGA				PKPab	PKPab	20 27 00.3	-0.9
PTGA	Pitinga	158.21	4	*e*P	PKPdf	20 26 28.4	+0.9
MALB	Monte Alegre	158.95	348	*e*P	PKPdf	20 26 29.2	+0.9
PLCA	Paso Flores	159.28	153	PKP	PKPdf	20 26 26.7	-1.4
	comp=Z,4.2nm,1.1s,baz=217,slow=5.1,SNR=3.8						
PLCA				PKPab	PKPab	20 27 05.5	+0.1
	comp=Z,6.1nm,0.6s,baz=249,slow=4.6,SNR=11						
PLCA	Paso Flores	159.28	153	*e*P	PKPdf	20 26 28.8	+0.8
CZSB	Cruzeiro do Su	159.90	45	*e*P	PKPdf	20 26 29.1	-0.3
GDU01	Guandu, BA	159.93	293	*e*P	PKPdf	20 26 30.9	+1.5
MACA	Manacapuru-AM	160.56	6	*e*P	PKPdf	20 26 31.4	+1.2
PRPB	Parauapebas	161.61	331	*e*P	PKPdf	20 26 30.7	-0.6
ITTB	Itaituba	161.66	351	*e*P	PKPdf	20 26 30.7	-0.7
BI02	San Fabin de	162.19	145	PKPdf	PKPdf	20 26 31.6	+0.3
BI02				PKPab	PKPab	20 27 18.7	+0.6
RIB01	Linhares ES	162.72	278	*e*P	PKPdf	20 26 34.1	+1.8
SMTB	Santa Maria do	162.75	321	*e*P	PKPdf	20 26 31.9	-0.6
BSFB	Barra de Sao F	163.01	280	*e*P	PKPdf	20 26 33.7	+1.1
SJMB	Sao Joao De Ma	163.29	280	*e*P	PKPdf	20 26 34.3	+1.5
ALF01	Guarapari-ES	163.30	273	*e*P	PKPdf	20 26 34.1	+1.3
SDBA	SAO DESIDERIO	163.51	306	*e*P	PKPdf	20 26 34.7	+1.5
NPGB	Novo Progresso	164.22	348	*e*P	PKPdf	20 26 33.7	-0.2
CAM01	Campos-RJ	164.33	270	*e*P	PKPdf	20 26 35.1	+1.4
JANB	Januaria	164.57	297	*e*P	PKPdf	20 26 33.9	-0.3
DUB01	Friburgo-RJ	165.02	269	*e*P	PKPdf	20 26 35.9	+1.5
ETMB	Extrema	165.31	31	*e*P	PKPdf	20 26 34.3	-0.5
DIAM	Diamantina, MG	165.41	284	*e*P	PKPdf	20 26 36.3	+1.4
PEXB	Peixe	165.69	315	*e*P	PKPdf	20 26 36.3	+1.2
SAML	Samuel	165.71	19	PKIKP	PKPdf	20 26 34.5	-0.6
SAML	Samuel	165.71	19		PKPdf	20 26 34.5	-0.6
SAML	Samuel	165.71	19	*e*P	PKPdf	20 26 34.7	-0.4
CO03	El Pedregal	166.42	130		PKPab	20 27 37.2	+0.2
LCO	Las Campanas	167.34	123	PKIKP	PKPdf	20 26 36.4	+0.1
LCO	Las Campanas	167.34	123		PKPdf	20 26 36.4	+0.1
AC05	El Transito	167.76	123		PKPdf	20 26 36.5	+0.1
BDFB	Brasilia	167.87	303	PKP	PKPdf	20 26 35.9	-0.9
	comp=Z,17nm,0.9s,baz=82,slow=0.6,SNR=18						
BDFB				PKPab	PKPab	20 27 43.8	0.0
	comp=Z,29nm,0.9s,baz=49,slow=6.0,SNR=10						
BDFB	Brasilia	167.87	303		PKPab	20 27 44.3	+0.5
PB16	IPOC Station P	168.89	69		PKPdf	20 26 38.0	0.0
LPAZ	La Paz	169.00	57	PKP	PKPdf	20 26 38.0	-0.2
	comp=Z,19nm,1.2s,baz=351,slow=2.3,SNR=24						
PB07	IPOC Station P	169.46	87		PKPdf	20 26 38.0	+0.2
PB08	IPOC Station P	169.82	78		PKPdf	20 26 37.8	-0.5
PB09	IPOC Station P	170.07	87		PKPdf	20 26 38.8	+0.6
LVC	Limon Verde	170.43	92	PKP	PKPdf	20 26 36.9	-1.7
	comp=Z,7.2nm,0.8s,baz=249,slow=2.2,SNR=7.3						
LVC				PKPab	PKPab	20 27 56.3	+0.8
	comp=Z,4.5nm,0.5s,baz=33,slow=14,SNR=14						
LVC	Limon Verde	170.43	92		PKPdf	20 26 39.0	+0.4
SIV	San Ignacio	173.00	20	PKP	PKPdf	20 26 39.3	-0.2
	comp=Z,6.8nm,0.6s,baz=128,slow=1.8,SNR=22						
SIV				PKPab	PKPab	20 28 06.0	-0.2
	comp=Z,3.4nm,0.8s,baz=3.8,slow=3.3,SNR=1.7						
SIV				PP	PP	20 31 57.5	+1.0
	comp=Z,5.0nm,1.1s,baz=19,slow=3.4,SNR=6.2						
CPUP	Villa Florida	176.13	197	PKP	PKPdf	20 26 39.1	-1.1
	comp=Z,3.4nm,0.6s,baz=124,slow=0.7,SNR=7.1						
CPUP				PKPab	PKPab	20 28 19.0	-0.8
	comp=Z,8.7nm,0.8s,baz=166,slow=5.9,SNR=7.1						
CPUP				PP	PP	20 32 07.9	-3.6
	comp=Z,1.0nm,0.4s,baz=186,slow=4.5,SNR=2.1						
CPUP	Villa Florida	176.13	197	PKIKP	PKPdf	20 26 39.3	-0.9
CPUP						20 28 18.5	
CPUP	Villa Florida	176.13	197		PKPdf	20 26 39.3	-0.9
CPUP					PKPab	20 28 18.5	-1.3

ROM 13 20:16:33.4±0.2**, 43°.471N**±0°.007×**12°.576E**±0°.009**,**
h10^{km}±1^{km}, ML0.9 Error ellipse: s-maj=0.7km
s-min=0.6km az=322.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATFO	Monte Foce - G	0.10	182	P	Pg	20 16 36.4	+0.3
ATFO				S	Sg	20 16 38.6	+0.5
ATFO				P	Sg	20 16 38.6	+0.6
ATFO				AML	AML		
	comp=E,103µm,0.9s						
ATFO				AML	AML		
	comp=N,99µm,0.1s						
ATFO				AML	AML		
	comp=E,103µm,0.9s						
ATFO				AML	AML		
	comp=N,99µm,0.1s						
ATPI	Pietralunga -	0.13	261	P	Pg	20 16 36.9	+0.5
ATPI				S	Sg	20 16 39.5	+0.9
ATVO	AVT- Monte Val	0.15	234	P	Pg	20 16 37.1	+0.4
ATVO				S	Sg	20 16 39.9	+0.8
SSFR	Montelago di S	0.15	103	P	Pg	20 16 37.3	+0.4
SSFR				S	Sg	20 16 40.1	+0.9
MPAG	Monte Paganucc	0.21	40	P	Pg	20 16 38.3	+0.5
MPAG				S	Sg	20 16 42.1	+1.3
MURB	Monte Urbino	0.21	190	P	Pg	20 16 38.4	+0.6
MURB				S	Sg	20 16 42.1	+1.3
ATCC	AVT- Casa Cast	0.29	171	P	Pg	20 16 39.7	+0.5
ATCC				S	Sb	20 16 44.8	-0.8

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*IDC **13** 20:19:25.9±0.9, 52°.65N×31°.90W, h0^{km}, mb3.8/14,*
mb1 4.1/16, mb1mx3.8/75, mbtmp3.9/16, ML3.9/2, Error
ellipse: s-maj=26.9km s-min=16.1km az=3.0
*NEIC **13** 20:19:28.1±3.0, 52°.7N±0°.1×32°.0W±0°.2, h15^{km}±4^{km},*
mb4.5/6, Error ellipse: s-maj=17.7km s-min=15.3km
az=186.0
ISC 13 20:19:27.8±0.7**, 52°.7N**±0°.1×**31°.95W**±0°.08**, h13^{km}, n26,**
σ**1^{s}.02**/24**, mb4.0**/14**, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NRS	Narsarsuaq	11.19	324	Pn	Pn	20 22 06.1	-1.1
DRLN	Deer Lake	16.43	268	Pn	Pn	20 23 17.2	-0.7
DRLN				IAmb	IAmb	20 23 55.1	
	comp=Z,87nm,1.6s						
SFJD	Kangerlussuaq	17.00	334	P	P	20 23 26.8	+0.1
	comp=Z,0.3nm,0.3s,baz=146,slow=13,SNR=4.5						
SFJD	Kangerlussuaq	17.00	334	IAmb	IAmb	20 23 53.9	
	comp=Z,92nm,2.0s						
EKA	Eskdalemuir Ar	17.06	70	P	P	20 23 27.0	-0.6
	baz=300,slow=8.6,SNR=5.7						
SUMG	Summit	20.13	354	P	Pn	20 24 04.1	+0.7
FRB	Frobisher Bay	21.86	315	P	P	20 24 21.8	+1.9
	comp=Z,13nm,1.1s,baz=105,slow=8.0,SNR=5.4						
BATG	Bathurst New B	22.45	270	P	P	20 24 27.0	+0.7
G65A	Princeton	24.36	266	P	P	20 24 44.7	-0.6
FINES	FINESS Array B	31.70	51	P	P	20 25 52.6	+1.9
	comp=Z,2.5nm,0.9s,baz=286,slow=11,SNR=1.7						
AKASG	Malin Array Be	36.96	68	P	P	20 26 36.3	0.0
	comp=Z,0.2nm,0.3s,baz=295,slow=8.8,SNR=2.3						
YKA	Yellowknife Ar	42.35	317	P	P	20 27 22.1	+1.1
	comp=Z,3.2nm,1.1s,baz=67,slow=8.6,SNR=8.4						
BRTR	Keskin Array B	45.64	79	P	P	20 27 46.7	-1.3
	comp=Z,1.3nm,0.7s,baz=320,slow=6.6,SNR=5.6						
TORD	Torodi Ar. Bea	47.72	133	P	P	20 28 03.8	-0.5
	comp=Z,1.7nm,0.8s,baz=321,slow=8.8,SNR=3.1						
TORD	Torodi Ar. Bea	47.72	133	IAmb	IAmb	20 28 37.4	
	comp=Z,4.2nm,1.2s						
PDAR	Pinedale Array	50.72	292	P	P	20 28 26.4	-0.9
	comp=Z,0.8nm,0.7s,baz=64,slow=10,SNR=2.7						
ILAR	Eielson Array	52.61	331	P	P	20 28 39.5	-1.3
	comp=Z,0.2nm,0.8s,baz=40,slow=5.9,SNR=2.3						
TXAR	Lajitas Array	56.40	275	P	P	20 29 08.7	-0.2
	comp=Z,1.3nm,1.0s,baz=69,slow=4.9,SNR=3.4						
NVAR	Mina Array Bea	58.56	293	P	P	20 29 25.2	+1.0
	comp=Z,0.4nm,0.6s,baz=59,slow=7.5,SNR=2.7						
NVAR	Mina Array Bea	58.56	293	P	P	20 29 23.7	-0.5
ZALV	Zalesovo Beam	61.43	37	P	P	20 29 42.5	-0.9
	comp=Z,0.8nm,0.3s,baz=297,slow=6.3,SNR=1.9						
MKAR	Makanchi Array	66.10	43	P	P	20 30 14.7	+0.4
	comp=Z,0.8nm,0.7s,baz=335,slow=4.9,SNR=9.2						
ATAH	Atahualpa	71.46	229	P	P	20 30 49.7	+1.2
	comp=Z,4.6nm,0.6s,baz=325,slow=7.1,SNR=2.5						
SONM	Songino Array	73.72	28	P	P	20 31 02.5	+1.2
	comp=Z,0.3nm,0.7s,baz=326,slow=6.3,SNR=3.7						
WRA	Warramunga Arr	145.59	23	PKPbc	PKPbc	20 39 05.7	-0.2
	comp=Z,0.9nm,0.9s,baz=325,slow=3.4,SNR=2.0						
ASAR	Alice Springs	149.05	26	PKPbc	PKPbc	20 39 14.6	-0.9
	comp=Z,0.5nm,1.0s,baz=0.0,slow=2.8,SNR=1.4						
ASAR				PKPab	PKPab	20 39 19.7	0.0
	comp=Z,1.1nm,0.9s,baz=356,slow=1.3,SNR=5.6						

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*IDC **13** 21:13:00.7±1.2, 64°.55N×17°.56W, h0^{km}, mb3.3/6,*
mb1 3.6/7, mb1mx3.3/54, mbtmp3.3/7, ML3.7/1, Error
ellipse: s-maj=37.3km s-min=12.3km az=8.0
*REY **13** 21:13:00.7, 64°.68N×17°.48W, h8^{km}*
ISC 13 21:13:00.6±0.6**, 64°.68N**±0°.02×**17°.45W**±0°.02**, h10^{km}, n47,**
σ**1^{s}.75**/69**, mb3.4**/6**, Iceland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IVON	Vonarskard	0.13	266	P	Pg	21 13 03.4	-0.3
	baz=267						
IVON				S	Sg	21 13 05.7	-0.2
	baz=267						
IURH	Urdarhals	0.19	43	P	Pg	21 13 04.9	+0.3
	baz=45						
IDJK	Dyngjujokull	0.20	153	P	Pg	21 13 05.4	+0.6
	baz=150						
IGRF	Grimsfjall	0.29	164	P	Pb	21 13 06.2	-1.8
	baz=162						
IHUS	Husbondi	0.40	193	P	Pb	21 13 08.2	-1.5
	baz=192						
THOR	Thorvaldshraun	0.42	52	P	Pb	21 13 08.7	-1.4
	baz=53						
THOR				S	Sb	21 13 15.1	-1.3
	baz=53						
ISKR	Skrokkalda	0.42	254	P	Pg	21 13 08.4	-0.5
	baz=253						
ISKR				S	Sb	21 13 15.1	-1.5
	baz=253						
IVOT	Vottur	0.43	164	P	Pb	21 13 08.5	-1.8
	baz=163						
IKRE	Kreppuhraun	0.47	77	P	Pb	21 13 09.3	-1.6
	baz=77						
IKRE				S	Sb	21 13 16.1	-1.8
	baz=77						
IASK	Askja	0.50	42	P	Pb	21 13 10.0	-1.5
	baz=43						
IASK				S	Sb	21 13 17.5	-1.5
	baz=43						
IMKO	Mokollar	0.56	57	P	Pb	21 13 11.1	-1.4
	baz=58						
IMKO				S	Sb	21 13 19.6	-1.0
	baz=58						
IIEY	Innrieyrar	0.66	207	P	Pg	21 13 12.3	-1.0
	baz=206						
IIEY				S	Sg	21 13 21.4	-0.5
	baz=206						
ISVA	Svartarkot	0.66	7	P	Pb	21 13 12.8	-1.4
	baz=8.0						
ISVA				S	Sb	21 13 22.5	-0.9
	baz=8.0						
IKSK	Karasker	0.67	141	P	Pg	21 13 12.2	-1.4
	baz=140						
IKSK				S	Sb	21 13 21.4	-2.4
	baz=140						
IKAL	Kalfafell	0.74	188	P	Pb	21 13 13.8	-1.7
	baz=187						
IKAL				S	Sg	21 13 23.6	-1.0
	baz=187						
IVSH	V-Sauoahnukur	0.75	80	P	Pb	21 13 13.9	-1.8
	baz=80						
IVSH				S	Sb	21 13 24.2	-1.8

	baz=80						
IVAT	**Vatnsfell**	**0.81**	**233**	P	**Pg**	**21 13 15.0**	**-1.1**
	baz=232						
IADA	**Aoalbol**	**0.87**	**66**	P	**Pb**	**21 13 15.9**	**-1.8**
	baz=66						
IADA				S	**Sb**	**21 13 28.1**	**-1.3**
	baz=66						
IFAG	**Fagurholsmyri**	**0.88**	**156**	P	**Pb**	**21 13 16.4**	**-1.5**
	baz=156						
IHVE	**Hveravellir**	**0.93**	**283**	P	**Pg**	**21 13 16.6**	**-1.8**
	baz=283						
IHVE				S	**Sg**	**21 13 29.6**	**-0.8**
	baz=283						
IMEL	**Melhnausar**	**0.95**	**20**	P	**Pg**	**21 13 17.5**	**-1.4**
	baz=21						
IMEL				S	**Sb**	**21 13 30.8**	**-1.0**
	baz=21						
IREN	**Reynihlio**	**1.00**	**13**	P	**Pg**	**21 13 18.3**	**-1.4**
	baz=14						
IREN				S	**Sb**	**21 13 31.9**	**-1.2**
	baz=14						
IKVO	**Krokottuvotn**	**1.06**	**13**	P	**Pg**	**21 13 19.5**	**-1.5**
	baz=13						
ISNB	**Snabyli**	**1.08**	**209**	P	**Pb**	**21 13 19.4**	**-1.9**
	baz=209						
ISNB				S	**Sg**	**21 13 33.9**	**-1.5**
	baz=209						
IGRS	**Grimsstaoir**	**1.11**	**30**	P	**Pb**	**21 13 20.3**	**-1.6**
	baz=30						
IRJU	**Rjupnafell**	**1.20**	**207**	P	**Pb**	**21 13 21.2**	**-2.0**
	baz=207						
IRJU				S	**Sg**	**21 13 37.8**	**-1.2**
	baz=207						
ISKI	**Skildingahlsh**	**1.21**	**8**	P	**Pb**	**21 13 21.8**	**-1.7**
	baz=8.8						
IGHA	**Grjothals**	**1.21**	**15**	P	**Pn**	**21 13 21.8**	**-1.8**
	baz=16						
IGHA				S	**Sn**	**21 13 38.7**	**-1.3**
	baz=16						
IGRA	**Granastaoir**	**1.24**	**358**	P	**Pn**	**21 13 22.1**	**-1.8**
	baz=358						
IGRA				S	**Sn**	**21 13 39.6**	**-1.1**
	baz=358						
IGYG	**Gygjarholskot**	**1.26**	**253**	P	**Pn**	**21 13 22.5**	**-1.8**
	baz=253						
IDIM	**Dimmadalss**	**1.30**	**9**	P	**Pn**	**21 13 23.3**	**-1.5**
	baz=9.8						
IHAU	**Haukadalur**	**1.31**	**238**	P	**Pn**	**21 13 23.7**	**-1.1**
	baz=238						
IHVO	**Lagu-Hvolar**	**1.31**	**209**	P	**Pn**	**21 13 23.5**	**-1.4**
	baz=208						
IHLA	**Hella**	**1.33**	**343**	P	**Pn**	**21 13 23.7**	**-1.4**
	baz=344						
IHED	**Heoinshofoi**	**1.41**	**2**	P	**Pn**	**21 13 24.9**	**-1.3**
	baz=2.7						
IHED				S	**Sg**	**21 13 44.3**	**-1.4**
	baz=2.7						
IESK	**Eystri-Skogar**	**1.46**	**218**	P	**Pn**	**21 13 25.6**	**-1.3**
	baz=218						
IBRE	**Brettingsstaoi**	**1.46**	**353**	P	**Pn**	**21 13 25.6**	**-1.3**
	baz=353						
IBRE				S	**Sg**	**21 13 46.1**	**-1.4**
	baz=353						
ISAU	**Saurbar**	**1.47**	**243**	P	**Pn**	**21 13 25.4**	**-1.6**
	baz=243						
BORG	**Borgarnes**	**1.67**	**274**	Pg	**Pn**	**21 13 28.4**	**-1.4**
	13nm,0.3s,baz=99,slow=7.6,SNR=34						
BORG				Lg	Lg	21 13 53.0	
	7.5nm,0.3s,baz=67,slow=14,SNR=8.4						
SCO	**Scoresbysund**	**6.08**	**346**	*e*	**Pn**	**21 14 25.7**	**-4.5**
	baz=165,slow=9.3						
SCO				*i* P	**Pn**	**21 14 31.0**	**+0.7**
SCO				*e*S	**Sn**	**21 15 45.8**	**+6.1**
SCO				IAML		21 16 05.0	
	comp=Z,0.6nm,0.5s						
EKA	**Eskdalemuir Ar**	**11.76**	**136**	Pn	**Pn**	**21 15 50.0**	**+1.9**
	baz=322,slow=13,SNR=3.7						
GERES	**GERESS Array B**	**22.94**	**119**	P	**P**	**21 18 06.0**	**+1.3**
	comp=Z,0.2nm,0.4s,baz=334,slow=6.5,SNR=2.6						
YKA	**Yellowknife Ar**	**39.22**	**313**	P	**P**	**21 20 29.6**	**+1.3**
	comp=Z,0.1nm,0.4s,baz=48,slow=9.2,SNR=4.6						
ILAR	**Eielson Array**	**45.68**	**332**	P	P	21 21 24.7	+3.8
	comp=Z,0.5nm,0.9s,baz=8.9,slow=6.4,SNR=3.5						
KURBB	**Kurchatov Arra**	**48.13**	**58**	P	**P**	**21 21 42.3**	**+2.2**
	comp=Z,1.2nm,1.0s,baz=318,slow=8.0,SNR=6.2						
MKAR	**Makanchi Array**	**52.70**	**58**	P	**P**	**21 22 15.9**	**+1.2**
	comp=Z,0.3nm,0.8s,baz=339,slow=3.7,SNR=2.8						
PDAR	**Pinedale Array**	**53.19**	**293**	P	**P**	**21 22 21.9**	**+3.1**
	comp=Z,0.3nm,0.6s,baz=57,slow=5.5,SNR=3.3						

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*IDC **13** 21:13:41.7±1.1, 52°.68N×31°.78W, h0^{km}, mb3.8/18, mb1 4.0/20, mb1mx3.8/59, mbtmp3.9/20, ML4.2/2, Error ellipse: s-maj=29.2km s-min=14.9km az=14.0*

*NEIC **13** 21:13:42.6±1.4, 52°.6N±0°.1×31°.9W±0°.2, h10^{km}±1^{km}, mb4.3/8, Error ellipse: s-maj=18.1km s-min=15.7km az=191.0*

ISC 13 21:13:43.5±0.8, **52°.7N**±0°.1×**31°.81W**±0°.08, **h13^{km}, n37,** σ**0^s.85**/36, **mb4.0**/25, **Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BORG	**Borgarnes**	**13.22**	**20**	Pn	**Pn**	**21 16 49.0**	**-1.7**
	0.7nm,0.3s,baz=259,slow=14,SNR=1.0						
DSB	**Dublin**	**15.31**	**78**	Pn	**Pn**	**21 17 20.1**	**+1.0**
DSB				IAmb	IAmb	21 17 37.0	
	comp=Z,56nm,1.5s						
DRLN	**Deer Lake**	**16.51**	**268**	Pn	**Pn**	**21 17 33.3**	**-1.3**
DRLN				IAmb	IAmb	21 17 47.9	
	comp=Z,23nm,1.2s						
ESK	**Eskdalemuir**	**16.96**	**70**		**P**	**21 17 42.8**	**+0.6**
ESK				IAmb	IAmb	21 17 49.5	
	comp=Z,12nm,1.1s						
EKA	**Eskdalemuir Ar**	**16.99**	**70**	Pn	**Pn**	**21 17 39.7**	**-0.9**
	baz=270,slow=9.5,SNR=14						
FRB	**Frobisher Bay**	**21.93**	**315**	P	**P**	**21 18 35.7**	**-0.6**
	comp=Z,1.3nm,0.3s,baz=96,slow=8.7,SNR=4.6						
HFS	**Hagfors**	**25.78**	**55**	P	**P**	**21 19 15.4**	**+1.7**
	comp=Z,1.7nm,0.8s,baz=225,slow=10.0,SNR=2.1						
DAVOX	**Davos/Dischmat**	**27.28**	**86**	P	**P**	**21 19 28.0**	**+0.3**
	comp=Z,1.7nm,0.7s,baz=339,slow=14,SNR=2.7						
CLL	**Collm**	**27.29**	**75**	*i* P	**P**	**21 19 27.1**	**-0.3**
	comp=Z,4.0nm,0.7s						
GERES	**GERESS Array B**	**28.67**	**79**	P	**P**	**21 19 39.8**	**-0.1**
	comp=Z,1.0nm,0.7s,baz=298,slow=9.0,SNR=7.5						
CTI	**Castel Tesino**	**28.71**	**86**	P	**P**	**21 19 40.1**	**-0.2**
MYKA	**Terra Mystica**	**29.63**	**83**	*e*P	**P**	**21 19 48.5**	**0.0**
	comp=Z,4.6nm,0.6s						
OBKA	**Obir**	**30.24**	**83**	*e*P	**P**	**21 19 53.1**	**-0.7**
	comp=Z,2.8nm,0.6s						
SOKA	**Soboth**	**30.45**	**82**	*i* P	**P**	**21 19 54.8**	**-0.9**
	comp=Z,1.0nm,0.5s						
ARSA	**Arzberg**	**30.47**	**81**	*i* P	**P**	**21 19 55.1**	**-0.7**
	comp=Z,1.0nm,0.4s						
ARCES	**ARCESS Array B**	**30.86**	**35**	P	**P**	**21 19 58.5**	**-0.5**
	comp=Z,3.7nm,0.9s,baz=332,slow=5.1,SNR=2.0						
FINES	**FINESS Array B**	**31.64**	**51**	P	**P**	**21 20 05.6**	**-0.3**
	comp=Z,1.3nm,0.6s,baz=264,slow=7.5,SNR=5.6						
FIA1	**FINESS Array S**	**31.64**	**51**	P	**P**	**21 20 06.3**	**+0.5**
FIA1				IAmb	IAmb	21 20 12.3	
	comp=Z,21nm,1.4s						
RES	**Resolute Bay**	**33.05**	**334**	P	**P**	**21 20 19.0**	**+0.9**
	comp=Z,1.0nm,0.8s,baz=70,slow=6.3,SNR=3.7						
BURAR	**Bucovina Array**	**36.06**	**75**	P	**P**	**21 20 45.5**	**+1.0**
AKASG	**Malin Array Be**	**36.89**	**68**	P	**P**	**21 20 50.1**	**-1.3**
	comp=Z,0.5nm,0.4s,baz=301,slow=8.2,SNR=5.2						
YKA	**Yellowknife Ar**	**42.42**	**317**	P	**P**	**21 21 37.6**	**+0.3**
	comp=Z,0.6nm,0.8s,baz=62,slow=9.3,SNR=5.4						
BRTR	**Keskin Array B**	**45.56**	**79**	P	**P**	**21 22 03.8**	**+0.7**
	comp=Z,3.5nm,0.7s,baz=292,slow=5.9,SNR=13						
TORD	**Torodi Ar. Bea**	**47.65**	**133**	P	**P**	**21 22 18.6**	**-0.9**
	comp=Z,1.8nm,1.1s,baz=352,slow=8.7,SNR=5.5						
PDAR	**Pinedale Array**	**50.80**	**292**	P	**P**	**21 22 42.7**	**-0.9**
	comp=Z,0.4nm,0.6s,baz=78,slow=7.2,SNR=2.4						
ILAR	**Eielson Array**	**52.67**	**331**	P	**P**	**21 22 56.7**	**-0.2**
	comp=Z,0.3nm,0.9s,baz=96,slow=2.7,SNR=2.1						
NVAR	**Mina Array Bea**	**58.64**	**293**	P	**P**	**21 23 42.2**	**+1.7**
	comp=Z,0.2nm,0.7s,baz=39,slow=7.6,SNR=1.7						
ZALV	**Zalesovo Beam**	**61.39**	**37**	P	**P**	**21 23 58.9**	**+0.1**
	comp=Z,1.2nm,0.6s,baz=310,slow=9.2,SNR=2.1						
KURK	**Kurchatov**	**61.48**	**43**	P	**P**	**21 23 59.5**	**+0.1**
KURK	**Kurchatov**	**61.48**	**43**	IAmb	IAmb	21 24 02.5	
	comp=Z,2.2nm,1.4s						
KURBB	**Kurchatov Arra**	**61.51**	**43**	P	**P**	**21 23 59.5**	**-0.1**
	comp=Z,0.8nm,0.7s,baz=322,slow=7.2,SNR=5.9						
CNBA	**Chernabura Isl**	**64.44**	**330**	P	**P**	**21 24 20.2**	**+1.2**
MKAR	**Makanchi Array**	**66.06**	**43**	P	**P**	**21 24 30.3**	**+0.6**
	comp=Z,1.0nm,0.6s,baz=328,slow=5.9,SNR=14						
MKAR	**Makanchi Array**	**66.06**	**43**	P	**P**	**21 24 30.1**	**+0.4**
SONM	**Songino Array**	**73.70**	**28**	P	**P**	**21 25 17.6**	**+0.8**
	comp=Z,0.9nm,0.9s,baz=323,slow=7.4,SNR=6.8						
WRA	**Warramunga Arr**	**145.58**	**23**	PKPbc	**PKPab**	**21 33 21.5**	**-0.3**
	comp=Z,0.5nm,0.8s,baz=346,slow=3.4,SNR=2.5						
ASAR	**Alice Springs**	**149.03**	**26**	PKPbc	**PKPbc**	**21 33 31.1**	**0.0**
	comp=Z,0.4nm,0.6s,baz=8.4,slow=3.0,SNR=2.1						

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*IDC **13** 21:18:30.9±1.8, 53°.05N×31°.67W, h0^{km}, mb3.5/6, mb1 3.8/7, mb1mx3.5/54, mbtmp3.6/7, ML3.6/1, Error ellipse: s-maj=50.9km s-min=26.1km az=23.0*

ISC 13 21:18:32.5±1.6, **53°.1N**±0°.3×**31°.6W**±0°.2, **h10^{km}, n7,** σ**0^s.46**/7, **mb3.6**/6, **Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EKA	**Eskdalemuir Ar**	**16.74**	**71**	Pn	**P**	**21 22 28.9**	**-0.2**
	baz=269,slow=11,SNR=3.8						
GERES	**GERESS Array B**	**28.47**	**80**	P	**P**	**21 24 27.0**	**-0.6**
	0.5nm,0.7s,baz=302,slow=7.7,SNR=4.3						
AKASG	**Malin Array Be**	**36.63**	**69**	P	**P**	**21 25 38.5**	**-0.1**
	0.1nm,0.3s,baz=288,slow=7.4,SNR=1.9						
YKA	**Yellowknife Ar**	**42.22**	**317**	P	**P**	**21 26 24.9**	**-0.2**
	0.8nm,0.8s,baz=62,slow=9.0,SNR=9.0						
BRTR	**Keskin Array B**	**45.37**	**80**	P	**P**	**21 26 51.3**	**+0.4**
	1.4nm,0.8s,baz=264,slow=6.8,SNR=4.6						
TORD	**Torodi Ar. Bea**	**47.83**	**134**	P	**P**	**21 27 10.3**	**0.0**
	0.3nm,0.5s,baz=345,slow=7.2,SNR=2.9						
MKAR	**Makanchi Array**	**65.69**	**44**	P	**P**	**21 29 17.3**	**+0.5**
	0.5nm,0.9s,baz=325,slow=5.9,SNR=3.8						

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*IDC **13** 21:22:52.3±0.7, 64°.38N×17°.59W, h0^{km}, mb3.8/18, mb1 4.0/23, mb1mx3.9/51, mbtmp3.8/23, ML2.7/4, Error ellipse: s-maj=22.9km s-min=8.7km az=16.0*

*REY **13** 21:22:52.6, 64°.67N×17°.36W, h0^{km}*

*NEIC **13** 21:22:56.2±1.6, 64°.69N±0°.09×17°.0W±0°.2, h6^{km}±4^{km}, mb4.6/79, Error ellipse: s-maj=14.5km s-min=10.8km az=221.0*

ISC 13 21:22:56.1±0.3, **64°.64N**±0°.02×**17°.25W**±0°.03, **h10^{km}, n211,** σ**1^s.80**/200, **mb4.4**/64, **1C, Iceland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IDJK	**Dyngjujokull**	**0.14**	**178**	P	**Pg**	**21 22 56.9**	**-2.4**
	baz=162						
IURH	**Urdarhals**	**0.19**	**13**	P	**Pg**	**21 22 56.5**	**-3.5**
	baz=32						
IVON	**Vonarskard**	**0.22**	**279**	P	Pg	21 22 56.7	-4.0
	baz=271						
IGRF	**Grimsfjall**	**0.23**	**182**	P	**Pg**	**21 22 58.4**	**-2.6**
	baz=171						
IHAM	**Hamarinn**	**0.29**	**237**	P	Pg	21 22 58.3	-3.7
	baz=226						
IVOT	**Vottur**	**0.37**	**176**	P	**Pg**	**21 23 00.9**	**-2.5**
	baz=169						
IVOT				S	**Sg**	**21 23 07.5**	**-0.8**
	baz=169						
THOR	**Thorvaldshraun**	**0.39**	**39**	P	**Pg**	**21 23 00.5**	**-3.1**
	baz=48						
THOR				S	**Sg**	**21 23 08.2**	**-0.6**
	baz=48						
IHUS	**Husbondi**	**0.39**	**207**	P	Pg	21 23 00.1	-3.6
	baz=199						
IKRE	**Kreppuhraun**	**0.40**	**68**	P	**Pg**	**21 23 01.2**	**-2.7**
	baz=74						
IKRE				S	**Sg**	**21 23 08.1**	**-1.1**
	baz=74						
IASK	**Askja**	**0.49**	**32**	P	**Pg**	**21 23 01.9**	**-3.6**
	baz=38						
IASK				S	**Sg**	**21 23 09.6**	**-2.4**
	baz=38						
ISKR	**Skrokkalda**	**0.50**	**261**	P	Pg	21 23 01.3	-4.4
	baz=256						
ISKR				S	**Sg**	**21 23 08.2**	**-4.1**
	baz=256						
IMKO	**Mokollar**	**0.52**	**48**	P	**Pg**	**21 23 02.9**	**-3.2**
	baz=54						
IMKO				S	**Sg**	**21 23 11.1**	**-1.8**
	baz=54						
IJOK	**Jokulheimar**	**0.53**	**233**	P	Pg	21 23 01.3	-5.1
	baz=227						
IKSK	**Karasker**	**0.59**	**145**	P	**Pg**	**21 23 04.4**	**-3.0**
	baz=142						
IKSK				S	**Sg**	**21 23 14.1**	**-1.1**
	baz=142						
IIEY	**Innrieyrar**	**0.67**	**215**	P	Pg	21 23 05.0	-3.9
	baz=210						
IIEY				S	**Sg**	**21 23 14.8**	**-2.8**
	baz=210						
IVSH	**V-Sauoahnukur**	**0.68**	**75**	P	**Pg**	**21 23 05.9**	**-3.2**
	baz=78						
IVSH				S	**Sb**	**21 23 16.5**	**-2.9**
	baz=78						
ISVA	**Svartarkot**	**0.70**	**360**	P	Pg	21 23 05.1	-4.5
	baz=3.9						
ISVA				S	**Sg**	**21 23 15.4**	**-3.4**
	baz=3.9						
IKAL	**Kalfafell**	**0.72**	**196**	P	Pg	21 23 06.3	-3.6
	baz=191						
IKAL				S	**Sg**	**21 23 17.1**	**-2.2**
	baz=191						
IFAG	**Fagurholsmyri**	**0.81**	**161**	P	**Pg**	**21 23 08.4**	**-3.2**
	baz=158						
IADA	**Aoalbol**	**0.81**	**61**	P	**Pg**	**21 23 08.3**	**-3.4**
	baz=65						
IADA				S	**Sg**	**21 23 19.9**	**-2.4**
	baz=65						
IVAT	**Vatnsfell**	**0.85**	**239**	P	Pg	21 23 08.4	-4.1
	baz=235						
IVAT				S	**Sg**	**21 23 19.4**	**-4.3**
	baz=235						
IMEL	**Melhnausar**	**0.97**	**15**	P	Pg	21 23 10.1	-4.6
	baz=18						
IHVE	**Hveravellir**	**1.02**	**284**	P	Pb	21 23 10.0	-5.8
	baz=283						
IREN	**Reynihlio**	**1.02**	**8**	P	Pg	21 23 10.6	-5.1
	baz=11						
ISNB	**Snabyli**	**1.09**	**214**	P	Pb	21 23 12.6	-4.4
	baz=211						
IKVO	**Krokottuvotn**	**1.09**	**8**	P	Pg	21 23 12.6	-4.4
	baz=11						
IGRS	**Grimsstaoir**	**1.11**	**25**	P	Pg	21 23 12.6	-4.8
	baz=28						
IRJU	**Rjupnafell**	**1.20**	**212**	P	Pn	21 23 14.2	-4.6
	baz=209						
IGHA	**Grjothals**	**1.23**	**11**	P	Pn	21 23 14.5	-4.9
	baz=14						
ISKI	**Skildingahlsh**	**1.24**	**4**	P	Pn	21 23 14.2	-5.3
	baz=6.6						
IGRA	**Granastaoir**	**1.29**	**354**	P	Pn	21 23 14.8	-5.3
	baz=356						
IHVO	**Lagu-Hvolar**	**1.32**	**213**	P	Pn	21 23 16.4	-4.1
	baz=210						
IDIM	**Dimmadalss**	**1.33**	**6**	P	Pn	21 23 16.1	-4.6
	baz=7.8						
IGYG	**Gygjarholskot**	**1.33**	**256**	P	Pn	21 23 15.6	-5.1
	baz=254						
IHAU	**Haukadalur**	**1.36**	**242**	P	Pn	21 23 16.8	-4.3
	baz=239						
IHLA	**Hella**	**1.40**	**340**	P	Pn	21 23 16.6	-4.9
	baz=342						
IALF	**Alftagrof**	**1.43**	**217**	P	Pn	21 23 18.0	-4.0
	baz=215						
IHED	**Heoinshofoi**	**1.45**	**359**	P	Pn	21 23 17.6	-4.7
	baz=0.9						
IESK	**Eystri-Skogar**	**1.48**	**222**	P	Pn	21 23 18.9	-3.8
	baz=220						
IGIL	**Gilhagi**	**1.49**	**14**	P	Pn	21 23 18.5	-4.4
	baz=16						
IBRE	**Brettingsstaoi**	**1.52**	**350**	P	Pn	21 23 18.6	-4.6
	baz=351						
ISAU	**Saurbar**	**1.53**	**246**	P	Pn	21 23 18.6	-4.7
	baz=244						
BORG	**Borgarnes**	**1.76**	**275**	Pg	Pn	21 23 21.4	-5.1
	19nm,0.3s,baz=96,slow=9.8,SNR=62						
BORG				Lg	Lg	21 23 46.6	
	11nm,0.3s,baz=221,slow=20,SNR=7.4						
SCO	**Scoresbysund**	**6.14**	**345**	*e*	Pn	21 24 20.4	-6.2
	baz=165,slow=8.6						
SCO				*i* P	**Pn**	**21 24 25.0**	**-1.6**
SCO				*i* S	**Sn**	**21 25 38.1**	**+1.3**
SCO				IAML		21 25 50.1	
	comp=Z,1.5nm,0.5s						
EKB10	**Eskdalemuir Ar**	**11.64**	**136**	Pn	**Pn**	**21 25 43.1**	**+1.1**
EKB9	**Eskdalemuir Ar**	**11.64**	**136**	Pn	**Pn**	**21 25 41.9**	**-0.1**
EKB8	**Eskdalemuir Ar**	**11.65**	**136**	Pn	**Pn**	**21 25 41.8**	**-0.3**
EKB7	**Eskdalemuir Ar**	**11.65**	**136**	Pn	**Pn**	**21 25 42.6**	**+0.4**
EKB	**Eskdalemuir**	**11.65**	**137**	Pn	**Pn**	**21 25 40.8**	**-1.4**
EKR1	**Eskdalemuir Ar**	**11.65**	**137**	Pn	**Pn**	**21 25 41.3**	**-0.9**
EKB6	**Eskdalemuir Ar**	**11.66**	**136**	Pn	**Pn**	**21 25 40.4**	**-1.8**
EKB5	**Eskdalemuir Ar**	**11.66**	**137**	Pn	**Pn**	**21 25 41.6**	**-0.7**
EKR2	**Eskdalemuir Ar**	**11.66**	**137**	Pn	**Pn**	**21 25 41.8**	**-0.5**
EKA	**Eskdalemuir Ar**	**11.66**	**137**	Pn	**Pn**	**21 25 38.4**	**-4.0**
	baz=325,slow=13,SNR=12						
EKB4	**Eskdalemuir Ar**	**11.66**	**137**	Pn	**Pn**	**21 25 42.2**	**-0.1**
ESK	**Eskdalemuir**	**11.66**	**137**	Pn	**Pn**	**21 25 42.5**	**+0.2**
EKB3	**Eskdalemuir Ar**	**11.67**	**137**	Pn	**Pn**	**21 25 42.4**	**0.0**
EKR3	**Eskdalemuir Ar**	**11.67**	**137**	Pn	**Pn**	**21 25 42.7**	**+0.3**
EKR4	**Eskdalemuir Ar**	**11.67**	**136**		**Pn**	**21 25 43.2**	**+0.7**
EKB2	**Eskdalemuir Ar**	**11.68**	**137**	Pn	**Pn**	**21 25 43.0**	**+0.6**
EKR5	**Eskdalemuir Ar**	**11.68**	**136**	Pn	**Pn**	**21 25 42.8**	**+0.3**
EKR6	**Eskdalemuir Ar**	**11.69**	**136**	Pn	**Pn**	**21 25 44.0**	**+1.4**
EKR8	**Eskdalemuir Ar**	**11.70**	**136**	Pn	**Pn**	**21 25 43.1**	**+0.3**
EKR9	**Eskdalemuir Ar**	**11.71**	**136**	Pn	**Pn**	**21 25 42.8**	**-0.1**
EKR10	**Eskdalemuir Ar**	**11.71**	**136**	Pn	**Pn**	**21 25 42.7**	**-0.3**
DAG	**Danmarks Havn**	**12.20**	**358**	*i* P	**Pn**	**21 25 51.4**	**+1.8**
DAG	**Danmarks Havn**	**12.20**	**358**	*i* P	**Pn**	**21 25 51.4**	**+1.8**
NC204	**NORSAR Array S**	**13.12**	**92**	Pn	**Pn**	**21 26 00.3**	**-1.9**
NOA	**NORSAR Array B**	**13.43**	**92**	Pn	**Pn**	**21 26 03.4**	**-3.0**
	comp=Z,0.0nm,0.3s,baz=299,slow=13,SNR=3.5						
HFS	**Hagfors**	**14.94**	**93**	Pn	**Pn**	**21 26 26.2**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=319,slow=9.8,SNR=2.2						
SPA0	**Spitsbergen Ar**	**16.85**	**23**	Pn	**Pn**	**21 26 52.1**	**+0.5**
SPA0				IAmb	IAmb	21 27 02.2	
	comp=Z,60nm,1.4s						
ARCES	**ARCESS Array B**	**17.05**	**55**	P	**Pn**	**21 26 54.6**	**+0.5**
	baz=335,slow=11,SNR=2.6						
FINES	**FINESS Array B**	**19.60**	**79**	P	**P**	**21 27 23.7**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=316,slow=5.3,SNR=2.3						
TULEG	**Thule**	**19.93**	**327**	P	**P**	**21 27 29.2**	**+1.7**
TULEG				IAmb	IAmb	21 27 33.4	
	comp=Z,12nm,0.5s						
CLL	**Collm**	**20.60**	**116**	*i* P	**P**	**21 27 35.2**	**+0.3**
	comp=Z,18nm,1.6s						
CLL	**Collm**	**20.60**	**116**	P	**P**	**21 27 34.4**	**-0.5**
GRA1	**Grafenberg Arr**	**21.23**	**121**	P	**P**	**21 27 41.1**	**-0.7**
GRFO	**Grafenberg**	**21.23**	**121**	P	**P**	**21 27 41.4**	**-0.4**
BRG	**Berggiesshubel**	**21.30**	**115**	*e*P	**P**	**21 27 45.7**	**+3.1**
BRG				Amp		21 27 45.9	
	comp=Z,6.2nm,1.0s						
BFO	**Black Forest**	**21.35**	**128**	P	**P**	**21 27 41.9**	**-1.1**
VSU	**Vasula**	**21.46**	**86**	*e*P	**P**	**21 27 44.0**	**-0.1**
FRB	**Frobisher Bay**	**21.86**	**291**	P	**P**	**21 27 46.4**	**-2.0**
	comp=Z,0.8nm,0.3s,baz=45,slow=4.3,SNR=1.8						
PABE	**Paberze**	**22.10**	**95**	*e*P	**P**	**21 27 50.8**	**-0.2**
KHC	**Kasperske Hory**	**22.57**	**119**	*e*P	**P**	**21 27 57.3**	**+1.1**
KHC	**Kasperske Hory**	**22.57**	**119**	P	**P**	**21 27 56.9**	**+0.7**
DPC	**Dobruska-Polom**	**22.65**	**113**	*e*P	**P**	**21 27 58.9**	**+1.9**
GERES	**GERESS Array B**	**22.85**	**119**	P	**P**	**21 27 57.6**	**-1.6**
	comp=Z,1.1nm,0.9s,baz=342,slow=9.3,SNR=3.4						
GERES	**GERESS Array B**	**22.85**	**119**	P	**P**	**21 28 00.4**	**+1.2**
ISAL	**Salakas**	**22.98**	**93**	*e*P	**P**	**21 28 00.5**	**+0.1**
CKRC	**Cesky Krumlov**	**23.10**	**118**	*e*P	**P**	**21 28 04.7**	**+3.0**
IIGN	**Ignalina**	**23.17**	**93**	*e*P	**P**	**21 28 01.9**	**-0.4**
DAVOX	**Davos/Dischmat**	**23.22**	**127**	P	**P**	**21 28 01.4**	**-1.6**
	comp=Z,0.7nm,0.6s,baz=282,slow=11,SNR=1.6						
SQTA	**Sankt Quirin**	**23.30**	**125**	*e*P	**P**	**21 28 04.3**	**+0.4**
	comp=Z,11nm,1.2s						
WATA	**Walderalm**	**23.33**	**124**	*e*P	**P**	**21 28 06.5**	**+2.3**
	comp=Z,9.4nm,1.4s						
WTTA	**Wattenberg**	**23.41**	**124**	*e*P	**P**	**21 28 07.5**	**+2.4**
	comp=Z,13nm,1.9s						
IDID	**Didziasalis**	**23.42**	**93**	*e*P	**P**	**21 28 04.8**	**0.0**
NACGM	**Naroch**	**23.71**	**93**	*i* P	**P**	**21 28 06.8**	**-0.8**
NACGM				*i* P	**P**	**21 28 06.8**	**-0.8**
NACGM				*i* P	**P**	**21 28 06.8**	**-0.8**
NACGM				*i* PP	**PnPn**	**21 28 29.2**	**-5.6**
NACGM				*i* PPP	PPP	21 28 41.2	
NACGM				*i* S	**S**	**21 32 23.9**	**+1.6**
NACGM				*i* SS	**SnSn**	**21 33 00.7**	**+1.1**
NACGM				*i* SSS	SSS	21 33 20.6	
NACGM				*i* LQ	LQ	21 35 09.2	
NACGM				*i* LR	LR	21 37 13.8	
EUNU	**Eureka**	**23.74**	**336**	P	**P**	**21 28 08.8**	**+0.9**
CONA	**Conrad Observa**	**24.42**	**117**	*e*P	**P**	**21 28 16.8**	**+2.2**
	comp=Z,8.5nm,2.0s						
MNK	**Minsk**	**24.45**	**93**	*i* P	**P**	**21 28 14.0**	**-0.6**
	comp=E,3.0nm,1.1s						
MNK				*i* P	**P**	**21 28 14.0**	**-0.6**
	comp=N,12nm,1.1s						
MNK				*i* P	**P**	**21 28 14.0**	**-0.6**
	comp=Z,7.0nm,0.8s						
MNK				*i* PP	**PnPn**	**21 28 44.5**	**-0.5**
MNK				*i* PPP	PPP	21 28 52.4	
MNK				*i* S	**S**	**21 32 34.8**	**+0.6**
MNK				*i* SS	**SnSn**	**21 33 21.1**	**+3.3**
MNK				*i* SSS	SSS	21 33 34.7	
MNK				*i* LQ	LQ	21 35 51.2	
MNK				*i* LR	LR	21 37 43.0	
MNK				*i* LRM	MLR	21 38 35.7	
	comp=E,46nm,15.2s						
MNK				*i* LRM	MLR	21 38 35.7	
	comp=N,763nm,16.6s						
MNK				*i* LRM	MLR	21 38 35.7	
	comp=Z,412nm,17.4s						
CTI	**Castel Tesino**	**24.46**	**126**	P	**P**	**21 28 15.3**	**+0.4**
MYKA	**Terra Mystica**	**24.68**	**122**	*e*P	**P**	**21 28 18.6**	**+1.8**
	comp=Z,6.6nm,1.4s						
ARSA	**Arzberg**	**24.86**	**119**	*e*P	**P**	**21 28 20.6**	**+2.3**
	comp=Z,4.0nm,1.1s						
OBKA	**Obir**	**25.11**	**121**	*e*P	**P**	**21 28 24.2**	**+3.4**
	comp=Z,6.9nm,1.7s						
VYHS	**Vyhne**	**25.12**	**113**	*e*P	**P**	**21 28 24.3**	**+3.5**
SOKA	**Soboth**	**25.15**	**120**	*e*P	**P**	**21 28 23.0**	**+1.9**
	comp=Z,5.5nm,1.5s						
ZCCA	**Zocca**	**25.71**	**129**	P	**P**	**21 28 26.7**	**+0.5**
ZCCA				IAmb	IAmb	21 28 37.6	
	comp=Z,22nm,1.5s						
KWP	**Kalwaria Pacla**	**25.80**	**106**	P	**P**	**21 28 27.0**	**+0.1**
PSZ	**Piszkesteto**	**26.01**	**112**	P	**P**	**21 28 29.6**	**+0.7**
PSZ				IAmb	IAmb	21 28 32.7	
	comp=Z,12nm,1.2s						
KOLS	**Kolonicke sedl**	**26.16**	**108**	*e*P	**P**	**21 28 35.0**	**+4.8**
RES	**Resolute Bay**	**26.55**	**324**	P	**P**	**21 28 32.9**	**-0.6**
	comp=Z,2.2nm,1.1s,baz=54,slow=10,SNR=3.6						
AKASG	**Malin Array Be**	**27.73**	**98**	P	**P**	**21 28 42.9**	**-1.4**
	comp=Z,0.2nm,0.3s,baz=324,slow=10,SNR=2.0						
BURAR	**Bucovina Array**	**28.41**	**106**	P	**P**	**21 28 51.4**	**+0.9**
C36M	**Paulatuk**	**36.91**	**326**	P	**P**	**21 30 05.6**	**+1.4**
BRTR	**Keskin Array B**	**38.37**	**105**	P	**P**	**21 30 15.4**	**-1.8**
	comp=Z,0.9nm,0.5s,baz=340,slow=11,SNR=6.5						
BRTR	**Keskin Array B**	**38.37**	**105**	P	**P**	**21 30 16.7**	**-0.4**
KBZ	**Khabaz**	**39.01**	**93**	P	**P**	**21 30 21.9**	**-0.3**
	comp=Z,2.5nm,0.9s,baz=300,slow=14,SNR=4.7						
YKA	**Yellowknife Ar**	**39.31**	**313**	P	**P**	**21 30 22.9**	**-1.6**
	comp=Z,2.7nm,1.1s,baz=45,slow=9.0,SNR=15						
YKA				PcP	**PcP**	**21 32 29.3**	**-3.5**
	comp=Z,0.4nm,0.8s,baz=341,slow=1.6,SNR=3.6						
INK	**Inuvik**	**39.92**	**329**	P	**P**	**21 30 28.5**	**-1.1**
	comp=Z,3.1nm,1.0s,baz=42,slow=12,SNR=6.1						
INK	**Inuvik**	**39.92**	**329**	P	**P**	**21 30 29.3**	**-0.3**
A21K	**Barrow**	**41.49**	**342**	P	**P**	**21 30 44.1**	**+1.7**
ABKAR	**Akbulak array**	**41.90**	**73**	P	**P**	**21 30 46.6**	**+0.6**
ABKAR	**Akbulak array**	**41.90**	**73**	P	**P**	**21 30 46.3**	**+0.2**
ABKAR				IAmb	IAmb	21 30 55.8	
	comp=Z,1.7nm,1.1s						
TIXI	**Tiksi**	**42.03**	**15**	P	**P**	**21 30 48.4**	**+1.5**
TIXI				IAmb	IAmb	21 30 51.2	
	comp=Z,14nm,1.2s						
M52A	**Chesterland**	**42.49**	**269**	P	**P**	**21 30 52.9**	**+1.9**
M52A				IAmb	IAmb	21 31 05.9	
	comp=Z,20nm,1.2s						
GNI	**Garni**	**42.72**	**94**	P	**P**	**21 30 54.6**	**+1.5**
TOLK	**Toolik Lake Re**	**42.82**	**337**	P	**P**	**21 30 54.5**	**+1.1**
TOLK				IAmb	IAmb	21 30 57.5	
	comp=Z,14nm,1.1s						
BMAR	**Burnt Mountain**	**42.97**	**333**	P	**P**	**21 30 54.9**	**+0.3**
BRVK	**Borovoye**	**43.05**	**62**	P	**P**	**21 30 55.3**	**-0.2**
M50A	**Fremont**	**43.33**	**270**	P	**P**	**21 30 59.4**	**+1.6**
M50A				IAmb	IAmb	21 31 04.8	
	comp=Z,12nm,1.0s						
MARD	**Mardin**	**43.40**	**100**	P	**P**	**21 30 59.7**	**+1.1**
MARD				IAmb	IAmb	21 31 03.4	
	comp=Z,11nm,1.2s						
FYU	**Fort Yukon**	**43.85**	**333**	P	**P**	**21 31 03.7**	**+2.1**
EGAK	**Eagle**	**44.56**	**330**	P	**P**	**21 31 09.1**	**+1.7**
EGAK				IAmb	IAmb	21 31 10.6	
	comp=Z,12nm,1.4s						

PRP	Porcupine Dome	44.83	332	P	P	21 31 11.8	+2.1
PRP				IAmb	IAmb	21 31 14.1	
	comp=Z,12nm,1.5s						
RDOG	Red Dog Mine	45.36	343	P	P	21 31 16.1	+2.4
RDOG				IAmb	IAmb	21 31 19.5	
	comp=Z,8.0nm,1.4s						
Q51A	Peebles	45.42	269	P	P	21 31 16.7	+2.1
IL31		45.76	333	P	P	21 31 18.4	+1.5
IL31				IAmb	IAmb	21 31 20.7	
	comp=Z,7.8nm,1.2s						
ILAR	Eielson Array	45.76	333	P	P	21 31 16.9	-0.1
	comp=Z,3.3nm,1.0s,baz=26,slow=6.5,SNR=16						
ILAR				PcP	PcP	21 32 51.8	-2.5
	comp=Z,0.8nm,0.9s,baz=155,slow=3.3,SNR=4.6						
ILAR	Eielson Array	45.76	333	P	P	21 31 17.7	+0.8
MDM	Murphy Dome	45.85	333	P	P	21 31 19.3	+1.6
COLA	College	45.86	333	P	P	21 31 18.5	+0.8
TCOL	CIGO, UAF Yank	45.86	333	P	P	21 31 18.3	+0.6
I23K	Minto, Yukon-K	45.90	334	P	P	21 31 20.5	+2.5
I23K				IAmb	IAmb	21 31 22.2	
	comp=Z,12nm,1.3s						
IMAR	Indian Mountai	45.92	337	P	P	21 31 18.8	+0.6
CCB	Clear Creek Bu	46.05	333	P	P	21 31 20.2	+1.0
CCB				IAmb	IAmb	21 31 22.6	
	comp=Z,4.6nm,1.1s						
HDA	Harding Lake	46.09	332	P	P	21 31 20.8	+1.2
BCAR	Beaver Creek A	46.19	329	P	P	21 31 21.1	+0.7
MENT	Mentasta	46.73	330	P	P	21 31 26.3	+1.7
BPAW	Bear Paw Mtn.	47.15	334	P	P	21 31 29.2	+1.3
BPAW				IAmb	IAmb	21 31 30.6	
	comp=Z,7.6nm,1.2s						
W57A	Gilead	47.24	263	P	P	21 31 30.9	+2.0
ZAA0	Zalesovo Array	47.57	52	P	P	21 31 31.2	0.0
ZAA0				IAmb	IAmb	21 31 37.8	
	comp=Z,5.2nm,1.4s						
ZALV	Zalesovo Beam	47.57	52	P	P	21 31 30.4	-0.8
	comp=Z,0.5nm,0.3s,baz=335,slow=9.5,SNR=1.5						
SKAG	Skagway	47.74	323	P	P	21 31 34.5	+2.0
KURK	Kurchatov	48.04	58	P	P	21 31 35.1	+0.2
KURK				IAmb	IAmb	21 31 37.1	
	comp=Z,6.5nm,1.1s						
KURK	Kurchatov	48.04	58		P	21 31 35.3	+0.4
TNA	Tin City	48.36	344	P	P	21 31 38.1	+1.0
TNA				IAmb	IAmb	21 31 44.5	
	comp=Z,3.7nm,1.0s						
EGMT	Eagleton	48.98	297	P	P	21 31 44.7	+2.3
ANM	Nome	49.00	342	P	P	21 31 44.1	+2.0
ANM				IAmb	IAmb	21 31 47.0	
	comp=Z,8.6nm,1.3s						
GEYT	Alibeck	50.32	84	P	P	21 31 52.0	-0.6
	comp=Z,1.0nm,0.5s,baz=322,slow=11,SNR=2.2						
KKAR	Karatay Array	51.19	70	P	P	21 31 58.5	-0.5
RLMT	Red Lodge	51.20	295	P	P	21 32 01.5	+2.2
YNE	Yellowstone No	51.58	295	P	P	21 32 03.4	+1.1
BOZ	Bozeman (W)	51.72	297	IAmb	IAmb	21 32 06.8	
	comp=Z,9.4nm,1.2s						
YMP	Mirror Lake Pl	51.86	295	P	P	21 32 05.8	+1.3
H17A	Grant Village	52.32	295	P	P	21 32 09.3	+1.6
H17A				IAmb	IAmb	21 32 12.3	
	comp=Z,9.7nm,1.3s						
YPP	Pitchstone Pla	52.51	295	P	P	21 32 10.5	+1.2
MAKZ	Makanchi	52.52	59	P	P	21 32 09.8	+0.9
MK31	Makanchi Array	52.65	58		P	21 32 10.6	+0.7
MKAR	Makanchi Array	52.65	58	P	P	21 32 09.3	-0.6
	comp=Z,1.6nm,0.9s,baz=312,slow=5.7,SNR=11						
MKAR	Makanchi Array	52.65	58	P	P	21 32 10.2	+0.3
LOHW	Long Hollow	52.98	295	P	P	21 32 13.9	+1.3
TORD	Torodi Ar. Bea	53.07	157	P	P	21 32 09.6	-3.7
	comp=Z,0.8nm,0.9s,baz=344,slow=8.4,SNR=3.0						
TORD	Torodi Ar. Bea	53.07	157	P	P	21 32 14.0	+0.7
AAK	Ala-Archa	53.17	67		P	21 32 14.6	+0.6
BW06	Boulder Array	53.29	293	IAmb	IAmb	21 32 17.4	
	comp=Z,12nm,1.4s						
PD31	Pinedale Array	53.29	293	IAmb	IAmb	21 32 17.4	
	comp=Z,10nm,1.4s						
PDAR	Pinedale Array	53.29	293	P	P	21 32 11.6	-3.4
	comp=Z,2.5nm,0.9s,baz=62,slow=6.3,SNR=15						
PDAR	Pinedale Array	53.29	293	P	P	21 32 14.0	-0.9
HRA	Herat	55.09	83	P	P	21 32 28.3	+0.2
RDMU	Red Mountain	55.15	292	P	P	21 32 29.3	+0.8
TLY	Talaya	55.35	41	P	P	21 32 29.7	+0.2
TLY				IAmb	IAmb	21 32 32.0	
	comp=Z,4.9nm,1.3s						
TCUT	Toone Canyon	55.41	294	P	P	21 32 32.2	+1.7
WMOK	Wichita Mounta	55.66	279	P	P	21 32 33.4	+1.4
KSH	Kashi	56.41	68	P	P	21 32 40.1	+2.7
KSH				PP	PP	21 34 48.1	+5.5
KSH				PcS	PcS	21 37 35.8	+0.8
KSH				S	S	21 40 26.3	-1.6
KSH				pmax	pmax		
	comp=Z,15nm,1.1s						
KSH				pmax	pmax		
	comp=Z,3µm,14.0s						
KSH				LR	LR		
	comp=N,1µm,13.2s						
KSH				LR	LR		
	comp=E,2µm,12.5s						
KSH				LR	LR		
	comp=Z,3µm,16.8s						
PV10	Paradox Valley	56.81	290	P	P	21 32 41.8	+1.3
PV02	Paradox Valley	56.83	290	P	P	21 32 41.4	+0.8
PV03	Paradox Valley	56.84	290	IAmb	IAmb	21 32 44.4	
	comp=Z,5.4nm,1.0s						
PV19	Morning Glory	56.84	290	P	P	21 32 41.1	+0.4
PV19				IAmb	IAmb	21 32 48.8	
	comp=Z,11nm,1.4s						
PV17	East Wray Mesa	56.86	290	P	P	21 32 42.2	+1.4
PV17				IAmb	IAmb	21 32 46.0	
	comp=Z,9.4nm,1.2s						
PV18	Skein Mesa, Pa	56.87	290	P	P	21 32 42.2	+1.4
PV18				IAmb	IAmb	21 32 43.2	
	comp=Z,8.5nm,1.1s						
WMQ	Urumqi	57.16	56	*e*P	P	21 32 46.4	+3.8
MSU	Marysvale	57.95	293	P	P	21 32 49.1	+0.7
PSUT	Pine Spring	58.60	294	P	P	21 32 54.6	+1.7
R11A	Troy Canyon, C	59.43	295	IAmb	IAmb	21 33 01.7	
	comp=Z,4.9nm,1.4s						
SONM	Songino Array	59.59	41	P	P	21 32 58.9	-0.8
	comp=Z,1.3nm,1.0s,baz=325,slow=6.8,SNR=8.3						
LCMT	Little Creek M	59.67	293	P	P	21 33 01.4	+1.0
JCT	Junction City	59.76	278	P	P	21 33 02.1	+1.3
U15A	North Rim	59.80	292	IAmb	IAmb	21 33 03.2	
	comp=Z,4.7nm,1.1s						
WUAZ	Wupatki	60.22	290	P	P	21 33 05.3	+1.1
NIL	Nilore	60.35	74	P	P	21 33 04.7	-0.2
NIL				IAmb	IAmb	21 33 07.5	
	comp=Z,5.3nm,0.9s						
SHPR	Sheep Range	60.87	294	P	P	21 33 09.1	+0.6
SHPR				IAmb	IAmb	21 33 11.9	
	comp=Z,3.9nm,1.2s						
X16A	Lo Mia Camp, P	61.20	290	P	P	21 33 12.2	+1.4
X16A				IAmb	IAmb	21 33 14.0	
	comp=Z,5.5nm,1.2s						
TXAR	Lajitas Array	62.40	280	P	P	21 33 15.1	-3.8
	comp=Z,0.2nm,0.8s,baz=90,slow=4.5,SNR=4.9						
TXAR	Lajitas Array	62.40	280	P	P	21 33 18.5	-0.4
ISA	Isabella, Lake	62.90	296	P	P	21 33 23.6	+1.5
ISA				IAmb	IAmb	21 33 25.2	
	comp=Z,3.9nm,1.1s						
GTA	Gaotai	65.24	49	⇑P	P	21 33 38.0	+0.5
GTA				pP	sP	21 33 42.3	-0.4
GTA				sP	pP	21 33 45.3	+4.1
GTA				pmax	pmax		
	comp=Z,2.0nm,1.3s						
HHC	Hu-ho-hao-te	67.46	40	*e*P	P	21 33 53.0	+1.3
HHC				pmax	pmax		
	comp=Z,4.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,510nm,6.6s						
XAN	Xi'an	73.03	44	P	P	21 34 19.9	-5.9
XAN				pP	pP	21 34 22.6	-7.0
XAN				pmax	pmax		
	comp=Z,5.0nm,1.9s						
NJ2	Nanjing	77.69	37	*e*P	P	21 34 53.1	+0.6
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
CMAR	Chiang Mai Arr	84.06	59	P	P	21 35 26.5	-0.3
	comp=Z,0.9nm,0.8s,baz=315,slow=5.5,SNR=6.1						
ASAR	Alice Springs	134.92	39	PKP	PKPdf	21 42 15.1	+0.3
	comp=Z,0.5nm,0.9s,baz=4.3,slow=3.7,SNR=3.2						

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*BJI **13** 21:25:16.0±0.0, 52°.50N×32°.50W, h10^{km}, mb4.6/31*
*IDC **13** 21:25:16.3±0.6, 52°.48N×32°.39W, h0^{km}, mb4.2/25, mb1 4.3/27, mb1mx4.1/52, mbtmp4.2/27, ML3.9/2, Error ellipse: s-maj=19.7km s-min=10.8km az=7.0*
*NEIC **13** 21:25:18.1±1.5, 52°.45N±0°.09×32°.3W±0°.1, h10^{km}±1^{km}, mb4.6/130, Error ellipse: s-maj=15.9km s-min=14.5km az=160.0*
ISC 13 21:25:17.9±0.4, **52°.45N**±0°.08×**32°.33W**±0°.05, **h10^{km}, n207,** σ**0s.97**/207, **mb4.6**/99, **1C, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NRS	Narsarsuaq	11.28	326	Pn	Pn	21 27 58.2	-0.6
DRLN	Deer Lake	16.19	269	Pn	Pn	21 29 05.4	+0.2
SFJD	Kangerlussuaq	17.14	335	P	P	21 29 18.3	-0.5
	0.5nm,0.3s,baz=136,slow=9.4,SNR=4.2						
SFJD	Kangerlussuaq	17.14	335	Pn	Pn	21 29 17.4	+0.2
EKA	Eskdalemuir Ar	17.37	69	P	P	21 29 21.9	+0.5
	baz=265,slow=8.8,SNR=4.1						
EKR8	Eskdalemuir Ar	17.41	69	P	P	21 29 22.8	+0.9
EKR9	Eskdalemuir Ar	17.42	69		P	21 29 22.5	+0.5
EKR10	Eskdalemuir Ar	17.43	69		P	21 29 22.3	+0.2
SCO	Scoresbysund	18.71	11	P	P	21 29 35.6	-0.4
SUMG	Summit	20.38	355	P	P	21 29 55.5	+0.8
FRB	Frobisher Bay	21.89	315	P	P	21 30 11.2	+0.6
	10.0nm,0.8s,baz=102,slow=11,SNR=15						
BATG	Bathurst New B	22.22	270	P	P	21 30 14.8	+0.5
PQI	Presque Isle	23.69	270	P	P	21 30 28.3	-1.2
PQI				IAmb	IAmb	21 30 39.4	
	comp=Z,24nm,1.3s						
E63A	Oxbow	24.05	270	P	P	21 30 32.7	-0.2
F64A	Sherman	24.27	269	P	P	21 30 33.8	-1.2
NB2	NORSAR Subarra	24.93	53	P	P	21 30 40.6	-0.3
	comp=Z,35nm,2.0s,baz=270,slow=10						
NOA	NORSAR Array B	24.93	53	P	P	21 30 40.2	-0.7
	comp=Z,2.3nm,0.9s,baz=270,slow=9.4,SNR=4.3						
HFS	Hagfors	26.18	55	P	P	21 30 51.3	-0.9
	comp=Z,4.6nm,1.1s,baz=268,slow=8.1,SNR=2.0						
CLL	Collm	27.66	74	*e*P	P	21 31 06.0	+0.5
	comp=Z,9.0nm,1.0s						
SQTA	Sankt Quirin	28.23	83	*e*P	P	21 31 11.5	+0.7
	comp=Z,9.7nm,1.2s						
WTTA	Wattenberg	28.46	83	*i* P	P	21 31 13.7	+0.7
	comp=Z,9.8nm,1.5s						
GERES	GERESS Array B	29.02	79	P	P	21 31 18.2	+0.3
	comp=Z,1.8nm,0.8s,baz=302,slow=7.7,SNR=11						
MYKA	Terra Mystica	29.98	83	*i* P	P	21 31 26.8	+0.6
	comp=Z,8.3nm,0.8s						
L59A	Walton	30.31	267	P	P	21 31 30.1	+0.9
L59A				IAmb	IAmb	21 31 40.1	
	comp=Z,10nm,1.1s						
OBKA	Obir	30.58	82	*e*P	P	21 31 31.6	-0.1
	comp=Z,5.2nm,0.9s						
FINES	FINESS Array B	32.04	50	P	P	21 31 42.7	-1.5
	comp=Z,1.4nm,0.7s,baz=264,slow=11,SNR=1.9						
FINES	FINESS Array B	32.04	50	P	P	21 31 45.1	+0.9
EUNU	Eureka	32.73	345	P	P	21 31 53.0	+2.8
EUNU				IAmb	IAmb	21 31 53.5	
	comp=Z,10nm,0.8s						
RES	Resolute Bay	33.14	334	P	P	21 31 51.3	-2.4
	comp=Z,1.5nm,0.3s,baz=180,slow=6.1,SNR=8.5						
RES				PcP	PcP	21 34 36.0	-0.2
	comp=Z,1.5nm,0.8s,baz=157,slow=4.3,SNR=4.2						
KEST	Kesra	33.72	103	P	P	21 31 58.2	-1.1
	comp=Z,8.0nm,0.9s,baz=288,slow=8.6,SNR=7.5						
FCC	Fort Churchill	34.32	305	P	P	21 32 04.4	+0.3
BUR08	Bucovina Ar. S	36.41	74	P	P	21 32 22.2	-0.1
BUR08				IAmb	IAmb	21 32 23.9	
	comp=Z,13nm,1.4s						
BURAR	Bucovina Array	36.43	74	P	P	21 32 23.6	+1.1
AKASG	Malin Array Be	37.27	67	P	P	21 32 28.4	-1.1
	comp=Z,0.8nm,0.5s,baz=300,slow=8.3,SNR=5.7						
AKASG	Malin Array Be	37.27	67	IAmb	IAmb	21 32 29.8	
	comp=Z,1.9nm,1.4s						
FNA	Florina	37.84	86	P	P	21 32 34.1	-0.5
VTS	Vitosha	37.91	82	P	P	21 32 35.4	+0.2
MLR	Muntele Rosu	37.95	77	P	P	21 32 36.5	+1.0
KLMR	Klimovskoe	38.47	48	*e*P	P	21 32 35.4	-4.1
KLMR				AMP		21 32 40.4	
	comp=Z,29nm,1.3s						
ULM	Lac du Bonnet	38.61	293	P	P	21 32 40.1	-0.7
	comp=Z,2.9nm,0.8s,baz=63,slow=9.8,SNR=4.7						
OBN	Obninsk	39.29	58	P	P	21 32 46.5	+0.1
	comp=Z,2.6nm,0.6s,baz=0.0,slow=6.1,SNR=4.2						
OBN	Obninsk	39.29	58	IAmb	IAmb	21 32 47.0	
	comp=Z,13nm,0.8s						
F36A	Milaca	39.49	286	P	P	21 32 48.1	-0.1
P43A	Skaggs, Pawnee	40.66	275	P	P	21 32 58.6	+0.6
P43A				IAmb	IAmb	21 33 06.8	
	comp=Z,12nm,1.1s						
YKA	Yellowknife Ar	42.39	317	P	P	21 33 11.8	-0.1
	comp=Z,1.8nm,0.8s,baz=64,slow=9.1,SNR=13						
YKA				PcP	PcP	21 35 04.2	-0.7
	comp=Z,1.4nm,0.7s,baz=66,slow=4.1,SNR=12						
SJG	San Juan	43.29	231	P	P	21 33 19.9	+0.2
MDUB	Mudurnu	43.99	79	P	P	21 33 25.5	+0.2
FDF	Fort de France	44.06	222	P	P	21 33 26.4	+0.5
BR131	Keskin Array S	45.92	79	P	P	21 33 40.9	+0.2
BRTR	Keskin Array B	45.92	79	P	P	21 33 41.5	+0.8
	comp=Z,5.8nm,0.8s,baz=288,slow=5.1,SNR=21						
BRTR				PcP	PcP	21 35 18.0	+0.5
	comp=Z,0.3nm,0.4s,baz=319,slow=4.0,SNR=1.5						
INK	Inuvik	46.37	330	P	P	21 33 43.7	+0.1
	comp=Z,5.0nm,0.8s,baz=40,slow=9.5,SNR=14						
INK	Inuvik	46.37	330	P	P	21 33 43.9	+0.3
INK				IAmb	IAmb	21 33 45.1	
	comp=Z,5.1nm,0.8s						
TOKA	Tokat	47.24	76	P	P	21 33 51.9	+1.0
QUOK	Quay	47.25	276	P	P	21 33 48.6	-2.4
KAN12	Harper NE Stat	47.30	279	P	P	21 33 50.5	-0.9
EGMT	Eagleton	47.50	297	P	P	21 33 52.1	-0.7
EGMT				IAmb	IAmb	21 34 09.9	
	comp=Z,4.7nm,0.9s						
TOA0	Torodi Ar. Sit	47.71	133	P	P	21 33 55.9	+1.1
TOA0				IAmb	IAmb	21 33 58.2	
	comp=Z,5.7nm,0.9s						
TORD	Torodi Ar. Bea	47.71	133	P	P	21 33 56.4	+1.6
	comp=Z,3.9nm,0.9s,baz=334,slow=8.6,SNR=9.6						
TORD	Torodi Ar. Bea	47.71	133	P	P	21 33 55.0	+0.3
EPYK	Eagle Plains	48.51	329	P	P	21 34 01.5	+1.1
KIV	Kislovodsk	48.60	68	P	P	21 34 02.0	+0.6
KIV				IAmb	IAmb	21 34 05.2	
	comp=Z,7.9nm,1.1s						
KBZ	Khabaz	48.86	69	P	P	21 34 04.8	+1.5
	comp=Z,2.4nm,0.9s,baz=300,slow=4.9,SNR=4.5						
KBZ				PcP	PcP	21 35 27.8	+0.1
	comp=Z,2.5nm,0.9s,baz=355,slow=7.4,SNR=4.1						
WALA	Waterton Lakes	49.11	301	P	P	21 34 05.7	+0.4
WALA				IAmb	IAmb	21 34 07.4	
	comp=Z,5.1nm,1.0s						
ARU	Arti	49.28	47	P	P	21 34 06.4	0.0
HRY	Holter Researc	49.42	297	P	P	21 34 07.2	-0.5
YNE	Yellowstone No	49.46	294	P	P	21 34 07.9	-0.3
GAZ	Gaziantep	49.70	79	P	P	21 34 10.3	+0.3
YMP	Mirror Lake Pl	49.70	294	P	P	21 34 10.5	+0.4
BOZ	Bozeman (W)	49.99	296	P	P	21 34 12.6	+0.4
BMAR	Burnt Mountain	50.20	332	P	P	21 34 14.2	+0.9
YHB	Horse Butte	50.28	295	P	P	21 34 15.2	+0.8
PD31	Pinedale Array	50.61	292	P	P	21 34 16.3	-0.6
PDAR	Pinedale Array	50.61	292	P	P	21 34 15.8	-1.1
	comp=Z,2.3nm,0.7s,baz=64,slow=8.2,SNR=18						
PDAR				PcP	PcP	21 35 33.5	-1.0
	comp=Z,0.1nm,0.4s,baz=58,slow=3.5,SNR=1.0						
PDAR	Pinedale Array	50.61	292	P	P	21 34 15.3	-1.6
LOHW	Long Hollow	50.66	293	P	P	21 34 17.2	-0.1
LOHW				IAmb	IAmb	21 34 19.4	
	comp=Z,8.1nm,1.4s						
TOLK	Toolik Lake Re	50.71	335	P	P	21 34 17.8	+0.7
NRIK	Noril'sk	50.86	23	P	P	21 34 18.8	+0.6
	comp=Z,4.8nm,0.9s,baz=329,slow=4.8,SNR=5.6						
NRIK	Noril'sk	50.86	23	P	P	21 34 19.8	+1.6
NRIK				IAmb	IAmb	21 34 22.4	
	comp=Z,6.2nm,1.1s						
EGAK	Eagle	50.95	329	P	P	21 34 19.9	+1.0
EGAK				IAmb	IAmb	21 34 20.6	
	comp=Z,13nm,1.0s						
FYU	Fort Yukon	50.98	332	P	P	21 34 20.2	+1.2
MCMT	McKenzie Canyo	51.15	296	P	P	21 34 20.7	-0.3
MARD	Mardin	51.74	76	P	P	21 34 25.1	-0.3
MARD				IAmb	IAmb	21 34 26.9	
	comp=Z,8.8nm,1.1s						
BCYI	Bear Canyon	51.78	295	P	P	21 34 25.0	-0.7
COLD	Coldfoot	51.90	334	P	P	21 34 26.5	+0.6
COLD				IAmb	IAmb	21 34 28.1	
	comp=Z,6.0nm,1.1s						
RDMU	Red Mountain	52.03	290	P	P	21 34 27.0	-0.6
GNI	Garni	52.20	71	P	P	21 34 29.7	+0.9
GNI				IAmb	IAmb	21 34 30.9	
	comp=Z,7.5nm,1.0s						
BCAR	Beaver Creek A	52.32	327	P	P	21 34 30.2	+1.0
HYT	Haines Junctio	52.34	323	P	P	21 34 30.8	+1.2
B08A	Colville Reser	52.37	303	P	P	21 34 29.6	-0.2
POKR	Poker Plat Res	52.65	331	P	P	21 34 31.5	-0.1
DOT	Dot Lake	52.66	329	P	P	21 34 32.4	+0.7
DOT				IAmb	IAmb	21 34 34.1	
	comp=Z,8.8nm,0.9s						
TCUT	Toone Canyon	52.72	291	P	P	21 34 33.3	+0.5
IL31		52.73	331	P	P	21 34 33.5	+1.4
IL31				IAmb	IAmb	21 34 34.3	
	comp=Z,5.9nm,0.9s						
ILAR	Eielson Array	52.73	331	P	P	21 34 33.1	+0.9
	comp=Z,3.8nm,0.9s,baz=43,slow=5.7,SNR=31						
ILAR				PcP	PcP	21 35 41.6	-0.1
	comp=Z,1.8nm,0.8s,baz=5.9,slow=2.6,SNR=8.4						
ILAR	Eielson Array	52.73	331	P	P	21 34 32.5	+0.3
HLID	Hailey	52.82	295	P	P	21 34 34.2	+0.8
PV07	Paradox Valley	52.90	287	P	P	21 34 34.8	+0.7
COLA	College	52.95	331	P	P	21 34 33.6	-0.1
COLA				IAmb	IAmb	21 34 40.1	
	comp=Z,18nm,1.5s						
TCOL	CIGO, UAF Yank	52.95	331	P	P	21 34 34.7	+0.9
TCOL				IAmb	IAmb	21 34 37.6	
	comp=Z,5.9nm,0.8s						
MDM	Murphy Dome	53.00	331	P	P	21 34 34.9	+0.7
MDM				IAmb	IAmb	21 34 36.2	
	comp=Z,7.6nm,1.0s						
HDA	Harding Lake	53.01	330	P	P	21 34 34.8	+0.5
HDA				IAmb	IAmb	21 34 36.2	
	comp=Z,8.1nm,0.8s						
MENT	Mentasta	53.05	328	P	P	21 34 35.4	+0.8
MENT				IAmb	IAmb	21 34 37.0	
	comp=Z,9.2nm,0.8s						
HVU	Hansel Valley	53.07	293	P	P	21 34 35.7	+0.5
PV12	Saucer Basin,	53.07	287	P	P	21 34 35.2	-0.2
PV12				IAmb	IAmb	21 34 37.6	
	comp=Z,6.6nm,0.9s						
CCB	Clear Creek Bu	53.10	331	P	P	21 34 36.0	+1.1
CCB				IAmb	IAmb	21 34 37.7	
	comp=Z,9.8nm,1.4s						
PV11	David Mesa, Pa	53.12	287	P	P	21 34 36.0	+0.4
PV11				IAmb	IAmb	21 34 37.4	
	comp=Z,15nm,1.1s						
PV03	Paradox Valley	53.14	287	P	P	21 34 35.8	0.0
PV16	Nyswonger Mesa	53.14	287	P	P	21 34 36.0	+0.1
PV16				IAmb	IAmb	21 34 37.5	
	comp=Z,11nm,1.1s						
PV14	Lion Creek, Pa	53.16	287	IAmb	IAmb	21 34 37.7	
	comp=Z,6.9nm,0.9s						
PV18	Skein Mesa, Pa	53.18	287	P	P	21 34 36.5	+0.4
PV18				IAmb	IAmb	21 34 37.8	
	comp=Z,7.1nm,0.9s						
PV17	East Wray Mesa	53.18	287	P	P	21 34 35.8	-0.4
PV17				IAmb	IAmb	21 34 38.3	
	comp=Z,10.0nm,0.9s						
I23K	Minto, Yukon-K	53.19	332	P	P	21 34 36.2	+0.7
I23K				IAmb	IAmb	21 34 38.0	
	comp=Z,13nm,1.1s						
WRH	Wood River Hil	53.31	331	P	P	21 34 37.1	+0.7
WRH				IAmb	IAmb	21 34 38.3	
	comp=Z,7.2nm,0.9s						
PAX	Paxson	53.59	329	P	P	21 34 39.3	+0.7
PAX				IAmb	IAmb	21 34 41.0	
	comp=Z,6.6nm,0.9s						
BARN	Barnard Glacie	53.67	325	P	P	21 34 39.6	+0.2
LTY	Liberty	53.77	302	P	P	21 34 39.6	-0.6
LTY				IAmb	IAmb	21 34 45.6	
	comp=Z,7.9nm,1.1s						
BGU	Big Grassy Mou	53.77	292	P	P	21 34 39.5	-0.9
IMAR	Indian Mountai	53.77	334	P	P	21 34 41.1	+1.3
DUG	Dugway, Tooele	54.13	291	P	P	21 34 42.9	-0.2
DUG				IAmb	IAmb	21 34 44.5	
	comp=Z,4.6nm,0.9s						
TGL	Tana Glacier	54.29	325	P	P	21 34 44.5	+0.7
RDOG	Red Dog Mine	54.32	339	IAmb	IAmb	21 34 45.2	
	comp=Z,5.8nm,1.1s						
CRQM	Cirque	54.40	326	P	P	21 34 45.6	+1.0
ABKAR	Akbulak array	54.44	54	P	P	21 34 45.2	+0.3
ABKAR	Akbulak array	54.44	54	IAmb	IAmb	21 34 48.2	
	comp=Z,5.9nm,1.1s						
BPAW	Bear Paw Mtn.	54.44	332	P	P	21 34 45.0	+0.2
BPAW				IAmb	IAmb	21 34 46.6	
	comp=Z,11nm,1.2s						
TRF	Thorofare Moun	54.72	331	IAmb	IAmb	21 34 48.3	
	comp=Z,9.5nm,1.0s						
KLU	Klutina	54.80	327	P	P	21 34 47.9	+0.4
KTH	Kantishna Hill	54.83	331	P	P	21 34 48.1	+0.4
MSU	Marysvale	54.90	289	P	P	21 34 48.6	-0.1
ELK	Elko	55.14	293	P	P	21 34 51.4	+1.0
RAGM	Ragged Mountai	55.19	326	P	P	21 34 48.7	-1.6
MTPU	Mount Pierson	55.22	289	P	P	21 34 51.8	+0.5
SML	Sawmill	55.35	329	P	P	21 34 52.2	+0.8
TIXI	Tiksi	55.48	7	P	P	21 34 53.7	+1.5
GHO	Glory Hole Cre	55.56	329	P	P	21 34 53.2	+0.2
WVOR	Wild Horse Val	55.89	297	IAmb	IAmb	21 35 02.6	
	comp=Z,4.0nm,0.8s						
SZCU	Shurtz Canyon	56.05	289	P	P	21 34 56.5	-0.5
TXAR	Lajitas Array	56.19	275	P	P	21 34 57.7	-0.3
	comp=Z,0.6nm,0.8s,baz=57,slow=9.1,SNR=6.6						
TXAR				PcP	PcP	21 35 55.7	+0.1
	comp=Z,0.4nm,0.7s,baz=49,slow=3.4,SNR=3.8						
SKT	Skwentna	56.21	330	P	P	21 34 57.0	-0.6
KNB	Kanab	56.29	288	P	P	21 34 58.4	-0.3
SUA	Susitna One	56.37	330	P	P	21 34 59.0	+0.2
BRVK	Borovoye	56.64	45	P	P	21 35 01.7	+1.0
BRVK				IAmb	IAmb	21 35 02.4	
	comp=Z,4.1nm,0.8s						
K05A	Summer Lake	56.91	298	P	P	21 35 02.9	-0.2
MOD	Modoc Plateau	57.16	297	P	P	21 35 04.8	+0.1
X16A	Lo Mia Camp, P	57.28	285	P	P	21 35 06.3	+0.5
PRN	Pahroc Range	57.31	290	P	P	21 35 05.5	-0.3
PRN				IAmb	IAmb	21 35 18.8	
	comp=Z,4.5nm,1.0s						
TNA	Tin City	57.50	340	P	P	21 35 07.1	+0.5
TNA				IAmb	IAmb	21 35 08.2	
	comp=Z,4.6nm,1.0s						
RSO	Redoubt South	57.77	330	P	P	21 35 10.2	+1.4
ANM	Nome	57.80	338	P	P	21 35 08.9	+0.2
PTGA	Pitinga	57.85	213	P	P	21 35 09.9	+0.2
PTGA				IAmb	IAmb	21 35 13.9	
	comp=Z,4.1nm,0.8s						
TPH	Tonopah	58.09	292	P	P	21 35 11.6	+0.2
PAHR	Pah Rah Range	58.17	295	P	P	21 35 12.2	+0.3
PAHR				IAmb	IAmb	21 35 13.7	
	comp=Z,7.2nm,1.3s						
NV11	Mina Array Sit	58.37	293	P	P	21 35 13.7	+0.5
NVAR	Mina Array Bea	58.45	293	P	P	21 35 12.5	-1.4
	comp=Z,0.7nm,0.8s,baz=62,slow=35,SNR=4.8						
NVAR	Mina Array Bea	58.45	293	P	P	21 35 13.0	-0.9
BEKR	Beckworth	58.59	296	P	P	21 35 14.8	-0.1
LHV	Little Huntoon	58.69	293	P	P	21 35 15.3	0.0
LHV				IAmb	IAmb	21 35 16.8	
	comp=Z,4.5nm,1.0s						
ROSC	El Rosal	58.70	231	P	P	21 35 14.9	-1.1
	comp=Z,25nm,0.7s,baz=118,slow=17,SNR=2.8						
ROSC	El Rosal	58.70	231	P	P	21 35 15.7	-0.4
PNTR	Pine Nut	58.72	295	P	P	21 35 16.6	+0.8
PNTR				IAmb	IAmb	21 35 17.4	
	comp=Z,7.5nm,0.9s						
XPFO	Pion Flat	60.79	288	P	P	21 35 30.5	+0.5
PFO	Pinyon Flats O	60.80	288	P	P	21 35 30.1	+0.1
PFO				IAmb	IAmb	21 35 43.4	
	comp=Z,7.1nm,1.4s						
ZAA0	Zalesovo Array	61.78	37	P	P	21 35 36.4	+0.2
ZALV	Zalesovo Beam	61.78	37	P	P	21 35 35.6	-0.6
	comp=Z,1.0nm,0.4s,baz=317,slow=8.5,SNR=5.5						
ZALV	Zalesovo Beam	61.78	37	P	P	21 35 36.5	+0.3
KURK	Kurchatov	61.88	42		P	21 35 37.4	+0.5
KURK	Kurchatov	61.88	42	P	P	21 35 36.9	0.0
KURK				IAmb	IAmb	21 35 37.7	
	comp=Z,3.8nm,0.7s						
KK09	Karatay Array	63.95	53	P	P	21 35 49.4	-1.4
KK08	Karatay Array	63.95	53	P	P	21 35 49.1	-1.9
KK04	Karatay Array	63.96	53	P	P	21 35 49.4	-1.6
KK01	Karatay Array	63.96	53	P	P	21 35 49.5	-1.4
KK03	Karatay Array	63.96	53	P	P	21 35 49.1	-1.9
KK05	Karatay Array	63.96	53	P	P	21 35 48.7	-2.3
KK02	Karatay Array	63.97	53	P	P	21 35 49.4	-1.6
KK31	Karatay Array	63.97	53	P	P	21 35 48.7	-2.3
KK31				IAmb	IAmb	21 35 49.6	
	comp=Z,1.7nm,0.6s						
KKAR	Karatay Array	63.97	53	P	P	21 35 48.9	-2.2

KKAR				IAmb	IAmb	21 35 49.6	
	comp=Z,1.7nm,0.6s						
KKAR	Karatay Array	63.97	53	P	P	21 35 49.0	-2.0
KK07	Karatay Array	63.97	53	P	P	21 35 48.6	-2.4
KK06	Karatay Array	63.98	53	P	P	21 35 49.0	-2.2
MK31	Makanchi Array	66.45	43	P	P	21 36 07.5	+0.3
MK31				IAmb	IAmb	21 36 08.3	
	comp=Z,3.1nm,0.8s						
MKAR	Makanchi Array	66.45	43	P	P	21 36 07.4	+0.3
	comp=Z,4.2nm,0.8s,baz=329,slow=6.2,SNR=33						
KSH	Kashi	69.36	52	P	P	21 36 28.5	+2.9
KSH				pmax	pmax		
	comp=Z,5.0nm,1.2s						
WMQ	Urumqi	71.09	41	eP	P	21 36 37.3	+1.2
WMQ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
SONM	Songino Array	74.06	28	P	P	21 36 53.7	-0.1
	comp=Z,5.8nm,0.9s,baz=331,slow=6.1,SNR=37						
ULN	Ulaanbaatar	74.22	27	P	P	21 36 56.0	+1.2
ULN				IAmb	IAmb	21 36 58.9	
	comp=Z,9.4nm,1.1s						
PETK	Petropavlovsk-	74.48	354	P	P	21 36 55.6	-0.3
	comp=Z,4.0nm,0.8s,baz=80,slow=3.2,SNR=2.3						
LPAZ	La Paz	75.15	216	P	P	21 36 58.9	-2.1
	comp=Z,0.6nm,0.4s,baz=18,slow=7.7,SNR=1.6						
PB16	IPOC Station P	77.53	216	P	P	21 37 15.8	+1.4
PB16				IAmb	IAmb	21 37 18.0	
	comp=Z,6.3nm,0.9s						
PB08	IPOC Station P	79.07	215	P	P	21 37 23.8	+1.2
PB08				IAmb	IAmb	21 37 25.9	
	comp=Z,14nm,1.3s						
GTA	Gaotai	79.52	36	⇑P	P	21 37 25.1	+0.4
GTA				pP	pwP	21 37 30.6	-0.1
GTA				sP	PcP	21 37 33.4	+0.7
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s						
HHC	Hu-ho-hao-te	81.94	27	eP	P	21 37 38.9	+1.3
HHC				pmax	pmax		
	comp=Z,5.0nm,0.8s						
DANN	Dangsing	82.16	53	eP	P	21 37 39.7	+0.5
	comp=Z,15nm,0.9s						
GKN	Gorkha	82.88	53	eP	P	21 37 43.2	+0.4
	comp=Z,13nm,0.8s						
KKN	Kakani	83.36	52	eP	P	21 37 45.9	+0.5
	comp=Z,12nm,0.7s						
DMN	Daman	83.43	52	eP	P	21 37 46.7	+0.9
	comp=Z,12nm,0.8s						
GUN	Gumba	83.55	52	eP	P	21 37 47.2	+0.7
	comp=Z,21nm,1.1s						
PKIN	Phulchoki	83.60	52	eP	P	21 37 46.8	+0.1
PKI	Pulchoki	83.61	52	eP	P	21 37 47.1	+0.3
	comp=Z,12nm,0.9s						
RAMN	Ramite	84.70	52	eP	P	21 37 52.6	+0.3
	comp=Z,10.0nm,0.9s						
TAPN	Taplejung	84.90	51	eP	P	21 37 54.3	+1.0
	comp=Z,12nm,1.1s						
ODAN	Odare	85.16	51	eP	P	21 37 54.9	+0.4
	comp=Z,18nm,1.0s						
XAN	Xi'an	87.46	31	P	P	21 38 05.1	-0.4
XAN				pP	pP	21 38 08.3	+0.3
CD2	Chengdu	88.55	37	P	P	21 38 11.1	+0.3
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
NJ2	Nanjing	92.16	24	eP	P	21 38 27.0	-0.5
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.5s						
WRA	Warramunga Arr	145.93	23	PKPbc	PKPdf	21 44 57.3	+0.5
	comp=Z,3.7nm,0.6s,baz=338,slow=2.6,SNR=41						
ASAR	Alice Springs	149.39	25	PKPbc	PKPbc	21 45 06.5	-0.4
	comp=Z,3.2nm,0.8s,baz=345,slow=2.2,SNR=21						
ASAR	Alice Springs	149.39	25		PKPbc	21 45 05.3	-1.6

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*JMA **13** 21:48:36.8, 22.°67N×121.°42E, h14km±2km, M2.8*
*TAP **13** 21:48:38.5, 22.°71N×121.°29E, h22km, ML2.9, B*
ISC 13 21:48:38.3±0.9**, 22.°69N**±0.°02×**121.°34E**±0.°02**, h26**km±5km,
n95, σ0.ˢ88/145**, 2C-4D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LDUT	Ludao	0.12	99	⇓iP	Pb	21 48 43.6	+0.3
	baz=96						
LDUT				i S	Sb	21 48 47.4	+0.7
	baz=96						
TTN	Taitung	0.19	289	i P	Pb	21 48 43.8	-0.2
	baz=287						
TTN				i S	Sb	21 48 47.7	-0.1
	baz=287						
TWGBT	Beinan	0.27	298	⇑iP	Pb	21 48 44.5	-0.6
	baz=298						
TWGBT				i S	Sb	21 48 48.9	-0.8
	baz=298						
TWG	Pinlang	0.28	297	⇑iP	Pb	21 48 44.5	-0.7
	baz=298						
TWG				i S	Sb	21 48 49.0	-0.8
	baz=298						
EDH	Donghe	0.28	353	i P	Pb	21 48 44.6	-0.6
	baz=358						
EDH				i S	Sb	21 48 49.6	-0.3
	baz=358						
LONT	Longtian	0.29	318	P	Pb	21 48 44.8	-0.5
	baz=322						
LONT				i S	Sb	21 48 50.5	+0.4
	baz=322						
ECL	Taimali	0.37	255	P	Pb	21 48 46.0	-0.5
	baz=249						
ECL				eS	Sb	21 48 51.6	-0.4
	baz=249						
CHKT	Chengkung	0.41	3	P	Pb	21 48 46.6	-0.5
	baz=21						
CHKT				eS	Sb	21 48 52.6	-0.4
	baz=21						
FULB	Fuli	0.51	355	P	Pb	21 48 48.4	-0.4
	baz=344						
FULB				eS	Sb	21 48 56.2	+0.4
	baz=344						
TAW	Tawu	0.53	231	eP	Pb	21 48 48.7	-0.4
	baz=236						
TAW				eS	Sb	21 48 56.1	-0.2
	baz=236						
EAST	Anshuo	0.55	236	P	Pb	21 48 49.0	-0.5
	baz=239						
EAST				eS	Sb	21 48 56.9	-0.1
	baz=239						
ELDTW	Lidau	0.58	329	i P	Pb	21 48 48.8	-1.2
	baz=331						
ELDTW				eS	Sb	21 48 56.0	-2.0
	baz=331						
TSMG	Majia	0.64	271	P	Pb	21 48 50.2	-0.7
	baz=267						
TSMG				eS	Sb	21 48 57.7	-1.9
	baz=267						
EYUL	Yuli	0.65	358	P	Pb	21 48 51.1	0.0
	baz=349						
EYUL				eS	Sb	21 48 59.3	-0.7
	baz=349						
SSD	Sandimen	0.66	275	P	Pb	21 48 50.2	-1.1
	baz=270						
SSD				eS	Sb	21 48 59.4	-0.6
	baz=270						
TWF1	Yuli	0.66	356	eP	Pb	21 48 50.3	-1.0
	baz=348						
TWF1				eS	Sb	21 49 00.6	+0.5
	baz=348						
MASBT	Mashibuluo	0.66	263	⇓iP	Pb	21 48 50.7	-0.6
	baz=256						
MASBT				i S	Sb	21 48 58.6	-1.5
	baz=256						
LAY	Lan-yu	0.68	163	eP	Pb	21 48 51.6	0.0
	baz=160						
LAY				eS	Sn	21 49 02.3	+0.3
	baz=160						
SLIU	Shizi	0.69	227	eP	Pb	21 48 51.0	-0.8
	baz=210						
STYH	Taoyuan	0.71	313	i P	Pb	21 48 51.4	-0.6
	baz=313						
STYH				S	Sb	21 49 00.4	-1.0
	baz=313						
SLGT	Liugui	0.71	295	eP	Pb	21 48 51.5	-0.6
	baz=290						
STYT	Tauyuan	0.71	311	⇓iP	Pb	21 48 51.5	-0.7
	baz=312						
STYT				eS	Sb	21 49 00.6	-1.1
	baz=312						
SCZT	Fangliau	0.74	245	eP	Pb	21 48 52.3	-0.3
	baz=243						
SCZT				S	Sb	21 49 01.6	-0.7
	baz=243						
SSPT	Xinbi	0.74	254	eP	Pn	21 48 53.0	-0.1
	baz=247						
SGST	Jiashian	0.80	299	P	Pb	21 48 52.6	-1.0
	baz=308						
HGSD	Ruisui	0.80	5	P	Pb	21 48 53.3	-0.3
	baz=16						
HGSD				eS	Sn	21 49 05.9	+0.9
	baz=16						
SCST	Cishan	0.81	284	eP	Pb	21 48 51.8	-1.9
	baz=280						
EHY	Hungye	0.81	359	eP	Pb	21 48 53.1	-0.7
	baz=1.0						
TWM1	Shoushan	0.86	279	eP	Pn	21 48 55.8	+1.1
	baz=277						
WTP	Ta-pu	0.87	310	P	Pn	21 48 54.8	0.0
	baz=310						
WTP				eS	Sn	21 49 06.8	+0.1
	baz=310						
YUS	Yu-Shan	0.87	336	P	Pb	21 48 54.1	-1.1
	baz=338						
YUS				eS	Sb	21 49 04.1	-2.6
	baz=338						
HEN	Hengchun	0.88	219	eP	Pb	21 48 54.1	-0.9
	baz=205						
TSEB	Hengchuen, Pin	0.89	208	eP	Pb	21 48 53.6	-1.5
	baz=197						
TSEB				eS	Sn	21 49 07.6	+0.6
	baz=197						
TPUB	Ta-pu	0.89	313	⇓iP	Pb	21 48 55.1	-0.1
	baz=313						
TPUB				eS	Sn	21 49 07.6	+0.3
	baz=313						
TWKBT	Hengchun	0.89	213	P	Pb	21 48 54.5	-0.7
	baz=200						
TWKBT				eS	Sb	21 49 06.9	+0.2
	baz=200						
TWK1	Hengchun	0.90	214	eP	Pb	21 48 54.6	-0.6
	baz=200						
TWK1				eS	Sb	21 49 07.0	+0.2
	baz=200						
CHN1	Nanshi	0.90	303	eP	Pn	21 48 55.9	+0.6
	baz=310						
CHN1				eS	Sn	21 49 08.6	+1.2
	baz=310						
SNST	Tainan City	0.94	304	P	Pn	21 48 56.6	+0.8
	baz=315						
CHN4	Tsaushan	0.95	314	P	Pn	21 48 56.4	+0.4
	baz=314						
CHN4				eS	Sn	21 49 10.7	+2.0
	baz=314						
ALS	Alishan	0.95	329	eP	Pb	21 48 56.0	-0.4
	baz=330						
WLCH	Liuqiu	0.95	249	eP	Pn	21 48 56.8	+0.8
	baz=242						
TWK	Hsinying	0.97	306	P	Pn	21 48 56.9	+0.5
	baz=316						
TWK				eS	Sn	21 49 09.8	+0.5
	baz=316						
EGFH	Guangfu	0.98	5	eP	Pb	21 48 55.6	-1.0
	baz=353						
CHN3	Shinhua	0.98	293	eP	Pn	21 48 59.0	+2.6
	baz=292						
VWDT	VWDT	1.07	350	eP	Pn	21 48 57.4	-0.2
	baz=360						
CHN5	Tsauling	1.09	326	P	Pb	21 48 58.6	0.0
	baz=326						
CHN5				eS	Sn	21 49 13.6	+1.4
	baz=326						
ESL	Shilin	1.12	4	eP	Pb	21 48 59.1	+0.1
	baz=5.0						
SSLB	Suanglung	1.15	342	P	Pn	21 48 58.3	-0.4
	baz=351						
SSLB				eS	Sn	21 49 14.7	+1.1
	baz=351						
CHY	Chiayi	1.17	314	eP	Pb	21 49 00.0	+0.2
	baz=323						
CHY				eS	Sb	21 49 13.8	-0.7
	baz=323						
ICHU	Yijhu	1.18	304	eP	Pb	21 48 59.6	-0.5
	baz=303						
WGK	Gukeng	1.22	324	eP	Pb	21 49 01.0	+0.3
	baz=323						
WDLH	Douliu	1.24	323	eP	Pb	21 49 01.7	+0.6
	baz=322						
WDLH				eS	Sb	21 49 18.5	+1.9
	baz=322						
SMLT	Sun Moon Lake	1.25	341	eP	Pb	21 49 01.2	-0.2
	baz=353						
SMLT				eS	Sb	21 49 17.9	+0.7
	baz=353						
WJS	Zhushan	1.26	333	eP	Pb	21 49 01.9	+0.5
	baz=333						
TYC	Yuchr	1.29	340	eP	Pb	21 49 02.0	+0.1
	baz=351						
TYC				eS	Sb	21 49 19.7	+1.7
	baz=351						
WTK	Tuku	1.32	319	eP	Pb	21 49 02.5	-0.1
	baz=317						
WNT	Mingjian	1.33	333	eP	Pb	21 49 03.3	+0.8
	baz=332						
WNT				eS	Sb	21 49 20.4	+1.3
	baz=332						
WPL	Puli Township	1.36	345	eP	Pb	21 49 03.1	-0.1
	baz=345						
CHGB	Renai	1.37	354	eP	Pn	21 49 02.5	+0.5
	baz=3.0						
DPDB	Guoxing	1.39	344	eP	Pb	21 49 03.9	+0.3
	baz=344						
DPDB				eS	Sb	21 49 21.7	+0.7
	baz=344						
WCS	Beigang Elemen	1.42	344	eP	Pb	21 49 03.7	-0.4
	baz=343						
WCS				eS	Sb	21 49 20.9	-0.8
	baz=343						
NACB	Ninganchiao	1.49	9	eP	Pn	21 49 02.4	-1.1
	baz=8.0						
NACB				eS	Sn	21 49 20.9	-1.2
	baz=8.0						
ETLH	Xiulin Townshi	1.51	5	eP	Pn	21 49 04.4	+0.6
	baz=4.0						
FUSS	Fushou	1.55	357	eP	Pn	21 49 05.1	+0.6
	baz=6.0						
TWT	Tachien	1.56	354	eP	Pn	21 49 05.5	+0.9
	baz=4.0						
TDCB	Techi	1.56	354	eP	Pn	21 49 05.0	+0.5
	baz=4.0						
WHP	Taichung City	1.62	347	eP	Pb	21 49 06.7	-0.9
	baz=357						
WHP				eS	Sb	21 49 28.3	+0.6
	baz=357						
WDGT	Dungji	1.65	290	P	Pn	21 49 06.0	+0.5
	baz=289						
WDGT				eS	Sn	21 49 27.0	+1.1
	baz=289						
NNSB	Datong	1.73	1	eP	Pn	21 49 07.3	+0.5
	baz=11						
NNSB				eS	Sn	21 49 27.4	-0.6
	baz=11						
NNSH	Datong	1.73	1	eP	Pn	21 49 06.9	+0.1
	baz=11						
NNSH				eS	Sn	21 49 27.9	-0.2
	baz=11						
TWQ1	Liyutan	1.73	343	P	Pb	21 49 09.0	-0.4
	baz=341						
TWQ1				eS	Sb	21 49 31.9	+1.1
	baz=341						
NNS	Nan Shan	1.74	1	eP	Pb	21 49 08.6	-1.1
	baz=12						
ENA	Nanau	1.77	12	eP	Pn	21 49 06.8	-0.4
	baz=360						
PHUB	P'eng-hu	1.82	297	eP	Pn	21 49 07.2	-0.7
	baz=295						
VCHM	Qimei	1.84	287	eP	Pn	21 49 08.7	+0.6
	baz=284						
PNG	Penghu	1.86	298	eP	Pn	21 49 09.4	+0.9
	baz=296						
ENTT	Nioudou	1.95	6	eP	Pn	21 49 10.1	+0.3
	baz=4.0						
NDS	Dongshan	1.96	10	eP	Pn	21 49 10.0	+0.1
	baz=6.0						
LIOB	Emei	1.97	351	eP	Pb	21 49 11.7	-1.8
	baz=1.0						
NSK	Sanguang	1.98	0	eP	Pn	21 49 10.9	+0.7
	baz=10.0						
TWE	Neicheng	2.04	8	eP	Pn	21 49 12.3	+1.4
	baz=5.0						
NWLT	Wulai	2.08	4	eP	Pb	21 49 13.6	-1.9
	baz=13						
JYNG	Yonagunijimaku	2.29	40	P	Pn	21 49 14.1	-0.2
JYNG				eS	Sn	21 49 42.6	+0.9
TIPB	Shuangxi	2.31	11	eP	Pn	21 49 16.0	+1.3
	baz=6.0						
IRIF	Iriomote-Funau	2.73	53	P	Pn	21 49 21.1	+0.6
IRIF				eS	Sn	21 49 52.6	-0.1
VWUC	VWUC	2.87	323	eP	Pn	21 49 22.2	-0.2
	baz=321						
JKRS	Kuro-shima	2.89	57	eS	Sn	21 49 56.8	+0.2
JIJ	Ishigaki jima	3.06	57	P	Pn	21 49 25.8	+0.8
JIJ				eS	Sn	21 50 01.3	+0.5
PTMZ	Houxiangcun	3.10	319	eP	Pn	21 49 26.0	+0.5
	baz=317						
KNM	Kinmen	3.17	303	eP	Pn	21 49 29.1	+2.5
	baz=299						
KNMB	Chin-men Tao	3.23	304	eP	Pn	21 49 27.9	+0.6
	baz=301						
JISG	Ishigakijimahi	3.31	55	P	Pn	21 49 28.6	+0.2
JISG				S	Sn	21 50 06.3	-0.7
JTJ	Tarama	3.64	57	eS	Sn	21 50 15.1	0.0
MATB	Ma-tsu	3.67	340	eP	Pn	21 49 33.2	-0.2
	baz=338						
AXDP	Jialang	3.79	306	eP	Pn	21 49 35.2	+0.2
	baz=304						

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*JMA **13** 21:51:32.3, 22.°67N×121.°43E, h19km±2km, M3.0*
*TAP **13** 21:51:33.6, 22.°69N×121.°33E, h25km, ML3.0, B*
ISC 13 21:51:33.4±0.9**, 22.°66N**±0.°02×**121.°37E**±0.°02**, h26**km±5km,
n97, σ0.ˢ88/149**, 2C-2D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LDUT	Ludao	0.10	81	⇓iP	Pb	21 51 38.6	+0.5
	baz=90						
LDUT				i S	Sb	21 51 42.2	+0.9
	baz=90						
TTN	Taitung	0.22	295	i P	Pb	21 51 39.5	0.0
	baz=290						
TTN				i S	Sb	21 51 44.0	+0.4
	baz=290						
TWGBT	Beinan	0.31	301	⇑iP	Pb	21 51 40.3	-0.3
	baz=298						
TWGBT				i S	Sb	21 51 45.2	-0.4
	baz=298						
TWG	Pinlang	0.32	301	⇑iP	Pb	21 51 40.3	-0.4
	baz=299						
TWG				i S	Sb	21 51 45.0	-0.7
	baz=299						
EDH	Donghe	0.32	350	P	Pb	21 51 40.3	-0.5
	baz=350						
EDH				S	Sb	21 51 45.8	0.0
	baz=350						
LONT	Longtian	0.33	319	P	Pb	21 51 40.4	-0.5
	baz=319						
LONT				eS	Sb	21 51 46.3	+0.2
	baz=319						
ECL	Taimali	0.39	261	P	Pb	21 51 41.3	-0.5
	baz=254						
ECL				eS	Sb	21 51 46.9	-0.6
	baz=254						
CHKT	Chengkung	0.44	360	P	Pb	21 51 42.0	-0.6
	baz=13						
CHKT				eS	Sb	21 51 48.1	-0.8
	baz=13						
TAW	Tawu	0.53	236	eP	Pb	21 51 43.7	-0.3
	baz=240						
TAW				eS	Sb	21 51 50.9	-0.5
	baz=240						
FULB	Fuli	0.54	353	P	Pb	21 51 43.8	-0.6
	baz=340						
FULB				eS	Sn	21 51 53.2	-0.6
	baz=340						
EAST	Anshuo	0.55	240	eP	Pb	21 51 43.8	-0.7
	baz=235						
EAST				eS	Sb	21 51 52.4	+0.3
	baz=235						
ELDTW	Lidau	0.62	329	i P	Pb	21 51 44.4	-1.3
	baz=330						
LAY	Lan-yu	0.64	164	eP	Pb	21 51 46.0	0.0
	baz=164						
LAY				eS	Sb	21 51 55.7	+1.1
	baz=164						
TSMG	Majia	0.67	274	eP	Pb	21 51 45.8	-0.7
	baz=269						
TSMG				eS	Sb	21 51 53.5	-1.8
	baz=269						
MASBT	Mashibuluo	0.68	266	i P	Pb	21 51 46.1	-0.5
	baz=261						
MASBT				S	Sb	21 51 54.3	-1.4
	baz=261						
SSD	Sandimen	0.68	278	P	Pb	21 51 45.7	-1.0
	baz=272						
SSD				eS	Sb	21 51 54.4	-1.4
	baz=272						
SLIU	Shizi	0.68	230	eP	Pb	21 51 46.3	-0.4
	baz=216						
EYUL	Yuli	0.69	356	eP	Pb	21 51 46.0	-0.8
	baz=345						
EYUL				eS	Sn	21 51 57.2	-0.2
	baz=345						
TWF1	Yuli	0.69	355	P	Pb	21 51 46.0	-1.0
	baz=344						
TWF1				eS	Sb	21 51 55.4	-0.8
	baz=344						
SLGT	Liugui	0.74	297	eP	Pb	21 51 47.1	-0.6
	baz=295						
SCZT	Fangliau	0.75	248	eP	Pb	21 51 47.3	-0.4
	baz=239						
STYH	Taoyuan	0.75	313	P	Pb	21 51 47.1	-0.7
	baz=312						
STYH				S	Sb	21 51 56.5	-1.1
	baz=312						
STYT	Tauyuan	0.75	312	⇓iP	Pb	21 51 47.2	-0.8
	baz=311						
STYT				eS	Sb	21 51 55.5	-2.4
	baz=311						
SSPT	Xinbi	0.76	257	eP	Pb	21 51 46.5	-1.4
	baz=254						
TSPT	Pingtung City	0.80	272	eP	Pb	21 51 48.5	-0.2
	baz=269						
HGSD	Ruisui	0.83	4	eP	Pn	21 51 48.6	-0.9
	baz=10.0						
HGSD				eS	Sn	21 52 01.5	+0.7
	baz=10.0						
SCST	Cishan	0.84	286	eP	Pn	21 51 49.2	-0.3
	baz=282						
SCST				eS	Sn	21 52 01.9	+0.9
	baz=282						
SGST	Jiashian	0.84	300	eP	Pn	21 51 48.4	-1.1
	baz=299						
SGST				eS	Sb	21 52 00.2	0.0
	baz=299						
EHY	Hungye	0.85	357	eP	Pn	21 51 47.9	-1.8
	baz=347						
TSEB	Hengchuen, Pin	0.87	210	eP	Pn	21 51 48.2	-1.7
	baz=204						
HEN	Hengchun	0.87	222	eP	Pn	21 51 49.5	-0.5
	baz=211						
TWKBT	Hengchun	0.88	216	eP	Pn	21 51 49.3	-0.7
	baz=207						
TWK1	Hengchun	0.88	216	eP	Pn	21 51 49.7	-0.4
	baz=207						
TWM1	Shoushan	0.89	281	eP	Pb	21 51 50.5	+0.4
	baz=277						
WTP	Ta-pu	0.91	310	P	Pn	21 51 50.6	+0.1
	baz=309						
WTP				eS	Sn	21 52 03.5	+0.7
	baz=309						
TPUB	Ta-pu	0.93	313	P	Pn	21 51 50.8	-0.1
	baz=312						
TPUB				eS	Sn	21 52 03.6	+0.2
	baz=312						
CHN1	Nanshi	0.93	304	eP	Pb	21 51 51.4	+0.5
	baz=309						
CHN1				eS	Sn	21 52 04.6	+1.1
	baz=309						
WLCH	Liuqiu	0.96	252	eP	Pb	21 51 54.2	+2.8
	baz=245						
SNST	Tainan City	0.98	305	eP	Pb	21 51 52.0	+0.3
	baz=312						
TWP	Hsiaoliuchiu	0.98	252	eP	Pb	21 51 53.3	+1.6
	baz=235						
CHN4	Tsaushan	0.99	314	P	Pb	21 51 52.1	+0.2
	baz=313						
CHN4				eS	Sb	21 52 06.2	+1.6
	baz=313						
ALS	Alishan	0.99	329	P	Pn	21 51 51.5	-0.4

	baz=328						
ALS				*e*S	Sn	21 52 04.3	-0.9
	baz=328						
EGFH	Guangfu	1.01	3	*e*P	Pn	21 51 51.5	-0.4
	baz=349						
TWK	Hsinying	1.01	307	*e*P	Pb	21 51 52.5	+0.2
	baz=315						
TWK				*e*S	Sb	21 52 06.5	+1.3
	baz=315						
CHN3	Shinhua	1.01	294	*e*P	Pb	21 51 53.2	+0.9
	baz=292						
VWDT	VWDT	1.11	349	*e*P	Pn	21 51 52.5	-0.8
VWDT				*e*S	Sb	21 52 08.0	0.0
CHN5	Tsauling	1.13	326	P	Pb	21 51 54.2	-0.1
	baz=324						
CHN5				*e*S	Sb	21 52 10.3	+1.7
	baz=324						
ESL	Shilin	1.15	3	*e*P	Pn	21 51 54.0	+0.1
	baz=352						
SSLB	Suanglung	1.19	341	P	Pn	21 51 53.9	-0.4
	baz=347						
SSLB				*e*S	Sn	21 52 09.2	-0.5
	baz=347						
SCLT	Jiali	1.20	296	*e*S	Sb	21 52 13.3	+2.9
	baz=294						
CHY	Chiayi	1.21	314	P	Pb	21 51 56.0	+0.5
	baz=312						
CHY				*e*S	Sb	21 52 12.6	+1.9
	baz=312						
ICHU	Yijhu	1.22	305	*e*P	Pb	21 51 56.1	+0.3
	baz=303						
WGK	Gukeng	1.26	324	*e*P	Pb	21 51 57.2	+0.7
	baz=322						
WDLH	Douliu	1.28	324	*e*P	Pb	21 51 56.7	-0.1
	baz=321						
SMLT	Sun Moon Lake	1.29	341	P	Pb	21 51 56.8	-0.3
	baz=345						
SMLT				*e*S	Sb	21 52 15.1	+1.8
	baz=345						
WJS	Zhushan	1.30	333	*e*P	Pb	21 51 57.2	0.0
	baz=330						
TYC	Yuchr	1.33	339	*e*P	Pb	21 51 57.5	-0.1
	baz=347						
TYC				*e*S	Sb	21 52 14.9	+0.7
	baz=347						
WTK	Tuku	1.36	319	*e*P	Pn	21 51 57.0	+0.2
	baz=316						
WNT	Mingjian	1.37	333	*e*P	Pb	21 51 58.8	+0.5
	baz=331						
WNT				*e*S	Sb	21 52 16.7	+1.3
	baz=331						
WPL	Puli Township	1.40	345	*e*P	Pn	21 51 57.3	+0.1
	baz=341						
CHGB	Renai	1.41	353	P	Pn	21 51 57.5	0.0
	baz=357						
DPDB	Guoxing	1.43	344	*e*P	Pb	21 51 58.8	-0.6
	baz=340						
WSF	Szhu	1.44	313	*e*P	Pb	21 51 58.8	-0.6
	baz=311						
WSF				*e*S	Sb	21 52 17.8	+0.4
	baz=311						
WCS	Beigang Elemen	1.45	343	*e*P	Pb	21 51 59.2	-0.6
	baz=341						
WCS				*e*S	Sb	21 52 19.0	+1.2
	baz=341						
WHF	Hehuan Shan	1.48	356	*e*P	Pb	21 52 00.5	-0.1
	baz=5.0						
NACB	Ninganchiao	1.52	8	*e*P	Pn	21 51 57.1	-1.8
	baz=5.0						
NACB				*e*S	Sn	21 52 17.8	-0.2
	baz=5.0						
ETLH	Xiulin Townshi	1.55	4	*e*P	Pb	21 52 00.6	-0.8
FUSS	Fushou	1.59	356	*e*P	Pn	21 52 00.2	+0.1
	baz=4.0						
TWT	Tachien	1.60	354	*e*P	Pb	21 52 01.5	-0.9
	baz=360						
TDCB	Techi	1.60	353	*e*P	Pn	21 51 59.8	-0.4
	baz=359						
WHP	Taichung City	1.66	347	*e*P	Pb	21 52 03.0	-0.3
	baz=353						
WHP				*e*S	Sb	21 52 24.7	+0.9
	baz=353						
WDGT	Dungji	1.68	291	*e*P	Pn	21 52 01.2	+0.1
	baz=290						
WDGT				*e*S	Sn	21 52 21.9	+0.1
	baz=290						
NNSB	Datong	1.76	0	*e*P	Pn	21 52 01.8	-0.6
	baz=7.0						
NNSB				*e*S	Sn	21 52 24.2	+0.1
	baz=7.0						
NNSH	Datong	1.76	1	*e*P	Pn	21 52 02.0	-0.3
	baz=7.0						
TWQ1	Liyutan	1.77	342	*e*P	Pb	21 52 04.3	-0.8
	baz=339						
TWQ1				*e*S	Sb	21 52 27.3	+0.4
	baz=339						
NNS	Nan Shan	1.77	0	*e*P	Pn	21 52 02.9	+0.4
	baz=8.0						
ENA	Nanau	1.80	11	*e*P	Pn	21 52 02.3	-0.4
	baz=355						
PHUB	P'eng-hu	1.86	298	*e*P	Pn	21 52 02.8	-0.8
	baz=296						
PHUB				*e*S	Sn	21 52 25.2	-1.0
	baz=296						
VCHM	Qimei	1.87	287	*e*P	Pn	21 52 02.9	-0.8
	baz=286						
PNG	Penghu	1.90	299	*e*P	Pn	21 52 05.7	+1.7
	baz=297						
PNG				*e*S	Sn	21 52 27.4	+0.2
	baz=297						
ENTT	Nioudou	1.98	5	*e*P	Pn	21 52 05.9	+0.6
LIOB	Emei	2.00	351	*e*P	Pn	21 52 07.2	+1.6
	baz=346						
NSK	Sanguang	2.01	360	*e*P	Pn	21 52 07.1	+1.4
	baz=7.0						
NWLT	Wulai	2.11	3	*e*P	Pn	21 52 08.3	+1.2
	baz=10.0						
JYNG	Yonagunijimaku	2.30	39	P	Pn	21 52 09.5	-0.1
JYNG				S	Sn	21 52 37.2	+0.1
TIPB	Shuangxi	2.34	10	*e*P	Pn	21 52 09.9	-0.3
	baz=4.0						
YOJ	Yonaguni jima	2.35	40	P	Pn	21 52 10.8	+0.5
YOJ				*e*S	Sn	21 52 38.6	+0.4
HATJ	Hateruma jima	2.64	58	P	Pn	21 52 14.2	-0.1
HATJ				*e*S	Sn	21 52 44.6	-0.9
IRIF	Iriomote-Funau	2.74	52	P	Pn	21 52 16.3	+0.7
IRIF				S	Sn	21 52 48.1	+0.2
JKRS	Kuro-shima	2.89	57	P	Pn	21 52 18.4	+0.6
JKRS				S	Sn	21 52 50.6	-1.1
VWUC	VWUC	2.91	323	*e*P	Pn	21 52 17.9	-0.1
	baz=321						
JIJ	Ishigaki jima	3.06	56	P	Pn	21 52 21.4	+1.3
JIJ				*e*S	Sn	21 52 54.9	-1.0
PTMZ	Houxiangcun	3.14	320	*e*P	Pn	21 52 21.6	+0.5
	baz=317						
PTTC	Pingtan	3.18	333	*e*P	Pn	21 52 22.0	+0.2
	baz=330						
JISG	Ishigakijimahi	3.31	54	P	Pn	21 52 23.8	+0.2
JISG				S	Sn	21 53 00.5	-1.6
JTJ	Tarama	3.64	57	P	Pn	21 52 28.7	+0.6
JTJ				S	Sn	21 53 10.2	0.0
AXDP	Jialang	3.83	306	*e*P	Pn	21 52 31.0	+0.3
	baz=305						

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*IDC **13** 22:15:08.2±1.9, 30°.55S×121°.66E, h0^{km}, mb3.7/1, mb1 3.8/6, mb1mx3.5/45, mbtmp3.6/6, ML3.7/4, MS3.9/1, Ms1 3.9/1, ms1mx3.3/32, Error ellipse: s-maj=44.2km s-min=22.8km az=147.0*

*NOU **13** 22:15:10.8, 30°.54S×121°.55E, h0^{km}, MLv4.2, Western Australia*

*AUST **13** 22:15:11.5±1.0, 30°.63S×121°.53E, h13^{km}±9^{km}, Error ellipse: s-maj=5.8km s-min=4.3km az=137.0*

ISC 13 22:15:09.1±0.6**, 30°.53S**±0°.04×**121°.68E**±0°.05**, h11**^{km}**, n23, σ2s.88**/35**, Western Australia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMBL	Kambalda	0.85	168	P	Pg	22 15 26.2	+0.5
	baz=0.8,SNR=163						
KMBL				S	Sg	22 15 37.2	+0.3
	baz=0.8,SNR=7.1						
KLBR	Kellerberrin	3.53	252	P	Pn	22 16 05.3	+1.4
	baz=3.4,SNR=18						
KLBR				S	Sn	22 16 44.5	-1.2
	baz=3.4,SNR=6.6						
BLDU	Ballidu	4.29	268	P	Pn	22 16 14.9	+0.5
	baz=4.1						
BLDU				S	Sn	22 17 02.7	-1.6
	baz=4.1						
NWAO	Narrogin (SRO)	4.48	237	P	Pn	22 16 17.3	+0.3
	baz=4.3						
NWAO				S	Sn	22 17 04.7	-4.3
	baz=4.3						
NWAO	Narrogin (SRO)	4.48	237	Pn	Pn	22 16 16.0	-1.0
	0.3nm,0.3s,baz=354,slow=15,SNR=3.7						
NWAO				Pg	Pb	22 16 28.5	+0.7
	0.8nm,0.3s,baz=77,slow=15,SNR=7.6						
NWAO				Sn	Sn	22 17 05.3	-3.7
	3.4nm,0.3s,baz=89,slow=20,SNR=7.6						
NWAO				Lg	Lg	22 17 19.4	
	5.8nm,0.3s,baz=154,slow=23,SNR=9.4						
MEEK	Meekatharra	4.72	324	P	Pn	22 16 22.7	+2.4
	baz=4.7,SNR=6.5						
MEEK				S	Sn	22 17 18.6	+3.5
	baz=4.7,SNR=5.7						
MUN	Mundaring	4.90	251	P	Pn	22 16 23.4	+0.6
	baz=4.7						
MUN				S	Sn	22 17 18.1	-1.4
	baz=4.7						
MORW	Morawa	5.11	285	P	Pn	22 16 26.6	+0.9
	baz=5.0						
MORW				S	Sn	22 17 22.5	-2.2
	baz=5.0						
FORT	Forrest	5.50	94	P	Pn	22 16 35.3	+4.2
	baz=5.6						
FORT				S	Sn	22 17 38.6	+4.2
	baz=5.6						
WRKA	Warakurna	8.02	49	P	Pn	22 17 11.3	+5.6
	baz=8.2,SNR=5.9						
GIRL	Giralia	10.29	318	P	Pn	22 17 39.7	+2.9
	baz=10						
GIRL				S	Sn	22 19 27.3	-5.0
	baz=10						
MULG	Mulgathing	10.70	92	P	Pn	22 17 45.3	+3.0
	baz=11,SNR=5.4						
BBOO	Buckleboo	12.46	104	P	Pn	22 18 08.4	+1.9
	baz=12						
BBOO				S	Sn	22 20 21.1	-4.3
	baz=12						
OOD	Oodnadatta	12.54	81	P	Pn	22 18 09.4	+1.8
	baz=13,SNR=6.7						
ASAR	Alice Springs	12.85	61	Pn	Pn	22 18 12.2	+0.3
	0.3nm,0.3s,baz=238,slow=11,SNR=17						
ASAR				Sn	Sn	22 20 29.9	-5.2
	0.3nm,0.3s,baz=240,slow=22,SNR=5.4						
ASAR				Lg	Lg	22 21 51.0	
	0.1nm,0.3s,baz=238,slow=26,SNR=1.5						
FITZ	Fitzroy Crossi	12.89	17	P	Pn	22 18 13.0	+0.6
	baz=13						
FITZ				S	Sn	22 20 29.8	-6.1
	baz=13						
FITZ	Fitzroy Crossi	12.89	17	Pn	Pn	22 18 11.9	-0.4
	0.3nm,0.3s,baz=193,slow=12,SNR=15						
FITZ				Sn	Sn	22 20 27.8	-8.1
	0.2nm,0.3s,baz=331,slow=22,SNR=1.6						
WRA	Warramunga Arr	15.55	50	Pn	Pn	22 18 47.3	-1.2
	0.2nm,0.3s,baz=232,slow=12,SNR=13						
WRA				Sn	Sn	22 21 31.6	-9.3
	0.1nm,0.3s,baz=56,slow=28,SNR=2.1						
WB2	Warramunga Arr	15.56	50	P	Pn	22 18 48.3	-0.3
	baz=16						
WB2				S	Sn	22 21 36.1	-5.0
	baz=16						
STKA	Stephens Creek	17.10	100	P	Pn	22 19 09.9	+1.7
	0.2nm,0.3s,baz=275,slow=9.6,SNR=3.8						
KDU	Kakadu	20.37	32	P	Pn	22 19 52.4	+4.4
	baz=21,SNR=4.7						
LEM	Lembang	27.02	328	LR	LR	22 31 59.8	
	comp=Z,263nm,20.5s,baz=216,slow=37						
CMAR	Chiang Mai Arr	53.39	333	P	P	22 24 30.8	+1.8
	0.7nm,0.3s,baz=128,slow=13,SNR=3.4						

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*NEIC **13** 22:16:02.0±2.0, 16°.77S±0°.09×173°.9W±0°.1, h77^{km}±7^{km}, mb4.6/28, Error ellipse: s-maj=18.0km s-min=13.0km az=85.0*

*IDC **13** 22:16:05.9±4.1, 16°.84S×173°.95W, h114^{km}±35^{km}, mb3.9/14, mb1 4.1/16, mb1mx4.0/39, mbtmp4.2/16, MS4.3/1, Ms1 4.3/1, ms1mx3.5/42, Error ellipse: s-maj=25.2km s-min=16.2km az=134.0*

ISC 13 22:16:03.9±0.5**, 16°.80S**±0°.08×**173°.83W**±0°.09**, h100**^{km}**, n55, σ1s.32**/58**, mb4.4**/25**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	3.49	35		Pn	22 16 54.4	-2.0
AFI	Afiamalu	3.49	35	P	Pn	22 16 54.4	-2.0
NIUE	Niue	4.36	122		Pn	22 17 07.1	-0.9
MSVF	Nonsavu	7.81	262	P	Pn	22 17 57.3	+2.3
	1.7nm,0.3s,baz=165,slow=19,SNR=3.6						
DZM	Mont Dzumac	19.32	251	P	P	22 20 21.2	-0.2
	0.2nm,0.3s,baz=127,slow=20,SNR=1.1						
DZM	Mont Dzumac	19.32	251	P	Pn	22 20 22.3	-1.2
OUZ	Omahuta	21.51	209	P	P	22 20 44.4	-0.4
URZ	Urewera	22.81	199	P	P	22 20 58.0	-0.4
	13nm,0.5s,baz=258,slow=2.5,SNR=15						
URZ				S	S	22 24 56.2	-3.7
	1.3nm,0.4s,baz=225,slow=20,SNR=1.0						
URZ				LR	LR	22 28 40.9	
	comp=Z,752nm,20.2s,baz=197,slow=33						
URZ	Urewera	22.81	199	P	P	22 20 58.5	+0.2
URZ				IAmb	IAmb	22 21 02.9	
	comp=Z,16nm,0.7s						
HIZ	Hauiti	23.80	202	P	P	22 21 09.2	+1.7
BKZ	Black Stump Fm	23.83	199	P	P	22 21 08.2	+0.3
BKZ				IAmb	IAmb	22 21 26.0	
	comp=Z,21nm,1.2s						
BFZ	Birch Farm	25.30	198	P	P	22 21 21.7	+0.5
QRZ	Quartz Range	26.69	203	P	P	22 21 35.0	+1.3
TUWZ	Tuamarina	26.71	201	P	P	22 21 35.8	+2.0
NNZ	Nelson	26.72	202	P	P	22 21 36.3	+2.4
NNZ				IAmb	IAmb	22 21 41.6	
	comp=Z,28nm,1.2s						
BSWZ	Blackbirch Sta	26.99	201	P	P	22 21 38.3	+2.0
THZ	Tophouse	27.37	202	P	P	22 21 39.4	-0.3
THZ				IAmb	IAmb	22 21 46.7	
	comp=Z,21nm,1.1s						
KHZ	Kahutara	27.73	200	P	P	22 21 45.4	+2.5
KHZ				IAmb	IAmb	22 21 51.2	
	comp=Z,21nm,0.9s						
LTZ	Lake Taylor	28.49	202	P	P	22 21 51.9	+2.2
LTZ				IAmb	IAmb	22 22 03.9	
	comp=Z,15nm,1.2s						
FOZ	Fox Glacier	30.05	204	P	P	22 22 03.4	0.0
FOZ				IAmb	IAmb	22 22 10.4	
	comp=Z,10nm,1.1s						
WHZ	Wether Hill Ro	32.75	204	P	P	22 22 28.0	+0.8
WHZ				IAmb	IAmb	22 22 30.2	
	comp=Z,10nm,0.8s						
ARMA	Armidale	34.28	240	P	P	22 22 40.3	-0.5
ARMA				IAmb	IAmb	22 22 41.3	
	comp=Z,9.7nm,0.9s						
TOO	Toolangi	41.27	232	P	P	22 23 38.9	-0.6
TOO				IAmb	IAmb	22 23 39.9	
	comp=Z,12nm,1.1s						
STKA	Stephens Creek	42.99	241	P	P	22 23 52.5	-1.0
	comp=Z,6.7nm,0.9s,baz=72,slow=6.1,SNR=8.8						
STKA	Stephens Creek	42.99	241	P	P	22 23 53.1	-0.4
BBOO	Buckleboo	47.76	241	P	P	22 24 30.4	-0.8
BBOO				IAmb	IAmb	22 24 31.6	
	comp=Z,5.8nm,0.9s						
WR0	Warramunga Arr	48.94	258	P	P	22 24 39.5	-1.0
WB0	Warramunga Arr	49.10	258	P	P	22 24 39.9	-1.8
WB0				IAmb	IAmb	22 24 51.5	
	comp=Z,4.1nm,1.1s						
WB2	Warramunga Arr	49.12	258	P	P	22 24 40.5	-1.3
WRA	Warramunga Arr	49.13	258	P	P	22 24 40.0	-1.9
	comp=Z,1.1nm,0.4s,baz=96,slow=6.8,SNR=14						
WRA				PcP	PcP	22 26 03.8	-0.2
	comp=Z,0.8nm,0.8s,baz=90,slow=5.2,SNR=3.0						
WRA	Warramunga Arr	49.13	258	P	P	22 24 40.4	-1.5
AS31	Alice Springs	49.29	253	P	P	22 24 42.2	-1.0
ASAR	Alice Springs	49.29	253	P	P	22 24 42.0	-1.2
	comp=Z,19nm,0.5s,baz=88,slow=8.4,SNR=147						
ASAR				PcP	PcP	22 26 04.4	-0.2
	comp=Z,0.9nm,0.6s,baz=105,slow=4.0,SNR=4.1						
ASAR	Alice Springs	49.29	253	P	P	22 24 41.4	-1.7
FORT	Forrest	54.42	244	P	P	22 25 19.3	-1.8
FITZ	Fitzroy Crossi	57.52	259	P	P	22 25 43.0	-0.4
	comp=Z,1.2nm,0.8s,baz=121,slow=5.9,SNR=1.9						
VNDA	Vanda	61.95	186	P	P	22 26 13.8	+1.1
	comp=Z,3.8nm,1.1s,baz=25,slow=10,SNR=3.5						
VNDA	Vanda	61.95	186	P	P	22 26 13.4	+0.6
VNDA				IAmb	IAmb	22 26 15.2	
	comp=Z,3.2nm,0.8s						
PSA00	Pilbara Seismi	62.41	254	P	P	22 26 15.8	-1.0
PETK	Petropavlovsk-	73.83	343	P	P	22 27 27.7	+0.3
	comp=Z,3.6nm,0.6s,baz=108,slow=8.8,SNR=7.0						
NVAR	Mina Array Bea	75.64	42	P	P	22 27 39.4	+0.9
	comp=Z,1.8nm,0.9s,baz=225,slow=9.3,SNR=10						
TXAR	Lajitas Array	81.73	56	P	P	22 28 13.0	+1.1
	comp=Z,0.4nm,0.8s,baz=233,slow=9.3,SNR=3.5						
PDAR	Pinedale Array	83.58	42	P	P	22 28 21.4	0.0
	comp=Z,1.5nm,0.7s,baz=221,slow=3.1,SNR=17						
PDAR	Pinedale Array	83.58	42	P	P	22 28 21.8	+0.4
YHL	Hebgen Lake	83.62	39	P	P	22 28 22.8	+1.2
SEY	Seymchan	83.75	345	P	P	22 28 21.3	-0.2
	comp=Z,2.9nm,0.8s,baz=131,slow=6.7,SNR=5.7						
ILAR	Eielson Array	83.89	11	P	P	22 28 21.9	-0.2
	comp=Z,1.0nm,1.0s,baz=237,slow=6.4,SNR=6.8						
CMAR	Chiang Mai Arr	92.66	288	P	P	22 29 06.0	+0.8
	comp=Z,1.4nm,0.6s,baz=95,slow=2.5,SNR=9.9						
SONM	Songino Array	95.60	318	P	P	22 29 18.7	+0.5
	comp=Z,0.3nm,0.7s,baz=134,slow=4.2,SNR=1.9						
SONM	Songino Array	95.60	318	P	P	22 29 20.3	+2.1
MKAR	Makanchi Array	111.50	314	PKiKP	PKiKP	22 34 25.9	-0.7
	comp=Z,0.2nm,0.6s,baz=76,slow=1.4,SNR=2.5						
BRTR	Keskin Array B	146.96	319	PKPbc	PKPbc	22 35 35.4	0.0
	comp=Z,4.0nm,0.8s,baz=197,slow=3.9,SNR=9.7						
GERES	GERESS Array B	147.45	351	PKPbc	PKPbc	22 35 36.4	0.0
	comp=Z,0.5nm,0.6s,baz=1.9,slow=4.0,SNR=6.2						
MMAI	Mount Meron Ar	149.09	307	PKPab	PKPab	22 35 46.5	+0.8
	comp=Z,3.9nm,0.6s,baz=70,slow=7.2,SNR=8.7						
DAVOX	Davos/Dischmat	149.94	355	PKPbc	PKPbc	22 35 43.3	+0.4
	comp=Z,3.1nm,0.7s,baz=128,slow=3.1,SNR=6.0						

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*NDI **13** 22:21:48.2±2.4, 31°.51N×81°.07E, h31^{km}±63^{km}, ML3.6, mb4.1(NEIC)*

*IDC **13** 22:21:49.1±1.5, 31°.29N×80°.45E, h0^{km}, mb3.7/9, mb1 3.9/12, mb1mx3.5/70, mbtmp3.8/12, ML3.5/3, Error ellipse: s-maj=42.3km s-min=16.8km az=60.0*

*NEIC **13** 22:21:52.2±1.4, 31°.2N±0°.1×80°.39E±0°.07, h30^{km}±6^{km}, mb4.1/13, Error ellipse: s-maj=18.2km s-min=7.5km az=193.0*

ISC 13 22:21:53.7±0.5**, 31°.29N**±0°.06×**80°.54E**±0°.05**, h35**^{km}**, n52, σ2s.21**/55**, mb3.8**/11**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDI	Dehra Dun	2.34	246	*e*P	Pn	22 22 32.1	+2.4
DDI				*e*S	Sn	22 23 03.6	+6.4
DDI				IAML		22 23 10.0	
	comp=N,583nm,0.3s						
DDI				IAML		22 23 10.1	
	comp=E,604nm,0.6s						
SMLA	Simla	2.89	268	*e*P	Pn	22 22 37.6	+0.4
SMLA				*e*S	Sn	22 23 15.8	+5.1
SMLA				IAML		22 23 20.0	
	comp=N,237nm,0.6s						
SMLA				IAML		22 23 20.7	
	comp=E,194nm,0.5s						
DHRM	DHARAMSHALA	3.73	286	*e*P	Pn	22 22 48.3	-0.8
DHRM				*e*S	Sn	22 23 34.5	+2.6
DHRM				IAML		22 23 41.1	
	comp=E,171nm,0.8s						
DHRM				IAML		22 23 47.5	
	comp=N,111nm,0.8s						
DANN	Dangsing	4.05	135	*e*P	Pn	22 22 57.2	+3.7
	comp=N,44nm,0.4s						
GKN	Gorkha	4.84	131	*e*P	Pn	22 23 07.6	+3.4
	comp=N,34nm,0.4s						
KKN	Kakani	5.41	129	*e*P	Pn	22 23 15.5	+3.5
	comp=N,53nm,0.5s						
DMN	Daman	5.41	131	*e*P	Pn	22 23 15.7	+3.5
	comp=N,25nm,0.4s						
PKIN	Phulchoki	5.62	130	*e*P	Pn	22 23 18.1	+3.0
	comp=N,15nm,0.3s						
PKI	Pulchoki	5.64	130	*e*P	Pn	22 23 18.1	+2.8
	comp=N,11nm,0.3s						
GUN	Gumba	5.74	125	*e*P	Pn	22 23 20.4	+3.7
	comp=N,29nm,0.3s						
NIL	Nilore	6.59	293	Pn	Pn	22 23 26.1	-2.1
RAMN	Ramite	6.84	128	*e*P	Pn	22 23 33.9	+2.1
	comp=N,24nm,0.5s						
TAPN	Taplejung	7.39	120	*e*P	Pn	22 23 41.8	+2.5
	comp=N,22nm,0.4s						
BHPL	Bhopal	8.48	200	*e*P	Pn	22 23 54.9	+0.9
BHPL				*e*S	Sn	22 25 23.5	-5.0
LSA	Lhasa	9.29	97	Pn	Pn	22 24 05.8	+0.2
LSA					Sn	22 25 51.3	+2.2
KBL	Kabul	10.19	292	Pn	Pn	22 24 15.2	-2.5
SHL	Shillong	11.49	117	Pn	Pn	22 24 34.6	-0.9
AAK	Ala-Archa	12.31	339	Pn	Pn	22 24 45.7	-0.9
	comp=N,0.3nm,0.3s,baz=171,slow=18,SNR=6.0						
AAK	Ala-Archa	12.31	339	Pn	Pn	22 24 45.2	-1.3
HYB	Hyderabad	13.93	188	*i* P	P	22 25 15.0	-1.3
KK31	Karatay Array	14.23	329	Pn	Pn	22 25 12.1	-0.6
KKAR	Karatay Array	14.23	329	Pn	Pn	22 25 11.2	-1.4
KKAR	Karatay Array	14.23	329	Pn	Pn	22 25 11.0	-1.7
MAKZ	Makanchi	15.54	4	Pn	Pn	22 25 28.6	-1.5
MAKZ				IAmb	IAmb	22 25 35.4	
	comp=Z,6.7nm,0.9s						
MK31	Makanchi Array	15.54	5	Pn	Pn	22 25 30.2	+0.1
MKAR	Makanchi Array	15.54	5	Pn	Pn	22 25 28.4	-1.8
	comp=Z,0.2nm,0.3s,baz=181,slow=13,SNR=11						
MKAR	Makanchi Array	15.54	5	Pn	Pn	22 25 28.7	-1.5
HRA	Herat	15.68	286	Pn	Pn	22 25 31.5	-0.7
KURBB	Kurchatov Arra	19.38	356	P	P	22 26 15.7	-0.6
	comp=Z,0.1nm,0.3s,baz=184,slow=12,SNR=38						
KURK	Kurchatov	19.46	356	P	P	22 26 17.1	-0.1
KURK				IAmb	IAmb	22 26 19.7	
	comp=Z,16nm,0.8s						
GEYT	Alibeck	19.58	296		P	22 26 17.4	-1.4
KMI	Kunming	20.49	102	P	P	22 26 29.8	+0.8
KMI				IAmb	IAmb	22 27 17.2	
	comp=Z,13nm,1.1s						
CHTO	Chiang Mai	20.75	122	P	P	22 26 32.6	+1.1
CMAR	Chiang Mai Arr	20.98	123	P	Pn	22 26 35.8	-0.9
	comp=Z,3.9nm,0.8s,baz=314,slow=10.0,SNR=20						
CMAR	Chiang Mai Arr	20.98	123	P	Pn	22 26 37.1	+0.4
ZAA0	Zalesovo Array	22.86	7	P	P	22 26 53.6	-0.1
ZALV	Zalesovo Beam	22.86	7	P	P	22 26 53.5	-0.2
	comp=Z,3.3nm,0.7s,baz=195,slow=11,SNR=10						
ZALV	Zalesovo Beam	22.86	7	P	P	22 26 53.7	-0.1
BVAR	Borovoye Array	22.94	344	P	P	22 26 53.8	-0.8
	comp=Z,1.5nm,0.4s,baz=113,slow=11,SNR=16						
BRVK	Borovoye	23.00	344	P	P	22 26 55.6	+0.4
BRVK				IAmb	IAmb	22 26 56.7	
	comp=Z,18nm,1.6s						
ABKAR	Akbulak array	23.73	325		P	22 27 01.9	-0.4
ABKAR	Akbulak array	23.73	325	P	P	22 27 01.8	-0.6
ABKAR				IAmb	IAmb	22 27 05.9	
	comp=Z,4.1nm,1.1s						
XAN	Xi'an	24.02	76	P	P	22 27 05.9	+0.5
XAN				IAmb	IAmb	22 27 08.8	
	comp=Z,5.9nm,1.1s						
AKTO	Aktyubinsk	25.44	325	P	P	22 27 18.7	+0.7
	comp=Z,1.3nm,0.7s,baz=100,slow=5.4,SNR=5.0						
SONM	Songino Array	25.72	43	P	P	22 27 21.8	+1.0
	comp=Z,0.4nm,0.7s,baz=244,slow=6.6,SNR=3.8						
USRK	Ussuriysk Ar.	42.03	57	P	P	22 29 42.3	+0.6
	comp=Z,1.0nm,0.6s,baz=289,slow=10,SNR=4.4						
BURAR	Bucovina Array	44.76	308	P	P	22 30 04.3	+0.6
CISI	Cisompet, Garu	46.62	141	P	P	22 30 16.3	-2.4
JTM	Tenmabayashi	49.00	61	P	P	22 30 35.0	-1.9
WRA	Warramunga Arr	72.52	127	P	P	22 33 18.1	+0.9
	comp=Z,1.0nm,0.9s,baz=322,slow=5.7,SNR=9.6						
ASAR	Alice Springs	74.81	130	P	P	22 33 31.3	+0.7
	comp=Z,0.2nm,0.4s,baz=317,slow=6.2,SNR=2.6						
ILAR	Eielson Array	77.37	19	P	P	22 33 46.7	+2.1
	comp=Z,0.6nm,1.0s,baz=312,slow=4.7,SNR=4.5						

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*IDC **13** 22:23:32.4±1.9, 36°.93N×23°.46E, h70^{km}±18^{km}, mb3.7/9, mb1 3.7/14, mb1mx3.4/58, mbtmp3.9/14, Error ellipse: s-maj=18.9km s-min=13.5km az=143.0*

*ATH **13** 22:23:33.1, 36°.91N×23°.33E, h80^{km}±2^{km}, ML3.6/18, Error ellipse: s-maj=3.0km s-min=1.7km az=255.0*

*ISK **13** 22:23:34.4, 36°.95N×23°.40E, h23^{km}, ML3.6/5*

*THE **13** 22:23:35.8, 36°.97N×23°.35E, h71^{km}±1^{km}, ML3.5/16, Error ellipse: s-maj=1.6km s-min=0.6km az=267.0*

*HLW **13** 22:23:36.4, 36°.61N×24°.09E, h25^{km}±33^{km}, Md5.0, Ml4.7*

ISC 13 22:23:33.1±0.7**, 36°.97N**±0°.03×**23°.26E**±0°.03**, h87**^{km}±5^{km}**,**

n192,σ2^{s}23/229,mb4.0/11,8C-8D,Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNVA	Monemvasia	0.33	212	P	Pn	22 23 47.5	+1.1
MNVA				S	Sn	22 23 56.0	-0.1
MNVA				AML	AML	22 23 56.4	
	comp=E,3067µm,0.3s						
MNVA				AML	AML	22 23 57.2	
	comp=N,5914µm,0.4s						
VLI	Veliai	0.36	226	P	Pn	22 23 47.7	+1.1
VLI				S	Sn	22 23 56.5	0.0
VLI				AML	AML	22 23 56.7	
	comp=E,4201µm,0.2s						
VLI				AML	AML	22 23 57.8	
	comp=N,11372µm,0.6s						
VLI	Veliai	0.36	226	P	Pn	22 23 47.6	+1.1
VLI				S	Sn	22 23 56.5	0.0
	comp=N,4µm,0.7s						
YDRA	Hydra	0.41	24	P	Pn	22 23 48.2	+1.3
YDRA				S	Sn	22 23 58.1	+1.0
YDRA				AML	AML	22 23 59.6	
	comp=N,5453µm,0.2s						
YDRA				AML	AML	22 24 01.6	
	comp=E,3932µm,0.2s						
KRND	KRANIDI	0.42	348	P	Pn	22 23 48.5	+1.6
KRND				S	Sn	22 23 58.6	+1.5
KRND				AML	AML	22 23 59.2	
	comp=E,5457µm,0.2s						
KRND				AML	AML	22 24 02.6	
	comp=N,9405µm,0.6s						
KRND	KRANIDI	0.42	348	P	Pn	22 23 48.5	+1.6
KRND				S	Sn	22 23 58.7	+1.5
	comp=N,4µm,0.6s						
EPID	Epidavros	0.65	350	P	Pn	22 23 51.0	+2.0
KTHA	Kythira Island	0.73	192	P	Pn	22 23 51.0	+1.4
KTHA				S	Sn	22 24 02.5	+0.4
KTHA				AML	AML	22 24 03.1	
	comp=N,9604µm,0.7s						
KTHA				AML	AML	22 24 03.6	
	comp=E,10398µm,0.5s						
KTHA	Kythira Island	0.73	192	P	Pn	22 23 51.1	+1.4
KTHA				S	Sn	22 24 03.0	+1.0
	comp=E,6µm,0.7s						
KTHA	Kythira Island	0.73	192	PG	Pn	22 23 49.5	-0.2
KTHR	Kythira	0.74	196	P	Pn	22 23 51.4	+1.6
KTHR				S	Sn	22 24 03.6	+1.5
	comp=E,3µm,0.4s						
VLX	Vlachokerasia	0.81	300	P	Pn	22 23 52.8	+2.3
VLX				AML	AML	22 24 06.2	
	comp=N,3961µm,0.8s						
VLX				AML	AML	22 24 06.5	
	comp=E,6855µm,0.8s						
VLX	Vlachokerasia	0.81	300	P	Pn	22 23 52.9	+2.3
VLX				S	Sn	22 24 04.6	+1.0
	comp=E,3µm,1.0s						
MHLA	Plaka, Milos I	0.96	103	P	Pn	22 23 53.3	+1.2
MHLA				AML	AML	22 24 08.9	
	comp=E,5933µm,0.5s						
MHLA				AML	AML	22 24 14.0	
	comp=N,6860µm,0.7s						
MHLO	Agia Marina, M	0.96	107	P	Pn	22 23 53.2	+1.1
MHLO				AML	AML	22 24 08.1	
	comp=N,24708µm,0.6s						
MHLO				AML	AML	22 24 09.2	
	comp=E,21920µm,0.4s						
MHLO	Agia Marina, M	0.96	107	P	Pn	22 23 53.1	+1.0
MHLO				S	Sn	22 24 06.2	-0.2
	comp=E,12µm,0.5s						
VLY	Voula,Athens	0.98	26	P	Pn	22 23 53.5	+1.1
VLY				S	Sn	22 24 06.9	+0.1
	comp=E,2µm,0.5s						
LOUT	Loutraki	1.04	348	P	Pn	22 23 55.1	+2.1
LOUT				AML	AML	22 24 12.0	
	comp=N,1061µm,0.6s						
LOUT				AML	AML	22 24 14.3	
	comp=E,617µm,0.6s						
ATH	Athens Observa	1.06	20	P	Pn	22 23 55.0	+1.7
ATH				AML	AML	22 24 10.1	
	comp=E,3773µm,0.5s						
ATH				AML	AML	22 24 10.3	
	comp=N,2438µm,0.6s						
ATH	Athens Observa	1.06	20	P	Pn	22 23 55.2	+1.9
ATH				S	Sn	22 24 08.9	+0.4
	comp=N,2µm,0.5s						
LTK	Loutraki	1.07	348	P	Pn	22 23 55.7	+2.2
LTK				S	Sn	22 24 10.9	+2.1
	comp=N,2µm,0.6s						
ATHU	Athens Univers	1.08	23	P	Pn	22 23 55.1	+1.6
ATHU				AML	AML	22 24 11.0	
	comp=E,1315µm,0.4s						
ATHU				AML	AML	22 24 11.4	
	comp=N,1576µm,0.4s						
ATHU	Athens Univers	1.08	23	P	Pn	22 23 55.1	+1.6
ATHU				S	Sn	22 24 09.4	+0.6
	comp=N,732nm,0.4s						
ITM	Ithomi	1.08	281	P	Pn	22 23 56.9	+3.4
ITM				AML	AML	22 24 16.3	
	comp=E,2574µm,0.7s						
ITM				AML	AML	22 24 18.6	
	comp=N,1700µm,0.6s						
ITM	Ithomi	1.08	281	P	Pn	22 23 57.0	+3.4
ITM				S	Sn	22 24 13.2	+4.2
	comp=N,1µm,0.8s						
ITM	Ithomi	1.08	281	PN	Pn	22 23 56.5	+2.9
ITM				SN	Sn	22 24 12.5	+3.5
THAL	Thalero	1.16	336	P	Pn	22 23 56.8	+2.2
THAL				AML	AML	22 24 20.7	
	comp=E,6415µm,0.7s						
THAL				AML	AML	22 24 24.1	
	comp=N,5432µm,0.5s						
PTL	Penteli	1.18	24	P	Pn	22 23 56.7	+1.9
PTL				AML	AML	22 24 12.4	
	comp=E,7243µm,0.5s						
PTL				AML	AML	22 24 12.4	
	comp=N,4144µm,0.4s						
PTL	Penteli	1.18	24	P	Pn	22 23 56.7	+1.9
PTL				S	Sn	22 24 11.6	+0.6
	comp=N,3µm,0.5s						
PYL	PYLOS	1.22	267	P	Pn	22 23 57.5	+2.3
PYL	PYLOS	1.22	267	P	Pn	22 23 57.4	+2.3
DION	Dionisos Attik	1.23	26	P	Pn	22 23 57.3	+1.9
DION				AML	AML	22 24 13.6	
	comp=E,13979µm,0.6s						
DION				AML	AML	22 24 13.6	
	comp=N,8991µm,0.6s						
DION	Dionisos Attik	1.23	26	P	Pn	22 23 57.2	+1.9
DION				S	Sn	22 24 12.4	+0.3
	comp=N,6µm,0.6s						
VIL2	Platees	1.24	0	P	Pn	22 23 56.9	+1.4
VIL2				AML	AML	22 24 13.7	
	comp=N,6340µm,0.5s						
VIL2				AML	AML	22 24 15.0	
	comp=E,9054µm,0.5s						
EREA	Eretria	1.54	20	P	Pn	22 24 01.4	+2.1
EREA	Eretria	1.54	20	P	Pn	22 24 01.4	+2.1
EREA				S	Sn	22 24 20.5	+1.4
	comp=E,780nm,0.5s						
ALIK	Aliki, Aigiali	1.58	325	P	Pn	22 24 02.6	+2.9
IMMV	Iera Moni Meta	1.62	159	P	Pn	22 24 01.1	+0.8
IMMV				AML	AML	22 24 27.1	
	comp=E,4514µm,0.5s						
IMMV				AML	AML	22 24 28.4	
	comp=N,4207µm,0.4s						
IMMV	Iera Moni Meta	1.62	159	P	Pn	22 24 01.4	+1.2
IMMV	Iera Moni Meta	1.62	159	PN	Pn	22 24 01.5	+1.2
IMMV				SN	Sn	22 24 20.9	+0.1
TRIZ	Trizonia	1.68	326	P	Pn	22 24 04.0	+3.0
LKR	Lokris	1.69	353	P	Pn	22 24 03.5	+2.3
LKR				S	Sn	22 24 24.3	+1.9
	comp=N,3µm,0.5s						
VAM	Vamos	1.74	154	P	Pn	22 24 02.3	+0.5
VAM				AML	AML	22 24 27.2	
	comp=E,2408µm,0.3s						
VAM				AML	AML	22 24 33.8	
	comp=N,2852µm,0.3s						
VAM	Vamos	1.74	154	P	Pn	22 24 02.6	+0.8
SAP3	Santorini-Thir	1.76	107	P	Pn	22 24 03.6	+1.5
THR5	Thira Island,	1.77	108	P	Pn	22 24 03.6	+1.4
RLS	Riolos of Patr	1.79	308	P	Pn	22 24 06.4	+4.0
THR9	Santorini-Faro	1.80	109	P	Pn	22 24 04.2	+1.7
EFP	Efpalio	1.81	324	P	Pn	22 24 05.3	+2.6
SNT5	Nea Kammeni, S	1.81	108	P	Pn	22 24 04.2	+1.5
THR3	Thira Island,	1.81	107	P	Pn	22 24 04.3	+1.6
THT2	Imerovigli	1.82	106	PN	Pn	22 24 03.5	+0.6
APE	Apeiranthos	1.82	86	⇓P	Pn	22 24 04.2	+1.3
APE				⇑S	Sn	22 24 27.2	+1.6
APE	Apeiranthos	1.82	86	PN	Pn	22 24 03.8	+0.9
APE				SN	Sn	22 24 24.7	-0.9
THR2	Thira island,	1.83	106	P	Pn	22 24 04.5	+1.5
THR6	Thira Island,	1.83	109	P	Pn	22 24 04.7	+1.7
SANT	Santorini	1.87	108	⇑P	Pn	22 24 04.8	+1.3
SANT				⇓S	Sn	22 24 28.7	+2.0
SANT	Santorini	1.87	108	PN	Pn	22 24 04.3	+0.8
SANT				SN	Sn	22 24 25.8	-0.9
THR8	Santorini-Mono	1.87	107	P	Pn	22 24 05.0	+1.5
AXS	Araxos	1.93	310	P	Pn	22 24 08.1	+3.8
ANX	Ano Chora	1.93	327	P	Pn	22 24 07.3	+2.8
LTHK	Lithakia	2.06	292	P	Pn	22 24 07.7	+1.7
AGG	Agios Georgios	2.17	341	P	Pn	22 24 10.3	+2.7
AGG	Agios Georgios	2.17	341	PN	Pn	22 24 10.5	+2.9
KSTL	Kastelli Herak	2.22	138	P	Pn	22 24 12.2	+4.1
GVDS	Gavdos	2.23	162	P	Pn	22 24 09.0	+0.7
GVDS	Gavdos	2.23	162	PN	Pn	22 24 09.7	+1.4
GVDS				SN	Sn	22 24 36.4	+1.3
HRKL	Herakleio	2.23	137	P	Pn	22 24 09.9	+1.6
HRKL	Herakleio	2.23	137	PN	Pn	22 24 09.8	+1.5
GVD	Gavdhos	2.23	162	P	Pn	22 24 09.2	+0.9
GVD	Gavdhos	2.23	162	PN	Pn	22 24 10.0	+1.7
EVR	Evrytania	2.25	330	P	Pn	22 24 11.8	+3.1
VLMS	Volimes, Zakyn	2.25	294	P	Pn	22 24 10.4	+1.8
PDO	Prodromos	2.31	315	P	Pn	22 24 13.6	+4.3
SIVA	Sivas	2.32	147	P	Pn	22 24 11.1	+1.6
NEO	Neokhori	2.33	359	P	Pn	22 24 12.2	+2.5
XOR	Xorichti	2.39	359	P	Pn	22 24 12.9	+2.4
XOR				S	Sn	22 24 41.3	+2.3
	comp=N,240nm,0.5s						
PSDA	Pessada-Kefalo	2.41	299	P	Pn	22 24 12.6	+1.9
LAST	Lasithi	2.55	134	P	Pn	22 24 13.7	+1.1
NPS	Neapolis	2.56	131	P	Pn	22 24 13.1	+0.4
KEF4	Livadi, Kephal	2.59	301	P	Pn	22 24 15.1	+2.1
EVGI	Lefkada island	2.64	309	P	Pn	22 24 16.1	+2.4
NYDR	Nydri-Lefkada	2.67	311	P	Pn	22 24 17.1	+3.0
LKD2	Lefkada island	2.74	312	P	Pn	22 24 18.1	+3.0
THL	Klokotos Trika	2.77	340	P	Pn	22 24 17.9	+2.5
TSLK	Tsoukalades, L	2.77	313	P	Pn	22 24 18.8	+3.4
PAIG	Paliouri	2.97	6	P	Pn	22 24 20.3	+2.1
ZKR	Zakros	3.03	127	P	Pn	22 24 20.4	+1.4
ZKR	Zakros	3.03	127	PN	Pn	22 24 21.1	+2.1
BODT	Bodrum	3.25	87	P	Pn	22 24 23.4	+1.5
KPRO	Kipourio	3.33	334	P	Pn	22 24 26.7	+3.6
PLG	Polygyros	3.40	2	P	Pn	22 24 26.3	+2.3
OUR	Ouranopolis	3.41	9	P	Pn	22 24 26.4	+2.4
IGT	Igoumenitsa	3.44	319	P	Pn	22 24 27.0	+2.5
HORT	Hortiatis	3.62	358	P	Pn	22 24 29.7	+2.6
LSK	Leskovik	3.80	328	P	Pn	22 24 32.6	+3.2
SOH	Sokhos	3.84	1	P	Pn	22 24 33.0	+2.9
NEST	Nestorio	3.85	334	P	Pn	22 24 33.5	+3.4
KEK	Kerkira	3.86	316	P	Pn	22 24 32.2	+2.0
SRN	Sarande	3.87	320	P	Pn	22 24 32.6	+2.3
FNA	Florina	4.08	339	P	Pn	22 24 35.8	+2.6
KNT	Kendrikon	4.19	356	P	Pn	22 24 38.1	+3.3
VAY	Valandovo	4.38	353	*i* Pn	Pn	22 24 40.9	+3.7
OHR	Ohrid	4.55	336	*i* Pn	Pn	22 24 41.9	+2.2
STIP	Stip	4.79	350	*i* Pn	Pn	22 24 46.8	+4.0
TIP	Timpagrande	5.58	295	⇓P	Pn	22 24 53.4	-0.3
TIP				⇑S	Sn	22 25 55.3	-1.1
VTS	Vitosha	5.64	360	⇓P	Pn	22 24 56.2	+1.6
VTS				⇓S	Sn	22 26 01.4	+3.4
SLUM	Salum	5.70	163	P	Pn	22 24 52.9	-2.4
	baz=169						
DRME	Dracevica, Mon	6.08	330	*e*Pn	Pn	22 25 01.3	+0.8
PDG	Podgorica	6.26	332	⇓P	Pn	22 25 02.2	-0.6
PDG	Podgorica	6.26	332	*e*Pn	Pn	22 25 03.7	+0.8
MATE	Matera	6.30	308	⇑P	Pn	22 25 02.5	-0.9
HCY	Herceg Novi	6.59	328	*e*Pn	Pn	22 25 06.7	-0.6
BLKB	Belogradchik	6.66	356	⇑S	Sn	22 26 25.7	+3.0
TREB	Trebinje	6.87	328	*e*Pn	Pn	22 25 10.3	-0.8
DBRK	Dubrovnik	6.92	327	*e*Pn	Pn	22 25 10.0	-1.8
DBRK				Sn	Sn	22 26 22.4	-6.5
BRY	Bratogost	6.94	330	*e*Pn	Pn	22 25 12.2	-0.1
VAE	Valguarnera	7.08	277	P	Pn	22 25 16.6	+2.5
	comp=N,1.0nm,0.3s,baz=170,slow=6.1,SNR=1.9						
VAE				S	Sn	22 26 28.9	-4.1
	comp=N,1.7nm,0.3s,baz=153,slow=4.5,SNR=2.8						
GRUS	Gruza	7.18	345	⇑P	Pn	22 25 15.7	+0.4
RUDO	Rudo	7.27	337	*e*Pn	Pn	22 25 15.1	-1.6
STON	Ston	7.28	326	*e*Pn	Pn	22 25 14.7	-2.0
STON				Sn	Sn	22 26 30.8	-6.8
BBLS	Lazići	7.49	338	*e*Pn	Pn	22 25 19.4	-0.2
DIVS	Divibare	7.54	342	*e*Pn	Pn	22 25 19.9	-0.5
HAPS	Han Pijesak,Bl	7.83	337	*e*Pn	Pn	22 25 23.0	-1.3
MAKA	Makarska	7.91	325	*i* Pn	Pn	22 25 24.5	-0.8
MAKA				Sn	Sn	22 26 48.2	-4.9
SWA2		7.92	166	P	Pn	22 25 23.8	-1.8
	baz=170						
SWA2				AMP		22 26 00.0	
	baz=170						
SWA2				S	Sn	22 26 42.1	-12
	baz=170						
HERR	Herculane	7.93	356	⇓P	Pn	22 25 26.7	+1.1
RICI	Ricice	8.02	326	*i* Pn	Pn	22 25 26.2	-0.6
TEKS	Tekeris	8.08	341	*e*Pn	Pn	22 25 27.5	-0.2
HVAR	Hvar	8.10	322	*e*Pn	Pn	22 25 27.0	-0.9
HVAR				Sn	Sn	22 26 51.0	-6.8
VOIR		8.56	9	⇑P	Pn	22 25 34.8	+0.5
FRGS	Fruska Gora	8.58	343	*e*Pn	Pn	22 25 34.9	+0.4
MLR	Muntele Rosu	8.75	13	P	Pn	22 25 35.5	-1.3
	comp=N,0.1nm,0.3s,baz=142,slow=19,SNR=1.9						
KIJV	Kijevo	8.75	326	*e*Pn	Pn	22 25 36.5	-0.3
MGRS	Mrkonjic Grad	8.79	330	*e*Pn	Pn	22 25 36.4	-0.9
ZIRJ	Zirje	8.85	321	*i* Pn	Pn	22 25 37.4	-0.7
MORI	Morici	8.97	322	*i* Pn	Pn	22 25 39.4	-0.4
BLY	Banja Luka	9.03	331	*e*Pn	Pn	22 25 40.0	-0.5
PLOR	Plostina	9.23	15	⇑P	Pn	22 25 44.3	+1.0
VRI	Vrincioaia	9.26	15	⇓P	Pn	22 25 45.7	+2.0
DUGI	Dugi Otok	9.39	321	*e*Pn	Pn	22 25 46.0	+0.5
UDBI	Udbina	9.45	325	*i* Pn	Pn	22 25 46.9	+0.6
RYAN	Fayoum	9.83	141	P	Pn	22 25 47.5	-4.0
	baz=143						
MORH	Mrgy, Hungar	9.86	341	*e*Pn	Pn	22 25 51.7	-0.1
NVLJ	Novalja	9.89	323	*e*Pn	Pn	22 25 51.7	-0.6
MOSL	Moslavina	9.92	333	*i* Pn	Pn	22 25 51.8	-0.9
KOT	Kottamia	10.03	132	P	Pn	22 25 49.4	-4.9
	baz=133						
HHAG	Hagoal	10.17	131	P	Pn	22 25 51.3	-5.0
	baz=132						
GLL	Jalalah	10.21	134	P	Pn	22 25 53.5	-3.4
	baz=135						
KALN	Kalnik	10.47	333	*e*Pn	Pn	22 25 58.7	-1.5
CRES	Cresnjev	10.60	329	*e*Pn	Pn	22 26 00.4	-1.6
RIY	Rijeka	10.64	324	*e*Pn	Pn	22 26 01.7	-0.8
BEHE	Becsehely	10.65	335	*e*Pn	Pn	22 26 04.8	+2.1
SUZ	Suez	10.70	129	P	Pn	22 26 00.3	-3.2
	baz=130						
MMAI	Mount Meron Ar	10.71	108	P	Pn	22 25 60.0	-3.8
	comp=N,2.1nm,0.3s,baz=302,slow=13,SNR=17						
MMAI				S	Sn	22 27 52.4	-9.4
	comp=N,2.7nm,0.3s,baz=299,slow=15,SNR=2.3						
NBNS	Bani Suef	10.72	139	P	Pn	22 26 00.5	-3.2
	baz=140						
ZAF	Zafarana	10.93	132	P	Pn	22 26 01.9	-4.6
	baz=133						
CEY	Cerknica	10.98	326	*e*Pn	Pn	22 26 07.0	-0.2
ZNM	Zenema	11.05	130	P	Pn	22 26 03.6	-4.7
	baz=131						
SOKA	Soboth	11.47	330	*i* Pn	Pn	22 26 13.2	-0.7
	comp=N,1.3nm,0.3s						
SOKA				*i* Sn	Sn	22 28 14.1	-5.9
	comp=N,0.3nm,0.3s						
OBKA	Obir	11.53	328	*e*Pn	Pn	22 26 13.8	-0.9
	comp=N,0.6nm,0.3s						
OBKA				*e*Sn	Sn	22 28 15.8	-5.7
	comp=N,2.6nm,0.5s						
ARSA	Arzberg	11.76	333	*i* Pn	Pn	22 26 16.2	-1.6
	comp=N,1.6nm,0.5s						
EIL	Elat	12.19	123	P	Pn	22 26 19.9	-3.7
	comp=N,2.0nm,0.3s,baz=257,slow=2.3,SNR=48						
EIL				S	Sn	22 28 24.9	-13
	comp=N,1.0nm,0.3s,baz=199,slow=21,SNR=3.6						
CONA	Conrad Observa	12.23	336	*i* Pn	Pn	22 26 23.9	-0.2
	comp=N,1.1nm,0.5s						
HBST	Basata	12.34	126	P	Pn	22 26 22.4	-3.2
	baz=126						
HKAT	Jabal Katrina	12.35	130	P	Pn	22 26 21.9	-4.0
	baz=131						
KBA	Koelnbreinsper	12.49	327	*i* Pn	Pn	22 26 28.0	+0.3
	comp=N,1.2nm,0.3s						
HDK1	Dakhla	12.54	154	P	Pn	22 26 25.8	-2.6
	baz=156						
ABTA	Abfaltersbach	12.62	324	*e*Pn	Pn	22 26 27.4	-2.0
	comp=N,1.4nm,0.4s						
ABTA				*e*Sn	Sn	22 28 42.7	-5.3
	comp=N,1.5nm,0.6s						
MOA	Molln	12.73	331	*e*Pn	Pn	22 26 30.2	-0.6
	comp=N,1.2nm,0.6s						
GTR	Jabal at Tayr	13.02	149	P	Pn	22 26 32.1	-2.6
	baz=151						
WTTA	Wattenberg	13.41	324	*e*Pn	Pn	22 26 40.5	+0.6
	comp=N,1.6nm,0.3s,SNR=4.3						
WTTA				*e*Sn	Sn	22 29 02.0	-5.2
	comp=N,2.3nm,0.6s						
WATA	Walderalm	13.49	324	*i* Pn	Pn	22 26 41.7	+0.8
	comp=N,2.5nm,0.4s						
SQTA	Sankt Quirin	13.58	323	*e*Pn	Pn	22 26 43.1	+1.0
	comp=N,2.7nm,0.4s,SNR=4.4						
FETA	Feichten	13.68	321	*e*Pn	Pn	22 26 45.1	+1.7
	comp=N,0.8nm,0.4s						
MOTA	Moosalm	13.72	323	*i* Pn	Pn	22 26 45.5	+1.5
	comp=N,1.1nm,0.4s						
MOTA				*e*Sn	Sn	22 29 11.0	-3.7
	comp=N,1.4nm,0.6s						
GERES	GERESS Array B	13.76	333	P	Pn	22 26 44.7	+0.3
	comp=N,0.2nm,0.3s,baz=153,slow=13,SNR=6.1						
RETA	Reutte	13.98	323	*e*Pn	Pn	22 26 48.9	+1.6
	comp=N,0.2nm,0.2s						
HFS	Hagfors	23.98	348	P	P	22 28 40.0	+0.7
	comp=N,2.7nm,0.9s,baz=150,slow=15,SNR=1.9						
FINES	FINESS Array B	24.56	3	P	P	22 28 44.5	0.0
	comp=N,1.4nm,0.9s,baz=156,slow=11,SNR=1.5						
EKA	Eskdalemuir Ar	25.67	324	P	P	22 28 57.5	+2.8
	comp=N,2.7nm,0.9s,baz=119,slow=9.8,SNR=5.1						
TORD	Torodi Ar. Bea	30.58	225	P	P	22 29 40.3	+1.5
	comp=N,1.0nm,0.5s,baz=26,slow=8.6,SNR=9.3						
KOWA	Kowa	33.03	235	P	P	22 30 01.4	+1.1
	comp=N,1.0nm,0.4s,baz=90,slow=2.0,SNR=2.3						
DBIC	Dimbokro	39.58	227	P	P	22 30 58.0	+2.0
	comp=N,3.1nm,0.3s,baz=22,slow=9.2,SNR=19						
TIC	Toumodi	39.70	227	*e*P	P	22 30 58.7	+1.7
KIC	Kosan Boka	39.76	227	*e*P	P	22 30 59.4	+1.8
	comp=N,6.4nm,0.5s						
LIC	Lamto	40.04	227	*e*P	P	22 31 01.8	+2.0
	comp=N,20nm,0.4s						
KURBB	Kurchatov Arra	41.22	53	P	P	22 31 09.4	+0.2
	baz=284,slow=8.8						
MKAR	Makanchi Array	44.09	58	P	P	22 31 33.1	+0.5
	comp=N,0.8nm,0.3s,baz=272,slow=8.2,SNR=35						
MKAR				ScP	ScP	22 37 00.4	+0.2
	comp=N,0.2nm,0.7s,baz=288,slow=4.1,SNR=2.2						
ZALV	Zalesovo Beam	44.89	47	P	P	22 31 39.2	+0.4
	comp=N,2.0nm,0.3s,baz=271,slow=8.7,SNR=5.7						
SONM	Songino Array	59.54	51	P	P	22 33 28.0	+0.5
	comp=N,0.3nm,0.5s,baz=284,slow=6.1,SNR=3.5						
ASAR	Alice Springs	119.86	98	PKP	PKiKP	22 42 14.2	+0.5
	comp=N,0.4nm,0.5s,baz=318,slow=1.5,SNR=6.9						

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*IDC **13** 22:30:04.0±3.1, 38°94N×142°11E, h58^{km}±25^{km}, mb3.5/9, mb1 3.6/12, mb1mx3.3/55, mbtmp3.8/12, ML2.8/3, Error ellipse: s-maj=34.1km s-min=18.2km az=86.0*

*JMA **13** 22:30:04.2±0.1, 38°92N×141°92E, h51^{km}±1^{km}, M3.8*

JMA Felt I J1.

ISC 13 22:30:03.2±1.3**, 38°91N**±0°05×**142°04E**±0°10**, h50**^{km}±9^{km}**, n29, σ0^{s}81**/33**, mb3.9**/9**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	0.34	300	P	Pn	22 30 13.2	+0.6
OFUJ				*i* S	Sn	22 30 19.4	+0.1
JKMT	Kesennumamotoy	0.45	257	P	Pn	22 30 14.1	+0.3
JKMT				S	Sn	22 30 20.8	-0.7
JMK	Ichinoseki	0.64	274	P	Pn	22 30 16.1	0.0
JMK				S	Sn	22 30 24.5	-1.0
JIO	Ouri	0.71	230	P	Pn	22 30 17.1	+0.1
JIO				S	Sn	22 30 25.9	-1.1
JOM	Ohasama	0.81	314	P	Pn	22 30 18.5	+0.2
JOM				S	Sn	22 30 29.0	-0.3
JRG	Rokugo	1.20	294	P	Pn	22 30 23.4	-0.1
JRG				*e*S	Sn	22 30 37.8	-0.9
JOU	Okura	1.21	244	P	Pn	22 30 23.5	-0.2
JOU				S	Sn	22 30 37.7	-1.3
JYK	Kaneyama	1.31	271	P	Pn	22 30 25.0	-0.1
JMM	Marumori	1.43	224	P	Pn	22 30 26.4	-0.3
JMM				S	Sn	22 30 43.3	-1.1
JANG	Nango	1.52	345	P	Pn	22 30 28.3	+0.4
MAT	Matsushiro	3.85	233	P	Pn	22 31 01.9	+2.0
MAT				*e*S	Sn	22 31 44.0	+0.1
MJAR	Matsushiro Arr	3.85	233	P	Pn	22 31 01.9	+2.0
	0.6nm,0.3s,baz=38,slow=12,SNR=28						
ASAJ	Asahikawa	5.22	4	P	Pn	22 31 18.5	0.0
	0.7nm,0.3s,baz=202,slow=13,SNR=2.2						
ASAJ				S	Sn	22 32 15.8	-1.6
	0.6nm,0.3s,baz=0.1,slow=30,SNR=1.9						
USRK	Ussuriysk Ar.	9.20	308	P	Pn	22 32 13.9	+0.8
	baz=119,slow=14,SNR=6.7						
SONM	Songino Array	27.20	301	P	P	22 35 42.7	+0.6
	0.3nm,0.4s,baz=109,slow=8.9,SNR=2.5						
H11N2	WAKE ISLAND Hy	28.74	125	T	T	23 06 22.2	
	baz=317,slow=76,SNR=495						
H11N1	WAKE ISLAND Hy	28.75	125	T	T	23 06 23.2	
	baz=317,slow=76,SNR=334						
H11N3	WAKE ISLAND Hy	28.76	125	T	T	23 06 23.8	
	baz=317,slow=76,SNR=517						
H11S1	WAKE ISLAND Hy	29.52	127	T	T	23 07 15.4	
	baz=318,slow=76,SNR=33						
H11S3	WAKE ISLAND Hy	29.52	127	T	T	23 07 20.2	
	baz=318,slow=76,SNR=53						
H11S2	WAKE ISLAND Hy	29.54	127	T	T	23 07 20.5	
	baz=318,slow=76,SNR=28						
ZALV	Zalesovo Beam	41.04	311	P	P	22 37 41.1	-0.2
	1.3nm,0.5s,baz=100,slow=8.8,SNR=4.6						
MKAR	Makanchi Array	43.57	301	P	P	22 38 02.2	+0.2
	1.9nm,0.7s,baz=86,slow=10.0,SNR=26						
WRA	Warramunga Arr	58.99	188	P	P	22 39 57.6	-0.1
	0.4nm,0.4s,baz=5.8,slow=7.3,SNR=8.9						
RES	Resolute Bay	60.66	15	P	P	22 40 08.7	+0.2
	0.4nm,0.5s,baz=333,slow=4.5,SNR=1.9						
ASAR	Alice Springs	62.72	188	P	P	22 40 23.1	+0.2
	0.2nm,0.6s,baz=15,slow=7.7,SNR=2.0						
FINES	FINESS Array B	67.39	332	P	P	22 40 52.7	-0.1
	1.1nm,0.7s,baz=24,slow=11,SNR=5.7						
AKASG	Malin Array Be	73.12	322	P	P	22 41 27.6	-0.5
	0.8nm,0.5s,baz=45,slow=6.6,SNR=2.9						
BRTR	Keskin Array B	77.98	312	P	P	22 41 56.5	+0.2
	0.5nm,0.8s,baz=110,slow=3.1,SNR=1.3						

TAP 13 22:33:28.0, 24°46N×121°65E, h26^{km}±1^{km}, ML1.6, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENA	Nanau	0.09	110	*e*P	Pb	22 33 33.4	+0.7
	baz=109						
ENA				*e*S	Sb	22 33 36.9	+1.1
	baz=109						
NDS	Dongshan	0.18	20	P	Pb	22 33 34.1	+0.5
	baz=19						
NDS				*e*S	Sb	22 33 38.1	+0.7
	baz=19						
NDT	Datong Townshi	0.19	319	*e*P	Pn	22 33 34.5	-0.8
	baz=319						
NDT				*e*S	Sb	22 33 38.7	+1.2
	baz=319						
ENTT	Nioudou	0.20	338	P	Pb	22 33 34.3	+0.6
	baz=339						
ENTT				*e*S	Sb	22 33 38.5	+0.9
	baz=339						
TWC	Suao	0.24	51	*e*P	Pb	22 33 34.8	+0.5
	baz=52						
TWC				*e*S	Sb	22 33 38.8	+0.4
	baz=52						
NNSB	Datong	0.24	263	*e*P	Pb	22 33 35.0	+0.6
	baz=262						
NNSB				*e*S	Sb	22 33 39.5	+0.7
	baz=262						
NNSH	Datong	0.24	263	P	Pb	22 33 35.2	+0.8
	baz=262						
NNSH				S	Sb	22 33 39.4	+0.6
	baz=262						
NNS	Nan Shan	0.25	266	*e*P	Pb	22 33 35.4	+0.8
	baz=265						
NNS				*e*S	Sb	22 33 39.9	+0.9
	baz=265						

NACB	**Ninganchiao**	**0.29**	**190**	P	Pb	22 33 35.3	+0.4
	baz=189						
NACB				eS	Sb	22 33 40.7	+1.0
	baz=189						
ETLH	**Xiulin Townshi**	**0.29**	**211**	P	Pb	22 33 35.5	+0.5
	baz=211						
ETLH				eS	Sb	22 33 40.9	+1.0
	baz=211						
NSK	**Sanguang**	**0.34**	**309**	P	Pb	22 33 36.5	+0.7
	baz=309						
NSK				eS	Sb	22 33 41.8	+0.7
	baz=309						
NWLT	**Wulai**	**0.34**	**337**	eP	Pb	22 33 36.3	+0.5
	baz=337						
NWLT				eS	Sb	22 33 41.5	+0.4
	baz=337						
FUSS	**Fushou**	**0.42**	**240**	eP	Pb	22 33 37.8	+0.6
	baz=240						
FUSS				eS	Sb	22 33 44.0	+0.6
	baz=240						
WHF	**Hehuan Shan**	**0.47**	**228**	eP	Pn	22 33 39.5	0.0
	baz=227						
TIPB	**Shuangxi**	**0.54**	**18**	eP	Pb	22 33 39.5	+0.5
	baz=17						
TIPB				eS	Sb	22 33 46.6	+0.3
	baz=17						
WHP	**Taichung City**	**0.66**	**254**	eP	Pn	22 33 43.0	+1.1
	baz=254						
NJN	**Zhunan**	**0.74**	**288**	eP	Pn	22 33 43.4	+0.5
	baz=287						
NJN				eS	Sn	22 33 52.8	-0.5
	baz=287						

JMA 13 22:33:40.3±0.1**, 24°.98N**×**123°.55E, h28**^{km}±4^{km}**, M1.2,**
Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IRIF	**Iriomote-Funau**	**0.66**	**166**	P	Pb	22 33 52.9	-0.4
IRIF				eS	Sb	22 34 01.8	-0.4
YOJ	**Yonaguni jima**	**0.71**	**224**	P	Pb	22 33 53.8	-0.4
YOJ				S	Sb	22 34 03.0	-0.6
JYNG	**Yonagunijimaku**	**0.76**	**226**	P	Pb	22 33 54.6	-0.4
JYNG				S	Sb	22 34 05.1	+0.1
JISG	**Ishigakijimahi**	**0.79**	**119**	P	Pb	22 33 55.2	-0.3
JISG				S	Sn	22 34 06.3	-0.2
JIJ	**Ishigaki jima**	**0.82**	**139**	P	Pb	22 33 55.3	-0.6
JIJ				eS	Sb	22 34 05.7	-0.9
JKRS	**Kuro-shima**	**0.85**	**150**	P	Pn	22 33 55.9	-0.5
JKRS				eS	Sb	22 34 07.4	-0.1
HATJ	**Hateruma jima**	**0.95**	**166**	P	Pn	22 33 57.5	-0.3
HATJ				eS	Sn	22 34 10.4	+0.1

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*MOS **13** 22:34:24.3±0.8, 49°.32N×155°.66E, h39^{km}, mb3.9/1, Error ellipse: s-maj=91.3km s-min=6.5km az=74.2*
*KRSC **13** 22:34:26.7±1.4, 49°.61N×156°.64E, h6^{km}±21^{km}, ML4.3*
*IDC **13** 22:34:30.2±5.0, 49°.88N×154°.83E, h93^{km}±53^{km}, mb3.1/2, mb1 3.4/3, mb1mx2.8/53, mbtmp3.4/3, ML2.1/1, Error ellipse: s-maj=107.9km s-min=35.4km az=129.0*
ISC 13 22:34:26.8±1.3**, 49°.5N**±0°.1×**155°.6E**±0°.2**, h54**^{km}**, n37,**
σ**1**^{s}**69**/37**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.22**	**15**	ePN	**Pn**	**22 34 47.3**	**-0.2**
SKR				eS	**Sn**	**22 35 02.1**	**-0.8**
SKR				pmax	pmax		
	comp=Z,56nm,0.4s						
SKR				smax	smax		
	comp=N,603nm,0.2s						
SKR				smax	smax		
	comp=E,574nm,0.2s						
SKR	**Severo-Kuril's**	**1.22**	**15**	eP	**Pn**	**22 34 47.3**	**-0.2**
SKR				eS	**Sn**	**22 35 03.0**	**+0.1**
PAU	**Pauzhetka**	**2.10**	**21**	PN	**Pn**	**22 34 59.4**	**-0.1**
PAU				S	**Sn**	**22 35 23.9**	**-0.6**
PAU	**Pauzhetka**	**2.10**	**21**	eP	**Pn**	**22 34 59.4**	**-0.1**
PAU				eS	**Sn**	**22 35 23.9**	**-0.6**
KDTR	**Khodutka, Kamc**	**2.78**	**33**	eS	**Sn**	**22 35 37.8**	**-3.3**
MTVR	**Mutnovka**	**3.39**	**27**	PN	**Pn**	**22 35 18.0**	**+0.8**
MTVR	**Mutnovka**	**3.39**	**27**	eP	**Pn**	**22 35 18.0**	**+0.8**
MTVR				eS	**Sn**	**22 35 56.4**	**+0.2**
GRL	**Gorelyy**	**3.42**	**26**	PN	**Pn**	**22 35 18.1**	**+0.5**
GRL	**Gorelyy**	**3.42**	**26**	eP	**Pn**	**22 35 18.1**	**+0.5**
RUS	**Russkaya**	**3.45**	**31**	PN	**Pn**	**22 35 18.6**	**+0.7**
RUS	**Russkaya**	**3.45**	**31**	eP	**Pn**	**22 35 18.6**	**+0.7**
KRMR	**Karymshinskiy**	**3.68**	**24**	PN	**Pn**	**22 35 22.7**	**+1.6**
KRMR	**Karymshinskiy**	**3.68**	**24**	P	**Pn**	**22 35 22.7**	**+1.6**
PETK	**Petropavlovsk-**	**3.83**	**19**	P	**Pn**	**22 35 24.5**	**+1.3**
	comp=E,0.8nm,0.3s,baz=195,slow=12,SNR=15						
PETK				S	**Sn**	**22 36 08.4**	**+1.4**
	comp=E,0.4nm,0.3s,baz=214,slow=41,SNR=1.3						
DALK	**Dalny**	**4.04**	**28**	PN	**Pn**	**22 35 26.6**	**+0.6**
DALK	**Dalny**	**4.04**	**28**	eP	**Pn**	**22 35 26.6**	**+0.6**
UGLR	**Uglovaya**	**4.21**	**27**	PN	**Pn**	**22 35 30.6**	**+2.1**
UGLR	**Uglovaya**	**4.21**	**27**	eP	**Pn**	**22 35 30.6**	**+2.1**
KOK	**Koryaka**	**4.23**	**25**	PN	**Pn**	**22 35 31.4**	**+2.7**
KOK	**Koryaka**	**4.23**	**25**	eP	**Pn**	**22 35 31.4**	**+2.7**
AVH	**Avacha**	**4.24**	**26**	PN	**Pn**	**22 35 31.8**	**+3.0**
AVH	**Avacha**	**4.24**	**26**	eP	**Pn**	**22 35 31.8**	**+3.0**
KRER	**Koryakskii**	**4.28**	**26**	PN	**Pn**	**22 35 31.7**	**+2.3**
KRER	**Koryakskii**	**4.28**	**26**	eP	**Pn**	**22 35 31.7**	**+2.3**
SDLR	**Sedlovina**	**4.29**	**27**	PN	**Pn**	**22 35 30.5**	**+0.9**
SDLR	**Sedlovina**	**4.29**	**27**	eP	**Pn**	**22 35 30.5**	**+0.9**
KRX	**Arik**	**4.30**	**25**	PN	**Pn**	**22 35 32.4**	**+2.7**
KRX	**Arik**	**4.30**	**25**	eP	**Pn**	**22 35 32.4**	**+2.7**
H11N2	**WAKE ISLAND Hy**	**31.05**	**159**	T	T	23 13 29.9	
	baz=341						
H11N1	**WAKE ISLAND Hy**	**31.07**	**159**	T	T	23 13 31.5	
	baz=341						
H11N3	**WAKE ISLAND Hy**	**31.07**	**159**	T	T	23 13 31.9	
	baz=341						
H11S1	**WAKE ISLAND Hy**	**32.19**	**160**	T	T	23 14 54.4	
	baz=347,slow=76						
H11S3	**WAKE ISLAND Hy**	**32.20**	**160**	T	T	23 14 49.1	
	baz=347,slow=76						
H11S2	**WAKE ISLAND Hy**	**32.20**	**160**	T	T	23 14 53.9	
	baz=347,slow=76						
WRA	**Warramunga Arr**	**71.68**	**201**	P	**P**	**22 45 43.1**	**+0.4**
	comp=E,0.4nm,0.8s,baz=14,slow=7.7,SNR=2.2						
TXAR	**Lajitas Array**	**74.70**	**63**	P	**P**	**22 46 01.2**	**+0.5**
	comp=E,0.2nm,0.5s,baz=298,slow=3.8,SNR=4.7						
PSET	**Sete Cidades**	**93.04**	**1**	eP	**P**	**22 47 32.4**	**-1.9**

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*NIC **13** 22:43:58.5±0.0, 36°.52N×31°.58E, h5^{km}±1^{km}, Ml2.8/3*
*ISK **13** 22:44:00.3, 36°.19N×31°.19E, h18^{km}, ML2.6/12*
*DDA **13** 22:44:02.7, 36°.41N×31°.16E, h24^{km}±3^{km}, ML2.3*
ISC 13 22:44:01.6±1.3**, 36°.29N**±0°.04×**31°.25E**±0°.03**, h55**^{km}±13^{km}**,**
n38, σ**2**^{s}**46**/59**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEMT	**Kemer-ANTALYA**	**0.64**	**299**	PG	**Pn**	**22 44 14.1**	**-0.7**
KEMT				SG	**Sn**	**22 44 23.6**	**-0.8**
KEPZ	**Antalya-Kepez**	**0.67**	**25**	iP	**Pn**	**22 44 16.3**	**+1.0**
KEPZ				iS	**Sn**	**22 44 22.9**	**-2.3**
ALAN	**Alanya-ANTALYA**	**0.69**	**67**	PG	**Pn**	**22 44 15.9**	**+0.5**
ALAN				SG	**Sn**	**22 44 26.8**	**+1.4**
AKUM	**Antalya-Kumluc**	**0.73**	**273**	iP	**Pn**	**22 44 16.4**	**+0.4**
AKUM				iS	**Sn**	**22 44 25.2**	**-1.2**
ANTB	**Antalya**	**0.77**	**322**	PG	**Pn**	**22 44 16.9**	**+0.4**
ANTB				SG	**Sn**	**22 44 28.7**	**+1.3**
KORT	**Korkueli**	**1.01**	**315**	PG	**Pn**	**22 44 21.1**	**+1.4**
KORT				SG	**Sn**	**22 44 35.7**	**+2.6**
KORT	**Korkueli**	**1.01**	**315**	iP	**Pn**	**22 44 20.7**	**+1.0**
KORT				iS	**Sn**	**22 44 32.0**	**-1.2**
ELL	**Elmali**	**1.17**	**293**	PN	**Pn**	**22 44 23.1**	**+1.2**
ELL	**Elmali**	**1.17**	**293**	P	**Pn**	**22 44 23.9**	**+2.0**
SEDI	**Konya, Seydise**	**1.23**	**19**	iP	**Pn**	**22 44 24.5**	**+1.9**
SEDI				iS	**Sn**	**22 44 36.7**	**-1.5**
SEDI				IAML		22 44 45.0	
	comp=N,52nm,0.4s						
ERMK	**Ermenek**	**1.39**	**75**	iP	**Pn**	**22 44 28.2**	**+3.3**
ERMK				iS	**Sn**	**22 44 42.9**	**+0.7**
ERMK				IAML		22 44 52.0	
	comp=N,96nm,0.3s						
ERMK				IAML		22 44 52.0	
	comp=E,77nm,0.3s						
AKMS	**Akamas**	**1.55**	**145**	P	**Pn**	**22 44 27.3**	**+0.5**
AKMS				AML	AML	22 44 52.3	
	comp=E,0.4nm,0.3s						
AKMS				AML	AML	22 44 55.9	
	comp=E,0.6nm,0.4s						
ALFC	**Alefka**	**1.58**	**135**	P	**Pn**	**22 44 26.5**	**-0.7**
ALFC				AML	AML	22 44 51.0	
	comp=E,0.5nm,0.2s						
ALFC				AML	AML	22 44 52.3	
	comp=E,0.4nm,0.3s						
ISP	**Isparta**	**1.64**	**339**	PN	**Pn**	**22 44 30.4**	**+2.3**
KKBE	**Karaman, Kazim**	**1.65**	**55**	iP	**Pn**	**22 44 31.1**	**+2.8**
KKBE				iS	**Sn**	**22 44 46.1**	**-2.3**
KKBE				IAML		22 44 55.0	
	comp=E,39nm,0.6s						
GOLH	**Golhisar**	**1.65**	**305**	iP	**Pn**	**22 44 30.7**	**+2.4**
GOLH				iS	**Sn**	**22 44 49.3**	**+0.8**
GOLH				IAML		22 45 31.0	
	comp=E,102nm,2.2s						
BRDR	**BURDUR-Merkez**	**1.69**	**326**	iP	**Pn**	**22 44 32.0**	**+3.1**
BRDR				iS	**Sn**	**22 44 45.8**	**-3.8**
KMER	**Konya-Meram**	**1.73**	**31**	iP	**Pn**	**22 44 30.9**	**+1.5**
KMER				iS	**Sn**	**22 44 47.1**	**-3.2**
KMER				IAML		22 44 57.0	
	comp=N,34nm,0.7s						
LEF	**Lefka**	**1.77**	**131**	iP	**Pn**	**22 44 28.7**	**-1.2**
LEF				iS	Sn	22 44 42.0	-9.4
FETY	**Fethiye**	**1.78**	**282**	PN	**Pn**	**22 44 30.4**	**+0.4**
DOGA	**KONYA_Doganhis**	**1.84**	**10**	iP	**Pn**	**22 44 33.6**	**+2.6**
DOGA				iS	**Sn**	**22 44 50.7**	**-2.6**
DOGA				IAML		22 45 00.0	
	comp=N,24nm,0.5s						
GULN	**MERSIN_Gulnar**	**1.86**	**93**	iP	**Pn**	**22 44 34.0**	**+3.0**
GULN				iS	**Sn**	**22 44 49.0**	**-4.4**
GULN				IAML		22 45 03.0	
	comp=N,22nm,1.1s						
KONT	**Konya--Tatoy**	**1.88**	**28**	PN	**Pn**	**22 44 34.3**	**+3.0**
KONT	**Konya--Tatoy**	**1.88**	**28**	iP	**Pn**	**22 44 34.1**	**+2.8**
KONT				iS	**Sn**	**22 44 51.9**	**-2.0**
KONT				IAML		22 45 37.0	
	comp=N,27nm,1.8s						
BASM	**Basmaki-Afyon**	**1.89**	**330**	PN	**Pn**	**22 44 33.8**	**+2.3**
YVAC	**Isparta, Yalva**	**1.98**	**360**	iP	**Pn**	**22 44 35.0**	**+2.2**
YVAC				iS	**Sn**	**22 44 51.0**	**-5.5**
SZAC	**Souni**	**2.03**	**139**	S	**Sn**	**22 45 01.0**	**+3.4**
ATHAL	**Athalassa**	**2.09**	**123**	S	**Sn**	**22 44 59.8**	**+0.8**
LADK	**Ladik-KONYA**	**2.10**	**25**	PN	**Pn**	**22 44 37.4**	**+2.9**
CSS	**Mathiatis**	**2.15**	**127**	P	**Pn**	**22 44 34.1**	**-1.0**
KZIL	**AFYON_Kizioren**	**2.15**	**336**	iP	**Pn**	**22 44 37.4**	**+2.3**
KZIL				iS	**Sn**	**22 44 55.2**	**-5.5**
DALY	**Dalyan (Mula)**	**2.15**	**285**	PN	**Pn**	**22 44 35.8**	**+0.7**
TAVA	**DENIZLI_Tavas**	**2.21**	**303**	iP	**Pn**	**22 44 37.6**	**+1.6**
TAVA				iS	**Sn**	**22 45 02.3**	**+0.2**
MVOU	**Mavrovouni**	**2.32**	**123**	P	**Pn**	**22 44 36.5**	**-0.8**
MVOU				AML	AML	22 45 14.8	
	comp=N,0.2nm,0.8s						
SHUT	**Suhut-Afyon**	**2.33**	**346**	PN	**Pn**	**22 44 40.1**	**+2.6**
KDHN	**Kadinhani**	**2.33**	**17**	iP	**Pn**	**22 44 39.2**	**+1.5**
KDHN				iS	**Sn**	**22 44 59.2**	**-5.9**
KHAL	**Karahalli**	**2.50**	**327**	iP	**Pn**	**22 44 42.6**	**+2.7**
KHAL				iS	**Sn**	**22 45 06.8**	**-2.6**
YER	**Yerkesik**	**2.53**	**290**	PN	**Pn**	**22 44 41.2**	**+1.0**

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*IDC **13** 22:58:30.3±2.9, 10°.68N×85°.78W, h0^{km}, mb3.8/5, mb1 4.2/6, mb1mx3.9/32, mbtmp3.9/6, ML3.7/1, Error ellipse: s-maj=71.3km s-min=39.3km az=19.0*
*INET **13** 22:58:31.9, 10°.36N×86°.33W, h8^{km}, MW3.4*
*UCR **13** 22:58:31.6±1.8, 10°.45N×86°.33W, h14^{km}±11^{km}, MW4.7, mb4.2(NEIC)*
*NEIC **13** 22:58:43.9±1.8, 11°.4N±0°.2×86°.14W±0°.06, h62^{km}±16^{km}, mb4.2/8, Error ellipse: s-maj=25.0km s-min=8.0km az=185.0*
ISC 13 22:58:33.1±1.6**, 10°.45N**±0°.06×**86°.21W**±0°.06**, h25**^{km}±12^{km}**,**
n44, σ**1**^{s}**25**/51**, mb4.1**/9**, 2C, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HZTE	**Horizontes, Gu**	**0.65**	**66**	eP	**Pn**	**22 58 46.8**	**0.0**
HZTE				eS	**Sn**	**22 58 58.5**	**+2.1**
ORTG	**Ortega, Santa**	**0.74**	**97**	eP	**Pb**	**22 58 47.7**	**+0.3**
GRZA	**Playa Garza**	**0.77**	**133**	eP	**Pb**	**22 58 47.6**	**-0.4**
GBS3	**Finca Las Img**	**0.81**	**66**	iP	**Pb**	**22 58 48.8**	**+0.2**
LAPC	**Finca la Perla**	**0.82**	**67**	⇑iP	**Pb**	**22 58 47.9**	**-0.9**
LAPC				iS	**Sn**	**22 59 01.0**	**+0.5**
PLVR	**Palo Verde**	**0.85**	**97**	eP	**Pb**	**22 58 48.3**	**-1.0**
PLVR				eS	**Sb**	**22 59 01.0**	**+0.6**
GB1A	**Borinquen Arri**	**0.87**	**65**	iP	**Pb**	**22 58 49.9**	**+0.1**
GB1A				iS	**Sn**	**22 59 03.7**	**+1.8**
GPS3	**Bodega del ICE**	**0.88**	**70**	iP	**Pb**	**22 58 49.9**	**0.0**
GPS2	**Hotel Rincn d**	**0.89**	**70**	iP	**Pb**	**22 58 50.3**	**+0.3**
BUAI	**Buenos Aires**	**0.96**	**64**	iP	**Pb**	**22 58 50.6**	**-0.5**
LIM1	**Limonal**	**0.97**	**75**	iP	**Pb**	**22 58 51.3**	**0.0**
GUAB	**Guayabo de Bag**	**0.99**	**75**	iP	**Pb**	**22 58 51.7**	**0.0**
COLC	**Colonia**	**1.01**	**78**	iP	**Pb**	**22 58 52.0**	**0.0**
HORNC	**Hornillas**	**1.04**	**75**	iP	**Pn**	**22 58 52.2**	**-0.1**
CUI	**Cuipilapa**	**1.04**	**78**	⇑iP	**Pn**	**22 58 51.4**	**-0.9**
CUI				eP	**Pb**	**22 58 51.7**	**-0.9**
CUI				eS	**Sn**	**22 59 07.5**	**+1.4**
LAFE	**Finca La Fe, P**	**1.43**	**116**	eP	**Pn**	**22 58 56.8**	**-0.6**
ARE1	**Arenal 1**	**1.46**	**89**	eP	**Pb**	**22 58 59.0**	**-0.7**
CEDE	**Laguna Cedeo**	**1.48**	**88**	iP	**Pn**	**22 58 58.9**	**+0.7**
JACO	**JACO, Garabito**	**1.71**	**117**	eP	**Pb**	**22 59 05.0**	**+1.1**
COVE	**Coope Vega, Sa**	**1.79**	**81**	eP	**Pb**	**22 59 04.3**	**-1.0**
ACON	**Acoyapa**	**1.82**	**34**	Pn	**Pn**	**22 59 03.5**	**+0.6**
CRIN	**San Cristobal**	**2.39**	**340**	Pn	**Pn**	**22 59 10.2**	**-0.6**
CVTR	**Volcan Turrial**	**2.44**	**100**	eP	**Pb**	**22 59 16.3**	**-0.4**
ESPN	**Las Esperanzas**	**2.55**	**47**	eP	**Pn**	**22 59 13.7**	**+0.8**
ESPN	**Las Esperanzas**	**2.55**	**47**	Pn	**Pn**	**22 59 13.9**	**+1.0**
CDM	**Cerro de Muert**	**2.56**	**110**	eP	**Pb**	**22 59 19.2**	**+0.5**
TGUH	**Tegucigalpa,Un**	**3.73**	**344**	Pn	**Pn**	**22 59 28.2**	**-1.1**
MTO3	**Montecristo**	**4.99**	**322**	Pn	**Pn**	**22 59 45.2**	**-1.5**
CMIG	**Matias Romero**	**10.71**	**309**	Pn	**Pn**	**23 01 06.7**	**+1.7**
	0.6nm,0.3s,baz=129,slow=6.5,SNR=4.4						
PLAL	**Pickwick Lake**	**24.48**	**356**	P	**P**	**23 03 49.4**	**-0.9**
PLAL				IAmb	IAmb	23 03 51.2	
	comp=Z,8.9nm,0.9s						
SWET	**Sewanee**	**24.66**	**1**	P	**P**	**23 03 50.0**	**-1.9**
SWET				IAmb	IAmb	23 03 52.3	
	comp=Z,6.5nm,0.6s						
TX32	**Lajitas Array**	**24.89**	**321**	P	**P**	**23 03 55.8**	**+1.5**
TXAR	**Lajitas Array**	**24.89**	**321**	P	**P**	**23 03 55.6**	**+1.4**
	comp=Z,1.7nm,0.5s,baz=138,slow=9.4,SNR=16						
TXAR				PcP	**PcP**	**23 07 32.4**	**+2.6**
	comp=Z,0.2nm,0.5s,baz=134,slow=5.2,SNR=4.0						
TXAR	**Lajitas Array**	**24.89**	**321**	P	**P**	**23 03 55.0**	**+0.8**
TX31	**Lajitas Ar. Si**	**24.89**	**321**	P	**P**	**23 03 55.0**	**+0.8**
TX31				IAmb	IAmb	23 03 56.6	
	comp=Z,6.2nm,0.8s						
MIAR	**Mount Ida**	**24.91**	**345**	P	**P**	**23 03 53.3**	**-1.0**
MIAR				IAmb	IAmb	23 03 55.2	
	comp=Z,6.8nm,0.7s						
TKL	**Tuckaleechee C**	**25.19**	**5**	P	**P**	**23 03 56.9**	**+0.1**
	comp=Z,5.0nm,0.9s,baz=163,slow=11,SNR=4.9						
TKL	**Tuckaleechee C**	**25.19**	**5**	P	**P**	**23 03 55.1**	**-1.7**
Q51A	**Peebles**	**28.57**	**5**	P	**P**	**23 04 26.8**	**-0.3**
F36A	**Milaca**	**35.84**	**351**	P	**P**	**23 05 28.1**	**-2.6**
PDAR	**Pinedale Array**	**38.10**	**332**	P	**P**	**23 05 50.0**	**-0.3**
	comp=Z,0.5nm,0.6s,baz=125,slow=9.3,SNR=5.6						
NVAR	**Mina Array Bea**	**40.01**	**320**	P	**P**	**23 06 08.7**	**+2.4**
	comp=Z,1.5nm,0.7s,baz=132,slow=7.3,SNR=13						
NVAR	**Mina Array Bea**	**40.01**	**320**	P	**P**	**23 06 09.0**	**+2.7**
GERES	**GERESS Array B**	**88.65**	**41**	P	**P**	**23 11 22.0**	**-2.5**
	comp=Z,0.2nm,0.5s,baz=222,slow=1.2,SNR=1.5						

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*GEN **13** 23:04:04.7, 44°.56N×9°.47E, h3^{km}±2^{km}, Ml2.5*
*STR **13** 23:04:04.0±0.9, 44°N±4°×°±°, h5^{km}, mb4.2/1, mB5.1/1, MLv2.6/6, Mw(mB)4.5/1, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/alpes_taup-2.11 preliminary*
*LDG **13** 23:04:04.4±0.1, 44°.55N×9°.45E, h3^{km}, Md2.6/2, Ml2.8/26, Error ellipse: s-maj=2.5km s-min=1.5km az=28.0*
*ROM **13** 23:04:04.2±0.1, 44°.542N±0°.004×9°.459E±0°.005, h8^{km}, ML2.5/19, Error ellipse: s-maj=0.4km s-min=0.2km az=42.0*
*PRU **13** 23:04:07.2±0.0, 44°.35N×9°.60E, h7^{km}*
ISC 13 23:04:04.5±0.8**, 44°.52N**±0°.02×**9°.43E**±0°.01**, h13**^{km}±5^{km}**,**
n101, σ**1**^{s}**89**/152**, 3C-2D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GORR	**Gorreto**	**0.13**	**311**	P	**Pg**	**23 04 07.7**	**-0.2**
GORR				S	**Sg**	**23 04 10.0**	**-0.3**
GORR	**Gorreto**	**0.13**	**311**	⇑P	**Pg**	**23 04 07.7**	**-0.2**
GORR				S	**Sg**	**23 04 10.0**	**-0.3**
GORR				AML	AML		
	comp=E,5495μm,0.6s						
GORR				AML	AML		
	comp=N,6100μm,0.4s						
MSSA	**Maissana**	**0.22**	**163**	⇑P	**Pg**	**23 04 09.5**	**+0.2**
MSSA				S	**Sg**	**23 04 13.5**	**+1.0**
MSSA				AML	AML		
	comp=E,3260μm,0.6s						
MSSA				AML	AML		
	comp=N,4135μm,0.2s						
BOB	**Bobbio (Coli)**	**0.24**	**3**	⇓P	**Pg**	**23 04 09.4**	**-0.4**
BOB				S	**Sg**	**23 04 13.0**	**-0.4**
BOB				AML	AML		
	comp=E,2920μm,0.5s						
BOB				AML	AML		
	comp=N,2680μm,0.6s						
BOB				AML	AML		
	comp=E,2270μm,0.6s						
BOB				AML	AML		
	comp=N,2875μm,0.6s						
RNCA	**Ronca, Sant'Ol**	**0.34**	**262**	P	**Pg**	**23 04 12.0**	**+0.5**
RNCA				S	**Sg**	**23 04 17.4**	**+1.1**
GRAM	**Graiana**	**0.46**	**94**	P	**Pg**	**23 04 13.2**	**-0.4**
GRAM				S	**Sg**	**23 04 19.7**	**0.0**
GRAM	**Graiana**	**0.46**	**94**	P	**Pg**	**23 04 13.2**	**-0.4**
GRAM				S	**Sb**	**23 04 20.0**	**-1.2**
GRAM				AML	AML		
	comp=N,2660μm,0.3s						
GRAM				AML	AML		
	comp=E,1505μm,0.2s						
PLMA	**Palmaria, Port**	**0.56**	**147**	P	**Pg**	**23 04 15.5**	**-0.1**
PLMA				S	**Sb**	**23 04 24.2**	**0.0**
PLMA				AML	AML		
	comp=E,474μm,0.2s						
PLMA				AML	AML		
	comp=N,492μm,0.6s						
FIVI	**Fivizzano**	**0.58**	**119**	P	**Pg**	**23 04 15.7**	**-0.2**
EQUI	**Equi**	**0.63**	**124**	P	**Pg**	**23 04 16.6**	**-0.3**
EQUI				S	**Sg**	**23 04 25.2**	**0.0**
EQUI	**Equi**	**0.63**	**124**	P	**Pg**	**23 04 16.6**	**-0.3**
EQUI				S	**Sg**	**23 04 25.4**	**+0.3**
EQUI				AML	AML		
	comp=N,180μm,0.7s						
EQUI				AML	AML		
	comp=E,160μm,0.1s						
PCP	**Piancastagn**	**0.63**	**272**	P	**Pg**	**23 04 17.2**	**+0.4**
PCP				S	**Sg**	**23 04 26.1**	**+0.9**
PCP	**Piancastagn**	**0.63**	**272**	P	**Pg**	**23 04 17.0**	**+0.2**
PCP				S	**Sg**	**23 04 26.1**	**+0.9**
PCP				AML	AML		
	comp=N,496μm,0.2s						
PCP				AML	AML		
	comp=N,496μm,0.2s						
PCP				AML	AML		
	comp=E,390μm,0.8s						
SARO	**Sassorosso**	**0.78**	**116**	P	**Pg**	**23 04 19.2**	**-0.4**
SARO				S	**Sb**	**23 04 29.9**	**-0.5**
SARO	**Sassorosso**	**0.78**	**116**	P	**Pg**	**23 04 19.2**	**-0.4**
SARO				S	**Sb**	**23 04 30.1**	**-0.4**
SARO				AML	AML		
	comp=N,210μm,0.2s						
SARO				AML	AML		
	comp=E,128μm,0.4s						
VLC	**Villacollemand**	**0.78**	**118**	P	**Pb**	**23 04 19.7**	**-0.2**
VLC				AML	AML		
	comp=E,171μm,0.8s						
VLC				AML	AML		
	comp=N,154μm,0.8s						
VLC				AML	AML		
	comp=E,170μm,0.8s						
VLC				AML	AML		
	comp=N,173μm,1.6s						
CTL8	**Castelleone**	**0.79**	**17**	AML	AML		
	comp=E,422μm,0.6s						
CTL8				AML	AML		
	comp=E,1825μm,0.4s						
CTL8				AML	AML		
	comp=N,312μm,0.5s						
CTL8				AML	AML		
	comp=N,312μm,0.5s						
CTL8				AML	AML		
	comp=N,1485μm,0.5s						
CTL8				AML	AML		
	comp=E,422μm,0.6s						
CTL8				AML	AML		
	comp=E,1820μm,0.4s						
FINB	**Finale Ligure**	**0.86**	**247**	⇓P	**Pg**	**23 04 21.7**	**+0.4**
FINB				S	**Sb**	**23 04 34.0**	**+1.2**
FINB				AML	AML		
	comp=E,848μm,0.8s						
FINB				AML	AML		
	comp=N,518μm,0.3s						
CARD	**Cardoso**	**0.91**	**123**	P	**Pg**	**23 04 21.6**	**-0.4**
CARD	**Cardoso**	**0.91**	**123**	P	**Pg**	**23 04 21.6**	**-0.4**
CARD				AML	AML		
	comp=E,412μm,0.6s						
CARD				AML	AML		
	comp=N,470μm,0.6s						
CARD				AML	AML		
	comp=E,412μm,0.6s						
NOVE	**Novellara**	**0.96**	**73**	AML	AML		
	comp=N,488μm,0.3s						
NOVE				AML	AML		
	comp=E,644μm,0.7s						
NOVE				AML	AML		
	comp=E,640μm,0.7s						
MILN	**Milano**	**0.97**	**352**	AML	AML		
	comp=E,562μm,0.3s						
MILN				AML	AML		
	comp=N,504μm,0.5s						
MAIM	**Mastiano**	**0.98**	**128**	P	**Pg**	**23 04 22.9**	**-0.5**
MAIM	**Mastiano**	**0.98**	**128**	P	**Pg**	**23 04 22.9**	**-0.5**
MAIM				AML	AML		
	comp=E,190μm,0.6s						
MAIM				AML	AML		
	comp=N,177μm,0.4s						
RORO	**Rocca Rossa**	**1.06**	**248**	P	**Pg**	**23 04 24.8**	**-0.2**
RORO	**Rocca Rossa**	**1.06**	**248**	P	**Pg**	**23 04 24.6**	**-0.4**
RORO				AML	AML		
	comp=N,302μm,0.5s						
RORO				AML	AML		
	comp=N,302μm,0.5s						
RORO				AML	AML		
	comp=E,202μm,0.2s						
ZCCA	**Zocca**	**1.12**	**98**	AML	AML		
	comp=N,291μm,0.5s						
ZCCA				AML	AML		
	comp=E,209μm,0.6s						
PII	**Pisa**	**1.12**	**135**	P	**Pg**	**23 04 25.7**	**-0.5**
PII				AML	AML		
	comp=E,286μm,0.3s						
PII				AML	AML		
	comp=N,224μm,0.3s						
PII				AML	AML		
	comp=N,225μm,0.3s						
PII				AML	AML		
	comp=E,286μm,0.3s						
GROG	**Isola di Gorgo**	**1.15**	**163**	P	**Pg**	**23 04 26.3**	**-0.3**
GROG				AML	AML		
	comp=E,236μm,0.8s						
GROG				AML	AML		
	comp=N,153μm,0.6s						
GROG				AML	AML		
	comp=E,235μm,0.8s						
GROG				AML	AML		
	comp=N,154μm,0.6s						
CAVE	**Cavezzo**	**1.17**	**72**	AML	AML		
	comp=N,630μm,0.4s						
CAVE				AML	AML		
	comp=E,821μm,0.3s						
CAVE				AML	AML		
	comp=E,820μm,0.3s						
MONC	**Moncucco Torin**	**1.20**	**298**	AML	AML		
	comp=N,538μm,0.3s						
MONC				AML	AML		
	comp=E,422μm,1.6s						
IMI	**Imperia**	**1.26**	**242**	P	**Pn**	**23 04 27.8**	**-0.1**
IMI				AML	AML		
	comp=E,129μm,1.6s						
IMI				AML	AML		
	comp=N,246μm,0.6s						
IMI				AML	AML		
	comp=E,128μm,1.6s						
MDI	**Monti di Nese**	**1.27**	**9**	P	**Pg**	**23 04 28.0**	**-1.0**

SALO	Salr	1.34	35	AML	AML		
	comp=E,178µm,0.4s						
SALO				AML	AML		
	comp=N,276µm,0.6s						
SALO				AML	AML		
	comp=N,649µm,1.4s						
SALO				AML	AML		
	comp=E,451µm,0.4s						
VARE	Varese	1.42	341	AML	AML		
	comp=E,165µm,0.6s						
VARE				AML	AML		
	comp=N,94µm,0.6s						
VARE				AML	AML		
	comp=N,94µm,0.6s						
SAOF	Saorge	1.45	249	Pn	Pn	23 04 30.6	+0.1
MAGA	Magasa	1.51	34	P	Pn	23 04 31.9	+0.5
MAGA				AML	AML		
	comp=E,814µm,1.0s						
MAGA				AML	AML		
	comp=N,427µm,0.4s						
MAGA				AML	AML		
	comp=N,428µm,0.4s						
TURF	col de Turini	1.56	250	Pn	Pn	23 04 32.6	+0.4
TURF				Sn	Sn	23 04 52.3	0.0
SBF	Sospel	1.58	246	*e*P	Pn	23 04 33.2	+0.9
SBF				*e*Sg	Sn	23 04 54.7	+2.1
	comp=N,48nm,0.3s						
ROVR	Rover Verones	1.62	45	⇑P	Pn	23 04 33.5	+0.6
ROVR				AML	AML		
	comp=N,111µm,0.2s						
ROVR				AML	AML		
	comp=E,62µm,0.9s						
ESCA	l'Escarene	1.63	246	Pn	Pn	23 04 33.9	+1.0
ESCA				Sn	Sn	23 04 53.0	-0.8
PZZ	Stroppo	1.65	270	AML	AML		
	comp=E,203µm,0.3s						
PZZ				AML	AML		
	comp=N,202µm,0.6s						
CIRO	Champorcher	1.70	310	P	Pn	23 04 34.9	+0.6
CIRO				AML	AML		
	comp=N,56µm,0.9s						
CIRO				AML	AML		
	comp=E,71µm,0.4s						
MABI	Malga Bissina	1.71	26	P	Pn	23 04 34.9	+0.6
MABI				AML	AML		
	comp=E,77µm,1.1s						
MABI				AML	AML		
	comp=N,58µm,1.3s						
ISO	Isola	1.74	260	Pn	Pn	23 04 35.9	+1.4
ISO				Sn	Sn	23 04 57.0	+0.4
SURF	Saint Ours	1.87	270	Pn	Pn	23 04 37.6	+1.1
SURF				Sn	Sn	23 05 00.6	+0.6
MBDF	Montbardon	1.91	277	*e*P	Pn	23 04 38.3	+1.4
MBDF	Montbardon	1.91	277	*e*Pg	Pb	23 04 40.3	+1.0
MBDF				*e*Sg	Sb	23 05 04.3	+1.2
	comp=N,28nm,0.4s						
CALF	Calern	1.96	248	Pn	Pn	23 04 38.0	+0.3
CALF				Sn	Sn	23 05 01.9	-0.2
PGF	Pioggiola	2.00	189	*e*Pn	Pn	23 04 37.3	-0.8
PGF				*e*Sn	Sn	23 05 01.3	-1.7
	comp=N,6.1nm,0.3s						
LPG	La Plagne	2.13	298	*e*P	Pn	23 04 42.0	+1.9
LPG				*e*Sg	Sb	23 05 11.6	+1.9
	comp=N,11nm,0.3s						
LPL	La Plagne	2.15	298	*e*P	Pn	23 04 42.2	+1.8
LPL				*e*Sg	Sb	23 05 12.5	+2.3
	comp=N,18nm,0.4s						
FRF	La Foret Royal	2.23	245	*e*P	Pn	23 04 42.5	+1.4
FRF				*e*Sn	Sn	23 05 07.0	-1.5
	comp=N,9.7nm,0.2s						
LMR	La Mourre	2.42	242	*e*P	Pn	23 04 44.7	+0.9
LMR				*e*Sn	Sn	23 05 11.5	-1.8
	comp=N,13nm,0.3s						
ORIF	Oris-en-Rattie	2.56	280	*e*P	Pn	23 04 48.8	+3.0
ORIF				*e*Sg	Sb	23 05 23.6	+1.8
	comp=N,20nm,0.5s						
FETA	Feichten	2.66	20	*e*Pn	Pn	23 04 49.3	+2.1
	comp=N,2.4nm,0.3s,SNR=4.7						
DAVA	Damuels	2.78	6	*e*Pn	Pn	23 04 51.5	+2.6
	comp=N,2.1nm,0.1s						
DAVA				*e*Sn	Sb	23 05 26.0	-2.3
	comp=N,8.5nm,0.2s						
SMRF	Simiane la Rot	2.82	260	*e*P	Pn	23 04 50.9	+1.5
SMRF				*e*Sn	Sn	23 05 21.0	-2.3
	comp=N,20nm,0.5s						
OGSM	Saint Maurice	2.86	294	Pn	Pn	23 04 51.9	+2.1
SQTA	Sankt Quirin	2.97	24	*e*Pn	Pb	23 04 54.9	-2.5
	comp=N,1.0nm,0.1s,SNR=8.9						
SQTA				Sn	Sn	23 05 30.6	+3.5
	comp=N,15nm,0.3s						
RISI	Rein	3.05	36	AML	AML		
	comp=N,94µm,0.4s						
RISI				AML	AML		
	comp=E,67µm,1.3s						
MOTA	Moosalm	3.06	22	*i* Pn	Pn	23 04 55.6	+3.0
	comp=E,2.0nm,0.3s						
MOTA				*i* Sn	Sn	23 05 32.2	+3.0
	comp=E,4.4nm,0.3s						
ABTA	Abfaltersbach	3.10	43	*i* Pn	Pn	23 04 55.4	+2.2
	comp=E,3.1nm,0.2s,SNR=16						
ABTA				*i* Sn	Sn	23 05 32.0	+1.8
	comp=E,4.4nm,0.3s						
RETA	Reutte	3.11	17	*e*Pn	Pn	23 04 55.8	+2.5
	comp=E,1.8nm,0.2s						
RETA				*i* Sn	Sn	23 05 32.8	+2.5
	comp=E,3.3nm,0.3s						
OG35	Corcelles	3.12	301	Pn	Pn	23 04 55.5	+2.0
OG35				Sn	Sn	23 05 32.6	+2.0
CABF	La Chapelle	3.14	313	*e*P	Pn	23 04 56.2	+2.4
CABF				*e*Sn	Sn	23 05 28.8	-2.4
	comp=E,3.0nm,0.3s						
WTTA	Wattenberg	3.15	29	*i* Pn	Pb	23 04 57.4	-3.0
	comp=E,3.1nm,0.2s,SNR=6.4						
WTTA				*i* Sn	Sn	23 05 34.2	+2.8
	comp=E,4.2nm,0.3s						
WATA	Walderalm	3.19	27	*i* Pn	Pn	23 04 57.4	+2.9
	comp=E,1.5nm,0.2s						
WATA				*e*Sn	Sn	23 05 35.1	+2.7
	comp=E,4.8nm,0.3s						
CHMF	Charmoille	3.34	326	Pn	Pn	23 04 58.8	+2.3
CHMF				Sn	Sn	23 05 37.5	+1.3
VIVF	Saint-Julien-l	3.41	277	*e*P	Pn	23 05 00.0	+2.6
VIVF				*e*Sn	Sn	23 05 35.0	-2.7
	comp=E,2.3nm,0.3s						
KBA	Koelnbreinsper	3.75	46	*i* Pn	Pn	23 05 04.5	+2.3
	comp=E,2.3nm,0.4s						
KBA				*i* Sn	Sn	23 05 48.0	+1.8
	comp=E,2.5nm,0.4s						
HINF	Hinteralfeld	3.75	332	*e*P	Pn	23 05 04.0	+1.9
HINF				*e*Sn	Sn	23 05 42.5	-3.6
	comp=E,3.6nm,0.3s						
NVLJ	Novalja	3.89	88	*e*Pn	Pn	23 05 05.2	+1.3
NVLJ				Sn	Sn	23 05 49.2	-0.3
LASF	Ste Croix	4.03	266	*e*P	Pn	23 05 06.9	+1.0
LASF				*e*Sn	Sn	23 05 49.7	-3.2
	comp=E,0.7nm,0.2s						
DUGI	Dugi Otok	4.08	96	*i* Pn	Pn	23 05 08.1	+1.4
DUGI				Sn	Sn	23 05 53.8	-0.4
HAU	Haudompre	4.09	330	*e*P	Pn	23 05 08.8	+2.1
HAU				*e*Sn	Sn	23 05 50.6	-3.8
	comp=E,9.9nm,0.3s						
OBKA	Obir	4.11	59	*i* Pn	Pn	23 05 08.7	+1.6
	comp=E,0.5nm,0.2s						
OBKA				*e*Sn	Sn	23 05 56.8	+1.7
	comp=E,2.2nm,0.4s						
OBKA				Sg	Sg	23 06 17.7	+1.2
	comp=E,6.0nm,0.5s						
CDF	Champ du Feu	4.17	340	*e*P	Pn	23 05 09.0	+1.1
CDF				*e*Sn	Sn	23 05 52.4	-4.0
	comp=E,1.2nm,0.2s						
SMF	Signal de Mont	4.46	300	*e*P	Pn	23 05 14.3	+2.5
SMF				*e*Sn	Sn	23 05 59.8	-3.8
	comp=E,3.0nm,0.2s						
UDBI	Udbina	4.53	88	*e*Pn	Pn	23 05 13.8	+0.9
UDBI				Sn	Sn	23 06 06.2	+0.8
ZIRJ	Zirje	4.56	99	*i* Pn	Pn	23 05 14.6	+1.4
ZIRJ				Sn	Sn	23 06 04.5	-1.6
MORI	Morici	4.56	96	*e*Pn	Pn	23 05 15.3	+2.0
MORI				Sn	Sn	23 06 05.8	-0.3
MOA	Molln	4.73	44	*e*Pn	Pn	23 05 17.4	+1.9
	comp=E,0.7nm,0.2s						
LOR	Lormes	4.76	307	*e*P	Pn	23 05 18.4	+2.4
	baz=127						
LOR				*e*Sn	Sn	23 06 06.8	-4.2
	comp=E,8.4nm,0.3s						
SFTF	Sexfontaines	4.77	322	*e*P	Pn	23 05 18.4	+2.3
	baz=141						
AVF	Avril sur Loir	4.83	300	*e*P	Pn	23 05 19.4	+2.6
AVF				*e*Sn	Sn	23 06 08.6	-4.0
	comp=E,0.7nm,0.3s						
SSF	Saint Saulge	4.86	304	*e*P	Pn	23 05 19.3	+2.0
SSF				*e*Sn	Sn	23 06 09.1	-4.3
	comp=E,0.9nm,0.3s						
BGF	Bois d'Agland	5.05	296	*e*P	Pn	23 05 22.7	+2.7
BGF				*e*Sn	Sn	23 06 14.1	-4.1
	comp=E,5.5nm,0.3s						
ARSA	Arzberg	5.05	55	*i* Pn	Pn	23 05 21.6	+1.6
	comp=E,1.0nm,0.3s						
HVAR	Hvar	5.25	102	*e*Pn	Pn	23 05 24.2	+1.5
MTLF	Montolieu	5.34	260	*e*Pn	Pn	23 05 22.9	-1.0
MTLF				*e*Sn	Sn	23 06 21.2	-4.1
	comp=E,1.5nm,0.4s						
TCF	Toulx Ste Croi	5.38	292	*e*P	Pn	23 05 27.5	+3.0
TCF				*e*Sn	Sn	23 06 21.8	-4.5
	comp=E,1.5nm,0.2s						
KHC	Kasperske Hory	5.42	30	*e*PN	Pn	23 05 24.4	-0.6
KHC				*e*SN	Sn	23 06 24.7	-2.5
CKRC	Cesky Krumlov	5.45	36	*e*PN	Pn	23 05 24.7	-0.8
CKRC				*e*SN	Sn	23 06 24.6	-3.5
FNEB	Nbias	5.55	256	Pn	Pn	23 05 27.3	+0.5
CONA	Conrad Observa	5.61	50	*i* Pn	Pn	23 05 29.2	+1.4
	comp=E,0.7nm,0.2s						
MAKA	Makarska	5.62	100	*i* Pn	Pn	23 05 29.5	+1.8
RICI	Ricice	5.65	98	*e*Pn	Pn	23 05 30.9	+2.7
LSTV	Lastovo	5.69	105	*e*Pn	Pn	23 05 29.9	+1.1
LFF	La Frestale	6.20	277	*e*Pn	Pn	23 05 34.8	-1.0
STON	Ston	6.22	103	*e*Pn	Pn	23 05 36.5	+0.5

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*IDC **13** 23:39:34.4±0.7, 6°.81N×73°.02W, h157^{km}±10^{km}, mb3.5/1, mb1 3.9/4, mb1mx3.2/38, mbtmp4.2/4, MS3.1/1, Ms1 3.1/1, ms1mx2.6/28, Error ellipse: s-maj=42.0km s-min=7.5km az=132.0*

*RSNC **13** 23:39:35.6±1.2, 6°.83N×73°.15W, h147^{km}±5^{km}, ML3.6, Mw3.8, Fault plane solution: NP1:ϕ_s18.00000°, δ25.00000°, λ138.00000°.*

ISC 13 23:39:34.2±0.8**, 6°.86N**±0°.04×**73°.13W**±0°.04**, h154**^{km}±6^{km}**, n32, σ0^s.95**/56**, 7C-4D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.27	190	⇑*i*P	Pn	23 39 55.7	+0.2
BARC				*e*S	Sn	23 40 10.1	-1.7
BARC				*i*		23 40 15.2	
	comp=Z,701nm,0.3s						
BRRC	Barranca, Sant	0.62	293	⇑*i*P	Pn	23 39 57.5	+0.7
BRRC				*e*S	Sn	23 40 14.3	+0.5
BRRC				*i*		23 40 15.3	
	comp=Z,808nm,0.2s						
PAMC	Pamplona, Colo	0.64	42	⇓*i*P	Pn	23 39 58.5	+1.1
PAMC				*e*S	Sn	23 40 15.6	+0.4
PAMC				*i*		23 40 17.9	
	comp=Z,908nm,0.5s						
RUSC	La Rusia	0.96	177	⇑*i*P	Pn	23 39 59.6	-0.1
RUSC				*e*S	Sn	23 40 18.3	-0.8
RUSC				*i*		23 40 20.6	
	comp=Z,410nm,0.4s						
PTBC	PUERTO BERRIO,	1.35	256	⇑*e*P	Pn	23 40 02.2	-0.5
PTBC				*e*S	Sn	23 40 23.6	-0.8
PTBC				*i*		23 40 25.9	
	comp=Z,491nm,0.2s						
OCAC	Ocana	1.38	352	*e*P	Pn	23 40 03.6	+0.5
OCAC				*e*S	Sn	23 40 24.8	-0.5
OCAC				*i*		23 40 28.6	
	comp=Z,484nm,0.3s						
TAMC	Tame, Arauca	1.40	107	⇓*i*P	Pn	23 40 04.2	+1.0
TAMC				*e*S	Sn	23 40 25.7	+0.4
TAMC				*i*		23 40 26.4	
	comp=Z,299nm,0.6s						
SPBC	San Pablo de B	1.52	218	⇑*i*P	Pn	23 40 04.6	+0.2
SPBC				*e*S	Sn	23 40 26.9	-0.7
SPBC				*i*		23 40 35.3	
	comp=Z,586nm,0.2s						
ZARC	Zaragoza, Cauc	1.82	290	*e*P	Pn	23 40 08.1	+0.5
ZARC				*e*S	Sn	23 40 34.1	+0.9
ZARC				*i*		23 40 39.4	
	comp=Z,577nm,0.4s						
SMLC	San Martn de	2.14	334	*e*P	Pn	23 40 11.7	+0.4
SMLC				*e*S	Sn	23 40 40.2	+0.4
SMLC				*i*		23 40 49.2	
	comp=Z,391nm,0.2s						
NORC	Norcasia	2.15	233	*e*P	Pn	23 40 11.4	-0.1
NORC				*e*S	Sn	23 40 39.9	-0.2
NORC				*i*		23 40 47.4	
	comp=Z,277nm,0.2s						
CHIC	Chingaza	2.29	195	⇑*e*P	Pn	23 40 13.7	+0.2
CHIC				*e*S	Sn	23 40 43.0	-0.8
CHIC				*i*		23 40 47.9	
	comp=Z,153nm,0.3s						
ROSC	El Rosal	2.33	211	P	Pn	23 40 15.3	+1.4
	comp=Z,82nm,0.3s,baz=206,slow=2.4,SNR=150						
ROSC				S	Sn	23 40 45.5	+1.1
	comp=Z,140nm,0.3s,baz=206,slow=22,SNR=10.0						
ROSC	El Rosal	2.33	211	⇑*e*P	Pn	23 40 15.3	+1.4
ROSC				*e*S	Sn	23 40 42.8	-1.6
ROSC				*i*		23 40 49.9	
	comp=N,832nm,0.4s						
UREC	San Jos de Ur	2.54	291	*e*P	Pn	23 40 15.6	-0.4
UREC				*e*S	Sn	23 40 46.8	-1.5
UREC				*i*		23 40 56.8	
	comp=Z,278nm,0.2s						
GUY2C	Guyana, Caldas	2.75	234	*e*P	Pn	23 40 20.1	+1.0
GUY2C				*e*S	Sn	23 40 53.8	+0.1
GUY2C				*i*		23 41 03.6	
	comp=Z,299nm,0.5s						
RREF	El Recreo	2.94	229	*e*P	Pn	23 40 22.4	+0.8
RREF				*e*S	Sn	23 40 56.9	-1.3
RREF				*i*		23 41 07.1	
	comp=Z,282nm,0.3s						
CBOC	Ciudad Bolivar	3.03	251	*e*P	Pn	23 40 23.4	+1.2
CBOC				*e*S	Sn	23 40 56.9	-2.5
CBOC				*i*		23 41 08.9	
	comp=Z,80nm,0.2s						
DBBC	Dabeiba	3.06	273	⇓*e*P	Pn	23 40 23.3	+0.7
TOLC	Tolima	3.14	224	*e*P	Pn	23 40 25.4	+1.6
TOLC				*e*S	Sn	23 41 01.6	-0.6
TOLC				*i*		23 41 11.8	
	comp=Z,194nm,0.4s						
SDV	Santo Domingo	3.19	51	P	Pn	23 40 25.2	+0.8
	comp=Z,40nm,0.3s,baz=179,slow=3.0,SNR=87						
SDV				S	Sn	23 41 02.3	-1.0
	comp=Z,23nm,0.3s,baz=60,slow=23,SNR=26						
SDV	Santo Domingo	3.19	51	⇓*e*P	Pn	23 40 25.1	+0.8
SDV				*e*S	Sn	23 41 01.7	-1.5
SDV				*i*		23 41 07.6	
	comp=Z,52nm,0.5s						
ANIL	Santa Ana	3.26	224	*e*P	Pn	23 40 27.1	+1.7
ANIL				*e*S	Sn	23 41 05.5	+0.5
ANIL				*i*		23 41 12.2	
	comp=Z,56nm,0.3s						
PRAC	Prado	3.58	209	*e*P	Pn	23 40 29.0	-0.2
PRAC				*e*S	Sn	23 41 10.7	-1.3
PRAC				*i*		23 41 18.9	
	comp=Z,191nm,0.3s						
PLMC	San Jos del P	3.69	238	*e*P	Pn	23 40 31.5	+0.9
PLMC				*e*S	Sn	23 41 14.1	-0.3
PLMC				*i*		23 41 21.9	
	comp=Z,68nm,0.4s						
PCRV	Puerto La Cruz	9.03	68	P	Pn	23 41 41.4	+0.1
	comp=Z,0.8nm,0.3s,baz=235,slow=0.9,SNR=7.2						
CMIG	Matias Romero	23.55	298	LR	LR	23 55 17.6	
	comp=Z,48nm,19.2s,baz=170,slow=40						
YKA	Yellowknife Ar	63.22	340	P	P	23 49 46.2	+0.5
	comp=Z,0.9nm,0.6s,baz=129,slow=7.4,SNR=25						
MKAR	Makanchi Array	122.29	20	PKP	PKPdf	23 58 10.6	-0.6
	comp=Z,0.1nm,0.4s,baz=346,slow=1.9,SNR=6.2						
SONM	Songino Array	125.54	0	PKP	PKPdf	23 58 17.6	+0.1
	comp=Z,0.1nm,0.4s,baz=329,slow=5.0,SNR=1.8						
ASAR	Alice Springs	149.12	234	PKPbc	PKPbc	23 59 04.5	-0.7
	comp=Z,0.3nm,0.5s,baz=120,slow=3.3,SNR=4.8						
WRA	Warramunga Arr	150.34	241	PKPbc	PKPbc	23 59 07.9	-0.3
	comp=Z,0.4nm,0.3s,baz=107,slow=2.7,SNR=7.7						
WRA				PKPab	PKPab	23 59 14.8	-0.2
	comp=Z,0.1nm,0.3s,baz=105,slow=2.8,SNR=1.4						

IDC 13 23:48:14.5±2.5**, 2°.96S**×**136°.34E, h0**^{km}**, mb3.4**/2**, mb1 3.8**/5**, mb1mx3.5**/34**, mbtmp3.6**/5**, ML3.5**/3**, Error ellipse: s-maj=63.9km s-min=26.7km az=78.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	5.48	292	Pn	Pn	23 49 37.0	-0.5
	3.6nm,0.3s,baz=240,slow=23,SNR=4.2						
SIJI				Sn	Sn	23 50 37.0	-4.3
	2.5nm,0.3s,baz=296,slow=23,SNR=6.1						
WRA	Warramunga Arr	16.99	186	Pn	Pn	23 52 13.6	-0.2
	0.1nm,0.3s,baz=9.2,slow=12,SNR=8.2						
WRA				Sn	Sn	23 55 09.5	-14
	0.1nm,0.3s,baz=5.2,slow=23,SNR=3.7						
FITZ	Fitzroy Crossi	18.34	214	P	Pn	23 52 29.7	-0.8
	0.1nm,0.3s,baz=47,slow=19,SNR=1.1						
FITZ				S	Sn	23 55 39.7	-16
	0.1nm,0.3s,baz=105,slow=20,SNR=1.0						
ASAR	Alice Springs	20.72	186	P	P	23 52 57.2	+0.5
	1.0nm,0.7s,baz=11,slow=10,SNR=11						
MKAR	Makanchi Array	68.56	323	P	P	23 59 19.3	+0.1
	0.2nm,0.5s,baz=110,slow=7.7,SNR=6.3						

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*JMA **14** 00:05:07.8±0.2, 35°.70N×140°.10E, h67^{km}±2^{km}, M2.8*

*IDC **14** 00:05:10.1±3.2, 35°.45N×139°.86E, h81^{km}±19^{km}, mb3.1/2, mb1 3.3/3, mb1mx3.0/34, mbtmp3.5/3, Error ellipse: s-maj=56.9km s-min=9.2km az=67.0*

ISC 14 00:05:08.1±1.1**, 35°.62N**±0°.05×**140°.09E**±0°.06**, h73**^{km}±8^{km}**, n14, σ0^s.77**/22**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCN	Nagara	0.22	157	P	Pn	00 05 19.2	0.0
JCN				S	Sn	00 05 28.0	+0.7
JSMT	Sammumatsuo	0.29	86	P	Pn	00 05 19.2	-0.3
BSO3	Boso 3	0.89	157	P	Pn	00 05 24.8	-0.3
BSO3				S	Sn	00 05 38.8	+1.0
JOD2	Odawara 2	0.90	247	P	Pn	00 05 25.1	-0.4
JOD2				S	Sn	00 05 37.5	-1.0
JAG	Ashikaga	0.95	327	P	Pn	00 05 25.4	-0.8
JRY	Ryogami san	1.05	292	P	Pn	00 05 27.4	0.0
JIM2	Oshima 3	1.05	211	P	Pn	00 05 26.7	-0.8
JIM2				S	Sn	00 05 42.4	+0.5
BSO1	Boso 1	1.21	143	P	Pn	00 05 28.4	-0.4
JKT	Katashina	1.33	329	P	Pn	00 05 30.6	-0.5
JKT				S	Sn	00 05 47.0	-1.3
MJAR	Matsushiro Arr	1.78	302	P	Pn	00 05 36.9	0.0
	1.8nm,0.3s,baz=122,slow=14,SNR=36						
MJAR				S	Sn	00 05 59.6	+0.8
	0.6nm,0.3s,baz=138,slow=13,SNR=1.9						
MAT	Matsushiro	1.78	302	P	Pn	00 05 37.3	+0.4
MAT				*e*S	Sn	00 05 59.8	+1.0
JHJ	Hachijo jima 2	2.51	186	P	Pn	00 05 47.1	+0.4
	8.4nm,0.3s,baz=41,slow=20,SNR=1.1						
JHJ				S	Sn	00 06 14.9	-1.4
	15nm,0.3s,baz=94,slow=19,SNR=1.5						
MKAR	Makanchi Array	43.98	303	P	P	00 13 08.6	+0.6
	0.2nm,0.6s,baz=88,slow=8.3,SNR=4.4						
WRA	Warramunga Arr	55.53	187	P	P	00 14 35.6	-0.2
	0.4nm,0.5s,baz=1.4,slow=7.7,SNR=10						

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*ISN **14** 00:14:13.8±0.5, 35°.31N×44°.32E, h20^{km}±10^{km}, ML2.9*

*TEH **14** 00:14:14.9, 35°.42N×44°.59E, h10^{km}, ML3.3*

ISC 14 00:14:17.5±1.6**, 35°.36N**±0°.05×**44°.4E**±0°.1**, h35**^{km}**, n14, σ0^s.71**/17**, Iraq**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAHB	Mahabad	1.78	37	*e*Pg	Pn	00 14 45.9	-0.1
MAHB				*e*		00 15 15.3	
	comp=Z,99nm,0.9s						
IDHR	Dehrash	1.79	111	*e*Pg	Pn	00 14 45.7	-0.4
IDHR				*e*		00 15 13.5	
	comp=Z,99nm,0.3s						
BHD	Baghdad	2.08	179	*e*Pg	Pn	00 14 50.0	+0.1
BHD				*e*Sg	Sn	00 15 16.0	+1.5
BHD				AML	AML	00 15 24.8	
	comp=E,399nm,0.7s						
IGHG	Ghaleghazi	2.09	119	*e*Pn	Pn	00 14 51.1	+0.9
IGHG				*e*		00 15 27.5	
	comp=Z,99nm,1.0s						
KCHF	Cheshme Sefid,	2.46	115	*e*Pn	Pn	00 14 54.9	-0.4
KCHF				*e*		00 15 40.6	
	comp=Z,99nm,0.6s						
KER	Kermanshah	2.48	112	*e*Pn	Pn	00 14 56.2	+0.7
IBDR	Badra	2.59	149	*e*Pn	Pn	00 14 56.0	-0.9
IBDR				*e*Sn	Sn	00 15 27.5	+0.3
IBDR				AML	AML	00 15 42.1	
	comp=E,29nm,0.4s						
IBDR				AML	AML	00 15 52.2	
	comp=N,45nm,0.5s						
ITBZ	Tabriz	3.21	26	*e*Pn	Pn	00 15 05.1	-0.5
IKFM	Kafar-mosalman	3.42	121	*e*Pn	Pn	00 15 08.3	+0.1
IKFM				*e*		00 16 23.0	
	comp=Z,99nm,0.9s						
IMRD	Marand	3.52	17	*e*Pn	Pn	00 15 10.2	+0.3
IMRD				*e*		00 16 33.6	
	comp=Z,99nm,0.8s						
ISRB	Sarab	3.63	46	*e*Pn	Pn	00 15 11.4	0.0
ISRB				*e*		00 15 22.8	
	comp=Z,99nm,0.8s						
IHRS	Heris	3.66	35	*e*Pn	Pn	00 15 11.6	-0.2
IHRS				*e*		00 16 24.8	
	comp=Z,99nm,1.2s						
HSAM	Samen	3.68	107	*e*Pn	Pn	00 15 12.3	+0.2
HSAM				*e*		00 16 28.8	
	comp=Z,99nm,1.2s						
NSR	Nassriya	4.58	160	*e*Pn	Pn	00 15 24.0	-0.3
NSR				*e*Sn	Sn	00 16 15.0	-1.3
NSR				AML	AML	00 16 16.1	
	comp=E,40nm,0.3s						

IDC 14 00:30:18.5±1.8**, 3°.38S**×**122°.74E, h0**^{km}**, mb3.3**/2**, mb1 3.6**/4**, mb1mx3.4**/33**, mbtmp3.4**/4**, ML3.4**/2**, Error ellipse: s-maj=46.8km s-min=27.6km az=52.0, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPI	Kappang	3.39	241	Pn	Pn	00 31 12.7	-0.1
	12nm,0.3s,baz=128,slow=8.9,SNR=44						
KAPI				Sn	Sn	00 31 41.2	-13
	12nm,0.3s,baz=359,slow=20,SNR=7.2						
WRA	Warramunga Arr	19.97	146	P	P	00 34 51.8	-0.9
	0.1nm,0.3s,baz=319,slow=13,SNR=5.8						
ASAR	Alice Springs	22.87	153	P	P	00 35 24.4	+0.6
	1.3nm,0.9s,baz=330,slow=13,SNR=9.1						
MKAR	Makanchi Array	61.36	329	P	P	00 40 36.3	0.0
	0.3nm,0.8s,baz=142,slow=7.3,SNR=2.3						

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*UPA **14** 00:37:44.4±1.7, 7°.61N×81°.84W, h5^{km}, MW4.5, Fault plane solution: NP1:ϕ_s265.96000°, δ88.77000°, λ-37.98000°.*

ISC 14 00:37:44.9±1.2**, 7°.66N**±0°.04×**81°.80W**±0°.02**, h10**^{km}±9^{km}**, n52, σ1^s.30**/82**, 14C-11D, Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PVID3	Puerto Vidal,	0.43	26	⇓*i*P	Pb	00 37 54.8	+0.1
PVID3				*e*S	Sb	00 38 02.7	+1.4
GMAL	Guarumal, Vera	0.57	79	⇓*i*P	Pg	00 37 56.4	+0.4
GMAL				*e*S	Sb	00 38 06.4	+1.1
NANC3	Nancito, Chiri	0.58	7	⇑*i*P	Pb	00 37 57.0	-0.3
NANC3				*e*S	Sn	00 38 07.7	-1.3
RSUS3	Rio de Jesus,	0.71	63	⇓*i*P	Pg	00 37 59.0	+0.4
RSUS3				*e*S	Sn	00 38 11.2	-1.0
PONU3	Ponuga, Veragu	0.85	74	⇓*i*P	Pb	00 38 01.6	-0.2
STIA3	Santiago, Vera	0.93	62	⇓*i*P	Pg	00 38 02.9	+0.1
STIA3				*e*S	Sn	00 38 18.5	+0.9
PEDE3	Pedregal, Chir	0.95	320	⇓*e*P	Pg	00 38 02.2	-1.0
PEDE3				*e*S	Sn	00 38 17.0	-1.0
CACAO	El Cacao, Vera	0.98	108	⇑*i*P	Pb	00 38 03.7	-0.3
CACAO				*e*S	Sn	00 38 18.5	-0.3
SFRA3	San Francisco,	1.01	54	⇓*i*P	Pg	00 38 03.9	-0.4
SFRA3				*e*S	Sg	00 38 18.1	+0.6
OCU3	Ocu, Herrera	1.06	74	⇓*i*P	Pg	00 38 04.6	-0.6
OCU3				*e*S	Sg	00 38 18.6	-0.3
PSOM3	Paja de Sombre	1.15	333	*e*P	Pb	00 38 05.4	-1.4
PSOM3				*e*S	Sg	00 38 22.2	+0.4
PESE3	Pese, Herrera	1.21	78	⇓*i*P	Pn	00 38 06.9	-1.0
PESE3				*e*S	Sn	00 38 26.9	+2.6
PTAR3	Potrerillos Ar	1.24	326	*e*P	Pn	00 38 07.0	-1.4
PTAR3				*e*S	Sn	00 38 25.8	+0.5
SBAR3	San Bartolo, C	1.26	302	*e*P	Pb	00 38 08.3	-0.4

SBAR3				eS	Sn	00 38 27.4	+1.8
BCO2	Palmira	1.28	326	⇑eP	Pn	00 38 07.1	-1.9
BCO2				eS	Sn	00 38 28.4	+2.0
CHGR2	Aguacate	1.32	345	eP	Pn	00 38 08.4	-1.0
CHGR2				eS	Sg	00 38 29.2	+1.8
TOSI3	Tonosi	1.37	100	⇑iP	Pn	00 38 09.1	-1.1
TOSI3				eS	Sg	00 38 29.6	+0.5
CDITO	Canoas	1.40	311	eP	Pn	00 38 09.3	-1.2
CDITO				eS	Sn	00 38 28.5	-0.6
BRU2	Volcan	1.43	322	eP	Pn	00 38 10.4	-0.7
BRU2				eS	Sn	00 38 28.8	-1.4
MLIR3	Monte Lirio, C	1.52	318	i P	Pb	00 38 12.8	-0.4
MLIR3				eS	Sg	00 38 35.2	+1.5
AZU	Azuero	1.52	85	⇓iP	Pn	00 38 12.1	-0.1
AZU				eS	Sg	00 38 35.0	+1.2
PCRI3	Pocri, Los San	1.67	90	⇑iP	Pb	00 38 15.1	-0.7
PCRI3				eS	Sg	00 38 38.4	-0.2
PNME	Penonome	1.68	60	⇑iP	Pn	00 38 15.0	+0.7
PIRO	Carate, Puerto	1.69	296	⇑iP	Pn	00 38 12.1	-2.4
PIRO				eS	Sg	00 38 41.1	+1.8
CNI2	El Empalme, Bo	1.88	339	⇑eP	Pb	00 38 19.1	-0.2
CNI2				eS	Sg	00 38 45.5	+0.2
VTON	El Valle, Cocl	1.92	60	⇑iP	Pg	00 38 21.2	-0.6
VTON				eS	Sg	00 38 47.1	+0.4
DRK0	Durika	2.14	318	⇑iP	Pn	00 38 21.9	+1.0
DRK0				eS	Sb	00 38 50.4	-0.3
ZANG	Zanguenga, Cho	2.31	56	⇑iP	Pb	00 38 25.5	-1.2
ZANG				eS	Sg	00 38 58.1	-1.1
BCIP	Isla Barro Col	2.46	52	⇑eP	Pb	00 38 27.8	-1.4
BCIP				eS	Sb	00 39 01.6	+2.1
BCIP	Isla Barro Col	2.46	52	eP	Pb	00 38 27.6	-1.6
TABO3	Taboga, Panama	2.50	63	⇑eP	Pb	00 38 28.5	-1.4
TABO3				eS	Sb	00 38 60.0	-0.7
UPA	Univ. de Panam	2.60	59	⇑iP	Pb	00 38 29.8	-1.9
UPA				eS	Sb	00 39 02.6	-1.1
UPD2	Meteti	3.85	76	⇓eP	Pn	00 38 45.2	+0.9
UPD2				eS	Sb	00 39 40.0	+0.2
PTAC	Punta Ardita,	3.99	97	eP	Pn	00 38 45.6	-0.6
DBBC	Dabeiba	5.58	96	eP	Pn	00 39 09.0	+0.8
CBOC	Ciudad Bolivar	6.02	107	eP	Pn	00 39 12.8	-1.5
PLMC	San Jos del P	6.13	116	eP	Pn	00 39 16.0	+0.3
UREC	San Jos de Ur	6.21	89	eP	Pn	00 39 18.0	+1.2
UREC				eP	Pn	00 39 18.2	+1.4
YOTC	Yotoco, Valle	6.54	124	eP	Pn	00 39 18.9	-2.5
GUY2C	Guyana, Caldas	6.84	110	eP	Pn	00 39 27.8	+2.0
RREF	El Recreo	6.98	113	eP	Pn	00 39 30.1	+2.2
TOLC	Tolima	7.13	115	eP	Pn	00 39 34.2	+4.5
NORC	Norcasia	7.19	106	eP	Pn	00 39 32.7	+2.4
POPC	Popayan, Colom	7.20	135	eP	Pn	00 39 30.8	+0.2
PTBC	PUERTO BERRIO,	7.37	98	eP	Pn	00 39 32.0	-0.7
SOTA	Rioblanco	7.54	136	eP	Pn	00 39 38.1	+2.6
PCON	Cinco Dias	7.55	134	eP	Pn	00 39 36.1	+0.5
SMLC	San Martn de	7.74	81	eP	Pn	00 39 37.2	-0.5
GCUF	Volcan Galeras	7.78	145	eP	Pn	00 39 37.8	-1.0
OCAC	Ocana	8.42	85	eP	Pn	00 39 51.4	+4.1
CHIC	Chingaza	8.57	110	eP	Pn	00 39 50.0	+0.4
RUSC	La Rusia	8.83	101	eP	Pn	00 39 53.0	-0.2

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*NDI **14** 00:44:29.2±2.6, 31°.47N×81°.17E, h19^{km}±45^{km}, ML3.9, mb4.2(NEIC)*

*IDC **14** 00:44:31.9±1.1, 31°.30N×80°.46E, h0^{km}, mb3.9/10, mb1 4.1/14, mb1mx3.8/59, mbtmp4.0/14, ML3.5/4, MS3.4/2, Ms1 3.4/2, ms1mx2.8/36, Error ellipse: s-maj=33.3km s-min=15.5km az=55.0*

*BJI **14** 00:44:33.7±0.0, 31°.07N×80°.19E, h9^{km}, mB4.3/1, mb4.0/9, Ms7 3.6/1*

*NEIC **14** 00:44:36.4±1.3, 31°.35N±0°.08×80°.39E±0°.03, h33^{km}±6^{km}, mb4.2/20, Error ellipse: s-maj=11.5km s-min=3.2km az=166.0*

ISC 14 00:44:37.0±0.5**, 31°.35N**±0°.05×**80°.46E**±0°.04**, h35^{km}, n69, σ2^{s}.25**/73**, mb4.1**/17**, 1D, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDI	Dehra Dun	2.30	244	eP	Pn	00 45 15.2	+2.6
DDI				eS	Sn	00 45 47.5	+7.8
DDI				IAML		00 45 56.2	
	comp=N,716nm,0.9s						
DDI				IAML		00 46 00.5	
	comp=E,1µm,1.4s						
SMLA	Simla	2.83	266	eP	Pn	00 45 21.2	+1.5
SMLA				eS	Sn	00 45 58.7	+6.3
SMLA				IAML		00 46 02.2	
	comp=N,435nm,1.7s						
SMLA				IAML		00 46 03.7	
	comp=E,392nm,0.9s						
DHRM	DHARAMSHALA	3.65	285	eP	Pn	00 45 31.8	+0.6
DHRM				eS	Sn	00 46 20.4	+7.2
DHRM				IAML		00 46 33.4	
	comp=N,303nm,0.6s						
DHRM				IAML		00 46 34.8	
	comp=E,379nm,0.8s						
NDI	New Delhi	3.86	227	ePN	Pn	00 45 36.0	+2.0
NDI				eSN	Sn	00 46 24.0	+5.9
DANN	Dangsing	4.14	135	eP	Pn	00 45 40.4	+2.4
	comp=E,34nm,0.4s						
GKN	Gorkha	4.93	131	eP	Pn	00 45 50.8	+2.0
KKN	Kakani	5.50	129	eP	Pn	00 45 58.7	+2.1
	comp=E,67nm,0.6s						
DMN	Daman	5.50	131	eP	Pn	00 45 58.8	+2.1
	comp=E,25nm,0.6s						
PKIN	Phulchoki	5.71	130	eP	Pn	00 46 01.4	+1.8
	comp=E,39nm,0.7s						
PKI	Pulchoki	5.73	130	eP	Pn	00 46 01.7	+1.8
	comp=E,27nm,0.6s						
GUN	Gumba	5.83	125	eP	Pn	00 46 02.6	+1.3
	comp=E,39nm,0.4s						
NIL	Nilore	6.50	293	Pn	Pn	00 46 10.4	+0.1
NIL				Sn	Sn	00 47 23.6	+0.3
RAMN	Ramite	6.93	128	eP	Pn	00 46 17.5	+1.2
	comp=E,21nm,0.5s						
TAPN	Taplejung	7.48	120	eP	Pn	00 46 24.4	+0.5
	comp=E,19nm,0.4s						
ODAN	Odare	7.53	125	eP	Pn	00 46 26.6	+2.0
	comp=E,24nm,0.6s						
BHPL	Bhopal	8.51	199	eP	Pn	00 46 35.2	-2.7
BHPL				eS	Sn	00 48 06.7	-6.0
LSA	Lhasa	9.37	97	P	Pn	00 46 54.3	+4.3
LSA				S	Sn	00 48 36.3	+2.0
LSA				smax	smax		
	comp=E,14nm,0.9s						
LSA				smax	smax		
	comp=E,15nm,0.9s						
LSA	Lhasa	9.37	97	Pn	Pn	00 46 53.2	+3.2
LSA				Sn	Sn	00 48 38.3	+4.0
KBL	Kabul	10.11	291	Pn	Pn	00 46 59.8	0.0
KBL					Sn	00 48 50.9	-1.1
SHL	Shillong	11.58	117	Pn	Pn	00 47 18.2	-1.9
AAK	Ala-Archa	12.23	339	Pn	Pn	00 47 28.1	-0.7
	comp=E,0.2nm,0.3s,baz=166,slow=14,SNR=2.9						
WMQ	Urumqi	13.70	23	eP	P	00 47 56.3	-0.7
HYB	Hyderabad	13.97	188	i P	Pn	00 47 49.0	-3.6
KK31	Karatay Array	14.14	329		Pn	00 47 54.5	-0.3
KKAR	Karatay Array	14.14	329		Pn	00 47 53.7	-1.1
KKAR	Karatay Array	14.14	329	Pn	Pn	00 47 53.9	-0.9
MAKZ	Makanchi	15.48	4		Pn	00 48 12.3	-0.4
MAKZ				IAmb	IAmb	00 48 18.5	
	comp=Z,14nm,0.9s						
MK31	Makanchi Array	15.49	5	Pn	Pn	00 48 12.3	-0.4
MK31				IAmb	IAmb	00 48 19.2	
	comp=Z,16nm,1.1s						
MKAR	Makanchi Array	15.49	5	Pn	Pn	00 48 11.3	-1.5
	comp=Z,0.2nm,0.3s,baz=179,slow=9.7,SNR=14						
MKAR	Makanchi Array	15.49	5	Pn	Pn	00 48 12.3	-0.4
HRA	Herat	15.60	286	Pn	Pn	00 48 12.9	-1.6
GTA	Gaotai	17.70	58	eP	P	00 48 51.8	+10
GTA				pP	sP	00 48 56.8	-0.4
GTA				sP	pP	00 48 59.8	+7.7
GTA				pmax	pmax		
	comp=Z,2.0nm,1.2s						
KURBB	Kurchatov Arra	19.31	356	P	P	00 48 58.8	-0.1
	comp=Z,0.2nm,0.3s,baz=184,slow=12,SNR=122						
KURK	Kurchatov	19.40	356	P	P	00 49 00.3	+0.4
GEYT	Alibeck	19.50	296	P	P	00 49 01.1	0.0
	comp=Z,0.1nm,0.3s,baz=112,slow=19,SNR=5.8						
GEYT	Alibeck	19.50	296	P	P	00 48 59.1	-2.0
GYA0B	ALIBECK ARRAY	19.50	296	P	P	00 48 59.6	-1.5
CHTO	Chiang Mai	20.84	122	P	P	00 49 15.2	-0.7
CMAR	Chiang Mai Arr	21.07	123	P	P	00 49 18.4	0.0
	comp=Z,3.0nm,0.4s,baz=312,slow=9.8,SNR=22						
CMAR	Chiang Mai Arr	21.07	123	P	P	00 49 18.5	+0.2
UOSS	Minazif	22.29	259	P	P	00 49 30.9	-0.5
ZAA0	Zalesovo Array	22.81	7	P	P	00 49 36.9	+0.4
ZAA0				IAmb	IAmb	00 49 39.7	
	comp=Z,7.1nm,0.8s						
ZALV	Zalesovo Beam	22.81	7	P	P	00 49 36.8	+0.3
	comp=Z,7.5nm,0.9s,baz=195,slow=9.1,SNR=18						
BVAR	Borovoye Array	22.87	344	P	P	00 49 37.8	+0.6
	comp=Z,2.4nm,0.5s,baz=128,slow=12,SNR=25						
BRVK	Borovoye	22.92	344	P	P	00 49 38.9	+1.1
BRVK				IAmb	IAmb	00 49 39.8	
	comp=Z,16nm,1.2s						
SLVN	Son La	23.22	110	P	P	00 49 42.0	+0.9
SLVN				IAmb	IAmb	00 49 46.9	
	comp=Z,9.6nm,1.4s						
ABKAR	Akbulak array	23.64	325	P	P	00 49 44.0	-0.8
ABKAR				IAmb	IAmb	00 49 56.7	
	comp=Z,9.4nm,1.4s						
ABKAR	Akbulak array	23.64	325	P	P	00 49 44.2	-0.6
XAN	Xi'an	24.08	76	P	P	00 49 49.8	+0.6
XAN				pP	pP	00 49 57.3	-3.5
XAN				pmax	pmax		
	comp=Z,7.0nm,1.4s						
XAN	Xi'an	24.08	76	P	P	00 49 48.9	-0.3
XAN				IAmb	IAmb	00 49 52.1	
	comp=Z,4.3nm,0.8s						
AKTO	Aktyubinsk	25.35	325	P	P	00 50 01.3	+0.7
	comp=Z,3.6nm,0.7s,baz=113,slow=4.8,SNR=10						
SONM	Songino Array	25.72	43	P	P	00 50 05.0	+0.8
	comp=Z,0.9nm,0.8s,baz=236,slow=9.5,SNR=7.7						
SONM	Songino Array	25.72	43	P	P	00 50 04.5	+0.4
ULN	Ulaanbaatar	26.12	43	P	P	00 50 08.3	+0.5
ULN				IAmb	IAmb	00 50 56.5	
	comp=Z,13nm,1.9s						
WHN	Wuhan	29.02	83	⇓P	P	00 50 42.0	+8.3
KULM	Kulim	32.11	140	P	P	00 51 01.7	+0.6
KIV	Kislovodsk	32.17	304	P	P	00 51 01.5	0.0
KIV				IAmb	IAmb	00 51 33.3	
	comp=Z,10.0nm,1.5s						
GSI	Gunungsitoli	33.99	148	P	P	00 51 17.0	-0.5
USA0B	Ussuriysk Arra	42.06	57	P	P	00 52 24.9	-0.4
USRK	Ussuriysk Ar.	42.06	57	P	P	00 52 25.5	+0.2
AKASG	Malin Array Be	42.25	312	LR	LR	01 11 47.2	
	comp=Z,50nm,18.8s,baz=295,slow=39						
BURAR	Bucovina Array	44.66	308	P	P	00 52 45.7	-0.6
FINES	FINESS Array B	46.10	327	P	P	00 52 58.1	+0.8
	comp=Z,2.2nm,0.7s,baz=110,slow=17,SNR=4.9						
FINES	FINESS Array B	46.10	327	P	P	00 52 57.2	-0.2
KMBO	Kilima Mbogo	52.16	240	LR	LR	01 17 48.2	
	comp=Z,25nm,18.4s,baz=100,slow=38						
WRA	Warramunga Arr	72.61	127	P	P	00 56 01.2	+0.2
	comp=Z,2.1nm,0.9s,baz=324,slow=6.0,SNR=12						
ASAR	Alice Springs	74.90	130	P	P	00 56 14.8	+0.4
	comp=Z,0.6nm,0.6s,baz=311,slow=5.2,SNR=4.7						
ILAR	Eielson Array	77.34	19	P	P	00 56 27.3	-0.4
	comp=Z,0.9nm,1.0s,baz=311,slow=3.4,SNR=5.7						
YKA	Yellowknife Ar	85.71	7	P	P	00 57 10.7	-1.3
	comp=Z,0.4nm,0.6s,baz=350,slow=4.7,SNR=5.6						

IDC 14 00:49:41.4±1.6**, 2°.96S**×**130°.19E, h0^{km}, mb3.4**/2**, mb1 3.6**/4**, mb1mx3.4**/33**, mbtmp3.4**/4**, ML3.3**/2**, Error ellipse: s-maj=50.2km s-min=22.2km az=96.0, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	2.33	27	Pn	Pn	00 50 21.1	0.0
	9.3nm,0.3s,baz=78,slow=24,SNR=27						
SIJI				Sn	Sn	00 50 50.3	-0.2
	7.5nm,0.3s,baz=82,slow=12,SNR=3.8						
WRA	Warramunga Arr	17.36	167	P	Pn	00 53 44.4	-0.9
	0.1nm,0.3s,baz=345,slow=10,SNR=6.5						
ASAR	Alice Springs	20.90	170	P	P	00 54 25.8	+0.3
	1.0nm,0.5s,baz=350,slow=11,SNR=14						
MKAR	Makanchi Array	64.99	326	P	P	01 00 23.4	+0.2
	0.2nm,0.6s,baz=109,slow=9.5,SNR=2.1						

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*IDC **14** 01:07:25.9±0.8, 2°.57N×94°.46E, h0^{km}, mb4.2/15, mb1 4.3/18, mb1mx4.1/44, mbtmp4.2/18, ML4.2/3, MS3.5/4, Ms1 3.5/4, ms1mx3.0/30, Error ellipse: s-maj=27.0km s-min=14.2km az=45.0*

*NEIC **14** 01:07:30.4±1.3, 2°.61N±0°.09×94°.55E±0°.07, h28^{km}±4^{km}, mb4.5/30, Error ellipse: s-maj=13.9km s-min=9.6km az=208.0*

*DJA **14** 01:07:32.2±0.5, 3°N±4°×9°5E±°, h22^{km}±3^{km}, M4.5/11, mB5.0/6, mb4.7/11, MLv4.5/9, Mw(mB)4.4/6*

ISC 14 01:07:29.4±0.5**, 2°.54N**±0°.06×**94°.53E**±0°.06**, h21^{km}, n131, σ1^{s}.30**/126**, mb4.4**/41**, MS3.8**/8**, 7C-3D, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TPTI		2.74	75	P	Pn	01 08 11.1	-1.2
GSI	Gunungsitoli	3.29	112	Pn	Pn	01 08 19.6	-0.1
GSI	Gunungsitoli	3.29	112	P	Pn	01 08 19.8	+0.1
LHMI	Lhok Sumawe	3.60	42		Pn	01 08 24.6	+0.6
LHMI	Lhok Sumawe	3.60	42	P	Pn	01 08 25.7	+1.7
RPSI	Rantau Prapat	4.39	88		Pn	01 08 35.0	0.0
PSI	Prapat	4.40	87	Pn	Pn	01 08 35.0	-0.2
	4.1nm,0.3s,baz=358,slow=1.6,SNR=27						
PBSI	Pulau Batu	4.55	124	P	Pn	01 08 38.1	+1.0
KULM	Kulim	6.69	66	Pn	Pn	01 09 06.2	-0.4
IPM	Ipoh	6.76	73		Pn	01 09 07.5	-0.1
PDSI	Padang	6.85	120	P	Pn	01 09 08.7	-0.1
BKNI	Bangkinang	6.87	109	Pn	Pn	01 09 09.1	+0.1
BKNI	Bangkinang	6.87	109	P	Pn	01 09 09.3	+0.3
	0.5nm1µm152nm,0.8s						
KRAB	Krabi	7.31	39	P	Pb	01 09 34.0	-1.7
	34µm,0.6s						
TRTT	Trang	7.36	44	P	Pb	01 09 29.0	-7.5
	30nm,1.2s						
KLSI		12.47	125	P	Pn	01 10 26.4	+0.6
	6.4nm,0.8s						
UTHA	Uthaitani	13.81	20	P	P	01 11 01.2	+8.8
PALK	Pallekele	14.55	289	Pn	Pn	01 10 54.3	0.0
	0.4nm,0.3s,baz=319,slow=23,SNR=1.2						
PALK				Sn	Sn	01 13 22.3	-13
	1.0nm,0.3s,baz=319,slow=14,SNR=4.7						
CHAI	Chaiyaphum	15.17	29	P	P	01 11 07.0	-0.6
	26nm,0.8s						
SUKH	Sukhothai	15.67	18	P	P	01 11 13.0	-0.1
	33nm,0.9s						
KSM	Kuching	15.81	94	Pn	Pn	01 11 10.4	-0.5
KSM				IAmb	IAmb	01 11 24.4	
	comp=Z,17nm,0.8s						
UTTA	Uttaradit	16.23	21	P	P	01 11 20.1	+0.9
	comp=Z,11nm,0.7s						
CM05	Chiang Mai Arr	16.35	15	P	P	01 11 20.5	-0.1
	comp=Z,100nmcomp=Z,12nm,1.0s						
CM04	Chiang Mai Arr	16.35	15	P	P	01 11 20.0	-0.7
	comp=Z,185nmcomp=Z,19nm,1.1s						
CM13	Chiang Mai Arr	16.36	15	P	P	01 11 20.8	+0.1
	comp=Z,86nmcomp=Z,10nm,1.2s						
CM01	Chiang Mai Arr	16.37	15	P	P	01 11 21.2	+0.3
	comp=Z,144nmcomp=Z,17nm,1.2s						
CM02	Chiang Mai Arr	16.38	15	P	P	01 11 21.1	+0.1
	comp=Z,154nmcomp=Z,17nm,1.0s						
CM09	Chiang Mai Arr	16.40	15	P	P	01 11 21.5	+0.3
	comp=Z,171nmcomp=Z,20nm,0.9s						
CM31	Chiang Mai Arr	16.40	15	Pn	Pn	01 11 17.6	-0.9
CMAR	Chiang Mai Arr	16.40	15	Pn	Pn	01 11 16.0	-2.5
	comp=Z,1.1nm,0.3s,baz=74,slow=30,SNR=2.4						
CMAR				LR	LR	01 17 16.9	
	comp=Z,102nm,20.2s,baz=226,slow=36						
CMAR	Chiang Mai Arr	16.40	15	Pn	Pn	01 11 16.5	-2.0
UBPT	Khong Chiam	16.63	40	P	P	01 11 28.5	+4.7
	comp=Z,4.6nm,1.0s						
UBPT	Khong Chiam	16.63	40	Pn	Pn	01 11 20.3	-1.1
CHTO	Chiang Mai	16.74	15	Pn	Pn	01 11 20.5	-2.4
CMMT	Chiang Mai	16.74	15	P	Pn	01 11 23.6	+0.8
	comp=Z,256nmcomp=Z,6.7nm,1.0s						
NONG	Nongkai	17.59	28	P	P	01 11 34.6	+0.3
	comp=Z,13µmcomp=Z,7.4nm,0.4s						
SLVN	Son La	20.79	25	P	P	01 12 09.0	-0.5
BBKI	Banjar Baru	21.16	106	P	P	01 12 14.0	+0.5
	comp=Z,5µmcomp=Z,36nm,0.9s						
BBKI				pP	pP	01 12 19.4	+1.1
	comp=Z,5µmcomp=Z,36nm,0.9s						
HYB	Hyderabad	21.55	314	i P	P	01 12 18.0	+0.3
QIZ	Qiongzhong	22.21	41	P	P	01 12 24.3	-0.4
QIZ				S	S	01 16 28.8	+0.4
QIZ				LR	LR		
	comp=Z,240nm,16.7s						
QIZ				LR	LR		
	comp=Z,180nm,17.3s						
QIZ				LR	LR		
	comp=Z,220nm,17.7s						
SHL	Shillong	23.03	354	P	P	01 12 32.0	-1.6
KMI	Kunming	23.81	19	⇑P	P	01 12 42.0	+0.7
KMI				pP	pP	01 12 47.9	+1.5
KMI				sP	pwP	01 12 52.0	+0.3
KMI				PP	PnPn	01 13 16.1	+6.6
KMI				S	S	01 16 53.9	-2.3
KMI				SS	SnSn	01 17 41.8	+6.2
KMI				pmax	pmax		
	comp=Z,14nm,1.8s						
KMI				pmax	pmax		
	comp=Z,43nm,3.5s						
KMI				LR	LR		
	comp=Z,240nm,10.4s						
KMI				LR	LR		
	comp=Z,130nm,9.3s						
KMI				LR	LR		
	comp=Z,270nm,9.8s						
MYLDM	Lahad Datu	24.06	83	P	P	01 12 42.8	-0.8
H08S2	Diego Garcia H	24.20	245	T	T	01 37 48.8	
	baz=66,slow=76,SNR=45						
H08S3	Diego Garcia H	24.20	245	T	T	01 37 57.9	
	baz=66,slow=76,SNR=662						
H08S1	Diego Carcia H	24.22	245	T	T	01 37 56.2	
	baz=66,slow=76,SNR=7.1						
ODAN	Odare	25.13	345	eP	P	01 12 54.1	+0.7
	comp=Z,17nm,0.8s						
RAMN	Ramite	25.43	343	eP	P	01 12 56.9	+0.7
	comp=Z,16nm,0.7s						
PKI	Pulchoki	26.37	342	eP	P	01 13 05.4	+0.6
GYA	Guiyang	26.48	25	eP	P	01 13 07.4	+1.9
GYA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
GYA				LR	LR		
	comp=Z,250nm,13.8s						
DMN	Daman	26.51	341	eP	P	01 13 07.0	+1.1
GUN	Gumba	26.55	343	eP	P	01 13 06.6	+0.2
	comp=Z,28nm,0.8s						
GKN	Gorkha	27.02	340	eP	P	01 13 10.3	-0.2
LSA	Lhasa	27.20	354	P	P	01 13 15.9	+3.5
LSA				pmax	pmax		
	comp=Z,58nm,0.7s						
LSA	Lhasa	27.20	354	P	P	01 13 10.6	-1.7
DANN	Dangsing	27.65	339	eP	P	01 13 15.9	-0.3
CD2	Chengdu	29.54	16	P	P	01 13 31.8	-0.9
CD2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
WHN	Wuhan	33.58	32	⇑P	P	01 14 15.0	+6.8
WHN				LR	LR		
	comp=Z,610nm,16.0s						
XAN	Xi'an	34.10	22	P	P	01 14 11.4	-1.4
XAN				pmax	pmax		
	comp=Z,18nm,0.8s						
XAN				LR	LR		
	comp=Z,230nm,11.6s						
XAN				LR	LR		
	comp=Z,160nm,11.9s						
XAN				LR	LR		
	comp=Z,270nm,16.3s						
XAN	Xi'an	34.10	22	P	P	01 14 11.3	-1.4
GTA	Gaotai	37.01	7	P	P	01 14 37.4	-0.4
GTA				pP	pP	01 14 44.9	+1.8
GTA				sP	pwP	01 14 47.8	-0.4
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
KSH	Kashi	40.49	338	P	P	01 15 05.5	-1.5
KSH				sP	pwP	01 15 17.8	0.0
KSH				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KSH				pmax	pmax		
	comp=Z,260nm,5.9s						
HHC	Hu-ho-hao-te	41.12	20	eP	P	01 15 12.8	+0.6
HHC				pmax	pmax		
	comp=Z,7.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,110nm,6.3s						
H01W3	Cape Leeuwin H	41.53	155	T	T	01 59 53.8	
	baz=332,slow=76,SNR=44						
H01W2	Cape Leeuwin H	41.54	155	T	T	01 59 59.4	
	baz=332,slow=76,SNR=38						
H01W1	Cape Leeuwin H	41.55	155	T	T	01 59 55.8	
	baz=332,slow=76,SNR=42						
WMQ	Urumqi	41.55	353	eP	P	01 15 16.3	+0.7
SHLS	Shalkode	42.61	344	eP	P	01 15 24.0	-0.4
	baz=344						
UZB	Uzynbulak	42.73	343	eP	P	01 15 25.5	+0.1
	comp=Z,5.0nm,0.7s,baz=343						
SATY	Saty	42.83	343	eP	P	01 15 26.1	0.0
	baz=343						
KPKS	Kokpek	43.12	343	eP	P	01 15 28.6	+0.1
	comp=Z,3.2nm,0.6s,baz=343						
MDOK	Medeo	43.34	341	eP	P	01 15 30.5	+0.2
	baz=341						
AAA	Alma-Ata	43.43	341	eP	P	01 15 30.9	+0.1
	baz=341						
KUU	Kurty	44.23	341	eP	P	01 15 36.7	-0.6
	comp=Z,4.6nm,1.1s,baz=341						
WRA	Warramunga Arr	45.01	122	P	P	01 15 43.5	-0.3
	comp=Z,3.4nm,0.8s,baz=299,slow=8.9,SNR=19						
IUG	Iuzhnay	45.13	334	eP	P	01 15 44.4	-0.2
	baz=334						
WR0	Warramunga Arr	45.19	122	P	P	01 15 45.7	+0.4
WR0				IAmb	IAmb	01 15 46.8	
	comp=Z,6.9nm,0.9s						
MK31	Makanchi Array	45.35	348	P	P	01 15 45.9	-0.2
MK31				IAmb	IAmb	01 15 54.6	
	comp=Z,4.8nm,0.8s						
MKAR	Makanchi Array	45.35	348	P	P	01 15 45.9	-0.2
	comp=Z,4.1nm,0.6s,baz=165,slow=8.2,SNR=62						
MAKZ	Makanchi	45.43	348	P	P	01 15 47.0	+0.3
MAKZ				IAmb	IAmb	01 15 55.1	
	comp=Z,4.5nm,0.7s						
ZSN	Zaisan	45.51	351	eP	P	01 15 47.9	+0.4
	baz=351						
KK31	Karatay Array	45.71	335	P	P	01 15 49.0	0.0
KKAR	Karatay Array	45.71	335	P	P	01 15 48.5	-0.5
BTLS	Baital	46.01	340	eP	P	01 15 50.5	-0.8
	baz=340						
SONM	Songino Array	46.27	11	P	P	01 15 53.1	-0.4
	comp=Z,2.9nm,0.7s,baz=190,slow=8.7,SNR=24						
SONM				PcP	PcP	01 17 28.2	-0.6
	comp=Z,1.3nm,0.7s,baz=194,slow=4.1,SNR=3.7						
SONM	Songino Array	46.27	11	P	P	01 15 53.2	-0.4
KSAR	Wonju Array Be	46.30	37	P	P	01 15 53.9	+0.1
ASAR	Alice Springs	46.33	126	P	P	01 15 54.9	+0.5
	comp=Z,1.4nm,0.7s,baz=298,slow=8.1,SNR=14						
ASAR				PcP	PcP	01 17 29.8	+0.4
	comp=Z,1.2nm,0.8s,baz=304,slow=3.5,SNR=7.0						
KSRS	Korea Array	46.34	37	P	P	01 15 53.9	-0.1
	comp=Z,1.5nm,0.7s,baz=231,slow=8.4,SNR=5.1						
KSRS				LR	LR	01 39 09.8	
	comp=Z,56nm,18.4s,baz=237,slow=41						
ULN	Ulaanbaatar	46.43	12	P	P	01 15 54.3	-0.6
ULN				IAmb	IAmb	01 16 02.3	
	comp=Z,3.3nm,0.8s						
GEYT	Alibeck	48.49	321	P	P	01 16 10.8	-0.1
	comp=Z,3.2nm,0.8s,baz=135,slow=16,SNR=7.6						
GEYT	Alibeck	48.49	321	P	P	01 16 11.8	+0.8
GYA0B	ALIBECK ARRAY	48.49	321	P	P	01 16 10.2	-0.7
GYA0B				IAmb	IAmb	01 16 12.4	
	comp=Z,6.5nm,1.0s						
SEM	Semipalatinsk	49.21	348	eP	P	01 16 15.6	-0.8
	baz=348						
KURK	Kurchatov	49.85	347	P	P	01 16 20.6	-0.4
KURK				IAmb	IAmb	01 16 22.0	
	comp=Z,3.6nm,0.8s						
BRZS	Berezniki	50.78	342	eP	P	01 16 27.2	-0.9
	baz=342						
RAYN	Ar Rayn	51.77	298	P	P	01 16 36.3	+0.2
RAYN				IAmb	IAmb	01 16 38.3	
	comp=Z,4.0nm,0.8s						
ZAA0	Zalesovo Array	51.86	353	P	P	01 16 35.9	-0.2
ZAA0				IAmb	IAmb	01 16 37.4	
	comp=Z,7.0nm,1.1s						
ZALV	Zalesovo Beam	51.86	353	P	P	01 16 36.0	-0.1
	comp=Z,2.1nm,0.5s,baz=182,slow=4.5,SNR=11						
MJAR	Matsushiro Arr	52.56	44	LR	LR	01 41 18.8	
	comp=Z,58nm,18.4s,baz=270,slow=39						
USRK	Ussuriysk Ar.	53.06	33	P	P	01 16 45.3	+0.1
	comp=Z,2.5nm,0.8s,baz=223,slow=4.7,SNR=4.3						
USRK	Ussuriysk Ar.	53.06	33	P	P	01 16 44.1	-1.1
BRVK	Borovoye	54.20	342	P	P	01 16 52.2	-1.2
BRVK				IAmb	IAmb	01 16 53.6	

	comp=Z,4.2nm,0.7s						
ABKAR	Akbulak array	55.10	333	P	P	01 16 60.0	0.0
ABKAR				IAmb	IAmb	01 17 00.6	
	comp=Z,5.7nm,0.9s						
STKA	Stephens Creek	56.23	131	P	P	01 17 08.9	+0.4
	comp=Z,1.8nm,0.7s,baz=323,slow=8.7,SNR=4.3						
MARD	Mardin	60.16	312	P	P	01 17 35.9	-0.1
KBZ	Khabaz	61.32	320	P	P	01 17 43.6	0.0
	comp=Z,1.7nm,0.9s,baz=152,slow=6.5,SNR=5.3						
YAK	Yakutsk	64.92	17	P	P	01 18 07.0	-0.1
BRTR	Keskin Array B	66.24	313	P	P	01 18 15.4	-1.0
	comp=Z,1.5nm,0.7s,baz=134,slow=5.3,SNR=5.2						
BRTR	Keskin Array B	66.24	313	P	P	01 18 14.7	-1.7
NRIK	Noril'sk	66.85	357	P	P	01 18 18.3	-1.2
	comp=Z,3.1nm,0.8s,baz=148,slow=6.2,SNR=7.9						
NRIK	Noril'sk	66.85	357	P	P	01 18 19.6	+0.1
KLMR	Klimovskoe	71.41	335	*e*P	P	01 18 49.6	+1.7
KLMR				AMP		01 18 56.9	
	comp=Z,32nm,1.5s						
PETK	Petropavlovsk-	72.12	34	LR	LR	01 51 50.6	
	comp=Z,29nm,20.3s,baz=269,slow=37						
TIXI	Tiksi	72.36	11	P	P	01 18 52.7	-0.7
TIXI				IAmb	IAmb	01 19 01.3	
	comp=Z,6.4nm,1.0s						
SORM	Soroca	72.36	320	⇑P	P	01 18 53.0	-0.9
AKASG	Malin Array Be	72.58	323	P	P	01 18 53.5	-1.6
	comp=Z,1.1nm,0.5s,baz=84,slow=5.4,SNR=5.5						
AKASG	Malin Array Be	72.58	323	P	P	01 18 53.4	-1.6
VRI	Vrincioaia	72.83	317	⇑P	P	01 18 57.3	+0.6
PLOR	Plostina	72.88	317	⇑P	P	01 18 58.0	+1.0
TESR	Tescani	73.04	318	⇓P	P	01 18 58.4	+0.4
MLR	Muntele Rosu	73.27	317	⇑P	P	01 19 00.5	+0.9
ARR	Arges	74.14	317	⇓P	P	01 19 04.2	-0.4
BURAR	Bucovina Array	74.26	319	⇓P	P	01 19 06.3	+1.0
BURAR	Bucovina Array	74.26	319	P	P	01 19 04.6	-0.7
DRGR		75.75	318	⇑P	P	01 19 14.0	+0.2
KOLS	Kolonicke sedl	76.47	320	*e*P	P	01 19 19.1	+1.3
FINES	FINESS Array B	77.59	333	P	P	01 19 22.7	-1.0
	comp=Z,2.5nm,0.8s,baz=123,slow=7.0,SNR=6.2						
GERES	GERESS Array B	82.05	319	P	P	01 19 48.2	-0.2
	comp=Z,1.5nm,0.8s,baz=104,slow=5.6,SNR=9.5						
TXAR	Lajitas Array	143.83	28	PKP	PKPbc	01 27 02.6	+1.0
	comp=Z,0.3nm,0.6s,baz=294,slow=0.2,SNR=3.8						
CPUP	Villa Florida	144.09	226	PKP	PKPab	01 27 03.1	+1.2
	comp=Z,1.3nm,0.5s,baz=87,slow=5.6,SNR=5.6						

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*AEIC **14** 01:11:40±0.7, 63°.09N±0°.04×150°.93W±0°.04, h125^{km}±4^{km}, ML3.1, ML3.3/87(NEIC), Error ellipse: s-maj=5.6km s-min=1.2km az=205.0*

*IDC **14** 01:11:40.1±7.2, 62°.98N×150°.72W, h99^{km}±69^{km}, mb2.9/1, mb1 3.3/3, mb1mx2.9/33, mbtmp3.2/3, ML3.1/2, Error ellipse: s-maj=69.1km s-min=59.7km az=17.0*

*NEIC **14** 01:11:40.1±0.8, 63°.10N±0°.03×150°.95W±0°.08, h125^{km}±5^{km}, Error ellipse: s-maj=5.5km s-min=3.8km az=90.0*

ISC 14 01:11:40.4±1.0**, 63°.09N**±0°.03×**150°.92W**±0°.04**, h126**^{km}±6^{km}**, n155, σ0^{s}.65**/140**, Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRF	Thorofare Moun	0.46	38		Pn	01 11 59.0	+0.2
TRF					Sn	01 12 12.7	-0.2
TRF	Thorofare Moun	0.46	38	IAML		01 12 13.7	
	comp=N,398nm,0.6s						
TRF				IAML		01 12 13.9	
	comp=E,654nm,0.6s						
KTH	Kantishna Hill	0.46	0		Pn	01 11 58.9	+0.1
KTH					Sn	01 12 12.5	-0.3
KTH	Kantishna Hill	0.46	0	IAML		01 12 12.8	
	comp=E,724nm,0.7s						
HUR	Hurricane	0.60	101		Pn	01 12 00.1	+0.6
PPLA	Purkeypile	0.61	252		Pn	01 11 59.8	0.0
PPLA					Sn	01 12 14.3	-0.2
CAST	Castle Rocks	0.62	302		Pn	01 11 59.4	-0.3
CAST					Sn	01 12 13.3	-1.0
CUT	Chulitna	0.75	156	P	Pn	01 12 01.2	+0.6
	baz=336,SNR=6.4						
CUT	Chulitna	0.75	156		Pn	01 12 00.9	+0.2
CUT					Sn	01 12 16.1	+0.2
RND	Reindeer	0.99	70		Pn	01 12 02.8	0.0
RND	Reindeer	0.99	70	IAML		01 12 22.5	
	comp=N,287nm,0.4s						
CHUM	Lake Minchumin	1.01	322		Pn	01 12 03.0	+0.1
CHUM					Sn	01 12 19.5	-0.5
BPAW	Bear Paw Mtn.	1.01	358		Pn	01 12 02.9	-0.1
BPAW					Sn	01 12 19.3	-0.9
BPAW	Bear Paw Mtn.	1.01	358	IAML		01 12 19.9	
	comp=E,365nm,0.7s						
BPAW				IAML		01 12 20.0	
	comp=N,320nm,0.9s						
WAT2	Susitna Watana	1.07	96		Pn	01 12 03.5	-0.2
MCK	McKinley	1.10	53	P	Pn	01 12 04.2	+0.3
	baz=235,SNR=26						
MCK	McKinley	1.10	53		Pn	01 12 04.0	+0.2
MCK					Sn	01 12 21.2	-0.5
WAT1	Susitna Watana	1.11	103		Pn	01 12 04.0	0.0
SKT	Skwentna	1.15	194		Pn	01 12 04.0	-0.4
BWN	Browne	1.26	30		Pn	01 12 06.2	+0.7
BWN					Sn	01 12 25.5	+0.9
BWN	Browne	1.26	30	IAML		01 12 28.7	
	comp=N,205nm,0.8s						
WAT6	Susitna Watana	1.55	108		Pn	01 12 08.6	-0.2
GHO	Glory Hole Cre	1.62	144		Pn	01 12 09.6	0.0
SUA	Susitna One	1.64	177		Pn	01 12 09.6	-0.2
SUA					Sn	01 12 31.8	-0.4
SUA	Susitna One	1.64	177	IAML		01 12 37.0	
	comp=N,163nm,0.4s						
STLK	Strandline Lak	1.66	195		Pn	01 12 09.6	-0.4
NEA2	Nenana	1.71	28	P	Pn	01 12 10.4	-0.3
	baz=209,SNR=66						
NEA2	Nenana	1.71	28		Pn	01 12 10.3	-0.3
PMR	Palmer	1.72	150		Pn	01 12 10.3	-0.3
PMR	Palmer	1.72	150	IAML		01 12 39.0	
	comp=N,198nm,0.6s						
SML	Sawmill	1.77	136		Pn	01 12 11.0	-0.3
WRH	Wood River Hil	1.87	41		Pn	01 12 12.4	-0.1
SPCG	Spurr Capps Gl	1.88	196		Pn	01 12 12.5	-0.2
SPCP	Crater Peak Br	1.92	198		Pn	01 12 13.0	-0.2
MLY	Manley	1.95	2	P	Pn	01 12 13.4	0.0
	baz=182,SNR=49						
MLY	Manley	1.95	2		Pn	01 12 13.3	0.0
SPCN	Chakachatna No	1.97	198		Pn	01 12 14.3	+0.6
FIS	Fire Island	1.98	170		Pn	01 12 14.8	+1.0
KNK	Knik Glacier	2.04	145		Pn	01 12 14.6	0.0
KNK	Knik Glacier	2.04	145	IAML		01 12 42.8	
	comp=N,242nm,0.4s						
CCB	Clear Creek Bu	2.08	40		Pn	01 12 14.9	-0.1
RC01	Rabbit Creek A	2.09	164	P	Pn	01 12 14.5	-0.6
	baz=345,SNR=9.2						
RC01	Rabbit Creek A	2.09	164		Pn	01 12 14.8	-0.4
SCM	Sheep Creek Mo	2.09	126		Pn	01 12 14.7	-0.6
SCM	Sheep Creek Mo	2.09	126	IAML		01 12 43.5	
	comp=N,206nm,0.4s						
I23K	Minto, Yukon-K	2.17	18	P	Pn	01 12 16.4	+0.2
	baz=199,SNR=117						
I23K	Minto, Yukon-K	2.17	18		Pn	01 12 16.2	+0.2
HDA	Harding Lake	2.21	51	P	Pn	01 12 16.3	-0.3
	baz=235,SNR=49						
HDA	Harding Lake	2.21	51		Pn	01 12 16.3	-0.3
HDA	Harding Lake	2.21	51	IAML		01 12 45.5	
	comp=N,110nm,0.7s						
HDA				IAML		01 12 48.2	
	comp=E,157nm,0.3s						
MDM	Murphy Dome	2.22	31		Pn	01 12 16.6	-0.1
TCOL	CIGO, UAF Yank	2.24	36	P	Pn	01 12 17.1	+0.2
	baz=218,SNR=14						
TCOL	CIGO, UAF Yank	2.24	36		Pn	01 12 17.1	+0.1
TCOL	CIGO, UAF Yank	2.24	36	IAML		01 12 48.9	
	comp=N,169nm,0.6s						
TCOL				IAML		01 12 55.3	
	comp=E,112nm,0.6s						
COLA	College	2.24	36		Pn	01 12 16.8	-0.2
COLA	College	2.24	36	IAML		01 12 48.3	
	comp=E,129nm,0.6s						
COLA				IAML		01 12 48.9	
	comp=E,180nm,0.6s						
TTA	Tatalina	2.33	268		Pn	01 12 17.7	-0.5
PS08	TAPS Pump Stn8	2.33	50		Pn	01 12 18.5	+0.4
TT01	Tatalina	2.33	268		Pn	01 12 17.6	-0.5
CAPN	Captain Cook N	2.34	183	P	Pn	01 12 20.1	+2.0
	baz=2.5,SNR=8.5						
CAPN	Captain Cook N	2.34	183		Pn	01 12 19.9	+1.7
M24K	Tolsona, Glenn	2.41	112	P	Pn	01 12 19.6	+0.4
	baz=296,SNR=7.5						
M24K	Tolsona, Glenn	2.41	112		Pn	01 12 19.5	+0.3
M24K	Tolsona, Glenn	2.41	112	IAML		01 12 57.2	
	comp=N,119nm,1.1s						
M24K				IAML		01 12 58.7	
	comp=E,159nm,0.9s						
IL31		2.45	45		Pn	01 12 19.4	-0.2
ILAR	Eielson Array	2.45	45	P	Pn	01 12 19.4	-0.3
	comp=E,7.6nm,0.3s,baz=226,slow=13,SNR=362						
ILAR				S	Sn	01 12 48.9	-1.1
	comp=E,3.3nm,0.3s,baz=230,slow=16,SNR=8.7						
ILAR	Eielson Array	2.45	45	Pn	Pn	01 12 18.8	-0.9
PAX	Paxson	2.49	90		Pn	01 12 20.6	+0.4
POKR	Poker Plat Res	2.54	35	P	Pn	01 12 21.1	+0.2
	baz=218,SNR=16						
POKR	Poker Plat Res	2.54	35		Pn	01 12 21.0	+0.2
PWL	Port Wells	2.55	150		Pn	01 12 20.5	-0.5
SLKM	Skilak Lake	2.62	172		Pn	01 12 21.5	-0.4
DFR	Drift River	2.65	199		Pn	01 12 21.7	-0.6
O22K	Cooper Landing	2.68	167		Pn	01 12 22.2	-0.4
NCT	North Crescent	2.71	201		Pn	01 12 22.9	-0.2
RSO	Redoubt South	2.78	199		Pn	01 12 23.5	-0.6
PS06	TAPS Pump Stn6	2.82	10		Pn	01 12 24.7	+0.3
RED	Redoubt Volcan	2.82	199		Pn	01 12 24.8	+0.2
KLU	Klutina	2.83	122		Pn	01 12 23.8	-0.9
KLU	Klutina	2.83	122	IAML		01 13 09.6	
	comp=E,96nm,0.8s						
SVW2	Sparrevohn	2.97	230		Pn	01 12 25.6	-0.8
SEW	Seward	3.08	166		Pn	01 12 27.4	-0.4
DIV	Divide	3.12	127		Pn	01 12 27.1	-1.3
DOT	Dot Lake	3.14	77		Pn	01 12 28.5	-0.1
IM03		3.15	338		Pn	01 12 28.6	-0.1
IMAR	Indian Mountai	3.15	338		Pn	01 12 28.0	-0.7
PS12	TAPS Pump St12	3.15	118		Pn	01 12 27.9	-0.8
SCRK	Sand Creek	3.23	71		Pn	01 12 29.9	0.0
IVE	Iliamna Volcan	3.25	199		Pn	01 12 30.1	0.0
MENT	Mentasta	3.29	89		Pn	01 12 30.7	+0.1
MENT	Mentasta	3.29	89	IAML		01 13 20.4	
	comp=E,74nm,0.5s						
N25K	Chitina, Valde	3.30	114		Pn	01 12 30.6	-0.2
N25K	Chitina, Valde	3.30	114	IAML		01 13 11.0	
	comp=E,46nm,0.5s						
N25K				IAML		01 13 12.1	
	comp=N,63nm,0.6s						
BRLK	Bradley Lake	3.34	180		Pn	01 12 31.1	-0.2
BRLK	Bradley Lake	3.34	180	IAML		01 13 11.5	
	comp=E,68nm,0.5s						
BRLK				IAML		01 13 11.6	
	comp=N,87nm,0.7s						
BRSE	Bradley Lake S	3.36	178		Pn	01 12 30.9	-0.6
PRP	Porcupine Dome	3.38	42		Pn	01 12 31.6	-0.3
HIN	Hinchinbrook I	3.43	140		Pn	01 12 32.0	-0.4
HOM	Homer	3.46	186		Pn	01 12 33.1	+0.2
EYAK	Cordova Ski Ar	3.54	134		Pn	01 12 33.4	-0.4
CNPM	China Poot	3.58	183		Pn	01 12 34.1	-0.3
CNPM	China Poot	3.58	183	IAML		01 13 16.4	
	comp=E,56nm,0.5s						
CNPM				IAML		01 13 17.4	
	comp=N,61nm,0.7s						
OPT	Oil Point	3.63	199		Pn	01 12 34.7	-0.3
BMRM	Bremner River	3.66	123		Pn	01 12 34.3	-1.2
GLB	Gilahina Butte	3.71	113		Pn	01 12 35.9	-0.3
GLB	Gilahina Butte	3.71	113	IAML		01 13 19.7	
	comp=N,40nm,0.8s						
GLB				IAML		01 13 20.0	
	comp=E,34nm,0.4s						
PS05	TAPS Pump Stn5	3.74	2		Pn	01 12 36.8	+0.4
GOAT	Goat Mountain	3.87	128		Pn	01 12 37.8	-0.5
AU22	Augustine Moun	3.92	199		Pn	01 12 40.3	+1.5
AUL	Augustine Lava	3.92	199		Pn	01 12 40.1	+1.3
VRDI	Verde Repeater	3.97	115		Pn	01 12 38.9	-0.8
VRDI	Verde Repeater	3.97	115	IAML		01 13 40.9	
	comp=N,41nm,4.3s						
RAGM	Ragged Mountai	4.02	130		Pn	01 12 40.2	-0.1
MCARA	McCarthy VSAT	4.07	111		Pn	01 12 40.9	0.0
MCARA	McCarthy VSAT	4.07	111	IAML		01 13 33.3	
	comp=E,49nm,0.6s						
MCARA				IAML		01 13 35.1	
	comp=N,43nm,0.8s						
BC03		4.16	86		Pn	01 12 41.5	-0.5
BCAR	Beaver Creek A	4.16	86		Pn	01 12 40.9	-1.1
COLD	Coldfoot	4.16	4	P	Pn	01 12 42.4	+0.4
	baz=184,SNR=12						
COLD	Coldfoot	4.16	4		Pn	01 12 41.9	-0.1
HMT	Hamilton	4.21	128	Pn	Pn	01 12 42.2	-0.5
FYU	Fort Yukon	4.25	32	Pn	Pn	01 12 42.5	-0.7
CRQM	Cirque	4.36	119	Pn	Pn	01 12 44.8	-0.1
CRQM				IAML		01 13 45.7	
	comp=N,41nm,2.4s						
BERG	Berg Lake	4.37	125		Pn	01 12 44.4	-0.5
PTPK	Patty Peak	4.41	112		Pn	01 12 45.5	0.0
TGL	Tana Glacier	4.49	118		Pn	01 12 45.5	-0.9
TGL	Tana Glacier	4.49	118	IAML		01 13 55.8	
	comp=E,29nm,1.4s						
TGL				IAML		01 14 00.2	
	comp=N,32nm,1.5s						
BALM	Baldy	4.53	113		Pn	01 12 46.4	-0.7
BALM	Baldy	4.53	113	IAML		01 13 37.0	
	comp=N,26nm,2.8s						
BALM				IAML		01 14 08.6	
	comp=E,20nm,4.0s						
KIAG	Kiagna River	4.58	114		Pn	01 12 47.0	-0.9
EGAK	Eagle	4.63	64		Pn	01 12 48.2	0.0
EGAK	Eagle	4.63	64	IAML		01 13 56.2	
	comp=E,22nm,1.6s						
EGAK				IAML		01 13 56.5	
	comp=E,31nm,1.3s						
BVCY	Beaver Creek	4.68	94		Pn	01 12 48.8	-0.1
BARN	Barnard Glacie	4.81	111		Pn	01 12 51.0	+0.1
BARN	Barnard Glacie	4.81	111	IAML		01 13 51.8	
	comp=E,21nm,3.7s						
BARN				IAML		01 15 22.5	
	comp=N,20nm,4.4s						
KULT	Kultieth River	4.84	122		Pn	01 12 50.9	-0.3
YUK2	White River	4.86	101		Pn	01 12 51.9	+0.4
GRNC	Granite Creek	4.94	115		Pn	01 12 52.0	-0.7
CTGM	Chitina Glacie	4.99	111		Pn	01 12 53.1	-0.2
CTGM	Chitina Glacie	4.99	111	IAML		01 14 31.6	
	comp=E,23nm,4.1s						
CTGM				IAML		01 15 52.8	
	comp=N,24nm,4.2s						
YUK3	Moose Creek	5.04	101		Pn	01 12 54.3	+0.4
BM03	Burnt Mountain	5.09	29		Pn	01 12 54.4	-0.1
BMAR	Burnt Mountain	5.10	29		Pn	01 12 54.3	-0.3
LOGN	Logan Glacier	5.20	111		Pn	01 12 55.9	-0.2
KCG	Knife Ck. Glac	5.22	205		Pn	01 12 56.6	+0.3
DAWY	Dawson	5.24	74		Pn	01 12 56.4	-0.2
KABU	Katmai Buttres	5.29	206		Pn	01 12 57.5	+0.3
TABL	Table Mountain	5.35	115		Pn	01 12 57.4	-0.7
KDAK	Kodiak Island	5.39	190	Pn	Pn	01 12 57.1	-1.4
TOLK	Toolik Lake Re	5.60	5		Pn	01 13 02.0	+0.7
OHAK	Old Harbor	6.01	192		Pn	01 13 04.6	-2.2
SII	Sitkinak Islan	6.76	196		Pn	01 13 14.3	-2.6
EPYK	Eagle Plains	6.91	55	P	Pn	01 13 19.4	+0.6
	baz=248,SNR=6.0						
EPYK	Eagle Plains	6.91	55		Pn	01 13 17.2	-1.7
YKA	Yellowknife Ar	16.48	76	P	P	01 15 23.9	-0.4
	comp=N,0.1nm,0.3s,baz=285,slow=9.3,SNR=4.1						
TXAR	Lajitas Array	45.28	116	P	P	01 19 46.4	+1.2
	comp=N,0.2nm,0.5s,baz=325,slow=5.8,SNR=3.8						

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*IDC **14** 01:17:03.5±4.6, 19°.93S×178°.56W, h562^{km}±34^{km}, mb2.6/6, mb1 3.0/7, mb1mx2.9/21, mbtmp3.5/7, Error ellipse: s-maj=132.8km s-min=22.4km az=152.0*

ISC 14 01:17:01.9±1.6**, 20°.2S**±0°.4×**178°.4W**±0°.2**, h550**^{km}**, n8, σ0^{s}.58**/8**, mb3.1**/6**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.16	306	P	P	01 18 25.5	+0.4
	2.3nm,0.3s,baz=290,slow=23,SNR=14						
ASAR	Alice Springs	44.22	256	P	P	01 24 23.0	+0.1
	0.3nm,0.5s,baz=96,slow=7.5,SNR=4.3						
WRA	Warramunga Arr	44.27	262	P	P	01 24 23.1	-0.2
	0.1nm,0.3s,baz=96,slow=7.8,SNR=5.7						
NVAR	Mina Array Bea	81.07	44	P	P	01 28 19.9	-0.4
	0.2nm,0.5s,baz=228,slow=8.0,SNR=2.1						
TXAR	Lajitas Array	87.22	57	P	P	01 28 51.1	+0.6
	0.3nm,0.8s,baz=243,slow=4.0,SNR=2.0						
ILAR	Eielson Array	88.11	13	P	P	01 28 53.3	-0.4
	0.3nm,0.6s,baz=216,slow=4.8,SNR=4.3						
PDAR	Pinedale Array	89.01	43	P	P	01 28 59.1	+0.4
	0.2nm,0.5s,baz=190,slow=2.7,SNR=2.7						
ARCES	ARCESS Array B	128.57	349	PKP	PKPdf	01 35 05.1	-0.8
	2.7nm,0.8s,baz=36,slow=3.4,SNR=1.5						

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*NOU **14** 01:24:49.3, 37°.26S×177°.07E, h242^{km}, MLv3.7, Off E. Coast of N. Island, N.Z.*

WEL 14 01:25:00.5, 38°S±3°×**17°7E**±°**, h157**^{km}±5^{km}**, M2.6**/24**, MLv2.6**/24**, Error ellipse: s-maj=0.0km s-min=0.0km az=174.4, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGRZ	Tauranga	0.30	258	P	Pn	01 25 21.8	0.0
OMRZ	Omania	0.49	206	P	Pn	01 25 22.7	+0.1
URZ	Urewera	0.70	148	S	Sn	01 25 40.9	-0.6
MUGZ	Murupara	0.82	173	P	Pn	01 25 24.3	-0.2
MUGZ				S	Sn	01 25 43.5	+0.4
RUGZ	Raukumara Rang	0.88	110	P	Pn	01 25 24.5	-0.6
HAZ	Te Kaha	0.91	96	P	Pn	01 25 24.8	-0.4
HAZ				S	Sn	01 25 43.6	-0.4
ALRZ	Allen Road	0.92	194	P	Pn	01 25 25.5	+0.2
MWZ	Matawai	0.97	134	P	Pn	01 25 25.4	-0.3
RTZ	Ruatahuna	0.98	164	P	Pn	01 25 25.8	-0.1
RTZ				S	Sn	01 25 45.4	-0.1
TLZ	Tolley Road	1.09	232	P	Pn	01 25 27.1	+0.4
PKGZ	Pakihiroa	1.16	101	P	Pn	01 25 28.4	+1.0
KUZ	Kuaotunu	1.18	321	P	Pn	01 25 27.4	0.0
TWGZ	Tauwhareparae	1.18	116	P	Pn	01 25 28.1	+0.6
MTHZ	Maungataniwha	1.20	172	P	Pn	01 25 27.5	-0.2
MTHZ				S	Sn	01 25 48.0	-0.6
SNGZ	Shannon Statio	1.24	154	P	Pn	01 25 28.0	-0.1
SNGZ				S	Sn	01 25 48.4	-1.0
WATZ	Wairara	1.26	214	P	Pn	01 25 28.9	+0.6
RAHZ	Arahi	1.30	164	P	Pn	01 25 28.7	+0.1
RAHZ				S	Sn	01 25 50.2	0.0
MKAZ	Moumakai	1.30	295	P	Pn	01 25 29.0	+0.4
MXZ	Matakaoa Point	1.33	86	P	Pn	01 25 29.6	+0.8
PUZ	Puketiti	1.34	108	P	Pn	01 25 32.1	+3.1
RIGZ	Rimuhau	1.36	140	P	Pn	01 25 29.5	+0.2
WMGZ	Waiomatatini S	1.42	97	P	Pn	01 25 30.0	+0.3
NMHZ	Naumai	1.43	175	P	Pn	01 25 30.8	+0.8
WIAZ	Waiheke Island	1.48	306	P	Pn	01 25 30.8	+0.3
BKZ	Black Stump Fm	1.50	184	P	Pn	01 25 30.1	-0.5
KATZ	Kakaramea	1.50	209	P	Pn	01 25 31.5	+0.7
ARHZ	Aropaoanui	1.62	170	P	Pn	01 25 32.4	+0.6
HIZ	Hauiti	1.64	238	P	Pn	01 25 32.6	+0.5
WTVZ	West Tongariro	1.66	209	P	Pn	01 25 32.7	+0.2
OTVZ	Oturere	1.68	207	P	Pn	01 25 32.9	+0.3
TWVZ	Taurewa	1.69	214	P	Pn	01 25 33.2	+0.5
NGZ	Ngauruhoe	1.71	208	P	Pn	01 25 33.3	+0.4
KWHZ	Kaweka Forest	1.76	185	P	Pn	01 25 33.3	-0.1
KWHZ				S	Sn	01 25 57.6	-1.2
MCHZ	McNeill Hill	1.77	179	P	Pn	01 25 34.0	+0.5
TUVZ	Tukino	1.77	205	P	Pn	01 25 33.7	0.0
MHGZ	Mahia Peninsul	1.79	146	P	Pn	01 25 33.9	+0.2
TRVZ	Turoa	1.84	207	P	Pn	01 25 34.5	0.0
WNVZ	Wahianoa	1.85	206	P	Pn	01 25 34.2	-0.2
MOVZ	Moawhango	1.87	201	P	Pn	01 25 33.9	-0.7
BHHZ	Black Hill Sta	1.88	194	P	Pn	01 25 33.9	-0.8
BHHZ				S	Sn	01 25 58.2	-2.8
KRHZ	Kereru	1.98	186	P	Pn	01 25 35.6	-0.3
CKHZ	Cape Kidnapper	2.02	170	P	Pn	01 25 36.4	+0.1
VRZ	Vera Road	2.07	225	P	Pn	01 25 38.3	+1.4
KAHZ	Kahuranaki	2.13	175	P	Pn	01 25 37.3	-0.3
PNHZ	Pukenui	2.27	189	P	Pn	01 25 38.1	-1.1
PXZ	Pawanui	2.37	176	P	Pn	01 25 39.8	-0.5
WPHZ	Waipukurau	2.40	184	P	Pn	01 25 39.9	-0.9
TSZ	Takapari Road	2.45	192	P	Pn	01 25 40.2	-1.2
PKE	Pukeiti	2.58	233	P	Pn	01 25 44.2	+1.2
KHEZ	Kahui Hut	2.62	231	P	Pn	01 25 45.1	+1.5
DVHZ	Dannevirke	2.65	188	P	Pn	01 25 42.0	-1.8
PRWZ	Pori Road	2.93	190	P	Pn	01 25 45.9	-1.4
BFZ	Birch Farm	3.03	186	P	Pn	01 25 46.5	-1.9
MRZ	Mangatainoka R	3.10	195	P	Pn	01 25 47.1	-2.3
TIWZ	Tintock	3.16	190	P	Pn	01 25 48.4	-1.8
HOWZ	Holdsworth Sta	3.34	195	P	Pn	01 25 49.8	-2.7
KIW	Kapiti Island	3.46	202	P	Pn	01 25 51.4	-2.6
TMWZ	Te Maipa	3.48	189	P	Pn	01 25 51.4	-2.9
CAW	Cannon Point	3.65	199	P	Pn	01 25 53.5	-2.8
TRWZ	Traveller	3.80	191	P	Pn	01 25 55.4	-2.9
TCW	Tory Channel	3.98	207	P	Pn	01 25 57.9	-2.7
PLWZ	Palliser	4.04	195	P	Pn	01 25 57.9	-3.6
KHZ	Kahutara	5.31	206	P	Pn	01 26 15.0	-3.0

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*TIR **14** 01:37:04.8, 41°.12N×20°.21E, h0^{km}±1^{km}, Md3.0*

*SKO **14** 01:37:05.8, 41°.02N×20°.07E, h4^{km}*

*ATH **14** 01:37:05.9, 41°.15N×20°.24E, h10^{km}±31^{km}, ML2.1/4, Error ellipse: s-maj=31.6km s-min=1.4km az=0.0*

*BEO **14** 01:37:05.5±0.7, 41°.00N×20°.12E, h0^{km}, ML2.0/7*

*PDG **14** 01:37:06.7±0.1, 41°.14N×20°.10E, h10^{km}, ML2.2/13, Error ellipse: s-maj=0.1km s-min=0.1km az=0.0*

*THE **14** 01:37:06.0, 41°.09N×20°.18E, h9^{km}±3^{km}, ML2.0/7, Error ellipse: s-maj=3.5km s-min=0.5km az=320.0*

ISC 14 01:37:05.8±1.1**, 41°.08N**±0°.02×**20°.14E**±0°.02**, h4**^{km}±9^{km}**, n75, σ0^{s}.99**/116**, 6C-5D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	Tirane	0.34	323	P	Pg	01 37 12.1	-0.2
TIR				S	Sg	01 37 18.1	+1.3
TIR				AML	AML	01 37 21.4	
	comp=E,894μm,0.2s						
TIR				AML	AML	01 37 22.4	
	comp=N,1350μm,0.4s						
TIR	Tirane	0.34	323	P	Pg	01 37 12.3	0.0
TIR				S	Sb	01 37 18.4	-1.8
	comp=N,252nm,0.4s						
TIR	Tirane	0.34	323	*e*Pg	Pg	01 37 12.2	-0.2
TIR				*e*Sg	Sg	01 37 17.7	+0.9
TIR	Tirane	0.34	323	P	Pg	01 37 12.4	0.0
	baz=312						
TIR				S	Sb	01 37 18.7	-1.6
	baz=312						
TIR	Tirane	0.34	323	*i* Pg	Pg	01 37 12.3	0.0
OHR	Ohrid	0.50	86	*i* Pg	Pg	01 37 15.4	-0.1
OHR				*i* Sg	Sb	01 37 23.7	-1.3
OHR				*e*Lg	Lg	01 37 24.0	
	comp=E,125nm,0.5s						
PHP	Peshkopia	0.65	21	P	Pg	01 37 17.7	-0.6
PHP				S	Sb	01 37 27.6	-1.6
PHP	Peshkopia	0.65	21	P	Pg	01 37 17.7	-0.6
	baz=16						
PHP				S	Sb	01 37 27.5	-1.7
	baz=16						
KBN	Korca	0.67	132	P	Pg	01 37 18.0	-0.7
KBN				S	Sg	01 37 28.0	+0.6
	comp=E,258nm,0.4s						
KBN	Korca	0.67	132	P	Pg	01 37 18.2	-0.5
	baz=138						
KBN				S	Sb	01 37 28.9	-0.9
	baz=138						
VLO	Vlora	0.78	219	P	Pb	01 37 21.8	-0.1
VLO				S	Sb	01 37 33.0	+0.2
	comp=E,442nm,0.5s						
VLO	Vlora	0.78	219	P	Pb	01 37 21.9	0.0
	baz=221						
VLO				S	Sn	01 37 35.7	0.0
	baz=221						
NEST	Nestorio	0.96	133	P	Pg	01 37 23.8	-0.4
NEST				AML	AML	01 37 43.0	
	comp=N,175μm,0.4s						
NEST				AML	AML	01 37 43.6	
	comp=E,144μm,0.5s						
NEST	Nestorio	0.96	133	P	Pg	01 37 23.3	-0.9
NEST				S	Sb	01 37 37.6	-0.6
	comp=E,68nm,0.5s						
PUK	Puka	0.98	349	P	Pg	01 37 23.9	-0.8
	baz=346						
PUK				S	Sb	01 37 39.2	+0.4
	baz=346						
FNA	Florina	0.98	107	P	Pg	01 37 23.9	-0.8
FNA				AML	AML	01 37 39.7	
	comp=E,248μm,0.4s						
FNA				AML	AML	01 37 41.8	
	comp=N,321μm,0.3s						
FNA	Florina	0.98	107	P	Pg	01 37 24.0	-0.7
FNA				S	Sb	01 37 38.0	-0.9
	comp=N,168nm,0.5s						
FNA	Florina	0.98	107	*i* Pg	Pg	01 37 23.9	-0.8
FNA				*i* Sg	Sb	01 37 39.4	+0.5

LSK	Leskovik	0.99	159	P	Pg	01 37 23.2	-1.6
ULC	Ulcinj	1.11	323	*i* Pg	Pg	01 37 26.5	-0.6
ULC	Ulcinj	1.11	323	⇑*i*Pg	Pg	01 37 26.1	-1.0
ULC				*i* Sg	Sb	01 37 42.3	-0.1
PENT	Pentalofos	1.17	139	P	Pg	01 37 27.1	-1.0
PENT	Pentalofos	1.17	139	P	Pg	01 37 26.9	-1.2
PENT				S	Sb	01 37 44.5	+0.4
	comp=N,68nm,0.4s						
SRN	Sarande	1.20	185	P	Pn	01 37 29.7	+0.3
SRN	Sarande	1.20	185	P	Pn	01 37 30.1	+0.7
	baz=188						
SRN				S	Sn	01 37 49.1	+3.0
	baz=188						
PRZK	Prizren	1.23	22	*i* Pg	Pg	01 37 28.0	-1.3
PRZK				*i* Sg	Sn	01 37 48.1	+1.2
BCI	Bajram Curri	1.29	358	P	Pg	01 37 29.5	-1.1
	baz=356						
BCI				S	Sn	01 37 48.7	+0.3
	baz=356						
DRME	Dracevica, Mon	1.32	328	⇓*i*Pg	Pg	01 37 29.8	-1.3
DRME				*i* Sg	Sn	01 37 49.4	+0.3
SKO	Skopje	1.33	47	*e*Pg	Pb	01 37 31.2	-0.1
SKO				*e*Sg	Sn	01 37 48.7	-0.6
SKO	Skopje	1.33	47	*i* Pg	Pb	01 37 31.4	+0.1
SKO				*i* Sg	Sn	01 37 49.2	-0.1
SKO				*e*Lg	Lg	01 37 52.5	
	comp=E,2.3nm,0.4s						
KEK	Kerkira	1.39	191	P	Pg	01 37 33.0	+0.6
KPRO	Kipourio	1.46	140	P	Pn	01 37 32.2	-0.9
KPRO	Kipourio	1.46	140	P	Pn	01 37 32.2	-0.9
KZN	Kozani	1.46	121	P	Pn	01 37 31.6	-1.5
KZN	Kozani	1.46	121	P	Pn	01 37 31.5	-1.6
KZN				S	Sb	01 37 51.7	-0.9
	comp=E,52nm,0.5s						
PDG	Podgorica	1.50	334	*e*Pn	Pb	01 37 34.0	-0.3
PDG				*e*Sg	Sg	01 37 56.7	+2.6
PDG	Podgorica	1.50	334	*i* Pn	Pn	01 37 32.9	-0.7
TTG	Podgorica	1.50	334	⇑*i*Pg	Pn	01 37 33.1	-0.5
TTG				*i* Sg	Sg	01 37 55.2	+1.1
PVY	Plav	1.52	355	⇓*i*Pg	Pn	01 37 33.5	-0.5
PVY				*i* Sg	Sg	01 37 55.8	+1.1
BUM	Brajici-Budva	1.54	323	⇓*i*Pg	Pn	01 37 33.8	-0.3
BUM				*i* Sg	Sg	01 37 56.1	+0.9
IGT	Igoumenitsa	1.55	174	P	Pb	01 37 35.1	0.0
IGT				AML	AML	01 38 00.6	
	comp=N,77μm,0.5s						
IGT				AML	AML	01 38 01.4	
	comp=E,161μm,0.7s						
STIP	Stip	1.66	68	*i* Pn	Pg	01 37 39.8	+2.1
STIP				*e*Lg	Lg	01 38 08.1	
	comp=E,6.1nm,0.5s						
GRG	Griva	1.72	93	P	Pn	01 37 36.5	-0.1
GRG	Griva	1.72	93	*i* Pn	Pn	01 37 36.5	-0.1
CEME	Cevo	1.73	329	*e*Pn	Pn	01 37 36.8	+0.1
CEME				*i* Sn	Sg	01 38 00.7	-0.6
BEY	Berane	1.80	354	*i* Pn	Pb	01 37 38.4	-1.0
IVA	Berane	1.80	354	⇑*i*Pn	Pn	01 37 37.9	+0.1
IVA				*i* Sn	Sb	01 38 02.6	+0.2
KOME	Kolasin	1.83	346	*e*Pn	Pn	01 37 38.3	+0.1
KOME				*i* Sn	Sb	01 38 03.1	-0.2
HCY	Herceg Novi	1.84	319	⇑*i*Pn	Pn	01 37 38.4	+0.2
HCY				*i* Sn	Sb	01 38 03.3	-0.1
SMRK	Smrekonice	1.89	18	*i* Pn	Pb	01 37 39.7	-1.3
NKME	Niksic	1.91	333	⇓*i*Pn	Pn	01 37 39.3	+0.1
NKME				*i* Sn	Sb	01 38 04.9	-0.5
NKY	Niksic	1.93	334	⇓*i*Pn	Pn	01 37 39.7	+0.1
NKY				*i* Sn	Sb	01 38 05.5	-0.7
TREB	Trebinje	2.11	321	*e*Pn	Pn	01 37 42.2	+0.2
TREB				*e*Sn	Sb	01 38 10.8	-0.5
DBRK	Dubrovnik	2.18	318	*e*Pn	Pn	01 37 41.2	-1.6
BRY	Bratogost	2.18	327	⇑*i*Pn	Pn	01 37 43.1	+0.1
BRY				*i* Sn	Sn	01 38 11.5	+1.0
BOSS	Bosilegrad	2.25	50	*e*Pn	Pb	01 37 45.7	-1.4
PLE	Pljevlja	2.32	346	⇑*i*Pn	Pn	01 37 45.1	+0.2
PLE				*i* Sn	Sn	01 38 14.9	+1.0
IVAS	Ivanjica	2.50	0	*e*Pn	Pn	01 37 48.5	+1.2
STON	Ston	2.55	315	*e*Pn	Pn	01 37 45.7	-2.2
BBLS	Lazići	2.84	349	*e*Pn	Pn	01 37 52.9	+0.9
GRUS	Gruza	2.84	8	*e*Pn	Pn	01 37 53.0	+1.0
ZAPS	Zavoj	2.88	39	*e*Pn	Pn	01 37 53.6	+1.1
LSTV	Lastovo	2.95	306	*e*Pn	Pn	01 37 52.0	-1.5
DIVS	Divibare	3.02	358	*e*Pn	Pn	01 37 55.8	+1.3
DIVS				*e*Sn	Sn	01 38 33.6	+2.4
HAPS	Han Pijesak,Bl	3.13	344	*e*Pn	Pn	01 37 56.4	+0.3
ZAGS	Zajecar	3.14	29	*e*Pn	Pn	01 37 57.9	+1.8
ZAGS				*e*Sn	Sn	01 38 35.5	+1.4
MAKA	Makarska	3.20	315	*i* Pn	Pn	01 37 55.8	-1.1
RICI	Ricice	3.29	318	*e*Pn	Pn	01 37 57.2	-0.9
RICI				Sn	Sn	01 38 38.2	+0.6
HVAR	Hvar	3.45	309	*i* Pn	Pn	01 37 58.9	-1.4
KIJV	Kijevo	4.02	318	*i* Pn	Pn	01 38 08.4	+0.2
KIJV				Sn	Sn	01 38 55.9	+0.2
ZIRJ	Zirje	4.21	309	*e*Pn	Pn	01 38 10.5	-0.3
MORI	Morici	4.30	312	*e*Pn	Pn	01 38 12.6	+0.6
UDBI	Udbina	4.71	318	*i* Pn	Pn	01 38 18.5	+0.8
DUGI	Dugi Otok	4.75	310	*i* Pn	Pn	01 38 17.4	-0.8
NVLJ	Novalja	5.21	314	*i* Pn	Pn	01 38 23.9	-0.5

IDC 14 01:53:11.3±5.4**,5°.84S**×**152°.80E,h0**^{km}**,mb3.4**/4**, mb1 3.7**/4**,mb1mx3.5**/27**,mbtmp3.4**/4**,Error ellipse: s-maj=147.4km s-min=40.8km az=111.0,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.77	230	P	P	01 58 15.5	-0.1
	1.1nm,0.8s,baz=57,slow=11,SNR=5.4						
ASAR	Alice Springs	25.39	224	P	P	01 58 40.9	+0.2
	0.5nm,0.9s,baz=54,slow=9.4,SNR=3.6						
FITZ	Fitzroy Crossi	29.17	243	P	P	01 59 14.6	-0.1
	1.0nm,0.5s,baz=54,slow=7.6,SNR=7.3						
MKAR	Makanchi Array	81.10	319	P	P	02 05 28.7	0.0
	0.1nm,0.5s,baz=99,slow=9.3,SNR=1.4						

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*IDC **14** 02:28:55.7±0.4, 37°.14N×117°.25W, h0^{km}, mb4.5/26, mb1 4.5/33, mb1mx4.5/47, mbtmp4.4/33, ML4.0/7, MS3.8/36, Ms1 3.8/36, ms1mx3.8/52, Error ellipse: s-maj=9.3km s-min=5.3km az=61.0*

*ANF **14** 02:28:56.2±0.3, 37°.15N×117°.26W, h12^{km}±2^{km}, ML5.0/44, Error ellipse: s-maj=2.6km s-min=2.1km az=8.0*

*REN **14** 02:28:56.2±2.4, 37°.14N±0°.03×117°.26W±0°.03, h17^{km}±1^{km}, ML4.8/6, mb4.7/142(NEIC), ML4.8/134(NEIC), Mwr4.7/102(NEIC), Error ellipse: s-maj=4.0km s-min=2.8km az=210.0*

*NEIC **14** 02:28:56.2, 37°.15N×117°.26W, h11^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-1.30; $M_{\theta\theta}$0.21; $M_{\phi\phi}$1.09; $M_{r\theta}$0.53; $M_{\theta\phi}$0.59; $M_{\phi r}$0.13; Fault plane solution: $M_0$1.45000×10^{16} NP1:ϕ_s10.87000°,δ39.82000°, λ-115.78000°. NP2:ϕ_s223.03000°,δ54.78000°, λ-70.07000°. Principal axes: T 1.4355, Plg8.0000°, Azm299.0000°; N 0.0374, Plg16.0000°, Azm31.0000°; P -1.4729, Plg72.0000°, Azm184.0000°;*

*NEIC **14** 02:28:56.3±2.2, 37°.16N±0°.03×117°.26W±0°.03, h9^{km}±2^{km} Error ellipse: s-maj=3.8km s-min=3.2km az=184.0*

*GCMT **14** 02:29:00.2±0.4, 37°.15N±0°.05×117°.33W±0°.05, h20^{km}±1^{km}, MW4.9/64, Moment Tensor Solution. s13,c16; s64,c98; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.06±.35; $M_{\theta\theta}$0.86±.20; $M_{\phi\phi}$2.20±.23; $M_{r\theta}$-0.26±.52; $M_{\theta\phi}$1.12±.11; $M_{\phi r}$0.89±.46; Best double couple: $M_0$3.08000×10^{16} NP1:ϕ_s40.00000°,δ40.00000°,λ-73.00000°. NP2: ϕ_s198.00000°,δ52.00000°,λ-103.00000°. Principal axes: T 2.9060, Plg6.0000°, Azm298.0000°; N 0.3480, Plg11.0000°, Azm207.0000°; P -3.2550, Plg78.0000°, Azm58.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 14 02:28:56.3±0.9**,37°.14N**±0°.02×**117°.22W**±0°.02**,h9**^{km}±5^{km}**, n550,**σ**1^s.45**/571**,mb4.7**/79**,MS3.9**/29**,44C-44D,Fault plane solution: NP1:**ϕ_s211.69470°**,**δ60.92041°**,** λ-79.39621°. **NP2:**ϕ_s10.62833°**,**δ30.79314°**,** λ-108.30884°. **Principal axes:** T Plg15.2926°**,** Azm293.9421°**;** N Plg9.2545°**,** Azm26.4957°**;** P Plg72.0063°, Azm146.6062°**; California-Nevada border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GRAC	Grapevine Rang	0.19	220	P	Pg	02 29 00.4	+0.2
	baz=30,SNR=1000						
GRAC				S	Sg	02 29 04.2	+1.3
	baz=30						
GRAC	Grapevine Rang	0.19	220		Pg	02 29 00.7	+0.5
GRAC					Sg	02 29 04.1	+1.3
TMO	Tin Mountain	0.37	204		Pg	02 29 03.7	+0.1
MCA	Marble Canyon	0.50	186		Pg	02 29 06.0	+0.1
FMT	Funeral Mounta	0.61	145		Pg	02 29 08.8	+0.7
FURC	Furnace Creek,	0.73	157	P	Pg	02 29 10.8	+0.5
	baz=335,SNR=1000						
FURC				S	Sb	02 29 21.9	+0.7
	baz=335						
FURC	Furnace Creek,	0.73	157		Pb	02 29 11.3	+0.1
FURC					Sb	02 29 21.6	+0.4
CGO	Cerro Gordo	0.75	219		Pg	02 29 11.1	+0.3
CGO					Sb	02 29 22.0	-0.2
TPNV	Topopah Spring	0.80	104	P	Pg	02 29 12.3	+0.6
	baz=284,SNR=1000						
TPNV	Topopah Spring	0.80	104		Pb	02 29 12.5	0.0
TPNV				IAML		02 29 31.0	
	41μm,0.7s						
TPNV				IAML		02 29 35.8	
	24μm,1.3s						
TIN	Tinemaha, Big	0.81	264	P	Pg	02 29 11.4	-0.6
	baz=83,SNR=1000						
TIN				S	Sg	02 29 22.4	-0.2
	baz=83						
TIN	Tinemaha, Big	0.81	264		Pg	02 29 11.7	-0.3
TIN					Sg	02 29 22.4	-0.2
TPH	Tonopah	0.93	360		Pg	02 29 14.3	0.0
CWC	Cottonwood Cre	0.98	225	P	Pg	02 29 14.9	-0.3
	baz=43						
CWC				S	Sb	02 29 28.4	-0.4
	baz=43						
CWC	Cottonwood Cre	0.98	225		Pg	02 29 15.1	-0.2
CWC					Sg	02 29 27.9	-0.1
AMDNV	Amargosa	1.02	132		Pb	02 29 16.4	+0.3
MPMC	Manual Prospec	1.10	192	P	Pg	02 29 17.0	-0.5
	baz=9.6,SNR=1000						
MPMC				S	Sb	02 29 32.5	+0.3
	baz=9.6						
MPMC	Manual Prospec	1.10	192		Pg	02 29 17.1	-0.3
MPMC					Sb	02 29 32.5	+0.3
MFS	McCloud Flat S	1.14	207		Pg	02 29 18.1	-0.1
BONR	Boundary Peak	1.19	314		Pg	02 29 18.3	-0.8
WCSM	Coso Springs S	1.20	202		Pn	02 29 19.4	+0.1
WCSM					Sg	02 29 34.9	+0.1
BENR	Benton	1.22	298		Pb	02 29 18.5	-1.3
JRC2	Joshua Ridge	1.25	203		Pg	02 29 20.3	0.0
JRC2					Sn	02 29 37.4	+0.2
WRVM	Rose V. Centra	1.25	206		Pb	02 29 20.1	-0.1
WVPM	Volcano Peak E	1.28	202		Pg	02 29 21.0	+0.1
WLHM	Little Horse	1.32	222		Pb	02 29 21.3	-0.2
WLHM					Sn	02 29 38.8	-0.3
CLC	China Lake	1.36	193		Pn	02 29 21.4	-0.1
CLC					Sg	02 29 40.2	+0.2
MLAC	Mammoth, Mammo	1.38	291	P	Pn	02 29 21.4	-0.5
	baz=111,SNR=1000						
MLAC	Mammoth, Mammo	1.38	291		Pb	02 29 21.9	-0.5
TOW	Tower One	1.40	199		Pb	02 29 22.4	-0.2
TOW					Sg	02 29 42.9	+1.5
WNMM	Nine Mile Cany	1.41	203		Pg	02 29 23.1	-0.2
WCHM	Chimney Peak	1.43	209		Pn	02 29 22.6	-0.1
MCSM	Casa Diablo Ho	1.44	291		Pb	02 29 22.9	-0.6
SHOC	Shoshone, Teco	1.45	148	P	Pn	02 29 22.7	0.0
	baz=328,SNR=1000						
SHOC				Sb	Sg	02 29 43.6	+0.6
	baz=328						
SHOC	Shoshone, Teco	1.45	148		Pn	02 29 23.2	+0.4
SHOC					Sg	02 29 43.4	+0.5
NV11	Mina Array Sit	1.49	330		Pn	02 29 22.6	-0.7
NV11				IAML		02 29 45.9	
	comp=E,15μm,0.9s						
NV11				IAML		02 29 48.8	
	comp=N,9μm,1.4s						
OMMB	Old Mammoth Mi	1.50	289		Pn	02 29 22.4	-1.3
OMMB				IAML		02 29 46.9	
	comp=N,11μm,1.1s						
OMMB				IAML		02 29 50.5	
	comp=E,8μm,1.7s						
LHV	Little Huntoon	1.51	318		Pn	02 29 22.8	-0.6
SRTC	Snort	1.51	197		Pn	02 29 23.9	+0.3
NVAR	Mina Array Bea	1.55	327	Pg	Pn	02 29 23.5	-0.7
	comp=E,4μm,0.3s,baz=153,slow=18,SNR=4104						
NVAR				Lg	Lg	02 29 44.8	
	comp=E,3μm,0.3s,baz=216,slow=31,SNR=15						
NVAR	Mina Array Bea	1.55	327	Pn	Pn	02 29 22.7	-1.6
WSHM	Spangler Hills	1.55	188		Pn	02 29 24.1	-0.1
SPG2	Springville 2	1.56	233		Pb	02 29 24.8	-0.6
SPG2					Sb	02 29 44.6	-0.6
MDPB	Devils Postpil	1.56	289		Sg	02 29 45.5	-1.0
MDPB	Devils Postpil	1.56	289		Pn	02 29 23.6	-0.9
MDPB	Devils Postpil	1.56	289	IAML		02 29 49.0	
	comp=N,8μm,1.1s						
MDPB				IAML		02 29 55.3	
	comp=E,7μm,1.4s						
CCCA	Chr Cany lake	1.62	184		Pn	02 29 25.4	+0.3
CCCA					Sg	02 29 48.3	+0.1
WORM	Onyx Ranch	1.66	210		Pn	02 29 26.0	+0.3
LRMC	Laurel Mtn Rad	1.70	193	P	Pn	02 29 26.1	-0.1
	baz=11,SNR=1000						
LRMC				Sg	Sg	02 29 51.9	+0.9
	baz=11						
LRMC	Laurel Mtn Rad	1.70	193		Pn	02 29 26.5	+0.3
LRMC					Sg	02 29 51.9	+0.9
WHFM	Hanning Flat	1.71	213		Pn	02 29 26.7	+0.4
PRN	Pahroc Range	1.75	81		Pn	02 29 26.8	-0.1
WBSM	Bird Springs	1.77	205		Pn	02 29 27.5	+0.3
SHPR	Sheep Range	1.77	110		Pn	02 29 27.6	+0.3
SHPR	Sheep Range	1.77	110		Sg	02 29 54.4	+1.2
SHPR	Sheep Range	1.77	110	IAML		02 30 02.8	
	comp=N,7μm,1.0s						
SHPR				IAML		02 30 03.2	
	comp=E,9μm,1.0s						
WASM	Alta Sierra Ca	1.77	218		Pn	02 29 27.7	+0.4
R11A	Troy Canyon, C	1.77	47	P	Pn	02 29 26.9	-0.4
	baz=228,SNR=559						
R11A				Sb	Sb	02 29 52.5	+1.1
	baz=228						
R11A	Troy Canyon, C	1.77	47		Pn	02 29 27.0	-0.3
R11A				IAML		02 29 54.9	
	comp=N,5μm,0.4s						
R11A				IAML		02 29 57.3	
	comp=E,6μm,0.7s						
ISA	Isabella, Lake	1.79	215	P	Pn	02 29 27.5	+0.1
	baz=33,SNR=703						
ISA	Isabella, Lake	1.79	215		Pn	02 29 26.9	-0.6
RYN	Ryan	1.81	326		Pn	02 29 26.9	-0.9
RYN				IAML		02 29 59.0	
	comp=N,8μm,0.6s						
RCTC	Rector, Farmer	1.83	243		Pb	02 29 28.7	-1.2
GSC	Goldstone, Bar	1.86	170	Pn	Pn	02 29 28.7	+0.2
	baz=349,SNR=1000						
GSC				Pg	Pg	02 29 32.3	+0.2
	baz=349						
GSC				Sb	Sg	02 29 56.6	+0.3
	baz=349						
GSC	Goldstone, Bar	1.86	170		Pn	02 29 27.6	-0.9
GSC	Goldstone, Bar	1.86	170		Sg	02 29 56.4	+0.2
GSC	Goldstone, Bar	1.86	170	IAML		02 30 01.0	
	comp=E,10μm,0.7s						
GSC				IAML		02 30 05.5	
	comp=N,9μm,1.3s						
VOG	Valley Oaks Go	1.92	245	Pb	Pb	02 29 30.4	-1.1
	baz=64,SNR=91						
VOG				Sb	Sb	02 29 55.8	+0.2
	baz=64						
VOG	Valley Oaks Go	1.92	245		Pb	02 29 30.3	-1.2
VOG					Sb	02 29 55.5	-0.1
DTP	Desert Tortois	1.94	195		Pn	02 29 29.9	+0.4
VES	Vestal, Richgr	1.99	230	Pb	Pn	02 29 31.0	+1.0
	baz=48,SNR=522						
VES				Sb	Sg	02 29 58.7	-1.4
	baz=48						
VES	Vestal, Richgr	1.99	230		Pn	02 29 31.0	+1.0
TUQ	Turquoise Moun	2.00	148		Pn	02 29 30.9	+0.6
TUQ					Sn	02 29 56.9	+1.4
FRI	Friant	2.00	266		Pn	02 29 30.8	+0.6
WOFM	Oak Flat	2.01	217		Pn	02 29 31.0	+0.5
MMIM	Miami Mountain	2.03	279		Pn	02 29 31.2	+0.3
CCAC	Calif City Air	2.09	198		Pn	02 29 32.4	+0.8
ALV	Alvord Mountai	2.13	167		Pn	02 29 32.5	+0.5
MTPC	Mountain Pass	2.13	140		Pn	02 29 33.0	+0.8
WAKR	Walker	2.22	308		Pn	02 29 32.3	-1.2
TEJ	El Tejon	2.25	212		Pn	02 29 34.8	+1.1
RRX	Edison Barstow	2.27	175	P	Pn	02 29 34.8	+0.8
	baz=355,SNR=61						
RRX				Sb	Sg	02 30 09.4	+0.3
	baz=355						
RRX	Edison Barstow	2.27	175		Pn	02 29 35.0	+1.1
HYS	Haystack Butte	2.29	187		Pn	02 29 34.8	+0.5
EDW2	Edwards Air Fo	2.34	196	P	Pn	02 29 35.4	+0.4
	baz=14,SNR=168						
EDW2	Edwards Air Fo	2.34	196		Pn	02 29 35.7	+0.7
ARVC	Arvin	2.40	213	Pb	Pb	02 29 37.6	-2.0
	baz=32,SNR=55						
ARVC	Arvin	2.40	213		Pb	02 29 37.6	-2.0
TPO	Tropico Hills	2.40	200		Pn	02 29 36.7	+0.8
HEC	Hector,Ludlow	2.42	163	P	Pn	02 29 36.4	+0.4
	baz=342,SNR=99						
HEC				Sb	Sg	02 30 12.6	-1.3
	baz=342						
HEC	Hector,Ludlow	2.42	163		Pg	02 29 42.6	0.0
YERR	Yerington	2.44	320		Pn	02 29 35.2	-1.3
YERR				IAML		02 30 15.4	
	comp=E,8μm,0.7s						
YERR				IAML		02 30 19.8	
	comp=N,6μm,0.7s						
SBB	Saddle Back Bu	2.50	192		Pn	02 29 37.6	+0.5
THC	Tehachapi Micr	2.52	208		Pn	02 29 38.8	+1.2
ICU	Indian Springs	2.63	89		Pn	02 29 39.2	+0.1
GMRC	Granite Mounta	2.67	151	P	Pn	02 29 39.5	-0.1
	baz=332,SNR=65						
GMRC				Sb	Sg	02 30 21.2	-0.8
	baz=332						
GMRC	Granite Mounta	2.67	151		Pb	02 29 46.0	+1.7
CMB	Columbia Colle	2.67	290		Pn	02 29 38.7	-0.8
LRRC	Littlerock Res	2.69	194		Pn	02 29 40.7	+1.0
PNTR	Pine Nut	2.71	317		Pn	02 29 39.4	-0.7
PNTR				IAML		02 30 26.4	
	comp=N,6μm,1.0s						
CJV	Casa Juvan	2.71	196		Pn	02 29 41.2	+1.0
JNH	Juniper Hills	2.75	193		Pn	02 29 41.7	+0.9
CRGC	Crocker Grade	2.78	228		Pb	02 29 47.1	+1.0
OSI	Osito Audit: C	2.80	206	P	Pn	02 29 42.6	+1.3
	baz=25,SNR=9.5						
OSI	Osito Audit: C	2.80	206		Pn	02 29 41.1	-0.2
OSI				IAML		02 30 32.1	
	comp=E,2μm,0.9s						
CARC	Carrizo Plain	2.80	230		Pn	02 29 42.7	+1.3
PAGB	Antelope Grade	2.82	241		Pn	02 29 41.6	+0.1
BCW	Bitter Crk WRg	2.83	220		Pn	02 29 42.6	+0.9
CSP	Cedar Springs	2.84	182		Pn	02 29 43.0	+1.1
CHFC	Chilao Flat St	2.88	193		Pn	02 29 43.4	+0.9
VCNR	Virginia City	2.88	319		Pn	02 29 41.1	-1.5
VCNR				IAML		02 30 29.4	
	comp=N,4μm,0.5s						
VCNR				IAML		02 30 31.0	
	comp=E,4μm,0.8s						
BBRC	Big Bear Solar	2.88	175	Pn	Pn	02 29 43.7	+1.1
	baz=355,SNR=17						
BBRC				Pg	Pg	02 29 51.5	0.0
	baz=355						
BBRC				Sb	Sg	02 30 29.0	+0.1
	baz=355						
SMMC	Simmler	2.89	232	Pn	Pn	02 29 43.6	+1.1
	baz=50,SNR=65						
SMMC				Pb	Pb	02 29 48.2	+0.1
	baz=50						
SMMC				Sb	Sb	02 30 25.5	+1.9
	baz=50						
BFSC	Mount Baldy Ra	2.92	187	P	Pn	02 29 44.1	+1.0
	baz=6.2,SNR=72						
BFSC				Sb	Sg	02 30 27.8	-2.3
	baz=6.2						
SSK	Sunset Peak	2.95	188		Pn	02 29 44.9	+1.4
MWC	Mount Wilson	2.99	193		Pn	02 29 45.3	+1.3
MWC				IAML		02 30 40.6	
	comp=N,2μm,1.2s						
RUBR	Rubicon Trail	3.00	310		Pn	02 29 44.5	+0.3
RUBR				IAML		02 30 35.1	
	comp=E,3μm,1.3s						
RUBR				IAML		02 30 43.9	
	comp=N,3μm,1.6s						
PSUT	Pine Spring	3.00	61		Pn	02 29 44.3	+0.1
DECC	Green Verdugo	3.02	198	P	Pn	02 29 45.6	+1.3
	baz=16,SNR=9.1						
DECC	Green Verdugo	3.02	198		Pn	02 29 45.8	+1.4
PMPB	Monarch Peak	3.02	253		Pn	02 29 43.9	-0.5
PASC	Pasadena Art C	3.07	195	Pn	Pn	02 29 44.7	-0.2
PAHR	Pah Rah Range	3.08	327		Pn	02 29 44.2	-1.0
PAHR				IAML		02 30 44.5	
	comp=E,2μm,1.3s						
PKM	Mcpherson Peak	3.08	224	P	Pn	02 29 46.0	+0.7
	baz=42,SNR=68						
PKM				S	Sn	02 30 23.2	+0.9
	baz=42						
PSRC	Puddingstone R	3.08	189		Pn	02 29 46.8	+1.7
CCUT	Cedar City	3.10	81		Pn	02 29 46.3	+0.7
CCUT	Cedar City	3.10	81	IAML		02 30 41.9	
	comp=N,2μm,1.2s						
CCUT				IAML		02 30 50.7	
	comp=E,2μm,2.0s						
BLCC	Black Canyon	3.12	203		Pn	02 29 47.3	+1.5
NEE2	Needles Airpor	3.17	138	P	Pn	02 29 47.3	+0.9
	baz=319,SNR=244						
NEE2				Sb	Sg	02 30 37.7	-0.5
	baz=319						
NEE2	Needles Airpor	3.17	138		Pg	02 29 56.3	-0.7
LCMT	Little Creek M	3.18	91		Pn	02 29 47.0	+0.3
LCMT				IAML		02 30 42.7	
	comp=N,2μm,2.5s						
DJJ	Donna J Jenkin	3.19	199		Pn	02 29 47.9	+1.3
BELC	Belle Mtn. Jos	3.29	162	P	Pn	02 29 48.5	+0.4
	baz=342,SNR=124						
BELC				Sb	Sg	02 30 40.9	-1.0
	baz=342						
SME	Santa Rosa Min	3.31	182		Pn	02 29 49.5	+1.2
SZCU	Shurtz Canyon	3.32	81		Pn	02 29 49.1	+0.5
SZCU				IAML		02 30 49.6	
	comp=N,2μm,1.5s						
SZCU				IAML		02 30 59.1	
	comp=E,2μm,1.2s						
SBC	Santa Barbara	3.37	218	Sb	Sg	02 30 42.4	-2.2
	baz=36						
W13A	Hualapai Mount	3.38	126	Pn	Pn	02 29 49.9	+0.5
W13A				IAML		02 30 50.0	
	comp=E,1μm,1.0s						
W13A				IAML		02 30 55.8	
	comp=N,1μm,0.9s						
SAO	San Andreas Ge	3.41	265		Pn	02 29 49.2	-0.5
IRM	Iron Mountain	3.42	150	Pn	Pn	02 29 50.4	+0.5
	baz=331,SNR=39						
IRM				Pg	Pg	02 30 00.8	-1.0
	baz=331						
IRM				Sb	Sg	02 30 45.3	-0.9
	baz=331						
IRM	Iron Mountain	3.42	150		Pg	02 30 00.3	-1.5
HMTC	Hemet	3.43	177		Pn	02 29 51.2	+1.2
POB	Polly Butte	3.46	176		Pn	02 29 51.9	+1.5
AFDM	Forest Hills D	3.47	302		Pn	02 29 50.3	-0.2
AFDM				IAML		02 30 56.0	
	comp=E,1μm,1.6s						
DGR	Domenigoni Val	3.49	177		Pn	02 29 52.2	+1.4
ELS	Elsinore Mount	3.49	183		Pn	02 29 52.3	+1.5
KNB	Kanab	3.52	91	Pn	Pn	02 29 51.6	+0.3
KNB				IAML		02 30 54.8	
	comp=E,3μm,1.5s						
BACC	Bachelor Mtn.	3.52	178		Pn	02 29 52.6	+1.3
MURC	Murrieta	3.53	180	P	Pn	02 29 52.7	+1.3
	baz=359,SNR=61						
MURC				Sb	Sg	02 30 48.9	-0.8
	baz=359						
PFO	Pinyon Flats O	3.58	170	Pn	Pn	02 29 53.0	+0.9
	comp=E,11nm,0.3s,baz=354,slow=8.9,SNR=102						
PFO				Lg	Lg	02 30 49.7	
	comp=E,90nm,0.3s,baz=240,slow=19,SNR=13						
PFO	Pinyon Flats O	3.58	170	Pn	Pn	02 29 52.7	+0.7
	baz=350,SNR=74						
PFO				Pg	Pg	02 30 04.2	-0.6
	baz=350						
PFO				Sn	Sn	02 30 35.2	+0.7
	baz=350						
PFO				Sb	Sg	02 30 49.8	-1.3
	baz=350						
PFO	Pinyon Flats O	3.58	170		Pn	02 29 52.3	+0.3

PFO				IAML		02 30 58.4	
	comp=E,1µm,2.3s						
XPFO	Pion Flat	3.58	170		Pn	02 29 53.5	+1.5
XPFO	Pion Flat	3.58	170	IAML		02 30 58.4	
	comp=E,1µm,2.3s						
XPFO	Pion Flat	3.58	170	Pn	Pn	02 29 51.5	-0.5
I57US	PINON FLAT INF	3.58	170	*i*		02 51 20.0	
	baz=350,slow=313,SNR=1.1						
CRY	Cary Ranch	3.59	174		Pn	02 29 53.8	+1.5
DNR	Dunn Ranch,Anz	3.60	172		Pn	02 29 53.9	+1.5
SNDA	J Saunders Pla	3.62	172		Pn	02 29 54.0	+1.4
BEKR	Beckworth	3.67	319		Pn	02 29 52.9	-0.5
FRD	Ford Ranch, An	3.67	172		Pn	02 29 54.6	+1.2
FRD	Ford Ranch, An	3.67	172		Pn	02 29 54.5	+1.2
BC3	Big Chuckawall	3.76	157	P	Pn	02 29 55.2	+0.6
	baz=338,SNR=24						
BC3				Sb	Sg	02 30 53.3	-3.9
	baz=338						
PDMCI	Parker Dam,Lak	3.78	138	Pn	Pn	02 29 55.8	+1.1
	baz=319,SNR=74						
PDMCI				Pg	Pg	02 30 07.5	-1.2
	baz=319						
CIS	Catalina Islan	3.86	195	Pn	Pn	02 29 57.0	+1.1
	baz=14						
CIS				Pg	Pg	02 30 09.3	-0.8
	baz=14						
CIS				Sb	Sg	02 30 58.0	-2.1
	baz=14						
ELK	Elko	3.92	23	Pn	Pn	02 29 57.4	+0.6
	comp=E,15nm,0.3s,baz=211,slow=12,SNR=558						
ELK				Lg	Lg	02 30 57.3	
	comp=E,140nm,0.3s,baz=129,slow=22,SNR=15						
ELK	Elko	3.92	23		Pn	02 29 56.4	-0.4
ELK				IAML		02 31 02.5	
	comp=E,768nm,0.5s						
PKCU	Pink Cliffs	3.92	84		Pn	02 29 57.8	+0.8
MATG	Mataguay Scout	3.96	173		Pn	02 29 58.9	+1.6
U15A	North Rim	4.02	99		Pn	02 29 59.4	+1.1
TCRU	Three Creeks R	4.05	67	Pn	Pn	02 29 59.0	+0.3
MTPU	Mount Pierson	4.10	76	Pn	Pn	02 29 59.8	+0.4
MTPU				IAML		02 31 17.6	
	comp=E,1µm,1.5s						
MTPU				IAML		02 31 18.4	
	comp=N,1µm,2.1s						
HWB	Hans Werner Br	4.11	177		Pn	02 30 00.7	+1.4
ORV	Oroville	4.14	307		Pn	02 29 59.8	+0.1
MVU	Marysvale	4.19	70		Pn	02 30 01.2	+0.6
MSU	Marysvale	4.22	70	Pn	Pn	02 30 01.5	+0.5
109C	Camp Elliot, M	4.24	179	P	Pn	02 30 02.7	+1.6
	baz=358,SNR=14						
109C				Sb	Sg	02 31 08.4	-4.2
	baz=358						
109C	Camp Elliot, M	4.24	179	Pn	Pn	02 30 01.2	+0.1
109C				IAML		02 31 19.4	
	comp=E,942nm,1.2s						
MONP2	Monument Peak	4.29	171	P	Pn	02 30 03.0	+1.1
	baz=351,SNR=15						
MONP2				Sb	Sg	02 31 12.4	-1.6
	baz=351						
SNCC	San Nicolas Is	4.32	207	P	Pn	02 30 02.5	+0.4
	baz=25						
SNCC	San Nicolas Is	4.32	207		Pn	02 30 02.1	0.0
SWSC	Sam W. Stewart	4.34	164	P	Pn	02 30 02.8	+0.3
	baz=344,SNR=10						
BAR	Barrett	4.47	174		Pn	02 30 05.0	+0.7
BAR				IAML		02 31 21.4	
	comp=E,645nm,0.9s						
GLA	Glamis	4.53	154	Pn	Pn	02 30 05.8	+0.8
	baz=335,SNR=9.4						
GLA				Pg	Pg	02 30 21.2	-1.8
	baz=335						
GLA	Glamis	4.53	154		Pn	02 30 05.4	+0.4
GLA				IAML		02 31 24.4	
	comp=N,1µm,0.8s						
IKP	In-Ko-Pah, Jac	4.57	168	Pn	Pn	02 30 06.5	+0.8
	baz=348,SNR=9.3						
IKP				Pg	Pg	02 30 21.5	-2.4
	baz=348						
IKP				Sb	Sg	02 31 19.4	-3.7
	baz=348						
TKX	Tecate	4.59	174		Pn	02 30 06.4	+0.5
TKX				IAML		02 33 05.4	
	comp=E,627nm,0.1s						
DUG	Dugway, Tooele	4.60	47	Pn	Pn	02 30 07.5	+1.4
	baz=230,SNR=28						
DUG				Pg	Pg	02 30 23.6	-0.8
	baz=230						
DUG				Sb	Sg	02 31 22.3	-1.7
	baz=230						
DUG	Dugway, Tooele	4.60	47	Pn	Pn	02 30 07.0	+0.8
DUG				IAML		02 31 26.5	
	comp=E,999nm,0.7s						
DUG				IAML		02 31 32.8	
	comp=E,1µm,0.8s						
MCCM	Marconi Confer	4.61	284	Pn	Pn	02 30 04.5	-1.6
MCCM				IAML		02 31 22.5	
	comp=E,1µm,1.1s						
MCCM				IAML		02 31 35.2	
	comp=N,714nm,2.2s						
TJX	Tijuana	4.62	178	Pn	Pn	02 30 06.3	0.0
TJX					Lg	02 31 26.5	
RMX	La Rumorosa	4.62	168	Pn	Pn	02 30 06.9	+0.4
GDXM	Geysers	4.71	292		Pn	02 30 08.0	+0.4
O03E	Paynes Creek	4.77	313	Pn	Pn	02 30 09.5	+1.1
	baz=130,SNR=37						
O03E				Pg	Pg	02 30 24.3	-3.3
	baz=130						
CBX	Cerro Bola	4.84	174		Pn	02 30 09.9	+0.5
CBX				IAML		02 31 44.3	
	comp=E,523nm,0.9s						
NLU	North Lily Min	4.91	54		Pn	02 30 12.3	+1.7
NLU				IAML		02 31 39.1	
	comp=E,566nm,2.4s						
NLU				IAML		02 31 43.8	
	comp=N,431nm,2.2s						
CPBX	Cerro Prieto	4.97	161	Pn	Pn	02 30 11.3	+0.3
CPBX				IAML		02 33 10.2	
	comp=N,1µm,2.0s						
HOPS	Hopland Field	4.98	294	Pn	Pn	02 30 10.7	-0.5
HOPS				IAML		02 31 58.5	
	comp=N,437nm,2.1s						
HOPS				IAML		02 32 12.2	
	comp=E,495nm,1.9s						
WUAZ	Wupatki	4.99	107	P	Pn	02 30 15.2	+3.7
	baz=291,SNR=29						
WUAZ				Sb	Sg	02 31 31.3	-5.1
	baz=291						
BGU	Big Grassy Mou	4.99	39		Pn	02 30 11.4	-0.1
BGU	Big Grassy Mou	4.99	39	IAML		02 31 44.2	
	comp=E,571nm,1.2s						
BGU				IAML		02 32 04.1	
	comp=N,430nm,1.4s						
TMUT	Trail Mountain	5.20	64	Pn	Pn	02 30 15.4	+0.9
113A	Mohawk Valley,	5.20	146	Pn	Pn	02 30 13.9	-0.4
113A				IAML		02 31 56.6	
	comp=N,657nm,1.2s						
113A				IAML		02 32 05.7	
	comp=E,839nm,1.4s						
ESJX	Sierra Juarez	5.23	168		Pn	02 30 15.2	+0.4
CCX	Cicese	5.28	175	Pn	Pn	02 30 15.1	-0.3
CCX				IAML		02 31 53.8	
	comp=N,348nm,1.6s						
CCX				IAML		02 31 55.2	
	comp=E,379nm,1.4s						
O02D	Mt. Diablo Mer	5.31	307	Sg	Sg	02 31 52.3	+5.6
	baz=123						
MOD	Modoc Plateau	5.32	334	Pn	Pn	02 30 15.2	-0.9
MOD				IAML		02 31 52.0	
	comp=E,635nm,0.8s						
MOD				IAML		02 31 53.9	
	comp=N,705nm,0.8s						
WDC	Whiskeytown Da	5.39	311		Pn	02 30 17.1	+0.3
WDC	Whiskeytown Da	5.39	311	IAML		02 31 51.3	
	comp=N,351nm,3.1s						
WDC				IAML		02 31 55.7	
	comp=E,292nm,2.5s						
WVOR	Wild Horse Val	5.40	349		Pn	02 30 20.1	+3.0
WVOR	Wild Horse Val	5.40	349	IAML		02 31 50.4	
	comp=E,682nm,1.4s						
WVOR				IAML		02 31 53.6	
	comp=E,490nm,0.7s						
CTU	Camp Tracy	5.54	49	Pn	Pn	02 30 19.9	+0.8
SPUT	South Promonto	5.57	40	Pn	Pn	02 30 19.9	+0.4
P17A	Butcher Ranch,	5.60	63	Pn	Pn	02 30 20.9	+1.0
KCPM	Cahto Peak	5.61	299	Pn	Pn	02 30 19.9	-0.1
JLU	Jordanelle	5.67	51	Pn	Pn	02 30 21.9	+0.9
N02D	Trinity Center	5.73	314	P	Pn	02 30 22.1	+0.4
	baz=130						
HVU	Hansel Valley	5.77	35		Pn	02 30 23.7	+1.5
M04C	Macdoel	5.85	324	P	Pn	02 30 26.0	+2.7
	baz=141,SNR=25						
KMRM	Mail Ridge	5.94	303	Pn	Pn	02 30 23.6	-0.8
TCUT	Toone Canyon	6.01	47	Pn	Pn	02 30 25.9	+0.2
M02C	Callahan	6.09	316	P	Pn	02 30 28.9	+2.3
	baz=133						
K05A	Summer Lake	6.25	334	Pn	Pn	02 30 28.8	-0.1
YBH	Yreka Blue Hor	6.25	319	Pn	Pn	02 30 30.3	+1.5
	comp=E,1.2nm,0.3s,baz=147,slow=8.7,SNR=13						
YBH				LR	LR	02 33 18.6	
	comp=E,3µm,18.1s,baz=142,slow=42						
YBH	Yreka Blue Hor	6.25	319	Pn	Pn	02 30 31.1	+2.3
KHMM	Horse Mountain	6.29	308	Pn	Pn	02 30 29.5	+0.1
214A	Organ Pipe Nat	6.32	144	P	Pn	02 30 31.6	+1.9
	baz=326,SNR=16						
214A	Organ Pipe Nat	6.32	144	Pn	Pn	02 30 30.4	+0.7
MFID	Camas Ranch	6.36	9	Pn	Pn	02 30 29.9	-0.4
W18A	Petrified Fore	6.38	106	Pn	Pn	02 30 30.4	-0.2
L04D	Klamath Falls	6.41	324	P	Pn	02 30 33.7	+2.7
	baz=141,SNR=12						
JCC	Jacoby Creek,	6.45	307	Pn	Pn	02 30 31.0	-0.4
X18A	Snowflake	6.45	112	Pn	Pn	02 30 32.5	+0.9
K04D	Chiloquin, OR	6.49	329	Pn	Pn	02 30 35.4	+3.3
	baz=146,SNR=9.6						
K04D				Pg	Pg	02 30 58.7	-1.8
	baz=146						
HLID	Hailey	6.76	18	P	Pn	02 30 39.2	+3.4
	baz=200,SNR=31						
HLID	Hailey	6.76	18	Pn	Pn	02 30 35.5	-0.4
J05D	Fort Rock, OR	6.86	335	P	Pn	02 30 41.0	+3.7
	baz=152,SNR=59						
MVCO	Mesa Verde	6.96	87	P	Pn	02 30 40.7	+2.0
	baz=272,SNR=13						
MVCO	Mesa Verde	6.96	87	Pn	Pn	02 30 37.8	-0.9
L02E	Cave Junction	7.03	317	P	Pn	02 30 43.6	+4.3
	baz=134,SNR=8.2						
J04D	Umpqua Nationa	7.15	330	P	Pn	02 30 45.1	+3.9
	baz=147,SNR=19						
TUC	Tucson	7.16	130	P	Pn	02 30 44.3	+3.0
	baz=314						
TUC	Tucson	7.16	130	Pn	Pn	02 30 41.8	+0.6
KBO	Bosley Butte	7.41	315	Pn	Pn	02 30 44.2	-0.5
ECR	Eagle Creek	7.41	35	Pn	Pn	02 30 45.0	+0.2
K02D	Willamette Mer	7.44	320	P	Pn	02 30 49.0	+4.0
	baz=136,SNR=8.3						
O20A	White River Ci	7.63	64	P	Pn	02 30 52.3	+4.5
	baz=250,SNR=134						
I05D	Terrebonne, OR	7.84	338	P	Pn	02 30 55.3	+4.8
	baz=155,SNR=11						
I03D	Drain, OR	8.04	326	P	Pn	02 30 58.2	+4.9
	baz=143,SNR=10						
BW06	Boulder Array	8.13	44	P	Pn	02 30 58.0	+3.3
	baz=229,SNR=15						
PDAR	Pinedale Array	8.13	44	Pn	Pn	02 30 58.1	+3.4
	comp=E,0.6nm,0.3s,baz=230,slow=12,SNR=54						
PDAR				Lg	Lg	02 33 11.4	
	comp=E,1.0nm,0.3s,baz=222,slow=21,SNR=0.9						
PDAR				LR	LR	02 33 32.5	
	comp=E,90nm,19.9s,baz=234,slow=34						
PDAR	Pinedale Array	8.13	44	Pn	Pn	02 30 56.6	+1.8
LOHW	Long Hollow	8.20	36	Pn	Pn	02 30 55.8	+0.2
H04A	Detroit Lake	8.42	335	Pn	Pn	02 30 58.0	-0.4
YMR	Madison River	8.88	30	Pn	Pn	02 31 05.0	0.0
YHL	Hebgen Lake	8.95	29	Pn	Pn	02 31 05.8	-0.2
RWWY	Rawlins	8.98	57	Pn	Pn	02 31 06.0	-0.4
ANMO	Albuquerque	8.99	101	Pn	Pn	02 31 09.2	+2.8
	comp=E,0.3nm,0.3s,baz=299,slow=12,SNR=5.7						
ANMO				Lg	Lg	02 33 39.2	
	comp=E,0.8nm,0.3s,baz=118,slow=13,SNR=7.0						
ANMO				LR	LR	02 34 40.0	
	comp=E,1µm,18.2s,baz=290,slow=38						
121A	Cookes Peak, D	9.01	118	P	Pn	02 31 11.0	+4.3
	baz=303,SNR=20						
SDCO	Great Sand Dun	9.34	83	P	Pn	02 31 14.0	+2.6
	baz=270						
BOZ	Bozeman (W)	9.43	25	P	Pn	02 31 18.5	+6.0
	baz=208,SNR=5.9						
BOZ	Bozeman (W)	9.43	25		Pn	02 31 11.5	-1.0
ISCO	Idaho Springs	9.48	70	P	Pn	02 31 17.2	+3.9
	baz=257						
N23A	Red Feather La	9.54	63	P	Pn	02 31 18.4	+4.4
	baz=250,SNR=8.9						
K22A	Casper	9.88	53	P	Pn	02 31 22.2	+3.5
	baz=240,SNR=18						
MSO	Missoula	9.98	13	P	Pn	02 31 25.0	+5.0
	baz=195,SNR=12						
NEW	Newport	11.12	0	Pn	Pn	02 31 38.7	+3.3
	comp=E,0.1nm,0.3s,baz=187,slow=12,SNR=7.2						
NEW				Lg	Lg	02 34 44.8	
	comp=E,0.1nm,0.3s,baz=94,slow=23,SNR=2.9						
NEW				LR	LR	02 36 38.2	
	comp=E,417nm,21.2s,baz=184,slow=42						
NEW	Newport	11.12	0		Pn	02 31 34.7	-0.7
MNTX	Cornudas Mount	11.18	116		Pn	02 31 40.1	+3.8
EGMT	Eagleton	12.18	24	P	Pn	02 31 55.0	+5.0
	baz=210,SNR=15						
MSTX	Muleshoe	12.18	101	P	Pn	02 31 56.7	+6.6
	baz=289,SNR=26						
MSTX	Muleshoe	12.18	101		Pn	02 31 53.8	+3.7
RSSD	Black Hills	12.19	51	P	Pn	02 31 52.0	+1.6
	baz=240						
RSSD	Black Hills	12.19	51		Pn	02 31 50.3	0.0
LAO	LASA Array	12.56	37		Pn	02 31 54.9	-0.3
TXAR	Lajitas Array	13.75	121	Pn	P	02 32 17.1	-3.1
	comp=E,0.2nm,0.3s,baz=300,slow=10.0,SNR=29						
TXAR				Lg	Lg	02 36 07.8	
	comp=E,0.0nm,0.3s,baz=305,slow=13,SNR=2.0						
TXAR				LR	LR	02 37 29.0	
	comp=E,445nm,18.1s,baz=0.0,slow=37						
TXAR	Lajitas Array	13.75	121	Pn	P	02 32 17.2	-3.0
CBKS	Cedar Bluff	13.89	78	P	P	02 32 20.3	-1.4
	baz=269						
LPIG	La Paz	14.29	154	LR	LR	02 38 04.2	
	comp=E,606nm,18.5s,baz=344,slow=38						
U32A	Winter Ranch,	14.63	87	Pn	Pn	02 32 21.6	-1.9
R32A	Long Quarter,	14.69	79	Pn	Pn	02 32 21.8	-2.5
DGMT	Dagmar	14.79	36	Pn	Pn	02 32 23.2	-2.4
ABTX	Abilene, Hawle	15.11	102	P	P	02 32 33.3	-2.0
	baz=292,SNR=11						
ABTX	Abilene, Hawle	15.11	102	Pn	Pn	02 32 27.2	-2.7
ABTX				IAmb	IAmb	02 32 39.9	
	comp=Z,34nm,1.1s						
WMOK	Wichita Mounta	15.13	94	P	P	02 32 34.5	-0.9
	baz=284						
K31A	O'Neill	15.19	63	Pn	Pn	02 32 29.6	-1.3
KAN12	Harper NE Stat	15.32	84	Pn	Pn	02 32 30.5	-2.2
KAN08	Anthony NE Sta	15.35	84	Pn	Pn	02 32 31.3	-1.7
BGNE	Belgrade	15.37	68	Pn	Pn	02 32 30.6	-2.6
BGNE				IAmb	IAmb	02 32 41.9	
	comp=Z,49nm,0.9s						
KAN14	Manchester OK	15.38	85	Pn	Pn	02 32 32.3	-1.2
KAN14				IAmb	IAmb	02 32 42.1	
	comp=Z,72nm,1.1s						
CROK	Carrier	15.42	87	Pn	Pn	02 32 32.6	-1.4
CROK				IAmb	IAmb	02 33 19.4	
	comp=Z,79nm,1.5s						
E28A	Huff	15.48	47	Pn	Pn	02 32 32.2	-2.6
E28A				IAmb	IAmb	02 32 45.0	
	comp=Z,55nm,1.1s						
KAN01	Argonia South	15.52	84	Pn	Pn	02 32 33.9	-1.5
KAN01				IAmb	IAmb	02 32 43.7	
	comp=Z,58nm,1.1s						
SUSD	Miller	15.62	56	Pn	Pn	02 32 33.9	-2.6
SUSD				IAmb	IAmb	02 32 45.7	
	comp=Z,57nm,1.1s						
KAN13	South Haven SW	15.76	84	Pn	Pn	02 32 36.5	-1.9
KAN13				IAmb	IAmb	02 32 46.1	
	comp=Z,52nm,0.8s						
N33A	J Bar K, Exete	15.79	71	Pn	Pn	02 32 37.5	-1.3
N33A				IAmb	IAmb	02 32 47.1	
	comp=Z,57nm,1.1s						
BCOK	Bluff Creek, N	15.86	89	Pn	Pn	02 32 36.7	-3.1
BCOK				IAmb	IAmb	02 32 53.7	
	comp=Z,91nm,1.3s						
JCT	Junction City	15.92	110	Pn	Pn	02 32 38.9	-1.6
JCT				IAmb	IAmb	02 32 49.3	
	comp=Z,94nm,1.6s						
X34A	Smith Ranch, M	15.92	93	Pn	Pn	02 32 37.8	-2.7
X34A				IAmb	IAmb	02 32 56.4	
	comp=Z,74nm,1.1s						
OK029	Liberty Lake	15.96	89	Pn	Pn	02 32 37.6	-3.4
OK025	Westminster Rd	16.09	90	Pn	Pn	02 32 39.6	-3.2
KSU1	Kansas State U	16.34	77	Pn	Pn	02 32 46.0	+0.1
OK031	S. Brethren Rd	16.42	88	Pn	Pn	02 32 46.8	-0.2
OK030	Cody Creek RV	16.47	88	Pn	Pn	02 32 44.1	-3.5
T35A	Sooner Cattle	16.54	85	Pn	Pn	02 32 45.2	-3.3
T35A				IAmb	IAmb	02 32 55.3	
	comp=Z,58nm,1.1s						
L34A	Svendsen Farm,	16.77	67	Pn	Pn	02 32 48.3	-3.0
BBB	Bella Bella	16.89	336	LR	LR	02 39 19.4	
	comp=Z,403nm,20.3s,baz=162,slow=37						
ECSD	EROS Data Cent	16.99	61	P	P	02 32 56.1	0.0
	baz=254,SNR=8.6						
ECSD	EROS Data Cent	16.99	61	Pn	Pn	02 32 53.3	-0.8
WHTX	Lake Whitney,	17.06	102	P	P	02 32 58.3	+1.5
	baz=293						
WHTX	Lake Whitney,	17.06	102	Pn	Pn	02 32 53.3	-1.7
WHTX				IAmb	IAmb	02 33 36.3	
	comp=Z,69nm,1.1s						
N35A	Tabor	17.17	71	Pn	Pn	02 32 53.6	-2.8
TUL1	Leonard	17.27	88	Pn	Pn	02 32 54.5	-3.1
435B	Jarrell	17.46	106	Pn	Pn	02 32 56.4	-3.7
F33A	5 Mile Ranch,	17.89	54	Pn	Pn	02 33 02.1	-3.2
F33A				IAmb	IAmb	02 33 11.0	
	comp=Z,92nm,1.9s						
X37A	Clayton	17.89	92	Pn	Pn	02 33 01.5	-3.8
U38A	Gravette	18.30	85	Pn	Pn	02 33 06.4	-4.0
HHAR	Hobbs	18.68	86	P	P	02 33 11.2	-3.5
P38A	Dawn	18.72	75	P	P	02 33 12.5	-2.7
P38A				IAmb	IAmb	02 33 20.5	
	comp=Z,80nm,0.9s						
S39A	Bolivar	18.98	81	P	P	02 33 16.1	-1.9
N38A	Joes South For	18.99	72	P	P	02 33 17.7	-0.3
N38A				IAmb	IAmb	02 33 22.7	
	comp=Z,69nm,0.9s						
AGMN	Agassiz Nation	19.18	48	P	Pn	02 33 20.9	-0.1
	baz=242,SNR=7.4						
AGMN	Agassiz Nation	19.18	48	P	P	02 33 18.5	-1.6
HKT	Hockley	19.19	106	P	P	02 33 19.4	-0.8
I37A	Lemond, Waseca	19.31	62	P	P	02 33 21.0	-0.6
MIAR	Mount Ida	19.33	91	P	Pn	02 33 24.7	+1.8
	baz=285,SNR=15						
MIAR	Mount Ida	19.33	91	P	P	02 33 19.3	-2.5
NATX	Nacogdoches	19.34	99	P	P	02 33 19.8	-2.2
NATX				IAmb	IAmb	02 33 27.5	
	comp=Z,43nm,0.9s						
K38A	Parkersburg	19.52	66	P	P	02 33 22.6	-1.3
U40A	Yellville	19.53	85	P	Pn	02 33 26.4	+1.1
	baz=280,SNR=16						
U40A	Yellville	19.53	85	P	P	02 33 22.8	-1.3
F36A	Milaca	19.71	56	P	P	02 33 25.2	-0.8
R40A	Maddies Statio	19.76	79	P	P	02 33 25.6	-0.9
R40A				IAmb	IAmb	02 33 31.3	
	comp=Z,49nm,1.0s						
P40A	Paris	19.87	75	P	P	02 33 26.1	-1.6
MGMO	Mountain Grove	19.88	82	P	P	02 33 28.4	+0.6
WLAR	White Oak Lake	19.93	93	P	P	02 33 27.5	-0.9
WLAR				IAmb	IAmb	02 33 38.0	
	comp=Z,82nm,1.3s						
SPMN	Marine on St.	20.02	59	P	P	02 33 28.0	-1.3
SPMN				IAmb	IAmb	02 33 33.6	
	comp=Z,61nm,1.4s						
ULM	Lac du Bonnet	20.15	43	P	P	02 33 31.1	+0.4
	comp=Z,12nm,0.7s,baz=232,slow=10,SNR=28						
ULM				LR	LR	02 42 48.7	
	comp=Z,133nm,19.4s,baz=245,slow=41						
ULM	Lac du Bonnet	20.15	43	P	P	02 33 31.0	+0.3
ULM				IAmb	IAmb	02 33 37.3	
	comp=Z,37nm,1.2s						
WHAR	Wooly Hollow	20.19	88	P	Pn	02 33 32.3	-0.8
FCAR	Ozark Folk Cen	20.20	86	P	P	02 33 31.9	+0.6
W41B	Gary Mavity, V	20.24	88	P	Pn	02 33 33.8	+0.1
	baz=283						
FFC	Flin Flon	20.45	26	P	P	02 33 33.1	-0.8
B35A	Bob, Littlefor	20.49	49	P	P	02 33 33.6	-0.8
B35A				IAmb	IAmb	02 33 38.8	
	comp=Z,65nm,1.9s						
CCM	Cathedral Cave	20.58	80	P	Pn	02 33 37.9	+0.2
	baz=276						
CCM	Cathedral Cave	20.58	80	P	P	02 33 34.5	-1.0
CCM				IAmb	IAmb	02 33 41.0	
	comp=Z,55nm,1.1s						
L40A	Anamosa	20.59	68	P	P	02 33 35.9	+0.3
N41A	Harden Midland	20.79	72	P	P	02 33 36.4	-1.3
N41A				IAmb	IAmb	02 33 40.5	
	comp=Z,37nm,1.0s						
T42A	Van Buren	20.82	82	P	P	02 33 38.0	-0.1
441A	DeRidder	20.90	101	P	P	02 33 38.1	-0.9
FVM	French Village	21.23	80	P	P	02 33 41.9	-0.7
FVM				IAmb	IAmb	02 33 49.7	
	comp=Z,56nm,1.1s						
E38A	The Farm, Brul	21.24	56	P	P	02 33 41.4	-1.1
I40A	Norwalk	21.26	63	P	P	02 33 42.5	-0.3
SLM	Saint Louis	21.32	78	P	P	02 33 44.0	+0.6
SLM				IAmb	IAmb	02 33 46.6	
	comp=Z,40nm,1.1s						
PBMO	Poplar Bluff	21.39	83	P	P	02 33 43.5	-0.6
PBMO				IAmb	IAmb	02 33 54.7	
	comp=Z,36nm,1.2s						
JFWS	Jewell Farm	21.39	66	P	P	02 33 45.6	+1.4
	baz=264,SNR=9.8						
JFWS	Jewell Farm	21.39	66	P	P	02 33 44.2	0.0
HBAR	Harrisburg	21.43	86	P	P	02 33 44.6	-0.1
EYMN	Ely	21.71	52	P	P	02 33 47.7	+0.2
	baz=250						
EYMN	Ely	21.71	52	P	P	02 33 46.9	-0.6
L42A	Oliver, Polo	21.74	69	P	P	02 33 47.3	-0.6
G40A	Rib Lake	21.81	60	P	P	02 33 48.5	-0.2
G40A				IAmb	IAmb	02 34 10.5	
	comp=Z,48nm,1.6s						
P43A	Skaggs, Pawnee	21.82	75	P	P	02 33 49.0	+0.2
P43A				IAmb	IAmb	02 33 55.5	
	comp=Z,35nm,0.8s						
HDIL	Hopedale	21.98	72	P	P	02 33 52.2	+1.7
	baz=270,SNR=6.6						
HDIL	Hopedale	21.98	72	P	P	02 33 50.0	-0.5
S44A	Carbondale	22.19	80	P	P	02 33 52.4	-0.3
S44A				IAmb	IAmb	02 33 56.0	
	comp=Z,39nm,1.1s						
SIUC	Southern Illin	22.21	80	P	P	02 33 52.8	-0.2
SIUC				IAmb	IAmb	02 33 55.6	
	comp=Z,25nm,0.9s						
Q44A	Meyer Farm, Va	22.25	77	P	P	02 33 53.6	+0.1
MOIG	Morelia	22.34	137	P	P	02 33 52.8	-1.9
VBMS	Vicksburg	22.47	95	P	P	02 33 55.6	-0.1
O44A	Mansfield	22.61	73	P	P	02 33 55.6	-1.6
OXF	Oxford	22.67	88	P	P	02 33 58.0	+0.1
OXF				IAmb	IAmb	02 34 01.9	
	comp=Z,42nm,1.1s						
K43A	Burlington	22.78	67	P	P	02 33 58.3	-0.7
DLBC	Dease Lake	22.90	343	P	P	02 34 02.7	+2.5
	comp=Z,14nm,1.1s,baz=182,slow=6.1,SNR=6.6						
M44A	Midewin, Midew	22.93	70	P	P	02 33 59.5	-1.1
OLIL	Olney	22.98	77	P	P	02 33 59.9	-1.3
HQIL	Hanson Quary C	23.08	69	P	P	02 34 00.6	-1.6
USIN	University of	23.40	79	P	P	02 34 04.5	-1.0
USIN				IAmb	IAmb	02 34 08.6	
	comp=Z,36nm,0.9s						
WVT	Waverly	23.57	84	P	P	02 34 06.8	-0.2
P46A	Rosedale	23.61	75	P	P	02 34 07.0	-0.4
P46A				IAmb	IAmb	02 34 09.8	
	comp=Z,30nm,0.9s						
PLAL	Pickwick Lake	23.62	86	P	P	02 34 07.8	+0.2
PLAL				IAmb	IAmb	02 34 11.3	
	comp=Z,37nm,1.7s						
SFIN	Lafayette	23.66	73	P	P	02 34 07.8	-0.1
SFIN				IAmb	IAmb	02 34 10.2	
	comp=Z,21nm,0.8s						
T47A	Sharon Grove	23.98	81	P	P	02 34 10.5	-0.6
T47A				IAmb	IAmb	02 34 22.8	
	comp=Z,24nm,1.1s						
Z47A	Carrollton	24.11	91	P	P	02 34 12.6	+0.3
Z47A				IAmb	IAmb	02 34 41.1	
	comp=Z,24nm,1.2s						
BLO	Bloomington	24.17	76	P	P	02 34 12.0	-0.8
BLO				IAmb	IAmb	02 34 15.7	
	comp=Z,19nm,0.9s						
WCI	Wyandotte Cave	24.44	78	P	P	02 34 15.9	+0.5
	baz=277						
WCI	Wyandotte Cave	24.44	78	P	P	02 34 15.2	-0.2
WCI				IAmb	IAmb	02 34 19.4	
	comp=Z,19nm,0.9s						
N47A	Urbana	24.71	72	P	P	02 34 16.8	-1.0
CLTN	Cedars of Leba	24.76	83	P	P	02 34 17.6	-0.7
CLTN				IAmb	IAmb	02 34 26.4	
	comp=Z,22nm,1.1s						
P48A	Milroy	24.99	75	P	P	02 34 20.0	-0.3

P48A				IAmb	IAmb	02 34 25.3	
	comp=Z,18nm,1.1s						
YKA	Yellowknife Ar	25.43	3	P	P	02 34 24.9	+0.9
	comp=Z,13nm,0.9s,baz=180,slow=10,SNR=97						
YKA				PcP	PcP	02 37 56.1	+0.4
	comp=Z,1.3nm,0.8s,baz=169,slow=2.8,SNR=7.5						
YKA				LR	LR	02 44 50.9	
	comp=Z,258nm,21.2s,baz=0.0,slow=38						
TLIG	Tlapa	25.50	135	P	P	02 34 24.1	-1.1
TLIG				IAmb	IAmb	02 34 30.3	
	comp=Z,14nm,0.9s						
L48A	N Adams	25.64	69	P	P	02 34 25.4	-0.8
W50A	Signal Mountai	25.77	85	P	P	02 34 25.6	-1.8
FCC	Fort Churchill	26.35	27	P	P	02 34 32.3	0.0
FCC				IAmb	IAmb	02 34 34.4	
	comp=Z,19nm,1.1s						
Z51A	Franklin	26.38	89	P	P	02 34 32.0	-1.0
S51A	Beattyville	26.64	79	P	P	02 34 34.6	-0.6
S51A				IAmb	IAmb	02 34 37.3	
	comp=Z,16nm,0.8s						
ACSO	Alum Creek Sta	26.80	73	P	P	02 34 35.8	-0.9
ACSO				IAmb	IAmb	02 35 09.8	
	comp=Z,24nm,1.2s						
TKL	Tuckaleechee C	26.88	83	P	P	02 34 38.3	+0.9
	comp=Z,3.2nm,0.6s,baz=180,slow=6.2,SNR=5.3						
TKL				LR	LR	02 45 56.6	
	comp=Z,201nm,20.7s,baz=286,slow=38						
TKL	Tuckaleechee C	26.88	83	IAmb	IAmb	02 35 20.9	
	comp=Z,46nm,1.9s						
CMIG	Matias Romero	28.05	129	LR	LR	02 46 29.2	
	comp=Z,143nm,18.4s,baz=273,slow=38						
SADO	Sadowa	29.54	63	P	P	02 35 02.0	+1.0
	comp=Z,7.2nm,1.0s,baz=273,slow=8.2,SNR=4.6						
SADO				LR	LR	02 48 26.9	
	comp=Z,146nm,20.6s,baz=278,slow=40						
Q56A	Snyder Ridge,	29.85	75	P	P	02 35 05.0	+1.1
	baz=278						
Q56A	Snyder Ridge,	29.85	75	P	P	02 35 03.9	0.0
Q56A				IAmb	IAmb	02 35 08.1	
	comp=Z,19nm,1.0s						
BCAR	Beaver Creek A	29.98	338	P	P	02 35 05.4	+0.6
P56A	Dayton Farm, R	30.05	74	P	P	02 35 06.7	+1.0
	baz=278						
KDAK	Kodiak Island	31.05	323	LR	LR	02 46 30.3	
	comp=Z,262nm,18.5s,baz=56,slow=34						
DOT	Dot Lake	31.11	337	P	P	02 35 14.8	0.0
DOT				IAmb	IAmb	02 35 21.4	
	comp=Z,11nm,1.0s						
V59A	Middlesex	31.24	81	P	P	02 35 17.1	+1.0
	baz=284						
SCRK	Sand Creek	31.32	338	P	P	02 35 19.3	+2.6
	baz=136,SNR=12						
EPYK	Eagle Plains	31.37	345	P	P	02 35 19.0	+2.0
	baz=149,SNR=8.2						
BINY	Binghamton	31.91	68	P	P	02 35 22.0	-0.1
	baz=275						
L58A	Harry Jones Me	32.02	68	P	P	02 35 23.5	+0.5
	baz=275						
D55A	Sainte-Anne-du	32.18	59	P	P	02 35 24.6	+0.2
	baz=268						
E56A	St. Veronique	32.46	60	P	P	02 35 27.1	+0.2
	baz=269						
INK	Inuvik	32.52	349	P	P	02 35 28.6	+1.6
	comp=Z,3.8nm,1.0s,baz=146,slow=7.3,SNR=6.8						
INK				PcP	PcP	02 38 13.9	+0.4
	comp=Z,2.0nm,0.9s,baz=157,slow=5.9,SNR=5.1						
INK	Inuvik	32.52	349	P	P	02 35 26.7	-0.3
INK				IAmb	IAmb	02 35 29.7	
	comp=Z,14nm,1.4s						
I58A	Old Forge	32.55	65	P	P	02 35 28.1	+0.4
	baz=273						
HDA	Harding Lake	32.55	336	P	P	02 35 30.0	+2.6
	baz=133						
MCK	McKinley	32.77	334	P	P	02 35 31.9	+2.6
	baz=129						
ILAR	Eielson Array	32.78	337	P	P	02 35 31.9	+2.6
	comp=Z,6.5nm,1.0s,baz=151,slow=7.5,SNR=45						
ILAR				PcP	PcP	02 38 15.4	+1.1
	comp=Z,1.1nm,0.7s,baz=167,slow=1.9,SNR=9.4						
ILAR				LR	LR	02 48 39.4	
	comp=Z,208nm,18.1s,baz=140,slow=36						
ILAR	Eielson Array	32.78	337	P	P	02 35 28.8	-0.6
M60A	Port Jervis	33.01	69	P	P	02 35 32.1	+0.4
	baz=277						
E57A	Chemin Saint G	33.07	60	P	P	02 35 32.6	+0.4
	baz=270						
COLA	College	33.15	337	P	P	02 35 32.4	-0.2
COLA				IAmb	IAmb	02 35 39.9	
	comp=Z,16nm,1.1s						
POKR	Poker Plat Res	33.19	337	P	P	02 35 35.8	+2.9
	baz=133,SNR=8.7						
E58A	La Victoria	33.68	60	P	P	02 35 37.4	0.0
	baz=270						
D58A	Chemin du LacG	33.95	59	P	P	02 35 39.7	-0.1
	baz=269						
COLD	Coldfoot	35.44	339	P	P	02 35 51.6	-0.8
COLD				IAmb	IAmb	02 36 00.3	
	comp=Z,17nm,1.7s						
TOLK	Toolik Lake Re	36.23	341	P	P	02 36 01.9	+2.7
	baz=134,SNR=11						
TOLK	Toolik Lake Re	36.23	341	P	P	02 36 01.4	+2.2
TOLK				IAmb	IAmb	02 36 07.2	
	comp=Z,15nm,1.1s						
RES	Resolute Bay	39.10	9	P	P	02 36 23.6	+0.2
	comp=Z,6.8nm,0.9s,baz=196,slow=9.6,SNR=21						
A21K	Barrow	39.82	341	P	P	02 36 30.1	+0.7
A21K				IAmb	IAmb	02 36 36.4	
	comp=Z,43nm,1.6s						
TNA	Tin City	40.78	330	P	P	02 36 41.6	+4.2
EUNU	Eureka	44.65	7	P	P	02 37 09.9	+1.1
EUNU				IAmb	IAmb	02 37 14.9	
	comp=Z,18nm,1.1s						
TULEG	Thule	44.86	14	P	P	02 37 10.8	+0.4
TULEG				IAmb	IAmb	02 38 14.8	
	comp=Z,14nm,1.1s						
SFJD	Kangerlussuaq	47.35	29	LR	LR	02 57 22.5	
	comp=Z,166nm,20.1s,baz=277,slow=36						
UREC	San Jos de Ur	47.78	117	*e*P	P	02 37 32.8	-1.3
SMLC	San Martn de	48.11	115	*e*P	P	02 37 36.4	-0.3
CBOC	Ciudad Bolivar	48.77	119	*e*P	P	02 37 39.8	-2.1
OCAC	Ocana	49.04	115	*e*P	P	02 37 55.0	+11
PTBC	PUERTO BERRIO,	49.39	117	*e*P	P	02 37 46.6	+0.1
GUY2C	Guyana, Caldas	49.67	119	*e*P	P	02 37 50.0	+0.8
NORC	Norcasia	49.78	119	*e*P	P	02 37 50.5	+0.9
YOTC	Yotoco, Valle	49.89	121	*e*P	P	02 37 45.2	-5.2
TOLC	Tolima	50.16	120	*e*P	P	02 37 51.6	-1.2
SPBC	San Pablo de B	50.28	118	*e*P	P	02 37 53.2	-0.2
SDV	Santo Domingo	50.58	112	P	P	02 37 54.3	-1.5
SDV	Santo Domingo	50.58	112	*e*P	P	02 38 00.9	+5.1
ROSC	El Rosal	50.67	119	P	P	02 37 58.6	+1.9
	comp=Z,4.8nm,0.4s,baz=26,slow=5.8,SNR=5.9						
ROSC				LR	LR	03 03 21.5	
	comp=Z,109nm,18.1s,baz=359,slow=41						
ROSC	El Rosal	50.67	119	IAmb	IAmb	02 38 00.7	
	comp=Z,35nm,1.4s						
ORTC	Ortega, Tolima	50.69	120	*e*P	P	02 37 57.6	+1.2
POPC	Popayan, Colom	50.72	123	*e*P	P	02 37 56.8	0.0
BBAC	Balboa, Cauca	50.72	124	*e*P	P	02 37 58.4	+1.5
RUSC	La Rusia	50.81	117	*e*P	P	02 37 57.7	-0.2
PRAC	Prado	51.08	120	*e*P	P	02 38 00.4	+1.1
CHIC	Chingaza	51.23	118	*e*P	P	02 37 59.9	-1.1
OTAV	Otavalo	51.28	127	P	P	02 38 03.1	+1.8
OTAV				IAmb	IAmb	02 38 05.2	
	comp=Z,12nm,1.2s						
OTAV	Otavalo	51.28	127	*e*P	P	02 38 03.2	+1.9
SUMG	Summit	51.67	22	P	P	02 38 02.6	-0.9
SUMG				IAmb	IAmb	02 38 04.4	
	comp=Z,6.9nm,0.7s						
SEY	Seymchan	57.86	327	P	P	02 38 49.4	+1.5
	comp=Z,6.6nm,1.0s,baz=24,slow=16,SNR=9.8						
PETK	Petropavlovsk-	58.60	315	P	P	02 38 54.6	+1.2
	comp=Z,4.7nm,0.8s,baz=89,slow=9.6,SNR=1.2						
PETK				LR	LR	03 01 25.3	
	comp=Z,40nm,19.8s,baz=48,slow=33						
JMIC	Jan Mayen	61.05	21	LR	LR	03 07 45.9	
	comp=Z,105nm,18.1s,baz=58,slow=38						
SPITS	Spitsbergen Ar	61.66	10	LR	LR	03 06 18.9	
	comp=Z,156nm,19.5s,baz=10.0,slow=36						
TIXI	Tiksi	62.12	341	P	P	02 39 16.5	-0.6
TIXI				IAmb	IAmb	02 39 18.8	
	comp=Z,7.3nm,1.0s						
PTGA	Pitinga	64.87	112	P	P	02 39 36.6	+0.5
YAK	Yakutsk	67.52	332	P	P	02 39 53.4	+1.0
SAML	Samuel	68.24	121	P	P	02 39 56.6	-1.0
SAML				IAmb	IAmb	02 39 58.2	
	comp=Z,9.9nm,1.3s						
ARCES	ARCESS Array B	70.17	13	LR	LR	03 13 17.5	
	comp=Z,124nm,18.2s,baz=275,slow=38						
LPAZ	La Paz	70.43	130	P	P	02 40 12.3	+0.5
	comp=Z,3.4nm,0.8s,baz=336,slow=3.8,SNR=8.1						
LPAZ				LR	LR	03 10 15.1	
	comp=Z,61nm,21.6s,baz=322,slow=35						
LPAZ	La Paz	70.43	130	P	P	02 40 11.5	-0.3
LPAZ				IAmb	IAmb	02 40 13.2	
	comp=Z,5.4nm,0.9s						
PB16	IPOC Station P	71.17	132	P	P	02 40 15.5	-0.7
ASAJ	Asahikawa	71.62	312	LR	LR	03 07 56.5	
	comp=Z,201nm,21.9s,baz=168,slow=33						
MNMC	Minye Minye	71.74	133	P	P	02 40 18.1	-1.2
NRIK	Noril'sk	72.27	351	P	P	02 40 21.4	-0.1
	comp=Z,1.2nm,0.3s,baz=196,slow=0.8,SNR=2.1						
NRIK				LR	LR	03 15 56.7	
	comp=Z,55nm,18.4s,baz=28,slow=39						
NRIK	Noril'sk	72.27	351	P	P	02 40 20.0	-1.5
NRIK				IAmb	IAmb	02 40 28.1	
	comp=Z,9.6nm,1.3s						
TA01	Diego Aracena	72.52	134	P	P	02 40 22.1	-1.5
NB2	NORSAR Subarra	73.53	23	P	P	02 40 29.5	+0.3
	comp=Z,1.6nm,0.8s,baz=320,slow=6.2						
NOA	NORSAR Array B	73.53	23	P	P	02 40 29.0	-0.2
	comp=Z,1.6nm,0.8s,baz=319,slow=6.1,SNR=4.8						
NOA				LR	LR	03 14 01.9	
	comp=Z,64nm,18.6s,baz=295,slow=37						
KLR	Kul'dur	74.57	321	LR	LR	03 14 17.1	
	comp=Z,43nm,18.8s,baz=58,slow=36						
SIV	San Ignacio	74.72	124	LR	LR	03 14 28.9	
	comp=Z,40nm,19.0s,baz=67,slow=37						
FINES	FINESS Array B	77.33	17	P	P	02 40 50.1	-0.8
	comp=Z,1.2nm,0.8s,baz=18,slow=6.6,SNR=6.9						
USRK	Ussuriysk Ar.	77.66	317	P	P	02 40 53.4	+0.3
	comp=Z,3.7nm,0.7s,baz=54,slow=4.5,SNR=5.4						
USRK	Ussuriysk Ar.	77.66	317	P	P	02 40 52.0	-1.1
MJAR	Matsushiro Arr	78.79	307	LR	LR	03 09 59.8	
	comp=Z,32nm,21.5s,baz=20,slow=31						
HIA	Hailar	80.28	326	P	P	02 41 05.1	-2.3
HIA				IAmb	IAmb	02 41 09.9	
	comp=Z,12nm,1.4s						
KLMR	Klimovskoe	80.51	11	*e*P	P	02 41 07.5	-0.9
KLMR				AMP		02 41 10.3	
	comp=Z,49nm,1.5s						
ESDC	Sonseca Array	82.02	46	P	P	02 41 17.1	+0.2
	comp=Z,3.2nm,0.9s,baz=304,slow=6.6,SNR=7.9						
ZON	Zonda	82.03	140	P	P	02 41 15.7	-1.1
BDFB	Brasilia	83.55	115	LR	LR	03 22 23.1	
	comp=Z,42nm,21.1s,baz=41,slow=38						
BNI	Bardonecchia	83.79	36	P	P	02 41 24.6	-1.5
GEC2B	GERESS ARRAY S	83.94	30	P	P	02 41 25.6	-1.1
GERES	GERESS Array B	83.94	30	P	P	02 41 27.8	+1.1
	comp=Z,1.0nm,0.9s,baz=357,slow=2.7,SNR=6.4						
GERES				LR	LR	03 19 16.2	
	comp=Z,144nm,18.1s,baz=300,slow=36						
GERES	GERESS Array B	83.94	30	P	P	02 41 25.6	-1.1
TUE	Stuetta	83.94	34	P	P	02 41 27.2	+0.3
MOTA	Moosalm	84.04	32	*e*P	P	02 41 29.1	+1.7
	comp=Z,13nm,1.9s						
FETA	Feichten	84.13	33	*i* P	P	02 41 29.9	+2.0
	comp=Z,7.2nm,1.2s						
SQTA	Sankt Quirin	84.18	32	*e*P	P	02 41 29.8	+1.7
	comp=Z,10nm,1.6s						
WATA	Walderalm	84.25	32	*e*P	P	02 41 29.9	+1.5
	comp=Z,13nm,1.5s						
WTTA	Wattenberg	84.33	32	*e*P	P	02 41 30.5	+1.7
	comp=Z,12nm,1.3s						
KSRS	Korea Array	84.45	313	P	P	02 41 30.4	+1.0
	comp=Z,3.9nm,1.0s,baz=51,slow=5.5,SNR=5.9						
KSRS				LR	LR	03 17 07.5	
	comp=Z,15nm,18.1s,baz=43,slow=34						
KSAR	Wonju Array Be	84.48	314	P	P	02 41 29.8	+0.2
CPUP	Villa Florida	84.57	129	P	P	02 41 31.8	+1.8
	comp=Z,3.8nm,1.0s,baz=9.0,slow=6.6,SNR=6.5						
CPUP				LR	LR	03 19 53.7	
	comp=Z,38nm,19.1s,baz=335,slow=36						
TLY	Talaya	84.60	336	P	P	02 41 30.4	+0.5
MOA	Molln	84.96	30	*e*P	P	02 41 33.1	+1.3
	comp=Z,10nm,1.4s						
ABTA	Abfaltersbach	85.11	32	*e*P	P	02 41 33.6	+1.0
	comp=Z,4.9nm,1.2s						
KBA	Koelnbreinsper	85.20	31	*i* P	P	02 41 32.5	-0.7
	comp=Z,4.4nm,1.2s						
CONA	Conrad Observa	85.53	30	*e*P	P	02 41 36.4	+1.6
	comp=Z,5.0nm,1.1s						
MODS	Modra-Piesok	85.72	28	*e*P	P	02 41 37.1	+1.5
OBKA	Obir	86.15	31	*e*P	P	02 41 38.3	+0.4
	comp=Z,8.1nm,1.4s						
SOKA	Soboth	86.21	31	*e*P	P	02 41 39.1	+0.9
	comp=Z,6.3nm,1.4s						
ULN	Ulaanbaatar	86.61	332	P	P	02 41 39.1	-1.1
ULN				IAmb	IAmb	02 41 47.2	
	comp=Z,8.2nm,1.1s						
CRVS	Cervenica-Dubn	86.81	26	*e*P	P	02 41 46.6	+5.7
SONM	Songino Array	86.88	332	P	P	02 41 42.8	+1.3
	comp=Z,5.0nm,0.8s,baz=25,slow=4.2,SNR=25						
SONM				LR	LR	03 22 05.0	
	comp=Z,70nm,19.6s,baz=40,slow=37						
SONM	Songino Array	86.88	332	P	P	02 41 40.7	-0.7
SONM				IAmb	IAmb	02 41 43.8	
	comp=Z,4.7nm,0.8s						
KOLS	Kolonicke sedl	87.06	25	*e*P	P	02 41 47.6	+5.4
ZAA0	Zalesovo Array	87.30	347	P	P	02 41 41.2	-1.9
ZALV	Zalesovo Beam	87.30	347	P	P	02 41 43.8	+0.6
	comp=Z,1.2nm,0.6s,baz=5.7,slow=4.5,SNR=7.5						
ZALV				LR	LR	03 24 47.8	
	comp=Z,36nm,21.7s,baz=37,slow=38						
ZALV	Zalesovo Beam	87.30	347	P	P	02 41 41.2	-1.9
AKASG	Malin Array Be	87.68	21	P	P	02 41 45.1	+0.1
	comp=Z,4.5nm,0.8s,baz=332,slow=3.8,SNR=12						
AKASG	Malin Array Be	87.68	21	P	P	02 41 44.3	-0.7
AKBB	Malin Array Si	87.68	21	P	P	02 41 44.5	-0.6
PLCA	Paso Flores	88.51	146	P	P	02 41 50.0	+1.0
	comp=Z,3.1nm,0.9s,baz=25,slow=3.9,SNR=4.4						
PLCA				LR	LR	03 15 59.3	
	comp=Z,44nm,18.8s,baz=335,slow=32						
BURAR	Bucovina Array	89.19	24	P	P	02 41 51.1	-1.3
BRVK	Borovoye	89.94	355	P	P	02 41 56.6	+0.9
DIVS	Divibare	90.32	29	P	P	02 41 56.9	-0.9
DIVS				IAmb	IAmb	02 42 03.8	
	comp=Z,9.9nm,1.3s						
HHC	Hu-ho-hao-te	90.44	325	*e*P	P	02 41 58.1	-0.4
HHC	Hu-ho-hao-te	90.44	325	*e*P	P	02 42 10.8	+12
HHC				pmax	pmax		
	comp=Z,8.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,130nm,5.4s						
HHC				pmax	pmax		
	comp=Z,6.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,68nm,5.1s						
KURK	Kurchatov	91.41	350	P	P	02 42 01.5	-1.1
SEM	Semipalatinsk	91.47	349	*e*P	P	02 42 03.0	-0.2
	baz=349						
BRZS	Berezniki	92.81	354	*e*P	P	02 42 08.5	-0.6
	baz=354						
NJ2	Nanjing	93.51	315	*e*P	P	02 42 11.4	-1.2
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
ABKAR	Akbulak array	93.94	2	P	P	02 42 14.7	+0.4
MK31	Makanchi Array	94.63	347	P	P	02 42 17.0	-0.5
MK31				IAmb	IAmb	02 45 03.4	
	comp=Z,7.8nm,1.9s						
MKAR	Makanchi Array	94.63	347	P	P	02 42 17.5	-0.1
	comp=Z,1.4nm,1.0s,baz=350,slow=6.2,SNR=7.8						
MKAR				LR	LR	03 30 52.9	
	comp=Z,49nm,18.3s,baz=12,slow=39						
MKAR	Makanchi Array	94.63	347	P	P	02 42 16.9	-0.7
MAKZ	Makanchi	94.67	347	P	P	02 42 17.5	-0.2
MAKZ				IAmb	IAmb	02 42 19.0	
	comp=Z,3.5nm,0.9s						
WMQ	Urumqi	96.30	342	*e*P	P	02 42 24.9	-0.4
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.8s						
WMQ				pmax	pmax		
	comp=Z,100nm,4.1s						
GTA	Gaotai	96.55	332	*e*P	P	02 42 28.8	+2.2
GTA				pP	sP	02 42 32.4	+1.1
GTA				sP	pP	02 42 35.5	+5.4
GTA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KBZ	Khabaz	97.51	14	P	Pdif	02 42 31.3	+0.7
	comp=Z,2.4nm,0.9s,baz=319,slow=2.2,SNR=5.7						
BTLS	Baital	97.56	352	*e*P	P	02 42 30.8	-0.1
	baz=352						
LZH	Lanzhou	97.79	328	*e*P	P	02 42 23.1	-9.2
LZH				pP	Pdif	02 42 27.4	-4.9
LZH				sP	PcP	02 42 29.9	-2.5
LZH				pmax	pmax		
	comp=Z,14nm,1.2s						
BRTR	Keskin Array B	98.95	22	LR	LR	03 29 10.9	
	comp=Z,67nm,19.2s,baz=320,slow=36						
BRLS	Borolday	99.95	355	*e*P	Pdif	02 42 43.4	+1.8
	baz=355						
CMAR	Chiang Mai Arr	115.04	322	PKP	PKPdf	02 47 40.5	+2.3
	comp=Z,0.9nm,0.3s,baz=202,slow=1.5,SNR=4.2						
WRA	Warramunga Arr	116.21	264	PKP	PKiKP	02 47 40.3	-0.1
	comp=Z,1.6nm,1.0s,baz=55,slow=1.5,SNR=6.9						
STKA	Stephens Creek	116.61	249	PKP	PKPdf	02 47 40.1	-0.7
	comp=Z,1.0nm,0.5s,baz=87,slow=12,SNR=2.3						
ASAR	Alice Springs	118.49	261	PKP	PKPdf	02 47 43.5	-1.2
	comp=Z,1.1nm,0.8s,baz=76,slow=1.4,SNR=8.6						
LBTB	Lobatse	146.14	80	PKPbc	PKPdf	02 48 36.7	+0.4
BOSA	Boshof	147.52	86	PKPbc	PKPbc	02 48 41.3	+0.1
	comp=Z,9.0nm,0.9s,baz=288,slow=3.4,SNR=12						
BOSA	Boshof	147.52	86	PKPbc	PKPbc	02 48 40.1	-1.1

IDC ***14*** *03:23:28.5±2.0, 15°.38S×173°.36W, h0^{km}, mb3.6/5, mb1 4.0/5, mb1mx3.8/30, mbtmp3.6/5, MS3.2/2, Ms1 3.2/2, ms1mx2.7/33 Error ellipse: s-maj=121.8km s-min=25.7km az=150.0*

NOU ***14*** *03:23:51.2, 13°.95S×172°.16W, h64^{km}, MLv3.0, Samoa Islands*

ISC 14 03:23:33.9±2.0, **15°.2S**±0°.7×**173°.4W**±0°.4, **h35**^{km}**, n15,** σ**1^{s}.14**/7, **mb3.5**/5, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	1.99	50	P	Pn	03 24 03.8	-1.4
DZM	Mont Dzumac	20.32	247	LR	LR	03 34 08.4	
	comp=Z,46nm,19.6s,baz=31,slow=32						
H11S2	WAKE ISLAND Hy	38.82	329	T	T	04 11 49.5	
	baz=149,slow=76,SNR=5.0						
H11S3	WAKE ISLAND Hy	38.84	329	T	T	04 11 50.7	
	baz=149,slow=76,SNR=4.1						
H11S1	WAKE ISLAND Hy	38.84	329	T	T	04 12 07.9	
	baz=149,slow=76,SNR=3.3						
H11N3	WAKE ISLAND Hy	39.77	330	T	T	04 13 27.9	
	baz=151						
H11N1	WAKE ISLAND Hy	39.77	330	T	T	04 13 25.5	
	baz=151						
H11N2	WAKE ISLAND Hy	39.78	330	T	T	04 13 30.3	
	baz=151						
WRA	Warramunga Arr	49.94	257	P	P	03 32 23.9	-0.9
	0.2nm,0.6s,baz=90,slow=6.7,SNR=1.7						
ASAR	Alice Springs	50.22	252	P	P	03 32 26.1	-0.8
	0.8nm,0.6s,baz=85,slow=8.3,SNR=16						
KAPI	Kappang	66.42	271	LR	LR	04 02 28.6	
	comp=Z,19nm,18.7s,baz=136,slow=35						
TXAR	Lajitas Array	80.46	56	P	P	03 35 43.5	+0.9
	0.5nm,0.8s,baz=228,slow=6.9,SNR=5.2						
PDAR	Pinedale Array	82.09	42	P	P	03 35 51.6	+0.5
	0.6nm,0.8s,baz=207,slow=5.0,SNR=5.6						
ILAR	Eielson Array	82.25	11	P	P	03 35 51.9	+0.7
	0.3nm,0.6s,baz=225,slow=6.4,SNR=5.9						
GERES	GERESS Array B	145.96	352	PKPbc	PKPab	03 43 11.2	+0.7
	0.4nm,0.4s,baz=0.0,slow=4.9,SNR=4.7						

IDC ***14*** *03:56:12.7±1.7, 4°.95N×125°.80E, h0^{km}, mb3.8/5, mb1 3.9/5, mb1mx3.6/38, mbtmp3.8/5, Error ellipse: s-maj=104.0km s-min=23.6km az=68.0*

NEIC ***14*** *03:56:22.8±0.4, 5°.2N±0°.1×126°.1E±0°.1, h104^{km}±12^{km}, mb4.1/7, Error ellipse: s-maj=27.8km s-min=6.6km az=222.0*

MAN ***14*** *03:56:28.5, 4°.99N×125°.82E, h6^{km}, mb4.6, ML3.4, MS3.3*

ISC 14 03:56:25.5±0.9, **4°.81N**±0°.06×**126°.0E**±0°.1, **h100**^{km}**, n16,** σ**1^{s}.53**/17, **mb4.0**/8, **1D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	Don Marcelino,	1.32	346	*e*P	Pn	03 56 50.2	+0.5
DDMP				*e*S	Sn	03 57 06.2	-1.7
SKMP	Bagumbayan, Su	2.25	319	*e*P	Pn	03 57 02.4	+1.1
SKMP				*e*S	Sn	03 57 28.9	+0.1
KCP	Kidapawan	2.38	337	⇓*e*P	Pn	03 57 04.8	+1.8
KCP				*i* S	Sn	03 57 35.7	+3.9
TNTI	Ternate	4.23	162	Pn	Pn	03 57 29.5	+1.7
TOLI2	Tolitoli	6.40	235		Pn	03 57 58.1	+0.8
FITZ	Fitzroy Crossi	22.77	181	P	P	04 01 19.2	-0.4
	3.3nm,0.5s,baz=359,slow=7.0,SNR=22						
FITZ	Fitzroy Crossi	22.77	181	IAmb	IAmb	04 01 21.7	
	comp=Z,5.0nm,0.7s						
WB0	Warramunga Arr	25.77	162	P	P	04 01 47.8	+0.6
WB0				IAmb	IAmb	04 01 59.9	
	comp=Z,6.3nm,1.2s						
WRA	Warramunga Arr	25.92	162	P	P	04 01 48.5	0.0
	comp=Z,0.7nm,0.6s,baz=338,slow=10,SNR=9.3						
WB2	Warramunga Arr	25.92	162	P	P	04 01 48.4	-0.2
WB2				IAmb	IAmb	04 02 02.0	
	comp=Z,9.4nm,1.4s						
ASAR	Alice Springs	29.33	165	P	P	04 02 18.8	-0.2
	comp=Z,0.6nm,0.5s,baz=345,slow=7.3,SNR=16						
FORT	Forrest	35.44	177	P	P	04 03 12.1	-0.1
BBOO	Buckleboo	38.61	166	P	P	04 03 38.7	-0.3
BBOO				IAmb	IAmb	04 03 39.1	
	comp=Z,21nm,1.5s						
STKA	Stephens Creek	39.38	159	P	P	04 03 45.4	0.0
	comp=Z,1.7nm,0.7s,baz=340,slow=13,SNR=4.3						
STKA	Stephens Creek	39.38	159	IAmb	IAmb	04 03 47.5	
	comp=Z,1.4nm,1.3s						
MKAR	Makanchi Array	56.28	325	P	P	04 05 53.3	-2.4
	comp=Z,0.2nm,0.4s,baz=119,slow=7.3,SNR=6.4						

JMA ***14*** *04:13:59.9, 38°.86N×141°.77E, h56^{km}±1^{km}, M3.4*

JMA Felt I J1.

IDC ***14*** *04:14:03.7±4.2, 38°.85N×141°.60E, h92^{km}±41^{km}, mb3.1/4, mb1 3.3/5, mb1mx3.0/45, mbtmp3.4/5, Error ellipse: s-maj=37.2km s-min=30.5km az=84.0*

ISC 14 04:13:59.6±1.1, **38°.88N**±0°.05×**141°.82E**±0°.09, **h53**^{km}±7^{km}, **n22,** σ**1^{s}.37**/26, **mb3.5**/4, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	Ofunato	0.23	330	P	Pn	04 14 09.2	+0.6
OFUJ				S	Sn	04 14 15.7	+0.7
JKMT	Kesennumamotoy	0.28	256	P	Pn	04 14 09.2	+0.3
JKMT				S	Sn	04 14 15.5	0.0
JMK	Ichinoseki	0.47	279	P	Pn	04 14 10.9	+0.1
JMK				S	Sn	04 14 18.8	0.0
JIO	Ouri	0.56	221	P	Pn	04 14 11.7	-0.1
JIO				S	Sn	04 14 19.8	-0.8
JOM	Ohasama	0.72	325	P	Pn	04 14 14.2	+0.4
JOM				S	Sn	04 14 24.5	+0.4
JOU	Okura	1.04	241	P	Pn	04 14 17.6	-0.4
JOU				S	Sn	04 14 30.6	-1.0
JRG	Rokugo	1.06	300	P	Pn	04 14 18.1	-0.1
JRG				S	Sn	04 14 31.8	-0.2
JYK	Kaneyama	1.14	272	P	Pn	04 14 19.2	-0.1
JYK				S	Sn	04 14 33.7	-0.3
JMM	Marumori	1.29	219	P	Pn	04 14 20.6	-0.8
JMM				S	Sn	04 14 35.7	-1.9
JYS	Shirataka	1.52	245	*e*S	Sn	04 14 43.4	+0.1
MAT	Matsushiro	3.69	232	P	Pn	04 14 57.2	+3.0
MAT				*e*S	Sn	04 15 40.6	+4.1
MJAR	Matsushiro Arr	3.69	232	P	Pn	04 14 56.4	+2.2
	0.3nm,0.3s,baz=37,slow=12,SNR=9.6						
H11N2	WAKE ISLAND Hy	28.86	124	T	T	04 50 25.3	
	baz=317,slow=75,SNR=66						
H11N1	WAKE ISLAND Hy	28.87	124	T	T	04 50 20.3	
	baz=317,slow=75,SNR=100						
H11N3	WAKE ISLAND Hy	28.88	124	T	T	04 50 21.1	
	baz=317,slow=75,SNR=76						
H11S1	WAKE ISLAND Hy	29.64	126	T	T	04 51 18.5	
	baz=319,slow=76,SNR=23						
H11S3	WAKE ISLAND Hy	29.64	126	T	T	04 51 19.1	
	baz=319,slow=76,SNR=36						
H11S2	WAKE ISLAND Hy	29.65	126	T	T	04 51 19.7	
	baz=319,slow=76,SNR=21						
ZALV	Zalesovo Beam	40.93	311	P	P	04 21 35.2	-1.4
	0.5nm,0.4s,baz=73,slow=11,SNR=1.9						
MKAR	Makanchi Array	43.44	301	P	P	04 21 56.5	-0.7
	0.3nm,0.4s,baz=83,slow=9.6,SNR=6.3						
ILAR	Eielson Array	47.77	33	P	P	04 22 31.9	+0.8
	0.2nm,0.6s,baz=270,slow=6.1,SNR=4.4						
WRA	Warramunga Arr	58.93	188	P	P	04 23 52.6	-0.7

0.4nm,0.8s,baz=7.4,slow=7.5,SNR=2.1

IDC 14 04:47:25.6±2.1**, 4°.31S**×**151°.59E, h0^{km}, mb3.5**/4**, mb1 3.8**/4**, mb1mx3.5**/30**, mbtmp3.5**/4**, Error ellipse: s-maj=131.8km s-min=28.9km az=129.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.89	226	P	P	04 52 31.0	-0.1
	0.3nm,0.5s,baz=51,slow=9.9,SNR=4.7						
ASAR	Alice Springs	25.72	220	P	P	04 52 58.2	+0.3
	0.3nm,0.9s,baz=53,slow=11,SNR=1.7						
FITZ	Fitzroy Crossi	28.84	240	P	P	04 53 25.7	-0.2
	3.9nm,1.3s,baz=36,slow=14,SNR=1.7						
ILAR	Eielson Array	82.17	22	P	P	04 59 48.1	0.0
	0.4nm,0.7s,baz=250,slow=5.8,SNR=5.2						

IDC 14 04:54:24.1±2.3**, 4°.13S**×**151°.58E, h0^{km}, mb3.4**/3**, mb1 3.7**/3**, mb1mx3.4**/26**, mbtmp3.4**/3**, Error ellipse: s-maj=203.8km s-min=28.9km az=126.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.01	226	P	P	04 59 30.6	-0.2
	0.8nm,0.9s,baz=50,slow=9.7,SNR=4.6						
ASAR	Alice Springs	25.85	220	P	P	04 59 57.8	+0.2
	0.3nm,0.6s,baz=52,slow=9.0,SNR=1.8						
ILAR	Eielson Array	82.00	22	P	P	05 06 45.8	0.0
	0.5nm,0.7s,baz=237,slow=5.1,SNR=8.8						

WEL 14 04:54:31.9±1.3**, 34°S**±30°×**18°0W**±3°2**, h361^{km}**±30^{km}**, M4.2**/12**, mB4.7**/1**, ML4.3**/12**, MLv4.2**/12**, Mw(mB)3.9**/1**, Error ellipse: s-maj=0.1km s-min=0.0km az=133.4, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	4.17	202	P	Pn	04 55 44.0	+0.7
HAZ	Te Kaha	4.34	209	P	Pn	04 55 44.7	-0.3
HAZ				S	S	04 56 43.4	-0.7
PKGZ	Pakihiroa	4.35	205	P	Pn	04 55 44.4	-0.7
PKGZ				S	S	04 56 44.6	+0.3
PUZ	Puketiti	4.46	202	P	Pn	04 55 47.0	+0.9
PUZ				S	S	04 56 48.1	+1.9
RUGZ	Raukumara Rang	4.57	208	P	Pn	04 55 46.9	-0.6
RUGZ				S	S	04 56 48.4	-0.2
TWGZ	Tauwhareparae	4.64	204	P	Pn	04 55 49.3	+1.1
TWGZ				S	S	04 56 51.6	+1.7
TKGZ	Te Karaka	4.92	204	P	Pn	04 55 49.5	-1.6
MWZ	Matawai	4.95	207	P	Pn	04 55 51.1	-0.3
MWZ				S	S	04 56 55.6	-0.2
URZ	Urewera	5.05	211	P	Pn	04 55 52.6	+0.1
URZ				S	S	04 56 57.8	0.0
MUGZ	Murupara	5.38	212	P	Pn	04 55 55.9	-0.2
NMHZ	Naumai	5.89	208	P	Pn	04 56 02.4	+0.6
BKZ	Black Stump Fm	6.07	210	P	Pn	04 56 02.7	-1.2
HIZ	Hauiti	6.38	223	P	Pn	04 56 09.5	+2.2
OTVZ	Oturere	6.44	215	P	Pn	04 56 08.5	+0.3
BHHZ	Black Hill Sta	6.53	211	P	Pn	04 56 08.6	-0.4
KRHZ	Kereru	6.53	209	P	Pn	04 56 08.9	-0.1

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*NEIC **14** 04:54:50.6±1.3, 15°.5S±0°.1×174°.30W±0°.10, h155^{km}±6^{km}, mb4.4/38, Error ellipse: s-maj=17.1km s-min=12.3km az=156.0*

*NOU **14** 04:54:52.6, 15°.37S×173°.87W, h207^{km}, mb4.7, Tonga Islands*

*IDC **14** 04:54:55.3±3.3, 15°.56S×174°.34W, h196^{km}±30^{km}, mb4.1/15, mb1 4.3/17, mb1mx4.1/30, mbtmp4.6/17, Error ellipse: s-maj=21.7km s-min=13.0km az=145.0*

ISC 14 04:54:50.1±0.4**, 15°.50S**±0°.08×**174°.30W**±0°.07**, h150^{km}, n153, σ0^s.62**/145**, mb4.3**/34**, 11C-13D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	2.91	57		Pn	04 55 36.7	+0.2
AFI	Afiamalu	2.91	57	P	Pn	04 55 36.7	+0.2
NIUE	Niue	5.49	131		Pn	04 56 10.6	+0.6
NIUE	Niue	5.49	131	P	Pn	04 56 10.6	+0.6
MSVF	Nonsavu	7.66	252	P	Pn	04 56 44.8	+5.7
	0.5nm,0.3s,baz=110,slow=14,SNR=7.8						
MSVF	Nonsavu	7.66	252		Pn	04 56 40.1	+1.0
MSVF	Nonsavu	7.66	252	P	Pn	04 56 46.9	+7.8
LIFNC	LIFOU	18.31	251	P	Pn	04 58 57.1	+2.5
	173nm,1.0s						
DZM	Mont Dzumac	19.36	247	P	Pn	04 59 05.3	-1.7
	0.5nm,0.3s,baz=147,slow=24,SNR=2.7						
DZM	Mont Dzumac	19.36	247	P	Pn	04 59 07.4	+0.4
NOUC	Port Laguerre	19.49	247	P	Pn	04 59 08.8	+0.3
	35nm,1.4s						
URZ	Urewera	23.91	197	P	P	04 59 49.4	-0.7
	4.8nm,0.3s,baz=286,slow=2.5,SNR=8.6						
WHZ	Wether Hill Ro	33.76	203	P	P	05 01 17.3	-0.2
H11S2	WAKE ISLAND Hy	38.61	330	T	T	05 42 50.9	
	baz=146,slow=75,SNR=6.7						
H11S3	WAKE ISLAND Hy	38.62	330	T	T	05 42 55.5	
	baz=146,slow=75,SNR=6.7						
H11S1	WAKE ISLAND Hy	38.63	330	T	T	05 42 54.9	
	baz=146,slow=75,SNR=5.0						
TOO	Toolangi	41.73	230	P	P	05 02 24.2	-0.4
TOO				IAmb	IAmb	05 02 25.5	
	comp=Z,9.2nm,0.7s						
PTCN	Pitcairn Islan	42.38	110	P	P	05 02 30.0	+0.1
STKA	Stephens Creek	43.23	240	P	P	05 02 37.0	+0.2
	comp=Z,5.1nm,0.6s,baz=61,slow=6.5,SNR=13						
STKA	Stephens Creek	43.23	240	P	P	05 02 36.3	-0.4
WR0	Warramunga Arr	48.78	257	P	P	05 03 19.9	-0.5
WR0				IAmb	IAmb	05 03 22.6	
	comp=Z,8.2nm,1.1s						
WB0	Warramunga Arr	48.94	257	P	P	05 03 21.1	-0.4
WB2	Warramunga Arr	48.96	257	P	P	05 03 21.3	-0.4
WRA	Warramunga Arr	48.98	257	P	P	05 03 21.6	-0.2
	comp=Z,4.8nm,0.3s,baz=97,slow=7.8,SNR=121						
AS31	Alice Springs	49.25	252	P	P	05 03 23.8	-0.1
AS31				IAmb	IAmb	05 03 24.9	
	comp=Z,12nm,0.8s						
ASAR	Alice Springs	49.25	252	P	P	05 03 23.8	-0.1
	comp=Z,46nm,0.6s,baz=85,slow=8.6,SNR=400						
ASAR	Alice Springs	49.25	252	P	P	05 03 23.0	-0.9
MTN	Manton Dam	52.86	265	P	P	05 03 50.2	-0.6
FORT	Forrest	54.60	243	P	P	05 04 02.6	-0.7
SIJI	Sorong	55.62	280	P	P	05 04 10.9	0.0
	comp=Z,36nm,0.7s,baz=77,slow=2.9,SNR=6.7						
FITZ	Fitzroy Crossi	57.34	258	P	P	05 04 23.1	+0.2
	comp=Z,2.4nm,0.7s,baz=128,slow=4.1,SNR=12						
SOEI	Soe	60.06	268	P	P	05 04 42.9	+0.9
MMRI	Maumere	62.25	268	P	P	05 04 56.5	-0.2
PSA00	Pilbara Seismi	62.34	254	P	P	05 04 56.1	-1.0
VNDA	Vanda	63.19	186	P	P	05 05 02.5	+0.8
	comp=Z,1.0nm,0.7s,baz=25,slow=5.0,SNR=1.6						
SNCC	San Nicolas Is	71.27	46	P	P	05 05 52.6	-0.8
PETK	Petropavlovsk-	72.46	343	P	P	05 05 60.0	-0.1
	comp=Z,5.2nm,0.9s,baz=108,slow=8.8,SNR=5.8						
CMB	Columbia Colle	73.41	42	P	P	05 06 06.4	+0.4
CMB				IAmb	IAmb	05 06 07.6	
	comp=Z,5.4nm,0.8s						
ORV	Oroville	73.61	40	P	P	05 06 07.9	+0.8
MDPB	Devils Postpil	74.03	43	P	P	05 06 10.3	+0.4
MDPB				IAmb	IAmb	05 06 11.5	
	comp=Z,5.7nm,0.9s						
OMMB	Old Mammoth Mi	74.07	43	P	P	05 06 10.1	-0.1
YBH	Yreka Blue Hor	74.20	38	P	P	05 06 11.3	+0.7
YBH				IAmb	IAmb	05 06 12.7	
	comp=Z,7.0nm,0.8s						
BEKR	Beckworth	74.50	40	IAmb	IAmb	05 06 14.1	
	comp=Z,5.1nm,0.9s						
HUMO	Hull Mountain	74.61	37	P	P	05 06 13.9	+1.1
HUMO				IAmb	IAmb	05 06 16.5	
	comp=Z,5.8nm,0.9s						
VCNR	Virginia City	74.61	41	P	P	05 06 13.2	0.0
VCNR				IAmb	IAmb	05 06 14.9	
	comp=Z,4.0nm,0.7s						
NVAR	Mina Array Bea	74.99	42	P	P	05 06 16.3	+1.0
	comp=Z,6.2nm,0.7s,baz=227,slow=9.8,SNR=59						
NVAR	Mina Array Bea	74.99	42	P	P	05 06 15.8	+0.4
HSIG		75.49	54	P	P	05 06 17.2	-1.0
HSIG				IAmb	IAmb	05 06 17.8	
	comp=Z,7.8nm,1.4s						
KSRS	Korea Array	75.62	316	P	P	05 06 18.9	+0.2
	comp=Z,0.7nm,0.5s,baz=121,slow=5.2,SNR=2.3						
WVOR	Wild Horse Val	77.05	39	P	P	05 06 27.1	+0.2
PSUT	Pine Spring	77.98	44	P	P	05 06 32.4	+0.1
G08A	Pilot Rock	78.53	36	P	P	05 06 35.2	+0.3
HAWA	Hanford	78.86	35	P	P	05 06 36.7	+0.2
E08A	Dider Farm, El	79.18	35	P	P	05 06 38.1	-0.1
E08A				IAmb	IAmb	05 06 39.7	
	comp=Z,11nm,1.4s						
B08A	Colville Reser	80.14	34	P	P	05 06 43.3	-0.2
B08A				IAmb	IAmb	05 06 44.1	
	comp=Z,5.1nm,0.8s						
HLID	Hailey	80.26	40	P	P	05 06 45.2	+0.8
HLID				IAmb	IAmb	05 06 46.2	
	comp=Z,6.8nm,1.1s						
LENM	Lemitar	80.81	51	P	P	05 06 47.4	-0.2
MNTX	Cornudas Mount	80.98	54	P	P	05 06 49.0	+0.7
BNM	Barren Site	81.06	51	P	P	05 06 49.5	+0.5
TXAR	Lajitas Array	81.39	56	P	P	05 06 51.5	+0.8
	comp=Z,1.4nm,0.6s,baz=220,slow=7.4,SNR=21						
TXAR	Lajitas Array	81.39	56	P	P	05 06 50.7	+0.1
ANMO	Albuquerque	81.53	50	P	P	05 06 51.3	-0.1
MCMT	McKenzie Canyo	81.88	39	P	P	05 06 53.5	+0.4
DOT	Dot Lake	82.30	13	P	P	05 06 54.5	0.0
DOT				IAmb	IAmb	05 06 55.5	
	comp=Z,8.3nm,0.7s						
COLA	College	82.62	11	P	P	05 06 55.6	-0.5
COLA				IAmb	IAmb	05 06 56.7	
	comp=Z,11nm,0.7s						
ILAR	Eielson Array	82.71	11	P	P	05 06 56.1	-0.5
	comp=Z,2.9nm,0.6s,baz=225,slow=6.0,SNR=55						
YHL	Hebgen Lake	82.91	40	P	P	05 06 59.0	+0.5
PDAR	Pinedale Array	82.92	42	P	P	05 06 58.3	-0.2
	comp=Z,3.2nm,0.7s,baz=210,slow=3.2,SNR=28						
YNE	Yellowstone No	83.72	40	P	P	05 07 02.9	+0.4
ABTX	Abilene, Hawle	85.83	55	P	P	05 07 12.6	-0.6
ABTX				IAmb	IAmb	05 07 14.1	
	comp=Z,11nm,0.8s						
HHC	Hu-ho-hao-te	88.46	313	*e*P	P	05 07 26.4	+0.7
HHC				pmax	pmax		
	comp=Z,9.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,82nm,6.7s						
KMI	Kunming	90.29	296	⇓P	P	05 07 35.9	+1.2
KMI				pmax	pmax		
	comp=Z,5.0nm,0.7s						
YKA	Yellowknife Ar	90.53	24	P	P	05 07 34.7	0.0
	comp=Z,2.1nm,0.8s,baz=229,slow=4.0,SNR=24						
CD2	Chengdu	91.12	302	P	P	05 07 38.6	+0.3
CMAR	Chiang Mai Arr	91.82	289	P	P	05 07 42.4	+0.7
	comp=Z,1.4nm,0.3s,baz=89,slow=2.6,SNR=12						
CMAR	Chiang Mai Arr	91.82	289	P	P	05 07 42.2	+0.5
CHTO	Chiang Mai	91.92	289	P	P	05 07 42.2	0.0
CHTO				IAmb	IAmb	05 07 44.1	
	comp=Z,4.2nm,1.0s						
SNAA	Sanae	92.85	177	P	P	05 07 42.6	-3.0
VNA2	Neumayer--Watz	93.32	176	P	P	05 07 47.8	+0.2
	baz=193,slow=3.0						
VNA1	Neumayer--Stat	93.52	175	P	P	05 07 50.3	+1.7
MKAR	Makanchi Array	110.28	315	PKiKP	PKiKP	05 13 03.2	-1.1
	comp=Z,0.4nm,0.4s,baz=174,slow=0.7,SNR=15						
ARCES	ARCESS Array B	124.58	352	PKP	PKPdf	05 13 30.6	-0.5
	comp=Z,5.5nm,0.7s,baz=57,slow=4.5,SNR=13						
FINES	FINESS Array B	131.85	347	PKP	PKPdf	05 13 43.5	-1.6
	comp=Z,1.9nm,0.7s,baz=22,slow=2.7,SNR=9.3						
AKASG	Malin Array Be	140.09	337	PKP	PKPdf	05 14 00.0	-0.7
	comp=Z,0.8nm,0.6s,baz=90,slow=15,SNR=2.4						
CLL	Collm	143.80	352	*i* PKPdf	PKPab	05 14 04.6	-0.1
	comp=Z,4.0nm,0.7s						
CLL				*i*		05 14 06.9	
	comp=Z,5.0nm,0.9s						
KOLS	Kolonicke sedl	144.00	341	*e*PKP	PKPbc	05 14 06.4	+0.3
BUR08	Bucovina Ar. S	144.11	337	PKPdf	PKPdf	05 14 08.0	-0.2
BURAR	Bucovina Array	144.13	337	⇑P	PKPab	05 14 06.5	+0.3
BURAR	Bucovina Array	144.13	337	PKPdf	PKPbc	05 14 07.1	+0.4
DPC	Dobruska-Polom	144.19	348	*e*PKP	PKPab	05 14 06.6	+0.3
MORC	Moravsky Berou	144.48	347	⇓P	PKPab	05 14 07.5	+0.2
MORC	Moravsky Berou	144.48	347	*e*PKP	PKPab	05 14 07.4	0.0
MORC	Moravsky Berou	144.48	347	PKPdf	PKPab	05 14 07.6	+0.2
LANS	Liptovska Anna	144.60	344	*e*PKP	PKPdf	05 14 08.8	-0.1
KMBO	Kilima Mbogo	144.71	245	PKP	PKPdf	05 14 10.1	-0.3
	comp=Z,1.3nm,0.5s,baz=56,slow=9.0,SNR=4.9						
GAZ	Gaziantep	144.72	314		PKPab	05 14 09.2	+0.5
UCC	Uccle	144.78	1	PKPdf	PKPdf	05 14 09.7	+0.7
PRU	Pruhonice	144.86	350	*e*PKP	PKPbc	05 14 08.1	-0.6
CFR	Carcaliu	144.89	332	⇓P	PKPdf	05 14 09.3	-0.1
NKC	Novy Kostel	144.93	352	*e*PKP	PKPbc	05 14 09.2	+0.2
KECS	Kecovo	144.93	343	*e*PKP	PKPbc	05 14 09.1	+0.1
VRI	Vrincioaia	144.96	334	⇓P	PKPbc	05 14 09.0	-0.2
TPGR	Topolog	145.00	331	⇑P	PKPab	05 14 09.9	+0.5
PLOR	Plostina	145.01	334	⇓P	PKPdf	05 14 09.7	0.0
VRAC	Vranov	145.13	348	⇑P	PKPdf	05 14 09.3	-0.4
VRAC	Vranov	145.13	348	*e*PKP	PKPdf	05 14 09.5	-0.3
OZUR		145.16	335	⇓P	PKPab	05 14 10.2	+0.2
PBCC	Pribram	145.24	351	*e*PKP	PKPdf	05 14 10.0	0.0
TIRR	Tirgusor	145.31	331	⇓P	PKPbc	05 14 10.4	+0.1
JAVC	Velka Javorina	145.31	346	*e*PKP	PKPab	05 14 11.2	+0.7
HARR	Harsova	145.35	332	⇑P	PKPab	05 14 11.0	+0.3
VYHS	Vyhne	145.37	345	*e*PKP	PKPab	05 14 10.9	+0.2
KRUC	Moravsky	145.40	348	*e*PKP	PKPdf	05 14 10.2	0.0
TLBR	Topalu	145.41	331	⇑P	PKPab	05 14 11.2	+0.2
DOPR	Dopca	145.43	336	⇑P	PKPab	05 14 11.5	+0.5
MLR	Muntele Rosu	145.59	334	⇓P	PKPab	05 14 12.0	+0.2
MLR	Muntele Rosu	145.59	334		PKPbc	05 14 11.6	+0.3
GRF	Grafenberg Arr	145.60	354	*e*PKPdf	PKPbc	05 14 11.3	+0.3
	baz=9.5,slow=2.5						
ISR	Istrita	145.63	333	⇓P	PKPdf	05 14 11.2	+0.3
BR131	Keskin Array S	145.68	320		PKPbc	05 14 11.6	-0.2
BRTR	Keskin Array B	145.68	320	PKPbc	PKPbc	05 14 11.6	-0.2
	comp=Z,7.7nm,0.7s,baz=91,slow=2.4,SNR=30						
BRTR	Keskin Array B	145.68	320		PKPbc	05 14 11.9	+0.1
DRGR		145.73	339	⇓P	PKPbc	05 14 11.5	-0.2
KHC	Kasperske Hory	145.85	351	*e*PKP	PKPbc	05 14 11.6	-0.3
KHC	Kasperske Hory	145.85	351	PKPbc	PKPdf	05 14 11.5	+0.4
MODS	Modra-Piesok	145.86	346	*e*PKP	PKPdf	05 14 11.5	+0.4
VOIR		146.00	335	⇓P	PKPab	05 14 13.4	+0.1
CKRC	Cesky Krumlov	146.03	350	*e*PKP	PKPdf	05 14 11.3	-0.1
GEC2	GERESS Array S	146.10	351	PKPbc	PKPdf	05 14 12.2	+0.6
GERES	GERESS Array B	146.10	351	PKPbc	PKPbc	05 14 12.5	-0.3
	comp=Z,1.6nm,0.5s,baz=28,slow=3.7,SNR=18						
GERES	GERESS Array B	146.10	351		PKPdf	05 14 11.9	+0.3
GERES					PKPbc	05 14 12.5	-0.3
ARR	Arges	146.22	336	⇑P	PKPab	05 14 14.4	+0.3
SIRR	Siria	146.54	340	⇑P	PKPbc	05 14 14.3	+0.3
CONA	Conrad Observa	146.59	348	*e*P	PKPbc	05 14 14.8	+0.6
	comp=Z,6.1nm,0.7s,SNR=8.7						
GZR	Gura Zlata	146.91	338	⇑P	PKPbc	05 14 15.0	-0.1
MOA	Molln	146.97	349	*i* P	PKPbc	05 14 15.5	+0.3
	comp=Z,4.0nm,0.6s						
BZS	Buzias	147.13	339	⇓P	PKPbc	05 14 15.5	-0.1
ARSA	Arzberg	147.31	348	*i* P	PKPdf	05 14 14.8	+1.3
	comp=Z,4.1nm,0.9s						
HERR	Herculane	147.48	338	⇑P	PKPbc	05 14 16.5	-0.1
MORH	Mrgy, Hungar	147.52	343	⇑P	PKPbc	05 14 15.9	-0.8
RETA	Reutte	147.83	354	*i* P	PKPbc	05 14 17.7	+0.1
	comp=Z,3.0nm,0.7s						
KBA	Koelnbreinsper	147.88	350	*i* P	PKPbc	05 14 17.7	-0.2
	comp=Z,3.8nm,0.4s						
WATA	Walderalm	147.88	352	*i* P	PKPbc	05 14 17.8	0.0
	comp=Z,3.5nm,0.5s						
MOTA	Moosalm	147.93	353	*i* P	PKPbc	05 14 17.7	-0.3
	comp=Z,12nm,1.2s						
WTTA	Wattenberg	147.95	352	*i* P	PKPbc	05 14 18.2	+0.2
	comp=Z,8.9nm,0.5s,SNR=9.9						
SOKA	Soboth	147.95	348	*i* P	PKPbc	05 14 17.5	-0.4
	comp=Z,6.1nm,1.0s,SNR=6.0						
SQTA	Sankt Quirin	148.04	353	*i* P	PKPbc	05 14 18.4	+0.2
	comp=Z,3.9nm,0.6s						
DAVA	Damuels	148.12	355	*e*P	PKPbc	05 14 18.6	+0.1
	comp=Z,6.9nm,0.7s,SNR=4.5						
OBKA	Obir	148.21	348	*i* P	PKPbc	05 14 18.6	0.0
	comp=Z,2.1nm,0.6s						
MYKA	Terra Mystica	148.26	350	*i* P	PKPbc	05 14 18.1	-0.7
	comp=Z,4.4nm,0.5s						
FETA	Feichten	148.29	353	*i* P	PKPbc	05 14 19.1	+0.2
	comp=Z,9.8nm,1.3s						
ABTA	Abfaltersbach	148.33	351	*e*P	PKPbc	05 14 18.5	-0.4
	comp=Z,7.3nm,0.7s,SNR=11						
PDG	Podgorica	150.74	339	⇓P	PKPbc	05 14 24.1	-0.7

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*NEIC **14** 05:14:11.8±0.8, 6°.49S±0°.06×127°.82E±0°.09, h373^{km}±6^{km}, mb4.3/10, Error ellipse: s-maj=13.1km s-min=8.2km az=81.0*

*IDC **14** 05:14:11.8±1.1, 6°.53S×127°.75E, h377^{km}±15^{km}, mb3.7/9, mb1 3.9/15, mb1mx3.7/36, mbtmp4.6/15, Error ellipse: s-maj=18.5km s-min=8.5km az=77.0*

*DJA **14** 05:14:12.3±0.2, 7°S±2°×12°8E±°, h368^{km}±4^{km}, M4.5/25, mB4.9/14, mb4.7/25, MLv5.0/14, Mw(mB)4.2/14*

ISC 14 05:14:10.2±0.5**, 6°.50S**±0°.04×**127°.78E**±0°.06**, h353^{km}, n60, σ1^s.90**/68**, mb4.0**/12**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NLAI	Namlea	3.31	348	P	Pn	05 15 16.9	+4.3
NLAI				S	S	05 16 07.1	+4.2
SAUI	Saumlaki	3.79	113	Pn	Pn	05 15 21.0	+3.7
SAUI				S	S	05 16 13.5	+2.1
SOEI	Soe	4.75	227	Pn	Pn	05 15 30.3	+2.9
SOEI	Soe	4.75	227	P	Pn	05 15 29.6	+2.2
SANI	Sanana	4.76	338	P	Pn	05 15 29.7	+2.3
BATI	Baumata	5.49	228	P	Pn	05 15 38.0	+2.6
	492nm,0.3s,baz=59,slow=3.0,SNR=154						
BATI				S	S	05 16 45.3	+0.9
	19nm,0.3s,baz=303,slow=13,SNR=5.7						
BATI	Baumata	5.49	228	P	Pn	05 15 38.0	+2.6
	4.8nm14µm1µm,0.5s						
FAKI	Fak Fak	5.70	52	Pn	Pn	05 15 39.1	+1.4
FAKI	Fak Fak	5.70	52	P	Pn	05 15 39.0	+1.2
	1.3nm5µm266nm,1.6s						
MMRI	Maumere	5.89	249		Pn	05 15 43.0	+3.2
EDFI	Ende, Flores	6.43	249	P	Pn	05 15 48.4	+2.2
	0.2nm725nm43nm,0.5s						
SIJI	Sorong	6.59	32	P	P	05 15 50.9	+1.6
	16nm,0.3s,baz=196,slow=4.9,SNR=10						
SIJI				S	S	05 17 02.8	-4.5
	7.5nm,0.3s,baz=81,slow=23,SNR=7.4						
SWI	Sorong	6.59	32	P	P	05 15 49.5	+0.3
	0.4nm1µm85nm,0.6s						
MTN	Manton Dam	7.12	153	Pn	P	05 15 56.3	+0.9
LUWI	Luwuk	7.37	317	Pn	P	05 15 59.0	+0.6
LUWI	Luwuk	7.37	317	P	P	05 16 00.3	+2.0
	0.6nm3µm175nm,0.6s						
BKSI	Bulukumba	7.70	278	P	P	05 16 04.0	+1.8
	0.1nm433nm35nm,1.0s						
BNSI	Bone	7.92	285	P	P	05 16 07.2	+2.6
	0.3nm81nm,0.8s						
KMSI	Cibinong	7.98	332	P	P	05 16 06.7	+1.3
	0.8nm164nm,0.8s						
KAPI	Kappang	8.12	280	P	P	05 16 09.0	+0.4
	2.7nm,0.3s,baz=112,slow=7.5,SNR=13						
KAPI				S	S	05 17 35.0	-5.2
	1.0nm,0.3s,baz=33,slow=24,SNR=2.0						
KAPI	Kappang	8.12	280	Pn	P	05 16 09.8	+1.2
APSI	Ampana	8.26	312	P	P	05 16 10.4	+0.2
	784nm111nm,0.9s						
SPSI	Sidrap Palu	8.36	287	P	Pn	05 16 09.6	+0.9
	1µm124nm,0.6s						
GTOI	Gorontalo	8.54	326	P	P	05 16 14.9	+1.6
	35nm,0.9s						
TTSI	Tana Toraja	8.64	293	P	P	05 16 15.1	+0.7
	1µm64nm,0.7s						
MRSI	Marisa	9.05	320	P	P	05 16 19.3	+0.3
	1µm152nm,0.9s						
BAKI	Biak	9.84	58	P	P	05 16 29.1	+1.3
	5µm594nm,0.9s						
TOLI2	Tolitoli	10.29	317		P	05 16 34.2	+1.4
FITZ	Fitzroy Crossi	11.72	190	P	P	05 16 49.9	+1.4
	1.5nm,0.3s,baz=22,slow=9.7,SNR=46						
FITZ				S	S	05 18 55.6	-3.5
	0.6nm,0.3s,baz=115,slow=13,SNR=7.7						
FITZ	Fitzroy Crossi	11.72	190	P	P	05 16 49.5	+1.0
BBKI	Banjar Baru	13.23	283	P	Pn	05 17 07.7	+1.1
	3µm57nm,0.8s						
JAY	Jayapura	13.48	74	P	Pn	05 17 09.6	+0.1
	1.7nm,0.3s,baz=88,slow=1.3,SNR=2.1						
JAGI	Jajag, Banyuwa	13.65	261		Pn	05 17 10.6	-0.8
WB0	Warramunga Arr	14.67	155		P	05 17 21.6	+0.5
WRA	Warramunga Arr	14.81	155	P	P	05 17 23.2	+0.6
	10nm,0.3s,baz=331,slow=12,SNR=335						
WRA				S	S	05 19 59.4	-2.8
	0.2nm,0.3s,baz=335,slow=15,SNR=4.9						
WRA	Warramunga Arr	14.81	155	P	P	05 17 21.6	-1.0
WB2	Warramunga Arr	14.81	155	P	Pn	05 17 23.6	-1.3
KKM	Kota Kinabalu	16.98	317	P	P	05 17 47.3	+0.9
KKM				IAmb	IAmb	05 18 02.0	
	comp=Z,21nm,0.9s						
AS31	Alice Springs	18.06	162	P	P	05 17 58.7	+1.0
AS31				IAmb	IAmb	05 17 59.2	
	comp=Z,14nm,0.7s						
ASAR	Alice Springs	18.06	162	P	P	05 17 58.4	+0.7
	comp=Z,10nm,0.3s,baz=344,slow=12,SNR=513						
ASAR				S	S	05 21 04.8	-1.5
	comp=Z,0.7nm,0.3s,baz=329,slow=16,SNR=5.0						
ASAR	Alice Springs	18.06	162	P	P	05 17 58.6	+0.9
FORT	Forrest	24.16	179	P	P	05 18 56.1	+0.5
BBOO	Buckleboo	27.29	165	P	P	05 19 23.8	+0.2
BBOO				IAmb	IAmb	05 19 24.5	
	comp=Z,16nm,0.7s						
STKA	Stephens Creek	28.36	155	P	P	05 19 33.4	+0.3
	comp=Z,17nm,0.5s,baz=329,slow=9.1,SNR=69						
STKA	Stephens Creek	28.36	155	P	P	05 19 33.6	+0.6
CAN	Canberra	34.70	149	P	P	05 20 29.5	+1.5
TOO	Toolangi	34.88	155	P	P	05 20 30.6	+1.1
TOO				IAmb	IAmb	05 20 33.0	
	comp=Z,20nm,1.4s						
KSRS	Korea Array	43.72	0	P	P	05 21 41.6	-0.1
	comp=Z,3.1nm,0.7s,baz=179,slow=11,SNR=8.5						
MJAR	Matsushiro Arr	43.92	12	P	P	05 21 41.3	-2.0
	comp=Z,2.5nm,0.3s,baz=188,slow=9.4,SNR=10						
MJAR	Matsushiro Arr	43.92	12	P	P	05 21 42.9	-0.4
USRK	Ussuriysk Ar.	50.60	4	P	P	05 22 33.3	-0.9
	comp=Z,2.7nm,0.6s,baz=209,slow=5.8,SNR=4.8						
RPZ	Rata Peaks	52.99	142	P	P	05 22 51.4	-0.3
	comp=Z,11nm,0.4s,baz=253,slow=2.9,SNR=9.4						
SONM	Songino Array	57.30	343	P	P	05 23 22.4	+0.1
	comp=Z,1.1nm,0.7s,baz=165,slow=6.5,SNR=6.5						
PETK	Petropavlovsk-	64.56	19	P	P	05 24 10.5	+0.1
	comp=Z,7.5nm,0.6s,baz=167,slow=3.1,SNR=25						
PETK	Petropavlovsk-	64.56	19	P	P	05 24 10.4	-0.1
MK31	Makanchi Array	66.61	328	P	P	05 24 23.4	-0.2
MKAR	Makanchi Array	66.61	328	P	P	05 24 23.3	-0.3
	comp=Z,0.6nm,0.4s,baz=120,slow=8.3,SNR=21						
QSPA	South Pole Qui	83.48	180	P	P	05 25 58.1	-0.8
QSPA				IAmb	IAmb	05 26 25.2	
	comp=Z,4.1nm,1.4s						
ILAR	Eielson Array	93.84	25	P	P	05 26 45.0	-2.7
	comp=Z,0.4nm,0.8s,baz=249,slow=6.0,SNR=5.0						
BMAR	Burnt Mountain	95.04	23	P	P	05 26 52.7	-0.5

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*NNC **14** 05:24:38.7±0.4, 43°.15N×78°.23E, h0^{km}, mb2.7, mpv2.8, Error ellipse: s-maj=5.0km s-min=2.4km az=172.0*

*SOME **14** 05:24:39.8, 43°.17N×78°.25E, h10^{km}*

*KRNET **14** 05:24:39.0±0.1, 43°.15N×78°.23E, h12^{km}, mb2.4*

ISC 14 05:24:39.0±0.9**, 43°.14N**±0°.02×**78°.24E**±0°.02**, h8^{km}**±8^{km}**, n43, σ0^s.43**/84**, 8C-5D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SATY	Saty	0.15	123	*e*P	Pg	05 24 42.4	+0.2
	baz=26						
SATY				*e*S	Sg	05 24 44.5	0.0
	baz=26						
SATY	Saty	0.15	123	*e*P	Pg	05 24 42.4	+0.2
	39nm,0.1s						
SATY				*e*S	Sg	05 24 44.5	0.0
	339nm,0.1s						
SATY	Saty	0.15	123	P	Pg	05 24 42.4	+0.2
	39nm,0.1s						
SATY				S	Sg	05 24 44.5	0.0
	339nm,0.1s						
KURS	Kuram	0.35	352	*e*P	Pg	05 24 46.1	+0.1
	baz=52						
KURS				*e*S	Sg	05 24 50.6	-0.1
	baz=52						
KURS	Kuram	0.35	352	*e*P	Pg	05 24 46.1	+0.1
	7.8nm,0.1s						
KURS				*e*S	Sg	05 24 50.6	-0.1
	5.2nm,0.2s						
KURS	Kuram	0.35	352	P	Pg	05 24 46.1	+0.1
	7.8nm,0.1s						
KURS				S	Sg	05 24 50.6	-0.1
	5.2nm,0.2s						
KPKS	Kokpek	0.46	45	*e*P	Pg	05 24 48.1	+0.1
	baz=46						
KPKS				*e*S	Sg	05 24 54.2	+0.1
	baz=46						
KPKS	Kokpek	0.46	45	*e*P	Pg	05 24 48.1	+0.1
	8.8nm,0.1s						

KPKS				eS	Sg	05 24 54.2	+0.1
	41nm,0.3s						
ANVS	Anan'yevo	0.55	230	⇓iP	Pb	05 24 50.5	-0.5
	baz=29						
ANVS				⇓iS	Sb	05 24 58.2	-0.9
	baz=29						
UZB	Uzynbulak	0.57	89	eP	Pg	05 24 50.1	0.0
	baz=90						
UZB				eS	Sg	05 24 57.5	-0.2
	baz=90						
UZB	Uzynbulak	0.57	89	eP	Pg	05 24 50.1	0.0
	3.9nm,0.1s						
UZB				eS	Sg	05 24 57.5	-0.2
	12nm,0.1s						
UZB	Uzynbulak	0.57	89	P	Pg	05 24 50.1	0.0
	3.9nm,0.1s						
UZB				S	Sg	05 24 57.5	-0.2
	12nm,0.1s						
PRZ	Przheval'sk	0.67	170	⇑iP	Pg	05 24 52.3	+0.4
	baz=69						
PRZ				⇑iS	Sg	05 25 00.5	-0.1
	baz=69						
MDOK	Medeo	0.87	272	eP	Pg	05 24 55.5	-0.2
	baz=71						
MDOK				eS	Sg	05 25 06.6	-0.5
	baz=71						
MDOK	Medeo	0.87	272	eP	Pg	05 24 55.5	-0.2
	2.3nm,0.3s						
MDOK				eS	Sg	05 25 06.6	-0.5
	12nm,0.4s						
MDOK	Medeo	0.87	272	⇑P	Pg	05 24 54.5	-1.2
	1.0nm,0.4s						
MDOK				S	Sg	05 25 07.0	-0.1
	4.9nm,0.4s						
PDGK	Podgornoye	0.94	78	P	Pg	05 24 56.4	-0.5
	0.9nm,0.1s						
PDGK				S	Sg	05 25 08.4	-0.7
	1.7nm,0.2s						
MNBS	Baschi	0.95	7	eP	Pb	05 24 57.4	-0.4
	2.5nm,0.1s						
MNBS				eS	Sb	05 25 10.0	-0.5
	14nm,0.2s						
MNBS	Baschi	0.95	7	P	Pb	05 24 57.3	-0.4
	2.5nm,0.1s						
TNSS	Tian-Shan	0.95	264	eP	Pg	05 24 57.3	0.0
	baz=64						
TNSS				eS	Sg	05 25 09.8	+0.1
	baz=64						
TNSS	Tian-Shan	0.95	264	eP	Pg	05 24 57.3	0.0
	0.7nm,0.1s						
TNSS				eS	Sg	05 25 09.8	+0.1
	2.0nm,0.2s						
TNSS	Tian-Shan	0.95	264	P	Pg	05 24 57.3	0.0
	0.7nm,0.1s						
TNSS				S	Sg	05 25 09.8	+0.1
	2.0nm,0.2s						
ARXS	Arharly	1.11	345	eP	Pg	05 24 59.9	-0.5
	1.8nm,0.1s						
ARXS				eS	Sg	05 25 14.3	-0.6
	5.8nm,0.3s						
ARXS	Arharly	1.11	345	P	Pg	05 24 59.9	-0.5
	1.8nm,0.1s						
ARXS				S	Sg	05 25 14.3	-0.6
	5.8nm,0.3s						
IZV	Izvestkoviy	1.19	266	eP	Pb	05 25 01.7	-0.3
	baz=65						
IZV				eS	Sb	05 25 17.4	-0.3
	baz=65						
IZV	Izvestkoviy	1.19	266	eP	Pb	05 25 01.7	-0.3
	0.8nm,0.1s						
IZV				eS	Sb	05 25 17.3	-0.3
	6.0nm,0.3s						
IZV	Izvestkoviy	1.19	266	P	Pb	05 25 01.7	-0.3
	0.8nm,0.1s						
IZV				S	Sb	05 25 17.3	-0.3
	6.0nm,0.3s						
KTBS	Karatobe	1.27	297	eP	Pg	05 25 03.9	+0.5
	0.7nm,0.1s						
KTBS				eS	Sn	05 25 21.6	+1.3
	12nm,0.4s						
KTBS	Karatobe	1.27	297	P	Pg	05 25 03.9	+0.5
	0.7nm,0.1s						
KTBS				S	Sn	05 25 21.6	+1.3
	12nm,0.4s						
KDJ	Kajisay	1.27	218	⇓iP	Pg	05 25 03.7	+0.2
	baz=17						
KDJ				⇓iS	Sb	05 25 20.1	+0.2
	baz=17						
KTMS	Ketmen	1.57	78	eP	Pb	05 25 07.9	-0.5
	4.0nm,0.1s						
KTMS				eS	Sb	05 25 28.1	-0.4
	4.6nm,0.2s						
KTMS	Ketmen	1.57	78	P	Pb	05 25 07.9	-0.5
	4.0nm,0.1s						
KTMS				S	Sb	05 25 28.1	-0.4
	4.6nm,0.2s						
DJR	Jarkent	1.64	43	eP	Pb	05 25 09.2	-0.3
	2.1nm,0.2s						
DJR				eS	Sb	05 25 30.3	-0.1
	4.5nm,0.1s						
DJR	Jarkent	1.64	43	P	Pb	05 25 09.2	-0.3
	2.1nm,0.2s						
DJR				S	Sb	05 25 30.3	-0.1
	4.5nm,0.1s						
KST	Kastek	1.67	267	eP	Pb	05 25 09.7	-0.3
	0.9nm,0.3s						
KST				eS	Sb	05 25 31.1	-0.1
	2.2nm,0.3s						
KST	Kastek	1.67	267	P	Pb	05 25 09.7	-0.3
	0.9nm,0.3s						
KST				S	Sb	05 25 31.1	-0.1
	2.2nm,0.3s						
ULHL	Ulahol	1.72	239	⇑iP	Pg	05 25 11.9	-0.1
	baz=39						
ULHL				⇑iS	Sg	05 25 34.1	-0.2
	baz=39						
DGS	Degeres	1.81	274	eP	Pb	05 25 12.2	-0.1
	0.7nm,0.3s						
DGS				eS	Sb	05 25 35.4	+0.2
	2.4nm,0.3s						
DGS	Degeres	1.81	274	P	Pb	05 25 12.2	-0.1
	0.7nm,0.3s						
DGS				S	Sb	05 25 35.4	+0.2
	2.4nm,0.3s						
TKM2	Tokmak 2	1.95	264	⇑iP	Pg	05 25 15.9	-0.4
	baz=64						
TKM2				⇑iS	Sg	05 25 41.8	+0.2
	baz=64						
TKM2	Tokmak 2	1.95	264	⇑Pn	Pb	05 25 13.6	-1.2
	4.3nm,1.1s						
TKM2				⇓Sn	Sg	05 25 41.7	+0.2
	0.9nm,0.6s						
KAPS	Kapalarasan	2.29	20	eP	Pb	05 25 20.9	+0.3
	0.9nm,0.3s						
KAPS				eS	Sb	05 25 49.9	+0.8
	4.7nm,0.4s						
KAPS	Kapalarasan	2.29	20	Pg	Pb	05 25 20.9	+0.3
	0.9nm,0.3s						
KAPS				Lg	Lg	05 25 49.9	
	4.7nm,0.4s						

NEIC ***14*** *05:52:52.7±2.0, 17°.7S±0°.2×178°.6W±0°.1, h573^{km}±8^{km}, mb4.5/22, Error ellipse: s-maj=23.9km s-min=15.0km az=152.0*
IDC ***14*** *05:52:54.1±1.2, 17°.58S×178°.84W, h588^{km}±10^{km}, mb3.7/12, mb1 4.0/14, mb1mx3.7/28, mbtmp4.6/14, Error ellipse: s-maj=38.8km s-min=12.4km az=150.0*
ISC 14 05:52:54.7±0.7, **17°.7S**±0°.1×**178°.8W**±0°.1, **h600**^{km}, **n48**, σ**0**^{s}.**93**/48, **mb4.4**/22, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.03	269	P	P	05 54 11.5	-2.7
	42nm,0.3s,baz=117,slow=3.7,SNR=496						
MSVF				S	S	05 55 16.8	-2.0
	baz=287,slow=21,SNR=0.6						
MSVF	Nonsavu	3.03	269	P	P	05 54 11.9	-2.3
AFI	Afiamalu	7.71	62	P	P	05 54 45.3	-6.2
NIUE	Niue	8.51	101	P	P	05 54 54.2	-4.8
SANVU	Saraoutou	13.63	277	P	P	05 55 51.1	+1.1
DZM	Mont Dzumac	14.57	250	P	P	05 55 58.5	-0.7
	1.2nm,0.3s,baz=83,slow=20,SNR=10						
DZM	Mont Dzumac	14.57	250	P	P	05 55 60.0	+0.9
EIDS	Eidsvold	29.02	249	P	P	05 58 08.0	-0.1
EIDS				IAmb	IAmb	05 58 08.2	
	comp=Z,10nm,0.8s						
ARMA	Armidale	29.75	239	P	P	05 58 15.1	+0.6
ARMA				IAmb	IAmb	05 58 15.6	
	comp=Z,9.1nm,0.7s						
CTAO	Charters Tower	33.14	260	P	P	05 58 42.9	-0.4
CTAO				IAmb	IAmb	05 58 47.1	
	comp=Z,16nm,1.1s						
COEN	Coen	36.76	270	P	P	05 59 13.9	+0.6
COEN				IAmb	IAmb	05 59 14.6	
	comp=Z,17nm,0.8s						
TOO	Toolangi	37.04	230	P	P	05 59 16.0	+0.6
TOO				IAmb	IAmb	05 59 16.4	
	comp=Z,17nm,0.9s						
STKA	Stephens Creek	38.43	241	P	P	05 59 26.8	+0.1
	comp=Z,10nm,0.5s,baz=73,slow=11,SNR=3.9						
BBOO	Buckleboo	43.21	241	P	P	06 00 04.7	+0.3
MLH	Mauna Loa	43.51	33	P	P	06 00 06.9	-0.3
HMH	Humu‘ula Sheep	43.55	33	P	P	06 00 07.4	-0.1
WB0	Warramunga Arr	44.30	260	P	P	06 00 13.2	+0.1
WB0				IAmb	IAmb	06 00 14.5	
	comp=Z,17nm,1.5s						
WRA	Warramunga Arr	44.33	259	P	P	06 00 12.4	-0.9
	comp=Z,5.4nm,0.5s,baz=92,slow=6.9,SNR=114						
WRA	Warramunga Arr	44.33	259	P	P	06 00 13.1	-0.1
AS31	Alice Springs	44.51	254	P	P	06 00 14.8	+0.1
ASAR	Alice Springs	44.52	254	P	P	06 00 14.4	-0.3
	comp=Z,61nm,0.6s,baz=88,slow=8.2,SNR=1046						
ASAR				S	S	06 06 07.9	+0.1
	comp=Z,0.5nm,0.8s,baz=87,slow=16,SNR=3.2						
SOEI	Soe	55.72	270	P	P	06 01 37.8	+1.3
SOEI				IAmb	IAmb	06 01 38.9	
	comp=Z,31nm,0.8s						
SOEI	Soe	55.72	270	P	P	06 01 38.2	+1.7
	comp=Z,54nm,1.0s						
MJAR	Matsushiro Arr	67.53	324	P	P	06 02 51.6	-0.9
	comp=Z,3.0nm,0.9s,baz=197,slow=7.6,SNR=4.3						
UGM	Wanagama	69.31	268	P	P	06 03 03.8	0.0
QSPA	South Pole Qui	72.36	180	P	P	06 03 20.5	-0.3
PETK	Petropavlovsk-	73.38	345	P	P	06 03 27.0	+0.4
	comp=Z,3.0nm,0.8s,baz=147,slow=8.6,SNR=1.7						
OHAK	Old Harbor	77.61	14	P	P	06 03 49.1	-0.7
OHAK				IAmb	IAmb	06 04 04.2	
	comp=Z,27nm,1.4s						
CMB	Columbia Colle	77.92	43	P	P	06 03 51.8	-0.3
BEKR	Beckworth	78.96	42	P	P	06 03 57.8	+0.1
YERR	Yerington	79.19	43	P	P	06 03 58.8	-0.2
NVAR	Mina Array Bea	79.51	44	P	P	06 04 00.8	+0.2
	comp=Z,3.6nm,0.7s,baz=225,slow=8.7,SNR=36						
PINE	Pine Mountain	80.84	38	P	P	06 04 08.0	+0.5
SEY	Seymchan	83.49	347	P	P	06 04 19.5	-0.5
	comp=Z,2.4nm,0.5s,baz=158,slow=4.8,SNR=7.7						
N25K	Chitina, Valde	83.59	16	P	P	06 04 20.3	-0.4
N25K				IAmb	IAmb	06 04 20.7	
	comp=Z,7.4nm,0.7s						
ILAR	Eielson Array	85.75	13	P	P	06 04 29.8	-1.3
	comp=Z,1.1nm,0.4s,baz=222,slow=5.2,SNR=27						
TX32	Lajitas Array	86.17	58	P	P	06 04 35.3	+1.4
TX32				IAmb	IAmb	06 04 36.1	
	comp=Z,7.1nm,0.9s						
TXAR	Lajitas Array	86.17	58	P	P	06 04 34.9	+0.9
	comp=Z,4.1nm,0.8s,baz=218,slow=6.2,SNR=53						
TXAR	Lajitas Array	86.17	58	P	P	06 04 35.2	+1.3
PD31	Pinedale Array	87.44	44	P	P	06 04 40.0	+0.2
PD31				IAmb	IAmb	06 04 40.2	
	comp=Z,9.2nm,1.4s						
PDAR	Pinedale Array	87.44	44	P	P	06 04 39.4	-0.4
	comp=Z,2.2nm,0.5s,baz=211,slow=3.2,SNR=34						
CMAR	Chiang Mai Arr	88.48	290	P	P	06 04 46.6	+1.8
	comp=Z,1.1nm,0.3s,baz=112,slow=3.0,SNR=6.3						
YKA	Yellowknife Ar	94.28	25	P	P	06 05 09.8	-0.7
	comp=Z,1.1nm,0.8s,baz=246,slow=3.9,SNR=9.3						
BURAR	Bucovina Array	144.26	332		PKPab	06 11 24.8	+0.9
CLL	Collm	145.18	347	ePKPbc	PKPbc	06 11 26.0	+0.1
GERES	GERESS Array B	147.31	345	PKPbc	PKPbc	06 11 32.2	+0.3
	comp=Z,1.0nm,0.4s,baz=27,slow=3.1,SNR=12						
GERES	GERESS Array B	147.31	345		PKPbc	06 11 32.4	+0.5
DAVOX	Davos/Dischmat	150.12	348	PKPbc	PKPbc	06 11 39.4	+0.4
	comp=Z,2.7nm,0.4s,baz=257,slow=2.0,SNR=8.9						

HEL ***14*** *05:53:30.3±0.4, 67°.67N×34°.06E, h0^{km}, ML2.1, Explosion*
IDC ***14*** *05:53:37.6±2.3, 67°.61N×32°.81E, h0^{km}, mb1 3.4/4, mb1mx3.1/45, mbtmp3.4/4, ML2.2/4, Error ellipse: s-maj=24.3km s-min=9.1km az=82.0*
ISC 14 05:53:30.4±2.2, **67°.68N**±0°.06×**33°.7E**±0°.1, **h0**^{km}, **n15**, σ**1**^{s}.**38**/29, **Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VRF	Varrio	1.57	274	PG	Pg	05 54 00.8	+0.4
VRF				MSG	Sn	05 54 21.1	+0.6
	comp=Z,16nm,0.2s						
VRF				SG	Sn	05 54 21.1	+0.6
OLKF	Oulanka, Finla	2.18	233	PG	Pb	05 54 11.1	+0.4
OLKF				SG	Sg	05 54 40.3	0.0
KU6	Riekki	2.25	224	PG	Pb	05 54 11.5	-0.4
	baz=44						
KU6				MSG		05 54 39.2	
	comp=Z,6.9nm,0.2s						
KU6				SG	Sg	05 54 41.5	-1.0
MSF	Maaselka	2.57	228	PB	Pb	05 54 16.3	-1.0
	baz=51						
MSF				SG	Sg	05 54 52.1	-0.7
SGF	Sodankyl	2.77	268	PB	Pb	05 54 19.2	-1.5
	baz=82						
SGF				SG	Sg	05 54 59.5	+0.2
RNF	Rovaniemi	3.19	254	PN	Pn	05 54 23.8	+2.0
	baz=66						
ARCES	ARCESS Array B	3.54	306	Pn	Pn	05 54 28.4	+1.8
	baz=123,slow=15,SNR=149						
ARCES				Pg	Pg	05 54 37.2	-1.0
	baz=115,slow=15,SNR=14						
ARCES				Sn	Sn	05 55 09.8	+0.7
	baz=118,slow=26,SNR=7.6						
ARCES				Lg	Lg	05 55 20.1	
	baz=112,slow=36,SNR=3.4						
TOF	Tornio	4.04	251	PN	Pn	05 54 34.7	+1.3
TOF				SN	Sn	05 55 23.1	+1.8
OUL	Oulu	4.09	234	PB	Pb	05 54 42.0	-1.2
OUL				SG	Sg	05 55 41.9	+0.3
PAJU	Pajala	4.16	266	PN	Pn	05 54 36.3	+1.3
	baz=72						
PAJU				SN	Sn	05 55 25.4	+1.2
LANU	Lannavaara	4.46	280	PN	Pn	05 54 40.4	+1.2
LANU				SG	Sg	05 55 50.0	-3.3
ERTU	Ertsjaerv	4.64	261	PN	Pn	05 54 42.9	+1.2
ERTU				SN	Sn	05 55 37.2	+1.0
FINES	FINESS Array B	7.07	211	Pn	Pn	05 55 16.4	+1.4
	comp=Z,0.1nm,0.3s,baz=197,slow=18,SNR=1.4						
FINES				Sn	Sn	05 56 33.1	-2.8
	comp=Z,0.1nm,0.3s,baz=30,slow=23,SNR=2.6						
FINES				Lg	Lg	05 57 09.9	
	comp=Z,0.8nm,0.3s,baz=38,slow=25,SNR=12						
HFS	Hagfors	11.56	239	Pn	Pn	05 56 16.5	0.0
	comp=Z,0.1nm,0.3s,baz=74,slow=12,SNR=1.9						
HFS				Lg	Lg	05 59 28.0	
	comp=Z,0.1nm,0.3s,baz=54,slow=25,SNR=1.8						
NOA	NORSAR Array B	11.74	246	Pn	Pn	05 56 19.0	0.0
	comp=Z,0.0nm,0.3s,baz=45,slow=11,SNR=2.2						
NOA				Lg	Lg	05 59 33.5	
	comp=Z,0.0nm,0.3s,baz=350,slow=12,SNR=1.1						

NNC ***14*** *05:54:35.9±6.6, 37°.49N×71°.37E, h0^{km}, mb4.2, mpv3.9, Error ellipse: s-maj=56.8km s-min=46.4km az=35.0*
ISC 14 05:54:39.0±4.9, **37°.3N**±0°.3×**71°.8E**±0°.2, **h100**^{km}, **n16**, σ**0**^{s}.**73**/16, **1C-3D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	5.06	16	P	Pn	05 55 53.5	+0.6
	SNR=102						
UCH	Uchtor	5.37	22	P	Pn	05 55 57.4	+0.2
	SNR=32						
MRKS	Merke	5.57	11	Lg	Lg	05 57 01.8	
	14nm,0.7s						
EKS2	Erkin-Say	5.59	15	P	Pn	05 56 00.5	+0.7
	SNR=10						
AAK	Ala-Archa	5.74	21	P	Pn	05 56 02.7	+0.8
	SNR=14						
AAK	Ala-Archa	5.74	21	⇓P	Pn	05 56 02.3	+0.4
	4.4nm,0.3s						
AAK				⇓S	Sn	05 57 07.2	+0.7
	6.7nm,0.5s						
KK31	Karatay Array	5.89	351	P	Pn	05 56 04.1	+0.3
	9.7nm,0.7s,baz=178,slow=13,SNR=65						
KK31				⇓S	Sn	05 57 08.4	-1.5
	11nm,0.5s,baz=178,slow=25						
KBK	Karagaybulak	5.89	23	P	Pn	05 56 05.1	+1.1
	SNR=5.8						
BRLS	Borolday	5.93	346	Lg	Lg	05 56 58.1	
	11nm,0.4s						
ULHL	Ulahol	6.04	33	P	Pn	05 56 05.6	-0.3
	SNR=5.7						
CHMS	Chumysh	6.15	21	P	Pn	05 56 07.9	+0.6
	SNR=6.4						
TKM2	Tokmak 2	6.35	26	P	Pn	05 56 10.5	+0.3
	SNR=8.7						
TKM2	Tokmak 2	6.35	26	⇑P	Pn	05 56 09.9	-0.2
	5.7nm,0.7s						
KST	Kastek	6.59	28	P	Pn	05 56 13.2	-0.2
DGS	Degeres	6.69	26	P	Pn	05 56 14.5	-0.3
KOTS	Kotyrbulak	7.21	33	P	Pn	05 56 21.2	-0.6

DJA 14 05:57:50.6±0.3, **7°S**±5°×**10°8E**±°, **h13**^{km}±4^{km}, **M4.1**/9, **mb5.4**/2, **mB6.0**/1, **MLv3.4**/9, **Mw(mB)5.6**/1, **Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LEM	Lembang	0.27	275	P	Pg	05 57 56.1	-0.3
JCJI	Jatiwangi	0.52	47	P	Pg	05 57 59.8	-1.0
CISI	Cisompet, Garu	0.70	186	P	Pg	05 58 04.0	-0.4
CBJI	Citeko	1.12	292	P	Pb	05 58 08.7	-3.1
DBJI	Dramaga	1.17	284	P	Pb	05 58 12.8	+0.1
SKJI	Sukabumi	1.33	263	P	Pb	05 58 15.6	+0.1
TNG	Tangerang	1.41	299	P	Pb	05 58 16.7	-0.1
UGM	Wanagama	2.82	112	P	Pn	05 58 36.0	+0.6
MDSI	Maura Dua	4.38	302	P	Pn	05 58 57.3	+0.5

SOME ***14*** *06:02:38.5, 40°.50N×76°.90E, h5^{km}*
KRNET ***14*** *06:02:39.0±0.1, 40°.48N×77°.03E, mb3.3*
NNC ***14*** *06:02:40.4±2.4, 40°.49N×77°.25E, h0^{km}, mb3.8, mpv3.5, Error ellipse: s-maj=17.5km s-min=12.7km az=163.0*
ISC 14 06:02:42.7±2.0, **40°.59N**±0°.07×**77°.10E**±0°.03, **h6**^{km}±11^{km}, **n64**, σ**1**^{s}.**49**/101, **20C-16D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDJ	Kajisay	1.54	2	⇑iP	Pn	06 03 10.2	-0.6
	baz=4.0						
KDJ				⇑iS	Sg	06 03 32.9	+0.8
	baz=4.0						
ULHL	Ulahol	1.77	339	⇑iP	Pb	06 03 14.0	-1.7
	baz=42						
ULHL				⇑iS	Sg	06 03 39.5	-0.2
	baz=42						
ULHL	Ulahol	1.77	339	P	Pb	06 03 14.0	-1.7
	SNR=149						
PRZ	Przheval'sk	2.13	27	⇑iP	Pb	06 03 20.0	-1.7
	baz=27						
PRZ				⇑iS	Sg	06 03 49.9	-1.1
	baz=27						
ANVS	Anan'yevo	2.23	11	⇑iP	Pb	06 03 21.6	-1.9
	baz=11						
ANVS				⇑iS	Sb	06 03 52.2	+0.8
	baz=11						
TNSS	Tian-Shan	2.45	357	eP	Pb	06 03 26.7	-0.6
	32nm,0.4s						
TNSS				eS	Sg	06 04 01.4	+0.1
	35nm,0.3s						
TNSS	Tian-Shan	2.45	357	Pg	Pb	06 03 26.7	-0.6
	32nm,0.4s						
TNSS				Lg	Lg	06 04 01.4	
	35nm,0.3s						
ARLS	Aral	2.45	302	⇓iP	Pn	06 03 22.6	-0.7
	baz=5.0						
ARLS				⇓iS	Sb	06 03 54.7	-3.0
	baz=5.0						
IZV	Izvestkoviy	2.47	352	eP	Pb	06 03 26.7	-0.8
	18nm,0.5s						
IZV				eS	Sg	06 04 01.9	-0.1
	45nm,0.7s						
IZV	Izvestkoviy	2.47	352	Pg	Pb	06 03 26.7	-0.8
	18nm,0.5s						
IZV				Lg	Lg	06 04 01.9	
	45nm,0.7s						
UCH	Uchtor	2.54	311	⇓iP	Pn	06 03 24.5	-0.3
	baz=14						
UCH				⇓iS	Sb	06 03 57.7	-2.9
	baz=14						
UCH	Uchtor	2.54	311	P	Pn	06 03 25.0	+0.2
	SNR=6.2						
MDOK	Medeo	2.57	359	eP	Pb	06 03 28.9	-0.4
	9.0nm,0.2s						
MDOK				eS	Sg	06 04 04.7	-0.6
	56nm,0.6s						
MDOK	Medeo	2.57	359	Pn	Pb	06 03 28.6	-0.6
	6.5nm,0.5s						
MDOK				⇓Pg	Pg	06 03 37.0	+5.1
	10nm,0.6s						
MDOK				⇑Sn	Sg	06 04 04.0	-1.2
	58nm,0.6s						
MDOK	Medeo	2.57	359	Pg	Pb	06 03 28.8	-0.4
	9.0nm,0.2s						
MDOK				Lg	Lg	06 04 04.7	
	56nm,0.6s						
TKM2	Tokmak 2	2.59	335	⇑iP	Pn	06 03 25.7	+0.5
	baz=37						
TKM2				⇑iS	Sb	06 03 59.5	-2.1
	baz=37						
TKM2	Tokmak 2	2.59	335	P	Pb	06 03 28.6	-0.9
	SNR=11						
TKM2	Tokmak 2	2.59	335	⇓Pn	Pn	06 03 25.8	+0.6
	4.5nm,0.3s						
TKM2				⇓Sn	Sg	06 04 05.0	-0.7
	14nm,0.5s						
KST	Kastek	2.59	341	eP	Pb	06 03 29.1	-0.5
	16nm,0.3s						
KST				eS	Sg	06 04 05.7	-0.3
	32nm,0.6s						
KST	Kastek	2.59	341	Pg	Pb	06 03 29.1	-0.5
	16nm,0.3s						
KST				Lg	Lg	06 04 05.7	
	32nm,0.6s						
KBK	Karagaybulak	2.62	323	P	Pb	06 03 29.2	-0.9
	SNR=12						
KOTS	Kotyrbulak	2.64	0	eP	Pb	06 03 30.4	0.0
	26nm,0.2s						
KOTS				eS	Sg	06 04 07.6	+0.1
	154nm,0.7s						
KOTS	Kotyrbulak	2.64	0	Pg	Pb	06 03 30.4	0.0
	26nm,0.2s						
KOTS				Lg	Lg	06 04 07.6	
	154nm,0.7s						
SATY	Saty	2.65	21	eP	Pb	06 03 29.6	-1.0
	6.8nm,0.3s						
SATY				eS	Sg	06 04 06.5	-1.4
	42nm,0.6s						
SATY	Saty	2.65	21	Pg	Pb	06 03 29.6	-1.0
	6.8nm,0.3s						
SATY				Lg	Lg	06 04 06.4	
	42nm,0.6s						
ZHN	Zhinishke	2.76	21	eP	Pb	06 03 32.2	-0.2
	5.4nm,0.3s						
ZHN				eS	Sg	06 04 10.5	-0.9
	8.2nm,0.3s						
ZHN	Zhinishke	2.76	21	Pg	Pb	06 03 32.2	-0.2
	5.4nm,0.3s						
ZHN				Lg	Lg	06 04 10.5	
	8.2nm,0.3s						
AAK	Ala-Archa	2.83	317	⇑eP	Pn	06 03 28.4	-0.1
	baz=19						
AAK				⇑eS	Sn	06 04 04.3	+1.4
	baz=19						
AAK	Ala-Archa	2.83	317	P	Pb	06 03 32.6	-1.1
	SNR=11						
AAK	Ala-Archa	2.83	317	⇑Pn	Pb	06 03 31.1	-2.6
	4.0nm,0.3s						
AAK				⇑Pg	Pg	06 03 40.4	+3.5
	14nm,0.5s						
AAK				⇓Sn	Sb	06 04 10.1	+1.6
	17nm,0.8s						
DGS	Degeres	2.83	340	eP	Pb	06 03 33.4	-0.2
	23nm,0.5s						
DGS				eS	Sg	06 04 12.9	-0.7
	26nm,0.7s						
DGS	Degeres	2.83	340	Pg	Pb	06 03 33.4	-0.2
	23nm,0.5s						
DGS				Lg	Lg	06 04 12.9	
	26nm,0.7s						

CHMS	Chumysh baz=27	2.98	325	⇓iP	Pn	06 03 30.6	+0.2
CHMS	baz=27			⇓iS	Sn	06 04 08.2	+1.7
AML	Almayashu baz=4.0	2.99	302	⇑iP	Pn	06 03 30.4	-0.5
AML	baz=4.0			⇑iS	Sn	06 04 07.9	+0.6
AML	Almayashu SNR=5.2	2.99	302	P	Pb	06 03 36.8	+0.3
KURS	Kuram 7.3nm,0.9s	3.00	15	eP	Pb	06 03 36.0	-0.6
KURS	17nm,0.6s			eS	Sg	06 04 16.9	-2.2
KURS	Kuram 7.3nm,0.9s	3.00	15	Pg	Pb	06 03 36.0	-0.6
KURS	17nm,0.6s			Lg	Lg	06 04 16.9	
KPKS	Kokpek 6.3nm,0.1s	3.10	22	eP	Pb	06 03 38.2	-0.1
KPKS	50nm,0.4s			eS	Sg	06 04 20.9	-1.5
SHLS	Shalkode 9.3nm,0.5s	3.11	34	eP	Pg	06 03 42.4	+0.1
SHLS	43nm,0.5s			eS	Sg	06 04 27.9	+5.3
SHLS	Shalkode 9.3nm,0.5s	3.11	34	Pg	Pg	06 03 42.4	+0.1
KTBS	Karatobe 6.9nm,0.4s	3.13	354	eP	Pb	06 03 37.7	-1.1
KTBS	52nm,0.6s			eS	Sb	06 04 19.9	+2.7
KTBS	Karatobe 6.9nm,0.4s	3.13	354	Pg	Pb	06 03 37.7	-1.1
KTBS	52nm,0.6s			Lg	Lg	06 04 19.9	
ARSB	Arslanbob baz=87	3.21	285	⇓iP	Pn	06 03 32.5	-1.1
ARSB	baz=87			⇓eS	Sn	06 04 12.3	+0.1
EKS2	Erkin-Say baz=13	3.24	311	⇓eP	Pn	06 03 33.7	-0.4
EKS2	baz=13			⇓iS	Sn	06 04 13.9	+0.9
EKS2	Erkin-Say SNR=6.0	3.24	311	P	Pb	06 03 41.0	+0.4
PDGK	Podgornoye 2.2nm,0.5s	3.26	32	Pg	Pb	06 03 40.4	-0.6
PDGK	18nm,0.9s			Lg	Lg	06 04 25.0	
PDGK	Podgornoye 1.9nm,0.9s	3.26	32	⇑Pn	Pn	06 03 33.5	-1.0
PDGK	6.1nm,0.7s			⇓Pg	Pb	06 03 41.4	+0.4
PDGK	42nm,0.8s			⇑Lg	Lg	06 04 25.4	
KRBS	Karabastau 14nm,0.6s	3.28	342	eP	Pb	06 03 40.9	-0.4
KRBS	17nm,0.4s			eS	Sg	06 04 26.2	-1.8
KRBS	Karabastau 14nm,0.6s	3.28	342	Pg	Pb	06 03 40.9	-0.4
KRBS	17nm,0.4s			Lg	Lg	06 04 26.2	
KUU	Kurty 4.9nm,0.5s	3.35	351	eP	Pb	06 03 42.4	0.0
KUU	24nm,0.4s			eS	Sg	06 04 28.0	-2.2
KUU	Kurty 4.9nm,0.5s	3.35	351	Pg	Pb	06 03 42.4	0.0
KUU	24nm,0.4s			Lg	Lg	06 04 28.0	
MRKS	Merke 2.9nm,0.3s	3.61	308	eP	Pb	06 03 47.0	+0.1
MRKS	8.5nm,0.6s			eS	Sg	06 04 36.6	-2.1
MRKS	Merke 5.6nm,0.5s	3.61	308	Pg	Pb	06 03 47.9	+0.9
MNBS	Baschi 5.7nm,0.5s	3.62	15	eP	Pb	06 03 47.7	+0.7
MNBS	29nm,0.6s			eS	Sg	06 04 37.0	-1.8
MNBS	Baschi 5.7nm,0.5s	3.62	15	Pg	Pb	06 03 47.7	+0.7
MNBS	29nm,0.6s			Lg	Lg	06 04 37.0	
ARXS	Arharly 9.6nm,0.3s	3.66	8	eP	Pb	06 03 48.2	+0.4
ARXS	24nm,0.6s			eS	Sg	06 04 37.9	-2.3
ARXS	Arharly 9.6nm,0.3s	3.66	8	Pg	Pb	06 03 48.2	+0.4
ARXS	24nm,0.6s			Lg	Lg	06 04 37.9	
DJR	Jarkent 2.3nm,0.3s	4.23	27	eP	Pb	06 03 57.8	+0.3
DJR	9.1nm,0.3s			eS	Sg	06 04 54.2	-4.4
DJR	Jarkent 2.3nm,0.3s	4.23	27	Pg	Pb	06 03 57.8	+0.3
DJR	9.1nm,0.3s			Lg	Lg	06 04 54.2	
KAPS	Kapalarasan 2.1nm,0.4s	4.97	19	eP	Pb	06 04 11.9	+1.8
KAPS	6.8nm,0.6s			eS	Sg	06 05 18.6	-3.8
KAPS	Kapalarasan 2.1nm,0.4s	4.97	19	Pg	Pb	06 04 11.9	+1.8
KAPS	6.8nm,0.6s			Lg	Lg	06 05 18.6	
BTLS	Baital 2.2nm,0.7s	4.98	334	eP	Pb	06 04 11.8	+1.5
BTLS	3.4nm,0.6s			eS	Sg	06 05 18.3	-4.3
BTLS	Baital 2.2nm,0.7s	4.98	334	Pg	Pb	06 04 11.8	+1.5
BTLS	3.4nm,0.6s			Lg	Lg	06 05 18.3	
KK31	Karatay Array 3.2nm,0.8s,baz=120,slow=16	5.53	299	⇑Pn	Pb	06 04 20.4	+0.9
KK31	3.9nm,0.9s,baz=129,slow=29			⇓Lg	Lg	06 05 32.3	

TAP 14 06:05:46.4, 22°.80N×121°.46E, h17km, ML2.0, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LDUT	Ludao baz=173	0.12	174	P	Pb	06 05 50.8	+0.4
LDUT	baz=173			S	Sb	06 05 53.7	+0.8
EDH	Donghe baz=321	0.22	321	eP	Pb	06 05 52.3	+0.2
EDH	baz=321			S	Sb	06 05 56.2	+0.3
CHKT	Chengkung baz=345	0.31	345	eS	Sb	06 05 59.0	+0.6
LONT	Longtian baz=289	0.32	290	S	Sb	06 05 59.6	+1.0
TWGBT	Beinan baz=273	0.35	273	eP	Pb	06 05 54.2	+0.1
TWGBT	baz=273			S	Sb	06 06 00.0	+0.6
TWG	Pinlang baz=273	0.35	274	i P	Pb	06 05 54.3	0.0
TWG	baz=273			S	Sb	06 05 59.9	+0.3
FULB	Fuli baz=339	0.43	340	eP	Pb	06 05 55.7	+0.1
FULB	baz=339			eS	Sb	06 06 02.3	+0.6
ECL	Taimali baz=246	0.50	247	eS	Sg	06 06 03.6	+0.3
ELDTW	Lidau baz=314	0.56	314	eP	Pg	06 05 57.7	0.0
ELDTW	baz=314			eS	Sb	06 06 06.5	+0.8
STYH	Taoyuan baz=300	0.73	301	eP	Pb	06 06 00.5	-0.2
STYH	Taoyuan baz=355	0.73	301	eS	Pb	06 06 00.2	-0.5
STYT	Tauyuan baz=299	0.74	300	eP	Pb	06 05 60.0	-0.9
STYT	Tauyuan baz=350	0.74	300	S	Pb	06 05 60.0	-1.0
SLGT	Liugui baz=284	0.77	285	eP	Pb	06 06 01.4	-0.1
SLGT	Liugui baz=251	0.77	285	S	Pb	06 06 01.3	-0.1
TPUB	Ta-pu baz=303	0.91	304	eS	Sn	06 06 17.1	-0.2

TAP 14 06:05:54.9, 23°.04N×120°.80E, h7km, ML0.9, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STYT	Tauyuan baz=350	0.12	341	P	Pg	06 05 58.1	+0.4
STYH	Taoyuan baz=355	0.13	349	P	Pg	06 05 58.2	+0.5
SLGT	Liugui baz=251	0.15	251	P	Pg	06 05 58.8	+0.8
TPUB	Ta-pu baz=328	0.30	328	eS	Sb	06 06 06.7	-1.1

IDC 14 06:24:45.8±1.8, 0°.93S×139°.11E, h0km, mb3.3/2, mb1 3.4/4, mb1mx3.3/28, mbtmp3.2/4, ML3.1/2, Error ellipse: s-maj=52.5km s-min=26.5km az=66.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura 7.5nm,0.3s,baz=231,slow=21,SNR=18	2.24	135	Pn	Pn	06 25 24.9	+0.7
JAY	11nm,0.3s,baz=128,slow=16,SNR=11			Sn	Sn	06 25 36.2	-16
WRA	Warramunga Arr 0.1nm,0.3s,baz=25,slow=12,SNR=2.3	19.47	194	P	P	06 29 13.6	-0.8
ASAR	Alice Springs 0.5nm,0.7s,baz=29,slow=9.3,SNR=7.8	23.16	192	P	P	06 29 54.3	+0.2
MKAR	Makanchi Array 0.2nm,0.4s,baz=120,slow=8.0,SNR=5.0	68.64	322	P	P	06 35 50.9	-0.1

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*IDC **14** 07:08:53.8±0.7, 18°.06S×64°.99E, h0km, mb4.1/12, mb1 4.3/13, mb1mx3.9/72, mbtmp4.1/13, ML3.7/1, MS3.8/17, Ms1 3.8/17, ms1mx3.5/38, Error ellipse: s-maj=21.8km s-min=19.8km az=155.0*

*NEIC **14** 07:08:55.7±1.6, 18°.1S±0°.1×65°.0E±0°.2, h10km±1km, mb4.7/13, Error ellipse: s-maj=26.1km s-min=23.8km az=258.0*

ISC 14 07:08:55.7±0.6, **18°.1S**±0°.1×**65°.0E**±0°.1, **h10km, n57, σ0s.89**/40, **mb4.4**/20, **MS3.8**/17, **1C, Mauritius-Reunion region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	Diego Carcia H baz=213,slow=76	12.70	36	T	T	07 24 33.5	
H08S2	Diego Garcia H baz=213,slow=76	12.71	36	T	T	07 24 38.0	
H08S3	Diego Garcia H baz=213,slow=76	12.72	36	T	T	07 24 34.8	
ABPO	Ambohimpanom	16.84	264	Pn	Pn	07 12 51.8	-0.2
OPO	Ambohidratompo 0.3nm,0.3s,baz=73,slow=11,SNR=1.6	16.88	266	Pn	Pn	07 12 52.0	-0.5
PALK	Pallekele comp=Z,81nm,18.8s,baz=312,slow=32	29.61	33	LR	LR	07 24 46.1	
KMBO	Kilima Mbogo comp=Z,139nm,20.8s,baz=93,slow=32	32.01	299	LR	LR	07 25 41.1	
ATD	Arta Tunnel comp=Z,27nm,19.9s,baz=105,slow=32	36.64	322	LR	LR	07 28 21.0	
LBTB	Lobatse 5.4nm,1.0s,baz=84,slow=9.2,SNR=2.9	37.16	252	P	P	07 16 08.2	+1.0
BOSA	Boshof 5.9nm,1.1s,baz=63,slow=9.0,SNR=2.6	37.77	246	P	P	07 16 11.9	-0.5
BOSA	comp=Z,149nm,21.6s,baz=83,slow=32			LR	LR	07 28 49.5	
MBAR	Mbarara comp=Z,106nm,21.8s,baz=230,slow=32	37.84	294	LR	LR	07 29 00.8	
PSI	Prapat comp=Z,239nm,19.9s,baz=253,slow=31	39.38	62	LR	LR	07 29 05.5	
H01W2	Cape Leeuwin H baz=278,slow=75,SNR=12	46.61	121	T	T	08 07 04.8	
H01W3	Cape Leeuwin H baz=278,slow=75,SNR=13	46.61	121	T	T	08 07 24.0	
H01W1	Cape Leeuwin H baz=278,slow=75,SNR=12	46.63	121	T	T	08 07 26.9	
CMAR	Chiang Mai Arr 1.2nm,0.3s,baz=234,slow=8.3,SNR=7.6	49.34	44	P	P	07 17 46.5	+0.9
CMAR	comp=Z,171nm,20.0s,baz=231,slow=33			LR	LR	07 35 52.6	
MAW	Mawson comp=Z,118nm,21.4s,baz=57,slow=30	49.51	181	LR	LR	07 33 29.9	
SHL	Shillong	50.69	32	P	P	07 17 57.0	+1.2
KBL	Kabul	52.48	4	P	P	07 18 09.6	+0.5
KBL	comp=Z,14nm,1.3s			IAmb	IAmb	07 18 16.9	
SYO	Syowa Base	53.30	191	⇑eP	P	07 18 15.6	+1.0
GNI	Garni	60.93	342	P	P	07 19 09.6	+0.6
KK31	Karatay Array	61.10	5	P	P	07 19 10.6	+0.6
KK31	comp=Z,6.1nm,1.4s			IAmb	IAmb	07 19 17.3	
KKAR	Karatay Array	61.10	5	P	P	07 19 10.1	+0.1
ASAR	Alice Springs comp=Z,1.3nm,0.9s,baz=268,slow=5.7,SNR=7.2	64.12	108	P	P	07 19 29.8	-1.0
ASAR	comp=Z,265nm,20.7s,baz=300,slow=32			LR	LR	07 43 22.4	
ASAR	Alice Springs	64.12	108	P	P	07 19 29.9	-0.8
WRA	Warramunga Arr comp=Z,2.4nm,0.9s,baz=263,slow=6.0,SNR=10	65.18	104	P	P	07 19 37.5	-0.2
WRA	comp=Z,116nm,18.5s,baz=265,slow=34			LR	LR	07 46 09.7	
WRA	Warramunga Arr	65.18	104	P	P	07 19 38.0	+0.3
MKAR	Makanchi Array comp=Z,0.5nm,0.6s,baz=200,slow=6.2,SNR=3.6	66.45	13	P	P	07 19 44.7	-0.5
MKAR	Makanchi Array	66.45	13	P	P	07 19 44.4	-0.8
ABKAR	Akbulak array	67.19	356	P	P	07 19 49.4	-0.5
KURBB	Kurchatov Arra comp=Z,0.9nm,0.9s,baz=206,slow=6.6,SNR=2.7	69.45	9	P	P	07 20 03.5	-0.5
STKA	Stephens Creek comp=Z,75nm,20.9s,baz=207,slow=32	69.56	118	LR	LR	07 45 37.3	
TORD	Torodi Ar. Bea comp=Z,40nm,19.9s,baz=5.0,slow=35	69.69	292	LR	LR	07 49 21.8	
QSPA	South Pole Qui comp=Z,5.2nm,1.1s,baz=251,slow=4.6,SNR=5.8	72.01	180	P	P	07 20 19.7	0.0
QSPA	South Pole Qui	72.01	180	P	P	07 20 19.7	0.0
QSPA	comp=Z,14nm,1.4s			IAmb	IAmb	07 20 23.6	
MLR	Muntele Rosu comp=Z,3.4nm,1.0s,baz=162,slow=13,SNR=2.8	72.51	332	P	P	07 20 22.8	-0.1
DBIC	Dimbokro comp=Z,62nm,22.0s,baz=124,slow=34	73.12	283	LR	LR	07 49 42.8	
ZAA0	Zalesovo Array	73.75	12	P	P	07 20 28.8	-1.0
ZAA0	comp=Z,4.6nm,1.1s			IAmb	IAmb	07 20 40.7	
ZALV	Zalesovo Beam comp=Z,0.6nm,0.3s,baz=202,slow=6.4,SNR=4.0	73.75	12	P	P	07 20 28.5	-1.3
ZALV	comp=Z,43nm,18.0s,baz=74,slow=35			LR	LR	07 51 48.8	
ZALV	Zalesovo Beam	73.75	12	P	P	07 20 29.4	-0.4
VNDA	Vanda comp=Z,53nm,19.0s,baz=240,slow=33	73.95	167	LR	LR	07 49 50.3	
DIVS	Divibare	74.29	328	P	P	07 20 34.0	+0.6
DIVS	comp=Z,9.3nm,1.2s			IAmb	IAmb	07 20 46.0	
BURAR	Bucovina Array	74.48	333	P	P	07 20 35.6	+1.2
AKASG	Malin Array Be comp=Z,2.5nm,0.9s,baz=136,slow=4.8,SNR=9.9	75.36	337	P	P	07 20 38.5	-0.7
AKASG	Malin Array Be	75.36	337	P	P	07 20 38.4	-0.8
SONM	Songino Array comp=Z,1.2nm,0.9s,baz=231,slow=4.7,SNR=5.3	75.38	27	P	P	07 20 38.4	-1.2
SONM	Songino Array	75.38	27	P	P	07 20 39.1	-0.5
ULN	Ulaanbaatar	75.69	28	P	P	07 20 41.4	-0.1
OBKA	Obir comp=Z,8.5nm,1.6s	78.73	327	eP	P	07 21 00.9	+2.4
ARSA	Arzberg comp=Z,5.1nm,1.1s	78.73	328	eP	P	07 20 59.6	+1.2
CONA	Conrad Observa comp=Z,8.9nm,1.2s	79.02	329	eP	P	07 21 01.1	+1.1
WTTA	Wattenberg comp=Z,7.5nm,1.3s	80.74	326	eP	P	07 21 10.0	+0.5
KSRS	Korea Array comp=Z,40nm,19.3s,baz=216,slow=35	80.96	46	LR	LR	07 56 23.2	
MDT	Midelt comp=Z,54nm,18.6s,baz=138,slow=37	83.50	307	LR	LR	08 00 12.3	
YKA	Yellowknife Ar comp=Z,0.6nm,1.0s,baz=280,slow=7.5,SNR=4.3	135.64	360	PKP	PKPdf	07 28 14.3	-1.6
NVAR	Mina Array Bea comp=Z,0.4nm,0.8s,baz=327,slow=1.5,SNR=2.8	159.53	7	PKPab	PKPab	07 29 33.5	+0.3
TXAR	Lajitas Array comp=Z,0.1nm,0.8s,baz=113,slow=2.3,SNR=2.0	164.72	319	PKP	PKPdf	07 29 00.1	-0.6
TXAR	comp=Z,0.2nm,0.7s,baz=64,slow=4.2,SNR=2.2			PKPab	PKPab	07 29 55.0	-1.1

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*NIED **14** 07:18:07.5, 34°.95N×134°.59E, h15km, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}0.19; $M_{\theta\theta}$2.58; $M_{\phi\phi}$-2.78; $M_{r\theta}$-0.68; $M_{\theta\phi}$-0.35; $M_{\phi r}$0.09; Fault plane solution: $M_0$2.79000×10^{14} NP1: ϕ_s320.00000°, δ80.00000°, λ11.00000°. NP2: ϕ_s228.00000°, δ79.00000°, λ170.00000°.*

JMA 14 07:18:07.4, 34°.95N×134°.59E, h15km, M3.9, 3C-4D Broadband fault plane solution: P waves. NP1: ϕ_s135.00000°, δ84.00000°, λ6.00000°. **NP2:**ϕ_s45.00000°, δ84.00000°, λ174.00000°. **Principal axes:** T Plg8.0000°, Azm0.0000°**;** N Plg82.0000°, Azm180.0000°**;** P Plg0.0000°, Azm90.0000°**; Near south coast of western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKS	Kasai	0.21	81	⇓P	Pg	07 18 12.2	0.0
JKS				S	Sg	07 18 15.3	-0.2
JAD	Aida	0.35	269	P	Pg	07 18 14.5	0.0
JAD				S	Sg	07 18 19.5	+0.1
JAWN	Awajishima-nag	0.53	151	⇑P	Pg	07 18 17.7	-0.2
JAWN				S	Sg	07 18 25.0	0.0
JKSM	Kasumi	0.64	5	⇑P	Pg	07 18 19.8	-0.1
JKSM				S	Sg	07 18 28.3	-0.1
JWT	Wachi	0.74	63	⇓P	Pg	07 18 21.3	-0.6
JWT				S	Sg	07 18 31.2	-0.5
JJS	Sakaide	0.79	224	⇓P	Pg	07 18 22.2	-0.6
JJS				S	Sg	07 18 32.8	-0.4
JKY	Yasaka	0.80	32	⇑P	Pg	07 18 22.6	-0.3
JKY				i S	Sg	07 18 33.2	-0.2
JHE	Heguri	0.95	108	⇓P	Pb	07 18 25.1	-0.4
JHE				S	Sb	07 18 37.5	-0.4
MAT	Matsushiro	3.34	61	P	Pn	07 19 00.7	+1.5
MAT				eS	Sn	07 19 40.6	+2.0

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*THR **14** 07:19:26.4±0.4, 27°.30N×56°.33E, h14km±4km, ML3.7*

*OMAN **14** 07:19:28.4, 27°.54N×56°.51E, h4km, mb4.9/1, ml3.4/7*

*TEH **14** 07:19:28.7, 27°.46N×56°.15E, h5km, ML3.6*

*IDC **14** 07:19:33.8±2.2, 27°.37N×56°.13E, h46km±27km, mb3.5/16, mb1 3.6/19, mb1mx3.4/63, mbtmp3.8/19, ML3.4/3, MS2.8/2, Ms1 2.8/2, ms1mx2.3/35, Error ellipse: s-maj=18.0km s-min=15.3km az=46.0*

ISC 14 07:19:28.9±1.0, **27°.49N**±0°.02×**56°.22E**±0°.05, **h6km**±6km, **n70, σ1s.56**/79, **mb3.7**/16, **Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GENO	Geno	0.10	209	ePg	Pg	07 19 30.6	-0.5
GENO				eSg	Sg	07 19 31.9	-0.7
BNDS	Bandar-Abbas	0.10	209	ePg	Pg	07 19 30.6	-0.4
BNDS	Bandar-Abbas	0.10	209	ePg	Pg	07 19 30.7	-0.4
SHME	Shamm	1.43	183	ePn	Pb	07 19 55.9	-0.1
SHME	Shamm	1.43	183	P	Pg	07 19 56.3	-0.1
SHME				S	Sg	07 20 16.2	+1.3
BANOM	Banah	1.56	177	ePn	Pn	07 19 57.5	+0.3
BANOM	Banah SNR=21	1.56	177	P	Pg	07 19 58.6	-0.1
BANOM				S	Sg	07 20 20.0	+1.0
LAR1	LAR	1.65	277	ePn	Pn	07 19 58.2	-0.4
MASF	Masafi SNR=16	2.11	182	P	Pb	07 20 06.8	-0.8
MASF				S	Sg	07 20 38.7	+2.2
MSFE	Esma-Masafi	2.12	182	ePn	Pb	07 20 06.5	-1.2
MDH	Madha	2.18	178	ePn	Pb	07 20 08.7	0.0
MDH	Madha	2.18	178	P	Pn	07 20 06.4	+0.7
MDH				S	Sb	07 20 36.8	+0.8
NGRK	Negar Kerman comp=Z,99nm,0.4s	2.20	12	e		07 20 46.7	
NGRK				ePn	Pb	07 20 09.2	-0.1
JSK1	Jask	2.30	143	ePn	Pb	07 20 09.6	-1.3
UOSS	Minazif	2.53	180	ePn	Pn	07 20 11.1	+0.5
UOSS	Minazif	2.53	180	P	Pn	07 20 11.5	+0.9
UOSS				S	Sg	07 20 54.6	+4.4
KRBR	Kerman	2.53	11	ePn	Pn	07 20 11.7	+0.8
KRBR				eSg	Sg	07 20 50.9	+0.6
KRBR	comp=E,244nm,0.5s			IAML		07 20 58.9	
KRBR	Kerman	2.53	11	ePn	Pn	07 20 11.7	+0.8
TVBK	TV Kerman	2.54	11	ePn	Pb	07 20 14.2	-0.9
TVBK	comp=Z,99nm,0.6s			e		07 20 19.5	
JHRM	Jahrom	2.55	294	ePn	Pn	07 20 12.5	+1.5
KBAM	BAM	2.56	50	ePn	Pb	07 20 14.1	-1.3
KBAM	comp=Z,99nm,1.1s			e		07 21 02.1	
CHMN	Cheshme madani	2.63	26	ePn	Pb	07 20 15.5	-1.3
CHMN	comp=Z,99nm,0.8s			e		07 20 57.1	
HATD	Hatta, Dubai	2.65	182	ePn	Pb	07 20 14.6	-2.2
LMD1	Lamerd	2.72	268	ePn	Pn	07 20 14.7	+1.4
FAQ	Al Faqa, Dubai	2.79	192	ePn	Pn	07 20 15.7	+1.6
ASHO	Ashiyiah	2.79	183	ePn	Pn	07 20 16.2	+2.0
ASHO	Ashiyiah SNR=12	2.79	183	P	Pn	07 20 16.2	+2.0
KHGB	Koh Gabri	2.89	4	ePn	Pb	07 20 19.0	-2.0
KHGB	comp=Z,99nm,0.8s			e		07 21 31.3	
ASUD	Al Ashush, Dub	2.96	196	ePn	Pn	07 20 18.7	+2.2
ASUD	Al Ashush, Dub SNR=5.2	2.96	196	P	Pb	07 20 19.4	-2.7
SOHO	SOHO	3.35	175	ePn	Pn	07 20 22.8	+1.0
ARQ	Araqi	4.14	176	P	Pn	07 20 33.9	+1.1
ARQ				S	Sn	07 21 23.4	+1.9
WSAR	Wadi Sarin comp=Z,2.6nm,0.3s,baz=347,slow=13,SNR=21	4.75	152	P	Pn	07 20 41.5	+0.3
WSAR	comp=Z,2.5nm,0.3s,baz=130,slow=22,SNR=6.2			S	Sn	07 21 36.0	-0.7
BSRN	Basiran	5.13	29	ePn	Pn	07 20 46.6	+0.2
BSRN	Basiran	5.13	29	ePn	Pn	07 20 46.6	+0.2
IRAM	Ramesheh	5.45	323	ePn	Pn	07 20 52.6	+1.6
IKOO	Kooshah	5.48	25	ePn	Pn	07 20 54.2	+2.8
TPRV	Parvadeh(Tabas	5.54	4	ePn	Pn	07 20 55.3	+3.3
JLN	Jalan Bani Buh SNR=7.9	6.05	151	P	Pn	07 20 58.0	-0.9
JLN				S	Sn	07 22 05.5	-3.0
NASN	Na'in	6.07	332	ePn	Pn	07 21 01.4	+1.9
NASN	Na'in	6.07	332	ePn	Pn	07 21 01.8	+2.3
TABS	Tabas	6.19	7	ePn	Pn	07 21 01.8	+0.7
IZEF	Zefreh	6.36	329	ePn	Pn	07 21 04.5	+1.0
AFRZ	Afriz	6.39	21	ePn	Pn	07 21 07.1	+3.3
TNSJ	Nastanj	6.47	3	ePn	Pn	07 21 08.1	+3.3
IKLH	Kolahrood	7.06	327	ePn	Pn	07 21 15.8	+2.7
SHRT	Shahrakht	7.07	29	ePn	Pn	07 21 13.4	+0.3
SHRT	Shahrakht	7.07	29	ePn	Pn	07 21 13.4	+0.3
KRSH	Karshahi	7.36	332	ePn	Pn	07 21 19.1	+2.0
GEYT	Alibeck comp=Z,36nm,20.1s,baz=115,slow=43	10.54	8	LR	LR	07 27 11.2	
MMAI	Mount Meron Ar comp=Z,0.2nm,0.3s,baz=110,slow=12,SNR=2.4	18.80	292	P	P	07 23 48.5	-0.7
KBZ	Khabaz comp=Z,0.1nm,0.3s,baz=118,slow=15,SNR=1.8	19.45	330	P	Pn	07 23 58.3	+1.0
AAK	Ala-Archa comp=Z,0.9nm,0.5s,baz=257,slow=6.8,SNR=2.2	21.20	40	P	P	07 24 17.4	+2.1
BRTR	Keskin Array B comp=Z,2.4nm,0.7s,baz=135,slow=14,SNR=6.3	22.36	309	P	P	07 24 29.0	+1.1
AKTO	Aktyubinsk comp=Z,2.3nm,0.7s,baz=163,slow=4.5,SNR=6.3	22.96	3	P	P	07 24 36.4	+2.4
AKTO	comp=Z,29nm,18.4s,baz=215,slow=38			LR	LR	07 34 13.1	
BVAR	Borovoye Array comp=Z,0.5nm,0.5s,baz=224,slow=10,SNR=5.0	27.60	19	P	P	07 25 16.8	-0.1
MKAR	Makanchi Array comp=Z,0.4nm,0.6s,baz=227,slow=7.9,SNR=4.6	28.13	40	P	P	07 25 22.4	+0.6
KURBB	Kurchatov Arra comp=Z,0.3nm,0.6s,baz=228,slow=8.8,SNR=6.5	28.67	30	P	P	07 25 27.4	+1.0
ARU	Arti comp=Z,0.7nm,0.3s,baz=333,slow=9.2,SNR=4.8	28.97	3	P	P	07 25 28.4	-0.6
ZALV	Zalesovo Beam comp=Z,0.9nm,0.3s,baz=237,slow=10,SNR=4.7	33.76	31	P	P	07 26 12.4	+1.2
GERES	GERESS Array B comp=Z,0.5nm,0.5s,baz=132,slow=11,SNR=3.3	39.00	315	P	P	07 26 54.9	-1.3
KHC	Kasperske Hory	39.16	315	eP	P	07 26 56.5	-1.0
FINES	FINESS Array B comp=Z,1.2nm,0.6s,baz=152,slow=10,SNR=6.6	39.49	338	P	P	07 26 59.9	0.0
HFS	Hagfors comp=Z,1.6nm,0.8s,baz=106,slow=5.4,SNR=1.7	43.52	331	P	P	07 27 32.9	-0.2

SONM	Songino Array	43.73	48	P	P	07 27 35.9	+0.7
	comp=Z,0.9nm,0.7s,baz=255,slow=8.9,SNR=5.3						
NOA	NORSAR Array B	45.03	331	P	P	07 27 44.0	-1.2
	comp=Z,2.4nm,1.0s,baz=116,slow=8.0,SNR=2.4						
TORD	Torodi Ar. Bea	52.70	266	P	P	07 28 43.4	-1.3
	comp=Z,1.0nm,0.5s,baz=64,slow=7.2,SNR=7.3						
ILAR	Eielson Array	86.30	10	P	P	07 32 10.6	-0.8
	comp=Z,0.2nm,0.6s,baz=320,slow=4.0,SNR=2.6						
ASAR	Alice Springs	90.54	116	P	P	07 32 31.3	-1.0
	comp=Z,0.1nm,0.4s,baz=305,slow=4.4,SNR=4.1						
TXAR	Lajitas Array	120.31	340	PKP	PKPdf	07 38 21.4	-0.3
	comp=Z,0.3nm,1.0s,baz=168,slow=1.8,SNR=1.7						

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*NAO **14** 07:19:41.8±2.2, 73°.76N×9°.02E, ML3.4*
*IDC **14** 07:19:41.8±1.1, 73°.68N×8°.65E, h0^{km}, mb3.3/6, mb1 3.6/10, mb1mx3.3/65, mbtmp3.4/10, ML2.7/3, MS2.9/2, Ms1 2.8/2, ms1mx2.3/33, Error ellipse: s-maj=25.1km s-min=12.6km az=71.0*
*BER **14** 07:19:44.9±2.6, 73°.78N×9°.24E, h20^{km}±56^{km}, ML1.8, ML3.4(NAO), Confirmed Earthquake*
ISC 14 07:19:43.1±0.9, **73°.84N**±0°.06×**9°.59E**±0°.09, **h10**^{km}, **n34**, σ**1^{s}.51**/34, **mb3.2**/6, **Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BJO1	Bjornoya	2.67	71	eP	Pn	07 20 26.1	+0.2
BJO1				eS	Sn	07 20 57.6	-0.6
BJO1				IAML		07 21 07.9	
	comp=Z,17nm,0.7s						
HSPB	Hornsund (broa	3.52	22	Pn	Pn	07 20 38.0	+0.3
HSPB	Hornsund (broa	3.52	22	eP	Pn	07 20 38.0	+0.3
HSPB				IAML		07 21 20.1	
	comp=Z,2.5nm,0.6s						
BRBA	Barentsburg A	4.39	13	Pn	Pn	07 20 49.9	+0.2
BRBA	Barentsburg A	4.39	13	Pn	Pn	07 20 49.9	+0.2
SPA0	Spitsbergen Ar	4.66	17	Pn	Pn	07 20 54.3	+0.9
	baz=197,slow=14						
SPA0	Spitsbergen Ar	4.66	17	Pn	Pn	07 20 54.3	+0.9
	baz=197,slow=14						
SPITS	Spitsbergen Ar	4.66	17	Pn	Pn	07 20 55.1	+1.7
	baz=186,slow=13,SNR=132						
HOPEN	Hopen	4.77	49	Pn	Pn	07 20 56.1	+1.2
HOPEN	Hopen	4.77	49	eP	Pn	07 20 55.4	+0.5
HOPEN				eS	Sn	07 21 47.3	-2.9
HOPEN				IAML		07 21 59.6	
	comp=Z,4.7nm,0.6s						
KBS	Kingsbay	5.15	5	Pn	Pn	07 20 59.8	-0.3
KBS	Kingsbay	5.15	5	eP	Pn	07 20 59.2	-0.8
HAMF	Hammerfest	5.37	120	Pn	Pn	07 21 04.5	+1.4
HAMF	Hammerfest	5.37	120	Pn	Pn	07 21 04.5	+1.4
ARA0	ARCESS Array S	6.60	123	Pn	Pn	07 21 21.2	+1.2
	baz=319,slow=12						
ARA0	ARCESS Array S	6.60	123	Pn	Pn	07 21 21.2	+1.2
	baz=319,slow=12						
ARCES	ARCESS Array B	6.60	123	Pn	Pn	07 21 20.9	+0.9
	baz=326,slow=11,SNR=33						
ARCES				Sn	Sn	07 22 31.2	-3.9
	baz=316,slow=22,SNR=1.7						
APA0	Apatity Array	9.87	117	Pn	Pn	07 22 03.8	-1.0
	baz=330,slow=14						
APA0	Apatity Array	9.87	117	Pn	Pn	07 22 03.8	-1.0
	baz=330,slow=14						
SCO	Scoresbysund	10.14	266	i	Pn	07 22 00.6	-7.9
NOA	NORSAR Array B	12.87	176	LR	LR	07 27 16.9	
	comp=Z,18nm,18.1s,baz=245,slow=36						
FIA0	FINESS Array S	13.85	145	Pn	Pn	07 22 57.7	-1.3
	baz=348,slow=14						
FIA0	FINESS Array S	13.85	145	Pn	Pn	07 22 57.7	-1.3
	baz=348,slow=14						
FINES	FINESS Array B	13.85	145	Pn	Pn	07 22 57.6	-1.4
	comp=Z,0.1nm,0.3s,baz=343,slow=12,SNR=6.4						
HFS	Hagfors	13.85	171	Pn	Pn	07 22 58.9	-0.3
	comp=Z,0.1nm,0.3s,baz=351,slow=18,SNR=1.5						
HFS	Hagfors	13.85	171	Pn	Pn	07 22 58.3	-0.9
	baz=344,slow=16						
HFS	Hagfors	13.85	171	Pn	Pn	07 22 58.3	-0.9
	baz=344,slow=16						
AKASG	Malin Array Be	24.68	149	P	P	07 25 03.1	-0.6
	comp=Z,0.3nm,0.4s,baz=348,slow=9.4,SNR=2.0						
GERES	GERESS Array B	25.14	174	P	P	07 25 08.1	0.0
	comp=Z,0.2nm,0.5s,baz=337,slow=12,SNR=3.5						
KBZ	Khabaz	33.80	134	LR	LR	07 39 29.5	
	comp=Z,41nm,18.8s,baz=152,slow=35						
KURBB	Kurchatov Arra	36.47	90	P	P	07 26 50.2	+2.5
	comp=Z,0.6nm,0.8s,baz=336,slow=7.1,SNR=4.6						
YKA	Yellowknife Ar	39.00	322	P	P	07 27 06.9	-2.0
	comp=Z,0.5nm,0.9s,baz=16,slow=8.6,SNR=3.9						
ILAR	Eielson Array	40.78	345	P	P	07 27 25.8	+2.1
	comp=Z,0.3nm,0.8s,baz=9.7,slow=6.4,SNR=2.5						
MKAR	Makanchi Array	41.00	89	P	P	07 27 28.5	+2.8
	comp=Z,0.4nm,0.8s,baz=325,slow=7.2,SNR=3.7						

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*NNC **14** 07:29:36.3±4.6, 40°.88N×70°.44E, h0^{km}, mb3.1, mpv3.5, Error ellipse: s-maj=33.6km s-min=21.7km az=26.0*
*SOME **14** 07:29:37.1, 41°.13N×70°.73E, h0^{km}*
*KRNET **14** 07:29:38.3±0.1, 41°.17N×70°.65E, h13^{km}, mb2.4*
ISC 14 07:29:37.6±1.6, **41°.14N**±0°.04×**70°.64E**±0°.05, **h5**^{km}±13^{km}, **n14**, σ**1^{s}.47**/26, **15C-3D**, **Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRKS	Terek-Say	0.55	43	⇑iP	Pg	07 29 48.0	-0.2
	baz=54						
TRKS				⇑iS	Sg	07 29 55.3	0.0
	baz=54						
BTK	Batken	1.08	173	⇑iP	Pn	07 29 59.8	+0.2
	baz=73						
BTK				⇑iS	Sn	07 30 15.6	+0.6
	baz=73						
IUG	Iuzhnay	1.11	336	P	Pn	07 30 00.5	+0.5
IUG				S	Sn	07 30 17.9	+2.2
OHH	Osh	1.74	110	⇑iP	Pg	07 30 11.2	+0.3
	baz=11						
OHH				⇑iS	Sg	07 30 34.9	+1.5
	baz=11						
ARSB	Arslanbob	1.77	83	⇓iP	Pb	07 30 11.4	+0.6
	baz=84						
ARSB				⇓iS	Sg	07 30 35.8	+1.1
	baz=84						
MNAS	Manas	1.94	45	⇑iP	Pb	07 30 14.1	+0.5
	baz=46						
MNAS				⇑iS	Sg	07 30 40.3	+0.3
	baz=46						
KK31	Karatay Array	1.97	357	⇓Pn	Pg	07 30 15.6	+0.2
	2.1nm,0.5s,baz=179,slow=15,SNR=110						
KK31				⇑Sn	Sg	07 30 44.0	+3.1
	6.8nm,0.2s,baz=184,slow=30						
BRLS	Borolday	1.99	343	eP	Pb	07 30 12.9	-1.4
	22nm,0.1s						
BRLS				eS	Sg	07 30 39.9	-1.6
	32nm,0.2s						
BRLS	Borolday	1.99	343	Pg	Pb	07 30 12.9	-1.4
	22nm,0.1s						
BRLS				Lg	Lg	07 30 39.9	
	32nm,0.2s						
AML	Almayashu	2.50	65	⇑iP	Pb	07 30 22.2	-1.0
	baz=66						
AML				⇑iS	Sb	07 30 54.4	0.0
	baz=66						
MRKS	Merke	2.51	49	eP	Pb	07 30 23.9	+0.6
	5.5nm,0.1s						
MRKS				eS	Sg	07 30 58.5	+0.2
	3.9nm,0.2s						
MRKS	Merke	2.51	49	Pg	Pb	07 30 23.9	+0.6
	5.5nm,0.1s						
MRKS				Lg	Lg	07 30 58.5	
	3.9nm,0.2s						
ARLS	Aral	2.86	74	⇑iP	Pb	07 30 27.4	-1.9
	baz=75						
ARLS				⇑iS	Sb	07 31 03.2	-1.4
	baz=75						
UCH	Uchtor	3.10	68	⇑iP	Pb	07 30 30.8	-2.7
	baz=69						
UCH				⇑iS	Sb	07 31 09.1	-2.7
	baz=69						

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*ATH **14** 07:50:35.2, 35°.54N×21°.98E, h10^{km}±31^{km}, ML4.0/6, Error ellipse: s-maj=31.6km s-min=2.0km az=0.0*
*NEIC **14** 07:50:38.6±1.9, 35°.66N±0°.02×22°.11E±0°.08, h37^{km}±10^{km}, Error ellipse: s-maj=9.7km s-min=2.2km az=86.0*
*THE **14** 07:50:38.0, 35°.70N×22°.09E, h5^{km}±2^{km}, ML4.0/5, Error ellipse: s-maj=3.5km s-min=1.0km az=151.0*
*MED_RC **14** 07:50:39.0±0.7, 35°.65N×22°.00E, h33^{km}±2^{km}, MW4.1/8, Moment Tensor Solution.Mantle waves: s8,c9; Duration: 1^{s}.0 Moment tensor: Scale 10^{15}Nm; M$_{rr}$0.82±.37; M$_{θθ}$-0.58±.37; M$_{φφ}$-0.24±.37; M$_{rθ}$0.71±.11; M$_{θφ}$1.61±.37; M$_{φr}$0.11±.11; Best double couple: M$_0$1.86000×10^{15} NP1:φ$_s$352.00000°,δ58.00000°,λ159.00000°. NP2: φ$_s$94.00000°,δ72.00000°,λ34.00000°. Principal axes: T 1.6200, Plg37.0000°, Azm317.0000°; N 0.4800, Plg52.0000°, Azm119.0000°; P -2.1000, Plg9.0000°, Azm221.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
*PDG **14** 07:50:39.1±0.1, 36°.04N×21°.76E, h10^{km}±1^{km}, ML4.3/13 Error ellipse: s-maj=2.0km s-min=0.5km az=90.0*
*IDC **14** 07:50:40.7±2.0, 35°.67N×22°.23E, h58^{km}±20^{km}, mb3.7/17, mb1 3.8/25, mb1mx3.7/50, mbtmp4.0/25, ML3.6/7, MS3.2/8, Ms1 3.2/8, ms1mx2.7/49, Error ellipse: s-maj=17.2km s-min=13.5km az=167.0*
*ISK **14** 07:50:40.1, 35°.83N×22°.36E, h79^{km}, ML4.0/13*
*HLW **14** 07:50:45.8, 35°.37N×23°.06E, h22^{km}±31^{km}, Md4.8, Ml4.1*
ISC 14 07:50:38.9±0.6, **35°.75N**±0°.05×**22°.05E**±0°.05, **h39**^{km}±3^{km}, **n204**, σ**2^{s}.12**/236, **mb4.1**/19, **MS3.4**/5, **12C-6D**, **Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTHR	Kythira	0.93	56	P	Pn	07 50 55.5	+0.1
KTHR				S	Sn	07 51 08.7	+1.2
	10μm,0.5s						
KTHA	Kythira Island	0.96	58	P	Pn	07 50 56.3	+0.4
KTHA				S	Sn	07 51 11.2	+2.8
KTHA				AML	AML	07 51 14.3	
	comp=N,9318μm,0.4s						
KTHA				AML	AML	07 51 14.8	
	comp=E,21092μm,0.6s						
KTHA	Kythira Island	0.96	58	P	Pn	07 50 56.3	+0.4
KTHA				S	Sn	07 51 09.8	+1.4
	comp=E,8μm,0.6s						
KTHA	Kythira Island	0.96	58	PG	Pn	07 50 56.7	+0.8
KTHA				SG	Sn	07 51 08.3	-0.1
PYL	PYLOS	1.17	348	P	Pn	07 51 00.1	+1.4
PYL				AML	AML	07 51 29.7	
	comp=N,6619μm,0.9s						
PYL				AML	AML	07 51 31.0	
	comp=E,9705μm,0.8s						
PYL	PYLOS	1.17	348	P	Pn	07 51 00.1	+1.4
PYL				S	Sn	07 51 19.1	+5.6
	comp=E,4μm,0.9s						
VLI	Veliai	1.21	36	P	Pn	07 51 01.3	+2.1
VLI				S	Sn	07 51 20.1	+5.8
VLI				AML	AML	07 51 24.6	
	comp=E,12367μm,0.6s						
VLI				AML	AML	07 51 25.1	
	comp=N,11526μm,0.7s						
VLI	Veliai	1.21	36	P	Pn	07 51 01.5	+2.3
VLI				S	Sn	07 51 19.6	+5.3
	comp=N,7μm,0.7s						
MNVA	Monemvasia	1.23	40	P	Pn	07 51 01.6	+2.1
MNVA				S	Sn	07 51 20.4	+5.5
MNVA				AML	AML	07 51 24.6	
	comp=N,4753μm,0.5s						
MNVA				AML	AML	07 51 24.6	
	comp=E,7304μm,1.1s						
ITM	Ithomi	1.43	356	P	Pn	07 51 04.4	+2.0
ITM	Ithomi	1.43	356	P	Pn	07 51 04.2	+1.8
ITM	Ithomi	1.43	356	PN	Pn	07 51 04.8	+2.4
ITM				SN	Sn	07 51 23.2	+3.2
ITM	Ithomi	1.43	356		Pn	07 51 04.1	+1.7
IMMV	Iera Moni Meta	1.60	100	P	Pn	07 51 05.2	+0.6
IMMV				AML	AML	07 51 35.6	
	comp=N,8306μm,1.0s						
IMMV				AML	AML	07 51 38.8	
	comp=E,10200μm,0.7s						
IMMV	Iera Moni Meta	1.60	100	P	Pn	07 51 05.0	+0.4
IMMV				S	Sn	07 51 26.4	+2.4
	comp=E,5μm,0.7s						
IMMV	Iera Moni Meta	1.60	100	PN	Pn	07 51 04.9	+0.4
VLX	Vlachokerasia	1.64	9	P	Pn	07 51 08.2	+2.9
VAM	Vamos	1.78	100	P	Pn	07 51 07.5	+0.4
VAM				AML	AML	07 51 44.2	
	comp=E,7140μm,0.6s						
VAM				AML	AML	07 51 45.5	
	comp=N,6855μm,0.6s						
VAM	Vamos	1.78	100	P	Pn	07 51 07.5	+0.4
KRND	KRANIDI	1.86	28	P	Pn	07 51 12.1	+3.9
GVD	Gavdhos	1.90	118	P	Pn	07 51 08.5	-0.1
GVD	Gavdhos	1.90	118	P	Pn	07 51 08.4	-0.3
GVD	Gavdhos	1.90	118	PN	Pn	07 51 09.1	+0.4
GVDS	Gavdos	1.90	118	PN	Pn	07 51 09.0	+0.3
MHLO	Agia Marina, M	2.12	63	P	Pn	07 51 15.0	+3.3
MHLA	Plaka, Milos I	2.16	62	P	Pn	07 51 15.3	+3.0
LTHK	Lithakia	2.19	334	P	Pn	07 51 14.7	+2.0
HRKL	Herakleio	2.52	99	PN	Pn	07 51 17.5	+0.2
THT2	Imerovigli	2.81	75	PN	Pn	07 51 20.9	-0.4
SANT	Santorini	2.83	76	PN	Pn	07 51 21.1	-0.5
SANT	Santorini	2.83	76		Pn	07 51 21.6	0.0
APE	Apeiranthos	3.10	64	PN	Pn	07 51 25.2	-0.1
AGG	Agios Georgios	3.28	4	PN	Pn	07 51 30.1	+2.4
AGG	Agios Georgios	3.28	4		Pn	07 51 30.8	+3.1
ZKR	Zakros	3.46	99	PN	Pn	07 51 30.7	+0.5
KOSK	Kos Island	4.11	74	PN	Pn	07 51 38.9	-0.1
CHOS	Chios island	4.15	49	PN	Pn	07 51 39.6	-0.1
KARP	Karpathos	4.17	91	PN	Pn	07 51 39.7	-0.2
KARP	Karpathos	4.17	91	Pn	Pn	07 51 39.6	-0.3
LIT	Litokhoron	4.36	4	Pn	Pn	07 51 44.3	+1.7
BODT	Bodrum	4.44	71	PN	Pn	07 51 43.0	-0.7
SIGR	SIGRI	4.59	40	PN	Pn	07 51 45.5	-0.2
OUR	Ouranopolis	4.83	18	PN	Pn	07 51 50.2	+1.3
HORT	Hortiatis	4.91	9	PN	Pn	07 51 51.5	+1.3
ARG	Arkhangelos	4.95	83	PN	Pn	07 51 49.7	-0.9
SLUM	Salum	5.00	147	P	Pn	07 51 50.0	-1.3
	baz=154						
SLUM				AMP		07 52 00.0	
	baz=154						
FNA	Florina	5.06	354		Pn	07 51 54.1	+2.0
TURN	Turunc	5.11	77	PN	Pn	07 51 52.4	-0.4
SCTE	Santa Cesarea	5.16	328	Pn	Pn	07 51 54.7	+1.2
AYDB	Zeytinkoy-Aydi	5.17	63	PN	Pn	07 51 53.2	-0.6
BOZC	Bozcaada	5.17	37	PN	Pn	07 51 53.8	+0.1
YER	Yerkesik	5.21	73	PN	Pn	07 51 53.7	-0.6
TIP	Timpagrande	5.43	311	⇑P	Pn	07 51 58.8	+1.5
TIP	Timpagrande	5.43	311		Pn	07 51 58.6	+1.4
OHR	Ohrid	5.45	350	i Pn	Pn	07 51 59.2	+1.7
VAY	Valandovo	5.58	4	i Pn	Pn	07 52 00.7	+1.4
TIR	Tirane	5.85	344	⇑P	Pn	07 52 02.0	-1.0
TIR	Tirane	5.85	344		Pn	07 52 03.8	+0.8
STIP	Stip	5.94	1	i Pn	Pn	07 52 06.4	+2.2
SKO	Skopje	6.23	356	i Pn	Pn	07 52 08.8	+0.6
RAFF	Raffo Rosso	6.37	286	Pn	Pn	07 52 10.5	+0.4
VAE	Valguarnera	6.38	288	P	Pn	07 52 15.5	+5.1
	comp=N,2.6nm,0.3s,baz=17,slow=9.6,SNR=1.6						
VAE				S	Sn	07 53 24.1	+2.0
	comp=N,3.2nm,0.3s,baz=118,slow=13,SNR=3.6						
ELL	Elmali	6.43	79	Pn	Pn	07 52 10.7	-0.3
MATE	Matera	6.46	321	⇑P	Pn	07 52 11.6	+0.3
ULC	Ulcinj	6.58	341	ePn	Pn	07 52 12.9	-0.2
ULC				i Sn	Sn	07 53 23.2	-3.6
DRME	Dracevica, Mon	6.81	342	⇑iPn	Pn	07 52 16.0	-0.2
DRME	Dracevica, Mon	6.81	342	ePn	Pn	07 52 15.9	-0.2
DRME				i Sn	Sn	07 53 28.6	-3.7
VTS	Vitosha	6.92	7	⇓P	Pn	07 52 17.1	-0.8
VTS	Vitosha	6.92	7		Pn	07 52 19.1	+1.2
BUM	Brajici-Budva	6.99	340	ePn	Pn	07 52 18.2	-0.5
BUM				i Sn	Sn	07 53 32.7	-4.2
PDG	Podgorica	7.02	343	⇑P	Pn	07 52 18.8	-0.1
PDG				S	Sn	07 53 34.9	-2.6
PDG	Podgorica	7.02	343	ePn	Pn	07 52 18.7	-0.3
PDG	Podgorica	7.02	343	Pn	Pn	07 52 19.3	+0.3
TTG	Podgorica	7.02	343	⇓iPn	Pn	07 52 18.9	-0.1
TTG				i Sn	Sn	07 53 33.8	-3.7
PVY	Plav	7.03	347	⇓iPn	Pn	07 52 19.2	-0.1
PVY				i Sn	Sn	07 53 34.2	-3.7
SWA2		7.09	155	P	Pn	07 52 18.9	-1.2
	baz=160						
SWA2				S	Sn	07 53 27.9	-12
	baz=160						
CEME	Cevo	7.21	341	ePn	Pn	07 52 21.1	-0.7
CEME				i Sn	Sn	07 53 38.3	-4.1
HCY	Herceg Novi	7.24	339	ePn	Pn	07 52 20.6	-1.5
HCY	Herceg Novi	7.24	339	⇓iPn	Pn	07 52 21.2	-0.9
HCY				i Sn	Sn	07 53 38.9	-4.1
IVA	Berane	7.31	347	ePn	Pn	07 52 23.3	+0.2
IVA				i Sn	Sn	07 53 40.8	-4.0
KOME	Kolasin	7.36	345	ePn	Pn	07 52 23.9	+0.1
KOME				i Sn	Sn	07 53 42.2	-3.9
NKME	Niksic	7.41	342	ePn	Pn	07 52 24.1	-0.3
NKME				i Sn	Sn	07 53 43.1	-4.1
NKY	Niksic	7.44	342	ePn	Pn	07 52 24.8	-0.2
NKY				i Sn	Sn	07 53 44.1	-4.0
TREB	Trebinje	7.53	339	ePn	Pn	07 52 24.6	-1.4
DBRK	Dubrovnik	7.55	338	ePn	Pn	07 52 24.0	-2.3
DBRK				Sn	Sn	07 53 42.7	-7.8
BRY	Bratogost	7.64	340	ePn	Pn	07 52 26.7	-1.1
BRY	Bratogost	7.64	340	⇓iPn	Pn	07 52 27.5	-0.3
BRY				i Sn	Sn	07 53 48.6	-4.5
SGRT	San Giovanni R	7.76	323	Pn	Pn	07 52 29.7	+0.4
UPM	Unac-Piva	7.83	343	ePn	Pn	07 52 26.3	-4.1
UPM	Unac-Piva	7.83	343	ePn	Pn	07 52 30.2	-0.2
UPM				i Sn	Sn	07 53 53.3	-4.5
PLE	Pljevlja	7.85	346	ePn	Pn	07 52 30.7	+0.2
PLE				i Sn	Sn	07 53 53.8	-4.3
STON	Ston	7.87	336	ePn	Pn	07 52 28.6	-2.1
STON				Sn	Sn	07 53 49.7	-8.8
LSTV	Lastovo	8.07	332	ePn	Pn	07 52 32.3	-1.2
LSTV				Sn	Sn	07 53 54.6	-8.7
RUDO	Rudo	8.13	346	ePn	Pn	07 52 34.6	+0.3
GRUS	Gruza	8.20	353	P	Pn	07 52 34.8	-0.4
BBLS	Lazići	8.36	347	⇑iPn	Pn	07 52 36.5	-1.0
DIVS	Divibare	8.49	350	⇑iPn	Pn	07 52 38.2	-1.1
DIVS	Divibare	8.49	350	Pn	Pn	07 52 38.7	-0.6
HVAR	Hvar	8.59	331	ePn	Pn	07 52 39.8	-0.8
RICI	Ricice	8.62	335	ePn	Pn	07 52 39.6	-1.3
HAPS	Han Pijesak,Bl	8.66	345	ePn	Pn	07 52 39.7	-2.0
INTR	Introdacqua	8.91	317	Pn	Pn	07 52 47.8	+2.7
TEKS	Tekeris	9.00	348	ePn	Pn	07 52 44.9	-1.3
HERR	Herculane	9.13	2	⇑P	Pn	07 52 47.9	0.0
ZIRJ	Zirje	9.31	330	i Pn	Pn	07 52 49.2	-1.2
ZIRJ				Sn	Sn	07 54 25.2	-8.6
KIJV	Kijevo	9.32	334	ePn	Pn	07 52 49.6	-0.9
KIJV				Sn	Sn	07 54 27.8	-6.2
AQU	L'Aquila	9.42	317	ePn	Pn	07 53 06.4	+14
MGRS	Mrkonjic Grad	9.46	338	ePn	Pn	07 52 51.9	-0.6
MORI	Morici	9.46	331	ePn	Pn	07 52 51.2	-1.3
FRGS	Fruska Gora	9.55	350	⇑P	Pn	07 52 53.2	-0.6
FRGS	Fruska Gora	9.55	350	⇑iPn	Pn	07 52 53.0	-0.8
RYAN	Fayoum	9.61	131	P	Pn	07 52 52.4	-2.3
	baz=133						
GZR	Gura Zlata	9.65	3	⇑P	Pn	07 52 54.3	-0.9
BLY	Banja Luka	9.73	339	ePn	Pn	07 52 55.9	-0.3
DUGI	Dugi Otok	9.83	329	i Pn	Pn	07 52 58.6	+1.1
NRCA	Norcia	9.90	318		Pn	07 53 00.4	+1.8
VOIR		9.94	12	⇓P	Pn	07 52 58.6	-0.6
BRTR	Keskin Array B	10.00	63	P	Pn	07 53 01.6	+1.6
	comp=N,0.3nm,0.3s,baz=231,slow=14,SNR=5.8						
BRTR				LR	LR	07 57 18.7	
	comp=N,129nm,21.4s,baz=253,slow=40						
BRTR	Keskin Array B	10.00	63	Pn	Pn	07 53 01.0	+1.0
UDBI	Udbina	10.00	333	ePn	Pn	07 53 00.4	+0.5
MLR	Muntele Rosu	10.17	16	P	Pn	07 53 05.8	+3.5
	comp=N,0.2nm,0.3s,baz=176,slow=14,SNR=2.3						
MLR				LR	LR	07 57 15.4	
	comp=N,84nm,18.5s,baz=200,slow=39						
MLR	Muntele Rosu	10.17	16	Pn	Pn	07 53 04.8	+2.4
GLL	Jalalah	10.20	124	P	Pn	07 52 59.6	-3.2
	baz=126						
NBNS	Bani Suef	10.57	130	P	Pn	07 53 05.0	-2.8
	baz=131						
MORH	Mrgy, Hungar	10.77	347	⇑P	Pn	07 53 08.7	-1.6
MORH	Mrgy, Hungar	10.77	347	ePn	Pn	07 53 08.5	-1.9
BOJS	Bojanci	11.03	334	i Pn	Pn	07 53 13.5	-0.4
BOJS				i Sn	Sn	07 55 08.3	-7.5
OZLJ	Ozalj	11.05	335	ePn	Pn	07 53 13.6	-0.6
KALN	Kalnik	11.20	340	i Pn	Pn	07 53 14.4	-1.9
GBRS	Gornja Briga	11.21	333	i Pn	Pn	07 53 16.1	-0.3
GBRS				i Sn	Sn	07 55 12.8	-7.6
CRES	Cresnjev	11.23	336	i Pn	Pn	07 53 15.7	-1.1
CRES				i Sn	Sn	07 55 12.8	-8.2
CRES	Cresnjev	11.23	336	ePn	Pn	07 53 15.6	-1.2
MMAI	Mount Meron Ar	11.36	100	P	Pn	07 53 17.4	-1.3
	comp=N,0.9nm,0.3s,baz=285,slow=11,SNR=8.4						
MMAI				S	Sn	07 55 11.5	-13
	comp=N,1.2nm,0.3s,baz=296,slow=16,SNR=1.6						
CEY	Cerknica	11.53	332	ePn	Pn	07 53 19.8	-1.0
SOKA	Soboth	12.12	336	i Pn	Pn	07 53 27.5	-1.6
	comp=N,2.2nm,0.2s						
SOKA				eSn	Sn	07 55 35.5	-7.4
	comp=N,2.8nm,0.5s						
OBKA	Obir	12.14	335	i Pn	Pn	07 53 29.9	+0.6
	comp=N,1.1nm,0.2s						
OBKA				eSn	Sn	07 55 37.8	-5.4
	comp=N,9.4nm,0.6s						
PSZ	Piszkesteto	12.27	353	Pn	Pn	07 53 30.5	-0.4
EIL	Elat	12.43	116	P	Pn	07 53 31.9	-1.3
	comp=N,0.8nm,0.3s,baz=323,slow=10,SNR=14						
EIL				S	Sn	07 55 34.9	-16
	comp=N,0.9nm,0.3s,baz=329,slow=19,SNR=2.5						
ARSA	Arzberg	12.48	339	ePn	Pn	07 53 32.9	-1.0
	comp=N,1.4nm,0.3s						
ZOU	Zoufplan	12.77	330	Pn	Pn	07 53 37.7	-0.3
CTI	Castel Tesino	12.94	326	Pn	Pn	07 53 41.1	+0.9
VYHS	Vyhne	12.96	350	ePN	Pn	07 53 41.4	+1.1
VYHS	Vyhne	12.96	350	eSN	Sn	07 56 00.7	-2.4
KBA	Koelnbreinsper	13.06	333	ePn	Pn	07 53 42.9	+1.1
	comp=N,0.9nm,0.3s						
KBA				i Sn	Sn	07 55 59.2	-6.6
	comp=N,0.9nm,0.2s						
ABTA	Abfaltersbach	13.11	330	ePn	Pn	07 53 43.4	+0.9
	comp=N,2.2nm,0.6s						
ABTA				eSn	Sn	07 56 01.3	-5.7
	comp=N,5.6nm,0.5s						
KOLS	Kolonicke sedl	13.18	1	ePN	Pn	07 53 43.9	+0.6
MOA	Molln	13.40	337	i Pn	Pn	07 53 46.8	+0.4
	comp=N,1.5nm,0.2s						
WTTA	Wattenberg	13.89	329	ePn	Pn	07 53 53.7	+0.6
	comp=N,1.0nm,0.3s						
WTTA				eSn	Sn	07 56 22.2	-3.8
	comp=N,7.2nm,0.6s						
SQTA	Sankt Quirin	14.03	328	i Pn	Pn	07 53 59.0	+3.9
	comp=N,1.1nm,0.2s						
SQTA				i Sn	Sn	07 56 25.9	-3.6
	comp=N,6.8nm,0.6s						
FETA	Feichten	14.09	327	ePn	Pn	07 54 00.2	+4.3
	comp=N,1.6nm,0.6s						
FETA				eSn	Sn	07 56 31.0	0.0
	comp=N,1.8nm,0.6s						
VRAC	Vranov	14.13	345	LR	LR	08 00 44.6	
	comp=N,49nm,19.3s,baz=229,slow=42						
DAVOX	Davos/Dischmat	14.31	324	P	Pn	07 54 02.5	+3.6
	comp=N,0.2nm,0.3s,baz=164,slow=15,SNR=1.6						
DAVOX				S	Sn	07 56 28.4	-7.9
	comp=N,0.2nm,0.3s,baz=325,slow=22,SNR=1.9						
GERES	GERESS Array B	14.46	337	P	Pn	07 53 58.6	-2.2
	comp=N,0.2nm,0.3s,baz=158,slow=16,SNR=7.3						
GERES				S	Sn	07 56 32.5	-7.3
	comp=N,0.1nm,0.3s,baz=151,slow=22,SNR=3.3						
GERES	GERESS Array B	14.46	337		Pn	07 54 00.4	-0.4
DAVA	Damuels	14.68	325	eSn	Sn	07 56 44.7	-0.5
	comp=N,1.6nm,0.2s						
KHC	Kasperske Hory	14.75	338	ePN	Pn	07 54 04.6	-0.1
KHC				eSN	Sn	07 56 40.5	-6.3
KOPT	Kop Dagi	15.17	68		Pn	07 54 11.2	+0.6
KOPT				IAmb	IAmb	07 54 21.3	
	comp=Z,8.1nm,0.9s						
AKASG	Malin Array Be	15.82	17	P	Pn	07 54 15.9	-2.6
	comp=Z,0.6nm,0.3s,baz=204,slow=12,SNR=4.1						
AKASG	Malin Array Be	15.82	17	Pn	Pn	07 54 18.6	0.0
KVAR	Kislovodsk Arr	17.81	56	P	P	07 54 44.9	+0.8
	baz=278,slow=15,SNR=1.0						
KBZ	Khabaz	17.87	57	P	P	07 54 45.2	+0.5
	comp=Z,0.1nm,0.3s,baz=251,slow=15,SNR=2.4						
SUW	Suwalki	18.28	2	P	P	07 54 49.0	-0.1
NACGM	Naroch	19.43	8	i P	P	07 55 01.7	0.0
NACGM				i P	P	07 55 01.7	0.0
NACGM				i P	P	07 55 01.7	0.0
NACGM				i PP	PnPn	07 55 18.1	+1.2
NACGM				i PPP	PPP	07 55 25.3	
NACGM				i S	Sn	07 58 54.8	+15
NACGM				i SS	SnSn	07 59 02.1	+7.6
NACGM				i SSS	SSS	07 59 15.1	
NACGM				i LQ	LQ	08 01 46.1	
NACGM				i LR	LR	08 03 53.3	
PABE	Paberze	19.80	3	eP	P	07 55 05.6	-0.1
IIGN	Ignalina	19.81	7	eP	P	07 55 06.5	+0.6
IIGN				IAmb	IAmb	07 55 18.7	

	comp=Z,6.6nm,0.8s						
IDID	Didziasalis	19.83	8	eP	P	07 55 06.6	+0.6
ISAL	Salakas	20.02	7	eP	P	07 55 07.0	-1.1
ISAL				IAmb	IAmb	07 55 15.7	
	comp=Z,9.6nm,1.0s						
PBUR	Paburge	20.28	360	eP	P	07 55 05.6	-5.3
SLIT	Slitere, Latvi	21.89	0	eP	P	07 55 27.3	-0.9
MDT	Midelt	22.20	270	P	P	07 55 32.5	+0.6
	comp=Z,2.0nm,0.9s,baz=106,slow=13,SNR=3.7						
VSU	Vasula	22.94	6	eP	P	07 55 40.5	+1.2
MTSE	Matsula	23.01	2	eP	P	07 55 39.5	-0.5
AAL	Aland	24.48	358	eP	P	07 55 53.0	-1.0
BELG	Belogornoye	24.59	39	P	P	07 55 54.6	-0.5
	comp=Z,8.1nm,0.5s,baz=228,slow=12,SNR=6.8						
HFS	Hagfors	25.00	350	P	P	07 55 59.1	+0.4
	comp=Z,2.4nm,0.3s,baz=156,slow=10,SNR=45						
FINES	FINESS Array B	25.84	4	P	P	07 56 06.2	-0.1
	comp=Z,0.7nm,0.3s,baz=167,slow=11,SNR=12						
FINES				LR	LR	08 07 31.9	
	comp=Z,61nm,21.4s,baz=173,slow=39						
FINES	FINESS Array B	25.84	4	P	P	07 56 06.0	-0.3
NC602	NORSAR Array S	25.90	348	P	P	07 56 07.8	+0.9
EKA	Eskdalemuir Ar	26.12	326	P	P	07 56 10.1	+1.2
	comp=Z,4.7nm,0.6s,baz=127,slow=8.7,SNR=17						
NB201	NORSAR Array S	26.24	348	P	P	07 56 10.5	+0.5
NB2	NORSAR Subarra	26.24	348	P	P	07 56 11.3	+1.3
	comp=Z,3.0nm,0.9s,baz=155,slow=9.3						
NOA	NORSAR Array B	26.24	348	P	P	07 56 11.5	+1.5
	comp=Z,0.1nm,0.3s,baz=151,slow=10,SNR=12						
TORD	Torodi Ar. Bea	29.03	224	P	P	07 56 37.0	+1.7
	comp=Z,0.2nm,0.4s,baz=37,slow=10,SNR=1.6						
AKTO	Aktyubinsk	29.75	49	P	P	07 56 39.8	-1.7
	comp=Z,0.5nm,0.3s,baz=270,slow=5.1,SNR=4.7						
ABKAR	Akbulak array	30.68	52	P	P	07 56 48.7	-0.9
ARCES	ARCESS Array B	33.90	2	P	P	07 57 17.3	-0.3
	comp=Z,3.4nm,0.6s,baz=183,slow=9.8,SNR=18						
ARCES				LR	LR	08 12 31.9	
	comp=Z,62nm,19.2s,baz=240,slow=39						
KK31	Karatay Array	37.71	64	P	P	07 57 50.3	-0.3
KKAR	Karatay Array	37.71	64	P	P	07 57 50.4	-0.2
DBIC	Dimbokro	38.03	227	P	P	07 57 53.0	-0.5
	comp=Z,2.0nm,0.8s,baz=54,slow=8.7,SNR=1.5						
DBIC	Dimbokro	38.03	227	P	P	07 57 53.0	-0.5
DBIC				IAmb	IAmb	07 58 01.0	
	comp=Z,8.4nm,1.1s						
SPITS	Spitsbergen Ar	42.60	358	P	P	07 58 31.7	+1.0
	comp=Z,2.3nm,0.6s,baz=151,slow=10,SNR=11						
MAKZ	Makanchi	45.35	57	P	P	07 58 53.5	+0.3
MAKZ				IAmb	IAmb	07 59 09.7	
	comp=Z,2.2nm,0.8s						
MK31	Makanchi Array	45.57	57	P	P	07 58 54.2	-0.7
MK31				IAmb	IAmb	07 59 08.5	
	comp=Z,3.7nm,0.6s						
MKAR	Makanchi Array	45.57	57	P	P	07 58 54.0	-0.9
	comp=Z,3.2nm,0.3s,baz=268,slow=7.8,SNR=88						
MKAR	Makanchi Array	45.57	57	P	P	07 58 54.8	-0.1
ZALV	Zalesovo Beam	46.44	46	P	P	07 58 59.3	-2.2
	comp=Z,1.1nm,0.4s,baz=273,slow=8.5,SNR=4.5						
SONM	Songino Array	61.06	50	P	P	08 00 48.5	-0.3
	comp=Z,0.4nm,0.4s,baz=316,slow=4.0,SNR=1.9						
BOSA	Boshof	64.09	177	LR	LR	08 30 15.0	
	comp=Z,31nm,20.0s,baz=13,slow=37						
FCC	Fort Churchill	71.96	331	P	P	08 01 59.6	+1.7
YKA	Yellowknife Ar	76.09	341	P	P	08 02 23.1	+1.1
	comp=Z,0.3nm,0.7s,baz=38,slow=5.5,SNR=3.8						
ILAR	Eielson Array	79.44	355	P	P	08 02 41.9	+1.2
	comp=Z,0.2nm,0.6s,baz=36,slow=4.8,SNR=1.5						
KSRS	Korea Array	79.91	51	P	P	08 02 43.1	-0.6
	comp=Z,0.5nm,0.4s,baz=304,slow=4.6,SNR=1.9						
KSRS				LR	LR	08 42 38.8	
	comp=Z,10nm,21.0s,baz=170,slow=39						
NVAR	Mina Array Bea	97.58	330	LR	LR	08 50 18.9	
	comp=Z,29nm,20.7s,baz=10,slow=37						
ASAR	Alice Springs	120.65	98	PKP	PKPdf	08 09 26.6	-0.2
	comp=Z,0.3nm,0.7s,baz=293,slow=1.3,SNR=2.1						

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*NEIC **14** 08:28:01.6±1.2, 19°.1N±0°.4×68°.65W±0°.07, h119^{km}±41^{km}, Error ellipse: s-maj=56.5km s-min=4.9km az=187.0*

*RSPR **14** 08:28:01.5, 19°.01N×68°.74W, h120^{km}±4^{km}, MD3.4/4*

ISC 14 08:28:02.5±2.0**, 19°.2N**±0°.3×**68°.66W**±0°.09**, h100**^{km}**, n22, σ0.^{s}74**/26**, 3C-3D, North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AGPR	Aguadilla, PR	1.61	115	⇑eP	Pn	08 28 30.4	+0.2
AGPR	Aguadilla, PR	1.61	115	eS	Sn	08 28 52.5	+1.2
AGPR	Aguadilla, PR	1.61	115		Pn	08 28 30.4	+0.2
AGPR	Aguadilla, PR	1.61	115		Sn	08 28 52.5	+1.2
AGPR	Aguadilla, PR	1.61	115	IAML		08 28 48.5	
	comp=E,105nm,3.1s						
LSP	Las Mesas	1.78	123	⇑eP	Pn	08 28 31.8	-0.6
LSP	Las Mesas	1.78	123	eS	Sn	08 28 55.7	+0.7
LSP	Las Mesas	1.78	123		Pn	08 28 31.8	-0.6
LSP					Sn	08 28 55.7	+0.7
MLPR	Magueyes Islan	1.93	127	⇑eP	Pn	08 28 33.5	-0.7
MLPR	Magueyes Islan	1.93	127	eS	Sn	08 28 58.7	+0.3
MLPR	Magueyes Islan	1.93	127		Pn	08 28 33.7	-0.5
MLPR					Sn	08 28 57.9	-0.4
MLPR				IAML		08 29 01.6	
	comp=N,29nm,0.4s						
AOPR	Arecibo Observ	1.97	114	⇓eP	Pn	08 28 34.4	-0.4
AOPR	Arecibo Observ	1.97	114	eS	Sn	08 29 00.5	+1.1
AOPR	Arecibo Observ	1.97	114		Pn	08 28 33.6	-1.2
AOPR					Sn	08 28 59.0	-0.4
AOPR				IAML		08 29 10.2	
	comp=N,72nm,0.3s						
OBIP	Obispado Ponce	2.23	119	⇓eP	Pn	08 28 37.8	-0.4
OBIP	Obispado Ponce	2.23	119	eS	Sn	08 29 06.0	+0.5
OBIP	Obispado Ponce	2.23	119		Pn	08 28 38.6	+0.4
OBIP					Sn	08 29 05.2	-0.3
OBIP				IAML		08 29 08.8	
	comp=N,27nm,0.6s						
OBIP				IAML		08 29 11.1	
	comp=E,28nm,1.4s						
CELP	Cerrillos	2.24	118	⇓eP	Pn	08 28 38.0	-0.2
CELP	Cerrillos	2.24	118	eS	Sn	08 29 06.3	+0.7
CELP	Cerrillos	2.24	118		Pn	08 28 38.0	-0.2
CELP					Sn	08 29 06.3	+0.7
SDDR	Presa de Saban	2.50	267	Pn	Pn	08 28 41.5	-0.2
HUMP	Col San Antoni	2.84	110	Pn	Pn	08 28 44.9	-1.4
HUMP				IAML		08 29 39.1	
	comp=N,19nm,2.9s						
HUMP				IAML		08 30 12.3	
	comp=E,19nm,4.2s						

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*BGR **14** 08:44:57.9±0.5, 51°.49N×16°.15E, h1^{km}, ML2.8/9, Error ellipse: s-maj=4.4km s-min=2.2km az=39.0, Second Lubin event 10 mins later*

*DNK **14** 08:44:57.1±2.0, 51°.48N×16°.17E, h10^{km}±70^{km}, ML2.1*

*PRU **14** 08:44:58.5±0.0, 51°.46N×16°.10E, h0^{km}*

*IDC **14** 08:44:59.3±0.8, 51°.45N×16°.00E, h0^{km}, mb1 3.2/5, mb1mx3.0/46, mbtmp3.1/5, ML2.3/4, Error ellipse: s-maj=14.2km s-min=7.4km az=105.0*

*VIE **14** 08:44:59.8±1.0, 51°.36N×16°.00E, h0^{km}, mb2.2/4, ml3.0/4, Error ellipse: s-maj=11.5km s-min=4.7km az=50.0 76 km WNW of Wroclaw Suspected Mining induced.*

*UPP **14** 08:45:00.5±2.8, 51°.69N×15°.69E, h0^{km}, ML1.8, Suspected explosion*

ISC 14 08:44:56.5±0.7**, 51°.55N**±0°.03×**16°.18E**±0°.02**, h0**^{km}**, n56, σ1.^{s}13**/104**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	Ksiaz	0.71	174	ePg	Pg	08 45 10.5	+0.5
KSP				eSg	Sg	08 45 19.1	-0.1
KSP	Ksiaz	0.71	174	ePg	Pg	08 45 10.5	+0.5
	SNR=2.7						
KSP				eSg	Sg	08 45 19.1	-0.1
	SNR=2.2						
CHVC	Chvalec	0.96	185	ePG	Pg	08 45 15.2	+0.3
CHVC				eSG	Sg	08 45 27.0	-0.4
	comp=Z,82nm,0.7s						
OSTC	Ostas	0.99	179	ePG	Pg	08 45 16.2	+0.7
OSTC				eSG	Sg	08 45 28.1	-0.2
	comp=Z,56nm,0.5s						
UPC	Upice	1.04	186	ePG	Pg	08 45 16.9	+0.4
UPC				eSG	Sg	08 45 29.3	-0.7
	comp=Z,156nm,0.6s						
DPC	Dobruska-Polom	1.20	176	ePG	Pg	08 45 19.3	-0.2
DPC				eSG	Sg	08 45 34.2	-0.8
	comp=Z,60nm,0.5s						
DPC	Dobruska-Polom	1.20	176	ePg	Pg	08 45 19.6	+0.1
	SNR=29						
DPC				eSg	Sg	08 45 34.4	-0.6
	SNR=6.3						
PVCC	Panska Ves	1.44	226	ePG	Pn	08 45 23.7	-0.1
PVCC				eSG	Sg	08 45 42.2	-0.5
	comp=Z,312nm,0.2s						
PVCC	Panska Ves	1.44	226	ePg	Pn	08 45 23.8	-0.1
	SNR=10						
PVCC				eSg	Sg	08 45 42.5	-0.2
	SNR=1.9						
KRLC	Kraliky	1.52	165	ePG	Pb	08 45 25.7	+0.1
KRLC				eSG	Sg	08 45 44.6	-0.7
	comp=Z,81nm,0.4s						
BRG	Berggiesshubel	1.56	245	Pg	Pn	08 45 25.9	+0.4
BRG				Sg	Sn	08 45 46.5	+0.1
BRG				Amp		08 45 47.0	
	comp=Z,107nm,0.6s						
BRG	Berggiesshubel	1.56	245	ePn	Pn	08 45 25.8	+0.3
	SNR=2.0						
BRG				eSg	Sn	08 45 46.5	+0.1
	SNR=6.6						
RUE	Ruedersdorf	1.75	303	ePn	Pn	08 45 28.4	+0.3
	SNR=2.4						
RUE				eSg	Sg	08 45 54.8	+1.9
	SNR=3.3						
PRA	Prague	1.85	218	eSG	Sn	08 45 53.7	+0.2
	comp=Z,19nm,0.5s						
PRU	Pruhonice	1.87	214	ePG	Pb	08 45 31.2	-0.4
PRU				eSG	Sn	08 45 54.4	+0.2
	comp=Z,99nm,1.3s						
PRU	Pruhonice	1.87	214	ePg	Pb	08 45 31.6	0.0
	SNR=2.6						
FBE	Freiberg	1.88	252	ePg	Pb	08 45 32.1	+0.3
	SNR=3.6						
FBE				eSg	Sb	08 45 56.3	+0.4
	SNR=3.9						
MORC	Moravsky Berou	1.97	153	ePN	Pn	08 45 31.3	+0.1
MORC				eSG	Sb	08 45 58.5	+0.1
MORC	Moravsky Berou	1.97	153	ePn	Pn	08 45 31.4	+0.2
	SNR=2.5						
MORC				eSg	Sb	08 45 59.0	+0.6
	SNR=5.9						
CLL	Collm	2.00	264	ePn	Pn	08 45 31.0	-0.6
CLL				ePg	Pb	08 45 34.0	+0.2
CLL				i		08 45 37.1	
CLL				i Sg	Sb	08 45 59.8	+0.5
	comp=Z,22nm,0.5s						
CLL	Collm	2.00	264	ePn	Pn	08 45 31.3	-0.3
	SNR=3.5						
CLL				ePg	Pb	08 45 34.3	+0.5
	SNR=8.3						
CLL				eSg	Sg	08 46 00.4	-0.4
	SNR=3.9						
OKC	Ostrava-Krasne	2.12	143	ePG	Pg	08 45 37.1	0.0
OKC				eSG	Sg	08 46 04.2	-0.3
	comp=Z,68nm,1.0s						
OKC	Ostrava-Krasne	2.12	143	eSg	Sb	08 46 03.5	+0.9
	SNR=4.5						
VRAC	Vranov	2.25	173	Pn	Pn	08 45 36.3	+1.2
	comp=Z,0.7nm,0.3s,baz=353,slow=18,SNR=9.7						
VRAC				Pg	Pg	08 45 41.0	+1.2
	comp=Z,1.8nm,0.3s,baz=356,slow=17,SNR=6.8						
VRAC				Sn	Sn	08 46 02.4	-1.2
	comp=Z,1.9nm,0.3s,baz=38,slow=22,SNR=3.8						
VRAC				Lg	Lg	08 46 07.5	
	comp=Z,5.8nm,0.3s,baz=71,slow=13,SNR=12						
VRAC	Vranov	2.25	173	ePN	Pn	08 45 35.8	+0.7
VRAC				eSG	Sb	08 46 07.0	+0.5
TREC	Trest	2.30	191	eSG	Sb	08 46 07.8	+0.1
	comp=Z,30nm,0.3s						
TREC	Trest	2.30	191	eSg	Sb	08 46 08.1	+0.4
	SNR=5.7						
PBCC	Pribram	2.32	218	ePG	Pb	08 45 39.4	+0.1
PBCC				eSG	Sb	08 46 08.8	+0.3
KRUC	Moravsky	2.49	177	ePN	Pn	08 45 39.3	+1.0
KRUC				eSG	Sb	08 46 14.6	+1.3
OJC	Ojcow	2.65	119	ePn	Pn	08 45 40.6	+0.1
OJC				ePg	Pg	08 45 49.3	+2.0
OJC				eSn	Sn	08 46 11.8	-1.5
OJC				eSg	Sg	08 46 24.2	+2.7
NKC	Novy Kostel	2.70	242	ePN	Pn	08 45 41.8	+0.5
NKC				ePG	Pb	08 45 46.6	+0.8
NKC				eSG	Sg	08 46 23.3	0.0
	comp=Z,69nm,0.7s						
KHC	Kasperske Hory	2.94	216	ePN	Pn	08 45 44.9	+0.4
KHC				ePG	Pb	08 45 50.3	+0.6
KHC				eSN	Sn	08 46 19.1	-1.3
KHC				eSG	Sb	08 46 28.2	+2.0
	comp=Z,16nm,0.6s						
CKRC	Cesky Krumlov	2.98	204	ePN	Pn	08 45 47.3	+2.2
CKRC				ePG	Pb	08 45 51.5	+1.0
CKRC				eSG	Sb	08 46 29.5	+2.1
GERES	GERESS Array B	3.14	211	Pn	Pn	08 45 48.0	+0.7
	comp=Z,0.3nm,0.3s,baz=26,slow=13,SNR=8.9						
GERES				Pg	Pb	08 45 54.3	+1.1
	comp=Z,1.0nm,0.3s,baz=30,slow=17,SNR=17						
GERES				Lg	Lg	08 46 32.8	
	comp=Z,7.1nm,0.3s,baz=29,slow=27,SNR=23						
LANS	Liptovska Anna	3.19	137	ePG	Pg	08 45 56.6	-1.1
LANS				eSG	Sg	08 46 38.0	-1.0
MODS	Modra-Piesok	3.25	167	ePG	Pg	08 45 59.7	+0.9
MODS				eSG	Sg	08 46 39.8	-1.2
NIE	Niedzica	3.38	127	eP	Pg	08 46 01.8	+0.4
NIE				eS	Sg	08 46 45.8	+0.5
ZST	Bratislava	3.41	170	eSG	Sg	08 46 46.3	+0.4
VYHS	Vyhne	3.50	150	ePG	Pg	08 46 05.0	+1.4
VYHS				eSG	Sg	08 46 47.9	-1.1
CONA	Conrad Observa	3.63	183	i Pn	Pn	08 45 55.2	+1.2
	comp=Z,0.3nm,0.1s						
CONA				eSg	Sg	08 46 51.4	-1.6
	comp=Z,21nm,0.5s						
BSD	Bornholm Skovb	3.66	349	i P	Pn	08 45 55.5	+1.3
BSD	Bornholm Skovb	3.66	349	i P	Pn	08 45 55.6	+1.3
BSD				IAML		08 46 39.6	
	comp=Z,1.9nm,0.3s						
MOA	Molln	3.90	199	i Pn	Pn	08 45 58.2	+0.4
	comp=Z,0.5nm,0.1s						
MOA				Sg	Sg	08 46 58.9	-2.9
	comp=Z,9.8nm,0.3s						
ARSA	Arzberg	4.32	186	Sg	Sg	08 47 12.5	-2.7
	comp=Z,12nm,0.6s						
LUNU	Lund	4.41	339	P	Pn	08 46 04.6	0.0
LUNU				S	Sn	08 46 54.4	-2.2
BLEU	Blekinge	4.77	358	P	Pn	08 46 10.7	+1.1
BLEU				S	Sn	08 47 02.9	-2.7
BJUU	Bjuv	4.91	339	P	Pn	08 46 11.1	-0.3
BJUU				S	Sn	08 47 06.3	-2.6
DEL	Delary	5.12	345	P	Pn	08 46 14.5	+0.1
VXJU	Vaexsjoe	5.44	353	P	Pn	08 46 19.6	+0.9
VXJU	Vaexsjoe	5.44	353	P	Pn	08 46 19.6	+0.9
FABU	Falkenberg	5.83	341	P	Pn	08 46 24.2	+0.1
GNOU	Gnosjoe	5.93	347	P	Pn	08 46 26.2	+0.7
GNOU	Gnosjoe	5.93	347	P	Pn	08 46 26.2	+0.7
AKASG	Malin Array Be	8.25	91	Pn	Pn	08 46 58.3	+0.9
	comp=Z,0.6nm,0.3s,baz=277,slow=12,SNR=2.8						
HFS	Hagfors	8.72	352	Pn	Pn	08 47 04.4	+0.7
	comp=Z,0.0nm,0.3s,baz=171,slow=14,SNR=2.6						
FINES	FINESS Array B	11.31	25	Pn	Pn	08 47 39.6	+0.3
	comp=Z,0.1nm,0.3s,baz=218,slow=12,SNR=4.3						
FINES				Sn	Sn	08 49 41.5	-4.7
	comp=Z,0.2nm,0.3s,baz=208,slow=24,SNR=4.8						

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*ATH **14** 09:08:52.8, 36°.50N×21°.66E, h27^{km}±6^{km}, ML3.1/3, Error ellipse: s-maj=7.3km s-min=2.0km az=36.0*

*THE **14** 09:08:53.4, 36°.58N×21°.56E, h29^{km}, ML3.1/6, Error ellipse: s-maj=2.3km s-min=0.7km az=267.0*

ISC 14 09:08:53.8±1.9**, 36°.57N**±0°.07×**21°.7E**±0°.1**, h30**^{km}±9^{km}**, n20, σ0.^{s}69**/29**, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PYL	PYLOS	0.33	13	P	Pb	09 09 01.2	-0.5
PYL				S	Sb	09 09 07.2	+0.2
PYL				AML	AML	09 09 08.0	
	comp=N,6995µm,0.6s						
PYL				AML	AML	09 09 09.4	
	comp=E,5034µm,0.3s						
PYL	PYLOS	0.33	13	P	Pb	09 09 01.2	-0.5
PYL				S	Sb	09 09 07.4	+0.4
	comp=E,3µm,0.4s						
ITM	Ithomi	0.64	20	P	Pb	09 09 05.9	-0.7
ITM				S	Sb	09 09 16.2	+0.9
ITM				AML	AML	09 09 17.2	
	comp=E,4361µm,0.4s						
ITM				AML	AML	09 09 17.7	
	comp=N,5020µm,0.4s						
ITM	Ithomi	0.64	20	P	Pb	09 09 06.0	-0.7
ITM				S	Sb	09 09 16.2	+0.9
	comp=N,2µm,0.4s						
VLX	Vlachokerasia	0.98	36	P	Pn	09 09 11.6	-0.1
VLX	Vlachokerasia	0.98	36	P	Pn	09 09 11.5	-0.1
VLX				S	Sn	09 09 24.2	-0.5
	comp=N,1µm,0.5s						
VLI	Veliai	1.04	82	P	Pn	09 09 11.9	-0.5
VLI	Veliai	1.04	82	P	Pn	09 09 12.1	-0.3
VLI				S	Sb	09 09 28.2	+1.6
	comp=N,688nm,0.6s						
MNVA	Monemvasia	1.12	84	P	Pn	09 09 13.6	+0.2
KTHR	Kythira	1.13	106	P	Pn	09 09 13.3	-0.3
KTHR				S	Sb	09 09 29.6	+0.4
	comp=N,812nm,0.3s						
KTHA	Kythira Island	1.18	105	P	Pn	09 09 13.8	-0.4
KTHA				AML	AML	09 09 34.9	
	comp=E,1783µm,0.4s						
KTHA				AML	AML	09 09 35.1	
	comp=N,1406µm,0.5s						
KTHA	Kythira Island	1.18	105	P	Pn	09 09 13.6	-0.7
KTHA				S	Sb	09 09 30.4	-0.1
	comp=N,820nm,0.4s						
KRND	KRANIDI	1.45	56	P	Pn	09 09 18.1	+0.2
KRND				S	Sn	09 09 36.6	+0.7
RLS	Riolos of Patr	1.49	354	P	Pb	09 09 21.0	+0.2
AXS	Araxos	1.63	352	P	Pb	09 09 23.5	+0.3
LAKA	Lakka	1.68	9	P	Pb	09 09 23.5	-0.6
KALE	Kalithea	1.85	12	P	Pb	09 09 25.8	-1.2
ANX	Ano Chora	2.03	6	P	Pb	09 09 29.0	-1.0
IMMV	Iera Moni Meta	2.19	120	P	Pn	09 09 29.2	+1.0
VAM	Vamos	2.37	119	P	Pn	09 09 30.4	-0.2

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*VIE **14** 09:15:11.8±0.4, 49°.78N×18°.57E, h0^{km}, mb1.6/2, ml2.5/4, Error ellipse: s-maj=6.2km s-min=2.6km az=170.0 24 km ESE of Ostrava Suspected Mining induced.*

*IPEC **14** 09:15:12.2±0.2, 49°.85N×18°.54E, h0^{km}±3^{km}, ML2.1/3, Error ellipse: s-maj=1.7km s-min=1.1km az=165.0*

*PRU **14** 09:15:12.6±0.0, 49°.85N×18°.47E, h0^{km}, Rockburst Darkov, E=1.7e+05, Felt In Karvina Mining induced.*

ISC 14 09:15:11.7±0.8**, 49°.82N**±0°.04×**18°.52E**±0°.02**, h0**^{km}**, n28, σ0.^{s}83**/48**, Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKC	Ostrava-Krasne	0.24	275	ePG	Pg	09 15 17.5	+1.2
OKC				eSG	Sg	09 15 20.2	+0.7
	comp=Z,74nm,0.6s						
MORC	Moravsky Berou	0.64	267	ePG	Pg	09 15 24.4	+0.6
MORC				eSG	Sg	09 15 32.4	+0.3
MORC	Moravsky Berou	0.64	267	ePg	Pg	09 15 24.4	+0.6
	baz=83						
MORC				eSg	Sg	09 15 32.3	+0.2
	40nm,0.2s,baz=83						
LANS	Liptovska Anna	0.91	137	ePG	Pb	09 15 30.5	+0.2
LANS				eSG	Sn	09 15 44.6	-0.9
LANS				eLG	Lg	09 15 47.6	
OJC	Ojcow	0.92	63	ePg	Pg	09 15 29.2	0.0
OJC				eSg	Sg	09 15 41.6	+0.6
JAVC	Velka Javorina	1.11	211	ePG	Pn	09 15 34.5	0.0
JAVC	Velka Javorina	1.11	211	ePg	Pn	09 15 34.4	0.0
	baz=30						
KRLC	Kraliky	1.16	284	eSG	Sg	09 15 48.6	-0.1
	comp=Z,40nm,0.3s						
NIE	Niedzica	1.22	108	ePg	Pn	09 15 36.2	+0.2
NIE				eSg	Sn	09 15 53.8	+0.6
VYHS	Vyhne	1.34	171	ePG	Pb	09 15 38.1	+0.5
VYHS				eSG	Sn	09 15 57.0	+0.9
VRAC	Vranov	1.35	249	ePG	Pb	09 15 37.9	0.0
VRAC				eSG	Sb	09 15 55.5	-0.3
VRAC	Vranov	1.35	249	ePg	Pb	09 15 37.9	0.0
	baz=66						
VRAC				eSg	Sb	09 15 55.4	-0.3
	19nm,0.2s,baz=66						
DPC	Dobruska-Polom	1.52	291	ePG	Pn	09 15 40.0	-0.1
DPC				eSG	Sg	09 15 59.9	-0.4
	comp=Z,23nm,0.6s						
KRUC	Moravsky	1.58	242	ePG	Pn	09 15 41.2	+0.3
KRUC				eSG	Sg	09 16 02.4	0.0
KRUC	Moravsky	1.58	242	ePg	Pn	09 15 41.2	+0.3
	baz=60						
KRUC				eSg	Sg	09 16 02.3	-0.1
	16nm,0.3s,baz=60						
OSTC	Ostas	1.66	297	ePG	Pb	09 15 42.7	-0.4
OSTC				eSG	Sg	09 16 05.2	+0.3
	comp=Z,29nm,1.2s						
MODS	Modra-Piesok	1.66	210	ePG	Pn	09 15 41.8	-0.2
MODS				eSG	Sn	09 16 04.1	+0.1
MODS				eLG	Lg	09 16 05.6	
UPC	Upice	1.76	294	ePG	Pb	09 15 44.3	-0.5
UPC				eSG	Sg	09 16 07.6	-0.5
	comp=Z,28nm,0.8s						
CHVC	Chvalec	1.76	297	ePG	Pb	09 15 44.7	-0.2
CHVC				eSG	Sg	09 16 07.9	-0.4
	comp=Z,12nm,0.5s						
KECS	Kecovo	1.85	135	ePN	Pb	09 15 45.7	-0.7
KECS				eSN	Sn	09 16 08.8	0.0
CONA	Conrad Observa	2.58	224	ePn	Pn	09 15 54.6	-0.2
	0.3nm,0.1s						
CONA				eSn	Sn	09 16 26.7	-0.2
	1.5nm,0.2s						
PRU	Pruhonice	2.58	275	eSG	Sb	09 16 32.5	+1.5
	comp=Z,3.8nm,0.3s						
PVCC	Panska Ves	2.64	287	eSG	Sg	09 16 35.2	-1.2
	comp=Z,20nm,0.6s						
CKRC	Cesky Krumlov	2.93	252	ePG	Pg	09 16 06.6	-1.2
CKRC				eSG	Sg	09 16 44.3	-1.5
KHC	Kasperske Hory	3.30	260	ePG	Pb	09 16 12.4	+1.4
KHC				eSG	Sg	09 16 55.4	-2.1
	comp=Z,4.5nm,0.3s						
MOA	Molln	3.43	237	eSn	Sn	09 16 49.1	+1.3
	1.2nm,0.2s						
CLL	Collm	3.82	295	eSg	Sg	09 17 12.0	-2.4
NKC	Novy Kostel	3.94	278	eSG	Sg	09 17 16.5	-1.6
	comp=Z,5.8nm,0.8s						

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*IDC **14** 09:18:11.3±3.6, 36°.72N×71°.33E, h56^{km}±31^{km}, mb3.7/10, mb1 3.9/16, mb1mx3.5/54, mbtmp4.1/16, ML4.0/6, Error ellipse: s-maj=28.8km s-min=20.9km az=21.0*

*NEIC **14** 09:18:17.4±1.6, 37°.10N±0°.10×71°.19E±0°.08, h90^{km}±8^{km}, mb4.0/4, Error ellipse: s-maj=14.5km s-min=8.7km az=160.0*

*NNC **14** 09:18:19.3±2.8, 37°.55N×71°.14E, h0^{km}, mb4.5, mpv4.2, Error ellipse: s-maj=25.5km s-min=20.6km az=51.0*

ISC 14 09:18:15.0±0.6**, 36°.93N**±0°.05×**71°.13E**±0°.06**, h88**^{km}**, n69, σ1.^{s}86**/74**, mb3.8**/10**, 7C-4D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBL	Kabul	2.93	216	Pn	Pn	09 19 04.2	+4.4
NIL	Nilore	3.71	151		Pn	09 19 13.6	+3.5
AML	Almayashu	5.55	20	P	Pn	09 19 36.7	+1.2
	SNR=108						
THN	Thein Dam	5.87	139	eP	Pn	09 19 42.5	+3.1
THN				eS	Sn	09 20 45.5	+0.2
UCH	Uchtor	5.90	25	P	Pn	09 19 42.0	+1.8
	SNR=29						
EKS2	Erkin-Say	6.07	19	P	Pn	09 19 44.3	+2.0
	SNR=18						
BRLS	Borolday	6.17	351	Pg	Pn	09 19 41.2	-2.3
	37nm,0.3s						
BRLS				Lg	Lg	09 20 44.7	
	26nm,0.3s						
KK31	Karatay Array	6.18	356	⇓P	Pn	09 19 44.9	+1.2
	26nm,0.4s,baz=184,slow=12,SNR=373						
KK31				⇑S	Sn	09 20 48.6	-4.3
	27nm,0.5s						
KK31	Karatay Array	6.18	356	Pn	Pn	09 19 44.8	+1.2
KKAR	Karatay Array	6.18	356	Pn	Pn	09 19 44.6	+1.0
KKAR	Karatay Array	6.18	356	Pn	Pn	09 19 44.7	+1.0
AAK	Ala-Archa	6.26	23	P	Pn	09 19 46.4	+1.6
	7.0nm,0.3s,baz=194,slow=7.0,SNR=60						
AAK				S	Sn	09 20 54.5	-0.4
	1.7nm,0.3s,baz=300,slow=20,SNR=4.6						
AAK	Ala-Archa	6.26	23	P	Pn	09 19 46.7	+1.9
	SNR=30						
AAK	Ala-Archa	6.26	23	⇓P	Pn	09 19 46.4	+1.6

	15nm,0.5s						
AAK				⇓S	Sn	09 20 52.7	-2.2
	45nm,1.0s						
AAK	Ala-Archa	6.26	23	Pn	Pn	09 19 45.8	+1.0
DHRM	DHARAMSHALA	6.32	136	*e*P	Pn	09 19 46.3	+0.4
DHRM				*e*S	Sn	09 20 51.8	-5.0
DHRM				IAML		09 20 55.7	
	comp=E,504nm,0.6s						
DHRM				IAML		09 20 56.7	
	comp=N,686nm,0.0s						
KBK	Karagaybulak	6.42	26	P	Pn	09 19 50.0	+2.9
	SNR=11						
ULHL	Ulahol	6.61	35	P	Pn	09 19 51.7	+2.0
	SNR=10						
CHMS	Chumysh	6.66	24	P	Pn	09 19 51.8	+1.5
	SNR=25						
USP	Ospenovka	6.83	21	P	Pn	09 19 53.6	+1.0
	SNR=21						
TKM2	Tokmak 2	6.89	28	P	Pn	09 19 54.9	+1.4
	SNR=18						
TKM2	Tokmak 2	6.89	28	⇑P	Pn	09 19 55.0	+1.5
	comp=N,9.0nm,0.6s						
KST	Kastek	7.14	30	Pg	Pn	09 19 58.3	+1.5
	comp=N,13nm,0.7s						
DGS	Degeres	7.23	28	Pg	Pn	09 19 59.1	+1.0
	comp=N,14nm,0.7s						
DGS				Lg	Lg	09 21 15.5	
	comp=N,12nm,0.8s						
TNSS	Tian-Shan	7.55	34	Pg	Pn	09 20 04.0	+1.2
	comp=N,4.2nm,0.5s						
TNSS				Lg	Lg	09 21 23.3	
	comp=N,3.2nm,0.7s						
KRBS	Karabastau	7.59	26	Pg	Pn	09 20 03.2	+0.2
	comp=N,3.2nm,0.5s						
KRBS				Lg	Lg	09 21 22.2	
	comp=N,3.2nm,0.6s						
SMLA	Simla	7.66	137	*e*P	Pn	09 20 04.8	+1.0
SMLA				*e*S	Sn	09 21 22.3	-6.6
SMLA				IAML		09 21 26.1	
	comp=N,180nm,0.9s						
SMLA				IAML		09 21 27.3	
	comp=E,166nm,0.4s						
HRA	Herat	7.67	253	Pn	Pn	09 20 05.8	+1.7
KTBS	Karatobe	7.99	30	Pg	Pn	09 20 10.9	+2.6
	comp=E,6.4nm,0.5s						
KTBS				Lg	Lg	09 21 35.4	
	comp=E,5.8nm,0.5s						
PDGK	Podgornoye	9.04	42	⇓P	Pn	09 20 23.9	+1.2
	comp=E,6.5nm,0.7s						
AYAN	Aya Nagar	9.82	147	*e*S	Sn	09 22 16.9	-4.9
SONA	Sohna	10.01	148	*e*S	Sn	09 22 19.4	-6.9
GEYT	Alibeck	10.40	279	P	Pn	09 20 40.3	-0.9
	comp=E,3.4nm,0.3s,baz=132,slow=8.9,SNR=19						
GEYT				S	Sn	09 22 30.6	-5.2
	comp=E,4.6nm,0.3s,baz=119,slow=17,SNR=10						
GEYT	Alibeck	10.40	279		Pn	09 20 40.4	-0.8
GYA0B	ALIBECK ARRAY	10.40	279	Pn	Pn	09 20 40.5	-0.7
MAKZ	Makanchi	12.74	36	⇑P	Pn	09 21 12.6	-0.1
	comp=E,3.5nm,0.7s						
MAKZ	Makanchi	12.74	36		Pn	09 21 13.3	+0.5
MK31	Makanchi Array	12.88	37	P	Pn	09 21 14.3	-0.2
	comp=E,3.5nm,0.7s,baz=221,slow=14,SNR=39						
MK31	Makanchi Array	12.88	37	Pn	Pn	09 21 14.7	+0.1
MKAR	Makanchi Array	12.88	37	P	Pn	09 21 14.4	-0.2
	comp=E,0.2nm,0.3s,baz=225,slow=13,SNR=48						
MKAR	Makanchi Array	12.88	37		Pn	09 21 14.9	+0.3
KURBB	Kurchatov Arra	14.68	19	P	Pn	09 21 36.3	-1.6
	comp=E,0.1nm,0.3s,baz=209,slow=10,SNR=6.5						
KURBB	Kurchatov Arra	14.68	19	⇑P	P	09 21 41.8	0.0
	comp=E,3.2nm,0.6s						
AB31	Akbulak array	14.76	330	P	Pn	09 21 37.5	-1.5
	comp=E,4.1nm,0.4s,baz=137,slow=13,SNR=261						
ABKAR	Akbulak array	14.76	330		Pn	09 21 37.5	-1.5
KURK	Kurchatov	14.79	19	⇑P	P	09 21 42.4	-0.6
	comp=E,3.0nm,0.9s						
KURK	Kurchatov	14.79	19		P	09 21 43.2	+0.2
BVAR	Borovoye Array	16.10	358	P	Pn	09 21 55.1	-0.8
	comp=E,0.8nm,0.3s,baz=145,slow=11,SNR=11						
BRVK	Borovoye	16.13	358	⇑P	P	09 21 58.6	+0.6
	comp=E,8.6nm,0.8s						
BRVK	Borovoye	16.13	358	Pn	Pn	09 21 56.8	+0.5
BRVK				IAmb	IAmb	09 22 00.2	
	comp=Z,8.5nm,0.7s						
AKTO	Aktyubinsk	16.46	329	P	Pn	09 22 00.7	+0.2
	comp=Z,3.4nm,0.3s,baz=132,slow=9.4,SNR=31						
AKTO	Aktyubinsk	16.46	329	⇑P	P	09 22 02.1	+0.5
	comp=Z,20nm,0.6s						
ZAA0	Zalesovo Array	19.48	25	P	P	09 22 34.6	0.0
ZAA0				IAmb	IAmb	09 22 38.1	
	comp=Z,3.5nm,0.6s						
ZALV	Zalesovo Beam	19.48	25	P	P	09 22 34.5	-0.2
	comp=Z,0.8nm,0.3s,baz=221,slow=11,SNR=12						
ZALV	Zalesovo Beam	19.48	25	P	P	09 22 34.6	0.0
ARU	Arti	21.26	341	P	P	09 22 55.1	+1.3
	comp=Z,2.1nm,0.6s,baz=164,slow=3.0,SNR=9.3						
ARU	Arti	21.26	341	P	P	09 22 53.8	0.0
ARU				IAmb	IAmb	09 22 59.9	
	comp=Z,7.0nm,0.8s						
KBZ	Khabaz	22.50	296	P	P	09 23 09.0	+1.9
	comp=Z,1.5nm,0.8s,baz=75,slow=7.5,SNR=4.4						
BELG	Belogornoye	22.62	321	P	P	09 23 09.7	+1.4
	comp=Z,14nm,0.9s,baz=75,slow=5.6,SNR=4.7						
FINES	FINESS Array B	37.18	326	P	P	09 25 18.8	+1.6
	comp=Z,1.9nm,0.7s,baz=107,slow=6.4,SNR=6.0						
ARCES	ARCESS Array B	40.78	337	P	P	09 25 48.7	+1.5
	comp=Z,2.5nm,0.5s,baz=110,slow=7.0,SNR=14						
ARCES	ARCESS Array B	40.78	337	P	P	09 25 49.2	+2.0
HFS	Hagfors	42.79	322	P	P	09 26 05.2	+1.6
	comp=Z,2.2nm,0.5s,baz=98,slow=11,SNR=14						
NC303	NORSAR Array S	44.04	323	P	P	09 26 15.6	+1.9
NB2	NORSAR Subarra	44.10	323	P	P	09 26 15.3	+1.1
	comp=Z,0.4nm,0.4s,baz=96,slow=7.9						
NOA	NORSAR Array B	44.10	323	P	P	09 26 15.4	+1.3
	comp=Z,0.6nm,0.5s,baz=96,slow=7.8,SNR=5.2						
YKA	Yellowknife Ar	80.81	3	P	P	09 30 19.8	+1.2
	comp=Z,0.6nm,0.7s,baz=357,slow=5.3,SNR=14						
WRA	Warramunga Arr	82.13	122	P	P	09 30 24.4	-1.8
	comp=Z,0.6nm,0.9s,baz=326,slow=5.0,SNR=2.9						
ASAR	Alice Springs	84.42	125	P	P	09 30 36.5	-1.3
	comp=Z,0.4nm,0.7s,baz=298,slow=4.5,SNR=4.2						

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*IDC **14** 09:27:21.1±1.9,25°.79S×179°.71E,h491^{km}±23^{km},mb3.2/6, mb1 3.5/10,mb1mx3.4/23,mbtmp4.2/10,Error ellipse: s-maj=21.0km s-min=16.7km az=146.0*

*NEIC **14** 09:27:23.4±1.7,25°.67S±0°.09×179°.7E±0°.2,h515^{km}±11^{km}, mb4.1/14,Error ellipse: s-maj=21.5km s-min=13.0km az=89.0*

ISC 14 09:27:22.0±0.8,**25°.79S**±0°.09×**179°.8E**±0°.1,**h500**^{km}**,n30,** σ**0ˢ.89**/32,**mb4.0**/13,**South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	8.18	348	P	P	09 29 18.9	-1.5
	0.7nm,0.3s,baz=164,slow=15,SNR=5.4						
MSVF	Nonsavu	8.18	348	P	P	09 29 20.2	-0.3
OUZ	Omahuta	10.79	208	P	P	09 29 48.0	+0.3
URZ	Urewera	12.63	190	P	P	09 30 05.7	-1.3
	2.6nm,0.3s,baz=293,slow=3.0,SNR=23						
URZ				S	S	09 32 22.7	-0.4
	0.8nm,0.3s,baz=260,slow=22,SNR=7.8						
DZM	Mont Dzumac	12.73	284	P	P	09 30 08.6	0.0
	1.0nm,0.3s,baz=108,slow=15,SNR=9.7						
DZM	Mont Dzumac	12.73	284	P	P	09 30 09.9	+1.4
RPZ	Rata Peaks	19.24	199	P	P	09 31 12.9	-0.6
	0.7nm,0.3s,baz=45,slow=2.9,SNR=5.8						
ARMA	Armidale	25.21	253	P	P	09 32 09.5	+1.9
EIDS	Eidsvold	25.86	265	P	P	09 32 14.2	+1.0
CTAO	Charters Tower	31.32	273	P	P	09 33 01.7	+0.8
STKA	Stephens Creek	33.86	251	P	P	09 33 21.7	-0.7
	0.9nm,0.5s,baz=95,slow=7.8,SNR=3.7						
STKA	Stephens Creek	33.86	251	P	P	09 33 22.4	0.0
COEN	Coen	36.25	282	P	P	09 33 42.5	0.0
COEN				IAmb	IAmb	09 33 44.6	
	comp=Z,5.8nm,0.8s						
AS31	Alice Springs	41.55	263	P	P	09 34 25.4	-0.2
ASAR	Alice Springs	41.55	263	P	P	09 34 25.1	-0.4
	comp=Z,1.7nm,0.4s,baz=90,slow=7.4,SNR=46						
ASAR	Alice Springs	41.55	263	P	P	09 34 24.8	-0.7
WR0	Warramunga Arr	41.92	268	P	P	09 34 27.0	-1.4
WR0				IAmb	IAmb	09 34 39.3	
	comp=Z,15nm,1.4s						
WB2	Warramunga Arr	42.09	268	P	P	09 34 29.0	-0.8
WB2				IAmb	IAmb	09 34 57.9	
	comp=Z,8.7nm,1.4s						
WRA	Warramunga Arr	42.10	268	P	P	09 34 28.7	-1.2
	comp=Z,3.7nm,0.8s,baz=102,slow=8.3,SNR=18						
WRA				S	S	09 40 13.1	+0.2
	comp=Z,0.7nm,1.0s,baz=108,slow=13,SNR=2.8						
WRA	Warramunga Arr	42.10	268	P	P	09 34 29.0	-0.9
WB0	Warramunga Arr	42.11	269	P	P	09 34 28.9	-1.0
WB0				IAmb	IAmb	09 34 30.9	
	comp=Z,6.3nm,0.8s						
FITZ	Fitzroy Crossi	50.50	267	P	P	09 35 33.7	0.0
FITZ				IAmb	IAmb	09 35 34.1	
	comp=Z,4.9nm,0.9s						
QSPA	South Pole Qui	64.30	180	P	P	09 37 08.3	+0.9
KSRS	Korea Array	79.56	320	P	P	09 38 35.7	-0.9
	comp=Z,1.1nm,0.7s,baz=128,slow=4.7,SNR=4.4						
ISA	Isabella, Lake	84.48	46	P	P	09 39 02.1	+0.3
ISA				IAmb	IAmb	09 39 03.3	
	comp=Z,3.5nm,0.9s						
NVAR	Mina Array Bea	86.25	44	P	P	09 39 10.9	+0.4
	comp=Z,0.8nm,0.8s,baz=218,slow=8.5,SNR=6.5						
NVAR	Mina Array Bea	86.25	44	P	P	09 39 11.3	+0.8
PINE	Pine Mountain	88.00	39	P	P	09 39 19.7	+1.1
PINE				IAmb	IAmb	09 39 20.4	
	comp=Z,4.4nm,0.8s						
TXAR	Lajitas Array	91.61	58	P	P	09 39 36.0	+0.6
	comp=Z,0.6nm,0.8s,baz=212,slow=6.9,SNR=6.6						
TXAR	Lajitas Array	91.61	58	P	P	09 39 35.8	+0.3

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*NNC **14** 09:34:57.5±0.5,44°.88N×80°.91E,h0^{km},mb3.6,mpv3.4, Error ellipse: s-maj=6.2km s-min=2.7km az=122.0*

*SOME **14** 09:34:58.8,44°.92N×80°.88E,h25^{km}*

ISC 14 09:34:57.5±1.4,**44°.86N**±0°.03×**80°.96E**±0°.04,**h5**^{km}±11^{km}, **n47,**σ**1ˢ.14**/75,**7C-1D,Kazakhstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DJR	Jarkent	0.99	238	*e*P	Pg	09 35 16.8	+0.2
	8.2nm,0.2s						
DJR				*e*S	Sg	09 35 29.8	+0.4
	29nm,0.2s						
DJR	Jarkent	0.99	238	P	Pg	09 35 16.8	+0.2
	8.2nm,0.2s						
DJR				S	Sg	09 35 29.8	+0.4
	29nm,0.2s						
KAPS	Kapalarasan	1.22	291	*e*P	Pb	09 35 20.0	-1.1
	7.1nm,0.1s						
KAPS				*e*S	Sg	09 35 35.4	-1.2
	42nm,0.1s						
KAPS	Kapalarasan	1.22	291	P	Pb	09 35 20.0	-1.1
	7.1nm,0.1s						
KAPS				S	Sg	09 35 35.4	-1.2
	42nm,0.1s						
KTMS	Ketmen	1.48	198	*e*P	Pn	09 35 25.3	+0.3
	9.5nm,0.1s						
KTMS				*e*S	Sn	09 35 44.3	-0.5
	37nm,0.3s						
KTMS	Ketmen	1.48	198	P	Pn	09 35 25.3	+0.3
	9.5nm,0.1s						
KTMS				S	Sn	09 35 44.3	-0.5
	37nm,0.3s						
TDK	Taldyqorghan	1.82	275	*e*P	Pg	09 35 32.4	0.0
	40nm,0.3s						
TDK				*e*S	Sg	09 35 56.4	+0.3
	27nm,0.2s						
TDK	Taldyqorghan	1.82	275	P	Pg	09 35 32.4	0.0
	40nm,0.3s						
PDGK	Podgornoye	1.86	215	P	Pb	09 35 31.6	-0.5
	1.7nm,0.2s						
PDGK				S	Sb	09 35 55.3	-0.4
	30nm,0.3s						
PDGK	Podgornoye	1.86	215	⇑Pn	Pn	09 35 30.6	+0.3
	2.1nm,0.5s						
PDGK				⇑Sn	Sb	09 35 55.8	0.0
	42nm,0.6s						
MNBS	Baschi	1.99	248	*e*P	Pb	09 35 33.9	-0.5
	19nm,0.3s						
MNBS				*e*S	Sb	09 35 58.9	-0.6
	54nm,0.2s						
MNBS	Baschi	1.99	248	P	Pb	09 35 33.9	-0.5
	19nm,0.3s						
MNBS				S	Sb	09 35 58.9	-0.6
	54nm,0.2s						
SHLS	Shalkode	2.02	213	*e*P	Pn	09 35 31.7	-0.6
	8.8nm,0.1s						
SHLS				*e*S	Sn	09 35 55.1	-2.9
	184nm,0.3s						
SHLS	Shalkode	2.02	213	P	Pn	09 35 31.7	-0.6
	8.8nm,0.1s						
SHLS				S	Sn	09 35 55.1	-2.9
	184nm,0.3s						
MAKZ	Makanchi	2.07	20	⇑Pn	Pn	09 35 33.5	+0.5
	0.8nm,0.3s						
MAKZ				⇑Sn	Sb	09 36 00.4	-1.3
	6.0nm,0.3s						
MK31	Makanchi Array	2.15	25	⇑Pn	Pn	09 35 34.3	+0.3
	0.9nm,0.2s,baz=205,slow=13,SNR=90						
MK31				⇑Sn	Sn	09 36 01.6	+0.5
	4.2nm,0.2s						
KPKS	Kokpek	2.15	230	*e*P	Pb	09 35 36.9	-0.2
	12nm,0.2s						
KPKS				*e*S	Sb	09 36 04.3	+0.2
	144nm,0.3s						
UZB	Uzynbulak	2.21	220	*e*P	Pb	09 35 37.7	-0.4
	5.9nm,0.2s						
UZB				*e*S	Sb	09 36 05.8	-0.1
	54nm,0.3s						
UZB	Uzynbulak	2.21	220	Pg	Pb	09 35 37.7	-0.4
	5.9nm,0.2s						
UZB				Lg	Lg	09 36 05.8	
	54nm,0.3s						
ARXS	Arharly	2.33	255	*e*P	Pb	09 35 39.6	-0.5
	16nm,0.2s						
ARXS				*e*S	Sb	09 36 09.0	-0.3
	44nm,0.3s						
ARXS	Arharly	2.33	255	Pg	Pb	09 35 39.6	-0.5
	16nm,0.2s						
ARXS				Lg	Lg	09 36 09.0	
	44nm,0.3s						
KURS	Kuram	2.43	237	*e*P	Pb	09 35 41.6	-0.2
	3.1nm,0.4s						
KURS				*e*S	Sb	09 36 12.3	+0.1
	9.2nm,0.3s						
KURS	Kuram	2.43	237	Pg	Pb	09 35 41.6	-0.2
	3.1nm,0.4s						
KURS				Lg	Lg	09 36 12.3	
	9.2nm,0.3s						
ZHN	Zhinishke	2.49	228	*e*P	Pb	09 35 42.9	+0.1
	144nm,0.2s						
ZHN				*e*S	Sb	09 36 14.7	+1.0
	11nm,0.2s						
ZHN	Zhinishke	2.49	228	Pg	Pb	09 35 42.9	+0.1
	144nm,0.2s						
ZHN				Lg	Lg	09 36 14.7	
	11nm,0.2s						
SATY	Saty	2.58	227	*e*P	Pb	09 35 45.1	+0.7
	3.0nm,0.1s						
SATY				*e*S	Sb	09 36 18.2	+1.8
	53nm,0.2s						
SATY	Saty	2.58	227	Pg	Pb	09 35 45.1	+0.7
	3.0nm,0.1s						
SATY				Lg	Lg	09 36 18.2	
	53nm,0.2s						
CHKK	Chushkaly	3.02	252	*e*P	Pb	09 35 52.5	+0.6
	4.1nm,0.1s						
CHKK				*e*S	Sb	09 36 30.8	+1.7
	22nm,0.2s						
CHKK	Chushkaly	3.02	252	Pg	Pb	09 35 52.5	+0.6
	4.1nm,0.1s						
CHKK				Lg	Lg	09 36 30.8	
	22nm,0.2s						
KOTS	Kotyrbulak	3.22	241	*e*P	Pb	09 35 55.8	+0.5
	9.7nm,0.2s						
KOTS				*e*S	Sb	09 36 36.7	+1.9
	34nm,0.3s						
KOTS	Kotyrbulak	3.22	241	Pg	Pb	09 35 55.8	+0.5
	9.7nm,0.2s						
KOTS				Lg	Lg	09 36 36.7	
	34nm,0.3s						
KTBS	Karatobe	3.28	251	*e*P	Pb	09 35 57.1	+0.8
	2.9nm,0.2s						
KTBS				*e*S	Sb	09 36 38.7	+2.2
	21nm,0.2s						
KTBS	Karatobe	3.28	251	Pg	Pb	09 35 57.1	+0.8
	2.9nm,0.2s						
KTBS				Lg	Lg	09 36 38.7	
	21nm,0.2s						
MDOK	Medeo	3.29	240	*e*P	Pb	09 35 56.9	+0.3
	2.6nm,0.4s						
MDOK				*e*S	Sb	09 36 38.3	+1.3
	8.3nm,0.5s						
MDOK	Medeo	3.29	240	⇓Pn	Pn	09 35 52.9	+3.0
	2.6nm,0.7s						
MDOK				Lg	Lg	09 36 39.1	
	6.3nm,0.6s						
MDOK	Medeo	3.29	240	Pg	Pb	09 35 56.9	+0.3
	2.6nm,0.4s						
MDOK				Lg	Lg	09 36 38.3	
	8.3nm,0.5s						
TNSS	Tian-Shan	3.43	239	*e*P	Pb	09 35 59.4	+0.4
	1.2nm,0.3s						
TNSS				*e*S	Sb	09 36 42.8	+1.8
	3.4nm,0.3s						
TNSS	Tian-Shan	3.43	239	Pg	Pb	09 35 59.4	+0.4
	1.2nm,0.3s						
TNSS				Lg	Lg	09 36 42.8	
	3.4nm,0.3s						
KUU	Kurty	3.45	255	*e*P	Pb	09 35 59.3	+0.1
	2.5nm,0.4s						
KUU				*e*S	Sb	09 36 42.5	+1.0
	10nm,0.3s						
KUU	Kurty	3.45	255	Pg	Pb	09 35 59.3	+0.1
	2.5nm,0.4s						
KUU				Lg	Lg	09 36 42.5	
	10nm,0.3s						
IZV	Izvestkoviy	3.63	241	*e*P	Pb	09 36 04.2	+1.9
	1.8nm,0.2s						
IZV				*e*S	Sg	09 36 50.9	-3.3
	10nm,0.4s						
IZV	Izvestkoviy	3.63	241	Pg	Pb	09 36 04.2	+1.9
	1.8nm,0.2s						
IZV				Lg	Lg	09 36 50.9	
	10nm,0.4s						
ZSN	Zaisan	3.75	45	*e*P	Pb	09 36 03.6	-0.6
	1.5nm,0.3s						
ZSN				*e*S	Sb	09 36 51.1	+1.2
	7.0nm,0.4s						
ZSN	Zaisan	3.75	45	Pg	Pb	09 36 05.4	+1.2
	2.7nm,0.4s						
KST	Kastek	4.04	245	*e*P	Pb	09 36 10.0	+0.7
	1.3nm,0.2s						
KST				*e*S	Sb	09 37 01.0	+2.5
	5.3nm,0.5s						
KST	Kastek	4.04	245	Lg	Lg	09 37 01.0	
	5.3nm,0.5s						
TKM2	Tokmak 2	4.34	245	⇑Lg	Lg	09 37 11.8	
	5.1nm,0.8s						

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*NEIC **14** 10:15:49.2±1.1,7°.22S±0°.09×102°.8E±0°.1,h10^{km}±2^{km}, mb4.5/11,Error ellipse: s-maj=22.9km s-min=12.0km az=246.0*

*IDC **14** 10:15:49.5±1.6,7°.04S×102°.89E,h0^{km},mb3.7/9, mb1 3.9/10,mb1mx3.7/53,mbtmp3.7/10,ML4.1/1,MS2.7/3, Ms1 2.8/3,ms1mx2.5/38,Error ellipse: s-maj=48.2km s-min=19.4km az=41.0*

*DJA **14** 10:15:51.1±0.8,7°S±5°×10°3E±°,h10^{km},M4.5/12,mb4.8/1, MLv4.3/12*

ISC 14 10:15:51.1±0.9,**7°.02S**±0°.08×**102°.89E**±0°.09,**h10**^{km}**,n53,** σ**1ˢ.37**/45,**mb4.0**/13,**Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KASI	Kota Agung	2.18	47	P	Pn	10 16 27.7	+0.2
KASI				S	Sn	10 16 53.2	-1.4
LWLI	Liwa	2.30	31	P	Pn	10 16 29.8	+0.6
MNAI	Manna	2.64	2	Pn	Pn	10 16 33.4	-0.3
MDSI	Maura Dua	2.82	27	P	Pn	10 16 36.7	+0.4
MDSI				S	Sn	10 17 10.3	-0.1
KLSI		2.95	39	P	Pn	10 16 39.3	+1.3
LHSI	Lahat	3.23	11	P	Pn	10 16 42.9	+1.0
TNG	Tangerang	3.83	78	P	Pn	10 16 47.7	-2.4
DBJI	Dramaga	3.87	83	P	Pn	10 16 52.5	+1.9
CBJI	Citeko	3.98	82	P	Pn	10 16 54.5	+2.3
XMIS	Christmas Isla	4.40	142	Pn	Pn	10 16 51.7	-6.3
LEM	Lembang	4.70	88	Pn	Pn	10 17 03.6	+1.3
	8.4nm,0.3s,baz=300,slow=15,SNR=4.7						
LEM				Sn	Sn	10 17 58.0	+1.0
	6.0nm,0.3s,baz=97,slow=22,SNR=1.7						
LEM				LR	LR	10 19 08.2	
	comp=Z,66nm,20.2s,baz=353,slow=42						
LEM	Lembang	4.70	88	P	Pn	10 17 04.4	+2.1
CISI	Cisompet, Garu	4.92	97	Pn	Pn	10 17 05.3	+0.1
CISI	Cisompet, Garu	4.92	97	P	Pn	10 17 04.9	-0.3
UGM	Wanagama	7.63	97	P	Pn	10 17 42.8	+0.4
KAPI	Kappang	16.89	84	LR	LR	10 27 34.6	
	comp=Z,38nm,18.1s,baz=338,slow=42						
SOEI	Soe	21.33	99	P	P	10 20 38.0	-0.5
CM04	Chiang Mai Arr	25.55	351	P	P	10 21 23.1	+2.9
CM05	Chiang Mai Arr	25.55	351	P	P	10 21 30.4	+10
CM01	Chiang Mai Arr	25.57	351	P	P	10 21 31.0	+11
CM13	Chiang Mai Arr	25.58	351	P	P	10 21 31.0	+10
CM02	Chiang Mai Arr	25.59	351	P	P	10 21 31.1	+11
CM09	Chiang Mai Arr	25.59	351	P	P	10 21 23.0	+2.4
CM15	Chiang Mai Arr	25.61	351	P	P	10 21 32.6	+12
CM31	Chiang Mai Arr	25.61	351	P	P	10 21 18.1	-2.6
CM31				IAmb	IAmb	10 21 32.2	
	comp=Z,16nm,1.0s						
CMAR	Chiang Mai Arr	25.61	351	P	P	10 21 21.1	+0.3
	comp=Z,1.9nm,0.5s,baz=185,slow=8.2,SNR=14						
CMAR				LR	LR	10 31 41.5	
	comp=Z,17nm,18.6s,baz=230,slow=37						
CMAR	Chiang Mai Arr	25.61	351	P	P	10 21 19.0	-1.8
CM36	Chiang Mai Arr	25.65	352	P	P	10 21 23.0	+1.9
CM35	Chiang Mai Arr	25.80	352	P	P	10 21 24.0	+1.5
CHTO	Chiang Mai	25.96	351	P	P	10 21 23.5	-0.5
CHTO				IAmb	IAmb	10 21 48.1	
	comp=Z,9.1nm,1.4s						
CM33	Chiang Mai Arr	25.96	351	P	P	10 21 35.0	+11
CM34	Chiang Mai Arr	25.97	352	P	P	10 21 26.0	+2.0
H01W3	Cape Leeuwin H	29.61	161	T	T	10 52 56.5	
	baz=338						
H01W2	Cape Leeuwin H	29.62	161	T	T	10 53 02.5	
	baz=338						
H01W1	Cape Leeuwin H	29.62	161	T	T	10 53 02.4	
	baz=338						
WB0	Warramunga Arr	33.09	116	P	P	10 22 24.6	-2.8
WB0				IAmb	IAmb	10 22 50.8	
	comp=Z,12nm,1.4s						
WRA	Warramunga Arr	33.10	116	P	P	10 22 26.8	-0.8
	comp=Z,0.6nm,0.8s,baz=284,slow=11,SNR=4.6						
WRA	Warramunga Arr	33.10	116	P	P	10 22 25.6	-1.9
WRAB	Tennant Creek	33.10	116	P	P	10 22 26.0	-1.5
WB2	Warramunga Arr	33.11	116	P	P	10 22 27.5	-0.1
ASAR	Alice Springs	34.07	122	P	P	10 22 35.4	-0.6
	comp=Z,0.6nm,0.9s,baz=306,slow=7.9,SNR=3.4						
XAN	Xi'an	41.23	8		P	10 23 36.4	0.0
XAN				IAmb	IAmb	10 23 46.2	
	comp=Z,7.9nm,0.8s						
WMQ	Urumqi	52.44	346	P	P	10 25 03.4	-0.5
SONM	Songino Array	54.70	3	P	P	10 25 20.8	+0.2
	comp=Z,1.8nm,0.9s,baz=192,slow=8.7,SNR=5.2						
SONM	Songino Array	54.70	3	P	P	10 25 20.7	+0.1
MK31	Makanchi Array	56.62	343	P	P	10 25 34.4	+0.2
MKAR	Makanchi Array	56.62	343	P	P	10 25 34.1	-0.1
	comp=Z,0.2nm,0.6s,baz=145,slow=7.2,SNR=2.7						
MKAR	Makanchi Array	56.62	343	P	P	10 25 33.8	-0.5
KURBB	Kurchatov Arra	61.15	343	P	P	10 26 05.3	-0.3
	comp=Z,0.2nm,0.6s,baz=152,slow=6.1,SNR=1.7						
KLR	Kul'dur	61.43	21	P	P	10 26 06.9	-0.6
	comp=Z,0.9nm,0.9s,baz=214,slow=7.3,SNR=2.0						
ZALV	Zalesovo Beam	62.62	348	P	P	10 26 15.3	-0.1
	comp=Z,0.5nm,0.3s,baz=152,slow=6.5,SNR=1.8						
KBZ	Khabaz	73.96	319	P	P	10 27 27.3	+0.6
	comp=Z,0.6nm,0.7s,baz=153,slow=6.8,SNR=1.6						
TKL	Tuckaleechee C	150.85	11	PKPbc	PKiKP	10 35 46.0	+0.9
	comp=Z,3.6nm,1.1s,baz=208,slow=4.0,SNR=1.9						

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*IDC **14** 10:21:34.8±1.5,28°.69N×52°.32E,h0^{km},mb3.6/6, mb1 3.7/7,mb1mx3.4/49,mbtmp3.6/7,ML3.2/1,MS2.9/1, Ms1 2.9/1,ms1mx2.3/36,Error ellipse: s-maj=31.5km s-min=27.6km az=19.0*

*TEH **14** 10:21:36.5,28°.91N×52°.39E,h8^{km},ML3.5*

*KISR **14** 10:21:39.7±0.7,29°.35N×51°.88E,h0^{km}±616^{km},ML3.9, Hypocentre not reviewed by the ISC*

ISC 14 10:21:36.9±0.8,**28°.84N**±0°.05×**52°.39E**±0°.09,**h12**^{km}**,n18,** σ**1ˢ.49**/19,**mb3.6**/6,**Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QIR1	Qir	0.68	122	*e*Pg	Pg	10 21 50.1	-0.1
QIR1				*e*		10 22 12.5	

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              comp=Z,99nm,0.4s
SHI    Shiraz            0.80   8 ePg     Pg      10 21 51.8 -0.7
SHI                               eSg     Sg      10 22 01.2 -1.9
SHI                               e               10 22 09.5
              comp=Z,99nm,0.5s
KAZ1   Kazerun           1.02 320 ePg     Pb      10 21 55.0 -1.6
JHRM   Jahrom            1.10 108 ePg     Pn      10 21 58.5 +0.3
LMD1   Lamerd            1.65 155 e               10 22 47.5
              comp=Z,99nm,0.7s
LMD1                              ePg     Pg      10 22 09.2 +0.6
LAR1   LAR               2.11 123 ePg     Pg      10 22 17.4 +0.1
LAR1                              e               10 23 07.8
              comp=Z,99nm,0.4s
KLNJ   Kolanjah          2.27 342 ePn     Pb      10 22 16.5 -1.5
KLNJ                              e               10 23 06.7
              comp=Z,99nm,0.6s
IRAM   Ramesheh          2.96 360 ePn     Pn      10 22 26.7 +2.8
IMEH   Mehriz            3.19  37 ePn     Pn      10 22 28.9 +1.8
IZEF   Zefreh            4.04 359 ePn     Pn      10 22 41.0 +2.1
UMR    Umm Al-Rimmam     4.15 281 eP              10 22 41.7
RDF    Al-Radifah        4.24 272 eP              10 22 44.1
MIB    Mutribah          4.51 283 eP              10 22 46.5
MIB                               eS              10 23 36.4
MIB                                IAML           10 23 39.7
              comp=Z,147nm,0.8s
RST    Umm Al-Ruwaisa    4.76 279 eP              10 22 49.9
WSAR   Wadi Sarin        7.91 133  Pn     Pn      10 23 31.0 -0.9
              comp=Z,0.3nm,0.3s,baz=313,slow=9.6,SNR=1.7
WSAR                               Sn     Sn      10 24 59.4 -2.0
              comp=Z,0.1nm,0.3s,baz=244,slow=6.2,SNR=1.6
BRTR   Keskin Array B   18.88 310  LR     LR      10 36 27.7
              comp=Z,32nm,19.2s,baz=316,slow=47
KURBB  Kurchatov Arra   29.35  35  P      P       10 27 40.3 +0.8
              comp=Z,0.2nm,0.2s,baz=234,slow=7.9,SNR=4.3
MKAR   Makanchi Array   29.40  44  P      P       10 27 41.2 +1.1
              comp=Z,0.3nm,0.6s,baz=232,slow=10,SNR=3.0
ZALV   Zalesovo Beam    34.43  34  P      P       10 28 25.3 +1.2
              comp=Z,0.8nm,0.4s,baz=244,slow=9.5,SNR=3.0
FINES  FINESS Array B   36.99 339  P      P       10 28 46.3 +0.4
              comp=Z,1.6nm,0.9s,baz=150,slow=9.6,SNR=4.8
TORD   Torodi Ar. Bea   49.47 263  P      P       10 30 26.4 -1.0
              comp=Z,0.5nm,0.7s,baz=50,slow=9.2,SNR=1.9
YKA    Yellowknife Ar   88.39 354  P      P       10 34 29.7 +1.2
              comp=Z,0.2nm,0.7s,baz=17,slow=4.8,SNR=2.9
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*IDC **14** 10:28:20.7±1.1, 8°.44N×72°.25W, h0^{km}, mb3.2/3, mb1 3.7/5, mb1mx3.5/34, mbtmp3.5/5, ML2.8/2, MS3.2/1, Ms1 3.2/1, ms1mx2.4/16, Error ellipse: s-maj=23.5km s-min=12.0km az=160.0*

*RSNC **14** 10:28:23.7±1.7, 8°.35N×72°.11W, h2^{km}±5^{km}, ML3.3*

*FUNV **14** 10:28:23.7, 8°.27N×72°.12W, h5^{km}, MW4.0*

ISC 14 10:28:21.9±1.1**, 8°.34N**±0°.02×**72°.11W**±0°.02**, h8**^{km}±8^{km}**, n49, σ1ˢ63**/88**, mb3.4**/3**, 1C-3D, Venezuela**

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Code   Station Name        Δ°  AZ°   Phase ID          Time     Res
                                  Op      ISC       h  m  s   ISC
CAPV   Capacho           0.52 203⇑iP      Pg      10 28 31.5 -0.4
CAPV                              eS      Sg      10 28 38.2 -0.5
OCAC   Ocana             1.20 265⇓eP      Pg      10 28 44.1 -0.8
OCAC                              i               10 28 45.0
              comp=Z,1μm,0.2s
OCAC                              eS      Sg      10 28 59.7 -0.9
SOCV   Socops            1.24  93⇓eP      Pn      10 28 45.7 +0.1
SOCV                              eS      Sb      10 29 02.3 +0.5
SOCV   Socops            1.24  93 eP      Pn      10 28 45.9 +0.3
SOCV                              eS      Sn      10 29 03.9 +1.3
SDV    Santo Domingo     1.56  70  Pg     Pg      10 28 52.3 +0.5
              comp=Z,79nm,0.3s,baz=151,slow=8.1,SNR=308
SDV                                Lg     Lg      10 29 12.4
              comp=Z,164nm,0.3s,baz=273,slow=22,SNR=19
SDV                                LR     LR      10 29 30.6
              comp=Z,49nm,21.6s,baz=20,slow=42
SDV    Santo Domingo     1.56  70 eP      Pg      10 28 51.9 +0.1
SDV                               eS      Sb      10 29 11.8 +0.7
SDV                               i               10 29 15.7
              comp=Z,456nm,0.4s
SDV    Santo Domingo     1.56  70 eP      Pg      10 28 52.0 +0.2
SDV                               eS      Sg      10 29 12.7 +0.6
MCQV   Machiques         1.75 346 eP      Pb      10 28 54.5 +0.3
MCQV                              eS      Sg      10 29 19.0 +0.9
TAMC   Tame, Arauca      1.92 170 eP      Pn      10 28 56.1 +1.2
TAMC                              eS      Sb      10 29 21.2 -0.2
TAMC                              i               10 29 26.4
              comp=Z,364nm,0.2s
SMLC   San Martn de      1.99 283⇓iP      Pn      10 28 56.5 +0.6
SMLC                              eS      Sb      10 29 24.0 +0.6
BRRC   Barranca, Sant    2.01 232 eP      Pb      10 28 57.9 -0.8
BRRC                              eS      Sb      10 29 23.9 +0.1
BRRC                              i               10 29 29.8
              comp=Z,291nm,0.3s
BARC   Barichara         2.04 212 eP      Pn      10 28 58.3 +1.6
BARC                              eS      Sb      10 29 25.3 +0.4
BARC                              i               10 29 28.4
              comp=Z,272nm,0.4s
CVALL  Valledupar, Ce    2.43 332 eP      Pn      10 29 03.1 +1.2
CVALL                             eS      Sn      10 29 34.0 +2.0
ARGC   Ariguani, Magd    2.59 306 eP      Pn      10 29 05.5 +1.3
ARGC                              i               10 29 49.4
              comp=Z,75nm,0.2s
RUSC   La Rusia          2.62 202 eP      Pn      10 29 06.3 +1.4
RUSC                              i               10 29 11.1
              comp=Z,96nm,0.2s
RUSC                              eS      Sn      10 29 40.1 +3.0
CRJC   Cerrejon, Guaj    2.77 344 eP      Pn      10 29 08.2 +1.5
CRJC                              eS      Sn      10 29 42.2 +1.9
CRJC                              i               10 29 49.6
              comp=Z,399nm,0.3s
ELOV   Elorza            2.93 117 eP      Pn      10 29 10.1 +1.4
ELOV                              eS      Sn      10 29 45.3 +1.2
ELOV   Elorza            2.93 117 eP      Pn      10 29 10.1 +1.4
ELOV                              eS      Sn      10 29 44.3 +0.3
PTBC   PUERTO BERRIO,    2.94 233 eP      Pn      10 29 09.3 +0.4
PTBC                              eS      Sn      10 29 46.6 +2.3
PTBC                              i               10 29 56.1
              comp=Z,120nm,0.4s
DABV   Dabajuro          2.95  29 eP      Pn      10 29 11.0 +1.9
DABV                              eS      Sn      10 29 47.6 +3.0
DABV   Dabajuro          2.95  29 eP      Pn      10 29 11.1 +2.1
DABV                              eS      Sn      10 29 47.0 +2.3
SIQV   Siquisique        3.23  45 eP      Pn      10 29 14.4 +1.5
SIQV                              eS      Sn      10 29 52.7 +1.1
SPBC   San Pablo de B    3.31 216 eP      Pn      10 29 15.6 +1.6
SPBC                              eS      Sn      10 29 57.4 +3.8
SPBC                              i               10 30 06.5
              comp=Z,70nm,0.3s
URIC   Uribia, Colomb    3.34   2 eP      Pn      10 29 15.1 +0.6
URIC                              eS      Sn      10 29 56.0 +1.7
URIC                              i               10 30 21.7
              comp=Z,63nm,0.6s
UREC   San Jos de Ur     3.44 260 eP      Pn      10 29 17.1 +1.3
UREC                              eS      Sn      10 29 58.5 +1.7
UREC                              i               10 30 11.8
              comp=Z,66nm,0.4s
SMRC   Santa Marta, M    3.49 324 eP      Pn      10 29 15.1 -1.4
SMRC                              eS      Sn      10 29 55.5 -2.6
SMRC                              i               10 30 12.1
              comp=Z,139nm,0.3s
MOTC   Monteria, Cord    3.54 277 eP      Pn      10 29 19.2 +2.0
MOTC                              eS      Sb      10 30 05.9 -2.2
MOTC                              i               10 30 23.6
              comp=Z,40nm,0.5s
NORC   Norcasia          3.89 225 eP      Pn      10 29 22.5 +0.5
NORC                              eS      Sn      10 30 09.9 +1.9
NORC                              i               10 30 22.7
              comp=Z,55nm,0.3s
MAPV   Macapo            3.90  67 eP      Pn      10 29 24.1 +1.9
MAPV                              eS      Sn      10 30 08.4 +0.2
CHIC   Chingaza          4.02 204 eP      Pn      10 29 25.6 +1.4
CHIC                              i               10 29 48.0
              comp=Z,20nm,0.4s
BAUV   El Baul           4.07  81 eP      Pn      10 29 24.9 +0.5
BAUV                              eS      Sn      10 30 11.3 -1.0
ROSC   El Rosal          4.11 212  Pn     Pn      10 29 27.1 +1.6
              comp=Z,3.6nm,0.3s,baz=307,slow=20,SNR=2.2
ROSC                               Pg     Pg      10 29 41.1 +0.3
              comp=Z,5.5nm,0.3s,baz=200,slow=21,SNR=4.7
ROSC                               Sn     Sn      10 30 17.1 +3.1
              comp=Z,3.9nm,0.3s,baz=180,slow=23,SNR=1.6
ROSC                               Lg     Lg      10 30 31.0
              comp=Z,3.4nm,0.3s,baz=332,slow=22,SNR=1.7
PTGC   Puerto Gaitan,    4.12 180 eP      Pn      10 29 24.8 -0.4
PTGC                              eS      Sn      10 30 09.9 -3.6
PTGC                              i               10 30 14.9
              comp=Z,69nm,0.3s
MONV   Montecano         4.16  30 eP      Pn      10 29 26.7 +0.9
JACV   Jacura            4.23  50 eP      Pn      10 29 28.4 +1.7
GUY2C  Guyana, Caldas    4.48 226 eP      Pn      10 29 32.1 +1.6
GUY2C                             eS      Sn      10 30 24.6 +1.5
GUY2C                             i               10 30 45.6
              comp=Z,35nm,0.5s
CBOC   Ciudad Bolivar    4.59 238 eP      Pn      10 29 34.3 +2.6
CBOC                              i               10 30 50.1
              comp=Z,21nm,0.7s
RREF   El Recreo         4.69 223 eP      Pn      10 29 35.2 +1.6
RREF                              eS      Sn      10 30 30.5 +1.9
RREF                              i               10 31 03.9
              comp=Z,19nm,0.5s
TOLC   Tolima            4.91 221 eP      Pn      10 29 37.5 +1.2
TOLC                              eS      Sn      10 30 35.7 +2.2
TOLC                              i               10 31 09.9
              comp=Z,25nm,0.7s
ANIL   Santa Ana         5.03 221 eP      Pn      10 29 40.3 +2.3
ANIL                              eS      Sn      10 30 38.5 +1.9
TACV   Tcata             5.33  70 eP      Pn      10 29 42.6 +0.8
PRAC   Prado             5.36 211 eP      Pn      10 29 43.8 +1.5
PRAC                              eS      Sn      10 30 44.6 +0.3
PRAC                              i               10 31 17.8
              comp=Z,13nm,0.4s
ORTC   Ortega, Tolima    5.39 215 eP      Pn      10 29 45.1 +2.3
ORTC                              eS      Sn      10 30 47.1 +1.9
BIRV   Birongo           6.14  69 eP      Pn      10 29 54.0 +1.0
BIRV                              eS      Sn      10 31 00.1 -3.4
PCRV   Puerto La Cruz    7.60  76  Pn     Pn      10 30 14.6 +1.5
              comp=Z,1.0nm,0.3s,baz=0.4,slow=14,SNR=2.2
PCRV                               Sn     Sn      10 31 39.5  0.0
              comp=Z,1.2nm,0.3s,baz=29,slow=19,SNR=1.9
TXAR   Lajitas Array    36.24 309  P      P       10 35 25.5 -0.3
              comp=Z,0.1nm,0.4s,baz=114,slow=9.0,SNR=1.6
PDAR   Pinedale Array   47.47 323  P      P       10 36 55.7 -1.9
              comp=Z,0.3nm,0.9s,baz=114,slow=6.4,SNR=1.9
PDAR                               LR     LR      10 59 16.8
              comp=Z,27nm,18.3s,baz=340,slow=39
YKA    Yellowknife Ar   62.20 339  P      P       10 38 42.9 -0.8
              comp=Z,0.5nm,0.7s,baz=121,slow=7.7,SNR=4.2
WRA    Warramunga Arr  151.93 243  PKPbc  PKPbc   10 48 16.5 -2.1
              comp=Z,0.5nm,0.8s,baz=109,slow=2.9,SNR=2.1
```

JMA 14 10:34:59.9±0.2**, 24°.84N**×**123°.36E, h16**^{km}**, Southwestern Ryukyu Islands**

```
Code   Station Name        Δ°  AZ°   Phase ID          Time     Res
                                  Op      ISC       h  m  s   ISC
YOJ    Yonaguni jima     0.49 220  P      Pg      10 35 09.6 -0.1
YOJ                               eS      Sg      10 35 16.1 -0.3
JYNG   Yonagunijimaku    0.54 224  P      Pg      10 35 10.6  0.0
JYNG                               S      Sg      10 35 17.4 -0.5
IRIF   Iriomote-Funau    0.60 146  P      Pg      10 35 11.4 -0.4
IRIF                              eS      Sb      10 35 20.6 +0.2
JKRS   Kuro-shima        0.84 135  P      Pb      10 35 15.6 -0.6
JKRS                              eS      Sb      10 35 27.2  0.0
JIJ    Ishigaki jima     0.86 123  P      Pb      10 35 15.9 -0.5
JIJ                               eS      Sg      10 35 28.4 +0.6
HATJ   Hateruma jima     0.88 152 eS      Sb      10 35 27.9 -0.4
```

TAP 14 10:34:59.1, 24°.18N×**121°.44E, h12**^{km}±1^{km}**, ML1.0, C, Taiwan**

```
Code   Station Name        Δ°  AZ°   Phase ID          Time     Res
                                  Op      ISC       h  m  s   ISC
ETLH   Xiulin Townshi    0.05  49 i P     Pg      10 35 01.6 +0.2
       baz=49
ETLH                              i S     Sg      10 35 02.8 -0.3
       baz=49
NACB   Ninganchiao       0.14  91  P      Pg      10 35 02.3 -0.1
       baz=91
NACB                               S      Sg      10 35 04.6 -0.2
       baz=91
WHF    Hehuan Shan       0.17 259  P      Pg      10 35 02.9 -0.2
       baz=257
WHF                                S      Sg      10 35 05.1 -1.0
       baz=257
NNSB   Datong            0.26 347 eP      Pg      10 35 04.1 -0.4
       baz=347
NNSB                              eS      Sg      10 35 08.1  0.0
       baz=347
NNS    Nan Shan          0.27 346 eP      Pg      10 35 04.9 +0.2
       baz=347
NNS                               eS      Sg      10 35 09.1 +0.6
       baz=347
ENA    Nanau             0.37  47 eS      Sg      10 35 11.8 +0.4
       baz=48
```

IDC 14 11:06:01.2±4.2**, 19°.55N**×**121°.86E, h0**^{km}**, mb3.5**/3**, mb1 3.7**/3**, mb1mx3.3**/59**, mbtmp3.5**/3**, MS3.0**/2**, Ms1 3.0**/2**, ms1mx2.4**/33**, Error ellipse: s-maj=339.6km s-min=26.5km az=61.0, Philippine Islands region**

```
Code   Station Name        Δ°  AZ°   Phase ID          Time     Res
                                  Op      ISC       h  m  s   ISC
PSI    Prapat           27.92 236  LR     LR      11 22 36.7
              comp=Z,25nm,19.7s,baz=109,slow=36
WRA    Warramunga Arr   41.11 162  P      P       11 13 46.3 -0.8
              0.6nm,0.6s,baz=342,slow=8.9,SNR=6.4
MKAR   Makanchi Array   42.17 319  P      P       11 13 55.5 -0.1
              0.4nm,0.6s,baz=113,slow=9.1,SNR=6.3
PETK   Petropavlovsk-   43.42  31  LR     LR      11 31 19.9
              comp=Z,25nm,20.5s,baz=217,slow=35
ASAR   Alice Springs    44.53 164  P      P       11 14 15.3 +0.5
              0.2nm,0.3s,baz=344,slow=6.7,SNR=10.0
```

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*BJI **14** 11:13:24.6±0.0, 18°.31S×64°.51E, h10^{km}, mB5.1/17, mb4.6/32, Ms4.7/9, Ms7 4.4/12*

*IDC **14** 11:13:27.4±0.5, 18°.04S×65°.18E, h0^{km}, mb4.3/20, mb1 4.4/21, mb1mx4.2/59, mbtmp4.3/21, ML3.9/1, MS3.9/20, Ms1 3.9/20, ms1mx3.7/34, Error ellipse: s-maj=17.8km s-min=15.2km az=10.0*

*NEIC **14** 11:13:29.5±1.1, 18°.1S±0°.1×65°.2E±0°.1, h10^{km}±1^{km}, mb4.8/29, Error ellipse: s-maj=21.1km s-min=19.3km az=172.0*

*GCMT **14** 11:13:31.5±0.3, 18°.13S±0°.03×65°.15E±0°.02, h12^{km}, MW4.8/88, Moment Tensor Solution. s18,c20; s88,c112; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.74±.06; $M_{\theta\theta}$0.45±.06; $M_{\phi\phi}$1.30±.06; $M_{r\theta}$-0.61±.26; $M_{\theta\phi}$-0.72±.05; $M_{\phi r}$0.05±.24; Best double couple: $M_0$1.82700×10^{16} NP1:ϕ_s344.00000°,δ41.00000°,λ-68.00000°. NP2: ϕ_s136.00000°,δ53.00000°,λ-108.00000°. Principal axes: T 1.7480, Plg6.0000°, Azm239.0000°; N 0.1640, Plg14.0000°, Azm147.0000°; P -1.9070, Plg74.0000°, Azm350.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 14 11:13:29.3±0.4**, 18°.11S**±0°.09×**65°.17E**±0°.08**, h10**^{km}**, n123, σ1ˢ04**/108**, mb4.6**/55**, MS4.0**/25**, 2C-1D, Mauritius-Reunion region**

```
Code   Station Name        Δ°  AZ°   Phase ID          Time     Res
                                  Op      ISC       h  m  s   ISC
H08S1  Diego Carcia H   12.61  35  T      T       11 29 18.4
       baz=214,slow=76,SNR=16
H08S2  Diego Garcia H   12.62  35  T      T       11 29 19.1
       baz=214,slow=76,SNR=42
H08S3  Diego Garcia H   12.62  35  T      T       11 29 10.5
       baz=214,slow=76,SNR=177
ABPO   Ambohimpanom     17.03 264  P      P       11 17 30.5 +0.8
OPO    Ambohidratompo   17.07 266  P      Pn      11 17 29.2 +0.8
       0.4nm,0.3s,baz=132,slow=17,SNR=2.3
PALK   Pallekele        29.52  33  LR     LR      11 29 20.0
       comp=Z,159nm,18.4s,baz=312,slow=32
LSZ    Lusaka           35.49 269  P      P       11 20 28.4 +1.8
LSZ                                IAmb   IAmb    11 20 34.3
       comp=Z,14nm,1.2s
LBTB   Lobatse          37.34 252  P      P       11 20 41.8 -0.5
       comp=Z,6.8nm,0.8s,baz=87,slow=9.0,SNR=6.6
LBTB   Lobatse          37.34 252  IAmb   IAmb    11 20 41.8
       comp=Z,19nm,1.4s
BOSA   Boshof           37.94 247  P      P       11 20 47.4  0.0
       comp=Z,5.8nm,0.8s,baz=56,slow=9.9,SNR=5.7
BOSA                               LR     LR      11 33 33.7
       comp=Z,256nm,20.6s,baz=92,slow=32
BOSA   Boshof           37.94 247  IAmb   IAmb    11 20 54.7
       comp=Z,19nm,1.2s
SUR    Sutherland       42.26 242  LR     LR      11 35 59.5
       comp=Z,279nm,19.1s,baz=96,slow=32
H01W3  Cape Leeuwin H   46.43 121  T      T       12 11 45.2
       baz=278,slow=75,SNR=15
H01W2  Cape Leeuwin H   46.44 121  T      T       12 11 48.2
       baz=278,slow=75,SNR=14
H01W1  Cape Leeuwin H   46.45 121  T      T       12 11 44.8
       baz=278,slow=75,SNR=14
CMAR   Chiang Mai Arr   49.22  44  P      P       11 22 17.4 -0.8
       comp=Z,1.0nm,0.5s,baz=233,slow=7.9,SNR=15
CMAR                               PcP    PcP     11 23 41.8 +0.4
       comp=Z,0.4nm,0.3s,baz=231,slow=5.7,SNR=1.8
CMAR                               LR     LR      11 40 16.0
       comp=Z,296nm,20.5s,baz=244,slow=33
DMN    Daman            49.39  23 eP      P       11 22 18.9 -0.7
       comp=Z,45nm,1.1s
RAMN   Ramite           49.39  25 eP      P       11 22 20.9 +1.3
       comp=Z,26nm,0.9s
PKI    Pulchoki         49.47  24 eP      P       11 22 20.7 +0.4
MAW    Mawson           49.49 181  LR     LR      11 37 53.4
       comp=Z,150nm,21.0s,baz=58,slow=30
DANN   Dangsing         49.57  22 eP      P       11 22 21.9 +0.9
       comp=Z,28nm,1.0s
GKN    Gorkha           49.57  23 eP      P       11 22 21.3 +0.4
       comp=Z,48nm,1.1s
PSA00  Pilbara Seismi   51.34 103  P      P       11 22 34.7 +0.4
KBL    Kabul            52.49   4  P      P       11 22 43.9 +1.1
KBL                                IAmb   IAmb    11 22 50.5
       comp=Z,18nm,1.2s
SYO    Syowa Base       53.32 191⇓eP      P       11 22 49.0 +0.8
GEYT   Alibeck          56.13 353  LR     LR      11 44 48.3
       comp=Z,32nm,20.3s,baz=35,slow=34
KMI    Kunming          56.44  42 ⇑P      P       11 23 14.1 +2.4
KMI                                pmax   pmax
       comp=Z,10.0nm,1.2s
KMI                                LR     LR
       comp=Z,180nm,14.1s
KMI                                LR     LR
       comp=Z,150nm,10.8s
KMI                                LR     LR
       comp=Z,170nm,23.4s
FITZ   Fitzroy Crossi   57.23 100  P      P       11 23 17.4 +0.1
       comp=Z,4.9nm,1.0s,baz=270,slow=6.1,SNR=4.2
FITZ   Fitzroy Crossi   57.23 100  IAmb   IAmb    11 23 24.8
       comp=Z,16nm,1.2s
QIZ    Qiongzhong       57.34  52  P      P       11 23 17.5 -0.5
QIZ                                S      S       11 31 15.1 +0.3
QIZ                                LR     LR
       comp=Z,150nm,15.2s
QIZ                                LR     LR
       comp=Z,180nm,15.6s
QIZ                                LR     LR
       comp=Z,200nm,16.0s
KSH    Kashi            58.21  10  P      P       11 23 20.8 -3.0
KSH                                pP     pwP     11 23 29.4 +0.1
KSH                                PcP    PcP     11 24 11.9 -3.3
KSH                                S      S       11 31 13.0  -13
KSH                                pmax   pmax
       comp=Z,44nm,1.4s
KSH                                pmax   pmax
       comp=Z,160nm,5.3s
KSH                                LR     LR
       comp=Z,180nm,5.5s
KSH                                LR     LR
       comp=Z,100nm,9.8s
KSH                                LR     LR
       comp=Z,410nm,6.2s
GYA    Guiyang          59.89  43 eP      P       11 23 38.3 +2.5
GYA                                pmax   pmax
       comp=Z,5.0nm,1.5s
GYA                                LR     LR
       comp=Z,170nm,16.7s
AAK    Ala-Archa        61.05   8  P      P       11 23 44.8 +1.4
KKAR   Karatay Array    61.11   4  P      P       11 23 43.2 -0.4
CD2    Chengdu          61.25  38  P      P       11 23 46.3 +1.4
CD2                                pmax   pmax
       comp=Z,10.0nm,0.7s
ASAR   Alice Springs    63.92 108  P      P       11 24 02.5 -0.5
       comp=Z,4.6nm,1.1s,baz=265,slow=6.4,SNR=16
ASAR                               LR     LR      11 47 56.3
       comp=Z,432nm,20.8s,baz=274,slow=32
ASAR   Alice Springs    63.92 108  P      P       11 24 02.7 -0.3
BRTR   Keskin Array B   64.63 333  P      P       11 24 07.2 -0.1
       comp=Z,1.3nm,0.8s,baz=148,slow=7.3,SNR=4.0
BRTR                               LR     LR      11 50 19.5
       comp=Z,28nm,20.2s,baz=156,slow=34
KBZ    Khabaz           64.84 342  P      P       11 24 08.2 -0.1
       comp=Z,1.7nm,1.0s,baz=150,slow=6.8,SNR=3.6
WRA    Warramunga Arr   64.98 104  P      P       11 24 10.0  0.0
       comp=Z,5.9nm,1.0s,baz=263,slow=6.1,SNR=17
WRA                                LR     LR      11 50 52.5
       comp=Z,194nm,18.4s,baz=290,slow=34
WRA    Warramunga Arr   64.98 104  P      P       11 24 11.2 +1.2
WB2    Warramunga Arr   65.00 104  P      P       11 24 11.6 +1.6
WMQ    Urumqi           65.00  18 eP      P       11 24 11.8 +2.3
WMQ                                pP     pwP     11 24 15.8 +0.8
WMQ                                pmax   pmax
       comp=Z,15nm,1.1s
WMQ                                pmax   pmax
       comp=Z,150nm,6.1s
WMQ                                LR     LR
       comp=Z,370nm,23.5s
WMQ                                LR     LR
       comp=Z,590nm,23.5s
WMQ                                LR     LR
       comp=Z,240nm,19.3s
WB0    Warramunga Arr   65.07 104  P      P       11 24 08.9 -1.7
WB0                                IAmb   IAmb    11 24 14.1
       comp=Z,17nm,1.4s
LZH    Lanzhou          65.15  34 eP      P       11 24 13.3 +2.5
LZH                                pP     pwP     11 24 18.6 +1.6
LZH                                sP     sP      11 24 22.3 +8.3
LZH                                pmax   pmax
       comp=Z,14nm,1.0s
WR0    Warramunga Arr   65.17 104  P      P       11 24 11.6 +0.4
WR0                                IAmb   IAmb    11 24 26.5
       comp=Z,19nm,1.5s
GTA    Gaotai           65.75  29 ⇑P      P       11 24 15.0 +0.4
GTA                                pP     pwP     11 24 20.6 -0.1
GTA                                sP     sP      11 24 24.3 +6.6
GTA                                pmax   pmax
       comp=Z,6.0nm,2.0s
SNAA   Sanae            66.06 199  P      P       11 24 14.0 -2.1
MAKZ   Makanchi         66.37  13  P      P       11 24 18.1 -0.2
MK31   Makanchi Array   66.42  13  P      P       11 24 18.1 -0.5
MKAR   Makanchi Array   66.42  13  P      P       11 24 18.4 -0.2
       comp=Z,2.4nm,1.0s,baz=205,slow=5.5,SNR=12
MKAR                               LR     LR      11 52 16.3
       comp=Z,60nm,19.6s,baz=184,slow=35
MKAR   Makanchi Array   66.42  13  P      P       11 24 18.1 -0.5
XAN    Xi'an            66.53  39  P      P       11 24 21.3 +1.7
XAN                                sP     pwP     11 24 26.0 +0.2
XAN                                pmax   pmax
       comp=Z,8.0nm,1.7s
XAN                                LR     LR
       comp=Z,200nm,17.3s
XAN                                LR     LR
       comp=Z,240nm,19.5s
XAN                                LR     LR
       comp=Z,280nm,19.5s
ABKAR  Akbulak array    67.22 356  P      P       11 24 23.4 -0.2
ABKAR                              IAmb   IAmb    11 24 31.2
       comp=Z,12nm,1.4s
ABKAR  Akbulak array    67.22 356  P      P       11 24 23.3 -0.4
VNA1   Neumayer--Stat   67.56 200  P      P       11 24 23.8 -1.8
VNA3   Neumayer Olymp   68.11 200  P      P       11 24 30.0 +0.9
STKA   Stephens Creek   69.38 118  P      P       11 24 38.5 +0.8
       comp=Z,1.0nm,0.3s,baz=328,slow=7.4,SNR=3.4
STKA                               LR     LR      11 51 09.7
       comp=Z,82nm,19.0s,baz=212,slow=33
STKA   Stephens Creek   69.38 118  IAmb   IAmb    11 24 45.1
       comp=Z,2.8nm,1.3s
KURK   Kurchatov        69.54   9  P      P       11 24 37.8 -0.3
KURK                               IAmb   IAmb    11 24 43.8
       comp=Z,5.6nm,1.1s
TORD   Torodi Ar. Bea   69.88 292  P      P       11 24 40.9  0.0
       comp=Z,1.1nm,1.1s,baz=116,slow=6.8,SNR=4.5
TORD                               LR     LR      11 54 15.9
       comp=Z,58nm,19.8s,baz=310,slow=35
TORD   Torodi Ar. Bea   69.88 292  P      P       11 24 41.2 +0.2
NJ2    Nanjing          71.64  46 eP      P       11 24 52.1 +0.8
NJ2                                pmax   pmax
       comp=Z,10.0nm,0.6s
BTO    Baotou           71.76  34 eP      P       11 24 40.3  -12
QSPA   South Pole Qui   71.99 180  P      P       11 24 53.4 +0.3
       comp=Z,7.2nm,1.0s,baz=275,slow=3.9,SNR=9.0
```

QSPA	**South Pole Qui**	**71.99**	**180**	P	**P**	**11 24 53.8**	**+0.7**
QSPA				IAmb	IAmb	11 24 55.0	
	comp=Z,18nm,1.2s						
MLR	**Muntele Rosu**	**72.62**	**332**	P	**P**	**11 24 58.0**	**+0.9**
HHC	**Hu-ho-hao-te**	**72.77**	**35**	*e*P	**P**	**11 24 58.3**	**+0.2**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,170nm,6.8s						
DBIC	**Dimbokro**	**73.31**	**283**	LR	LR	11 56 18.2	
	comp=Z,74nm,18.1s,baz=135,slow=35						
ZAA0	**Zalesovo Array**	**73.73**	**12**	P	**P**	**11 25 03.0**	**-0.2**
ZAA0				IAmb	IAmb	11 25 08.7	
	comp=Z,12nm,1.4s						
ZALV	**Zalesovo Beam**	**73.73**	**12**	P	**P**	**11 25 02.2**	**-1.0**
	comp=Z,2.0nm,0.6s,baz=207,slow=6.0,SNR=8.2						
ZALV				LR	LR	11 55 46.7	
	comp=Z,41nm,20.0s,baz=48,slow=34						
ZALV	**Zalesovo Beam**	**73.73**	**12**	P	**P**	**11 25 02.6**	**-0.7**
VNDA	**Vanda**	**73.89**	**167**	LR	LR	11 53 51.5	
	comp=Z,101nm,20.6s,baz=238,slow=33						
DIVS	**Divibare**	**74.41**	**328**	P	**P**	**11 25 07.8**	**+0.3**
DIVS				IAmb	IAmb	11 25 22.2	
	comp=Z,15nm,1.3s						
BURAR	**Bucovina Array**	**74.59**	**333**	P	**P**	**11 25 07.5**	**-1.1**
SONM	**Songino Array**	**75.31**	**27**	P	**P**	**11 25 12.1**	**-0.7**
	comp=Z,2.7nm,1.0s,baz=223,slow=4.8,SNR=9.5						
SONM				LR	LR	11 57 06.0	
	comp=Z,99nm,18.5s,baz=196,slow=35						
SONM	**Songino Array**	**75.31**	**27**	P	**P**	**11 25 12.4**	**-0.4**
AKASG	**Malin Array Be**	**75.45**	**337**	P	**P**	**11 25 13.0**	**-0.3**
	comp=Z,4.0nm,0.7s,baz=140,slow=5.0,SNR=14						
AKASG	**Malin Array Be**	**75.45**	**337**	P	**P**	**11 25 13.1**	**-0.3**
AKBB	**Malin Array Si**	**75.45**	**337**	P	**P**	**11 25 12.8**	**-0.5**
AKBB				IAmb	IAmb	11 25 15.3	
	comp=Z,8.6nm,0.9s						
INTR	**Introdacqua**	**76.26**	**323**	P	**P**	**11 25 17.7**	**-0.6**
KOLS	**Kolonicke sedl**	**76.87**	**333**	*e*P	**P**	**11 25 22.2**	**+0.7**
CRVS	**Cervenica-Dubn**	**77.20**	**332**	*e*P	**P**	**11 25 25.0**	**+1.6**
KWP	**Kalwaria Pacla**	**77.20**	**333**	P	**P**	**11 25 23.4**	**+0.1**
LANS	**Liptovska Anna**	**78.28**	**331**	*e*P	**P**	**11 25 30.1**	**+0.7**
SOKA	**Soboth**	**78.72**	**327**	*e*P	**P**	**11 25 33.3**	**+1.4**
	comp=Z,11nm,1.3s						
ARSA	**Arzberg**	**78.85**	**328**	*e*P	**P**	**11 25 33.2**	**+0.7**
	comp=Z,14nm,1.4s						
CONA	**Conrad Observa**	**79.14**	**329**	*e*P	**P**	**11 25 34.8**	**+0.5**
	comp=Z,12nm,1.3s						
MYKA	**Terra Mystica**	**79.40**	**327**	*e*P	**P**	**11 25 35.0**	**-0.7**
	comp=Z,5.3nm,1.1s						
KRUC	**Moravsky**	**79.66**	**330**	*e*P	**P**	**11 25 37.0**	**+0.1**
KBA	**Koelnbreinsper**	**79.85**	**327**	*e*P	**P**	**11 25 38.0**	**-0.3**
	comp=Z,7.7nm,1.4s						
MOA	**Molln**	**79.89**	**328**	*e*P	**P**	**11 25 36.8**	**-1.4**
	comp=Z,6.7nm,1.1s						
ABTA	**Abfaltersbach**	**80.07**	**326**	*e*P	**P**	**11 25 39.4**	**0.0**
	comp=Z,8.4nm,1.1s						
DPC	**Dobruska-Polom**	**80.58**	**331**	*e*P	**P**	**11 25 41.3**	**-0.6**
GERES	**GERESS Array B**	**80.83**	**328**	P	**P**	**11 25 41.9**	**-1.4**
	comp=Z,0.7nm,0.8s,baz=133,slow=7.5,SNR=3.8						
KSRS	**Korea Array**	**80.83**	**46**	P	**P**	**11 25 42.0**	**-1.5**
	comp=Z,2.5nm,1.0s,baz=259,slow=5.4,SNR=5.4						
KSRS				LR	LR	12 00 36.6	
	comp=Z,59nm,19.9s,baz=224,slow=35						
WATA	**Walderalm**	**80.94**	**326**	*e*P	**P**	**11 25 43.6**	**-0.5**
	comp=Z,3.4nm,0.7s						
SQTA	**Sankt Quirin**	**81.06**	**326**	*i* P	**P**	**11 25 44.6**	**0.0**
	comp=Z,9.4nm,1.7s						
KHC	**Kasperske Hory**	**81.08**	**329**	*e*P	**P**	**11 25 43.6**	**-1.0**
PRU	**Pruhonice**	**81.17**	**330**	*e*P	**P**	**11 25 44.2**	**-0.8**
FETA	**Feichten**	**81.19**	**326**	*e*P	**P**	**11 25 45.6**	**+0.2**
	comp=Z,6.2nm,1.0s						
MOTA	**Moosalm**	**81.20**	**326**	*e*P	**P**	**11 25 44.8**	**-0.7**
	comp=Z,6.7nm,1.2s						
KLMR	**Klimovskoe**	**81.36**	**348**	*e*P	**P**	**11 25 44.5**	**-1.2**
KLMR				AMP		11 25 53.1	
	comp=Z,24nm,1.5s						
CLL	**Collm**	**82.78**	**330**	*e*P	**P**	**11 25 53.0**	**-0.4**
	comp=Z,47nm,2.3s						
FINES	**FINESS Array B**	**85.20**	**342**	P	**P**	**11 26 05.0**	**-0.6**
	comp=Z,1.9nm,0.8s,baz=121,slow=5.4,SNR=2.1						
USRK	**Ussuriysk Ar.**	**86.87**	**41**	LR	LR	12 06 59.1	
	comp=Z,56nm,18.3s,baz=204,slow=37						
MJAR	**Matsushiro Arr**	**87.70**	**50**	P	**P**	**11 26 18.0**	**-0.5**
	comp=Z,4.5nm,0.8s,baz=226,slow=5.0,SNR=8.2						
MJAR				LR	LR	12 04 59.6	
	comp=Z,71nm,20.2s,baz=240,slow=35						
MJAR	**Matsushiro Arr**	**87.70**	**50**	P	**P**	**11 26 18.6**	**+0.1**
NRIK	**Noril'sk**	**88.67**	**8**	LR	LR	12 04 56.5	
	comp=Z,23nm,18.5s,baz=188,slow=35						
KLR	**Kul'dur**	**89.17**	**37**	P	**P**	**11 26 24.9**	**-0.3**
	comp=Z,1.5nm,0.9s,baz=253,slow=3.1,SNR=4.5						
IMAR	**Indian Mountai**	**125.79**	**18**		**PKiKP**	**11 32 31.5**	**+0.4**
ILAR	**Eielson Array**	**128.66**	**17**	PKP	**PKPdf**	**11 32 35.4**	**-1.0**
	comp=Z,0.8nm,1.0s,baz=320,slow=3.7,SNR=5.2						
YKA	**Yellowknife Ar**	**135.66**	**360**	PKP	**PKPdf**	**11 32 49.3**	**-0.2**
	comp=Z,0.9nm,0.9s,baz=21,slow=2.1,SNR=8.8						
LONY	**Lake Ozonia**	**137.28**	**317**		**PKPdf**	**11 32 52.8**	**-0.4**
ULM	**Lac du Bonnet**	**144.52**	**339**	PKP	**PKPab**	**11 33 03.7**	**-0.6**
	comp=Z,1.4nm,0.6s,baz=49,slow=4.7,SNR=5.7						
ULM	**Lac du Bonnet**	**144.52**	**339**		**PKPab**	**11 33 04.3**	**-0.1**
B35A	**Bob, Littlefor**	**145.28**	**335**		**PKPbc**	**11 33 06.1**	**-1.0**
ECSD	**EROS Data Cent**	**150.19**	**333**		**PKPbc**	**11 33 21.1**	**+0.4**
PDAR	**Pinedale Array**	**155.02**	**351**	PKP	**PKPdf**	**11 33 22.2**	**-0.9**
	comp=Z,0.4nm,0.9s,baz=46,slow=3.9,SNR=2.3						
PDAR				PKPbc	PKPbc	11 33 31.1	
	comp=Z,0.6nm,0.8s,baz=49,slow=2.9,SNR=5.1						
PDAR	**Pinedale Array**	**155.02**	**351**		**PKPdf**	**11 33 22.8**	**-0.3**
NVAR	**Mina Array Bea**	**159.53**	**8**	PKPab	**PKPab**	**11 34 05.4**	**-1.3**
	comp=Z,1.0nm,1.0s,baz=24,slow=4.0,SNR=4.3						
TXAR	**Lajitas Array**	**164.87**	**320**	PKP	**PKPdf**	**11 33 32.1**	**-2.3**
	comp=Z,0.5nm,1.1s,baz=35,slow=3.3,SNR=2.6						
TXAR				PKPab	**PKPab**	**11 34 30.1**	**-0.2**
	comp=Z,0.8nm,1.0s,baz=91,slow=3.3,SNR=5.5						
TXAR	**Lajitas Array**	**164.87**	**320**		**PKPab**	**11 34 31.1**	**+0.8**

IDC 14 11:13:40.1±3.0, 4°.17S×152°.26E, h0^{km}, mb3.7/3, mb1 3.9/4, mb1mx3.5/48, mbtmp3.8/4, ML1.8/1, MS3.3/1, Ms1 3.3/1, ms1mx2.3/38, Error ellipse: s-maj=118.4km s-min=37.3km az=126.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.26**	**224**	Pn	Pn	11 15 27.6	0.0
	1.0nm,0.3s,baz=214,slow=5.9,SNR=2.0						
PMG				Sn	Sn	11 16 52.8	+2.0
	1.1nm,0.3s,baz=202,slow=16,SNR=1.9						
WRA	**Warramunga Arr**	**23.47**	**227**	P	P	11 18 52.1	+0.5
	1.0nm,0.6s,baz=53,slow=10,SNR=8.1						
ASAR	**Alice Springs**	**26.26**	**221**	P	P	11 19 17.4	0.0
	0.4nm,0.7s,baz=55,slow=9.7,SNR=7.3						
FITZ	**Fitzroy Crossi**	**29.50**	**240**	P	P	11 19 47.4	+1.1
	2.8nm,1.0s,baz=74,slow=7.4,SNR=2.4						
PPT	**Papeete**	**58.43**	**108**	LR	LR	11 45 31.0	
	comp=Z,21nm,18.0s,baz=48,slow=33						
TORD	**Torodi Ar. Bea**	**149.60**	**289**	PKPbc	PKPbc	11 33 30.7	-2.0
	0.4nm,0.9s,baz=72,slow=2.3,SNR=1.6						

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*IDC **14** 11:18:42.6±1.6, 51°.97S×27°.99E, h0^{km}, mb3.7/4, mb1 3.9/4, mb1mx3.7/35, mbtmp3.8/4, MS2.9/1, Ms1 2.9/1, ms1mx2.6/31, Error ellipse: s-maj=50.7km s-min=38.7km az=125.0*

ISC 14 11:18:46.3±1.7, 52°.3S±0°.3×28°.4E±0°.4, h10^{km}, n6, σ0^{s}.71/6, mb3.7/4, South of Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNAA	**Sanae**	**23.83**	**204**	P	**P**	**11 23 59.3**	**+0.2**
	2.1nm,0.6s,baz=268,slow=2.8,SNR=14						
SNAA				LR	LR	11 31 38.9	
	comp=Z,30nm,20.9s,baz=312,slow=32						
QSPA	**South Pole Qui**	**37.93**	**180**	P	**P**	**11 26 03.5**	**-0.1**
	1.9nm,0.6s,baz=67,slow=0.7,SNR=15						
ASAR	**Alice Springs**	**80.54**	**116**	P	**P**	**11 30 58.9**	**+0.1**
	0.3nm,0.7s,baz=220,slow=4.9,SNR=2.2						
WRA	**Warramunga Arr**	**83.76**	**115**	P	**P**	**11 31 15.6**	**0.0**
	0.4nm,1.0s,baz=213,slow=4.0,SNR=2.1						
PDAR	**Pinedale Array**	**150.43**	**268**	PKPbc	**PKPdf**	**11 38 33.1**	**+0.8**
	0.1nm,0.4s,baz=113,slow=6.9,SNR=1.7						
NVAR	**Mina Array Bea**	**153.08**	**252**	PKPbc	**PKPbc**	**11 38 42.8**	**-0.9**
	0.4nm,0.7s,baz=148,slow=3.4,SNR=2.4						

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*MOS **14** 11:19:26.5±2.2, 43°.85N×148°.12E, h119^{km}, mb4.3/1, Error ellipse: s-maj=21.4km s-min=17.1km az=169.4*

*SKHL **14** 11:19:31.5±0.2, 44°.50N×147°.10E, h145^{km}±4^{km}, mb4.2/4, msha5.3/4*

*IDC **14** 11:19:33.0±3.1, 44°.05N×146°.80E, h199^{km}±31^{km}, mb3.2/5, mb1 3.4/6, mb1mx3.0/45, mbtmp3.7/6, Error ellipse: s-maj=84.4km s-min=33.5km az=173.0*

*JMA **14** 11:19:33.3±0.4, 44°.29N×147°.07E, h138^{km}±5^{km}, M3.6*

ISC 14 11:19:30.2±0.9, 44°.41N±0°.07×147°.23E±0°.07, h147^{km}±6^{km}, n40, σ1^{s}.07/50, mb3.7/6, 5C, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**0.94**	**29**	*e*PN	**Pn**	**11 19 54.6**	**+0.6**
KUR				*e*S	**Sn**	**11 20 11.5**	**-0.8**
KUR				pmax	pmax		
	comp=Z,35nm,0.1s						
KUR				smax	smax		
	comp=E,104nm,0.5s						
KUR				smax	smax		
	comp=N,99nm,0.3s						
KUR	**Kuril'sk**	**0.94**	**29**	*e*P	**Pn**	**11 19 55.1**	**+1.1**
KUR				AMB	AMB	11 19 55.5	
	comp=N,40nm,0.3s						
KUR				*e*S	**Sn**	**11 20 12.7**	**+0.4**
KUR				A	A	11 20 12.9	
	comp=N,240nm,0.3s						
KUR				A	A	11 20 12.9	
	comp=N,190nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**1.05**	**249**	*c* *i*PN	**Pn**	**11 19 55.7**	**+0.7**
YUK				*i* S	**Sn**	**11 20 13.8**	**-0.2**
YUK				pmax	pmax		
	comp=N,74nm,0.2s						
YUK				pmax	pmax		
	comp=Z,458nm,0.2s						
YUK				smax	smax		
	comp=N,1μm,0.6s						
YUK				smax	smax		
	comp=E,344nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**1.05**	**249**	*i* P	**Pn**	**11 19 55.9**	**+0.9**
YUK				AMB	AMB	11 19 56.8	
	comp=E,120nm,0.4s						
YUK				*i* S	**Sn**	**11 20 14.4**	**+0.4**
YUK				A	A	11 20 14.8	
	comp=E,1μm,0.5s						
YUK				A	A	11 20 14.8	
	comp=E,340nm,0.5s						
GRPR	**Tuman**	**1.13**	**249**	⇑*i*PN	**Pn**	**11 19 56.4**	**+0.7**
GRPR				*i* S	**Sn**	**11 20 14.4**	**-0.8**
GRPR				pmax	pmax		
	comp=Z,348nm,0.3s						
GRPR				pmax	pmax		
	comp=N,192nm,0.1s						
GRPR				pmax	pmax		
	comp=E,123nm,0.1s						
GRPR				smax	smax		
	comp=E,734nm,0.4s						
GRPR				smax	smax		
	comp=N,329nm,0.2s						
GRPR	**Tuman**	**1.13**	**249**	*i* P	**Pn**	**11 19 56.5**	**+0.8**
GRPR				AMB	AMB	11 19 57.0	
	comp=N,90nm,0.4s						
GRPR				*i* S	**Sn**	**11 20 15.2**	**0.0**
GRPR				A	A	11 20 16.0	
	comp=N,330nm,0.4s						
GRPR				A	A	11 20 16.0	
	comp=N,730nm,0.4s						
GLVR	**Golovnino**	**1.40**	**242**	*c* *i*PN	**Pn**	**11 19 59.8**	**+1.4**
GLVR				*e*S	**Sn**	**11 20 20.7**	**+0.7**
GLVR				smax	smax		
	comp=N,2μm,0.3s						
GLVR				smax	smax		
	comp=E,733nm,0.3s						
GLVR	**Golovnino**	**1.40**	**242**	*i* P	**Pn**	**11 19 59.8**	**+1.4**
GLVR				*e*S	**Sn**	**11 20 20.3**	**+0.3**
GLVR				A	A	11 20 21.0	
	comp=E,260nm,0.4s						
GLVR				A	A	11 20 21.0	
	comp=E,730nm,0.4s						
NEM2	**Nemuro 2**	**1.50**	**226**	P	**Pn**	**11 20 00.1**	**+0.6**
NEM2				*e*S	**Sn**	**11 20 20.7**	**-1.1**
NMR	**Nemuro--Hokkai**	**1.50**	**227**	⇑*i*PN	**Pn**	**11 20 00.1**	**+0.6**
NMR				*i* S	**Sn**	**11 20 20.8**	**-1.1**
NMR	**Nemuro--Hokkai**	**1.50**	**227**	*i* P	**Pn**	**11 20 00.2**	**+0.7**
NMR				*i* S	**Sn**	**11 20 20.8**	**-1.1**
JRA	**Rausu**	**1.59**	**253**	P	**Pn**	**11 20 01.3**	**+0.9**
JNSB	**Nemuroshibetsu**	**1.72**	**249**	P	**Pn**	**11 20 03.1**	**+1.2**
JNK	**Nakash**	**1.99**	**246**	P	**Pn**	**11 20 06.0**	**+1.0**
JKHN	**Kushirohamanak**	**2.00**	**229**	P	**Pn**	**11 20 05.9**	**+0.8**
JKHN				*e*S	**Sn**	**11 20 31.4**	**-0.5**
JAK	**Akkeshi**	**2.32**	**233**	P	**Pn**	**11 20 09.6**	**+0.7**
JAK				*e*S	**Sn**	**11 20 37.3**	**-1.3**
JTKR	**Abashiri--Toko**	**2.43**	**261**	P	**Pn**	**11 20 10.9**	**+0.7**
JTKR				*e*S	**Sn**	**11 20 40.8**	**-0.2**
JAR	**Ashorobuto**	**2.74**	**247**	P	**Pn**	**11 20 15.8**	**+1.7**
JOB	**Onbets**	**2.89**	**240**	P	**Pn**	**11 20 17.3**	**+1.3**
JOB				*e*S	**Sn**	**11 20 51.0**	**-0.3**
JKK2	**Kamakawa 2**	**3.27**	**262**	P	**Pn**	**11 20 22.2**	**+1.4**
JCH	**Churui**	**3.34**	**239**	P	**Pn**	**11 20 22.5**	**+0.8**
JCH				*e*S	**Sn**	**11 21 00.2**	**-1.4**
JKA	**Kamikawa-asahi**	**3.34**	**266**	*e*P	**Pn**	**11 20 22.9**	**+1.2**
ASAJ	**Asahikawa**	**3.34**	**267**	P	**Pn**	**11 20 22.9**	**+1.2**
	comp=E,2.1nm,0.3s,baz=86,slow=14,SNR=27						
ASAJ				S	Sn	11 21 13.3	+12
	comp=E,0.4nm,0.3s,baz=115,slow=32,SNR=1.3						
ERM	**Erimo**	**3.82**	**233**	*e*P	**Pn**	**11 20 30.1**	**+2.1**
ERM				*e*S	**Sn**	**11 21 14.0**	**+1.2**
JWK2	**Keihoku**	**3.90**	**285**	P	**Pn**	**11 20 30.6**	**+1.7**
JNBK	**Urakawa-nobuka**	**3.90**	**238**	P	**Pn**	**11 20 29.1**	**+0.1**
YSS	**Yuzh-Sakhalins**	**4.03**	**311**	*e*P	**Pn**	**11 20 30.6**	**-0.1**
YSS				AMB	AMB	11 20 30.8	
	comp=E,10.0nm,0.3s						
EKMR	**Ekimchan**	**12.78**	**318**	*e*P	**Pn**	**11 22 24.8**	**-1.7**
ULN	**Ulaanbaatar**	**27.83**	**291**	*ce*P	P	11 25 16.9	+11
ULN				pmax	pmax		
	comp=Z,8.0nm,1.7s						
H11N2	**WAKE ISLAND Hy**	**29.57**	**140**	T	T	11 56 36.8	
	baz=329,slow=75,SNR=13						
H11N1	**WAKE ISLAND Hy**	**29.58**	**140**	T	T	11 56 35.6	
	baz=329,slow=75,SNR=10						
H11N3	**WAKE ISLAND Hy**	**29.59**	**140**	T	T	11 56 41.8	
	baz=329,slow=75,SNR=11						
H11S1	**WAKE ISLAND Hy**	**30.55**	**142**	T	T	11 57 45.5	
	baz=330,slow=76,SNR=27						
H11S3	**WAKE ISLAND Hy**	**30.55**	**142**	T	T	11 57 45.2	
	baz=330,slow=76,SNR=23						
H11S2	**WAKE ISLAND Hy**	**30.57**	**142**	T	T	11 57 46.8	
	baz=330,slow=76,SNR=14						
ILAR	**Eielson Array**	**40.92**	**37**	P	**P**	**11 26 59.3**	**+1.6**
	comp=Z,0.4nm,0.4s,baz=275,slow=9.6,SNR=13						
INK	**Inuvik**	**45.80**	**31**	P	**P**	**11 27 37.4**	**+0.7**
	comp=Z,1.4nm,0.4s,baz=290,slow=5.6,SNR=20						
YKA	**Yellowknife Ar**	**55.22**	**34**	P	**P**	**11 28 48.5**	**+1.1**
	comp=Z,0.4nm,0.7s,baz=302,slow=6.6,SNR=8.2						
FINES	**FINESS Array B**	**64.31**	**333**	P	**P**	**11 29 47.9**	**-1.6**
	comp=Z,1.0nm,0.5s,baz=58,slow=7.2,SNR=6.5						
TXAR	**Lajitas Array**	**82.24**	**56**	P	**P**	**11 31 34.3**	**-1.0**
	comp=Z,0.3nm,0.8s,baz=312,slow=6.8,SNR=1.7						

IDC 14 11:32:28.1±19.0, 15°.87S×173°.70W, h417^{km}±221^{km}, mb2.9/5, mb1 3.3/5, mb1mx3.1/29, mbtmp3.7/5, MS3.3/2, Ms1 3.3/2, ms1mx2.9/5, Error ellipse: s-maj=172.1km s-min=41.5km az=150.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**19.75**	**249**	LR	LR	11 43 06.2	
	comp=Z,52nm,18.4s,baz=90,slow=32						
URZ	**Urewera**	**23.73**	**198**	LR	LR	11 45 11.9	
	comp=Z,85nm,18.5s,baz=31,slow=32						
WRA	**Warramunga Arr**	**49.45**	**257**	P	P	11 40 38.5	-0.2
	0.6nm,0.7s,baz=97,slow=7.8,SNR=12						
ASAR	**Alice Springs**	**49.69**	**252**	P	P	11 40 40.4	0.0
	3.3nm,0.7s,baz=87,slow=7.9,SNR=44						
NVAR	**Mina Array Bea**	**74.87**	**42**	P	P	11 43 24.8	-0.2
	0.8nm,0.9s,baz=225,slow=8.7,SNR=5.1						
ILAR	**Eielson Array**	**82.96**	**11**	P	P	11 44 06.9	-0.6
	0.4nm,0.9s,baz=224,slow=6.3,SNR=2.7						
YKA	**Yellowknife Ar**	**90.64**	**23**	P	P	11 44 45.7	+1.4
	0.1nm,0.5s,baz=228,slow=4.1,SNR=1.9						
FINES	**FINESS Array B**	**132.34**	**347**	PKP	PKPdf	11 50 51.9	-1.3
	1.4nm,0.8s,baz=17,slow=1.5,SNR=3.5						

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*SJA **14** 11:46:42.8±0.7, 23°.93S×66°.94W, h222^{km}±5^{km}, ML4.3, MW4.1*

*VAO **14** 11:46:43.5±0.3, 23°.98S×67°.02W, h217^{km}±4^{km}, mb4.2*

*NEIC **14** 11:46:43.3±2.0, 23°.97S±0°.02×66°.89W±0°.10, h204^{km}±6^{km}, mb4.5/42, Md4.6(SJA), Error ellipse: s-maj=13.2km s-min=2.3km az=83.0*

*IDC **14** 11:46:43.6±1.0, 23°.82S×66°.75W, h192^{km}±7^{km}, mb3.7/12, mb1 3.8/18, mb1mx3.7/33, mbtmp4.2/18, MS3.3/1, Ms1 3.3/1, ms1mx2.3/31, Error ellipse: s-maj=16.8km s-min=11.3km az=19.0*

*GUC **14** 11:46:45.1±0.6, 23°.87S×67°.38W, h229^{km}±15^{km}, ML4.9*

ISC 14 11:46:43.6±0.6, 23°.94S±0°.04×66°.94W±0°.04, h204^{km}±6^{km}, n172, σ1^{s}.08/198, mb4.5/31, 11C, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLA	**San Lorenzo**	**1.53**	**121**	*e*P	**Pn**	**11 47 19.4**	**+1.3**
SLA				*e*S	**S**	**11 47 46.5**	**+1.9**
SLA				IAML		11 47 48.0	
	comp=Z,200nm,0.7s						
YJA	**Yavi**	**2.19**	**37**	*e*P	**Pn**	**11 47 26.0**	**+1.0**
YJA				*e*S	**S**	**11 47 58.4**	**+1.8**
YJA				IAML		11 48 03.9	
	comp=Z,40nm,1.9s						
LVC	**Limon Verde**	**2.24**	**306**	P	**Pn**	**11 47 26.3**	**+0.9**
	comp=Z,70nm,0.3s,baz=127,slow=6.2,SNR=203						
LVC				S	**S**	**11 47 58.0**	**+0.7**
	comp=Z,139nm,0.3s,baz=258,slow=21,SNR=9.8						
LVC	**Limon Verde**	**2.24**	**306**		**Pn**	**11 47 26.6**	**+1.2**
LVC	**Limon Verde**	**2.24**	**306**	*e*P	**Pn**	**11 47 26.6**	**+1.2**
LVC				*e*S	**S**	**11 47 58.7**	**+1.4**
LVC				IAML		11 48 01.7	
	comp=Z,380nm,0.8s						
LVC	**Limon Verde**	**2.24**	**306**	*e*P	**Pn**	**11 47 26.6**	**+1.2**
LVC				*e*S	**S**	**11 47 57.8**	**+0.5**
FSA	**Cafayete**	**2.33**	**158**	*e*P	**Pn**	**11 47 26.9**	**+0.8**
PB15	**IPOC Station P**	**2.43**	**287**	⇑*i*P	**Pn**	**11 47 28.5**	**+1.3**
PB15				*i* S	**S**	**11 48 01.2**	**+0.6**
PB15	**IPOC Station P**	**2.43**	**287**		**Pn**	**11 47 28.6**	**+1.3**
PB15	**IPOC Station P**	**2.43**	**287**	*e*P	**Pn**	**11 47 28.6**	**+1.3**
PB15				*e*S	**S**	**11 48 01.4**	**+0.7**
PB15				IAML		11 48 03.5	
	comp=Z,17μm,0.2s						
GO02	**Mina Guanaco**	**2.70**	**243**	⇑*i*P	**Pn**	**11 47 31.7**	**+1.3**
GO02				*i* S	**S**	**11 48 07.6**	**+1.3**
GO02				IAML		11 48 08.6	
	comp=E,4μm,0.4s						
GO02	**Mina Guanaco**	**2.70**	**243**		**Pn**	**11 47 31.7**	**+1.3**
PB06	**IPOC Station P**	**2.71**	**296**	⇑*i*P	**Pn**	**11 47 31.4**	**+1.1**
PB06				*i* S	**S**	**11 48 06.1**	**-0.1**
PB06				IAML		11 48 07.8	
	comp=N,4μm,0.5s						
PB06	**IPOC Station P**	**2.71**	**296**		**Pn**	**11 47 31.5**	**+1.1**
PB06	**IPOC Station P**	**2.71**	**296**	*e*P	**Pn**	**11 47 31.4**	**+1.1**
PB06				*e*S	**S**	**11 48 06.4**	**+0.3**
PB06				IAML		11 48 08.5	
	comp=Z,2μm,0.1s						
PB09	**IPOC Station P**	**3.01**	**315**	⇑*i*P	**Pn**	**11 47 35.0**	**+1.2**
PB09				*i* S	**S**	**11 48 12.5**	**+0.1**
PB09				IAML		11 48 15.3	
	comp=N,796nm,0.4s						
PB09	**IPOC Station P**	**3.01**	**315**		**Pn**	**11 47 34.8**	**+1.0**
PB09	**IPOC Station P**	**3.01**	**315**	*e*S	**S**	**11 48 13.2**	**+0.9**
PB09				IAML		11 48 15.2	
	comp=Z,727nm,0.4s						
PB05	**IPOC Station P**	**3.18**	**289**	⇑*i*P	**Pn**	**11 47 36.3**	**+0.5**
PB05				*i* S	**S**	**11 48 14.5**	**-1.5**
PB05				IAML		11 48 17.5	
	comp=E,761nm,0.4s						
PB05	**IPOC Station P**	**3.18**	**289**	*e*P	**Pn**	**11 47 36.3**	**+0.5**
PB05				*e*S	**S**	**11 48 15.3**	**-0.7**
PB05				IAML		11 48 27.3	
	comp=Z,464nm,0.3s						
AHML	**Horco Molle**	**3.19**	**153**	*e*P	**Pn**	**11 47 36.3**	**+0.6**
AHML				*e*S	**S**	**11 48 16.4**	**+0.3**
AHML				IAML		11 48 19.3	
	comp=Z,39nm,0.8s						
PB03	**IPOC Station P**	**3.20**	**305**	⇑*i*P	**Pn**	**11 47 36.7**	**+0.6**
PB03				*i* S	**S**	**11 48 15.2**	**-1.3**
PB03				IAML		11 48 18.0	
	comp=E,2μm,0.1s						
PB03	**IPOC Station P**	**3.20**	**305**	*e*P	**Pn**	**11 47 36.7**	**+0.6**
PB03				*e*S	**S**	**11 48 15.3**	**-1.1**
PB03				IAML		11 48 16.8	
	comp=Z,2μm,0.2s						
PB14	**IPOC Station P**	**3.23**	**257**		**Pn**	**11 47 37.3**	**+0.7**
PB14	**IPOC Station P**	**3.23**	**257**	*e*P	**Pn**	**11 47 37.2**	**+0.7**
PB14				*e*S	**S**	**11 48 17.5**	**+0.1**
PB14				IAML		11 48 19.9	
	comp=Z,945nm,0.4s						
PB10	**IPOC Station P**	**3.34**	**277**	⇑*i*P	**Pn**	**11 47 38.4**	**+1.0**
PB10				*i* S	**S**	**11 48 18.5**	**-0.6**
PB10				IAML		11 48 21.5	
	comp=N,824nm,0.3s						
PB10	**IPOC Station P**	**3.34**	**277**		**Pn**	**11 47 38.5**	**+1.0**
PB10	**IPOC Station P**	**3.34**	**277**	*e*P	**Pn**	**11 47 38.4**	**+1.0**
PB10				*e*S	**S**	**11 48 19.0**	**-0.1**
PB10				IAML		11 48 23.3	
	comp=Z,650nm,0.4s						
PB04	**IPOC Station P**	**3.36**	**298**	⇑*i*P	**Pn**	**11 47 38.4**	**+0.5**
PB04				*i* S	**S**	**11 48 18.4**	**-1.4**
PB04				IAML		11 48 22.9	
	comp=E,2μm,0.3s						
PB04	**IPOC Station P**	**3.36**	**298**		**Pn**	**11 47 38.4**	**+0.5**
PB04	**IPOC Station P**	**3.36**	**298**	*e*P	**Pn**	**11 47 38.4**	**+0.5**
PB04				*e*S	**S**	**11 48 19.0**	**-0.8**
PB04				IAML		11 48 22.6	
	comp=Z,1μm,0.2s						
PB07	**IPOC Station P**	**3.50**	**308**	⇑*i*P	**Pn**	**11 47 40.0**	**+0.4**
PB07				*i* S	**S**	**11 48 21.3**	**-1.6**
PB07				IAML		11 48 22.8	
	comp=N,2μm,0.3s						
PB07	**IPOC Station P**	**3.50**	**308**		**Pn**	**11 47 39.8**	**+0.2**
PB07	**IPOC Station P**	**3.50**	**308**	*e*S	**S**	**11 48 21.9**	**-1.0**
PB07				IAML		11 48 24.1	
	comp=Z,1μm,0.3s						
AC02	**Maricunga**	**3.50**	**214**		**Pn**	**11 47 41.3**	**+1.4**
PB01	**IPOC Station P**	**3.72**	**320**	⇑*i*P	**Pn**	**11 47 42.3**	**0.0**
PB01				*i* S	**S**	**11 48 26.0**	**-1.7**
PB01				IAML		11 48 31.3	
	comp=E,688nm,0.1s						
PB01	**IPOC Station P**	**3.72**	**320**		**Pn**	**11 47 42.0**	**-0.3**
AC01	**Pan de Azucar**	**3.98**	**236**	⇑*i*P	**Pn**	**11 47 45.1**	**-0.2**
AC01				*i* S	**S**	**11 48 31.6**	**-1.7**
AC01				IAML		11 48 32.8	
	comp=E,981nm,0.4s						
AC01	**Pan de Azucar**	**3.98**	**236**	Pn	**Pn**	**11 47 45.2**	**-0.2**
PATCX	**Punta Patache**	**4.29**	**316**	Pn	**Pn**	**11 47 49.0**	**-0.4**
PB08	**IPOC Station P**	**4.30**	**331**		**Pn**	**11 47 50.3**	**+0.6**
TA01	**Diego Aracena**	**4.50**	**318**		**Pn**	**11 47 51.8**	**0.0**
GO03	**Copiap**	**4.70**	**218**		**Pn**	**11 47 53.8**	**-0.5**
GO03	**Copiap**	**4.70**	**218**	*e*P	**Pn**	**11 47 54.2**	**-0.2**
GO03				*e*S	**S**	**11 48 48.1**	**-1.6**
PSGCX	**Pisagua**	**5.23**	**325**	Pn	**Pn**	**11 47 59.3**	**-2.0**
MNMC	**Minye Minye**	**5.38**	**332**	Pn	**Pn**	**11 48 03.2**	**-0.1**
AC04	**Llanos de Chal**	**5.64**	**220**	Pn	**Pn**	**11 48 05.3**	**-1.1**
AC05	**El Transito**	**5.72**	**211**		**Pn**	**11 48 07.2**	**-0.2**
LCO	**Las Campanas**	**6.07**	**213**		**Pn**	**11 48 11.0**	**-1.1**
CO01	**Juntas del Tor**	**6.64**	**204**	Pn	**Pn**	**11 48 20.0**	**+0.6**
GO04	**Tololo Observa**	**7.10**	**208**		**Pn**	**11 48 23.8**	**-1.6**
CO03	**El Pedregal**	**7.64**	**205**	Pn	**Pn**	**11 48 31.3**	**-0.9**
LPAZ	**La Paz**	**7.69**	**351**	P	**Pn**	**11 48 32.7**	**-0.8**
	comp=E,1.2nm,0.3s,baz=113,slow=4.6,SNR=25						
LPAZ				S	**S**	**11 49 57.8**	**-3.1**
	comp=E,0.5nm,0.3s,baz=281,slow=18,SNR=4.5						
LPAZ	**La Paz**	**7.69**	**351**		**Pn**	**11 48 32.8**	**-0.7**
LPAZ	**La Paz**	**7.69**	**351**	*e*P	**Pn**	**11 48 34.1**	**+0.6**
CO02	**Combarbal**	**8.08**	**206**	Pn	**Pn**	**11 48 37.5**	**-0.5**
CPUP	**Villa Florida**	**9.03**	**107**	P	**Pn**	**11 48 48.6**	**-1.6**
	comp=E,0.5nm,0.3s,baz=288,slow=11,SNR=23						
CPUP	**Villa Florida**	**9.03**	**107**		**Pn**	**11 48 48.9**	**-1.4**
CPUP	**Villa Florida**	**9.03**	**107**	*e*P	**Pn**	**11 48 49.1**	**-1.2**
SIV	**San Ignacio**	**9.64**	**36**	P	**Pn**	**11 48 56.2**	**-2.1**
	comp=E,1.9nm,0.3s,baz=223,slow=13,SNR=37						
SIV				S	S	11 50 36.2	-10
	comp=E,0.2nm,0.3s,baz=265,slow=13,SNR=1.6						
ITQB	**Itaqui**	**10.84**	**124**	*e*P	**Pn**	**11 49 12.8**	**-0.7**
RFA	**San Rafael**	**10.88**	**187**	*e*P	**Pn**	**11 49 13.7**	**-0.4**
RFA				*e*S	S	11 50 53.2	-23
AQDB	**Aquidauana**	**10.97**	**74**	*e*P	**Pn**	**11 49 14.6**	**-0.7**
VILB	**Vilhena**	**12.65**	**31**	*e*P	**P**	**11 49 38.8**	**-1.6**
TRCB	**Terra Rica**	**13.19**	**88**	*e*P	**P**	**11 49 45.3**	**-1.0**

PTGB	Pitanga	13.59	96	*e*P	P	11 49 50.2	-0.5
CPSB	Cacapava Do Su	13.63	121	*e*P	Pn	11 49 48.0	-0.8
ITAB	Concordia	13.76	107	*e*P	Pn	11 49 50.2	-0.2
ETMB	Extrema	14.06	3	*e*P	Pn	11 49 53.7	-0.5
PLTB	Pedras Altas	14.13	126	*e*P	Pn	11 49 54.2	-0.8
PCMB	Pacaembu	14.65	84	*e*P	P	11 50 02.8	+0.3
SAML	Samuel	15.33	14		P	11 50 09.2	-0.8
SAML	Samuel	15.33	14	*e*P	Pn	11 50 09.0	-0.8
CNLB	Canela	15.35	114	*e*P	P	11 50 09.9	-0.3
FRTB	Fartura	15.94	91	*e*P	Pn	11 50 16.8	-0.3
ITRB	Iturama	15.96	78	*e*P	Pn	11 50 17.9	+0.5
ARAG	Araguaiana, MT	16.41	63	*e*P	Pn	11 50 22.0	-0.8
PLCA	Paso Flores	17.02	189	P	Pn	11 50 30.6	+0.7
	comp=E,0.1nm,0.3s,baz=5.9,slow=14,SNR=3.1						
PLCA	Paso Flores	17.02	189	P	P	11 50 27.3	-1.1
PLCA	Paso Flores	17.02	189	*e*P	P	11 50 27.4	-1.1
CZSB	Cruzeiro do Su	17.04	340	*e*P	P	11 50 28.2	-0.6
BB19B	Bebedouro	17.25	84	*e*P	P	11 50 30.5	-0.7
SPB	Sao Paulo	17.86	93	P	P	11 50 37.2	-0.6
SPB	Sao Paulo	17.86	93	*e*P	Pn	11 50 38.1	-1.7
VAO	Valinhos	18.35	91	*e*P	P	11 50 42.7	-0.4
IPMB	Ipameri, GO	18.46	75	*e*P	Pn	11 50 44.7	-2.3
SNDB	Serra Nova Dou	19.03	54	*e*P	P	11 50 49.9	-0.6
PARB	Paraibuna	19.54	93	*e*P	P	11 50 55.5	-0.5
BDFB	Brasilia	19.61	69	P	P	11 50 55.6	-1.2
	comp=E,1.1nm,0.3s,baz=259,slow=9.8,SNR=8.8						
BDFB	Brasilia	19.61	69	P	P	11 50 56.3	-0.5
BDFB				IAmb	IAmb	11 50 59.7	
	comp=Z,7.6nm,0.6s						
NPGB	Novo Progresso	20.14	35	*e*P	P	11 51 00.4	-2.0
PEXB	Peixe	21.25	60	*e*P	P	11 51 13.0	-1.0
ITTB	Itaituba	22.26	31	*e*P	P	11 51 23.0	-1.0
JANB	Januaria	23.06	72	*e*P	P	11 51 30.5	-0.9
SMTB	Santa Maria do	23.81	54	*e*P	P	11 51 37.5	-0.7
SDBA	SAO DESIDERIO	23.83	65	*e*P	P	11 51 37.4	-1.0
PTGA	Pitinga	24.04	17	P	P	11 51 39.5	-0.7
	comp=Z,1.9nm,0.3s,baz=320,slow=22,SNR=4.6						
PTGA	Pitinga	24.04	17	P	P	11 51 40.0	-0.2
PTGA				IAmb	IAmb	11 52 29.6	
	comp=Z,19nm,1.7s						
BSFB	Barra de Sao F	24.81	83	*e*P	P	11 51 46.5	-0.6
RIB01	Linhares ES	25.09	85	*e*P	P	11 51 49.1	-0.5
NAN01	Guarapari, ES	25.75	81	*e*P	P	11 51 54.7	-1.0
FLOC	Florencia	26.74	340	*e*P	P	11 52 05.8	+1.2
GUVC	San Jose del G	26.90	347	*e*P	P	11 52 05.8	-0.1
GO09	Cerro Castillo	27.61	187	P	P	11 52 10.4	-1.4
BBAC	Balboa, Cauca	27.68	337	*e*P	P	11 52 15.8	+2.7
GDU01	Guandu, BA	27.77	73	*e*P	P	11 52 12.5	-1.2
EFI	East Falkland	28.52	168	P	P	11 52 18.4	-1.5
GO10	Punta Arenas	29.34	185	P	P	11 52 26.2	-1.0
RREF	El Recreo	29.81	343	*e*P	P	11 52 35.9	+3.5
PLMC	San Jos del P	30.08	341	*e*P	P	11 52 34.1	-0.1
GUY2C	Guyana, Caldas	30.12	343	*e*P	P	11 52 36.2	+1.2
NORC	Norcasia	30.32	344	*e*P	P	11 52 37.6	+1.4
CBOC	Ciudad Bolivar	30.91	342	*e*P	P	11 52 41.4	-0.2
PTBC	PUERTO BERRIO,	31.17	345	*e*P	P	11 52 41.9	-1.7
UREC	San Jos de Ur	32.59	344	*e*P	P	11 52 57.6	+1.6
SDV	Santo Domingo	32.82	353	P	P	11 52 57.6	-0.6
RCBR	Riachuelo	34.85	64	P	P	11 53 15.3	-0.3
RCBR				IAmb	IAmb	11 53 54.2	
	comp=Z,29nm,1.3s						
061Z	Ochoppi	51.32	344	P	P	11 55 29.0	+1.9
SNAA	Sanae	59.39	161	LR	LR	12 21 05.7	
	comp=Z,25nm,18.9s,baz=354,slow=35						
X48A	Hartselle	61.13	341	P	P	11 56 36.9	+0.6
X48A				IAmb	IAmb	11 56 37.8	
	comp=Z,8.5nm,0.8s						
CPCT	Cooper Cave	61.37	344	P	P	11 56 38.3	+0.4
CPCT				IAmb	IAmb	11 58 47.2	
	comp=Z,33nm,2.0s						
SWET	Sewanee	61.52	342	P	P	11 56 39.6	+0.6
SWET				IAmb	IAmb	11 56 40.3	
	comp=Z,9.9nm,1.0s						
PLAL	Pickwick Lake	61.93	340	P	P	11 56 41.9	+0.2
PLAL				IAmb	IAmb	11 57 14.4	
	comp=Z,21nm,1.9s						
V48A	Smith Brothers	62.26	342	P	P	11 56 44.3	+0.4
V48A				IAmb	IAmb	11 56 44.8	
	comp=Z,5.9nm,0.6s						
W45A	Hickory Valley	62.44	340	P	P	11 56 45.7	+0.7
CLTN	Cedars of Leba	62.45	342	P	P	11 56 45.9	+0.8
CLTN				IAmb	IAmb	11 56 46.4	
	comp=Z,4.4nm,0.7s						
WVT	Waverly	62.92	341	P	P	11 56 47.0	-1.1
WVT				IAmb	IAmb	11 56 49.1	
	comp=Z,12nm,0.7s						
T47A	Sharon Grove	63.51	342	P	P	11 56 52.3	+0.3
T47A				IAmb	IAmb	11 56 53.5	
	comp=Z,7.0nm,0.8s						
TX31	Lajitas Ar. Si	63.66	324	P	P	11 56 54.3	+1.0
TXAR	Lajitas Array	63.66	324	P	P	11 56 55.0	+1.7
	comp=Z,1.0nm,0.8s,baz=155,slow=8.3,SNR=13						
PBMO	Poplar Bluff	64.33	339	P	P	11 56 56.6	-0.8
PBMO				IAmb	IAmb	11 56 58.9	
	comp=Z,11nm,0.6s						
FVM	French Village	65.43	340	P	P	11 57 05.1	+0.7
FVM				IAmb	IAmb	11 57 05.8	
	comp=Z,8.2nm,0.7s						
DBIC	Dimbokro	67.73	72	P	P	11 57 19.9	+0.4
	comp=Z,1.5nm,0.5s,baz=224,slow=6.1,SNR=2.0						
P38A	Dawn	67.94	338	P	P	11 57 21.0	+0.7
ANMO	Albuquerque	69.52	326	P	P	11 57 31.4	+1.0
	comp=Z,2.0nm,0.7s,baz=137,slow=6.6,SNR=14						
ECSD	EROS Data Cent	72.64	338	P	P	11 57 49.8	+1.1
ECSD				IAmb	IAmb	11 57 50.5	
	comp=Z,8.6nm,1.2s						
DRLN	Deer Lake	73.35	6	P	P	11 57 53.8	+1.1
F36A	Milaca	73.55	341	P	P	11 57 53.0	-0.9
F36A				IAmb	IAmb	11 57 55.4	
	comp=Z,4.8nm,0.7s						
PFO	Pinyon Flats O	74.13	319	P	P	11 57 59.7	+1.9
	comp=Z,1.3nm,1.0s,baz=89,slow=6.4,SNR=4.0						
B35A	Bob, Littlefor	75.87	342	P	P	11 58 08.8	+1.6
B35A				IAmb	IAmb	11 58 08.8	
	comp=Z,6.2nm,0.7s						
PSUT	Pine Spring	76.12	324	P	P	11 58 09.8	+0.6
TOA0	Torodi Ar. Sit	76.50	69	P	P	11 58 10.8	-0.7
TORD	Torodi Ar. Bea	76.50	69	P	P	11 58 11.3	-0.2
	comp=Z,2.3nm,0.7s,baz=257,slow=4.9,SNR=11						
TORD	Torodi Ar. Bea	76.50	69	P	P	11 58 10.9	-0.6
TCUT	Toone Canyon	76.76	327	P	P	11 58 11.0	-1.7
TCUT				IAmb	IAmb	11 58 11.9	
	comp=Z,22nm,1.8s						
PD31	Pinedale Array	77.12	329	P	P	11 58 13.5	-1.2
PDAR	Pinedale Array	77.12	329	P	P	11 58 16.2	+1.5
	comp=Z,0.5nm,0.5s,baz=126,slow=7.1,SNR=8.5						
PDAR	Pinedale Array	77.12	329	P	P	11 58 13.4	-1.2
ULM	Lac du Bonnet	78.19	342	P	P	11 58 20.8	+0.7
	comp=Z,4.3nm,0.6s,baz=158,slow=6.3,SNR=9.0						
ULM	Lac du Bonnet	78.19	342	P	P	11 58 21.2	+1.1
ULM				IAmb	IAmb	11 58 21.6	
	comp=Z,4.8nm,0.7s						
REDW	Red Top Meadow	78.19	329	P	P	11 58 20.0	-0.6
REDW				IAmb	IAmb	11 58 36.5	
	comp=Z,16nm,1.9s						
LOHW	Long Hollow	78.26	329	P	P	11 58 22.2	+1.3
LOHW				IAmb	IAmb	11 58 24.7	
	comp=Z,19nm,1.9s						
OMMB	Old Mammoth Mi	78.37	320	P	P	11 58 21.4	-0.4
OMMB				IAmb	IAmb	11 58 25.9	
	comp=Z,18nm,2.0s						
ELK	Elko	78.45	325	P	P	11 58 23.3	+1.2
	comp=Z,0.7nm,0.7s,baz=202,slow=4.1,SNR=4.8						
NVAR	Mina Array Bea	78.52	321	P	P	11 58 24.4	+1.8
	comp=Z,0.4nm,0.6s,baz=153,slow=5.4,SNR=5.5						
LAO	LASA Array	78.76	334	P	P	11 58 22.4	-1.0
RLMT	Red Lodge	78.81	331	P	P	11 58 24.1	+0.1
YNE	Yellowstone No	79.06	330	P	P	11 58 25.5	+0.2
BCYI	Bear Canyon	80.12	328	P	P	11 58 30.0	-1.0
MCMT	McKenzie Canyo	80.24	329	P	P	11 58 32.2	+0.6
BOSA	Boshof	80.71	117	P	P	11 58 35.4	+0.8
	comp=Z,3.5nm,0.8s,baz=231,slow=4.3,SNR=5.7						
C09A	Chrisman Ranch	84.98	328	P	P	11 58 55.7	-0.1
C09A				IAmb	IAmb	11 58 58.5	
	comp=Z,11nm,1.2s						
FCC	Fort Churchill	85.41	346	P	P	11 58 59.0	+1.5
YKA	Yellowknife Ar	94.08	340	P	P	11 59 39.4	+1.2
	comp=Z,1.3nm,0.5s,baz=129,slow=5.2,SNR=42						
ASAR	Alice Springs	128.53	205	PKP	PKiKP	12 05 28.1	+0.5
	comp=Z,1.1nm,0.7s,baz=144,slow=2.1,SNR=16						
WRA	Warramunga Arr	131.71	207	PKP	PKiKP	12 05 34.4	+0.4
	comp=Z,0.8nm,0.5s,baz=160,slow=1.8,SNR=20						
WRA				SKPbc	SKPab	12 08 41.5	+1.2
	comp=Z,1.1nm,1.0s,baz=149,slow=3.0,SNR=4.9						
PETK	Petropavlovsk-	135.59	323	PKP	PKiKP	12 05 41.3	+0.5
	comp=Z,1.6nm,0.9s,baz=51,slow=7.8,SNR=4.5						
ZALV	Zalesovo Beam	143.31	28	PKP	PKPdf	12 05 51.6	-1.5
	comp=Z,2.4nm,0.5s,baz=292,slow=4.2,SNR=12						
ZALV	Zalesovo Beam	143.31	28		PKPdf	12 05 52.6	-0.6
MKAR	Makanchi Array	146.44	39	PKPbc	PKPab	12 06 00.6	-1.4
	comp=Z,4.5nm,0.6s,baz=327,slow=2.2,SNR=56						
MKAR	Makanchi Array	146.44	39		PKPab	12 06 00.9	-0.9
SONM	Songino Array	155.57	11	PKPab	PKPab	12 06 40.8	+1.0
	comp=Z,1.0nm,0.7s,baz=317,slow=5.6,SNR=6.2						

*PRU **14** 11:48:11.1±0.0, 51.°45N×16.°10E, h0^{km}*
*VIE **14** 11:48:12.8±0.8, 51.°31N×16.°01E, h0^{km}, mb2.3/3, ml2.7/4, Error ellipse: s-maj=8.0km s-min=5.1km az=56.0 74 km WNW of Wroclaw Suspected Mining induced.*
ISC 14 11:48:09.4±0.9**, 51.°53N**±0.°03×**16.°07E**±0.°03**, h0**^{km}**, n29, σ1.**^{s}**13**/60**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	Ksiaz	0.70	168	*i* Pg	Pg	11 48 23.2	+0.4
KSP				*e*Sg	Sg	11 48 31.7	-0.1
CHVC	Chvalec	0.94	181	*e*PG	Pg	11 48 27.6	+0.2
CHVC				*e*SG	Sg	11 48 39.4	-0.1
	comp=Z,28nm,0.5s						
OSTC	Ostas	0.97	174	*e*PG	Pg	11 48 28.0	-0.1
OSTC				*e*SG	Sg	11 48 40.5	-0.2
	comp=Z,32nm,0.4s						
UPC	Upice	1.02	182	*e*PG	Pg	11 48 29.1	+0.1
UPC				*e*SG	Sg	11 48 41.4	-0.8
	comp=Z,76nm,0.5s						
DPC	Dobruska-Polom	1.19	172	*e*PG	Pg	11 48 31.9	-0.3
DPC				*e*SG	Sg	11 48 46.3	-1.2
	comp=Z,26nm,0.7s						
PVCC	Panska Ves	1.38	224	*e*PG	Pg	11 48 36.1	+0.3
PVCC				*e*SG	Sn	11 48 54.5	-0.3
	comp=Z,94nm,0.3s						
BRG	Berggiesshubel	1.49	245	Pg	Pn	11 48 38.3	+0.8
BRG				Sg	Sn	11 48 59.0	+1.5
BRG				Amp		11 48 59.5	
	comp=Z,35nm,0.4s						
KRLC	Kraliky	1.52	162	*e*PG	Pn	11 48 37.7	-0.2
KRLC				*e*SG	Sg	11 48 56.2	-2.1
	comp=Z,34nm,0.4s						
PRA	Prague	1.79	216	*e*SG	Sg	11 49 06.7	-0.2
	comp=Z,14nm,0.9s						
PRU	Pruhonice	1.82	213	*e*PG	Pn	11 48 42.8	+0.8
PRU				*e*SG	Sg	11 49 07.4	-0.4
	comp=Z,16nm,0.5s						
CLL	Collm	1.93	265	*e*Pn	Pn	11 48 44.0	+0.5
CLL				*e*Pg	Pb	11 48 46.0	+0.5
CLL				*i*		11 48 50.7	
CLL				*e*Sg	Sg	11 49 13.0	+1.5
	comp=Z,12nm,0.4s						
MORC	Moravsky Berou	1.99	151	*e*PN	Pn	11 48 43.7	-0.6
MORC				*e*SG	Sn	11 49 10.0	+0.1
OKC	Ostrava-Krasne	2.15	141	*e*PG	Pn	11 48 47.4	+0.9
OKC				*e*SG	Sb	11 49 16.3	0.0
	comp=Z,32nm,0.9s						
VRAC	Vranov	2.25	171	*e*PN	Pn	11 48 48.8	+0.9
VRAC				*e*SG	Sb	11 49 18.7	-0.5
TREC	Trest	2.26	190	*e*SG	Sg	11 49 20.6	-1.5
	comp=Z,16nm,0.5s						
PBCC	Pribram	2.27	216	*e*PG	Pb	11 48 51.6	+0.4
PBCC				*e*SG	Sg	11 49 21.7	-0.5
KRUC	Moravsky	2.48	175	*e*PN	Pn	11 48 51.4	+0.4
KRUC				*e*SG	Sg	11 49 27.4	-1.5
NKC	Novy Kostel	2.63	242	*e*PN	Pn	11 48 54.5	+1.3
NKC				*e*PG	Pg	11 48 59.4	-0.5
NKC				*e*SG	Sg	11 49 35.3	+1.3
	comp=Z,45nm,1.0s						
OJC	Ojcow	2.70	118	*e*Pg	Pg	11 49 02.6	+1.5
OJC				*e*Sg	Sg	11 49 36.9	+0.7
KHC	Kasperske Hory	2.88	215	*e*PN	Pn	11 48 57.3	+0.7
KHC				*e*PG	Pb	11 49 02.8	+1.1
KHC				*e*SN	Sn	11 49 29.5	-2.5
KHC				*e*SG	Sg	11 49 41.8	-0.1
	comp=Z,12nm,0.3s						
CKRC	Cesky Krumlov	2.94	203	*e*PN	Pn	11 48 58.2	+0.9
CKRC				*e*PG	Pb	11 49 03.2	+0.6
CKRC				*e*SG	Sg	11 49 42.5	-1.2
LANS	Liptovska Anna	3.22	136	*e*PG	Pb	11 49 09.5	+1.9
LANS				*e*SG	Sg	11 49 54.5	+1.5
MODS	Modra-Piesok	3.25	166	*e*PG	Pg	11 49 11.9	+0.2
MODS				*e*SG	Sg	11 49 53.2	-0.6
VYHS	Vyhne	3.52	148	*e*PG	Pg	11 49 15.3	-1.6
CONA	Conrad Observa	3.60	182	*i* Pn	Pn	11 49 07.2	+0.6
	comp=Z,1.2nm,0.3s						
CONA				*e*Pg	Pg	11 49 17.6	-0.9
	comp=Z,3.1nm,0.3s						
CONA				*e*Sg	Sg	11 50 03.9	-1.3
	comp=Z,6.5nm,0.3s						
BSD	Bornholm Skovb	3.66	350	*i* P	Pn	11 49 07.6	+0.3
BSD				*e*S	Sn	11 49 47.8	-3.3
BSD	Bornholm Skovb	3.66	350	*i* P	Pn	11 49 07.6	+0.3
BSD				*e*S	Sn	11 49 47.8	-3.3
MOA	Molln	3.86	198	*i* Pn	Pn	11 49 10.8	+0.8
	comp=Z,1.0nm,0.2s						
MOA				Sg	Sg	11 50 13.0	-0.5
	comp=Z,6.4nm,0.4s						
ARSA	Arzberg	4.29	185	*e*Sg	Sg	11 50 26.7	-0.6
	comp=Z,3.1nm,0.3s						

*ISK **14** 11:50:06.3, 33.°69N×34.°85E, h62^{km}, ML4.0/27*
*GII **14** 11:50:07.4±0.0, 33.°64N×34.°86E, h9^{km}, mb4.1/2, MD3.8/6, Mm3.5/7*
*NIC **14** 11:50:07.7±0.0, 33.°70N×34.°85E, h31^{km}±3^{km}, Ml4.0/7*
*GRAL **14** 11:50:08.0±0.4, 33.°71N×34.°90E, h29^{km}±2^{km}, MD3.9*
*HLW **14** 11:50:10.8, 33.°47N×34.°64E, h25^{km}±30^{km}, Md3.7, Ml4.2*
ISC 14 11:50:06.7±1.2**, 33.°70N**±0.°02×**34.°87E**±0.°03**, h25**^{km}±13^{km}**, n115, σ0.**^{s}**95**/144**, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BEYL	Beirut	0.55	71	*e*P	Pb	11 50 17.6	-0.1
DQRL	Deir Qamar	0.59	89	*e*P	Pb	11 50 18.5	+0.1
DQRL				*e*S	Sb	11 50 26.5	+0.1
HNTI	Hanita	0.66	157	Pg	Pb	11 50 19.6	0.0
HNTI				Sg	Sb	11 50 28.1	-0.3
BHL	Bhannes	0.69	72	*e*P	Pb	11 50 20.1	0.0
BHL				*e*S	Sb	11 50 29.0	-0.3
QRWL	Qaraoun	0.69	102	*e*P	Pb	11 50 20.4	+0.2
SHBL	Chebaa	0.81	115	*e*P	Pn	11 50 22.3	-0.4
MMA0B	Mount Meron ar	0.81	146	Pg	Pn	11 50 21.9	-0.7
MMA0B				Sg	Sb	11 50 32.4	-0.4
GEM	Giv'at Ha'Em	0.82	126	Pg	Pn	11 50 22.4	-0.3
GEM				Sg	Sb	11 50 32.4	-0.6
RCY	Rachaya	0.83	104	*e*P	Pn	11 50 22.6	-0.4
BLGI	Bet Lehem HaGe	1.00	164	Pg	Pn	11 50 25.3	+0.2
BLGI				Sg	Sn	11 50 37.3	-1.1
HWQ	Hawqa	1.07	57	*e*P	Pn	11 50 25.9	-0.2
HWQ				*e*S	Sn	11 50 38.8	-1.4
OFRI	`Ofer	1.08	175	Pg	Pn	11 50 25.9	-0.3
OFRI				Sg	Sn	11 50 40.2	-0.2
MMLI	Mount Malkishu	1.34	160	PN	Pn	11 50 30.3	+0.5
MMLI				SN	Sn	11 50 46.8	-0.1
MMLI	Mount Malkishu	1.34	160	Pg	Pn	11 50 30.1	+0.3
MMLI				Sg	Sn	11 50 47.3	+0.5
MMLI	Mount Malkishu	1.34	160	P	Pn	11 50 30.2	+0.3
MMLI				S	Sn	11 50 46.7	-0.1
SLTI	Sal'it	1.46	174	Pn	Pn	11 50 31.4	0.0
SLTI				Sn	Sn	11 50 49.9	+0.1
HMDT	Nahal Hemdat	1.54	159	Pn	Pn	11 50 33.4	+0.8
HMDT				Sn	Sn	11 50 52.9	+1.1
MVOU	Mavrovouni	1.67	323	P	Pn	11 50 33.6	-0.7
MVOU				S	Sn	11 50 53.0	-1.9
MVOU				AML	AML	11 50 54.2	
	4.4nm,0.2s						
MVOU				AML	AML	11 50 54.2	
	4.4nm,0.2s						
MVOU				AML	AML	11 50 57.7	
	4.3nm,0.3s						
MVOU				AML	AML	11 50 57.7	
	4.3nm,0.3s						
ASGA	Asgata	1.73	309	P	Pn	11 50 34.8	-0.4
ASGA				S	Sn	11 50 55.8	-0.6
ASGA				AML	AML	11 50 58.7	
	1.5nm,0.2s						
ASGA				AML	AML	11 50 58.7	
	1.5nm,0.2s						
AKIN	Akıncılar- Kıb	1.75	319	PN	Pn	11 50 35.6	+0.1
CSS	Mathiatis	1.79	315	PN	Pn	11 50 35.9	-0.1
CSS				SN	Sn	11 50 57.0	-1.0
CSS	Mathiatis	1.79	315	P	Pn	11 50 35.6	-0.4
CSS				S	Sn	11 50 57.0	-1.0
CSS				AML	AML	11 50 58.5	
	1.1nm,0.3s						
CSS				AML	AML	11 50 58.5	
	1.1nm,0.3s						
ATHAL	Athalassa	1.89	320	P	Pn	11 50 38.1	+0.8
ATHAL				S	Sn	11 51 00.3	0.0
ATHAL				AML	AML	11 51 02.3	
	5.4nm,0.5s						
ATHAL				AML	AML	11 51 02.3	
	5.4nm,0.5s						
ATHAL				AML	AML	11 51 02.5	
	5.5nm,0.4s						
ATHAL				AML	AML	11 51 02.5	
	5.5nm,0.4s						
EREN	Erenkoy	1.92	343	PN	Pn	11 50 37.9	+0.2
SZAC	Souni	1.96	303	P	Pn	11 50 39.0	+0.7
SZAC				S	Sn	11 51 02.4	+0.3
SZAC				AML	AML	11 51 06.5	
	4.2nm,0.3s						
SZAC				AML	AML	11 51 06.5	
	4.2nm,0.3s						
SZAC				AML	AML	11 51 08.5	
	5.7nm,0.2s						
SZAC				AML	AML	11 51 08.5	
	5.7nm,0.2s						
AMAZ	Amatzia	2.16	179	Pn	Pn	11 50 42.2	+1.1
AMAZ				Sn	Sn	11 51 08.7	+1.7
AMAZ	Amatzia	2.16	179	P	Pn	11 50 42.3	+1.2
AMAZ				S	Sn	11 51 08.0	+1.0
DSI	Dead Sea	2.16	168	Pn	Pn	11 50 42.1	+1.0
LEF	Lefka	2.17	312	PN	Pn	11 50 41.8	+0.7
NATA	Nata	2.19	300	P	Pn	11 50 42.8	+1.3
AKDN	Akdeniz- Kıbrı	2.24	316	PN	Pn	11 50 42.6	+0.5
OSC2	CSNet OBS 4	2.26	255	P	Pn	11 50 41.7	-0.8
OSC2				S	Sn	11 51 07.2	-2.4
YTIR	Yattir	2.34	175	Pn	Pn	11 50 44.7	+1.1
YTIR				Sn	Sn	11 51 13.1	+1.6
ALFC	Alefka	2.37	308	P	Pn	11 50 45.0	+0.9
ALFC				S	Sn	11 51 13.9	+1.5
ALFC				AML	AML	11 51 16.7	
	6.5nm,0.2s						
ALFC				AML	AML	11 51 16.7	
	6.5nm,0.2s						
ALFC				AML	AML	11 51 17.2	
	4.1nm,0.3s						
ALFC				AML	AML	11 51 17.2	
	4.1nm,0.3s						
GHAJ	Ghor Haditha	2.46	166	Pn	Pn	11 50 46.4	+1.3
AKMS	Akamas	2.48	303	P	Pn	11 50 46.5	+1.1
AKMS				S	Sn	11 51 16.8	+1.9
AKMS				AML	AML	11 51 18.8	
	1.8nm,0.2s						
AKMS				AML	AML	11 51 18.8	
	1.8nm,0.2s						
AKMS				AML	AML	11 51 19.9	
	2.1nm,0.3s						
AKMS				AML	AML	11 51 19.9	
	2.1nm,0.3s						
TISA	Tisan-Mersin	2.65	339	PN	Pn	11 50 47.9	+0.1
AKK2	Akkuyu-Mersin	2.67	336	PN	Pn	11 50 48.8	+0.8
AKK1	Akkuyu-Mersin	2.67	336	PN	Pn	11 50 48.5	+0.4
KARG	Kargicak-Mersi	2.68	339	PN	Pn	11 50 48.3	+0.1
AKKU	Akkuyu-Mersin	2.68	337	PN	Pn	11 50 48.8	+0.5
YESI	Yesilovacik-Me	2.69	338	PN	Pn	11 50 48.4	+0.1
IKL	Isikli	2.72	339	PN	Pn	11 50 49.2	+0.5
YORU	Yoruktepe-Mers	2.73	334	PN	Pn	11 50 49.4	+0.5
TEPK	Tepekoy-MERSIN	2.75	337	PN	Pn	11 50 49.5	+0.3
OREN	Orenkoy-Mersin	2.76	336	PN	Pn	11 50 49.4	+0.1
SILI	Silifke-Mersin	2.77	344	PN	Pn	11 50 49.7	+0.2
KZIT	Kziot	2.81	188	Pn	Pn	11 50 51.0	+1.0
KZIT	Kziot	2.81	188	P	Pn	11 50 51.0	+1.0
KZIT				S	Sn	11 51 22.1	-1.0
TEKE	Tekeli-Mersin	2.83	330	PN	Pn	11 50 50.9	+0.6
KRTS	Karatas	2.90	8	PN	Pn	11 50 51.9	+0.7
KEBE	Keben-Mersin	2.90	341	PN	Pn	11 50 51.8	+0.4
BERE	Bereket-Mersin	2.97	333	PN	Pn	11 50 52.7	+0.4
TEVE	Tevekalti-Mers	2.97	337	PN	Pn	11 50 52.9	+0.6
OSC1	CSNet OBS 1	3.00	267	P	Pn	11 50 52.6	0.0
OSC1				S	Sn	11 51 28.1	+0.3
RMNI	Mount Ramon	3.09	182	Pn	Pn	11 50 54.8	+0.8
ZFRI	Zfri	3.14	175	Pn	Pn	11 50 55.5	+0.9
PRNI	Paran	3.34	178	Pn	Pn	11 50 58.3	+1.0
CEYT	Ceyhan	3.38	12	PN	Pn	11 50 58.7	+0.8
KARA	Karaisali	3.56	2	PN	Pn	11 51 00.8	+0.5
KRMI	Paran Flat	3.57	182	Pn	Pn	11 51 01.3	+0.8
HRFI	Mount Harif	3.65	178	PN	Pn	11 51 02.2	+0.6
HRFI	Mount Harif	3.65	178	Pn	Pn	11 51 02.4	+0.8
ALAN	Alanya-ANTALYA	3.68	322	PN	Pn	11 51 03.1	+1.1
KOZT	Kozan	3.86	11	PN	Pn	11 51 05.3	+0.9
MBRI	Mt Berech	3.89	179	Pn	Pn	11 51 05.7	+0.7
CMRD	Camardi-Nigde	3.96	1	PN	Pn	11 51 07.0	+1.1
GAZ	Gaziantep	3.96	28	PN	Pn	11 51 06.8	+0.9
GAZ	Gaziantep	3.96	28	P	Pn	11 51 06.8	+0.9
GAZ				S	Sn	11 51 51.3	-0.3
EIL	Elat	4.01	179	Pn	Pn	11 51 07.2	+0.6
KMRS	Kahramanmaras	4.14	23	PN	Pn	11 51 09.0	+0.6
SUZ	Suez	4.22	205	P	Pn	11 51 10.1	+0.7
	baz=204						
HBST	Basata	4.47	182	P	Pn	11 51 14.0	+1.1
	baz=178						
KOT	Kottamia	4.56	215	P	Pn	11 51 14.2	+0.1
	baz=215						
ZNM	Zenema	4.63	202	P	Pn	11 51 15.8	+0.7
	baz=201						
ZNM				S	Sn	11 52 02.1	-5.9
	baz=201						
NUB	Nuweibaa	4.66	182	P	Pn	11 51 16.7	+1.3
	baz=181						
GULA	Gulagac	4.67	354	PN	Pn	11 51 16.8	+1.2
KONT	Konya--Tatoy	4.70	335	PN	Pn	11 51 17.6	+1.5
ZAF	Zafarana	4.83	205	P	Pn	11 51 18.2	+0.4
	baz=204						
ZAF				AMP		11 52 00.0	
	baz=204						
SARI	SarD1z-Kayseri	4.87	15	PN	Pn	11 51 19.2	+0.8
GLL	Jalalah	4.91	214	P	Pn	11 51 19.2	+0.3
	baz=214						
LADK	Ladik-KONYA	4.93	336	PN	Pn	11 51 20.4	+1.1
URFA	Urfa	4.93	40	PN	Pn	11 51 19.5	+0.2
KORT	Korkueli	4.95	313	PN	Pn	11 51 20.5	+1.0
HSAF	As Saff	4.95	216	P	Pn	11 51 19.6	+0.1
	baz=216						
HDHB	Dhahab	4.96	183	P	Pn	11 51 20.8	+1.2
	baz=181						
ELL	Elmali	5.07	308	PN	Pn	11 51 22.1	+0.9
HRDS	Abu Rudays	5.15	196	P	Pn	11 51 22.7	+0.5
	baz=195						
BNN	Bunyan	5.21	8	PN	Pn	11 51 23.7	+0.6
HKAT	Jabal Katrina	5.21	189	P	Pn	11 51 23.8	+0.5
	baz=187						
YAYX	Yaylak	5.30	351	PN	Pn	11 51 25.1	+0.8
DARE	Darende-Malaty	5.30	23	PN	Pn	11 51 25.6	+1.2
TR2	Tor 2	5.38	191	P	Pn	11 51 25.5	0.0
	baz=190						
ISP	Isparta	5.42	321	PN	Pn	11 51 27.1	+1.1
HNAT	Natroun	5.43	223	P	Pn	11 51 26.2	+0.1
	baz=224						
MALT	Malatya	5.43	31	PN	Pn	11 51 27.3	+1.1
FETY	Fethiye	5.57	303	PN	Pn	11 51 27.8	-0.2
GRB	Gharib	5.70	199	P	Pn	11 51 29.4	-0.4
	baz=198						
BASM	Basmaki-Afyon	5.75	318	PN	Pn	11 51 31.3	+0.8
NBNS	Bani Suef	5.91	212	P	Pn	11 51 32.9	+0.2
	baz=212						
DALY	Dalyan (Mula)	5.96	303	PN	Pn	11 51 33.9	+0.6
SHUT	Suhut-Afyon	5.97	325	PN	Pn	11 51 34.8	+1.2
RYAN	Fayoum	6.05	222	P	Pn	11 51 34.2	-0.3
	baz=222						
ARG	Arkhangelos	6.08	296	PN	Pn	11 51 35.2	+0.3
BRTR	Keskin Array B	6.10	351	PN	Pn	11 51 36.2	+0.9
TURN	Turunc	6.23	301	PN	Pn	11 51 37.6	+0.6
YER	Yerkesik	6.38	304	PN	Pn	11 51 39.8	+0.7
CORM	Corum	6.47	358	PN	Pn	11 51 41.3	+0.8
HHRG	Al Ghardaqah	6.55	190	P	Pn	11 51 43.1	+1.7
	baz=189						
KARP	Karpathos	6.62	288	PN	Pn	11 51 42.5	+0.1
MLSB	Milas	6.81	304	PN	Pn	11 51 45.2	+0.2
TAMRE	El Minia	6.89	211	P	Pn	11 51 45.5	-0.6

	baz=211						
KULA	Kula-Manisa	6.95	316	PN	Pn	11 51 47.2	+0.2
BODT	Bodrum	7.03	301	PN	Pn	11 51 46.9	-1.1
ZKR	Zakros	7.29	284	PN	Pn	11 51 50.9	-0.7

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*SJA **14** 11:57:45.3±0.8, 21°.64S×67°.44W, h201^{km}±5^{km}, ML4.0, MW3.7*
*IDC **14** 11:57:45.9±0.8, 21°.72S×67°.32W, h180^{km}±8^{km}, mb3.4/7, mb1 3.6/12, mb1mx3.5/32, mbtmp3.9/12, Error ellipse: s-maj=15.4km s-min=11.4km az=105.0*
*GUC **14** 11:57:47.5±0.7, 21°.73S×67°.62W, h210^{km}±7^{km}, ML4.3*
*SCB **14** 11:57:48.8±2.3, 21°.72S×67°.47W, h184^{km}±15^{km}, ML4.1/3, Error ellipse: s-maj=6.7km s-min=5.7km az=0.0*
ISC 14 11:57:46.4±0.7**, 21°.72S**±0°.04×**67°.43W**±0°.04**, h189**^{km}±6^{km}**, n68, σ1^s.57**/105**, mb3.5**/7**, 13C-1D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	Limon Verde	1.64	237	P	Pn	11 58 21.3	+0.5
	26nm,0.3s,baz=48,slow=3.7,SNR=225						
LVC				S	Sn	11 58 46.7	-0.7
	9.2nm,0.3s,baz=228,slow=3.1,SNR=4.8						
LVC	Limon Verde	1.64	237	eP	Pn	11 58 21.4	+0.6
LVC				eS	Sn	11 58 48.1	+0.6
PB09	IPOC Station P	1.69	267	⇑iP	Pn	11 58 21.9	+0.8
PB09				eS	Sn	11 58 49.0	+1.0
PB09	IPOC Station P	1.69	267	P	Pn	11 58 21.9	+0.8
PB09	IPOC Station P	1.69	267	eS	Sn	11 58 49.6	+1.6
PB09				IAML		11 58 51.4	
	comp=Z,422nm,0.5s						
MOCB	Mochara	1.73	75	Pg	Pn	11 58 22.6	+0.7
MOCB				Sg	Sn	11 58 49.8	+0.6
MOCB				IAML		11 58 50.6	
	comp=Z,914nm,1.0s						
YJA	Yavi	1.83	105	Pg	Pn	11 58 23.7	+0.8
YJA				Sg	Sn	11 58 50.6	-0.5
YJA	Yavi	1.83	105	eP	Pn	11 58 23.7	+0.8
YJA				eS	Sn	11 58 52.7	+1.7
PB01	IPOC Station P	2.04	289	⇑iP	Pn	11 58 24.8	+0.1
PB01				i S	Sn	11 58 53.5	-0.7
PB01				IAML		11 58 54.5	
	comp=N,2µm,0.2s						
PB01	IPOC Station P	2.04	289	P	Pn	11 58 24.8	+0.1
PB01				S	Sn	11 58 53.2	-1.0
PB01				IAML		11 58 54.4	
	comp=N,666nm,0.5s						
PB01	IPOC Station P	2.04	289	eP	Pn	11 58 24.7	+0.1
PB01				eS	Sn	11 58 53.8	-0.4
PB01				IAML		11 58 55.0	
	comp=Z,904nm,0.2s						
PB03	IPOC Station P	2.19	261	⇓iP	Pn	11 58 26.7	+0.4
PB03				i S	Sn	11 58 56.0	-1.3
PB03				IAML		11 58 56.9	
	comp=E,798nm,0.4s						
PB03	IPOC Station P	2.19	261	eP	Pn	11 58 26.9	+0.6
PB03				eS	Sn	11 58 56.8	-0.5
PB03				IAML		11 58 57.7	
	comp=Z,640nm,0.3s						
PB06	IPOC Station P	2.22	243	⇑iP	Pn	11 58 26.7	+0.1
PB06				i S	Sn	11 58 57.2	-0.7
PB06	IPOC Station P	2.22	243	P	Pn	11 58 26.8	+0.2
PB06	IPOC Station P	2.22	243	eP	Pn	11 58 26.9	+0.2
PB06				eS	Sn	11 58 58.5	+0.6
PB06				IAML		11 59 02.6	
	comp=Z,299nm,0.3s						
PB08	IPOC Station P	2.25	314	⇑iP	Pn	11 58 28.4	+1.1
PB08				i S	Sn	11 58 59.4	+0.4
PB08				IAML		11 59 01.2	
	comp=N,599nm,0.6s						
PB08	IPOC Station P	2.25	314	P	Pn	11 58 28.4	+1.1
PB08				S	Sn	11 58 58.7	-0.3
PB08	IPOC Station P	2.25	314	eP	Pn	11 58 17.2	-10
PB08				IAML		11 59 00.4	
	comp=Z,289nm,0.4s						
PB07	IPOC Station P	2.29	269	⇑iP	Pn	11 58 27.7	+0.2
PB07				i S	Sn	11 58 57.9	-1.4
PB07				IAML		11 58 58.9	
	comp=E,1µm,0.2s						
PB07	IPOC Station P	2.29	269	eP	Pn	11 58 27.6	+0.1
PB07				eS	Sn	11 58 58.1	-1.1
PB07				IAML		11 59 00.7	
	comp=Z,542nm,0.1s						
PB15	IPOC Station P	2.40	232	⇑iP	Pn	11 58 29.1	+0.4
PB15				eS	Sn	11 59 01.2	-0.4
PB15	IPOC Station P	2.40	232	eP	Pn	11 58 29.1	+0.4
PB15				eS	Sn	11 59 02.4	+0.7
PB15				IAML		11 59 05.7	
	comp=Z,2µm,0.1s						
PB04	IPOC Station P	2.60	256	⇑iP	Pn	11 58 30.9	+0.1
PB04				eS	Sn	11 59 03.5	-2.1
PB04				IAML		11 59 06.0	
	comp=E,747nm,0.2s						
PB04	IPOC Station P	2.60	256	P	Pn	11 58 30.8	-0.1
PB04				S	Sn	11 59 03.2	-2.4
PB04				IAML		11 59 05.7	
	comp=E,575nm,0.4s						
PB04	IPOC Station P	2.60	256	eP	Pn	11 58 31.0	+0.1
PB04				eS	Sn	11 59 04.1	-1.5
PB04				IAML		11 59 06.8	
	comp=Z,386nm,0.3s						
PATCX	Punta Patache	2.70	289	⇑iP	Pn	11 58 31.8	-0.2
PATCX				i S	Sn	11 59 05.3	-2.1
PATCX				IAML		11 59 07.9	
	comp=E,861nm,0.2s						
HMBC	Humberstone	2.71	302	⇑iP	Pn	11 58 31.7	-0.5
HMBC				eS	Sn	11 59 06.1	-1.8
HMBC				IAML		11 59 08.2	
	comp=E,1µm,0.4s						
PB05	IPOC Station P	2.81	246	⇑iP	Pn	11 58 33.2	-0.1
PB05				i S	Sn	11 59 07.4	-2.5
PB05	IPOC Station P	2.81	246	eP	Pn	11 58 33.3	-0.1
PB05				eS	Sn	11 59 10.5	+0.6
TA01	Diego Aracena	2.82	294	⇑iP	Pn	11 58 32.7	-0.6
TA01				i S	Sn	11 59 07.7	-2.2
TA01				IAML		11 59 10.3	
	comp=E,707nm,0.3s						
MNMC	Minye Minye	3.28	321	⇑iP	Pn	11 58 39.5	+0.3
MNMC				i S	Sn	11 59 19.5	-1.0
MNMC	Minye Minye	3.28	321	P	Pn	11 58 39.5	+0.3
MNMCX	Minye Minye	3.28	321	eP	Pn	11 58 39.4	+0.2
MNMCX				eS	Sn	11 59 19.8	-0.7
PSGCX	Pisagua	3.29	309	eP	Pn	11 58 37.9	-1.2
PSGCX				eS	Sn	11 59 18.3	-2.1
PB10	IPOC Station P	3.40	238	⇑iP	Pn	11 58 39.9	-0.5
PB10				i S	Sn	11 59 19.9	-2.5
PB10	IPOC Station P	3.40	238	P	Pn	11 58 39.8	-0.5
PB10	IPOC Station P	3.40	238	eP	Pn	11 58 39.8	-0.5
PB10				eS	Sn	11 59 19.5	-3.0
SLA	San Lorenzo	3.47	150	P	Pn	11 58 42.2	+0.8
SLA	San Lorenzo	3.47	150	eP	Pn	11 58 42.7	+1.3
SLA				eS	Sn	11 59 25.1	+0.7
PB16	IPOC Station P	3.90	329	eP	Pn	11 58 38.6	-8.6
PB14	IPOC Station P	3.98	223	eP	Pn	11 58 47.4	-0.5
PB14				eS	Sn	11 59 33.3	-2.8
PB14				IAML		11 59 35.0	
	comp=Z,124nm,0.4s						
FSA	Cafayete	4.57	163	eP	Pn	11 58 56.3	+1.2
BBOE	La Paz, Chanca	4.91	354	P	Pn	11 59 02.1	+2.1
BBOD	La Paz, Gloria	5.18	347	P	Pn	11 59 05.1	+1.7
AHML	Horco Molle	5.39	160	eP	Pn	11 59 06.9	+1.2
LPAZ	La Paz	5.45	353	P	Pn	11 59 07.8	+0.9
	comp=Z,7.1nm,0.3s,baz=154,slow=6.5,SNR=137						
LPAZ				S	Sn	12 00 09.5	-0.8
	baz=7.2,slow=22,SNR=1.3						
LPAZ	La Paz	5.45	353	P	Pn	11 59 08.0	+1.0
LPAZ				S	Sn	12 00 06.3	-4.0
LPAZ	La Paz	5.45	353	eP	Pn	11 59 08.2	+1.2
BBOB	La Paz, Bander	5.59	353	P	Pn	11 59 09.6	+0.8
BBOB				S	Sn	12 00 10.7	-2.9
GO03	Copiap	6.38	203	eP	Pn	11 59 16.5	-2.0
GO03				eS	Sn	12 00 26.5	-4.8
VCA	Vinchina	7.02	186	eP	Pn	11 59 27.4	+0.4
ACLC	CERRO LA CRUZ	7.68	177	eP	Pn	11 59 34.4	-1.3
ACLC				eS	Sn	12 01 00.8	-1.6
SIV	San Ignacio	8.29	48	P	Pn	11 59 41.1	-2.4
	comp=Z,3.4nm,0.3s,baz=243,slow=7.5,SNR=42						
SIV				S	Sn	12 01 08.2	-8.4
	comp=Z,3.6nm,0.3s,baz=322,slow=21,SNR=15						
TCA	Tanti	9.91	166	eP	Pn	12 00 02.3	-2.4
CPUP	Villa Florida	10.30	118	P	Pn	12 00 08.9	-0.8
	comp=Z,0.4nm,0.3s,baz=296,slow=11,SNR=4.8						
PLCA	Paso Flores	19.14	187	P	P	12 01 55.2	-0.1
	comp=Z,0.1nm,0.3s,baz=7.7,slow=10,SNR=8.3						
BDFB	Brasilia	19.35	75	P	P	12 01 57.6	-0.3
	comp=Z,0.4nm,0.3s,baz=196,slow=4.6,SNR=3.7						
TXAR	Lajitas Array	61.61	324	P	P	12 07 44.9	+0.7
	comp=Z,0.1nm,0.4s,baz=142,slow=9.0,SNR=2.1						
QSPA	South Pole Qui	68.47	180	P	P	12 08 28.5	+0.5
	comp=Z,0.7nm,0.7s,baz=296,slow=0.9,SNR=8.3						
PDAR	Pinedale Array	75.00	329	P	P	12 09 08.3	+1.1
	comp=Z,0.3nm,0.5s,baz=132,slow=9.5,SNR=5.5						
ULM	Lac du Bonnet	75.95	342	P	P	12 09 12.2	0.0
	comp=Z,1.2nm,0.5s,baz=191,slow=6.6,SNR=4.2						
TORD	Torodi Ar. Bea	76.13	70	P	P	12 09 13.7	-0.3
	comp=Z,1.7nm,0.5s,baz=257,slow=5.1,SNR=18						
NVAR	Mina Array Bea	76.52	321	P	P	12 09 17.3	+1.3
	comp=Z,0.4nm,0.8s,baz=150,slow=7.7,SNR=4.9						
YKA	Yellowknife Ar	91.86	340	P	P	12 10 33.4	+0.9
	comp=Z,0.8nm,0.6s,baz=129,slow=5.0,SNR=22						
ASAR	Alice Springs	130.34	206	SKPbc	SKPbc	12 19 40.3	-0.3
	comp=Z,0.5nm,0.8s,baz=160,slow=4.7,SNR=4.3						
WRA	Warramunga Arr	133.44	209	PKP	PKPdf	12 16 41.5	+0.5
	comp=Z,0.3nm,0.7s,baz=160,slow=1.9,SNR=1.9						
MKAR	Makanchi Array	144.99	37	PKP	PKPbc	12 17 01.6	+0.8
	comp=Z,0.7nm,0.7s,baz=318,slow=3.3,SNR=5.8						

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*IDC **14** 12:04:28.6±1.0, 16°.62N×145°.75E, h235^{km}±11^{km}, mb3.7/19, mb1 3.8/22, mb1mx3.6/49, mbtmp4.3/22, Error ellipse: s-maj=15.4km s-min=9.4km az=89.0*
*NEIC **14** 12:04:31.1±1.4, 16°.6N±0°.1×145°.6E±0°.1, h258^{km}±6^{km}, mb4.4/30, ML4.5/6, Error ellipse: s-maj=20.8km s-min=13.9km az=110.0*
ISC 14 12:04:30.8±0.8**, 16°.58N**±0°.06×**145°.5E**±0°.1**, h253**^{km}±8^{km}**, n81, σ0^s.98**/76**, mb4.3**/35**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SARN	Sarigan	0.28	65	P	Pn	12 05 05.1	+1.5
ANA2	Anatahan	0.31	141	Pn	Pn	12 05 04.9	+1.2
GUMO	Guam	3.04	192	P	Pn	12 05 23.5	-0.4
	108nm,0.3s,baz=122,slow=3.8,SNR=68						
GUMO				S	S	12 06 03.3	-2.8
	65nm,0.3s,baz=20,slow=23,SNR=10						
GUMO	Guam	3.04	192		Pn	12 05 23.6	-0.4
GUMO				IAML		12 06 14.3	
	586nm,0.6s						
GUMO	Guam	3.04	192	P	Pn	12 05 23.8	-0.1
JHJ	Hachijo jima 2	17.26	344	P	P	12 08 14.6	-0.5
	9.3nm,0.3s,baz=38,slow=14,SNR=1.4						
JOW	Kunigami	18.97	305	P	P	12 08 34.9	+1.2
	7.0nm,0.3s,baz=117,slow=16,SNR=33						
JMN	Monobe	20.03	331	P	P	12 08 44.5	-0.4
H11S3	WAKE ISLAND Hy	20.28	81	T	T	12 30 03.4	
	baz=277,slow=74,SNR=7.0						
H11S1	WAKE ISLAND Hy	20.30	81	T	T	12 30 03.9	
	baz=277						
H11S2	WAKE ISLAND Hy	20.30	81	T	T	12 30 05.1	
	baz=277,slow=74,SNR=7.0						
H11N1	WAKE ISLAND Hy	20.55	78	T	T	12 30 28.6	
	baz=263,slow=74,SNR=4.0						
H11N2	WAKE ISLAND Hy	20.56	78	T	T	12 30 29.8	
	baz=263,slow=74,SNR=3.2						
H11N3	WAKE ISLAND Hy	20.57	78	T	T	12 30 28.1	
	baz=263,slow=74,SNR=5.5						
MJAR	Matsushiro Arr	20.91	343	P	P	12 08 52.6	-1.6
	0.6nm,0.5s,baz=171,slow=10,SNR=1.7						
JNU	Nakatsue	21.11	324	P	P	12 08 56.0	-0.3
	10nm,0.6s,baz=64,slow=6.4,SNR=11						
JNU	Nakatsue	21.11	324	P	P	12 08 56.6	+0.3
JNU				IAmb	IAmb	12 08 58.5	
	comp=Z,14nm,0.8s						
SIJI	Sorong	22.32	220	P	P	12 09 08.6	+1.0
	comp=Z,11nm,0.5s,baz=18,slow=14,SNR=5.9						
FAKI	Fak Fak	23.39	215	P	P	12 09 17.8	+0.4
NACB	Ninganchiao	23.63	293	P	P	12 09 19.6	+0.1
KSRS	Korea Array	25.95	327	P	P	12 09 40.2	+0.1
	comp=Z,7.8nm,0.7s,baz=146,slow=10,SNR=26						
KSAR	Wonju Array Be	25.96	327	P	P	12 09 39.4	-0.9
KS19	Wonju Array Si	26.01	327	P	P	12 09 40.1	-0.7
KS19				IAmb	IAmb	12 09 44.5	
	comp=Z,16nm,0.9s						
ASAJ	Asahikawa	27.56	355	P	P	12 09 53.1	-1.4
	comp=Z,6.8nm,1.0s,baz=217,slow=20,SNR=2.0						
USA0B	Ussuriysk Arra	29.82	340	P	P	12 10 12.6	-1.8
USA0B				IAmb	IAmb	12 10 29.1	
	comp=Z,4.9nm,0.8s						
MTN	Manton Dam	32.51	207	P	P	12 10 38.1	-0.1
MTN				IAmb	IAmb	12 10 50.4	
	comp=Z,22nm,1.2s						
XAN	Xi'an	37.12	305	P	P	12 11 17.3	-0.2
XAN				IAmb	IAmb	12 11 18.9	
	comp=Z,4.4nm,0.5s						
PETK	Petropavlovsk-	37.69	12	P	P	12 11 20.6	-1.3
	comp=Z,1.1nm,0.5s,baz=146,slow=7.0,SNR=16						
PETK	Petropavlovsk-	37.69	12	P	P	12 11 21.1	-0.8
WB0	Warramunga Arr	37.74	197	P	P	12 11 22.7	0.0
WR0	Warramunga Arr	37.88	197	P	P	12 11 23.7	-0.1
WR0				IAmb	IAmb	12 11 50.6	
	comp=Z,9.4nm,1.3s						
WRAB	Tennant Creek	37.91	197	P	P	12 11 24.4	+0.3
WRAB				IAmb	IAmb	12 11 25.0	
	comp=Z,6.1nm,0.8s						
WB2	Warramunga Arr	37.91	197	P	P	12 11 24.2	0.0
WRA	Warramunga Arr	37.92	197	P	P	12 11 24.2	0.0
	comp=Z,1.9nm,0.4s,baz=24,slow=9.1,SNR=40						
WRA	Warramunga Arr	37.92	197	P	P	12 11 23.4	-0.8
SANVU	Saraoutou	38.35	145	P	P	12 11 30.2	+2.4
FITZ	Fitzroy Crossi	39.63	210	P	P	12 11 38.5	+0.1
AS31	Alice Springs	41.58	196	P	P	12 11 54.5	+0.2
ASAR	Alice Springs	41.58	196	P	P	12 11 54.2	0.0
	comp=Z,0.4nm,0.5s,baz=22,slow=12,SNR=14						
CMAR	Chiang Mai Arr	44.35	280	P	P	12 12 17.8	+1.2
	comp=Z,1.8nm,0.7s,baz=77,slow=6.4,SNR=13						
SONM	Songino Array	44.70	323	P	P	12 12 19.8	+0.8
	comp=Z,1.5nm,0.5s,baz=136,slow=6.7,SNR=14						
SONM	Songino Array	44.70	323	P	P	12 12 19.5	+0.5
BBOO	Buckleboo	49.94	190	P	P	12 12 59.4	+0.3
BBOO				IAmb	IAmb	12 13 00.1	
	comp=Z,31nm,1.4s						
MORW	Morawa	53.57	212	P	P	12 13 26.1	0.0
MORW				IAmb	IAmb	12 13 48.3	
	comp=Z,19nm,1.1s						
ZSN	Zaisan	58.17	316	eP	P	12 13 59.2	+0.8
	baz=315						
ZALV	Zalesovo Beam	59.59	323	P	P	12 14 07.8	-0.1
	comp=Z,1.5nm,0.4s,baz=114,slow=7.2,SNR=5.4						
MK31	Makanchi Array	59.81	315	P	P	12 14 11.2	+1.5
MK31				IAmb	IAmb	12 14 11.5	
	comp=Z,9.4nm,1.1s						
MKAR	Makanchi Array	59.81	315	P	P	12 14 10.9	+1.2
	comp=Z,8.8nm,0.3s,baz=91,slow=8.5,SNR=296						
MKAR	Makanchi Array	59.81	315	P	P	12 14 11.0	+1.4
MAKZ	Makanchi	60.02	315	P	P	12 14 12.1	+1.0
SHLS	Shalkode	61.44	310	eP	P	12 14 19.6	-1.2
	baz=310						
SEM	Semipalatinsk	61.66	319	eP	P	12 14 21.6	-0.6
	baz=318						
KPKS	Kokpek	62.02	311	eP	P	12 14 25.2	+0.5
	baz=310						
SATY	Saty	62.20	310	eP	P	12 14 26.7	+0.8
	baz=310						
TDK	Taldyqorghan	62.32	312	eP	P	12 14 27.6	+1.1
	comp=Z,8.7nm,0.7s,baz=312						
KURK	Kurchatov	62.73	319	P	P	12 14 29.8	+0.8
MDOK	Medeo	63.20	310	eP	P	12 14 33.6	+1.1
	baz=310						
TNSS	Tian-Shan	63.27	310	eP	P	12 14 34.7	+1.4
	baz=310						
CHKK	Chushkaly	63.27	311	eP	P	12 14 33.3	+0.5
	baz=310						
AAA	Alma-Ata	63.30	310	eP	P	12 14 34.2	+1.2
	comp=Z,5.7nm,0.4s,baz=310						
NRIK	Noril'sk	63.53	340	P	P	12 14 33.3	-0.6
	comp=Z,4.3nm,0.6s,baz=106,slow=9.8,SNR=7.4						
NRIK	Noril'sk	63.53	340	P	P	12 14 33.5	-0.4
NRIK				IAmb	IAmb	12 14 34.3	
	comp=Z,4.7nm,0.7s						
KUU	Kurty	63.74	311	eP	P	12 14 36.5	+0.6
	comp=Z,9.7nm,0.6s,baz=311						
BTLS	Baital	65.41	312	eP	P	12 14 47.1	+0.5
	baz=312						
IL31		65.62	26	P	P	12 14 46.2	-1.2
IL31				IAmb	IAmb	12 15 06.2	
	comp=Z,8.5nm,1.4s						
ILAR	Eielson Array	65.62	26	P	P	12 14 45.8	-1.7
	comp=Z,0.6nm,0.4s,baz=249,slow=5.7,SNR=32						
ILAR	Eielson Array	65.62	26	P	P	12 14 46.0	-1.6
BMAR	Burnt Mountain	67.12	23	P	P	12 14 57.5	+0.5
KK31	Karatay Array	67.98	310	P	P	12 15 03.7	+0.8
KK31				IAmb	IAmb	12 15 04.5	
	comp=Z,5.3nm,0.7s						
KKAR	Karatay Array	67.98	310	P	P	12 15 04.0	+1.2
KKAR				IAmb	IAmb	12 15 04.5	
	comp=Z,5.3nm,0.7s						
KKAR	Karatay Array	67.98	310	P	P	12 15 04.2	+1.3
BRVK	Borovoye	68.06	321	P	P	12 15 03.6	+0.5
BRVK				IAmb	IAmb	12 15 04.4	
	comp=Z,7.2nm,0.8s						
INK	Inuvik	71.38	23	P	P	12 15 22.9	-0.1
	comp=Z,1.0nm,0.6s,baz=265,slow=6.3,SNR=2.8						
ARU	Arti	74.68	325	P	P	12 15 42.8	+0.3
ABKAR	Akbulak array	74.76	317	P	P	12 15 43.5	+0.3
ABKAR				IAmb	IAmb	12 15 44.0	
	comp=Z,7.8nm,0.7s						
EUNU	Eureka	79.84	8	P	P	12 16 10.7	0.0
YKA	Yellowknife Ar	79.94	28	P	P	12 16 10.8	-0.6
	comp=Z,0.4nm,0.4s,baz=289,slow=4.3,SNR=11						
ARCES	ARCESS Array B	84.44	342	P	P	12 16 34.2	-0.5
	comp=Z,6.8nm,0.9s,baz=48,slow=3.6,SNR=4.6						
NVAR	Mina Array Bea	84.58	52	P	P	12 16 36.7	+0.3
	comp=Z,0.3nm,0.5s,baz=270,slow=5.4,SNR=6.1						
FINES	FINESS Array B	88.72	335	P	P	12 16 54.0	-1.5
	comp=Z,1.0nm,0.4s,baz=58,slow=4.5,SNR=16						
FINES	FINESS Array B	88.72	335	P	P	12 16 54.1	-1.3

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*NIC **14** 12:08:01.5±0.0, 33°.77N×34°.99E, h33^{km}±26^{km}, Ml2.6/2*
*GRAL **14** 12:08:02.6±0.3, 33°.69N×34°.96E, h40^{km}±8^{km}, MD3.1*
ISC 14 12:08:01.8±1.5**, 33°.74N**±0°.05×**34°.95E**±0°.05**, h34**^{km}±3^{km}**, n14, σ0^s.45**/20**, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DQRL	Deir Qamar	0.52	93	eP	Pb	12 08 13.0	+0.2
DQRL				eS	Sb	12 08 20.7	+0.4
BHL	Bhannes	0.61	74	eP	Pb	12 08 14.5	+0.2
BHL				eS	Sb	12 08 23.0	+0.2
QRWL	Qaraoun	0.64	107	eP	Pb	12 08 14.6	-0.1
QRWL				eS	Sb	12 08 23.1	-0.4
SHBL	Chebaa	0.77	120	eP	Pn	12 08 16.2	-0.1
SHBL				eS	Sb	12 08 26.1	-1.0
RCY	Rachaya	0.77	108	eP	Pn	12 08 16.4	0.0
HWQ	Hawqa	0.99	56	eP	Pn	12 08 19.8	+0.5
HWQ				eS	Sn	12 08 32.3	+0.1
MMLI	Mount Malkishu	1.35	163	P	Pn	12 08 24.2	-0.1
MMLI				S	Sn	12 08 41.0	-0.1
MVOU	Mavrovouni	1.68	320	P	Pn	12 08 28.0	-0.8
CSS	Mathiatis	1.82	313	P	Pn	12 08 30.7	0.0
SZAC	Souni	2.00	301	P	Pn	12 08 33.0	-0.1
AMAZ	Amatzia	2.20	181	P	Pn	12 08 36.6	+0.6
AMAZ				AML	AML	12 09 03.5	
	0.2nm,0.3s						
AMAZ				AML	AML	12 09 13.4	
	0.2nm,0.4s						
OSC2	CSNet OBS 4	2.34	254	P	Pn	12 08 38.2	+0.4
ALFC	Alefka	2.41	307	P	Pn	12 08 39.2	+0.4
KZIT	Kziot	2.86	190	P	Pn	12 08 45.5	+0.4
KZIT				AML	AML	12 09 17.8	
KZIT				AML	AML	12 09 18.4	

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*IDC **14** 12:10:25.1±0.8, 32°.44S×71°.71W, h0^{km}, mb4.1/7, mb1 4.1/12, mb1mx4.0/34, mbtmp4.0/12, ML4.0/5, MS3.5/3, Ms1 3.4/3, ms1mx3.0/19, Error ellipse: s-maj=21.9km s-min=19.1km az=130.0*
*NEIC **14** 12:10:28.3±1.7, 32°.49S±0°.04×71°.8W±0°.1, h16^{km}±5^{km}, Error ellipse: s-maj=12.6km s-min=5.3km az=83.0*
*SJA **14** 12:10:29.1±0.6, 32°.58S×71°.78W, h10^{km}, ML4.0, MW3.8*
*GUC **14** 12:10:30.0±0.6, 32°.57S×71°.69W, h28^{km}±5^{km}, ML4.1*
ISC 14 12:10:26.1±1.3**, 32°.51S**±0°.02×**71°.84W**±0°.04**, h7**^{km}±8^{km}**, n99, σ1^s.34**/107**, mb4.3**/10**, MS3.6**/3**, 3C-5D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ROC1	El Roble	0.83	124	eS	Sn	12 10 55.3	-1.8
ROCH	El Roble	0.83	124	⇓iP	Pn	12 10 44.4	0.0
ROCH				eS	Sn	12 10 55.0	-2.1
MT02	Curacav	0.95	142	⇓iP	Pn	12 10 46.0	+0.1
MT02				eS	Sb	12 10 58.1	+0.4
MT02	Curacav	0.95	142		Pn	12 10 46.0	+0.1
VA03	San Esteban	1.11	104	⇓iP	Pn	12 10 48.6	+0.5
VA03				i S	Sn	12 11 03.0	-0.8
VA03				IAML		12 11 03.5	
	comp=N,10µm,0.4s						
VA03	San Esteban	1.11	104		Pn	12 10 48.6	+0.5
PEL	Peldehue	1.16	124	eP	Pn	12 10 49.4	+0.7
PEL				i S	Sn	12 11 04.3	-0.5
PEL				IAML		12 11 08.1	
	comp=E,6µm,0.4s						
PEL	Peldehue	1.16	124	Pn	Pn	12 10 49.6	+0.9
PEL	Peldehue	1.16	124	eP	Pn	12 10 49.6	+0.9
PEL				eS	Sn	12 11 04.9	+0.1
VA05	Santo Domingo	1.16	171	eP	Pg	12 10 49.9	+1.5
VA05				IAML		12 11 10.9	
	comp=E,9µm,0.4s						
MT05	Renca	1.28	134	⇓iP	Pg	12 10 51.5	+0.9
MT05				i S	Sn	12 11 07.8	+0.1
MT05				IAML		12 11 11.1	
	comp=E,14µm,0.3s						
MT05	Renca	1.28	134	Pn	Pg	12 10 51.5	+0.9
MT09	Talagante	1.45	151	eP	Pg	12 10 54.4	+0.5
MT09				IAML		12 11 19.9	
	comp=N,5µm,0.2s						
FSR	Penalolen	1.47	132	eP	Pg	12 10 55.6	+1.4
CO02	Combarbal	1.48	29		Pg	12 10 54.8	+0.3
MT03	Universidad Ad	1.49	132	eP	Pg	12 10 54.7	+0.1
MT03				eS	Sg	12 11 13.1	-0.8
MT03				IAML		12 11 14.4	
	comp=E,9µm,0.2s						
LMEL	Las Melosas	1.91	135	⇑eP	Pb	12 11 01.5	+0.1
LMEL				eS	Sg	12 11 25.7	-1.9
LMEL				IAML		12 11 29.8	
	comp=N,3µm,0.4s						
CO03	El Pedregal	1.93	31	⇑eP	Pb	12 11 01.4	-0.2
CO03				IAML		12 11 34.2	
	comp=E,1µm,0.5s						
CO03	El Pedregal	1.93	31		Pb	12 11 01.3	-0.3
BO03	Pichilemu	1.99	183	⇓iP	Pn	12 11 00.7	+0.6
AUSP	Uspallata	2.09	83	eP	Pg	12 11 05.7	-0.5
AUSP				eS	Sg	12 11 35.0	+1.7
BO02	Sierra Bellavi	2.44	159	eP	Pn	12 11 08.1	+1.7
BO02				IAML		12 11 49.0	
	comp=N,2µm,0.2s						
BO02	Sierra Bellavi	2.44	159	Pn	Pn	12 11 08.1	+1.7
GO04	Tololo Observa	2.49	21	⇑eP	Pn	12 11 08.8	+1.6
GO04	Tololo Observa	2.49	21		Pn	12 11 08.6	+1.4
GO04	Tololo Observa	2.49	21	eP	Pb	12 11 09.2	-2.1
GO04				eS	Sg	12 11 45.7	-0.4
ZON	Zonda	2.85	71		Pb	12 11 16.7	-0.6
ZON	Zonda	2.85	71	eP	Pb	12 11 17.2	0.0
ZON				eS	Sg	12 12 01.5	+3.9
ZON				IAML		12 12 06.5	
	comp=Z,345nm,0.7s						
RTCV	Cerro Valdivia	2.87	78	eP	Pb	12 11 16.6	-1.0
CO01	Juntas del Tor	2.93	31	IAML		12 12 00.2	
	comp=Z,441nm,0.5s						
CO01	Juntas del Tor	2.93	31		Pb	12 11 16.1	-2.7
ACCO	Cerro Coronel	3.04	52	eP	Pb	12 11 19.3	-1.4
ACCO				eS	Sg	12 12 04.8	+1.0
ACCO				IAML		12 12 15.9	
	comp=Z,480nm,0.7s						
AROD	Rodeo	3.09	42	eP	Pb	12 11 19.8	-1.7
AROD				eS	Sg	12 12 04.9	-0.4
RTLL	Cerro Villicun	3.09	69	eP	Pb	12 11 19.8	-1.6
RTLL				eS	Sb	12 11 58.4	-0.8
RTLL				IAML		12 12 14.3	
	comp=Z,324nm,0.5s						
LAMA	Las Malvinas	3.26	139	eP	Pb	12 11 21.9	-2.4
ACDV	Cuesta del Vie	3.29	46	eP	Pb	12 11 22.6	-2.3
ACDV				eS	Sg	12 12 11.1	-0.7
ACDV				IAML		12 12 17.9	
	comp=Z,208nm,0.5s						
PUMA	Malargue	3.58	147	eP	Pb	12 11 26.5	-3.2
LCO	Las Campanas	3.62	16	Pn	Pn	12 11 24.3	+1.5
AC05	El Transito	3.90	21	eP	Pn	12 11 28.5	+2.0
AC05	El Transito	3.90	21		Pn	12 11 28.7	+2.2

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BI02  San Fabin de        4.17 174 eP    Pn      12 11 31.8 +1.6
BI02  San Fabin de        4.17 174       Pn      12 11 32.2 +2.0
AC04  Llanos de Chal      4.34   9 eP    Pn      12 11 32.8 +0.4
AC04  Llanos de Chal      4.34   9  Pn   Pn      12 11 32.7 +0.4
BI03  Tigo                4.44 192  Pn   Pn      12 11 34.5 +0.8
GO03  Copiap              5.09  16 eP    Pn      12 11 43.8 +1.0
GO03  Copiap              5.09  16       Pn      12 11 43.3 +0.5
GO03  Copiap              5.09  16 eP    Pn      12 11 44.3 +1.5
GO03                               eS    Sb      12 12 59.2 +2.3
MRA   San Martin          5.17  91 eP    Pn      12 11 46.9 +2.9
MRA                                 IAML         12 12 53.9
      comp=Z,113nm,1.1s
ACLC  CERRO LA CRUZ       5.20  55 eP    Pn      12 11 47.6 +3.2
ACLC                                IAML         12 12 59.1
      comp=Z,263nm,0.5s
H03N1 Juan Fernandez      6.02 259  Pn   Pn      12 11 56.8 +1.6
      baz=77,slow=74
H03N1                               T    T       12 18 26.6
      baz=88,slow=73,SNR=1249
H03N3 Juan Fernandez      6.03 259  Pn   Pn      12 11 56.6 +1.2
      baz=80,slow=74
H03N3                               T    T       12 18 25.6
      baz=88,slow=73,SNR=1081
H03N2 Juan Fernandez      6.04 259  Pn   Pn      12 11 57.4 +1.9
      baz=77,slow=74
H03N2                               T    T       12 18 26.8
      baz=88,slow=73,SNR=1027
H03S1 Juan Fernandez      6.08 255  Pn   Pn      12 11 56.5 +0.4
      baz=80
H03S1                               T    T       12 18 18.1
      baz=82,slow=75,SNR=88
H03S3 Juan Fernandez      6.08 256  Pn   Pn      12 11 57.1 +1.1
      baz=77
H03S3                               T    T       12 18 18.6
      baz=82,slow=75,SNR=72
H03S2 Juan Fernandez      6.09 256  Pn   Pn      12 11 56.5 +0.3
      baz=80
H03S2                               T    T       12 18 18.4
      baz=82,slow=75,SNR=161
AC02  Maricunga           6.12  23  Pn   Pn      12 11 58.9 +1.5
LC01  Cunco               6.38 180  Pn   Pn      12 12 02.0 +1.6
AC01  Pan de Azucar       6.43  10  Pn   Pn      12 12 01.6 +0.5
GO02  Mina Guanaco        7.58  16  Pn   Pn      12 12 17.4 +0.2
PLCA  Paso Flores         8.27 173  Pn   Pn      12 12 28.1 +1.6
      comp=Z,0.5nm,0.3s,baz=338,slow=12,SNR=18
PLCA                                Lg   Lg      12 14 41.7
      comp=Z,0.1nm,0.3s,baz=263,slow=19,SNR=3.0
PLCA  Paso Flores         8.27 173  Pn   Pn      12 12 28.5 +2.0
LVC   Limon Verde        10.19  15  Pn   Pn      12 12 51.7 -1.5
      comp=Z,0.1nm,0.3s,baz=189,slow=17,SNR=1.3
LVC                                 Lg   Lg      12 15 20.0
      comp=Z,1.5nm,0.3s,baz=16,slow=20,SNR=10.0
LVC   Limon Verde        10.19  15       Pn      12 12 52.9 -0.3
CPUP  Villa Florida      14.05  68  Pn   Pn      12 13 43.4 -2.2
      comp=Z,0.9nm,0.3s,baz=24,slow=4.5,SNR=2.8
LPAZ  La Paz             16.49  13  Pn   Pn      12 14 17.5 -1.0
      comp=Z,0.2nm,0.3s,baz=181,slow=5.4,SNR=9.1
LPAZ  La Paz             16.49  13  P    Pn      12 14 19.9 +1.3
SIV   San Ignacio        19.12  33  P    P       12 14 48.3 -1.4
      comp=Z,0.2nm,0.3s,baz=230,slow=12,SNR=6.3
SAML  Samuel             24.78  21  P    P       12 15 47.3 -1.2
BDFB  Brasilia           27.38  58  P    P       12 16 11.5 -0.7
      comp=Z,2.0nm,0.5s,baz=236,slow=6.7,SNR=3.9
BDFB                                LR   LR      12 26 29.7
      comp=Z,33nm,20.3s,baz=106,slow=35
BDFB  Brasilia           27.38  58  P    P       12 16 11.5 -0.7
BDFB                                IAmb IAmb    12 16 12.5
      comp=Z,10nm,1.2s
ROSC  El Rosal           37.22 356  P    P       12 17 38.3 -0.3
SDV   Santo Domingo      41.18   2  P    P       12 18 11.6 +0.1
SNAA  Sanae              52.90 158  P    P       12 19 42.7 +0.3
      comp=Z,1.0nm,0.6s,baz=258,slow=9.9,SNR=5.9
SNAA  Sanae              52.90 158  P    P       12 19 43.2 +0.9
SNAA                                IAmb IAmb    12 20 10.0
      comp=Z,5.2nm,1.2s
QSPA  South Pole Qui     57.73 180  P    P       12 20 18.4 +1.2
QSPA                                IAmb IAmb    12 20 19.9
      comp=Z,3.3nm,0.9s
VNDA  Vanda              65.59 191  LR   LR      12 46 43.1
      comp=Z,37nm,18.2s,baz=130,slow=33
TXAR  Lajitas Array      68.52 330  P    P       12 21 29.0 -0.3
      comp=Z,0.5nm,0.8s,baz=152,slow=7.5,SNR=4.8
TXAR                                LR   LR      12 47 19.7
      comp=Z,64nm,19.5s,baz=0.0,slow=32
TXAR  Lajitas Array      68.52 330  P    P       12 21 30.8 +1.5
TKL   Tuckaleechee C     68.73 350  P    P       12 21 30.5 +0.2
DBIC  Dimbokro           74.54  72  P    P       12 22 05.4 -0.4
      comp=Z,2.1nm,0.6s,baz=226,slow=6.0,SNR=4.5
DBIC  Dimbokro           74.54  72  P    P       12 22 05.8  0.0
ECSD  EROS Data Cent     79.18 342  P    P       12 22 32.2 +0.8
ECSD                                IAmb IAmb    12 22 39.4
      comp=Z,2.9nm,1.0s
BOSA  Boshof             80.61 118  P    P       12 22 39.2 -0.6
      comp=Z,5.5nm,1.1s,baz=239,slow=5.8,SNR=5.0
NVAR  Mina Array Bea     82.76 325  P    P       12 22 52.1 +1.3
      comp=Z,0.3nm,0.7s,baz=176,slow=6.9,SNR=5.0
TOA0  Torodi Ar. Sit     83.54  70  P    P       12 22 55.6 +0.4
TOA0                                IAmb IAmb    12 22 55.8
      comp=Z,2.3nm,0.7s
TORD  Torodi Ar. Bea     83.54  70  P    P       12 22 54.9 -0.2
      comp=Z,2.0nm,0.7s,baz=266,slow=5.1,SNR=11
TORD  Torodi Ar. Bea     83.54  70  P    P       12 22 55.6 +0.4
TORD                                IAmb IAmb    12 22 55.8
      comp=Z,2.1nm,0.8s
WRA   Warramunga Arr    122.14 209  PKP  PKPdf   12 29 21.4 -0.7
      comp=Z,0.5nm,0.9s,baz=150,slow=1.5,SNR=2.3
H11S2 WAKE ISLAND Hy    125.95 270  T    T       14 48 28.8
      baz=118,slow=74,SNR=269
H11S1 WAKE ISLAND Hy    125.96 270  T    T       14 48 28.2
      baz=118,slow=74,SNR=120
H11S3 WAKE ISLAND Hy    125.97 270  T    T       14 48 30.1
      baz=118,slow=74,SNR=184
H11N3 WAKE ISLAND Hy    126.33 272  T    T       14 48 52.5
      baz=112,slow=78,SNR=13
H11N1 WAKE ISLAND Hy    126.34 272  T    T       14 48 56.2
      baz=112,slow=78,SNR=10
H11N2 WAKE ISLAND Hy    126.34 272  T    T       14 48 56.1
      baz=112,slow=78,SNR=24
SEY   Seymchan          138.82 331  PKP  PKPdf   12 29 52.9 +0.7
      comp=Z,1.6nm,0.8s,baz=234,slow=18,SNR=2.3
ZALV  Zalesovo Beam     152.87  31  PKPbc PKPbc  12 30 23.2 -0.2
      comp=Z,1.7nm,0.5s,baz=312,slow=3.0,SNR=6.5
ZALV  Zalesovo Beam     152.87  31        PKPbc  12 30 23.5 +0.1
MKAR  Makanchi Array    155.64  47  PKPab PKPab  12 30 46.0 -0.5
      comp=Z,0.6nm,0.7s,baz=284,slow=4.3,SNR=3.9
```

BJI **14** *12:18:18.4±0.0, 67°.55N×162°.32W, h9^{km}, mB5.0/14, mb4.5/24, Ms4.7/3, Ms7 4.3/2*

MOS **14** *12:18:20.7±1.2, 67°.73N×162°.45W, h10^{km}, mb4.6/22, Error ellipse: s-maj=27.8km s-min=8.0km az=100.4*

AEIC **14** *12:18:21±2.3, 67°.65N±0°.04×162°.6W±0°.1, h15^{km}±4^{km}, ML4.3, mb4.6/95(NEIC), ML4.4/10(NEIC), Error ellipse: s-maj=8.0km s-min=5.3km az=81.0*

NEIC **14** *12:18:21.2±1.9, 67°.78N±0°.06×162°.5W±0°.1, h4^{km}±4^{km}, Error ellipse: s-maj=8.3km s-min=6.6km az=159.0*

IDC **14** *12:18:21.0±0.6, 67°.83N×162°.55W, h0^{km}, mb4.2/24, mb1 4.4/27, mb1mx4.3/46, mbtmp4.3/27, ML4.2/3, MS3.5/13, Ms1 3.5/13, ms1mx3.2/42, Error ellipse: s-maj=15.9km s-min=11.4km az=11.0*

ANF **14** *12:18:23.6±1.0, 67°.80N×162°.20W, h15^{km}, ML4.8/5, Error ellipse: s-maj=9.6km s-min=8.7km az=89.0*

ISC 14 12:18:22.3±0.3**, 67°.76N**±0°.04×**162°.25W**±0°.03**, h10**^{km}**, n357, σ1^{s}47**/373**, mb4.5**/80**, MS3.5**/14**, 1C-2D, Northern Alaska**

```
Code  Station Name         Δ°  AZ°   Phase ID        Time      Res
                                    Op    ISC      h  m  s     ISC
RDOG  Red Dog Mine        0.38 320        Pg     12 18 30.0 +0.1
RDOG                                      Sg     12 18 35.5 +0.5
TNA   Tin City            3.16 228  P     Pn     12 19 08.3 -3.7
      baz=43,SNR=158
TNA                                 S     Sn     12 19 55.9 +6.2
      baz=43
TNA   Tin City            3.16 228  Pn    Pn     12 19 11.1 -0.9
TNA   Tin City            3.16 228        Sn     12 19 44.3 -5.4
ANM   Nome                3.46 203        Pn     12 19 13.9 -2.1
ANM                                 IAML         12 20 19.2
      comp=N,436nm,0.8s
ANM                                 IAML         12 20 26.2
      comp=E,453nm,0.8s
IM03                      3.80 114        Pn     12 19 21.2 +0.4
IMAR  Indian Mountai      3.80 114        Pn     12 19 20.3 -0.5
A21K  Barrow              4.08  26  P     Pn     12 19 20.5 -4.2
      baz=213,SNR=161
A21K                                S     Sn     12 20 13.5 +1.1
      baz=213
A21K  Barrow              4.08  26        Pn     12 19 21.0 -3.6
PS05  TAPS Pump Stn5      4.59  97        Pn     12 19 32.6 +1.0
COLD  Coldfoot            4.66  91  P     Pn     12 19 33.3 +0.7
      baz=281,SNR=123
COLD                                S     Sn     12 20 28.4 +1.7
      baz=281
COLD  Coldfoot            4.66  91  Pn    Pn     12 19 34.4 +1.8
TOLK  Toolik Lake Re      4.81  74  P     Pn     12 19 35.7 +1.1
      baz=264,SNR=267
TOLK                                S     Sn     12 20 32.4 +2.1
      baz=264
TOLK  Toolik Lake Re      4.81  74  Pn    Pn     12 19 36.3 +1.6
TOLK                                IAML         12 21 11.2
      comp=E,504nm,1.9s
TOLK                                IAML         12 21 11.7
      comp=N,480nm,1.9s
PS04  TAPS Pump Stn4      4.87  76        Pn     12 19 36.8 +1.2
PS06  TAPS Pump Stn6      5.30 105        Pn     12 19 42.1 +0.7
MLY   Manley              5.37 115  P     Pn     12 19 41.9 -0.6
      baz=304,SNR=70
MLY                                 S     Sn     12 20 44.3 -0.1
      baz=304
MLY   Manley              5.37 115        Pn     12 19 42.0 -0.5
PS01  TAPS Pump Stn       5.50  57        Pn     12 19 45.4 +1.3
TTA   Tatalina            5.51 149  Pn    Pn     12 19 44.0 -0.4
TT01  Tatalina            5.53 149        Pn     12 19 44.0 -0.5
GAMB  Gambell             5.58 229        Pn     12 19 43.7 -1.6
CHUM  Lake Minchumin      5.64 129        Pn     12 19 46.6 +0.5
I23K  Minto, Yukon-K      5.79 111  P     Pn     12 19 48.3 +0.2
      baz=301,SNR=52
I23K  Minto, Yukon-K      5.79 111        Pn     12 19 48.7 +0.6
BPAW  Bear Paw Mtn.       5.89 123  Pn    Pn     12 19 49.7 +0.2
NEA2  Nenana              6.21 115  P     Pn     12 19 54.3 +0.5
      baz=305,SNR=224
NEA2                                S     Sn     12 21 03.3 -1.6
      baz=305
NEA2  Nenana              6.21 115        Pn     12 19 54.4 +0.5
MDM   Murphy Dome         6.30 110  Pn    Pn     12 19 55.6 +0.6
KTH   Kantishna Hill      6.30 127        Pn     12 19 55.3 +0.1
BWN   Browne              6.34 119        Pn     12 19 56.7 +1.0
PPLA  Purkeypile          6.44 135  Pn    Pn     12 19 57.6 +0.4
TCOL  CIGO, UAF Yank      6.47 110  P     Pn     12 19 58.7 +1.2
      baz=302,SNR=139
TCOL                                S     Sn     12 21 10.5 -0.8
      baz=302
TCOL  CIGO, UAF Yank      6.47 110        Pn     12 19 58.5 +1.0
COLA  College             6.48 110d iP    Pn     12 19 58.8 +1.3
COLA  College             6.48 110        Pn     12 19 58.1 +0.6
POKR  Poker Plat Res      6.50 107  P     Pn     12 19 58.6 +0.7
      baz=299,SNR=55
POKR                                S     Sn     12 21 12.8 +0.8
      baz=299
POKR  Poker Plat Res      6.50 107        Pn     12 19 59.1 +1.2
TRF   Thorofare Moun      6.57 126        Pn     12 19 59.1 +0.1
CCB   Clear Creek Bu      6.62 111  Pn    Pn     12 19 59.5  0.0
WRH   Wood River Hil      6.62 113        Pn     12 19 59.9 +0.3
FYU   Fort Yukon          6.73  92  Pn    Pn     12 20 01.5 +0.5
BM03  Burnt Mountain      6.75  85        Pn     12 20 02.4 +1.0
BMAR  Burnt Mountain      6.76  85        Pn     12 20 02.1 +0.7
MCK   McKinley            6.81 120  P     Pn     12 20 02.4 +0.3
      baz=311,SNR=24
MCK                                 S     Sn     12 21 19.6 +0.1
      baz=311
MCK   McKinley            6.81 120        Pn     12 20 02.5 +0.4
IL31                      6.88 109        Pn     12 20 04.1 +1.0
ILAR  Eielson Array       6.88 109  Pn    Pn     12 20 04.1 +1.0
      comp=N,31nm,0.3s,baz=303,slow=13,SNR=1709
ILAR                                Sn    Sn     12 21 18.7 -2.7
      baz=305,slow=26,SNR=0.6
ILAR                                Lg    Lg     12 22 04.3
      baz=313,slow=28,SNR=5.0
ILAR  Eielson Array       6.88 109  Pn    Pn     12 20 03.7 +0.7
PRP   Porcupine Dome      7.01 101  Pn    Pn     12 20 04.9 -0.1
PS08  TAPS Pump Stn8      7.03 110        Pn     12 20 05.5 +0.4
RND   Reindeer            7.06 122  Pn    Pn     12 20 04.9 -0.7
HDA   Harding Lake        7.06 111  P     Pn     12 20 06.1 +0.5
      baz=304,SNR=39
HDA                                 S     Sn     12 21 24.1 -1.7
      baz=304
HDA                                 S     Sn     12 21 24.1 -1.7
      baz=304
HDA   Harding Lake        7.06 111        Pn     12 20 05.4 -0.1
SVW2  Sparrevohn          7.28 154        Pn     12 20 07.1 -1.5
CUT   Chulitna            7.37 131  P     Pn     12 20 11.4 +1.6
      baz=321,SNR=18
CUT                                 S     Sn     12 21 35.4 +2.0
      baz=321
CUT   Chulitna            7.37 131        Pn     12 20 10.8 +1.0
SKT   Skwentna            7.37 137        Pn     12 20 10.0 +0.1
WAT2  Susitna Watana      7.46 124        Pn     12 20 12.0 +0.9
WAT1  Susitna Watana      7.57 124        Pn     12 20 13.2 +0.7
STLK  Strandline Lak      7.71 140        Pn     12 20 15.1 +0.7
WAT6  Susitna Watana      8.01 124        Pn     12 20 19.1 +0.5
SUA   Susitna One         8.01 137        Pn     12 20 19.3 +0.6
GHO   Glory Hole Cre      8.26 130        Pn     12 20 23.6 +1.5
NCT   North Crescent      8.29 146        Pn     12 20 22.3 -0.1
DFR   Drift River         8.31 145        Pn     12 20 22.4 -0.4
PMR   Palmer              8.35 132        Pn     12 20 23.9 +0.7
SCRK  Sand Creek          8.37 108  P     Pn     12 20 24.0 +0.4
      baz=304,SNR=45
SCRK  Sand Creek          8.37 108        Pn     12 20 24.0 +0.4
SML   Sawmill             8.41 129        Pn     12 20 24.4 +0.4
RSO   Redoubt South       8.41 146        Pn     12 20 24.6 +0.3
RDSO  Redoubt South       8.42 146        Pn     12 20 24.2 -0.2
PAX   Paxson              8.48 117  Pn    Pn     12 20 25.4 +0.3
DOT   Dot Lake            8.54 110        Pn     12 20 26.8 +0.9
RC01  Rabbit Creek A      8.59 135  P     Pn     12 20 29.8 +3.2
      baz=325
KNK   Knik Glacier        8.68 131        Pn     12 20 29.2 +1.4
SCM   Sheep Creek Mo      8.69 126        Pn     12 20 27.5 -0.5
IVE   Iliamna Volcan      8.77 148        Pn     12 20 28.3 -0.7
M24K  Tolsona, Glenn      8.85 122  P     Pn     12 20 32.4 +2.2
      baz=316
M24K  Tolsona, Glenn      8.85 122        Pn     12 20 30.9 +0.8
EGAK  Eagle               8.99 100        Pn     12 20 32.7 +0.7
MENT  Mentasta            9.11 113        Pn     12 20 34.3 +0.7
KLU   Klutina             9.39 124        Pn     12 20 38.4 +0.8
CNPM  China Poot          9.59 144  Pn    Pn     12 20 41.0 +0.8
BC03                      9.71 109        Pn     12 20 42.6 +0.8
BCAR  Beaver Creek A      9.71 109        Pn     12 20 42.5 +0.6
N25K  Chitina, Valde      9.73 121  P     Pn     12 20 44.3 +2.2
      baz=316
N25K  Chitina, Valde      9.73 121  Pn    Pn     12 20 44.6 +2.4
EPYK  Eagle Plains       10.03  86  P     Pn     12 20 47.3 +1.1
      baz=289
EPYK                                S     Sn     12 22 37.1 -1.5
      baz=289
EPYK  Eagle Plains       10.03  86        Pn     12 20 47.3 +1.1
KABU  Katmai Buttres     10.03 158        Pn     12 20 45.2 -1.2
VRDI  Verde Repeater     10.38 120  Pn    Pn     12 20 53.7 +2.5
MCARA McCarthy VSAT      10.41 119  Pn    Pn     12 20 52.5 +1.1
INK   Inuvik             10.72  74  Pn    Pn     12 20 55.1 -0.5
      comp=N,4.2nm,0.3s,baz=299,slow=9.9,SNR=60
INK                                 Sn    Sn     12 22 50.5 -4.9
      comp=N,1.3nm,0.3s,baz=337,slow=13,SNR=8.4
INK   Inuvik             10.72  74  Pn    Pn     12 20 55.8 +0.2
KDAK  Kodiak Island      10.93 152  Pn    Pn     12 20 58.8 +0.3
      comp=N,0.8nm,0.3s,baz=45,slow=8.5,SNR=8.3
KDAK  Kodiak Island      10.93 152 iP     Pn     12 20 59.8 +1.3
TGL   Tana Glacier       10.94 121  Pn    Pn     12 20 59.4 +0.7
HYT   Haines Junctio     12.71 111  Pn    Pn     12 21 25.3 +2.3
C36M  Paulatuk           13.90  66  P     Pn     12 21 35.3 -3.6
      baz=281,SNR=30
C36M                                S     Sn     12 24 02.6  -10
      baz=281
C36M  Paulatuk           13.90  66  Pn    Pn     12 21 35.8 -3.1
DLBC  Dease Lake         17.09 107  P     Pn     12 22 22.2 +1.2
      comp=N,0.3nm,0.3s,baz=324,slow=8.4,SNR=9.9
SEY   Seymchan           19.16 277  P     P      12 22 45.5 +0.2
      comp=N,0.2nm,0.3s,baz=73,slow=9.7,SNR=11
SEY   Seymchan           19.16 277 iP     P      12 22 46.7 +1.3
YKA   Yellowknife Ar     20.27  82  P     P      12 22 58.1 +0.7
      comp=N,8.5nm,0.6s,baz=305,slow=9.2,SNR=77
YKA                                 S     S      12 26 36.4 -8.0
      comp=N,0.9nm,0.7s,baz=306,slow=21,SNR=2.8
RES   Resolute Bay       21.50  42  P     P      12 23 10.9 +0.3
      comp=N,3.2nm,0.8s,baz=259,slow=14,SNR=8.6
RES                                 S     S      12 27 02.7 -5.8
      comp=N,1.2nm,0.5s,baz=44,slow=21,SNR=1.8
RES                                 LR    LR     12 33 03.8
      comp=N,139nm,20.7s,baz=276,slow=41
MA2   Magadan            21.85 271  LR    LR     12 32 11.7
      comp=N,94nm,19.9s,baz=305,slow=38
MA2   Magadan            21.85 271 iP     P      12 23 14.1 -0.5
MA2                                 pmax  pmax
      comp=Z,7.0nm,0.9s
EUNU  Eureka             22.05  27  P     P      12 23 15.8 -0.9
EUNU                                IAmb  IAmb   12 23 25.2
      comp=Z,28nm,1.4s
TIXI  Tiksi              22.99 311 iP     P      12 23 26.0 -0.6
PETK  Petropavlovsk-     24.02 252  P     P      12 23 36.0 -0.9
      comp=Z,4.7nm,0.8s,baz=67,slow=5.0,SNR=9.2
PETK                                LR    LR     12 33 36.8
      comp=Z,88nm,19.2s,baz=32,slow=38
YAK   Yakutsk            28.05 292 iP     P      12 24 14.4 +1.2
YAK                                 pmax  pmax
      comp=Z,5.0nm,0.9s
LTY   Liberty            29.43 113  P     P      12 24 27.0 +1.3
NEW   Newport            29.84 108  LR    LR     12 37 36.6
      comp=Z,94nm,18.7s,baz=328,slow=39
FCC   Fort Churchill     30.34  73  P     P      12 24 33.9 +0.4
JTMT  Jette              31.31 105  P     P      12 24 43.9 +1.5
JTMT                                IAmb  IAmb   12 24 44.7
      comp=Z,12nm,1.2s
G08A  Pilot Rock         31.73 113  P     P      12 24 47.7 +1.6
I05D  Terrebonne, OR     31.74 117  P     P      12 24 47.7 +1.6
      baz=332
F10A  Beach Ranch, E     31.75 110  P     P      12 24 47.5 +1.3
PINE  Pine Mountain      32.35 117  P     P      12 24 53.0 +1.4
PINE                                IAmb  IAmb   12 24 54.7
      comp=Z,9.8nm,1.2s
I07A  Izee               32.59 115  P     P      12 24 55.4 +1.7
BMO   Blue Mountains     32.69 112  P     P      12 24 55.7 +1.3
J05D  Fort Rock, OR      32.70 118  P     P      12 24 56.1 +1.4
      baz=332
EGMT  Eagleton           32.76 100  P     P      12 24 55.8 +0.8
      baz=326
HRY   Holter Researc     33.08 104  P     P      12 24 59.9 +2.0
K05A  Summer Lake        33.31 118  P     P      12 25 02.5 +2.5
K05A                                IAmb  IAmb   12 25 04.3
      comp=Z,7.8nm,1.3s
DAG   Danmarks Havn      33.97  14 iP     P      12 25 06.9 +1.8
      comp=Z,5.6nm,1.0s
DAG   Danmarks Havn      33.97  14 iP     P      12 25 06.9 +1.8
DAG                                 pmax  pmax
      comp=Z,6.0nm,1.0s
DAG   Danmarks Havn      33.97  14 iP     P      12 25 07.0 +1.8
DAG                                 IAmb  IAmb   12 25 08.3
      comp=Z,5.6nm,1.0s
BOZ   Bozeman (W)        34.10 105  P     P      12 25 08.6 +1.8
      baz=328
SPITS Spitsbergen Ar     34.27   1  P     P      12 25 06.7 -1.1
      comp=Z,17nm,1.1s,baz=358,slow=7.4,SNR=6.4
SPITS                               PcP   PcP    12 27 42.0 -1.7
      comp=Z,8.6nm,0.9s,baz=354,slow=1.4,SNR=4.2
N02D  Trinity Center     34.28 121  P     P      12 25 10.2 +1.8
      baz=334
MCMT  McKenzie Canyo     34.31 107  P     P      12 25 10.8 +2.0
WVOR  Wild Horse Val     34.34 115  P     P      12 25 11.1 +2.2
WVOR                                IAmb  IAmb   12 25 11.9
      comp=Z,8.1nm,1.3s
GCMT  Greycliff          34.66 102  P     P      12 25 13.7 +2.0
QLMT  Earthquake Lak     34.83 105  P     P      12 25 14.6 +1.3
HLID  Hailey             34.84 109  P     P      12 25 14.7 +1.4
      baz=330,SNR=6.1
HLID  Hailey             34.84 109  P     P      12 25 14.8 +1.4
HLID                                IAmb  IAmb   12 25 15.6
      comp=Z,9.2nm,1.4s
YHL   Hebgen Lake        34.90 105  P     P      12 25 15.5 +1.5
YHB   Horse Butte        34.98 105  P     P      12 25 15.4 +0.9
YHH   Holmes Hill        35.08 104  P     P      12 25 17.5 +2.0
SUMG  Summit             35.12  26 iP     P      12 25 17.8 +2.2
      comp=Z,22nm,0.9s
SUMG  Summit             35.12  26 iP     P      12 25 17.8 +2.2
SUMG                                pmax  pmax
      comp=Z,22nm,0.9s
SUMG  Summit             35.12  26  P     P      12 25 16.9 +1.3
SUMG                                IAmb  IAmb   12 25 18.9
      comp=Z,9.7nm,1.0s
SUMG  Summit             35.12  26 iP     P      12 25 17.9 +2.2
SUMG                                IAmb  IAmb   12 25 19.1
      comp=Z,22nm,0.9s
NRIK  Noril'sk           35.12 325  P     P      12 25 14.2 -1.0
      comp=Z,6.4nm,0.8s,baz=46,slow=8.3,SNR=12
NRIK  Noril'sk           35.12 325 iP     P      12 25 15.3 +0.1
NRIK                                pmax  pmax
      comp=Z,10.0nm,1.0s
NRIK  Noril'sk           35.12 325  P     P      12 25 15.7 +0.4
YMR   Madison River      35.14 105  P     P      12 25 17.5 +1.6
FRB   Frobisher Bay      35.18  50  P     P      12 25 16.6 +0.8
      comp=Z,3.1nm,0.7s,baz=332,slow=9.0,SNR=6.7
O03E  Paynes Creek       35.19 121  P     P      12 25 17.1 +0.9
      baz=334
YNE   Yellowstone No     35.20 103  P     P      12 25 17.4 +0.9
RLMT  Red Lodge          35.38 103  P     P      12 25 19.1 +1.2
      baz=328
RLMT  Red Lodge          35.38 103  P     P      12 25 18.5 +0.5
RLMT                                IAmb  IAmb   12 25 20.6
      comp=Z,11nm,1.4s
LKWY  Lake               35.44 104  P     P      12 25 20.2 +1.8
LKWY                                IAmb  IAmb   12 25 25.0
      comp=Z,11nm,1.4s
FLWY  Flagg Ranch        35.74 105  P     P      12 25 23.1 +2.0
FLWY                                IAmb  IAmb   12 25 38.2
      comp=Z,14nm,1.5s
LOHW  Long Hollow        36.18 105  P     P      12 25 26.7 +1.8
ULM   Lac du Bonnet      36.20  85  PcP   PcP    12 27 49.8 +0.1
      comp=Z,0.9nm,0.4s,baz=348,slow=12,SNR=3.0
VCNR  Virginia City      36.80 119  P     P      12 25 31.1 +1.0
KLR   Kul'dur            36.89 274 iP     P      12 25 29.9 -0.6
KLR                                 pmax  pmax
      comp=Z,4.0nm,1.2s
HVU   Hansel Valley      36.98 109  P     P      12 25 33.6 +2.0
PNTR  Pine Nut           37.01 119  P     P      12 25 33.4 +1.4
BW06  Boulder Array      37.30 105  P     P      12 25 36.0 +1.7
      baz=330,SNR=7.4
BW06  Boulder Array      37.30 105  P     P      12 25 35.1 +0.7
BW06                                IAmb  IAmb   12 25 37.5
      comp=Z,11nm,1.3s
PD31  Pinedale Array     37.30 105  P     P      12 25 35.8 +1.4
PD31                                IAmb  IAmb   12 25 37.5
      comp=Z,10nm,1.3s
PDAR  Pinedale Array     37.30 105  P     P      12 25 35.9 +1.5
      comp=Z,3.6nm,0.5s,baz=342,slow=6.7,SNR=48
PDAR  Pinedale Array     37.30 105  P     P      12 25 35.3 +0.9
WAKR  Walker             37.59 119  P     P      12 25 38.3 +1.5
WAKR                                IAmb  IAmb   12 25 39.6
      comp=Z,19nm,1.4s
ICESG Greenland Ices     37.86  30 iP     P      12 25 40.7 +1.7
NVAR  Mina Array Bea     38.03 118  P     P      12 25 42.4 +1.8
      comp=Z,4.5nm,0.7s,baz=320,slow=7.5,SNR=47
NVAR                                PcP   PcP    12 27 55.1 -0.7
      comp=Z,0.4nm,0.7s,baz=316,slow=5.0,SNR=2.9
NVAR  Mina Array Bea     38.03 118  P     P      12 25 42.1 +1.5
TCUT  Toone Canyon       38.06 108  P     P      12 25 42.7 +1.9
NV11  Mina Array Sit     38.08 118  P     P      12 25 42.7 +1.8
LHV   Little Huntoon     38.13 118  P     P      12 25 42.9 +1.7
LHV                                 IAmb  IAmb   12 25 44.4
      comp=Z,9.0nm,1.1s
DUG   Dugway, Tooele     38.37 110  P     P      12 25 44.5 +1.2
      baz=332
DUG   Dugway, Tooele     38.37 110  P     P      12 25 44.6 +1.2
DUG                                 IAmb  IAmb   12 25 45.9
      comp=Z,14nm,1.5s
MDPB  Devils Postpil     38.50 119  P     P      12 25 46.4 +1.9
MDPB                                IAmb  IAmb   12 25 48.4
      comp=Z,15nm,1.2s
OMMB  Old Mammoth Mi     38.54 119  P     P      12 25 47.4 +2.4
OMMB                                IAmb  IAmb   12 25 48.2
      comp=Z,17nm,1.3s
NLU   North Lily Min     38.84 110  P     P      12 25 49.6 +2.2
R11A  Troy Canyon, C     39.03 115  P     P      12 25 50.3 +1.3
      baz=334
R11A  Troy Canyon, C     39.03 115  P     P      12 25 50.2 +1.3
R11A                                IAmb  IAmb   12 25 52.2
      comp=Z,11nm,1.2s
PSUT  Pine Spring        39.47 113  P     P      12 25 53.9 +1.2
EYMN  Ely                39.74  83  P     P      12 25 55.5 +0.9
      baz=326
CWC   Cottonwood Cre     39.91 119  P     P      12 25 58.1 +1.9
      baz=335
PRN   Pahroc Range       40.07 115  P     P      12 25 59.0 +1.5
TPNV  Topopah Spring     40.07 116  P     P      12 25 58.9 +1.3
      baz=335,SNR=7.4
TPNV  Topopah Spring     40.07 116  P     P      12 25 58.3 +0.8
MVU   Marysvale          40.08 111  P     P      12 25 59.4 +1.6
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MSU	Marysvale	40.09	111	P	P	12 25 59.1	+1.4
VES	Vestal, Richgr	40.12	120	P	P	12 25 58.9	+1.1
	baz=336						
SRU	San Rafael Swe	40.15	109	P	P	12 25 59.0	+0.7
N23A	Red Feather La	40.26	103	P	P	12 26 00.8	+1.5
	baz=330						
FURC	Furnace Creek,	40.30	117	P	P	12 26 01.1	+1.9
	baz=335						
SMMC	Simmler	40.31	122	P	P	12 26 01.3	+1.8
	baz=336						
MPMC	Manual Prospec	40.46	118	P	P	12 26 02.7	+1.8
	baz=335,SNR=6.4						
ISA	Isabella, Lake	40.49	120	P	P	12 26 02.3	+1.3
	baz=336,SNR=5.3						
ISA	Isabella, Lake	40.49	120	P	P	12 26 01.3	+0.4
MTPU	Mount Pierson	40.50	111	P	P	12 26 02.7	+1.3
CCUT	Cedar City	40.52	113	P	P	12 26 03.1	+1.6
SZCU	Shurtz Canyon	40.58	113	P	P	12 26 02.8	+0.9
PKM	Mcpherson Peak	40.76	122	P	P	12 26 05.6	+2.2
	baz=337,SNR=6.6						
LRMC	Laurel Mtn Rad	40.92	119	P	P	12 26 06.2	+1.7
	baz=336,SNR=14						
USRK	Ussuriysk Ar.	40.99	269	P	P	12 26 05.3	+0.4
SHOC	Shoshone, Teco	41.01	117	P	P	12 26 06.6	+1.4
	baz=335						
LCMT	Little Creek M	41.05	113	P	P	12 26 06.7	+1.0
KNB	Kanab	41.19	113	P	P	12 26 08.4	+1.5
PV22	Blue Mesa, Par	41.28	107	P	P	12 26 08.4	+0.7
PV22				IAmb	IAmb	12 26 09.6	
	comp=Z,8.6nm,0.8s						
ECSD	EROS Data Cent	41.34	91	P	P	12 26 08.5	+0.7
	baz=328						
ISCO	Idaho Springs	41.34	103	P	P	12 26 09.8	+1.6
	baz=331						
EDW2	Edwards Air Fo	41.36	120	P	P	12 26 09.5	+1.3
	baz=336						
GSC	Goldstone, Bar	41.37	118	P	P	12 26 10.1	+1.8
	baz=336,SNR=10.0						
GSC	Goldstone, Bar	41.37	118	P	P	12 26 08.9	+0.7
GSC				IAmb	IAmb	12 26 11.0	
	comp=Z,9.2nm,1.1s						
PV02	Paradox Valley	41.59	107	P	P	12 26 10.7	+0.5
PV02				IAmb	IAmb	12 26 12.3	
	comp=Z,6.6nm,0.8s						
PV01	Paradox Valley	41.72	107	P	P	12 26 12.2	+1.0
MWC	Mount Wilson	41.94	120	P	P	12 26 14.3	+1.3
MWC				IAmb	IAmb	12 26 16.4	
	comp=Z,16nm,1.1s						
BFSC	Mount Baldy Ra	42.06	120	P	P	12 26 15.9	+2.0
	baz=336,SNR=10						
GMRC	Granite Mounta	42.23	117	P	P	12 26 17.2	+1.9
	baz=336,SNR=6.0						
BBRC	Big Bear Solar	42.28	119	P	P	12 26 17.1	+1.3
	baz=336						
I37A	Lemond, Waseca	42.32	88	P	P	12 26 17.7	+1.9
W13A	Hualapai Mount	42.55	115	P	P	12 26 18.3	+0.3
CIS	Catalina Islan	42.58	121	P	P	12 26 19.1	+1.1
	baz=337						
S22A	4UR Ranch, Cre	42.70	106	P	P	12 26 21.1	+1.8
	baz=332						
BELC	Belle Mtn. Jos	42.83	118	P	P	12 26 21.8	+1.6
	baz=336						
ARCES	ARCESS Array B	42.86	356	P	P	12 26 19.7	-0.2
	comp=Z,2.9nm,0.8s,baz=21,slow=9.2,SNR=6.1						
ARCES				PcP	PcP	12 28 10.4	-0.1
	comp=Z,5.7nm,1.0s,baz=346,slow=4.1,SNR=8.4						
ARCES				LR	LR	12 44 17.6	
	comp=Z,41nm,18.5s,baz=250,slow=36						
IRM	Iron Mountain	42.97	117	P	P	12 26 23.1	+1.8
	baz=336,SNR=5.4						
PFO	Pinyon Flats O	43.03	119	P	P	12 26 22.8	+1.0
	baz=336						
WUAZ	Wupatki	43.05	112	P	P	12 26 24.0	+1.9
	baz=334,SNR=6.5						
WUAZ	Wupatki	43.05	112	P	P	12 26 23.3	+1.3
WUAZ				IAmb	IAmb	12 26 24.7	
	comp=Z,11nm,1.1s						
PDMCI	Parker Dam,Lak	43.18	116	P	P	12 26 25.2	+2.3
	baz=335						
SDCO	Great Sand Dun	43.19	104	P	P	12 26 24.8	+1.6
	baz=332,SNR=6.1						
SDCO	Great Sand Dun	43.19	104	P	P	12 26 25.1	+1.9
BC3	Big Chuckawall	43.33	118	P	P	12 26 25.6	+1.4
	baz=336						
MONP2	Monument Peak	43.70	119	P	P	12 26 29.0	+1.6
	baz=337,SNR=13						
IKP	In-Ko-Pah, Jac	44.03	119	P	P	12 26 31.3	+1.5
	baz=337						
LSQQ	Lebel-sur-Quev	44.18	70	P	P	12 26 31.1	+0.3
	baz=327						
ESJX	Sierra Juarez	44.67	119	P	P	12 26 36.8	+1.7
ESJX				IAmb	IAmb	12 26 37.6	
	comp=Z,9.1nm,1.3s						
113A	Mohawk Valley,	44.71	116	P	P	12 26 34.5	-0.7
TLY	Talaya	45.04	299	*i* P	P	12 26 38.8	+1.2
TLY				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MJAR	Matsushiro Arr	45.28	258	P	P	12 26 39.1	-0.7
	comp=Z,2.0nm,0.9s,baz=17,slow=8.3,SNR=4.7						
MJAR				LR	LR	12 46 29.9	
	comp=Z,53nm,18.8s,baz=15,slow=37						
ANMO	Albuquerque	45.33	107	P	P	12 26 41.7	+1.4
	baz=334						
ANMO	Albuquerque	45.33	107	*i* P	P	12 26 41.3	+1.0
ANMO				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ANMO	Albuquerque	45.33	107	P	P	12 26 41.4	+1.1
ANMO				IAmb	IAmb	12 26 42.9	
	comp=Z,6.2nm,1.1s						
214A	Organ Pipe Nat	45.78	116	P	P	12 26 45.4	+1.7
	baz=336						
214A	Organ Pipe Nat	45.78	116	P	P	12 26 44.8	+1.0
BNM	Barren Site	45.98	108	P	P	12 26 45.4	-0.1
P38A	Dawn	46.04	91	P	P	12 26 46.2	+0.5
D56A	ZEC Mazanza, M	46.68	70	P	P	12 26 51.2	+0.6
	baz=328						
121A	Cookes Peak, D	47.02	110	P	P	12 26 55.9	+2.3
	baz=335						
ULN	Ulaanbaatar	47.11	293	*i* P	P	12 26 56.2	+2.0
ULN				pmax	pmax		
	comp=Z,1.0nm,0.9s						
D58A	Chemin du LacG	47.30	68	P	P	12 26 55.6	+0.1
	baz=329						
SONM	Songino Array	47.37	294	P	P	12 26 56.4	+0.2
	comp=Z,2.0nm,0.9s,baz=44,slow=6.0,SNR=11						
SONM	Songino Array	47.37	294	P	P	12 26 56.9	+0.8
MSTX	Muleshoe	47.55	104	P	P	12 26 58.8	+1.1
	baz=334						
MSTX	Muleshoe	47.55	104	P	P	12 26 57.9	+0.2
CCM	Cathedral Cave	48.28	90	P	P	12 27 02.9	-0.3
	baz=331						
WMOK	Wichita Mounta	48.35	100	P	P	12 27 03.2	-0.5
KSRS	Korea Array	48.36	268	P	P	12 27 03.6	-0.2
	comp=Z,2.7nm,0.8s,baz=16,slow=7.3,SNR=7.4						
KSRS				LR	LR	12 47 30.0	
	comp=Z,31nm,18.4s,baz=50,slow=36						
TUL1	Leonard	48.44	96	P	P	12 27 04.6	+0.2
MNTX	Cornudas Mount	48.63	108	P	P	12 27 07.5	+1.5
	baz=335,SNR=7.5						
MNTX	Cornudas Mount	48.63	108	P	P	12 27 06.7	+0.8
MNTX				IAmb	IAmb	12 27 08.4	
	comp=Z,4.2nm,0.8s						
FVM	French Village	48.66	90	P	P	12 27 06.0	-0.1
H57A	Richville	48.67	72	P	P	12 27 06.1	+0.1
	baz=330						
MGMO	Mountain Grove	48.68	92	P	P	12 27 05.6	-0.7
X34A	Smith Ranch, M	48.83	99	P	P	12 27 05.7	-1.8
ZAA0	Zalesovo Array	48.84	314	P	P	12 27 06.7	-0.5
ZAA0				IAmb	IAmb	12 27 08.8	
	comp=Z,5.5nm,0.9s						
ZALV	Zalesovo Beam	48.84	314	P	P	12 27 05.9	-1.3
	comp=Z,4.5nm,0.8s,baz=33,slow=5.9,SNR=14						
ZALV				LR	LR	12 51 22.1	
	comp=Z,65nm,18.6s,baz=34,slow=41						
ZALV	Zalesovo Beam	48.84	314	*i* P	P	12 27 06.5	-0.7
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ZALV	Zalesovo Beam	48.84	314	P	P	12 27 05.6	-1.6
T42A	Van Buren	49.24	91	P	P	12 27 10.4	-0.1
T42A				IAmb	IAmb	12 27 18.3	
	comp=Z,5.9nm,0.9s						
FCAR	Ozark Folk Cen	49.85	92	P	P	12 27 14.6	-0.6
FCAR				IAmb	IAmb	12 27 15.2	
	comp=Z,4.7nm,0.6s						
MIAR	Mount Ida	50.49	95	P	P	12 27 20.4	+0.4
	baz=333						
MIAR	Mount Ida	50.49	95	P	P	12 27 19.7	-0.3
MIAR				IAmb	IAmb	12 27 35.8	
	comp=Z,10nm,1.2s						
KLMR	Klimovskoe	50.70	346	*e*P	P	12 27 19.6	-1.7
KLMR				pmax	pmax		
	comp=Z,14nm,1.1s						
KLMR	Klimovskoe	50.70	346	*e*P	P	12 27 19.6	-1.7
KLMR				AMP		12 27 23.6	
	comp=Z,14nm,1.1s						
X40A	Basin Creek Fa	50.82	94	P	P	12 27 22.5	0.0
	baz=333						
FINES	FINESS Array B	50.95	355	P	P	12 27 23.3	+0.2
	comp=Z,2.8nm,0.7s,baz=1.2,slow=6.7,SNR=7.8						
FINES				LR	LR	12 48 24.2	
	comp=Z,52nm,20.1s,baz=344,slow=35						
FINES	FINESS Array B	50.95	355	*i* P	P	12 27 23.2	+0.1
FINES				pmax	pmax		
	comp=Z,3.0nm,0.7s						
WVT	Waverly	51.27	88	P	P	12 27 26.4	+0.5
	baz=332						
TX31	Lajitas Ar. Si	51.39	108	P	P	12 27 27.3	+0.3
TX32	Lajitas Array	51.39	108	P	P	12 27 28.0	+1.0
TXAR	Lajitas Array	51.39	108	P	P	12 27 28.2	+1.1
	comp=Z,6.3nm,0.6s,baz=331,slow=6.0,SNR=86						
TXAR	Lajitas Array	51.39	108	P	P	12 27 27.3	+0.3
NOA	NORSAR Array B	51.41	4	P	P	12 27 26.7	0.0
	comp=Z,0.7nm,0.7s,baz=356,slow=7.4,SNR=3.7						
NOA				LR	LR	12 50 55.3	
	comp=Z,22nm,18.3s,baz=305,slow=38						
HHC	Hu-ho-hao-te	51.56	285	*e*P	P	12 27 28.8	+0.6
HHC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,54nm,6.2s						
JCT	Junction City	51.78	103	P	P	12 27 30.3	+0.5
	baz=334,SNR=6.0						
JCT	Junction City	51.78	103	P	P	12 27 30.1	+0.3
DGZ	Jazzator, Alta	51.87	309	*i* P	P	12 27 30.2	-0.2
DGZ				pmax	pmax		
	comp=Z,2.0nm,1.0s						
R54A	Victor	52.06	81	P	P	12 27 31.3	-0.5
	baz=332						
OXF	Oxford	52.10	91	P	P	12 27 32.8	+0.7
	baz=332,SNR=6.9						
OXF	Oxford	52.10	91	P	P	12 27 32.5	+0.4
HFS	Hagfors	52.37	3	P	P	12 27 33.8	+0.1
	comp=Z,4.3nm,0.9s,baz=20,slow=5.2,SNR=5.8						
ARU	Arti	52.49	333	*d i*P	P	12 27 34.2	-0.5
ARU						12 29 31.1	
ARU				S	S	12 34 59.5	-1.1
ARU				SS	SS	12 38 34.0	-3.7
ARU				pmax	pmax		
	comp=Z,9.0nm,1.0s						
ARU	Arti	52.49	333	P	P	12 27 33.6	-1.1
ARU				IAmb	IAmb	12 27 37.0	
	comp=Z,11nm,1.1s						
TZTN	Tazewell	52.53	84	P	P	12 27 35.9	+0.6
	baz=332						
HPIG		52.86	111	P	P	12 27 38.1	+0.1
HPIG				IAmb	IAmb	12 27 40.0	
	comp=Z,6.1nm,0.9s						
BRVK	Borovoye	53.31	323	*i* P	P	12 27 40.3	-0.5
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BRVK	Borovoye	53.31	323	P	P	12 27 40.1	-0.7
BRVK				IAmb	IAmb	12 27 50.2	
	comp=Z,5.8nm,0.8s						
KURK	Kurchatov	53.41	316	*i* P	P	12 27 41.6	0.0
KURK				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KURK	Kurchatov	53.41	316	P	P	12 27 40.8	-0.8
KURK				IAmb	IAmb	12 27 43.4	
	comp=Z,9.7nm,1.0s						
U57A	Blanch	54.22	81	P	P	12 27 47.5	-0.2
	baz=332						
HODGE	Hodges	55.07	84	P	P	12 27 53.8	-0.1
HODGE				IAmb	IAmb	12 27 55.2	
	comp=Z,6.5nm,0.8s						
MK31	Makanchi Array	55.98	312	*i* P	P	12 27 59.6	-0.7
MK31	Makanchi Array	55.98	312	P	P	12 27 58.8	-1.5
MKAR	Makanchi Array	55.98	312	P	P	12 27 58.8	-1.5
	comp=Z,1.1nm,0.5s,baz=32,slow=6.9,SNR=23						
MAKZ	Makanchi	56.06	312	P	P	12 28 00.2	-0.6
EKA	Eskdalemuir Ar	56.24	14	P	P	12 28 02.6	+0.7
	comp=Z,4.7nm,0.7s,baz=355,slow=5.4,SNR=21						
NJ2	Nanjing	56.59	273	*e*P	P	12 28 03.6	-1.2
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.5s						
OBN	Obninsk	56.64	347	*i* P	P	12 28 05.1	+0.3
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
GTA	Gaotai	57.04	294	⇑P	P	12 28 10.1	+2.0
GTA				pP	sP	12 28 16.3	+3.7
GTA				sP	pP	12 28 19.3	+7.9
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
WMQ	Urumqi	57.07	306	*e*P	P	12 28 08.6	+0.4
ZAIG	Zacatecas	57.78	110	P	P	12 28 14.5	+0.8
ABKAR	Akbulak array	59.08	329	P	P	12 28 21.6	-0.4
ABKAR	Akbulak array	59.08	329	P	P	12 28 21.1	-1.0
VSR	Storozhevoye	60.26	345	*e*P	P	12 28 29.6	-0.5
VSR				pmax	pmax		
	comp=Z,10.0nm,1.2s						
CLL	Collm	61.20	3	*e*P	P	12 28 37.0	+0.5
CLL	Collm	61.20	3	*e*P	P	12 28 37.0	+0.5
AKASG	Malin Array Be	61.54	352	P	P	12 28 38.5	-0.4
	comp=Z,1.5nm,0.4s,baz=6.9,slow=6.6,SNR=16						
AKASG				LR	LR	12 55 48.6	
	comp=Z,44nm,19.4s,baz=355,slow=37						
AKASG	Malin Array Be	61.54	352	P	P	12 28 38.4	-0.5
AKBB	Malin Array Si	61.54	352	*i* P	P	12 28 39.2	+0.3
AKBB	Malin Array Si	61.54	352	P	P	12 28 38.8	-0.1
AAK	Ala-Archa	61.96	316	*i* P	P	12 28 41.9	-0.2
AAK				pmax	pmax		
	comp=Z,13nm,1.0s						
AAK	Ala-Archa	61.96	316	P	P	12 28 42.5	+0.4
AAK				IAmb	IAmb	12 28 52.3	
	comp=Z,4.0nm,0.9s						
CHVC	Chvalec	61.97	1	*e*P	P	12 28 44.9	+3.1
DPC	Dobruska-Polom	62.20	1	*e*P	P	12 28 45.2	+1.8
DPC	Dobruska-Polom	62.20	1	*e*P	P	12 28 45.2	+1.8
PRU	Pruhonice	62.55	2	*e*P	P	12 28 48.2	+2.6
PRU	Pruhonice	62.55	2	*e*P	P	12 28 48.2	+2.6
KK31	Karatay Array	62.55	319	P	P	12 28 44.9	-0.9
KK31				IAmb	IAmb	12 28 48.0	
	comp=Z,3.3nm,1.1s						
KKAR	Karatay Array	62.55	319	P	P	12 28 45.1	-0.7
KKAR	Karatay Array	62.55	319	P	P	12 28 44.7	-1.1
KKAR				IAmb	IAmb	12 28 48.0	
	comp=Z,3.3nm,1.1s						
KHC	Kasperske Hory	63.39	3	*e*P	P	12 28 52.5	+1.2
KHC	Kasperske Hory	63.39	3	*e*P	P	12 28 52.5	+1.2
KOLS	Kolonicke sedl	63.58	357	*e*P	P	12 28 55.0	+2.5
KOLS	Kolonicke sedl	63.58	357	*e*P	P	12 28 55.0	+2.5
CRVS	Cervenica-Dubn	63.63	357	*e*P	P	12 28 55.3	+2.4
CRVS	Cervenica-Dubn	63.63	357	*e*P	P	12 28 55.3	+2.4
GERES	GERESS Array B	63.68	3	P	P	12 28 53.3	0.0
	comp=Z,2.6nm,0.9s,baz=359,slow=5.3,SNR=14						
GERES	GERESS Array B	63.68	3	P	P	12 28 52.3	-1.0
CKRC	Cesky Krumlov	63.71	3	*e*P	P	12 28 55.8	+2.4
VYHS	Vyhne	64.06	359	*e*P	P	12 28 58.2	+2.5
VYHS				pmax	pmax		
	comp=Z,10.0nm,1.0s						
VYHS	Vyhne	64.06	359	*e*P	P	12 28 58.1	+2.4
KSH	Kashi	64.47	313	P	P	12 29 04.1	+5.4
KSH				pmax	pmax		
	comp=Z,16nm,1.4s						
CONA	Conrad Observa	64.62	1	*e*P	P	12 29 00.3	+0.8
	comp=Z,4.6nm,1.2s						
BURAR	Bucovina Array	64.81	354	P	P	12 28 58.2	-2.5
ARSA	Arzberg	65.30	2	*e*P	P	12 29 03.2	-0.6
	comp=Z,1.6nm,0.8s						
FETA	Feichten	65.42	5	*i* P	P	12 29 05.1	+0.3
	comp=Z,4.6nm,0.9s						
OBKA	Obir	66.03	2	*e*P	P	12 29 09.0	+0.3
	comp=Z,8.1nm,1.1s						
KIV	Kislovodsk	67.02	341	*e*P	P	12 29 14.8	-0.2
KIV				pmax	pmax		
	comp=Z,25nm,1.1s						
KIV				MLR	MLR		
	comp=Z,51nm,17.0s						
KIV	Kislovodsk	67.02	341	P	P	12 29 13.2	-1.9
KBZ	Khabaz	67.22	340	P	P	12 29 16.1	0.0
	comp=Z,3.0nm,0.9s,baz=288,slow=3.9,SNR=7.6						
KBZ	Khabaz	67.22	340	*i* P	P	12 29 16.3	+0.2
KBZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
SHA1	Shidzhatmaz	67.24	341	*i* P	P	12 29 15.1	-1.5
BRTR	Keskin Array B	72.16	347	P	P	12 29 46.6	-0.3
	comp=Z,1.1nm,0.8s,baz=20,slow=4.7,SNR=3.6						
BRTR				LR	LR	13 06 30.9	
	comp=Z,30nm,19.1s,baz=3.0,slow=40						
CMAR	Chiang Mai Arr	76.37	285	P	P	12 30 10.8	-0.6
	comp=Z,1.5nm,0.6s,baz=6.3,slow=6.4,SNR=14						
CMAR				LR	LR	13 07 21.2	
	comp=Z,34nm,18.0s,baz=30,slow=39						
CMAR	Chiang Mai Arr	76.37	285	*i* P	P	12 30 11.5	0.0
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
CMAR	Chiang Mai Arr	76.37	285	P	P	12 30 11.5	0.0
VNDA	Vanda	146.67	193	PKPbc	PKPdf	12 38 02.3	+2.0
	comp=Z,2.4nm,0.8s,baz=325,slow=3.1,SNR=6.5						

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*IDC **14** 12:20:37.5±3.7,67°.59N×163°.46W,h0^{km},mb3.4/4,mb1 4.0/5,mb1mx3.5/44,mbtmp3.6/5,ML3.9/1,Error ellipse: s-maj=65.4km s-min=52.2km az=22.0*
*AEIC **14** 12:20:39±1.6,67°.68N±0°.09×162°.4W±0°.5,h16^{km}±9^{km},ML3.5,Error ellipse: s-maj=29.0km s-min=6.5km az=64.0*
*NEIC **14** 12:20:40.3±1.0,67°.8N±0°.1×162°.5W±0°.4,h35^{km}±9^{km},Error ellipse: s-maj=26.1km s-min=8.6km az=47.0*
ISC 14 12:20:39.4±1.6**,67°.6N**±0°.1×**162°.5W**±0°.2**,h10**^{km}**,n13,σ1^{s}.94**/15**,mb3.3**/3**,Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RDOG	Red Dog Mine	0.45	338	Pg	Pg	12 20 48.0	-0.3
RDOG				Sg	Sg	12 20 54.2	-0.1
IM03		3.82	112		Pn	12 21 37.5	-0.6
ILAR	Eielson Array	6.92	107	Pn	Pn	12 22 21.4	+0.8
	2.2nm,0.3s,baz=303,slow=15,SNR=4.4						
ILAR				Sn	Sn	12 23 39.5	+0.2
	baz=305,slow=25,SNR=1.4						
ILAR	Eielson Array	6.92	107		Pn	12 22 18.1	-2.6
SUA	Susitna One	7.97	135	Pn	Pn	12 22 35.0	-0.3
TGL	Tana Glacier	10.94	120	Pn	Pn	12 23 13.8	-2.1
YKA	Yellowknife Ar	20.36	82	P	P	12 25 17.6	+1.9
	0.6nm,0.5s,baz=306,slow=9.8,SNR=2.8						
PDAR	Pinedale Array	37.34	104	P	P	12 27 54.4	+2.5
	0.3nm,0.5s,baz=354,slow=4.7,SNR=3.2						
PDAR	Pinedale Array	37.34	104	P	P	12 27 50.0	-1.8
NVAR	Mina Array Bea	38.05	117	P	P	12 28 00.8	+3.0
	0.2nm,0.5s,baz=326,slow=7.6,SNR=1.9						
NVAR	Mina Array Bea	38.05	117	P	P	12 27 55.9	-1.9
RSSD	Black Hills	38.25	98	P	P	12 27 57.7	-1.9
TXAR	Lajitas Array	51.43	107	P	P	12 29 46.2	+1.8
	0.7nm,0.7s,baz=347,slow=5.1,SNR=4.0						

IDC 14 12:20:47.0±3.8**,67°.91N**×**163°.61W,h0**^{km}**,mb3.5**/4**,mb1 4.1**/5**,mb1mx3.6**/45**,mbtmp3.7**/5**,ML4.4**/1**,Error ellipse: s-maj=79.5km s-min=54.8km az=14.0,Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ILAR	Eielson Array	7.42	107	Pn	Pn	12 22 33.0	-3.4
	6.0nm,0.3s,baz=299,slow=14,SNR=6.2						
ILAR				Sn	Sn	12 23 50.9	-10
	0.7nm,0.3s,baz=301,slow=25,SNR=1.8						
YKA	Yellowknife Ar	20.76	81	P	P	12 25 28.0	-0.9
	1.5nm,0.6s,baz=306,slow=10.0,SNR=1.5						
PDAR	Pinedale Array	37.83	104	P	P	12 28 05.1	-0.1
	0.2nm,0.4s,baz=332,slow=6.2,SNR=1.8						
NVAR	Mina Array Bea	38.56	116	P	P	12 28 11.4	0.0
	0.2nm,0.5s,baz=316,slow=6.3,SNR=2.5						
TXAR	Lajitas Array	51.93	106	P	P	12 29 57.0	-0.4
	0.6nm,0.7s,baz=352,slow=5.7,SNR=4.7						

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*IDC **14** 12:23:57.1±5.5,68°.09N×164°.81W,h0^{km},mb3.4/4,mb1 4.1/6,mb1mx3.6/42,mbtmp3.7/6,ML4.0/2,Error ellipse: s-maj=88.4km s-min=63.3km az=124.0*
*NEIC **14** 12:24:06.5±1.4,67°.71N±0°.03×162°.9W±0°.2,h26^{km}±4^{km},Error ellipse: s-maj=9.4km s-min=4.2km az=90.0*
*AEIC **14** 12:24:06±1.4,67°.68N±0°.06×162°.6W±0°.2,h21^{km}±5^{km},ML3.3,ML3.3/10(NEIC),Error ellipse: s-maj=10.9km s-min=6.8km az=121.0*
ISC 14 12:24:05.7±1.0**,67°.75N**±0°.07×**162°.46W**±0°.07**,h10**^{km}**,n37,σ1^{s}.18**/40**,mb3.4**/3**,Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RDOG	Red Dog Mine	0.35	331		Pb	12 24 13.1	-0.9
RDOG					Sb	12 24 19.9	+0.3
TNA	Tin City	3.09	227		Pn	12 24 52.4	-2.0
ANM	Nome	3.41	202		Pn	12 24 57.2	-1.7
ANM				IAML		12 26 04.0	
	comp=N,47nm,0.7s						
ANM				IAML		12 26 15.8	
	comp=E,44nm,1.0s						
IM03		3.87	113		Pn	12 25 05.3	+0.3
IMAR	Indian Mountai	3.87	113		Pn	12 25 05.4	+0.3
A21K	Barrow	4.13	27	Pn	Pn	12 25 09.2	+0.5
A21K					Pb	12 25 09.6	-8.7
A21K				IAML		12 26 07.0	
	comp=E,52nm,1.0s						
A21K				IAML		12 26 39.5	
	comp=N,55nm,1.0s						
COLD	Coldfoot	4.74	91		Pn	12 25 18.8	+1.7
TOLK	Toolik Lake Re	4.89	74	Pn	Pn	12 25 20.6	+1.5
TTA	Tatalina	5.54	148		Pn	12 25 28.1	0.0
TT01	Tatalina	5.56	148		Pn	12 25 28.5	+0.2
I23K	Minto, Yukon-K	5.86	110		Pn	12 25 33.9	+1.5
BPAW	Bear Paw Mtn.	5.95	123		Pn	12 25 34.9	+1.2
NEA2	Nenana	6.28	114		Pn	12 25 38.8	+0.6
KTH	Kantishna Hill	6.36	126	Pn	Pn	12 25 39.8	+0.4
MDM	Murphy Dome	6.37	109	Pn	Pn	12 25 40.1	+0.6
BWN	Browne	6.40	118	Pn	Pn	12 25 40.6	+0.7
PPLA	Purkeypile	6.49	134		Pn	12 25 41.7	+0.5
TCOL	CIGO, UAF Yank	6.55	109		Pn	12 25 43.2	+1.4
COLA	College	6.55	109		Pn	12 25 43.0	+1.1
COLA	College	6.55	109		Pn	12 25 43.4	+1.5
POKR	Poker Plat Res	6.57	107		Pn	12 25 43.4	+1.1
CCB	Clear Creek Bu	6.69	111		Pn	12 25 44.4	+0.5
WRH	Wood River Hil	6.69	113		Pn	12 25 44.5	+0.6
BM03	Burnt Mountain	6.83	85		Pn	12 25 46.5	+0.7
IL31		6.95	108		Pn	12 25 48.6	+1.2
ILAR	Eielson Array	6.95	108	Pn	Pn	12 25 48.5	+1.0
	comp=N,4.4nm,0.3s,baz=300,slow=14,SNR=25						
ILAR				Sn	Sn	12 27 04.8	-1.7
	comp=N,0.4nm,0.3s,baz=299,slow=24,SNR=5.8						
ILAR	Eielson Array	6.95	108		Pn	12 25 48.3	+0.8
SVW2	Sparrevohn	7.31	153	Pn	Pn	12 25 52.9	+0.5
WAT2	Susitna Watana	7.52	123		Pn	12 25 55.7	+0.4
BCAR	Beaver Creek A	9.78	109	Pn	Pn	12 26 26.7	+0.4
EPYK	Eagle Plains	10.11	86	Pn	Pn	12 26 31.1	+0.5
RAGM	Ragged Mountai	10.69	125	Pn	Pn	12 26 37.7	-1.0
INK	Inuvik	10.80	74	Pn	Pn	12 26 40.1	0.0
	comp=N,0.3nm,0.3s,baz=283,slow=12,SNR=1.2						
INK				Sn	Sn	12 28 36.9	-3.9
	comp=N,0.1nm,0.3s,baz=177,slow=7.9,SNR=2.5						
YKA	Yellowknife Ar	20.35	82	P	P	12 28 41.9	+0.1
	comp=N,1.3nm,0.6s,baz=307,slow=9.6,SNR=8.1						
PDAR	Pinedale Array	37.37	105	P	P	12 31 18.9	+0.5
	comp=N,0.3nm,0.5s,baz=1.6,slow=6.3,SNR=3.4						
NVAR	Mina Array Bea	38.10	118	P	P	12 31 26.0	+1.5
	comp=N,0.4nm,0.8s,baz=325,slow=7.8,SNR=3.8						
TXAR	Lajitas Array	51.47	107	P	P	12 33 11.6	+0.7
	comp=N,0.6nm,0.7s,baz=334,slow=6.3,SNR=5.5						

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*IDC **14** 12:49:04.0±7.8,31°.12S×68°.79W,h84^{km}±54^{km},mb3.5/4,mb1 3.7/8,mb1mx3.6/26,mbtmp3.8/8,ML3.6/4,Error ellipse: s-maj=72.9km s-min=28.4km az=35.0*
ISC 14 12:49:06.0±1.2**,31°.0S**±0°.1×**68°.6W**±0°.2**,h100**^{km}**,n11,σ0^{s}.85**/13**,mb3.5**/4**,San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	8.41	358	P	Pn	12 51 06.0	+0.7
	0.4nm,0.3s,baz=198,slow=18,SNR=2.5						
LVC				S	Sn	12 52 38.2	-0.5
	0.3nm,0.3s,baz=140,slow=20,SNR=1.3						
CPUP	Villa Florida	10.94	67	P	Pn	12 51 38.5	-1.0
	0.3nm,0.3s,baz=253,slow=11,SNR=4.9						
LPAZ	La Paz	14.70	2	P	Pn	12 52 30.7	+1.2
	0.2nm,0.3s,baz=179,slow=9.6,SNR=5.9						

SIV	**San Ignacio**	**16.48**	**26**	P	**Pn**	**12 52 51.9**	**+0.6**
	0.1nm,0.3s,baz=212,slow=10.0,SNR=2.2						
TXAR	**Lajitas Array**	**68.70**	**327**	P	**P**	**12 59 58.6**	**-0.4**
	0.3nm,0.6s,baz=154,slow=8.2,SNR=6.1						
TORD	**Torodi Ar. Bea**	**80.44**	**68**	P	**P**	**13 01 08.4**	**+1.4**
	1.1nm,0.8s,baz=251,slow=4.4,SNR=3.6						
PDAR	**Pinedale Array**	**82.53**	**331**	P	**P**	**13 01 16.8**	**-0.9**
	0.3nm,0.7s,baz=124,slow=4.5,SNR=2.6						
ULM	**Lac du Bonnet**	**84.48**	**343**	P	**P**	**13 01 26.5**	**-0.7**
	0.4nm,0.4s,baz=198,slow=6.4,SNR=3.2						
KURBB	**Kurchatov Arra**	**148.73**	**42**	PKPbc	**PKPbc**	**13 08 41.6**	**+0.4**
	0.3nm,0.5s,baz=303,slow=3.1,SNR=5.7						
ZALV	**Zalesovo Beam**	**150.18**	**32**	PKPbc	**PKPbc**	**13 08 44.9**	**+0.3**
	1.9nm,0.5s,baz=330,slow=2.4,SNR=9.0						
MKAR	**Makanchi Array**	**152.63**	**47**	PKPbc	**PKPbc**	**13 08 50.7**	**+0.1**
	0.6nm,0.8s,baz=27,slow=1.6,SNR=4.7						
MKAR				PKPab	**PKPab**	**13 09 01.9**	**+0.3**
	0.6nm,0.6s,baz=278,slow=4.3,SNR=7.3						

IDC 14 12:54:21.6±7.3**,30°.61S**×**179°.07W,h0^{km},mb3.2**/2**, mb1 3.5**/2**,mb1mx3.4**/30**,mbtmp3.2**/2**,Error ellipse: s-maj=307.6km s-min=57.1km az=156.0,Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**42.17**	**268**	P	P	13 02 16.0	-0.2
	0.2nm,0.8s,baz=106,slow=7.5,SNR=5.3						
WRA	**Warramunga Arr**	**43.18**	**273**	P	P	13 02 24.4	-0.1
	0.1nm,0.3s,baz=112,slow=7.9,SNR=1.6						
FINES	**FINESS Array B**	**145.02**	**339**	PKPbc	PKPbc	13 13 58.9	-0.5
	0.6nm,0.4s,baz=60,slow=3.8,SNR=12						

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*IDC **14** 12:59:24.1±5.6,43°.81N×144°.75E,h0^{km},mb3.7/6, mb1 3.7/7,mb1mx3.4/42,mbtmp3.6/7,ML3.5/1,Error ellipse: s-maj=128.2km s-min=28.9km az=162.0*

*JMA **14** 12:59:39.8±0.1,43°.63N×144°.91E,h149^{km}±1^{km},M3.1*

*SKHL **14** 12:59:41.1±0.3,43°.30N×144°.20E,h92^{km}±2^{km},mb4.3/2, msha5.3/4*

ISC 14 12:59:39.0±0.8**,43°.58N**±0°.08×**144°.91E**±0°.06**,h153^{km}**±6^{km}**, n30,σ1^{s}.04**/36**,mb3.5**/6**,Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNSB	**Nemuroshibetsu**	**0.21**	**20**	P	**Pn**	**13 00 00.1**	**+0.4**
JNSB				*e*S	**Sn**	**13 00 15.6**	**0.0**
JRA	**Rausu**	**0.39**	**23**	P	**Pn**	**13 00 00.3**	**+0.1**
GLVR	**Golovnino**	**0.47**	**70**	*e*P	**Pn**	**13 00 00.8**	**+0.2**
GLVR				AMB	AMB	13 00 03.0	
	120nm,0.4s						
GLVR				*e*S	**Sn**	**13 00 15.6**	**-1.4**
GLVR				A	A	13 00 18.0	
	2μm,0.6s						
GLVR				A	A	13 00 18.0	
	1μm,0.6s						
JKHN	**Kushirohamanak**	**0.53**	**159**	P	**Pn**	**13 00 01.4**	**+0.5**
JKHN				*e*S	**Sn**	**13 00 17.3**	**-0.2**
JAK	**Akkeshi**	**0.60**	**195**	P	**Pn**	**13 00 01.9**	**+0.6**
JAK				*e*S	**Sn**	**13 00 18.1**	**-0.1**
NMR	**Nemuro--Hokkai**	**0.63**	**109**	*i* P	**Pn**	**13 00 01.5**	**+0.1**
NMR				*i* S	**Sn**	**13 00 16.8**	**-1.7**
NEM2	**Nemuro 2**	**0.64**	**109**	P	**Pn**	**13 00 01.5**	**0.0**
NEM2				*e*S	**Sn**	**13 00 17.3**	**-1.3**
GRPR	**Tuman**	**0.75**	**56**	*e*P	**Pn**	**13 00 03.8**	**+1.6**
GRPR				AMB	AMB	13 00 07.0	
	40nm,0.3s						
GRPR				*e*S	**Sn**	**13 00 20.6**	**+0.7**
GRPR				A	A	13 00 23.0	
	450nm,0.4s						
GRPR				A	A	13 00 23.0	
	320nm,0.4s						
JTKR	**Abashiri--Toko**	**0.82**	**299**	P	**Pn**	**13 00 03.0**	**+0.3**
JTKR				*e*S	**Sn**	**13 00 19.9**	**-0.9**
YUK	**Yuzh-Kuril'sk**	**0.83**	**56**	*e*P	**Pn**	**13 00 04.5**	**+1.8**
YUK				*e*S	**Sn**	**13 00 22.3**	**+1.4**
YUK				A	A	13 00 24.5	
	360nm,0.5s						
YUK				A	A	13 00 24.5	
	300nm,0.5s						
JAR	**Ashorobuto**	**0.87**	**252**	P	**Pn**	**13 00 04.1**	**+1.0**
JAR				*e*S	**Sn**	**13 00 22.1**	**+0.6**
JOB	**Onbets**	**1.03**	**230**	P	**Pn**	**13 00 05.5**	**+1.1**
JOB				*e*S	**Sn**	**13 00 24.0**	**+0.3**
JMP	**Maruseppu**	**1.20**	**292**	P	**Pn**	**13 00 06.1**	**+0.2**
JCH	**Churui**	**1.48**	**230**	P	**Pn**	**13 00 09.6**	**+0.9**
JCH				*e*S	**Sn**	**13 00 31.1**	**-0.2**
JKK2	**Kamakawa 2**	**1.59**	**281**	P	**Pn**	**13 00 10.4**	**+0.6**
JNBK	**Urakawa-nobuka**	**2.04**	**231**	P	**Pn**	**13 00 15.3**	**+0.5**
JNBK				*e*S	**Sn**	**13 00 41.4**	**-1.0**
KUR	**Kuril'sk**	**2.69**	**51**	*e*S	Sn	13 01 07.2	+11
KUR				A	A	13 01 11.8	
	70nm,0.3s						
KUR				A	A	13 01 11.8	
	60nm,0.3s						
SEY	**Seymchan**	**19.87**	**10**	P	**P**	**13 03 54.9**	**-3.1**
	0.1nm,0.3s,baz=197,slow=19,SNR=1.7						
SONM	**Songino Array**	**27.04**	**293**	P	**P**	**13 05 06.4**	**-0.5**
	0.9nm,0.6s,baz=101,slow=9.0,SNR=6.5						
H11N2	**WAKE ISLAND Hy**	**30.08**	**135**	T	T	13 36 56.0	
	baz=328,slow=75,SNR=17						
H11N1	**WAKE ISLAND Hy**	**30.09**	**135**	T	T	13 37 00.5	
	baz=328,slow=75,SNR=9.0						
H11N3	**WAKE ISLAND Hy**	**30.10**	**135**	T	T	13 37 00.6	
	baz=328,slow=75,SNR=10.0						
H11S1	**WAKE ISLAND Hy**	**31.01**	**137**	T	T	13 38 11.0	
	baz=329,slow=76,SNR=23						
H11S3	**WAKE ISLAND Hy**	**31.02**	**137**	T	T	13 38 06.1	
	baz=329,slow=76,SNR=24						
H11S2	**WAKE ISLAND Hy**	**31.03**	**137**	T	T	13 38 06.0	
	baz=329,slow=76,SNR=16						
ZALV	**Zalesovo Beam**	**39.80**	**307**	P	**P**	**13 06 56.2**	**-0.5**
	0.6nm,0.3s,baz=79,slow=7.5,SNR=2.8						
ILAR	**Eielson Array**	**42.59**	**36**	P	**P**	**13 07 20.6**	**+1.2**
	0.2nm,0.7s,baz=260,slow=5.4,SNR=5.9						
MKAR	**Makanchi Array**	**43.22**	**297**	P	**P**	**13 07 25.5**	**+0.8**
	0.5nm,0.5s,baz=79,slow=9.1,SNR=5.5						
KURBB	**Kurchatov Arra**	**44.35**	**303**	P	**P**	**13 07 34.3**	**+0.7**
	0.6nm,0.5s,baz=73,slow=8.7,SNR=10						
FINES	**FINESS Array B**	**64.28**	**332**	P	**P**	**13 09 57.5**	**+0.1**
	2.3nm,1.1s,baz=37,slow=9.8,SNR=4.1						

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*ECX **14** 13:06:30.4±0.7,31°.35N×115°.36W,h5^{km}±283^{km},MD1.8, ML2.0*

*MEX **14** 13:06:30.4±0.3,31°.34N×115°.34W,h20^{km},MD3.6*

ISC 14 13:06:27.5±1.6**,31°.36N**±0°.03×**115°.32W**±0°.03**, h10^{km}**±13^{km}**,n12,σ0^{s}.89**/24**,3C,Baja California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ECBX	**El Chinero**	**0.25**	**64**	*e*P	**Pb**	**13 06 34.4**	**+0.2**
ECBX				*e*S	**Sb**	**13 06 38.2**	**-0.4**
SPIG	**San Pedro Mart**	**0.34**	**202**	*i* P	**Pb**	**13 06 36.4**	**+0.6**
	baz=20,slow=5.9						
SPIG				*e*S	**Sb**	**13 06 41.1**	**-0.4**
SPIG	**San Pedro Mart**	**0.34**	**202**	*e*P	**Pb**	**13 06 35.9**	**0.0**
SPIG				*e*S	**Sb**	**13 06 41.2**	**-0.3**
SPX	**San Pedro Mart**	**0.35**	**201**	⇑*i*P	**Pb**	**13 06 36.4**	**+0.4**
SPX				*e*S	**Sb**	**13 06 41.4**	**-0.3**
SPX				IAML		13 06 42.2	
	comp=N,96nm,0.1s						
SPX				*e*		13 06 42.2	
VTX	**Valle De La Tr**	**0.40**	**274**	*e*P	**Pb**	**13 06 37.1**	**+0.4**
VTX				*e*S	**Sb**	**13 06 42.2**	**-0.8**
VTX				IAML		13 06 42.7	
	comp=N,190nm,0.1s						
VTX				*e*		13 06 42.7	
VTX				IAML		13 06 42.8	
	comp=E,258nm,0.1s						
VTX				*e*		13 06 42.8	
SFX	**San Felipe**	**0.52**	**129**	*e*P	**Pn**	**13 06 40.1**	**-0.8**
SFX				*e*S	**Sb**	**13 06 47.5**	**+1.4**
SJX	**San Joaquin**	**0.68**	**306**	*e*P	**Pn**	**13 06 45.0**	**+1.8**
SJX				*e*S	**Sn**	**13 06 55.7**	**+1.9**
SJX				⇑*e*		13 07 00.2	
SJX				IAML		13 07 00.2	
	comp=N,88nm,0.1s						
SVX	**San Vicente**	**0.80**	**268**	*e*P	**Pn**	**13 06 44.1**	**-0.7**
SVX				*e*S	**Sb**	**13 06 54.0**	**-0.4**
SQX	**San Quintin**	**0.92**	**212**	*e*P	**Pn**	**13 06 46.3**	**-0.2**
SQX				*e*S	**Sb**	**13 06 58.2**	**+0.4**
RMX	**La Rumorosa**	**1.40**	**333**	*e*P	**Pn**	**13 06 53.3**	**+0.1**
RMX				*e*S	**Sb**	**13 07 11.2**	**-0.5**
CBX	**Cerro Bola**	**1.49**	**310**	*e*P	**Pg**	**13 06 55.9**	**-0.2**
CBX				*e*S	**Sg**	**13 07 15.6**	**+0.1**
CBX				IAML		13 07 17.0	
	comp=E,19nm,0.5s						
CBX				⇑*e*		13 07 17.0	
TJIG	**Tijuana**	**1.57**	**313**	*i* P	**Pn**	**13 06 54.6**	**-0.9**
TJIG				*i* S	**Sn**	**13 07 14.3**	**-1.6**

IDC 14 13:08:39.5±8.7**,17°.04S**×**174°.79W,h0^{km},mb3.7**/3**, mb1 4.0**/3**,mb1mx3.6**/29**,mbtmp3.7**/3**,Error ellipse: s-maj=382.8km s-min=35.7km az=141.0,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**48.19**	**258**	P	P	13 17 21.8	-0.4
	0.5nm,0.7s,baz=94,slow=7.3,SNR=8.5						
ASAR	**Alice Springs**	**48.35**	**253**	P	P	13 17 23.5	+0.1
	1.1nm,0.5s,baz=89,slow=8.1,SNR=20						
ILAR	**Eielson Array**	**84.31**	**12**	P	P	13 21 12.9	0.0
	0.4nm,0.8s,baz=214,slow=5.6,SNR=8.1						

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*IDC **14** 13:22:43.9±3.8,10°.88S×165°.92E,h72^{km}±34^{km},mb3.5/4, mb1 3.8/6,mb1mx3.5/26,mbtmp4.0/6,ML4.3/2,MS3.1/7, Ms1 3.2/7,ms1mx2.9/19,Error ellipse: s-maj=33.1km s-min=26.0km az=38.0*

*NEIC **14** 13:22:44.1±1.2,11°.0S±0°.1×165°.9E±0°.1,h77^{km}±10^{km}, mb4.2/5,Error ellipse: s-maj=21.9km s-min=12.9km az=48.0*

ISC 14 13:22:42.6±1.1**,11°.0S**±0°.1×**165°.9E**±0°.1**,h61^{km},n25, σ1^{s}.66**/16**,mb3.8**/6**,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**4.57**	**164**		**Pn**	**13 23 51.1**	**+1.9**
HNR	**Honiara**	**6.11**	**284**	P	**Pn**	**13 24 10.9**	**+0.6**
	17nm,0.3s,baz=117,slow=2.3,SNR=12						
HNR				S	**Sn**	**13 25 19.8**	**+1.0**
	6.9nm,0.3s,baz=192,slow=19,SNR=1.5						
HNR				LR	LR	13 26 43.6	
	comp=Z,207nm,18.9s,baz=119,slow=40						
DZM	**Mont Dzumac**	**11.00**	**178**	P	**Pn**	**13 25 20.1**	**+2.8**
	0.9nm,0.3s,baz=302,slow=14,SNR=12						
DZM				S	**Sn**	**13 27 15.9**	**-2.9**
	0.2nm,0.3s,baz=287,slow=19,SNR=2.3						
DZM				LR	LR	13 28 56.0	
	comp=Z,62nm,19.5s,baz=356,slow=33						
DZM	**Mont Dzumac**	**11.00**	**178**		**Pn**	**13 25 19.4**	**+2.1**
MSVF	**Nonsavu**	**13.49**	**121**	LR	LR	13 29 50.2	
	comp=Z,108nm,18.4s,baz=296,slow=31						
PMG	**Port Moresby**	**18.55**	**273**	LR	LR	13 34 01.0	
	comp=Z,70nm,18.4s,baz=108,slow=36						
CTAO	**Charters Tower**	**20.98**	**242**	P	**P**	**13 27 18.4**	**-2.5**
H11S2	**WAKE ISLAND Hy**	**29.34**	**1**	T	T	13 59 04.4	
	baz=181,slow=76,SNR=40						
H11S3	**WAKE ISLAND Hy**	**29.34**	**1**	T	T	13 59 04.1	
	baz=181,slow=76,SNR=22						
H11S1	**WAKE ISLAND Hy**	**29.35**	**1**	T	T	13 59 05.7	
	baz=181,slow=76,SNR=28						
BKZ	**Black Stump Fm**	**29.56**	**163**	P	**P**	**13 28 41.6**	**-0.1**
H11N1	**WAKE ISLAND Hy**	**30.56**	**2**	T	T	14 00 35.4	
	baz=182,slow=76,SNR=24						
H11N3	**WAKE ISLAND Hy**	**30.56**	**2**	T	T	14 00 34.7	
	baz=182,slow=76,SNR=27						
H11N2	**WAKE ISLAND Hy**	**30.57**	**2**	T	T	14 00 36.7	
	baz=182,slow=76,SNR=21						
PLWZ	**Palliser**	**31.51**	**167**	P	**P**	**13 28 58.1**	**-0.7**
WRA	**Warramunga Arr**	**31.67**	**250**	P	**P**	**13 29 00.9**	**+0.4**
	0.8nm,0.7s,baz=74,slow=9.0,SNR=5.1						
LTZ	**Lake Taylor**	**32.12**	**171**	P	**P**	**13 29 05.3**	**+1.2**
LTZ				IAmb	IAmb	13 29 22.3	
	comp=Z,5.1nm,0.9s						
RPZ	**Rata Peaks**	**32.87**	**173**	LR	LR	13 41 07.7	
	comp=Z,37nm,21.6s,baz=356,slow=33						
ASAR	**Alice Springs**	**32.97**	**243**	P	**P**	**13 29 12.3**	**+0.4**
	comp=Z,0.4nm,0.6s,baz=65,slow=11,SNR=2.0						
ASAR	**Alice Springs**	**32.97**	**243**	P	**P**	**13 29 11.8**	**-0.1**
FITZ	**Fitzroy Crossi**	**39.57**	**255**	P	**P**	**13 30 07.3**	**-0.9**
FITZ				IAmb	IAmb	13 30 09.5	
	comp=Z,1.7nm,0.8s						
CMAR	**Chiang Mai Arr**	**72.28**	**293**	LR	LR	14 07 44.8	
	comp=Z,7.7nm,18.3s,baz=265,slow=37						
ILAR	**Eielson Array**	**83.43**	**18**	P	**P**	**13 35 02.5**	**-0.6**
	comp=Z,0.5nm,0.6s,baz=229,slow=5.0,SNR=12						
MKAR	**Makanchi Array**	**93.64**	**317**	P	**P**	**13 35 51.9**	**-0.6**
	comp=Z,0.4nm,0.7s,baz=100,slow=6.4,SNR=5.2						
YKA	**Yellowknife Ar**	**94.87**	**27**	LR	LR	14 13 42.6	
	comp=Z,14nm,20.2s,baz=0.0,slow=32						

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*JMA **14** 14:06:45.6±0.1,22°.70N×121°.40E,h25^{km}±4^{km},M3.1*

*TAP **14** 14:06:46.9,22°.70N×121°.37E,h14^{km},ML3.3,B*

ISC 14 14:06:46.4±0.8**,22°.67N**±0°.02×**121°.43E**±0°.02**,h20^{km}**±4^{km}**, n110,σ0^{s}.93**/215**,1C-3D,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LDUT	**Ludao**	**0.04**	**83**	*i* P	**Pg**	**14 06 50.4**	**+0.6**
	baz=96						
LDUT				*e*S	**Sg**	**14 06 53.4**	**+1.1**
	baz=96						
TTN	**Taitung**	**0.28**	**288**	⇓*i*P	**Pg**	**14 06 52.2**	**-0.5**
	baz=285						
TTN				S	**Sb**	**14 06 56.4**	**-0.5**
	baz=285						
EDH	**Donghe**	**0.33**	**339**	*e*P	**Pg**	**14 06 53.0**	**-0.5**
	baz=347						
EDH				*e*S	**Sg**	**14 06 58.1**	**-0.2**
	baz=347						
TWGBT	**Beinan**	**0.36**	**295**	⇓*i*P	**Pg**	**14 06 53.0**	**-1.0**
	baz=303						
TWGBT				S	**Sg**	**14 06 58.6**	**-0.7**
	baz=303						
TWG	**Pinlang**	**0.36**	**295**	⇓*i*P	**Pg**	**14 06 53.0**	**-1.1**
	baz=303						
TWG				S	**Sg**	**14 06 59.0**	**-0.5**
	baz=303						
LONT	**Longtian**	**0.37**	**310**	*e*P	**Pg**	**14 06 54.3**	**+0.1**
	baz=313						
LONT				*e*S	**Sg**	**14 06 59.3**	**-0.2**
	baz=313						
CHKT	**Chengkung**	**0.43**	**352**	P	**Pb**	**14 06 54.7**	**-0.7**
	baz=9.0						
CHKT				S	**Sg**	**14 07 00.9**	**-0.5**
	baz=9.0						
ECL	**Taimali**	**0.45**	**261**	⇑*i*P	**Pb**	**14 06 55.1**	**-0.5**
	baz=255						
ECL				*e*S	**Sg**	**14 07 01.2**	**-0.7**
	baz=255						
FULB	**Fuli**	**0.54**	**346**	*e*P	**Pb**	**14 06 56.4**	**-0.9**
	baz=4.0						
FULB				*e*S	**Sb**	**14 07 04.3**	**-0.3**
	baz=4.0						
TAW	**Tawu**	**0.58**	**238**	*e*P	**Pb**	**14 06 57.7**	**-0.3**
	baz=232						
TAW				*e*S	**Sb**	**14 07 05.7**	**-0.1**
	baz=232						
EAST	**Anshuo**	**0.61**	**242**	P	**Pb**	**14 06 58.0**	**-0.4**
	baz=249						
EAST				*e*S	**Sb**	**14 07 04.8**	**-1.8**
	baz=249						
LAY	**Lan-yu**	**0.64**	**170**	*e*P	**Pg**	**14 06 59.2**	**+0.1**
	baz=166						
LAY				*e*S	**Sn**	**14 07 08.2**	**-1.6**
	baz=166						
ELDTW	**Lidau**	**0.64**	**324**	P	**Pb**	**14 06 57.7**	**-1.3**
	baz=327						
ELDTW				*e*S	**Sb**	**14 07 05.9**	**-1.7**
	baz=327						
EYUL	**Yuli**	**0.68**	**351**	*e*P	**Pb**	**14 06 59.8**	**+0.1**
	baz=6.0						
EYUL				*e*S	**Sg**	**14 07 09.9**	**+0.8**
	baz=6.0						
TWF1	**Yuli**	**0.69**	**350**	*e*P	**Pb**	**14 06 58.9**	**-0.9**
	baz=5.0						
TWF1				*e*S	**Sb**	**14 07 09.5**	**+0.6**
	baz=5.0						
TSMG	**Majia**	**0.73**	**273**	*e*P	**Pb**	**14 07 00.1**	**-0.3**
	baz=264						
TSMG				*e*S	**Sb**	**14 07 08.8**	**-1.1**
	baz=264						
SLIU	**Shizi**	**0.74**	**233**	*e*P	**Pb**	**14 07 00.1**	**-0.4**
	baz=229						
SLIU				*e*S	**Sb**	**14 07 09.5**	**-0.7**
	baz=229						
MASBT	**Mashibuluo**	**0.74**	**266**	P	**Pb**	**14 06 59.9**	**-0.7**
	baz=255						
MASBT				S	**Sb**	**14 07 08.6**	**-1.7**
	baz=255						
SSD	**Sandimen**	**0.74**	**276**	P	**Pb**	**14 06 59.6**	**-1.0**
	baz=275						
SSD				*e*S	**Sb**	**14 07 08.9**	**-1.4**
	baz=275						
STYH	**Taoyuan**	**0.79**	**310**	*e*P	**Pb**	**14 07 00.6**	**-0.7**
	baz=311						
STYH				*e*S	**Sb**	**14 07 10.7**	**-0.9**
	baz=311						
STYT	**Tauyuan**	**0.79**	**308**	P	**Pb**	**14 07 00.5**	**-1.0**
	baz=310						
STYT				S	**Sb**	**14 07 10.9**	**-1.0**
	baz=310						
SLGT	**Liugui**	**0.79**	**294**	*e*P	**Pb**	**14 07 00.9**	**-0.6**
	baz=299						
SLGT				*e*S	**Sb**	**14 07 10.7**	**-1.2**
	baz=299						
SCZT	**Fangliau**	**0.81**	**249**	*e*P	**Pb**	**14 07 01.2**	**-0.5**
	baz=245						
SCZT				*e*S	**Sb**	**14 07 09.8**	**-2.4**
	baz=245						
HGSD	**Ruisui**	**0.82**	**359**	*e*P	**Pb**	**14 07 00.5**	**-1.4**
	baz=12						
HGSD				*e*S	**Sb**	**14 07 11.6**	**-1.0**
	baz=12						
SSPT	**Xinbi**	**0.82**	**257**	*e*P	**Pg**	**14 07 02.3**	**-0.2**
	baz=247						
SSPT				*e*S	**Sg**	**14 07 13.3**	**-0.1**
	baz=247						
EHY	**Hungye**	**0.84**	**353**	*e*P	**Pb**	**14 07 01.1**	**-1.2**
	baz=6.0						
EHY				*e*S	**Sb**	**14 07 12.6**	**-0.6**
	baz=6.0						
SGST	**Jiashian**	**0.89**	**298**	P	**Pb**	**14 07 02.1**	**-1.0**
	baz=299						
SGST				S	**Sb**	**14 07 13.8**	**-0.7**
	baz=299						
SCST	**Cishan**	**0.89**	**284**	*e*P	**Pb**	**14 07 03.6**	**+0.4**
	baz=284						
SCST				*e*S	**Sg**	**14 07 16.0**	**+0.3**
	baz=284						
TSEB	**Hengchuen, Pin**	**0.91**	**213**	*e*P	**Pb**	**14 07 01.7**	**-1.8**
	baz=212						
TSEB				*e*S	**Sn**	**14 07 17.1**	**+0.5**
	baz=212						
HEN	**Hengchun**	**0.92**	**224**	*e*P	**Pg**	**14 07 04.9**	**+0.5**
	baz=221						
HEN				*e*S	**Sg**	**14 07 16.4**	**-0.2**
	baz=221						
TWKBT	**Hengchun**	**0.92**	**218**	*e*P	**Pb**	**14 07 03.4**	**-0.3**
	baz=215						
TWKBT				*e*S	**Sb**	**14 07 15.9**	**+0.3**
	baz=215						
TWK1	**Hengchun**	**0.93**	**219**	*e*P	**Pb**	**14 07 03.2**	**-0.5**
	baz=215						
TWK1				*e*S	**Sg**	**14 07 16.4**	**-0.3**
	baz=215						
TWM1	**Shoushan**	**0.94**	**280**	*e*P	**Pg**	**14 07 05.2**	**+0.3**
	baz=272						
TWM1				*e*S	**Sn**	**14 07 19.0**	**+1.5**
	baz=272						
WTP	**Ta-pu**	**0.95**	**307**	*e*P	**Pb**	**14 07 04.0**	**-0.2**
	baz=309						
WTP				*e*S	**Sb**	**14 07 16.7**	**+0.4**
	baz=309						
TPUB	**Ta-pu**	**0.97**	**311**	P	**Pb**	**14 07 04.3**	**-0.3**
	baz=312						
TPUB				*e*S	**Sb**	**14 07 17.4**	**+0.4**
	baz=312						
CHN1	**Nanshi**	**0.98**	**302**	*e*P	**Pn**	**14 07 05.3**	**+0.3**
	baz=313						
CHN1				*e*S	**Sn**	**14 07 18.6**	**+0.2**
	baz=313						
EGFH	**Guangfu**	**0.99**	**360**	*e*P	**Pb**	**14 07 04.6**	**-0.4**
	baz=15						
EGFH				*e*S	**Sn**	**14 07 18.9**	**+0.1**
	baz=15						
ALS	**Alishan**	**1.02**	**326**	*e*P	**Pb**	**14 07 05.0**	**-0.5**
	baz=336						
ALS				*e*S	**Sb**	**14 07 17.6**	**-1.0**
	baz=336						
SNST	**Tainan City**	**1.02**	**303**	*e*P	**Pb**	**14 07 05.2**	**-0.2**
	baz=303						
SNST				*e*S	**Sn**	**14 07 19.9**	**+0.6**
	baz=303						
WLCH	**Liuqiu**	**1.02**	**252**	*e*P	**Pg**	**14 07 08.8**	**+2.5**
	baz=242						
WLCH				*e*S	**Sg**	**14 07 22.9**	**+3.0**
	baz=242						
CHN4	**Tsaushan**	**1.03**	**311**	*e*P	**Pb**	**14 07 05.5**	**-0.1**
	baz=313						
CHN4				*e*S	**Sn**	**14 07 19.9**	**+0.3**
	baz=313						
TWP	**Hsiaoliuchiu**	**1.04**	**252**	*e*P	**Pg**	**14 07 08.1**	**+1.4**
	baz=242						
TWP				*e*S	**Sg**	**14 07 21.8**	**+1.4**
	baz=242						
TWK	**Hsinying**	**1.05**	**305**	*e*P	**Pb**	**14 07 06.1**	**+0.1**
	baz=306						
TWK				*e*S	**Sn**	**14 07 20.6**	**+0.4**
	baz=306						
CHN3	**Shinhua**	**1.06**	**293**	*e*P	**Pg**	**14 07 08.5**	**+1.5**
	baz=292						
CHN3				*e*S	**Sg**	**14 07 24.7**	**+3.6**
	baz=292						
VWDT	**VWDT**	**1.11**	**346**	*e*P	**Pn**	**14 07 06.0**	**-0.8**
	baz=349						
VWDT				*e*S	**Sb**	**14 07 19.5**	**-1.5**
	baz=349						
ESL	**Shilin**	**1.14**	**0**	*e*P	**Pn**	**14 07 06.1**	**-1.2**
	baz=351						
ESL				*e*S	**Sb**	**14 07 19.8**	**-2.0**
	baz=351						
WHYT	**Xinyi Township**	**1.15**	**333**	*e*P	**Pb**	**14 07 07.8**	**+0.1**
	baz=342						
WHYT				*e*S	**Sb**	**14 07 22.5**	**+0.2**
	baz=342						
CHN5	**Tsauling**	**1.16**	**323**	*e*P	**Pn**	**14 07 07.5**	**0.0**
	baz=325						
CHN5				*e*S	**Sn**	**14 07 23.2**	**+0.4**
	baz=325						
SSLB	**Suanglung**	**1.20**	**339**	*e*P	**Pn**	**14 07 07.5**	**-0.5**
	baz=350						
SSLB				*e*S	**Sn**	**14 07 24.2**	**+0.4**
	baz=350						
CHN2	**Minshiung**	**1.23**	**314**	*e*P	**Pb**	**14 07 09.8**	**+0.8**
	baz=316						
CHN2				*e*S	**Sg**	**14 07 26.9**	**+0.5**
	baz=316						
CHY	**Chiayi**	**1.24**	**312**	*e*P	**Pb**	**14 07 09.6**	**+0.5**
	baz=313						
CHY				*e*S	**Sb**	**14 07 26.2**	**+1.5**
	baz=313						
ICHU	**Yijhu**	**1.27**	**303**	*e*P	**Pb**	**14 07 10.0**	**+0.5**
	baz=304						
ICHU				*e*S	**Sg**	**14 07 27.3**	**-0.2**
	baz=304						
WGK	**Gukeng**	**1.29**	**322**	*e*P	**Pb**	**14 07 10.8**	**+0.8**
	baz=324						
WGK				*e*S	**Sg**	**14 07 28.0**	**-0.3**
	baz=324						
SMLT	**Sun Moon Lake**	**1.30**	**338**	*e*P	**Pb**	**14 07 10.2**	**-0.1**
	baz=348						
SMLT				*e*S	**Sb**	**14 07 28.0**	**+1.3**
	baz=348						
WDLH	**Douliu**	**1.31**	**321**	*e*P	**Pb**	**14 07 10.8**	**+0.6**
	baz=312						
WDLH				*e*S	**Sg**	**14 07 29.0**	**+0.2**
	baz=312						
CHN8	**Yiju**	**1.31**	**301**	*e*P	**Pb**	**14 07 10.7**	**+0.4**
	baz=302						
CHN8				*e*S	**Sg**	**14 07 29.2**	**+0.3**
	baz=302						
WJS	**Zhushan**	**1.32**	**331**	*e*P	**Pg**	**14 07 11.5**	**-0.4**
	baz=333						
WJS				*e*S	**Sg**	**14 07 29.9**	**+0.7**
	baz=333						
TYC	**Yuchr**	**1.34**	**337**	*e*P	**Pb**	**14 07 10.8**	**0.0**
	baz=347						
TYC				*e*S	**Sb**	**14 07 28.9**	**+1.3**
	baz=347						
WNT	**Mingjian**	**1.39**	**330**	*e*P	**Pb**	**14 07 12.4**	**+0.7**
	baz=334						
WNT				*e*S	**Sg**	**14 07 30.6**	**-0.7**
	baz=334						

```
WTK   Tuku              1.40 317 eP      Pb     14 07 12.0 +0.2
        baz=318
WTK                              eS      Sg     14 07 31.0 -0.7
        baz=318
CHGB  Renai             1.41 350 eP      Pn     14 07 10.6 -0.5
        baz=353
CHGB                             eS      Sb     14 07 30.7 +1.0
        baz=353
TWD   Chiawan           1.41   6 eP      Pn     14 07 09.5 -1.5
        baz=21
TWD                              eS      Sn     14 07 27.2 -1.8
        baz=21
WNT1  Nantou City       1.41 331 eP      Pb     14 07 12.9 +0.8
        baz=334
WNT1                             eS      Sg     14 07 31.9 -0.3
        baz=334
DPDB  Guoxing           1.44 341 eP      Pb     14 07 12.1 -0.4
        baz=354
DPDB                             eS      Sb     14 07 31.8 +1.3
        baz=354
WCS   Beigang Elemen    1.46 341 eP      Pb     14 07 12.6 -0.4
        baz=352
WCS                              eS      Sb     14 07 32.1 +1.0
        baz=352
WHF   Hehuan Shan       1.48 354 eP      Pn     14 07 11.6 -0.6
        baz=9.0
WHF                              eS      Sn     14 07 30.8 -0.4
        baz=9.0
NACB  Ninganchiao       1.50   6 eP      Pn     14 07 11.1 -1.2
        baz=357
NACB                             eS      Sn     14 07 31.1 -0.2
        baz=357
ETLH  Xiulin Townshi    1.53   2 eP      Pn     14 07 11.3 -1.4
        baz=4.0
ETLH                             eS      Sn     14 07 32.4 +0.3
        baz=4.0
FUSS  Fushou            1.58 354 eP      Pn     14 07 13.7 +0.2
        baz=7.0
FUSS                             eS      Sn     14 07 32.8 -0.8
        baz=7.0
TDCB  Techi             1.60 351 eP      Pn     14 07 13.8 +0.2
        baz=5.0
TDCB                             eS      Sb     14 07 35.3 +0.1
        baz=5.0
WHP   Taichung City     1.66 345 eP      Pb     14 07 16.5 +0.1
        baz=355
WHP                              eS      Sb     14 07 38.0 +1.0
        baz=355
WDGT  Dungji            1.74 290 eP      Pn     14 07 15.4  0.0
        baz=289
WDGT                             eS      Sn     14 07 36.7 -0.3
        baz=289
NNSB  Datong            1.75 359 eP      Pn     14 07 15.5 -0.2
        baz=11
NNSB                             eS      Sn     14 07 38.0 +0.4
        baz=11
NNSH  Datong            1.75 359 eP      Pn     14 07 15.2 -0.5
        baz=11
NNSH                             eS      Sn     14 07 37.7 +0.1
        baz=11
NNS   Nan Shan          1.76 358 eP      Pn     14 07 15.2 -0.7
        baz=11
NNS                              eS      Sb     14 07 40.0  0.0
        baz=11
ENA   Nanau             1.77   9 eP      Pn     14 07 15.0 -1.0
        baz=357
ENA                              eS      Sb     14 07 40.5 +0.4
        baz=357
TWQ1  Liyutan           1.78 340 eP      Pb     14 07 18.0 -0.3
        baz=344
TWQ1                             eS      Sb     14 07 41.2 +1.0
        baz=344
WDJ   Dajia District    1.82 337 eP      Pb     14 07 18.0 -1.0
        baz=340
WDJ                              eS      Sb     14 07 43.2 +1.7
        baz=340
NSY   Sanyi             1.84 341 eP      Pb     14 07 19.2 -0.2
        baz=345
NSY                              eS      Sb     14 07 44.0 +1.8
        baz=345
PHUB  P'eng-hu          1.91 296 eP      Pn     14 07 18.6 +0.9
        baz=296
PHUB                             eS      Sn     14 07 40.3 -0.9
        baz=296
NDT   Datong Townshi    1.93   2 eP      Pn     14 07 18.6 +0.5
        baz=5.0
NDT                              eS      Sn     14 07 43.1 +1.4
        baz=5.0
PNG   Penghu            1.95 298 eP      Pn     14 07 19.2 +0.9
        baz=297
PNG                              eS      Sn     14 07 42.3 +0.1
        baz=297
ENTT  Nioudou           1.97   4 eP      Pn     14 07 18.7 +0.1
        baz=6.0
ENTT                             eS      Sb     14 07 45.2 -0.4
        baz=6.0
TWC   Suao              1.97  11 eP      Pn     14 07 18.8 +0.2
        baz=1.0
TWC                              eS      Sn     14 07 43.0 +0.2
        baz=1.0
NDS   Dongshan          1.97   8 eP      Pn     14 07 18.9 +0.2
        baz=9.0
NDS                              eS      Sn     14 07 42.9 +0.1
        baz=9.0
NSTT  Nanjuang          1.99 349 eP      Pn     14 07 20.5 +1.5
        baz=5.0
NSTT                             eS      Sb     14 07 47.2 +0.8
        baz=5.0
NSK   Sanguang          2.00 358 eP      Pn     14 07 19.7 +0.5
        baz=12
NSK                              eS      Sn     14 07 45.2 +1.6
        baz=12
LIOB  Emei              2.00 349 eP      Pn     14 07 20.6 +1.4
        baz=6.0
LIOB                             eS      Sb     14 07 47.3 +0.6
        baz=6.0
TWE   Neicheng          2.05   6 eP      Pn     14 07 20.6 +0.8
        baz=8.0
TWE                              eS      Sb     14 07 46.7 -1.4
        baz=8.0
NWLT  Wulai             2.10   2 eP      Pn     14 07 21.0 +0.6
        baz=5.0
NWLT                             eS      Sn     14 07 47.1 +1.1
        baz=5.0
JYNG  Yonagunijimaku    2.25  38  P      Pn     14 07 22.8 +0.3
JYNG                             eS      Sn     14 07 48.8 -0.9
YOJ   Yonaguni jima     2.30  39  P      Pn     14 07 23.8 +0.6
YOJ                              eS      Sn     14 07 50.7 -0.2
TIPB  Shuangxi          2.32   9 eP      Pn     14 07 24.6 +1.1
        baz=1.0
TIPB                             eS      Sn     14 07 52.4 +0.9
        baz=1.0
HATJ  Hateruma jima     2.58  57  P      Pn     14 07 27.4 +0.4
HATJ                             eS      Sn     14 07 56.8 -1.1
IRIF  Iriomote-Funau    2.68  51  P      Pn     14 07 29.1 +0.7
IRIF                             eS      Sn     14 08 00.5 +0.1
JKRS  Kuro-shima        2.83  56  P      Pn     14 07 31.0 +0.5
VWUC  VWUC              2.94 322 eP      Pn     14 07 32.3 +0.3
        baz=324
VWUC                             eS      Sn     14 08 06.4 -0.3
        baz=324
JIJ   Ishigaki jima     3.01  55  P      Pn     14 07 33.6 +0.7
PTMZ  Houxiangcun       3.17 319 eP      Pn     14 07 35.3 +0.2
        baz=321
PTMZ                             eS      Sn     14 08 10.5 -1.9
        baz=321
PTTC  Pingtan           3.20 332 eP      Pn     14 07 35.6  0.0
        baz=335
PTTC                             eS      Sn     14 08 12.1 -1.1
        baz=335
JISG  Ishigakijimahi    3.26  54  P      Pn     14 07 36.6 +0.3
JISG                              S      Sn     14 08 14.3 -0.3
KNMB  Chin-men Tao      3.31 303 eP      Pn     14 07 37.3 +0.2
        baz=302
KNMB                             eS      Sn     14 08 14.4 -1.6
        baz=302
JTJ   Tarama            3.58  56  P      Pn     14 07 41.5 +0.7
JTJ                              eS      Sn     14 08 23.1 +0.5
MATB  Ma-tsu            3.72 339 eP      Pn     14 07 41.8 -0.9
        baz=343
MATB                             eS      Sn     14 08 24.0 -2.0
        baz=343
AXDP  Jialang           3.87 306 eP      Pn     14 07 45.0 +0.2
        baz=304
AXDP                             eS      Sn     14 08 27.9 -1.8
        baz=304
JIRB  Irabujima         4.04  57  P      Pn     14 07 47.9 +0.7
MHZQ  Yeshan            4.06 328 eP      Pn     14 07 47.2 -0.2
        baz=331
MHZQ                             eS      Sn     14 08 33.5 -0.8
        baz=331
JMJ2  Miyako jima3      4.12  59  P      Pn     14 07 49.6 +1.3
LYJJ  Jianjiangzhen     4.15 339 eP      Pn     14 07 48.7  0.0
        baz=344
LYJJ                             eS      Sn     14 08 36.9 +0.3
        baz=344
JOGS  Gusukube          4.20  59  P      Pn     14 07 50.2 +1.0
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*JMA **14** 14:17:11.7, 33°.96N×133°.88E, h41^{km}±1^{km}, M4.0 Broadband fault plane solution: P waves. NP1: ϕ_s138.00000°, δ74.00000°, λ174.00000°. NP2: ϕ_s230.00000°, δ84.00000°, λ16.00000°. Principal axes: T Plg15.0000°, Azm95.0000°; N Plg73.0000°, Azm249.0000°; P Plg7.0000°, Azm3.0000°;*

JMA Felt III J1.

*NIED **14** 14:17:11.7, 33°.96N×133°.88E, h41^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.03; $M_{\theta\theta}$-0.98; $M_{\phi\phi}$1.01; $M_{r\theta}$-0.53; $M_{\theta\phi}$0.18; $M_{\phi r}$-0.07; Fault plane solution: $M_0$1.13000×10^{15} NP1:ϕ_s48.00000°, δ79.00000°, λ-22.00000°. NP2:ϕ_s143.00000°, δ68.00000°, λ-168.00000°.*

*IDC **14** 14:17:12.8±1.8, 33°.94N×133°.76E, h48^{km}±17^{km}, mb3.3/10, mb1 3.5/16, mb1mx3.3/46, mbtmp3.6/16, ML3.0/6, MS2.7/3, Ms1 2.7/3, ms1mx2.4/33 Error ellipse: s-maj=17.9km s-min=17.0km az=154.0*

ISC 14 14:17:09.6±0.5, **33°.99N**±0°.03×**133°.83E**±0°.03, **h18**^{km}, **n32**, σ**1^{s}61**/45, **mb3.6**/10, **7C-6D, Shikoku**

```
Code  Station Name       Δ°  AZ°   Phase ID          Time     Res
                                  Op      ISC     h  m  s    ISC
JMN   Monobe            0.27 171 ⇓P      Pb     14 17 19.3 +3.5
JMN                               S      Sg     14 17 24.4 +4.7
JMAF  Mimaanabuki       0.28  79 ⇑P      Pn     14 17 19.6 +0.8
JMAF                              S      Sn     14 17 24.7 +0.2
JJS   Sakaide           0.39  13 ⇓P      Pn     14 17 21.3 +0.9
JJS                               S      Sn     14 17 28.0 +0.6
JAI   Aioi              0.56 111 ⇑P      Pn     14 17 22.4 -0.2
JAI                               S      Sn     14 17 30.0 -1.4
JET   Tanbara           0.68 252 ⇑P      Pn     14 17 25.2 +0.8
JET                              eS      Sn     14 17 34.8 +0.2
JKU   Kubokawa          0.93 223 ⇓P      Pn     14 17 28.4 +0.6
JKU                              eS      Sn     14 17 40.6 -0.1
JAD   Aida              0.99  17 ⇓P      Pn     14 17 29.1 +0.5
JAD                              eS      Sn     14 17 42.7 +0.6
JAWN  Awajishima-nag    1.02  61  P      Pb     14 17 29.1 +0.4
JAWN                             eS      Sb     14 17 41.4 -0.4
JHM   Kurahashi         1.09 278 ⇑P      Pg     14 17 31.0 +0.3
JHS   Saijyo            1.16 330 ⇓P      Pb     14 17 32.2 +1.0
JHS                              eS      Sb     14 17 47.2 +1.2
JNA   Nagahama          1.20 249 ⇑P      Pg     14 17 32.4 -0.5
UWA2  Uwa jima 2        1.27 233 ⇑P      Pg     14 17 33.1 -1.0
JWM   Minabe            1.28  96 ⇑P      Pn     14 17 32.2 -0.4
JKS   Kasai             1.30  40 ⇓P      Pn     14 17 32.9 +0.1
JNU   Nakatsue          2.61 251  P      Pn     14 17 52.1 +1.1
        6.8nm,0.3s,baz=14,slow=7.9,SNR=104
JNU                               S      Sb     14 18 24.7 -2.9
        10.0nm,0.3s,baz=135,slow=8.9,SNR=5.4
MAT   Matsushiro        4.39  53  P      Pn     14 18 16.8 +1.3
MAT                               S      Sn     14 19 05.1 -1.1
MJAR  Matsushiro Arr    4.40  53  P      Pn     14 18 17.4 +1.9
        0.5nm,0.3s,baz=230,slow=16,SNR=54
MJAR                              S      Sn     14 19 05.2 -1.0
        0.8nm,0.3s,baz=229,slow=19,SNR=8.6
MJAR                              LR     LR     14 19 53.4
        comp=Z,43nm,18.8s,baz=275,slow=36
KSRS  Korea Array       5.92 307  P      Pn     14 18 38.4 +2.1
        0.5nm,0.3s,baz=122,slow=15,SNR=6.1
KSRS                              S      Sn     14 19 44.3 +0.7
        1.8nm,0.3s,baz=123,slow=24,SNR=10
KSRS                              LR     LR     14 21 23.6
        comp=Z,51nm,19.6s,baz=136,slow=42
JOW   Kunigami          8.60 215  P      Pn     14 19 13.7 +0.5
        0.4nm,0.3s,baz=102,slow=19,SNR=1.2
JOW                               S      Sn     14 20 44.2 -5.4
        0.4nm,0.3s,baz=82,slow=19,SNR=1.5
USRK  Ussuriysk Ar.    10.29 353  P      Pn     14 19 38.6 +2.3
        baz=177,slow=14,SNR=2.3
KLR   Kul'dur          15.30 355  P      P      14 20 47.5 -1.8
        0.2nm,0.3s,baz=165,slow=10,SNR=8.0
SONM  Songino Array    24.76 312  P      P      14 22 30.5 +0.2
        0.5nm,0.5s,baz=116,slow=9.8,SNR=4.9
PETK  Petropavlovsk-   25.57  34  P      P      14 22 38.0 +0.6
        2.1nm,0.8s,baz=212,slow=13,SNR=1.7
TLY   Talaya           28.04 318  LR     LR     14 35 06.4
        comp=Z,28nm,19.5s,baz=120,slow=38
MKAR  Makanchi Array   40.59 304  P      P      14 24 47.6 -0.5
        0.2nm,0.6s,baz=81,slow=9.2,SNR=1.8
KURBB Kurchatov Arra   43.09 310  P      P      14 25 08.1 -0.3
        0.2nm,0.5s,baz=89,slow=9.2,SNR=1.7
WRA   Warramunga Arr   53.64 179  P      P      14 26 28.7 -1.3
        0.2nm,0.5s,baz=356,slow=8.1,SNR=5.7
ILAR  Eielson Array    55.32  31  P      P      14 26 41.6 -0.2
        0.5nm,0.8s,baz=286,slow=9.2,SNR=7.4
INK   Inuvik           59.84  25  P      P      14 27 13.5  0.0
        0.6nm,0.5s,baz=309,slow=5.0,SNR=5.0
FINES FINESS Array B   68.51 331  P      P      14 28 09.7 -0.8
        1.5nm,0.7s,baz=116,slow=8.7,SNR=7.4
YKA   Yellowknife Ar   69.45  27  P      P      14 28 16.4  0.0
        0.4nm,0.8s,baz=302,slow=5.5,SNR=7.4
AKASG Malin Array Be   72.77 320  P      P      14 28 35.5 -1.2
        0.6nm,0.4s,baz=52,slow=6.3,SNR=4.3
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*VIE **14** 14:20:35.9±0.6, 47°.08N×9°.58E, h4^{km}±13^{km}, ml1.3/1, Error ellipse: s-maj=2.5km s-min=1.3km az=75.0 7 km SSE of Vaduz*

ZUR 14 14:20:35.6, 47°.07N×9°.59E, h1^{km}±1^{km}, **MLh0.8**/6, **1D, Error ellipse: s-maj=2.9km s-min=0.7km az=115.0, Germany**

```
Code  Station Name       Δ°  AZ°   Phase ID          Time     Res
                                  Op      ISC     h  m  s    ISC
STRW  Triesenberg, W    0.05 329 ⇓Pg     Pg     14 20 37.0 +0.3
        0.3nm,SNR=2.9
STRW                              Sg     Sg     14 20 38.0 +0.6
SBUA2 Buchs, Altendo    0.12 317  Pg     Pg     14 20 38.1 +0.2
        0.1nm,SNR=0.6
PLONS Plons/SG          0.14 260  Pg     Pg     14 20 38.7 +0.3
        0.1nm,SNR=1.2
PLONS                             Pg     Pg     14 20 38.7 +0.3
PLONS                             Sg     Sg     14 20 41.1 +0.7
LIENZ Kamor/St.Gall     0.23 344  Pg     Pg     14 20 40.4 +0.3
LIENZ                             Sg     Sg     14 20 44.0 +0.8
DAVA  Damuels           0.29  43  Pg     Pg     14 20 41.4 +0.1
DAVA                              Pg     Pg     14 20 41.4 +0.1
        SNR=0.4
DAVA                              Sg     Sg     14 20 46.0 +0.9
DAVA  Damuels           0.29  43 ePg     Pg     14 20 41.3  0.0
        3.3nm,0.1s
DAVA                             eSg     Sg     14 20 45.9 +0.8
        5.2nm,0.1s
SGT04 Schlatt-Haslen    0.32 329  Pg     Pg     14 20 42.5 +0.8
        SNR=0.3
SGT04                             Pg     Pg     14 20 42.5 +0.8
SGT04                             Sg     Sb     14 20 48.0 -1.9
DAVOX Davos/Dischmat    0.35 146  Pg     Pg     14 20 42.9 +0.4
DAVOX                             Pg     Pg     14 20 42.9 +0.4
        SNR=0.5
DAVOX                             Sg     Sg     14 20 48.3 +1.3
PANIX Pigniu (Panix)    0.41 233  Pg     Pg     14 20 43.5 +0.1
        0.1nm,SNR=1.1
PANIX                             Pg     Pg     14 20 43.5 +0.1
PANIX                             Sg     Sg     14 20 49.4 +0.6
LLS   Linth-Limmern     0.46 240  Sg     Sg     14 20 51.0 +0.7
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*VIE **14** 14:20:56.0±0.2, 46°.42N×10°.38E, h5^{km}±3^{km}, mb1.6/2, ml1.9/7, Error ellipse: s-maj=2.0km s-min=1.4km az=0.0 6 km S of Bormio*

ROM 14 14:20:55.4±0.1, **46°.399N**±0°.007×**10°.365E**±0°.008, **h8**^{km}, **ML1.8**/6, **10C-1D, Error ellipse: s-maj=0.6km s-min=0.5km az=351.0, Northern Italy**

```
Code  Station Name       Δ°  AZ°   Phase ID          Time     Res
                                  Op      ISC     h  m  s    ISC
BRMO  Bormio            0.08   4  P      Pg     14 20 57.8 +0.2
BRMO                              S      Sg     14 20 59.1 -0.1
BRMO                              AML    AML
        comp=E,402µm,0.5s
BRMO                              AML    AML
        comp=N,302µm,1.2s
BRMO  Bormio            0.08   4 ⇑P      Pg     14 20 57.6  0.0
BRMO                              AML    AML
        comp=E,402µm,0.5s
BRMO                              AML    AML
        comp=N,302µm,1.2s
CARE  Lago del Cares    0.23  83⇑ePg     Pg     14 21 00.6 +0.5
CARE                             eSg     Sg     14 21 03.9 +0.6
BERNI Berninapass       0.24 274  P      Pg     14 21 01.1 +0.9
BERNI                             S      Sg     14 21 04.7 +1.2
BERNI                             AML    AML
        comp=N,296µm,0.1s
BERNI                             AML    AML
        comp=N,296µm,0.1s
BERNI                             AML    AML
        comp=E,228µm,0.1s
BERNI Berninapass       0.24 274 ⇑P      Pg     14 21 01.1 +0.9
BERNI                             AML    AML
        comp=E,228µm,0.1s
BERNI                             AML    AML
        comp=N,296µm,0.1s
BERNI                             AML    AML
        comp=N,296µm,0.1s
MOSI  Grossmontoni      0.25  30  P      Pg     14 21 01.1 +0.6
MOSI                              S      Sg     14 21 05.1 +1.1
MOSI                              AML    AML
        comp=E,273µm,1.5s
MOSI                              AML    AML
        comp=N,312µm,0.3s
MOSI  Grossmontoni      0.25  30 ⇑P      Pg     14 21 01.4 +0.8
MOSI                              AML    AML
        comp=E,273µm,1.5s
MOSI                              AML    AML
        comp=N,312µm,0.3s
MABI  Malga Bissina     0.36 163  P      Pg     14 21 03.2 +0.7
MABI                              S      Sg     14 21 08.1 +0.8
MABI                              AML    AML
        comp=N,48µm,1.5s
MABI                              AML    AML
        comp=E,96µm,0.2s
MABI  Malga Bissina     0.36 163 ⇑P      Pg     14 21 03.2 +0.7
MABI                              AML    AML
        comp=E,96µm,0.2s
MABI                              AML    AML
        comp=N,48µm,1.5s
OZOL  Ozolo             0.47  89⇑ePg     Pg     14 21 05.3 +0.6
OZOL                             eSg     Sg     14 21 12.0 +1.1
DAVOX Davos/Dischmat    0.51 319  P      Pb     14 21 06.3 -0.4
DAVOX                             S      Sg     14 21 13.2 +1.2
GAGG  Gaggia            0.52 127⇑ePg     Pg     14 21 06.1 +0.6
GAGG                             eSg     Sg     14 21 13.2 +1.0
APPI  Appiano           0.60  82  P      Pb     14 21 07.7 -0.6
APPI                              S      Sg     14 21 15.8 +0.9
APPI  Appiano           0.60  82 ⇑P      Pb     14 21 07.8 -0.5
MAGA  Magasa            0.65 164  P      Pb     14 21 08.6 -0.5
MAGA                              S      Sb     14 21 17.9 -0.4
FETA  Feichten          0.67  22 ePg     Pb     14 21 09.0 -0.5
        comp=N,0.3nm,0.1s
FETA                             eSg     Sg     14 21 17.1 -0.1
        comp=N,1.3nm,0.1s,SNR=5.2
TUE   Stuetta           0.71 276  P      Pg     14 21 09.6 +0.5
TUE                               S      Sg     14 21 19.0 +0.7
TUE   Stuetta           0.71 276 ⇓P      Pb     14 21 09.6 -0.5
ABSI  Aberstueckl       0.74  63  P      Pg     14 21 09.9 +0.3
ABSI                              S      Sb     14 21 20.4 -0.5
ABSI  Aberstueckl       0.74  63 ⇑P      Pg     14 21 10.0 +0.4
ROSI  Rosskopf          0.90  53  P      Pg     14 21 12.8 +0.2
ROSI  Rosskopf          0.90  53 ⇑P      Pb     14 21 13.1 -0.2
CTI   Castel Tesino     0.96 111  P      Pn     14 21 14.9 -0.4
BRES  Bressanone        0.99  72  P      Pg     14 21 14.6 +0.1
SQTA  Sankt Quirin      1.01  35 ePg     Pb     14 21 15.3 +0.1
        comp=N,0.7nm,0.1s
SQTA                             eSg     Sg     14 21 27.3 -0.5
        comp=N,3.8nm,0.2s
MUGIO Muggio            1.04 243  P      Pb     14 21 15.6  0.0
MUGIO                             S      Sb     14 21 29.2 -0.2
CGRP  Cima Grappa       1.12 117 ePg     Pn     14 21 17.9 +0.2
ABTA  Abfaltersbach     1.52  76 ePg     Pg     14 21 24.5 -0.1
        comp=N,0.9nm,0.1s,SNR=9.0
ABTA                             eSn     Sg     14 21 44.7 +0.4
        comp=N,1.3nm,0.2s
ZCCA  Zocca             2.09 168  P      Pb     14 21 33.9 +0.2
ZCCA  Zocca             2.09 168  P      Pb     14 21 33.9 +0.2
COR1  Corinaldo         3.34 145  S      Sn     14 22 29.0 +1.3
SENI  Senigallia        3.37 142  S      Sn     14 22 27.0 -1.6
```

ROM 14 14:21:47.8±0.1, **43°.479N**±0°.004×**12°.700E**±0°.007, **h13**^{km}, **ML1.0**/2, **2C-5D, Error ellipse: s-maj=0.6km s-min=0.1km az=91.0, Central Italy**

```
Code  Station Name       Δ°  AZ°   Phase ID          Time     Res
                                  Op      ISC     h  m  s    ISC
FRON  Frontone          0.04  26 ⇓P      Pg     14 21 50.5 +0.2
FRON  Frontone          0.04  26  P      Pg     14 21 50.5 +0.2
FRON                              S      Sg     14 21 52.6 +0.5
SSFR  Montelago di S    0.07 125  P      Pg     14 21 50.7 +0.1
SSFR                              AML    AML
        comp=N,152µm,0.1s
SSFR                              AML    AML
        comp=E,90µm,0.1s
SSFR  Montelago di S    0.07 125  P      Pg     14 21 50.7 +0.1
SSFR                              S      Sg     14 21 52.9 +0.4
SSFR                              AML    AML
        comp=E,90µm,0.1s
SSFR                              AML    AML
        comp=N,152µm,0.1s
ATFO  Monte Foce - G    0.15 220 ⇑P      Pg     14 21 51.7 +0.2
ATFO                              AML    AML
        comp=E,51µm,0.5s
ATFO                              AML    AML
        comp=N,78µm,0.2s
ATFO  Monte Foce - G    0.15 220  P      Pg     14 21 51.6 +0.1
ATFO                              S      Sg     14 21 54.7 +0.6
ATFO                              AML    AML
        comp=N,78µm,0.2s
ATFO                              AML    AML
        comp=E,51µm,0.5s
MPAG  Monte Paganucc    0.16  16  P      Pg     14 21 52.1 +0.4
MPAG  Monte Paganucc    0.16  16  P      Pg     14 21 52.0 +0.4
MPAG                              S      Sb     14 21 55.1 -0.7
ARVD  Arcevia           0.18  84 ⇑P      Pg     14 21 52.1 +0.2
ARVD  Arcevia           0.18  84  P      Pg     14 21 52.0 +0.1
ARVD                              S      Sg     14 21 55.4 +0.7
FDMO  Fiordimonte       0.53 147 ⇓P      Pg     14 21 58.1  0.0
FDMO  Fiordimonte       0.53 147 ⇓P      Pg     14 21 58.1  0.0
FDMO  Fiordimonte       0.53 147 ⇓P      Pg     14 21 58.1  0.0
FDMO  Fiordimonte       0.53 147 ⇓P      Pg     14 21 58.1  0.0
FDMO                              S      Sb     14 22 06.2 -0.1
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*IDC **14** 14:34:03.3±1.4, 37°.87N×144°.23E, h0^{km}, mb3.6/3, mb1 3.8/5, mb1mx3.4/48, mbtmp3.6/5, ML3.9/1, Error ellipse: s-maj=37.9km s-min=26.2km az=107.0*

*NEIC **14** 14:34:06.2±1.1, 37°.99N±0°.07×144°.1E±0°.1, h31^{km}±9^{km}, mb4.4/5, Error ellipse: s-maj=13.7km s-min=10.7km az=78.0*

*JMA **14** 14:34:07.1±0.2, 38°.03N×143°.88E, h46^{km}, M3.9*

ISC 14 14:34:07.6±1.1, **38°.03N**±0°.05×**143°.99E**±0°.07, **h35**^{km}, **n36**, σ**1^{s}56**/46, **mb4.1**/5, **Off east coast of Honshu**

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Code  Station Name       Δ°  AZ°   Phase ID          Time     Res
                                  Op      ISC     h  m  s    ISC
JIKH  Ishinomakikobu    2.01 279  P      Pn     14 34 38.2 -0.8
JIKH                              S      Sn     14 35 00.9 -2.1
OFUJ  Ofunato           2.10 301  P      Pn     14 34 39.7 -0.6
JIO   Ouri              2.12 282  P      Pn     14 34 40.0 -0.6
JIO                               S      Sn     14 35 03.8 -2.0
JKMT  Kesennumamotoy    2.13 292  P      Pn     14 34 40.0 -0.6
JKMT                              S      Sn     14 35 03.9 -1.9
JMK   Ichinoseki        2.36 294  P      Pn     14 34 43.5 -0.4
JMM   Marumori          2.54 267  Pn     Pn     14 34 45.9 -0.3
JOM   Ohasama           2.56 305  P      Pn     14 34 46.5 -0.1
JOM                               S      Sn     14 35 16.4  0.0
JFT   Otama             2.94 261  P      Pn     14 34 52.0 +0.1
JFT                               S      Sn     14 35 25.4 -0.6
JYK   Kaneyama          2.99 288  P      Pn     14 34 52.7 +0.2
JYK                               S      Sn     14 35 27.3 +0.2
JANG  Nango             3.03 321  P      Pn     14 34 52.7 -0.4
JYT   Yasato            3.53 241  Pn     Pn     14 34 59.2 -0.7
JTM   Tenmabayashi      3.57 321  Pn     Pn     14 35 01.3 +0.9
ERM   Erimo             4.03 351  Pn     Pn     14 35 06.7 -0.1
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JOT	Ohata	4.05	327	P	Pn	14 35 07.0	0.0
JOT				*e*S	Sn	14 35 50.8	-2.3
JKB	Kayabe	4.47	330	P	Pn	14 35 13.7	+0.8
JKB				S	Sn	14 36 01.6	-2.1
JRY	Ryogami san	4.54	245	P	Pn	14 35 13.3	-0.6
JRY				S	Sn	14 36 01.7	-3.8
JCH	Churui	4.61	354	P	Pn	14 35 13.9	-0.8
JCH				S	Sn	14 36 03.1	-3.8
JOD2	Odawara 2	4.81	236	*e*S	Sn	14 36 07.9	-4.3
MJAR	Matsushiro Arr	4.85	254	Pn	Pn	14 35 19.1	+1.0
	0.2nm,0.3s,baz=85,slow=15,SNR=13						
MJAR				Sn	Sn	14 36 14.0	+1.0
	0.2nm,0.3s,baz=165,slow=12,SNR=2.5						
MJAR	Matsushiro Arr	4.85	254		Pn	14 35 18.2	+0.2
MAJO	Matsushiro	4.85	254	Pn	Pn	14 35 18.8	+0.8
MAT	Matsushiro	4.85	254	P	Pn	14 35 19.2	+1.1
MAT				*e*S	Sn	14 36 12.8	-0.2
JEW	Eniwo	5.18	339	Pn	Pn	14 35 23.0	+0.4
JKA	Kamikawa-asahi	6.17	351		Pn	14 35 36.0	-0.2
ASAJ	Asahikawa	6.17	351	Pn	Pn	14 35 36.9	+0.7
	2.4nm,0.3s,baz=203,slow=13,SNR=44						
ASAJ				Sn	Sn	14 36 43.4	-2.2
	1.4nm,0.3s,baz=233,slow=20,SNR=2.2						
H11N2	WAKE ISLAND Hy	26.98	126	T	T	15 07 52.4	
	baz=318						
H11N1	WAKE ISLAND Hy	26.99	126	T	T	15 08 02.9	
	baz=318						
H11N3	WAKE ISLAND Hy	27.00	126	T	T	15 08 03.6	
	baz=318						
MKAR	Makanchi Array	45.34	302	P	P	14 42 25.6	+3.4
	0.5nm,0.7s,baz=81,slow=8.0,SNR=1.9						
ILAR	Eielson Array	47.55	33	P	P	14 42 40.4	+1.2
	0.3nm,0.6s,baz=269,slow=6.2,SNR=4.8						
WB0	Warramunga Arr	58.19	191	P	P	14 43 57.1	-1.1
WB0				IAmb	IAmb	14 44 13.9	
	comp=Z,2.4nm,0.9s						
WR0	Warramunga Arr	58.36	190	P	P	14 43 58.9	-0.4
WB2	Warramunga Arr	58.37	191	P	P	14 43 58.0	-1.5
WB2				IAmb	IAmb	14 44 03.3	
	comp=Z,5.2nm,1.1s						
WRA	Warramunga Arr	58.37	191	P	P	14 43 59.3	-0.2
	comp=Z,1.1nm,0.7s,baz=11,slow=7.3,SNR=9.3						
WRA	Warramunga Arr	58.37	191	P	P	14 43 58.0	-1.5
AS31	Alice Springs	62.09	190	P	P	14 44 23.5	-1.4

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*NEIC **14** 14:37:10.9±2.0, 10°.6S±0°.1×166°.11E±0°.09, h155^{km}±6^{km}, mb4.4/22, Error ellipse: s-maj=15.7km s-min=11.9km az=195.0*

*IDC **14** 14:37:14.8±2.5, 10°.68S×165°.93E, h184^{km}±23^{km}, mb3.6/10, mb1 3.7/13, mb1mx3.5/46, mbtmp4.2/13, Error ellipse: s-maj=18.2km s-min=15.4km az=43.0*

ISC 14 14:37:11.1±0.6**, 10°.69S**±0°.08×**166°.15E**±0°.07**, h155^{km}, n61, σ1ˢ46**/57**, mb4.2**/18**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	4.83	168		Pn	14 38 23.8	+1.4
SANVU	Saraoutou	4.83	168	P	Pn	14 38 23.9	+1.4
HNR	Honiara	6.24	281	P	Pn	14 38 42.0	+0.9
	5.9nm,0.3s,baz=207,slow=0.8,SNR=7.8						
HNR				S	Sn	14 39 54.4	+2.9
	baz=152,slow=7.5,SNR=1.1						
HNR	Honiara	6.24	281		Pn	14 38 40.8	-0.3
KOUNC	Koumac, New Ca	9.96	190	P	Pn	14 39 39.7	+9.1
DZM	Mont Dzumac	11.32	179	P	Pn	14 39 52.2	+3.7
	2.0nm,0.3s,baz=318,slow=12,SNR=38						
DZM				S	Sn	14 41 53.6	-0.1
	1.0nm,0.3s,baz=288,slow=20,SNR=2.7						
DZM	Mont Dzumac	11.32	179	P	P	14 39 52.6	-3.6
YATNC	Mamie plateau,	11.32	177	P	Pn	14 39 51.9	+3.4
NOUC	Port Laguerre	11.35	179	P	P	14 39 54.1	-2.3
OUENC	Ouen Island, N	11.68	177	P	P	14 39 58.2	-1.9
PINNC	Pines Island,	11.92	174	P	P	14 40 00.9	-1.9
MSVF	Nonsavu	13.49	123	P	P	14 40 22.4	+2.1
	0.4nm,0.3s,baz=269,slow=13,SNR=5.8						
MSVF	Nonsavu	13.49	123	P	P	14 40 21.0	+0.6
PMG	Port Moresby	18.75	272		P	14 41 18.2	-0.1
PMG				IAmb	IAmb	14 41 32.6	
	comp=Z,35nm,1.1s						
EIDS	Eidsvold	20.42	222	P	P	14 41 35.2	-1.1
EIDS				IAmb	IAmb	14 41 44.2	
	comp=Z,10nm,0.9s						
CTAO	Charters Tower	21.32	242	P	P	14 41 44.6	-1.4
CTAO				IAmb	IAmb	14 41 46.7	
	comp=Z,18nm,1.1s						
COEN	Coen	22.68	259	P	P	14 41 58.6	-1.1
COEN				IAmb	IAmb	14 42 17.8	
	comp=Z,10nm,1.1s						
ARMA	Armidale	23.83	212	P	P	14 42 11.1	+0.9
HAZ	Te Kaha	28.90	161	P	P	14 42 57.2	+1.8
H11S2	WAKE ISLAND Hy	29.00	1	T	T	15 14 03.5	
	baz=181,slow=76,SNR=3.5						
H11S3	WAKE ISLAND Hy	29.01	1	T	T	15 14 03.8	
	baz=181,slow=76,SNR=4.5						
H11S1	WAKE ISLAND Hy	29.02	1	T	T	15 14 04.8	
	baz=181,slow=76,SNR=2.5						
PKGZ	Pakihiroa	29.12	160	P	P	14 42 58.2	+0.7
URZ	Urewera	29.15	162	P	P	14 42 59.3	+1.6
	comp=Z,6.1nm,0.3s,baz=303,slow=2.2,SNR=21						
URZ	Urewera	29.15	162	P	P	14 42 58.9	+1.2
URZ				IAmb	IAmb	14 43 09.1	
	comp=Z,14nm,1.0s						
URZ	Urewera	29.15	162	P	P	14 42 58.8	+1.2
WMGZ	Waiomatatini S	29.17	160	P	P	14 42 58.4	+0.6
MUGZ	Murupara	29.25	163	P	P	14 43 00.7	+2.1
MWZ	Matawai	29.35	162	P	P	14 43 00.3	+0.8
TWGZ	Tauwhareparae	29.35	161	P	P	14 43 00.2	+0.8
TKGZ	Te Karaka	29.55	161	P	P	14 43 01.5	+0.3
CNGZ	Carnagh Statio	29.70	161	P	P	14 42 59.5	-3.0
SNGZ	Shannon Statio	29.70	162	P	P	14 43 03.3	+0.7
BKZ	Black Stump Fm	29.82	164	P	P	14 43 05.0	+1.4
BKZ				IAmb	IAmb	14 43 10.5	
	comp=Z,11nm,0.7s						
H11N1	WAKE ISLAND Hy	30.22	1	T	T	15 15 35.7	
	baz=179						
H11N3	WAKE ISLAND Hy	30.23	1	T	T	15 15 35.6	
	baz=179						
H11N2	WAKE ISLAND Hy	30.24	1	T	T	15 15 34.8	
	baz=179						
STKA	Stephens Creek	30.97	223	P	P	14 43 13.9	+0.1
	comp=Z,2.8nm,0.6s,baz=35,slow=11,SNR=8.3						
STKA	Stephens Creek	30.97	223	P	P	14 43 13.8	0.0
BFZ	Birch Farm	31.17	165	P	P	14 43 16.6	+1.1
WR0	Warramunga Arr	31.80	249	P	P	14 43 21.7	+0.4
WB0	Warramunga Arr	31.89	250	P	P	14 43 21.2	-0.9
WB0				IAmb	IAmb	14 43 23.5	
	comp=Z,4.8nm,1.0s						
WRA	Warramunga Arr	31.98	249	P	P	14 43 21.8	-1.0
	comp=Z,1.3nm,0.8s,baz=80,slow=8.8,SNR=6.7						
WRA				PcP	PcP	14 46 09.0	-0.3
	comp=Z,0.3nm,0.9s,baz=79,slow=3.4,SNR=4.7						
WRA	Warramunga Arr	31.98	249	IAmb	IAmb	14 43 25.0	
	comp=Z,0.2nm,1.1s						
LTZ	Lake Taylor	32.41	172	P	P	14 43 26.9	+0.6
RPZ	Rata Peaks	33.17	173	P	P	14 43 33.9	+1.0
	comp=Z,17nm,0.7s,baz=347,slow=2.5,SNR=13						
RPZ	Rata Peaks	33.17	173	P	P	14 43 33.2	+0.3
ASAR	Alice Springs	33.31	243	P	P	14 43 33.3	-1.1
	comp=Z,0.3nm,0.5s,baz=64,slow=10,SNR=5.2						
ASAR				PcP	PcP	14 46 12.7	-0.3
	comp=Z,0.7nm,0.6s,baz=74,slow=2.4,SNR=6.9						
RAR	Rarotonga	34.32	112	P	P	14 43 41.8	-1.3
BBOO	Buckleboo	35.36	227	P	P	14 43 51.4	-0.5
BBOO				IAmb	IAmb	14 43 52.9	
	comp=Z,8.5nm,1.0s						
FITZ	Fitzroy Crossi	39.86	255	P	P	14 44 29.2	-0.7
	comp=Z,3.8nm,0.8s,baz=61,slow=7.5,SNR=7.1						
FITZ	Fitzroy Crossi	39.86	255	P	P	14 44 29.1	-0.7
FITZ				IAmb	IAmb	14 44 30.2	
	comp=Z,4.9nm,0.8s						
SOEI	Soe	41.21	267	P	P	14 44 40.3	-0.9
SOEI				IAmb	IAmb	14 44 44.4	
	comp=Z,14nm,1.0s						
PPTF	Pamatai, Papee	43.41	104	P	P	14 44 57.9	-1.0
PSA00	Pilbara Seismi	45.62	250	P	P	14 45 15.1	-1.2
PSA00				IAmb	IAmb	14 45 18.4	
	comp=Z,9.7nm,1.1s						
SONM	Songino Array	78.62	324	P	P	14 48 56.3	+0.4
	comp=Z,0.3nm,0.5s,baz=131,slow=5.6,SNR=2.6						
QSPA	South Pole Qui	79.31	180	P	P	14 48 59.7	+0.3
ILAR	Eielson Array	83.06	18	P	P	14 49 19.4	+0.5
	comp=Z,0.7nm,0.7s,baz=235,slow=5.0,SNR=11						
DOT	Dot Lake	83.21	20	P	P	14 49 20.0	+0.2
DOT				IAmb	IAmb	14 49 25.1	
	comp=Z,6.7nm,0.8s						
NVAR	Mina Array Bea	85.49	50	P	P	14 49 33.2	+1.1
	comp=Z,0.3nm,0.6s,baz=224,slow=8.5,SNR=4.5						
MKAR	Makanchi Array	93.54	317	P	P	14 50 09.0	-0.5
	comp=Z,0.2nm,0.5s,baz=64,slow=5.5,SNR=3.6						

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*SJA **14** 14:47:27.5±0.7, 19°.79S×71°.25W, h17^{km}±2^{km}, ML4.3, MW4.5*

*GUC **14** 14:47:32.0±0.9, 19°.81S×71°.20W, h34^{km}±5^{km}, ML4.0*

*NEIC **14** 14:47:33.1±1.8, 19°.83S±0°.05×71°.1W±0°.1, h32^{km}±10^{km}, Error ellipse: s-maj=16.2km s-min=6.7km az=104.0*

*IDC **14** 14:47:38.5±2.0, 19°.89S×70°.84W, h64^{km}±18^{km}, mb3.8/6, mb1 4.1/11, mb1mx3.9/27, mbtmp4.1/11, MS3.7/12, Ms1 3.7/12, ms1mx3.4/36, Error ellipse: s-maj=23.9km s-min=14.1km az=70.0*

*VAO **14** 14:47:38.6±1.2, 19°.75S×70°.51W, h34^{km}±10^{km}, mb4.4*

ISC 14 14:47:30.6±1.6**, 19°.82S**±0°.03×**71°.07W**±0°.05**, h7^{km}**±9^{km}**, n128, σ1ˢ76**/128**, mb4.1**/6**, MS3.6**/11**, 10C, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.92	76	⇑*i*P	Pb	14 47 49.0	+0.1
PSGC				*i* S	Sn	14 48 03.1	-0.5
PSGC				IAML		14 48 04.6	
	comp=E,4μm,0.4s						
PSGCX	Pisagua	0.92	76		Pb	14 47 48.4	-0.6
PSGCX	Pisagua	0.92	76	*e*P	Pg	14 47 47.1	-1.1
PSGCX				*e*P	Pb	14 47 48.1	-0.8
PSGCX				*e*S	Sn	14 48 03.1	-0.5
TA02	Huaiquique	0.99	117	*e*P	Pn	14 47 50.5	-0.4
TA02				*i* S	Sn	14 48 05.0	-0.2
TA02				IAML		14 48 15.7	
	comp=N,6μm,0.8s						
TA01	Diego Aracena	1.12	132	⇑*i*P	Pb	14 47 52.5	+0.2
TA01				*i* S	Sb	14 48 07.4	+0.4
TA01				IAML		14 48 19.4	
	comp=N,3μm,0.3s						
HMBC	Humberstone	1.20	113	⇑*i*P	Pb	14 47 53.7	0.0
HMBC				*i* S	Sn	14 48 11.7	+1.1
HMBC				IAML		14 48 22.5	
	comp=N,7μm,0.6s						
PATCX	Punta Patache	1.32	139	⇑*i*P	Pg	14 47 55.2	-0.6
PATCX				IAML		14 48 26.8	
	comp=N,3μm,0.6s						
PATCX	Punta Patache	1.32	139		Pg	14 47 55.1	-0.8
PATCX	Punta Patache	1.32	139	*e*P	Pg	14 47 55.1	-0.8
MNMC	Minye Minye	1.55	64	⇑*i*P	Pn	14 47 58.7	-0.2
MNMC				*i* S	Sg	14 48 18.7	-1.7
MNMC				IAML		14 48 30.3	
	comp=E,6μm,0.6s						
MNMC	Minye Minye	1.55	64	Pn	Pn	14 47 58.8	-0.1
MNMCX	Minye Minye	1.55	64	*e*P	Pn	14 47 58.6	-0.3
AP01	Chacalluta	1.60	26		Pn	14 47 58.1	-1.2
PB08	IPOC Station P	1.83	100	⇑*i*P	Pn	14 48 03.1	+0.3
PB08				*i* S	Sg	14 48 28.4	-1.1
PB08				IAML		14 48 43.9	
	comp=E,1μm,0.4s						
PB08	IPOC Station P	1.83	100		Pn	14 48 02.9	+0.1
PB08	IPOC Station P	1.83	100	*e*P	Pn	14 48 03.1	+0.3
PB08				*e*S	Sg	14 48 29.8	+0.3
PB08				IAML		14 48 43.7	
	comp=Z,1μm,0.9s						
PB02	IPOC Station P	1.85	144	⇑*i*P	Pn	14 48 02.8	-0.1
PB02				IAML		14 48 45.6	
	comp=E,3μm,0.6s						
PB02	IPOC Station P	1.85	144	*e*P	Pn	14 48 02.8	-0.1
PB02				*e*S	Sn	14 48 08.4	-18
PB02				*e*S	Sb	14 48 25.6	-2.7
PB02				IAML		14 48 38.0	
	comp=Z,3μm,0.5s						
PB01	IPOC Station P	1.92	130		Pn	14 48 03.9	+0.1
PB01	IPOC Station P	1.92	130	*e*P	Pn	14 48 04.1	+0.3
PB01				*e*S	Sb	14 48 30.3	+0.1
PB01				IAML		14 48 42.3	
	comp=Z,2μm,1.2s						
PB16	IPOC Station P	2.09	45	⇑*i*P	Pn	14 48 06.2	-0.4
PB16				*i* S	Sg	14 48 39.7	+2.0
PB16				IAML		14 48 51.4	
	comp=N,917nm,0.5s						
PB16	IPOC Station P	2.09	45		Pn	14 48 06.8	+0.3
PB16	IPOC Station P	2.09	45	*e*P	Pn	14 48 06.4	-0.2
PB16				*e*S	Sg	14 48 37.2	-0.6
PB16				IAML		14 48 44.2	
	comp=Z,3μm,1.4s						
PB07	IPOC Station P	2.20	150	⇑*i*P	Pn	14 48 07.3	-0.4
PB07				IAML		14 48 49.0	
	comp=E,1μm,0.8s						
PB07	IPOC Station P	2.20	150		Pn	14 48 07.5	-0.2
PB07	IPOC Station P	2.20	150	*e*P	Pn	14 48 07.4	-0.2
PB07				*e*S	Sn	14 48 34.4	-0.9
PB07				IAML		14 49 06.4	
	comp=Z,1μm,0.7s						
PB03	IPOC Station P	2.54	151	*e*P	Pn	14 48 12.1	-0.2
PB03				*e*S	Sn	14 48 41.7	-1.9
PB03				IAML		14 49 03.0	
	comp=Z,1μm,0.8s						
PB09	IPOC Station P	2.61	139	⇑*i*P	Pn	14 48 14.4	+1.1
PB09				IAML		14 49 06.2	
	comp=N,2μm,0.7s						
PB09	IPOC Station P	2.61	139		Pn	14 48 14.2	+0.9
PB09	IPOC Station P	2.61	139	*e*P	Pn	14 48 14.4	+1.1
PB09				*e*S	Sg	14 49 00.5	+6.2
PB09				IAML		14 49 03.4	
	comp=Z,2μm,1.0s						
PB04	IPOC Station P	2.65	161		Pn	14 48 12.8	-1.0
PB04	IPOC Station P	2.65	161	*e*P	Pn	14 48 13.2	-0.6
PB04				*e*S	Sn	14 48 46.3	0.0
PB04				IAML		14 49 10.6	
	comp=Z,1μm,1.3s						
PB05	IPOC Station P	3.12	165	*e*P	Pn	14 48 19.4	-1.0
PB05				*e*S	Sn	14 48 55.2	-2.9
PB05				IAML		14 49 21.6	
	comp=Z,414nm,1.3s						
PB06	IPOC Station P	3.19	154		Pn	14 48 20.8	-0.5
PB06	IPOC Station P	3.19	154	*e*P	Pn	14 48 20.9	-0.5
PB06				*e*S	Sn	14 48 59.1	-0.7
PB06				IAML		14 49 24.3	
	comp=Z,1μm,0.9s						
LVC	Limon Verde	3.43	144	P	Pn	14 48 26.4	+1.6
	comp=Z,11nm,0.3s,baz=313,slow=7.9,SNR=89						
LVC				S	Sn	14 49 05.6	-0.4
	comp=Z,32nm,0.3s,baz=94,slow=11,SNR=4.6						
LVC	Limon Verde	3.43	144		Pn	14 48 26.0	+1.2
LVC	Limon Verde	3.43	144	*e*P	Pn	14 48 25.5	+0.7
LVC				*e*S	Sn	14 49 08.4	+2.4
LVC				IAML		14 49 30.2	
	comp=Z,384nm,0.8s						
LVC	Limon Verde	3.43	144	*e*P	Pn	14 48 26.2	+1.4
PB15	IPOC Station P	3.69	156		Pn	14 48 27.5	-0.7
PB15	IPOC Station P	3.69	156	*e*P	Pn	14 48 28.0	-0.2
PB15				*e*S	Sn	14 49 12.2	+0.1
PB15				IAML		14 49 43.8	
	comp=Z,918nm,0.9s						
PB10	IPOC Station P	3.71	173		Pn	14 48 26.9	-1.4
PB10	IPOC Station P	3.71	173	*e*P	Pn	14 48 27.0	-1.3
PB10				*e*S	Sn	14 49 10.4	-1.9
LPAZ	La Paz	4.49	39	P	Pn	14 48 44.1	+4.5
	comp=Z,1.0nm,0.3s,baz=223,slow=7.6,SNR=14						
LPAZ				LR	LR	14 50 34.4	
	comp=Z,683nm,19.2s,baz=244,slow=40						
LPAZ	La Paz	4.49	39	Pn	Pn	14 48 42.9	+3.3
LPAZ	La Paz	4.49	39	*e*P	Pn	14 48 40.0	+0.4
PB14	IPOC Station P	4.82	173	Pn	Pn	14 48 41.8	-2.2
PB14	IPOC Station P	4.82	173	*e*P	Pn	14 48 41.9	-2.0
PB14				*e*S	Sn	14 49 38.2	-2.1
PB14				IAML		14 49 39.5	
	comp=Z,168nm,0.9s						
GO02	Mina Guanaco	5.49	166	Pn	Pn	14 48 52.2	-0.9
AC02	Maricunga	7.21	166		Pn	14 49 16.1	-0.8
ASTB	Santa Barbara	7.39	125	*e*P	Pn	14 49 28.9	+10
NNA	Nana	9.56	324	P	Pn	14 49 55.9	+7.1
	comp=Z,1.5nm,0.3s,baz=180,slow=14,SNR=1.8						
SIV	San Ignacio	10.25	70	P	Pn	14 50 00.5	+2.2
	comp=Z,0.6nm,0.3s,baz=261,slow=14,SNR=16						
ETMB	Extrema	10.99	26	*e*P	Pn	14 50 08.6	+0.2
VILB	Vilhena	12.46	58	*e*P	Pn	14 50 26.6	-1.9
SAML	Samuel	13.23	36	Pn	Pn	14 50 38.8	-0.2
SAML	Samuel	13.23	36	*e*P	Pn	14 50 40.2	+1.2
MT02	Curacav	13.39	180	Pn	Pn	14 50 42.7	+1.6
CPUP	Villa Florida	14.20	120	P	Pn	14 50 55.5	+3.2
	comp=Z,0.7nm,0.3s,baz=295,slow=12,SNR=4.1						
AQDB	Aquidauana	14.45	95	*e*P	Pn	14 50 54.2	-1.4
H03N1	Juan Fernandez	15.26	206	T	T	15 07 00.0	
	baz=29,slow=72,SNR=71						
H03N2	Juan Fernandez	15.27	206	T	T	15 06 57.5	
	baz=29,slow=72,SNR=54						
H03N3	Juan Fernandez	15.28	206	T	T	15 06 57.9	
	baz=29,slow=72,SNR=54						
PP1B	Ponte de Pedra	15.50	84	*e*P	Pn	14 51 08.3	-1.5
BI02	San Fabin de	16.78	181		Pn	14 51 24.9	-1.3
BI02				IAmb	IAmb	14 51 41.7	
	comp=Z,19nm,1.1s						
TRCB	Terra Rica	17.43	103	*e*P	Pn	14 51 32.6	-1.8
PCMB	Pacaembu	18.62	99	*e*P	P	14 51 47.2	-1.6
ARAG	Araguaiana, MT	18.79	80	*e*P	P	14 51 49.3	-1.4
CPSB	Cacapava Do Su	19.11	127	*e*P	Pn	14 51 55.5	+0.7
ITRB	Iturama	19.49	93	*e*P	P	14 51 57.9	-0.5
NPGB	Novo Progresso	19.84	52	*e*P	P	14 52 01.1	-1.2
PTLC	Puerto Leguiza	20.20	349	*e*P	Pn	14 52 09.5	+1.5
FRTB	Fartura	20.30	104	*e*P	P	14 52 06.5	-0.8
SNDB	Serra Nova Dou	20.54	71	*e*P	P	14 52 07.9	-1.9
PLCA	Paso Flores	20.85	179	P	P	14 52 14.4	+1.3
	comp=Z,6.7nm,1.0s,baz=355,slow=13,SNR=10						
PLCA	Paso Flores	20.85	179		Pn	14 52 16.3	+0.8
PLCA				IAmb	IAmb	14 52 27.9	
	comp=Z,8.4nm,0.8s						
BB19B	Bebedouro	21.16	97	*e*P	P	14 52 15.6	-1.0
OTAV	Otavalo	21.21	339	*e*P	P	14 52 26.8	+9.3
OTAV	Otavalo	21.21	339	*e*P	P	14 52 23.4	+5.9
IPMB	Ipameri, GO	21.70	89	*e*P	P	14 52 21.4	-1.0
FLOC	Florencia	21.74	348	*e*P	P	14 52 24.0	+1.2
CFLOR	Florencia	21.74	348	*e*P	P	14 52 33.0	+10
PTGA	Pitinga	21.87	31	P	P	14 52 21.5	-2.6
	comp=Z,4.8nm,0.5s,baz=196,slow=13,SNR=5.7						
PTGA	Pitinga	21.87	31	*e*P	P	14 52 25.4	+1.3
BDFB	Brasilia	22.34	83	P	P	14 52 29.8	+0.4
	comp=Z,7.1nm,0.9s,baz=259,slow=10,SNR=2.2						
BDFB				LR	LR	15 02 04.7	
	comp=Z,194nm,19.8s,baz=292,slow=39						
BBAC	Balboa, Cauca	22.54	344	*e*P	P	14 52 32.2	+0.7
BETC	Betania	22.77	349	*e*P	P	14 52 35.4	+1.6
POPC	Popayan, Colom	22.89	345	*e*P	P	14 52 46.2	+11
PEXB	Peixe	23.18	74	*e*P	P	14 52 37.7	-0.3
PRAC	Prado	23.68	350	*e*P	P	14 52 43.7	+0.6
ORTC	Ortega, Tolima	23.93	350	*e*P	P	14 52 44.8	-0.8
YOTC	Yotoco, Valle	24.22	347	*e*P	P	14 52 51.4	+3.1
CHIC	Chingaza	24.44	354	*e*P	P	14 52 56.2	+5.6
TOLC	Tolima	24.61	350	*e*P	P	14 52 57.6	+5.5
RREF	El Recreo	24.92	350	*e*P	P	14 53 04.2	+8.9
SMTB	Santa Maria do	25.19	68	*e*P	P	14 52 56.5	-0.5
GUY2C	Guyana, Caldas	25.24	350	*e*P	P	14 52 58.6	+0.7
SPBC	San Pablo de B	25.48	353	*e*P	P	14 53 06.2	+6.5
NORC	Norcasia	25.50	351	*e*P	P	14 52 58.6	-1.2
RUSC	La Rusia	25.63	355	*e*P	P	14 53 00.7	-0.8
JANB	Januaria	25.95	84	*e*P	P	14 53 02.0	-1.9
CBOC	Ciudad Bolivar	25.98	349	*e*P	P	14 53 06.2	+1.9
PAMC	Pamplona, Colo	27.04	356	*e*P	P	14 53 22.5	+8.3
ZARC	Zaragoza, Cauc	27.39	352	*e*P	P	14 53 15.9	-1.0
SMLC	San Martn de	28.59	354	*e*P	P	14 53 30.1	+2.5
PCRV	Puerto La Cruz	30.47	13	LR	LR	15 07 54.4	
	comp=Z,281nm,21.3s,slow=40						
MDP	Montagnes des	30.69	38	LR	LR	15 08 02.7	
	comp=Z,102nm,20.0s,baz=201,slow=40						
RCBR	Riachuelo	36.90	73	LR	LR	15 11 17.3	
	comp=Z,247nm,18.5s,baz=319,slow=39						
TKL	Tuckaleechee C	56.47	348	LR	LR	15 22 45.2	
	comp=Z,37nm,18.2s,baz=135,slow=37						
TXAR	Lajitas Array	58.11	326	P	P	14 57 27.1	+2.0
	comp=Z,0.4nm,0.6s,baz=132,slow=10,SNR=4.2						
DBIC	Dimbokro	70.23	75	LR	LR	15 29 39.1	
	comp=Z,34nm,18.2s,baz=176,slow=36						
NVAR	Mina Array Bea	72.94	323	P	P	14 59 02.3	+1.3
	comp=Z,1.0nm,0.8s,baz=156,slow=5.6,SNR=4.4						
VNDA	Vanda	78.14	190	LR	LR	15 30 56.7	
	comp=Z,26nm,18.4s,baz=290,slow=33						
TORD	Torodi Ar. Bea	78.72	72	P	P	14 59 32.8	-1.5
	comp=Z,9.0nm,1.0s,baz=259,slow=5.5,SNR=16						
TORD				LR	LR	15 34 16.0	
	comp=Z,37nm,18.1s,baz=70,slow=36						
BBB	Bella Bella	87.15	329	LR	LR	15 40 59.2	
	comp=Z,22nm,19.7s,baz=318,slow=37						
YKA	Yellowknife Ar	88.95	341	P	P	15 00 25.3	-0.1
	comp=Z,2.2nm,0.8s,baz=132,slow=5.2,SNR=32						
KEST	Kesra	93.92	54	LR	LR	15 43 04.0	
	comp=Z,42nm,19.9s,baz=188,slow=36						
INK	Inuvik	98.69	341	LR	LR	15 46 18.3	
	comp=Z,28nm,19.1s,baz=85,slow=36						
H11S2	WAKE ISLAND Hy	125.64	279	T	T	17 25 49.3	
	baz=101,slow=74,SNR=14						
H11S1	WAKE ISLAND Hy	125.65	279	T	T	17 25 49.4	
	baz=101,slow=74,SNR=3.0						
H11S3	WAKE ISLAND Hy	125.66	279	T	T	17 25 50.4	
	baz=101,slow=74,SNR=2.7						
ASAR	Alice Springs	130.39	211	PKP	PKPdf	15 06 42.7	0.0
	comp=Z,0.5nm,0.8s,baz=127,slow=1.6,SNR=5.4						
WRA	Warramunga Arr	133.29	214	PKP	PKPdf	15 06 47.8	-0.5
	comp=Z,0.3nm,0.6s,baz=133,slow=1.9,SNR=1.5						
ZALV	Zalesovo Beam	141.25	23	PKP	PKPdf	15 07 00.8	-1.0
	comp=Z,1.5nm,0.8s,baz=313,slow=3.0,SNR=5.5						
MKAR	Makanchi Array	145.40	33	PKPbc	PKPbc	15 07 08.9	-0.3
	comp=Z,2.7nm,0.9s,baz=321,slow=3.1,SNR=20						
USRK	Ussuriysk Ar.	149.01	327	PKPbc	PKPbc	15 07 20.0	+0.5
	comp=Z,1.5nm,0.9s,baz=124,slow=15,SNR=2.1						
MJAR	Matsushiro Arr	149.45	309	PKPbc	PKPbc	15 07 20.9	0.0
	comp=Z,1.4nm,0.6s,baz=84,slow=1.0,SNR=3.4						
SONM	Songino Array	151.98	4	PKPbc	PKPbc	15 07 26.6	-0.1
	comp=Z,0.9nm,0.6s,baz=353,slow=1.0,SNR=5.4						

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*HEL **14** 14:53:38.6±0.4, 67°.64N×34°.03E, h0^{km}, ML2.3, Explosion*

*NAO **14** 14:53:40.7±1.0, 67°.70N×33°.66E, ML2.9*

*IDC **14** 14:53:42.7±2.0, 67°.71N×33°.44E, h0^{km}, mb1 3.5/4, mb1mx3.2/44, mbtmp3.4/4, ML2.6/4, Error ellipse: s-maj=21.1km s-min=9.2km az=72.0*

ISC 14 14:53:35.6±1.4**, 67°.77N**±0°.04×**34°.05E**±0°.08**, h0^{km}, n31, σ1ˢ92**/57**, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APZ9	Apatity	0.32	230	Pg	Pb	14 53 43.5	-0.7
APZ9				Lg	Lg	14 53 46.1	
APZ9	Apatity	0.32	230	Pg	Pb	14 53 43.5	-0.7
APZ9				Sg	Sg	14 53 46.1	+0.2
APA0	Apatity Array	0.44	248	Pg	Pb	14 53 45.8	-0.4
	baz=84,slow=16						
APA0				Lg	Lg	14 53 49.9	
	baz=70,slow=28						
APA0				Rg	Rg	14 53 51.4	
	baz=76,slow=37						
APA0	Apatity Array	0.44	248	Pg	Pb	14 53 45.8	-0.4
	baz=84,slow=16						
APA0				Sg	Sg	14 53 49.9	+0.3
	baz=70,slow=28						
VRF	Varrio	1.69	271	PG	Pg	14 54 08.7	+0.7
	baz=87						
VRF				SG	Sn	14 54 29.0	+0.3
VRF				MSG		14 54 29.1	
	comp=Z,29nm,0.2s						
OLKF	Oulanka, Finla	2.33	233	PG	Pb	14 54 18.6	0.0
OLKF				SG	Sb	14 54 47.6	-0.3
KU6	Riekki	2.40	225	PG	Pb	14 54 19.0	-0.7
	baz=44						
KU6				MSG		14 54 46.8	
	comp=Z,16nm,0.2s						
KU6				SG	Sb	14 54 49.9	0.0
MSF	Maaselka	2.72	229	PB	Pb	14 54 24.3	-0.9
	baz=46						
MSF				SG	Sb	14 54 59.2	+0.2
SGF	Sodankyl	2.90	267	PN	Pb	14 54 26.1	-2.1
SGF				SB	Sb	14 55 04.6	+0.5
RNF	Rovaniemi	3.34	253	PN	Pn	14 54 31.7	+2.6
	baz=65						
RNF				SN	Sn	14 55 11.2	+1.8
ARA0	ARCESS Array S	3.59	303	Pn	Pb	14 54 36.5	-3.5
	baz=122,slow=16						
ARA0				Pg	Pg	14 54 44.0	-0.3
	baz=120,slow=16						
ARA0				Sn	Sn	14 55 17.7	+2.2
	baz=116,slow=28						
ARA0				Lg	Lg	14 55 28.0	
	baz=109,slow=37						
ARA0	ARCESS Array S	3.59	303	Pn	Pb	14 54 36.5	-3.5
	baz=122,slow=16						
ARA0				Pg	Pg	14 54 44.0	-0.3

	baz=120,slow=16						
ARA0				Sn	**Sn**	**14 55 17.7**	**+2.2**
	baz=116,slow=28						
ARA0				Sg	**Sg**	**14 55 28.0**	**-2.8**
	baz=109,slow=37						
ARCES	**ARCESS Array B**	**3.59**	**303**	Pn	**Pb**	**14 54 36.7**	**-3.2**
	baz=119,slow=15,SNR=418						
ARCES				Pg	**Pg**	**14 54 44.3**	**-0.1**
	baz=118,slow=15,SNR=13						
ARCES				Sn	**Sn**	**14 55 18.1**	**+2.6**
	baz=117,slow=26,SNR=16						
ARCES				Lg	Lg	14 55 29.0	
	baz=119,slow=28,SNR=9.6						
KTK1	**Kautokeino**	**4.19**	**292**	Pn	**Pn**	**14 54 41.3**	**+0.7**
KTK1				Sn	**Sn**	**14 55 31.2**	**+1.0**
KTK1				Lg	Lg	14 55 44.9	
KTK1	**Kautokeino**	**4.19**	**292**	Pn	**Pn**	**14 54 41.3**	**+0.7**
KTK1				Sn	**Sn**	**14 55 31.2**	**+1.0**
TOF	**Tornio**	**4.19**	**251**	PN	**Pn**	**14 54 42.3**	**+1.7**
	baz=66						
TOF				SN	**Sn**	**14 55 31.1**	**+1.0**
OUL	**Oulu**	**4.24**	**234**	PB	**Pb**	**14 54 49.2**	**-1.7**
PAJU	**Pajala**	**4.29**	**265**	PN	**Pn**	**14 54 44.0**	**+1.9**
PAJU				SN	**Sn**	**14 55 33.3**	**+0.6**
KALU	**Kalix**	**4.64**	**251**	PN	**Pn**	**14 54 48.6**	**+1.7**
ERTU	**Ertsjaerv**	**4.78**	**261**	PN	**Pn**	**14 54 50.8**	**+2.0**
	baz=76						
ERTU				SN	**Sn**	**14 55 44.8**	**0.0**
KIF	**Kilpisjarvi**	**5.05**	**290**	Pn	**Pn**	**14 54 55.3**	**+2.9**
KIF				Sn	**Sn**	**14 55 51.0**	**-0.4**
KIF	**Kilpisjarvi**	**5.05**	**290**	Pn	**Pn**	**14 54 55.3**	**+2.9**
KIF				Sn	**Sn**	**14 55 51.0**	**-0.4**
FIA0	**FINESS Array S**	**7.21**	**212**	Pn	**Pn**	**14 55 23.8**	**+1.6**
	baz=21,slow=12						
FIA0				Sn	**Sn**	**14 56 43.2**	**-1.5**
	baz=34,slow=28						
FIA0				Lg	Lg	14 57 12.6	
	baz=27,slow=18						
FIA0	**FINESS Array S**	**7.21**	**212**	Pn	**Pn**	**14 55 23.8**	**+1.6**
	baz=21,slow=12						
FIA0				Sn	**Sn**	**14 56 43.2**	**-1.5**
	baz=34,slow=28						
FINES	**FINESS Array B**	**7.21**	**212**	Pn	**Pn**	**14 55 24.2**	**+2.0**
	comp=Z,0.1nm,0.3s,baz=24,slow=15,SNR=6.2						
FINES				Sn	**Sn**	**14 56 42.9**	**-1.7**
	comp=Z,0.3nm,0.3s,baz=30,slow=22,SNR=1.8						
FINES				Lg	Lg	14 57 12.5	
	comp=Z,0.6nm,0.3s,baz=24,slow=25,SNR=5.4						
SPA0	**Spitsbergen Ar**	**11.57**	**342**	Pn	**Pn**	**14 56 24.0**	**+2.2**
	baz=137,slow=16						
SPA0	**Spitsbergen Ar**	**11.57**	**342**	Pn	**Pn**	**14 56 24.0**	**+2.2**
	baz=137,slow=16						
HFS	**Hagfors**	**11.72**	**239**	Pn	**Pn**	**14 56 23.9**	**+0.1**
	baz=35,slow=14						
HFS	**Hagfors**	**11.72**	**239**	Pn	**Pn**	**14 56 23.9**	**+0.1**
	baz=35,slow=14						
NOA	**NORSAR Array B**	**11.89**	**246**	Pn	**Pn**	**14 56 26.4**	**+0.1**
	comp=Z,0.0nm,0.3s,baz=54,slow=9.7,SNR=4.2						
NOA				Sn	**Sn**	**14 58 32.3**	**-7.2**
	comp=Z,0.0nm,0.3s,baz=40,slow=19,SNR=3.7						
NOA				Lg	Lg	14 59 47.7	
	comp=Z,0.0nm,0.3s,baz=40,slow=24,SNR=3.3						
AKASG	**Malin Array Be**	**17.29**	**190**	Pn	**Pn**	**14 57 35.5**	**-2.6**
	comp=Z,0.2nm,0.3s,baz=8.9,slow=13,SNR=5.5						

IDC 14 15:06:31.0±2.3, **4°.18N**×**126°.61E**, **h0**^{km}, **mb3.3**/4, **mb1 3.5**/4, **mb1mx3.2**/45, **mbtmp3.4**/4, **Error ellipse: s-maj=147.2km s-min=25.0km az=70.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**22.16**	**182**	P	P	15 11 28.7	+0.1
	2.1nm,0.9s,baz=15,slow=9.6,SNR=2.3						
WRA	**Warramunga Arr**	**25.14**	**163**	P	P	15 11 57.0	-1.0
	0.7nm,0.8s,baz=340,slow=10,SNR=3.3						
ASAR	**Alice Springs**	**28.57**	**166**	P	P	15 12 29.9	+0.9
	0.2nm,0.8s,baz=342,slow=11,SNR=1.0						
MKAR	**Makanchi Array**	**57.12**	**325**	P	P	15 16 19.4	0.0
	0.3nm,0.4s,baz=120,slow=7.8,SNR=8.0						

*ROM **14** 15:29:40.5±0.1, 41°.825N±0°.006×15°.593E±0°.007, h21^{km}±1^{km}, ML2.5/32, Error ellipse: s-maj=0.7km s-min=0.2km az=7.0*

ISC 14 15:29:40.4±1.0, **41°.84N**±0°.02×**15°.58E**±0°.02, **h18**^{km}±3^{km}, **n47, σ0^s.64**/61, **2D, Southern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGRT	**San Giovanni R**	**0.15**	**124**	P	**Pg**	**15 29 45.0**	**+0.3**
SGRT				S	**Sg**	**15 29 48.0**	**+0.4**
SGRT				AML	AML		
	comp=E,5090μm,0.6s						
SGRT				AML	AML		
	comp=N,4110μm,0.2s						
MSAG	**Monte S. Angel**	**0.28**	**117**	⇓P	**Pb**	**15 29 46.9**	**+0.1**
MSAG				S	**Sg**	**15 29 51.5**	**+0.7**
MSAG				AML	AML		
	comp=E,1017μm,0.3s						
MSAG				AML	AML		
	comp=N,1990μm,0.2s						
MSAG				AML	AML		
	comp=N,2055μm,0.2s						
MSAG				AML	AML		
	comp=E,1016μm,0.3s						
MSAG				AML	AML		
	comp=E,1019μm,0.3s						
MSAG				AML	AML		
	comp=N,1995μm,0.2s						
MSAG				AML	AML		
	comp=E,1100μm,0.3s						
TREM	**Isole Tremiti**	**0.29**	**350**	P	**Pg**	**15 29 47.5**	**+0.6**
TREM				S	**Sb**	**15 29 52.8**	**+1.3**
TREM				AML	AML		
	comp=N,1480μm,0.2s						
TREM				AML	AML		
	comp=E,1670μm,0.6s						
MELA	**Melanico ??? S**	**0.36**	**249**	P	**Pg**	**15 29 48.0**	**-0.1**
MELA				S	**Sb**	**15 29 53.9**	**+0.1**
MELA				AML	AML		
	comp=E,3180μm,0.3s						
MELA				AML	AML		
	comp=N,2300μm,0.2s						
MELA				AML	AML		
	comp=N,2495μm,0.2s						
MELA				AML	AML		
	comp=N,2300μm,0.2s						
MELA				AML	AML		
	comp=E,3325μm,0.3s						
MELA				AML	AML		
	comp=E,3175μm,0.3s						
MOCO	**Biccari - m.te**	**0.56**	**214**	P	**Pb**	**15 29 51.6**	**-0.1**
MOCO				S	**Sb**	**15 29 58.9**	**-0.6**
MOCO				AML	AML		
	comp=E,323μm,0.8s						
MOCO				AML	AML		
	comp=N,202μm,1.1s						
MOCO				AML	AML		
	comp=N,196μm,0.9s						
MOCO				AML	AML		
	comp=E,334μm,0.8s						
GATE	**Gambatesa**	**0.60**	**237**	P	**Pg**	**15 29 53.0**	**+0.6**
GATE				AML	AML		
	comp=E,354μm,0.6s						
GATE				AML	AML		
	comp=E,354μm,0.6s						
GATE				AML	AML		
	comp=N,404μm,0.7s						
GATE				AML	AML		
	comp=E,158μm,1.2s						
GATE				AML	AML		
	comp=N,422μm,0.7s						
GATE				AML	AML		
	comp=E,354μm,0.6s						
SGTA	**Sant Agata di**	**0.72**	**193**	⇓P	**Pb**	**15 29 54.0**	**-0.5**
SGTA				S	**Sb**	**15 30 03.7**	**-0.3**
SGTA				AML	AML		
	comp=E,1866μm,1.4s						
SGTA				AML	AML		
	comp=N,1965μm,1.4s						
SGTA				AML	AML		
	comp=E,1868μm,1.4s						
SGTA				AML	AML		
	comp=N,353μm,0.7s						
SGTA				AML	AML		
	comp=E,1870μm,1.4s						
SGTA				AML	AML		
	comp=E,440μm,0.6s						
BIOG	**Biogem**	**0.72**	**208**	P	**Pg**	**15 29 55.2**	**+0.6**
TRIV	**Trivento**	**0.77**	**265**	P	**Pb**	**15 29 55.1**	**-0.2**
TRIV				S	**Sn**	**15 30 07.4**	**-0.3**
SACR	**S. Croce Del S**	**0.79**	**236**	P	**Pb**	**15 29 55.1**	**-0.6**
SACR				S	**Sg**	**15 30 06.9**	**+0.5**
SACR				AML	AML		
	comp=E,553μm,1.6s						
SACR				AML	AML		
	comp=N,212μm,0.7s						
SACR				AML	AML		
	comp=E,226μm,0.4s						
SACR				AML	AML		
	comp=N,214μm,0.7s						
BSSO	**Busso**	**0.80**	**249**	P	**Pb**	**15 29 55.5**	**-0.3**
BSSO				S	**Sg**	**15 30 06.7**	**+0.2**
BSSO				AML	AML		
	comp=N,54μm,0.3s						
BSSO				AML	AML		
	comp=E,51μm,0.3s						
PSB1	**Pescosannita**	**0.84**	**224**	P	**Pb**	**15 29 55.9**	**-0.7**
PSB1				S	**Sg**	**15 30 08.6**	**+0.5**
PSB1				AML	AML		
	comp=N,150μm,0.8s						
PSB1				AML	AML		
	comp=E,116μm,1.3s						
MRB1	**Monte Rocchett**	**0.84**	**213**	P	**Pb**	**15 29 56.9**	**+0.3**
MRB1				AML	AML		
	comp=E,320μm,0.8s						
MRB1				AML	AML		
	comp=N,237μm,1.5s						
CAFE	**Carife**	**0.85**	**198**	P	**Pb**	**15 29 56.7**	**0.0**
CAFE				S	**Sg**	**15 30 08.9**	**+0.7**
CAFE				AML	AML		
	comp=N,196μm,0.6s						
CAFE				AML	AML		
	comp=E,334μm,0.8s						
VULT	**Monte Vulture**	**0.88**	**178**	P	**Pb**	**15 29 57.0**	**-0.2**
VULT				AML	AML		
	comp=E,539μm,1.4s						
VULT				AML	AML		
	comp=N,672μm,1.1s						
VULT				AML	AML		
	comp=E,540μm,1.4s						
VULT				AML	AML		
	comp=N,672μm,1.2s						
VULT				AML	AML		
	comp=N,731μm,1.2s						
VULT				AML	AML		
	comp=E,554μm,1.4s						
MRVN	**Minervino Murg**	**0.90**	**149**	P	**Pb**	**15 29 56.8**	**-0.8**
MRVN				S	**Sb**	**15 30 09.4**	**+0.1**
MRVN				AML	AML		
	comp=E,340μm,0.3s						
MRVN				AML	AML		
	comp=N,364μm,0.2s						
PALZ	**Palazzo San Ge**	**0.94**	**162**	P	**Pb**	**15 29 57.6**	**-0.5**
PALZ				S	**Sg**	**15 30 11.3**	**+0.3**
PALZ				AML	AML		
	comp=N,476μm,0.8s						
PALZ				AML	AML		
	comp=E,366μm,0.2s						
SNAL	**S. Angelo Dei**	**0.95**	**197**	P	**Pb**	**15 29 57.9**	**-0.5**
SNAL				S	**Sg**	**15 30 11.5**	**0.0**
SNAL				AML	AML		
	comp=N,316μm,0.9s						
SNAL				AML	AML		
	comp=E,302μm,0.3s						
SNAL				AML	AML		
	comp=N,302μm,0.4s						
SNAL				AML	AML		
	comp=E,270μm,0.3s						
SNAL				AML	AML		
	comp=E,301μm,0.3s						
VITU	**Vitulano (BN)**	**0.97**	**228**	AML	AML		
	comp=N,318μm,0.3s						
VITU				AML	AML		
	comp=E,292μm,0.6s						
CAFR	**Castel Frentan**	**1.00**	**293**	P	**Pg**	**15 30 00.2**	**+0.3**
CAFR				AML	AML		
	comp=N,408μm,0.2s						
CAFR				AML	AML		
	comp=E,296μm,0.3s						
MIDA	**Miranda**	**1.01**	**259**	P	**Pb**	**15 29 58.3**	**-1.1**
MIDA				S	**Sb**	**15 30 13.2**	**+0.7**
MIDA				AML	AML		
	comp=N,91μm,0.7s						
MIDA				AML	AML		
	comp=E,100μm,1.0s						
MIDA				AML	AML		
	comp=N,91μm,0.7s						
LPEL	**Lama dei Pelig**	**1.06**	**282**	P	**Pb**	**15 30 00.6**	**+0.3**
LPEL				AML	AML		
	comp=E,314μm,1.1s						
LPEL				AML	AML		
	comp=N,333μm,0.3s						
RNI2	**Rionero Sannit**	**1.08**	**263**	P	**Pb**	**15 29 59.7**	**-0.8**
RNI2				AML	AML		
	comp=E,111μm,0.2s						
RNI2				AML	AML		
	comp=N,126μm,0.6s						
RNI2				AML	AML		
	comp=N,126μm,0.6s						
RNI2				AML	AML		
	comp=E,108μm,0.3s						
MRLC	**Muro Lucano**	**1.08**	**184**	P	**Pb**	**15 30 00.3**	**-0.3**
MRLC				AML	AML		
	comp=E,188μm,0.5s						
MRLC				AML	AML		
	comp=N,172μm,0.4s						
ACER	**Acerenza**	**1.08**	**165**	P	**Pb**	**15 30 00.7**	**0.0**
ACER				S	**Sn**	**15 30 15.6**	**+0.3**
ACER				AML	AML		
	comp=E,356μm,0.5s						
ACER				AML	AML		
	comp=N,423μm,0.5s						
ACER				AML	AML		
	comp=E,332μm,0.5s						
ACER				AML	AML		
	comp=N,419μm,0.2s						
ACER				AML	AML		
	comp=E,356μm,0.5s						
ACER				AML	AML		
	comp=N,424μm,0.5s						
VAGA	**Valle Agricola**	**1.09**	**248**	P	**Pn**	**15 30 01.3**	**+0.4**
VAGA				AML	AML		
	comp=E,118μm,0.4s						
VAGA				AML	AML		
	comp=N,174μm,0.3s						
MCRV	**Calabrutti - M**	**1.10**	**197**	P	**Pb**	**15 30 00.1**	**-0.8**
MCRV				S	**Sn**	**15 30 15.8**	**+0.1**
MCRV				AML	AML		
	comp=E,250μm,0.5s						
MCRV				AML	AML		
	comp=N,277μm,1.6s						
CERA	**Filignano**	**1.19**	**259**	P	**Pg**	**15 30 04.0**	**+0.5**
CERA				AML	AML		
	comp=E,93μm,0.5s						
CERA				AML	AML		
	comp=N,128μm,0.6s						
AMUR	**Altamura**	**1.21**	**140**	AML	AML		
	comp=N,250μm,1.1s						
AMUR				AML	AML		
	comp=E,212μm,0.3s						
INTR	**Introdacqua**	**1.26**	**278**	P	**Pn**	**15 30 02.8**	**-0.4**
INTR				AML	AML		
	comp=E,145μm,0.6s						
INTR				AML	AML		
	comp=N,276μm,0.7s						
CDRU	**Civita di Ruta**	**1.36**	**189**	P	**Pn**	**15 30 03.6**	**-1.0**
CDRU				AML	AML		
	comp=N,50μm,1.5s						
CDRU				AML	AML		
	comp=E,95μm,0.6s						
MIGL	**Miglionico**	**1.39**	**152**	P	**Pb**	**15 30 05.9**	**0.0**
MIGL				AML	AML		
	comp=E,434μm,0.2s						
MIGL				AML	AML		
	comp=N,568μm,0.4s						
T0110	**Collepietro**	**1.40**	**287**	P	**Pb**	**15 30 06.0**	**0.0**
T0110				AML	AML		
	comp=E,176μm,1.0s						
T0110				AML	AML		
	comp=N,130μm,0.5s						
MATE	**Matera**	**1.46**	**144**	P	**Pn**	**15 30 06.6**	**+0.8**
MATE				AML	AML		
	comp=E,281μm,0.7s						
MATE				AML	AML		
	comp=N,242μm,0.7s						
HVAR	**Hvar**	**1.49**	**25**	*e*Pn	**Pn**	**15 30 05.5**	**-0.7**
NOCI	**Noci**	**1.53**	**133**	P	**Pn**	**15 30 06.4**	**-0.4**
NOCI				AML	AML		
	comp=N,367μm,1.0s						
NOCI				AML	AML		
	comp=E,322μm,0.3s						
FAGN	**Fagnano**	**1.55**	**287**	P	**Pb**	**15 30 08.7**	**+0.2**
FAGN				AML	AML		
	comp=E,206μm,0.4s						
FAGN				AML	AML		
	comp=N,154μm,0.4s						
TERO	**Teramo**	**1.67**	**299**	P	**Pn**	**15 30 09.5**	**+0.7**
TERO				AML	AML		
	comp=E,19μm,0.7s						
TERO				AML	AML		
	comp=N,23μm,0.8s						
ZIRJ	**Zirje**	**1.82**	**1**	*e*Pn	**Pn**	**15 30 09.8**	**-0.9**
RICI	**Ricice**	**2.01**	**34**	*i* Pn	**Pn**	**15 30 12.4**	**-1.1**
MORI	**Morici**	**2.03**	**3**	*e*Pn	**Pn**	**15 30 12.8**	**-0.8**
SALB	**San Lorenzo Be**	**2.04**	**163**	AML	AML		
	comp=E,49μm,0.3s						
SALB				AML	AML		
	comp=N,34μm,0.3s						
DUGI	**Dugi Otok**	**2.19**	**350**	*i* Pn	**Pn**	**15 30 14.8**	**-1.0**
FDMO	**Fiordimonte**	**2.20**	**304**	AML	AML		
	comp=N,35μm,0.5s						
FDMO				AML	AML		
	comp=E,30μm,1.5s						
KIJV	**Kijevo**	**2.25**	**15**	*e*Pn	**Pn**	**15 30 16.7**	**0.0**
KIJV				Sn	**Sn**	**15 30 45.0**	**+0.9**
NVLJ	**Novalja**	**2.77**	**349**	*i* Pn	**Pn**	**15 30 22.6**	**-1.3**
NVLJ				Sn	**Sn**	**15 30 55.3**	**-1.6**
NDIM	**Novi di Modena**	**4.58**	**313**	AML	AML		
	comp=E,2065μm,0.1s						
NDIM				AML	AML		
	comp=N,951μm,1.4s						

*NEIC **14** 15:32:27.6±2.9, 7°.54S±0°.09×128°.31E±0°.05, h160^{km}±12^{km}, mb4.2/7, Error ellipse: s-maj=13.6km s-min=6.9km az=168.0*

*IDC **14** 15:32:27.6±1.9, 7°.59S×128°.28E, h156^{km}±22^{km}, mb3.3/4, mb1 3.8/9, mb1mx3.5/34, mbtmp4.2/9, Error ellipse: s-maj=23.6km s-min=18.8km az=119.0*

ISC 14 15:32:26.9±0.7, **7°.67S**±0°.06×**128°.41E**±0°.08, **h151**^{km}, **n27, σ2^s.17**/30, **mb3.7**/6, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOEI	**Soe**	**4.58**	**243**	Pn	**Pn**	**15 33 35.8**	**+0.8**
BATI	**Baumata**	**5.32**	**241**	P	**Pn**	**15 33 45.8**	**+1.1**
	49nm,0.3s,baz=80,slow=4.5,SNR=49						
BATI				S	**Sn**	**15 34 44.6**	**-0.7**
	27nm,0.3s,baz=72,slow=5.2,SNR=7.9						
MTN	**Manton Dam**	**5.80**	**153**	Pn	**Pn**	**15 33 54.4**	**+3.5**
FAKI	**Fak Fak**	**6.08**	**39**	Pn	**Pn**	**15 33 55.1**	**+0.3**
SIJI	**Sorong**	**7.33**	**23**	P	**Pn**	**15 34 11.7**	**+0.2**
	1.9nm,0.3s,baz=225,slow=20,SNR=9.1						
FITZ	**Fitzroy Crossi**	**10.71**	**194**	P	**Pn**	**15 34 56.2**	**-0.1**
	2.4nm,0.3s,baz=23,slow=11,SNR=46						
FITZ				S	**Sn**	**15 36 50.4**	**-4.4**
	4.3nm,0.3s,baz=11,slow=10,SNR=3.8						
FITZ	**Fitzroy Crossi**	**10.71**	**194**	Pn	**Pn**	**15 34 57.3**	**+1.0**
WB0	**Warramunga Arr**	**13.35**	**155**		**Pn**	**15 35 31.6**	**+1.0**
WRAB	**Tennant Creek**	**13.48**	**155**	Pn	**Pn**	**15 35 34.0**	**+1.7**
WRA	**Warramunga Arr**	**13.49**	**155**	P	**Pn**	**15 35 33.6**	**+1.2**
	2.9nm,0.3s,baz=329,slow=13,SNR=85						
WRA				S	**Sn**	**15 37 57.1**	**-4.7**
	2.3nm,0.3s,baz=325,slow=24,SNR=9.2						
WRA	**Warramunga Arr**	**13.49**	**155**		**Pn**	**15 35 32.4**	**0.0**
WB2	**Warramunga Arr**	**13.49**	**155**		**Pn**	**15 35 33.2**	**+0.8**
WR0	**Warramunga Arr**	**13.59**	**155**		**Pn**	**15 35 34.5**	**+0.9**
PSA00	**Pilbara Seismi**	**16.10**	**210**	P	**P**	**15 36 07.1**	**+1.7**
PSA00				IAmb	IAmb	15 36 08.4	
	comp=Z,10nm,0.7s						
AS31	**Alice Springs**	**16.75**	**162**	P	**Pn**	**15 36 16.6**	**+3.7**
AS31				IAmb	IAmb	15 36 25.1	
	comp=Z,3.6nm,0.6s						
ASAR	**Alice Springs**	**16.76**	**162**	P	**Pn**	**15 36 16.0**	**+3.1**
	comp=Z,1.1nm,0.3s,baz=345,slow=11,SNR=106						
ASAR				S	**S**	**15 39 17.6**	**-1.7**
	comp=Z,1.0nm,0.3s,baz=326,slow=22,SNR=6.0						
ASAR	**Alice Springs**	**16.76**	**162**	P	**Pn**	**15 36 17.1**	**+4.2**
FORT	**Forrest**	**22.99**	**181**	P	**P**	**15 37 19.4**	**+0.9**
MORW	**Morawa**	**24.26**	**207**	P	**P**	**15 37 30.9**	**+0.7**
MORW				IAmb	IAmb	15 37 44.1	
	comp=Z,12nm,1.1s						
BBOO	**Buckleboo**	**26.00**	**165**	P	**P**	**15 37 48.7**	**+2.8**
BBOO				IAmb	IAmb	15 37 51.9	
	comp=Z,6.7nm,1.1s						
JOW	**Kunigami**	**34.30**	**360**	P	**P**	**15 38 57.0**	**-1.9**
KSRS	**Korea Array**	**44.89**	**359**	P	**P**	**15 40 25.8**	**-0.6**
	comp=Z,0.6nm,0.7s,baz=182,slow=9.8,SNR=1.9						
SONM	**Songino Array**	**58.59**	**343**	P	**P**	**15 42 07.7**	**-0.3**
	comp=Z,0.9nm,0.8s,baz=163,slow=6.9,SNR=4.7						
SONM	**Songino Array**	**58.59**	**343**	IAmb	IAmb	15 42 08.5	
	comp=Z,0.9nm,0.8s						
MKAR	**Makanchi Array**	**67.93**	**328**	P	**P**	**15 43 08.7**	**-0.7**
	comp=Z,0.3nm,0.4s,baz=120,slow=8.2,SNR=15						
MKAR	**Makanchi Array**	**67.93**	**328**	P	**P**	**15 43 07.9**	**-1.5**
ZALV	**Zalesovo Beam**	**71.50**	**335**	P	**P**	**15 43 29.9**	**-1.0**
	comp=Z,0.8nm,0.6s,baz=117,slow=5.0,SNR=4.8						

*IDC **14** 15:36:09.6±1.9, 62°.53N×151°.51W, h75^{km}±26^{km}, mb3.3/4, mb1 3.4/7, mb1mx3.1/48, mbtmp3.6/7, Error ellipse: s-maj=26.1km s-min=14.2km az=113.0*

*AEIC **14** 15:36:11±0.7, 62°.54N±0°.01×151°.13W±0°.10, h86^{km}±6^{km}, ML3.5, ML3.8/83(NEIC), Error ellipse: s-maj=6.6km s-min=1.5km az=103.0*

*NEIC **14** 15:36:11.1±0.6, 62°.54N±0°.01×151°.16W±0°.10, h91^{km}±7^{km}, Error ellipse: s-maj=6.5km s-min=1.1km az=102.0*

ISC 14 15:36:11.0±0.8, **62°.56N**±0°.04×**151°.16W**±0°.04, **h93**^{km}±6^{km}, **n162, σ0^s.91**/151, **mb3.5**/4, **Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CUT	**Chulitna**	**0.44**	**110**	P	**Pn**	**15 36 25.4**	**-0.2**
	baz=289,SNR=275						
CUT	**Chulitna**	**0.44**	**110**		**Pn**	**15 36 25.2**	**-0.3**
CUT					**Sn**	**15 36 36.1**	**-0.3**
PPLA	**Purkeypile**	**0.58**	**306**		**Pn**	**15 36 27.0**	**+0.1**
PPLA					**Sn**	**15 36 38.5**	**-0.2**
SKT	**Skwentna**	**0.60**	**197**		**Pn**	**15 36 26.6**	**-0.3**
SKT					**Sn**	**15 36 38.0**	**-0.7**
SKT	**Skwentna**	**0.60**	**197**	IAML		15 36 38.8	
	comp=N,4μm,0.4s						
HUR	**Hurricane**	**0.82**	**58**		**Pn**	**15 36 28.9**	**0.0**
HUR					**Sn**	**15 36 42.3**	**0.0**
TRF	**Thorofare Moun**	**0.98**	**23**		**Pn**	**15 36 31.4**	**+0.5**
TRF					**Sn**	**15 36 46.1**	**+0.3**
TRF	**Thorofare Moun**	**0.98**	**23**	IAML		15 36 47.1	
	comp=N,2μm,0.8s						
TRF				IAML		15 36 47.7	
	comp=E,1μm,0.8s						
KTH	**Kantishna Hill**	**1.01**	**6**		**Pn**	**15 36 31.3**	**+0.2**
KTH					**Sn**	**15 36 45.6**	**-0.4**
KTH	**Kantishna Hill**	**1.01**	**6**	IAML		15 36 46.3	
	comp=E,1μm,0.5s						
STLK	**Strandline Lak**	**1.11**	**197**		**Pn**	**15 36 31.6**	**-0.6**
SUA	**Susitna One**	**1.11**	**170**		**Pn**	**15 36 31.9**	**-0.4**
SUA					**Sn**	**15 36 47.9**	**-0.4**
SUA	**Susitna One**	**1.11**	**170**	IAML		15 36 49.5	
	comp=E,1μm,0.7s						
WAT1	**Susitna Watana**	**1.23**	**76**		**Pn**	**15 36 33.5**	**-0.1**
WAT1					**Sn**	**15 36 50.5**	**-0.2**
WAT2	**Susitna Watana**	**1.25**	**70**		**Pn**	**15 36 34.0**	**0.0**
WAT2					**Sn**	**15 36 51.2**	**0.0**
GHO	**Glory Hole Cre**	**1.31**	**126**		**Pn**	**15 36 34.8**	**+0.2**
GHO					**Sn**	**15 36 53.0**	**+0.7**
GHO	**Glory Hole Cre**	**1.31**	**126**	IAML		15 36 56.2	
	comp=E,2μm,0.5s						
GHO				IAML		15 36 58.1	
	comp=N,1μm,0.5s						
SPCG	**Spurr Capps Gl**	**1.33**	**198**		**Pn**	**15 36 34.2**	**-0.7**
RND	**Reindeer**	**1.36**	**50**		**Pn**	**15 36 35.3**	**+0.2**
RND	**Reindeer**	**1.36**	**50**	IAML		15 36 54.4	
	comp=E,1μm,0.3s						
RND				IAML		15 36 54.5	

	comp=N,1μm,0.4s						
PMR	Palmer	1.36	134		Pn	15 36 34.7	-0.4
PMR	Palmer	1.36	134	IAML		15 36 56.8	
	comp=N,968nm,0.5s						
PMR				IAML		15 36 57.6	
	comp=E,1μm,0.3s						
SPCP	Crater Peak Br	1.38	200		Pn	15 36 35.0	-0.5
SPCN	Chakachatna No	1.42	200		Pn	15 36 35.8	-0.1
CHUM	Lake Minchumin	1.43	339		Pn	15 36 36.1	+0.2
SPCR	Spurr Chakacha	1.45	201		Pn	15 36 35.9	-0.4
CKL	Chakachamna La	1.47	203		Pn	15 36 36.5	-0.2
FIS	Fire Island	1.48	162		Pn	15 36 36.7	0.0
SML	Sawmill	1.52	118		Pn	15 36 37.1	-0.1
SML	Sawmill	1.52	118	IAML		15 37 00.6	
	comp=E,1μm,0.6s						
SML				IAML		15 37 02.2	
	comp=N,1μm,0.6s						
BPAW	Bear Paw Mtn.	1.55	3		Pn	15 36 37.4	-0.1
MCK	McKinley	1.55	40	P	Pn	15 36 38.1	+0.6
	baz=221,SNR=131						
MCK	McKinley	1.55	40		Pn	15 36 38.0	+0.5
WAT6	Susitna Watana	1.58	88		Pn	15 36 37.6	-0.4
RC01	Rabbit Creek A	1.62	155	P	Pn	15 36 39.5	+1.1
	baz=336,SNR=27						
RC01	Rabbit Creek A	1.62	155		Pn	15 36 37.6	-0.7
KNK	Knik Glacier	1.71	131		Pn	15 36 39.2	-0.4
KNK	Knik Glacier	1.71	131	IAML		15 37 06.0	
	comp=N,986nm,0.6s						
BWN	Browne	1.79	24		Pn	15 36 41.2	+0.7
BWN	Browne	1.79	24	IAML		15 37 10.2	
	comp=N,526nm,0.8s						
CAPN	Captain Cook N	1.79	180	P	Pn	15 36 42.8	+2.2
	baz=0.4,SNR=17						
CAPN	Captain Cook N	1.79	180		Pn	15 36 42.5	+1.9
SCM	Sheep Creek Mo	1.94	110		Pn	15 36 42.0	-0.5
SCM	Sheep Creek Mo	1.94	110	IAML		15 37 12.2	
	comp=E,949nm,0.8s						
SCM				IAML		15 37 13.1	
	comp=N,789nm,0.5s						
DFR	Drift River	2.10	201		Pn	15 36 44.4	-0.2
SLKM	Skilak Lake	2.10	167		Pn	15 36 44.1	-0.5
PWL	Port Wells	2.17	140		Pn	15 36 44.7	-0.8
NCT	North Crescent	2.17	204		Pn	15 36 45.5	-0.1
O22K	Cooper Landing	2.19	161	P	Pn	15 36 48.1	+2.3
	baz=343,SNR=20						
O22K	Cooper Landing	2.19	161		Pn	15 36 45.3	-0.5
RSO	Redoubt South	2.23	201		Pn	15 36 46.5	0.0
RDSO	Redoubt South	2.24	201		Pn	15 36 46.6	0.0
NEA2	Nenana	2.25	24	P	Pn	15 36 46.3	-0.2
	baz=205,SNR=198						
NEA2	Nenana	2.25	24		Pn	15 36 46.2	-0.2
TTA	Tatalina	2.27	282		Pn	15 36 46.4	-0.4
TT01	Tatalina	2.27	281		Pn	15 36 46.2	-0.5
RED	Redoubt Volcan	2.28	201		Pn	15 36 47.0	0.0
WRH	Wood River Hil	2.37	34		Pn	15 36 48.0	0.0
M24K	Tolsona, Glenn	2.37	99	P	Pn	15 36 48.6	+0.5
	baz=283,SNR=117						
M24K	Tolsona, Glenn	2.37	99		Pn	15 36 48.5	+0.3
M24K	Tolsona, Glenn	2.37	99	IAML		15 37 25.4	
	comp=N,786nm,0.6s						
MLY	Manley	2.49	4	P	Pn	15 36 49.8	+0.1
	baz=184,SNR=95						
MLY	Manley	2.49	4		Pn	15 36 49.7	-0.1
SVW2	Sparrevohn	2.56	237		Pn	15 36 50.3	-0.4
CCB	Clear Creek Bu	2.58	34		Pn	15 36 50.9	0.0
SEW	Seward	2.59	161		Pn	15 36 51.1	0.0
PAX	Paxson	2.65	78		Pn	15 36 52.6	+0.7
HDA	Harding Lake	2.65	44	P	Pn	15 36 52.1	+0.3
	baz=227,SNR=180						
HDA	Harding Lake	2.65	44		Pn	15 36 52.0	+0.2
HDA	Harding Lake	2.65	44	IAML		15 37 27.6	
	comp=E,468nm,0.4s						
HDA				IAML		15 37 31.2	
	comp=N,509nm,0.7s						
KLU	Klutina	2.69	111		Pn	15 36 51.5	-1.0
KLU	Klutina	2.69	111	IAML		15 37 33.1	
	comp=E,411nm,0.4s						
KLU				IAML		15 37 35.2	
	comp=N,392nm,0.7s						
PS11	TAPS Pump St11	2.70	98		Pn	15 36 53.0	+0.5
IVE	Iliamna Volcan	2.70	200		Pn	15 36 52.7	+0.1
I23K	Minto, Yukon-K	2.72	16	P	Pn	15 36 52.8	+0.1
	baz=197,SNR=90						
I23K	Minto, Yukon-K	2.72	16		Pn	15 36 53.4	+0.6
MDM	Murphy Dome	2.74	27		Pn	15 36 53.3	+0.2
TCOL	CIGO, UAF Yank	2.75	31	P	Pn	15 36 53.5	+0.4
	baz=213,SNR=271						
TCOL	CIGO, UAF Yank	2.75	31		Pn	15 36 53.5	+0.4
COLA	College	2.75	31		Pn	15 36 53.4	+0.2
ILS	Iliamna Low So	2.77	200		Pn	15 36 54.2	+0.7
PS08	TAPS Pump Stn8	2.78	42		Pn	15 36 53.8	+0.2
BRLK	Bradley Lake	2.80	177		Pn	15 36 54.0	+0.1
BRLK	Bradley Lake	2.80	177	IAML		15 37 35.0	
	comp=N,336nm,0.7s						
BRLK				IAML		15 37 36.7	
	comp=E,305nm,0.4s						
BRSE	Bradley Lake S	2.83	176		Pn	15 36 54.2	-0.1
DIV	Divide	2.93	117		Pn	15 36 54.5	-1.1
IL31		2.93	39		Pn	15 36 55.6	+0.2
ILAR	Eielson Array	2.93	39	P	Pn	15 36 55.5	-0.1
	comp=E,15nm,0.3s,baz=224,slow=14,SNR=1042						
ILAR				S	Sn	15 37 24.8	-5.1
	comp=E,8.0nm,0.3s,baz=225,slow=16,SNR=2.5						
ILAR	Eielson Array	2.93	39	Pn	Pn	15 36 55.1	-0.5
PS12	TAPS Pump St12	3.04	108		Pn	15 36 56.0	-1.0
CNPM	China Poot	3.04	181		Pn	15 36 57.2	+0.1
CNPM	China Poot	3.04	181	IAML		15 37 40.5	
	comp=E,389nm,0.5s						
POKR	Poker Plat Res	3.06	31	P	Pn	15 36 57.9	+0.6
	baz=214,SNR=82						
POKR	Poker Plat Res	3.06	31		Pn	15 36 57.7	+0.5
OPT	Oil Point	3.08	200		Pn	15 36 58.6	+0.9
N25K	Chitina, Valde	3.23	104	P	Pn	15 37 03.3	+3.6
	baz=290,SNR=15						
N25K	Chitina, Valde	3.23	104		Pn	15 36 59.2	-0.5
N25K	Chitina, Valde	3.23	104	IAML		15 37 51.2	
	comp=N,345nm,0.5s						
N25K				IAML		15 37 51.3	
	comp=E,314nm,0.5s						
EYAK	Cordova Ski Ar	3.28	125		Pn	15 36 59.6	-0.7
PS06	TAPS Pump Stn6	3.37	10		Pn	15 37 02.1	+0.7
AUW	Augustine West	3.39	200		Pn	15 37 02.1	+0.4
AUCH	Augustine Cone	3.39	200		Pn	15 37 02.7	+0.9
DOT	Dot Lake	3.41	68		Pn	15 37 02.2	+0.2
MENT	Mentasta	3.44	80		Pn	15 37 03.0	+0.4
MENT				IAML		15 37 51.7	
	comp=N,326nm,0.7s						
BMRM	Bremner River	3.50	114		Pn	15 37 02.3	-1.0
SCRK	Sand Creek	3.54	63	P	Pn	15 37 04.4	+0.5
	baz=249,SNR=45						
SCRK	Sand Creek	3.54	63		Pn	15 37 04.2	+0.3
IM03		3.62	343		Pn	15 37 05.3	+0.5
GLB	Gilahina Butte	3.64	105		Pn	15 37 04.5	-0.7
GLB	Gilahina Butte	3.64	105	IAML		15 37 59.6	
	comp=E,117nm,0.8s						
GLB				IAML		15 38 01.8	
	comp=N,190nm,0.5s						
PRP	Porcupine Dome	3.87	37		Pn	15 37 08.5	+0.2
VRDI	Verde Repeater	3.88	107		Pn	15 37 07.9	-0.7
VRDI	Verde Repeater	3.88	107	IAML		15 38 07.1	
	comp=N,173nm,0.7s						
VRDI				IAML		15 38 07.3	
	comp=E,114nm,0.7s						
MCARA	McCarthy VSAT	4.02	103		Pn	15 37 09.8	-0.4
CRQM	Cirque	4.23	112		Pn	15 37 13.8	+0.5
PS05	TAPS Pump Stn5	4.28	3		Pn	15 37 14.6	+0.9
BC03		4.33	79		Pn	15 37 14.4	0.0
BCAR	Beaver Creek A	4.33	79		Pn	15 37 13.9	-0.6
PTPK	Patty Peak	4.34	105		Pn	15 37 14.2	-0.6
KHIT	Khitrov Hills	4.34	116		Pn	15 37 13.9	-0.8
KAHC	Katmai Hardscr	4.36	208		Pn	15 37 15.5	+0.6
TGL	Tana Glacier	4.36	111		Pn	15 37 14.7	-0.3
BALM	Baldy	4.45	106		Pn	15 37 15.4	-0.8
BALM	Baldy	4.45	106	IAML		15 38 31.7	
	comp=E,91nm,1.0s						
COLD	Coldfoot	4.71	5	P	Pn	15 37 20.5	+0.9
	baz=185,SNR=129						
COLD	Coldfoot	4.71	5		Pn	15 37 20.2	+0.7
BARN	Barnard Glacie	4.75	104		Pn	15 37 19.8	-0.5
BARN	Barnard Glacie	4.75	104	IAML		15 38 37.7	
	comp=E,74nm,0.8s						
BARN				IAML		15 38 38.0	
	comp=N,110nm,0.8s						
KABU	Katmai Buttres	4.76	207		Pn	15 37 21.1	+0.7
FYU	Fort Yukon	4.77	30		Pn	15 37 21.2	+0.8
FYU	Fort Yukon	4.77	30	IAML		15 38 55.0	
	comp=E,59nm,3.8s						
FYU				IAML		15 39 06.1	
	comp=N,64nm,3.5s						
BVCY	Beaver Creek	4.78	87		Pn	15 37 20.5	-0.1
KDAK	Kodiak Island	4.84	189	P	Pn	15 37 19.6	-1.8
	comp=N,1.1nm,0.3s,baz=333,slow=15,SNR=26						
KDAK				S	Sn	15 38 13.9	-2.2
	comp=N,2.6nm,0.3s,baz=343,slow=23,SNR=6.2						
KDAK	Kodiak Island	4.84	189		Pn	15 37 19.8	-1.6
KDAK	Kodiak Island	4.84	189	IAML		15 38 27.2	
	comp=N,53nm,2.9s						
KDAK				IAML		15 38 33.2	
	comp=N,47nm,2.3s						
GRNC	Granite Creek	4.84	108		Pn	15 37 21.5	-0.1
YUK2	White River	4.90	94		Pn	15 37 21.9	-0.4
CTGM	Chitina Glacie	4.93	104		Pn	15 37 22.3	-0.5
CTGM	Chitina Glacie	4.93	104	IAML		15 38 37.3	
	comp=E,51nm,0.8s						
CTGM				IAML		15 38 45.6	
	comp=N,69nm,0.8s						
CAHL	Cahill	4.96	206		Pn	15 37 24.7	+1.6
EGAK	Eagle	4.98	59		Pn	15 37 23.4	+0.2
YUK3	Moose Creek	5.08	94		Pn	15 37 24.6	-0.2
LOGN	Logan Glacier	5.14	105		Pn	15 37 24.8	-0.8
OHAK	Old Harbor	5.46	192		Pn	15 37 27.6	-2.1
DAWY	Dawson	5.52	69		Pn	15 37 30.6	-0.1
BM03	Burnt Mountain	5.62	27		Pn	15 37 32.2	+0.3
BMAR	Burnt Mountain	5.63	27		Pn	15 37 31.9	-0.2
TOLK	Toolik Lake Re	6.15	5	P	Pn	15 37 41.3	+2.1
	baz=187,SNR=24						
TOLK	Toolik Lake Re	6.15	5		Pn	15 37 41.0	+1.9
YUK5	Granite Creek	6.46	97		Pn	15 37 42.5	-1.0
ANM	Nome	6.66	294		Pn	15 37 46.0	0.0
EPYK	Eagle Plains	7.31	52		Pn	15 37 55.4	+0.4
TNA	Tin City	7.94	300	P	Pn	15 38 05.0	+1.6
	baz=105,SNR=6.6						
TNA	Tin City	7.94	300	Pn	Pn	15 38 04.0	+0.6
A21K	Barrow	9.06	349	P	Pn	15 38 18.8	+0.2
	baz=164,SNR=11						
A21K	Barrow	9.06	349		Pn	15 38 18.6	0.0
INK	Inuvik	9.31	44	P	Pn	15 38 22.6	+0.6
	comp=N,0.5nm,0.3s,baz=231,slow=16,SNR=23						
INK				S	Sn	15 40 02.0	-2.8
	comp=N,0.3nm,0.3s,baz=355,slow=18,SNR=2.8						
YKA	Yellowknife Ar	16.73	74	P	P	15 40 00.6	+0.5
	comp=N,0.1nm,0.3s,baz=290,slow=10,SNR=5.1						
RES	Resolute Bay	22.67	35	P	P	15 41 05.8	+1.7
	comp=N,0.6nm,0.5s,baz=271,slow=7.9,SNR=5.2						
SONM	Songino Array	54.02	306	P	P	15 45 25.8	+0.5
	comp=N,0.8nm,0.7s,baz=28,slow=6.5,SNR=4.8						
MKAR	Makanchi Array	62.98	322	P	P	15 46 26.8	-0.6
	comp=N,0.2nm,0.4s,baz=39,slow=7.6,SNR=7.2						
AKASG	Malin Array Be	67.09	360	P	P	15 46 54.1	+0.2
	comp=N,0.3nm,0.4s,baz=360,slow=6.3,SNR=2.6						

IDC ***14*** *15:41:46.2±1.4, 16°.32S×173°.44W, h0^{km}, mb3.9/5, mb1 4.2/5, mb1mx3.8/32, mbtmp3.9/5, MS3.3/1, Ms1 3.3/1, ms1mx2.6/26, Error ellipse: s-maj=57.0km s-min=25.8km az=134.0*

NEIC ***14*** *15:41:48.9±2.4, 16°.18S±0°.09×173°.33W±0°.06, h35^{km}±2^{km}, mb4.5/4, Error ellipse: s-maj=16.7km s-min=7.0km az=24.0*

ISC 14 15:41:46.0±0.9**, 16°.04S**±0°.09×**173°.1W**±0°.1**, h26^{km}, n19, σ1^{s}06**/13**, mb4.3**/8**, MS3.1**/3**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	2.46	31		Pb	15 42 30.1	+0.4
NIUE	Niue	4.27	136	Pn	Pn	15 42 48.3	-1.0
MSVF	Nonsavu	8.65	258	LR	LR	15 46 45.6	
	comp=Z,186nm,18.5s,baz=97,slow=36						
FUNA	Funafuti	10.61	314	Pn	Pn	15 44 15.1	-1.3
KNTN	Kanton	13.25	6	Pn	Pn	15 44 52.4	-0.2
DZM	Mont Dzumac	20.25	250	*e*LR	LR	15 51 53.0	
	comp=Z,111nm,25.4s						
PPT2	Papeete2	22.55	97	*e*LR	LR	15 51 46.4	
	comp=Z,55nm,24.5s						
TBI	Tubuai	23.38	112	*e*LR	LR	15 52 16.6	
	comp=Z,97nm,27.8s						
URZ	Urewera	23.76	199	P	P	15 46 56.7	+0.3
	22nm,1.3s,baz=108,slow=3.2,SNR=1.8						
WB0	Warramunga Arr	49.96	257	P	P	15 50 39.3	+1.1
WB0				IAmb	IAmb	15 50 54.7	
	comp=Z,8.6nm,1.5s						
WRAB	Tennant Creek	49.99	257	P	P	15 50 37.6	-0.9
WRAB				IAmb	IAmb	15 50 47.3	
	comp=Z,9.2nm,1.4s						
WRA	Warramunga Arr	50.00	257	P	P	15 50 39.3	+0.8
	comp=Z,0.4nm,0.5s,baz=95,slow=7.7,SNR=16						
WRA	Warramunga Arr	50.00	257	P	P	15 50 38.8	+0.3
AS31	Alice Springs	50.20	252	P	P	15 50 40.5	+0.4
AS31				IAmb	IAmb	15 50 41.6	
	comp=Z,1.1nm,0.7s						
ASAR	Alice Springs	50.20	252	P	P	15 50 41.0	+0.9
	comp=Z,3.0nm,0.5s,baz=89,slow=8.2,SNR=128						
ASAR	Alice Springs	50.20	252	P	P	15 50 39.8	-0.3
PDAR	Pinedale Array	82.54	42	P	P	15 54 13.2	+6.3
	comp=Z,0.3nm,0.6s,baz=238,slow=5.2,SNR=3.7						
ILAR	Eielson Array	83.01	11	P	P	15 54 14.5	+5.9
	comp=Z,0.4nm,0.9s,baz=238,slow=6.1,SNR=7.9						
BRTR	Keskin Array B	146.84	321	PKPbc	PKiKP	16 01 31.2	+2.2
	comp=Z,0.8nm,0.7s,baz=84,slow=3.2,SNR=4.7						

IDC ***14*** *16:01:06.8±0.8, 46°.98S×13°.20W, h0^{km}, mb4.2/6, mb1 4.2/6, mb1mx4.0/33, mbtmp4.2/6, MS4.4/8, Ms1 4.4/8, ms1mx4.3/12, Error ellipse: s-maj=27.7km s-min=25.0km az=128.0*

NEIC ***14*** *16:01:07.4±2.0, 47°.4S±0°.1×13°.3W±0°.2, h10^{km}±1^{km}, mb4.7/8, Error ellipse: s-maj=22.6km s-min=19.5km az=89.0*

GCMT ***14*** *16:01:12.4±0.2, 47°.19S±0°.02×13°.22W±0°.02, h12^{km}, MW5.0/127, Moment Tensor Solution. s41,c50; s127,c191; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-4.32±.10; $M_{\theta\theta}$0.64±.11; $M_{\phi\phi}$3.68±.08; $M_{r\theta}$1.18±.39; $M_{\theta\phi}$-1.01±.08; $M_{\phi r}$-0.08±.30; Best double couple: $M_0$4.29800×10^{16} NP1:ϕ_s175.00000°, δ43.00000°, λ-72.00000°. NP2:ϕ_s331.00000°, δ49.00000°, λ-107.00000°. Principal axes: T 4.0060, Plg3.0000°, Azm72.0000°; N 0.5820, Plg13.0000°, Azm342.0000°; P -4.5890, Plg77.0000°, Azm175.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 14 16:01:09.1±0.6**, 47°.1S**±0°.1×**13°.5W**±0°.1**, h10^{km}, n34, σ2^{s}44**/27**, mb4.6**/9**, MS4.5**/8**, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	16.23	235	Pn	Pn	16 04 53.2	-3.8
HOPE				IAmb	IAmb	16 04 54.2	
	comp=Z,73nm,1.2s						
VNA3	Neumayer Olymp	24.33	177	P	P	16 06 29.6	+3.0
SNAA	Sanae	25.19	172	P	P	16 06 32.6	-1.9
SNAA	Sanae	25.19	172	LR	LR	16 15 09.9	
	comp=Z,249nm,18.6s,baz=1.5,slow=33						
SUR	Sutherland	29.89	73	LR	LR	16 16 14.5	
	comp=Z,1μm,21.5s,baz=238,slow=31						
PMSA	Palmer Station	32.28	218	LR	LR	16 18 13.1	
	comp=Z,602nm,21.8s,baz=118,slow=32						
BOSA	Boshof	35.25	72	LR	LR	16 20 24.9	
	comp=Z,1μm,19.8s,baz=227,slow=33						
TSUM	Tsumeb	37.62	53	P	P	16 08 23.8	-0.4
TSUM				IAmb	IAmb	16 08 24.6	
	comp=Z,14nm,1.2s						
CPUP	Villa Florida	40.15	285	P	P	16 08 45.0	-0.2
	comp=Z,1.2nm,0.4s,baz=124,slow=7.1,SNR=2.8						
CPUP				LR	LR	16 25 07.2	
	comp=Z,242nm,19.0s,baz=144,slow=36						
PLCA	Paso Flores	40.83	257	LR	LR	16 24 18.5	
	comp=Z,702nm,20.9s,baz=132,slow=34						
BDFB	Brasilia	42.43	306	LR	LR	16 24 20.2	
	comp=Z,557nm,20.7s,baz=131,slow=33						
MATP	Matopo	43.12	67	P	P	16 09 07.2	-2.5
	comp=Z,2.0nm,0.8s,baz=215,slow=7.8,SNR=5.3						
QSPA	South Pole Qui	43.20	180	P	P	16 09 10.0	0.0
	comp=Z,2.7nm,0.9s,baz=277,slow=0.8,SNR=8.0						
SIV	San Ignacio	49.97	292	P	P	16 10 04.1	+0.6
	comp=Z,1.6nm,0.9s,baz=171,slow=7.6,SNR=4.9						
DBIC	Dimbokro	54.04	11	P	P	16 10 32.3	-1.3
	comp=Z,5.6nm,1.0s,baz=202,slow=5.4,SNR=4.9						
DBIC	Dimbokro	54.04	11	P	P	16 10 32.9	-0.7
DBIC				IAmb	IAmb	16 10 34.0	
	comp=Z,40nm,1.5s						
SAML	Samuel	56.66	296	P	P	16 10 52.5	-0.1
SAML				IAmb	IAmb	16 11 01.7	
	comp=Z,12nm,1.3s						
TOA0	Torodi Ar. Sit	61.45	17	P	P	16 11 25.0	-0.7
TORD	Torodi Ar. Bea	61.45	17	P	P	16 11 24.2	-1.5
	comp=Z,5.6nm,0.9s,baz=200,slow=5.1,SNR=17						
TORD	Torodi Ar. Bea	61.45	17	P	P	16 11 24.9	-0.8
TAM	Tamanrasset	71.61	18	P	P	16 12 31.9	+1.2
TAM				IAmb	IAmb	16 12 32.4	
	comp=Z,7.4nm,1.1s						
GERES	GERESS Array B	98.40	18	LR	LR	16 56 31.2	
	comp=Z,149nm,18.2s,baz=207,slow=34						
CMAR	Chiang Mai Arr	118.50	93	PKP	PKPdf	16 19 56.1	-1.0
	comp=Z,0.6nm,0.8s,baz=229,slow=4.2,SNR=4.8						
PDAR	Pinedale Array	123.17	299	PKP	PKPdf	16 20 04.5	-1.1
	comp=Z,0.5nm,0.7s,baz=140,slow=4.9,SNR=5.6						
NVAR	Mina Array Bea	126.10	290	PKP	PKPdf	16 20 12.0	+0.6
	comp=Z,0.4nm,0.8s,baz=180,slow=1.2,SNR=3.6						
YKA	Yellowknife Ar	135.04	320	PKP	PKPdf	16 20 26.5	-0.8
	comp=Z,0.7nm,0.7s,baz=112,slow=3.1,SNR=12						
EPYK	Eagle Plains	144.98	324	PKPbc	PKPbc	16 20 44.6	0.0
BCAR	Beaver Creek A	147.43	318	PKPbc	PKPdf	16 20 51.2	+1.7
TOLK	Toolik Lake Re	149.26	330	PKPbc	PKPdf	16 20 56.0	+3.7
ILAR	Eielson Array	149.40	322	PKPbc	PKPdf	16 20 56.0	+3.5
	comp=Z,4.0nm,0.7s,baz=7.4,slow=1.0,SNR=40						
HDA	Harding Lake	149.50	322	PKPbc	PKPdf	16 20 57.2	+4.5
CCB	Clear Creek Bu	149.81	322	PKPbc	PKPdf	16 20 57.7	+4.5
KSRS	Korea Array	150.12	95	PKPbc	PKPdf	16 20 57.6	+3.0
	comp=Z,1.9nm,0.8s,baz=262,slow=2.9,SNR=6.1						
BPAW	Bear Paw Mtn.	151.29	322	PKPbc	PKPdf	16 21 00.1	+4.6

IDC 14 16:02:21.9±14.0**, 47°.13S**×**13°.09W, h0^{km}, mb4.3**/1**, mb1 4.3**/1**, mb1mx3.6**/34**, mbtmp4.3**/1**, Error ellipse: s-maj=899.4km s-min=74.3km az=126.0, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TORD	Torodi Ar. Bea	61.45	16	P	P	16 12 40.1	0.0
	3.8nm,1.0s,baz=192,slow=6.3,SNR=7.3						
YKA	Yellowknife Ar	135.27	320	PKP	PKPdf	16 21 42.2	-0.1
	0.3nm,0.8s,baz=109,slow=2.4,SNR=3.1						
ILAR	Eielson Array	149.62	322	PKPbc	PKPbc	16 22 11.5	-0.6
	1.8nm,0.9s,baz=48,slow=1.3,SNR=5.8						

IDC 14 16:03:12.2±1.6**, 46°.97S**×**13°.20W, h0^{km}, mb4.9**/2**, mb1 4.9**/2**, mb1mx3.9**/33**, mbtmp4.9**/2**, Error ellipse: s-maj=89.6km s-min=36.0km az=75.0, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAW	Mawson	42.59	147	P	P	16 11 09.2	-0.1
	54nm,1.0s,baz=258,slow=5.5,SNR=3.7						
TORD	Torodi Ar. Bea	61.31	17	P	P	16 13 29.4	-0.1
	3.9nm,1.0s,baz=191,slow=8.6,SNR=7.0						
YKA	Yellowknife Ar	135.09	320	PKP	PKPdf	16 22 32.0	-0.2
	0.4nm,0.8s,baz=104,slow=2.6,SNR=4.1						
ILAR	Eielson Array	149.44	322	PKPbc	PKPbc	16 23 01.4	-0.5
	1.9nm,0.7s,baz=97,slow=0.2,SNR=6.8						

LDG ***14*** *16:04:18.5±0.1, 46°.13N×7°.41E, h10^{km}, Md1.5/2, Ml1.3/3, Error ellipse: s-maj=1.1km s-min=1.0km az=75.0*

ZUR 14 16:04:19.0, 46°.14N×**7°.41E, h5^{km}**±**2^{km}, MLh0.7**/8**, 3C-6D, Error ellipse: s-maj=3.8km s-min=0.7km az=169.0, Switzerland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DIX	Grande Dixence	0.06	184	⇑Pg	Pg	16 04 21.0	+0.4
	SNR=0.7						
SIOV	Sion-Valere	0.10	341	Pg	Pg	16 04 21.5	+0.3
	0.1nm,SNR=0.9						
SIOV				Sg	Sg	16 04 22.9	+0.2
VANNI	Vissoie, Val d	0.15	60	⇓Pg	Pg	16 04 22.5	+0.5
VANNI				⇓Pg	Pg	16 04 22.5	+0.5
	SNR=0.5						
VANNI				Sg	Sg	16 04 24.5	+0.5
GRYON	Gryon	0.24	298	⇑Pg	Pg	16 04 24.0	+0.3
GRYON				⇑Pg	Pg	16 04 24.0	+0.3
	0.1nm,SNR=1.2						
GRYON				Sg	Sg	16 04 27.0	+0.2
SENIN	Lac Senin/Sane	0.24	341	⇓Pg	Pg	16 04 24.0	+0.3
	0.1nm,SNR=0.6						
SENIN				⇓Pg	Pg	16 04 24.0	+0.3
SENIN				Sg	Sg	16 04 27.4	+0.4
EMBD	Embd, Matterta	0.30	75	Pg	Pg	16 04 25.1	+0.2
EMBD				Pg	Pg	16 04 25.1	+0.2
	SNR=0.7						
EMBD				Sg	Sg	16 04 28.9	+0.1
MMK	Mattmark	0.39	103	Pg	Pg	16 04 26.5	-0.2
	0.1nm,SNR=0.9						
SATI	Passo dei Sala	0.41	129	⇓Pg	Pg	16 04 26.9	0.0
	0.1nm,SNR=1.2						
SATI				⇓Pg	Pg	16 04 26.9	0.0
SATI				Sg	Sg	16 04 32.2	-0.2
LPL	La Plagne	0.78	218	*e*Pg	Pg	16 04 33.3	-0.7
LPL				*e*Sg	Sg	16 04 43.3	-0.8
	0.4nm,0.2s						
LPG	La Plagne	0.79	216	*e*Pg	Pg	16 04 33.5	-0.6
LPG				*e*Sg	Sg	16 04 43.7	-0.7
	0.6nm,0.2s						
CABF	La Chapelle	1.03	298	*e*P	Pg	16 04 38.0	-0.8
CABF				*e*Sg	Sg	16 04 51.6	-0.6
	0.2nm,0.2s						
MBDF	Montbardon	1.48	198	*e*Pn	Pn	16 04 43.8	-2.6
MBDF				*e*Sg	Sn	16 05 05.0	-1.1
	0.2nm,0.2s						
ORIF	Oris-en-Rattie	1.63	222	*e*Pn	Pn	16 04 46.1	-2.2
HINF	Hinteralfeld	1.72	347	*e*Pn	Pn	16 04 47.7	-1.9
HAU	Haudompre	2.01	339	*e*Pn	Pn	16 04 50.4	-3.1
HAU				*e*Sg	Sb	16 05 22.1	+0.9
	5.2nm,0.3s						
LOR	Lormes	2.69	296	*e*Pn	Pn	16 05 00.5	-2.4

ROM 14 16:05:47.9±0.1**, 43°.625N**±0°.004×**11°.256E**±0°.006**, h7^{km}, ML1.4**/2**, 1C-2D, Error ellipse: s-maj=0.5km s-min=0.2km az=264.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OSSC	Osservatorio P	0.10	184	⇓P	Pg	16 05 50.7	+0.5
OSSC				S	Sg	16 05 52.7	+0.9
OSSC				AML	AML		
	comp=E,307μm,0.5s						
OSSC				AML	AML		
	comp=N,542μm,0.2s						
OSSC				AML	AML		
	comp=E,538μm,0.2s						
OSSC				AML	AML		
	comp=N,322μm,0.5s						
OSSC				AML	AML		
	comp=E,538μm,0.2s						
OSSC				AML	AML		
	comp=E,306μm,0.5s						
CSNT	Castellina Chi	0.15	170	⇓P	Pg	16 05 51.5	+0.4
CSNT				S	Sg	16 05 54.1	+0.8
CSNT				AML	AML		
	comp=N,150μm,0.8s						
CSNT				AML	AML		
	comp=E,94μm,0.4s						
CRMI	Carmignano	0.27	309	P	Pb	16 05 54.1	-0.9
CRMI				S	Sg	16 05 58.1	+1.4
RUFI	Rufina	0.28	41	P	Pg	16 05 54.4	+0.9
RUFI				S	Sb	16 05 59.0	-1.3
MTCR	Monte La Croce	0.44	335	P	Pb	16 05 57.4	-0.7
PII	Pisa	0.54	281	⇑P	Pn	16 06 01.8	-0.2

NEIC ***14*** *16:07:49.5±1.4, 17°.6S±0°.2×178°.4W±0°.2, h633^{km}±20^{km}, mb4.2/15, Error ellipse: s-maj=27.2km s-min=24.2km az=93.0*

IDC ***14*** *16:07:51.0±1.7, 17°.62S×178°.69W, h619^{km}±18^{km}, mb3.2/8, mb1 3.5/9, mb1mx3.2/29, mbtmp4.1/9, Error ellipse: s-maj=69.8km s-min=13.4km az=150.0*

ISC 14 16:07:49.0±0.6**, 17°.7S**±0°.1×**178°.6W**±0°.1**, h600^{km}, n30,**

σ1ˢ41/32, mb4.1/16, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	3.21	270	P	P	16 09 12.8	+3.3
	1.4nm,0.3s,baz=82,slow=0.4,SNR=18						
MSVF	Nonsavu	3.21	270	P	P	16 09 13.1	+3.6
AFI	Afiamalu	7.57	61	P	P	16 09 44.4	0.0
NIUE	Niue	8.32	101	P	P	16 09 52.8	+1.4
TARA	Tarawa	20.73	335	P	P	16 11 46.8	-2.8
FOZ	Fox Glacier	27.53	198	P	P	16 12 45.4	-3.8
EIDS	Eidsvold	29.18	250	P	P	16 13 04.5	+0.7
CAN	Canberra	33.68	232	P	P	16 13 41.1	-0.8
COEN	Coen	36.94	270	P	P	16 14 10.7	+1.6
COEN				IAmb	IAmb	16 14 11.5	
	comp=Z,5.1nm,0.6s						
TOO	Toolangi	37.16	231	P	P	16 14 10.6	0.0
TOO				IAmb	IAmb	16 14 27.4	
	comp=Z,5.0nm,1.0s						
STKA	Stephens Creek	38.57	241	P	P	16 14 22.4	+0.3
	comp=Z,3.6nm,0.5s,baz=80,slow=9.9,SNR=12						
STKA	Stephens Creek	38.57	241	P	P	16 14 22.6	+0.5
BBOO	Buckleboo	43.35	241	P	P	16 14 59.5	-0.3
BBOO				IAmb	IAmb	16 15 00.0	
	comp=Z,5.8nm,0.5s						
WR0	Warramunga Arr	44.31	259	P	P	16 15 07.9	+0.5
WB0	Warramunga Arr	44.47	260	P	P	16 15 08.7	0.0
WB0				IAmb	IAmb	16 15 09.3	
	comp=Z,4.6nm,0.6s						
WB2	Warramunga Arr	44.49	259	P	P	16 15 08.6	-0.3
WRA	Warramunga Arr	44.51	259	P	P	16 15 08.5	-0.4
	comp=Z,1.7nm,0.3s,baz=95,slow=7.4,SNR=92						
WRA				PcP	PcP	16 16 38.4	-0.5
	comp=Z,0.1nm,0.3s,baz=91,slow=3.8,SNR=1.3						
WRA	Warramunga Arr	44.51	259	P	P	16 15 08.4	-0.5
AS31	Alice Springs	44.68	254	P	P	16 15 10.4	+0.2
AS31				IAmb	IAmb	16 15 11.5	
	comp=Z,3.9nm,0.5s						
ASAR	Alice Springs	44.68	254	P	P	16 15 10.4	+0.2
	comp=Z,12nm,0.6s,baz=88,slow=8.5,SNR=278						
ASAR				S	S	16 21 04.1	-0.3
	comp=Z,0.4nm,0.8s,baz=96,slow=19,SNR=4.0						
ASAR	Alice Springs	44.68	254	P	P	16 15 10.0	-0.2
FITZ	Fitzroy Crossi	52.90	260	P	P	16 16 11.3	+0.6
FITZ				IAmb	IAmb	16 16 30.5	
	comp=Z,6.5nm,1.1s						
SOEI	Soe	55.91	270	P	P	16 16 30.7	-1.4
SOEI				IAmb	IAmb	16 16 41.8	
	comp=Z,16nm,1.0s						
NWAO	Narrogin (SRO)	59.15	242	P	P	16 16 52.4	-1.2
NWAO				IAmb	IAmb	16 17 01.2	
	comp=Z,17nm,1.1s						
NVAR	Mina Array Bea	79.41	44	P	P	16 18 55.0	+0.6
	comp=Z,0.5nm,0.7s,baz=228,slow=8.6,SNR=5.4						
ILAR	Eielson Array	85.75	13	P	P	16 19 24.9	-0.4
	comp=Z,0.4nm,0.4s,baz=222,slow=4.7,SNR=15						
TXAR	Lajitas Array	86.04	58	P	P	16 19 28.2	+0.6
	comp=Z,0.8nm,0.7s,baz=202,slow=6.3,SNR=4.7						
PDAR	Pinedale Array	87.34	43	P	P	16 19 33.6	+0.1
	comp=Z,0.5nm,0.6s,baz=216,slow=4.2,SNR=5.9						
YKA	Yellowknife Ar	94.24	25	P	P	16 20 03.8	-0.8
	comp=Z,0.2nm,0.6s,baz=240,slow=4.2,SNR=3.1						
GERES	GERESS Array B	147.40	345	PKPbc	PKPbc	16 26 26.4	-0.1
	comp=Z,0.4nm,0.5s,baz=20,slow=4.4,SNR=4.0						

IDC 14 16:26:43.0±4.8, 7°29S×127°49E, h345km±53km, mb2.5/1, mb1 2.8/4, mb1mx2.6/29, mbtmp3.5/4, Error ellipse: s-maj=73.3km s-min=20.5km az=57.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
BATI	Baumata	4.77	232	P	Pn	16 28 00.2	+0.4
	7.2nm,0.3s,baz=72,slow=6.6,SNR=13						
BATI				S	S	16 29 02.3	+0.3
	4.6nm,0.3s,baz=85,slow=21,SNR=9.7						
WRA	Warramunga Arr	14.22	153	P	P	16 29 48.2	-1.2
	0.2nm,0.3s,baz=330,slow=12,SNR=13						
ASAR	Alice Springs	17.41	160	P	P	16 30 24.2	+0.2
	0.1nm,0.3s,baz=340,slow=12,SNR=14						
ASAR				S	S	16 33 28.3	+1.1
	0.0nm,0.3s,baz=335,slow=17,SNR=2.7						
MKAR	Makanchi Array	67.13	328	P	P	16 37 00.4	0.0
	0.1nm,0.5s,baz=132,slow=6.2,SNR=1.7						

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*DJA **14** 16:31:15.7±2.4, 8°S±3°×11°9E±°, h21km±25km, M3.6/11, MLv3.6/11*
*IDC **14** 16:31:26.2±5.4, 8°78S×119°43E, h92km±55km, mb3.1/2, mb1 3.3/5, mb1mx3.0/36, mbtmp3.5/5, ML3.3/3, Error ellipse: s-maj=52.4km s-min=30.8km az=65.0*
ISC 14 16:31:16.9±1.2, 8°27S±0°06×119°24E±0°06, h35km, n14, σ1ˢ55/14, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
PLAI	Plampang	1.55	249	P	Pn	16 31 42.4	+0.4
WSI	Waingapu	1.74	143	P	Pn	16 31 45.5	+0.9
BASI	Baing, Sumba	2.34	146	P	Pn	16 31 53.2	+0.3
TWSI	Taliwang, Sumb	2.38	259	P	Pn	16 31 53.7	+0.3
BSSI	Bau Bau, Buton	2.45	30	P	Pn	16 31 53.5	-0.9
EDFI	Ende, Flores	2.47	101	P	Pn	16 31 55.2	+0.5
MMRI	Maumere	2.98	97	P	Pn	16 32 01.8	+0.1
BNSI	Bone	3.94	13	P	Pn	16 32 15.7	+0.8
SPSI	Sidrap Palu	4.31	7	P	Pn	16 32 19.8	-0.2
BATI	Baumata	4.77	114	P	Pn	16 32 32.0	+5.7
	2.9nm,0.3s,baz=155,slow=4.7,SNR=5.2						
BATI				S	Sn	16 33 21.7	+1.3
	0.0nm,0.3s,baz=93,slow=15,SNR=1.0						
FITZ	Fitzroy Crossi	11.58	148	P	Pn	16 34 00.8	+1.0
	0.1nm,0.3s,baz=320,slow=14,SNR=1.4						
FITZ				S	Sn	16 36 03.4	-4.6
	0.1nm,0.3s,baz=134,slow=14,SNR=1.2						
WRA	Warramunga Arr	18.66	130	P	P	16 35 32.0	0.0
	0.1nm,0.3s,baz=303,slow=12,SNR=9.0						
ASAR	Alice Springs	20.78	139	P	P	16 35 55.0	-0.1
	1.3nm,0.8s,baz=320,slow=11,SNR=13						
MKAR	Makanchi Array	63.92	333	P	P	16 41 52.8	+6.5
	0.3nm,0.7s,baz=144,slow=5.2,SNR=4.0						

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*TUL **14** 16:39:04.6±1.0, 36°60N±0°02×97°63W±0°03, h5km±7km, ML3.8, mb_Lg3.7/118(NEIC), Error ellipse: s-maj=3.5km s-min=2.3km az=56.0*
*NEIC **14** 16:39:04.8±0.8, 36°582N±0°009×97°63W±0°03, h3km±7km, Error ellipse: s-maj=3.3km s-min=1.1km az=74.0*
*ANF **14** 16:39:05.1±0.5, 36°58N×97°61W, h5km, ML4.3/8, Error ellipse: s-maj=7.6km s-min=4.8km az=127.0*
*IDC **14** 16:39:05.6±1.3, 36°63N×97°79W, h0km, mb3.3/1, mb1 3.8/6, mb1mx3.5/41, mbtmp3.5/6, ML4.1/3, Error ellipse: s-maj=19.2km s-min=11.3km az=116.0*
ISC 14 16:39:04.4±1.3, 36°59N±0°02×97°61W±0°03, h2km±10km, n105, σ0ˢ89/66, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
CROK	Carrier	0.31	255		Pg	16 39 10.7	+0.4
CROK				Sg	Sg	16 39 15.4	+1.0
KAN13	South Haven SW	0.44	14		Pg	16 39 13.4	+0.6
KAN14	Manchester OK	0.47	323		Pg	16 39 13.7	+0.3
KAN14				Sg	Sg	16 39 20.0	+0.6
KAN01	Argonia South	0.58	348		Pg	16 39 15.8	+0.3
KAN10	Anthony SW Sta	0.66	324		Pg	16 39 17.3	+0.2
KS21	Milan North St	0.70	357		Pg	16 39 18.1	+0.2
KAN12	Harper NE Stat	0.78	337		Pg	16 39 19.4	+0.1
OK029	Liberty Lake	0.80	171		Pg	16 39 20.2	+0.5
QUOK	Quay	0.84	119		Pg	16 39 21.0	+0.5
OK031	S. Brethren Rd	0.89	135		Pg	16 39 21.9	+0.5
BCOK	Bluff Creek, N	0.93	180		Pg	16 39 22.5	+0.3
OK030	Cody Creek RV	0.94	134		Pg	16 39 22.8	+0.4
T35A	Sooner Cattle	0.94	69	Pg	Pg	16 39 22.5	0.0
T35B	Sooner Cattle	0.94	69	P		16 39 22.5	
	baz=250,SNR=417						
T35B				S		16 39 35.5	
	baz=250						
OK025	Westminster Rd	1.03	167		Pg	16 39 24.3	+0.3
U32A	Winter Ranch,	1.14	260		Pg	16 39 25.8	-0.4
U32A	Winter Ranch,	1.14	260	P		16 39 25.8	
	baz=79						
U32A				S		16 39 41.2	
	baz=79						
OKCFA	Oklahoma City	1.18	174		Pg	16 39 26.9	0.0
OKCSW	OKLAHOMA CITY	1.19	173		Pg	16 39 27.2	0.0
FNO	Franklin	1.34	173		Pn	16 39 30.1	+0.1
TUL1	Leonard	1.62	114	P	Pn	16 39 34.1	+0.2
	baz=295						
TUL1				S	Sn	16 39 56.1	+0.7
	baz=295						
TUL1	Leonard	1.62	114		Pn	16 39 34.3	+0.3
TUL1				IAmb_Lg		16 39 59.2	
	comp=Z,485nm,0.9s						
TUL1	Leonard	1.62	114	P		16 39 34.3	
	baz=295,SNR=162						
TUL1				S		16 39 56.4	
	baz=295						
X34A	Smith Ranch, M	1.99	185	IAmb_Lg		16 40 09.3	
	comp=Z,334nm,0.7s						
R32A	Long Quarter,	2.03	335		Pn	16 39 40.8	+1.1
R32A	Long Quarter,	2.03	335	P		16 39 41.0	
	baz=155,SNR=30						
R32A				S		16 40 08.2	
	baz=155						
WMOK	Wichita Mounta	2.07	208	P	Pn	16 39 40.8	+0.6
	baz=26						
WMOK				S	Sn	16 40 07.3	+0.7
	baz=26						
WMOK	Wichita Mounta	2.07	208		Pn	16 39 40.9	+0.6
WMOK				IAmb_Lg		16 40 11.2	
	comp=Z,520nm,1.0s						
WMOK	Wichita Mounta	2.07	208	P		16 39 40.6	
	baz=26,SNR=925						
U38A	Gravette	2.60	92		Pn	16 39 48.5	+1.0
U38A	Gravette	2.60	92	P		16 39 48.4	
	baz=274						
KSU1	Kansas State U	2.63	17	P	Pn	16 39 48.5	+0.5
	baz=198						
KSU1				S	Sn	16 40 21.7	+1.3
	baz=198						
KSU1	Kansas State U	2.63	17	P		16 39 48.5	
	baz=198,SNR=42						
KSU1				S		16 40 22.0	
	baz=198						
X37A	Clayton	2.70	137		Pn	16 39 49.8	+0.9
X37A	Clayton	2.70	137	P		16 39 49.7	
	baz=318						
CBKS	Cedar Bluff	2.79	324	P	Pn	16 39 50.3	+0.2
	baz=143						
CBKS				S	Sn	16 40 25.5	+1.2
	baz=143						
CBKS	Cedar Bluff	2.79	324	Pn	Pn	16 39 50.4	+0.2
CBKS	Cedar Bluff	2.79	324	P		16 39 50.3	
	baz=143,SNR=40						
HHAR	Hobbs	2.98	95		Pn	16 39 53.3	+0.7
HHAR	Hobbs	2.98	95	P		16 39 53.4	
	baz=277						
Z35A	Perchaven, San	3.26	175		Pn	16 39 56.8	+0.3
Z35A	Perchaven, San	3.26	175	P		16 39 57.2	
	baz=355						
Z35A				S		16 40 37.3	
	baz=355						
W39A	Magazine	3.40	113	P	Pn	16 39 59.4	+0.9
	baz=295						
W39A				S	Sn	16 40 40.0	+0.5
	baz=295						
W39A	Magazine	3.40	113		Pn	16 39 59.4	+0.9
W39A				IAmb_Lg		16 40 57.7	
	comp=Z,238nm,0.7s						
W39A	Magazine	3.40	113	P		16 39 59.3	
	baz=295						
S39A	Bolivar	3.60	71		Pn	16 40 01.6	+0.4
S39A				IAmb_Lg		16 41 02.5	
	comp=Z,234nm,0.7s						
S39A	Bolivar	3.60	71	P		16 40 01.6	
	baz=253,SNR=24						
AMTX	Amarillo	3.72	244	P	Pn	16 40 03.0	+0.1
	baz=62						
AMTX				S	Sn	16 40 48.0	+0.7
	baz=62						
AMTX	Amarillo	3.72	244	Pn	Pn	16 40 03.7	+0.8
AMTX				IAmb_Lg		16 41 08.2	
	comp=Z,194nm,0.8s						
AMTX	Amarillo	3.72	244	P		16 40 03.6	
	baz=62,SNR=22						
U40A	Yellville	3.84	92	P	Pn	16 40 04.8	+0.3
	baz=275						
U40A				S	Sn	16 40 50.5	+0.2
	baz=275						
U40A	Yellville	3.84	92	Pn	Pn	16 40 05.0	+0.4
U40A				IAmb_Lg		16 41 10.6	
	comp=Z,321nm,0.8s						
U40A	Yellville	3.84	92	P		16 40 04.9	
	baz=275,SNR=55						
U40A				P		16 40 04.9	
	baz=275,SNR=55						
U40A				S		16 40 50.3	
	baz=275						
U40A				S		16 40 50.3	
	baz=275						
MIAR	Mount Ida	3.87	121	P	Pn	16 40 05.1	+0.2
	baz=303						
MIAR	Mount Ida	3.87	121	Pn	Pn	16 40 05.5	+0.7
MIAR				IAmb_Lg		16 41 10.2	
	comp=Z,149nm,0.9s						
MIAR	Mount Ida	3.87	121	P		16 40 05.4	
	baz=303,SNR=28						
ABTX	Abilene, Hawle	4.29	204	Pn	Pn	16 40 10.8	+0.1
ABTX	Abilene, Hawle	4.29	204	P		16 40 10.6	
	baz=22						
MGMO	Mountain Grove	4.32	81		Pn	16 40 12.4	+1.2
MGMO				IAmb_Lg		16 41 23.5	
	comp=Z,264nm,0.8s						
P38A	Dawn	4.42	45	Pn	Pn	16 40 12.5	0.0
P38A				IAmb_Lg		16 41 24.9	
	comp=Z,116nm,0.8s						
P38A	Dawn	4.42	45	P		16 40 13.0	
	baz=228						
X40A	Basin Creek Fa	4.42	117		Pn	16 40 13.3	+0.7
X40A				IAmb_Lg		16 41 32.7	
	comp=Z,103nm,0.8s						
X40A	Basin Creek Fa	4.42	117	P		16 40 13.2	
	baz=300,SNR=6.8						
X40A				P		16 40 13.2	
	baz=300,SNR=6.8						
FCAR	Ozark Folk Cen	4.49	97	IAmb_Lg		16 41 31.5	
	comp=Z,86nm,0.7s						
WHAR	Wooly Hollow	4.51	105	IAmb_Lg		16 41 39.0	
	comp=Z,144nm,0.8s						
N35A	Tabor	4.54	19		Pn	16 40 14.3	+0.2
N35A	Tabor	4.54	19	P		16 40 15.1	
	baz=201,SNR=6.9						
W41B	Gary Mavity, V	4.58	106	P		16 40 14.7	
	baz=290,SNR=31						
R40A	Maddies Statio	4.58	67		Pn	16 40 14.7	+0.1
R40A				IAmb_Lg		16 41 27.5	
	comp=Z,119nm,0.8s						
R40A	Maddies Statio	4.58	67	P		16 40 14.9	
	baz=250,SNR=26						
WHTX	Lake Whitney,	4.58	178		Pn	16 40 14.6	-0.2
WHTX	Lake Whitney,	4.58	178	P		16 40 15.4	
	baz=358,SNR=10						
KSCO	Kaye Shedlock’	4.65	303	IAmb_Lg		16 41 37.2	
	comp=Z,88nm,0.7s						
KSCO	Kaye Shedlock’	4.65	303	P		16 40 16.1	
	baz=120,SNR=9.8						
237A	Washetta, Mont	4.81	161	IAmb_Lg		16 41 49.0	
	comp=Z,116nm,0.9s						
BGNE	Belgrade	4.83	355	Pn	Pn	16 40 18.2	0.0
BGNE	Belgrade	4.83	355	P		16 40 18.3	
	baz=175						
MSTX	Muleshoe	4.96	240		Pn	16 40 20.1	+0.1
MSTX	Muleshoe	4.96	240	P		16 40 20.0	
	baz=57						
LCAR	Lake Charles	5.24	94	IAmb_Lg		16 41 53.2	
	comp=Z,187nm,0.8s						
T42A	Van Buren	5.25	83		Pn	16 40 24.8	+0.9
T42A				IAmb_Lg		16 41 56.5	
	comp=Z,164nm,0.9s						
T42A	Van Buren	5.25	83	P		16 40 24.9	
	baz=267,SNR=17						
CCM	Cathedral Cave	5.28	72	IAmb_Lg		16 41 58.7	
	comp=Z,232nm,0.8s						
P40A	Paris	5.29	55	IAmb_Lg		16 41 55.5	
	comp=Z,156nm,0.7s						
NATX	Nacogdoches	5.40	152	IAmb_Lg		16 42 08.1	
	comp=Z,67nm,0.8s						
N38A	Joes South For	5.42	38	IAmb_Lg		16 42 11.4	
	comp=Z,167nm,0.8s						
CCAR	Cane Creek	5.47	117	IAmb_Lg		16 42 14.2	
	comp=Z,103nm,0.8s						
OGNE	Ogallala	5.56	323	IAmb_Lg		16 42 10.0	
	comp=Z,204nm,1.0s						
OGNE	Ogallala	5.56	323	P		16 40 29.4	
	baz=140,SNR=5.2						
PBMO	Poplar Bluff	5.78	86	IAmb_Lg		16 42 17.0	
	comp=Z,144nm,0.9s						
435B	Jarrell	5.79	180	IAmb_Lg		16 42 14.8	
	comp=Z,129nm,0.8s						
SLM	Saint Louis	6.20	69	IAmb_Lg		16 42 24.0	
	comp=Z,144nm,0.8s						
SCIA	State Center	6.32	31	IAmb_Lg		16 42 29.9	
	comp=Z,115nm,0.8s						
JCT	Junction City	6.36	197	IAmb_Lg		16 42 31.7	
	comp=Z,170nm,1.1s						
SDCO	Great Sand Dun	6.40	283	IAmb_Lg		16 42 29.8	
	comp=Z,61nm,1.1s						
N41A	Harden Midland	6.70	50	IAmb_Lg		16 42 40.6	
	comp=Z,162nm,0.9s						
W45A	Hickory Valley	6.99	99	IAmb_Lg		16 43 03.1	
	comp=Z,143nm,0.7s						
OXF	Oxford	7.00	105	IAmb_Lg		16 43 01.9	
	comp=Z,97nm,0.9s						
K38A	Parkersburg	7.11	30	IAmb_Lg		16 42 58.8	
	comp=Z,91nm,0.7s						
Y45A	Yeager Farm, C	7.14	110	IAmb_Lg		16 43 01.4	
	comp=Z,116nm,0.8s						
ANMO	Albuquerque	7.37	260	Pn	Pn	16 40 53.3	0.0
	comp=Z,0.1nm,0.3s,baz=79,slow=16,SNR=1.8						
ANMO				Pg	Pg	16 41 21.4	-4.3
	comp=Z,1.0nm,0.3s,baz=85,slow=16,SNR=16						
ANMO				Lg	Lg	16 42 53.3	
	comp=Z,3.9nm,0.3s,baz=346,slow=17,SNR=7.8						
L40A	Anamosa	7.38	40	IAmb_Lg		16 43 04.1	
	comp=Z,63nm,0.8s						
735A	Kenedy	7.71	181	IAmb_Lg		16 43 23.5	
	comp=Z,50nm,0.8s						
PHWY	Pilot Hill	7.71	310	IAmb_Lg		16 43 21.6	
	comp=Z,42nm,1.0s						
WVT	Waverly	7.91	90	IAmb_Lg		16 43 17.5	
	comp=Z,44nm,0.8s						
PLAL	Pickwick Lake	7.92	99	IAmb_Lg		16 43 16.6	
	comp=Z,51nm,0.8s						
SUSD	Miller	7.92	353	IAmb_Lg		16 43 24.2	
	comp=Z,69nm,0.7s						
Y22D	IRIS PASSCAL I	8.01	254	IAmb_Lg		16 43 36.0	
	comp=Z,115nm,1.0s						
O44A	Mansfield	8.02	61	IAmb_Lg		16 43 20.3	
	comp=Z,99nm,0.8s						
MNTX	Cornudas Mount	8.07	235	P		16 41 02.1	
	baz=51,SNR=14						
146A	Union	8.08	117	IAmb_Lg		16 43 40.7	
	comp=Z,46nm,0.9s						
I37A	Lemond, Waseca	8.09	22	IAmb_Lg		16 43 31.9	
	comp=Z,65nm,0.9s						
L42A	Oliver, Polo	8.20	46	IAmb_Lg		16 43 30.6	
	comp=Z,101nm,0.8s						
T47A	Sharon Grove	8.44	84	IAmb_Lg		16 43 39.8	
	comp=Z,100nm,1.1s						
JFWS	Jewell Farm	8.49	40	IAmb_Lg		16 43 57.1	
	comp=Z,55nm,0.8s						
Z47A	Carrollton	8.54	111	IAmb_Lg		16 43 59.9	
	comp=Z,42nm,0.8s						
TXAR	Lajitas Array	8.84	217	Pn	Pn	16 41 12.2	-1.0
	comp=Z,0.7nm,0.3s,baz=41,slow=11,SNR=6.9						
TXAR				Pg	Pg	16 41 38.7	-15
	comp=Z,1.0nm,0.3s,baz=30,slow=14,SNR=4.6						
TXAR				Lg	Lg	16 43 37.8	
	comp=Z,1.1nm,0.3s,baz=23,slow=28,SNR=1.6						
X48A	Hartselle	8.88	101	IAmb_Lg		16 43 51.5	
	comp=Z,41nm,0.9s						
RSSD	Black Hills	8.98	329	IAmb_Lg		16 44 03.9	
	comp=Z,50nm,1.0s						
I40A	Norwalk	9.04	34		Pn	16 41 14.5	-1.4
SFIN	Lafayette	9.07	62	IAmb_Lg		16 43 51.9	
	comp=Z,96nm,0.7s						
CLTN	Cedars of Leba	9.12	90	IAmb_Lg		16 43 55.6	
	comp=Z,61nm,0.9s						
BLO	Bloomington	9.14	70	IAmb_Lg		16 43 54.0	
	comp=Z,113nm,0.7s						
WCI	Wyandotte Cave	9.16	76	IAmb_Lg		16 44 08.1	
	comp=Z,67nm,0.7s						
K22A	Casper	9.16	314	IAmb_Lg		16 44 19.2	
	comp=Z,43nm,0.9s						
HQIL	Hanson Quary C	9.19	53	IAmb_Lg		16 44 00.2	
	comp=Z,67nm,0.8s						
U49A	Red Boiling Sp	9.52	87	IAmb_Lg		16 44 05.4	
	comp=Z,48nm,0.9s						
Y49A	Blount Mountai	9.56	103	IAmb_Lg		16 44 17.8	
	comp=Z,41nm,0.8s						
SWET	Sewanee	9.58	95	IAmb_Lg		16 44 20.2	
	comp=Z,42nm,0.8s						
PDAR	Pinedale Array	11.08	308	Pn	Pn	16 41 45.2	+1.2
	comp=Z,0.2nm,0.3s,baz=120,slow=15,SNR=5.7						
PDAR				Lg	Lg	16 44 46.3	
	comp=Z,0.4nm,0.3s,baz=105,slow=30,SNR=2.3						
TKL	Tuckaleechee C	11.23	91	Sn	Sn	16 43 53.7	+1.6
	comp=Z,0.5nm,0.3s,baz=258,slow=20,SNR=1.5						
TKL				Lg	Lg	16 44 54.9	
	comp=Z,1.9nm,0.3s,baz=171,slow=10,SNR=4.5						
ULM	Lac du Bonnet	13.72	5	Pn	Pn	16 42 15.4	-4.4
	comp=Z,0.3nm,0.3s,baz=180,slow=13,SNR=2.8						
ULM				Sn	Sn	16 44 40.6	-12
	comp=Z,0.5nm,0.3s,baz=98,slow=21,SNR=3.3						
ULM				Lg	Lg	16 46 09.7	
	comp=Z,0.5nm,0.3s,baz=98,slow=21,SNR=4.5						
SADO	Sadowa	16.20	54	Pn	Pn	16 42 51.6	-1.4
	comp=Z,0.2nm,0.3s,baz=250,slow=14,SNR=2.4						
SADO				Lg	Lg	16 47 28.2	
	comp=Z,0.3nm,0.3s,baz=176,slow=19,SNR=3.4						
ILAR	Eielson Array	40.43	330	P	P	16 46 44.8	+1.1
	comp=Z,0.3nm,0.7s,baz=106,slow=7.0,SNR=3.1						

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*KRNET **14** 16:47:28.0±0.1, 42°88N×78°19E, h24km, mb2.0*
*NNC **14** 16:47:31.6±0.6, 42°92N×77°97E, h0km, mb1.8, mpv2.5, Error ellipse: s-maj=6.6km s-min=2.0km az=178.0*
*SOME **14** 16:47:32.5, 43°00N×77°93E, h5km*
ISC 14 16:47:30.0±1.0, 42°78N±0°03×78°04E±0°02, h18km±3km, n35, σ0ˢ84/65, 8C-4D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
ANVS	Anan'yevo	0.27	270	⇑*e*P	Pb	16 47 36.1	-0.2
	baz=56						
ANVS				⇑*i*S	Sg	16 47 42.4	+1.9
	baz=56						
SATY	Saty	0.39	44	*e*P	Pn	16 47 39.7	-1.2
	0.4nm,0.0s						
SATY				*e*S	Sb	16 47 45.2	+0.9
	9.7nm,0.1s						
SATY	Saty	0.39	44	P	Pn	16 47 39.7	-1.2
	0.4nm,0.0s						
SATY				S	Sb	16 47 45.2	+0.9
	9.7nm,0.1s						
PRZ	Przheval'sk	0.40	138	⇑*e*P	Pg	16 47 36.5	-1.9
	baz=58						
PRZ				⇑*e*S	Sg	16 47 42.9	-1.2
	baz=58						
ZHN	Zhinishke	0.48	37	*e*P	Pb	16 47 40.4	+0.3
	90nm,0.1s						
ZHN				*e*S	Sb	16 47 46.2	-0.7
	4.2nm,0.2s						
ZHN	Zhinishke	0.48	37	P	Pb	16 47 40.4	+0.3
	90nm,0.1s						
ZHN				S	Sb	16 47 46.2	-0.7
	4.2nm,0.2s						
UZB	Uzynbulak	0.81	63	*e*P	Pn	16 47 47.2	+0.5
	3.6nm,0.1s						
UZB				*e*S	Sn	16 47 58.1	-0.2
	3.6nm,0.1s						
UZB	Uzynbulak	0.81	63	P	Pn	16 47 47.2	+0.5
	3.6nm,0.1s						
UZB				S	Sn	16 47 58.1	-0.2
	3.6nm,0.1s						
KOTS	Kotyrbulak	0.81	304	*e*P	Pb	16 47 45.5	-0.3
	0.8nm,0.1s						
KOTS				*e*S	Sb	16 47 54.9	-1.5
	2.2nm,0.1s						
KOTS	Kotyrbulak	0.81	304	P	Pb	16 47 45.5	-0.3
	0.8nm,0.1s						
KOTS				S	Sb	16 47 54.9	-1.5
	2.2nm,0.1s						
TNSS	Tian-Shan	0.84	288	*e*P	Pb	16 47 46.3	0.0
	0.3nm,0.1s						
TNSS				*e*S	Sb	16 47 56.6	-0.8
	2.7nm,0.2s						
TNSS	Tian-Shan	0.84	288	P	Pb	16 47 46.3	0.0
	0.3nm,0.1s						
TNSS				S	Sb	16 47 56.6	-0.8
	2.7nm,0.2s						

KDJ	Kajisay	0.91	224	⇑iP	Pb	16 47 47.5	+0.2
	baz=25						
KDJ				⇑iS	Sn	16 48 01.8	+1.0
	baz=25						
IZV	Izvestkoviy	1.07	284	eP	Pg	16 47 50.9	0.0
	0.4nm,0.1s						
IZV				eS	Sb	16 48 04.2	+0.2
	3.6nm,0.2s						
IZV	Izvestkoviy	1.07	284	P	Pg	16 47 50.9	0.0
	0.4nm,0.1s						
IZV				S	Sb	16 48 04.2	+0.2
	3.6nm,0.2s						
SHLS	Shalkode	1.11	70	eP	Pg	16 47 59.1	+7.5
	1.6nm,0.1s						
SHLS				eS	Sg	16 48 18.6	+12
	3.2nm,0.3s						
SHLS	Shalkode	1.11	70	P	Pg	16 47 59.2	+7.5
	1.6nm,0.1s						
SHLS				S	Sg	16 48 18.6	+12
	3.2nm,0.3s						
PDGK	Podgornoye	1.20	62	P	Pg	16 47 54.0	+0.7
	0.2nm,0.1s						
PDGK				S	Sg	16 48 09.2	+0.3
	0.4nm,0.3s						
PDGK	Podgornoye	1.20	62	⇓P	Pg	16 47 54.0	+0.7
	3.9nm,1.6s						
PDGK				⇓S	Sg	16 48 09.6	+0.7
	0.7nm,0.6s						
MNBS	Baschi	1.32	12	eP	Pg	16 47 54.8	-0.8
	1.2nm,0.1s						
MNBS				eS	Sb	16 48 10.9	-0.1
	2.8nm,0.1s						
MNBS	Baschi	1.32	12	P	Pg	16 47 54.8	-0.8
	1.2nm,0.1s						
MNBS				S	Sb	16 48 10.9	-0.1
	2.8nm,0.1s						
KTBS	Karatobe	1.36	314	eP	Pb	16 47 55.0	0.0
	0.5nm,0.1s						
KTBS				eS	Sn	16 48 10.9	-0.7
	1.8nm,0.1s						
KTBS	Karatobe	1.36	314	P	Pb	16 47 55.0	0.0
	0.5nm,0.1s						
KTBS				S	Sn	16 48 10.9	-0.7
	1.8nm,0.1s						
ULHL	Ulahol	1.43	249	⇑iP	Pb	16 47 56.6	+0.3
	baz=47						
ULHL				⇑iS	Sg	16 48 17.8	+1.5
	baz=47						
ARXS	Arharly	1.44	354	eP	Pb	16 47 56.1	-0.3
	0.6nm,0.1s						
ARXS				eS	Sn	16 48 12.8	-0.9
	2.0nm,0.1s						
ARXS	Arharly	1.44	354	P	Pb	16 47 56.1	-0.3
	0.6nm,0.1s						
ARXS				S	Sn	16 48 12.8	-0.9
	2.0nm,0.1s						
KST	Kastek	1.54	280	eP	Pg	16 47 59.7	-0.1
	0.2nm,0.1s						
KST				eS	Sg	16 48 19.2	-0.7
	0.6nm,0.2s						
KST	Kastek	1.54	280	P	Pg	16 47 59.7	-0.1
	0.2nm,0.1s						
KST				S	Sg	16 48 19.2	-0.7
	0.6nm,0.2s						
KUU	Kurty	1.66	312	eP	Pb	16 48 00.3	+0.2
	0.3nm,0.1s						
KUU				eS	Sb	16 48 20.4	-0.3
	4.7nm,0.2s						
KUU	Kurty	1.66	312	P	Pb	16 48 00.3	+0.2
	0.3nm,0.1s						
KUU				S	Sb	16 48 20.4	-0.3
	4.7nm,0.2s						
TKM2	Tokmak 2	1.80	275	⇓iP	Pn	16 48 01.4	+1.1
	baz=72						
TKM2				⇓iS	Sb	16 48 26.3	+1.5
	baz=72						
KRBS	Karabastau	1.95	299	eP	Pb	16 48 05.8	+0.7
	0.1nm,0.1s						
KRBS				eS	Sb	16 48 29.4	+0.4
	1.7nm,0.3s						
KRBS	Karabastau	1.95	299	P	Pb	16 48 05.8	+0.7
	0.1nm,0.1s						
KRBS				S	Sb	16 48 29.4	+0.4
	1.7nm,0.3s						
KAPS	Kapalarasan	2.68	20	eP	Pb	16 48 18.7	+1.3
	0.1nm,0.1s						
KAPS				eS	Sb	16 48 51.9	+1.9
	1.8nm,0.3s						
KAPS	Kapalarasan	2.68	20	Pg	Pb	16 48 18.7	+1.3
	0.1nm,0.1s						
KAPS				Lg	Lg	16 48 51.9	
	1.8nm,0.3s						

IDC ***14*** *16:54:22.6±0.5, 16°.92S×14°.54W, h0km, mb4.4/22, mb1 4.5/22, mb1mx4.4/33, mbtmp4.4/22, MS4.1/23, Ms1 4.1/23, ms1mx4.1/31, Error ellipse: s-maj=18.4km s-min=12.4km az=153.0*

MOS ***14*** *16:54:23.1±0.8, 16°.88S×14°.52W, h12km, mb4.9/12, Error ellipse: s-maj=16.2km s-min=10.1km az=138.1*

NEIC ***14*** *16:54:24.1±2.1, 16°.89S±0°.09×14°.6W±0°.1, h10km±1km, mb5.3/34, Ms_20 4.7/21, Error ellipse: s-maj=21.9km s-min=4.5km az=130.0*

GCMT ***14*** *16:54:26.1±0.2, 16°.76S±0°.02×14°.42W±0°.01, h12km, MW4.9/107, Moment Tensor Solution. s33,c39; s107,c150; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.85±.08; $M_{\theta\theta}$0.26±.09; $M_{\phi\phi}$-3.11±.06; $M_{r\theta}$0.09±.28; $M_{\theta\phi}$-0.01±.07; $M_{\phi r}$0.76±.24; Best double couple: $M_0$3.07600×10^{16} NP1:ϕ_s178.00000°,δ38.00000°, λ87.00000°. NP2:ϕ_s2.00000°,δ52.00000°,λ92.00000°. Principal axes: T 2.9470, Plg83.0000°, Azm285.0000°; N 0.2610, Plg2.0000°, Azm181.0000°; P -3.2040, Plg7.0000°, Azm90.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

BGR ***14*** *16:54:28.1±0.0, 16°.26S×14°.10W, h10km, mb4.6, Ms4.1*

ISC 14 16:54:24.0±0.3**, 16°.84S**±0°.08×**14°.50W**±0°.06**, h10**km**, n318, σ1**^{s}**.11**/302**, mb4.8**/68**, MS4.4**/36**, 6C, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10S2	ASCENSION HYDR	7.83	359	T	T	17 04 29.4	
	baz=42,slow=74,SNR=322						
H10S3	ASCENSION HYDR	7.84	359	T	T	17 04 25.6	
	baz=178,slow=74,SNR=575						
NBRF	Rio Formoso -	21.68	289	eP	P	16 59 13.8	-1.3
NBPV	Pedro Velho	22.82	295	eP	P	16 59 27.5	+0.1
RCBR	Riachuelo	23.64	295	P	P	16 59 35.7	0.0
	32nm,1.1s,baz=117,slow=12,SNR=9.2						
RCBR				LR	LR	17 06 22.3	
	comp=Z,791nm,21.2s,baz=138,slow=30						
RCBR	Riachuelo	23.64	295	ceP	P	16 59 36.4	+0.7
RCBR				pmax	pmax		
	comp=Z,68nm,1.3s						
RCBR	Riachuelo	23.64	295	P	P	16 59 35.7	0.0
RCBR				IAmb	IAmb	16 59 39.2	
	comp=Z,93nm,1.4s						
RCBR	Riachuelo	23.64	295	eP	P	16 59 35.8	0.0
NBLI	Livramento-PB	23.86	291	eP	P	16 59 37.5	-0.4
GDU01	Guandu, BA	24.38	274	eP	P	16 59 43.3	+0.5
NAN01	Guarapari, ES	24.48	264	eP	P	16 59 43.6	0.0
NBPA	Parau_RN	24.73	294	eP	P	16 59 46.7	+0.8
RIB01	Linhares ES	24.73	260	eP	P	16 59 46.1	+0.2
LIC	Lamto	24.76	23	eP	P	16 59 44.6	-1.4
	comp=Z,46nm,0.9s						
KIC	Kosan Boka	24.99	23	eP	P	16 59 47.8	-0.4
	comp=Z,16nm,0.6s						
TIC	Toumodi	25.15	23	eP	P	16 59 46.1	-3.5
BSFB	Barra de Sao F	25.15	261	eP	P	16 59 49.7	0.0
DBIC	Dimbokro	25.23	23	P	P	16 59 51.5	+1.2
	comp=Z,10nm,0.7s,baz=186,slow=12,SNR=15						
DBIC				LR	LR	17 07 23.2	
	comp=Z,368nm,19.9s,baz=182,slow=31						
DBIC	Dimbokro	25.23	23	P	P	16 59 51.4	+1.1
DBIC				pmax	pmax		
	comp=Z,121nm,1.8s						
DBIC	Dimbokro	25.23	23	P	P	16 59 51.4	+1.1
DBIC				IAmb	IAmb	17 00 02.2	
	comp=Z,120nm,1.8s						
SJMB	Sao Joao De Ma	25.48	262	eP	P	16 59 52.7	+0.1
CAM01	Campos-RJ	26.09	255	eP	P	16 59 59.1	+1.0
NBMO	Morrinhos-CE	28.46	295	eP	P	17 00 20.1	+0.6
JANB	Januaria	28.71	269	eP	P	17 00 21.4	-0.4
SDBA	SAO DESIDERIO	29.73	274	eP	P	17 00 30.9	0.0
IPMB	Ipameri, GO	32.17	263	eP	P	17 00 52.2	-0.1
BDFB	Brasilia	32.18	267	P	P	17 00 52.6	+0.1
	comp=Z,4.5nm,0.7s,baz=68,slow=9.0,SNR=7.6						
BDFB				LR	LR	17 11 24.4	
	comp=Z,1μm,20.7s,baz=97,slow=32						
BDFB	Brasilia	32.18	267	P	P	17 00 52.2	-0.3
BDFB				pmax	pmax		
	comp=Z,87nm,1.9s						
BDFB	Brasilia	32.18	267	P	P	17 00 52.2	-0.3
BDFB				IAmb	IAmb	17 00 54.8	
	comp=Z,87nm,1.9s						
BB19B	Bebedouro	32.42	257	eP	P	17 00 55.8	+1.2
KOWA	Kowa	32.81	19	P	P	17 00 58.5	+0.7
KOWA				IAmb	IAmb	17 01 07.9	
	comp=Z,65nm,1.9s						
PEXB	Peixe	33.04	274	eP	P	17 00 59.7	-0.2
SMTB	Santa Maria do	33.18	280	eP	P	17 01 01.5	+0.3
TOA0	Torodi Ar. Sit	33.82	29	P	P	17 01 06.5	-0.1
TOA0				IAmb	IAmb	17 01 16.2	
	comp=Z,43nm,1.3s						
TORD	Torodi Ar. Bea	33.82	29	P	P	17 01 07.0	+0.4
	comp=Z,15nm,0.8s,baz=212,slow=9.3,SNR=31						
TORD				LR	LR	17 12 51.4	
	comp=Z,646nm,18.8s,baz=210,slow=33						
TORD	Torodi Ar. Bea	33.82	29	P	P	17 01 06.8	+0.1
ITRB	Iturama	34.13	260	eP	P	17 01 09.8	+0.3
PCMB	Pacaembu	34.98	256	eP	P	17 01 17.7	+0.9
ARAG	Araguaiana, MT	35.80	266	eP	P	17 01 24.7	+0.8
TMAB	Tom-Au,PA,Br	36.02	290	eP	P	17 01 26.6	+0.9
PRPB	Parauapebas	36.13	283	eP	P	17 01 27.4	+0.7
CPSB	Cacapava Do Su	37.95	242	eP	P	17 01 43.4	+1.3
BOSA	Boshof	38.33	115	P	P	17 01 44.7	-0.7
	comp=Z,5.2nm,0.9s,baz=286,slow=7.4,SNR=4.7						
BOSA				LR	LR	17 14 48.4	
	comp=Z,640nm,19.6s,baz=278,slow=32						
PLTB	Pedras Altas	38.39	240	eP	P	17 01 47.3	+1.6
MCPB	Macapa, AP	40.45	290	eP	P	17 02 03.8	+0.6
ITQB	Itaqui	40.54	244	eP	P	17 02 05.0	+1.3
CPUP	Villa Florida	40.77	249	P	P	17 02 05.3	-0.3
	comp=Z,3.5nm,0.7s,baz=95,slow=8.3,SNR=8.3						
CPUP				LR	LR	17 16 47.3	
	comp=Z,488nm,19.3s,baz=76,slow=33						
CPUP	Villa Florida	40.77	249	P	P	17 02 05.4	-0.3
CPUP				pmax	pmax		
	comp=Z,76nm,1.9s						
CPUP	Villa Florida	40.77	249	P	P	17 02 05.4	-0.3
MATP	Matopo	40.82	102	P	P	17 02 06.5	+0.2
	comp=Z,4.7nm,0.9s,baz=274,slow=11,SNR=7.0						
LSZ	Lusaka	40.99	94	P	P	17 02 08.6	+0.8
LSZ				pmax	pmax		
	comp=Z,45nm,1.9s						
LSZ				MLR	MLR		
	comp=Z,1μm,19.0s						
LSZ	Lusaka	40.99	94	P	P	17 02 08.6	+0.8
LSZ	Lusaka	40.99	94	IAMs_20	IAMs_20	17 17 32.1	
	comp=Z,1μm,19.0s						
NPGB	Novo Progresso	41.06	279	eP	P	17 02 09.2	+0.9
MALB	Monte Alegre	41.84	287	eP	P	17 02 15.3	+0.8
ITTB	Itaituba	42.28	282	eP	P	17 02 18.8	+0.6
VILB	Vilhena	44.26	269	eP	P	17 02 35.1	+0.8
SIV	San Ignacio	44.60	264	P	P	17 02 37.2	+0.2
	comp=Z,2.7nm,0.8s,baz=92,slow=11,SNR=9.5						
MBAR	Mbarara	47.36	75	i P	P	17 03 00.7	+1.8
MBAR				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MBAR	Mbarara	47.36	75	IAMs_20	IAMs_20	17 20 22.3	
	comp=Z,482nm,20.0s						
PTGA	Pitinga	47.53	285	P	P	17 03 00.9	+0.8
PTGA				IAmb	IAmb	17 03 03.3	
	comp=Z,36nm,1.2s						
PTGA				IAMs_20	IAMs_20	17 20 44.3	
	comp=Z,787nm,21.0s						
PTGA	Pitinga	47.53	285	eP	P	17 03 00.7	+0.6
SAML	Samuel	48.00	273	ceP	P	17 03 05.1	+1.4
SAML				pmax	pmax		
	comp=Z,28nm,1.3s						
SAML	Samuel	48.00	273	P	P	17 03 05.0	+1.4
SAML				IAmb	IAmb	17 03 07.0	
	comp=Z,48nm,1.5s						
SAML	Samuel	48.00	273	eP	P	17 03 04.6	+0.9
EFI	East Falkland	48.90	215	i P	P	17 03 10.1	+0.1
EFI				pmax	pmax		
	comp=Z,36nm,1.0s						
ETMB	Extrema	50.69	271	eP	P	17 03 24.8	+0.5
LPAZ	La Paz	51.27	262	P	P	17 03 28.0	-1.3
	comp=Z,1.0nm,0.8s,baz=210,slow=7.8,SNR=3.9						
LPAZ				LR	LR	17 24 21.3	
	comp=Z,717nm,19.0s,baz=118,slow=35						
LPAZ	La Paz	51.27	262	eP	P	17 03 28.8	-0.5
AC02	Maricunga	51.35	249	P	P	17 03 29.0	-0.7
AC02				IAmb	IAmb	17 03 31.4	
	comp=Z,54nm,1.4s						
PB08	IPOC Station P	51.75	257	P	P	17 03 29.0	-3.6
GO02	Mina Guanaco	51.80	251	P	P	17 03 30.3	-2.6
PB01	IPOC Station P	51.98	256	P	P	17 03 32.5	-1.4
CO01	Juntas del Tor	52.22	245	P	P	17 03 36.3	+0.4
PB07	IPOC Station P	52.28	255	P	P	17 03 35.8	-0.5
PB07				IAmb	IAmb	17 03 37.0	
	comp=Z,38nm,1.0s						
AC05	El Transito	52.36	246	P	P	17 03 36.9	+0.2
AC05				IAmb	IAmb	17 03 38.4	
	comp=Z,49nm,1.2s						
PB04	IPOC Station P	52.48	255	P	P	17 03 35.9	-1.9
PB04				IAmb	IAmb	17 03 39.5	
	comp=Z,65nm,1.4s						
PB14	IPOC Station P	52.56	252	P	P	17 03 38.5	0.0
AC01	Pan de Azucar	52.68	250	P	P	17 03 38.9	-0.1
LCO	Las Campanas	52.74	246	P	P	17 03 39.4	-0.3
LCO				pmax	pmax		
	comp=Z,187nm,1.9s						
LCO	Las Campanas	52.74	246	P	P	17 03 39.4	-0.3
GO04	Tololo Observa	52.84	245	P	P	17 03 39.4	-1.0
BO02	Sierra Bellavi	53.06	239	P	P	17 03 39.1	-2.6
BO02				IAmb	IAmb	17 03 43.3	
	comp=Z,39nm,1.3s						
KMBO	Kilima Mbogo	53.24	79	P	P	17 03 45.7	+2.1
	comp=Z,2.4nm,0.7s,baz=232,slow=8.6,SNR=2.0						
KMBO				LR	LR	17 24 38.9	
	comp=Z,420nm,19.2s,baz=272,slow=34						
PLCA	Paso Flores	53.59	232	P	P	17 03 44.9	-0.7
	comp=Z,6.0nm,1.2s,baz=81,slow=3.6,SNR=4.4						
PLCA				LR	LR	17 24 03.5	
	comp=Z,541nm,19.5s,baz=87,slow=33						
PLCA	Paso Flores	53.59	232	eP	P	17 03 44.9	-0.7
BI02	San Fabin de	53.62	237	P	P	17 03 45.3	-0.6
VNA1	Neumayer--Stat	53.93	177	P	P	17 03 47.4	0.0
VNA2	Neumayer--Watz	54.24	177	P	P	17 03 49.8	0.0
	baz=351,slow=12						
LC01	Cunco	54.34	234	P	P	17 03 50.7	-0.4
LC01				IAmb	IAmb	17 03 52.3	
	comp=Z,57nm,1.7s						
VNA3	Neumayer Olymp	54.47	178	P	P	17 03 49.8	-1.6
SNAA	Sanae	55.26	176	P	P	17 03 57.1	0.0
SNAA	Sanae	55.26	176	P	P	17 03 56.6	-0.6
	comp=Z,4.5nm,1.0s,baz=356,slow=10,SNR=4.5						
SNAA	Sanae	55.26	176	i P	P	17 03 57.2	0.0
SNAA				pmax	pmax		
	comp=Z,9.0nm,1.2s						
KEST	Kesra	56.96	23	P	P	17 04 11.1	+1.3
	comp=Z,11nm,0.9s,baz=252,slow=3.8,SNR=8.6						
KEST				LR	LR	17 27 23.5	
	comp=Z,198nm,21.2s,baz=243,slow=35						
KEST	Kesra	56.96	23	P	P	17 04 11.8	+2.0
CZSB	Cruzeiro do Su	57.42	272	eP	P	17 04 13.4	-0.1
PTGC	Puerto Gaitan,	60.64	285	eP	P	17 04 33.0	-2.8
SOCV	Socops	61.06	290	eP	P	17 04 39.1	+0.5
SDV	Santo Domingo	61.11	290	P	P	17 04 39.4	+0.2
SDV	Santo Domingo	61.11	290	IAMs_20	IAMs_20	17 31 30.4	
	comp=Z,413nm,18.0s						
SDV	Santo Domingo	61.11	290	eP	P	17 04 39.5	+0.3
SDV	Santo Domingo	61.11	290	eP	P	17 04 40.4	+1.2
TAMC	Tame, Arauca	61.17	287	eP	P	17 04 39.5	+0.1
PTLC	Puerto Leguiza	61.73	280	eP	P	17 04 40.8	-2.4
CEL	Celeste	61.79	27	IAMs_20	IAMs_20	17 30 45.4	
	comp=Z,489nm,20.0s						
BELA	Belgrano 2	61.87	185	P	P	17 04 42.9	-0.2
SYO	Syowa Base	61.90	161	⇑iP	P	17 04 42.2	-1.2
RUSC	La Rusia	62.15	286	eP	P	17 04 47.8	+1.2
PAMC	Pamplona, Colo	62.35	288	eP	P	17 04 48.1	+0.2
ROSC	El Rosal	62.90	285	P	P	17 04 51.8	+0.3
	comp=Z,5.2nm,0.3s,baz=121,slow=7.5,SNR=10.0						
ROSC				LR	LR	17 30 58.6	
	comp=Z,505nm,18.8s,baz=76,slow=35						
ROSC	El Rosal	62.90	285	eP	P	17 04 53.1	+1.6
FLOC	Florencia	63.00	281	eP	P	17 04 52.5	+0.7
ORTC	Ortega, Tolima	63.42	283	eP	P	17 04 54.3	-0.2
NORC	Norcasia	63.67	285	eP	P	17 04 53.5	-2.7
TOLC	Tolima	63.73	284	eP	P	17 04 56.8	-0.2
PCON	Cinco Dias	63.95	281	eP	P	17 05 00.4	+1.7
POPC	Popayan, Colom	64.29	281	eP	P	17 05 00.7	+0.2
ZARC	Zaragoza, Cauc	64.39	287	eP	P	17 04 59.3	-1.6
YOTC	Yotoco, Valle	64.48	283	eP	P	17 04 50.1	-12
OTAV	Otavalo	65.21	278	ceP	P	17 05 08.6	+1.8
OTAV				pmax	pmax		
	comp=Z,22nm,2.5s						
OTAV	Otavalo	65.21	278	IAMs_20	IAMs_20	17 31 06.6	
	comp=Z,612nm,21.0s						
DBBC	Dabeiba	65.45	286	⇑eP	P	17 05 03.4	-4.5
DAVA	Damuels	67.48	18	eP	P	17 05 20.2	-0.1
	comp=Z,14nm,1.4s						
FETA	Feichten	67.50	18	eP	P	17 05 20.1	-0.3
	comp=Z,8.6nm,1.2s						
VISS	Visnje	67.78	22	eP	P	17 05 22.8	+0.9
ABTA	Abfaltersbach	67.81	20	eP	P	17 05 22.6	+0.4
	comp=Z,7.1nm,1.2s						
SQTA	Sankt Quirin	67.82	19	eP	P	17 05 22.9	+0.6
	comp=Z,7.1nm,1.0s						
MOTA	Moosalm	67.90	18	eP	P	17 05 23.2	+0.3
	comp=Z,6.4nm,0.9s						
UBR	Ueberruh	67.91	18	eP	P	17 05 23.0	+0.2
	comp=Z,5.3nm,0.9s,baz=206,slow=6.7						
RETA	Reutte	67.92	18	eP	P	17 05 23.4	+0.4
	comp=Z,8.2nm,1.4s						
WTTA	Wattenberg	67.99	19	eP	P	17 05 24.5	+1.0
	comp=Z,7.4nm,0.9s						
BFO	Black Forest	68.00	16	eP	P	17 05 23.4	+0.1
	comp=Z,2.8nm,0.8s,baz=206,slow=6.7						
BFO				eL	L	17 31 45.0	
	comp=Z,74nm,21.9s						
WATA	Walderalm	68.04	19	eP	P	17 05 24.5	+0.7
	comp=Z,6.0nm,1.1s						
MYKA	Terra Mystica	68.08	21	eP	P	17 05 25.6	+1.7
	comp=Z,4.3nm,1.0s						
OBKA	Obir	68.28	21	eP	P	17 05 26.7	+1.5
	comp=Z,2.2nm,0.7s						
DIVS	Divibare	68.34	26	P	P	17 05 25.8	+0.1
SOKA	Soboth	68.60	21	eP	P	17 05 27.4	+0.2
	comp=Z,5.3nm,0.9s						
FUR	Furstenfeldbru	68.69	18	eL	L	17 35 13.9	
	comp=Z,99nm,19.6s						
ARSA	Arzberg	69.26	21	eP	P	17 05 32.1	+0.9
	comp=Z,3.3nm,0.7s						
MOA	Molln	69.35	20	eP	P	17 05 32.4	+0.6
	comp=Z,8.8nm,1.4s						
MAW	Mawson	69.75	157	LR	LR	17 32 09.5	
	comp=Z,108nm,18.1s,baz=240,slow=32						
TNS	Taunus Mts	69.77	15	eL	L	17 30 10.3	
	comp=Z,114nm,18.7s						
CONA	Conrad Observa	69.96	21	eP	P	17 05 35.1	-0.5
	comp=Z,9.2nm,1.7s						
GEC2	GERESS Array S	70.04	19	eP	P	17 05 36.8	+0.7
	comp=Z,1.8nm,0.8s,baz=206,slow=6.7						
GEC2				eL	L	17 35 59.5	
	comp=Z,185nm,18.0s						
GERES	GERESS Array B	70.04	19	P	P	17 05 36.8	+0.7
	comp=Z,1.4nm,0.8s,baz=194,slow=4.6,SNR=9.9						
GERES				LR	LR	17 36 18.8	
	comp=Z,156nm,18.7s,baz=212,slow=36						
GERES	GERESS Array B	70.04	19	P	P	17 05 35.9	-0.2
GERES	GERESS Array B	70.04	19	P	P	17 05 35.9	-0.2
GRF	Grafenberg Arr	70.04	17	eP	P	17 05 37.9	+1.9
	comp=Z,3.3nm,0.7s,baz=206,slow=6.7						
GRF				eL	L	17 33 12.1	
	comp=Z,115nm,20.1s						
WET	Wettzell	70.04	19	eP	P	17 05 36.5	+0.4
	comp=Z,3.0nm,0.9s,baz=206,slow=6.7						
WET				eL	L	17 36 43.1	
	comp=Z,90nm,20.3s						
CKRC	Cesky Krumlov	70.21	20	eP	P	17 05 36.4	-0.7
KHC	Kasperske Hory	70.25	19	eP	P	17 05 39.0	+1.7
KHC	Kasperske Hory	70.25	19	eP	P	17 05 39.0	+1.7
ROTZ	Rotzenmuhle	70.39	18	eP	P	17 05 39.0	+0.9
	comp=Z,2.8nm,0.8s,baz=206,slow=6.7						
MODS	Modra-Piesok	70.84	22	eP	P	17 05 41.1	+0.2
MODS				pmax	pmax		
	comp=Z,22nm,1.3s						
MODS	Modra-Piesok	70.84	22	eP	P	17 05 41.1	+0.2
RAYN	Ar Rayn	71.02	57	P	P	17 05 43.1	+0.5
RAYN				pmax	pmax		
	comp=Z,19nm,1.7s						
RAYN				MLR	MLR		
	comp=Z,300nm,21.0s						
RAYN	Ar Rayn	71.02	57	P	P	17 05 43.1	+0.5
RAYN				IAMs_20	IAMs_20	17 33 06.1	
	comp=Z,344nm,21.0s						
KOLL	Kolacno	71.42	22	eP	P	17 05 45.0	+0.7
VYHS	Vyhne	71.50	23	eP	P	17 05 46.2	+1.3
VYHS				pmax	pmax		
	comp=Z,9.0nm,1.2s						
VYHS	Vyhne	71.50	23	eP	P	17 05 46.2	+1.3
BRG	Berggiesshubel	71.89	19	eP	P	17 05 47.3	+0.1
BRG				Amp		17 05 52.8	
	comp=Z,2.1nm,0.8s						
BR131	Keskin Array S	71.96	37	i P	P	17 05 48.8	+0.7
BRTR	Keskin Array B	71.96	37	P	P	17 05 49.0	+1.0
	comp=Z,2.9nm,0.8s,baz=208,slow=5.6,SNR=14						
BRTR				LR	LR	17 37 43.7	
	comp=Z,44nm,19.6s,baz=232,slow=36						
BRTR	Keskin Array B	71.96	37	i P	P	17 05 49.2	+1.1
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BRTR	Keskin Array B	71.96	37	P	P	17 05 48.5	+0.4
CLL	Collm	72.00	18	eL	L	17 36 38.4	
	comp=Z,114nm,20.3s						
MLR	Muntele Rosu	72.06	29	P	P	17 05 48.5	0.0
MLR				pmax	pmax		
	comp=Z,57nm,1.9s						
MLR	Muntele Rosu	72.06	29	P	P	17 05 48.5	0.0
MLR				IAmb	IAmb	17 06 52.6	
	comp=Z,57nm,1.9s						
DPC	Dobruska-Polom	72.19	20	eP	P	17 05 49.0	-0.1
DPC	Dobruska-Polom	72.19	20	eP	P	17 05 49.0	-0.1
CHVC	Chvalec	72.31	20	eP	P	17 05 49.7	0.0
OSTC	Ostas	72.34	20	eP	P	17 05 50.8	+0.9
CRVS	Cervenica-Dubn	72.83	24	eP	P	17 05 58.5	+5.6
CRVS	Cervenica-Dubn	72.83	24	e	P	17 05 58.5	+5.6
QSPA	South Pole Qui	73.33	180	P	P	17 05 56.7	+0.9
SOCY	Socotra	73.56	72	IAMs_20	IAMs_20	17 35 44.9	
	comp=Z,388nm,20.0s						
AKASG	Malin Array Be	77.41	27	P	P	17 06 19.0	-0.2
	comp=Z,3.1nm,0.8s,baz=220,slow=4.9,SNR=11						
AKASG				LR	LR	17 40 35.2	
	comp=Z,37nm,19.7s,baz=250,slow=36						
AKBB	Malin Array Si	77.41	27	i P	P	17 06 19.1	-0.1
L63A	North Scituate	78.64	320	P	P	17 06 27.2	+1.0
	baz=125						
U61A	Possum Corner	78.83	313	P	P	17 06 29.5	+2.2
	baz=121						
GNI	Garni	79.02	42	i P	P	17 06 29.4	+0.8
GNI				pmax	pmax		
	comp=Z,15nm,1.6s						
F64A	Sherman	79.12	325	P	P	17 06 29.0	+0.2
	baz=128						
J63A	Strafford	79.13	322	P	P	17 06 30.3	+1.4
	baz=126						
E64A	Bridgewater	79.18	326	P	P	17 06 29.7	+0.6
	baz=129						
Z59A	Georgetown, SC	79.35	310	P	P	17 06 30.4	+0.1
	baz=118						
F63A	Nahmakanta, Br	79.44	324	P	P	17 06 31.6	+1.0
	baz=128						
E63A	Oxbow	79.50	325	P	P	17 06 32.2	+1.3
	baz=128						
NACGM	Naroch	79.60	23	i P	P	17 06 32.0	+0.9
NACGM				i P	P	17 06 32.0	+0.9
NACGM				i P	P	17 06 32.0	+0.9
NACGM				i PP	PP	17 09 43.5	+11
NACGM				i PPP	PPP	17 11 33.9	
NACGM				i S	S	17 16 48.9	+16
NACGM				i PS	PnS	17 18 09.7	+53
NACGM				i SS	SS	17 22 40.2	+59
NACGM				i SSS	SSS	17 25 56.3	
NACGM				i LQ	LQ	17 38 42.7	
NACGM				i LR	LR	17 44 27.6	
L61B	Northampton	79.63	320	P	P	17 06 32.5	+0.8
	baz=124						
M61A	Granite Spring	79.67	319	P	P	17 06 32.7	+0.8
	baz=123						

N61A	South Mountain	79.70	318	P	P	17 06 32.4	+0.4
	baz=123						
MNK	Minsk	79.70	24	iP	P	17 06 29.2	-2.6
	comp=E,1.0nm,0.9s						
MNK				iP	P	17 06 29.2	-2.6
	comp=N,4.0nm,0.9s						
MNK				iP	P	17 06 29.2	-2.6
	comp=Z,10.0nm,0.9s						
MNK				iPcP	pwP	17 06 36.6	-1.7
MNK				iPP	PP	17 09 30.0	-3.1
MNK				iPPP	PPP	17 11 18.9	
MNK				iS	S	17 16 31.4	-2.7
MNK				iScS	ScS	17 16 53.2	-2.4
MNK				iSS	SS	17 21 24.0	-19
MNK				iSSS	SSS	17 24 50.3	
MNK				iLQ	LQ	17 35 25.8	
MNK				iLR	LR	17 37 32.8	
MNK				iLRM	MLR	17 43 43.7	
	comp=E,6.0nm,17.4s						
MNK				iLRM	MLR	17 43 43.7	
	comp=N,85nm,17.4s						
MNK				iLRM	MLR	17 43 59.5	
	comp=Z,99nm,17.4s						
D63A	Stockholm	79.71	326	P	P	17 06 32.8	+0.8
	baz=129						
SHA1	Shidzhatmaz	79.74	38	iP	P	17 06 33.7	+1.2
V59A	Middlesex	79.80	312	P	P	17 06 33.8	+1.1
	baz=120						
KBZ	Khabaz	79.88	38	P	P	17 06 33.7	+0.8
	comp=Z,2.9nm,0.9s,baz=253,slow=5.2,SNR=8.9						
KBZ				LR	LR	17 41 48.7	
	comp=Z,34nm,19.8s,baz=197,slow=36						
KBZ	Khabaz	79.88	38	iP	P	17 06 33.3	+0.4
KBZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KIV	Kislovodsk	79.88	38	eP	P	17 06 33.2	+0.1
KIV				pmax	pmax		
	comp=Z,28nm,1.1s						
H62A	Milan	79.93	323	P	P	17 06 34.7	+1.4
	baz=126						
P60A	Greenville	80.07	317	P	P	17 06 35.3	+1.2
	baz=122						
K61A	Williamstown	80.11	320	P	P	17 06 35.9	+1.7
	baz=124						
W58A	Raeford	80.16	311	P	P	17 06 36.1	+1.4
	baz=119						
I61A	Oroboro, Fairl	80.18	322	P	P	17 06 36.1	+1.5
	baz=125						
O60A	Telford	80.19	317	P	P	17 06 36.1	+1.4
	baz=122						
M60A	Port Jervis	80.22	318	P	P	17 06 35.9	+1.0
	baz=123						
N60A	Cedar Hill Far	80.28	318	P	P	17 06 36.3	+1.1
	baz=122						
NB2	NORSAR Subarra	80.30	12	P	P	17 06 35.8	+0.9
	comp=Z,37nm,2.0s,baz=207,slow=5.6						
NB2	NORSAR Subarra	80.30	12	P	P	17 06 35.8	+0.9
	baz=207,slow=5.6						
NOA	NORSAR Array B	80.30	12	P	P	17 06 35.3	+0.4
	comp=Z,1.4nm,0.9s,baz=192,slow=7.9,SNR=4.9						
NOA				LR	LR	17 43 33.2	
	comp=Z,42nm,18.2s,baz=190,slow=37						
U58A	Oxford	80.33	313	P	P	17 06 36.8	+1.2
	baz=119						
H61A	Lyndonville	80.36	322	P	P	17 06 36.0	+0.4
	baz=125						
J60A	Lant Hill Farm	80.52	321	P	P	17 06 36.8	+0.3
	baz=124						
G61A	St-Isidore-de-	80.56	323	P	P	17 06 37.4	+0.8
	baz=126						
T58A	Grand View Acr	80.59	313	P	P	17 06 36.8	-0.2
	baz=119						
R58B	Mineral	80.63	314	P	P	17 06 38.0	+0.8
	baz=120						
E61A	Lac Etchemin	80.65	324	P	P	17 06 37.7	+0.6
	baz=127						
F61A	St Evariste	80.66	324	P	P	17 06 37.0	-0.2
	baz=126						
O59A	Robesonia	80.69	317	P	P	17 06 36.7	-0.8
	baz=122						
N59A	State Game Lan	80.74	318	P	P	17 06 38.4	+0.6
	baz=122						
I60A	Shoreham	80.78	321	P	P	17 06 38.3	+0.5
	baz=124						
H60A	Morristown	80.83	322	P	P	17 06 38.6	+0.5
	baz=125						
M59A	Waymart	80.85	318	P	P	17 06 39.0	+0.7
	baz=122						
R58A	Rapidan	80.88	315	P	P	17 06 39.0	+0.5
	baz=120						
U57A	Blanch	80.90	312	P	P	17 06 38.8	+0.2
	baz=119						
G60A	Masonville	80.92	323	P	P	17 06 39.3	+0.8
	baz=125						
D61A	St Aubert, Com	80.94	325	P	P	17 06 39.3	+0.7
	baz=127						
L59A	Walton	80.95	319	P	P	17 06 39.1	+0.3
	baz=123						
V57A	Coltrane Farms	80.96	312	P	P	17 06 39.3	+0.4
	baz=118						
Q58A	Fox Den Farm,	80.99	315	P	P	17 06 39.7	+0.7
	baz=120						
P58A	Pank, Wackersv	81.01	316	P	P	17 06 39.2	+0.1
	baz=121						
O58A	Lewisberry	81.08	317	P	P	17 06 40.6	+1.1
	baz=121						
I59A	Olmsteadville	81.10	321	P	P	17 06 40.1	+0.5
	baz=124						
K59A	Cooperstown	81.14	320	P	P	17 06 40.7	+0.9
	baz=123						
E60A	Ste Agathe de	81.15	324	P	P	17 06 40.1	+0.3
	baz=126						
D60A	Saint Jean D'O	81.17	325	P	P	17 06 40.6	+0.8
	baz=126						
W56A	Indian Trail	81.19	311	P	P	17 06 40.5	+0.3
	baz=118						
S57A	Dark Hollow, R	81.27	314	P	P	17 06 42.2	+1.6
	baz=119						
N58A	Sunbury	81.31	317	P	P	17 06 42.3	+1.5
	baz=121						
L58A	Harry Jones Me	81.38	319	P	P	17 06 41.7	+0.5
	baz=122						
G59A	Clarenceville	81.40	322	P	P	17 06 42.9	+1.8
	baz=124						
V56A	Mocksville	81.44	311	P	P	17 06 43.1	+1.6
	baz=118						
H59A	Cadyville	81.46	322	P	P	17 06 41.9	+0.5
	baz=124						
P57A	Homestead Farm	81.48	316	P	P	17 06 43.5	+1.8
	baz=120						
Q57A	Strasburg	81.53	315	P	P	17 06 43.3	+1.4
	baz=120						
O57A	Amberson	81.59	316	P	P	17 06 43.7	+1.4
	baz=120						
F59A	Saint Guilaume	81.61	323	P	P	17 06 42.7	+0.6
	baz=125						
H58A	Gabriels	81.63	321	P	P	17 06 43.7	+1.3
	baz=124						
K58A	Earlville	81.63	319	P	P	17 06 43.8	+1.3
	baz=122						
S56A	Natural Bridge	81.66	313	P	P	17 06 43.1	+0.4
	baz=119						
T56A	Rocky Mt	81.68	313	P	P	17 06 44.1	+1.3
	baz=118						
I58A	Old Forge	81.71	320	P	P	17 06 44.5	+1.6
	baz=123						
KMSC	Kings Mountain	81.74	310	P	P	17 06 44.2	+1.1
	baz=117						
WSAR	Wadi Sarin	81.80	63	P	P	17 06 44.7	+1.0
	comp=Z,6.2nm,0.9s,baz=236,slow=3.6,SNR=4.5						
N57A	Milroy	81.81	317	P	P	17 06 44.1	+0.7
	baz=121						
M57A	Sunshine Farm,	81.83	318	P	P	17 06 44.6	+1.1
	baz=121						
G58A	Ormstown	81.96	322	P	P	17 06 44.8	+0.8
	baz=124						
L57A	Andrews Acres	81.99	318	P	P	17 06 46.0	+1.6
	baz=121						
P56A	Dayton Farm, R	82.05	315	P	P	17 06 46.1	+1.4
	baz=120						
Q56A	Snyder Ridge,	82.06	315	P	P	17 06 46.5	+1.7
	baz=119						
K57A	Scipio Center	82.16	319	P	P	17 06 46.4	+1.2
	baz=122						
E58A	La Victoria	82.19	323	P	P	17 06 45.8	+0.5
	baz=124						
D58A	Chemin du LacG	82.37	324	P	P	17 06 46.6	+0.4
	baz=125						
H57A	Richville	82.38	321	P	P	17 06 48.0	+1.7
	baz=123						
G57A	Newington	82.48	322	P	P	17 06 47.4	+0.6
	baz=123						
L56A	Greenwood	82.52	318	P	P	17 06 48.1	+1.0
	baz=121						
M56A	Emporium	82.59	317	P	P	17 06 47.9	+0.4
	baz=120						
J56A	Wolcott	82.66	319	P	P	17 06 48.9	+1.1
	baz=121						
E57A	Chemin Saint G	82.71	323	P	P	17 06 48.3	+0.3
	baz=124						
U54A	Nelsons Funny	82.72	311	P	P	17 06 49.9	+1.6
	baz=117						
S54A	Dingess, Beckl	82.94	313	P	P	17 06 50.3	+0.8
	baz=118						
E56A	St. Veronique	83.29	323	P	P	17 06 51.2	+0.2
	baz=123						
D56A	ZEC Mazanza, M	83.41	323	P	P	17 06 51.2	-0.4
	baz=123						
N54A	Moraine State	83.52	316	P	P	17 06 52.1	-0.2
	baz=119						
M54A	Oil Creek Stat	83.57	317	P	P	17 06 52.6	0.0
	baz=119						
Q53A	Leroy	83.58	314	P	P	17 06 53.3	+0.7
	baz=118						
D55A	Sainte-Anne-du	83.80	323	P	P	17 06 53.9	+0.3
	baz=123						
E55A	Montcerf-Lytto	83.84	322	P	P	17 06 54.6	+0.8
	baz=122						
O53A	New Philadelph	84.00	315	P	P	17 06 55.5	+0.7
	baz=118						
L53A	Girard	84.18	317	P	P	17 06 56.3	+0.7
	baz=119						
M53A	WI Miller and	84.20	316	P	P	17 06 56.1	+0.3
	baz=118						
P52A	Corning	84.35	314	P	P	17 06 57.2	+0.7
	baz=117						
FINES	FINESS Array B	84.43	18	P	P	17 06 57.2	+0.8
	comp=Z,2.7nm,0.9s,baz=212,slow=4.9,SNR=2.3						
FINES				LR	LR	17 45 27.4	
	comp=Z,57nm,19.2s,baz=204,slow=36						
G54A	Lake Saint Pet	84.50	321	P	P	17 06 57.4	+0.2
	baz=121						
MOS	Moscow	84.54	27	eP	P	17 06 58.0	+0.9
I51A	Listowel	85.55	318	P	P	17 07 02.6	+0.1
	baz=118						
VNDA	Vanda	85.81	179	P	P	17 07 03.3	0.0
	comp=Z,2.6nm,0.9s,baz=172,slow=4.0,SNR=3.1						
GEYT	Alibeck	87.13	49	LR	LR	17 45 02.9	
	comp=Z,102nm,19.6s,baz=55,slow=35						
BELG	Belogornoye	87.31	33	iP	P	17 07 11.0	+0.1
BELG				pmax	pmax		
	comp=Z,2.0nm,1.2s						
S44A	Carbondale	88.60	310	P	P	17 07 16.4	-1.0
S44A				IAmb	IAmb	17 07 17.7	
	comp=Z,17nm,1.0s						
W41B	Gary Mavity, V	89.92	307	P	P	17 07 23.6	-0.1
	baz=111						
FRB	Frobisher Bay	90.45	339	LR	LR	17 42 34.2	
	comp=Z,60nm,19.7s,baz=359,slow=32						
ARCES	ARCESS Array B	90.66	13	LR	LR	17 48 34.8	
	comp=Z,50nm,18.3s,baz=225,slow=36						
U40A	Yellville	90.80	308	P	P	17 07 27.3	-0.5
	baz=110						
HKT	Hockley	91.02	301	iP	P	17 07 29.8	+0.9
HKT				pmax	pmax		
	comp=Z,7.0nm,1.4s						
W39A	Magazine	91.11	306	P	P	17 07 29.6	+0.3
	baz=110						
HHAR	Hobbs	91.60	307	P	P	17 07 30.0	-1.5
HHAR				IAmb	IAmb	17 07 32.6	
	comp=Z,21nm,1.4s						
TXAR	Lajitas Array	97.37	298	LR	LR	17 54 09.9	
	comp=Z,18nm,19.2s,baz=0.0,slow=37						
ULM	Lac du Bonnet	97.39	320	LR	LR	17 45 27.1	
	comp=Z,87nm,18.4s,baz=94,slow=32						
WMQ	Urumqi	110.19	49	ePKP	PKiKP	17 12 56.3	-0.1
KULM	Kulim	115.57	92	IAMs_20	IAMs_20	17 58 28.6	
	comp=Z,276nm,19.0s						
IPM	Ipoh	115.70	93	IAMs_20	IAMs_20	17 54 48.2	
	comp=Z,223nm,20.0s						
GTA	Gaotai	119.18	54	PKP	PKPdf	17 13 13.1	-0.7
GTA				LR	LR		
	comp=Z,88nm,20.0s						
GTA				LR	LR		
	comp=Z,200nm,21.8s						
GTA				LR	LR		
	comp=Z,130nm,20.4s						
BMAR	Burnt Mountain	120.24	340		PKPdf	17 13 13.5	-1.5
KMI	Kunming	121.26	71	⇑PKP	PKPdf	17 13 13.6	-4.8
KMI				sPKP		17 13 23.9	
ILAR	Eielson Array	122.47	338	PKP	PKPdf	17 13 18.4	-0.8
	comp=Z,0.8nm,0.9s,baz=350,slow=1.4,SNR=6.6						
LZH	Lanzhou	122.48	58	ePKP	PKiKP	17 13 21.0	+0.5
SONM	Songino Array	122.96	44	PKP	PKPdf	17 13 20.5	-0.4
	comp=Z,0.9nm,0.8s,baz=230,slow=1.2,SNR=5.3						
RAGM	Ragged Mountai	123.83	333		PKPdf	17 13 19.9	-2.1
SBUM	Sibu	125.75	99	IAMs_20	IAMs_20	18 00 13.9	
	comp=Z,271nm,20.0s						
HHC	Hu-ho-hao-te	127.97	51	ePKP	PKiKP	17 13 32.3	+1.1
TNA	Tin City	128.18	346		PKiKP	17 13 30.4	-0.3
ASAR	Alice Springs	129.27	142	PKP	PKPdf	17 13 33.2	-0.4
	comp=Z,0.7nm,0.8s,baz=197,slow=1.5,SNR=7.4						
ASAR	Alice Springs	129.27	142	PKIKP	PKPdf	17 13 33.0	-0.6
ASAR	Alice Springs	129.27	142		PKPdf	17 13 33.0	-0.6
NJ2	Nanjing	135.26	61	ePKP	PKPdf	17 13 44.4	-0.1
AMKA	Amchitka	143.83	345		PKPab	17 13 56.6	+0.2
MJAR	Matsushiro Arr	148.88	46	PKPbc	PKiKP	17 14 14.9	+1.0
	comp=Z,2.1nm,0.9s,baz=294,slow=5.0,SNR=3.5						

RSNC ***14*** *16:57:21.8±1.2, 5°.72N×78°.26W, h32^{km}±19^{km}, ML2.9*
UPA ***14*** *16:57:24.0±1.8, 5°.90N×78°.75W, h11^{km}±45^{km}, MW4.4*
ISC 14 16:57:18.3±2.2, **5°.68N**±0°.04×**78°.41W**±0°.04, **h25**^{km}±21^{km}, **n13**, σ**1^{s}.70**/27, **3C-2D, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOLC	Bahia Solano	1.13	61	⇓iP	Pn	16 57 39.1	+0.6
SOLC				i		16 57 39.4	
	comp=Z,485nm,0.2s						
SOLC				eS	Sn	16 57 51.3	-2.0
PIZC	Pizarro, Choco	1.26	124	⇑iP	Pn	16 57 41.0	+0.6
PIZC				eS	Sn	16 57 55.2	-1.2
PIZC				i		16 57 58.2	
	comp=Z,358nm,0.3s						
PTAC	Punta Ardita,	1.57	22	eP	Pn	16 57 45.7	+1.0
PTAC				eS	Sn	16 58 02.7	-1.6
MALC	Bahia Malaga	1.97	147	⇑eP	Pn	16 57 51.9	+1.8
MALC				i		16 57 52.2	
	comp=Z,63nm,0.2s						
MALC				eS	Sn	16 58 14.5	+0.4
PLMC	San Jos del P	2.25	110	eP	Pn	16 57 54.9	+0.8
PLMC				eS	Sn	16 58 20.1	-1.0
PLMC				i		16 58 20.7	
	comp=Z,105nm,0.2s						
CBOC	Ciudad Bolivar	2.39	85	eP	Pn	16 57 56.8	+0.7
CBOC				eS	Sn	16 58 22.6	-2.0
CBOC				i		16 58 24.1	
	comp=Z,34nm,0.4s						
DBBC	Dabeiba	2.56	59	⇓eP	Pn	16 58 00.9	+2.6
DBBC				i		16 58 02.1	
	comp=Z,142nm,0.3s						
DBBC				eS	Sn	16 58 27.8	-0.8
YOTC	Yotoco, Valle	2.66	129	i	Pn	16 58 00.8	+1.2
	comp=Z,21nm,0.2s						
YOTC				⇑iP	Pn	16 58 00.8	+1.2
YOTC				eS	Sn	16 58 30.2	-0.9
AZU	Azuero	2.80	319	eP	Pn	16 58 03.0	+1.5
AZU				eS	Sn	16 58 34.0	-0.5
UPD2	Meteti	2.88	8	eP	Pb	16 58 08.2	-0.7
UPD2				eS	Sn	16 58 39.9	+3.5
CACAO	El Cacao, Vera	2.95	304	eP	Pn	16 58 05.3	+1.8
CACAO				eS	Sn	16 58 35.5	-2.7
GMAL	Guarumal, Vera	3.49	307	eP	Pn	16 58 12.2	+1.1
GMAL				eS	Sn	16 58 48.8	-2.7
BCIP	Isla Barro Col	3.74	338	eP	Pn	16 58 15.5	+1.0
BCIP				eS	Sn	16 58 56.8	-1.0

SNET ***14*** *17:03:03.9±0.5, 10°.89N×88°.58W, h138^{km}±197^{km}, ML3.9*
UCR ***14*** *17:03:04.2±0.4, 10°.71N×88°.65W, h35^{km}±999^{km}, ML3.6*
ISC 14 17:03:03.2±5.2, **10°.6N**±0°.3×**88°.6W**±0°.2, **h35**^{km}, **n10**, σ**0^{s}.32**/12, **Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	Conchagua	2.76	16	eP	Pn	17 03 45.1	0.0
CNCH	Conchagua	2.76	16	eP	Pn	17 03 45.1	0.0
CEVE	Cerro Verde	3.36	343	eP	Pn	17 03 53.9	+0.4
CEVE	Cerro Verde	3.36	343	eP	Pn	17 03 53.9	+0.4
SBLS	San Blas	3.37	343	eP	Pn	17 03 53.9	+0.3
SBLS				eS	Sn	17 04 32.6	0.0
SBLS	San Blas	3.37	343	eP	Pn	17 03 53.9	+0.3
SBLS				eS	Sn	17 04 32.6	0.0
SNJE	San Jose	3.40	343	eP	Pn	17 03 53.8	-0.1
SNJE	San Jose	3.40	343	eP	Pn	17 03 53.8	-0.1
RTR	El Retiro	3.43	343	eP	Pn	17 03 53.9	-0.5
RTR	El Retiro	3.43	343	eP	Pn	17 03 53.9	-0.5

NDI ***14*** *17:06:44.2±2.5, 27°.42N×86°.88E, h17^{km}±27^{km}, ML3.7*
IDC ***14*** *17:06:44.5±5.2, 27°.76N×87°.31E, h0^{km}, mb3.1/2, mb1 3.3/4, mb1mx3.1/59, mbtmp3.2/4, ML3.8/2, Error ellipse: s-maj=118.3km s-min=39.0km az=51.0*
DMN ***14*** *17:06:45.3±0.2, 27°.43N×87°.01E, h10^{km}, Ml4.8/6, Error ellipse: s-maj=6.4km s-min=2.4km az=23.0*
ISC 14 17:06:46.3±1.0, **27°.34N**±0°.05×**87°.03E**±0°.03, **h32**^{km}±10^{km}, **n22**, σ**1^{s}.22**/34, **Nepal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAMN	Ramite	0.55	225	ePg	Pb	17 06 57.4	-0.3
ODAN	Odare	0.57	146	ePg	Pb	17 06 58.1	0.0
ODAN				eSg	Sn	17 07 06.7	-0.2
	5µm,0.4s						
TAPN	Taplejung	0.60	89	ePg	Pb	17 06 57.8	-0.8
TAPN				eSg	Sb	17 07 06.5	-0.6
	5µm,0.5s						
GUN	Gumba	1.17	299	ePg	Pb	17 07 07.5	-0.7
GUN				eSg	Sn	17 07 22.0	+0.1
	5µm,0.3s						
GTK	Tadong	1.40	90	eP	Pn	17 07 10.4	+0.7
GTK				eS	Sb	17 07 30.1	+0.7
GTK				IAML		17 07 31.8	
	comp=E,1µm,0.4s						
PKI	Pulchoki	1.46	280	ePg	Pb	17 07 12.6	-0.5
PKI				eSg	Sb	17 07 31.4	0.0
	comp=E,6µm,0.5s						
KKN	Kakani	1.62	287	ePg	Pb	17 07 15.0	-0.7
KKN	Kakani	1.62	287	ePg	Pb	17 07 15.0	-0.7
KKN				eSg	Sb	17 07 35.2	-0.6
	comp=E,2µm,0.2s						
KKN				eSg	Sn	17 07 35.5	+2.7
	comp=E,453nm,0.2s						
DMN	Daman	1.73	279	ePg	Pb	17 07 17.0	-0.6
DMN				eSg	Sb	17 07 39.8	+0.7
	comp=E,692nm,0.3s						
GKN	Gorkha	2.23	288	ePg	Pb	17 07 24.9	-1.0
GKN				eSg	Sb	17 07 53.6	+0.4
	comp=E,872nm,0.2s						
BOK	Bokaro	3.68	197	eP	Pn	17 07 41.6	+0.6
BOK				eS	Sn	17 08 22.0	-1.3
BOK				IAML		17 08 25.9	
	comp=E,67nm,0.1s						
BOK				IAML		17 08 26.6	
	comp=N,65nm,0.2s						
GUWA	GUWAHATI	4.32	104	eP	Pn	17 07 51.0	+1.2
GUWA				eS	Sn	17 08 39.8	+0.8
GUWA				IAML		17 09 03.6	
	comp=E,87nm,0.1s						
TEZP	TEZPUR	5.20	97	eP	Pn	17 08 01.3	-0.5
TEZP				eS	Sn	17 09 00.6	-0.1
ZIRO	ZIRO	6.06	87	ex	Pn	17 08 07.5	-6.3
ZIRO				eS	Sn	17 09 21.8	-0.5
ZIRO				IAML		17 10 00.2	
	comp=N,272nm,0.8s						
ZIRO				IAML		17 10 00.2	
	comp=E,530nm,0.8s						
KOHI	KOHIMA	6.54	103	ex	Pb	17 08 48.1	+8.8
MOKO	MOKOCHONG	6.76	97	eP	Pn	17 08 26.2	+2.7
SAIH	SAIHA	7.25	130	eP	Pn	17 08 30.6	+0.5
SAIH				eS	Sn	17 09 49.8	-1.6
SAIH				IAML		17 09 51.3	
	comp=N,46nm,0.6s						
SAIH				IAML		17 09 51.6	
	comp=E,68nm,0.6s						
LKP	Lekhapani	7.84	88	eP	Pn	17 08 39.7	+1.5
CMAR	Chiang Mai Arr	14.08	126	Pn	Pn	17 10 06.6	+2.9
	comp=E,0.2nm,0.3s,baz=308,slow=10,SNR=4.2						
MKAR	Makanchi Array	19.78	350	P	P	17 11 13.1	-0.7
	comp=E,0.2nm,0.3s,baz=178,slow=9.2,SNR=9.9						
KURBB	Kurchatov Arra	24.14	347	P	P	17 11 58.2	-1.1
	comp=E,0.2nm,0.5s,baz=170,slow=9.0,SNR=2.3						
SONM	Songino Array	25.44	31	P	P	17 12 09.4	-1.9
	comp=E,0.3nm,0.3s,baz=218,slow=11,SNR=2.7						

IDC 14 17:10:27.6±2.7, **6°.88S**×**130°.20E, h94**^{km}±37^{km}, **mb3.1**/1, **mb1 3.3**/5, **mb1mx3.0**/41, **mbtmp3.5**/5, **Error ellipse: s-maj=69.5km s-min=22.1km az=90.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	6.06	10	P	Pn	17 11 55.0	+0.2
	1.0nm,0.3s,baz=132,slow=13,SNR=22						
SIJI				S	Sn	17 12 57.7	-5.1
	1.6nm,0.3s,baz=148,slow=23,SNR=6.2						
FITZ	Fitzroy Crossi	12.01	201	P	Pn	17 13 15.2	-0.3
	0.3nm,0.3s,baz=21,slow=11,SNR=15						
FITZ				S	Sn	17 15 22.6	-5.0
	0.2nm,0.3s,baz=141,slow=23,SNR=6.2						
WRA	Warramunga Arr	13.59	163	P	Pn	17 13 35.4	-1.2
	0.3nm,0.3s,baz=347,slow=13,SNR=13						
WRA				S	Sn	17 15 58.8	-7.4
	0.4nm,0.3s,baz=240,slow=14,SNR=8.1						
ASAR	Alice Springs	17.07	168	P	P	17 14 21.9	+1.1
	0.1nm,0.3s,baz=345,slow=10.0,SNR=15						
ASAR				S	Sn	17 17 23.4	-6.7
	0.1nm,0.3s,baz=346,slow=26,SNR=5.6						
MKAR	Makanchi Array	68.23	327	P	P	17 21 18.3	0.0
	0.2nm,0.4s,baz=120,slow=7.2,SNR=6.6						

IDC ***14*** *17:11:54.5±1.9, 2°.36N×127°.84E, h0^{km}, mb3.6/4, mb1 3.8/4, mb1mx3.4/43, mbtmp3.6/4, Error ellipse: s-maj=166.4km s-min=21.2km az=68.0*
NEIC ***14*** *17:12:16.9±0.9, 2°.6N±0°.1×128°.5E±0°.1, h230^{km}±10^{km}, mb4.3/8, Error ellipse: s-maj=22.6km s-min=15.8km az=54.0*
DJA ***14*** *17:12:19.3±0.7, 2°N±3°×12°8E±$^{\circ}$, h203^{km}±7^{km}, M4.0/10, mb3.9/5, mB4.5/1, MLv4.0/10, Mw(mB)3.7/1*
ISC 14 17:12:15.3±0.9, **2°.40N**±0°.06×**128°.72E**±0°.09, **h200**^{km}, **n29**, σ**1^{s}.90**/30, **mb3.9**/9, **1D, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	2.11	220		Pn	17 12 59.0	+4.1
TNTI	Ternate	2.11	220	P	Pn	17 12 57.5	+2.5
SGSI	Sangihe	3.43	292	P	Pn	17 13 12.5	+2.4
SGSI				S	Sn	17 13 54.2	+1.3
KMSI	Cibinong	5.07	249	P	Pn	17 13 31.9	+1.3
SANI	Sanana	5.20	212	P	Pn	17 13 32.9	+0.7
SANI				S	Sn	17 14 29.2	-3.8
MSAI	Masohi	5.71	178	P	Pn	17 13 38.0	-0.9
	0.1nm910nm12nm,0.6s						
MSAI				S	Sn	17 14 46.3	+1.2
	0.1nm910nm12nm,0.6s						
KCP	Kidapawan	5.83	322	⇓iP	Pn	17 13 43.7	+3.2
GTOI	Gorontalo	5.97	253	P	Pn	17 13 44.3	+2.1
	0.0nm12nm,0.5s						
GTOI				S	Sn	17 14 51.4	+0.6
	0.0nm12nm,0.5s						
FAKI	Fak Fak	6.36	146	Pn	Pn	17 13 52.8	+5.5
LUWI	Luwuk	6.86	240	Pn	Pn	17 13 54.8	+1.1
MRSI	Marisa	7.04	254	P	Pn	17 13 56.8	+0.7
	0.1nm26nm,0.6s						
APSI	Ampana	7.79	245	P	Pn	17 14 06.4	+0.5
TOLI2	Tolitoli	8.03	261	Pn	Pn	17 14 09.3	+0.3
MYLDM	Lahad Datu	10.56	285	Pn	Pn	17 14 36.0	-5.8
MTN	Manton Dam	15.34	171	P	P	17 15 44.2	+2.2
WB0	Warramunga Arr	22.73	166	P	P	17 17 00.6	+0.2
WB0				IAmb	IAmb	17 17 14.1	
	comp=Z,9.2nm,1.1s						
WRA	Warramunga Arr	22.88	166	P	P	17 17 01.9	+0.1
	comp=Z,1.3nm,0.5s,baz=343,slow=11,SNR=7.1						
WRA	Warramunga Arr	22.88	166	IAmb	IAmb	17 17 04.3	
	comp=Z,0.2nm,0.8s						

WB2	Warramunga Arr	22.89	166	P	P	17 17 03.1	+1.3
WB2				IAmb	IAmb	17 17 35.8	
	comp=Z,13nm,1.3s						
WR0	Warramunga Arr	22.95	166	P	P	17 17 03.8	+1.5
WR0				IAmb	IAmb	17 17 12.4	
	comp=Z,15nm,1.4s						
AS31	Alice Springs	26.40	169	P	P	17 17 33.3	-0.2
AS31				IAmb	IAmb	17 17 36.7	
	comp=Z,1.7nm,1.1s						
ASAR	Alice Springs	26.40	169	P	P	17 17 33.8	+0.3
	comp=Z,0.9nm,0.6s,baz=355,slow=8.2,SNR=19						
ASAR	Alice Springs	26.40	169	P	P	17 17 33.2	-0.4
KSAR	Wonju Array Be	34.88	359	P	P	17 18 44.8	-2.9
BBOO	Buckleboo	35.71	169	P	P	17 18 55.4	+0.6
BBOO				IAmb	IAmb	17 19 30.2	
	comp=Z,40nm,1.6s						
MKAR	Makanchi Array	59.77	325	P	P	17 21 58.7	-0.6
	comp=Z,0.2nm,0.4s,baz=112,slow=8.1,SNR=6.2						
MKAR	Makanchi Array	59.77	325	P	P	17 21 56.0	-3.4
KURBB	Kurchatov Arra	63.92	327	P	P	17 22 26.1	-0.7
	comp=Z,0.3nm,0.4s,baz=128,slow=5.8,SNR=6.3						
KURK	Kurchatov	63.92	327	P	P	17 22 26.1	-0.7

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*TUL **14** 17:13:21.9±1.3, 36°.60N±0°.01×97°.63W±0°.02, h5^{km}±7^{km}, ML3.2, mb_Lg3.1/55(NEIC), Error ellipse: s-maj=1.9km s-min=1.7km az=98.0*

*ANF **14** 17:13:22.2±0.8, 36°.58N×97°.62W, h5^{km}, ML3.5/7, Error ellipse: s-maj=9.1km s-min=7.2km az=146.0*

*NEIC **14** 17:13:22.2±1.1, 36°.58N±0°.01×97°.633W±0°.009, h4^{km}±7^{km}, Error ellipse: s-maj=1.9km s-min=1.1km az=180.0*

ISC 14 17:13:21.9±1.1**, 36°.57N**±0°.02×**97°.63W**±0°.02**, h6**^{km}±9^{km}**,**
n74, σ0^{s}.99/87**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CROK	Carrier	0.29	257		Pg	17 13 28.1	+0.5
CROK				Sg	Sg	17 13 32.4	+1.0
KAN13	South Haven SW	0.46	16		Pg	17 13 30.7	-0.1
KAN13				Sg	Sg	17 13 36.9	+0.1
KAN14	Manchester OK	0.47	326		Pg	17 13 30.9	0.0
KAN14				Sg	Sg	17 13 37.2	+0.2
KAN01	Argonia South	0.59	350		Pg	17 13 33.1	-0.2
KAN01				Sg	Sg	17 13 41.0	+0.1
KAN10	Anthony SW Sta	0.66	326		Pg	17 13 34.5	-0.2
KAN10				Sg	Sg	17 13 43.4	+0.1
KAN08	Anthony NE Sta	0.71	338		Pg	17 13 35.3	-0.2
KAN08				Sg	Sg	17 13 44.9	+0.1
KAN12	Harper NE Stat	0.78	338		Pg	17 13 37.1	+0.2
KAN12				Sg	Sg	17 13 47.0	-0.1
OK029	Liberty Lake	0.79	169		Pb	17 13 37.4	-0.6
OK029				Sg	Sb	17 13 48.5	-0.5
QUOK	Quay	0.85	118		Pg	17 13 38.2	0.0
OK031	S. Brethren Rd	0.89	134		Pg	17 13 39.2	+0.2
BCOK	Bluff Creek, N	0.91	179		Pb	17 13 39.7	-0.5
BCOK				Sg	Sb	17 13 52.5	-0.1
OK030	Cody Creek RV	0.94	133		Pg	17 13 40.1	+0.2
T35A	Sooner Cattle	0.96	69		Pg	17 13 40.1	-0.3
T35A				Sg	Sg	17 13 52.6	-0.3
T35B	Sooner Cattle	0.96	69	P		17 13 40.0	
	baz=251						
T35B				S		17 13 52.9	
	baz=251						
OK025	Westminster Rd	1.02	166		Pb	17 13 41.6	-0.4
U32A	Winter Ranch,	1.12	261		Pg	17 13 43.1	-0.2
U32A				Sg	Sg	17 13 58.3	+0.4
U32A	Winter Ranch,	1.12	261	P		17 13 43.1	
	baz=78						
U32A				S		17 13 58.3	
	baz=78						
OKCFA	Oklahoma City	1.16	173	Pg	Pb	17 13 44.2	-0.2
OKCFA				Sg	Sn	17 14 00.2	-0.8
OKCSW	OKLAHOMA CITY	1.17	172		Pg	17 13 44.3	-0.2
OKCSW				Sg	Sn	17 14 00.7	-0.6
FNO	Franklin	1.32	172		Pg	17 13 47.3	0.0
TUL1	Leonard	1.63	113	P	Pn	17 13 51.5	+0.4
	baz=295						
TUL1				S	Sg	17 14 13.8	-0.4
	baz=295						
TUL1	Leonard	1.63	113		Pn	17 13 51.6	+0.4
TUL1				IAmb_Lg		17 14 17.5	
	comp=Z,89nm,0.9s						
TUL1	Leonard	1.63	113	P		17 13 51.5	
	baz=295						
TUL1				S		17 14 13.7	
	baz=295						
X34A	Smith Ranch, M	1.97	185		Pn	17 13 56.8	+0.9
X34A				IAmb_Lg		17 14 28.5	
	comp=Z,124nm,0.9s						
R32A	Long Quarter,	2.04	335		Pn	17 13 58.2	+1.4
R32A	Long Quarter,	2.04	335	P		17 13 58.1	
	baz=154						
R32A				S		17 14 24.0	
	baz=154						
WMOK	Wichita Mounta	2.05	207	P	Pn	17 13 57.7	+0.6
	baz=26						
WMOK				S	Sb	17 14 24.8	-0.7
	baz=26						
WMOK	Wichita Mounta	2.05	207		Pn	17 13 57.8	+0.8
WMOK				IAmb_Lg		17 14 29.7	
	comp=Z,80nm,0.8s						
WMOK	Wichita Mounta	2.05	207	P		17 13 57.9	
	baz=26						
WMOK				S		17 14 25.6	
	baz=26						
U38A	Gravette	2.62	92		Pn	17 14 06.1	+1.3
KSU1	Kansas State U	2.65	17	P	Pn	17 14 05.4	+0.2
	baz=198						
KSU1				S	Sn	17 14 39.0	+1.3
	baz=198						
KSU1	Kansas State U	2.65	17	Pn	Pn	17 14 06.5	+1.2
KSU1	Kansas State U	2.65	17	P		17 14 05.8	
	baz=198						
X37A	Clayton	2.70	136		Pn	17 14 07.1	+1.1
X37A	Clayton	2.70	136	P		17 14 06.9	
	baz=318						
CBKS	Cedar Bluff	2.79	324	Pn	Pn	17 14 08.1	+0.9
CBKS	Cedar Bluff	2.79	324	Pb		17 14 10.8	
	baz=142						
CBKS				S		17 14 48.2	
	baz=142						
HHAR	Hobbs	2.99	94		Pn	17 14 10.8	+0.9
Z35A	Perchaven, San	3.25	174	Pn	Pn	17 14 14.6	+1.2
Z35A	Perchaven, San	3.25	174	P		17 14 14.8	
	baz=355						
Z35A				S		17 14 54.8	
	baz=355						
W39A	Magazine	3.41	113	P	Pn	17 14 15.8	+0.1
	baz=295						
W39A				S	Sn	17 14 57.8	+1.3
	baz=295						
W39A	Magazine	3.41	113		Pn	17 14 17.6	+1.8
W39A				IAmb_Lg		17 15 17.0	
	comp=Z,32nm,0.8s						
S39A	Bolivar	3.62	71		Pn	17 14 19.6	+1.0
S39A				IAmb_Lg		17 15 19.9	
	comp=Z,47nm,0.7s						
S39A	Bolivar	3.62	71	S		17 15 02.4	
	baz=254						
AMTX	Amarillo	3.70	244	P	Pn	17 14 20.4	+0.6
	baz=61						
AMTX				S	Sn	17 15 04.7	+1.0
	baz=61						
AMTX	Amarillo	3.70	244		Pn	17 14 20.3	+0.6
AMTX				IAmb_Lg		17 15 22.9	
	comp=Z,32nm,0.8s						
AMTX	Amarillo	3.70	244	P		17 14 21.0	
	baz=61						
U40A	Yellville	3.86	92	P	Pn	17 14 22.3	+0.5
	baz=275						
U40A				S	Sn	17 15 07.5	-0.1
	baz=275						
U40A	Yellville	3.86	92		Pn	17 14 22.3	+0.5
U40A				IAmb_Lg		17 15 28.1	
	comp=Z,60nm,0.8s						
U40A	Yellville	3.86	92	P		17 14 22.9	
	baz=275						
U40A				P		17 14 22.9	
	baz=275						
U40A				S		17 15 07.8	
	baz=275						
U40A				S		17 15 07.8	
	baz=275						
MIAR	Mount Ida	3.88	120	P	Pn	17 14 23.2	+1.1
	baz=303						
MIAR				S	Sn	17 15 08.9	+1.0
	baz=303						
MIAR	Mount Ida	3.88	120		Pn	17 14 21.2	-0.9
MIAR				IAmb_Lg		17 15 26.8	
	comp=Z,30nm,0.9s						
Z38A	Mt. Pleasant	3.96	146		Pn	17 14 22.4	-0.7
ABTX	Abilene, Hawle	4.27	203		Pn	17 14 27.3	-0.2
MGMO	Mountain Grove	4.34	81	Pn	Pn	17 14 29.1	+0.6
MGMO				IAmb_Lg		17 15 40.9	
	comp=Z,48nm,0.8s						
X40A	Basin Creek Fa	4.43	117		Pn	17 14 30.5	+0.8
P38A	Dawn	4.45	45		Pn	17 14 29.9	0.0
FCAR	Ozark Folk Cen	4.51	97		Pn	17 14 31.3	+0.6
FCAR				IAmb_Lg		17 15 46.3	
	comp=Z,29nm,0.8s						
WHAR	Wooly Hollow	4.52	105		Pn	17 14 30.9	-0.1
WHAR				IAmb_Lg		17 15 56.4	
	comp=Z,24nm,0.8s						
N35A	Tabor	4.56	19	Pn	Pn	17 14 31.0	-0.4
WHTX	Lake Whitney,	4.57	178	Pn	Pn	17 14 32.0	+0.4
WHTX	Lake Whitney,	4.57	178	P		17 14 32.4	
	baz=358						
R40A	Maddies Statio	4.60	66	IAmb_Lg		17 15 49.3	
	comp=Z,21nm,0.7s						
KSCO	Kaye Shedlock’	4.64	303		Pn	17 14 32.4	-0.4
WLAR	White Oak Lake	4.69	127	Pn	Pn	17 14 35.0	+1.8
237A	Washetta, Mont	4.80	161	Pn	Pn	17 14 34.2	-0.6
237A				IAmb_Lg		17 16 06.2	
	comp=Z,21nm,0.8s						
BGNE	Belgrade	4.85	355	Pn	Pn	17 14 35.6	+0.1
BGNE				IAmb_Lg		17 16 00.8	
	comp=Z,50nm,0.8s						
MSTX	Muleshoe	4.94	240		Pn	17 14 37.3	+0.5
LCAR	Lake Charles	5.26	94	Pn	Pn	17 14 40.5	-0.5
LCAR				IAmb_Lg		17 16 10.1	
	comp=Z,29nm,0.8s						
T42A	Van Buren	5.27	83		Pn	17 14 44.0	+2.7
CCM	Cathedral Cave	5.30	72		Pn	17 14 42.9	+1.2
CCM				IAmb_Lg		17 16 16.1	
	comp=Z,44nm,0.8s						
P40A	Paris	5.31	54	Pn	Pn	17 14 42.5	+0.8
P40A				IAmb_Lg		17 16 11.1	
	comp=Z,33nm,0.9s						
N38A	Joes South For	5.44	38	Pn	Pn	17 14 46.7	+3.1
N38A				IAmb_Lg		17 16 25.3	
	comp=Z,29nm,0.7s						
L34A	Svendsen Farm,	5.47	10	IAmb_Lg		17 16 16.7	
	comp=Z,44nm,0.8s						
OGNE	Ogallala	5.56	323	Pn	Pn	17 14 45.4	+0.2
OGNE				IAmb_Lg		17 16 28.1	
	comp=Z,34nm,0.8s						
HBAR	Harrisburg	5.74	98	Pn	Pn	17 14 49.2	+1.5
435B	Jarrell	5.77	180	IAmb_Lg		17 16 38.4	
	comp=Z,20nm,0.7s						
PBMO	Poplar Bluff	5.79	86	Pn	Pn	17 14 50.0	+1.6
PBMO				IAmb_Lg		17 16 34.3	
	comp=Z,29nm,0.9s						
FVM	French Village	5.92	74	Pn	Pn	17 14 50.8	+0.6
SLM	Saint Louis	6.22	68	IAmb_Lg		17 16 45.2	
	comp=Z,30nm,0.9s						
JCT	Junction City	6.34	197	Pn	Pn	17 14 54.4	-1.6
JCT				IAmb_Lg		17 16 48.9	
	comp=Z,32nm,1.0s						
SDCO	Great Sand Dun	6.39	283	Pn	Pn	17 14 54.5	-2.4
W45A	Hickory Valley	7.00	99	IAmb_Lg		17 17 20.2	
	comp=Z,23nm,0.8s						
ISCO	Idaho Springs	7.06	300	Pn	Pn	17 15 03.7	-2.4
ECSD	EROS Data Cent	7.20	6	P		17 15 06.6	
	baz=187						
RSSD	Black Hills	8.98	329	Pn	Pn	17 15 29.6	-2.8
CLTN	Cedars of Leba	9.13	90	IAmb_Lg		17 18 23.0	
	comp=Z,20nm,0.9s						
K22A	Casper	9.16	314	IAmb_Lg		17 18 35.4	
	comp=Z,9.4nm,0.9s						

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*TUL **14** 17:23:04.9±1.6, 36°.60N±0°.01×97°.63W±0°.02, h4^{km}±7^{km}, ML3.6, mb_Lg3.6/111(NEIC), Error ellipse: s-maj=2.0km s-min=1.7km az=74.0*

*NEIC **14** 17:23:05.2±1.5, 36°.59N±0°.01×97°.63W±0°.02, h4^{km}±7^{km}, Error ellipse: s-maj=2.5km s-min=1.5km az=78.0*

*ANF **14** 17:23:05.4±0.3, 36°.58N×97°.61W, h5^{km}, ML4.5/17, Error ellipse: s-maj=3.6km s-min=2.7km az=9.0*

*IDC **14** 17:23:06.7±2.0, 36°.64N×97°.95W, h0^{km}, mb1 3.5/4, mb1mx3.3/55, mbtmp3.3/4, ML3.2/4, Error ellipse: s-maj=32.0km s-min=12.4km az=110.0*

ISC 14 17:23:05.1±1.0**, 36°.58N**±0°.02×**97°.57W**±0°.02**, h8**^{km}±8^{km}**,**
n179, σ1^{s}.58/207**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CROK	Carrier	0.34	258		Pg	17 23 11.1	-0.7
CROK				Sg	Sg	17 23 15.5	-0.8
KAN13	South Haven SW	0.44	9		Pg	17 23 13.8	+0.2
KAN13				Sg	Sg	17 23 19.9	+0.5
KAN14	Manchester OK	0.49	320		Pg	17 23 14.0	-0.6
KAN14				Sg	Sg	17 23 20.3	-0.8
KAN01	Argonia South	0.59	345		Pg	17 23 16.1	-0.4
KAN01				Sg	Sg	17 23 23.8	-0.5
KAN10	Anthony SW Sta	0.69	322		Pg	17 23 17.6	-0.7
KAN10				Sg	Sg	17 23 26.5	-0.8
KS21	Milan North St	0.71	354		Pg	17 23 18.4	-0.4
KS21				Sg	Sg	17 23 27.2	-0.8
KAN08	Anthony NE Sta	0.72	334		Pg	17 23 18.3	-0.7
KAN08				Sg	Sg	17 23 27.9	-0.5
OK029	Liberty Lake	0.79	173		Pg	17 23 20.5	+0.4
OK029				Sg	Sg	17 23 31.6	+1.2
KAN12	Harper NE Stat	0.80	334	Pg	Pg	17 23 19.8	-0.5
KAN12				Sg	Sg	17 23 30.0	-0.7
QUOK	Quay	0.80	120		Pb	17 23 21.4	+0.1
OK031	S. Brethren Rd	0.86	136		Pb	17 23 22.3	+0.1
OK030	Cody Creek RV	0.91	135		Pb	17 23 23.2	+0.1
OK030				Sg	Sb	17 23 36.5	+1.2
T35A	Sooner Cattle	0.91	68		Pb	17 23 23.2	0.0
T35A				Sg	Sb	17 23 36.0	+0.5
T35B	Sooner Cattle	0.91	68	P		17 23 23.1	
	baz=251,SNR=197						
T35B				S		17 23 35.7	
	baz=251						
BCOK	Bluff Creek, N	0.92	182		Pb	17 23 22.8	-0.5
BCOK				Sg	Sb	17 23 35.6	-0.1
OK009	Oakdale Elemen	1.00	173	Pg	Pb	17 23 24.0	-0.7
OK009				Sg	Sb	17 23 38.6	+0.6
OK025	Westminster Rd	1.01	169		Pb	17 23 24.7	-0.1
OK025				Sg	Sb	17 23 38.8	+0.5
OKCFA	Oklahoma City	1.17	175		Pn	17 23 27.3	-0.4
OKCFA				Sg	Sb	17 23 43.3	+0.6
U32A	Winter Ranch,	1.17	261		Pb	17 23 26.0	-1.6
U32A				Sg	Sb	17 23 41.3	-1.7
U32A	Winter Ranch,	1.17	261	P		17 23 26.1	
	baz=78						
U32A				S		17 23 41.4	
	baz=78						
OKCSW	OKLAHOMA CITY	1.18	175		Pn	17 23 27.5	-0.3
OKCSW				Sg	Sb	17 23 43.7	+0.7
FNO	Franklin	1.33	174		Pn	17 23 30.3	+0.4
FNO				Sg	Sb	17 23 48.8	+1.5
TUL1	Leonard	1.58	114	P	Pn	17 23 34.7	+1.3
	baz=295,SNR=142						
TUL1				S	Sb	17 23 56.9	+2.2
	baz=295						
TUL1	Leonard	1.58	114		Pn	17 23 34.6	+1.3
TUL1				IAmb_Lg		17 24 00.6	
	comp=Z,306nm,0.9s						
TUL1	Leonard	1.58	114	P		17 23 34.7	
	baz=295,SNR=93						
TUL1				S		17 23 56.9	
	baz=295						
X34A	Smith Ranch, M	1.98	186		Pn	17 23 40.5	+1.5
X34A				IAmb_Lg		17 24 11.6	
	comp=Z,422nm,0.7s						
R32A	Long Quarter,	2.05	334		Pn	17 23 41.0	+1.1
R32A	Long Quarter,	2.05	334	P		17 23 41.3	
	baz=155,SNR=35						
R32A				S		17 24 08.5	
	baz=155						
WMOK	Wichita Mounta	2.09	209	P	Pn	17 23 40.9	+0.6
	baz=26						
WMOK				S	Sb	17 24 08.6	-0.7
	baz=26						
WMOK	Wichita Mounta	2.09	209		Pn	17 23 40.9	+0.6
WMOK				IAmb_Lg		17 24 11.5	
	comp=Z,261nm,0.8s						
WMOK	Wichita Mounta	2.09	209	P		17 23 40.8	
	baz=26,SNR=291						
WMOK				S		17 24 08.7	
	baz=26						
U38A	Gravette	2.57	92		Pn	17 23 48.7	+1.7
U38A	Gravette	2.57	92	P		17 23 49.0	
	baz=274,SNR=38						
KSU1	Kansas State U	2.63	16	P	Pn	17 23 48.9	+1.0
	baz=198						
KSU1	Kansas State U	2.63	16	Pn	Pn	17 23 48.8	+1.0
KSU1	Kansas State U	2.63	16	P		17 23 48.9	
	baz=198						
X37A	Clayton	2.67	137		Pn	17 23 49.7	+1.3
X37A	Clayton	2.67	137	P		17 23 50.0	
	baz=318						
CBKS	Cedar Bluff	2.82	323	P	Pn	17 23 50.7	+0.3
	baz=142						
CBKS				Sb	Sb	17 24 31.2	+0.8
	baz=142						
CBKS	Cedar Bluff	2.82	323	Pn	Pn	17 23 50.8	+0.3
CBKS	Cedar Bluff	2.82	323	P		17 23 50.7	
	baz=142						
CBKS				S		17 24 30.8	
	baz=142						
HHAR	Hobbs	2.94	95		Pn	17 23 53.8	+1.6
HHAR	Hobbs	2.94	95	P		17 23 53.9	
	baz=277						
Z35A	Perchaven, San	3.25	175		Pn	17 23 57.5	+1.2
Z35A	Perchaven, San	3.25	175	S		17 24 37.9	
	baz=355						
W39A	Magazine	3.37	113	Pn	Pn	17 23 59.4	+1.5
	baz=295						
W39A				Pb	Pb	17 24 07.3	+2.3
	baz=295						
W39A				Sb	Sb	17 24 50.5	+4.4
	baz=295						
W39A	Magazine	3.37	113		Pn	17 23 59.8	+1.8
W39A				IAmb_Lg		17 25 01.4	
	comp=Z,170nm,0.8s						
W39A	Magazine	3.37	113	P		17 23 59.9	
	baz=295						
S39A	Bolivar	3.57	71		Pn	17 24 02.2	+1.5
S39A				IAmb_Lg		17 25 04.9	
	comp=Z,124nm,0.9s						
S39A	Bolivar	3.57	71	P		17 24 01.8	
	baz=254,SNR=23						
AMTX	Amarillo	3.75	244	Pn	Pn	17 24 03.9	+0.6
	baz=61						
AMTX				Pb	Pb	17 24 11.4	-0.1
	baz=61						
AMTX				Sb	Sb	17 25 00.6	+3.4
	baz=61						
AMTX	Amarillo	3.75	244	Pn	Pn	17 24 03.9	+0.6
AMTX				IAmb_Lg		17 25 08.4	
	comp=Z,128nm,0.8s						
AMTX	Amarillo	3.75	244	P		17 24 03.9	
	baz=61,SNR=8.4						
U40A	Yellville	3.81	92	Pn	Pn	17 24 05.4	+1.4
	baz=275,SNR=14						
U40A				Pb	Pb	17 24 14.8	+2.3
	baz=275						
U40A				S	Sn	17 24 50.7	+1.7
	baz=275						
U40A	Yellville	3.81	92		Pn	17 24 04.6	+0.6
U40A	Yellville	3.81	92	P		17 24 05.2	
	baz=275,SNR=32						
U40A				P		17 24 05.2	
	baz=275,SNR=32						
U40A				S		17 24 50.8	
	baz=275						
U40A				S		17 24 50.8	
	baz=275						
MIAR	Mount Ida	3.83	121	Pn	Pn	17 24 06.3	+1.9
	baz=303,SNR=9.4						
MIAR				Pb	Pb	17 24 15.0	+2.1
	baz=303						
MIAR				S	Sn	17 24 52.4	+2.8
	baz=303						
MIAR	Mount Ida	3.83	121		Pn	17 24 06.2	+1.9
MIAR				IAmb_Lg		17 25 09.9	
	comp=Z,109nm,0.9s						
MIAR	Mount Ida	3.83	121	P		17 24 06.1	
	baz=303,SNR=15						
Z38A	Mt. Pleasant	3.93	147		Pn	17 24 07.5	+1.8
Z38A				IAmb_Lg		17 25 16.9	
	comp=Z,201nm,0.9s						
Z38A	Mt. Pleasant	3.93	147	P		17 24 07.5	
	baz=328						
N33A	J Bar K, Exete	4.15	1	Pn	Pn	17 24 09.5	+0.7
N33A				IAmb_Lg		17 25 25.3	
	comp=Z,90nm,0.7s						
MGMO	Mountain Grove	4.29	81		Pn	17 24 12.6	+1.9
MGMO				IAmb_Lg		17 25 28.6	
	comp=Z,158nm,0.7s						
ABTX	Abilene, Hawle	4.30	204	P	Pn	17 24 11.0	+0.2
	baz=22						
ABTX				Sb	Sb	17 25 15.8	+2.8
	baz=22						
ABTX	Abilene, Hawle	4.30	204		Pn	17 24 10.9	+0.1
ABTX				IAmb_Lg		17 25 29.3	
	comp=Z,70nm,1.1s						
X40A	Basin Creek Fa	4.39	117	Pn	Pn	17 24 13.5	+1.5
	baz=300,SNR=14						
X40A				Pb	Pb	17 24 23.9	+1.5
	baz=300						
X40A	Basin Creek Fa	4.39	117		Pn	17 24 13.2	+1.2
X40A				IAmb_Lg		17 25 30.9	
	comp=Z,68nm,0.8s						
P38A	Dawn	4.40	45		Pn	17 24 12.9	+0.8
P38A				IAmb_Lg		17 25 25.3	
	comp=Z,108nm,0.8s						
FCAR	Ozark Folk Cen	4.45	97		Pn	17 24 13.2	+0.3
FCAR				IAmb_Lg		17 25 38.5	
	comp=Z,70nm,0.9s						
WHAR	Wooly Hollow	4.47	105		Pn	17 24 13.8	+0.7
N35A	Tabor	4.53	19		Pn	17 24 15.2	+1.2
W41B	Gary Mavity, V	4.54	106	P	Pn	17 24 15.6	+1.5
	baz=290,SNR=8.7						
W41B				Sb	Sg	17 25 27.4	-3.5
	baz=290						
W41B	Gary Mavity, V	4.54	106	P		17 24 15.2	
	baz=290						
R40A	Maddies Statio	4.55	66	IAmb_Lg		17 25 32.4	
	comp=Z,80nm,0.7s						
WHTX	Lake Whitney,	4.58	179	P	Pn	17 24 15.4	+0.8
	baz=358						
WHTX				Sn	Sn	17 25 08.1	+0.1
	baz=358						
WHTX				Sb	Sb	17 25 25.0	+4.0
	baz=358						
WHTX	Lake Whitney,	4.58	179		Pn	17 24 15.4	+0.8
WHTX	Lake Whitney,	4.58	179	P		17 24 15.0	
	baz=358,SNR=6.0						
WLAR	White Oak Lake	4.65	127		Pn	17 24 17.1	+1.5
KSCO	Kaye Shedlock’	4.69	303	Pn	Pn	17 24 16.3	+0.1
	baz=120						
KSCO				Pb	Pb	17 24 27.9	+0.4
	baz=120						
KSCO				Sb	Sb	17 25 28.8	+4.6
	baz=120						
KSCO	Kaye Shedlock’	4.69	303		Pn	17 24 16.6	+0.4
KSCO				IAmb_Lg		17 25 41.9	
	comp=Z,74nm,0.7s						
237A	Washetta, Mont	4.79	162	Pn	Pn	17 24 18.4	+0.9
237A				IAmb_Lg		17 25 49.4	
	comp=Z,64nm,0.9s						
BGNE	Belgrade	4.84	355	P	Pn	17 24 18.7	+0.4
	baz=175						
BGNE				S	Sn	17 25 14.4	-0.2
	baz=175						
BGNE	Belgrade	4.84	355	Pn	Pn	17 24 18.8	+0.5
BGNE				IAmb_Lg		17 25 39.2	
	comp=Z,157nm,0.8s						
MSTX	Muleshoe	4.99	240	P	Pn	17 24 20.3	-0.1
	baz=56,SNR=6.9						
Z41A	Richland Creek	5.13	129	S	Sn	17 25 20.7	-0.8
	baz=312						
LCAR	Lake Charles	5.20	94		Pn	17 24 24.3	+1.1
LCAR				IAmb_Lg		17 25 52.1	
	comp=Z,97nm,0.7s						
T42A	Van Buren	5.21	83		Pn	17 24 25.4	+2.0
T42A				IAmb_Lg		17 25 57.0	
	comp=Z,101nm,0.9s						
CCM	Cathedral Cave	5.25	72	P	Pn	17 24 25.8	+2.0
	baz=256						
CCM				S	Sn	17 25 26.2	+1.7

	baz=256						
CCM	Cathedral Cave	5.25	72		Pn	17 24 25.1	+1.3
CCM				IAmb_Lg		17 26 00.0	
	comp=Z,150nm,0.8s						
P40A	Paris	5.26	54		Pn	17 24 26.2	+2.2
P40A				IAmb_Lg		17 25 59.7	
	comp=Z,80nm,0.8s						
N38A	Joes South For	5.40	38		Pn	17 24 26.1	+0.1
N38A				IAmb_Lg		17 25 59.6	
	comp=Z,126nm,0.9s						
CCAR	Cane Creek	5.43	118		Pn	17 24 26.2	-0.2
CCAR				IAmb_Lg		17 26 08.4	
	comp=Z,74nm,0.9s						
L34A	Svendsen Farm,	5.46	9		Pn	17 24 26.8	+0.1
T25A	Trinidad	5.51	278	P	Pn	17 24 28.8	+1.1
	baz=94						
T25A				Sb	Sb	17 25 54.7	+6.5
	baz=94						
OGNE	Ogallala	5.58	323		Pn	17 24 28.7	+0.2
OGNE				IAmb_Lg		17 26 09.9	
	comp=Z,124nm,0.8s						
PBMO	Poplar Bluff	5.74	86		Pn	17 24 32.8	+2.3
PBMO				IAmb_Lg		17 26 17.4	
	comp=Z,114nm,0.9s						
435B	Jarrell	5.78	180	S	Sn	17 25 36.3	-1.3
	baz=360						
435B	Jarrell	5.78	180		Pn	17 24 30.8	-0.4
435B				IAmb_Lg		17 26 13.2	
	comp=Z,92nm,0.8s						
FVM	French Village	5.87	74		Pn	17 24 33.3	+1.0
FVM				IAmb_Lg		17 26 11.9	
	comp=Z,124nm,0.7s						
K31A	O'Neill	6.11	352	Pn	Pn	17 24 36.1	+0.5
GNAR	Gosnell	6.13	93	Pn	Pn	17 24 36.7	+0.8
SLM	Saint Louis	6.17	68	Pn	Pn	17 24 37.1	+0.7
SLM				IAmb_Lg		17 26 23.2	
	comp=Z,93nm,0.8s						
PEBM	Pemiscott Bayo	6.24	92	Pn	Pn	17 24 36.9	-0.5
HDBT	Hernando Brdge	6.26	101	Pn	Pn	17 24 36.3	-1.4
CPRX	Cap Rock	6.28	237	Pn	Pn	17 24 38.3	+0.3
PARMO	Parma	6.29	87	Pn	Pn	17 24 37.9	-0.2
SCIA	State Center	6.30	31	IAmb_Lg		17 26 36.2	
	comp=Z,105nm,0.8s						
PVMO	Portageville	6.34	89	Pn	Pn	17 24 39.5	+0.7
JCT	Junction City	6.36	198	Pn	Pn	17 24 38.7	-0.5
JCT				IAmb_Lg		17 26 33.0	
	comp=Z,102nm,0.9s						
SDCO	Great Sand Dun	6.44	283	P	Pn	17 24 42.3	+1.9
	baz=98						
SDCO				Sb	Sb	17 26 22.8	+8.0
	baz=98						
SDCO	Great Sand Dun	6.44	283		Pn	17 24 42.4	+1.9
SDCO	Great Sand Dun	6.44	283	P		17 24 42.1	
	baz=98,SNR=5.9						
HENM	Henderson Moun	6.51	86	Pn	Pn	17 24 43.2	+2.0
LNXT	Lenox	6.54	92	Pn	Pn	17 24 44.5	+3.0
N41A	Harden Midland	6.68	50	Pn	Pn	17 24 43.9	+0.5
N41A				IAmb_Lg		17 26 39.5	
	comp=Z,77nm,0.8s						
HALT	Halls	6.68	93	Pn	Pn	17 24 45.6	+2.1
HICK	Hickman	6.71	88	Pn	Pn	17 24 43.7	-0.2
S44A	Carbondale	6.73	78	Pn	Pn	17 24 45.5	+1.3
SIUC	Southern Illin	6.76	78	Pn	Pn	17 24 45.6	+0.9
W45A	Hickory Valley	6.95	99	IAmb_Lg		17 27 02.3	
	comp=Z,83nm,0.7s						
OXF	Oxford	6.96	105	Pn	Pn	17 24 46.7	-0.7
OXF				IAmb_Lg		17 27 01.1	
	comp=Z,68nm,0.8s						
P43A	Skaggs, Pawnee	7.04	62	Pn	Pn	17 24 48.7	+0.3
K38A	Parkersburg	7.10	30	IAmb_Lg		17 27 07.0	
	comp=Z,74nm,0.7s						
Y45A	Yeager Farm, C	7.10	110	IAmb_Lg		17 27 01.5	
	comp=Z,76nm,0.8s						
ISCO	Idaho Springs	7.11	299	Pn	Pn	17 24 49.2	-0.4
GDL2	Guadalupe Moun	7.12	234	Pn	Pn	17 24 48.9	-0.7
Q44A	Meyer Farm, Va	7.16	69	Pn	Pn	17 24 52.1	+2.0
ECSD	EROS Data Cent	7.18	6	P	Pn	17 24 49.7	-0.7
	baz=187						
ECSD	EROS Data Cent	7.18	6		Pn	17 24 50.1	-0.3
L40A	Anamosa	7.36	40	Pn	Pn	17 24 53.1	+0.3
L40A				IAmb_Lg		17 26 56.9	
	comp=Z,48nm,0.9s						
ANMO	Albuquerque	7.41	260	Pn	Pn	17 24 51.7	-2.0
	comp=Z,0.1nm,0.3s,baz=82,slow=10.0,SNR=1.8						
ANMO				Pg	Pb	17 25 18.0	+4.0
	comp=Z,0.4nm,0.3s,baz=88,slow=17,SNR=5.6						
ANMO				Lg	Lg	17 26 53.2	
	comp=Z,2.9nm,0.3s,baz=326,slow=16,SNR=8.3						
ANMO	Albuquerque	7.41	260		Pn	17 24 53.0	-0.6
PHWY	Pilot Hill	7.75	310	Pn	Pn	17 24 58.9	+0.5
PHWY				IAmb_Lg		17 27 21.9	
	comp=Z,39nm,1.0s						
BNM	Barren Site	7.79	255	Pn	Pn	17 24 58.9	0.0
WVT	Waverly	7.87	90	Pn	Pn	17 25 01.0	+1.2
PLAL	Pickwick Lake	7.88	99	Pn	Pn	17 25 00.6	+0.7
SMCO	Snowmass	7.88	292		Pn	17 25 01.9	+1.6
SUSD	Miller	7.93	353	S	Sn	17 26 26.8	-3.6
	baz=172						
SUSD	Miller	7.93	353	Pn	Pn	17 25 02.5	+1.9
SUSD				IAmb_Lg		17 27 26.2	
	comp=Z,49nm,0.8s						
O44A	Mansfield	7.99	61	IAmb_Lg		17 27 29.7	
	comp=Z,81nm,0.8s						
Y22D	IRIS PASSCAL I	8.04	255	IAmb_Lg		17 27 36.6	
	comp=Z,76nm,0.8s						
LENM	Lemitar	8.05	255	Pn	Pn	17 25 04.0	+1.5
I37A	Lemond, Waseca	8.08	22		Pn	17 25 02.7	0.0
MNTX	Cornudas Mount	8.10	235	P	Pn	17 25 02.9	-0.1
	baz=50,SNR=6.0						
MNTX	Cornudas Mount	8.10	235		Pn	17 25 02.6	-0.4
MNTX	Cornudas Mount	8.10	235	P		17 25 02.6	
	baz=50,SNR=8.8						
L42A	Oliver, Polo	8.18	46	Pn	Pn	17 25 04.5	+0.5
L42A				IAmb_Lg		17 27 32.3	
	comp=Z,73nm,0.8s						
T47A	Sharon Grove	8.40	84	Pn	Pn	17 25 09.1	+2.0
T47A				IAmb_Lg		17 27 36.8	
	comp=Z,49nm,0.9s						
JFWS	Jewell Farm	8.47	39	S	Sn	17 26 40.7	-3.1
	baz=224						
JFWS	Jewell Farm	8.47	39		Pn	17 25 08.6	+0.5
JFWS				IAmb_Lg		17 27 39.9	
	comp=Z,46nm,0.7s						
Z47A	Carrollton	8.50	111	Pn	Pn	17 25 11.2	+2.7
V48A	Smith Brothers	8.73	92	IAmb_Lg		17 27 48.0	
	comp=Z,31nm,0.7s						
MVCO	Mesa Verde	8.78	277	Pn	Pn	17 25 13.0	+0.5
M44A	Midewin, Midew	8.83	54	Pn	Pn	17 25 15.2	+2.2
M44A				IAmb_Lg		17 27 46.4	
	comp=Z,61nm,0.9s						
TXAR	Lajitas Array	8.86	217	Pn	Pn	17 25 12.4	-1.1
	comp=Z,0.5nm,0.3s,baz=43,slow=11,SNR=7.2						
TXAR				Lg	Lg	17 27 36.9	
	comp=Z,0.9nm,0.3s,baz=38,slow=22,SNR=2.4						
PV07	Paradox Valley	9.00	285	Pn	Pn	17 25 15.6	+0.2
RSSD	Black Hills	9.00	329	Pn	Pn	17 25 15.8	+0.3
RSSD				IAmb_Lg		17 27 52.7	
	comp=Z,30nm,0.9s						
I40A	Norwalk	9.03	34		Pn	17 25 15.2	-0.5
I40A				IAmb_Lg		17 28 13.7	
	comp=Z,35nm,1.1s						
PV02	Paradox Valley	9.04	284	Pn	Pn	17 25 16.4	+0.3
SFIN	Lafayette	9.04	62	IAmb_Lg		17 27 55.8	
	comp=Z,51nm,0.8s						
RWWY	Rawlins	9.06	307	Pn	Pn	17 25 17.2	+0.8
CLTN	Cedars of Leba	9.08	90	IAmb_Lg		17 27 56.1	
	comp=Z,39nm,0.9s						
PV13	Radium Mtn., P	9.10	283	Pn	Pn	17 25 16.9	+0.1
BLO	Bloomington	9.11	70		Pn	17 25 18.8	+2.0
BLO				IAmb_Lg		17 27 54.5	
	comp=Z,68nm,0.8s						
WCI	Wyandotte Cave	9.12	76	Pn	Pn	17 25 18.9	+1.9
WCI				IAmb_Lg		17 28 04.7	
	comp=Z,52nm,0.9s						
PV03	Paradox Valley	9.13	284	Pn	Pn	17 25 19.3	+2.0
PV11	David Mesa, Pa	9.15	284	Pn	Pn	17 25 18.7	+1.1
K22A	Casper	9.19	314	Pn	Pn	17 25 18.3	+0.2
K22A				IAmb_Lg		17 28 13.8	
	comp=Z,50nm,1.2s						
PV16	Nyswonger Mesa	9.19	284	Pn	Pn	17 25 17.9	-0.3
PV04	Paradox Valley	9.19	285	Pn	Pn	17 25 17.9	-0.3
PV17	East Wray Mesa	9.22	284	Pn	Pn	17 25 19.0	+0.5
PV23	Carpenter Ridg	9.28	285	Pn	Pn	17 25 20.7	+1.3
F33A	5 Mile Ranch,	9.30	6	Pn	Pn	17 25 20.4	+1.0
F33A				IAmb_Lg		17 28 13.5	
	comp=Z,29nm,0.9s						
PV05	Paradox Valley	9.31	283	Pn	Pn	17 25 19.0	-0.7
SPMN	Marine on St.	9.36	21	IAmb_Lg		17 28 13.6	
	comp=Z,26nm,0.9s						
LRAL	Lakeview Retre	9.38	109	Pn	Pn	17 25 20.7	+0.2
K43A	Burlington	9.39	47	Pn	Pn	17 25 21.9	+1.4
U49A	Red Boiling Sp	9.49	87	Pn	Pn	17 25 22.4	+0.4
U49A				IAmb_Lg		17 28 15.3	
	comp=Z,38nm,1.1s						
Y49A	Blount Mountai	9.52	103	Pn	Pn	17 25 23.5	+1.0
SWET	Sewanee	9.54	95	Pn	Pn	17 25 22.8	+0.1
F36A	Milaca	9.76	17	Pn	Pn	17 25 24.8	-0.8
I42A	Draeger Farm,	9.85	39	Pn	Pn	17 25 27.4	+0.4
T50A	Nancy	10.22	84	Pn	Pn	17 25 34.4	+2.4
G40A	Rib Lake	10.31	30	Pn	Pn	17 25 32.4	-0.8
CPCT	Cooper Cave	10.63	92	Pn	Pn	17 25 38.9	+1.2
BW06	Boulder Array	11.11	307	Pn	Pn	17 25 43.4	-1.0
PD31	Pinedale Array	11.11	307	Pn	Pn	17 25 44.1	-0.3
PDAR	Pinedale Array	11.11	307	Pn	Pn	17 25 44.5	+0.1
	comp=Z,0.1nm,0.3s,baz=122,slow=15,SNR=1.2						
PDAR				Pg		17 26 28.9	
	comp=Z,0.6nm,0.3s,baz=109,slow=15,SNR=4.2						
PDAR				Lg	Lg	17 28 53.7	
	comp=Z,0.5nm,0.3s,baz=110,slow=30,SNR=4.1						
TKL	Tuckaleechee C	11.20	91	Lg	Lg	17 28 54.5	
	comp=Z,1.6nm,0.3s,baz=2.1,slow=23,SNR=4.5						
S51A	Beattyville	11.21	80	Pn	Pn	17 25 46.8	+1.2
TZTN	Tazewell	11.28	86	Pn	Pn	17 25 47.7	+1.2
N49A	Columbus Grove	11.31	63	Pn	Pn	17 25 47.8	+0.8
AGMN	Agassiz Nation	11.78	6		Pn	17 25 51.8	-1.5
EYMN	Ely	12.21	20	Pn	Pn	17 25 57.1	-2.1
Q52A	Bidwell	12.34	74	Pn	Pn	17 25 59.3	-1.7
P52A	Corning	12.54	71	Pn	Pn	17 26 04.4	+0.7
E43A	Lone Tree Farm	12.58	36	Pn	Pn	17 26 03.3	-1.0
ULM	Lac du Bonnet	13.72	5	Pn	Pn	17 26 17.1	-2.7
	comp=Z,0.2nm,0.3s,baz=187,slow=13,SNR=1.6						
ULM				Sn	Sn	17 28 41.3	-11
	comp=Z,0.3nm,0.3s,baz=264,slow=22,SNR=1.9						
ULM				Lg	Lg	17 30 10.7	
	comp=Z,0.3nm,0.3s,baz=114,slow=23,SNR=2.1						
E46A	Sault Ste Mari	13.93	41	Pn	Pn	17 26 19.8	-2.8
SADO	Sadowa	16.17	54	Lg	Lg	17 31 29.1	
	comp=Z,0.2nm,0.3s,baz=79,slow=5.4,SNR=3.1						

GCMT 14 17:32:33.0±0.4**, 46°.06S**±0°.07×**14°.38W**±0°.05**, h20**^{km}±1^{km}**, MW4.8**/69**, Moment Tensor Solution. s17,c20; s69,c84; Duration: 0 Moment tensor: Scale** 10^{16}**Nm;** M_{rr}-2.30±.19; $M_{\theta\theta}$0.89±.13; $M_{\phi\phi}$1.41±.12; $M_{r\theta}$-0.10±.41; $M_{\theta\phi}$-0.30±.07; $M_{\phi r}$0.14±.25; **Best double couple:** $M_0$1.93000×10^{16} **NP1:**ϕ_s336.00000°**,** δ42.00000°**,** λ-89.00000°. **NP2:**ϕ_s155.00000°**,** δ48.00000°**,** λ-91.00000°. **Principal axes:** T 1.5530**,** Plg3.0000°**,** Azm245.0000°**;** N 0.7540**,** Plg1.0000°**,** Azm155.0000°**;** P -2.3080**,** Plg87.0000°**,** Azm51.0000°**; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function Southern Mid-Atlantic Ridge**

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*DJA **14** 17:53:03.2±2.0, 6°S±18°×10°4E±°, h10^{km}, M3.3/7, MLv3.3/7*

*IDC **14** 17:53:04.1±3.5, 5°.23S×105°.43E, h0^{km}, mb3.4/4, mb1 3.5/4, mb1mx3.3/37, mbtmp3.4/4, Error ellipse: s-maj=152.4km s-min=25.1km az=54.0*

ISC 14 17:52:59.5±1.4**, 6°.5S**±0°.1×**103°.9E**±0°.1**, h10**^{km}**, n10,** σ**1^{s}.41**/10**, mb3.5**/4**, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KASI	Kota Agung	1.15	30	P	Pn	17 53 22.5	+0.8
LWLI	Liwa	1.50	6	P	Pg	17 53 29.3	+0.9
BLSI	Bandar Lampung	1.76	49	P	Pb	17 53 31.5	-0.3
KLSI		2.00	24	P	Pb	17 53 35.5	-0.4
MDSI	Maura Dua	2.04	8	P	Pb	17 53 36.7	0.0
MNAI	Manna	2.35	336	P	Pb	17 53 42.1	+0.1
WRA	Warramunga Arr	32.41	117	P	P	17 59 30.2	+0.3
	0.5nm,1.0s,baz=297,slow=8.8,SNR=1.9						
ASAR	Alice Springs	33.48	124	P	P	17 59 40.6	+1.3
	0.1nm,0.5s,baz=306,slow=8.1,SNR=4.9						
SONM	Songino Array	54.17	2	P	P	18 02 22.0	-3.1
	0.4nm,0.4s,baz=167,slow=7.2,SNR=4.2						
MKAR	Makanchi Array	56.45	342	P	P	18 02 42.1	+0.6
	0.3nm,0.5s,baz=149,slow=8.0,SNR=9.9						

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*NOU **14** 18:01:13.4, 39°.91S×174°.25E, h145^{km}, MLv3.6, North Island, New Zealand*

WEL 14 18:01:14.6, 40°S±1°×**17°4E**±°**, h130**^{km}±2^{km}**, M3.4**/53**, MLv3.4**/53**, Error ellipse: s-maj=0.0km s-min=0.0km az=63.9, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LREZ	Lake Rotokare	0.49	14	P	Pn	18 01 34.1	+0.6
LREZ				S	Sn	18 01 48.1	+0.3
WAZ	Wanganui	0.60	72	P	Pn	18 01 35.0	+0.8
WAZ				S	Sn	18 01 49.5	+0.5
NMEZ	Namu Road	0.60	331	P	Pn	18 01 34.6	+0.5
NMEZ				S	Sn	18 01 49.3	+0.4
PREZ	Palmer Road	0.60	353	P	Pn	18 01 34.6	+0.3
PREZ				S	Sn	18 01 48.7	-0.5
KHEZ	Kahui Hut	0.67	344	P	Pn	18 01 35.2	+0.4
NEZ	North Egmont	0.68	350	P	Pn	18 01 35.2	+0.4
NEZ				S	Sn	18 01 49.5	-0.7
DREZ	Durham Road	0.75	357	P	Pn	18 01 35.0	-0.3
DREZ				S	Sn	18 01 50.8	-0.1
PKE	Pukeiti	0.77	345	P	Pn	18 01 35.8	+0.3
PKE				S	Sn	18 01 50.0	-1.4
OHWZ	Ohakea	0.86	108	P	Pn	18 01 37.0	+0.9
OHWZ				S	Sn	18 01 52.0	-0.6
MHEZ	Mangahewa	0.86	4	P	Pn	18 01 36.9	+0.7
MHEZ				S	Sn	18 01 51.6	-1.0
DUWZ	D'Urville Isla	0.90	196	P	Pn	18 01 37.0	+0.4
DUWZ				S	Sn	18 01 53.0	-0.3
VRZ	Vera Road	0.90	26	P	Pn	18 01 36.8	+0.2
VRZ				S	Sn	18 01 53.4	+0.2
KIW	Kapiti Island	1.05	152	P	Pn	18 01 38.2	+0.3
KIW				S	Sn	18 01 52.8	-2.9
PKVZ	Pokaka	1.07	53	P	Pn	18 01 38.4	+0.2
PKVZ				S	Sn	18 01 55.0	-1.0
MTVZ	Mangateitei	1.09	60	P	Pn	18 01 38.7	+0.3
OGWZ	Otaki Gorge	1.12	142	P	Pn	18 01 39.1	+0.5
TRVZ	Turoa	1.19	58	P	Pn	18 01 39.5	0.0
WNVZ	Wahianoa	1.21	60	P	Pn	18 01 39.7	+0.1
DRZ	Dome Shelter	1.21	57	P	Pn	18 01 41.1	+1.2
WHVZ	Whangaehu Hut	1.22	58	P	Pn	18 01 39.9	0.0
MRZ	Mangatainoka R	1.25	126	P	Pn	18 01 40.2	+0.3
POWZ	Post Office Ro	1.25	112	P	Pn	18 01 40.1	+0.2
TWVZ	Taurewa	1.26	47	P	Pn	18 01 40.1	0.0
TCW	Tory Channel	1.27	179	P	Pn	18 01 40.6	+0.5
TUVZ	Tukino	1.27	59	P	Pn	18 01 40.6	+0.3
MOVZ	Moawhango	1.28	66	P	Pn	18 01 40.0	-0.3
NGZ	Ngauruhoe	1.29	54	P	Pn	18 01 40.5	0.0
TSZ	Takapari Road	1.32	96	P	Pn	18 01 40.7	0.0
CAW	Cannon Point	1.32	152	P	Pn	18 01 41.3	+0.6
WTVZ	West Tongariro	1.32	52	P	Pn	18 01 40.8	0.0
OTVZ	Oturere	1.34	55	P	Pn	18 01 41.2	+0.1
HOWZ	Holdsworth Sta	1.36	135	P	Pn	18 01 41.4	+0.3
KRVZ	Karewarewa	1.37	52	P	Pn	18 01 41.2	0.0
ETVZ	East Tongariro	1.39	55	P	Pn	18 01 41.8	+0.3
TMVZ	Te Maari	1.39	54	P	Pn	18 01 41.9	+0.3
WEL	Wellington	1.40	164	P	Pn	18 01 41.9	+0.5
NNZ	Nelson	1.44	207	P	Pn	18 01 42.3	+0.4
PRWZ	Pori Road	1.45	116	P	Pn	18 01 42.7	+0.6
BHHZ	Black Hill Sta	1.47	73	P	Pn	18 01 41.8	-0.5
KATZ	Kakaramea	1.48	50	P	Pn	18 01 42.6	+0.1
HIZ	Hauiti	1.50	18	P	Pn	18 01 42.8	+0.1
PNHZ	Pukenui	1.50	90	P	Pn	18 01 42.8	+0.1
TIWZ	Tintock	1.50	124	P	Pn	18 01 43.0	+0.3
TUWZ	Tuamarina	1.51	189	P	Pn	18 01 42.9	+0.2
DVHZ	Dannevirke	1.51	104	P	Pn	18 01 42.8	0.0
BHW	Baring Head	1.54	162	P	Pn	18 01 43.4	+0.3
MTW	Mount Morrison	1.55	142	P	Pn	18 01 43.4	+0.3
QRZ	Quartz Range	1.58	235	P	Pn	18 01 43.6	0.0
RATZ	Rangitukua	1.59	48	P	Pn	18 01 44.4	+0.7
KRHZ	Kereru	1.66	80	P	Pn	18 01 44.4	-0.1
MSWZ	Moikau Station	1.66	153	P	Pn	18 01 44.8	+0.3
WATZ	Wairara	1.68	44	P	Pn	18 01 45.5	+0.7
WPHZ	Waipukurau	1.69	95	P	Pn	18 01 45.0	+0.2
PAWZ	Paruwai Farm	1.70	149	P	Pn	18 01 45.2	+0.3
BFZ	Birch Farm	1.70	117	P	Pn	18 01 45.0	+0.1
TMWZ	Te Maipa	1.71	134	P	Pn	18 01 45.4	+0.3
KWHZ	Kaweka Forest	1.75	74	P	Pn	18 01 45.8	+0.2
CPWZ	Castlepoint	1.78	124	P	Pn	18 01 46.7	+0.9
ANWZ	Angora Road	1.78	108	P	Pn	18 01 46.3	+0.4
BSWZ	Blackbirch Sta	1.80	189	P	Pn	18 01 46.7	+0.7
PLWZ	Palliser	1.80	155	P	Pn	18 01 46.2	+0.1
TRWZ	Traveller	1.82	144	P	Pn	18 01 47.0	+0.6
PRHZ	Porangahau	1.86	101	P	Pn	18 01 47.1	+0.3
TLZ	Tolley Road	1.89	32	P	Pn	18 01 47.5	+0.2
BKZ	Black Stump Fm	1.90	67	P	Pn	18 01 46.9	-0.4
MCHZ	McNeill Hill	1.95	76	P	Pn	18 01 48.3	+0.4
PXZ	Pawanui	2.01	93	P	Pn	18 01 48.7	+0.2
KAHZ	Kahuranaki	2.03	87	P	Pn	18 01 48.8	0.0
THZ	Tophouse	2.09	209	P	Pn	18 01 49.9	+0.3
NMHZ	Naumai	2.15	68	P	Pn	18 01 50.9	+0.5
CKHZ	Cape Kidnapper	2.20	84	P	Pn	18 01 51.0	+0.1
ARHZ	Aropaoanui	2.23	73	P	Pn	18 01 51.2	-0.1
MTHZ	Maungataniwha	2.28	62	P	Pn	18 01 51.4	-0.6
RAHZ	Arahi	2.42	66	P	Pn	18 01 53.6	-0.2
MUGZ	Murupara	2.44	54	P	Pn	18 01 53.4	-0.6
RTZ	Ruatahuna	2.50	59	P	Pn	18 01 54.1	-0.6
KHZ	Kahutara	2.53	192	P	Pn	18 01 55.5	+0.4
DSZ	Denniston Nort	2.59	225	P	Pn	18 01 55.9	0.0
SNGZ	Shannon Statio	2.66	65	P	Pn	18 01 56.3	-0.5
TGRZ	Tauranga	2.71	36	P	Pn	18 01 58.1	+0.7
URZ	Urewera	2.79	54	P	Pn	18 01 57.4	-0.9
KNZ	Kokohu	2.80	72	P	Pn	18 01 57.7	-0.9
MKAZ	Moumakai	2.92	14	P	Pn	18 02 00.6	+0.5
MHGZ	Mahia Peninsul	2.94	76	P	Pn	18 01 59.7	-0.6
PRGZ	Paritu Road	2.99	71	P	Pn	18 02 00.1	-1.0
MWZ	Matawai	3.01	59	P	Pn	18 02 00.2	-1.1
ETAZ	East Tamaki Re	3.03	10	P	Pn	18 02 02.3	+0.8
GVZ	Greta Valley S	3.16	196	P	Pn	18 02 02.7	-0.5
TKGZ	Te Karaka	3.17	63	P	Pn	18 02 02.4	-0.9
LTZ	Lake Taylor	3.21	207	P	Pn	18 02 03.2	-0.6
WIAZ	Waiheke Island	3.22	13	P	Pn	18 02 04.9	+0.9
RUGZ	Raukumara Rang	3.32	55	P	Pn	18 02 03.8	-1.6
TWGZ	Tauwhareparae	3.40	60	P	Pn	18 02 05.6	-0.7
CNGZ	Carnagh Statio	3.40	66	P	Pn	18 02 05.6	-0.7
AMCZ	Amberley	3.45	200	P	Pn	18 02 06.1	-0.9
INZ	Inchbonnie	3.49	216	P	Pn	18 02 07.3	-0.3
HAZ	Te Kaha	3.52	53	P	Pn	18 02 06.0	-1.9
PKGZ	Pakihiroa	3.62	57	P	Pn	18 02 08.3	-1.0
OXZ	Oxford	3.77	205	P	Pn	18 02 09.3	-1.9
WMGZ	Waiomatatini S	3.88	58	P	Pn	18 02 11.0	-1.7
OKCZ	Okains Bay	3.88	193	P	Pn	18 02 11.5	-1.2
MQZ	McQueen's Vall	3.95	197	P	Pn	18 02 11.4	-2.1
RACZ	Rakaia	4.10	202	P	Pn	18 02 14.1	-1.4
RPZ	Rata Peaks	4.46	211	P	Pn	18 02 20.1	-0.4
GCSZ	Gaunt Creek Bo	4.47	220	P	Pn	18 02 19.6	-1.0
ARCZ	Arundel	4.61	209	P	Pn	18 02 20.7	-1.8
FOZ	Fox Glacier	4.89	221	P	Pn	18 02 24.9	-1.2
TMZ	Timaru	5.05	207	P	Pn	18 02 26.4	-1.9
ODZ	Otahua Downs	5.76	206	P	Pn	18 02 36.6	-1.1
JCZ	Jackson Bay	5.80	223	P	Pn	18 02 37.0	-1.3
HHSZ	Highcliff Hill	6.52	203	P	Pn	18 02 47.1	-0.8
WHZ	Wether Hill Ro	7.54	216	P	Pn	18 02 58.9	-2.7
CTZ	Chatham Island	7.80	122	P	Pn	18 03 06.0	+0.8

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*BGR **14** 18:13:35.6±0.0, 23°.85S×177°.67W, h33^{km}, Ms4.3*

*NEIC **14** 18:14:46.8±1.6, 20°.20S±0°.08×178°.3W±0°.1, h589^{km}±5^{km}, mb4.6/38, Error ellipse: s-maj=16.2km s-min=8.9km az=51.0*

*IDC **14** 18:14:47.4±1.7, 20°.15S×178°.43W, h588^{km}±12^{km}, mb3.3/9, mb1 3.5/11, mb1mx3.3/36, mbtmp4.3/11, Error ellipse: s-maj=30.5km s-min=12.8km az=150.0*

ISC 14 18:14:48.0±0.5**, 20°.19S**±0°.09×**178°.33W**±0°.07**, h602**^{km}**, n87,** σ**1^{s}.01**/93**, mb4.5**/26**, 1D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.20	305	P	P	18 16 13.2	-2.0
	8.5nm,0.3s,baz=131,slow=5.7,SNR=59						
MSVF				S	S	18 17 22.6	-3.6
	baz=330,slow=23,SNR=0.6						
NIUE	Niue	8.00	83	P	P	18 16 46.0	-1.4
DZM	Mont Dzumac	14.33	260	P	P	18 17 48.5	-1.5
	0.8nm,0.3s,baz=318,slow=24,SNR=9.1						
OUZ	Omahuta	16.58	204	P	P	18 18 12.1	+1.7
OUZ				IAmb	IAmb	18 18 16.3	
	comp=Z,15nm,1.2s						
MXZ	Matakaoa Point	17.56	189	P	P	18 18 16.7	-2.6
URZ	Urewera	18.44	191	P	P	18 18 25.6	-1.7
URZ				IAmb	IAmb	18 18 26.6	
	comp=Z,39nm,1.4s						
HNR	Honiara	23.53	294	P	P	18 19 16.5	+3.1
CTAO	Charters Tower	33.21	264	P	P	18 20 37.0	0.0
CTAO				IAmb	IAmb	18 20 46.5	
	comp=Z,26nm,1.3s						
PMG	Port Moresby	34.97	283	P	P	18 20 51.6	-0.1
PATS	Pohnpei	35.34	317	P	P	18 20 54.8	0.0
TOO	Toolangi	35.83	233	P	P	18 20 59.2	+0.6
COEN	Coen	37.25	273	P	P	18 21 10.8	+0.3
COEN				IAmb	IAmb	18 21 37.9	
	comp=Z,35nm,1.6s						
STKA	Stephens Creek	37.64	244	P	P	18 21 13.4	0.0
	comp=Z,0.8nm,0.5s,baz=104,slow=12,SNR=3.0						
MCQ	Macquarie Isla	38.37	201	P	P	18 21 16.8	-2.0
BBOO	Buckleboo	42.41	243	P	P	18 21 51.2	-0.1
BBOO				IAmb	IAmb	18 22 16.1	
	comp=Z,18nm,1.2s						
JAY	Jayapura	43.65	288	P	P	18 22 01.5	+0.3
WR0	Warramunga Arr	44.15	262	P	P	18 22 04.3	-0.7
WR0				PcP	PcP	18 23 36.7	+0.3
AS31	Alice Springs	44.29	256	P	P	18 22 05.8	-0.2
AS31				PcP	PcP	18 23 37.2	+0.3
ASAR	Alice Springs	44.29	256	P	P	18 22 05.8	-0.3
	comp=Z,2.9nm,0.6s,baz=89,slow=7.8,SNR=96						
ASAR				PcP	PcP	18 23 37.0	0.0
	comp=Z,1.2nm,0.5s,baz=108,slow=3.8,SNR=14						
ASAR				ScP	ScP	18 26 35.9	+3.6
	comp=Z,0.2nm,0.6s,baz=97,slow=4.8,SNR=1.7						
ASAR				S	S	18 27 56.5	-1.1
	comp=Z,0.5nm,0.9s,baz=95,slow=13,SNR=4.9						
ASAR	Alice Springs	44.29	256		PcP	18 23 36.8	-0.1
WB0	Warramunga Arr	44.31	262	P	P	18 22 05.5	-0.7
WB2	Warramunga Arr	44.32	262	P	P	18 22 05.7	-0.7
WRAB	Tennant Creek	44.33	262	P	P	18 22 05.4	-1.0
WRAB				IAmb	IAmb	18 22 06.1	
	comp=Z,22nm,1.6s						
WRA	Warramunga Arr	44.34	262	P	P	18 22 05.7	-0.8
	comp=Z,2.7nm,0.3s,baz=96,slow=7.6,SNR=106						
WRA				PcP	PcP	18 23 36.7	-0.4
	comp=Z,1.1nm,0.8s,baz=80,slow=3.8,SNR=4.5						
WRA				S	S	18 27 58.1	-0.2
	comp=Z,1.2nm,0.8s,baz=94,slow=13,SNR=5.8						
WRA	Warramunga Arr	44.34	262	P	P	18 22 05.6	-0.8
PTCN	Pitcairn Islan	44.61	106	P	P	18 22 08.7	+0.3
MTN	Manton Dam	48.85	270	P	P	18 22 39.7	-0.7
FITZ	Fitzroy Crossi	52.76	262	P	P	18 23 08.5	-0.1
SOEI	Soe	56.18	272	P	P	18 23 34.0	+1.2
SOEI				IAmb	IAmb	18 23 45.2	
	comp=Z,31nm,1.2s						
TOLI2	Tolitoli	63.23	282	P	P	18 24 21.1	+1.8
CASY	Casey	64.11	205	P	P	18 24 25.2	+1.3
CASY				IAmb	IAmb	18 24 48.9	
	comp=Z,50nm,1.2s						
KKM	Kota Kinabalu	69.38	285	P	P	18 24 57.4	+0.1
KKM				IAmb	IAmb	18 25 04.6	
	comp=Z,18nm,1.1s						
JGF	Kuroka	69.58	323	P	P	18 24 57.9	-0.1
JGF				IAmb	IAmb	18 25 02.8	
	comp=Z,22nm,1.2s						
UGM	Wanagama	69.66	269	P	P	18 24 58.8	-0.1
MJAR	Matsushiro Arr	69.77	324	P	P	18 24 58.7	-0.3
	comp=Z,1.9nm,0.5s,baz=165,slow=6.1,SNR=11						
MAJO	Matsushiro	69.78	324	P	P	18 24 58.9	-0.2
MAJO				IAmb	IAmb	18 25 08.4	
	comp=Z,18nm,1.2s						
QSPA	South Pole Qui	69.88	180	P	P	18 25 00.3	+0.9
ADK	Adak	71.77	1	P	P	18 25 10.1	-0.3
SSLB	Suanglung	73.54	304	P	P	18 25 20.2	-1.0
SSLB				IAmb	IAmb	18 25 23.1	
	comp=Z,16nm,1.2s						
UNV	Unalaska Valle	74.43	7	P	P	18 25 24.5	-1.0
UNV				IAmb	IAmb	18 25 24.5	
	comp=Z,55nm,1.5s						
PEA0B	Petropavlovsk-	75.89	345	P	P	18 25 33.8	+0.2

PEA0B				IAmb	IAmb	18 25 36.6	
	comp=Z,53nm,1.3s						
PETK	Petropavlovsk-	75.89	345	P	P	18 25 33.6	0.0
	comp=Z,6.6nm,0.8s,baz=127,slow=7.0,SNR=9.3						
KSRS	Korea Array	76.45	319	P	P	18 25 38.0	+1.0
	comp=Z,0.7nm,0.5s,baz=130,slow=6.0,SNR=6.0						
CNPM	China Poot	82.47	14	P	P	18 26 08.2	+0.1
CNPM				IAmb	IAmb	18 26 34.3	
	comp=Z,55nm,1.4s						
IPM	Ipoh	82.78	277	P	P	18 26 11.6	+0.9
SVW2	Sparrevohn	83.05	11	P	P	18 26 10.8	-0.2
SVW2				IAmb	IAmb	18 26 12.5	
	comp=Z,24nm,1.6s						
KULM	Kulim	83.42	278	P	P	18 26 14.6	+0.7
KULM				IAmb	IAmb	18 26 18.7	
	comp=Z,17nm,1.4s						
SUA	Susitna One	84.33	13	P	P	18 26 17.4	+0.1
SUA				IAmb	IAmb	18 26 37.6	
	comp=Z,23nm,1.6s						
TXAR	Lajitas Array	87.15	57	P	P	18 26 33.0	+1.4
	comp=Z,0.5nm,0.7s,baz=224,slow=6.3,SNR=6.3						
CCB	Clear Creek Bu	87.78	13	P	P	18 26 33.0	-0.6
CCB				IAmb	IAmb	18 26 33.6	
	comp=Z,4.7nm,0.6s						
ILAR	Eielson Array	88.08	13	P	P	18 26 34.3	-0.7
	comp=Z,1.2nm,0.5s,baz=215,slow=5.4,SNR=17						
CMAR	Chiang Mai Arr	89.72	290	P	P	18 26 45.5	+1.8
	comp=Z,1.4nm,0.8s,baz=119,slow=3.5,SNR=8.2						
CMAR	Chiang Mai Arr	89.72	290	P	P	18 26 45.0	+1.3
MKAR	Makanchi Array	110.76	314	PKiKP	PKiKP	18 32 12.5	-1.0
	comp=Z,0.5nm,0.6s,baz=251,slow=1.0,SNR=8.1						
ARCES	ARCESS Array B	128.56	350	PKP	PKPdf	18 32 46.6	-0.3
	comp=Z,2.8nm,0.8s,baz=50,slow=2.1,SNR=6.9						
FINES	FINESS Array B	135.38	344	PKP	PKPdf	18 33 00.6	+0.7
	comp=Z,7.3nm,1.1s,baz=43,slow=2.7,SNR=6.2						
AKASG	Malin Array Be	142.59	331	PKhKP	PKPpre	18 33 09.8	
	comp=Z,4.3nm,0.5s,baz=42,slow=4.4,SNR=28						
BSEG	Bad Segeberg	145.66	351	*e*L	L	19 44 15.2	
	comp=Z,49nm,21.1s						
BR131	Keskin Array S	146.40	312		PKPbc	18 33 23.1	+0.2
BRTR	Keskin Array B	146.40	312	PKPbc	PKPbc	18 33 22.9	0.0
	comp=Z,1.9nm,0.6s,baz=143,slow=4.5,SNR=13						
BRTR	Keskin Array B	146.40	312		PKPbc	18 33 22.8	-0.1
BUR08	Bucovina Ar. S	146.62	331		PKPbc	18 33 24.2	+1.0
BURAR	Bucovina Array	146.64	331		PKPbc	18 33 23.8	+0.5
KOLS	Kolonicke sedl	146.90	335	*e*PKP	PKPbc	18 33 24.4	+0.6
OSTC	Ostas	147.58	343	*e*PKP	PKPbc	18 33 25.9	+0.4
CHVC	Chvalec	147.60	343	*e*PKP	PKPbc	18 33 25.0	-0.6
CLZ	Clausthal	147.68	350	*e*PKPbc	PKPbc	18 33 26.3	+0.5
	baz=18,slow=2.3						
CLL	Collm	147.69	347	⇓*i*PKPbc	PKPbc	18 33 25.9	+0.2
	comp=Z,7.0nm,0.6s						
CLL				*i* PKPab	PKPab	18 33 30.4	+0.2
CLL	Collm	147.69	347		PKPbc	18 33 25.8	+0.2
CLL	Collm	147.69	347	*e*PKPbc	PKPbc	18 33 26.1	+0.4
	baz=18,slow=2.3						
DPC	Dobruska-Polom	147.74	342	*e*PKP	PKPbc	18 33 25.7	-0.2
DPC				*e*x	x	18 33 30.4	
BRG	Berggiesshubel	147.88	345	*e*PKPbc	PKPbc	18 33 26.7	+0.4
	baz=18,slow=2.3						
PRU	Pruhonice	148.55	344	*e*PKP	PKPbc	18 33 27.9	0.0
VYHS	Vyhne	148.55	338	*e*PKP	PKiKP	18 33 28.7	-0.4
KASTN	Kahler Asten	148.59	352	*e*PKPbc	PKPbc	18 33 28.4	+0.4
	baz=18,slow=2.3						
PLN	Plauen	148.64	347	*e*PKPbc	PKPbc	18 33 28.5	+0.4
	baz=18,slow=2.3						
TANN	Tannenbergstha	148.65	347	*e*PKPbc	PKPbc	18 33 28.5	+0.3
	baz=18,slow=2.3						
GUNZ	Gunzen	148.72	347	*e*PKPbc	PKPbc	18 33 28.8	+0.5
	baz=18,slow=2.3						
MANZ	Manzenberg	149.13	347	*e*PKPbc	PKiKP	18 33 29.9	-0.3
	baz=18,slow=2.3						
ROTZ	Rotzenmuhle	149.31	347	*e*PKPbc	PKPbc	18 33 30.0	+0.2
	baz=18,slow=2.3						
KHC	Kasperske Hory	149.58	344	*e*PKP	PKPbc	18 33 30.1	-0.4
KHC				*e*x	x	18 33 38.4	
GRF	Grafenberg Arr	149.59	348	*e*L	L	19 52 44.3	
	comp=Z,53nm,20.4s						
CKRC	Cesky Krumlov	149.68	343	*e*PKP	PKPbc	18 33 31.0	+0.3
GEC2	GERESS Array S	149.82	344	*e*PKPbc	PKPbc	18 33 31.2	+0.1
	baz=18,slow=2.3						
GERES	GERESS Array B	149.82	344	PKPbc	PKPbc	18 33 31.4	+0.3
	comp=Z,1.0nm,0.6s,baz=29,slow=1.8,SNR=12						
GERES	GERESS Array B	149.82	344		PKPbc	18 33 31.3	+0.2
RJOB	Jochberg	151.07	344	*e*PKPbc	PKPbc	18 33 33.8	-0.2
	baz=18,slow=2.3						

MOS ***14*** *18:16:43.0±1.0, 36°.41N×71°.77E, h83^{km}, mb4.6/23, Error ellipse: s-maj=5.3km s-min=3.5km az=85.9*

BJI ***14*** *18:16:45.0±0.0, 36°.39N×71°.95E, h87^{km}, mB4.9/36, mb4.8/58, Ms4.2/9, Ms7 4.0/10*

IDC ***14*** *18:16:46.6±2.4, 36°.33N×71°.69E, h106^{km}±22^{km}, mb4.3/32, mb1 4.4/36, mb1mx4.2/49, mbtmp4.7/36, MS3.1/6, Ms1 3.2/6, ms1mx2.8/47, Error ellipse: s-maj=11.2km s-min=8.3km az=0.0*

NEIC ***14*** *18:16:46.2±2.1, 36°.43N±0°.06×71°.64E±0°.07, h101^{km}±5^{km}, mb4.9/137, Error ellipse: s-maj=9.1km s-min=7.5km az=49.0*

NNC ***14*** *18:16:46.9±4.0, 36°.65N×71°.29E, h121^{km}±47^{km}, mb4.6, mpv5.2, Error ellipse: s-maj=38.6km s-min=19.7km az=158.0*

ISC 14 18:16:44.3±0.5, **36°.41N**±0°.03×**71°.66E**±0°.03, **h87**^{km}±4^{km}, **n501**, σ**2^{s}13**/553, **mb4.7**/160, **20C-18D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEP	Cherat	2.59	175	P	Pn	18 17 26.0	+1.6
KBL	Kabul	2.83	230	PN	Pn	18 17 29.3	+1.6
KBL	Kabul	2.83	230	Pn	Pn	18 17 29.3	+1.6
KBL	Kabul	2.83	230	P	Pn	18 17 29.3	+1.6
KBL				P	Pn	18 17 29.4	+1.6
	SNR=590						
KBL				S	Sn	18 18 02.7	+1.6
NIL	Nilore	3.05	154	PN	Pn	18 17 32.6	+2.1
NIL						18 18 07.8	
NIL	Nilore	3.05	154	Pn	Pn	18 17 32.6	+2.1
NIL				Sn	Sn	18 18 07.8	+1.7
NIL	Nilore	3.05	154	P	Pn	18 17 32.7	+2.1
NIL				S	Sn	18 18 03.5	-2.6
THW	Thamme Wali	3.61	179	P	Pn	18 17 38.8	+0.7
SARP	Sargodha	4.56	169	P	Pn	18 17 50.4	-0.5
KSH	Kashi	4.61	46	P	Pn	18 17 48.3	-3.4
KSH				sP		18 18 07.4	
KSH				S	Sn	18 18 34.8	-9.2
KSH				smax	smax		
	comp=N,2µm,0.3s						
KSH				smax	smax		
	comp=E,2µm,0.2s						
KSH				LR	LR		
	comp=Z,2µm,6.1s						
DHRM	DHARAMSHALA	5.66	136	*e*P	Pn	18 18 05.0	-1.0
DHRM				*e*S	Sn	18 19 04.1	-5.7
DHRM				IAML		18 19 08.5	
	comp=N,7µm,0.6s						
DHRM				IAML		18 19 09.4	
	comp=E,5µm,0.3s						
IUG	Iuzhnay	5.87	348	*e*P	Pn	18 18 09.6	+0.8
	baz=347						
IUG	Iuzhnay	5.87	348	Pg	Pn	18 18 11.4	+2.6
IUG				Lg	Lg	18 19 16.3	
IUG	Iuzhnay	5.87	348	*e*PN	Pn	18 18 09.5	+0.8
AML	Almayashu	5.93	15	P	Pn	18 18 12.3	+2.5
	SNR=782						
UCH	Uchtor	6.22	20	P	Pn	18 18 16.2	+2.4
	SNR=408						
EKS2	Erkin-Say	6.45	14	P	Pn	18 18 19.8	+3.0
	SNR=373						
DZA	Taraz	6.48	358	*e*P	Pn	18 18 17.6	+0.5
	baz=357						
DZA				*e*S	Sn	18 19 30.7	+1.3
	baz=357						
DZA	Taraz	6.48	358	*e*PN	Pn	18 18 17.5	+0.5
AAK	Ala-Archa	6.59	19	P	Pn	18 18 21.4	+2.6
	comp=E,62nm,0.3s,baz=197,slow=9.4,SNR=827						
AAK				S	Sn	18 19 33.9	+1.5
	comp=E,6.2nm,0.3s,baz=334,slow=23,SNR=12						
AAK				LR	LR	18 20 32.8	
	comp=E,72nm,18.4s,baz=212,slow=34						
AAK	Ala-Archa	6.59	19	P	Pn	18 18 21.4	+2.6
	SNR=229						
AAK	Ala-Archa	6.59	19	⇑P	Pn	18 18 21.3	+2.6
	comp=E,189nm,0.7s						
AAK				⇓S	Sn	18 19 32.0	-0.5
	comp=E,100nm,0.6s						
AAK	Ala-Archa	6.59	19	Pn	Pn	18 18 21.3	+2.6
AAK				Sn	Sn	18 19 32.9	+0.4
AAK	Ala-Archa	6.59	19	P	Pn	18 18 21.3	+2.6
AAK				S	Sn	18 19 33.4	+0.9
KBK	Karagaybulak	6.74	21	P	Pn	18 18 23.2	+2.6
	SNR=117						
KK31	Karatay Array	6.74	353	⇓P	Pn	18 18 22.4	+1.8
	comp=E,362nm,0.5s,baz=180,slow=13,SNR=3883						
KK31				⇑S	Sn	18 19 33.1	-2.7
	comp=E,45nm,0.3s,baz=181,slow=22						
KK31	Karatay Array	6.74	353	PN	Pn	18 18 22.4	+1.8
KK31	Karatay Array	6.74	353		Pn	18 18 22.4	+1.8
KK31				Sn	Sn	18 19 34.4	-1.5
KKAR	Karatay Array	6.74	353	PN	Pn	18 18 22.2	+1.6
KKAR	Karatay Array	6.74	353		Pn	18 18 22.2	+1.6
KKAR	Karatay Array	6.74	353		Pn	18 18 22.3	+1.6
BRLS	Borolday	6.76	349	*e*P	Pn	18 18 18.6	-2.2
	comp=E,54nm,0.8s,baz=346						
BRLS	Borolday	6.76	349	Pg	Pn	18 18 19.3	-1.5
	comp=E,170nm,0.4s						
BRLS	Borolday	6.76	349	*e*PN	Pn	18 18 18.6	-2.2
BRLS				pmax	pmax		
	comp=Z,55nm,0.8s						
ULHL	Ulahol	6.82	30	P	Pn	18 18 23.6	+1.7
	SNR=199						
SMLA	Simla	6.99	137	*e*P	Pn	18 18 23.3	-0.6
SMLA				*e*S	Sn	18 19 35.4	-6.4
SMLA				IAML		18 19 37.7	
	comp=E,1µm,0.5s						
SMLA				IAML		18 19 38.2	
	comp=N,2µm,0.3s						
CHMS	Chumysh	7.00	19	P	Pn	18 18 26.6	+2.5
	SNR=242						
TKM2	Tokmak 2	7.17	24	P	Pn	18 18 28.7	+2.0
	SNR=28						
TKM2	Tokmak 2	7.17	24	⇓P	Pn	18 18 28.6	+1.9
	comp=N,96nm,0.6s						
TKM2				⇑S	Sn	18 19 46.6	-0.2
	comp=N,44nm,0.6s						
SGDS	Sogindy	7.39	17	*e*P	Pn	18 18 29.4	-0.1
	baz=16						
SGDS	Sogindy	7.39	17	*e*PN	Pn	18 18 29.4	-0.1
KST	Kastek	7.41	25	Pg	Pn	18 18 32.1	+2.3
	comp=N,80nm,0.5s						
DGS	Degeres	7.52	24	Pg	Pn	18 18 33.3	+2.0
	comp=N,56nm,0.4s						
DGS				Lg	Lg	18 19 53.2	
	comp=N,45nm,0.7s						
IZV	Izvestkoviy	7.64	28	Pg	Pn	18 18 35.5	+2.6
	comp=N,47nm,0.4s						
TNSS	Tian-Shan	7.77	30	Pg	Pn	18 18 36.8	+1.8
	comp=N,78nm,0.5s						
KRBS	Karabastau	7.90	22	Pg	Pn	18 18 37.9	+1.4
	comp=N,42nm,0.8s						
KRBS				Lg	Lg	18 20 01.1	
	comp=N,16nm,0.7s						
AAA	Alma-Ata	7.90	29	*e*P	Pn	18 18 37.0	+0.5
	baz=28						
AAA				*e*S	Sn	18 20 04.7	+0.4
	baz=28						
AAA	Alma-Ata	7.90	29	*e*PN	Pn	18 18 36.9	+0.5
MDOK	Medeo	7.92	30	*e*P	Pn	18 18 36.8	0.0
	baz=29						
MDOK				*e*S	Sn	18 20 04.6	-0.2
	baz=29						
MDOK	Medeo	7.92	30	⇑P	Pn	18 18 38.3	+1.6
	comp=N,37nm,0.6s						
MDOK	Medeo	7.92	30	Pg	Pn	18 18 38.7	+2.0
	comp=N,40nm,0.4s						
MDOK				Lg	Lg	18 20 03.2	
	comp=N,35nm,0.6s						
MDOK	Medeo	7.92	30	*e*PN	Pn	18 18 36.7	0.0
HRA	Herat	7.95	258	Pn	Pn	18 18 38.3	+1.0
KOTS	Kotyrbulak	8.00	30	Pg	Pn	18 18 40.4	+2.5
	comp=N,256nm,0.4s						
KOTS				Lg	Lg	18 20 05.6	
	comp=N,140nm,0.5s						
DDI	Dehra Dun	8.09	137	*e*P	Pn	18 18 39.7	+0.6
DDI				*e*x	x	18 20 03.7	
DDI				IAML		18 20 07.1	
	comp=E,2µm,0.2s						
DDI				IAML		18 20 07.6	
	comp=N,2µm,0.5s						
KTBS	Karatobe	8.24	26	Pg	Pn	18 18 42.1	+1.0
	comp=N,44nm,0.5s						
KUU	Kurty	8.29	24	*e*P	Pn	18 18 41.0	-0.7
	baz=24						
KUU	Kurty	8.29	24	Pg	Pn	18 18 42.4	+0.7
	comp=N,17nm,0.5s						
KUU	Kurty	8.29	24	*e*PN	Pn	18 18 40.9	-0.7
SATY	Saty	8.43	36	*e*P	Pn	18 18 43.0	-0.8
	comp=N,8.7nm,0.8s,baz=35						
SATY	Saty	8.43	36	*e*PN	Pn	18 18 42.9	-0.8
SATY				pmax	pmax		
	comp=Z,9.0nm,0.8s						
CHKK	Chushkaly	8.48	27	*e*P	Pn	18 18 44.1	-0.2
	baz=26						
CHKK	Chushkaly	8.48	27	Pg	Pn	18 18 45.4	+1.1
	comp=Z,91nm,0.4s						
CHKK	Chushkaly	8.48	27	*e*PN	Pn	18 18 44.0	-0.2
UZB	Uzynbulak	8.79	38	*e*P	Pn	18 18 47.8	-0.9
	baz=37						
UZB	Uzynbulak	8.79	38	*e*PN	Pn	18 18 47.8	-0.9
BTLS	Baital	8.81	11	*e*P	Pn	18 18 48.5	-0.3
	comp=Z,13nm,0.6s,baz=10						
BTLS	Baital	8.81	11	*e*PN	Pn	18 18 48.4	-0.3
BTLS				pmax	pmax		
	comp=Z,13nm,0.6s						
KPKS	Kokpek	8.87	35	*e*P	Pn	18 18 49.3	-0.4
	comp=Z,24nm,1.1s,baz=35						
KPKS	Kokpek	8.87	35	*e*PN	Pn	18 18 49.3	-0.4
KPKS				pmax	pmax		
	comp=Z,24nm,1.1s						
NDI	New Delhi	9.02	147	*e*P	Pn	18 18 49.0	-2.7
NDI				*e*S	Sn	18 20 24.0	-7.6
SHLS	Shalkode	9.02	39	*e*P	Pn	18 18 53.7	+1.8
	baz=40						
SHLS	Shalkode	9.02	39	*e*P	Pn	18 18 53.6	+1.8
PDGK	Podgornoye	9.16	39	⇓P	Pn	18 18 53.7	+0.1
	comp=Z,38nm,0.9s						
TDK	Taldyqorghan	9.99	29	*e*P	Pn	18 19 03.9	-0.9
	baz=28						
TDK	Taldyqorghan	9.99	29	*e*P	Pn	18 19 03.9	-0.9
GEYT	Alibeck	10.91	282	P	Pn	18 19 14.6	-2.9
	comp=Z,2.4nm,0.3s,baz=100,slow=10,SNR=17						
GEYT				S	Sn	18 21 09.3	-8.3
	comp=Z,4.6nm,0.3s,baz=112,slow=20,SNR=3.5						
GEYT	Alibeck	10.91	282		Pn	18 19 15.4	-2.1
GYA0B	ALIBECK ARRAY	10.91	282	⇓P	Pn	18 19 15.4	-2.1
	baz=152,slow=12						
GYA0B				⇓S	Sn	18 21 10.0	-7.6
GYA0B	ALIBECK ARRAY	10.91	282	Pn	Pn	18 19 15.7	-1.7
MAKZ	Makanchi	12.93	33	⇓P	Pn	18 19 43.7	-0.9
	comp=Z,30nm,0.7s						
MAKZ	Makanchi	12.93	33	P	Pn	18 19 44.0	-0.6
MAKZ	Makanchi	12.93	33		Pn	18 19 44.0	-0.6
DANN	Dangsing	13.00	125	*e*Pn	Pn	18 19 41.5	-4.4
DANN				*e*Sn	Sn	18 21 56.9	-12
	comp=Z,701nm,0.7s						
MK31	Makanchi Array	13.06	34	P	Pn	18 19 45.6	-0.7
	comp=Z,8.0nm,0.6s,baz=237,slow=13,SNR=138						
MK31	Makanchi Array	13.06	34	*ce*P	Pn	18 19 46.1	-0.2
MK31	Makanchi Array	13.06	34	Pn	Pn	18 19 45.7	-0.7
MKAR	Makanchi Array	13.06	34	P	Pn	18 19 45.6	-0.7
	comp=Z,0.5nm,0.3s,baz=213,slow=16,SNR=28						
MKAR				LR	LR	18 24 31.6	
	comp=Z,44nm,20.2s,baz=206,slow=36						
BHUJ	Bhuj	13.23	188	*e*P	Pn	18 19 42.1	-6.5
GKN	Gorkha	13.81	124	*e*Pn	Pn	18 19 52.3	-4.1
GKN				*e*Sn	Sn	18 22 14.7	-14
	comp=Z,411nm,0.4s						
BHPL	Bhopal	14.04	158	*e*P	Pn	18 19 54.0	-5.3
BHPL				*e*x	x	18 22 22.0	
WMQ	Urumqi	14.32	54	*e*P	Pn	18 20 03.1	+0.3
WMQ				pP	P	18 20 18.0	+11
WMQ				sP		18 20 31.3	
WMQ				pmax	pmax		
	comp=Z,20nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,150nm,5.3s						
WMQ	Urumqi	14.32	54	P	Pn	18 20 00.6	-2.2
WMQ	Urumqi	14.32	54	Pn	Pn	18 20 00.6	-2.2
DMN	Daman	14.38	124	*e*Pn	Pn	18 20 00.2	-3.7
DMN				*e*Sn	Sn	18 22 28.7	-14
	comp=Z,218nm,0.5s						
KKN	Kakani	14.38	123	*e*Pn	Pn	18 19 59.4	-4.5
KKN				*e*Sn	Sn	18 22 28.2	-14
	comp=Z,180nm,0.5s						
PKIN	Phulchoki	14.60	123	*e*Pn	Pn	18 20 02.5	-4.2
PKIN				*e*Sn	Sn	18 22 33.1	-14
	comp=Z,318nm,0.5s						
PKI	Pulchoki	14.61	123	*e*Pn	Pn	18 20 02.3	-4.6
PKI				*e*Sn	Sn	18 22 34.0	-14
	comp=Z,357nm,0.8s						
GUN	Gumba	14.72	121	*e*Pn	Pn	18 20 03.3	-5.0
GUN				*e*Sn	Sn	18 22 33.9	-17
ZSN	Zaisan	14.75	38	*e*P	Pn	18 20 07.5	-0.8
	baz=37						
ZSN	Zaisan	14.75	38	*e*P	Pn	18 20 07.4	-0.8
KURBB	Kurchatov Arra	15.04	17	P	Pn	18 20 09.7	-2.2
	comp=Z,0.1nm,0.3s,baz=207,slow=12,SNR=71						
KURBB				S	S	18 23 06.0	-3.6
	baz=206,slow=19,SNR=7.7						
KURBB	Kurchatov Arra	15.04	17	⇓P	Pn	18 20 09.6	-2.4
	comp=Z,51nm,0.8s						
KURK	Kurchatov	15.15	17	⇑P	Pn	18 20 10.8	-2.5
	comp=Z,46nm,0.9s						
KURK	Kurchatov	15.15	17	*ce*P	Pn	18 20 11.0	-2.3
KURK				pmax	pmax		
	comp=Z,32nm,1.3s						
KURK	Kurchatov	15.15	17		Pn	18 20 10.6	-2.7
KURK				IAmb	IAmb	18 20 18.2	
	comp=Z,42nm,0.9s						
AB31	Akbulak array	15.42	330	⇓P	Pn	18 20 15.1	-1.6
	comp=Z,6.9nm,0.3s,baz=152,slow=12,SNR=431						
AB31				⇑S	Sn	18 22 51.0	-16
	comp=Z,7.7nm,0.5s						
ABKAR	Akbulak array	15.42	330	Pn	Pn	18 20 15.2	-1.6
ABKAR				IAmb	IAmb	18 20 17.0	
	comp=Z,25nm,0.5s						
ABKAR	Akbulak array	15.42	330	Pn	Pn	18 20 14.6	-2.1
RAMN	Ramite	15.82	122	*e*Pn	Pn	18 20 18.4	-3.8
RAMN				*e*Sn	Sn	18 23 02.0	-15
	comp=Z,346nm,0.6s						
TAPN	Taplejung	16.34	119	*e*Pn	Pn	18 20 24.1	-4.6
TAPN				*e*Sn	Sn	18 23 10.3	-19
	comp=Z,158nm,0.8s						
ODAN	Odare	16.42	121	*e*Pn	Pn	18 20 25.9	-3.8
ODAN				*e*Sn	Sn	18 23 15.1	-16
	comp=Z,158nm,0.5s						
BVAR	Borovoye Array	16.64	357	P	Pn	18 20 30.6	-1.3
	comp=Z,2.5nm,0.3s,baz=144,slow=11,SNR=29						
BRVK	Borovoye	16.67	357	⇓P	Pn	18 20 30.6	-1.7
	comp=Z,32nm,1.1s						
BRVK	Borovoye	16.67	357	*ce*P	Pn	18 20 31.4	-0.9
BRVK				pmax	pmax		
	comp=Z,49nm,1.3s						
BRVK	Borovoye	16.67	357	P	Pn	18 20 31.2	-1.1
BRVK				IAmb	IAmb	18 20 36.3	
	comp=Z,52nm,1.2s						
BANOM	Banah	16.77	236	P	Pn	18 20 33.2	-0.7
	SNR=9.3						
SHME	Shamm	16.79	236	P	P	18 20 36.1	+1.3
AKTO	Aktyubinsk	17.12	329	P	Pn	18 20 38.2	+0.3
	comp=Z,5.9nm,0.3s,baz=138,slow=9.1,SNR=68						
AKTO				S	Sn	18 23 42.2	-5.7
	comp=Z,0.6nm,0.3s,baz=79,slow=21,SNR=3.8						
AKTO				LR	LR	18 27 41.0	
	comp=Z,42nm,21.3s,baz=163,slow=38						
AKTO	Aktyubinsk	17.12	329	⇓P	P	18 20 38.3	+0.1
	comp=Z,36nm,0.8s						
AKTO				⇓S	Sn	18 23 32.8	-15
	comp=Z,16nm,0.8s						
WSAR	Wadi Sarin	17.30	224	P	P	18 20 41.4	+0.9
	comp=Z,0.6nm,0.3s,baz=87,slow=8.1,SNR=8.7						
UOSS	Minazif	17.50	234	P	P	18 20 42.0	-0.7
UOSS	Minazif	17.50	234	P	Pn	18 20 46.1	+3.3
DGZ	Jazzator, Alta	17.54	36	*i* P	P	18 20 42.7	-0.3
DGZ				pmax	pmax		
	comp=Z,13nm,0.8s						
BOK	Bokaro	17.57	132	*e*P	P	18 20 42.2	-1.2
BOK				IAmb	IAmb	18 20 45.4	
	comp=Z,15nm,0.5s						
WBK	Wadi Bani Khal	17.61	222	P	Pn	18 20 46.8	+2.7
	SNR=5.7						
LSA	Lhasa	17.64	107	P	P	18 20 43.1	-1.6
LSA				S	Sn	18 23 44.9	-17
LSA	Lhasa	17.64	107	P	P	18 20 43.0	-1.6
LSA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
LSA	Lhasa	17.64	107	P	P	18 20 43.0	-1.6
HOQ	Hoqain	17.80	228	P	Pn	18 20 49.4	+3.0
	SNR=11						
POO	Poona	17.92	173	*e*P	P	18 20 45.0	-2.3
ZAA0	Zalesovo Array	19.78	23	⇓P	P	18 21 06.4	-0.9
	comp=Z,7.1nm,0.7s						
ZAA0	Zalesovo Array	19.78	23	P	P	18 21 07.7	+0.4
ZAA0				IAmb	IAmb	18 21 10.9	
	comp=Z,42nm,0.7s						
ZALV	Zalesovo Beam	19.78	23	P	P	18 21 08.2	+0.9
	comp=Z,4.8nm,0.3s,baz=216,slow=10,SNR=126						
ZALV				S	S	18 24 42.7	-2.6
	comp=Z,0.3nm,0.3s,baz=222,slow=19,SNR=2.8						
ZALV	Zalesovo Beam	19.78	23	P	P	18 21 07.7	+0.4
HYB	Hyderabad	19.88	160	*i* P	P	18 21 09.0	+0.3
	comp=Z,40nm,1.0s						
HYB				*e*S	Sn	18 24 53.0	-1.6
HYB	Hyderabad	19.88	160	*e*P	P	18 21 08.8	+0.1
HYB				IAmb	IAmb	18 21 13.0	
	comp=Z,28nm,0.4s						
SHL	Shillong	20.39	116	P	P	18 21 13.6	-0.8
SHL				pmax	pmax		
	comp=Z,21nm,0.6s						
SHL	Shillong	20.39	116	*e*P	P	18 21 14.3	-0.1
SHL				IAmb	IAmb	18 21 18.1	
	comp=Z,27nm,0.3s						
SHL	Shillong	20.39	116	P	P	18 21 13.6	-0.8
SHL				IAmb	IAmb	18 21 18.2	
	comp=Z,21nm,0.6s						
ZIRO	ZIRO	20.77	109	*e*P	P	18 21 18.6	+0.2
GROC	Groznyy	20.94	297	*e*P	P	18 21 21.8	+1.8
GROC				*e*S	S	18 25 11.4	+3.0
GROC				pmax	pmax		
	comp=Z,38nm,1.6s						
UMR	Umm Al-Rimmam	21.19	258	*e*P		18 21 22.9	
MIB	Mutribah	21.38	259	*e*P		18 21 24.7	
GNI	Garni	21.42	288	P	P	18 21 27.9	+2.6
	comp=Z,10nm,0.7s,baz=346,slow=4.7,SNR=6.7						
GNI	Garni	21.42	288	*i* P	P	18 21 28.6	+3.3
GNI				pmax	pmax		
	comp=Z,42nm,1.5s						
GNI	Garni	21.42	288	P	P	18 21 26.4	+1.1
GNI				IAmb	IAmb	18 22 02.3	
	comp=Z,34nm,1.1s						
RDF	Al-Radifah	21.59	257	*e*P		18 21 27.1	
SVE	Sverdlovsk	21.73	344	*e*P	P	18 21 29.2	+1.1
SVE				pmax	pmax		
	comp=Z,33nm,0.8s						
RST	Umm Al-Ruwaisa	21.78	259	*e*P		18 21 28.6	
ARU	Arti	21.89	340	P	P	18 21 30.9	+1.0
	comp=Z,3.8nm,0.6s,baz=153,slow=7.6,SNR=8.8						
ARU	Arti	21.89	340	*c* *i*P	P	18 21 31.3	+1.4
ARU						18 22 02.5	
ARU				S	S	18 25 28.6	+2.1
ARU				SS	SnSn	18 26 09.6	+10
ARU				pmax	pmax		
	comp=Z,34nm,1.9s						
ARU	Arti	21.89	340	P	P	18 21 30.4	+0.5
ARU				IAmb	IAmb	18 22 08.6	
	comp=Z,63nm,1.6s						
MOKO	MOKOCHONG	21.91	111	*e*P	P	18 21 31.0	+0.4
KOHI	KOHIMA	21.94	113	*e*P	P	18 21 30.9	0.0
KOHI				*i* sP	sP	18 22 05.5	+4.7
ZEI	Tsey	22.25	295	*e*P	P	18 21 37.9	+3.7
ZEI				pmax	pmax		
	comp=Z,5.0nm,0.7s						
GTA	Gaotai	22.38	74	⇑P	P	18 21 36.1	+0.6
GTA				pP	pP	18 21 58.8	+4.7
GTA				pmax	pmax		
	comp=Z,44nm,0.7s						
NCK	Nalchik	22.57	297	*i* P	P	18 21 39.0	+1.6
NCK				pmax	pmax		
	comp=Z,16nm,0.9s						
GEVA	Gevas	22.77	283	P	P	18 21 39.0	-0.6
KBZ	Khabaz	23.11	297	P	P	18 21 43.6	+0.9
	comp=Z,2.1nm,0.7s,baz=110,slow=9.3,SNR=8.6						
KBZ	Khabaz	23.11	297	*i* P	P	18 21 43.8	+1.1
KBZ				pmax	pmax		

	comp=Z,6.0nm,0.9s						
NEY	Neytrino	23.17	296	i P	P	18 21 45.6	+2.1
NEY				pmax	pmax		
	comp=Z,1.0nm,0.9s						
GOF	Gofitskoye	23.24	301	⇑eP	P	18 21 47.5	+3.6
SHA1	Shidzhatmaz	23.29	297	i P	P	18 21 46.4	+1.8
BELG	Belogornoye	23.29	321	P	P	18 21 45.9	+1.7
	comp=Z,34nm,0.7s,baz=302,slow=0.8,SNR=13						
KIV	Kislovodsk	23.30	298	eP	P	18 21 45.4	+0.8
KIV				eS	S	18 25 52.6	+2.4
KIV				pmax	pmax		
	comp=Z,17nm,1.0s						
KIV				MLR	MLR		
	comp=Z,123nm,14.0s						
KIV	Kislovodsk	23.30	298	P	P	18 21 44.7	+0.2
MARD	Mardin	24.67	281	P	P	18 21 59.7	+2.7
KOPT	Kop Dagi	24.68	288	P	P	18 21 59.9	+2.6
SOC	Sochi	25.39	296	eP	P	18 22 10.5	+7.2
SOC				e		18 22 45.4	
SOC				eSS		18 27 35.9	
SOC				MLR	MLR		
	comp=Z,32nm,17.0s						
MOY	Mondy	25.80	45	eP	P	18 22 09.4	+2.3
MOY				pmax	pmax		
	comp=Z,13nm,1.4s						
LZH	Lanzhou	25.90	81	eP	P	18 22 10.3	+2.0
LZH				pP	pP	18 22 33.3	+4.1
LZH				pmax	pmax		
	comp=Z,18nm,1.0s						
VRH	Novokhopyorsk	25.95	314	eP	P	18 22 08.9	+0.6
VRH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
RAYN	Ar Rayn	25.95	248	P	P	18 22 08.2	-0.5
RAYN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
RAYN	Ar Rayn	25.95	248	P	P	18 22 08.2	-0.5
KIRV	Kirov	26.55	334	P	P	18 22 15.8	+2.1
	comp=Z,15nm,0.6s,baz=49,slow=2.5,SNR=8.8						
KIRV	Kirov	26.55	334	ceP	P	18 22 16.3	+2.7
ZAK	Zakamensk	26.65	48	eP	P	18 22 14.8	0.0
ZAK				pmax	pmax		
	comp=Z,10.0nm,1.2s						
CD2	Chengdu	27.20	92	P	P	18 22 21.8	+1.9
CD2				pmax	pmax		
	comp=Z,20nm,0.8s						
VORD	Divnogorie	27.29	312	eP	P	18 22 21.0	+0.6
VORD				pmax	pmax		
	comp=Z,10.0nm,1.0s						
TLY	Talaya	27.32	46	P	P	18 22 22.8	+2.1
	comp=Z,3.5nm,0.4s,baz=229,slow=5.4,SNR=10.0						
TLY	Talaya	27.32	46	i P	P	18 22 21.3	+0.6
TLY				pmax	pmax		
	comp=Z,5.0nm,0.9s						
TLY	Talaya	27.32	46	P	P	18 22 20.7	0.0
VSR	Storozhevoye	27.45	313	eP	P	18 22 21.0	-0.8
VSR				pmax	pmax		
	comp=Z,10.0nm,1.4s						
GAZ	Gaziantep	27.51	282	P	P	18 22 25.6	+3.0
GAZ				IAmb	IAmb	18 23 14.5	
	comp=Z,34nm,1.8s						
SONM	Songino Array	27.95	55	P	P	18 22 28.3	+1.8
	comp=Z,7.0nm,0.6s,baz=260,slow=9.4,SNR=56						
SONM	Songino Array	27.95	55	P	P	18 22 27.7	+1.2
LPSR	Galich'ya Gora	28.09	316	eP	P	18 22 27.7	+0.2
LPSR				pmax	pmax		
	comp=Z,9.0nm,0.7s						
ULN	Ulaanbaatar	28.39	55	P	P	18 22 31.4	+0.9
ULN				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ULN	Ulaanbaatar	28.39	55	P	P	18 22 31.4	+0.9
KMI	Kunming	28.86	104	⇓P	P	18 22 35.3	+0.4
KMI				pP	pP	18 22 59.3	+3.4
KMI				PP	PnPn	18 23 35.5	+5.0
KMI				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KMI	Kunming	28.86	104	P	P	18 22 34.3	-0.6
KMI				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KMI	Kunming	28.86	104	P	P	18 22 34.3	-0.6
MHMT	Maesarieng	29.43	121	P	P	18 22 39.7	0.0
	comp=Z,23nm,0.6s						
CHTO	Chiang Mai	29.71	119	P	P	18 22 42.4	+0.2
CHTO				pmax	pmax		
	comp=Z,3.0nm,0.7s						
CHTO	Chiang Mai	29.71	119	P	P	18 22 42.4	+0.2
CMMT	Chiang Mai	29.72	119	P	P	18 22 42.4	+0.1
	comp=Z,3.0nm,0.6s						
ILGA	Ilgaz	29.80	291	P	P	18 22 43.7	+0.6
ILGA				IAmb	IAmb	18 23 38.2	
	comp=Z,19nm,1.5s						
MMAI	Mount Meron Ar	29.88	274	P	P	18 22 45.5	+1.8
	comp=Z,0.7nm,0.4s,baz=68,slow=8.5,SNR=1.8						
CM13	Chiang Mai Arr	29.95	119	P	P	18 22 45.0	+0.7
	comp=Z,53nmcomp=Z,4.3nm,0.7s						
CM31	Chiang Mai Arr	29.95	119	P	P	18 22 44.2	-0.1
CMAR	Chiang Mai Arr	29.95	119	P	P	18 22 44.5	+0.2
	comp=Z,3.6nm,0.7s,baz=301,slow=8.8,SNR=39						
CMAR	Chiang Mai Arr	29.95	119	P	P	18 22 43.7	-0.7
BR131	Keskin Array S	29.96	288	P	P	18 22 46.1	+1.6
BR131				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BR131	Keskin Array S	29.96	288	P	P	18 22 46.1	+1.6
BRTR	Keskin Array B	29.96	288	P	P	18 22 46.4	+1.9
	comp=Z,1.1nm,0.7s,baz=104,slow=7.9,SNR=6.9						
BRTR	Keskin Array B	29.96	288	P	P	18 22 45.7	+1.2
CM02	Chiang Mai Arr	29.97	119	P	P	18 22 45.0	+0.5
	comp=Z,64nmcomp=Z,7.0nm,0.8s						
CM01	Chiang Mai Arr	29.98	119	P	P	18 22 45.8	+1.2
	comp=Z,46nmcomp=Z,5.5nm,0.8s						
CM05	Chiang Mai Arr	29.99	119	P	P	18 22 45.7	+1.0
	comp=Z,43nmcomp=Z,4.6nm,0.7s						
CM04	Chiang Mai Arr	30.01	119	P	P	18 22 46.0	+1.1
	comp=Z,62nmcomp=Z,5.6nm,0.8s						
OBN	Obninsk	30.35	319	P	P	18 22 48.0	+0.5
XAN	Xi'an	30.41	83	P	P	18 22 49.0	+0.6
XAN				sP	sP	18 23 24.5	+4.6
XAN				pmax	pmax		
	comp=Z,11nm,0.7s						
XAN	Xi'an	30.41	83	P	P	18 22 49.0	+0.6
XAN				pmax	pmax		
	comp=Z,7.0nm,0.7s						
XAN	Xi'an	30.41	83	P	P	18 22 49.0	+0.6
HHC	Hu-ho-hao-te	31.30	70	eP	P	18 22 58.1	+1.9
HHC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,130nm,6.7s						
GYA	Guiyang	31.33	98	eP	P	18 22 57.0	+0.4
GYA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
UTTA	Uttaradit	31.56	118	P	P	18 22 59.3	+0.8
	comp=Z,166nmcomp=Z,18nm,0.8s						
SLVN	Son La	31.81	109	P	P	18 23 01.8	+1.0
KLMR	Klimovskoe	31.82	330	eP	P	18 22 57.4	-2.9
KLMR				pmax	pmax		
	comp=Z,20nm,1.4s						
KLMR	Klimovskoe	31.82	330	eP	P	18 22 57.5	-2.9
KLMR				AMP		18 23 05.1	
	comp=Z,20nm,1.4s						
ENH	Enshi	32.05	90	P	P	18 23 03.5	+0.8
ENH				IAmb	IAmb	18 23 05.0	
	comp=Z,18nm,1.0s						
UTHA	Uthaitani	32.29	123	P	P	18 23 06.4	+1.5
	comp=Z,15nm,0.8s						
NONG	Nongkai	33.22	115	P	P	18 23 13.6	+0.5
	comp=Z,7µmcomp=Z,22nm,0.8s						
ELL	Elmali	33.34	283	P	P	18 23 14.6	+0.5
ELL				pmax	pmax		
	comp=Z,32nm,0.9s						
ELL	Elmali	33.34	283	P	P	18 23 14.6	+0.5
ELL				IAmb	IAmb	18 23 57.6	
	comp=Z,32nm,0.9s						
AKASG	Malin Array Be	33.41	309	P	P	18 23 15.6	+1.2
	comp=Z,5.3nm,0.6s,baz=80,slow=6.9,SNR=40						
AKASG	Malin Array Be	33.41	309	P	P	18 23 15.2	+0.9
AKBB	Malin Array Si	33.41	309	P	P	18 23 15.2	+0.8
AKBB				pmax	pmax		
	comp=Z,7.0nm,0.7s						
AKBB	Malin Array Si	33.41	309	P	P	18 23 15.2	+0.8
AKBB				IAmb	IAmb	18 23 16.3	
	comp=Z,7.2nm,0.7s						
SORM	Soroca	33.69	304	⇓P	P	18 23 17.1	+0.2
CHAI	Chaiyaphum	33.81	119	P	P	18 23 19.4	+1.2
	comp=Z,18nm,1.0s						
KHON	Khomkaen	34.11	118	P	P	18 23 21.7	+0.9

NRIK	Noril'sk	34.12	10	P	P	18 23 21.9	+1.7
	comp=Z,3.4nm,0.3s,baz=209,slow=2.8,SNR=7.1						
NRIK	Noril'sk	34.12	10	P	P	18 23 22.0	+1.7
NRIK	Noril'sk	34.12	10	P	P	18 23 21.4	+1.1
NRIK				IAmb	IAmb	18 23 22.5	
	comp=Z,5.1nm,0.5s						
TMCR	Tamitsa	34.35	335	eP	P	18 23 24.0	+1.7
TMCR				pmax	pmax		
	comp=Z,13nm,0.8s						
PLOR	Plostina	34.78	300	⇓P	P	18 23 27.3	+0.9
BJT	Baijiatuau	34.88	70	P	P	18 23 28.8	+1.6
BJT				pmax	pmax		
	comp=Z,6.0nm,0.6s						
BJT	Baijiatuau	34.88	70	P	P	18 23 28.8	+1.6
BJT				IAmb	IAmb	18 23 29.9	
	comp=Z,6.0nm,0.6s						
BJI	Beijing	34.89	70	P	P	18 23 28.8	+1.6
BJI				PcP	PcP	18 25 57.6	-0.6
BJI				pmax	pmax		
	comp=Z,8.0nm,0.9s						
BJI				pmax	pmax		
	comp=Z,190nm,5.8s						
MNK	Minsk	34.94	315	i P	P	18 23 21.4	-6.1
	comp=E,1.0nm,0.8s						
MNK				i P	P	18 23 21.4	-6.1
	comp=N,8.0nm,0.8s						
MNK				i P	P	18 23 21.4	-6.1
	comp=Z,7.0nm,0.8s						
MNK				i pP	pP	18 23 40.2	-8.4
MNK				i sP	sP	18 23 49.8	-9.3
MNK				i PP	PnPn	18 24 40.9	-6.0
MNK				i PcP	PcP	18 25 51.7	-6.4
MNK				i S	S	18 28 48.9	-3.6
MNK				i sS	sS	18 29 21.2	-8.4
MNK				i ScP	ScP	18 29 29.9	-5.8
MNK				i PcS	PcS	18 29 38.7	-6.0
MNK				i SS	SnSn	18 31 12.4	-3.6
MNK				i ScS	ScS	18 32 39.6	-60
MNK				i LQ	LQ	18 35 08.8	
MNK				i LR	LR	18 36 05.4	
MNK				i LRM	MLR	18 38 42.2	
	comp=Z,51nm,16.9s						
MNK				i LRM	MLR	18 39 06.5	
	comp=E,18nm,16.9s						
MNK				i LRM	MLR	18 41 37.1	
	comp=N,155nm,16.9s						
MLR	Muntele Rosu	35.28	299	⇑P	P	18 23 34.0	+3.2
MLR	Muntele Rosu	35.28	299	P	P	18 23 32.9	+2.1
MLR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MLR	Muntele Rosu	35.28	299	P	P	18 23 32.9	+2.1
MLR				IAmb	IAmb	18 23 59.0	
	comp=Z,8.1nm,0.9s						
NACGM	Naroch	35.65	316	i P	P	18 23 35.1	+1.6
NACGM				i P	P	18 23 35.1	+1.6
NACGM				i P	P	18 23 35.1	+1.6
NACGM				i PP	PnPn	18 24 48.4	-7.3
NACGM				i S	S	18 28 55.8	-7.6
NACGM				i SS	SnSn	18 31 01.1	-32
NACGM				i SSS	SSS	18 31 24.6	
NACGM				i LQ	LQ	18 34 19.4	
NACGM				i LR	LR	18 37 17.3	
IDID	Didziasalis	35.76	316	eP	P	18 23 37.0	+2.4
BURAR	Bucovina Array	35.78	303	⇑P	P	18 23 37.1	+2.1
BURAR	Bucovina Array	35.78	303	P	P	18 23 36.3	+1.4
BUR08	Bucovina Ar. S	35.79	303	P	P	18 23 36.7	+1.6
WHN	Wuhan	35.87	87	⇓P	P	18 23 37.6	+1.8
WHN				pmax	pmax		
	comp=Z,34nm,0.9s						
VOIR		35.92	299	⇓P	P	18 23 35.7	-0.5
IIGN	Ignalina	36.06	316	eP	P	18 23 39.1	+2.0
ISAL	Salakas	36.16	317	eP	P	18 23 40.3	+2.3
VSU	Vasula	36.58	321	eP	P	18 23 43.3	+1.8
UBPT	Khong Chiam	36.72	116	P	P	18 23 42.8	-0.3
UBPT				IAmb	IAmb	18 23 49.2	
	comp=Z,15nm,1.6s						
PABE	Paberze	37.35	316	eP	P	18 23 50.0	+2.0
SUW	Suwalki	37.56	314	eP	P	18 23 51.0	+1.2
QIZ	Qiongzhong	37.69	107	P	P	18 23 51.1	-0.3
LVZ	Lovozero	37.74	338	P	P	18 23 51.9	+0.7
LVZ				pmax	pmax		
	comp=Z,230nm,1.8s						
LVZ	Lovozero	37.74	338	P	P	18 23 51.9	+0.7
KOLS	Kolonicke sedl	37.76	305	eP	P	18 23 55.1	+3.5
KOLS	Kolonicke sedl	37.76	305	eP	P	18 23 55.1	+3.5
FIA1	FINESS Array S	37.85	326	P	P	18 23 53.9	+1.7
FIA1				IAmb	IAmb	18 23 54.5	
	comp=Z,13nm,0.9s						
FINES	FINESS Array B	37.85	326	P	P	18 23 53.9	+1.7
	comp=Z,9.8nm,0.3s,baz=120,slow=9.1,SNR=178						
MTSE	Matsula	38.12	321	eP	P	18 23 56.4	+1.9
SLIT	Slitere, Latvi	38.67	319	eP	P	18 23 59.8	+0.8
AGG	Agios Georgios	38.73	289	P	P	18 24 00.5	+0.6
AGG				pmax	pmax		
	comp=Z,21nm,1.4s						
AGG	Agios Georgios	38.73	289	P	P	18 24 00.5	+0.6
AGG				IAmb	IAmb	18 24 47.7	
	comp=Z,21nm,1.4s						
LHMI	Lhok Sumawe	38.75	137	P	P	18 23 59.1	-1.1
NJ2	Nanjing	38.96	82	eP	P	18 24 02.0	+0.1
NJ2				pmax	pmax		
	comp=Z,2.0nm,0.5s						
NIE	Niedzica	39.05	306	eP	P	18 24 05.3	+2.7
FNA	Florina	39.10	292	P	P	18 24 02.1	-1.0
FNA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
FNA	Florina	39.10	292	P	P	18 24 02.1	-1.0
DL2	Dalian	39.24	71	P	P	18 24 06.0	+1.9
DL2				pmax	pmax		
	comp=Z,28nm,0.7s						
OJC	Ojcow	39.38	307	P	P	18 24 04.9	-0.3
OJC				pmax	pmax		
	comp=Z,6.0nm,1.0s						
OJC	Ojcow	39.38	307	P	P	18 24 04.9	-0.3
ITM	Ithomi	39.46	286	P	P	18 24 05.0	-1.0
ITM				IAmb	IAmb	18 24 05.7	
	comp=Z,18nm,1.3s						
AAL	Aland	40.36	323	eP	P	18 24 14.0	+0.9
KULM	Kulim	40.82	132	P	P	18 24 17.5	+0.1
KULM				IAmb	IAmb	18 24 25.1	
	comp=Z,12nm,1.1s						
MORC	Moravsky Berou	40.84	307	P	P	18 24 18.9	+1.6
MORC				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MORC	Moravsky Berou	40.84	307	P	P	18 24 18.9	+1.6
GKP	Gorka Klasztor	41.02	312	eP	P	18 24 19.0	+0.3
KEV	Kevo	41.08	338	P	P	18 24 20.3	+1.4
KEV				pmax	pmax		
	comp=Z,87nm,1.4s						
KEV	Kevo	41.08	338	P	P	18 24 20.3	+1.4
SSE	Sheshan	41.16	83	P	P	18 24 21.0	+0.9
SSE				IAmb	IAmb	18 24 22.6	
	comp=Z,25nm,1.0s						
ARA0	ARCESS Array S	41.43	337	eP	P	18 24 23.7	+1.9
ARCES	ARCESS Array B	41.43	337	P	P	18 24 23.3	+1.5
	comp=Z,7.5nm,0.6s,baz=113,slow=8.1,SNR=40						
ARCES				PcP	PcP	18 26 18.2	+0.2
	comp=Z,2.4nm,0.6s,baz=120,slow=5.3,SNR=1.3						
ARCES				LR	LR	18 42 14.6	
	comp=Z,61nm,20.3s,baz=260,slow=37						
ARCES	ARCESS Array B	41.43	337	P	P	18 24 23.6	+1.7
UPP	Uppsala	41.47	322	eP	P	18 24 23.9	+1.7
KNMB	Chin-men Tao	41.65	93	P	P	18 24 24.4	+0.3
KNMB				IAmb	IAmb	18 25 54.7	
	comp=Z,63nm,1.6s						
IPM	Ipoh	41.69	133	P	P	18 24 24.4	-0.2
IPM				IAmb	IAmb	18 24 25.3	
	comp=Z,15nm,0.7s						
ZEA	Zeya	41.74	47	eP	P	18 24 26.7	+2.2
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PSI	Prapat	41.85	137	P	P	18 24 25.3	-0.7
	comp=Z,3.9nm,0.4s,baz=360,slow=2.1,SNR=5.7						
KTK1	Kautokeino	41.91	336	eP	P	18 24 27.2	+1.5
CONA	Conrad Observa	42.07	304	eP	P	18 24 28.2	+0.8
	comp=Z,2.6nm,0.6s						
CONA	Conrad Observa	42.07	304	i P	PKiKP	18 33 32.3	+6.2
	comp=Z,2.6nm,0.6s						
GSI	Gunungsitoli	42.38	140	P	P	18 24 30.9	+0.7
GSI				IAmb	IAmb	18 24 32.0	
	comp=Z,27nm,0.7s						
GSI				PcP	PcP	18 26 22.6	+0.6
GSI	Gunungsitoli	42.38	140	P	P	18 24 31.2	+1.1
	comp=Z,42nm,0.8s						

HAMF	Hammerfest	42.50	338	eP	P	18 24 32.9	+2.4
SOKA	Soboth	42.77	302	i P	P	18 24 34.7	+1.7
	comp=Z,2.6nm,0.6s						
SOKA	Soboth	42.77	302	i P	PKiKP	18 33 35.3	+8.6
	comp=Z,1.2nm,0.7s						
TIP	Timpagrande	42.91	291	P	P	18 24 35.0	+0.6
SGRT	San Giovanni R	43.08	295	P	P	18 24 35.7	0.0
SGRT				IAmb	IAmb	18 25 39.5	
	comp=Z,20nm,1.7s						
BRG	Berggiesshubel	43.09	308	i P	P	18 24 37.6	+2.1
BRG				Amp		18 24 39.6	
	comp=Z,6.7nm,0.7s						
BRG				ex	x	18 24 54.3	
BRG				Amp		18 24 56.5	
	comp=Z,1.6nm,0.8s						
BRG				ex	x	18 25 02.9	
BRG				Amp		18 25 05.4	
	comp=Z,2.3nm,0.7s						
MOA	Molln	43.14	304	i P	P	18 24 37.3	+1.3
	comp=Z,1.9nm,0.6s						
MOA	Molln	43.14	304	i P	PKiKP	18 33 33.0	+6.0
	comp=Z,1.5nm,0.5s						
GERES	GERESS Array B	43.41	305	P	P	18 24 39.5	+1.2
	comp=Z,0.6nm,0.7s,baz=70,slow=7.2,SNR=5.3						
GERES				PcP	PcP	18 26 23.3	-1.8
	comp=Z,0.4nm,0.7s,baz=58,slow=3.7,SNR=2.5						
GERES	GERESS Array B	43.41	305	P	P	18 24 39.4	+1.1
TRO	Tromso	43.56	336	eP	P	18 24 40.8	+1.8
CLL	Collm	43.66	309	eP	P	18 24 41.0	+0.9
	comp=Z,4.0nm,0.9s						
CLL	Collm	43.66	309	eP	P	18 24 41.0	+0.9
CLL				pmax	pmax		
	comp=Z,4.0nm,0.9s						
CLL	Collm	43.66	309	P	P	18 24 40.7	+0.6
MYKA	Terra Mystica	43.72	302	eP	PKiKP	18 33 35.2	+7.6
	comp=Z,2.2nm,0.5s						
YAK	Yakutsk	43.73	35	P	P	18 24 40.4	-0.1
	comp=Z,9.4nm,0.3s,baz=249,slow=3.1,SNR=16						
YAK	Yakutsk	43.73	35	eP	P	18 24 40.3	-0.2
YAK				e*PP	pP	18 24 59.5	-3.1
YAK				e		18 26 20.0	
YAK				eS	S	18 31 02.8	-1.1
YAK				eSS	SS	18 34 13.4	-8.8
YAK				eSSS	SSS	18 35 04.0	
YAK				pmax	pmax		
	comp=Z,14nm,0.8s						
YAK				pmax	pmax		
	comp=Z,272nm,4.9s						
YAK				pmax	pmax		
	comp=N,71nm,3.3s						
YAK				smax	smax		
	comp=N,42nm,1.6s						
YAK				smax	smax		
	comp=E,13nm,1.3s						
YAK	Yakutsk	43.73	35	P	P	18 24 40.8	+0.3
YAK				IAmb	IAmb	18 24 41.7	
	comp=Z,31nm,1.0s						
KBA	Koelnbreinsper	43.86	303	eP	P	18 24 42.6	+0.6
	comp=Z,0.9nm,0.4s						
KBA	Koelnbreinsper	43.86	303	eP	PKiKP	18 33 35.5	+7.6
	comp=Z,1.1nm,0.5s						
MDJ	Mudanjiang	43.98	61	P	P	18 24 42.8	0.0
MDJ				pP	pP	18 25 06.8	+1.7
MDJ				sP	sP	18 25 18.4	+2.7
MDJ				PP	PP	18 26 25.4	-1.2
MDJ				S	S	18 31 08.5	+0.4
MDJ				pmax	pmax		
	comp=Z,5.0nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,140nm,3.8s						
MDJ	Mudanjiang	43.98	61	P	P	18 24 44.7	+1.9
MDJ				IAmb	IAmb	18 24 48.5	
	comp=Z,12nm,1.2s						
TPUB	Ta-pu	44.01	93	P	P	18 24 44.6	+1.3
SSLB	Suanglung	44.03	92	P	P	18 24 45.7	+2.2
SSLB				IAmb	IAmb	18 24 46.6	
	comp=Z,21nm,0.8s						
N2IH	Innhavet	44.05	333	eP	P	18 24 44.7	+1.8
ZOU	Zoufplan	44.19	302	P	P	18 24 45.7	+1.0
N2TV	T¥rnvik	44.24	333	eP	P	18 24 46.2	+1.7
STEI	Steigen	44.29	333	eP	P	18 24 46.7	+1.8
KS19	Wonju Array Si	44.35	71	P	P	18 24 47.2	+1.4
KS19				PcP	PcP	18 26 27.9	-0.5
KSAR	Wonju Array Be	44.38	71	P	P	18 24 47.0	+0.9
KSAR						18 26 27.8	
KSAR	Wonju Array Be	44.38	71	P	P	18 24 47.0	+0.9
KSAR				PcP	PcP	18 26 27.8	-0.7
KSRS	Korea Array	44.41	71	P	P	18 24 46.8	+0.5
	comp=Z,4.2nm,0.7s,baz=277,slow=7.5,SNR=17						
KSRS				PcP	PcP	18 26 27.7	-0.9
	comp=Z,1.4nm,0.7s,baz=308,slow=2.2,SNR=4.2						
ABTA	Abfaltersbach	44.47	303	i P	P	18 24 47.8	+1.0
	comp=Z,1.5nm,0.7s						
ABTA	Abfaltersbach	44.47	303	i P	PKiKP	18 33 35.9	+7.6
	comp=Z,3.4nm,0.6s						
YULB	Yu-li	44.50	93	P	P	18 24 49.9	+2.8
YULB				IAmb	IAmb	18 24 50.6	
	comp=Z,30nm,1.1s						
NC405	NORSAR Array S	44.53	323	P	P	18 24 48.2	+1.2
NC602	NORSAR Array S	44.58	323	P	P	18 24 48.2	+0.9
NC602				IAmb	IAmb	18 25 46.8	
	comp=Z,33nm,1.4s						
NBB30	Finnes	44.61	332	eP	P	18 24 49.1	+1.6
NC303	NORSAR Array S	44.71	323	P	P	18 24 49.9	+1.5
NB201	NORSAR Array S	44.73	323	P	P	18 24 49.6	+1.0
KONS	Konsvik	44.75	331	eP	P	18 24 50.0	+1.5
KLR	Kul'dur	44.77	54	P	P	18 24 50.2	+1.3
	comp=Z,11nm,0.4s,baz=280,slow=7.1,SNR=80						
KLR	Kul'dur	44.77	54	ceP	P	18 24 49.9	+0.9
KLR				pmax	pmax		
	comp=Z,8.0nm,0.5s						
NB2	NORSAR Subarra	44.77	323	P	P	18 24 49.6	+0.7
	comp=Z,12nm,0.5s,baz=95,slow=7.4						
NB2	NORSAR Subarra	44.77	323	P	P	18 24 49.6	+0.7
	baz=95,slow=7.4						
NOA	NORSAR Array B	44.77	323	P	P	18 24 49.6	+0.7
	comp=Z,6.4nm,0.4s,baz=111,slow=7.7,SNR=122						
NOA				LR	LR	18 47 16.6	
	comp=Z,24nm,19.2s,baz=275,slow=41						
NSS	Namsos	44.85	328	eP	P	18 24 50.2	+0.8
NAO01	NORSAR Array S	44.91	323	P	P	18 24 50.8	+0.8
NAO01				IAmb	IAmb	18 25 31.1	
	comp=Z,52nm,1.4s						
NAO01	NORSAR Array S	44.91	323	eP	P	18 24 50.7	+0.8
OSL	Oslo	44.93	321	eP	P	18 24 51.1	+1.0
LOF	Lofoten	44.96	333	eP	P	18 24 51.3	+1.1
NBO00	NORSAR Array S	44.98	323	P	P	18 24 51.4	+0.9
WTTA	Wattenberg	44.99	303	i P	PKiKP	18 33 36.0	+7.0
	comp=Z,2.5nm,0.4s						
NC204	NORSAR Array S	45.01	323	P	P	18 24 51.7	+0.9
NC204				IAmb	IAmb	18 25 36.2	
	comp=Z,47nm,1.6s						
WATA	Walderalm	45.02	304	i P	PKiKP	18 33 35.5	+6.6
	comp=Z,2.2nm,0.5s						
MURB	Monte Urbino	45.09	298	P	P	18 24 53.2	+1.5
MURB				IAmb	IAmb	18 24 56.2	
	comp=Z,12nm,0.9s						
CTI	Castel Tesino	45.17	302	P	P	18 24 53.1	+0.7
CTI				pmax	pmax		
	comp=Z,9.0nm,1.1s						
CTI	Castel Tesino	45.17	302	P	P	18 24 53.1	+0.7
SQTA	Sankt Quirin	45.28	303	eP	P	18 24 53.9	+0.6
	comp=Z,2.6nm,0.6s						
KONO	Kongsberg	45.49	321	P	P	18 24 55.6	+1.1
KONO				pmax	pmax		
	comp=Z,12nm,0.5s						
KONO	Kongsberg	45.49	321	P	P	18 24 55.6	+1.1
KONO				IAmb	IAmb	18 24 56.0	
	comp=Z,12nm,0.5s						
KONO	Kongsberg	45.49	321	eP	P	18 24 55.6	+1.1
MYKOM	Kota Tinggi	45.52	132	P	P	18 24 56.1	+0.8
MYKOM				IAmb	IAmb	18 24 56.7	
	comp=Z,13nm,0.6s						
FETA	Feichten	45.64	303	eP	P	18 24 56.3	+0.2
	comp=Z,1.0nm,0.4s						
FETA	Feichten	45.64	303	eP	PKiKP	18 33 37.0	+7.4
	comp=Z,1.8nm,0.9s						
TIXI	Tiksi	45.66	22	P	P	18 24 56.4	+0.7
TIXI				pmax	pmax		
	comp=Z,16nm,0.3s						
TIXI	Tiksi	45.66	22	P	P	18 24 56.4	+0.7
USA0B	Ussuriysk Arra	45.75	61	P	P	18 24 57.3	+0.5
USA0B						18 26 32.0	
USA0B				pmax	pmax		
	comp=Z,46nm,1.8s						

USA0B	Ussuriysk Arra	45.75	61	P	P	18 24 57.3	+0.5
USA0B				IAmb	IAmb	18 25 51.8	
	comp=Z,46nm,1.8s						
USA0B				PcP	PcP	18 26 32.0	-1.1
USRK	Ussuriysk Ar.	45.75	61	P	P	18 24 57.3	+0.5
	comp=Z,2.9nm,0.5s,baz=279,slow=6.5,SNR=9.7						
USRK	Ussuriysk Ar.	45.75	61	P	P	18 24 57.3	+0.5
USRK				PcP	PcP	18 26 32.1	-1.0
PDSI	Padang	45.78	138	P	P	18 24 57.0	-0.3
	comp=Z,467nmcomp=Z,34nm,0.8s						
DOMB	Dombas	45.87	324	eP	P	18 24 59.1	+1.6
HOMB	Homborsund	46.03	319	i P	P	18 24 59.0	+0.2
HOMB				i P	P	18 24 59.8	+1.0
HOMB				IAmb	IAmb	18 25 00.6	
	comp=Z,4.1nm,0.3s						
DAVA	Damuels	46.16	304	eP	P	18 25 00.3	0.0
	comp=Z,3.8nm,0.5s						
SKAR	Skarslia	46.17	322	eP	P	18 25 01.9	+2.0
JTU	Tsushima	46.46	74	P	P	18 25 03.5	+1.0
SNART	Snartemo	46.72	319	eP	P	18 25 05.9	+1.7
ODD1	Odda	46.99	321	eP	P	18 25 08.4	+2.1
MSSA	Maissana	46.99	300	P	P	18 25 06.9	+0.2
BLS5	Blasjo	47.09	321	eP	P	18 25 08.9	+1.9
HSPB	Hornsund (broa	47.36	345	eP	P	18 25 11.6	+2.7
GRNR	Gornyy	47.55	51	⇑iP	P	18 25 12.2	+1.4
GRNR				pmax	pmax		
	comp=E,5.0nm,0.7s						
GRNR				pmax	pmax		
	comp=Z,6.0nm,1.2s						
GRNR				MLR	MLR		
	comp=E,130nm,14.0s						
GRNR				MLR	MLR		
	comp=Z,110nm,13.0s						
BER	Bergen	47.64	322	eP	P	18 25 12.9	+1.7
SPA0	Spitsbergen Ar	47.70	347	P	P	18 25 13.7	+2.2
SPA0				IAmb	IAmb	18 25 56.2	
	comp=Z,37nm,1.1s						
SPA0				PcP	PcP	18 26 39.8	+0.3
SPA0	Spitsbergen Ar	47.70	347	eP	P	18 25 13.8	+2.3
ASK	Askoy	47.70	322	eP	P	18 25 13.3	+1.6
SENIN	Lac Senin/Sane	48.08	303	P	P	18 25 15.5	+0.3
JNU	Nakatsue	48.10	76	P	P	18 25 16.4	+1.1
	comp=Z,17nm,0.7s,baz=283,slow=2.3,SNR=10						
JNU	Nakatsue	48.10	76	P	P	18 25 16.6	+1.3
JNU				IAmb	IAmb	18 25 17.6	
	comp=Z,37nm,1.0s						
KBS	Kingsbay	48.81	347	P	P	18 25 22.4	+2.3
KBS	Kingsbay	48.81	347	P	P	18 25 22.4	+2.3
KBS				IAmb	IAmb	18 26 05.5	
	comp=Z,26nm,1.1s						
KBS	Kingsbay	48.81	347	eP	P	18 25 22.4	+2.3
KMBO	Kilima Mbogo	49.16	228	P	P	18 25 24.7	+0.9
	comp=Z,5.6nm,0.5s,baz=38,slow=14,SNR=17						
KMBO	Kilima Mbogo	49.16	228	i P	P	18 25 25.7	+1.8
KMBO				pmax	pmax		
	comp=Z,6.0nm,0.5s						
JHS	Saijyo	49.17	72	P	P	18 25 24.0	+0.6
KSI	Kapahiang	49.22	137	P	P	18 25 23.2	-0.8
	comp=Z,89nm,0.7s						
KSM	Kuching	49.84	125	P	P	18 25 29.1	+0.3
KSM				IAmb	IAmb	18 25 30.5	
	comp=Z,8.3nm,0.8s						
SSB	Saint Sauveur	50.21	302	P	P	18 25 32.4	+1.2
SSB				pmax	pmax		
	comp=Z,36nm,1.8s						
SSB	Saint Sauveur	50.21	302	P	P	18 25 32.4	+1.2
SSB				IAmb	IAmb	18 26 52.6	
	comp=Z,36nm,1.8s						
KKM	Kota Kinabalu	50.70	116	P	P	18 25 35.6	+0.3
JWT	Wachi	50.82	71	P	P	18 25 37.4	+1.4
KLSI		51.26	136	P	P	18 25 36.2	-3.2
	comp=Z,5.6nm,0.8s						
INU	Inuyama	52.02	70	P	P	18 25 46.5	+1.6
JGF	Kuroka	52.19	70	P	P	18 25 46.6	+0.4
MJB9	Matsu-Tunnel	52.49	69	P	P	18 25 49.1	+0.8
MAJO	Matsushiro	52.49	69	P	P	18 25 48.0	-0.4
MAJO				pmax	pmax		
	comp=Z,22nm,1.1s						
MAJO	Matsushiro	52.49	69	P	P	18 25 48.0	-0.4
MAJO				IAmb	IAmb	18 25 48.9	
	comp=Z,22nm,1.1s						
MAT	Matsushiro	52.49	69	P	P	18 25 48.1	-0.3
MJAR	Matsushiro Arr	52.49	69	P	P	18 25 49.2	+0.8
	comp=Z,8.0nm,0.9s,baz=288,slow=9.3,SNR=11						
ESK	Eskdalemuir	52.75	316	P	P	18 25 50.8	+0.9
ESK				pmax	pmax		
	comp=Z,26nm,1.4s						
ESK	Eskdalemuir	52.75	316	P	P	18 25 50.8	+0.9
ESK				IAmb	IAmb	18 27 11.5	
	comp=Z,26nm,1.4s						
JEW	Eniwo	52.75	60	P	P	18 25 50.6	+0.5
MBAR	Mbarara	52.89	235	P	P	18 25 52.4	+0.7
MBAR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
MBAR	Mbarara	52.89	235	P	P	18 25 52.4	+0.7
MBAR				IAmb	IAmb	18 25 53.8	
	comp=Z,6.4nm,0.7s						
MYLDM	Lahad Datu	52.95	114	P	P	18 25 53.8	+1.9
MYLDM				IAmb	IAmb	18 27 00.1	
	comp=Z,14nm,1.1s						
JTM	Tenmabayashi	53.13	63	P	P	18 25 53.3	+0.3
JMM	Marumori	53.94	66	P	P	18 25 59.4	+0.5
JYT	Yasato	54.10	68	P	P	18 26 00.1	+0.1
MA2	Magadan	54.11	38	P	P	18 26 00.6	+0.8
MA2				pmax	pmax		
	comp=Z,38nm,1.6s						
MA2	Magadan	54.11	38	P	P	18 26 00.6	+0.8
MA2				IAmb	IAmb	18 27 10.2	
	comp=Z,38nm,1.6s						
ERM	Erimo	54.21	61	P	P	18 26 02.5	+1.7
ERM				pmax	pmax		
	comp=Z,179nm,1.5s						
ERM	Erimo	54.21	61	P	P	18 26 02.5	+1.7
DAG	Danmarks Havn	54.96	344	⇑iP	P	18 26 07.1	+1.4
	comp=Z,2.8nm,0.4s						
DAG				i		18 26 10.6	
DAG	Danmarks Havn	54.96	344	⇑iP	P	18 26 07.1	+1.4
DAG				pmax	pmax		
	comp=Z,3.0nm,0.4s						
DAG	Danmarks Havn	54.96	344	⇑iP	P	18 26 07.2	+1.4
DAG				IAmb	IAmb	18 26 07.8	
	comp=Z,2.8nm,0.4s						
DAG				i		18 26 10.6	
DSB	Dublin	55.05	314	P	P	18 26 06.0	-0.7
SCO	Scoresbysund	57.35	337	P	P	18 26 25.4	+2.6
SCO				pmax	pmax		
	comp=Z,76nm,1.6s						
SCO	Scoresbysund	57.35	337	P	P	18 26 25.4	+2.6
MRSI	Marisa	58.65	116	P	P	18 26 34.1	+1.4
	comp=Z,38nm,0.9s						
SKR	Severo-Kuril's	59.63	47	eP	P	18 26 36.6	-2.4
SKR				pmax	pmax		
	comp=Z,1μm,6.9s						
SKR				pmax	pmax		
	comp=Z,400nm,5.7s						
SKR				MLR	MLR		
	comp=Z,200nm,17.0s						
PETK	Petropavlovsk-	59.66	44	P	P	18 26 38.8	-0.4
	comp=Z,2.2nm,0.7s,baz=315,slow=5.2,SNR=6.1						
PETK	Petropavlovsk-	59.66	44	P	P	18 26 38.5	-0.7
PETK	Petropavlovsk-	59.66	44	P	P	18 26 38.5	-0.7
KAPI	Kappang	60.96	122	P	P	18 26 47.9	-0.6
KAPI				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KAPI	Kappang	60.96	122	P	P	18 26 47.9	-0.6
KAPI				IAmb	IAmb	18 27 07.2	
	comp=Z,8.9nm,1.1s						
SUMG	Summit	61.32	341	i P	P	18 26 52.3	+1.7
	comp=Z,49nm,0.7s						
SUMG	Summit	61.32	341	i P	P	18 26 52.3	+1.7
SUMG				pmax	pmax		
	comp=Z,49nm,0.7s						
SUMG	Summit	61.32	341	P	P	18 26 52.2	+1.7
SUMG				IAmb	IAmb	18 26 53.3	
	comp=Z,14nm,0.7s						
SUMG					PcP	18 27 35.3	+3.1
SUMG	Summit	61.32	341	i P	P	18 26 52.3	+1.7
SUMG				IAmb	IAmb	18 26 53.5	
	comp=Z,49nm,0.7s						
TNTI	Ternate	62.46	111	P	P	18 27 01.6	+2.9
TNTI				IAmb	IAmb	18 29 12.2	
	comp=Z,16nm,0.7s						
EUNU	Eureka	63.13	356	P	P	18 27 04.0	+1.8
EUNU				IAmb	IAmb	18 28 13.7	
	comp=Z,16nm,1.8s						
SANI	Sanana	63.32	115	P	P	18 27 03.6	-0.7
	comp=Z,28nm,0.8s						
ICESG	Greenland Ices	63.49	338	i P	P	18 27 06.8	+1.7
ICESG				IAmb	IAmb	18 27 07.7	
	comp=Z,13nm,0.7s						
TULEG	Thule	64.61	351	P	P	18 27 12.9	+1.0
TULEG				IAmb	IAmb	18 29 06.0	
	comp=Z,9.5nm,0.7s						
ANGG	Ammassalik, Gr	64.72	334	P	P	18 27 14.3	+1.6
MMRI	Maumere	65.27	123	P	P	18 27 14.7	-2.3
LSZ	Lusaka	65.78	227	P	P	18 27 21.0	+0.6
LSZ				pmax	pmax		
	comp=Z,11nm,1.0s						
LSZ	Lusaka	65.78	227	P	P	18 27 21.0	+0.6
LSZ				IAmb	IAmb	18 27 21.8	
	comp=Z,11nm,0.9s						
TOA0	Torodi Ar. Sit	66.25	269	P	P	18 27 21.5	-1.8
TORD	Torodi Ar. Bea	66.25	269	P	P	18 27 21.8	-1.6
	comp=Z,3.1nm,0.3s,baz=50,slow=6.1,SNR=46						
TORD	Torodi Ar. Bea	66.25	269	P	P	18 27 21.5	-1.8
ILULI	Ilulissat	66.66	341	P	P	18 27 25.0	-0.1
ILULI				pmax	pmax		
	comp=Z,19nm,0.7s						
ILULI	Ilulissat	66.66	341	P	P	18 27 25.0	-0.1
ILULI				IAmb	IAmb	18 27 27.3	
	comp=Z,19nm,0.7s						
A21K	Barrow	67.26	15	P	P	18 27 28.8	-0.1
BATI	Baumata	67.37	123	P	P	18 27 29.4	-1.0
	comp=Z,47nm,0.6s						
SOEI	Soe	67.46	122	P	P	18 27 30.5	-0.6
SOEI	Soe	67.46	122	P	P	18 27 29.9	-1.2
SFJD	Kangerlussuaq	68.03	339	P	P	18 27 34.8	+1.0
SFJD				pmax	pmax		
	comp=Z,15nm,1.1s						
SFJD	Kangerlussuaq	68.03	339	P	P	18 27 34.8	+1.0
SFJD				IAmb	IAmb	18 27 35.6	
	comp=Z,15nm,1.1s						
KOWA	Kowa	70.10	274	P	P	18 27 46.2	-1.3
KOWA				IAmb	IAmb	18 27 47.2	
	comp=Z,9.2nm,0.5s						
TOLK	Toolik Lake Re	70.87	15	P	P	18 27 51.9	+0.5
TOLK				IAmb	IAmb	18 27 52.9	
	comp=Z,15nm,0.9s						
COLD	Coldfoot	71.91	16	P	P	18 27 58.2	+0.6
I23K	Minto, Yukon-K	73.83	17	P	P	18 28 09.8	+0.8
INK	Inuvik	73.91	9	P	P	18 28 10.1	+0.8
	comp=Z,8.5nm,0.5s,baz=345,slow=6.3,SNR=50						
INK	Inuvik	73.91	9	P	P	18 28 10.2	+0.9
INK				pmax	pmax		
	comp=Z,9.0nm,0.6s						
INK	Inuvik	73.91	9	P	P	18 28 10.2	+0.9
INK				IAmb	IAmb	18 28 10.5	
	comp=Z,8.8nm,0.6s						
C36M	Paulatuk	73.91	6	P	P	18 28 09.7	+0.3
POKR	Poker Plat Res	74.30	16	P	P	18 28 12.1	+0.3
TCOL	CIGO, UAF Yank	74.41	16	P	P	18 28 12.9	+0.6
TCOL				IAmb	IAmb	18 28 14.0	
	comp=Z,16nm,0.8s						
COLA	College	74.41	16	P	P	18 28 12.9	+0.6
COLA				pmax	pmax		
	comp=Z,17nm,0.9s						
COLA	College	74.41	16	P	P	18 28 12.9	+0.6
COLA				IAmb	IAmb	18 28 14.0	
	comp=Z,17nm,0.9s						
FITZ	Fitzroy Crossi	74.41	127	P	P	18 28 13.0	0.0
IL31		74.72	16	P	P	18 28 13.7	-0.4
ILAR	Eielson Array	74.72	16	P	P	18 28 13.7	-0.5
	comp=Z,3.6nm,0.9s,baz=316,slow=5.2,SNR=30						
ILAR	Eielson Array	74.72	16	P	P	18 28 13.4	-0.7
KTH	Kantishna Hill	74.78	18	P	P	18 28 14.6	0.0
KTH				IAmb	IAmb	18 30 30.3	
	comp=Z,45nm,1.8s						
LBTB	Lobatse	74.97	223	P	P	18 28 16.8	+0.6
LBTB				pmax	pmax		
	comp=Z,17nm,0.7s						
LBTB	Lobatse	74.97	223	P	P	18 28 16.8	+0.6
LBTB				IAmb	IAmb	18 28 17.6	
	comp=Z,18nm,0.7s						
TSUM	Tsumeb	75.28	232	P	P	18 28 18.3	+0.2
TSUM				IAmb	IAmb	18 28 19.6	
	comp=Z,29nm,1.6s						
KIC	Kosan Boka	75.31	267	eP	P	18 28 17.2	-1.2
	comp=Z,3.9nm,0.3s						
TIC	Toumodi	75.37	267	eP	P	18 28 17.5	-1.2
LIC	Lamto	75.62	267	eP	P	18 28 18.8	-1.3
	comp=Z,3.0nm,0.3s						
SKT	Skwentna	75.92	19	P	P	18 28 20.5	-0.6
PAX	Paxson	76.59	16	P	P	18 28 25.0	0.0
PAX				pmax	pmax		
	comp=Z,7.0nm,0.8s						
PAX	Paxson	76.59	16	P	P	18 28 24.9	0.0
BOSA	Boshof	78.02	221	P	P	18 28 33.4	+0.1
	comp=Z,6.9nm,0.8s,baz=31,slow=4.3,SNR=15						
HYT	Haines Junctio	80.21	14	P	P	18 28 45.0	0.0
HYT				IAmb	IAmb	18 28 47.1	
	comp=Z,9.2nm,0.8s						
YKA	Yellowknife Ar	81.31	3	P	P	18 28 51.0	+0.4
	comp=Z,12nm,0.5s,baz=359,slow=5.2,SNR=297						
YKA				LR	LR	19 09 26.1	
	comp=Z,39nm,18.1s,baz=0.0,slow=39						
YKA	Yellowknife Ar	81.31	3	P	P	18 28 51.0	+0.4
WRA	Warramunga Arr	81.50	122	P	P	18 28 51.6	-0.6
	comp=Z,7.7nm,0.4s,baz=324,slow=5.0,SNR=176						
WRA				PKKPbc	PKKPbc	18 47 25.2	+0.4
	comp=Z,0.6nm,0.9s,baz=127,slow=2.5,SNR=5.2						
WRA	Warramunga Arr	81.50	122	P	P	18 28 51.7	-0.6
WRAB	Tennant Creek	81.50	122	P	P	18 28 51.9	-0.3
WRAB				pmax	pmax		
	comp=Z,13nm,0.5s						
WRAB	Tennant Creek	81.50	122	P	P	18 28 51.9	-0.3
WRAB				IAmb	IAmb	18 28 52.1	
	comp=Z,13nm,0.5s						
WB2	Warramunga Arr	81.50	122	P	P	18 28 51.8	-0.5
WR0	Warramunga Arr	81.64	122	P	P	18 28 52.3	-0.7
WR0				IAmb	IAmb	18 28 53.1	
	comp=Z,12nm,1.0s						
AS31	Alice Springs	83.77	125	P	P	18 29 03.4	-0.6
ASAR	Alice Springs	83.77	125	P	P	18 29 03.3	-0.7
	comp=Z,5.4nm,0.6s,baz=307,slow=5.1,SNR=142						
ASAR				PKKPbc	PKKPbc	18 47 19.9	+0.1
	comp=Z,0.5nm,1.1s,baz=140,slow=3.0,SNR=5.2						
ASAR	Alice Springs	83.77	125	P	P	18 29 00.2	-3.7
FCC	Fort Churchill	84.44	353	P	P	18 29 07.4	+0.6
FCC				pmax	pmax		
	comp=Z,8.0nm,1.0s						
FCC	Fort Churchill	84.44	353	P	P	18 29 07.4	+0.6
FFC	Flin Flon	89.06	356	P	P	18 29 29.8	+0.4
FFC				pmax	pmax		
	comp=Z,10.0nm,1.1s						
FFC	Flin Flon	89.06	356	P	P	18 29 29.8	+0.4
FFC				IAmb	IAmb	18 29 31.2	
	comp=Z,10nm,1.1s						
STKA	Stephens Creek	94.31	127	P	P	18 29 52.9	-1.0
	comp=Z,0.9nm,0.5s,baz=302,slow=2.9,SNR=3.8						
TXAR	Lajitas Array	114.45	356	PKKPbc	PKKPbc	18 45 59.5	+6.6
	comp=Z,0.6nm,0.7s,baz=179,slow=7.2,SNR=8.4						
PLCA	Paso Flores	150.29	250	PKPbc	PKPbc	18 36 25.0	-0.2
	comp=Z,1.1nm,0.5s,baz=14,slow=5.1,SNR=5.8						

IDC ***14*** *18:49:03.6±6.6, 30.°65S×178.°14W, h30^{km}±44^{km}, mb3.9/3, mb1 4.1/4, mb1mx3.7/42, mbtmp4.1/4, ML3.5/1, MS3.9/2, Ms1 3.9/2, ms1mx3.0/35, Error ellipse: s-maj=49.4km s-min=19.5km az=122.0*

NEIC ***14*** *18:49:04.6±1.4, 30.°60S±0.°02×178.°0W±0.°2, h47^{km}±10^{km}, mb4.4/8, Error ellipse: s-maj=21.5km s-min=2.3km az=90.0*

ISC 14 18:49:04.1±1.0**, 30.°75S**±0.°07×**178.°0W**±0.°2**, h46**^{km}**, n33, σ1ˢ69**/29**, mb4.3**/6**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.49	2	Pn	Pn	18 49 27.4	-1.0
	92nm,0.3s,baz=92,slow=13,SNR=6.3						
RAO				Sn	Sn	18 49 44.4	-2.3
	405nm,0.3s,baz=115,slow=22,SNR=9.1						
RAO	Raoul Island	1.49	2		Pn	18 49 27.2	-1.2
RAO				Sn	Sn	18 49 44.2	-2.5
MXZ	Matakaoa Point	7.46	203	Pn	Pn	18 50 53.1	+2.8
OUZ	Omahuta	8.37	236	Pn	Pn	18 51 03.5	+0.7
URZ	Urewera	8.52	207	Pn	Pn	18 51 04.2	-0.7
	0.6nm,0.3s,baz=2.7,slow=10,SNR=2.2						
URZ				Sn	Sn	18 52 34.8	-4.8
	1.5nm,0.3s,baz=26,slow=15,SNR=2.3						
URZ	Urewera	8.52	207		Pn	18 51 00.1	-4.7
BKZ	Black Stump Fm	9.55	207		Pn	18 51 14.2	-4.7
TUWZ	Tuamarina	12.50	209	Pn	Pn	18 51 53.8	-5.4
NNZ	Nelson	12.57	211	Pn	Pn	18 52 02.1	+1.9
THZ	Tophouse	13.22	211	Pn	Pn	18 52 08.3	-0.9
KHZ	Kahutara	13.49	208	Pn	Pn	18 52 11.3	-1.4
LTZ	Lake Taylor	14.32	210	Pn	P	18 52 28.9	-1.2
OXZ	Oxford	14.86	210	Pn	Pn	18 52 33.4	+2.2
CTAO	Charters Tower	33.89	280	P	P	18 55 44.1	+1.5
STKA	Stephens Creek	34.43	257	P	P	18 55 48.4	+1.2
	1.8nm,0.7s,baz=83,slow=9.9,SNR=4.6						
STKA	Stephens Creek	34.43	257	IAmb	IAmb	18 55 52.6	
	comp=Z,2.8nm,1.4s						
AS31	Alice Springs	43.12	267	P	P	18 56 59.4	-0.8
ASAR	Alice Springs	43.12	267	P	P	18 56 59.8	-0.4
	comp=Z,1.9nm,0.8s,baz=106,slow=7.3,SNR=17						
ASAR	Alice Springs	43.12	267	P	P	18 56 59.6	-0.6
WR0	Warramunga Arr	43.96	273	P	P	18 57 06.5	-0.4
WR0				IAmb	IAmb	18 57 14.2	
	comp=Z,19nm,1.6s						
WB2	Warramunga Arr	44.13	272	P	P	18 57 08.1	-0.2
WRA	Warramunga Arr	44.14	272	P	P	18 57 08.1	-0.4
	comp=Z,2.0nm,0.5s,baz=111,slow=8.1,SNR=39						
WRA	Warramunga Arr	44.14	272	IAmb	IAmb	18 57 09.9	
	comp=Z,0.2nm,0.8s						
WB0	Warramunga Arr	44.17	273	P	P	18 57 08.1	-0.5
WB0				IAmb	IAmb	18 57 15.4	
	comp=Z,16nm,1.4s						
BATI	Baumata	57.73	278	LR	LR	19 23 03.7	
	comp=Z,154nm,18.6s,baz=80,slow=35						
QSPA	South Pole Qui	59.36	180	P	P	18 59 02.5	+1.1
QSPA				IAmb	IAmb	18 59 11.2	
	comp=Z,5.8nm,1.3s						
MJAR	Matsushiro Arr	78.55	325	LR	LR	19 28 46.2	
	comp=Z,36nm,20.0s,baz=165,slow=30						
FINES	FINESS Array B	145.48	340	PKPbc	PKPbc	19 08 35.5	-0.9
	comp=Z,1.5nm,0.4s,baz=55,slow=4.6,SNR=16						
NB2	NORSAR Subarra	149.10	351	PKP	PKPab	19 08 50.5	-0.5
	comp=Z,1.6nm,0.9s,baz=16,slow=3.2						
NOA	NORSAR Array B	149.10	351	PKPbc	PKPbc	19 08 47.0	+0.4
	comp=Z,0.7nm,0.7s,baz=16,slow=4.2,SNR=3.1						
AKASG	Malin Array Be	151.59	322	PKPbc	PKiKP	19 08 54.2	+1.0
	comp=Z,2.0nm,0.7s,baz=50,slow=2.8,SNR=11						
AKASG	Malin Array Be	151.59	322		PKiKP	19 08 54.4	+1.1
BRTR	Keskin Array B	152.79	298	PKPbc	PKiKP	19 08 58.6	+2.3
	comp=Z,0.4nm,0.5s,baz=147,slow=6.8,SNR=4.2						

KRNET ***14*** *18:56:33.6±0.1, 39.°98N×71.°42E, h12^{km}, mb3.1*

NNC ***14*** *18:56:38.0±2.0, 40.°17N×71.°42E, h4^{km}±8^{km}, mb3.8, mpv3.5, Error ellipse: s-maj=15.0km s-min=7.3km az=5.0*

SOME ***14*** *18:56:38.2, 40.°20N×71.°50E, h5^{km}*

ISC 14 18:56:35.2±1.4**, 39.°69N**±0.°07×**71.°26E**±0.°05**, h28**^{km}±13^{km}**, n45, σ1ˢ93**/61**, 24C-16D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	Karamyk	0.47	117	⇓iP	Pb	18 56 45.0	-0.2
	baz=49						
DRK				⇓iS	Sb	18 56 53.6	+1.5
	baz=49						
BTK	Batken	0.50	317	⇑iP	Pb	18 56 42.7	-2.9
	baz=79						
BTK				⇑iS	Sb	18 56 49.8	-2.8
	baz=79						
OHH	Osh	1.44	54	⇓eP	Pn	18 56 56.4	-3.1
	baz=62						
OHH				⇓iS	Sn	18 57 12.7	-4.8
	baz=62						
SFK	Sufi-Kurgan	1.76	79	⇓iP	Pn	18 57 04.1	0.0
	baz=88						
SFK				⇓iS	Sn	18 57 26.0	+0.3
	baz=88						
TRKS	Terek-Say	1.84	357	⇑iP	Pn	18 57 01.9	-3.2
	baz=53						
TRKS				⇑iS	Sn	18 57 22.5	-5.1
	baz=53						
ARSB	Arslanbob	2.09	38	⇑iP	Pn	18 57 07.3	-1.3
	baz=41						
ARSB				⇑iS	Sn	18 57 31.9	-1.9
	baz=41						
IUG	Iuzhnay	2.62	340	eP	Pn	18 57 18.5	+2.6
IUG				eS	Sn	18 57 47.6	+0.8
IUG	Iuzhnay	2.62	340	Pg	Pn	18 57 18.5	+2.6
IUG				Lg	Lg	18 57 47.6	
CHM	Chimkent	2.91	335	eP	Pb	18 57 27.1	+0.7
	4.1nm,0.2s						
CHM				eS	Sb	18 58 01.8	+0.3
	289nm,0.3s						
MNAS	Manas	2.95	18	⇑eP	Pn	18 57 19.8	-0.5
	baz=18						
MNAS				⇑iS	Sn	18 57 53.3	-1.6
	baz=18						
AML	Almayashu	3.06	36	⇑iP	Pn	18 57 21.4	-0.7
	baz=38						
AML				⇑iS	Sn	18 57 56.3	-1.6
	baz=38						
AML	Almayashu	3.06	36	P	Pn	18 57 21.2	-0.9
	SNR=15						
ARLS	Aral	3.18	46	⇓iP	Pn	18 57 23.6	0.0
	baz=49						
ARLS				⇓iS	Sn	18 57 59.9	-0.7
	baz=49						
DZA	Taraz	3.20	1	eP	Pn	18 57 29.5	+5.8
	24nm,0.1s						
DZA				eS	Sn	18 58 06.4	+5.5
	227nm,0.2s						
MRKS	Merke	3.39	25	eP	Pn	18 57 32.5	+6.1
	18nm,0.2s						
MRKS				eS	Sn	18 58 11.1	+5.3
	73nm,0.4s						
MRKS	Merke	3.39	25	Pg	Pn	18 57 32.5	+6.1
	18nm,0.2s						
MRKS				Lg	Lg	18 58 11.1	
	73nm,0.4s						
KK31	Karatay Array	3.45	351	Pn	Pn	18 57 26.5	-0.7
	0.3nm,0.2s,baz=184,slow=14,SNR=101						
KK31				⇑Pg		18 57 32.7	
	4.4nm,0.4s,baz=178,slow=17,SNR=18						
KK31				⇓Lg	Lg	18 58 14.4	
	107nm,0.7s						
BRLS	Borolday	3.50	343	eP	Pn	18 57 32.5	+4.7
	10.0nm,0.1s						
BRLS				eS	Sn	18 58 11.3	+2.9
	40nm,0.1s						
BRLS	Borolday	3.50	343	Pg	Pn	18 57 32.5	+4.7
	10.0nm,0.1s						
BRLS				Lg	Lg	18 58 11.3	
	40nm,0.1s						
EKS2	Erkin-Say	3.52	32	⇓iP	Pn	18 57 27.8	-0.4
	baz=33						
EKS2				⇓iS	Sn	18 58 07.3	-1.8
	baz=33						
EKS2	Erkin-Say	3.52	32	P	Pn	18 57 28.2	-0.1
	SNR=17						
UCH	Uchtor	3.54	43	⇑iP	Pn	18 57 28.2	-0.5
	baz=45						
UCH				⇑iS	Sn	18 58 08.0	-1.8
	baz=45						
UCH	Uchtor	3.54	43	P	Pn	18 57 31.0	+2.3
	SNR=8.6						
AAK	Ala-Archa	3.83	39	⇓iP	Pn	18 57 32.2	-0.2
	baz=40						
AAK				⇓iS	Sn	18 58 14.9	-1.6
	baz=40						
AAK	Ala-Archa	3.83	39	P	Pn	18 57 31.0	-1.4
	SNR=7.8						
AAK	Ala-Archa	3.83	39	Pn	Pn	18 57 29.7	-2.7
	6.6nm,0.8s						
AAK				⇓Lg	Lg	18 58 23.8	
	18nm,0.5s						
FRU1	Bishkek	4.02	38	⇓iP	Pn	18 57 34.9	-0.1
	baz=39						
FRU1				⇓iS	Sn	18 58 19.5	-1.7
	baz=39						
KBK	Karagaybulak	4.07	42	⇑iP	Pn	18 57 35.6	-0.1
	baz=44						
KBK				⇑iS	Sn	18 58 20.7	-1.8
	baz=44						
KBK	Karagaybulak	4.07	42	P	Pn	18 57 36.6	+0.9
	SNR=14						
CHMS	Chumysh	4.22	37	P	Pn	18 57 37.7	0.0
	SNR=7.1						
ULHL	Ulahol	4.55	54	⇑eP	Pn	18 57 42.8	+0.3
	baz=57						
ULHL				⇑iS	Sn	18 58 33.2	-1.4

	baz=57						
TKM2	Tokmak 2	4.59	44	⇑*i*P	Pn	18 57 42.9	-0.1
	baz=46						
TKM2				⇑*e*S	Sn	18 58 33.4	-2.1
	baz=46						
TKM2	Tokmak 2	4.59	44	P	Pn	18 57 43.0	-0.1
	SNR=30						
TKM2	Tokmak 2	4.59	44	⇑Pn	Pn	18 57 42.9	-0.1
	9.9nm,0.3s						
TKM2				⇑Sn	Sn	18 58 33.8	-1.7
	3.4nm,0.5s						
TKM2				⇑Lg	Lg	18 58 49.1	
	16nm,0.8s						
KST	Kastek	4.87	45	*e*P	Pb	18 57 58.5	-1.4
	6.9nm,0.5s						
KST				*e*S	Sb	18 58 56.3	-1.7
	13nm,0.4s						
KST	Kastek	4.87	45	Pg	Pb	18 57 58.5	-1.4
	6.9nm,0.5s						
KST				Lg	Lg	18 58 56.3	
	13nm,0.4s						
TNSS	Tian-Shan	5.43	50	*e*P	Pb	18 58 11.1	+1.6
	1.8nm,0.2s						
TNSS				*e*S	Sb	18 59 17.2	+2.8
	3.6nm,0.6s						
TNSS	Tian-Shan	5.43	50	Pg	Pb	18 58 11.1	+1.6
	1.8nm,0.2s						
TNSS				Lg	Lg	18 59 17.2	
	3.6nm,0.6s						
MDOK	Medeo	5.56	50	*e*P	Pb	18 58 12.9	+1.3
	3.0nm,0.3s						
MDOK				*e*S	Sb	18 59 21.7	+3.7
	7.4nm,0.6s						
MDOK	Medeo	5.56	50	⇑Pn	Pn	18 57 56.7	+0.4
	2.4nm,0.4s						
MDOK				⇑Lg	Lg	18 59 21.8	
	14nm,1.1s						
MDOK	Medeo	5.56	50	Pg	Pb	18 58 12.9	+1.3
	3.0nm,0.3s						
MDOK				Lg	Lg	18 59 21.7	
	7.4nm,0.6s						
KUU	Kurty	5.66	40	*e*P	Pb	18 58 13.3	+0.1
	2.0nm,0.5s						
KUU				*e*S	Sb	18 59 21.1	+0.6
	8.8nm,0.4s						
KUU	Kurty	5.66	40	Pg	Pb	18 58 13.3	+0.1
	2.0nm,0.5s						
KUU				Lg	Lg	18 59 21.1	
	8.8nm,0.4s						
BTLS	Baital	5.73	20	*e*P	Pb	18 58 14.8	+0.4
	3.4nm,0.3s						
BTLS				*e*S	Sb	18 59 23.7	+1.1
	11nm,0.5s						
BTLS	Baital	5.73	20	Pg	Pb	18 58 14.8	+0.4
	3.4nm,0.3s						
BTLS				Lg	Lg	18 59 23.7	
	11nm,0.5s						

*NEIC **14** 18:59:07.3±2.1, 10°.75S±0°.08×161°.85E±0°.08, h48^{km}±7^{km}, mb5.0/53, Error ellipse: s-maj=12.8km s-min=9.4km az=221.0*

*IDC **14** 18:59:07.7±2.6, 10°.74S×161°.77E, h53^{km}±23^{km}, mb3.8/11, mb1 4.0/14, mb1mx3.8/51, mbtmp4.1/14, ML4.5/3, MS3.6/11, Ms1 3.6/11, ms1mx3.4/31, Error ellipse: s-maj=20.3km s-min=17.4km az=59.0*

ISC 14 18:59:06.1±0.4**, 10°.79S**±0°.06×**161°.88E**±0°.06**, h36**^{km}**, n98,** σ**1^{s}.21**/81**, mb4.8**/35**, MS3.6**/11**, 1C, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	2.33	305	P	Pn	18 59 42.3	+0.3
	45nm,0.3s,baz=213,slow=12,SNR=24						
HNR				S	Sn	19 00 14.1	+4.7
	106nm,0.3s,baz=86,slow=17,SNR=12						
HNR	Honiara	2.33	305		Pn	18 59 42.1	+0.2
SANVU	Saraoutou	6.95	132		Pn	19 00 46.3	+0.9
RABL	Rabaul	11.65	304	Pn	Pn	19 01 55.8	+5.9
DZM	Mont Dzumac	12.04	159	P	Pn	19 01 57.6	+2.4
	0.7nm,0.3s,baz=46,slow=8.5,SNR=28						
DZM				S	Sn	19 04 07.3	-1.1
	0.3nm,0.3s,baz=129,slow=20,SNR=1.3						
DZM				LR	LR	19 05 52.6	
	comp=Z,253nm,19.5s,baz=5.5,slow=33						
DZM	Mont Dzumac	12.04	159	*e*Pn	Pn	19 01 57.3	+2.1
	5.0nm,0.2s						
DZM				*e*Sn	Sn	19 04 04.2	-4.1
	2.3nm,0.2s						
DZM				*e*LR	LR	19 04 41.4	
	comp=Z,475nm,24.4s						
DZM	Mont Dzumac	12.04	159		Pn	19 01 57.0	+1.8
TARA	Tarawa	16.32	43	Pn	Pn	19 02 53.1	+0.5
TARA				IAmb	IAmb	19 02 59.6	
	comp=Z,205nm,1.3s						
MSVF	Nonsavu	17.11	116	P	Pn	19 03 03.9	+1.2
	comp=Z,0.3nm,0.3s,baz=117,slow=22,SNR=3.6						
MSVF				LR	LR	19 08 36.4	
	comp=Z,218nm,20.9s,baz=304,slow=33						
MSVF	Nonsavu	17.11	116	P	P	19 03 05.3	+1.2
FUNA	Funafuti	17.22	84	P	Pn	19 03 04.8	+0.9
FUNA				IAmb	IAmb	19 03 47.6	
	comp=Z,145nm,1.6s						
CTAO	Charters Tower	17.66	237	P	Pn	19 03 08.5	-0.9
EIDS	Eidsvold	17.75	214	P	P	19 03 12.3	+1.4
PATS	Pohnpei	17.87	348	P	Pn	19 03 10.7	-1.3
PATS				IAmb	IAmb	19 03 12.4	
	comp=Z,110nm,1.1s						
COEN	Coen	18.54	258		Pn	19 03 19.2	-0.9
KWAJ	Kwajalein Atol	20.28	17	P	Pn	19 03 41.3	+0.3
JAY	Jayapura	22.57	290	LR	LR	19 12 17.3	
	comp=Z,227nm,18.2s,baz=122,slow=35						
OUZ	Omahuta	26.55	158	P	P	19 04 41.3	+0.7
OUZ				IAmb	IAmb	19 04 54.9	
	comp=Z,39nm,1.4s						
WB0	Warramunga Arr	27.94	248	P	P	19 04 52.2	-1.0
WB0				IAmb	IAmb	19 05 16.3	
	comp=Z,36nm,1.8s						
WB2	Warramunga Arr	28.02	248	P	P	19 04 54.9	+0.9
WB2				IAmb	IAmb	19 04 59.0	
	comp=Z,41nm,1.8s						
WRA	Warramunga Arr	28.03	248	P	P	19 04 52.9	-1.2
	comp=Z,1.6nm,0.9s,baz=76,slow=8.9,SNR=4.2						
STKA	Stephens Creek	28.14	219	P	P	19 04 54.8	0.0
H11S2	WAKE ISLAND Hy	29.48	9	T	T	19 36 09.4	
	baz=188,slow=76,SNR=192						
H11S3	WAKE ISLAND Hy	29.48	9	T	T	19 36 09.6	
	baz=188,slow=76,SNR=195						
H11S1	WAKE ISLAND Hy	29.50	9	T	T	19 36 10.7	
	baz=188,slow=76,SNR=156						
GUMO	Guam	29.52	325	LR	LR	19 17 52.0	
	comp=Z,115nm,18.1s,baz=142,slow=38						
ASAR	Alice Springs	29.56	241	P	P	19 05 05.4	-2.2
	comp=Z,0.4nm,0.6s,baz=63,slow=10.0,SNR=8.3						
ASAR	Alice Springs	29.56	241	P	P	19 05 07.1	-0.6
WAKE	Wake Island	30.25	9	P	P	19 05 13.9	+0.2
TOO	Toolangi	30.47	206	P	P	19 05 17.1	+1.6
TOO				IAmb	IAmb	19 05 18.8	
	comp=Z,48nm,1.7s						
URZ	Urewera	30.57	156	LR	LR	19 15 41.8	
	comp=Z,103nm,21.4s,baz=31,slow=32						
URZ	Urewera	30.57	156	P	P	19 05 17.6	+1.3
URZ				IAmb	IAmb	19 06 12.7	
	comp=Z,65nm,1.6s						
H11N1	WAKE ISLAND Hy	30.71	9	T	T	19 37 41.6	
	baz=188,slow=76,SNR=118						
H11N3	WAKE ISLAND Hy	30.72	9	T	T	19 37 42.1	
	baz=188,slow=76,SNR=146						
H11N2	WAKE ISLAND Hy	30.73	9	T	T	19 37 42.9	
	baz=188,slow=76,SNR=140						
BKZ	Black Stump Fm	31.11	158	P	P	19 05 21.0	-0.2
BKZ				IAmb	IAmb	19 05 27.8	
	comp=Z,101nm,1.7s						
SIJI	Sorong	31.97	286	LR	LR	19 18 55.2	
	comp=Z,172nm,20.4s,baz=224,slow=37						
TUWZ	Tuamarina	32.31	163	P	P	19 05 31.3	-0.3
BBOO	Buckleboo	32.31	223	P	P	19 05 31.5	-0.3
BBOO				IAmb	IAmb	19 06 26.5	
	comp=Z,39nm,1.4s						
THZ	Tophouse	32.33	164	P	P	19 05 30.4	-1.5
BFZ	Birch Farm	32.36	159	P	P	19 05 30.6	-1.5
BHW	Baring Head	32.57	162	P	P	19 05 33.9	0.0
CMWZ	Cape Campbell	32.68	163	P	P	19 05 34.6	-0.3
LTZ	Lake Taylor	33.13	166	P	P	19 05 39.0	+0.1
LTZ				IAmb	IAmb	19 06 19.4	
	comp=Z,31nm,1.3s						
RPZ	Rata Peaks	33.75	168	P	P	19 05 45.4	+1.1
	comp=Z,10nm,0.9s,baz=310,slow=9.7,SNR=3.0						
RPZ	Rata Peaks	33.75	168	P	P	19 05 45.2	+1.0
FITZ	Fitzroy Crossi	35.79	254	P	P	19 06 02.9	+0.8
	comp=Z,2.4nm,0.6s,baz=44,slow=12,SNR=11						
FITZ				LR	LR	19 19 17.0	
	comp=Z,99nm,20.5s,baz=82,slow=34						
FITZ	Fitzroy Crossi	35.79	254	P	P	19 06 00.7	-1.4
FITZ				IAmb	IAmb	19 06 31.2	
	comp=Z,23nm,1.4s						
FORT	Forrest	37.13	233	P	P	19 06 12.8	-0.6
FORT				IAmb	IAmb	19 07 29.6	
	comp=Z,27nm,0.9s						
TOLI2	Tolitoli	42.55	284	P	P	19 06 57.7	-1.0
NWAO	Narrogin (SRO)	46.48	235	P	P	19 07 32.1	+2.2
PPT	Papeete	47.44	104	LR	LR	19 24 21.2	
	comp=Z,64nm,18.5s,baz=346,slow=32						
PPT2	Papeete2	47.44	104	*e*LR	LR	19 21 24.5	
	comp=Z,176nm,25.2s						
TBI	Tubuai	47.95	112	*e*LR	LR	19 21 40.2	
	comp=Z,99nm,36.8s						
KKM	Kota Kinabalu	48.44	288	P	P	19 07 43.3	-2.2
KKM				IAmb	IAmb	19 08 44.8	
	comp=Z,29nm,1.2s						
JOW	Kunigami	49.63	320	P	P	19 07 54.2	-0.1
SZP	Santa	49.68	304	P	P	19 07 54.4	-0.3
MLH	Mauna Loa	51.75	55	P	P	19 08 09.8	-0.8
KSRS	Korea Array	57.59	328	LR	LR	19 34 38.8	
	comp=Z,43nm,18.1s,baz=140,slow=37						
PETK	Petropavlovsk-	63.74	357	LR	LR	19 31 15.4	
	comp=Z,36nm,21.4s,baz=234,slow=30						
VNDA	Vanda	66.71	180	P	P	19 09 53.1	+0.2
	comp=Z,3.5nm,0.6s,baz=341,slow=6.7,SNR=11						
VNDA	Vanda	66.71	180	P	P	19 09 52.6	-0.4
CMAR	Chiang Mai Arr	68.55	295	P	P	19 10 04.7	-0.8
	comp=Z,0.3nm,0.6s,baz=133,slow=5.4,SNR=4.5						
ULN	Ulaanbaatar	75.90	325	P	P	19 10 48.6	-0.5
GTA	Gaotai	76.18	315	*e*P	P	19 10 59.1	+8.3
GTA				pP	PcP	19 11 03.8	+1.0
GTA				sP	sP	19 11 06.4	+0.1
GTA				pmax	pmax		
	comp=Z,2.0nm,1.2s						
SONM	Songino Array	76.25	325	P	P	19 10 50.3	-0.8
	comp=Z,1.2nm,0.8s,baz=142,slow=5.5,SNR=10.0						
SONM	Songino Array	76.25	325	P	P	19 10 50.0	-1.1
SVW2	Sparrevohn	79.10	20	P	P	19 11 07.9	+1.4
SVW2				IAmb	IAmb	19 11 09.2	
	comp=Z,22nm,1.3s						
ANM	Nome	79.10	14	P	P	19 11 06.8	+0.4
QSPA	South Pole Qui	79.21	180	P	P	19 11 07.2	-0.1
QSPA				IAmb	IAmb	19 11 40.2	
	comp=Z,31nm,1.9s						
CNPM	China Poot	79.50	22	P	P	19 11 09.0	+0.3
TTA	Tatalina	80.32	18	P	P	19 11 12.8	-0.4
SUA	Susitna One	81.00	21	P	P	19 11 17.6	+0.6
SUA				IAmb	IAmb	19 12 07.9	
	comp=Z,30nm,1.6s						
SCM	Sheep Creek Mo	82.47	22	P	P	19 11 24.6	0.0
TRF	Thorofare Moun	82.52	20	P	P	19 11 24.0	-0.9
TRF				IAmb	IAmb	19 11 27.1	
	comp=Z,58nm,2.0s						
RDOG	Red Dog Mine	82.57	13	P	P	19 11 25.5	+0.6
RND	Reindeer	82.97	20	P	P	19 11 27.6	+0.4
RND				IAmb	IAmb	19 11 54.3	
	comp=Z,45nm,2.0s						
M24K	Tolsona, Glenn	83.07	22	P	P	19 11 27.6	-0.1
IMAR	Indian Mountai	83.24	17	P	P	19 11 28.4	0.0
GLB	Gilahina Butte	83.55	23	P	P	19 11 30.6	+0.4
GLB				IAmb	IAmb	19 13 46.9	
	comp=Z,55nm,1.8s						
WRH	Wood River Hil	83.92	20	P	P	19 11 31.7	-0.3
WRH				IAmb	IAmb	19 11 36.0	
	comp=Z,23nm,1.7s						
CCB	Clear Creek Bu	84.13	19	P	P	19 11 33.0	+0.1
CCB				IAmb	IAmb	19 11 42.0	
	comp=Z,10nm,1.4s						
MDM	Murphy Dome	84.20	19	P	P	19 11 33.6	+0.2
MDM				IAmb	IAmb	19 13 38.7	
	comp=Z,13nm,1.5s						
HDA	Harding Lake	84.26	20	P	P	19 11 33.9	+0.2
IL31		84.52	20	P	P	19 11 35.5	+0.7
IL31				IAmb	IAmb	19 11 36.3	
	comp=Z,27nm,1.9s						
ILAR	Eielson Array	84.52	20	P	P	19 11 34.4	-0.6
	comp=Z,0.7nm,0.5s,baz=242,slow=4.9,SNR=9.4						
ILAR	Eielson Array	84.52	20	P	P	19 11 34.9	0.0
IL18	Eielson Array	84.54	20	P	P	19 11 35.4	+0.3
DOT	Dot Lake	84.78	21	P	P	19 11 37.4	+1.0
DOT				IAmb	IAmb	19 12 51.4	
	comp=Z,14nm,1.3s						
BCAR	Beaver Creek A	85.27	22	P	P	19 11 39.3	+0.4
NVAR	Mina Array Bea	88.78	51	P	P	19 11 57.5	+0.8
	comp=Z,0.8nm,0.7s,baz=238,slow=6.6,SNR=8.4						
NVAR	Mina Array Bea	88.78	51	P	P	19 11 56.7	0.0
MKAR	Makanchi Array	90.76	317	P	P	19 12 03.2	-2.3
	comp=Z,0.2nm,0.4s,baz=100,slow=5.4,SNR=12						
R11A	Troy Canyon, C	90.83	51	P	P	19 12 07.0	+0.7
R11A				IAmb	IAmb	19 12 19.3	
	comp=Z,11nm,1.9s						
SYO	Syowa Base	90.89	198	⇑*e*X	P	19 12 12.6	+7.0
PRN	Pahroc Range	91.04	52	P	P	19 12 07.9	+0.7
PRN				IAmb	IAmb	19 12 11.4	
	comp=Z,4.0nm,1.1s						
NRIK	Noril'sk	94.57	340	LR	LR	19 59 38.1	
	comp=Z,12nm,18.0s,baz=80,slow=38						
YKA	Yellowknife Ar	96.50	28	P	P	19 12 30.6	-0.8
	comp=Z,0.5nm,0.6s,baz=252,slow=3.9,SNR=9.5						

*IDC **14** 19:00:14.2±1.4, 43°.88N×105°.58W, h0^{km}, mb3.6/1, mb1 3.6/6, mb1mx3.3/54, mbtmp3.3/6, ML3.4/5, Error ellipse: s-maj=38.4km s-min=7.5km az=147.0*

*NEIC **14** 19:00:15.4±1.1, 43°.76N±0°.02×105°.29W±0°.06, h0^{km}±2^{km}, ML3.2/48, Error ellipse: s-maj=7.4km s-min=3.3km az=95.0*

ISC 14 19:00:14.3±0.9**, 43°.78N**±0°.06×**105°.33W**±0°.06**, h0**^{km}**, n41,** σ**1^{s}.29**/42**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	1.00	70	Pg	Pg	19 00 33.9	+0.5
K22A	Casper	1.43	218		Pn	19 00 40.5	-1.1
K22A				IAML		19 01 05.2	
	comp=N,393nm,0.3s						
K22A				IAML		19 01 07.6	
	comp=E,386nm,0.3s						
PHWY	Pilot Hill	2.48	182		Pn	19 00 57.2	+1.0
RWWY	Rawlins	2.51	214		Pn	19 00 57.1	+0.6
RWWY				IAML		19 01 32.7	
	comp=E,136nm,0.8s						
LAO	LASA Array	2.98	348		Pn	19 01 04.2	+1.4
RLMT	Red Lodge	3.12	297		Pn	19 01 06.1	+1.2
RLMT				IAML		19 02 03.6	
	comp=E,58nm,0.6s						
PD31	Pinedale Array	3.25	253		Pn	19 01 07.6	+0.9
PDAR	Pinedale Array	3.25	253	Pn	Pn	19 01 07.5	+0.7
	comp=E,4.1nm,0.3s,baz=72,slow=16,SNR=80						
PDAR				Pg	Pb	19 01 12.8	-0.1
	comp=E,12nm,0.3s,baz=77,slow=19,SNR=55						
PDAR				Lg	Lg	19 01 51.7	
	comp=E,18nm,0.3s,baz=71,slow=33,SNR=16						
PDAR	Pinedale Array	3.25	253	Pn	Pn	19 01 07.6	+0.9
BW06	Boulder Array	3.25	253		Pn	19 01 07.5	+0.8
BW06				IAML		19 01 56.6	
	comp=E,40nm,0.3s						
BW06				IAML		19 01 57.3	
	comp=E,39nm,0.3s						
YNE	Yellowstone No	3.57	292		Pn	19 01 12.2	+1.1
YMP	Mirror Lake Pl	3.59	287		Pn	19 01 12.4	+0.9
GCMT	Greycliff	3.68	305		Pn	19 01 14.2	+1.6
LKWY	Lake	3.73	284		Pn	19 01 14.9	+1.6
LKWY				IAML		19 01 44.8	
	comp=E,32nm,1.5s						
LKWY				IAML		19 02 19.5	
	comp=E,27nm,3.1s						
OGNE	Ogallala	3.74	138	Pn	Pn	19 01 14.3	+0.9
LOHW	Long Hollow	3.83	269		Pn	19 01 16.1	+1.4
H17A	Grant Village	3.83	281		Pn	19 01 16.8	+2.1
FLWY	Flagg Ranch	3.89	276		Pn	19 01 16.6	+1.1
FLWY				IAML		19 02 23.0	
	comp=E,38nm,2.7s						
FLWY				IAML		19 02 28.1	
	comp=E,31nm,3.1s						
ISCO	Idaho Springs	3.98	183		Pn	19 01 18.1	+1.2
ISCO				IAML		19 02 22.2	
	comp=E,22nm,1.8s						
REDW	Red Top Meadow	4.03	266		Pn	19 01 18.8	+1.3
REDW				IAML		19 02 27.1	
	comp=E,37nm,0.7s						
YHH	Holmes Hill	4.09	286		Pn	19 01 19.3	+1.0
O20A	White River Ci	4.24	212		Pn	19 01 21.3	+1.0
AHID	Auburn Hatcher	4.33	258		Pn	19 01 22.9	+1.3
AHID				IAML		19 02 34.2	
	comp=N,29nm,0.7s						
AHID				IAML		19 02 35.5	
	comp=E,30nm,0.9s						
YHL	Hebgen Lake	4.33	286		Pn	19 01 23.0	+1.4
RDMU	Red Mountain	4.49	226		Pn	19 01 24.4	+0.6
DGMT	Dagmar	4.76	9		Pn	19 01 28.8	+1.6
BOZ	Bozeman (W)	4.84	294		Pn	19 01 30.0	+1.4
BOZ				IAML		19 03 53.6	
	comp=E,12nm,5.0s						
BOZ				IAML		19 04 31.1	
	comp=E,16nm,5.0s						
EGMT	Eagleton	5.25	326		Pn	19 01 34.4	+0.4
HRY	Holter Researc	5.44	305		Pn	19 01 37.7	+0.9
LRM	Limekiln Ridge	5.46	294		Pn	19 01 39.1	+2.0
CTU	Camp Tracy	5.67	239	Pn	Pn	19 01 40.9	+0.8
HVU	Hansel Valley	5.83	252		Pn	19 01 42.7	+0.6
PV22	Blue Mesa, Par	5.85	208		Pn	19 01 43.7	+1.2
PV07	Paradox Valley	5.89	206		Pn	19 01 44.6	+1.5
ECSD	EROS Data Cent	6.32	87	Pn	Pn	19 01 49.4	+0.8
BGU	Big Grassy Mou	6.38	246	Pn	Pn	19 01 51.1	+1.5
ELK	Elko	7.95	251	Pn	Pn	19 02 12.8	+1.5
	comp=E,0.4nm,0.3s,baz=68,slow=9.3,SNR=5.9						
ULM	Lac du Bonnet	9.14	42	Pn	Pn	19 02 26.1	-1.3
	comp=E,1.5nm,0.3s,baz=231,slow=13,SNR=20						
ULM				Lg	Lg	19 04 56.6	
	comp=E,0.4nm,0.3s,baz=309,slow=22,SNR=1.9						
NVAR	Mina Array Bea	11.15	246	Pn	Pn	19 02 57.0	+1.9
	comp=E,0.1nm,0.3s,baz=53,slow=13,SNR=4.2						
YKA	Yellowknife Ar	19.52	347	P	P	19 04 42.6	-0.2
	comp=E,0.1nm,0.3s,baz=162,slow=10,SNR=4.7						
MKAR	Makanchi Array	89.56	355	P	P	19 13 10.9	-2.6
	comp=E,0.1nm,0.4s,baz=358,slow=5.6,SNR=4.9						

*IDC **14** 19:05:09.8±1.7, 7°.89S×118°.69E, h0^{km}, mb3.8/3, mb1 3.9/7, mb1mx3.6/45, mbtmp3.8/7, ML3.6/4, MS2.7/1, Ms1 2.7/1, ms1mx2.3/35, Error ellipse: s-maj=49.7km s-min=20.3km az=59.0*

*DJA **14** 19:05:14.2±1.4, 8°S±3°×11°9E±°, h31^{km}±22^{km}, M3.8/13, MLv3.8/13*

ISC 14 19:05:14.8±0.9**, 7°.82S**±0°.05×**118°.78E**±0°.05**, h34**^{km}**, n18,** σ**1^{s}.23**/20**, mb3.9**/3**, Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	Plampang	1.41	225	P	Pn	19 05 37.7	-0.4
TWSI	Taliwang, Sumb	2.09	244	P	Pn	19 05 46.9	-0.5
WSI	Waingapu	2.37	141	P	Pn	19 05 50.7	-0.6
KAPI	Kappang	2.95	19	Pn	Pn	19 05 58.4	-0.8
	4.2nm,0.3s,baz=194,slow=5.5,SNR=46						
KAPI				Sn	Sn	19 06 31.6	-1.8
	9.2nm,0.3s,baz=162,slow=20,SNR=6.5						
KAPI				Lg	Lg	19 06 38.5	
	15nm,0.3s,baz=287,slow=20,SNR=2.7						
KAPI				LR	LR	19 07 25.6	
	comp=Z,107nm,18.8s,baz=240,slow=45						
BASI	Baing, Sumba	2.97	144	P	Pn	19 05 59.2	-0.4
EDFI	Ende, Flores	3.02	108	P	Pn	19 05 59.6	-0.7
MMRI	Maumere	3.52	104	P	Pn	19 06 05.8	-1.2
BNSI	Bone	3.64	21	P	Pn	19 06 09.4	+0.7
SPSI	Sidrap Palu	3.95	14	P	Pn	19 06 12.6	-0.4
JAGI	Jajag, Banyuwa	4.63	262	P	Pn	19 06 22.3	-0.1
KMMI	Kalianget	4.84	279	P	Pn	19 06 27.0	+1.8
TTSI	Tana Toraja	4.85	12	P	Pn	19 06 26.4	+1.0
BATI	Baumata	5.37	117	Pn	Pn	19 06 33.6	+1.0
	2.8nm,0.3s,baz=350,slow=2.1,SNR=4.7						
BATI				Sn	Sn	19 07 36.6	+3.3
	1.1nm,0.3s,baz=262,slow=22,SNR=1.5						
FITZ	Fitzroy Crossi	12.21	148	Pn	Pn	19 08 05.6	-0.7
	0.1nm,0.3s,baz=332,slow=17,SNR=1.2						
FITZ				Sn	Sn	19 10 11.7	-10
	0.1nm,0.3s,baz=180,slow=19,SNR=2.0						
WRA	Warramunga Arr	19.30	130	P	P	19 09 36.2	-0.8
	0.3nm,0.3s,baz=302,slow=13,SNR=9.8						
ASAR	Alice Springs	21.42	139	P	P	19 09 59.6	-0.3
	3.4nm,0.6s,baz=311,slow=9.9,SNR=33						
STKA	Stephens Creek	32.00	142	P	P	19 11 37.4	-0.7
	1.8nm,0.6s,baz=324,slow=12,SNR=4.3						
MKAR	Makanchi Array	63.31	333	P	P	19 15 41.0	+0.7
	0.3nm,0.7s,baz=138,slow=8.2,SNR=4.1						

*BJI **14** 19:07:15.3±0.0, 5°.85S×147°.23E, h239^{km}, mB4.9/38, mb4.5/53*

*DJA **14** 19:07:21.7±0.3, 5°S±3°×14°7E±°, h235^{km}±4^{km}, M4.8/31, mb5.0/31, mB5.1/15, MLv5.4/6, Mw(mB)4.5/15, MwMwp7.8/1, Mwp7.4/1*

*IDC **14** 19:07:21.2±0.5, 5°.37S×146°.80E, h236^{km}±4^{km}, mb4.4/25, mb1 4.6/30, mb1mx4.4/38, mbtmp5.0/30, Error ellipse: s-maj=9.5km s-min=7.2km az=76.0*

*GCMT **14** 19:07:22.2±0.3, 5°.39S±0°.02×146°.79E±0°.02, h255^{km}±2^{km}, MW5.1/98, Moment Tensor Solution. s38,c43; s98,c132; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.55±.15; $M_{\theta\theta}$-3.11±.14; $M_{\phi\phi}$-0.44±.16; $M_{r\theta}$-2.31±.12; $M_{\theta\phi}$2.26±.14; $M_{\phi r}$-1.74±.14; Best double couple: $M_0$4.93500×10^{16} NP1:ϕ_s146.00000°, δ44.00000°, λ135.00000°. NP2: ϕ_s271.00000°, δ61.00000°, λ55.00000°. Principal axes: T 5.2780, Plg59.0000°, Azm131.0000°; N -0.6880, Plg30.0000°, Azm290.0000°; P -4.5910, Plg9.0000°, Azm25.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **14** 19:07:23.2±1.3, 5°.39S±0°.07×146°.75E±0°.07, h257^{km}±5^{km}, mb4.8/96 Error ellipse: s-maj=10.6km s-min=9.4km az=75.0*

ISC 14 19:07:22.1±0.2**, 5°.39S**±0°.04×**146°.72E**±0°.04**, h250**^{km}**, h251**^{km}**:pP-P, n286,** σ**1^{s}.48**/302**, mb4.7**/85**, 3C-1D, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANU	Manus Island	3.39	11		Pn	19 08 19.2	+0.3
PMG	Port Moresby	4.01	174	P	Pn	19 08 24.1	-2.0
	306nm,0.3s,baz=13,slow=5.4,SNR=1380						
PMG				S	S	19 09 11.4	-5.6
	325nm,0.3s,baz=330,slow=14,SNR=4.3						
PMG	Port Moresby	4.01	174	Pn	Pn	19 08 24.2	-1.9
PMG	Port Moresby	4.01	174	P	Pn	19 08 24.6	-1.5
RABL	Rabaul	5.56	78	Pn	Pn	19 08 43.6	-1.3
RABL	Rabaul	5.56	78	P	Pn	19 08 43.9	-1.0
JAY	Jayapura	6.64	295	P	Pn	19 08 57.3	-1.1
	27nm,0.3s,baz=156,slow=5.6,SNR=81						
JAY				S	S	19 10 08.9	-6.7
	12nm,0.3s,baz=24,slow=20,SNR=2.1						
JAY	Jayapura	6.64	295	P	Pn	19 08 57.5	-0.9
	0.6nm2μm207nm,0.8s						
GENI	Genyem	7.10	293	P	Pn	19 09 02.7	-1.4
	2.2nm4μm338nm,0.6s						
SMPI	Sarmi	8.68	293	P	Pn	19 09 22.4	-1.7
	84nm,0.9s						
COEN	Coen	9.20	202	Pn	Pn	19 09 31.8	+1.1
SRPI	Serui, Papua	11.02	288	P	Pn	19 09 52.1	-1.6
	2μm94nm,0.8s						
MTSU	Mount Surprise	12.88	190	P	P	19 10 18.4	-0.2
	baz=13,SNR=100						
HNR	Honiara	13.72	108	P	Pn	19 10 25.8	-1.2
	22nm,0.3s,baz=301,slow=3.2,SNR=14						
HNR				S	S	19 12 58.3	-0.8
	2.5nm,0.3s,baz=219,slow=14,SNR=1.6						
HNR	Honiara	13.72	108	P	P	19 10 28.3	+0.4
CTAO	Charters Tower	14.62	182	P	Pn	19 10 39.1	+1.3
FAKI	Fak Fak	14.64	279		P	19 10 37.5	-0.6
KDU	Kakadu	15.82	242	P	P	19 10 51.7	+0.7
	baz=16,SNR=305						
SIJI	Sorong	16.07	286	P	Pn	19 10 55.8	+0.6
	1.9nm,0.3s,baz=102,slow=12,SNR=8.4						
SWI	Sorong	16.07	286	P	Pn	19 10 55.6	+0.3
	731nm59nm,0.7s						
QIS	Mount Isa	16.58	204	P	Pn	19 11 01.4	+0.2
	baz=17,SNR=80						
PATS	Pohnpei	16.78	44	P	P	19 11 02.0	+0.4
	baz=17,SNR=7.0						

PATS	Pohnpei	16.78	44	P	P	19 11 02.0	+0.4
MTN	Manton Dam	17.07	243	P	P	19 11 06.0	+1.3
	baz=17,SNR=38						
MTN	Manton Dam	17.07	243	P	P	19 11 05.8	+1.0
WB0	Warramunga Arr	18.66	219	P	P	19 11 23.0	+1.1
WR0	Warramunga Arr	18.71	218	P	P	19 11 23.1	+0.6
WRAB	Tennant Creek	18.81	219	P	P	19 11 23.9	+0.3
WB2	Warramunga Arr	18.81	219	P	P	19 11 24.8	+1.2
	baz=19						
WB2	Warramunga Arr	18.81	219	P	P	19 11 24.5	+0.8
WRA	Warramunga Arr	18.82	219	P	P	19 11 24.5	+0.7
	23nm,0.3s,baz=37,slow=12,SNR=161						
WRA				S	S	19 14 43.4	-1.0
	2.9nm,0.3s,baz=40,slow=20,SNR=10.0						
WRA	Warramunga Arr	18.82	219	P	P	19 11 24.1	+0.4
EIDS	Eidsvold	20.30	169	P	P	19 11 40.6	+1.1
	baz=20,SNR=32						
EIDS	Eidsvold	20.30	169	P	P	19 11 40.2	+0.8
KNRA	Kununurra	20.38	239	P	P	19 11 42.2	+1.8
SANI	Sanana	20.95	278	P	P	19 11 48.2	+1.8
	20nm,0.7s						
RMQ	Roma	21.07	175	P	P	19 11 48.8	+1.4
	baz=21,SNR=39						
QLP	Quilpie	21.20	186	P	P	19 11 49.9	+1.1
	baz=21,SNR=61						
AS31	Alice Springs	21.96	213	P	P	19 11 57.6	+1.7
ASAR	Alice Springs	21.96	213	P	P	19 11 57.6	+1.7
	69nm,0.5s,baz=40,slow=7.4,SNR=810						
ASAR				S	S	19 15 40.0	-0.4
	30nm,0.7s,baz=33,slow=17,SNR=4.7						
ASAR	Alice Springs	21.96	213	P	P	19 11 57.3	+1.3
ASPA	Alice Springs	21.97	213	P	P	19 11 57.8	+1.8
	baz=22						
SANVU	Saraoutou	22.47	118	P	P	19 12 00.8	+0.2
SANVU	Saraoutou	22.47	118	P	P	19 12 01.7	+1.1
SOEI	Soe	22.67	258	P	P	19 12 04.1	+1.6
SOEI				IAmb	IAmb	19 12 16.5	
	comp=Z,40nm,0.8s						
SOEI	Soe	22.67	258	P	P	19 12 04.2	+1.6
	comp=Z,70nm,0.8s						
KOUNC	Koumac, New Ca	22.77	133	P	P	19 12 04.0	+0.7
BATI	Baumata	23.33	257	P	P	19 12 10.1	+1.6
	comp=Z,81nm,0.8s,baz=150,slow=0.7,SNR=26						
BATI	Baumata	23.33	257	P	P	19 12 10.1	+1.6
	comp=Z,61nm,0.8s						
FITZ	Fitzroy Crossi	24.15	237	P	P	19 12 16.7	+0.8
	baz=24,SNR=97						
FITZ	Fitzroy Crossi	24.15	237	P	P	19 12 16.6	+0.6
	comp=Z,62nm,0.6s,baz=46,slow=6.1,SNR=63						
FITZ	Fitzroy Crossi	24.15	237	P	P	19 12 16.5	+0.6
GTOI	Gorontalo	24.42	283	P	P	19 12 22.4	+4.0
	comp=Z,506nmcomp=Z,15nm,0.8s						
MMRI	Maumere	24.50	261	P	P	19 12 18.4	-0.8
MMRI	Maumere	24.50	261	P	P	19 12 19.3	+0.1
	comp=Z,71nm,0.7s						
EDFI	Ende, Flores	25.05	261	P	P	19 12 22.6	-1.6
	comp=Z,32nm,0.7s						
NOUC	Port Laguerre	25.20	133	P	P	19 12 25.0	-0.3
DZM	Mont Dzumac	25.28	133	P	P	19 12 25.7	-0.5
	comp=Z,34nm,0.7s,baz=257,slow=12,SNR=25						
DZM	Mont Dzumac	25.28	133	P	P	19 12 25.6	-0.6
DZM				IAmb	IAmb	19 12 29.8	
	comp=Z,54nm,1.0s						
DZM	Mont Dzumac	25.28	133	P	P	19 12 26.0	-0.2
ARMA	Armidale	25.32	170	P	P	19 12 27.6	+1.2
	baz=26,SNR=74						
ARMA	Armidale	25.32	170	P	P	19 12 27.5	+1.1
YATNC	Mamie plateau,	25.60	132	P	P	19 12 29.0	+0.1
OUENC	Ouen Island, N	25.79	133	P	P	19 12 30.4	-0.2
WRKA	Warakurna	26.34	220	P	P	19 12 36.2	+0.6
	baz=26,SNR=136						
TOLI2	Tolitoli	26.70	283	P	P	19 12 39.3	+0.5
STKA	Stephens Creek	26.78	190	P	P	19 12 40.0	+0.7
	baz=27,SNR=20						
STKA	Stephens Creek	26.78	190	P	P	19 12 39.6	+0.4
	comp=Z,4.3nm,0.5s,baz=1.2,slow=8.7,SNR=23						
STKA	Stephens Creek	26.78	190	P	P	19 12 39.7	+0.4
KAPI	Kappang	26.86	270	P	P	19 12 41.2	+0.9
KAPI				IAmb	IAmb	19 12 57.5	
	comp=Z,23nm,1.1s						
MGCD	Mangrove Creek	27.98	172	P	P	19 12 52.1	+2.2
	baz=28,SNR=5.4						
YNG	Young	28.80	177	P	P	19 12 58.8	+1.5
	baz=29,SNR=5.0						
HTT	Hallett	28.83	194	P	P	19 12 58.3	+0.8
	baz=29,SNR=20						
BBOO	Buckleboo	29.04	199	P	P	19 12 59.8	+0.4
	baz=29,SNR=25						
BBOO	Buckleboo	29.04	199	P	P	19 12 59.7	+0.4
BBOO				IAmb	IAmb	19 13 00.8	
	comp=Z,30nm,0.9s						
CAN	Canberra	29.86	176	P	P	19 13 07.3	+0.7
CAN				IAmb	IAmb	19 13 09.5	
	comp=Z,30nm,1.3s						
CNB	Canberra Magne	29.88	176	P	P	19 13 08.1	+1.3
	baz=30,SNR=9.5						
PSA00	Pilbara Seismi	30.59	236	P	P	19 13 13.7	+0.5
FORT	Forrest	30.75	213	P	P	19 13 15.5	+1.0
	baz=31,SNR=18						
FORT	Forrest	30.75	213	P	P	19 13 15.3	+0.9
ARPS	Mount Arapiles	31.55	187	P	P	19 13 22.7	+1.4
	baz=32,SNR=14						
TOO	Toolangi	32.05	182	P	P	19 13 27.0	+1.3
	baz=32,SNR=4.7						
TOO	Toolangi	32.05	182	P	P	19 13 26.8	+1.1
FUNA	Funafuti	32.38	97	P	P	19 13 28.0	-0.9
MSVF	Nonsavu	32.99	114	P	P	19 13 34.9	+0.8
	comp=Z,71nm,0.9s,baz=273,slow=8.6,SNR=43						
MSVF	Nonsavu	32.99	114	P	P	19 13 35.0	+0.8
MSVF	Nonsavu	32.99	114	P	P	19 13 35.4	+1.2
MEEK	Meekatharra	34.13	229	P	P	19 13 44.8	+0.9
	baz=34,SNR=30						
KMBL	Kambalda	34.79	219	P	P	19 13 50.1	+0.7
	baz=35,SNR=15						
GIRL	Giralia	35.74	238	P	P	19 13 59.1	+1.5
	baz=36,SNR=4.0						
GIRL	Giralia	35.74	238	P	P	19 13 59.2	+1.6
UGM	Wanagama	36.03	264	P	P	19 14 00.8	+0.6
UGM				IAmb	IAmb	19 14 07.3	
	comp=Z,68nm,1.2s						
TAU	Tasmania Unive	37.37	179	P	P	19 14 11.8	+0.9
TAU				IAmb	IAmb	19 14 27.1	
	comp=Z,43nm,1.2s						
MORW	Morawa	37.37	227	P	P	19 14 12.0	+0.8
	baz=38,SNR=13						
MORW	Morawa	37.37	227	P	P	19 14 12.1	+0.8
MORW				IAmb	IAmb	19 14 14.2	
	comp=Z,26nm,0.8s						
KLBR	Kellerberrin	37.62	223	P	P	19 14 13.7	+0.4
	baz=38,SNR=32						
BLDU	Ballidu	37.76	225	P	P	19 14 15.1	+0.6
	baz=38,SNR=33						
YULB	Yu-li	37.88	320	P	P	19 14 15.8	+0.3
YULB				IAmb	IAmb	19 14 17.9	
	comp=Z,16nm,0.8s						
TPUB	Ta-pu	38.24	319	P	P	19 14 18.5	-0.1
TPUB				IAmb	IAmb	19 14 19.6	
	comp=Z,20nm,0.8s						
SSLB	Suanglung	38.38	320	P	P	19 14 20.5	+0.8
OUZ	Omahuta	38.67	144	P	P	19 14 24.1	+2.1
YHNB	Yeheng	38.75	322	P	P	19 14 24.0	+1.2
YHNB				IAmb	IAmb	19 14 28.1	
	comp=Z,73nm,1.4s						
NWAO	Narrogin (SRO)	38.79	221	P	P	19 14 23.8	+0.7
	baz=39,SNR=8.0						
NWAO	Narrogin (SRO)	38.79	221	P	P	19 14 23.4	+0.4
	comp=Z,16nm,0.6s,baz=50,slow=7.7,SNR=12						
NWAO	Narrogin (SRO)	38.79	221	P	P	19 14 23.4	+0.4
NWAO				IAmb	IAmb	19 14 24.4	
	comp=Z,19nm,0.7s						
NWAO	Narrogin (SRO)	38.79	221	P	P	19 14 23.8	+0.7
NWAO				IAmb	IAmb	19 14 24.4	
	comp=Z,15nm,0.7s						
LEM	Lembang	38.90	266	P	P	19 14 25.6	+1.3
	comp=Z,14nm,0.6s,baz=8.5,slow=17,SNR=4.6						
MUN	Mundaring	38.91	223	P	P	19 14 24.7	+0.7
	baz=39,SNR=7.2						
JSU	Suzuyama	39.84	338	P	P	19 14 31.8	+0.2
KNMB	Chin-men Tao	40.52	318	P	P	19 14 38.7	+1.4
KNMB				IAmb	IAmb	19 14 39.3	
	comp=Z,14nm,0.6s						
JMN	Monobe	40.76	344	P	P	19 14 39.8	+0.6
JMN				IAmb	IAmb	19 14 40.5	
	comp=Z,22nm,0.8s						
JNU	Nakatsue	41.15	340	P	P	19 14 43.0	+0.7
	comp=Z,31nm,0.9s,baz=113,slow=4.3,SNR=9.7						
JNU	Nakatsue	41.15	340	P	P	19 14 42.6	+0.2
JNU				IAmb	IAmb	19 14 43.9	
	comp=Z,42nm,0.9s						
INU	Inuyama	41.54	348	P	P	19 14 45.6	+0.2
INU				IAmb	IAmb	19 14 47.8	
	comp=Z,38nm,1.2s						
JGF	Kuroka	41.71	349	P	P	19 14 46.9	+0.1
JGF				IAmb	IAmb	19 14 47.8	
	comp=Z,23nm,1.0s						
AFI	Afiamalu	41.73	105	P	P	19 14 47.7	+0.3
AFI				IAmb	IAmb	19 14 59.9	
	comp=Z,51nm,1.2s						
JWT	Wachi	41.84	346	P	P	19 14 48.3	+0.5
JWT				IAmb	IAmb	19 14 48.7	
	comp=Z,32nm,0.9s						
JYT	Yasato	41.85	352	P	P	19 14 48.3	+0.4
JYT				IAmb	IAmb	19 14 49.9	
	comp=Z,24nm,0.5s						
JHS	Saijyo	42.17	343	P	P	19 14 50.9	+0.3
JHS				IAmb	IAmb	19 14 51.6	
	comp=Z,44nm,1.1s						
MJAR	Matsushiro Arr	42.47	350	P	P	19 14 52.5	-0.4
	comp=Z,8.4nm,0.8s,baz=184,slow=9.6,SNR=20						
MJAR				pP	pP	19 15 42.9	-1.5
	comp=Z,3.6nm,0.9s,baz=174,slow=9.1,SNR=3.1						
MJAR	Matsushiro Arr	42.47	350	P	P	19 14 52.8	-0.2
MAJO	Matsushiro	42.47	350	P	P	19 14 53.0	+0.1
MAJO				IAmb	IAmb	19 14 53.6	
	comp=Z,17nm,0.8s						
MAT	Matsushiro	42.47	350	P	P	19 14 52.6	-0.3
MAT				*e*S	S	19 20 51.0	-4.7
URZ	Urewera	42.81	144	P	P	19 14 56.2	+0.6
	comp=Z,24nm,0.4s,baz=281,slow=3.2,SNR=7.4						
URZ	Urewera	42.81	144	P	P	19 14 56.7	+1.1
URZ				IAmb	IAmb	19 14 57.9	
	comp=Z,31nm,0.5s						
MXZ	Matakaoa Point	43.06	142	P	P	19 14 58.8	+1.2
MXZ				IAmb	IAmb	19 15 13.5	
	comp=Z,43nm,0.8s						
BKZ	Black Stump Fm	43.07	146	P	P	19 14 58.7	+0.9
BKZ				IAmb	IAmb	19 14 59.9	
	comp=Z,36nm,0.6s						
FOZ	Fox Glacier	43.10	155	P	P	19 14 59.2	+1.3
TUWZ	Tuamarina	43.34	150	P	P	19 15 00.4	+0.6
JMM	Marumori	43.39	353	P	P	19 15 01.0	+0.8
JMM				IAmb	IAmb	19 15 01.7	
	comp=Z,49nm,1.2s						
SSE	Sheshan	43.72	328	P	P	19 15 04.3	+1.3
SSE				IAmb	IAmb	19 15 05.1	
	comp=Z,25nm,1.0s						
RPZ	Rata Peaks	43.77	154	P	P	19 15 04.2	+0.9
RPZ				IAmb	IAmb	19 15 05.5	
	comp=Z,43nm,0.9s						
PYZ	Puysegur Point	44.15	160	P	P	19 15 07.6	+1.4
NJ2	Nanjing	45.72	326	*e*P	P	19 15 20.5	+1.8
NJ2				pmax	pmax		
	comp=Z,22nm,0.6s						
KSRS	Korea Array	46.09	339	P	P	19 15 22.4	+0.9
	comp=Z,11nm,0.8s,baz=154,slow=8.9,SNR=43						
KSRS				pP	pP	19 16 11.9	-1.9
	comp=Z,5.5nm,0.9s,baz=156,slow=9.6,SNR=5.1						
KSRS				ScP	ScP	19 20 23.0	+0.6
	comp=Z,1.4nm,1.0s,baz=139,slow=5.8,SNR=3.7						
KSAR	Wonju Array Be	46.09	339	P	P	19 15 22.0	+0.5
KS19	Wonju Array Si	46.15	339	P	P	19 15 22.5	+0.5
PSI	Prapat	48.43	279	pP	pP	19 16 32.2	-1.3
	comp=Z,5.5nm,0.5s,baz=179,slow=2.3,SNR=2.3						
USRK	Ussuriysk Ar.	51.12	346	P	P	19 16 00.7	+1.2
	comp=Z,6.1nm,0.7s,baz=153,slow=6.6,SNR=11						
USRK	Ussuriysk Ar.	51.12	346	P	P	19 16 00.5	+1.0
USA0B	Ussuriysk Arra	51.12	346	P	P	19 16 00.3	+0.8
MDJ	Mudanjiang	52.11	345	P	P	19 16 10.3	+3.5
MDJ				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MDJ				pmax	pmax		
	comp=Z,290nm,4.7s						
KMI	Kunming	52.41	307	⇑P	P	19 16 12.6	+2.9
KMI				pP	pP	19 17 05.8	+2.0
KMI				sP	sP	19 17 31.4	-0.1
KMI				pmax	pmax		
	comp=Z,7.0nm,0.7s						
CM31	Chiang Mai Arr	52.72	298	P	P	19 16 12.2	+0.4
CMAR	Chiang Mai Arr	52.72	298	P	P	19 16 12.9	+1.1
	comp=Z,2.5nm,0.8s,baz=123,slow=5.8,SNR=27						
CMAR				pP	pP	19 17 03.9	-2.6
	comp=Z,8.1nm,0.8s,baz=122,slow=5.8,SNR=7.9						
CMAR				ScP	ScP	19 20 53.0	+1.7
	comp=Z,0.9nm,1.0s,baz=130,slow=3.4,SNR=4.4						
CMAR	Chiang Mai Arr	52.72	298	P	P	19 16 12.8	+1.0
XAN	Xi'an	53.04	320	P	P	19 16 13.9	0.0
XAN				pP	pwP	19 17 10.3	0.0
XAN				pmax	pmax		
	comp=Z,23nm,1.0s						
XAN	Xi'an	53.04	320	P	P	19 16 14.1	+0.2
CD2	Chengdu	54.65	314	P	P	19 16 26.3	+0.7
CD2				pP	pP	19 17 17.8	-2.3
CD2				S	S	19 23 50.3	+4.3
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CD2				pmax	pmax		
	comp=Z,380nm,7.4s						
HHC	Hu-ho-hao-te	56.17	328	*e*P	P	19 16 36.6	+0.3
HHC				pmax	pmax		
	comp=Z,13nm,0.9s						
HHC				pmax	pmax		
	comp=Z,80nm,7.1s						
LZH	Lanzhou	57.57	319	*e*P	P	19 16 47.8	+1.5
LZH				pP	pP	19 17 41.3	+0.1
LZH				sP	sP	19 18 06.6	-2.0
LZH				pmax	pmax		
	comp=Z,15nm,1.0s						
PEA0B	Petropavlovsk-	59.02	8	P	P	19 16 57.0	+1.3
PEA0B				IAmb	IAmb	19 17 03.5	
	comp=Z,44nm,1.4s						
PETK	Petropavlovsk-	59.02	8	P	P	19 16 56.9	+1.1
	comp=Z,5.8nm,0.8s,baz=159,slow=6.8,SNR=9.2						
SHL	Shillong	61.45	303	P	P	19 17 12.9	-0.1
GTA	Gaotai	62.10	320	⇑P	P	19 17 18.3	+1.4
GTA				pP	pP	19 18 11.6	-1.2
GTA				S	S	19 25 25.6	+3.7
GTA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,110nm,5.1s						
ULN	Ulaanbaatar	63.44	331	P	P	19 17 26.6	+0.9
ULN				IAmb	IAmb	19 17 27.8	
	comp=Z,13nm,0.8s						
LSA	Lhasa	63.65	307	P	P	19 17 28.8	+1.0
LSA	Lhasa	63.65	307	P	P	19 17 28.7	+1.0
SONM	Songino Array	63.74	331	P	P	19 17 28.8	+1.2
	comp=Z,5.9nm,0.8s,baz=151,slow=7.3,SNR=34						
SONM				pP	pP	19 18 23.0	-0.7
	comp=Z,3.3nm,0.8s,baz=152,slow=5.1,SNR=6.3						
SONM				PKP2bc		19 46 25.0	
	comp=Z,1.7nm,0.8s,baz=317,slow=3.1,SNR=10						
SONM	Songino Array	63.74	331	P	P	19 17 28.4	+0.8
TAPN	Taplejung	65.58	303	*e*P	P	19 17 40.0	-0.1
	comp=Z,11nm,0.9s						
ODAN	Odare	65.68	303	*e*P	P	19 17 40.8	+0.2
	comp=Z,13nm,0.8s						
RAMN	Ramite	66.38	302	*e*P	P	19 17 45.2	+0.1
	comp=Z,4.7nm,0.6s						
GUN	Gumba	67.30	303	*e*P	P	19 17 51.2	+0.2
	comp=Z,12nm,0.6s						
PKI	Pulchoki	67.58	303	*e*P	P	19 17 52.5	-0.2
	comp=Z,5.8nm,0.8s						
PKIN	Phulchoki	67.59	303	*e*P	P	19 17 52.1	-0.6
	comp=Z,5.5nm,0.8s						
TLY	Talaya	67.68	333	P	P	19 17 52.9	+0.4
KKN	Kakani	67.76	303	*e*P	P	19 17 53.8	+0.1
	comp=Z,10nm,0.7s						
DMN	Daman	67.85	303	*e*P	P	19 17 54.8	+0.5
	comp=Z,21nm,0.7s						
GKN	Gorkha	68.37	303	*e*P	P	19 17 57.3	-0.1
	comp=Z,12nm,0.6s						
YAK	Yakutsk	68.50	351	P	P	19 17 57.9	+0.7
YAK				IAmb	IAmb	19 17 60.0	
	comp=Z,8.3nm,0.9s						
DANN	Dangsing	69.21	303	*e*P	P	19 18 02.5	-0.3
	comp=Z,12nm,0.6s						
WMQ	Urumqi	72.15	319	*e*P	P	19 18 21.3	+1.5
WMQ				pP	pP	19 19 17.4	-0.4
WMQ				sP	sP	19 19 42.4	-2.1
WMQ				pmax	pmax		
	comp=Z,14nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,170nm,5.9s						
WMQ	Urumqi	72.15	319	P	P	19 18 20.0	+0.1
WMQ				IAmb	IAmb	19 18 21.5	
	comp=Z,19nm,1.5s						
VNDA	Vanda	72.53	177	P	P	19 18 22.2	+0.8
	comp=Z,20nm,0.7s,baz=333,slow=6.4,SNR=50						
VNDA	Vanda	72.53	177	P	P	19 18 22.1	+0.8
VNDA				IAmb	IAmb	19 18 23.2	
	comp=Z,25nm,0.8s						
SBA	Scott Base	73.18	176	P	P	19 18 26.8	+1.7
SBA				IAmb	IAmb	19 18 39.0	
	comp=Z,42nm,1.4s						
ZSN	Zaisan	75.51	322	*e*P	P	19 18 39.1	-0.1
	baz=322						
CHGN	Chignik	76.00	28	P	P	19 18 43.0	+1.4
CHGN				IAmb	IAmb	19 18 53.6	
	comp=Z,36nm,1.2s						
DHRM	DHARAMSHALA	76.52	305	*e*P	P	19 18 43.9	-1.5
DHRM				*e*S	pP	19 19 37.8	-6.1
MK31	Makanchi Array	76.85	320	P	P	19 18 47.0	+0.3
MKAR	Makanchi Array	76.85	320	P	P	19 18 47.0	+0.3
	comp=Z,2.6nm,0.6s,baz=99,slow=8.0,SNR=37						
MAKZ	Makanchi	77.06	320	P	P	19 18 48.1	+0.3
MAKZ				IAmb	IAmb	19 18 49.0	
	comp=Z,12nm,1.2s						
SHLS	Shalkode	77.40	316	*e*P	P	19 18 48.2	-1.8
	baz=316						
UZB	Uzynbulak	77.70	316	*e*P	P	19 18 51.6	-0.1
	baz=316						
KPKS	Kokpek	78.04	316	*e*P	P	19 18 53.1	-0.3
	baz=316						
SATY	Saty	78.10	316	*e*P	P	19 18 53.6	-0.2
	baz=316						
TNA	Tin City	78.10	18	P	P	19 18 54.6	+1.5
	baz=226						
TNA	Tin City	78.10	18	P	P	19 18 55.0	+1.9
ZAA0	Zalesovo Array	78.35	328	P	P	19 18 54.2	-0.5
ZALV	Zalesovo Beam	78.35	328	P	P	19 18 54.1	-0.7
	comp=Z,4.3nm,0.5s,baz=114,slow=5.3,SNR=22						
ZALV	Zalesovo Beam	78.35	328	P	P	19 18 54.2	-0.6
TDK	Taldyqorghan	78.74	318	*e*P	P	19 18 57.0	-0.1
	baz=318						
OHAK	Old Harbor	78.90	29	P	P	19 18 59.0	+1.3
MDOK	Medeo	79.08	316	*e*P	P	19 18 59.2	+0.1
	baz=316						
TNSS	Tian-Shan	79.11	316	*e*P	P	19 18 59.6	0.0
	baz=316						
SEM	Semipalatinsk	79.48	323	*e*P	P	19 18 59.9	-1.3
	baz=323						
KUU	Kurty	79.79	316	*e*P	P	19 19 02.3	-0.5
	baz=316						
SVW2	Sparrevohn	79.81	25	P	P	19 19 04.5	+2.0
SVW2				IAmb	IAmb	19 19 07.3	
	comp=Z,8.0nm,0.8s						
KURK	Kurchatov	80.56	323	P	P	19 19 06.6	-0.1
AAK	Ala-Archa	80.72	315	P	P	19 19 08.3	+0.3
BRLK	Bradley Lake	81.20	27	P	P	19 19 11.4	+1.4
BRLK				IAmb	IAmb	19 19 11.8	
	comp=Z,17nm,1.0s						
BTLS	Baital	81.70	317	*e*P	P	19 19 12.6	-0.3
	baz=317						
PPLA	Purkeypile	82.10	24	P	P	19 19 16.1	+1.3
RC01	Rabbit Creek A	82.30	26	P	P	19 19 16.8	+1.2
	baz=244						
CUT	Chulitna	82.66	25	P	P	19 19 18.8	+1.4
	baz=243						
MAW	Mawson	82.70	203	P	P	19 19 17.8	+0.3
	comp=Z,13nm,0.7s,baz=62,slow=15,SNR=1.5						
PMR	Palmer	82.78	26	P	P	19 19 18.4	+0.4
PMR				IAmb	IAmb	19 19 20.4	
	comp=Z,7.1nm,0.6s						
IMAR	Indian Mountai	83.03	21	P	P	19 19 20.1	+0.8
DZA	Taraz	83.03	314	*e*P	P	19 19 19.3	-0.5
	baz=314						
Q23K	Middleton Isla	83.16	28	P	P	19 19 21.1	+1.1
	baz=247						
SML	Sawmill	83.22	26	P	P	19 19 21.1	+0.7
SML				IAmb	IAmb	19 19 22.8	
	comp=Z,26nm,1.0s						
KK31	Karatay Array	83.67	314	P	P	19 19 23.1	+0.1
KKAR	Karatay Array	83.67	314	P	P	19 19 23.1	+0.1
KKAR	Karatay Array	83.67	314	P	P	19 19 23.1	+0.1
MLY	Manley	83.67	22	P	P	19 19 23.3	+0.7
	baz=243						
RND	Reindeer	83.68	24	P	P	19 19 22.7	0.0
RND				IAmb	IAmb	19 19 24.4	
	comp=Z,20nm,0.8s						
MCK	McKinley	83.79	24	P	P	19 19 23.3	+0.1
	baz=244						
BRZS	Berezniki	83.95	321	*e*P	P	19 19 23.9	-0.4
	baz=321						
NEA2	Nenana	84.11	23	P	P	19 19 25.4	+0.7
	baz=244						
I23K	Minto, Yukon-K	84.24	22	P	P	19 19 26.5	+1.1
	baz=244						
M24K	Tolsona, Glenn	84.28	26	P	P	19 19 27.0	+1.3
	baz=247						
QSPA	South Pole Qui	84.57	180	P	P	19 19 27.4	+0.2
NRIK	Noril'sk	84.61	342	P	P	19 19 27.1	-0.1
	comp=Z,7.3nm,0.6s,baz=206,slow=6.0,SNR=4.1						
NRIK				pP	pP	19 20 23.4	-3.1
	comp=Z,12nm,0.9s,baz=106,slow=4.6,SNR=4.3						
NRIK	Noril'sk	84.61	342	P	P	19 19 27.3	+0.1
NRIK				IAmb	IAmb	19 19 28.3	
	comp=Z,12nm,0.8s						
CCB	Clear Creek Bu	84.63	23	P	P	19 19 26.8	-0.5
CCB				IAmb	IAmb	19 19 29.5	
	comp=Z,15nm,0.8s						
TCOL	CIGO, UAF Yank	84.70	23	P	P	19 19 27.9	+0.3
	baz=245						
N25K	Chitina, Valde	84.78	27	P	P	19 19 29.9	+1.6
	baz=249						
COLD	Coldfoot	84.87	20	P	P	19 19 29.6	+1.2
	baz=243						
COLD	Coldfoot	84.87	20	P	P	19 19 29.7	+1.2
HDA	Harding Lake	84.87	24	P	P	19 19 29.1	+0.6
	baz=246						
A21K	Barrow	84.96	16	P	P	19 19 29.7	+0.9
	baz=237						
POKR	Poker Plat Res	84.97	23	P	P	19 19 29.7	+0.7
	baz=246						
ILAR	Eielson Array	85.04	23	P	P	19 19 28.4	-1.0
	comp=Z,14nm,0.8s,baz=252,slow=4.9,SNR=84						
ILAR				pP	pP	19 20 26.1	-2.6
	comp=Z,2.5nm,0.8s,baz=253,slow=4.7,SNR=3.2						
TOLK	Toolik Lake Re	85.72	19	P	P	19 19 33.7	+1.0
	baz=244						
TOLK	Toolik Lake Re	85.72	19	P	P	19 19 33.1	+0.4
SCRK	Sand Creek	85.90	24	P	P	19 19 34.5	+0.7
	baz=249						
EGAK	Eagle	87.33	24	P	P	19 19 41.4	+0.9
EGAK				IAmb	IAmb	19 19 43.1	
	comp=Z,11nm,0.8s						
EPYK	Eagle Plains	89.55	23	P	P	19 19 51.6	+0.6
	baz=256						
EPYK	Eagle Plains	89.55	23	P	P	19 19 51.7	+0.7
EPYK				IAmb	IAmb	19 19 53.8	
	comp=Z,10nm,0.8s						
SYO	Syowa Base	91.06	200	⇓*e*P	P	19 19 58.4	+0.5
INK	Inuvik	91.19	21	P	P	19 19 58.5	+0.1
	comp=Z,2.8nm,0.9s,baz=250,slow=8.1,SNR=7.5						
ABKAR	Akbulak array	91.94	319	P	P	19 20 00.4	-1.9
ABKAR	Akbulak array	91.94	319	P	P	19 20 01.0	-1.4
ABKAR				IAmb	IAmb	19 20 01.2	
	comp=Z,1.2nm,0.7s						
BELA	Belgrano 2	96.84	180	P	P	19 20 23.8	-0.4
NVAR	Mina Array Bea	97.22	52	P	Pdif	19 20 28.4	+1.3
	comp=Z,1.7nm,0.8s,baz=254,slow=6.4,SNR=11						
NVAR	Mina Array Bea	97.22	52	P	P	19 20 27.6	+0.5
YKA	Yellowknife Ar	98.77	28	P	Pdif	19 20 33.0	-0.1
	comp=Z,1.3nm,0.7s,baz=272,slow=4.1,SNR=20						
YKA				pP	pP	19 21 31.3	-2.1
	comp=Z,1.7nm,0.9s,baz=274,slow=4.2,SNR=6.0						
YKA				PKKPbc	PKKPbc	19 36 59.3	-3.7
	comp=Z,0.7nm,0.8s,baz=89,slow=3.8,SNR=8.0						
SNAA	Sanae	100.55	189	Pdiff	Pdif	19 20 41.5	+0.5
VNA2	Neumayer--Watz	101.91	188	Pdiff	Pdif	19 20 49.7	+2.7
VNA1	Neumayer--Stat	102.28	188	Pdiff	Pdif	19 20 54.9	+6.3
PDAR	Pinedale Array	103.72	47	Pdiff	Pdif	19 20 56.6	+0.7
	comp=Z,0.3nm,0.5s,baz=215,slow=3.0,SNR=2.3						
ARCES	ARCESS Array B	105.59	342	PKKPbc	PKKPbc	19 36 38.8	-4.5
	comp=Z,2.3nm,0.7s,baz=270,slow=2.7,SNR=5.0						
CLL	Collm	120.30	328	*e*PKPdf	PKPdf	19 25 43.0	-0.6
GERES	GERESS Array B	121.25	326	PKP	PKPdf	19 25 44.8	-0.8
	comp=Z,0.3nm,0.5s,baz=81,slow=1.8,SNR=4.2						

GERES				PKKPbc	**PKKPab**	**19 35 48.0**	**-1.5**
	comp=Z,0.3nm,0.5s,baz=234,slow=3.3,SNR=4.5						
PLCA	**Paso Flores**	**122.78**	**147**	PKP	**PKPdf**	**19 25 49.3**	**+0.5**
	comp=Z,4.8nm,0.5s,baz=228,slow=1.9,SNR=22						
MOTC	**Monteria, Cord**	**137.82**	**83**	*e*P	**PKPdf**	**19 26 18.3**	**+0.5**
GUY2C	**Guyana, Caldas**	**138.10**	**88**	*e*P	**PKPdf**	**19 26 17.4**	**-1.6**
RREF	**El Recreo**	**138.11**	**89**	*e*P	**PKPdf**	**19 26 20.6**	**+1.3**
TOLC	**Tolima**	**138.12**	**89**	*e*P	**PKPdf**	**19 26 16.1**	**-2.8**
ORTC	**Ortega, Tolima**	**138.16**	**90**	⇑*e*P	**PKPdf**	**19 26 17.4**	**-1.1**
PRAC	**Prado**	**138.50**	**90**	*e*P	**PKPdf**	**19 26 16.8**	**-2.5**
LPAZ	**La Paz**	**139.35**	**123**	PKP	**PKPdf**	**19 26 22.1**	**+0.8**
	comp=Z,3.7nm,0.8s,baz=237,slow=1.2,SNR=7.7						
LPAZ				SKPbc	**SKiKP**	**19 29 35.2**	**-0.7**
	comp=Z,2.6nm,0.9s,baz=247,slow=3.8,SNR=4.6						
LPAZ	**La Paz**	**139.35**	**123**	*e*P	PKPdf	19 26 11.6	-10
RUSC	**La Rusia**	**140.40**	**87**	*e*P	PKPdf	19 26 15.0	-8.2
SDDR	**Presa de Saban**	**140.59**	**67**	*e*P	**PKPdf**	**19 26 15.7**	**-7.2**
CPUP	**Villa Florida**	**140.79**	**145**	PKhKP	PKPpre	19 26 15.2	
	comp=Z,1.2nm,0.4s,baz=189,slow=2.1,SNR=3.3						
CPUP				PKP	**PKPdf**	**19 26 23.8**	**+0.9**
	comp=Z,5.5nm,0.8s,baz=265,slow=0.9,SNR=6.8						
PAMC	**Pamplona, Colo**	**140.79**	**85**	*e*P	**PKPdf**	**19 26 17.4**	**-6.4**
SDV	**Santo Domingo**	**142.79**	**82**	PKhKP	PKPpre	19 26 23.9	
	comp=Z,3.7nm,0.3s,baz=297,slow=5.3,SNR=5.8						
SDV	**Santo Domingo**	**142.79**	**82**	*e*P	**PKPdf**	**19 26 23.7**	**-3.4**
TOA0	**Torodi Ar. Sit**	**144.66**	**285**		**PKPab**	**19 26 28.7**	**-0.8**
TORD	**Torodi Ar. Bea**	**144.66**	**285**	PKP	**PKPab**	**19 26 28.8**	**-0.8**
	comp=Z,3.0nm,0.5s,baz=85,slow=4.7,SNR=18						
MLPR	**Magueyes Islan**	**144.73**	**66**		PKPbc	19 26 27.7	-1.9
OBIP	**Obispado Ponce**	**145.11**	**66**	PKPdf	**PKPdf**	**19 26 29.1**	**-1.6**
SIV	**San Ignacio**	**145.25**	**128**	PKPbc	**PKPdf**	**19 26 30.9**	**-0.2**
	comp=Z,56nm,0.9s,baz=242,slow=3.1,SNR=176						
SJG	**San Juan**	**145.51**	**66**	PKPbc	**PKPdf**	**19 26 31.5**	**+0.1**
	comp=Z,19nm,0.6s,baz=314,slow=2.5,SNR=7.0						
HUMP	**Col San Antoni**	**145.77**	**65**		**PKPdf**	**19 26 31.9**	**0.0**
CDVI	**St. Croix**	**146.87**	**66**		**PKPbc**	**19 26 35.5**	**-0.5**
SAML	**Samuel**	**146.96**	**115**	PKPdf	**PKPdf**	**19 26 33.7**	**-0.3**
SAML	**Samuel**	**146.96**	**115**	*e*P	**PKPdf**	**19 26 33.0**	**-1.0**
PCRV	**Puerto La Cruz**	**148.59**	**79**	PKPbc	**PKPbc**	**19 26 39.5**	**-1.2**
	comp=Z,15nm,0.8s,baz=346,slow=8.3,SNR=2.4						
PLCV	**Puerto La Cruz**	**148.63**	**79**		**PKPbc**	**19 26 39.5**	**-1.3**
DBIC	**Dimbokro**	**151.70**	**274**	PKPbc	**PKPbc**	**19 26 47.6**	**-0.5**
	comp=Z,3.2nm,0.9s,baz=107,slow=6.5,SNR=2.3						
DBIC				PKPab	**PKPab**	**19 26 58.5**	**+0.6**
	comp=Z,3.5nm,0.8s,baz=20,slow=2.4,SNR=3.7						
PTGA	**Pitinga**	**152.67**	**102**	PKPbc	**PKPbc**	**19 26 50.3**	**0.0**
	comp=Z,7.7nm,0.6s,baz=309,slow=6.8,SNR=4.7						
PTGA	**Pitinga**	**152.67**	**102**	PKPbc	**PKPbc**	**19 26 50.2**	**-0.1**
PTGA				PKPab	**PKPab**	**19 27 01.4**	**-0.6**
BDFB	**Brasilia**	**154.51**	**145**	PKP	**PKPdf**	**19 26 46.1**	**+0.4**
	comp=Z,2.8nm,0.6s,baz=148,slow=2.5,SNR=4.8						
BDFB				PKPbc	**PKPbc**	**19 26 54.5**	**+0.2**
	comp=Z,12nm,0.7s,baz=230,slow=1.5,SNR=19						
BDFB				PKPab	**PKPab**	**19 27 09.8**	**+0.2**
	comp=Z,9.2nm,1.0s,baz=153,slow=6.8,SNR=6.1						

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*IDC **14** 19:12:54.2±0.6, 55°.31S×29°.44W, h0^{km}, mb4.4/9, mb1 4.5/10, mb1mx4.3/26, mbtmp4.4/10, ML4.3/1, MS3.8/11, Ms1 3.8/11, ms1mx3.8/15, Error ellipse: s-maj=27.5km s-min=17.4km az=37.0*

*NEIC **14** 19:12:55.9±1.5, 55°.3S±0°.1×29°.6W±0°.2, h10^{km}±1^{km}, mb5.0/41, Error ellipse: s-maj=20.7km s-min=14.2km az=193.0*

*MOS **14** 19:12:55.6±1.3, 55°.25S×29°.79W, h10^{km}, mb4.4/22, Error ellipse: s-maj=22.3km s-min=13.1km az=119.5*

*GCMT **14** 19:12:56.9±0.3, 55°.48S±0°.02×29°.45W±0°.03, h20^{km}±1^{km}, MW4.9/80, Moment Tensor Solution. s21,c21; s80,c107; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.43±.14; $M_{\theta\theta}$-1.79±.12; $M_{\phi\phi}$2.22±.12; $M_{r\theta}$0.67±.25; $M_{\theta\phi}$1.34±.09; $M_{\phi r}$0.86±.21; Best double couple: $M_0$2.61200×10^{16} NP1:ϕ_s331.00000°, δ68.00000°, λ177.00000°. NP2: ϕ_s62.00000°, δ87.00000°, λ22.00000°. Principal axes: T 2.9350, Plg17.0000°, Azm288.0000°; N -0.6440, Plg68.0000°, Azm68.0000°; P -2.2880, Plg13.0000°, Azm194.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BJI **14** 19:12:58.3±0.0, 55°.68S×29°.29W, h33^{km}, mB5.7/3, Ms5.5/2, Ms7 5.2/2*

ISC 14 19:12:58.5±0.3**, 55°.39S**±0°.08×**29°.73W**±0°.06**, h28**^{km}**, n128,** σ**1^s.41**/127**, mb4.9**/32**, MS4.0**/12**, 1D, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**4.06**	**283**	P	**Pn**	**19 13 58.9**	**+0.3**
HOPE						19 14 42.0	
HOPE	**Hope Point**	**4.06**	**283**		**Pn**	**19 13 58.9**	**+0.3**
HOPE				Sn	**Sn**	**19 14 42.0**	**-3.2**
EFI	**East Falkland**	**17.19**	**271**	*i* P	**Pn**	**19 16 57.4**	**+1.1**
EFI				pmax	pmax		
	comp=Z,42nm,1.2s						
EFI	**East Falkland**	**17.19**	**271**	Pn	**Pn**	**19 16 55.5**	**-0.8**
EFI				IAmb	IAmb	19 17 12.2	
	comp=Z,155nm,1.6s						
VNA1	**Neumayer--Stat**	**17.96**	**157**	P	**P**	**19 17 07.4**	**+1.3**
VNA3	**Neumayer Olymp**	**18.11**	**159**	P	**P**	**19 17 07.4**	**-0.4**
VNA2	**Neumayer--Watz**	**18.36**	**157**	P	**Pn**	**19 17 11.3**	**+0.7**
	baz=328,slow=11						
SNAA	**Sanae**	**19.94**	**155**	P	**P**	**19 17 27.0**	**-0.8**
SNAA	**Sanae**	**19.94**	**155**	P	**P**	**19 17 26.9**	**-0.8**
	comp=Z,0.9nm,0.3s,baz=301,slow=12,SNR=26						
SNAA				LR	LR	19 23 32.5	
	comp=Z,67nm,18.0s,baz=4.5,slow=32						
SNAA	**Sanae**	**19.94**	**155**	*i* P	**Pn**	**19 17 32.6**	**+3.0**
SNAA				pmax	pmax		
	comp=Z,33nm,1.1s						
SNAA	**Sanae**	**19.94**	**155**	P	**P**	**19 17 27.0**	**-0.8**
USHA	**Ushuaia**	**21.96**	**255**	LR	LR	19 24 14.1	
	comp=Z,4μm,21.3s,baz=114,slow=31						
BELA	**Belgrano 2**	**22.66**	**183**	P	**P**	**19 17 56.7**	**-0.2**
GO10	**Punta Arenas**	**23.98**	**258**	P	**P**	**19 18 11.6**	**+1.3**
GO09	**Cerro Castillo**	**25.47**	**261**	P	**P**	**19 18 24.3**	**+0.5**
GO09				IAmb	IAmb	19 18 55.4	
	comp=Z,62nm,1.4s						
PLCA	**Paso Flores**	**30.46**	**282**	P	**P**	**19 19 08.1**	**-0.6**
	comp=Z,3.7nm,1.1s,baz=154,slow=11,SNR=3.3						
PLCA	**Paso Flores**	**30.46**	**282**	*e*P	**P**	**19 19 08.8**	**+0.2**
PLCA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
PLCA	**Paso Flores**	**30.46**	**282**	P	**P**	**19 19 06.5**	**-2.2**
SYO	**Syowa Base**	**33.00**	**142**	⇓*e*P	**P**	**19 19 28.8**	**-1.7**
BO02	**Sierra Bellavi**	**34.85**	**289**	P	**P**	**19 19 47.0**	**-0.1**
BO02				IAmb	IAmb	19 19 59.7	
	comp=Z,42nm,1.5s						
CPUP	**Villa Florida**	**35.30**	**314**	P	**P**	**19 19 50.3**	**-0.6**
	comp=Z,5.3nm,0.9s,baz=144,slow=6.5,SNR=7.1						
CPUP				LR	LR	19 36 20.8	
	comp=Z,118nm,18.2s,baz=160,slow=40						
CPUP	**Villa Florida**	**35.30**	**314**	P	**P**	**19 19 50.8**	**-0.1**
CPUP				pmax	pmax		
	comp=Z,12nm,1.2s						
CPUP	**Villa Florida**	**35.30**	**314**	P	**P**	**19 19 50.8**	**-0.1**
PEL	**Peldehue**	**36.06**	**291**	P	**P**	**19 19 58.2**	**+0.8**
PEL				pmax	pmax		
	comp=Z,36nm,0.8s						
PEL	**Peldehue**	**36.06**	**291**	P	**P**	**19 19 58.2**	**+0.8**
MT02	**Curacav**	**36.21**	**290**	P	**P**	**19 19 58.8**	**+0.2**
ZON	**Zonda**	**36.25**	**295**	P	**P**	**19 19 58.7**	**-0.3**
ZON				pmax	pmax		
	comp=Z,14nm,1.1s						
ZON	**Zonda**	**36.25**	**295**	P	**P**	**19 19 58.7**	**-0.3**
VA03	**San Esteban**	**36.28**	**291**	P	**P**	**19 19 59.4**	**0.0**
VA03				IAmb	IAmb	19 20 11.7	
	comp=Z,30nm,0.8s						
ROC1	**El Roble**	**36.36**	**291**	P	**P**	**19 20 00.3**	**0.0**
CO02	**Combarbal**	**37.73**	**293**	P	**P**	**19 20 11.9**	**+0.2**
CO02				IAmb	IAmb	19 20 24.2	
	comp=Z,41nm,1.1s						
CO03	**El Pedregal**	**37.86**	**293**	P	**P**	**19 20 13.5**	**+0.7**
CO01	**Juntas del Tor**	**38.23**	**295**	P	**P**	**19 20 16.9**	**+0.8**
CO01				IAmb	IAmb	19 20 19.1	
	comp=Z,17nm,0.8s						
GO04	**Tololo Observa**	**38.44**	**294**	P	**P**	**19 20 17.4**	**-0.5**
GO04				IAmb	IAmb	19 20 51.1	
	comp=Z,51nm,1.4s						
AC05	**El Transito**	**39.24**	**296**	P	**P**	**19 20 25.1**	**+0.6**
AC05				IAmb	IAmb	19 20 26.6	
	comp=Z,21nm,0.8s						
LCO	**Las Campanas**	**39.32**	**295**	P	**P**	**19 20 25.7**	**+0.5**
LCO				pmax	pmax		
	comp=Z,15nm,1.0s						
LCO	**Las Campanas**	**39.32**	**295**	P	**P**	**19 20 25.7**	**+0.5**
AC04	**Llanos de Chal**	**40.16**	**295**	P	**P**	**19 20 32.9**	**+0.9**
AC04				IAmb	IAmb	19 20 34.6	
	comp=Z,46nm,1.1s						
GO03	**Copiap**	**40.23**	**297**	P	**P**	**19 20 32.3**	**-0.3**
AC02	**Maricunga**	**40.29**	**299**	P	**P**	**19 20 32.8**	**-0.8**
AC02				IAmb	IAmb	19 21 15.8	
	comp=Z,19nm,0.6s						
MAW	**Mawson**	**41.53**	**145**	LR	LR	19 35 06.6	
	comp=Z,138nm,22.0s,baz=240,slow=32						
SUR	**Sutherland**	**41.88**	**78**	P	**P**	**19 20 46.1**	**-0.2**
GO02	**Mina Guanaco**	**41.91**	**300**	P	**P**	**19 20 47.6**	**+0.9**
GO02				IAmb	IAmb	19 20 48.8	
	comp=Z,30nm,0.9s						
BDFB	**Brasilia**	**42.09**	**333**	P	**P**	**19 20 48.4**	**+0.4**
	comp=Z,2.2nm,0.7s,baz=172,slow=13,SNR=3.2						
BDFB				LR	LR	19 37 38.0	
	comp=Z,153nm,18.0s,baz=146,slow=35						
BDFB	**Brasilia**	**42.09**	**333**	P	**P**	**19 20 47.7**	**-0.3**
BDFB				pmax	pmax		
	comp=Z,16nm,1.6s						
BDFB	**Brasilia**	**42.09**	**333**	P	**P**	**19 20 47.7**	**-0.3**
LVC	**Limon Verde**	**43.73**	**302**	P	**P**	**19 21 02.1**	**+0.6**
LVC				pmax	pmax		
	comp=Z,12nm,0.6s						
LVC	**Limon Verde**	**43.73**	**302**	P	**P**	**19 21 02.1**	**+0.6**
LVC				IAmb	IAmb	19 21 07.2	
	comp=Z,12nm,0.6s						
PB09	**IPOC Station P**	**44.58**	**303**	P	**P**	**19 21 09.2**	**+1.1**
PB09				IAmb	IAmb	19 21 40.1	
	comp=Z,23nm,1.2s						
PB07	**IPOC Station P**	**44.95**	**302**	P	**P**	**19 21 11.2**	**+0.2**
PB07				IAmb	IAmb	19 21 13.1	
	comp=Z,17nm,1.1s						
PB01	**IPOC Station P**	**45.34**	**303**	P	**P**	**19 21 15.0**	**+1.0**
PB01				IAmb	IAmb	19 21 16.3	
	comp=Z,19nm,0.9s						
PB08	**IPOC Station P**	**45.95**	**304**	P	**P**	**19 21 20.0**	**+0.7**
PB08				IAmb	IAmb	19 21 24.2	
	comp=Z,17nm,0.8s						
SBA	**Scott Base**	**46.63**	**185**	P	**P**	**19 21 24.0**	**+0.5**
SBA				pmax	pmax		
	comp=Z,97nm,1.8s						
SBA	**Scott Base**	**46.63**	**185**	P	**P**	**19 21 24.0**	**+0.5**
PSGCX	**Pisagua**	**46.88**	**303**	P	**P**	**19 21 26.5**	**+0.2**
PSGCX				IAmb	IAmb	19 21 35.9	
	comp=Z,15nm,1.2s						
MNMC	**Minye Minye**	**47.03**	**304**	P	**P**	**19 21 28.6**	**+1.0**
VNDA	**Vanda**	**47.16**	**183**	P	**P**	**19 21 28.7**	**+1.1**
	comp=Z,2.2nm,0.9s,baz=150,slow=8.8,SNR=2.2						
VNDA				LR	LR	19 40 13.3	
	comp=Z,43nm,18.7s,baz=166,slow=35						
VNDA	**Vanda**	**47.16**	**183**	P	**P**	**19 21 28.5**	**+0.9**
VNDA				pmax	pmax		
	comp=Z,32nm,2.0s						
VNDA	**Vanda**	**47.16**	**183**	P	**P**	**19 21 28.5**	**+0.9**
VNDA				IAmb	IAmb	19 22 41.2	
	comp=Z,32nm,1.9s						
BOSA	**Boshof**	**47.23**	**79**	P	**P**	**19 21 26.6**	**-2.3**
	comp=Z,3.6nm,0.9s,baz=227,slow=5.6,SNR=5.8						
BOSA				LR	LR	19 37 14.7	
	comp=Z,228nm,18.7s,baz=224,slow=31						
BOSA	**Boshof**	**47.23**	**79**	P	**P**	**19 21 26.7**	**-2.2**
BOSA				pmax	pmax		
	comp=Z,89nm,2.0s						
BOSA	**Boshof**	**47.23**	**79**	P	**P**	**19 21 26.7**	**-2.2**
LPAZ	**La Paz**	**48.82**	**308**	P	**P**	**19 21 42.5**	**+0.6**
	comp=Z,16nm,0.6s,baz=148,slow=5.6,SNR=58						
LPAZ				LR	LR	19 42 26.0	
	comp=Z,50nm,20.8s,baz=164,slow=36						
LPAZ	**La Paz**	**48.82**	**308**	*e*P	**P**	**19 21 43.2**	**+1.3**
LPAZ				pmax	pmax		
	comp=Z,16nm,0.6s						
LPAZ	**La Paz**	**48.82**	**308**	P	**P**	**19 21 42.3**	**+0.4**
LPAZ				IAmb	IAmb	19 21 46.7	
	comp=Z,16nm,0.7s						
H10N1	**ASCENSION HYDR**	**48.94**	**20**	T	T	20 14 36.6	
	baz=190,slow=75,SNR=4.2						
H10N3	**ASCENSION HYDR**	**48.94**	**20**	T	T	20 14 35.9	
	baz=190,slow=75,SNR=7.3						
H10N2	**ASCENSION HYDR**	**48.96**	**20**	T	T	20 14 38.4	
	baz=190,slow=75,SNR=6.1						
LBTB	**Lobatse**	**50.22**	**76**	P	**P**	**19 21 51.6**	**-0.3**
LBTB				pmax	pmax		
	comp=Z,50nm,1.9s						
LBTB	**Lobatse**	**50.22**	**76**	P	**P**	**19 21 51.6**	**-0.3**
LBTB				IAmb	IAmb	19 22 01.1	
	comp=Z,50nm,1.9s						
TSUM	**Tsumeb**	**50.65**	**64**	P	**P**	**19 21 54.3**	**-0.9**
SAML	**Samuel**	**53.32**	**317**	P	**P**	**19 22 14.9**	**-0.1**
SAML				pmax	pmax		
	comp=Z,13nm,1.1s						
SAML	**Samuel**	**53.32**	**317**	P	**P**	**19 22 14.9**	**-0.1**
ATAH	**Atahualpa**	**61.62**	**302**	P	**P**	**19 23 16.7**	**+2.8**
	comp=Z,6.2nm,0.8s,baz=137,slow=11,SNR=2.9						
DBIC	**Dimbokro**	**65.20**	**27**	LR	LR	19 44 50.2	
	comp=Z,96nm,21.5s,baz=172,slow=30						
DBIC	**Dimbokro**	**65.20**	**27**	P	**P**	**19 23 36.1**	**-0.9**
DBIC				pmax	pmax		
	comp=Z,42nm,1.9s						
DBIC	**Dimbokro**	**65.20**	**27**	P	**P**	**19 23 36.1**	**-0.9**
SDV	**Santo Domingo**	**72.53**	**317**	P	**P**	**19 24 23.5**	**+0.6**
	comp=Z,3.8nm,0.4s,baz=169,slow=2.9,SNR=5.6						
TOA0	**Torodi Ar. Sit**	**73.22**	**32**	P	**P**	**19 24 25.7**	**-0.9**
TOA0				IAmb	IAmb	19 26 31.2	
	comp=Z,26nm,1.6s						
TORD	**Torodi Ar. Bea**	**73.22**	**32**	P	**P**	**19 24 25.9**	**-0.7**
	comp=Z,2.0nm,0.8s,baz=201,slow=6.3,SNR=7.7						
TORD				LR	LR	19 49 55.3	
	comp=Z,174nm,20.0s,baz=160,slow=30						
TORD	**Torodi Ar. Bea**	**73.22**	**32**	P	**P**	**19 24 25.4**	**-1.3**
STKA	**Stephens Creek**	**92.77**	**173**	LR	LR	20 05 32.7	
	comp=Z,61nm,20.7s,baz=203,slow=34						
KEST	**Kesra**	**96.72**	**31**	LR	LR	20 04 34.2	
	comp=Z,175nm,20.3s,baz=266,slow=32						
ASAR	**Alice Springs**	**100.03**	**165**	P	**Pdif**	**19 26 40.8**	**-0.3**
	comp=Z,0.3nm,0.9s,baz=181,slow=4.3,SNR=1.6						
PFO	**Pinyon Flats O**	**115.17**	**293**	*i* PKIKP	**PKiKP**	**19 31 41.4**	**+4.8**
KIV	**Kislovodsk**	**116.33**	**50**	*e*PKIKP	**PKiKP**	**19 31 39.2**	**+0.8**
KIV				pmax	pmax		
	comp=Z,8.0nm,1.0s						
PDAR	**Pinedale Array**	**118.78**	**304**	PKP	**PKiKP**	**19 31 43.3**	**-0.1**
	comp=Z,0.4nm,0.8s,baz=100,slow=4.7,SNR=3.5						
MNK	**Minsk**	**119.26**	**34**	*i* PKP	**PKiKP**	**19 31 46.4**	**+2.8**
	comp=E,1.0nm,0.9s						
MNK				*i* PKP	**PKiKP**	**19 31 46.4**	**+2.8**
	comp=N,10.0nm,1.0s						
MNK				*i* PKP	**PKiKP**	**19 31 46.4**	**+2.8**
	comp=Z,7.0nm,0.9s						
MNK				*i* PP	**PP**	**19 33 06.7**	**+1.1**
MNK				*i* SKP		19 35 21.9	
MNK				*i* PKS	**PKSdf**	**19 35 23.1**	**+3.2**
MNK				*i* PPP	PPP	19 35 38.0	
MNK				*i* SKS	SKSdf	19 39 08.9	+16
MNK				*i* PS	**PKKPdf**	**19 42 22.1**	**-5.3**
MNK				*i* SS	**SS**	**19 49 29.5**	**+4.1**
MNK				*i* SSS	SSS	19 53 53.8	
MNK				*i* LQ	LQ	20 12 24.4	
MNK				*i* LR	LR	20 17 49.9	
MNK				*i* LRM	MLR	20 23 15.2	
	comp=Z,69nm,19.0s						
MNK				*i* LRM	MLR	20 23 53.7	
	comp=E,3.0nm,19.2s						
MNK				*i* LRM	MLR	20 23 56.2	
	comp=N,131nm,19.2s						
NVAR	**Mina Array Bea**	**119.81**	**295**	PKP	**PKiKP**	**19 31 46.6**	**+1.0**
	comp=N,0.4nm,0.6s,baz=106,slow=2.9,SNR=3.3						
OBN	**Obninsk**	**122.71**	**39**	*i* PKIKP	**PKiKP**	**19 31 51.3**	**+1.0**
OBN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
WVOR	**Wild Horse Val**	**122.96**	**298**	PKIKP	**PKiKP**	**19 31 51.8**	**+0.3**
WVOR	**Wild Horse Val**	**122.96**	**298**		**PKiKP**	**19 31 51.8**	**+0.3**
FINES	**FINESS Array B**	**124.48**	**29**	PKP	**PKiKP**	**19 31 52.7**	**-1.0**
	comp=Z,1.5nm,0.6s,baz=215,slow=1.7,SNR=6.2						
FINES	**FINESS Array B**	**124.48**	**29**	PKIKP	**PKiKP**	**19 31 52.9**	**-0.8**
FINES	**FINESS Array B**	**124.48**	**29**		**PKiKP**	**19 31 52.9**	**-0.8**
G08A	**Pilot Rock**	**125.19**	**300**		**PKiKP**	**19 31 55.7**	**-0.1**
CMAR	**Chiang Mai Arr**	**126.65**	**113**	PKP	**PKiKP**	**19 31 59.5**	**+0.1**
	comp=Z,0.6nm,0.9s,baz=234,slow=3.0,SNR=1.6						
KSH	**Kashi**	**129.79**	**76**	PKP	**PKPdf**	**19 32 03.6**	**-0.8**
ARCES	**ARCESS Array B**	**130.87**	**22**	PKP	**PKiKP**	**19 32 05.3**	**-1.0**
	comp=Z,5.7nm,1.0s,baz=198,slow=2.8,SNR=5.2						
ARCES	**ARCESS Array B**	**130.87**	**22**	PKIKP	**PKiKP**	**19 32 06.1**	**-0.2**
ARCES	**ARCESS Array B**	**130.87**	**22**		**PKiKP**	**19 32 06.1**	**-0.2**
ARU	**Arti**	**132.33**	**49**	*i* PKIKP	**PKiKP**	**19 32 08.2**	**-1.4**
YKA	**Yellowknife Ar**	**134.72**	**319**	PKP	**PKiKP**	**19 32 12.9**	**-1.3**
	comp=Z,0.6nm,0.4s,baz=114,slow=3.3,SNR=13						
BRVK	**Borovoye**	**135.61**	**58**	*i* PKIKP	**PKiKP**	**19 32 15.7**	**-0.7**
MK31	**Makanchi Array**	**138.05**	**72**	*i* PKIKP	**PKiKP**	**19 32 20.3**	**-1.3**
MKAR	**Makanchi Array**	**138.05**	**72**	PKhKP	PKPpre	19 32 12.4	
	comp=Z,0.5nm,0.9s,baz=242,slow=3.1,SNR=3.2						
MKAR				PKP	**PKiKP**	**19 32 20.8**	**-0.7**
	comp=Z,0.4nm,0.6s,baz=242,slow=0.7,SNR=4.9						
MKAR	**Makanchi Array**	**138.05**	**72**	*e*PKIKP	**PKiKP**	**19 32 22.9**	**+1.3**
MKAR	**Makanchi Array**	**138.05**	**72**		**PKiKP**	**19 32 21.7**	**+0.1**
WMQ	**Urumqi**	**139.19**	**79**	*e*PKP	**PKiKP**	**19 32 23.9**	**-0.2**
GTA	**Gaotai**	**143.20**	**94**	*e*P	**PKiKP**	**19 32 36.3**	**+3.8**
GTA				pP	sPKPdf	19 32 47.3	+7.7
GTA				sP	pPKPdf	19 32 52.1	+15
GTA				pmax	pmax		
	comp=Z,3.0nm,1.7s						
ZALV	**Zalesovo Beam**	**143.37**	**64**	PKhKP	PKPpre	19 32 24.9	
	comp=Z,0.9nm,0.5s,baz=222,slow=1.9,SNR=3.9						
ZALV	**Zalesovo Beam**	**143.37**	**64**	PKIKP	**PKiKP**	**19 32 30.6**	**-1.6**
ZALV	**Zalesovo Beam**	**143.37**	**64**		**PKiKP**	**19 32 30.6**	**-1.6**
XAN	**Xi'an**	**144.42**	**109**	PKP	**PKiKP**	**19 32 33.9**	**-1.2**
XAN				pPKP	pPKPdf	19 32 38.5	-0.7
PAX	**Paxson**	**147.53**	**310**	PKP2	**PKPbc**	**19 32 38.3**	**-0.3**
PAX	**Paxson**	**147.53**	**310**		**PKPbc**	**19 32 38.3**	**-0.3**
NJ2	**Nanjing**	**147.91**	**124**	*e*PKPbc	**PKPbc**	**19 32 39.0**	**-1.4**
ILAR	**Eielson Array**	**148.60**	**313**	PKPbc	**PKPbc**	**19 32 41.1**	**-0.1**
	comp=Z,11nm,0.7s,baz=122,slow=1.7,SNR=50						
COLA	**College**	**149.03**	**313**	*i* PKIKP	**PKPdf**	**19 32 39.3**	**+1.2**
KDAK	**Kodiak Island**	**149.23**	**298**	*i* PKIKP	**PKPdf**	**19 32 39.7**	**+1.1**
NRIK	**Noril'sk**	**149.38**	**38**	PKPbc	**PKiKP**	**19 32 44.0**	**-0.1**
	comp=Z,0.9nm,0.3s,baz=0.3,slow=2.5,SNR=4.3						
NRIK	**Noril'sk**	**149.38**	**38**	*i* PKIKP	**PKPbc**	**19 32 40.9**	**-2.1**
NRIK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
HHC	**Hu-ho-hao-te**	**150.79**	**104**	*e*PKPbc	**PKPdf**	**19 32 43.6**	**+1.7**
ZAK	**Zakamensk**	**151.65**	**80**	*e*PKIKP	**PKiKP**	**19 32 48.4**	**-1.1**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
SONM	**Songino Array**	**152.13**	**87**	PKPbc	**PKiKP**	**19 32 49.8**	**-0.8**
	comp=Z,2.2nm,0.6s,baz=227,slow=2.9,SNR=15						
SONM				PKPab	**sPKPbc**	**19 32 59.1**	**-1.6**
	comp=Z,1.8nm,0.8s,baz=219,slow=4.0,SNR=7.1						
SONM	**Songino Array**	**152.13**	**87**	PKIKP	**PKiKP**	**19 32 50.5**	**-0.2**
SONM	**Songino Array**	**152.13**	**87**		**PKiKP**	**19 32 50.5**	**-0.2**
TLY	**Talaya**	**152.45**	**78**	*e*PKIKP	**PKiKP**	**19 32 54.0**	**+3.0**
TLY				pmax	pmax		
	comp=Z,7.0nm,0.6s						

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*GCG **14** 19:22:38.8±0.6, 12°.47N×90°.52W, h50^{km}, MD4.0*

*IDC **14** 19:22:39.4±0.8, 13°.22N×89°.63W, h0^{km}, mb4.2/8, mb1 4.5/10, mb1mx4.1/38, mbtmp4.2/10, ML3.4/2, MS3.4/3, Ms1 3.4/3, ms1mx2.9/29, Error ellipse: s-maj=36.7km s-min=16.3km az=55.0*

*SNET **14** 19:22:40.9±2.3, 12°.72N×90°.21W, h21^{km}±11^{km}, ML4.0*

*UCR **14** 19:22:41.1±2.3, 12°.72N×90°.19W, h20^{km}±11^{km}, ML3.9, mb4.5(NEIC)*

*NEIC **14** 19:22:43.1±2.1, 12°.81N±0°.08×90°.14W±0°.07, h35^{km}±2^{km}, Error ellipse: s-maj=14.5km s-min=9.7km az=206.0*

*INET **14** 19:22:47.3, 13°.12N×89°.78W, h73^{km}, ML3.8, MW3.7*

ISC 14 19:22:43.3±1.2**, 12°.81N**±0°.05×**90°.20W**±0°.04**, h34**^{km}±3^{km}**, n121,** σ**1^s.15**/131**, mb4.4**/23**, 2C-2D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LALI	**Alcalda de L**	**1.09**	**52**	*e*P	**Pb**	**19 23 03.8**	**0.0**
LALI	**Alcalda de L**	**1.09**	**52**	*e*P	**Pb**	**19 23 03.8**	**0.0**
JAYA	**Jayaque - finc**	**1.11**	**41**	*e*P	**Pn**	**19 23 02.1**	**-0.5**
JAYA				*e*S	**Sb**	**19 23 17.7**	**-0.8**
JAYA				IAML		19 23 23.5	
	comp=Z,3μm,0.3s						
JAYA	**Jayaque - finc**	**1.11**	**41**	*e*P	**Pn**	**19 23 02.1**	**-0.5**
JAYA				*e*S	**Sb**	**19 23 17.7**	**-0.8**
JAYA				IAML		19 23 23.5	
	comp=Z,3μm,0.3s						
CEVE	**Cerro Verde**	**1.15**	**29**	*e*P	**Pn**	**19 23 02.8**	**-0.6**
CEVE				IAML		19 23 23.2	
	comp=Z,5μm,0.3s						
CEVE	**Cerro Verde**	**1.15**	**29**	*e*P	**Pn**	**19 23 02.8**	**-0.6**
CEVE				IAML		19 23 23.2	
	comp=Z,5μm,0.3s						
SBLS	**San Blas**	**1.16**	**29**	*e*P	**Pn**	**19 23 03.1**	**-0.4**
SBLS	**San Blas**	**1.16**	**29**	*e*P	**Pn**	**19 23 03.1**	**-0.4**
RTR	**El Retiro**	**1.21**	**27**	*e*P	**Pn**	**19 23 03.9**	**-0.1**
RTR	**El Retiro**	**1.21**	**27**	*e*P	**Pn**	**19 23 03.9**	**-0.1**
CEDA	**San Andres**	**1.26**	**39**	*e*P	**Pn**	**19 23 04.6**	**0.0**
CEDA				*e*S	**Sb**	**19 23 23.4**	**+0.8**
CEDA				IAML		19 23 32.1	
	comp=Z,3μm,0.5s						
CEDA	**San Andres**	**1.26**	**39**	*e*P	**Pn**	**19 23 04.6**	**0.0**
CEDA				*e*S	**Sb**	**19 23 23.4**	**+0.8**
CEDA				IAML		19 23 32.1	
	comp=Z,3μm,0.5s						
BOQS	**Boqueron**	**1.28**	**44**	*e*P	**Pn**	**19 23 04.5**	**-0.6**
BOQS	**Boqueron**	**1.28**	**44**	*e*P	**Pn**	**19 23 04.5**	**-0.6**
SNET	**Serv Nac Est T**	**1.28**	**47**		**Pn**	**19 23 03.7**	**-1.3**
LFRS	**El Faro**	**1.37**	**54**	⇓*i*P	**Pn**	**19 23 05.5**	**-0.8**
LFRS	**El Faro**	**1.37**	**54**	⇓*i*P	**Pn**	**19 23 05.5**	**-0.8**
LFU	**La Fuente**	**1.41**	**49**	*e*P	**Pn**	**19 23 06.4**	**-0.3**
LFU	**La Fuente**	**1.41**	**49**	*e*P	**Pn**	**19 23 06.4**	**-0.3**
TACO	**Tacachico**	**1.42**	**36**	*e*P	**Pn**	**19 23 06.7**	**-0.1**
TACO				*e*S	**Sb**	**19 23 27.8**	**+0.8**
TACO				IAML		19 23 33.3	
	comp=Z,849nm,0.6s						
TACO	**Tacachico**	**1.42**	**36**	*e*P	**Pn**	**19 23 06.7**	**-0.1**
TACO				*e*S	**Sb**	**19 23 27.8**	**+0.8**
TACO				IAML		19 23 33.3	
	comp=Z,849nm,0.6s						
LBRS	**Las Brisas**	**1.46**	**51**	*e*P	**Pn**	**19 23 07.0**	**-0.4**
LBRS	**Las Brisas**	**1.46**	**51**	*e*P	**Pn**	**19 23 07.0**	**-0.4**
COEG	**Centro de Oper**	**1.52**	**58**	*e*P	**Pn**	**19 23 07.4**	**-0.8**
COEG				IAML		19 23 18.4	
	comp=Z,2μm,0.4s						
COEG				⇑*e*S	**Sn**	**19 23 27.0**	**+0.2**
COEG	**Centro de Oper**	**1.52**	**58**	*e*P	**Pn**	**19 23 07.4**	**-0.8**
COEG				IAML		19 23 18.4	
	comp=Z,2μm,0.4s						
COEG				⇑*e*S	**Sn**	**19 23 27.0**	**+0.2**
PCG	**Pacaya**	**1.62**	**346**	*e*P	**Pn**	**19 23 09.5**	**-0.2**
FUG	**Fuego 3**	**1.74**	**339**	*e*P	**Pn**	**19 23 10.8**	**-0.6**
FUG				*e*S	**Sb**	**19 23 35.6**	**-0.8**
NBG	**Las Nubes**	**1.77**	**355**	*e*P	**Pn**	**19 23 13.2**	**+1.3**
MTO3	**Montecristo**	**1.77**	**27**	Pn	**Pn**	**19 23 11.3**	**-0.6**
PQSS	**Presa 15 de Se**	**1.79**	**63**	*e*P	**Pn**	**19 23 11.3**	**-0.5**
ESQI	**Esquipulas**	**1.93**	**26**	Pn	**Pn**	**19 23 14.1**	**+0.3**
RTAL	**Retalhuleu**	**2.23**	**320**	Pn	**Pn**	**19 23 18.1**	**0.0**
LCND	**La Caada**	**2.31**	**77**	*e*P	**Pn**	**19 23 18.3**	**-0.7**
LCND				*e*S	**Sn**	**19 23 47.2**	**+1.0**
LCND	**La Caada**	**2.31**	**77**	*e*P	**Pn**	**19 23 18.3**	**-0.7**
LCND				*e*S	**Sn**	**19 23 47.2**	**+1.0**
MRL	**Marmol**	**2.31**	**13**	*e*P	**Pn**	**19 23 20.9**	**+1.7**
HUEH	**Huehuetenango**	**2.79**	**333**	Pn	**Pn**	**19 23 26.4**	**+0.6**
CRIN	**San Cristobal**	**3.08**	**92**	Pn	**Pn**	**19 23 28.3**	**-1.4**
TGUH	**Tegucigalpa,Un**	**3.11**	**66**	Pn	**Pn**	**19 23 29.8**	**-0.3**
TGUH	**Tegucigalpa,Un**	**3.11**	**66**	*e*P	**Pn**	**19 23 30.1**	**0.0**
CCIG	**Comitan**	**3.92**	**332**		**Pn**	**19 23 43.0**	**+1.6**
PETF	**Flores**	**4.09**	**5**	Pn	**Pn**	**19 23 44.3**	**+0.8**
ACON	**Acoyapa**	**4.98**	**99**	Pn	**Pn**	**19 23 55.4**	**-0.4**
JTS	**Las Juntas de**	**5.72**	**115**	Pn	**Pn**	**19 24 06.1**	**+0.1**
ESPN	**Las Esperanzas**	**5.80**	**95**	Pn	**Pn**	**19 24 06.3**	**-0.7**
CMIG	**Matias Romero**	**6.21**	**314**	Pn	**Pn**	**19 24 14.4**	**+1.8**
	comp=Z,1.3nm,0.3s,baz=129,slow=9.5,SNR=9.7						
CMIG				Sn	**Sn**	**19 25 20.8**	**-1.7**
	comp=Z,0.4nm,0.3s,baz=102,slow=11,SNR=1.1						
HDC	**Heredia**	**6.59**	**114**	Pn	**Pn**	**19 24 16.1**	**-2.0**
TEIG	**Tepich**	**7.60**	**14**	Pn	**Pn**	**19 24 32.6**	**+0.9**
	comp=Z,2.5nm,0.3s,baz=108,slow=5.0,SNR=14						
TEIG				LR	LR	19 27 35.6	
	comp=Z,177nm,19.1s,baz=95,slow=42						
TEIG	**Tepich**	**7.60**	**14**	Pn	**Pn**	**19 24 32.1**	**+0.4**
TEIG	**Tepich**	**7.60**	**14**	*e*P	**Pn**	**19 24 32.2**	**+0.5**
TLIG	**Tlapa**	**9.35**	**301**	Pn	**Pn**	**19 24 56.2**	**+0.2**
CBOC	**Ciudad Bolivar**	**15.61**	**115**	*e*P	**P**	**19 26 25.8**	**+0.8**
BBAC	**Balboa, Cauca**	**16.72**	**129**	*e*P	**P**	**19 26 39.2**	**+1.8**
NORC	**Norcasia**	**16.75**	**114**	*e*P	**P**	**19 26 37.5**	**-0.1**
POPC	**Popayan, Colom**	**16.84**	**126**	*e*P	**P**	**19 26 38.8**	**+0.1**
PCON	**Cinco Dias**	**17.18**	**126**	*e*P	**P**	**19 26 43.3**	**+0.4**
ROSC	**El Rosal**	**17.57**	**115**	P	**P**	**19 26 46.5**	**-0.5**

ROSC				IAmb	IAmb	19 26 59.5	
	comp=Z,66nm,1.4s						
CHIC	**Chingaza**	**18.19**	**115**	*e*P	**Pn**	**19 26 52.7**	**-1.1**
NATX	**Nacogdoches**	**19.30**	**348**	P	**P**	**19 27 05.4**	**0.0**
NATX				IAmb	IAmb	19 27 08.0	
	comp=Z,38nm,1.4s						
VBMS	**Vicksburg**	**19.32**	**359**	P	**P**	**19 27 05.2**	**-0.4**
SDV	**Santo Domingo**	**19.61**	**100**	P	**P**	**19 27 04.4**	**-4.8**
	comp=Z,0.7nm,0.3s,baz=293,slow=7.7,SNR=1.6						
SDV				LR	LR	19 35 32.8	
	comp=Z,62nm,19.0s,baz=280,slow=40						
SDV	**Santo Domingo**	**19.61**	**100**	P	**P**	**19 27 08.2**	**-1.0**
SDV				IAmb	IAmb	19 27 20.4	
	comp=Z,14nm,0.7s						
WHTX	**Lake Whitney,**	**20.22**	**342**	P	**P**	**19 27 15.3**	**-0.2**
Z47A	**Carrollton**	**20.39**	**5**	P	**P**	**19 27 16.7**	**-0.5**
Z47A				IAmb	IAmb	19 27 22.4	
	comp=Z,30nm,0.8s						
TXAR	**Lajitas Array**	**20.66**	**325**	P	**P**	**19 27 22.0**	**+1.6**
	comp=Z,5.0nm,0.8s,baz=144,slow=11,SNR=24						
TXAR				PcP	**PcP**	**19 31 32.2**	**+2.2**
	comp=Z,0.4nm,0.4s,baz=134,slow=3.9,SNR=2.2						
TXAR	**Lajitas Array**	**20.66**	**325**	P	**P**	**19 27 22.2**	**+1.8**
TX32	**Lajitas Array**	**20.66**	**325**	P	**P**	**19 27 21.9**	**+1.5**
WLAR	**White Oak Lake**	**20.95**	**353**	P	**P**	**19 27 22.0**	**-1.4**
WLAR				IAmb	IAmb	19 27 28.4	
	comp=Z,27nm,1.0s						
OXF	**Oxford**	**21.61**	**2**	P	**P**	**19 27 30.9**	**+0.4**
OXF				IAmb	IAmb	19 27 33.7	
	comp=Z,26nm,0.7s						
X48A	**Hartselle**	**21.73**	**7**	P	**P**	**19 27 31.5**	**-0.3**
MIAR	**Mount Ida**	**21.85**	**352**	P	**P**	**19 27 32.5**	**-0.6**
PLAL	**Pickwick Lake**	**22.15**	**5**	P	**P**	**19 27 36.9**	**+0.6**
X37A	**Clayton**	**22.18**	**349**	P	**P**	**19 27 36.2**	**-0.4**
X37A				IAmb	IAmb	19 27 47.9	
	comp=Z,16nm,1.1s						
W45A	**Hickory Valley**	**22.26**	**2**	P	**P**	**19 27 37.3**	**-0.2**
SWET	**Sewanee**	**22.64**	**9**	P	**P**	**19 27 40.8**	**-0.8**
ATAH	**Atahualpa**	**23.03**	**149**	P	**P**	**19 27 48.2**	**+2.0**
	comp=Z,9.7nm,1.0s,baz=5.9,slow=7.4,SNR=3.9						
CPCT	**Cooper Cave**	**23.11**	**12**	P	**P**	**19 27 45.4**	**-1.0**
FNO	**Franklin**	**23.27**	**345**	P	**P**	**19 27 46.6**	**-1.4**
WVT	**Waverly**	**23.31**	**5**	P	**P**	**19 27 47.1**	**-1.3**
WVT				IAmb	IAmb	19 27 48.1	
	comp=Z,23nm,1.4s						
MNTX	**Cornudas Mount**	**23.41**	**326**	P	**P**	**19 27 50.1**	**+0.6**
CLTN	**Cedars of Leba**	**23.44**	**8**	P	**P**	**19 27 48.7**	**-0.9**
TKL	**Tuckaleechee C**	**23.47**	**13**	P	**P**	**19 27 46.9**	**-3.1**
	comp=Z,6.5nm,0.8s,baz=217,slow=10,SNR=5.3						
TKL	**Tuckaleechee C**	**23.47**	**13**	P	**P**	**19 27 49.0**	**-1.0**
TKL				IAmb	IAmb	19 27 51.4	
	comp=Z,16nm,1.4s						
U49A	**Red Boiling Sp**	**23.93**	**9**	P	**P**	**19 27 53.7**	**-0.6**
U49A				IAmb	IAmb	19 27 54.8	
	comp=Z,17nm,0.9s						
T47A	**Sharon Grove**	**24.23**	**6**	P	**P**	**19 27 56.1**	**-1.0**
S39A	**Bolivar**	**24.93**	**354**	P	**P**	**19 28 02.4**	**-1.0**
S39A				IAmb	IAmb	19 28 02.9	
	comp=Z,12nm,1.0s						
USIN	**University of**	**25.15**	**5**	P	**P**	**19 28 04.8**	**-0.6**
121A	**Cookes Peak, D**	**25.39**	**323**	P	**P**	**19 28 09.4**	**+1.6**
121A				IAmb	IAmb	19 28 27.4	
	comp=Z,8.9nm,1.0s						
WCI	**Wyandotte Cave**	**25.55**	**7**	P	**P**	**19 28 08.8**	**-0.2**
WCI				IAmb	IAmb	19 28 15.4	
	comp=Z,11nm,0.8s						
P40A	**Paris**	**26.66**	**357**	P	**P**	**19 28 17.4**	**-1.7**
P40A				IAmb	IAmb	19 28 19.2	
	comp=Z,7.3nm,0.7s						
SEUS	**St. Eustatius**	**26.67**	**77**	P	**P**	**19 28 20.4**	**+1.0**
GRGR	**Grenville**	**27.88**	**88**	P	**P**	**19 28 29.3**	**-1.0**
N35A	**Tabor**	**28.34**	**351**	P	**P**	**19 28 33.5**	**-0.6**
WUAZ	**Wupatki**	**29.60**	**323**	P	**P**	**19 28 47.4**	**+1.8**
WUAZ				IAmb	IAmb	19 28 49.1	
	comp=Z,6.8nm,1.1s						
PV18	**Skein Mesa, Pa**	**30.31**	**330**	P	**P**	**19 28 52.8**	**+0.9**
PV18				IAmb	IAmb	19 28 56.1	
	comp=Z,5.5nm,0.8s						
I37A	**Lemond, Waseca**	**31.21**	**356**	P	**P**	**19 28 58.5**	**-1.0**
ECSD	**EROS Data Cent**	**31.30**	**351**	P	**P**	**19 28 58.6**	**-1.7**
ECSD				IAmb	IAmb	19 28 59.7	
	comp=Z,7.2nm,0.9s						
SPMN	**Marine on St.**	**32.38**	**357**	P	**P**	**19 29 07.8**	**-1.9**
PTGA	**Pitinga**	**32.88**	**112**	P	**P**	**19 29 15.1**	**+0.6**
PTGA				IAmb	IAmb	19 29 23.2	
	comp=Z,7.2nm,0.8s						
PSUT	**Pine Spring**	**33.13**	**325**	P	**P**	**19 29 18.3**	**+1.6**
ISA	**Isabella, Lake**	**34.16**	**317**	P	**P**	**19 29 25.5**	**0.0**
ISA				IAmb	IAmb	19 29 38.5	
	comp=Z,5.4nm,1.2s						
PDAR	**Pinedale Array**	**34.23**	**334**	P	**P**	**19 29 25.8**	**-0.4**
	comp=Z,2.1nm,1.2s,baz=133,slow=8.8,SNR=2.9						
PDAR				PcP	**PcP**	**19 32 04.2**	**+1.7**
	comp=Z,0.2nm,0.3s,baz=134,slow=5.2,SNR=4.3						
REDW	**Red Top Meadow**	**35.27**	**334**	P	**P**	**19 29 35.8**	**+0.6**
REDW				IAmb	IAmb	19 29 36.4	
	comp=Z,9.7nm,1.1s						
NV11	**Mina Array Sit**	**35.60**	**321**	P	**P**	**19 29 38.8**	**+0.7**
NV11				IAmb	IAmb	19 29 56.5	
	comp=Z,7.2nm,1.2s						
AGMN	**Agassiz Nation**	**35.69**	**354**	P	**P**	**19 29 36.8**	**-1.6**
NVAR	**Mina Array Bea**	**35.69**	**321**	P	**P**	**19 29 41.1**	**+2.2**
	comp=Z,4.0nm,0.8s,baz=134,slow=8.2,SNR=25						
NVAR				PcP	**PcP**	**19 32 08.6**	**+1.8**
	comp=Z,1.4nm,0.8s,baz=125,slow=4.5,SNR=4.7						
NVAR	**Mina Array Bea**	**35.69**	**321**	P	**P**	**19 29 40.8**	**+1.9**
LHV	**Little Huntoon**	**35.70**	**320**	P	**P**	**19 29 39.0**	**+0.3**
LHV				IAmb	IAmb	19 29 43.4	
	comp=Z,6.6nm,0.9s						
MCMT	**McKenzie Canyo**	**37.30**	**333**	P	**P**	**19 29 53.8**	**+1.2**
ULM	**Lac du Bonnet**	**37.62**	**354**	P	**P**	**19 29 51.7**	**-3.2**
	comp=Z,6.7nm,0.8s,baz=167,slow=6.1,SNR=11						
F10A	**Beach Ranch, E**	**40.19**	**331**	P	**P**	**19 30 16.5**	**-0.1**
SIV	**San Ignacio**	**40.61**	**134**	P	**P**	**19 30 19.9**	**-0.4**
	comp=Z,7.7nm,0.9s,baz=320,slow=10,SNR=5.9						
H03N2	**Juan Fernandez**	**47.23**	**167**	T	T	20 22 06.6	
	baz=348						
H03N1	**Juan Fernandez**	**47.24**	**167**	T	T	20 22 01.4	
	baz=348						
H03N3	**Juan Fernandez**	**47.25**	**167**	T	T	20 22 05.8	
	baz=348						
YKA	**Yellowknife Ar**	**52.58**	**346**	P	**P**	**19 31 51.7**	**-1.8**
	comp=Z,2.0nm,0.7s,baz=144,slow=8.1,SNR=35						
GERES	**GERESS Array B**	**89.39**	**40**	LR	LR	20 10 45.5	
	comp=Z,74nm,20.6s,baz=230,slow=32						
KSH	**Kashi**	**126.37**	**13**	PKP	**PKPdf**	**19 41 41.3**	**-2.0**
WRA	**Warramunga Arr**	**136.78**	**255**	PKP	**PKiKP**	**19 42 06.3**	**+1.3**
	comp=Z,0.7nm,1.1s,baz=88,slow=2.7,SNR=2.6						
ASAR	**Alice Springs**	**136.90**	**249**	PKhKP	PKPpre	19 42 00.9	
	comp=Z,0.4nm,1.0s,baz=117,slow=3.4,SNR=2.0						
FITZ	**Fitzroy Crossi**	**145.10**	**257**	PKPbc	**PKPab**	**19 42 18.4**	**+0.6**
	comp=Z,2.3nm,0.9s,baz=135,slow=1.4,SNR=2.1						
CMAR	**Chiang Mai Arr**	**147.64**	**344**	PKPbc	**PKPbc**	**19 42 25.5**	**+0.3**
	comp=Z,4.2nm,0.8s,baz=340,slow=3.3,SNR=32						

DJA **14** *19:41:07.5±0.2, 7°S±2°×12°5E±°, h512^{km}±2^{km}, M4.4/30, mB4.9/22, mb4.8/30, MLv5.0/19, Mw(mB)4.2/22*

NEIC **14** *19:41:07.3±1.0, 7°.01S±0°.09×124°.92E±0°.10, h522^{km}±7^{km}, mb4.5/48, Error ellipse: s-maj=14.9km s-min=12.0km az=58.0*

IDC **14** *19:41:07.7±0.9, 7°.01S×124°.93E, h525^{km}±10^{km}, mb3.5/15, mb1 3.7/21, mb1mx3.5/50, mbtmp4.5/21, Error ellipse: s-maj=16.5km s-min=9.1km az=80.0*

ISC 14 19:41:08.3±0.3**, 7°.09S**±0°.05×**124°.91E**±0°.06**, h543**^{km}**, n124,** σ**1^s.74**/141**, mb4.2**/37**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	**Soe**	**2.72**	**193**		**P**	**19 42 19.1**	**-2.1**
SOEI	**Soe**	**2.72**	**193**	P	**P**	**19 42 19.3**	**-1.9**
SOEI				S	**S**	**19 43 14.7**	**-5.8**
MMRI	**Maumere**	**3.06**	**240**		**P**	**19 42 20.4**	**-2.6**
MMRI	**Maumere**	**3.06**	**240**	P	**P**	**19 42 20.5**	**-2.6**
MMRI				S	**S**	**19 43 18.5**	**-5.5**
BATI	**Baumata**	**3.33**	**202**	P	**P**	**19 42 23.1**	**-1.8**
	149nm,0.3s,baz=74,slow=0.9,SNR=227						
BATI				S	**S**	**19 43 20.4**	**-6.9**
	133nm,0.3s,baz=323,slow=3.0,SNR=6.8						
BATI	**Baumata**	**3.33**	**202**	P	**P**	**19 42 23.3**	**-1.6**
BATI				S	**S**	**19 43 20.9**	**-6.4**
EDFI	**Ende, Flores**	**3.59**	**242**	P	**P**	**19 42 23.5**	**-3.3**
EDFI				S	**S**	**19 43 24.5**	**-6.2**
NLAI	**Namlea**	**4.41**	**30**	P	**P**	**19 42 30.7**	**-2.2**
NLAI				S	**S**	**19 43 36.2**	**-5.5**
BSSI	**Bau Bau, Buton**	**4.49**	**282**	P	**P**	**19 42 33.0**	**-0.5**
SANI	**Sanana**	**5.12**	**12**	P	**P**	**19 42 36.7**	**-2.1**
	4.1nm10µm1µm,0.8s						
WSI	**Waingapu**	**5.23**	**240**	P	**P**	**19 42 36.8**	**-2.9**
	12nm11µm885nm,0.8s						
BASI	**Baing, Sumba**	**5.29**	**234**	P	**P**	**19 42 38.0**	**-2.2**
	3.0nm6µm531nm,0.6s						
BNSI	**Bone**	**5.47**	**299**	P	**P**	**19 42 41.8**	**0.0**
	1.0nm3µm215nm,0.8s						
KAPI	**Kappang**	**5.52**	**292**	P	**P**	**19 42 42.1**	**-0.2**
	12nm,0.3s,baz=114,slow=5.0,SNR=86						
KAPI				S	**S**	**19 43 58.1**	**-0.9**
	baz=200,slow=23,SNR=5.8						
KAPI	**Kappang**	**5.52**	**292**	P	**P**	**19 42 41.8**	**-0.5**
SPSI	**Sidrap Palu**	**5.98**	**301**	P	**P**	**19 42 45.6**	**-0.8**
	0.3nm884nm75nm,0.6s						
LUWI	**Luwuk**	**6.37**	**340**	P	**P**	**19 42 48.3**	**-1.8**
LUWI	**Luwuk**	**6.37**	**340**	P	**P**	**19 42 49.2**	**-0.9**
	1.2nm3µm359nm,0.8s						
TTSI	**Tana Toraja**	**6.47**	**308**	P	**P**	**19 42 51.5**	**+0.6**
	0.2nm31nm,0.5s						
APSI	**Ampana**	**6.94**	**332**	P	**P**	**19 42 55.1**	**-0.4**
	0.5nm2µm153nm,0.9s						
PLAI	**Plampang**	**7.27**	**256**	P	**P**	**19 42 56.1**	**-2.5**
	1.2nm3µm150nm,0.5s						
KMSI	**Cibinong**	**7.67**	**353**	P	**P**	**19 43 02.1**	**-0.5**
	3.5nm11µm1µm,0.6s						
GTOI	**Gorontalo**	**7.90**	**346**	P	**P**	**19 43 05.2**	**+0.3**
	2µm214nm,1.1s						
MRSI	**Marisa**	**8.08**	**338**	P	**P**	**19 43 05.9**	**-0.7**
	3µm332nm,0.9s						
TWSI	**Taliwang, Sumb**	**8.11**	**258**	P	**P**	**19 43 04.8**	**-2.2**
	588nm39nm,0.7s						
TNTI	**Ternate**	**8.19**	**18**	P	**P**	**19 43 05.1**	**-2.6**
TNTI	**Ternate**	**8.19**	**18**	P	**P**	**19 43 05.5**	**-2.2**
	920nm99nm,0.9s						
MTN	**Manton Dam**	**8.38**	**133**		**P**	**19 43 08.4**	**-1.3**
FAKI	**Fak Fak**	**8.41**	**61**	P	**P**	**19 43 06.5**	**-3.5**
SIJI	**Sorong**	**8.86**	**46**	P	**P**	**19 43 12.5**	**-2.0**
	18nm,0.3s,baz=217,slow=8.1,SNR=56						
SWI	**Sorong**	**8.86**	**46**	P	**P**	**19 43 13.1**	**-1.4**
	2µm262nm,0.7s						
TOLI2	**Tolitoli**	**9.13**	**333**	P	**P**	**19 43 15.9**	**-1.4**
KNRA	**Kununurra**	**9.33**	**156**	P	**P**	**19 43 18.7**	**-0.5**
JAGI	**Jajag, Banyuwa**	**10.74**	**262**	P	**P**	**19 43 32.9**	**-1.0**
FITZ	**Fitzroy Crossi**	**10.96**	**176**	P	**P**	**19 43 35.8**	**-0.2**
	13nm,0.3s,baz=357,slow=6.4,SNR=713						
MYLDM	**Lahad Datu**	**13.76**	**332**	P	**P**	**19 44 04.5**	**-0.7**
PSA00	**Pilbara Seismi**	**15.21**	**198**	P	**P**	**19 44 19.4**	**-0.6**
WB0	**Warramunga Arr**	**15.61**	**145**	P	**P**	**19 44 22.9**	**-1.3**
WB0				IAmb	IAmb	19 44 23.7	
	comp=Z,25nm,1.2s						
KKM	**Kota Kinabalu**	**15.67**	**326**	P	**P**	**19 44 23.4**	**-1.6**
KKM				IAmb	IAmb	19 44 30.3	
	comp=Z,16nm,0.9s						
WRA	**Warramunga Arr**	**15.72**	**145**	P	**P**	**19 44 24.0**	**-1.3**
	comp=Z,3.1nm,0.3s,baz=325,slow=11,SNR=119						
WRA				S	**S**	**19 47 06.1**	**-0.6**
	comp=Z,0.7nm,0.3s,baz=327,slow=15,SNR=13						
WRA	**Warramunga Arr**	**15.72**	**145**	P	**P**	**19 44 23.0**	**-2.2**
WB2	**Warramunga Arr**	**15.72**	**145**	P	**P**	**19 44 24.1**	**-1.2**
WB2				IAmb	IAmb	19 44 25.1	
	comp=Z,17nm,0.9s						
SBUM	**Sibu**	**15.81**	**306**	P	**P**	**19 44 25.6**	**-0.8**
SBUM				IAmb	IAmb	19 44 26.4	
	comp=Z,4.3nm,0.7s						
JAY	**Jayapura**	**16.38**	**75**	P	**P**	**19 44 31.2**	**-0.6**
	comp=Z,1.0nm,0.3s,baz=246,slow=10.0,SNR=4.0						
KSM	**Kuching**	**16.87**	**300**	P	**P**	**19 44 37.2**	**+1.0**
KSM				IAmb	IAmb	19 44 56.1	
	comp=Z,13nm,1.2s						
CISI	**Cisompet, Garu**	**16.96**	**267**	P	**P**	**19 44 36.9**	**-0.2**
GIRL	**Giralia**	**18.57**	**212**	P	**P**	**19 44 53.4**	**+1.7**
AS31	**Alice Springs**	**18.61**	**153**	P	**P**	**19 44 53.2**	**+1.1**
AS31				IAmb	IAmb	19 44 54.4	
	comp=Z,6.9nm,0.5s						
ASAR	**Alice Springs**	**18.61**	**153**	P	**P**	**19 44 53.0**	**+0.9**
	comp=Z,4.8nm,0.3s,baz=331,slow=9.0,SNR=305						
ASAR				S	**S**	**19 47 55.4**	**+1.2**
	comp=Z,0.4nm,0.3s,baz=340,slow=21,SNR=12						
ASAR				PcP	**PcP**	**19 48 53.7**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=342,slow=0.8,SNR=1.8						
ASAR				ScP	**ScP**	**19 51 39.1**	**+1.5**
	comp=Z,0.1nm,0.3s,baz=346,slow=1.8,SNR=5.4						
ASAR	**Alice Springs**	**18.61**	**153**	P	**P**	**19 44 53.3**	**+1.2**
COEN	**Coen**	**19.20**	**112**	P	**P**	**19 44 57.3**	**-0.3**
COEN				IAmb	IAmb	19 45 10.4	
	comp=Z,13nm,0.9s						
MORW	**Morawa**	**23.41**	**200**	P	**P**	**19 45 35.8**	**+0.5**
MORW				IAmb	IAmb	19 45 36.2	
	comp=Z,22nm,0.9s						
CTAO	**Charters Tower**	**24.40**	**124**	P	**P**	**19 45 44.7**	**+0.5**
CTAO				IAmb	IAmb	19 46 01.7	
	comp=Z,25nm,1.4s						
NWAO	**Narrogin (SRO)**	**26.68**	**194**	P	**P**	**19 46 04.9**	**+0.8**
	comp=Z,12nm,0.3s,baz=32,slow=7.6,SNR=26						
NWAO	**Narrogin (SRO)**	**26.68**	**194**	P	**P**	**19 46 04.9**	**+0.8**
RABL	**Rabaul**	**27.27**	**85**	P	**P**	**19 46 09.4**	**-0.3**
BBOO	**Buckleboo**	**27.61**	**159**	P	**P**	**19 46 12.9**	**+0.6**
STKA	**Stephens Creek**	**29.16**	**150**	P	**P**	**19 46 26.9**	**+1.0**
	comp=Z,6.4nm,0.5s,baz=324,slow=9.6,SNR=28						
STKA				S	**S**	**19 50 40.5**	**+0.3**
	comp=Z,5.3nm,0.9s,baz=254,slow=19,SNR=6.6						
STKA	**Stephens Creek**	**29.16**	**150**	P	**P**	**19 46 26.9**	**+1.0**
TPUB	**Ta-pu**	**30.49**	**352**	P	**P**	**19 46 36.2**	**-1.2**
TPUB				IAmb	IAmb	19 46 55.0	
	comp=Z,27nm,1.3s						
SSLB	**Suanglung**	**30.93**	**353**	P	**P**	**19 46 39.4**	**-1.8**
SSLB				IAmb	IAmb	19 46 51.4	
	comp=Z,24nm,1.4s						
ARMA	**Armidale**	**34.16**	**136**	P	**P**	**19 47 09.9**	**+1.3**
ARMA				IAmb	IAmb	19 47 15.8	
	comp=Z,10nm,1.2s						
TOO	**Toolangi**	**35.64**	**151**	P	**P**	**19 47 22.7**	**+1.9**
TOO				IAmb	IAmb	19 47 25.4	
	comp=Z,6.1nm,1.1s						
CAN	**Canberra**	**35.76**	**145**	P	**P**	**19 47 23.4**	**+1.5**
CAN				IAmb	IAmb	19 47 37.0	
	comp=Z,34nm,1.5s						
CMAR	**Chiang Mai Arr**	**36.06**	**315**	P	**P**	**19 47 24.4**	**-0.1**
	comp=Z,0.6nm,0.7s,baz=147,slow=6.4,SNR=7.5						
CMAR				PcP	**PcP**	**19 49 36.7**	**+0.8**
	comp=Z,1.2nm,0.6s,baz=160,slow=2.8,SNR=11						
CMAR				ScP	**ScP**	**19 52 33.9**	**+3.0**
	comp=Z,0.3nm,0.6s,baz=126,slow=1.6,SNR=4.2						
CMAR	**Chiang Mai Arr**	**36.06**	**315**	P	**P**	**19 47 24.1**	**-0.4**
SANVU	**Saraoutou**	**42.24**	**105**	P	**P**	**19 48 15.0**	**+0.7**
SANVU				IAmb	IAmb	19 48 16.2	
	comp=Z,21nm,0.7s						
JHS	**Saijyo**	**42.57**	**10**	P	**P**	**19 48 17.1**	**+0.5**
JWT	**Wachi**	**43.29**	**13**	P	**P**	**19 48 22.0**	**-0.2**
KSRS	**Korea Array**	**44.40**	**3**	P	**P**	**19 48 30.7**	**-0.1**
	comp=Z,1.1nm,0.5s,baz=182,slow=8.5,SNR=8.3						
KSRS				PcP	**PcP**	**19 50 03.9**	**+1.2**
	comp=Z,1.4nm,0.7s,baz=184,slow=3.5,SNR=6.4						
MJAR	**Matsushiro Arr**	**45.16**	**15**	P	**P**	**19 48 35.7**	**-1.0**
	comp=Z,2.0nm,0.6s,baz=202,slow=9.4,SNR=2.7						
MAJO	**Matsushiro**	**45.16**	**15**	P	**P**	**19 48 36.7**	**0.0**
TAPN	**Taplejung**	**49.67**	**315**	*e*P	**P**	**19 49 11.5**	**+0.4**
	comp=Z,3.5nm,0.3s						
JTM	**Tenmabayashi**	**49.91**	**16**	P	**P**	**19 49 12.2**	**0.0**
RAMN	**Ramite**	**50.22**	**314**	*e*P	**P**	**19 49 15.8**	**+0.8**
	comp=Z,7.9nm,0.5s						
GUN	**Gumba**	**51.30**	**314**	*e*P	**P**	**19 49 23.3**	**+0.3**
	comp=Z,7.4nm,0.5s						
PKI	**Pulchoki**	**51.44**	**314**	*e*P	**P**	**19 49 24.0**	**0.0**
	comp=Z,3.4nm,0.4s						
PKIN	**Phulchoki**	**51.45**	**314**	*e*P	**P**	**19 49 23.9**	**-0.1**
	comp=Z,4.0nm,0.4s						
USRK	**Ussuriysk Ar.**	**51.45**	**7**	P	**P**	**19 49 23.3**	**0.0**
	comp=Z,2.6nm,0.5s,baz=195,slow=6.1,SNR=8.1						
MDJ	**Mudanjiang**	**51.64**	**4**	P	**P**	**19 49 24.1**	**-0.6**
GKN	**Gorkha**	**52.24**	**314**	*e*P	**P**	**19 49 29.8**	**+0.3**
	comp=Z,5.5nm,0.3s						
ASAJ	**Asahikawa**	**53.42**	**16**	P	**P**	**19 49 37.5**	**+0.1**
	comp=Z,15nm,1.1s,baz=233,slow=4.5,SNR=5.2						
RPZ	**Rata Peaks**	**54.34**	**140**	P	**P**	**19 49 45.3**	**+1.3**
RPZ				IAmb	IAmb	19 49 57.7	
	comp=Z,28nm,1.4s						
TUWZ	**Tuamarina**	**55.24**	**136**	P	**P**	**19 49 51.3**	**+1.0**
KLR	**Kul'dur**	**56.40**	**5**	P	**P**	**19 49 58.1**	**0.0**
	comp=Z,0.9nm,0.4s,baz=193,slow=8.7,SNR=6.7						
KLR				PcP	**PcP**	**19 50 48.0**	**+0.7**
	comp=Z,0.7nm,0.5s,baz=108,slow=3.2,SNR=2.1						
ULN	**Ulaanbaatar**	**56.95**	**346**	P	**P**	**19 50 02.8**	**+0.7**
SONM	**Songino Array**	**57.08**	**345**	P	**P**	**19 50 03.5**	**+0.5**
	comp=Z,2.0nm,0.8s,baz=162,slow=8.3,SNR=13						
SONM				PcP	**PcP**	**19 50 50.9**	**+0.6**
	comp=Z,0.5nm,0.6s,baz=142,slow=3.9,SNR=2.9						
SONM	**Songino Array**	**57.08**	**345**	P	**P**	**19 50 03.4**	**+0.4**
NIL	**Nilore**	**63.51**	**313**	P	**P**	**19 50 46.1**	**+0.3**
NIL				IAmb	IAmb	19 50 46.3	
	comp=Z,4.2nm,0.6s						
MK31	**Makanchi Array**	**65.62**	**329**	P	**P**	**19 50 59.2**	**+0.4**
MKAR	**Makanchi Array**	**65.62**	**329**	P	**P**	**19 50 59.4**	**+0.6**
	comp=Z,4.2nm,0.5s,baz=124,slow=7.7,SNR=130						
MKAR	**Makanchi Array**	**65.62**	**329**	P	**P**	**19 50 59.2**	**+0.4**
MAKZ	**Makanchi**	**65.79**	**329**	P	**P**	**19 51 00.2**	**+0.3**
PEA0B	**Petropavlovsk-**	**66.10**	**21**	P	**P**	**19 51 02.6**	**+1.0**
PETK	**Petropavlovsk-**	**66.10**	**21**	P	**P**	**19 51 02.7**	**+1.1**
	comp=Z,3.9nm,0.5s,baz=187,slow=1.4,SNR=20						
PETK	**Petropavlovsk-**	**66.10**	**21**	P	**P**	**19 51 02.4**	**+0.8**
AAK	**Ala-Archa**	**67.42**	**322**	P	**P**	**19 51 11.1**	**+1.0**
YAK	**Yakutsk**	**69.01**	**2**	P	**P**	**19 51 19.6**	**+0.4**
YAK				IAmb	IAmb	19 51 20.1	
	comp=Z,14nm,0.7s						
ZAA0	**Zalesovo Array**	**69.52**	**336**	P	**P**	**19 51 22.2**	**-0.2**
ZALV	**Zalesovo Beam**	**69.52**	**336**	P	**P**	**19 51 22.1**	**-0.2**
	comp=Z,3.2nm,0.5s,baz=133,slow=4.2,SNR=14						
ZALV	**Zalesovo Beam**	**69.52**	**336**	P	**P**	**19 51 22.0**	**-0.4**
MA2	**Magadan**	**69.58**	**14**	P	**P**	**19 51 23.1**	**+0.4**
MA2				IAmb	IAmb	19 51 24.4	
	comp=Z,15nm,1.0s						
KURK	**Kurchatov**	**70.04**	**331**	P	**P**	**19 51 26.1**	**+0.5**
KURK				IAmb	IAmb	19 51 26.5	
	comp=Z,4.3nm,0.5s						
SOCY	**Socotra**	**73.05**	**285**	P	**P**	**19 51 44.4**	**+0.4**
SOCY				IAmb	IAmb	19 51 45.1	
	comp=Z,8.3nm,0.9s						
BRVK	**Borovoye**	**75.58**	**329**	P	**P**	**19 51 58.1**	**+0.8**
BRVK				IAmb	IAmb	19 51 58.4	
	comp=Z,3.8nm,0.5s						
TIXI	**Tiksi**	**78.62**	**1**	P	**P**	**19 52 13.1**	**-0.4**
TIXI				IAmb	IAmb	19 52 14.2	
	comp=Z,5.7nm,0.5s						
ABKAR	**Akbulak array**	**79.48**	**323**	P	**P**	**19 52 18.9**	**+0.4**
ABKAR	**Akbulak array**	**79.48**	**323**	P	**P**	**19 52 19.0**	**+0.4**
ABKAR				IAmb	IAmb	19 52 19.8	
	comp=Z,4.8nm,1.3s						
AKTO	**Aktyubinsk**	**81.09**	**323**	P	**P**	**19 52 27.6**	**+0.7**
	comp=Z,3.2nm,0.6s,baz=107,slow=8.2,SNR=8.6						
QSPA	**South Pole Qui**	**82.89**	**180**	P	**P**	**19 52 37.1**	**+1.2**
ARU	**Arti**	**83.15**	**329**	P	**P**	**19 52 37.7**	**+0.5**
	comp=Z,0.7nm,0.5s,baz=84,slow=11,SNR=5.3						
ARU	**Arti**	**83.15**	**329**	P	**P**	**19 52 37.6**	**+0.4**
ARU				IAmb	IAmb	19 52 39.6	
	comp=Z,9.9nm,1.4s						
RAYN	**Ar Rayn**	**83.17**	**295**	P	**P**	**19 52 39.1**	**+1.0**
SDPT	**Sand Point**	**87.15**	**33**	P	**P**	**19 52 56.1**	**-0.4**
ILAR	**Eielson Array**	**95.59**	**25**	P	**P**	**19 53 33.8**	**-1.5**
	comp=Z,0.5nm,0.7s,baz=305,slow=3.2,SNR=4.8						
ARCES	**ARCESS Array B**	**99.89**	**339**	P	**Pdif**	**19 53 54.5**	**+0.1**
	comp=Z,3.0nm,0.9s,baz=65,slow=6.4,SNR=1.4						
YKA	**Yellowknife Ar**	**110.02**	**25**	PKiKP	**PKiKP**	**19 58 37.9**	**+0.1**
	comp=Z,0.3nm,0.6s,baz=315,slow=0.9,SNR=6.1						
TORD	**Torodi Ar. Bea**	**123.86**	**281**	PKP	**PKiKP**	**19 59 06.2**	**+0.1**
	comp=Z,1.0nm,0.7s,baz=44,slow=1.8,SNR=5.6						
TORD	**Torodi Ar. Bea**	**123.86**	**281**		**PKiKP**	**19 59 06.6**	**+0.5**
W57A	**Gilead**	**143.90**	**36**		**PKPdf**	**19 59 42.1**	**-0.3**
TIGA	**Tifton**	**144.02**	**44**		**PKPdf**	**19 59 42.9**	**+0.2**
CPUP	**Villa Florida**	**146.71**	**176**	PKPbc	**PKiKP**	**19 59 51.2**	**-1.0**
	comp=Z,1.8nm,0.5s,baz=151,slow=3.6,SNR=5.8						
MNMC	**Minye Minye**	**150.28**	**151**		**PKiKP**	**20 00 01.2**	**+1.1**
LPAZ	**La Paz**	**153.43**	**151**	PKPab	**PKPab**	**20 00 23.9**	**+2.0**
	comp=Z,1.3nm,0.6s,baz=171,slow=3.3,SNR=4.9						

IDC **14** *19:49:15.4±1.1, 35°.19N×27°.38E, h0^{km}, mb3.7/8, mb1 3.7/12, mb1mx3.5/46, mbtmp3.6/12, ML3.4/4, MS3.2/2, Ms1 3.2/2, ms1mx2.5/48, Error ellipse: s-maj=21.8km s-min=20.5km az=162.0*

DDA **14** *19:49:16.1, 35°.01N×27°.22E, h7^{km}±3^{km}, MW4.0*

NIC **14** *19:49:17.5±0.0, 35°.11N×27°.47E, h13^{km}±4^{km}, Ml3.9/4*

ISK **14** *19:49:18.4, 35°.20N×27°.44E, h13^{km}, ML3.6/22*

THE **14** *19:49:19.2, 35°.16N×27°.37E, h0^{km}±1^{km}, ML3.6/3, Error ellipse: s-maj=3.5km s-min=1.5km az=138.0*

ATH **14** *19:49:20.6, 35°.27N×27°.35E, h27^{km}±7^{km}, ML3.6/7, Error ellipse: s-maj=9.9km s-min=2.3km az=329.0*

ISC 14 19:49:16.7±1.4**, 35°.11N**±0°.04×**27°.45E**±0°.03**, h7**^{km}±9^{km}**, n84,** σ**1^s.10**/98**, mb3.6**/8**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.50**	**331**	P	**Pb**	**19 49 27.7**	**-0.1**
KARP				S	**Sb**	**19 49 33.5**	**-1.8**
KARP				AML	AML	19 49 36.2	
	comp=N,28089µm,0.6s						
KARP				AML	AML	19 49 36.4	
	comp=E,34089µm,0.6s						
KARP	**Karpathos**	**0.50**	**331**	P	**Pb**	**19 49 27.7**	**-0.1**
KARP				S	**Sb**	**19 49 35.0**	**-0.3**
	comp=E,16µm,0.5s						
KARP	**Karpathos**	**0.50**	**331**	PG	**Pb**	**19 49 27.4**	**-0.4**
KARP				SG	**Sb**	**19 49 33.6**	**-1.7**
KARP	**Karpathos**	**0.50**	**331**	P	**Pb**	**19 49 27.7**	**-0.1**
KARP				S	**Sb**	**19 49 35.3**	**-0.1**
KARP				AML	AML	19 49 35.7	
	comp=E,34nm,0.6s						
KARP				AML	AML	19 49 35.7	
	comp=E,34nm,0.6s						
KARP				AML	AML	19 49 38.4	
	comp=E,31nm,0.4s						
KARP				AML	AML	19 49 38.4	
	comp=E,31nm,0.4s						
ZKR	**Zakros**	**1.01**	**271**	P	**Pb**	**19 49 37.2**	**+0.7**
ZKR				AML	AML	19 49 58.4	
	comp=E,9360µm,0.4s						
ZKR				AML	AML	19 50 01.1	
	comp=N,4523µm,0.4s						
ZKR	**Zakros**	**1.01**	**271**	P	**Pb**	**19 49 37.3**	**+0.7**
ZKR				S	**Sn**	**19 49 53.0**	**+1.2**
	comp=N,3µm,0.4s						
ZKR	**Zakros**	**1.01**	**271**	PG	**Pn**	**19 49 37.9**	**+0.6**
ZKR				SG	**Sn**	**19 49 52.5**	**+0.7**
ZKR	**Zakros**	**1.01**	**271**	P	**Pb**	**19 49 36.9**	**+0.4**
ZKR				AML	AML	19 49 57.2	
	comp=N,8.5nm,0.3s						
ZKR				AML	AML	19 49 59.7	
	comp=N,4.3nm,0.4s						
STIA	**Sitia Lasithi**	**1.12**	**275**	P	**Pg**	**19 49 38.1**	**-0.1**
STIA				S	**Sn**	**19 49 55.1**	**+0.7**
ARG	**Arkhangelos**	**1.23**	**26**	P	**Pn**	**19 49 41.2**	**+0.8**
ARG				AML	AML	19 50 05.5	
	comp=E,4100µm,0.7s						
ARG				AML	AML	19 50 08.5	
	comp=N,2712µm,0.9s						
ARG	**Arkhangelos**	**1.23**	**26**	P	**Pn**	**19 49 41.4**	**+1.1**
ARG				S	**Sn**	**19 50 00.3**	**+3.1**
	comp=N,2µm,0.9s						
ARG	**Arkhangelos**	**1.23**	**26**	PN	**Pn**	**19 49 41.1**	**+0.8**
ARG				SN	**Sn**	**19 49 57.1**	**-0.1**
ARG	**Arkhangelos**	**1.23**	**26**	P	**Pg**	**19 49 40.1**	**-0.3**
FRMA	**Ierapetra Chan**	**1.42**	**267**	P	**Pn**	**19 49 42.5**	**-0.3**
NPS	**Neapolis**	**1.52**	**276**	P	**Pg**	**19 49 46.8**	**+1.1**
NPS				AML	AML	19 50 15.0	
	comp=E,4004µm,0.5s						
NPS				AML	AML	19 50 20.3	
	comp=N,4110µm,1.3s						
NPS	**Neapolis**	**1.52**	**276**	P	**Pg**	**19 49 46.2**	**+0.5**
NISR	**Nisiros**	**1.52**	**350**	P	**Pg**	**19 49 45.3**	**-0.6**
NISR				AML	AML	19 50 12.1	
	comp=N,3683µm,0.7s						
NISR				AML	AML	19 50 14.7	
	comp=E,5808µm,1.0s						
LAST	**Lasithi**	**1.62**	**272**	P	**Pg**	**19 49 47.9**	**+0.2**
LAST				AML	AML	19 50 22.9	
	comp=E,2154µm,0.6s						
LAST				AML	AML	19 50 22.9	
	comp=N,2783µm,0.5s						
DATC	**Datca-Mugla**	**1.66**	**6**	PN	**Pn**	**19 49 46.8**	**+0.7**
KOSK	**Kos Island**	**1.69**	**347**	PN	**Pb**	**19 49 47.3**	**-0.7**
MRSB	**Marmaris-Mugla**	**1.71**	**20**	PN	**Pn**	**19 49 47.7**	**+0.8**
TURN	**Turunc**	**1.78**	**21**	PN	**Pn**	**19 49 48.8**	**+1.0**
TURN	**Turunc**	**1.78**	**21**	*i* P	**Pb**	**19 49 49.4**	**-0.2**
TURN				IAML		19 50 22.0	
	comp=E,158nm,0.4s						
TURN				IAML		19 50 24.0	
	comp=N,286nm,0.7s						

HRKL	**Herakleio**	**1.94**	**277**	PN	**Pb**	**19 49 51.8**	**-0.5**
BDRM	**Kayabasi**	**1.96**	**360**	*i* P	**Pn**	**19 49 51.4**	**+1.2**
BDRM				*i* S	**Sb**	**19 50 16.7**	**-0.5**
BDRM				IAML		19 50 25.0	
	comp=N,241nm,0.5s						
BDRM				IAML		19 50 27.0	
	comp=E,213nm,0.8s						
BODT	**Bodrum**	**1.96**	**357**	PN	**Pn**	**19 49 51.0**	**+0.8**
DALY	**Dalyan (Mula)**	**1.96**	**29**	PN	**Pn**	**19 49 51.2**	**+0.9**
DALY	**Dalyan (Mula)**	**1.96**	**29**	*i* P	**Pn**	**19 49 51.8**	**+1.5**
DALY				*i* S	**Sg**	**19 50 20.2**	**+0.4**
DALY				IAML		19 50 27.0	
	comp=N,229nm,0.9s						
DALY				IAML		19 50 31.0	
	comp=E,209nm,0.6s						
FETY	**Fethiye**	**2.02**	**40**	PN	**Pn**	**19 49 52.2**	**+1.1**
SANT	**Santorini**	**2.06**	**308**	P	**Pb**	**19 49 53.2**	**-1.1**
SANT				AML	AML	19 50 28.3	
	comp=E,2911μm,0.6s						
SANT				AML	AML	19 50 28.5	
	comp=N,1053μm,0.7s						
SANT	**Santorini**	**2.06**	**308**	PN	**Pn**	**19 49 52.7**	**+1.1**
THR6	**Thira Island,**	**2.09**	**307**	P	**Pb**	**19 49 53.8**	**-1.0**
SNT1	**Gialos, Santor**	**2.10**	**309**	P	**Pb**	**19 49 53.7**	**-1.4**
THT2	**Imerovigli**	**2.12**	**309**	PN	**Pn**	**19 49 53.6**	**+1.1**
YER	**Yerkesik**	**2.13**	**18**	PN	**Pn**	**19 49 53.5**	**+0.8**
THR5	**Thira Island,**	**2.15**	**308**	P	**Pb**	**19 49 54.7**	**-1.3**
SIVA	**Sivas**	**2.17**	**268**	P	**Pb**	**19 49 56.1**	**-0.1**
MLSB	**Milas**	**2.20**	**7**	PN	**Pn**	**19 49 54.5**	**+0.9**
MULA	**Mugla, Merkez-**	**2.26**	**18**	*i* P	**Pb**	**19 49 57.4**	**-0.3**
MULA				*i* S	**Sg**	**19 50 28.1**	**-1.1**
MULA				IAML		19 50 35.0	
	comp=N,128nm,0.9s						
MULA				IAML		19 50 42.0	
	comp=E,190nm,0.8s						
APE	**Apeiranthos**	**2.50**	**322**	P	**Pn**	**19 49 58.5**	**+0.7**
APE	**Apeiranthos**	**2.50**	**322**	PN	**Pn**	**19 49 58.7**	**+0.9**
CAEL	**Denizli, Camel**	**2.52**	**36**	*i* P	**Pn**	**19 49 60.0**	**+1.9**
ELL	**Elmali**	**2.58**	**50**	PN	**Pn**	**19 50 00.5**	**+1.6**
GCAM	**G?zelcaml?**	**2.59**	**356**	PN	**Pn**	**19 50 00.2**	**+1.2**
GCAM	**G?zelcaml?**	**2.59**	**356**	*i* P	**Pn**	**19 50 00.3**	**+1.4**
GCAM				IAML		19 50 50.0	
	comp=N,91nm,0.6s						
GCAM				IAML		19 50 52.0	
	comp=E,75nm,0.6s						
TAVA	**DENIZLI_Tavas**	**2.63**	**26**	*i* P	**Pn**	**19 50 01.0**	**+1.3**
TAVA				*i* S	**Sg**	**19 50 42.9**	**+1.6**
TAVA				IAML		19 50 43.0	
	comp=N,142nm,1.4s						
TAVA				IAML		19 50 46.0	
	comp=E,148nm,0.7s						
GOLH	**Golhisar**	**2.73**	**38**	*i* P	**Pn**	**19 50 03.2**	**+2.3**
GOLH				IAML		19 51 04.0	
	comp=E,152nm,0.7s						
GOLH				IAML		19 51 09.0	
	comp=N,195nm,0.7s						
AYDB	**Zeytinkoy-Aydi**	**2.86**	**7**	PN	**Pn**	**19 50 03.8**	**+1.1**
IMMV	**Iera Moni Meta**	**2.86**	**278**	PN	**Pn**	**19 50 04.9**	**+2.2**
DGB	**zmir**	**2.98**	**351**	*i* P	**Pn**	**19 50 05.4**	**+1.2**
DGB				IAML		19 51 08.0	
	comp=N,52nm,0.8s						
DGB				IAML		19 51 11.0	
	comp=E,46nm,0.8s						
KORT	**Korkueli**	**3.01**	**50**	PN	**Pn**	**19 50 06.8**	**+1.9**
ANTB	**Antalya**	**3.15**	**54**	PN	**Pn**	**19 50 08.7**	**+2.1**
BLCB	**Balcova**	**3.29**	**354**	PN	**Pn**	**19 50 10.0**	**+1.5**
CHOS	**Chios island**	**3.46**	**341**	PN	**Pn**	**19 50 12.0**	**+1.0**
BASM	**Basmaki-Afyon**	**3.50**	**36**	PN	**Pn**	**19 50 13.2**	**+1.7**
KULA	**Kula-Manisa**	**3.54**	**16**	PN	**Pn**	**19 50 13.4**	**+1.4**
OSC1	**CSNet OBS 1**	**3.55**	**116**	P	**Pn**	**19 50 12.5**	**+0.4**
KTHR	**Kythira**	**3.80**	**289**	P	**Pn**	**19 50 16.8**	**+1.2**
DKL	**Dikili**	**3.98**	**354**	PN	**Pn**	**19 50 19.8**	**+1.8**
AKMS	**Akamas**	**4.00**	**90**	P	**Pn**	**19 50 19.1**	**+0.7**
AKMS				AML	AML	19 51 06.9	
	comp=E,0.5nm,0.6s						
AKMS				AML	AML	19 51 07.3	
	comp=E,0.5nm,0.9s						
VLI	**Veliai**	**4.00**	**295**	P	**Pn**	**19 50 19.6**	**+1.2**
NATA	**Nata**	**4.21**	**93**	P	**Pn**	**19 50 21.8**	**+0.5**
ALFC	**Alefka**	**4.22**	**88**	P	**Pn**	**19 50 21.8**	**+0.5**
ALFC				AML	AML	19 51 11.0	
	comp=E,1.1nm,0.7s						
ALFC				AML	AML	19 51 11.1	
	comp=E,0.8nm,0.6s						
SHUT	**Suhut-Afyon**	**4.24**	**35**	PN	**Pn**	**19 50 23.4**	**+1.6**
SIGR	**SIGRI**	**4.29**	**343**	PN	**Pn**	**19 50 23.9**	**+1.6**
SZAC	**Souni**	**4.47**	**93**	P	**Pn**	**19 50 25.3**	**+0.4**
OSC2	**CSNet OBS 4**	**4.48**	**116**	P	**Pn**	**19 50 24.7**	**-0.2**
ASGA	**Asgata**	**4.77**	**92**	P	**Pn**	**19 50 29.4**	**+0.5**
CSS	**Mathiatis**	**4.82**	**90**	P	**Pn**	**19 50 30.2**	**+0.5**
MVOU	**Mavrovouni**	**5.07**	**89**	P	**Pn**	**19 50 33.8**	**+0.8**
BRTR	**Keskin Array B**	**6.74**	**45**	Pn	**Pn**	**19 50 56.7**	**+0.5**
	comp=E,0.1nm,0.3s,baz=234,slow=12,SNR=8.2						
BRTR				Sn	**Sn**	**19 52 14.5**	**+1.3**
	comp=E,0.1nm,0.3s,baz=223,slow=26,SNR=1.7						
BRTR				LR	LR	19 54 29.6	
	comp=E,96nm,18.9s,baz=237,slow=47						
MMAI	**Mount Meron Ar**	**6.92**	**105**	Pn	**Pn**	**19 50 58.2**	**-0.3**
	comp=E,2.0nm,0.3s,baz=302,slow=13,SNR=15						
MMAI				Sn	**Sn**	**19 52 17.8**	**+0.3**
	comp=E,2.1nm,0.3s,baz=301,slow=28,SNR=2.9						
EIL	**Elat**	**8.34**	**128**	Pn	**Pn**	**19 51 18.2**	**+0.3**
	comp=E,0.4nm,0.3s,baz=335,slow=16,SNR=8.6						
EIL				Sn	Sn	19 52 46.2	-6.1
	comp=E,0.7nm,0.3s,baz=11,slow=16,SNR=4.5						
GERES	**GERESS Array B**	**17.08**	**328**	Pn	**Pn**	**19 53 15.9**	**0.0**
	comp=E,0.1nm,0.3s,baz=148,slow=15,SNR=3.3						
KHC	**Kasperske Hory**	**17.35**	**328**	*e*P	**Pn**	**19 53 19.0**	**-0.2**
FINES	**FINESS Array B**	**26.37**	**359**	P	**P**	**19 54 52.4**	**-0.8**
	comp=E,1.9nm,0.7s,baz=171,slow=13,SNR=5.4						
HFS	**Hagfors**	**26.59**	**345**	P	**P**	**19 54 54.7**	**-0.5**
	comp=E,1.3nm,0.8s,baz=141,slow=7.1,SNR=1.3						
NOA	**NORSAR Array B**	**27.96**	**343**	P	**P**	**19 55 05.4**	**-2.2**
	comp=E,0.8nm,0.8s,baz=148,slow=10,SNR=3.3						
TORD	**Torodi Ar. Bea**	**31.93**	**233**	P	**P**	**19 55 43.0**	**0.0**
	comp=E,1.5nm,0.7s,baz=37,slow=8.4,SNR=14						
ARCES	**ARCESS Array B**	**34.50**	**359**	P	**P**	**19 56 03.1**	**-1.9**
	comp=E,2.7nm,0.9s,baz=177,slow=6.3,SNR=1.2						
MKAR	**Makanchi Array**	**42.23**	**57**	P	**P**	**19 57 10.8**	**+0.4**
	comp=E,0.3nm,0.6s,baz=275,slow=7.9,SNR=4.7						
SONM	**Songino Array**	**58.06**	**51**	P	**P**	**19 59 11.6**	**+1.1**
	comp=E,0.2nm,0.5s,baz=285,slow=7.5,SNR=2.2						
YKA	**Yellowknife Ar**	**78.06**	**343**	P	**P**	**20 01 15.2**	**-0.4**
	comp=E,0.1nm,0.6s,baz=45,slow=7.2,SNR=1.6						
DAV	**Davao City (W)**	**92.58**	**80**	LR	LR	20 49 48.9	
	comp=E,25nm,21.4s,baz=60,slow=39						

TUL ***14*** *19:52:08±1.3, 36.°60N±0.°02×97.°63W±0.°01, h5^{km}±6^{km}, ML3.1, mb_Lg3.1/52(NEIC), Error ellipse: s-maj=2.2km s-min=1.5km az=177.0*

NEIC ***14*** *19:52:08.3±1.1, 36.°58N±0.°02×97.°63W±0.°01, h5^{km}±2^{km}, Error ellipse: s-maj=3.0km s-min=2.8km az=330.0*

ANF ***14*** *19:52:08.2±0.7, 36.°60N×97.°61W, h5^{km}, ML3.7/7, Error ellipse: s-maj=8.7km s-min=6.5km az=28.0*

ISC 14 19:52:08.4±1.2**, 36.°58N**±0.°02×**97.°62W**±0.°02**, h4**^{km}±10^{km}**,**
n55, σ0.^{s}60/46**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CROK	**Carrier**	**0.30**	**255**	Pg	**Pg**	**19 52 14.1**	**-0.1**
CROK				Sg	**Sg**	**19 52 18.6**	**+0.5**
KAN13	**South Haven SW**	**0.45**	**15**	Pg	**Pg**	**19 52 16.8**	**-0.3**
KAN14	**Manchester OK**	**0.46**	**324**		**Pg**	**19 52 17.0**	**-0.3**
KAN10	**Anthony SW Sta**	**0.66**	**325**		**Pg**	**19 52 20.6**	**-0.5**
KAN12	**Harper NE Stat**	**0.78**	**337**		**Pg**	**19 52 23.0**	**-0.3**
OK029	**Liberty Lake**	**0.80**	**170**		**Pg**	**19 52 23.4**	**-0.3**
OK029				Sg	**Sg**	**19 52 34.5**	**+0.5**
QUOK	**Quay**	**0.84**	**119**		**Pg**	**19 52 24.4**	**-0.2**
QUOK				Sg	**Sg**	**19 52 35.8**	**+0.3**
OK031	**S. Brethren Rd**	**0.89**	**134**		**Pg**	**19 52 25.3**	**-0.2**
BCOK	**Bluff Creek, N**	**0.92**	**179**		**Pg**	**19 52 25.8**	**-0.3**
OK030	**Cody Creek RV**	**0.94**	**134**		**Pg**	**19 52 26.1**	**-0.3**
T35A	**Sooner Cattle**	**0.95**	**69**		**Pg**	**19 52 26.2**	**-0.6**
T35B	**Sooner Cattle**	**0.95**	**69**	P		19 52 26.2	
	baz=251						
T35B				S		19 52 39.0	
	baz=251						
OK025	**Westminster Rd**	**1.02**	**167**		**Pg**	**19 52 27.7**	**-0.4**
U32A	**Winter Ranch,**	**1.13**	**260**		**Pg**	**19 52 29.1**	**-0.9**
U32A	**Winter Ranch,**	**1.13**	**260**	P		19 52 29.2	
	baz=78						
U32A				S		19 52 44.4	
	baz=78						
OKCFA	**Oklahoma City**	**1.17**	**173**		**Pg**	**19 52 30.2**	**-0.6**
OKCSW	**OKLAHOMA CITY**	**1.18**	**173**		**Pg**	**19 52 30.5**	**-0.6**
FNO	**Franklin**	**1.33**	**172**		**Pg**	**19 52 33.5**	**-0.5**
TUL1	**Leonard**	**1.62**	**114**	P	**Pn**	**19 52 37.6**	**-0.3**
	baz=295						
TUL1				S	**Sn**	**19 52 59.7**	**+0.4**
	baz=295						
TUL1	**Leonard**	**1.62**	**114**		**Pn**	**19 52 37.7**	**-0.2**
TUL1				IAmb_Lg		19 53 03.6	
	comp=Z,77nm,0.9s						
TUL1	**Leonard**	**1.62**	**114**	P		19 52 37.8	
	baz=295						
TUL1				S		19 52 59.8	
	baz=295						
X34A	**Smith Ranch, M**	**1.98**	**185**		**Pn**	**19 52 43.6**	**+0.8**
X34A				IAmb_Lg		19 53 12.2	
	comp=Z,68nm,0.8s						
R32A	**Long Quarter,**	**2.03**	**335**		**Pn**	**19 52 44.2**	**+0.6**
R32A	**Long Quarter,**	**2.03**	**335**	P		19 52 44.3	
	baz=154						
R32A				S		19 53 11.5	
	baz=154						
WMOK	**Wichita Mounta**	**2.07**	**207**	P	**Pn**	**19 52 44.0**	**+0.1**
	baz=26						
WMOK				S	**Sn**	**19 53 11.0**	**+0.8**
	baz=26						
WMOK	**Wichita Mounta**	**2.07**	**207**		**Pn**	**19 52 44.1**	**+0.2**
WMOK				IAmb_Lg		19 53 14.8	
	comp=Z,92nm,0.9s						
WMOK	**Wichita Mounta**	**2.07**	**207**	P		19 52 44.0	
	baz=26						
U38A	**Gravette**	**2.61**	**92**	Pn	**Pn**	**19 52 52.7**	**+1.2**
KSU1	**Kansas State U**	**2.64**	**17**	P	**Pn**	**19 52 51.7**	**-0.2**
	baz=198						
KSU1				S	**Sn**	**19 53 23.9**	**-0.5**
	baz=198						
KSU1	**Kansas State U**	**2.64**	**17**		**Pn**	**19 52 53.1**	**+1.3**
KSU1				IAmb_Lg		19 53 36.7	
	comp=Z,37nm,1.2s						
KSU1	**Kansas State U**	**2.64**	**17**	P		19 52 51.9	
	baz=198						
X37A	**Clayton**	**2.71**	**137**	Pn	**Pn**	**19 52 53.0**	**+0.3**
CBKS	**Cedar Bluff**	**2.79**	**324**	P	**Pn**	**19 52 53.6**	**-0.3**
	baz=142						
CBKS				S	**Sn**	**19 53 28.1**	**0.0**
	baz=142						
CBKS	**Cedar Bluff**	**2.79**	**324**		**Pn**	**19 52 54.7**	**+0.8**
CBKS	**Cedar Bluff**	**2.79**	**324**	Sb		19 53 34.1	
	baz=142						
HHAR	**Hobbs**	**2.99**	**95**		**Pn**	**19 52 56.8**	**+0.1**
Z35A	**Perchaven, San**	**3.26**	**175**	S		19 53 41.2	
	baz=355						
W39A	**Magazine**	**3.41**	**113**	P	**Pn**	**19 53 02.6**	**+0.1**
	baz=295						
W39A				S	**Sn**	**19 53 43.5**	**+0.2**
	baz=295						
W39A	**Magazine**	**3.41**	**113**	IAmb_Lg		19 54 04.8	
	comp=Z,36nm,0.9s						
S39A	**Bolivar**	**3.61**	**71**	Pn	**Pn**	**19 53 06.9**	**+1.7**
S39A				IAmb_Lg		19 54 08.0	
	comp=Z,31nm,0.8s						
AMTX	**Amarillo**	**3.71**	**244**	P	**Pn**	**19 53 06.7**	**0.0**
	baz=61						
AMTX				S	**Sn**	**19 53 50.3**	**-0.6**
	baz=61						
AMTX	**Amarillo**	**3.71**	**244**	Pn	**Pn**	**19 53 06.8**	**+0.2**
AMTX				IAmb_Lg		19 54 09.0	
	comp=Z,33nm,0.7s						
U40A	**Yellville**	**3.85**	**92**	P	**Pn**	**19 53 08.2**	**-0.3**
	baz=275						
U40A				S	**Sn**	**19 53 53.1**	**-1.1**
	baz=275						
U40A	**Yellville**	**3.85**	**92**	Pn	**Pn**	**19 53 08.5**	**0.0**
U40A				IAmb_Lg		19 54 14.2	
	comp=Z,59nm,0.9s						
MIAR	**Mount Ida**	**3.88**	**120**	IAmb_Lg		19 54 13.0	
	comp=Z,28nm,0.9s						
Z38A	**Mt. Pleasant**	**3.96**	**146**	IAmb_Lg		19 54 19.9	
	comp=Z,68nm,0.9s						
MGMO	**Mountain Grove**	**4.33**	**81**	IAmb_Lg		19 54 27.0	
	comp=Z,41nm,0.8s						
WHAR	**Wooly Hollow**	**4.52**	**105**	IAmb_Lg		19 54 34.6	
	comp=Z,46nm,1.2s						
R40A	**Maddies Statio**	**4.59**	**67**	Pn	**Pn**	**19 53 18.0**	**-0.7**
KSCO	**Kaye Shedlock'**	**4.65**	**303**	IAmb_Lg		19 54 37.5	
	comp=Z,23nm,0.8s						
BGNE	**Belgrade**	**4.84**	**355**	IAmb_Lg		19 54 50.8	
	comp=Z,37nm,0.7s						
LCAR	**Lake Charles**	**5.25**	**94**	IAmb_Lg		19 54 57.1	
	comp=Z,24nm,0.7s						
T42A	**Van Buren**	**5.26**	**83**	IAmb_Lg		19 54 59.3	
	comp=Z,32nm,1.0s						
CCM	**Cathedral Cave**	**5.29**	**72**	IAmb_Lg		19 55 02.2	
	comp=Z,32nm,0.8s						
P40A	**Paris**	**5.29**	**55**	IAmb_Lg		19 55 02.6	
	comp=Z,26nm,0.9s						
N38A	**Joes South For**	**5.43**	**38**	IAmb_Lg		19 55 14.8	
	comp=Z,24nm,0.7s						
L34A	**Svendsen Farm,**	**5.46**	**10**	IAmb_Lg		19 55 10.2	
	comp=Z,36nm,0.7s						
OGNE	**Ogallala**	**5.55**	**323**	IAmb_Lg		19 55 13.3	
	comp=Z,41nm,0.9s						
435B	**Jarrell**	**5.78**	**180**	IAmb_Lg		19 55 15.9	
	comp=Z,22nm,0.8s						
SCIA	**State Center**	**6.32**	**31**	IAmb_Lg		19 55 35.6	
	comp=Z,30nm,0.8s						
JCT	**Junction City**	**6.35**	**197**	IAmb_Lg		19 55 35.6	
	comp=Z,30nm,1.0s						
O44A	**Mansfield**	**8.03**	**61**	IAmb_Lg		19 56 27.7	
	comp=Z,20nm,0.7s						
USIN	**University of**	**8.06**	**77**	IAmb_Lg		19 56 26.4	
	comp=Z,22nm,0.8s						

IDC ***14*** *19:56:26.8±0.8, 52.°64N×169.°90W, h45^{km}±6^{km}, mb3.9/14, mb1 4.2/17, mb1mx3.9/37, mbtmp4.2/17, ML3.9/3, MS3.3/11, Ms1 3.3/11, ms1mx3.0/46, Error ellipse: s-maj=22.4km s-min=11.1km az=177.0*

AEIC ***14*** *19:56:27±2.7, 52.°52N±0.°09×169.°77W±0.°06, h43^{km}±5^{km}, ML4.0, mb4.5/68(NEIC), Error ellipse: s-maj=13.4km s-min=3.4km az=159.0*

NEIC ***14*** *19:56:28.0±2.0, 52.°63N±0.°08×169.°84W±0.°09, h50^{km}±5^{km}, Error ellipse: s-maj=12.9km s-min=6.1km az=151.0*

ISC 14 19:56:27.3±0.7**, 52.°55N**±0.°09×**169.°79W**±0.°05**, h49**^{km}±5^{km}**,**
n267, σ1.^{s}21/265**, mb4.4**/47**, MS3.2**/10**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIKH	**Nikolski High**	**0.71**	**53**		**Pn**	**19 56 40.7**	**-0.4**
NIKH				Sn	**Sn**	**19 56 50.8**	**-0.3**
OKSP	**Okmok Steeple**	**1.15**	**52**		**Pn**	**19 56 47.1**	**+0.1**
OKSO	**Okmok South**	**1.28**	**50**		**Pn**	**19 56 48.1**	**-0.7**
OKSO					**Sn**	**19 57 06.2**	**+1.5**
OKFG	**Magazine Ridge**	**1.43**	**52**		**Pn**	**19 56 50.5**	**-0.2**
OKFG					**Sn**	**19 57 10.0**	**+1.6**
MAPS	**Pakushin South**	**2.13**	**53**		**Pn**	**19 57 01.2**	**+0.8**
MGOD	**Makushin Gods**	**2.15**	**54**		**Pn**	**19 57 01.6**	**+0.9**
MGOD					**Sn**	**19 57 29.4**	**+3.1**
MREP	**Makushin Rep't**	**2.23**	**54**		**Pn**	**19 57 02.9**	**+1.2**
MSW	**Makushin Switc**	**2.27**	**52**		**Pn**	**19 57 03.4**	**+1.2**
MSW					**Sn**	**19 57 30.5**	**+1.5**
MNAT	**Makushin Natee**	**2.30**	**53**		**Pn**	**19 57 03.7**	**+1.1**
UNV	**Unalaska Valle**	**2.37**	**55**		**Pn**	**19 57 04.7**	**+1.1**
UNV	**Unalaska Valle**	**2.37**	**55**		**Sn**	**19 57 32.2**	**+0.9**
KOFP	**Korovin Flat P**	**2.65**	**266**		**Pn**	**19 57 08.2**	**+0.7**
ATKA	**Atka Island**	**2.72**	**264**		**Pn**	**19 57 08.7**	**+0.2**
AKRB	**Akutan Reef Bi**	**2.74**	**53**		**Pn**	**19 57 10.7**	**+2.1**
AKMO	**Akutan Morgan**	**2.74**	**54**		**Pn**	**19 57 10.6**	**+1.8**
AKBBA	**Akutan Broad B**	**2.79**	**55**		**Pn**	**19 57 11.4**	**+2.1**
AKLV	**Akutan Long Va**	**2.81**	**53**		**Pn**	**19 57 11.9**	**+2.2**
AKGG	**Akutan Green G**	**2.81**	**53**		**Pn**	**19 57 11.2**	**+1.5**
AKUT	**Akutan**	**2.89**	**55**		**Pn**	**19 57 13.1**	**+2.4**
AKSA	**Akutan Strait**	**2.92**	**55**		**Pn**	**19 57 12.9**	**+1.6**
WESP	**Westdahl Peak**	**3.60**	**55**		**Pn**	**19 57 22.6**	**+2.1**
WEBT	**Westdahl Beart**	**3.63**	**54**		**Pn**	**19 57 21.2**	**+0.3**
GSTR	**Great Sitkin T**	**3.87**	**266**	Pn	**Pn**	**19 57 24.2**	**-0.1**
GSMY	**Great Sitkin M**	**3.88**	**265**		**Pn**	**19 57 25.4**	**+1.1**
GSTD	**Great Sitkin T**	**3.93**	**265**		**Pn**	**19 57 26.0**	**+0.9**
WTUG	**Tugumak**	**3.95**	**52**		**Pn**	**19 57 26.9**	**+1.5**
SSLW	**Shishaldin Wes**	**4.04**	**54**		**Pn**	**19 57 28.0**	**+1.4**
SSLN	**Shishaldin Nor**	**4.12**	**54**		**Pn**	**19 57 29.2**	**+1.5**
ADAG	**Mount Adagdak**	**4.22**	**265**		**Pn**	**19 57 30.1**	**+1.1**
ADK	**Adak**	**4.29**	**264**		**Pn**	**19 57 30.5**	**+0.6**
FALS	**False Pass**	**4.44**	**56**		**Pn**	**19 57 33.9**	**+2.0**
SPIA	**Saint Paul Isl**	**4.64**	**357**		**Pn**	**19 57 36.4**	**+1.7**
KIMD	**Kanaga Island**	**4.65**	**263**		**Pn**	**19 57 35.8**	**+0.9**
DT1	**Dutton Round H**	**5.13**	**57**		**Pn**	**19 57 43.6**	**+2.1**
SDPT	**Sand Point**	**6.17**	**59**		**Pn**	**19 57 56.8**	**+1.1**
CESW	**Semis' Southwe**	**6.57**	**269**		**Pn**	**19 58 03.3**	**+2.1**
AMKA	**Amchitka**	**6.84**	**264**	Pn	**Pn**	**19 58 05.3**	**+0.4**
LSPA	**Little Sitkin**	**7.17**	**270**		**Pn**	**19 58 11.2**	**+1.8**
CHGN	**Chignik**	**7.62**	**56**		**Pn**	**19 58 16.2**	**+0.6**
SMY	**Shemya**	**9.80**	**277**	Pn	**Pn**	**19 58 45.4**	**0.0**
SII	**Sitkinak Islan**	**9.91**	**60**	Pn	**Pn**	**19 58 46.8**	**-0.1**
OHAK	**Old Harbor**	**10.59**	**57**	Pn	**Pn**	**19 58 54.5**	**-1.6**
KDAK	**Kodiak Island**	**11.14**	**55**	P	**Pn**	**19 59 01.9**	**-1.7**
	2.0nm,0.3s,baz=250,slow=7.9,SNR=31						
KDAK				S	**Sn**	**20 01 01.0**	**-5.5**
	0.2nm,0.3s,baz=330,slow=20,SNR=1.6						
KDAK	**Kodiak Island**	**11.14**	**55**	Pn	**Pn**	**19 59 02.9**	**-0.8**
GAMB	**Gambell**	**11.30**	**356**	Pn	**Pn**	**19 59 07.5**	**+1.7**
SVW2	**Sparrevohn**	**11.55**	**37**		**Pn**	**19 59 11.6**	**+2.4**
RSO	**Redoubt South**	**12.27**	**43**		**Pn**	**19 59 21.5**	**+2.2**
CNPM	**China Poot**	**12.48**	**49**	Pn	**Pn**	**19 59 21.6**	**-0.4**
TTA	**Tatalina**	**12.71**	**30**	Pn	**Pn**	**19 59 26.8**	**+1.7**
BRLK	**Bradley Lake**	**12.74**	**48**	Pn	**Pn**	**19 59 25.1**	**-0.5**
TNA	**Tin City**	**13.09**	**3**	P	**Pn**	**19 59 32.8**	**+2.7**
	baz=185,SNR=8.7						
SEW	**Seward**	**13.54**	**48**	Pn	**Pn**	**19 59 36.0**	**-0.4**
O22K	**Cooper Landing**	**13.59**	**46**	P	**Pn**	**19 59 37.6**	**+0.6**
	baz=243						
SKT	**Skwentna**	**13.62**	**39**	Pn	**Pn**	**19 59 39.3**	**+1.8**
SUA	**Susitna One**	**13.64**	**42**		**Pn**	**19 59 38.0**	**+0.1**
RC01	**Rabbit Creek A**	**13.87**	**44**	P	**Pn**	**19 59 40.5**	**-0.3**
	baz=241						
PPLA	**Purkeypile**	**13.94**	**35**	Pn	**Pn**	**19 59 44.3**	**+2.3**
GHO	**Glory Hole Cre**	**14.54**	**42**	Pn	**Pn**	**19 59 49.3**	**-0.7**
KTH	**Kantishna Hill**	**14.80**	**35**		**Pn**	**19 59 55.2**	**+1.8**
TRF	**Thorofare Moun**	**14.96**	**36**		**P**	**19 59 57.8**	**-2.3**
SCM	**Sheep Creek Mo**	**15.24**	**44**		**Pn**	**19 59 57.8**	**-1.2**
SCM				IAmb	IAmb	20 00 02.5	
	comp=Z,48nm,1.2s						
RND	**Reindeer**	**15.45**	**37**	Pn	**Pn**	**20 00 02.1**	**+0.4**
MCK	**McKinley**	**15.61**	**36**	P	**Pn**	**20 00 04.7**	**+0.9**
	baz=234						
MLY	**Manley**	**15.84**	**31**	P	**P**	**20 00 10.2**	**+0.5**
	baz=227,SNR=11						
M24K	**Tolsona, Glenn**	**15.85**	**44**	P	**Pn**	**20 00 06.9**	**+0.1**
	baz=244						
NEA2	**Nenana**	**16.09**	**33**	P	**P**	**20 00 10.7**	**-1.8**
	baz=231						
N25K	**Chitina, Valde**	**16.32**	**46**	P	**Pn**	**20 00 11.0**	**-1.8**
	baz=248						
WRH	**Wood River Hil**	**16.35**	**35**		**Pn**	**20 00 12.3**	**-0.9**
WRH				IAmb	IAmb	20 00 23.5	
	comp=Z,35nm,1.5s						
I23K	**Minto, Yukon-K**	**16.35**	**32**	P	**P**	**20 00 14.3**	**-1.0**
	baz=229						
I23K	**Minto, Yukon-K**	**16.35**	**32**		**P**	**20 00 13.9**	**-1.4**
PAX	**Paxson**	**16.53**	**41**	Pn	**Pn**	**20 00 14.8**	**-0.7**
CCB	**Clear Creek Bu**	**16.56**	**34**	Pn	**Pn**	**20 00 15.1**	**-0.6**
MDM	**Murphy Dome**	**16.60**	**33**	Pn	**Pn**	**20 00 16.4**	**+0.1**
HDA	**Harding Lake**	**16.72**	**36**	P	**Pn**	**20 00 17.2**	**-0.6**
	baz=235						
HDA	**Harding Lake**	**16.72**	**36**		**Pn**	**20 00 17.4**	**-0.3**
IL31		**16.95**	**35**		**Pn**	**20 00 19.2**	**-1.3**
ILAR	**Eielson Array**	**16.95**	**35**	P	**Pn**	**20 00 19.1**	**-1.6**
	comp=Z,0.4nm,0.3s,baz=233,slow=11,SNR=26						
ILAR				LR	LR	20 07 09.2	
	comp=Z,98nm,19.6s,baz=242,slow=38						
ILAR				ScP	**ScP**	**20 08 34.9**	**+0.3**
	comp=Z,0.0nm,0.3s,baz=284,slow=3.6,SNR=3.2						
ILAR	**Eielson Array**	**16.95**	**35**	Pn	**Pn**	**20 00 20.2**	**-0.4**
MENT	**Mentasta**	**17.24**	**43**		**Pn**	**20 00 23.6**	**-0.6**
SCRK	**Sand Creek**	**17.60**	**39**	P	**Pn**	**20 00 27.5**	**-1.2**
	baz=241,SNR=7.8						
PRP	**Porcupine Dome**	**17.85**	**34**	Pn	**Pn**	**20 00 29.6**	**-2.3**
BCAR	**Beaver Creek A**	**18.09**	**44**	P	**Pn**	**20 00 32.9**	**-1.8**
FYU	**Fort Yukon**	**18.57**	**31**	P	**Pn**	**20 00 40.1**	**-0.2**
EGAK	**Eagle**	**19.06**	**39**	P	**P**	**20 00 44.3**	**-0.9**
BMAR	**Burnt Mountain**	**19.30**	**30**	P	**P**	**20 00 47.1**	**-0.7**
HYT	**Haines Junctio**	**19.39**	**52**	P	**Pn**	**20 00 50.7**	**+0.2**
HYT				IAmb	IAmb	20 00 53.5	
	comp=Z,18nm,0.9s						
PEA0B	**Petropavlovsk-**	**19.56**	**285**	P	**P**	**20 00 50.9**	**+0.1**
PEA0B				IAmb	IAmb	20 00 58.3	
	comp=Z,82nm,1.5s						
PETK	**Petropavlovsk-**	**19.56**	**285**	P	**P**	**20 00 50.9**	**+0.2**
	comp=Z,0.7nm,0.3s,baz=85,slow=14,SNR=11						
PETK	**Petropavlovsk-**	**19.56**	**285**	P	**P**	**20 00 50.1**	**-0.6**
SKAG	**Skagway**	**20.29**	**56**	P	Pn	20 01 00.1	-0.8
EPYK	**Eagle Plains**	**21.41**	**37**	P	**P**	**20 01 09.2**	**-1.4**
	baz=246						
SEY	**Seymchan**	**22.36**	**312**	P	**P**	**20 01 20.7**	**0.0**
	comp=Z,5.2nm,0.3s,baz=98,slow=17,SNR=50						
MA2	**Magadan**	**22.82**	**304**	LR	LR	20 11 49.7	
	comp=Z,32nm,18.3s,baz=135,slow=41						
DLBC	**Dease Lake**	**23.02**	**59**	P	**P**	**20 01 30.4**	**+2.6**
	comp=Z,6.6nm,0.5s,baz=268,slow=8.2,SNR=12						
DLBC				LR	LR	20 10 00.9	
	comp=Z,54nm,18.5s,slow=35						
INK	**Inuvik**	**23.34**	**34**	P	**P**	**20 01 28.6**	**-2.0**
	comp=Z,3.1nm,0.6s,baz=246,slow=7.4,SNR=12						
INK				LR	LR	20 12 06.1	
	comp=Z,111nm,18.5s,baz=238,slow=40						
INK	**Inuvik**	**23.34**	**34**	P	**P**	**20 01 29.1**	**-1.5**
D03D	**Eldon**	**29.99**	**81**	P	**P**	**20 02 33.9**	**+3.0**
	baz=297						
B05A	**Bryant**	**30.25**	**79**	P	**P**	**20 02 36.1**	**+2.9**
	baz=296						
YKA	**Yellowknife Ar**	**30.32**	**49**	P	**P**	**20 02 33.6**	**0.0**
	comp=Z,0.7nm,0.4s,baz=273,slow=7.3,SNR=23						
YKA				PcP	**PcP**	**20 05 32.0**	**-0.5**
	comp=Z,0.2nm,0.6s,baz=292,slow=3.3,SNR=2.6						
YKA				LR	LR	20 15 46.8	
	comp=Z,70nm,18.5s,baz=0.0,slow=38						
E04D	**Cinebar**	**30.76**	**82**	P	**P**	**20 02 40.5**	**+2.9**
	baz=299						
LTY	**Liberty**	**31.57**	**80**	P	**P**	**20 02 46.3**	**+1.4**
LTY				IAmb	IAmb	20 02 47.4	
	comp=Z,4.4nm,1.2s						
B08A	**Colville Reser**	**31.86**	**77**	P	**P**	**20 02 48.6**	**+1.2**
B08A				IAmb	IAmb	20 02 49.6	
	comp=Z,4.7nm,0.6s						
H04A	**Detroit Lake**	**31.93**	**85**	P	**P**	**20 02 49.5**	**+1.4**
H04A				IAmb	IAmb	20 02 50.8	
	comp=Z,10nm,1.2s						
KBO	**Bosley Butte**	**32.04**	**90**	P	**P**	**20 02 48.3**	**-0.7**
I05D	**Terrebonne, OR**	**32.63**	**85**	P	**P**	**20 02 56.5**	**+2.3**
	baz=302						
HAWA	**Hanford**	**32.67**	**80**	P	**P**	**20 02 55.9**	**+1.4**
HAWA				IAmb	IAmb	20 02 57.4	
	comp=Z,8.3nm,0.9s						
NEW	**Newport**	**33.22**	**76**	P	**P**	**20 03 00.7**	**+1.4**
	baz=298,SNR=7.4						
NEW	**Newport**	**33.22**	**76**	P	**P**	**20 03 00.2**	**+0.9**
NEW				IAmb	IAmb	20 03 01.4	
	comp=Z,6.9nm,0.8s						
J05D	**Fort Rock, OR**	**33.27**	**86**	P	**P**	**20 03 02.2**	**+2.3**
	baz=304						
I07A	**Izee**	**33.88**	**84**	P	**P**	**20 03 07.1**	**+1.9**
I07A				IAmb	IAmb	20 03 08.0	
	comp=Z,9.0nm,1.1s						
WALA	**Waterton Lakes**	**34.74**	**73**	P	**P**	**20 03 13.6**	**+1.1**
WALA				IAmb	IAmb	20 03 14.7	
	comp=Z,10nm,1.2s						
JTMT	**Jette**	**35.14**	**75**	P	**P**	**20 03 17.1**	**+1.1**
JTMT				IAmb	IAmb	20 03 17.6	
	comp=Z,5.0nm,0.6s						
WVOR	**Wild Horse Val**	**35.32**	**86**	P	**P**	**20 03 19.1**	**+1.5**
WVOR				IAmb	IAmb	20 03 20.5	
	comp=Z,6.5nm,0.9s						
MSO	**Missoula**	**35.80**	**76**	P	**P**	**20 03 22.3**	**+0.6**
	baz=300						
HRY	**Holter Researc**	**37.11**	**75**	P	**P**	**20 03 33.9**	**+1.1**
HLID	**Hailey**	**37.25**	**81**	P	**P**	**20 03 35.4**	**+1.3**
	baz=304						
HLID	**Hailey**	**37.25**	**81**	P	**P**	**20 03 35.0**	**+0.8**
HLID				IAmb	IAmb	20 03 36.6	
	comp=Z,8.8nm,1.4s						
H11N2	**WAKE ISLAND Hy**	**37.44**	**218**	T	T	20 43 22.9	
	baz=24,slow=76,SNR=8.4						
H11N3	**WAKE ISLAND Hy**	**37.44**	**218**	T	T	20 43 21.1	
	baz=24,slow=76,SNR=7.9						
H11N1	**WAKE ISLAND Hy**	**37.45**	**218**	T	T	20 43 24.3	
	baz=24,slow=76,SNR=8.6						
MCMT	**McKenzie Canyo**	**37.50**	**78**	P	**P**	**20 03 37.2**	**+0.9**
BOZ	**Bozeman (W)**	**37.81**	**77**	P	**P**	**20 03 40.0**	**+1.2**

	baz=302,SNR=7.5						
BOZ	Bozeman (W)	37.81	77	P	P	20 03 39.9	+1.1
BOZ				IAmb	IAmb	20 03 40.2	
	comp=Z,3.4nm,0.7s						
NVAR	Mina Array Bea	37.93	91	P	P	20 03 41.8	+1.9
	comp=Z,1.6nm,0.8s,baz=292,slow=7.6,SNR=12						
NVAR	Mina Array Bea	37.93	91	P	P	20 03 41.1	+1.2
ELK	Elko	38.38	86	P	P	20 03 44.8	+1.0
ELK				IAmb	IAmb	20 03 46.2	
	comp=Z,4.0nm,0.9s						
YHL	Hebgen Lake	38.48	77	P	P	20 03 45.1	+0.5
H11S1	WAKE ISLAND Hy	38.63	217	T	T	20 44 49.6	
	baz=23,slow=76,SNR=74						
H11S2	WAKE ISLAND Hy	38.64	217	T	T	20 44 54.6	
	baz=23,slow=76,SNR=66						
H11S3	WAKE ISLAND Hy	38.64	217	T	T	20 44 53.5	
	baz=23,slow=76,SNR=74						
YHH	Holmes Hill	38.71	77	P	P	20 03 47.7	+1.2
H17A	Grant Village	39.09	78	P	P	20 03 52.3	+2.6
	baz=304						
MJAR	Matsushiro Arr	39.44	267	P	P	20 03 51.8	-0.6
	comp=Z,2.2nm,0.6s,baz=37,slow=5.7,SNR=6.1						
MJAR				LR	LR	20 18 35.9	
	comp=Z,27nm,21.4s,baz=65,slow=34						
MJAR	Matsushiro Arr	39.44	267	P	P	20 03 51.9	-0.5
MAJO	Matsushiro	39.45	267	P	P	20 03 52.0	-0.5
RLMT	Red Lodge	39.47	76	P	P	20 03 54.2	+1.4
	baz=303,SNR=5.8						
RLMT	Red Lodge	39.47	76	P	P	20 03 54.0	+1.2
R11A	Troy Canyon, C	39.64	89	P	P	20 03 55.2	+1.0
	baz=309						
MPMC	Manual Prospec	39.95	93	P	P	20 03 58.4	+1.6
	baz=311						
FURC	Furnace Creek,	40.06	92	P	P	20 03 59.7	+2.2
	baz=311						
TPNV	Topopah Spring	40.12	91	P	P	20 03 60.0	+1.7
	baz=310,SNR=8.1						
TPNV	Topopah Spring	40.12	91	P	P	20 03 59.8	+1.5
TPNV				IAmb	IAmb	20 04 01.5	
	comp=Z,3.7nm,0.7s						
DUG	Dugway, Tooele	40.19	84	P	P	20 04 00.2	+1.5
	baz=308,SNR=9.1						
DUG	Dugway, Tooele	40.19	84	P	P	20 04 00.2	+1.5
DUG				IAmb	IAmb	20 04 01.1	
	comp=Z,13nm,1.3s						
PRN	Pahroc Range	40.56	90	P	P	20 04 03.5	+1.6
PRN				IAmb	IAmb	20 04 04.4	
	comp=Z,7.3nm,1.1s						
JGF	Kuroka	40.58	267	P	P	20 04 01.8	-0.1
BW06	Boulder Array	40.62	79	P	P	20 04 03.4	+1.0
	baz=306,SNR=11						
BW06	Boulder Array	40.62	79	P	P	20 04 03.2	+0.8
BW06				IAmb	IAmb	20 04 04.3	
	comp=Z,9.1nm,1.1s						
PDAR	Pinedale Array	40.62	79	P	P	20 04 03.3	+0.9
	comp=Z,3.2nm,0.5s,baz=314,slow=3.5,SNR=43						
PDAR	Pinedale Array	40.62	79	P	P	20 04 03.2	+0.8
GSC	Goldstone, Bar	40.87	93	P	P	20 04 06.1	+1.8
	baz=312,SNR=5.3						
GSC	Goldstone, Bar	40.87	93	P	P	20 04 05.3	+1.0
GSC				IAmb	IAmb	20 04 06.7	
	comp=Z,5.9nm,0.9s						
FCC	Fort Churchill	41.02	50	P	P	20 04 05.5	+0.4
HEC	Hector,Ludlow	41.47	94	P	P	20 04 10.5	+1.2
	baz=312						
MVU	Marysvale	41.60	86	P	P	20 04 10.8	+0.4
MVU				IAmb	IAmb	20 04 13.0	
	comp=Z,18nm,1.1s						
GMRC	Granite Mounta	41.91	93	P	P	20 04 14.2	+1.3
	baz=312						
BELC	Belle Mtn. Jos	42.23	94	P	P	20 04 16.5	+1.0
	baz=313						
K22A	Casper	42.51	77	P	P	20 04 18.2	+0.5
	baz=306						
IRM	Iron Mountain	42.65	93	P	P	20 04 20.2	+1.4
	baz=313						
MONP2	Monument Peak	42.73	96	P	P	20 04 20.1	+0.4
	baz=314						
U15A	North Rim	42.88	88	P	P	20 04 22.6	+1.7
U15A				IAmb	IAmb	20 04 24.0	
	comp=Z,5.2nm,0.6s						
O20A	White River Ci	42.99	81	P	P	20 04 22.7	+0.9
	baz=308,SNR=8.7						
RSSD	Black Hills	43.12	74	P	P	20 04 22.9	+0.1
	baz=306						
RSSD	Black Hills	43.12	74	P	P	20 04 22.9	+0.1
RSSD				IAmb	IAmb	20 04 30.9	
	comp=Z,7.0nm,1.3s						
PDMCI	Parker Dam,Lak	43.16	92	P	P	20 04 24.1	+1.2
	baz=313						
MDND	Maddock	43.56	67	P	P	20 04 26.9	+1.0
	baz=304						
PV14	Lion Creek, Pa	43.62	84	P	P	20 04 27.3	+0.4
PV14				IAmb	IAmb	20 04 30.6	
	comp=Z,4.1nm,0.8s						
WUAZ	Wupatki	44.04	89	P	P	20 04 31.7	+1.6
	baz=312,SNR=6.0						
WUAZ	Wupatki	44.04	89	P	P	20 04 31.5	+1.4
WUAZ				IAmb	IAmb	20 04 32.2	
	comp=Z,5.2nm,0.7s						
ULM	Lac du Bonnet	44.29	62	P	P	20 04 31.8	0.0
	comp=Z,4.3nm,0.6s,baz=301,slow=7.0,SNR=9.5						
ULM	Lac du Bonnet	44.29	62	P	P	20 04 32.0	+0.2
ULM				IAmb	IAmb	20 04 32.9	
	comp=Z,13nm,1.3s						
MVCO	Mesa Verde	44.68	85	P	P	20 04 36.2	+0.8
	baz=310						
KSRS	Korea Array	45.12	276	P	P	20 04 38.0	-0.5
	comp=Z,1.5nm,0.7s,baz=55,slow=7.4,SNR=7.4						
KSRS				LR	LR	20 22 11.6	
	comp=Z,23nm,18.7s,baz=54,slow=34						
S22A	4UR Ranch, Cre	45.35	83	P	P	20 04 42.2	+1.5
	baz=310						
AGMN	Agassiz Nation	45.38	64	P	P	20 04 40.4	-0.1
	baz=304,SNR=5.3						
SUSD	Miller	45.88	70	P	P	20 04 45.7	+1.2
	baz=307						
SDCO	Great Sand Dun	46.16	82	P	P	20 04 48.4	+1.3
	baz=310,SNR=5.1						
SDCO	Great Sand Dun	46.16	82	P	P	20 04 48.2	+1.1
SDCO				IAmb	IAmb	20 04 49.1	
	comp=Z,3.7nm,1.0s						
JNU	Nakatsue	46.20	269	P	P	20 04 46.9	-0.3
JNU				IAmb	IAmb	20 04 54.1	
	comp=Z,7.3nm,1.0s						
B35A	Bob, Littlefor	46.52	63	P	P	20 04 49.5	+0.1
TUC	Tucson	46.57	92	P	P	20 04 51.5	+1.4
	baz=314						
T25A	Trinidad	47.21	82	P	P	20 04 56.8	+1.6
	baz=311,SNR=6.1						
JSU	Suzuyama	47.58	268	P	P	20 04 57.5	-0.4
ECSD	EROS Data Cent	47.65	70	P	P	20 04 57.8	-0.6
	baz=308						
ECSD	EROS Data Cent	47.65	70	P	P	20 04 58.0	-0.3
ECSD				IAmb	IAmb	20 04 59.0	
	comp=Z,5.8nm,1.0s						
EYMN	Ely	47.97	62	P	P	20 05 00.4	-0.4
	baz=306						
EYMN	Ely	47.97	62	P	P	20 05 00.6	-0.2
EYMN				IAmb	IAmb	20 05 01.1	
	comp=Z,7.9nm,1.1s						
121A	Cookes Peak, D	48.25	89	P	P	20 05 03.1	-0.2
	baz=314						
E38A	The Farm, Brul	48.74	64	P	P	20 05 06.7	-0.1
SPMN	Marine on St.	48.90	66	P	P	20 05 07.3	-0.6
	baz=308						
D41A	Chassel	50.09	62	P	P	20 05 16.9	-0.1
MNTX	Cornudas Mount	50.29	88	P	P	20 05 19.8	+1.1
	baz=314						
MSTX	Muleshoe	50.32	84	P	P	20 05 19.4	+0.4
	baz=313						
SONM	Songino Array	50.98	300	P	P	20 05 23.1	-0.7
	comp=Z,0.2nm,0.4s,baz=42,slow=6.3,SNR=4.9						
E43A	Lone Tree Farm	51.36	62	P	P	20 05 26.4	-0.1
WMOK	Wichita Mounta	52.21	80	P	P	20 05 33.4	+0.3
	baz=313						
HHC	Hu-ho-hao-te	52.61	291	*e*P	P	20 05 37.3	+1.3
HHC				pmax	pmax		
	comp=Z,3.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,140nm,5.3s						
TX31	Lajitas Ar. Si	53.00	89	P	P	20 05 39.4	+0.4
TXAR	Lajitas Array	53.00	89	P	P	20 05 39.8	+0.7
	comp=Z,3.7nm,0.7s,baz=298,slow=5.6,SNR=22						
TXAR				pP	pP	20 05 51.9	-0.5
	comp=Z,1.1nm,0.6s,baz=299,slow=6.5,SNR=4.9						
TXAR				sP	sP	20 05 56.5	-1.5
	comp=Z,0.7nm,0.6s,baz=320,slow=6.0,SNR=2.8						
MATQ	Matagami	53.99	53	P	P	20 05 45.1	-0.8
	baz=311						
NJ2	Nanjing	54.27	278	*e*P	P	20 05 48.4	+0.3
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.6s						
WHTX	Lake Whitney,	54.90	82	P	P	20 05 54.0	+1.3
	baz=315						
MIAR	Mount Ida	55.45	77	P	P	20 05 57.0	+0.3
	baz=314						
ALGO	Algonquin Park	56.33	57	P	P	20 06 02.7	-0.1
	baz=313						
SADO	Sadowa	56.57	59	P	P	20 06 04.6	0.0
D55A	Sainte-Anne-du	56.90	55	P	P	20 06 06.3	-0.6
	baz=313						
H53A	Bobcaygeon	57.00	58	P	P	20 06 07.0	-0.5
	baz=313						
D56A	ZEC Mazanza, M	57.24	54	P	P	20 06 08.5	-0.8
	baz=314						
E57A	Chemin Saint G	57.98	54	P	P	20 06 13.9	-0.6
	baz=314						
SSLB	Suanglung	58.95	269	P	P	20 06 20.7	-0.8
K56A	Middlesex	58.96	59	P	P	20 06 21.8	+0.4
	baz=315						
M55A	Ridgway	59.06	61	P	P	20 06 22.3	+0.2
D60A	Saint Jean D'O	59.20	52	P	P	20 06 22.4	-0.5
	baz=315						
L56A	Greenwood	59.23	60	P	P	20 06 23.5	+0.2
	baz=315						
D61A	St Aubert, Com	59.35	51	P	P	20 06 23.6	-0.3
	baz=316						
M56A	Emporium	59.36	61	P	P	20 06 24.1	0.0
	baz=315						
M56A	Emporium	59.36	61	P	P	20 06 24.3	+0.1
NCB	Newcomb	59.66	56	P	P	20 06 26.3	+0.1
NCB				IAmb	IAmb	20 06 38.2	
	comp=Z,4.8nm,1.1s						
N56A	West Decatur	59.70	61	P	P	20 06 26.4	-0.1
	baz=315						
L57A	Andrews Acres	59.70	60	P	P	20 06 26.8	+0.3
	baz=315						
O56A	Blue Knob Stat	60.01	62	P	P	20 06 28.4	-0.2
	baz=315						
BINY	Binghamton	60.01	59	P	P	20 06 28.6	0.0
	baz=315						
BINY	Binghamton	60.01	59	P	P	20 06 28.6	0.0
M57A	Sunshine Farm,	60.02	60	P	P	20 06 28.9	+0.2
	baz=315						
SSPA	Standing Stone	60.11	61	P	P	20 06 29.2	-0.1
	baz=315						
SSPA	Standing Stone	60.11	61	P	P	20 06 29.4	+0.1
R54A	Victor	60.16	65	P	P	20 06 29.7	-0.1
	baz=315						
K59A	Cooperstown	60.19	58	P	P	20 06 29.6	-0.2
	baz=316						
L58A	Harry Jones Me	60.19	59	P	P	20 06 30.3	+0.5
	baz=316						
N57A	Milroy	60.21	61	P	P	20 06 29.9	0.0
	baz=315						
S54A	Dingess, Beckl	60.26	66	P	P	20 06 30.2	-0.2
	baz=315						
LRAL	Lakeview Retre	60.40	73	P	P	20 06 30.4	-0.9
	baz=316						
P56A	Dayton Farm, R	60.41	63	P	P	20 06 31.3	0.0
	baz=316						
L59A	Walton	60.51	58	P	P	20 06 32.6	+0.6
	baz=316						
O57A	Amberson	60.55	61	P	P	20 06 32.4	+0.1
	baz=316						
E63A	Oxbow	60.75	51	P	P	20 06 33.3	-0.2
M59A	Waymart	60.77	59	P	P	20 06 33.9	+0.1
	baz=316						
N59A	State Game Lan	61.04	60	P	P	20 06 36.0	+0.3
	baz=316						
BATG	Bathurst New B	61.23	49	P	P	20 06 36.9	0.0
O59A	Robesonia	61.25	61	P	P	20 06 37.1	+0.1
	baz=316						
M60A	Port Jervis	61.35	59	P	P	20 06 38.0	+0.3
	baz=316						
N60A	Cedar Hill Far	61.43	59	P	P	20 06 38.2	0.0
	baz=316						
Q58A	Fox Den Farm,	61.44	63	P	P	20 06 37.9	-0.4
	baz=316						
R57A	Stanardsville	61.44	64	P	P	20 06 38.0	-0.3
	baz=316						
KURK	Kurchatov	62.06	318	P	P	20 06 42.3	0.0
KURK				IAmb	IAmb	20 06 47.3	
	comp=Z,2.6nm,1.4s						
GOGA	Godfrey	62.18	71	P	P	20 06 42.8	-0.5
	baz=316						
LMN	Caledonia Moun	62.87	49	P	P	20 06 47.9	0.0
WMQ	Urumqi	63.21	308	*e*P	P	20 06 51.9	+1.7
V59A	Middlesex	63.43	65	P	P	20 06 52.1	+0.5
	baz=317						
MK31	Makanchi Array	63.49	313	P	P	20 06 53.2	+1.3
MKAR	Makanchi Array	63.49	313	P	P	20 06 50.2	-1.8
	comp=Z,0.2nm,0.8s,baz=51,slow=6.4,SNR=2.2						
MKAR				pP	pP	20 07 05.3	-0.5
	comp=Z,0.7nm,1.0s,baz=43,slow=4.2,SNR=4.3						
MKAR				LR	LR	20 35 13.9	
	comp=Z,34nm,19.6s,baz=273,slow=37						
MKAR	Makanchi Array	63.49	313	P	P	20 06 52.9	+1.0
FINES	FINESS Array B	65.65	352	P	P	20 07 04.8	-1.0
	comp=Z,2.0nm,0.9s,baz=12,slow=9.8,SNR=4.8						
FINES	FINESS Array B	65.65	352	P	P	20 07 05.0	-0.7
NC303	NORSAR Array S	66.57	359	P	P	20 07 11.0	-0.7
NOA	NORSAR Array B	66.76	359	P	P	20 07 12.4	-0.4
	comp=Z,1.5nm,0.6s,baz=16,slow=6.4,SNR=1.9						
ABKAR	Akbulak array	70.14	328	P	P	20 07 33.9	-0.3
ABKAR	Akbulak array	70.14	328	P	P	20 07 33.5	-0.6
AAK	Ala-Archa	70.19	315	P	P	20 07 34.9	+0.2
CMAR	Chiang Mai Arr	76.32	282	P	P	20 08 10.8	-0.3
	comp=Z,1.4nm,0.8s,baz=27,slow=6.3,SNR=12						
CMAR				LR	LR	20 44 05.4	
	comp=Z,7.4nm,19.4s,baz=70,slow=38						
WRA	Warramunga Arr	86.91	231	P	P	20 09 05.1	-1.5
	comp=Z,0.9nm,0.9s,baz=34,slow=5.6,SNR=3.6						
ASAR	Alice Springs	90.31	230	P	P	20 09 22.1	-0.7
	comp=Z,1.1nm,0.7s,baz=24,slow=4.7,SNR=12						
LEM	Lembang	90.88	260	LR	LR	20 53 31.1	
	comp=Z,10.0nm,18.1s,baz=152,slow=38						
STKA	Stephens Creek	94.17	220	LR	LR	20 45 04.7	
	comp=Z,36nm,20.2s,baz=26,slow=31						
H03N2	Juan Fernandez	116.23	111	T	T	22 22 06.8	
	baz=327,slow=80,SNR=7.1						
H03N1	Juan Fernandez	116.25	111	T	T	22 22 17.2	
	baz=327,slow=80,SNR=6.8						
H03N3	Juan Fernandez	116.25	111	T	T	22 22 09.0	
	baz=327,slow=80,SNR=9.6						

IDC 14 20:08:24.0±6.0**, 57°.28S×151°.00W, h0^{km}, mb3.6**/1**, mb1 3.8**/1**, mb1mx3.5**/26**, mbtmp3.6**/1**, MS3.4**/1**, Ms1 3.4**/1**, ms1mx2.8**/27**, Error ellipse: s-maj=545.4km s-min=67.7km az=164.0, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	Vanda	25.86	201	LR	LR	20 21 31.2	
	comp=Z,73nm,18.4s,baz=198,slow=30						
H03S2	Juan Fernandez	52.80	96	T	T	21 14 41.1	
	baz=219,slow=74,SNR=11						
H03S1	Juan Fernandez	52.81	96	T	T	21 14 42.4	
	baz=219,slow=74,SNR=12						
H03S3	Juan Fernandez	52.82	96	T	T	21 14 41.5	
	baz=219,slow=74,SNR=12						
H03N3	Juan Fernandez	53.10	96	T	T	21 15 00.3	
	baz=222,slow=72,SNR=24						
H03N2	Juan Fernandez	53.10	96	T	T	21 14 56.2	
	baz=222,slow=72,SNR=24						
H03N1	Juan Fernandez	53.11	96	T	T	21 14 56.0	
	baz=222,slow=72,SNR=32						
ASAR	Alice Springs	62.41	269	P	P	20 18 48.8	+0.2
	0.3nm,0.4s,baz=137,slow=6.6,SNR=8.3						
H10N3	ASCENSION HYDR	106.05	135	T	T	22 22 10.3	
	baz=203,slow=75,SNR=4.2						
H10N1	ASCENSION HYDR	106.06	135	T	T	22 22 12.8	
	baz=203,slow=75,SNR=4.3						
H10N2	ASCENSION HYDR	106.07	135	T	T	22 22 19.4	
	baz=203,slow=75,SNR=3.7						
ILAR	Eielson Array	121.77	2	PKP	PKiKP	20 27 18.7	+0.3
	0.4nm,0.9s,baz=195,slow=2.8,SNR=2.9						
MKAR	Makanchi Array	146.42	275	PKPbc	PKPdf	20 28 05.1	+0.5
	0.8nm,0.7s,baz=117,slow=4.7,SNR=10						
ZALV	Zalesovo Beam	149.05	288	PKPbc	PKPbc	20 28 11.0	-1.7
	0.4nm,0.4s,baz=111,slow=3.2,SNR=1.8						

MAN 14 20:22:35.4, 9°.67N×126°.68E, h17^{km}, mb4.0, ML2.7, MS2.3, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLSP	General Luna,	0.56	282	*e*P	Pb	20 22 46.9	+0.1
GLSP				*e*S	Sg	20 22 53.7	-0.3
BUTP	Butuan	1.26	236	*e*P	Pn	20 22 57.0	-1.2
BUTP				*e*S	Sn	20 23 14.8	0.0
MSLP	Maasin	1.85	285	*e*P	Pb	20 23 09.1	+0.2
MSLP				*e*S	Sb	20 23 31.5	-0.3
CGP	Cagayan de Oro	2.30	239⥣	*e*P	Pn	20 23 13.8	+1.2
CGP				*e*S	Sn	20 23 39.8	-0.7
LLP	Lapu-Lapu	2.75	284	*e*P	Pn	20 23 18.4	-0.4
PAGZ	Pagadian	3.73	241	*e*P	Pn	20 23 34.9	+2.7

IDC 14 20:29:59.0±59.0**, 16°.86S×177°.13W, h0^{km}, mb3.6**/3**, mb1 3.8**/3**, mb1mx3.5**/46**, mbtmp3.6**/3**, Error ellipse: s-maj=1094.0km s-min=195.0km az=78.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	40.20	240	P	P	20 37 37.6	+0.1
	0.7nm,0.5s,baz=75,slow=12,SNR=1.2						
WRA	Warramunga Arr	46.03	258	P	P	20 38 24.5	-0.3
	0.1nm,0.5s,baz=95,slow=7.5,SNR=1.0						
ASAR	Alice Springs	46.26	253	P	P	20 38 26.4	-0.2
	1.5nm,0.6s,baz=88,slow=8.5,SNR=30						

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*NIC **14** 21:12:57.4±0.0, 36°.95N×28°.92E, h0^{km}±3^{km}, Ml3.7/3*

*IDC **14** 21:12:58.3±2.0, 36°.82N×29°.07E, h0^{km}, mb3.5/2, mb1 3.7/7, mb1mx3.4/52, mbtmp3.6/7, ML3.6/4, MS2.2/1, Ms1 2.2/1, ms1mx1.8/34, Error ellipse: s-maj=34.3km s-min=20.8km az=48.0*

*DDA **14** 21:12:58.5, 36°.82N×28°.96E, h7^{km}±3^{km}, MW3.6*

*ISK **14** 21:12:58.5, 36°.80N×28°.95E, h7^{km}, ML3.4/27*

*ATH **14** 21:12:59.5, 36°.84N×28°.90E, h36^{km}±17^{km}, ML3.2/2, Error ellipse: s-maj=18.1km s-min=1.7km az=164.0*

*THE **14** 21:12:59.3, 36°.80N×28°.92E, h0^{km}±1^{km}, ML3.2/2, Error ellipse: s-maj=1.9km s-min=1.2km az=45.0*

ISC 14 21:12:58.9±0.9**, 36°.80N**±0°.02×**28°.96E**±0°.02**, h10^{km}**±7^{km}**, n77, σ1^{s}07**/102**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FETY	Fethiye	0.20	149	PG	Pg	21 13 02.2	-0.9
FETY				SG	Sg	21 13 06.1	+0.2
DALY	Dalyan (Mula)	0.24	273	PG	Pg	21 13 04.0	+0.1
DALY				SG	Sg	21 13 07.7	+0.4
DALY	Dalyan (Mula)	0.24	273	*i* P	Pg	21 13 04.0	+0.1
DALY				*i* S	Sg	21 13 08.2	+1.0
DALY				IAML		21 13 09.0	
	comp=N,8µm,0.9s						
DALY				IAML		21 13 09.0	
	comp=E,4µm,0.7s						
CAEL	Denizli, Camel	0.43	42	*i* P	Pg	21 13 06.7	-0.8
CAEL				*i* S	Sb	21 13 13.8	-1.5
CAEL				IAML		21 13 15.0	
	comp=N,3µm,0.3s						
CAEL				IAML		21 13 19.0	
	comp=E,5µm,0.4s						
TURN	Turunc	0.57	267	PG	Pg	21 13 09.9	-0.2
TURN				SG	Sg	21 13 17.9	+0.3
TURN	Turunc	0.57	267	*i* P	Pg	21 13 09.7	-0.4
TURN				*i* S	Sb	21 13 18.2	-1.1
MRSB	Marmaris-Mugla	0.62	262	PG	Pg	21 13 10.8	-0.1
MRSB				SG	Sb	21 13 19.9	-0.7
YER	Yerkesik	0.63	302	P	Pb	21 13 11.3	-0.8
YER	Yerkesik	0.63	302	PG	Pg	21 13 10.9	-0.3
YER				SG	Sb	21 13 20.5	-0.6
GOLH	Golhisar	0.65	48	*i* P	Pg	21 13 10.6	-0.9
GOLH				*i* S	Sb	21 13 21.3	-0.2
GOLH				IAML		21 13 22.0	
	comp=E,3µm,0.6s						
GOLH				IAML		21 13 22.0	
	comp=N,2µm,0.2s						
TAVA	DENIZLI_Tavas	0.66	357	*i* P	Pg	21 13 10.8	-0.9
TAVA				IAML		21 13 23.0	
	comp=E,1µm,0.3s						
TAVA				IAML		21 13 23.0	
	comp=N,1µm,0.3s						
MULA	Mugla, Merkez-	0.68	312	*i* P	Pg	21 13 11.8	-0.3
MULA				IAML		21 13 25.0	
	comp=E,1µm,0.9s						
ELL	Elmali	0.77	94	PG	Pg	21 13 13.3	-0.4
ELL	Elmali	0.77	94	P	Pg	21 13 13.1	-0.7
ELL				S	Sn	21 13 26.6	-0.9
KSL	Kastellorizon	0.82	142	P	Pb	21 13 15.6	+0.3
KSL				S	Sn	21 13 28.3	-0.5
KSL				AML	AML	21 13 33.9	
	comp=N,3010µm,0.5s						
KSL				AML	AML	21 13 34.0	
	comp=E,3341µm,0.8s						
KSL	Kastellorizon	0.82	142	P	Pb	21 13 15.5	+0.2
KSL				S	Sn	21 13 29.9	+1.1
	comp=E,2µm,0.6s						
KSL	Kastellorizon	0.82	142	P	Pb	21 13 15.6	+0.3
KSL				S	Sn	21 13 30.7	+1.9
ARG	Arkhangelos	0.89	229	P	Pg	21 13 16.0	0.0
ARG				S	Sb	21 13 28.2	-0.2
ARG				AML	AML	21 13 35.0	
	comp=N,2720µm,0.4s						
ARG				AML	AML	21 13 36.5	
	comp=E,3545µm,0.5s						
ARG	Arkhangelos	0.89	229	P	Pg	21 13 15.8	-0.3
ARG				S	Sn	21 13 31.0	+0.6
	comp=E,2µm,0.6s						
ARG	Arkhangelos	0.89	229	PG	Pg	21 13 16.1	0.0
ARG	Arkhangelos	0.89	229	P	Pg	21 13 16.0	0.0
ARG				S	Sn	21 13 31.3	+0.8
DEMR	Demre-Antalya	0.95	126	PG	Pb	21 13 17.8	+0.3
DATC	Datca-Mugla	1.04	268	PG	Pb	21 13 19.1	+0.1
MLSB	Milas	1.06	298	PG	Pn	21 13 19.9	0.0
KORT	Korkueli	1.13	80	PN	Pn	21 13 21.4	+0.5
KORT	Korkueli	1.13	80	*i* P	Pg	21 13 19.5	-1.2
KORT				IAML		21 13 45.0	
	comp=E,424nm,0.4s						
KORT				IAML		21 13 46.0	
	comp=N,394nm,0.5s						
BDRM	Kayabasi	1.24	283	*i* P	Pn	21 13 22.8	+0.5
BDRM				*i* S	Sb	21 13 38.3	-0.2
BDRM				IAML		21 13 44.0	
	comp=E,495nm,0.4s						
BDRM				IAML		21 13 46.0	
	comp=N,425nm,0.6s						
BRDR	BURDUR-Merkez	1.25	44	*i* P	Pb	21 13 22.3	-0.4
BRDR				*i* S	Sn	21 13 41.6	+2.1
BRDR				IAML		21 13 45.0	
	comp=E,541nm,0.9s						
BRDR				IAML		21 13 46.0	
	comp=N,614nm,0.5s						
KEMT	Kemer-ANTALYA	1.30	98	PN	Pg	21 13 23.7	-0.2
BODT	Bodrum	1.34	282	P	Pn	21 13 23.1	-0.7
BODT				S	Sg	21 13 41.6	-0.6
BODT	Bodrum	1.34	282	PN	Pg	21 13 24.1	-0.7
ANTB	Antalya	1.36	85	PN	Pg	21 13 24.7	-0.4
BASM	Basmaki-Afyon	1.41	38	PN	Pb	21 13 25.1	-0.3
AYDB	Zeytinkoy-Aydi	1.42	324	PN	Pb	21 13 25.3	-0.3
BCK	Bucak	1.46	63	PN	Pb	21 13 26.1	-0.1
NISR	Nisiros	1.48	263	P	Pb	21 13 26.2	-0.4
DIDI	Didim-Aydin	1.49	293	PN	Pb	21 13 26.3	-0.3
DDIM	Aydin, Didim	1.52	296	*i* P	Pg	21 13 27.3	-0.8
DDIM				IAML		21 13 56.0	
	comp=N,494nm,1.1s						
DDIM				IAML		21 13 57.0	
	comp=E,250nm,0.9s						
KHL	Karahalli	1.58	16	PN	Pb	21 13 27.7	-0.6
KOSK	Kos Island	1.59	269	PN	Pb	21 13 28.0	-0.4
ISP	Isparta	1.61	50	P	Pb	21 13 28.7	-0.1
ISP	Isparta	1.61	50	PN	Pb	21 13 28.2	-0.6
GCAM	G?zelcaml?	1.64	304	PN	Pb	21 13 28.7	-0.5
GCAM	G?zelcaml?	1.64	304	*i* P	Pb	21 13 28.5	-0.8
GCAM				IAML		21 14 00.0	
	comp=E,242nm,0.6s						
KULA	Kula-Manisa	1.72	352	P	Pn	21 13 29.2	+0.2
KULA				S	Sb	21 13 52.5	0.0
KULA	Kula-Manisa	1.72	352	PN	Pn	21 13 29.4	+0.4
SMG	Samos	1.92	299	P	Pn	21 13 31.7	0.0

SMG	Samos	1.92	299	P	Pn	21 13 32.1	+0.5
SMG				S	Sb	21 13 57.6	-0.4
KARP	Karpathos	1.92	230	P	Pb	21 13 33.7	-0.3
KARP	Karpathos	1.92	230	PN	Pn	21 13 32.3	+0.6
KARP	Karpathos	1.92	230	P	Pn	21 13 32.7	+1.0
KARP				S	Sg	21 13 60.0	-0.7
KARP				AML	AML	21 14 02.5	
	comp=E,1.4nm,0.7s						
KARP				AML	AML	21 14 02.5	
	comp=E,1.4nm,0.7s						
KARP				AML	AML	21 14 09.9	
	comp=E,1.3nm,0.9s						
KARP				AML	AML	21 14 09.9	
	comp=E,1.3nm,0.9s						
GOMA	Golmarmara-Man	2.07	337	PN	Pn	21 13 34.4	+0.7
SHUT	Suhut-Afyon	2.15	35	PN	Pn	21 13 35.8	+0.8
BLCB	Balcova	2.19	317	P	Pn	21 13 35.6	+0.2
BLCB	Balcova	2.19	317	PN	Pn	21 13 35.6	+0.2
SHAP	Saphane-Kutahy	2.23	5	PN	Pn	21 13 36.6	+0.7
GEDZ	Gediz	2.27	9	PN	Pn	21 13 37.5	+1.0
APE	Apeiranthos	2.76	277	P	Pn	21 13 45.4	+2.2
APE	Apeiranthos	2.76	277	PN	Pn	21 13 44.5	+1.3
DKL	Dikili	2.79	325	PN	Pn	21 13 45.0	+1.5
ZKR	Zakros	2.79	234	P	Pb	21 13 46.7	-2.2
ZKR	Zakros	2.79	234	PN	Pn	21 13 44.9	+1.3
CHOS	Chios island	2.79	305	PN	Pn	21 13 44.9	+1.1
SANT	Santorini	2.85	262	PN	Pn	21 13 45.5	+1.0
AKMS	Akamas	3.27	122	P	Pn	21 13 51.4	+1.2
AKMS				AML	AML	21 14 33.6	
	comp=E,0.7nm,0.4s						
AKMS				AML	AML	21 14 35.0	
	comp=E,0.5nm,0.3s						
ALFC	Alefka	3.38	118	P	Pn	21 13 53.4	+1.6
ALFC				AML	AML	21 14 36.2	
	comp=E,0.3nm,0.6s						
ALFC				AML	AML	21 14 38.0	
	comp=E,0.4nm,0.7s						
NATA	Nata	3.56	123	P	Pn	21 13 55.4	+1.1
SZAC	Souni	3.79	122	P	Pn	21 13 58.6	+1.3
CSS	Mathiatis	4.00	116	P	Pn	21 14 01.8	+1.6
ASGA	Asgata	4.03	119	P	Pn	21 14 02.2	+1.6
BRTR	Keskin Array B	4.70	50	Pn	Pn	21 14 11.8	+1.9
	comp=E,1.4nm,0.3s,baz=236,slow=15,SNR=52						
BRTR				Sn	Sn	21 15 07.2	+2.7
	comp=E,0.6nm,0.3s,baz=235,slow=24,SNR=4.5						
BRTR				LR	LR	21 16 36.8	
	comp=E,26nm,18.7s,baz=288,slow=47						
MMAI	Mount Meron Ar	6.50	124	Pn	Pn	21 14 34.8	0.0
	comp=E,8.7nm,0.3s,baz=308,slow=12,SNR=46						
MMAI				Sn	Sn	21 15 45.7	-3.4
	comp=E,7.2nm,0.3s,baz=298,slow=24,SNR=10.0						
EIL	Elat	8.71	143	Pn	Pn	21 15 05.2	+0.3
	comp=E,0.7nm,0.3s,baz=344,slow=6.9,SNR=7.0						
EIL				Sn	Sn	21 16 38.5	-4.6
	comp=E,0.5nm,0.3s,baz=105,slow=20,SNR=1.7						
MLR	Muntele Rosu	8.97	346	Pn	Pn	21 15 10.0	+1.4
	comp=E,0.1nm,0.3s,baz=78,slow=9.3,SNR=1.5						
GERES	GERESS Array B	16.40	322	Pn	P	21 16 53.6	+1.6
	baz=131,slow=12,SNR=6.2						
FINES	FINESS Array B	24.73	357	P	P	21 18 20.6	+0.5
	comp=E,2.9nm,0.9s,baz=165,slow=11,SNR=4.6						
MKAR	Makanchi Array	40.30	58	P	P	21 20 35.5	-0.7
	comp=E,0.1nm,0.4s,baz=268,slow=9.9,SNR=4.7						

*IDC **14** 21:46:25.3±2.9, 5°.98S×150°.37E, h0km, mb3.9/5, mb1 4.1/5, mb1mx3.7/31, mbtmp3.9/5, Error ellipse: s-maj=71.0km s-min=31.0km az=99.0*

ISC 14 21:46:31.7±2.1**, 6°.1S**±0°.2×**150°.4E**±0°.3**, h48**km**, n6,** σ**0ˢ.40**/6**,**
mb3.9/4**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	4.63	224	Sn	Sn	21 48 32.0	+0.3
	1.9nm,0.3s,baz=142,slow=20,SNR=1.9						
WRA	Warramunga Arr	20.85	227	P	P	21 51 09.2	-0.5
	3.6nm,0.6s,baz=51,slow=10,SNR=24						
ASAR	Alice Springs	23.64	221	P	P	21 51 38.5	-0.3
	1.7nm,0.6s,baz=55,slow=9.0,SNR=37						
STKA	Stephens Creek	26.96	197	P	P	21 52 09.1	+0.2
	3.7nm,0.9s,baz=20,slow=15,SNR=4.0						
FITZ	Fitzroy Crossi	26.98	242	P	P	21 52 09.0	-0.2
	4.0nm,0.8s,baz=63,slow=9.3,SNR=9.6						
SONM	Songino Array	66.19	329	P	P	21 57 14.7	+0.2
	0.1nm,0.3s,baz=120,slow=5.2,SNR=1.6						

*ANF **14** 21:55:49.5±1.2, 31°.49N×115°.62W, h10km, ML3.2/16, Error ellipse: s-maj=11.0km s-min=7.3km az=17.0*
*NEIC **14** 21:55:50.1±1.7, 31°.55N±0°.02×115°.64W±0°.02, h1km±6km, Error ellipse: s-maj=3.3km s-min=2.1km az=209.0*
*PAS **14** 21:55:50.7±2.1, 31°.53N±0°.04×115°.66W±0°.03, h11km±5km, Error ellipse: s-maj=5.2km s-min=3.7km az=195.0*
*SCEDC **14** 21:55:50.7, 31°.53N×115°.66W, h11km*
*ECX **14** 21:55:51.1±0.6, 31°.52N×115°.66W, h6km±3km, MD3.0, ML3.3*
*MEX **14** 21:55:52.0±0.3, 31°.37N×115°.68W, h43km±9km, MD3.5*

ISC 14 21:55:49.8±0.9**, 31°.52N**±0°.02×**115°.64W**±0°.02**, h14**km±7km**,**
n98, σ**1ˢ.19**/130**, 4C-11D, Baja California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VTX	Valle De La Tr	0.17	224	⇓eP	Pg	21 55 54.5	+0.4
VTX				eS	Sg	21 55 57.1	+0.2
VTX				IAML		21 55 57.6	
	comp=E,6μm,0.1s						
VTX				⇑e		21 55 57.6	
SJX	San Joaquin	0.36	312	⇓eP	Pn	21 56 00.7	+0.1
SJX				eS	Sb	21 56 08.2	+4.6
SJX				⇓e		21 56 08.6	
SJX				IAML		21 56 08.6	
	comp=N,2μm,0.1s						
SPIG	San Pedro Mart	0.49	162	⇓eP	Pb	21 56 00.2	-0.3
	baz=330,slow=14						
SPIG				eS	Sb	21 56 06.7	-1.0
SPIG	San Pedro Mart	0.49	162	⇓iP	Pb	21 56 00.2	-0.3
SPIG				eS	Sb	21 56 07.2	-0.5
SPX	San Pedro Mart	0.50	162		Pb	21 56 00.2	-0.4
SPX				IAML		21 56 07.6	
	comp=N,633nm,0.1s						
SPX				IAML		21 56 07.9	
	comp=E,658nm,0.4s						
SPX	San Pedro Mart	0.50	162		Sg	21 56 06.8	+0.1
SPX	San Pedro Mart	0.50	162	⇓iP	Pb	21 56 00.2	-0.4
SPX				eS	Sb	21 56 07.4	-0.6
ECBX	El Chinero	0.51	95	⇑iP	Pg	21 55 59.4	-0.5
ECBX				eS	Sg	21 56 06.7	+0.1
ESJX	Sierra Juarez	0.55	332		Pb	21 56 00.7	-0.6
ESJX					Sg	21 56 07.8	-0.3
ESJX	Sierra Juarez	0.55	332	IAML		21 56 08.5	
	comp=N,2μm,0.1s						
ESJX				IAML		21 56 08.7	
	comp=E,2μm,0.1s						
SVX	San Vicente	0.55	250	⇑iP	Pb	21 56 00.7	-0.6
SVX				iS	Sg	21 56 08.1	0.0
SFX	San Felipe	0.83	125		Pb	21 56 06.2	+0.2
SFX					Sb	21 56 17.2	+0.2
SFX	San Felipe	0.83	125	IAML		21 56 18.6	
	comp=E,915nm,0.6s						
SFX				IAML		21 56 19.0	
	comp=N,1μm,0.5s						
SFX	San Felipe	0.83	125	⇑eP	Pb	21 56 06.2	+0.2
SFX				eS	Sb	21 56 17.4	+0.3
SFX				eS	Sn	21 56 18.5	-0.6
SFX				⇓e		21 56 19.0	
SFX				IAML		21 56 19.0	
	comp=N,978nm,0.2s						
GUVIX	Guadalupe Vict	0.92	31		Sb	21 56 20.4	+0.8
CCX	Cicese	0.94	292		Pg	21 56 07.5	-0.5
CCX					Sb	21 56 20.2	0.0
CCX	Cicese	0.94	292	IAML		21 56 21.0	
	comp=N,341nm,0.4s						
CCX				IAML		21 56 22.9	
	comp=E,408nm,0.4s						
CCX	Cicese	0.94	292	eP	Pg	21 56 07.5	-0.5
CPBX	Cerro Prieto	0.94	18		Pb	21 56 08.1	+0.1
SQX	San Quintin	0.96	192	eP	Pg	21 56 07.9	-0.5
SQX				⇓eP	Pg	21 56 07.9	-0.5
SQX				eS	Sg	21 56 20.5	-0.5
MBIG	Mexicali	0.96	23	eP	Pn	21 56 09.3	+0.4
MBIG				eS	Sn	21 56 23.1	+0.7
UABX	UABC, Campus M	1.12	9		Pn	21 56 12.2	+1.1
UABX					Sn	21 56 27.5	+1.2
UABX	UABC, Campus M	1.12	9	IAML		21 56 28.8	
	comp=N,998nm,0.2s						
SGL	Mount Signal	1.13	356		Pb	21 56 10.5	-0.6
SGL					Sb	21 56 26.2	+0.5
RMX	La Rumorosa	1.14	341		Pg	21 56 10.2	-1.7
RMX	La Rumorosa	1.14	341	IAML		21 56 26.3	
	comp=N,497nm,0.4s						
RMX				IAML		21 56 26.7	
	comp=E,798nm,0.3s						
RMX	La Rumorosa	1.14	341	⇓eP	Pg	21 56 10.2	-1.7
RMX				eS	Sg	21 56 23.9	-3.0
YUH	Yuha Desert	1.15	348		Pb	21 56 11.1	-0.4
YUH					Sg	21 56 26.4	-0.7
CBX	Cerro Bola	1.18	313		Pb	21 56 11.6	-0.4
CBX					Sg	21 56 26.9	-1.0
CBX	Cerro Bola	1.18	313	IAML		21 56 27.9	
	comp=N,382nm,0.4s						
CBX				IAML		21 56 28.6	
	comp=E,430nm,0.4s						
CBX	Cerro Bola	1.18	313	eP	Pb	21 56 11.7	-0.3
CBX				eS	Sg	21 56 27.2	-0.7
CBX				⇓e		21 56 31.0	
CBX				IAML		21 56 31.0	
	comp=E,808nm,0.3s						
IKP	In-Ko-Pah, Jac	1.20	341	P	Pb	21 56 12.2	-0.1
	baz=161,SNR=244						
IKP				S	Sb	21 56 27.2	-0.5
	baz=161						
IKP	In-Ko-Pah, Jac	1.20	341		Pb	21 56 12.2	-0.1
IKP					Sb	21 56 27.0	-0.7
IKP	In-Ko-Pah, Jac	1.20	341	⇓eP	Pb	21 56 12.2	-0.1
WESC	Westside Schoo	1.24	357		Pn	21 56 12.4	-0.3
WESC					Sn	21 56 30.9	+1.7
TJIG	Tijuana	1.27	316	eP	Pn	21 56 13.1	-0.1
TJIG				eS	Sb	21 56 29.0	-0.7
COK2	Cook Ranch 2	1.33	357		Pg	21 56 14.7	-0.8
TKX	Tecate	1.33	322		Pn	21 56 14.2	+0.2
TKX					Sb	21 56 30.5	-1.0
EMSC	East Mesa	1.34	24		Pg	21 56 16.0	+0.4
CRR	Carrizo Plain	1.39	349		Pb	21 56 15.7	+0.1
CRR					Sg	21 56 34.2	-0.5
YMD	Yuma Desert	1.39	42		Pn	21 56 14.1	-0.7
SWSC	Sam W. Stewart	1.43	355	P	Pg	21 56 16.5	-0.9
	baz=175,SNR=39						
SWSC				S	Sg	21 56 35.9	0.0
	baz=175						
BAR	Barrett	1.45	323		Pn	21 56 16.1	+0.4
BAR	Barrett	1.45	323		Sn	21 56 34.5	-0.1
BAR	Barrett	1.45	323	eP	Pn	21 56 16.1	+0.4
CBKC	Canebrake	1.47	340		Pg	21 56 17.5	-0.6
MONP2	Monument Peak	1.52	334	P	Pb	21 56 17.4	-0.5
	baz=154,SNR=117						
MONP2				S	Sn	21 56 37.0	+0.6
	baz=154						
MONP2	Monument Peak	1.52	334		Pb	21 56 18.1	+0.2
MONP2					Sn	21 56 37.1	+0.6
MONP2	Monument Peak	1.52	334	eP	Pb	21 56 17.4	-0.5
OLP	Otay Lakes Par	1.54	315		Sn	21 56 37.4	+0.7
OLP	Otay Lakes Par	1.54	315	eP	Pb	21 56 17.6	-0.6
TJX	Tijuana	1.55	310		Pb	21 56 18.2	-0.2
SDRC	San Diego Road	1.64	318		Pb	21 56 19.8	0.0
SDRC					Sn	21 56 39.9	+0.8
SDRC	San Diego Road	1.64	318	eP	Pb	21 56 19.3	-0.5
GLA	Glamis	1.68	24	P	Pn	21 56 18.1	-0.7
	baz=205,SNR=20						
GLA				S	Sg	21 56 43.6	-0.3
	baz=205						
GLA	Glamis	1.68	24		Pn	21 56 18.1	-0.7
GLA				IAML		21 56 44.2	
	comp=N,146nm,0.3s						
GLA				IAML		21 56 44.3	
	comp=E,232nm,0.3s						
SLH	Sleepy Hollow	1.75	343		Pg	21 56 22.5	-1.0
SLH					Sg	21 56 45.3	-0.8
DPP	Dos Picos Cty	1.84	324		Sb	21 56 45.9	-0.3
109C	Camp Elliot, M	1.84	318	P	Pb	21 56 22.6	-0.8
	baz=138,SNR=18						
109C				S	Sb	21 56 45.8	-0.5
	baz=138						
109C	Camp Elliot, M	1.84	318		Pb	21 56 22.6	-0.8
CPE	Camp Elliot	1.84	318		Pb	21 56 22.8	-0.5
PIX	Pinacate	1.86	88		Pn	21 56 20.3	-1.0
HWB	Hans Werner Br	1.87	324		Pb	21 56 24.0	+0.1
MATG	Mataguay Scout	1.88	333		Pn	21 56 22.1	+0.5
MATG					Pb	21 56 24.5	+0.5
113A	Mohawk Valley,	2.02	51	Pn	Pn	21 56 23.4	-0.1
PLM	Palomar	2.10	331		Pb	21 56 27.7	-0.1
FRD	Ford Ranch, An	2.13	338		Pb	21 56 29.1	+0.8
FRD	Ford Ranch, An	2.13	338		Pb	21 56 29.1	+0.8
BC3	Big Chuckawall	2.14	4	P	Pn	21 56 25.1	-0.1
	baz=185,SNR=19						
BZNA	Buzz No.'s Pla	2.15	337		Pb	21 56 29.5	+0.9
SNDA	J Saunders Pla	2.19	338		Pg	21 56 30.4	-1.4
PFO	Pinyon Flats O	2.20	342	P	Pn	21 56 26.0	-0.1
	baz=162,SNR=24						
PFO				S	Sb	21 56 57.8	+1.2
	baz=162						
PFO	Pinyon Flats O	2.20	342	Pn	Pn	21 56 25.9	-0.2
PFO				IAML		21 57 00.1	
	comp=E,90nm,0.3s						
PMD	Palm Desert	2.21	344		Pg	21 56 30.9	-1.4
CRY	Cary Ranch	2.24	336		Pb	21 56 30.7	+0.6
214A	Organ Pipe Nat	2.45	79	P	Pn	21 56 29.2	-0.3
	baz=261,SNR=9.7						
214A				S	Sn	21 56 57.8	-1.4
	baz=261						
214A	Organ Pipe Nat	2.45	79		Pn	21 56 29.0	-0.4
214A				IAML		21 56 59.4	
	comp=E,43nm,0.5s						
MURC	Murrieta	2.46	328	P	Pb	21 56 33.0	-0.8
	baz=148,SNR=12						
MURC				S	Sb	21 57 03.6	-0.3
	baz=148						
HMTC	Hemet	2.47	333		Pb	21 56 34.0	0.0
BELC	Belle Mtn. Jos	2.49	353	P	Pn	21 56 30.4	+0.3
	baz=173						
EW2	E Wide Canyon	2.50	345		Pg	21 56 36.2	-1.6
IRM	Iron Mountain	2.67	9	P	Pn	21 56 34.7	+2.3
	baz=190						
SCI2	San Clemente I	2.86	301	P	Pn	21 56 35.9	+0.8
	baz=120						
MWC	Mount Wilson	3.38	324		Pn	21 56 44.1	+1.8
MWC				IAML		21 57 40.5	
	comp=E,70nm,0.8s						
MWC				IAML		21 57 42.7	
	comp=N,75nm,0.9s						
RRX	Edison Barstow	3.54	342	Sb	Sg	21 57 40.1	-3.3
	baz=161						
W13A	Hualapai Mount	3.86	22		Pn	21 56 50.0	+1.0
EDW2	Edwards Air Fo	3.89	330	Sb	Sb	21 57 47.0	+1.8
	baz=149						
TUC	Tucson	4.21	78	Pn	Pn	21 56 54.9	+1.3
LRMC	Laurel Mtn Rad	4.30	337	Sb	Sb	21 58 02.1	+5.0
	baz=156						
X16A	Lo Mia Camp, P	4.56	50		Pn	21 56 59.8	+1.2
X16A				IAML		21 59 39.8	
	comp=E,9.7nm,5.0s						
MPMC	Manual Prospec	4.78	342	Sb	Sg	21 58 18.8	-4.6
	baz=161						
WUAZ	Wupatki	5.35	41	Pn	Pn	21 57 09.5	+0.1
WUAZ				IAML		21 58 45.0	
	comp=E,14nm,5.0s						
WUAZ				IAML		21 59 03.7	
	comp=E,11nm,4.5s						
TPNV	Topopah Spring	5.44	355	Pn	Pn	21 57 13.2	+2.6
U15A	North Rim	5.63	29		Pn	21 57 15.3	+1.9
X18A	Snowflake	5.64	56	Pn	Pn	21 57 15.4	+2.0
LCMT	Little Creek M	5.83	19	Pn	Pn	21 57 17.8	+1.9
KNB	Kanab	5.96	22	Pn	Pn	21 57 20.4	+2.6
121A	Cookes Peak, D	6.75	79	Pn	Pn	21 57 30.7	+2.0

*TAP **14** 21:58:20.1, 24°.48N×122°.40E, h79km, ML3.6, C*
*JMA **14** 21:58:20.2±0.1, 24°.42N×122°.37E, h75km±2km, M3.0*

ISC 14 21:58:20.5±1.2**, 24°.47N**±0°.03×**122°.40E**±0°.02**, h73**km±7km**,**
n126, σ**1ˢ.02**/226**, 4C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.49	92	P	Pn	21 58 33.9	+0.4
JYNG				S	Sn	21 58 43.7	+0.6
TWC	Suao	0.53	286	eP	Pn	21 58 33.7	-0.1
	baz=287						
TWC				eS	Sn	21 58 43.2	-0.5
	baz=287						
YOJ	Yonaguni jima	0.55	90	P	Pn	21 58 34.4	+0.3
YOJ				S	Sn	21 58 44.5	+0.4
ENA	Nanau	0.60	266	iP	Pn	21 58 34.6	0.0
	baz=262						
ENA				iS	Sn	21 58 45.9	+0.8
	baz=262						
NDS	Dongshan	0.65	285	eP	Pn	21 58 35.9	+0.8
	baz=288						
NDS				eS	Sn	21 58 45.7	-0.2
	baz=288						
NTC	Toucheng	0.65	307	eP	Pn	21 58 34.7	-0.4
	baz=312						
NTC				eS	Sn	21 58 45.5	-0.4
	baz=312						
TWB1	Santiao Chiao	0.66	325	eP	Pn	21 58 35.6	+0.4
	baz=317						
TWB1				eS	Sn	21 58 45.8	-0.2
	baz=317						
ILA	Ilan	0.67	297	eP	Pn	21 58 35.7	+0.4
	baz=300						
ILA				eS	Sn	21 58 46.2	0.0
	baz=300						
TWE	Neicheng	0.72	291	eP	Pn	21 58 35.9	+0.1
	baz=292						
TWE				S	Sn	21 58 47.0	-0.1
	baz=292						
TIPB	Shuangxi	0.73	314	eP	Pn	21 58 36.0	0.0
	baz=311						
TIPB				eS	Sn	21 58 46.8	-0.7
	baz=311						
ENTT	Nioudou	0.78	283	eP	Pn	21 58 37.1	+0.5
	baz=285						
ENTT				eS	Sn	21 58 49.0	+0.5
	baz=285						
NACB	Ninganchiao	0.79	249	⇑iP	Pn	21 58 36.2	-0.5
	baz=242						
NACB				iS	Sn	21 58 48.6	-0.1
	baz=242						
NDT	Datong Townshi	0.82	280	P	Pn	21 58 37.7	+0.6
	baz=282						
NDT				eS	Sn	21 58 50.2	+0.9
	baz=282						
NWF	Wu-fen Shan	0.83	317	eP	Pn	21 58 37.2	0.0
	baz=310						
NWF				eS	Sn	21 58 49.2	-0.3
	baz=310						
WFSB	Wu-fen Shan	0.83	317	eP	Pn	21 58 37.2	+0.1
	baz=310						
WFSB				eS	Sn	21 58 49.3	-0.1
	baz=310						
TWD	Chiawan	0.83	243	⇑iP	Pn	21 58 36.8	-0.3
	baz=235						
TWD				iS	Sn	21 58 49.4	-0.1
	baz=235						
HWA	Hwalien	0.88	236	eP	Pn	21 58 37.9	+0.2
	baz=229						
HWA				eS	Sn	21 58 51.2	+0.8
	baz=229						
NWLT	Wulai	0.88	291	eP	Pn	21 58 38.1	+0.4
	baz=292						
NWLT				eS	Sn	21 58 50.2	-0.3
	baz=292						
ETLH	Xiulin Townshi	0.88	253	iP	Pn	21 58 37.6	-0.2
	baz=252						
ETLH				iS	Sn	21 58 50.6	0.0
	baz=252						
TNOU	National Taiwa	0.89	320	P	Pn	21 58 37.8	-0.1
	baz=319						
TNOU				S	Sn	21 58 50.3	-0.4
	baz=319						
TWA	Mucha	0.90	305	eP	Pn	21 58 37.9	-0.1
	baz=304						
TWA				eS	Sn	21 58 50.1	-0.9
	baz=304						
NNSB	Datong	0.93	268	P	Pn	21 58 38.6	+0.1
	baz=261						
NNSB				eS	Sn	21 58 52.0	+0.2
	baz=261						
NNSH	Datong	0.93	268	P	Pn	21 58 38.5	0.0
	baz=261						
NNSH				eS	Sn	21 58 51.8	0.0
	baz=261						
NHDH	Xindian Distri	0.94	302	eP	Pn	21 58 38.7	+0.2
	baz=307						
NHDH				eS	Sn	21 58 51.0	-0.8
	baz=307						
NNS	Nan Shan	0.94	269	P	Pn	21 58 38.8	+0.2
	baz=261						
NNS				eS	Sn	21 58 52.2	+0.2
	baz=261						
NSK	Sanguang	0.97	283	eP	Pn	21 58 39.2	+0.2
	baz=282						
NSK				eS	Sn	21 58 53.0	+0.4
	baz=282						
TATO	Taipei	0.97	301	P	Pn	21 58 38.8	-0.1
	baz=301						
TATO				S	Sn	21 58 51.4	-1.2
	baz=301						
TAP	Taipei	1.00	305	eS	Sn	21 58 52.4	-0.6
	baz=304						
ANP	Anpu	1.08	312	eP	Pn	21 58 39.9	-0.3
	baz=304						
ANP				eS	Sn	21 58 53.8	-1.1
	baz=304						
FUSS	Fushou	1.08	259	P	Pn	21 58 40.6	+0.1
	baz=258						
FUSS				S	Sn	21 58 55.5	+0.2
	baz=258						
TWY	Chenhua	1.09	318	eP	Pn	21 58 40.6	+0.3
	baz=309						
TWY				eS	Sn	21 58 55.2	+0.2
	baz=309						
WHF	Hehuan Shan	1.09	253	⇑iP	Pn	21 58 40.7	0.0
	baz=252						
WHF				iS	Sn	21 58 55.2	-0.5
	baz=252						
TWS1	Kuangyinshan	1.10	305	eP	Pn	21 58 40.5	+0.2
	baz=305						
TWS1				eS	Sn	21 58 55.2	0.0
	baz=305						
ESL	Shilin	1.10	234	P	Pn	21 58 39.9	-0.5
	baz=227						
ESL				eS	Sn	21 58 54.2	-1.1
	baz=227						
NTST	Danshui	1.11	309	eP	Pn	21 58 40.6	0.0
	baz=308						
NTST				eS	Sn	21 58 55.3	-0.2
	baz=308						
NTY	Taoyuan	1.14	298	eS	Sn	21 58 56.7	+0.5
	baz=302						
TWT	Tachien	1.14	260	P	Pn	21 58 42.0	+0.9
	baz=256						
TWT				S	Sn	21 58 57.2	+0.7
	baz=256						
TDCB	Techi	1.16	260	P	Pn	21 58 41.9	+0.6
	baz=256						
TDCB				S	Sn	21 58 56.8	0.0
	baz=256						
CHGB	Renai	1.19	250	⇑P	Pn	21 58 42.2	+0.4
	baz=243						
CHGB				eS	Sn	21 58 57.1	-0.6
	baz=243						
EGFH	Guangfu	1.20	229	eP	Pn	21 58 41.4	-0.2
	baz=223						
EGFH				eS	Sn	21 58 57.3	-0.1
	baz=223						
PCYT	Pengchaiyu	1.20	345	eP	Pn	21 58 42.1	+0.4
	baz=341						
NCU	National Centr	1.22	295	eP	Pn	21 58 42.4	+0.5
	baz=294						
NCU				eS	Sn	21 58 58.6	+0.7
	baz=294						
IRIF	Iriomote-Funau	1.22	96	P	Pn	21 58 42.1	+0.2
IRIF				S	Sn	21 58 58.1	+0.2
NCUH	Zhongli	1.22	294	eP	Pn	21 58 42.4	+0.5
	baz=294						
NCUH				eS	Sn	21 58 58.4	+0.4
	baz=294						
NJD	Zhudong	1.23	283	eS	Sn	21 58 59.0	+0.8
	baz=282						
LIOB	Emei	1.28	278	eP	Pn	21 58 43.0	+0.3
	baz=278						
LIOB				eS	Sn	21 59 00.1	+0.7
	baz=278						
NSTT	Nanjuang	1.29	278	eP	Pn	21 58 43.4	+0.6
	baz=277						
NSTT				eS	Sn	21 59 00.2	+0.6

	baz=277						
HSN1	**Hsinchu**	1.30	284	*e*S	Sn	21 59 01.2	+1.4
	baz=283						
HGSD	**Ruisui**	1.32	223	*e*P	Pn	21 58 42.9	-0.4
	baz=222						
HGSD				*e*S	Sn	21 58 59.2	-1.1
	baz=222						
SBCB	**Hsinchu**	1.33	284	*e*S	Sn	21 59 01.3	+0.7
	baz=284						
HATJ	**Hateruma jima**	1.34	107	P	Pn	21 58 44.4	+0.9
HATJ				*e*S	Sn	21 59 01.8	+1.0
WHP	**Taichung City**	1.34	262	P	Pn	21 58 44.9	+1.3
	baz=259						
WHP				*e*S	Sn	21 59 01.5	+0.5
	baz=259						
VWDT	**VWDT**	1.35	239	P	Pn	21 58 44.0	+0.4
	baz=233						
VWDT				S	Sn	21 59 00.9	-0.2
	baz=233						
EHY	**Hungye**	1.38	226	*e*P	Pn	21 58 43.2	-0.8
	baz=226						
EHY				*e*S	Sn	21 59 00.3	-1.3
	baz=226						
WPL	**Puli Township**	1.40	251	*e*P	Pn	21 58 45.0	+0.7
	baz=247						
WPL				*e*S	Sn	21 59 02.9	+0.8
	baz=247						
NJN	**Zhunan**	1.41	279	*e*S	Sn	21 59 02.4	-0.1
	baz=278						
WCS	**Beigang Elemen**	1.42	254	*e*P	Pn	21 58 45.3	+0.8
	baz=251						
WCS				*e*S	Sn	21 59 04.3	+1.6
	baz=251						
NMLH	**Miaoli**	1.47	273	*e*S	Sn	21 59 04.2	+0.4
	baz=272						
JKRS	**Kuro-shima**	1.48	99	P	Pn	21 58 45.9	+0.6
JKRS				S	Sn	21 59 05.1	+1.0
SSLB	**Suanglung**	1.49	243	P	Pn	21 58 45.6	+0.1
	baz=239						
SSLB				*e*S	Sn	21 59 04.6	+0.4
	baz=239						
SMLT	**Sun Moon Lake**	1.49	247	*e*P	Pn	21 58 46.1	+0.5
	baz=243						
SMLT				*e*S	Sn	21 59 07.1	+2.6
	baz=243						
TWQ1	**Liyutan**	1.49	266	*e*P	Pn	21 58 46.2	+0.7
	baz=265						
TWQ1				*e*S	Sn	21 59 05.2	+0.9
	baz=265						
EYUL	**Yuli**	1.49	222	*e*P	Pn	21 58 45.2	-0.3
	baz=231						
EYUL				*e*S	Sn	21 59 05.5	+1.2
	baz=231						
NSY	**Sanyi**	1.50	268	*e*P	Pn	21 58 46.5	+0.9
	baz=268						
NSY				*e*S	Sn	21 59 04.8	+0.3
	baz=268						
TWF1	**Yuli**	1.50	223	*e*P	Pn	21 58 45.0	-0.6
	baz=230						
TWF1				*e*S	Sn	21 59 03.5	-1.1
	baz=230						
TYC	**Yuchr**	1.52	249	*e*P	Pn	21 58 46.5	+0.6
	baz=242						
TYC				*e*S	Sn	21 59 06.3	+1.3
	baz=242						
JIJ	**Ishigaki jima**	1.59	93	P	Pn	21 58 46.9	+0.1
JIJ				S	Sn	21 59 06.1	-0.5
TCU	**Taichung**	1.61	259	*e*P	Pn	21 58 48.0	+1.0
	baz=258						
WHYT	**Xinyi Township**	1.61	242	*e*P	Pn	21 58 48.3	+1.2
	baz=239						
WHYT				*e*S	Sn	21 59 08.1	+0.9
	baz=239						
WDJ	**Dajia District**	1.61	266	*e*P	Pn	21 58 47.4	+0.4
	baz=265						
WDJ				*e*S	Sn	21 59 07.6	+0.5
	baz=265						
FULB	**Fuli**	1.62	219	P	Pn	21 58 47.0	-0.2
	baz=212						
FULB				*e*S	Sn	21 59 06.8	-0.6
	baz=212						
YUS	**Yu-Shan**	1.65	234	*e*P	Pn	21 58 48.4	+0.4
	baz=227						
YUS				*e*S	Sn	21 59 08.3	-0.4
	baz=227						
WJS	**Zhushan**	1.66	248	*e*P	Pn	21 58 49.2	+1.5
	baz=260						
WJS				*e*S	Sn	21 59 10.2	+1.9
	baz=260						
CHKT	**Chengkung**	1.66	215	*e*P	Pn	21 58 46.8	-1.0
	baz=209						
CHKT				*e*S	Sn	21 59 05.7	-2.6
	baz=209						
WNT1	**Nantou City**	1.67	251	*e*P	Pn	21 58 49.2	+1.3
	baz=250						
WNT1				*e*S	Sn	21 59 09.6	+1.1
	baz=250						
WNT	**Mingjian**	1.68	250	*e*P	Pn	21 58 49.5	+1.6
	baz=261						
WNT				*e*S	Sn	21 59 11.3	+2.6
	baz=261						
WCHH	**Zhanghua**	1.73	257	*e*P	Pn	21 58 49.1	+0.5
	baz=268						
WCHH				*e*S	Sn	21 59 10.2	+0.4
	baz=268						
JISG	**Ishigakijimahi**	1.74	86	P	Pn	21 58 48.9	+0.1
JISG				S	Sn	21 59 09.8	-0.4
ALS	**Alishan**	1.75	237	*e*P	Pn	21 58 49.7	+0.6
	baz=230						
ALS				*e*S	Sn	21 59 10.7	0.0
	baz=230						
ELDTW	**Lidau**	1.80	225	*e*P	Pn	21 58 49.0	-0.6
	baz=222						
ELDTW				*e*S	Sn	21 59 10.6	-1.1
	baz=222						
CHN5	**Tsauling**	1.80	242	*e*P	Pn	21 58 50.8	+1.1
	baz=233						
CHN5				*e*S	Sn	21 59 12.8	+1.0
	baz=233						
WGK	**Gukeng**	1.85	246	*e*P	Pn	21 58 52.1	+1.8
	baz=258						
WGK				*e*S	Sn	21 59 16.0	+3.1
	baz=258						
WDLH	**Douliu**	1.87	246	*e*P	Pn	21 58 51.6	+1.1
	baz=258						
WDLH				*e*S	Sn	21 59 15.2	+1.8
	baz=258						
LONT	**Longtian**	1.94	217	*e*P	Pn	21 58 50.7	-0.8
	baz=225						
LONT				*e*S	Sn	21 59 13.5	-1.6
	baz=225						
STYH	**Taoyuan**	1.97	229	*e*P	Pn	21 58 52.6	+0.7
	baz=229						
STYH				*e*S	Sn	21 59 16.1	+0.4
	baz=229						
LDUT	**Ludao**	1.98	206	*e*P	Pn	21 58 51.0	-1.0
	baz=202						
LDUT				*e*S	Sn	21 59 13.3	-2.7
	baz=202						
STYT	**Tauyuan**	1.99	230	*e*P	Pn	21 58 52.9	+0.7
	baz=229						
STYT				*e*S	Sn	21 59 16.9	+0.7
	baz=229						
CHN2	**Minshiung**	1.99	243	*e*S	Sn	21 59 20.1	+3.9
	baz=255						
CHN4	**Tsaushan**	2.00	237	*e*P	Pn	21 58 53.7	+1.5
	baz=236						
CHN4				*e*S	Sn	21 59 18.6	+2.2
	baz=236						
TPUB	**Ta-pu**	2.00	235	*e*P	Pn	21 58 53.5	+1.2
	baz=235						
TPUB				*e*S	Sn	21 59 18.2	+1.8
	baz=235						
WTK	**Tuku**	2.00	248	*e*P	Pn	21 58 52.8	+0.6
	baz=259						
WTK				*e*S	Sn	21 59 17.7	+1.3
	baz=259						
WTP	**Ta-pu**	2.04	234	*e*P	Pn	21 58 54.0	+1.1
	baz=233						
WTP				*e*S	Sn	21 59 20.2	+2.7
	baz=233						
TWGBT	**Beinan**	2.04	217	*e*P	Pn	21 58 52.1	-0.7
	baz=223						
TWGBT				*e*S	Sn	21 59 15.1	-2.4
	baz=223						
TWG	**Pinlang**	2.04	217	*e*P	Pn	21 58 52.1	-0.8
	baz=223						
TWG				*e*S	Sn	21 59 15.3	-2.2
	baz=223						
CHY	**Chiayi**	2.05	242	*e*P	Pn	21 58 53.8	+0.9
	baz=254						
CHY				*e*S	Sn	21 59 19.1	+1.5
	baz=254						
TTN	**Taitung**	2.06	214	*e*S	Sn	21 59 18.6	+0.8
	baz=222						
JTJ	**Tarama**	2.10	85	P	Pn	21 58 54.4	+0.8
JTJ				S	Sn	21 59 19.3	+0.5
TWK	**Hsinying**	2.12	236	*e*P	Pn	21 58 55.2	+1.2
	baz=236						
TWK				*e*S	Sn	21 59 21.4	+1.9
	baz=236						
CHN1	**Nanshi**	2.14	234	*e*P	Pn	21 58 55.2	+1.0
	baz=234						
CHN1				*e*S	Sn	21 59 20.9	+1.0
	baz=234						
SNST	**Tainan City**	2.14	235	*e*P	Pn	21 58 55.4	+1.2
	baz=235						
SNST				*e*S	Sn	21 59 22.4	+2.5
	baz=235						
WSF	**Szhu**	2.16	248	*e*P	Pn	21 58 54.8	+0.4
	baz=257						
WSF				*e*S	Sn	21 59 21.1	+0.9
	baz=257						
SGST	**Jiashian**	2.16	231	*e*P	Pn	21 58 55.1	+0.6
	baz=231						
SGST				*e*S	Sn	21 59 21.0	+0.6
	baz=231						
SLGT	**Liugui**	2.18	228	*e*P	Pn	21 58 56.3	+1.6
	baz=228						
ICHU	**Yijhu**	2.23	241	*e*P	Pn	21 58 57.1	+1.7
	baz=241						
ECL	**Taimali**	2.29	216	*e*P	Pn	21 58 55.2	-0.9
	baz=216						
ECL				*e*S	Sn	21 59 21.3	-2.1
	baz=216						
CHN8	**Yiju**	2.30	241	*e*S	Sn	21 59 25.8	+2.2
	baz=241						
SSD	**Sandimen**	2.36	224	*e*P	Pn	21 58 58.5	+1.4
	baz=224						
SSD				*e*S	Sn	21 59 27.7	+2.5
	baz=224						
MASBT	**Mashibuluo**	2.46	222	*e*P	Pn	21 58 59.2	+0.7
	baz=222						
MASBT				*e*S	Sn	21 59 28.0	+0.5
	baz=222						
EAST	**Anshuo**	2.52	215	*e*P	Pn	21 58 58.6	-0.7
	baz=210						
EAST				*e*S	Sn	21 59 28.6	-0.5
	baz=210						
LAY	**Lan-yu**	2.54	198	*e*P	Pn	21 58 58.3	-1.3
	baz=192						
JIRB	**Irabujima**	2.54	81	S	Sn	21 59 29.0	-0.6
PTTC	**Pingtan**	2.60	294	*e*P	Pn	21 58 59.7	-0.6
	baz=293						
JIKM	**Ikemajima**	2.63	79	S	Sn	21 59 31.5	0.0
JMJ2	**Miyako jima3**	2.67	84	S	Sn	21 59 33.5	+0.8
VWUC	**VWUC**	2.74	282	*e*P	Pn	21 59 01.6	-0.6
	baz=281						
JOGS	**Gusukube**	2.75	83	*e*S	Sn	21 59 35.2	+0.7
PNG	**Penghu**	2.75	252	*e*P	Pn	21 59 02.4	-0.1
	baz=251						
PNG				*e*S	Sn	21 59 33.2	-1.4
	baz=251						
PHUB	**P'eng-hu**	2.76	250	*e*P	Pn	21 59 01.6	-0.9
	baz=250						
PHUB				*e*S	Sn	21 59 32.5	-2.3
	baz=250						
WDGT	**Dungji**	2.78	245	*e*P	Pn	21 59 02.7	-0.1
	baz=245						
WDGT				*e*S	Sn	21 59 35.1	-0.3
	baz=245						
MATB	**Ma-tsu**	2.79	308	*e*P	Pn	21 59 02.4	-0.5
	baz=307						
MSUT	**Lienchiang**	2.81	308	*e*P	Pn	21 59 02.4	-0.9
	baz=298						
MSUT				*e*S	Sn	21 59 34.7	-1.4
	baz=298						
VCHM	**Qimei**	3.00	246	*e*S	Sn	21 59 39.9	-0.7
	baz=236						
PTMZ	**Houxiangcun**	3.04	282	*e*P	Pn	21 59 05.8	-0.5
	baz=281						
LYJJ	**Jianjiangzhen**	3.16	312	*e*P	Pn	21 59 07.3	-0.7
	baz=311						
LYJJ				*e*S	Sn	21 59 43.0	-1.6
	baz=311						
MHZQ	**Yeshan**	3.46	299	*e*P	Pn	21 59 11.3	-0.7
	baz=299						
AXDP	**Jialang**	4.06	277	*e*P	Pn	21 59 20.0	-0.2
	baz=276						

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*IDC **14** 21:58:49.5±6.7, 22.°36S×175.°43W, h98km±49km, mb3.4/7, mb1 3.7/8, mb1mx3.6/36, mbtmp3.8/8, MS3.4/4, Ms1 3.4/4, ms1mx3.0/19, Error ellipse: s-maj=65.0km s-min=24.8km az=148.0*

ISC 14 21:58:49.6±1.1**, 22.°4S**±0.°3×**175.°4W**±0.°2**, h100km, n21, σ1.s32**/12**, mb3.8**/8**, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	7.69	306	P	Pn	22 00 39.7	+0.7
	1.5nm,0.3s,baz=130,slow=15,SNR=13						
MSVF				LR	LR	22 03 24.4	
	comp=Z,564nm,20.1s,baz=180,slow=36						
DZM	**Mont Dzumac**	16.83	267	*e*LR	LR	22 06 16.5	
	comp=Z,142nm,21.9s						
PAE	**Paea**	24.68	84	*e*T	T	22 29 12.5	
	7.4nm,0.3s						
PPT2	**Papeete2**	24.70	84	*e*LR	LR	22 09 58.9	
	comp=Z,96nm,24.2s						
PPT2	**Papeete2**	24.70	84	*e*T	T	22 29 15.7	
	5.0nm,0.4s						
PPT	**Papeete**	24.71	84	LR	LR	22 13 31.7	
	comp=Z,39nm,19.2s,baz=186,slow=36						
PMG	**Port Moresby**	38.14	284	LR	LR	22 18 53.7	
	comp=Z,64nm,20.1s,baz=99,slow=32						
STKA	**Stephens Creek**	39.23	247	LR	LR	22 20 18.0	
	comp=Z,51nm,18.6s,baz=33,slow=33						
ASAR	**Alice Springs**	46.49	258	P	**P**	**22 07 06.2**	**-1.0**
	0.5nm,0.4s,baz=96,slow=7.1,SNR=13						
ASAR				PcP	**PcP**	**22 08 39.9**	**-0.3**
	0.6nm,0.9s,baz=100,slow=3.9,SNR=2.6						
WRA	**Warramunga Arr**	46.78	263	P	**P**	**22 07 08.5**	**-0.9**
	1.2nm,0.7s,baz=102,slow=8.1,SNR=12						
MJAR	**Matsushiro Arr**	73.14	322	P	**P**	**22 10 07.3**	**-2.0**
	1.5nm,0.9s,baz=121,slow=6.5,SNR=2.3						
NVAR	**Mina Array Bea**	80.73	42	P	**P**	**22 10 51.4**	**-0.7**
	0.2nm,0.5s,baz=225,slow=5.7,SNR=2.7						
USRK	**Ussuriysk Ar.**	81.86	325	P	**P**	**22 10 58.5**	**+0.8**
	0.9nm,0.5s,baz=143,slow=3.1,SNR=1.7						
H03S2	**Juan Fernandez**	82.94	124	T	T	23 42 42.2	
	baz=246,slow=74,SNR=9.8						
H03S1	**Juan Fernandez**	82.96	124	T	T	23 42 43.4	
	baz=246,slow=74,SNR=7.0						
H03S3	**Juan Fernandez**	82.96	124	T	T	23 42 42.6	
	baz=246,slow=74,SNR=8.1						
TXAR	**Lajitas Array**	86.03	56	P	**P**	**22 11 20.8**	**+1.4**
	0.3nm,0.9s,baz=224,slow=5.0,SNR=2.2						
ILAR	**Eielson Array**	89.59	12	P	**P**	**22 11 33.9**	**-1.5**
	0.4nm,0.8s,baz=187,slow=6.4,SNR=2.3						
CMAR	**Chiang Mai Arr**	93.02	289	P	**P**	**22 11 54.1**	**+1.7**
	1.3nm,0.4s,baz=122,slow=2.7,SNR=9.2						
AKASG	**Malin Array Be**	145.79	332	PKPbc	**PKPdf**	**22 18 17.1**	**+0.8**
	2.4nm,0.6s,baz=42,slow=4.4,SNR=11						
BRTR	**Keskin Array B**	149.88	312	PKPbc	**PKPbc**	**22 18 29.1**	**+0.6**
	1.0nm,0.8s,baz=103,slow=3.3,SNR=6.7						

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*NNC **14** 21:58:57.8±4.8, 36.°79N×70.°72E, h109km±118km, mb3.0, mpv3.5, Error ellipse: s-maj=59.6km s-min=27.7km az=54.0*

ISC 14 21:58:51.2±1.8**, 36.°3N**±0.°1×**70.°9E**±0.°2**, h100km, n11, σ2.s39**/14**, 1C-2D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DHRM	**DHARAMSHALA**	6.05	131	*e*P	**Pn**	**22 00 19.3**	**+0.9**
DHRM				*e*S	**Sn**	**22 01 25.4**	**-0.9**
DHRM				IAML		22 01 28.5	
	comp=N,107nm,0.4s						
DHRM				IAML		22 01 28.6	
	comp=E,112nm,0.1s						
AML	**Almayashu**	6.19	20	P	**Pn**	**22 00 21.8**	**+1.5**
	SNR=30						
UCH	**Uchtor**	6.53	24	P	**Pn**	**22 00 27.0**	**+2.0**
	SNR=5.1						
EKS2	**Erkin-Say**	6.71	19	P	**Pn**	**22 00 28.7**	**+1.5**
	SNR=9.1						
KK31	**Karatay Array**	6.77	358	P	**Pn**	**22 00 28.6**	**+0.6**
	comp=E,1.8nm,0.5s,baz=180,slow=12,SNR=46						
KK31				⇓S	**Sn**	**22 01 39.4**	**-4.2**
	comp=E,9.5nm,0.6s						
AAK	**Ala-Archa**	6.89	23	P	**Pn**	**22 00 31.4**	**+1.7**
	SNR=6.3						
AAK	**Ala-Archa**	6.89	23	⇓P	**Pn**	**22 00 31.4**	**+1.7**
	comp=E,4.3nm,0.7s						
CHMS	**Chumysh**	7.30	23	P	**Pn**	**22 00 37.4**	**+2.3**
	SNR=6.8						
SMLA	**Simla**	7.37	133	*e*P	**Pn**	**22 00 37.6**	**+1.6**
SMLA				*e*S	**Sn**	**22 01 53.6**	**-4.3**
SMLA				IAML		22 01 59.8	
	comp=E,27nm,0.5s						
SMLA				IAML		22 01 59.9	
	comp=N,31nm,0.0s						
TKM2	**Tokmak 2**	7.52	27	⇑P	**Pn**	**22 00 39.8**	**+1.5**
	comp=N,1.8nm,0.6s						
AB31	**Akbulak array**	15.19	332	P	**Pn**	**22 02 20.4**	**+0.3**
	comp=N,0.3nm,0.3s,baz=152,slow=13,SNR=10						

IDC 14 22:07:57.1±16.0**, 1.°79N**×**127.°45E, h296km**±167km**, mb2.7**/3**, mb1 2.9**/3**, mb1mx2.5**/48**, mbtmp3.3**/3**, Error ellipse: s-maj=166.4km s-min=27.3km az=58.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	12.50	197	P	Pn	22 10 46.1	+0.2
	4.7nm,0.3s,baz=20,slow=12,SNR=8.2						
WRA	**Warramunga Arr**	22.63	163	P	P	22 12 33.0	-0.3
	0.8nm,0.4s,baz=342,slow=10,SNR=12						
ASAR	**Alice Springs**	26.07	166	P	P	22 13 04.7	+0.3
	0.3nm,0.4s,baz=344,slow=7.2,SNR=7.4						
MKAR	**Makanchi Array**	59.55	326	P	P	22 17 30.0	0.0
	0.1nm,0.4s,baz=124,slow=7.3,SNR=2.0						

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*IDC **14** 22:09:10.9±8.6, 35.°80N×70.°29E, h0km, mb3.8/3, mb1 3.6/9, mb1mx3.3/57, mbtmp3.7/9, ML3.3/6, Error ellipse: s-maj=125.5km s-min=28.3km az=163.0*

*NNC **14** 22:09:16.0±7.5, 37.°05N×72.°17E, h0km, mb4.3, mpv3.9, Error ellipse: s-maj=62.0km s-min=46.3km az=137.0*

ISC 14 22:09:23.1±2.3**, 36.°2N**±0.°2×**70.°5E**±0.°1**, h100km, n22, σ1.s50**/26**, 2C-3D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	6.41	22	P	**Pn**	**22 10 55.4**	**+0.2**
	SNR=40						
DZA	**Taraz**	6.70	5	Pg	**Pn**	**22 10 58.6**	**-0.1**
	22nm,0.6s						
DZA				Lg	Lg	22 12 11.6	
	41nm,0.3s						
UCH	**Uchtor**	6.76	26	P	**Pn**	**22 11 00.6**	**+0.5**
	SNR=8.6						
MRKS	**Merke**	6.85	17	Pg	**Pn**	**22 11 01.1**	**+0.2**
	6.3nm,0.3s						
MRKS				Lg	Lg	22 12 16.4	
	9.5nm,0.3s						
KK31	**Karatay Array**	6.88	0	P	**Pn**	**22 11 00.3**	**-0.9**
	2.6nm,0.3s,baz=182,slow=12,SNR=173						
KK31				⇑S	**Sn**	**22 12 15.2**	**-2.6**
	4.3nm,0.4s						
EKS2	**Erkin-Say**	6.92	21	P	**Pn**	**22 11 02.2**	**+0.3**
	SNR=10						
AAK	**Ala-Archa**	7.12	25	Pn	**Pn**	**22 11 05.1**	**+0.5**
	2.0nm,0.3s,baz=195,slow=8.4,SNR=31						
AAK				Sn	**Sn**	**22 12 23.3**	**-0.7**
	1.0nm,0.3s,baz=356,slow=20,SNR=11						
AAK	**Ala-Archa**	7.12	25	P	**Pn**	**22 11 05.1**	**+0.5**
	SNR=7.2						
AAK	**Ala-Archa**	7.12	25	⇓P	**Pn**	**22 11 05.0**	**+0.3**
	3.0nm,0.4s						
AAK				⇓S	**Sn**	**22 12 22.9**	**-1.1**
	12nm,0.7s						
CHMS	**Chumysh**	7.53	25	P	**Pn**	**22 11 10.3**	**+0.3**
	SNR=15						
TKM2	**Tokmak 2**	7.77	29	P	**Pn**	**22 11 13.9**	**+0.4**
	SNR=9.3						
TKM2	**Tokmak 2**	7.77	29	⇑P	**Pn**	**22 11 13.6**	**+0.1**
	3.1nm,0.5s						
TKM2				⇓S	**Sn**	**22 12 39.0**	**-0.8**
	3.1nm,0.6s						
KST	**Kastek**	8.02	30	Pg	**Pn**	**22 11 17.7**	**+0.9**
	3.3nm,0.3s						
KST				Lg	Lg	22 12 45.5	
	2.9nm,0.5s						
GEYT	**Alibeck**	10.03	283	Pn	Pn	22 11 36.4	-7.8
	0.5nm,0.3s,baz=102,slow=12,SNR=5.8						
GEYT				Sn	Sn	22 13 22.4	-12
	0.3nm,0.3s,baz=88,slow=36,SNR=1.8						
MKAR	**Makanchi Array**	13.76	36	Pn	**Pn**	**22 12 34.6**	**+0.8**
	0.0nm,0.3s,baz=224,slow=14,SNR=2.3						
AB31	**Akbulak array**	15.14	333	P	**Pn**	**22 12 48.0**	**-3.3**
	2.7nm,0.4s,baz=153,slow=12,SNR=63						
AB31				P	**Sn**	**22 15 43.1**	**+4.8**
	3.2nm,1.4s,baz=317,slow=5.7,SNR=3.5						
KURBB	**Kurchatov Arra**	15.52	19	Pn	**Pn**	**22 12 55.5**	**-0.6**
	0.0nm,0.3s,baz=208,slow=11,SNR=3.1						
BVAR	**Borovoye Array**	16.80	360	P	**P**	**22 13 12.8**	**+0.2**
	0.2nm,0.3s,baz=152,slow=9.8,SNR=2.2						
AKTO	**Aktyubinsk**	16.82	331	P	**Pn**	**22 13 11.2**	**-1.0**
	0.4nm,0.3s,baz=144,slow=17,SNR=6.0						
ZALV	**Zalesovo Beam**	20.34	25	P	**P**	**22 13 52.6**	**+1.5**
	4.3nm,0.3s,baz=217,slow=10,SNR=19						
ARU	**Arti**	21.77	342	P	**P**	**22 14 07.3**	**+1.0**
	0.3nm,0.3s,baz=105,slow=23,SNR=3.3						
BELG	**Belogornoye**	22.85	322	P	**P**	**22 14 17.8**	**+0.2**
	6.0nm,0.9s,baz=95,slow=11,SNR=2.9						

SOME 14 22:16:47.2, 42.°82N×81.°15E, h5km, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHLS	**Shalkode**	1.28	286	*e*P	Pg	22 17 05.8	-6.0
	1.0nm,0.3s						
SHLS				*e*S	Sg	22 17 18.9	-10
	2.9nm,0.2s						
UZB	**Uzynbulak**	1.60	283	*e*P	Pn	22 17 13.6	-2.6
	2.5nm,0.1s						
UZB				*e*S	Sn	22 17 36.6	-0.7
	1.3nm,0.2s						
DJR	**Jarkent**	1.81	327	*e*P	Pg	22 17 21.4	-0.5
	0.5nm,0.2s						
DJR				*e*S	Sg	22 17 46.2	+0.9
	3.9nm,0.2s						
KPKS	**Kokpek**	1.92	291	*e*P	Pn	22 17 17.4	-3.3
	0.4nm,0.2s						
KPKS				*e*S	Sn	22 17 43.7	-1.5
	3.4nm,0.3s						
SATY	**Saty**	2.03	278	*e*P	Pn	22 17 19.9	-2.3
	0.8nm,0.1s						
SATY				*e*S	Sn	22 17 47.7	-0.3
	2.0nm,0.2s						
MNBS	**Baschi**	2.37	303	*e*P	Pn	22 17 28.3	+1.5
	0.5nm,0.3s						
MNBS				*e*S	Sg	22 18 03.0	-0.3
	2.9nm,0.3s						
MNBS	**Baschi**	2.37	303	*e*P	Pb	22 17 31.0	+0.6
	0.5nm,0.3s						
MNBS				*e*S	Sg	22 18 02.8	-0.4
	2.9nm,0.3s						

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*BJI **14** 22:52:16.0±0.0, 4.°20S×139.°87E, h86km, mB5.1/27, mb4.7/42, Ms4.6/5, Ms7 4.3/5*

*IDC **14** 22:52:20.1±0.7, 3.°96S×139.°73E, h90km±5km, mb4.1/9, mb1 4.2/14, mb1mx4.1/26, mbtmp4.5/14, MS3.3/9, Ms1 3.3/9, ms1mx3.0/32, Error ellipse: s-maj=17.1km s-min=11.9km az=83.0*

*DJA **14** 22:52:20.2±0.2, 4°S±3°×14°0E±°, h85km±4km, M4.9/28, mb5.0/28, mB5.2/7, MLv5.2/7, Mw(mB)4.5/7, MwMwp5.7/2, Mwp5.8/2*

*NEIC **14** 22:52:20.5±1.0, 4.°05S±0.°09×139.°58E±0.°09, h92km±6km, mb4.7/48, Error ellipse: s-maj=15.0km s-min=11.4km az=49.0*

ISC 14 22:52:20.5±0.3**, 4.°05S**±0.°04×**139.°66E**±0.°04**, h100km, n171, σ1.s94**/181**, mb4.6**/49**, 3C-1D, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GENI	Genyem	1.54	19	P	Pn	22 52 44.2	-3.1
JAY	Jayapura	1.85	34	P	Pn	22 52 47.4	-3.9
	694nm,0.3s,baz=210,slow=8.5,SNR=1980						
JAY				S	Sn	22 53 07.8	-6.9
	521nm,0.3s,baz=265,slow=22,SNR=16						
JAY	Jayapura	1.85	34	P	Pn	22 52 47.2	-4.1
SRPI	Serui, Papua	4.04	302	P	Pn	22 53 19.4	-0.9
MMPI	Merauke	4.44	171	P	Pn	22 53 28.7	+2.9
BAKI	Biak	4.54	309	P	Pn	22 53 23.9	-3.2
FAKI	Fak Fak	7.48	278	Pn	Pn	22 54 05.6	-1.5
FAKI	Fak Fak	7.48	278	P	Pn	22 54 06.0	-1.0
	0.4nm128nm,1.1s						
MANU	Manus Island	7.95	76	Pn	Pn	22 54 14.3	+0.8
SIJI	Sorong	8.96	290	P	Pn	22 54 26.1	-1.0
	5.6nm,0.3s,baz=125,slow=23,SNR=16						
SIJI				S	Sn	22 56 05.2	-1.2
	1.2nm,0.3s,baz=297,slow=22,SNR=1.5						
SIJI				LR	LR	22 58 28.1	
	comp=Z,167nm,18.8s,baz=278,slow=41						
SWI	Sorong	8.97	290	P	Pn	22 54 26.2	-1.1
	74nm,0.8s						
PMG	Port Moresby	9.15	126	P	Pn	22 54 27.6	-2.1
	5.6nm,0.3s,baz=242,slow=0.9,SNR=6.6						
PMG				S	Sn	22 56 09.0	-2.0
	2.1nm,0.3s,baz=224,slow=21,SNR=1.1						
PMG				LR	LR	22 59 30.8	
	comp=Z,147nm,21.2s,baz=256,slow=47						
PMG	Port Moresby	9.15	126	Pn	Pn	22 54 28.3	-1.5
COEN	Coen	10.44	161	P	Pn	22 54 47.7	+0.4
	baz=10						
COEN	Coen	10.44	161	Pn	Pn	22 54 47.7	+0.4
KDU	Kakadu	11.14	219	P	Pn	22 54 55.5	-1.3
	baz=11,SNR=903						
RABL	Rabaul	12.48	91	Pn	Pn	22 55 15.5	+0.8
RABL	Rabaul	12.48	91	P	P	22 55 20.5	-1.9
TNTI	Ternate	13.18	291	Pn	Pn	22 55 22.3	-1.7
SANI	Sanana	13.79	278	P	Pn	22 55 30.1	-1.8
	19nm,0.8s						
MTSU	Mount Surprise	14.72	162	P	Pn	22 55 46.0	+2.1
	baz=15,SNR=19						
KNRA	Kununurra	15.76	222		Pn	22 55 56.3	-0.6
SOEI	Soe	16.29	249	P	Pn	22 56 04.4	+0.7
SOEI				IAmb	IAmb	22 56 19.5	
	comp=Z,65nm,0.8s						
SOEI	Soe	16.29	249	P	Pn	22 56 04.8	+1.1
	comp=Z,87nm,0.8s						
KMSI	Cibinong	16.32	286	P	P	22 56 06.0	+0.9
	comp=Z,341nm,0.9s						
QIS	Mount Isa	16.41	180	P	Pn	22 56 03.9	-1.0
	baz=16,SNR=75						
WB0	Warramunga Arr	16.44	198	Pn	Pn	22 56 03.6	-1.7
WR0	Warramunga Arr	16.58	197	Pn	Pn	22 56 06.0	-1.0
WB2	Warramunga Arr	16.62	198	P	Pn	22 56 07.1	-0.5
	baz=17						
WRA	Warramunga Arr	16.62	198	P	Pn	22 56 07.2	-0.4
	comp=Z,2.1nm,0.3s,baz=23,slow=12,SNR=130						
WRA				S	Sn	22 59 03.8	-8.4
	comp=Z,2.2nm,0.3s,baz=14,slow=22,SNR=7.5						
BATI	Baumata	17.00	248	P	P	22 56 14.2	+1.7
	comp=Z,6.7nm,0.3s,baz=0.4,slow=2.6,SNR=7.2						
BATI				S	Sn	22 59 13.5	-7.9
	comp=Z,3.2nm,0.3s,baz=97,slow=18,SNR=2.2						
BATI	Baumata	17.00	248	P	P	22 56 13.8	+1.2
	comp=Z,48nm,0.9s						
CTAO	Charters Tower	17.19	159	P	P	22 56 17.2	+2.6
GTOI	Gorontalo	17.27	285	P	Pn	22 56 16.4	+0.8
	comp=Z,638nmcomp=Z,57nm,1.4s						
APSI	Ampana	18.26	279	P	Pn	22 56 28.5	+1.0
	comp=Z,856nmcomp=Z,60nm,1.2s						
MRSI	Marisa	18.27	284	P	P	22 56 27.0	+0.5
	comp=Z,783nmcomp=Z,91nm,0.6s						
GUMO	Guam	18.28	16	LR	LR	23 02 33.0	
	comp=Z,92nm,20.3s,baz=116,slow=34						
EDFI	Ende, Flores	18.45	254	P	Pn	22 56 30.2	+0.3
	comp=Z,11nm,1.3s						
BNSI	Bone	19.50	268	P	Pn	22 56 43.0	+0.8
	comp=Z,12µmcomp=Z,40nm,0.9s						
TOLI2	Tolitoli	19.55	285	P	P	22 56 41.5	+0.9
FITZ	Fitzroy Crossi	19.57	223	P	P	22 56 41.3	+0.6
	baz=20,SNR=67						
FITZ	Fitzroy Crossi	19.57	223	P	P	22 56 41.9	+1.2
	comp=Z,3.6nm,0.3s,baz=38,slow=8.1,SNR=75						
FITZ				S	S	23 00 09.5	-6.9
	comp=Z,5.7nm,0.3s,baz=179,slow=11,SNR=10						
FITZ	Fitzroy Crossi	19.57	223		P	22 56 41.1	+0.4
FITZ				IAmb	IAmb	22 56 43.7	
	comp=Z,24nm,0.8s						
TTSI	Tana Toraja	19.82	272	P	Pn	22 56 46.4	+0.4
	comp=Z,2µmcomp=Z,19nm,1.1s						
SPSI	Sidrap Palu	19.84	270	P	Pn	22 56 45.6	-0.6
	comp=Z,14nm,1.1s						
KAPI	Kappang	19.86	266	P	P	22 56 45.3	+1.4
	comp=Z,0.3nm,0.3s,baz=102,slow=12,SNR=2.2						
BASI	Baing, Sumba	19.89	251	P	Pn	22 56 46.7	0.0
	comp=Z,77nm,0.5s						
AS31	Alice Springs	20.27	195	P	P	22 56 49.9	+1.6
ASAR	Alice Springs	20.27	195	P	P	22 56 50.2	+1.9
	comp=Z,91nm,0.6s,baz=28,slow=11,SNR=979						
ASAR				pP	pP	22 57 07.2	-0.2
	comp=Z,48nm,0.7s,baz=35,slow=11,SNR=7.1						
ASAR				S	S	23 00 28.7	-1.7
	comp=Z,20nm,0.9s,baz=14,slow=24,SNR=4.9						
ASAR	Alice Springs	20.27	195	P	P	22 56 49.3	+1.0
ASPA	Alice Springs	20.28	195	P	P	22 56 49.8	+1.5
	baz=20						
QLP	Quilpie	22.83	169	P	P	22 57 16.4	+1.2
	baz=23,SNR=5.6						
MYLDM	Lahad Datu	23.04	293	P	P	22 57 19.5	+2.1
MYLDM				IAmb	IAmb	22 57 23.0	
	comp=Z,47nm,0.9s						
WRKA	Warakurna	23.55	207	P	P	22 57 22.1	0.0
	baz=24,SNR=88						
EIDS	Eidsvold	23.87	154	P	P	22 57 26.4	+1.5
	baz=24,SNR=4.0						
EIDS	Eidsvold	23.87	154	P	P	22 57 26.9	+2.0
EIDS				IAmb	IAmb	22 57 49.3	
	comp=Z,17nm,0.8s						
KKM	Kota Kinabalu	25.47	293	P	P	22 57 39.8	+0.1
KKM				IAmb	IAmb	22 57 41.2	
	comp=Z,35nm,0.8s						
TGY	Tagaytay City	25.89	315	P	P	22 57 43.9	+0.5
	comp=Z,97nm,0.3s,baz=176,slow=13,SNR=5.4						
STKA	Stephens Creek	27.74	176	P	P	22 58 00.1	+0.4
	baz=28,SNR=6.1						
STKA	Stephens Creek	27.74	176	P	P	22 57 59.8	+0.1
	comp=Z,2.9nm,0.6s,baz=357,slow=7.1,SNR=6.8						
STKA				LR	LR	23 09 56.8	
	comp=Z,78nm,19.2s,baz=20,slow=38						
STKA	Stephens Creek	27.74	176	P	P	22 57 59.8	+0.1
FORT	Forrest	28.75	201	P	P	22 58 09.8	+1.1
	baz=29,SNR=11						
BBOO	Buckleboo	28.81	186	P	P	22 58 09.5	+0.2
	baz=29,SNR=6.3						
BBOO	Buckleboo	28.81	186	P	P	22 58 09.5	+0.2
BBOO				IAmb	IAmb	22 58 30.4	
	comp=Z,42nm,1.4s						
HTT	Hallett	29.23	181	P	P	22 58 13.9	+0.8
	baz=29,SNR=4.2						
MEEK	Meekatharra	30.16	220	P	P	22 58 21.7	+0.4
	baz=30,SNR=8.1						
GIRL	Giralia	30.77	231	P	P	22 58 28.1	+1.4
ARPS	Mount Arapiles	32.62	177	P	P	22 58 44.2	+1.4
	baz=33,SNR=6.1						
MORW	Morawa	33.48	219	P	P	22 58 50.9	+0.5
	baz=34,SNR=5.8						
MORW	Morawa	33.48	219	P	P	22 58 50.5	0.0
TOO	Toolangi	33.78	172	P	P	22 58 53.7	+0.8
KLBR	Kellerberrin	34.27	214	P	P	22 58 57.9	+0.7
	baz=34,SNR=6.5						
NWAO	Narrogin (SRO)	35.56	213	P	P	22 59 08.9	+0.7
	comp=Z,6.3nm,0.6s,baz=50,slow=11,SNR=7.7						
NWAO				LR	LR	23 15 27.1	
	comp=Z,111nm,19.6s,baz=274,slow=39						
NWAO	Narrogin (SRO)	35.56	213	P	P	22 59 09.0	+0.7
BKNI	Bangkinang	38.83	276	P	P	22 59 36.4	+0.1
UBPT	Khong Chiam	38.92	300	P	P	22 59 37.0	+0.1
UBPT				IAmb	IAmb	23 00 05.2	
	comp=Z,12nm,1.4s						
TAU	Tasmania Unive	39.29	171	P	P	22 59 41.4	+1.8
IPM	Ipoh	39.52	282	P	P	22 59 42.2	+0.3
IPM				IAmb	IAmb	22 59 44.3	
	comp=Z,16nm,1.2s						
KULM	Kulim	40.05	283	P	P	22 59 46.5	+0.1
KULM				IAmb	IAmb	22 59 52.4	
	comp=Z,11nm,1.2s						
NJ2	Nanjing	40.99	333	eP	P	22 59 55.0	+1.2
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
GSI	Gunungsitoli	42.39	276	P	P	23 00 04.5	-1.0
GSI				IAmb	IAmb	23 00 06.8	
	comp=Z,11nm,0.9s						
KSRS	Korea Array	42.72	346	LR	LR	23 17 28.5	
	comp=Z,20nm,20.0s,baz=105,slow=35						
GYA	Guiyang	44.03	315	⇓P	P	23 00 19.9	+1.2
GYA				pmax	pmax		
	comp=Z,15nm,0.7s						
ENH	Enshi	44.70	322	P	P	23 00 24.3	+0.5
ENH				IAmb	IAmb	23 00 25.2	
	comp=Z,9.9nm,0.9s						
CM31	Chiang Mai Arr	45.92	300	P	P	23 00 34.0	+0.3
CMAR	Chiang Mai Arr	45.92	300	P	P	23 00 34.3	+0.6
	comp=Z,2.3nm,0.7s,baz=121,slow=5.8,SNR=17						
CMAR	Chiang Mai Arr	45.92	300	P	P	23 00 33.8	+0.2
CHTO	Chiang Mai	46.08	301	P	P	23 00 35.0	+0.1
KMI	Kunming	46.11	311	⇑P	P	23 00 35.6	+0.3
KMI				pP	pP	23 00 59.3	0.0
KMI				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KMI	Kunming	46.11	311	P	P	23 00 35.3	0.0
KMI				IAmb	IAmb	23 00 37.4	
	comp=Z,7.8nm,0.9s						
XAN	Xi'an	47.71	325	P	P	23 00 47.3	-0.1
XAN				pP	pP	23 01 09.4	-1.9
XAN				pmax	pmax		
	comp=Z,9.0nm,1.0s						
XAN	Xi'an	47.71	325	P	P	23 00 47.7	+0.3
XAN				IAmb	IAmb	23 00 48.3	
	comp=Z,6.4nm,0.9s						
ASAJ	Asahikawa	48.02	3	LR	LR	23 18 56.9	
	comp=Z,29nm,20.0s,baz=182,slow=33						
TUWZ	Tuamarina	48.24	145	P	P	23 00 52.1	+0.8
BKZ	Black Stump Fm	48.33	141	P	P	23 00 53.1	+0.9
CD2	Chengdu	48.80	318	P	P	23 00 56.5	+0.6
CD2				S	S	23 07 54.0	+2.3
CD2				pmax	pmax		
	comp=Z,20nm,1.0s						
CD2				pmax	pmax		
	comp=Z,240nm,5.9s						
HHC	Hu-ho-hao-te	51.55	333	eP	P	23 01 18.0	+1.5
HHC				pmax	pmax		
	comp=Z,3.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,220nm,5.9s						
LZH	Lanzhou	52.12	323	eP	P	23 01 22.4	+1.5
LZH				pP	pP	23 01 44.8	-0.3
LZH				sP	sP	23 01 57.1	+0.7
LZH				pmax	pmax		
	comp=Z,14nm,1.1s						
KLR	Kul'dur	53.51	354	LR	LR	23 23 02.7	
	comp=Z,24nm,18.7s,baz=119,slow=34						
SHL	Shillong	54.87	305	P	P	23 01 41.2	0.0
SHL				IAmb	IAmb	23 01 41.8	
	comp=Z,4.0nm,0.7s						
GTA	Gaotai	56.70	324	⇑P	P	23 01 54.9	+0.9
GTA				pP	pP	23 02 14.4	-4.2
GTA				sP	sP	23 02 26.8	-2.9
GTA				pmax	pmax		
	comp=Z,8.0nm,1.2s						
LSA	Lhasa	57.29	309	P	P	23 01 59.0	+0.3
ODAN	Odare	59.08	305	eP	P	23 02 11.6	+0.6
	comp=Z,7.1nm,0.7s						
SONM	Songino Array	59.33	335	P	P	23 02 11.8	-0.4
	comp=Z,0.3nm,0.5s,baz=149,slow=6.4,SNR=2.6						
SONM				LR	LR	23 29 24.2	
	comp=Z,38nm,18.6s,baz=154,slow=38						
SONM	Songino Array	59.33	335	P	P	23 02 12.3	+0.1
RAMN	Ramite	59.77	304	eP	P	23 02 16.8	+1.1
GUN	Gumba	60.73	305	eP	P	23 02 23.1	+0.7
	comp=Z,8.7nm,0.7s						
KKN	Kakani	61.17	305	eP	P	23 02 25.5	+0.2
	comp=Z,13nm,0.7s						
DMN	Daman	61.25	304	eP	P	23 02 26.7	+0.9
GKN	Gorkha	61.78	305	eP	P	23 02 29.7	+0.4
	comp=Z,16nm,0.7s						
DANN	Dangsing	62.63	305	eP	P	23 02 35.5	+0.4
	comp=Z,12nm,0.6s						
WMQ	Urumqi	66.64	322	P	P	23 03 02.5	+1.9
WMQ				pmax	pmax		
	comp=Z,16nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,110nm,5.7s						
WMQ	Urumqi	66.64	322	P	P	23 03 01.5	+0.9
WMQ				IAmb	IAmb	23 03 02.8	
	comp=Z,14nm,0.9s						
ZSN	Zaisan	70.20	324	eP	P	23 03 23.1	+0.4
	baz=324						
MK31	Makanchi Array	71.42	322	P	P	23 03 30.9	+0.8
MK31				IAmb	IAmb	23 03 32.1	
	comp=Z,7.0nm,0.9s						
MKAR	Makanchi Array	71.42	322	P	P	23 03 31.1	+1.0
	comp=Z,7.7nm,0.8s,baz=116,slow=7.8,SNR=78						
MKAR				pP	pP	23 03 54.3	-1.4
	comp=Z,1.6nm,0.7s,baz=110,slow=6.7,SNR=3.0						
MKAR				sP	sP	23 04 03.5	-3.1
	comp=Z,4.2nm,0.9s,baz=120,slow=7.1,SNR=4.1						
MKAR	Makanchi Array	71.42	322	P	P	23 03 31.0	+0.9
MAKZ	Makanchi	71.62	322	P	P	23 03 32.3	+1.0
MAKZ				IAmb	IAmb	23 03 33.1	
	comp=Z,12nm,0.8s						
SHLS	Shalkode	71.64	318	eP	P	23 03 30.9	-0.8
	comp=Z,4.9nm,0.6s,baz=318						
UZB	Uzynbulak	71.93	318	eP	P	23 03 34.3	+0.9
	comp=Z,5.7nm,0.5s,baz=318						
KPKS	Kokpek	72.28	318	eP	P	23 03 36.1	+0.6
	comp=Z,2.6nm,0.7s,baz=318						
KSH	Kashi	72.69	313	P	P	23 03 40.4	+2.5
KSH				pP	pP	23 04 05.0	+1.3
KSH				S	S	23 12 56.4	+0.9
KSH				ScS	SKKSac	23 13 35.6	+1.1
KSH				pmax	pmax		
	comp=Z,14nm,1.1s						
KSH				pmax	pmax		
	comp=Z,82nm,4.2s						
KSH				LR	LR		
	comp=Z,110nm,7.0s						
KSH				LR	LR		
	comp=Z,76nm,6.0s						
KSH				LR	LR		
	comp=Z,400nm,6.7s						
NIL	Nilore	72.88	307	P	P	23 03 39.9	+0.8
NIL				IAmb	IAmb	23 03 41.0	
	comp=Z,10nm,0.7s						
TDK	Taldyqorghan	73.09	319	eP	P	23 03 40.9	+0.9
	comp=Z,9.7nm,0.6s,baz=320						
MDOK	Medeo	73.27	317	eP	P	23 03 42.4	+1.1
	baz=317						
TNSS	Tian-Shan	73.29	317	eP	P	23 03 43.1	+1.4
	baz=317						
AAA	Alma-Ata	73.37	317	eP	P	23 03 43.4	+1.6
	baz=317						
ZALV	Zalesovo Beam	73.56	330	P	P	23 03 41.9	-0.7
	comp=Z,0.8nm,0.5s,baz=128,slow=9.6,SNR=5.0						
ZALV	Zalesovo Beam	73.56	330	P	P	23 03 42.4	-0.2
CHKK	Chushkaly	73.57	318	eP	P	23 03 43.3	+0.4
	baz=318						
KUU	Kurty	74.02	318	eP	P	23 03 46.2	+0.7
	comp=Z,14nm,0.8s,baz=318						
TKM2	Tokmak 2	74.16	317	P	P	23 03 48.1	+1.4
	SNR=9.6						
SEM	Semipalatinsk	74.28	325	eP	P	23 03 47.8	+0.6
	baz=325						
VNDA	Vanda	74.37	175	P	P	23 03 47.9	+1.0
	comp=Z,1.4nm,0.5s,baz=333,slow=7.4,SNR=2.6						
VNDA	Vanda	74.37	175	P	P	23 03 48.1	+1.2
VNDA				IAmb	IAmb	23 03 57.4	
	comp=Z,12nm,1.4s						
KBK	Karagaybulak	74.52	316	P	P	23 03 50.4	+1.8
	SNR=5.1						
UCH	Uchtor	74.67	316	P	P	23 03 51.9	+2.0
	SNR=9.8						
AAK	Ala-Archa	74.82	316	P	P	23 03 51.1	+0.7
SGDS	Sogindy	75.01	317	eP	P	23 03 51.6	+0.2
	baz=317						
AML	Almayashu	75.21	315	P	P	23 03 54.5	+1.6
	SNR=10						
EKS2	Erkin-Say	75.33	316	P	P	23 03 55.3	+2.0
	SNR=6.9						
KURK	Kurchatov	75.35	325	P	P	23 03 53.7	+0.7
BTLS	Baital	75.97	318	eP	P	23 03 57.4	+0.7
	comp=Z,3.3nm,0.6s,baz=318						
KBL	Kabul	76.48	307	P	P	23 04 00.5	+0.4
KBL				IAmb	IAmb	23 04 01.2	
	comp=Z,5.1nm,0.7s						
DZA	Taraz	77.11	316	eP	P	23 04 03.9	+0.6
	baz=316						
KK31	Karatay Array	77.74	316	P	P	23 04 07.6	+0.8
KKAR	Karatay Array	77.74	316	P	P	23 04 07.6	+0.8
KKAR	Karatay Array	77.74	316	P	P	23 04 07.7	+1.0
KKAR				IAmb	IAmb	23 04 08.2	
	comp=Z,3.3nm,0.8s						
BRZS	Berezniki	78.57	323	eP	P	23 04 11.3	+0.2
	baz=323						
BRVK	Borovoye	81.02	325	P	P	23 04 25.4	+1.1
BRVK				IAmb	IAmb	23 04 26.1	
	comp=Z,6.6nm,0.9s						
HRA	Herat	81.94	305	P	P	23 04 30.3	+0.5
GEYT	Alibeck	85.81	308	P	P	23 04 50.9	+1.7
	comp=Z,1.5nm,0.6s,baz=27,slow=1.6,SNR=5.9						
GEYT	Alibeck	85.81	308	P	P	23 04 51.0	+1.7
GYA0B	ALIBECK ARRAY	85.81	308	P	P	23 04 51.1	+1.9
GYA0B				IAmb	IAmb	23 04 52.7	
	comp=Z,6.0nm,0.9s						
QSPA	South Pole Qui	85.90	180	P	P	23 04 50.1	+0.9
QSPA				IAmb	IAmb	23 05 17.0	
	comp=Z,8.0nm,1.1s						
ABKAR	Akbulak array	86.35	320	P	P	23 04 51.7	+0.1
ABKAR				IAmb	IAmb	23 04 53.1	
	comp=Z,4.9nm,0.7s						
ABKAR	Akbulak array	86.35	320	P	P	23 04 51.2	-0.3
ILAR	Eielson Array	86.66	24	P	P	23 04 51.6	-1.2
	comp=Z,0.4nm,0.8s,baz=264,slow=5.3,SNR=2.2						
SYO	Syowa Base	89.85	201	⇑eP	P	23 05 06.8	-1.0
VNA2	Neumayer--Watz	102.06	191	Pdiff	Pdif	23 06 04.7	+1.4
VNA3	Neumayer Olymp	102.19	190	Pdiff	Pdif	23 06 04.9	+1.0
VNA1	Neumayer--Stat	102.45	190	Pdiff	Pdif	23 06 06.6	+1.6
CLL	Collm	115.37	326	ePKiKP	PKPdf	23 10 53.0	+2.4
SFJD	Kangerlussuaq	116.77	5	*i* P	Pdif	23 07 01.4	-7.2
SFJD	Kangerlussuaq	116.77	5	*e*	Pdif	23 07 01.1	-7.6
	baz=264,slow=22						
SFJD				*i* P	Pdif	23 07 01.4	-7.2
SFJD				IAML		23 07 03.8	
	comp=Z,3.8nm,0.3s						
DBIC	Dimbokro	144.58	276	PKP	PKPab	23 11 45.9	+0.7
	comp=Z,3.7nm,0.6s,baz=90,slow=1.0,SNR=10.0						
DBIC				pPKP	pPKPdf	23 12 11.7	-2.7
	comp=Z,4.7nm,0.6s,baz=86,slow=6.5,SNR=4.3						
DBIC	Dimbokro	144.58	276		PKPbc	23 11 46.3	+0.9
CPUP	Villa Florida	145.61	152	PKPbc	PKPab	23 11 50.0	+1.3
	comp=Z,3.8nm,0.7s,baz=282,slow=1.0,SNR=10						
CPUP				pPKPbc	pPKPab	23 12 15.1	-1.0
	comp=Z,1.9nm,0.7s,baz=203,slow=5.0,SNR=2.9						
CPUP	Villa Florida	145.61	152		PKPab	23 11 49.2	+0.5
LPAZ	La Paz	145.89	127	PKPbc	PKPab	23 11 52.3	+1.5
	comp=Z,1.7nm,0.7s,baz=9.8,slow=2.1,SNR=5.6						
LPAZ	La Paz	145.89	127		PKPab	23 11 51.5	+0.7

IDC **14** *23:03:43.6±2.2, 7.°50S×129.°13E, h137^{km}±27^{km}, mb3.3/1, mb1 3.4/6, mb1mx3.2/29, mbtmp3.8/6, Error ellipse: s-maj=36.3km s-min=21.2km az=95.0*

ISC 14 23:03:41.2±0.9, **7.°62S**±0.°06×**129.°30E**±0.°10, **h100**^{km}, **n6**, σ**3.^{s}24**/11, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	6.13	245	P	Pn	23 05 11.8	+2.4
	5.0nm,0.3s,baz=320,slow=3.1,SNR=6.5						
BATI				S	Sn	23 06 16.7	-1.5
	3.7nm,0.3s,baz=354,slow=7.0,SNR=2.3						
SIJI	Sorong	6.99	16	P	Pn	23 05 22.4	+1.4
	0.3nm,0.3s,baz=211,slow=22,SNR=7.7						
SIJI				S	Sn	23 06 36.2	-2.7
	0.5nm,0.3s,baz=307,slow=20,SNR=1.1						
FITZ	Fitzroy Crossi	11.01	199	P	Pn	23 06 16.6	+1.0
	0.5nm,0.3s,baz=15,slow=9.2,SNR=15						
FITZ				S	Sn	23 08 12.8	-4.1
	0.3nm,0.3s,baz=176,slow=19,SNR=1.6						
WRA	Warramunga Arr	13.19	159	P	Pn	23 06 47.6	+2.9
	0.3nm,0.3s,baz=327,slow=14,SNR=10.0						
WRA				S	Sn	23 09 05.1	-4.7
	0.3nm,0.3s,baz=327,slow=23,SNR=2.5						
ASAR	Alice Springs	16.56	165	P	P	23 07 31.2	+2.9
	0.2nm,0.3s,baz=340,slow=9.3,SNR=6.9						
ASAR				S	Sn	23 10 30.0	-1.3
	0.1nm,0.3s,baz=328,slow=19,SNR=2.5						
MKAR	Makanchi Array	68.36	327	P	P	23 14 29.1	-2.9
	0.5nm,0.6s,baz=125,slow=7.8,SNR=6.6						

IDC 14 23:16:00.8±3.1, **4.°11S**×**133.°69E**, **h0**^{km}, **mb3.6**/1, **mb1 3.8**/5, **mb1mx3.5**/37, **mbtmp3.7**/5, **ML3.5**/4, **MS2.9**/2, **Ms1 2.9**/2, **ms1mx2.4**/24, **Error ellipse: s-maj=113.1km s-min=25.5km az=77.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	4.03	323	Pn	Pn	23 17 05.1	+1.3
	1.1nm,0.3s,baz=253,slow=22,SNR=7.3						
SIJI				Sn	Sn	23 17 47.9	-3.9
	5.0nm,0.3s,baz=106,slow=8.9,SNR=3.8						
WRA	Warramunga Arr	15.75	178	Pn	Pn	23 19 42.1	-2.1
	0.1nm,0.3s,baz=359,slow=13,SNR=3.7						
WRA				Sn	Sn	23 22 27.3	-12
	0.1nm,0.3s,baz=359,slow=23,SNR=2.3						
WRA				LR	LR	23 26 19.9	
	comp=Z,22nm,20.5s,baz=80,slow=39						
FITZ	Fitzroy Crossi	15.98	209	Pn	Pn	23 19 45.8	-1.4
	0.5nm,0.3s,baz=36,slow=12,SNR=11						
FITZ				Sn	Sn	23 22 35.3	-10
	0.3nm,0.3s,baz=116,slow=20,SNR=5.4						
ASAR	Alice Springs	19.44	179	P	Pn	23 20 30.9	+0.6
	0.2nm,0.3s,baz=0.4,slow=10,SNR=13						
ASAR				S	Sn	23 24 01.6	-7.5
	0.0nm,0.3s,baz=354,slow=32,SNR=4.2						
ASAR				LR	LR	23 28 58.2	
	comp=Z,58nm,18.2s,baz=26,slow=40						
MKAR	Makanchi Array	67.92	325	P	P	23 27 01.0	-0.5
	0.6nm,0.9s,baz=108,slow=7.4,SNR=4.2						

IDC **14** *23:19:28.8±1.1, 30.°65N×139.°90E, h133^{km}±13^{km}, mb3.7/8, mb1 3.7/13, mb1mx3.4/45, mbtmp4.1/13, Error ellipse: s-maj=41.9km s-min=7.8km az=74.0*

JMA **14** *23:19:28.8±0.2, 30.°79N×140.°41E, h156^{km}±3^{km}, M4.2*

NEIC **14** *23:19:29.0±1.9, 30.°78N±0.°07×140.°4E±0.°2, h152^{km}±8^{km}, mb4.1/13, Error ellipse: s-maj=21.8km s-min=8.1km az=71.0*

ISC 14 23:19:29.4±0.6, **30.°86N**±0.°05×**140.°5E**±0.°1, **h150**^{km}, **n62**, σ**1.^{s}32**/72, **mb3.9**/14, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	Mitsune	2.32	346	eS	Sn	23 20 39.8	+1.5
JHJ2	Mitsune	2.32	346	Pn	Pn	23 20 09.9	+1.7
JHJ2				Sn	Sn	23 20 37.9	-0.4
JHJ	Hachijo jima 2	2.33	345	P	Pn	23 20 10.3	+1.9
	25nm,0.3s,baz=74,slow=22,SNR=5.1						
JHJ				S	Sn	23 20 39.2	+0.6
	55nm,0.3s,baz=264,slow=23,SNR=7.8						
BSO1	Boso 1	3.81	6	P	Pn	23 20 28.5	+1.9
BSO1				eS	Sn	23 21 12.7	+1.6
BSO3	Boso 3	3.93	0	P	Pn	23 20 30.1	+1.6
CBIJ	Chichi jima	4.04	158	P	Pn	23 20 29.6	-0.6
CBIJ				eS	Sn	23 21 16.4	-0.9
JCJ	Chichijima	4.04	158	P	Pn	23 20 29.6	-0.6
	22nm,0.3s,baz=360,slow=20,SNR=15						
JCJ				S	Sn	23 21 16.4	-0.9
	48nm,0.3s,baz=239,slow=22,SNR=7.3						
JCJ	Chichijima	4.04	158		Pn	23 20 28.4	-1.8
JCJ				Sn	Sn	23 21 16.2	-1.1
JOD2	Odawara 2	4.54	345	eS	Sn	23 21 30.8	+1.5
JHU	Hanno	5.08	349	P	Pn	23 20 45.2	+1.4
JAO	Obara	5.16	329	P	Pn	23 20 46.2	+1.2
JRY	Ryogami san	5.31	346	eS	Sn	23 21 48.4	+0.9
INU	Inuyama	5.34	328	Pn	Pn	23 20 48.3	+1.0
JYT	Yasato	5.36	357	P	Pn	23 20 48.2	+0.7
JYT				eS	Sn	23 21 46.9	-1.7
JYT	Yasato	5.36	357		Pn	23 20 47.9	+0.4
JGF	Kuroka	5.41	332	Pn	Pn	23 20 49.3	+1.1
JAG	Ashikaga	5.62	351	P	Pn	23 20 51.1	+0.1
JAG				eS	Sn	23 21 53.6	-1.1
JHO	Hitachi	5.74	1	P	Pn	23 20 53.1	+0.6
JHO				eS	Sn	23 21 55.8	-1.8
MJAR	Matsushiro Arr	5.98	342	P	Pn	23 20 57.3	+1.5

	0.3nm,0.3s,baz=162,slow=11,SNR=14						
MJAR	Matsushiro Arr	5.98	342		Pn	23 20 56.8	+1.1
MAJO	Matsushiro	5.98	342	Pn	Pn	23 20 56.8	+1.0
MAT	Matsushiro	5.98	342	P	Pn	23 20 57.2	+1.4
MAT				eS	Sn	23 22 01.4	-2.0
JWT	Wachi	6.14	317	Pn	Pn	23 20 58.6	+0.8
JFK	Kawauchi	6.50	3	P	Pn	23 21 03.0	+0.3
JFK				eS	Sn	23 22 11.1	-4.8
JMM	Marumori	6.99	2		Pn	23 21 09.5	+0.2
JSD	Sado	7.39	346	Pn	Pn	23 21 14.5	-0.1
JTM	Tenmabayashi	9.92	3	Pn	Pn	23 21 48.3	+0.1
JKA	Kamikawa-asahi	13.34	7	Pn	Pn	23 22 33.9	+1.1
ASAJ	Asahikawa	13.34	7	P	Pn	23 22 34.0	+1.3
	0.9nm,0.3s,baz=207,slow=6.8,SNR=2.8						
USRK	Ussuriysk Ar.	14.91	336	P	Pn	23 22 53.4	+0.9
	baz=145,slow=11,SNR=6.9						
KLR	Kul'dur	19.50	343	P	P	23 23 45.6	+0.8
	0.5nm,0.3s,baz=168,slow=13,SNR=5.3						
H11S3	WAKE ISLAND Hy	26.73	111	T	T	23 54 00.6	
	baz=304,slow=75,SNR=3.5						
H11S1	WAKE ISLAND Hy	26.73	111	T	T	23 54 01.2	
	baz=304,slow=75,SNR=3.2						
H11S2	WAKE ISLAND Hy	26.75	111	T	T	23 54 00.9	
	baz=304,slow=75,SNR=2.8						
COEN	Coen	44.63	176	P	P	23 27 26.1	-1.0
ZALV	Zalesovo Beam	45.70	317	P	P	23 27 33.8	-1.3
	0.8nm,0.4s,baz=89,slow=8.1,SNR=4.6						
MK31	Makanchi Array	46.98	307	P	P	23 27 44.0	-1.3
MKAR	Makanchi Array	46.98	307	P	P	23 27 43.8	-1.4
	0.1nm,0.3s,baz=86,slow=10.0,SNR=4.4						
MKAR				PcP	PcP	23 29 15.0	-0.2
	0.4nm,0.8s,baz=66,slow=3.6,SNR=2.7						
MKAR				ScP	ScP	23 32 54.8	-0.1
	0.2nm,0.7s,baz=98,slow=5.1,SNR=2.3						
MAKZ	Makanchi	47.20	307	P	P	23 27 45.3	-1.6
NRIK	Noril'sk	48.61	338	P	P	23 27 58.5	+1.1
	1.2nm,0.3s,baz=136,slow=7.2,SNR=1.9						
NRIK	Noril'sk	48.61	338	P	P	23 27 57.8	+0.4
NRIK				IAmb	IAmb	23 27 58.8	
	comp=Z,6.5nm,1.3s						
KURK	Kurchatov	49.33	312	P	P	23 28 01.9	-1.2
KURK				IAmb	IAmb	23 28 07.8	
	comp=Z,2.6nm,1.2s						
WB0	Warramunga Arr	50.67	187	P	P	23 28 12.6	-1.0
WB0				IAmb	IAmb	23 28 13.7	
	comp=Z,7.1nm,1.2s						
FITZ	Fitzroy Crossi	50.73	198	P	P	23 28 12.9	-1.0
	comp=Z,1.9nm,0.7s,baz=4.8,slow=12,SNR=2.3						
FITZ	Fitzroy Crossi	50.73	198	P	P	23 28 13.2	-0.8
WRA	Warramunga Arr	50.85	187	P	P	23 28 14.3	-0.7
	comp=Z,1.4nm,0.3s,baz=3.9,slow=7.7,SNR=57						
BRVK	Borovoye	54.36	316	P	P	23 28 39.4	-0.9
BRVK				IAmb	IAmb	23 28 42.7	
	comp=Z,3.0nm,1.4s						
AS31	Alice Springs	54.58	187	P	P	23 28 42.2	-0.1
ASAR	Alice Springs	54.58	187	P	P	23 28 41.6	-0.7
	comp=Z,0.8nm,0.5s,baz=16,slow=13,SNR=20						
ASAR	Alice Springs	54.58	187	P	P	23 28 41.4	-0.9
KKAR	Karatay Array	55.72	304	P	P	23 28 48.9	-1.5
ARU	Arti	60.56	321	P	P	23 29 23.1	-0.6
ARU				IAmb	IAmb	23 29 45.1	
	comp=Z,4.6nm,1.3s						
ABKAR	Akbulak array	61.43	313	P	P	23 29 28.6	-1.1
ABKAR	Akbulak array	61.43	313	P	P	23 29 28.8	-0.9
ABKAR				IAmb	IAmb	23 29 29.0	
	comp=Z,0.8nm,0.6s						
ARCES	ARCESS Array B	69.51	340	P	P	23 30 23.0	+1.7
	comp=Z,16nm,1.2s,baz=55,slow=4.6,SNR=3.8						
FIA1	FINESS Array S	73.92	333	P	P	23 30 48.4	+0.7
FINES	FINESS Array B	73.93	333	P	P	23 30 48.8	+1.0
	comp=Z,0.9nm,0.4s,baz=62,slow=5.0,SNR=19						
FINES	FINESS Array B	73.93	333	P	P	23 30 48.1	+0.3
BKZ	Black Stump Fm	77.31	152	P	P	23 31 09.2	+2.0
PD31	Pinedale Array	82.58	44	P	P	23 31 35.6	-0.4
PD31				IAmb	IAmb	23 31 44.8	
	comp=Z,2.8nm,0.7s						
PDAR	Pinedale Array	82.58	44	P	P	23 31 34.9	-1.1
LPAZ	La Paz	150.14	67	PKPbc	PKiKP	23 39 07.5	+2.9
	comp=Z,0.7nm,0.7s,baz=0.0,slow=6.1,SNR=2.1						

*IDC **15** 00:00:27.2±1.0, 2°.13S×139°.76E, h0^{km}, mb3.7/5, mb1 3.9/6, mb1mx3.7/33, mbtmp3.7/6, ML3.7/1, MS3.2/6, Ms1 3.3/6, ms1mx2.8/24, Error ellipse: s-maj=25.3km s-min=10.9km az=23.0*

*NEIC **15** 00:00:29.0±1.1, 2°.2S±0°.2×139°.79E±0°.08, h10^{km}±2^{km}, mb4.2/11, Error ellipse: s-maj=27.6km s-min=10.5km az=19.0*

ISC 15 00:00:32.0±0.8**, 2°.2S**±0°.1×**139°.8E**±0°.1**, h35^{km}, n31, σ0^{s}.74**/22**, mb4.0**/7**, MS3.2**/5**, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	Jayapura	0.92	110	Pg	Pn	00 00 47.7	-0.7
	62nm,0.3s,baz=281,slow=7.3,SNR=80						
JAY				Lg	Lg	00 00 59.9	
	51nm,0.3s,baz=122,slow=20,SNR=6.1						
JAY				LR	LR	00 01 27.6	
	comp=Z,410nm,19.1s,baz=166,slow=59						
SOEI	Soe	17.20	243	Pn	Pn	00 04 28.3	-1.6
SOEI				IAmb	IAmb	00 04 44.4	
	comp=Z,25nm,0.8s						
WB0	Warramunga Arr	18.25	197		P	00 04 41.9	-0.8
WB0				IAmb	IAmb	00 04 55.8	
	comp=Z,13nm,1.2s						
WB2	Warramunga Arr	18.43	197	P	Pn	00 04 45.0	+0.2
WRA	Warramunga Arr	18.44	197	P	P	00 04 44.7	+0.1
	comp=Z,0.2nm,0.3s,baz=18,slow=12,SNR=13						
WRA				LR	LR	00 12 33.2	
	comp=Z,69nm,20.9s,baz=50,slow=39						
WRA	Warramunga Arr	18.44	197	P	P	00 04 44.2	-0.4
TOLI2	Tolitoli	19.34	280		P	00 04 54.3	-0.3
TOLI2				IAmb	IAmb	00 05 04.6	
	comp=Z,6.0nm,1.0s						
FITZ	Fitzroy Crossi	21.07	220	P	P	00 05 13.2	-0.1
	comp=Z,2.9nm,1.0s,baz=281,slow=17,SNR=1.9						
FITZ				LR	LR	00 14 26.8	
	comp=Z,52nm,20.5s,baz=40,slow=40						
FITZ	Fitzroy Crossi	21.07	220	P	P	00 05 13.4	+0.1
FITZ				IAmb	IAmb	00 05 22.5	
	comp=Z,19nm,1.5s						
HNR	Honiara	21.24	111	LR	LR	00 12 15.0	
	comp=Z,46nm,21.5s,baz=190,slow=33						
AS31	Alice Springs	22.10	195	P	P	00 05 26.1	+1.7
ASAR	Alice Springs	22.10	195	P	P	00 05 25.0	+0.6
	comp=Z,1.5nm,0.6s,baz=26,slow=10,SNR=22						
ASAR				LR	LR	00 14 47.5	
	comp=Z,88nm,19.2s,baz=26,slow=39						
ASAR	Alice Springs	22.10	195	P	P	00 05 24.2	-0.2
MYLDM	Lahad Datu	22.55	289	P	P	00 05 30.0	+0.7
EIDS	Eidsvold	25.45	156	P	P	00 05 57.7	+0.9
STKA	Stephens Creek	29.57	177	LR	LR	00 21 16.3	
	comp=Z,55nm,18.8s,baz=22,slow=42						
H11S3	WAKE ISLAND Hy	33.48	51	T	T	00 42 23.9	
	baz=229,slow=73						
H11S2	WAKE ISLAND Hy	33.49	51	T	T	00 42 25.0	
	baz=229,slow=73						
H11S1	WAKE ISLAND Hy	33.50	51	T	T	00 42 26.7	
	baz=229,slow=73						
H11N1	WAKE ISLAND Hy	34.34	49	T	T	00 43 27.1	
	baz=233,slow=75,SNR=17						
H11N2	WAKE ISLAND Hy	34.36	49	T	T	00 43 28.1	
	baz=233,slow=75,SNR=25						
H11N3	WAKE ISLAND Hy	34.36	49	T	T	00 43 28.0	
	baz=233,slow=75,SNR=20						
CMAR	Chiang Mai Arr	45.18	299	P	P	00 08 44.9	-0.9
	comp=Z,0.6nm,0.3s,baz=115,slow=6.4,SNR=5.9						
MKAR	Makanchi Array	70.08	322	P	P	00 11 41.3	+0.6
	comp=Z,0.3nm,0.6s,baz=121,slow=6.7,SNR=4.5						
NIL	Nilore	71.93	306	P	P	00 11 52.8	+0.6
NIL				IAmb	IAmb	00 11 53.8	
	comp=Z,4.9nm,0.9s						
ZALV	Zalesovo Beam	72.07	329	P	P	00 11 52.4	-0.1
	comp=Z,0.3nm,0.3s,baz=92,slow=7.4,SNR=2.1						
GEYT	Alibeck	84.81	308	P	P	00 13 03.5	+0.3
ILAR	Eielson Array	84.90	24	LR	LR	00 44 37.6	
	comp=Z,30nm,21.3s,baz=140,slow=31						
ABKAR	Akbulak array	85.07	320	P	P	00 13 04.0	-0.3
ABKAR				IAmb	IAmb	00 13 08.7	
	comp=Z,1.6nm,0.9s						
ABKAR	Akbulak array	85.07	320	P	P	00 13 04.2	0.0
DBIC	Dimbokro	144.54	278	PKP	PKPab	00 20 04.5	+0.1
	comp=Z,8.4nm,1.3s,baz=56,slow=3.6,SNR=1.5						

*BJI **15** 00:14:23.1±0.0, 36°.62N×141°.17E, h8^{km}, mB5.0/36, mb4.5/56, Ms4.2/24, Ms7 3.9/24*

*IDC **15** 00:14:25.2±0.5, 36°.65N×141°.03E, h0^{km}, mb4.4/30, mb1 4.5/34, mb1mx4.4/48, mbtmp4.4/34, ML3.7/4, MS3.4/10, Ms1 3.4/10, ms1mx3.1/40, Error ellipse: s-maj=14.3km s-min=10.9km az=110.0*

*JMA **15** 00:14:27.4±0.1, 36°.62N×141°.13E, h31^{km}±1^{km}, M4.7*

JMA Felt II J1.

*NIED **15** 00:14:27.4, 36°.62N×141°.13E, h31^{km}, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-2.55; $M_{\theta\theta}$-0.47; $M_{\phi\phi}$3.01; $M_{r\theta}$1.22; $M_{\theta\phi}$0.92; $M_{\phi r}$-0.99; Fault plane solution: $M_0$3.35000×10^{15} NP1: ϕ_s349.00000°, δ58.00000°, λ-123.00000°. NP2: ϕ_s219.00000°, δ45.00000°, λ-49.00000°.*

*NEIC **15** 00:14:30.0±1.0, 36°.66N±0°.03×141°.02E±0°.07, h30^{km}±4^{km}, mb4.7/91 Error ellipse: s-maj=9.5km s-min=0.8km az=116.0*

*MOS **15** 00:14:29.5±0.9, 36°.70N×141°.00E, h39^{km}, mb4.9/61, Error ellipse: s-maj=7.7km s-min=4.8km az=117.7*

*BGR **15** 00:14:37.8±0.0, 37°.93N×141°.24E, h33^{km}, mb4.9*

ISC 15 00:14:26.9±0.8**, 36°.64N**±0°.03×**141°.18E**±0°.04**, h12^{km}**±4^{km}**, n413, σ1^{s}.21**/433**, mb4.8**/152**, MS3.7**/13**, 30C-17D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHO	Hitachi	0.49	267	P	Pg	00 14 36.6	0.0
ONAJ	Iwakimizuishiy	0.55	327	P	Pb	00 14 38.2	-0.4
ONAJ				eS	Sb	00 14 45.9	-0.6
JHYU	Hitachinakayam	0.56	238	P	Pg	00 14 37.9	0.0
JHYU				eS	Sg	00 14 45.6	+0.3
JFFD	Fukushimafurud	0.67	313	P	Pg	00 14 39.9	-0.1
JFFD				eS	Sg	00 14 48.6	-0.2
JFK	Kawauchi	0.77	342	P	Pg	00 14 41.4	-0.4
JFK				eS	Sg	00 14 51.2	-0.7
JYT	Yasato	0.89	243	P	Pg	00 14 42.9	-1.2
JYT	Yasato	0.89	243		Pg	00 14 43.0	-1.2
JYT					Sg	00 14 55.4	-0.4
JSB	Shiboa	1.06	288	P	Pb	00 14 46.8	-0.4
JFT	Otama	1.11	323	P	Pb	00 14 47.4	-0.6
JFT				eS	Sb	00 15 01.7	-0.6
JMM	Marumori	1.26	346	P	Pn	00 14 49.1	-1.3
JMM				eS	Sb	00 15 05.4	-1.5
JMM	Marumori	1.26	346		Pn	00 14 49.3	-1.1
JMM					Sb	00 15 05.9	-1.0
JAG	Ashikaga	1.40	262	P	Pn	00 14 50.5	-1.8
MJAR	Matsushiro Arr	2.39	269	Pn	Pn	00 15 05.7	-0.2
	5.0nm,0.3s,baz=112,slow=10,SNR=355						
MJAR				Sn	Sb	00 15 39.9	+0.6
	12nm,0.3s,baz=295,slow=24,SNR=6.7						
MJAR				LR	LR	00 15 56.1	
	comp=Z,286nm,21.1s,baz=95,slow=41						
MJAR	Matsushiro Arr	2.39	269		Pn	00 15 05.3	-0.6
MAJO	Matsushiro	2.39	269	P	Pn	00 15 06.5	+0.6
MAJO	Matsushiro	2.39	269	Pn	Pn	00 15 06.5	+0.6
MAT	Matsushiro	2.39	269	P	Pn	00 15 05.7	-0.2
MAT				S	Sn	00 15 33.9	-1.2
MJB9	Matsu-Tunnel	2.39	269		Pn	00 15 06.3	+0.3
JSD	Sado	2.71	302	Pn	Pn	00 15 10.1	-0.2
JSG	Sagara	3.12	232		Pn	00 15 15.8	-0.2
JGF	Kuroka	3.26	253		Pn	00 15 18.3	+0.4
INU	Inuyama	3.61	250	Pn	Pn	00 15 23.1	+0.5
JHJ2	Mitsune	3.69	198	Pn	Pn	00 15 25.0	+1.3
JHJ	Hachijo jima 2	3.69	198	Pn	Pn	00 15 25.2	+1.5
	21nm,0.3s,baz=20,slow=20,SNR=2.1						
JHJ				Sn	Sn	00 16 06.0	-1.2
	28nm,0.3s,baz=71,slow=19,SNR=2.2						
JTM	Tenmabayashi	4.14	359	Pn	Pn	00 15 30.9	+1.0
JWT	Wachi	4.88	256	Pn	Pn	00 15 41.2	+1.2
ERM	Erimo	5.58	15	P	Pn	00 15 51.1	+1.4
ERM	Erimo	5.58	15		Pn	00 15 51.1	+1.4
JHS	Saijyo	6.75	258	Pn	Pn	00 16 07.4	+1.6
ASAJ	Asahikawa	7.55	8	Pn	Pn	00 16 16.1	-0.6
	3.5nm,0.3s,baz=214,slow=9.9,SNR=17						
ASAJ				Sn	Sn	00 17 39.8	-2.4
	1.0nm,0.3s,baz=267,slow=31,SNR=2.6						
JKA	Kamikawa-asahi	7.55	8	Pn	Pn	00 16 16.1	-0.6
NMR	Nemuro--Hokkai	7.58	26	eP	Pn	00 16 15.9	-1.2
NMR				eS	Sn	00 17 36.6	-6.2
GLVR	Golovnino	7.83	24	eP	Pn	00 16 22.1	+1.5
GLVR				eS	Sn	00 17 46.3	-2.8
GLVR				pmax	pmax		
	comp=Z,442nm,0.6s						
GLVR				pmax	pmax		
	comp=N,145nm,0.3s						
GLVR				pmax	pmax		
	comp=E,417nm,0.6s						
GLVR				pmax	pmax		
	comp=Z,4µm,1.8s						
GLVR				smax	smax		
	comp=N,3407µm,1.7s						
GLVR				smax	smax		
	comp=E,2660µm,1.3s						
GRPR	Tuman	8.14	24	eP	Pn	00 16 26.1	+1.3
GRPR				pmax	pmax		
	comp=Z,142nm,0.5s						
GRPR				pmax	pmax		
	comp=N,63nm,0.1s						
GRPR				pmax	pmax		
	comp=E,70nm,0.1s						
TEY	Ternei	9.07	339	eP	Pn	00 16 30.6	-7.0
JNU	Nakatsue	9.16	250	Pn	Pn	00 16 41.9	+3.0
	comp=E,0.5nm,0.3s,baz=42,slow=9.1,SNR=4.8						
JCJ	Chichijima	9.55	175	LR	LR	00 20 43.0	
	comp=E,195nm,19.2s,baz=51,slow=39						
MSHR	Mys Shultsa	9.74	311	ceP	Pn	00 16 46.5	-0.3
MSHR				pmax	pmax		
	comp=Z,15nm,1.3s						
USA0B	Ussuriysk Arra	10.29	320	i P	Pn	00 16 53.0	-1.4
USRK	Ussuriysk Ar.	10.29	320	Pn	Pn	00 16 58.2	+3.8
	baz=138,slow=12,SNR=18						
USRK	Ussuriysk Ar.	10.29	320	P	Pn	00 16 56.3	+1.9
USRK	Ussuriysk Ar.	10.29	320	Pn	Pn	00 16 56.2	+1.9
YSS	Yuzh-Sakhalins	10.38	6	eP	Pn	00 16 54.5	-0.9
YSS				MLR	MLR		
	comp=Z,700nm,13.0s						
KSRS	Korea Array	10.63	278	Pn	Pn	00 17 03.1	+4.2
	comp=Z,0.2nm,0.3s,baz=96,slow=14,SNR=19						
KS19	Wonju Array Si	10.67	279		Pn	00 17 01.0	+1.4
MDJ	Mudanjiang	11.86	316	P	Pn	00 17 14.8	-1.0
MDJ				PP	PnPn	00 17 23.0	-0.6
MDJ				S	Sn	00 19 32.5	+4.4
MDJ				SS	SnSn	00 19 45.4	+5.4
MDJ				pmax	pmax		
	comp=Z,6.0nm,0.6s						
MDJ				pmax	pmax		
	comp=Z,210nm,4.1s						
MDJ				LR	LR		
	comp=Z,550nm,14.5s						
MDJ				LR	LR		
	comp=Z,420nm,5.9s						
MDJ				LR	LR		
	comp=Z,360nm,7.1s						
MDJ	Mudanjiang	11.86	316	Pn	Pn	00 17 16.3	+0.5
KLR	Kul'dur	14.34	334	Pn	Pn	00 17 49.6	0.0
	comp=Z,0.1nm,0.3s,baz=95,slow=6.8,SNR=1.8						
KLR				LR	LR	00 22 59.7	
	comp=Z,120nm,18.4s,baz=148,slow=36						
KLR	Kul'dur	14.34	334	ceP	Pn	00 17 52.9	+3.3
KLR				pmax	pmax		
	comp=Z,5.0nm,1.0s						
JOW	Kunigami	14.69	232	Pn	Pn	00 17 56.8	+2.3
	comp=Z,0.3nm,0.3s,baz=66,slow=20,SNR=1.5						
NJ2	Nanjing	18.98	263	eP	P	00 18 47.3	-0.9
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
TIA	Tai'an	19.35	276	P	P	00 18 51.3	-1.0
TIA				pmax	pmax		
	comp=Z,6.0nm,1.2s						
ZEA	Zeya	19.65	335	eP	P	00 18 55.8	+0.4
ZEA				eS	S	00 22 23.2	-14
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ZEA				smax	smax		
	comp=N,100nm,5.6s						
ZEA				MLR	MLR		
	comp=Z,200nm,11.0s						
BJI	Beijing	19.88	287	P	P	00 18 57.0	-1.0
BJI				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BJI				LR	LR		
	comp=Z,200nm,4.6s						
BJI				LR	LR		
	comp=Z,160nm,5.1s						
BJT	Baijiatuau	19.89	287	P	P	00 18 56.6	-1.5
BJT				pmax	pmax		
	comp=Z,7.0nm,0.9s						
BJT	Baijiatuau	19.89	287	P	P	00 18 56.6	-1.5
HIA	Hailar	20.05	316	i P	P	00 19 00.5	+0.7
HIA				pmax	pmax		
	comp=Z,20nm,2.8s						
WHN	Wuhan	23.12	263	⇓P	P	00 19 29.8	-3.0
WHN				S	S	00 23 36.3	-7.5
WHN				LR	LR		
	comp=Z,530nm,11.3s						
HHC	Hu-ho-hao-te	23.42	289	eP	P	00 19 33.8	-2.1
HHC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,250nm,4.5s						
HHC				LR	LR		
	comp=Z,130nm,11.6s						
HHC				LR	LR		
	comp=Z,250nm,10.2s						
HHC				LR	LR		
	comp=Z,180nm,12.5s						
MA2	Magadan	23.78	12	P	P	00 19 37.8	-1.3
	comp=Z,9.1nm,0.6s,baz=202,slow=10.0,SNR=8.0						
MA2	Magadan	23.78	12	P	P	00 19 38.9	-0.2
MA2				pmax	pmax		
	comp=Z,47nm,1.5s						
MA2	Magadan	23.78	12	P	P	00 19 38.9	-0.2
MA2				IAmb	IAmb	00 19 41.2	
	comp=Z,47nm,1.5s						
XAN	Xi'an	26.38	274	P	P	00 20 01.5	-1.6
XAN				pP	sP	00 20 07.5	-0.8
XAN				pmax	pmax		
	comp=Z,7.0nm,1.4s						
XAN	Xi'an	26.38	274	P	P	00 20 02.0	-1.1
XAN				pmax	pmax		
	comp=Z,7.0nm,1.1s						
XAN	Xi'an	26.38	274	P	P	00 20 02.0	-1.1
YAK	Yakutsk	26.41	348	P	P	00 20 02.0	-1.0
	comp=Z,7.1nm,0.4s,baz=70,slow=2.4,SNR=7.0						
YAK	Yakutsk	26.41	348	eP	P	00 20 02.7	-0.3
YAK				eS	S	00 24 35.7	-0.3
YAK				pmax	pmax		
	comp=Z,17nm,0.9s						
YAK				smax	smax		
	comp=N,41nm,2.3s						
YAK				smax	smax		
	comp=E,25nm,3.1s						
YAK				MLR	MLR		
	comp=Z,121nm,15.0s						
YAK				MLR	MLR		
	comp=E,126nm,19.0s						
YAK	Yakutsk	26.41	348	P	P	00 20 02.4	-0.6
YAK				IAmb	IAmb	00 20 05.1	
	comp=Z,24nm,1.0s						
ENH	Enshi	27.11	266	P	P	00 20 08.7	-1.1
ENH				IAmb	IAmb	00 20 10.4	
	comp=Z,13nm,0.8s						
SEY	Seymchan	27.21	11	P	P	00 20 11.1	+0.8
	comp=Z,11nm,0.9s,baz=196,slow=6.5,SNR=16						
ULN	Ulaanbaatar	27.42	305	ceP	P	00 20 12.5	0.0
ULN				pmax	pmax		
	comp=Z,8.0nm,1.3s						
ULN	Ulaanbaatar	27.42	305	P	P	00 20 11.6	-0.9
BOD	Bodaibo	27.76	328	eP	P	00 20 14.3	-0.9
BOD				pmax	pmax		
	comp=Z,8.0nm,1.0s						
SONM	Songino Array	27.85	305	P	P	00 20 14.5	-1.8
	comp=Z,5.0nm,0.9s,baz=110,slow=8.0,SNR=29						
SONM	Songino Array	27.85	305	P	P	00 20 16.0	-0.3
SONM				pmax	pmax		
	comp=Z,4.0nm,0.9s						
SONM	Songino Array	27.85	305	P	P	00 20 16.0	-0.3
H11N2	WAKE ISLAND Hy	28.11	120	T	T	00 49 42.6	
	baz=313,slow=75,SNR=4083						
H11N1	WAKE ISLAND Hy	28.12	120	T	T	00 49 43.2	
	baz=313,slow=75,SNR=4465						
H11N3	WAKE ISLAND Hy	28.13	120	T	T	00 49 44.0	
	baz=313,slow=75,SNR=4305						
H11S1	WAKE ISLAND Hy	28.81	122	T	T	00 50 39.7	
	baz=315,slow=76,SNR=778						
H11S3	WAKE ISLAND Hy	28.81	122	T	T	00 50 36.5	
	baz=315,slow=76,SNR=500						
H11S2	WAKE ISLAND Hy	28.82	122	T	T	00 50 41.0	
	baz=315,slow=76,SNR=450						
LZH	Lanzhou	29.95	280	eP	P	00 20 35.8	+0.7
LZH				pP	pP	00 20 38.9	+0.1
LZH				sP	sP	00 20 40.9	+0.6
LZH				pmax	pmax		
	comp=Z,15nm,1.0s						
GYA	Guiyang	30.97	261	⇑P	P	00 20 42.6	-1.6
GYA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
CD2	Chengdu	31.48	271	eP	P	00 20 47.6	-1.0
GTA	Gaotai	32.50	288	P	P	00 20 55.9	-1.6
GTA				pP	pP	00 21 01.6	+0.4
GTA				sP	sP	00 21 04.4	+1.6
GTA				PcP	PcP	00 23 45.1	+0.9
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,84nm,5.6s						
GTA				LR	LR		
	comp=Z,100nm,16.4s						
GTA				LR	LR		
	comp=Z,110nm,17.5s						
GTA				LR	LR		
	comp=Z,150nm,15.6s						
KMI	Kunming	34.71	262	⇑P	P	00 21 15.3	-1.7
KMI				pP	sP	00 21 21.5	-0.8
KMI				sP	pP	00 21 24.4	+3.6
KMI				S	S	00 26 44.9	-2.2
KMI				pmax	pmax		
	comp=Z,8.0nm,1.5s						
KMI				pmax	pmax		
	comp=Z,54nm,3.5s						
KMI				LR	LR		
	comp=Z,110nm,21.4s						
KMI				LR	LR		
	comp=Z,130nm,13.5s						
KMI				LR	LR		
	comp=Z,160nm,21.5s						
KMI	Kunming	34.71	262	P	P	00 21 15.5	-1.6
KMI				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KMI	Kunming	34.71	262	P	P	00 21 15.5	-1.6
KMI				IAmb	IAmb	00 21 17.2	
	comp=Z,9.7nm,1.1s						
TIXI	Tiksi	35.66	353	P	P	00 21 23.6	-0.8
TIXI				pmax	pmax		
	comp=Z,13nm,1.4s						
TIXI	Tiksi	35.66	353	P	P	00 21 23.6	-0.8
TIXI				IAmb	IAmb	00 21 27.0	
	comp=Z,13nm,1.4s						
FAKI	Fak Fak	40.23	194	P	P	00 22 03.5	0.0
DGZ	Jazzator, Alta	40.47	306	d iP	P	00 22 05.8	+0.4
DGZ				pmax	pmax		
	comp=Z,34nm,0.8s						
MOKO	MOKOCHONG	40.76	269	ex	P	00 22 07.5	-0.6
MOKO				IAmb	IAmb	00 22 09.3	
	comp=Z,24nm,1.0s						
ZIRO	ZIRO	40.77	271	ex	P	00 22 08.6	+0.4
ZIRO				IAmb	IAmb	00 22 14.1	
	comp=Z,30nm,0.2s						
WMQ	Urumqi	40.85	297	eP	P	00 22 09.0	+0.5
WMQ				pP	sP	00 22 13.8	0.0
WMQ				sP	pP	00 22 19.1	+6.8
WMQ				pmax	pmax		
	comp=Z,26nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,220nm,5.3s						
WMQ	Urumqi	40.85	297	P	P	00 22 08.1	-0.5
WMQ				pmax	pmax		
	comp=Z,16nm,0.8s						
WMQ	Urumqi	40.85	297	P	P	00 22 08.1	-0.5
WMQ				IAmb	IAmb	00 22 10.9	
	comp=Z,16nm,0.8s						
CHTO	Chiang Mai	41.01	256	P	P	00 22 09.4	-0.7
CHTO				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CHTO	Chiang Mai	41.01	256	P	P	00 22 09.4	-0.7
CMAR	Chiang Mai Arr	41.21	256	P	P	00 22 11.0	-0.7
	comp=Z,1.7nm,0.4s,baz=50,slow=5.9,SNR=5.8						

CMAR				LR	LR	00 38 44.4	
	comp=Z,31nm,21.2s,baz=19,slow=36						
CMAR	Chiang Mai Arr	41.21	256	*ce*P	P	00 22 13.0	+1.3
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.4s						
CMAR	Chiang Mai Arr	41.21	256	P	P	00 22 10.9	-0.7
TNA	Tin City	41.29	29	P	P	00 22 12.7	+0.9
ZAA0	Zalesovo Array	42.04	313	P	P	00 22 17.2	-0.9
ZAA0				IAmb	IAmb	00 22 18.7	
	comp=Z,14nm,0.8s						
ZALV	Zalesovo Beam	42.04	313	P	P	00 22 17.6	-0.4
	comp=Z,15nm,0.7s,baz=94,slow=6.9,SNR=78						
ZALV				PcP	PcP	00 24 12.8	0.0
	comp=Z,1.3nm,0.6s,baz=115,slow=2.6,SNR=3.0						
ZALV	Zalesovo Beam	42.04	313	P	P	00 22 16.9	-1.1
LSA	Lhasa	42.06	276	P	P	00 22 18.5	-0.6
LSA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
LSA	Lhasa	42.06	276	P	P	00 22 18.5	-0.6
SHL	Shillong	43.21	270	P	P	00 22 27.7	-0.5
SHL				pmax	pmax		
	comp=Z,6.0nm,0.6s						
SHL	Shillong	43.21	270	*e*x	P	00 22 28.4	+0.3
SHL	Shillong	43.21	270	P	P	00 22 27.7	-0.5
SHL				IAmb	IAmb	00 22 32.4	
	comp=Z,6.4nm,0.6s						
NRIK	Noril'sk	43.55	335	P	P	00 22 28.9	-1.2
	comp=Z,2.5nm,0.5s,baz=130,slow=7.8,SNR=5.1						
NRIK	Noril'sk	43.55	335	*ce*P	P	00 22 29.5	-0.6
NRIK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
NRIK	Noril'sk	43.55	335	P	P	00 22 29.3	-0.8
SAIH	SAIHA	43.79	265	*e*x	P	00 22 31.1	-1.7
MK31	Makanchi Array	44.17	302	*ce*P	P	00 22 35.1	-0.3
MK31	Makanchi Array	44.17	302	P	P	00 22 34.8	-0.6
MKAR	Makanchi Array	44.17	302	P	P	00 22 35.2	-0.2
	comp=Z,4.7nm,0.7s,baz=89,slow=10.0,SNR=62						
MKAR	Makanchi Array	44.17	302	P	P	00 22 35.0	-0.5
MAKZ	Makanchi	44.38	302	P	P	00 22 36.7	-0.4
MAKZ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MAKZ	Makanchi	44.38	302	P	P	00 22 36.7	-0.4
KSM	Kuching	45.14	226	P	P	00 22 43.9	+0.4
KSM				IAmb	IAmb	00 22 48.0	
	comp=Z,10nm,0.9s						
KURK	Kurchatov	46.03	308	P	P	00 22 49.9	-0.2
KURK				pmax	pmax		
	comp=Z,20nm,0.8s						
KURK	Kurchatov	46.03	308	P	P	00 22 49.9	-0.2
ODAN	Odare	46.25	274	*e*P	P	00 22 52.2	-0.2
	comp=Z,15nm,0.7s						
RAMN	Ramite	46.84	274	*e*P	P	00 22 56.7	-0.4
	comp=Z,60nm,0.7s						
GUN	Gumba	47.01	276	*e*P	P	00 22 58.7	+0.2
	comp=Z,41nm,0.9s						
KDAK	Kodiak Island	47.52	42	P	P	00 23 03.1	+1.4
	comp=Z,3.6nm,0.6s,baz=324,slow=11,SNR=1.4						
KDAK	Kodiak Island	47.52	42	P	P	00 23 02.1	+0.4
PKIN	Phulchoki	47.53	276	*e*P	P	00 23 02.3	-0.2
	comp=Z,19nm,0.8s						
KKN	Kakani	47.54	276	*e*P	P	00 23 02.5	0.0
	comp=Z,27nm,0.8s						
PPLA	Purkeypile	47.60	35	P	P	00 23 03.1	+0.7
PPLA				IAmb	IAmb	00 23 20.6	
	comp=Z,20nm,1.4s						
GKN	Gorkha	47.96	277	*e*P	P	00 23 05.4	-0.3
	comp=Z,63nm,0.8s						
DANN	Dangsing	48.51	278	*e*P	P	00 23 09.8	-0.3
	comp=Z,91nm,0.8s						
MDM	Murphy Dome	49.35	32	P	P	00 23 16.7	+0.9
MDM				IAmb	IAmb	00 23 22.7	
	comp=Z,11nm,1.2s						
IL31		49.93	32	P	P	00 23 20.8	+0.7
IL31				IAmb	IAmb	00 23 36.8	
	comp=Z,7.1nm,1.2s						
ILAR	Eielson Array	49.93	32	P	P	00 23 20.8	+0.7
	comp=Z,2.7nm,1.1s,baz=267,slow=6.5,SNR=12						
ILAR	Eielson Array	49.93	32	P	P	00 23 20.6	+0.4
KSH	Kashi	50.39	294	P	P	00 23 28.0	+3.8
KSH				sP	sP	00 23 34.6	+5.1
KSH				PP	PP	00 25 25.8	+6.2
KSH				S	S	00 30 41.3	+4.0
KSH				ScS	ScS	00 33 12.1	-3.1
KSH				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KSH				pmax	pmax		
	comp=Z,270nm,7.1s						
KSH				LR	LR		
	comp=Z,270nm,6.9s						
KSH				LR	LR		
	comp=Z,250nm,8.1s						
AAK	Ala-Archa	50.51	299	P	P	00 23 24.8	-0.3
AAK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
AAK	Ala-Archa	50.51	299	P	P	00 23 24.8	-0.3
BRVK	Borovoye	50.75	313	*ce*P	P	00 23 26.5	0.0
BRVK				pmax	pmax		
	comp=Z,14nm,2.5s						
BRVK	Borovoye	50.75	313	P	P	00 23 26.2	-0.3
BRVK				IAmb	IAmb	00 23 46.8	
	comp=Z,8.0nm,1.1s						
PSI	Prapat	51.43	239	P	P	00 23 31.5	-0.7
	comp=Z,3.1nm,0.5s,baz=360,slow=2.3,SNR=3.7						
BKNI	Bangkinang	51.81	235	P	P	00 23 34.7	-0.2
BCAR	Beaver Creek A	52.33	34	P	P	00 23 39.6	+1.4
EGAK	Eagle	52.38	32	P	P	00 23 39.4	+1.0
KK31	Karatay Array	53.16	300	P	P	00 23 43.9	-0.7
KK31				pmax	pmax		
	comp=Z,13nm,1.3s						
KK31	Karatay Array	53.16	300	P	P	00 23 43.9	-0.7
KK31				IAmb	IAmb	00 24 04.4	
	comp=Z,13nm,1.2s						
KKAR	Karatay Array	53.16	300	P	P	00 23 44.0	-0.6
KKAR				pmax	pmax		
	comp=Z,13nm,1.3s						
KKAR	Karatay Array	53.16	300	P	P	00 23 44.0	-0.6
KKAR				IAmb	IAmb	00 24 04.4	
	comp=Z,13nm,1.2s						
KKAR	Karatay Array	53.16	300	P	P	00 23 43.8	-0.9
KLSI		53.37	228	P	P	00 23 46.8	+0.4
	comp=Z,10nm,1.1s						
GSI	Gunungsitoli	53.43	239	P	P	00 23 46.2	-0.7
GSI	Gunungsitoli	53.43	239	P	P	00 23 47.1	+0.2
	comp=Z,54nm,1.2s						
LEM	Lembang	53.46	223	P	P	00 23 46.4	-0.8
	comp=Z,16nm,0.4s,baz=357,slow=9.7,SNR=3.7						
MDSI	Maura Dua	53.54	228	P	P	00 23 46.7	-0.9
	comp=Z,23nm,1.0s						
NIL	Nilore	54.56	288	P	P	00 23 54.6	-0.4
NIL				pmax	pmax		
	comp=Z,8.0nm,0.8s						
NIL	Nilore	54.56	288	P	P	00 23 54.6	-0.4
NIL				IAmb	IAmb	00 23 57.4	
	comp=Z,8.1nm,0.8s						
INK	Inuvik	54.82	27	P	P	00 23 56.2	0.0
	comp=Z,1.2nm,0.5s,baz=274,slow=8.7,SNR=5.6						
INK	Inuvik	54.82	27	P	P	00 23 56.3	0.0
SVE	Sverdlovsk	55.32	319	⇓*e*P	P	00 24 00.2	+0.1
SVE				pmax	pmax		
	comp=Z,15nm,1.3s						
FITZ	Fitzroy Crossi	56.38	198	P	P	00 24 07.8	-0.2
	comp=Z,4.1nm,0.9s,baz=80,slow=5.6,SNR=3.9						
FITZ	Fitzroy Crossi	56.38	198	P	P	00 24 08.2	+0.2
WB0	Warramunga Arr	56.46	188	P	P	00 24 08.3	-0.3
WB0				IAmb	IAmb	00 24 09.0	
	comp=Z,8.7nm,0.7s						
ARU	Arti	56.53	319	*d i*P	P	00 24 08.1	-0.7
ARU						00 25 03.4	
ARU				S	S	00 32 01.6	+1.8
ARU				SS	SS	00 35 45.0	-1.6
ARU				pmax	pmax		
	comp=Z,15nm,1.2s						
ARU	Arti	56.53	319	P	P	00 24 08.0	-0.8
ARU				IAmb	IAmb	00 24 09.3	
	comp=Z,17nm,1.2s						
WB2	Warramunga Arr	56.64	188	P	P	00 24 09.6	-0.3
WB2				IAmb	IAmb	00 24 10.3	
	comp=Z,8.9nm,0.8s						
WRA	Warramunga Arr	56.64	188	P	P	00 24 09.3	-0.6
	comp=Z,6.3nm,0.7s,baz=5.3,slow=7.5,SNR=53						
WRA	Warramunga Arr	56.64	188	*i* P	P	00 24 09.6	-0.3
WRA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
SANVU	Saraoutou	57.34	150	P	P	00 24 15.5	+0.6
KBL	Kabul	57.38	291	P	P	00 24 14.4	-1.0
KBL				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KBL	Kabul	57.38	291	P	P	00 24 14.4	-1.0
KBL				IAmb	IAmb	00 24 29.6	
	comp=Z,6.0nm,1.0s						
HYB	Hyderabad	58.00	269	*i* P	P	00 24 19.0	-0.8
ABKAR	Akbulak array	58.05	310	P	P	00 24 18.8	-0.8
ABKAR	Akbulak array	58.05	310	P	P	00 24 18.9	-0.7
ABKAR				IAmb	IAmb	00 24 20.7	
	comp=Z,5.5nm,0.9s						
AS31	Alice Springs	60.37	188	P	P	00 24 35.8	-0.1
ASAR	Alice Springs	60.37	188	P	P	00 24 36.0	+0.1
	comp=Z,3.5nm,0.8s,baz=9.2,slow=6.5,SNR=23						
ASAR	Alice Springs	60.37	188	P	P	00 24 36.0	+0.1
ASAR	Alice Springs	60.37	188	P	P	00 24 35.7	-0.2
KIRV	Kirov	60.45	323	*ce*P	P	00 24 35.8	-0.2
EUNU	Eureka	60.61	8	P	P	00 24 37.2	+0.3
EUNU				IAmb	IAmb	00 24 42.6	
	comp=Z,3.4nm,0.8s						
EIDS	Eidsvold	62.38	170	P	P	00 24 50.6	+1.2
EIDS				IAmb	IAmb	00 25 10.8	
	comp=Z,13nm,1.1s						
HRA	Herat	62.50	294	P	P	00 24 50.9	+0.2
HRA				IAmb	IAmb	00 24 51.8	
	comp=Z,5.2nm,0.8s						
TMCR	Tamitsa	63.00	331	*e*P	P	00 24 52.1	-1.0
TMCR				pmax	pmax		
	comp=Z,15nm,1.0s						
GEYT	Alibeck	63.86	299	P	P	00 24 59.4	+0.1
	comp=Z,2.3nm,0.8s,baz=44,slow=8.8,SNR=4.9						
GEYT	Alibeck	63.86	299	P	P	00 24 59.5	+0.1
BELG	Belogornoye	63.96	317	*i* P	P	00 24 58.8	-0.9
BELG				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KLMR	Klimovskoe	63.99	328	*e*P	P	00 24 57.4	-2.3
KLMR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KLMR	Klimovskoe	63.99	328	*e*P	P	00 24 57.5	-2.3
KLMR				AMP		00 24 59.9	
	comp=Z,10.0nm,1.0s						
YKA	Yellowknife Ar	64.25	30	P	P	00 25 02.0	+0.6
	comp=Z,0.4nm,0.6s,baz=306,slow=6.1,SNR=11						
ARCES	ARCESS Array B	64.30	339	P	P	00 25 02.6	+0.9
	comp=Z,5.1nm,1.0s,baz=53,slow=9.1,SNR=1.8						
ARCES	ARCESS Array B	64.30	339	P	P	00 25 02.4	+0.7
VRH	Novokhopyorsk	67.75	318	*e*P	P	00 25 22.3	-1.8
VRH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
STKA	Stephens Creek	68.16	180	P	P	00 25 27.2	+0.5
	comp=Z,3.6nm,0.7s,baz=352,slow=9.1,SNR=6.3						
STKA	Stephens Creek	68.16	180	P	P	00 25 26.8	+0.1
OBN	Obninsk	68.30	323	⇑*e*P	P	00 25 26.9	-0.6
OBN				pmax	pmax		
	comp=Z,26nm,2.2s						
LPSR	Galich'ya Gora	68.48	320	*e*P	P	00 25 28.0	-0.7
LPSR				pmax	pmax		
	comp=Z,20nm,0.8s						
FIA1	FINESS Array S	69.07	332	P	P	00 25 32.3	+0.1
FIA1				IAmb	IAmb	00 25 33.3	
	comp=Z,9.5nm,0.8s						
FINES	FINESS Array B	69.08	332	P	P	00 25 32.2	0.0
	comp=Z,5.5nm,0.7s,baz=72,slow=5.7,SNR=16						
FINES	FINESS Array B	69.08	332	P	P	00 25 32.3	+0.1
VSR	Storozhevoye	69.10	319	*e*P	P	00 25 31.2	-1.4
VSR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
VORD	Divnogorie	69.17	319	*e*P	P	00 25 31.3	-1.7
VORD				pmax	pmax		
	comp=Z,7.0nm,0.6s						
BBOO	Buckleboo	69.25	185	P	P	00 25 33.8	+0.2
MORW	Morawa	69.50	203	P	P	00 25 35.7	+0.6
GOF	Gofitskoye	70.21	312	⇑*e*P	P	00 25 39.5	-0.1
GOF				pmax	pmax		
	comp=Z,16nm,0.8s						
VSU	Vasula	70.70	330	*e*P	P	00 25 42.9	+0.6
NCK	Nalchik	70.71	310	*i* P	P	00 25 43.0	+0.3
NCK				pmax	pmax		
	comp=Z,8.0nm,1.1s						
ZEI	Tsey	70.90	309	*e*P	P	00 25 42.5	-1.6
ZEI				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KBZ	Khabaz	71.02	311	P	P	00 25 44.8	+0.4
	comp=Z,9.2nm,0.9s,baz=47,slow=5.4,SNR=27						
KBZ				LR	LR	00 58 19.0	
	comp=Z,43nm,18.8s,baz=118,slow=37						
KIV	Kislovodsk	71.02	311	*e*P	P	00 25 45.0	+0.3
KIV				pmax	pmax		
	comp=Z,70nm,1.1s						
KIV	Kislovodsk	71.02	311	P	P	00 25 44.6	-0.1
SUMG	Summit	71.08	360	P	P	00 25 45.4	+0.5
SUMG				pmax	pmax		
	comp=Z,3.0nm,1.0s						
SUMG	Summit	71.08	360	P	P	00 25 45.4	+0.5
SHA1	Shidzhatmaz	71.16	311	*i* P	P	00 25 45.2	-0.5
NEY	Neytrino	71.38	310	*i* P	P	00 25 46.6	-0.4
NEY				pmax	pmax		
	comp=Z,1.0nm,0.9s						
UOSS	Minazif	71.75	288	P	P	00 25 48.6	-0.6
UOSS				IAmb	IAmb	00 25 49.9	
	comp=Z,6.1nm,0.9s						
GNI	Garni	71.79	307	*ce*P	P	00 25 48.9	-0.6
GNI				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BMO	Blue Mountains	72.34	47	P	P	00 25 54.2	+1.6
BMO				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BMO	Blue Mountains	72.34	47	P	P	00 25 54.2	+1.6
IDID	Didziasalis	72.70	327	*e*P	P	00 25 55.4	+1.0
ISAL	Salakas	72.81	327	*e*P	P	00 25 56.0	+1.0
IIGN	Ignalina	72.91	327	*e*P	P	00 25 56.8	+1.2
NACGM	Naroch	72.95	327	*i* P	P	00 25 56.0	+0.1
NACGM				*i* P	P	00 25 56.0	+0.1
NACGM				*i* P	P	00 25 56.0	+0.1
NACGM				*i* PcP	PcP	00 26 15.3	+2.5
NACGM				*i* PP	PP	00 28 27.6	-10
NACGM				*i* PPP	PPP	00 30 06.6	
NACGM				*i* S	S	00 35 12.2	-10
NACGM				*i* PS	PnS	00 36 23.0	+30
NACGM				*i* SS	SS	00 40 08.8	+7.2
NACGM				*i* SSS	SSS	00 43 07.7	
NACGM				*i* LQ	LQ	00 53 35.1	
NACGM				*i* LR	LR	00 57 52.5	
SOC	Sochi	73.02	312	*e*P	P	00 25 55.1	-1.4
SOC				*e*		00 28 40.0	
SOC				*e*PPP	PPP	00 30 18.0	
SOC				*e*S	S	00 35 22.1	-1.2
SOC				MLR	MLR		
	comp=Z,46nm,16.0s						
UPP	Uppsala	73.22	334	*e*P	P	00 25 57.4	0.0
PABE	Paberze	73.77	328	*e*P	P	00 26 01.7	+1.0
NC405	NORSAR Array S	74.26	337	P	P	00 26 03.3	-0.2
PBUR	Paburge	74.27	329	*e*P	P	00 26 03.7	+0.1
HRY	Holter Researc	74.37	43	P	P	00 26 05.9	+1.3
NB2	NORSAR Subarra	74.48	337	P	P	00 26 04.7	-0.1
	comp=Z,2.3nm,0.7s,baz=39,slow=6.2						
NOA	NORSAR Array B	74.48	337	P	P	00 26 05.0	+0.2
	comp=Z,5.9nm,0.9s,baz=39,slow=5.8,SNR=14						
NOA				LR	LR	01 01 48.9	
	comp=Z,24nm,18.6s,baz=355,slow=38						
NOA	NORSAR Array B	74.48	337	P	P	00 26 05.0	+0.2
AKASG	Malin Array Be	74.49	322	P	P	00 26 04.4	-0.6
	comp=Z,13nm,0.8s,baz=48,slow=6.1,SNR=37						
AKASG				LR	LR	01 00 36.7	
	comp=Z,18nm,18.6s,baz=355,slow=37						
AKASG	Malin Array Be	74.49	322	P	P	00 26 04.4	-0.6
AKBB	Malin Array Si	74.49	322	*ce*P	P	00 26 04.8	-0.2
AKBB	Malin Array Si	74.49	322	P	P	00 26 04.8	-0.2
SUW	Suwalki	75.12	327	*e*P	P	00 26 08.0	-0.6
SUW	Suwalki	75.12	327	*e*P	P	00 26 08.4	-0.1
SUW	Suwalki	75.12	327	P	P	00 26 08.5	-0.1
SUW				pmax	pmax		
	comp=Z,18nm,0.9s						
SUW	Suwalki	75.12	327	P	P	00 26 08.5	-0.1
NVAR	Mina Array Bea	75.38	53	P	P	00 26 12.6	+1.9
	comp=Z,1.4nm,0.8s,baz=283,slow=6.4,SNR=13						
NVAR	Mina Array Bea	75.38	53	P	P	00 26 11.9	+1.2
MARD	Mardin	75.94	306	P	P	00 26 14.1	+0.3
MARD				IAmb	IAmb	00 26 15.2	
	comp=Z,12nm,1.0s						
SORM	Soroca	76.58	321	⇑P	P	00 26 16.7	-0.3
R11A	Troy Canyon, C	77.16	52	P	P	00 26 21.8	+1.1
R11A				IAmb	IAmb	00 26 28.0	
	comp=Z,7.0nm,1.2s						
TPNV	Topopah Spring	77.56	53	P	P	00 26 24.6	+1.6
TPNV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
TPNV	Topopah Spring	77.56	53	P	P	00 26 24.6	+1.6
DUG	Dugway, Tooele	77.76	49	P	P	00 26 25.3	+1.3
DUG				pmax	pmax		
	comp=Z,11nm,1.4s						
DUG	Dugway, Tooele	77.76	49	P	P	00 26 25.3	+1.3
DUG				IAmb	IAmb	00 26 32.2	
	comp=Z,11nm,1.4s						
PD31	Pinedale Array	78.08	45	P	P	00 26 26.7	+0.8
PDAR	Pinedale Array	78.08	45	P	P	00 26 26.7	+0.8
	comp=Z,1.3nm,0.6s,baz=276,slow=1.3,SNR=11						
PDAR	Pinedale Array	78.08	45	P	P	00 26 26.5	+0.7
KWP	Kalwaria Pacla	78.34	324	*e*P	P	00 26 27.5	+0.6
KWP	Kalwaria Pacla	78.34	324	P	P	00 26 27.1	+0.2
KWP				pmax	pmax		
	comp=Z,29nm,1.1s						
KWP	Kalwaria Pacla	78.34	324	P	P	00 26 27.1	+0.2
BUR08	Bucovina Ar. S	78.49	322	P	P	00 26 28.3	+0.4
BUR08				IAmb	IAmb	00 26 29.1	
	comp=Z,6.6nm,0.8s						
BURAR	Bucovina Array	78.50	322	⇑P	P	00 26 28.5	+0.5
BURAR	Bucovina Array	78.50	322	P	P	00 26 28.0	+0.1
BIZ	Bicaz	78.51	321	⇑P	P	00 26 28.6	+0.7
TESR	Tescani	78.52	320	⇑P	P	00 26 28.0	+0.1
TPGR	Topolog	78.67	318	⇑P	P	00 26 28.2	-0.6
ODBI	Odobesti	78.80	319	⇓P	P	00 26 31.6	+2.1
VRI	Vrincioaia	78.90	320	⇑P	P	00 26 30.7	+0.6
PLOR	Plostina	78.95	320	⇓P	P	00 26 30.2	-0.2
BR131	Keskin Array S	78.97	311	*i* P	P	00 26 30.4	-0.3
BR131	Keskin Array S	78.97	311	P	P	00 26 30.0	-0.7
BR131				IAmb	IAmb	00 26 31.9	
	comp=Z,8.5nm,1.1s						
BRTR	Keskin Array B	78.97	311	P	P	00 26 30.6	-0.1
	comp=Z,4.5nm,1.0s,baz=89,slow=3.4,SNR=17						
BRTR				LR	LR	01 03 20.4	
	comp=Z,26nm,20.7s,baz=359,slow=37						
BRTR	Keskin Array B	78.97	311	*ce*P	P	00 26 31.0	+0.3
BRTR				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BRTR	Keskin Array B	78.97	311	P	P	00 26 30.2	-0.5
KOLS	Kolonicke sedl	79.03	324	*e*P	P	00 26 30.9	+0.2
KOLS				pmax	pmax		
	comp=Z,7.0nm,1.2s						
KOLS	Kolonicke sedl	79.03	324	*e*P	P	00 26 30.9	+0.2
BISRR	Bisoca	79.12	319	⇓P	P	00 26 31.1	-0.2
OZUR		79.24	320	⇓P	P	00 26 32.9	+0.9
OJC	Ojcow	79.26	326	*e*P	P	00 26 32.3	+0.4
OJC	Ojcow	79.26	326	P	P	00 26 31.6	-0.3
OJC	Ojcow	79.26	326	P	P	00 26 31.6	-0.3
OJC				IAmb	IAmb	00 26 33.3	
	comp=Z,17nm,1.0s						
CRVS	Cervenica-Dubn	79.43	324	*e*P	P	00 26 32.2	-0.7
CRVS				pmax	pmax		
	comp=Z,12nm,1.1s						
CRVS	Cervenica-Dubn	79.43	324	*e*P	P	00 26 32.2	-0.7
ICOR	Ion Corvin	79.49	318	⇓P	P	00 26 33.0	-0.3
ISR	Istrita	79.50	319	⇑P	P	00 26 34.6	+1.2
DOPR	Dopca	79.53	320	⇓P	P	00 26 33.9	+0.4
NIE	Niedzica	79.61	325	*e*P	P	00 26 34.8	+0.9
SRU	San Rafael Swe	79.82	49	P	P	00 26 36.5	+1.1
SRU				pmax	pmax		
	comp=Z,6.0nm,0.7s						
SRU	San Rafael Swe	79.82	49	P	P	00 26 36.5	+1.1
ULM	Lac du Bonnet	79.94	33	P	P	00 26 35.5	0.0
	comp=Z,1.5nm,0.7s,baz=331,slow=5.3,SNR=3.3						
ULM	Lac du Bonnet	79.94	33	P	P	00 26 35.9	+0.3
ULM				pmax	pmax		
	comp=Z,6.0nm,1.2s						
ULM	Lac du Bonnet	79.94	33	P	P	00 26 35.9	+0.3
LANS	Liptovska Anna	80.18	325	*e*P	P	00 26 37.7	+0.7
LANS				pmax	pmax		
	comp=Z,3.0nm,0.9s						
LANS	Liptovska Anna	80.18	325	*e*P	P	00 26 37.7	+0.7
DRGR		80.31	322	⇑P	P	00 26 38.4	+0.6
ARR	Arges	80.33	320	⇑P	P	00 26 39.2	+1.3
KSP	Ksiaz	80.34	328	*e*P	P	00 26 38.4	+0.7
OSTC	Ostas	80.58	328	*e*P	P	00 26 40.1	+1.0
MORC	Moravsky Berou	80.58	327	⇓P	P	00 26 39.8	+0.7
MORC	Moravsky Berou	80.58	327	*e*P	P	00 26 39.5	+0.3
MORC	Moravsky Berou	80.58	327	P	P	00 26 39.1	-0.1
MORC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MORC	Moravsky Berou	80.58	327	P	P	00 26 39.1	-0.1
MORC				IAmb	IAmb	00 26 40.6	
	comp=Z,7.2nm,0.9s						
SOCY	Socotra	80.61	278	P	P	00 26 37.6	-2.3
CHVC	Chvalec	80.63	328	*e*P	P	00 26 39.5	+0.1
RAYN	Ar Rayn	80.63	292	P	P	00 26 39.6	-0.3
RAYN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
RAYN	Ar Rayn	80.63	292	P	P	00 26 39.6	-0.3
RAYN				IAmb	IAmb	00 26 40.8	
	comp=Z,5.3nm,0.9s						
DPC	Dobruska-Polom	80.69	328	*e*P	P	00 26 40.0	+0.3
DPC	Dobruska-Polom	80.69	328	*e*P	P	00 26 40.0	+0.3
KRLC	Kraliky	80.70	327	*e*P	P	00 26 40.0	+0.2
KRLC	Kraliky	80.70	327	*e*P	P	00 26 40.0	+0.2
UPC	Upice	80.71	328	*e*P	P	00 26 40.3	+0.6
UPC	Upice	80.71	328	*e*P	P	00 26 40.3	+0.6
PSZ	Piszkesteto	80.87	324	P	P	00 26 40.9	+0.2
PSZ				pmax	pmax		
	comp=Z,11nm,1.0s						
PSZ	Piszkesteto	80.87	324	P	P	00 26 40.9	+0.2
PSZ				IAmb	IAmb	00 26 42.4	
	comp=Z,11nm,1.0s						
VYHS	Vyhne	80.94	325	*e*P	P	00 26 41.4	+0.3
VYHS				pmax	pmax		
	comp=Z,6.0nm,1.0s						
VYHS	Vyhne	80.94	325	*e*P	P	00 26 41.4	+0.3
JAVC	Velka Javorina	81.20	326	*e*P	P	00 26 44.0	+1.5
FLTG	Flechtingen	81.24	332	*e*P	P	00 26 42.2	-0.3
	comp=Z,8.1nm,0.8s,baz=38,slow=5.2						
GZR	Gura Zlata	81.25	321	⇑P	P	00 26 43.0	+0.2
BRG	Berggiesshubel	81.30	329	*e*P	P	00 26 43.0	+0.2
BRG				Amp		00 26 44.7	
	comp=Z,8.6nm,1.0s						
BRG	Berggiesshubel	81.30	329	*e*P	P	00 26 43.0	+0.2
	comp=Z,8.6nm,1.0s,baz=38,slow=5.2						
PVCC	Panska Ves	81.30	329	*e*P	P	00 26 43.4	+0.5
PVCC	Panska Ves	81.30	329	*e*P	P	00 26 43.4	+0.5
CLL	Collm	81.34	330	*i* P	P	00 26 42.5	-0.6
	comp=Z,13nm,0.9s						
CLL				*i* PcP	sP	00 26 48.5	0.0
CLL				*e*PP	PP	00 29 49.0	+0.9
CLL	Collm	81.34	330	*i* P	P	00 26 42.5	-0.6
CLL				pmax	pmax		
	comp=Z,13nm,0.9s						
CLL	Collm	81.34	330	P	P	00 26 43.0	-0.1
CLL				IAmb	IAmb	00 26 44.0	
	comp=Z,12nm,0.9s						
CLL	Collm	81.34	330	*e*P	P	00 26 43.2	+0.1
	comp=Z,13nm,0.9s,baz=38,slow=5.2						
VRAC	Vranov	81.35	327	⇑P	P	00 26 44.3	+1.1
VRAC	Vranov	81.35	327	*e*P	P	00 26 43.9	+0.7
FBE	Freiberg	81.50	330	*e*P	P	00 26 44.7	+0.8
	comp=Z,22nm,1.1s,baz=38,slow=5.2						
SMOL	Smolenice	81.57	326	*e*P	P	00 26 45.5	+1.1
SMOL				pmax	pmax		
	comp=Z,5.0nm,0.9s						
SMOL	Smolenice	81.57	326	*e*P	P	00 26 45.5	+1.1
KRUC	Moravsky	81.62	327	*e*P	P	00 26 45.0	+0.4
BZS	Buzias	81.68	322	⇓P	P	00 26 45.0	0.0
SRO2	Moca	81.68	325	*e*P	P	00 26 44.8	-0.1
SRO2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
SRO2	Moca	81.68	325	*e*P	P	00 26 44.8	-0.1
PRU	Pruhonice	81.72	328	*e*P	P	00 26 44.8	-0.3
PRU	Pruhonice	81.72	328	*e*P	P	00 26 44.8	-0.3
MODS	Modra-Piesok	81.74	326	*e*P	P	00 26 45.5	+0.2
MODS				pmax	pmax		
	comp=Z,12nm,1.2s						
MODS	Modra-Piesok	81.74	326	*e*P	P	00 26 45.5	+0.2
NEUB	Neuenburg	81.91	331	*e*P	P	00 26 46.4	+0.4
	comp=Z,15nm,1.0s,baz=38,slow=5.2						
CLZ	Clausthal	81.96	332	*e*P	P	00 26 46.9	+0.5
	comp=Z,12nm,1.0s,baz=38,slow=5.2						
PBCC	Pribram	82.18	329	*e*P	P	00 26 47.2	-0.4
GUNZ	Gunzen	82.34	330	*e*P	P	00 26 49.0	+0.6
	comp=Z,4.9nm,0.9s,baz=38,slow=5.2						
WERN	Wernitzgruen	82.39	330	*e*P	P	00 26 49.0	+0.3
	comp=Z,8.3nm,1.1s,baz=38,slow=5.2						
NKC	Novy Kostel	82.40	330	*e*P	P	00 26 48.6	-0.1

NKC	**Novy Kostel**	**82.40**	**330**	*e*P	**P**	**00 26 48.6**	**-0.1**
IBBN	**Ibbenburen**	**82.56**	**333**	*e*P	**P**	**00 26 49.8**	**+0.4**
	comp=Z,19nm,1.0s,baz=38,slow=5.2						
MORH	**Mrgy, Hungar**	**82.69**	**324**	⇑P	**P**	**00 26 49.9**	**-0.4**
CONA	**Conrad Observa**	**82.70**	**326**	*e*P	**P**	**00 26 51.5**	**+1.0**
	comp=Z,5.7nm,0.9s						
CKRC	**Cesky Krumlov**	**82.71**	**328**	*e*P	**P**	**00 26 50.1**	**-0.3**
MANZ	**Manzenberg**	**82.73**	**330**	*e*P	**P**	**00 26 50.9**	**+0.5**
	comp=Z,6.9nm,1.0s,baz=38,slow=5.2						
KHC	**Kasperske Hory**	**82.78**	**328**	*e*P	**P**	**00 26 51.0**	**+0.2**
KHC	**Kasperske Hory**	**82.78**	**328**	*e*P	**P**	**00 26 51.0**	**+0.2**
KHC	**Kasperske Hory**	**82.78**	**328**	P	**P**	**00 26 51.0**	**+0.2**
KHC				IAmb	IAmb	00 26 52.1	
	comp=Z,7.9nm,0.8s						
ROTZ	**Rotzenmuhle**	**82.86**	**329**	*e*P	**P**	**00 26 51.7**	**+0.6**
	comp=Z,15nm,1.5s,baz=38,slow=5.2						
FRGS	**Fruska Gora**	**82.90**	**322**	⇑P	**P**	**00 26 51.7**	**+0.3**
GEC2	**GERESS Array S**	**82.95**	**328**	P	**P**	**00 26 51.7**	**0.0**
GEC2				IAmb	IAmb	00 26 52.5	
	comp=Z,4.5nm,0.9s						
GEC2	**GERESS Array S**	**82.95**	**328**	*e*P	**P**	**00 26 51.5**	**-0.2**
	comp=Z,5.3nm,1.0s,baz=38,slow=5.2						
GERES	**GERESS Array B**	**82.95**	**328**	P	**P**	**00 26 51.4**	**-0.3**
	comp=Z,3.8nm,0.8s,baz=41,slow=5.4,SNR=27						
VTS	**Vitosha**	**82.95**	**319**	⇑P	**P**	**00 26 52.2**	**+0.3**
VTS	**Vitosha**	**82.95**	**319**	P	**P**	**00 26 51.8**	**-0.2**
VTS				pmax	pmax		
	comp=Z,5.0nm,0.8s						
VTS	**Vitosha**	**82.95**	**319**	P	**P**	**00 26 51.8**	**-0.2**
VTS				IAmb	IAmb	00 26 53.5	
	comp=Z,5.0nm,0.8s						
WET	**Wettzell**	**83.06**	**329**	*e*P	**P**	**00 26 52.9**	**+0.7**
	comp=Z,5.7nm,1.0s,baz=38,slow=5.2						
KASTN	**Kahler Asten**	**83.21**	**332**	*e*P	**P**	**00 26 53.3**	**+0.4**
	comp=Z,5.2nm,0.9s,baz=38,slow=5.2						
GRF	**Grafenberg Arr**	**83.32**	**330**	*e*P	**P**	**00 26 54.4**	**+0.9**
	comp=Z,20nm,0.9s,baz=38,slow=5.2						
GRFO	**Grafenberg**	**83.32**	**330**	P	**P**	**00 26 54.4**	**+0.9**
GRFO				pmax	pmax		
	comp=Z,17nm,0.9s						
GRFO	**Grafenberg**	**83.32**	**330**	P	**P**	**00 26 54.4**	**+0.9**
ARSA	**Arzberg**	**83.36**	**326**	*e*P	**P**	**00 26 54.6**	**+0.8**
	comp=Z,2.1nm,0.8s						
MOA	**Molln**	**83.47**	**327**	*e*P	**P**	**00 26 55.7**	**+1.4**
	comp=Z,5.7nm,1.1s						
DIVS	**Divibare**	**83.57**	**322**	P	**P**	**00 26 54.9**	**-0.1**
DIVS				IAmb	IAmb	00 26 56.0	
	comp=Z,7.5nm,1.3s						
EYMN	**Ely**	**83.57**	**33**	P	**P**	**00 26 55.4**	**+0.6**
EYMN				IAmb	IAmb	00 27 00.9	
	comp=Z,8.2nm,0.9s						
SOKA	**Soboth**	**84.02**	**326**	*e*P	**P**	**00 26 57.3**	**+0.1**
	comp=Z,7.5nm,0.9s,SNR=10.0						
RJOB	**Jochberg**	**84.19**	**328**	*e*P	**P**	**00 26 58.9**	**+0.8**
	comp=Z,63nm,1.1s,baz=38,slow=5.2						
EIL	**Elat**	**84.43**	**303**	LR	LR	01 06 07.1	
	comp=Z,12nm,20.5s,baz=356,slow=37						
FUR	**Furstenfeldbru**	**84.49**	**329**	*e*P	**P**	**00 26 59.9**	**+0.4**
	comp=Z,20nm,1.0s,baz=38,slow=5.2						
MEM	**Membach**	**84.58**	**333**	*d*P	**P**	**00 26 59.6**	**-0.3**
PPT	**Papeete**	**84.63**	**116**	LR	LR	00 58 26.2	
	comp=Z,46nm,19.8s,baz=4.5,slow=31						
MYKA	**Terra Mystica**	**84.67**	**327**	*e*P	**P**	**00 26 60.0**	**-0.6**
	comp=Z,4.4nm,0.8s						
BSTI	**Sart Tilman**	**84.76**	**333**	*d*P	**P**	**00 27 01.1**	**+0.3**
STU	**Stuttgart**	**84.86**	**330**	P	**P**	**00 27 01.1**	**-0.2**
STU				pmax	pmax		
	comp=Z,12nm,0.8s						
STU	**Stuttgart**	**84.86**	**330**	P	**P**	**00 27 01.1**	**-0.2**
STU	**Stuttgart**	**84.86**	**330**	*e*P	**P**	**00 27 01.8**	**+0.5**
	comp=Z,15nm,0.8s,baz=38,slow=5.2						
BCLA	**Clavier**	**84.99**	**333**	*d*P	**P**	**00 27 01.4**	**-0.5**
ABTA	**Abfaltersbach**	**85.08**	**327**	*e*P	**P**	**00 27 00.6**	**-2.0**
	comp=Z,6.4nm,1.4s						
PDG	**Podgorica**	**85.15**	**321**	⇑P	**P**	**00 27 03.0**	**+0.1**
PDG	**Podgorica**	**85.15**	**321**	P	**P**	**00 27 02.7**	**-0.2**
MOTA	**Moosalm**	**85.21**	**329**	*e*P	**P**	**00 27 03.4**	**0.0**
	comp=Z,3.1nm,0.9s						
FNA	**Florina**	**85.23**	**319**	P	**P**	**00 27 03.3**	**-0.2**
FNA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
FNA	**Florina**	**85.23**	**319**	P	**P**	**00 27 03.3**	**-0.2**
FNA				IAmb	IAmb	00 27 04.4	
	comp=Z,4.3nm,1.0s						
RETA	**Reutte**	**85.24**	**329**	*i* P	**P**	**00 27 03.7**	**+0.3**
	comp=Z,6.6nm,0.8s,SNR=10						
SQTA	**Sankt Quirin**	**85.26**	**328**	*i* P	**P**	**00 27 03.5**	**-0.1**
	comp=Z,2.5nm,0.8s						
BMRD	**Maredsous**	**85.28**	**334**	*d*P	**P**	**00 27 03.1**	**-0.2**
SNF	**Seneffe**	**85.28**	**334**	*d*P	**P**	**00 27 03.1**	**-0.2**
BFO	**Black Forest**	**85.56**	**331**	P	**P**	**00 27 04.9**	**0.0**
BFO				pmax	pmax		
	comp=Z,16nm,1.0s						
BFO	**Black Forest**	**85.56**	**331**	P	**P**	**00 27 04.9**	**0.0**
BFO	**Black Forest**	**85.56**	**331**	*e*P	**P**	**00 27 04.9**	**0.0**
	comp=Z,19nm,1.1s,baz=38,slow=5.2						
FETA	**Feichten**	**85.62**	**329**	*e*P	**P**	**00 27 05.6**	**+0.1**
	comp=Z,5.3nm,0.9s,SNR=6.1						
DAVA	**Damuels**	**85.77**	**329**	*e*P	**P**	**00 27 06.3**	**+0.2**
	comp=Z,5.1nm,0.8s						
AGG	**Agios Georgios**	**85.97**	**317**	P	**P**	**00 27 06.0**	**-1.1**
AGG				pmax	pmax		
	comp=Z,18nm,1.4s						
AGG	**Agios Georgios**	**85.97**	**317**	P	**P**	**00 27 06.0**	**-1.1**
ECH	**Echery**	**86.11**	**331**	P	**P**	**00 27 07.5**	**-0.1**
ECH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ECH	**Echery**	**86.11**	**331**	P	**P**	**00 27 07.5**	**-0.1**
ECH				IAmb	IAmb	00 27 08.3	
	comp=Z,6.7nm,0.8s						
NRCA	**Norcia**	**87.84**	**325**	P	**P**	**00 27 16.3**	**+0.1**
INTR	**Introdacqua**	**88.10**	**324**	P	**P**	**00 27 17.6**	**+0.1**
TIP	**Timpagrande**	**88.83**	**320**	P	**P**	**00 27 20.7**	**-0.3**
TIP				IAmb	IAmb	00 27 38.6	
	comp=Z,5.7nm,1.0s						
TX32	**Lajitas Array**	**90.51**	**52**	P	**P**	**00 27 30.0**	**+0.9**
TXAR	**Lajitas Array**	**90.51**	**52**	P	**P**	**00 27 30.1**	**+1.0**
	comp=Z,1.8nm,0.9s,baz=305,slow=2.7,SNR=12						
TXAR	**Lajitas Array**	**90.51**	**52**	P	**P**	**00 27 29.8**	**+0.8**
H06E1	**SOCORRO T-PHAS**	**92.53**	**64**	T	T	02 10 35.8	
	SNR=10.0						
LPAZ	**La Paz**	**147.06**	**60**	PKPbc	**PKPbc**	**00 34 11.3**	**+0.5**
	comp=Z,2.8nm,0.7s,baz=303,slow=2.4,SNR=11						
LPAZ	**La Paz**	**147.06**	**60**	PKP2	**PKPbc**	**00 34 11.5**	**+0.6**
LPAZ	**La Paz**	**147.06**	**60**		**PKPbc**	**00 34 11.5**	**+0.6**
H03N2	**Juan Fernandez**	**147.17**	**96**	T	T	03 18 40.1	
	baz=292,slow=76,SNR=90						
H03N3	**Juan Fernandez**	**147.18**	**97**	T	T	03 18 43.0	
	baz=292,slow=76,SNR=89						
H03N1	**Juan Fernandez**	**147.19**	**96**	T	T	03 18 41.5	
	baz=292,slow=76,SNR=84						

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*IDC **15** 00:16:16.5±2.1, 4°.38N×123°.00E, h605km±25km, mb3.2/4, mb1 3.5/5, mb1mx2.7/39, mbtmp4.5/5, Error ellipse: s-maj=107.7km s-min=12.4km az=65.0*

ISC 15 00:16:14.9±0.9**, 4°.4N**±0°.1×**122°.9E**±0°.3**, h582**km**, n6, σ1§36**/11**, mb3.9**/4**, 1C, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCP	**Kidapawan**	**3.40**	**40**	⇑*i*P	**P**	**00 17 36.1**	**+1.0**
BATI	**Baumata**	**14.51**	**177**	P	**P**	**00 19 19.7**	**+0.6**
	8.9nm,0.3s,baz=342,slow=14,SNR=10						
BATI				S	**S**	**00 21 51.5**	**+1.5**
	2.7nm,0.3s,baz=82,slow=15,SNR=1.7						
WRA	**Warramunga Arr**	**26.66**	**155**	P	**P**	**00 21 08.4**	**-0.3**
	4.5nm,0.3s,baz=334,slow=10.0,SNR=98						
ASAR	**Alice Springs**	**29.87**	**159**	P	**P**	**00 21 37.1**	**+0.5**
	1.8nm,0.4s,baz=339,slow=7.2,SNR=66						
ASAR				PcP	**PcP**	**00 24 20.4**	**-0.6**
	0.1nm,0.4s,baz=7.1,slow=2.5,SNR=1.5						
ASAR				S	**S**	**00 25 51.8**	**-2.1**
	2.0nm,0.9s,baz=347,slow=20,SNR=6.8						
ASAR				ScP	**ScP**	**00 27 06.2**	**-2.4**
	0.7nm,0.6s,baz=342,slow=2.8,SNR=5.7						
STKA	**Stephens Creek**	**40.21**	**155**	P	**P**	**00 23 02.5**	**+0.3**
	0.9nm,0.4s,baz=341,slow=8.5,SNR=4.1						
MKAR	**Makanchi Array**	**54.89**	**327**	P	**P**	**00 24 51.5**	**0.0**
	1.0nm,0.3s,baz=121,slow=7.6,SNR=14						
MKAR				PcP	**PcP**	**00 25 43.9**	**-0.7**
	0.7nm,0.6s,baz=117,slow=3.9,SNR=3.5						

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*TIR **15** 00:19:16.2, 41°.84N×20°.20E, h2km±1km, Md2.6*

*SKO **15** 00:19:18.0, 41°.79N×20°.18E, h4km*

ISC 15 00:19:17.3±0.9**, 41°.81N**±0°.03×**20°.18E**±0°.03**, h11**km±10km**, n19, σ1§17**/28**, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PHP	**Peshkopia**	**0.23**	**123**	P	**Pg**	**00 19 21.8**	**-0.4**
	baz=130						
PHP				S	**Sg**	**00 19 26.0**	**+0.6**
	baz=130						
PUK	**Puka**	**0.32**	**317**	P	**Pg**	**00 19 23.2**	**-0.5**
	baz=312						
PUK				S	**Sg**	**00 19 28.7**	**+0.8**
	baz=312						
TIR	**Tirane**	**0.52**	**207**	P	**Pg**	**00 19 28.0**	**+0.5**
	baz=207						
TIR				S	**Sb**	**00 19 36.8**	**+0.8**
	baz=207						
TIR	**Tirane**	**0.52**	**207**	*i* Pg	**Pg**	**00 19 27.9**	**+0.5**
BCI	**Bajram Curri**	**0.56**	**351**	P	**Pg**	**00 19 27.7**	**-0.5**
	baz=350						
BCI				S	**Sg**	**00 19 36.2**	**+0.6**
	baz=350						
PRZK	**Prizren**	**0.58**	**47**	*i* Pg	**Pg**	**00 19 28.2**	**-0.4**
PRZK				*i* Sg	**Sg**	**00 19 37.3**	**+0.9**
ULC	**Ulcinj**	**0.72**	**282**	*i* Pg	**Pb**	**00 19 30.4**	**-1.4**
OHR	**Ohrid**	**0.84**	**146**	*i* Pg	**Pb**	**00 19 32.6**	**-1.3**
OHR				*i* Sg	**Sb**	**00 19 45.0**	**-0.2**
OHR				*e*Lg	Lg	00 19 45.4	
	comp=N,26nm,0.3s						
OHR				*e*Lg	Lg	00 19 46.5	
	comp=E,23nm,0.4s						
PDG	**Podgorica**	**0.92**	**312**	*i* Pg	**Pb**	**00 19 34.2**	**-1.1**
SMRK	**Smrekonice**	**1.20**	**28**	*i* Pg	**Pg**	**00 19 40.8**	**+0.5**
SMRK				*i* Sg	**Sg**	**00 19 58.3**	**+2.4**
FNA	**Florina**	**1.37**	**138**	*i* Pg	**Pn**	**00 19 41.8**	**-0.5**
STIP	**Stip**	**1.50**	**94**	*i* Pg	**Pg**	**00 19 46.7**	**+0.5**
DBRK	**Dubrovnik**	**1.74**	**300**	*e*Pn	**Pn**	**00 19 46.9**	**-0.5**
DBRK				Sn	**Sg**	**00 20 13.6**	**+0.5**
STON	**Ston**	**2.12**	**301**	*e*Pn	**Pn**	**00 19 53.5**	**+0.8**
STON				Sn	**Sg**	**00 20 26.0**	**+0.6**
LSTV	**Lastovo**	**2.62**	**292**	*e*Pn	**Pn**	**00 20 00.4**	**+0.9**
MAKA	**Makarska**	**2.76**	**303**	*e*Pn	**Pb**	**00 20 04.5**	**-2.1**
RICI	**Ricice**	**2.81**	**308**	*e*Pn	**Pb**	**00 20 05.4**	**-2.0**
HVAR	**Hvar**	**3.08**	**298**	*e*Pn	**Pn**	**00 20 08.2**	**+2.4**
KIJV	**Kijevo**	**3.53**	**310**	*e*Pn	**Pn**	**00 20 13.0**	**+0.9**

NNC 15 00:24:40.2±2.2**, 37°.43N**×**69°.79E, h0**km**, mb3.7, mpv3.4, 2C-3D, Error ellipse: s-maj=20.1km s-min=14.4km az=23.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**5.69**	**5**	⇓P	Pn	00 26 05.1	-0.8
	0.9nm,0.3s,baz=185,slow=12,SNR=25						
KK31				⇓S	Sn	00 27 13.4	+1.3
	10.0nm,0.6s,baz=186,slow=34						
AAK	**Ala-Archa**	**6.33**	**33**	⇑P	Pn	00 26 14.8	-0.1
	1.2nm,0.5s						
AAK				S	Sn	00 27 20.5	-7.4
TKM2	**Tokmak 2**	**7.06**	**37**	⇓P	Pn	00 26 25.3	+0.4
	2.7nm,0.5s						
AB31	**Akbulak array**	**13.80**	**332**	⇑P	Pn	00 27 58.2	+1.2
	0.8nm,0.7s,baz=144,slow=11,SNR=10						

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*IPEC **15** 00:29:25.3±0.1, 49°.88N×18°.51E, h0km, ML1.3/3, Error ellipse: s-maj=1.7km s-min=0.7km az=162.0*

PRU 15 00:29:25.6±0.0**, 49°.85N**×**18°.50E, h0**km**, Mining Induced Event Darkov, E=3.8e+04, Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.23**	**267**	*e*PG	Pg	00 29 30.1	+0.1
OKC				*e*SG	Sg	00 29 32.4	-0.5
	comp=Z,26nm,0.3s						
MORC	**Moravsky Berou**	**0.62**	**264**	*e*PG	Pg	00 29 37.2	-0.4
MORC				*e*SG	Sg	00 29 45.0	-0.6
MORC	**Moravsky Berou**	**0.62**	**264**	*e*Pg	Pg	00 29 37.2	-0.4
	baz=81						
MORC				*e*Sg	Sg	00 29 45.0	-0.6
	5.1nm,0.3s,baz=81						
OJC	**Ojcow**	**0.92**	**66**	*e*Pb	Pg	00 29 41.9	-1.2
OJC				*e*Pg	Pb	00 29 42.7	-1.6
OJC				*e*Sg	Sb	00 29 56.3	-0.8
LANS	**Liptovska Anna**	**0.94**	**138**	*e*PG	Pg	00 29 43.5	-0.1
LANS				*e*SG	Sb	00 29 59.1	+1.2
LANS				*e*LG	Lg	00 30 02.2	
JAVC	**Velka Javorina**	**1.13**	**209**	*e*PG	Pg	00 29 47.6	+0.4
JAVC	**Velka Javorina**	**1.13**	**209**	*e*Pg	Pg	00 29 47.6	+0.4
	baz=28						
KRLC	**Kraliky**	**1.13**	**282**	*e*PG	Pg	00 29 45.4	-1.9
KRLC				*e*SG	Sg	00 30 01.8	-0.2
	comp=Z,6.7nm,0.4s						
NIE	**Niedzica**	**1.25**	**110**	*e*Pg	Pg	00 29 49.2	-0.3
NIE				*e*Sg	Sn	00 30 07.5	-0.3
VRAC	**Vranov**	**1.35**	**247**	*e*PG	Pg	00 29 50.7	-0.8
VRAC				*e*SG	Sg	00 30 08.2	-0.9
VRAC	**Vranov**	**1.35**	**247**	*e*Pg	Pg	00 29 50.6	-0.9
	baz=65						
VRAC				*e*Sg	Sg	00 30 08.2	-0.9
	3.8nm,0.3s,baz=65						
VYHS	**Vyhne**	**1.38**	**171**	*e*PG	Pg	00 29 51.0	-0.9
VYHS				*e*SG	Sb	00 30 10.1	-0.2
DPC	**Dobruska-Polom**	**1.49**	**290**	*e*PG	Pn	00 29 52.3	-1.4
DPC				*e*SG	Sg	00 30 13.3	-0.1
	comp=Z,4.7nm,0.3s						
SMOL	**Smolenice**	**1.51**	**208**	*e*PG	Pn	00 29 53.0	-0.9
SMOL				*e*SG	Sg	00 30 14.1	0.0
KRUC	**Moravsky**	**1.58**	**241**	*e*PG	Pn	00 29 54.3	-0.6
KRUC				*e*SG	Sn	00 30 15.4	-0.7
KRUC	**Moravsky**	**1.58**	**241**	*e*Pg	Pn	00 29 54.2	-0.7
	baz=59						
KRUC				*e*Sg	Sn	00 30 15.3	-0.8
	3.6nm,0.3s,baz=59						
OSTC	**Ostas**	**1.63**	**297**	*e*PG	Pn	00 29 54.5	-1.1
OSTC				*e*SG	Sb	00 30 17.6	0.0
MODS	**Modra-Piesok**	**1.68**	**209**	*e*PG	Pn	00 29 55.0	-1.3
MODS				*e*SG	Sn	00 30 16.9	-1.6
MODS				*e*LG	Lg	00 30 18.4	
UPC	**Upice**	**1.73**	**293**	*e*PG	Pn	00 29 56.7	-0.2
UPC				*e*SG	Sb	00 30 20.5	0.0
	comp=Z,3.3nm,0.6s						
CHVC	**Chvalec**	**1.74**	**296**	*e*PG	Pn	00 29 55.9	-1.1
CHVC				*e*SG	Sg	00 30 21.3	0.0
PRU	**Pruhonice**	**2.56**	**275**	*e*PG	Pb	00 30 10.9	-1.5
PRU				*e*SG	Sg	00 30 46.9	-1.0
CKRC	**Cesky Krumlov**	**2.93**	**251**	*e*PG	Pb	00 30 18.5	-0.2
CKRC				*e*SG	Sg	00 30 58.3	-1.3
KHC	**Kasperske Hory**	**3.29**	**259**	*e*PG	Pb	00 30 25.0	+0.2
KHC				*e*SG	Sg	00 31 09.5	-1.7

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*UCR **15** 00:49:55.9±1.9, 10°.48N×86°.27W, h20km, MW4.8, mb4.5(NEIC)*

*INET **15** 00:49:56.1, 10°.47N×86°.36W, h10km, MW4.0*

*NEIC **15** 00:49:58.4±1.6, 10°.59N±0°.09×86°.04W±0°.06, h35km±1km, mb4.5/57, Error ellipse: s-maj=15.8km s-min=7.6km az=205.0*

*IDC **15** 00:50:04.2±5.9, 11°.30N×85°.49W, h76km±49km, mb3.9/11, mb1 4.1/11, mb1mx3.8/36, mbtmp4.2/11, MS3.4/9, Ms1 3.4/9, ms1mx3.2/39, Error ellipse: s-maj=48.6km s-min=16.9km az=42.0*

*SNET **15** 00:50:28.9±0.4, 12°.71N×87°.49W, h93km±6km, ML2.9*

ISC 15 00:49:58.1±1.1**, 10°.51N**±0°.05×**86°.20W**±0°.05**, h40**km±10km**, n214, σ1§36**/218**, mb4.4**/38**, MS3.3**/6**, 5C-2D, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HZTE	**Horizontes, Gu**	**0.63**	**71**	*e*P	**Pn**	**00 50 09.5**	**-1.1**
ORTG	**Ortega, Santa**	**0.74**	**101**	*e*P	**Pn**	**00 50 10.4**	**-1.8**
ORTG				*e*S	**Sn**	**00 50 21.4**	**-0.9**
GBS3	**Finca Las Img**	**0.78**	**69**	⇓*i*P	**Pn**	**00 50 11.5**	**-1.2**
GBS3				*i* S	**Sn**	**00 50 24.6**	**+1.4**
LAPC	**Finca la Perla**	**0.80**	**71**	⇓*i*P	**Pn**	**00 50 10.7**	**-2.2**
GRZA	**Playa Garza**	**0.81**	**137**	*e*P	**Pn**	**00 50 10.2**	**-2.8**
GRZA				*e*S	**Sn**	**00 50 20.9**	**-2.9**
BUEV	**Buena Vista**	**0.83**	**70**	*i* P	**Pn**	**00 50 12.4**	**-1.0**
GB1A	**Borinquen Arri**	**0.84**	**68**	*i* P	**Pn**	**00 50 12.7**	**-0.9**
GB1A				*i* S	**Sn**	**00 50 25.7**	**+0.8**
GPS3	**Bodega del ICE**	**0.85**	**73**	⇑*i*P	**Pn**	**00 50 12.7**	**-1.0**
GPS2	**Hotel Rincn d**	**0.87**	**74**	⇑*i*P	**Pn**	**00 50 12.8**	**-1.0**
GPS2				*e*S	**Sn**	**00 50 26.2**	**+0.8**
BUAI	**Buenos Aires**	**0.93**	**67**	⇑*i*P	**Pn**	**00 50 13.3**	**-1.4**
LIM1	**Limonal**	**0.95**	**78**	⇑*i*P	**Pn**	**00 50 14.0**	**-1.0**
GUAB	**Guayabo de Bag**	**0.97**	**78**	*i* P	**Pn**	**00 50 14.4**	**-1.0**
COLC	**Colonia**	**0.99**	**81**	⇑*i*P	**Pn**	**00 50 14.7**	**-0.9**
COLC				*i* S	**Sn**	**00 50 30.4**	**+2.1**
HORNC	**Hornillas**	**1.02**	**78**	*i* P	**Pn**	**00 50 15.0**	**-1.0**
CUI	**Cuipilapa**	**1.03**	**82**	*i* S	**Sn**	**00 50 30.2**	**+0.8**
JTS	**Las Juntas de**	**1.24**	**100**	*e*P	**Pn**	**00 50 17.8**	**-1.2**
JTS	**Las Juntas de**	**1.24**	**100**	Pn	**Pn**	**00 50 18.2**	**-0.9**
JTS				Sn	**Sn**	**00 50 29.9**	**-4.7**
CASO	**Castillo**	**1.44**	**93**	*i* P	**Pn**	**00 50 21.7**	**-0.1**
ARE1	**Arenal 1**	**1.46**	**92**	*e*P	**Pn**	**00 50 22.0**	**+0.1**
CEDE	**Laguna Cedeo**	**1.47**	**91**	*e*P	**Pn**	**00 50 21.6**	**-0.5**
JACO	**JACO, Garabito**	**1.73**	**119**	*e*P	**Pn**	**00 50 27.6**	**+1.9**
SRA1	**San Ramn**	**1.74**	**104**	*e*P	**Pn**	**00 50 27.4**	**+1.4**
ACON	**Acoyapa**	**1.77**	**35**	Pn	**Pn**	**00 50 25.7**	**-0.4**
COVE	**Coope Vega, Sa**	**1.78**	**83**	*e*P	**Pn**	**00 50 27.1**	**+0.7**
HDC	**Heredia**	**2.11**	**104**	*e*P	**Pn**	**00 50 31.0**	**0.0**
HDC	**Heredia**	**2.11**	**104**	Pn	**Pn**	**00 50 31.1**	**0.0**
LCR2	**La Lucha 2**	**2.29**	**109**	*e*P	**Pn**	**00 50 34.8**	**+1.2**
CRIN	**San Cristobal**	**2.33**	**339**	Pn	**Pn**	**00 50 34.1**	**+0.1**
CVTR	**Volcan Turrial**	**2.45**	**101**	*e*P	**Pn**	**00 50 38.0**	**+2.0**
ESPN	**Las Esperanzas**	**2.50**	**48**	*e*P	**Pn**	**00 50 36.4**	**+0.1**
ESPN	**Las Esperanzas**	**2.50**	**48**	Pn	**Pn**	**00 50 36.3**	**-0.1**
EDBA	**Buenos Aires**	**3.17**	**115**	*e*P	**Pn**	**00 50 46.4**	**+0.8**
CNCH	**Conchagua**	**3.18**	**330**	*e*P	**Pn**	**00 50 45.6**	**-0.2**
CNCH	**Conchagua**	**3.18**	**330**	*e*P	**Pn**	**00 50 45.6**	**-0.2**
RIOS	**Rincon, Osa**	**3.20**	**124**	*e*P	**Pn**	**00 50 46.3**	**+0.5**
LCND	**La Caada**	**3.24**	**329**	*e*P	**Pn**	**00 50 46.0**	**-0.4**
LCND	**La Caada**	**3.24**	**329**	*e*P	**Pn**	**00 50 46.0**	**-0.4**
LCND				IAML		00 50 47.3	
	comp=Z,246nm,0.3s						
LCND				*e*S	Sn	00 50 59.1	-25
LPLA	**Las Palmas La**	**3.47**	**115**	*e*P	**Pn**	**00 50 49.2**	**-0.5**
PIRO	**Carate, Puerto**	**3.51**	**126**	*e*P	**Pn**	**00 50 50.5**	**+0.3**
PACA	**Pacayal**	**3.60**	**325**	*e*P	**Pn**	**00 50 50.5**	**-1.1**
PACA	**Pacayal**	**3.60**	**325**	*e*P	**Pn**	**00 50 50.5**	**-1.1**
TGUH	**Tegucigalpa,Un**	**3.68**	**344**	*e*P	**Pn**	**00 50 53.1**	**+0.4**
TGUH	**Tegucigalpa,Un**	**3.68**	**344**	*e*P	**Pn**	**00 50 53.1**	**+0.4**
TGUH	**Tegucigalpa,Un**	**3.68**	**344**	Pn	**Pn**	**00 50 53.3**	**+0.6**
TECA	**Tecapa**	**3.73**	**323**	*e*P	**Pn**	**00 50 52.9**	**-0.5**
TECA	**Tecapa**	**3.73**	**323**	*e*P	**Pn**	**00 50 52.9**	**-0.5**
COEG	**Centro de Oper**	**4.06**	**320**	*e*P	**Pn**	**00 50 56.9**	**-0.9**
COEG	**Centro de Oper**	**4.06**	**320**	*e*P	**Pn**	**00 50 56.9**	**-0.9**
SNET	**Serv Nac Est T**	**4.33**	**317**	Pn	**Pn**	**00 51 03.2**	**+1.6**
PMON	**Piamonte**	**4.41**	**317**	*e*P	**Pn**	**00 51 02.3**	**-0.4**
PMON	**Piamonte**	**4.41**	**317**	*e*P	**Pn**	**00 51 02.3**	**-0.4**
MTO3	**Montecristo**	**4.95**	**322**	Pn	**Pn**	**00 51 11.4**	**+1.3**
BCIP	**Isla Barro Col**	**6.41**	**101**	Pn	**Pn**	**00 51 30.6**	**+0.6**
RTAL	**Retalhuleu**	**6.69**	**307**	Pn	**Pn**	**00 51 36.8**	**+2.9**
CCIG	**Comitan**	**8.14**	**315**	Pn	**Pn**	**00 51 55.9**	**+1.9**
TEIG	**Tepich**	**9.87**	**349**	LR	LR	00 56 26.0	
	comp=Z,457nm,18.9s,baz=164,slow=41						
TEIG	**Tepich**	**9.87**	**349**	Pn	**Pn**	**00 52 17.5**	**+0.1**
CMIG	**Matias Romero**	**10.68**	**309**	P	**Pn**	**00 52 28.9**	**+0.4**
	comp=Z,1.1nm,0.3s,baz=135,slow=8.1,SNR=11						
CMIG				S	**Sn**	**00 54 23.5**	**-3.3**
	comp=Z,0.2nm,0.3s,baz=247,slow=23,SNR=1.3						
TLIG	**Tlapa**	**13.89**	**302**		**Pn**	**00 53 15.8**	**+3.1**
SDV	**Santo Domingo**	**15.43**	**95**	LR	LR	01 01 43.0	
	comp=Z,97nm,18.1s,baz=272,slow=47						
ATAH	**Atahualpa**	**19.17**	**156**	LR	LR	01 00 45.2	
	comp=Z,177nm,19.2s,baz=327,slow=33						
SJG	**San Juan**	**20.83**	**66**	LR	LR	01 00 36.7	
	comp=Z,48nm,21.5s,baz=217,slow=32						
344A	**Westbrook Farm**	**21.26**	**349**	P	**P**	**00 54 41.4**	**+0.4**
HKT	**Hockley**	**21.33**	**336**	P	**P**	**00 54 41.9**	**+0.2**
250A	**Grady**	**21.37**	**360**	P	**P**	**00 54 42.1**	**0.0**
250A				IAmb	IAmb	00 54 47.0	
	comp=Z,15nm,0.8s						
833A	**Chaparral WMA,**	**21.62**	**327**	P	**P**	**00 54 47.8**	**+3.0**
	baz=142,SNR=5.2						
152A	**Waverly Hall**	**22.10**	**3**	P	**P**	**00 54 49.8**	**-0.1**
146A	**Union**	**22.18**	**354**	P	**P**	**00 54 50.7**	**-0.1**
146A				IAmb	IAmb	00 54 54.4	
	comp=Z,18nm,0.8s						
154A	**Montrose**	**22.18**	**7**	P	**P**	**00 54 51.7**	**+0.8**
LRAL	**Lakeview Retre**	**22.43**	**358**	P	**P**	**00 54 54.2**	**+0.7**
	baz=178,SNR=8.9						
LRAL	**Lakeview Retre**	**22.43**	**358**	P	**P**	**00 54 53.8**	**+0.3**
LRAL				IAmb	IAmb	00 54 56.3	
	comp=Z,16nm,0.8s						
NATX	**Nacogdoches**	**22.55**	**341**	P	**P**	**00 54 55.9**	**+1.1**
	baz=158						
NATX	**Nacogdoches**	**22.55**	**341**	P	**P**	**00 54 55.5**	**+0.7**
Z47A	**Carrollton**	**22.65**	**356**	P	**P**	**00 54 56.2**	**+0.4**
Z47A				IAmb	IAmb	00 54 57.5	
	comp=Z,14nm,0.6s						
Z51A	**Franklin**	**22.72**	**2**	P	**P**	**00 54 57.0**	**+0.4**
Z51A				IAmb	IAmb	00 54 58.5	
	comp=Z,16nm,0.7s						
435B	**Jarrell**	**22.78**	**334**	P	**P**	**00 54 57.5**	**+0.2**
435B				IAmb	IAmb	00 55 00.8	
	comp=Z,18nm,0.9s						
GOGA	**Godfrey**	**22.93**	**6**	P	**P**	**00 54 59.2**	**+0.5**
	baz=186						
GOGA	**Godfrey**	**22.93**	**6**		**P**	**00 54 59.4**	**+0.7**
GOGA				IAmb	IAmb	00 55 00.1	
	comp=Z,10nm,0.6s						
Y49A	**Blount Mountai**	**23.24**	**360**	P	**P**	**00 55 02.0**	**+0.1**
Y52A	**Lilburn**	**23.33**	**4**	P	**P**	**00 55 02.7**	**-0.1**
Y52A				IAmb	IAmb	00 55 03.8	
	comp=Z,20nm,1.0s						
Z41A	**Richland Creek**	**23.44**	**346**	P	**P**	**00 55 03.6**	**-0.2**
	baz=163						
Y45A	**Yeager Farm, C**	**23.45**	**353**	P	**P**	**00 55 04.0**	**+0.1**
JCT	**Junction City**	**23.56**	**329**	P	**P**	**00 55 04.9**	**-0.2**
	baz=144						
JCT	**Junction City**	**23.56**	**329**	P	**P**	**00 55 05.0**	**-0.1**
WHTX	**Lake Whitney,**	**23.78**	**336**	P	**P**	**00 55 06.1**	**-0.9**
	baz=151,SNR=7.2						
WHTX	**Lake Whitney,**	**23.78**	**336**	P	**P**	**00 55 06.6**	**-0.4**
WHTX				IAmb	IAmb	00 55 08.4	
	comp=Z,8.5nm,0.6s						
X48A	**Hartselle**	**23.85**	**358**	P	**P**	**00 55 07.6**	**0.0**
X48A				IAmb	IAmb	00 55 08.5	
	comp=Z,8.2nm,0.8s						
X51A	**Calhoun**	**23.98**	**3**	P	**P**	**00 55 09.0**	**+0.1**
OXF	**Oxford**	**24.07**	**353**	P	**P**	**00 55 08.6**	**-1.1**
	baz=172,SNR=5.4						
OXF	**Oxford**	**24.07**	**353**	P	**P**	**00 55 08.7**	**-1.1**
GRGR	**Grenville**	**24.12**	**84**	P	**P**	**00 55 10.0**	**-0.4**
PLAL	**Pickwick Lake**	**24.42**	**356**	P	**P**	**00 55 12.4**	**-0.5**
PLAL				IAmb	IAmb	00 55 13.8	
	comp=Z,9.5nm,0.8s						
SWET	**Sewanee**	**24.60**	**1**	P	**P**	**00 55 14.2**	**-0.4**
SWET				IAmb	IAmb	00 55 16.0	
	comp=Z,21nm,1.1s						
X40A	**Basin Creek Fa**	**24.63**	**347**	P	**P**	**00 55 14.0**	**-0.8**
	baz=164						
TXAR	**Lajitas Array**	**24.85**	**321**	P	**P**	**00 55 18.2**	**+1.2**
	comp=Z,3.7nm,0.5s,baz=140,slow=9.5,SNR=47						
TXAR				PcP	**PcP**	**00 58 55.0**	**+2.5**
	comp=Z,1.1nm,0.8s,baz=131,slow=3.8,SNR=8.6						
TXAR	**Lajitas Array**	**24.85**	**321**	P	**P**	**00 55 17.7**	**+0.7**
TX31	**Lajitas Ar. Si**	**24.85**	**321**	P	**P**	**00 55 18.0**	**+1.0**
TX31				IAmb	IAmb	00 55 28.8	
	comp=Z,17nm,0.8s						
MIAR	**Mount Ida**	**24.86**	**345**	P	**P**	**00 55 16.2**	**-0.6**
	baz=162,SNR=12						
MIAR	**Mount Ida**	**24.86**	**345**	P	**P**	**00 55 16.3**	**-0.6**
CPCT	**Cooper Cave**	**24.88**	**3**	P	**P**	**00 55 17.3**	**+0.2**
CPCT				IAmb	IAmb	00 55 17.8	
	comp=Z,9.2nm,0.7s						
KMSC	**Kings Mountain**	**24.92**	**9**	P	**P**	**00 55 17.7**	**+0.3**
	baz=191						
V48A	**Smith Brothers**	**25.13**	**359**	P	**P**	**00 55 18.7**	**-0.6**
V48A				IAmb	IAmb	00 55 19.4	
	comp=Z,8.6nm,0.8s						
TKL	**Tuckaleechee C**	**25.13**	**5**	P	**P**	**00 55 18.9**	**-0.5**
	comp=Z,6.2nm,0.8s,baz=164,slow=12,SNR=8.6						
TKL				LR	LR	01 05 13.2	
	comp=Z,91nm,20.0s,baz=322,slow=37						
TKL	**Tuckaleechee C**	**25.13**	**5**	P	**P**	**00 55 19.4**	**+0.1**
TKL				IAmb	IAmb	00 55 22.1	
	comp=Z,8.4nm,0.8s						
W41B	**Gary Mavity, V**	**25.17**	**348**	P	**P**	**00 55 18.5**	**-1.1**
	baz=166,SNR=5.3						
W57A	**Gilead**	**25.18**	**12**	P	**P**	**00 55 19.0**	**-0.7**
W57A				IAmb	IAmb	00 55 31.6	
	comp=Z,8.7nm,0.9s						
ABTX	**Abilene, Hawle**	**25.26**	**333**	P	**P**	**00 55 21.3**	**+0.7**

	baz=147,SNR=6.5						
WHAR	Wooly Hollow	25.29	348	P	P	00 55 19.4	-1.4
WHAR				IAmb	IAmb	00 55 20.7	
	comp=Z,16nm,1.0s						
W39A	Magazine	25.53	345	P	P	00 55 22.6	-0.4
	baz=162,SNR=5.6						
WVT	Waverly	25.55	357	P	P	00 55 21.9	-1.3
	baz=176						
V58A	Windy Hill, Pi	25.98	13	P	P	00 55 26.3	-0.8
U40A	Yellville	26.43	348	P	P	00 55 30.8	-0.4
	baz=165						
WMOK	Wichita Mounta	26.72	336	P	P	00 55 35.8	+2.0
	baz=151,SNR=12						
WMOK	Wichita Mounta	26.72	336	P	P	00 55 34.1	+0.4
WMOK				IAmb	IAmb	00 55 37.0	
	comp=Z,11nm,0.8s						
S51A	Beattyville	27.12	5	P	P	00 55 36.7	-0.6
S51A				IAmb	IAmb	00 55 39.3	
	comp=Z,13nm,0.8s						
WCI	Wyandotte Cave	27.60	360	P	P	00 55 40.7	-0.9
	baz=180						
WCI	Wyandotte Cave	27.60	360	P	P	00 55 40.7	-0.9
CCM	Cathedral Cave	27.80	351	P	P	00 55 42.1	-1.3
	baz=169						
MSTX	Muleshoe	27.86	330	P	P	00 55 44.1	0.0
	baz=143,SNR=5.5						
MSTX	Muleshoe	27.86	330	P	P	00 55 43.5	-0.6
MSTX				IAmb	IAmb	00 55 45.7	
	comp=Z,9.1nm,0.8s						
PTGA	Pitinga	28.38	112	P	P	00 55 49.8	+0.9
	comp=Z,1.1nm,0.3s,baz=343,slow=15,SNR=4.6						
P49A	Miami Univ. Ec	28.94	2	P	P	00 55 51.7	-1.8
	baz=183						
P52A	Corning	29.23	6	P	P	00 55 55.3	-0.8
	baz=188,SNR=5.6						
ACSO	Alum Creek Sta	29.74	5	P	P	00 56 00.0	-0.6
	baz=186						
O53A	New Philadelph	29.95	8	P	P	00 56 02.0	-0.5
	baz=190						
HDIL	Hopedale	30.05	355	P	P	00 56 01.7	-1.7
	baz=174						
ANMO	Albuquerque	30.55	326	P	P	00 56 08.8	+0.7
	comp=Z,1.9nm,0.7s,baz=124,slow=6.5,SNR=8.6						
ANMO	Albuquerque	30.55	326	P	P	00 56 09.9	+1.8
	baz=138						
ANMO	Albuquerque	30.55	326	P	P	00 56 08.9	+0.9
M53A	WI Miller and	31.19	8	P	P	00 56 12.7	-0.7
	baz=190						
L53A	Girard	31.75	8	P	P	00 56 17.2	-1.2
	baz=191						
ERPA	Erie	31.95	9	P	P	00 56 19.2	-0.9
	baz=191						
LPAZ	La Paz	32.07	146	LR	LR	01 10 03.7	
	comp=Z,65nm,19.9s,baz=330,slow=37						
LPAZ	La Paz	32.07	146	P	P	00 56 23.1	+1.0
SDCO	Great Sand Dun	32.20	331	P	P	00 56 23.6	+0.9
	baz=142,SNR=5.9						
SDCO	Great Sand Dun	32.20	331	P	P	00 56 23.2	+0.5
L58A	Harry Jones Me	32.70	14	P	P	00 56 26.7	0.0
	baz=199						
S22A	4UR Ranch, Cre	32.86	329	P	P	00 56 30.9	+2.5
	baz=140						
X16A	Lo Mia Camp, P	33.14	320	P	P	00 56 32.2	+1.3
MVCO	Mesa Verde	33.33	327	P	P	00 56 33.7	+1.2
	baz=137						
K58A	Earlville	33.43	14	P	P	00 56 32.8	-0.3
	baz=199						
PV14	Lion Creek, Pa	34.47	327	P	P	00 56 43.1	+0.7
PV14				IAmb	IAmb	00 56 44.4	
	comp=Z,3.2nm,0.8s						
GLA	Glamis	34.58	315	P	P	00 56 45.4	+2.1
	baz=124						
SADO	Sadowa	34.68	9	P	P	00 56 40.4	-3.4
	comp=Z,4.8nm,0.7s,baz=191,slow=9.0,SNR=5.3						
PDMCI	Parker Dam,Lak	34.83	317	P	P	00 56 48.0	+2.7
	baz=126						
O20A	White River Ci	35.40	330	P	P	00 56 51.4	+1.1
	baz=140						
LONY	Lake Ozonia	35.44	14	P	P	00 56 49.7	-0.7
	baz=200						
MTPU	Mount Pierson	35.98	324	P	P	00 56 57.0	+1.3
GMRC	Granite Mounta	36.13	317	P	P	00 56 59.2	+2.6
	baz=125						
P17A	Butcher Ranch,	36.18	327	P	P	00 56 57.8	+0.7
HEC	Hector,Ludlow	36.61	316	P	P	00 57 03.3	+2.6
	baz=124						
F60A	Warwick	37.38	16	P	P	00 57 04.8	-2.1
	baz=203						
D55A	Sainte-Anne-du	37.51	12	P	P	00 57 06.0	-2.0
	baz=197						
EYMN	Ely	37.58	354	P	P	00 57 05.7	-2.9
	baz=171						
TPNV	Topopah Spring	37.78	319	P	P	00 57 13.1	+2.5
	baz=126						
TPNV	Topopah Spring	37.78	319	P	P	00 57 13.2	+2.5
TPNV				IAmb	IAmb	00 57 14.6	
	comp=Z,5.6nm,1.1s						
EDW2	Edwards Air Fo	37.78	315	P	P	00 57 12.9	+2.3
	baz=122						
BW06	Boulder Array	38.05	332	P	P	00 57 12.4	-0.7
	baz=141						
PD31	Pinedale Array	38.05	332	P	P	00 57 12.2	-0.8
PDAR	Pinedale Array	38.05	332	P	P	00 57 12.2	-0.8
	comp=Z,1.0nm,0.6s,baz=128,slow=9.8,SNR=13						
PDAR				PcP	PcP	00 59 28.8	+1.0
	comp=Z,0.5nm,0.8s,baz=125,slow=4.7,SNR=3.4						
PDAR	Pinedale Array	38.05	332	P	P	00 57 12.1	-0.9
MPMC	Manual Prospec	38.08	317	P	P	00 57 15.6	+2.4
	baz=124						
D58A	Chemin du LacG	38.17	15	P	P	00 57 12.6	-1.0
	baz=201						
LATQ	La Tuque	38.47	15	P	P	00 57 15.1	-0.9
	baz=201						
LSQQ	Lebel-sur-Quev	39.19	10	P	P	00 57 19.8	-2.3
	baz=194						
ELK	Elko	39.55	325	P	P	00 57 25.5	-0.1
	comp=Z,2.1nm,0.8s,baz=102,slow=4.7,SNR=8.2						
ELK				PcP	PcP	00 59 33.3	+0.8
	comp=Z,1.1nm,0.7s,baz=198,slow=3.2,SNR=4.5						
MATQ	Matagami	39.77	9	P	P	00 57 24.5	-2.4
	baz=193						
RLMT	Red Lodge	39.78	334	P	P	00 57 27.1	-0.2
	baz=143						
NVAR	Mina Array Bea	39.97	319	P	P	00 57 31.9	+2.8
	comp=Z,4.2nm,0.8s,baz=131,slow=7.5,SNR=36						
NVAR				PcP	PcP	00 59 35.6	+1.7
	comp=Z,2.2nm,0.8s,baz=136,slow=4.3,SNR=12						
NVAR				LR	LR	01 15 46.6	
	comp=Z,52nm,18.5s,baz=304,slow=39						
NVAR	Mina Array Bea	39.97	319	P	P	00 57 31.5	+2.5
LHV	Little Huntoon	39.99	319	P	P	00 57 31.4	+2.5
LHV				IAmb	IAmb	00 57 33.5	
	comp=Z,4.9nm,0.8s						
MDPB	Devils Postpil	40.02	318	P	P	00 57 31.5	+2.0
ULM	Lac du Bonnet	40.42	350	P	P	00 57 28.9	-3.5
	comp=Z,3.3nm,0.7s,baz=160,slow=8.5,SNR=8.2						
DGMT	Dagmar	40.74	342	P	P	00 57 34.3	-0.8
	baz=152						
HLID	Hailey	41.03	328	P	P	00 57 38.6	+0.9
	baz=135						
HLID	Hailey	41.03	328	P	P	00 57 38.7	+1.0
MCMT	McKenzie Canyo	41.17	331	P	P	00 57 39.9	+1.0
BOZ	Bozeman (W)	41.19	333	P	P	00 57 39.4	+0.5
	baz=140						
BOZ	Bozeman (W)	41.19	333	P	P	00 57 39.3	+0.4
BEKR	Beckworth	42.10	320	P	P	00 57 48.2	+1.7
WVOR	Wild Horse Val	42.59	324	P	P	00 57 51.5	+1.1
WVOR				IAmb	IAmb	00 57 52.6	
	comp=Z,5.3nm,0.8s						
ORV	Oroville	42.66	319	P	P	00 57 53.2	+2.3
O02D	Mt. Diablo Mer	43.83	319	P	P	00 58 00.5	+0.1
	baz=122						
L04D	Klamath Falls	44.64	321	P	P	00 58 07.8	+0.9
	baz=124						
PINE	Pine Mountain	44.75	324	P	P	00 58 08.5	+0.6
PINE				IAmb	IAmb	00 58 09.7	
	comp=Z,5.7nm,0.9s						
BDFB	Brasilia	45.88	124	P	P	00 58 17.0	0.0
	comp=Z,1.9nm,0.6s,baz=182,slow=4.5,SNR=3.2						
BDFB				LR	LR	01 18 10.4	
	comp=Z,58nm,18.1s,baz=123,slow=37						
BDFB	Brasilia	45.88	124	P	P	00 58 18.0	+0.9
BDFB				IAmb	IAmb	00 58 18.6	
	comp=Z,6.6nm,1.2s						
CPUP	Villa Florida	46.13	143	LR	LR	01 18 24.4	
	comp=Z,31nm,18.5s,baz=203,slow=37						
G03D	McMinnville, O	46.93	324	P	P	00 58 25.6	+0.8
	baz=126						
YKA	Yellowknife Ar	55.80	345	P	P	00 59 28.6	-2.3
	comp=Z,0.7nm,0.5s,baz=138,slow=7.4,SNR=17						
YKA				PcP	PcP	01 00 27.4	-2.1
	comp=Z,0.4nm,0.6s,baz=141,slow=4.7,SNR=7.2						
BCAR	Beaver Creek A	65.52	336	P	P	01 00 36.8	-0.3
EGAK	Eagle	66.07	337	P	P	01 00 39.0	-1.6
PMOZ	Porto Moniz, M	66.77	59	P	P	01 00 43.7	-2.1
IL31		68.28	336	P	P	01 00 53.9	-0.7
IL31				IAmb	IAmb	01 00 55.9	
	comp=Z,8.5nm,1.4s						
ILAR	Eielson Array	68.28	336	P	P	01 00 53.7	-1.0
	comp=Z,1.4nm,0.7s,baz=134,slow=4.7,SNR=20						
ILAR	Eielson Array	68.28	336	P	P	01 00 53.8	-0.9
NEA2	Nenana	69.09	336	P	P	01 00 59.0	-0.7
	baz=110						
I23K	Minto, Yukon-K	69.40	336	P	P	01 01 01.1	-0.5
	baz=110						
MLY	Manley	69.91	336	P	P	01 01 04.1	-0.8
	baz=109						
KOWA	Kowa	79.94	77	P	P	01 02 04.2	+0.6
ADK	Adak	82.13	321	P	P	01 02 15.8	+1.2
VNA3	Neumayer Olymp	95.58	162	P	P	01 03 18.9	+0.2
VNA1	Neumayer--Stat	95.87	161	P	P	01 03 24.1	+4.2
VNA2	Neumayer--Watz	96.22	161	P	P	01 03 22.1	+0.6
SNAA	Sanae	97.81	162	P	Pdif	01 03 33.0	+4.1
KURBB	Kurchatov Arra	117.69	11	PKP	PKPdf	01 08 39.1	-0.8
	comp=Z,0.5nm,0.3s,baz=326,slow=0.8,SNR=4.4						
SONM	Songino Array	120.85	350	PKP	PKPdf	01 08 46.0	-0.4
	comp=Z,0.2nm,0.5s,baz=340,slow=1.7,SNR=1.8						
MKAR	Makanchi Array	122.04	9	PKP	PKPdf	01 08 47.6	-1.0
	comp=Z,0.2nm,0.5s,baz=282,slow=2.1,SNR=4.0						
MKAR	Makanchi Array	122.04	9		PKPdf	01 08 47.5	-1.1
KSRS	Korea Array	122.56	328	PKP	PKiKP	01 08 50.8	+0.8
	comp=Z,1.2nm,0.6s,baz=31,slow=1.6,SNR=5.2						
ASAR	Alice Springs	139.65	246	PKhKP	PKPpre	01 09 21.1	
	comp=Z,0.2nm,0.7s,baz=101,slow=1.9,SNR=1.2						
WRA	Warramunga Arr	139.87	252	PKhKP	PKPpre	01 09 21.5	
	comp=Z,0.7nm,0.7s,baz=101,slow=2.1,SNR=6.9						
CMAR	Chiang Mai Arr	150.78	350	PKPbc	PKPbc	01 09 47.6	+0.5
	comp=Z,1.4nm,0.3s,baz=324,slow=3.7,SNR=6.5						
CMAR	Chiang Mai Arr	150.78	350		PKPbc	01 09 47.4	+0.3

IDC ***15*** *00:52:30.4±0.6, 2°.16S×139°.77E, h0^{km}, mb4.0/11, mb1 4.2/13, mb1mx3.9/48, mbtmp4.1/13, ML3.9/1, MS3.5/10, Ms1 3.5/10, ms1mx3.1/44, Error ellipse: s-maj=18.6km s-min=9.5km az=25.0*

NEIC ***15*** *00:52:32.5±2.0, 2°.1S±0°.1×139°.8E±0°.1, h10^{km}±1^{km}, mb4.5/19, Error ellipse: s-maj=22.9km s-min=17.1km az=19.0*

DJA ***15*** *00:52:33.5±1.1, 2°S±7°×14°0E±°, h16^{km}±10^{km}, M4.4/7, mb4.6/7, MLv4.3/5*

ISC 15 00:52:32.2±0.5**, 2°.16S**±0°.07×**139°.85E**±0°.06**, h10^{km}, n69, σ0^{s}.95**/56**, mb4.3**/18**, MS3.5**/8**, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GENI	Genyem	0.53	143	P	Pn	00 52 46.0	+0.1
JAY	Jayapura	0.92	112	Pg	Pb	00 52 51.2	+0.8
	145nm,0.3s,baz=259,slow=7.8,SNR=216						
JAY				Lg	Lg	00 53 02.3	
	306nm,0.3s,baz=120,slow=22,SNR=36						
JAY				LR	LR	00 53 31.9	
	comp=Z,1μm,18.8s,baz=180,slow=62						
JAY	Jayapura	0.92	112	P	Pb	00 52 51.2	+0.8
WAMI	Wamena	2.05	214	P	Pg	00 53 12.3	+0.7
SRPI	Serui, Papua	3.62	275	P	Pn	00 53 30.6	+2.2
BAKI	Biak	3.86	284	P	Pn	00 53 33.4	+1.6
FAKI	Fak Fak	7.63	264	Pn	Pn	00 54 23.1	-0.5
GUMO	Guam	16.42	18	LR	LR	01 03 03.4	
	comp=Z,106nm,18.6s,baz=7.0,slow=38						
SOEI	Soe	17.23	243	P	P	00 56 36.0	+1.2
SOEI				IAmb	IAmb	00 56 48.5	
	comp=Z,46nm,0.8s						
SOEI	Soe	17.23	243	P	P	00 56 35.4	+0.6
	comp=Z,61nm,1.0s						
BATI	Baumata	17.95	243	P	Pn	00 56 41.5	-0.8
	baz=188,slow=21,SNR=1.7						
BATI	Baumata	17.95	243	P	P	00 56 43.3	+0.5
	comp=Z,17nm,0.6s						
WB0	Warramunga Arr	18.29	197	P	Pn	00 56 45.9	-0.4
WB2	Warramunga Arr	18.47	197	P	P	00 56 48.5	+0.1
WRA	Warramunga Arr	18.47	197	P	P	00 56 48.5	+0.1
	comp=Z,0.4nm,0.3s,baz=20,slow=12,SNR=15						
WRA				LR	LR	01 04 36.1	
	comp=Z,199nm,19.0s,baz=25,slow=39						
WRA	Warramunga Arr	18.47	197	P	P	00 56 48.7	+0.3
TOLI2	Tolitoli	19.34	280	P	P	00 56 58.9	+0.9
TOLI2				IAmb	IAmb	00 57 03.9	
	comp=Z,8.3nm,0.7s						
SPSI	Sidrap Palu	20.13	264	P	P	00 57 07.9	+1.2
	comp=Z,13nm,0.7s						
FITZ	Fitzroy Crossi	21.10	220	P	P	00 57 16.7	-0.4
	comp=Z,3.6nm,0.8s,baz=64,slow=3.5,SNR=6.7						
FITZ				LR	LR	01 06 20.7	
	comp=Z,193nm,19.3s,baz=52,slow=39						
AS31	Alice Springs	22.14	195	P	P	00 57 29.5	+1.3
ASAR	Alice Springs	22.14	195	P	P	00 57 28.1	-0.1
	comp=Z,1.7nm,0.6s,baz=25,slow=11,SNR=23						
ASAR	Alice Springs	22.14	195	P	P	00 57 29.4	+1.2
EIDS	Eidsvold	25.48	156	P	P	00 58 02.5	+1.7
EIDS				IAmb	IAmb	00 58 12.4	
	comp=Z,13nm,0.8s						
PSA00	Pilbara Seismi	27.41	224	P	P	00 58 18.1	-0.1
STKA	Stephens Creek	29.60	177	LR	LR	01 12 03.2	
	comp=Z,111nm,21.2s,baz=8.7,slow=40						
DZM	Mont Dzumac	32.55	129	LR	LR	01 12 36.7	
	comp=Z,72nm,18.2s,baz=316,slow=37						
H11S3	WAKE ISLAND Hy	33.45	51	T	T	01 34 28.3	
	baz=237,slow=74,SNR=21						
H11S2	WAKE ISLAND Hy	33.46	51	T	T	01 34 30.1	
	baz=237,slow=74,SNR=15						
H11S1	WAKE ISLAND Hy	33.47	51	T	T	01 34 29.7	
	baz=237,slow=74,SNR=12						
H11N1	WAKE ISLAND Hy	34.31	49	T	T	01 35 32.2	
	baz=233,slow=75,SNR=36						
H11N2	WAKE ISLAND Hy	34.33	49	T	T	01 35 32.9	
	baz=233,slow=75,SNR=37						
H11N3	WAKE ISLAND Hy	34.33	49	T	T	01 35 33.2	
	baz=233,slow=75,SNR=36						
NWAO	Narrogin (SRO)	37.24	212	P	P	00 59 42.9	-1.3
	comp=Z,5.9nm,0.9s,baz=21,slow=8.6,SNR=1.4						
NWAO				LR	LR	01 16 08.4	
	comp=Z,112nm,19.5s,baz=360,slow=38						
NWAO	Narrogin (SRO)	37.24	212	P	P	00 59 44.4	+0.2
RPSI	Rantau Prapat	41.20	277	P	P	01 00 16.4	-1.2
RPSI				IAmb	IAmb	01 00 17.7	
	comp=Z,8.7nm,0.9s						
GSI	Gunungsitoli	42.41	274	P	P	01 00 25.4	-2.1
CMAR	Chiang Mai Arr	45.16	299	P	P	01 00 47.8	-1.8
	comp=Z,1.4nm,0.3s,baz=126,slow=7.0,SNR=9.2						
CMAR	Chiang Mai Arr	45.16	299	P	P	01 00 48.2	-1.4
PETK	Petropavlovsk-	57.08	13	LR	LR	01 24 31.2	
	comp=Z,25nm,21.0s,baz=283,slow=34						
RAR	Rarotonga	61.68	113	LR	LR	01 27 10.2	
	comp=Z,38nm,21.1s,baz=312,slow=34						
YAK	Yakutsk	64.49	355	LR	LR	01 31 29.4	
	comp=Z,16nm,18.2s,baz=269,slow=36						
MK31	Makanchi Array	70.06	322	P	P	01 03 45.1	+0.6
MK31				IAmb	IAmb	01 04 01.3	
	comp=Z,3.8nm,1.5s						
MKAR	Makanchi Array	70.06	322	P	P	01 03 45.4	+0.8
	comp=Z,0.7nm,0.7s,baz=110,slow=8.1,SNR=8.8						
MKAR	Makanchi Array	70.06	322	P	P	01 03 44.7	+0.2
MAKZ	Makanchi	70.26	322	P	P	01 03 46.2	+0.5
MAKZ				IAmb	IAmb	01 04 02.4	
	comp=Z,7.3nm,1.5s						
NIL	Nilore	71.92	306	P	P	01 03 55.9	-0.2
NIL				IAmb	IAmb	01 03 58.0	
	comp=Z,6.5nm,0.8s						
ZALV	Zalesovo Beam	72.04	329	P	P	01 03 56.3	-0.1
	comp=Z,0.7nm,0.5s,baz=121,slow=5.2,SNR=3.9						
ZALV	Zalesovo Beam	72.04	329	P	P	01 03 55.9	-0.5
KURBB	Kurchatov Arra	73.94	324	P	P	01 04 07.3	-0.4
	comp=Z,0.9nm,0.8s,baz=100,slow=5.4,SNR=6.7						
BVAR	Borovoye Array	79.52	325	P	P	01 04 38.6	-0.7
	comp=Z,1.2nm,0.7s,baz=151,slow=14,SNR=4.1						
TTA	Tatalina	80.44	25	P	P	01 04 45.5	+1.4
GEYT	Alibeck	84.80	308	P	P	01 05 07.1	-0.2
	comp=Z,1.7nm,0.6s,baz=81,slow=9.2,SNR=4.1						
GEYT	Alibeck	84.80	308	P	P	01 05 06.9	-0.4
GYA0B	ALIBECK ARRAY	84.80	308	P	P	01 05 06.5	-0.8
GYA0B				IAmb	IAmb	01 05 18.4	
	comp=Z,4.1nm,0.9s						
ILAR	Eielson Array	84.87	24	P	P	01 05 06.7	-0.3
	comp=Z,0.6nm,0.8s,baz=262,slow=4.3,SNR=7.8						
ILAR	Eielson Array	84.87	24	P	P	01 05 07.0	0.0
ABKAR	Akbulak array	85.04	320	P	P	01 05 08.3	+0.1
ABKAR	Akbulak array	85.04	320	P	P	01 05 08.1	-0.1
ABKAR				IAmb	IAmb	01 05 09.6	
	comp=Z,2.5nm,0.8s						
AKTO	Aktyubinsk	86.45	321	P	P	01 05 14.5	-0.6
	comp=Z,0.8nm,0.6s,baz=162,slow=3.6,SNR=2.7						
BMAR	Burnt Mountain	86.47	22	P	P	01 05 16.9	+1.9
EGAK	Eagle	87.26	25	P	P	01 05 19.4	+0.6
QSPA	South Pole Qui	87.78	180	P	P	01 05 20.4	-1.1
YBH	Yreka Blue Hor	96.99	48	LR	LR	01 39 22.1	
	comp=Z,28nm,21.1s,baz=322,slow=29						
DBIC	Dimbokro	144.54	278	PKP	PKPab	01 12 09.1	+0.5
	comp=Z,3.9nm,0.7s,baz=106,slow=4.6,SNR=4.6						
DBIC	Dimbokro	144.54	278		PKPab	01 12 09.0	+0.4
LPAZ	La Paz	146.83	125	PKPbc	PKPdf	01 12 14.9	+0.2
	comp=Z,1.6nm,0.6s,baz=301,slow=7.5,SNR=3.7						
CPUP	Villa Florida	147.16	151	PKPbc	PKPdf	01 12 14.9	+0.6
	comp=Z,1.5nm,0.8s,baz=256,slow=4.2,SNR=2.5						
CPUP	Villa Florida	147.16	151		PKPdf	01 12 14.6	+0.2
SIV	San Ignacio	152.56	132	PKPbc	PKPbc	01 12 28.5	-1.6
	comp=Z,0.5nm,0.5s,baz=281,slow=12,SNR=4.3						

ISN ***15*** *00:56:39.9±1.1, 30°.28N×47°.09E, h29^{km}±8^{km}, ML2.9*

KISR ***15*** *00:56:42.9±0.8, 30°.53N×47°.13E, h7^{km}±6^{km}, ML3.0, Hypocentre not reviewed by the ISC*

TEH ***15*** *00:56:45.6, 30°.78N×47°.23E, h11^{km}, ML3.0*

ISC 15 00:56:40.7±2.2**, 30°.3N**±0°.2×**46°.99E**±0°.08**, h10^{km}, n20, σ0^{s}.83**/23**, Iraq**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MIB	Mutribah	0.61	150	*e*P		00 56 58.2	
MIB				*e*S		00 57 10.5	
MIB				IAML		00 57 15.4	
	comp=Z,549nm,0.6s						
RST	Umm Al-Ruwaisa	0.83	179	*e*P		00 57 03.8	
RST				*e*S		00 57 19.1	
RST				IAML		00 57 25.3	
	comp=Z,403nm,0.6s						
NSR	Nassriya	0.99	313	*e*Pg	Pg	00 57 00.0	+0.2
NSR				*e*Sg	Sb	00 57 13.0	-0.2
NSR				AML	AML	00 57 21.2	
	comp=E,395nm,0.5s						
UMR	Umm Al-Rimmam	1.00	141	*e*P		00 57 05.0	
UMR				*e*S		00 57 21.0	
UMR				IAML		00 57 24.1	
	comp=Z,377nm,0.3s						
RDF	Al-Radifah	1.49	161	*e*P		00 57 14.6	
RDF				*e*S		00 57 38.7	
AHWZ	Ahwaz	1.74	55	*e*Pg	Pn	00 57 11.0	+0.1
DHL1	Dehloran	2.35	6	*e*Pn	Pn	00 57 20.8	+1.4
ABEH	Behbahan	2.83	84	*e*Pn	Pb	00 57 30.0	-1.4
IBDR	Badra	2.91	342	*e*Pn	Pn	00 57 27.0	-0.1
IBDR				*e*Sn	Sn	00 58 02.5	+0.4
IBDR				AML	AML	00 58 25.1	
	comp=N,50nm,0.6s						
IBDR				AML	AML	00 58 31.6	
	comp=E,44nm,0.8s						
IDOB	Doab	3.59	16	*e*Pn	Pn	00 57 36.9	+0.3
BHD	Baghdad	3.67	324	*e*Pn	Pn	00 57 38.0	+0.4
BHD				*e*Sn	Sn	00 58 21.0	+0.1
BHD				AML	AML	00 58 29.8	
	comp=E,72nm,0.3s						
IGHG	Ghaleghazi	4.00	355	*e*Pn	Pn	00 57 42.6	+0.3
KER	Kermanshah	4.04	2	*e*Pn	Pn	00 57 43.9	+1.1
IPIR	Pirpir	4.08	54	*e*Pn	Pn	00 57 44.2	+0.8
IPIR				*e*		00 58 00.7	
	comp=Z,99nm,0.5s						
HSAM	Samen	4.10	19	*e*Pn	Pn	00 57 44.3	+0.6
IDHR	Dehrash	4.38	354	*e*Pn	Pn	00 57 48.4	+0.9
IDHR				*e*		00 57 49.8	
	comp=Z,99nm,0.4s						
ILIN	Lien	4.57	360	*e*Pn	Pn	00 57 49.9	-0.3
ILIN				*e*		00 57 53.5	
	comp=Z,99nm,0.3s						
IALM	Almabolaq	4.62	12	*e*Pn	Pn	00 57 51.1	+0.2
HAGD	Aghdareh	4.83	22	*e*Pn	Pn	00 57 54.2	+0.5
IRAM	Ramesheh	4.86	71	*e*Pn	Pn	00 57 56.2	+2.2
IRAM				*e*		00 58 51.0	
	comp=Z,99nm,0.3s						
IKLH	Kolahrood	4.91	52	*e*Pn	Pn	00 57 55.5	+0.7
IKLH				*e*		00 57 58.4	
	comp=Z,99nm,0.2s						
QAM	Ghamsar	5.09	47	*e*Pn	Pn	00 57 58.1	+0.8
IZEF	Zefreh	5.22	59	*e*Pn	Pn	00 57 59.7	+0.6
KRSH	Karshahi	5.67	49	*e*Pn	Pn	00 58 05.1	-0.1

IDC ***15*** *01:10:16.2±1.9, 33°.91N×137°.41E, h335^{km}±18^{km}, mb2.6/5, mb1 2.8/7, mb1mx2.5/65, mbtmp3.2/7, Error ellipse: s-maj=26.8km s-min=25.3km az=172.0*

ISC 15 01:10:17.0±1.2**, 34°.0N**±0°.2×**137°.4E**±0°.1**, h347^{km}, n7, σ1^{s}.36**/7**, mb2.8**/5**, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	2.65	14	P	Pn	01 11 11.8	-1.3
	0.2nm,0.3s,baz=183,slow=9.6,SNR=8.3						
KSRS	Korea Array	8.47	297	P	Pn	01 12 15.8	-0.8
	0.2nm,0.3s,baz=109,slow=12,SNR=6.0						
SONM	Songino Array	27.03	310	P	P	01 15 29.6	+1.1
	0.2nm,0.5s,baz=106,slow=11,SNR=2.2						
MKAR	Makanchi Array	43.07	304	P	P	01 17 43.8	-0.1
	0.4nm,0.6s,baz=86,slow=9.7,SNR=4.8						
WRA	Warramunga Arr	53.69	184	P	P	01 19 04.2	-0.1
	0.4nm,0.8s,baz=358,slow=7.4,SNR=1.8						
ILAR	Eielson Array	53.81	31	P	P	01 19 06.4	+1.8
	0.2nm,0.5s,baz=253,slow=5.5,SNR=2.2						
YKA	Yellowknife Ar	68.07	28	P	P	01 20 38.8	-0.9
	0.1nm,0.5s,baz=316,slow=5.1,SNR=2.3						

IDC ***15*** *01:43:12.6±1.0, 31°.20S×179°.06W, h220^{km}±8^{km}, mb3.4/4, mb1 3.6/8, mb1mx3.5/39, mbtmp4.1/8, Error ellipse: s-maj=29.3km s-min=12.2km az=122.0*

NEIC ***15*** *01:43:13.2±1.0, 31°.1S±0°.1×179°.2W±0°.2, h224^{km}±3^{km}, mb4.1/6, Error ellipse: s-maj=27.2km s-min=13.9km az=114.0*

ISC 15 01:43:13.2±0.7**, 31°.17S**±0°.06×**179°.5W**±0°.1**, h200^{km}, n94, σ2^{s}.45**/120**, mb4.0**/8**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	2.33	35	P	Pn	01 43 55.4	+0.2
GLKZ				S	Sn	01 44 27.7	-0.3
RAO	Raoul Island	2.34	35	P	Pn	01 43 55.8	+0.5
	104nm,0.3s,baz=38,slow=23,SNR=7.1						
RAO				S	Sn	01 44 27.2	-0.9
	347nm,0.3s,baz=61,slow=20,SNR=7.5						
RAO	Raoul Island	2.34	35		Pn	01 43 54.9	-0.5
RIZ	Raoul Island	2.34	35	P	Pn	01 43 55.9	+0.5
RIZ				S	Sn	01 44 28.7	+0.6
MXZ	Matakaoa Point	6.63	196	Pn	Pn	01 44 50.7	+2.1
MXZ	Matakaoa Point	6.63	196	P	Pn	01 44 51.1	+2.4
MXZ				S	Sn	01 46 08.7	+4.4
HAZ	Te Kaha	6.95	198	P	Pn	01 44 55.8	+3.1
HAZ				S	Sn	01 46 15.9	+4.2
PKGZ	Pakihiroa	7.00	196	P	Pn	01 44 56.1	+2.7
PKGZ				S	Sn	01 46 17.4	+4.4
PUZ	Puketiti	7.13	195	P	Pn	01 44 57.0	+1.9
PUZ				S	Sn	01 46 19.6	+3.5
WHRZ	Whale Island	7.28	203	P	Pn	01 45 02.9	+5.8
WHRZ				S	Sn	01 46 26.3	+6.6
TWGZ	Tauwhareparae	7.30	196	P	Pn	01 44 59.8	+2.5
TWGZ				S	Sn	01 46 24.6	+4.5
CNGZ	Carnagh Statio	7.54	194	P	Pn	01 45 02.0	+1.6
MWZ	Matawai	7.56	198	P	Pn	01 45 02.2	+1.5
MWZ				S	Sn	01 46 28.9	+2.7
TKGZ	Te Karaka	7.58	196	P	Pn	01 45 02.0	+1.2
TKGZ				S	Sn	01 46 30.1	+3.6
URZ	Urewera	7.61	201	P	Pn	01 45 02.4	+1.1
	2.2nm,0.3s,baz=266,slow=4.4,SNR=16						
URZ				S	Sn	01 46 29.9	+2.6
	11nm,0.3s,baz=236,slow=22,SNR=12						
URZ	Urewera	7.61	201	Pn	Pn	01 45 03.0	+1.7
URZ	Urewera	7.61	201	P	Pn	01 45 03.4	+2.1
URZ				S	Sn	01 46 30.0	+2.7
RAGZ	Rawiri	7.74	198	P	Pn	01 45 04.6	+1.5

RIGZ	Rimuhau	7.85	196	P	Pn	01 45 06.2	+1.7
RIGZ				S	Sn	01 46 35.9	+2.8
MUGZ	Murupara	7.92	202	P	Pn	01 45 07.0	+1.7
HSRZ	Hossack Road	7.95	205	P	Sn	01 47 00.9	+26
RTZ	Ruatahuna	7.98	200	P	Pn	01 45 06.7	+0.6
SNGZ	Shannon Statio	8.03	198	P	Pn	01 45 08.0	+1.1
SNGZ				S	Sn	01 46 40.9	+3.6
ALRZ	Allen Road	8.13	204	P	Pn	01 45 10.3	+2.1
RAHZ	Arahi	8.23	199	P	Pn	01 45 10.1	+0.8
RAHZ				S	Sn	01 46 40.8	-1.1
RAHZ	Arahi	8.23	199	P	Sn	01 46 45.6	+3.6
MTHZ	Maungataniwha	8.24	201	P	Pn	01 45 10.4	+0.9
MTHZ	Maungataniwha	8.24	201	P	Sn	01 46 48.2	+5.9
WHHZ	Waihua	8.34	198	P	Sn	01 46 49.6	+5.1
NMHZ	Naumai	8.47	200	P	Pn	01 45 13.3	+0.6
NMHZ				S	Sn	01 46 49.2	+1.3
NMHZ	Naumai	8.47	200	P	Sn	01 46 51.0	+3.0
ARHZ	Aropaoanui	8.57	199	P	Pn	01 45 13.7	-0.1
ARHZ				S	Sn	01 46 52.7	+2.6
BKZ	Black Stump Fm	8.63	201	P	Pn	01 45 15.0	+0.4
HIZ	Hauiti	8.68	211	P	Pn	01 45 23.1	+7.8
MCHZ	McNeill Hill	8.83	200	P	Pn	01 45 18.7	+1.5
MCHZ				S	Sn	01 46 57.9	+1.8
MCHZ	McNeill Hill	8.83	200	P	Sn	01 46 56.9	+0.7
TMVZ	Te Maari	8.86	205	P	Pn	01 45 18.6	+1.0
ETVZ	East Tongariro	8.87	205	P	Pn	01 45 18.5	+0.7
KWHZ	Kaweka Forest	8.89	201	P	Pn	01 45 18.0	0.0
KWHZ	Kaweka Forest	8.89	201	P	Sn	01 47 00.2	+2.4
WTVZ	West Tongariro	8.90	206	P	Pn	01 45 22.0	+3.8
OTVZ	Oturere	8.91	205	P	Pn	01 45 19.0	+0.6
OTVZ				S	Sn	01 47 03.8	+5.4
TWVZ	Taurewa	8.91	206	P	Pn	01 45 21.7	+3.3
NGZ	Ngauruhoe	8.95	205	P	Pn	01 45 21.6	+2.7
TUVZ	Tukino	9.01	205	P	Pn	01 45 22.1	+2.4
BHHZ	Black Hill Sta	9.06	203	P	Pn	01 45 20.8	+0.5
BHHZ				S	Sn	01 47 02.9	+1.0
WNVZ	Wahianoa	9.08	205	P	Pn	01 45 23.8	+3.2
MOVZ	Moawhango	9.10	204	P	Pn	01 45 22.3	+1.5
MOVZ				S	Sn	01 47 05.2	+2.5
KAHZ	Kahuranaki	9.10	198	P	Pn	01 45 20.6	-0.2
KRHZ	Kereru	9.11	201	P	Pn	01 45 20.0	-0.9
KRHZ				S	Sn	01 47 04.0	+1.1
KRHZ	Kereru	9.11	201	P	Sn	01 47 05.1	+2.2
PXZ	Pawanui	9.33	198	P	Sn	01 47 05.7	-2.4
PNHZ	Pukenui	9.41	201	P	Pn	01 45 23.3	-1.5
PNHZ				S	Sn	01 47 08.3	-1.7
PNHZ	Pukenui	9.41	201	P	Sn	01 47 11.0	+1.0
WPHZ	Waipukurau	9.47	199	P	Sn	01 47 11.4	-0.2
TSZ	Takapari Road	9.61	201	P	Pn	01 45 27.8	+0.4
TSZ				S	Sn	01 47 15.7	+0.8
TSZ	Takapari Road	9.61	201	P	Sn	01 47 14.9	0.0
DVHZ	Dannevirke	9.77	200	P	Sn	01 47 16.1	-2.6
ANWZ	Angora Road	9.83	198	P	Pn	01 45 31.5	+1.3
ANWZ				S	Sn	01 47 18.8	-1.3
ANWZ	Angora Road	9.83	198	P	Sn	01 47 19.2	-0.9
POWZ	Post Office Ro	9.98	201	P	Pn	01 45 34.1	+2.0
POWZ				S	Sn	01 47 21.0	-2.5
POWZ	Post Office Ro	9.98	201	P	S	01 47 24.2	
PRWZ	Pori Road	10.06	200	P	S	01 47 22.2	-3.8
BFZ	Birch Farm	10.10	199	P	Pn	01 45 31.6	-2.1
BFZ				S	Sn	01 47 23.4	-3.1
BFZ	Birch Farm	10.10	199	P	S	01 47 24.7	-2.2
MRZ	Mangatainoka R	10.28	202	P	Pn	01 45 33.8	-2.2
MRZ				S	Sn	01 47 24.7	-6.0
MRZ	Mangatainoka R	10.28	202	P	S	01 47 24.3	-6.9
TIWZ	Tintock	10.29	200	P	Pn	01 45 37.6	+1.4
TIWZ				S	Sn	01 47 28.8	-2.3
HOWZ	Holdsworth Sta	10.52	201	P	Pn	01 45 38.6	-0.4
TMWZ	Te Maipa	10.60	199	P	Pn	01 45 38.2	-1.9
TRWZ	Traveller	10.93	200	P	Pn	01 45 45.6	+1.3
PAWZ	Paruwai Farm	10.99	201	P	Pn	01 45 44.7	-0.4
PAWZ				S	Sn	01 47 42.4	-5.2
DUWZ	D'Urville Isla	11.00	207	P	Pn	01 45 46.3	+1.1
MSWZ	Moikau Station	11.07	201	P	Pn	01 45 44.4	-1.8
BHW	Baring Head	11.19	202	P	Pn	01 45 47.5	-0.1
BSWZ	Blackbirch Sta	11.80	205	P	Pn	01 45 56.2	+0.7
MSVF	Nonsavu	13.57	350	P	Pn	01 46 17.9	-0.1
	0.7nm,0.3s,baz=170,slow=6.7,SNR=3.6						
RPZ	Rata Peaks	14.60	208	P	Pn	01 46 29.2	-1.2
	0.9nm,0.3s,baz=221,slow=2.2,SNR=7.4						
RPZ				S	S	01 49 02.5	-10
	0.9nm,0.3s,baz=112,slow=23,SNR=6.5						
EIDS	Eidsvold	26.53	275	P	P	01 48 32.2	-0.3
STKA	Stephens Creek	33.08	258	P	P	01 49 31.9	+1.7
	2.3nm,0.6s,baz=106,slow=13,SNR=5.5						
ASAR	Alice Springs	41.82	268	P	P	01 50 43.6	0.0
	0.3nm,0.5s,baz=106,slow=7.5,SNR=5.2						
WR0	Warramunga Arr	42.70	274	P	P	01 50 50.1	-0.6
WR0				IAmb	IAmb	01 51 04.6	
	comp=Z,12nm,1.4s						
WB2	Warramunga Arr	42.87	274	P	P	01 50 51.9	-0.2
WB2				IAmb	IAmb	01 51 00.8	
	comp=Z,7.9nm,1.1s						
WRA	Warramunga Arr	42.88	274	P	P	01 50 51.8	-0.4
	comp=Z,1.4nm,0.3s,baz=111,slow=8.1,SNR=22						
WB0	Warramunga Arr	42.90	274	P	P	01 50 52.0	-0.3
WB0				IAmb	IAmb	01 51 18.4	
	comp=Z,6.0nm,1.1s						
QSPA	South Pole Qui	58.94	180	P	P	01 52 52.9	+1.6
QSPA				IAmb	IAmb	01 52 53.6	
	comp=Z,5.6nm,1.2s						
NVAR	Mina Array Bea	89.66	43	P	P	01 55 45.1	-3.5
	comp=Z,0.6nm,0.9s,baz=224,slow=6.2,SNR=3.7						
KBZ	Khabaz	144.48	303	PKP	PKPab	02 02 23.2	-1.1
	comp=Z,0.6nm,0.4s,baz=139,slow=2.1,SNR=8.5						
GEVA	Gevas	144.58	293		PKPab	02 02 22.8	-2.5
FINES	FINESS Array B	145.42	339	PKPbc	PKPdf	02 02 23.5	-3.0
	comp=Z,5.9nm,0.7s,baz=54,slow=3.2,SNR=32						
MARD	Mardin	146.36	292	PKPbc	PKPdf	02 02 28.1	-0.9
NB2	NORSAR Subarra	149.31	350	PKP	PKPdf	02 02 34.2	+1.1
	comp=Z,1.0nm,0.6s,baz=17,slow=2.6						
NOA	NORSAR Array B	149.31	350	PKPbc	PKPdf	02 02 33.8	+0.8
	comp=Z,0.3nm,0.5s,baz=34,slow=1.8,SNR=1.3						
BRTR	Keskin Array B	151.84	297	PKPbc	PKPdf	02 02 41.3	+3.5
	comp=Z,0.7nm,0.6s,baz=134,slow=5.3,SNR=5.8						

IDC 15 01:45:13.9±2.1, 8°.81S×119°.47E, h0^{km}, mb3.1/2, mb1 3.5/5, mb1mx3.3/39, mbtmp3.3/5, ML3.0/3, Error ellipse: s-maj=72.6km s-min=20.4km az=66.0, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	Kappang	3.78	4	Pn	Pn	01 46 14.1	+0.6
	1.1nm,0.3s,baz=206,slow=12,SNR=3.9						
KAPI				Sn	Sn	01 46 58.1	-0.7
	0.7nm,0.3s,baz=95,slow=14,SNR=1.4						
FITZ	Fitzroy Crossi	11.01	148	Pn	Pn	01 47 53.9	+1.2
	0.0nm,0.3s,baz=268,slow=16,SNR=1.2						
FITZ				Sn	Sn	01 49 59.0	+2.4
	0.1nm,0.3s,baz=78,slow=17,SNR=1.3						
WRA	Warramunga Arr	18.14	129	P	P	01 49 28.0	+0.1
	0.1nm,0.3s,baz=302,slow=12,SNR=6.9						
ASAR	Alice Springs	20.22	139	P	P	01 49 49.5	-1.2
	0.5nm,0.4s,baz=311,slow=9.1,SNR=12						
MKAR	Makanchi Array	64.50	333	P	P	01 55 52.6	+0.1
	0.2nm,0.6s,baz=138,slow=8.9,SNR=2.0						

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*SNET **15** 01:55:23.1±1.6, 13°.88N×91°.39W, h15^{km}±18^{km}, ML3.8*
*UCR **15** 01:55:23.3±1.6, 13°.89N×91°.38W, h14^{km}±18^{km}, ML3.7*
*GCG **15** 01:55:24.4±0.3, 13°.76N×91°.39W, h9^{km}±9^{km}, MD3.9*
ISC 15 01:55:20.5±3.3, 13°.8N±0°.1×91°.58W±0°.10, h20^{km}±8^{km}, n17, σ1^{s}.07/24, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTAL	Retalhuleu	0.76	351	*e*P	Pn	01 55 36.8	+0.6
RTAL				*e*S	Sn	01 55 45.8	-1.4
FUG	Fuego 3	0.98	46	*e*P	Pn	01 55 41.1	+1.7
PCG	Pacaya	1.13	56	*e*P	Pg	01 55 43.3	+0.8
NBG	Las Nubes	1.45	56	*e*P	Pg	01 55 48.6	+0.1
NBG				*e*S	Sg	01 56 07.4	-0.1
CEVE	Cerro Verde	1.90	88	*e*P	Pn	01 55 52.6	+0.5
CEVE				IAML		01 56 22.1	
	comp=Z,1µm,0.2s						
CEVE	Cerro Verde	1.90	88	*e*P	Pn	01 55 52.6	+0.5
CEVE				IAML		01 56 22.1	
	comp=Z,1µm,0.2s						
UNIC	Universidad Ca	1.98	84	*e*P	Pn	01 55 54.0	+1.0
UNIC				*e*S	Sn	01 56 16.1	-1.3
UNIC	Universidad Ca	1.98	84	*e*P	Pn	01 55 54.0	+1.0
UNIC				*e*S	Sn	01 56 16.1	-1.3
JAYA	Jayaque - finc	2.07	93	*e*P	Pn	01 55 54.1	-0.2
JAYA				IAML		01 56 21.6	
	comp=Z,642nm,0.2s						
JAYA	Jayaque - finc	2.07	93	*e*P	Pn	01 55 54.1	-0.2
JAYA				IAML		01 56 21.6	
	comp=Z,642nm,0.2s						
TACO	Tacachico	2.17	84	*e*P	Pn	01 55 56.6	+1.0
TACO	Tacachico	2.17	84	*e*P	Pn	01 55 56.6	+1.0
PMON	Piamonte	2.20	91	*e*P	Pn	01 55 56.4	+0.3
PMON	Piamonte	2.20	91	*e*P	Pn	01 55 56.4	+0.3
MTO3	Montecristo	2.24	73	*e*P	Pn	01 55 57.8	+1.0
MTO3				*e*S	Sn	01 56 24.9	+0.9
MTO3	Montecristo	2.24	73	*e*P	Pn	01 55 57.8	+1.0
MTO3				*e*S	Sn	01 56 24.9	+0.9
MRL	Marmol	2.25	54	*e*P	Pb	01 56 00.3	-0.4
MRL				*e*S	Sg	01 56 30.9	-2.3

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*IDC **15** 02:21:48.7±7.0, 37°.68N×140°.94E, h0^{km}, mb3.2/2, mb1 3.1/3, mb1mx3.0/31, mbtmp3.1/3, ML2.1/1, Error ellipse: s-maj=115.6km s-min=37.7km az=121.0*
*JMA **15** 02:21:54.4, 37°.07N×140°.93E, h69^{km}±1^{km}, M3.3 Broadband fault plane solution: P waves. NP1: ϕ_s61.00000°, δ50.00000°, λ146.00000°. NP2: ϕ_s174.00000°, δ65.00000°, λ45.00000°. Principal axes: T Plg49.0000°, Azm35.0000°; N Plg40.0000°, Azm196.0000°; P Plg9.0000°, Azm294.0000°;*
ISC 15 02:21:53.8±1.4, 37°.06N±0°.06×141°.02E±0°.08, h68^{km}±7^{km}, n22, σ0^{s}.87/28, 5C-3D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.18	283	⇑P	Pn	02 22 04.6	+0.4
ONAJ				S	Sn	02 22 12.0	+0.3
JFK	Kawauchi	0.33	339	⇑P	Pn	02 22 05.4	+0.4
JFK				S	Sn	02 22 13.4	+0.2
JFFD	Fukushimafurud	0.37	275	⇑P	Pn	02 22 05.6	+0.3
JFFD				S	Sn	02 22 13.5	-0.2
JHO	Hitachi	0.58	219	⇑P	Pn	02 22 07.4	+0.2
JHO				S	Sn	02 22 16.6	-0.4
JFT	Otama	0.71	310	⇓P	Pn	02 22 08.9	+0.2
JFT				S	Sn	02 22 19.3	-0.4
JMM	Marumori	0.82	347	⇓P	Pn	02 22 10.6	+0.6
JMM				S	Sn	02 22 22.5	+0.5
JFY	Yanaizu	1.10	289	P	Pn	02 22 13.4	-0.2
JFY				S	Sn	02 22 27.6	-0.7
JOU	Okura	1.33	348	P	Pn	02 22 17.1	+0.6
JOU				S	Sn	02 22 34.2	+0.6
JYS	Shirataka	1.39	327	⇓P	Pn	02 22 17.7	+0.5
JYS				S	Sn	02 22 35.3	+0.5
JAG	Ashikaga	1.41	244	⇑P	Pn	02 22 17.6	+0.1
JIO	Ouri	1.42	11	P	Pn	02 22 18.3	+0.7
JIO				S	Sn	02 22 35.4	-0.1
JNS	Sasagawa	1.55	300	P	Pn	02 22 18.7	-0.7
MJAR	Matsushiro Arr	2.31	258	Pn	Pn	02 22 30.7	+1.0
	0.4nm,0.3s,baz=60,slow=14,SNR=10.0						
MJAR				Sn	Sn	02 22 59.8	+2.7
	0.6nm,0.3s,baz=84,slow=18,SNR=4.4						
MAT	Matsushiro	2.32	258	P	Pn	02 22 29.9	+0.2
MAT				*e*S	Sn	02 22 58.3	+1.2
SONM	Songino Array	27.51	304	P	P	02 27 34.9	+1.0
	0.2nm,0.5s,baz=99,slow=8.9,SNR=2.1						
H11N2	WAKE ISLAND Hy	28.43	120	T	T	02 57 48.8	
	baz=313,slow=76,SNR=3.9						
H11N1	WAKE ISLAND Hy	28.44	120	T	T	02 57 50.0	
	baz=313,slow=76,SNR=6.2						
H11N3	WAKE ISLAND Hy	28.45	120	T	T	02 57 49.9	
	baz=313,slow=76,SNR=2.8						
H11S1	WAKE ISLAND Hy	29.14	122	T	T	02 58 43.2	
	baz=314,slow=76,SNR=4.5						
H11S3	WAKE ISLAND Hy	29.14	122	T	T	02 58 40.9	
	baz=314,slow=76,SNR=4.7						
H11S2	WAKE ISLAND Hy	29.15	122	T	T	02 58 44.0	
	baz=314,slow=76,SNR=3.7						
MKAR	Makanchi Array	43.84	302	P	P	02 29 51.3	-1.8
	0.3nm,0.7s,baz=91,slow=8.6,SNR=3.7						

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*IDC **15** 02:36:14.7±1.8, 51°.65N×151°.42E, h492^{km}±21^{km}, mb2.7/7, mb1 3.0/9, mb1mx2.6/42, mbtmp3.6/9, Error ellipse: s-maj=23.9km s-min=15.3km az=158.0*
ISC 15 02:36:13.3±1.1, 51°.5N±0°.2×151°.4E±0°.2, h472^{km}, n9, σ1^{s}.23/9, mb3.2/7, Sea of Okhotsk

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	Petropavlovsk-	4.20	66	P	P	02 37 33.0	+1.6
	1.5nm,0.3s,baz=246,slow=10,SNR=30						
SEY	Seymchan	11.44	2	P	P	02 38 47.0	+1.5
	0.4nm,0.3s,baz=178,slow=9.6,SNR=16						
ILAR	Eielson Array	33.66	43	P	P	02 42 12.4	-0.8
	0.7nm,0.8s,baz=274,slow=8.6,SNR=6.0						
INK	Inuvik	38.31	35	P	P	02 42 50.6	-1.0
	1.5nm,0.4s,baz=295,slow=7.4,SNR=15						
MKAR	Makanchi Array	43.88	292	P	P	02 43 36.4	-0.1
	0.2nm,0.3s,baz=52,slow=7.1,SNR=3.2						
KURBB	Kurchatov Arra	43.98	299	P	P	02 43 36.7	-0.5
	0.4nm,0.3s,baz=69,slow=8.4,SNR=2.7						
YKA	Yellowknife Ar	47.83	39	P	P	02 44 05.0	-1.4
	0.7nm,0.7s,baz=305,slow=6.9,SNR=11						
TXAR	Lajitas Array	76.13	60	P	P	02 47 11.3	-0.5
	0.4nm,1.0s,baz=294,slow=4.8,SNR=2.4						
ASAR	Alice Springs	76.44	196	P	P	02 47 13.8	+0.5
	0.2nm,0.6s,baz=9.5,slow=6.8,SNR=2.9						

ZUR 15 02:39:28.0, 46°.74N×9°.40E, h5^{km}±2^{km}, MLh0.8/7, 2C-2D, Error ellipse: s-maj=5.5km s-min=0.9km az=40.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVAM	Vaz, Muldain	0.10	119	Pg	Pg	02 39 30.5	+0.4
	0.1nm,SNR=0.7						
SCUG	Chur Gewerbesc	0.14	35	Pg	Pg	02 39 31.0	+0.1
SCUG				Pg	Pg	02 39 31.0	+0.1
	0.1nm,SNR=0.8						
PANIX	Pigniu (Panix)	0.22	293	⇑Pg	Pg	02 39 32.8	+0.4
	SNR=0.4						
PANIX				⇑Pg	Pg	02 39 32.8	+0.4
PANIX				Sg	Sg	02 39 35.8	+0.6
TUE	Stuetta	0.27	188	⇓Pg	Pg	02 39 33.8	+0.5
	SNR=0.3						
TUE				⇓Pg	Pg	02 39 33.8	+0.5
TUE				Sg	Sg	02 39 37.4	+0.5
PLONS	Plons/SG	0.31	357	Pg	Pg	02 39 34.3	+0.3
PLONS				Pg	Pg	02 39 34.3	+0.3
	SNR=0.4						
PLONS				Sg	Sg	02 39 38.6	+0.4
DAVOX	Davos/Dischmat	0.33	83	Pg	Pg	02 39 34.5	+0.1
DAVOX				Pg	Pg	02 39 34.5	+0.1
	SNR=0.8						
DAVOX				Sg	Sg	02 39 39.3	+0.5
NALPS	Val Nalps	0.47	252	Pg	Pg	02 39 37.6	+0.5
	SNR=0.6						
NALPS				Pg	Pg	02 39 37.6	+0.5

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*LDG **15** 02:40:07.5±0.1, 47°.86N×8°.63E, h7^{km}, Md1.3/2, Ml1.5/5, Error ellipse: s-maj=0.9km s-min=0.9km az=5.0*
*STR **15** 02:40:08.9±1.3, 48°N±5°×°±°, h3^{km}, MLv0.9/3, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/haslach_taup-2.11 preliminary*
ZUR 15 02:40:07.1, 47°.87N×8°.64E, h7^{km}±2^{km}, MLh0.9/12, 2C-5D, Error ellipse: s-maj=4.1km s-min=0.6km az=341.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLE	Schleitheim	0.14	224	⇓Pg	Pg	02 40 10.3	+0.3
SLE				⇓Pg	Pg	02 40 10.3	+0.3
	0.1nm,SNR=1.1						
SLE				Sg	Sg	02 40 12.3	+0.3
EMING	Emmingen-Lipti	0.14	79	⇑Pg	Pg	02 40 10.5	+0.4
EMING				⇑Pg	Pg	02 40 10.5	+0.4
	SNR=1.1						
EMING				Sg	Sg	02 40 12.7	+0.5
TRULL	Truellikon	0.22	172	⇓Pg	Pg	02 40 11.8	+0.4
	SNR=0.5						
TRULL				Sg	Sg	02 40 15.1	+0.7
STEIN	Stein am Rhein	0.25	141	Pg	Pg	02 40 12.5	+0.4
STEIN				Pg	Pg	02 40 12.5	+0.4
	SNR=0.7						
STEIN				Sg	Sg	02 40 16.2	+0.8
FLACH	Flaach	0.30	189	Pg	Pg	02 40 13.2	+0.2
FLACH				Pg	Pg	02 40 13.2	+0.2
	0.1nm,SNR=0.9						
FLACH				Sg	Sg	02 40 17.7	+0.8
METMA	Mettma DE	0.30	239	Pg	Pg	02 40 13.2	+0.2
	SNR=0.5						
METMA				Pg	Pg	02 40 13.2	+0.2
METMA				Sg	Sg	02 40 17.2	+0.3
BERGE	Lenzkirch (DE)	0.31	271	Pg	Pg	02 40 13.5	+0.4
BERGE				Pg	Pg	02 40 13.5	+0.4
	SNR=0.3						
BERGE				Sg	Sg	02 40 17.9	+0.7
STIEG	Stiegenhof Hun	0.37	178	Pg	Pg	02 40 14.7	+0.4
	0.3nm,SNR=0.9						
STIEG				Sg	Sg	02 40 20.0	+0.9
ACHB	Acheberg	0.38	223	Pg	Pg	02 40 14.8	+0.3
	SNR=0.4						
ACHB				Pg	Pg	02 40 14.8	+0.3
ACHB				Sg	Sg	02 40 19.9	+0.5
GUT	Gutenstein	0.38	57	Sg	Sg	02 40 20.3	+0.6
WEIN	Weingarten	0.41	145	Pg	Pg	02 40 15.5	+0.4
	0.1nm,SNR=1.0						
WEIN				Pg	Pg	02 40 15.5	+0.4
WEIN				Sg	Sg	02 40 21.5	+1.0
FELD	Feldberg im Sc	0.42	272	Pg	Pg	02 40 15.7	+0.3
FELD				Pg	Pg	02 40 15.7	+0.3
	SNR=0.9						
SULZ	Cheisacher	0.49	226	⇓Pg	Pg	02 40 16.9	+0.4
SULZ				⇓Pg	Pg	02 40 16.9	+0.4
	SNR=1.1						
KIZ	Kirchzarten	0.49	281	Pg	Pg	02 40 16.8	+0.2
KIZ				Sg	Sg	02 40 23.5	+0.5
BFO	Black Forest	0.51	336	Pg	Pg	02 40 17.1	+0.1
OPP	Oppenau	0.70	335	Pg	Pb	02 40 21.3	-0.3
OPP				Sg	Sg	02 40 29.9	+0.2
ECH	Echery	1.05	290	Pg	Pb	02 40 27.5	-0.1
ECH				Pn	Pn	02 40 28.5	+0.2
ECH				Sg	Sg	02 40 41.1	+0.2
CDF	Champ du Feu	1.06	302	*e*Pg	Pg	02 40 27.4	-0.1
CDF				*e*Sg	Sg	02 40 41.1	-0.2
	1.4nm,0.2s						
HINF	Hinteralfeld	1.20	268	*e*Pg	Pg	02 40 29.6	-0.5
HINF				*e*Sg	Sg	02 40 45.4	-0.3
	0.9nm,0.2s						
HAU	Haudompre	1.54	276	*e*Pg	Pb	02 40 36.1	0.0
HAU				*e*Sg	Sb	02 40 56.1	+0.3
	0.8nm,0.2s						
CABF	La Chapelle	2.14	235	*e*Pg	Pb	02 40 46.9	+0.6
CABF				*e*Sg	Sg	02 41 14.8	-1.1
	0.3nm,0.2s						
LOR	Lormes	3.29	261	*e*Sg	Sg	02 41 50.7	-2.0
	0.2nm,0.2s						

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*IDC **15** 03:05:50.5±2.4, 31°.15S×68°.36W, h86^{km}±20^{km}, mb3.6/6, mb1 3.8/11, mb1mx3.7/32, mbtmp3.9/11, MS3.0/2, Ms1 3.0/2, ms1mx2.6/19, Error ellipse: s-maj=25.6km s-min=22.6km az=69.0*
*NEIC **15** 03:05:52.3±2.6, 31°.14S±0°.07×68°.47W±0°.07, h111^{km}±7^{km}, Error ellipse: s-maj=10.4km s-min=7.9km az=212.0*
ISC 15 03:05:51.5±0.7, 31°.09S±0°.07×68°.36W±0°.09, h101^{km}, n47, σ1^{s}.34/46, mb3.8/7, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZON	Zonda	0.53	211		Pn	03 06 09.1	+1.3
CO01	Juntas del Tor	1.86	306		Pn	03 06 25.1	+2.5
CO03	El Pedregal	2.02	277		Pn	03 06 26.0	+1.5
CO02	Combarbal	2.27	266	Pn	Pn	03 06 28.5	+0.7
GO04	Tololo Observa	2.30	293		Pn	03 06 29.6	+1.4
VA03	San Esteban	2.50	228		Pn	03 06 31.0	+0.2
AC05	El Transito	2.79	323		Pn	03 06 36.9	+2.2
PEL	Peldehue	2.85	223	Pn	Pn	03 06 35.4	+0.1
LCO	Las Campanas	2.90	315	Pn	Pn	03 06 37.4	+1.1
ROC1	El Roble	2.94	230		Pn	03 06 36.1	-0.6
MT05	Renca	3.06	221	Pn	Pn	03 06 38.5	+0.4
MT02	Curacav	3.20	227		Pn	03 06 39.0	-0.9
AC04	Llanos de Chal	3.72	320	Pn	Pn	03 06 47.5	+0.5
GO03	Copiap	3.85	334		Pn	03 06 50.2	+1.4
BO02	Sierra Bellavi	4.22	208	Pn	Pn	03 06 53.7	-0.1
AC02	Maricunga	4.29	351	Pn	Pn	03 06 57.5	+2.3
AC01	Pan de Azucar	5.30	338	Pn	Pn	03 07 09.3	+0.9
GO02	Mina Guanaco	6.00	349	Pn	Pn	03 07 18.7	+0.5
BI02	San Fabin de	6.07	203	Pn	Pn	03 07 17.2	-1.6
PB14	IPOC Station P	6.69	344	Pn	Pn	03 07 27.4	-0.1
PB15	IPOC Station P	7.91	353		Pn	03 07 44.0	-0.1
LC01	Cunco	8.31	199	Pn	Pn	03 07 46.4	-2.7
PB06	IPOC Station P	8.42	352	Pn	Pn	03 07 50.3	-0.6
LVC	Limon Verde	8.46	357	P	Pn	03 07 51.3	-0.4
	5.5nm,0.3s,baz=184,slow=8.8,SNR=31						
LVC				S	Sn	03 09 21.9	-3.8
	1.8nm,0.3s,baz=242,slow=23,SNR=2.0						
LVC	Limon Verde	8.46	357		Pn	03 07 50.9	-0.7
PB09	IPOC Station P	9.29	355		Pn	03 08 02.3	-0.4
PB07	IPOC Station P	9.43	351		Pn	03 08 03.3	-1.3
PLCA	Paso Flores	9.79	190	P	Pn	03 08 08.0	-1.3
	0.5nm,0.3s,baz=358,slow=10,SNR=20						
PLCA	Paso Flores	9.79	190	Pn	Pn	03 08 07.8	-1.5
CPUP	Villa Florida	10.78	67	P	Pn	03 08 21.8	-1.0
	0.1nm,0.3s,baz=262,slow=16,SNR=1.4						
CPUP	Villa Florida	10.78	67		Pn	03 08 23.9	+1.1
PB08	IPOC Station P	10.93	356	Pn	Pn	03 08 23.4	-1.8
LPAZ	La Paz	14.74	1	P	Pn	03 09 17.1	+1.6
	0.2nm,0.3s,baz=171,slow=6.4,SNR=5.6						
LPAZ				LR	LR	03 16 18.4	
	comp=Z,36nm,21.4s,baz=148,slow=42						
LPAZ	La Paz	14.74	1	Pn	Pn	03 09 15.2	-0.3
SIV	San Ignacio	16.44	26	P	Pn	03 09 35.1	-1.2
	0.2nm,0.3s,baz=212,slow=13,SNR=6.5						
SAML	Samuel	22.55	13	P	P	03 10 43.6	+0.3
SAML				IAmb	IAmb	03 10 48.9	
	comp=Z,4.9nm,1.0s						
TXAR	Lajitas Array	68.85	327	P	P	03 16 46.7	+1.4
	comp=Z,0.8nm,0.6s,baz=152,slow=9.0,SNR=16						
TXAR				LR	LR	03 43 28.5	
	comp=Z,16nm,18.4s,baz=0.0,slow=33						
KOWA	Kowa	76.58	64	P	P	03 17 32.5	+1.2
	comp=Z,0.6nm,0.5s,baz=233,slow=5.8,SNR=5.1						
KOWA	Kowa	76.58	64	IAmb	IAmb	03 17 50.4	
	comp=Z,4.7nm,1.4s						
TORD	Torodi Ar. Bea	80.27	68	P	P	03 17 52.8	+1.2
	comp=Z,0.3nm,0.4s,baz=279,slow=6.8,SNR=17						
PDAR	Pinedale Array	82.67	331	P	P	03 18 04.3	+0.5
	comp=Z,0.4nm,0.7s,baz=117,slow=6.3,SNR=5.5						
NVAR	Mina Array Bea	83.37	323	P	P	03 18 09.0	+1.5
	comp=Z,0.4nm,0.7s,baz=178,slow=5.7,SNR=5.3						
ULM	Lac du Bonnet	84.58	343	P	P	03 18 13.0	-0.1
	comp=Z,1.5nm,0.6s,baz=183,slow=6.6,SNR=4.5						
ULM	Lac du Bonnet	84.58	343	IAmb	IAmb	03 18 21.6	
	comp=Z,7.5nm,1.5s						
WRA	Warramunga Arr	124.78	206	PKP	PKPdf	03 24 39.5	-0.6
	comp=Z,0.5nm,0.9s,baz=164,slow=1.5,SNR=4.9						
ZALV	Zalesovo Beam	150.11	32	PKPbc	PKiKP	03 25 30.8	0.0
	comp=Z,1.4nm,0.4s,baz=293,slow=2.8,SNR=11						
MKAR	Makanchi Array	152.51	47	PKPbc	PKiKP	03 25 36.2	+0.2
	comp=Z,0.8nm,0.7s,baz=308,slow=1.9,SNR=8.8						

TAP 15 03:32:14.8, 23°.05N×120°.83E, h5^{km}±1^{km}, ML1.5, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STYH	Taoyuan	0.13	339	*i* P	Pg	03 32 18.7	+1.1
	baz=338						
STYH				*i* S	Sg	03 32 20.8	+1.4
	baz=338						
STYT	Tauyuan	0.14	331	*i* P	Pg	03 32 18.5	+0.9
	baz=332						
STYT				S	Sg	03 32 20.7	+1.2
	baz=332						
SLGT	Liugui	0.18	253	*i* P	Pg	03 32 19.4	+1.0
	baz=253						
SLGT				*i* S	Sg	03 32 22.0	+1.3
	baz=253						
ELDTW	Lidau	0.23	50	*e*P	Pg	03 32 20.5	+1.2
	baz=51						
ELDTW				*e*S	Sg	03 32 23.5	+1.2
	baz=51						
WTP	Ta-pu	0.28	315	*e*P	Pb	03 32 22.3	-0.2

	baz=316						
WTP				*e*S	Sb	03 32 26.4	-1.2
	baz=316						
CHN1	**Nanshi**	0.31	297	*e*S	Sb	03 32 27.8	-0.6
	baz=296						
LONT	**Longtian**	0.31	116	*e*P	Pb	03 32 22.3	-0.6
	baz=116						
LONT				*e*S	Sb	03 32 27.0	-1.2
	baz=116						
TPUB	**Ta-pu**	0.31	324	*e*P	Pg	03 32 20.3	-0.7
	baz=324						
TPUB				*e*S	Sb	03 32 27.5	-0.9
	baz=324						
SSD	**Sandimen**	0.35	211	*e*P	Pg	03 32 22.3	+0.7
	baz=210						
SSD				*e*S	Sg	03 32 26.4	+0.2
	baz=210						
SNST	**Tainan City**	0.35	300	*e*P	Pb	03 32 23.1	-0.5
	baz=299						
SNST				*e*S	Sb	03 32 30.0	+0.5
	baz=299						
EDH	**Donghe**	0.44	99	*e*S	Sb	03 32 32.3	+0.2
	baz=99						
ALS	**Alishan**	0.46	357	*e*S	Sb	03 32 31.9	-1.2
	baz=358						

TAP 15 03:32:22.9, 22°.69N×121°.31E, h24^{km}±1^{km}, ML1.2, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LDUT	**Ludao**	0.14	96	*i* P	Pb	03 32 28.4	+0.6
	baz=96						
LDUT				*i* S	Sb	03 32 32.1	+1.0
	baz=96						
TWGBT	**Beinan**	0.25	301	*e*P	Pb	03 32 30.1	+0.9
	baz=300						
TWGBT				*e*S	Sb	03 32 34.4	+1.0
	baz=300						
LONT	**Longtian**	0.28	322	*e*P	Pb	03 32 30.5	+1.0
	baz=322						
LONT				*e*S	Sn	03 32 35.7	-1.3
	baz=322						
EDH	**Donghe**	0.28	358	*e*P	Pb	03 32 30.3	+0.7
	baz=358						
EDH				*e*S	Sb	03 32 34.7	+0.5
	baz=358						
ECL	**Taimali**	0.34	255	*e*P	Pb	03 32 30.9	+0.4
	baz=253						
ECL				*e*S	Sb	03 32 36.7	+1.0
	baz=253						
FULB	**Fuli**	0.51	358	*e*S	Pb	03 32 32.4	-0.8
	baz=70						
FULB	**Fuli**	0.51	358	*e*P	Pb	03 32 32.4	-0.8
	baz=358						
FULB				*e*S	Sn	03 32 41.8	-1.0
	baz=358						

IDC 15 03:40:57.1±2.3, 14°.96N×147°.12E, h0^{km}, mb3.4/3, mb1 3.6/4, mb1mx3.3/53, mbtmp3.4/4, ML3.4/1, MS3.4/1, Ms1 3.4/1, ms1mx2.5/27, Error ellipse: s-maj=52.9km s-min=27.5km az=102.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	2.57	238	Pn	Pn	03 41 40.4	+0.3
	7.6nm,0.3s,baz=17,slow=19,SNR=4.0						
GUMO				Sn	Sn	03 42 12.4	+0.3
	9.5nm,0.3s,baz=17,slow=19,SNR=3.4						
WRA	**Warramunga Arr**	36.89	200	P	P	03 48 07.7	0.0
	0.3nm,0.5s,baz=26,slow=9.1,SNR=3.5						
MSVF	**Nonsavu**	44.55	136	LR	LR	04 09 03.6	
	comp=Z,41nm,18.1s,baz=11,slow=38						
SONM	**Songino Array**	46.92	323	P	P	03 49 30.8	+1.2
	0.3nm,0.8s,baz=134,slow=8.3,SNR=2.7						
MKAR	**Makanchi Array**	62.05	315	P	P	03 51 18.4	-1.1
	0.5nm,0.7s,baz=90,slow=7.6,SNR=4.3						

IDC 15 03:56:03.3±3.2, 17°.55S×173°.50W, h0^{km}, mb3.6/4, mb1 4.0/4, mb1mx3.7/25, mbtmp3.6/4, Error ellipse: s-maj=180.4km s-min=28.6km az=148.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	49.29	259	P	P	04 04 53.9	-0.5
	0.4nm,0.7s,baz=98,slow=6.5,SNR=5.5						
ASAR	**Alice Springs**	49.39	254	P	P	04 04 55.4	+0.2
	1.2nm,0.5s,baz=89,slow=8.6,SNR=20						
PDAR	**Pinedale Array**	83.92	42	P	P	04 08 35.8	+0.3
	0.4nm,0.9s,baz=212,slow=2.8,SNR=3.1						
ILAR	**Eielson Array**	84.56	11	P	P	04 08 37.6	-0.3
	0.3nm,0.8s,baz=204,slow=5.6,SNR=5.1						

KRSZO ***15*** *04:01:01.4±0.8, 43°.30N×17°.64E, h16^{km}±8^{km}, ML3.9/22, Error ellipse: s-maj=3.1km s-min=2.6km az=79.0*
BGR ***15*** *04:01:02.1±0.9, 43°.14N×18°.22E, h10^{km}, ML3.9/6, Error ellipse: s-maj=21.1km s-min=11.1km az=54.0*
PDG ***15*** *04:01:02.2±0.6, 43°.23N×17°.61E, h20^{km}±1^{km}, MD3.6/9, ML3.4/13, Error ellipse: s-maj=0.8km s-min=0.8km az=0.0*
LDG ***15*** *04:01:02.8±0.1, 43°.21N×17°.63E, h10^{km}, Ml3.3/28, Error ellipse: s-maj=5.1km s-min=2.1km az=16.0*
RHSSO ***15*** *04:01:03.7±0.3, 43°.25N×17°.69E, h14^{km}±2^{km}, ML3.6/15*
BEO ***15*** *04:01:04.1±0.4, 43°.31N×17°.76E, h10^{km}±2^{km}, ML3.3/16*
PRU ***15*** *04:01:06.3±0.0, 43°.44N×17°.55E, h1^{km}*

ISC 15 04:01:01.3±0.8, 43°.28N±0°.01×17°.60E±0°.01, h17^{km}±5^{km}, n308, σ2^s.69/536, 35C-21D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RICI	**Ricice**	0.41	303	*i* Pg	Pn	04 01 12.2	-0.2
RICI				Sg	Sn	04 01 19.6	0.0
RICI	**Ricice**	0.41	303	Pg	Pn	04 01 12.2	-0.2
RICI				Lg	Lg	04 01 19.6	
STON	**Ston**	0.41	170	*i* Pg	Pg	04 01 10.1	+0.5
STON				Sg	Sg	04 01 16.1	+0.8
STON	**Ston**	0.41	170	Pg	Pg	04 01 10.1	+0.5
STON				Lg	Lg	04 01 16.1	
MAKA	**Makarska**	0.43	272	*i* Pg	Pn	04 01 12.3	-0.3
MAKA				Sg	Sn	04 01 19.4	-0.6
MAKA	**Makarska**	0.43	272	Pg	Pn	04 01 12.3	-0.3
MAKA				Lg	Lg	04 01 19.4	
DBRK	**Dubrovnik**	0.73	146	*e*Pg	Pg	04 01 15.6	+0.1
DBRK				Sg	Sb	04 01 25.7	+0.7
DBRK	**Dubrovnik**	0.73	146	Pg	Pg	04 01 15.6	+0.1
DBRK				Lg	Lg	04 01 25.7	
LSTV	**Lastovo**	0.73	226	*i* Pg	Pn	04 01 17.1	+0.4
LSTV				Sg	Sb	04 01 26.8	+1.7
LSTV	**Lastovo**	0.73	226	Pg	Pn	04 01 17.1	+0.4
LSTV				Lg	Lg	04 01 26.8	
BRY	**Bratogost**	0.78	118	⇑*i*Pg	Pb	04 01 16.9	+0.5
BRY				*e*Sg	Sb	04 01 27.4	+0.6
BRY	**Bratogost**	0.78	118	⇑*i*Pg	Pb	04 01 16.7	+0.3
BRY				*i* Sg	Sn	04 01 28.4	-0.5
BRY	**Bratogost**	0.78	118	Pg	Pb	04 01 16.9	+0.5
BRY				Lg	Lg	04 01 27.4	
TREB	**Trebinje**	0.78	135	*e*Pg	Pn	04 01 17.2	-0.3
TREB				*e*Sg	Sb	04 01 27.7	+1.1
TREB	**Trebinje**	0.78	135	*e*Pg	Pb	04 01 17.0	+0.6
TREB				*e*Sg	Sb	04 01 27.8	+1.1
TREB	**Trebinje**	0.78	135	Pg	Pb	04 01 17.0	+0.6
TREB				Pb	Pn	04 01 17.2	-0.3
TREB				Lg	Lg	04 01 27.7	
TREB				Lg	Lg	04 01 27.8	
HVAR	**Hvar**	0.85	264	*e*Pg	Pn	04 01 19.5	+1.1
HVAR				Sg	Sn	04 01 31.2	+0.8
HVAR	**Hvar**	0.85	264	Pg	Pn	04 01 19.5	+1.1
HVAR				Lg	Lg	04 01 31.2	
UPM	**Unac-Piva**	0.95	94	⇑*i*Pg	Pn	04 01 20.3	+0.3
UPM				*e*Sg	Sn	04 01 32.7	-0.6
UPM	**Unac-Piva**	0.95	94	*e*Pg	Pn	04 01 20.1	+0.1
UPM				*i* Sg	Sn	04 01 35.3	+2.0
UPM	**Unac-Piva**	0.95	94	Pg	Pn	04 01 20.3	+0.3
UPM				Lg	Lg	04 01 32.7	
HCY	**Herceg Novi**	1.05	141	⇑*i*Pg	Pg	04 01 21.8	+0.1
HCY				*e*Sg	Sb	04 01 35.2	+0.7
HCY	**Herceg Novi**	1.05	141	⇓*i*Pg	Pb	04 01 21.3	+0.3
HCY				*i* Sg	Sn	04 01 37.6	+2.1
HCY	**Herceg Novi**	1.05	141	Pg	Pg	04 01 21.8	+0.1
HCY				Lg	Lg	04 01 35.2	
NKME	**Niksic**	1.11	117	⇑*i*Pg	Pg	04 01 22.7	-0.1
NKME				*i* Sg	Sn	04 01 40.0	+3.0
NKY	**Niksic**	1.12	114	⇓*i*Pg	Pg	04 01 23.0	+0.1
NKY				*i* Sg	Sn	04 01 40.3	+3.1
KIJV	**Kijevo**	1.14	310	*e*Pg	Pg	04 01 25.1	+1.9
KIJV				Sg	Sg	04 01 40.7	+2.6
KIJV	**Kijevo**	1.14	310	Pn	Pg	04 01 25.1	+1.9
KIJV				Sn	Sg	04 01 40.7	+2.6
MGRS	**Mrkonjic Grad**	1.20	342	*e*Pg	Pg	04 01 26.0	+1.5
MGRS				*e*Sg	Sg	04 01 43.1	+2.9
MGRS	**Mrkonjic Grad**	1.20	342	Pn	Pg	04 01 26.0	+1.5
MGRS				Sn	Sg	04 01 43.1	+2.9
CEME	**Cevo**	1.21	127	*e*Pg	Pg	04 01 24.3	-0.3
CEME				*i* Sg	Sg	04 01 41.7	+1.3
HAPS	**Han Pijesak,Bl**	1.27	50	*e*Pg	Pg	04 01 26.4	+0.6
HAPS				*e*Sg	Sb	04 01 40.3	-0.5
HAPS	**Han Pijesak,Bl**	1.27	50	*e*Pg	Pg	04 01 26.3	+0.5
HAPS				*e*Sg	Sg	04 01 43.3	+0.9
HAPS	**Han Pijesak,Bl**	1.27	50	Pn	Pg	04 01 26.3	+0.5
HAPS				Pg	Pg	04 01 26.4	+0.6
HAPS				Sn	Sb	04 01 40.3	-0.5
HAPS				Lg	Lg	04 01 43.3	
PLE	**Pljevlja**	1.30	87	*e*Pg	Pg	04 01 26.6	+0.2
PLE				*i* Sg	Sg	04 01 45.7	+2.2
RUDO	**Rudo**	1.33	74	*e*Pg	Pg	04 01 26.9	0.0
RUDO				*e*Sg	Sg	04 01 44.5	+0.2
RUDO	**Rudo**	1.33	74	Pn	Pg	04 01 26.9	0.0
RUDO				Sn	Sg	04 01 44.5	+0.2
BUM	**Brajici-Budva**	1.36	135	*e*Pg	Pb	04 01 27.0	+0.7
BUM				*i* Sg	Sg	04 01 46.0	+0.8
BBLS	**Lazići**	1.44	65	*e*Pg	Pg	04 01 28.3	-0.6
BBLS				*e*Sg	Sb	04 01 45.3	-0.3
BBLS	**Lazići**	1.44	65	⇑*i*Pg	Pg	04 01 29.3	+0.4
BBLS				*e*Sg	Sg	04 01 48.1	+0.4
BBLS	**Lazići**	1.44	65	Pn	Pg	04 01 28.3	-0.6
BBLS				Pg	Pg	04 01 29.3	+0.4
BBLS				Pb	Pn	04 01 29.7	+3.2
	comp=Z,9.2nm,SNR=47						
BBLS				Sn	Sb	04 01 45.3	-0.3
BBLS				Lg	Lg	04 01 48.2	
KOME	**Kolasin**	1.46	106	⇑*i*Pg	Pg	04 01 28.7	-0.8
KOME				*i* Sg	Sg	04 01 49.4	+0.9
ZIRJ	**Zirje**	1.48	286	*i* Pn	Pg	04 01 29.8	+0.1
ZIRJ				Sn	Sg	04 01 49.7	+0.8
ZIRJ	**Zirje**	1.48	286	Pn	Pg	04 01 29.8	+0.1
ZIRJ				Sn	Sg	04 01 49.7	+0.8
PDG	**Podgorica**	1.48	124	*e*Pg	Pb	04 01 28.9	+0.7
PDG				*e*Sg	Sg	04 01 49.1	+0.1
PDG	**Podgorica**	1.48	124	⇑P	Pb	04 01 29.0	+0.7
PDG				⇓S	Sg	04 01 49.6	+0.6
PDG	**Podgorica**	1.48	124	⇑*i*Pg	Pb	04 01 29.0	+0.7
PDG				*e*Sg	Sg	04 01 49.0	+0.1
PDG	**Podgorica**	1.48	124	Pn	Pb	04 01 28.9	+0.7
PDG				Pn	Pb	04 01 29.0	+0.7
PDG				Pb	Pb	04 01 29.0	+0.7
PDG				Sn	Sg	04 01 49.0	+0.1
PDG				Sn	Sg	04 01 49.1	+0.1
PDG				Sg	Sg	04 01 49.6	+0.6
TTG	**Podgorica**	1.48	124	⇑*i*Pg	Pb	04 01 28.6	+0.3
TTG				*i* Sg	Sg	04 01 49.7	+0.7
MORI	**Morici**	1.50	294	*i* Pn	Pg	04 01 30.4	+0.3
MORI				Sn	Sg	04 01 51.2	+1.5
MORI	**Morici**	1.50	294	Pn	Pg	04 01 30.4	+0.3
MORI				Sn	Sg	04 01 51.2	+1.5
BLY	**Banja Luka**	1.50	349	*e*Pg	Pg	04 01 31.3	+1.1
BLY				*e*Sg	Sg	04 01 53.5	+3.7
BLY	**Banja Luka**	1.50	349	*e*Pn	Pg	04 01 31.0	+0.8
BLY				*e*Sg	Sg	04 01 52.0	+2.2
BLY	**Banja Luka**	1.50	349	Pn	Pg	04 01 31.0	+0.8
BLY				Pb	Pb	04 01 31.2	+2.5
	comp=Z,1.7nm,SNR=51						
BLY				Pg	Pg	04 01 31.3	+1.1
BLY				Sg	Sg	04 01 50.6	+0.8
BLY				Sn	Sg	04 01 52.0	+2.2
BLY				Lg	Lg	04 01 53.5	
DRME	**Dracevica, Mon**	1.59	133	⇑*i*Pg	Pb	04 01 30.8	+0.6
DRME				*e*Sg	Sg	04 01 52.1	-0.6
DRME	**Dracevica, Mon**	1.59	133	⇓*i*Pg	Pb	04 01 30.2	0.0
DRME				*i* Sg	Sg	04 01 52.2	-0.5
DRME	**Dracevica, Mon**	1.59	133	Pn	Pb	04 01 30.8	+0.6
DRME				Sn	Sg	04 01 52.1	-0.6
IVA	**Berane**	1.73	103	⇑*i*Pn	Pb	04 01 32.2	-0.3
IVA				*i* Sn	Sg	04 01 55.9	-1.0
ULC	**Ulcinj**	1.79	137	*e*Pn	Pb	04 01 32.9	-0.6
ULC				*i* Sn	Sb	04 01 56.6	+1.0
PRIJ	**Prijedor**	1.82	340	*e*Pn	Pg	04 01 35.5	-0.7
PRIJ				*e*Sn	Sg	04 01 58.9	-0.9
PRIJ	**Prijedor**	1.82	340	Pn	Pg	04 01 35.5	-0.7
PRIJ				Sn	Sg	04 01 58.9	-0.9
UDBI	**Udbina**	1.83	314	*i* Pn	Pg	04 01 37.2	+0.8
UDBI				Sn	Sg	04 02 01.2	+1.1
UDBI	**Udbina**	1.83	314	Pn	Pg	04 01 37.2	+0.8
UDBI				Sn	Sg	04 02 01.2	+1.1
PVY	**Plav**	1.86	111	⇓*i*Pn	Pb	04 01 33.9	-0.9
PVY				*i* Sn	Sb	04 01 58.8	+1.0
IVAS	**Ivanjica**	1.88	80	*e*Pn	Pb	04 01 35.0	-0.2
IVAS				*e*Sn	Sn	04 01 56.5	+0.5
IVAS	**Ivanjica**	1.88	80	Pn	Pb	04 01 35.0	-0.2
IVAS				Sn	Sn	04 01 56.5	+0.5
TEKS	**Tekeris**	1.89	47	*e*Pn	Pb	04 01 34.9	-0.3
TEKS				*e*Sn	Sb	04 01 57.8	-0.7
TEKS	**Tekeris**	1.89	47	*e*Pn	Pb	04 01 34.8	-0.4
TEKS				*e*Sn	Sb	04 01 57.9	-0.6
TEKS	**Tekeris**	1.89	47	Pn	Pb	04 01 34.8	-0.4
TEKS				Pg	Pb	04 01 34.9	-0.3
TEKS				Sn	Sb	04 01 57.8	-0.7
TEKS				Lg	Lg	04 01 57.9	
DIVS	**Divibare**	1.92	64	*e*Pg	Pb	04 01 35.8	0.0
DIVS				*e*Sg	Sg	04 02 01.9	-1.1
DIVS	**Divibare**	1.92	64	⇑*i*Pn	Pb	04 01 35.5	-0.3
DIVS				*e*Sn	Sb	04 01 58.7	-0.8
DIVS	**Divibare**	1.92	64	Pg	Pb	04 01 35.5	-0.3
DIVS				Pn	Pg	04 01 35.6	-2.5
	comp=Z,1.2nm,SNR=22						
DIVS				Pb	Pb	04 01 35.8	0.0
DIVS				Lg	Lg	04 01 58.7	
DIVS				Sn	Sb	04 01 59.2	-0.2
DIVS				Sg	Sg	04 02 01.9	-1.1
DUGI	**Dugi Otok**	1.98	292	*i* Pn	Pb	04 01 38.0	+1.1
DUGI	**Dugi Otok**	1.98	292	Pn	Pb	04 01 38.0	+1.1
TRUS	**Trudelj**	2.24	64	*e*Pn	Pb	04 01 39.9	-1.4
TRUS				*e*Sn	Sn	04 02 05.8	+1.0
TRUS	**Trudelj**	2.24	64	Pn	Pb	04 01 39.9	-1.4
TRUS				Sn	Sn	04 02 05.8	+1.0
GRUS	**Gruza**	2.34	74	*e*Pn	Pb	04 01 41.6	-1.4
GRUS				*e*Sn	Sn	04 02 08.8	+1.5
GRUS	**Gruza**	2.34	74	⇑P	Pb	04 01 40.9	-2.1
GRUS				⇓S	Sn	04 02 08.2	+0.9
GRUS	**Gruza**	2.34	74	Pn	Pb	04 01 40.9	-2.1
GRUS				Pg	Pb	04 01 41.6	-1.4
GRUS				Sn	Sn	04 02 08.2	+0.9
GRUS				Lg	Lg	04 02 08.8	
NVLJ	**Novalja**	2.36	304	*e*Pn	Pb	04 01 44.5	+1.3
NVLJ				Sn	Sg	04 02 15.4	-1.6
NVLJ	**Novalja**	2.36	304	Pn	Pb	04 01 44.5	+1.3
NVLJ				Sn	Sg	04 02 15.4	-1.6
MOSL	**Moslavina**	2.42	346	*i* Pn	Pb	04 01 42.8	-1.5
MOSL	**Moslavina**	2.42	346	Pn	Pb	04 01 42.8	-1.5
FRGS	**Fruska Gora**	2.46	39	*e*Pn	Pn	04 01 42.0	+1.4
FRGS				*e*Sn	Sn	04 02 11.9	+1.6
FRGS	**Fruska Gora**	2.46	39	⇑P	Pn	04 01 42.4	+1.8
FRGS				⇑S	Sn	04 02 11.9	+1.6
FRGS	**Fruska Gora**	2.46	39	*e*Sn	Sb	04 02 12.3	-2.7
FRGS	**Fruska Gora**	2.46	39	Pn	Pn	04 01 42.0	+1.4
FRGS				Pg	Pn	04 01 42.4	+1.8
FRGS				Sn	Sn	04 02 11.9	+1.6
FRGS				Lg	Lg	04 02 11.9	
FRGS				Sg	Sb	04 02 12.3	-2.7
TIR	**Tirane**	2.55	138	⇑P	Pn	04 01 43.9	+2.1
TIR	**Tirane**	2.55	138	Pn	Pn	04 01 43.9	+2.1
TIR				Pg	Pg	04 01 50.2	0.0
	comp=Z,0.8nm,SNR=19						
TIR				Lg	Lg	04 02 23.1	
BOJS	**Bojanci**	2.79	324	*i* Pn	Pb	04 01 49.1	-1.6
BOJS	**Bojanci**	2.79	324	Pn	Pb	04 01 49.1	-1.6
OZLJ	**Ozalj**	2.79	328	*e*Pn	Pb	04 01 49.5	-1.2
OZLJ				Sn	Sb	04 02 23.9	-0.7
OZLJ	**Ozalj**	2.79	328	Pn	Pb	04 01 49.5	-1.2
OZLJ				Sn	Sb	04 02 23.9	-0.7
ZAG	**Zagreb**	2.80	336	*e*Pn	Pb	04 01 48.9	-1.9
ZAG	**Zagreb**	2.80	336	*e*Pn	Pb	04 01 48.6	-2.2
ZAG				*e*Sn	Sb	04 02 22.8	-2.0
ZAG	**Zagreb**	2.80	336	Pg	Pb	04 01 48.6	-2.2
ZAG				Pb	Pb	04 01 48.9	-1.9
ZAG				Lg	Lg	04 02 22.8	
PTJ	**Puntijarka**	2.88	337	*e*Pn	Pn	04 01 49.5	+3.1
PTJ				Sn	Sn	04 02 23.6	+2.9
PTJ	**Puntijarka**	2.88	337	Pn	Pn	04 01 49.5	+3.1
PTJ				Sn	Sn	04 02 23.6	+2.9
KALN	**Kalnik**	2.97	344	*i* Pn	Pn	04 01 50.5	+2.9
KALN				Sn	Sn	04 02 26.1	+3.2
KALN	**Kalnik**	2.97	344	Pn	Pn	04 01 50.5	+2.9
KALN				Sn	Sn	04 02 26.1	+3.2
CRES	**Cresnjev**	2.98	330	⇓*i*Pn	Pb	04 01 51.1	-2.7
CRES				*e*Sn	Sb	04 02 27.3	-2.5
CRES	**Cresnjev**	2.98	330	Pg	Pb	04 01 51.1	-2.7
CRES				Lg	Lg	04 02 27.3	
MORH	**Mrgy, Hungar**	3.03	14	⇑P	Pn	04 01 50.6	+2.2
MORH	**Mrgy, Hungar**	3.03	14	Pn	Pn	04 01 50.5	+2.2
	comp=Z,0.2nm,SNR=5.5						
RIY	**Rijeka**	3.04	314	*e*Pn	Pb	04 01 52.1	-2.7
RIY	**Rijeka**	3.04	314	*e*Pn	Pb	04 01 52.5	-2.3
RIY				*e*Sn	Sb	04 02 28.9	-2.6
RIY	**Rijeka**	3.04	314	Pn	Pb	04 01 52.1	-2.7
RIY				Pg	Pb	04 01 52.5	-2.3
RIY				Sn	Sb	04 02 28.9	-2.6
BARS	**Barje**	3.12	97	*e*Pn	Pb	04 01 53.0	-3.3
BARS				*e*Sn	Sb	04 02 30.2	-3.8
BARS	**Barje**	3.12	97	Pn	Pb	04 01 53.0	-3.3
BARS				Sn	Sb	04 02 30.2	-3.8
OHR	**Ohrid**	3.21	131	*i* Pn	Pg	04 02 01.9	-0.8
AQU	**L'Aquila**	3.23	255	Pn	Pn	04 01 55.3	+4.1
	comp=Z,0.2nm,SNR=5.0						
BEHE	**Becsehely**	3.25	350	*e*Pn	Pb	04 01 55.1	-3.3
BEHE				*e*Sn	Sn	04 02 33.1	+3.5
BEHE	**Becsehely**	3.25	350	Pn	Pb	04 01 55.1	-3.3
BEHE				Pg	Pn	04 01 56.4	+5.1
	comp=Z,1.1nm,SNR=18						
BEHE				Sn	Sn	04 02 33.1	+3.5
BEHE				Lg	Lg	04 02 35.2	
MDVR	**Moldovita**	3.32	62	⇑P	Pn	04 01 53.2	+0.7
MDVR				⇓S	Sn	04 02 31.8	+0.2
MDVR	**Moldovita**	3.32	62	Pn	Pn	04 01 53.2	+0.7
MDVR				Sn	Sn	04 02 31.8	+0.2
PDKS	**Podkum**	3.35	327	*i* Pn	Pn	04 01 56.7	+3.9
PDKS	**Podkum**	3.35	327	Pn	Pn	04 01 56.7	+3.9
CEY	**Cerknica**	3.35	318	*e*Pn	Pn	04 01 56.2	+3.4
CEY				*e*Sn	Sn	04 02 36.4	+4.2
CEY	**Cerknica**	3.35	318	Pn	Pn	04 01 56.2	+3.4
CEY				Sn	Sn	04 02 36.4	+4.2
ZAGS	**Zajecar**	3.41	79	*e*Pn	Pn	04 01 55.7	+2.1
ZAGS				*e*Sn	Sn	04 02 35.2	+1.6
ZAGS	**Zajecar**	3.41	79	Pn	Pn	04 01 55.7	+2.1
ZAGS				Sn	Sn	04 02 35.2	+1.6
LJU	**Ljubljana**	3.53	323	*e*Pn	Pn	04 01 59.5	+4.2
LJU				*e*Sn	Sn	04 02 40.7	+4.0
LJU	**Ljubljana**	3.53	323	Pn	Pn	04 01 59.5	+4.2
LJU				Sn	Sn	04 02 40.7	+4.0
TIH	**Tihany**	3.63	3	Pn	Pn	04 01 59.4	+2.7
	comp=Z,2.2nm,SNR=26						
BOSS	**Bosilegrad**	3.67	101	*e*Pn	Pn	04 01 59.9	+2.7
BOSS				*e*Sn	Sn	04 02 41.1	+1.1
BOSS	**Bosilegrad**	3.67	101	Pn	Pn	04 01 59.9	+2.7
BOSS				Sn	Sn	04 02 41.1	+1.1
TRI	**Trieste**	3.67	313	Pn	Pb	04 02 02.4	-3.2
	comp=Z,0.7nm,SNR=18						
ZAPS	**Zavoj**	3.67	88	*e*Pn	Pn	04 01 59.9	+2.6
ZAPS				*e*Sn	Sn	04 02 41.6	+1.4
ZAPS	**Zavoj**	3.67	88	Pn	Pn	04 01 59.9	+2.6
ZAPS				Sn	Sn	04 02 41.6	+1.4
BZS	**Buzias**	3.71	49	⇓P	Pn	04 01 59.2	+1.5
BZS				⇓S	Sn	04 02 40.8	-0.1
BZS	**Buzias**	3.71	49	Pn	Pn	04 01 59.2	+1.5
BZS				Pg	Pb	04 02 00.7	-5.5
	comp=Z,0.1nm,SNR=6.0						
BZS				Sn	Sn	04 02 40.8	-0.1
BLKB	**Belogradchik**	3.71	83	⇑S	Sn	04 02 42.4	+1.4
BLKB	**Belogradchik**	3.71	83	Sn	Sn	04 02 42.4	+1.4
STIP	**Stip**	3.74	113	*i* Pn	Pn	04 02 02.3	+4.2
PERS	**Pernice**	3.79	333	*i* Pn	Pn	04 02 02.4	+3.5
PERS	**Pernice**	3.79	333	Pn	Pn	04 02 02.4	+3.5
HERR	**Herculane**	3.82	64	⇑P	Pn	04 02 00.8	+1.6
HERR				⇑S	Sn	04 02 45.3	+1.5
HERR	**Herculane**	3.82	64	Pn	Pn	04 02 00.8	+1.6
HERR				Sn	Sn	04 02 45.3	+1.5
SOKA	**Soboth**	3.86	333	*i* Pn	Pn	04 02 03.3	+3.4
	comp=Z,12nm,0.3s,SNR=67						
SOKA				*e*Sn	Sn	04 02 47.1	+2.2
	comp=Z,21nm,0.5s						
SOKA	**Soboth**	3.86	333	Pn	Pn	04 02 03.3	+3.4
	comp=Z,12nm,0.3s,SNR=67						
SOKA				Sn	Sn	04 02 47.1	+2.2
	comp=Z,21nm,0.5s						
OBKA	**Obir**	3.89	327	*e*Pn	Pn	04 02 04.3	+4.0
	comp=Z,3.0nm,0.1s,SNR=15						
OBKA	**Obir**	3.89	327	Pn	Pn	04 02 04.3	+4.0
	comp=Z,3.0nm,0.1s,SNR=15						
OBKA	**Obir**	3.89	327	*e*Pn	Pn	04 02 04.8	+4.4
	SNR=11						
CADS	**Cadrg**	4.04	318	*i* Pn	Pn	04 02 05.7	+3.4
CADS	**Cadrg**	4.04	318	Pn	Pn	04 02 05.7	+3.4
CSKK	**Cskako**	4.11	6	Pn	Pn	04 02 06.1	+2.9
	comp=Z,0.3nm,SNR=39						
EGYH	**Egyhazaskeszo**	4.15	357	Pn	Pn	04 02 04.5	+0.8
	comp=Z,0.3nm,SNR=3.8						
SIRR	**Siria**	4.16	43	⇑P	Pn	04 02 05.3	+1.4
SIRR				⇓S	Sn	04 02 52.2	+0.1
SIRR	**Siria**	4.16	43	Pn	Pn	04 02 05.3	+1.4
SIRR				Sn	Sn	04 02 52.2	+0.1
VAY	**Valandovo**	4.17	116	*i* Pn	Pn	04 02 08.6	+4.5
VTS	**Vitosha**	4.19	97	⇓P	Pn	04 02 07.0	+2.6
VTS				⇑S	Sn	04 02 55.1	+2.1
VTS	**Vitosha**	4.19	97	Pg	Pn	04 02 07.0	+2.6
VTS				Pn	Pb	04 02 07.4	-7.1
	comp=Z,0.1nm,SNR=4.8						
VTS				Sn	Sn	04 02 55.1	+2.1
ARSA	**Arzberg**	4.24	340	*i* Pn	Pn	04 02 08.5	+3.4
	comp=Z,26nm,0.3s,SNR=77						
ARSA				*e*Sn	Sn	04 02 56.1	+2.0
	comp=Z,8.9nm,0.5s						
ARSA	**Arzberg**	4.24	340	Pg	Pn	04 02 08.5	+3.4
	comp=Z,26nm,0.3s,SNR=77						
ARSA				Pn	Pb	04 02 08.6	-6.7
	comp=Z,0.2nm,SNR=6.2						
ARSA				Sn	Sn	04 02 55.2	+1.2
ARSA				Lg	Lg	04 02 56.1	
	comp=Z,8.9nm,0.5s						
ARSA	**Arzberg**	4.24	340	*e*Pn	Pn	04 02 08.4	+3.4
	SNR=46						
GZR	**Gura Zlata**	4.27	59	⇓P	Pn	04 02 07.1	+1.6
GZR				⇑S	Sn	04 02 55.1	+0.1
GZR	**Gura Zlata**	4.27	59	Pn	Pn	04 02 07.1	+1.6
GZR				Pg	Pb	04 02 08.8	-7.1
	comp=Z,0.1nm,SNR=5.7						
GZR				Sn	Sn	04 02 54.7	-0.3
GZR				Lg	Lg	04 02 55.1	
SRE	**Strehaia**	4.27	69	⇑P	Pn	04 02 06.9	+1.4
SRE	**Strehaia**	4.27	69	Pn	Pn	04 02 06.9	+1.4
BUD	**Budapest**	4.33	13	Pn	Pn	04 02 08.5	+2.4
	comp=Z,0.2nm,SNR=6.4						
MYKA	**Terra Mystica**	4.38	321	*i* Pn	Pn	04 02 10.8	+3.9
	comp=Z,0.7nm,0.1s						
MYKA				*e*Sn	Sn	04 03 02.1	+4.6
	comp=Z,5.0nm,0.3s						
MYKA	**Terra Mystica**	4.38	321	Pn	Pn	04 02 10.8	+3.9
	comp=Z,0.7nm,0.1s						
MYKA				Sn	Sn	04 03 02.1	+4.6
	comp=Z,5.0nm,0.3s						
SRO2	**Moca**	4.52	7	*e*PN	Pn	04 02 11.0	+2.1
SRO2				*e*SN	Sn	04 03 06.2	+5.2
SRO2	**Moca**	4.52	7	Pn	Pn	04 02 11.0	+2.1
SRO2				Sn	Sn	04 03 06.2	+5.2
SRO	**Srobarova**	4.56	6	*e*PN	Pn	04 02 12.8	+3.3
SRO				*e*SN	Sb	04 03 09.1	-6.4
SRO	**Srobarova**	4.56	6	Pn	Pn	04 02 12.8	+3.3
SRO				Sn	Sb	04 03 09.1	-6.4
DEV	**Deva**	4.60	54	⇑P	Pn	04 02 10.3	+0.4
DEV				⇓S	Sn	04 03 03.6	+0.7
DEV	**Deva**	4.60	54	Pn	Pn	04 02 10.3	+0.4
DEV				Sn	Sn	04 03 03.6	+0.7
CONA	**Conrad Observa**	4.81	346	*i* Pn	Pn	04 02 16.5	+3.5
	comp=Z,3.7nm,0.3s,SNR=24						

CONA				*e*Sn	Sn	04 03 10.3	+2.0
	comp=Z,8.7nm,0.3s						
CONA	Conrad Observa	4.81	346	Pn	Pn	04 02 16.5	+3.5
	comp=Z,3.7nm,0.3s,SNR=24						
CONA				Sn	Sn	04 03 10.3	+2.0
	comp=Z,8.7nm,0.3s						
KBA	Koelnbreinsper	4.85	323	*e*Sn	Sn	04 03 14.1	+4.7
	comp=Z,19nm,0.5s						
KBA	Koelnbreinsper	4.85	323	Sn	Sn	04 03 14.1	+4.7
	comp=Z,19nm,0.5s						
KBA	Koelnbreinsper	4.85	323	*e*Sn	Sn	04 03 14.0	+4.7
	SNR=3.2						
PSZ	Piszkesteto	4.91	18	⇓P	Pn	04 02 16.2	+1.8
PSZ	Piszkesteto	4.91	18	Pn	Pn	04 02 16.2	+1.8
PSZ				Pg	Pb	04 02 16.5	-10
	comp=Z,0.1nm,SNR=3.4						
ZST	Bratislava	4.93	356	*e*PN	Pn	04 02 17.8	+3.3
ZST				*e*SN	Sn	04 03 11.8	+0.6
ZST	Bratislava	4.93	356	Pn	Pn	04 02 17.8	+3.3
ZST				Sn	Sn	04 03 11.8	+0.6
ABTA	Abfaltersbach	5.01	316	*i* Pn	Pn	04 02 18.8	+3.1
	comp=Z,1.0nm,0.1s,SNR=10						
ABTA	Abfaltersbach	5.01	316	Pn	Pn	04 02 18.8	+3.1
	comp=Z,1.0nm,0.1s,SNR=10						
DRGR		5.04	44	⇑P	Pn	04 02 17.9	+1.7
DRGR				⇑S	Sn	04 03 14.5	+0.5
DRGR		5.04	44	Pn	Pn	04 02 17.9	+1.7
DRGR				Sn	Sn	04 03 14.5	+0.5
MODS	Modra-Piesok	5.10	358	*e*PN	Pn	04 02 19.0	+2.1
MODS				*e*SN	Sn	04 03 16.4	+1.0
MODS	Modra-Piesok	5.10	358	Pn	Pn	04 02 19.0	+2.1
MODS				Sn	Sn	04 03 16.4	+1.0
MOA	Molln	5.14	334	*i* Pn	Pn	04 02 21.7	+4.3
	comp=Z,9.3nm,0.3s,SNR=46						
MOA				*e*Sn	Sn	04 03 19.4	+3.2
	comp=Z,36nm,0.6s						
MOA	Molln	5.14	334	Pn	Pn	04 02 21.7	+4.3
	comp=Z,9.3nm,0.3s,SNR=46						
MOA				Sn	Sn	04 03 19.4	+3.2
	comp=Z,36nm,0.6s						
MOA	Molln	5.14	334	*e*Pn	Pn	04 02 21.8	+4.4
	SNR=33						
MOA				*e*Sn	Sn	04 03 19.5	+3.2
	SNR=6.8						
SMOL	Smolenice	5.24	359	*e*PN	Pn	04 02 21.8	+3.0
SMOL	Smolenice	5.24	359	Pn	Pn	04 02 21.8	+3.0
VYHS	Vyhne	5.29	9	*e*PN	Pn	04 02 22.1	+2.7
VYHS				*e*SN	Sn	04 03 26.3	+6.3
VYHS	Vyhne	5.29	9	Pn	Pn	04 02 21.9	+2.5
	comp=Z,2.8nm,0.6s,SNR=3.7						
VYHS				Pg	Pb	04 02 22.1	-11
VYHS				Sn	Sn	04 03 26.3	+6.3
ARR	Arges	5.46	65	⇓P	Pn	04 02 23.4	+1.6
ARR				⇑S	Sn	04 03 23.7	-0.6
ARR	Arges	5.46	65	Pn	Pn	04 02 23.4	+1.6
ARR				Sn	Sn	04 03 23.7	-0.6
CJR	Cluj-Napoca	5.47	49	⇑P	Pn	04 02 22.3	+0.4
CJR				⇑S	Sn	04 03 24.1	-0.3
CJR	Cluj-Napoca	5.47	49	Pn	Pn	04 02 22.3	+0.4
CJR				Sn	Sn	04 03 24.1	-0.3
KECS	Kecovo	5.58	20	*e*PN	Pn	04 02 25.8	+2.3
KECS	Kecovo	5.58	20	Pn	Pn	04 02 25.8	+2.3
JAVC	Velka Javorina	5.58	0	*e*PN	Pn	04 02 27.5	+4.0
JAVC	Velka Javorina	5.58	0	Pn	Pn	04 02 27.5	+4.0
RJOB	Jochberg	5.60	325	*e*Pn	Pn	04 02 28.2	+4.5
	SNR=14						
VOIR		5.76	65	⇑P	Pn	04 02 27.8	+1.9
VOIR				⇑S	Sn	04 03 32.8	+1.2
VOIR		5.76	65	Pn	Pn	04 02 27.8	+1.9
VOIR				Sn	Sn	04 03 32.8	+1.2
WTTA	Wattenberg	5.80	316	*i* Pn	Pn	04 02 30.1	+3.5
	comp=Z,1.7nm,0.2s,SNR=14						
WTTA				*e*Sn	Sn	04 03 36.4	+3.7
	comp=Z,12nm,0.3s						
WTTA	Wattenberg	5.80	316	Pn	Pn	04 02 30.1	+3.5
	comp=Z,1.7nm,0.2s,SNR=14						
WTTA				Sn	Sn	04 03 36.4	+3.7
	comp=Z,12nm,0.3s						
WTTA	Wattenberg	5.80	316	*e*Pn	Pn	04 02 31.6	+5.0
	SNR=11						
WTTA				*e*Sn	Sn	04 03 36.8	+4.0
	SNR=2.5						
KRUC	Moravsky	5.85	352	*e*PN	Pn	04 02 30.3	+3.2
KRUC				*e*SN	Sn	04 03 33.8	+0.1
KRUC	Moravsky	5.85	352	Pn	Pn	04 02 30.3	+3.2
KRUC				Sn	Sn	04 03 33.8	+0.1
WATA	Walderalm	5.88	316	*i* Pn	Pn	04 02 31.5	+3.9
	comp=Z,1.6nm,0.2s,SNR=19						
WATA				Sn	Sn	04 03 38.1	+3.4
	comp=Z,12nm,0.3s						
WATA	Walderalm	5.88	316	Pn	Pn	04 02 31.5	+3.9
	comp=Z,1.6nm,0.2s,SNR=19						
WATA				Sn	Sn	04 03 38.1	+3.4
	comp=Z,12nm,0.3s						
SQTA	Sankt Quirin	5.99	313	*i* Pn	Pn	04 02 33.4	+4.2
	comp=Z,1.2nm,0.2s,SNR=11						
SQTA				*e*Sn	Sn	04 03 39.8	+2.4
	comp=Z,8.5nm,0.3s						
SQTA	Sankt Quirin	5.99	313	Pn	Pn	04 02 33.4	+4.2
	comp=Z,1.2nm,0.2s,SNR=11						
SQTA				Sn	Sn	04 03 39.8	+2.4
	comp=Z,8.5nm,0.3s						
CKRC	Cesky Krumlov	6.00	339	*e*PN	Pn	04 02 33.2	+4.0
CKRC				*e*SN	Sn	04 03 37.8	+0.3
CKRC	Cesky Krumlov	6.00	339	Pn	Pn	04 02 33.2	+4.0
CKRC				Sn	Sn	04 03 37.8	+0.3
LANS	Liptovska Anna	6.02	12	*e*PN	Pn	04 02 33.2	+3.8
LANS	Liptovska Anna	6.02	12	Pn	Pn	04 02 33.2	+3.8
VRAC	Vranov	6.08	354	⇓P	Pn	04 02 32.1	+1.9
VRAC				⇓S	Sn	04 03 40.6	+1.3
VRAC	Vranov	6.08	354	*e*PN	Pn	04 02 33.4	+3.2
VRAC				*e*SN	Sn	04 03 39.7	+0.4
VRAC	Vranov	6.08	354	Pn	Pn	04 02 32.1	+1.9
VRAC				Pg	Pb	04 02 33.4	-13
VRAC				Sn	Sn	04 03 39.7	+0.4
VRAC				Lg	Lg	04 03 40.6	
MOTA	Moosalm	6.13	314	*i* Pn	Pn	04 02 35.0	+3.9
	comp=Z,3.2nm,0.2s,SNR=15						
MOTA				*e*Sn	Sn	04 03 43.0	+2.1
	comp=Z,7.5nm,0.3s						
MOTA	Moosalm	6.13	314	Pn	Pn	04 02 35.0	+3.9
	comp=Z,3.2nm,0.2s,SNR=15						
MOTA				Sn	Sn	04 03 43.0	+2.1
	comp=Z,7.5nm,0.3s						
FETA	Feichten	6.14	310	*e*Pn	Pn	04 02 36.6	+5.4
	comp=Z,1.2nm,0.2s						
FETA	Feichten	6.14	310	Pn	Pn	04 02 36.6	+5.4
	comp=Z,1.2nm,0.2s						
GEC2	GERESS Array S	6.20	335	*e*Pn	Pn	04 02 36.2	+4.3
	SNR=6.0						
GEC2				*e*Sn	Sn	04 03 44.5	+2.1
	SNR=7.0						
CRVS	Cervenica-Dubn	6.23	24	*e*PN	Pn	04 02 35.6	+3.2
CRVS	Cervenica-Dubn	6.23	24	Pn	Pn	04 02 35.6	+3.2
PGF	Pioggiola	6.36	266	*e*Pn	Pn	04 02 35.9	+1.7
PGF				*e*Sn	Sn	04 03 43.2	-3.3
	comp=Z,1.1nm,0.4s						
PGF	Pioggiola	6.36	266	Pn	Pn	04 02 35.9	+1.7
PGF				Sn	Sn	04 03 43.2	-3.3
	comp=Z,0.6nm,0.4s						
MLR	Muntele Rosu	6.37	67	⇓P	Pn	04 02 36.3	+1.8
MLR				⇓S	Sn	04 03 48.1	+1.2
MLR	Muntele Rosu	6.37	67	Pn	Pn	04 02 36.3	+1.8
MLR				Sn	Sn	04 03 48.1	+1.2
RETA	Reutte	6.40	314	*i* Pn	Pn	04 02 38.8	+4.0
	comp=Z,1.2nm,0.2s,SNR=8.6						
RETA				*e*Sn	Sn	04 03 50.2	+2.8
	comp=Z,9.0nm,0.3s						
RETA	Reutte	6.40	314	Pn	Pn	04 02 38.8	+4.0
	comp=Z,1.2nm,0.2s,SNR=8.6						
RETA				Sn	Sn	04 03 50.2	+2.8
	comp=Z,9.0nm,0.3s						
KHC	Kasperske Hory	6.49	336	*e*PN	Pn	04 02 39.4	+3.5
KHC				*e*SN	Sn	04 03 50.8	+1.3
KHC	Kasperske Hory	6.49	336	Pn	Pn	04 02 39.4	+3.5
KHC				Sn	Sn	04 03 50.8	+1.3
MORC	Moravsky Berou	6.50	360	⇑P	Pn	04 02 37.8	+1.7
MORC	Moravsky Berou	6.50	360	*e*PN	Pn	04 02 39.6	+3.5
MORC				*e*SN	Sn	04 03 50.7	+0.8
MORC	Moravsky Berou	6.50	360	Pn	Pn	04 02 37.8	+1.7
MORC				Pg	Pb	04 02 39.6	-14
MORC				Sn	Sn	04 03 50.7	+0.8
KOLS	Kolonicke sedl	6.52	28	*e*PN	Pn	04 02 40.5	+4.1
KOLS				*e*SN	Sn	04 03 48.5	-1.8
KOLS	Kolonicke sedl	6.52	28	Pn	Pn	04 02 40.5	+4.1
KOLS				Sn	Sn	04 03 48.5	-1.8
WET	Wettzell	6.72	332	*e*Pn	Pn	04 02 43.4	+4.2
	SNR=4.4						
WET				*e*Sn	Sn	04 03 56.6	+1.4
	SNR=3.4						
DAVA	Damuels	6.76	309	*i* Pn	Pn	04 02 44.0	+4.2
	comp=Z,1.2nm,0.2s						
DAVA				*e*Sn	Sn	04 03 59.3	+2.8
	comp=Z,3.6nm,0.3s						
DAVA	Damuels	6.76	309	Pn	Pn	04 02 44.0	+4.2
	comp=Z,1.2nm,0.2s						
DAVA				Sn	Sn	04 03 59.3	+2.8
	comp=Z,3.6nm,0.3s						
DAVA	Damuels	6.76	309	*e*Pn	Pn	04 02 46.0	+6.2
	SNR=3.9						
KRLC	Kraliky	6.83	356	*e*PN	Pn	04 02 45.2	+4.6
KRLC	Kraliky	6.83	356	Pn	Pn	04 02 45.2	+4.6
BURAR	Bucovina Array	6.89	48	⇓P	Pn	04 02 43.2	+1.7
BURAR	Bucovina Array	6.89	48	Pn	Pn	04 02 43.2	+1.7
PRU	Pruhonice	7.04	344	*e*SN	Sn	04 04 02.9	0.0
PRU	Pruhonice	7.04	344	Sn	Sn	04 04 02.9	0.0
DPC	Dobruska-Polom	7.13	353	*e*PN	Pn	04 02 48.8	+4.0
DPC				*e*SN	Sn	04 04 06.1	+0.8
DPC	Dobruska-Polom	7.13	353	Pn	Pn	04 02 48.8	+4.0
DPC				Sn	Sn	04 04 06.1	+0.8
UPC	Upice	7.32	352	*e*PN	Pn	04 02 51.0	+3.8
UPC	Upice	7.32	352	Pn	Pn	04 02 51.0	+3.8
OSTC	Ostas	7.34	353	*e*PN	Pn	04 02 51.5	+3.8
OSTC				*e*SN	Sn	04 04 11.3	+0.7
OSTC	Ostas	7.34	353	Pn	Pn	04 02 51.5	+3.8
OSTC				Sn	Sn	04 04 11.3	+0.7
CHVC	Chvalec	7.39	352	*e*PN	Pn	04 02 52.6	+4.3
CHVC	Chvalec	7.39	352	Pn	Pn	04 02 52.6	+4.3
SBF	Sospel	7.41	278	*e*Pn	Pn	04 02 49.8	+1.2
SBF				*e*Sn	Sn	04 04 08.3	-4.0
	comp=Z,4.5nm,0.3s						
SBF	Sospel	7.41	278	Pn	Pn	04 02 49.8	+1.2
SBF				Sn	Sn	04 04 08.3	-4.0
	comp=Z,2.2nm,0.3s						
ROTZ	Rotzenmuhle	7.48	332	*e*Pn	Pn	04 02 52.6	+3.1
	SNR=3.6						
MANZ	Manzenberg	7.70	333	*e*Pn	Pn	04 02 56.1	+3.5
	SNR=3.1						
MBDF	Montbardon	7.95	284	*e*Pn	Pn	04 02 56.2	+0.2
MBDF				*e*Sn	Sn	04 04 20.4	-5.1
	comp=Z,2.8nm,0.3s						
MBDF	Montbardon	7.95	284	Pn	Pn	04 02 56.2	+0.2
MBDF				Sn	Sn	04 04 20.4	-5.1
	comp=Z,1.4nm,0.3s						
TANN	Tannenbergstha	7.96	336	*e*Pn	Pn	04 03 00.9	+4.8
	SNR=2.5						
FRF	La Foret Royal	7.98	276	*e*Pn	Pn	04 02 57.9	+1.5
FRF				*e*Sn	Sn	04 04 20.3	-6.0
	comp=Z,1.2nm,0.3s						
FRF	La Foret Royal	7.98	276	Pn	Pn	04 02 57.9	+1.5
FRF				Sn	Sn	04 04 20.3	-6.0
	comp=Z,0.6nm,0.3s						
LPG	La Plagne	8.09	290	*e*Pn	Pn	04 02 58.8	+0.7
LPG				*e*Sn	Sn	04 04 23.5	-5.7
	comp=Z,5.4nm,0.4s						
LPG	La Plagne	8.09	290	Pn	Pn	04 02 58.8	+0.7
LPG				Sn	Sn	04 04 23.5	-5.7
	comp=Z,2.7nm,0.4s						
LMR	La Mourre	8.09	274	*e*Pn	Pn	04 02 59.0	+1.1
LMR				*e*Sn	Sn	04 04 24.6	-4.4
	comp=Z,0.9nm,0.3s						
LMR	La Mourre	8.09	274	Pn	Pn	04 02 59.0	+1.1
LMR				Sn	Sn	04 04 24.6	-4.4
	comp=Z,0.5nm,0.3s						
LPL	La Plagne	8.10	290	*e*Pn	Pn	04 02 58.5	+0.3
LPL				*e*Sn	Sn	04 04 24.4	-5.1
	comp=Z,7.0nm,0.4s						
LPL	La Plagne	8.10	290	Pn	Pn	04 02 58.5	+0.3
LPL				Sn	Sn	04 04 24.4	-5.1
	comp=Z,3.5nm,0.4s						
ORIF	Oris-en-Rattie	8.60	285	*e*Pn	Pn	04 03 05.0	+0.1
ORIF				*e*Sn	Sn	04 04 36.0	-5.5
	comp=Z,5.7nm,0.6s						
ORIF	Oris-en-Rattie	8.60	285	Pn	Pn	04 03 05.0	+0.1
ORIF				Sn	Sn	04 04 36.0	-5.5
	comp=Z,2.9nm,0.6s						
CLL	Collm	8.62	340	*e*Sn	Sn	04 04 36.0	-5.8
CLL				*e*		04 04 56.0	
CLL				*e*Sb		04 05 10.0	
CLL				*e*Sg		04 05 35.0	
CLL	Collm	8.62	340	Sn	Sn	04 04 36.0	-5.8
CLL				Lg	Lg	04 05 10.0	
CLL				Sg		04 05 35.0	
SMRF	Simiane la Rot	8.76	279	*e*Pn	Pn	04 03 05.9	-1.1
SMRF				*e*Sn	Sn	04 04 40.2	-5.1
	comp=Z,0.5nm,0.3s						
SMRF	Simiane la Rot	8.76	279	Pn	Pn	04 03 05.9	-1.1
SMRF				Sn	Sn	04 04 40.2	-5.1
	comp=Z,0.2nm,0.3s						
HINF	Hinteralfeld	8.80	305	*e*Pn	Pn	04 03 08.9	+1.2
HINF	Hinteralfeld	8.80	305	Pn	Pn	04 03 08.9	+1.2
HINF				Pg		04 03 46.8	
HINF				Sn	Sn	04 04 42.1	-4.3
	comp=Z,1.3nm,0.3s						
CABF	La Chapelle	8.82	296	*e*Pn	Pn	04 03 09.1	+1.1
CABF				*e*Sn	Sn	04 04 41.9	-5.1
	comp=Z,1.3nm,0.5s						
CABF	La Chapelle	8.82	296	Pn	Pn	04 03 09.1	+1.1
CABF				Sn	Sn	04 04 41.9	-5.1
	comp=Z,0.7nm,0.5s						
CDF	Champ du Feu	8.85	309	*e*Pn	Pn	04 03 10.5	+2.2
CDF				*e*Sn	Sn	04 04 45.4	-2.2
	comp=Z,1.4nm,0.4s						
CDF				*e*Sg		04 05 40.2	
	comp=Z,1.0nm,0.2s						
CDF	Champ du Feu	8.85	309	Pn	Pn	04 03 10.5	+2.2
CDF				Sn	Sn	04 04 45.4	-2.2
	comp=Z,0.7nm,0.4s						
CDF				Lg	Lg	04 05 40.2	
	comp=Z,0.5nm,0.2s						
HAU	Haudompre	9.19	305	*e*Pn	Pn	04 03 15.3	+2.3
HAU				*e*Sn	Sn	04 04 50.9	-5.1
	comp=Z,3.7nm,0.5s						
HAU	Haudompre	9.19	305	Pn	Pn	04 03 15.3	+2.3
HAU				Sn	Sn	04 04 50.9	-5.1
	comp=Z,1.9nm,0.5s						
VIVF	Saint-Julien-l	9.44	284	*e*Pn	Pn	04 03 16.6	+0.1
VIVF				*e*Sn	Sn	04 04 56.2	-6.0
	comp=Z,1.1nm,0.4s						
VIVF	Saint-Julien-l	9.44	284	Pn	Pn	04 03 16.6	+0.1
VIVF				Sn	Sn	04 04 56.2	-6.0
	comp=Z,0.6nm,0.4s						
LASF	Ste Croix	9.99	279	*e*Pn	Pn	04 03 24.6	+0.6
LASF				*e*Sn	Sn	04 05 09.3	-6.4
	comp=Z,0.4nm,0.3s						
LASF	Ste Croix	9.99	279	Pn	Pn	04 03 24.6	+0.6
LASF				Sn	Sn	04 05 09.3	-6.4
	comp=Z,0.2nm,0.3s						
SFTF	Sexfontaines	10.07	304	*e*Pn	Pn	04 03 27.4	+2.4
SFTF				*e*Sn	Sn	04 05 12.5	-5.0
	comp=Z,1.4nm,0.4s						
SFTF	Sexfontaines	10.07	304	Pn	Pn	04 03 27.4	+2.4
SFTF				Sn	Sn	04 05 12.5	-5.0
	comp=Z,0.7nm,0.4s						
SAVF	Savonnieres en	10.20	306	*e*Pn	Pn	04 03 27.3	+0.6
SAVF	Savonnieres en	10.20	306	Pn	Pn	04 03 27.3	+0.6
SMF	Signal de Mont	10.32	294	*e*Pn	Pn	04 03 28.4	0.0
SMF				*e*Sn	Sn	04 05 18.8	-4.8
	comp=Z,3.9nm,0.5s						
SMF	Signal de Mont	10.32	294	Pn	Pn	04 03 28.4	0.0
SMF				Sn	Sn	04 05 18.8	-4.8
	comp=Z,1.9nm,0.5s						
LOR	Lormes	10.48	297	*e*Pn	Pn	04 03 31.0	+0.4
	baz=114						
LOR				*e*Sn	Sn	04 05 22.5	-5.0
	comp=Z,3.0nm,0.4s						
LOR	Lormes	10.48	297	Pn	Pn	04 03 31.0	+0.4
LOR				Sn	Sn	04 05 22.5	-5.0
	comp=Z,1.5nm,0.4s						
SSF	Saint Saulge	10.65	296	*e*Pn	Pn	04 03 32.5	-0.4
SSF				*e*Sn	Sn	04 05 25.4	-6.3
	comp=Z,2.1nm,0.5s						
SSF	Saint Saulge	10.65	296	Pn	Pn	04 03 32.5	-0.4
SSF				Sn	Sn	04 05 25.4	-6.3
	comp=Z,1.1nm,0.5s						
AVF	Avril sur Loir	10.68	294	*e*Pn	Pn	04 03 33.4	+0.1
AVF				*e*Sn	Sn	04 05 24.9	-7.5
	comp=Z,0.5nm,0.3s						
AVF	Avril sur Loir	10.68	294	Pn	Pn	04 03 33.4	+0.1
AVF				Sn	Sn	04 05 24.9	-7.5
	comp=Z,0.2nm,0.3s						
BGF	Bois d'Agland	10.97	292	*e*Pn	Pn	04 03 37.5	+0.2
BGF				*e*Sn	Sn	04 05 33.0	-6.5
	comp=Z,3.2nm,0.4s						
BGF	Bois d'Agland	10.97	292	Pn	Pn	04 03 37.5	+0.2
BGF				Sn	Sn	04 05 33.0	-6.5
	comp=Z,1.6nm,0.4s						
TCF	Toulx Ste Croi	11.35	291	*e*Pn	Pn	04 03 42.4	-0.1
TCF				*e*Sn	Sn	04 05 41.8	-7.1
	comp=Z,0.2nm,0.2s						
TCF	Toulx Ste Croi	11.35	291	Pn	Pn	04 03 42.4	-0.1
TCF				Sn	Sn	04 05 41.8	-7.1
	comp=Z,0.1nm,0.2s						
RJF	Les Rejaudoux	11.71	286	*e*Pn	Pn	04 03 48.3	+0.9
RJF				*e*Sn	Sn	04 05 50.3	-7.4
	comp=Z,0.3nm,0.2s						
RJF	Les Rejaudoux	11.71	286	Pn	Pn	04 03 48.3	+0.9
RJF				Sn	Sn	04 05 50.3	-7.4
	comp=Z,0.1nm,0.2s						
MFF	Saint Martin d	13.01	291	*e*Pn	Pn	04 04 05.3	+0.2
MFF	Saint Martin d	13.01	291	Pn	Pn	04 04 05.3	+0.2

IDC 15 04:05:51.1±6.8**, 20°.70S**×**176°.85W, h480^{km}**±38^{km}**,**
mb3.3/3**, mb1 3.5**/5**, mb1mx3.1**/33**, mbtmp4.2**/5**, Error ellipse: s-maj=142.7km s-min=23.0km az=70.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	5.65	301	P	P	04 07 22.9	-0.5
	6.3nm,0.3s,baz=133,slow=6.0,SNR=25						
URZ	Urewera	18.27	195	P	P	04 09 34.9	+0.1
	1.0nm,0.3s,baz=206,slow=2.3,SNR=7.6						
URZ				S	S	04 12 37.9	+0.3
	0.2nm,0.3s,baz=159,slow=14,SNR=2.6						
STKA	Stephens Creek	38.68	245	P	P	04 12 33.3	+0.6
	2.5nm,0.8s,baz=94,slow=13,SNR=3.6						
ASAR	Alice Springs	45.52	257	P	P	04 13 27.2	+0.2
	3.8nm,0.5s,baz=98,slow=7.8,SNR=78						
WRA	Warramunga Arr	45.64	262	P	P	04 13 27.4	-0.6
	1.0nm,0.3s,baz=94,slow=6.5,SNR=38						

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*IDC **15** 04:12:22.6±0.8, 49°.74N×123°.78W, h0^{km}, mb3.1/1, mb1 3.4/7, mb1mx3.2/39, mbtmp3.0/7, ML3.3/5, MS3.0/3, Ms1 3.0/3, ms1mx2.6/24, Error ellipse: s-maj=21.4km s-min=6.8km az=38.0*

*ANF **15** 04:12:22.8±1.1, 49°.67N×123°.49W, h2^{km}±4^{km}, ML4.0/10, Error ellipse: s-maj=9.2km s-min=6.7km az=73.0*

*PGC **15** 04:12:22.5±0.1, 49°.73N×123°.59W, h3^{km}, ML3.4/35, ML3.4, 30km west of Squamish, Bc Vancouver Island, Canada Region*

*NEIC **15** 04:12:23.8±1.7, 49°.60N±0°.05×123°.55W±0°.08, h2^{km}±8^{km}, Error ellipse: s-maj=8.1km s-min=7.2km az=122.0*

ISC 15 04:12:20.6±0.9**, 49°.80N**±0°.02×**123°.69W**±0°.01**, h13^{km}**±6^{km}**,**
n132, σ**2^{s}.16**/194**, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHB	Sechelt	0.23	210	P	Pg	04 12 27.0	+1.3
SHB				S	Sg	04 12 30.6	+1.4
SHB	Sechelt	0.23	210		Pg	04 12 27.0	+1.3
SHB					Sg	04 12 30.5	+1.4
WPB	Watts Point	0.34	114	P	Pg	04 12 27.5	-0.1
WPB				S	Sg	04 12 30.8	-1.5
WPB	Watts Point	0.34	114		Pg	04 12 27.5	-0.1
BIB	Bowen Island	0.47	147	P	Pg	04 12 29.2	-0.6
BIB				S	Sg	04 12 34.0	-2.0
BIB	Bowen Island	0.47	147		Pg	04 12 29.2	-0.6
TXB	Texada	0.49	258	P	Pn	04 12 32.4	-1.0
TXB				S	Sb	04 12 39.7	+1.4
TXB	Texada	0.49	258		Pn	04 12 32.4	-1.0
WSLR	Whistler	0.60	56	P	Pb	04 12 33.2	+0.3
WSLR				S	Sg	04 12 40.8	+0.6
NLLB	Nanaimo Lost L	0.60	199	P	Pb	04 12 32.4	-0.6
NLLB				S	Sb	04 12 40.0	-1.4
NLLB	Nanaimo Lost L	0.60	199		Pb	04 12 32.4	-0.6
NLLB					Sb	04 12 40.0	-1.4
GHNB	Nanoose	0.61	216	P	Pn	04 12 33.2	-1.7
GHNB				S	Sb	04 12 41.3	-0.1
GOBB	Galiano Island	0.86	172	P	Pb	04 12 36.6	-0.8
GOBB				S	Sg	04 12 47.1	-1.3
B927	Port Alberni	0.93	232	P	Pn	04 12 39.0	-0.3
B927				S	Sn	04 12 51.4	-1.1
B926	Mesachie Lake	1.02	196	P	Pb	04 12 39.3	-0.8
B926				S	Sg	04 12 52.2	-1.4
MGB	Mount Grey	1.03	220	P	Pn	04 12 40.4	-0.5
MGB				S	Sn	04 12 54.2	-1.0
SNB	Saturna Island	1.08	161	P	Pg	04 12 40.3	-1.2
CBB	Campbell River	1.10	283	P	Pn	04 12 42.8	+1.0
CBB				S	Sn	04 12 58.2	+1.4
PA01	PA01 North	1.16	172	P	Pb	04 12 41.1	-1.3
PA01				S	Sb	04 12 55.2	-2.1
PA02	PA02 Ocean	1.16	172	P	Pb	04 12 41.2	-1.3
PA02				S	Sb	04 12 55.4	-2.0
B010	North Saanich	1.16	172	P	Pb	04 12 41.1	-1.4
B010				S	Sb	04 12 55.3	-2.1
B011	North Saanich	1.16	172	P	Pb	04 12 41.2	-1.3
B011				S	Sb	04 12 55.1	-2.3
PGC	Sidney	1.16	172	P	Pb	04 12 41.2	-1.3
PGC				S	Sb	04 12 55.3	-2.1
PGC	Sidney	1.16	172		Pb	04 12 41.2	-1.3
PGC					Sb	04 12 55.0	-2.4
PGC				IAML		04 12 55.8	
	comp=E,1µm,0.8s						
PGC				IAML		04 12 57.1	
	comp=N,2µm,0.8s						
B009	North Saanich	1.16	172	P	Pb	04 12 41.2	-1.3
B009				S	Sb	04 12 55.2	-2.3
PA12	PA12 Sannich	1.16	172	P	Pb	04 12 41.2	-1.3
PA12				S	Sb	04 12 55.2	-2.3
BTB	Buttle Lake	1.23	255	P	Pg	04 12 45.0	+0.6
BTB				S	Sn	04 13 01.9	+1.7
MCW	Mount Constitu	1.25	153	P	Pn	04 12 43.1	-0.8
A04D	Lummi Island	1.26	149	P	Pn	04 12 43.0	-0.8
	baz=331,SNR=197						
A04D				S	Sb	04 12 58.8	-1.4
	baz=331						
A05A	Maple Falls	1.32	127	P	Pn	04 12 43.7	-1.0
A05A				S	Sb	04 12 60.0	-2.1
BFSB	Bamfield	1.35	225	S	Sg	04 13 03.5	-0.6
VGZ	Gonzales	1.41	170	P	Pn	04 12 45.1	-0.8
VGZ				S	Sn	04 13 02.1	-2.2
LLLB	Lillooet	1.42	54	P	Pg	04 12 47.6	-0.3
LLLB				S	Sb	04 13 05.7	+0.7
OZB	Mount Ozzard	1.44	235	P	Pg	04 12 47.3	-1.0
OZB				S	Sg	04 13 06.6	-0.5
B012	Ucluelet	1.49	235	P	Pg	04 12 48.4	-0.9
B012				S	Sg	04 13 06.9	-1.7
GDR	Gold River	1.52	270	P	Pg	04 12 49.6	-0.1
GDR				S	Sg	04 13 10.1	+0.7
HOPB	Hope	1.54	105	P	Pn	04 12 47.9	+0.2
HOPB				S	Sn	04 13 06.5	-1.0
MBW	Mount Baker	1.55	130	P	Pn	04 12 47.7	-0.4
MBW				S	Sn	04 13 06.7	-1.4
TOFB	Tofino	1.58	247	P	Pg	04 12 50.0	-0.9
TOFB				S	Sg	04 13 10.8	-0.7
OCP	Olym-Cheeka Pk	1.62	203	P	Pb	04 12 49.8	-0.6
OCP				S	Sg	04 13 10.8	-1.9
NCRB	Newcastle Ridg	1.64	293	P	Pg	04 12 51.5	-0.6
NCRB				S	Sg	04 13 14.3	+1.0
STW	Striped Peak	1.65	179	P	Pn	04 12 49.0	-0.2
STW				S	Sn	04 13 09.7	-0.6
CMW	Cultus Mountai	1.72	142	P	Pn	04 12 50.7	+0.3
CMW				S	Sn	04 13 12.4	+0.1
OBC	Olympics--Boni	1.78	188	P	Pb	04 12 51.5	-1.6
BLN	Blyn Mountain	1.85	165	P	Pn	04 12 52.2	+0.1
B05A	Bryant	1.86	145	P	Pn	04 12 52.6	+0.4
	baz=327,SNR=212						
B05A				S	Sn	04 13 15.4	-0.1
	baz=327						
WOSB	Woss	1.89	282	P	Pg	04 12 55.1	-1.8
WOSB				S	Sg	04 13 20.8	-0.7
ETB	Estevan Point	1.90	258	P	Pg	04 12 56.4	-0.6
B06A	Marblemount	1.94	131	P	Pn	04 12 54.0	+0.9
B06A				S	Sn	04 13 17.6	+0.3
B06A	Marblemount	1.94	131		Pn	04 12 53.9	+0.8
B06A					Sn	04 13 17.2	-0.1
RPW	Rockport	1.97	133	P	Pn	04 12 54.6	+0.8

RPW				S	Sn	04 13 18.7	+0.4
JCW	Jim Creek	1.98	143	P	Pn	04 12 54.5	+0.7
TLCB	Telegraph Cove	2.15	292	P	Pb	04 12 59.1	-0.3
TLCB				S	Sg	04 13 28.0	-1.8
HDW	Hoodsport	2.19	169	P	Pn	04 12 57.5	+0.7
EDB	Eliza Dome	2.22	273	P	Pb	04 13 00.7	+0.2
EDB				S	Sg	04 13 28.8	-3.1
FHRB	Fair Harbour	2.23	278	P	Pg	04 13 01.0	-2.3
FHRB				S	Sg	04 13 29.2	-3.0
D03D	Eldon	2.30	170	P	Pb	04 12 59.5	-2.4
	baz=352,SNR=48						
D03D				S	Sn	04 13 27.0	+0.6
	baz=352						
GNW	Green Mountain	2.31	165	P	Pn	04 12 59.1	+0.8
MAYB	Maynard	2.32	286	P	Pb	04 13 01.5	-0.9
MAYB				S	Sg	04 13 33.2	-1.9
GPW	Glacier Peak	2.38	134	P	Pn	04 13 01.0	+1.5
NLWA	Neilton Lookou	2.41	183	Pn	Pb	04 13 01.2	-2.7
NLWA				IAML		04 13 41.5	
	comp=N,327nm,0.8s						
C05A	Tolt Reservoir	2.49	147	P	Pn	04 13 02.0	+1.2
C05A				S	Sn	04 13 32.9	+1.9
PHC	Port Hardy	2.57	292	P	Pb	04 13 05.6	-0.9
PHC				S	Sb	04 13 38.5	+0.6
WISH	Wishkah	2.68	181	P	Pn	04 13 05.2	+1.7
D04E	Lakebay	2.69	166	P	Pb	04 13 06.6	-2.0
	baz=348,SNR=9.7						
D04E				S	Sb	04 13 38.9	-2.6
	baz=348						
PNT	Penticton	2.70	99	P	Pb	04 13 06.8	-1.9
PNT				S	Sb	04 13 42.3	+0.6
D05A	Enumclaw	2.85	156	P	Pn	04 13 07.9	+2.2
D05A	Enumclaw	2.85	156		Pn	04 13 07.6	+1.9
D05A				IAML		04 13 55.0	
	comp=E,218nm,1.2s						
HOLB	Holberg	2.97	288	P	Pb	04 13 11.2	-2.2
UBRB	Upper Baezaeko	3.11	356	P	Pb	04 13 12.7	-3.0
UBRB				S	Sg	04 14 00.5	+0.1
FMW	Mount Fremont	3.17	154	P	Pn	04 13 12.2	+1.8
B08A	Colville Reser	3.21	115	P	Pb	04 13 14.1	-3.4
B08A				S	Sb	04 13 57.0	+0.6
B08A	Colville Reser	3.21	115		Pb	04 13 14.4	-3.0
B08A					Sb	04 13 56.7	+0.3
B08A				IAML		04 14 02.6	
	comp=E,222nm,1.2s						
B08A				IAML		04 14 05.8	
	comp=N,179nm,1.1s						
LTY	Liberty	3.24	141	P	Pn	04 13 13.6	+2.4
LTY	Liberty	3.24	141		Pn	04 13 13.5	+2.4
E03A	Lebam	3.26	178	P	Pn	04 13 12.4	+1.1
E03A				S	Sn	04 13 50.1	+0.2
E03A	Lebam	3.26	178	Pn	Pn	04 13 12.9	+1.6
E03A				IAML		04 14 16.8	
	comp=E,218nm,1.1s						
E03A				IAML		04 14 19.4	
	comp=N,195nm,1.5s						
LON	Longmire	3.30	157	P	Pn	04 13 14.1	+2.1
LON	Longmire	3.30	157		Pn	04 13 13.7	+1.7
E04D	Cinebar	3.33	166	P	Pn	04 13 14.3	+1.9
	baz=348,SNR=15						
E04D				S	Sn	04 13 54.2	+2.4
	baz=348						
NC27	ODP1027	3.37	234	P	Pn	04 13 12.8	+0.3
BLBC	Blue River	3.60	50	P	Pb	04 13 21.1	-3.2
BLBC				S	Sb	04 14 10.2	+2.2
BBB	Bella Bella	3.67	312	Pn	Pb	04 13 21.8	-3.5
	comp=N,2.4nm,0.3s,baz=135,slow=11,SNR=44						
BBB				Pg	Pg	04 13 27.1	-3.9
	comp=N,8.2nm,0.3s,baz=139,slow=11,SNR=48						
BBB				Lg	Lg	04 14 15.4	
	comp=N,20nm,0.3s,baz=198,slow=23,SNR=11						
BBB	Bella Bella	3.67	312	P	Pb	04 13 24.4	-0.9
BBB				S	Sg	04 14 15.1	-3.4
BBB	Bella Bella	3.67	312	Pn	Pb	04 13 25.9	+0.6
BBB					Sg	04 14 16.4	-2.1
BBB				IAML		04 14 20.4	
	comp=N,116nm,0.9s						
BBB				IAML		04 14 26.9	
	comp=E,100nm,1.1s						
F04D	Rainier, OR	3.75	173	S	Sn	04 14 04.1	+2.1
	baz=354						
SLEB	Sale Mountain	3.81	67	P	Pb	04 13 23.9	-3.8
SLEB				S	Sb	04 14 17.9	+4.2
C09A	Chrisman Ranch	4.10	117		Pn	04 13 24.9	+1.9
MNB	Mounoet Dainar	4.13	52	P	Pn	04 13 22.1	-1.4
MNB				S	Sg	04 14 29.6	-3.4
E07A	Sunnyside	4.14	140		Pn	04 13 25.8	+2.3
E07A				IAML		04 14 30.3	
	comp=N,68nm,0.5s						
E07A				IAML		04 14 42.6	
	comp=E,103nm,0.8s						
D08A	Wollman Farm,	4.20	129		Pn	04 13 26.1	+1.8
D08A				IAML		04 14 37.5	
	comp=E,95nm,1.3s						
D08A				IAML		04 14 37.5	
	comp=N,61nm,1.2s						
HAWA	Hanford	4.40	139		Pn	04 13 28.5	+1.4
HAWA				IAML		04 14 36.7	
	comp=N,51nm,1.4s						
E08A	Dider Farm, El	4.54	135		Pn	04 13 30.4	+1.5
E08A				IAML		04 14 55.9	
	comp=E,53nm,1.0s						
NEW	Newport	4.59	107	Pn	Pn	04 13 34.3	+4.7
	comp=E,0.6nm,0.3s,baz=285,slow=14,SNR=7.5						
NEW				Pg	Pb	04 13 41.7	+0.8
	comp=E,2.9nm,0.3s,baz=298,slow=12,SNR=38						
NEW				Lg	Lg	04 14 38.9	
	comp=E,1.3nm,0.3s,baz=294,slow=18,SNR=3.7						
NEW	Newport	4.59	107	Pb	Pb	04 13 42.3	+1.4
	baz=292						
NEW				Sb	Sb	04 14 38.8	+2.7
	baz=292						
NEW	Newport	4.59	107		Pn	04 13 31.5	+1.8
G03D	McMinnville, O	4.60	176	P	Pn	04 13 32.2	+2.4
	baz=357,SNR=11						
G03D				S	Sn	04 14 24.2	+1.2
	baz=357						
F07A	Phinny Hill Vi	4.66	146		Pn	04 13 31.9	+1.3
F07A				IAML		04 15 00.0	
	comp=N,71nm,1.0s						
E09A	Wood Farm, Sta	4.96	129		Pn	04 13 36.5	+1.8
E09A				IAML		04 14 58.5	
	comp=N,47nm,0.9s						
H04A	Detroit Lake	5.22	168		Pn	04 13 39.6	+1.3
COR	Corvallis	5.22	177	Pn	Pn	04 13 40.9	+2.5
COR				IAML		04 14 39.4	
	comp=N,48nm,1.0s						
COR				IAML		04 14 40.2	
	comp=N,46nm,1.0s						
KITB	Kitimat	5.26	326	P	Pn	04 13 43.2	+4.4
KITB				S	Sg	04 15 03.9	-5.5
G08A	Pilot Rock	5.53	143	Pn	Pn	04 13 44.5	+1.7
GRNB	Grenville Isla	5.61	319	P	Pn	04 13 43.3	-0.4
GRNB				S	Sg	04 15 16.9	-3.7
BNAB	Bonilla	5.69	313	S	Sg	04 15 16.0	-7.0
F10A	Beach Ranch, E	5.79	129		Pn	04 13 48.3	+2.0
RUBB	Prince Rupert	6.07	321	S	Sg	04 15 31.0	-4.4
PRDA	Priddis	6.12	76	S	Sg	04 15 30.8	-6.0
NBC4	NorthernBC 4	6.18	16	S	Sg	04 15 35.4	-3.3
PINE	Pine Mountain	6.30	162	Pn	Pn	04 13 54.9	+1.5
I07A	Izee	6.40	152		Pn	04 13 55.4	+0.8
WALA	Waterton Lakes	6.42	93	S	Sb	04 15 36.3	+7.3
JTMT	Jette	6.55	105		Pn	04 14 00.9	+4.2
BMO	Blue Mountains	6.58	136		Pn	04 13 58.2	+1.1
HUMO	Hull Mountain	7.21	176	Pn	Pn	04 14 08.8	+3.1
EDM	Edmonton	7.31	58	S	Sg	04 16 07.4	-7.5
YBH	Yreka Blue Hor	8.10	175	LR	LR	04 17 31.4	
	comp=N,76nm,19.9s,baz=356,slow=38						
DLMT	Dillon	8.71	116		Pn	04 14 28.8	+2.4
MCMT	McKenzie Canyo	8.88	120	Pn	Pn	04 14 30.7	+1.9
HLID	Hailey	8.92	131		Pn	04 14 31.8	+2.6
DLBC	Dease Lake	9.41	339	Lg	Lg	04 17 16.4	
	comp=N,0.1nm,0.3s,baz=240,slow=18,SNR=2.2						
DLBC				LR	LR	04 18 33.7	
	comp=N,88nm,18.6s,baz=107,slow=39						
QLMT	Earthquake Lak	9.70	116	Pn	Pn	04 14 42.6	+2.7
YHB	Horse Butte	9.88	116		Pn	04 14 44.8	+2.4
YHH	Holmes Hill	10.06	115		Pn	04 14 48.8	+3.8
YMR	Madison River	10.06	116		Pn	04 14 48.4	+3.5
H17A	Grant Village	10.45	116		Pn	04 14 52.9	+2.7
NVAR	Mina Array Bea	12.00	159	Pn	Pn	04 15 16.6	+5.1
	baz=342,slow=10,SNR=3.2						
PDAR	Pinedale Array	12.03	120	Pn	Pn	04 15 18.2	+6.3
	comp=N,0.1nm,0.3s,baz=306,slow=10,SNR=5.4						
YKA	Yellowknife Ar	13.67	18	Pn	Pn	04 15 33.3	-0.7
	comp=N,0.1nm,0.3s,baz=203,slow=12,SNR=4.4						
YKA				Lg	Lg	04 19 30.1	
	comp=N,0.0nm,0.3s,baz=190,slow=25,SNR=4.9						
PFO	Pinyon Flats O	17.04	159	LR	LR	04 23 04.6	
	comp=N,68nm,21.4s,baz=280,slow=38						
ILAR	Eielson Array	19.37	329	P	Pn	04 16 51.3	+4.5
	comp=N,0.0nm,0.3s,baz=134,slow=11,SNR=1.9						
TXAR	Lajitas Array	25.47	136	P	P	04 17 51.4	+3.0
	comp=N,0.3nm,0.8s,baz=340,slow=4.9,SNR=3.7						

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*TIF **15** 04:13:33.5, 42°.77N×41°.79E, h14^{km}±1^{km}*
*DDA **15** 04:13:34.0, 42°.80N×41°.75E, h16^{km}±999^{km}, ML2.2*
*MOS **15** 04:13:34.4±0.0, 42°.80N×41°.87E, h8^{km}, MPVA3.1*
*ISK **15** 04:13:34.2, 42°.83N×41°.58E, h15^{km}, ML2.6/4*
*NORS **15** 04:13:35.8±0.0, 42°.82N×41°.95E, h7^{km}, MPVA3.1*
ISC 15 04:13:34.2±0.9**, 42°.79N**±0°.02×**41°.80E**±0°.02**, h12**^{km}±8^{km}**,**
n30, σ0^{s}.80/57**, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHVG	Ch'k'valeri	0.22	110	P	Pg	04 13 39.0	-0.1
CHVG				S	Sg	04 13 42.6	+0.3
DOMR	Dombai	0.51	346	*i* Pg	Pb	04 13 45.0	-0.3
DOMR				*i* Sg	Sb	04 13 52.2	-0.5
NEY	Neytrino	0.82	56	*i* Pg	Pg	04 13 49.4	-0.7
NEY				*i* Sg	Sg	04 13 59.2	-1.6
ARXR	Arkhyz	0.86	334	*e*Pg	Pb	04 13 51.2	+0.1
ARXR				*e*Sg	Sb	04 14 03.0	+0.3
SHA1	Shidzhatmaz	1.13	33	*i* Pg	Pg	04 13 56.0	0.0
SHA1				*e*Sg	Sg	04 14 11.1	+0.2
KBZ	Khabaz	1.23	40	*i* Pg	Pn	04 13 56.8	-0.4
KBZ				*i* Sg	Sb	04 14 12.7	-0.5
ONI	Oni	1.24	99	P	Pn	04 13 57.2	-0.1
ONI				S	Sg	04 14 14.3	+0.2
ONI	Oni	1.24	99	*e*Pg	Pb	04 13 57.4	-0.2
ONI				*e*Sg	Sb	04 14 13.1	-0.3
ABS	Abastumani	1.28	144	P	Pb	04 13 58.4	0.0
ABS				S	Sg	04 14 16.3	+0.7
DIGR	Digorskoe uzhe	1.31	85	*e*Pg	Pn	04 13 58.5	-0.1
DIGR				*e*Sg	Sb	04 14 15.6	-0.2
KIV	Kislovodsk	1.33	29	PN	Pg	04 13 59.5	-0.3
KIV				SN	Sg	04 14 18.3	+1.2
RPOR	Krasnaya Polya	1.44	309	*i* Pg	Pg	04 14 02.2	+0.3
RPOR				*i* Sg	Sg	04 14 22.3	+1.8
DBOC	Borcka	1.45	184	*i* P	Pn	04 14 00.2	0.0
DBOC				*i* S	Sb	04 14 20.1	+0.5
DBOC				IAML		04 14 24.0	
	comp=E,34nm,0.3s						
VSLR	Vesyoloye	1.45	298	*i* Pg	Pg	04 14 02.2	0.0
VSLR				*i* Sg	Sg	04 14 22.8	+1.7
EPOS	Posof	1.46	151	*i* P	Pn	04 14 00.5	-0.1
EPOS				*i* S	Sg	04 14 20.8	-0.5
EPOS				IAML		04 14 28.0	
	comp=N,39nm,1.1s						
ZEI	Tsey	1.55	90	*e*Pg	Pb	04 14 03.4	+0.5
ZEI				*e*Sg	Sg	04 14 26.4	+2.3
BKRG	Bakuriani	1.65	128	P	Pb	04 14 03.9	-0.6
BKRG				S	Sb	04 14 25.9	+0.6
SOC	Sochi	1.71	298	*e*Pg	Pb	04 14 05.8	+0.2
SOC				*e*Sg	Sg	04 14 28.7	-0.7
GUZR	Guzeripl'	1.71	315	*i* Pg	Pg	04 14 06.6	-0.6
GUZR				*i* Sg	Sg	04 14 30.6	+1.2
DBAD	Bademkaya	1.78	183	*i* P	Pn	04 14 05.2	+0.4
DBAD				*i* S	Sn	04 14 27.7	+0.4
DBAD				IAML		04 14 31.0	
	comp=E,24nm,0.3s						
DBAD				IAML		04 14 34.0	
	comp=N,26nm,0.6s						
LACR	Lac	1.84	88	*e*Pg	Pb	04 14 08.0	+0.2
LACR				*e*Sg	Sb	04 14 31.6	+0.8
CHOM	Cayeli-Rize	1.86	205	PN	Pn	04 14 05.8	-0.1
CHOM				SN	Sn	04 14 29.3	-0.1
AKH	Akhalkalaki	1.87	137	P	Pb	04 14 09.1	+0.7
AKH				S	Sg	04 14 33.8	-0.7
AKH	Akhalkalaki	1.87	137	PN	Pb	04 14 08.9	+0.5
AKH				SN	Sg	04 14 33.6	-0.8
BGD	Bogdanovka	2.03	138	P	Pb	04 14 10.6	-0.6
BGD				S	Sb	04 14 37.6	+1.1
LZRR	Lazarevskoye	2.10	304	*e*Pg	Pb	04 14 11.3	-0.9
LZRR				*e*Sg	Sg	04 14 39.9	-1.8
SENK	Senkaya-Erzuru	2.27	169	PN	Pb	04 14 13.5	-1.7
TPSR	Tuapse	2.35	304	*e*Pn	Pb	04 14 15.7	-0.8
TPSR				*e*Sn	Sb	04 14 45.8	+0.4
KTUT	Trabzon	2.36	221	PN	Pn	04 14 13.3	+0.6
ESPY	Espiye-Giresun	2.96	232	PN	Pn	04 14 20.9	-0.1

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*TUL **15** 04:22:05.1±1.1, 36°.60N±0°.02×97°.62W±0°.05, h5^{km}±6^{km}, ML3.3, mb_Lg3.0/48(NEIC), Error ellipse: s-maj=6.4km s-min=2.3km az=67.0*
*NEIC **15** 04:22:05.1±0.7, 36°.57N±0°.02×97°.64W±0°.07, h4^{km}±7^{km}, Error ellipse: s-maj=8.0km s-min=0.6km az=71.0*
*ANF **15** 04:22:05.5±0.7, 36°.59N×97°.61W, h5^{km}, ML3.6/8, Error ellipse: s-maj=9.7km s-min=6.7km az=5.0*
ISC 15 04:22:05.1±1.2**, 36°.58N**±0°.02×**97°.62W**±0°.03**, h4**^{km}±10^{km}**,**
n71, σ0^{s}.52/76**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CROK	Carrier	0.30	256		Pg	04 22 11.3	+0.3
CROK				Sg	Sg	04 22 15.6	+0.6
KAN13	South Haven SW	0.45	15	Pg	Pg	04 22 13.6	-0.2
KAN14	Manchester OK	0.47	324	Pg	Pg	04 22 13.9	-0.2
KAN14				Sg	Sg	04 22 20.4	+0.1
KAN01	Argonia South	0.58	349		Pg	04 22 16.4	0.0
KAN01				Sg	Sg	04 22 23.8	-0.2
KAN10	Anthony SW Sta	0.66	325		Pg	04 22 17.9	0.0
KAN10				Sg	Sg	04 22 26.4	-0.1
KAN08	Anthony NE Sta	0.70	336	Pg	Pg	04 22 18.4	-0.3
KAN12	Harper NE Stat	0.78	337		Pg	04 22 19.8	-0.3
OK029	Liberty Lake	0.79	170		Pg	04 22 20.2	-0.1
QUOK	Quay	0.84	119	Pg	Pg	04 22 21.1	-0.1
OK031	S. Brethren Rd	0.89	135		Pg	04 22 22.1	-0.1
BCOK	Bluff Creek, N	0.92	180		Pg	04 22 22.5	-0.3
OK030	Cody Creek RV	0.94	134		Pg	04 22 23.2	+0.1
T35A	Sooner Cattle	0.95	69	Pg	Pg	04 22 23.2	-0.2
T35B	Sooner Cattle	0.95	69	P		04 22 23.2	
	baz=251,SNR=57						
T35B				S		04 22 35.9	
	baz=251						
OK025	Westminster Rd	1.02	167		Pg	04 22 24.4	-0.3
U32A	Winter Ranch,	1.13	260		Pg	04 22 26.4	-0.5
U32A	Winter Ranch,	1.13	260	P		04 22 26.3	
	baz=78						
U32A				S		04 22 41.7	
	baz=78						
OKCFA	Oklahoma City	1.17	173	Pg	Pg	04 22 27.2	-0.4
OKCSW	OKLAHOMA CITY	1.18	173		Pg	04 22 27.3	-0.5
FNO	Franklin	1.33	172		Pn	04 22 30.2	-0.3
TUL1	Leonard	1.62	114	P	Pn	04 22 34.7	+0.1
	baz=296						
TUL1				S	Sb	04 22 56.4	0.0
	baz=296						
TUL1	Leonard	1.62	114	Pn	Pn	04 22 34.6	+0.1
TUL1				IAmb_Lg		04 23 00.5	
	comp=Z,102nm,0.9s						
TUL1	Leonard	1.62	114	P		04 22 34.6	
	baz=296,SNR=124						
TUL1				S		04 22 56.6	
	baz=296						
X34A	Smith Ranch, M	1.98	185	Pn	Pn	04 22 40.3	+0.8
R32A	Long Quarter,	2.04	335		Pn	04 22 40.6	+0.4
R32A	Long Quarter,	2.04	335	P		04 22 41.2	
	baz=154,SNR=24						
R32A				S		04 23 08.9	
	baz=154						
WMOK	Wichita Mounta	2.07	208	P	Pn	04 22 41.2	+0.5
	baz=26						
WMOK				S	Sb	04 23 08.2	-1.1
	baz=26						
WMOK	Wichita Mounta	2.07	208		Pn	04 22 41.0	+0.3
WMOK				IAmb_Lg		04 23 13.4	
	comp=Z,54nm,0.8s						
WMOK	Wichita Mounta	2.07	208	P		04 22 41.2	
	baz=26,SNR=237						
U38A	Gravette	2.61	92		Pn	04 22 48.8	+0.7
U38A	Gravette	2.61	92	P		04 22 49.2	
	baz=274,SNR=36						
KSU1	Kansas State U	2.64	17	P	Pn	04 22 48.9	+0.3
	baz=198						
KSU1	Kansas State U	2.64	17	Pn	Pn	04 22 48.6	0.0
KSU1	Kansas State U	2.64	17	P		04 22 49.0	
	baz=198,SNR=12						
X37A	Clayton	2.70	137		Pn	04 22 49.8	+0.4
X37A	Clayton	2.70	137	P		04 22 50.2	
	baz=318						
CBKS	Cedar Bluff	2.79	324	P	Pn	04 22 50.9	+0.2
	baz=142						
CBKS				S	Sn	04 23 25.3	+0.4
	baz=142						
CBKS	Cedar Bluff	2.79	324	Pn	Pn	04 22 51.1	+0.4
CBKS	Cedar Bluff	2.79	324	Sb		04 23 31.4	
	baz=142						
HHAR	Hobbs	2.98	95		Pn	04 22 53.6	+0.3
Z35A	Perchaven, San	3.25	175	Pn	Pn	04 22 57.1	+0.1
W39A	Magazine	3.41	113	P	Pn	04 23 00.4	+1.4
	baz=295						
W39A	Magazine	3.41	113	Pn	Pn	04 22 59.0	0.0
W39A				IAmb_Lg		04 23 57.5	
	comp=Z,30nm,0.8s						
S39A	Bolivar	3.61	71	Pn	Pn	04 23 01.8	0.0
S39A	Bolivar	3.61	71	P		04 23 02.1	
	baz=254,SNR=12						
AMTX	Amarillo	3.71	244	P	Pn	04 23 04.1	+0.7
	baz=61						
AMTX				S	Sn	04 23 48.1	+0.4
	baz=61						
AMTX	Amarillo	3.71	244	Pn	Pn	04 23 01.7	-1.7
AMTX				IAmb_Lg		04 24 09.9	
	comp=Z,39nm,0.8s						
U40A	Yellville	3.85	92	P	Pn	04 23 04.9	-0.3
	baz=275						
U40A				S	Sn	04 23 50.6	-0.2
	baz=275						
U40A	Yellville	3.85	92		Pn	04 23 05.7	+0.5
U40A				IAmb_Lg		04 24 13.2	
	comp=Z,46nm,0.7s						
U40A	Yellville	3.85	92	P		04 23 05.6	
	baz=275,SNR=18						
U40A				P		04 23 05.6	
	baz=275,SNR=18						
U40A				S		04 23 50.6	
	baz=275						
U40A				S		04 23 50.6	
	baz=275						
MIAR	Mount Ida	3.87	120	P	Pn	04 23 06.8	+1.4
	baz=303						
MIAR				S	Sn	04 23 51.6	+0.2
	baz=303						
MIAR	Mount Ida	3.87	120	Pn	Pn	04 23 05.7	+0.2
Z38A	Mt. Pleasant	3.96	146	Pn	Pn	04 23 07.4	+0.8
ABTX	Abilene, Hawle	4.29	204	Pn	Pn	04 23 10.8	-0.3
MGMO	Mountain Grove	4.33	81	Pn	Pn	04 23 12.0	+0.2
MGMO				IAmb_Lg		04 24 23.8	
	comp=Z,36nm,0.8s						
X40A	Basin Creek Fa	4.42	117	Pn	Pn	04 23 13.3	+0.2
P38A	Dawn	4.43	45	Pn	Pn	04 23 13.1	0.0
P38A				IAmb_Lg		04 24 25.2	
	comp=Z,24nm,0.8s						
FCAR	Ozark Folk Cen	4.50	97	Pn	Pn	04 23 15.0	+1.0
WHAR	Wooly Hollow	4.51	105	Pn	Pn	04 23 14.7	+0.5
N35A	Tabor	4.55	19	Pn	Pn	04 23 14.4	-0.3
N35A				IAmb_Lg		04 24 36.7	
	comp=Z,41nm,0.8s						
WHTX	Lake Whitney,	4.58	178	Pn	Pn	04 23 14.6	-0.6
WHTX	Lake Whitney,	4.58	178	P		04 23 15.5	
	baz=358,SNR=8.1						
R40A	Maddies Statio	4.59	67	Pn	Pn	04 23 15.7	+0.3
R40A				IAmb_Lg		04 24 34.0	
	comp=Z,21nm,0.8s						
R40A	Maddies Statio	4.59	67	P		04 23 15.5	
	baz=250,SNR=13						
KSCO	Kaye Shedlock'	4.65	303	Pn	Pn	04 23 16.7	+0.4
WLAR	White Oak Lake	4.69	127	Pn	Pn	04 23 16.9	+0.3
237A	Washetta, Mont	4.81	161	Pn	Pn	04 23 18.5	+0.2
237A				IAmb_Lg		04 24 50.9	
	comp=Z,23nm,1.1s						
BGNE	Belgrade	4.84	355	Pn	Pn	04 23 18.4	-0.4
BGNE				IAmb_Lg		04 24 48.1	
	comp=Z,38nm,0.7s						
BGNE	Belgrade	4.84	355	P		04 23 18.3	
	baz=175						
MSTX	Muleshoe	4.96	240	Pn	Pn	04 23 20.2	-0.2
LCAR	Lake Charles	5.24	94	Pn	Pn	04 23 24.8	+0.5
LCAR				IAmb_Lg		04 24 53.8	
	comp=Z,20nm,0.7s						
T42A	Van Buren	5.26	83	Pn	Pn	04 23 24.8	+0.4
T42A				IAmb_Lg		04 24 57.8	
	comp=Z,23nm,0.8s						
CCM	Cathedral Cave	5.29	72	Pn	Pn	04 23 25.6	+0.7
CCM				IAmb_Lg		04 24 58.9	
	comp=Z,37nm,0.8s						
P40A	Paris	5.29	54	Pn	Pn	04 23 25.5	+0.5
P40A				IAmb_Lg		04 24 57.9	
	comp=Z,32nm,0.7s						
N38A	Joes South For	5.43	38	Pn	Pn	04 23 26.6	-0.3
N38A				IAmb_Lg		04 24 56.6	
	comp=Z,25nm,0.8s						
L34A	Svendsen Farm,	5.46	10	Pn	Pn	04 23 28.4	+1.0
OGNE	Ogallala	5.56	323	Pn	Pn	04 23 29.1	+0.4
OGNE				IAmb_Lg		04 25 12.8	
	comp=Z,30nm,0.8s						
PBMO	Poplar Bluff	5.78	86	Pn	Pn	04 23 31.4	-0.3
PBMO				IAmb_Lg		04 25 17.2	
	comp=Z,22nm,0.9s						
435B	Jarrell	5.78	180	IAmb_Lg		04 25 19.1	
	comp=Z,18nm,0.8s						
FVM	French Village	5.90	74	Pn	Pn	04 23 33.0	-0.5
FVM				IAmb_Lg		04 25 11.6	
	comp=Z,31nm,0.7s						
K31A	O'Neill	6.10	352	Pn	Pn	04 23 36.6	+0.5
SLM	Saint Louis	6.21	68	IAmb_Lg		04 25 28.5	
	comp=Z,23nm,0.7s						
JCT	Junction City	6.35	197	IAmb_Lg		04 25 32.6	
	comp=Z,16nm,1.0s						
W45A	Hickory Valley	6.99	99	IAmb_Lg		04 26 03.4	
	comp=Z,20nm,0.8s						
O44A	Mansfield	8.02	61	IAmb_Lg		04 26 20.6	
	comp=Z,27nm,1.0s						

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*BJI **15** 04:36:33.0±0.0, 52°.70N×33°.50W, h10^{km}, mB5.2/19, mb4.6/30, Ms4.9/3, Ms7 4.6/3*
*IDC **15** 04:36:34.5±0.4, 52°.72N×33°.48W, h0^{km}, mb4.3/38, mb1 4.4/41, mb1mx4.3/67, mbtmp4.4/41, ML4.4/3, MS3.8/42, Ms1 3.8/42, ms1mx3.8/45, Error ellipse: s-maj=12.4km s-min=9.0km az=177.0*
*NEIC **15** 04:36:35.5±1.0, 52°.71N±0°.10×33°.5W±0°.1, h10^{km}±1^{km}, mb4.7/130, Error ellipse: s-maj=16.5km s-min=12.0km az=169.0*
*OTT **15** 04:36:36.6±0.7, 52°.50N×33°.38W, h18^{km}, ML5.5/2, Atlantic Ocean. 1458km northeast from Bonavista, Nl*
*BGR **15** 04:36:36.5±0.0, 52°.57N×33°.76W, h10^{km}, mb4.5, Ms3.5*
*GCMT **15** 04:36:38.5±0.2, 52°.66N±0°.02×33°.42W±0°.02, h27^{km}±1^{km}, MW5.0/107, Moment Tensor Solution. s42,c49; s107,c146; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.05±.15; $M_{\theta\theta}$-1.01±.13; $M_{\phi\phi}$1.06±.12; $M_{r\theta}$0.76±.21; $M_{\theta\phi}$-3.26±.09; $M_{\phi r}$0.74±.20; Best double couple: $M_0$3.57400×10^{16} NP1:ϕ_s280.00000°, δ77.00000°, λ-170.00000°. NP2:ϕ_s188.00000°, δ81.00000°, λ-13.00000°. Principal axes: T 3.4520, Plg3.0000°, Azm234.0000°; N 0.2450, Plg74.0000°, Azm333.0000°; P -3.6970, Plg16.0000°, Azm143.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 15 04:36:35.3±0.4**, 52°.70N**±0°.07×**33°.54W**±0°.04**, h10**^{km}**, n267,**
σ1^{s}.46/242**, mb4.6**/109**, MS3.8**/41**, 18C-14D, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SJNN	Saint John's	13.28	255	PN	Pn	04 39 43.9	+0.3
SJNN				SN	Sn	04 42 02.0	-9.2
SJNN				Trac		04 42 07.9	
	comp=Z,131nm,0.7s						
BORG	Borgarnes	13.61	23	Pn	Pn	04 39 50.1	+2.1
	0.6nm,0.3s,baz=315,slow=4.3,SNR=2.9						
BORG				LR	LR	04 43 44.5	
	comp=Z,213nm,19.7s,baz=273,slow=32						
MKVL	Makkovik	15.28	289	PN	Pn	04 40 12.6	+1.9
MKVL				SN	Sn	04 42 52.1	-7.6
MKVL				Trac		04 43 12.0	

	comp=Z,2µm,4.4s						
DRLN	Deer Lake	15.46	267	PN	Pn	04 40 13.6	+0.5
DRLN				SN	Sn	04 42 51.1	-13
DRLN				Trac		04 43 01.1	
	comp=Z,46nm,0.7s						
DRLN	Deer Lake	15.46	267	Pn	Pn	04 40 12.7	-0.5
SFJD	Kangerlussuaq	16.61	336	Pn	P	04 40 29.8	-0.5
	0.8nm,0.3s,baz=140,slow=10,SNR=11						
SFJD				LR	LR	04 45 40.4	
	comp=Z,866nm,20.6s,baz=154,slow=33						
SFJD	Kangerlussuaq	16.61	336	i P	P	04 40 31.3	+1.0
	3.9nm,0.9s						
SFJD	Kangerlussuaq	16.61	336	Pn	Pn	04 40 28.1	+0.3
SFJD				IAmb	IAmb	04 40 32.5	
	comp=Z,52nm,0.9s						
SFJD	Kangerlussuaq	16.61	336	i P	P	04 40 31.3	+1.0
SFJD				IAmb	IAmb	04 40 33.0	
	comp=Z,3.9nm,0.9s						
ICESG	Greenland Ices	16.70	352	i P	P	04 40 34.3	+2.6
ICESG				IAmb	IAmb	04 40 37.5	
	comp=Z,14nm,0.9s						
ESK	Eskdalemuir	17.95	70	Pn	Pn	04 40 41.7	-3.0
EKA	Eskdalemuir Ar	17.98	69	P	P	04 40 45.3	-0.2
	baz=268,slow=9.2,SNR=40						
NATG	Natashquan Que	18.33	274	PN	P	04 40 50.4	+1.0
NATG				SN	Sn	04 44 01.9	-12
ILULI	Ilulissat	18.50	340	i P	Pn	04 40 51.8	+0.6
ILULI	Ilulissat	18.50	340	P	Pn	04 40 51.6	+0.3
ILULI	Ilulissat	18.50	340	i P	Pn	04 40 51.8	+0.6
KAJQ	Kangiqsualujju	19.08	301	PN	Pn	04 40 59.2	+0.9
KAJQ				SN	Sn	04 44 27.2	-4.6
GBN	Guysborough	19.64	259	PN	Pn	04 41 04.7	-0.5
GBN				SN	S	04 44 33.2	-12
GBN				Trac		04 44 39.0	
	comp=Z,1µm,4.1s						
GBN	Guysborough	19.64	259	P	P	04 41 03.6	-0.2
GBN				IAmb	IAmb	04 41 11.4	
	comp=Z,42nm,1.2s						
SUMG	Summit	20.07	356	i P	P	04 41 09.0	+0.3
	comp=Z,21nm,0.9s						
SUMG	Summit	20.07	356	P	Pn	04 41 09.9	-0.6
SUMG	Summit	20.07	356	i P	P	04 41 09.0	+0.3
SUMG				IAmb	IAmb	04 41 14.7	
	comp=Z,21nm,0.9s						
FRB	Frobisher Bay	21.19	315	P	P	04 41 21.2	+0.8
	comp=Z,40nm,0.8s,baz=102,slow=10,SNR=53						
FRB				LR	LR	04 47 37.1	
	comp=Z,198nm,21.2s,baz=90,slow=31						
SVNB	Stilesville Qu	21.28	265	PN	P	04 41 21.7	+0.1
SVNB				SN	S	04 45 10.2	-7.7
ICQ	Pointe Anglais	21.30	275	PN	P	04 41 22.6	+0.8
ICQ				SN	S	04 45 13.5	-4.6
ICQ				Trac		04 45 27.6	
	comp=Z,1µm,5.3s						
BATG	Bathurst New B	21.48	268	SN	S	04 45 16.7	-5.1
BATG	Bathurst New B	21.48	268	P	P	04 41 24.7	+1.0
BATG				IAmb	IAmb	04 41 32.3	
	comp=Z,48nm,1.4s						
UPNV	Upernavik	22.36	342	i P	P	04 41 34.0	+1.1
UPNV				IAmb	IAmb	04 41 40.2	
	comp=Z,14nm,0.8s						
CLF	Chambon-Foret	23.15	87	P	P	04 41 40.4	-1.1
CLF				IAmb	IAmb	04 41 42.8	
	comp=Z,26nm,0.8s						
E63A	Oxbow	23.31	268	P	P	04 41 43.8	+0.6
UCC	Uccle	23.37	79	dP	P	04 41 43.5	-0.2
UCC	Uccle	23.37	79	P	P	04 41 42.8	-0.9
UCC				IAmb	IAmb	04 41 53.1	
	comp=Z,15nm,0.8s						
G65A	Princeton	23.39	265	P	P	04 41 43.8	-0.2
SNF	Seneffe	23.42	80	dP	P	04 41 42.9	-1.3
F64A	Sherman	23.54	267	P	P	04 41 46.0	+0.6
DOU	Dourbes	23.75	81	dP	P	04 41 46.5	-1.0
BMRD	Maredsous	23.78	80	dP	P	04 41 46.8	-0.9
BGES	Gesves	23.95	80	dP	P	04 41 48.0	-1.3
BCLA	Clavier	24.06	80	dP	P	04 41 49.5	-0.9
	comp=Z,13nm,1.5s						
ESDC	Sonseca Array	24.07	111	P	P	04 41 49.9	-0.8
	comp=Z,1.6nm,0.6s,baz=315,slow=9.3,SNR=16						
ESDC				LR	LR	04 49 38.3	
	comp=Z,300nm,19.4s,baz=290,slow=33						
RCHB	Rochefort	24.11	80	dP	P	04 41 50.2	-0.7
BSTI	Sart Tilman	24.16	79	dP	P	04 41 49.9	-1.4
MEM	Membach	24.42	79	dP	P	04 41 52.8	-0.8
MEM				dx	x	04 42 01.9	
BTNL	Ternell	24.50	79	dP	P	04 41 54.3	-0.1
BHOU	Houvegnez	24.51	80	dP	P	04 41 54.0	-0.5
WLF	Walferdange	24.85	81	dP	P	04 41 57.3	-0.2
WLF	Walferdange	24.85	81	P	P	04 41 57.0	-0.6
WLF				IAmb	IAmb	04 41 59.3	
	comp=Z,15nm,0.9s						
NC204	NORSAR Array S	25.16	53	P	P	04 42 00.5	+0.2
NBO00	NORSAR Array S	25.17	53	P	P	04 41 59.9	-0.4
NAO01	NORSAR Array S	25.22	54	P	P	04 42 00.8	-0.1
NB2	NORSAR Subarra	25.38	53	P	P	04 42 02.2	-0.1
	comp=Z,22nm,1.0s,baz=274,slow=10						
NOA	NORSAR Array B	25.38	53	P	P	04 42 01.6	-0.7
	comp=Z,12nm,1.0s,baz=272,slow=9.3,SNR=13						
NOA				LR	LR	04 50 55.0	
	comp=Z,226nm,18.9s,baz=270,slow=34						
NC303	NORSAR Array S	25.45	53	P	P	04 42 02.8	-0.1
NC602	NORSAR Array S	25.55	54	P	P	04 42 03.4	-0.4
BSEG	Bad Segeberg	25.92	70	eL	L	04 54 35.7	
	comp=Z,186nm,18.0s						
TNS	Taunus Mts	26.01	78	eL	L	04 55 14.9	
	comp=Z,85nm,21.6s						
ECH	Echery	26.04	83	P	P	04 42 07.5	-1.0
ECH				IAmb	IAmb	04 42 19.7	
	comp=Z,12nm,0.8s						
HFS	Hagfors	26.65	55	P	P	04 42 13.2	-0.6
	comp=Z,2.7nm,0.8s,baz=245,slow=9.7,SNR=8.6						
HFS				LR	LR	04 51 26.3	
	comp=Z,276nm,18.7s,baz=280,slow=34						
BFO	Black Forest	26.70	82	P	P	04 42 13.8	-0.6
BFO				IAmb	IAmb	04 42 15.2	
	comp=Z,11nm,0.9s						
BFO	Black Forest	26.70	82	eL	L	04 51 54.2	
	comp=Z,176nm,19.5s						
STU	Stuttgart	27.03	81	P	P	04 42 16.5	-0.8
STU				IAmb	IAmb	04 42 19.0	
	comp=Z,13nm,0.7s						
GRF	Grafenberg Arr	27.87	78	eP	P	04 42 26.9	+2.0
	comp=Z,7.9nm,1.1s,baz=294,slow=11						
GRF				eL	L	04 52 30.6	
	comp=Z,187nm,18.3s						
TUE	Stuetta	28.16	85	P	P	04 42 28.0	+0.3
TUE				IAmb	IAmb	04 42 29.7	
	comp=Z,9.8nm,0.8s						
CLL	Collm	28.30	74	i P	P	04 42 28.3	-0.4
	comp=Z,35nm,1.9s						
CLL				i sP	sP	04 42 32.6	+1.2
	comp=Z,8.0nm,0.8s						
CLL				eS	S	04 47 12.0	-2.7
CLL				eSSS	SSS	04 48 48.0	
CLL	Collm	28.30	74	P	P	04 42 28.4	-0.3
CLL				IAmb	IAmb	04 42 33.5	
	comp=Z,7.1nm,0.7s						
CLL	Collm	28.30	74	eL	L	04 52 09.6	
	comp=Z,129nm,20.7s						
DAVOX	Davos/Dischmat	28.34	84	P	P	04 42 30.0	+0.7
	comp=Z,9.4nm,0.9s,baz=314,slow=11,SNR=16						
DAVOX				LR	LR	04 53 07.9	
	comp=Z,199nm,20.7s,baz=272,slow=35						
RETA	Reutte	28.54	83	eP	P	04 42 31.2	+0.3
	comp=Z,9.3nm,0.9s,SNR=7.3						
FUR	Furstenfeldbru	28.55	81	eL	L	04 51 17.8	
	comp=Z,174nm,19.9s						
FETA	Feichten	28.74	83	eP	P	04 42 34.3	+1.5
	comp=Z,5.7nm,0.8s						
MDT	Midelt	28.78	122	LR	LR	04 51 03.2	
	comp=Z,48nm,20.4s,baz=354,slow=30						
MOTA	Moosalm	28.81	83	eP	P	04 42 33.8	+0.3
	comp=Z,10nm,0.9s						
SQTA	Sankt Quirin	28.93	83	eP	P	04 42 34.9	+0.4
	comp=Z,8.2nm,0.8s,SNR=12						
BRG	Berggiesshubel	29.02	74	eP	P	04 42 38.5	+3.5
BRG				Amp		04 42 40.6	
	comp=Z,2.3nm,0.8s						
WET	Wettzell	29.08	78	eL	L	04 55 25.1	
	comp=Z,89nm,21.5s						
WATA	Walderalm	29.10	82	eP	P	04 42 35.9	0.0
	comp=Z,12nm,1.1s,SNR=6.5						
WTTA	Wattenberg	29.17	82	eP	P	04 42 37.2	+0.6
	comp=Z,7.6nm,0.8s,SNR=7.0						
KHC	Kasperske Hory	29.50	78	eP	P	04 42 38.5	-0.9
GEC2	GERESS Array S	29.70	78	P	P	04 42 40.9	-0.3
GEC2	GERESS Array S	29.70	78	eL	L	04 53 45.7	
	comp=Z,122nm,21.4s						
GERES	GERESS Array B	29.70	78	P	P	04 42 41.1	-0.1
	comp=Z,1.8nm,0.8s,baz=294,slow=7.2,SNR=12						
GERES				LR	LR	04 53 56.5	
	comp=Z,142nm,18.5s,baz=301,slow=35						
GERES	GERESS Array B	29.70	78	P	P	04 42 41.0	-0.2
PRU	Pruhonice	29.72	76	eP	P	04 42 43.3	+2.1
CTI	Castel Tesino	29.76	85	P	P	04 42 41.5	-0.3
CKRC	Cesky Krumlov	30.07	78	eP	P	04 42 44.1	-0.3
TEOL	Teolo	30.12	86	P	P	04 42 44.8	0.0
TEOL				IAmb	IAmb	04 43 06.4	
	comp=Z,16nm,1.0s						
DPC	Dobruska-Polom	30.62	74	eP	P	04 42 48.7	-0.6
SADO	Sadowa	30.66	274	LR	LR	04 54 42.7	
	comp=Z,224nm,19.0s,baz=72,slow=36						
MYKA	Terra Mystica	30.68	82	eP	P	04 42 50.3	+0.4
	comp=Z,16nm,0.7s,SNR=13						
SPITS	Spitsbergen Ar	30.99	18	LR	LR	04 51 58.6	
	comp=Z,178nm,18.8s,baz=175,slow=30						
VRAC	Vranov	31.21	76	LR	LR	04 54 35.4	
	comp=Z,158nm,18.1s,baz=292,slow=35						
OBKA	Obir	31.29	82	eP	P	04 42 55.2	0.0
	comp=Z,11nm,0.8s,SNR=8.0						
ARCES	ARCESS Array B	31.47	35	LR	LR	04 52 49.7	
	comp=Z,147nm,19.5s,baz=270,slow=31						
SOKA	Soboth	31.50	81	eP	P	04 42 57.3	+0.2
	comp=Z,5.5nm,0.7s						
LJU	Ljubljana	31.50	83	eP	P	04 42 56.6	-0.5
ARSA	Arzberg	31.51	80	eP	P	04 42 57.2	0.0
	comp=Z,2.3nm,0.6s						
CEY	Cerknica	31.60	83	⇑iP	P	04 42 57.6	-0.3
FINES	FINESS Array B	32.46	51	P	P	04 43 05.2	0.0
	comp=Z,10nm,0.8s,baz=284,slow=7.7,SNR=9.4						
FINES				LR	LR	04 54 37.2	
	comp=Z,274nm,21.6s,baz=276,slow=33						
RES	Resolute Bay	32.60	334	P	P	04 43 07.0	+0.7
	comp=Z,20nm,0.7s,baz=97,slow=9.0,SNR=77						
OJC	Ojcow	32.70	73	P	P	04 43 06.3	-1.1
PABE	Paberze	33.01	62	eP	P	04 43 10.1	0.0
SUW	Suwalki	33.11	65	eP	P	04 43 10.6	-0.4
FCC	Fort Churchill	33.57	305	P	P	04 43 15.6	+0.6
BLY	Banja Luka	33.77	83	⇑iP	P	04 43 16.8	-0.1
MORH	Mrgy, Hungar	33.89	80	⇑P	P	04 43 17.1	-0.9
MORH	Mrgy, Hungar	33.89	80	eP	P	04 43 17.0	-0.9
ISAL	Salakas	34.14	61	eP	P	04 43 19.8	-0.2
IIGN	Ignalina	34.27	61	eP	P	04 43 20.6	-0.6
KEST	Kesra	34.50	102	P	P	04 43 22.4	-1.0
	comp=Z,10nm,1.0s,baz=170,slow=0.6,SNR=7.0						
KEST				LR	LR	04 55 30.8	
	comp=Z,191nm,18.7s,baz=264,slow=33						
IDID	Didziasalis	34.56	61	eP	P	04 43 21.0	-2.6
NACGM	Naroch	34.74	62	i P	P	04 43 21.6	-3.6
NACGM				i P	P	04 43 21.6	-3.6
NACGM				i P	P	04 43 21.6	-3.6
NACGM				i PP	PnPn	04 44 38.7	-2.2
NACGM				i PPP	PPP	04 45 01.7	
NACGM				i S	S	04 48 51.2	-3.8
NACGM				i SS	SnSn	04 51 04.3	-3.3
NACGM				i SSS	SSS	04 51 21.1	
NACGM				i SSS	SSS	04 51 30.3	
NACGM				i LQ	LQ	04 54 39.3	
NACGM				i LR	LR	04 56 40.1	
FRGS	Fruska Gora	35.14	81	⇑P	P	04 43 28.9	+0.1
FRGS	Fruska Gora	35.14	81	⇑iP	P	04 43 28.2	-0.6
MNK	Minsk	35.48	62	i P	P	04 43 29.7	-1.8
	comp=E,9.0nm,1.4s						
MNK				i P	P	04 43 29.7	-1.8
	comp=N,40nm,1.3s						
MNK				i P	P	04 43 29.7	-1.8
	comp=Z,71nm,1.1s						
MNK				i PP	PnPn	04 44 49.4	-0.7
MNK				i PPP	PPP	04 45 02.9	
MNK				i S	S	04 49 05.4	-1.0
MNK				i SS	SnSn	04 51 30.2	+4.6
MNK				i SSS	SSS	04 51 46.4	
MNK				i LQ	LQ	04 55 46.9	
MNK				i LR	LR	04 58 08.6	
MNK				i LRM	MLR	04 59 29.2	
	comp=E,16nm,17.0s						
MNK				i LRM	MLR	04 59 29.2	
	comp=N,308nm,20.8s						
MNK				i LRM	MLR	04 59 29.2	
	comp=Z,124nm,16.4s						
BBLS	Lazići	35.59	83	⇑iP	P	04 43 31.6	-1.2
DIVS	Divibare	35.82	82	⇑iP	P	04 43 34.3	-0.4
DIVS	Divibare	35.82	82	P	P	04 43 34.2	-0.5
BZS	Buzias	35.98	79	⇑P	P	04 43 35.7	-0.2
DRGR		36.02	76	⇑P	P	04 43 37.0	+0.6
PDG	Podgorica	36.31	85	⇑P	P	04 43 38.4	-0.3
PDG	Podgorica	36.31	85	⇑iP	P	04 43 38.3	-0.5
PDG	Podgorica	36.31	85	P	P	04 43 37.8	-1.0
PDG				IAmb	IAmb	04 43 39.4	
	comp=Z,9.3nm,0.9s						
DRME	Dracevica, Mon	36.41	85	eP	P	04 43 38.1	-1.6
EYMN	Ely	36.44	286	P	P	04 43 40.4	+0.5
GZR	Gura Zlata	36.79	78	⇓P	P	04 43 42.6	-0.3
HERR	Herculane	36.85	79	⇑P	P	04 43 42.6	-0.8
BURAR	Bucovina Array	37.08	74	⇑P	P	04 43 45.6	+0.2
BURAR	Bucovina Array	37.08	74	P	P	04 43 45.7	+0.3
ULM	Lac du Bonnet	37.83	292	P	P	04 43 51.9	+0.3
	comp=Z,2.6nm,0.7s,baz=64,slow=9.6,SNR=5.3						
ULM				LR	LR	04 58 04.5	
	comp=Z,184nm,18.9s,baz=59,slow=34						
AKASG	Malin Array Be	37.86	67	P	P	04 43 51.2	-0.7
	comp=Z,10nm,0.9s,baz=302,slow=8.3,SNR=25						
AKASG				LR	LR	04 58 54.7	
	comp=Z,149nm,18.3s,baz=305,slow=35						
AKASG	Malin Array Be	37.86	67	P	P	04 43 50.4	-1.5
BIZ	Bicaz	37.94	74	⇑P	P	04 43 53.6	+1.0
KLMR	Klimovskoe	38.86	48	eP	P	04 43 59.4	-0.7
KLMR				AMP		04 44 02.0	
	comp=Z,40nm,1.3s						
VRI	Vrincioaia	38.87	75	⇑P	P	04 44 01.3	+0.8
FFC	Flin Flon	39.09	301	P	P	04 44 02.7	+0.5
OBN	Obninsk	39.79	58	P	P	04 44 08.0	0.0
	comp=Z,6.9nm,0.6s,baz=96,slow=23,SNR=11						
OBN	Obninsk	39.79	58	⇑P	P	04 44 08.0	0.0
OBN	Obninsk	39.79	58	P	P	04 44 07.4	-0.6
CFR	Carcaliu	40.08	75	⇑P	P	04 44 09.5	-1.0
AGG	Agios Georgios	40.22	87	P	P	04 44 11.5	-0.3
AGG				IAmb	IAmb	04 44 21.7	
	comp=Z,17nm,1.0s						
V48A	Smith Brothers	40.76	267	IAmb	IAmb	04 44 27.9	
	comp=Z,16nm,1.1s						
SLM	Saint Louis	40.96	273	P	P	04 44 19.1	+1.3
SLM				IAmb	IAmb	04 44 29.8	
	comp=Z,13nm,0.8s						
YKA	Yellowknife Ar	41.70	316	P	P	04 44 24.6	+0.9
	comp=Z,4.4nm,0.9s,baz=64,slow=9.4,SNR=41						
YKA				PP	PP	04 45 59.8	+0.1
	comp=Z,1.3nm,0.9s,baz=62,slow=10,SNR=6.3						
YKA				PcP	PcP	04 46 19.8	-0.2
	comp=Z,0.3nm,0.6s,baz=71,slow=4.3,SNR=2.3						
YKA				LR	LR	04 59 10.5	
	comp=Z,122nm,21.4s,baz=0.0,slow=32						
CCM	Cathedral Cave	41.94	273	P	P	04 44 26.9	+0.9
CCM				IAmb	IAmb	04 44 38.1	
	comp=Z,18nm,1.2s						
250A	Grady	42.99	263	IAmb	IAmb	04 44 36.8	
	comp=Z,16nm,0.8s						
LCAR	Lake Charles	43.18	271	P	P	04 44 36.6	+0.7
LCAR				IAmb	IAmb	04 44 48.4	
	comp=Z,14nm,1.2s						
KIRV	Kirov	44.36	48	P	P	04 44 46.0	+0.9
	comp=Z,8.1nm,0.7s,baz=108,slow=3.8,SNR=3.9						
WHAR	Wooly Hollow	44.38	271	P	P	04 44 46.2	+0.5
HHAR	Hobbs	44.73	273	P	P	04 44 48.0	-0.5
HHAR				IAmb	IAmb	04 44 59.7	
	comp=Z,6.5nm,0.9s						
KOWA	Kowa	44.74	137	P	P	04 44 50.0	+1.3
	comp=Z,3.0nm,0.9s,baz=343,slow=8.0,SNR=4.3						
KOWA	Kowa	44.74	137	P	P	04 44 49.0	+0.3
KOWA				IAmb	IAmb	04 44 59.8	
	comp=Z,12nm,1.1s						
X40A	Basin Creek Fa	45.25	271	IAmb	IAmb	04 45 05.5	
	comp=Z,14nm,1.4s						
LAO	LASA Array	45.55	293	IAmb	IAmb	04 45 07.6	
	comp=Z,10nm,0.9s						
INK	Inuvik	45.78	329	P	P	04 44 56.1	-0.3
	comp=Z,3.0nm,0.7s,baz=36,slow=9.0,SNR=12						
INK	Inuvik	45.78	329	P	P	04 44 56.5	+0.1
BR231	Keskin MP Arra	46.01	79	P	P	04 44 58.0	-0.7
BR231				IAmb	IAmb	04 45 12.6	
	comp=Z,5.8nm,0.8s						
BR131	Keskin Array S	46.60	78	IAmb	IAmb	04 45 04.8	
	comp=Z,8.6nm,0.8s						
BRTR	Keskin Array B	46.60	78	P	P	04 45 04.2	+0.9
	comp=Z,5.4nm,0.9s,baz=300,slow=5.8,SNR=24						
BRTR				LR	LR	05 05 56.2	
	comp=Z,159nm,18.3s,baz=314,slow=38						
BRTR	Keskin Array B	46.60	78	P	P	04 45 03.4	0.0
TOKA	Tokat	47.90	76	IAmb	IAmb	04 45 15.5	
	comp=Z,8.8nm,0.9s						
EPYK	Eagle Plains	47.91	328	P	P	04 45 13.6	+0.5
NATX	Nacogdoches	48.24	269	P	P	04 45 18.3	+2.3
WALA	Waterton Lakes	48.35	300	IAmb	IAmb	04 45 26.1	
	comp=Z,8.7nm,0.9s						
TOA0	Torodi Ar. Sit	48.43	131	P	P	04 45 17.4	-0.2
TORD	Torodi Ar. Bea	48.43	131	P	P	04 45 17.2	-0.4
	comp=Z,2.6nm,0.9s,baz=329,slow=7.8,SNR=11						
TORD				LR	LR	05 02 14.5	
	comp=Z,70nm,20.4s,baz=55,slow=32						
TORD	Torodi Ar. Bea	48.43	131	P	P	04 45 16.9	-0.7
KIV	Kislovodsk	49.20	68	P	P	04 45 23.6	+0.2
KIV				IAmb	IAmb	04 45 25.3	
	comp=Z,4.5nm,0.8s						
PCRV	Puerto La Cruz	49.28	222	P	P	04 45 25.8	+1.6
	comp=Z,12nm,0.9s,baz=40,slow=3.7,SNR=3.5						
KBZ	Khabaz	49.46	68	P	P	04 45 26.4	+1.2
	comp=Z,3.1nm,0.9s,baz=313,slow=7.4,SNR=9.1						
KBZ				LR	LR	05 05 50.1	
	comp=Z,119nm,20.2s,baz=304,slow=36						
BMAR	Burnt Mountain	49.63	332	P	P	04 45 27.3	+0.9
ARU	Arti	49.66	47	P	P	04 45 26.3	-0.3
	comp=Z,2.9nm,0.9s,baz=285,slow=7.7,SNR=8.8						
ARU	Arti	49.66	47	P	P	04 45 26.2	-0.3
PDAR	Pinedale Array	49.82	291	P	P	04 45 28.5	+0.1
	comp=Z,0.7nm,0.5s,baz=59,slow=7.4,SNR=14						
PDAR				LR	LR	05 05 30.3	
	comp=Z,150nm,18.7s,baz=54,slow=35						
PDAR	Pinedale Array	49.82	291	P	P	04 45 28.0	-0.3
MDP	Montagnes des	49.99	205	LR	LR	05 01 01.0	
	comp=Z,140nm,21.3s,baz=9.5,slow=29						
EGAK	Eagle	50.35	328	IAmb	IAmb	04 45 33.5	
	comp=Z,8.0nm,1.0s						
NEW	Newport	50.52	301	P	P	04 45 34.8	+1.5
	comp=Z,1.1nm,0.4s,baz=45,slow=11,SNR=4.8						
NRIK	Noril'sk	50.93	23	LR	LR	05 05 32.9	
	comp=Z,58nm,21.6s,baz=340,slow=34						
BCYI	Bear Canyon	51.00	295	P	P	04 45 38.5	+1.2
PRP	Porcupine Dome	51.22	330	P	P	04 45 39.0	+0.6
DBIC	Dimbokro	51.55	142	P	P	04 45 43.5	+2.2
	comp=Z,2.7nm,0.8s,baz=265,slow=6.9,SNR=3.1						
DBIC				LR	LR	05 05 03.6	
	comp=Z,225nm,19.5s,baz=324,slow=33						
DBIC	Dimbokro	51.55	142	IAmb	IAmb	04 46 10.9	
	comp=Z,18nm,1.5s						
B08A	Colville Reser	51.61	302	P	P	04 45 41.6	+0.1
B08A				IAmb	IAmb	04 45 50.3	
	comp=Z,14nm,1.3s						
BCAR	Beaver Creek A	51.71	327	P	P	04 45 43.7	+1.7
DOT	Dot Lake	52.05	328	IAmb	IAmb	04 46 00.5	
	comp=Z,11nm,1.2s						
POKR	Poker Plat Res	52.07	331	IAmb	IAmb	04 45 47.2	
	comp=Z,7.6nm,0.8s						
MMAI	Mount Meron Ar	52.12	83	P	P	04 45 45.9	+0.3
	comp=Z,8.0nm,1.0s,baz=337,slow=6.3,SNR=4.1						
ILAR	Eielson Array	52.15	330	P	P	04 45 46.6	+1.4
	comp=Z,2.8nm,0.7s,baz=42,slow=4.9,SNR=42						
ILAR				LR	LR	05 07 06.4	
	comp=Z,118nm,19.0s,baz=76,slow=35						
ILAR	Eielson Array	52.15	330	P	P	04 45 45.6	+0.3
MARD	Mardin	52.41	76	P	P	04 45 47.6	-0.1
MARD				IAmb	IAmb	04 45 49.5	
	comp=Z,14nm,1.4s						
MDM	Murphy Dome	52.42	331	IAmb	IAmb	04 45 59.6	
	comp=Z,18nm,1.4s						
HDA	Harding Lake	52.43	330	IAmb	IAmb	04 45 49.6	
	comp=Z,7.8nm,0.6s						
MENT	Mentasta	52.44	327	IAmb	IAmb	04 45 50.3	
	comp=Z,8.6nm,0.8s						
I23K	Minto, Yukon-K	52.62	331	P	P	04 45 49.9	+1.2
I23K				IAmb	IAmb	04 45 51.6	
	comp=Z,7.4nm,1.0s						
GNI	Garni	52.82	70	P	P	04 45 52.4	+1.6
	comp=Z,3.7nm,0.5s,baz=344,slow=14,SNR=3.1						
GNI	Garni	52.82	70	IAmb	IAmb	04 46 08.7	
	comp=Z,9.1nm,1.1s						
LTY	Liberty	53.01	302	IAmb	IAmb	04 46 00.1	
	comp=Z,7.3nm,1.1s						
AKTO	Aktyubinsk	53.17	53	P	P	04 45 53.8	+0.8
	comp=Z,7.0nm,0.6s,baz=318,slow=7.6,SNR=24						
IMAR	Indian Mountai	53.23	334	P	P	04 45 53.5	+0.3
DUG	Dugway, Tooele	53.35	290	IAmb	IAmb	04 46 20.3	
	comp=Z,9.5nm,1.5s						
KTH	Kantishna Hill	54.25	331	IAmb	IAmb	04 46 03.0	
	comp=Z,9.2nm,0.9s						
SMLC	San Martn de	54.70	232	eP	P	04 46 04.7	+0.1
ABKAR	Akbulak array	54.89	53	P	P	04 46 05.5	0.0
ABKAR				IAmb	IAmb	04 46 07.1	
	comp=Z,12nm,1.4s						
TIXI	Tiksi	55.33	7	P	P	04 46 09.7	+1.3
TIXI				IAmb	IAmb	04 46 20.6	
	comp=Z,11nm,1.0s						
TXAR	Lajitas Array	55.43	274	P	P	04 46 10.1	+0.2
	comp=Z,0.5nm,0.7s,baz=63,slow=8.6,SNR=4.7						
TXAR				LR	LR	05 08 29.3	
	comp=Z,103nm,18.7s,baz=0.0,slow=34						
K05A	Summer Lake	56.14	298	P	P	04 46 16.0	+1.1
MOD	Modoc Plateau	56.38	296	IAmb	IAmb	04 46 18.4	
	comp=Z,3.8nm,0.7s						
X16A	Lo Mia Camp, P	56.50	284	IAmb	IAmb	04 46 30.4	
	comp=Z,7.5nm,1.4s						
BRVK	Borovoye	56.98	44	P	P	04 46 20.8	+0.3
BRVK				IAmb	IAmb	04 46 22.5	
	comp=Z,6.3nm,0.9s						
TNA	Tin City	57.01	339	IAmb	IAmb	04 46 23.8	
	comp=Z,12nm,1.3s						
BVAR	Borovoye Array	57.05	44	P	P	04 46 21.8	+0.8
	comp=Z,2.9nm,0.7s,baz=258,slow=6.8,SNR=21						
SPBC	San Pablo de B	57.45	230	eP	P	04 46 24.9	+0.6
NVAR	Mina Array Bea	57.67	292	P	P	04 46 26.2	+0.3
	comp=Z,0.4nm,0.5s,baz=55,slow=7.2,SNR=7.2						
NVAR				LR	LR	05 10 31.5	
	comp=Z,104nm,18.6s,baz=50,slow=35						
PTGC	Puerto Gaitan,	57.85	227	eP	P	04 46 27.6	+0.6
CBOC	Ciudad Bolivar	58.19	232	eP	P	04 46 30.0	+0.4
ROSC	El Rosal	58.28	230	P	P	04 46 32.9	+2.4
	comp=Z,38nm,0.7s,baz=227,slow=0.7,SNR=35						
ROSC				LR	LR	05 08 47.3	
	comp=Z,90nm,21.6s,baz=21,slow=33						
ROSC	El Rosal	58.28	230	P	P	04 46 31.1	+0.6
ROSC	El Rosal	58.28	230	eP	P	04 46 33.1	+2.6
GUY2C	Guyana, Caldas	58.44	231	eP	P	04 46 32.3	+0.6
RREF	El Recreo	58.71	231	eP	P	04 46 33.9	+0.1
TOLC	Tolima	58.97	231	eP	P	04 46 36.6	+1.3
ORTC	Ortega, Tolima	59.53	230	eP	P	04 46 40.1	+1.3
PRAC	Prado	59.53	230	eP	P	04 46 39.0	+0.1
BETC	Betania	60.70	230	eP	P	04 46 45.6	-1.3
BAR	Barrett	60.80	286	P	P	04 46 48.3	+0.9
BAR				IAmb	IAmb	04 47 05.4	
	comp=Z,7.8nm,1.3s						
POPC	Popayan, Colom	61.40	231	eP	P	04 46 49.9	-2.0
GEYT	Alibeck	61.85	64	LR	LR	05 14 11.5	
	comp=Z,27nm,18.9s,baz=155,slow=36						
GEYT	Alibeck	61.85	64	P	P	04 46 54.7	+0.2
GYA0B	ALIBECK ARRAY	61.85	64	P	P	04 46 54.5	+0.1
ZALV	Zalesovo Beam	62.02	36	P	P	04 46 57.2	+2.0
	comp=Z,0.6nm,0.6s,baz=316,slow=8.1,SNR=3.4						
ZALV				LR	LR	05 13 41.2	
	comp=Z,64nm,18.6s,baz=309,slow=36						
ZALV	Zalesovo Beam	62.02	36	P	P	04 46 55.3	+0.1
KURK	Kurchatov	62.19	42	P	P	04 46 56.3	-0.1
KURK				IAmb	IAmb	04 46 57.8	
	comp=Z,3.4nm,0.8s						
KURBB	Kurchatov Arra	62.22	42	P	P	04 46 57.3	+0.7
	comp=Z,2.9nm,0.8s,baz=324,slow=7.1,SNR=26						
KK31	Karatay Array	64.40	52	P	P	04 47 11.5	+0.2
KKAR	Karatay Array	64.40	52	P	P	04 47 10.9	-0.4
MAKZ	Makanchi	66.64	42	P	P	04 47 25.5	-0.1
MAKZ				IAmb	IAmb	04 47 27.2	
	comp=Z,7.4nm,1.1s						
AAK	Ala-Archa	66.64	50	P	P	04 47 28.0	+2.0
	comp=Z,0.7nm,0.3s,baz=319,slow=11,SNR=4.8						
AAK	Ala-Archa	66.64	50	P	P	04 47 26.0	+0.1
AAK				IAmb	IAmb	04 47 28.4	
	comp=Z,7.1nm,1.4s						
MK31	Makanchi Array	66.78	42	P	P	04 47 26.1	-0.4

MK31				IAmb	IAmb	04 47 28.0	
	comp=Z,3.9nm,0.7s						
MKAR	**Makanchi Array**	**66.78**	**42**	P	**P**	**04 47 27.7**	**+1.1**
	comp=Z,4.4nm,0.6s,baz=330,slow=5.8,SNR=54						
MKAR				LR	LR	05 15 30.8	
	comp=Z,125nm,21.1s,baz=318,slow=35						
MKAR	**Makanchi Array**	**66.78**	**42**	P	**P**	**04 47 26.0**	**-0.6**
BDFB	**Brasilia**	**69.20**	**195**	P	**P**	**04 47 43.0**	**+0.9**
	comp=Z,1.5nm,0.7s,baz=72,slow=3.1,SNR=4.4						
BDFB				LR	LR	05 12 37.9	
	comp=Z,58nm,21.0s,baz=323,slow=31						
BDFB	**Brasilia**	**69.20**	**195**	IAmb	IAmb	04 48 08.9	
	comp=Z,4.4nm,1.1s						
KSH	**Kashi**	**69.78**	**51**	P	**P**	**04 47 47.6**	**+2.0**
KSH				PP	**PP**	**04 50 20.5**	**+1.1**
KSH				S	**S**	**04 56 54.4**	**-0.3**
KSH				ScS	**SKSac**	**04 57 42.5**	**-3.9**
KSH				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KSH				pmax	pmax		
	comp=Z,320nm,4.9s						
KSH				LR	LR		
	comp=Z,240nm,7.1s						
KSH				LR	LR		
	comp=Z,270nm,5.6s						
KSH				LR	LR		
	comp=Z,160nm,8.1s						
UOSS	**Minazif**	**70.41**	**74**	P	**P**	**04 47 48.6**	**-0.9**
UOSS				IAmb	IAmb	04 47 49.6	
	comp=Z,7.2nm,0.8s						
WMQ	**Urumqi**	**71.39**	**41**	*e*P	**P**	**04 47 56.8**	**+1.5**
WMQ				pmax	pmax		
	comp=Z,12nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,150nm,4.7s						
PETK	**Petropavlovsk-**	**74.14**	**353**	LR	LR	05 21 40.4	
	comp=Z,104nm,19.2s,baz=12,slow=36						
SONM	**Songino Array**	**74.18**	**27**	P	**P**	**04 48 12.9**	**+1.0**
	comp=Z,2.7nm,1.0s,baz=328,slow=6.4,SNR=8.5						
SONM				LR	LR	05 22 35.8	
	comp=Z,75nm,18.1s,baz=42,slow=37						
SONM	**Songino Array**	**74.18**	**27**	P	**P**	**04 48 12.3**	**+0.4**
ULN	**Ulaanbaatar**	**74.33**	**26**	P	**P**	**04 48 12.8**	**0.0**
ULN				IAmb	IAmb	04 48 24.7	
	comp=Z,7.6nm,1.1s						
LPAZ	**La Paz**	**74.93**	**214**	P	**P**	**04 48 18.1**	**+1.1**
	comp=Z,1.7nm,0.9s,baz=10.0,slow=12,SNR=3.0						
LPAZ				LR	LR	05 18 12.7	
	comp=Z,30nm,20.9s,baz=360,slow=33						
KMBO	**Kilima Mbogo**	**79.36**	**106**	LR	LR	05 24 35.0	
	comp=Z,42nm,18.3s,baz=299,slow=36						
GTA	**Gaotai**	**79.74**	**35**	⇑P	**P**	**04 48 43.8**	**+0.5**
GTA				pP	PcP	04 48 53.0	+1.9
GTA				sP	pwP	04 48 57.8	+7.4
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
CPUP	**Villa Florida**	**81.39**	**201**	LR	LR	05 22 39.3	
	comp=Z,32nm,18.5s,baz=26,slow=34						
HHC	**Hu-ho-hao-te**	**82.05**	**26**	*e*P	**P**	**04 48 55.3**	**-0.3**
HHC				pmax	pmax		
	comp=Z,4.0nm,1.2s						
HHC				pmax	pmax		
	comp=Z,180nm,6.6s						
LZH	**Lanzhou**	**84.11**	**33**	*e*P	P	04 49 17.5	+11
LZH				pP	pwP	04 49 30.8	+17
LZH				sP	PcP	04 49 38.3	+28
LZH				pmax	pmax		
	comp=Z,16nm,1.2s						
XAN	**Xi'an**	**87.63**	**30**	P	**P**	**04 49 23.9**	**+0.2**
XAN				pP	sP	04 49 26.6	+0.1
XAN				pmax	pmax		
	comp=Z,4.0nm,1.4s						
KSRS	**Korea Array**	**88.78**	**15**	LR	LR	05 31 05.8	
	comp=Z,39nm,20.0s,baz=28,slow=37						
CD2	**Chengdu**	**88.79**	**36**	*e*P	**P**	**04 49 26.3**	**-3.0**
CD2				pmax	pmax		
	comp=Z,10.0nm,1.9s						
NJ2	**Nanjing**	**92.23**	**23**	*e*P	**P**	**04 49 44.5**	**-0.7**
NJ2				pmax	pmax		
	comp=Z,3.0nm,0.5s						
BOSA	**Boshof**	**95.79**	**131**	LR	LR	05 31 11.5	
	comp=Z,86nm,20.2s,baz=355,slow=34						
CMAR	**Chiang Mai Arr**	**98.07**	**45**	LR	LR	05 36 38.2	
	comp=Z,42nm,21.6s,baz=2.0,slow=37						
PLCA	**Paso Flores**	**98.42**	**208**	LR	LR	05 33 35.2	
	comp=Z,25nm,19.0s,baz=10,slow=35						
KNRA	**Kununurra**	**140.50**	**27**	PKPdf	**PKPdf**	**04 56 05.0**	**+0.2**
WRA	**Warramunga Arr**	**145.98**	**21**	PKPbc	**PKPdf**	**04 56 14.5**	**+0.2**
	comp=Z,1.6nm,0.7s,baz=340,slow=3.1,SNR=11						
WRA	**Warramunga Arr**	**145.98**	**21**	PKPbc	**PKPab**	**04 56 15.9**	**+0.3**
ASAR	**Alice Springs**	**149.47**	**23**	PKPbc	**PKPbc**	**04 56 23.9**	**-0.6**
	comp=Z,1.0nm,0.7s,baz=350,slow=2.3,SNR=13						

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*NAO **15** 04:37:25.7±1.3, 67°.68N×33°.71E, ML2.6*
*IDC **15** 04:37:26.6±1.0, 67°.70N×33°.82E, h0^{km}, mb3.2/2, mb1 3.4/6, mb1mx3.1/54, mbtmp3.4/6, ML2.5/4, MS3.0/1, Ms1 3.0/1, ms1mx2.2/25, Error ellipse: s-maj=13.1km s-min=9.0km az=54.0*
*HEL **15** 04:37:26.9±0.3, 67°.69N×33°.40E, h0^{km}, ML2.0, Explosion*
ISC 15 04:37:25.0±1.1**, 67°.60N**±0°.04×**33°.66E**±0°.06**, h0^{km}, n33, σ1^s.43**/54**, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APA0	**Apatity Array**	**0.26**	**272**	Pg	**Pg**	**04 37 31.2**	**+1.4**
	baz=82,slow=16						
APA0				Lg	Lg	04 37 35.4	
	baz=81,slow=37						
APA0				Rg	Rg	04 37 36.8	
	baz=76,slow=37						
APA0	**Apatity Array**	**0.26**	**272**	Pg	**Pg**	**04 37 31.2**	**+1.4**
	baz=82,slow=16						
APA0				Sg	**Sg**	**04 37 35.4**	**+2.2**
	baz=81,slow=37						
VRF	**Varrio**	**1.56**	**277**	PN	**Pn**	**04 37 54.0**	**+0.2**
VRF				MSG		04 38 10.4	
	comp=Z,14nm,0.2s						
VRF				SN	**Sg**	**04 38 14.0**	**-0.9**
OLKF	**Oulanka, Finla**	**2.11**	**235**	PG	**Pb**	**04 38 03.9**	**-0.2**
OLKF				SG	**Sg**	**04 38 33.1**	**+0.4**
KU6	**Riekki**	**2.17**	**225**	PB	**Pb**	**04 38 04.6**	**-0.5**
KU6				MSG		04 38 31.2	
	comp=Z,9.3nm,0.2s						
KU6				SG	**Sg**	**04 38 34.9**	**+0.2**
MSF	**Maaselka**	**2.50**	**229**	PB	**Pb**	**04 38 09.6**	**-1.0**
MSF				SG	**Sg**	**04 38 45.0**	**-0.1**
SGF	**Sodankyl**	**2.75**	**270**	PB	**Pn**	**04 38 10.9**	**+0.7**
SGF				SG	**Sb**	**04 38 47.5**	**-1.5**
RNF	**Rovaniemi**	**3.15**	**255**	PN	**Pn**	**04 38 17.1**	**+1.4**
	baz=67						
RNF				SB	**Sn**	**04 38 56.3**	**+2.3**
ARA0	**ARCESS Array S**	**3.57**	**307**	Pn	**Pn**	**04 38 21.9**	**+0.4**
	baz=124,slow=16						
ARA0				Sn	**Sn**	**04 39 02.9**	**-1.4**
	baz=120,slow=28						
ARA0				Lg	Lg	04 39 14.1	
	baz=111,slow=37						
ARA0	**ARCESS Array S**	**3.57**	**307**	Pn	**Pn**	**04 38 21.9**	**+0.4**
	baz=124,slow=16						
ARA0				Sn	**Sn**	**04 39 02.9**	**-1.4**
	baz=120,slow=28						
ARA0				Sg	**Sb**	**04 39 14.1**	**+1.4**
	baz=111,slow=37						
ARA0	**ARCESS Array S**	**3.57**	**307**	PN	**Pn**	**04 38 21.9**	**+0.4**
	baz=123						
ARCES	**ARCESS Array B**	**3.57**	**307**	Pn	**Pn**	**04 38 22.1**	**+0.6**
	baz=120,slow=15,SNR=94						
ARCES				Pg	**Pb**	**04 38 30.7**	**+1.8**
	baz=114,slow=15,SNR=13						
ARCES				Sn	**Sn**	**04 39 03.6**	**-0.8**
	baz=120,slow=24,SNR=14						
ARCES				Lg	Lg	04 39 17.6	
	baz=119,slow=25,SNR=12						
TOF	**Tornio**	**3.99**	**252**	PN	**Pn**	**04 38 28.0**	**+0.7**
OUL	**Oulu**	**4.02**	**235**	PB	**Pb**	**04 38 34.6**	**-1.9**
	baz=47						
KTK1	**Kautokeino**	**4.12**	**295**	Pn	**Pn**	**04 38 29.7**	**+0.6**
KTK1				Sn	**Sn**	**04 39 16.9**	**-1.0**
KTK1				Lg	Lg	04 39 30.8	
KTK1	**Kautokeino**	**4.12**	**295**	Pn	**Pn**	**04 38 29.7**	**+0.6**
KTK1				Sn	**Sn**	**04 39 16.9**	**-1.0**
KTK1				Sg	**Sb**	**04 39 30.8**	**+2.2**
PAJU	**Pajala**	**4.13**	**267**	PN	**Pn**	**04 38 29.5**	**+0.3**
LANU	**Lannavaara**	**4.45**	**281**	PN	**Pn**	**04 38 33.2**	**-0.4**
ERTU	**Ertsjaerv**	**4.61**	**262**	PN	**Pn**	**04 38 36.1**	**+0.4**
ERTU				SN	**Sn**	**04 39 30.3**	**+0.4**
OUF	**Merijarvi**	**4.88**	**233**	PN	**Pn**	**04 38 42.5**	**+3.0**
KIF	**Kilpisjarvi**	**4.98**	**292**	Pn	**Pn**	**04 38 40.7**	**-0.1**
KIF				Sn	**Sn**	**04 39 36.1**	**-2.8**
KIF				Lg	Lg	04 39 56.0	
KIF	**Kilpisjarvi**	**4.98**	**292**	Pn	**Pn**	**04 38 40.7**	**-0.1**
KIF				Sn	**Sn**	**04 39 36.1**	**-2.8**
KIF	**Kilpisjarvi**	**4.98**	**292**	PN	**Pn**	**04 38 40.6**	**-0.1**
KIF				SN	**Sn**	**04 39 37.7**	**-1.2**
FIA0	**FINESS Array S**	**6.99**	**211**	Pn	**Pn**	**04 39 09.5**	**+1.1**
	baz=29,slow=12						
FIA0				Sn	**Sn**	**04 40 26.8**	**-1.6**
	baz=32,slow=22						
FIA0				Lg	Lg	04 41 00.7	
	baz=28,slow=28						
FIA0	**FINESS Array S**	**6.99**	**211**	Pn	**Pn**	**04 39 09.5**	**+1.1**
	baz=29,slow=12						
FIA0				Sn	**Sn**	**04 40 26.8**	**-1.6**
	baz=32,slow=22						
FINES	**FINESS Array B**	**6.99**	**211**	Pn	**Pn**	**04 39 09.5**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=29,slow=11,SNR=3.8						
FINES				Sn	**Sn**	**04 40 28.3**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=29,slow=21,SNR=2.4						
HFS	**Hagfors**	**11.50**	**239**	Pn	**Pn**	**04 40 09.3**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=30,slow=15,SNR=2.6						
HFS	**Hagfors**	**11.50**	**239**	Pn	**Pn**	**04 40 07.6**	**-2.6**
	baz=56,slow=16						
HFS	**Hagfors**	**11.50**	**239**	Pn	**Pn**	**04 40 07.6**	**-2.6**
	baz=56,slow=16						
SPITS	**Spitsbergen Ar**	**11.69**	**342**	Pn	**Pn**	**04 40 10.0**	**-2.7**
	baz=128,slow=14,SNR=4.4						
KURBB	**Kurchatov Arra**	**27.74**	**105**	P	**P**	**04 43 15.5**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=330,slow=8.5,SNR=2.4						
GNI	**Garni**	**28.18**	**162**	LR	LR	04 54 01.2	
	comp=Z,30nm,19.8s,baz=7.5,slow=35						
MKAR	**Makanchi Array**	**32.31**	**105**	P	**P**	**04 43 56.8**	**+1.6**
	comp=Z,0.2nm,0.6s,baz=324,slow=7.5,SNR=2.7						

IDC 15 04:48:50.4±11.0**, 13°.92S×167°.00E, h121^{km}**±102^{km}**, mb3.4**/3**, mb1 3.6**/4**, mb1mx3.4**/27**, mbtmp3.8**/4**, ML3.1**/1**, Error ellipse: s-maj=109.9km s-min=43.7km az=167.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**8.12**	**184**	P	Pn	04 50 45.6	0.0
	0.2nm,0.3s,baz=93,slow=18,SNR=2.9						
DZM				S	Sn	04 52 09.2	-6.7
	0.3nm,0.3s,baz=72,slow=19,SNR=2.9						
STKA	**Stephens Creek**	**29.33**	**228**	P	P	04 54 42.0	+0.2
	1.4nm,0.4s,baz=60,slow=8.3,SNR=5.4						
WRA	**Warramunga Arr**	**31.78**	**255**	P	P	04 55 03.3	-0.3
	0.6nm,0.9s,baz=85,slow=10,SNR=4.2						
ASAR	**Alice Springs**	**32.73**	**248**	P	P	04 55 11.8	0.0
	0.4nm,0.4s,baz=80,slow=9.1,SNR=10.0						
ARCES	**ARCESS Array B**	**119.41**	**345**	PKP	PKPdf	05 07 24.8	-0.2
	2.1nm,0.8s,baz=65,slow=2.4,SNR=3.2						

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*OTT **15** 04:49:30.0±0.3, 72°.00N×75°.13W, h18^{km}, MN3.6/9, 124km southeast from Pond Inlet, Nu Baffin Island Seismic Zone, Nt.*
*DNK **15** 04:49:30.5±1.9, 72°.23N×74°.77W, h0^{km}±74^{km}, ML3.1*
*IDC **15** 04:49:31.7±2.9, 71°.70N×76°.07W, h0^{km}, mb3.0/2, mb1 3.6/4, mb1mx3.2/42, mbtmp3.2/4, ML3.5/2, Error ellipse: s-maj=54.1km s-min=27.4km az=39.0*
ISC 15 04:49:25.0±0.7**, 71°.91N**±0°.05×**75°.38W**±0°.05**, h10^{km}, n22, σ3^s.20**/34**, Baffin Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CLRN	**Clyde River**	**2.63**	**120**	PN	**Pn**	**04 50 10.9**	**+3.5**
CLRN				SN	**Sn**	**04 50 43.1**	**+3.8**
CLRN				Trac		04 50 50.5	
	comp=Z,131nm,0.1s						
TULEG	**Thule**	**4.98**	**18**	PN	**Pn**	**04 50 41.4**	**+1.7**
TULEG				SN	**Sn**	**04 51 34.9**	**-2.3**
TULEG				Trac		04 51 38.9	
	comp=Z,18nm,0.2s						
TULEG	**Thule**	**4.98**	**18**	*i* P	**Pn**	**04 50 41.4**	**+1.7**
TULEG				*i* S	**Sn**	**04 51 33.9**	**-3.3**
TULEG				IAML		04 51 39.3	
	comp=Z,23nm,0.4s						
KULLO	**Kullorsuaq**	**5.88**	**54**	*i* P	**Pn**	**04 50 53.7**	**+1.7**
KULLO				*i* S	**Sn**	**04 51 55.9**	**-3.4**
KULLO	**Kullorsuaq**	**5.88**	**54**	PN	**Pn**	**04 50 53.8**	**+1.8**
KULLO				SN	**Sn**	**04 51 56.1**	**-3.2**
KULLO				Trac		04 52 00.1	
	comp=Z,12nm,0.2s						
KULLO	**Kullorsuaq**	**5.88**	**54**	*i* P	**Pn**	**04 50 53.7**	**+1.7**
KULLO				*i* S	**Sn**	**04 51 55.9**	**-3.4**
KULLO				IAML		04 52 00.6	
	comp=Z,13nm,0.4s						
UPNV	**Upernavik**	**5.91**	**72**	*e*P	**Pn**	**04 50 54.8**	**+2.3**
UPNV				*i* S	**Sn**	**04 51 56.2**	**-3.8**
UPNV				IAML		04 52 00.6	
	comp=Z,10nm,0.3s						
RES	**Resolute Bay**	**6.26**	**305**	PN	**Pn**	**04 51 00.9**	**+3.7**
RES				SN	**Sn**	**04 52 09.2**	**+0.6**
RES				LG	Lg	04 52 50.1	
RES				Trac		04 52 51.0	
	comp=Z,46nm,0.6s						
NUUG	**Nuugaatsiaq**	**6.97**	**82**	*i* P	**Pn**	**04 51 10.5**	**+3.5**
NUUG				*i* S	**Sn**	**04 52 23.2**	**-2.8**
NUUG				IAML		04 52 26.7	
	comp=Z,3.9nm,0.3s						
EUNU	**Eureka**	**8.59**	**347**	PN	**Pn**	**04 51 32.0**	**+2.9**
EUNU				SN	**Sn**	**04 53 03.4**	**-2.6**
EUNU				Trac		04 53 15.4	
	comp=Z,296nm,4.1s						
FRB	**Frobisher Bay**	**8.59**	**159**	Pn	**Pn**	**04 51 31.4**	**+2.3**
	comp=Z,0.8nm,0.3s,baz=330,slow=12,SNR=9.0						
FRB	**Frobisher Bay**	**8.59**	**159**	PN	**Pn**	**04 51 31.7**	**+2.6**
FRB				SN	**Sn**	**04 53 05.3**	**-0.6**
FRB				LG	Lg	04 53 58.1	
FRB				Trac		04 54 02.4	
	comp=Z,52nm,0.5s						
SUMG	**Summit**	**11.17**	**69**	*i* P	**Pn**	**04 52 05.4**	**+0.6**
SUMG	**Summit**	**11.17**	**69**	*i* P	**Pn**	**04 52 05.5**	**+0.6**
SUMG				IAML		04 54 05.7	
	comp=Z,6.8nm,0.4s						
KAJQ	**Kangiqsualujju**	**13.81**	**159**	PN	**Pn**	**04 52 40.9**	**+0.4**
KAJQ				SN	**Sn**	**04 55 07.8**	**-5.9**
KAJQ				LG	Lg	04 56 40.7	
KAJQ				Trac		04 56 54.0	
	comp=Z,17nm,0.5s						
KUKN	**Kugluktuk,NWT**	**14.05**	**273**	PN	**Pn**	**04 52 43.8**	**0.0**
KUKN				SN	**Sn**	**04 55 14.0**	**-5.6**
KUKN				Trac		04 56 44.7	
	comp=Z,54nm,1.1s						
KUKN				LG	Lg	04 56 47.0	
FCC	**Fort Churchill**	**15.21**	**220**	PN	**Pn**	**04 53 00.2**	**+0.7**
FCC				SN	**Sn**	**04 55 42.5**	**-5.2**
FCC				LG	Lg	04 57 21.4	
FCC				Trac		04 57 27.9	
	comp=Z,676nm,3.9s						
DHRN	**Dharma Camp**	**15.90**	**274**	PN	**Pn**	**04 53 08.9**	**+0.4**
DHRN				SN	Sn	04 55 54.6	-10
DHRN				Trac		04 57 41.1	
	comp=Z,340nm,4.0s						
DHRN				LG	Lg	04 57 51.1	
KJKQ	**Kuujjuarapik**	**16.73**	**185**	SN	Sn	04 56 14.6	-10
KJKQ				SN	S	04 56 18.1	-18
KJKQ				Trac		04 58 08.9	
	comp=Z,2.5nm,0.2s						
KJKQ				LG	Lg	04 58 21.0	
YKA	**Yellowknife Ar**	**17.50**	**258**	Pn	**Pn**	**04 53 27.7**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=39,slow=12,SNR=9.4						
YKA				Sn	Sn	04 56 28.7	-15
	comp=Z,0.2nm,0.3s,baz=38,slow=22,SNR=7.2						
YKA				Lg	Lg	04 58 21.4	
	comp=Z,0.3nm,0.3s,baz=35,slow=30,SNR=6.2						
ILAR	**Eielson Array**	**25.74**	**291**	P	**P**	**04 55 02.1**	**+7.0**
	comp=Z,0.1nm,0.5s,baz=38,slow=8.4,SNR=4.0						
TXAR	**Lajitas Array**	**45.31**	**216**	P	P	04 57 49.6	+6.8
	comp=Z,0.1nm,0.5s,baz=15,slow=7.5,SNR=3.2						

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*IDC **15** 04:52:53.0±2.4, 13°.53S×74°.67W, h102^{km}±17^{km}, mb3.2/4, mb1 3.5/9, mb1mx3.4/30, mbtmp3.7/9, MS2.5/1, Ms1 2.6/1, ms1mx2.4/6, Error ellipse: s-maj=57.6km s-min=17.7km az=27.0*
ISC 15 04:52:52.3±1.4**, 13°.6S**±0°.3×**74°.8W**±0°.2**, h100^{km}, n10, σ1^s.35**/11**, mb3.5**/4**, Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	**Nana**	**2.59**	**309**	P	**Pn**	**04 53 32.2**	**-0.4**
	54nm,0.3s,baz=131,slow=12,SNR=84						
NNA				S	**Sn**	**04 54 02.4**	**-1.2**
	40nm,0.3s,baz=126,slow=7.7,SNR=8.6						
LPAZ	**La Paz**	**6.95**	**113**	P	**Pn**	**04 54 33.8**	**+1.7**
	0.7nm,0.3s,baz=301,slow=10,SNR=19						
LPAZ				LR	LR	04 57 45.5	
	comp=Z,34nm,19.9s,baz=274,slow=42						
ATAH	**Atahualpa**	**7.36**	**331**	P	**Pn**	**04 54 39.3**	**+1.8**
	0.9nm,0.3s,baz=199,slow=3.9,SNR=8.4						
SIV	**San Ignacio**	**13.46**	**102**	P	**Pn**	**04 55 58.4**	**-0.9**
	0.1nm,0.3s,baz=311,slow=10,SNR=6.5						
PTGA	**Pitinga**	**19.47**	**50**	P	**P**	**04 57 10.6**	**-0.8**
	0.5nm,0.3s,baz=234,slow=16,SNR=5.6						
TXAR	**Lajitas Array**	**51.01**	**327**	P	**P**	**05 01 45.1**	**+0.8**
	0.1nm,0.3s,baz=157,slow=9.6,SNR=4.8						
PDAR	**Pinedale Array**	**64.55**	**332**	P	**P**	**05 03 18.9**	**-0.1**
	0.1nm,0.4s,baz=104,slow=11,SNR=2.4						
TORD	**Torodi Ar. Bea**	**80.29**	**74**	P	**P**	**05 04 51.0**	**-1.9**
	1.2nm,0.8s,baz=279,slow=5.7,SNR=4.4						
YKA	**Yellowknife Ar**	**81.99**	**343**	P	**P**	**05 05 00.9**	**+0.2**
	1.0nm,1.0s,baz=136,slow=6.4,SNR=5.2						
SONM	**Songino Array**	**145.88**	**359**	PKPbc	**PKPab**	**05 12 22.0**	**+1.1**
	0.1nm,0.3s,baz=304,slow=1.6,SNR=4.6						

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*NEIC **15** 05:23:32.9±1.8, 18°.9N±0°.1×146°.2E±0°.2, h92^{km}±8^{km}, mb4.3/13, Error ellipse: s-maj=26.0km s-min=15.6km az=100.0*
*IDC **15** 05:23:35.2±8.1, 18°.88N×146°.28E, h112^{km}±74^{km}, mb3.4/10, mb1 3.6/11, mb1mx3.4/44, mbtmp3.8/11, ML3.0/1, Error ellipse: s-maj=32.0km s-min=16.9km az=91.0*
ISC 15 05:23:34.3±0.6**, 18°.75N**±0°.09×**146°.2E**±0°.2**, h109^{km}, n43, σ1^s.14**/37**, mb4.0**/17**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SARN	**Sarigan**	**2.08**	**191**	P	**Pn**	**05 24 06.9**	**-1.4**
SARN	**Sarigan**	**2.08**	**191**	P	**Pn**	**05 24 06.9**	**-1.4**
ANA2	**Anatahan**	**2.44**	**191**		**Pn**	**05 24 11.7**	**-1.3**
ANA2	**Anatahan**	**2.44**	**191**	P	**Pn**	**05 24 11.9**	**-1.0**
ANA2	**Anatahan**	**2.44**	**191**	P	**Pn**	**05 24 12.1**	**-0.8**
GUMO	**Guam**	**5.29**	**194**	Pn	**Pn**	**05 24 51.3**	**+0.3**
MJAR	**Matsushiro Arr**	**19.06**	**340**	P	**P**	**05 27 47.3**	**-0.8**
	0.0nm,0.3s,baz=176,slow=12,SNR=3.4						
H11S3	**WAKE ISLAND Hy**	**19.43**	**87**	T	T	05 48 42.0	
	baz=274,slow=74,SNR=11						
H11S1	**WAKE ISLAND Hy**	**19.45**	**87**	T	T	05 48 42.5	
	baz=274,slow=74,SNR=12						
H11S2	**WAKE ISLAND Hy**	**19.45**	**87**	T	T	05 48 42.9	
	baz=274,slow=74,SNR=12						
H11N1	**WAKE ISLAND Hy**	**19.58**	**84**	T	T	05 48 59.4	
	baz=267,slow=74,SNR=4.4						
H11N2	**WAKE ISLAND Hy**	**19.58**	**84**	T	T	05 49 01.4	
	baz=267,slow=74,SNR=4.7						
H11N3	**WAKE ISLAND Hy**	**19.59**	**84**	T	T	05 49 00.8	
	baz=267,slow=74,SNR=5.0						
KSAR	**Wonju Array Be**	**24.56**	**323**	P	**P**	**05 28 41.1**	**-2.8**
WB0	**Warramunga Arr**	**39.99**	**197**	P	**P**	**05 30 58.2**	**-0.2**
WB0				IAmb	IAmb	05 31 18.0	
	comp=Z,3.6nm,1.1s						
WR0	**Warramunga Arr**	**40.13**	**197**	P	**P**	**05 30 59.8**	**+0.2**
WRA	**Warramunga Arr**	**40.17**	**197**	P	**P**	**05 31 00.9**	**+0.9**
	comp=Z,0.5nm,0.6s,baz=18,slow=8.4,SNR=6.8						
FITZ	**Fitzroy Crossi**	**41.82**	**210**	P	**P**	**05 31 14.7**	**+1.3**
FITZ				IAmb	IAmb	05 31 29.3	
	comp=Z,20nm,1.4s						
SONM	**Songino Array**	**43.39**	**321**	P	**P**	**05 31 27.0**	**+0.9**
	comp=Z,0.3nm,0.5s,baz=133,slow=8.3,SNR=3.5						
SONM	**Songino Array**	**43.39**	**321**	P	**P**	**05 31 26.6**	**+0.6**
ASAR	**Alice Springs**	**43.83**	**196**	P	**P**	**05 31 32.1**	**+2.4**
	comp=Z,0.2nm,0.4s,baz=21,slow=6.9,SNR=8.6						
ASAR	**Alice Springs**	**43.83**	**196**	P	**P**	**05 31 31.0**	**+1.3**
MKAR	**Makanchi Array**	**58.76**	**314**	P	**P**	**05 33 21.7**	**+0.8**
	comp=Z,0.2nm,0.5s,baz=96,slow=7.0,SNR=3.8						
RND	**Reindeer**	**62.23**	**27**	P	**P**	**05 33 44.5**	**+0.2**
ILAR	**Eielson Array**	**63.39**	**26**	P	**P**	**05 33 50.5**	**-1.3**
	comp=Z,0.3nm,0.5s,baz=258,slow=5.2,SNR=5.9						
ILAR	**Eielson Array**	**63.39**	**26**	P	**P**	**05 33 49.9**	**-1.9**
BCAR	**Beaver Creek A**	**65.31**	**28**	P	**P**	**05 34 04.9**	**+0.4**
BRVK	**Borovoye**	**66.79**	**320**	P	**P**	**05 34 14.2**	**+0.2**
BRVK				IAmb	IAmb	05 34 14.7	
	comp=Z,1.3nm,0.7s						
KKAR	**Karatay Array**	**67.09**	**310**	P	**P**	**05 34 16.8**	**+0.6**
ABKAR	**Akbulak array**	**73.61**	**317**	P	**P**	**05 34 55.5**	**-0.2**
YKA	**Yellowknife Ar**	**77.72**	**28**	P	**P**	**05 35 18.9**	**0.0**
	comp=Z,0.3nm,0.4s,baz=287,slow=4.9,SNR=5.9						
RES	**Resolute Bay**	**79.26**	**14**	P	**P**	**05 35 27.7**	**+0.6**
	comp=Z,1.0nm,0.7s,baz=354,slow=6.8,SNR=8.0						
PINE	**Pine Mountain**	**79.28**	**47**	P	**P**	**05 35 29.1**	**+1.0**
PINE				IAmb	IAmb	05 35 36.6	
	comp=Z,5.0nm,1.1s						
PNTR	**Pine Nut**	**81.58**	**52**	P	**P**	**05 35 41.7**	**+1.2**
PNTR				IAmb	IAmb	05 35 51.8	
	comp=Z,3.0nm,0.8s						
KEV	**Kevo**	**82.02**	**342**	P	**P**	**05 35 42.3**	**+0.4**
PAGB	**Antelope Grade**	**82.08**	**55**	P	**P**	**05 35 42.3**	**-0.6**
PAGB				IAmb	IAmb	05 36 09.1	
	comp=Z,12nm,1.4s						
ARCES	**ARCESS Array B**	**82.58**	**342**	P	**P**	**05 35 44.9**	**0.0**
	comp=Z,7.4nm,1.1s,baz=63,slow=6.2,SNR=16						
ARCES	**ARCESS Array B**	**82.58**	**342**	P	**P**	**05 35 45.1**	**+0.2**
NVAR	**Mina Array Bea**	**82.74**	**52**	P	**P**	**05 35 47.1**	**+0.5**
	comp=Z,0.4nm,0.6s,baz=265,slow=6.8,SNR=5.8						
TPNV	**Topopah Spring**	**84.76**	**53**	P	**P**	**05 35 55.7**	**-1.2**
TPNV				IAmb	IAmb	05 35 56.9	
	comp=Z,3.5nm,1.2s						
FIA1	**FINESS Array S**	**87.03**	**335**	P	**P**	**05 36 06.1**	**-1.1**
FINES	**FINESS Array B**	**87.03**	**335**	P	**P**	**05 36 05.8**	**-1.4**
	comp=Z,2.5nm,0.5s,baz=71,slow=4.4,SNR=35						
FINES	**FINESS Array B**	**87.03**	**335**	P	**P**	**05 36 06.0**	**-1.2**

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*IDC **15** 05:24:40.5±2.8, 19°.86S×179°.30W, h643^{km}±22^{km}, mb3.0/6, mb1 3.4/7, mb1mx3.0/41, mbtmp3.9/7, Error ellipse: s-maj=88.9km s-min=16.8km az=152.0*
ISC 15 05:24:40.8±1.5**, 19°.7S**±0°.5×**179°.4W**±0°.2**, h650^{km}, n12, σ1^s.02**/13**, mb3.5**/6**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.07**	**309**	P	**P**	**05 26 03.9**	**-0.8**
	5.5nm,0.3s,baz=246,slow=23,SNR=25						
WRA	**Warramunga Arr**	**43.38**	**261**	P	**P**	**05 31 49.7**	**+0.8**
	0.5nm,0.3s,baz=97,slow=7.4,SNR=17						
ASAR	**Alice Springs**	**43.40**	**256**	P	**P**	**05 31 49.8**	**+0.8**
	1.5nm,0.7s,baz=88,slow=8.0,SNR=22						
ASAR				PcP	**PcP**	**05 33 22.4**	**+0.2**
	0.5nm,0.5s,baz=108,slow=4.1,SNR=6.5						
NVAR	**Mina Array Bea**	**81.37**	**44**	P	**P**	**05 35 52.8**	**+0.7**
	0.7nm,0.5s,baz=236,slow=6.4,SNR=8.6						
TXAR	**Lajitas Array**	**87.76**	**58**	P	**P**	**05 36 23.1**	**+0.1**
	0.7nm,0.8s,baz=218,slow=6.1,SNR=9.5						
ILAR	**Eielson Array**	**87.83**	**13**	P	**P**	**05 36 23.6**	**+1.3**
	0.4nm,0.5s,baz=215,slow=5.4,SNR=11						
PDAR	**Pinedale Array**	**89.30**	**44**	P	**P**	**05 36 30.1**	**+0.1**
	0.5nm,0.6s,baz=199,slow=3.1,SNR=6.5						
ARCES	**ARCESS Array B**	**127.87**	**349**	PKP	**PKiKP**	**05 42 33.7**	**-0.7**
	4.5nm,0.9s,baz=58,slow=4.7,SNR=5.4						
FINES	**FINESS Array B**	**134.61**	**343**	PKP	**PKPdf**	**05 42 45.6**	**-0.9**
	3.1nm,0.9s,baz=172,slow=3.9,SNR=4.5						
AKASG	**Malin Array Be**	**141.64**	**331**	PKP	**PKPdf**	**05 42 57.5**	**-2.2**
	1.6nm,0.3s,baz=42,slow=4.5,SNR=12						
BRTR	**Keskin Array B**	**145.29**	**312**	PKPbc	**PKPab**	**05 43 09.6**	**0.0**
	0.5nm,0.4s,baz=141,slow=3.8,SNR=4.4						
GERES	**GERESS Array B**	**149.04**	**343**	PKPbc	**PKiKP**	**05 43 18.4**	**+0.2**
	0.9nm,0.8s,baz=357,slow=2.7,SNR=6.8						

IDC 15 05:48:22.2±23.0**, 15°.66S×66°.83E, h0^{km}, mb3.6**/4**, mb1 3.8**/4**, mb1mx3.4**/49**, mbtmp3.6**/4**, MS3.6**/7**, Ms1 3.6**/7**, ms1mx3.2**/40**, Error ellipse: s-maj=777.4km s-min=33.2km az=58.0, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMBO	**Kilima Mbogo**	**32.55**	**293**	LR	LR	06 05 09.1	
	comp=Z,95nm,20.7s,baz=96,slow=31						
BOSA	**Boshof**	**40.41**	**244**	LR	LR	06 09 43.4	
	comp=Z,127nm,20.1s,baz=70,slow=32						

CMAR	Chiang Mai Arr	46.37	44	LR	LR	06 13 57.9	
	comp=Z,130nm,19.1s,baz=207,slow=33						
H01W3	Cape Leeuwin H	46.39	123	T	T	06 46 13.9	
	baz=282,slow=75,SNR=6.7						
H01W2	Cape Leeuwin H	46.39	123	T	T	06 46 11.2	
	baz=282,slow=75,SNR=7.4						
H01W1	Cape Leeuwin H	46.41	123	T	T	06 46 14.0	
	baz=282,slow=75,SNR=5.6						
MAW	Mawson	51.97	182	LR	LR	06 14 15.4	
	comp=Z,62nm,19.9s,baz=130,slow=30						
ASAR	Alice Springs	63.19	109	P	P	05 58 52.0	-0.8
	0.7nm,0.9s,baz=274,slow=5.4,SNR=4.3						
MKAR	Makanchi Array	63.70	12	P	P	05 58 54.9	-0.6
	0.4nm,0.8s,baz=212,slow=8.0,SNR=4.0						
WRA	Warramunga Arr	64.05	105	P	P	05 58 59.2	+0.7
	1.3nm,1.0s,baz=270,slow=5.8,SNR=4.7						
KURBB	Kurchatov Arra	66.79	8	P	P	05 59 15.9	+0.4
	0.6nm,0.8s,baz=206,slow=7.0,SNR=3.2						
ZALV	Zalesovo Beam	71.02	11	LR	LR	06 29 45.3	
	comp=Z,24nm,18.8s,baz=76,slow=35						
DBIC	Dimbokro	74.35	282	LR	LR	06 31 54.9	
	comp=Z,36nm,18.5s,baz=181,slow=35						
KSRS	Korea Array	77.99	45	LR	LR	06 33 27.1	
	comp=Z,23nm,20.9s,baz=140,slow=35						

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*IDC **15** 05:49:11.6±7.8, 36°.22N×70°.68E, h92^{km}±47^{km}, mb3.1/2, mb1 3.1/8, mb1mx2.9/56, mbtmp3.5/8, MS2.4/1, Ms1 2.4/1, ms1mx2.1/17, Error ellipse: s-maj=111.9km s-min=23.9km az=165.0*

*NNC **15** 05:49:18.3±4.6, 37°.12N×70°.59E, h0^{km}, mb3.8, mpv3.6, Error ellipse: s-maj=38.0km s-min=34.9km az=4.0*

ISC 15 05:49:12.6±0.9**, 36°.41N**±0°.08×**70°.70E**±0°.07**, h100**^{km}**, n28,** σ**1^{s}.69**/32**, 3C-2D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	6.17	21	P	Pn	05 50 42.1	+0.6
	SNR=24						
DHRM	DHARAMSHALA	6.22	130	*e*P	Pn	05 50 41.5	-0.6
UCH	Uchtor	6.52	26	P	Pn	05 50 47.1	+0.8
	SNR=5.7						
EKS2	Erkin-Say	6.68	20	P	Pn	05 50 50.2	+2.0
	SNR=5.1						
KK31	Karatay Array	6.69	359	Pn	Pn	05 50 48.9	+0.7
	0.8nm,0.2s,baz=177,slow=12,SNR=89						
KK31				⇓Sn	Sn	05 51 57.1	-5.8
	1.7nm,0.3s,baz=179,slow=22,SNR=5.2						
AAK	Ala-Archa	6.88	24	P	Pn	05 50 51.6	+0.7
	2.2nm,0.3s,baz=182,slow=6.2,SNR=21						
AAK				S	Sn	05 52 06.7	-1.0
	0.4nm,0.3s,baz=162,slow=20,SNR=3.6						
AAK	Ala-Archa	6.88	24	P	Pn	05 50 52.8	+1.9
	SNR=7.3						
AAK	Ala-Archa	6.88	24	⇓Pn	Pn	05 50 52.2	+1.3
	3.0nm,0.4s						
AAK				⇑Sn	Sn	05 52 06.8	-1.0
	11nm,0.9s						
CHMS	Chumysh	7.29	24	P	Pn	05 50 57.6	+1.3
	SNR=5.7						
USP	Ospenovka	7.45	22	P	Pn	05 50 59.4	+0.9
	SNR=5.2						
TKM2	Tokmak 2	7.52	29	⇑Pn	Pn	05 51 00.5	+0.9
	3.9nm,0.8s						
SMLA	Simla	7.53	132	*e*P	Pn	05 51 00.9	+1.3
GEYT	Alibeck	10.16	282	P	Pn	05 51 35.8	+0.4
	0.6nm,0.3s,baz=132,slow=9.4,SNR=5.8						
GEYT				S	Sn	05 53 25.8	-1.5
	1.0nm,0.3s,baz=180,slow=14,SNR=5.2						
GEYT				LR	LR	05 56 48.2	
	comp=Z,22nm,19.4s,baz=25,slow=45						
MKAR	Makanchi Array	13.51	36	P	Pn	05 52 20.5	+0.5
	0.1nm,0.3s,baz=229,slow=14,SNR=9.4						
DANN	Dangsing	13.64	122	*e*P	Pn	05 52 20.1	-2.0
	10nm,0.4s						
GKN	Gorkha	14.46	121	*e*P	Pn	05 52 30.5	-2.1
	26nm,0.5s						
DMN	Daman	15.03	122	*e*P	Pn	05 52 38.7	-1.2
	11nm,0.5s						
KKN	Kakani	15.04	121	*e*P	Pn	05 52 38.0	-2.0
AB31	Akbulak array	15.05	332	⇑P	Pn	05 52 40.3	+0.5
	0.3nm,0.4s,baz=166,slow=12,SNR=17						
PKI	Pulchoki	15.26	121	*e*P	Pn	05 52 41.3	-1.6
	4.3nm,0.3s						
KURBB	Kurchatov Arra	15.29	19	P	P	05 52 46.2	+0.9
	0.0nm,0.3s,baz=202,slow=11,SNR=2.9						
GUN	Gumba	15.38	119	*e*P	Pn	05 52 43.9	-0.6
	8.7nm,0.4s						
RAMN	Ramite	16.48	120	*e*P	Pn	05 52 56.9	-1.1
	10nm,0.5s						
BVAR	Borovoye Array	16.62	359	P	P	05 53 02.4	+2.4
	0.1nm,0.3s,baz=104,slow=4.9,SNR=3.3						
AKTO	Aktyubinsk	16.74	331	P	P	05 53 02.3	+0.9
	0.1nm,0.3s,baz=151,slow=16,SNR=4.3						
TAPN	Taplejung	17.02	117	*e*P	Pn	05 53 04.1	-0.6
	8.0nm,0.4s						
ZALV	Zalesovo Beam	20.10	25	P	P	05 53 39.0	+0.9
	0.5nm,0.3s,baz=213,slow=10,SNR=4.7						
ARU	Arti	21.64	342	P	P	05 53 55.8	+1.3
	0.4nm,0.3s,baz=244,slow=6.4,SNR=3.1						

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*LDG **15** 06:07:46.5±0.0, 44°.44N×7°.30E, h10^{km}, Md2.9/2, Ml3.0/33, Error ellipse: s-maj=0.8km s-min=0.5km az=69.0*

*STR **15** 06:07:46.5±0.3, 44°N±1°×°±°, h5^{km}±1^{km}, MLv3.0/18, MLv3.3/1, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/alpes_taup-2.11 preliminary*

*ROM **15** 06:07:46.5±0.1, 44°.395N±0°.008×7°.27E±0°.01, h12^{km}, ML2.8/6, Error ellipse: s-maj=1.3km s-min=0.4km az=231.0*

*GEN **15** 06:07:46.9, 44°.42N×7°.29E, h10^{km}±2^{km}, Ml2.8*

*PRU **15** 06:07:47.9±0.0, 44°.41N×7°.71E, h0^{km}*

ISC 15 06:07:46.4±0.8**, 44°.45N**±0°.01×**7°.28E**±0°.02**, h17**^{km}±4^{km}**, n100,** σ**2^{s}.18**/174**, 2C-2D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PZZ	Stroppo	0.13	297	P	Pg	06 07 50.5	0.0
PZZ				S	Sg	06 07 53.0	-0.3
PZZ	Stroppo	0.13	297	⇑P	Pg	06 07 50.5	0.0
PZZ				S	Sg	06 07 53.0	-0.3
PZZ				AML	AML		
	comp=E,27200µm,0.3s						
PZZ				AML	AML		
	comp=N,22450µm,0.4s						
PZZ				AML	AML		
	comp=N,22450µm,0.4s						
STV	Sant Anna di V	0.20	171	P	Pg	06 07 50.9	-0.5
STV				S	Sg	06 07 53.3	-1.4
STV	Sant Anna di V	0.20	171	P	Pg	06 07 50.9	-0.5
STV				S	Sg	06 07 53.4	-1.4
STV				AML	AML		
	comp=N,1995µm,0.1s						
STV				AML	AML		
	comp=E,2175µm,0.4s						
ENR	Entracque	0.24	156	P	Pg	06 07 51.5	-0.5
ENR				S	Sg	06 07 54.5	-1.3
ENR	Entracque	0.24	156	P	Pg	06 07 51.5	-0.5
ENR				S	Sg	06 07 54.4	-1.3
ENR				AML	AML		
	comp=N,12300µm,0.1s						
ENR				AML	AML		
	comp=E,8910µm,1.1s						
ISO	Isola	0.31	213	Pg	Pg	06 07 52.9	-0.2
ISO				Sg	Sg	06 07 56.7	-1.0
SURF	Saint Ours	0.34	276	Pg	Pg	06 07 53.8	+0.2
SURF				Sg	Sg	06 07 58.8	+0.2
GBOS	Grotte di Boss	0.45	117	P	Pg	06 07 55.3	-0.2
GBOS				S	Sg	06 08 01.2	-0.5
GBOS	Grotte di Boss	0.45	117	⇓P	Pg	06 07 55.3	-0.2
GBOS				S	Sg	06 08 01.1	-0.5
GBOS				AML	AML		
	comp=N,3550µm,0.4s						
GBOS				AML	AML		
	comp=E,5910µm,0.2s						
MBDF	Montbardon	0.46	308	*e*Pg	Pg	06 07 56.0	+0.2
MBDF				*e*Sg	Sg	06 08 02.2	+0.1
	comp=E,1µm,0.5s						
TURF	col de Turini	0.48	171	Pg	Pg	06 07 55.7	-0.3
TURF				Sg	Sg	06 08 01.6	-0.9
SAOF	Saorge	0.50	157	Pg	Pg	06 07 56.0	-0.4
SAOF				Sg	Sg	06 08 02.3	-0.9
SAOF	Saorge	0.50	157	⇑P	Pg	06 07 56.0	-0.4
SAOF				S	Sg	06 08 02.5	-0.6
SAOF	Saorge	0.50	157	AML	AML		
	comp=E,1685µm,0.3s						
SAOF				AML	AML		
	comp=N,961µm,0.2s						
OGAG	Argentiere	0.53	271	Pg	Pn	06 07 59.4	+0.1
OGAG				Sg	Sn	06 08 08.2	+0.3
SBF	Sospel	0.59	169	*e*Pg	Pg	06 07 57.7	-0.5
SBF				*e*Sg	Sg	06 08 05.5	-0.6
	comp=N,269nm,0.2s						
ESCA	l'Escarene	0.62	174	Pg	Pg	06 07 58.3	-0.3
ESCA				Sg	Sg	06 08 06.5	-0.4
IMI	Imperia	0.69	140	P	Pg	06 07 59.5	-0.5
IMI				S	Sg	06 08 08.5	-0.7
IMI	Imperia	0.69	140	P	Pg	06 07 59.5	-0.5
IMI				S	Sg	06 08 08.5	-0.7
RSP	Reno Superiore	0.70	359	P	Pg	06 07 59.3	-0.9
RSP				S	Sg	06 08 08.5	-1.1
CALF	Calern	0.74	201	Pg	Pg	06 08 00.8	-0.1
CALF				Sg	Sg	06 08 10.4	-0.3
BNI	Bardonecchia	0.74	325	P	Pg	06 08 01.1	+0.2
BNI				S	Sg	06 08 11.3	+0.4
BNI				AML	AML		
	comp=E,234µm,1.0s						
BNI				AML	AML		
	comp=N,94µm,1.0s						
MONC	Moncucco Torin	0.78	36	P	Pb	06 08 02.6	+1.1
MONC				AML	AML		
	comp=N,982µm,0.4s						
MONC				AML	AML		
	comp=E,1145µm,0.4s						
OGDI	Digne	0.78	245	Pg	Pn	06 08 03.6	+0.9
OGDI				Sg	Sn	06 08 14.7	+0.8
FINB	Finale Ligure	0.80	109	⇓P	Pg	06 08 01.5	-0.4
FINB				S	Sg	06 08 11.4	-1.0
FINB				AML	AML		
	comp=N,705µm,0.3s						
FINB				AML	AML		
	comp=E,767µm,0.3s						
ROTM	Rocchetta Tana	0.86	62	P	Pb	06 08 04.1	+1.2
ROTM				S	Sn	06 08 16.4	+0.5
OGMO	Fort Saint-Gob	0.87	331	Pg	Pg	06 08 03.7	+0.3
OGMO				Sg	Sg	06 08 15.8	+0.9
EILF	Villa Eilenroc	0.91	187	Pg	Pg	06 08 03.6	-0.4
EILF				Sg	Sg	06 08 15.0	-0.9
PCP	Piancastagn	0.91	84	P	Pg	06 08 03.9	-0.2
PCP				S	Sg	06 08 15.8	-0.2
PCP				AML	AML		
	comp=E,884µm,0.3s						
PCP				AML	AML		
	comp=N,873µm,0.4s						
FRF	La Foret Royal	1.00	208	*e*Pg	Pg	06 08 05.0	-0.7
FRF				*e*Sg	Sg	06 08 17.6	-1.2
	comp=N,290nm,0.2s						
BLAF	les Blancs	1.02	241	Pg	Pb	06 08 06.6	+1.0
BLAF				Sg	Sn	06 08 20.7	+0.9
LSD	Lago del Serru	1.02	354	P	Pg	06 08 06.2	0.0
LSD				AML	AML		
	comp=N,190µm,1.5s						
LSD				AML	AML		
	comp=E,388µm,0.6s						
ORIF	Oris-en-Rattie	1.11	296	*e*Pg	Pb	06 08 07.5	+0.4
ORIF				*e*Sg	Sg	06 08 21.7	-0.6
	comp=E,116nm,0.3s						
ORIF	Oris-en-Rattie	1.11	296	P	Pb	06 08 07.9	+0.8
ORIF				S	Sg	06 08 21.8	-0.6
ORIF				AML	AML		
	comp=E,336µm,0.4s						
ORIF				AML	AML		
	comp=N,202µm,0.8s						
TRAV	Traversella	1.12	17	AML	AML		
	comp=E,104µm,0.3s						
TRAV				AML	AML		
	comp=N,90µm,0.5s						
LPG	La Plagne	1.12	340	*e*Pg	Pg	06 08 07.8	-0.3
LPG				*e*Sn	Sg	06 08 22.0	-0.7
	comp=N,112nm,0.5s						
GDM	Grand'Maison	1.12	313	Pg	Pb	06 08 08.5	+1.0
GDM				Sg	Sg	06 08 23.4	+0.5
LPL	La Plagne	1.14	340	*e*Pg	Pb	06 08 08.2	+0.5
LPL				*e*Sg	Sg	06 08 23.4	0.0
	comp=N,81nm,0.4s						
CIRO	Champorcher	1.17	10	AML	AML		
	comp=E,84µm,1.5s						
CIRO				AML	AML		
	comp=N,61µm,0.6s						
MLYF	Mely	1.18	248	Pg	Pg	06 08 09.9	+0.6
MLYF				Sg	Sn	06 08 26.5	+2.7
LMR	La Mourre	1.25	207	*e*Pg	Pn	06 08 09.4	+0.5
LMR				*e*Sg	Sb	06 08 25.1	0.0
	comp=N,116nm,0.2s						
BSTF	la Bastide-des	1.31	245	Pn	Pg	06 08 12.1	+0.5
BSTF				Sn	Sg	06 08 30.8	+2.1
SMRF	Simiane la Rot	1.31	250	*e*Pg	Pn	06 08 11.2	+1.2
SMRF				*e*Sg	Sn	06 08 28.6	+1.5
	comp=N,73nm,0.3s						
MRGE	Morge	1.33	353	P	Pb	06 08 12.3	+1.3
ARTF	Artigues	1.37	232	Pn	Pb	06 08 12.2	+0.6
ARTF				Sn	Sg	06 08 30.9	+0.3
RUSF	Rustrel	1.39	249	Pn	Pg	06 08 13.2	+0.1
RUSF				Sn	Sg	06 08 32.1	+0.8
OGSM	Saint Maurice	1.62	317	Pn	Pb	06 08 16.3	+0.5
OGSM				Sn	Sb	06 08 37.9	+2.0
VIVF	Saint-Julien-l	1.91	283	*e*P	Pn	06 08 19.8	+1.7
VIVF				*e*Sn	Sn	06 08 40.1	-1.6
	comp=N,36nm,0.4s						
OG35	Corcelles	2.00	323	Pn	Pn	06 08 21.6	+2.1
OG35				Sn	Sn	06 08 46.7	+2.6
PGF	Pioggiola	2.27	146	*e*Pn	Pn	06 08 22.0	-1.2
PGF				*e*Sn	Sn	06 08 48.1	-2.7
	comp=N,15nm,0.2s						
CABF	La Chapelle	2.32	339	*e*P	Pn	06 08 26.0	+2.1
CABF				*e*Sn	Sn	06 08 50.3	-1.7
	comp=N,33nm,0.8s						
LASF	Ste Croix	2.49	263	*e*P	Pn	06 08 27.2	+1.1
LASF				*e*Sn	Sn	06 08 53.9	-2.2
	comp=N,6.8nm,0.3s						
LBL	Lubilhac	2.98	287	Pn	Pn	06 08 34.8	+1.9
SMF	Signal de Mont	3.27	313	*e*P	Pn	06 08 39.6	+2.8
SMF				*e*Sn	Sn	06 09 12.8	-2.5
	comp=N,8.3nm,0.4s						
SMF				*e*S	Sb	06 09 18.7	-4.7
AGO	Saint Agoulin	3.34	300	Pn	Pn	06 08 40.0	+2.2
AGO	Saint Agoulin	3.34	300	Sn	Sn	06 09 18.0	+0.9
DAVA	Damuels	3.37	32	*e*Pn	Pn	06 08 40.5	+2.1
	comp=N,0.6nm,0.2s						
HINF	Hinteralfeld	3.38	355	*e*P	Pn	06 08 40.8	+2.4
HINF				*e*Sn	Sn	06 09 15.6	-2.6
	comp=N,4.5nm,0.3s						
HINF				*e*Sg	Sg	06 09 32.6	-2.5
FETA	Feichten	3.53	42	*e*Pn	Pn	06 08 43.4	+2.9
	comp=N,0.9nm,0.4s						
HAU	Haudompre	3.62	350	*e*P	Pn	06 08 43.2	+1.6
HAU	Haudompre	3.62	350	*e*Pg	Pb	06 08 53.4	+3.5
HAU				*e*Sn	Sn	06 09 21.5	-2.4
	comp=N,6.7nm,0.3s						
HAU				*e*Sg	Sg	06 09 40.1	-2.5
	comp=N,5.2nm,0.3s						
AVF	Avril sur Loir	3.62	312	*e*P	Pn	06 08 44.1	+2.5
AVF				*e*Sn	Sn	06 09 21.2	-2.7
	comp=N,11nm,0.6s						
AVF				*e*Sg	Sg	06 09 39.6	-3.0
LOR	Lormes	3.70	321	*e*P	Pn	06 08 45.4	+2.7
	baz=140						
LOR	Lormes	3.70	321	*e*Pg	Pg	06 08 55.7	-1.5
LOR				*e*Sn	Sn	06 09 23.1	-2.8
	comp=N,3.7nm,0.3s						
LOR				*e*Sg	Sg	06 09 42.5	-2.7
SSF	Saint Saulge	3.72	316	*e*P	Pn	06 08 45.5	+2.5
SSF				*e*Sn	Sn	06 09 23.4	-2.9
	comp=N,3.2nm,0.4s						
SSF				*e*Sg	Sg	06 09 42.8	-3.0
BGF	Bois d'Agland	3.77	306	*e*P	Pn	06 08 46.2	+2.6
BGF				*e*Sn	Sn	06 09 24.8	-2.7
	comp=N,11nm,0.4s						
BGF				*e*Sg	Sg	06 09 45.2	-2.1
	comp=N,23nm,0.4s						
MTLF	Montolieu	3.83	255	*e*P	Pn	06 08 46.1	+1.7
MTLF				*e*Sn	Sn	06 09 25.8	-3.2
	comp=N,6.5nm,0.4s						
RETA	Reutte	3.89	37	*e*Pn	Pn	06 08 48.1	+2.7
	comp=N,0.4nm,0.2s						
SQTA	Sankt Quirin	3.90	43	*e*Pn	Pn	06 08 48.9	+3.3
	comp=N,1.0nm,0.3s						
MOTA	Moosalm	3.94	41	*e*Pn	Pn	06 08 48.8	+2.6
	comp=N,0.3nm,0.2s						
CDF	Champ du Feu	3.97	360	*e*P	Pn	06 08 49.3	+2.8
CDF	Champ du Feu	3.97	360	*e*Pg	Pb	06 08 59.9	+4.1
CDF				*e*Sn	Sn	06 09 29.5	-3.1
	comp=N,2.7nm,0.3s						
TCF	Toulx Ste Croi	4.02	299	*e*P	Pn	06 08 49.9	+2.7
TCF				*e*Sn	Sn	06 09 30.6	-3.3
	comp=N,3.6nm,0.4s						
TCF				*e*Sg	Sb	06 09 51.4	+6.3
FNEB	Nbias	4.06	249	Pn	Pn	06 08 49.6	+1.9
FNEB				Sn	Sn	06 09 34.7	-0.1
SFTF	Sexfontaines	4.07	338	*e*P	Pn	06 08 51.1	+3.3
	baz=158						
SFTF				*e*Sn	Sn	06 09 31.8	-3.2
	comp=N,3.6nm,0.2s						
SFTF				*e*Sg	Sg	06 09 54.1	-2.9
	comp=N,3.0nm,0.3s						
WTTA	Wattenberg	4.15	46	*e*Pn	Pn	06 08 52.6	+3.6
	comp=N,0.8nm,0.3s						
RJF	Les Rejaudoux	4.19	284	*e*P	Pn	06 08 52.2	+2.8
RJF	Les Rejaudoux	4.19	284	*e*Pg	Pg	06 09 04.4	-2.2
RJF				*e*Sn	Sn	06 09 35.1	-2.8
RJF				*e*Sg	Sg	06 09 57.1	-3.7
PAGF	Fort de Pagny	4.25	346	*e*P	Pn	06 08 52.8	+2.6
	baz=166						
PAGF				*e*Sn	Sn	06 09 36.2	-3.2
	comp=N,1.5nm,0.2s						
HYF	Humbligny	4.30	313	*e*P	Pn	06 08 54.0	+3.0
ABTA	Abfaltersbach	4.33	56	*e*Pn	Pn	06 08 54.8	+3.3
	comp=N,1.1nm,0.4s						
MEZF	Maizieres J'vi	4.34	340	*e*P	Pn	06 08 54.4	+2.9
MEZF				*e*Sn	Sn	06 09 38.2	-3.4
	comp=N,6.3nm,0.5s						
MONQ	Montcuq	4.36	271	Pn	Pn	06 08 54.0	+2.2
SAVF	Savonnieres en	4.43	341	*e*P	Pn	06 08 55.6	+2.9
	baz=160						
SAVF	Savonnieres en	4.43	341	*e*Pg	Pg	06 09 08.7	-2.5
SAVF				*e*Sn	Sn	06 09 40.5	-3.3
	comp=N,4.9nm,0.4s						
LFF	La Frestale	4.69	278	*e*P	Pn	06 08 59.1	+2.8
EPF	Esparros	5.23	257	*e*P	Pn	06 09 05.9	+2.2
EPF				*e*Sg	Sg	06 10 30.0	-4.1
	comp=N,3.0nm,0.5s						
MFF	Saint Martin d	5.65	295	*e*P	Pn	06 09 12.8	+3.3
MFF	Saint Martin d	5.65	295	Pn	Pn	06 09 12.7	+3.3
ETSF	Etsaut	5.89	258	*e*P	Pn	06 09 16.7	+3.8
ETSF				*e*Sn	Sn	06 10 15.2	-4.9
	comp=N,1.1nm,0.3s						
GIVF	Givet	5.90	344	*e*P	Pn	06 09 16.1	+3.2
GIVF	Givet	5.90	344	*e*Pg	Pg	06 09 36.1	-3.2
GIVF				*e*S	Sn	06 10 25.0	+4.9
BAIF	Baives	5.99	341	*e*P	Pn	06 09 17.4	+3.2
KHC	Kasperske Hory	6.37	40	*e*PN	Pn	06 09 19.5	+0.1
KHC				*e*SN	Sn	06 10 28.7	-3.1
LDF	La Druitiere	6.58	312	*e*P	Pn	06 09 25.2	+3.0
GRR	Gorron	6.87	308	*e*P	Pn	06 09 30.1	+3.9
FLN	La Foliniere	6.87	312	*e*P	Pn	06 09 30.0	+3.8
	baz=131						
QUIF	Quistinic	8.04	299	*e*P	Pn	06 09 45.7	+3.5
ROSF	Rostrenen	8.27	302	*e*P	Pn	06 09 49.4	+4.0

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*IDC **15** 06:17:47.6±1.0, 0°.05S×16°.42W, h0^{km}, mb3.9/10, mb1 4.1/12, mb1mx3.9/46, mbtmp4.0/12, ML4.3/2, MS3.3/7, Ms1 3.3/7, ms1mx3.0/34, Error ellipse: s-maj=35.4km s-min=18.9km az=146.0*

*NEIC **15** 06:17:49.7±1.6, 0°.14N±0°.07×16°.35W±0°.10, h10^{km}±1^{km}, mb4.7/15, Error ellipse: s-maj=18.8km s-min=8.5km az=120.0*

ISC 15 06:17:50.1±0.6**, 0°.1N**±0°.1×**16°.33W**±0°.09**, h10**^{km}**, n48,** σ**1^{s}.25**/34**, mb4.1**/17**, MS3.3**/7**, 2D, North of Ascension Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10N2	ASCENSION HYDR	8.08	167	T	T	06 28 07.3	
	baz=348,SNR=411						
H10N3	ASCENSION HYDR	8.09	167	T	T	06 28 10.1	
	baz=348,slow=74,SNR=370						
H10N1	ASCENSION HYDR	8.10	167	T	T	06 28 11.1	
	baz=348,slow=74,SNR=654						
H10S3	ASCENSION HYDR	9.14	170	T	T	06 29 25.4	
	baz=232,slow=74,SNR=179						
H10S2	ASCENSION HYDR	9.15	169	T	T	06 29 28.8	
	baz=348,slow=74,SNR=36						
LIC	Lamto	12.81	61	*e*P	Pn	06 20 55.3	+2.8
	29nm,0.9s						
TIC	Toumodi	13.02	60	*e*P	Pn	06 20 54.2	-1.2
KIC	Kosan Boka	13.13	61	*e*P	Pn	06 20 56.0	-0.8
	26nm,0.9s						
DBIC	Dimbokro	13.18	60	Pn	Pn	06 20 56.3	-1.2
	1.4nm,0.3s,baz=233,slow=14,SNR=23						
DBIC				Sn	Sn	06 23 15.6	-8.6
	1.0nm,0.3s,baz=134,slow=14,SNR=2.8						
DBIC	Dimbokro	13.18	60		Pn	06 20 56.5	-0.9
SACV	Santiago Islan	16.44	334	Pn	Pn	06 21 39.7	-1.4
SACV				IAmb	IAmb	06 22 07.9	
	comp=Z,33nm,0.9s						
KOWA	Kowa	18.79	40	Pn	P	06 22 09.4	-0.4
	comp=Z,0.8nm,0.3s,baz=219,slow=10,SNR=17						
KOWA				Sn	Sn	06 25 26.5	-14
	comp=Z,0.3nm,0.3s,baz=131,slow=20,SNR=2.8						
KOWA	Kowa	18.79	40	P	P	06 22 09.7	-0.1
SHEL	Horse Pasture	19.07	147	P	P	06 22 13.0	+0.1
SHEL				IAmb	IAmb	06 22 20.6	
	comp=Z,123nm,1.4s						
RCBR	Riachuelo	20.41	253	P	P	06 22 29.0	+1.3
	comp=Z,3.5nm,0.5s,baz=114,slow=7.7,SNR=7.7						
RCBR				LR	LR	06 28 16.2	
	comp=Z,63nm,18.4s,baz=138,slow=31						
RCBR	Riachuelo	20.41	253	P	P	06 22 28.9	+1.2
RCBR				IAmb	IAmb	06 22 39.7	
	comp=Z,19nm,1.3s						
TOA0	Torodi Ar. Sit	22.07	53	P	P	06 22 45.6	+0.1
TOA0				IAmb	IAmb	06 22 48.7	
	comp=Z,13nm,1.1s						
TORD	Torodi Ar. Bea	22.07	53	P	P	06 22 45.7	+0.2
	comp=Z,7.3nm,0.9s,baz=235,slow=12,SNR=16						
TORD				LR	LR	06 30 49.9	
	comp=Z,46nm,18.6s,baz=260,slow=35						
TORD	Torodi Ar. Bea	22.07	53	P	P	06 22 45.3	-0.2
BDFB	Brasilia	34.98	242	P	P	06 24 40.6	-2.5
	comp=Z,2.4nm,1.0s,baz=54,slow=5.4,SNR=3.0						
BDFB	Brasilia	34.98	242	P	P	06 24 42.2	-0.8
BDFB				IAmb	IAmb	06 24 42.4	
	comp=Z,5.7nm,1.2s						
CPUP	Villa Florida	47.43	233	LR	LR	06 44 10.5	
	comp=Z,49nm,20.9s,baz=94,slow=34						
BOSA	Boshof	48.94	129	P	P	06 26 36.0	-1.0
	comp=Z,1.1nm,0.7s,baz=303,slow=5.6,SNR=3.7						
BOSA	Boshof	48.94	129	P	P	06 26 36.3	-0.7
BOSA				IAmb	IAmb	06 27 01.2	
	comp=Z,23nm,1.5s						
SENIN	Lac Senin/Sane	50.53	21	P	P	06 26 46.7	-2.2
SALO	Salr	51.14	24	P	P	06 26 49.7	-3.6
DAVA	Damuels	52.26	22	*e*P	P	06 27 04.3	+2.4
	comp=Z,3.4nm,0.6s						
FETA	Feichten	52.37	23	*i* P	P	06 27 04.6	+2.0
	comp=Z,0.8nm,0.4s						
SQTA	Sankt Quirin	52.72	23	*e*P	P	06 27 07.1	+1.9
	comp=Z,3.2nm,0.7s						
RETA	Reutte	52.77	23	*i* P	P	06 27 07.1	+1.7
	comp=Z,0.6nm,0.3s						
LPAZ	La Paz	53.60	250	P	P	06 27 09.8	-3.0
	comp=Z,0.8nm,0.7s,baz=72,slow=9.6,SNR=2.2						
LPAZ				LR	LR	06 48 58.8	
	comp=Z,35nm,18.7s,baz=82,slow=35						
SDV	Santo Domingo	54.77	281	P	P	06 27 18.6	-2.3
GERES	GERESS Array B	55.03	24	P	P	06 27 21.9	-0.1
	comp=Z,1.3nm,0.6s,baz=211,slow=7.3,SNR=14						
GERES	GERESS Array B	55.03	24	P	P	06 27 22.9	+0.9
BRTR	Keskin Array B	60.19	43	P	P	06 27 59.7	+1.1
	comp=Z,0.5nm,0.7s,baz=232,slow=7.1,SNR=3.4						
AKASG	Malin Array Be	63.47	30	P	P	06 28 20.7	+0.4
	comp=Z,0.5nm,0.5s,baz=229,slow=9.7,SNR=4.5						
AKASG				LR	LR	06 57 13.1	
	comp=Z,20nm,19.4s,baz=75,slow=37						
AKASG	Malin Array Be	63.47	30	P	P	06 28 19.9	-0.3
NOA	NORSAR Array B	64.34	14	LR	LR	06 56 01.5	
	comp=Z,10nm,19.0s,baz=345,slow=36						
TRNY	Table Rock, Ra	66.27	316	P	P	06 28 35.0	-3.7
BRNJ	Basking Ridge	66.33	315	P	P	06 28 38.8	-0.3
BRNJ				IAmb	IAmb	06 28 43.4	
	comp=Z,16nm,1.1s						
P60A	Greenville	66.78	314	P	P	06 28 42.6	+0.6

KIV	Kislovodsk	68.10	42	P	P	06 28 48.8	-1.6
KIV				IAmb	IAmb	06 28 49.2	
	comp=Z,4.8nm,0.4s						
FINES	FINESS Array B	69.13	20	P	P	06 28 56.5	+0.2
	comp=Z,2.7nm,0.9s,baz=250,slow=5.7,SNR=6.2						
SYO	Syowa Base	78.44	162	⇓*e*pP	P	06 29 52.4	+1.6
SYO	Syowa Base	78.44	162	⇓*e*PcP	PcP	06 29 58.1	-1.9
TXAR	Lajitas Array	87.63	299	P	P	06 30 39.0	-0.5
	comp=Z,0.9nm,0.9s,baz=118,slow=6.7,SNR=6.4						
YKA	Yellowknife Ar	93.75	333	P	P	06 31 06.6	-0.5
	comp=Z,0.3nm,0.7s,baz=86,slow=5.3,SNR=6.9						
NEW	Newport	97.12	319	LR	LR	07 09 18.4	
	comp=Z,21nm,18.4s,baz=27,slow=32						

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*IDC **15** 06:28:31.0±0.8, 1°.73S×135°.49E, h0^{km}, mb4.3/5, mb1 4.5/10, mb1mx4.1/36, mbtmp4.4/10, ML4.2/5, MS3.5/3, Ms1 3.5/3, ms1mx2.9/36, Error ellipse: s-maj=23.3km s-min=13.7km az=89.0*

*DJA **15** 06:28:34.1±0.3, 2°S±5°×13°6E±°, h10^{km}, M4.9/9, mb4.8/2, mB5.3/1, MLv4.9/9, Mw(mB)4.7/1*

*NEIC **15** 06:28:35.7±2.6, 1°.71S±0°.08×135°.54E±0°.08, h29^{km}±6^{km}, mb4.2/12, Error ellipse: s-maj=11.4km s-min=11.1km az=91.0*

ISC 15 06:28:34.1±0.6, **1°.66S**±0°.07×**135°.53E**±0°.04, **h21**^{km}, **n38**, σ**1^s.30**/38, **mb4.3**/7, **Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BAKI	Biak	0.74	51	P	Pb	06 28 46.6	-1.7
SRPI	Serui, Papua	0.74	107	P	Pb	06 28 47.9	-0.4
SRPI				S	Sb	06 28 58.5	+0.5
RKPI	Ransiki, Papua	1.36	276	P	Pn	06 28 58.3	+0.4
RKPI				S	Sb	06 29 17.7	+1.8
FAKI	Fak Fak	3.51	249	Pn	Pn	06 29 28.4	+0.9
FAKI	Fak Fak	3.51	249	P	Pn	06 29 28.5	+0.9
SIJI	Sorong	4.33	280	Pn	Pn	06 29 39.7	+0.9
	4.0nm,0.3s,baz=243,slow=23,SNR=22						
SWI	Sorong	4.34	280	P	Pn	06 29 40.5	+1.6
GENI	Genyem	4.73	101	P	Pn	06 29 47.7	+3.5
JAY	Jayapura	5.24	99	Pn	Pn	06 29 52.2	+0.8
	4.2nm,0.3s,baz=266,slow=10,SNR=9.0						
JAY				Sn	Sn	06 30 52.7	+1.5
	1.9nm,0.3s,baz=90,slow=19,SNR=2.2						
JAY	Jayapura	5.24	99	P	Pn	06 29 52.4	+1.0
	0.1nm27nm,0.9s						
PMG	Port Moresby	13.89	124	LR	LR	06 38 41.7	
	comp=Z,436nm,19.3s,baz=268,slow=44						
COEN	Coen	14.37	149	Pn	Pn	06 31 55.7	-0.8
BATI	Baumata	14.53	234	Pn	Pn	06 31 56.7	-2.1
	4.5nm,0.3s,baz=160,slow=5.2,SNR=7.4						
KNRA	Kununurra	15.45	205	Pn	Pn	06 32 09.1	-1.8
WB0	Warramunga Arr	18.03	183		Pn	06 32 41.5	-2.1
WB0				IAmb	IAmb	06 33 05.6	
	comp=Z,32nm,1.4s						
WB2	Warramunga Arr	18.21	184		Pn	06 32 43.9	-1.9
WB2				IAmb	IAmb	06 32 59.6	
	comp=Z,16nm,0.7s						
WRA	Warramunga Arr	18.21	184	Pn	Pn	06 32 43.8	-2.1
	comp=Z,0.6nm,0.3s,baz=5.6,slow=12,SNR=26						
WRA				S	Sn	06 35 55.1	-14
	comp=Z,0.5nm,0.3s,baz=5.5,slow=23,SNR=6.2						
WRA	Warramunga Arr	18.21	184	P	Pn	06 32 44.8	-1.0
WR0	Warramunga Arr	18.22	183	P	Pn	06 32 45.0	-0.8
WR0				IAmb	IAmb	06 33 00.4	
	comp=Z,10nm,0.8s						
FITZ	Fitzroy Crossi	19.01	210	P	P	06 32 54.0	-0.7
	comp=Z,1.2nm,0.3s,baz=36,slow=11,SNR=35						
FITZ	Fitzroy Crossi	19.01	210	P	P	06 32 54.7	+0.1
FITZ				IAmb	IAmb	06 32 58.8	
	comp=Z,12nm,0.8s						
CTAO	Charters Tower	21.11	151	P	P	06 33 18.2	+0.6
AS31	Alice Springs	21.93	184	P	P	06 33 26.6	+0.1
AS31				IAmb	IAmb	06 33 29.7	
	comp=Z,8.7nm,0.9s						
ASAR	Alice Springs	21.94	184	P	P	06 33 27.5	+1.0
	comp=Z,22nm,0.9s,baz=10,slow=11,SNR=164						
ASAR				S	S	06 37 27.1	-0.8
	comp=Z,5.1nm,0.9s,baz=10,slow=29,SNR=4.2						
ASAR	Alice Springs	21.94	184	P	P	06 33 27.3	+0.8
HNR	Honiara	25.48	109	LR	LR	06 45 27.5	
	comp=Z,59nm,18.4s,baz=134,slow=40						
EIDS	Eidsvold	27.94	149	P	P	06 34 23.9	+0.6
FORT	Forrest	29.82	193	P	P	06 34 41.5	+1.6
STKA	Stephens Creek	30.60	170	P	P	06 34 47.2	+0.5
	comp=Z,3.8nm,0.7s,baz=328,slow=9.0,SNR=8.3						
STKA	Stephens Creek	30.60	170	P	P	06 34 47.7	+1.0
BBOO	Buckleboo	30.99	179	P	P	06 34 50.5	+0.3
XAN	Xi'an	43.44	327	P	P	06 36 46.3	+11
XAN				pP	sP	06 36 52.9	+8.0
XAN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KLR	Kul'dur	50.79	357	P	P	06 37 33.0	+0.2
	comp=Z,2.3nm,0.7s,baz=278,slow=1.9,SNR=9.6						
MKAR	Makanchi Array	67.04	323	P	P	06 39 25.8	0.0
	comp=Z,0.9nm,0.5s,baz=133,slow=8.2,SNR=3.2						
ILAR	Eielson Array	86.21	25	P	P	06 41 13.2	-0.5
	comp=Z,1.2nm,0.9s,baz=248,slow=5.8,SNR=6.0						
KIRV	Kirov	89.37	328	LR	LR	07 24 22.7	
	comp=Z,18nm,20.1s,baz=71,slow=38						
CPUP	Villa Florida	149.53	157	PKPbc	PKPbc	06 48 23.8	+1.0
	comp=Z,1.8nm,1.0s,baz=235,slow=7.7,SNR=2.7						
LPAZ	La Paz	150.61	128	PKPbc	PKPbc	06 48 26.9	+0.5
	comp=Z,1.0nm,0.5s,baz=6.5,slow=3.5,SNR=4.2						

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*BJI **15** 06:29:02.3±0.0, 0°.50S×123°.80E, h60^{km}, mB5.0/9, mb4.6/18*

*DJA **15** 06:29:04.2±1.2, 0°S±2°×12°4E±°, h15^{km}±11^{km}, M5.0/22, mb5.3/15, mB5.4/10, MLv5.2/22, Mw(mB)4.8/10, MwMwp5.1/2, Mwp5.3/2*

*NEIC **15** 06:29:05.2±2.1, 0°.58S±0°.09×123°.81E±0°.07, h87^{km}±8^{km}, mb4.8/34, Error ellipse: s-maj=15.4km s-min=6.2km az=148.0*

*IDC **15** 06:29:08.8±2.0, 0°.40S×123°.51E, h114^{km}±19^{km}, mb4.1/17, mb1 4.2/20, mb1mx4.0/39, mbtmp4.5/20, MS3.3/10, Ms1 3.3/10, ms1mx3.0/45, Error ellipse: s-maj=24.4km s-min=13.5km az=90.0*

*KLM **15** 06:29:09, 0°.66S×123°.69E, h138^{km}, mb4.7*

ISC 15 06:29:06.1±0.5, **0°.44S**±0°.05×**123°.79E**±0°.05, **h87**^{km}, **n139**, σ**1^s.55**/133, **mb4.7**/49, **2C-2D**, **Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMSI	Cibinong	1.03	11	P	Pn	06 29 23.9	-2.1
KMSI				S	Sn	06 29 38.8	-2.1
LUWI	Luwuk	1.18	240		Pn	06 29 25.9	-1.9
LUWI	Luwuk	1.18	240	P	Pn	06 29 25.8	-2.0
LUWI				S	Sn	06 29 42.1	-1.9
MRSI	Marisa	2.06	296	P	Pn	06 29 36.8	-2.3
APSI	Ampana	2.19	258	P	Pn	06 29 40.2	-0.6
SANI	Sanana	2.71	126	P	Pn	06 29 44.6	-3.2
TOLI2	Tolitoli	3.38	297	Pn	Pn	06 29 56.6	-0.2
TNTI	Ternate	3.77	71		Pn	06 30 00.6	-1.5
TNTI	Ternate	3.77	71	P	Pn	06 30 01.6	-0.5
TNTI				S	Sn	06 30 46.8	+1.3
NLAI	Namlea	4.32	130	P	Pn	06 30 08.4	-1.1
SGSI	Sangihe	4.46	23	P	Pn	06 30 12.8	+1.4
TTSI	Tana Toraja	4.74	237	P	Pn	06 30 14.6	-0.6
SPSI	Sidrap Palu	5.33	229	P	Pn	06 30 23.0	-0.2
	1.8nm6μm373nm,0.6s						
BNSI	Bone	5.38	223	P	Pn	06 30 24.1	+0.1
	1.6nm3μm256nm,0.7s						
MSAI	Masohi	5.89	119	P	Pn	06 30 31.8	+0.9
	0.3nm72nm,0.6s						
KAPI	Kappang	6.07	222	P	Pn	06 30 33.6	+0.2
	31nm,0.3s,baz=30,slow=4.5,SNR=61						
KAPI				S	Sn	06 31 38.6	-3.0
	11nm,0.3s,baz=99,slow=19,SNR=2.3						
KAPI				LR	LR	06 33 25.8	
	comp=Z,328nm,18.1s,baz=74,slow=43						
KAPI	Kappang	6.07	222	Pn	Pn	06 30 30.8	-2.6
BKSI	Bulukumba	6.07	217	P	Pn	06 30 33.0	-0.4
	1.0nm1μm101nm,0.7s						
SGKI	Sangatta, Kali	6.19	269	P	Pn	06 30 38.6	+3.6
	1.3nm183nm,0.7s						
SMKI	Samarinda	6.58	270	P	Pn	06 30 46.7	+6.3
DDMP	Don Marcelino,	6.78	16	*e*P	Pn	06 30 45.2	+2.1
BKB	Balikpapan	6.94	263	Pn	Pn	06 30 43.3	-2.0
BKB	Balikpapan	6.94	263	P	Pn	06 30 45.5	+0.2
	2.0nm5μm612nm,0.7s						
SKMP	Bagumbayan, Su	6.96	6	*e*P	Pn	06 30 44.5	-1.0
SKMP				*e*S	Sn	06 31 59.5	-3.6
SWI	Sorong	7.48	93	P	Pn	06 30 50.6	-2.0
	2.2nm4μm7μm639nm,1.3s						
SIJI	Sorong	7.49	93	S	Sn	06 32 23.9	+7.7
	0.3nm,0.3s,baz=53,slow=20,SNR=0.7						
KCP	Kidapawan	7.52	10	⇓*i*P	Pn	06 30 56.1	+2.9
DAV	Davao City (W)	7.67	13	P	Pn	06 30 59.2	+3.9
	38nm,0.3s,baz=142,slow=3.4,SNR=10						
DAV				LR	LR	06 34 06.3	
	comp=Z,257nm,21.9s,baz=142,slow=39						
DAV	Davao City (W)	7.67	13		Pn	06 30 60.0	+4.7
MYLDM	Lahad Datu	7.69	317	Pn	Pn	06 30 58.7	+3.2
MATI	Mati	7.74	18	*e*P	Pn	06 30 56.5	+0.3
KBKI	Kotabaru	8.13	249	P	Pn	06 31 00.9	-0.6
	2μm159nm,0.8s						
PAGZ	Pagadian	8.25	357	*e*P	Pn	06 31 02.3	-0.8
EDFI	Ende, Flores	8.51	194	P	Pn	06 31 05.4	-1.4
	16nm,0.9s						
MTKI	Muara Teweh, K	8.91	267	P	Pn	06 31 19.7	+7.6
SPMM	Sapulut	8.93	305	P	Pn	06 31 15.0	+2.6
BBKI	Banjar Baru	9.43	251	P	Pn	06 31 21.1	+1.8
BATI	Baumata	9.70	181	P	Pn	06 31 26.9	+4.0
	3.1nm,0.3s,baz=292,slow=19,SNR=2.7						
BATI				LR	LR	06 35 18.9	
	comp=Z,218nm,18.9s,baz=7.5,slow=38						
KKM	Kota Kinabalu	9.94	311	Pn	Pn	06 31 27.8	+1.5
CNOP	Candoni, Negro	10.27	354	*e*P	Pn	06 31 31.4	+0.8
GLSP	General Luna,	10.42	13	*e*P	Pn	06 31 34.4	+1.6
SBUM	Sibu	11.92	284	Pn	Pn	06 31 52.4	-0.7
SBUM	Sibu	11.92	284	P	Pn	06 31 57.0	+3.9
ENPP	El Nido	12.36	340	*e*P	Pn	06 32 01.2	+2.2
LQP	Lukban	14.63	351	⇓*e*P	P	06 32 33.0	0.0
TGY	Tagaytay City	14.73	349	P	P	06 32 34.4	+0.5
	19nm,0.3s,baz=172,slow=12,SNR=4.2						
SMPP	San Manuel, Pa	16.77	350	*e*P	P	06 32 57.1	+0.5
LEM	Lembang	17.33	248	LR	LR	06 39 32.9	
	comp=Z,138nm,18.9s,baz=98,slow=36						
MYKOM	Kota Tinggi	20.06	276	P	P	06 33 33.1	+0.4
MYKOM				IAmb	IAmb	06 33 34.6	
	comp=Z,43nm,0.8s						
WRA	Warramunga Arr	21.96	153	P	P	06 33 54.2	+1.2
	comp=Z,3.9nm,0.7s,baz=324,slow=12,SNR=5.4						
IPM	Ipoh	23.26	282	P	P	06 34 05.1	-1.3
IPM	Ipoh	23.26	282	P	P	06 34 07.0	+0.6
KULM	Kulim	23.80	284	P	P	06 34 13.0	+1.7
ASAR	Alice Springs	25.08	158	P	P	06 34 24.9	+2.1
	comp=Z,6.1nm,0.8s,baz=5.6,slow=11,SNR=4.9						
CHAI	Chaiyaphum	26.97	308	P	P	06 34 43.0	+3.1
	comp=Z,520nmcomp=Z,29nm,0.7s						
UTHA	Uthaitani	28.83	305	P	P	06 35 07.5	+11
	comp=Z,12nm,0.7s						
SUKH	Sukhothai	29.72	308	P	P	06 35 07.3	+3.0
	comp=Z,21nm,0.7s						
CM05	Chiang Mai Arr	30.78	309	P	P	06 35 16.7	+3.0
	comp=Z,4.2nm,0.8s						
CMAR	Chiang Mai Arr	30.81	309	P	P	06 35 15.6	+1.6
	comp=Z,2.3nm,0.4s,baz=139,slow=7.9,SNR=12						
CMAR				LR	LR	06 48 27.3	
	comp=Z,34nm,20.8s,baz=166,slow=38						
CM13	Chiang Mai Arr	30.82	309	P	P	06 35 16.0	+2.0
	comp=Z,81nmcomp=Z,5.5nm,0.8s						
CMMT	Chiang Mai	31.01	309	P	P	06 35 17.1	+1.3
	comp=Z,245nmcomp=Z,5.4nm,0.8s						
CHTO	Chiang Mai	31.01	309	P	P	06 35 16.5	+0.8
CHTO				IAmb	IAmb	06 35 19.0	
	comp=Z,8.2nm,0.8s						
MHMT	Maesarieng	31.45	307	P	P	06 35 27.7	+8.2
JNU	Nakatsue	34.05	11	LR	LR	06 52 16.3	
	comp=Z,64nm,18.2s,baz=234,slow=41						
JMN	Monobe	35.29	15	P	P	06 35 53.1	+0.3
STKA	Stephens Creek	35.51	153	PcP	PcP	06 38 24.2	+1.8
	comp=Z,2.0nm,0.5s,baz=321,slow=6.5,SNR=2.8						
JWT	Wachi	37.16	16	P	P	06 36 08.9	+0.2
JWT				IAmb	IAmb	06 36 11.4	
	comp=Z,23nm,0.8s						
INU	Inuyama	37.69	18	P	P	06 36 12.8	-0.4
INU				IAmb	IAmb	06 36 15.6	
	comp=Z,37nm,1.3s						
KSRS	Korea Array	37.90	5	P	P	06 36 15.6	+0.8
	comp=Z,1.9nm,0.8s,baz=186,slow=9.8,SNR=4.3						
JGF	Kuroka	38.03	18	P	P	06 36 16.0	-0.1
MAJO	Matsushiro	39.16	19	P	P	06 36 24.8	-0.7
MAJO				IAmb	IAmb	06 36 27.3	
	comp=Z,12nm,0.8s						
MAT	Matsushiro	39.16	19	P	P	06 36 24.5	-1.0
MJAR	Matsushiro Arr	39.16	19	P	P	06 36 24.9	-0.7
	comp=Z,13nm,0.7s,baz=189,slow=9.0,SNR=29						
MJAR				LR	LR	06 50 46.5	
	comp=Z,39nm,21.6s,baz=185,slow=33						
MJAR	Matsushiro Arr	39.16	19	P	P	06 36 24.4	-1.1
SHL	Shillong	40.23	312	P	P	06 36 34.9	+0.1
JMM	Marumori	41.23	21	P	P	06 36 43.2	+0.7
JTM	Tenmabayashi	43.94	19	P	P	06 37 05.2	+0.7
CN2	Changchun	44.08	2	*e*P	P	06 37 12.0	+6.5
ODAN	Odare	44.31	311	*e*P	P	06 37 09.3	+1.3
TAPN	Taplejung	44.33	311	*e*P	P	06 37 08.5	+0.3
	comp=Z,12nm,0.5s						
RAMN	Ramite	44.96	310	*e*P	P	06 37 13.7	+0.5
	comp=Z,30nm,0.5s						
USRK	Ussuriysk Ar.	45.05	8	P	P	06 37 13.3	+0.1
	comp=Z,3.0nm,0.3s,baz=190,slow=5.1,SNR=16						
USRK	Ussuriysk Ar.	45.05	8	P	P	06 37 13.9	+0.7
GTA	Gaotai	45.33	334	⇑P	P	06 37 17.1	+1.3
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GUN	Gumba	46.00	311	*e*P	P	06 37 21.8	+0.3
	comp=Z,19nm,0.4s						
PKI	Pulchoki	46.19	310	*e*P	P	06 37 23.3	+0.4
	comp=Z,9.2nm,0.4s						
PKIN	Phulchoki	46.20	310	*e*P	P	06 37 23.3	+0.3
	comp=Z,8.7nm,0.4s						
KKN	Kakani	46.40	310	*e*P	P	06 37 25.0	+0.6
	comp=Z,10nm,0.4s						
DMN	Daman	46.44	310	*e*P	P	06 37 25.2	+0.4
	comp=Z,11nm,0.5s						
GKN	Gorkha	46.99	310	*e*P	P	06 37 29.5	+0.5
	comp=Z,9.6nm,0.3s						
ASAJ	Asahikawa	47.43	18	P	P	06 37 32.7	+0.7
	comp=Z,16nm,0.6s,baz=176,slow=11,SNR=11						
JKA	Kamikawa-asahi	47.43	18	P	P	06 37 32.8	+0.9
DANN	Dangsing	47.84	310	*e*P	P	06 37 35.8	+0.1
	comp=Z,26nm,0.4s						
KLR	Kul'dur	49.95	7	P	P	06 37 50.8	-0.4
	comp=Z,2.9nm,0.7s,baz=241,slow=5.0,SNR=6.5						
SONM	Songino Array	50.41	345	P	P	06 37 53.8	-1.1
	comp=Z,2.0nm,0.8s,baz=159,slow=9.0,SNR=11						
SONM	Songino Array	50.41	345	P	P	06 37 55.5	+0.7
NIL	Nilore	58.27	311	P	P	06 38 52.5	+0.4
NIL				IAmb	IAmb	06 38 52.5	
	comp=Z,6.0nm,0.6s						
MK31	Makanchi Array	59.41	328	P	P	06 38 59.0	-0.6
MK31				IAmb	IAmb	06 38 59.0	
	comp=Z,2.7nm,0.3s						
MKAR	Makanchi Array	59.41	328	P	P	06 38 58.7	-0.9
	comp=Z,3.1nm,0.3s,baz=127,slow=8.4,SNR=103						
MKAR				PcP	PcP	06 39 46.3	-0.3
	comp=Z,3.0nm,0.7s,baz=128,slow=5.9,SNR=6.4						
MKAR	Makanchi Array	59.41	328	P	P	06 38 58.9	-0.8
MAKZ	Makanchi	59.58	328	P	P	06 38 59.6	-1.2
MAKZ				IAmb	IAmb	06 39 04.4	
	comp=Z,2.7nm,0.5s						
PEA0B	Petropavlovsk-	60.38	23	P	P	06 39 07.5	+1.4
PETK	Petropavlovsk-	60.38	23	P	P	06 39 06.0	-0.1
	comp=Z,5.5nm,0.8s,baz=211,slow=4.6,SNR=7.2						
PETK				LR	LR	07 02 15.3	
	comp=Z,18nm,21.8s,baz=220,slow=33						
PETK	Petropavlovsk-	60.38	23	P	P	06 39 06.8	+0.7
KBL	Kabul	61.83	310	P	P	06 39 15.4	-1.1
KBL				IAmb	IAmb	06 39 17.6	
	comp=Z,5.0nm,0.6s						
YAK	Yakutsk	62.47	3	P	P	06 39 19.4	-0.6
ZAA0	Zalesovo Array	63.04	335	P	P	06 39 22.4	-1.5
ZALV	Zalesovo Beam	63.04	335	P	P	06 39 22.0	-2.0
	comp=Z,1.4nm,0.4s,baz=138,slow=6.9,SNR=9.6						
ZALV	Zalesovo Beam	63.04	335	P	P	06 39 22.6	-1.4
KURK	Kurchatov	63.75	330	P	P	06 39 27.5	-1.2
KURK				IAmb	IAmb	06 39 32.3	
	comp=Z,9.8nm,0.6s						
KK31	Karatay Array	64.36	319	P	P	06 39 32.7	-0.2
KKAR	Karatay Array	64.36	319	P	P	06 39 32.4	-0.5
BRVK	Borovoye	69.34	329	P	P	06 40 02.5	-1.8
TIXI	Tiksi	72.05	2	P	P	06 40 19.4	-1.0
TIXI				IAmb	IAmb	06 40 22.6	
	comp=Z,6.0nm,0.7s						
ABKAR	Akbulak array	73.56	322	P	P	06 40 28.1	-1.7
NRIK	Noril'sk	73.80	347	P	P	06 40 29.9	-0.8
	comp=Z,4.3nm,0.5s,baz=119,slow=5.8,SNR=7.2						
NRIK	Noril'sk	73.80	347	P	P	06 40 30.6	-0.1
NRIK				IAmb	IAmb	06 40 33.3	
	comp=Z,4.4nm,0.6s						
ARU	Arti	76.92	329	P	P	06 40 47.2	-1.7
SDPT	Sand Point	82.27	34	P	P	06 41 19.1	+1.2
SVW2	Sparrevohn	85.85	29	P	P	06 41 37.6	+1.6
SVW2				IAmb	IAmb	06 41 49.4	
	comp=Z,12nm,1.5s						
TTA	Tatalina	85.93	27	P	P	06 41 36.7	+0.3
IMAR	Indian Mountai	87.32	24	P	P	06 41 44.1	+1.0
SYO	Syowa Base	87.50	201	⇑*e*X	P	06 41 53.0	+9.2
SKT	Skwentna	87.88	28	P	P	06 41 45.7	-0.1
SKT				IAmb	IAmb	06 42 05.6	
	comp=Z,17nm,1.5s						
COLD	Coldfoot	88.85	23	P	P	06 41 51.3	+1.0
COLD				IAmb	IAmb	06 41 53.1	
	comp=Z,5.2nm,1.1s						
EIL	Elat	89.21	300	LR	LR	07 27 21.5	
	comp=Z,8.9nm,18.7s,baz=113,slow=39						
ILAR	Eielson Array	90.11	25	P	P	06 41 55.1	-1.1
	comp=Z,0.7nm,0.6s,baz=262,slow=4.1,SNR=5.8						
AKASG	Malin Array Be	93.24	321	P	P	06 42 09.3	-1.7
	comp=Z,0.6nm,0.5s,baz=71,slow=5.0,SNR=2.9						
ARCES	ARCESS Array B	93.32	340	P	P	06 42 09.2	-1.7
	comp=Z,3.1nm,0.9s,baz=90,slow=4.1,SNR=12						
FINES	FINESS Array B	94.08	331	P	P	06 42 12.2	-2.4
	comp=Z,3.2nm,0.9s,baz=116,slow=4.4,SNR=6.4						
FINES				LR	LR	07 27 24.2	
	comp=Z,35nm,20.9s,baz=36,slow=37						
EPYK	Eagle Plains	94.22	23	P	P	06 42 15.9	+0.7
EPYK				IAmb	IAmb	06 42 17.5	
	comp=Z,4.5nm,0.8s						
INK	Inuvik	95.09	21	P	P	06 42 19.2	+0.1
	comp=Z,1.3nm,0.6s,baz=330,slow=1.6,SNR=9.5						
C36M	Paulatuk	98.10	19	P	Pdif	06 42 33.0	+0.3
C36M				IAmb	IAmb	06 42 36.2	
	comp=Z,6.7nm,1.4s						
PDAR	Pinedale Array	116.41	41	PKP	PKiKP	06 47 41.7	+1.3
	comp=Z,0.3nm,0.4s,baz=70,slow=1.7,SNR=3.8						
PDAR	Pinedale Array	116.41	41		PKiKP	06 47 40.1	-0.4
ULM	Lac du Bonnet	120.00	28	PKP	PKiKP	06 47 47.0	+0.1
	comp=Z,1.8nm,0.5s,baz=345,slow=1.3,SNR=6.0						
ULM	Lac du Bonnet	120.00	28		PKiKP	06 47 46.6	-0.2
TORD	Torodi Ar. Bea	121.29	285	PKP	PKPdf	06 47 48.6	-1.6
	comp=Z,1.7nm,0.9s,baz=333,slow=1.5,SNR=6.5						
TORD	Torodi Ar. Bea	121.29	285		PKPdf	06 47 49.5	-0.8

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*JMA **15** 06:35:44.8±0.3, 23°.74N×126°.28E, h28^{km}, M3.7*

*IDC **15** 06:35:45.7±0.9, 23°.94N×126°.23E, h0^{km}, mb3.8/6, mb1 4.0/7, mb1mx3.6/44, mbtmp3.8/7, ML3.1/1, Error ellipse: s-maj=41.6km s-min=19.2km az=83.0*

ISC 15 06:35:47.9±2.6, **23°.90N**±0°.08×**126°.18E**±0°.05, **h17**^{km}±15^{km}, **n23**, σ**0^s.88**/31, **mb3.6**/6, **Southeast of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOGS	Gusukube	1.11	321	P	Pn	06 36 07.6	-1.1
JOGS				S	Sg	06 36 24.1	+0.2
JMJ2	Miyako jima3	1.14	318	P	Pn	06 36 08.0	-1.1
JMJ2				*e*S	Sg	06 36 25.3	+0.3
JIRB	Irabujima	1.30	316	P	Pn	06 36 10.1	-1.2
JIRB				S	Sb	06 36 29.3	+0.9
JIKM	Ikemajima	1.33	321	P	Pn	06 36 10.4	-1.2
JIKM				S	Sn	06 36 28.8	-0.1
JTJ	Tarama	1.54	299	P	Pn	06 36 12.6	-1.9
JTJ				S	Sn	06 36 33.5	-0.6
JISG	Ishigakijimahi	1.84	292	P	Pn	06 36 17.4	-1.2
JISG				S	Sn	06 36 42.1	+0.6
JIJ	Ishigaki jima	1.91	285	P	Pn	06 36 19.0	-0.7
JIJ				S	Sn	06 36 43.7	+0.3
JKRS	Kuro-shima	2.01	280	P	Pn	06 36 20.5	-0.5
HATJ	Hateruma jima	2.17	275	P	Pn	06 36 21.9	-1.4
HATJ				S	Sn	06 36 49.3	-0.5
IRIF	Iriomote-Funau	2.28	282	P	Pn	06 36 24.7	0.0
JKE	Kume jima 2	2.48	13	P	Pn	06 36 26.7	-0.8
JNTH	Nagotoyohara	3.10	32	P	Pn	06 36 35.8	-0.3
JNTH				S	Sn	06 37 11.9	-0.8
JOW	Kunigami	3.49	33	Pn	Pn	06 36 40.5	-0.9
	3.4nm,0.3s,baz=99,slow=23,SNR=8.0						
JOW	Kunigami	3.49	33	P	Pn	06 36 40.7	-0.7
JIH	Iheya	3.52	27	P	Pn	06 36 41.0	-0.8
JYRO	Yoronjima	3.73	33	P	Pn	06 36 44.5	-0.2
JOKE	Okinoerabujima	4.07	32	P	Pn	06 36 48.6	-0.8
FITZ	Fitzroy Crossi	41.74	181	P	P	06 43 36.0	-0.2
	7.1nm,1.2s,baz=9.5,slow=12,SNR=2.1						
MKAR	Makanchi Array	41.76	314	P	P	06 43 36.4	+0.1
	0.5nm,0.5s,baz=102,slow=9.7,SNR=7.2						
WRA	Warramunga Arr	44.29	169	P	P	06 43 57.0	0.0
	0.7nm,0.6s,baz=349,slow=8.5,SNR=4.9						
ASAR	Alice Springs	47.87	170	P	P	06 44 27.5	+2.4
	0.3nm,0.6s,baz=356,slow=14,SNR=4.9						
FINES	FINESS Array B	73.97	331	P	P	06 47 23.4	+1.3
	5.0nm,1.1s,baz=41,slow=4.4,SNR=4.3						
YKA	Yellowknife Ar	81.41	24	P	P	06 48 03.5	-0.2
	0.2nm,0.7s,baz=305,slow=3.7,SNR=3.2						

IDC 15 06:36:35.3±2.0, **60°.76S**×**44°.59W**, **h0**^{km}, **mb3.7**/2, **mb1 3.8**/2, **mb1mx3.6**/21, **mbtmp3.7**/2, **Error ellipse: s-maj=100.6km s-min=37.5km az=19.0**, **Scotia Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLCA	Paso Flores	25.62	310	P	P	06 42 06.0	-0.2
	0.9nm,0.8s,baz=101,slow=10,SNR=2.3						
TORD	Torodi Ar. Bea	82.32	45	P	P	06 48 58.7	+0.1
	0.9nm,0.8s,baz=213,slow=7.1,SNR=2.7						
YKA	Yellowknife Ar	133.93	323	PKP	PKPdf	06 55 52.0	-0.6
	0.2nm,0.6s,baz=120,slow=2.6,SNR=4.0						
ILAR	Eielson Array	146.30	311	PKPbc	PKPbc	06 56 15.8	-0.4
	1.1nm,0.8s,baz=153,slow=2.4,SNR=8.4						
MKAR	Makanchi Array	146.66	90	PKPbc	PKPdf	06 56 16.8	+0.6
	1.0nm,0.6s,baz=224,slow=2.0,SNR=12						

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*TUL **15** 06:42:49.5±1.1, 36°.60N±0°.01×97°.638W±0°.008, h5^{km}±7^{km}, ML3.3, mb_Lg3.2/69(NEIC), Error ellipse: s-maj=1.9km s-min=0.7km az=195.0*

*NEIC **15** 06:42:49.8±0.8, 36°.583N±0°.009×97°.63W±0°.02, h3^{km}±7^{km}, Error ellipse: s-maj=2.1km s-min=1.1km az=66.0*

*ANF **15** 06:42:50.0±0.5, 36°.59N×97°.62W, h5^{km}, ML3.8/8, Error ellipse: s-maj=5.9km s-min=5.2km az=147.0*

ISC 15 06:42:49.8±1.1, **36°.58N**±0°.02×**97°.63W**±0°.02, **h3**^{km}±10^{km}, **n69**, σ**0^s.62**/67, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CROK	Carrier	0.29	255		Pg	06 42 55.7	+0.3
CROK				Sg	Sg	06 42 59.8	+0.6
KAN13	South Haven SW	0.45	16		Pg	06 42 58.4	0.0
KAN13				Sg	Sg	06 43 04.5	+0.3
KAN14	Manchester OK	0.46	325		Pg	06 42 58.5	-0.1
KAN14				Sg	Sg	06 43 04.8	+0.2
KAN01	Argonia South	0.58	350		Pg	06 43 00.8	-0.1
KAN01				Sg	Sg	06 43 08.7	+0.3
KAN10	Anthony SW Sta	0.66	326		Pg	06 43 02.0	-0.3
KAN10				Sg	Sg	06 43 11.0	+0.1
KAN08	Anthony NE Sta	0.70	337		Pg	06 43 03.0	-0.1
KAN08				Sg	Sg	06 43 12.4	+0.2
KAN12	Harper NE Stat	0.77	338	Pg	Pg	06 43 04.5	-0.1
KAN12				Sg	Sg	06 43 14.7	+0.1
OK029	Liberty Lake	0.80	170		Pg	06 43 05.2	+0.2
OK029				Sg	Sg	06 43 16.1	+0.8
QUOK	Quay	0.85	118	Pg	Pg	06 43 06.0	0.0
OK031	S. Brethren Rd	0.90	134		Pg	06 43 07.0	0.0
OK031				Sg	Sg	06 43 19.1	+0.5
BCOK	Bluff Creek, N	0.92	179		Pg	06 43 07.3	-0.1
BCOK				Sg	Sg	06 43 20.3	+0.9
OK030	Cody Creek RV	0.95	133		Pg	06 43 07.8	-0.1
T35A	Sooner Cattle	0.96	69	Pg	Pg	06 43 07.8	-0.3
T35A				Sg	Sg	06 43 20.5	-0.1
T35B	Sooner Cattle	0.96	69	P		06 43 07.6	
	baz=251,SNR=84						
T35B				S		06 43 20.4	
	baz=251						
OK025	Westminster Rd	1.03	166		Pg	06 43 09.4	0.0
OK025				Sg	Sb	06 43 23.5	-0.6
U32A	Winter Ranch,	1.12	260		Pg	06 43 10.7	-0.6
U32A				Sg	Sg	06 43 25.6	-0.2

U32A	Winter Ranch,	1.12	260	P		06 43 10.5	
	baz=78						
U32A				S		06 43 25.7	
	baz=78						
OKCFA	Oklahoma City	1.17	173	Pg	Pg	06 43 12.0	-0.3
OKCFA				Sg	Sb	06 43 28.2	-0.1
OKCSW	OKLAHOMA CITY	1.18	172		Pg	06 43 12.2	-0.2
OKCSW				Sg	Sb	06 43 28.3	-0.3
FNO	Franklin	1.33	172		Pn	06 43 15.2	-0.1
TUL1	Leonard	1.63	114	P	Pn	06 43 19.2	-0.2
	baz=295						
TUL1				S	Sb	06 43 41.3	-0.2
	baz=295						
TUL1	Leonard	1.63	114		Pn	06 43 19.4	0.0
TUL1				IAmb_Lg		06 43 45.2	
	comp=Z,124nm,0.8s						
TUL1	Leonard	1.63	114	P		06 43 19.2	
	baz=295,SNR=119						
TUL1				S		06 43 41.5	
	baz=295						
X34A	Smith Ranch, M	1.98	185	Pn	Pb	06 43 25.4	-1.1
R32A	Long Quarter,	2.03	335		Pn	06 43 25.5	+0.6
R32A	Long Quarter,	2.03	335	P		06 43 25.7	
	baz=155,SNR=38						
R32A				S		06 43 51.9	
	baz=155						
WMOK	Wichita Mounta	2.06	207	P	Pn	06 43 25.5	+0.1
	baz=26						
WMOK				S	Sb	06 43 52.8	-1.2
	baz=26						
WMOK	Wichita Mounta	2.06	207		Pn	06 43 25.7	+0.3
WMOK				IAmb_Lg		06 43 56.9	
	comp=Z,109nm,1.0s						
WMOK	Wichita Mounta	2.06	207	P		06 43 25.4	
	baz=26,SNR=96						
WMOK				S		06 43 53.1	
	baz=26						
U38A	Gravette	2.62	92		Pn	06 43 33.5	+0.4
KSU1	Kansas State U	2.64	18	P	Pn	06 43 33.5	+0.2
	baz=198						
KSU1				S	Sn	06 44 05.6	-0.3
	baz=198						
KSU1	Kansas State U	2.64	18	Pn	Pn	06 43 33.5	+0.2
KSU1	Kansas State U	2.64	18	P		06 43 33.6	
	baz=198,SNR=10						
X37A	Clayton	2.71	136		Pn	06 43 34.9	+0.7
X37A	Clayton	2.71	136	P		06 43 34.7	
	baz=318						
CBKS	Cedar Bluff	2.79	324	P	Pn	06 43 35.3	0.0
	baz=142						
CBKS				S	Sn	06 44 10.9	+1.4
	baz=142						
CBKS	Cedar Bluff	2.79	324	P		06 43 35.3	
	baz=142,SNR=16						
HHAR	Hobbs	2.99	95		Pn	06 43 38.5	+0.4
Z35A	Perchaven, San	3.26	174	S		06 44 22.4	
	baz=355						
W39A	Magazine	3.42	113	P	Pn	06 43 44.6	+0.7
	baz=295						
W39A				S	Sn	06 44 25.3	+0.3
	baz=295						
S39A	Bolivar	3.62	71		Pn	06 43 46.9	+0.2
S39A				IAmb_Lg		06 44 49.6	
	comp=Z,55nm,0.7s						
S39A	Bolivar	3.62	71	P		06 43 47.0	
	baz=254,SNR=6.7						
AMTX	Amarillo	3.70	244	P	Pn	06 43 48.3	+0.3
	baz=61						
AMTX				S	Sn	06 44 32.3	+0.1
	baz=61						
AMTX	Amarillo	3.70	244	Pn	Pn	06 43 48.6	+0.6
AMTX				IAmb_Lg		06 44 57.5	
	comp=Z,49nm,0.9s						
U40A	Yellville	3.86	92	P	Pn	06 43 49.7	-0.4
	baz=275						
U40A				S	Sn	06 44 35.4	-0.5
	baz=275						
U40A	Yellville	3.86	92		Pn	06 43 50.1	+0.1
U40A				IAmb_Lg		06 44 54.9	
	comp=Z,79nm,0.8s						
U40A	Yellville	3.86	92	P		06 43 50.2	
	baz=275,SNR=9.1						
U40A				P		06 43 50.2	
	baz=275,SNR=9.1						
MIAR	Mount Ida	3.88	120	P	Pn	06 43 50.8	+0.5
	baz=303						
MIAR				S	Sn	06 44 36.8	+0.3
	baz=303						
MIAR	Mount Ida	3.88	120		Pn	06 43 51.7	+1.4
MIAR				IAmb_Lg		06 44 54.4	
	comp=Z,40nm,0.8s						
Z38A	Mt. Pleasant	3.96	146	IAmb_Lg		06 45 01.5	
	comp=Z,92nm,1.0s						
N33A	J Bar K, Exete	4.15	2	IAmb_Lg		06 45 12.5	
	comp=Z,36nm,1.0s						
ABTX	Abilene, Hawle	4.28	203	IAmb_Lg		06 45 07.1	
	comp=Z,36nm,1.2s						
MGMO	Mountain Grove	4.34	81		Pn	06 43 57.5	+0.8
MGMO				IAmb_Lg		06 45 13.2	
	comp=Z,62nm,0.7s						
X40A	Basin Creek Fa	4.43	117	Pn	Pn	06 43 58.3	+0.3
X40A	Basin Creek Fa	4.43	117	P		06 43 58.4	
	baz=300						
X40A				P		06 43 58.4	
	baz=300						
P38A	Dawn	4.44	46	IAmb_Lg		06 45 11.1	
	comp=Z,33nm,0.8s						
WHAR	Wooly Hollow	4.52	105	Pn	Pn	06 44 01.7	+2.5
N35A	Tabor	4.55	19	Pn	Pn	06 44 00.1	+0.5
N35A	Tabor	4.55	19	P		06 43 59.9	
	baz=201						
WHTX	Lake Whitney,	4.58	178	Pn	Pn	06 43 60.0	0.0
WHTX	Lake Whitney,	4.58	178	P		06 43 60.0	
	baz=358,SNR=12						
R40A	Maddies Statio	4.60	67	P		06 44 00.4	
	baz=250,SNR=5.4						
237A	Washetta, Mont	4.81	161	IAmb_Lg		06 45 33.9	
	comp=Z,30nm,0.9s						
BGNE	Belgrade	4.84	355	IAmb_Lg		06 45 28.4	
	comp=Z,56nm,0.8s						
BGNE	Belgrade	4.84	355	P		06 44 03.2	
	baz=175						
LCAR	Lake Charles	5.25	94	IAmb_Lg		06 45 37.8	
	comp=Z,40nm,0.8s						
T42A	Van Buren	5.27	83	IAmb_Lg		06 45 40.3	
	comp=Z,35nm,0.7s						
P40A	Paris	5.30	55	IAmb_Lg		06 45 44.6	
	comp=Z,45nm,0.9s						
CCM	Cathedral Cave	5.30	72	IAmb_Lg		06 45 44.2	
	comp=Z,64nm,0.9s						
N38A	Joes South For	5.43	38	IAmb_Lg		06 45 56.5	
	comp=Z,42nm,0.8s						
L34A	Svendsen Farm,	5.47	10	IAmb_Lg		06 45 44.9	
	comp=Z,44nm,0.7s						
OGNE	Ogallala	5.55	323	IAmb_Lg		06 45 53.9	
	comp=Z,34nm,0.8s						
435B	Jarrell	5.78	180	IAmb_Lg		06 45 59.6	
	comp=Z,34nm,0.9s						
PBMO	Poplar Bluff	5.79	86	IAmb_Lg		06 46 00.5	
	comp=Z,41nm,0.7s						
SLM	Saint Louis	6.22	69	IAmb_Lg		06 46 09.6	
	comp=Z,37nm,0.7s						
SCIA	State Center	6.33	31	IAmb_Lg		06 46 14.9	
	comp=Z,39nm,0.7s						
JCT	Junction City	6.35	197	IAmb_Lg		06 46 16.5	
	comp=Z,54nm,1.1s						
SDCO	Great Sand Dun	6.39	283	Pn	Pn	06 44 27.0	+1.9
N41A	Harden Midland	6.71	50	IAmb_Lg		06 46 25.6	
	comp=Z,39nm,1.0s						
W45A	Hickory Valley	7.00	99	IAmb_Lg		06 46 34.5	
	comp=Z,40nm,0.8s						
K38A	Parkersburg	7.12	30	IAmb_Lg		06 46 51.5	
	comp=Z,26nm,0.8s						
HDIL	Hopedale	7.64	56	IAmb_Lg		06 46 54.4	
	comp=Z,37nm,0.7s						
O44A	Mansfield	8.03	61	IAmb_Lg		06 47 10.2	
	comp=Z,34nm,1.0s						
T47A	Sharon Grove	8.46	84	IAmb_Lg		06 47 20.9	
	comp=Z,18nm,0.8s						
K22A	Casper	9.15	314	IAmb_Lg		06 47 58.7	
	comp=Z,14nm,1.0s						

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*KRSC **15** 06:56:34.0±2.0, 53°.45N×168°.48E, h18^{km}±31^{km}, ML3.8*
*IDC **15** 06:56:34.6±2.2, 54°.05N×168°.75E, h0^{km}, mb3.3/3, mb1 3.7/4, mb1mx3.2/67, mbtmp3.4/4, ML2.9/1, Error ellipse: s-maj=92.4km s-min=32.0km az=164.0*
ISC 15 06:56:38.9±0.9**, 53°.7N**±0°.1×**168°.64E**±0°.06**, h35^{km}, n11,** σ**2^{s}.19**/11**, mb3.1**/3**, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKI	Bering	2.17	315	*e*P	Pn	06 57 12.8	+0.4
BKI				*e*S	Sn	06 57 41.2	+3.2
SMY	Shemya	3.43	104	P	Pn	06 57 29.8	+0.1
SMY				S	Sn	06 58 12.7	+3.6
TUMD	Tumrok D	5.04	291	S	Sn	06 58 50.3	+1.5
GNL	Ganaly	6.35	274	P	Pn	06 58 10.8	+0.7
PETK	Petropavlovsk-	6.57	269	Pn	Pn	06 58 13.6	+0.7
	1.2nm,0.3s,baz=96,slow=19,SNR=25						
PETK				Sn	Sn	06 59 25.1	-1.4
	0.7nm,0.3s,baz=82,slow=39,SNR=6.0						
ILAR	Eielson Array	24.73	46	P	P	07 01 53.7	-2.9
	0.4nm,0.8s,baz=252,slow=7.1,SNR=6.7						
H11N2	WAKE ISLAND Hy	33.93	183	T	T	07 39 45.1	
	baz=2.3,slow=76,SNR=15						
H11N3	WAKE ISLAND Hy	33.94	183	T	T	07 39 49.9	
	baz=2.3,slow=76,SNR=8.1						
H11N1	WAKE ISLAND Hy	33.95	183	T	T	07 39 51.1	
	baz=2.3,slow=76,SNR=7.4						
YKA	Yellowknife Ar	39.17	46	P	P	07 04 01.7	-1.1
	0.2nm,0.6s,baz=295,slow=7.1,SNR=4.5						
TXAR	Lajitas Array	65.62	73	P	P	07 07 19.4	0.0
	0.4nm,0.5s,baz=306,slow=5.2,SNR=11						

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*DNK **15** 07:08:59.3±2.0, 51°.38N×16°.36E, h15^{km}±92^{km}, ML2.1*
*IDC **15** 07:09:01.5±0.8, 51°.46N×16°.00E, h0^{km}, mb1 3.6/7, mb1mx3.2/47, mbtmp3.4/7, ML2.7/7, Error ellipse: s-maj=17.5km s-min=7.6km az=99.0*
*PRU **15** 07:09:01.5±0.0, 51°.46N×16°.09E, h0^{km}*
*VIE **15** 07:09:01.0±0.7, 51°.47N×16°.13E, h0^{km}, mb2.5/9, ml2.6/12, ms3.4/1, Error ellipse: s-maj=7.4km s-min=3.4km az=47.0 75 km NW of Wroclaw Suspected Mining induced.*
ISC 15 07:08:59.8±0.7**, 51°.54N**±0°.04×**16°.12E**±0°.02**, h0^{km}, n45,** σ**0^{s}.98**/80**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.70	171	*i* Pg	Pg	07 09 13.6	+0.3
KSP				*e*Sg	Sg	07 09 22.1	-0.3
CHVC	Chvalec	0.95	182	*e*PG	Pg	07 09 18.1	+0.1
CHVC				*e*SG	Sg	07 09 30.0	-0.3
	comp=Z,47nm,0.5s						
OSTC	Ostas	0.98	176	*e*PG	Pg	07 09 18.4	-0.2
OSTC				*e*SG	Sg	07 09 31.0	-0.4
	comp=Z,42nm,0.4s						
UPC	Upice	1.03	184	*e*PG	Pg	07 09 19.7	+0.1
UPC				*e*SG	Sg	07 09 32.2	-0.8
	comp=Z,108nm,0.4s						
DPC	Dobruska-Polom	1.20	174	*e*PG	Pg	07 09 22.4	-0.3
DPC				*e*SG	Sg	07 09 36.6	-1.6
	comp=Z,61nm,0.9s						
PVCC	Panska Ves	1.41	225	*e*PG	Pn	07 09 26.6	0.0
PVCC				*e*SG	Sg	07 09 45.2	+0.3
	comp=Z,154nm,0.3s						
BRG	Berggiesshubel	1.52	245	Pn	Pn	07 09 28.1	-0.1
BRG				Pg	Pg	07 09 29.3	+0.4
BRG				Sg	Sn	07 09 49.4	+0.7
BRG				Amp		07 09 50.1	
	comp=Z,59nm,0.4s						
KRLC	Kraliky	1.52	164	*e*PG	Pn	07 09 28.0	-0.3
KRLC				*e*SG	Sn	07 09 46.4	-2.5
	comp=Z,86nm,1.0s						
PRA	Prague	1.82	217	*e*PG	Pn	07 09 32.4	+0.1
PRA				*e*SG	Sn	07 09 56.7	+0.7
	comp=Z,19nm,0.9s						
PRU	Pruhonice	1.85	213	*e*PG	Pn	07 09 33.2	+0.5
PRU				*e*SG	Sn	07 09 57.3	+0.6
	comp=Z,27nm,0.6s						
CLL	Collm	1.96	264	*i* Pn	Pn	07 09 34.3	0.0
CLL				*i* Pg	Pg	07 09 37.1	-0.3
CLL				*i*		07 09 40.3	
CLL				*e*		07 09 52.0	
CLL				*e*Sg	Sg	07 10 03.0	+0.2
	comp=Z,16nm,0.6s						
MORC	Moravsky Berou	1.98	152	*e*PN	Pn	07 09 34.2	-0.4
MORC				*e*SG	Sn	07 10 00.5	+0.3
OKC	Ostrava-Krasne	2.14	142	*e*PG	Pb	07 09 39.6	+0.3
OKC				*e*SG	Sb	07 10 07.1	+0.7
	comp=Z,52nm,0.7s						
VRAC	Vranov	2.25	172	Pn	Pn	07 09 38.3	0.0
	comp=Z,2.0nm,0.3s,baz=344,slow=14,SNR=14						
VRAC				Lg	Lg	07 10 10.1	
	comp=Z,3.6nm,0.3s,baz=275,slow=23,SNR=12						
VRAC	Vranov	2.25	172	*e*PN	Pn	07 09 38.0	-0.3
VRAC				*e*SG	Sn	07 10 08.5	+1.7
PBCC	Pribram	2.29	217	*e*PN	Pn	07 09 38.8	-0.1
PBCC				*e*PG	Pb	07 09 41.7	-0.3
PBCC				*e*SG	Sb	07 10 12.2	+1.3
KRUC	Moravsky	2.48	176	*e*PN	Pn	07 09 41.5	0.0
KRUC				*e*PG	Pb	07 09 44.6	-0.7
KRUC				*e*SG	Sb	07 10 16.8	+0.4
NKC	Novy Kostel	2.67	242	*e*PN	Pn	07 09 44.7	+0.7
NKC				*e*PG	Pg	07 09 50.0	-0.8
NKC				*e*SG	Sg	07 10 25.7	+0.3
	comp=Z,24nm,0.3s						
OJC	Ojcow	2.68	118	*e*Pn	Pn	07 09 42.9	-1.2
OJC				*e*Pg	Pg	07 09 52.6	+1.5
OJC				*e*Sg	Sg	07 10 27.4	+1.5
JAVC	Velka Javorina	2.86	159	*e*PN	Pn	07 09 48.8	+2.1
KHC	Kasperske Hory	2.91	215	*e*PN	Pn	07 09 47.9	+0.6
KHC				*e*PG	Pb	07 09 53.0	+0.5
KHC				*e*SN	Sn	07 10 22.2	-0.8
KHC				*e*SG	Sg	07 10 32.3	-0.8
	comp=Z,15nm,0.4s						
CKRC	Cesky Krumlov	2.96	204	*e*PN	Pn	07 09 48.4	+0.4
CKRC				*e*PG	Pb	07 09 54.3	+0.9
CKRC				*e*SG	Sg	07 10 33.0	-1.8
GERES	GERESS Array B	3.11	211	Pn	Pn	07 09 50.6	+0.5
	comp=Z,0.9nm,0.3s,baz=28,slow=13,SNR=28						
GERES				Pg	Pb	07 09 57.0	+1.0
	comp=Z,3.4nm,0.3s,baz=29,slow=12,SNR=27						
GERES				Lg	Lg	07 10 36.0	
	comp=Z,3.2nm,0.3s,baz=36,slow=27,SNR=7.5						
LANS	Liptovska Anna	3.21	137	*e*PG	Pg	07 10 01.3	0.0
LANS				*e*SG	Sg	07 10 43.4	+0.5
LANS				*e*LG	Lg	07 10 49.0	
MODS	Modra-Piesok	3.25	166	*e*PG	Pg	07 10 00.6	-1.5
MODS				*e*SG	Sg	07 10 43.6	-0.7
MODS				*e*LG	Lg	07 10 47.9	
ZST	Bratislava	3.41	169	*e*PG	Pg	07 10 03.9	-1.1
ZST				*e*SG	Sg	07 10 49.9	+0.8
NIE	Niedzica	3.41	127	*e*P	Pg	07 10 04.6	-0.5
NIE				*e*S	Sg	07 10 48.9	-0.5
VYHS	Vyhne	3.52	149	*e*PG	Pg	07 10 06.8	-0.3
CONA	Conrad Observa	3.62	183	*e*Pn	Pn	07 09 57.9	+0.7
	comp=Z,0.7nm,0.3s,SNR=6.2						
MOA	Molln	3.88	199	*i* Pn	Pn	07 10 00.9	+0.2
	comp=Z,1.1nm,0.2s,SNR=4.9						
ARSA	Arzberg	4.31	185	*e*Pn	Pn	07 10 07.5	+1.0
	comp=Z,1.3nm,0.3s						
KOLS	Kolonicke sedl	4.73	121	*e*PN	Pn	07 10 13.0	+0.6
KOLS				*e*PG	Pg	07 10 31.6	+1.1
SOKA	Soboth	4.92	189	*e*Pn	Pn	07 10 16.9	+1.9
	comp=Z,0.8nm,0.4s						
WATA	Walderalm	5.14	217	*i* Pn	Pn	07 10 19.5	+1.3
	comp=Z,0.3nm,0.2s						
WTTA	Wattenberg	5.18	216	*e*Pn	Pn	07 10 20.8	+2.1
	comp=Z,0.9nm,0.2s						
MOTA	Moosalm	5.32	220	*e*Pn	Pn	07 10 20.4	-0.2
	comp=Z,0.6nm,0.3s						
ABTA	Abfaltersbach	5.35	208	*e*Pn	Pn	07 10 22.6	+1.8
	comp=Z,0.7nm,0.3s						
RETA	Reutte	5.35	223	*e*Pn	Pn	07 10 20.6	-0.3
	comp=Z,0.8nm,0.3s						
SQTA	Sankt Quirin	5.38	218	*e*Pn	Pn	07 10 23.2	+1.8
	comp=Z,0.7nm,0.3s						
FETA	Feichten	5.73	220	Pn	Pn	07 10 28.1	+1.8
HFS	Hagfors	8.72	352	Pn	Pn	07 11 06.3	-0.7
	comp=Z,0.1nm,0.3s,baz=137,slow=19,SNR=2.0						
NOA	NORSAR Array B	9.90	346	Pn	Pn	07 11 23.0	-0.3
	comp=Z,0.0nm,0.3s,baz=163,slow=12,SNR=1.3						
FINES	FINESS Array B	11.34	25	Pn	Pn	07 11 42.5	-0.3
	comp=Z,0.1nm,0.3s,baz=207,slow=12,SNR=6.0						
EKA	Eskdalemuir Ar	12.10	296	Pn	Pn	07 11 53.8	+0.6
	baz=95,slow=14,SNR=1.2						
ARCES	ARCESS Array B	18.59	10	Pn	P	07 13 15.4	-2.8
	baz=196,slow=12,SNR=6.0						

IDC 15 07:55:07.4±17.0**, 15°.02S**×**164°.55E, h0^{km}, mb3.8**/3**, mb1 4.0**/4**, mb1mx3.6**/36**, mbtmp3.8**/4**, ML3.6**/1**, Error ellipse: s-maj=316.3km s-min=43.6km az=43.0, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	7.24	166	Pn	Pn	07 56 54.6	-0.1
	1.0nm,0.3s,baz=156,slow=16,SNR=7.0						
STKA	Stephens Creek	26.84	227	P	P	08 00 50.0	+0.3
	1.2nm,0.4s,baz=36,slow=11,SNR=4.6						
WRA	Warramunga Arr	29.20	256	P	P	08 01 10.5	-0.5
	0.2nm,0.3s,baz=81,slow=6.6,SNR=5.4						
ASAR	Alice Springs	30.12	249	P	P	08 01 19.2	+0.2
	0.4nm,0.3s,baz=80,slow=9.1,SNR=18						

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*IDC **15** 07:59:58.7±2.1, 52°.76N×32°.69W, h0^{km}, mb3.9/15, mb1 4.0/16, mb1mx3.7/69, mbtmp3.9/16, ML4.0/1, MS2.8/1, Ms1 2.9/1, ms1mx2.4/39, Error ellipse: s-maj=59.9km s-min=17.8km az=2.0*
ISC 15 07:59:59.2±2.0**, 52°.6N**±0°.4×**32°.7W**±0°.1**, h10^{km}, n18,** σ**0^{s}.65**/18**, mb3.9**/15**, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EKA	Eskdalemuir Ar	17.54	69	P	Pn	08 04 03.5	-0.1
	baz=268,slow=8.5,SNR=7.5						
FRB	Frobisher Bay	21.61	315	P	P	08 04 49.3	+0.4
	4.0nm,0.8s,baz=95,slow=8.4,SNR=9.9						
NOA	NORSAR Array B	25.04	53	P	P	08 05 22.5	-0.7
	2.1nm,0.9s,baz=272,slow=9.7,SNR=4.5						
NOA				LR	LR	08 13 20.6	
	comp=Z,20nm,18.2s,baz=125,slow=32						
HFS	Hagfors	26.30	55	P	P	08 05 35.3	+0.8
	1.6nm,0.8s,baz=238,slow=11,SNR=5.0						
GERES	GERESS Array B	29.23	79	P	P	08 06 01.2	+0.2
	1.1nm,0.7s,baz=298,slow=8.5,SNR=7.8						
ARCES	ARCESS Array B	31.26	35	P	P	08 06 17.8	-0.9
	1.6nm,0.6s,baz=257,slow=7.3,SNR=1.6						
FINES	FINESS Array B	32.13	51	P	P	08 06 26.4	+0.1
	1.8nm,0.8s,baz=299,slow=8.5,SNR=6.9						
AKASG	Malin Array Be	37.44	67	P	P	08 07 11.2	-1.1
	0.8nm,0.7s,baz=300,slow=8.4,SNR=5.8						
YKA	Yellowknife Ar	42.11	317	P	P	08 07 50.8	-0.2
	0.4nm,0.8s,baz=64,slow=8.4,SNR=6.4						
ARU	Arti	49.36	47	P	P	08 08 48.4	+0.1
	1.4nm,0.8s,baz=330,slow=5.5,SNR=6.2						
PDAR	Pinedale Array	50.32	291	P	P	08 08 55.4	-0.8
	0.3nm,0.5s,baz=53,slow=6.3,SNR=5.0						
BVAR	Borovoye Array	56.77	45	P	P	08 09 43.3	+0.3
	1.7nm,0.7s,baz=232,slow=7.1,SNR=15						
ZALV	Zalesovo Beam	61.80	36	P	P	08 10 17.3	-0.4
	0.7nm,0.6s,baz=350,slow=7.3,SNR=2.7						
KURBB	Kurchatov Arra	61.96	42	P	P	08 10 19.3	+0.4
	1.9nm,0.9s,baz=323,slow=7.3,SNR=12						
MKAR	Makanchi Array	66.51	43	P	P	08 10 49.0	+0.3
	3.1nm,0.7s,baz=326,slow=4.9,SNR=37						
SONM	Songino Array	74.04	27	P	P	08 11 35.6	+0.6
	0.6nm,0.7s,baz=340,slow=4.9,SNR=4.9						
WRA	Warramunga Arr	145.88	22	PKPbc	PKPab	08 19 40.3	+1.2
	0.4nm,0.7s,baz=340,slow=3.5,SNR=1.5						
ASAR	Alice Springs	149.36	25	PKPbc	PKiKP	08 19 49.8	+0.5
	0.4nm,0.6s,baz=360,slow=2.0,SNR=4.8						

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*TEH **15** 08:04:38.3, 32°.79N×46°.84E, h8^{km}, ML4.9*
*NEIC **15** 08:04:39.0±1.6, 32°.73N±0°.05×46°.95E±0°.07, h10^{km}±1^{km}, mb4.8/75, mb_Lg4.9(TEH), Error ellipse: s-maj=10.9km s-min=7.0km az=237.0*
*DSN **15** 08:04:39.2±5.0, 32°.89N×46°.65E, h43^{km}, mb5.9/1, Error ellipse: s-maj=58.8km s-min=11.2km az=157.0*
*ISN **15** 08:04:39.7±0.7, 32°.82N×46°.99E, h29^{km}±4^{km}, ML4.7*
*MOS **15** 08:04:40.6±1.0, 32°.89N×46°.99E, h29^{km}, mb5.0/54, MS4.0/6, Error ellipse: s-maj=4.9km s-min=3.5km az=96.8*
*THR **15** 08:04:40.1±0.6, 32°.96N×46°.90E, h15^{km}±8^{km}, ML5.2*
*IDC **15** 08:04:41.4±2.7, 32°.93N×46°.94E, h22^{km}±16^{km}, mb4.2/35, mb1 4.3/44, mb1mx4.2/67, mbtmp4.3/44, ML3.4/6, MS4.0/25, Ms1 4.0/25, ms1mx3.8/45, Error ellipse: s-maj=11.0km s-min=10.0km az=165.0*
*GCMT **15** 08:04:41.0±0.3, 32°.74N±0°.02×46°.65E±0°.03, h17^{km}±1^{km}, MW4.9/81, Moment Tensor Solution. s23,c24; s81,c109; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.87±.13; $M_{\theta\theta}$-1.24±.08; $M_{\phi\phi}$-0.62±.07; $M_{r\theta}$1.66±.22; $M_{\theta\phi}$0.85±.05; $M_{\phi r}$-0.85±.20; Best double couple: $M_0$2.62700×10^{16} NP1:ϕ_s310.00000°, δ23.00000°, λ100.00000°. NP2: ϕ_s119.00000°, δ68.00000°, λ86.00000°. Principal axes: T 2.6540, Plg67.0000°, Azm22.0000°; N -0.0520, Plg4.0000°, Azm121.0000°; P -2.6000, Plg23.0000°, Azm213.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*BJI **15** 08:04:42.0±0.0, 32°.80N×47°.00E, h45^{km}, mB5.2/36, mb4.7/53, Ms4.7/33, Ms7 4.5/33*
*OMAN **15** 08:04:49.8, 31°.95N×46°.88E, h44^{km}, mb5.6/28*
ISC 15 08:04:42.0±0.6**, 32°.73N**±0°.03×**46°.94E**±0°.03**, h32^{km}**±3^{km}**, n572,** σ**1^{s}.68**/633**, mb4.7**/140**, MS4.1**/32**, 34C-2D, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DHL1	Dehloran	0.29	100	*e*Pg	Pb	08 04 46.9	-2.6
IBDR	Badra	0.93	294	*e*Pg	Pn	08 04 57.0	-1.8
IBDR				*e*Sg	Sn	08 05 10.0	-1.1
IBDR				AML	AML	08 05 31.5	
	comp=E,18µm,0.6s						
IBDR				AML	AML	08 05 34.0	
	comp=N,32µm,0.6s						
IKFM	Kafar-mosalman	1.09	44	*e*Pg	Pn	08 04 59.6	-1.4
IKMR	Kamar-syah	1.44	57	*e*		08 05 33.1	
	comp=Z,99nm,0.4s						
IKMR				*e*Pg	Pn	08 05 06.5	+0.7
IDOB	Doab	1.47	44	*e*Pg	Pn	08 05 06.3	-0.2
KCHF	Cheshme Sefid,	1.54	3	*e*		08 05 30.8	
	comp=Z,99nm,0.4s						
KCHF				*e*Pg	Pn	08 05 06.4	-1.0
IGHG	Ghaleghazi	1.62	349	*e*		08 05 40.9	
	comp=Z,99nm,0.8s						
IGHG				*e*Pg	Pn	08 05 08.3	-0.3
KER	Kermanshah	1.65	5	*e*Pg	Pn	08 05 09.6	+0.7
SHGR	Shooshtar-Gavs	1.69	111	*e*Pg	Pb	08 05 12.9	+0.5
SHGR				*e*Sg	Sb	08 05 37.7	+4.4
SHGR				IAML		08 05 42.6	
	comp=E,21µm,0.5s						
SHGR				IAML		08 05 44.3	
	comp=N,23µm,0.5s						
SHGR	Shooshtar-Gavs	1.69	111	*e*Pg	Pb	08 05 12.9	+0.5
NSR	Nassriya	1.85	202	*e*Pn	Pn	08 05 12.5	+1.0
NSR				*e*Sn	Sn	08 05 35.5	+1.8
NSR				AML	AML	08 05 44.7	
	comp=E,7µm,0.4s						
IBZA	Bozab	1.89	24	*e*Pn	Pn	08 05 13.1	+0.8
IBZA				*e*		08 05 44.5	
	comp=Z,99nm,0.4s						
AHWZ	Ahwaz	2.01	134	*e*Pn	Pb	08 05 16.7	-1.2
IDHR	Dehrash	2.02	347	*e*Pn	Pn	08 05 14.4	+0.5
IDHR				*e*		08 05 45.7	
	comp=Z,99nm,0.4s						
HSAM	Samen	2.02	43	*e*Pn	Pn	08 05 15.5	+1.4
HSAM				*e*		08 05 50.3	
	comp=Z,99nm,1.0s						
ILIN	Lien	2.18	0	*e*Pn	Pn	08 05 16.7	+0.5
ILIN				*e*		08 05 55.0	
	comp=Z,99nm,1.1s						
BHD	Baghdad	2.22	285	*e*Pn	Pn	08 05 16.5	0.0
BHD				*e*Sn	Sn	08 05 44.0	+1.1
BHD				AML	AML	08 06 00.1	
	comp=E,9µm,0.6s						
IALM	Almabolaq	2.35	25	*e*Pn	Pn	08 05 19.8	+1.1
HAGD	Aghdareh	2.77	41	*e*Pn	Pn	08 05 25.7	+1.3
HAGD				*e*		08 06 03.0	
	comp=Z,99nm,0.3s						
MIB	Mutribah	2.94	173	*e*P		08 05 30.0	
ASAO	Ashtian	3.14	54	IAML		08 06 18.3	
	comp=N,1µm,0.6s						
RST	Umm Al-Ruwaisa	3.22	179	*e*P		08 05 33.5	
UMR	Umm Al-Rimmam	3.24	168	*e*P		08 05 33.6	
IPIR	Pirpir	3.33	90	*e*Pn	Pn	08 05 34.4	+2.3
SHK1	Shahrekord	3.35	96	*e*Pn	Pn	08 05 33.9	+1.5
ABEH	Behbahan	3.53	126	*e*Pn	Pn	08 05 36.8	+2.1

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IRAZ  Razeghan           3.64  42 ePn    Pn    08 05 38.1 +1.8
QABG  Abgarm-Qazvin      3.69  36 ePn    Pn    08 05 36.7  -0.2
RDF   Al-Radifah         3.83 172 eP           08 05 41.7
QAM   Ghamsar            3.90  74 ePn    Pn    08 05 40.5 +0.6
IKLH  Kolahrood          3.94  80 ePn    Pn    08 05 42.4 +2.0
GHVR  GHOM               4.03  63 ePn    Pn    08 05 41.8 +0.3
GHVR                               IAML         08 06 33.2
      comp=N,5µm,0.6s
GHVR                               IAML         08 06 34.0
      comp=E,6µm,0.5s
GHVR  GHOM               4.03  63 ePn    Pn    08 05 41.8 +0.3
IQOM  Qom                4.03  57 ePn    Pn    08 05 42.1 +0.4
ZNJK  Zanjan             4.18  20 ePn    Pn    08 05 43.1  -0.6
ZNJK  Zanjan             4.18  20 ePn    Pn    08 05 43.1  -0.6
IMHD  Mahdasht           4.26  45 ePn    Pn    08 05 45.6 +0.8
KLNJ  Kolanjah           4.31 112 ePn    Pn    08 05 47.3 +1.6
IGAR  Gharneh            4.32  93 ePn    Pn    08 05 47.0 +1.4
IHSB  Hasanabad          4.49  52 ePn    Pn    08 05 48.5 +0.6
KRSH  Karshahi           4.52  73 ePn    Pn    08 05 49.8 +1.5
IGZV  Ghazvin            4.54  36 ePn    Pn    08 05 49.3 +0.7
IZEF  Zefreh             4.54  87 ePn    Pn    08 05 50.1 +1.4
THKV  Tehran--Karaj      4.55  45 ePn    Pn    08 05 48.9 +0.2
THKV  Tehran--Karaj      4.55  45 ePn    Pn    08 05 48.9 +0.2
IHSH  Hashtrud           4.57   3 ePn    Pn    08 05 49.8   -13
IVRN  Varamin            4.57  59 ePn    Pn    08 05 49.7 +0.7
CHTH  Charan             4.69  46 ePn    Pn    08 05 51.2 +0.4
CHTH  Charan             4.69  46 ePn    Pn    08 05 51.2 +0.4
IRAM  Ramesheh           4.70 100 ePn    Pn    08 05 52.4 +1.6
TEH   Tehran             4.74  50 ePn    Pn    08 05 51.0  -0.4
QALM  Alamut, Qazvin     4.79  39 ePn    Pn    08 05 51.6  -0.5
NASN  Na'in              4.94  88 ePn    Pn    08 05 56.3 +2.0
NASN  Na'in              4.94  88 ePn    Pn    08 05 56.3 +2.0
DAMV  Damavand           5.07  54 ePn    Pn    08 05 56.6 +0.6
DAMV  Damavand           5.07  54 ePn    Pn    08 05 56.6 +0.6
KAZ1  Kazerun            5.08 126 ePn    Pn    08 05 58.4 +2.4
ISRB  Sarab              5.11   6 ePn    Pn    08 05 56.8 +0.3
CUKT  Cukurca            5.27 330 eP     Pn    08 05 56.2  -2.4
AHBU  AHRAM              5.37 135 ePn    Pn    08 06 04.6 +4.7
IHRS  Heris              5.57   1 ePn    Pn    08 06 03.0 +0.1
IFIR  Firoozkooh         5.62  57 ePn    Pn    08 06 05.5 +1.9
ILAS  Lasjerd            5.65  60 ePn    Pn    08 06 04.5 +0.6
IPRN  Peran              5.66  50 ePn    Pn    08 06 04.7 +0.7
SHI   Shiraz             5.68 121 ePn    Pn    08 06 06.2 +1.9
ANAR  Anarak             5.72  84 ePn    Pn    08 06 06.1 +1.3
AHAR  Ahar               5.74   1 ePn    Pn    08 06 06.1 +1.0
IMRD  Marand             6.05 351 ePn    Pn    08 06 09.8 +0.4
ISHM  Shahmirzad         6.08  58 ePn    Pn    08 06 11.6 +1.7
ICHK  Chekchek           6.33  92 ePn    Pn    08 06 15.0 +1.8
IANJ  Anjilo             6.39  63 ePn    Pn    08 06 14.3 +0.2
GEVA  Gevas              6.40 331  Pn    Pn    08 06 14.8 +0.6
GEVA  Gevas              6.40 331 ePn    Pn    08 06 14.8 +0.6
AKDM  Akdamar-Van        6.45 331 eP     Pn    08 06 13.2  -1.6
VANB  Van                6.52 335 eP     Pn    08 06 13.1  -2.7
IMEH  Mehriz             6.65 100 ePn    Pn    08 06 18.4 +0.8
IGLO  Ghaloghah          6.81  55 ePn    Pn    08 06 21.4 +1.6
MARD  Mardin             6.81 314  Pn    Pn    08 06 19.0  -0.9
CLDR  Caldiran           6.85 340 eP     Pn    08 06 19.6  -0.8
MAKU  Maku               6.86 345 ePn    Pn    08 06 19.9  -0.5
MAKU  Maku               6.86 345 ePn    Pn    08 06 19.9  -0.5
GURO  Guroymak-BITLI     7.05 327 eP     Pn    08 06 21.5  -1.5
SVAN  Silvan-Diyarba     7.15 321 eP     Pn    08 06 22.6  -1.8
AGRB  Hanur-Agry         7.54 336 eP     Pn    08 06 28.6  -1.2
GNI   Garni              7.61 347  Pn    Pn    08 06 32.2 +1.4
      comp=E,1.0nm,0.3s,baz=256,slow=2.0,SNR=9.5
GNI                                Sn    Sn    08 07 53.1  -2.8
      comp=E,0.8nm,0.3s,baz=74,slow=20,SNR=3.7
GNI                                Lg    Lg    08 08 35.8
      comp=E,0.6nm,0.3s,baz=244,slow=20,SNR=0.6
GNI                                LR    LR    08 09 21.3
      comp=E,526nm,21.1s,baz=168,slow=38
GNI   Garni              7.61 347 eP     Pn    08 06 31.9 +1.1
GNI   Garni              7.61 347  Pn    Pn    08 06 33.0 +2.2
LMD1  Lamerd             7.61 133 ePn    Pn    08 06 32.5 +1.8
DYBB  Diyarbakir         7.62 315 eP     Pn    08 06 30.3  -0.5
BNGB  Bingl              8.05 323 eP     Pn    08 06 35.1  -1.7
URFA  Urfa               8.14 307 eP     Pn    08 06 36.4  -1.6
TNSJ  Nastanj            8.18  79 ePn    Pn    08 06 40.0 +1.5
DIGO  Kars               8.18 340 ePn    Pn    08 06 39.7 +1.0
TPRV  Parvadeh(Tabas     8.20  85 ePn    Pn    08 06 39.4 +0.6
KOPR  Koprukoy-ERZUR     8.32 332 eP     Pn    08 06 39.2  -1.4
KHGB  Koh Gabri          8.47 104 ePn    Pn    08 06 45.2 +2.6
TKDS  Koohdasht(Taba     8.58  81 ePn    Pn    08 06 44.4 +0.4
SENK  Senkaya-Erzuru     8.64 336 eP     Pn    08 06 43.8  -1.1
MALT  Malatya            8.90 311 eP     Pn    08 06 47.8  -0.6
KOPT  Kop Dagi           8.93 326  Pn    Pn    08 06 50.7 +1.6
GAZ   Gaziantep          9.13 302 eP     Pn    08 06 52.4 +0.8
RAYN  Ar Rayn            9.27 188 i P    Pn    08 06 52.8  -0.6
      SNR=24
RAYN  Ar Rayn            9.27 188  P     Pn    08 06 52.9  -0.5
RAYN  Ar Rayn            9.27 188  Pn    Pn    08 06 52.9  -0.5
RAYN  Ar Rayn            9.27 188 ePn    Pn    08 06 52.9  -0.5
KEMA  Kemaliye           9.45 316 ePn    Pn    08 06 57.1 +1.1
KMRS  Kahramanmaras      9.50 303 eP     Pn    08 06 57.2 +0.6
SBZV  Sabzevar           9.52  65 ePn    Pn    08 06 57.8 +0.8
GENO  Geno               9.60 121 ePn    Pn    08 06 59.2 +1.1
MMAI  Mount Meron Ar     9.71 275  Pn    Pn    08 07 00.5 +0.9
      comp=E,1.0nm,0.3s,baz=95,slow=13,SNR=2.1
MMAI                               Sn    Sn    08 08 46.9  -0.7
      comp=E,1.2nm,0.3s,baz=103,slow=19,SNR=1.9
MMAI                               Lg    Lg    08 09 46.6
      comp=E,3.8nm,0.3s,baz=109,slow=15,SNR=3.8
MMAI                               LR    LR    08 11 53.4
      comp=E,782nm,20.2s,baz=80,slow=45
ITEG  Tejag              9.94  86 ePn    Pn    08 07 03.4 +0.7
ISFR  Sfrayin           10.05  62 ePn    Pn    08 07 05.7 +1.4
AFRZ  Afriz             10.15  83 ePn    Pn    08 07 05.8 +0.2
MAK   Makhachkala       10.22   2 eP     Pn    08 07 04.1  -2.2
MAK                               eS     Sn    08 08 58.2  -1.6
MAK                                pmax  pmax
      comp=Z,37nm,0.4s
MAK                                MLR   MLR
      comp=Z,2µm,15.0s
KOZT  Kozan             10.26 301 eP     Pn    08 07 07.5 +0.5
ZEI   Tsey              10.32 347 eP     Pn    08 07 09.5 +1.6
ZEI                                pmax  pmax
      comp=Z,7.0nm,0.8s
SHME  Shamm             10.42 127 i P    Pn    08 07 10.8 +1.6
      SNR=10
SHME  Shamm             10.42 127  P     Pn    08 07 11.0 +1.8
      SNR=22
SHME                               S     Sn    08 09 01.1  -3.8
IAKL  Akhelmad          10.46  65 ePn    Pn    08 07 11.1 +1.1
GROC  Groznyy           10.49 355  P     Pn    08 07 10.8 +0.7
GROC                              eS     Sn    08 09 07.0 +0.6
GROC                               pmax  pmax
      comp=Z,16nm,0.6s
GEYT  Alibeck           10.49  57  Pn    Pn    08 07 09.0  -1.2
      comp=Z,0.3nm,0.3s,baz=243,slow=12,SNR=29
GEYT  Alibeck           10.49  57        Pn    08 07 11.5 +1.4
GYA0B ALIBECK ARRAY     10.49  57        Pn    08 07 11.5 +1.4
KBAM  BAM               10.51 107 ePn    Pn    08 07 11.3 +0.8
BANOM Banah             10.61 127 i P    Pn    08 07 12.4 +0.6
      SNR=53
BANOM Banah             10.61 127  P     Pn    08 07 12.3 +0.4
      SNR=27
BANOM                              S     Sn    08 09 06.8  -2.8
EIL   Elat              10.71 257  Pn    Pn    08 07 14.5 +1.3
      comp=Z,0.7nm,0.3s,baz=7.2,slow=7.0,SNR=5.9
EIL                                Lg    Lg    08 10 20.4
      comp=Z,1.3nm,0.3s,baz=108,slow=20,SNR=1.7
EIL                                LR    LR    08 12 25.4
      comp=Z,2µm,18.7s,baz=77,slow=43
EIL   Elat              10.71 257 ePn    Pn    08 07 12.3  -0.9
AJN   Ajban             10.77 137 i P    Pn    08 07 16.3 +2.3
      SNR=7.9
AJN   Ajban             10.77 137  P     Pn    08 07 16.8 +2.8
MZWR  Madinat Zayed     10.83 144  P     Pn    08 07 16.9 +2.1
MZWR                               S     Sn    08 09 10.1  -4.7
NAZ   Nazwa, Dubai      10.86 133  P     Pn    08 07 16.6 +1.5
NAZ   Nazwa, Dubai      10.86 133  P     Pn    08 07 16.7 +1.5
      SNR=9.2
NAZ                                S     Sn    08 09 14.4  -1.1
MASF  Masafi            10.90 130  P     Pn    08 07 17.1 +1.3
      SNR=19
MASF                               S     Sn    08 09 14.2  -2.4
MSFE  Esma-Masafi       10.90 130 i P    Pn    08 07 17.0 +1.1
      SNR=19
ASUD  Al Ashush, Dub    10.93 136  P     Pn    08 07 19.1 +3.0
FAQ   Al Faqa, Dubai    10.99 134 i P    Pn    08 07 18.7 +1.7
      SNR=8.8
FAQ   Al Faqa, Dubai    10.99 134  P     Pn    08 07 19.7 +2.6
      SNR=9.3
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FAQ                                S     Sn    08 09 17.1  -1.9
NEY   Neytrino          11.01 344 i P    Pn    08 07 18.9 +1.5
MDH   Madha             11.04 130 i P    Pn    08 07 18.5 +0.9
      SNR=27
MDH   Madha             11.04 130  P     Pn    08 07 19.7 +2.1
      SNR=27
MDH                                S     Sn    08 09 16.9  -3.1
NCK   Nalchik           11.06 347 i P    Pn    08 07 19.5 +1.6
NCK                                pmax  pmax
      comp=Z,9.0nm,0.8s
IKRD  Kardeh            11.10  65 ePn    Pn    08 07 20.0   +12
UOSS  Minazif           11.22 131 i P    Pn    08 07 20.4 +0.1
      SNR=24
UOSS  Minazif           11.22 131  Pn    Pn    08 07 20.8 +0.6
UOSS  Minazif           11.22 131  P     Pn    08 07 20.8 +0.6
UOSS                               S     Sn    08 09 21.9  -2.7
HATD  Hatta, Dubai      11.27 132 i P    Pn    08 07 21.5 +0.7
      SNR=26
HATD  Hatta, Dubai      11.27 132  P     Pn    08 07 22.5 +1.7
      SNR=18
HATD                               S     Sn    08 09 23.0  -2.6
ASHO  Ashiyiah          11.32 133 i P    Pn    08 07 22.4 +0.8
      SNR=52
ASHO  Ashiyiah          11.32 133  P     Pn    08 07 23.2 +1.6
      SNR=24
ASHO                               S     Sn    08 09 24.4  -2.7
KBZ   Khabaz            11.43 345  Pn    Pn    08 07 23.9 +1.0
      comp=Z,0.1nm,0.3s,baz=163,slow=11,SNR=13
KBZ                                LR    LR    08 12 33.5
      comp=Z,761nm,21.0s,baz=147,slow=42
IMYA  Miami             11.43  68 ePn    Pn    08 07 23.7 +0.5
SHA1  Shidzhatmaz       11.49 344 i P    Pn    08 07 25.0 +1.0
ALNE  Al Ain            11.61 136  P     Pn    08 07 27.4 +2.0
      SNR=7.9
ALNE                               S     Sn    08 09 29.4  -4.6
KVAR  Kislovodsk Arr    11.69 345  Pn    Pn    08 07 28.3 +1.7
      baz=60,slow=20,SNR=3.8
KIV   Kislovodsk        11.69 345 eP     Pn    08 07 28.3 +1.7
KIV                                pmax  pmax
      comp=Z,41nm,1.0s
KIV                                MLR   MLR
      comp=Z,463nm,11.0s
KIV   Kislovodsk        11.69 345  Pn    Pn    08 07 28.2 +1.7
SOHO  SOHO              12.02 133 i P    Pn    08 07 31.1   0.0
      SNR=18
SOHO  SOHO              12.02 133  P     Pn    08 07 31.6 +0.5
SOHO                               S     Sn    08 09 39.5  -4.5
SOC   Sochi             12.23 334 eP     Pn    08 07 32.6  -1.2
SOC                               e            08 09 48.6
SOC                                pmax  pmax
      comp=Z,16nm,0.9s
SOC                                MLR   MLR
      comp=Z,1µm,13.0s
UMZA  Um Al Zommool     12.35 142  P     Pn    08 07 36.1 +0.6
UMZA                               S     Sn    08 09 46.8  -5.3
ARQ   Araqi             12.61 136  P     Pn    08 07 41.0 +1.8
      SNR=19
GOF   Gofitskoye        12.67 347⇑eP     P     08 07 47.4  -3.4
BRTR  Keskin Array B    12.80 307  Pn    Pn    08 07 42.8 +0.9
      comp=Z,0.1nm,0.3s,baz=132,slow=12,SNR=9.0
BRTR                               LR    LR    08 12 56.1
      comp=Z,308nm,20.5s,baz=122,slow=39
BRTR  Keskin Array B    12.80 307        Pn    08 07 41.6  -0.3
BR131 Keskin Array S    12.80 307 i P    Pn    08 07 43.3 +1.5
BR131 Keskin Array S    12.80 307  Pn    Pn    08 07 41.0  -0.8
HRA   Herat             12.87  78  Pn    Pn    08 07 42.9 +0.1
HOQ   Hoqain            12.90 132  P     Pn    08 07 46.0 +2.8
      SNR=10
HOQ                                S     Sn    08 09 58.6  -7.1
ANTO  Ankara            13.44 306  P     Pn    08 07 49.8  -0.7
ANTO  Ankara            13.44 306  Pn    Pn    08 07 49.8  -0.7
BSY   Bisya             13.46 135  P     Pn    08 07 52.0 +1.2
      SNR=15
BSY                                S     Sn    08 10 14.7  -4.7
BIDO  Bidbid            13.47 130  P     Pn    08 07 52.0 +1.1
      SNR=6.3
BIDO                               S     Sn    08 10 18.2  -1.2
SMDO  Samad             13.75 132  P     Pn    08 07 55.5 +0.7
      SNR=20
WSAR  Wadi Sarin        13.99 130  Pn    Pn    08 07 56.9  -1.1
      comp=Z,5.1nm,0.3s,baz=306,slow=12,SNR=40
WSAR                               Sn    Sn    08 10 23.9  -8.4
      comp=Z,1.6nm,0.3s,baz=26,slow=22,SNR=9.1
ANN   Anapa             14.13 331 eP     P     08 08 04.0  -3.0
ANN                               eS     Sn    08 10 42.9 +7.4
ANN                                pmax  pmax
      comp=Z,41nm,1.3s
ANN                                MLR   MLR
      comp=Z,1µm,17.0s
ANN                                MLR   MLR
      comp=N,2µm,17.0s
ANN                                MLR   MLR
      comp=E,764nm,18.0s
ISP   Isparta           14.34 295  P     P     08 08 06.0  -3.5
ISP   Isparta           14.34 295  Pn    P     08 08 06.0  -3.5
ELL   Elmali            14.57 291  P     Pn    08 08 06.2 +0.3
ELL   Elmali            14.57 291        Pn    08 08 06.2 +0.3
WBK   Wadi Bani Khal    14.66 130  P     Pn    08 08 07.1   0.0
      SNR=10
JLN   Jalan Bani Buh    15.27 131  P     Pn    08 08 15.3   0.0
      SNR=10.0
MHTO  MHTO              15.27 137  P     Pn    08 08 14.4  -0.9
      SNR=27
MHTO                               S     Sn    08 10 58.8  -4.7
DOK   Doka              15.47 154  P     Pn    08 08 15.8  -2.1
      SNR=16
DOK                                S     Sn    08 11 02.0  -6.2
DQM   DQM               15.89 141  P     Pn    08 08 21.6  -1.6
      SNR=31
DQM                                S     Sn    08 11 10.3  -8.1
      SNR=21
DQM                                S     Sn    08 11 10.4  -8.0
WHFO  Wadi Hawf         15.98 156  P     Pn    08 08 22.3  -2.3
      SNR=10
WHFO                               S     Sn    08 11 15.4  -5.4
MANT  Manisa            16.01 296        Pn    08 08 24.9   0.0
MANT                               IAmb  IAmb  08 08 46.9
      comp=Z,102nm,1.3s
ABTO  Aybut             16.35 158  P     Pn    08 08 26.6  -2.7
      SNR=13
ABTO                               S     Sn    08 11 24.1  -5.7
      SNR=7.9
RBK   Rabkut            16.52 155  P     Pn    08 08 29.3  -2.1
      SNR=11
DMTO  DMTO              16.60 152  P     Pn    08 08 31.0  -1.4
      SNR=29
DMTO                               S     Sn    08 11 28.3  -7.5
SHAO  Shalim            16.60 150  P     Pn    08 08 32.2  -0.2
SHAO  Shalim            16.60 150  P     P     08 08 34.2  -0.5
      SNR=5.5
SANT  Santorini         18.06 288        P     08 08 51.8 +1.1
SANT                               IAmb  IAmb  08 09 09.1
      comp=Z,50nm,0.9s
KBL   Kabul             18.49  78  P     Pn    08 08 56.6 +0.7
KBL                                pmax  pmax
      comp=Z,59nm,1.4s
KBL   Kabul             18.49  78  P     Pn    08 08 56.5 +0.7
KBL                                IAmb  IAmb  08 09 01.3
      comp=Z,59nm,1.4s
ALN   Alexandroupoli    18.58 302  P     P     08 08 56.3   0.0
ALN                                pmax  pmax
      comp=Z,24nm,1.2s
ALN   Alexandroupoli    18.58 302  P     P     08 08 56.3   0.0
TPGR  Topolog           18.79 315 ⇑P     P     08 08 57.6  -1.0
VRH   Novokhopyorsk     18.85 350 eP     P     08 08 57.7  -1.4
VRH                                pmax  pmax
      comp=Z,40nm,0.5s
HARR  Harsova           18.99 314 ⇑P     P     08 09 00.5  -0.3
VORD  Divnogorie        19.07 345 eP     P     08 09 00.8  -0.7
VORD                               pmax  pmax
      comp=Z,10.0nm,0.6s
CFR   Carcaliu          19.14 316 ⇑P     P     08 09 01.9  -0.4
AB31  Akbulak array     19.15  27 i P    P     08 09 02.3  -0.2
AB31                               pmax  pmax
      comp=Z,9.0nm,0.5s
ABKAR Akbulak array     19.15  27  P     P     08 09 02.1  -0.4
RAZG  Razgrad           19.32 310 ⇑P     Pn    08 09 05.2  -0.4
VSR   Storozhevoye      19.33 345 eP     P     08 09 02.7  -1.7
VSR                                pmax  pmax
      comp=Z,20nm,0.5s
AKTO  Aktyubinsk        19.49  22  P     P     08 09 04.9  -1.3
      comp=Z,1.9nm,0.3s,baz=206,slow=11,SNR=40
BELG  Belogornoye       19.65   1  P     P     08 09 06.4  -1.5
      comp=Z,1.3nm,0.3s,baz=48,slow=3.2,SNR=5.7
VRI   Vrincioaia        20.34 316 ⇑P     P     08 09 15.7 +0.2
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NEHR  Nehoiu            20.36 314 ⇑P     P     08 09 16.2 +0.4
PLOR  Plostina          20.38 316 ⇑P     P     08 09 16.5 +0.5
PLVB  Pleven            20.48 308 ⇑P     P     08 09 17.4 +0.3
IUG   Iuzhnay           20.55  56 eP     P     08 09 16.8  -1.2
      baz=57
IUG   Iuzhnay           20.55  56 eP     P     08 09 16.7  -1.2
MLR   Muntele Rosu      20.61 314  P     P     08 09 19.5 +0.9
      comp=Z,7.9nm,0.8s,baz=153,slow=2.3,SNR=8.6
MLR                                LR    LR    08 18 04.8
      comp=Z,68nm,19.9s,baz=126,slow=39
MLR   Muntele Rosu      20.61 314 ⇓P     Pn    08 09 19.6  -1.3
MLR   Muntele Rosu      20.61 314  P     P     08 09 18.3  -0.2
LPSR  Galich'ya Gora    20.69 346 eP     P     08 09 16.6  -2.5
LPSR                               pmax  pmax
      comp=Z,130nm,0.7s
BRLS  Borolday          20.73  54 eP     P     08 09 16.6  -3.2
      baz=55
BRLS                              eS     S     08 13 03.7  -5.8
      baz=55
BRLS  Borolday          20.73  54 eP     P     08 09 16.5  -3.2
BRLS                              eS     S     08 13 03.7  -5.8
TESR  Tescani           20.75 317 ⇑P     P     08 09 19.8  -0.1
SORM  Soroca            20.82 323 ⇑P     P     08 09 19.2  -1.4
AGG   Agios Georgios    20.88 294  P     P     08 09 21.9 +0.5
AGG                                pmax  pmax
      comp=Z,40nm,1.0s
AGG   Agios Georgios    20.88 294  P     P     08 09 21.9 +0.5
AGG                                IAmb  IAmb  08 09 45.6
      comp=Z,40nm,1.0s
VLAD  Vladila           20.88 309 ⇓P     P     08 09 21.5 +0.2
ITM   Ithomi            20.96 289  P     P     08 09 22.0  -0.2
MTUR  Matau             21.02 313 ⇑P     P     08 09 24.0 +1.1
OZUR                    21.02 316 ⇑P     P     08 09 23.0 +0.1
VOIR                    21.13 313 ⇑P     P     08 09 24.9 +0.8
VTS   Vitosha           21.14 305 ⇑P     P     08 09 25.0 +0.6
VTS   Vitosha           21.14 305  P     P     08 09 23.4  -1.0
VTS                                pmax  pmax
      comp=Z,5.0nm,0.9s
VTS   Vitosha           21.14 305  P     P     08 09 23.4  -1.0
DOPR  Dopca             21.19 315 ⇑P     P     08 09 24.9 +0.2
KK31  Karatay Array     21.21  54  P     P     08 09 24.7  -0.3
KK31                               pmax  pmax
      comp=Z,75nm,1.4s
KK31  Karatay Array     21.21  54  P     P     08 09 24.7  -0.3
KK31                               IAmb  IAmb  08 09 30.8
      comp=Z,75nm,1.4s
KKAR  Karatay Array     21.21  54  P     P     08 09 24.1  -0.9
KKAR  Karatay Array     21.21  54  P     P     08 09 24.1  -0.9
BIZ   Bicaz             21.30 318 ⇑P     P     08 09 25.5  -0.3
ARR   Arges             21.35 313 ⇑P     P     08 09 27.1 +0.6
ATD   Arta Tunnel       21.44 191  P     P     08 09 32.0 +4.4
      comp=Z,4.4nm,0.4s,baz=18,slow=6.3,SNR=7.4
ATD   Arta Tunnel       21.44 191  P     P     08 09 27.9 +0.4
SOCY  Socotra           21.45 161  P     P     08 09 24.2  -3.5
SOCY                               IAmb  IAmb  08 09 42.4
      comp=Z,55nm,1.3s
SOCY  Socotra           21.45 161  P     P     08 09 24.5  -3.2
      SNR=7.4
DZA   Taraz             21.70  55 eP     P     08 09 29.9  -0.3
      baz=56
DZA                               eS     S     08 13 27.8  -1.0
      baz=56
DZA   Taraz             21.70  55 eP     P     08 09 29.9  -0.3
DZA                               eS     S     08 13 27.7  -1.0
FNA   Florina           21.95 299  P     P     08 09 33.1 +0.2
FNA                                pmax  pmax
      comp=Z,12nm,0.8s
FNA   Florina           21.95 299  P     P     08 09 33.1 +0.2
NIL   Nilore            22.02  80  P     P     08 09 33.8 +0.1
NIL                                pmax  pmax
      comp=Z,85nm,1.3s
NIL   Nilore            22.02  80  P     P     08 09 33.8 +0.1
BURAR Bucovina Array    22.18 318 ⇑P     P     08 09 35.5 +0.2
BURAR Bucovina Array    22.18 318  P     P     08 09 34.9  -0.4
AKASG Malin Array Be    22.20 329  P     P     08 09 33.2  -2.2
      comp=Z,8.0nm,0.7s,baz=137,slow=10,SNR=38
AKASG                              LR    LR    08 20 48.6
      comp=Z,152nm,18.1s,baz=140,slow=44
AKASG Malin Array Be    22.20 329 i P    P     08 09 35.7 +0.3
AKASG                              pmax  pmax
      comp=Z,8.0nm,0.7s
AKBB  Malin Array Si    22.20 329 i P    P     08 09 35.1  -0.3
AKBB  Malin Array Si    22.20 329  P     P     08 09 33.6  -1.8
BUR08 Bucovina Ar. S    22.20 318  P     P     08 09 34.8  -0.9
GZR   Gura Zlata        22.53 311 ⇑P     P     08 09 38.4  -0.7
HERR  Herculane         22.54 310 ⇑P     P     08 09 39.5 +0.4
AML   Almayashu         23.14  58  P     P     08 09 46.5 +0.7
      SNR=24
DRGR                    23.21 314 ⇑P     P     08 09 45.7  -0.5
EKS2  Erkin-Say         23.34  57  P     P     08 09 49.2 +1.6
      SNR=15
BZS   Buzias            23.36 311 ⇑P     P     08 09 47.2  -0.3
OBN   Obninsk           23.54 345  P     P     08 09 47.7  -1.4
      comp=Z,3.7nm,0.4s,baz=84,slow=3.3,SNR=9.3
OBN   Obninsk           23.54 345 i P    P     08 09 47.2  -1.9
OBN                                pmax  pmax
      comp=Z,35nm,1.5s
OBN   Obninsk           23.54 345  P     P     08 09 48.0  -1.1
SIRR  Siria             23.61 312 ⇑P     P     08 09 50.2 +0.2
UCH   Uchtor            23.75  59  P     P     08 09 53.6 +1.7
      SNR=11
AAK   Ala-Archa         23.85  58  P     P     08 09 53.1 +0.6
      comp=Z,3.4nm,0.6s,baz=262,slow=9.2,SNR=14
AAK                                LR    LR    08 20 42.8
      comp=Z,858nm,18.9s,baz=270,slow=40
AAK   Ala-Archa         23.85  58  P     P     08 09 56.7 +4.2
      SNR=7.2
AAK   Ala-Archa         23.85  58  P     P     08 09 52.8 +0.3
DIVS  Divibare          23.87 306  P     P     08 09 52.4  -0.2
PDG   Podgorica         23.89 302 ⇑P     P     08 09 53.5 +0.8
MOS   Moscow            23.91 347 eP     P     08 09 51.5  -1.1
MOS                               eS     S     08 14 05.4  -1.3
MOS                                pmax  pmax
      comp=Z,48nm,0.6s
CHMS  Chumysh           24.13  57  P     P     08 09 55.9 +1.0
      SNR=12
SGDS  Sogindy           24.17  56 eP     P     08 09 55.0  -0.4
      comp=Z,29nm,1.8s,baz=56
SGDS  Sogindy           24.17  56 eP     P     08 09 54.9  -0.4
SGDS                               pmax  pmax
      comp=Z,29nm,1.8s
KBK   Karagaybulak      24.18  58  P     P     08 09 57.4 +1.8
      SNR=15
BTLS  Baital            24.29  52 eP     P     08 09 55.9  -0.5
      comp=Z,20nm,1.5s,baz=52
BTLS  Baital            24.29  52 eP     P     08 09 55.8  -0.5
BTLS                               pmax  pmax
      comp=Z,20nm,1.5s
KSH   Kashi             24.34  66  P     P     08 09 55.3  -1.7
KSH                                sP    sP    08 10 08.8  -1.6
KSH                                PcP   PcP   08 13 35.8  -0.2
KSH                                S     S     08 14 08.3  -6.0
KSH                                PcS   PcS   08 17 18.3 +2.3
KSH                                pmax  pmax
      comp=Z,18nm,0.7s
KSH                                pmax  pmax
      comp=Z,450nm,4.2s
KSH                                LR    LR
      comp=Z,620nm,10.4s
KSH                                LR    LR
      comp=Z,1µm,13.4s
KSH                                LR    LR
      comp=Z,2µm,17.6s
UZH   Uzhgorod          24.37 318 eP     P     08 09 59.2 +2.1
UZH                               e            08 10 13.6
UZH                               e            08 10 28.4
UZH                               e            08 13 37.0
UZH                               eS     S     08 14 13.2  -1.2
KOLS  Kolonicke sedl    24.54 318 eP     P     08 10 00.4 +1.8
KOLS                               pmax  pmax
      comp=Z,51nm,1.9s
KOLS  Kolonicke sedl    24.54 318 eP     P     08 10 00.4 +1.8
KWP   Kalwaria Pacla    24.69 320 eP     P     08 10 00.5 +0.5
KWP   Kalwaria Pacla    24.69 320  P     P     08 09 59.8  -0.1
KWP                                pmax  pmax
      comp=Z,36nm,0.9s
KWP   Kalwaria Pacla    24.69 320  P     P     08 09 59.8  -0.1
TKM2  Tokmak 2          24.70  57  P     P     08 10 01.9 +1.4
      SNR=19
TKM2  Tokmak 2          24.70  57 i P    P     08 10 01.6 +1.2
TKM2                               pmax  pmax
      comp=Z,56nm,1.6s
CRVS  Cervenica-Dubn    24.98 318 eP     P     08 10 03.3 +0.7
CRVS                               pmax  pmax
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	comp=Z,23nm,0.9s						
CRVS	**Cervenica-Dubn**	**24.98**	**318**	*e*P	**P**	**08 10 03.3**	**+0.7**
ULHL	**Ulahol**	**25.01**	**59**	P	**P**	**08 10 05.1**	**+1.9**
	SNR=27						
ARU	**Arti**	**25.02**	**15**	P	**P**	**08 10 02.2**	**-0.7**
	comp=Z,2.2nm,0.6s,baz=197,slow=6.4,SNR=12						
ARU	**Arti**	**25.02**	**15***c*	*i*P	**P**	**08 10 02.6**	**-0.3**
ARU				*PP	**sP**	**08 10 16.5**	**+0.2**
ARU						08 10 37.4	
ARU				S	**S**	**08 14 26.4**	**+1.7**
ARU				SS	**SnSn**	**08 15 18.6**	**+3.6**
ARU				pmax	pmax		
	comp=Z,63nm,1.6s						
ARU				MLR	MLR		
	comp=Z,539nm,16.0s						
ARU	**Arti**	**25.02**	**15**	P	**P**	**08 10 02.6**	**-0.3**
ARU				IAmb	IAmb	08 10 06.9	
	comp=Z,35nm,1.1s						
STON	**Ston**	**25.11**	**302**	*i* P	**P**	**08 10 02.6**	**-1.2**
TIP	**Timpagrande**	**25.19**	**293**	⇑P	**P**	**08 10 05.6**	**+0.9**
TIP	**Timpagrande**	**25.19**	**293**	P	**P**	**08 10 03.3**	**-1.4**
TIP				IAmb	IAmb	08 10 17.1	
	comp=Z,11nm,0.8s						
KECS	**Kecovo**	**25.34**	**316**	*e*P	**P**	**08 10 05.6**	**-0.2**
KECS				pmax	pmax		
	comp=Z,13nm,0.9s						
KECS	**Kecovo**	**25.34**	**316**	*e*P	**P**	**08 10 05.6**	**-0.2**
MATE	**Matera**	**25.41**	**297**	⇑P	**P**	**08 10 06.4**	**-0.1**
PSZ	**Piszkesteto**	**25.43**	**315**	⇑P	**P**	**08 10 06.4**	**-0.3**
PSZ	**Piszkesteto**	**25.43**	**315**	P	**P**	**08 10 06.6**	**-0.1**
PSZ				pmax	pmax		
	comp=Z,14nm,0.8s						
PSZ	**Piszkesteto**	**25.43**	**315**	P	**P**	**08 10 06.6**	**-0.1**
PSZ				IAmb	IAmb	08 10 08.9	
	comp=Z,14nm,0.8s						
KUU	**Kurty**	**25.48**	**56**	*e*P	**P**	**08 10 06.7**	**-0.6**
	comp=Z,54nm,1.7s,baz=56						
KUU	**Kurty**	**25.48**	**56**	*e*P	**P**	**08 10 06.6**	**-0.6**
KUU				pmax	pmax		
	comp=Z,54nm,1.7s						
MORH	**Mrgy, Hungar**	**25.50**	**310**	⇑P	**P**	**08 10 07.5**	**+0.1**
MNK	**Minsk**	**25.61**	**334**	*e*P	**P**	**08 10 07.0**	**-1.2**
MNK	**Minsk**	**25.61**	**334**	*i* P	**P**	**08 10 07.5**	**-0.6**
	comp=E,4.0nm,1.2s						
MNK				*i* P	**P**	**08 10 07.5**	**-0.6**
	comp=N,34nm,1.0s						
MNK				*i* P	**P**	**08 10 07.5**	**-0.6**
	comp=Z,43nm,0.9s						
MNK				*i* pP	**sP**	**08 10 22.2**	**+0.8**
MNK				*i* PP	**PnPn**	**08 10 47.1**	**+2.3**
MNK				*i* S	**S**	**08 14 32.5**	**-1.4**
MNK				*i* SS	**SnSn**	**08 15 35.0**	**+5.7**
MNK				*i* LQ	LQ	08 18 21.3	
MNK				*i* LR	LR	08 20 19.1	
MNK				*i* LRM	MLR	08 21 11.4	
	comp=E,15nm,13.8s						
MNK				*i* LRM	MLR	08 21 11.4	
	comp=N,231nm,17.7s						
MNK				*i* LRM	MLR	08 21 11.4	
	comp=Z,121nm,16.9s						
RICI	**Ricice**	**25.67**	**303**	*i* P	**P**	**08 10 09.3**	**+0.4**
BRZS	**Berezniki**	**25.69**	**40**	*e*P	**P**	**08 10 08.2**	**-0.8**
	comp=Z,12nm,1.6s,baz=41						
BRZS	**Berezniki**	**25.69**	**40**	*e*P	**P**	**08 10 08.2**	**-0.8**
BRZS				pmax	pmax		
	comp=Z,12nm,1.6s						
TNSS	**Tian-Shan**	**25.69**	**58**	*e*P	**P**	**08 10 09.3**	**-0.3**
	baz=58						
TNSS	**Tian-Shan**	**25.69**	**58**	*e*P	**P**	**08 10 09.2**	**-0.3**
AAA	**Alma-Ata**	**25.71**	**57**	*e*P	**P**	**08 10 09.6**	**+0.2**
	comp=Z,9.8nm,0.6s,baz=58						
AAA	**Alma-Ata**	**25.71**	**57**	*e*P	**P**	**08 10 09.5**	**+0.2**
AAA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
MDOK	**Medeo**	**25.80**	**57**	*e*P	**P**	**08 10 10.0**	**-0.2**
	baz=58						
MDOK	**Medeo**	**25.80**	**57**	*e*P	**P**	**08 10 10.0**	**-0.2**
SVE	**Sverdlovsk**	**25.88**	**17**	⇑*e*P	**P**	**08 10 10.9**	**+0.3**
SVE				*e*S	**S**	**08 14 39.5**	**+1.3**
SVE				pmax	pmax		
	comp=Z,54nm,2.0s						
SVE				MLR	MLR		
	comp=Z,520nm,20.0s						
NIE	**Niedzica**	**25.90**	**318**	*e*P	**P**	**08 10 11.5**	**+0.5**
KIRV	**Kirov**	**25.91**	**3**	P	**P**	**08 10 10.0**	**-0.8**
	comp=Z,23nm,0.5s,baz=191,slow=8.3,SNR=9.4						
KIRV	**Kirov**	**25.91**	**3**	*i* P	**P**	**08 10 10.4**	**-0.4**
CHKK	**Chushkaly**	**25.93**	**56**	*e*P	**P**	**08 10 10.7**	**-0.6**
	baz=56						
CHKK	**Chushkaly**	**25.93**	**56**	*e*P	**P**	**08 10 10.6**	**-0.6**
LANS	**Liptovska Anna**	**26.25**	**317**	*e*P	**P**	**08 10 15.7**	**+1.6**
LANS				pmax	pmax		
	comp=Z,9.0nm,0.7s						
LANS	**Liptovska Anna**	**26.25**	**317**	*e*P	**P**	**08 10 15.7**	**+1.6**
KIJV	**Kijevo**	**26.31**	**304**	*i* P	**P**	**08 10 14.3**	**-0.4**
VYHS	**Vyhne**	**26.32**	**315**	*e*P	**P**	**08 10 16.8**	**+2.1**
VYHS				pmax	pmax		
	comp=Z,95nm,2.8s						
VYHS	**Vyhne**	**26.32**	**315**	*e*P	**P**	**08 10 16.8**	**+2.1**
NACGM	**Naroch**	**26.33**	**333**	*i* P	**P**	**08 10 13.7**	**-0.9**
NACGM				*i* P	**P**	**08 10 13.7**	**-0.9**
NACGM				*i* P	**P**	**08 10 13.7**	**-0.9**
NACGM				*i* PP	**PP**	**08 11 06.8**	**-7.8**
NACGM				*i* S	**S**	**08 14 43.3**	**-2.1**
NACGM				*i* SS	**SnSn**	**08 15 49.5**	**+2.7**
NACGM				*i* LQ	LQ	08 18 45.9	
NACGM				*i* LR	LR	08 20 47.1	
BRVK	**Borovoye**	**26.34**	**33**	*i* P	**P**	**08 10 15.0**	**+0.2**
BRVK				pmax	pmax		
	comp=Z,11nm,1.2s						
BRVK	**Borovoye**	**26.34**	**33**	P	**P**	**08 10 15.0**	**+0.2**
BRVK				IAmb	IAmb	08 10 20.1	
	comp=Z,21nm,1.2s						
BVAR	**Borovoye Array**	**26.37**	**33**	P	**P**	**08 10 13.8**	**-1.3**
	comp=Z,4.2nm,0.6s,baz=298,slow=3.2,SNR=19						
MOSL	**Moslavina**	**26.53**	**308**	*i* P	**P**	**08 10 16.5**	**-0.2**
OJC	**Ojcow**	**26.59**	**319**	*e*P	**P**	**08 10 17.4**	**+0.3**
OJC	**Ojcow**	**26.59**	**319**	P	**P**	**08 10 17.4**	**+0.3**
OJC				pmax	pmax		
	comp=Z,14nm,0.7s						
OJC	**Ojcow**	**26.59**	**319**	P	**P**	**08 10 17.4**	**+0.3**
OJC				IAmb	IAmb	08 10 18.4	
	comp=Z,14nm,0.7s						
IDID	**Didziasalis**	**26.66**	**334**	*e*P	**P**	**08 10 17.6**	**-0.1**
SATY	**Saty**	**26.74**	**58**	*e*P	**P**	**08 10 17.8**	**-1.0**
	comp=Z,35nm,1.3s,baz=59						
SATY	**Saty**	**26.74**	**58**	*e*P	**P**	**08 10 17.7**	**-1.0**
SATY				pmax	pmax		
	comp=Z,35nm,1.3s						
ZIRJ	**Zirje**	**26.76**	**303**	*i* P	**P**	**08 10 17.4**	**-1.3**
MORI	**Morici**	**26.76**	**304**	*i* P	**P**	**08 10 18.6**	**-0.2**
IIGN	**Ignalina**	**26.88**	**333**	*e*P	**P**	**08 10 19.0**	**-0.6**
UDBI	**Udbina**	**26.89**	**305**	*i* P	**P**	**08 10 17.7**	**-2.3**
KALN	**Kalnik**	**26.90**	**309**	*i* P	**P**	**08 10 19.4**	**-0.6**
VAE	**Valguarnera**	**26.95**	**289**	P	**P**	**08 10 22.9**	**+2.3**
	comp=Z,3.8nm,0.4s,baz=11,slow=8.4,SNR=1.4						
KPKS	**Kokpek**	**27.03**	**57**	*e*P	**P**	**08 10 21.1**	**-0.2**
	comp=Z,39nm,2.0s,baz=58						
KPKS	**Kokpek**	**27.03**	**57**	*e*P	**P**	**08 10 21.0**	**-0.2**
KPKS				pmax	pmax		
	comp=Z,39nm,2.0s						
ISAL	**Salakas**	**27.08**	**334**	*e*P	**P**	**08 10 21.1**	**-0.3**
SUW	**Suwalki**	**27.16**	**329**	*e*P	**P**	**08 10 21.9**	**-0.3**
SUW	**Suwalki**	**27.16**	**329**	*e*P	**P**	**08 10 21.7**	**-0.5**
SUW	**Suwalki**	**27.16**	**329**	P	**P**	**08 10 21.0**	**-1.2**
SUW				pmax	pmax		
	comp=Z,48nm,1.0s						
SUW	**Suwalki**	**27.16**	**329**	P	**P**	**08 10 21.0**	**-1.2**
SMOL	**Smolenice**	**27.17**	**314**	*e*P	**P**	**08 10 24.2**	**+1.8**
SMOL	**Smolenice**	**27.17**	**314**	*e*P	**P**	**08 10 24.2**	**+1.8**
JAVC	**Velka Javorina**	**27.17**	**315**	*e*P	**P**	**08 10 23.5**	**+1.0**
UZB	**Uzynbulak**	**27.20**	**58**	*e*P	**P**	**08 10 23.3**	**+0.3**
	comp=Z,42nm,1.7s,baz=59						
UZB	**Uzynbulak**	**27.20**	**58**	*e*P	**P**	**08 10 23.2**	**+0.3**
UZB				pmax	pmax		
	comp=Z,42nm,1.7s						
TDK	**Taldyqorghan**	**27.21**	**54**	*e*P	**P**	**08 10 22.3**	**-0.5**
	comp=Z,8.4nm,0.8s,baz=54						
TDK	**Taldyqorghan**	**27.21**	**54**	*e*P	**P**	**08 10 22.3**	**-0.5**
TDK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ZST	**Bratislava**	**27.24**	**313**	*e*P	**P**	**08 10 25.6**	**+2.6**
ZST	**Bratislava**	**27.24**	**313**	*e*P	**P**	**08 10 25.6**	**+2.6**
SHLS	**Shalkode**	**27.52**	**58**	*e*P	**P**	**08 10 28.4**	**+2.6**
	comp=Z,15nm,1.2s,baz=59						
SHLS	**Shalkode**	**27.52**	**58**	*e*P	**P**	**08 10 28.3**	**+2.6**
SHLS				pmax	pmax		
	comp=Z,15nm,1.2s						
PDGK	**Podgornoye**	**27.57**	**58**	*i* P	**P**	**08 10 26.7**	**+0.5**
PDGK				pmax	pmax		
	comp=Z,22nm,1.8s						
MORC	**Moravsky Berou**	**27.65**	**317**	*e*P	**P**	**08 10 26.2**	**-0.5**
MORC	**Moravsky Berou**	**27.65**	**317**	P	**P**	**08 10 26.3**	**-0.5**
MORC				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MORC	**Moravsky Berou**	**27.65**	**317**	P	**P**	**08 10 26.3**	**-0.4**
PABE	**Paberze**	**27.86**	**332**	*e*P	**P**	**08 10 28.1**	**-0.3**
ARSA	**Arzberg**	**27.88**	**311**	*e*P	**P**	**08 10 29.8**	**+1.0**
	comp=Z,4.0nm,1.2s						
VRAC	**Vranov**	**28.00**	**315**	P	**P**	**08 10 28.6**	**-1.3**
	comp=Z,1.3nm,0.6s,baz=132,slow=13,SNR=2.3						
VRAC	**Vranov**	**28.00**	**315**	⇑P	**P**	**08 10 29.0**	**-0.8**
VRAC	**Vranov**	**28.00**	**315**	*e*P	**P**	**08 10 27.9**	**-1.9**
KRUC	**Moravsky**	**28.02**	**315**	*e*P	**P**	**08 10 28.0**	**-2.0**
KLMR	**Klimovskoe**	**28.55**	**352**	*e*P	**P**	**08 10 31.7**	**-2.8**
KLMR				pmax	pmax		
	comp=Z,30nm,0.9s						
KLMR	**Klimovskoe**	**28.55**	**352**	*e*P	**P**	**08 10 31.8**	**-2.8**
KLMR				AMP		08 10 36.0	
	comp=Z,30nm,0.9s						
DPC	**Dobruska-Polom**	**28.61**	**317**	*e*P	**P**	**08 10 35.4**	**+0.1**
DPC	**Dobruska-Polom**	**28.61**	**317**	*e*P	**P**	**08 10 35.4**	**+0.1**
OSTC	**Ostas**	**28.77**	**317**	*e*P	**P**	**08 10 36.3**	**-0.3**
KSP	**Ksiaz**	**28.85**	**318**	*e*P	**P**	**08 10 37.6**	**+0.2**
UPC	**Upice**	**28.86**	**317**	*e*P	**P**	**08 10 37.8**	**+0.4**
UPC	**Upice**	**28.86**	**317**	*e*P	**P**	**08 10 37.8**	**+0.4**
CHVC	**Chvalec**	**28.87**	**317**	*e*P	**P**	**08 10 37.8**	**+0.2**
MOA	**Molln**	**28.88**	**311**	*e*P	**P**	**08 10 38.0**	**+0.3**
	comp=Z,2.0nm,0.5s						
VSU	**Vasula**	**29.12**	**338**	*e*P	**P**	**08 10 39.4**	**-0.3**
VSU	**Vasula**	**29.12**	**338**	*i* P	**P**	**08 10 39.3**	**-0.3**
VSU				pmax	pmax		
	comp=Z,48nm,0.8s						
KURBB	**Kurchatov Arra**	**29.29**	**43**	P	**P**	**08 10 41.2**	**0.0**
	comp=Z,4.9nm,0.8s,baz=248,slow=9.1,SNR=19						
KURBB				PcP	**PcP**	**08 13 47.1**	**-0.2**
	comp=Z,0.6nm,0.4s,baz=242,slow=3.2,SNR=6.9						
KURBB				ScP	**ScP**	**08 17 27.6**	**+0.9**
	comp=Z,1.4nm,1.0s,baz=248,slow=4.5,SNR=7.9						
KURK	**Kurchatov**	**29.38**	**43**	P	**P**	**08 10 41.2**	**-0.8**
KURK						08 13 47.1	
KURK						08 17 27.6	
KURK	**Kurchatov**	**29.38**	**43**	P	**P**	**08 10 41.6**	**-0.4**
GERES	**GERESS Array B**	**29.58**	**313**	P	**P**	**08 10 43.2**	**-0.7**
	comp=Z,0.6nm,0.5s,baz=116,slow=8.8,SNR=11						
GERES				PcP	**PcP**	**08 13 48.7**	**+0.5**
	comp=Z,0.5nm,0.7s,baz=141,slow=4.8,SNR=2.8						
CIMO	**Cimolais**	**29.62**	**307**	P	**P**	**08 10 43.8**	**-0.4**
KHC	**Kasperske Hory**	**29.75**	**313**	*e*P	**P**	**08 10 46.9**	**+1.5**
KHC	**Kasperske Hory**	**29.75**	**313**	*e*P	**P**	**08 10 46.9**	**+1.5**
CTI	**Castel Tesino**	**30.08**	**307**	P	**P**	**08 10 48.5**	**0.0**
CTI				pmax	pmax		
	comp=Z,8.0nm,0.8s						
CTI	**Castel Tesino**	**30.08**	**307**	P	**P**	**08 10 48.5**	**0.0**
CTI				IAmb	IAmb	08 11 05.1	
	comp=Z,7.7nm,0.8s						
MAKZ	**Makanchi**	**30.10**	**52**	P	**P**	**08 10 49.8**	**+1.3**
MAKZ				pmax	pmax		
	comp=Z,7.0nm,1.2s						
MAKZ	**Makanchi**	**30.10**	**52**	P	**P**	**08 10 49.8**	**+1.3**
SEM	**Semipalatinsk**	**30.20**	**44**	*e*P	**P**	**08 10 49.2**	**-0.4**
	baz=45						
SEM	**Semipalatinsk**	**30.20**	**44**	*e*P	**P**	**08 10 49.1**	**-0.4**
BRG	**Berggiesshubel**	**30.21**	**317**	*e*P	**P**	**08 10 48.8**	**-0.5**
BRG				Amp		08 10 49.8	
	comp=Z,3.2nm,0.8s						
MK31	**Makanchi Array**	**30.30**	**52**	P	**P**	**08 10 49.3**	**-1.0**
MK31				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MK31	**Makanchi Array**	**30.30**	**52**	P	**P**	**08 10 49.3**	**-1.0**
MKAR	**Makanchi Array**	**30.30**	**52**	P	**P**	**08 10 50.9**	**+0.6**
	comp=Z,4.0nm,0.7s,baz=250,slow=7.4,SNR=32						
MKAR				PcP	**PcP**	**08 13 50.1**	**+0.1**
	comp=Z,0.7nm,0.7s,baz=240,slow=1.8,SNR=1.9						
MKAR				ScP	**ScP**	**08 17 31.6**	**+1.6**
	comp=Z,0.5nm,0.8s,baz=186,slow=1.4,SNR=3.6						
MKAR				LR	LR	08 23 29.5	
	comp=Z,167nm,20.7s,baz=248,slow=37						
MKAR	**Makanchi Array**	**30.30**	**52**	P	**P**	**08 10 49.6**	**-0.7**
WTTA	**Wattenberg**	**30.40**	**309**	*e*P	**P**	**08 10 51.1**	**-0.3**
	comp=Z,4.0nm,0.4s						
WATA	**Walderalm**	**30.46**	**309**	*e*P	**P**	**08 10 51.6**	**-0.3**
	comp=Z,5.3nm,0.5s						
SQTA	**Sankt Quirin**	**30.67**	**309**	*e*P	**P**	**08 10 53.4**	**-0.3**
	comp=Z,5.5nm,0.4s						
MOTA	**Moosalm**	**30.77**	**309**	*e*P	**P**	**08 10 53.8**	**-0.8**
	comp=Z,4.3nm,0.7s						
CLL	**Collm**	**30.93**	**317**	*e*P	**P**	**08 10 57.0**	**+1.3**
CLL				*i*		08 11 09.1	
CLL				*e*		08 11 15.0	
CLL	**Collm**	**30.93**	**317**	*e*P	**P**	**08 10 57.0**	**+1.3**
CLL				*i*		08 11 09.1	
FETA	**Feichten**	**30.94**	**308**	*e*P	**P**	**08 10 55.8**	**-0.2**
	comp=Z,2.6nm,0.6s						
RETA	**Reutte**	**31.03**	**309**	*e*P	**P**	**08 10 56.2**	**-0.6**
	comp=Z,3.1nm,0.6s						
DAVOX	**Davos/Dischmat**	**31.45**	**307**	P	**P**	**08 11 00.4**	**-0.2**
	comp=Z,2.0nm,0.5s,baz=347,slow=10,SNR=5.8						
DAVA	**Damuels**	**31.56**	**308**	*e*P	**P**	**08 11 01.0**	**-0.6**
	comp=Z,6.8nm,0.4s						
TUE	**Stuetta**	**31.73**	**307**	P	**P**	**08 11 04.2**	**+1.0**
TUE				IAmb	IAmb	08 11 22.2	
	comp=Z,6.8nm,0.8s						
FIA1	**FINESS Array S**	**31.75**	**341**	P	**P**	**08 11 02.6**	**-0.2**
FINES	**FINESS Array B**	**31.75**	**341**	P	**P**	**08 11 02.2**	**-0.6**
	comp=Z,10nm,0.5s,baz=146,slow=9.5,SNR=66						
FINES				LR	LR	08 25 46.5	
	comp=Z,427nm,19.3s,baz=145,slow=40						
FINES	**FINESS Array B**	**31.75**	**341**	P	**P**	**08 11 02.4**	**-0.3**
FINES	**FINESS Array B**	**31.75**	**341**	P	**P**	**08 11 02.4**	**-0.3**
DANN	**Dangsing**	**31.90**	**88**	*e*P	**P**	**08 11 06.3**	**+1.4**
	comp=Z,74nm,1.0s						
TMCR	**Tamitsa**	**31.94**	**353**	*e*P	**P**	**08 11 02.0**	**-2.4**
TMCR				pmax	pmax		
	comp=Z,14nm,0.9s						
ZSN	**Zaisan**	**32.17**	**52**	*e*P	**P**	**08 11 06.7**	**0.0**
	baz=52						
ZSN	**Zaisan**	**32.17**	**52**	*e*P	**P**	**08 11 06.7**	**0.0**
HYB	**Hyderabad**	**32.28**	**110**	*i* P	**P**	**08 11 09.0**	**+1.0**
HYB				*e*S	**S**	**08 16 24.0**	**+4.3**
GKN	**Gorkha**	**32.75**	**88**	*e*P	**P**	**08 11 13.0**	**+0.8**
	comp=Z,27nm,0.5s						
SENIN	**Lac Senin/Sane**	**33.10**	**306**	P	**P**	**08 11 15.1**	**-0.1**
DMN	**Daman**	**33.26**	**89**	*e*P	**P**	**08 11 17.7**	**+0.9**
	comp=Z,44nm,0.8s						
BNI	**Bardonecchia**	**33.33**	**304**	P	**P**	**08 11 17.4**	**+0.3**
BNI				pmax	pmax		
	comp=Z,19nm,1.0s						
BNI	**Bardonecchia**	**33.33**	**304**	P	**P**	**08 11 17.4**	**+0.3**
KKN	**Kakani**	**33.35**	**88**	*e*P	**P**	**08 11 18.5**	**+1.0**
	comp=Z,42nm,0.7s						
PKIN	**Phulchoki**	**33.52**	**89**	*e*P	**P**	**08 11 20.0**	**+1.0**
	comp=Z,214nm,1.6s						
PKI	**Pulchoki**	**33.53**	**89**	*e*P	**P**	**08 11 20.0**	**+0.8**
WMQ	**Urumqi**	**33.54**	**59**	P	**P**	**08 11 19.9**	**+1.1**
WMQ				pP	sP	08 11 30.1	-2.1
WMQ				sP	pP	08 11 37.1	+8.9
WMQ				pmax	pmax		
	comp=Z,20nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,220nm,4.9s						
WMQ				LR	LR		
	comp=Z,510nm,17.9s						
WMQ				LR	LR		
	comp=Z,520nm,19.1s						
WMQ				LR	LR		
	comp=Z,260nm,26.7s						
WMQ	**Urumqi**	**33.54**	**59**	P	**P**	**08 11 18.6**	**-0.2**
WMQ				pmax	pmax		
	comp=Z,32nm,1.4s						
WMQ	**Urumqi**	**33.54**	**59**	P	**P**	**08 11 18.6**	**-0.2**
GUN	**Gumba**	**33.82**	**88**	*e*P	**P**	**08 11 23.0**	**+1.3**
ZAA0	**Zalesovo Array**	**34.17**	**40**	P	**P**	**08 11 24.2**	**+0.2**
ZAA0				IAmb	IAmb	08 11 29.1	
	comp=Z,7.3nm,0.7s						
ZALV	**Zalesovo Beam**	**34.17**	**40**	P	**P**	**08 11 23.9**	**-0.2**
	comp=Z,7.5nm,0.5s,baz=261,slow=9.5,SNR=24						
ZALV				PcP	**PcP**	**08 13 59.7**	**-0.7**
	comp=Z,1.3nm,0.5s,baz=260,slow=6.1,SNR=2.5						
ZALV				LR	LR	08 27 41.4	
	comp=Z,209nm,20.1s,baz=239,slow=41						
ZALV	**Zalesovo Beam**	**34.17**	**40**	P	**P**	**08 11 24.1**	**0.0**
DGZ	**Jazzator, Alta**	**34.36**	**48**	P	**P**	**08 11 25.0**	**-1.0**
DGZ				pmax	pmax		
	comp=Z,4.0nm,1.0s						
WLF	**Walferdange**	**34.54**	**312**	P	**P**	**08 11 26.9**	**-0.5**
WLF				pmax	pmax		
	comp=Z,13nm,1.2s						
WLF	**Walferdange**	**34.54**	**312**	P	**P**	**08 11 26.9**	**-0.5**
WLF				IAmb	IAmb	08 11 47.4	
	comp=Z,13nm,1.2s						
RAMN	**Ramite**	**34.73**	**89**	*e*P	**P**	**08 11 30.0**	**+0.5**
	comp=Z,30nm,0.6s						
KMBO	**Kilima Mbogo**	**34.90**	**197**	P	**P**	**08 11 32.9**	**+1.8**
	comp=Z,0.7nm,0.4s,baz=356,slow=9.1,SNR=6.4						
KMBO				LR	LR	08 26 35.6	
	comp=Z,298nm,18.2s,baz=18,slow=38						
HFS	**Hagfors**	**35.05**	**331**	P	**P**	**08 11 31.2**	**-0.3**
	comp=Z,18nm,0.5s,baz=128,slow=9.6,SNR=97						
MUD	**Monsted U'grnd**	**35.17**	**324**	*i* P	**P**	**08 11 33.0**	**+0.4**
	comp=Z,31nm,0.8s						
MUD	**Monsted U'grnd**	**35.17**	**324**	*i* P	**P**	**08 11 33.0**	**+0.4**
MUD				pmax	pmax		
	comp=Z,31nm,0.8s						
MUD	**Monsted U'grnd**	**35.17**	**324**	*i* P	**P**	**08 11 33.0**	**+0.4**
MUD				*i* P	**P**	**08 11 33.0**	**+0.4**
MUD				IAmb	IAmb	08 11 34.8	
	comp=Z,31nm,0.8s						
TAPN	**Taplejung**	**35.54**	**88**	*e*P	**P**	**08 11 37.6**	**+1.1**
	comp=Z,182nm,1.4s						
OSL	**Oslo**	**36.16**	**330**	*e*P	**P**	**08 11 40.9**	**-0.2**
NC602	**NORSAR Array S**	**36.27**	**331**	*e*P	**P**	**08 11 41.8**	**-0.2**
NC405	**NORSAR Array S**	**36.41**	**332**	P	**P**	**08 11 43.2**	**-0.1**
KONO	**Kongsberg**	**36.50**	**329**	P	**P**	**08 11 43.5**	**-0.5**
KONO				pmax	pmax		
	comp=Z,34nm,1.5s						
KONO	**Kongsberg**	**36.50**	**329**	P	**P**	**08 11 43.5**	**-0.5**
KONO				IAmb	IAmb	08 11 48.9	
	comp=Z,34nm,1.5s						
KONO	**Kongsberg**	**36.50**	**329**	*e*P	**P**	**08 11 43.4**	**-0.5**
NB2	**NORSAR Subarra**	**36.57**	**332**	P	**P**	**08 11 43.6**	**-1.1**
	comp=Z,1.9nm,0.5s,baz=124,slow=8.6						
NB2	**NORSAR Subarra**	**36.57**	**332**	P	**P**	**08 11 43.6**	**-1.1**
	baz=124,slow=8.6						
NOA	**NORSAR Array B**	**36.57**	**332**	P	**P**	**08 11 43.5**	**-1.2**
	comp=Z,3.1nm,0.7s,baz=124,slow=8.6,SNR=14						
SKAR	**Skarslia**	**37.58**	**330**	*e*P	**P**	**08 11 53.8**	**+0.5**
LSA	**Lhasa**	**37.72**	**83**	P	**P**	**08 11 57.1**	**+1.7**
LSA				pmax	pmax		
	comp=Z,32nm,1.5s						
LSA	**Lhasa**	**37.72**	**83**	P	**P**	**08 11 57.1**	**+1.7**
LSA				IAmb	IAmb	08 11 58.8	
	comp=Z,32nm,1.5s						
ODD1	**Odda**	**37.94**	**328**	*e*P	**P**	**08 11 55.5**	**-0.8**
NSS	**Namsos**	**38.38**	**336**	*e*P	**P**	**08 12 00.1**	**+0.2**
BER	**Bergen**	**38.73**	**328**	*e*P	**P**	**08 12 02.1**	**-0.7**
KTK1	**Kautokeino**	**38.73**	**347**	*e*P	**P**	**08 12 02.4**	**-0.4**
ARA0	**ARCESS Array S**	**38.77**	**348**	*e*P	**P**	**08 12 03.1**	**0.0**
ARCES	**ARCESS Array B**	**38.77**	**348**	P	**P**	**08 12 02.6**	**-0.5**
	comp=Z,1.6nm,0.3s,baz=163,slow=8.9,SNR=53						
ARCES				PcP	**PcP**	**08 14 14.8**	**+0.8**
	comp=Z,3.7nm,0.8s,baz=152,slow=4.1,SNR=5.2						
ARCES				LR	LR	08 29 35.2	
	comp=Z,271nm,21.0s,baz=145,slow=39						
FAUS	**Fauske**	**39.30**	**341**	*e*P	**P**	**08 12 07.6**	**0.0**
KONS	**Konsvik**	**39.30**	**339**	*e*P	**P**	**08 12 08.3**	**+0.8**
SHL	**Shillong**	**39.66**	**88**	P	**P**	**08 12 11.3**	**0.0**
SHL				pmax	pmax		
	comp=Z,51nm,1.3s						
SHL	**Shillong**	**39.66**	**88**	P	**P**	**08 12 11.3**	**0.0**
STEI	**Steigen**	**39.71**	**342**	*e*P	**P**	**08 12 10.6**	**-0.3**
TRO	**Tromso**	**40.13**	**345**	*e*P	**P**	**08 12 13.9**	**-0.4**
EKA	**Eskdalemuir Ar**	**41.36**	**318**	P	**P**	**08 12 24.4**	**-0.3**
	comp=Z,3.4nm,0.5s,baz=102,slow=8.8,SNR=24						
GTA	**Gaotai**	**42.74**	**66**	⇑P	**P**	**08 12 37.1**	**+0.7**
GTA				pP	pP	08 12 43.8	-2.2
GTA				pmax	pmax		
	comp=Z,14nm,1.7s						
GTA				pmax	pmax		
	comp=Z,120nm,5.6s						
GTA				LR	LR		
	comp=Z,320nm,18.5s						
GTA				LR	LR		
	comp=Z,280nm,18.5s						
GTA				LR	LR		
	comp=Z,430nm,18.9s						
NRIK	**Noril'sk**	**43.09**	**20**	P	**P**	**08 12 38.2**	**-0.5**
	comp=Z,4.1nm,0.7s,baz=228,slow=5.6,SNR=12						
NRIK				LR	LR	08 34 59.7	
	comp=Z,173nm,19.7s,baz=238,slow=42						
NRIK	**Noril'sk**	**43.09**	**20**	P	**P**	**08 12 39.2**	**+0.5**
NRIK				pmax	pmax		
	comp=Z,19nm,1.2s						
NRIK	**Noril'sk**	**43.09**	**20**	P	**P**	**08 12 39.1**	**+0.5**
NRIK				IAmb	IAmb	08 12 41.5	
	comp=Z,19nm,1.1s						
ZAK	**Zakamensk**	**44.56**	**49**	*e*P	**P**	**08 12 49.5**	**-1.4**
ZAK				*e*		08 14 29.6	
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.7s						
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.6s						
TLY	**Talaya**	**44.83**	**48**	*i* P	**P**	**08 12 53.0**	**+0.1**
TLY				pmax	pmax		
	comp=Z,1.0nm,0.7s						
TOA0	**Torodi Ar. Sit**	**45.60**	**256**	P	**P**	**08 13 00.0**	**+0.6**
TOA0				IAmb	IAmb	08 13 03.5	
	comp=Z,6.9nm,0.9s						
TORD	**Torodi Ar. Bea**	**45.60**	**256**	P	**P**	**08 12 59.6**	**+0.2**
	comp=Z,3.8nm,0.6s,baz=76,slow=7.0,SNR=27						
TORD				LR	LR	08 35 04.0	
	comp=Z,224nm,19.9s,baz=50,slow=40						
TORD	**Torodi Ar. Bea**	**45.60**	**256**	P	**P**	**08 12 59.5**	**+0.2**
LZH	**Lanzhou**	**46.49**	**69**	*e*P	**P**	**08 13 07.1**	**+0.7**
LZH				pP	pP	08 13 16.9	+0.8
LZH				sP	sP	08 13 21.9	+1.8
LZH				S	**S**	**08 19 54.3**	**+1.5**
LZH				pmax	pmax		
	comp=Z,24nm,1.0s						
LZH				pmax	pmax		
	comp=Z,130nm,4.3s						
LZH				LR	LR		
	comp=Z,250nm,13.6s						
LZH				LR	LR		
	comp=Z,520nm,13.3s						
LZH				LR	LR		
	comp=Z,340nm,14.1s						
SONM	**Songino Array**	**46.66**	**53**	P	**P**	**08 13 07.5**	**-0.1**
	comp=Z,0.5nm,0.4s,baz=274,slow=5.8,SNR=9.6						
SONM				PcP	**PcP**	**08 14 41.2**	**+0.3**
	comp=Z,1.7nm,0.8s,baz=250,slow=4.0,SNR=6.5						
SONM				LR	LR	08 34 31.3	
	comp=Z,271nm,20.5s,baz=286,slow=38						
SONM	**Songino Array**	**46.66**	**53**	P	**P**	**08 13 08.3**	**+0.8**
SONM	**Songino Array**	**46.66**	**53**	P	**P**	**08 13 08.3**	**+0.8**
ULN	**Ulaanbaatar**	**47.10**	**53**	P	**P**	**08 13 12.2**	**+1.2**
ULN				pmax	pmax		
	comp=Z,15nm,1.4s						
ULN	**Ulaanbaatar**	**47.10**	**53**	P	**P**	**08 13 12.2**	**+1.2**
ULN				IAmb	IAmb	08 13 13.4	
	comp=Z,15nm,1.4s						
SPA0	**Spitsbergen Ar**	**47.45**	**352**	*e*P	**P**	**08 13 13.6**	**+0.5**
SPITS	**Spitsbergen Ar**	**47.45**	**352**	P	**P**	**08 13 12.7**	**-0.5**
	comp=Z,6.2nm,0.6s,baz=158,slow=16,SNR=31						
CD2	**Chengdu**	**47.81**	**76**	P	**P**	**08 13 16.8**	**+0.2**
CD2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CD2				LR	LR		
	comp=Z,350nm,12.2s						
CD2				LR	LR		
	comp=Z,250nm,10.0s						
CD2				LR	LR		
	comp=Z,270nm,13.7s						
CHTO	**Chiang Mai**	**48.39**	**93**	P	**P**	**08 13 22.0**	**+0.8**
CHTO				pmax	pmax		
	comp=Z,31nm,1.5s						
CHTO	**Chiang Mai**	**48.39**	**93**	P	**P**	**08 13 22.0**	**+0.8**
CMMT	**Chiang Mai**	**48.40**	**93**	P	**P**	**08 13 21.8**	**+0.6**
	comp=Z,3.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**48.55**	**94**	P	**P**	**08 13 22.9**	**+0.5**
	comp=Z,1.8nm,0.4s,baz=298,slow=8.1,SNR=9.7						
CMAR				PcP	**PcP**	**08 14 49.4**	**+1.4**
	comp=Z,1.3nm,0.5s,baz=294,slow=4.1,SNR=4.6						
CMAR				LR	LR	08 38 08.1	
	comp=Z,62nm,20.1s,baz=346,slow=41						

CM02	**Chiang Mai Arr**	**48.57**	**94**	P	P	08 13 31.7	+9.1
CM36	**Chiang Mai Arr**	**48.66**	**94**	P	**P**	**08 13 24.0**	**+0.8**
KMI	**Kunming**	**48.95**	**84**	⇑P	**P**	**08 13 25.6**	**-0.1**
KMI				pP	sP	08 13 42.6	+3.4
KMI				S	**S**	**08 20 29.0**	**+1.0**
KMI				pmax	pmax		
	comp=Z,15nm,1.5s						
KMI				pmax	pmax		
	comp=Z,100nm,4.4s						
KMI				LR	LR		
	comp=Z,180nm,21.5s						
KMI				LR	LR		
	comp=Z,220nm,13.0s						
KMI				LR	LR		
	comp=Z,230nm,21.0s						
UMPA	**Umpang Tak**	**49.55**	**96**	P	P	08 13 35.7	+5.5
	comp=Z,749nmcomp=Z,16nm,0.7s						
KOWA	**Kowa**	**49.61**	**261**	P	**P**	**08 13 30.6**	**+0.1**
KOWA				IAmb	IAmb	08 13 34.1	
	comp=Z,8.4nm,0.6s						
UTTA	**Uttaradit**	**50.24**	**94**	P	**P**	**08 13 37.9**	**+2.6**
	comp=Z,11nm,0.7s						
BTO	**Baotou**	**50.25**	**62**	*e*P	**P**	**08 13 31.3**	**-3.9**
UTHA	**Uthaitani**	**50.36**	**97**	P	**P**	**08 13 40.0**	**+3.8**
	comp=Z,291nmcomp=Z,11nm,0.7s						
BOD	**Bodaibo**	**50.92**	**39**	*e*P	**P**	**08 13 39.8**	**-0.1**
BOD				pmax	pmax		
	comp=Z,31nm,1.7s						
XAN	**Xi'an**	**51.05**	**70**	P	**P**	**08 13 41.0**	**-0.3**
XAN				pP	sP	08 13 53.5	-1.5
XAN				S	**S**	**08 20 57.3**	**+0.6**
XAN				SS	**SS**	**08 24 30.8**	**-1.0**
XAN				pmax	pmax		
	comp=Z,19nm,1.4s						
XAN				LR	LR		
	comp=Z,300nm,17.4s						
XAN				LR	LR		
	comp=Z,360nm,20.6s						
XAN				LR	LR		
	comp=Z,520nm,20.6s						
XAN	**Xi'an**	**51.05**	**70**	P	**P**	**08 13 41.3**	**0.0**
XAN				pmax	pmax		
	comp=Z,23nm,1.2s						
XAN	**Xi'an**	**51.05**	**70**	P	**P**	**08 13 41.3**	**0.0**
XAN				IAmb	IAmb	08 13 43.4	
	comp=Z,23nm,1.2s						
HHC	**Hu-ho-hao-te**	**51.34**	**61**	*e*P	**P**	**08 13 44.8**	**+1.3**
HHC				pmax	pmax		
	comp=Z,17nm,1.1s						
HHC				pmax	pmax		
	comp=Z,220nm,6.8s						
HHC				LR	LR		
	comp=Z,250nm,16.5s						
HHC				LR	LR		
	comp=Z,340nm,16.8s						
HHC				LR	LR		
	comp=Z,290nm,16.9s						
SLVN	**Son La**	**51.46**	**88**	P	**P**	**08 13 44.9**	**+0.4**
SLVN				IAmb	IAmb	08 13 49.5	
	comp=Z,20nm,1.3s						
GYA	**Guiyang**	**51.72**	**80**	*e*P	**P**	**08 13 46.0**	**-0.5**
GYA				sP	sP	08 14 08.1	+8.0
GYA				S	**S**	**08 21 06.9**	**+0.5**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.5s						
PHET	**Kaeng Krachan**	**51.86**	**100**	P	P	08 13 52.3	+4.9
	comp=Z,1µmcomp=Z,22nm,0.7s						
NONG	**Nongkai**	**52.27**	**92**	P	**P**	**08 13 52.6**	**+2.0**
	comp=Z,22nm,1.4s						
SRAK	**Srakaew**	**53.30**	**97**	P	P	08 14 04.7	+6.5
	comp=Z,2µmcomp=Z,121nm,0.9s						
DBIC	**Dimbokro**	**54.56**	**253**	LR	LR	08 40 28.0	
	comp=Z,395nm,19.1s,baz=30,slow=39						
TRTT	**Trang**	**54.66**	**105**	P	**P**	**08 14 08.8**	**+0.7**
UBPT	**Khong Chiam**	**55.55**	**94**	P	**P**	**08 14 16.1**	**+1.6**
UBPT	**Khong Chiam**	**55.55**	**94**	P	**P**	**08 14 14.5**	**0.0**
UBPT				IAmb	IAmb	08 14 15.5	
	comp=Z,14nm,1.4s						
WHN	**Wuhan**	**56.53**	**73**	P	**P**	**08 14 22.4**	**+1.0**
TIXI	**Tiksi**	**56.77**	**22**	*i* P	**P**	**08 14 22.0**	**-0.4**
QIZ	**Qiongzhong**	**57.48**	**87**	P	**P**	**08 14 26.6**	**-1.6**
QIZ				S	**S**	**08 22 21.8**	**-1.8**
QIZ				LR	LR		
	comp=Z,170nm,9.3s						
QIZ				LR	LR		
	comp=Z,120nm,9.2s						
QIZ				LR	LR		
	comp=Z,140nm,18.8s						
SUMG	**Summit**	**57.76**	**339**	*i* P	**P**	**08 14 30.0**	**+0.1**
	comp=Z,13nm,0.8s						
SUMG	**Summit**	**57.76**	**339**	*i* P	**P**	**08 14 30.0**	**+0.1**
SUMG				pmax	pmax		
	comp=Z,13nm,0.8s						
SUMG	**Summit**	**57.76**	**339**	*i* P	**P**	**08 14 30.0**	**+0.1**
SUMG				IAmb	IAmb	08 14 31.1	
	comp=Z,13nm,0.8s						
YAK	**Yakutsk**	**58.34**	**33**	*i* P	**P**	**08 14 33.5**	**-0.1**
YAK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ZEA	**Zeya**	**58.85**	**43**	*e*P	**P**	**08 14 38.6**	**+1.3**
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
NJ2	**Nanjing**	**59.57**	**69**	*e*P	**P**	**08 14 42.5**	**-0.1**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
KLR	**Kul'dur**	**62.84**	**47**	P	**P**	**08 15 03.5**	**-1.1**
	comp=Z,1.7nm,1.0s,baz=250,slow=4.6,SNR=4.3						
BOSA	**Boshof**	**64.39**	**201**	P	**P**	**08 15 16.9**	**+1.9**
	comp=Z,7.2nm,1.0s,baz=358,slow=6.0,SNR=4.6						
BOSA				LR	LR	08 43 32.1	
	comp=Z,114nm,19.0s,baz=30,slow=36						
BOSA	**Boshof**	**64.39**	**201**	IAmb	IAmb	08 15 18.8	
	comp=Z,31nm,1.5s						
KSAR	**Wonju Array Be**	**64.44**	**61**	P	**P**	**08 15 14.4**	**-0.9**
KSAR	**Wonju Array Be**	**64.44**	**61**	P	**P**	**08 15 14.4**	**-0.9**
KSRS	**Korea Array**	**64.47**	**61**	P	**P**	**08 15 14.8**	**-0.7**
	comp=Z,2.2nm,0.7s,baz=282,slow=6.3,SNR=7.3						
KSRS				LR	LR	08 48 08.6	
	comp=Z,103nm,19.1s,baz=288,slow=40						
EUNU	**Eureka**	**64.57**	**352**	P	**P**	**08 15 16.4**	**+0.9**
EUNU				IAmb	IAmb	08 15 18.5	
	comp=Z,12nm,1.3s						
USA0B	**Ussuriysk Arra**	**64.77**	**52**	*i* P	**P**	**08 15 16.1**	**-1.2**
USRK	**Ussuriysk Ar.**	**64.77**	**52**	P	**P**	**08 15 16.1**	**-1.2**
	comp=Z,2.0nm,0.6s,baz=286,slow=9.7,SNR=4.7						
USRK				LR	LR	08 46 09.4	
	comp=Z,217nm,18.3s,baz=273,slow=38						
MSHR	**Mys Shultsa**	**64.81**	**54**	*i* P	**P**	**08 15 17.2**	**-0.4**
SEY	**Seymchan**	**67.92**	**28**	*i* P	**P**	**08 15 37.0**	**-0.1**
FRB	**Frobisher Bay**	**71.30**	**335**	P	**P**	**08 15 58.0**	**+0.1**
	comp=Z,7.8nm,0.7s,baz=49,slow=7.1,SNR=24						
FRB	**Frobisher Bay**	**71.30**	**335**	P	**P**	**08 15 58.0**	**+0.1**
MAJO	**Matsushiro**	**72.30**	**58**	*i* P	**P**	**08 16 03.3**	**-1.2**
MAJO				pmax	pmax		
	comp=Z,11nm,1.2s						
MJAR	**Matsushiro Arr**	**72.30**	**58**	LR	LR	08 50 31.4	
	comp=Z,91nm,19.7s,baz=120,slow=38						
PETK	**Petropavlovsk-**	**75.56**	**36**	LR	LR	08 54 10.4	
	comp=Z,112nm,19.1s,baz=304,slow=39						
C36M	**Paulatuk**	**78.01**	**357**	P	**P**	**08 16 36.0**	**-0.7**
C36M				IAmb	IAmb	08 16 36.5	
	comp=Z,5.0nm,0.8s						
TOLK	**Toolik Lake Re**	**78.19**	**6**	P	**P**	**08 16 38.5**	**+0.7**
INK	**Inuvik**	**79.27**	**0**	P	**P**	**08 16 43.2**	**-0.5**
	comp=Z,1.2nm,0.6s,baz=5.1,slow=8.4,SNR=6.9						
INK	**Inuvik**	**79.27**	**0**	P	**P**	**08 16 43.6**	**-0.1**
INK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
INK	**Inuvik**	**79.27**	**0**	P	**P**	**08 16 43.6**	**-0.1**
COLD	**Coldfoot**	**79.50**	**7**	P	**P**	**08 16 45.8**	**+0.8**
COLD				IAmb	IAmb	08 16 47.6	
	comp=Z,6.8nm,1.0s						
ANM	**Nome**	**79.76**	**14**	P	**P**	**08 16 46.9**	**+0.5**
ANM				pmax	pmax		
	comp=Z,12nm,1.2s						
ANM	**Nome**	**79.76**	**14**	P	**P**	**08 16 46.9**	**+0.5**
ANM				IAmb	IAmb	08 16 49.6	
	comp=Z,12nm,1.2s						
FYU	**Fort Yukon**	**80.58**	**5**	P	**P**	**08 16 53.0**	**+2.2**
FYU				IAmb	IAmb	08 16 55.3	
	comp=Z,12nm,1.2s						
EPYK	**Eagle Plains**	**81.17**	**1**	P	**P**	**08 16 54.2**	**+0.1**
EPYK				IAmb	IAmb	08 17 23.3	
	comp=Z,4.6nm,0.8s						
PRP	**Porcupine Dome**	**81.59**	**5**	P	**P**	**08 16 57.0**	**+0.6**
I23K	**Minto, Yukon-K**	**81.61**	**7**	P	**P**	**08 16 57.4**	**+1.1**
POKR	**Poker Plat Res**	**81.83**	**6**	P	**P**	**08 16 58.5**	**+1.0**
POKR				IAmb	IAmb	08 17 02.0	
	comp=Z,13nm,1.1s						
MDM	**Murphy Dome**	**81.91**	**6**	P	**P**	**08 16 58.7**	**+0.7**
MDM				IAmb	IAmb	08 17 01.1	
	comp=Z,9.6nm,1.0s						
COLA	**College**	**82.03**	**6**	P	**P**	**08 16 59.1**	**+0.6**
COLA				pmax	pmax		
	comp=Z,20nm,1.4s						
COLA	**College**	**82.03**	**6**	P	**P**	**08 16 59.1**	**+0.6**
TCOL	**CIGO, UAF Yank**	**82.03**	**6**	P	**P**	**08 16 59.1**	**+0.6**
IL31		**82.21**	**6**	P	**P**	**08 16 59.7**	**+0.2**
ILAR	**Eielson Array**	**82.21**	**6**	P	**P**	**08 16 59.0**	**-0.5**
	comp=Z,1.8nm,0.7s,baz=321,slow=3.0,SNR=24						
ILAR				LR	LR	08 57 59.7	
	comp=Z,52nm,19.9s,baz=326,slow=39						
ILAR	**Eielson Array**	**82.21**	**6**	P	**P**	**08 16 59.0**	**-0.5**
CCB	**Clear Creek Bu**	**82.25**	**6**	P	**P**	**08 16 59.9**	**+0.2**
HDA	**Harding Lake**	**82.56**	**6**	P	**P**	**08 17 00.9**	**-0.5**
HDA				IAmb	IAmb	08 17 02.3	
	comp=Z,3.5nm,0.7s						
EGAK	**Eagle**	**82.60**	**3**	P	**P**	**08 17 02.0**	**+0.5**
EGAK				IAmb	IAmb	08 17 04.5	
	comp=Z,6.3nm,0.9s						
KTH	**Kantishna Hill**	**82.99**	**8**	P	**P**	**08 17 03.9**	**+0.2**
DOT	**Dot Lake**	**83.55**	**5**	P	**P**	**08 17 07.4**	**+0.8**
DOT				IAmb	IAmb	08 17 09.8	
	comp=Z,8.7nm,1.1s						
YKA	**Yellowknife Ar**	**83.95**	**352**	P	**P**	**08 17 08.2**	**-0.3**
	comp=Z,1.6nm,0.8s,baz=22,slow=5.4,SNR=20						
YKA				LR	LR	08 56 31.3	
	comp=Z,66nm,18.5s,baz=0.0,slow=37						
BCAR	**Beaver Creek A**	**84.28**	**4**	P	**P**	**08 17 10.9**	**+0.6**
MENT	**Mentasta**	**84.28**	**5**	P	**P**	**08 17 11.7**	**+1.4**
MENT				IAmb	IAmb	08 17 13.8	
	comp=Z,6.6nm,0.8s						
SUA	**Susitna One**	**85.04**	**8**	P	**P**	**08 17 14.6**	**+0.4**
KLU	**Klutina**	**85.53**	**6**	P	**P**	**08 17 17.9**	**+1.2**
FFC	**Flin Flon**	**88.88**	**343**	P	**P**	**08 17 33.3**	**+0.5**
FFC				pmax	pmax		
	comp=Z,3.0nm,0.9s						
FFC	**Flin Flon**	**88.88**	**343**	P	**P**	**08 17 33.3**	**+0.5**
FFC				IAmb	IAmb	08 17 33.7	
	comp=Z,3.4nm,0.8s						
WRA	**Warramunga Arr**	**98.42**	**108**	P	Pdif	08 18 18.8	+1.6
	comp=Z,0.6nm,0.8s,baz=316,slow=3.9,SNR=3.0						
ASAR	**Alice Springs**	**100.01**	**112**	P	**Pdif**	**08 18 26.0**	**+1.7**
	comp=Z,0.4nm,0.8s,baz=301,slow=4.7,SNR=2.1						

IDC ***15*** *08:46:26.9±1.0, 2°.98S×147°.40E, h0^{km}, mb4.1/8, mb1 4.4/8, mb1mx4.0/31, mbtmp4.1/8, MS3.5/6, Ms1 3.5/6, ms1mx3.0/39, Error ellipse: s-maj=55.9km s-min=20.0km az=122.0*

NEIC ***15*** *08:46:30.6±1.6, 2°.84S±0°.07×147°.35E±0°.09, h29^{km}±5^{km}, mb4.2/8, Error ellipse: s-maj=13.1km s-min=10.2km az=114.0*

ISC 15 08:46:31.5±0.6**, 2°.87S**±0°.09×**147°.4E**±0°.1**, h32**^{km}**, n34, σ1^{s}20**/25**, mb4.1**/11**, MS3.4**/4**, Admiralty Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MANU	**Manus Island**	**0.83**	**1**	Pn	**Pn**	**08 46 45.3**	**-1.7**
RABL	**Rabaul**	**4.98**	**105**	Pn	**Pn**	**08 47 43.3**	**-0.8**
JAY	**Jayapura**	**6.65**	**273**	LR	LR	08 50 26.2	
	comp=Z,410nm,20.3s,baz=61,slow=36						
SIJI	**Sorong**	**16.20**	**277**	LR	LR	08 55 33.1	
	comp=Z,120nm,20.6s,baz=296,slow=34						
WB0	**Warramunga Arr**	**21.02**	**216**	P	**P**	**08 51 13.1**	**+0.4**
WR0	**Warramunga Arr**	**21.09**	**215**	P	**P**	**08 51 12.9**	**-0.5**
WR0				IAmb	IAmb	08 51 40.5	
	comp=Z,19nm,1.3s						
WB2	**Warramunga Arr**	**21.19**	**216**	P	**P**	**08 51 14.3**	**-0.2**
WB2				IAmb	IAmb	08 51 18.8	
	comp=Z,22nm,1.1s						
WRA	**Warramunga Arr**	**21.19**	**216**	P	**P**	**08 51 14.1**	**-0.4**
	comp=Z,4.9nm,0.7s,baz=41,slow=11,SNR=40						
WRA				PcP	**PcP**	**08 55 20.0**	**+0.4**
	comp=Z,0.6nm,0.9s,baz=32,slow=2.4,SNR=2.4						
WRA				LR	LR	09 00 28.4	
	comp=Z,108nm,18.6s,baz=35,slow=40						
WRA	**Warramunga Arr**	**21.19**	**216**	P	**P**	**08 51 12.6**	**-2.0**
AS31	**Alice Springs**	**24.42**	**211**	P	**P**	**08 51 47.2**	**-0.2**
AS31				IAmb	IAmb	08 52 02.1	
	comp=Z,1.5nm,0.9s						
ASAR	**Alice Springs**	**24.42**	**211**	P	**P**	**08 51 47.4**	**-0.1**
	comp=Z,4.7nm,0.8s,baz=39,slow=7.2,SNR=43						
ASAR				LR	LR	09 01 52.1	
	comp=Z,98nm,19.3s,baz=12,slow=38						
ASAR	**Alice Springs**	**24.42**	**211**	P	**P**	**08 51 47.5**	**0.0**
FITZ	**Fitzroy Crossi**	**26.11**	**233**	P	**P**	**08 52 01.8**	**-0.9**
	comp=Z,3.2nm,0.7s,baz=62,slow=8.7,SNR=5.4						
FITZ				LR	LR	09 02 33.3	
	comp=Z,113nm,20.9s,baz=72,slow=37						
FITZ	**Fitzroy Crossi**	**26.11**	**233**	P	**P**	**08 52 01.2**	**-1.5**
H11S3	**WAKE ISLAND Hy**	**28.52**	**41**	T	T	09 22 12.1	
	baz=223,slow=76,SNR=272						
H11S2	**WAKE ISLAND Hy**	**28.53**	**41**	T	T	09 22 12.8	
	baz=223,slow=76,SNR=351						
H11S1	**WAKE ISLAND Hy**	**28.54**	**41**	T	T	09 22 13.5	
	baz=223,slow=76,SNR=285						
H11N1	**WAKE ISLAND Hy**	**29.54**	**40**	T	T	09 23 27.3	
	baz=221,slow=76,SNR=76						
H11N3	**WAKE ISLAND Hy**	**29.55**	**40**	T	T	09 23 28.5	
	baz=221,slow=76,SNR=160						
H11N2	**WAKE ISLAND Hy**	**29.55**	**40**	T	T	09 23 28.6	
	baz=221,slow=76,SNR=139						
CAN	**Canberra**	**32.32**	**177**	P	**P**	**08 52 57.7**	**-0.1**
FORT	**Forrest**	**33.21**	**211**	P	**P**	**08 53 05.8**	**+0.2**
NWAO	**Narrogin (SRO)**	**41.10**	**220**	LR	LR	09 11 23.9	
	comp=Z,116nm,20.1s,baz=106,slow=36						
PEA0B	**Petropavlovsk-**	**56.45**	**7**	P	**P**	**08 56 09.1**	**-1.0**
MKAR	**Makanchi Array**	**75.33**	**320**	P	**P**	**08 58 13.8**	**+2.0**
	comp=Z,0.4nm,0.8s,baz=110,slow=6.3,SNR=3.0						
RSO	**Redoubt South**	**78.17**	**26**	P	**P**	**08 58 26.2**	**-1.5**
NRIK	**Noril'sk**	**82.43**	**342**	P	**P**	**08 58 51.8**	**+1.6**
	comp=Z,0.8nm,0.3s,baz=100,slow=4.3,SNR=3.7						
ILAR	**Eielson Array**	**82.49**	**23**	P	**P**	**08 58 50.8**	**+0.1**
	comp=Z,1.2nm,0.7s,baz=247,slow=4.9,SNR=15						
NVAR	**Mina Array Bea**	**95.18**	**52**	P	**P**	**08 59 54.1**	**+1.7**
	comp=Z,0.7nm,0.7s,baz=266,slow=8.0,SNR=5.8						
YKA	**Yellowknife Ar**	**96.26**	**28**	P	**P**	**08 59 57.5**	**+1.0**
	comp=Z,0.9nm,0.7s,baz=274,slow=4.0,SNR=18						
LPAZ	**La Paz**	**140.10**	**120**	PKP	**PKPdf**	**09 05 56.8**	**-1.9**
	comp=Z,1.4nm,0.4s,baz=254,slow=8.5,SNR=8.6						
LPAZ	**La Paz**	**140.10**	**120**		**PKPdf**	**09 05 57.0**	**-1.7**
TORD	**Torodi Ar. Bea**	**144.54**	**289**	PKP	PKPbc	09 06 04.1	-0.5
	comp=Z,0.9nm,1.0s,baz=55,slow=3.3,SNR=6.2						
TORD	**Torodi Ar. Bea**	**144.54**	**289**		**PKPdf**	**09 06 05.9**	**+0.1**

IDC ***15*** *08:55:21.3±10.0, 8°.49S×115°.38E, h142^{km}±84^{km}, mb2.9/4, mb1 3.1/6, mb1mx3.0/39, mbtmp3.5/6, MS3.0/1, Ms1 3.2/1, ms1mx2.5/10, Error ellipse: s-maj=120.1km s-min=19.6km az=62.0*

DJA ***15*** *08:55:25.5±0.4, 8°S±7°×11°6E±°, h143^{km}±4^{km}, M3.8/11, mb4.0/4, MLv3.7/11*

ISC 15 08:55:23.7±0.8**, 8°.42S**±0°.09×**115°.70E**±0°.05**, h150**^{km}**, n17, σ2^{s}92**/22**, mb3.2**/4**, Bali region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DNP	**Denpasar**	**0.54**	**242**	P	**Pn**	**08 55 47.9**	**+2.7**
DNP				S	**Sn**	**08 56 03.2**	**+1.6**
SRBI	**Singaraja**	**0.58**	**305**	P	**Pn**	**08 55 47.3**	**+1.8**
SRBI				S	**Sn**	**08 56 04.7**	**+2.6**
TWSI	**Taliwang, Sumb**	**1.21**	**105**	P	**Pn**	**08 55 52.2**	**+1.8**
TWSI				S	**Sn**	**08 56 13.1**	**+2.3**
JAGI	**Jajag, Banyuwa**	**1.53**	**268**	P	**Pn**	**08 55 54.3**	**+0.7**
JAGI				S	**Sn**	**08 56 16.6**	**+0.2**
PLAI	**Plampang**	**2.10**	**101**	P	**Pn**	**08 56 02.3**	**+2.3**
BASI	**Baing, Sumba**	**5.14**	**111**	P	**Pn**	**08 56 41.3**	**+2.3**
	0.4nm81nm,0.7s						
UGM	**Wanagama**	**5.15**	**275**	P	**Pn**	**08 56 39.8**	**+0.7**
	0.5nm42nm,1.1s						
KAPI	**Kappang**	**5.26**	**50**	P	**Pn**	**08 56 42.4**	**+1.8**
	1.1nm,0.3s,baz=230,slow=9.2,SNR=7.8						
BKSI	**Bulukumba**	**5.37**	**55**	P	**Pn**	**08 56 43.9**	**+1.9**
	0.1nm20nm,1.5s						
EDFI	**Ende, Flores**	**5.94**	**94**	P	**Pn**	**08 56 49.0**	**-0.7**
BATI	**Baumata**	**8.06**	**103**	S	**Sn**	**08 58 43.5**	**-4.3**
	5.1nm,0.3s,baz=27,slow=5.7,SNR=2.1						
FITZ	**Fitzroy Crossi**	**13.64**	**136**	P	**Pn**	**08 58 30.4**	**-0.6**
	0.3nm,0.3s,baz=323,slow=10,SNR=1.9						
FITZ				S	**Sn**	**09 00 56.9**	**-5.3**
	0.4nm,0.3s,baz=324,slow=20,SNR=2.9						
WRA	**Warramunga Arr**	**21.37**	**124**	P	**P**	**08 59 59.5**	**0.0**
	0.5nm,0.5s,baz=305,slow=11,SNR=9.9						
WRA				S	**S**	**09 03 55.5**	**+7.7**
	0.3nm,0.7s,baz=294,slow=22,SNR=2.2						
ASAR	**Alice Springs**	**23.11**	**133**	P	**P**	**09 00 17.2**	**+0.6**
	0.3nm,0.4s,baz=311,slow=9.7,SNR=11						
CMAR	**Chiang Mai Arr**	**31.41**	**328**	LR	LR	09 14 18.3	
	comp=Z,25nm,19.8s,baz=354,slow=36						
SONM	**Songino Array**	**56.61**	**353**	P	**P**	**09 04 49.4**	**-1.6**
	0.1nm,0.3s,baz=157,slow=7.2,SNR=1.8						
MKAR	**Makanchi Array**	**62.50**	**335**	P	**P**	**09 05 28.9**	**-2.3**
	0.2nm,0.3s,baz=154,slow=7.4,SNR=4.7						

BGR ***15*** *09:08:13.8±0.0, 52°.91N×33°.81W, h10^{km}, mb4.7, Ms3.4*

IDC ***15*** *09:08:17.4±0.6, 52°.56N×32°.47W, h0^{km}, mb4.2/28, mb1 4.3/29, mb1mx4.2/51, mbtmp4.2/29, ML4.6/1, MS3.6/23, Ms1 3.6/23, ms1mx3.4/55, Error ellipse: s-maj=18.5km s-min=10.5km az=1.0*

NEIC ***15*** *09:08:19.1±1.4, 52°.6N±0°.1×32°.4W±0°.1, h10^{km}±1^{km}, mb4.6/63, Error ellipse: s-maj=18.7km s-min=14.0km az=183.0*

ISC 15 09:08:18.8±0.5**, 52°.51N**±0°.09×**32°.41W**±0°.05**, h10**^{km}**, n160, σ1^{s}05**/153**, mb4.5**/75**, MS3.5**/24**, 8D, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NRS	**Narsarsuaq**	**11.20**	**326**	Pn	**Pn**	**09 11 01.4**	**+2.6**
DRLN	**Deer Lake**	**16.14**	**268**	Pn	**Pn**	**09 12 05.7**	**+0.2**
DRLN				IAmb	IAmb	09 12 34.6	
	comp=Z,108nm,1.8s						
ICESG	**Greenland Ices**	**16.99**	**351**	*i* P	**P**	**09 12 19.1**	**+0.7**
SFJD	**Kangerlussuaq**	**17.07**	**335**	LR	LR	09 17 34.5	
	comp=Z,397nm,20.4s,baz=158,slow=33						
ESK	**Eskdalemuir**	**17.37**	**69**		**Pn**	**09 12 21.0**	**-0.1**
EKA	**Eskdalemuir Ar**	**17.40**	**69**	P	**Pn**	**09 12 20.8**	**-0.6**
	baz=274,slow=9.3,SNR=26						
SUMG	**Summit**	**20.32**	**355**	*i* P	**P**	**09 12 54.1**	**-0.8**
	comp=Z,35nm,0.7s						
SUMG	**Summit**	**20.32**	**355**	P	**P**	**09 12 55.1**	**+0.1**
SUMG				IAmb	IAmb	09 12 59.6	
	comp=Z,18nm,0.8s						
SUMG	**Summit**	**20.32**	**355**	*i* P	**P**	**09 12 54.2**	**-0.8**
SUMG				IAmb	IAmb	09 12 59.4	
	comp=Z,35nm,0.7s						
JMIC	**Jan Mayen**	**21.43**	**21**	LR	LR	09 18 47.5	
	comp=Z,176nm,20.0s,baz=250,slow=30						
FRB	**Frobisher Bay**	**21.81**	**315**	P	**P**	**09 13 10.4**	**-0.3**
	comp=Z,9.3nm,0.8s,baz=106,slow=9.9,SNR=21						
FRB				LR	LR	09 19 60.0	
	comp=Z,191nm,19.0s,baz=98,slow=32						
CLF	**Chambon-Foret**	**22.47**	**88**	P	**P**	**09 13 18.1**	**+0.2**
CLF				IAmb	IAmb	09 13 19.0	
	comp=Z,21nm,0.8s						
SNF	**Seneffe**	**22.77**	**80**	*d*P	**P**	**09 13 20.5**	**-0.5**
DOU	**Dourbes**	**23.10**	**81**	*d*P	**P**	**09 13 23.9**	**-0.6**
BMRD	**Maredsous**	**23.13**	**81**	*d*P	**P**	**09 13 24.2**	**-0.6**
BGES	**Gesves**	**23.30**	**80**	*d*P	**P**	**09 13 26.7**	**+0.2**
ESDC	**Sonseca Array**	**23.36**	**112**	LR	LR	09 20 57.4	
	comp=Z,173nm,18.2s,baz=320,slow=32						
BCLA	**Clavier**	**23.41**	**80**	*d*P	**P**	**09 13 27.0**	**-0.7**
MEM	**Membach**	**23.77**	**79**	*d*P	**P**	**09 13 31.7**	**+0.5**
BTNL	**Ternell**	**23.86**	**79**	*d*P	**P**	**09 13 31.3**	**-0.7**
WLF	**Walferdange**	**24.20**	**81**	*d*P	**P**	**09 13 35.3**	**+0.1**
NBO00	**NORSAR Array S**	**24.73**	**53**	P	**P**	**09 13 39.8**	**-0.2**
NB2	**NORSAR Subarra**	**24.94**	**53**	P	**P**	**09 13 41.4**	**-0.5**
	comp=Z,21nm,1.1s,baz=274,slow=10						
NOA	**NORSAR Array B**	**24.94**	**53**	P	**P**	**09 13 41.3**	**-0.6**
	comp=Z,6.6nm,0.9s,baz=272,slow=9.8,SNR=6.9						
NOA				LR	LR	09 22 28.3	
	comp=Z,71nm,19.4s,baz=275,slow=34						
NB201	**NORSAR Array S**	**24.98**	**53**	P	**P**	**09 13 42.2**	**-0.1**
KASTN	**Kahler Asten**	**25.02**	**77**	*e*P	**P**	**09 13 42.7**	**+0.1**
	comp=Z,10nm,1.2s,baz=293,slow=8.5						
NC405	**NORSAR Array S**	**25.19**	**53**	P	**P**	**09 13 43.0**	**-1.1**
BSEG	**Bad Segeberg**	**25.34**	**70**	*e*P	**P**	**09 13 47.1**	**+1.6**
	comp=Z,31nm,1.0s,baz=293,slow=8.5						
BSEG				*e*L	L	09 21 43.3	
	comp=Z,116nm,18.4s						
TNS	**Taunus Mts**	**25.37**	**79**	*e*P	**P**	**09 13 48.0**	**+2.1**
	comp=Z,28nm,1.1s,baz=293,slow=8.5						
TNS				*e*L	L	09 22 14.5	
	comp=Z,137nm,18.1s						
ECH	**Echery**	**25.38**	**84**	P	**P**	**09 13 46.5**	**+0.6**
ECH				IAmb	IAmb	09 13 48.5	
	comp=Z,16nm,1.1s						
GTTG	**Gottingen**	**25.82**	**75**	*e*P	**P**	**09 13 52.6**	**+2.7**
	comp=Z,56nm,1.1s,baz=293,slow=8.5						
CLZ	**Clausthal**	**25.97**	**74**	*e*P	**P**	**09 13 53.6**	**+2.3**
	comp=Z,24nm,1.2s,baz=293,slow=8.5						
BFO	**Black Forest**	**26.04**	**83**	P	**P**	**09 13 51.5**	**-0.4**
BFO	**Black Forest**	**26.04**	**83**	*e*L	L	09 23 45.6	
	comp=Z,114nm,19.9s						
HFS	**Hagfors**	**26.20**	**55**	P	**P**	**09 13 53.6**	**+0.4**
	comp=Z,1.5nm,0.5s,baz=278,slow=10.0,SNR=6.8						
HFS				LR	LR	09 22 24.1	
	comp=Z,104nm,20.7s,baz=264,slow=32						
SENIN	**Lac Senin/Sane**	**26.29**	**88**	P	**P**	**09 13 55.6**	**+1.2**
SENIN				IAmb	IAmb	09 13 58.3	
	comp=Z,10nm,0.9s						
FLTG	**Flechtingen**	**26.32**	**73**	*e*P	**P**	**09 13 56.3**	**+1.9**
	comp=Z,16nm,1.3s,baz=293,slow=8.5						
STU	**Stuttgart**	**26.38**	**81**	P	**P**	**09 13 55.1**	**+0.1**
STU				IAmb	IAmb	09 13 59.0	
	comp=Z,21nm,1.1s						
GRF	**Grafenberg Arr**	**27.23**	**78**	*e*P	**P**	**09 14 03.8**	**+1.2**
	comp=Z,6.3nm,1.0s,baz=293,slow=8.5						
GRF				*e*L	L	09 21 43.4	
	comp=Z,57nm,21.3s						
TUE	**Stuetta**	**27.48**	**86**	P	**P**	**09 14 04.4**	**-0.8**
TUE				IAmb	IAmb	09 14 15.5	
	comp=Z,22nm,1.4s						
DAVOX	**Davos/Dischmat**	**27.66**	**85**	P	**P**	**09 14 07.7**	**+0.9**
	comp=Z,3.9nm,0.8s,baz=357,slow=16,SNR=7.2						
DAVOX				LR	LR	09 22 51.1	
	comp=Z,86nm,21.5s,baz=277,slow=32						
CLL	**Collm**	**27.69**	**74**	*i* P	**P**	**09 14 06.4**	**-0.4**
	comp=Z,6.0nm,0.7s						
CLL	**Collm**	**27.69**	**74**	*e*L	L	09 23 04.8	
	comp=Z,74nm,20.2s						
RETA	**Reutte**	**27.88**	**83**	*e*P	**P**	**09 14 08.9**	**+0.3**
	comp=Z,5.1nm,0.9s						
FUR	**Furstenfeldbru**	**27.89**	**81**	*e*L	L	09 23 38.3	
	comp=Z,94nm,21.0s						
FETA	**Feichten**	**28.07**	**84**	*e*P	**P**	**09 14 11.3**	**+0.9**
	comp=Z,7.0nm,1.2s						
SQTA	**Sankt Quirin**	**28.27**	**83**	*e*P	**P**	**09 14 13.0**	**+0.9**
	comp=Z,7.6nm,1.0s						
WET	**Wettzell**	**28.44**	**78**	*e*L	L	09 23 15.4	
	comp=Z,87nm,19.9s						
WTTA	**Wattenberg**	**28.51**	**83**	*e*P	**P**	**09 14 15.0**	**+0.7**
	comp=Z,6.7nm,1.0s						
GEC2	**GERESS Array S**	**29.06**	**79**	P	**P**	**09 14 18.0**	**-1.1**
GEC2	**GERESS Array S**	**29.06**	**79**	*e*L	L	09 23 33.1	
	comp=Z,88nm,20.8s						
GERES	**GERESS Array B**	**29.06**	**79**	P	**P**	**09 14 19.1**	**0.0**
	comp=Z,2.3nm,0.8s,baz=302,slow=10,SNR=13						
GERES				LR	LR	09 24 47.4	
	comp=Z,78nm,18.3s,baz=293,slow=34						
GERES	**GERESS Array B**	**29.06**	**79**	P	**P**	**09 14 19.3**	**+0.2**
MYKA	**Terra Mystica**	**30.02**	**83**	*e*P	**P**	**09 14 28.4**	**+0.8**
	comp=Z,6.6nm,0.6s						
OBKA	**Obir**	**30.63**	**82**	*e*P	**P**	**09 14 33.0**	**0.0**
	comp=Z,6.5nm,0.8s						
SOKA	**Soboth**	**30.84**	**82**	*e*P	**P**	**09 14 34.1**	**-0.7**
	comp=Z,7.3nm,1.2s						
ARSA	**Arzberg**	**30.86**	**80**	*e*P	**P**	**09 14 35.3**	**+0.3**
	comp=Z,4.2nm,0.9s						
ARCES	**ARCESS Array B**	**31.23**	**35**	P	**P**	**09 14 37.1**	**-0.9**
	comp=Z,3.7nm,0.8s,baz=257,slow=8.2,SNR=6.2						
ARCES				LR	LR	09 23 52.7	
	comp=Z,65nm,20.0s,baz=260,slow=30						
FINES	**FINESS Array B**	**32.05**	**51**	P	**P**	**09 14 44.9**	**-0.3**
	comp=Z,3.3nm,0.6s,baz=286,slow=8.3,SNR=22						
FINES				LR	LR	09 26 19.9	
	comp=Z,72nm,19.4s,baz=288,slow=34						
FINES	**FINESS Array B**	**32.05**	**51**	P	**P**	**09 14 45.1**	**-0.1**
RES	**Resolute Bay**	**33.07**	**334**	P	**P**	**09 14 54.2**	**+0.2**
	comp=Z,3.0nm,0.7s,baz=95,slow=8.7,SNR=14						
KOLS	**Kolonicke sedl**	**34.11**	**74**	*e*P	**P**	**09 15 04.2**	**+0.9**
FCC	**Fort Churchill**	**34.25**	**305**	P	**P**	**09 15 04.7**	**+0.3**
FCC				IAmb	IAmb	09 15 14.9	
	comp=Z,17nm,1.4s						
MNK	**Minsk**	**34.96**	**62**	*i* P	**P**	**09 15 07.4**	**-3.2**

	comp=E,3.0nm,0.8s						
MNK				*i* P	P	09 15 07.4	-3.2
	comp=N,30nm,1.4s						
MNK				*i* P	P	09 15 07.4	-3.2
	comp=Z,15nm,0.9s						
MNK				*i* PP	PnPn	09 16 25.3	-1.9
MNK				*i* PPP	PPP	09 16 38.2	
MNK				*i* S	S	09 20 39.8	-2.2
MNK				*i* SS	SnSn	09 23 00.4	+3.8
MNK				*i* SSS	SSS	09 23 16.6	
MNK				*i* LQ	LQ	09 26 52.1	
MNK				*i* LR	LR	09 28 25.5	
MNK				*i* LRM	MLR	09 29 07.7	
	comp=N,598nm,28.7s						
MNK				*i* LRM	MLR	09 29 26.9	
	comp=E,32nm,22.1s						
MNK				*i* LRM	MLR	09 29 34.5	
	comp=Z,91nm,14.4s						
DIVS	Divibare	35.16	82	P	P	09 15 11.7	-0.9
DIVS				IAmb	IAmb	09 15 13.9	
	comp=Z,7.6nm,1.0s						
BUR08	Bucovina Ar. S	36.44	74	P	P	09 15 23.5	0.0
BUR08				IAmb	IAmb	09 16 38.5	
	comp=Z,26nm,2.0s						
BURAR	Bucovina Array	36.46	74	P	P	09 15 24.3	+0.6
AKASG	Malin Array Be	37.30	67	P	P	09 15 29.7	-0.9
	comp=Z,4.1nm,0.7s,baz=303,slow=8.3,SNR=14						
AKASG				LR	LR	09 29 42.5	
	comp=Z,45nm,18.3s,baz=320,slow=34						
AKASG	Malin Array Be	37.30	67	P	P	09 15 30.0	-0.6
AKBB	Malin Array Si	37.30	67	P	P	09 15 29.7	-0.9
AKBB				IAmb	IAmb	09 15 30.9	
	comp=Z,7.8nm,0.8s						
KLMR	Klimovskoe	38.47	48	*e*P	P	09 15 39.6	-0.8
KLMR				AMP		09 15 42.4	
	comp=Z,19nm,1.3s						
ULM	Lac du Bonnet	38.55	293	P	P	09 15 40.0	-1.2
	comp=Z,2.0nm,0.8s,baz=53,slow=6.3,SNR=3.9						
ULM				LR	LR	09 29 55.7	
	comp=Z,90nm,19.7s,baz=66,slow=34						
ULM	Lac du Bonnet	38.55	293	P	P	09 15 39.8	-1.4
ULM				IAmb	IAmb	09 16 03.0	
	comp=Z,27nm,1.8s						
AGG	Agios Georgios	39.54	88	P	P	09 15 49.8	+0.1
AGG				IAmb	IAmb	09 15 51.3	
	comp=Z,18nm,1.0s						
YKA	Yellowknife Ar	42.31	317	P	P	09 16 11.4	-0.7
	comp=Z,2.4nm,0.9s,baz=64,slow=9.4,SNR=18						
YKA				PcP	PcP	09 18 05.0	-0.5
	comp=Z,1.0nm,0.9s,baz=68,slow=4.7,SNR=5.7						
YKA				LR	LR	09 31 50.3	
	comp=Z,42nm,19.0s,baz=0.0,slow=33						
PBMO	Poplar Bluff	42.97	272	P	P	09 16 17.9	0.0
PBMO				IAmb	IAmb	09 16 25.5	
	comp=Z,11nm,0.7s						
MDUB	Mudurnu	44.03	79	P	P	09 16 26.8	+0.3
BR131	Keskin Array S	45.96	79	P	P	09 16 42.5	+0.6
BRTR	Keskin Array B	45.96	79	P	P	09 16 43.1	+1.2
	comp=Z,7.0nm,0.8s,baz=301,slow=5.9,SNR=31						
BRTR				LR	LR	09 37 43.3	
	comp=Z,50nm,19.0s,baz=321,slow=38						
BRTR	Keskin Array B	45.96	79	P	P	09 16 41.6	-0.3
LAO	LASA Array	46.26	294	P	P	09 16 44.5	+0.4
LAO				IAmb	IAmb	09 16 45.9	
	comp=Z,8.5nm,0.8s						
INK	Inuvik	46.30	330	P	P	09 16 42.6	-1.4
	comp=Z,1.3nm,0.8s,baz=38,slow=14,SNR=3.9						
TORD	Torodi Ar. Bea	47.78	132	P	P	09 16 56.8	+0.6
	comp=Z,0.7nm,0.5s,baz=328,slow=7.4,SNR=5.7						
TORD				LR	LR	09 35 46.1	
	comp=Z,35nm,18.0s,baz=325,slow=34						
TORD	Torodi Ar. Bea	47.78	132	P	P	09 16 58.5	+2.3
EPYK	Eagle Plains	48.44	329	P	P	09 17 00.4	-0.4
K22A	Casper	48.88	290	P	P	09 17 04.2	-0.4
K22A				IAmb	IAmb	09 18 08.1	
	comp=Z,13nm,1.4s						
KBZ	Khabaz	48.89	69	P	P	09 17 04.7	+0.3
	comp=Z,3.4nm,1.1s,baz=299,slow=5.4,SNR=4.0						
ARU	Arti	49.28	47	P	P	09 17 07.0	-0.3
	comp=Z,1.7nm,0.4s,baz=284,slow=4.8,SNR=14						
ARU	Arti	49.28	47	P	P	09 17 06.4	-0.9
YNE	Yellowstone No	49.39	294	P	P	09 17 09.1	+0.5
BOZ	Bozeman (W)	49.92	296	P	P	09 17 12.9	+0.4
BMAR	Burnt Mountain	50.13	332	P	P	09 17 12.9	-0.8
PD31	Pinedale Array	50.54	292	P	P	09 17 16.2	-1.2
PDAR	Pinedale Array	50.54	292	P	P	09 17 16.6	-0.7
	comp=Z,2.1nm,0.6s,baz=62,slow=7.5,SNR=26						
PDAR				LR	LR	09 37 30.2	
	comp=Z,109nm,18.9s,baz=78,slow=35						
PDAR	Pinedale Array	50.54	292	P	P	09 17 15.9	-1.4
TOLK	Toolik Lake Re	50.64	335	P	P	09 17 17.8	+0.3
TOLK				IAmb	IAmb	09 17 34.5	
	comp=Z,16nm,1.6s						
SNOW	Snow King Moun	50.77	293	P	P	09 17 19.2	0.0
SNOW				IAmb	IAmb	09 17 22.1	
	comp=Z,17nm,1.8s						
DBIC	Dimbokro	50.98	144	P	P	09 17 20.8	+0.3
	comp=Z,3.6nm,0.9s,baz=0.0,slow=7.1,SNR=2.4						
DBIC				LR	LR	09 36 43.4	
	comp=Z,111nm,19.1s,baz=348,slow=33						
O20A	White River Ci	51.48	288	P	P	09 17 25.2	+0.8
ILAR	Eielson Array	52.66	331	P	P	09 17 32.6	0.0
	comp=Z,1.0nm,0.8s,baz=44,slow=5.6,SNR=12						
ILAR				LR	LR	09 39 12.2	
	comp=Z,113nm,18.9s,baz=77,slow=35						
ILAR	Eielson Array	52.66	331	P	P	09 17 33.3	+0.7
AKTO	Aktyubinsk	52.73	53	P	P	09 17 33.5	+0.2
	comp=Z,5.8nm,0.8s,baz=322,slow=8.0,SNR=11						
HLID	Hailey	52.75	295	P	P	09 17 34.0	+0.2
HLID				IAmb	IAmb	09 18 05.2	
	comp=Z,16nm,2.0s						
PV12	Saucer Basin,	53.00	287	P	P	09 17 36.7	+0.9
PV12				IAmb	IAmb	09 17 46.4	
	comp=Z,11nm,1.1s						
PV02	Paradox Valley	53.04	287	P	P	09 17 36.8	+0.8
PV02				IAmb	IAmb	09 17 38.3	
	comp=Z,5.3nm,0.9s						
PV18	Skein Mesa, Pa	53.11	287	P	P	09 17 36.0	-0.6
BGU	Big Grassy Mou	53.70	292	P	P	09 17 39.6	-1.2
DUG	Dugway, Tooele	54.07	291	P	P	09 17 42.1	-1.4
DUG				IAmb	IAmb	09 17 45.0	
	comp=Z,3.5nm,0.7s						
ABKAR	Akbulak array	54.45	54	P	P	09 17 46.1	+0.2
ABKAR				IAmb	IAmb	09 17 47.1	
	comp=Z,5.3nm,0.9s						
ABKAR	Akbulak array	54.45	54	P	P	09 17 46.0	+0.1
TRF	Thorofare Moun	54.65	331	P	P	09 17 46.5	-0.9
MVU	Marysvale	54.86	289	P	P	09 17 47.6	-1.8
TIXI	Tiksi	55.44	7	P	P	09 17 53.2	+0.5
WVOR	Wild Horse Val	55.82	297	P	P	09 17 54.7	-1.3
TXAR	Lajitas Array	56.13	275	P	P	09 17 58.4	-0.1
	comp=Z,0.4nm,0.4s,baz=76,slow=7.5,SNR=7.2						
TXAR				LR	LR	09 42 14.5	
	comp=Z,77nm,18.4s,baz=0.0,slow=36						
CCUT	Cedar City	56.17	289	P	P	09 17 58.2	-0.6
KNB	Kanab	56.23	288	P	P	09 17 58.7	-0.4
U15A	North Rim	56.32	287	P	P	09 17 59.5	-0.4
BRVK	Borovoye	56.64	45	P	P	09 18 01.9	+0.3
BVAR	Borovoye Array	56.70	45	P	P	09 18 02.2	+0.1
	comp=Z,1.7nm,0.6s,baz=202,slow=11,SNR=17						
X16A	Lo Mia Camp, P	57.22	285	P	P	09 18 06.9	+0.7
X16A				IAmb	IAmb	09 18 08.8	
	comp=Z,3.7nm,0.8s						
TPH	Tonopah	58.02	292	P	P	09 18 12.2	+0.4
PAHR	Pah Rah Range	58.10	295	P	P	09 18 12.6	+0.3
PAHR				IAmb	IAmb	09 18 14.1	
	comp=Z,4.2nm,0.9s						
NV11	Mina Array Sit	58.30	293	P	P	09 18 14.0	+0.3
RYN	Ryan	58.37	293	P	P	09 18 13.6	-0.6
NVAR	Mina Array Bea	58.38	293	P	P	09 18 13.9	-0.5
	comp=Z,0.6nm,0.6s,baz=53,slow=7.0,SNR=8.0						
NVAR				LR	LR	09 42 13.6	
	comp=Z,78nm,19.6s,baz=34,slow=35						
NVAR	Mina Array Bea	58.38	293	P	P	09 18 13.2	-1.2
VCNR	Virginia City	58.53	295	P	P	09 18 15.6	+0.2
CBOC	Ciudad Bolivar	58.62	233	*e*P	P	09 18 22.9	+6.6
PNTR	Pine Nut	58.65	294	P	P	09 18 16.5	+0.3
PNTR				IAmb	IAmb	09 18 17.8	
	comp=Z,4.6nm,0.8s						
ROSC	El Rosal	58.69	231	P	P	09 18 17.2	+0.3
	comp=Z,8.1nm,0.6s,baz=147,slow=22,SNR=7.3						
ROSC				LR	LR	09 39 58.2	
	comp=Z,27nm,21.6s,baz=58,slow=32						
ROSC	El Rosal	58.69	231	P	P	09 18 17.9	+1.0
ROSC	El Rosal	58.69	231	*e*P	P	09 18 17.1	+0.1
GUY2C	Guyana, Caldas	58.86	232	*e*P	P	09 18 19.6	+1.4
RREF	El Recreo	59.13	232	*e*P	P	09 18 25.1	+4.8
KDAK	Kodiak Island	59.75	328	LR	LR	09 43 29.9	
	comp=Z,71nm,18.9s,baz=61,slow=35						
PRAC	Prado	59.95	231	*e*P	P	09 18 23.6	-1.6
ORTC	Ortega, Tolima	59.95	232	*e*P	P	09 18 24.1	-1.1
BAR	Barrett	61.52	287	P	P	09 18 36.5	+0.7
BAR				IAmb	IAmb	09 18 38.2	
	comp=Z,3.6nm,0.8s						
ZALV	Zalesovo Beam	61.77	37	P	P	09 18 37.8	+0.7
	comp=Z,0.9nm,0.5s,baz=319,slow=8.6,SNR=4.6						
KURK	Kurchatov	61.87	42	P	P	09 18 36.9	-0.9
KURBB	Kurchatov Arra	61.90	42	P	P	09 18 38.3	+0.3
	comp=Z,1.7nm,0.4s,baz=324,slow=7.2,SNR=11						
YAK	Yakutsk	64.93	9	LR	LR	09 45 23.3	
	comp=Z,30nm,19.9s,baz=249,slow=34						
MAKZ	Makanchi	66.31	43	P	P	09 19 06.5	-0.6
MK31	Makanchi Array	66.45	43	P	P	09 19 07.5	-0.5
MK31				IAmb	IAmb	09 19 09.1	
	comp=Z,2.5nm,0.7s						
MKAR	Makanchi Array	66.45	43	P	P	09 19 08.4	+0.4
	comp=Z,2.7nm,0.6s,baz=331,slow=5.7,SNR=40						
MKAR	Makanchi Array	66.45	43	P	P	09 19 07.7	-0.3
KSH	Kashi	69.36	52	P	P	09 19 29.3	+2.7
KSH				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KSH				pmax	pmax		
	comp=Z,330nm,4.7s						
WMQ	Urumqi	71.08	41	*e*P	P	09 19 38.9	+1.9
WMQ				pmax	pmax		
	comp=Z,11nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,200nm,5.3s						
SONM	Songino Array	74.04	27	P	P	09 19 55.0	+0.4
	comp=Z,1.3nm,0.9s,baz=358,slow=4.9,SNR=8.4						
SONM	Songino Array	74.04	27	P	P	09 19 54.9	+0.3
HHC	Hu-ho-hao-te	81.91	27	*e*P	P	09 20 38.8	+0.4
HHC				pmax	pmax		
	comp=Z,13nm,1.3s						
HHC				pmax	pmax		
	comp=Z,87nm,6.6s						
XAN	Xi'an	87.44	31	P	P	09 21 14.8	+8.5
XAN				pP	pwP	09 21 23.0	+10
XAN				pmax	pmax		
	comp=Z,6.0nm,1.7s						
XAN				LR	LR		
	comp=N,550nm,16.3s						
XAN				LR	LR		
	comp=E,320nm,17.3s						
XAN				LR	LR		
	comp=Z,450nm,13.0s						
NJ2	Nanjing	92.13	24	*e*P	P	09 21 27.3	-1.0
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
WRA	Warramunga Arr	145.90	23	PKPbc	PKPbc	09 27 58.0	-0.4
	comp=Z,1.4nm,0.9s,baz=342,slow=3.2,SNR=7.2						
WRA	Warramunga Arr	145.90	23		PKPab	09 27 58.5	-0.3
DZM	Mont Dzumac	146.33	327	PKPbc	PKPab	09 27 59.9	-0.6
	comp=Z,9.6nm,0.8s,baz=77,slow=18,SNR=1.9						
DZM	Mont Dzumac	146.33	327		PKPbc	09 27 58.8	-0.9
ASAR	Alice Springs	149.37	25	PKPbc	PKPbc	09 28 07.3	-0.5
	comp=Z,1.2nm,0.7s,baz=357,slow=2.2,SNR=11						
ASAR	Alice Springs	149.37	25		PKPbc	09 28 07.2	-0.6

NOU ***15*** *09:19:03.5, 37°.04S×178°.41E, h203^{km}, MLv4.3, Off E. Coast of N. Island, N.Z.*

WEL ***15*** *09:19:10.9, 37°S±3°×17°8E±°, h134^{km}±4^{km}, M3.5/41, ML3.9/8, MLv3.5/41, Error ellipse: s-maj=0.0km s-min=0.0km az=177.5*

IDC ***15*** *09:19:15.7±1.5, 37°.26S×176°.89E, h133^{km}±23^{km}, mb3.0/2, mb1 3.4/3, mb1mx3.3/25, mbtmp3.6/3, Error ellipse: s-maj=51.1km s-min=20.2km az=150.0*

ISC 15 09:19:10.1±1.2**, 37°.08S**±0°.06×**177°.88E**±0°.07**, h147**^{km}±7^{km}**, n117, σ1^{s}.00**/130**, mb3.4**/3**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	0.59	145	P	Pn	09 19 31.4	-0.2
MXZ				S	Sn	09 19 47.2	-0.9
HAZ	Te Kaha	0.68	186	P	Pn	09 19 31.8	-0.4
HAZ				S	Sn	09 19 47.0	-2.0
PKGZ	Pakihiroa	0.83	169	P	Pn	09 19 33.4	+0.1
PKGZ				S	Sn	09 19 51.2	+0.1
WMGZ	Waiomatatini S	0.86	150	P	Pn	09 19 33.9	+0.5
WMGZ				S	Sn	09 19 51.6	+0.3
RUGZ	Raukumara Rang	0.90	190	P	Pn	09 19 33.3	-0.6
RUGZ				S	Sn	09 19 49.9	-2.3
PUZ	Puketiti	1.04	163	P	Pn	09 19 35.2	+0.2
WHRZ	Whale Island	1.06	222	P	Pn	09 19 35.6	+0.5
TWGZ	Tauwhareparae	1.10	176	P	Pn	09 19 36.6	+1.1
TWGZ				S	Sn	09 19 55.6	+0.6
MWZ	Matawai	1.28	192	P	Pn	09 19 37.5	+0.2
MWZ				S	Sn	09 19 57.5	-0.6
OPRZ	Ohinepanea	1.30	233	P	Pn	09 19 37.3	-0.1
OPRZ				S	Sn	09 19 56.7	-1.6
MARZ	Manawahe	1.32	226	P	Pn	09 19 37.9	+0.4
MYRZ	Mayor Island	1.32	261	P	Pn	09 19 37.2	-0.4
URZ	Urewera	1.33	207	P	Pn	09 19 37.6	0.0
	26nm,0.3s,baz=270,slow=4.4,SNR=405						
URZ				S	Sn	09 19 57.4	-1.3
	34nm,0.3s,baz=153,slow=3.2,SNR=8.6						
URZ	Urewera	1.33	207	P	Pn	09 19 37.6	0.0
URZ				S	Sn	09 19 57.8	-1.0
TKGZ	Te Karaka	1.36	181	P	Pn	09 19 38.9	+0.9
TKGZ				S	Sn	09 19 59.4	+0.1
EDRZ	Edgecumbe	1.37	221	P	Pn	09 19 38.6	+0.4
CNGZ	Carnagh Statio	1.43	169	P	Pn	09 19 40.1	+1.4
RAGZ	Rawiri	1.46	194	P	Pn	09 19 40.0	+0.9
MKRZ	Makatiti	1.54	226	P	Pn	09 19 41.3	+1.4
OMRZ	Omania	1.57	229	P	Pn	09 19 41.1	+0.8
TARZ	Mount Tarawera	1.59	223	P	Pn	09 19 41.6	+1.1
KARZ	Kaharoa	1.60	234	P	Pn	09 19 40.9	+0.4
RIGZ	Rimuhau	1.63	183	P	Pn	09 19 41.5	+0.7
RIGZ				S	Sn	09 20 04.8	+0.3
MUGZ	Murupara	1.65	212	P	Pn	09 19 41.4	+0.4
MUGZ				S	Sn	09 20 03.9	-0.9
RRRZ	Republican Roa	1.66	220	P	Pn	09 19 41.8	+0.6
HLRZ	Highlands Stat	1.68	225	P	Pn	09 19 42.4	+0.9
NGRZ	Ngongotaha	1.69	232	P	Pn	09 19 42.5	+1.0
RTZ	Ruatahuna	1.69	204	P	Pn	09 19 41.7	+0.2
RTZ				S	Sn	09 20 05.3	-0.5
KMRZ	Kaimai	1.72	243	P	Pn	09 19 42.1	+0.3
UTU	Utuhina	1.73	230	P	Pn	09 19 43.9	+2.0
SNGZ	Shannon Statio	1.75	194	P	Pn	09 19 42.9	+0.7
SNGZ				S	Sn	09 20 08.0	+1.1
KUZ	Kuaotunu	1.76	280	P	Pn	09 19 41.3	-1.0
HSRZ	Hossack Road	1.79	226	P	Pn	09 19 44.1	+1.5
HRRZ	Handcock Road	1.82	223	P	Pn	09 19 44.3	+1.4
PRRZ	Plateau Road	1.84	219	P	Pn	09 19 43.8	+0.6
PRGZ	Paritu Road	1.84	180	P	Pn	09 19 44.2	+1.0
GRRZ	Galatos Road	1.89	227	P	Pn	09 19 44.6	+0.8
ALRZ	Allen Road	1.92	219	P	Pn	09 19 44.8	+0.8
RAHZ	Arahi	1.94	199	P	Pn	09 19 45.1	+0.8
KNZ	Kokohu	1.95	185	P	Pn	09 19 45.0	+0.6
MTHZ	Maungataniwha	1.95	204	P	Pn	09 19 44.6	+0.2
WPRZ	Whakapapatarin	1.98	223	P	Pn	09 19 45.9	+1.1
WHHZ	Waihua	2.06	194	P	Pn	09 19 46.4	+0.7
MHGZ	Mahia Peninsul	2.07	179	P	Pn	09 19 47.1	+1.2
MRHZ	Matea Rd	2.10	213	P	Pn	09 19 46.6	+0.3
GRZ	Great Barrier	2.11	292	P	Pn	09 19 45.5	-0.8
KUTZ	Kaahu Road	2.15	228	P	Pn	09 19 47.9	+1.1
MKAZ	Moumakai	2.17	268	P	Pn	09 19 47.0	0.0
NMHZ	Naumai	2.19	202	P	Pn	09 19 48.3	+1.1
WHTZ	Whakaora	2.19	223	P	Pn	09 19 48.9	+1.5
WIAZ	Waiheke Island	2.21	277	P	Pn	09 19 47.4	-0.2
TLZ	Tolley Road	2.24	235	P	Pn	09 19 48.7	+0.8
ARHZ	Aropaoanui	2.29	197	P	Pn	09 19 49.1	+0.7
HATZ	Hinemaiaia	2.29	217	P	Pn	09 19 49.2	+0.7
WATZ	Wairara	2.35	225	P	Pn	09 19 50.4	+1.2
BKZ	Black Stump Fm	2.35	207	P	Pn	09 19 49.3	+0.1
ETAZ	East Tamaki Re	2.36	272	P	Pn	09 19 49.7	+0.3
MBAZ	Motutapu North	2.41	276	P	Pn	09 19 49.9	+0.1
RATZ	Rangitukua	2.44	222	P	Pn	09 19 51.4	+1.1
RITZ	Rihia Road	2.48	219	P	Pn	09 19 51.8	+1.1
ABAZ	Army Bay	2.49	280	P	Pn	09 19 51.1	+0.3
EPAZ	Eden Park BICE	2.52	274	P	Pn	09 19 51.9	+0.7
HBAZ	Herne Bay Bore	2.53	274	P	Pn	09 19 51.8	+0.4
MCHZ	McNeill Hill	2.54	201	P	Pn	09 19 52.0	+0.5
KATZ	Kakaramea	2.56	222	P	Pn	09 19 52.7	+0.8
AWAZ	Awhitu Peninsu	2.58	269	P	Pn	09 19 52.6	+0.5
KWHZ	Kaweka Forest	2.61	206	P	Pn	09 19 52.7	+0.3
WTAZ	Waiatarua	2.65	272	P	Pn	09 19 53.6	+0.8
CKHZ	Cape Kidnapper	2.65	193	P	Pn	09 19 53.0	+0.1
RVAZ	Riverhead Bore	2.66	276	P	Pn	09 19 53.5	+0.5
TMVZ	Te Maari	2.66	219	P	Pn	09 19 53.7	+0.6
ETVZ	East Tongariro	2.67	219	P	Pn	09 19 53.7	+0.4
KRVZ	Karewarewa	2.68	221	P	Pn	09 19 54.3	+0.9
OTVZ	Oturere	2.72	219	P	Pn	09 19 54.3	+0.5
WTVZ	West Tongariro	2.72	221	P	Pn	09 19 54.5	+0.7
NGZ	Ngauruhoe	2.76	220	P	Pn	09 19 55.1	+0.7
TWVZ	Taurewa	2.77	223	P	Pn	09 19 55.2	+0.8
HIZ	Hauiti	2.79	238	P	Pn	09 19 56.1	+1.5
BHHZ	Black Hill Sta	2.80	210	P	Pn	09 19 54.7	-0.1
TUVZ	Tukino	2.80	218	P	Pn	09 19 55.2	+0.2
KRHZ	Kereru	2.82	204	P	Pn	09 19 54.7	-0.4
KAHZ	Kahuranaki	2.82	196	P	Pn	09 19 55.2	+0.1
WHVZ	Whangaehu Hut	2.84	219	P	Pn	09 19 55.8	+0.2
MOVZ	Moawhango	2.86	215	P	Pn	09 19 55.3	-0.4
WNVZ	Wahianoa	2.88	218	P	Pn	09 19 55.9	+0.1
TRVZ	Turoa	2.88	219	P	Pn	09 19 56.3	+0.4
PKVZ	Pokaka	2.98	221	P	Pn	09 19 57.4	+0.4
MTVZ	Mangateitei	2.98	219	P	Pn	09 19 57.6	+0.4
PXZ	Pawanui	3.05	195	P	Pn	09 19 57.4	-0.6
WCZ	Waipu Caves	3.06	291	P	Pn	09 19 57.8	-0.3
PNHZ	Pukenui	3.12	204	P	Pn	09 19 58.0	-0.9
WPHZ	Waipukurau	3.19	200	P	Pn	09 19 58.9	-0.8
VRZ	Vera Road	3.20	229	P	Pn	09 20 01.0	+1.2
PRHZ	Porangahau	3.33	197	P	Pn	09 20 00.7	-0.8
TSZ	Takapari Road	3.33	206	P	Pn	09 20 00.5	-1.0
DVHZ	Dannevirke	3.48	202	P	Pn	09 20 02.2	-1.3
WAZ	Wanganui	3.51	219	P	Pn	09 20 04.0	+0.2
ANWZ	Angora Road	3.55	198	P	Pn	09 20 03.4	-0.9
NEZ	North Egmont	3.70	233	P	Pn	09 20 08.2	+1.9
POWZ	Post Office Ro	3.70	206	P	Pn	09 20 05.5	-0.8
PREZ	Palmer Road	3.70	231	P	Pn	09 20 09.0	+2.7
PKE	Pukeiti	3.72	234	P	Pn	09 20 08.1	+1.5
KHEZ	Kahui Hut	3.76	233	P	Pn	09 20 09.3	+2.1
PRWZ	Pori Road	3.78	203	P	Pn	09 20 06.6	-0.7
BFZ	Birch Farm	3.82	199	P	Pn	09 20 06.2	-1.6
NBEZ	Newall Road No	3.84	234	P	Pn	09 20 11.2	+3.1
OUZ	Omahuta	3.93	297	P	Pn	09 20 09.0	-0.3
TIWZ	Tintock	4.01	202	P	Pn	09 20 08.9	-1.4
CPWZ	Castlepoint	4.04	198	P	Pn	09 20 10.3	-0.4
OGWZ	Otaki Gorge	4.29	209	P	Pn	09 20 12.5	-1.5
CTZ	Chatham Island	7.87	149	P	Pn	09 21 07.3	+5.7
RPZ	Rata Peaks	8.43	216	P	Pn	09 21 05.8	-3.3
	2.8nm,0.3s,baz=40,slow=1.4,SNR=19						
RPZ				S	Sn	09 22 33.6	-9.1
	1.3nm,0.3s,baz=322,slow=22,SNR=7.2						
WKZ	Wanaka	10.23	218	P	Pn	09 21 32.0	-1.1
RAR	Rarotonga	25.03	57	P	P	09 24 34.4	+14
	9.2nm,0.4s,baz=180,slow=10,SNR=1.7						
ASAR	Alice Springs	39.88	277	P	P	09 26 31.4	+1.8
	0.6nm,0.8s,baz=123,slow=7.9,SNR=8.9						
WRA	Warramunga Arr	41.50	282	P	P	09 26 42.7	-0.1
	0.2nm,0.3s,baz=125,slow=7.1,SNR=1.5						
FINES	FINESS Array B	149.90	333	PKPbc	PKPab	09 38 48.3	+0.3
	5.3nm,1.1s,baz=95,slow=4.5,SNR=3.6						

IDC ***15*** *09:23:02.3±3.7, 51°.64N×160°.42E, h0^{km}, mb3.6/2, mb1 3.6/3, mb1mx3.2/42, mbtmp3.5/3, ML2.4/1, Error ellipse: s-maj=110.8km s-min=49.8km az=34.0*

KRSC ***15*** *09:23:08.7±1.3, 52°.20N×160°.57E, h42^{km}±18^{km}, ML3.8*

ISC 15 09:23:06.2±2.3**, 52°.11N**±0°.08×**160°.47E**±0°.07**, h6**^{km}±11^{km}**, n29, σ0^{s}.86**/36**, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	Mys Shipunski	1.02	345	*e*P	Pb	09 23 26.1	-0.3
SPN				*e*S	Sg	09 23 38.6	-0.5
RUS	Russkaya	1.25	286	*e*P	Pn	09 23 31.0	+0.8
RUS				*e*S	Sb	09 23 46.9	+0.5
NLC	Nalytchevo	1.26	328	*e*P	Pb	09 23 30.5	+0.1
NLC				*e*S	Sg	09 23 46.0	-0.8
DALK	Dalny	1.40	312	*e*P	Pb	09 23 32.7	0.0
DALK				*e*S	Sb	09 23 50.3	-0.4
PET	Petropavlovsk	1.44	310	*e*P	Pg	09 23 34.0	+0.3
PET				*e*S	Sb	09 23 52.0	+0.1
MTVR	Mutnovka	1.45	286	*e*P	Pg	09 23 34.4	+0.4
MTVR				*e*S	Sg	09 23 53.2	+0.3
UGLR	Uglovaya	1.49	318	*e*P	Pg	09 23 34.6	-0.1
UGLR				*e*S	Sb	09 23 53.7	+0.2
KDTR	Khodutka, Kamc	1.51	259	*e*S	Sg	09 23 54.8	+0.1
SDLR	Sedlovina	1.52	321	*e*P	Pb	09 23 34.6	-0.2
GRL	Gorelyy	1.54	288	*e*P	Pg	09 23 36.2	+0.6
SMAR	Somma	1.54	319	*e*P	Pg	09 23 35.7	0.0
AVH	Avacha	1.56	318	*e*P	Pg	09 23 36.0	-0.2
KRER	Koryakskii	1.59	319	*e*P	Pg	09 23 36.5	-0.1
KRMR	Karymshinskiy	1.60	298	*e*P	Pg	09 23 36.9	0.0
KRMR				*e*S	Sb	09 23 57.2	+0.5
KOK	Koryaka	1.63	317	*e*P	Pb	09 23 36.7	0.0
KRX	Arik	1.67	319	*e*P	Pb	09 23 37.4	0.0
PETK	Petropavlovsk-	1.96	302	Pn	Pb	09 23 41.5	-0.9
	5.7nm,0.3s,baz=112,slow=19,SNR=119						
PETK				Sn	Sb	09 24 07.8	+0.7
	12nm,0.3s,baz=97,slow=12,SNR=4.8						
KII	Karymskiy	2.02	343	*e*P	Pb	09 23 42.7	-0.7
APC	Apacha	2.18	293	*e*P	Pb	09 23 45.2	-0.9
APC				*e*S	Sn	09 24 11.6	+1.3
GNL	Ganaly	2.20	317	*e*P	Pb	09 23 45.2	-1.3
KZV	Kizimen	3.01	358	*e*P	Pn	09 23 56.7	+2.1
TUMD	Tumrok D	3.10	359	*e*P	Pn	09 23 55.9	+0.2
TUMR	Tumrok	3.18	357	*e*P	Pn	09 23 58.1	+1.2
KBTR	Krutoberegovo	4.33	18	*e*P	Pn	09 24 14.7	+2.2
H11N2	WAKE ISLAND Hy	32.70	169	T	T	10 04 21.8	
	baz=353,slow=76						
H11N3	WAKE ISLAND Hy	32.72	169	T	T	10 04 29.4	
	baz=353,slow=76						
H11N1	WAKE ISLAND Hy	32.72	169	T	T	10 04 24.6	
	baz=353,slow=76						
MKAR	Makanchi Array	48.79	297	P	P	09 31 49.9	-2.0
	0.2nm,0.5s,baz=57,slow=9.3,SNR=1.9						
FINES	FINESS Array B	61.11	337	P	P	09 33 20.3	-0.3
	2.2nm,1.0s,baz=46,slow=8.2,SNR=4.8						

IDC ***15*** *09:26:26.4±1.7, 24°.74S×69°.96E, h0^{km}, mb4.0/7, mb1 4.1/7, mb1mx3.7/43, mbtmp4.0/7, MS3.5/3, Ms1 3.5/3, ms1mx3.0/34, Error ellipse: s-maj=57.1km s-min=29.4km az=35.0*

ISC 15 09:26:28.0±1.7**, 24°.7S**±0°.4×**70°.0E**±0°.3**, h10**^{km}**, n13, σ0^{s}.59**/7**, mb3.9**/7**, MS3.5**/3**, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	39.24	50	LR	LR	09 46 10.3	
	comp=Z,59nm,20.1s,baz=265,slow=30						
H01W2	Cape Leeuwin H	39.36	115	T	T	10 15 44.1	
	baz=266						
H01W3	Cape Leeuwin H	39.36	115	T	T	10 15 52.5	
	baz=266						
H01W1	Cape Leeuwin H	39.37	115	T	T	10 15 53.6	
	baz=266						
BOSA	Boshof	39.97	254	LR	LR	09 47 43.1	
	comp=Z,76nm,20.0s,baz=70,slow=32						
MAW	Mawson	43.09	184	LR	LR	09 48 23.9	
	comp=Z,62nm,18.5s,baz=286,slow=31						
ASAR	Alice Springs	57.83	103	P	P	09 36 20.9	+0.7
	1.1nm,1.0s,baz=245,slow=6.0,SNR=5.4						
WRA	Warramunga Arr	59.26	99	P	P	09 36 29.4	-0.8
	1.1nm,1.0s,baz=253,slow=7.1,SNR=4.3						
MKAR	Makanchi Array	72.07	9	P	P	09 37 52.1	-0.1
	0.9nm,0.7s,baz=193,slow=5.9,SNR=11						
KURBB	Kurchatov Arra	75.41	6	P	P	09 38 12.1	+0.4
	0.8nm,0.8s,baz=203,slow=6.5,SNR=4.8						
TORD	Torodi Ar. Bea	76.48	291	P	P	09 38 18.6	-0.1
	1.0nm,0.9s,baz=160,slow=4.6,SNR=3.6						
SONM	Songino Array	79.32	24	P	P	09 38 33.9	+0.1
	0.2nm,0.5s,baz=181,slow=3.6,SNR=3.9						
ZALV	Zalesovo Beam	79.41	9	P	P	09 38 33.9	-0.1
	0.6nm,0.5s,baz=214,slow=3.7,SNR=2.8						

BJI ***15*** *09:38:46.0±0.0, 39°.45N×74°.82E, h9^{km}, mB4.8/30, mb4.6/37, ML4.8/8, Ms4.4/33, Ms7 4.0/33*

SOME ***15*** *09:38:47.5, 39°.40N×75°.15E, h25^{km}, MS4.4*

KRNET ***15*** *09:38:47.1±0.1, 39°.26N×75°.15E, mb5.3*

BGR ***15*** *09:38:52.2±0.0, 39°.38N×75°.52E, h33^{km}, mb4.8, Ms3.8*

IDC ***15*** *09:38:52.1±3.0, 39°.42N×75°.12E, h33^{km}±22^{km}, mb4.4/30, mb1 4.4/36, mb1mx4.3/55, mbtmp4.5/36, ML3.7/6, MS3.6/27,* *Ms1 3.7/27, ms1mx3.5/56, Error ellipse: s-maj=14.1km s-min=9.3km az=2.0*

*MOS **15** 09:38:52.6±1.0, 39.°47N×75.°16E, h51km, mb5.0/31, Error ellipse: s-maj=5.4km s-min=3.6km az=95.4*

*NNC **15** 09:38:52.5±0.9, 39.°66N×75.°07E, h0km, mb5.2, mpv4.9, Error ellipse: s-maj=7.1km s-min=4.5km az=167.0*

*NEIC **15** 09:38:54.6±1.6, 39.°54N±0.°06×75.°13E±0.°07, h52km±7km, mb4.7/66, Error ellipse: s-maj=9.3km s-min=7.8km az=150.0*

ISC 15 09:38:48.2±0.7**, 39.°42N**±0.°03×**75.°04E**±0.°02**, h3**km±4km**,** **n509, σ2.°10**/572**, mb4.8**/114**, MS3.8**/32**, 77C-40D,**
Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSH	Kashi	0.73	82	Pg	Pg	09 38 58.0	-4.2
KSH				Sg	Sg	09 39 06.4	-5.3
KSH				smax	smax		
	comp=N,56µm,0.7s						
KSH				smax	smax		
	comp=E,30µm,0.7s						
SFK	Sufi-Kurgan	1.33	297	⇓iP	Pn	09 39 14.2	+0.4
	baz=1.0						
SFK				⇓iS	Sn	09 39 35.1	+3.0
	baz=1.0						
OHH	Osh	2.06	303	⇓iP	Pb	09 39 26.2	0.0
	baz=6.0						
OHH				⇓iS	Sg	09 39 54.8	+0.6
	baz=6.0						
ARSB	Arslanbob	2.47	321	⇑iP	Pb	09 39 32.5	-0.8
	baz=22						
ARSB				⇑eS	Sb	09 40 06.0	+1.8
	baz=22						
ARLS	Aral	2.50	348	⇓iP	Pb	09 39 32.8	-1.1
	baz=47						
ARLS				⇓iS	Sb	09 40 06.8	+1.6
	baz=47						
DRK	Karamyk	2.51	272	⇑iP	Pn	09 39 32.5	+2.4
	baz=76						
DRK				⇑iS	Sb	09 40 04.6	-0.8
	baz=76						
UCH	Uchtor	2.84	352	⇓iP	Pb	09 39 37.9	-1.9
	baz=51						
UCH				⇓iS	Sb	09 40 14.5	-0.6
	baz=51						
UCH	Uchtor	2.84	352	P	Pn	09 39 37.7	+2.9
	SNR=155						
AML	Almayashu	2.90	340	⇑iP	Pb	09 39 38.9	-1.9
	baz=39						
AML				⇑iS	Sb	09 40 16.4	-0.4
	baz=39						
AML	Almayashu	2.90	340	P	Pn	09 39 37.7	+2.1
	SNR=766						
ULHL	Ulahol	2.97	18	⇑iP	Pn	09 39 38.9	+2.5
	baz=15						
ULHL				⇑iS	Sb	09 40 16.9	-1.8
	baz=15						
ULHL	Ulahol	2.97	18	P	Pn	09 39 38.7	+2.2
	SNR=599						
KDJ	Kajisay	3.16	30	⇑iP	Pn	09 39 41.1	+2.1
	baz=28						
KDJ				⇑iS	Sn	09 40 20.1	+2.7
	baz=28						
KBK	Karagaybulak	3.24	359	⇓iP	Pn	09 39 43.1	+3.0
	baz=57						
KBK				⇓iS	Sb	09 40 23.6	-2.7
	baz=57						
KBK	Karagaybulak	3.24	359	P	Pn	09 39 43.4	+3.3
	SNR=337						
AAK	Ala-Archa	3.25	353	Pn	Pn	09 39 43.4	+3.2
	34nm,0.3s,baz=172,slow=9.1,SNR=450						
AAK				Lg	Lg	09 40 26.8	
	35nm,0.3s,baz=60,slow=19,SNR=8.0						
AAK				LR	LR	09 41 08.5	
	comp=Z,1µm,18.0s,baz=166,slow=42						
AAK	Ala-Archa	3.25	353	⇓iP	Pn	09 39 43.4	+3.2
	baz=52						
AAK				⇓iS	Sb	09 40 24.2	-2.3
	baz=52						
AAK	Ala-Archa	3.25	353	P	Pn	09 39 43.2	+3.1
	SNR=316						
AAK	Ala-Archa	3.25	353	⇑Pn	Pn	09 39 43.0	+2.9
	743nm,0.8s						
AAK				⇓Lg	Lg	09 40 25.4	
	2µm,0.8s						
AAK	Ala-Archa	3.25	353	PN	Pn	09 39 43.7	+3.6
AAK	Ala-Archa	3.25	353	Pn	Pn	09 39 43.7	+3.6
BTK	Batken	3.32	282	⇓iP	Pn	09 39 43.7	+2.6
	baz=85						
BTK				⇓iS	Sn	09 40 24.9	+3.9
	baz=85						
EKS2	Erkin-Say	3.38	344	⇑iP	Pn	09 39 45.3	+3.3
	baz=43						
EKS2				⇑iS	Sb	09 40 27.6	-2.8
	baz=43						
EKS2	Erkin-Say	3.38	344	P	Pn	09 39 45.0	+3.1
	SNR=70						
FRU1	Bishkek	3.41	355	⇓iP	Pn	09 39 45.0	+2.7
	baz=54						
FRU1				⇓iS	Sb	09 40 27.8	-3.2
	baz=54						
TKM2	Tokmak 2	3.53	7	⇓iP	Pn	09 39 47.1	+3.0
	baz=5.0						
TKM2				⇓iS	Sn	09 40 30.3	+3.9
	baz=5.0						
TKM2	Tokmak 2	3.53	7	P	Pn	09 39 47.2	+3.1
	SNR=1297						
TKM2	Tokmak 2	3.53	7	⇓Pn	Pn	09 39 47.1	+3.0
	649nm,0.5s						
TKM2				⇓Lg	Lg	09 40 32.8	
	3µm,0.8s						
TKM2	Tokmak 2	3.53	7	i PN	Pn	09 39 47.0	+3.0
TKM2				pmax	pmax		
	comp=Z,649nm,0.5s						
CHMS	Chumysh	3.59	357	⇑eP	Pn	09 39 47.5	+2.8
	baz=56						
CHMS				⇑iS	Sn	09 40 32.2	+4.6
	baz=56						
CHMS	Chumysh	3.59	357	P	Pn	09 39 48.2	+3.5
	SNR=51						
MRKS	Merke	3.60	338	eP	Pb	09 39 54.5	+2.0
	comp=Z,327nm,0.6s						
MRKS				eS	Sg	09 40 42.4	-1.4
	comp=Z,492nm,0.8s						
MRKS	Merke	3.60	338	Pg	Pb	09 39 54.5	+2.0
	comp=Z,327nm,0.6s						
MRKS				Lg	Lg	09 40 42.4	
	comp=Z,492nm,0.8s						
MRKS	Merke	3.60	338	ePN	Pb	09 39 54.5	+2.0
MNAS	Manas	3.62	329	⇑eP	Pn	09 39 48.7	+3.4
	baz=29						
MNAS				⇑iS	Sn	09 40 33.4	+4.8
	baz=29						
TRKS	Terek-Say	3.65	307	⇓iP	Pn	09 39 47.8	+2.1
	baz=7.0						
TRKS				⇓iS	Sn	09 40 32.3	+3.0
	baz=7.0						
KST	Kastek	3.69	11	eP	Pb	09 39 54.5	+0.4
	comp=Z,683nm,0.6s						
KST				eS	Sb	09 40 42.6	+3.3
	comp=Z,2µm,0.8s						
KST	Kastek	3.69	11	Pg	Pb	09 39 54.5	+0.4
	comp=Z,683nm,0.6s						
KST				Lg	Lg	09 40 42.6	
	comp=Z,2µm,0.8s						
KST	Kastek	3.69	11	ePN	Pb	09 39 54.5	+0.4
IZV	Izvestkoviy	3.81	18	eP	Pb	09 39 57.0	+0.9
	comp=Z,436nm,0.4s						
IZV				eS	Sb	09 40 46.9	+4.2
	comp=Z,1µm,0.7s						
IZV	Izvestkoviy	3.81	18	Pg	Pb	09 39 57.0	+0.9
	comp=Z,436nm,0.4s						
IZV				Lg	Lg	09 40 46.9	
	comp=Z,1µm,0.7s						
IZV	Izvestkoviy	3.81	18	ePN	Pb	09 39 57.0	+0.9
DGS	Degeres	3.86	8	eP	Pb	09 39 56.8	-0.3
	comp=Z,1µm,0.8s						
DGS				eS	Sb	09 40 46.2	+2.0
	comp=Z,721nm,0.6s						
DGS	Degeres	3.86	8	Pg	Pb	09 39 56.8	-0.3
	comp=Z,1µm,0.8s						
DGS				Lg	Lg	09 40 46.2	
	comp=Z,721nm,0.6s						
DGS	Degeres	3.86	8	ePN	Pb	09 39 56.8	-0.3
USP	Ospenovka	3.87	354	⇓eP	Pn	09 39 51.7	+3.1
	baz=53						
USP				⇓iS	Sn	09 40 39.1	+4.5
	baz=53						
USP	Ospenovka	3.87	354	P	Pn	09 39 52.2	+3.6
	SNR=31						
TNSS	Tian-Shan	3.89	21	eP	Pb	09 39 58.3	+0.6
	comp=Z,252nm,0.8s						
TNSS				eS	Sb	09 40 49.4	+4.0
	comp=Z,542nm,0.9s						
TNSS	Tian-Shan	3.89	21	eP	Pn	09 39 51.4	+2.1
	baz=21						
TNSS				i S	Sn	09 40 31.7	-4.1
	baz=21						
TNSS	Tian-Shan	3.89	21	Pg	Pb	09 39 58.3	+0.6
	comp=Z,252nm,0.8s						
TNSS				Lg	Lg	09 40 49.4	
	comp=Z,542nm,0.9s						
TNSS	Tian-Shan	3.89	21	ePN	Pn	09 39 51.4	+2.1
ANVS	Anan'yevo	3.91	30	⇑eP	Pn	09 39 51.6	+2.3
	baz=28						
ANVS				⇑iS	Sn	09 40 38.4	+2.7
	baz=28						
PRZ	Przheval'sk	3.98	39	⇑iP	Pn	09 39 52.1	+1.8
	baz=36						
PRZ				⇑iS	Sn	09 40 40.0	+2.4
	baz=36						
MDOK	Medeo	4.04	21	eP	Pb	09 40 00.3	+0.3
	comp=Z,165nm,0.6s						
MDOK				eS	Sb	09 40 52.5	+3.1
	comp=Z,1µm,1.2s						
MDOK	Medeo	4.04	21	eP	Pn	09 39 53.3	+2.2
	baz=21						
MDOK	Medeo	4.04	21	⇓Pn	Pn	09 39 53.9	+2.8
	comp=Z,230nm,0.8s						
MDOK				⇑Lg	Lg	09 40 54.5	
	comp=Z,1µm,0.9s						
MDOK	Medeo	4.04	21	Pg	Pb	09 40 00.4	+0.3
	comp=Z,165nm,0.6s						
MDOK				Lg	Lg	09 40 52.5	
	comp=Z,1µm,1.2s						
MDOK	Medeo	4.04	21	ePN	Pn	09 39 53.2	+2.2
AAA	Alma-Ata	4.04	20	eP	Pb	09 40 01.5	+1.4
	comp=Z,294nm,0.6s						
AAA				eS	Sg	09 40 54.4	-3.7
	comp=Z,604nm,0.6s						
AAA	Alma-Ata	4.04	20	eP	Pn	09 39 53.8	+2.7
	baz=20						
AAA	Alma-Ata	4.04	20	Pg	Pb	09 40 01.5	+1.4
	comp=Z,294nm,0.6s						
AAA				Lg	Lg	09 40 54.4	
	comp=Z,604nm,0.6s						
AAA	Alma-Ata	4.04	20	ePN	Pn	09 39 53.7	+2.7
SGDS	Sogindy	4.04	356	eP	Pn	09 39 53.2	+2.1
	baz=355						
SGDS	Sogindy	4.04	356	Pg	Pb	09 40 01.6	+1.5
	comp=Z,236nm,0.8s						
SGDS				Lg	Lg	09 40 55.1	
	comp=Z,560nm,1.6s						
SGDS	Sogindy	4.04	356	ePN	Pn	09 39 53.1	+2.1
KNDC	Almaty	4.07	20	⇑Pn	Pn	09 39 54.4	+3.1
	comp=Z,668nm,0.7s						
KNDC				⇑Lg	Lg	09 40 55.9	
	comp=Z,6µm,1.0s						
KOTS	Kotyrbulak	4.12	22	eP	Pb	09 40 02.7	+1.2
	comp=Z,254nm,0.5s						
KOTS				eS	Sb	09 40 56.4	+4.7
	comp=Z,2µm,0.7s						
KOTS	Kotyrbulak	4.12	22	Pg	Pb	09 40 02.7	+1.2
	comp=Z,254nm,0.5s						
KOTS				Lg	Lg	09 40 56.4	
	comp=Z,2µm,0.7s						
KOTS	Kotyrbulak	4.12	22	ePN	Pb	09 40 02.7	+1.2
KRBS	Karabastau	4.30	6	eP	Pb	09 40 06.2	+1.7
	comp=Z,186nm,1.0s						
KRBS				eS	Sg	09 41 02.6	-3.8
	comp=Z,448nm,0.7s						
KRBS	Karabastau	4.30	6	Pg	Pb	09 40 06.2	+1.7
	comp=Z,186nm,1.0s						
KRBS				Lg	Lg	09 41 02.6	
	comp=Z,448nm,0.7s						
KRBS	Karabastau	4.30	6	ePN	Pb	09 40 06.2	+1.7
SATY	Saty	4.44	34	eP	Pb	09 40 08.8	+1.9
	comp=Z,256nm,0.6s						
SATY				eS	Sg	09 41 07.1	-3.6
	comp=Z,566nm,1.0s						
SATY	Saty	4.44	34	eP	Pn	09 39 58.2	+1.7
	baz=34						
SATY	Saty	4.44	34	Pg	Pb	09 40 08.8	+1.9
	comp=Z,256nm,0.6s						
SATY				Lg	Lg	09 41 07.1	
	comp=Z,566nm,1.0s						
SATY	Saty	4.44	34	ePN	Pn	09 39 58.2	+1.7
DZA	Taraz	4.46	322	eP	Pb	09 40 09.7	+2.6
	comp=Z,420nm,0.7s						
DZA				eS	Sg	09 41 08.7	-2.7
	comp=Z,1µm,0.8s						
DZA	Taraz	4.46	322	eP	Pn	09 39 59.3	+2.6
	baz=321						
DZA	Taraz	4.46	322	Pg	Pb	09 40 09.7	+2.6
	comp=Z,420nm,0.7s						
DZA				Lg	Lg	09 41 08.7	
	comp=Z,1µm,0.8s						
DZA	Taraz	4.46	322	ePN	Pn	09 39 59.3	+2.6
KTBS	Karatobe	4.47	15	eP	Pb	09 40 08.5	+1.2
	comp=Z,142nm,0.5s						
KTBS				eS	Sb	09 41 06.7	+5.2
	comp=Z,923nm,1.0s						
KTBS	Karatobe	4.47	15	Pg	Pb	09 40 08.5	+1.2
	comp=Z,142nm,0.5s						
KTBS				Lg	Lg	09 41 06.7	
	comp=Z,923nm,1.0s						
KTBS	Karatobe	4.47	15	ePN	Pb	09 40 08.5	+1.2
ZHN	Zhinishke	4.54	33	eP	Pb	09 40 10.5	+1.9
	comp=Z,33nm,0.4s						
ZHN				eS	Sg	09 41 09.8	-4.1
	comp=Z,282nm,0.8s						
ZHN	Zhinishke	4.54	33	Pg	Pb	09 40 10.5	+1.9
	comp=Z,33nm,0.4s						
ZHN				Lg	Lg	09 41 09.8	
	comp=Z,282nm,0.8s						
ZHN	Zhinishke	4.54	33	ePN	Pb	09 40 10.5	+1.9
KUU	Kurty	4.58	12	eP	Pb	09 40 10.8	+1.6
	comp=Z,141nm,0.7s						
KUU				eS	Sg	09 41 10.8	-4.4
	comp=Z,259nm,0.8s						
KUU	Kurty	4.58	12	eP	Pn	09 39 59.6	+1.3
	baz=11						
KUU	Kurty	4.58	12	Pg	Pb	09 40 10.8	+1.6
	comp=Z,141nm,0.7s						
KUU				Lg	Lg	09 41 10.8	
	comp=Z,259nm,0.8s						
KUU	Kurty	4.58	12	ePN	Pn	09 39 59.6	+1.3
CHKK	Chushkaly	4.67	18	eP	Pb	09 40 12.4	+1.7
	comp=Z,151nm,0.7s						
CHKK				eS	Sb	09 41 13.0	+5.6
	comp=Z,849nm,0.8s						
CHKK	Chushkaly	4.67	18	eP	Pn	09 40 01.1	+1.5
	baz=17						
CHKK	Chushkaly	4.67	18	Pg	Pb	09 40 12.4	+1.7
	comp=Z,151nm,0.7s						
CHKK				Lg	Lg	09 41 13.0	
	comp=Z,849nm,0.8s						
CHKK	Chushkaly	4.67	18	ePN	Pn	09 40 01.1	+1.5
IUG	Iuzhnay	4.68	307	eP	Pn	09 40 03.4	+3.5
	baz=306						
IUG	Iuzhnay	4.68	307	ePN	Pn	09 40 03.3	+3.5
KURS	Kuram	4.70	29	eP	Pb	09 40 13.6	+2.4
	comp=Z,238nm,1.3s						
KURS				eS	Sg	09 41 15.2	-4.0
	comp=Z,722nm,0.9s						
KURS	Kuram	4.70	29	Pg	Pb	09 40 13.6	+2.4
	comp=Z,238nm,1.3s						
KURS				Lg	Lg	09 41 15.2	
	comp=Z,722nm,0.9s						
KURS	Kuram	4.70	29	ePN	Pb	09 40 13.6	+2.4
UZB	Uzynbulak	4.79	38	eP	Pb	09 40 15.6	+2.8
	comp=Z,190nm,1.0s						
UZB				eS	Sg	09 41 18.4	-3.5
	comp=Z,747nm,0.9s						
UZB	Uzynbulak	4.79	38	eP	Pn	09 40 03.1	+1.7
	baz=38						
UZB	Uzynbulak	4.79	38	Pg	Pb	09 40 15.6	+2.8
	comp=Z,190nm,1.0s						
UZB				Lg	Lg	09 41 18.4	
	comp=Z,747nm,0.9s						
UZB	Uzynbulak	4.79	38	ePN	Pn	09 40 03.0	+1.7
KPKS	Kokpek	4.89	33	eP	Pb	09 40 16.4	+1.9
	comp=Z,949nm,1.2s						
KPKS				eS	Sb	09 41 19.6	+5.9
	comp=Z,922nm,0.6s						
KPKS	Kokpek	4.89	33	eP	Pn	09 40 04.6	+2.0
	baz=33						
KPKS	Kokpek	4.89	33	ePN	Pn	09 40 04.6	+2.0
SHLS	Shalkode	5.01	40	eP	Pg	09 40 23.4	-0.7
	comp=Z,381nm,0.8s						
SHLS				eS	Sg	09 41 32.7	+3.7
	comp=Z,876nm,0.9s						
SHLS	Shalkode	5.01	40	eP	Pn	09 40 09.1	+4.7
	baz=43						
SHLS	Shalkode	5.01	40	Pg	Pg	09 40 23.4	-0.7
	comp=Z,381nm,0.8s						
SHLS				Lg	Lg	09 41 32.7	
	comp=Z,876nm,0.9s						
SHLS	Shalkode	5.01	40	ePN	Pn	09 40 09.0	+4.7
KK31	Karatay Array	5.02	319	⇓Pn	Pn	09 40 06.5	+2.1
	comp=Z,34nm,0.7s,baz=129,slow=12,SNR=398						
KK31				⇑Pg	Pb	09 40 21.3	+4.6
	comp=Z,89nm,0.8s						
KK31				⇓Sn	Sn	09 41 06.0	+3.1
	comp=Z,84nm,0.5s						
KK31				⇓Lg	Lg	09 41 26.4	
	comp=Z,541nm,0.8s						
KK31	Karatay Array	5.02	319	PN	Pn	09 40 06.9	+2.5
KK31	Karatay Array	5.02	319	Pn	Pn	09 40 06.9	+2.5
KKAR	Karatay Array	5.02	319	PN	Pn	09 40 06.9	+2.5
KKAR	Karatay Array	5.02	319	Pn	Pn	09 40 06.7	+2.3
KKAR	Karatay Array	5.02	319	Pn	Pn	09 40 06.9	+2.5
CHM	Chimkent	5.04	307	eP	Pg	09 40 21.7	-3.0
	comp=Z,174nm,0.3s						
CHM				eS	Sg	09 41 29.7	-0.3
	comp=Z,949nm,0.7s						
PDGK	Podgornoye	5.15	39	Pg	Pb	09 40 21.8	+2.9
	comp=Z,86nm,1.2s						
PDGK				Lg	Lg	09 41 29.7	
	comp=Z,252nm,1.0s						
PDGK	Podgornoye	5.15	39	⇑Pn	Pn	09 40 08.0	+1.7
	comp=Z,65nm,1.0s						
PDGK				⇑Pg	Pg	09 40 23.7	-3.1
	comp=Z,390nm,0.8s						
PDGK				⇓Lg	Lg	09 41 31.0	
	comp=Z,938nm,1.0s						
PDGK	Podgornoye	5.15	39	i PN	Pn	09 40 08.2	+1.9
PDGK				pmax	pmax		
	comp=Z,65nm,1.0s						
ARXS	Arharly	5.23	23	eP	Pb	09 40 22.0	+1.7
	comp=Z,157nm,0.8s						
ARXS				eS	Sg	09 41 30.2	-5.8
	comp=Z,214nm,0.6s						
ARXS	Arharly	5.23	23	Pg	Pb	09 40 22.0	+1.7
	comp=Z,157nm,0.8s						
ARXS				Lg	Lg	09 41 30.2	
	comp=Z,214nm,0.6s						
ARXS	Arharly	5.23	23	ePN	Pb	09 40 22.0	+1.7
BRLS	Borolday	5.33	314	eP	Pb	09 40 25.4	+3.4
	comp=Z,68nm,0.7s						
BRLS				eS	Sg	09 41 35.6	-3.8
	comp=Z,241nm,0.7s						
BRLS	Borolday	5.33	314	eP	Pn	09 40 11.3	+2.6
	baz=310						
BRLS	Borolday	5.33	314	Pg	Pb	09 40 25.4	+3.4
	comp=Z,68nm,0.7s						
BRLS				Lg	Lg	09 41 35.6	
	comp=Z,241nm,0.7s						
BRLS	Borolday	5.33	314	ePN	Pn	09 40 11.3	+2.6
BTLS	Baital	5.67	353	eP	Pb	09 40 30.9	+3.2
	comp=Z,78nm,0.7s						
BTLS				eS	Sg	09 41 45.0	-5.2
	comp=Z,182nm,0.8s						
BTLS	Baital	5.67	353	eP	Pn	09 40 16.4	+3.1
	baz=352						
BTLS	Baital	5.67	353	Pg	Pb	09 40 30.9	+3.2
	comp=Z,78nm,0.7s						
BTLS				Lg	Lg	09 41 45.0	
	comp=Z,182nm,0.8s						
BTLS	Baital	5.67	353	ePN	Pn	09 40 16.3	+3.0
KTMS	Ketmen	5.67	43	eP	Pb	09 40 31.0	+3.1
	comp=Z,26nm,0.3s						
KTMS				eS	Sg	09 41 45.1	-5.2
	comp=Z,222nm,0.8s						
KTMS	Ketmen	5.67	43	Pg	Pb	09 40 31.0	+3.1
	comp=Z,26nm,0.3s						
KTMS				Lg	Lg	09 41 45.1	
	comp=Z,222nm,0.8s						
NIL	Nilore	5.93	195	PN	Pn	09 40 23.9	+6.9
NIL	Nilore	5.93	195		Pn	09 40 23.9	+6.9
DJR	Jarkent	6.06	34	Pg	Pb	09 40 39.1	+4.7
	comp=Z,80nm,1.1s						
DJR				Lg	Lg	09 41 59.5	
	comp=Z,140nm,1.3s						
TDK	Taldyqorghan	6.12	23	eP	Pn	09 40 22.6	+3.1
	baz=23						
TDK	Taldyqorghan	6.12	23	Pg	Pb	09 40 40.3	+4.9
	comp=Z,184nm,0.8s						
TDK				Lg	Lg	09 42 01.0	
	comp=Z,651nm,1.3s						
TDK	Taldyqorghan	6.12	23	ePN	Pn	09 40 22.6	+3.1
CEP	Cherat	6.12	205	P	Pn	09 40 25.6	+5.9
KAPS	Kapalarasan	6.68	27	Pg	Pb	09 40 48.8	+3.8
	comp=Z,72nm,0.8s						
KAPS				Lg	Lg	09 42 15.6	
	comp=Z,131nm,1.3s						
KBL	Kabul	6.83	226	PN	Pn	09 40 34.9	+5.4
KBL	Kabul	6.83	226	Pn	Pn	09 40 34.9	+5.5
THW	Thamme Wali	7.12	203	P	Pn	09 40 38.0	+4.7
DHRM	DHARAMSHALA	7.22	171	eP	Pn	09 40 37.9	+3.0
DHRM				eS	Sn	09 41 59.6	+2.1
DHRM				IAML		09 42 05.1	
	comp=E,1µm,0.6s						
DHRM				IAML		09 42 05.6	
	comp=N,806nm,0.2s						
SARP	Sargodha	7.72	195	P	Pn	09 40 44.9	+3.4
SMLA	Simla	8.45	167	eP	Pn	09 40 54.4	+2.9
SMLA				eS	Sn	09 42 26.9	-0.4
SMLA				IAML		09 42 32.2	
	comp=N,575nm,1.1s						
SMLA				IAML		09 42 35.1	
	comp=E,496nm,0.8s						
MAKZ	Makanchi	8.96	32	⇑Pn	Pn	09 40 59.1	+0.6
	comp=E,8.1nm,0.8s						
MAKZ				⇑Pg	Pg	09 41 34.5	-5.2
	comp=E,49nm,1.1s						
MAKZ				⇑Lg	Lg	09 43 32.9	
	comp=E,70nm,1.1s						
MAKZ	Makanchi	8.96	32	P	Pn	09 41 02.3	+3.8
MAKZ	Makanchi	8.96	32		Pn	09 41 02.3	+3.8
MK31	Makanchi Array	9.08	33	Pn	Pn	09 41 00.9	+0.8
	comp=E,10nm,0.7s,baz=206,slow=13,SNR=120						
MK31				⇑Pg		09 41 34.9	
	comp=E,28nm,0.8s						
MK31				⇑Lg	Lg	09 43 35.7	
	comp=E,72nm,1.0s						
MK31	Makanchi Array	9.08	33	ceP	Pn	09 41 01.6	+1.5
MK31	Makanchi Array	9.08	33	Pn	Pn	09 41 01.4	+1.3
MKAR	Makanchi Array	9.08	33	Pn	Pn	09 41 01.7	+1.6
	comp=E,0.7nm,0.3s,baz=204,slow=14,SNR=41						
MKAR				Lg	Lg	09 43 31.5	
	comp=E,1.4nm,0.3s,baz=212,slow=25,SNR=5.1						
MKAR				LR	LR	09 44 50.9	
	comp=E,839nm,18.8s,baz=212,slow=40						
MKAR	Makanchi Array	9.08	33		Pn	09 41 00.8	+0.6
DDI	Dehra Dun	9.40	164	eP	Pn	09 41 09.2	+4.6
DDI				eS	Sn	09 42 50.4	-0.5
DDI				IAML		09 42 58.3	
	comp=N,381nm,0.2s						
DDI				IAML		09 42 59.2	
	comp=E,407nm,0.6s						
WMQ	Urumqi	10.45	61	eP	Pn	09 41 19.5	+0.6
WMQ				pP		09 41 22.8	
WMQ				sP		09 41 24.8	
WMQ				PP	PnPn	09 41 28.3	+1.8
WMQ				S	Sn	09 43 17.6	+1.1
WMQ				pmax	pmax		
	comp=E,20nm,0.7s						
WMQ				pmax	pmax		
	comp=E,170nm,5.7s						
WMQ				LR	LR		
	comp=E,1µm,10.7s						
WMQ				LR	LR		
	comp=E,1µm,10.5s						
WMQ				LR	LR		
	comp=E,670nm,12.1s						
WMQ	Urumqi	10.45	61	P	Pn	09 41 20.3	+1.4
WMQ	Urumqi	10.45	61	Pn	Pn	09 41 20.3	+1.4
NDI	New Delhi	10.86	170	eP	Pn	09 41 28.5	+4.0
NDI				ex	x	09 43 22.0	
HRA	Herat	11.40	248		Pn	09 41 35.9	+3.7

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KURBB Kurchatov Arra    11.47  11   Pn     Pn      09 41 32.6 -0.2
      comp=E,0.1nm,0.3s,baz=200,slow=12,SNR=11
KURBB                               Lg     Lg      09 44 45.3
      comp=E,0.2nm,0.3s,baz=11,slow=22,SNR=5.3
KURBB Kurchatov Arra    11.47  11  ⇓Pn     Pn      09 41 35.3 +2.4
      comp=E,6.8nm,0.8s
KURBB                              ⇓Lg     Lg      09 44 49.6
      comp=E,346nm,1.1s
KURK  Kurchatov         11.58  11ceP       Pn      09 41 35.4 +1.2
KURK                                pmax   pmax
      comp=Z,6.0nm,0.8s
KURK  Kurchatov         11.58  11          Pn      09 41 35.0 +0.7
SEM   Semipalatinsk     11.59  17 eP       Pn      09 41 35.2 +0.6
      baz=17
SEM   Semipalatinsk     11.59  17 eP       Pn      09 41 35.2 +0.6
DANN  Dangsing          13.19 144 eP       Pn      09 41 53.7 -3.0
      comp=Z,84nm,0.5s
GEYT  Alibeck           13.31 269   Pn     Pn      09 41 55.4 -2.6
      comp=Z,2.3nm,0.3s,baz=106,slow=9.4,SNR=13
GEYT                                Sn     Sn      09 44 23.2 -3.3
      comp=Z,4.8nm,0.3s,baz=88,slow=16,SNR=6.4
GEYT                                LR     LR      09 47 55.5
      comp=Z,275nm,19.3s,baz=55,slow=41
GEYT  Alibeck           13.31 269   Pn     Pn      09 41 55.7 -2.3
GYA0B ALIBECK ARRAY     13.31 269          Pn      09 41 56.1 -1.9
DGZ   Jazzator, Alta    13.54  37 i P      Pn      09 42 01.4 +0.2
GKN   Gorkha            13.89 142 eP       Pn      09 42 02.9 -3.3
      comp=Z,89nm,0.4s
BVAR  Borovoye Array    13.98 348   Pn     Pn      09 42 05.7 -1.4
      comp=Z,0.2nm,0.3s,baz=162,slow=15,SNR=14
BRVK  Borovoye          14.03 348 ⇑P       Pn      09 42 07.9 +0.2
      comp=Z,4.7nm,1.0s
BRVK  Borovoye          14.03 348   P      Pn      09 42 08.1 +0.4
BRVK  Borovoye          14.03 348          Pn      09 42 08.1 +0.4
KKN   Kakani            14.38 141 eP       Pn      09 42 08.8 -4.1
      comp=Z,90nm,0.5s
DMN   Daman             14.45 142 eP       Pn      09 42 10.8 -3.1
      comp=Z,36nm,0.4s
AB31  Akbulak array     14.58 317 ⇑P       Pn      09 42 14.4 -0.9
      comp=Z,41nm,0.8s,baz=129,slow=10,SNR=306
AB31  Akbulak array     14.58 317 i P      Pn      09 42 15.3  0.0
AB31                                pmax   pmax
      comp=Z,41nm,0.7s
ABKAR Akbulak array     14.58 317          Pn      09 42 14.7 -0.7
ABKAR Akbulak array     14.58 317          Pn      09 42 14.1 -1.2
GUN   Gumba             14.59 139 eP       Pn      09 42 12.2 -3.6
      comp=Z,52nm,0.4s
PKIN  Phulchoki         14.62 141 eP       Pn      09 42 12.3 -3.9
      comp=Z,42nm,0.4s
PKI   Pulchoki          14.63 141 eP       Pn      09 42 12.6 -3.8
      comp=Z,60nm,0.4s
RAMN  Ramite            15.74 139 eP       Pn      09 42 26.5 -4.6
      comp=Z,412nm,0.8s
ZAA0  Zalesovo Array    15.99  21 ⇓P       Pn      09 42 32.5 -1.3
      comp=Z,4.9nm,1.1s
ZAA0  Zalesovo Array    15.99  21          Pn      09 42 32.8 -1.1
ZALV  Zalesovo Beam     15.99  21   Pn     Pn      09 42 32.6 -1.3
      comp=Z,0.9nm,0.3s,baz=201,slow=9.8,SNR=18
ZALV                                Lg     Lg      09 47 17.9
      baz=189,slow=27,SNR=5.0
ZALV                                LR     LR      09 48 57.4
      comp=Z,407nm,19.3s,baz=211,slow=38
TAPN  Taplejung         16.00 135 eP       Pn      09 42 30.2 -4.4
      comp=Z,74nm,0.6s
ODAN  Odare             16.22 137 eP       Pn      09 42 33.2 -4.1
      comp=Z,145nm,0.6s
BHPL  Bhopal            16.25 172 ex       Pn      09 42 33.4 -4.2
BHPL                              ex       x       09 45 27.7
AKTO  Aktyubinsk        16.29 318   Pn     Pn      09 42 37.9  0.0
      comp=Z,1.2nm,0.3s,baz=114,slow=16,SNR=49
AKTO                                Sn     Sn      09 45 34.8 -4.1
      comp=Z,0.2nm,0.3s,baz=290,slow=15,SNR=3.0
AKTO                                Lg     Lg      09 47 29.7
      comp=Z,0.1nm,0.3s,baz=210,slow=20,SNR=2.2
AKTO                                LR     LR      09 49 36.5
      comp=Z,105nm,21.6s,baz=134,slow=40
AKTO  Aktyubinsk        16.29 318 ⇓P       Pn      09 42 38.0 +0.2
      comp=Z,59nm,1.1s
LSA   Lhasa             16.41 121   P      Pn      09 42 40.5 +0.5
LSA   Lhasa             16.41 121   P      Pn      09 42 41.0 +1.0
LSA                                 pmax   pmax
      comp=Z,21nm,1.0s
LSA   Lhasa             16.41 121          Pn      09 42 41.0 +1.0
GTA   Gaotai            19.13  82 ⇓P       P       09 43 12.3 -0.2
GTA                                 pP     sP      09 43 16.8 +2.1
GTA                                 sP     pP      09 43 20.6 +6.6
GTA                                 S      S       09 46 52.5 +2.4
GTA                                 pmax   pmax
      comp=Z,9.0nm,0.8s
GTA                                 pmax   pmax
      comp=Z,99nm,5.1s
GTA                                 LR     LR
      comp=Z,580nm,14.2s
GTA                                 LR     LR
      comp=Z,320nm,13.8s
GTA                                 LR     LR
      comp=Z,470nm,15.3s
GUWA  GUWAHATI          19.19 128 eP       P       09 43 11.8 -1.2
SHL   Shillong          19.77 129   P      P       09 43 18.9 -0.7
SHL                                 pmax   pmax
      comp=Z,37nm,0.9s
SHL   Shillong          19.77 129 eP       P       09 43 16.9 -2.7
SHL                                 IAmb   IAmb    09 43 20.3
      comp=Z,23nm,0.7s
SHL   Shillong          19.77 129   P      P       09 43 18.9 -0.7
SHL                                 IAmb   IAmb    09 43 20.9
      comp=Z,37nm,0.9s
SVE   Sverdlovsk        19.82 336 eP       Pn      09 43 20.9 -0.4
ARU   Arti              20.20 333   P      Pn      09 43 25.1 -0.6
      comp=Z,12nm,0.8s,baz=157,slow=8.4,SNR=27
ARU                                 Lg     Lg      09 49 33.3
      comp=Z,2.1nm,0.8s,baz=206,slow=14,SNR=4.7
ARU   Arti              20.20 333d iP      Pn      09 43 25.6 -0.1
ARU                                                09 43 43.8
ARU                                 S      S       09 47 11.5 +0.6
ARU                                 SS     SnSn    09 47 34.7 +7.0
ARU                                 pmax   pmax
      comp=Z,37nm,0.9s
ARU   Arti              20.20 333   P      P       09 43 23.9 +0.1
ARU                                 IAmb   IAmb    09 43 29.0
      comp=Z,35nm,0.9s
POO   Poona             20.84 183 ex       P       09 43 35.0 +3.9
      comp=Z,15nm,1.0s
POO                               ex       x       09 43 35.5
POO                               ex       x       09 47 20.0
MOKO  MOKOCHONG         20.88 123 eP       P       09 43 31.9 +0.3
KOHI  KOHIMA            21.03 125 eP       P       09 43 33.9 +0.6
WSAR  Wadi Sarin        21.31 226   P      P       09 43 36.5 +0.3
      comp=Z,6.9nm,0.8s,baz=84,slow=6.3,SNR=8.5
WSAR                                LR     LR      09 54 19.6
      comp=Z,169nm,18.4s,baz=78,slow=43
UOSS  Minazif           21.44 233   P      P       09 43 37.3 -0.2
MOY   Mondy             21.79  47 eP       P       09 43 41.1 -0.1
MOY                                 pmax   pmax
      comp=Z,16nm,2.1s
HYB   Hyderabad         22.13 171 i P      P       09 43 45.0  0.0
HYB                               eS       S       09 47 50.0 +0.4
HYB   Hyderabad         22.13 171 eP       P       09 43 44.2 -0.8
GROC  Groznyy           22.24 289 eP       P       09 43 46.9 +1.0
GROC                              e*PP     sP      09 44 01.6  +14
GROC                              e*SP     pP      09 44 10.1  +23
GROC                              e                09 44 13.6
GROC                              eS       S       09 47 48.0 -3.2
GROC                              e*SS     Sn      09 48 11.9 +9.4
GROC                                pmax   pmax
      comp=Z,105nm,1.0s
ZAK   Zakamensk         22.68  52 eP       P       09 43 48.9 -1.8
ZAK                                 pmax   pmax
      comp=Z,6.0nm,1.0s
SAIH  SAIHA             22.77 133 eP       P       09 43 51.8 -0.1
BELG  Belogornoye       22.91 314   P      P       09 43 53.5 +0.5
      comp=Z,83nm,0.9s,baz=136,slow=2.4,SNR=16
BELG                                LR     LR      09 53 05.8
      comp=Z,88nm,19.1s,baz=168,slow=37
BELG  Belogornoye       22.91 314c iP      P       09 43 54.8 +1.9
LZH   Lanzhou           22.98  89 eP       P       09 43 55.3 +1.3
LZH                                 pmax   pmax
      comp=Z,31nm,1.2s
LZH                                 LR     LR
      comp=Z,570nm,11.4s
LZH                                 LR     LR
      comp=Z,360nm,15.7s
LZH                                 LR     LR
      comp=Z,290nm,15.7s
GNI   Garni             23.25 282   P      P       09 43 59.1 +2.3
      comp=Z,76nm,1.1s,baz=57,slow=0.6,SNR=8.0
GNI                                 LR     LR      09 54 56.2
      comp=Z,59nm,18.6s,baz=101,slow=41
GNI   Garni             23.25 282ceP       P       09 43 59.8 +3.0
GNI                                 pmax   pmax
      comp=Z,99nm,1.3s
GNI   Garni             23.25 282   P      P       09 43 59.4 +2.6
TLY   Talaya            23.32  49   LR     LR      09 54 13.3
      comp=Z,63nm,18.7s,baz=264,slow=40
ZEI   Tsey              23.64 288 eP       P       09 44 02.0 +1.3
ZEI                                 pmax   pmax
      comp=Z,13nm,1.0s
SONM  Songino Array     24.08  59   P      P       09 44 04.6 -0.2
      comp=Z,4.6nm,0.7s,baz=262,slow=10,SNR=33
SONM                                PcP    PcP     09 47 45.7 -0.5
      comp=Z,0.4nm,0.6s,baz=218,slow=3.3,SNR=1.6
SONM                                LR     LR      09 54 24.9
      comp=Z,254nm,18.9s,baz=252,slow=39
SONM  Songino Array     24.08  59   P      P       09 44 03.5 -1.4
GOF   Gofitskoye        24.25 294⇑eP       P       09 44 09.5 +3.2
GOF                                 pmax   pmax
      comp=Z,43nm,1.0s
KBZ   Khabaz            24.34 291   P      P       09 44 07.8 +0.7
      comp=Z,2.4nm,0.8s,baz=123,slow=11,SNR=8.7
KBZ                                 LR     LR      09 55 17.6
      comp=Z,162nm,19.6s,baz=85,slow=40
KBZ   Khabaz            24.34 291ceP       P       09 44 08.1 +1.0
NEY   Neytrino          24.48 290 i P      P       09 44 10.2 +1.5
NEY                                 pmax   pmax
      comp=Z,4.0nm,0.9s
KIV   Kislovodsk        24.49 291 eP       P       09 44 11.4 +2.8
KIV                                 pmax   pmax
      comp=Z,38nm,1.0s
KIV                                 MLR    MLR
      comp=Z,218nm,15.0s
ULN   Ulaanbaatar       24.52  59ceP       P       09 44 10.0 +1.1
ULN                                 pmax   pmax
      comp=Z,7.0nm,0.8s
ULN   Ulaanbaatar       24.52  59   P      P       09 44 08.9  0.0
MIB   Mutribah          24.65 256 eP               09 44 10.1
GEVA  Gevas             24.86 278   P      P       09 44 13.4 +1.3
GEVA                                IAmb   IAmb    09 44 17.1
      comp=Z,29nm,1.0s
CD2   Chengdu           24.89 101   P      P       09 44 13.3 +1.0
CD2                                 pmax   pmax
      comp=Z,30nm,0.9s
CD2                                 LR     LR
      comp=Z,450nm,12.7s
CD2                                 LR     LR
      comp=Z,540nm,12.3s
CD2                                 LR     LR
      comp=Z,300nm,13.1s
RDF   Al-Radifah        24.95 254 eP               09 44 13.2
RST   Umm Al-Ruwaisa    25.06 255 eP               09 44 14.3
KIRV  Kirov             25.24 328   P      P       09 44 14.9 -0.1
      comp=Z,26nm,0.6s,baz=82,slow=1.9,SNR=12
KIRV                                LR     LR      09 54 50.9
      comp=Z,208nm,18.3s,baz=129,slow=38
VRH   Novokhopyorsk     26.00 308 eP       P       09 44 22.9 +0.9
VRH                                 pmax   pmax
      comp=Z,20nm,0.7s
KOPT  Kop Dagi          26.48 282   P      P       09 44 27.6 +0.7
BTO   Baotou            26.72  76 eP       P       09 44 26.8 -2.0
MARD  Mardin            26.85 276   P      P       09 44 33.4 +3.3
MARD                                IAmb   IAmb    09 44 34.5
      comp=Z,15nm,1.0s
KMI   Kunming           27.29 113 ⇓P       P       09 44 35.8 +1.6
KMI                                 S      S       09 49 08.8 -5.7
KMI                                 SS     SnSn    09 50 27.5 +5.5
KMI                                 pmax   pmax
      comp=Z,9.0nm,0.6s
KMI                                 pmax   pmax
      comp=Z,180nm,4.0s
KMI                                 LR     LR
      comp=Z,280nm,12.3s
KMI                                 LR     LR
      comp=Z,180nm,15.0s
KMI                                 LR     LR
      comp=Z,210nm,16.0s
VORD  Divnogorie        27.44 307 eP       P       09 44 35.3 +0.2
VORD                                pmax   pmax
      comp=Z,20nm,1.2s
VSR   Storozhevoye      27.57 307 eP       P       09 44 36.2  0.0
VSR                                 pmax   pmax
      comp=Z,20nm,1.1s
XAN   Xi'an             27.58  91   P      P       09 44 36.4 -0.2
XAN                                 pmax   pmax
      comp=Z,7.0nm,0.9s
XAN                                 LR     LR
      comp=Z,550nm,17.3s
XAN                                 LR     LR
      comp=Z,320nm,19.5s
XAN                                 LR     LR
      comp=Z,450nm,13.7s
XAN   Xi'an             27.58  91   P      P       09 44 35.8 -0.8
XAN                                 pmax   pmax
      comp=Z,6.0nm,0.9s
XAN   Xi'an             27.58  91   P      P       09 44 35.8 -0.8
HHC   Hu-ho-hao-te      27.84  75 eP       P       09 44 41.3 +2.4
HHC                                 pmax   pmax
      comp=Z,9.0nm,0.9s
HHC                                 pmax   pmax
      comp=Z,200nm,5.1s
HHC                                 LR     LR
      comp=Z,350nm,11.3s
HHC                                 LR     LR
      comp=Z,260nm,12.2s
HHC                                 LR     LR
      comp=Z,240nm,12.7s
LPSR  Galich'ya Gora    28.01 310 eP       P       09 44 40.5 +0.3
LPSR                                pmax   pmax
      comp=Z,10.0nm,0.8s
GYA   Guiyang           29.36 107 ⇑P       P       09 45 04.9  +12
GYA                                 pmax   pmax
      comp=Z,5.0nm,0.9s
CMAR  Chiang Mai Arr    29.40 128   P      P       09 44 51.5 -1.3
      comp=Z,0.9nm,0.3s,baz=312,slow=9.6,SNR=7.6
CMAR                                PcP    PcP     09 47 58.9 -0.1
      comp=Z,1.5nm,0.4s,baz=258,slow=3.0,SNR=5.4
RAYN  Ar Rayn           29.59 246   P      P       09 44 54.5  0.0
RAYN                                pmax   pmax
      comp=Z,11nm,0.9s
RAYN  Ar Rayn           29.59 246   P      P       09 44 54.5  0.0
RAYN                                IAmb   IAmb    09 44 57.5
      comp=Z,11nm,0.9s
MOS   Moscow            29.60 316 eP       P       09 44 55.0 +0.8
MOS                               e                09 45 49.6
OBN   Obninsk           30.00 314⇓iP       P       09 45 02.4 +4.7
OBN                                 pmax   pmax
      comp=Z,25nm,1.3s
SLVN  Son La            30.55 118   P      P       09 45 03.9 +0.8
KLMR  Klimovskoe        30.67 326   P      P       09 45 02.6 -1.1
KLMR                                pmax   pmax
      comp=Z,19nm,1.5s
KLMR  Klimovskoe        30.67 326   P      P       09 45 02.7 -1.0
KLMR                                AMP            09 45 06.9
      comp=Z,19nm,1.5s
NRIK  Noril'sk          30.73   9   P      P       09 45 03.6 -0.4
      comp=Z,4.9nm,0.6s,baz=197,slow=6.7,SNR=8.8
NRIK                                LR     LR      09 59 01.5
      comp=Z,253nm,19.9s,baz=210,slow=39
NRIK  Noril'sk          30.73   9c iP      P       09 45 03.8 -0.3
NRIK  Noril'sk          30.73   9   P      P       09 45 03.5 -0.6
ILGA  Ilgaz             31.38 286   P      P       09 45 13.4 +3.0
ILGA                                IAmb   IAmb    09 45 13.9
      comp=Z,17nm,1.0s
BJI   Beijing           31.45  75   P      P       09 45 10.4 -0.3
BJI                                 pmax   pmax
      comp=Z,6.0nm,1.3s
BJI                                 LR     LR
      comp=Z,230nm,17.8s
BJI                                 LR     LR
      comp=Z,160nm,11.5s
BR131 Keskin Array S    31.71 284   P      P       09 45 13.5 +0.2
BR131                               pmax   pmax
      comp=Z,22nm,0.8s
BR131 Keskin Array S    31.71 284   P      P       09 45 13.5 +0.2
BRTR  Keskin Array B    31.71 284   P      P       09 45 13.9 +0.6
      comp=Z,17nm,0.9s,baz=90,slow=6.7,SNR=53
BRTR                                LR     LR      10 00 08.2
      comp=Z,60nm,20.4s,baz=77,slow=40
BRTR  Keskin Array B    31.71 284ceP       P       09 45 14.1 +0.8
BRTR                                pmax   pmax
      comp=Z,17nm,0.9s
BRTR  Keskin Array B    31.71 284   P      P       09 45 13.8 +0.5
TMCR  Tamitsa           32.91 331 eP       P       09 45 23.6 +0.3
TMCR                                pmax   pmax
      comp=Z,13nm,0.9s
WHN   Wuhan             33.19  93 ⇓P       P       09 45 27.1 +1.0
AKASG Malin Array Be    33.76 305   P      P       09 45 30.4 -0.4
      comp=Z,14nm,0.9s,baz=80,slow=7.8,SNR=24
AKASG                               LR     LR      10 00 07.8
      comp=Z,145nm,19.9s,baz=55,slow=38
AKASG Malin Array Be    33.76 305   P      P       09 45 31.5 +0.6
AKASG                               pmax   pmax
      comp=Z,3.0nm,1.0s
AKASG Malin Array Be    33.76 305   P      P       09 45 31.5 +0.6
AKBB  Malin Array Si    33.76 305ceP       P       09 45 31.1 +0.3
AKBB  Malin Array Si    33.76 305   P      P       09 45 30.3 -0.6
AKBB                                IAmb   IAmb    09 45 32.8
      comp=Z,16nm,0.9s
SORM  Soroca            34.36 300 ⇑P       P       09 45 36.0 -0.1
TPGR  Topolog           34.62 295 ⇑P       P       09 45 39.6 +1.2
CFR   Carcaliu          34.77 295 ⇑P       P       09 45 41.4 +1.7
MNK   Minsk             34.82 312 i P      P       09 45 41.4 +1.3
      comp=E,4.0nm,1.0s
MNK                               i P      P       09 45 41.4 +1.3
      comp=N,23nm,1.1s
MNK                               i P      P       09 45 41.4 +1.3
      comp=Z,27nm,0.8s
MNK                               i pP     sP      09 45 56.4  +14
MNK                               i PP     PnPn    09 46 49.3 -6.7
MNK                               i S      S       09 51 12.2 +1.0
MNK                               i SS     SnSn    09 53 26.4 +2.1
MNK                               i LQ     LQ      09 57 41.0
MNK                               i LR     LR      10 00 23.6
MNK                               i LRM    MLR     10 01 43.7
      comp=E,50nm,22.8s
MNK                               i LRM    MLR     10 01 43.7
      comp=N,774nm,22.8s
MNK                               i LRM    MLR     10 01 43.7
      comp=Z,102nm,16.0s
HARR  Harsova           34.98 294 ⇑P       P       09 45 43.4 +1.8
ICOR  Ion Corvin        35.16 293 ⇑P       P       09 45 45.7 +2.6
NACGM Naroch            35.50 312 i P      P       09 45 47.2 +1.3
NACGM                             i P      P       09 45 47.2 +1.3
NACGM                             i P      P       09 45 47.2 +1.3
NACGM                             i Pb     pP      09 45 48.8 +1.3
      comp=Z,38nm,1.1s
NACGM                             i Pb     sP      09 45 49.1 +1.1
      comp=E,19nm,1.1s
NACGM                             i PP     PP      09 47 07.6 +1.4
NACGM                             i S      S       09 51 18.5 -3.1
NACGM                             i SS     SnSn    09 53 44.0 +3.4
NACGM                             i LQ     LQ      09 57 42.9
NACGM                             i LR     LR      10 00 59.1
IDID  Didziasalis       35.56 313 eP       P       09 45 48.0 +1.6
TESR  Tescani           35.65 298 ⇑P       P       09 45 48.3 +1.0
VRI   Vrincioaia        35.67 297 ⇑P       P       09 45 48.5 +1.0
PLOR  Plostina          35.73 296 ⇑P       P       09 45 49.4 +1.4
MANT  Manisa            35.85 284   P      P       09 45 49.9 +0.6
IIGN  Ignalina          35.86 313 eP       P       09 45 50.5 +1.5
UBPT  Khong Chiam       35.88 123   P      P       09 45 48.6 -0.9
UBPT                                IAmb   IAmb    09 45 49.4
      comp=Z,15nm,1.1s
ISR   Istrita           35.90 295 ⇑P       P       09 45 51.5 +2.0
ISAL  Salakas           35.94 313 eP       P       09 45 51.3 +1.6
BIZ   Bicaz             35.97 298 ⇑P       P       09 45 50.5 +0.5
VSU   Vasula            36.02 318 eP       P       09 45 50.1 -0.1
NEHR  Nehoiu            36.03 296 ⇑P       P       09 45 53.1 +2.5
NJ2   Nanjing           36.04  88 eP       P       09 45 52.0 +1.3
NJ2                                 pmax   pmax
      comp=Z,5.0nm,0.5s
QIZ   Qiongzhong        36.23 114   P      P       09 45 52.5  0.0
QIZ                                 S      S       09 51 29.4 -4.1
QIZ                                 LR     LR
      comp=Z,120nm,17.5s
QIZ                                 LR     LR
      comp=Z,180nm,16.2s
QIZ                                 LR     LR
      comp=Z,140nm,13.4s
MLR   Muntele Rosu      36.26 296 ⇑P       P       09 45 54.7 +2.0
MLR   Muntele Rosu      36.26 296   P      P       09 45 54.1 +1.4
MLR                                 pmax   pmax
      comp=Z,22nm,1.0s
MLR   Muntele Rosu      36.26 296   P      P       09 45 54.1 +1.4
BURAR Bucovina Array    36.50 300 ⇑P       P       09 45 56.2 +1.5
BURAR Bucovina Array    36.50 300   P      P       09 45 54.9 +0.2
BUR08 Bucovina Ar. S    36.51 300   P      P       09 45 56.1 +1.3
BUR08                               IAmb   IAmb    09 45 57.5
      comp=Z,11nm,1.1s
DOPR  Dopca             36.58 297 ⇑P       P       09 45 56.5 +1.2
VOIR                    36.89 296 ⇑P       P       09 45 58.6 +0.5
MTUR  Matau             36.92 296 ⇑P       P       09 46 00.4 +2.1
FINES FINESS Array B    36.97 323   P      P       09 45 57.7 -0.6
      comp=Z,6.8nm,0.6s,baz=112,slow=8.8,SNR=43
FINES                               LR     LR      10 01 37.2
      comp=Z,138nm,19.2s,baz=98,slow=37
LVV   L'vov             37.11 303 eP       P       09 46 01.0 +1.3
LVV                                 MLR    MLR
      comp=E,100nm,16.0s
LVV                                 MLR    MLR
      comp=Z,200nm,16.0s
ARCR  ARCALIA           37.15 299 ⇑P       P       09 46 01.4 +1.3
PABE  Paberze           37.16 313 eP       P       09 46 01.5 +1.5
SUW   Suwalki           37.54 310 eP       P       09 46 04.5 +1.2
ZEA   Zeya              37.75  50 eP       P       09 46 04.6 -0.5
ZEA                                 pmax   pmax
      comp=Z,10.0nm,0.3s
LOT   Lotru             37.78 296 ⇑P       P       09 46 07.3 +1.7
KARP  Karpathos         37.84 280   P      P       09 46 06.7 +0.6
KWP   Kalwaria Pacla    37.98 303   P      P       09 46 07.1  0.0
KWP                                 pmax   pmax
      comp=Z,117nm,0.4s
KWP   Kalwaria Pacla    37.98 303   P      P       09 46 07.1  0.0
DRGR                    38.30 299 ⇓P       P       09 46 10.9 +0.9
KOLS  Kolonicke sedl    38.33 302 eP       P       09 46 11.1 +1.1
KOLS                                pmax   pmax
      comp=Z,7.0nm,1.1s
KOLS  Kolonicke sedl    38.33 302 eP       P       09 46 11.1 +1.1
KOLS                              ePP      PP      09 47 37.2 -0.2
KOLS                              e                10 25 28.6
GZR   Gura Zlata        38.48 296 ⇑P       P       09 46 13.2 +1.7
VTS   Vitosha           38.72 292 ⇑P       P       09 46 15.4 +1.8
VTS   Vitosha           38.72 292   P      P       09 46 14.2 +0.6
VTS                                 pmax   pmax
      comp=Z,9.0nm,1.0s
VTS   Vitosha           38.72 292   P      P       09 46 14.2 +0.6
VTS                                 IAmb   IAmb    09 46 17.3
      comp=Z,9.0nm,1.0s
HERR  Herculane         38.83 296 ⇑P       P       09 46 14.7 +0.4
CRVS  Cervenica-Dubn    38.86 302 eP       P       09 46 14.7 +0.2
CRVS                                pmax   pmax
      comp=Z,9.0nm,1.0s
CRVS  Cervenica-Dubn    38.86 302 eP       P       09 46 14.7 +0.2
CRVS                              e                10 25 29.6
SIRR  Siria             39.10 298 ⇑P       P       09 46 18.4 +1.8
BZS   Buzias            39.24 297 ⇑P       P       09 46 19.4 +1.7
MDVR  Moldovita         39.34 296 ⇑P       P       09 46 19.5 +0.9
NIE   Niedzica          39.56 303 eP       P       09 46 21.5 +1.1
ARCES ARCESS Array B    39.75 335   P      P       09 46 20.3 -1.4
      comp=Z,2.0nm,0.6s,baz=98,slow=8.7,SNR=12
ARCES                               LR     LR      10 04 02.5
      comp=Z,80nm,18.1s,baz=185,slow=38
OJC   Ojcow             39.79 304 eP       P       09 46 22.6 +0.4
OJC   Ojcow             39.79 304   P      P       09 46 22.6 +0.4
OJC                                 pmax   pmax
      comp=Z,27nm,1.2s
OJC   Ojcow             39.79 304   P      P       09 46 22.6 +0.4
OJC                                 IAmb   IAmb    09 46 24.8
      comp=Z,27nm,1.2s
PSZ   Piszkesteto       40.03 301   P      P       09 46 25.0 +0.7
PSZ                                 pmax   pmax
      comp=Z,7.0nm,0.6s
PSZ   Piszkesteto       40.03 301   P      P       09 46 25.0 +0.7
PSZ                                 IAmb   IAmb    09 46 33.5
      comp=Z,7.2nm,0.6s
LANS  Liptovska Anna    40.13 303 eP       P       09 46 27.1 +1.9
LANS                                pmax   pmax
      comp=Z,2.0nm,1.0s
LANS  Liptovska Anna    40.13 303 eP       P       09 46 27.1 +1.9
LANS                              e                10 25 32.7
MDJ   Mudanjiang        40.23  64   P      P       09 46 26.9 +1.0
MDJ                                 pmax   pmax
      comp=Z,6.0nm,0.8s
MDJ                                 pmax   pmax
      comp=Z,350nm,4.7s
KTK1  Kautokeino        40.31 334 eP       P       09 46 26.8 +0.4
FNA   Florina           40.53 290   P      P       09 46 28.6  0.0
FNA                                 pmax   pmax
      comp=Z,14nm,1.3s
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FNA	Florina	40.53	290	P	P	09 46 28.6	0.0
FNA				IAmb	IAmb	09 46 30.9	
	comp=Z,14nm,1.3s						
FRGS	Fruska Gora	40.58	297	⇑P	P	09 46 30.3	+1.4
FRGS	Fruska Gora	40.58	297	*e*P	P	09 46 30.3	+1.4
VYHS	Vyhne	40.64	302	*e*P	P	09 46 31.1	+1.8
VYHS				pmax	pmax		
	comp=Z,12nm,1.2s						
VYHS	Vyhne	40.64	302	*e*P	P	09 46 31.1	+1.8
VYHS				*e*		10 25 31.8	
DIVS	Divibare	40.69	295	*e*P	P	09 46 30.3	+0.4
DIVS	Divibare	40.69	295	P	P	09 46 31.1	+1.2
DIVS				IAmb	IAmb	09 46 32.6	
	comp=Z,13nm,0.9s						
HAMF	Hammerfest	40.75	336	*e*P	P	09 46 30.5	+0.6
KLR	Kul'dur	40.86	57	P	P	09 46 30.1	-1.1
	comp=Z,2.0nm,0.6s,baz=273,slow=6.6,SNR=6.9						
KSRS	Korea Array	40.98	75	P	P	09 46 30.6	-1.6
	comp=Z,2.9nm,0.8s,baz=282,slow=8.4,SNR=10						
KSRS				LR	LR	10 05 00.4	
	comp=Z,117nm,18.3s,baz=287,slow=38						
BBLS	Lazići	41.15	295	*e*P	P	09 46 33.5	-0.2
MORH	Mrgy, Hungar	41.17	299	⇑P	P	09 46 34.2	+0.6
MORH	Mrgy, Hungar	41.17	299	*e*P	P	09 46 34.0	+0.3
MORC	Moravsky Berou	41.29	304	⇑P	P	09 46 35.7	+0.9
MORC	Moravsky Berou	41.29	304	*e*P	P	09 46 36.2	+1.5
MORC	Moravsky Berou	41.29	304	P	P	09 46 34.7	-0.1
MORC				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MORC	Moravsky Berou	41.29	304	P	P	09 46 34.7	-0.1
JAVC	Velka Javorina	41.34	303	*e*P	P	09 46 37.9	+2.7
SMOL	Smolenice	41.56	302	*e*P	P	09 46 38.9	+2.0
SMOL				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SMOL	Smolenice	41.56	302	*e*P	P	09 46 38.9	+2.0
PDG	Podgorica	41.62	293	⇑P	P	09 46 39.2	+1.8
PDG	Podgorica	41.62	293	*e*P	P	09 46 38.1	+0.7
UPM	Unac-Piva	41.66	294	*e*P	P	09 46 38.4	+0.3
DRME	Dracevica, Mon	41.73	292	*e*P	P	09 46 38.7	+0.3
KRLC	Kraliky	41.73	305	*e*P	P	09 46 39.7	+1.3
KRLC	Kraliky	41.73	305	*e*P	P	09 46 39.7	+1.3
TIXI	Tiksi	41.87	23	P	P	09 46 37.7	-1.4
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.8s						
TIXI	Tiksi	41.87	23	P	P	09 46 37.7	-1.4
KSP	Ksiaz	41.94	306	*e*P	P	09 46 41.3	+1.4
TRO	Tromso	41.96	334	*e*P	P	09 46 40.7	+0.8
VRAC	Vranov	41.97	303	*e*P	P	09 46 42.1	+1.8
DPC	Dobruska-Polom	41.99	305	*e*P	P	09 46 41.5	+1.1
DPC	Dobruska-Polom	41.99	305	*e*P	P	09 46 41.5	+1.1
USRK	Ussuriysk Ar.	41.99	64	P	P	09 46 40.8	+0.3
	comp=Z,0.9nm,0.7s,baz=272,slow=7.1,SNR=4.3						
BRY	Bratogost	42.00	294	*e*P	P	09 46 41.1	+0.3
OSTC	Ostas	42.03	305	*e*P	P	09 46 42.3	+1.6
CHVC	Chvalec	42.12	305	*e*P	P	09 46 42.9	+1.4
KRUC	Moravsky	42.14	303	*e*P	P	09 46 43.5	+1.9
UPC	Upice	42.16	305	*e*P	P	09 46 43.0	+1.2
UPC	Upice	42.16	305	*e*P	P	09 46 43.0	+1.2
TREB	Trebinje	42.19	293	*e*P	P	09 46 41.6	-0.5
BLY	Banja Luka	42.49	297	*e*P	P	09 46 44.4	-0.1
MGRS	Mrkonjic Grad	42.64	296	*e*P	P	09 46 44.7	-1.1
CONA	Conrad Observa	42.70	302	*e*P	P	09 46 48.1	+1.8
	comp=Z,11nm,0.8s,SNR=14						
FAUS	Fauske	42.77	331	*e*P	P	09 46 46.9	+0.4
STEI	Steigen	42.88	331	*e*P	P	09 46 47.7	+0.3
ARSA	Arzberg	43.06	301	*e*P	P	09 46 50.7	+1.5
	comp=Z,4.9nm,0.8s						
PRU	Pruhonice	43.18	305	*e*P	P	09 46 51.2	+1.2
PRU	Pruhonice	43.18	305	*e*P	P	09 46 51.2	+1.2
BRG	Berggiesshubel	43.41	306	*i* P	P	09 46 53.3	+1.4
BRG				Amp		09 46 55.0	
	comp=Z,7.6nm,0.9s						
BRG				*e*x	x	10 22 23.0	
BRG				Amp		10 22 25.9	
	comp=Z,2.1nm,0.9s						
BRG				*e*x	x	10 22 44.7	
BRG				Amp		10 22 48.0	
	comp=Z,4.2nm,0.9s						
BRG	Berggiesshubel	43.41	306	*e*P	P	09 46 53.3	+1.4
	comp=Z,7.6nm,0.9s,baz=83,slow=7.0						
CRES	Cresnjev	43.42	299	*e*P	P	09 46 50.7	-1.4
PERS	Pernice	43.46	300	*i* P	P	09 46 53.1	+0.7
SOKA	Soboth	43.51	300	*e*P	P	09 46 54.6	+1.8
	comp=Z,10nm,0.7s,SNR=15						
CKRC	Cesky Krumlov	43.54	303	*e*P	P	09 46 53.8	+0.8
PBCC	Pribram	43.58	304	*e*P	P	09 46 54.5	+1.2
MOA	Molln	43.76	302	*e*P	P	09 46 56.0	+1.1
	comp=Z,7.0nm,0.9s,SNR=8.0						
NC405	NORSAR Array S	43.80	321	P	P	09 46 54.7	-0.3
OBKA	Obir	43.87	300	*e*P	P	09 46 57.3	+1.5
	comp=Z,12nm,0.8s,SNR=9.9						
NC602	NORSAR Array S	43.89	321	P	P	09 46 55.4	-0.2
NC602	NORSAR Array S	43.89	321	*e*P	P	09 46 55.4	-0.2
CLL	Collm	43.92	307	*i* P	P	09 46 56.9	+0.9
	comp=Z,12nm,1.1s						
CLL				*e*pP	sP	09 47 12.0	+14
CLL				*e*PP	PP	09 48 36.0	-2.0
CLL				*e*PcP	PcP	09 48 43.0	+1.1
	comp=Z,12nm,1.3s						
CLL				LmV		10 08 00.0	
	comp=Z,100nm,18.6s						
CLL	Collm	43.92	307	*i* P	P	09 46 56.9	+0.9
CLL				*e**PP	sP	09 47 12.0	+14
CLL				pmax	pmax		
	comp=Z,12nm,1.1s						
CLL	Collm	43.92	307	P	P	09 46 54.9	-1.1
CLL				IAmb	IAmb	09 46 59.3	
	comp=Z,22nm,1.5s						
CLL	Collm	43.92	307	*e*P	P	09 46 57.1	+1.1
	comp=Z,12nm,1.1s,baz=83,slow=7.0						
CLL				*e*L	L	10 06 32.1	
	comp=Z,148nm,18.3s						
GEC2	GERESS Array S	43.93	303	P	P	09 46 56.4	+0.1
GEC2				IAmb	IAmb	09 46 59.3	
	comp=Z,20nm,1.2s						
GEC2	GERESS Array S	43.93	303	*e*P	P	09 46 57.3	+1.1
	comp=Z,18nm,1.2s,baz=83,slow=7.0						
GEC2				*e*L	L	10 06 29.6	
	comp=Z,126nm,19.6s						
GERES	GERESS Array B	43.93	303	P	P	09 46 56.5	+0.3
	comp=Z,11nm,0.9s,baz=69,slow=6.8,SNR=47						
GERES				LR	LR	10 06 40.1	
	comp=Z,131nm,18.6s,baz=81,slow=38						
GERES	GERESS Array B	43.93	303	P	P	09 46 56.0	-0.2
KHC	Kasperske Hory	43.95	304	*ce*P	P	09 46 57.6	+1.3
KHC				pmax	pmax		
	comp=Z,44nm,2.5s						
KHC	Kasperske Hory	43.95	304	*e*P	P	09 46 56.7	+0.4
KHC	Kasperske Hory	43.95	304	P	P	09 46 57.0	+0.6
NC303	NORSAR Array S	43.97	321	P	P	09 46 56.4	+0.1
LJU	Ljubljana	44.00	299	*i* P	P	09 46 58.2	+1.5
LJU	Ljubljana	44.00	299	*e*P	P	09 46 57.3	+0.6
NB2	NORSAR Subarra	44.05	321	P	P	09 46 56.3	-0.7
	comp=Z,18nm,0.8s,baz=90,slow=7.9						
NB2	NORSAR Subarra	44.05	321	P	P	09 46 56.3	-0.7
	baz=90,slow=7.9						
NOA	NORSAR Array B	44.05	321	P	P	09 46 56.2	-0.7
	comp=Z,16nm,0.8s,baz=90,slow=8.0,SNR=33						
NOA				LR	LR	10 05 23.4	
	comp=Z,72nm,19.1s,baz=100,slow=36						
CEY	Cerknica	44.14	299	*e*P	P	09 46 58.2	+0.3
NAO01	NORSAR Array S	44.21	321	P	P	09 46 58.2	0.0
NBO00	NORSAR Array S	44.26	321	P	P	09 46 58.9	+0.2
NC204	NORSAR Array S	44.26	321	P	P	09 46 58.2	-0.5
OSL	Oslo	44.32	320	*e*P	P	09 47 00.3	+1.2
WET	Wettzell	44.40	304	*e*P	P	09 47 01.6	+1.7
	comp=Z,15nm,1.1s,baz=83,slow=7.0						
WET				*e*L	L	10 08 05.8	
	comp=Z,89nm,19.2s						
TIP	Timpagrande	44.40	289	⇑P	P	09 47 01.2	+1.1
TIP	Timpagrande	44.40	289	P	P	09 47 01.1	+1.1
TIP				IAmb	IAmb	09 47 02.7	
	comp=Z,13nm,1.0s						
MYKA	Terra Mystica	44.45	300	*e*P	P	09 47 01.8	+1.3
	comp=Z,6.4nm,1.0s						
KBA	Koelnbreinsper	44.55	301	*e*P	P	09 47 02.6	+1.3
	comp=Z,5.1nm,0.7s						
TRI	Trieste	44.60	299	P	P	09 47 01.7	+0.2
TRI				pmax	pmax		
	comp=Z,31nm,0.8s						
TRI	Trieste	44.60	299	P	P	09 47 01.7	+0.2
KONO	Kongsberg	44.90	319	*e*P	P	09 47 04.7	+1.0
DOMB	Dombas	45.06	323	*e*P	P	09 47 05.5	+0.5
BSEG	Bad Segeberg	45.12	311	*e*L	L	10 09 37.6	
	comp=Z,116nm,18.3s						
GRF	Grafenberg Arr	45.34	305	*e*P	P	09 47 08.9	+1.5
	comp=Z,15nm,0.9s,baz=83,slow=7.0						
GRF				*e*L	L	10 07 05.9	
	comp=Z,109nm,19.8s						
SPA0	Spitsbergen Ar	45.42	346	*e*P	P	09 47 07.8	+0.2
HOMB	Homborsund	45.58	317	*e*P	P	09 47 09.8	+0.7
WTTA	Wattenberg	45.63	302	*e*P	P	09 47 10.8	+0.9
	comp=Z,7.6nm,0.8s,SNR=5.4						
FUR	Furstenfeldbru	45.65	303	*e*L	L	10 07 32.5	
	comp=Z,116nm,21.3s						
WATA	Walderalm	45.65	302	*e*P	P	09 47 10.7	+0.7
	comp=Z,5.9nm,0.8s						
JOW	Kunigami	45.72	89	P	P	09 47 09.3	-1.3
	comp=Z,13nm,0.7s,baz=57,slow=26,SNR=4.9						
GTTG	Gottingen	45.75	308	*e*P	P	09 47 12.4	+1.8
	comp=Z,18nm,1.0s,baz=83,slow=7.0						
NRCA	Norcia	45.85	295	P	P	09 47 12.3	+0.7
SQTA	Sankt Quirin	45.92	302	*e*P	P	09 47 12.8	+0.6
	comp=Z,10.0nm,1.1s						
MOTA	Moosalm	45.96	302	*e*P	P	09 47 13.2	+0.6
	comp=Z,7.6nm,0.8s,SNR=5.6						
AKN	Aaknes	46.02	323	*e*P	P	09 47 12.6	0.0
TEOL	Teolo	46.11	299	P	P	09 47 12.9	-0.6
RETA	Reutte	46.15	302	*e*P	P	09 47 15.1	+1.2
	comp=Z,4.0nm,0.7s,SNR=5.4						
FETA	Feichten	46.29	301	*e*P	P	09 47 15.7	+0.6
	comp=Z,7.9nm,1.3s,SNR=4.2						
ODD1	Odda	46.38	320	*e*P	P	09 47 16.6	+1.1
BLS5	Blasjo	46.52	319	*e*P	P	09 47 17.0	+0.5
UBR	Ueberruh	46.53	303	*e*P	P	09 47 17.8	+0.9
	comp=Z,22nm,1.2s,baz=83,slow=7.0						
DAVA	Damuels	46.78	302	*e*P	P	09 47 20.0	+1.0
	comp=Z,16nm,0.8s,SNR=4.7						
TNS	Taunus Mts	46.97	306	*e*L	L	10 10 48.5	
	comp=Z,83nm,21.8s						
BER	Bergen	46.97	320	*e*P	P	09 47 20.5	+0.4
ASK	Askoy	47.03	321	*e*P	P	09 47 21.2	+0.7
SUE	Sulen	47.18	321	*e*P	P	09 47 22.8	+1.2
TUE	Stuetta	47.36	301	P	P	09 47 23.5	0.0
TUE				IAmb	IAmb	09 47 29.9	
	comp=Z,16nm,1.3s						
BFO	Black Forest	47.52	304	*e*L	L	10 08 41.0	
	comp=Z,79nm,20.6s						
MAT	Matsushiro	48.97	72	P	P	09 47 34.3	-1.6
MJAR	Matsushiro Arr	48.97	72	P	P	09 47 34.7	-1.2
	comp=Z,6.7nm,0.7s,baz=295,slow=8.7,SNR=20						
MJAR	Matsushiro Arr	48.97	72	P	P	09 47 35.5	-0.4
MJAR				pmax	pmax		
	comp=Z,3.0nm,1.1s						
MJAR	Matsushiro Arr	48.97	72	P	P	09 47 35.5	-0.4
BNI	Bardonecchia	49.57	300	P	P	09 47 40.5	0.0
BNI				pmax	pmax		
	comp=Z,14nm,1.1s						
BNI	Bardonecchia	49.57	300	P	P	09 47 40.5	0.0
BNI				IAmb	IAmb	09 47 43.6	
	comp=Z,14nm,1.1s						
KKM	Kota Kinabalu	49.76	121	P	P	09 47 42.7	+0.5
SBUM	Sibu	49.95	128	P	P	09 47 43.7	+0.2
SBUM				IAmb	IAmb	09 47 45.2	
	comp=Z,8.0nm,0.8s						
KMBO	Kilima Mbogo	53.15	230	P	P	09 48 07.8	0.0
	comp=Z,1.7nm,0.6s,baz=40,slow=19,SNR=5.2						
MBAR	Mbarara	56.78	237	LR	LR	10 15 01.5	
	comp=Z,20nm,18.9s,baz=22,slow=38						
MBAR	Mbarara	56.78	237	*ce*P	P	09 48 35.1	+1.1
MBAR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MBAR	Mbarara	56.78	237	P	P	09 48 33.5	-0.5
MBAR				IAmb	IAmb	09 48 34.9	
	comp=Z,7.0nm,0.6s						
TOLK	Toolik Lake Re	67.27	16	P	P	09 49 43.1	-0.5
TOLK				IAmb	IAmb	09 49 45.2	
	comp=Z,6.5nm,0.8s						
COLD	Coldfoot	68.27	17	P	P	09 49 48.3	-1.6
IMAR	Indian Mountai	68.40	19	P	P	09 49 49.1	-1.6
TOA0	Torodi Ar. Sit	68.95	270	P	P	09 49 53.8	-1.2
TOA0				IAmb	IAmb	09 49 55.9	
	comp=Z,7.8nm,1.0s						
TORD	Torodi Ar. Bea	68.95	270	P	P	09 49 53.5	-1.4
	comp=Z,2.7nm,0.4s,baz=50,slow=5.5,SNR=31						
TORD	Torodi Ar. Bea	68.95	270	P	P	09 49 53.8	-1.1
LSZ	Lusaka	69.77	229	P	P	09 50 00.3	+0.3
LSZ				pmax	pmax		
	comp=Z,8.0nm,0.8s						
LSZ	Lusaka	69.77	229	P	P	09 50 00.3	+0.3
LSZ				IAmb	IAmb	09 50 02.3	
	comp=Z,7.7nm,0.8s						
INK	Inuvik	70.48	11	P	P	09 50 02.3	-1.2
	comp=Z,2.8nm,0.6s,baz=347,slow=5.8,SNR=12						
INK	Inuvik	70.48	11	P	P	09 50 02.3	-1.2
C36M	Paulatuk	70.64	7	P	P	09 50 02.8	-1.6
C36M				IAmb	IAmb	09 50 03.7	
	comp=Z,9.0nm,0.5s						
ILAR	Eielson Array	71.07	18	P	P	09 50 05.5	-1.7
	comp=Z,1.5nm,0.7s,baz=318,slow=5.1,SNR=5.8						
ILAR				LR	LR	10 26 13.4	
	comp=Z,68nm,18.6s,baz=309,slow=40						
ILAR	Eielson Array	71.07	18	P	P	09 50 05.3	-1.9
KOWA	Kowa	72.56	275	P	P	09 50 16.8	-0.1
KOWA				IAmb	IAmb	09 50 18.7	
	comp=Z,12nm,1.1s						
JAY	Jayapura	73.06	108	LR	LR	10 25 54.0	
	comp=Z,70nm,18.4s,baz=116,slow=39						
MATP	Matopo	73.72	225	LR	LR	10 23 17.3	
	comp=Z,15nm,21.0s,baz=16,slow=36						
KDAK	Kodiak Island	75.27	24	P	P	09 50 30.7	-1.4
	comp=Z,10nm,1.0s,baz=315,slow=6.5,SNR=4.5						
DBIC	Dimbokro	78.00	269	P	P	09 50 46.6	-1.6
	comp=Z,7.7nm,0.8s,baz=29,slow=8.5,SNR=6.7						
KIC	Kosan Boka	78.10	268	*e*P	P	09 50 48.3	-0.5
	comp=Z,26nm,0.9s						
TIC	Toumodi	78.14	269	*e*P	P	09 50 48.4	-0.7
YKA	Yellowknife Ar	78.14	5	P	P	09 50 47.2	-1.0
	comp=Z,3.3nm,0.7s,baz=355,slow=5.3,SNR=81						
YKA				LR	LR	10 27 51.6	
	comp=Z,47nm,19.8s,baz=0.0,slow=38						
LIC	Lamto	78.41	269	*e*P	P	09 50 50.2	-0.3
	comp=Z,26nm,0.9s						
LBTB	Lobatse	78.98	225	LR	LR	10 30 25.5	
	comp=Z,21nm,19.1s,baz=34,slow=39						
LBTB	Lobatse	78.98	225	P	P	09 50 52.3	-1.2
LBTB				pmax	pmax		
	comp=Z,39nm,1.5s						
LBTB	Lobatse	78.98	225	P	P	09 50 52.3	-1.2
TSUM	Tsumeb	79.22	234	LR	LR	10 27 56.3	
	comp=Z,56nm,18.2s,baz=146,slow=37						
WB0	Warramunga Arr	80.84	125	P	P	09 51 02.6	-1.0
WB0				IAmb	IAmb	09 51 03.6	
	comp=Z,9.5nm,0.8s						
WRA	Warramunga Arr	80.93	125	P	P	09 51 03.3	-0.7
	comp=Z,12nm,0.7s,baz=326,slow=5.0,SNR=146						
WRA	Warramunga Arr	80.93	125	P	P	09 51 03.1	-1.0
WRAB	Tennant Creek	80.93	125	*ce*P	P	09 51 03.9	-0.1
WRAB				pmax	pmax		
	comp=Z,7.0nm,0.8s						
WRAB	Tennant Creek	80.93	125	P	P	09 51 02.1	-1.9
WB2	Warramunga Arr	80.94	125	P	P	09 51 03.8	-0.2
WR0	Warramunga Arr	81.07	125	P	P	09 51 03.8	-1.0
WR0				IAmb	IAmb	09 51 04.8	
	comp=Z,12nm,0.7s						
BOSA	Boshof	82.04	223	P	P	09 51 09.6	-0.2
	comp=Z,4.0nm,0.8s,baz=108,slow=5.4,SNR=4.8						
AS31	Alice Springs	83.41	128	P	P	09 51 15.7	-1.3
ASAR	Alice Springs	83.41	128	P	P	09 51 16.1	-0.9
	comp=Z,10nm,0.7s,baz=316,slow=5.0,SNR=155						
ASAR	Alice Springs	83.41	128	P	P	09 51 16.6	-0.4
ASAR	Alice Springs	83.41	128	P	P	09 51 16.6	-0.4

MOS ***15*** *10:03:08.4±0.8, 18°.61S×168°.94E, h213^{km}, mb4.9/38, Error ellipse: s-maj=8.4km s-min=7.0km az=121.9*

BJI ***15*** *10:03:08.1±0.0, 18°.16S×169°.14E, h200^{km}, mB5.0/42, mb5.0/62*

IDC ***15*** *10:03:09.7±0.5, 18°.60S×169°.00E, h213^{km}±4^{km}, mb4.5/25, mb1 4.6/29, mb1mx4.5/37, mbtmp5.1/29, Error ellipse: s-maj=8.9km s-min=7.7km az=93.0*

NOU ***15*** *10:03:10.0, 18°.59S×169°.01E, h205^{km}, mb5.2, Vanuatu Islands*

NEIC ***15*** *10:03:10±1.9, 18°.60S±0°.07×168°.93E±0°.08, h217^{km}±4^{km}, mb5.0/174, Error ellipse: s-maj=11.4km s-min=9.7km az=102.0*

GCMT ***15*** *10:03:12.0±0.1, 18°.60S±0°.01×168°.80E±0°.01, h212^{km}±1^{km}, MW5.3/144, Moment Tensor Solution. s104,c146; s144,c234; Duration: 1^{s}2 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.33±.02; $M_{\theta\theta}$0.65±.02; $M_{\phi\phi}$-0.32±.02; $M_{r\theta}$0.88±.02; $M_{\theta\phi}$-0.75±.02; $M_{\phi r}$0.33±.02; Best double couple: $M_0$1.32500×10^{17} NP1:ϕ_s158.00000°,δ43.00000°, λ-14.00000°. NP2:ϕ_s259.00000°,δ80.00000°, λ-132.00000°. Principal axes: T 1.3240, Plg23.0000°, Azm20.0000°; N 0.0020, Plg41.0000°, Azm268.0000°; P -1.3260, Plg40.0000°, Azm131.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 15 10:03:09.0±0.4**, 18°.59S**±0°.04×**169°.00E**±0°.04**, h209**^{km}±2^{km}**, h209**^{km}**:pP-P, n697, σ1**^{s}**25**/739**, mb4.9**/152**, 70C-52D, Fault plane solution: NP1:**ϕ_s199.20387°**,** δ52.92388°**,** λ13.39543°. **NP2:**ϕ_s101.03351°**,** δ79.34850°**,** λ142.16095°. **Principal axes:** T Plg33.8483°**,** Azm53.2851°**;** N Plg50.9076°**,** Azm267.6487°**;** P Plg17.1935°**,** Azm155.2622°**; Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	Devils Point	1.15	318	P	Pn	10 03 41.5	+0.7
LIFNC	LIFOU	2.74	217	P	Pn	10 03 55.3	-0.8
SANVU	Saraoutou	3.56	331		Pn	10 04 05.7	-0.1
SANVU	Saraoutou	3.56	331	P	Pn	10 04 06.2	+0.3
YATNC	Mamie plateau,	3.98	209	P	Pn	10 04 09.9	-1.0
DZM	Mont Dzumac	4.21	214	P	Pn	10 04 14.1	+0.3
	206nm,0.3s,baz=54,slow=8.2,SNR=1059						
DZM				S	S	10 05 06.3	+1.8
	58nm,0.3s,baz=156,slow=20,SNR=1.2						
DZM	Mont Dzumac	4.21	214	*e*Pn	Pn	10 04 13.7	-0.1
	374nm,0.4s						
DZM				*e*LR	LR	10 04 58.9	
	comp=Z,3µm,24.9s						
DZM				*e*Sn	S	10 05 02.3	-2.2
	279nm,0.2s						
DZM	Mont Dzumac	4.21	214		Pn	10 04 13.7	-0.1
DZM	Mont Dzumac	4.21	214	P	Pn	10 04 14.3	+0.5
PINNC	Pines Island,	4.26	200	P	Pn	10 04 14.2	-0.1
OUENC	Ouen Island, N	4.31	208	P	Pn	10 04 15.4	+0.4
NOUC	Port Laguerre	4.31	215	P	Pn	10 04 15.5	+0.5
ONTNC	Ouen Toro	4.40	212	P	Pn	10 04 16.8	+0.7
KOUNC	Koumac, New Ca	4.85	246	P	Pn	10 04 23.9	+2.1
MSVF	Nonsavu	8.65	86	P	Pn	10 05 13.4	+2.6
	2.9nm,0.3s,baz=255,slow=10,SNR=58						
MSVF				S	S	10 06 49.1	+0.8
	1.9nm,0.3s,baz=293,slow=23,SNR=4.5						
MSVF	Nonsavu	8.65	86	Pn	Pn	10 05 13.7	+2.9
MSVF	Nonsavu	8.65	86	P	Pn	10 05 14.0	+3.2
NFK	Norfolk Island	10.45	185	P	Pn	10 05 36.1	+2.2
	baz=10,SNR=12						
NFK				S	S	10 07 32.7	+1.6
	baz=10						
NFK	Norfolk Island	10.45	185	P	Pn	10 05 35.1	+1.2
HNR	Honiara	12.64	315	P	Pn	10 06 02.6	+0.7
	8.0nm,0.3s,baz=194,slow=2.9,SNR=6.7						
HNR	Honiara	12.64	315		Pn	10 06 00.7	-1.1
HNR	Honiara	12.64	315	P	P	10 06 05.9	+0.6
FUNA	Funafuti	14.07	46		Pn	10 06 20.3	+0.6
LHI	Lord Howe Isla	15.70	213	P	Pn	10 06 40.7	+1.4
	baz=16,SNR=4.5						
LHI	Lord Howe Isla	15.70	213	P	Pn	10 06 39.6	+0.4
LHI	Lord Howe Isla	15.70	213	P	Pn	10 06 40.5	+1.3
RAO	Raoul Island	15.98	134	P	Pn	10 06 43.1	+0.4
	43nm,0.3s,baz=180,slow=11,SNR=4.7						
RAO	Raoul Island	15.98	134	P	Pn	10 06 45.1	+2.4
OUZ	Omahuta	17.06	167	P	Pn	10 06 55.4	-0.1
OUZ	Omahuta	17.06	167	P	Pn	10 06 56.2	+0.8
WCZ	Waipu Caves	17.92	166	P	Pn	10 07 06.2	+0.7
EIDS	Eidsvold	17.93	245	P	Pn	10 07 06.1	+0.4
	baz=18,SNR=28						
EIDS	Eidsvold	17.93	245		P	10 07 03.5	0.0
EIDS				IAmb	IAmb	10 07 09.7	
	comp=Z,64nm,0.7s						
GRZ	Great Barrier	18.50	163	P	Pn	10 07 12.0	-0.2
ABAZ	Army Bay	18.66	165	P	Pn	10 07 14.0	-0.2
RVAZ	Riverhead Bore	18.77	166	P	Pn	10 07 14.6	-0.8
MBAZ	Motutapu North	18.84	165	P	Pn	10 07 15.5	-0.8
WTAZ	Waiatarua	18.92	166	P	Pn	10 07 16.5	-0.9
WIAZ	Waiheke Island	18.92	165	P	Pn	10 07 16.1	-1.2
ETAZ	East Tamaki Re	19.02	165	P	Pn	10 07 17.2	-1.3
AFI	Afiamalu	19.03	79	P	P	10 07 15.2	-0.4
AFI				pmax	pmax		
	comp=Z,52nm,0.8s						
AFI	Afiamalu	19.03	79	P	P	10 07 15.2	-0.4
AFI				IAmb	IAmb	10 07 22.2	
	comp=Z,52nm,0.8s						
KUZ	Kuaotunu	19.03	163	P	Pn	10 07 17.1	-1.5
AWAZ	Awhitu Peninsu	19.06	166	P	Pn	10 07 17.8	-1.1
MKAZ	Moumakai	19.23	165	P	Pn	10 07 19.3	-1.6
ARMA	Armidale	19.68	230	P	P	10 07 23.9	+1.4
	baz=20,SNR=6.1						
ARMA	Armidale	19.68	230	P	P	10 07 23.6	+1.1
ARMA				IAmb	IAmb	10 07 32.1	
	comp=Z,50nm,0.9s						
TGRZ	Tauranga	20.10	163	P	P	10 07 28.4	+1.7
KMRZ	Kaimai	20.12	164	P	P	10 07 28.7	+1.6
TARA	Tarawa	20.19	11	P	P	10 07 27.8	-0.1
TARA	Tarawa	20.19	11	P	P	10 07 28.9	+1.0
RMQ	Roma	20.26	244	P	P	10 07 30.8	+2.1
	baz=20,SNR=15						
TLZ	Tolley Road	20.48	165	P	P	10 07 32.7	+1.8
HIZ	Hauiti	20.50	167	P	P	10 07 32.6	+1.6
HIZ	Hauiti	20.50	167	P	P	10 07 33.5	+2.4
HAZ	Te Kaha	20.59	160	P	P	10 07 34.5	+2.6
MXZ	Matakaoa Point	20.59	159	P	P	10 07 34.0	+2.0
RUGZ	Raukumara Rang	20.74	160	P	P	10 07 35.9	+2.2
WPRZ	Whakapapatarin	20.82	164	P	Pn	10 07 39.3	-1.2
URZ	Urewera	20.84	162	P	P	10 07 35.5	+0.9
	comp=Z,156nm,0.6s,baz=277,slow=2.2,SNR=120						
URZ				S	S	10 11 18.3	+3.6
	comp=Z,8.5nm,0.8s,baz=165,slow=20,SNR=1.3						
URZ	Urewera	20.84	162	P	P	10 07 36.3	+1.7
BKZ	Black Stump Fm	21.51	164	P	P	10 07 42.1	+0.5
MGCD	Mangrove Creek	21.65	224	P	P	10 07 45.3	+2.2
	baz=22,SNR=8.2						
QRZ	Quartz Range	22.37	173	P	P	10 07 51.5	+1.7
NNZ	Nelson	22.86	171	P	P	10 07 54.6	+0.3
BFZ	Birch Farm	22.88	166	P	P	10 07 54.5	+0.1
PMG	Port Moresby	23.05	290	P	P	10 07 57.6	+1.5
	comp=Z,25nm,0.8s,baz=82,slow=8.0,SNR=6.1						
TUWZ	Tuamarina	23.16	171	P	P	10 07 57.0	+0.1
SNZO	South Karori	23.17	169	P	P	10 07 57.1	+0.2
BHW	Baring Head	23.29	169	P	P	10 07 57.8	-0.3
THZ	Tophouse	23.34	173	P	P	10 07 59.1	+0.5
MSWZ	Moikau Station	23.37	168	P	P	10 07 58.3	-0.6
BSWZ	Blackbirch Sta	23.43	171	P	P	10 08 00.7	+1.3
MTSU	Mount Surprise	23.43	267	P	P	10 08 01.7	+2.1
	baz=23,SNR=18						
CMWZ	Cape Campbell	23.51	170	P	P	10 08 01.7	+1.6
PLWZ	Palliser	23.52	168	P	P	10 08 00.1	-0.2
KHZ	Kahutara	24.06	172	P	P	10 08 04.3	-0.8
CNB	Canberra Magne	24.09	222	P	P	10 08 07.2	+1.6
	baz=24,SNR=24						
YNG	Young	24.11	225	P	P	10 08 07.4	+1.6
	baz=24,SNR=7.8						
QLP	Quilpie	24.18	246	P	P	10 08 08.5	+2.1
	baz=24,SNR=12						
LTZ	Lake Taylor	24.28	174	P	P	10 08 07.2	0.0
KNTN	Kanton	24.57	52	P	P	10 08 09.6	-0.4
OXZ	Oxford	24.80	175	P	P	10 08 11.6	-0.2
FOZ	Fox Glacier	24.88	179	P	P	10 08 13.3	+0.8
RPZ	Rata Peaks	25.11	176	P	P	10 08 14.9	+0.3
	comp=Z,75nm,0.7s,baz=309,slow=2.0,SNR=57						
RPZ	Rata Peaks	25.11	176	P	P	10 08 14.4	-0.2
MQZ	McQueen's Vall	25.23	174	P	P	10 08 15.8	+0.1
LBZ	Lake Benmore	25.74	178	P	P	10 08 20.1	-0.1
LBZ				IAmb	IAmb	10 08 21.9	
	comp=Z,59nm,0.7s						
WKZ	Wanaka	26.16	180	P	P	10 08 24.8	+0.8
WKZ				IAmb	IAmb	10 08 35.3	
	comp=Z,48nm,1.0s						
ODZ	Otahua Downs	26.41	177	P	P	10 08 25.6	-0.6
ODZ				IAmb	IAmb	10 08 28.2	
	comp=Z,38nm,1.0s						
MLZ	Mavora Lakes	26.71	181	P	P	10 08 28.8	-0.2
MLZ				IAmb	IAmb	10 08 30.7	
	comp=Z,74nm,1.1s						
MANU	Manus Island	26.83	305	P	P	10 08 25.9	-4.4
DCZ	Deep Cove	26.84	183	P	P	10 08 30.9	+0.8
WHZ	Wether Hill Ro	27.24	182	P	P	10 08 33.2	-0.4
WHZ				IAmb	IAmb	10 08 35.0	

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      comp=Z,69nm,1.0s
PATS  Pohnpei           27.37 336    P        P        10 08 35.3 +0.2
      baz=28,SNR=4.2
PATS  Pohnpei           27.37 336    P        P        10 08 34.0 -1.1
TOO   Toolangi          27.94 223    P        P        10 08 41.1 +1.1
      baz=28,SNR=12
TOO   Toolangi          27.94 223    P        P        10 08 40.9 +0.9
TOO                                  pmax     pmax
      comp=Z,12nm,1.0s
TOO   Toolangi          27.94 223    P        P        10 08 40.9 +0.9
STKA  Stephens Creek    28.00 237    P        P        10 08 41.9 +1.3
      baz=28,SNR=21
STKA  Stephens Creek    28.00 237    P        P        10 08 41.4 +0.7
      comp=Z,12nm,0.8s,baz=83,slow=10,SNR=20
STKA                                 pP       pP       10 09 22.9 +1.6
      comp=Z,13nm,0.7s,baz=61,slow=9.0,SNR=3.2
STKA                                 PcP      PcP      10 11 50.4 +0.3
      comp=Z,11nm,0.7s,baz=77,slow=3.9,SNR=5.2
STKA                                 ScP      ScP      10 15 10.3 -0.8
      comp=Z,1.8nm,0.6s,baz=5.8,slow=5.9,SNR=3.0
STKA  Stephens Creek    28.00 237    P        P        10 08 41.3 +0.7
ARPS  Mount Arapiles    29.95 227    P        P        10 08 58.8 +1.0
      baz=30,SNR=14
HTT   Hallett           30.67 235    P        P        10 09 05.1 +0.9
      baz=31,SNR=8.4
GENI  Genyem            32.40 296    P        P        10 09 20.7 +1.2
      comp=Z,244nm,1.0s
WR0   Warramunga Arr    32.52 262    P        P        10 09 19.6 -0.9
WB0   Warramunga Arr    32.67 262    P        P        10 09 21.0 -0.8
WB2   Warramunga Arr    32.70 262    P        P        10 09 21.7 -0.3
WRAB  Tennant Creek     32.70 262  i P        P        10 09 21.7 -0.4
WRAB                                 pmax     pmax
      comp=Z,23nm,1.8s
WRA   Warramunga Arr    32.71 262    P        P        10 09 21.6 -0.6
      comp=Z,2.1nm,0.3s,baz=80,slow=6.2,SNR=69
WRA                                  pP       pwP      10 10 06.9 -2.9
      comp=Z,2.8nm,0.8s,baz=90,slow=9.0,SNR=1.8
WRA                                  PcP      PcP      10 12 02.3 -0.4
      comp=Z,6.0nm,0.8s,baz=92,slow=3.4,SNR=6.7
WRA                                  S        S        10 14 20.0 -3.2
      comp=Z,2.5nm,0.9s,baz=93,slow=19,SNR=5.3
WRA                                  ScP      ScP      10 15 27.9 +1.0
      comp=Z,5.8nm,0.9s,baz=90,slow=3.6,SNR=9.4
WRA                                  PKiKP    PKiKP    10 19 27.9 -1.4
      comp=Z,1.1nm,0.8s,baz=15,slow=0.7,SNR=6.9
WRA   Warramunga Arr    32.71 262    P        P        10 09 20.9 -1.2
BBOO  Buckleboo         32.73 238    P        P        10 09 23.1 +0.9
      baz=33,SNR=27
BBOO  Buckleboo         32.73 238    P        P        10 09 22.0 -0.2
BBOO                                 IAmb     IAmb     10 09 23.7
      comp=Z,29nm,0.7s
AS31  Alice Springs     33.07 255    P        P        10 09 25.0 -0.3
AS31                                 IAmb     IAmb     10 09 26.1
      comp=Z,13nm,0.5s
ASAR  Alice Springs     33.07 255    P        P        10 09 25.2  0.0
      comp=Z,19nm,0.5s,baz=82,slow=8.7,SNR=601
ASAR                                 pP       pwP      10 10 10.8 -1.8
      comp=Z,15nm,0.9s,baz=81,slow=8.8,SNR=2.0
ASAR                                 PcP      PcP      10 12 03.2 -0.5
      comp=Z,3.3nm,0.7s,baz=97,slow=2.7,SNR=4.2
ASAR                                 S        S        10 14 26.1 -2.5
      comp=Z,6.6nm,0.9s,baz=88,slow=17,SNR=12
ASAR                                 ScP      ScP      10 15 29.3 +1.2
      comp=Z,3.4nm,0.9s,baz=85,slow=3.7,SNR=7.5
ASAR                                 PKiKP    PKiKP    10 19 27.9 -1.6
      comp=Z,0.9nm,0.7s,baz=83,slow=2.4,SNR=7.0
ASAR  Alice Springs     33.07 255    P        P        10 09 24.7 -0.5
WRKA  Warakurna         38.22 253    P        P        10 10 09.3 +0.3
      baz=38,SNR=49
FORT  Forrest           38.92 244    P        P        10 10 15.1 +0.4
      baz=39,SNR=9.6
FORT  Forrest           38.92 244    P        P        10 10 14.8  0.0
FORT                                 IAmb     IAmb     10 10 22.1
      comp=Z,29nm,0.8s
TBI   Tubuai            38.98 104  eLR        LR       10 21 12.4
      comp=Z,194nm,32.2s
FAKI  Fak Fak           39.19 289    P        P        10 10 17.4 +0.2
      comp=Z,39nm,0.9s
PPT2  Papeete2          39.33  95  eLR        LR       10 21 22.5
      comp=Z,201nm,26.0s
GUMO  Guam              39.85 322    P        P        10 10 23.3 +0.8
      comp=Z,381nm,2.0s
SWI   Sorong            41.00 291    P        P        10 10 32.6 +0.6
      comp=Z,2µmcomp=Z,54nm,0.8s
FITZ  Fitzroy Crossi    41.08 264    P        P        10 10 33.6 +1.0
      baz=41,SNR=26
FITZ  Fitzroy Crossi    41.08 264    S        S        10 16 28.5 -1.3
      comp=Z,3.1nm,1.0s,baz=346,slow=17,SNR=2.0
KMBL  Kambalda          44.26 244    P        P        10 10 57.8 -0.2
      baz=44,SNR=8.5
SANI  Sanana            45.22 286    P        P        10 11 06.1 +0.3
      comp=Z,21nm,1.2s
PSA00 Pilbara Seismi    46.11 258    P        P        10 11 12.1 -0.6
PSA00                                IAmb     IAmb     10 11 14.2
      comp=Z,22nm,0.7s
MEEK  Meekatharra       46.95 251    P        P        10 11 19.6 +0.4
      baz=47,SNR=25
KLBR  Kellerberrin      47.79 244    P        P        10 11 25.3 -0.3
      baz=48,SNR=20
NWAO  Narrogin (SRO)    48.31 242    P        P        10 11 30.0 +0.5
      baz=48,SNR=4.6
BLDU  Ballidu           48.65 245    P        P        10 11 32.0 -0.1
      baz=49,SNR=5.9
MORW  Morawa            49.21 247    P        P        10 11 37.6 +1.3
      baz=49,SNR=4.0
KAPI  Kappang           49.88 279    P        P        10 11 42.0 +0.4
      comp=Z,8.4nm,0.8s,baz=148,slow=10,SNR=5.6
KCP   Kidapawan         50.22 296⇑ eP       P        10 11 45.3 +1.1
GLSP  General Luna,     50.83 300  eP       P        10 11 48.2 -0.5
GIRL  Giralia           51.18 256    P        P        10 11 52.9 +1.6
      baz=51,SNR=4.0
TOLI2 Tolitoli          51.26 287    P        P        10 11 49.9 -2.0
PAGZ  Pagadian          52.10 296  eP       P        10 11 58.0 -0.1
CNOP  Candoni, Negro    53.74 298  eP       P        10 12 08.5 -1.6
JCNP  Jose Panganiba    56.11 302  eP       P        10 12 26.2 -0.9
SPMM  Sapulut           56.69 289    P        P        10 12 33.0 +1.8
ENPP  El Nido           57.16 297  eP       P        10 12 34.2 -0.2
BATP  Bataraza          57.36 294  eP       P        10 12 36.3 +0.4
TGY   Tagaytay City     57.43 301    P        P        10 12 36.5 +0.1
      comp=Z,119nm,0.3s,baz=209,slow=8.9,SNR=3.8
SMPP  San Manuel, Pa    58.76 303  eP       P        10 12 45.0 -0.5
VNDA  Vanda             59.07 182    P        P        10 12 46.4 -0.4
      comp=Z,7.4nm,0.8s,baz=357,slow=8.9,SNR=20
VNDA  Vanda             59.07 182    P        P        10 12 45.9 -0.9
VNDA                                 IAmb     IAmb     10 12 47.6
      comp=Z,34nm,1.3s
SBA   Scott Base        59.31 181    P        P        10 12 49.1 +0.7
SBA                                  pmax     pmax
      comp=Z,140nm,1.2s
SBA   Scott Base        59.31 181    P        P        10 12 49.0 +0.7
JOW   Kunigami          60.00 318    P        P        10 12 54.4 +0.6
      comp=Z,29nm,0.7s,baz=159,slow=7.7
KSM   Kuching           61.01 282    P        P        10 13 01.0  0.0
INU   Inuyama           61.63 331    P        P        10 13 05.5 +0.9
INU                                  IAmb     IAmb     10 13 06.7
      comp=Z,92nm,1.5s
JMN   Monobe            61.87 327    P        P        10 13 07.2 +0.9
JMN                                  IAmb     IAmb     10 13 08.3
      comp=Z,36nm,0.8s
JSU   Suzuyama          62.04 323    P        P        10 13 08.3 +0.8
MJAR  Matsushiro Arr    62.07 332    P        P        10 13 07.5 -0.1
      comp=Z,30nm,0.9s,baz=164,slow=7.0,SNR=42
MJAR  Matsushiro Arr    62.07 332    P        P        10 13 07.7 +0.1
MJAR                                 pmax     pmax
      comp=Z,15nm,1.0s
MJAR  Matsushiro Arr    62.07 332    P        P        10 13 07.7 +0.1
MAJO  Matsushiro        62.08 332  i P        P        10 13 07.5 -0.1
MAJO                                 pmax     pmax
      comp=Z,47nm,1.0s
MAJO  Matsushiro        62.08 332    P        P        10 13 07.2 -0.4
MAJO                                 IAmb     IAmb     10 13 09.2
      comp=Z,44nm,0.9s
MAT   Matsushiro        62.08 332    P        P        10 13 07.9 +0.3
MAT                                eS       S        10 21 15.4 -0.3
JWT   Wachi             62.34 329    P        P        10 13 10.4 +1.0
NACB  Ninganchiao       62.79 311    P        P        10 13 13.2 +0.6
NACB                                 IAmb     IAmb     10 13 13.9
      comp=Z,48nm,0.9s
TPUB  Ta-pu             62.95 310    P        P        10 13 13.9 +0.3
JNU   Nakatsue          63.01 324    P        P        10 13 14.4 +0.6
SSLB  Suanglung         63.01 310    P        P        10 13 14.2 +0.1
SSLB                                 IAmb     IAmb     10 13 14.8
      comp=Z,41nm,0.7s
YHNB  Yeheng            63.25 311    P        P        10 13 16.5 +0.9
JHS   Saijyo            63.26 327    P        P        10 13 16.5 +1.1
JHS                                  IAmb     IAmb     10 13 23.1
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      comp=Z,62nm,1.1s
JSD   Sado              63.30 333    P        P        10 13 15.9 +0.3
JKA   Kamikawa-asahi    66.91 340    P        P        10 13 39.6 +0.9
ASAJ  Asahikawa         66.92 340    P        P        10 13 39.6 +0.9
ASAJ                                 pmax     pmax
      comp=Z,90nm,0.8s
TJN   Taejon            67.36 324  i P        P        10 13 41.9 +0.2
KSRS  Korea Array       67.84 326    P        P        10 13 45.6 +0.9
      comp=Z,5.4nm,0.8s,baz=131,slow=6.2,SNR=24
KSRS                                 PKPPKP   P'P'df   10 42 02.5 -0.3
      comp=Z,1.1nm,0.8s,baz=358,slow=1.9,SNR=4.8
KSAR  Wonju Array Be    67.86 326    P        P        10 13 45.0 +0.2
KSAR  Wonju Array Be    67.86 326    P        P        10 13 45.0 +0.2
INCN  Inchon            68.56 325    P        P        10 13 49.1 -0.1
INCN                                 pmax     pmax
      comp=Z,149nm,1.5s
INCN  Inchon            68.56 325    P        P        10 13 49.0 -0.1
YSS   Yuzh-Sakhalins    69.39 341  eP       P        10 13 55.1 +1.1
YSS                                  pmax     pmax
      comp=Z,70nm,0.8s
YSS   Yuzh-Sakhalins    69.39 341    P        P        10 13 54.0 -0.1
YSS                                  IAmb     IAmb     10 13 57.1
      comp=Z,63nm,0.9s
NJ2   Nanjing           69.58 316⇓ iP       P        10 13 56.8 +1.2
NJ2                                  pmax     pmax
      comp=Z,14nm,0.7s
MSHR  Mys Shultsa       70.15 331  i P        P        10 13 59.3 +0.6
MSHR                                 pmax     pmax
      comp=Z,17nm,0.7s
USA0B Ussuriysk Arra    71.06 333  i P        P        10 14 05.3 +1.1
USA0B Ussuriysk Arra    71.06 333    P        P        10 14 05.0 +0.8
USA0B                                IAmb     IAmb     10 14 06.8
      comp=Z,71nm,1.4s
USRK  Ussuriysk Ar.     71.06 333    P        P        10 14 05.1 +0.9
      comp=Z,16nm,0.7s,baz=127,slow=5.7,SNR=48
USRK                                 pP       pP       10 14 53.1 -0.3
      comp=Z,3.4nm,0.8s,baz=131,slow=5.8,SNR=2.0
USRK  Ussuriysk Ar.     71.06 333    P        P        10 14 05.5 +1.3
QSPA  South Pole Qui    71.46 180    P        P        10 14 05.7 -0.9
WHN   Wuhan             71.75 312 ⇑P        P        10 14 09.5 +0.9
WHN                                  pmax     pmax
      comp=Z,42nm,0.8s
PET   Petropavlovsk     71.87 353  i P        P        10 14 09.4 +0.5
PET                                  pmax     pmax
      comp=Z,179nm,0.5s
PET   Petropavlovsk     71.87 353    P        P        10 14 09.1 +0.2
PEA0B Petropavlovsk-    72.06 353    P        P        10 14 11.6 +1.6
PEA0B                                pmax     pmax
      comp=Z,108nm,1.0s
PEA0B Petropavlovsk-    72.06 353    P        P        10 14 11.6 +1.6
PETK  Petropavlovsk-    72.06 353    P        P        10 14 11.2 +1.1
      comp=Z,72nm,0.8s,baz=135,slow=5.7,SNR=104
PETK  Petropavlovsk-    72.06 353    P        P        10 14 11.5 +1.5
PETK  Petropavlovsk-    72.06 353    P        P        10 14 11.5 +1.5
DL2   Dalian            72.36 323    P        P        10 14 13.5 +1.4
DL2                                  pP       pP       10 14 59.9 -1.5
DL2                                eS       SKiKP    10 23 24.4 -1.5
DL2                                  pmax     pmax
      comp=Z,110nm,0.7s
DL2                                  pmax     pmax
      comp=Z,280nm,5.1s
MDJ   Mudanjiang        72.44 332    P        P        10 14 14.0 +1.5
MDJ                                  pmax     pmax
      comp=Z,51nm,0.9s
MDJ                                  pmax     pmax
      comp=Z,230nm,4.7s
MDJ   Mudanjiang        72.44 332    P        P        10 14 13.6 +1.1
MDJ                                  IAmb     IAmb     10 14 15.0
      comp=Z,46nm,1.0s
TIA   Tai'an            73.31 318    P        P        10 14 18.4 +0.6
TIA                                  pmax     pmax
      comp=Z,37nm,0.8s
TIA                                  LR       LR
      comp=Z,140nm,10.8s
TIA                                  LR       LR
      comp=Z,180nm,10.3s
TIA                                  LR       LR
      comp=Z,240nm,15.9s
CN2   Changchun         73.79 329⇑ iP       P        10 14 21.4 +1.0
CN2                                epP      pP       10 15 11.0 +1.1
CN2                                eS       S        10 23 35.3 +1.1
CN2                                  pmax     pmax
      comp=Z,70nm,0.7s
NIKH  Nikolski High     73.80  14    P        P        10 14 20.4 +0.1
RPN   Rapa Nui          74.56 114    P        P        10 14 25.6 +0.2
RPN                                  pmax     pmax
      comp=Z,161nm,1.3s
RPN   Rapa Nui          74.56 114    P        P        10 14 25.6 +0.2
GRNR  Gornyy            74.77 339⇑ iP       P        10 14 28.0 +2.1
GRNR                                 pmax     pmax
      comp=Z,40nm,1.1s
GRNR                                 MLR      MLR
      comp=E,270nm,17.0s
GRNR                                 MLR      MLR
      comp=N,140nm,14.0s
GRNR                                 MLR      MLR
      comp=Z,110nm,12.0s
ENH   Enshi             75.08 310    P        P        10 14 28.2  0.0
ENH                                  IAmb     IAmb     10 14 29.2
      comp=Z,15nm,0.6s
UNV   Unalaska Valle    75.16  15    P        P        10 14 27.4 -0.6
KLR   Kul'dur           75.19 336  i P        P        10 14 29.8 +1.5
KLR                                  pmax     pmax
      comp=Z,32nm,1.1s
GYA   Guiyang           75.26 305 ⇓P        P        10 14 30.8 +1.4
GYA                                  PcP      PcP      10 14 42.8 +1.0
GYA                                  S        S        10 23 53.0 +1.4
GYA                                  sS       sS       10 25 18.3 +2.5
GYA                                  pmax     pmax
      comp=Z,13nm,0.9s
LOEI  Loei              75.63 294    P        P        10 14 18.0  -14
      comp=Z,3µmcomp=Z,17nm,0.9s
BJT   Baijiatuau        76.28 321    P        P        10 14 35.7 +1.0
BJT                                  pmax     pmax
      comp=Z,30nm,0.7s
BJT   Baijiatuau        76.28 321    P        P        10 14 35.7 +1.0
BJT                                  IAmb     IAmb     10 14 36.9
      comp=Z,30nm,0.7s
BJI   Beijing           76.29 321    P        P        10 14 36.3 +1.6
BJI                                  PcP      PcP      10 14 46.1 +0.4
BJI                                  S        S        10 24 05.1 +3.2
BJI                                  pmax     pmax
      comp=Z,40nm,0.7s
LAMP  Lampang           77.46 295    P        P        10 14 44.0 +2.2
      comp=Z,35nm,0.8s
XAN   Xi'an             77.50 313    P        P        10 14 43.0 +1.2
XAN                                  S        S        10 24 19.0 +3.5
XAN                                  pmax     pmax
      comp=Z,42nm,0.9s
XAN                                  LR       LR
      comp=Z,260nm,15.2s
XAN                                  LR       LR
      comp=Z,300nm,16.3s
XAN                                  LR       LR
      comp=Z,520nm,15.2s
XAN   Xi'an             77.50 313    P        P        10 14 42.7 +0.9
XAN                                  pmax     pmax
      comp=Z,33nm,0.9s
XAN   Xi'an             77.50 313    P        P        10 14 42.7 +0.9
XAN                                  IAmb     IAmb     10 14 43.9
      comp=Z,32nm,0.9s
KMI   Kunming           77.74 302 ⇑P        P        10 14 45.5 +2.0
KMI                                  pP       pwP      10 15 35.0 -0.6
KMI                                  sP       sP       10 15 54.4 -0.7
KMI                                  PP       PP       10 17 41.8 -0.3
KMI                                  pmax     pmax
      comp=Z,37nm,0.8s
KMI                                  pmax     pmax
      comp=Z,110nm,3.6s
KMI   Kunming           77.74 302    P        P        10 14 45.0 +1.5
KMI                                  pmax     pmax
      comp=Z,28nm,0.8s
KMI   Kunming           77.74 302    P        P        10 14 45.0 +1.5
KMI                                  IAmb     IAmb     10 14 46.3
      comp=Z,28nm,0.8s
CM04  Chiang Mai Arr    77.97 294    P        P        10 14 46.8 +2.2
      comp=Z,120nmcomp=Z,11nm,0.9s
CM09  Chiang Mai Arr    77.98 294    P        P        10 14 47.3 +2.6
      comp=Z,111nmcomp=Z,12nm,0.9s
CM01  Chiang Mai Arr    78.00 294    P        P        10 14 47.4 +2.6
      comp=Z,1µmcomp=Z,15nm,0.9s
CM05  Chiang Mai Arr    78.00 294    P        P        10 14 47.0 +2.2
      comp=Z,73nmcomp=Z,7.9nm,0.8s
CM02  Chiang Mai Arr    78.02 294    P        P        10 14 47.0 +2.1
      comp=Z,98nmcomp=Z,11nm,0.8s
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CM31  Chiang Mai Arr    78.03 294    P        P        10 14 47.0 +2.1
CMAR  Chiang Mai Arr    78.03 294    P        P        10 14 44.9  0.0
      comp=Z,6.0nm,0.7s,baz=132,slow=4.3,SNR=32
CMAR                                 pP       pP       10 15 35.4 +1.0
      comp=Z,6.6nm,0.8s,baz=128,slow=3.7,SNR=3.1
CMAR                                 PKKPbc   PKKPbc   10 33 43.6 +0.1
      comp=Z,0.8nm,0.5s,baz=297,slow=3.7,SNR=4.0
CMAR  Chiang Mai Arr    78.03 294    P        P        10 14 45.9 +1.0
CM15  Chiang Mai Arr    78.04 294    P        P        10 14 47.0 +2.0
      comp=Z,13nm,0.8s
CM13  Chiang Mai Arr    78.05 294    P        P        10 14 47.5 +2.4
      comp=Z,10.0nm,0.9s
CMMT  Chiang Mai        78.17 295    P        P        10 14 46.6 +0.9
      comp=Z,303nmcomp=Z,8.7nm,0.9s
CHTO  Chiang Mai        78.17 295    P        P        10 14 46.8 +1.1
CHTO                                 pmax     pmax
      comp=Z,11nm,0.8s
CHTO  Chiang Mai        78.17 295    P        P        10 14 46.8 +1.1
CM33  Chiang Mai Arr    78.17 295    P        P        10 14 47.0 +1.3
MAW   Mawson            78.95 202    P        P        10 14 49.9 +0.8
      comp=Z,70nm,0.9s,baz=114,slow=8.9,SNR=9.4
MAW   Mawson            78.95 202    P        P        10 14 50.1 +1.1
MAW   Mawson            78.95 202    P        P        10 14 50.1 +1.1
MA2   Magadan           79.30 351    P        P        10 14 51.0 +0.1
      comp=Z,18nm,0.7s
MA2   Magadan           79.30 351    P        P        10 14 51.0 +0.1
MA2   Magadan           79.30 351    P        P        10 14 50.9 +0.1
MA2                                  IAmb     IAmb     10 14 52.1
      comp=Z,23nm,0.8s
CHGN  Chignik           79.49  18    P        P        10 14 51.6 -0.3
CHGN                                 IAmb     IAmb     10 14 55.3
      comp=Z,35nm,0.7s
HHC   Hu-ho-hao-te      79.58 319  eP       P        10 14 54.5 +1.5
HHC                                  pP       pP       10 15 41.9 -1.2
HHC                                  S        S        10 24 38.8 +1.4
HHC                                  pmax     pmax
      comp=Z,25nm,1.1s
HHC                                  pmax     pmax
      comp=Z,130nm,6.5s
CD2   Chengdu           79.66 308    P        P        10 14 54.5 +0.9
CD2                                  S        S        10 24 40.3 +1.8
CD2                                  pmax     pmax
      comp=Z,20nm,1.1s
CD2                                  pmax     pmax
      comp=Z,160nm,4.3s
HIA   Hailar            80.44 330    P        P        10 14 57.2 -0.1
HIA                                  pmax     pmax
      comp=Z,10.0nm,0.8s
HIA   Hailar            80.44 330    P        P        10 14 57.2 -0.1
ZEA   Zeya              80.47 336  eP       P        10 14 58.9 +1.6
ZEA                                e                   10 15 48.6
ZEA                                  pmax     pmax
      comp=Z,10.0nm,1.2s
OHAK  Old Harbor        81.82  20    P        P        10 15 05.4 +1.1
LZH   Lanzhou           82.12 312  eP       P        10 15 08.3 +1.6
LZH                                  pP       pP       10 16 00.4 +3.5
LZH                                  sP       sP       10 16 23.0 +4.2
LZH                                  pmax     pmax
      comp=Z,28nm,1.1s
LZH                                  pmax     pmax
      comp=Z,200nm,4.6s
LZH                                  LR       LR
      comp=Z,320nm,11.9s
LZH                                  LR       LR
      comp=Z,180nm,9.8s
LZH                                  LR       LR
      comp=Z,280nm,13.3s
SEY   Seymchan          82.30 352  i P        P        10 15 06.0 -0.7
KDAK  Kodiak Island     82.50  20    P        P        10 15 08.2 +0.3
      comp=Z,21nm,0.7s,baz=267,slow=2.7,SNR=13
KDAK  Kodiak Island     82.50  20    P        P        10 15 08.7 +0.9
KDAK                                 pmax     pmax
      comp=Z,38nm,1.0s
KDAK  Kodiak Island     82.50  20    P        P        10 15 08.7 +0.9
KDAK                                 IAmb     IAmb     10 15 10.0
      comp=Z,38nm,0.9s
BELA  Belgrano 2        82.76 175    P        P        10 15 07.3 -1.8
GAMB  Gambell           83.46   8    P        P        10 15 13.6 +1.0
GAMB                                 IAmb     IAmb     10 15 14.8
      comp=Z,37nm,1.0s
HOM   Homer             84.30  19    P        P        10 15 18.5 +1.6
      baz=217
CNPM  China Poot        84.32  19    P        P        10 15 18.5 +1.4
SVW2  Sparrevohn        84.34  16    P        P        10 15 18.2 +1.0
SVW2                                 IAmb     IAmb     10 15 19.4
      comp=Z,53nm,1.3s
RSO   Redoubt South     84.61  18    P        P        10 15 19.4 +0.6
ANM   Nome              85.21  11    P        P        10 15 23.0 +1.6
ANM                                  pmax     pmax
      comp=Z,45nm,1.4s
ANM   Nome              85.21  11    P        P        10 15 23.0 +1.6
ANM                                  IAmb     IAmb     10 15 24.2
      comp=Z,45nm,1.4s
SYO   Syowa Base        85.49 196⇓ iP       P        10 15 23.1 +0.2
SYO   Syowa Base        85.49 196⇓ ePcP     PcP      10 15 25.5  0.0
SYO   Syowa Base        85.49 196⇑ epP      pP       10 16 15.4 +1.8
SYO   Syowa Base        85.49 196⇑ esP      sP       10 16 36.2 +0.7
O22K  Cooper Landing    85.54  19    P        P        10 15 24.1 +0.9
      baz=219
O22K  Cooper Landing    85.54  19    P        P        10 15 23.9 +0.8
TNA   Tin City          85.70   9    P        P        10 15 25.2 +1.4
      baz=202,SNR=32
TNA   Tin City          85.70   9    P        P        10 15 24.4 +0.7
TNA                                  IAmb     IAmb     10 15 26.4
      comp=Z,44nm,1.1s
TTA   Tatalina          85.77  15    P        P        10 15 24.9 +0.6
TTA                                  pmax     pmax
      comp=Z,8.0nm,0.8s
TTA   Tatalina          85.77  15    P        P        10 15 24.9 +0.6
SUA   Susitna One       86.00  18    P        P        10 15 25.5 -0.1
SUA                                  IAmb     IAmb     10 15 28.6
      comp=Z,17nm,0.8s
RC01  Rabbit Creek A    86.01  19    P        P        10 15 26.1 +0.7
      baz=219
YAK   Yakutsk           86.19 343  eP       P        10 15 26.6 +0.4
YAK                                e*PP     pP       10 16 15.9 -1.1
YAK                                eS       S        10 25 29.3  -13
YAK                                e                   10 25 44.3
YAK                                  pmax     pmax
      comp=Z,67nm,0.9s
YAK                                  pmax     pmax
      comp=N,11nm,0.9s
YAK                                  pmax     pmax
      comp=E,6.0nm,1.1s
YAK                                  smax     smax
      comp=N,87nm,1.6s
YAK                                  smax     smax
      comp=E,52nm,1.9s
YAK   Yakutsk           86.19 343    P        P        10 15 26.8 +0.6
ULN   Ulaanbaatar       86.21 323c iP       P        10 15 28.0 +1.1
ULN                                  pmax     pmax
      comp=Z,37nm,1.0s
ULN   Ulaanbaatar       86.21 323    P        P        10 15 27.5 +0.5
ULN                                  IAmb     IAmb     10 15 29.0
      comp=Z,34nm,1.0s
O02D  Mt. Diablo Mer    86.21  45    P        P        10 15 29.3 +2.3
      baz=242,SNR=7.3
GTA   Gaotai            86.52 313 ⇑P        P        10 16 04.4  +36
GTA                                  pP       pP       10 16 17.9 -1.5
GTA                                  sP       sP       10 16 22.0  -19
GTA   Gaotai            86.52 313 ⇑P        P        10 15 29.8 +1.2
GTA                                  pP       pP       10 16 17.8 -1.6
GTA                                  sP       sP       10 16 41.1 -0.1
GTA                                  SKS      S        10 25 35.8  -12
GTA                                  S        ScS      10 25 52.3 -2.3
GTA                                  pmax     pmax
      comp=Z,18nm,1.1s
GTA                                  pmax     pmax
      comp=Z,60nm,5.8s
SONM  Songino Array     86.56 323    P        P        10 15 29.1 +0.5
      comp=Z,19nm,0.8s,baz=148,slow=5.7,SNR=33
SONM                                 pP       pP       10 16 19.4 -0.1
      comp=Z,2.4nm,0.8s,baz=146,slow=4.3,SNR=1.4
SONM                                 PKKPbc   PKKPbc   10 33 23.4 -2.2
      comp=Z,1.1nm,0.6s,baz=267,slow=4.5,SNR=5.1
WDC   Whiskeytown Da    86.56  45    P        P        10 15 29.7 +1.1
WDC                                  pmax     pmax
      comp=Z,15nm,1.1s
WDC   Whiskeytown Da    86.56  45    P        P        10 15 29.7 +1.1
WDC                                  IAmb     IAmb     10 15 33.9
      comp=Z,15nm,1.1s
PMR   Palmer            86.59  19    P        P        10 15 28.0 -0.2
PMR                                  pmax     pmax
      comp=Z,34nm,1.4s
PMR   Palmer            86.59  19    P        P        10 15 28.0 -0.2
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PMR                                     IAmb     IAmb      10 15 34.8
      comp=Z,34nm,1.4s
N02D  Trinity Center      86.64  45     P        P         10 15 31.1 +2.0
      baz=242,SNR=7.5
M02C  Callahan            86.74  44     P        P         10 15 31.6 +2.0
      baz=242,SNR=6.2
ARVC  Arvin               86.76  51     P        P         10 15 31.1 +1.4
      baz=245
GHO   Glory Hole Cre      86.79  19     P        P         10 15 29.3  0.0
GHO                                     IAmb     IAmb      10 15 35.6
      comp=Z,13nm,0.8s
ORV   Oroville            86.80  46     P        P         10 15 30.6 +0.8
ORV                                     pmax     pmax
      comp=Z,6.0nm,0.9s
ORV   Oroville            86.80  46     P        P         10 15 30.6 +0.8
VES   Vestal, Richgr      86.88  51     P        P         10 15 31.1 +0.9
      baz=244
CUT   Chulitna            86.89  18     P        P         10 15 28.8 -0.8
      baz=218
CMB   Columbia Colle      86.89  48     P        P         10 15 30.2 -0.2
CMB                                     pmax     pmax
      comp=Z,12nm,1.2s
CMB   Columbia Colle      86.89  48     P        P         10 15 30.2 -0.2
O03E  Paynes Creek        86.93  46     P        P         10 15 31.9 +1.4
      baz=243,SNR=7.7
MWC   Mount Wilson        86.95  52     P        P         10 15 30.9  0.0
MWC                                     pmax     pmax
      comp=Z,12nm,1.3s
MWC   Mount Wilson        86.95  52     P        P         10 15 30.9  0.0
YBH   Yreka Blue Hor      86.99  44     P        P         10 15 31.5 +0.7
YBH                                     pmax     pmax
      comp=Z,11nm,1.1s
YBH   Yreka Blue Hor      86.99  44     P        P         10 15 31.5 +0.7
HUMO  Hull Mountain       87.24  43     P        P         10 15 28.8 -3.1
HUMO                                    IAmb     IAmb      10 15 34.6
      comp=Z,16nm,1.1s
ISA   Isabella, Lake      87.25  51     P        P         10 15 33.7 +1.6
      baz=245
ISA   Isabella, Lake      87.25  51     P        P         10 15 30.9 -1.2
ISA                                     pmax     pmax
      comp=Z,8.0nm,1.0s
ISA   Isabella, Lake      87.25  51     P        P         10 15 30.9 -1.2
BFSC  Mount Baldy Ra      87.26  53     P        P         10 15 33.2 +0.9
      baz=245
EDW2  Edwards Air Fo      87.28  52     P        P         10 15 33.9 +1.6
      baz=245
L04D  Klamath Falls       87.49  44     P        P         10 15 34.5 +1.3
      baz=242
RUBR  Rubicon Trail       87.51  47     P        P         10 15 33.0 -0.4
KTH   Kantishna Hill      87.61  17     P        P         10 15 32.5 -0.7
KTH                                     IAmb     IAmb      10 15 37.8
      comp=Z,13nm,1.0s
MDPB  Devils Postpil      87.65  49     P        P         10 15 34.5 +0.3
MONP2 Monument Peak       87.65  54     P        P         10 15 35.5 +1.2
      baz=246
ESJX  Sierra Juarez       87.67  55     P        P         10 15 35.5 +1.1
OMMB  Old Mammoth Mi      87.70  49     P        P         10 15 35.2 +0.7
TRF   Thorofare Moun      87.71  17     P        P         10 15 33.2 -0.6
BEKR  Beckworth           87.73  47     P        P         10 15 35.1 +0.7
LRMC  Laurel Mtn Rad      87.76  51     P        P         10 15 36.0 +1.3
      baz=245
WAKR  Walker              87.77  48     P        P         10 15 36.3 +1.6
WAKR                                    IAmb     IAmb      10 15 40.0
      comp=Z,13nm,1.1s
IKP   In-Ko-Pah, Jac      87.80  55     P        P         10 15 36.7 +1.9
      baz=246
MLAC  Mammoth, Mammo87.82  49     P        P         10 15 36.9 +1.8
      baz=245
CWC   Cottonwood Cre      87.87  50     P        P         10 15 36.8 +1.7
      baz=245
M24K  Tolsona, Glenn      87.89  19     P        P         10 15 36.8 +2.3
      baz=222
PNTR  Pine Nut            87.91  48     P        P         10 15 37.3 +1.9
PNTR                                    IAmb     IAmb      10 15 40.0
      comp=Z,11nm,0.9s
PFO   Pinyon Flats O      87.92  54     P        P         10 15 36.2 +0.7
      comp=Z,1.4nm,0.7s,baz=260,slow=3.3,SNR=5.0
PFO   Pinyon Flats O      87.92  54     P        P         10 15 36.7 +1.3
      baz=246
PFO   Pinyon Flats O      87.92  54ceP      P         10 15 36.4 +1.0
PFO   Pinyon Flats O      87.92  54     P        P         10 15 35.4  0.0
TPFO  Pinon Flats         87.92  54     P        P         10 15 36.8 +1.4
      baz=246
VCNR  Virginia City       87.97  47     P        P         10 15 37.0 +1.3
BPAW  Bear Paw Mtn.       88.03  16     P        P         10 15 36.1 +1.0
N25K  Chitina, Valde      88.03  20     P        P         10 15 35.1 -0.2
      baz=223
RND   Reindeer            88.08  18     P        P         10 15 35.5 +0.1
RND                                     pmax     pmax
      comp=Z,12nm,0.8s
RND   Reindeer            88.08  18     P        P         10 15 35.5 +0.1
RND                                     IAmb     IAmb      10 15 37.0
      comp=Z,12nm,0.8s
YERR  Yerington           88.12  48     P        P         10 15 37.9 +1.6
MPMC  Manual Prospec      88.14  51     P        P         10 15 37.8 +1.3
      baz=245
I04A  Tendick Farm,       88.15  42     P        P         10 15 37.4 +1.2
      baz=242
SWSC  Sam W. Stewart      88.16  54     P        P         10 15 37.6 +1.3
      baz=246
MCK   McKinley            88.31  17     P        P         10 15 35.6 -0.8
      baz=220
LHV   Little Huntoon      88.33  49     P        P         10 15 37.9 +0.8
LHV                                     IAmb     IAmb      10 15 40.6
      comp=Z,19nm,1.4s
PAHR  Pah Rah Range       88.33  47     P        P         10 15 38.0 +0.7
PAHR                                    IAmb     IAmb      10 15 42.9
      comp=Z,12nm,1.1s
BELC  Belle Mtn. Jos      88.42  53     P        P         10 15 39.3 +1.5
      baz=246
RYN   Ryan                88.47  48     P        P         10 15 39.3 +1.3
BWN   Browne              88.50  17     P        P         10 15 36.4 -0.9
BWN                                     IAmb     IAmb      10 15 38.8
      comp=Z,31nm,0.8s
NVAR  Mina Array Bea      88.54  49     P        P         10 15 39.3 +0.9
      comp=Z,1.8nm,0.7s,baz=227,slow=8.0,SNR=18
NVAR                                    pP       pwP       10 16 32.0 +0.3
      comp=Z,3.7nm,1.0s,baz=230,slow=7.1,SNR=3.5
NVAR                                    PKKPbc   PKKPbc    10 33 20.8 +0.4
      comp=Z,0.5nm,0.7s,baz=79,slow=2.7,SNR=4.6
NVAR  Mina Array Bea      88.54  49     P        P         10 15 38.0 -0.3
GRAC  Grapevine Rang      88.62  50     P        P         10 15 39.9 +1.3
      baz=246
BARN  Barnard Glacie      88.64  22     P        P         10 15 38.2  0.0
BARN                                    IAmb     IAmb      10 15 39.0
      comp=Z,10nm,0.8s
K05A  Summer Lake         88.65  44     P        P         10 15 39.5 +0.8
K05A                                    IAmb     IAmb      10 15 41.4
      comp=Z,31nm,1.3s
NV11  Mina Array Sit      88.65  49     P        P         10 15 38.6 -0.2
NV11                                    IAmb     IAmb      10 15 43.1
      comp=Z,13nm,1.4s
BOD   Bodaibo             88.65 334   eP        P         10 15 38.3 +0.2
BOD                                     pmax     pmax
      comp=Z,19nm,1.7s
MOD   Modoc Plateau       88.67  45     P        P         10 15 39.3 +0.5
MOD                                     IAmb     IAmb      10 15 43.7
      comp=Z,19nm,1.1s
J05D  Fort Rock, OR       88.68  43     P        P         10 15 40.5 +1.7
      baz=243,SNR=14
CTGM  Chitina Glacie      88.69  22     P        P         10 15 38.0 -0.4
CTGM                                    IAmb     IAmb      10 15 39.2
      comp=Z,11nm,0.8s
BC3   Big Chuckawall      88.70  54     P        P         10 15 40.7 +1.6
      baz=247
H04A  Detroit Lake        88.71  42     P        P         10 15 39.2 +0.5
H04A                                    IAmb     IAmb      10 15 40.7
      comp=Z,37nm,1.4s
FURC  Furnace Creek,      88.77  51     P        P         10 15 40.5 +1.3
      baz=246
RDOG  Red Dog Mine        88.80  10     P        P         10 15 38.7 +0.1
MLY   Manley              88.83  16     P        P         10 15 38.3 -0.6
      baz=218
IMAR  Indian Mountai      88.86  14     P        P         10 15 38.7 -0.2
NEA2  Nenana              88.94  17     P        P         10 15 38.2 -1.1
      baz=219
GLA   Glamis              88.95  55     P        P         10 15 42.2 +2.0
      baz=247
SHOC  Shoshone, Teco      88.97  52     P        P         10 15 41.6 +1.4
      baz=246
LSA   Lhasa               89.00 302     P        P         10 15 40.1 -0.9
LSA                                     pmax     pmax
      comp=Z,7.0nm,0.6s
LSA   Lhasa               89.00 302     P        P         10 15 40.0 -0.9
LSA                                     IAmb     IAmb      10 15 42.8
      comp=Z,6.7nm,0.6s
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I05D  Terrebonne, OR      89.09  42     P        P         10 15 42.1 +1.5
      baz=243
PINE  Pine Mountain       89.10  43     P        P         10 15 42.5 +1.7
PINE                                    IAmb     IAmb      10 15 43.5
      comp=Z,38nm,1.4s
WRH   Wood River Hil      89.11  17     P        P         10 15 39.3 -0.8
WRH                                     IAmb     IAmb      10 15 43.1
      comp=Z,7.7nm,0.7s
IRM   Iron Mountain       89.14  54     P        P         10 15 42.8 +1.7
      baz=247
TPH   Tonopah             89.17  49     P        P         10 15 41.9 +0.6
TPH                                     pmax     pmax
      comp=Z,30nm,1.2s
TPH   Tonopah             89.17  49     P        P         10 15 41.9 +0.6
I23K  Minto, Yukon-K      89.29  16     P        P         10 15 40.3 -0.6
      baz=219
I23K  Minto, Yukon-K      89.29  16     P        P         10 15 40.6 -0.3
CCB   Clear Creek Bu      89.33  17     P        P         10 15 39.9 -1.3
CCB                                     IAmb     IAmb      10 15 44.3
      comp=Z,5.9nm,0.6s
E04D  Cinebar             89.36  40     P        P         10 15 43.5 +1.9
      baz=242
HDA   Harding Lake        89.39  18     P        P         10 15 40.8 -0.6
      baz=221,SNR=10
HDA   Harding Lake        89.39  18     P        P         10 15 40.4 -1.1
HDA                                     IAmb     IAmb      10 15 45.8
      comp=Z,14nm,0.7s
TPNV  Topopah Spring      89.42  51     P        P         10 15 43.8 +1.4
      baz=246
TPNV  Topopah Spring      89.42  51     P        P         10 15 43.8 +1.4
TPNV                                    pmax     pmax
      comp=Z,7.0nm,1.1s
TPNV  Topopah Spring      89.42  51     P        P         10 15 43.8 +1.4
MDM   Murphy Dome         89.45  17     P        P         10 15 40.4 -1.4
MDM                                     IAmb     IAmb      10 15 42.3
      comp=Z,22nm,1.5s
TCOL  CIGO, UAF Yank      89.48  17     P        P         10 15 41.0 -0.9
      baz=220
TCOL  CIGO, UAF Yank      89.48  17     P        P         10 15 40.3 -1.5
TCOL                                    IAmb     IAmb      10 15 41.9
      comp=Z,11nm,0.8s
COLA  College             89.49  17   i P        P         10 15 41.1 -0.7
COLA                                    pmax     pmax
      comp=Z,10.0nm,0.8s
COLA  College             89.49  17     P        P         10 15 41.0 -0.8
COLA                                    IAmb     IAmb      10 15 41.9
      comp=Z,11nm,0.8s
D03D  Eldon               89.50  39     P        P         10 15 43.9 +1.5
      baz=242
SLBS  Sierra La Lagu      89.51  65     P        P         10 15 41.1 -2.0
SLBS                                    IAmb     IAmb      10 15 46.3
      comp=Z,19nm,0.8s
G05D  Wamic, OR           89.52  41     P        P         10 15 44.0 +1.5
      baz=243
D04E  Lakebay             89.53  39     P        P         10 15 44.4 +2.0
      baz=242
BESE  Bessie Mountai      89.61  26     P        P         10 15 41.8 -0.9
BESE                                    IAmb     IAmb      10 15 44.9
      comp=Z,27nm,1.0s
113A  Mohawk Valley,      89.66  55     P        P         10 15 44.5 +1.0
113A                                    IAmb     IAmb      10 15 48.6
      comp=Z,12nm,1.4s
IL31                      89.68  17     P        P         10 15 41.6 -1.1
IL31                                    IAmb     IAmb      10 15 44.8
      comp=Z,8.5nm,0.8s
ILAR  Eielson Array       89.68  17     P        P         10 15 41.7 -1.1
      comp=Z,5.7nm,0.7s,baz=238,slow=4.8,SNR=78
ILAR                                    pP       pwP       10 16 35.4 -0.7
      comp=Z,1.9nm,0.7s,baz=237,slow=5.1,SNR=2.2
ILAR                                    PKKP     PKKPdf    10 33 14.2 +0.2
      comp=Z,0.2nm,0.5s,baz=352,slow=3.9,SNR=5.5
ILAR  Eielson Array       89.68  17     P        P         10 15 41.2 -1.6
DOT   Dot Lake            89.69  19     P        P         10 15 42.1 -0.8
F05D  White Salmon        89.72  41     P        P         10 15 44.9 +1.4
      baz=243
POKR  Poker Plat Res      89.79  17     P        P         10 15 43.8 +0.5
      baz=221
SNAA  Sanae               89.80 183     P        P         10 15 43.0 -0.6
SNAA  Sanae               89.80 183d iP        P         10 15 43.0 -0.6
SNAA                                    pmax     pmax
      comp=Z,82nm,0.8s
SNAA  Sanae               89.80 183     P        P         10 15 42.3 -1.2
LON   Longmire            89.91  40     P        P         10 15 45.2 +0.9
LON                                     pmax     pmax
      comp=Z,11nm,1.3s
LON   Longmire            89.91  40     P        P         10 15 45.2 +0.9
SCRK  Sand Creek          89.95  19     P        P         10 15 44.1 -0.1
      baz=224,SNR=7.1
PDMCI Parker Dam,Lak      89.96  54     P        P         10 15 46.7 +1.9
      baz=247
BCAR  Beaver Creek A      90.00  20     P        P         10 15 43.5 -0.9
D05A  Enumclaw            90.00  40     P        P         10 15 45.4 +0.7
WVOR  Wild Horse Val      90.02  45     P        P         10 15 46.0 +0.9
WVOR                                    pmax     pmax
      comp=Z,20nm,1.3s
WVOR  Wild Horse Val      90.02  45     P        P         10 15 46.0 +0.9
WVOR                                    IAmb     IAmb      10 15 47.5
      comp=Z,20nm,1.3s
SHPR  Sheep Range         90.04  51     P        P         10 15 45.0 -0.4
TLY   Talaya              90.10 326     P        P         10 15 44.6 -0.5
      comp=Z,9.1nm,0.7s,baz=222,slow=3.6
TLY   Talaya              90.10 326   i P        P         10 15 45.7 +0.6
TLY                                     pmax     pmax
      comp=Z,9.0nm,0.8s
TLY   Talaya              90.10 326     P        P         10 15 44.5 -0.5
TLY                                     IAmb     IAmb      10 15 46.5
      comp=Z,12nm,0.8s
214A  Organ Pipe Nat      90.11  56     P        P         10 15 47.3 +1.7
      baz=248
214A  Organ Pipe Nat      90.11  56     P        P         10 15 47.3 +1.7
I07A  Izee                90.16  43     P        P         10 15 46.4 +0.7
I07A                                    IAmb     IAmb      10 15 47.7
      comp=Z,9.9nm,0.8s
A04D  Lummi Island        90.29  38     P        P         10 15 47.3 +1.3
      baz=242,SNR=6.1
VNA3  Neumayer Olymp      90.40 180     P        P         10 15 45.6 -0.6
B05A  Bryant              90.44  39     P        P         10 15 48.1 +1.4
      baz=242,SNR=8.9
W13A  Hualapai Mount      90.46  53     P        P         10 15 47.7 +0.3
R11A  Troy Canyon, C      90.46  50     P        P         10 15 48.2 +0.9
      baz=247
R11A  Troy Canyon, C      90.46  50     P        P         10 15 47.2 -0.1
PRN   Pahroc Range        90.48  51     P        P         10 15 48.2 +0.9
PRN                                     IAmb     IAmb      10 15 53.1
      comp=Z,13nm,1.0s
PRP   Porcupine Dome      90.62  17     P        P         10 15 45.9 -1.4
VNA2  Neumayer--Watz      90.69 181     P        P         10 15 47.7 +0.1
      baz=186,slow=3.3
COLD  Coldfoot            90.71  15     P        P         10 15 48.4 +0.9
      baz=218,SNR=9.9
COLD  Coldfoot            90.71  15     P        P         10 15 48.0 +0.4
COLD                                    IAmb     IAmb      10 15 49.5
      comp=Z,8.4nm,0.9s
LTY   Liberty             90.83  40     P        P         10 15 49.4 +0.8
LTY                                     IAmb     IAmb      10 15 50.6
      comp=Z,23nm,1.5s
VNA1  Neumayer--Stat      90.98 181     P        P         10 15 48.5 -0.4
G08A  Pilot Rock          91.03  42     P        P         10 15 50.3 +0.6
G08A                                    IAmb     IAmb      10 15 51.9
      comp=Z,9.6nm,0.8s
HAWA  Hanford             91.15  41     P        P         10 15 51.1 +1.0
HAWA                                    IAmb     IAmb      10 15 52.5
      comp=Z,13nm,1.0s
EGAK  Eagle               91.39  19     P        P         10 15 50.4 -0.3
EGAK                                    IAmb     IAmb      10 15 52.2
      comp=Z,7.9nm,0.7s
E08A  Dider Farm, El      91.49  41     P        P         10 15 52.7 +1.1
E08A                                    IAmb     IAmb      10 15 54.7
      comp=Z,18nm,1.4s
ELK   Elko                91.65  47     P        P         10 15 52.9 +0.1
ELK                                     pmax     pmax
      comp=Z,6.0nm,1.4s
ELK   Elko                91.65  47     P        P         10 15 52.9 +0.1
LCMT  Little Creek M      91.66  51     P        P         10 15 53.7 +0.9
CCUT  Cedar City          91.77  51     P        P         10 15 54.0 +0.6
TUC   Tucson              91.84  57     P        P         10 15 55.6 +2.0
      baz=249
TUC   Tucson              91.84  57     P        P         10 15 53.5 -0.2
TUC                                     pmax     pmax
      comp=Z,6.0nm,1.2s
TUC   Tucson              91.84  57     P        P         10 15 53.5 -0.2
GO10  Punta Arenas        91.85 149     P        P         10 15 52.2 -1.2
BMO   Blue Mountains      91.91  43     P        P         10 15 54.3 +0.5
BMO                                     pmax     pmax
      comp=Z,7.0nm,1.4s
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BMO   Blue Mountains      91.91  43     P        P         10 15 54.3 +0.5
TOLK  Toolik Lake Re      91.97  14     P        P         10 15 54.2 +0.8
      baz=219,SNR=5.4
TOLK  Toolik Lake Re      91.97  14     P        P         10 15 54.1 +0.8
TOLK                                    IAmb     IAmb      10 15 54.6
      comp=Z,5.0nm,0.7s
KNB   Kanab               91.97  52     P        P         10 15 55.2 +0.9
KNB                                     pmax     pmax
      comp=Z,9.0nm,1.1s
KNB   Kanab               91.97  52     P        P         10 15 55.2 +0.9
X16A  Lo Mia Camp, P      92.07  54     P        P         10 15 56.4 +1.6
X16A                                    IAmb     IAmb      10 16 00.1
      comp=Z,8.9nm,1.1s
U15A  North Rim           92.15  52     P        P         10 15 56.3 +1.0
U15A                                    IAmb     IAmb      10 16 00.5
      comp=Z,8.1nm,0.9s
BMAR  Burnt Mountain      92.29  16     P        P         10 15 55.0 +0.1
F10A  Beach Ranch, E      92.42  42     P        P         10 15 55.7 -0.4
F10A                                    IAmb     IAmb      10 15 58.1
      comp=Z,14nm,1.5s
WUAZ  Wupatki             92.52  53     P        P         10 15 58.9 +2.0
      baz=249
WUAZ  Wupatki             92.52  53     P        P         10 15 57.2 +0.4
319A  Douglas             92.71  58     P        P         10 15 59.1 +1.3
319A                                    IAmb     IAmb      10 16 01.1
      comp=Z,11nm,0.9s
A21K  Barrow              92.74  10     P        P         10 15 57.5 +0.7
      baz=212
A21K  Barrow              92.74  10     P        P         10 15 57.0 +0.3
A21K                                    IAmb     IAmb      10 15 59.3
      comp=Z,24nm,1.4s
MTPU  Mount Pierson       92.82  51     P        P         10 15 58.9 +0.4
HLID  Hailey              93.31  45     P        P         10 16 01.1 +0.7
      baz=248
HLID  Hailey              93.31  45     P        P         10 16 01.5 +1.2
EPYK  Eagle Plains        93.83  19     P        P         10 16 01.7 -0.3
      baz=230
EPYK  Eagle Plains        93.83  19     P        P         10 16 01.6 -0.4
EPYK                                    IAmb     IAmb      10 16 03.2
      comp=Z,8.7nm,0.7s
TIXI  Tiksi               94.06 348   i P        P         10 16 01.4 -1.5
TIXI  Tiksi               94.06 348     P        P         10 16 00.7 -2.1
INK   Inuvik              96.00  18     P        P         10 16 10.9 -0.8
      comp=Z,4.1nm,0.8s,baz=237,slow=5.5,SNR=14
INK                                     PKKP     PKKPbc    10 32 58.9 -3.1
      comp=Z,0.5nm,0.4s,baz=14,slow=5.6,SNR=8.3
INK   Inuvik              96.00  18     P        P         10 16 11.0 -0.8
INK   Inuvik              96.00  18     P        P         10 16 10.0 -1.8
INK                                     IAmb     IAmb      10 16 12.6
      comp=Z,8.9nm,1.1s
PDAR  Pinedale Array      96.34  47     P        P         10 16 16.0 +1.7
      comp=Z,0.2nm,0.5s,baz=142,slow=3.1,SNR=2.6
WMQ   Urumqi              96.59 314   eP        P         10 16 16.1 +0.9
WMQ                                     pP       pP        10 17 06.8 +0.3
WMQ                                     pmax     pmax
      comp=Z,14nm,1.3s
WMQ                                     pmax     pmax
      comp=Z,260nm,5.3s
TXAR  Lajitas Array       96.66  61     P        P         10 16 16.7 +0.9
      comp=Z,1.5nm,0.8s,baz=228,slow=5.2,SNR=20
TXAR                                    PKKP     PKKPbc    10 32 59.2 +0.5
      comp=Z,0.2nm,0.6s,baz=90,slow=4.2,SNR=3.9
TXAR  Lajitas Array       96.66  61     P        P         10 16 16.6 +0.8
DGZ   Jazzator, Alta      98.66 319   i P        P         10 16 23.7 -0.7
DGZ                                     pmax     pmax
      comp=Z,6.0nm,1.6s
C36M  Paulatuk            99.46  19     P        Pdif      10 16 27.1 -0.2
      baz=242
YKA   Yellowknife Ar     100.20  27     P        Pdif      10 16 31.4 +0.7
      comp=Z,5.3nm,0.6s,baz=250,slow=4.1,SNR=95
YKA                                     PP       PP        10 20 37.7 -1.8
      comp=Z,1.1nm,0.9s,baz=252,slow=6.8,SNR=3.9
YKA                                     PKKPbc   PKKPbc    10 32 47.1 -2.9
      comp=Z,0.4nm,0.7s,baz=67,slow=3.6,SNR=4.8
MK31  Makanchi Array     101.12 316   i P        Pdif      10 16 35.3 +0.1
MKAR  Makanchi Array     101.12 316     P        Pdif      10 16 35.9 +0.6
      comp=Z,2.5nm,0.5s,baz=87,slow=6.3,SNR=37
MKAR                                    PP       PP        10 20 43.9 -3.0
      comp=Z,1.3nm,0.9s,baz=104,slow=7.9,SNR=6.1
MKAR                                    PKKPbc   PKKPbc    10 32 43.8 -3.1
      comp=Z,1.2nm,0.7s,baz=287,slow=3.1,SNR=12
MKAR  Makanchi Array     101.12 316     Pdif     Pdif      10 16 34.9 -0.3
ZALV  Zalesovo Beam      101.46 323     P        Pdif      10 16 36.0 -0.5
      comp=Z,1.2nm,0.7s,baz=130,slow=2.3,SNR=5.1
ZALV                                    PKKPbc   PKKPbc    10 32 42.6 -3.5
      comp=Z,1.0nm,0.6s,baz=290,slow=3.7,SNR=5.4
NRIK  Noril'sk           104.25 339     Pdiff    Pdif      10 16 48.6  0.0
      comp=Z,2.3nm,0.6s,baz=93,slow=5.4,SNR=5.7
TULEG Thule              115.24  13              PKiKP     10 21 22.3 -2.3
ARU   Arti               116.58 324   i PKIKP    PKPdf     10 21 26.9 -0.8
ARU                                                        10 22 37.8
ARU                                                        10 28 19.6
ARU                                     SS       SS        10 38 28.7 +1.5
CPUP  Villa Florida      116.62 133     PKP      PKPdf     10 21 27.6 -1.3
      comp=Z,3.1nm,0.8s,baz=228,slow=3.8,SNR=7.0
SPITS Spitsbergen Ar     118.93 354     PKKPab   PKKPab    10 31 48.8  0.0
      comp=Z,27nm,1.1s,baz=176,slow=13,SNR=5.0
BOSA  Boshof             121.43 218     PKP      PKPdf     10 21 38.0 -0.2
      comp=Z,7.2nm,0.7s,baz=140,slow=1.8,SNR=18
BOSA  Boshof             121.43 218     PKIKP    PKPdf     10 21 38.0 -0.2
SDV   Santo Domingo      121.50  91     PKP      PKPdf     10 21 37.6 -1.2
      comp=Z,2.9nm,0.5s,baz=323,slow=3.0,SNR=6.0
SAML  Samuel             121.71 113     PKIKP    PKPdf     10 21 37.4 -1.5
SAML  Samuel             121.71 113              PKPdf     10 21 37.4 -1.5
TMCR  Tamitsa            123.87 337   ePKIKP    PKPdf     10 21 40.1 -1.4
TMCR                                    pmax     pmax
      comp=Z,12nm,0.9s
LBTB  Lobatse            123.89 221     PKP      PKPdf     10 21 42.9 -0.1
      comp=Z,8.7nm,0.9s,baz=112,slow=4.2,SNR=6.7
ARCES ARCESS Array B 124.38 345     PKP      PKPdf     10 21 41.9 -0.5
      comp=Z,1.8nm,0.4s,baz=64,slow=2.1,SNR=24
ARCES                                   PKKPab   PKKPab    10 31 25.5 +0.1
      comp=Z,11nm,1.2s,baz=223,slow=2.2,SNR=5.3
MATP  Matopo             125.20 227     PKP      PKPdf     10 21 45.2 -0.4
      comp=Z,8.4nm,1.0s,baz=126,slow=1.2,SNR=8.2
RAYN  Ar Rayn            127.31 286     PKIKP    PKPdf     10 21 45.6 -3.8
RAYN  Ar Rayn            127.31 286              PKPdf     10 21 45.6 -3.8
SJG   San Juan           127.83  81     PKP      PKPdf     10 21 49.5 -0.9
      comp=Z,16nm,1.0s,baz=37,slow=2.6,SNR=7.9
HUMP  Col San Antoni     128.12  81              PKPdf     10 21 50.8 -0.3
PTGA  Pitinga            128.22 106     PKP      PKPdf     10 21 50.6 -0.8
      comp=Z,8.5nm,0.5s,baz=196,slow=1.0,SNR=19
PTGA  Pitinga            128.22 106              PKPdf     10 21 51.4  0.0
AKH   Akhalkalaki        128.54 308   ⇑P        SKPdf     10 24 54.5  -12
KIV   Kislovodsk         128.67 312   ePKIKP    PKPdf     10 21 51.6 +0.1
KIV                                     pmax     pmax
      comp=Z,12nm,1.1s
LSZ   Lusaka             128.79 231     PKIKP    PKiKP     10 21 53.1 -0.2
LSZ   Lusaka             128.79 231              PKiKP     10 21 53.1 -0.2
OBN   Obninsk            128.83 327   i PKIKP    PKPdf     10 21 50.5 -0.7
OBN                                     pmax     pmax
      comp=Z,5.0nm,0.9s
BATM  Batumi             129.84 309   ⇑P        SKPbc     10 24 58.8 +2.5
BDFB  Brasilia           130.15 131     PKP      PKPdf     10 21 54.3 -0.9
      comp=Z,12nm,0.8s,baz=173,slow=2.6,SNR=19
BDFB                                    SKPbc    SKPab     10 24 58.5  0.0
      comp=Z,5.3nm,0.8s,baz=150,slow=2.3,SNR=5.8
SOC   Sochi              130.85 312   i PKIKP    PKPdf     10 21 54.8 -0.7
SOC                                   e                    10 24 10.6
SOC                                   ePS       PS        10 34 33.8 +3.8
SOC                                   eSS       SS        10 41 29.4 +1.9
SOC                                   eSSS      SSS       10 46 24.0
VSU   Vasula             131.59 335   eP        SKPbc     10 25 01.9 -0.3
ANN   Anapa              132.11 314   eP        Pdif      10 18 51.4 -1.6
ANN                                     pmax     pmax
      comp=Z,23nm,0.7s
TSUM  Tsumeb             133.12 218     PKP      PKPdf     10 22 01.0 +0.2
      comp=Z,9.3nm,1.0s,baz=144,slow=6.9,SNR=8.1
TSUM  Tsumeb             133.12 218              PKiKP     10 22 01.8 -0.2
IDID  Didziasalis        133.53 331   eP        SKPbc     10 25 09.0  0.0
IIGN  Ignalina           133.74 331   eP        SKPbc     10 25 09.8  0.0
NACGM Naroch             133.75 331   i P        SKPbc     10 25 10.3 +0.6
NACGM                                 i P        SKPbc     10 25 10.3 +0.6
NACGM                                 i P        SKPbc     10 25 10.3 +0.6
NACGM                                 i PPP      PPP       10 28 50.5
NACGM                                 i SSS      SSS       10 40 25.0
NACGM                                 i LQ       LQ        10 48 13.9
NACGM                                 i LR       LR        10 58 06.8
UPP   Uppsala            133.92 340   eP        SKPbc     10 25 12.5 +2.4
PABE  Paberze            134.65 333   eP        SKPbc     10 25 13.8 +1.1
NB2   NORSAR Subarra134.76 345     PKP      PKiKP     10 22 03.8 -0.1
      comp=Z,1.7nm,0.8s,baz=17,slow=2.6
NOA   NORSAR Array B 134.76 345     SKP      SKPdf     10 25 17.1 -0.5
      comp=Z,3.8nm,0.9s,baz=27,slow=3.3,SNR=7.0
AKASG Malin Array Be     134.83 325     PKP      PKPdf     10 22 01.2 -1.5
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	comp=Z,0.4nm,0.4s,baz=68,slow=1.8,SNR=2.8						
AKASG				SKPbc	SKPbc	10 25 13.7	+0.3
	comp=Z,12nm,0.9s,baz=46,slow=3.6,SNR=17						
AKASG	Malin Array Be	134.83	325		PKPdf	10 22 02.6	-0.2
HFS	Hagfors	134.88	343	SKPbc	SKPbc	10 25 12.6	-0.6
	comp=Z,5.1nm,0.8s,baz=46,slow=6.4,SNR=4.5						
HFS				SKPab	SKPab	10 25 17.1	-0.1
	comp=Z,5.2nm,0.8s,baz=76,slow=6.3,SNR=4.1						
SUW	Suwalki	135.96	332	eP	SKPbc	10 25 16.9	0.0
SUW	Suwalki	135.96	332	eP	SKPbc	10 25 16.8	0.0
MMAI	Mount Meron Ar	136.16	299	SKP	SKPdf	10 25 20.2	-0.9
	comp=Z,16nm,0.7s,baz=75,slow=4.4,SNR=15						
BRTR	Keskin Array B	136.23	308	PKP	PKPdf	10 22 06.3	+0.4
	comp=Z,1.1nm,0.9s,baz=108,slow=4.0,SNR=4.8						
BRTR				SKP	SKPdf	10 25 19.3	-1.8
	comp=Z,2.9nm,0.9s,baz=92,slow=3.2,SNR=8.4						
BRTR				SKPab	SKPab	10 25 24.1	-0.1
	comp=Z,3.6nm,1.0s,baz=79,slow=2.6,SNR=7.5						
SORM	Soroca	136.60	322	⇑P	SKPbc	10 25 19.8	+0.9
EIL	Elat	136.88	294	SKP	SKPdf	10 25 22.1	-0.2
	comp=Z,6.5nm,0.9s,baz=62,slow=6.3,SNR=5.3						
GHRR		138.15	320	⇑P	SKPbc	10 25 25.5	+1.9
TESR	Tescani	138.40	321	⇑P	SKPbc	10 25 25.3	+1.1
BEL	Belsk	138.48	330	eP	SKPbc	10 25 24.9	+0.6
BIZ	Bicaz	138.51	321	⇑P	SKPbc	10 25 26.1	+1.5
VRI	Vrincioaia	138.66	320	⇑P	SKPbc	10 25 26.1	+1.0
BURAR	Bucovina Array	138.68	323	⇑P	SKPbc	10 25 27.4	+2.3
PLOR	Plostina	138.72	320	⇑P	SKPbc	10 25 26.1	+0.9
MLR	Muntele Rosu	139.32	320	SKP	SKPdf	10 25 27.1	+0.7
	comp=Z,7.1nm,1.1s,baz=93,slow=4.2,SNR=5.6						
MLR	Muntele Rosu	139.32	320	⇑P	SKPbc	10 25 27.9	+0.9
DOPR	Dopca	139.43	320	⇑P	SKPbc	10 25 28.7	+1.5
ARCR	ARCALIA	139.46	323	⇑P	SKPbc	10 25 28.8	+1.6
VOIR		139.90	320	⇑P	SKPbc	10 25 31.0	+2.5
OJC	Ojcow	140.01	329	eP	SKPbc	10 25 29.0	+0.5
ARR	Arges	140.19	320	⇑P	SKPbc	10 25 31.6	+2.3
NIE	Niedzica	140.28	328	eP	SKPbc	10 25 30.6	+1.3
HUMR	Humele	140.39	319	⇑P	SKPbc	10 25 30.4	+0.7
DRGR		140.56	323	⇑P	SKPbc	10 25 30.2	0.0
PLVB	Pleven	141.16	317	⇑P	SKPbc	10 25 33.4	+1.7
KSP	Ksiaz	141.21	332	eP	SKPbc	10 25 32.2	+0.6
GZR	Gura Zlata	141.29	321	⇑P	SKPbc	10 25 32.8	+0.6
MORC	Moravsky Berou	141.39	330	⇓P	SKPbc	10 25 33.1	+1.0
MORC	Moravsky Berou	141.39	330	ePKP	PKPdf	10 22 11.3	-3.6
MORC				ePP	PP	10 25 32.9	+13
PSZ	Piszkesteto	141.44	326	⇑P	SKPbc	10 25 33.2	+0.8
OSTC	Ostas	141.45	332	eSKP	SKPdf	10 25 32.1	+2.4
SIRR	Siria	141.46	323	⇑P	SKPbc	10 25 33.6	+1.2
CHVC	Chvalec	141.50	332	eSKP	SKPdf	10 25 32.0	+2.2
KRLC	Kraliky	141.53	331	eSKP	SKPdf	10 25 32.4	+2.5
DPC	Dobruska-Polom	141.55	332	ePKHKP	PKPpre	10 22 10.0	
DPC	Dobruska-Polom	141.55	332	ePKP	PKPdf	10 22 10.0	-5.2
DPC				eSKP	SKPdf	10 25 32.6	+2.7
UPC	Upice	141.57	332	eSKP	SKPdf	10 25 32.4	+2.5
HERR	Herculane	141.78	321	⇑P	SKPbc	10 25 33.7	+0.5
JAVC	Velka Javorina	141.95	329	ePKP	PKPdf	10 22 14.2	-1.8
JAVC				ePP	PP	10 25 35.6	+13
VRAC	Vranov	142.16	330	SKPbc	SKPbc	10 25 34.3	+0.2
	comp=Z,4.3nm,0.8s,baz=102,slow=2.8,SNR=5.2						
VRAC	Vranov	142.16	330	⇑P	SKPbc	10 25 35.0	+0.9
VRAC	Vranov	142.16	330	ePKP	PKPdf	10 22 12.3	-4.0
VRAC				ePP	PP	10 25 34.8	+11
BRG	Berggiesshubel	142.19	334	Amp		10 25 35.7	
	comp=Z,15nm,1.1s						
BRG	Berggiesshubel	142.19	334	i P	SKPbc	10 25 34.6	+0.6
CLL	Collm	142.23	335	i PKPdf	PKPdf	10 22 15.7	-0.6
	comp=Z,6.0nm,0.9s						
CLL				i		10 22 45.5	
CLL				i SKPbc	SKPbc	10 25 33.5	-0.7
	comp=Z,12nm,0.9s						
CLL				e		10 25 41.0	
CLL				ePKSdf	PKSdf	10 25 47.0	-4.9
CLL	Collm	142.23	335	i PKIKP	PKPdf	10 22 15.7	-0.6
CLL				i		10 25 33.5	
CLL				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KRUC	Moravsky	142.42	330	ePKP	PKPdf	10 22 12.9	-3.8
KRUC				ePP	PP	10 25 35.0	+9.2
VTS	Vitosha	142.43	317	⇑P	SKPbc	10 25 36.3	+1.1
MODS	Modra-Piesok	142.47	329	e		10 25 34.8	
PRU	Pruhonice	142.60	333	eSKP	SKPdf	10 25 35.6	+3.9
EKA	Eskdalemuir Ar	142.84	353	PKhKP	PKPpre	10 22 13.3	
	comp=Z,1.2nm,0.5s,baz=341,slow=2.4,SNR=3.3						
EKA				PKP	PKPdf	10 22 17.6	+0.3
	comp=Z,1.2nm,0.5s,baz=341,slow=3.0,SNR=7.6						
PBCC	Pribram	143.06	333	eSKP	SKPdf	10 25 36.4	+3.9
FRGS	Fruska Gora	143.16	323	⇑P	SKPbc	10 25 37.5	+0.9
MORH	Mrgy, Hungar	143.17	325	⇑P	SKPbc	10 25 37.4	+0.8
MORH	Mrgy, Hungar	143.17	325	eP	PKPbc	10 22 16.0	+0.3
PLN	Plauen	143.21	335	ePKPab	PKPbc	10 22 15.8	+0.1
	baz=38,slow=3.3						
GUNZ	Gunzen	143.24	335	ePKPab	PKPbc	10 22 16.3	+0.5
	baz=38,slow=3.3						
IBBN	Ibbenburen	143.28	341	ePKPab	PKPbc	10 22 16.3	+0.6
	baz=38,slow=3.3						
WERN	Wernitzgruen	143.28	335	ePKPab	PKPbc	10 22 16.3	+0.4
	baz=38,slow=3.3						
NKC	Novy Kostel	143.29	335	ePKIKP	PKPbc	10 22 15.9	0.0
NKC				e		10 25 37.3	
NKC	Novy Kostel	143.29	335	ePKP	PKPbc	10 22 15.9	0.0
NKC				eSKP	SKPdf	10 25 37.3	+4.5
CONA	Conrad Observa	143.47	329	eP	PKPbc	10 22 17.4	+0.8
	comp=Z,7.5nm,0.6s						
CONA				eS	SKiKP	10 25 38.3	-0.1
	comp=Z,8.5nm,0.8s,SNR=13						
CKRC	Cesky Krumlov	143.56	332	ePKP	PKPbc	10 22 16.6	-0.1
CKRC				ex	x	10 22 48.5	
CKRC				eSKP	SKPdf	10 25 37.8	+4.5
MANZ	Manzenberg	143.62	335	ePKPab	PKPbc	10 22 17.4	+0.5
	baz=38,slow=3.3						
KHC	Kasperske Hory	143.65	333	ePKIKP	PKPab	10 22 16.4	+0.3
KHC				e		10 25 37.7	
KHC	Kasperske Hory	143.65	333	ePKP	PKPab	10 22 16.4	+0.3
KHC				ex	x	10 22 49.0	
KHC				eSKP	SKPdf	10 25 37.7	+4.2
KHC	Kasperske Hory	143.65	333		PKPbc	10 22 16.9	-0.1
DIVS	Divibare	143.66	321	⇑iP	PKPbc	10 22 17.4	+0.1
DIVS	Divibare	143.66	321		PKPbc	10 22 17.9	+0.6
ROTZ	Rotzenmuhle	143.75	334	ePKPab	PKPbc	10 22 17.9	+0.6
	baz=38,slow=3.3						
GEC2	GERESS Array S	143.81	332		PKPbc	10 22 17.7	+0.1
GEC2	GERESS Array S	143.81	332	ePKPab	PKPbc	10 22 17.8	+0.3
	baz=38,slow=3.3						
GERES	GERESS Array B	143.81	332	PKP	PKPbc	10 22 17.9	+0.3
	comp=Z,3.5nm,0.7s,baz=40,slow=4.6,SNR=27						
GERES				SKPbc	SKPbc	10 25 38.2	0.0
	comp=Z,7.7nm,0.8s,baz=50,slow=2.1,SNR=20						
GERES	GERESS Array B	143.81	332	PKPdf	PKPbc	10 22 17.6	+0.1
WET	Wettzell	143.95	333	ePKPab	PKPbc	10 22 18.5	+0.6
	baz=38,slow=3.3						
BEHE	Becsehely	144.00	327	eP	PKPdf	10 22 20.2	+0.6
KASTN	Kahler Asten	144.00	339	ePKPab	PKPbc	10 22 18.5	+0.6
	baz=38,slow=3.3						
LIT	Litokhoron	144.10	314	PKIKP	PKPab	10 22 18.2	+0.1
LIT	Litokhoron	144.10	314		PKPab	10 22 18.1	+0.1
ARSA	Arzberg	144.10	329	eP	PKPbc	10 22 19.0	+0.6
	comp=Z,4.7nm,0.7s						
ARSA				eS	SKPbc	10 25 38.8	-0.1
	comp=Z,5.8nm,1.0s						
BBLS	Lazići	144.14	321	⇑iP	PKPbc	10 22 19.2	+0.5
GRA1	Grafenberg Arr	144.21	335		PKPbc	10 22 18.6	0.0
GRF	Grafenberg Arr	144.21	335	PKIKP	PKPbc	10 22 18.6	0.0
GRF	Grafenberg Arr	144.21	335	ePKPab	PKPdf	10 22 19.5	-0.4
	baz=38,slow=3.3						
GRF				eL	L	11 24 13.8	
	comp=Z,58nm,18.5s						
GRFO	Grafenberg	144.21	335	PKIKP	PKPdf	10 22 19.3	-0.5
GRFO	Grafenberg	144.21	335		PKPdf	10 22 19.3	-0.5
HAPS	Han Pijesak,Bl	144.28	322	⇑iP	PKPbc	10 22 19.3	+0.2
KOGS	Kog	144.28	327	i PKPbc	PKPbc	10 22 19.4	+0.5
MOA	Molln	144.28	330	eP	PKPdf	10 22 19.6	-0.5
	comp=Z,18nm,0.6s,SNR=9.0						
MOA				eS	SKPbc	10 25 39.4	+0.2
	comp=Z,5.5nm,0.8s						
KALN	Kalnik	144.39	327	i P	PKPdf	10 22 19.8	-0.5
LBWR	Ladybower, Pea	144.51	350	eP	PKPab	10 22 18.3	-0.9
FNA	Florina	144.53	316	PKIKP	PKPab	10 22 19.4	-0.4
FNA	Florina	144.53	316		PKPab	10 22 19.4	-0.4
MOSL	Moslavina	144.57	326	i P	PKPdf	10 22 20.4	-0.2
AGG	Agios Georgios	144.68	312	PKIKP	PKPab	10 22 19.8	-0.6
AGG	Agios Georgios	144.68	312		PKPab	10 22 19.8	-0.6
SOKA	Soboth	144.74	328	i P	PKPdf	10 22 20.9	-0.1
	comp=Z,24nm,0.5s,SNR=20						
SOKA				eS	SKPbc	10 25 40.5	0.0
	comp=Z,13nm,0.9s,SNR=11						
TNS	Taunus Mts	144.82	338	ePKPab	PKPdf	10 22 21.4	+0.5
	baz=38,slow=3.3						
UPM	Unac-Piva	144.82	321	eP	PKPbc	10 22 20.2	-0.7
WME	Myndd Eilian	144.87	353	eP	PKPbc	10 22 20.4	0.0
BLY	Banja Luka	144.89	324	⇑iP	PKPdf	10 22 21.9	+0.7
WLF1	Llynfaes	144.99	353	eP	PKPab	10 22 20.9	0.0
PDG	Podgorica	145.04	319	⇑P	SKPbc	10 25 41.2	+0.1
PDG	Podgorica	145.04	319	eP	PKPab	10 22 21.7	+0.2
PDG	Podgorica	145.04	319		PKPab	10 22 22.0	+0.5
RJOB	Jochberg	145.04	332	ePKPab	PKPab	10 22 22.1	+0.6
	baz=38,slow=3.3						
YRC	Rhoscolyn	145.05	353	eP	PKPbc	10 22 20.8	-0.1
CWF	Charnwood Fore	145.09	350	eP	PKPbc	10 22 19.6	-1.6
OBKA	Obir	145.10	329	eP	PKPdf	10 22 21.7	+0.1
	comp=Z,18nm,0.7s,SNR=7.4						
CRES	Cresnjev	145.11	327	⇑iP	PKPab	10 22 22.4	+0.7
BRY	Bratogost	145.21	321	eP	PKPab	10 22 22.3	-0.1
DRME	Dracevica, Mon	145.22	319	⇑iP	PKPab	10 22 22.5	+0.3
KBA	Koelnbreinsper	145.27	330	eP	PKPbc	10 22 22.2	0.0
	comp=Z,14nm,0.6s,SNR=8.9						
KBA				eS	SKPbc	10 25 41.3	-0.5
	comp=Z,9.7nm,1.0s						
BTNL	Ternell	145.28	341	dPKP	PKPab	10 22 22.6	+0.4
BTNL				dx	x	10 22 53.2	
SHEL	Horse Pasture	145.28	189	PKP2	PKPdf	10 22 22.7	-0.1
SHEL	Horse Pasture	145.28	189		PKPdf	10 22 22.6	-0.1
MEM	Membach	145.29	341	dPKP	PKPab	10 22 22.3	+0.1
MEM				dx	x	10 22 52.9	
MEM				dx	x	10 22 54.5	
MEM				dpPKP	pPKPab	10 23 14.8	+0.4
LLW	Llanuwychllyn	145.33	352	eP	PKPdf	10 22 21.2	-0.4
BOJS	Bojanci	145.43	327	i PKPbc	PKPab	10 22 23.5	+0.6
LJU	Ljubljana	145.44	328	⇑iP	PKPab	10 22 23.0	+0.1
BSTI	Sart Tilman	145.45	341	dPKP	PKPab	10 22 23.5	+0.7
BSTI				dx	x	10 22 52.4	
BSTI				dx	x	10 22 55.1	
MYKA	Terra Mystica	145.46	330	eP	PKPab	10 22 22.9	-0.1
	comp=Z,15nm,0.6s,SNR=7.5						
MYKA				eS	SKPbc	10 25 41.6	-0.5
	comp=Z,9.4nm,0.8s,SNR=5.4						
RCBR	Riachuelo	145.48	132	PKPbc	PKPdf	10 22 22.6	-0.6
	comp=Z,38nm,0.8s,baz=190,slow=2.5,SNR=20						
RCBR	Riachuelo	145.48	132		PKPdf	10 22 21.4	-1.8
HCY	Herceg Novi	145.50	320	eP	PKPab	10 22 23.3	0.0
BHOU	Houvegnez	145.52	341	dPKP	PKPab	10 22 24.2	+1.1
BHOU				dx	x	10 22 48.8	
BHOU				dx	x	10 22 54.2	
BCLA	Clavier	145.68	341	dPKPdf	PKPdf	10 22 18.4	-3.9
BCLA				dPKiKP	PKPab	10 22 23.5	-0.1
BCLA				dx	x	10 22 51.3	
BCLA				dx	x	10 22 55.3	
RICI	Ricice	145.69	322	i P	PKPbc	10 22 23.3	0.0
CEY	Cerknica	145.70	328	⇑iP	PKPab	10 22 23.8	-0.2
STU	Stuttgart	145.74	336	PKP2	PKPab	10 22 24.9	+0.9
STU	Stuttgart	145.74	336		PKPab	10 22 24.9	+0.9
STU	Stuttgart	145.74	336	ePKPab	PKPab	10 22 25.1	+1.1
	baz=38,slow=3.3						
ITM	Ithomi	145.74	310		PKPab	10 22 24.1	-0.3
BGES	Gesves	145.77	342	dPKPdf	PKPbc	10 22 23.2	-0.1
BGES				dPKiKP	PKiKP	10 22 26.2	-0.5
KIJV	Kijevo	145.79	324	i P	PKPbc	10 22 23.8	+0.2
UDBI	Udbina	145.81	325	i P	PKPbc	10 22 24.0	+0.3
ZOU	Zoufplan	145.83	330		PKPbc	10 22 23.6	-0.3
WATA	Walderalm	145.89	332	eP	PKPbc	10 22 24.3	+0.3
	comp=Z,6.1nm,0.5s						
WATA				eS	SKPbc	10 25 43.1	-0.1
	comp=Z,13nm,1.1s						
SNF	Seneffe	145.90	343	dPKP	PKPab	10 22 24.6	+0.2
SNF				dx	x	10 22 56.4	
ABTA	Abfaltersbach	145.91	331	eP	PKPbc	10 22 23.8	-0.2
	comp=Z,14nm,0.6s,SNR=6.1						
ABTA				eS	SKPbc	10 25 42.7	-0.4
	comp=Z,11nm,0.8s,SNR=6.8						
WTTA	Wattenberg	145.92	332	i P	PKPab	10 22 24.7	-0.3
	comp=Z,5.2nm,0.5s						
WTTA				eS	SKPbc	10 25 43.1	-0.1
	comp=Z,5.9nm,0.7s,SNR=6.7						
BMRD	Maredsous	145.94	342	dPKP	PKPbc	10 22 24.0	+0.1
BMRD				dx	x	10 22 56.4	
MCH1	Michaelchurch	146.07	351	eP	PKPbc	10 22 24.3	+0.1
WLF	Walferdange	146.07	340	dPKP	PKPab	10 22 25.5	+0.2
WLF				dx	x	10 22 56.3	
WLF				dpPKP	pPKPab	10 23 18.0	+0.6
WLF	Walferdange	146.07	340	PKP2	PKPab	10 22 25.9	+0.7
WLF	Walferdange	146.07	340		PKPab	10 22 25.9	+0.7
MOTA	Moosalm	146.09	333	eP	PKPbc	10 22 24.9	+0.3
	comp=Z,11nm,0.9s,SNR=5.7						
MOTA				eS	SKPbc	10 25 43.5	-0.1
	comp=Z,9.0nm,0.9s,SNR=5.9						
RETA	Reutte	146.12	333	i P	PKPab	10 22 25.2	-0.5
	comp=Z,8.0nm,0.7s						
RETA				eS	SKPbc	10 25 43.1	-0.5
	comp=Z,5.9nm,1.0s						
SQTA	Sankt Quirin	146.14	332	eP	PKPbc	10 22 25.2	+0.5
	comp=Z,6.3nm,0.6s						
SQTA				eS	SKPbc	10 25 43.7	0.0
	comp=Z,8.9nm,0.9s,SNR=5.1						
STRD	Stroud	146.16	350	eP	PKPab	10 22 25.3	-0.2
DOU	Dourbes	146.18	342	dPKPdf	PKPab	10 22 25.2	-0.4
DOU				dx	x	10 22 52.3	
DOU				dx	x	10 22 54.8	
UBR	Ueberruh	146.25	334	ePKPab	PKPab	10 22 25.7	-0.4
	baz=38,slow=3.3						
MORI	Morici	146.26	324	i P	PKPbc	10 22 25.1	+0.1
BFO	Black Forest	146.43	336	PKP2	PKPab	10 22 26.3	-0.4
BFO	Black Forest	146.43	336		PKPab	10 22 26.3	-0.4
BFO	Black Forest	146.43	336	ePKPab	PKPbc	10 22 26.1	+0.7
	baz=38,slow=3.3						
FETA	Feichten	146.50	333	eP	PKPbc	10 22 26.4	+0.6
	comp=Z,23nm,0.8s,SNR=7.8						
FETA				eS	SKiKP	10 25 44.8	0.0
	comp=Z,7.1nm,0.9s						
DAVA	Damuels	146.66	334	eP	PKPab	10 22 27.4	-0.4
	comp=Z,17nm,0.6s						
CTI	Castel Tesino	146.82	331	PKP2	PKPbc	10 22 27.2	+0.5
CTI	Castel Tesino	146.82	331		PKPbc	10 22 27.2	+0.5
ECH	Echery	146.96	338	PKP2	PKPab	10 22 28.0	-0.8
ECH	Echery	146.96	338		PKPab	10 22 27.9	-0.8
DAVOX	Davos/Dischmat	147.05	333	PKPbc	PKPbc	10 22 27.9	+0.6
	comp=Z,21nm,0.6s,baz=244,slow=1.5,SNR=33						
DAVOX				SKPbc	SKPbc	10 25 44.7	-1.1
	comp=Z,5.2nm,0.9s,baz=112,slow=2.0,SNR=3.7						
DAVOX	Davos/Dischmat	147.05	333	PKP2	PKPbc	10 22 28.0	+0.6
HTL	Hartland	147.25	352	eP	PKPbc	10 22 27.2	-0.3
TEOL	Teolo	147.32	330		PKPbc	10 22 28.7	+0.7
TUE	Stuetta	147.52	333		PKPbc	10 22 29.0	+0.3
SGRT	San Giovanni R	147.56	321		PKPbc	10 22 28.3	-0.5
SALO	Salr	147.67	331		PKPab	10 22 31.4	-0.3
NRCA	Norcia	148.37	325		PKPbc	10 22 30.8	-0.1
TIP	Timpagrande	148.40	316		PKPbc	10 22 31.6	+0.6
ZCCA	Zocca	148.40	329		PKiKP	10 22 33.1	+0.8
SENIN	Lac Senin/Sane	148.45	335		PKPbc	10 22 31.7	+0.6
BNI	Bardonecchia	149.77	335	PKP2	PKPbc	10 22 34.8	+0.4
BNI	Bardonecchia	149.77	335		PKPbc	10 22 34.8	+0.4
RAFF	Raffo Rosso	151.04	315		PKiKP	10 22 39.1	+1.2
KIC	Kosan Boka	166.40	207	eP	PKPab	10 23 53.1	+0.4
	comp=Z,29nm,0.9s						
LIC	Lamto	166.40	206	eP	PKPab	10 23 53.1	+0.4
	comp=Z,50nm,0.9s						
TORD	Torodi Ar. Bea	166.64	248	PKP	PKPdf	10 22 49.8	-0.4
	comp=Z,7.2nm,0.9s,baz=27,slow=0.4,SNR=26						
TORD				PKPab	PKPab	10 23 53.5	-0.5
	comp=Z,3.0nm,0.8s,baz=67,slow=3.8,SNR=4.3						
DBIC	Dimbokro	166.73	208	PKP	PKPdf	10 22 49.8	-0.6
	comp=Z,5.3nm,0.9s,baz=126,slow=5.9,SNR=3.2						
DBIC				PKPab	PKPab	10 23 53.7	-0.4
	comp=Z,12nm,0.8s,baz=167,slow=6.1,SNR=11						
DBIC	Dimbokro	166.73	208		PKPab	10 23 54.6	+0.5
TIC	Toumodi	166.78	207	eP	PKPab	10 23 54.8	+0.5
KOWA	Kowa	172.16	240	PKP	PKPdf	10 22 53.1	-0.4
	comp=Z,3.4nm,0.6s,baz=150,slow=2.3,SNR=9.0						
KOWA				PKPab	PKPab	10 24 18.9	+0.5
	comp=Z,5.6nm,0.7s,baz=122,slow=3.5,SNR=11						
KOWA	Kowa	172.16	240		PKPdf	10 22 53.2	-0.4
KOWA					PKPab	10 24 17.7	-0.7

TAP **15** *10:07:30.7, 24°.23N×121°.80E, h68^{km}, ML3.5, B*
JMA **15** *10:07:30.2±0.1, 24°.17N×121°.79E, h68^{km}±1^{km}, M3.4*
ISC 15 10:07:29.7±1.1**, 24°.24N**±0°.02×**121°.80E**±0°.02**, h75**^{km}±4^{km}**,**
n134, σ1^{s}.**19**/258**, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ENA	Nanau	0.20	344	i P	Pn	10 07 41.5	+0.5
	baz=347						
ENA				i S	Sn	10 07 49.6	+0.4
	baz=347						
NACB	Ninganchiao	0.20	251	i P	Pn	10 07 41.0	+0.1
	baz=252						
NACB				i S	Sn	10 07 49.1	0.0
	baz=252						
TWD	Chiawan	0.24	230	i P	Pn	10 07 41.4	+0.3
	baz=229						
TWD				i S	Sn	10 07 49.3	-0.2
	baz=229						
ETLH	Xiulin Townshi	0.29	264	i P	Pn	10 07 41.9	+0.3
	baz=265						
ETLH				S	Sn	10 07 49.6	-0.6
	baz=265						
HWA	Hwalien	0.32	215	P	Pn	10 07 42.1	+0.5
	baz=213						
HWA				S	Sn	10 07 50.5	+0.2
	baz=213						
TWC	Suao	0.37	7	i P	Pn	10 07 42.8	+0.9
	baz=8.0						
TWC				S	Sn	10 07 52.0	+1.1
	baz=8.0						
NDS	Dongshan	0.40	349	P	Pn	10 07 43.0	+0.9
	baz=349						
NDS				S	Sn	10 07 51.9	+0.6
	baz=349						
NNSH	Datong	0.42	296	i P	Pn	10 07 43.0	+0.5
	baz=297						
NNSB	Datong	0.43	296	i P	Pn	10 07 43.1	+0.6
	baz=297						
NNSB				S	Sn	10 07 52.3	+0.4
	baz=297						
NNS	Nan Shan	0.44	297	P	Pn	10 07 43.2	+0.6
	baz=298						
NNS				S	Sn	10 07 51.9	-0.2
	baz=298						
NDT	Datong Townshi	0.45	324	i P	Pn	10 07 43.4	+0.9
	baz=325						
NDT				i S	Sn	10 07 52.0	0.0
	baz=325						
ENTT	Nioudou	0.45	332	i P	Pn	10 07 43.4	+0.8
	baz=333						
ENTT				i S	Sn	10 07 52.5	+0.4
	baz=333						
TWE	Neicheng	0.49	346	P	Pn	10 07 43.8	+0.9
	baz=347						
TWE				S	Sn	10 07 53.5	+0.8
	baz=347						
WHF	Hehuan Shan	0.50	259	i P	Pn	10 07 44.1	+0.6
	baz=259						
WHF				S	Sn	10 07 53.9	+0.3
	baz=259						
FUSS	Fushou	0.51	271	P	Pn	10 07 44.5	+1.2
	baz=271						
FUSS				S	Sn	10 07 53.7	+0.3
	baz=271						
ILA	Ilan	0.53	355	eP	Pn	10 07 44.4	+1.2
	baz=356						
ILA				eS	Sn	10 07 54.1	+0.9
	baz=356						
ESL	Shilin	0.54	219	i P	Pn	10 07 43.2	-0.2
	baz=217						
ESL				i S	Sn	10 07 54.0	+0.6
	baz=217						
TWT	Tachien	0.57	272	i P	Pn	10 07 45.2	+1.3
	baz=271						
TWT				eS	Sn	10 07 55.0	+0.7
	baz=271						
TDCB	Techi	0.59	272	P	Pn	10 07 45.1	+1.1
	baz=272						
TDCB				S	Sn	10 07 55.0	+0.5
	baz=272						
NSK	Sanguang	0.59	317	i P	Pn	10 07 44.7	+0.7
	baz=318						
NSK				S	Sn	10 07 54.3	-0.2
	baz=318						
CHGB	Renai	0.60	253	i P	Pn	10 07 45.1	+0.9
	baz=253						
CHGB				i S	Sn	10 07 55.0	+0.1
	baz=253						
NWLT	Wulai	0.60	333	P	Pn	10 07 44.6	+0.6
	baz=333						
NWLT				S	Sn	10 07 55.0	+0.4
	baz=333						
NTC	Toucheng	0.61	2	P	Pn	10 07 45.2	+1.1
	baz=2.0						
NTC				S	Sn	10 07 54.9	+0.2
	baz=2.0						
EGFH	Guangfu	0.66	211	eP	Pn	10 07 45.5	+0.9
	baz=211						
EGFH				eS	Sn	10 07 55.7	0.0
	baz=211						
TIPB	Shuangxi	0.73	2	P	Pn	10 07 46.9	+1.6
	baz=2.0						
TIPB				S	Sn	10 07 58.1	+1.2
	baz=2.0						
NHDH	Xindian Distri	0.76	341	eP	Pn	10 07 46.5	+0.8
	baz=341						
NHDH				eS	Sn	10 07 57.8	+0.3
	baz=341						
TWA	Mucha	0.76	345	eP	Pn	10 07 46.9	+1.2
	baz=345						
TWA				eS	Sn	10 07 58.2	+0.6
	baz=345						
VWDT	VWDT	0.77	231	i P	Pn	10 07 46.8	+1.0
	baz=231						
VWDT				i S	Sn	10 07 58.3	+0.6
	baz=231						
WHP	Taichung City	0.78	273	P	Pn	10 07 47.7	+1.7
	baz=273						
WHP				S	Sn	10 07 59.1	+1.0
	baz=273						
TWB1	Santiao Chiao	0.79	13	eP	Pn	10 07 47.1	+1.2
	baz=13						
TWB1				S	Sn	10 07 58.4	+0.4
	baz=13						
WPL	Puli Township	0.80	254	P	Pn	10 07 47.0	+0.9
	baz=254						
WPL				eS	Sn	10 07 58.7	+0.3
	baz=254						
NJD	Zhudong	0.82	307	eP	Pn	10 07 47.5	+1.2
	baz=307						
NJD				eS	Sn	10 08 00.0	+1.4
	baz=307						
HGSD	Ruisui	0.82	205	i P	Pn	10 07 47.1	+0.8
	baz=204						
HGSD				i S	Sn	10 07 59.3	+0.6
	baz=204						
LIOB	Emei	0.82	300	P	Pn	10 07 47.4	+1.0
	baz=300						
LIOB				eS	Sn	10 07 59.6	+0.8
	baz=300						
DPDB	Guoxing	0.82	256	P	Pn	10 07 48.1	+1.7
	baz=256						
DPDB				eS	Sn	10 08 00.1	+1.2
	baz=256						
NSTT	Nanjuang	0.83	298	P	Pn	10 07 47.7	+1.3
	baz=298						
NSTT				S	Sn	10 07 59.4	+0.5
	baz=298						
NWF	Wu-fen Shan	0.83	359	eP	Pn	10 07 47.8	+1.3
	baz=359						
NWF				eS	Sn	10 08 00.1	+1.1
	baz=359						
WFSB	Wu-fen Shan	0.83	359	eP	Pn	10 07 47.8	+1.4
	baz=359						
WFSB				eS	Sn	10 08 00.3	+1.4
	baz=359						
WCS	Beigang Elemen	0.83	258	P	Pn	10 07 48.1	+1.6
	baz=257						
WCS				S	Sn	10 08 00.7	+1.7
	baz=257						
EHY	Hungye	0.85	211	P	Pn	10 07 46.2	-0.5
	baz=210						
EHY				S	Sn	10 07 59.1	-0.3
	baz=210						
NTY	Taoyuan	0.89	329	eP	Pn	10 07 48.0	+0.9
	baz=329						
NTY				eS	Sn	10 08 00.8	+0.8
	baz=329						
HSN1	Hsinchu	0.89	307	P	Pn	10 07 48.5	+1.4
	baz=307						
HSN1				S	Sn	10 08 01.3	+1.1
	baz=307						

```
SSLB  Suanglung        0.90 240 iP    Pn     10 07 48.3 +1.1
      baz=240
SSLB                            iS    Sn     10 08 01.2 +0.9
      baz=240
SMLT  Sun Moon Lake    0.90 247  P    Pn     10 07 48.8 +1.5
      baz=246
SMLT                             S    Sn     10 08 01.3 +0.8
      baz=246
TNOU  National Taiwa   0.91 358 eP    Pn     10 07 48.4 +1.0
      baz=358
TNOU                             S    Sn     10 08 01.7 +1.2
      baz=358
NCUH  Zhongli          0.92 322 eP    Pn     10 07 48.8 +1.3
      baz=322
NCUH                             S    Sn     10 08 01.2 +0.5
      baz=322
NCU   National Centr   0.92 323 eS    Sn     10 08 01.6 +0.9
      baz=323
SBCB  Hsinchu          0.93 307  P    Pn     10 07 48.8 +1.3
      baz=307
SBCB                             S    Sn     10 08 02.0 +1.1
      baz=307
TWS1  Kuangyinshan     0.93 338 eP    Pn     10 07 48.6 +1.1
      baz=338
TWS1                            eS    Sn     10 08 01.7 +0.8
      baz=338
HSN   Hsinchu          0.94 307 eP    Pn     10 07 48.9 +1.2
      baz=309
HSN                              S    Sn     10 08 01.8 +0.6
      baz=309
TWQ1  Liyutan          0.94 277  P    Pn     10 07 49.1 +1.3
      baz=277
TWQ1                             S    Sn     10 08 01.8 +0.5
      baz=277
NJN   Zhunan           0.96 298 eP    Pn     10 07 49.4 +1.5
      baz=298
NJN                              S    Sn     10 08 02.3 +0.8
      baz=298
NSY   Sanyi            0.96 281 eP    Pn     10 07 49.1 +1.0
      baz=281
NSY                             eS    Sn     10 08 02.6 +0.8
      baz=281
NMLH  Miaoli           0.97 288  P    Pn     10 07 48.7 +0.6
      baz=288
NMLH                            eS    Sn     10 08 02.6 +0.8
      baz=288
NTST  Danshui          0.97 341 eP    Pn     10 07 49.6 +1.5
      baz=341
NTST                            eS    Sn     10 08 02.6 +0.7
      baz=341
ANP   Anpu             0.98 345 eP    Pn     10 07 49.7 +1.4
      baz=345
ANP                             eS    Sn     10 08 03.1 +1.0
      baz=345
EYUL  Yuli             0.99 207 eP    Pn     10 07 50.2 +1.8
      baz=206
EYUL                            eS    Sn     10 08 03.5 +1.2
      baz=206
TWF1  Yuli             1.00 208  P    Pn     10 07 48.2 -0.2
      baz=207
TWF1                             S    Sn     10 08 02.6 +0.2
      baz=207
WHYT  Xinyi Township   1.02 238 eP    Pn     10 07 50.0 +1.2
      baz=238
WHYT                            eS    Sn     10 08 04.2 +1.2
      baz=238
TCU   Taichung         1.03 265 eP    Pn     10 07 50.0 +1.2
      baz=265
TCU                             eS    Sn     10 08 04.4 +1.2
      baz=265
TWY   Chenhua          1.05 350 eP    Pn     10 07 49.6 +0.5
      baz=350
TWY                             eS    Sn     10 08 04.9 +1.4
      baz=350
JYNG  Yonagunijimaku   1.06  78  P    Pn     10 07 50.2 +1.0
JYNG                             S    Sn     10 08 04.7 +0.8
WDJ   Dajia District   1.06 276 eP    Pn     10 07 50.6 +1.3
      baz=276
WDJ                             eS    Sn     10 08 05.1 +1.2
      baz=276
WJS   Zhushan          1.06 247 eP    Pn     10 07 51.2 +1.9
      baz=247
WJS                             eS    Sn     10 08 05.4 +1.5
      baz=247
WNT1  Nantou City      1.08 252 eP    Pn     10 07 51.2 +1.8
      baz=252
WNT1                            eS    Sn     10 08 05.3 +1.2
      baz=252
WNT   Mingjian         1.08 251 eP    Pn     10 07 51.5 +2.0
      baz=250
WNT                             eS    Sn     10 08 05.5 +1.2
      baz=250
YOJ   Yonaguni jima    1.12  78  P    Pn     10 07 50.9 +0.9
YOJ                             eS    Sn     10 08 05.9 +0.7
FULB  Fuli             1.14 204 eP    Pn     10 07 51.1 +0.9
      baz=204
FULB                            eS    Sn     10 08 06.0 +0.5
      baz=204
WCHH  Zhanghua         1.15 262  P    Pn     10 07 51.7 +1.4
      baz=262
WCHH                            eS    Sn     10 08 05.8 +0.2
      baz=262
ALS   Alishan          1.17 232  P    Pn     10 07 52.6 +1.8
      baz=231
ALS                             eS    Sn     10 08 08.2 +1.6
      baz=231
CHKT  Chengkung        1.20 199  P    Pn     10 07 51.5 +0.5
      baz=198
CHKT                            eS    Sn     10 08 06.7 -0.3
      baz=198
CHN5  Tsauling         1.21 238  P    Pn     10 07 53.0 +1.8
      baz=238
CHN5                            eS    Sn     10 08 08.6 +1.3
      baz=238
WGK   Gukeng           1.26 244 eP    Pn     10 07 53.3 +1.6
      baz=244
WGK                             eS    Sn     10 08 10.4 +2.1
      baz=244
ELDTW Lidau            1.27 215  P    Pn     10 07 52.5 +0.5
      baz=214
ELDTW                            S    Sn     10 08 08.0 -0.6
      baz=214
WDLH  Douliu           1.28 245 eP    Pn     10 07 53.6 +1.7
      baz=244
WDLH                            eS    Sn     10 08 10.5 +1.9
      baz=244
EDH   Donghe           1.34 200  P    Pn     10 07 54.3 +1.5
      baz=199
EDH                              S    Sn     10 08 10.2 +0.1
      baz=199
RLNB  Erlin            1.36 256 eP    Pn     10 07 54.6 +1.6
      baz=255
RLNB                            eS    Sn     10 08 11.9 +1.3
      baz=255
WTK   Tuku             1.40 247 eP    Pn     10 07 54.1 +0.6
      baz=247
WTK                              S    Sn     10 08 12.9 +1.3
      baz=247
PCYT  Pengchaiyu       1.41  10 eP    Pn     10 07 55.5 +1.9
      baz=10.0
PCYT                            eS    Sn     10 08 13.7 +2.1
      baz=10.0
CHN4  Tsaushan         1.42 232  P    Pn     10 07 55.9 +2.1
      baz=231
CHN4                             S    Sn     10 08 13.3 +1.4
      baz=231
STYH  Taoyuan          1.42 222 eP    Pn     10 07 55.8 +2.0
      baz=221
STYH                            eS    Sn     10 08 13.3 +1.4
      baz=221
TPUB  Ta-pu            1.42 229  P    Pn     10 07 55.3 +1.4
      baz=229
TPUB                             S    Sn     10 08 14.1 +2.0
      baz=229
STYT  Tauyuan          1.44 222  P    Pn     10 07 56.0 +2.0
      baz=221
STYT                            eS    Sn     10 08 13.7 +1.3
      baz=221
CHY   Chiayi           1.46 240 eP    Pn     10 07 55.9 +1.6
      baz=239
CHY                             eS    Sn     10 08 13.3 +0.4
      baz=239
LONT  Longtian         1.46 205 eP    Pn     10 07 54.3  0.0
      baz=204
LONT                            eS    Sn     10 08 13.1 +0.1
      baz=204
WTP   Ta-pu            1.47 228  P    Pn     10 07 56.3 +1.8
      baz=227
WTP                              S    Sn     10 08 14.4 +1.2
      baz=227
TWK   Hsinying         1.54 231 eP    Pn     10 07 57.7 +2.3
      baz=231
TWK                             eS    Sn     10 08 16.0 +1.1
      baz=231
TWG   Pinlang          1.56 206 eP    Pn     10 07 55.5 -0.2
      baz=205
TWG                              S    Sn     10 08 14.6 -0.7
      baz=205
TWGBT Beinan           1.56 205  P    Pn     10 07 57.1 +1.4
      baz=205
TWGBT                           eS    Sn     10 08 15.3  0.0
      baz=205
WSF   Szhu             1.56 248 eP    Pn     10 07 57.2 +1.5
      baz=247
WSF                             eS    Sn     10 08 16.5 +1.3
      baz=247
SNST  Tainan City      1.57 230 eP    Pn     10 07 57.4 +1.6
      baz=229
SNST                            eS    Sn     10 08 16.2 +0.8
      baz=229
CHN1  Nanshi           1.57 228 eP    Pn     10 07 58.1 +2.3
      baz=228
CHN1                            eS    Sn     10 08 17.0 +1.5
      baz=228
LDUT  Ludao            1.59 191  P    Pn     10 07 57.6 +1.6
      baz=190
LDUT                            eS    Sn     10 08 15.2 -0.6
      baz=190
SGST  Jiashian         1.60 224 eP    Pn     10 07 57.8 +1.5
      baz=223
SGST                            eS    Sn     10 08 17.4 +1.2
      baz=223
SLGT  Liugui           1.63 221 eP    Pn     10 07 58.1 +1.5
      baz=220
SLGT                            eS    Sn     10 08 18.6 +1.7
      baz=220
ICHU  Yijhu            1.65 238 eP    Pn     10 07 58.4 +1.7
      baz=238
ICHU                            eS    Sn     10 08 18.8 +1.6
      baz=238
CHN8  Yiju             1.71 239 eP    Pn     10 07 59.1 +1.5
      baz=238
CHN8                            eS    Sn     10 08 20.4 +1.8
      baz=238
IRIF  Iriomote-Funau   1.76  87  P    Pn     10 07 59.2 +0.9
IRIF                             S    Sn     10 08 20.4 +0.4
SCST  Cishan           1.80 222 eP    Pn     10 07 59.6 +0.7
      baz=221
SCST                            eS    Sn     10 08 22.3 +1.3
      baz=221
ECL   Taimali          1.81 206  P    Pn     10 08 00.6 +1.7
      baz=205
ECL                              S    Sn     10 08 21.3 +0.2
      baz=205
SSD   Sandimen         1.83 216 eP    Pn     10 08 00.8 +1.6
      baz=215
SSD                             eS    Sn     10 08 22.9 +1.2
      baz=215
HATJ  Hateruma jima    1.84  95  P    Pn     10 08 00.4 +1.1
TSMG  Majia            1.86 215 eP    Pn     10 08 01.6 +2.0
      baz=214
TSMG                            eS    Sn     10 08 23.6 +1.3
      baz=214
MASBT Mashibuluo       1.94 214 eP    Pn     10 08 02.3 +1.6
      baz=213
MASBT                           eS    Sn     10 08 25.8 +1.5
      baz=213
JKRS  Kuro-shima       2.02  90  P    Pn     10 08 03.1 +1.5
JKRS                             S    Sn     10 08 27.4 +1.4
EAST  Anshuo           2.04 206 eP    Pn     10 08 02.9 +0.8
      baz=205
EAST                            eS    Sn     10 08 27.5 +0.7
      baz=205
SSPT  Xinbi            2.08 213 eP    Pn     10 08 04.1 +1.5
      baz=212
JIJ   Ishigaki jima    2.14  86  P    Pn     10 08 04.1 +0.8
JIJ                              S    Sn     10 08 28.7 -0.3
SCZT  Fangliau         2.15 211 eP    Pn     10 08 05.1 +1.6
      baz=210
SCZT                            eS    Sn     10 08 30.3 +1.0
      baz=210
PNG   Penghu           2.16 252 eP    Pn     10 08 03.7 +0.1
      baz=252
PNG                             eS    Sn     10 08 29.0 -0.5
      baz=252
PHUB  P'eng-hu         2.17 251 eP    Pn     10 08 05.0 +1.3
      baz=250
PHUB                            eS    Sn     10 08 28.0 -1.6
      baz=250
LAY   Lan-yu           2.20 186 eP    Pn     10 08 05.8 +1.5
      baz=185
LAY                             eS    Sn     10 08 29.8 -0.8
      baz=185
SLIU  Shizi            2.21 205 eP    Pn     10 08 06.0 +1.6
      baz=204
SLIU                            eS    Sn     10 08 31.4 +0.6
      baz=204
PTTC  Pingtan          2.23 305 eP    Pn     10 08 04.5 -0.1
      baz=304
PTTC                            eS    Sn     10 08 29.5 -1.7
      baz=304
VWUC  VWUC             2.27 290 eP    Pn     10 08 04.8 -0.2
      baz=289
VWUC                            eS    Sn     10 08 31.6 -0.5
      baz=289
JISG  Ishigakijimahi   2.31  81  P    Pn     10 08 06.5 +0.8
JISG                            eS    Sn     10 08 33.3 +0.1
VCHM  Qimei            2.40 245 eP    Pn     10 08 08.5 +1.6
      baz=244
VCHM                            eS    Sn     10 08 35.8 +0.5
      baz=244
TWKBT Hengchun         2.46 202 eP    Pn     10 08 08.7 +1.0
      baz=201
TWKBT                           eS    Sn     10 08 36.4 -0.4
      baz=201
MATB  Ma-tsu           2.54 319 eP    Pn     10 08 08.6 -0.1
      baz=318
MATB                            eS    Sn     10 08 36.6 -2.0
      baz=318
MSUT  Lienchiang       2.57 319 eP    Pn     10 08 10.6 +1.5
      baz=318
MSUT                            eS    Sn     10 08 38.9 -0.4
      baz=318
PTMZ  Houxiangcun      2.57 289 eP    Pn     10 08 09.0 -0.1
      baz=288
PTMZ                            eS    Sn     10 08 39.0 -0.3
      baz=288
JTJ   Tarama           2.67  81  P    Pn     10 08 11.8 +1.3
JTJ                              S    Sn     10 08 42.3 +0.4
LYJJ  Jianjiangzhen    2.95 322 eP    Pn     10 08 14.4 +0.1
      baz=321
LYJJ                            eS    Sn     10 08 47.4 -1.2
      baz=321
KNM   Kinmen           3.08 274 eP    Pn     10 08 19.4 +3.4
      baz=273
KNM                             eS    Sn     10 08 53.0 +1.3
      baz=273
KNMB  Chin-men Tao     3.12 275 eP    Pn     10 08 16.3 -0.3
      baz=274
KNMB                            eS    Sn     10 08 51.7 -1.1
      baz=274
MHZQ  Yeshan           3.12 307 eP    Pn     10 08 16.3 -0.3
      baz=306
MHZQ                            eS    Sn     10 08 53.1 +0.3
      baz=306
JIRB  Irabujima        3.13  78  S    Sn     10 08 53.7 +0.8
JIKM  Ikemajima        3.21  77  S    Sn     10 08 55.7 +0.7
JMJ   Miyako jima 2    3.23  79 eP    Pn     10 08 19.9 +1.8
      baz=79
JMJ                             eS    Sn     10 08 55.8 +0.3
      baz=79
JMJ2  Miyako jima3     3.25  80  P    Pn     10 08 20.1 +1.7
JMJ2                            eS    Sn     10 08 56.5 +0.5
JOGS  Gusukube         3.33  80  P    Pn     10 08 21.2 +1.8
AXDP  Jialang          3.55 281 eP    Pn     10 08 24.1 +1.7
      baz=280
AXDP                            eS    Sn     10 09 02.2 -1.0
      baz=280
SKMP  Bagumbayan, Su  17.82 171 eP    Pn     10 11 45.1  +12
DDMP  Don Marcelino,  18.42 168 eP    P      10 11 35.0 -4.1
```

IDC 15 10:08:54.2±1.5**, 27°.64N**×**104°.30E, h0^{km}, mb3.2**/4**, mb1 3.5**/4**, mb1mx3.2**/68**, mbtmp3.3**/4**, Error ellipse: s-maj=92.9km s-min=25.4km az=65.0, Yunnan**

```
Code  Station Name      Δ°   AZ°   Phase ID          Time      Res
                               Op        ISC       h  m  s    ISC
SONM  Songino Array    20.22   4   P         P        10 13 31.4 +0.5
      0.5nm,0.8s,baz=187,slow=10,SNR=3.9
MKAR  Makanchi Array   25.78 324   P         P        10 14 26.5 -0.3
      0.2nm,0.6s,baz=120,slow=8.7,SNR=2.4
WRA   Warramunga Arr   55.53 145   P         P        10 18 30.9 -0.5
      0.6nm,0.8s,baz=336,slow=8.2,SNR=6.2
ASAR  Alice Springs    58.47 148   P         P        10 18 52.8 +0.5
      0.2nm,0.4s,baz=330,slow=7.3,SNR=1.8
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*IDC **15** 10:14:50.4±0.6, 1°.23N×97°.03E, h0^{km}, mb4.4/26, mb1 4.5/28, mb1mx4.2/76, mbtmp4.4/28, ML4.3/2, MS3.4/8, Ms1 3.5/8, ms1mx3.2/36, Error ellipse: s-maj=15.9km s-min=12.0km az=38.0*

*DJA **15** 10:14:53.6±1.0, 1°N±3°×9°7E±°, h20^{km}±6^{km}, M4.6/16, mb4.7/16, mB5.1/5, MLv4.6/13, Mw(mB)4.5/5*

*BJI **15** 10:14:54.7±0.0, 1°.19N×97°.24E, h46^{km}, mB5.0/32, mb4.7/51, Ms4.5/17, Ms7 4.3/17*

*NEIC **15** 10:14:55.7±1.6, 1°.31N±0°.08×97°.14E±0°.04, h32^{km}±5^{km}, mb4.6/33, Error ellipse: s-maj=11.5km s-min=5.3km az=186.0*

*KLM **15** 10:14:57, 1°.44N×96°.92E, h6^{km}, mb4.6*

ISC 15 10:14:55.8±0.4**, 1°.23N**±0°.05×**97°.06E**±0°.06**, h35^{km}, n154,** σ1^s**25**/156**, mb4.6**/63**, MS3.8**/12**, 2C-1D, Northern Sumatera**

```
Code  Station Name      Δ°   AZ°   Phase ID          Time      Res
                               Op        ISC       h  m  s    ISC
GSI   Gunungsitoli      0.52  82             Pn       10 15 05.2 -1.6
GSI   Gunungsitoli      0.52  82   P         Pn       10 15 05.2 -1.6
PBSI  Pulau Batu        1.77 136   P         Pn       10 15 24.1 +0.2
PBSI                               S         Sn       10 15 44.2 -1.0
TPTI                    2.02   4   P         Pn       10 15 25.5 -1.9
RPSI  Rantau Prapat     2.37  52             Pn       10 15 31.4 -0.7
PSI   Prapat            2.43  50   Pn        Pn       10 15 31.8 -1.4
      26nm,0.3s,baz=360,slow=9.3,SNR=48
PSI                                LR        LR       10 15 58.2
      comp=Z,328nm,21.3s,baz=270,slow=28
PSI                                Sn        Sn       10 15 58.2 -3.6
      29nm,0.3s,baz=180,slow=5.5,SNR=6.0
PSI                                Lg        Lg       10 16 07.0
      20nm,0.3s,baz=0.1,slow=8.4,SNR=2.9
TSI   Tuntungan         2.71  34   P         Pn       10 15 36.1 -0.8
MLSI  Meulaboh, Aceh    3.08 348   P         Pn       10 15 41.0 -1.1
PDSI  Padang            4.02 122   P         Pn       10 15 54.2 -0.7
BKNI  Bangkinang        4.08 103   Pn        Pn       10 15 56.0 +0.3
BKNI  Bangkinang        4.08 103   P         Pn       10 15 56.7 +0.9
IPM   Ipoh              5.11  51             Pn       10 16 09.6 -0.4
IPM   Ipoh              5.11  51   P         Pn       10 16 10.0 +0.1
KULM  Kulim             5.40  42             Pn       10 16 12.5 -1.4
KULM  Kulim             5.40  42   P         Pn       10 16 13.0 -0.8
MYKOM Kota Tinggi       6.81  85   Pn        Pn       10 16 32.4 -0.9
MYKOM Kota Tinggi       6.81  85   P         Pn       10 16 34.0 +0.7
MNAI  Manna             8.10 133   Pn        Pn       10 16 51.2 +0.2
KSM   Kuching          13.25  89   P         P        10 18 13.0 +2.1
SRAK  Srakaew          13.62  21   P         Pn       10 18 09.0 +2.4
      2µm197nm,0.7s
UTHA  Uthaitani        14.43   9   P         P        10 18 25.8 +1.8
      250nm22nm,0.8s
SBUM  Sibu             15.20  85   Pn        Pn       10 18 27.6 -0.4
CHAI  Chaiyaphum       15.37  18   P         P        10 18 33.2 -1.2
      28nm,0.8s
DLV   T  Lat           15.55  46             Pn       10 18 33.4 +0.6
UBPT  Khong Chiam      16.24  30   P         P        10 18 43.0 -1.2
      9.9nm,0.7s
UBPT  Khong Chiam      16.24  30   P         Pn       10 18 42.2 +0.8
UTTA  Uttaradit        16.77  12   P         P        10 18 50.2 +0.3
      13nm,0.9s
CM05  Chiang Mai Arr   17.16   6   P         P        10 18 54.0 -0.4
      8.4nm,0.8s
CM04  Chiang Mai Arr   17.17   6   P         P        10 18 54.7 +0.3
      97nm8.6nm,0.7s
CM13  Chiang Mai Arr   17.18   6   P         P        10 18 54.0 -0.6
      96nm9.4nm,0.7s
CM01  Chiang Mai Arr   17.18   6   P         P        10 18 54.0 -0.6
      12nm,0.8s
CM02  Chiang Mai Arr   17.20   6   P         P        10 18 55.6 +0.9
      12nm,0.8s
CM09  Chiang Mai Arr   17.21   6   P         P        10 18 55.5 +0.6
      113nm12nm,0.7s
CM15  Chiang Mai Arr   17.21   6   P         P        10 18 55.7 +0.8
      8.1nm,0.6s
CMAR  Chiang Mai Arr   17.22   6   P         Pn       10 18 51.9 -1.9
      0.8nm,0.3s,baz=195,slow=11,SNR=15
CMAR                               LR        LR       10 26 19.3
      comp=Z,212nm,19.5s,baz=236,slow=40
CM36  Chiang Mai Arr   17.30   7   P         P        10 18 56.0 +0.2
CM35  Chiang Mai Arr   17.46   7   P         P        10 18 58.0 +0.3
CMMT  Chiang Mai       17.57   6   P         P        10 19 01.0 +2.1
      4.1nm,0.8s
CM33  Chiang Mai Arr   17.58   6   P         P        10 19 00.0 +1.1
CM34  Chiang Mai Arr   17.63   7   P         P        10 19 01.0 +1.5
NONG  Nongkai          17.77  19   P         P        10 19 01.4 +0.4
      25nm,0.8s
SPMM  Sapulut          19.68  79   P         Pn       10 19 25.0 +1.2
SLVN  Son La           21.07  18   P         P        10 19 36.2 -0.9
QIZ   Qiongzhong       21.68  35   P         P        10 19 44.3 +0.6
QIZ                                S         S        10 23 43.1 +1.1
QIZ                                LR        LR
      comp=N,190nm,15.9s
QIZ                                LR        LR
      comp=E,220nm,11.8s
QIZ                                LR        LR
      comp=Z,200nm,12.0s
MYLDM Lahad Datu       21.76  79             P        10 19 45.1 +0.5
MYLDM                              IAmb      IAmb     10 20 03.6
      comp=Z,20nm,0.9s
KAPI  Kappang          23.50 105   P         P        10 20 01.7 -1.1
      comp=Z,3.6nm,0.4s,baz=331,slow=6.4,SNR=3.6
KMI   Kunming          24.38  13  ⇑P         P        10 20 11.5 +0.4
KMI                                pP        sP       10 20 23.8 -1.6
KMI                                sP        pP       10 20 30.3 +9.1
KMI                                PP        PnPn     10 20 47.5 +5.1
KMI                                S         S        10 24 25.9 -2.8
KMI                                sS        sS       10 24 45.9 +1.1
KMI                                SS        SnSn     10 25 21.1 +7.0
KMI                                pmax      pmax
      comp=Z,40nm,1.2s
KMI                                pmax      pmax
      comp=Z,180nm,3.5s
KMI                                LR        LR
      comp=Z,530nm,16.6s
KMI                                LR        LR
      comp=Z,250nm,13.3s
KMI                                LR        LR
      comp=Z,620nm,17.0s
KMI   Kunming          24.38  13   P         P        10 20 11.3 +0.2
APSI  Ampana           24.68  95   P         P        10 20 13.0 -0.8
      comp=Z,38nm,0.9s
SHL   Shillong         24.70 349   P         P        10 20 13.6 -0.5
H08S2 Diego Garcia H   26.04 250   T         T        10 47 31.6
      baz=72,slow=76,SNR=123
H08S3 Diego Garcia H   26.04 250   T         T        10 47 31.8
      baz=72,slow=76,SNR=1738
H08S1 Diego Carcia H   26.06 250   T         T        10 47 32.9
      baz=72,slow=76,SNR=70
GYA   Guiyang          26.73  19  ⇓P         P        10 20 31.5 -0.8
GYA                                pmax      pmax
      comp=Z,13nm,1.0s
GYA                                LR        LR
      comp=Z,440nm,14.1s
TGY   Tagaytay City    26.86  60   LR        LR       10 30 32.7
      comp=Z,91nm,20.2s,baz=152,slow=35
ODAN  Odare            27.12 341  eP         P        10 20 37.4 +1.5
      comp=Z,50nm,0.7s
RAMN  Ramite           27.47 339  eP         P        10 20 40.3 +1.2
      comp=Z,20nm,0.5s
TAPN  Taplejung        27.48 342  eP         P        10 20 40.6 +1.4
      comp=Z,93nm,0.9s
PKI   Pulchoki         28.47 338  eP         P        10 20 49.4 +1.3
PKIN  Phulchoki        28.48 338  eP         P        10 20 49.2 +1.1
GUN   Gumba            28.61 339  eP         P        10 20 50.6 +1.3
      comp=Z,47nm,0.6s
DMN   Daman            28.62 337  eP         P        10 20 50.8 +1.4
KKN   Kakani           28.72 338  eP         P        10 20 51.3 +1.1
LSA   Lhasa            28.86 349   P         P        10 20 53.5 +1.7
LSA                                pmax      pmax
      comp=Z,24nm,0.8s
LSA   Lhasa            28.86 349   P         P        10 20 53.4 +1.7
LSA                                IAmb      IAmb     10 20 55.9
      comp=Z,7.0nm,0.7s
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GKN	**Gorkha**	**29.16**	**337**	*e*P	**P**	**10 20 55.5**	**+1.5**
	comp=Z,61nm,1.0s						
DANN	**Dangsing**	**29.81**	**336**	*e*P	**P**	**10 21 01.2**	**+1.2**
	comp=Z,26nm,0.7s						
CD2	**Chengdu**	**30.19**	**12**	P	**P**	**10 21 01.8**	**-1.2**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CD2				LR	LR		
	comp=Z,490nm,18.1s						
CD2				LR	LR		
	comp=Z,510nm,11.8s						
CD2				LR	LR		
	comp=Z,520nm,13.0s						
ENH	**Enshi**	**31.20**	**21**	P	**P**	**10 21 10.0**	**-2.0**
FITZ	**Fitzroy Crossi**	**34.06**	**126**	P	**P**	**10 21 36.3**	**-0.8**
	comp=Z,3.8nm,0.9s,baz=281,slow=7.2,SNR=5.1						
FITZ	**Fitzroy Crossi**	**34.06**	**126**	P	**P**	**10 21 36.2**	**-0.9**
FITZ				IAmb	IAmb	10 21 41.1	
	comp=Z,9.1nm,1.2s						
XAN	**Xi'an**	**34.48**	**18**	P	**P**	**10 21 38.9**	**-1.6**
LZH	**Lanzhou**	**35.25**	**10**	*e*P	**P**	**10 21 46.3**	**-1.0**
LZH				pP	pP	10 21 54.8	-2.7
LZH				pmax	pmax		
	comp=Z,10.0nm,1.1s						
NJ2	**Nanjing**	**36.91**	**32**	*e*P	**P**	**10 22 02.5**	**+1.1**
NJ2				pmax	pmax		
	comp=Z,3.0nm,0.5s						
GTA	**Gaotai**	**38.08**	**3**	⇑P	**P**	**10 22 10.9**	**-0.5**
GTA				pP	pP	10 22 18.8	-2.6
GTA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,49nm,6.0s						
GTA				LR	LR		
	comp=Z,120nm,16.7s						
GTA				LR	LR		
	comp=Z,150nm,16.4s						
GTA				LR	LR		
	comp=Z,150nm,14.9s						
NIL	**Nilore**	**39.22**	**328**	P	**P**	**10 22 20.6**	**-0.3**
NIL				IAmb	IAmb	10 22 27.8	
	comp=Z,11nm,0.5s						
JOW	**Kunigami**	**39.32**	**47**	P	**P**	**10 22 21.1**	**-0.7**
	comp=Z,22nm,0.5s,baz=238,slow=5.7,SNR=13						
H01W3	**Cape Leeuwin H**	**39.33**	**158**	T	T	11 04 00.6	
	baz=332,slow=76						
H01W2	**Cape Leeuwin H**	**39.34**	**158**	T	T	11 04 01.6	
	baz=332,slow=76						
H01W1	**Cape Leeuwin H**	**39.34**	**158**	T	T	11 03 58.6	
	baz=332,slow=76						
HHC	**Hu-ho-hao-te**	**41.57**	**17**	*e*P	**P**	**10 22 39.8**	**-0.5**
HHC				S	**S**	**10 28 55.1**	**+1.0**
HHC				pmax	pmax		
	comp=Z,9.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,130nm,4.5s						
HHC				LR	LR		
	comp=Z,350nm,14.1s						
HHC				LR	LR		
	comp=Z,360nm,13.0s						
HHC				LR	LR		
	comp=Z,250nm,14.3s						
WB0	**Warramunga Arr**	**42.14**	**122**	P	**P**	**10 22 44.3**	**-1.0**
WB0				IAmb	IAmb	10 22 45.8	
	comp=Z,19nm,1.4s						
WRA	**Warramunga Arr**	**42.17**	**122**	P	**P**	**10 22 44.9**	**-0.6**
	comp=Z,3.7nm,0.6s,baz=301,slow=9.2,SNR=38						
WRA				PcP	**PcP**	**10 24 40.1**	**+0.6**
	comp=Z,0.5nm,0.7s,baz=313,slow=2.6,SNR=2.4						
WRA				LR	LR	10 43 47.7	
	comp=Z,43nm,18.2s,baz=315,slow=41						
WRA	**Warramunga Arr**	**42.17**	**122**	P	**P**	**10 22 44.9**	**-0.6**
WB2	**Warramunga Arr**	**42.18**	**122**	P	**P**	**10 22 44.9**	**-0.6**
WB2				IAmb	IAmb	10 23 11.9	
	comp=Z,15nm,1.4s						
BJT	**Baijiatuau**	**42.34**	**22**	P	**P**	**10 22 45.2**	**-1.3**
BJT				IAmb	IAmb	10 22 47.8	
	comp=Z,13nm,0.7s						
WR0	**Warramunga Arr**	**42.35**	**122**	P	**P**	**10 22 46.3**	**-0.6**
WR0				IAmb	IAmb	10 22 49.9	
	comp=Z,14nm,1.3s						
BJI	**Beijing**	**42.36**	**22**	P	**P**	**10 22 47.3**	**+0.7**
BJI				pmax	pmax		
	comp=Z,18nm,0.6s						
KSH	**Kashi**	**42.68**	**336**	P	**P**	**10 22 49.3**	**-0.1**
KSH				sP	sP	10 23 08.8	+5.4
KSH				S	**S**	**10 29 13.6**	**+2.9**
KSH				pmax	pmax		
	comp=Z,3.0nm,0.5s						
KSH				pmax	pmax		
	comp=Z,170nm,5.1s						
WMQ	**Urumqi**	**43.22**	**350**	*e*P	**P**	**10 22 55.3**	**+1.7**
WMQ				pP	pP	10 23 04.3	+0.4
WMQ				sP	sP	10 23 07.6	-0.4
WMQ				pmax	pmax		
	comp=Z,18nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,170nm,3.9s						
ASAR	**Alice Springs**	**43.53**	**127**	P	**P**	**10 22 56.2**	**-0.2**
	comp=Z,1.3nm,0.5s,baz=298,slow=7.7,SNR=18						
ASAR				LR	LR	10 43 11.1	
	comp=Z,50nm,20.8s,baz=342,slow=39						
SHLS	**Shalkode**	**44.61**	**342**	*e*P	**P**	**10 23 04.7**	**-0.2**
	baz=342						
UZB	**Uzynbulak**	**44.74**	**341**	*e*P	**P**	**10 23 06.8**	**+0.8**
	comp=Z,2.3nm,0.6s,baz=341						
SATY	**Saty**	**44.86**	**341**	*e*P	**P**	**10 23 08.0**	**+1.1**
	comp=Z,4.6nm,0.8s,baz=340						
JNU	**Nakatsue**	**44.88**	**41**	P	**P**	**10 23 06.1**	**-1.0**
	comp=Z,18nm,1.1s,baz=188,slow=8.4,SNR=5.3						
KPKS	**Kokpek**	**45.13**	**341**	*e*P	**P**	**10 23 09.8**	**+0.8**
	baz=341						
TNSS	**Tian-Shan**	**45.34**	**339**	*e*P	**P**	**10 23 11.7**	**+0.6**
	baz=339						
MDOK	**Medeo**	**45.42**	**339**	*e*P	**P**	**10 23 12.5**	**+1.1**
	baz=339						
AAA	**Alma-Ata**	**45.51**	**339**	*e*P	**P**	**10 23 13.2**	**+1.2**
	baz=339						
KSAR	**Wonju Array Be**	**45.87**	**35**	P	**P**	**10 23 13.9**	**-1.0**
KSRS	**Korea Array**	**45.90**	**35**	P	**P**	**10 23 14.1**	**-1.0**
	comp=Z,12nm,0.8s,baz=220,slow=9.3,SNR=34						
AAK	**Ala-Archa**	**45.92**	**337**	P	**P**	**10 23 15.5**	**+0.2**
	comp=Z,2.2nm,0.5s,baz=180,slow=4.6,SNR=4.5						
AAK	**Ala-Archa**	**45.92**	**337**	P	**P**	**10 23 16.6**	**+1.2**
CHKK	**Chushkaly**	**46.05**	**340**	*e*P	**P**	**10 23 15.8**	**-0.3**
	baz=340						
KUU	**Kurty**	**46.31**	**339**	*e*P	**P**	**10 23 18.3**	**+0.1**
	comp=Z,2.5nm,0.8s,baz=339						
TDK	**Taldyqorghan**	**46.60**	**342**	*e*P	**P**	**10 23 20.6**	**+0.1**
	comp=Z,3.1nm,0.5s,baz=342						
SONM	**Songino Array**	**47.12**	**9**	P	**P**	**10 23 24.6**	**0.0**
	comp=Z,8.5nm,0.8s,baz=189,slow=9.5,SNR=62						
SONM				PcP	**PcP**	**10 24 56.7**	**+0.6**
	comp=Z,1.6nm,0.5s,baz=186,slow=4.0,SNR=6.3						
SONM	**Songino Array**	**47.12**	**9**	P	**P**	**10 23 24.6**	**0.0**
SONM				IAmb	IAmb	10 23 25.8	
	comp=Z,7.1nm,0.8s						
MK31	**Makanchi Array**	**47.18**	**346**	P	**P**	**10 23 25.1**	**+0.1**
MK31				IAmb	IAmb	10 23 26.5	
	comp=Z,7.9nm,1.1s						
MKAR	**Makanchi Array**	**47.18**	**346**	P	**P**	**10 23 25.6**	**+0.6**
	comp=Z,6.9nm,0.6s,baz=161,slow=8.4,SNR=50						
MKAR				LR	LR	10 47 02.2	
	comp=Z,56nm,20.5s,baz=111,slow=41						
MKAR	**Makanchi Array**	**47.18**	**346**	P	**P**	**10 23 24.6**	**-0.4**
ZSN	**Zaisan**	**47.24**	**349**	*e*P	**P**	**10 23 26.4**	**+1.0**
	comp=Z,11nm,1.0s,baz=349						
MAKZ	**Makanchi**	**47.27**	**346**	P	**P**	**10 23 25.8**	**+0.2**
MAKZ				IAmb	IAmb	10 23 29.0	
	comp=Z,5.3nm,0.6s						
DZA	**Taraz**	**47.44**	**334**	*e*P	**P**	**10 23 27.6**	**+0.6**
	comp=Z,4.6nm,0.6s,baz=334						
KK31	**Karatay Array**	**47.97**	**334**	P	**P**	**10 23 32.1**	**+1.0**
KKAR	**Karatay Array**	**47.97**	**334**	P	**P**	**10 23 31.4**	**+0.2**
BTLS	**Baital**	**48.13**	**338**	*e*P	**P**	**10 23 32.2**	**-0.1**
	baz=338						
TLY	**Talaya**	**50.58**	**5**	P	**P**	**10 23 51.7**	**+0.8**
	comp=Z,4.2nm,0.6s,baz=223,slow=7.5,SNR=13						
TLY	**Talaya**	**50.58**	**5**	P	**P**	**10 23 50.5**	**-0.4**
TLY				IAmb	IAmb	10 23 52.6	
	comp=Z,5.1nm,0.8s						
SEM	**Semipalatinsk**	**51.04**	**346**	*e*P	**P**	**10 23 54.4**	**-0.3**
	comp=Z,2.5nm,0.8s,baz=346						
GEYT	**Alibeck**	**51.10**	**320**	P	**P**	**10 23 53.8**	**-1.3**
	comp=Z,1.5nm,0.5s,baz=130,slow=4.5,SNR=2.2						
KURK	**Kurchatov**	**51.73**	**345**	P	**P**	**10 24 00.0**	**+0.5**
KURK				IAmb	IAmb	10 24 01.1	
	comp=Z,6.2nm,0.9s						
MJAR	**Matsushiro Arr**	**51.76**	**42**	P	**P**	**10 23 59.5**	**-0.7**
	comp=Z,1.7nm,0.9s,baz=222,slow=6.9,SNR=2.4						
MJAR				LR	LR	10 48 12.5	
	comp=Z,39nm,18.0s,baz=205,slow=39						
MDJ	**Mudanjiang**	**51.91**	**29**	P	**P**	**10 24 01.3**	**+0.3**
MDJ				pmax	pmax		
	comp=Z,8.0nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,320nm,4.9s						
USA0B	**Ussuriysk Arra**	**52.82**	**31**	P	**P**	**10 24 07.8**	**0.0**
USRK	**Ussuriysk Ar.**	**52.82**	**31**	P	**P**	**10 24 07.7**	**-0.1**
	comp=Z,14nm,0.9s,baz=229,slow=5.0,SNR=27						
USRK	**Ussuriysk Ar.**	**52.82**	**31**	P	**P**	**10 24 07.0**	**-0.7**
BRZS	**Berezniki**	**52.83**	**340**	*e*P	**P**	**10 24 07.8**	**0.0**
	baz=340						
STKA	**Stephens Creek**	**53.48**	**132**	P	**P**	**10 24 13.6**	**+0.6**
	comp=Z,3.7nm,0.8s,baz=293,slow=11,SNR=5.1						
ZAA0	**Zalesovo Array**	**53.51**	**351**	P	**P**	**10 24 12.8**	**+0.2**
ZALV	**Zalesovo Beam**	**53.51**	**351**	P	**P**	**10 24 13.1**	**+0.4**
	comp=Z,14nm,0.4s,baz=176,slow=6.6,SNR=74						
ZALV	**Zalesovo Beam**	**53.51**	**351**	P	**P**	**10 24 11.9**	**-0.8**
BRVK	**Borovoye**	**56.24**	**341**	P	**P**	**10 24 32.5**	**+0.1**
BRVK				IAmb	IAmb	10 24 32.9	
	comp=Z,4.9nm,0.6s						
ABKAR	**Akbulak array**	**57.42**	**332**	P	**P**	**10 24 40.8**	**-0.1**
AKTO	**Aktyubinsk**	**59.14**	**332**	P	**P**	**10 24 52.3**	**-0.6**
	comp=Z,1.9nm,0.5s,baz=128,slow=6.5,SNR=10						
ARU	**Arti**	**63.10**	**337**	P	**P**	**10 25 18.9**	**-0.7**
	comp=Z,0.9nm,0.4s,baz=97,slow=16,SNR=4.0						
KBZ	**Khabaz**	**63.95**	**319**	P	**P**	**10 25 25.3**	**-0.2**
	comp=Z,3.7nm,0.8s,baz=138,slow=7.6,SNR=6.4						
BELG	**Belogornoye**	**65.46**	**329**	P	**P**	**10 25 34.5**	**-0.6**
	comp=Z,11nm,0.7s,baz=71,slow=1.7,SNR=2.7						
NRIK	**Noril'sk**	**68.29**	**356**	P	**P**	**10 25 52.8**	**-0.1**
	comp=Z,4.4nm,0.6s,baz=141,slow=5.5,SNR=8.0						
NRIK	**Noril'sk**	**68.29**	**356**	P	**P**	**10 25 52.1**	**-0.8**
NRIK				IAmb	IAmb	10 25 53.2	
	comp=Z,5.9nm,0.8s						
BRTR	**Keskin Array B**	**68.98**	**312**	P	**P**	**10 25 57.6**	**-0.4**
	comp=Z,0.8nm,0.8s,baz=139,slow=7.5,SNR=1.4						
TIXI	**Tiksi**	**73.18**	**10**	P	**P**	**10 26 21.4**	**-1.2**
TIXI				IAmb	IAmb	10 26 22.7	
	comp=Z,5.2nm,0.6s						
AKASG	**Malin Array Be**	**75.15**	**322**	P	**P**	**10 26 34.1**	**-0.4**
	comp=Z,0.3nm,0.4s,baz=89,slow=5.1,SNR=4.2						
FINES	**FINESS Array B**	**79.91**	**333**	P	**P**	**10 27 00.3**	**-0.5**
	comp=Z,1.3nm,0.7s,baz=111,slow=7.6,SNR=3.4						
ARCES	**ARCESS Array B**	**82.46**	**340**	P	**P**	**10 27 14.6**	**+0.3**
	comp=Z,2.7nm,0.9s,baz=86,slow=4.0,SNR=5.7						
ARCES				LR	LR	11 08 20.5	
	comp=Z,40nm,18.2s,baz=70,slow=39						
GERES	**GERESS Array B**	**84.70**	**319**	P	**P**	**10 27 26.7**	**+0.3**
	comp=Z,1.3nm,0.9s,baz=57,slow=3.6,SNR=3.4						
QSPA	**South Pole Qui**	**91.17**	**180**	P	**P**	**10 27 55.6**	**-1.4**
IMAR	**Indian Mountai**	**96.61**	**23**	P	**P**	**10 28 22.2**	**+0.4**
NVAR	**Mina Array Bea**	**128.84**	**36**	PKP	**PKiKP**	**10 34 01.6**	**+0.4**
	comp=Z,0.5nm,0.8s,baz=250,slow=4.4,SNR=4.1						
PDAR	**Pinedale Array**	**130.07**	**26**	PKP	**PKiKP**	**10 34 03.0**	**-0.5**
	comp=Z,0.4nm,0.8s,baz=146,slow=2.9,SNR=3.8						
TXAR	**Lajitas Array**	**143.72**	**31**	PKP	PKPbc	10 34 25.6	0.0
	comp=Z,0.7nm,0.7s,baz=64,slow=0.8,SNR=12						
TXAR	**Lajitas Array**	**143.72**	**31**		**PKPdf**	**10 34 28.9**	**+0.9**
CPUP	**Villa Florida**	**144.93**	**222**	PKP	**PKiKP**	**10 34 31.8**	**-2.1**
	comp=Z,1.2nm,0.7s,baz=91,slow=4.2,SNR=4.2						
CPUP	**Villa Florida**	**144.93**	**222**		**PKPdf**	**10 34 31.3**	**+1.2**

GCG ***15*** *10:18:00.7±0.4, 13.°88N×91.°11W, h76^{km}±12^{km}, MD3.7*
SNET ***15*** *10:18:01.7±1.0, 14.°00N×91.°09W, h26^{km}±5^{km}, ML3.2*
INET ***15*** *10:18:06.0, 14.°37N×90.°83W, h30^{km}, MW3.0*
ISC 15 10:18:01.6±2.5**, 14.°0N**±0.°1×**91.°1W**±0.°1**, h83**^{km}±21^{km}**, n11,**
σ0.^{s}63/16**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FUG	**Fuego 3**	**0.56**	**30**	*e*P	**Pn**	**10 18 15.8**	**-0.6**
PCG	**Pacaya**	**0.67**	**49**	*e*P	**Pn**	**10 18 16.9**	**-0.6**
NBG	**Las Nubes**	**0.98**	**50**	*e*P	**Pn**	**10 18 21.0**	**0.0**
NBG				*e*S	**Sn**	**10 18 36.4**	**+1.0**
HUEH	**Huehuetenango**	**1.40**	**345**	*e*P	**Pn**	**10 18 25.8**	**-0.3**
HUEH				*e*S	**Sn**	**10 18 45.0**	**+0.6**
CEVE	**Cerro Verde**	**1.47**	**95**	*e*P	**Pn**	**10 18 26.7**	**-0.2**
CEVE				*e*S	**Sn**	**10 18 46.5**	**+0.6**
JAYA	**Jayaque - finc**	**1.66**	**100**	*e*P	**Pn**	**10 18 28.9**	**-0.3**
JAYA				*e*S	**Sn**	**10 18 49.9**	**-0.3**
MRL	**Marmol**	**1.79**	**51**	*e*P	**Pn**	**10 18 30.1**	**-1.0**
MRL	**Marmol**	**1.79**	**51**	*e*P	**Pn**	**10 18 31.0**	**-0.1**
ESQI	**Esquipulas**	**1.83**	**71**	*e*P	**Pn**	**10 18 30.6**	**-0.9**
COEG	**Centro de Oper**	**2.21**	**98**	*e*P	**Pn**	**10 18 36.2**	**-0.2**
COEG				*e*S	**Sn**	**10 19 03.4**	**+0.2**
COEG				IAML		10 19 12.8	
	comp=Z,185nm,0.4s						
LCND	**La Caada**	**3.21**	**101**	*e*P	**Pn**	**10 18 50.2**	**+0.2**

NEIC ***15*** *10:19:06.4±0.8, 20.°08S±0.°04×69.°2W±0.°1, h99^{km}±9^{km},*
mb4.0/4, ML3.8(GUC), Error ellipse: s-maj=15.8km
s-min=3.9km az=103.0
GUC ***15*** *10:19:06.9±0.7, 20.°04S×69.°17W, h101^{km}±3^{km}, ML3.8*
IDC ***15*** *10:19:08.0±1.8, 19.°97S×68.°87W, h116^{km}±16^{km}, mb3.6/6,*
mb1 3.7/10, mb1mx3.5/45, mbtmp4.0/10, MS3.3/1,
Ms1 3.3/1, ms1mx2.4/24, Error ellipse: s-maj=28.9km
s-min=15.2km az=107.0
VAO ***15*** *10:19:09.4±0.7, 20.°05S×68.°66W, h105^{km}±10^{km}, mb4.3*
ISC 15 10:19:05.4±0.7**, 20.°05S**±0.°03×**69.°18W**±0.°06**, h104**^{km}±6^{km}**,**
n57, σ1.^{s}51/67**, mb3.8**/4**, 6C-2D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB08	**IPOC Station P**	**0.09**	**168**	⇓*i*P	**Pn**	**10 19 21.2**	**+0.8**
PB08				*i* S	**Sn**	**10 19 32.2**	**+0.8**
PB08				IAML		10 19 34.3	
	comp=N,9µm,0.2s						
PB08	**IPOC Station P**	**0.09**	**168**		**Pn**	**10 19 20.7**	**+0.3**
TA02	**Huaiquique**	**0.93**	**256**	⇑*i*P	**Pn**	**10 19 26.0**	**+0.7**
TA02				*i* S	**Sn**	**10 19 40.5**	**+0.2**
TA02				IAML		10 19 42.6	
	comp=E,8µm,0.1s						
MNMC	**Minye Minye**	**1.00**	**336**	⇓*i*P	**Pn**	**10 19 27.6**	**+1.2**
MNMC				*i* S	**Sn**	**10 19 43.8**	**+1.6**
MNMC				IAML		10 19 45.0	
	comp=E,8µm,0.2s						
MNMC	**Minye Minye**	**1.00**	**336**		**Pn**	**10 19 27.5**	**+1.1**
PSGC	**Pisagua**	**1.00**	**297**	⇑*i*P	**Pn**	**10 19 26.8**	**+0.5**
PSGC				*i* S	**Sn**	**10 19 41.9**	**-0.1**
PSGC				IAML		10 19 42.8	
	comp=E,2µm,0.2s						
PSGCX	**Pisagua**	**1.00**	**297**		**Pn**	**10 19 26.7**	**+0.4**
PB01	**IPOC Station P**	**1.03**	**196**	⇑*i*P	**Pn**	**10 19 27.6**	**+1.0**
PB01				*i* S	**Sn**	**10 19 43.6**	**+1.1**
PB01				IAML		10 19 45.0	
	comp=N,5µm,0.5s						
PB01	**IPOC Station P**	**1.03**	**196**		**Pn**	**10 19 27.2**	**+0.7**
TA01	**Diego Aracena**	**1.07**	**241**	⇑*i*P	**Pn**	**10 19 27.3**	**+0.4**
TA01				*i* S	**Sn**	**10 19 43.5**	**+0.3**
TA01				IAML		10 19 47.3	
	comp=E,1µm,0.2s						
TA01	**Diego Aracena**	**1.07**	**241**		**Pn**	**10 19 27.2**	**+0.4**
PATCX	**Punta Patache**	**1.20**	**230**	⇑*i*P	**Pn**	**10 19 28.9**	**+0.5**
PATCX				*i* S	**Sn**	**10 19 46.2**	**+0.5**
PATCX				IAML		10 19 52.7	
	comp=E,1µm,0.5s						
PATCX	**Punta Patache**	**1.20**	**230**		**Pn**	**10 19 28.7**	**+0.3**
PB09	**IPOC Station P**	**1.74**	**182**	⇑*i*P	**Pn**	**10 19 36.8**	**+1.8**
PB09				*i* S	**Sn**	**10 19 59.3**	**+1.7**
PB09				IAML		10 20 02.4	
	comp=E,632nm,0.3s						
PB07	**IPOC Station P**	**1.80**	**202**	*e*P	**Pn**	**10 19 36.5**	**+0.8**
PB07				*i* S	**Sn**	**10 19 58.7**	**-0.1**
PB07				IAML		10 20 03.7	
	comp=E,933nm,0.4s						
PB04	**IPOC Station P**	**2.45**	**202**	*e*P	**Pn**	**10 19 46.1**	**+1.9**
PB04				*i* S	**Sn**	**10 20 09.0**	**-4.8**
PB04	**IPOC Station P**	**2.45**	**202**		**Pn**	**10 19 46.0**	**+1.9**
LVC	**Limon Verde**	**2.56**	**175**	P	**Pn**	**10 19 48.4**	**+2.6**
	comp=E,15nm,0.3s,baz=16,slow=11,SNR=56						
LVC				S	**Sn**	**10 20 18.2**	**+1.5**
	comp=E,19nm,0.3s,baz=336,slow=9.6,SNR=12						
LVC	**Limon Verde**	**2.56**	**175**		**Pn**	**10 19 48.1**	**+2.3**
LVC	**Limon Verde**	**2.56**	**175**	*e*P	**Pn**	**10 19 49.1**	**+3.3**
PB06	**IPOC Station P**	**2.67**	**188**	*e*P	**Pn**	**10 19 48.5**	**+1.4**
PB06				*i* S	**Sn**	**10 20 18.0**	**-1.0**
PB06				IAML		10 20 18.6	
	comp=E,498nm,0.4s						
PB06	**IPOC Station P**	**2.67**	**188**		**Pn**	**10 19 47.9**	**+0.8**
PB05	**IPOC Station P**	**2.95**	**199**	*e*P	**Pn**	**10 19 50.6**	**-0.1**
PB05				IAML		10 20 33.6	
	comp=N,212nm,0.6s						
PB15	**IPOC Station P**	**3.15**	**185**	*e*P	**Pn**	**10 19 55.1**	**+1.5**
PB10	**IPOC Station P**	**3.68**	**200**	*e*P	**Pn**	**10 19 59.8**	**-0.5**
LPAZ	**La Paz**	**3.87**	**15**	P	**Pn**	**10 20 06.4**	**+2.8**
	comp=N,1.8nm,0.3s,baz=189,slow=8.2,SNR=38						
LPAZ				S	**Sn**	**10 20 46.9**	**-1.5**
	baz=173,slow=17,SNR=1.8						
LPAZ	**La Paz**	**3.87**	**15**		**Pn**	**10 20 04.7**	**+1.1**
LPAZ	**La Paz**	**3.87**	**15**	*e*P	**Pn**	**10 20 06.8**	**+3.3**
PB14	**IPOC Station P**	**4.69**	**194**	*e*P	**Pn**	**10 20 13.6**	**-0.8**
PB14	**IPOC Station P**	**4.69**	**194**		**Pn**	**10 20 14.7**	**+0.4**
GO02	**Mina Guanaco**	**5.10**	**184**		**Pn**	**10 20 19.9**	**0.0**
AC01	**Pan de Azucar**	**6.21**	**192**	Pn	**Pn**	**10 20 32.6**	**-2.0**
AC02	**Maricunga**	**6.75**	**180**	Pn	**Pn**	**10 20 42.5**	**0.0**
SIV	**San Ignacio**	**8.70**	**64**	P	**Pn**	**10 21 06.5**	**-2.0**
	comp=N,2.9nm,0.3s,baz=266,slow=9.6,SNR=69						
VILB	**Vilhena**	**11.13**	**52**	*e*P	**Pn**	**10 21 39.5**	**-2.0**
CPUP	**Villa Florida**	**12.55**	**122**	P	**Pn**	**10 21 59.3**	**-1.1**
	comp=N,0.2nm,0.3s,baz=286,slow=14,SNR=3.8						
MT02	**Curacav**	**13.27**	**187**	Pn	**Pn**	**10 22 10.3**	**+0.6**
FRTB	**Fartura**	**18.52**	**104**	*e*P	**P**	**10 23 12.5**	**-1.3**
MACA	**Manacapuru-AM**	**18.72**	**27**	*e*P	**P**	**10 23 16.9**	**+0.8**
BB19B	**Bebedouro**	**19.36**	**97**	*e*P	**P**	**10 23 21.3**	**-1.7**
ITTB	**Itaituba**	**20.36**	**42**	*e*P	**P**	**10 23 32.8**	**-1.0**
BDFB	**Brasilia**	**20.61**	**81**	P	**P**	**10 23 35.9**	**-0.7**
	comp=N,2.5nm,0.4s,baz=238,slow=8.2,SNR=5.8						
BDFB	**Brasilia**	**20.61**	**81**	P	**P**	**10 23 36.5**	**-0.2**
BDFB				IAmb	IAmb	10 23 47.0	
	comp=Z,8.7nm,1.3s						
PLCA	**Paso Flores**	**20.65**	**183**	P	Pn	10 23 40.5	+0.5
	comp=Z,2.6nm,0.6s,baz=359,slow=11,SNR=13						
PLCA	**Paso Flores**	**20.65**	**183**	P	Pn	10 23 38.0	-2.0
PLCA				IAmb	IAmb	10 23 40.0	
	comp=Z,12nm,1.4s						
VAO	**Valinhos**	**20.87**	**102**	*e*P	**P**	**10 23 38.3**	**-1.0**
PTGA	**Pitinga**	**21.21**	**26**	P	**P**	**10 23 40.9**	**-2.1**
	comp=Z,1.6nm,0.3s,baz=139,slow=20,SNR=1.8						
OTAV	**Otavalo**	**22.12**	**335**	P	**P**	**10 23 54.9**	**+1.8**
SMTB	**Santa Maria do**	**23.64**	**65**	*e*P	**P**	**10 24 07.3**	**-0.3**
JANB	**Januaria**	**24.21**	**82**	*e*P	**P**	**10 24 12.8**	**+0.2**
SDBA	**SAO DESIDERIO**	**24.49**	**76**	*e*P	**P**	**10 24 15.4**	**+0.1**
SDV	**Santo Domingo**	**28.79**	**357**	LR	LR	10 37 03.8	
	comp=Z,56nm,18.8s,baz=100,slow=38						
QSPA	**South Pole Qui**	**70.13**	**180**	P	**P**	**10 30 08.6**	**+2.1**
	comp=Z,1.2nm,1.0s,baz=282,slow=1.5,SNR=7.6						
QSPA	**South Pole Qui**	**70.13**	**180**	P	**P**	**10 30 08.9**	**+2.4**
TORD	**Torodi Ar. Bea**	**77.11**	**71**	P	**P**	**10 30 47.5**	**-0.5**
	comp=Z,0.8nm,0.4s,baz=254,slow=5.0,SNR=17						
YKA	**Yellowknife Ar**	**89.74**	**341**	P	**P**	**10 31 52.4**	**+0.8**
	comp=Z,0.6nm,0.7s,baz=131,slow=5.1,SNR=10						
WRA	**Warramunga Arr**	**134.06**	**211**	PKP	**PKPdf**	**10 38 12.0**	**+0.4**
	comp=Z,0.8nm,1.2s,baz=161,slow=1.3,SNR=1.9						

ATH ***15*** *10:20:50.7, 40.°34N×23.°95E, h8^{km}±2^{km}, ML2.0/9, Error*
ellipse: s-maj=2.2km s-min=0.9km az=152.0
THE ***15*** *10:20:50.6, 40.°34N×23.°94E, h8^{km}±1^{km}, ML2.0/11, Error*
ellipse: s-maj=1.5km s-min=0.6km az=138.0
SKO ***15*** *10:20:50.5, 40.°27N×23.°95E, h0^{km}*
SOF ***15*** *10:20:50.8, 40.°39N×23.°88E, h10^{km}, MD2.3*
ISC 15 10:20:50.5±0.8**, 40.°34N**±0.°02×**23.°96E**±0.°02**, h10**^{km}±5^{km}**,**
n35, σ0.^{s}49/54**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OUR	**Ouranopolis**	**0.02**	**111**	P	**Pg**	**10 20 52.3**	**+0.1**
OUR				S	**Sg**	**10 20 52.8**	**-0.6**
OUR				AML	AML	10 20 52.9	
	comp=N,20480µm,0.2s						
OUR				AML	AML	10 20 52.9	
	comp=E,21944µm,0.1s						
OUR	**Ouranopolis**	**0.02**	**111**	P	**Pg**	**10 20 52.4**	**+0.1**
OUR				S	**Sg**	**10 20 53.4**	**0.0**
	comp=E,11µm,0.2s						
PLG	**Polygyros**	**0.39**	**275**	P	**Pg**	**10 20 58.1**	**-0.2**
PLG				S	**Sg**	**10 21 03.6**	**+0.1**
PLG				AML	AML	10 21 04.1	
	comp=E,2751µm,0.2s						
PLG				AML	AML	10 21 04.1	
	comp=N,1241µm,0.2s						
PLG	**Polygyros**	**0.39**	**275**	P	**Pg**	**10 20 58.1**	**-0.2**
PLG				S	**Sg**	**10 21 03.2**	**-0.3**
	comp=N,1µm,0.2s						
PAIG	**Paliouri**	**0.47**	**207**	P	**Pg**	**10 20 59.6**	**0.0**
PAIG				S	**Sg**	**10 21 05.2**	**-0.5**
PAIG				AML	AML	10 21 06.7	
	comp=N,244µm,0.1s						
PAIG				AML	AML	10 21 07.1	
	comp=E,359µm,0.2s						
PAIG	**Paliouri**	**0.47**	**207**	P	**Pg**	**10 20 59.6**	**0.0**
PAIG				S	**Sg**	**10 21 06.0**	**+0.3**
	comp=E,175nm,0.2s						
THAS	**Thassos island**	**0.64**	**65**	P	**Pg**	**10 21 02.7**	**-0.3**
THAS				S	**Sg**	**10 21 11.0**	**-0.3**
THAS				AML	AML	10 21 14.2	
	comp=N,857µm,0.3s						
THAS				AML	AML	10 21 14.4	
	comp=E,349µm,0.3s						
THAS	**Thassos island**	**0.64**	**65**	P	**Pg**	**10 21 02.6**	**-0.3**
THAS				S	**Sb**	**10 21 12.7**	**-0.1**
	comp=E,308nm,0.3s						
SOH	**Sokhos**	**0.66**	**316**	P	**Pg**	**10 21 02.8**	**-0.6**
SOH				AML	AML	10 21 16.4	
	comp=E,266µm,0.3s						
SOH				AML	AML	10 21 16.7	
	comp=N,240µm,0.3s						
SOH	**Sokhos**	**0.66**	**316**	P	**Pg**	**10 21 03.2**	**-0.2**
SOH				S	**Sg**	**10 21 12.3**	**+0.2**
	comp=N,108nm,0.4s						
SOH	**Sokhos**	**0.66**	**316**	*i* Pg	**Pg**	**10 21 03.2**	**-0.2**
KVLA	**Kavala**	**0.68**	**29**	P	**Pb**	**10 21 04.5**	**0.0**
KVLA				S	**Sg**	**10 21 12.5**	**-0.1**
HORT	**Hortiatis**	**0.70**	**292**	P	**Pg**	**10 21 03.4**	**-0.8**
HORT				S	**Sg**	**10 21 13.0**	**-0.3**
HORT				AML	AML	10 21 14.1	
	comp=N,161µm,0.3s						
HORT				AML	AML	10 21 15.2	
	comp=E,155µm,0.1s						
HORT	**Hortiatis**	**0.70**	**292**	P	**Pg**	**10 21 03.5**	**-0.6**
HORT				S	**Sg**	**10 21 12.9**	**-0.4**
	comp=E,78nm,0.2s						
KAVA	**Kavala**	**0.78**	**33**	P	**Pg**	**10 21 05.4**	**-0.2**
KAVA				S	**Sg**	**10 21 15.9**	**+0.1**
KAVA				AML	AML	10 21 17.9	
	comp=E,372µm,0.2s						
KAVA				AML	AML	10 21 18.0	
	comp=N,344µm,0.1s						
KAVA	**Kavala**	**0.78**	**33**	P	**Pg**	**10 21 05.6**	**0.0**
KAVA				S	**Sg**	**10 21 16.4**	**+0.7**
	comp=N,140nm,0.1s						
THE	**Thessaloniki**	**0.81**	**291**	P	**Pg**	**10 21 05.3**	**-0.9**
THE	**Thessaloniki**	**0.81**	**291**	*i* Pg	**Pg**	**10 21 05.3**	**-0.9**
SRS	**Serrai**	**0.82**	**340**	P	**Pg**	**10 21 05.8**	**-0.6**
SRS				AML	AML	10 21 21.1	
	comp=E,236µm,0.1s						
SRS				AML	AML	10 21 21.6	
	comp=N,153µm,0.1s						
SRS	**Serrai**	**0.82**	**340**	P	**Pg**	**10 21 06.4**	**0.0**
SRS				S	**Sb**	**10 21 18.2**	**0.0**
	comp=N,100nm,0.1s						
SRS	**Serrai**	**0.82**	**340**	*i* Pg	**Pg**	**10 21 06.0**	**-0.4**
SRS				*i* Sg	**Sb**	**10 21 19.0**	**+0.8**
NVR	**Nevrokopi**	**1.01**	**356**	P	**Pg**	**10 21 09.9**	**-0.1**
NVR				AML	AML	10 21 25.7	
	comp=E,129µm,0.3s						
NVR				AML	AML	10 21 26.1	
	comp=N,88µm,0.2s						
NVR	**Nevrokopi**	**1.01**	**356**	P	**Pg**	**10 21 10.1**	**+0.1**
NVR				S	**Sg**	**10 21 23.5**	**+0.4**
	comp=N,55nm,0.3s						
LIA	**Limnos Island**	**1.04**	**115**	P	**Pg**	**10 21 10.5**	**0.0**
LIA	**Limnos Island**	**1.04**	**115**	P	**Pb**	**10 21 11.2**	**+0.6**
LIA				S	**Sg**	**10 21 24.2**	**+0.2**
	comp=N,85nm,0.4s						
XOR	**Xorichti**	**1.14**	**211**	P	**Pg**	**10 21 12.2**	**-0.3**
XOR	**Xorichti**	**1.14**	**211**	P	**Pg**	**10 21 12.0**	**-0.4**
LIT	**Litokhoron**	**1.15**	**258**	P	**Pb**	**10 21 12.7**	**+0.2**
LIT				S	**Sb**	**10 21 28.0**	**+0.5**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
	comp=N,12nm,0.2s						
SMTH	Samothraki Isl	1.21	83	P	Pb	10 21 12.6	-0.9
SMTH	Samothraki Isl	1.21	83	P	Pb	10 21 12.4	-1.1
MMB	Musomiste	1.26	352	i P	Pn	10 21 13.4	-0.9
RZN	Rozhen	1.46	23	i P	Pg	10 21 18.6	0.0
KKB	Krupnik	1.66	337	i P	Pb	10 21 21.6	+0.3
KDZ	Kurdzhali	1.71	40	i P	Pb	10 21 21.9	-0.2
STIP	Stip	1.90	316	i Pn	Pn	10 21 24.4	+1.3

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*IDC **15** 10:22:49.9±0.9, 30°.78S×179°.26W, h196^{km}±9^{km}, mb4.1/5, mb1 4.2/7, mb1mx3.8/30, mbtmp4.6/7, Error ellipse: s-maj=19.1km s-min=14.1km az=117.0*

ISC 15 10:22:49.7±0.7**, 31°.02S**±0°.07×**179°.3W**±0°.1**, h200**^{km}**, n46, σ2^{s}.30**/63**, mb4.5**/5**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	2.13	35	P	Pn	10 23 38.3	+8.8
GLKZ				S	Sn	10 24 04.4	+3.8
RAO	Raoul Island	2.14	35	P	Pn	10 23 27.4	-2.3
	60nm,0.3s,baz=80,slow=22,SNR=1.8						
RAO				S	Sn	10 23 56.3	-4.4
	26nm,0.3s,baz=270,slow=20,SNR=1.3						
MXZ	Matakaoa Point	6.81	196	P	Pn	10 24 32.1	+4.7
MXZ				S	Sn	10 25 43.1	-1.9
WMGZ	Waiomatatini S	7.04	195	P	Pn	10 24 33.5	+3.2
WMGZ				S	Sn	10 25 50.8	+0.6
HAZ	Te Kaha	7.13	199	P	Pn	10 24 33.7	+2.1
HAZ				S	Sn	10 25 50.2	-2.3
PKGZ	Pakihiroa	7.18	197	P	Pn	10 24 33.4	+1.1
PKGZ				S	Sn	10 25 51.2	-2.5
PUZ	Puketiti	7.31	195	P	Pn	10 24 34.3	+0.4
PUZ				S	Sn	10 25 55.8	-1.0
RUGZ	Raukumara Rang	7.36	199	P	Pn	10 24 36.7	+2.1
RUGZ				S	Sn	10 25 56.0	-2.0
TWGZ	Tauwhareparae	7.48	197	P	Pn	10 24 37.3	+1.2
TWGZ				S	Sn	10 26 01.4	+0.6
CNGZ	Carnagh Statio	7.72	195	P	Pn	10 24 40.2	+1.1
MWZ	Matawai	7.74	199	P	Pn	10 24 39.8	+0.3
TKGZ	Te Karaka	7.76	197	P	Pn	10 24 40.5	+0.8
URZ	Urewera	7.80	201	P	Pn	10 24 42.0	+1.8
	2.3nm,0.3s,baz=274,slow=3.1,SNR=17						
URZ				S	Sn	10 26 06.5	-1.7
	7.3nm,0.3s,baz=284,slow=3.9,SNR=18						
URZ	Urewera	7.80	201	P	Pn	10 24 42.6	+2.3
URZ				S	Sn	10 26 07.0	-1.2
RIGZ	Rimuhau	8.03	197	P	Pn	10 24 43.1	-0.2
RIGZ				S	Sn	10 26 08.6	-5.3
MUGZ	Murupara	8.10	202	P	Pn	10 24 44.8	+0.6
MUGZ				S	Sn	10 26 13.9	-1.6
RTZ	Ruatahuna	8.16	201	P	Pn	10 24 49.1	+4.0
SNGZ	Shannon Statio	8.21	199	P	Pn	10 24 45.5	-0.2
RAHZ	Arahi	8.41	200	P	Pn	10 24 49.8	+1.5
RAHZ				S	Sn	10 26 19.8	-3.0
TLZ	Tolley Road	8.43	209	P	Pn	10 24 56.7	+8.2
NMHZ	Naumai	8.66	200	P	Pn	10 24 55.9	+4.4
HATZ	Hinemaiaia	8.71	204	P	Pn	10 24 56.9	+4.8
HATZ				S	Sn	10 26 29.7	-0.2
BKZ	Black Stump Fm	8.82	202	P	Pn	10 24 54.1	+0.5
BHHZ	Black Hill Sta	9.25	203	P	Pn	10 25 02.7	+3.4
BHHZ				S	Sn	10 26 39.5	-3.4
KAHZ	Kahuranaki	9.29	199	P	Pn	10 25 01.4	+1.7
KAHZ				S	Sn	10 26 39.9	-3.7
KRHZ	Kereru	9.29	201	P	Pn	10 24 60.0	+0.2
KRHZ				S	Sn	10 26 39.7	-4.1
PXZ	Pawanui	9.51	198	P	Pn	10 25 03.1	+0.6
PXZ				S	Sn	10 26 42.9	-6.0
PNHZ	Pukenui	9.59	201	P	Pn	10 25 05.3	+1.7
TSZ	Takapari Road	9.80	202	P	Pn	10 25 07.6	+1.3
TIWZ	Tintock	10.48	200	P	Pn	10 25 16.0	+1.0
TMWZ	Te Maipa	10.78	200	P	Pn	10 25 20.1	+1.1
MSVF	Nonsavu	13.45	349	P	Pn	10 25 51.9	-1.1
	1.9nm,0.3s,baz=156,slow=11,SNR=20						
RPZ	Rata Peaks	14.79	208	P	Pn	10 26 07.3	-2.0
	0.3nm,0.3s,baz=45,slow=8.6,SNR=1.1						
RPZ				S	S	10 28 40.3	-13
	0.8nm,0.3s,baz=120,slow=22,SNR=9.0						
STKA	Stephens Creek	33.24	258	P	P	10 29 09.7	+1.6
	8.0nm,0.7s,baz=84,slow=9.8,SNR=16						
ASAR	Alice Springs	41.96	268	P	P	10 30 22.0	+0.8
	2.2nm,0.4s,baz=105,slow=7.3,SNR=77						
WRA	Warramunga Arr	43.00	274	P	P	10 30 30.2	+0.6
	5.4nm,0.3s,baz=111,slow=8.1,SNR=114						
QSPA	South Pole Qui	59.09	180	P	P	10 32 31.9	+3.1
	2.7nm,0.5s,baz=330,slow=0.3,SNR=33						
PETK	Petropavlovsk-	86.14	346	P	P	10 35 08.0	+0.2
	9.5nm,1.1s,baz=98,slow=3.0,SNR=5.9						
MKAR	Makanchi Array	117.31	310	PKP	PKPdf	10 41 10.0	-1.0
	0.5nm,0.5s,baz=113,slow=0.8,SNR=10						
ZALV	Zalesovo Beam	117.75	318	PKP	PKPdf	10 41 10.5	-1.1
	0.4nm,0.5s,baz=32,slow=3.6,SNR=2.3						
FINES	FINESS Array B	145.33	339	PKPbc	PKPdf	10 42 02.6	-0.2
	16nm,0.6s,baz=57,slow=3.8,SNR=82						
NB2	NORSAR Subarra	149.18	350	PKP	PKPbc	10 42 13.3	-0.5
	comp=Z,3.5nm,0.7s,baz=22,slow=3.1						
NOA	NORSAR Array B	149.18	350	PKPbc	PKPbc	10 42 13.3	-0.5
	comp=Z,2.9nm,0.8s,baz=15,slow=4.2,SNR=6.1						
AKASG	Malin Array Be	151.09	321	PKPbc	PKPbc	10 42 18.0	-0.6
	comp=Z,2.8nm,0.5s,baz=56,slow=2.5,SNR=13						
AKASG				PKPab	PKPab	10 42 26.9	-0.1
	comp=Z,0.5nm,0.3s,baz=50,slow=5.1,SNR=4.7						
BRTR	Keskin Array B	151.89	297	PKPbc	PKPbc	10 42 20.4	-0.6
	comp=Z,2.0nm,0.5s,baz=138,slow=4.6,SNR=15						
TORD	Torodi Ar. Bea	162.19	183	PKPab	PKPab	10 43 16.1	+0.6
	comp=Z,0.6nm,0.6s,baz=161,slow=4.2,SNR=4.2						

GEN 15 10:23:59.4, 44°.18N×10°.97E, h22^{km}±4^{km}**, Ml1.5, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
POPM	Popiglio	0.21	228	P	Pb	10 24 04.9	-0.2
POPM				S	Sb	10 24 08.6	-0.3
SARO	Sassorosso	0.41	270	P	Pb	10 24 07.7	-0.3
SARO				S	Sb	10 24 13.5	-0.3

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*IDC **15** 11:19:50.0±1.1, 7°.25S×126°.78E, h337^{km}±16^{km}, mb2.6/1, mb1 3.0/5, mb1mx2.8/33, mbtmp3.7/5, Error ellipse: s-maj=21.8km s-min=13.2km az=103.0*

*DJA **15** 11:19:53.5±0.7, 7°S±16°×12°6E±1°1, h266^{km}±18^{km}, M4.1/6, mb3.8/6, MLv4.3/6*

ISC 15 11:19:50.8±0.9**, 7°.41S**±0°.08×**127°.02E**±0°.09**, h300**^{km}**, n12, σ1^{s}.80**/16**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOEI	Soe	3.58	229	P	Pn	11 20 55.0	+2.3
SOEI				S	S	11 21 41.8	-0.3
BATI	Baumata	4.32	230	P	Pn	11 21 02.4	+1.8
	41nm,0.3s,baz=106,slow=1.6,SNR=42						
BATI				S	S	11 21 57.4	+0.7
	11nm,0.3s,baz=250,slow=1.4,SNR=11						
BATI	Baumata	4.32	230	P	Pn	11 21 02.5	+1.8
EDFI	Ende, Flores	5.44	256	P	Pn	11 21 11.5	-2.2
	0.0nm3.6nm,1.1s						
FAKI	Fak Fak	6.86	50	P	Pn	11 21 32.7	+2.1
	0.2nm25nm,1.5s						
BASI	Baing, Sumba	6.95	246	P	Pn	11 21 28.9	-2.7
	0.4nm65nm,1.1s						
SIJI	Sorong	7.76	33	P	Pn	11 21 42.5	+0.9
	2.9nm,0.3s,baz=206,slow=22,SNR=12						
SIJI				S	S	11 23 09.2	-2.1
	1.6nm,0.3s,baz=241,slow=23,SNR=3.1						
SWI	Sorong	7.76	33	P	Pn	11 21 42.8	+1.2
	0.1nm17nm,0.9s						
FITZ	Fitzroy Crossi	10.71	187	P	Pn	11 22 18.4	+0.7
	0.4nm,0.3s,baz=17,slow=12,SNR=14						
WRA	Warramunga Arr	14.34	151	P	P	11 23 00.6	-0.1
	0.7nm,0.3s,baz=328,slow=12,SNR=48						
WRA				S	S	11 25 37.2	-1.2
	0.1nm,0.3s,baz=327,slow=22,SNR=2.2						
ASAR	Alice Springs	17.46	159	P	Pn	11 23 36.4	-1.8
	0.2nm,0.3s,baz=335,slow=12,SNR=22						
ASAR				S	S	11 26 39.4	-1.3
	0.1nm,0.3s,baz=343,slow=23,SNR=7.7						
MKAR	Makanchi Array	66.98	328	P	P	11 30 05.3	-6.5
	0.2nm,0.8s,baz=133,slow=7.5,SNR=1.8						

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*IDC **15** 11:37:53.8±0.6, 14°.10N×125°.11E, h0^{km}, mb4.0/15, mb1 4.2/18, mb1mx4.0/43, mbtmp4.1/18, ML4.3/3, MS2.9/2, Ms1 3.0/2, ms1mx2.4/56, Error ellipse: s-maj=21.8km s-min=12.2km az=81.0*

*MAN **15** 11:38:01.3, 13°.95N×124°.65E, h17^{km}, mb5.1, ML4.1, MS4.2*

ISC 15 11:37:57.5±0.6**, 14°.04N**±0°.05×**125°.02E**±0°.07**, h27**^{km}**, n44, σ1^{s}.37**/46**, mb4.3**/21**, 2C, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PVCP	Virac	0.95	242	eP	Pn	11 38 13.3	-1.8
PVCP				eS	Sn	11 38 25.1	-2.7
SCSP	San Jose Seism	1.51	255	eP	Pn	11 38 21.9	-0.9
SCSP				eS	Sn	11 38 41.9	+0.4
CNP	Catarman	1.56	193	eP	Pb	11 38 25.0	-0.8
JCNP	Jose Panganiba	2.27	277	eP	Pn	11 38 33.4	+0.2
JCNP				eS	Sn	11 38 58.2	-2.2
GQP	Guinayangan	2.50	267⇑	eP	Pn	11 38 36.5	0.0
GQP				eS	Sn	11 38 51.6	-15
LQP	Lukban	3.38	272⇑	eP	Pn	11 38 49.1	+0.3
LQP				eS	Sn	11 39 28.2	+0.1
MSLP	Maasin	3.89	182	eP	Pb	11 39 01.7	-3.7
TGY	Tagaytay City	3.96	271	Pn	Pn	11 38 57.5	+0.8
	30nm,0.3s,baz=264,slow=0.6,SNR=4.4						
TGY				Sn	Sn	11 39 44.8	+2.5
	25nm,0.3s,baz=124,slow=26,SNR=2.7						
SJMP	San Jose	4.11	248	eP	Pn	11 39 00.6	+2.0
GUIM	Jordan	4.14	215	eP	Pn	11 39 00.6	+1.6
GUIM				eS	Sn	11 39 47.4	+0.8
CNOP	Candoni, Negro	4.79	209	eP	Pn	11 39 11.1	+3.1
ENPP	El Nido	6.14	243	eP	Pn	11 39 27.6	+1.0
SIJI	Sorong	16.05	157	Pn	P	11 41 43.2	-1.5
	1.0nm,0.3s,baz=264,slow=9.2,SNR=3.4						
KAPI	Kappang	19.64	196	P	Pn	11 42 26.5	+0.7
	0.6nm,0.3s,baz=16,slow=12,SNR=4.8						
KSRS	Korea Array	23.46	6	P	P	11 43 03.1	-1.8
	0.9nm,0.7s,baz=187,slow=9.0,SNR=2.9						
CM35	Chiang Mai Arr	25.23	284	P	P	11 43 22.0	+0.5
CM34	Chiang Mai Arr	25.26	284	P	P	11 43 23.0	+1.3
CM36	Chiang Mai Arr	25.27	284	P	P	11 43 22.0	+0.2
CM09	Chiang Mai Arr	25.36	283	P	P	11 43 24.4	+1.7
	99nm15nm,0.8s						
CM04	Chiang Mai Arr	25.37	283	P	P	11 43 24.0	+1.3
	93nm10nm,0.8s						
CM01	Chiang Mai Arr	25.39	283	P	P	11 43 24.4	+1.5
	78nm10nm,0.9s						
CM05	Chiang Mai Arr	25.40	283	P	P	11 43 24.0	+1.0
	60nm7.1nm,0.9s						
CM02	Chiang Mai Arr	25.40	283	P	P	11 43 24.0	+1.0
	65nm10nm,0.9s						
CM31	Chiang Mai Arr	25.41	283	P	P	11 43 33.0	+10
CMAR	Chiang Mai Arr	25.41	283	P	P	11 43 23.6	+0.5
	4.1nm,0.8s,baz=94,slow=7.6,SNR=29						
CMAR				LR	LR	11 53 35.9	
	comp=Z,15nm,18.1s,baz=70,slow=37						
CM15	Chiang Mai Arr	25.42	283	P	P	11 43 24.6	+1.3
	103nm13nm,0.9s						
CM13	Chiang Mai Arr	25.44	283	P	P	11 43 24.6	+1.3
CMMT	Chiang Mai	25.44	284	P	P	11 43 32.0	+8.6
CM33	Chiang Mai Arr	25.44	284	P	P	11 43 23.0	-0.4
CM32	Chiang Mai Arr	25.52	284	P	P	11 43 34.0	+10
PSI	Prapat	28.09	249	LR	LR	11 54 44.1	
	comp=Z,31nm,19.1s,baz=291,slow=36						
USRK	Ussuriysk Ar.	30.64	10	P	P	11 44 10.4	+0.8
	2.4nm,0.7s,baz=201,slow=11,SNR=4.8						
FITZ	Fitzroy Crossi	31.94	179	P	P	11 44 21.5	+0.3
	3.0nm,0.8s,baz=344,slow=7.4,SNR=2.7						
WRA	Warramunga Arr	34.99	165	P	P	11 44 47.7	-0.1
	1.0nm,0.8s,baz=347,slow=8.8,SNR=8.1						
KLR	Kul'dur	35.52	8	P	P	11 44 51.7	-0.4
	1.6nm,0.9s,baz=180,slow=6.7,SNR=3.0						
SONM	Songino Array	37.08	339	P	P	11 45 05.7	+0.1
	2.0nm,0.8s,baz=152,slow=8.1,SNR=16						
ASAR	Alice Springs	38.47	167	P	P	11 45 18.1	+0.7
	3.0nm,0.6s,baz=348,slow=7.0,SNR=54						
PETK	Petropavlovsk-	46.78	27	P	P	11 46 25.1	+0.5
	3.7nm,0.8s,baz=225,slow=3.7,SNR=1.7						
NWAO	Narrogin (SRO)	47.29	189	P	P	11 46 29.1	+0.3
	3.2nm,0.6s,baz=8.1,slow=7.1,SNR=1.1						
MKAR	Makanchi Array	48.32	321	P	P	11 46 37.5	+0.9
	1.8nm,1.0s,baz=115,slow=7.5,SNR=9.9						
STKA	Stephens Creek	48.34	161	P	P	11 46 37.5	+0.6
	3.4nm,0.8s,baz=345,slow=7.3,SNR=6.3						
ZALV	Zalesovo Beam	50.76	330	P	P	11 46 55.2	+0.1
	0.5nm,0.5s,baz=134,slow=6.2,SNR=1.6						
NRIK	Noril'sk	60.08	346	P	P	11 48 02.4	+0.4
	1.6nm,0.5s,baz=125,slow=6.9,SNR=2.1						
ILAR	Eielson Array	76.61	26	P	P	11 49 44.1	-1.4
	0.4nm,0.7s,baz=252,slow=5.4,SNR=7.0						

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*IDC **15** 11:46:54.2±1.0, 4°.35S×12°.00W, h0^{km}, mb4.0/13, mb1 4.2/13, mb1mx4.0/42, mbtmp4.1/13, MS3.9/20, Ms1 3.9/20, ms1mx3.6/44, Error ellipse: s-maj=27.7km s-min=20.9km az=84.0*

*GCMT **15** 11:46:58.0±0.3, 4°.67S±0°.03×12°.42W±0°.02, h15^{km}±1^{km}, MW4.9/97, Moment Tensor Solution. s17,c19; s97,c119; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.23±.17; $M_{\theta\theta}$0.04±.09; $M_{\phi\phi}$2.20±.12; $M_{r\theta}$-1.19±.27; $M_{\theta\phi}$-0.28±.07; $M_{\phi r}$-0.34±.20; Best double couple: $M_0$2.51000×10^{16} NP1:ϕ_s152.00000°, δ47.00000°, λ-123.00000°. NP2: ϕ_s15.00000°, δ52.00000°, λ-60.00000°. Principal axes: T 2.2440, Plg3.0000°, Azm84.0000°; N 0.5400, Plg24.0000°, Azm176.0000°; P -2.7760, Plg66.0000°, Azm348.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 15 11:46:55.7±0.9**, 4°.4S**±0°.2×**12°.0W**±0°.2**, h10**^{km}**, n35, σ0^{s}.86**/14**, mb4.1**/12**, MS3.9**/19**, North of Ascension Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H10N2	ASCENSION HYDR	4.22	216	T	T	11 51 42.2	
	baz=35,slow=74,SNR=1495						
H10N1	ASCENSION HYDR	4.23	216	T	T	11 51 45.2	
	baz=35,slow=74,SNR=1258						
H10N3	ASCENSION HYDR	4.24	216	T	T	11 51 42.0	
	baz=35,slow=74,SNR=976						
H10S2	ASCENSION HYDR	5.25	210	T	T	11 52 57.3	
	baz=190,slow=74,SNR=152						
H10S3	ASCENSION HYDR	5.25	210	T	T	11 52 57.5	
	baz=30,slow=74,SNR=426						
DBIC	Dimbokro	13.10	33	LR	LR	11 54 16.6	
	comp=Z,395nm,20.1s,baz=184,slow=34						
KOWA	Kowa	20.36	23	P	P	11 51 33.1	+0.5
	1.3nm,0.4s,baz=236,slow=4.9,SNR=2.4						
TORD	Torodi Ar. Bea	22.10	38	P	P	11 51 51.9	+0.6
	3.3nm,0.7s,baz=220,slow=11,SNR=14						
TORD				LR	LR	11 59 30.1	
	comp=Z,272nm,21.2s,baz=210,slow=34						
RCBR	Riachuelo	23.86	266	LR	LR	11 58 44.5	
	comp=Z,480nm,20.4s,baz=138,slow=30						
BDFB	Brasilia	37.13	250	LR	LR	12 06 12.6	
	comp=Z,196nm,21.1s,baz=105,slow=31						
MDT	Midelt	37.66	10	LR	LR	12 09 16.0	
	comp=Z,158nm,18.8s,baz=162,slow=36						
SUR	Sutherland	41.43	136	LR	LR	12 08 48.2	
	comp=Z,143nm,19.0s,baz=329,slow=32						
LBTB	Lobatse	41.50	123	P	P	11 54 43.9	+0.4
	7.5nm,1.0s,baz=315,slow=7.1,SNR=4.8						
MATP	Matopo	42.47	116	P	P	11 54 51.8	+0.3
	4.8nm,0.9s,baz=297,slow=6.2,SNR=5.5						
BOSA	Boshof	42.76	128	P	P	11 54 54.3	+0.6
	6.4nm,1.1s,baz=294,slow=8.4,SNR=4.4						
BOSA				LR	LR	12 10 23.8	
	comp=Z,125nm,18.6s,baz=305,slow=33						
ESDC	Sonseca Array	44.47	9	LR	LR	12 13 36.8	
	comp=Z,68nm,19.9s,baz=105,slow=36						
KEST	Kesra	44.65	25	LR	LR	12 14 32.1	
	comp=Z,121nm,18.1s,baz=187,slow=37						
PTGA	Pitinga	48.06	273	LR	LR	12 14 10.9	
	comp=Z,222nm,19.4s,baz=95,slow=34						
CPUP	Villa Florida	48.51	238	LR	LR	12 14 21.6	
	comp=Z,127nm,18.3s,baz=70,slow=34						
SIV	San Ignacio	49.54	253	P	P	11 55 47.8	+0.6
	1.3nm,0.8s,baz=112,slow=7.4,SNR=5.4						
SIV				LR	LR	12 14 33.9	
	comp=Z,174nm,20.7s,baz=42,slow=34						
EIL	Elat	56.29	50	LR	LR	12 20 34.1	
	comp=Z,58nm,20.7s,baz=288,slow=36						
GERES	GERESS Array B	57.56	20	P	P	11 56 46.0	+0.4
	1.1nm,0.9s,baz=188,slow=6.7,SNR=5.3						
GERES				LR	LR	12 21 41.0	
	comp=Z,59nm,20.4s,baz=236,slow=36						
SDV	Santo Domingo	59.94	283	LR	LR	12 21 03.3	
	comp=Z,66nm,20.1s,baz=108,slow=34						
BRTR	Keskin Array B	60.70	39	P	P	11 57 06.9	-0.8
	0.3nm,0.5s,baz=239,slow=10,SNR=2.1						
NNA	Nana	64.52	259	LR	LR	12 24 24.3	
	comp=Z,110nm,18.9s,baz=71,slow=35						
AKASG	Malin Array Be	65.28	27	P	P	11 57 37.9	+0.3
	0.6nm,0.6s,baz=224,slow=7.7,SNR=5.8						
ATAH	Atahualpa	66.08	264	LR	LR	12 25 43.4	
	comp=Z,141nm,19.1s,baz=103,slow=35						
HFS	Hagfors	67.43	14	P	P	11 57 50.5	-0.7
	1.5nm,0.5s,baz=190,slow=7.3,SNR=7.2						
KBZ	Khabaz	68.69	40	P	P	11 57 59.3	-0.2
	2.1nm,0.9s,baz=282,slow=2.0,SNR=5.9						
FINES	FINESS Array B	71.91	18	P	P	11 58 18.8	-0.1
	2.2nm,0.9s,baz=213,slow=9.9,SNR=4.1						
SADO	Sadowa	77.16	318	LR	LR	12 25 15.6	
	comp=Z,111nm,19.6s,baz=70,slow=30						
TKL	Tuckaleechee C	77.90	308	LR	LR	12 27 49.0	
	comp=Z,50nm,19.5s,baz=130,slow=32						
TEIG	Tepich	78.71	292	LR	LR	12 26 51.7	
	comp=Z,47nm,20.9s,baz=104,slow=30						
MKAR	Makanchi Array	96.11	44	P	P	12 00 23.9	+0.1
	0.4nm,0.9s,baz=145,slow=26,SNR=2.7						
ASAR	Alice Springs	136.60	132	PKP	PKPdf	12 06 16.9	-2.3
	0.3nm,0.9s,baz=213,slow=2.8,SNR=1.9						

TAP 15 12:05:01.8, 25°.05N×121°.94E, h15^{km}**, ML1.9, C, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWB1	Santiao Chiao	0.06	130	P	Pg	12 05 05.3	+0.5
	baz=126						
TWB1				i S	Sg	12 05 07.7	+1.0
	baz=126						
TIPB	Shuangxi	0.12	232	i P	Pb	12 05 05.9	0.0
	baz=232						
TIPB				i S	Sb	12 05 08.9	+0.3
	baz=232						
TNOU	National Taiwa	0.18	304	eP	Pb	12 05 07.1	+0.3
	baz=303						
TNOU				eS	Sb	12 05 10.8	+0.7
	baz=303						
NTC	Toucheng	0.22	206	eP	Pb	12 05 07.5	+0.1
	baz=206						
NTC				S	Sb	12 05 11.6	+0.4
	baz=206						
TWA	Mucha	0.33	258	eP	Pb	12 05 09.2	-0.1
	baz=257						
TWY	Chenhua	0.38	307	eP	Pb	12 05 10.0	-0.2
	baz=306						
TWY				eS	Sb	12 05 16.4	+0.4
	baz=306						
NHDH	Xindian Distri	0.38	257	eP	Pb	12 05 10.4	+0.1
	baz=257						
NHDH				eS	Sb	12 05 16.7	+0.7
	baz=257						
TWE	Neicheng	0.41	217	eP	Pb	12 05 10.7	0.0
	baz=214						
TWE				eS	Sb	12 05 16.7	0.0
	baz=214						
TATO	Taipei	0.41	260	eP	Pb	12 05 11.0	+0.2
	baz=259						
TATO				eS	Sb	12 05 17.3	+0.4
	baz=259						
TWC	Suao	0.45	190	eP	Pb	12 05 11.2	-0.1
	baz=188						
NDS	Dongshan	0.46	206	eP	Pb	12 05 11.7	+0.1
	baz=205						
NDS				eS	Sb	12 05 19.0	+0.8
	baz=205						
NWLT	Wulai	0.48	236	eP	Pb	12 05 12.0	+0.1
	baz=235						
NWLT				eS	Sb	12 05 19.4	+0.6
	baz=235						
ENTT	Nioudou	0.53	220	eP	Pb	12 05 12.8	0.0
	baz=218						
ENTT				eS	Sb	12 05 20.7	+0.5
	baz=218						
NDT	Datong Townshi	0.59	221	eP	Pb	12 05 14.0	+0.2
	baz=220						
NDT				eS	Sb	12 05 22.1	+0.2
	baz=220						
NSK	Sanguang	0.64	235	eP	Pg	12 05 14.5	+0.1
	baz=234						
NSK				eS	Sb	12 05 24.4	+0.8
	baz=234						
ENA	Nanau	0.64	196	eP	Pb	12 05 14.9	+0.2
	baz=195						
NNS	Nan Shan	0.79	220	eP	Pb	12 05 17.4	0.0
	baz=219						
NNSB	Datong	0.80	219	eP	Pb	12 05 17.5	+0.1
	baz=219						
NNSB				eS	Sb	12 05 28.9	+0.9
	baz=219						
NNSH	Datong	0.80	219	eP	Pb	12 05 17.6	+0.1
	baz=219						
NNSH				eS	Sb	12 05 29.0	+0.9
	baz=219						
SBCB	Hsinchu	0.90	254	eP	Pg	12 05 19.4	+0.2
	baz=253						
SBCB				eS	Sn	12 05 32.2	-0.5
	baz=253						
NACB	Ninganchiao	0.93	200	eP	Pg	12 05 19.7	0.0
	baz=199						
NACB				eS	Sb	12 05 30.9	-0.7
	baz=199						
ETLH	Xiulin Townshi	0.93	206	eP	Pn	12 05 20.2	-0.2
	baz=206						
ETLH				eS	Sn	12 05 33.2	-0.5
	baz=206						
FUSS	Fushou	1.02	218	eP	Pb	12 05 21.3	+0.1
	baz=218						
FUSS				eS	Sn	12 05 35.7	-0.1
	baz=218						
CHGB	Renai	1.20	215	eP	Pb	12 05 24.4	-0.1
	baz=215						
CHGB				eS	Sn	12 05 40.6	+0.2
	baz=215						

TAP 15 12:05:06.1, 24°.89N×121°.97E, h7^{km}**, ML1.8, D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWB1	Santiao Chiao	0.12	7	i P	Pg	12 05 09.5	+0.7
	baz=11						
TWB1				i S	Sg	12 05 11.9	+1.2
	baz=11						
NTC	Toucheng	0.13	257	eP	Pg	12 05 09.3	+0.4
	baz=256						
NTC				eS	Sg	12 05 12.8	+2.0
	baz=256						
TIPB	Shuangxi	0.16	303	i P	Pg	12 05 10.3	+0.9
	baz=303						
TIPB				i S	Sg	12 05 13.2	+1.5
	baz=303						
NWF	Wu-fen Shan	0.25	317	P	Pb	12 05 12.5	-0.6
	baz=317						
NWF				S	Sb	12 05 16.7	-1.0
	baz=317						
WFSB	Wu-fen Shan	0.25	317	i P	Pb	12 05 12.7	-0.3
	baz=317						
WFSB				i S	Sb	12 05 16.8	-0.8
	baz=317						
TWC	Suao	0.30	202	eP	Pb	12 05 13.0	-0.7
	baz=200						
TNOU	National Taiwa	0.32	326	eP	Pb	12 05 13.6	-0.6
	baz=325						
TNOU				eS	Sb	12 05 18.3	-1.2
	baz=325						
TWE	Neicheng	0.32	239	eP	Pb	12 05 14.0	-0.1
	baz=237						
TWE				eS	Sb	12 05 19.5	0.0
	baz=237						
NDS	Dongshan	0.34	223	eP	Pb	12 05 14.4	-0.1
	baz=222						
NDS				eS	Sb	12 05 19.5	-0.6
	baz=222						
TWA	Mucha	0.36	285	eP	Pb	12 05 14.2	-0.6
	baz=285						
TWA				eS	Sb	12 05 19.8	-1.0
	baz=285						
TWA	Mucha	0.36	285	eS	Pb	12 05 14.4	-0.5
	baz=257						
NWLT	Wulai	0.44	256	eP	Pb	12 05 15.9	-0.3
	baz=255						
NWLT				S	Sg	12 05 21.3	+0.9

	baz=255						
ENTT	Nioudou	0.44	237	eP	Pb	12 05 16.0	-0.2
	baz=235						
ENTT				eS	Sb	12 05 23.1	+0.1
	baz=235						
TATO	Taipei	0.45	282	eP	Pb	12 05 15.9	-0.4
	baz=281						
TATO				eS	Sb	12 05 22.8	-0.3
	baz=281						
ENA	Nanau	0.50	205	eP	Pb	12 05 16.7	-0.5
	baz=203						
ENA				eS	Sb	12 05 24.5	-0.2
	baz=203						
ENA	Nanau	0.50	205	eS	Sb	12 05 24.5	-0.2
	baz=195						
NDT	Datong Townshi	0.50	236	eP	Pb	12 05 16.8	-0.5
	baz=235						
NDT				eS	Sb	12 05 25.1	+0.4
	baz=235						
TWY	Chenhua	0.52	319	eP	Pb	12 05 17.1	-0.3
	baz=319						
TWY				eS	Sb	12 05 25.2	+0.1
	baz=319						
NSK	Sanguang	0.59	250	eP	Pg	12 05 17.5	-0.1
	baz=249						
NSK				eS	Sb	12 05 26.9	-0.5
	baz=249						
NNSB	Datong	0.70	230	eP	Pb	12 05 20.6	-0.1
	baz=229						
NNSB				eS	Sn	12 05 32.9	-0.8
	baz=229						
NNSH	Datong	0.70	230	eP	Pg	12 05 20.0	+0.4
	baz=229						
NNSH				eS	Sb	12 05 31.5	+0.9
	baz=229						
NACB	Ninganchiao	0.79	206	eP	Pb	12 05 22.2	+0.1
	baz=205						
NACB				eS	Sb	12 05 33.9	+1.0
	baz=205						
ETLH	Xiulin Townshi	0.81	214	eP	Pb	12 05 22.5	0.0
	baz=213						
ETLH				eS	Sb	12 05 34.5	+0.9
	baz=213						
NJD	Zhudong	0.82	260	eS	Sb	12 05 34.8	+1.1
	baz=259						
TWD	Chiawan	0.87	203	eP	Pb	12 05 23.5	0.0
	baz=202						

IDC 15 12:07:33.0±5.7**,6°.26S**×**154°.22E,h0**km**,mb3.4**/3**,**
mb1 3.7/3**,mb1mx3.4**/38**,mbtmp3.4**/3**,Error ellipse:**
s-maj=169.2km s-min=42.2km az=111.0,
Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	23.62	233	P	P	12 12 46.6	+0.6
	2.0nm,0.8s,baz=58,slow=9.8,SNR=10						
ASAR	Alice Springs	26.10	226	P	P	12 13 08.1	-0.7
	0.3nm,0.7s,baz=58,slow=9.7,SNR=5.2						
MKAR	Makanchi Array	82.35	319	P	P	12 19 57.1	+0.1
	0.1nm,0.4s,baz=101,slow=6.0,SNR=1.9						

IDC ***15*** *12:09:50.8±0.6,4°.56S×12°.23W,h0km,mb4.1/18,*
mb1 4.2/19,mb1mx4.0/52,mbtmp4.1/19,ML3.1/1,Error
ellipse: s-maj=19.1km s-min=14.3km az=149.0

ISC 15 12:09:52.3±0.7**,4°.6S**±0°.1×**12°.2W**±0°.1**,h10**km**,n25,**
σ**0ˢ.73**/20**,mb4.2**/17**,North of Ascension Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H10N2	ASCENSION HYDR	3.92	215	T	T	12 14 49.7	
	baz=30						
H10N1	ASCENSION HYDR	3.93	215	T	T	12 14 49.8	
	baz=30						
H10N3	ASCENSION HYDR	3.94	215	T	T	12 14 51.2	
	baz=30						
DBIC	Dimbokro	13.40	33	Pn	Pn	12 13 03.9	+1.3
	0.1nm,0.3s,baz=197,slow=11,SNR=1.8						
KOWA	Kowa	20.65	23	P	P	12 14 32.2	-0.1
	4.5nm,0.7s,baz=209,slow=12,SNR=11						
TORD	Torodi Ar. Bea	22.41	38	P	P	12 14 50.5	-0.7
	6.4nm,0.8s,baz=223,slow=11,SNR=21						
BDFB	Brasilia	36.84	250	P	P	12 17 01.1	-0.1
	1.0nm,0.3s,baz=47,slow=11,SNR=4.0						
SUR	Sutherland	41.44	136	P	P	12 17 40.6	+1.0
	8.8nm,0.9s,baz=35,slow=7.2,SNR=1.8						
MDP	Montagnes des	41.51	283	P	P	12 17 41.5	+1.3
	30nm,1.1s,baz=118,slow=4.0,SNR=2.8						
LBTB	Lobatse	41.58	123	P	P	12 17 41.5	+0.7
	3.7nm,0.9s,baz=278,slow=4.3,SNR=2.7						
MATP	Matopo	42.58	115	P	P	12 17 49.5	+0.5
	1.4nm,0.6s,baz=284,slow=7.7,SNR=5.0						
BOSA	Boshof	42.81	128	P	P	12 17 51.0	+0.1
	3.4nm,0.7s,baz=286,slow=9.2,SNR=6.0						
PTGA	Pitinga	47.84	273	P	P	12 18 31.6	+0.8
	1.0nm,0.3s,baz=319,slow=22,SNR=1.1						
CPUP	Villa Florida	48.20	239	P	P	12 18 33.0	-0.4
	1.1nm,0.7s,baz=330,slow=16,SNR=2.1						
SIV	San Ignacio	49.26	253	P	P	12 18 41.1	-0.6
	3.2nm,0.8s,baz=110,slow=12,SNR=4.7						
LPAZ	La Paz	56.03	254	P	P	12 19 31.8	-0.8
	0.7nm,0.6s,baz=175,slow=9.6,SNR=1.9						
GERES	GERESS Array B	57.83	20	P	P	12 19 44.2	0.0
	1.8nm,0.7s,baz=191,slow=6.1,SNR=12						
CKRC	Cesky Krumlov	58.02	20	eP	P	12 19 44.6	-0.8
KHC	Kasperske Hory	58.04	20	eP	P	12 19 52.2	+6.7
BRTR	Keskin Array B	61.01	39	P	P	12 20 06.4	0.0
	0.7nm,0.7s,baz=165,slow=5.1,SNR=4.5						
AKASG	Malin Array Be	65.57	28	P	P	12 20 35.7	-0.5
	1.6nm,0.7s,baz=227,slow=6.3,SNR=6.8						
KBZ	Khabaz	69.00	40	P	P	12 20 57.9	-0.2
	1.9nm,0.9s,baz=263,slow=4.5,SNR=6.6						
FINES	FINESS Array B	72.19	18	P	P	12 21 16.5	-0.6
	3.6nm,0.9s,baz=217,slow=6.0,SNR=7.5						
MKAR	Makanchi Array	96.42	44	P	P	12 23 21.2	-0.7
	0.4nm,0.9s,baz=242,slow=6.7,SNR=3.6						
ASAR	Alice Springs	136.63	132	PKhKP	PKPpre	12 29 05.2	
	0.3nm,0.8s,baz=242,slow=2.0,SNR=2.4						

BGR ***15*** *12:10:37.5±0.0,4°.64S×12°.55W,h10km,mb5.2,Ms4.0*
IDC ***15*** *12:10:38.7±0.8,4°.60S×12°.33W,h0km,mb4.4/20,*
mb1 4.5/21,mb1mx4.3/52,mbtmp4.4/21,ML2.9/1,MS4.1/1,
Ms1 4.1/1,ms1mx3.4/16,Error ellipse: s-maj=19.7km
s-min=16.9km az=70.0
MOS ***15*** *12:10:39.4±0.8,4°.32S×12°.26W,h11km,mb5.2/29,Error*
ellipse: s-maj=17.4km s-min=6.8km az=56.7
BJI ***15*** *12:10:39.6±0.0,3°.71S×12°.57W,h8km,mB5.8/4,mb5.3/5,*
Ms5.4/2,Ms7 5.1/2
NEIC ***15*** *12:10:41.6±1.6,4°.4S±0°.1×12°.04W±0°.05,h10km±1km,*
mb5.1/31,Error ellipse: s-maj=21.8km s-min=5.6km
az=200.0
GCMT ***15*** *12:10:42.6±0.2,4°.52S±0°.02×12°.45W±0°.01,h12km,*
MW4.9/107,Moment Tensor Solution. s27,c33;
s107,c143; Duration: 0 Moment tensor: Scale 10^{16}*Nm;*
M_{rr}*-2.53±.07;* $M_{\theta\theta}$*-0.18±.07;* $M_{\phi\phi}$*2.71±.06;* $M_{r\theta}$*0.33±.30;*
$M_{\theta\phi}$*-0.35±.06;* $M_{\phi r}$*-0.11±.22; Best double couple:*
M_0*2.66600×*10^{16} *NP1:*ϕ_s*181.00000°,δ44.00000°,*
λ-79.00000°. NP2:ϕ_s*346.00000°,δ47.00000°,*
λ-100.00000°. Principal axes: T 2.7560, Plg2.0000°,
Azm83.0000°; N -0.1800, Plg8.0000°, Azm353.0000°; P
-2.5760, Plg82.0000°, Azm185.0000°; nsta1 refers to
body waves, cutoff=40s. nsta2 refers to surface waves,
cutoff=50s. Triangular moment-rate function

ISC 15 12:10:41.0±0.5**,4°.47S**±0°.09×**12°.2W**±0°.1**,h10**km**,n207,**
σ**1ˢ.14**/206**,mb5.0**/77**,6C-9D,North of Ascension Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H10N2	ASCENSION HYDR	4.05	215	T	T	12 15 30.8	
	baz=32,slow=74						
H10N1	ASCENSION HYDR	4.06	214	T	T	12 15 34.3	
	baz=32,slow=74						
H10N3	ASCENSION HYDR	4.07	215	T	T	12 15 32.0	
	baz=32,slow=74						
H10S2	ASCENSION HYDR	5.09	209	T	T	12 16 51.5	
	baz=190,slow=74,SNR=304						
H10S3	ASCENSION HYDR	5.09	209	T	T	12 16 47.6	
	baz=30,slow=74,SNR=1007						
DBIC	Dimbokro	13.26	33	Pn	Pn	12 13 49.8	+0.3
	0.1nm,0.3s,baz=194,slow=18,SNR=1.8						
DBIC				LR	LR	12 18 02.6	
	comp=Z,812nm,20.2s,baz=190,slow=33						
KOWA	Kowa	20.51	23	P	Pn	12 15 21.0	-0.7
	21nm,0.9s,baz=195,slow=8.1,SNR=6.9						
KOWA	Kowa	20.51	23	P	P	12 15 15.9	-3.6
KOWA				IAmb	IAmb	12 15 35.8	
	comp=Z,125nm,1.4s						
TOA0	Torodi Ar. Sit	22.27	38		P	12 15 36.8	-1.7
TORD	Torodi Ar. Bea	22.27	38	P	P	12 15 38.1	-0.4
	comp=Z,20nm,0.9s,baz=222,slow=11,SNR=9.2						
TORD	Torodi Ar. Bea	22.27	38	P	P	12 15 36.9	-1.6
MDT	Midelt	37.77	10	P	P	12 17 59.7	+2.2
	baz=219,slow=2.7						
LSZ	Lusaka	41.10	108	P	P	12 18 26.5	+0.8
LSZ				pmax	pmax		
	comp=Z,16nm,1.3s						
LSZ	Lusaka	41.10	108		P	12 18 26.5	+0.8
SUR	Sutherland	41.50	136	P	P	12 18 28.2	-0.5
	comp=Z,9.0nm,1.0s,baz=319,slow=6.8,SNR=2.2						
LBTB	Lobatse	41.61	123	P	P	12 18 28.9	-0.8
	comp=Z,16nm,1.1s,baz=267,slow=8.6,SNR=5.1						
LBTB	Lobatse	41.61	123	P	P	12 18 29.6	-0.1
LBTB				pmax	pmax		
	comp=Z,46nm,1.4s						
LBTB	Lobatse	41.61	123		P	12 18 29.6	-0.1
LBTB				IAmb	IAmb	12 18 31.4	
	comp=Z,46nm,1.4s						
PBDV	Barranco-do-Ve	41.69	5	eP	P	12 18 30.9	+0.9
PCVE	Castro Verde	42.07	5	eP	P	12 18 33.9	+0.9
MATP	Matopo	42.60	115	P	P	12 18 37.9	0.0
	comp=Z,3.5nm,0.8s,baz=292,slow=11,SNR=4.6						
BOSA	Boshof	42.86	128	P	P	12 18 38.8	-1.1
	comp=Z,7.7nm,1.0s,baz=320,slow=4.5,SNR=3.6						
EVO	Evora	42.96	5	eP	P	12 18 41.1	+0.8
MBAR	Mbarara	43.03	86	P	P	12 18 43.7	+2.2
	comp=Z,2.6nm,0.2s,baz=269,slow=8.7,SNR=7.8						
MBAR	Mbarara	43.03	86	eP	P	12 18 43.8	+2.3
MBAR	Mbarara	43.03	86		P	12 18 41.6	+0.1
MBAR				IAmb	IAmb	12 18 46.1	
	comp=Z,77nm,1.8s						
PMRV	Marv??o	43.91	5	eP	P	12 18 48.7	+0.8
PCBR	Castelo Branco	44.31	5	eP	P	12 18 52.9	+1.8
KEST	Kesra	44.80	25	P	P	12 18 57.6	+2.4
	comp=Z,3.2nm,0.7s,baz=154,slow=10,SNR=3.7						
KEST	Kesra	44.80	25	P	P	12 18 55.5	+0.2
KEST				IAmb	IAmb	12 19 16.0	
	comp=Z,39nm,1.5s						
MTE	Manteigas	44.86	5	eP	P	12 18 56.3	+0.7
PVIS	Viseu	45.14	5	eP	P	12 18 59.3	+1.5
MVO	Moncorvo	45.66	5	eP	P	12 19 03.4	+1.4
POLO	Lamas de Olo	45.80	5	eP	P	12 19 04.4	+1.3
PBRG	Braganca	46.32	6	eP	P	12 19 08.5	+1.3
PTGA	Pitinga	47.88	273	P	P	12 19 19.0	-0.7
	comp=Z,4.6nm,0.8s,baz=325,slow=23,SNR=1.5						
SIV	San Ignacio	49.34	253	P	P	12 19 28.7	-2.3
	comp=Z,1.5nm,0.8s,baz=130,slow=7.9,SNR=1.5						
KMBO	Kilima Mbogo	49.47	88	P	P	12 19 33.9	+1.6
	comp=Z,1.8nm,0.8s,baz=249,slow=6.9,SNR=7.2						
SAML	Samuel	50.83	262	P	P	12 19 42.0	-0.3
SAML				pmax	pmax		
	comp=Z,32nm,1.4s						
SAML	Samuel	50.83	262	P	P	12 19 42.0	-0.3
SAML				IAmb	IAmb	12 19 47.7	
	comp=Z,32nm,1.4s						
SSB	Saint Sauveur	51.73	15	P	P	12 19 48.2	-0.4
SSB				pmax	pmax		
	comp=Z,30nm,1.4s						
SSB	Saint Sauveur	51.73	15		P	12 19 48.2	-0.4
SSB				IAmb	IAmb	12 19 51.2	
	comp=Z,30nm,1.4s						
CLF	Chambon-Foret	53.79	12		P	12 20 03.7	0.0
DAVA	Damuels	55.09	18	eP	P	12 20 13.7	+0.3
	comp=Z,15nm,1.0s						
FETA	Feichten	55.12	19	eP	P	12 20 13.9	+0.3
	comp=Z,10.0nm,1.1s						
SQTA	Sankt Quirin	55.45	19	eP	P	12 20 16.1	+0.1
	comp=Z,31nm,1.5s						
ABTA	Abfaltersbach	55.48	20	eP	P	12 20 17.5	+1.4
	comp=Z,27nm,1.7s						
UBR	Ueberruh	55.51	18	eP	P	12 20 16.3	0.0
	comp=Z,25nm,1.1s,baz=207,slow=7.3						
UBR				eL	L	12 46 04.5	
	comp=Z,123nm,20.3s						
MOTA	Moosalm	55.53	19	eP	P	12 20 16.4	-0.1
	comp=Z,15nm,1.2s						
RETA	Reutte	55.54	19	eP	P	12 20 16.6	0.0
	comp=Z,7.3nm,1.1s						
BFO	Black Forest	55.56	16	P	P	12 20 16.3	-0.3
BFO				pmax	pmax		
	comp=Z,30nm,1.3s						
BFO	Black Forest	55.56	16		P	12 20 16.3	-0.3
BFO				IAmb	IAmb	12 20 17.9	
	comp=Z,30nm,1.3s						
BFO	Black Forest	55.56	16	eP	P	12 20 16.8	+0.2
	comp=Z,39nm,1.4s,baz=207,slow=7.3						
BFO				eL	L	12 41 28.5	
	comp=Z,131nm,20.8s						
WTTA	Wattenberg	55.63	19	eP	P	12 20 17.9	+0.5
	comp=Z,16nm,1.0s,SNR=5.9						
WATA	Walderalm	55.67	19	eP	P	12 20 17.7	+0.1
	comp=Z,13nm,1.2s						
OBKA	Obir	56.01	22	eP	P	12 20 21.5	+1.5
	comp=Z,13nm,1.8s						
LPAZ	La Paz	56.11	253	P	P	12 20 22.1	+0.3
LPAZ				pmax	pmax		
	comp=Z,13nm,1.3s						
LPAZ	La Paz	56.11	253	P	P	12 20 22.1	+0.3
WLF	Walferdange	56.21	14	dP	P	12 20 21.8	+0.6
WLF				dx	x	12 20 38.4	
WLF	Walferdange	56.21	14	eP	P	12 20 21.8	+0.6
	comp=Z,32nm,1.4s,baz=207,slow=7.3						
DOU	Dourbes	56.25	13	dP	P	12 20 22.0	+0.5
DOU				dx	x	12 20 33.4	
FUR	Furstenfeldbru	56.30	19	eL	L	12 46 01.9	
	comp=Z,231nm,19.2s						
SOKA	Soboth	56.33	22	eP	P	12 20 23.7	+1.5
	comp=Z,9.0nm,1.0s,SNR=5.5						
BMRD	Maredsous	56.48	13	dP	P	12 20 23.4	+0.3
ARSA	Arzberg	57.00	22	eP	P	12 20 26.8	-0.1
	comp=Z,7.9nm,1.1s						
MOA	Molln	57.04	21	i P	P	12 20 27.2	0.0
	comp=Z,7.3nm,1.0s						
MEM	Membach	57.06	14	dP	P	12 20 27.6	+0.5
BTNL	Ternell	57.06	14	dP	P	12 20 28.0	+0.7
BTNL				dx	x	12 20 44.2	
TNS	Taunus Mts	57.32	16	eL	L	12 45 18.9	
	comp=Z,97nm,18.0s						
GRF	Grafenberg Arr	57.63	18	eP	P	12 20 31.2	-0.1
	comp=Z,68nm,1.9s,baz=207,slow=7.3						
GRF				eL	L	12 43 57.3	
	comp=Z,138nm,19.7s						
PB16	IPOC Station P	57.63	251	P	P	12 20 34.4	+1.8
WET	Wettzell	57.68	19	eP	P	12 20 31.8	+0.2
	comp=Z,52nm,1.8s,baz=207,slow=7.3						
WET				eL	L	12 47 18.0	
	comp=Z,106nm,18.3s						
CONA	Conrad Observa	57.69	22	eP	P	12 20 33.0	+1.2
	comp=Z,9.1nm,1.1s,SNR=5.9						
GEC2	GERESS Array S	57.70	20		P	12 20 31.5	-0.4
GEC2				IAmb	IAmb	12 20 33.3	
	comp=Z,30nm,1.2s						
GEC2	GERESS Array S	57.70	20	eP	P	12 20 31.8	-0.1
	comp=Z,44nm,1.4s,baz=207,slow=7.3						
GEC2				eL	L	12 44 52.9	
	comp=Z,121nm,21.8s						
GERES	GERESS Array B	57.70	20	P	P	12 20 32.1	+0.3
	comp=Z,6.9nm,0.8s,baz=191,slow=6.3,SNR=14						
GERES	GERESS Array B	57.70	20	P	P	12 20 32.0	+0.1
GERES	GERESS Array B	57.70	20	P	P	12 20 32.0	+0.1
CKRC	Cesky Krumlov	57.88	20	eP	P	12 20 33.2	+0.1
KHC	Kasperske Hory	57.90	20	P	P	12 20 33.4	+0.2
KHC				pmax	pmax		
	comp=Z,32nm,1.8s						
KHC	Kasperske Hory	57.90	20	eP	P	12 20 33.3	+0.1
KHC	Kasperske Hory	57.90	20	P	P	12 20 33.4	+0.2
KHC				IAmb	IAmb	12 20 55.7	
	comp=Z,32nm,1.8s						
ROTZ	Rotzenmuhle	58.00	18	eP	P	12 20 34.6	+0.7
	comp=Z,62nm,2.2s,baz=207,slow=7.3						
MANZ	Manzenberg	58.17	18	eP	P	12 20 35.2	+0.1
	comp=Z,36nm,1.6s,baz=207,slow=7.3						
WERN	Wernitzgruen	58.51	18	eP	P	12 20 37.9	+0.4
	comp=Z,33nm,1.5s,baz=207,slow=7.3						
PBCC	Pribram	58.52	20	eP	P	12 20 36.5	-1.0
GUNZ	Gunzen	58.57	18	eP	P	12 20 38.6	+0.7
	comp=Z,28nm,1.4s,baz=207,slow=7.3						
MODS	Modra-Piesok	58.59	23	eP	P	12 20 38.0	-0.1
MODS				pmax	pmax		
	comp=Z,38nm,1.7s						
MODS	Modra-Piesok	58.59	23	eP	P	12 20 38.0	-0.1
PLN	Plauen	58.62	18	eP	P	12 20 38.6	+0.4
	comp=Z,34nm,1.7s,baz=207,slow=7.3						
AC02	Maricunga	58.63	241		P	12 20 42.1	+2.8
TANN	Tannenbergstha	58.65	18	eP	P	12 20 38.9	+0.4
	comp=Z,30nm,1.4s,baz=207,slow=7.3						
GO02	Mina Guanaco	58.72	243	P	P	12 20 43.0	+3.3
KRUC	Moravsky	58.83	22	eP	P	12 20 39.9	+0.2
VRAC	Vranov	59.11	22	eP	P	12 20 41.7	+0.1
JAVC	Velka Javorina	59.14	23	eP	P	12 20 43.5	+1.6
PSZ	Piszkesteto	59.27	25	P	P	12 20 43.1	+0.3
PSZ				pmax	pmax		
	comp=Z,18nm,1.2s						
PSZ	Piszkesteto	59.27	25	P	P	12 20 43.1	+0.3
PSZ				IAmb	IAmb	12 20 45.0	
	comp=Z,18nm,1.2s						
VYHS	Vyhne	59.30	23	eP	P	12 20 44.1	+1.1
VYHS				pmax	pmax		
	comp=Z,31nm,1.5s						
VYHS	Vyhne	59.30	23	eP	P	12 20 44.1	+1.1
BRG	Berggiesshubel	59.52	19	eP	P	12 20 44.4	0.0
BRG				Amp		12 20 47.2	
	comp=Z,13nm,1.3s						
BRG				ex	x	12 21 01.9	
BRG				Amp		12 21 03.5	
	comp=Z,30nm,1.7s						
BRG				PP	PP	12 22 55.3	-0.6
BRG				Amp		12 23 02.3	
	comp=Z,32nm,1.9s						
CLL	Collm	59.60	18	i P	P	12 20 44.5	-0.4
	comp=Z,37nm,1.9s						
CLL				ePP	PP	12 22 56.0	-0.7
CLL				LmH		12 46 00.0	
	comp=N,100nm,19.4s						
CLL				LmH		12 46 00.0	
	comp=E,100nm,20.7s						
CLL	Collm	59.60	18	i P	P	12 20 44.5	-0.4
CLL				pmax	pmax		
	comp=Z,37nm,1.9s						
CLL	Collm	59.60	18	eL	L	12 47 09.5	
	comp=Z,127nm,19.1s						
MORC	Moravsky Berou	59.84	22	eP	P	12 20 47.3	+0.6
MORC	Moravsky Berou	59.84	22	P	P	12 20 46.3	-0.4
MORC				pmax	pmax		
	comp=Z,23nm,1.3s						
MORC	Moravsky Berou	59.84	22		P	12 20 46.3	-0.4
MORC				IAmb	IAmb	12 20 48.6	
	comp=Z,23nm,1.3s						
DPC	Dobruska-Polom	59.88	21	eP	P	12 20 45.3	-1.7
DPC	Dobruska-Polom	59.88	21	eP	P	12 20 45.3	-1.7
CHVC	Chvalec	59.98	20	eP	P	12 20 47.7	0.0
LANS	Liptovska Anna	60.07	23	eP	P	12 20 49.6	+1.3
LANS				pmax	pmax		
	comp=Z,5.0nm,1.3s						
LANS	Liptovska Anna	60.07	23	eP	P	12 20 49.6	+1.3
MLR	Muntele Rosu	60.22	30	P	P	12 20 50.6	+1.1
MLR				pmax	pmax		
	comp=Z,46nm,1.6s						
MLR	Muntele Rosu	60.22	30		P	12 20 50.6	+1.1
CRVS	Cervenica-Dubn	60.69	25	eP	P	12 20 54.0	+1.5
CRVS				pmax	pmax		
	comp=Z,75nm,1.5s						
CRVS	Cervenica-Dubn	60.69	25	eP	P	12 20 54.0	+1.5
UZH	Uzhgorod	60.83	25	eP	P	12 20 54.0	+0.6
UZH				e		12 20 59.9	
BR131	Keskin Array S	60.88	39	i P	P	12 20 55.1	+0.9
BRTR	Keskin Array B	60.88	39	P	P	12 20 54.3	+0.2
	comp=Z,3.3nm,1.1s,baz=211,slow=6.5,SNR=6.7						
BRTR	Keskin Array B	60.88	39	P	P	12 20 52.4	-1.8
BRTR	Keskin Array B	60.88	39		P	12 20 52.4	-1.8
KOLS	Kolonicke sedl	61.06	25	eP	P	12 20 56.0	+1.0
KOLS				pmax	pmax		
	comp=Z,18nm,1.5s						
KOLS	Kolonicke sedl	61.06	25	eP	P	12 20 56.0	+1.0
OJC	Ojcow	61.06	23	P	P	12 20 54.7	-0.3
OJC				pmax	pmax		
	comp=Z,19nm,1.2s						
OJC	Ojcow	61.06	23		P	12 20 54.7	-0.3
OJC				IAmb	IAmb	12 20 56.7	
	comp=Z,19nm,1.2s						
BSEG	Bad Segeberg	61.17	15	eL	L	12 49 33.7	
	comp=Z,107nm,20.2s						
BURAR	Bucovina Array	61.39	28		P	12 20 57.8	+0.4
LVV	L'vov	62.48	26	eP	P	12 21 04.7	+0.1
RAYN	Ar Rayn	62.70	61	P	P	12 21 06.2	-0.5
RAYN				pmax	pmax		
	comp=Z,10.0nm,1.3s						
RAYN	Ar Rayn	62.70	61		P	12 21 06.2	-0.5
SUW	Suwalki	65.33	22	P	P	12 21 23.4	+0.2
SUW				pmax	pmax		
	comp=Z,62nm,1.0s						
SUW	Suwalki	65.33	22		P	12 21 23.4	+0.2
AKASG	Malin Array Be	65.43	28	P	P	12 21 23.7	-0.2
	comp=Z,11nm,0.9s,baz=227,slow=6.8,SNR=14						
AKASG	Malin Array Be	65.43	28	P	P	12 21 23.0	-0.9
AKASG				pmax	pmax		
	comp=Z,11nm,1.2s						
AKASG	Malin Array Be	65.43	28		P	12 21 23.0	-0.9
AKBB	Malin Array Si	65.43	28	P	P	12 21 23.2	-0.7
AKBB				pmax	pmax		
	comp=Z,32nm,1.1s						
AKBB	Malin Array Si	65.43	28		P	12 21 23.2	-0.7
GEVA	Gevas	66.46	45	P	P	12 21 31.6	+0.5
GEVA				IAmb	IAmb	12 21 33.7	
	comp=Z,21nm,1.4s						
NACGM	Naroch	67.39	23	i P	P	12 21 36.6	+0.2
NACGM				i P	P	12 21 36.6	+0.2
NACGM				i P	P	12 21 36.6	+0.2
NACGM				i PcP	PcP	12 22 10.4	+6.5
NACGM				i PP	PP	12 24 08.3	+3.3
NACGM				i PPP	PPP	12 25 48.2	
NACGM				i SS	SS	12 35 11.4	+19
NACGM				i SSS	SSS	12 36 47.8	
NACGM				i LQ	LQ	12 43 37.0	
NACGM				i LR	LR	12 50 04.1	
MNK	Minsk	67.53	24	eP	P	12 21 37.0	-0.3
MNK	Minsk	67.53	24	i P	P	12 21 37.2	-0.1
	comp=E,6.0nm,1.3s						
MNK				i P	P	12 21 37.2	-0.1
	comp=N,29nm,1.3s						
MNK				i P	P	12 21 37.2	-0.1
	comp=Z,16nm,1.1s						
MNK				i PP	PP	12 25 40.5	+94
MNK				i PPP	PPP	12 27 46.8	
MNK				i S	S	12 30 33.5	-0.3
MNK				i SSS	SSS	12 43 49.8	
MNK				i LQ	LQ	13 00 33.1	
MNK				i LR	LR	13 08 07.2	
MNK				i LRM	MLR	13 09 35.0	
	comp=E,41nm,21.2s						
MNK				i LRM	MLR	13 10 03.1	
	comp=N,836nm,26.4s						
MNK				i LRM	MLR	13 10 03.1	
	comp=Z,195nm,27.3s						
NB2	NORSAR Subarra	67.81	12	P	P	12 21 38.4	-0.6
	comp=Z,34nm,2.0s,baz=205,slow=6.2						
NB2	NORSAR Subarra	67.81	12	P	P	12 21 38.4	-0.6
	baz=205,slow=6.2						
NOA	NORSAR Array B	67.81	12	P	P	12 21 38.7	-0.3
	comp=Z,3.9nm,1.0s,baz=207,slow=6.6,SNR=3.9						
KIV	Kislovodsk	68.85	39	eP	P	12 21 46.6	+0.7
KIV				pmax	pmax		
	comp=Z,50nm,1.1s						
KIV				MLR	MLR		
	comp=Z,122nm,17.0s						
KIV	Kislovodsk	68.85	39		P	12 21 45.3	-0.6
KBZ	Khabaz	68.87	40	P	P	12 21 47.4	+1.5
	comp=Z,7.6nm,1.0s,baz=279,slow=1.6,SNR=8.0						
KBZ	Khabaz	68.87	40	ceP	P	12 21 46.4	+0.5
GOF	Gofitskoye	69.61	38	⇑eP	P	12 21 51.1	+0.6
VORD	Divnogorie	70.56	32	eP	P	12 21 55.5	-0.7
VORD				pmax	pmax		
	comp=Z,8.0nm,0.7s						
VSR	Storozhevoye	70.64	31	eP	P	12 21 55.2	-1.5
VSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
LPSR	Galich'ya Gora	71.31	30	eP	P	12 21 59.8	-0.9
LPSR				pmax	pmax		
	comp=Z,20nm,1.4s						
FINES	FINESS Array B	72.05	18	P	P	12 22 05.0	+0.1
	comp=Z,10nm,1.0s,baz=184,slow=5.7,SNR=7.1						
FINES	FINESS Array B	72.05	18	P	P	12 22 04.7	-0.3

FINES	**FINESS Array B**	72.05	18	P	P	12 22 04.7	-0.3
PUL	**Pulkovo**	72.23	21c	*e*P	P	12 22 06.3	+0.2
PUL				pmax	pmax		
	comp=Z,136nm,0.6s						
MOS	**Moscow**	72.54	27	*e*P	P	12 22 05.8	-2.2
MOS				pmax	pmax		
	comp=Z,63nm,1.1s						
SYO	**Syowa Base**	72.86	163	⇓*e*P	P	12 22 08.0	-1.8
KLMR	**Klimovskoe**	76.41	23	*e*P	P	12 22 28.4	-2.0
KLMR				pmax	pmax		
	comp=Z,22nm,1.2s						
KLMR	**Klimovskoe**	76.41	23	*e*P	P	12 22 28.5	-2.0
KLMR				AMP		12 22 32.4	
	comp=Z,22nm,1.2s						
GEYT	**Alibeck**	77.38	50	P	P	12 22 36.4	-0.1
	comp=Z,1.0nm,0.5s,baz=251,slow=4.4,SNR=4.1						
GEYT	**Alibeck**	77.38	50	P	P	12 22 36.1	-0.4
KIRV	**Kirov**	79.49	28	*i* P	P	12 22 47.5	-0.1
ABKAR	**Akbulak array**	81.83	39		P	12 22 58.9	-1.5
ARU	**Arti**	83.20	32c	*i*P	P	12 23 06.2	-1.2
ARU						12 26 12.2	
ARU				S	S	12 33 25.1	-2.5
ARU				pmax	pmax		
	comp=Z,14nm,1.4s						
KK31	**Karatay Array**	87.69	47	P	P	12 23 30.4	+0.2
KK31				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KK31	**Karatay Array**	87.69	47		P	12 23 30.4	+0.2
KKAR	**Karatay Array**	87.69	47	P	P	12 23 29.2	-1.0
KKAR						12 23 30.0	
KKAR				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KKAR	**Karatay Array**	87.69	47		P	12 23 30.0	-0.2
KKAR	**Karatay Array**	87.69	47	P	P	12 23 29.2	-1.0
DZA	**Taraz**	88.26	47	*e*P	P	12 23 32.7	-0.3
	baz=47						
DZA	**Taraz**	88.26	47	*e*P	P	12 23 32.6	-0.3
BRVK	**Borovoye**	89.01	37	*i* P	P	12 23 36.4	+0.3
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.6s						
BRZS	**Berezniki**	90.08	40	*e*P	P	12 23 40.7	-0.5
	baz=40						
BRZS	**Berezniki**	90.08	40	*e*P	P	12 23 40.7	-0.5
BTLS	**Baital**	90.46	45	*e*P	P	12 23 42.6	-0.5
	baz=45						
BTLS	**Baital**	90.46	45	*e*P	P	12 23 42.6	-0.5
AAK	**Ala-Archa**	90.54	47	P	P	12 23 44.0	+0.2
AAK				pmax	pmax		
	comp=Z,12nm,1.2s						
AAK	**Ala-Archa**	90.54	47		P	12 23 44.0	+0.2
AAK				IAmb	IAmb	12 23 45.5	
	comp=Z,12nm,1.2s						
SGDS	**Sogindy**	90.72	47	*e*P	P	12 23 43.1	-1.3
	baz=47						
SGDS	**Sogindy**	90.72	47	*e*P	P	12 23 43.1	-1.3
KSH	**Kashi**	91.38	51	P	P	12 23 47.3	-0.4
KSH				sP	pwP	12 23 56.1	+2.4
KSH				S	S	12 34 37.9	-9.4
KSH				pmax	pmax		
	comp=Z,13nm,1.2s						
KSH				pmax	pmax		
	comp=Z,100nm,4.5s						
KUU	**Kurty**	91.99	46	*e*P	P	12 23 49.6	-0.8
	comp=Z,6.3nm,1.6s,baz=46						
KUU	**Kurty**	91.99	46	*e*P	P	12 23 49.5	-0.8
KUU				pmax	pmax		
	comp=Z,6.0nm,1.6s						
AAA	**Alma-Ata**	92.36	47	*e*P	P	12 23 51.7	-0.5
	baz=47						
AAA	**Alma-Ata**	92.36	47	*e*P	P	12 23 51.6	-0.5
MDOK	**Medeo**	92.46	47	*e*P	P	12 23 52.0	-0.7
	baz=47						
MDOK	**Medeo**	92.46	47	*e*P	P	12 23 51.9	-0.7
CHKK	**Chushkaly**	92.46	46	*e*P	P	12 23 51.4	-1.1
	baz=46						
CHKK	**Chushkaly**	92.46	46	*e*P	P	12 23 51.3	-1.1
TXAR	**Lajitas Array**	93.47	299	P	P	12 23 55.7	-1.9
	comp=Z,0.5nm,0.9s,baz=132,slow=8.9,SNR=4.0						
TDK	**Taldyqorghan**	93.54	45	*e*P	P	12 23 56.5	-1.0
	baz=45						
TDK	**Taldyqorghan**	93.54	45	*e*P	P	12 23 56.4	-1.0
KURK	**Kurchatov**	93.93	40c	*e*P	P	12 23 57.5	-1.5
KURK				pmax	pmax		
	comp=Z,5.0nm,1.7s						
SEM	**Semipalatinsk**	94.96	40	*e*P	P	12 24 02.8	-1.3
	baz=40						
SEM	**Semipalatinsk**	94.96	40	*e*P	P	12 24 02.8	-1.3
MK31	**Makanchi Array**	96.29	44c	*e*P	P	12 24 08.9	-1.1
MKAR	**Makanchi Array**	96.29	44	P	P	12 24 09.3	-0.6
	comp=Z,1.4nm,0.9s,baz=266,slow=3.6,SNR=5.0						
MKAR	**Makanchi Array**	96.29	44	P	P	12 24 09.0	-1.0
MKAR	**Makanchi Array**	96.29	44	P	P	12 24 09.0	-1.0
DGZ	**Jazzator, Alta**	99.61	40	*i* P	Pdif	12 24 23.8	-1.2
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.7s						
WMQ	**Urumqi**	100.20	46	*e*P	Pdif	12 24 28.8	+1.1
WMQ				pmax	pmax		
	comp=Z,12nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,180nm,5.1s						
LZH	**Lanzhou**	113.56	53	*e*PKP	PKiKP	12 29 11.4	-8.9
LZH				sPKP		12 29 26.4	
NJ2	**Nanjing**	126.63	53	*e*PKP	PKiKP	12 29 45.5	-0.2
ASAR	**Alice Springs**	136.68	132	PKP	PKPdf	12 30 01.9	-2.7
	comp=Z,3.0nm,1.1s,baz=215,slow=1.9,SNR=7.4						
ASAR	**Alice Springs**	136.68	132	PKIKP	PKPdf	12 30 03.8	-0.8
ASAR	**Alice Springs**	136.68	132		PKPdf	12 30 03.8	-0.8

IDC 15 12:17:55.6±1.4**, 26°.81N×141°.24E, h0**^{km}**, mb3.5**/2,
mb1 3.8/4**, mb1mx3.3**/48**, mbtmp3.7**/4**, ML3.3**/2**, MS3.9**/3,
Ms1 3.9/3**, ms1mx2.7**/44**, Error ellipse: s-maj=28.7km**
s-min=19.2km az=146.0, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	**Chichijima**	0.89	71	Pn	Pn	12 18 15.2	-0.1
	19nm,0.3s,baz=245,slow=17,SNR=4.7						
JCJ				Sn	Sn	12 18 30.8	+1.8
	18nm,0.3s,baz=288,slow=22,SNR=1.7						
MJAR	**Matsushiro Arr**	10.04	346	Pn	Pn	12 20 19.4	-1.7
	0.1nm,0.3s,baz=163,slow=12,SNR=4.9						
JNU	**Nakatsue**	10.96	307	Pn	Pn	12 20 34.9	+1.2
	0.3nm,0.3s,baz=107,slow=11,SNR=4.5						
WRA	**Warramunga Arr**	46.95	189	P	P	12 26 29.0	+0.7
	1.2nm,0.7s,baz=12,slow=8.6,SNR=9.5						
PSI	**Prapat**	47.01	247	LR	LR	12 44 24.5	
	comp=Z,53nm,18.9s,baz=93,slow=34						
ASAR	**Alice Springs**	50.68	189	P	P	12 26 55.5	-1.4
	0.3nm,0.9s,baz=354,slow=4.7,SNR=2.0						
KIRV	**Kirov**	68.45	326	LR	LR	13 01 04.6	
	comp=Z,86nm,18.8s,baz=253,slow=38						
RAR	**Rarotonga**	74.44	124	LR	LR	12 58 56.9	
	comp=Z,134nm,18.9s,baz=321,slow=33						

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*LDG **15** 12:30:56.2±0.1, 44°.20N×10°.94E, h25^{km}, Ml2.1/8, Error*
ellipse: s-maj=1.4km s-min=1.3km az=175.0
*GEN **15** 12:30:56.7, 44°.20N×10°.97E, h21^{km}±3^{km}, Ml2.3*
*ROM **15** 12:30:57.4±0.1, 44°.192N±0°.004×10°.891E±0°.004,*
h10^{km}, ML2.3/1, Error ellipse: s-maj=0.5km s-min=0.2km
az=16.0
ISC 15 12:30:56.0±0.9**, 44°.23N**±0°.02×**10°.87E**±0°.02**, h19**^{km}±2^{km}**,**
n76, σ**1^{s}60**/114**, 7C-3D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZCCA	**Zocca**	0.14	33	P	Pg	12 31 01.9	+1.6
ZCCA				AML	AML		
	comp=E,1540µm,0.4s						
ZCCA				AML	AML		
	comp=N,1775µm,0.2s						
ZCCA				AML	AML		
	comp=E,1390µm,0.2s						
ZCCA				AML	AML		
	comp=N,1820µm,0.2s						
ZCCA				AML	AML		
	comp=E,1540µm,0.4s						
ZCCA				AML	AML		
	comp=N,1780µm,0.2s						
ZCCA				AML	AML		
	comp=E,1390µm,0.2s						
ZCCA				AML	AML		
	comp=N,1820µm,0.2s						
ZCCA				AML	AML		
	comp=N,1820µm,0.2s						
ZCCA				AML	AML		
	comp=E,1540µm,0.4s						
ZCCA				AML	AML		
	comp=N,1780µm,0.2s						
ZCCA				AML	AML		
	comp=E,1390µm,0.2s						
ZCCA				AML	AML		
	comp=N,1820µm,0.2s						
ZCCA				AML	AML		
	comp=E,1540µm,0.4s						
ZCCA				AML	AML		
	comp=N,1780µm,0.2s						
ZCCA				AML	AML		
	comp=E,1390µm,0.2s						
FNVD	**Fontana Vidola**	0.19	108	P	Pg	12 31 01.2	+0.2
FNVD				S	Sg	12 31 04.3	-0.1
FNVD				AML	AML		
	comp=E,1115µm,0.5s						
FNVD				AML	AML		
	comp=N,1435µm,0.5s						
FNVD				AML	AML		
	comp=N,1435µm,0.5s						
FNVD				AML	AML		
	comp=E,1115µm,0.5s						
FNVD				AML	AML		
	comp=N,1435µm,0.5s						
FNVD				AML	AML		
	comp=E,1115µm,0.5s						
FNVD	**Fontana Vidola**	0.19	108	S	Sg	12 31 04.3	-0.1
POPM	**Popiglio**	0.20	204	P	Pg	12 31 02.0	+1.0
POPM				S	Sg	12 31 05.8	+1.4
POPM	**Popiglio**	0.20	204	P	Pg	12 31 02.0	+1.0
POPM				S	Sg	12 31 05.8	+1.4
POPM	**Popiglio**	0.20	204	P	Pg	12 31 02.0	+1.0
POPM				S	Sg	12 31 05.6	+1.2
POPM				AML	AML		
	comp=E,4340µm,0.2s						
POPM				AML	AML		
	comp=N,3635µm,0.4s						
POPM				AML	AML		
	comp=E,4340µm,0.2s						
POPM				AML	AML		
	comp=N,3635µm,0.4s						
POPM				AML	AML		
	comp=N,3635µm,0.4s						
POPM				AML	AML		
	comp=E,4340µm,0.2s						
POPM				AML	AML		
	comp=N,3635µm,0.4s						
POPM				AML	AML		
	comp=E,4340µm,0.2s						
POPM	**Popiglio**	0.20	204	S	Sg	12 31 05.7	+1.2
MTCR	**Monte La Croce**	0.22	155	P	Pg	12 31 01.9	+0.5
MTCR				S	Sg	12 31 05.4	+0.3
MTCR	**Monte La Croce**	0.22	155	P	Pg	12 31 01.9	+0.5
MTCR	**Monte La Croce**	0.22	155	S	Sg	12 31 05.4	+0.3
BDI	**Bagni Di Lucca**	0.26	230	⇑P	Pg	12 31 03.1	+1.2
BDI	**Bagni Di Lucca**	0.26	230	⇑P	Pg	12 31 03.1	+1.2
BDI	**Bagni Di Lucca**	0.26	230	⇑P	Pg	12 31 03.1	+1.2
BDI				S	Sg	12 31 07.5	+1.6
BDI				AML	AML		
	comp=E,1230µm,0.4s						
BDI				AML	AML		
	comp=N,1130µm,0.5s						
BDI				AML	AML		
	comp=E,1220µm,0.3s						
BDI				AML	AML		
	comp=N,1205µm,0.6s						
BDI				AML	AML		
	comp=N,1205µm,0.6s						
BDI				AML	AML		
	comp=N,1130µm,0.5s						
BDI				AML	AML		
	comp=E,1230µm,0.4s						
BDI				AML	AML		
	comp=E,1220µm,0.3s						
BDI				AML	AML		
	comp=N,1205µm,0.6s						
BDI				AML	AML		
	comp=N,1130µm,0.5s						
BDI				AML	AML		
	comp=E,1230µm,0.4s						
BDI				AML	AML		
	comp=E,1220µm,0.3s						
BDI	**Bagni Di Lucca**	0.26	230	S	Sg	12 31 07.6	+1.6
PTF	**Prato**	0.31	151	P	Pb	12 31 03.0	+0.2
PTF				S	Sb	12 31 07.5	0.0
PTF	**Prato**	0.31	151	P	Pb	12 31 03.0	+0.2
PTF	**Prato**	0.31	151	S	Sb	12 31 07.5	0.0
SARO	**Sassorosso**	0.34	263	P	Pb	12 31 04.9	+1.3
SARO				S	Sb	12 31 10.4	+1.9
SARO	**Sassorosso**	0.34	263	P	Pb	12 31 04.9	+1.3
SARO				S	Sb	12 31 10.6	+1.9
SARO	**Sassorosso**	0.34	263	P	Pb	12 31 04.8	+1.3
SARO	**Sassorosso**	0.34	263	P	Pb	12 31 04.8	+1.3
SARO				S	Sb	12 31 10.5	+1.9
SARO				AML	AML		
	comp=E,336µm,0.4s						
SARO				AML	AML		
	comp=N,636µm,0.4s						
SARO				AML	AML		
	comp=E,336µm,0.4s						
SARO				AML	AML		
	comp=N,636µm,0.4s						
SARO				AML	AML		
	comp=N,636µm,0.4s						
SARO				AML	AML		
	comp=E,336µm,0.4s						
SARO				AML	AML		
	comp=N,636µm,0.4s						
SARO				AML	AML		
	comp=E,336µm,0.4s						
SARO	**Sassorosso**	0.34	263	S	Sb	12 31 10.5	+1.9
CARD	**Cardoso**	0.34	234	P	Pb	12 31 04.4	+0.7
CARD				S	Sb	12 31 10.1	+1.3
CARD	**Cardoso**	0.34	234	P	Pb	12 31 04.4	+0.7
CARD				S	Sb	12 31 10.1	+1.3
CARD	**Cardoso**	0.34	234	P	Pb	12 31 04.3	+0.7
CARD	**Cardoso**	0.34	234	P	Pb	12 31 04.3	+0.7
CARD				S	Sb	12 31 10.0	+1.3
CARD				AML	AML		
	comp=E,624µm,1.1s						
CARD				AML	AML		
	comp=N,682µm,0.6s						
CARD				AML	AML		
	comp=E,624µm,1.1s						
CARD				AML	AML		
	comp=N,682µm,0.6s						
CARD				AML	AML		
	comp=N,682µm,0.6s						
CARD				AML	AML		
	comp=E,624µm,1.1s						
CARD				AML	AML		
	comp=N,682µm,0.6s						
CARD				AML	AML		
	comp=E,624µm,1.1s						
VLC	**Villacollemand**	0.35	259	P	Pb	12 31 05.2	+1.4
VLC				S	Sb	12 31 10.8	+1.8
VLC				AML	AML		
	comp=E,892µm,0.4s						
VLC				AML	AML		
	comp=N,883µm,1.2s						
VLC				AML	AML		
	comp=E,892µm,0.3s						
VLC				AML	AML		
	comp=N,820µm,1.2s						
VLC				AML	AML		
	comp=E,893µm,0.4s						
VLC				AML	AML		
	comp=N,884µm,1.2s						
VLC				AML	AML		
	comp=E,892µm,0.3s						
VLC				AML	AML		
	comp=N,820µm,1.2s						
VLC				AML	AML		
	comp=N,820µm,1.2s						
VLC				AML	AML		
	comp=N,884µm,1.2s						
VLC				AML	AML		
	comp=E,892µm,0.3s						
VLC				AML	AML		
	comp=E,893µm,0.4s						
VLC				AML	AML		
	comp=N,820µm,1.2s						
VLC				AML	AML		
	comp=N,884µm,1.2s						
VLC				AML	AML		
	comp=E,893µm,0.4s						
VLC				AML	AML		
	comp=E,892µm,0.3s						
VLC	**Villacollemand**	0.35	259	S	Sb	12 31 10.8	+1.8
ERBM	**Eremo**	0.38	300	⇓P	Pn	12 31 06.1	-0.5
ERBM	**Eremo**	0.38	300	⇓P	Pn	12 31 06.1	-0.5
ERBM				S	Sn	12 31 12.4	-1.0
ERBM				AML	AML		
	comp=E,352µm,1.3s						
ERBM				AML	AML		
	comp=N,480µm,1.4s						
ERBM				AML	AML		
	comp=E,353µm,1.3s						
ERBM				AML	AML		
	comp=N,480µm,1.4s						
ERBM				AML	AML		
	comp=E,353µm,1.3s						
ERBM				AML	AML		
	comp=N,480µm,1.4s						
ERBM				AML	AML		
	comp=E,353µm,1.3s						
ERBM				AML	AML		
	comp=N,480µm,1.4s						
ERBM	**Eremo**	0.38	300	⇓P	Pn	12 31 06.1	-0.5
ERBM	**Eremo**	0.38	300	S	Sn	12 31 12.5	-1.0
SEI	**Scarperia**	0.39	116	P	Pb	12 31 05.0	+0.6
SEI				S	Sb	12 31 10.8	+0.6
SEI				AML	AML		
	comp=E,1068µm,0.4s						
SEI				AML	AML		
	comp=N,968µm,1.6s						
SEI				AML	AML		
	comp=E,1068µm,0.4s						
SEI				AML	AML		
	comp=N,968µm,1.6s						
SEI				AML	AML		
	comp=E,1068µm,0.4s						
SEI				AML	AML		
	comp=N,968µm,1.6s						
SEI				AML	AML		
	comp=E,1068µm,0.4s						
SEI				AML	AML		
	comp=N,968µm,1.6s						
MAIM	**Mastiano**	0.41	221	P	Pb	12 31 05.6	+0.7
MAIM				S	Sn	12 31 12.4	-1.8
MAIM	**Mastiano**	0.41	221	P	Pb	12 31 05.4	+0.6
MAIM				S	Sb	12 31 12.1	+1.3
MAIM	**Mastiano**	0.41	221	P	Pb	12 31 05.4	+0.6
MAIM				S	Sb	12 31 12.3	+1.5
MAIM	**Mastiano**	0.41	221	P	Pb	12 31 05.4	+0.6
MTRZ	**Monterenzio**	0.46	71	P	Pb	12 31 06.3	+0.8
MTRZ				AML	AML		
	comp=E,1060µm,0.4s						
MTRZ				AML	AML		
	comp=N,959µm,0.5s						
MTRZ				AML	AML		
	comp=E,1100µm,0.4s						
MTRZ				AML	AML		
	comp=N,967µm,0.5s						
MTRZ				AML	AML		
	comp=N,959µm,0.5s						
MTRZ				AML	AML		
	comp=N,967µm,0.5s						
MTRZ				AML	AML		
	comp=E,1060µm,0.4s						
MTRZ				AML	AML		
	comp=E,1100µm,0.4s						
MTRZ				AML	AML		
	comp=N,959µm,0.5s						
MTRZ				AML	AML		
	comp=N,967µm,0.5s						
MTRZ				AML	AML		
	comp=E,1100µm,0.4s						
MTRZ				AML	AML		
	comp=E,1060µm,0.4s						
EQUI	**Equi**	0.52	263	P	Pn	12 31 08.0	-0.5
EQUI				S	Sb	12 31 15.2	+1.6
EQUI	**Equi**	0.52	263	P	Pn	12 31 08.1	-0.4
EQUI				S	Sb	12 31 15.1	+1.6
EQUI	**Equi**	0.52	263	⇑P	Pn	12 31 07.8	-0.6
EQUI	**Equi**	0.52	263	⇑P	Pn	12 31 07.8	-0.6
EQUI				S	Sn	12 31 15.4	-1.4
EQUI				AML	AML		
	comp=E,125µm,0.6s						
EQUI				AML	AML		
	comp=N,180µm,0.9s						
EQUI				AML	AML		
	comp=E,125µm,0.6s						
EQUI				AML	AML		
	comp=N,180µm,0.9s						
EQUI				AML	AML		
	comp=E,125µm,0.6s						
EQUI				AML	AML		
	comp=N,180µm,0.9s						
EQUI				AML	AML		
	comp=E,125µm,0.6s						
EQUI				AML	AML		
	comp=N,180µm,0.9s						
EQUI	**Equi**	0.52	263	S	Sb	12 31 15.2	+1.6
FIVI	**Fivizzano**	0.53	271	P	Pn	12 31 08.3	-0.4
FIVI				S	Sn	12 31 16.5	-0.6
PII	**Pisa**	0.56	206	P	Pg	12 31 08.1	+0.9
PII				AML	AML		
	comp=E,258µm,1.1s						
PII				AML	AML		
	comp=N,276µm,0.3s						
PII				AML	AML		
	comp=N,276µm,0.3s						
PII				AML	AML		
	comp=E,258µm,1.1s						
PII				AML	AML		
	comp=N,276µm,0.3s						
PII				AML	AML		
	comp=E,258µm,1.1s						
RUFI	**Rufina**	0.60	130	P	Pn	12 31 09.0	-0.6
RUFI				S	Sg	12 31 17.0	+0.9
LMD	**Lutirano**	0.62	104	P	Pg	12 31 09.4	+1.1
GRAM	**Graiana**	0.63	295	P	Pn	12 31 10.7	+0.6
GRAM	**Graiana**	0.63	295	P	Pn	12 31 10.1	0.0
GRAM				S	Sn	12 31 18.9	-0.7
GRAM	**Graiana**	0.63	295	⇑P	Pn	12 31 10.5	+0.4
GRAM				AML	AML		
	comp=E,478µm,1.4s						
GRAM				AML	AML		
	comp=N,310µm,0.3s						
GRAM				AML	AML		
	comp=E,478µm,1.4s						
GRAM				AML	AML		
	comp=N,310µm,0.3s						
GRAM				AML	AML		
	comp=E,478µm,1.4s						
GRAM				AML	AML		
	comp=N,310µm,0.3s						
OSSC	**Osservatorio P**	0.76	159	P	Pn	12 31 11.6	-0.1
OSSC				S	Sg	12 31 21.1	+0.2
SFI	**Santa Sofia**	0.78	114	P	Pn	12 31 12.0	0.0
SFI				S	Sg	12 31 22.4	+0.9
SFI				AML	AML		
	comp=E,138µm,0.4s						
SFI				AML	AML		
	comp=N,129µm,1.4s						
SFI				AML	AML		
	comp=N,129µm,1.4s						
SFI				AML	AML		
	comp=E,138µm,0.4s						
SFI				AML	AML		
	comp=N,129µm,1.4s						
SFI				AML	AML		
	comp=E,138µm,0.4s						
ASQU	**Asqua**	0.79	123	⇑P	Pn	12 31 12.4	+0.1
ASQU				S	Sg	12 31 22.6	+0.5
ASQU				AML	AML		
	comp=E,91µm,0.4s						
ASQU				AML	AML		
	comp=N,106µm,1.4s						
ASQU				AML	AML		
	comp=E,91µm,0.4s						
ASQU				AML	AML		
	comp=N,106µm,1.4s						
ASQU				AML	AML		
	comp=E,91µm,0.4s						
ASQU				AML	AML		
	comp=N,106µm,1.4s						
CSNT	**Castellina Chi**	0.82	158	P	Pg	12 31 12.1	+0.1

CSNT				S	Sg	12 31 22.9	+0.1
PGF	Pioggiola	2.16	220	*e*Pn	Pn	12 31 28.4	-2.7
PGF				*e*Sn	Sn	12 31 53.1	-4.4
	comp=N,0.7nm,0.2s						
SBF	Sospel	2.50	263	*e*Pn	Pn	12 31 34.4	-1.4
SBF				*e*Sn	Sn	12 32 02.3	-3.5
	comp=N,2.8nm,0.3s						
ABTA	Abfaltersbach	2.77	24	Pn	Pb	12 31 43.3	-1.7
	comp=N,0.7nm,0.2s						
FETA	Feichten	2.79	358	Pn	Pb	12 31 46.1	+0.7
	comp=N,0.5nm,0.3s						
MBDF	Montbardon	2.97	281	*e*P	Pn	12 31 44.2	+1.9
MBDF				*e*Sn	Sn	12 32 14.2	-3.4
	comp=N,1.6nm,0.4s						
SQTA	Sankt Quirin	3.00	4	*e*Pn	Pb	12 31 48.1	-0.8
	comp=N,1.3nm,0.2s						
SQTA				*e*Sn	Sb	12 32 25.7	+0.4
	comp=N,5.5nm,0.6s						
WTTA	Wattenberg	3.08	10	*e*Pn	Pb	12 31 48.2	-2.1
	comp=N,0.5nm,0.2s						
MOTA	Moosalm	3.12	3	*e*Pn	Pb	12 31 49.9	-1.1
	comp=N,0.4nm,0.2s						
MOTA				*e*Sn	Sb	12 32 28.4	-0.3
	comp=N,2.3nm,0.6s						
FRF	La Foret Royal	3.12	259	*e*Pn	Pn	12 31 43.3	-0.9
FRF	La Foret Royal	3.12	259	*e*P	Pn	12 31 46.2	+2.0
FRF				*e*Sn	Sn	12 32 17.5	-3.5
	comp=N,0.8nm,0.2s						
WATA	Walderalm	3.15	9	*e*Pn	Pb	12 31 49.8	-1.6
	comp=N,0.7nm,0.2s						
LPG	La Plagne	3.19	295	*e*Pn	Pn	12 31 43.7	-1.7
LPL	La Plagne	3.21	295	*e*Pn	Pn	12 31 43.9	-1.7
RETA	Reutte	3.26	359	*e*Pn	Pb	12 31 50.6	-2.7
	comp=N,0.6nm,0.2s						
LMR	La Mourre	3.28	256	*e*Pn	Pn	12 31 44.7	-1.7
LMR	La Mourre	3.28	256	*e*P	Pn	12 31 48.0	+1.6
LMR				*e*Sn	Sn	12 32 20.5	-4.4
	comp=N,1.8nm,0.4s						
KBA	Koelnbreinsper	3.34	30	*e*Pn	Pn	12 31 50.9	+3.6
	comp=N,0.2nm,0.2s						
KBA				*e*Sn	Sn	12 32 29.6	+3.1
	comp=N,0.8nm,0.4s						
MOA	Molln	4.33	32	*e*Pn	Pn	12 32 03.9	+3.1
	comp=N,0.3nm,0.2s						
ARSA	Arzberg	4.45	46	*e*Pn	Pn	12 32 04.0	+1.5
	comp=N,0.3nm,0.2s						
HINF	Hinteralfeld	4.55	323	*e*Pn	Pn	12 32 02.1	-1.8
HINF	Hinteralfeld	4.55	323	*e*Pg	Pg	12 32 21.7	-1.4
HINF				*e*Sn	Sn	12 32 51.2	-5.1
	comp=N,1.5nm,0.3s						
CONA	Conrad Observa	5.08	41	*e*Pn	Pn	12 32 13.3	+2.2
	comp=N,0.9nm,0.5s						

IDC ***15*** *12:46:30.5±1.0, 73°.49N×14°.35E, h0^{km}, mb3.2/3, mb1 3.5/7, mb1mx3.2/55, mbtmp3.4/7, ML2.5/4, Error ellipse: s-maj=27.0km s-min=9.8km az=78.0*
NAO ***15*** *12:46:31.8±9.2, 73°.43N×14°.00E, h14^{km}±80^{km}, ML3.0*
BER ***15*** *12:46:33.0±3.2, 73°.42N×13°.92E, h16^{km}±23^{km}, ML2.2, ML3.0(NAO), Confirmed Earthquake*
ISC 15 12:46:30.6±0.8**, 73°.36N**±0°.04×**14°.23E**±0°.06**, h10**^{km}**, n34,** σ**2**^{s}**21**/54**, mb3.1**/3**, Norwegian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BJO1	Bjornoya	1.75	47	Pn	Pb	12 47 02.9	+0.2
BJO1				Sn	Sb	12 47 25.2	+0.4
BJO1	Bjornoya	1.75	47	*e*P	Pb	12 47 02.0	-0.8
BJO1				*e*S	Sn	12 47 22.5	-0.8
HSPB	Hornsund (broa	3.68	5	Pn	Pn	12 47 25.3	-2.0
HSPB	Hornsund (broa	3.68	5	Pn	Pn	12 47 25.3	-2.0
HAMF	Hammerfest	4.01	128	Pn	Pn	12 47 32.8	+1.0
HAMF				Sn	Sn	12 48 17.3	-1.5
HAMF	Hammerfest	4.01	128	*e*P	Pn	12 47 32.9	+1.0
HAMF				*e*S	Sn	12 48 17.3	-1.5
HAMF				IAML		12 48 19.9	
	comp=Z,16nm,0.2s						
TRO	Tromso	4.04	156	*e*P	Pn	12 47 35.3	+3.1
TRO				*e*S	Sn	12 48 18.1	-1.3
HOPEN	Hopen	4.23	37	Pn	Pn	12 47 36.3	+1.4
HOPEN				Sn	Sn	12 48 24.2	0.0
HOPEN	Hopen	4.23	37	*e*P	Pn	12 47 36.6	+1.7
HOPEN				*e*S	Sn	12 48 21.3	-2.9
HOPEN				IAML		12 48 37.2	
	comp=Z,7.7nm,0.9s						
JETT	Jettan, Norway	4.30	150	Pn	Pn	12 47 37.9	+1.9
JETT				Sn	Sn	12 48 25.2	-0.9
KIF	Kilpisjarvi	4.87	151	Pn	Pn	12 47 44.7	+1.1
KIF				Sn	Sn	12 48 39.3	-0.6
KIF	Kilpisjarvi	4.87	151	*e*P	Pn	12 47 44.9	+1.2
KIF				*e*S	Sn	12 48 38.8	-1.1
SPA0	Spitsbergen Ar	4.87	5	Pn	Pn	12 47 42.8	-1.0
	baz=175,slow=28						
SPA0	Spitsbergen Ar	4.87	5	Pn	Pn	12 47 42.8	-1.0
	baz=175,slow=28						
SPITS	Spitsbergen Ar	4.87	5	Pn	Pn	12 47 42.9	-0.9
	baz=180,slow=17,SNR=13						
SPITS				Sn	Sn	12 48 34.3	-5.8
	baz=181,slow=24,SNR=1.5						
KTK1	Kautokeino	5.25	142	*e*P	Pn	12 47 51.5	+2.5
KTK1				*e*S	Sn	12 48 49.7	+0.3
KTK1				IAML		12 48 55.1	
	comp=Z,5.2nm,0.4s						
ARA0	ARCESS Array S	5.26	131	Pn	Pn	12 47 51.0	+1.9
	baz=317,slow=11						
ARA0				Sn	Sn	12 48 48.6	-1.1
	baz=315,slow=22						
ARA0	ARCESS Array S	5.26	131	Pn	Pn	12 47 51.0	+1.9
	baz=317,slow=11						
ARA0				Sn	Sn	12 48 48.6	-1.1
	baz=315,slow=22						
ARCES	ARCESS Array B	5.26	131	Pn	Pn	12 47 51.3	+2.2
	baz=328,slow=17,SNR=48						
ARCES				Sn	Sn	12 48 48.6	-1.1
	baz=332,slow=19,SNR=12						
LOF	Lofoten	5.26	183	*e*P	Pn	12 47 49.5	+0.4
LOF				*e*S	Sn	12 48 44.7	-5.0
LOF				IAML		12 48 47.9	
	comp=Z,7.2nm,0.2s						
STEI	Steigen	5.47	176	*e*P	Pn	12 47 52.2	+0.2
STEI				*e*S	Sn	12 48 51.8	-3.0
STEI				IAML		12 48 54.5	
	comp=Z,4.6nm,0.3s						
KONS	Konsvik	6.91	184	*e*P	Pn	12 48 11.4	-0.3
KONS				*e*S	Sn	12 49 25.1	-5.0
KONS				IAML		12 49 27.4	
	comp=Z,4.9nm,0.4s						
STOK	Stokkvaagen	7.08	184	*e*P	Pn	12 48 14.0	0.0
APA0	Apatity Array	8.49	123	Pn	Pn	12 48 34.4	+1.1
	baz=329,slow=11						
APA0				Sn	Sn	12 50 03.2	-5.8
	baz=313,slow=28						
APA0	Apatity Array	8.49	123	Pn	Pn	12 48 34.4	+1.1
	baz=329,slow=11						
APA0				Sn	Sn	12 50 03.2	-5.8
	baz=313,slow=28						
FIA0	FINESS Array S	12.76	153	Pn	Pn	12 49 33.1	+1.3
	baz=348,slow=11						
FIA0	FINESS Array S	12.76	153	Pn	Pn	12 49 33.1	+1.3
	baz=348,slow=11						
FINES	FINESS Array B	12.76	153	Pn	Pn	12 49 32.3	+0.5
	comp=Z,0.1nm,0.3s,baz=348,slow=10,SNR=1.4						
HFS	Hagfors	13.29	181	Pn	Pn	12 49 39.9	+1.0
	comp=Z,0.1nm,0.3s,baz=354,slow=9.4,SNR=1.6						
HFS	Hagfors	13.29	181	Pn	Pn	12 49 39.6	+0.6
HFS	Hagfors	13.29	181	Pn	Pn	12 49 39.6	+0.6
YKA	Yellowknife Ar	40.16	326	P	P	12 54 05.3	-0.8
	comp=Z,0.1nm,0.3s,baz=25,slow=8.9,SNR=1.9						
ILAR	Eielson Array	41.55	348	P	P	12 54 19.3	+1.8
	comp=Z,0.4nm,0.9s,baz=355,slow=5.3,SNR=5.0						
TORD	Torodi Ar. Bea	60.63	194	P	P	12 56 43.1	+1.8
	comp=Z,0.7nm,0.7s,baz=14,slow=6.5,SNR=3.5						

IDC 15 12:49:25.0±2.4**, 1°.84N**×**125°.41E, h0**^{km}**, mb3.5**/3**, mb1 3.8**/3**, mb1mx3.4**/51**, mbtmp3.5**/3**, Error ellipse: s-maj=251.0km s-min=27.0km az=65.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.36	158	P	P	12 54 35.0	-0.3
	1.5nm,0.6s,baz=336,slow=9.8,SNR=14						
ASAR	Alice Springs	26.67	162	P	P	12 55 05.5	-0.4
	0.6nm,0.5s,baz=341,slow=7.6,SNR=27						
MKAR	Makanchi Array	58.37	327	P	P	12 59 23.0	+0.8
	0.2nm,0.8s,baz=144,slow=5.2,SNR=2.2						

MOS ***15*** *12:56:44.3±1.2, 5°.61S×150°.87E, h56^{km}, mb5.4/61, Error ellipse: s-maj=7.4km s-min=5.0km az=110.4*
BJI ***15*** *12:56:44.6±0.0, 5°.87S×151°.39E, h88^{km}, mB5.2/54, mb5.2/79, Ms4.8/60, Ms7 4.7/63*
IDC ***15*** *12:56:46.3±0.8, 5°.71S×150°.97E, h59^{km}±6^{km}, mb4.9/38, mb1 4.9/40, mb1mx4.9/47, mbtmp5.2/40, MS4.3/33, Ms1 4.3/33, ms1mx4.2/41, Error ellipse: s-maj=9.7km s-min=7.3km az=86.0*
NEIC ***15*** *12:56:47.7±1.8, 5°.76S±0°.06×150°.94E±0°.07, h75^{km}±4^{km}, mb5.3/196, Error ellipse: s-maj=10.3km s-min=9.0km az=123.0*
GCMT ***15*** *12:56:47.7±0.1, 5°.85S±0°.01×151°.00E±0°.01, h53^{km}±1^{km}, MW5.2/126, Moment Tensor Solution. s99,c144; s126,c198; Duration: 1^{s}0 Moment tensor: Scale 10^{16} Nm; M_{rr}3.73±.19; $M_{\theta\theta}$-0.97±.15; $M_{\phi\phi}$-2.75±.16; $M_{r\theta}$-6.60±.16; $M_{\theta\phi}$-2.52±.15; $M_{\phi r}$-3.62±.14; Best double couple: $M_0$8.61500×10^{16} NP1:ϕ_s12.00000°, δ19.00000°, λ46.00000°. NP2:ϕ_s238.00000°, δ77.00000°, λ103.00000°. Principal axes: T 8.6080, Plg56.0000°, Azm165.0000°; N 0.0210, Plg13.0000°, Azm55.0000°; P -8.6230, Plg31.0000°, Azm317.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
DJA ***15*** *12:56:49.0±0.3, 6°S±3°×15°1E±°, h87^{km}±4^{km}, M5.3/47, mb5.3/47, mB5.7/20, MLv5.9/3, Mw(mB)5.2/20, MwMwp4.8/5, Mwp5.2/5*
ISC 15 12:56:47.7±0.5**, 5°.77S**±0°.04×**150°.99E**±0°.04**, h76**^{km}±4^{km}**, n702,** σ**1**^{s}**42**/746**, mb5.2**/212**, 9C-9D, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	1.96	37		Pn	12 57 19.6	+0.6
MANU	Manus Island	5.17	316		Pn	12 58 05.9	+3.3
PMG	Port Moresby	5.24	226	P	Pn	12 58 03.7	+0.2
	42nm,0.3s,baz=51,slow=7.1,SNR=147						
PMG				S	Sn	12 59 02.3	-0.3
	55nm,0.3s,baz=122,slow=17,SNR=4.3						
PMG				LR	LR	12 59 36.0	
	comp=Z,1μm,20.8s,baz=352,slow=32						
PMG	Port Moresby	5.24	226	Pn	Pn	12 58 04.3	+0.7
HNR	Honiara	9.60	113	P	Pn	12 59 02.5	-0.7
	28nm,0.3s,baz=267,slow=5.1,SNR=12						
HNR				S	Sn	13 00 50.4	+1.0
	7.7nm,0.3s,baz=74,slow=18,SNR=3.2						
HNR				LR	LR	13 02 31.3	
	comp=Z,2μm,20.5s,baz=270,slow=36						
JAY	Jayapura	10.75	287	P	Pn	12 59 20.7	+1.8
	1.4nm,0.3s,baz=107,slow=9.6,SNR=7.2						
JAY				LR	LR	13 03 01.9	
	comp=Z,3μm,19.8s,baz=90,slow=35						
JAY	Jayapura	10.75	287	P	Pn	12 59 21.3	+2.4
	932nm61nm,1.3s						
COEN	Coen	11.20	223	P	Pn	12 59 24.0	-0.9
	baz=11						
COEN	Coen	11.20	223	Pn	Pn	12 59 24.6	-0.3
GENI	Genyem	11.24	286	P	Pn	12 59 27.2	+1.7
	6μm168nm,1.5s						
MTSU	Mount Surprise	13.91	207	P	Pn	13 00 03.7	+2.3
	baz=14,SNR=34						
PATS	Pohnpei	14.50	30		Pn	13 00 10.0	+0.9
CTAO	Charters Tower	14.96	197	P	P	13 00 17.8	-1.0
CTAO	Charters Tower	14.96	197	P	P	13 00 17.8	-1.0
QIS	Mount Isa	18.39	216	P	Pn	13 00 57.7	0.0
	baz=18,SNR=76						
SANVU	Saraoutou	18.60	122		Pn	13 01 01.1	+0.9
SANVU				IAmb	IAmb	13 01 15.6	
	comp=Z,292nm,1.0s						
EIDS	Eidsvold	19.49	180	P	Pn	13 01 10.0	-0.7
	baz=20,SNR=15						
EIDS	Eidsvold	19.49	180	P	P	13 01 09.4	+0.6
EIDS				IAmb	IAmb	13 01 11.2	
	comp=Z,176nm,1.0s						
KDU	Kakadu	19.51	248	P	P	13 01 08.4	-0.6
	baz=19,SNR=42						
GUMO	Guam	20.17	343	P	P	13 01 17.3	+1.2
	comp=Z,578nm,1.1s,baz=143,slow=9.5,SNR=7.0						
GUMO				LR	LR	13 08 06.9	
	comp=Z,572nm,21.9s,baz=140,slow=34						
GUMO	Guam	20.17	343	P	Pn	13 01 17.5	-1.1
GUMO				pmax	pmax		
	comp=Z,688nm,1.1s						
GUMO	Guam	20.17	343		Pn	13 01 17.5	-1.1
SIJI	Sorong	20.27	283	P	P	13 01 18.5	+1.2
	comp=Z,28nm,0.9s,baz=80,slow=6.6,SNR=12						
SIJI				ScP	ScP	13 08 59.4	+0.9
	comp=Z,4.6nm,0.6s,baz=26,slow=3.4,SNR=6.3						
SWI	Sorong	20.28	283	P	P	13 01 18.0	+0.6
	comp=Z,84nm,1.0s						
RMQ	Roma	20.71	186	P	Pn	13 01 23.5	-1.5
	baz=21,SNR=85						
WB0	Warramunga Arr	21.31	228	P	P	13 01 28.0	-0.4
WR0	Warramunga Arr	21.32	227	P	P	13 01 28.4	-0.2
WRAB	Tennant Creek	21.45	227	P	P	13 01 29.8	-0.1
WRAB				pmax	pmax		
	comp=Z,252nm,0.9s						
WRAB	Tennant Creek	21.45	227	P	P	13 01 29.8	-0.1
WB2	Warramunga Arr	21.45	227	P	P	13 01 29.2	-0.7
	baz=21						
WB2	Warramunga Arr	21.45	227	P	P	13 01 30.0	+0.1
WB2				IAmb	IAmb	13 01 49.4	
	comp=Z,231nm,0.9s						
WRA	Warramunga Arr	21.46	227	P	P	13 01 29.8	-0.2
	comp=Z,84nm,0.7s,baz=52,slow=10,SNR=315						
WRA				S	S	13 05 22.3	-1.8
	comp=Z,33nm,1.1s,baz=56,slow=18,SNR=10.0						
WRA				PcP	PcP	13 05 32.2	+1.5
	comp=Z,5.6nm,0.5s,baz=43,slow=1.9,SNR=7.8						
WRA				ScP	ScP	13 09 03.3	+2.1
	comp=Z,17nm,0.7s,baz=49,slow=2.6,SNR=33						
WRA				LR	LR	13 09 54.3	
	comp=Z,615nm,20.1s,baz=45,slow=37						
WRA	Warramunga Arr	21.46	227	P	P	13 01 28.4	-1.6
QLP	Quilpie	21.68	197	P	P	13 01 33.0	+0.8
	baz=22,SNR=191						
LIFNC	LIFOU	21.71	135	P	P	13 01 35.5	+2.8
NOUC	Port Laguerre	21.98	139	P	P	13 01 36.7	+1.2
DZM	Mont Dzumac	22.05	139	P	P	13 01 36.8	+0.4
	comp=Z,208nm,1.0s,baz=321,slow=8.3,SNR=73						
DZM				LR	LR	13 08 55.1	
	comp=Z,3μm,21.9s,baz=321,slow=33						
DZM	Mont Dzumac	22.05	139	*e*P	P	13 01 35.9	-0.5
	comp=Z,551nm,1.1s						
DZM				*e*S	S	13 05 26.6	-8.8
	comp=Z,788nm,26.9s						
DZM				*e*LR	LR	13 06 57.6	
	comp=Z,6μm,25.1s						
DZM	Mont Dzumac	22.05	139	P	P	13 01 36.6	+0.2
DZM				IAmb	IAmb	13 01 39.4	
	comp=Z,194nm,0.9s						
DZM	Mont Dzumac	22.05	139	P	P	13 01 37.3	+0.9
YATNC	Mamie plateau,	22.34	138	P	P	13 01 41.0	+1.6
ANA2	Anatahan	22.58	347	P	P	13 01 41.3	-0.7
AS31	Alice Springs	24.23	221	P	P	13 01 57.7	+0.1
ASAR	Alice Springs	24.23	221	P	P	13 01 58.1	+0.5
	comp=Z,115nm,0.7s,baz=57,slow=8.3,SNR=989						
ASAR				PcP	PcP	13 05 37.8	+1.4
	comp=Z,3.3nm,0.6s,baz=34,slow=1.6,SNR=4.1						
ASAR				S	S	13 06 14.2	+3.3
	comp=Z,3.5nm,0.8s,baz=40,slow=14,SNR=3.4						
ASAR				ScP	ScP	13 09 11.8	+3.3
	comp=Z,21nm,0.7s,baz=46,slow=3.2,SNR=31						
ASAR				LR	LR	13 12 47.5	
	comp=Z,470nm,19.0s,baz=54,slow=40						
ASAR	Alice Springs	24.23	221	P	P	13 01 58.0	+0.4
ASPA	Alice Springs	24.23	221	P	P	13 01 57.8	+0.2
	baz=24						
ARMA	Armidale	24.53	179	P	P	13 02 01.4	+1.0
	baz=25,SNR=60						
ARMA	Armidale	24.53	179	P	P	13 02 01.1	+0.8
ARMA				IAmb	IAmb	13 02 04.0	
	comp=Z,172nm,1.1s						
SANI	Sanana	25.21	277	P	P	13 02 09.6	+3.0
	comp=Z,24nm,1.4s						
SOEI	Soe	26.76	260	P	P	13 02 21.3	+0.5
SOEI				IAmb	IAmb	13 03 05.2	
	comp=Z,284nm,1.7s						
SOEI	Soe	26.76	260	P	P	13 02 20.6	-0.2
	comp=Z,63nm,1.2s						
BATI	Baumata	27.41	259	P	P	13 02 27.2	+0.8
	comp=Z,66nm,0.8s,baz=166,slow=1.2,SNR=16						
BATI	Baumata	27.41	259	P	P	13 02 27.2	+0.8
	comp=Z,55nm,1.1s						
STKA	Stephens Creek	27.42	198	P	P	13 02 26.0	-0.3
	baz=28,SNR=75						
STKA	Stephens Creek	27.42	198	P	P	13 02 26.2	-0.2
	comp=Z,57nm,0.8s,baz=0.3,slow=8.6,SNR=80						
STKA				ScP	ScP	13 09 21.8	+4.3
	comp=Z,44nm,1.0s,baz=58,slow=4.7,SNR=23						
STKA				LR	LR	13 13 24.8	
	comp=Z,1μm,20.1s,baz=24,slow=36						
STKA	Stephens Creek	27.42	198	P	P	13 02 25.5	-0.8
FITZ	Fitzroy Crossi	27.61	241	P	P	13 02 27.8	-0.3
	baz=28,SNR=80						
FITZ	Fitzroy Crossi	27.61	241	P	P	13 02 28.0	-0.1
	comp=Z,32nm,0.7s,baz=48,slow=6.2,SNR=74						
FITZ				ScP	ScP	13 09 22.2	+3.9
	comp=Z,15nm,1.1s,baz=90,slow=3.8,SNR=3.1						
FITZ				LR	LR	13 15 08.4	
	comp=Z,434nm,19.2s,baz=60,slow=40						
FITZ	Fitzroy Crossi	27.61	241	P	P	13 02 28.3	+0.2
FITZ				IAmb	IAmb	13 02 54.0	
	comp=Z,55nm,0.8s						
YNG	Young	28.49	184	P	P	13 02 36.8	+0.9
	baz=29,SNR=26						
GTOI	Gorontalo	28.65	282	P	P	13 02 38.8	+1.3
	comp=Z,314nmcomp=Z,12nm,0.7s						
MMRI	Maumere	28.66	263	P	P	13 02 35.3	-2.2
MMRI				IAmb	IAmb	13 02 37.9	
	comp=Z,99nm,1.0s						
MMRI	Maumere	28.66	263	P	P	13 02 35.3	-2.2
	comp=Z,100nm,0.9s						
WRKA	Warakurna	28.98	226	P	P	13 02 40.2	-0.2
	baz=29,SNR=99						
MSVF	Nonsavu	28.99	117	P	P	13 02 41.8	+1.2
	comp=Z,18nm,0.7s,baz=281,slow=7.5,SNR=15						
MSVF				PcP	PcP	13 05 49.9	+2.1
	comp=Z,4.4nm,0.8s,baz=333,slow=24,SNR=3.6						
MSVF				ScP	ScP	13 09 27.7	+4.9
	comp=Z,5.7nm,0.9s,baz=312,slow=3.1,SNR=5.1						
MSVF				LR	LR	13 13 37.0	
	comp=Z,435nm,21.3s,baz=272,slow=35						
MSVF	Nonsavu	28.99	117	P	P	13 02 41.4	+0.8
MSVF	Nonsavu	28.99	117	P	P	13 02 41.8	+1.2
SKMP	Bagumbayan, Su	29.08	294	*e*P	P	13 02 42.5	+1.3
EDFI	Ende, Flores	29.20	262	P	P	13 02 39.9	-2.6
	comp=Z,37nm,1.0s						
BUTP	Butuan	29.22	300	*e*P	P	13 02 42.9	+0.4
CNB	Canberra Magne	29.44	183	P	P	13 02 45.4	+1.0
	baz=30,SNR=18						
CAN	Canberra	29.47	183	P	P	13 02 44.6	0.0
CAN				pmax	pmax		
	comp=Z,60nm,0.9s						
CAN	Canberra	29.47	183	P	P	13 02 44.6	0.0
CAN				IAmb	IAmb	13 02 46.5	
	comp=Z,60nm,0.9s						
MRSI	Marisa	29.65	281	P	P	13 02 46.0	-0.4
	comp=Z,789nmcomp=Z,11nm,0.8s						
APSI	Ampana	29.67	278	P	P	13 02 46.4	-0.2
	comp=Z,14nm,1.0s						
HTT	Hallett	29.72	201	P	P	13 02 46.9	+0.1
	baz=30,SNR=29						
BBOO	Buckleboo	30.29	205	P	P	13 02 51.7	-0.1
	baz=30,SNR=20						
BBOO	Buckleboo	30.29	205	P	P	13 02 50.8	-1.0
BASI	Baing, Sumba	30.42	260	P	P	13 02 54.1	+0.9
	comp=Z,1μmcomp=Z,146nm,1.5s						
MSLP	Maasin	30.44	301	*e*P	P	13 02 52.8	-0.5
WSI	Waingapu	30.65	261	P	P	13 02 54.6	-0.6
	comp=Z,7μmcomp=Z,249nm,1.0s						
PAGZ	Pagadian	30.68	296	*e*P	P	13 02 55.3	-0.1
BNSI	Bone	30.79	271	P	P	13 02 55.4	-1.0
	comp=Z,19nm,1.3s						
KAPI	Kappang	31.10	270	P	P	13 02 58.7	-0.5
	comp=Z,9.4nm,0.7s,baz=80,slow=7.3,SNR=2.2						
KAPI				ScP	ScP	13 09 30.3	+0.7
	comp=Z,10nm,0.9s,baz=87,slow=8.6,SNR=5.9						
KAPI	Kappang	31.10	270	P	P	13 02 58.1	-1.1
ARPS	Mount Arapiles	31.97	194	P	P	13 03 07.2	+0.7
	baz=32,SNR=29						
TOO	Toolangi	32.05	188	P	P	13 03 08.2	+0.9
	baz=32,SNR=23						
TOO	Toolangi	32.05	188	P	P	13 03 07.4	+0.1
TOO				pmax	pmax		
	comp=Z,104nm,1.0s						
TOO	Toolangi	32.05	188	P	P	13 03 07.4	+0.1
PVCP	Virac	32.86	306	*e*P	P	13 03 13.1	-1.4
FORT	Forrest	32.91	218	P	P	13 03 14.7	-0.1
	baz=33,SNR=32						
FORT	Forrest	32.91	218	P	P	13 03 15.0	+0.2
PLAI	Plampang	33.07	263	P	P	13 03 14.0	-2.5
	comp=Z,59nm,0.7s						
TWSI	Taliwang, Sumb	33.95	263	P	P	13 03 22.7	-1.4
	comp=Z,895nmcomp=Z,15nm,0.7s						
PSA00	Pilbara Seismi	33.98	239	P	P	13 03 24.3	0.0
PSA00	Pilbara Seismi	33.98	239	P	P	13 03 23.9	-0.5
PSA00				IAmb	IAmb	13 03 25.9	
	comp=Z,33nm,0.8s						
MYLDM	Lahad Datu	34.21	288	P	P	13 03 26.7	+0.3
MYLDM				IAmb	IAmb	13 03 34.8	
	comp=Z,27nm,1.0s						
SJMP	San Jose	34.77	301	*e*P	P	13 03 31.9	+0.8
LQP	Lukban	35.27	304⥣	*e*P	P	13 03 35.3	-0.4
BUSP	Coron	35.34	300	*e*P	P	13 03 35.6	-0.5
ENPP	El Nido	35.65	298	*e*P	P	13 03 37.4	-1.3
TGY	Tagaytay City	35.76	304	P	P	13 03 38.7	-1.0
	comp=Z,133nm,0.5s,baz=174,slow=4.2,SNR=5.4						
TGY				LR	LR	13 16 00.2	
	comp=Z,736nm,21.8s,baz=108,slow=32						
TGY	Tagaytay City	35.76	304	*e*P	P	13 03 39.3	-0.4
OUZ	Omahuta	35.97	148	P	P	13 03 42.6	+1.4
QVP	Quezon City--P	35.98	305	*e*P	P	13 03 41.8	+0.4
SPMM	Sapulut	36.01	286	P	P	13 03 46.0	+4.1
BBKI	Banjar Baru	36.09	272	P	P	13 03 43.8	+1.2
	comp=Z,3μmcomp=Z,9.5nm,0.7s						
BATP	Bataraza	36.11	293	*e*P	P	13 03 41.9	-0.8
LUBP	Lubang	36.15	303	*e*P	P	13 03 40.4	-2.5
JAGI	Jajag, Banyuwa	36.64	264	P	P	13 03 44.6	-2.6
	comp=Z,55nm,0.8s						
JMZ	Minamidaito 2	36.80	329	P	P	13 03 48.8	+0.4
SMPP	San Manuel, Pa	37.06	306	*e*P	P	13 03 51.4	+0.6
TAU	Tasmania Unive	37.13	184	P	P	13 03 51.7	+0.8
TAU				pmax	pmax		
	comp=Z,234nm,1.2s						
TAU	Tasmania Unive	37.13	184	P	P	13 03 51.7	+0.8
MEEK	Meekatharra	37.18	232	P	P	13 03 52.1	+0.3
	baz=37,SNR=21						
SGCP	Mt. Cagua	37.20	310	*e*P	P	13 03 51.7	-0.2
KMBL	Kambalda	37.31	223	P	P	13 03 52.7	0.0
	baz=37,SNR=66						
AFI	Afiamalu	37.53	105	P	P	13 03 55.2	+0.4
AFI				pmax	pmax		
	comp=Z,136nm,1.0s						
AFI	Afiamalu	37.53	105	P	P	13 03 55.2	+0.4
APYP	Conner	37.59	309	*e*P	P	13 03 54.5	-0.7
SZP	Santa	38.02	308	P	P	13 03 57.9	-0.9
KUZ	Kuaotunu	38.25	147	P	P	13 04 02.1	+1.6
HIZ	Hauiti	39.13	150	P	P	13 04 08.6	+0.8
HIZ	Hauiti	39.13	150	P	P	13 04 10.1	+2.3
JOW	Kunigami	39.16	327	P	P	13 04 08.9	+0.7
	comp=Z,55nm,0.6s,baz=157,slow=6.3,SNR=19						
GIRL	Giralia	39.22	241	P	P	13 04 10.3	+1.4
	baz=39,SNR=12						
GIRL	Giralia	39.22	241	P	P	13 04 09.8	+1.0
SBUM	Sibu	39.57	281	P	P	13 04 12.0	+0.2
QRZ	Quartz Range	39.88	154	P	P	13 04 15.8	+1.7
QRZ				IAmb	IAmb	13 04 16.9	
	comp=Z,62nm,0.9s						
NGZ	Ngauruhoe	40.01	150	P	P	13 04 17.6	+2.2
TMVZ	Te Maari	40.02	150	P	P	13 04 17.7	+2.3
ETVZ	East Tongariro	40.04	150	P	P	13 04 18.0	+2.4
URZ	Urewera	40.11	147	P	P	13 04 16.9	+0.9
	comp=Z,32nm,0.7s,baz=273,slow=3.3,SNR=25						
URZ				PcP	PcP	13 06 18.2	-1.1
	comp=Z,23nm,0.8s,baz=122,slow=1.6,SNR=4.7						
URZ				LR	LR	13 18 26.5	
	comp=Z,694nm,22.0s,baz=24,slow=32						
URZ	Urewera	40.11	147	P	P	13 04 17.1	+1.1
KLBR	Kellerberrin	40.33	226	P	P	13 04 17.8	-0.2
	baz=40,SNR=9.4						
MORW	Morawa	40.34	231	P	P	13 04 18.2	+0.2
	baz=40,SNR=8.7						
MORW	Morawa	40.34	231	P	P	13 04 18.2	+0.2
MORW				IAmb	IAmb	13 04 33.6	
	comp=Z,70nm,1.2s						

RAGZ	Rawiri	40.45	147	P	P	13 04 21.0	+2.1
BKZ	Black Stump Fm	40.46	149	P	P	13 04 19.6	+0.7
BKZ				IAmb	IAmb	13 04 22.4	
	comp=Z,45nm,1.1s						
BKZ	Black Stump Fm	40.46	149	P	P	13 04 19.7	+0.7
YOJ	Yonaguni jima	40.56	319	P	P	13 04 20.6	+0.7
YOJ				pmax	pmax		
	comp=Z,206nm,0.8s						
YOJ	Yonaguni jima	40.56	319	P	P	13 04 20.6	+0.7
BLDU	Ballidu	40.59	228	P	P	13 04 20.2	+0.1
	baz=40,SNR=23						
TKGZ	Te Karaka	40.64	147	P	P	13 04 21.8	+1.4
TWG	Pinlang	40.78	315	P	P	13 04 20.7	-1.0
TWG				IAmb	IAmb	13 04 22.2	
	comp=Z,41nm,0.6s						
THZ	Tophouse	40.82	155	P	P	13 04 21.3	-0.5
YULB	Yu-li	40.99	316	P	P	13 04 23.0	-0.5
TUWZ	Tuamarina	41.00	153	P	P	13 04 23.3	+0.1
FOZ	Fox Glacier	41.11	159	P	P	13 04 24.5	+0.3
FOZ				IAmb	IAmb	13 04 27.2	
	comp=Z,51nm,1.0s						
BSWZ	Blackbirch Sta	41.20	154	P	P	13 04 25.3	+0.4
KSM	Kuching	41.25	279	P	P	13 04 26.0	+0.2
NACB	Ninganchiao	41.31	317	P	P	13 04 26.5	+0.5
TPUB	Ta-pu	41.40	315	P	P	13 04 26.0	-0.8
BHW	Baring Head	41.40	153	P	P	13 04 26.4	-0.2
LTZ	Lake Taylor	41.40	156	P	P	13 04 26.9	+0.2
NWAO	Narrogin (SRO)	41.43	225	P	P	13 04 26.9	-0.1
	baz=41,SNR=7.3						
NWAO	Narrogin (SRO)	41.43	225	P	P	13 04 26.2	-0.7
	comp=Z,28nm,0.9s,baz=61,slow=8.1,SNR=10						
NWAO	Narrogin (SRO)	41.43	225	P	P	13 04 26.7	-0.3
NWAO				pmax	pmax		
	comp=Z,42nm,1.0s						
NWAO	Narrogin (SRO)	41.43	225	P	P	13 04 26.7	-0.3
NWAO				IAmb	IAmb	13 04 27.7	
	comp=Z,42nm,0.9s						
NWAO	Narrogin (SRO)	41.43	225	P	P	13 04 26.3	-0.7
NWAO				IAmb	IAmb	13 04 27.7	
	comp=Z,34nm,0.9s						
BFZ	Birch Farm	41.48	151	P	P	13 04 27.1	-0.2
SSLB	Suanglung	41.49	316	P	P	13 04 27.1	-0.5
MSWZ	Moikau Station	41.58	152	P	P	13 04 27.9	-0.2
KHZ	Kahutara	41.62	155	P	P	13 04 27.7	-0.6
MUN	Mundaring	41.66	227	P	P	13 04 29.2	+0.3
	baz=42,SNR=8.6						
PLWZ	Palliser	41.70	152	P	P	13 04 28.9	-0.2
RPZ	Rata Peaks	41.72	158	P	P	13 04 29.3	+0.2
	comp=Z,74nm,0.7s,baz=343,slow=2.0,SNR=56						
RPZ				LR	LR	13 19 29.9	
	comp=Z,2µm,21.4s,baz=316,slow=33						
RPZ	Rata Peaks	41.72	158	P	P	13 04 29.6	+0.4
OXZ	Oxford	41.77	157	P	P	13 04 29.4	-0.2
YHNB	Yeheng	41.79	318	P	P	13 04 30.7	+0.6
JSU	Suzuyama	41.93	333	P	P	13 04 31.3	+0.3
DCZ	Deep Cove	41.98	163	P	P	13 04 31.8	+0.6
DCZ				IAmb	IAmb	13 04 33.1	
	comp=Z,51nm,1.0s						
WKZ	Wanaka	41.98	161	P	P	13 04 31.3	0.0
WKZ				IAmb	IAmb	13 05 22.1	
	comp=Z,76nm,1.2s						
LBZ	Lake Benmore	41.99	159	P	P	13 04 31.1	-0.3
LBZ				IAmb	IAmb	13 04 32.5	
	comp=Z,141nm,1.5s						
MLZ	Mavora Lakes	42.17	162	P	P	13 04 33.5	+0.6
MQZ	McQueen's Vall	42.33	157	P	P	13 04 34.4	+0.3
JMN	Monobe	42.49	339	P	P	13 04 36.3	+0.7
WHZ	Wether Hill Ro	42.60	162	P	P	13 04 36.4	+0.1
WHZ				IAmb	IAmb	13 04 38.6	
	comp=Z,47nm,1.0s						
ODZ	Otahua Downs	42.72	159	P	P	13 04 37.4	+0.1
ODZ				IAmb	IAmb	13 04 43.2	
	comp=Z,62nm,1.2s						
CISI	Cisompet, Garu	42.90	265	P	P	13 04 37.3	-2.0
CISI	Cisompet, Garu	42.90	265	P	P	13 04 37.5	-1.8
	comp=Z,1µmcomp=Z,154nm,1.3s						
JNU	Nakatsue	43.13	335	P	P	13 04 41.8	+1.0
	comp=Z,173nm,0.7s,baz=135,slow=2.9,SNR=126						
JNU	Nakatsue	43.13	335	P	P	13 04 41.2	+0.4
JWT	Wachi	43.39	341	P	P	13 04 44.0	+1.3
JWT				IAmb	IAmb	13 04 59.0	
	comp=Z,40nm,0.9s						
KNMB	Chin-men Tao	43.72	315	P	P	13 04 46.0	+0.4
MJAR	Matsushiro Arr	43.76	345	P	P	13 04 46.0	+0.3
	comp=Z,4.9nm,0.8s,baz=164,slow=8.6,SNR=11						
MJAR				PcP	PcP	13 06 30.9	-0.5
	comp=Z,3.3nm,0.7s,baz=160,slow=4.2,SNR=5.2						
MJAR				ScP	ScP	13 10 16.9	+0.4
	comp=Z,1.3nm,0.6s,baz=318,slow=41,SNR=4.6						
MJAR				LR	LR	13 20 08.4	
	comp=Z,152nm,19.8s,baz=165,slow=32						
MJAR	Matsushiro Arr	43.76	345	P	P	13 04 46.5	+0.8
MAJO	Matsushiro	43.76	345	P	P	13 04 46.6	+0.9
MAJO				pmax	pmax		
	comp=Z,19nm,0.8s						
MAJO	Matsushiro	43.76	345	P	P	13 04 46.6	+0.9
MAT	Matsushiro	43.76	345	P	P	13 04 43.4	-2.3
MAT				S	S	13 11 08.6	-2.1
QZH	Quanzhou	43.88	315	⇓iP	P	13 04 47.6	+0.8
QZH				S	S	13 11 13.9	+1.3
QZH				pmax	pmax		
	comp=Z,210nm,0.7s						
QZH				LR	LR		
	comp=Z,590nm,20.5s						
JHS	Saijyo	43.91	339	P	P	13 04 47.3	+0.3
JHS				IAmb	IAmb	13 05 03.1	
	comp=Z,130nm,1.4s						
DLV	T Lat	45.78	293	P	P	13 05 01.4	-1.0
DLV				IAmb	IAmb	13 05 45.9	
	comp=Z,46nm,1.5s						
SSE	Sheshan	46.42	324	P	P	13 05 08.0	+1.1
SSE				S	S	13 11 51.1	+1.9
SSE				pmax	pmax		
	comp=Z,24nm,0.9s						
SSE				pmax	pmax		
	comp=Z,50nm,3.5s						
SSE				LR	LR		
	comp=Z,170nm,23.0s						
SSE				LR	LR		
	comp=Z,180nm,23.3s						
SSE	Sheshan	46.42	324	P	P	13 05 07.0	+0.2
SSE				IAmb	IAmb	13 05 08.7	
	comp=Z,46nm,1.0s						
TJN	Taejon	47.41	334	ceP	P	13 05 12.4	-2.1
QIZ	Qiongzhong	47.43	302	P	P	13 05 14.9	-0.1
QIZ				S	S	13 12 04.0	0.0
QIZ				pmax	pmax		
	comp=Z,11nm,1.0s						
QIZ				LR	LR		
	comp=Z,350nm,21.4s						
QIZ				LR	LR		
	comp=Z,500nm,21.8s						
QIZ				LR	LR		
	comp=Z,1µm,31.2s						
MYKOM	Kota Tinggi	47.67	278	P	P	13 05 17.0	+0.1
KSRS	Korea Array	48.08	335	P	P	13 05 20.8	+1.1
	comp=Z,23nm,0.7s,baz=154,slow=8.5,SNR=71						
KSRS				PcP	PcP	13 06 47.5	+1.1
	comp=Z,4.0nm,0.8s,baz=190,slow=3.2,SNR=5.3						
KSRS				ScP	ScP	13 10 35.9	+1.6
	comp=Z,1.0nm,1.0s,baz=104,slow=23,SNR=2.7						
KSRS				LR	LR	13 23 57.8	
	comp=Z,271nm,21.8s,baz=156,slow=34						
KSAR	Wonju Array Be	48.09	335	P	P	13 05 20.3	+0.6
KSAR	Wonju Array Be	48.09	335	P	P	13 05 20.3	+0.6
ERM	Erimo	48.09	352	i P	P	13 05 16.9	-2.7
ERM				pmax	pmax		
	comp=Z,82nm,1.2s						
KS19	Wonju Array Si	48.14	335	P	P	13 05 20.4	+0.2
NJ2	Nanjing	48.49	323	⇓iP	P	13 05 24.0	+1.1
NJ2				pP	pP	13 05 42.4	+0.6
NJ2				sP	sP	13 05 52.8	+2.3
NJ2				S	S	13 12 21.3	+2.8
NJ2				pmax	pmax		
	comp=Z,79nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,400nm,4.0s						
NJ2				LR	LR		
	comp=Z,410nm,18.9s						
NJ2				LR	LR		
	comp=Z,310nm,13.3s						
NJ2				LR	LR		
	comp=Z,560nm,17.1s						
INCN	Inchon	48.65	334	P	P	13 05 25.6	+1.4
INCN				pmax	pmax		
	comp=Z,375nm,1.3s						
INCN	Inchon	48.65	334	P	P	13 05 25.6	+1.4
RAR	Rarotonga	50.06	113	LR	LR	13 22 49.7	
	comp=Z,228nm,22.0s,baz=276,slow=31						
ASAJ	Asahikawa	50.23	352	P	P	13 05 37.2	+1.2
	comp=Z,15nm,0.8s,baz=193,slow=13,SNR=11						
WHN	Wuhan	50.33	318	⇑iP	P	13 05 38.4	+1.4
WHN				S	S	13 12 47.9	+3.5
WHN				pmax	pmax		
	comp=Z,130nm,0.8s						
WHN				LR	LR		
	comp=Z,1µm,20.0s						
IPM	Ipoh	50.92	280	P	P	13 05 40.7	-1.0
IPM				IAmb	IAmb	13 05 41.9	
	comp=Z,20nm,1.0s						
IPM	Ipoh	50.92	280	P	P	13 05 41.0	-0.8
MSHR	Mys Shultsa	51.39	341	i P	P	13 05 43.0	-1.7
MSHR				pmax	pmax		
	comp=Z,24nm,1.5s						
KULM	Kulim	51.44	281	P	P	13 05 44.2	-1.5
KULM				IAmb	IAmb	13 05 45.7	
	comp=Z,22nm,0.9s						
KULM	Kulim	51.44	281	P	P	13 05 44.0	-1.7
DL2	Dalian	52.10	331	P	P	13 05 50.4	+0.3
DL2				S	S	13 13 09.3	+0.7
DL2				pmax	pmax		
	comp=Z,68nm,0.9s						
DL2				pmax	pmax		
	comp=Z,260nm,5.9s						
DL2				LR	LR		
	comp=Z,340nm,20.9s						
DL2				LR	LR		
	comp=Z,380nm,19.1s						
DL2				LR	LR		
	comp=Z,590nm,27.1s						
TIA	Tai'an	52.45	325	P	P	13 05 52.8	+0.1
TIA				pmax	pmax		
	comp=Z,66nm,0.8s						
TIA				LR	LR		
	comp=Z,220nm,21.9s						
TIA				LR	LR		
	comp=Z,330nm,21.4s						
TIA				LR	LR		
	comp=Z,350nm,20.6s						
USA0B	Ussuriysk Arra	52.60	343	P	P	13 05 53.7	0.0
USA0B				pmax	pmax		
	comp=Z,44nm,1.6s						
USA0B	Ussuriysk Arra	52.60	343	P	P	13 05 53.7	0.0
USA0B				IAmb	IAmb	13 06 32.9	
	comp=Z,44nm,1.6s						
USRK	Ussuriysk Ar.	52.60	343	P	P	13 05 53.6	-0.1
	comp=Z,7.6nm,0.9s,baz=169,slow=8.3,SNR=11						
USRK				LR	LR	13 27 50.0	
	comp=Z,112nm,20.5s,baz=146,slow=36						
USRK	Ussuriysk Ar.	52.60	343	P	P	13 05 52.8	-0.9
TRTT	Trang	52.92	284	P	P	13 05 57.0	+0.4
	comp=Z,16nm,1.2s						
YSS	Yuzh-Sakhalins	53.00	353	i P	P	13 05 54.3	-2.2
YSS				pmax	pmax		
	comp=Z,24nm,1.2s						
SLVN	Son La	53.44	302	P	P	13 06 01.1	+0.7
ENH	Enshi	53.51	315	P	P	13 06 00.6	-0.1
GYA	Guiyang	53.56	309	⇓P	P	13 06 02.3	+1.0
GYA				sP	sP	13 06 29.4	+0.3
GYA				S	S	13 13 30.6	+1.4
GYA				pmax	pmax		
	comp=Z,18nm,0.8s						
GYA				LR	LR		
	comp=Z,570nm,23.4s						
SNY	Shenyang	53.57	335	⇑P	P	13 06 00.3	-0.5
SNY				S	S	13 13 31.8	+3.4
SNY				pmax	pmax		
	comp=Z,8.0nm,0.6s						
SNY				pmax	pmax		
	comp=Z,250nm,4.6s						
SNY				LR	LR		
	comp=Z,250nm,4.9s						
SNY				LR	LR		
	comp=Z,260nm,4.7s						
SNY				LR	LR		
	comp=Z,580nm,22.6s						
MDJ	Mudanjiang	53.72	341	P	P	13 06 02.0	+0.1
MDJ				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,350nm,4.5s						
MDJ	Mudanjiang	53.72	341	P	P	13 06 01.6	-0.3
GSI	Gunungsitoli	53.79	276	P	P	13 06 01.0	-2.1
GSI				IAmb	IAmb	13 06 02.3	
	comp=Z,56nm,1.1s						
CN2	Changchun	54.46	337	eP	P	13 06 08.8	+1.5
CN2				eS	S	13 13 37.8	-2.6
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CN2				LR	LR		
	comp=Z,280nm,20.0s						
CN2				LR	LR		
	comp=Z,280nm,20.0s						
CN2				LR	LR		
	comp=Z,590nm,22.0s						
UTHA	Uthaitani	55.26	293	P	P	13 06 14.1	+0.5
	comp=Z,333nmcomp=Z,12nm,0.6s						
BJT	Baijiatuau	55.71	328	P	P	13 06 16.0	-0.4
BJT				pmax	pmax		
	comp=Z,36nm,1.3s						
BJT	Baijiatuau	55.71	328	P	P	13 06 16.0	-0.4
BJT				IAmb	IAmb	13 06 33.4	
	comp=Z,36nm,1.3s						
KMI	Kunming	56.05	305	⇑P	P	13 06 21.1	+1.7
KMI				pP	pP	13 06 42.1	+3.4
KMI				sP	sP	13 06 52.1	+4.8
KMI				S	S	13 14 02.8	+0.1
KMI				SS	SS	13 17 50.8	+0.7
KMI				pmax	pmax		
	comp=Z,22nm,1.0s						
KMI				pmax	pmax		
	comp=Z,29nm,3.5s						
KMI				LR	LR		
	comp=Z,290nm,23.2s						
KMI				LR	LR		
	comp=Z,260nm,27.6s						
KMI				LR	LR		
	comp=Z,660nm,27.6s						
KMI	Kunming	56.05	305	P	P	13 06 19.5	+0.1
KMI				pmax	pmax		
	comp=Z,18nm,0.9s						
KMI	Kunming	56.05	305	P	P	13 06 19.5	+0.1
KMI				IAmb	IAmb	13 06 21.7	
	comp=Z,18nm,0.9s						
XAN	Xi'an	56.10	318	P	P	13 06 18.9	-0.5
XAN				sP	sP	13 06 47.8	+0.6
XAN				S	S	13 14 01.5	-1.2
XAN				pmax	pmax		
	comp=Z,72nm,1.3s						
XAN				pmax	pmax		
	comp=Z,160nm,2.7s						
XAN				LR	LR		
	comp=Z,340nm,18.6s						
XAN				LR	LR		
	comp=Z,250nm,17.3s						
XAN				LR	LR		
	comp=Z,620nm,20.6s						
XAN	Xi'an	56.10	318	P	P	13 06 18.4	-1.0
XAN				pmax	pmax		
	comp=Z,44nm,0.8s						
XAN	Xi'an	56.10	318	P	P	13 06 18.4	-1.0
XAN				IAmb	IAmb	13 06 21.5	
	comp=Z,44nm,0.8s						
CM04	Chiang Mai Arr	56.62	296	P	P	13 06 27.4	+4.1
	comp=Z,79nmcomp=Z,6.5nm,0.9s						
CM09	Chiang Mai Arr	56.62	296	P	P	13 06 26.6	+3.2
CM05	Chiang Mai Arr	56.65	296	P	P	13 06 26.6	+3.1
	comp=Z,46nmcomp=Z,3.5nm,0.8s						
CM02	Chiang Mai Arr	56.66	296	P	P	13 06 27.6	+4.0
	comp=Z,54nmcomp=Z,4.1nm,0.8s						
CMAR	Chiang Mai Arr	56.67	296	P	P	13 06 23.3	-0.4
	comp=Z,2.5nm,0.8s,baz=113,slow=5.7,SNR=12						
CMAR				PcP	PcP	13 07 20.1	+1.0
	comp=Z,1.5nm,0.4s,baz=100,slow=2.7,SNR=4.1						
CMAR				ScP	ScP	13 11 13.7	+1.7
	comp=Z,1.3nm,0.5s,baz=118,slow=3.1,SNR=7.7						
CMAR				LR	LR	13 28 14.5	
	comp=Z,140nm,21.2s,baz=152,slow=33						
CMAR				PKPPKP	P'P'df	13 36 17.6	-0.5
	comp=Z,0.3nm,0.6s,baz=316,slow=3.8,SNR=4.1						
CMAR				PKP2bc		13 36 31.0	
	comp=Z,2.6nm,0.8s,baz=289,slow=4.0,SNR=12						
CMAR	Chiang Mai Arr	56.67	296	P	P	13 06 22.0	-1.6
CM15	Chiang Mai Arr	56.68	296	P	P	13 06 27.0	+3.3
	comp=Z,6.1nm,0.8s						
CM13	Chiang Mai Arr	56.69	296	P	P	13 06 27.9	+4.1
	comp=Z,49nmcomp=Z,4.4nm,0.7s						
CMMT	Chiang Mai	56.78	297	P	P	13 06 27.0	+2.5
	comp=Z,3.6nm,1.4s						
CHTO	Chiang Mai	56.79	297	P	P	13 06 23.9	-0.6
CHTO				pmax	pmax		
	comp=Z,7.0nm,0.9s						
CHTO	Chiang Mai	56.79	297	P	P	13 06 23.9	-0.6
KLR	Kul'dur	57.28	345	P	P	13 06 27.1	-0.4
	comp=Z,5.4nm,0.7s,baz=160,slow=3.2,SNR=18						
KLR				PcP	PcP	13 07 21.5	+0.6
	comp=Z,6.7nm,0.7s,baz=236,slow=0.6,SNR=5.7						
KLR				ScP	ScP	13 11 13.6	-0.4
	comp=Z,2.3nm,0.9s,baz=114,slow=0.5,SNR=3.5						
KLR				LR	LR	13 27 55.9	
	comp=Z,154nm,21.1s,baz=182,slow=33						
CD2	Chengdu	58.01	312	P	P	13 06 32.6	-0.4
CD2				S	S	13 14 28.5	+0.5
CD2				pmax	pmax		
	comp=Z,70nm,0.5s						
CD2				pmax	pmax		
	comp=Z,180nm,5.9s						
CD2				LR	LR		
	comp=Z,500nm,23.5s						
CD2				LR	LR		
	comp=Z,780nm,24.5s						
CD2				LR	LR		
	comp=Z,980nm,21.6s						
HHC	Hu-ho-hao-te	58.80	326	eP	P	13 06 39.1	+0.8
HHC				S	S	13 14 41.6	+3.6
HHC				pmax	pmax		
	comp=Z,31nm,1.2s						
HHC				pmax	pmax		
	comp=Z,230nm,5.4s						
HHC				LR	LR		
	comp=Z,370nm,18.9s						
HHC				LR	LR		
	comp=Z,250nm,17.6s						
HHC				LR	LR		
	comp=Z,510nm,18.6s						
PETK	Petropavlovsk-	58.93	5	P	P	13 06 38.4	-0.4
	comp=Z,13nm,0.6s,baz=160,slow=6.3,SNR=45						
PETK				LR	LR	13 28 08.8	
	comp=Z,288nm,21.2s,baz=190,slow=32						
PETK	Petropavlovsk-	58.93	5	P	P	13 06 38.3	-0.5
PPT	Papeete	59.17	107	LR	LR	13 28 25.6	
	comp=Z,82nm,21.5s,baz=296,slow=32						
PPT2	Papeete2	59.17	107	eS	S	13 14 39.9	-3.6
	comp=Z,139nm,27.0s						
PPT2				eLR	LR	13 24 09.4	
	comp=Z,249nm,28.2s						
BTO	Baotou	59.51	325	eP	P	13 06 43.1	-0.2
TBI	Tubuai	59.82	114	eS	S	13 14 47.9	-3.7
	comp=Z,160nm,29.0s						
TBI				eLR	LR	13 24 28.0	
	comp=Z,1µm,35.5s						
LZH	Lanzhou	60.68	317	eP	P	13 06 52.0	+0.6
LZH				pP	pP	13 07 11.5	+0.5
LZH				sP	sP	13 07 19.9	+0.3
LZH				eS	S	13 15 05.8	+3.3
LZH				sS	sS	13 15 41.0	+6.1
LZH				SS	SS	13 18 59.9	-2.6
LZH				pmax	pmax		
	comp=Z,58nm,1.0s						
LZH				pmax	pmax		
	comp=Z,220nm,5.2s						
LZH				LR	LR		
	comp=Z,1µm,11.9s						
LZH				LR	LR		
	comp=Z,1µm,14.4s						
LZH				LR	LR		
	comp=Z,1µm,16.5s						
HIA	Hailar	61.19	337	P	P	13 06 54.5	0.0
HIA				pmax	pmax		
	comp=Z,23nm,0.8s						
HIA	Hailar	61.19	337	P	P	13 06 54.5	0.0
HIA				IAmb	IAmb	13 06 55.9	
	comp=Z,23nm,0.8s						
ZEA	Zeya	62.56	344	eP	P	13 07 03.3	-0.2
ZEA				e		13 15 36.9	
ZEA				pmax	pmax		
	comp=N,10.0nm,0.6s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
SAIH	SAIHA	63.27	299	eP	P	13 07 05.9	-3.1
SAIH				IAmb	IAmb	13 07 13.8	
	comp=Z,26nm,0.5s						
KOHI	KOHIMA	63.42	302	eP	P	13 07 05.7	-4.3
MA2	Magadan	65.14	360	P	P	13 07 19.4	-0.8
	comp=Z,12nm,0.6s,baz=158,slow=5.2,SNR=12						
MA2	Magadan	65.14	360	ceP	P	13 07 18.9	-1.4
MA2				pmax	pmax		
	comp=Z,35nm,1.7s						
MA2	Magadan	65.14	360	P	P	13 07 18.8	-1.5
MA2				IAmb	IAmb	13 07 35.8	
	comp=Z,32nm,1.0s						
GTA	Gaotai	65.15	318	⇓P	P	13 07 21.3	+0.3
GTA				pP	pP	13 07 42.4	+1.6
GTA				sP	PcP	13 07 53.3	+0.2
GTA				PP	PP	13 09 45.0	-0.3
GTA				S	S	13 16 00.3	+2.0
GTA				sS	sS	13 16 39.4	+8.0
GTA				pmax	pmax		
	comp=Z,20nm,1.0s						
GTA				pmax	pmax		
	comp=Z,55nm,4.9s						
GTA				LR	LR		
	comp=Z,97nm,20.0s						
GTA				LR	LR		
	comp=Z,240nm,20.7s						
GTA				LR	LR		
	comp=Z,290nm,18.2s						
SHL	Shillong	65.25	301	P	P	13 07 20.4	-1.6
SHL				pmax	pmax		
	comp=Z,22nm,1.1s						
SHL	Shillong	65.25	301	eP	P	13 07 19.4	-2.5
SHL				IAmb	IAmb	13 07 24.1	
	comp=Z,10nm,0.6s						
SHL	Shillong	65.25	301	P	P	13 07 20.4	-1.6
ULN	Ulaanbaatar	65.88	329	P	P	13 07 25.9	+0.4
ULN				pmax	pmax		
	comp=Z,15nm,1.0s						
ULN	Ulaanbaatar	65.88	329	P	P	13 07 25.9	+0.4
SONM	Songino Array	66.19	329	P	P	13 07 28.1	+0.6
	comp=Z,16nm,0.7s,baz=149,slow=5.6,SNR=84						
SONM				PcP	PcP	13 07 58.0	+0.8
	comp=Z,3.6nm,0.6s,baz=145,slow=3.5,SNR=5.1						
SONM				LR	LR	13 35 37.0	
	comp=Z,369nm,21.7s,baz=150,slow=35						
SONM				PKP2bc		13 36 05.1	
	comp=Z,2.8nm,0.9s,baz=306,slow=2.4,SNR=16						
SONM	Songino Array	66.19	329	P	P	13 07 27.1	-0.5
LSA	Lhasa	67.31	305	P	P	13 07 35.0	-0.4
LSA				pmax	pmax		
	comp=Z,15nm,0.6s						
LSA	Lhasa	67.31	305	P	P	13 07 34.9	-0.4
LSA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
LSA	Lhasa	67.31	305	P	P	13 07 34.9	-0.5
TAOE	Nuku Hiva Isla	68.30	97	eLR	LR	13 28 19.1	
	comp=Z,366nm,24.2s						
SEY	Seymchan	68.51	1	P	P	13 07 41.0	-0.6
	comp=Z,34nm,1.4s,baz=188,slow=6.5,SNR=12						
SEY				LR	LR	13 37 44.4	
	comp=Z,144nm,19.5s,baz=174,slow=36						
TAPN	Taplejung	69.37	302	eP	P	13 07 48.0	-0.1
	comp=Z,20nm,0.6s						
ZAK	Zakamensk	69.39	330	eP	P	13 07 47.2	-0.3
ZAK				pmax	pmax		
	comp=Z,24nm,0.9s						
ODAN	Odare	69.49	301	eP	P	13 07 47.7	-1.1
	comp=Z,27nm,0.5s						
YAK	Yakutsk	69.57	349	P	P	13 07 47.8	-0.4
	comp=Z,5.3nm,0.5s,baz=115,slow=3.1,SNR=7.2						
YAK	Yakutsk	69.57	349	ceP	P	13 07 47.2	-1.0
YAK				pmax	pmax		
	comp=Z,20nm,1.0s						
YAK	Yakutsk	69.57	349	P	P	13 07 47.0	-1.2
YAK				IAmb	IAmb	13 08 04.5	
	comp=Z,64nm,1.2s						
TLY	Talaya	70.02	331	P	P	13 07 51.7	+0.5
	comp=Z,9.2nm,0.8s,baz=338,slow=0.6,SNR=6.2						

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TLY                               LR       LR       13 36 18.9
      comp=Z,165nm,20.8s,baz=162,slow=34
TLY   Talaya            70.02 331 eP       P        13 07 51.8 +0.5
TLY                               eS       S        13 16 54.6 -1.3
TLY                               pmax     pmax
      comp=Z,22nm,0.8s
TLY                               MLR      MLR
      comp=Z,352nm,17.0s
TLY   Talaya            70.02 331 P        P        13 07 51.1 -0.1
BOD   Bodaibo           70.06 340 eP       P        13 07 50.5 -0.8
BOD                               pmax     pmax
      comp=Z,26nm,1.4s
RAMN  Ramite            70.19 301 eP       P        13 07 51.7 -1.4
      comp=Z,14nm,0.6s
GUN   Gumba             71.08 302 eP       P        13 07 57.5 -1.1
      comp=Z,38nm,0.5s
MOY   Mondy             71.32 330 eP       P        13 07 59.5 +0.2
MOY                               pmax     pmax
      comp=Z,25nm,2.1s
PKI   Pulchoki          71.38 301 eP       P        13 07 59.1 -1.3
      comp=Z,11nm,0.6s
PKIN  Phulchoki         71.39 301 eP       P        13 07 59.6 -0.8
      comp=Z,26nm,0.9s
KKN   Kakani            71.56 302 eP       P        13 08 00.3 -1.0
      comp=Z,18nm,0.6s
DMN   Daman             71.65 301 eP       P        13 08 01.0 -1.0
      comp=Z,36nm,0.7s
VNDA  Vanda             71.94 178 P        P        13 08 03.9 +1.4
      comp=Z,32nm,0.8s,baz=323,slow=6.8,SNR=27
VNDA                              LR       LR       13 37 35.2
      comp=Z,116nm,18.9s,baz=2.5,slow=34
VNDA  Vanda             71.94 178 P        P        13 08 03.1 +0.6
VNDA                              IAmb     IAmb     13 08 04.8
      comp=Z,46nm,0.9s
GKN   Gorkha            72.16 302 eP       P        13 08 03.6 -1.3
      comp=Z,35nm,0.6s
DANN  Dangsing          73.00 302 eP       P        13 08 08.1 -1.9
      comp=Z,15nm,0.4s
RKT   Rikitea           73.09 112 eLR      LR       13 30 37.7
      comp=Z,819nm,32.8s
HYB   Hyderabad         75.11 290 i P      P        13 08 21.0 -1.2
WMQ   Urumqi            75.23 318 P        P        13 08 22.8 +0.3
WMQ                               pP       sP       13 08 47.8 -3.3
WMQ                               sP       pP       13 08 53.3 +11
WMQ                               pmax     pmax
      comp=Z,32nm,1.3s
WMQ                               pmax     pmax
      comp=Z,270nm,5.3s
WMQ                               LR       LR
      comp=Z,250nm,29.9s
WMQ                               LR       LR
      comp=Z,230nm,24.9s
WMQ   Urumqi            75.23 318 P        P        13 08 21.8 -0.7
WMQ                               pmax     pmax
      comp=Z,34nm,1.1s
WMQ   Urumqi            75.23 318 P        P        13 08 21.8 -0.7
WMQ                               IAmb     IAmb     13 08 24.8
      comp=Z,34nm,1.1s
TNA   Tin City          77.22  16 P        P        13 08 33.3 +0.2
      baz=222
TNA   Tin City          77.22  16 P        P        13 08 32.9 -0.2
ANM   Nome              77.24  18 P        P        13 08 32.9 -0.4
ANM                               pmax     pmax
      comp=Z,37nm,1.8s
ANM   Nome              77.24  18 P        P        13 08 32.9 -0.4
BHPL  Bhopal            77.30 295 eP       P        13 08 31.8 -2.8
DGZ   Jazzator, Alta    77.77 323 i P      P        13 08 34.9 -1.9
DGZ                               pmax     pmax
      comp=Z,17nm,0.7s
SVW2  Sparrevohn        78.42  23 P        P        13 08 40.4 +0.4
ZSN   Zaisan            78.46 321 eP       P        13 08 39.5 -0.9
      comp=Z,7.5nm,1.0s,baz=321
ZSN   Zaisan            78.46 321 eP       P        13 08 39.5 -0.9
ZSN                               pmax     pmax
      comp=Z,8.0nm,1.0s
TIXI  Tiksi             78.62 353 P        P        13 08 39.7 -1.0
TIXI                              pmax     pmax
      comp=Z,15nm,1.2s
TIXI  Tiksi             78.62 353 P        P        13 08 39.7 -1.0
SMLA  Simla             79.25 303 eP       P        13 08 42.3 -2.8
SMLA                              IAmb     IAmb     13 08 45.3
      comp=Z,14nm,0.4s
TTA   Tatalina          79.33  22 P        P        13 08 44.5 -0.4
TTA                               pmax     pmax
      comp=Z,15nm,1.3s
TTA   Tatalina          79.33  22 P        P        13 08 44.5 -0.4
CNPM  China Poot        79.37  26 P        P        13 08 45.1 -0.1
MK31  Makanchi Array    79.87 319 i P      P        13 08 47.4 -0.8
MK31                              pmax     pmax
      comp=Z,11nm,0.9s
MK31  Makanchi Array    79.87 319 P        P        13 08 46.5 -1.7
MKAR  Makanchi Array    79.87 319 P        P        13 08 47.5 -0.6
      comp=Z,12nm,0.8s,baz=105,slow=6.7,SNR=70
MKAR                              PP       PP       13 11 50.0 -0.7
      comp=Z,6.2nm,0.9s,baz=108,slow=7.9,SNR=5.1
MKAR                              PKKPbc   PKKPbc   13 27 34.4 -1.5
      comp=Z,0.5nm,0.8s,baz=267,slow=2.7,SNR=4.6
MKAR                              LR       LR       13 42 46.0
      comp=Z,146nm,21.1s,baz=88,slow=35
MAKZ  Makanchi          80.08 319 P        P        13 08 47.8 -1.5
MAKZ                              pmax     pmax
      comp=Z,32nm,0.9s
MAKZ  Makanchi          80.08 319 P        P        13 08 47.8 -1.5
MAKZ                              IAmb     IAmb     13 08 51.0
      comp=Z,32nm,0.9s
DHRM  DHARAMSHALA       80.23 304 eP       P        13 08 47.4 -3.3
DHRM                              IAmb     IAmb     13 08 51.4
      comp=Z,21nm,0.8s
RDOG  Red Dog Mine      80.40  16 P        P        13 08 50.7 +0.2
O22K  Cooper Landing    80.51  26 P        P        13 08 52.4 +1.2
      baz=240
SHLS  Shalkode          80.63 315 eP       P        13 08 49.5 -3.0
      comp=Z,12nm,0.8s,baz=315
SHLS  Shalkode          80.63 315 eP       P        13 08 49.5 -3.0
SHLS                              pmax     pmax
      comp=Z,12nm,0.8s
PDGK  Podgornoye        80.67 315 i P      P        13 08 51.9 -0.8
PDGK                              pmax     pmax
      comp=Z,19nm,0.8s
RC01  Rabbit Creek A    80.81  25 P        P        13 08 52.8  0.0
      baz=240
UZB   Uzynbulak         80.94 315 eP       P        13 08 53.2 -1.0
      comp=Z,18nm,1.3s,baz=315
UZB   Uzynbulak         80.94 315 eP       P        13 08 53.1 -1.0
UZB                               pmax     pmax
      comp=Z,18nm,1.3s
ZAA0  Zalesovo Array    80.96 327 P        P        13 08 52.6 -1.1
ZALV  Zalesovo Beam     80.96 327 P        P        13 08 52.3 -1.5
      comp=Z,11nm,0.7s,baz=110,slow=5.3,SNR=52
ZALV                              S        S        13 18 53.5 -3.1
      comp=Z,0.2nm,0.3s,baz=127,slow=9.2,SNR=1.5
ZALV                              LR       LR       13 43 51.2
      comp=Z,186nm,21.7s,baz=106,slow=35
ZALV  Zalesovo Beam     80.96 327 P        P        13 08 51.6 -2.2
CUT   Chulitna          81.25  24 P        P        13 08 56.7 +1.6
      baz=239
KPKS  Kokpek            81.27 315 eP       P        13 08 54.4 -1.4
      comp=Z,15nm,1.1s,baz=315
KPKS  Kokpek            81.27 315 eP       P        13 08 54.4 -1.4
KPKS                              pmax     pmax
      comp=Z,15nm,1.1s
SATY  Saty              81.35 315 eP       P        13 08 54.9 -1.4
      comp=Z,7.9nm,1.0s,baz=315
SATY  Saty              81.35 315 eP       P        13 08 54.9 -1.4
SATY                              pmax     pmax
      comp=Z,8.0nm,1.0s
SML   Sawmill           81.75  25 P        P        13 08 58.9 +1.0
SML                               IAmb     IAmb     13 09 01.0
      comp=Z,24nm,0.9s
TRF   Thorofare Moun    81.78  23 P        P        13 08 57.6 -0.6
BPAW  Bear Paw Mtn.     81.85  22 P        P        13 08 58.4 +0.1
TDK   Taldyqorghan      81.89 317 eP       P        13 08 57.3 -1.7
      comp=Z,21nm,0.9s,baz=317
TDK   Taldyqorghan      81.89 317 eP       P        13 08 57.3 -1.7
TDK                               pmax     pmax
      comp=Z,21nm,0.9s
IMAR  Indian Mountai    81.90  20 P        P        13 08 57.9 -0.6
KSH   Kashi             82.19 311 P        P        13 09 02.1 +1.3
KSH                               pP       pP       13 09 23.4 +1.9
KSH                               PP       PP       13 12 12.8 +2.6
KSH                               S        S        13 19 09.5 -0.7
KSH                               pmax     pmax
      comp=Z,28nm,1.1s
KSH                               pmax     pmax
      comp=Z,250nm,7.2s
KSH                               LR       LR
      comp=Z,250nm,4.5s
KSH                               LR       LR
      comp=Z,380nm,5.0s
KSH                               LR       LR
      comp=Z,340nm,8.3s
RND   Reindeer          82.32  23 P        P        13 09 00.1 -0.7
RND                               pmax     pmax
      comp=Z,21nm,1.0s
RND   Reindeer          82.32  23 P        P        13 09 00.1 -0.7
MDOK  Medeo             82.33 315 eP       P        13 09 00.2 -1.3
      baz=315
MDOK  Medeo             82.33 315 eP       P        13 09 00.2 -1.3
SEM   Semipalatinsk     82.34 322 eP       P        13 08 58.6 -2.8
      comp=Z,5.4nm,1.0s,baz=322
SEM   Semipalatinsk     82.34 322 eP       P        13 08 58.6 -2.8
SEM                               pmax     pmax
      comp=Z,5.0nm,1.0s
TNSS  Tian-Shan         82.37 315 eP       P        13 09 01.3 -0.8
      baz=315
TNSS  Tian-Shan         82.37 315 eP       P        13 09 01.2 -0.8
MLY   Manley            82.43  21 P        P        13 09 00.6 -0.8
      baz=239
AAA   Alma-Ata          82.44 315 eP       P        13 09 01.5 -0.4
      comp=Z,8.8nm,0.7s,baz=315
AAA   Alma-Ata          82.44 315 eP       P        13 09 01.5 -0.4
AAA                               pmax     pmax
      comp=Z,9.0nm,0.7s
MCK   McKinley          82.45  23 P        P        13 09 00.4 -1.1
      baz=240
BWN   Browne            82.46  22 P        P        13 09 01.8 +0.3
BWN                               IAmb     IAmb     13 09 43.8
      comp=Z,42nm,1.2s
CHKK  Chushkaly         82.56 315 eP       P        13 09 01.1 -1.4
      baz=315
CHKK  Chushkaly         82.56 315 eP       P        13 09 01.1 -1.4
KLU   Klutina           82.62  26 P        P        13 09 02.7 +0.2
ULHL  Ulahol            82.67 314 P        P        13 09 03.6 +0.2
      SNR=15
M24K  Tolsona, Glenn    82.79  25 P        P        13 09 04.7 +1.4
      baz=243
M24K  Tolsona, Glenn    82.79  25 P        P        13 09 04.2 +0.8
M24K                              IAmb     IAmb     13 10 46.5
      comp=Z,55nm,1.4s
NEA2  Nenana            82.82  22 P        P        13 09 01.9 -1.5
      baz=240
I23K  Minto, Yukon-K    82.99  22 P        P        13 09 03.7 -0.5
      baz=240
I23K  Minto, Yukon-K    82.99  22 P        P        13 09 04.2  0.0
KUU   Kurty             83.02 315 eP       P        13 09 03.4 -1.5
      comp=Z,33nm,0.8s,baz=315
KUU   Kurty             83.02 315 eP       P        13 09 03.4 -1.5
KUU                               pmax     pmax
      comp=Z,33nm,0.8s
NIL   Nilore            83.03 305 P        P        13 09 04.2 -1.0
NIL                               pmax     pmax
      comp=Z,50nm,0.6s
NIL   Nilore            83.03 305 P        P        13 09 04.2 -1.0
WRH   Wood River Hil    83.13  22 P        P        13 09 03.5 -1.4
TKM2  Tokmak 2          83.30 314 P        P        13 09 06.2 -0.4
      SNR=24
TKM2  Tokmak 2          83.30 314 i P      P        13 09 06.0 -0.6
TKM2                              pmax     pmax
      comp=Z,15nm,0.7s
CCB   Clear Creek Bu    83.33  22 P        P        13 09 04.5 -1.4
TCOL  CIGO, UAF Yank    83.41  22 P        P        13 09 05.0 -1.3
      baz=241
TCOL  CIGO, UAF Yank    83.41  22 P        P        13 09 06.0 -0.3
COLA  College           83.42  22 P        P        13 09 05.6 -0.8
COLA                              pmax     pmax
      comp=Z,12nm,0.8s
COLA  College           83.42  22 P        P        13 09 05.6 -0.8
KURK  Kurchatov         83.42 322 P        P        13 09 05.6 -1.1
KURK                              pmax     pmax
      comp=Z,59nm,1.2s
KURK  Kurchatov         83.42 322 P        P        13 09 05.6 -1.1
KURK                              IAmb     IAmb     13 09 08.2
      comp=Z,59nm,1.2s
HDA   Harding Lake      83.54  23 P        P        13 09 05.7 -1.4
      baz=242
HDA   Harding Lake      83.54  23 P        P        13 09 05.6 -1.4
POKR  Poker Plat Res    83.69  22 P        P        13 09 06.9 -0.9
      baz=242
KBK   Karagaybulak      83.70 314 P        P        13 09 08.7 +0.1
      SNR=6.0
IL31                    83.73  22 P        P        13 09 05.5 -2.4
IL31                              IAmb     IAmb     13 09 11.0
      comp=Z,53nm,1.9s
ILAR  Eielson Array     83.73  22 P        P        13 09 06.0 -2.1
      comp=Z,5.9nm,0.7s,baz=247,slow=5.0,SNR=69
ILAR                              LR       LR       13 41 56.0
      comp=Z,212nm,21.9s,baz=268,slow=32
ILAR  Eielson Array     83.73  22 P        P        13 09 06.7 -1.3
ILAR  Eielson Array     83.73  22 P        P        13 09 06.7 -1.3
COLD  Coldfoot          83.76  20 P        P        13 09 08.6 +0.4
      baz=239
COLD  Coldfoot          83.76  20 P        P        13 09 08.3 +0.1
UCH   Uchtor            83.91 313 P        P        13 09 10.7 +0.6
      SNR=30
CHMS  Chumysh           83.92 314 P        P        13 09 09.5 -0.1
      SNR=19
MAW   Mawson            83.99 203 P        P        13 09 10.2 +0.9
      comp=Z,42nm,1.0s,baz=70,slow=5.7,SNR=4.2
MAW                               LR       LR       13 43 42.5
      comp=Z,439nm,21.9s,baz=68,slow=34
AAK   Ala-Archa         84.02 314 P        P        13 09 10.4 +0.2
      SNR=20
AAK   Ala-Archa         84.02 314 P        P        13 09 10.5 +0.2
AAK                               pmax     pmax
      comp=Z,109nm,1.9s
AAK   Ala-Archa         84.02 314 P        P        13 09 10.4 +0.2
AAK                               IAmb     IAmb     13 09 12.6
      comp=Z,109nm,1.9s
SGDS  Sogindy           84.11 315 eP       P        13 09 09.5 -1.0
      comp=Z,11nm,1.0s,baz=315
SGDS  Sogindy           84.11 315 eP       P        13 09 09.5 -1.0
SGDS                              pmax     pmax
      comp=Z,11nm,1.0s
USP   Ospenovka         84.16 314 P        P        13 09 10.1 -0.7
      SNR=61
MENT  Mentasta          84.18  25 P        P        13 09 10.7 +0.3
A21K  Barrow            84.20  15 P        P        13 09 11.3 +1.1
      baz=232
QSPA  South Pole Qui    84.20 180 P        P        13 09 11.3 +0.7
      comp=Z,63nm,0.9s,baz=339,slow=1.1,SNR=148
QSPA  South Pole Qui    84.20 180 P        P        13 09 11.4 +0.7
BARN  Barnard Glacie    84.31  27 P        P        13 09 12.8 +1.5
DOT   Dot Lake          84.34  24 P        P        13 09 10.2 -0.9
AML   Almayashu         84.48 313 P        P        13 09 12.9  0.0
      SNR=68
SCRK  Sand Creek        84.51  24 P        P        13 09 11.8 -0.4
      baz=245
EKS2  Erkin-Say         84.54 314 P        P        13 09 12.6 -0.2
      SNR=49
TOLK  Toolik Lake Re    84.70  18 P        P        13 09 12.7 -0.3
      baz=239
TOLK  Toolik Lake Re    84.70  18 P        P        13 09 12.6 -0.3
BTLS  Baital            84.89 316 eP       P        13 09 13.0 -1.4
      comp=Z,26nm,0.9s,baz=316
BTLS  Baital            84.89 316 eP       P        13 09 12.9 -1.4
BTLS                              pmax     pmax
      comp=Z,26nm,0.9s
BCAR  Beaver Creek A    85.04  25 P        P        13 09 14.0 -0.7
FYU   Fort Yukon        85.16  21 P        P        13 09 14.8 -0.4
BMAR  Burnt Mountain    85.78  20 P        P        13 09 17.7 -0.6
EGAK  Eagle             85.96  23 P        P        13 09 19.8 +0.6
HYT   Haines Junctio    86.12  28 P        P        13 09 19.9 -0.4
HYT                               IAmb     IAmb     13 09 39.1
      comp=Z,24nm,1.3s
NRIK  Noril'sk          86.29 341 P        P        13 09 20.0 -0.8
      comp=Z,7.7nm,0.5s,baz=115,slow=4.5,SNR=17
NRIK                              LR       LR       13 47 30.2
      comp=Z,77nm,20.5s,baz=114,slow=35
NRIK  Noril'sk          86.29 341 P        P        13 09 20.1 -0.6
NRIK                              pmax     pmax
      comp=Z,10.0nm,0.7s
NRIK  Noril'sk          86.29 341 P        P        13 09 20.1 -0.6
DZA   Taraz             86.35 314 eP       P        13 09 20.2 -1.5
      comp=Z,23nm,0.9s,baz=314
DZA   Taraz             86.35 314 eP       P        13 09 20.2 -1.5
DZA                               pmax     pmax
      comp=Z,23nm,0.9s
KBL   Kabul             86.63 305 P        P        13 09 20.5 -3.0
KBL                               pmax     pmax
      comp=Z,7.0nm,0.7s
KBL   Kabul             86.63 305 P        P        13 09 20.5 -3.0
BRZS  BereznIki         86.91 321 eP       P        13 09 21.8 -2.5
      comp=Z,5.5nm,1.1s,baz=321
BRZS  Berezniki         86.91 321 eP       P        13 09 21.7 -2.5
BRZS                              pmax     pmax
      comp=Z,5.0nm,1.1s
KK31  Karatay Array     86.98 314 P        P        13 09 24.0 -0.7
KK31                              pmax     pmax
      comp=Z,63nm,1.5s
KK31  Karatay Array     86.98 314 P        P        13 09 24.0 -0.7
KK31                              IAmb     IAmb     13 09 25.6
      comp=Z,63nm,1.4s
KKAR  Karatay Array     86.98 314 P        P        13 09 23.4 -1.3
KKAR  Karatay Array     86.98 314 P        P        13 09 23.4 -1.3
KKAR                              IAmb     IAmb     13 09 25.6
      comp=Z,63nm,1.4s
KKAR  Karatay Array     86.98 314 P        P        13 09 23.4 -1.3
IUG   Iuzhnay           87.16 313 eP       P        13 09 23.6 -2.1
      baz=313
IUG   Iuzhnay           87.16 313 eP       P        13 09 23.6 -2.1
EPYK  Eagle Plains      88.25  23 P        P        13 09 30.0 -0.3
      baz=252
EPYK  Eagle Plains      88.25  23 P        P        13 09 29.2 -1.1
EPYK                              IAmb     IAmb     13 09 47.9
      comp=Z,27nm,1.2s
BRVK  Borovoye          89.00 323ceP       P        13 09 32.8 -1.3
BRVK                              pmax     pmax
      comp=Z,13nm,1.3s
BRVK  Borovoye          89.00 323 P        P        13 09 32.2 -1.9
BRVK                              IAmb     IAmb     13 09 33.9
      comp=Z,19nm,1.4s
INK   Inuvik            90.00  21 P        P        13 09 37.7 -0.7
      comp=Z,8.0nm,1.0s,baz=285,slow=6.2,SNR=13
INK   Inuvik            90.00  21 P        P        13 09 36.5 -1.8
INK                               IAmb     IAmb     13 09 55.5
      comp=Z,18nm,1.1s
J01E  Myrtle Point      90.32  47 P        P        13 09 41.6 +1.1
      baz=262
K02D  Willamette Mer    90.46  47 P        P        13 09 41.7 +0.5
      baz=263
O02D  Mt. Diablo Mer    90.80  50 P        P        13 09 44.2 +1.3
      baz=263
I03D  Drain, OR         90.81  46 P        P        13 09 43.5 +0.8
      baz=263
M02C  Callahan          90.90  49 P        P        13 09 44.6 +1.3
      baz=263,SNR=6.4
N02D  Trinity Center    90.96  49 P        P        13 09 45.2 +1.6
      baz=263
HUMO  Hull Mountain     90.96  47 P        P        13 09 43.8 +0.3
HUMO                              IAmb     IAmb     13 10 00.6
      comp=Z,20nm,0.8s
WDC   Whiskeytown Da    91.03  49 P        P        13 09 44.4 +0.5
WDC                               pmax     pmax
      comp=Z,32nm,1.8s
WDC   Whiskeytown Da    91.03  49 P        P        13 09 44.4 +0.5
WDC                               IAmb     IAmb     13 10 03.7
      comp=Z,32nm,1.8s
YBH   Yreka Blue Hor    91.04  48 P        P        13 09 44.7 +0.7
YBH                               pmax     pmax
      comp=Z,14nm,1.0s
YBH   Yreka Blue Hor    91.04  48 P        P        13 09 44.7 +0.7
YBH                               IAmb     IAmb     13 10 00.7
      comp=Z,14nm,0.9s
L04D  Klamath Falls     91.40  48 P        P        13 09 46.4 +0.7
      baz=264
I04A  Tendick Farm,     91.50  46 P        P        13 09 46.5 +0.5
      baz=264
O03E  Paynes Creek      91.56  50 P        P        13 09 46.9 +0.5
      baz=264
J04D  Umpqua Nationa    91.66  47 P        P        13 09 47.8 +0.9
      baz=264
M04C  Macdoel           91.70  48 P        P        13 09 48.4 +1.3
      baz=264,SNR=5.8
ORV   Oroville          91.72  51 P        P        13 09 47.0 -0.1
ORV                               pmax     pmax
      comp=Z,11nm,1.2s
ORV   Oroville          91.72  51 P        P        13 09 47.0 -0.1
ORV                               IAmb     IAmb     13 10 03.2
      comp=Z,10nm,1.1s
K04D  Chiloquin, OR     91.85  48 P        P        13 09 48.1 +0.4
      baz=264
A04D  Lummi Island      91.86  41 P        P        13 09 48.6 +1.2
      baz=264
SYO   Syowa Base        92.16 200⇑eP       P        13 09 48.8 +0.3
SYO   Syowa Base        92.16 200⇓epP      pP       13 10 07.4 -2.0
HRA   Herat             92.18 304 P        P        13 09 48.4 -1.2
HRA                               IAmb     IAmb     13 09 50.8
      comp=Z,9.9nm,0.8s
B05A  Bryant            92.21  42 P        P        13 09 49.7 +0.6
      baz=264
J05D  Fort Rock, OR     92.30  47 P        P        13 09 50.8 +0.9
      baz=264
I05D  Terrebonne, OR    92.33  46 P        P        13 09 50.8 +0.9
      baz=264
PAGB  Antelope Grade    92.33  54 P        P        13 09 50.6 +0.6
CMB   Columbia Colle    92.43  52 P        P        13 09 51.3 +0.8
CMB                               pmax     pmax
      comp=Z,10.0nm,1.1s
CMB   Columbia Colle    92.43  52 P        P        13 09 51.3 +0.8
CMB                               IAmb     IAmb     13 10 06.8
      comp=Z,10.0nm,1.1s
K05A  Summer Lake       92.49  47 P        P        13 09 51.6 +0.8
K05A                              IAmb     IAmb     13 10 07.3
      comp=Z,21nm,1.0s
SMMC  Simmler           92.49  55 P        P        13 09 53.2 +2.4
      baz=265
PINE  Pine Mountain     92.56  46 P        P        13 09 51.7 +0.6
PINE                              IAmb     IAmb     13 10 10.8
      comp=Z,20nm,1.1s
PKM   Mcpherson Peak    92.60  55 P        P        13 09 53.7 +2.2
      baz=265
BEKR  Beckworth         92.62  50 P        P        13 09 51.7 +0.2
BEKR                              IAmb     IAmb     13 10 07.7
      comp=Z,10nm,1.0s
MOD   Modoc Plateau     92.85  48 P        P        13 09 52.9 +0.4
MOD                               IAmb     IAmb     13 10 11.8
      comp=Z,33nm,1.4s
LTY   Liberty           93.07  43 P        P        13 09 54.7 +1.5
LTY                               IAmb     IAmb     13 09 56.1
      comp=Z,10nm,1.2s
VCNR  Virginia City     93.12  51 P        P        13 09 54.2 +0.4
VCNR                              IAmb     IAmb     13 10 12.8
      comp=Z,13nm,1.1s
PNTR  Pine Nut          93.14  51 P        P        13 09 55.0 +1.0
PNTR                              IAmb     IAmb     13 10 13.6
      comp=Z,22nm,1.2s
WAKR  Walker            93.22  52 P        P        13 09 54.2 -0.1
WAKR                              IAmb     IAmb     13 10 11.1
      comp=Z,8.3nm,0.9s
VES   Vestal, Richgr    93.28  54 P        P        13 09 55.8 +1.4
      baz=265,SNR=6.1
PAHR  Pah Rah Range     93.36  51 P        P        13 09 55.1 +0.2
PAHR                              IAmb     IAmb     13 10 11.2
      comp=Z,9.6nm,1.0s
YERR  Yerington         93.41  51 P        P        13 09 55.3 +0.2
YERR                              IAmb     IAmb     13 10 14.6
      comp=Z,9.9nm,1.0s
ARVC  Arvin             93.43  55 P        P        13 09 56.5 +1.4
      baz=265
MDPB  Devils Postpil    93.43  53 P        P        13 09 55.6 +0.3
MDPB                              IAmb     IAmb     13 10 11.9
      comp=Z,18nm,1.0s
OMMB  Old Mammoth Mi    93.49  53 P        P        13 09 56.3 +0.6
OMMB                              IAmb     IAmb     13 10 12.3
      comp=Z,12nm,1.1s
C36M  Paulatuk          93.57  21 P        P        13 09 53.7 -1.2
      baz=263
C36M  Paulatuk          93.57  21 P        P        13 09 54.3 -0.6
C36M                              IAmb     IAmb     13 09 54.3
      comp=Z,7.4nm,0.8s
I07A  Izee              93.62  46 P        P        13 09 56.0 +0.1
MLAC  Mammoth, Mammo93.62  53 P        P        13 09 58.3 +2.1
      baz=266
CIS   Catalina Islan    93.64  57 P        P        13 09 57.9 +1.9
      baz=266,SNR=8.2
ISA   Isabella, Lake    93.76  55 P        P        13 09 57.5 +0.8
      baz=266,SNR=6.7
ISA   Isabella, Lake    93.76  55 P        P        13 09 57.7 +1.0
ISA                               pmax     pmax
      comp=Z,10.0nm,1.1s
ISA   Isabella, Lake    93.76  55 P        P        13 09 57.7 +1.0
ISA                               IAmb     IAmb     13 10 13.2
      comp=Z,10nm,1.1s
DECC  Green Verdugo     93.77  56 P        P        13 09 58.8 +2.1
      baz=266
PNT   Penticton         93.94  41 P        P        13 09 55.0 -2.1
PNT                               pmax     pmax
      comp=Z,22nm,1.2s
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RYN	Ryan	93.94	52	P	P	13 09 58.3	+0.8
RYN				IAmb	IAmb	13 10 17.0	
	comp=Z,15nm,1.0s						
MWC	Mount Wilson	93.99	56	P	P	13 09 58.7	+0.8
MWC				pmax	pmax		
	comp=Z,43nm,1.1s						
MWC	Mount Wilson	93.99	56	P	P	13 09 58.7	+0.8
B08A	Colville Reser	94.05	42	P	P	13 09 58.0	+0.3
G08A	Pilot Rock	94.09	45	P	P	13 09 59.2	+1.1
EDW2	Edwards Air Fo	94.09	55	P	P	13 09 59.8	+1.5
	baz=266,SNR=12						
NVAR	Mina Array Bea	94.10	52	P	P	13 09 59.5	+1.1
	comp=Z,6.3nm,0.8s,baz=252,slow=5.3,SNR=34						
NVAR				LR	LR	13 49 40.6	
	comp=Z,227nm,18.1s,baz=250,slow=34						
NVAR	Mina Array Bea	94.10	52	P	P	13 09 58.7	+0.4
WVOR	Wild Horse Val	94.13	48	P	P	13 09 58.1	-0.2
WVOR				pmax	pmax		
	comp=Z,12nm,1.3s						
WVOR	Wild Horse Val	94.13	48	P	P	13 09 58.1	-0.2
WVOR				IAmb	IAmb	13 10 37.1	
	comp=Z,12nm,1.2s						
CWC	Cottonwood Cre	94.14	54	P	P	13 09 59.6	+1.1
	baz=266						
NV11	Mina Array Sit	94.22	52	P	P	13 09 58.8	0.0
NV11				IAmb	IAmb	13 10 17.7	
	comp=Z,26nm,1.2s						
BFSC	Mount Baldy Ra	94.33	56	P	P	13 10 00.8	+1.4
	baz=266,SNR=7.0						
LRMC	Laurel Mtn Rad	94.39	55	P	P	13 10 01.2	+1.6
	baz=266,SNR=6.8						
MPMC	Manual Prospec	94.59	54	P	P	13 10 01.9	+1.3
	baz=266,SNR=19						
MURC	Murrieta	94.67	57	P	P	13 10 02.0	+1.2
	baz=266						
109C	Camp Elliot, M	94.69	58	P	P	13 10 02.6	+1.7
	baz=266						
109C	Camp Elliot, M	94.69	58	P	P	13 10 02.6	+1.7
E09A	Wood Farm, Sta	94.74	44	P	P	13 10 01.4	+0.6
E09A				IAmb	IAmb	13 10 17.7	
	comp=Z,7.5nm,0.8s						
TPH	Tonopah	94.93	52	P	P	13 10 03.2	+1.1
TPH				pmax	pmax		
	comp=Z,69nm,1.1s						
TPH	Tonopah	94.93	52	P	P	13 10 03.2	+1.1
BBRC	Big Bear Solar	94.94	56	P	P	13 10 03.6	+1.3
	baz=266,SNR=7.7						
ABKAR	Akbulak array	95.01	319	P	P	13 09 58.6	-3.3
ABKAR	Akbulak array	95.01	319	P	P	13 09 58.8	-3.1
ABKAR				IAmb	IAmb	13 10 01.5	
	comp=Z,4.1nm,0.8s						
CBX	Cerro Bola	95.03	58	P	P	13 10 03.9	+1.2
CBX				IAmb	IAmb	13 10 08.9	
	comp=Z,6.5nm,0.4s						
BAR	Barrett	95.05	58	P	P	13 10 03.9	+1.3
GSC	Goldstone, Bar	95.09	55	P	P	13 10 03.5	+0.7
	baz=267,SNR=7.4						
GSC	Goldstone, Bar	95.09	55	P	P	13 10 03.8	+1.0
GSC				pmax	pmax		
	comp=Z,13nm,1.2s						
GSC	Goldstone, Bar	95.09	55	P	P	13 10 03.8	+1.0
GSC				IAmb	IAmb	13 10 22.4	
	comp=Z,13nm,1.2s						
FURC	Furnace Creek,	95.12	54	P	P	13 10 04.0	+1.3
	baz=267,SNR=9.4						
BMO	Blue Mountains	95.24	46	P	P	13 10 03.0	-0.3
BMO				pmax	pmax		
	comp=Z,9.0nm,1.3s						
BMO	Blue Mountains	95.24	46	P	P	13 10 03.0	-0.3
BMO				IAmb	IAmb	13 10 22.9	
	comp=Z,9.4nm,1.3s						
MONP2	Monument Peak	95.27	58	P	P	13 10 05.9	+2.1
	baz=267,SNR=18						
PFO	Pinyon Flats O	95.28	57	P	P	13 10 05.5	+1.8
	baz=267,SNR=10						
PFO	Pinyon Flats O	95.28	57	P	P	13 10 05.4	+1.6
PFO				pmax	pmax		
	comp=Z,24nm,1.2s						
PFO	Pinyon Flats O	95.28	57	P	P	13 10 05.4	+1.6
PFO				IAmb	IAmb	13 10 23.0	
	comp=Z,24nm,1.2s						
TPFO	Pinon Flats	95.28	57	P	P	13 10 05.4	+1.7
	baz=267,SNR=9.9						
F10A	Beach Ranch, E	95.35	44	P	P	13 10 03.5	-0.3
F10A				IAmb	IAmb	13 10 20.3	
	comp=Z,6.6nm,0.8s						
HEC	Hector,Ludlow	95.45	56	P	P	13 10 05.9	+1.4
	baz=267,SNR=6.1						
IKP	In-Ko-Pah, Jac	95.52	58	P	P	13 10 06.6	+1.8
	baz=267						
NEW	Newport	95.52	42	P	P	13 10 04.2	-0.2
	baz=268						
NEW	Newport	95.52	42	P	P	13 10 03.7	-0.7
NEW				pmax	pmax		
	comp=Z,9.0nm,1.4s						
NEW	Newport	95.52	42	P	P	13 10 03.7	-0.7
NEW				IAmb	IAmb	13 10 05.2	
	comp=Z,9.4nm,1.4s						
RMX	La Rumorosa	95.54	58	P	P	13 10 07.2	+2.2
RMX				IAmb	IAmb	13 10 09.3	
	comp=Z,9.4nm,0.9s						
SHOC	Shoshone, Teco	95.56	55	P	P	13 10 06.0	+1.1
	baz=267,SNR=14						
ESJX	Sierra Juarez	95.62	58	P	P	13 10 06.9	+1.5
TPNV	Topopah Spring	95.64	54	P	P	13 10 06.5	+1.1
	baz=267,SNR=9.4						
TPNV	Topopah Spring	95.64	54	P	P	13 10 05.8	+0.4
TPNV				pmax	pmax		
	comp=Z,15nm,1.0s						
TPNV	Topopah Spring	95.64	54	P	P	13 10 05.8	+0.4
TPNV				IAmb	IAmb	13 10 23.4	
	comp=Z,16nm,1.0s						
BELC	Belle Mtn. Jos	95.69	56	P	P	13 10 07.5	+1.9
	baz=267,SNR=12						
GEYT	Alibeck	95.77	307	P	P	13 10 04.5	-1.3
	comp=Z,2.6nm,0.8s,baz=270,slow=0.6,SNR=6.3						
GEYT				LR	LR	13 56 38.9	
	comp=Z,100nm,19.0s,baz=40,slow=38						
GEYT	Alibeck	95.77	307	P	P	13 10 04.1	-1.7
SWSC	Sam W. Stewart	95.79	58	P	P	13 10 07.6	+1.7
	baz=267						
GMRC	Granite Mounta	96.00	56	P	P	13 10 08.9	+1.8
	baz=267,SNR=10						
ARU	Arti	96.11	326	*d i*P	P	13 10 04.0	-2.8
ARU						13 13 55.8	
ARU				S	SKSac	13 20 40.1	+3.7
ARU				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ARU	Arti	96.11	326	P	P	13 10 04.8	-2.0
ARU				IAmb	IAmb	13 10 06.2	
	comp=Z,7.6nm,0.9s						
BC3	Big Chuckawall	96.12	57	P	P	13 10 09.8	+2.2
	baz=267,SNR=14						
R11A	Troy Canyon, C	96.23	52	P	P	13 10 09.1	+1.1
	baz=268						
IRM	Iron Mountain	96.40	56	P	P	13 10 10.8	+2.1
	baz=267,SNR=15						
BELA	Belgrano 2	96.42	179	P	P	13 10 07.5	-0.4
SHPR	Sheep Range	96.49	54	P	P	13 10 11.0	+1.7
SHPR				IAmb	IAmb	13 10 28.6	
	comp=Z,21nm,1.3s						
PRN	Pahroc Range	96.61	53	P	P	13 10 09.9	+0.2
PRN				IAmb	IAmb	13 10 29.1	
	comp=Z,15nm,1.0s						
GLA	Glamis	96.62	57	P	P	13 10 11.9	+2.2
	baz=267						
YKA	Yellowknife Ar	97.12	28	P	P	13 10 10.8	-0.5
	comp=Z,1.5nm,0.7s,baz=270,slow=3.9,SNR=61						
YKA				PP	PP	13 14 07.8	-0.2
	comp=Z,0.3nm,0.9s,baz=285,slow=4.4,SNR=3.6						
YKA				PKiKP	PKiKP	13 14 46.3	-0.2
	comp=Z,0.4nm,0.7s,baz=280,slow=0.8,SNR=6.6						
YKA				PKKPbc	PKKPbc	13 26 50.5	-3.1
	comp=Z,0.7nm,0.8s,baz=90,slow=3.7,SNR=12						
YKA				LR	LR	13 50 45.5	
	comp=Z,184nm,20.6s,baz=0.0,slow=33						
HLID	Hailey	97.27	47	P	Pdif	13 10 13.0	+0.3
	baz=269						
HLID	Hailey	97.27	47	P	Pdif	13 10 12.9	+0.2
W13A	Hualapai Mount	97.47	55	P	Pdif	13 10 15.4	+1.5
W13A				IAmb	IAmb	13 10 31.1	
	comp=Z,18nm,1.5s						
WALA	Waterton Lakes	97.67	41	P	Pdif	13 10 14.9	+0.7
WALA				IAmb	IAmb	13 10 30.5	
	comp=Z,5.9nm,0.8s						
CCUT	Cedar City	97.96	53	P	Pdif	13 10 16.7	+0.8
LCMT	Little Creek M	98.04	54	P	Pdif	13 10 17.1	+0.9
SZCU	Shurtz Canyon	98.18	53	P	Pdif	13 10 18.8	+1.9
214A	Organ Pipe Nat	98.28	59	Pdiff	Pdif	13 10 19.4	+2.1
	baz=268						
KNB	Kanab	98.38	54	P	Pdif	13 10 18.6	+0.8
KNB				pmax	pmax		
	comp=Z,19nm,1.4s						
KNB	Kanab	98.38	54	P	Pdif	13 10 18.6	+0.8
U15A	North Rim	98.80	54	P	P	13 10 16.6	-3.2
U15A				IAmb	IAmb	13 10 48.8	
	comp=Z,6.9nm,1.1s						
BOZ	Bozeman (W)	99.26	45	Pdiff	Pdif	13 10 21.1	-0.3
	baz=271						
WUAZ	Wupatki	99.54	55	Pdiff	Pdif	13 10 24.8	+1.8
	baz=270						
TUC	Tucson	100.00	58	Pdiff	Pdif	13 10 27.7	+2.7
	baz=270						
BW06	Boulder Array	100.83	48	Pdiff	Pdif	13 10 28.6	-0.1
	baz=272						
PDAR	Pinedale Array	100.83	48	P	Pdif	13 10 28.4	-0.3
	comp=Z,1.5nm,0.7s,baz=221,slow=2.0,SNR=20						
PDAR				PKiKP	PKiKP	13 14 54.9	+0.8
	comp=Z,0.3nm,0.7s,baz=343,slow=1.5,SNR=2.2						
O20A	White River Ci	101.93	50	Pdiff	Pdif	13 10 34.0	+0.5
	baz=273						
VNA2	Neumayer--Watz	102.11	187	Pdiff	Pdif	13 10 30.2	-3.3
ANMO	Albuquerque	103.57	56	Pdiff	Pdif	13 10 43.5	+2.5
	baz=272						
TXAR	Lajitas Array	106.18	61	Pdiff	Pdif	13 10 54.2	+1.7
	comp=Z,0.2nm,0.8s,baz=268,slow=6.3,SNR=1.9						
TXAR				PP	PP	13 15 17.4	0.0
	comp=Z,0.4nm,0.9s,baz=262,slow=6.2,SNR=4.0						
TXAR				PKKPab	PKKPab	13 26 42.7	+0.8
	comp=Z,1.1nm,0.8s,baz=117,slow=5.7,SNR=9.6						
ARCES	ARCESS Array B	107.25	343	PKiKP	PKiKP	13 15 04.3	-0.5
	comp=Z,2.6nm,0.7s,baz=77,slow=2.8,SNR=5.5						
ARCES				PKKPbc	PKKPbc	13 26 21.0	-3.1
	comp=Z,1.7nm,0.5s,baz=352,slow=3.7,SNR=11						
FINES	FINESS Array B	111.17	335	Pdiff	Pdif	13 11 13.4	-0.4
	comp=Z,3.2nm,0.9s,baz=64,slow=4.4,SNR=5.0						
FINES				PKiKP	PKiKP	13 15 12.2	-0.1
	comp=Z,3.4nm,1.0s,baz=79,slow=7.2,SNR=2.8						
AKASG	Malin Array Be	114.21	324	PKP	PKPdf	13 15 17.7	-0.7
	comp=Z,0.9nm,0.5s,baz=56,slow=2.7,SNR=4.7						
AKASG				PP	PP	13 16 10.6	-3.7
	comp=Z,0.2nm,0.2s,baz=50,slow=7.4,SNR=4.9						
AKASG				PKKPbc	PKKPbc	13 25 59.0	-1.8
	comp=Z,1.9nm,0.6s,baz=260,slow=3.7,SNR=14						
AKASG				SS	SS	13 32 05.9	+6.3
	comp=Z,0.4nm,0.4s,baz=48,slow=13,SNR=4.9						
BRTR	Keskin Array B	114.58	311	PKP	PKPdf	13 15 19.1	-0.6
	comp=Z,1.3nm,0.9s,baz=96,slow=2.5,SNR=5.0						
BRTR				PP	PP	13 16 13.9	-3.7
	comp=Z,1.2nm,1.0s,baz=121,slow=5.6,SNR=2.6						
BRTR				PKKPbc	PKKPbc	13 25 59.9	+0.5
	comp=Z,1.4nm,0.7s,baz=229,slow=3.3,SNR=8.2						
NB2	NORSAR Subarra	117.19	339	PKPdf	PKiKP	13 15 24.2	+0.2
	comp=Z,2.4nm,1.0s,baz=44,slow=1.9						
NOA	NORSAR Array B	117.19	339	PKP	PKPdf	13 15 23.5	-0.5
	comp=Z,1.5nm,1.0s,baz=44,slow=2.0,SNR=3.9						
NOA				SKP	SKPdf	13 18 53.7	+0.8
	comp=Z,3.0nm,0.9s,baz=44,slow=1.8,SNR=5.9						
BOSA	Boshof	117.60	234	PKP	PKiKP	13 15 27.4	+1.5
	comp=Z,3.4nm,0.6s,baz=168,slow=1.1,SNR=7.2						
BOSA				PKKPbc	PKKPbc	13 25 48.6	+0.1
	comp=Z,2.6nm,0.8s,baz=313,slow=4.2,SNR=3.7						
BOSA	Boshof	117.60	234	PKIKP	PKiKP	13 15 27.7	+1.8
BOSA	Boshof	117.60	234		PKiKP	13 15 27.7	+1.8
MATP	Matopo	117.81	243	PKP	PKiKP	13 15 26.8	+0.4
	comp=Z,3.1nm,0.6s,baz=135,slow=1.3,SNR=12						
MLR	Muntele Rosu	118.22	319	PKKPbc	PKKPbc	13 25 46.3	-0.5
	comp=Z,1.8nm,0.6s,baz=137,slow=6.1,SNR=3.6						
H03S2	Juan Fernandez	118.56	134	T	T	15 24 58.5	
	baz=239						
H03S1	Juan Fernandez	118.57	134	T	T	15 25 01.0	
	baz=239						
H03S3	Juan Fernandez	118.57	134	T	T	15 25 00.7	
	baz=239						
LBTB	Lobatse	118.74	238	PKP	PKiKP	13 15 29.7	+1.6
	comp=Z,2.9nm,0.9s,baz=209,slow=3.2,SNR=2.2						
KOLS	Kolonicke sedl	119.04	324	*e*PKIKP	PKiKP	13 15 29.5	+1.6
KOLS	Kolonicke sedl	119.04	324	*e*PKP	PKiKP	13 15 29.5	+1.6
SUR	Sutherland	119.33	228	PKP	PKiKP	13 15 30.2	+1.0
	comp=Z,3.6nm,0.8s,baz=46,slow=22,SNR=1.0						
CRVS	Cervenica-Dubn	119.53	324	*e*PKIKP	PKiKP	13 15 29.7	+0.9
CRVS	Cervenica-Dubn	119.53	324	*e*PKP	PKiKP	13 15 29.7	+0.9
PLCA	Paso Flores	120.07	144	PKP	PKiKP	13 15 30.9	+0.6
	comp=Z,1.9nm,0.8s,baz=234,slow=3.4,SNR=4.8						
PLCA				PKKPbc	PKKPbc	13 25 38.5	-1.4
	comp=Z,1.3nm,0.8s,baz=73,slow=6.1,SNR=3.6						
LSQQ	Lebel-sur-Quev	120.89	35	P	PKPdf	13 15 30.9	-0.5
	baz=301						
DPC	Dobruska-Polom	121.65	328	*e*PKIKP	PKiKP	13 15 34.8	+1.8
DPC				*e*		13 15 49.2	
DPC	Dobruska-Polom	121.65	328	*e*PKPDF	PKiKP	13 15 34.8	+1.8
DPC				*e*x	x	13 15 49.2	
BRG	Berggiesshubel	122.59	329	*e*PKP	PKiKP	13 15 36.0	+1.3
BRG				Amp		13 15 37.6	
	comp=Z,11nm,1.4s						
DIVS	Divibare	122.65	320	PKPdf	PKiKP	13 15 35.5	+0.3
CLL	Collm	122.80	330	*e*PKPdf	PKPdf	13 15 35.0	0.0
	comp=Z,5.0nm,0.9s						
CLL				*e*PPS	PPS	13 28 31.0	
CLL				*e*(SS)		13 33 30.0	
CLL				*e*		13 39 24.0	
CLL	Collm	122.80	330	*e*PKIKP	PKPdf	13 15 35.0	0.0
CLL				pmax	pmax		
	comp=Z,5.0nm,0.9s						
CLL	Collm	122.80	330	*e*PKPdf	PKPdf	13 15 34.3	-0.7
	baz=52,slow=1.0						
FNA	Florina	123.14	316	PKIKP	PKPdf	13 15 35.1	-0.9
FNA	Florina	123.14	316		PKPdf	13 15 35.1	-0.9
D56A	ZEC Mazanza, M	123.21	36	P	PKPdf	13 15 35.6	-0.3
	baz=302						
CONA	Conrad Observa	123.23	325	*e*P	PKiKP	13 15 37.7	+1.4
	comp=Z,1.3nm,0.6s						
CKRC	Cesky Krumlov	123.59	327	*e*PKPDF	PKPdf	13 15 36.2	-0.4
CKRC				*e*x	x	13 15 51.5	
CKRC				*e*SKP	SKPdf	13 19 07.3	+1.8
GUNZ	Gunzen	123.72	329	*e*PKPdf	PKiKP	13 15 37.1	0.0
	baz=52,slow=1.0						
KHC	Kasperske Hory	123.81	328	*e*PKIKP	PKPdf	13 15 36.3	-0.7
KHC				*e*		13 15 52.1	
KHC	Kasperske Hory	123.81	328	*e*PKPDF	PKPdf	13 15 36.3	-0.7
KHC				*e*x	x	13 15 52.1	
KHC				*e*SKP	SKPdf	13 19 06.1	+0.2
KHC	Kasperske Hory	123.81	328		PKPdf	13 15 36.8	-0.3
GEC2	GERESS Array S	123.91	327	PKPdf	PKiKP	13 15 38.1	+0.6
GEC2	GERESS Array S	123.91	327	*e*PKPdf	PKPdf	13 15 37.4	0.0
	baz=52,slow=1.0						
GERES	GERESS Array B	123.91	327	PKP	PKPdf	13 15 37.3	0.0
	comp=Z,2.2nm,0.6s,baz=76,slow=1.6,SNR=23						
GERES				SKP	SKPdf	13 19 08.8	+2.6
	comp=Z,0.6nm,0.6s,baz=90,slow=4.0,SNR=6.2						
GERES				PKKPbc	PKKPbc	13 25 25.4	0.0
	comp=Z,1.5nm,1.0s,baz=212,slow=4.7,SNR=5.4						
GERES	GERESS Array B	123.91	327	PKPdf	PKPdf	13 15 36.5	-0.9
SOKA	Soboth	124.39	325	*i* P	PKiKP	13 15 39.5	+0.9
	comp=Z,7.6nm,1.2s						
GRF	Grafenberg Arr	124.69	329	*e*PKPdf	PKPdf	13 15 38.5	-0.2
	baz=52,slow=1.0						
GRF				*e*L	L	14 09 52.3	
	comp=Z,186nm,19.9s						
OBKA	Obir	124.76	325	*e*P	PKiKP	13 15 40.0	+0.7
	comp=Z,8.8nm,1.4s						
ABTA	Abfaltersbach	125.78	326	*e*P	PKiKP	13 15 41.7	+0.3
	comp=Z,4.5nm,0.8s						
WATA	Walderalm	125.95	327	*e*P	PKiKP	13 15 42.3	+0.5
	comp=Z,4.7nm,0.7s						
WTTA	Wattenberg	125.96	327	*e*P	PKPdf	13 15 40.9	-0.5
	comp=Z,8.6nm,0.8s						
MOTA	Moosalm	126.20	327	*e*P	PKiKP	13 15 43.0	+0.7
	comp=Z,11nm,0.8s						
SQTA	Sankt Quirin	126.22	327	*e*P	PKiKP	13 15 43.1	+0.9
	comp=Z,5.8nm,1.0s						
MEM	Membach	126.59	333	*d*PKP	PKiKP	13 15 43.0	+0.3
FETA	Feichten	126.60	327	*e*P	PKiKP	13 15 44.1	+1.1
	comp=Z,4.5nm,0.8s						
LCO	Las Campanas	127.06	133	PKIKP	PKiKP	13 15 45.4	+0.7
LCO	Las Campanas	127.06	133	PKPdf	PKiKP	13 15 45.4	+0.7
BMRD	Maredsous	127.37	333	*d*PKP	PKiKP	13 15 45.3	+1.1
SNF	Seneffe	127.43	334	*d*PKP	PKiKP	13 15 44.4	0.0
AC05	El Transito	127.47	133		PKiKP	13 15 45.5	+0.1
OTAV	Otavalo	130.35	95	PKIKP	PKiKP	13 15 51.7	-0.2
OTAV	Otavalo	130.35	95	PKPdf	PKiKP	13 15 51.7	-0.2
OTAV	Otavalo	130.35	95	*e*P	PKPdf	13 15 43.4	-7.7
BBAC	Balboa, Cauca	131.75	92	*e*P	PKPdf	13 15 52.9	-0.6
POPC	Popayan, Colom	132.37	92	*e*P	PKPdf	13 15 53.9	-0.7
RAC02	Cali,SGC	132.59	91	*e*P	PKPdf	13 15 44.6	-10
YOTC	Yotoco, Valle	132.82	90	*e*P	PKPdf	13 15 51.6	-3.7
PLMC	San Jos del P	132.94	89	*e*P	PKPdf	13 15 52.9	-2.6
MARP	Paez Belalcaza	133.11	91	*e*P	PKiKP	13 15 57.3	0.0
CBOC	Ciudad Bolivar	133.26	87	*e*P	PKPdf	13 15 55.4	-0.8
FLOC	Florencia	133.29	93	*e*P	PKiKP	13 15 56.8	-0.5
GARC	Garzon, Huila	133.51	92	*e*P	PKiKP	13 15 57.8	-0.3
BETC	Betania	133.61	92	*e*P	PKiKP	13 15 57.5	-0.5
KEST	Kesra	133.85	316	PKP	PKiKP	13 15 57.6	-0.3
	comp=Z,3.6nm,0.8s,baz=260,slow=11,SNR=2.9						
KEST				SKPbc	SKPbc	13 19 20.1	+1.0
	comp=Z,3.7nm,0.5s,baz=326,slow=0.9,SNR=7.7						
GUY2C	Guyana, Caldas	133.87	88	*e*P	PKPdf	13 15 58.4	+0.6
RREF	El Recreo	133.87	89	*e*P	PKPdf	13 15 58.4	+0.5
TOLC	Tolima	133.88	89	*e*P	PKPdf	13 15 57.8	+0.2
ORTC	Ortega, Tolima	133.91	90	*e*P	PKPdf	13 15 57.0	-0.2
PTLC	Puerto Leguiza	133.96	95	*e*P	PKPdf	13 15 57.2	-0.2
PRAC	Prado	134.25	90	*e*P	PKPdf	13 15 58.1	+0.2
NORC	Norcasia	134.38	88	*e*P	PKPdf	13 15 58.8	+0.6
PTBC	PUERTO BERRIO,	134.82	87	*e*P	PKPdf	13 15 53.4	-5.5
ROSC	El Rosal	134.89	89	PKP	PKiKP	13 16 01.1	+0.1
	comp=Z,22nm,0.6s,baz=24,slow=3.9,SNR=12						
ROSC	El Rosal	134.89	89	PKPdf	PKiKP	13 16 00.5	-0.5
ROSC	El Rosal	134.89	89	*e*P	PKPdf	13 15 59.4	-0.1
MACC	Macarena, Meta	135.14	93	*e*P	PKPdf	13 15 58.5	-1.1
SPBC	San Pablo de B	135.18	88	*e*P	PKPdf	13 15 58.7	-1.0
CHIC	Chingaza	135.46	89	*e*P	PKPdf	13 15 51.3	-9.3
LPAZ	La Paz	135.53	120	PKhKP	PKPpre	13 15 50.9	
	comp=Z,1.7nm,0.6s,baz=220,slow=4.8,SNR=6.2						
LPAZ				PKP	PKPdf	13 16 01.0	+0.1
	comp=Z,4.2nm,0.6s,baz=53,slow=2.8,SNR=10.0						
LPAZ				SKP	SKPdf	13 19 30.2	+0.7
	comp=Z,6.4nm,0.9s,baz=17,slow=2.3,SNR=8.7						
LPAZ	La Paz	135.53	120	PKIKP	PKPdf	13 16 01.0	+0.1
OCAC	Ocana	135.97	84	*e*P	PKPdf	13 15 57.5	-3.7
RUSC	La Rusia	136.17	88	*e*P	PKPdf	13 16 00.2	-1.9
CPUP	Villa Florida	137.91	141	PKhKP	PKPpre	13 15 54.3	
	comp=Z,1.9nm,0.7s,baz=236,slow=2.6,SNR=4.7						
CPUP				PKP	PKPdf	13 16 05.0	+0.7
	comp=Z,3.0nm,0.8s,baz=313,slow=2.5,SNR=6.8						
CPUP				SKP	SKPdf	13 19 34.8	+2.0
	comp=Z,4.6nm,1.0s,baz=233,slow=5.0,SNR=4.2						
SDV	Santo Domingo	138.62	83	PKPdf	PKPdf	13 16 06.7	+0.5
SDV	Santo Domingo	138.62	83	*e*P	PKPdf	13 16 06.5	+0.3
POLO	Lamas de Olo	139.80	335	*e*-		13 19 38.5	
PVIS	Viseu	140.39	335	*e*-		13 19 41.0	
MTE	Manteigas	140.50	334	*e*-		13 19 41.3	
PCBR	Castelo Branco	140.92	333	*e*-		13 19 41.7	
PCAS	Casmilo, Conde	141.19	335	*e*-		13 19 42.6	
PMRV	Marv??o	141.22	333	*e*-		13 19 42.4	
PSBE	So Bento	141.77	334	*e*-		13 19 43.9	
PMTG	Montargil	141.89	333	*e*-		13 19 43.7	
HUMP	Col San Antoni	142.01	68	PKPdf	PKPdf	13 16 12.9	+1.0
PBAR	Barrancos	142.06	331	*e*-		13 19 44.9	
EVO	Evora	142.23	333	*e*-		13 19 45.2	
PBEJ	Beja	142.57	332	*e*-		13 19 46.1	
PNCL	Nicolau / Gran	142.81	333	*e*-		13 19 46.5	
MESJ	Messejana	142.88	332	*e*-		13 19 46.9	
PCVE	Castro Verde	142.97	332	*e*-		13 19 46.8	
SPB	Sao Paulo	145.72	149		PKPab	13 16 19.0	-0.2
SVB	Belmont	147.37	74		PKPab	13 16 25.0	-0.9
PTGA	Pitinga	148.43	101	PKPdf	PKPdf	13 16 23.6	+0.4
PTGA				PKPbc	PKPbc	13 16 27.4	+0.7
TOA0	Torodi Ar. Sit	148.86	286		PKPbc	13 16 27.1	-0.6
TORD	Torodi Ar. Bea	148.86	286	PKPbc	PKPbc	13 16 27.5	-0.2
	comp=Z,21nm,0.7s,baz=34,slow=1.6,SNR=91						
TORD				PP	PP	13 19 59.5	+0.6
	comp=Z,2.2nm,1.1s,baz=8.7,slow=2.0,SNR=4.1						
TORD	Torodi Ar. Bea	148.86	286		PKPbc	13 16 26.6	-1.1
BDFB	Brasilia	151.60	139	PKP	PKPdf	13 16 29.8	+1.6
	comp=Z,6.3nm,0.9s,baz=173,slow=2.7,SNR=8.4						
BDFB				PKPbc	PKiKP	13 16 35.1	+0.2
	comp=Z,16nm,0.6s,baz=217,slow=1.9,SNR=24						
BDFB				PKPab	PKPab	13 16 44.0	+0.8
	comp=Z,39nm,0.8s,baz=225,slow=3.5,SNR=22						
BDFB	Brasilia	151.60	139	PKPdf	PKPdf	13 16 30.0	+1.8
BDFB				PKPbc	PKiKP	13 16 35.0	+0.2
BDFB					PKPab	13 16 43.3	+0.2
KOWA	Kowa	153.93	291	PKPdf	PKPdf	13 16 31.4	0.0
KOWA				PKPbc	PKPbc	13 16 38.9	-0.6
DBIC	Dimbokro	155.97	273	PKP	PKPdf	13 16 34.4	+0.1
	comp=Z,2.6nm,0.8s,baz=60,slow=5.1,SNR=2.2						
DBIC				PKPab	PKPab	13 17 02.0	+0.3
	comp=Z,3.2nm,0.4s,baz=93,slow=4.3,SNR=7.4						

HEL ***15*** *13:22:46.8±0.5, 59.°71N×21.°32E, h0km, ML1.8, Explosion*
IDC ***15*** *13:22:47.2±1.9, 59.°84N×21.°44E, h0km, mb1 3.1/4, mb1mx2.9/48, mbtmp3.0/4, ML1.3/3, Error ellipse: s-maj=29.2km s-min=7.3km az=163.0*
UPP ***15*** *13:22:48.2±0.7, 59.°72N×20.°96E, h0km, ML1.8, Suspected explosion*
ISC 15 13:22:45.6±0.9**, 59.°80N**±0.°05×**21.°20E**±0.°03**, h0km, n24, σ0.s80**/27**, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAL	Aland	0.72	303	P	Pb	13 23 00.8	-0.1
AAL				S	Sb	13 23 11.1	-0.3
AAL	Aland	0.72	303	*e*P	Pb	13 23 00.8	-0.1
AAL				*e*S	Sn	13 23 13.7	-1.1
RAF	Rauma	1.26	12	*e*P	Pg	13 23 09.9	+0.2
RAF				*e*S	Sn	13 23 29.2	+1.1
NRTU	Norrtaelje	1.31	266	P	Pg	13 23 10.4	-0.2
NRTU				S	Sg	13 23 26.6	-0.9
NRTU	Norrtaelje	1.31	266	*e*P	Pg	13 23 10.4	-0.2
GRAU	Graesoe	1.44	293	P	Pn	13 23 12.5	-0.4
FORU	Forsmark	1.63	293	S	Sn	13 23 37.5	+0.4
MEF	Metsahovi	1.66	74	*e*P	Pn	13 23 15.4	-0.5
MEF				*e*S	Sn	13 23 37.6	-0.2
MEF				MSG		13 23 45.4	
	comp=Z,5.4nm,0.1s						
FLYU	Flymyra	1.70	283	P	Pn	13 23 16.9	+0.4
FLYU				S	Sb	13 23 40.2	+0.5
NYNU	Nynaeshamn	1.82	246	P	Pb	13 23 18.9	-0.8
NUR	Nurmijrvi	1.87	66	*e*P	Pn	13 23 17.9	-0.9
NUR				*e*S	Sn	13 23 43.2	+0.2
NUR				MSG		13 23 48.9	
	comp=Z,6.7nm,0.1s						
FIBU	Brunna	1.95	275	P	Pb	13 23 21.9	0.0
BACU	Backbrunna	2.07	273	P	Pb	13 23 23.8	-0.2
OSTU	Oestervaala	2.09	284	P	Pb	13 23 23.9	-0.4
IGGU	Iggoen	2.21	301	P	Pb	13 23 26.0	-0.4
SLIT	Slitere, Latvi	2.25	165	*e*P	Pn	13 23 24.6	+0.7
PVF	Pernaja	2.45	70	MSG		13 24 03.8	
	comp=Z,7.1nm,0.1s						
FIA0	FINESS Array S	2.92	53	MSG		13 24 18.4	
	comp=Z,1.8nm,0.1s						
FINES	FINESS Array B	2.92	53	Pn	Pn	13 23 34.9	+1.7
	comp=Z,0.3nm,0.3s,baz=234,slow=14,SNR=20						
FINES				Lg	Lg	13 24 12.6	
	comp=Z,0.7nm,0.3s,baz=240,slow=25,SNR=12						
FIA1	FINESS Array S	2.92	53	MSG		13 24 18.9	
	comp=Z,3.2nm,0.1s						
KEF	Keuruu	2.98	35	MSG		13 24 23.3	
	comp=Z,2.7nm,0.1s						
HFS	Hagfors	3.79	278	Pn	Pn	13 23 47.4	+2.2
	comp=Z,0.0nm,0.3s,baz=92,slow=17,SNR=2.8						
HFS				Lg	Lg	13 24 49.7	
	comp=Z,1.0nm,0.3s,baz=92,slow=27,SNR=12						
NOA	NORSAR Array B	5.11	288	Pn	Pn	13 24 02.9	-0.4
	comp=Z,0.0nm,0.3s,baz=97,slow=11,SNR=2.9						
ARCES	ARCESS Array B	9.95	9	Pn	Pn	13 25 09.0	-0.6
	baz=189,slow=14,SNR=14						

IDC ***15*** *13:26:45.8±2.3, 59.°52N×21.°43E, h0km, mb1 3.1/4, mb1mx2.9/47, mbtmp3.0/4, ML1.8/3, Error ellipse: s-maj=34.5km s-min=8.2km az=165.0*
HEL ***15*** *13:26:46.1±0.1, 59.°72N×21.°35E, h0km, ML1.9, ML2.3(UPP), Explosion*
UPP ***15*** *13:26:47.2±0.6, 59.°69N×21.°10E, h0km, ML2.3, Suspected explosion*
BER ***15*** *13:26:50.2±1.1, 59.°93N×21.°03E, h0km, ML1.8, ML2.3(UPP), Suspected explosion*
ISC 15 13:26:44.9±0.8**, 59.°81N**±0.°05×**21.°52E**±0.°02**, h0km, n44, σ1.s06**/63**, Baltic States-Belarus-Northwestern Russia**

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

AAL	Aland	0.85	297	P	Pg	13 27 01.2	0.0
AAL				S	Sg	13 27 12.5	+0.3
AAL	Aland	0.85	297	*e*P	Pg	13 27 01.2	0.0
AAL				*e*S	Sg	13 27 12.5	+0.3
RAF	Rauma	1.23	6	*e*P	Pn	13 27 09.7	+0.4
RAF				*e*S	Sb	13 27 25.4	+0.1
NRTU	Norrtaelje	1.47	266	P	Pn	13 27 10.8	-1.9
NRTU	Norrtaelje	1.47	266	*e*P	Pn	13 27 10.8	-1.9
NRTU				*e*SN	Sn	13 27 32.5	0.0
MEF	Metsahovi	1.50	73	*e*P	Pg	13 27 14.7	+1.0
GRAU	Graesoe	1.58	291	P	Pn	13 27 12.8	-1.4
GRAU	Graesoe	1.58	291	*e*P	Pn	13 27 12.8	-1.4
MTSE	Matsula	1.61	132	*e*P	Pn	13 27 14.9	+0.3
NUR	Nurmijrvi	1.72	64	*e*P	Pg	13 27 18.1	+0.3
FORU	Forsmark	1.77	291	P	Pn	13 27 16.2	-0.6
FORU				S	Sg	13 27 41.3	-0.5
FORU	Forsmark	1.77	291	*e*P	Pn	13 27 16.2	-0.6
FORU				*e*S	Sg	13 27 41.3	-0.5
FLYU	Flymyra	1.86	282	P	Pn	13 27 17.2	-0.7
FLYU				S	Sn	13 27 40.5	-1.5
FLYU	Flymyra	1.86	282	*e*P	Pn	13 27 17.2	-0.7
FLYU				*e*S	Sn	13 27 40.5	-1.5
NYNU	Nynaeshamn	1.97	247	P	Pn	13 27 19.0	-0.5
NYNU				S	Sn	13 27 42.6	-2.2
NYNU	Nynaeshamn	1.97	247	*e*P	Pn	13 27 19.0	-0.5
NYNU				*e*S	Sn	13 27 42.6	-2.2
FIBU	Brunna	2.10	274	P	Pn	13 27 21.4	+0.1
SLIT	Slitere, Latvi	2.22	169	*e*P	Pn	13 27 22.8	-0.1
BACU	Backbrunna	2.23	273	P	Pn	13 27 23.4	+0.4
BACU	Backbrunna	2.23	273	*e*P	Pn	13 27 23.4	+0.4
OSTU	Oestervaala	2.24	283	P	Pn	13 27 23.7	+0.4
OSTU	Oestervaala	2.24	283	*e*P	Pn	13 27 23.7	+0.4
PVF	Pernaja	2.29	69	*e*P	Pb	13 27 27.5	+0.4
PVF				MSG		13 27 59.6	
	comp=Z,5.9nm,0.1s						
IGGU	Iggoen	2.35	299	P	Pn	13 27 26.0	+1.3
IGGU	Iggoen	2.35	299	*e*P	Pn	13 27 26.0	+1.3
GOTU	Gotland	2.62	217	*e*P	Pn	13 27 27.4	-1.1
GOTU				*e*S	Sn	13 28 01.4	+0.4
ESKU	Eskilstuna	2.67	260	P	Pn	13 27 29.2	+0.1
ESKU	Eskilstuna	2.67	260	*e*P	Pn	13 27 29.2	+0.1
FIA0	FINESS Array S	2.78	52	MSG		13 28 16.9	
	comp=Z,2.3nm,0.1s						
FINES	FINESS Array B	2.78	52	Pn	Pb	13 27 35.2	-0.3
	comp=Z,0.6nm,0.3s,baz=235,slow=14,SNR=45						
FINES				Sn	Sg	13 28 12.7	-1.5
	comp=Z,1.2nm,0.3s,baz=240,slow=25,SNR=12						
FIA1	FINESS Array S	2.78	52	*e*P	Pb	13 27 35.3	-0.2
FIA1				MSG		13 28 17.0	
	comp=Z,3.3nm,0.1s						
HFS	Hagfors	3.95	278	Pn	Pn	13 27 46.6	-0.1
	comp=Z,0.1nm,0.3s,baz=100,slow=16,SNR=5.1						
HFS				Pg	Pb	13 27 55.6	+0.3
	comp=Z,0.6nm,0.3s,baz=95,slow=16,SNR=11						
HFS				Lg	Lg	13 28 48.8	
	comp=Z,1.2nm,0.3s,baz=100,slow=34,SNR=8.4						
NC602	NORSAR Array S	5.05	285	*e*P	Pn	13 28 01.8	-0.1
NC602				*e*Pg	Pb	13 28 16.5	+2.4
NC602				IAML		13 29 47.6	
	comp=Z,2.7nm,0.2s						
NC303	NORSAR Array S	5.21	290	*e*P	Pn	13 28 03.6	-0.4
NC303				*e*Pg	Pb	13 28 19.4	+2.5
NB201	NORSAR Array S	5.22	288	*e*P	Pn	13 28 03.6	-0.6
NB201				*e*Pg	Pb	13 28 18.9	+2.0
NOA	NORSAR Array B	5.25	288	Pn	Pn	13 28 04.0	-0.7
	comp=Z,0.0nm,0.3s,baz=104,slow=12,SNR=3.9						
STRU	Stroemstad	5.33	266	*e*P	Pn	13 28 05.3	-0.4
NAO01	NORSAR Array S	5.38	286	*e*P	Pn	13 28 05.7	-0.7
NAO01				*e*Pg	Pb	13 28 22.1	+2.3
OSL	Oslo	5.44	276	*e*P	Pn	13 28 06.9	-0.3
NBO00	NORSAR Array S	5.46	288	*e*P	Pn	13 28 06.4	-1.1
NBO00				*e*Pg	Pb	13 28 22.1	+1.0
NC204	NORSAR Array S	5.51	290	*e*P	Pn	13 28 07.4	-0.8
NC204				*e*Pg	Pb	13 28 23.1	+1.2
DOMB	Dombas	6.47	296	*e*P	Pn	13 28 20.3	-1.1
DOMB				*e*Pg	Pb	13 28 38.4	+0.1
DOMB				IAML		13 30 04.3	
	comp=Z,2.4nm,0.6s						
SKAR	Skarslia	6.64	283	*e*P	Pn	13 28 22.9	-0.8
SKAR				IAML		13 29 58.1	
	comp=Z,1.8nm,0.6s						
ARCES	ARCESS Array B	9.91	8	Pn	Pn	13 29 09.3	+0.9
	baz=190,slow=14,SNR=12						

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*UPP **15** 13:27:01.1±0.9, 59°.71N×21°.35E, h0^{km}, ML2.7, Suspected explosion*

*IDC **15** 13:27:03.1±1.8, 59°.85N×21°.43E, h0^{km}, mb1 3.1/4, mb1mx2.9/47, mbtmp3.1/4, ML2.1/3, Error ellipse: s-maj=28.6km s-min=6.8km az=162.0*

ISC 15 13:27:01.4±1.8**, 59°.8N**±0°.1×**21°.37E**±0°.09**, h0^{km}, n12, σ1^{s}32**/14**, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAL	Aland	0.81	302	P	Pg	13 27 16.9	0.0
AAL				S	Sg	13 27 28.2	+0.9
NRTU	Norrtaelje	1.39	268	P	Pg	13 27 26.6	-1.4
GRAU	Graesoe	1.53	293	P	Pn	13 27 28.6	-1.4
FORU	Forsmark	1.72	293	P	Pn	13 27 32.1	-0.4
FLYU	Flymyra	1.79	283	P	Pn	13 27 32.9	-0.7
NYNU	Nynaeshamn	1.88	248	P	Pn	13 27 34.9	+0.1
FIBU	Brunna	2.03	276	P	Pn	13 27 37.3	+0.4
BACU	Backbrunna	2.16	274	P	Pn	13 27 39.1	+0.5
FINES	FINESS Array B	2.87	52	Pn	Pn	13 27 51.0	+2.6
	1.5nm,0.3s,baz=236,slow=14,SNR=36						
FINES				Lg	Lg	13 28 28.1	
	2.2nm,0.3s,baz=236,slow=27,SNR=9.1						
HFS	Hagfors	3.88	279	Pn	Pn	13 28 03.8	+1.6
	0.2nm,0.3s,baz=95,slow=16,SNR=7.0						
HFS				Pg	Pb	13 28 10.7	+0.1
	1.0nm,0.3s,baz=94,slow=17,SNR=12						
HFS				Lg	Lg	13 29 03.9	
	2.5nm,0.3s,baz=90,slow=30,SNR=11						
NOA	NORSAR Array B	5.20	289	Pn	Pn	13 28 19.0	-1.4
	0.0nm,0.3s,baz=104,slow=15,SNR=15						
ARCES	ARCESS Array B	9.97	8	Pn	Pn	13 29 24.3	-1.4
	baz=190,slow=14,SNR=25						

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*IDC **15** 13:49:46.6±0.5, 18°.31S×176°.79E, h0^{km}, mb4.9/21, mb1 5.0/23, mb1mx5.0/32, mbtmp4.9/23, ML4.2/2, MS4.8/28, Ms1 4.8/28, ms1mx4.7/37, Error ellipse: s-maj=18.4km s-min=11.6km az=153.0*

*NEIC **15** 13:49:47.9±1.7, 18°.31S±0°.09×176°.92E±0°.07, h16^{km}±3^{km}, mb5.4/135, Mwb5.4/27, Mwc5.5(GCMT), Error ellipse: s-maj=14.3km s-min=8.6km az=159.0*

*MOS **15** 13:49:48.8±2.1, 18°.27S×176°.74E, h17^{km}, mb5.4/36, Error ellipse: s-maj=9.3km s-min=8.9km az=32.3*

*NEIC **15** 13:49:50, 18°.36S×176°.93E, h8^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.23; $M_{\theta\theta}$-1.79; $M_{\phi\phi}$1.56; $M_{r\theta}$0.48; $M_{\theta\phi}$-0.33; $M_{\phi r}$0.36; Fault plane solution: $M_0$1.82000×10^{17} NP1:ϕ_s309.89000°, δ71.07000°, λ-179.68000°. NP2:ϕ_s219.78000°, δ89.69000°, λ-18.93000°. Principal axes: T 1.6673, Plg13.0000°, Azm266.0000°; N 0.2784, Plg71.0000°, Azm39.0000°; P -1.9456, Plg13.0000°, Azm173.0000°;*

*BJI **15** 13:49:50.2±0.0, 18°.31S×177°.14E, h33^{km}, mB5.4/43, mb4.9/56, Ms5.2/46, Ms7 4.8/50*

*GCMT **15** 13:49:51.9±0.1, 18°.23S±0°.01×176°.62E, h12^{km}, MW5.5/162, Moment Tensor Solution. s134,c229; s162,c315; Duration: 1^{s}3 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.01±.02; $M_{\theta\theta}$-1.88±.02; $M_{\phi\phi}$1.89±.02; $M_{r\theta}$0.30±.04; $M_{\theta\phi}$-0.55±.02; $M_{\phi r}$0.55±.04; Best double couple: $M_0$2.06200×10^{17} NP1:ϕ_s306.00000°, δ72.00000°, λ178.00000°. NP2:ϕ_s37.00000°, δ88.00000°, λ18.00000°. Principal axes: T 2.0920, Plg14.0000°, Azm263.0000°; N -0.0610, Plg72.0000°, Azm43.0000°; P -2.0320, Plg11.0000°, Azm170.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **15** 13:49:52, 18°.24S×176°.63E, h15^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-0.04; $M_{\theta\theta}$-2.14; $M_{\phi\phi}$2.18; $M_{r\theta}$0.23; $M_{\theta\phi}$-0.65; $M_{\phi r}$0.28; Fault plane solution: $M_0$2.29000×10^{17} NP1:ϕ_s307.00000°, δ81.00000°, λ-179.00000°. NP2:ϕ_s217.00000°, δ89.00000°, λ-9.00000°. Principal axes: T 2.3021, Plg6.0000°, Azm262.0000°; N -0.0335, Plg81.0000°, Azm33.0000°; P -2.2686, Plg7.0000°, Azm171.0000°;*

*NOU **15** 13:49:54.6, 18°.31S×176°.71E, h39^{km}, mb5.2, Fiji Islands Region*

ISC 15 13:49:52.0±0.3**, 18°.42S**±0°.05×**176°.87E**±0°.04**, h35^{km}, n594, σ1^{s}79**/590**, mb5.2**/139**, MS4.8**/44**, 43C-15D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	1.31	59	Pn	Pn	13 50 10.5	-3.4
	835nm,0.3s,baz=243,slow=12,SNR=978						
MSVF				Sn	Sn	13 50 30.4	+0.2
	3µm,0.3s,baz=163,slow=21,SNR=17						
MSVF	Nonsavu	1.31	59	P	Pn	13 50 10.4	-3.5
MSVF	Nonsavu	1.31	59	Pn	Pn	13 50 10.4	-3.5
DVP	Devils Point	8.29	273	P	Pn	13 51 50.2	+0.4
LIFNC	LIFOU	9.38	254	P	Pn	13 52 05.1	+0.4
	540nm,1.7s						
SANVU	Saraoutou	9.71	286	Pn	Pn	13 52 07.9	-1.4
SANVU	Saraoutou	9.71	286	P	Pn	13 52 08.7	-0.6
PINNC	Pines Island,	9.77	243	P	Pn	13 52 11.3	+1.2
OUENC	Ouen Island, N	10.21	245	P	Pn	13 52 18.0	+1.8
DZM	Mont Dzumac	10.44	248	Pn	Pn	13 52 17.6	-1.8
	0.4nm,0.3s,baz=75,slow=11,SNR=19						
DZM				LR	LR	13 55 43.8	
	comp=Z,13µm,21.7s,baz=64,slow=34						
DZM	Mont Dzumac	10.44	248	*e*Pn	Pn	13 52 18.8	-0.6
	575nm,1.7s						
DZM				*e*LQ	LQ	13 54 17.9	
	11µm,26.3s						
DZM				*e*LR	LR	13 54 42.7	
	comp=Z,22µm,26.0s						
DZM	Mont Dzumac	10.44	248	Pn	Pn	13 52 18.1	-1.3
ONTNC	Ouen Toro	10.51	247	P	Pn	13 52 21.9	+1.7
NOUC	Port Laguerre	10.57	248	P	Pn	13 52 22.9	+1.8
AFI	Afiamalu	11.79	69	P	Pn	13 52 40.6	+2.8
RAO	Raoul Island	11.79	157	LR	LR	13 56 24.6	
	comp=Z,12µm,19.3s,baz=344,slow=33						
KOUNC	Koumac, New Ca	12.06	258	P	Pn	13 52 42.3	+0.9
OUZ	Omahuta	16.99	189		P	13 53 48.4	-0.1
HNR	Honiara	18.68	296	LR	LR	13 59 52.6	
	comp=Z,3µm,21.9s,baz=134,slow=33						
HNR	Honiara	18.68	296	P	P	13 54 06.4	-1.0
HNR				pmax	pmax		
	comp=Z,451nm,1.4s						
HNR	Honiara	18.68	296	P	P	13 54 06.4	-1.0
HNR				IAmb	IAmb	13 54 16.2	
	comp=Z,451nm,1.4s						
KNTN	Kanton	19.15	37	P	P	13 54 10.7	-1.8
URZ	Urewera	19.77	179	P	Pn	13 54 20.4	-0.4
	comp=Z,2.6nm,0.3s,baz=30,slow=4.6,SNR=42						
URZ				LR	LR	14 00 08.8	
	comp=Z,5µm,21.0s,baz=32,slow=31						
URZ	Urewera	19.77	179		P	13 54 19.2	+0.1
URZ				IAmb	IAmb	13 54 23.9	
	comp=Z,312nm,1.1s						
TARA	Tarawa	20.03	348	P	P	13 54 22.9	+0.9
HIZ	Hauiti	20.10	185	P	P	13 54 22.5	-0.2
HIZ				IAmb	IAmb	13 54 41.9	
	comp=Z,276nm,1.1s						
BKZ	Black Stump Fm	20.68	181		P	13 54 28.7	-0.3
BKZ				IAmb	IAmb	13 54 49.1	
	comp=Z,205nm,1.3s						
RAR	Rarotonga	22.14	101	P	P	13 54 48.0	+3.2
	comp=Z,53nm,0.9s,baz=63,slow=15,SNR=5.0						
RAR				LR	LR	14 01 25.5	
	comp=Z,2µm,20.9s,baz=277,slow=31						
RAR	Rarotonga	22.14	101	P	P	13 54 49.1	+4.2
BFZ	Birch Farm	22.20	181		P	13 54 44.8	-0.5
QRZ	Quartz Range	22.64	189	P	P	13 54 50.2	+0.2
QRZ				IAmb	IAmb	13 55 01.1	
	comp=Z,193nm,1.2s						
SNZO	South Karori	22.89	184	P	P	13 54 52.5	-0.1
SNZO				IAmb	IAmb	13 55 02.4	
	comp=Z,127nm,0.8s						
NNZ	Nelson	22.92	187	P	P	13 54 52.9	-0.1
MSWZ	Moikau Station	22.96	183	P	P	13 54 53.1	-0.3
BHW	Baring Head	22.98	184	P	P	13 54 53.1	-0.4
TUWZ	Tuamarina	23.07	186	P	P	13 54 54.3	-0.1
PLWZ	Palliser	23.12	183		P	13 54 54.2	-0.7
BSWZ	Blackbirch Sta	23.36	186	P	P	13 54 57.8	+0.4
CMWZ	Cape Campbell	23.37	185	P	P	13 54 56.9	-0.5
THZ	Tophouse	23.52	187		P	13 54 58.1	-0.8
KHZ	Kahutara	24.09	186		P	13 55 02.7	-1.5
LTZ	Lake Taylor	24.60	188		P	13 55 08.4	-0.6
LTZ				IAmb	IAmb	13 55 19.8	
	comp=Z,138nm,1.1s						
EIDS	Eidsvold	24.88	249	P	P	13 55 10.6	-1.1
	baz=25,SNR=5.4						
EIDS	Eidsvold	24.88	249	P	P	13 55 09.5	-2.2
EIDS				IAmb	IAmb	13 55 14.6	
	comp=Z,66nm,1.4s						
OXZ	Oxford	25.17	188	P	P	13 55 12.5	-1.5
MQZ	McQueen's Vall	25.46	187		P	13 55 15.8	-0.9
MQZ				IAmb	IAmb	13 55 17.7	
	comp=Z,99nm,1.4s						
RPZ	Rata Peaks	25.69	190	P	P	13 55 19.3	+0.5
	comp=Z,58nm,0.9s,baz=31,slow=1.2,SNR=25						
RPZ				LR	LR	14 04 32.5	
	comp=Z,3µm,19.2s,baz=2.0,slow=34						
RPZ	Rata Peaks	25.69	190		P	13 55 18.9	+0.1
FOZ	Fox Glacier	25.74	192	P	P	13 55 19.6	+0.4
FOZ				IAmb	IAmb	13 55 25.2	
	comp=Z,116nm,1.1s						
ARMA	Armidale	25.84	238	P	P	13 55 20.5	+0.1
	baz=26,SNR=16						
ARMA	Armidale	25.84	238	P	P	13 55 20.0	-0.4
ARMA				IAmb	IAmb	13 55 26.3	
	comp=Z,61nm,1.1s						
LBZ	Lake Benmore	26.49	191	P	P	13 55 25.4	-0.7
LBZ				IAmb	IAmb	13 55 36.9	
	comp=Z,67nm,1.2s						
ODZ	Otahua Downs	27.05	190	P	P	13 55 30.7	-0.4
ODZ				IAmb	IAmb	13 55 49.4	
	comp=Z,104nm,1.4s						
WKZ	Wanaka	27.14	192	P	P	13 55 31.9	0.0
WKZ				IAmb	IAmb	13 55 49.1	
	comp=Z,59nm,1.1s						
RMQ	Roma	27.15	248	P	P	13 55 31.8	-0.4
	baz=27,SNR=9.4						
MLZ	Mavora Lakes	27.84	193	P	P	13 55 37.7	-0.5
MLZ				IAmb	IAmb	13 55 55.5	
	comp=Z,73nm,1.1s						
WHZ	Wether Hill Ro	28.38	193	P	P	13 55 42.3	-0.7
WHZ				IAmb	IAmb	13 56 00.5	
	comp=Z,64nm,1.0s						
YNG	Young	29.88	232	P	P	13 55 56.4	0.0
	baz=30,SNR=5.2						
PMG	Port Moresby	30.16	283	P	P	13 55 59.4	+0.4
	comp=Z,20nm,1.0s,baz=129,slow=11,SNR=3.8						
PMG				LR	LR	14 06 32.1	
	comp=Z,3µm,18.3s,baz=107,slow=34						
PMG	Port Moresby	30.16	283	*ce*P	P	13 55 59.8	+0.8
PMG				pmax	pmax		
	comp=Z,26nm,1.0s						
PMG	Port Moresby	30.16	283	IAmb	IAmb	13 56 09.7	
	comp=Z,69nm,1.4s						
MTSU	Mount Surprise	30.89	265	P	P	13 56 04.8	-0.7
	baz=31,SNR=5.0						
QLP	Quilpie	31.16	249	P	P	13 56 06.5	-1.3
	baz=31,SNR=7.5						
TBI	Tubuai	31.79	105	*e*S	S	14 01 23.0	+1.6
	comp=Z,499nm,26.0s						
TBI				*e*LQ	LQ	14 03 15.9	
	comp=Z,9µm,28.5s						
TBI				*e*LR	LR	14 04 46.6	
	comp=Z,5µm,28.8s,baz=273						
PAE	Paea	31.88	94	*e*P	P	13 56 16.0	+1.8
	comp=Z,30nm,1.1s						
PPT2	Papeete2	31.89	94	*e*S	S	14 01 23.0	-0.3
	comp=Z,755nm,25.8s						
PPT2				*e*LQ	LQ	14 03 19.7	
	comp=Z,7µm,26.5s						
PPT2				*e*LR	LR	14 04 43.9	
	comp=Z,9µm,25.5s,baz=260						
PPT	Papeete	31.90	94	LR	LR	14 06 07.6	
	comp=Z,2µm,21.8s,baz=256,slow=31						
TOO	Toolangi	33.42	229	P	P	13 56 27.8	+0.3
	baz=34,SNR=4.3						
TOO	Toolangi	33.42	229	P	P	13 56 26.7	-0.8
TOO				pmax	pmax		
	comp=Z,68nm,1.1s						
TOO	Toolangi	33.42	229	P	P	13 56 26.7	-0.8
TOO				IAmb	IAmb	13 56 35.8	
	comp=Z,68nm,1.1s						
STKA	Stephens Creek	34.47	240	P	P	13 56 36.3	-0.4
	baz=34,SNR=6.8						
STKA	Stephens Creek	34.47	240	P	P	13 56 36.3	-0.4
	comp=Z,14nm,0.9s,baz=61,slow=6.8,SNR=14						
STKA				LR	LR	14 09 42.0	
	comp=Z,2µm,18.3s,baz=72,slow=35						
STKA	Stephens Creek	34.47	240	*i* P	P	13 56 36.1	-0.6
STKA	Stephens Creek	34.47	240	P	P	13 56 35.2	-1.4
QIS	Mount Isa	35.15	260	P	P	13 56 41.5	-1.2
	baz=35,SNR=11						
ARPS	Mount Arapiles	35.77	232	P	P	13 56 47.9	+0.1
	baz=36,SNR=8.3						
HTT	Hallett	37.04	239	P	P	13 56 58.2	-0.6
	baz=37,SNR=4.9						
H11S2	WAKE ISLAND Hy	38.01	344	T	T	14 37 08.8	
	baz=159,SNR=5.0						
H11S3	WAKE ISLAND Hy	38.02	344	T	T	14 37 08.8	
	baz=159						
H11S1	WAKE ISLAND Hy	38.03	344	T	T	14 37 08.0	
	baz=159						
JAY	Jayapura	38.79	290	LR	LR	14 11 08.7	
	comp=Z,993nm,21.6s,baz=103,slow=33						
H11N1	WAKE ISLAND Hy	39.14	345	T	T	14 38 28.0	
	baz=164,slow=76,SNR=6.6						
H11N3	WAKE ISLAND Hy	39.14	345	T	T	14 38 31.4	
	baz=164,slow=76,SNR=5.2						
H11N2	WAKE ISLAND Hy	39.15	345	T	T	14 38 29.4	
	baz=164,slow=76,SNR=4.3						
GENI	Genyem	39.24	289	P	P	13 57 17.3	-0.1
	comp=Z,3µmcomp=Z,240nm,1.3s						
BBOO	Buckleboo	39.24	240	P	P	13 57 16.4	-0.9
	baz=39,SNR=8.4						
BBOO	Buckleboo	39.24	240	P	P	13 57 15.1	-2.2
BBOO				IAmb	IAmb	13 57 29.2	
	comp=Z,77nm,1.2s						
WRAB	Tennant Creek	40.12	261	*ce*P	P	13 57 24.6	-0.1
WRAB				pmax	pmax		
	comp=Z,71nm,1.0s						
WRA	Warramunga Arr	40.12	261	P	P	13 57 22.0	-2.8
	comp=Z,34nm,0.9s,baz=93,slow=8.5,SNR=24						
WRA				LR	LR	14 12 30.4	
	comp=Z,2µm,20.6s,baz=100,slow=34						
WRA	Warramunga Arr	40.12	261	P	P	13 57 22.0	-2.8
WRA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
WRA	Warramunga Arr	40.12	261	IAmb	IAmb	13 57 25.4	
	comp=Z,3.8nm,0.9s						
AS31	Alice Springs	40.33	255	P	P	13 57 24.0	-2.5
ASAR	Alice Springs	40.33	255	P	P	13 57 24.5	-2.0
	comp=Z,76nm,1.0s,baz=83,slow=8.9,SNR=223						
ASAR				LR	LR	14 13 47.0	
	comp=Z,4µm,18.5s,baz=93,slow=36						
ASAR	Alice Springs	40.33	255	P	P	13 57 23.4	-3.1
ASAR	Alice Springs	40.33	255	P	P	13 57 23.4	-3.1
RKT	Rikitea	45.11	105	*e*LQ	LQ	14 08 33.1	
	comp=Z,3µm,35.2s						
RKT				*e*LR	LR	14 10 49.3	
	comp=Z,4µm,28.2s						
FORT	Forrest	45.73	245	P	P	13 58 07.1	-3.0
KHLU	Kahalu`u	46.27	37	P	P	13 58 10.3	-4.1
OBL	Observatory Le	46.48	37	P	P	13 58 13.0	-3.2
SIJI	Sorong	48.02	286	P	P	13 58 26.8	-1.4
	comp=Z,55nm,1.0s,baz=76,slow=7.0,SNR=11						
FITZ	Fitzroy Crossi	48.52	262	P	P	13 58 29.2	-2.7
NLAI	Namlea	50.96	281	P	P	13 58 50.6	0.0
	comp=Z,22nm,0.7s						
TNTI	Ternate	52.25	286	P	P	13 58 57.9	-2.3
TNTI				IAmb	IAmb	13 59 22.2	
	comp=Z,101nm,1.5s						
TNTI	Ternate	52.25	286	P	P	13 59 02.3	+2.1
	comp=Z,946nmcomp=Z,29nm,1.1s						
SANI	Sanana	52.43	282	P	P	13 58 59.6	-2.0
	comp=Z,815nmcomp=Z,68nm,1.1s						
PSA00	Pilbara Seismi	53.43	256	P	P	13 59 06.5	-2.5
PSA00				IAmb	IAmb	13 59 15.6	
	comp=Z,26nm,0.9s						
PSA00	Pilbara Seismi	53.43	256	P	P	13 59 06.4	-2.5
PSA00				IAmb	IAmb	13 59 15.2	
	comp=Z,19nm,1.1s						
MMRI	Maumere	53.83	273	P	P	13 59 10.2	-1.7
MMRI				IAmb	IAmb	13 59 13.4	
	comp=Z,51nm,0.9s						
MEEK	Meekatharra	54.05	250	P	P	13 59 12.9	-0.5
	baz=54,SNR=3.3						
EDFI	Ende, Flores	54.32	272	P	P	13 59 14.4	-1.2
	comp=Z,429nmcomp=Z,29nm,1.3s						
KLBR	Kellerberrin	54.58	244	P	P	13 59 15.4	-1.7
	baz=54,SNR=7.6						
NWAO	Narrogin (SRO)	55.01	242	P	P	13 59 21.2	+1.0
	baz=55,SNR=4.9						
NWAO	Narrogin (SRO)	55.01	242	P	P	13 59 20.8	+0.6
	comp=Z,28nm,1.1s,baz=120,slow=2.2,SNR=5.2						
NWAO	Narrogin (SRO)	55.01	242	P	P	13 59 18.6	-1.6
NWAO				pmax	pmax		
	comp=Z,55nm,1.2s						
NWAO	Narrogin (SRO)	55.01	242	P	P	13 59 18.6	-1.6
NWAO				IAmb	IAmb	13 59 22.1	
	comp=Z,55nm,1.2s						
LUWI	Luwuk	55.79	282	P	P	13 59 24.1	-2.0
APSI	Ampana	56.88	281	P	P	13 59 33.7	-0.1
	comp=Z,668nmcomp=Z,57nm,1.5s						
KCP	Kidapawan	56.98	292	⇓*i*P	P	13 59 35.6	+1.0
BNSI	Bone	57.13	277	P	P	13 59 35.7	+0.1
	comp=Z,35nm,1.5s						
SKMP	Bagumbayan, Su	57.24	291	*e*P	P	13 59 36.3	-0.1
KAPI	Kappang	57.27	276	P	P	13 59 34.7	-1.9
	comp=Z,16nm,0.9s,baz=138,slow=5.9,SNR=7.9						
KAPI	Kappang	57.27	276	P	P	13 59 34.0	-2.6
KAPI				pmax	pmax		
	comp=Z,37nm,1.3s						
KAPI	Kappang	57.27	276	P	P	13 59 34.0	-2.6
KAPI				IAmb	IAmb	14 00 02.4	
	comp=Z,37nm,1.3s						
SPSI	Sidrap Palu	57.59	277	P	P	13 59 39.3	+0.4
	comp=Z,25nm,1.0s						
TTSI	Tana Toraja	57.85	278	P	P	13 59 40.6	-0.1
	comp=Z,1µmcomp=Z,17nm,1.6s						
PLAI	Plampang	58.01	271	P	P	13 59 41.8	0.0
	comp=Z,54nm,1.5s						
GIRL	Giralia	58.44	254	P	P	13 59 41.6	-3.1
PAGZ	Pagadian	58.87	292	*e*P	P	13 59 48.5	+0.7
TWSI	Taliwang, Sumb	58.88	271	P	P	13 59 46.2	-1.7
	comp=Z,628nmcomp=Z,56nm,1.2s						
VNDA	Vanda	59.60	184	LR	LR	14 21 35.4	
	comp=Z,956nm,20.6s,baz=9.5,slow=32						
CNOP	Candoni, Negro	60.42	293	*e*P	P	13 59 56.0	-2.4
SRBI	Singaraja	60.65	271	P	P	13 59 58.9	-1.2
	comp=Z,1µmcomp=Z,30nm,1.2s						
JAGI	Jajag, Banyuwa	61.55	270	P	P	14 00 04.4	-1.8
JAGI				IAmb	IAmb	14 00 14.8	
	comp=Z,43nm,1.0s						
JAGI	Jajag, Banyuwa	61.55	270	P	P	14 00 05.0	-1.2
	comp=Z,34nm,0.9s						
BBKI	Banjar Baru	62.40	276	P	P	14 00 13.1	+1.2
	comp=Z,2µmcomp=Z,16nm,0.9s						
SJMP	San Jose	62.97	295	*e*P	P	14 00 36.6	+21
LQP	Lukban	63.39	297	⇑*e*P	P	14 00 23.9	+5.3
BUSP	Coron	63.55	294	*e*P	P	14 00 25.2	+5.7
ENPP	El Nido	63.86	293	*e*P	P	14 00 20.8	-0.7
BATP	Bataraza	64.24	290	*e*P	P	14 00 24.1	+0.1
KKM	Kota Kinabalu	64.54	286	P	P	14 00 24.6	-1.6
SGCP	Mt. Cagua	65.03	301	*e*P	P	14 00 34.8	+5.7
JMM	Marumori	65.46	329	P	P	14 00 28.1	-3.4
JGF	Kuroka	65.49	325	P	P	14 00 30.9	-0.9
JGF				IAmb	IAmb	14 00 35.4	
	comp=Z,37nm,1.3s						
PBKI	Pangkalan Bun	65.64	275	P	P	14 00 34.1	+0.9
	comp=Z,102nm,0.5s						
MJAR	Matsushiro Arr	65.74	327	P	P	14 00 31.2	-2.2
	comp=Z,13nm,1.1s,baz=151,slow=6.4,SNR=12						
MAT	Matsushiro	65.74	327	P	P	14 00 30.8	-2.6
MAT				S	S	14 09 13.0	-4.4
SBUM	Sibu	66.87	281	P	P	14 00 39.0	-2.1
JCJI	Jatiwangi	67.70	270	P	P	14 00 47.0	+0.6
	comp=Z,225nm,0.4s						
CISI	Cisompet, Garu	67.82	269	P	P	14 00 45.3	-1.9
CISI	Cisompet, Garu	67.82	269	P	P	14 00 47.2	0.0
	comp=Z,1µmcomp=Z,95nm,1.6s						
TWG	Pinlang	68.21	305	P	P	14 00 46.8	-2.5
LEM	Lembang	68.22	270	P	P	14 00 49.2	-0.7
	comp=Z,46nm,0.9s,baz=82,slow=6.3,SNR=9.5						
LEM				LR	LR	14 28 37.1	
	comp=Z,483nm,21.8s,baz=114,slow=34						
LEM	Lembang	68.22	270	P	P	14 00 51.1	+1.2
	comp=Z,1µmcomp=Z,40nm,1.0s						

KSM	Kuching	68.32	279	P	P	14 00 49.0	-1.2
YUK	Yuzh-Kuril'sk	68.32	336	P	P	14 00 49.8	+0.2
YUK				i S	S	14 09 48.1	0.0
NACB	Ninganchiao	68.53	306	P	P	14 00 48.9	-2.4
TPUB	Ta-pu	68.81	305	P	P	14 00 50.8	-2.3
SSLB	Suanglung	68.81	306	P	P	14 00 50.6	-2.5
YHNB	Yeheng	68.97	307	P	P	14 00 51.4	-2.7
JEW	Eniwo	69.13	333	P	P	14 00 52.7	-1.9
ADK	Adak	70.22	4	P	P	14 00 59.7	-1.5
ADK				pmax	pmax		
	comp=Z,65nm,1.2s						
ADK	Adak	70.22	4	P	P	14 00 59.7	-1.5
QZH	Quanzhou	71.25	305	eP	P	14 01 09.0	+1.0
QZH				S	S	14 10 28.4	+5.2
QZH				LR	LR		
	comp=Z,390nm,18.9s						
KASI	Kota Agung	71.57	270	P	P	14 01 09.3	-0.9
	comp=Z,41nm,1.1s						
QSPA	South Pole Qui	71.64	180	P	P	14 01 08.9	-1.0
YSS	Yuzh-Sakhalins	71.96	336	i P	P	14 01 14.2	+2.4
YSS				pmax	pmax		
	comp=Z,56nm,1.4s						
KSRS	Korea Array	72.18	321	P	P	14 01 14.4	+1.1
	comp=Z,6.7nm,1.1s,baz=135,slow=6.4,SNR=12						
KSRS				LR	LR	14 31 39.6	
	comp=Z,306nm,18.6s,baz=130,slow=35						
KSAR	Wonju Array Be	72.19	321	P	P	14 01 12.5	-1.0
KSAR	Wonju Array Be	72.19	321	P	P	14 01 12.5	-1.0
PET	Petropavlovsk	72.87	349	eP	P	14 01 28.0	+11
PET				eS	SKiKP	14 10 51.0	+3.2
PET				ePS		14 11 15.9	
PET				ePPS	PPS	14 11 33.5	
PET				eSSS	SSS	14 18 39.3	
PET				pmax	pmax		
	comp=Z,96nm,1.7s						
PET				pmax	pmax		
	comp=Z,300nm,14.2s						
PEA0B	Petropavlovsk-	73.14	348	ceP	P	14 01 19.8	+1.1
PETK	Petropavlovsk-	73.14	348	P	P	14 01 18.2	-0.5
	comp=Z,19nm,1.0s,baz=116,slow=8.4,SNR=6.7						
PETK				LR	LR	14 27 36.1	
	comp=Z,912nm,21.2s,baz=160,slow=31						
PETK	Petropavlovsk-	73.14	348	P	P	14 01 17.1	-1.6
PETK	Petropavlovsk-	73.14	348	P	P	14 01 17.1	-1.6
MSHR	Mys Shultsa	73.86	327	ceP	P	14 01 25.6	+2.4
MSHR				pmax	pmax		
	comp=Z,28nm,1.3s						
DLV	T Lat	73.88	289	P	P	14 01 21.7	-2.5
DLV				IAmb	IAmb	14 01 39.3	
	comp=Z,56nm,1.1s						
MYKOM	Kota Tinggi	74.49	277	P	P	14 01 25.0	-2.5
USA0B	Ussuriysk Arra	74.59	328	i P	P	14 01 29.4	+2.0
USRK	Ussuriysk Ar.	74.59	328	P	P	14 01 29.9	+2.5
	comp=Z,6.9nm,1.0s,baz=130,slow=7.7,SNR=8.6						
USRK				LR	LR	14 34 55.6	
	comp=Z,253nm,18.1s,baz=130,slow=36						
USRK	Ussuriysk Ar.	74.59	328	P	P	14 01 26.1	-1.3
USRK	Ussuriysk Ar.	74.59	328	P	P	14 01 26.1	-1.3
NJ2	Nanjing	74.86	312	eP	P	14 01 28.4	-0.8
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
QIZ	Qiongzhong	75.60	296	P	P	14 01 32.4	-1.4
QIZ				S	S	14 11 11.6	-1.1
QIZ				SS	SS	14 16 04.0	-0.7
QIZ				LR	LR		
	comp=Z,280nm,20.7s						
QIZ				LR	LR		
	comp=Z,280nm,23.3s						
QIZ				LR	LR		
	comp=Z,520nm,27.6s						
MDJ	Mudanjiang	76.10	327	P	P	14 01 36.1	0.0
MDJ				pP	pP	14 01 47.0	+0.9
MDJ				sP	pwP	14 01 51.8	+1.8
MDJ				PP	PP	14 04 30.1	+2.6
MDJ				S	S	14 11 26.3	+9.0
MDJ				pmax	pmax		
	comp=Z,11nm,1.7s						
MDJ				pmax	pmax		
	comp=Z,310nm,3.5s						
MDJ				LR	LR		
	comp=Z,280nm,4.8s						
MDJ				LR	LR		
	comp=Z,930nm,26.1s						
MDJ	Mudanjiang	76.10	327	P	P	14 01 34.2	-1.9
BKNI	Bangkinang	76.67	275	P	P	14 01 37.8	-2.2
DL2	Dalian	76.95	319	P	P	14 01 45.4	+4.4
DL2				S	S	14 11 35.3	+8.6
DL2				pmax	pmax		
	comp=Z,32nm,1.6s						
DL2				pmax	pmax		
	comp=Z,330nm,3.5s						
DL2				LR	LR		
	comp=Z,270nm,21.9s						
DL2				LR	LR		
	comp=Z,420nm,15.9s						
DL2				LR	LR		
	comp=Z,470nm,17.5s						
WHN	Wuhan	77.34	308	P	P	14 01 44.3	+0.9
WHN				sP	sP	14 01 59.3	+2.0
WHN				S	S	14 11 39.1	+7.7
WHN				LR	LR		
	comp=Z,2µm,24.9s						
GRNR	Gornyy	77.52	335	⇓iP	P	14 01 46.7	+2.8
GRNR				pmax	pmax		
	comp=N,4.0nm,0.9s						
GRNR				pmax	pmax		
	comp=Z,20nm,1.2s						
IPM	Ipoh	78.05	279	P	P	14 01 44.7	-3.1
IPM	Ipoh	78.05	279	P	P	14 01 48.0	+0.2
TIA	Tai'an	78.34	314	P	P	14 01 48.9	0.0
TIA				S	S	14 11 46.8	+4.8
TIA				pmax	pmax		
	comp=Z,21nm,1.0s						
TIA				LR	LR		
	comp=Z,190nm,16.9s						
TIA				LR	LR		
	comp=Z,190nm,22.8s						
TIA				LR	LR		
	comp=Z,300nm,23.0s						
KLR	Kul'dur	78.35	332	LR	LR	14 37 44.5	
	comp=Z,211nm,18.1s,baz=165,slow=37						
KLR	Kul'dur	78.35	332	ceP	P	14 01 48.2	-0.4
KLR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KULM	Kulim	78.67	279	P	P	14 01 52.0	+0.8
OHAK	Old Harbor	79.37	16	P	P	14 01 52.8	-1.2
OHAK				IAmb	IAmb	14 02 01.2	
	comp=Z,42nm,1.0s						
RPSI	Rantau Prapat	79.44	276	P	P	14 01 55.0	-0.4
PSI	Prapat	79.47	277	P	P	14 01 55.0	-0.7
	comp=Z,3.6nm,0.4s,baz=180,slow=3.8,SNR=4.7						
PSI	Prapat	79.47	277	P	P	14 01 55.0	-0.7
SAO	San Andreas Ge	79.95	46	P	P	14 01 55.1	-2.5
SAO				pmax	pmax		
	comp=Z,14nm,1.0s						
SAO	San Andreas Ge	79.95	46	P	P	14 01 55.1	-2.5
KDAK	Kodiak Island	80.05	16	i P	P	14 01 57.5	-0.1
KDAK	Kodiak Island	80.05	16	P	P	14 01 57.1	-0.5
KDAK				IAmb	IAmb	14 02 05.7	
	comp=Z,69nm,1.2s						
PMPB	Monarch Peak	80.10	47	P	P	14 01 57.0	-1.5
PMPB				IAmb	IAmb	14 02 11.9	
	comp=Z,46nm,1.4s						
PKM	Mcpherson Peak	80.11	48	P	P	14 02 00.3	+1.5
	baz=239						
SMMC	Simmler	80.20	48	P	P	14 02 00.9	+1.8
	baz=239						
KMRM	Mail Ridge	80.34	42	P	P	14 01 58.3	-1.5
KMRM				IAmb	IAmb	14 02 12.4	
	comp=Z,52nm,1.2s						
MA2	Magadan	80.58	347	ceP	P	14 02 01.5	+1.0
MA2				pmax	pmax		
	comp=Z,11nm,1.3s						
ENH	Enshi	80.89	306	P	P	14 02 00.7	-2.2
ENH				IAmb	IAmb	14 02 09.9	
	comp=Z,47nm,1.2s						
O02D	Mt. Diablo Mer	80.90	42	P	P	14 02 04.2	+1.4
	baz=237						
ARVC	Arvin	80.93	48	P	P	14 02 04.0	+1.1
	baz=240						
BJT	Baijiatuau	81.05	317	P	P	14 02 00.7	-2.7
BJT				pmax	pmax		
	comp=Z,30nm,1.3s						
BJT	Baijiatuau	81.05	317	P	P	14 02 00.7	-2.7
BJT				IAmb	IAmb	14 02 10.7	
	comp=Z,30nm,1.3s						
VES	Vestal, Richgr	81.11	48	P	P	14 02 04.9	+1.0
	baz=240,SNR=5.8						
BFSC	Mount Baldy Ra	81.33	50	P	P	14 02 05.9	+0.6
	baz=241						
MURC	Murrieta	81.36	50	P	P	14 02 06.5	+1.1
	baz=241						
N02D	Trinity Center	81.39	42	P	P	14 02 07.5	+2.1
	baz=237,SNR=6.8						
EDW2	Edwards Air Fo	81.41	49	P	P	14 02 06.2	+0.6
	baz=241,SNR=10						
GYA	Guiyang	81.43	301	⇑P	P	14 02 11.9	+5.9
GYA				S	S	14 12 18.6	+3.4
GYA				SS	SS	14 17 35.5	+3.0
GYA				pmax	pmax		
	comp=Z,11nm,1.5s						
GYA				LR	LR		
	comp=Z,460nm,22.4s						
ISA	Isabella, Lake	81.45	48	P	P	14 02 07.2	+1.4
	baz=240,SNR=13						
L02E	Cave Junction	81.49	40	P	P	14 02 05.6	-0.1
	baz=236						
M02C	Callahan	81.53	41	P	P	14 02 07.1	+1.0
	baz=236						
ESJX	Sierra Juarez	81.53	52	P	P	14 02 05.0	-1.5
MONP2	Monument Peak	81.59	51	P	P	14 02 08.0	+1.1
	baz=242,SNR=7.5						
O03E	Paynes Creek	81.60	43	P	P	14 02 07.0	+0.6
	baz=237						
IKP	In-Ko-Pah, Jac	81.71	52	P	P	14 02 08.9	+1.7
	baz=242						
RMX	La Rumorosa	81.72	52	P	P	14 02 06.0	-1.4
K02D	Willamette Mer	81.75	40	P	P	14 02 08.6	+1.4
	baz=236						
MAW	Mawson	81.83	201	LR	LR	14 34 28.3	
	comp=Z,583nm,21.3s,baz=98,slow=33						
PFO	Pinyon Flats O	81.91	51	P	P	14 02 09.2	+0.9
	baz=242						
PFO	Pinyon Flats O	81.91	51	i P	P	14 02 08.6	+0.3
MDPB	Devils Postpil	82.01	46	P	P	14 02 06.1	-2.9
RUBR	Rubicon Trail	82.02	44	P	P	14 02 06.5	-2.4
SWSC	Sam W. Stewart	82.08	52	P	P	14 02 10.7	+1.6
	baz=242,SNR=5.4						
CWC	Cottonwood Cre	82.11	48	P	P	14 02 10.1	+0.7
	baz=240						
MLAC	Mammoth, Mammo	82.18	46	P	P	14 02 11.6	+1.8
	baz=240						
BELA	Belgrano 2	82.19	174	P	P	14 02 07.9	-1.1
BELA				IAmb	IAmb	14 02 16.3	
	comp=Z,50nm,1.2s						
BRLK	Bradley Lake	82.21	16	P	P	14 02 08.2	-1.0
TIY	Taiyuan	82.32	314	eP	P	14 02 14.3	+4.0
TIY				pP	pP	14 02 21.3	+0.7
TIY				PP	PP	14 05 23.0	+3.4
TIY				S	S	14 12 17.8	-6.1
TIY				pmax	pmax		
	comp=Z,11nm,0.6s						
TIY				pmax	pmax		
	comp=Z,210nm,4.2s						
TIY				LR	LR		
	comp=Z,140nm,5.5s						
TIY				LR	LR		
	comp=Z,250nm,15.3s						
L04D	Klamath Falls	82.32	41	P	P	14 02 11.1	+0.8
	baz=237						
MPMC	Manual Prospec	82.34	48	P	P	14 02 11.6	+1.0
	baz=241,SNR=9.2						
RSO	Redoubt South	82.35	15	P	P	14 02 08.4	-1.7
M04C	Macdoel	82.38	41	P	P	14 02 11.0	+0.4
	baz=237						
GAMB	Gambell	82.41	5		PcP	14 02 13.1	-2.0
BELC	Belle Mtn. Jos	82.43	51	P	P	14 02 12.4	+1.4
	baz=242						
I02D	Swisshome	82.44	39	P	P	14 02 09.0	-1.6
	baz=235						
GSC	Goldstone, Bar	82.46	49	P	P	14 02 12.0	+0.8
	baz=241						
VCNR	Virginia City	82.48	44	P	P	14 02 09.8	-1.5
HEC	Hector,Ludlow	82.57	50	P	P	14 02 12.9	+1.2
	baz=242						
BC3	Big Chuckawall	82.67	51	P	P	14 02 13.8	+1.6
	baz=242						
LHV	Little Huntoon	82.72	46	P	P	14 02 10.0	-2.3
LHV				IAmb	IAmb	14 02 15.5	
	comp=Z,24nm,1.0s						
GLA	Glamis	82.86	52	P	P	14 02 15.2	+2.0
	baz=243						
PAHR	Pah Rah Range	82.87	44	P	P	14 02 11.7	-1.5
GRAC	Grapevine Rang	82.88	47	P	P	14 02 15.0	+1.8
	baz=241						
NVAR	Mina Array Bea	82.94	46	P	P	14 02 15.0	+1.2
	comp=Z,7.1nm,0.9s,baz=227,slow=9.1,SNR=40						
NVAR				LR	LR	14 35 58.4	
	comp=Z,270nm,18.3s,baz=238,slow=33						
NVAR	Mina Array Bea	82.94	46	P	P	14 02 11.9	-1.8
FURC	Furnace Creek,	82.98	48	P	P	14 02 15.0	+1.3
	baz=241						
CAPN	Captain Cook N	83.01	15	P	P	14 02 15.6	+2.4
	baz=210						
GMRC	Granite Mounta	83.04	50	P	P	14 02 15.3	+1.0
	baz=242,SNR=6.3						
XAN	Xi'an	83.05	309	P	P	14 02 14.8	+0.6
XAN				pP	pP	14 02 24.3	-0.1
XAN				SS	SS	14 18 01.4	+5.2
XAN				pmax	pmax		
	comp=Z,35nm,1.4s						
XAN				pmax	pmax		
	comp=Z,160nm,4.9s						
XAN				LR	LR		
	comp=Z,280nm,22.8s						
XAN				LR	LR		
	comp=Z,470nm,24.9s						
XAN				LR	LR		
	comp=Z,600nm,23.8s						
XAN	Xi'an	83.05	309	P	P	14 02 12.9	-1.3
XAN				pmax	pmax		
	comp=Z,39nm,1.2s						
XAN	Xi'an	83.05	309	P	P	14 02 12.9	-1.3
XAN				IAmb	IAmb	14 02 21.8	
	comp=Z,39nm,1.2s						
I04A	Tendick Farm,	83.12	40	P	P	14 02 15.6	+1.3
	baz=236						
SHOC	Shoshone, Teco	83.12	49	P	P	14 02 16.1	+1.6
	baz=242						
O22K	Cooper Landing	83.13	16	P	P	14 02 15.2	+1.4
	baz=212						
IRM	Iron Mountain	83.13	51	P	P	14 02 15.8	+1.3
	baz=242,SNR=9.3						
SEY	Seymchan	83.34	349	⇑iP	P	14 02 16.9	+2.0
UTHA	Uthaitani	83.37	289	P	P	14 02 19.4	+3.3
	comp=Z,270nmcomp=Z,33nm,1.0s						
G03D	McMinnville, O	83.41	38	P	P	14 02 16.2	+0.6
	baz=236						
MOD	Modoc Plateau	83.41	42	P	P	14 02 13.2	-2.8
K05A	Summer Lake	83.48	41	P	P	14 02 14.3	-2.0
K05A				IAmb	IAmb	14 02 26.0	
	comp=Z,29nm,1.1s						
ZEA	Zeya	83.53	333	eP	P	14 02 19.6	+3.5
ZEA				e		14 05 30.8	
ZEA				eS	S	14 12 44.4	+9.2
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ZEA				smax	smax		
	comp=E,200nm,10.2s						
J05D	Fort Rock, OR	83.56	40	P	P	14 02 17.7	+1.0
	baz=237						
RC01	Rabbit Creek A	83.64	16	P	P	14 02 16.3	-0.2
	baz=212						
TPNV	Topopah Spring	83.64	48	P	P	14 02 18.3	+1.0
	baz=242,SNR=12						
TPNV	Topopah Spring	83.64	48	P	P	14 02 14.9	-2.4
TPNV				pmax	pmax		
	comp=Z,19nm,1.1s						
TPNV	Topopah Spring	83.64	48	P	P	14 02 14.9	-2.4
TPNV				IAmb	IAmb	14 02 26.0	
	comp=Z,19nm,1.1s						
SUA	Susitna One	83.71	15	P	P	14 02 15.2	-1.9
H04A	Detroit Lake	83.75	39	P	P	14 02 15.1	-2.5
H04A				IAmb	IAmb	14 02 36.1	
	comp=Z,34nm,1.4s						
TTA	Tatalina	83.83	12	P	P	14 02 16.8	-0.8
TTA				pmax	pmax		
	comp=Z,33nm,1.0s						
TTA	Tatalina	83.83	12	P	P	14 02 16.8	-0.8
TTA				IAmb	IAmb	14 02 25.1	
	comp=Z,33nm,1.0s						
214A	Organ Pipe Nat	83.89	54	P	P	14 02 20.3	+1.8
	baz=244						
SUKH	Sukhothai	83.89	291	P	P	14 02 22.6	+3.9
	comp=Z,26nm,0.9s						
PDMCI	Parker Dam,Lak	83.93	51	P	P	14 02 20.2	+1.5
	baz=243						
SKT	Skwentna	83.97	14	P	P	14 02 17.4	-0.8
SKT				IAmb	IAmb	14 02 31.2	
	comp=Z,19nm,1.1s						
PINE	Pine Mountain	84.02	40	P	P	14 02 17.7	-1.4
PINE				IAmb	IAmb	14 02 40.8	
	comp=Z,17nm,1.1s						
I05D	Terrebonne, OR	84.07	39	P	P	14 02 20.5	+1.3
	baz=237						
KMI	Kunming	84.10	299	⇑P	P	14 02 22.0	+2.0
KMI				pP	pP	14 02 30.9	+0.7
KMI				sP	sP	14 02 34.3	+0.4
KMI				PP	PP	14 05 35.5	+0.8
KMI				S	S	14 12 46.6	+3.8
KMI				SS	SS	14 18 18.6	+6.1
KMI				pmax	pmax		
	comp=Z,7.0nm,1.2s						
KMI				pmax	pmax		
	comp=Z,130nm,5.7s						
KMI				LR	LR		
	comp=Z,440nm,17.1s						
KMI				LR	LR		
	comp=Z,330nm,20.8s						
KMI				LR	LR		
	comp=Z,420nm,28.9s						
UMPA	Umpang Tak	84.12	289	P	P	14 02 33.2	+13
PMR	Palmer	84.22	16	P	P	14 02 18.2	-1.2
PMR				pmax	pmax		
	comp=Z,47nm,1.3s						
PMR	Palmer	84.22	16	P	P	14 02 18.2	-1.2
PMR				IAmb	IAmb	14 02 26.9	
	comp=Z,46nm,1.3s						
KNK	Knik Glacier	84.25	16	P	P	14 02 18.1	-1.5
KNK				IAmb	IAmb	14 02 26.6	
	comp=Z,26nm,0.9s						
LAMP	Lampang	84.27	292	P	P	14 02 25.5	+4.8
	comp=Z,333nmcomp=Z,35nm,1.1s						
GHO	Glory Hole Cre	84.43	16	P	P	14 02 20.1	-0.5
HHC	Hu-ho-hao-te	84.48	316	eP	P	14 02 21.8	+0.4
HHC				pP	PcP	14 02 28.3	+3.3
HHC				S	S	14 12 47.9	+2.3
HHC				pmax	pmax		
	comp=Z,10.0nm,1.3s						
HHC				pmax	pmax		
	comp=Z,170nm,5.5s						
HHC				LR	LR		
	comp=Z,360nm,19.3s						
HHC				LR	LR		
	comp=Z,360nm,18.4s						
HHC				LR	LR		
	comp=Z,460nm,17.0s						
TNA	Tin City	84.51	6	P	P	14 02 20.6	-0.2
	baz=194						
TNA	Tin City	84.51	6	P	P	14 02 20.1	-0.7
E04D	Cinebar	84.56	37	P	P	14 02 21.9	+0.4
	baz=236						
CUT	Chulitna	84.64	15	P	P	14 02 21.5	0.0
	baz=211						
WVOR	Wild Horse Val	84.75	42	P	P	14 02 21.7	-1.0
WVOR				pmax	pmax		
	comp=Z,15nm,1.2s						
WVOR	Wild Horse Val	84.75	42	P	P	14 02 21.7	-1.0
R11A	Troy Canyon, C	84.77	47	P	P	14 02 24.2	+1.1
	baz=242						
CM04	Chiang Mai Arr	84.81	291	P	P	14 02 25.0	+1.6
	comp=Z,160nmcomp=Z,19nm,1.2s						
CM09	Chiang Mai Arr	84.81	291	P	P	14 02 26.9	+3.5
	comp=Z,139nmcomp=Z,17nm,1.2s						
CM01	Chiang Mai Arr	84.83	291	P	P	14 02 26.9	+3.4
	comp=Z,161nmcomp=Z,19nm,1.2s						
CM05	Chiang Mai Arr	84.83	291	P	P	14 02 26.1	+2.6
	comp=Z,114nmcomp=Z,11nm,1.0s						
CM31	Chiang Mai Arr	84.86	291	P	P	14 02 27.8	+4.1
	comp=Z,4µmcomp=Z,431nm,1.1s						
CM31	Chiang Mai Arr	84.86	291	P	P	14 02 21.7	-2.0
CM31				IAmb	IAmb	14 02 38.1	
	comp=Z,29nm,1.1s						
CMAR	Chiang Mai Arr	84.86	291	P	P	14 02 23.7	0.0
	comp=Z,3.1nm,1.0s,baz=122,slow=2.9,SNR=14						
CMAR				LR	LR	14 40 33.7	
	comp=Z,104nm,19.4s,baz=159,slow=36						
CMAR	Chiang Mai Arr	84.86	291	P	P	14 02 21.9	-1.8
CMAR	Chiang Mai Arr	84.86	291	P	P	14 02 21.9	-1.8
CM15	Chiang Mai Arr	84.87	291	P	P	14 02 26.9	+3.2
	comp=Z,148nmcomp=Z,13nm,1.0s						
CM13	Chiang Mai Arr	84.88	291	P	P	14 02 26.4	+2.7
	comp=Z,117nmcomp=Z,14nm,1.1s						
SCM	Sheep Creek Mo	84.90	16	P	P	14 02 22.3	-0.7
SCM				pmax	pmax		
	comp=Z,40nm,1.0s						
SCM	Sheep Creek Mo	84.90	16	P	P	14 02 22.2	-0.7
CMMT	Chiang Mai	84.98	292	P	P	14 02 26.1	+1.8
	comp=Z,8.9nm,1.3s						
CHTO	Chiang Mai	84.98	292	P	P	14 02 22.2	-2.1
CHTO				pmax	pmax		
	comp=Z,30nm,1.4s						
CHTO	Chiang Mai	84.98	292	P	P	14 02 22.2	-2.1
CHTO				IAmb	IAmb	14 02 37.8	
	comp=Z,30nm,1.4s						
I07A	Izee	85.05	40	P	P	14 02 22.5	-1.8
CRQM	Cirque	85.20	18	P	P	14 02 23.2	-1.5
TGL	Tana Glacier	85.30	19	P	P	14 02 23.7	-1.4
M24K	Tolsona, Glenn	85.43	16	P	P	14 02 26.5	+0.8
	baz=215						
N25K	Chitina, Valde	85.46	17	P	P	14 02 25.8	0.0
	baz=216						
N25K	Chitina, Valde	85.46	17	P	P	14 02 24.8	-1.1
N25K				IAmb	IAmb	14 02 32.9	
	comp=Z,31nm,0.8s						
KTH	Kantishna Hill	85.47	14	P	P	14 02 24.7	-1.2
KTH				IAmb	IAmb	14 02 37.0	
	comp=Z,13nm,0.8s						
VRDI	Verde Repeater	85.48	18	P	P	14 02 24.7	-1.3
VRDI				IAmb	IAmb	14 02 33.0	
	comp=Z,26nm,1.0s						
TRF	Thorofare Moun	85.53	14	P	P	14 02 25.0	-1.3
TRF				IAmb	IAmb	14 02 32.9	
	comp=Z,20nm,0.8s						
GLB	Gilahina Butte	85.55	18	P	P	14 02 25.1	-1.2
GLB				IAmb	IAmb	14 02 33.1	
	comp=Z,29nm,0.9s						
TUC	Tucson	85.59	54	P	P	14 02 28.9	+1.7
	baz=245						
CD2	Chengdu	85.61	304	P	P	14 02 26.1	-1.2
CD2				S	S	14 12 57.3	+0.1
CD2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CD2				pmax	pmax		
	comp=Z,150nm,4.1s						
CD2				LR	LR		
	comp=Z,540nm,15.8s						
CD2				LR	LR		
	comp=Z,200nm,18.7s						
CD2				LR	LR		
	comp=Z,260nm,12.2s						
MHMT	Maesarieng	85.65	291	P	P	14 02 34.5	+6.9
BALM	Baldy	85.66	19	P	P	14 02 25.9	-1.0
A04D	Lummi Island	85.69	35	P	P	14 02 28.6	+1.4
	baz=236						
MCARA	McCarthy VSAT	85.73	18	P	P	14 02 25.8	-1.3
MCARA				IAmb	IAmb	14 02 34.8	
	comp=Z,38nm,1.1s						
B05A	Bryant	85.78	36	P	P	14 02 28.5	+0.9
	baz=236						
RND	Reindeer	85.83	15	P	P	14 02 26.9	-0.7
RND				pmax	pmax		
	comp=Z,39nm,1.0s						
RND	Reindeer	85.83	15	P	P	14 02 26.9	-0.7
RND				IAmb	IAmb	14 02 34.8	
	comp=Z,39nm,1.0s						
BARN	Barnard Glacie	85.89	19	P	P	14 02 26.3	-1.8
CTGM	Chitina Glacie	85.92	19	P	P	14 02 26.3	-1.8
CTGM				IAmb	IAmb	14 02 35.9	
	comp=Z,38nm,1.0s						
G08A	Pilot Rock	86.01	40	P	P	14 02 27.6	-1.4
G08A				IAmb	IAmb	14 02 48.7	
	comp=Z,20nm,1.3s						
MCK	McKinley	86.09	15	P	P	14 02 30.9	+2.1
	baz=212						
KNB	Kanab	86.11	49	P	P	14 02 28.1	-1.7
KNB				pmax	pmax		

	comp=Z,19nm,1.4s						
KNB	Kanab	86.11	49	P	P	14 02 28.1	-1.7
ELK	Elko	86.14	45	P	P	14 02 27.9	-2.0
ELK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ELK	Elko	86.14	45	P	P	14 02 27.9	-2.0
HAWA	Hanford	86.24	38	P	P	14 02 28.7	-1.2
HAWA				IAmb	IAmb	14 02 49.8	
	comp=Z,31nm,1.4s						
319A	Douglas	86.38	55	P	P	14 02 29.6	-1.5
WUAZ	Wupatki	86.51	51	P	P	14 02 33.5	+1.8
	baz=245						
NEA2	Nenana	86.79	14	P	P	14 02 31.6	-0.6
	baz=212						
MLY	Manley	86.79	13	P	P	14 02 33.4	+1.1
	baz=211						
WRH	Wood River Hil	86.91	14	P	P	14 02 31.8	-1.0
CCB	Clear Creek Bu	87.13	14	P	P	14 02 32.6	-1.2
HDA	Harding Lake	87.14	15	P	P	14 02 34.4	+0.5
	baz=214						
HDA	Harding Lake	87.14	15	P	P	14 02 32.9	-1.0
HDA				IAmb	IAmb	14 02 45.5	
	comp=Z,14nm,1.0s						
I23K	Minto, Yukon-K	87.19	14	P	P	14 02 36.3	+2.1
	baz=212						
DOT	Dot Lake	87.25	16	P	P	14 02 33.6	-0.9
DOT				IAmb	IAmb	14 02 50.4	
	comp=Z,20nm,1.4s						
MDM	Murphy Dome	87.29	14	P	P	14 02 33.6	-1.0
TCOL	CIGO, UAF Yank	87.31	14	P	P	14 02 35.5	+0.8
	baz=213						
TCOL	CIGO, UAF Yank	87.31	14	P	P	14 02 33.4	-1.3
TCOL				IAmb	IAmb	14 02 42.3	
	comp=Z,15nm,0.9s						
COLA	College	87.31	14	⇑eP	P	14 02 35.5	+0.8
COLA				pmax	pmax		
	comp=Z,12nm,1.0s						
COLA	College	87.31	14	P	P	14 02 33.3	-1.4
COLA				IAmb	IAmb	14 02 42.4	
	comp=Z,13nm,0.8s						
F10A	Beach Ranch, E	87.40	40	P	P	14 02 34.7	-1.1
F10A				IAmb	IAmb	14 02 43.4	
	comp=Z,18nm,1.2s						
IL31		87.45	15	P	P	14 02 33.8	-1.6
ILAR	Eielson Array	87.45	15	P	P	14 02 34.0	-1.5
	comp=Z,4.4nm,0.8s,baz=235,slow=5.5,SNR=22						
ILAR				LR	LR	14 34 29.4	
	comp=Z,598nm,22.0s,baz=226,slow=31						
ILAR	Eielson Array	87.45	15	P	P	14 02 33.9	-1.5
ILAR	Eielson Array	87.45	15	P	P	14 02 33.9	-1.5
SCRK	Sand Creek	87.54	16	P	P	14 02 35.5	-0.5
	baz=217						
POKR	Poker Plat Res	87.61	14	P	P	14 02 37.6	+1.4
	baz=214						
POKR	Poker Plat Res	87.61	14	P	P	14 02 34.5	-1.7
POKR				IAmb	IAmb	14 02 45.5	
	comp=Z,14nm,0.8s						
SYO	Syowa Base	87.62	194	⇓esP	P	14 02 42.1	+5.8
LZH	Lanzhou	87.69	309	eP	P	14 02 37.8	+0.4
LZH				pP	pP	14 02 45.3	-2.5
LZH				sP	pwP	14 02 49.0	-2.0
LZH				eS	S	14 13 24.8	+7.5
LZH				sS	sS	14 13 38.0	+3.8
LZH				SS	SS	14 19 07.8	+3.1
LZH				pmax	pmax		
	comp=Z,10.0nm,1.1s						
LZH				pmax	pmax		
	comp=Z,300nm,5.2s						
LZH				LR	LR		
	comp=Z,170nm,16.5s						
LZH				LR	LR		
	comp=Z,520nm,16.0s						
LZH				LR	LR		
	comp=Z,330nm,17.6s						
HLID	Hailey	88.00	43	P	P	14 02 40.1	+1.3
	baz=242						
HLID	Hailey	88.00	43	P	P	14 02 36.3	-2.4
121A	Cookes Peak, D	88.00	55	P	P	14 02 40.5	+1.5
	baz=247						
SPUT	South Promonto	88.27	45	P	P	14 02 37.4	-2.7
YAK	Yakutsk	88.44	340	eP	P	14 02 40.8	+0.7
YAK				pmax	pmax		
	comp=Z,27nm,1.1s						
YAK				pmax	pmax		
	comp=N,7.0nm,1.4s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.4s						
YAK	Yakutsk	88.44	340	P	P	14 02 38.3	-1.8
YAK				IAmb	IAmb	14 02 43.4	
	comp=Z,36nm,1.2s						
NEW	Newport	88.61	38	P	P	14 02 41.8	+0.4
	baz=240						
SRU	San Rafael Swe	88.65	48	P	P	14 02 37.9	-4.1
SRU				pmax	pmax		
	comp=Z,10.0nm,1.2s						
SRU	San Rafael Swe	88.65	48	P	P	14 02 37.9	-4.1
COLD	Coldfoot	88.80	12	P	P	14 02 44.0	+2.2
	baz=211						
EGAK	Eagle	88.93	17	P	P	14 02 40.8	-1.6
EGAK				IAmb	IAmb	14 02 49.7	
	comp=Z,20nm,0.9s						
MNTX	Cornudas Mount	89.57	56	P	P	14 02 47.4	+1.1
	baz=248						
ANMO	Albuquerque	89.96	53	P	P	14 02 48.9	+0.6
	baz=248						
ANMO	Albuquerque	89.96	53	i P	P	14 02 48.6	+0.4
ANMO				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ANMO	Albuquerque	89.96	53	P	P	14 02 46.1	-2.1
TX31	Lajitas Ar. Si	90.08	59	P	P	14 02 46.2	-2.6
TX31				IAmb	IAmb	14 03 00.8	
	comp=Z,24nm,1.1s						
TX32	Lajitas Array	90.08	59	P	P	14 02 46.3	-2.5
TXAR	Lajitas Array	90.08	59	P	P	14 02 50.8	+2.0
	comp=Z,2.6nm,1.1s,baz=212,slow=4.4,SNR=16						
TXAR				LR	LR	14 37 24.2	
	comp=Z,806nm,18.1s,baz=0.0,slow=32						
TOLK	Toolik Lake Re	90.13	12	P	P	14 02 50.4	+2.3
	baz=212						
SNAA	Sanae	90.14	180	P	P	14 02 53.0	+4.7
SNAA	Sanae	90.14	180	ceP	P	14 02 52.8	+4.5
SNAA				pmax	pmax		
	comp=Z,38nm,2.0s						
VNA3	Neumayer Olymp	90.46	178	P	P	14 02 53.6	+3.9
ULN	Ulaanbaatar	90.67	321	ceP	P	14 02 51.9	+0.8
ULN				pmax	pmax		
	comp=Z,14nm,1.3s						
ULN	Ulaanbaatar	90.67	321	P	P	14 02 49.7	-1.4
ULN				IAmb	IAmb	14 03 07.1	
	comp=Z,21nm,1.4s						
O20A	White River Ci	90.68	48	P	P	14 02 52.4	+0.9
	baz=246						
BOZ	Bozeman (W)	90.69	42	P	P	14 02 52.5	+1.2
	baz=244						
S22A	4UR Ranch, Cre	90.75	50	P	P	14 02 53.5	+1.5
	baz=247						
BW06	Boulder Array	90.84	45	P	P	14 02 54.4	+2.2
	baz=246						
PDAR	Pinedale Array	90.84	45	P	P	14 02 52.5	+0.2
	comp=Z,1.4nm,0.9s,baz=222,slow=2.0,SNR=8.2						
PDAR				LR	LR	14 41 51.8	
	comp=Z,242nm,18.1s,baz=241,slow=34						
PDAR	Pinedale Array	90.84	45	P	P	14 02 50.2	-2.0
VNA2	Neumayer--Watz	90.84	179	P	P	14 02 51.3	-0.2
SONM	Songino Array	91.05	321	P	P	14 02 52.7	-0.2
	comp=Z,4.0nm,1.1s,baz=121,slow=2.0,SNR=15						
SONM				LR	LR	14 41 25.9	
	comp=Z,206nm,21.1s,baz=119,slow=34						
SONM	Songino Array	91.05	321	P	P	14 02 51.0	-1.9
SONM				pmax	pmax		
	comp=Z,8.0nm,1.2s						
SONM	Songino Array	91.05	321	P	P	14 02 51.0	-1.9
VNA1	Neumayer--Stat	91.10	178	P	P	14 02 53.6	+1.0
EPYK	Eagle Plains	91.35	17	P	P	14 02 55.9	+2.2
	baz=224						
SDCO	Great Sand Dun	91.73	51	P	P	14 02 56.9	+0.4
	baz=248						
BOD	Bodaibo	91.92	332	eP	P	14 02 58.3	+1.8
BOD				pmax	pmax		
	comp=Z,14nm,1.6s						
GTA	Gaotai	91.94	311	⇑P	P	14 02 57.8	+0.6
GTA				pP	pP	14 03 04.3	-3.3
GTA				sP	pwP	14 03 08.5	-2.3
GTA				S	S	14 14 02.8	+6.2
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,74nm,5.8s						
GTA				LR	LR		
	comp=Z,130nm,21.1s						
GTA				LR	LR		
	comp=Z,200nm,21.1s						
GTA				LR	LR		
	comp=Z,310nm,20.7s						
RLMT	Red Lodge	92.00	43	P	P	14 02 58.5	+1.0
	baz=246						
MSTX	Muleshoe	92.43	55	P	P	14 03 00.5	+0.8
	baz=250						
Q24A	Divide	92.44	50	P	P	14 03 00.4	+0.7
	baz=248						
SHL	Shillong	93.43	296	P	P	14 03 02.2	-2.3
SHL				pmax	pmax		
	comp=Z,16nm,1.0s						
SHL	Shillong	93.43	296	P	P	14 03 02.2	-2.3
SHL				IAmb	IAmb	14 03 11.4	
	comp=Z,16nm,1.0s						
INK	Inuvik	93.60	16	P	P	14 03 02.3	-1.7
INK				pmax	pmax		
	comp=Z,15nm,1.5s						
INK	Inuvik	93.60	16	P	P	14 03 02.3	-1.7
INK				IAmb	IAmb	14 03 07.4	
	comp=Z,15nm,1.4s						
PLCA	Paso Flores	94.18	135	P	P	14 03 07.1	-0.5
	comp=Z,1.5nm,1.0s,baz=217,slow=10,SNR=2.7						
PLCA				LR	LR	14 39 02.7	
	comp=Z,145nm,18.9s,baz=246,slow=31						
PLCA	Paso Flores	94.18	135	P	P	14 03 07.1	-0.5
PLCA				pmax	pmax		
	comp=Z,9.0nm,1.1s						
TLY	Talaya	94.31	323	LR	LR	14 42 18.5	
	comp=Z,230nm,21.0s,baz=112,slow=34						
TLY	Talaya	94.31	323	i P	P	14 03 08.1	+0.4
TLY				pmax	pmax		
	comp=Z,3.0nm,1.2s						
TIXI	Tiksi	95.55	346	ceP	P	14 03 13.9	+1.0
TIXI				pmax	pmax		
	comp=Z,46nm,2.5s						
TIXI	Tiksi	95.55	346	P	P	14 03 11.4	-1.4
YKA	Yellowknife Ar	96.70	26	P	P	14 03 18.0	-0.3
	comp=Z,0.4nm,0.7s,baz=240,slow=3.9,SNR=9.8						
YKA				PP	PP	14 07 12.3	-1.3
	comp=Z,0.4nm,0.9s,baz=252,slow=7.3,SNR=2.6						
YKA				LR	LR	14 44 22.4	
	comp=Z,260nm,18.4s,baz=0.0,slow=34						
C36M	Paulatuk	96.92	18	P	P	14 03 19.3	+0.2
	baz=235						
WMQ	Urumqi	101.94	312	eP	Pdif	14 03 46.3	+4.0
WMQ				pmax	pmax		
	comp=Z,13nm,1.1s						
WMQ				LR	LR		
	comp=Z,420nm,27.1s						
WMQ				LR	LR		
	comp=Z,270nm,24.5s						
MKAR	Makanchi Array	106.28	314	Pdiff	Pdif	14 04 00.4	-1.1
	comp=Z,0.6nm,0.9s,baz=64,slow=3.4,SNR=3.7						
MKAR				PKiKP	PKiKP	14 08 12.2	-0.7
	comp=Z,0.6nm,0.9s,baz=85,slow=3.6,SNR=3.0						
AKTO	Aktyubinsk	122.31	318	PKP	PKPdf	14 08 42.7	-0.6
	comp=Z,1.1nm,0.7s,baz=260,slow=3.8,SNR=4.8						
GEYT	Alibeck	123.60	304	PKP	PKiKP	14 08 48.1	+1.7
	comp=Z,3.0nm,1.0s,baz=243,slow=6.5,SNR=3.9						
KIRV	Kirov	124.75	330	c iPKIKP	PKiKP	14 08 50.4	+2.5
OBN	Obninsk	132.59	330	i PKIKP	PKiKP	14 09 05.6	+1.8
OBN				pmax	pmax		
	comp=Z,11nm,1.4s						
KIV	Kislovodsk	134.04	314	i PKIKP	PKiKP	14 09 09.1	+1.9
KIV				pmax	pmax		
	comp=Z,11nm,1.1s						
KIV				MLR	MLR		
	comp=Z,658nm,23.0s						
BRTR	Keskin Array B	141.86	312	PKP	PKPdf	14 09 18.8	-1.7
	comp=Z,2.0nm,1.1s,baz=57,slow=2.2,SNR=5.0						
BSEG	Bad Segeberg	143.06	347	eL	L	15 07 02.1	
	comp=Z,354nm,22.0s						
PLOR	Plostina	143.18	325	⇑P	PKiKP	14 09 24.7	-1.1
PLOR	Plostina	143.18	325	⇑PKIKP	PKiKP	14 09 24.7	-1.1
KOLS	Kolonicke sedl	143.29	332	ePKIKP	PKiKP	14 09 27.3	+1.4
KOLS	Kolonicke sedl	143.29	332	ePKP	PKiKP	14 09 27.3	+1.4
UZH	Uzhgorod	143.50	331	ePKIKP	PKiKP	14 09 27.6	+1.3
UZH				e		14 09 36.0	
EIL	Elat	143.62	295	PKP	PKPdf	14 09 22.7	-1.0
	comp=Z,4.5nm,0.9s,baz=114,slow=2.8,SNR=3.6						
CRVS	Cervenica-Dubn	143.67	332	ePKIKP	PKiKP	14 09 28.0	+1.3
CRVS	Cervenica-Dubn	143.67	332	ePKP	PKiKP	14 09 28.0	+1.3
DOPR	Dopca	143.79	326	⇑P	PKPdf	14 09 24.3	+0.7
MLR	Muntele Rosu	143.79	325	PKP	PKPdf	14 09 22.8	-1.0
	comp=Z,7.3nm,1.0s,baz=124,slow=6.3,SNR=6.5						
MLR	Muntele Rosu	143.79	325	⇑P	PKPdf	14 09 24.6	+0.9
MLR	Muntele Rosu	143.79	325	⇑PKIKP	PKPdf	14 09 24.6	+0.9
MLR	Muntele Rosu	143.79	325	PKPdf	PKPbc	14 09 22.2	+0.8
KSP	Ksiaz	144.15	339	ePKP	PKPdf	14 09 24.8	+0.8
VOIR		144.31	325	⇑P	PKiKP	14 09 26.8	-1.4
VOIR		144.31	325	⇑PKIKP	PKiKP	14 09 26.8	-1.4
FLTG	Flechtingen	144.33	345	ePKPab	PKPbc	14 09 23.4	+0.8
	baz=25,slow=3.2						
OSTC	Ostas	144.41	339	ePKP	PKPdf	14 09 25.9	+1.4
CHVC	Chvalec	144.44	339	ePKP	PKPdf	14 09 24.6	0.0
UPC	Upice	144.53	339	ePKIKP	PKPdf	14 09 25.6	+0.9
UPC	Upice	144.53	339	ePKP	PKPdf	14 09 25.6	+0.9
DPC	Dobruska-Polom	144.55	338	ePKIKP	PKPab	14 09 23.2	-0.1
DPC	Dobruska-Polom	144.55	338	ePKP	PKPab	14 09 23.2	-0.1
ARR	Arges	144.59	325	⇑P	PKPbc	14 09 24.3	+0.5
MORC	Moravsky Berou	144.59	337	⇑P	PKPdf	14 09 24.4	-0.5
MORC	Moravsky Berou	144.59	337	ePKP	PKPdf	14 09 24.3	-0.5
MORC	Moravsky Berou	144.59	337	⇑PKIKP	PKPdf	14 09 24.4	-0.5
MORC	Moravsky Berou	144.59	337	PKPdf	PKPab	14 09 23.3	-0.1
DRGR		144.62	329	⇑P	PKPbc	14 09 24.4	+0.6
DRGR		144.62	329	⇑PKIKP	PKPbc	14 09 24.4	+0.6
KRLC	Kraliky	144.62	338	ePKIKP	PKPdf	14 09 25.9	+1.0
KRLC	Kraliky	144.62	338	ePKP	PKPdf	14 09 25.9	+1.0
ASSE	Asse, Remlinge	144.65	345	ePKPab	PKPbc	14 09 23.8	+0.3
	baz=25,slow=3.2						
CLL	Collm	144.78	342	i PKPdf	PKPab	14 09 23.9	-0.1
CLL				i PKPbc	PKPdf	14 09 26.3	+1.2
	comp=Z,49nm,1.1s						
CLL				i sPKiKP	pPKPdf	14 09 34.8	-0.7
CLL				ePP	PP	14 12 44.0	+2.3
CLL				eSS	SS	14 31 42.0	+15
CLL				eSSS	SSS	14 36 54.0	
CLL				LmV		15 16 00.0	
	comp=Z,300nm,19.8s						
CLL	Collm	144.78	342	i PKIKP	PKPab	14 09 23.9	-0.1
CLL				i		14 09 34.8	
CLL				pmax	pmax		
	comp=Z,49nm,1.1s						
CLL				MLR	MLR		
	comp=Z,300nm,19.8s						
CLL	Collm	144.78	342	PKPdf	PKPab	14 09 23.3	-0.7
CLL	Collm	144.78	342	ePKPab	PKPbc	14 09 24.1	0.0
	baz=25,slow=3.2						
CLL				eL	L	15 09 49.4	
	comp=Z,254nm,21.8s						
ISP	Isparta	144.85	310	PKIKP	PKPab	14 09 23.6	-1.2
ISP	Isparta	144.85	310	PKPdf	PKPab	14 09 23.6	-1.2
BRG	Berggiesshubel	144.88	341	ePKP	PKPab	14 09 24.0	-0.4
BRG				Amp		14 09 25.1	
	comp=Z,3.7nm,0.8s						
BRG				ex	x	14 09 26.5	
BRG				Amp		14 09 28.7	
	comp=Z,50nm,1.2s						
BRG				ex	x	14 09 35.6	
BRG				Amp		14 09 36.9	
	comp=Z,46nm,1.2s						
BRG	Berggiesshubel	144.88	341	ePKPab	PKPbc	14 09 24.8	+0.3
	baz=25,slow=3.2						
CLZ	Clausthal	144.99	345	ePKPab	PKPdf	14 09 25.2	-0.3
	baz=25,slow=3.2						
PVCC	Panska Ves	144.99	340	ePKIKP	PKiKP	14 09 27.4	-1.9
PVCC	Panska Ves	144.99	340	ePKP	PKiKP	14 09 27.4	-1.9
LOT	Lotru	144.99	326	⇑P	PKPdf	14 09 26.6	+0.8
FBE	Freiberg	145.02	342	ePKPab	PKPdf	14 09 25.6	+0.1
	baz=25,slow=3.2						
PSZ	Piszkesteto	145.10	333	⇑P	PKiKP	14 09 28.3	-1.4
PSZ	Piszkesteto	145.10	333	⇑PKIKP	PKiKP	14 09 28.3	-1.4
VYHS	Vyhne	145.10	334	ePKIKP	PKiKP	14 09 28.0	-1.6
VYHS	Vyhne	145.10	334	ePKP	PKiKP	14 09 28.0	-1.6
IBBN	Ibbenburen	145.12	348	ePKPab	PKPab	14 09 25.2	0.0
	baz=25,slow=3.2						
NEUB	Neuenburg	145.21	344	ePKPab	PKPdf	14 09 25.8	0.0
	baz=25,slow=3.2						
JAVC	Velka Javorina	145.28	336	ePKP	PKPdf	14 09 27.2	+1.1
VRAC	Vranov	145.32	337	⇑P	PKPdf	14 09 26.8	+0.7
VRAC	Vranov	145.32	337	ePKP	PKPbc	14 09 25.9	0.0
VRAC	Vranov	145.32	337	⇑PKIKP	PKPdf	14 09 26.8	+0.7
GTTG	Gottingen	145.36	346	ePKPab	PKPab	14 09 26.3	+0.2
	baz=25,slow=3.2						
PRA	Prague	145.43	340	ePKIKP	PKPab	14 09 28.2	+1.8
PRA	Prague	145.43	340	ePKP	PKPab	14 09 28.2	+1.8
PRU	Pruhonice	145.46	340	ePKIKP	PKPdf	14 09 25.7	-0.6
PRU	Pruhonice	145.46	340	ePKP	PKPdf	14 09 25.7	-0.6
PRU				ex	x	14 09 42.3	
SIRR	Siria	145.50	329	⇑P	PKPab	14 09 27.5	+0.6
GZR	Gura Zlata	145.55	327	⇑P	PKPab	14 09 27.0	-0.1
GZR	Gura Zlata	145.55	327	⇑PKIKP	PKPab	14 09 27.0	-0.1
KRUC	Moravsky	145.60	337	ePKP	PKPbc	14 09 26.7	-0.1
SMOL	Smolenice	145.65	336	ePKIKP	PKiKP	14 09 29.5	-1.2
SMOL	Smolenice	145.65	336	ePKP	PKiKP	14 09 29.5	-1.2
TANN	Tannenbergstha	145.73	342	ePKPab	PKPab	14 09 27.8	+0.2
	baz=25,slow=3.2						
PLN	Plauen	145.76	343	ePKPab	PKPab	14 09 27.8	+0.1
	baz=25,slow=3.2						
GUNZ	Gunzen	145.81	342	ePKPab	PKPab	14 09 28.2	+0.3
	baz=25,slow=3.2						
MODS	Modra-Piesok	145.83	336	ePKIKP	PKiKP	14 09 29.9	-1.2
MODS	Modra-Piesok	145.83	336	ePKP	PKiKP	14 09 29.9	-1.2
SRO	Srobarova	145.85	334	ePKP2	PKiKP	14 09 31.8	+0.7
SRO	Srobarova	145.85	334	ePKP	PKiKP	14 09 31.8	+0.7
SRO				e		14 09 36.6	
WERN	Wernitzgruen	145.87	342	ePKPab	PKPab	14 09 28.5	+0.4
	baz=25,slow=3.2						
NKC	Novy Kostel	145.90	342	ePKP2	PKPab	14 09 28.8	+0.6
NKC	Novy Kostel	145.90	342	ePKP	PKPab	14 09 28.8	+0.6
PBCC	Pribram	145.90	340	ePKP	PKiKP	14 09 30.7	-0.5
BZS	Buzias	145.98	328	⇑P	PKPab	14 09 28.5	-0.1
BZS	Buzias	145.98	328	⇑PKP2	PKPab	14 09 28.5	-0.1
UBBA	Unterbreizbach	146.02	345	ePKPab	PKPab	14 09 28.5	0.0
	baz=25,slow=3.2						
KASTN	Kahler Asten	146.03	347	ePKPab	PKPab	14 09 28.4	-0.2
	baz=25,slow=3.2						
BUG	Bochum--Univer	146.03	348	ePKPab	PKPbc	14 09 28.3	+0.2
	baz=25,slow=3.2						
ZST	Bratislava	146.04	336	ePKP2	PKiKP	14 09 31.8	+0.3
ZST	Bratislava	146.04	336	ePKP	PKiKP	14 09 31.8	+0.3
MANZ	Manzenberg	146.22	342	ePKPab	PKPab	14 09 29.5	+0.1
	baz=25,slow=3.2						
ROTZ	Rotzenmuhle	146.38	342	ePKPab	PKPab	14 09 30.1	+0.1
	baz=25,slow=3.2						
KHC	Kasperske Hory	146.52	340	ePKP2	PKPbc	14 09 29.0	-0.6
KHC	Kasperske Hory	146.52	340	ePKP	PKPbc	14 09 29.0	-0.6
KHC				epPKP	PKiKP	14 09 32.0	-0.6
KHC				ex	x	14 09 53.8	
KHC	Kasperske Hory	146.52	340	PKPbc	PKPdf	14 09 28.5	+0.3
CKRC	Cesky Krumlov	146.54	339	ePKP	PKPbc	14 09 29.2	-0.5
GEC2	GERESS Array S	146.73	340	PKPbc	PKPdf	14 09 28.6	0.0
GEC2	GERESS Array S	146.73	340	ePKPab	PKPbc	14 09 30.5	+0.2
	baz=25,slow=3.2						
GEC2				eL	L	15 12 06.4	
	comp=Z,391nm,21.8s						
GERES	GERESS Array B	146.73	340	PKPbc	PKPdf	14 09 28.5	-0.2
	comp=Z,10nm,0.9s,baz=31,slow=3.1,SNR=21						
GERES	GERESS Array B	146.73	340	PKIKP	PKPdf	14 09 27.2	-1.4
GERES	GERESS Array B	146.73	340	PKPdf	PKPdf	14 09 27.2	-1.4
WET	Wettzell	146.73	341	eL	L	15 12 30.0	
	comp=Z,538nm,21.0s						
GRF	Grafenberg Arr	146.73	343	ePKPab	PKiKP	14 09 32.6	-0.3
	baz=25,slow=3.2						
GRF				eL	L	15 18 13.4	
	comp=Z,239nm,20.8s						
CONA	Conrad Observa	146.74	336	eP	PKPbc	14 09 30.5	+0.1
	comp=Z,27nm,1.0s,SNR=14						
AHRW	Bad Neuenahr-A	146.93	348	ePKPab	PKiKP	14 09 32.8	-0.4
	baz=25,slow=3.2						
BEBN	Eben Emael	146.94	350	dx	PKPab	14 09 33.5	+1.4
TNS	Taunus Mts	146.94	346	ePKPab	PKPbc	14 09 31.3	+0.4
	baz=25,slow=3.2						
TNS				eL	L	15 11 47.2	
	comp=Z,512nm,22.0s						
MORH	Mrgy, Hungar	146.95	332	⇑P	PKPab	14 09 32.3	0.0
BTNL	Ternell	147.06	349	dx	PKPab	14 09 32.8	+0.1
MEM	Membach	147.06	349	dx	PKPab	14 09 32.1	-0.5
VTS	Vitosha	147.12	323	⇑P	PKPab	14 09 33.6	+0.3
VTS	Vitosha	147.12	323	⇑PKP2	PKPab	14 09 33.6	+0.3
BSTI	Sart Tilman	147.16	350	dx	PKPab	14 09 34.2	+1.2
FRGS	Fruska Gora	147.20	329	⇑P	PKPab	14 09 33.4	0.0
BCLA	Clavier	147.37	350	dPKP	PKPdf	14 09 28.5	-1.0
BCLA				dx	x	14 09 35.2	
MOA	Molln	147.39	338	eP	PKPbc	14 09 32.8	+0.7
	comp=Z,17nm,1.2s,SNR=5.4						
ARSA	Arzberg	147.43	336	eP	PKPab	14 09 34.1	-0.2
	comp=Z,12nm,1.3s						
BGES	Gesves	147.44	350	dPKP	PKPdf	14 09 28.6	-1.0
BGES				dx	x	14 09 34.5	
SNF	Seneffe	147.44	351	dx	PKPab	14 09 33.5	-0.6
BMRD	Maredsous	147.57	351	dx	PKPab	14 09 33.1	-1.5
DOU	Dourbes	147.79	351	dPKP	PKPbc	14 09 33.0	-0.1
WLF	Walferdange	147.94	349	dx	PKPab	14 09 36.0	-0.1
WLF	Walferdange	147.94	349	PKIKP	PKPbc	14 09 32.0	-1.5
WLF	Walferdange	147.94	349	PKPbc	PKPbc	14 09 32.0	-1.5
WLF	Walferdange	147.94	349	ePKPab	PKPbc	14 09 34.4	+0.9
	baz=25,slow=3.2						
RJOB	Jochberg	147.99	340	ePKPab	PKPab	14 09 36.1	-0.4
	baz=25,slow=3.2						
SOKA	Soboth	148.09	336	eP	PKiKP	14 09 35.5	-0.4
	comp=Z,19nm,1.2s						
FUR	Furstenfeldbru	148.09	342	ePKPab	PKPab	14 09 36.6	-0.2
	baz=25,slow=3.2						
FUR				eL	L	15 11 48.9	
	comp=Z,386nm,21.6s						
STU	Stuttgart	148.12	344	ePKPab	PKPab	14 09 36.7	-0.1
	baz=25,slow=3.2						
STIP	Stip	148.30	322	i P	PKPbc	14 09 35.1	+0.3
KBA	Koelnbreinsper	148.37	338	eP	PKPbc	14 09 33.9	-1.1
	comp=Z,9.8nm,1.4s						
OBKA	Obir	148.41	336	eP	PKiKP	14 09 36.2	-0.4
	comp=Z,5.1nm,0.9s						
SKO	Skopje	148.55	324	i P	PKPbc	14 09 35.4	0.0
MYKA	Terra Mystica	148.65	338	eP	PKiKP	14 09 37.0	0.0
	comp=Z,34nm,1.7s						
WATA	Walderalm	148.74	341	eP	PKPbc	14 09 35.2	-0.7
	comp=Z,15nm,1.2s						
BFO	Black Forest	148.74	345	PKP2	PKPbc	14 09 34.7	-1.0
BFO	Black Forest	148.74	345		PKPbc	14 09 34.7	-1.0
BFO	Black Forest	148.74	345	ePKPab	PKPbc	14 09 36.0	+0.3
	baz=25,slow=3.2						
BFO				eL	L	15 12 39.0	
	comp=Z,442nm,21.8s						
WTTA	Wattenberg	148.78	340	eP	PKiKP	14 09 38.4	+1.0
	comp=Z,27nm,1.3s,SNR=8.5						
RETA	Reutte	148.85	342	eP	PKiKP	14 09 38.1	+0.6
	comp=Z,14nm,1.0s,SNR=5.9						
UBR	Ueberruh	148.87	343	ePKPab	PKPbc	14 09 36.2	+0.1
	baz=25,slow=3.2						
MOTA	Moosalm	148.88	341	eP	PKPbc	14 09 36.7	+0.5
	comp=Z,17nm,1.2s						
ABTA	Abfaltersbach	148.95	339	eP	PKiKP	14 09 37.2	-0.5
	comp=Z,17nm,1.3s,SNR=6.1						
ZOU	Zoufplan	148.95	338	PKPbc	PKPbc	14 09 35.1	-1.4
SQTA	Sankt Quirin	148.96	341	eP	PKPbc	14 09 36.2	-0.2
	comp=Z,25nm,1.4s,SNR=5.8						
LIT	Litokhoron	149.11	320	PKP2	PKiKP	14 09 38.1	-0.1
LIT	Litokhoron	149.11	320	PKPab	PKiKP	14 09 38.1	-0.1
ECH	Echery	149.12	347	PKP2	PKiKP	14 09 37.8	-0.1
ECH	Echery	149.12	347		PKiKP	14 09 37.8	-0.1
FETA	Feichten	149.28	341	eP	PKiKP	14 09 38.0	-0.5
	comp=Z,22nm,1.2s,SNR=8.3						
DAVA	Damuels	149.29	343	eP	PKiKP	14 09 39.2	+0.7
	comp=Z,17nm,1.2s,SNR=9.1						
STAL	STALIGIAL	149.30	338		PKiKP	14 09 38.7	+0.3
FNA	Florina	149.35	322	PKIKP	PKPbc	14 09 35.6	-1.9
FNA	Florina	149.35	322		PKPbc	14 09 35.6	-1.9
PDG	Podgorica	149.43	326	⇑P	PKiKP	14 09 39.6	+0.9
PDG	Podgorica	149.43	326	PKPab	PKiKP	14 09 39.3	+0.6
OHR	Ohrid	149.48	323	i P	PKiKP	14 09 38.6	-0.3
CTI	Castel Tesino	149.85	339	PKP2	PKiKP	14 09 40.6	+1.0
CTI	Castel Tesino	149.85	339	PKPab	PKiKP	14 09 40.6	+1.0
TUE	Stuetta	150.19	343	PKPab	PKiKP	14 09 42.0	+1.6
LIC	Lamto	167.74	171	eP	PKPab	14 11 06.9	+5.1
	comp=Z,91nm,1.8s						
KIC	Kosan Boka	167.91	172	eP	PKPab	14 11 08.7	+6.1
	comp=Z,61nm,1.6s						
TIC	Toumodi	168.15	171	eP	PKPab	14 11 09.7	+6.0
TORD	Torodi Ar. Bea	173.00	222	PKP	PKPdf	14 09 58.3	-0.2
	comp=Z,2.8nm,1.1s,baz=180,slow=0.8,SNR=4.0						
TORD				PKPab	PKPab	14 11 25.4	+0.1
	comp=Z,0.3nm,0.6s,baz=150,slow=35,SNR=3.0						

*IDC **15** 13:53:28.8±2.3,6°.52S×131°.31E,h44^{km}±28^{km},mb3.7/3, mb1 4.5/9,mb1mx4.0/40,mbtmp4.6/9,ML4.9/5,Error ellipse: s-maj=31.3km s-min=18.1km az=75.0*

*NEIC **15** 13:53:31.8±2.3,6°.31S±0°.07×131°.5E±0°.1,h86^{km}±10^{km}, mb4.3/20,Error ellipse: s-maj=15.6km s-min=9.4km az=103.0*

*DJA **15** 13:53:31.7±0.3,6°S±2°×13°1E±°,h116^{km}±6^{km},M4.7/13, mB5.1/6,mb4.7/13,MLv4.8/13,Mw(mB)4.5/6*

ISC 15 13:53:31.3±0.5,**6°.41S**±0°.04×**131°.56E**±0°.05,**h100^{km},n61, σ2^{s}63**/70,**mb4.1**/8,**Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	Saumlaki	1.59	189	Pn	Pn	13 54 00.4	+1.7
SAUI	Saumlaki	1.59	189	P	Pn	13 54 00.7	+2.0
SAUI				S	Sn	13 54 24.9	+5.4
BNDI	Bandanaira	2.49	319	P	Pn	13 54 10.5	+0.2
BNDI				S	Sn	13 54 38.7	-1.5
FAKI	Fak Fak	3.53	11	Pn	Pn	13 54 23.4	-0.9
FAKI	Fak Fak	3.53	11	P	Pn	13 54 23.4	-0.9
FAKI				S	Sn	13 55 00.6	-4.6
MSAI	Masohi	4.01	319	P	Pn	13 54 31.2	+0.5
MSAI				S	Sn	13 55 11.8	-4.9
NLAI	Namlea	5.44	305	P	Pn	13 54 49.6	-0.5
	0.3nm3µm45nm,0.5s						
NLAI				S	Sn	13 55 50.9	-0.5
	0.3nm3µm45nm,0.5s						
SIJI	Sorong	5.51	357	P	Pn	13 54 49.4	-1.6
	42nm,0.3s,baz=176,slow=14,SNR=59						
SIJI				S	Sn	13 55 45.6	-7.5
	44nm,0.3s,baz=224,slow=22,SNR=15						
SWI	Sorong	5.51	357	P	Pn	13 54 49.0	-2.1
	1.6nm7µm204nm,0.7s						
BAKI	Biak	6.89	41	P	Pn	13 55 08.5	-1.2
	0.5nm138nm,1.4s						
SANI	Sanana	7.04	308	P	Pn	13 55 13.1	+1.3
	0.3nm952nm47nm,0.4s						
SOEI	Soe	7.95	245		Pn	13 55 23.9	-0.3
SOEI	Soe	7.95	245	P	Pn	13 55 25.1	+0.8
	1.3nm122nm,0.7s						
SOEI				S	Sn	13 56 49.4	-3.2
	1.3nm122nm,0.7s						
BATI	Baumata	8.67	244	P	Pn	13 55 34.3	+0.2
	31nm,0.3s,baz=144,slow=3.7,SNR=33						
BATI				S	Sn	13 57 04.9	-5.4
	31nm,0.3s,baz=83,slow=12,SNR=9.7						
BATI	Baumata	8.67	244	P	Pn	13 55 34.5	+0.4
	62nm,0.7s						
KNRA	Kununurra	9.61	196	Pn	Pn	13 55 44.1	-2.7
JAY	Jayapura	9.91	67	P	Pn	13 55 52.0	+1.1
	1.9nm,0.3s,baz=218,slow=11,SNR=7.5						
EDFI	Ende, Flores	10.05	256	P	Pn	13 55 54.3	+1.4
	11nm,0.7s						
EDFI				S	Sn	13 57 41.5	-2.4
	11nm,0.7s						
BKSI	Bulukumba	11.42	275	P	Pn	13 56 10.5	-0.9
	11nm,0.8s						
BASI	Baing, Sumba	11.50	250	P	Pn	13 56 11.9	-0.6
	46nm,0.7s						
MRSI	Marisa	11.78	305	P	Pn	13 56 15.0	-1.2
	678nm18nm,0.7s						
KAPI	Kappang	11.83	276		Pn	13 56 16.3	-0.5
SPSI	Sidrap Palu	11.98	281	P	Pn	13 56 16.7	-2.2
	25nm,0.8s						
FITZ	Fitzroy Crossi	12.98	206	P	Pn	13 56 29.3	-2.7
	12nm,0.3s,baz=36,slow=12,SNR=175						
FITZ				S	Sn	13 58 42.1	-13
	3.5nm,0.3s,baz=90,slow=12,SNR=5.8						
FITZ	Fitzroy Crossi	12.98	206		Pn	13 56 29.0	-2.9
TOLI2	Tolitoli	13.09	304	Pn	Pn	13 56 32.5	-1.0
WB0	Warramunga Arr	13.57	169		Pn	13 56 36.0	-3.7
COEN	Coen	13.67	124	Pn	Pn	13 56 38.9	-2.2
WRAB	Tennant Creek	13.72	169		Pn	13 56 37.9	-3.8
WRA	Warramunga Arr	13.73	169	P	Pn	13 56 38.7	-3.1
	6.3nm,0.3s,baz=347,slow=13,SNR=132						
WRA				S	Sn	13 59 02.0	-11
	6.1nm,0.3s,baz=357,slow=23,SNR=7.2						
WRA	Warramunga Arr	13.73	169		Pn	13 56 37.1	-4.7
WB2	Warramunga Arr	13.73	169		Pn	13 56 38.6	-3.3
WR0	Warramunga Arr	13.78	168		Pn	13 56 38.8	-3.7
PLAI	Plampang	13.87	259	P	Pn	13 56 41.1	-2.6
	709nm29nm,0.5s						
TWSI	Taliwang, Sumb	14.73	260	P	Pn	13 56 52.7	-2.0
PMG	Port Moresby	15.74	102	P	P	13 57 09.9	+0.5
	3.2nm,0.3s,baz=343,slow=9.0,SNR=13						
PMG	Port Moresby	15.74	102	P	P	13 57 09.7	+0.3
PMG				IAmb	IAmb	13 57 13.4	
	comp=Z,24nm,0.7s						
ASAR	Alice Springs	17.31	173	P	P	13 57 27.5	+0.7
	comp=Z,3.1nm,0.3s,baz=352,slow=8.0,SNR=22						
ASAR				S	Sn	14 00 29.8	-10
	comp=Z,1.6nm,0.3s,baz=356,slow=27,SNR=5.7						
JAGI	Jajag, Banyuwa	17.38	262	Pn	Pn	13 57 26.8	-0.9
JAGI				IAmb	IAmb	13 57 37.9	
	comp=Z,22nm,0.9s						
PSA00	Pilbara Seismi	18.86	216	P	Pn	13 57 43.9	-1.5
PSA00				IAmb	IAmb	13 57 48.1	
	comp=Z,9.0nm,0.7s						
PSA00	Pilbara Seismi	18.86	216	P	P	13 57 42.3	-1.4
PSA00				IAmb	IAmb	13 58 10.1	
	comp=Z,4.9nm,0.8s						
KKM	Kota Kinabalu	19.68	309	P	P	13 57 54.0	+1.1
KKM				IAmb	IAmb	13 57 56.8	
	comp=Z,23nm,0.8s						
SBUM	Sibu	21.21	294	P	P	13 58 09.6	+0.3
SBUM				IAmb	IAmb	13 58 37.4	
	comp=Z,13nm,1.4s						
GIRL	Giralia	23.23	224	P	P	13 58 32.4	+2.5
CISI	Cisompet, Garu	23.59	266	P	P	13 58 34.7	+1.3
EIDS	Eidsvold	26.54	137	P	P	13 59 00.2	+0.3
EIDS				IAmb	IAmb	13 59 02.1	
	comp=Z,13nm,1.3s						
ANA2	Anatahan	26.59	32	P	P	13 59 01.7	+1.2
STKA	Stephens Creek	27.02	161	P	P	13 59 06.2	+2.1
	comp=Z,1.0nm,0.7s,baz=328,slow=17,SNR=1.5						
STKA	Stephens Creek	27.02	161	P	P	13 59 04.6	+0.5
KULM	Kulim	32.97	290	P	P	13 59 57.7	+0.8
KULM				IAmb	IAmb	14 00 04.2	
	comp=Z,7.8nm,1.2s						
GSI	Gunungsitoli	34.77	282	P	P	14 00 15.6	+3.0
CMAR	Chiang Mai Arr	40.56	308	P	P	14 01 03.0	+1.8
	comp=Z,1.2nm,0.5s,baz=138,slow=7.7,SNR=14						
CM31	Chiang Mai Arr	40.56	308	P	P	14 01 03.6	+2.3
CHTO	Chiang Mai	40.76	309	P	P	14 01 04.8	+2.0
CHTO				IAmb	IAmb	14 01 05.3	
	comp=Z,2.6nm,0.7s						
JWT	Wachi	41.62	5	P	P	14 01 12.1	+2.4
KMI	Kunming	42.05	319	P	P	14 01 15.2	+1.6
MK31	Makanchi Array	68.59	326	P	P	14 04 26.2	+2.7
MKAR	Makanchi Array	68.59	326	P	P	14 04 26.9	+3.4
	comp=Z,1.1nm,0.5s,baz=116,slow=7.4,SNR=22						
MKAR	Makanchi Array	68.59	326	P	P	14 04 26.2	+2.6
MAKZ	Makanchi	68.77	326	P	P	14 04 27.6	+3.0
SOCY	Socotra	79.28	284	P	P	14 05 29.1	+2.4
SOCY				IAmb	IAmb	14 05 43.9	
	comp=Z,6.7nm,1.0s						

WEL 15 13:54:07.4,38°S±3°×**17°6E**±1°3,**h216^{km}**±10^{km},**M3.8**/19, **MLv3.8**/19,**Error ellipse: s-maj=0.0km s-min=0.0km az=86.3,North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TLZ	Tolley Road	0.53	230	P	Pn	13 54 38.2	+1.7
PRRZ	Plateau Road	0.57	152	P	Pn	13 54 37.6	+1.0
MUGZ	Murupara	0.75	131	P	Pn	13 54 37.7	+0.3
MUGZ				S	S	13 54 59.8	-1.0
URZ	Urewera	0.88	108	P	Pn	13 54 38.3	+0.2
URZ				S	S	13 55 00.2	-1.7
URZ	Urewera	0.88	108	P	Pn	13 54 38.6	+0.5
URZ				S	S	13 55 00.1	-1.8
MRHZ	Matea Rd	0.89	161	P	Pn	13 54 39.2	+1.0
MRHZ				S	S	13 55 00.9	-1.5
RTZ	Ruatahuna	0.96	131	P	Pn	13 54 39.4	+0.7
RTZ				S	S	13 55 02.2	-0.8
RTZ	Ruatahuna	0.96	131	P	Pn	13 54 39.3	+0.6
RTZ				S	S	13 55 02.3	-0.7
MTHZ	Maungataniwha	1.06	144	P	Pn	13 54 40.4	+1.1
MTHZ				S	S	13 55 03.1	-1.0
MTHZ	Maungataniwha	1.06	144	P	Pn	13 54 40.4	+1.2
MTHZ				S	S	13 55 03.2	-0.9
MWZ	Matawai	1.22	107	P	Pn	13 54 40.9	+0.6
MWZ				S	S	13 55 04.6	-1.3
BKZ	Black Stump Fm	1.22	164	P	Pn	13 54 41.3	+0.9
BKZ				S	S	13 55 04.9	-1.2
RAHZ	Arahi	1.23	139	P	Pn	13 54 41.9	+1.5
RAHZ				S	S	13 55 06.2	+0.1
SNGZ	Shannon Statio	1.29	128	P	Pn	13 54 42.0	+1.2
SNGZ				S	S	13 55 06.1	-0.7
RUGZ	Raukumara Rang	1.29	89	P	Pn	13 54 40.4	-0.6
RUGZ				S	S	13 55 03.4	-3.5
RUGZ	Raukumara Rang	1.29	89	P	Pn	13 54 40.4	-0.6
RUGZ				S	S	13 55 03.5	-3.4
HAZ	Te Kaha	1.39	81	P	Pn	13 54 41.4	-0.2
HAZ				S	S	13 55 05.2	-2.9
HAZ	Te Kaha	1.39	81	P	Pn	13 54 41.6	-0.1
HAZ				S	S	13 55 05.3	-2.8
TKGZ	Te Karaka	1.49	108	P	Pn	13 54 43.4	+1.0
TKGZ				S	S	13 55 09.1	-0.4
PKGZ	Pakihiroa	1.61	87	P	Pn	13 54 44.0	+0.5
PKGZ				S	S	13 55 09.7	-1.7
PKGZ	Pakihiroa	1.61	87	P	Pn	13 54 43.9	+0.3
PKGZ				S	S	13 55 10.0	-1.4
KNZ	Kokohu	1.64	129	P	Pn	13 54 44.9	+1.2
CNGZ	Carnagh Statio	1.77	107	P	Pn	13 54 46.6	+1.7
MXZ	Matakaoa Point	1.84	77	P	Pn	13 54 46.0	+0.5
MXZ				S	S	13 55 13.6	-1.4
WMGZ	Waiomatatini S	1.88	85	P	Pn	13 54 46.4	+0.4
WMGZ				S	S	13 55 13.9	-1.8
MRZ	Mangatainoka R	2.69	188	P	Pn	13 54 54.8	+0.5
MRZ				S	S	13 55 30.2	-0.8
BFZ	Birch Farm	2.69	177	P	Pn	13 54 55.8	+1.4
BFZ				S	S	13 55 29.7	-1.3
TIWZ	Tintock	2.78	183	P	Pn	13 54 58.0	+2.5
TIWZ				S	S	13 55 32.0	-0.8
OGWZ	Otaki Gorge	2.90	193	P	Pn	13 54 57.5	+0.8
OGWZ				S	S	13 55 33.8	-1.4
HOWZ	Holdsworth Sta	2.93	188	P	Pn	13 54 57.7	+0.6
HOWZ				S	S	13 55 34.1	-1.7
KIW	Kapiti Island	3.00	197	P	Pn	13 54 58.2	+0.3
KIW				S	S	13 55 34.9	-2.3
TMWZ	Te Maipa	3.11	182	S	S	13 55 38.7	-0.9
MTW	Mount Morrison	3.19	187	P	Pn	13 55 00.2	+0.1
MTW				S	S	13 55 38.5	-2.7
CAW	Cannon Point	3.20	193	P	Pn	13 55 01.0	+0.8
CAW				S	S	13 55 39.8	-1.6
TCW	Tory Channel	3.50	203	S	S	13 55 45.6	-2.0
NNZ	Nelson	3.83	212	S	S	13 55 54.0	-0.7
QRZ	Quartz Range	3.93	223	S	S	13 55 55.9	-1.2
THZ	Tophouse	4.48	212	S	S	13 56 08.7	-0.6
KHZ	Kahutara	4.82	203	S	S	13 56 14.6	-2.3
DSZ	Denniston Nort	4.97	220	S	S	13 56 17.2	-3.3
LTZ	Lake Taylor	5.59	210	S	S	13 56 29.7	-4.9
INZ	Inchbonnie	5.89	215	S	S	13 56 37.0	-4.6
OXZ	Oxford	6.14	209	S	S	13 56 42.1	-5.3

KRSC 15 13:57:36.3±1.0,**56°.08N**×**164°.56E,h47^{km}**±16^{km},**ML3.7, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	Krutoberegovo	0.98	278	eP	Pn	13 57 54.0	+0.4
KBTR				S	Sn	13 58 04.6	-1.8
KBG	Krutoberegovo	1.05	281	eP	Pn	13 57 54.9	+0.3
KBG				S	Sn	13 58 07.6	-0.5
BKI	Bering	1.19	137	eP	Pn	13 57 59.1	+2.7
BKI				eS	Sn	13 58 14.3	+2.9
BDR	Baidarnaya	1.93	286	eP	Pn	13 58 09.7	+3.0
BDR				eS	Sn	13 58 33.3	+3.6
SRKR	Sorokina	1.97	288	eP	Pn	13 58 10.0	+2.8
SRKR				eS	Sn	13 58 33.9	+3.1
KLY	Klyuchi	2.19	278	eP	Pn	13 58 11.8	+1.6
KLY				eS	Sn	13 58 37.0	+0.9
KMNR	Kamenistaya	2.45	264	eP	Pn	13 58 17.6	+3.8
KMNR				eS	Sn	13 58 46.9	+4.3
TUMD	Tumrok D	2.52	251	eP	Pn	13 58 17.8	+3.2
TUMD				eS	Sn	13 58 47.0	+3.0
KZV	Kizimen	2.60	250	eP	Pn	13 58 19.2	+3.2
TUMR	Tumrok	2.62	254	eP	Pn	13 58 19.9	+3.7
KOZ	Kozyrevsk	2.63	272	eP	Pn	13 58 20.3	+4.2
KOZ				eS	Sn	13 58 50.3	+3.5
SRDR	Sredinnyy	2.71	277	eP	Pn	13 58 21.7	+4.3
SRDR				eS	Sn	13 58 53.1	+4.1
OSSR	Ossora	3.28	346	eP	Pn	13 58 28.1	+3.0
ESO	Esso	3.29	270	eP	Pn	13 58 30.1	+4.8
KII	Karymskiy	3.58	237	eP	Pn	13 58 32.6	+3.3
PALN	Palana	3.90	323	P	Pn	13 58 37.2	+3.6
KRER	Koryakskii	4.37	233	eP	Pn	13 58 43.5	+3.3
SMAR	Somma	4.37	232	eP	Pn	13 58 43.4	+3.1
KRX	Arik	4.38	234	eP	Pn	13 58 43.6	+3.3
AVH	Avacha	4.40	233	eP	Pn	13 58 44.4	+3.9
UGLR	Uglovaya	4.40	232	eP	Pn	13 58 44.1	+3.6
KOK	Koryaka	4.43	233	eP	Pn	13 58 44.2	+3.3
TILK	Tilichiki	4.46	10	P	Pn	13 58 46.3	+5.1
TILK				S	Sn	13 59 35.0	+3.2
GNL	Ganaly	4.50	241	eP	Pn	13 58 46.0	+4.0
DALK	Dalny	4.55	230	eP	Pn	13 58 45.7	+3.2
KRMR	Karymshinskiy	4.96	232	eP	Pn	13 58 52.7	+4.5
KRMR				eS	Sn	13 59 48.7	+4.5
GRL	Gorelyy	5.18	230	eP	Pn	13 58 55.4	+4.1
MTVR	Mutnovka	5.19	229	eP	Pn	13 58 55.3	+3.9

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*IDC **15** 14:05:06.7±2.9,59°.76N×21°.59E,h0^{km},mb1 3.1/3, mb1mx2.8/44,mbtmp3.0/3,ML1.2/2,Error ellipse: s-maj=44.8km s-min=10.7km az=160.0*

*HEL **15** 14:05:06.4±0.1,59°.70N×21°.32E,h0^{km},ML1.6, ML1.9(UPP),Explosion*

*UPP **15** 14:05:07.0±0.7,59°.70N×21°.10E,h0^{km},ML1.9,Suspected explosion*

ISC 15 14:05:03.9±0.8,**59°.68N**±0°.03×**21°.31E**±0°.02,**h0^{km},n31, σ0^{s}78**/41,**Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAL	Aland	0.83	308	P	Pb	14 05 20.9	-0.2
AAL				S	Sb	14 05 32.0	-0.9
AAL	Aland	0.83	308	eP	Pb	14 05 21.0	-0.2
AAL				eS	Sb	14 05 31.8	-1.0
NRTU	Norrtaelje	1.36	271	P	Pb	14 05 30.6	+0.5
NRTU	Norrtaelje	1.36	271	eP	Pb	14 05 30.5	+0.4
NRTU				eS	Sn	14 05 48.9	+0.2
RAF	Rauma	1.37	9	eP	Pb	14 05 30.6	+0.3
RAF				eS	Sb	14 05 48.3	0.0
GRAU	Graesoe	1.54	296	P	Pn	14 05 32.6	+0.1
GRAU				S	Sg	14 05 53.9	+0.6
GRAU	Graesoe	1.54	296	eP	Pn	14 05 32.6	+0.1
GRAU				eS	Sg	14 05 53.9	+0.6
MTSE	Matsula	1.61	126	eP	Pg	14 05 35.3	+0.6
MTSE				eS	Sg	14 05 56.5	+0.9
MEF	Metsahovi	1.64	70	eP	Pg	14 05 35.2	-0.1
MEF				eS	Sn	14 05 55.9	+0.2
MEF				MSG		14 06 01.1	
	comp=Z,7.9nm,0.1s						
FORU	Forsmark	1.73	296	P	Pb	14 05 36.1	-0.3
FORU				S	Sg	14 05 59.3	+0.1
FORU	Forsmark	1.73	296	eP	Pb	14 05 36.1	-0.3
FORU				eS	Sg	14 05 59.3	+0.1
FLYU	Flymyra	1.79	286	P	Pb	14 05 37.0	-0.4
FLYU	Flymyra	1.79	286	eP	Pb	14 05 37.0	-0.4
NYNU	Nynaeshamn	1.82	250	P	Pg	14 05 39.0	+0.1
NYNU	Nynaeshamn	1.82	250	eP	Pg	14 05 39.0	+0.1
NUR	Nurmijrvi	1.87	62	eP	Pb	14 05 39.0	+0.2
NUR				eS	Sb	14 06 03.0	+0.3
NUR				MSG		14 06 06.2	
	comp=Z,2.2nm,0.1s						
FIBU	Brunna	2.02	278	P	Pb	14 05 41.3	0.0
SLIT	Slitere, Latvi	2.12	166	eP	Pb	14 05 43.2	+0.1
BACU	Backbrunna	2.13	276	P	Pb	14 05 43.3	0.0
BACU	Backbrunna	2.13	276	eP	Pb	14 05 43.3	0.0
OSTU	Oestervaala	2.17	286	P	Pb	14 05 43.7	-0.4
OSTU	Oestervaala	2.17	286	eP	Pb	14 05 43.7	-0.4
ARBE	Arbavere	2.39	94	eS	Sn	14 06 15.5	+1.3
PVF	Pernaja	2.44	67	MSG		14 06 22.0	
	comp=Z,3.2nm,0.1s						
GOTU	Gotland	2.46	217	eP	Pb	14 05 47.6	-1.3
GOTU				eS	Sb	14 06 18.8	-0.9
ARNU	Arnoeviken	2.80	318	eP	Pn	14 05 51.8	+2.0
ARNU				eS	Sn	14 06 25.7	+1.6
FINES	FINESS Array B	2.94	51	Pn	Pb	14 05 54.8	-2.4
	comp=Z,0.1nm,0.3s,baz=234,slow=13,SNR=8.4						
FINES				Lg	Lg	14 06 31.8	
	comp=Z,0.2nm,0.3s,baz=250,slow=22,SNR=8.0						
FIA1	FINESS Array S	2.94	51	MSG		14 06 36.8	
	comp=Z,1.0nm,0.1s						
KEF	Keuruu	3.04	33	MSG		14 06 41.7	
	comp=Z,1.1nm,0.1s						
NOA	NORSAR Array B	5.20	290	Pn	Pn	14 06 23.9	+1.0
	comp=Z,0.0nm,0.3s,baz=105,slow=13,SNR=2.6						
ARCES	ARCESS Array B	10.05	8	Pn	Pn	14 07 29.1	-0.2
	baz=191,slow=14,SNR=6.5						

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*IDC **15** 14:14:14.5±0.5,34°.36N×76°.24E,h0^{km},mb4.2/27, mb1 4.4/32,mb1mx4.2/60,mbtmp4.2/32,ML3.9/5,MS3.4/3, Ms1 3.4/3,ms1mx3.0/54,Error ellipse: s-maj=13.6km s-min=11.2km az=35.0*

*MOS **15** 14:14:18.2±1.1,34°.49N×76°.23E,h35^{km},mb4.6/17,Error ellipse: s-maj=7.5km s-min=3.7km az=93.9*

*NEIC **15** 14:14:21.0±1.3,34°.43N±0°.07×76°.20E±0°.10,h48^{km}±7^{km}, mb4.7/97,Error ellipse: s-maj=11.7km s-min=9.6km az=111.0*

*BJI **15** 14:14:22.7±0.0,34°.57N×76°.94E,h30^{km},mB4.6/22, mb4.3/35,ML4.3/6,Ms4.0/15,Ms7 3.9/13*

*NNC **15** 14:14:28.5±3.7,34°.96N×76°.07E,h97^{km}±25^{km},mb4.1, mpv4.3,Error ellipse: s-maj=32.9km s-min=21.8km az=0.0*

ISC 15 14:14:19.5±0.3,**34°.51N**±0°.04×**76°.22E**±0°.04,**h35^{km},n301, σ1^{s}98**/316,**mb4.6**/85,**MS3.9**/3,**8C-9D,Eastern Kashmir**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JMU	Jammu	2.10	212	eP	Pn	14 14 49.5	-2.6
JMU				eS	Sn	14 15 18.5	+1.6
THN	Thein Dam	2.11	192	eP	Pn	14 14 54.5	+2.2
THN				eS	Sn	14 15 24.0	+6.7
DHRM	DHARAMSHALA	2.25	178	eP	Pn	14 14 55.2	+0.7
DHRM				eS	Sn	14 15 25.5	+4.3
DHRM				IAML		14 15 30.8	
	comp=N,3µm,0.8s						
DHRM				IAML		14 15 33.8	
	comp=E,4µm,0.0s						
NIL	Nilore	2.60	252	P	Pn	14 15 01.4	+2.3
NIL	Nilore	2.60	252		Pn	14 15 01.4	+2.3
BHK	Bhakra	3.09	177	eP	Pn	14 15 09.0	+3.2
BHK				ex	x	14 15 52.5	
SMLA	Simla	3.46	166	eP	Pn	14 15 11.8	+1.0
SMLA				i x	x	14 15 19.1	
SMLA				eS	Sn	14 15 54.6	+3.9
SMLA				IAML		14 16 06.3	
	comp=N,2µm,0.6s						
SMLA				IAML		14 16 06.6	
	comp=E,2µm,1.0s						
CEP	Cherat	3.64	260	P	Pn	14 15 15.4	+2.0
THW	Thamme Wali	4.10	247	P	Pn	14 15 20.2	+0.5
DDI	Dehra Dun	4.46	159	eP	Pn	14 15 25.1	+0.6
DDI				eS	Sn	14 16 18.4	+3.2
KSH	Kashi	5.00	358	Pn	Pn	14 15 34.4	+2.3
KSH				Sn	Sn	14 16 31.5	+2.7
KSH				smax	smax		
	comp=E,270nm,0.6s						
KSH				smax	smax		
	comp=E,230nm,0.7s						
NDI	New Delhi	5.87	171	eP	Pn	14 15 45.0	+1.0
NDI				ex	x	14 17 18.0	
KBL	Kabul	5.92	272	P	Pn	14 15 45.2	+0.3
KBL	Kabul	5.92	272	Pn	Pn	14 15 45.2	+0.3
ULHL	Ulahol	7.72	0	P	Pn	14 16 13.7	+4.1
	SNR=7.9						
UCH	Uchtor	7.82	351	P	Pn	14 16 14.3	+3.2
	SNR=68						
AML	Almayashu	7.86	346	P	Pn	14 16 14.2	+2.6
	SNR=84						
KBK	Karagaybulak	8.20	353	P	Pn	14 16 19.9	+3.9
	SNR=18						
AAK	Ala-Archa	8.23	351	Pn	Pn	14 16 19.9	+3.5
	comp=E,3.0nm,0.3s,baz=152,slow=6.5,SNR=56						
AAK				LR	LR	14 19 46.8	
	comp=E,258nm,19.4s,baz=177,slow=40						
AAK	Ala-Archa	8.23	351	P	Pn	14 16 19.9	+3.5
	SNR=18						
AAK	Ala-Archa	8.23	351	⇑P	Pn	14 16 19.9	+3.5
	comp=E,9.5nm,0.6s						
AAK	Ala-Archa	8.23	351	Pn	Pn	14 16 19.4	+3.0
EKS2	Erkin-Say	8.36	348	P	Pn	14 16 21.4	+3.2
	SNR=24						
TKM2	Tokmak 2	8.41	357	P	Pn	14 16 22.7	+3.7
	SNR=17						
TKM2	Tokmak 2	8.41	357	⇑P	Pn	14 16 22.1	+3.1
	comp=E,12nm,0.7s						
TKM2	Tokmak 2	8.41	357	i P	Pn	14 16 22.1	+3.1
TKM2				pmax	pmax		
	comp=Z,12nm,0.7s						
TNSS	Tian-Shan	8.53	4	eP	Pn	14 16 23.0	+2.2
	baz=4.6						
TNSS	Tian-Shan	8.53	4	eP	Pn	14 16 23.0	+2.2
CHMS	Chumysh	8.55	353	P	Pn	14 16 24.1	+3.4
	SNR=10						
MDOK	Medeo	8.66	4	eP	Pn	14 16 25.5	+3.0
	baz=5.0						
MDOK	Medeo	8.66	4	⇓P	Pn	14 16 25.9	+3.5
	comp=Z,3.5nm,0.6s						
MDOK	Medeo	8.66	4	eP	Pn	14 16 25.4	+3.0
AAA	Alma-Ata	8.70	3	eP	Pn	14 16 24.6	+1.7
	baz=4.3						
AAA	Alma-Ata	8.70	3	eP	Pn	14 16 24.6	+1.7
SATY	Saty	8.71	11	eP	Pn	14 16 26.2	+3.2
	baz=12						
SATY	Saty	8.71	11	eP	Pn	14 16 26.2	+3.2
USP	Ospenovka	8.85	352	P	Pn	14 16 27.6	+2.8
	SNR=12						
UZB	Uzynbulak	8.90	13	eP	Pn	14 16 28.7	+3.0
	comp=Z,6.0nm,1.3s,baz=15						
UZB	Uzynbulak	8.90	13	eP	Pn	14 16 28.6	+3.0
UZB				pmax	pmax		
	comp=Z,6.0nm,1.3s						
DANN	Dangsing	8.90	132	ePn	Pn	14 16 23.5	-2.3
DANN				eSn	Sn	14 18 01.0	-4.0
	comp=Z,131nm,0.5s						
SHLS	Shalkode	9.00	15	eP	Pn	14 16 31.0	+4.1
	comp=Z,5.9nm,0.6s,baz=19						
SHLS	Shalkode	9.00	15	eP	Pn	14 16 31.0	+4.1
SHLS				pmax	pmax		
	comp=Z,6.0nm,0.6s						
SGDS	Sogindy	9.02	353	eP	Pn	14 16 29.5	+2.3
	baz=353						
SGDS	Sogindy	9.02	353	eP	Pn	14 16 29.4	+2.3
IUG	Iuzhnay	9.04	329	eP	Pn	14 16 28.3	+0.7
	baz=329						
IUG	Iuzhnay	9.04	329	eP	Pn	14 16 28.2	+0.7
KPKS	Kokpek	9.15	11	eP	Pn	14 16 32.1	+3.1
	comp=Z,7.2nm,0.5s,baz=13						
KPKS	Kokpek	9.15	11	eP	Pn	14 16 32.0	+3.1
KPKS				pmax	pmax		
	comp=Z,7.0nm,0.5s						
PDGK	Podgornoye	9.17	15	⇑P	Pn	14 16 32.4	+3.1
	comp=Z,22nm,0.5s						
PDGK	Podgornoye	9.17	15	i P	Pn	14 16 32.7	+3.4
PDGK				pmax	pmax		
	comp=Z,22nm,0.4s						
DZA	Taraz	9.20	337	eP	Pn	14 16 30.6	+1.0
	comp=Z,14nm,0.5s,baz=337						
DZA	Taraz	9.20	337	eP	Pn	14 16 30.6	+1.0
DZA				pmax	pmax		
	comp=Z,14nm,0.5s						
CHKK	Chushkaly	9.35	3	eP	Pn	14 16 34.1	+2.4
	baz=4.3						
CHKK	Chushkaly	9.35	3	eP	Pn	14 16 34.1	+2.4
KUU	Kurty	9.37	1	eP	Pn	14 16 33.4	+1.4
	baz=1.3						
KUU	Kurty	9.37	1	eP	Pn	14 16 33.3	+1.4
KK31	Karatay Array	9.66	334	⇓P	Pn	14 16 36.0	0.0
	comp=Z,39nm,0.7s,baz=147,slow=12,SNR=371						
KK31				⇓S	Sn	14 18 21.5	-1.8
	comp=Z,23nm,0.5s						
KK31	Karatay Array	9.66	334	P	Pn	14 16 36.3	+0.3
KK31	Karatay Array	9.66	334	Pn	Pn	14 16 36.3	+0.3
KKAR	Karatay Array	9.66	334	P	Pn	14 16 36.4	+0.4
KKAR	Karatay Array	9.66	334	Pn	Pn	14 16 36.4	+0.4
KKAR	Karatay Array	9.66	334	Pn	Pn	14 16 36.3	+0.3
GKN	Gorkha	9.69	130	ePn	Pn	14 16 33.8	-2.8
GKN				eSn	Sn	14 18 18.6	-5.7
	comp=Z,84nm,0.4s						
KKN	Kakani	10.25	128	ePn	Pn	14 16 41.5	-2.8
DMN	Daman	10.26	130	ePn	Pn	14 16 42.6	-1.9
PKIN	Phulchoki	10.47	129	ePn	Pn	14 16 45.0	-2.3

PKI	Pulchoki	10.48	129	*e*Pn	Pn	14 16 45.0	-2.6
PKI				*e*Sn	Sn	14 18 38.7	-5.3
	comp=Z,111nm,0.8s						
GUN	Gumba	10.56	126	*e*Pn	Pn	14 16 45.6	-3.1
BTLS	Baital	10.65	352	*e*P	Pn	14 16 51.1	+1.6
	baz=352						
BTLS	Baital	10.65	352	*e*P	Pn	14 16 51.0	+1.6
BHPL	Bhopal	11.28	174	*e*P	Pn	14 16 55.3	-2.9
BHPL				*e*x	x	14 18 43.7	
HRA	Herat	11.54	273	Pn	Pn	14 17 01.4	-0.5
RAMN	Ramite	11.68	127	*e*Pn	Pn	14 17 00.3	-3.6
TAPN	Taplejung	12.17	123	*e*Pn	Pn	14 17 07.2	-3.4
ODAN	Odare	12.27	125	*e*Pn	Pn	14 17 07.9	-4.0
WMQ	Urumqi	12.86	40	*e*P	Pn	14 17 22.6	+2.8
WMQ				pP	P	14 17 29.8	-0.3
WMQ				S	Sn	14 19 37.9	-3.8
WMQ				pmax	pmax		
	comp=Z,17nm,0.8s						
WMQ				pmax	pmax		
	comp=Z,140nm,4.3s						
WMQ				LR	LR		
	comp=Z,300nm,15.7s						
WMQ				LR	LR		
	comp=Z,630nm,16.5s						
WMQ	Urumqi	12.86	40	P	Pn	14 17 19.3	-0.5
WMQ	Urumqi	12.86	40		Pn	14 17 19.3	-0.5
MAKZ	Makanchi	13.04	18	⇓P	Pn	14 17 22.4	+0.4
	comp=Z,5.1nm,0.5s						
MAKZ				⇓S	Sn	14 19 45.5	-0.2
	comp=Z,2.6nm,0.6s						
MAKZ	Makanchi	13.04	18	P	Pn	14 17 22.0	0.0
MAKZ	Makanchi	13.04	18		Pn	14 17 22.0	0.0
MK31	Makanchi Array	13.10	19	P	Pn	14 17 23.2	+0.2
	comp=Z,1.6nm,0.4s,baz=197,slow=12,SNR=66						
MK31				⇓S	Sn	14 19 47.7	+0.3
	comp=Z,3.6nm,0.6s,baz=199,slow=24,SNR=5.0						
MK31	Makanchi Array	13.10	19	*i* P	Pn	14 17 23.0	0.0
MK31				pmax	pmax		
	comp=Z,2.0nm,0.4s						
MK31	Makanchi Array	13.10	19	Pn	Pn	14 17 22.5	-0.5
MKAR	Makanchi Array	13.10	19	Pn	Pn	14 17 23.4	+0.4
	comp=Z,0.7nm,0.3s,baz=198,slow=13,SNR=45						
MKAR				Sn	Sn	14 19 43.6	-3.9
	comp=Z,0.2nm,0.3s,baz=192,slow=19,SNR=3.0						
MKAR				LR	LR	14 22 15.5	
	comp=Z,65nm,20.8s,baz=161,slow=36						
MKAR	Makanchi Array	13.10	19	P	Pn	14 17 22.3	-0.7
MKAR						14 19 43.6	
MKAR	Makanchi Array	13.10	19	Pn	Pn	14 17 22.3	-0.7
LSA	Lhasa	13.53	107	P	Pn	14 17 26.6	-2.8
LSA	Lhasa	13.53	107	Pn	Pn	14 17 26.6	-2.8
NGP	Nagpur	13.54	169	*e*x	Pn	14 17 26.1	-3.0
NGP				IAmb	IAmb	14 17 27.8	
	comp=Z,20nm,0.9s						
BOK	Bokaro	13.61	139	*e*P	Pn	14 17 24.6	-5.4
BOK				IAmb	IAmb	14 17 27.1	
	comp=Z,5.3nm,0.6s						
ZSN	Zaisan	14.47	24	*e*P	Pn	14 17 43.1	+1.5
	baz=25						
ZSN	Zaisan	14.47	24	*e*P	Pn	14 17 43.1	+1.5
GEYT	Alibeck	15.00	288	Pn	Pn	14 17 45.8	-3.1
	comp=Z,0.5nm,0.3s,baz=125,slow=12,SNR=4.3						
GEYT	Alibeck	15.00	288	Pn	Pn	14 17 47.9	-0.9
GYA0B	ALIBECK ARRAY	15.00	288	Pn	Pn	14 17 47.4	-1.4
BRZS	Berezniki	15.68	352	*e*P	Pn	14 17 58.0	+0.4
	baz=352						
BRZS	Berezniki	15.68	352	*e*P	Pn	14 17 58.0	+0.4
SEM	Semipalatinsk	16.16	9	*e*P	Pn	14 18 04.8	+0.8
	baz=9.9						
SEM	Semipalatinsk	16.16	9	*e*P	Pn	14 18 04.7	+0.8
KURBB	Kurchatov Arra	16.19	5	Pn	Pn	14 18 02.7	-1.5
	comp=Z,0.2nm,0.3s,baz=191,slow=11,SNR=39						
SHL	Shillong	16.22	119	*e*P	Pn	14 17 57.2	-7.6
SHL				IAmb	IAmb	14 17 58.6	
	comp=Z,6.2nm,0.8s						
SHL	Shillong	16.22	119		Pn	14 17 57.5	-7.3
KURK	Kurchatov	16.29	5	⇑P	Pn	14 18 04.7	-0.7
	comp=Z,28nm,1.0s						
KURK	Kurchatov	16.29	5	*i* P	Pn	14 18 04.1	-1.3
KURK				pmax	pmax		
	comp=Z,28nm,1.0s						
KURK	Kurchatov	16.29	5		Pn	14 18 03.0	-2.4
KURK				IAmb	IAmb	14 18 09.8	
	comp=Z,32nm,1.0s						
HYB	Hyderabad	17.15	172	*i* P	Pn	14 18 10.0	-6.5
HYB				*e*S	S	14 21 36.0	+1.3
DGZ	Jazzator, Alta	17.28	25	*i* P	Pn	14 18 18.1	+0.1
SAIH	SAIHA	18.96	125	*e*P	P	14 18 35.8	-2.1
SAIH				IAmb	IAmb	14 18 39.6	
	comp=Z,14nm,1.0s						
BVAR	Borovoye Array	18.97	349	P	P	14 18 38.1	+0.5
	comp=Z,2.1nm,0.3s,baz=134,slow=12,SNR=28						
AB31	Akbulak array	19.02	326	P	P	14 18 37.8	-0.3
	comp=Z,8.0nm,0.7s,baz=132,slow=12,SNR=106						
AB31				⇑S	Sn	14 22 01.9	-8.9
	comp=Z,6.4nm,0.7s,baz=266,slow=41,SNR=6.0						
AB31	Akbulak array	19.02	326	*i* P	P	14 18 37.8	-0.3
AB31				pmax	pmax		
	comp=Z,8.0nm,0.6s						
ABKAR	Akbulak array	19.02	326	P	P	14 18 37.0	-1.1
BRVK	Borovoye	19.02	349	⇑P	P	14 18 38.6	+0.5
	comp=Z,9.6nm,0.7s						
BRVK	Borovoye	19.02	349	P	P	14 18 38.2	+0.1
BRVK				pmax	pmax		
	comp=Z,13nm,0.7s						
BRVK	Borovoye	19.02	349		P	14 18 38.2	+0.1
WSAR	Wadi Sarin	19.03	238	P	P	14 18 36.1	-2.4
	comp=Z,0.1nm,0.3s,baz=295,slow=16,SNR=2.3						
GTA	Gaotai	19.46	69	P	Pn	14 18 45.4	+0.8
GTA				pP	pP	14 18 51.4	-2.1
GTA				sP	sP	14 18 54.5	-4.0
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,61nm,5.3s						
GTA				LR	LR		
	comp=Z,180nm,17.8s						
GTA				LR	LR		
	comp=Z,170nm,17.1s						
GTA				LR	LR		
	comp=Z,190nm,18.9s						
ZAA0	Zalesovo Array	20.36	15	⇑P	P	14 18 52.6	-0.1
	comp=Z,1.9nm,0.5s						
ZAA0	Zalesovo Array	20.36	15	P	P	14 18 52.0	-0.7
ZAA0				IAmb	IAmb	14 18 54.7	
	comp=Z,16nm,0.6s						
ZALV	Zalesovo Beam	20.36	15	P	P	14 18 52.6	-0.1
	comp=Z,17nm,0.4s,baz=209,slow=10,SNR=78						
ZALV	Zalesovo Beam	20.36	15	P	P	14 18 51.7	-1.0
AKTO	Aktyubinsk	20.73	326	P	P	14 18 57.9	+1.0
	comp=Z,48nm,0.7s,baz=120,slow=9.9,SNR=132						
AKTO	Aktyubinsk	20.73	326	⇓P	P	14 18 57.8	+1.0
	comp=Z,64nm,0.8s						
LZH	Lanzhou	22.58	78	*e*P	P	14 19 20.4	+3.4
LZH				pP	pP	14 19 28.4	+1.1
LZH				sP	sP	14 19 33.3	+1.0
LZH				pmax	pmax		
	comp=Z,13nm,1.2s						
CD2	Chengdu	23.42	91	P	P	14 19 25.1	-0.4
CD2				pmax	pmax		
	comp=Z,10.0nm,1.6s						
UMR	Umm Al-Rimmam	24.62	266	*e*P		14 19 37.9	
SVE	Sverdlovsk	24.72	339	*e*P	P	14 19 38.8	+1.6
SVE				pmax	pmax		
	comp=Z,14nm,0.9s						
KMI	Kunming	24.78	105	⇓P	P	14 19 38.0	-0.3
KMI				pP	pP	14 19 51.3	+1.9
KMI				sP	sP	14 19 55.3	+1.1
KMI				PP	PnPn	14 20 17.4	+6.2
KMI				pmax	pmax		
	comp=Z,9.0nm,0.6s						
MIB	Mutribah	24.85	267	*e*P		14 19 39.5	
RDF	Al-Radifah	24.97	265	*e*P		14 19 40.8	
ARU	Arti	25.03	337	P	P	14 19 41.6	+1.6
	comp=Z,5.2nm,0.6s,baz=143,slow=6.2,SNR=27						
ARU	Arti	25.03	337	*d i*P	P	14 19 41.5	+1.6
ARU				*PP	sP	14 19 58.4	+2.6
ARU						14 20 16.4	
ARU				S	S	14 23 57.7	-3.9
ARU				pmax	pmax		
	comp=Z,13nm,0.6s						
ARU	Arti	25.03	337	P	P	14 19 41.1	+1.1
ARU				IAmb	IAmb	14 19 42.2	
	comp=Z,16nm,0.6s						
RST	Umm Al-Ruwaisa	25.23	267	*e*P		14 19 42.6	
CHTO	Chiang Mai	25.54	122	P	P	14 19 43.8	-1.2
CHTO				pmax	pmax		
	comp=Z,4.0nm,0.7s						
CHTO	Chiang Mai	25.54	122	P	P	14 19 43.8	-1.2
CM33	Chiang Mai Arr	25.54	122	P	P	14 19 46.0	+1.0
CMMT	Chiang Mai	25.55	122	P	P	14 19 46.6	+1.5
GNI	Garni	25.57	292	P	P	14 19 47.8	+2.5
	comp=Z,18nm,0.9s,baz=179,slow=1.0,SNR=6.7						
GNI	Garni	25.57	292	P	P	14 19 46.7	+1.4
GNI				IAmb	IAmb	14 19 51.0	
	comp=Z,24nm,1.1s						
CM32	Chiang Mai Arr	25.58	122	P	P	14 19 46.0	+0.6
CM34	Chiang Mai Arr	25.66	122	P	P	14 19 46.0	-0.1
CM15	Chiang Mai Arr	25.77	123	P	P	14 19 50.8	+3.7
CM13	Chiang Mai Arr	25.78	123	P	P	14 19 48.0	+0.8
CM31	Chiang Mai Arr	25.78	123	P	P	14 19 52.9	+5.7
CMAR	Chiang Mai Arr	25.78	123	P	P	14 19 45.7	-1.5
	comp=Z,2.6nm,0.7s,baz=315,slow=9.8,SNR=21						
CM02	Chiang Mai Arr	25.80	123	P	P	14 19 47.9	+0.6
CM01	Chiang Mai Arr	25.82	123	P	P	14 19 48.0	+0.5
CM05	Chiang Mai Arr	25.82	123	P	P	14 19 48.0	+0.5
CM09	Chiang Mai Arr	25.82	122	P	P	14 19 53.0	+5.4
CM04	Chiang Mai Arr	25.84	123	P	P	14 19 48.8	+1.0
CM36	Chiang Mai Arr	25.85	122	P	P	14 19 50.0	+2.2
SONM	Songino Array	26.14	50	P	P	14 19 52.2	+1.9
	comp=Z,2.5nm,0.8s,baz=247,slow=9.1,SNR=13						
SONM	Songino Array	26.14	50	P	P	14 19 50.8	+0.5
ULN	Ulaanbaatar	26.57	51	*i* P	P	14 19 56.9	+2.7
ULN				pmax	pmax		
	comp=Z,1.0nm,0.3s						
XAN	Xi'an	26.97	82	P	P	14 19 57.4	-0.5
XAN				pP	pP	14 20 11.0	+2.0
XAN				pmax	pmax		
	comp=Z,4.0nm,1.2s						
BELG	Belogornoye	27.13	320	P	P	14 20 02.1	+3.1
	comp=Z,6.7nm,0.6s,baz=118,slow=3.1,SNR=4.4						
KBZ	Khabaz	27.29	300	P	P	14 20 02.2	+1.7
	comp=Z,0.9nm,0.7s,baz=119,slow=5.5,SNR=3.6						
GYA	Guiyang	27.36	99	*e*P	P	14 20 03.4	+1.9
GYA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
GYA				LR	LR		
	comp=Z,460nm,25.7s						
HHC	Hu-ho-hao-te	28.55	67	*e*P	P	14 20 13.8	+1.8
HHC				S	S	14 24 56.8	-0.9
HHC				pmax	pmax		
	comp=Z,6.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,190nm,4.8s						
HHC				LR	LR		
	comp=Z,310nm,12.1s						
HHC				LR	LR		
	comp=Z,380nm,12.1s						
HHC				LR	LR		
	comp=Z,360nm,12.6s						
RAYN	Ar Rayn	28.90	256	P	P	14 20 15.0	-0.2
RAYN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
RAYN	Ar Rayn	28.90	256	P	P	14 20 15.0	-0.2
KIRV	Kirov	29.95	332	LR	LR	14 33 11.6	
	comp=Z,157nm,19.5s,baz=157,slow=38						
SOCY	Socotra	30.04	228	P	P	14 20 22.5	-2.8
SOCY				IAmb	IAmb	14 20 24.5	
	comp=Z,13nm,1.3s						
TOKA	Tokat	31.89	292	P	P	14 20 41.5	0.0
BR131	Keskin Array S	34.11	291	P	P	14 21 01.6	+0.7
BR131				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BR131	Keskin Array S	34.11	291	P	P	14 21 01.6	+0.7
BRTR	Keskin Array B	34.11	291	P	P	14 21 01.6	+0.7
	comp=Z,0.6nm,0.6s,baz=107,slow=8.3,SNR=5.2						
NRIK	Noril'sk	35.45	7	P	P	14 21 13.2	+1.2
	comp=Z,3.4nm,0.6s,baz=192,slow=5.8,SNR=4.5						
NRIK	Noril'sk	35.45	7	*ce*P	P	14 21 13.7	+1.7
NRIK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
NRIK	Noril'sk	35.45	7	P	P	14 21 12.5	+0.6
NRIK				IAmb	IAmb	14 21 17.0	
	comp=Z,8.1nm,1.1s						
NJ2	Nanjing	35.54	82	*e*P	P	14 21 13.3	+0.1
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
AKASG	Malin Array Be	37.49	310	P	P	14 21 30.0	+0.4
	comp=Z,1.7nm,0.6s,baz=81,slow=6.6,SNR=4.6						
AKASG				PP	PnPn	14 22 56.2	-0.2
	comp=Z,2.3nm,0.7s,baz=90,slow=12,SNR=6.8						
AKASG	Malin Array Be	37.49	310	P	P	14 21 29.5	-0.1
AKASG						14 22 56.2	
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.8s						
AKASG	Malin Array Be	37.49	310	P	P	14 21 29.5	-0.1
GSI	Gunungsitoli	38.59	144	P	P	14 21 39.5	+0.2
GSI				IAmb	IAmb	14 21 42.3	
	comp=Z,12nm,0.8s						
MLR	Muntele Rosu	39.45	302	P	P	14 21 48.8	+2.4
	comp=Z,4.2nm,0.7s,baz=181,slow=3.9,SNR=9.8						
MLR	Muntele Rosu	39.45	302	P	P	14 21 48.1	+1.8
MLR				IAmb	IAmb	14 21 59.5	
	comp=Z,7.7nm,1.0s						
BURAR	Bucovina Array	39.92	305	P	P	14 21 50.4	+0.2
LVZ	Lovozero	40.90	337	P	P	14 21 56.9	-1.0
LVZ				pmax	pmax		
	comp=Z,84nm,1.3s						
LVZ	Lovozero	40.90	337	P	P	14 21 56.9	-1.0
FIA1	FINESS Array S	41.50	326	P	P	14 22 02.9	+0.1
FIA1				IAmb	IAmb	14 22 11.5	
	comp=Z,21nm,1.4s						
FINES	FINESS Array B	41.50	326	P	P	14 22 04.0	+1.1
	comp=Z,2.1nm,0.4s,baz=118,slow=9.6,SNR=16						
FINES	FINESS Array B	41.50	326	P	P	14 22 04.0	+1.1
FINES	FINESS Array B	41.50	326	P	P	14 22 02.8	-0.1
KSRS	Korea Array	41.52	70	P	P	14 22 05.1	+1.8
	comp=Z,1.0nm,0.8s,baz=288,slow=8.5,SNR=2.9						
VTS	Vitosha	41.63	297	P	P	14 22 04.4	0.0
VTS				pmax	pmax		
	comp=Z,3.0nm,1.0s						
VTS	Vitosha	41.63	297	P	P	14 22 04.4	0.0
KOLS	Kolonicke sedl	41.88	307	*e*P	P	14 22 07.7	+1.5
KOLS	Kolonicke sedl	41.88	307	*e*P	P	14 22 07.7	+1.5
LIT	Litokhoron	42.56	294	P	P	14 22 12.0	+0.2
LIT	Litokhoron	42.56	294	P	P	14 22 12.0	+0.2
AGG	Agios Georgios	42.88	292	P	P	14 22 14.9	+0.4
AGG				pmax	pmax		
	comp=Z,11nm,1.2s						
AGG	Agios Georgios	42.88	292	P	P	14 22 14.9	+0.4
AGG				IAmb	IAmb	14 22 33.0	
	comp=Z,11nm,1.2s						
KLR	Kul'dur	42.93	53	P	P	14 22 16.3	+1.6
	comp=Z,0.6nm,0.6s,baz=285,slow=12,SNR=2.0						
KLR	Kul'dur	42.93	53	*i* P	P	14 22 21.5	+6.8
KLR				pmax	pmax		
	comp=Z,2.0nm,1.1s						
KEV	Kevo	44.23	338	P	P	14 22 25.7	+0.8
KEV				pmax	pmax		
	comp=Z,39nm,1.2s						
KEV	Kevo	44.23	338	P	P	14 22 25.7	+0.8
ARCES	ARCESS Array B	44.62	337	P	P	14 22 29.5	+1.5
	comp=Z,4.7nm,0.6s,baz=106,slow=7.6,SNR=15						
ARCES	ARCESS Array B	44.62	337	P	P	14 22 29.1	+1.2
TIXI	Tiksi	46.08	20	P	P	14 22 40.5	+1.0
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.8s						
TIXI	Tiksi	46.08	20	P	P	14 22 40.5	+1.0
CONA	Conrad Observa	46.20	306	*e*P	P	14 22 42.6	+1.6
	comp=Z,4.4nm,0.9s,SNR=5.6						
SOKA	Soboth	46.92	304	*e*P	P	14 22 48.1	+1.5
	comp=Z,4.4nm,0.7s,SNR=8.9						
SGRT	San Giovanni R	47.26	298	P	P	14 22 49.4	+0.1
SGRT				IAmb	IAmb	14 22 50.1	
	comp=Z,9.1nm,0.8s						
GERES	GERESS Array B	47.53	307	P	P	14 22 51.9	+0.5
	comp=Z,0.7nm,0.6s,baz=70,slow=8.6,SNR=5.9						
CLL	Collm	47.73	311	*e*PP	PP	14 24 48.0	+3.6
JWT	Wachi	47.90	71	P	P	14 22 55.5	+1.2
TRI	Trieste	47.94	303	P	P	14 22 55.2	+0.9
TRI				pmax	pmax		
	comp=Z,16nm,1.3s						
TRI	Trieste	47.94	303	P	P	14 22 55.2	+0.9
TRI				IAmb	IAmb	14 22 58.1	
	comp=Z,16nm,1.3s						
NC405	NORSAR Array S	48.27	324	P	P	14 22 58.0	+1.2
NC602	NORSAR Array S	48.34	324	P	P	14 22 58.2	+1.0
NC303	NORSAR Array S	48.44	324	P	P	14 22 59.1	+1.0
NB201	NORSAR Array S	48.47	324	P	P	14 22 59.0	+0.7
NB2	NORSAR Subarra	48.51	324	P	P	14 22 59.2	+0.6
	comp=Z,6.8nm,0.8s,baz=93,slow=7.9						
NOA	NORSAR Array B	48.51	324	P	P	14 22 59.4	+0.8
	comp=Z,4.6nm,0.8s,baz=93,slow=7.5,SNR=13						
STAL	STALIGIAL	48.57	304	P	P	14 22 59.9	+0.6
STAL				IAmb	IAmb	14 23 01.3	
	comp=Z,12nm,1.1s						
NAO01	NORSAR Array S	48.66	324	P	P	14 23 00.7	+0.9
NBO00	NORSAR Array S	48.72	324	P	P	14 23 01.3	+1.1
NC204	NORSAR Array S	48.74	324	P	P	14 23 01.1	+0.7
NC204				IAmb	IAmb	14 23 26.2	
	comp=Z,12nm,1.1s						
NRCA	Norcia	48.94	300	P	P	14 23 01.4	-0.8
NRCA				IAmb	IAmb	14 23 02.8	
	comp=Z,13nm,1.4s						
MURB	Monte Urbino	49.27	300	P	P	14 23 06.1	+1.3
KONO	Kongsberg	49.29	322	P	P	14 23 05.7	+1.2
KONO				pmax	pmax		
	comp=Z,21nm,1.3s						
KONO	Kongsberg	49.29	322	P	P	14 23 05.7	+1.2
CTI	Castel Tesino	49.33	304	P	P	14 23 05.5	+0.3
CTI				pmax	pmax		
	comp=Z,4.0nm,0.7s						
CTI	Castel Tesino	49.33	304	P	P	14 23 05.5	+0.3
CTI				IAmb	IAmb	14 23 07.1	
	comp=Z,3.5nm,0.7s						
JGF	Kuroka	49.33	70	P	P	14 23 05.0	-0.3
RAFF	Raffo Rosso	49.41	292	P	P	14 23 05.5	-0.3
MOTA	Moosalm	49.47	306	*e*P	P	14 23 06.9	+0.5
	comp=Z,3.9nm,0.8s,SNR=4.9						
MJAR	Matsushiro Arr	49.71	69	P	P	14 23 09.6	+1.4
	comp=Z,3.4nm,1.1s,baz=281,slow=8.8,SNR=4.3						
MJAR	Matsushiro Arr	49.71	69	P	P	14 23 07.5	-0.7
LATE	Laterza	49.93	300	P	P	14 23 09.0	-0.8
OSSC	Osservatorio P	50.12	301	P	P	14 23 10.3	-0.9
DAVA	Damuels	50.30	306	*e*P	P	14 23 13.1	+0.4
	comp=Z,6.5nm,0.8s						
TUE	Stuetta	50.82	305	P	P	14 23 16.9	+0.3
TUE				IAmb	IAmb	14 23 43.0	
	comp=Z,9.5nm,1.2s						
KMBO	Kilima Mbogo	50.88	234	P	P	14 23 17.3	-0.2
	comp=Z,2.1nm,0.6s,baz=38,slow=14,SNR=7.0						
MSSA	Maissana	51.16	302	P	P	14 23 19.1	+0.1
SENIN	Lac Senin/Sane	52.23	305	P	P	14 23 27.4	+0.3
SENIN				IAmb	IAmb	14 23 30.5	
	comp=Z,6.3nm,0.8s						
WLF	Walferdange	52.29	309	P	P	14 23 28.1	+0.8
WLF				pmax	pmax		
	comp=Z,6.0nm,0.9s						
WLF	Walferdange	52.29	309	P	P	14 23 28.1	+0.8
WLF				IAmb	IAmb	14 23 55.5	
	comp=Z,6.4nm,0.9s						
SSB	Saint Sauveur	54.36	304	P	P	14 23 41.8	-0.8
SSB				pmax	pmax		
	comp=Z,17nm,1.5s						
SSB	Saint Sauveur	54.36	304	P	P	14 23 41.8	-0.8
SSB				IAmb	IAmb	14 23 42.7	
	comp=Z,16nm,1.5s						
SOEI	Soe	63.31	125	P	P	14 24 44.7	-0.5
TULEG	Thule	67.06	352	P	P	14 25 08.0	-0.6
TULEG				IAmb	IAmb	14 25 34.6	
	comp=Z,9.9nm,1.1s						
TOA0	Torodi Ar. Sit	69.99	272	P	P	14 25 26.6	-1.3
TOA0				IAmb	IAmb	14 25 28.3	
	comp=Z,7.5nm,1.2s						
TORD	Torodi Ar. Bea	69.99	272	P	P	14 25 27.1	-0.7
	comp=Z,2.1nm,0.6s,baz=48,slow=5.4,SNR=14						
TORD	Torodi Ar. Bea	69.99	272	P	P	14 25 26.4	-1.4
TOLK	Toolik Lake Re	71.71	16	P	P	14 25 38.1	+0.6
TOLK				IAmb	IAmb	14 25 49.6	
	comp=Z,4.1nm,0.6s						
COLD	Coldfoot	72.67	17	P	P	14 25 44.2	+1.0
KOWA	Kowa	73.98	277	P	P	14 25 51.7	0.0
KOWA				IAmb	IAmb	14 25 53.0	
	comp=Z,5.1nm,0.6s						
TTA	Tatalina	74.33	22	P	P	14 25 54.3	+1.2
TTA				pmax	pmax		
	comp=Z,6.0nm,1.4s						
TTA	Tatalina	74.33	22	P	P	14 25 54.3	+1.2
FYU	Fort Yukon	74.38	16	P	P	14 25 55.1	+2.0
FYU				IAmb	IAmb	14 25 58.0	
	comp=Z,5.0nm,1.0s						
I23K	Minto, Yukon-K	74.52	18	P	P	14 25 56.0	+1.9
BPAW	Bear Paw Mtn.	74.92	19	P	P	14 25 57.2	+0.8
BPAW				IAmb	IAmb	14 26 00.5	
	comp=Z,9.4nm,1.5s						
MDM	Murphy Dome	74.97	18	P	P	14 25 57.7	+1.0
MDM				IAmb	IAmb	14 26 07.0	
	comp=Z,8.6nm,1.3s						
POKR	Poker Plat Res	75.04	18	P	P	14 25 57.9	+0.8
POKR				IAmb	IAmb	14 25 59.3	
	comp=Z,4.2nm,0.6s						
INK	Inuvik	75.11	11	P	P	14 25 58.0	+0.6
INK				pmax	pmax		
	comp=Z,5.0nm,1.4s						
INK	Inuvik	75.11	11	P	P	14 25 58.0	+0.6
PRP	Porcupine Dome	75.17	17	P	P	14 25 59.4	+1.3
BWN	Browne	75.27	19	P	P	14 25 59.1	+0.7
BWN				IAmb	IAmb	14 26 15.6	
	comp=Z,18nm,1.2s						
CCB	Clear Creek Bu	75.33	18	P	P	14 25 59.4	+0.7
KTH	Kantishna Hill	75.36	20	P	P	14 25 59.9	+0.9
KTH				IAmb	IAmb	14 26 19.8	
	comp=Z,20nm,1.5s						
C36M	Paulatuk	75.38	7	P	P	14 25 59.0	+0.1
WRH	Wood River Hil	75.39	18	P	P	14 25 58.9	-0.2
WRH				IAmb	IAmb	14 26 06.4	
	comp=Z,9.1nm,1.4s						
IL31		75.45	18	P	P	14 25 59.8	+0.4
ILAR	Eielson Array	75.45	18	P	P	14 25 59.9	+0.4
	comp=Z,1.6nm,0.7s,baz=307,slow=4.4,SNR=20						
PPLA	Purkeypile	75.51	21	P	P	14 26 00.8	+0.8
PPLA				IAmb	IAmb	14 26 08.2	
	comp=Z,11nm,1.3s						
HDA	Harding Lake	75.74	18	P	P	14 26 01.0	-0.1
RND	Reindeer	76.05	19	P	P	14 26 02.4	-0.5
RND				pmax	pmax		
	comp=Z,10.0nm,1.4s						
RND	Reindeer	76.05	19	P	P	14 26 02.4	-0.5
RND				IAmb	IAmb	14 26 15.2	
	comp=Z,9.9nm,1.4s						
SKT	Skwentna	76.42	21	P	P	14 26 04.4	-0.6
SKT				IAmb	IAmb	14 26 21.7	
	comp=Z,11nm,1.0s						
EGAK	Eagle	76.80	15	P	P	14 26 06.5	-0.6
DOT	Dot Lake	77.08	17	P	P	14 26 09.2	+0.5
WB0	Warramunga Arr	77.26	125	P	P	14 26 09.1	-1.2
WB0				IAmb	IAmb	14 26 13.6	
	comp=Z,8.0nm,1.1s						
WRA	Warramunga Arr	77.35	125	P	P	14 26 10.6	-0.2
	comp=Z,1.0nm,0.5s,baz=318,slow=6.5,SNR=22						
WRA	Warramunga Arr	77.35	125	P	P	14 26 10.2	-0.6
WB2	Warramunga Arr	77.36	125	P	P	14 26 10.2	-0.6
WB2				IAmb	IAmb	14 26 13.6	
	comp=Z,10nm,1.2s						
PMR	Palmer	77.42	20	P	P	14 26 11.1	+0.5
PMR				pmax	pmax		
	comp=Z,13nm,1.3s						
PMR	Palmer	77.42	20	P	P	14 26 11.1	+0.5
PMR				IAmb	IAmb	14 26 22.5	
	comp=Z,13nm,1.3s						
SML	Sawmill	77.48	20	P	P	14 26 11.0	0.0
SML				IAmb	IAmb	14 26 25.2	
	comp=Z,10nm,1.0s						
WR0	Warramunga Arr	77.49	125	P	P	14 26 10.2	-1.4
WR0				IAmb	IAmb	14 26 36.3	
	comp=Z,11nm,1.4s						
SCM	Sheep Creek Mo	77.74	20	P	P	14 26 13.0	+0.5
SCM				pmax	pmax		
	comp=Z,18nm,1.2s						
SCM	Sheep Creek Mo	77.74	20	P	P	14 26 13.0	+0.5
KNK	Knik Glacier	77.76	20	P	P	14 26 13.4	+0.8
KNK				IAmb	IAmb	14 26 22.4	
	comp=Z,12nm,1.1s						
BRLK	Bradley Lake	78.35	22	P	P	14 26 16.5	+0.6
KLU	Klutina	78.40	19	P	P	14 26 16.9	+0.7
SEW	Seward	78.52	21	P	P	14 26 17.6	+0.9
GLB	Gilahina Butte	79.01	18	P	P	14 26 20.5	+1.0
BOSA	Boshof	79.13	224	P	P	14 26 20.1	-0.6
	comp=Z,3.2nm,0.8s,baz=26,slow=9.7,SNR=1.5						
EYAK	Cordova Ski Ar	79.23	20	P	P	14 26 21.6	+1.0
MCARA	McCarthy VSAT	79.26	18	P	P	14 26 21.3	+0.5
VRDI	Verde Repeater	79.28	18	P	P	14 26 21.6	+0.4
VRDI				IAmb	IAmb	14 26 43.7	
	comp=Z,15nm,1.3s						

AS31	Alice Springs	79.65	128	P	P	14 26 22.6	-0.9
ASAR	Alice Springs	79.65	128	P	P	14 26 23.1	-0.4
	comp=Z,1.0nm,0.5s,baz=318,slow=5.1,SNR=19						
ASAR	Alice Springs	79.65	128	P	P	14 26 22.9	-0.5
BALM	Baldy	79.73	18	P	P	14 26 24.3	+0.8
BALM				IAmb	IAmb	14 26 40.5	
	comp=Z,15nm,1.3s						
CRQM	Cirque	79.76	18	P	P	14 26 24.3	+0.5
TGL	Tana Glacier	79.84	18	P	P	14 26 24.6	+0.5
TGL				IAmb	IAmb	14 26 51.2	
	comp=Z,7.6nm,1.1s						
HYT	Haines Junctio	81.08	16	P	P	14 26 32.3	+1.5
HYT				IAmb	IAmb	14 26 33.6	
	comp=Z,4.3nm,0.8s						
YKA	Yellowknife Ar	82.94	5	P	P	14 26 41.1	+0.8
	comp=Z,1.1nm,0.6s,baz=352,slow=4.9,SNR=27						
STKA	Stephens Creek	90.21	129	P	P	14 27 16.9	+0.6
	comp=Z,0.8nm,0.4s,baz=324,slow=12,SNR=1.5						
QSPA	South Pole Qui	124.30	180	PKP	PKiKP	14 33 15.1	+1.2
	comp=Z,0.9nm,0.7s,baz=264,slow=2.0,SNR=5.4						
PLCA	Paso Flores	153.06	247	PKPbc	PKiKP	14 34 15.3	+1.9
	comp=Z,0.9nm,0.6s,baz=302,slow=11,SNR=3.4						

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*IDC **15** 14:33:56.1±5.7, 36°.02N×71°.24E, h79^{km}±35^{km}, mb3.2/4, mb1 3.3/9, mb1mx3.0/46, mbtmp3.5/9, Error ellipse: s-maj=67.4km s-min=21.5km az=157.0*

*NNC **15** 14:34:01.4±4.1, 36°.66N×71°.11E, h115^{km}±114^{km}, mb3.0, mpv3.6, Error ellipse: s-maj=40.4km s-min=21.4km az=148.0*

ISC 15 14:33:57.6±0.8**, 36°.29N**±0°.08×**71°.39E**±0°.07**, h114^{km}, n22, σ2^{s}.74**/27**, mb3.5**/3**, 4C-1D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	Ala-Archa	6.78	20	P	Pn	14 35 35.1	+0.6
	1.4nm,0.3s,baz=126,slow=2.6,SNR=13						
AAK				S	Sn	14 36 46.4	-3.9
	0.5nm,0.3s,baz=324,slow=23,SNR=9.3						
AAK	Ala-Archa	6.78	20	P	Pn	14 35 35.1	+0.6
AAK				⇑S	Sn	14 36 46.6	-3.6
KK31	Karatay Array	6.83	355	⇑P	Pn	14 35 35.1	0.0
	1.8nm,0.3s,baz=180,slow=13,SNR=92						
KK31				⇑S	Sn	14 36 47.2	-4.3
	2.0nm,0.5s,baz=165,slow=20,SNR=4.4						
GEYT	Alibeck	10.72	283	P	Pn	14 36 27.1	-0.8
	0.7nm,0.3s,baz=130,slow=7.5,SNR=17						
GEYT				S	Sn	14 38 22.4	-3.5
	0.9nm,0.3s,baz=10,slow=28,SNR=6.9						
GYA0B	ALIBECK ARRAY	10.72	283	⇑P	Pn	14 36 27.0	-0.8
GYA0B				⇓S	Sn	14 38 22.0	-3.9
DANN	Dangsing	13.12	124	*e*P	Pn	14 36 56.7	-3.1
	11nm,0.2s						
MKAR	Makanchi Array	13.28	34	P	P	14 37 07.1	0.0
	0.1nm,0.3s,baz=210,slow=10,SNR=3.6						
GKN	Gorkha	13.93	123	*e*P	Pn	14 37 07.2	-3.0
	9.1nm,0.3s						
DMN	Daman	14.50	123	*e*P	Pn	14 37 15.4	-2.2
	7.6nm,0.3s						
KKN	Kakani	14.51	122	*e*P	Pn	14 37 15.0	-2.6
	10nm,0.4s						
PKIN	Phulchoki	14.72	122	*e*P	Pn	14 37 18.4	-2.0
	9.9nm,0.3s						
PKI	Pulchoki	14.73	122	*e*P	Pn	14 37 18.1	-2.5
	6.0nm,0.3s						
GUN	Gumba	14.85	120	*e*P	Pn	14 37 18.6	-3.4
	9.2nm,0.4s						
KURBB	Kurchatov Arra	15.22	18	P	P	14 37 30.1	+1.6
	0.0nm,0.3s,baz=204,slow=11,SNR=2.8						
AB31	Akbulak array	15.41	331	P	Pn	14 37 27.9	-0.8
	1.0nm,0.8s,baz=148,slow=9.2,SNR=8.3						
RAMN	Ramite	15.94	121	*e*P	Pn	14 37 33.8	-1.9
	5.9nm,0.3s						
TAPN	Taplejung	16.48	118	*e*P	Pn	14 37 40.1	-2.2
	9.1nm,0.3s						
AKTO	Aktyubinsk	17.11	330	P	Pn	14 37 52.5	+3.0
	0.2nm,0.3s,baz=117,slow=12,SNR=3.2						
ZALV	Zalesovo Beam	19.98	24	P	Pn	14 38 25.8	+2.4
	0.5nm,0.4s,baz=224,slow=12,SNR=4.1						
NOA	NORSAR Array B	44.73	323	P	P	14 42 02.8	+3.7
	0.6nm,0.6s,baz=109,slow=7.7,SNR=2.6						
TORD	Torodi Ar. Bea	66.02	269	P	P	14 44 33.8	+1.5
	0.5nm,0.7s,baz=43,slow=6.3,SNR=2.4						
YKA	Yellowknife Ar	81.44	3	P	P	14 46 04.6	+3.1
	0.2nm,0.5s,baz=359,slow=5.3,SNR=5.2						

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*BJI **15** 14:34:33.9±0.0, 29°.75N×131°.33E, h38^{km}, mB4.9/21, mb4.2/34, Ms4.1/13, Ms7 4.0/14*

*NIED **15** 14:34:35.6, 30°.01N×131°.27E, h25^{km}, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$2.07; M$_{\theta\theta}$-0.34; M$_{\phi\phi}$-1.73; M$_{r\theta}$0.53; M$_{\theta\phi}$-1.33; M$_{\phi r}$1.84; Fault plane solution: M$_0$3.00000×10^{15} NP1:ϕ_s20.00000°, δ65.00000°, λ79.00000°. NP2:ϕ_s225.00000°, δ27.00000°, λ112.00000°.*

*JMA **15** 14:34:35.6±0.1, 30°.01N×131°.27E, h25^{km}±1^{km}, M4.1*

JMA Felt I J1.

*NEIC **15** 14:34:36.8±1.4, 30°.06N±0°.05×131°.10E±0°.04, h30^{km}±5^{km}, mb4.6/30, Error ellipse: s-maj=7.8km s-min=5.1km az=188.0*

*IDC **15** 14:34:39.1±2.1, 30°.11N×131°.03E, h40^{km}±17^{km}, mb3.8/19, mb1 3.9/24, mb1mx3.8/49, mbtmp4.0/24, ML3.4/5, MS3.5/1, Ms1 3.5/1, ms1mx2.7/52, Error ellipse: s-maj=18.2km s-min=12.5km az=94.0*

ISC 15 14:34:34.6±1.7**, 30°.03N**±0°.05×**131°.15E**±0°.05**, h15^{km}**±10^{km}**, n108, σ1^{s}.13**/115**, mb4.4**/41**, 5C-4D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JMTN	Minamitane	0.42	330	⇓P	Pn	14 34 45.5	-0.7
JMTN				S	Sb	14 34 52.4	+2.4
JYAK	Yakushimahirau	0.59	291	⇓P	Pn	14 34 48.8	+0.4
JYAK				*e*S	Sb	14 34 58.4	+3.6
JTN	Tanegashima 3	0.64	347	⇓P	Pn	14 34 48.9	-0.2
JTN				*e*S	Sn	14 34 58.4	-0.7
JKC	Kuchinoerabu	0.93	298	⇓P	Pn	14 34 54.4	+1.3
JKC				S	Sn	14 35 08.1	+1.9
JNN	Nakanoshima	1.12	261	P	Pn	14 34 57.4	+1.6
JTSR	Tashiro 2	1.15	350	⇑P	Pg	14 34 56.7	-0.1
JTSR				*e*S	Sn	14 35 12.2	+0.5
JNAR	Kushima--Naru	1.50	4	⇑P	Pn	14 35 01.6	+0.7
JSU	Suzuyama	1.59	338	⇑P	Pb	14 35 02.9	-0.8
JSU				S	Sg	14 35 23.7	-2.0
JSU	Suzuyama	1.59	338		Pb	14 35 02.9	-0.8
JNKG	Nichinankitago	1.64	7	⇑P	Pn	14 35 03.7	+0.8
JNKG				S	Sn	14 35 24.3	+0.6
JNU	Nakatsue	3.09	356	P	Pn	14 35 24.0	+1.1
	10nm,0.3s,baz=339,slow=5.2,SNR=56						
JNU				S	Sn	14 35 59.6	0.0
	8.2nm,0.3s,baz=82,slow=11,SNR=2.6						
JNU	Nakatsue	3.09	356	Pn	Pn	14 35 23.5	+0.6
JOW	Kunigami	4.07	219	P	Pn	14 35 37.5	+1.2
	4.5nm,0.3s,baz=133,slow=26,SNR=23						
JOW				S	Sn	14 36 23.2	-0.5
	6.2nm,0.3s,baz=194,slow=19,SNR=4.6						
JMZ	Minamidaito 2	4.20	179	Pn	Pn	14 35 39.6	+1.5
JMN	Monobe	4.36	32		Pn	14 35 40.9	+0.5
JTU	Tsushima	4.72	342	Pn	Pn	14 35 46.6	+1.3
JHS	Saijyo	5.23	18		Pn	14 35 53.2	+1.0
JWT	Wachi	6.35	33	Pn	Pn	14 36 07.7	+0.1
INU	Inuyama	7.25	41	Pn	Pn	14 36 22.4	+2.4
JGF	Kuroka	7.63	42		Pn	14 36 27.1	+1.8
KSRS	Korea Array	7.88	341	P	Pn	14 36 31.2	+2.7
	0.4nm,0.3s,baz=159,slow=13,SNR=12						
KS19	Wonju Array Si	7.94	341	Pn	Pn	14 36 28.2	-1.2
MAJO	Matsushiro	8.78	40	Pn	Pn	14 36 42.5	+1.5
MJAR	Matsushiro Arr	8.78	40	P	Pn	14 36 42.8	+1.8
	0.1nm,0.3s,baz=235,slow=14,SNR=8.5						
MJAR	Matsushiro Arr	8.78	40	Pn	Pn	14 36 41.3	+0.3
NJ2	Nanjing	10.73	284	*e*P	Pn	14 37 08.3	+0.5
NJ2				pmax	pmax		
	comp=Z,3.0nm,0.5s						
USRK	Ussuriysk Ar.	14.16	2	P	P	14 38 02.6	+0.5
	baz=182,slow=9.3,SNR=8.2						
CN2	Changchun	14.47	343	*e*P	P	14 38 06.8	+1.2
CN2				*e*sP	Pn	14 38 14.8	+16
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ASAJ	Asahikawa	16.74	30	LR	LR	14 45 35.3	
	comp=Z,179nm,19.7s,baz=198,slow=39						
KLR	Kul'dur	19.18	1	P	P	14 38 58.1	+0.5
	0.3nm,0.3s,baz=196,slow=7.8,SNR=11						
HHC	Hu-ho-hao-te	19.22	309	*e*P	P	14 38 55.9	-2.3
HHC				PP	PnPn	14 39 14.3	+2.2
HHC				sS	sS	14 42 42.8	+1.1
HHC				pmax	pmax		
	comp=Z,5.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,170nm,5.0s						
HHC				LR	LR		
	comp=N,280nm,12.4s						
HHC				LR	LR		
	comp=E,370nm,12.2s						
HHC				LR	LR		
	comp=Z,540nm,12.0s						
XAN	Xi'an	19.25	288	P	Pn	14 38 59.0	-0.6
XAN				pP	sP	14 39 08.9	+4.7
XAN				S	Sn	14 42 23.1	-12
XAN				pmax	pmax		
	comp=Z,7.0nm,1.4s						
XAN				LR	LR		
	comp=Z,380nm,17.4s						
XAN				LR	LR		
	comp=Z,280nm,16.3s						
XAN				LR	LR		
	comp=Z,350nm,13.0s						
GYA	Guiyang	21.85	267	*e*P	P	14 39 28.3	+1.5
GYA				pmax	pmax		
	comp=Z,9.0nm,0.5s						
QIZ	Qiongzhong	22.22	245	P	P	14 39 29.5	-1.3
QIZ				S	S	14 43 33.3	-1.8
QIZ				LR	LR		
	comp=Z,81nm,11.6s						
QIZ				LR	LR		
	comp=Z,210nm,13.9s						
QIZ				LR	LR		
	comp=Z,140nm,14.6s						
CD2	Chengdu	23.60	279	P	P	14 39 45.1	0.0
CD2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CD2				LR	LR		
	comp=Z,300nm,15.3s						
CD2				LR	LR		
	comp=Z,360nm,15.9s						
CD2				LR	LR		
	comp=Z,290nm,16.2s						
KMI	Kunming	25.62	266	⇑P	P	14 40 02.6	-1.2
KMI				pP	sP	14 40 11.4	+1.6
KMI				sP	pP	14 40 15.3	+7.3
KMI				pmax	pmax		
	comp=Z,6.0nm,0.9s						
SONM	Songino Array	26.03	320	P	P	14 40 06.7	-0.6
	comp=Z,1.1nm,0.4s,baz=138,slow=10,SNR=14						
SONM	Songino Array	26.03	320	P	P	14 40 06.1	-1.1
CMAR	Chiang Mai Arr	31.44	256	P	P	14 40 55.7	+0.1
	comp=Z,0.4nm,0.3s,baz=48,slow=8.1,SNR=7.1						
H11N2	WAKE ISLAND Hy	33.89	99	T	T	15 17 20.0	
	baz=296,slow=75,SNR=39						
H11N1	WAKE ISLAND Hy	33.89	99	T	T	15 17 20.3	
	baz=296,slow=75,SNR=21						
H11N3	WAKE ISLAND Hy	33.91	99	T	T	15 17 21.3	
	baz=296,slow=75,SNR=27						
WMQ	Urumqi	36.94	304	*e*P	P	14 41 44.4	+1.3
WMQ				pP	sP	14 41 50.1	+1.3
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,61nm,5.1s						
ODAN	Odare	38.43	276	*e*P	P	14 41 55.5	-0.6
	comp=Z,12nm,0.9s						
GUN	Gumba	39.47	278	*e*P	P	14 42 05.2	+0.3
	comp=Z,32nm,0.8s						
PKI	Pulchoki	39.95	278	*e*P	P	14 42 08.9	-0.1
	comp=Z,11nm,0.8s						
PKIN	Phulchoki	39.96	278	*e*P	P	14 42 08.3	-0.7
	comp=Z,6.1nm,0.6s						
KKN	Kakani	40.01	278	*e*P	P	14 42 09.5	+0.2
	comp=Z,17nm,0.8s						
GKN	Gorkha	40.51	279	*e*P	P	14 42 13.0	-0.3
	comp=Z,3.6nm,0.4s						
ZALV	Zalesovo Beam	40.92	319	P	P	14 42 15.9	-0.2
	comp=Z,0.9nm,0.4s,baz=112,slow=9.8,SNR=5.7						
MK31	Makanchi Array	41.08	308	P	P	14 42 16.6	-1.1
MKAR	Makanchi Array	41.08	308	P	P	14 42 17.6	0.0
	comp=Z,1.1nm,0.5s,baz=88,slow=11,SNR=26						
MKAR				PcP	PcP	14 44 17.7	+0.5
	comp=Z,0.6nm,0.8s,baz=78,slow=3.6,SNR=4.5						
MKAR	Makanchi Array	41.08	308	P	P	14 42 16.7	-0.9
DANN	Dangsing	41.17	280	*e*P	P	14 42 19.0	0.0
	comp=Z,19nm,0.6s						
MAKZ	Makanchi	41.29	308	P	P	14 42 18.3	-1.1
TIXI	Tiksi	41.69	359	P	P	14 42 21.7	-0.5
KURK	Kurchatov	43.96	313	P	P	14 42 40.1	-0.9
KURBB	Kurchatov Arra	44.01	313	P	P	14 42 41.0	-0.3
	comp=Z,0.4nm,0.3s,baz=267,slow=1.3,SNR=14						
KSH	Kashi	45.68	297	P	P	14 42 57.9	+2.9
KSH				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KSH				pmax	pmax		
	comp=Z,48nm,6.4s						
AAK	Ala-Archa	46.54	302	P	P	14 43 02.4	+0.6
	comp=Z,2.2nm,0.7s,baz=101,slow=5.2,SNR=11						
AAK	Ala-Archa	46.54	302	P	P	14 43 01.7	-0.1
AAK				IAmb	IAmb	14 43 04.2	
	comp=Z,2.3nm,0.8s						
BVAR	Borovoye Array	49.25	316	P	P	14 43 22.5	+0.1
	comp=Z,2.6nm,0.6s,baz=129,slow=12,SNR=23						
BRVK	Borovoye	49.32	316	P	P	14 43 22.1	-0.9
BRVK				IAmb	IAmb	14 43 24.8	
	comp=Z,6.1nm,0.8s						
KK31	Karatay Array	49.42	303	P	P	14 43 23.4	-0.5
KK31				IAmb	IAmb	14 43 25.1	
	comp=Z,4.2nm,0.6s						
KKAR	Karatay Array	49.42	303	P	P	14 43 23.3	-0.6
KKAR	Karatay Array	49.42	303	P	P	14 43 23.5	-0.5
KKAR				IAmb	IAmb	14 43 25.1	
	comp=Z,4.2nm,0.6s						
WB0	Warramunga Arr	49.61	176	P	P	14 43 23.9	-1.5
WB0				IAmb	IAmb	14 43 38.3	
	comp=Z,5.3nm,1.1s						
WRA	Warramunga Arr	49.78	176	P	P	14 43 28.1	+1.3
	comp=Z,0.8nm,0.8s,baz=354,slow=8.3,SNR=5.3						
ASAR	Alice Springs	53.45	177	P	P	14 43 56.5	+2.3
	comp=Z,0.5nm,0.5s,baz=10.0,slow=13,SNR=11						
ABKAR	Akbulak array	56.00	312	P	P	14 44 12.2	-0.3
ABKAR	Akbulak array	56.00	312	P	P	14 44 12.3	-0.1
ABKAR				IAmb	IAmb	14 44 12.7	
	comp=Z,5.9nm,1.3s						
ARU	Arti	56.07	320	P	P	14 44 12.6	-0.3
	comp=Z,1.3nm,0.4s,baz=110,slow=6.4,SNR=7.0						
ARU	Arti	56.07	320	P	P	14 44 12.5	-0.3
ARU				IAmb	IAmb	14 44 12.9	
	comp=Z,3.8nm,0.6s						
GEYT	Alibeck	59.67	299	P	P	14 44 39.3	+0.8
	comp=Z,2.9nm,0.7s,baz=99,slow=4.7,SNR=7.3						
GEYT	Alibeck	59.67	299	IAmb	IAmb	14 44 40.7	
	comp=Z,2.4nm,0.8s						
INK	Inuvik	64.39	24	P	P	14 45 10.1	+0.6
	comp=Z,0.8nm,0.5s,baz=330,slow=8.2,SNR=7.2						
INK	Inuvik	64.39	24	P	P	14 45 09.7	+0.1
INK				IAmb	IAmb	14 45 10.5	
	comp=Z,2.7nm,1.1s						
C36M	Paulatuk	67.23	22	P	P	14 45 28.6	+0.7
C36M				IAmb	IAmb	14 45 29.3	
	comp=Z,4.0nm,0.7s						
ARD3	ARCESS Array S	67.41	338	P	P	14 45 28.8	-0.3
ARD2	ARCESS Array S	67.41	338	P	P	14 45 29.2	+0.1
ARC2	ARCESS Array S	67.42	338	P	P	14 45 28.4	-0.7
ARA2	ARCESS Array S	67.42	338	P	P	14 45 28.9	-0.3
ARA2				IAmb	IAmb	14 45 50.6	
	comp=Z,25nm,1.3s						
ARCES	ARCESS Array B	67.42	338	P	P	14 45 29.0	-0.1
	comp=Z,4.3nm,1.0s,baz=55,slow=5.6,SNR=12						
ARCES	ARCESS Array B	67.42	338	P	P	14 45 28.7	-0.4
ARC4	ARCESS Array S	67.42	338	P	P	14 45 28.6	-0.5
EUNU	Eureka	68.23	7	P	P	14 45 34.1	-0.1
KBZ	Khabaz	68.76	309	P	P	14 45 38.6	+0.6
	comp=Z,2.8nm,0.8s,baz=139,slow=3.5,SNR=8.7						
FIA1	FINESS Array S	70.83	331	P	P	14 45 49.4	-0.9
FIA1				IAmb	IAmb	14 46 14.8	
	comp=Z,22nm,1.4s						
FINES	FINESS Array B	70.83	331	P	P	14 45 50.5	+0.1
	comp=Z,2.7nm,0.4s,baz=68,slow=5.9,SNR=49						
FINES	FINESS Array B	70.83	331	P	P	14 45 49.3	-1.0
SOCY	Socotra	72.97	274	P	P	14 46 02.9	-1.2
SOCY				IAmb	IAmb	14 46 16.7	
	comp=Z,8.4nm,1.1s						
YKA	Yellowknife Ar	74.00	26	P	P	14 46 09.8	+0.5
	comp=Z,0.6nm,0.8s,baz=306,slow=5.1,SNR=10						
BRTR	Keskin Array B	76.73	308	P	P	14 46 24.4	-1.1
	comp=Z,1.4nm,0.7s,baz=101,slow=5.6,SNR=9.9						
BRTR	Keskin Array B	76.73	308	P	P	14 46 23.6	-2.0
NC405	NORSAR Array S	76.80	334	P	P	14 46 24.7	-0.7
NC303	NORSAR Array S	76.86	334	P	P	14 46 25.9	+0.1
NB201	NORSAR Array S	77.00	334	P	P	14 46 26.3	-0.2
NB2	NORSAR Subarra	77.03	334	P	P	14 46 27.0	+0.2
	comp=Z,1.0nm,0.5s,baz=47,slow=5.6						
NOA	NORSAR Array B	77.03	334	P	P	14 46 26.8	0.0
	comp=Z,1.1nm,0.5s,baz=50,slow=5.6,SNR=7.0						
NC204	NORSAR Array S	77.05	335	P	P	14 46 26.8	-0.1
ANTO	Ankara	77.23	309	P	P	14 46 28.0	-0.4
SUMG	Summit	77.42	357	P	P	14 46 27.9	-1.2
SUMG				IAmb	IAmb	14 46 41.5	
	comp=Z,4.3nm,1.0s						
BURAR	Bucovina Array	78.13	318	P	P	14 46 32.4	-0.9
CLL	Collm	82.48	326	*e*P	P	14 46 57.0	+0.6
PDAR	Pinedale Array	88.60	40	P	P	14 47 28.3	+0.9
	comp=Z,0.5nm,0.8s,baz=343,slow=1.5,SNR=5.6						
VNA2	Neumayer--Watz	133.15	197	PKPdf	PKPdf	14 53 47.8	-1.0
VNA3	Neumayer Olymp	133.52	196	PKPdf	PKPdf	14 53 48.5	-1.0
VNA1	Neumayer--Stat	133.55	197	PKPdf	PKPdf	14 53 46.8	-2.7

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*IDC **15** 14:45:52.5±2.1, 36°.71N×76°.05E, h0^{km}, mb3.8/6, mb1 3.8/12, mb1mx3.5/67, mbtmp3.8/12, ML3.6/6, Error ellipse: s-maj=38.5km s-min=23.7km az=148.0*

*NNC **15** 14:46:07.8±2.9, 37°.33N×76°.33E, h110^{km}±28^{km}, mb3.4, mpv4.0, Error ellipse: s-maj=26.3km s-min=13.5km az=176.0*

ISC 15 14:46:01.6±0.6**, 37°.08N**±0°.05×**76°.27E**±0°.08**, h35^{km}, n42, σ2^{s}.84**/46**, mb3.8**/6**, 5C-6D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSH	Kashi	2.45	355	Pn	Pn	14 46 39.4	+0.2
KSH				Sn	Sn	14 47 05.8	-2.2
KSH				smax	smax		
	comp=N,500nm,0.4s						
KSH				smax	smax		
	comp=E,380nm,0.3s						
THN	Thein Dam	4.65	186	*e*P	Pn	14 47 16.0	+6.6
THN				*e*S	Sn	14 48 04.5	+2.4
DHRM	DHARAMSHALA	4.81	180	*e*P	Pn	14 47 15.1	+3.3
DHRM				*e*S	Sn	14 48 06.4	0.0
DHRM				IAML		14 48 09.5	
	comp=N,405nm,0.3s						
DHRM				IAML		14 48 10.1	
	comp=E,462nm,0.0s						
CEP	Cherat	4.82	229	P	Pn	14 47 15.1	+3.3
ULHL	Ulahol	5.16	360	P	Pn	14 47 19.9	+3.3
	SNR=12						
UCH	Uchtor	5.32	346	P	Pn	14 47 22.4	+3.5
	SNR=12						
AML	Almayashu	5.43	339	P	Pn	14 47 23.9	+3.6
	SNR=30						
THW	Thamme Wali	5.66	222	P	Pn	14 47 25.7	+2.4
KBK	Karagaybulak	5.67	350	P	Pn	14 47 27.9	+4.4
	SNR=20						
AAK	Ala-Archa	5.72	347	Pn	Pn	14 47 28.5	+4.4
	comp=E,3.1nm,0.3s,baz=157,slow=8.6,SNR=26						
AAK				Sn	Sn	14 48 30.7	+2.0
	comp=E,1.5nm,0.3s,baz=0.0,slow=20,SNR=2.1						
AAK	Ala-Archa	5.72	347	P	Pn	14 47 32.0	+7.8
	SNR=12						
AAK	Ala-Archa	5.72	347	⇓P	Pn	14 47 28.6	+4.4
	comp=E,5.4nm,0.5s						
TKM2	Tokmak 2	5.86	355	P	Pn	14 47 32.7	+6.5
	SNR=14						
TKM2	Tokmak 2	5.86	355	⇑P	Pn	14 47 29.2	+3.1
	comp=E,6.0nm,0.4s						
EKS2	Erkin-Say	5.90	342	P	Pn	14 47 32.9	+6.3
	SNR=15						
SMLA	Simla	5.98	173	*e*P	Pn	14 47 31.4	+3.9
SMLA				*e*S	Sn	14 48 32.0	-2.8
SMLA				IAML		14 48 37.1	
	comp=N,283nm,0.3s						
SMLA				IAML		14 48 37.6	
	comp=E,244nm,0.3s						
MDOK	Medeo	6.11	5	⇓P	Pn	14 47 32.5	+3.0
PDGK	Podgornoye	6.71	21	⇓P	Pn	14 47 41.1	+3.3
	comp=E,12nm,0.6s						
PDGK				⇓S	Sn	14 48 53.2	+0.1
	comp=E,47nm,0.8s						
DDI	Dehra Dun	6.90	167	*e*P	Pn	14 47 44.9	+4.7
DDI				*e*S	Sn	14 48 53.9	-3.6
DDI				*e*S	Sn	14 48 58.6	+1.0
KK31	Karatay Array	7.46	326	P	Pn	14 47 50.0	+2.0
	comp=E,6.7nm,0.6s,baz=132,slow=12,SNR=112						
KK31				⇓S	Sn	14 49 13.4	+2.0
	comp=E,7.4nm,0.4s						
NDI	New Delhi	8.41	174	*e*S	Sn	14 49 30.0	-4.6
MAKZ	Makanchi	10.61	22	⇓P	Pn	14 48 33.1	+2.0
	comp=E,1.6nm,0.7s						
MK31	Makanchi Array	10.69	23	P	Pn	14 48 33.7	+1.5
	comp=E,0.8nm,0.3s,baz=203,slow=13,SNR=40						
MKAR	Makanchi Array	10.69	23	Pn	Pn	14 48 34.3	+2.1
	comp=E,1.0nm,0.3s,baz=204,slow=14,SNR=50						
MKAR				Sn	Sn	14 50 28.4	-2.2
	comp=E,0.4nm,0.3s,baz=200,slow=21,SNR=5.8						
WMQ	Urumqi	11.00	49	*e*P	Pn	14 48 41.1	+4.6
WMQ				smax	smax		
	comp=N,18nm,1.1s						
WMQ				smax	smax		
	comp=E,22nm,0.7s						
KURBB	Kurchatov Arra	13.64	6	Pn	Pn	14 49 12.3	-0.1
	comp=E,0.1nm,0.3s,baz=193,slow=12,SNR=7.9						
KURK	Kurchatov	13.74	6	⇑P	Pn	14 49 13.2	-0.5
	comp=E,6.9nm,0.8s						
BHPL	Bhopal	13.82	176	*e*x	Pn	14 49 11.3	-3.8
BHPL				*e*S	Sn	14 51 34.0	-13
GEYT	Alibeck	14.44	279	Pn	Pn	14 49 18.6	-4.9
	comp=E,0.7nm,0.3s,baz=93,slow=8.9,SNR=7.9						
BVAR	Borovoye Array	16.47	347	Pn	Pn	14 49 50.9	+1.1
	comp=E,0.1nm,0.3s,baz=163,slow=26,SNR=6.9						
BRVK	Borovoye	16.52	347	⇑P	Pn	14 49 51.8	+1.3
	comp=E,6.4nm,0.6s						
AB31	Akbulak array	16.99	321	⇑P	Pn	14 49 56.4	+0.1
	comp=E,1.8nm,0.8s,baz=123,slow=12,SNR=4.7						
ZALV	Zalesovo Beam	17.88	17	P	Pn	14 50 06.5	-0.8
	comp=E,0.3nm,0.3s,baz=210,slow=11,SNR=7.2						
GTA	Gaotai	18.63	76	*e*P	Pn	14 50 18.0	+1.2
GTA				pP	sP	14 50 35.3	+3.8
GTA				sP	pP	14 50 43.6	+17
GTA				pmax	pmax		
	comp=Z,3.0nm,1.4s						
AKTO	Aktyubinsk	18.70	321	P	P	14 50 14.9	-1.9
	comp=Z,0.4nm,0.3s,baz=123,slow=7.4,SNR=5.7						
AKTO	Aktyubinsk	18.70	321	⇑P	P	14 50 15.6	-1.1
	comp=Z,2.2nm,0.8s						
SONM	Songino Array	24.54	54	P	P	14 51 17.6	-0.4
	comp=Z,0.3nm,0.5s,baz=260,slow=9.4,SNR=4.7						
FINES	FINESS Array B	39.42	324	P	P	14 53 24.9	-2.9
	comp=Z,0.9nm,0.6s,baz=106,slow=10,SNR=7.2						
ARCES	ARCESS Array B	42.28	336	P	P	14 53 48.8	-2.5
	comp=Z,2.6nm,0.9s,baz=107,slow=8.8,SNR=13						
HFS	Hagfors	45.25	321	P	P	14 54 12.6	-2.6
	comp=Z,1.7nm,0.7s,baz=100,slow=12,SNR=1.5						
NOA	NORSAR Array B	46.48	323	P	P	14 54 21.6	-3.4
	comp=Z,0.9nm,0.6s,baz=95,slow=7.8,SNR=2.6						
TORD	Torodi Ar. Bea	69.95	272	P	P	14 57 05.0	-4.6
	comp=Z,0.3nm,0.4s,baz=46,slow=5.8,SNR=4.7						

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*IDC **15** 14:46:43.0±1.1, 1°.67N×90°.67W, h0^{km}, mb3.8/10, mb1 4.1/10, mb1mx3.9/44, mbtmp3.8/10, MS3.6/11, Ms1 3.6/11, ms1mx3.5/31, Error ellipse: s-maj=44.6km s-min=18.7km az=55.0*

*NEIC **15** 14:46:42.9±1.4, 1°.42N±0°.09×90°.7W±0°.2, h10^{km}±1^{km}, mb4.6/16, Error ellipse: s-maj=32.8km s-min=13.4km az=257.0*

ISC 15 14:46:43.5±0.7**, 1°.51N**±0°.09×**90°.7W**±0°.1**, h10^{km}, n55, σ1^{s}.08**/43**, mb4.3**/18**, MS3.5**/6**, Galapagos Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PAYG	Puerto Ayora	2.21	168	Pn	Pn	14 47 18.3	-2.0
PCON	Cinco Dias	14.35	87	*e*P	P	14 50 13.6	-1.0
MARP	Paez Belalcaza	14.82	85	*e*P	P	14 50 22.7	+3.1
ATAH	Atahualpa	15.01	125	Pn	P	14 50 22.3	+0.6
	0.1nm,0.3s,baz=79,slow=16,SNR=1.5						
ATAH				LR	LR	14 55 11.9	

	comp=Z,304nm,20.9s,baz=293,slow=34						
FLOC	Florencia	15.07	90	eP	P	14 50 23.0	+0.9
RREF	El Recreo	15.72	77	eP	P	14 50 28.9	-1.0
CMIG	Matias Romero	16.02	345	Pn	P	14 50 33.3	+0.8
	0.1nm,0.3s,baz=270,slow=4.0,SNR=4.6						
CMIG				LR	LR	14 54 59.0	
	comp=Z,167nm,20.4s,baz=218,slow=31						
NORC	Norcasia	16.33	75	eP	Pn	14 50 32.8	-0.4
ROSC	El Rosal	16.71	78	LR	LR	14 56 07.1	
	comp=Z,722nm,21.8s,baz=266,slow=34						
SMLC	San Martn de	18.09	66	eP	Pn	14 50 53.9	-1.3
RUSC	La Rusia	18.14	76	eP	Pn	14 50 54.8	-1.4
TEIG	Tepich	18.76	7	LR	LR	14 57 19.5	
	comp=Z,134nm,18.6s,baz=127,slow=34						
TEIG	Tepich	18.76	7	P	P	14 51 02.0	-0.8
NNA	Nana	19.24	135	LR	LR	14 56 41.4	
	comp=Z,218nm,20.4s,baz=310,slow=31						
SDV	Santo Domingo	21.30	69	P	P	14 51 30.7	-0.1
	5.2nm,0.4s,baz=233,slow=11,SNR=6.1						
SDV				LR	LR	14 58 49.8	
	comp=Z,241nm,20.5s,baz=268,slow=34						
H06E1	SOCORRO T-PHAS	26.20	312	T	T	15 19 30.7	
	SNR=5.9						
LPAZ	La Paz	28.47	129	P	P	14 52 41.9	+2.1
	0.9nm,0.6s,baz=272,slow=11,SNR=3.2						
LPAZ				LR	LR	15 03 35.1	
	comp=Z,120nm,21.3s,baz=341,slow=36						
LPIG	La Paz	29.39	321	LR	LR	15 00 48.6	
	comp=Z,49nm,19.7s,baz=204,slow=29						
TXAR	Lajitas Array	30.29	337	P	P	14 52 55.3	+0.1
	0.8nm,0.9s,baz=152,slow=11,SNR=6.7						
TXAR				LR	LR	15 03 30.0	
	comp=Z,92nm,19.4s,baz=0.0,slow=33						
CCM	Cathedral Cave	36.38	359	P	P	14 53 48.6	+0.6
WCI	Wyandotte Cave	36.77	6	P	P	14 53 51.9	+0.6
WCI				IAmb	IAmb	14 54 18.7	
	comp=Z,11nm,1.2s						
BLA	Blacksburg	36.78	14	P	P	14 53 52.0	+0.5
BLA				IAmb	IAmb	14 54 14.5	
	comp=Z,6.9nm,0.9s						
JSRW	J. Sargeant Re	37.90	17	P	P	14 54 00.3	-0.6
Q51A	Peebles	37.95	9	P	P	14 54 01.1	-0.2
Q51A				IAmb	IAmb	14 54 02.7	
	comp=Z,16nm,1.0s						
P43A	Skaggs, Pawnee	37.97	2	P	P	14 54 01.3	-0.2
O44A	Mansfield	38.52	3	P	P	14 54 07.1	+0.9
P53A	Whipple	38.75	12	P	P	14 54 08.2	+0.2
P53A				IAmb	IAmb	14 54 22.6	
	comp=Z,25nm,1.4s						
ISCO	Idaho Springs	40.45	342	P	P	14 54 23.8	+1.1
ECSD	EROS Data Cent	42.37	354	P	P	14 54 38.2	+0.2
CPUP	Villa Florida	42.49	133	P	P	14 54 37.8	-1.4
BINY	Binghamton	42.62	16	P	P	14 54 39.0	-1.0
BINY				IAmb	IAmb	14 54 46.0	
	comp=Z,23nm,1.3s						
PDAR	Pinedale Array	44.40	340	P	P	14 54 54.1	-0.5
	comp=Z,0.5nm,1.0s,baz=202,slow=9.6,SNR=2.4						
NVAR	Mina Array Bea	44.59	329	P	P	14 54 58.2	+1.9
	comp=Z,0.9nm,0.7s,baz=150,slow=8.4,SNR=5.7						
NVAR				PcP	PP	14 56 39.8	-0.6
	comp=Z,0.3nm,0.7s,baz=142,slow=4.6,SNR=2.1						
NVAR	Mina Array Bea	44.59	329	P	P	14 54 54.7	-1.5
PLCA	Paso Flores	45.89	159	P	P	14 55 07.6	+1.3
	comp=Z,3.6nm,0.9s,baz=41,slow=5.6,SNR=2.8						
PLCA				LR	LR	15 10 54.2	
	comp=Z,70nm,19.3s,baz=292,slow=32						
HLID	Hailey	46.89	336	P	P	14 55 15.4	+1.1
HLID				IAmb	IAmb	14 55 18.9	
	comp=Z,7.0nm,1.5s						
ULM	Lac du Bonnet	48.76	356	P	P	14 55 27.9	-0.6
	comp=Z,1.4nm,0.6s,baz=170,slow=6.1,SNR=2.0						
PPT	Papeete	60.95	249	LR	LR	15 16 46.7	
	comp=Z,79nm,21.6s,baz=54,slow=30						
YKA	Yellowknife Ar	63.41	348	P	P	14 57 13.2	+0.1
	comp=Z,0.8nm,0.7s,baz=144,slow=7.0,SNR=12						
INK	Inuvik	72.72	345	P	P	14 58 10.7	-0.7
	comp=Z,1.0nm,0.7s,baz=122,slow=5.4,SNR=3.4						
INK	Inuvik	72.72	345	IAmb	IAmb	14 58 14.7	
	comp=Z,3.4nm,1.1s						
EGAK	Eagle	72.75	340	P	P	14 58 10.4	-1.3
IL31		74.80	338	P	P	14 58 23.0	-0.6
IL31				IAmb	IAmb	14 58 32.5	
	comp=Z,4.5nm,1.1s						
ILAR	Eielson Array	74.80	338	P	P	14 58 24.0	+0.3
	comp=Z,1.3nm,1.0s,baz=127,slow=3.8,SNR=10						
ILAR	Eielson Array	74.80	338	P	P	14 58 23.7	0.0
BMAR	Burnt Mountain	75.42	341	P	P	14 58 28.0	+0.7
I23K	Minto, Yukon-K	75.90	338	P	P	14 58 30.5	+0.5
I23K				IAmb	IAmb	14 58 50.0	
	comp=Z,8.3nm,1.5s						
IMAR	Indian Mountai	77.91	338	P	P	14 58 41.1	-0.3
H11N3	WAKE ISLAND Hy	101.12	290	T	T	16 53 09.1	
	baz=86,slow=75,SNR=5.0						
H11N2	WAKE ISLAND Hy	101.13	290	T	T	16 53 09.9	
	baz=86,slow=75,SNR=4.3						
H11N1	WAKE ISLAND Hy	101.14	290	T	T	16 53 10.4	
	baz=86,slow=75,SNR=9.0						
H11S2	WAKE ISLAND Hy	101.43	289	T	T	16 53 30.1	
	baz=85,slow=75,SNR=38						
H11S1	WAKE ISLAND Hy	101.43	289	T	T	16 53 33.3	
	baz=85,slow=75,SNR=37						
H11S3	WAKE ISLAND Hy	101.44	289	T	T	16 53 31.0	
	baz=85,slow=75,SNR=40						
CMAR	Chiang Mai Arr	158.00	335	PKPab	PKPab	15 07 15.0	+0.3
	comp=Z,0.4nm,0.6s,baz=355,slow=4.0,SNR=4.5						

IDC 15 14:51:02.8±2.1**, 1°.84N×126°.77E, h0^{km}, mb3.1**/3**, mb1 3.4**/3**, mb1mx3.1**/53**, mbtmp3.2**/3**, Error ellipse: s-maj=176.3km s-min=25.4km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.89	161	P	P	14 56 08.2	-0.1
	0.6nm,0.6s,baz=340,slow=11,SNR=6.4						
ASAR	Alice Springs	26.29	165	P	P	14 56 40.4	+0.1
	0.1nm,0.4s,baz=348,slow=13,SNR=4.5						
MKAR	Makanchi Array	59.12	326	P	P	15 01 05.2	-0.1
	0.1nm,0.5s,baz=118,slow=7.1,SNR=3.4						

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*IDC **15** 14:58:35.4±4.9, 6°.09S×148°.11E, h96^{km}±59^{km}, mb3.3/3, mb1 3.4/5, mb1mx3.1/34, mbtmp3.6/5, ML3.8/1, MS3.3/1, Ms1 3.3/1, ms1mx2.6/20, Error ellipse: s-maj=105.6km s-min=36.3km az=114.0*

*NEIC **15** 14:58:37.8±1.4, 6°.0S±0°.1×147°.7E±0°.1, h95^{km}±17^{km}, mb4.0/7, Error ellipse: s-maj=21.4km s-min=12.2km az=145.0*

ISC 15 14:58:37.5±1.1**, 6°.1S**±0°.1×**147°.8E**±0°.1**, h100^{km}, n15, σ0^{s}.80**/15**, mb3.6**/4**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.36	190	P	Pn	14 59 28.4	+0.3
	5.0nm,0.3s,baz=347,slow=5.0,SNR=15						
PMG				S	Sn	15 00 06.5	-0.7
	6.9nm,0.3s,baz=204,slow=18,SNR=7.3						
PMG	Port Moresby	3.36	190	Pn	Pn	14 59 28.3	+0.2
RABL	Rabaul	4.78	67	Pn	Pn	14 59 47.3	+0.1
WB0	Warramunga Arr	18.81	222	P	Pn	15 02 50.3	-0.8
WB0				IAmb	IAmb	15 02 52.8	
	comp=Z,6.3nm,1.2s						
WR0	Warramunga Arr	18.85	222	P	Pn	15 02 50.7	-0.8
WR0				IAmb	IAmb	15 03 18.8	
	comp=Z,9.4nm,1.4s						
WRAB	Tennant Creek	18.96	222	P	Pn	15 02 51.9	-0.8
WB2	Warramunga Arr	18.96	222	P	P	15 02 51.4	+0.3
WB2				IAmb	IAmb	15 03 00.4	
	comp=Z,24nm,1.5s						
WRA	Warramunga Arr	18.97	222	P	P	15 02 51.9	+0.7
	comp=Z,0.3nm,0.3s,baz=48,slow=11,SNR=30						
WRA	Warramunga Arr	18.97	222	P	P	15 02 51.0	-0.2
KNRA	Kununurra	20.93	241	P	P	15 03 12.1	-0.2
AS31	Alice Springs	21.99	216	P	P	15 03 24.7	+1.1
AS31				IAmb	IAmb	15 03 29.2	
	comp=Z,1.7nm,0.2s						
ASAR	Alice Springs	21.99	216	P	P	15 03 24.9	+1.2
	comp=Z,0.5nm,0.3s,baz=52,slow=8.3,SNR=22						
FITZ	Fitzroy Crossi	24.66	239	P	P	15 03 50.2	+1.1
	comp=Z,3.1nm,0.4s,baz=56,slow=8.4,SNR=24						
MSVF	Nonsavu	31.77	114	LR	LR	15 14 41.8	
	comp=Z,56nm,19.3s,baz=246,slow=31						
MKAR	Makanchi Array	78.03	320	P	P	15 10 24.6	-0.6
	comp=Z,0.1nm,0.6s,baz=103,slow=6.2,SNR=2.8						

IDC 15 15:14:02.3±6.8**, 22°.52S**×**178°.60E, h499^{km}**±31^{km}**, mb2.9**/4**, mb1 3.1**/5**, mb1mx2.9**/41**, mbtmp3.8**/5**, Error ellipse: s-maj=144.1km s-min=30.8km az=135.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.79	354	P	P	15 15 27.5	-0.1
	4.1nm,0.3s,baz=153,slow=4.8,SNR=30						
ASAR	Alice Springs	41.01	259	P	P	15 21 00.9	-0.6
	0.3nm,0.6s,baz=90,slow=8.3,SNR=3.9						
WRA	Warramunga Arr	41.23	265	P	P	15 21 03.5	+0.2
	0.3nm,0.3s,baz=96,slow=8.4,SNR=14						
KSRS	Korea Array	76.37	321	P	P	15 25 00.3	+0.6
	1.0nm,0.8s,baz=150,slow=5.8,SNR=4.3						
CMAR	Chiang Mai Arr	87.84	291	P	P	15 25 58.5	-0.1
	0.4nm,0.3s,baz=131,slow=2.8,SNR=6.4						
BRTR	Keskin Array B	145.72	308	PKPbc	PKPdf	15 32 44.3	+0.4
	0.3nm,0.7s,baz=102,slow=1.7,SNR=3.9						

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*KRSC **15** 15:22:00.0±1.4, 52°.14N×160°.58E, h59^{km}±19^{km}, ML4.4*

*MOS **15** 15:22:03.1±0.8, 52°.24N×160°.38E, h62^{km}, mb4.3/13, Error ellipse: s-maj=9.1km s-min=4.7km az=111.1*

*IDC **15** 15:22:08.3±8.0, 52°.53N×159°.62E, h51^{km}±63^{km}, mb3.7/10, mb1 3.8/13, mb1mx3.5/38, mbtmp4.0/13, ML3.9/3, MS3.4/3, Ms1 3.4/3, ms1mx2.9/41, Error ellipse: s-maj=63.9km s-min=27.2km az=112.0*

*NEIC **15** 15:22:20.7±1.7, 53°.6N±0°.2×156°.9E±0°.4, h35^{km}±2^{km}, mb4.2/8, Error ellipse: s-maj=53.7km s-min=11.2km az=42.0*

ISC 15 15:22:01.7±1.8**, 52°.17N**±0°.07×**160°.65E**±0°.08**, h42^{km}**±14^{km}**, n128, σ1^{s}.32**/128**, mb4.1**/27**, MS3.1**/3**, 12C, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	Mys Shipunski	1.01	338	PN	Pn	15 22 18.7	-0.7
SPN				S	Sn	15 22 31.2	-1.2
SPN	Mys Shipunski	1.01	338	eP	Pn	15 22 18.7	-0.7
SPN				eS	Sn	15 22 31.2	-1.2
NLC	Nalytchevo	1.28	322	PN	Pn	15 22 23.1	0.0
NLC	Nalytchevo	1.28	322	eP	Pn	15 22 23.1	0.0
RUS	Russkaya	1.34	282	PN	Pn	15 22 23.3	-0.6
RUS				S	Sn	15 22 39.7	-0.7
RUS	Russkaya	1.34	282	eP	Pn	15 22 23.3	-0.6
RUS				eS	Sn	15 22 39.7	-0.7
DALK	Dalny	1.45	308	PN	Pn	15 22 24.9	-0.5
DALK				S	Sn	15 22 42.7	-0.4
DALK	Dalny	1.45	308	eP	Pn	15 22 24.9	-0.5
DALK				eS	Sn	15 22 42.7	-0.4
PET	Petropavlovsk	1.49	306	⇑ePN	Pn	15 22 25.6	-0.4
PET				eS	Sn	15 22 44.5	+0.4
PET				pmax	pmax		
	comp=Z,940nm,0.7s						
PET				smax	smax		
	comp=E,2μm,0.7s						
PET				smax	smax		
	comp=N,2μm,0.6s						
PET	Petropavlovsk	1.49	306	eP	Pn	15 22 25.9	-0.1
PET				eS	Sn	15 22 44.6	+0.4
UGLR	Uglovaya	1.52	314	PN	Pn	15 22 27.0	+0.4
UGLR	Uglovaya	1.52	314	eP	Pn	15 22 27.0	+0.4
MTVR	Mutnovka	1.54	283	PN	Pn	15 22 26.9	0.0
MTVR				S	Sn	15 22 46.4	+0.6
MTVR	Mutnovka	1.54	283	eP	Pn	15 22 26.9	0.0
MTVR				eS	Sn	15 22 46.4	+0.6
SMAR	Somma	1.57	315	PN	Pn	15 22 27.2	-0.1
SMAR	Somma	1.57	315	eP	Pn	15 22 27.2	-0.1
AVH	Avacha	1.60	314	PN	Pn	15 22 28.0	+0.4
AVH	Avacha	1.60	314	eP	Pn	15 22 28.0	+0.4
KRER	Koryakskii	1.62	315	PN	Pn	15 22 28.5	+0.5
KRER	Koryakskii	1.62	315	eP	Pn	15 22 28.5	+0.5
GRL	Gorelyy	1.62	285	PN	Pn	15 22 28.4	+0.4
GRL	Gorelyy	1.62	285	eP	Pn	15 22 28.4	+0.4
KDTR	Khodutka, Kamc	1.63	258	PN	Pn	15 22 27.7	-0.2
KDTR				S	Sn	15 22 47.1	-0.5
KDTR	Khodutka, Kamc	1.63	258	eP	Pn	15 22 27.7	-0.2
KDTR				eS	Sn	15 22 47.1	-0.5
KOK	Koryaka	1.67	314	PN	Pn	15 22 28.9	+0.4
KOK	Koryaka	1.67	314	eP	Pn	15 22 28.9	+0.4
KRMR	Karymshinskiy	1.68	294	PN	Pn	15 22 29.5	+1.0
KRMR				S	Sn	15 22 51.0	+2.2
KRMR	Karymshinskiy	1.68	294	eP	Pn	15 22 29.5	+1.0
KRMR				eS	Sn	15 22 51.0	+2.2
KRX	Arik	1.71	315	PN	Pn	15 22 29.2	+0.1
KRX	Arik	1.71	315	eP	Pn	15 22 29.2	+0.1
PEA0B	Petropavlovsk-	2.03	299	PN	Pn	15 22 33.6	+0.2
PEA0B	Petropavlovsk-	2.03	299		Pn	15 22 33.6	+0.2
PEA0B				Sn	Sn	15 22 46.0	-12
PETK	Petropavlovsk-	2.03	299	P	Pn	15 22 34.0	+0.5
	comp=N,30nm,0.3s,baz=112,slow=19,SNR=444						
PETK				LR	LR	15 22 54.2	
	comp=N,116nm,21.3s,baz=48,slow=35						
PETK				S	Sn	15 23 01.4	+3.9
	comp=N,31nm,0.3s,baz=112,slow=19,SNR=16						
PETK	Petropavlovsk-	2.03	299	PN	Pn	15 22 33.4	0.0
PETK	Petropavlovsk-	2.03	299		Pn	15 22 33.4	0.0
GNL	Ganaly	2.24	314	PN	Pn	15 22 37.5	+1.1
GNL	Ganaly	2.24	314	eP	Pn	15 22 37.5	+1.1
APC	Apacha	2.26	291	PN	Pn	15 22 37.7	+1.1
APC				S	Sn	15 23 04.9	+1.7
APC	Apacha	2.26	291	eP	Pn	15 22 37.7	+1.1
APC				eS	Sn	15 23 04.9	+1.7
PAU	Pauzhetka	2.48	255	PN	Pn	15 22 40.1	+0.5
PAU	Pauzhetka	2.48	255	eP	Pn	15 22 40.1	+0.5
KZV	Kizimen	2.96	356	PN	Pn	15 22 47.5	+1.2
KZV	Kizimen	2.96	356	eP	Pn	15 22 47.5	+1.2
TUMD	Tumrok D	3.05	357	eP	Pn	15 22 48.3	+0.9
TUMD				eS	Sn	15 23 23.4	+0.8
TUMR	Tumrok	3.14	355	PN	Pn	15 22 48.3	-0.4
TUMR				S	Sn	15 23 23.4	-1.6
TUMR	Tumrok	3.14	355	eP	Pn	15 22 50.4	+1.7
SKR	Severo-Kuril's	3.20	244	ePN	Pn	15 22 53.6	+4.2
SKR				eS	Sn	15 23 25.3	-1.0
SKR				pmax	pmax		
	comp=Z,79nm,0.9s						
SKR				smax	smax		
	comp=E,185nm,0.6s						
SKR				smax	smax		
	comp=N,234nm,0.7s						
KMNR	Kamenistaya	3.61	356	PN	Pn	15 22 57.3	+2.2
KMNR	Kamenistaya	3.61	356	eP	Pn	15 22 57.3	+2.2
ESO	Esso	3.94	344	PN	Pn	15 23 01.6	+2.0
ESO	Esso	3.94	344	eP	Pn	15 23 01.6	+2.0
KLY	Klyuchi	4.16	0	PN	Pn	15 23 05.1	+2.5
KLY	Klyuchi	4.16	0	eP	Pn	15 23 05.1	+2.5
SRDR	Sredinnyy	4.20	353	PN	Pn	15 23 06.3	+3.1
SRDR	Sredinnyy	4.20	353	eP	Pn	15 23 06.3	+3.1
KBTR	Krutoberegovo	4.25	17	PN	Pn	15 23 05.5	+1.7
KBTR	Krutoberegovo	4.25	17	eP	Pn	15 23 05.5	+1.7
BDR	Baidarnaya	4.42	4	PN	Pn	15 23 09.8	+3.5
BDR	Baidarnaya	4.42	4	eP	Pn	15 23 09.8	+3.5
SRKR	Sorokina	4.51	4	PN	Pn	15 23 10.4	+2.9
SRKR	Sorokina	4.51	4	eP	Pn	15 23 10.4	+2.9
SEY	Seymchan	11.66	341	i PN	Pn	15 24 42.9	-2.4
ASAJ	Asahikawa	14.46	243	P	P	15 25 23.9	-5.6
	comp=N,0.4nm,0.3s,baz=30,slow=20,SNR=4.3						
KLR	Kul'dur	18.48	272	P	Pn	15 26 13.1	-1.3
	comp=N,0.1nm,0.3s,baz=40,slow=17,SNR=2.6						
YAK	Yakutsk	19.31	313	P	Pn	15 26 21.8	-2.4
	comp=N,0.1nm,0.3s,baz=45,slow=2.2,SNR=12						
YAK	Yakutsk	19.31	313	ceP	P	15 26 20.5	-2.3
YAK				pmax	pmax		
	comp=Z,24nm,1.0s						
MAT	Matsushiro	22.25	234	P	P	15 26 57.2	+2.3
MJAR	Matsushiro Arr	22.25	234	P	P	15 26 57.9	+3.0
	comp=Z,2.5nm,0.6s,baz=18,slow=12,SNR=13						
MJAR				LR	LR	15 35 44.6	
	comp=Z,66nm,21.8s,baz=340,slow=37						
TIXI	Tiksi	24.07	336	ceP	P	15 27 11.7	-0.9
TIXI	Tiksi	24.07	336	P	P	15 27 11.6	-1.0
TIXI				IAmb	IAmb	15 27 14.4	
	comp=Z,5.4nm,0.8s						
HIA	Hailar	25.82	280	P	P	15 27 28.0	-0.7
HIA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
HIA	Hailar	25.82	280	P	P	15 27 28.0	-0.7
HIA				IAmb	IAmb	15 27 30.2	
	comp=Z,7.0nm,1.0s						
KSRS	Korea Array	27.20	250	LR	LR	15 39 03.5	
	comp=Z,47nm,18.2s,baz=35,slow=38						
H11N2	WAKE ISLAND Hy	32.74	169	T	T	16 03 17.1	
	baz=353,slow=76,SNR=13						
H11N3	WAKE ISLAND Hy	32.75	169	T	T	16 03 12.3	
	baz=353,slow=76,SNR=10						
H11N1	WAKE ISLAND Hy	32.75	169	T	T	16 03 09.3	
	baz=353,slow=76,SNR=14						
H11S1	WAKE ISLAND Hy	33.92	170	T	T	16 04 35.6	
	baz=352						
H11S3	WAKE ISLAND Hy	33.93	170	T	T	16 04 36.2	
	baz=352						
H11S2	WAKE ISLAND Hy	33.94	170	T	T	16 04 38.2	
	baz=352						
ULN	Ulaanbaatar	34.05	285	ceP	P	15 28 41.2	-0.5
ULN				pmax	pmax		
	comp=Z,4.0nm,1.7s						
SONM	Songino Array	34.45	285	P	P	15 28 44.9	-0.3
	comp=Z,0.4nm,0.6s,baz=69,slow=6.3,SNR=3.1						
HHC	Hu-ho-hao-te	34.98	271	eP	P	15 28 50.3	+0.5
HHC				pmax	pmax		
	comp=Z,4.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,140nm,5.2s						
GTA	Gaotai	43.05	278	⇑P	P	15 29 58.3	+1.0
GTA				pP	pP	15 30 02.9	-5.5
GTA				sP	pwP	15 30 05.1	-6.0
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ZALV	Zalesovo Beam	43.57	304	P	P	15 29 60.0	-1.1
	comp=Z,0.5nm,0.6s,baz=38,slow=7.3,SNR=3.4						
ZALV	Zalesovo Beam	43.57	304	P	P	15 30 00.0	-1.1
DGZ	Jazzator, Alta	44.39	297	i P	P	15 30 07.0	-0.9
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ZSN	Zaisan	47.06	296	eP	P	15 30 28.1	-0.8
	baz=295						
ZSN	Zaisan	47.06	296	eP	P	15 30 28.0	-0.8
WMQ	Urumqi	47.60	290	eP	P	15 30 34.8	+1.6
KURK	Kurchatov	48.52	303	ceP	P	15 30 38.7	-1.3
KURK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
KURK	Kurchatov	48.52	303	P	P	15 30 39.0	-1.0
MK31	Makanchi Array	48.87	297	P	P	15 30 41.9	-0.9
MK31				pmax	pmax		
	comp=Z,3.0nm,1.4s						
MK31	Makanchi Array	48.87	297	P	P	15 30 41.9	-0.9
MKAR	Makanchi Array	48.87	297	P	P	15 30 42.7	-0.2
	comp=Z,0.7nm,0.5s,baz=54,slow=6.8,SNR=18						
MKAR	Makanchi Array	48.87	297	P	P	15 30 42.0	-0.8
MAKZ	Makanchi	49.03	297	P	P	15 30 42.6	-1.5
MAKZ				pmax	pmax		
	comp=Z,3.0nm,1.3s						
MAKZ	Makanchi	49.03	297	P	P	15 30 42.6	-1.5
KMI	Kunming	51.00	261	⇑P	P	15 31 06.0	+6.5
KMI				pP	sP	15 31 16.0	+1.0
KMI				sP	pwP	15 31 20.0	+5.1
KMI				pmax	pmax		
	comp=Z,4.0nm,2.3s						
BRVK	Borovoye	51.26	309	ceP	P	15 31 01.0	+0.2
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.3s						
BRVK	Borovoye	51.26	309	P	P	15 31 01.1	+0.2
BRZS	Berezniki	51.99	305	eP	P	15 31 05.8	-0.6
	comp=Z,1.3nm,1.1s,baz=304						
BRZS	Berezniki	51.99	305	eP	P	15 31 05.8	-0.6
BRZS				pmax	pmax		
	comp=Z,1.0nm,1.1s						
SHLS	Shalkode	52.70	295	eP	P	15 31 10.4	-1.5
	comp=Z,1.2nm,1.0s,baz=293						
SHLS	Shalkode	52.70	295	eP	P	15 31 10.4	-1.5
SHLS				pmax	pmax		
	comp=Z,1.0nm,1.0s						
CHKK	Chushkaly	53.62	297	eP	P	15 31 17.7	-0.8
	baz=296						
CHKK	Chushkaly	53.62	297	eP	P	15 31 17.7	-0.8
ARCES	ARCESS Array B	54.28	342	P	P	15 31 24.5	+1.6
	comp=Z,3.8nm,0.9s,baz=40,slow=7.2,SNR=3.2						
ARU	Arti	54.31	318	P	P	15 31 24.0	+0.7
ARU				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ARU	Arti	54.31	318	P	P	15 31 24.0	+0.7
ARU				IAmb	IAmb	15 31 24.2	
	comp=Z,4.2nm,1.0s						
BTLS	Baital	54.45	300	eP	P	15 31 23.8	-0.7
	baz=298						
BTLS	Baital	54.45	300	eP	P	15 31 23.7	-0.7
AAK	Ala-Archa	55.80	297	i P	P	15 31 34.5	+0.1
AAK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KIRV	Kirov	56.34	324	ceP	P	15 31 38.3	+0.5
KKAR	Karatay Array	57.64	300	P	P	15 31 46.9	-0.4
KKAR	Karatay Array	57.64	300	P	P	15 31 46.9	-0.4
KLMR	Klimovskoe	57.92	330	eP	P	15 31 48.8	-0.2
KLMR				pmax	pmax		
	comp=Z,27nm,1.5s						
KLMR	Klimovskoe	57.92	330	eP	P	15 31 48.8	-0.2
KLMR				AMP		15 31 56.3	
	comp=Z,27nm,1.5s						
CMAR	Chiang Mai Arr	58.33	259	P	P	15 31 54.2	+1.8
	comp=Z,1.1nm,0.7s,baz=26,slow=7.0,SNR=9.3						
CMAR	Chiang Mai Arr	58.33	259	ceP	P	15 31 55.4	+3.0
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ABKAR	Akbulak array	58.66	311	P	P	15 31 54.9	+0.6
ABKAR				IAmb	IAmb	15 31 57.7	
	comp=Z,3.3nm,1.2s						
FINES	FINESS Array B	61.11	337	P	P	15 32 13.2	+2.3
	comp=Z,4.2nm,0.6s,baz=34,slow=8.0,SNR=28						
NB2	NORSAR Subarra	64.53	344	P	P	15 32 35.7	+2.0
	comp=Z,1.0nm,0.8s,baz=20,slow=6.9						
NOA	NORSAR Array B	64.53	344	P	P	15 32 35.8	+2.0
	comp=Z,0.9nm,0.7s,baz=22,slow=6.8,SNR=4.4						
AKASG	Malin Array Be	69.58	329	P	P	15 33 06.4	+0.5
	comp=Z,0.9nm,0.3s,baz=30,slow=6.9,SNR=6.9						
AKASG	Malin Array Be	69.58	329	ceP	P	15 33 07.1	+1.2
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KBZ	Khabaz	70.44	317	P	P	15 33 13.3	+2.1
	comp=Z,1.3nm,0.7s,baz=67,slow=4.6,SNR=6.2						
KBZ	Khabaz	70.44	317	ceP	P	15 33 12.7	+1.4
KBZ				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MLR	Muntele Rosu	75.22	329	LR	LR	16 13 29.0	
	comp=Z,45nm,18.4s,baz=322,slow=41						

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*IDC **15** 15:32:24.9±3.5, 51°.56N×160°.44E, h0^{km}, mb3.7/2, mb1 3.8/3, mb1mx3.3/33, mbtmp3.6/3, ML2.5/1, Error ellipse: s-maj=103.7km s-min=49.6km az=36.0*

*MOS **15** 15:32:30.2±0.8, 52°.02N×160°.74E, h49^{km}, mb4.1/1, Error ellipse: s-maj=21.6km s-min=6.4km az=121.4*

*NEIC **15** 15:32:30.0±0.3, 51°.6N±0°.2×160°.3E±0°.2, h31^{km}±7^{km}, mb4.0/3, Error ellipse: s-maj=34.7km s-min=17.0km az=197.0*

*KRSC **15** 15:32:31.5±1.4, 52°.21N×160°.63E, h54^{km}±19^{km}, ML3.9*

ISC 15 15:32:31.7±1.9**, 52°.17N**±0°.07×**160°.49E**±0°.06**, h18^{km}**±6^{km}**, n48, σ0^{s}.91**/69**, mb3.7**/4**, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	Mys Shipunski	0.97	343	PN	Pb	15 32 49.3	-0.7
SPN				S	Sb	15 33 01.9	-0.5
SPN	Mys Shipunski	0.97	343	eP	Pb	15 32 49.3	-0.7
SPN				eS	Sb	15 33 01.9	-0.5
NLC	Nalytchevo	1.22	326	PN	Pb	15 32 54.3	+0.1
NLC	Nalytchevo	1.22	326	eP	Pb	15 32 54.3	+0.1
NLC				eS	Sg	15 33 11.1	-0.2
RUS	Russkaya	1.24	283	PN	Pn	15 32 54.1	0.0
RUS				S	Sn	15 33 10.2	-0.1
RUS	Russkaya	1.24	283	eP	Pn	15 32 54.1	0.0
RUS				eS	Sn	15 33 10.2	-0.1
DALK	Dalny	1.37	310	PN	Pn	15 32 55.8	0.0
DALK				S	Sb	15 33 14.1	+0.3
DALK	Dalny	1.37	310	eP	Pn	15 32 55.9	+0.1
DALK				eS	Sb	15 33 14.2	+0.4
PET	Petropavlovsk	1.41	308	ePN	Pn	15 32 56.4	0.0
PET				eS	Sb	15 33 15.5	+0.5
PET				pmax	pmax		
	comp=Z,178nm,0.8s						
PET				smax	smax		
	comp=E,432nm,0.7s						
PET				smax	smax		
	comp=N,356nm,0.5s						

PET	Petropavlovsk	1.41	308	eP	Pn	15 32 57.0	+0.6
PET				eS	Sb	15 33 15.3	+0.3
PET	Petropavlovsk	1.41	308		Pn	15 32 56.4	0.0
MTVR	Mutnovka	1.45	283	PN	Pn	15 32 57.5	+0.4
MTVR				S	Sb	15 33 16.9	+0.5
MTVR	Mutnovka	1.45	283	eP	Pn	15 32 57.5	+0.4
MTVR				eS	Sb	15 33 16.9	+0.5
UGLR	Uglovaya	1.45	316	PN	Pb	15 32 58.1	-0.1
UGLR				S	Sb	15 33 17.2	+0.8
UGLR	Uglovaya	1.45	316	eP	Pb	15 32 58.1	-0.1
UGLR				eS	Sb	15 33 17.2	+0.8
SMAR	Somma	1.50	317	PN	Pb	15 32 58.8	-0.3
SMAR	Somma	1.50	317	eP	Pb	15 32 58.8	-0.3
AVH	Avacha	1.53	316	PN	Pb	15 32 59.2	-0.3
AVH	Avacha	1.53	316	eP	Pb	15 32 59.3	-0.3
GRL	Gorelyy	1.53	285	PN	Pb	15 32 59.4	-0.2
GRL				S	Sb	15 33 19.8	+1.2
GRL	Gorelyy	1.53	285	eP	Pb	15 32 59.4	-0.2
GRL				eS	Sb	15 33 19.8	+1.2
KRER	Koryakskii	1.55	318	PN	Pn	15 32 59.3	+0.7
KRER	Koryakskii	1.55	318	eP	Pn	15 32 59.3	+0.7
KRMR	Karymshinskiy	1.59	296	PN	Pb	15 33 00.0	-0.4
KRMR				S	Sb	15 33 20.4	+0.3
KRMR	Karymshinskiy	1.59	296	eP	Pb	15 33 00.1	-0.4
KRMR				eS	Sb	15 33 20.5	+0.3
KOK	Koryaka	1.59	316	PN	Pn	15 32 59.9	+0.9
KOK	Koryaka	1.59	316	eP	Pn	15 32 59.9	+0.9
KRX	Arik	1.64	318	PN	Pn	15 33 00.4	+0.8
KRX	Arik	1.64	318	eP	Pn	15 33 00.5	+0.8
PEA0B	Petropavlovsk-	1.94	300	PN	Pn	15 33 04.5	+0.8
PEA0B	Petropavlovsk-	1.94	300		Pn	15 33 04.5	+0.8
PETK	Petropavlovsk-	1.94	300	Pn	Pn	15 33 05.1	+1.4
	comp=N,6.7nm,0.3s,baz=114,slow=19,SNR=120						
PETK				Sn	Sb	15 33 31.9	+1.5
	comp=N,12nm,0.3s,baz=96,slow=39,SNR=12						
PETK	Petropavlovsk-	1.94	300		Pn	15 33 04.5	+0.7
APC	Apacha	2.17	292	PN	Pn	15 33 08.3	+1.5
APC				S	Sb	15 33 35.5	-1.4
APC	Apacha	2.17	292	eP	Pn	15 33 08.3	+1.5
APC				eS	Sb	15 33 35.5	-1.4
GNL	Ganaly	2.17	316	PN	Pn	15 33 08.3	+1.3
GNL	Ganaly	2.17	316	eP	Pn	15 33 08.3	+1.3
KZV	Kizimen	2.95	358	PN	Pn	15 33 18.4	+0.7
KZV	Kizimen	2.95	358	eP	Pn	15 33 18.4	+0.7
TUMD	Tumrok D	3.04	359	eP	Pn	15 33 19.0	+0.2
TUMD				eS	Sn	15 33 53.9	-0.8
TUMR	Tumrok	3.13	356	PN	Pn	15 33 21.3	+1.2
TUMR	Tumrok	3.13	356	eP	Pn	15 33 21.3	+1.2
SPIA	Saint Paul Isl	17.57	62		P	15 36 36.8	+0.6
SPIA				IAmb	IAmb	15 36 37.1	
	comp=Z,81nm,1.0s						
EUNU	Eureka	42.79	14	P	P	15 40 29.6	+2.0
EUNU				IAmb	IAmb	15 40 56.6	
	comp=Z,0.3nm,0.7s						
MK31	Makanchi Array	48.78	297	P	P	15 41 13.0	-2.2
MK31				pmax	pmax		
	comp=Z,2.0nm,1.4s						
MK31	Makanchi Array	48.78	297	P	P	15 41 13.0	-2.2
MK31				IAmb	IAmb	15 41 35.1	
	comp=Z,2.0nm,1.4s						
MKAR	Makanchi Array	48.78	297	P	P	15 41 12.9	-2.3
	comp=Z,0.2nm,0.5s,baz=60,slow=7.1,SNR=4.1						
FINES	FINESS Array B	61.07	337	P	P	15 42 43.5	-0.2
	comp=Z,3.2nm,0.9s,baz=21,slow=8.1,SNR=6.0						

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*IDC **15** 15:57:06.7±0.9, 25°.18S×151°.55E, h0^{km}, mb4.3/8, mb1 4.5/11, mb1mx4.3/28, mbtmp4.4/11, ML4.2/4, MS4.0/18, Ms1 4.0/18, ms1mx3.8/37, Error ellipse: s-maj=25.2km s-min=24.6km az=131.0*

*NEIC **15** 15:57:07.8±2.4, 25°.10S±0°.05×151°.50E±0°.04, h10^{km}±1^{km}, Error ellipse: s-maj=10.9km s-min=2.9km az=148.0*

*NOU **15** 15:57:08.7, 25°.20S×151°.38E, h8^{km}, mb4.9, Near East Coast of Australia*

*AUST **15** 15:57:09.8±0.3, 25°.22S×151°.37E, h15^{km}, Error ellipse: s-maj=3.8km s-min=3.1km az=69.0*

*BJI **15** 15:57:09.3±0.0, 24°.94S×150°.97E, h9^{km}, mB5.2/15, mb4.6/23, Ms5.0/3, Ms7 4.6/2*

*GCMT **15** 15:57:12.0±0.2, 25°.09S±0°.01×151°.42E±0°.01, h20^{km}±1^{km}, MW5.0/99, Moment Tensor Solution. s32,c44; s99,c147; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.28±.13; M$_{\theta\theta}$-0.78±.10; M$_{\phi\phi}$1.06±.10; M$_{r\theta}$0.43±.18; M$_{\theta\phi}$3.40±.09; M$_{\phi r}$-0.37±.18; Best double couple: M$_0$3.57300×10^{16} NP1:ϕ_s262.00000°, δ83.00000°, λ-7.00000°. NP2: ϕ_s353.00000°, δ83.00000°, λ-173.00000°. Principal axes: T 3.6610, Plg1.0000°, Azm127.0000°; N -0.1760, Plg80.0000°, Azm34.0000°; P -3.4840, Plg10.0000°, Azm217.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 15 15:57:08.6±0.4, **25°.18S**±0°.05×**151°.40E**±0°.04, **h10**^{km}**, n135, σ1^{s}77**/136, **mb4.8**/33, **MS4.1**/17, **1C, Near east coast of Australia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EIDS	Eidsvold	0.34	237	P	Pg	15 57 16.8	+1.5
	baz=0.3,SNR=1000						
EIDS				S	Sg	15 57 21.9	+2.0
	baz=0.3						
EIDS	Eidsvold	0.34	237	Pg	Pg	15 57 17.0	+1.6
EIDS				Sg	Sg	15 57 23.0	+3.1
AUWSH	Wavell State H	2.66	147	P	Pn	15 57 51.8	+0.4
	baz=2.6						
AUWSH				S	Sn	15 58 24.2	+0.5
	baz=2.6						
RMQ	Roma	2.71	241	P	Pn	15 57 53.7	+1.5
	baz=2.7,SNR=84						
RMQ				S	Sn	15 58 24.5	-0.6
	baz=2.7						
AULRC	Lightning Ridg	5.21	215	P	Pn	15 58 28.4	+1.8
	baz=5.2						
AULRC				S	Sn	15 59 27.6	+0.9
	baz=5.2						
ARMA	Armidale	5.22	178	P	Pn	15 58 27.8	+1.0
	baz=5.2,SNR=77						
ARMA	Armidale	5.22	178	Pn	Pn	15 58 27.9	+1.0
QLP	Quilpie	6.60	256	P	Pn	15 58 46.4	+0.7
	baz=6.6,SNR=82						
QLP				S	Sn	16 00 00.6	-0.4
	baz=6.6						
CTAO	Charters Tower	6.95	316		Pn	15 58 51.2	+0.7
AUDCS	Dubbo College	7.43	198	P	Pn	15 58 58.6	+1.5
	baz=7.4						
MGCD	Mangrove Creek	8.00	182	P	Pn	15 59 06.4	+1.5
	baz=8.0,SNR=21						
LHI	Lord Howe Isla	9.24	135	P	Pn	15 59 20.7	-1.2
	baz=9.2,SNR=5.8						
LHI	Lord Howe Isla	9.24	135	Pn	Pn	15 59 21.1	-0.8
LHI	Lord Howe Isla	9.24	135	P	Pn	15 59 21.1	-0.8
YNG	Young	9.45	195	P	Pn	15 59 27.4	+2.6
	baz=9.4,SNR=45						
MTSU	Mount Surprise	9.62	315	P	Pn	15 59 29.1	+2.0
	baz=9.6,SNR=17						
INKA	Innaminka	9.88	253	P	Pn	15 59 31.2	+0.6
	baz=9.8,SNR=11						
INKA				S	Sn	16 01 17.5	-4.2
	baz=9.8						
CNB	Canberra Magne	10.25	189	P	Pn	15 59 36.3	+0.5
	baz=10						
CAN	Canberra	10.31	191	Pn	Pn	15 59 38.0	+1.4
STKA	Stephens Creek	10.89	230	P	Pn	15 59 43.3	-1.2
	baz=11,SNR=43						
STKA				S	Sn	16 01 40.5	-6.1
	baz=11						
STKA	Stephens Creek	10.89	230	Pn	Pn	15 59 43.5	-1.1
	2.7nm,0.3s,baz=51,slow=13,SNR=32						
STKA				Sn	Sn	16 01 40.7	-5.8
	14nm,0.3s,baz=99,slow=22,SNR=6.0						
STKA	Stephens Creek	10.89	230	Pn	Pn	15 59 43.1	-1.5
QIS	Mount Isa	11.80	291	P	Pn	15 59 58.3	+1.2
	baz=12,SNR=13						
QIS				S	Sn	16 02 02.4	-6.6
	baz=12						
TOO	Toolangi	13.34	201	P	Pn	16 00 19.0	+1.1
	baz=13,SNR=9.2						
TOO				S	Sn	16 02 46.2	-0.1
	baz=13						
TOO	Toolangi	13.34	201	Pn	Pn	16 00 17.2	-0.8
COEN	Coen	13.59	324	Pn	Pn	16 00 24.0	+2.5
HTT	Hallett	13.63	230	P	Pn	16 00 20.9	-1.1
	baz=14,SNR=10.0						
HTT				S	Sn	16 02 53.1	-0.5
	baz=14						
ONTNC	Ouen Toro	14.08	81	P	Pn	16 00 29.3	+1.1
DZM	Mont Dzumac	14.13	80	Pn	Pn	16 00 25.4	-3.6
	0.3nm,0.3s,baz=258,slow=10.0,SNR=28						
DZM				Sn	Sn	16 02 53.4	-13
	0.3nm,0.3s,baz=292,slow=18,SNR=1.8						
DZM				LR	LR	16 05 15.5	
	comp=Z,770nm,18.8s,baz=263,slow=35						
DZM	Mont Dzumac	14.13	80	ePn	Pn	16 00 25.9	-3.1
	5.7nm,0.3s						
DZM				eSn	Sn	16 02 52.5	-14
	4.4nm,0.3s						
DZM				eLR	LR	16 03 41.3	
	comp=Z,694nm,22.1s						
DZM	Mont Dzumac	14.13	80	Pn	Pn	16 00 26.1	-2.9
DZM	Mont Dzumac	14.13	80	P	Pn	16 00 29.3	+0.3
ARPS	Mount Arapiles	14.15	213	P	Pn	16 00 29.3	+0.2
	baz=14,SNR=53						
ARPS				S	Sn	16 03 00.6	-5.6
	baz=14						
OOD	Oodnadatta	14.31	256	P	Pn	16 00 30.2	-1.1
	baz=14,SNR=7.1						
OUENC	Ouen Island, N	14.40	82	P	Pn	16 00 33.8	+1.2
	31nm,1.1s						
YATNC	Mamie plateau,	14.54	81	P	Pn	16 00 34.3	-0.2
NFK	Norfolk Island	15.22	108	P	Pn	16 00 44.9	+1.2
	258nm,1.3s						
BBOO	Buckleboo	15.41	237	P	Pn	16 00 44.6	-1.5
	baz=15,SNR=14						
BBOO	Buckleboo	15.41	237	Pn	Pn	16 00 43.8	-2.3
BBOO				IAmb	IAmb	16 00 57.3	
	comp=Z,73nm,0.8s						
AS31	Alice Springs	16.00	272	P	Pn	16 00 53.5	-0.5
ASAR	Alice Springs	16.01	272	Pn	Pn	16 00 53.6	-0.3
	comp=Z,0.7nm,0.3s,baz=97,slow=14,SNR=36						
ASAR				Sn	Sn	16 03 43.9	-7.7
	baz=107,slow=19,SNR=4.6						
ASAR	Alice Springs	16.01	272		Pn	16 00 53.1	-0.8
ASPA	Alice Springs	16.01	272	P	Pn	16 00 53.8	-0.1
	baz=16						
MULG	Mulgathing	16.17	248	P	Pn	16 00 55.6	-0.3
	baz=16,SNR=14						
PMG	Port Moresby	16.20	345	P	P	16 01 00.1	+0.5
	baz=16,SNR=3.6						
PMG	Port Moresby	16.20	345	Pn	P	16 00 59.6	0.0
	comp=Z,2.0nm,0.3s,baz=206,slow=15,SNR=7.9						
PMG				LR	LR	16 06 57.2	
	comp=Z,620nm,18.3s,baz=253,slow=36						
PMG	Port Moresby	16.20	345	P	P	16 00 58.0	-1.6
PMG	Port Moresby	16.20	345	P	Pn	16 00 56.9	+0.5
WR0	Warramunga Arr	16.41	285	P	Pn	16 00 59.2	+0.1
WR0				IAmb	IAmb	16 01 04.4	
	comp=Z,142nm,1.0s						
WB2	Warramunga Arr	16.58	285	P	Pn	16 01 01.9	+0.6
WB2				IAmb	IAmb	16 01 06.3	
	comp=Z,116nm,0.9s						
WRAB	Tennant Creek	16.59	285	P	Pn	16 01 02.2	+0.9
WRAB				IAmb	IAmb	16 01 06.3	
	comp=Z,109nm,0.9s						
WRA	Warramunga Arr	16.59	285	Pn	Pn	16 01 02.5	+1.1
	comp=Z,0.7nm,0.3s,baz=103,slow=8.9,SNR=54						
WRA				Sn	Sn	16 04 09.5	+3.7
	comp=Z,1.2nm,0.3s,baz=117,slow=21,SNR=4.3						
WRA				Lg	Lg	16 05 52.7	
	comp=Z,1.5nm,0.3s,baz=115,slow=28,SNR=5.0						
WRA				LR	LR	16 07 55.7	
	comp=Z,904nm,19.8s,baz=115,slow=39						
WRA	Warramunga Arr	16.59	285	P	Pn	16 01 02.1	+0.6
WB0	Warramunga Arr	16.61	286	Pn	Pn	16 01 01.8	+0.2
WB0				IAmb	IAmb	16 01 07.5	
	comp=Z,175nm,1.4s						
HNR	Honiara	17.65	29	LR	LR	16 06 56.2	
	comp=Z,543nm,19.1s,baz=200,slow=34						
SANVU	Saraoutou	17.69	60		P	16 01 14.7	-1.4
SANVU				IAmb	IAmb	16 01 32.8	
	comp=Z,49nm,0.9s						
SANVU	Saraoutou	17.69	60	P	P	16 01 15.6	-0.5
FORT	Forrest	21.34	250	P	P	16 01 56.8	+1.0
	baz=21,SNR=8.3						
FORT	Forrest	21.34	250		P	16 01 56.2	+0.4
OUZ	Omahuta	21.59	123	P	P	16 01 57.0	-1.6
OUZ				IAmb	IAmb	16 02 06.3	
	comp=Z,36nm,1.1s						
THZ	Tophouse	24.30	138	P	P	16 02 27.1	+0.8
THZ				IAmb	IAmb	16 02 28.6	
	comp=Z,20nm,1.1s						
RPZ	Rata Peaks	24.48	144	P	P	16 02 29.3	+1.5
	comp=Z,8.1nm,0.9s,baz=186,slow=4.1,SNR=4.3						
WHZ	Wether Hill Ro	24.57	151	P	P	16 02 29.6	+1.0
OXZ	Oxford	24.76	142	P	P	16 02 32.0	+1.6
OXZ				IAmb	IAmb	16 02 40.3	
	comp=Z,20nm,0.9s						
JAY	Jayapura	24.78	334	LR	LR	16 12 22.6	
	comp=Z,718nm,19.1s,baz=95,slow=37						
FITZ	Fitzroy Crossi	24.93	281	P	P	16 02 32.8	+0.7
	baz=25,SNR=10						
FITZ	Fitzroy Crossi	24.93	281	P	P	16 02 32.7	+0.6
	comp=Z,15nm,0.9s,baz=89,slow=3.8,SNR=17						
FITZ				LR	LR	16 12 06.4	
	comp=Z,623nm,18.3s,baz=108,slow=36						
FITZ	Fitzroy Crossi	24.93	281	P	P	16 02 32.1	0.0
FITZ				IAmb	IAmb	16 02 46.8	
	comp=Z,22nm,0.8s						
KHZ	Kahutara	25.06	139	P	P	16 02 32.3	-0.8
KHZ				IAmb	IAmb	16 02 36.1	
	comp=Z,28nm,0.9s						
URZ	Urewera	25.37	127	LR	LR	16 11 39.5	
	comp=Z,190nm,18.3s,baz=212,slow=34						
MSVF	Nonsavu	25.86	79	LR	LR	16 11 28.5	
	comp=Z,577nm,20.7s,baz=244,slow=34						
SMPI	Sarmi	26.10	330	P	P	16 02 44.1	+1.4
RAO	Raoul Island	27.55	105	LR	LR	16 10 23.1	
	comp=Z,200nm,21.5s,baz=224,slow=29						
BATI	Baumata	30.24	295	LR	LR	16 16 48.3	
	comp=Z,581nm,19.0s,baz=151,slow=39						
NWAO	Narrogin (SRO)	30.75	247	LR	LR	16 16 12.2	
	comp=Z,746nm,18.8s,baz=83,slow=37						
PLAI	Plampang	35.89	291	P	P	16 04 09.5	+0.4
	comp=Z,714nmcomp=Z,23nm,1.3s						
JAGI	Jajag, Banyuwa	39.16	289	P	P	16 04 36.4	-0.4
JAGI				IAmb	IAmb	16 04 42.9	
	comp=Z,25nm,1.0s						
JAGI	Jajag, Banyuwa	39.16	289	P	P	16 04 36.6	-0.2
	comp=Z,27nm,1.4s						
PBKI	Pangkalan Bun	44.28	294	P	P	16 05 18.3	-0.5
	comp=Z,77nm,1.3s						
CISI	Cisompet, Garu	45.09	285	P	P	16 05 24.9	-0.4
CISI	Cisompet, Garu	45.09	285	P	P	16 05 25.4	+0.1
KSM	Kuching	47.79	297	P	P	16 05 46.4	0.0
VNDA	Vanda	52.64	177	P	P	16 06 21.8	-0.6
	comp=Z,5.4nm,1.0s,baz=17,slow=3.3,SNR=2.5						
VNDA				LR	LR	16 25 38.1	
	comp=Z,230nm,18.6s,baz=342,slow=32						
VNDA	Vanda	52.64	177	IAmb	IAmb	16 06 27.5	
	comp=Z,9.6nm,1.1s						
TBI	Tubuai	53.57	101	eLQ	LQ	16 19 44.9	
	comp=Z,370nm,40.5s						
TBI				eLR	LR	16 21 54.7	
	comp=Z,255nm,31.2s						
PPT2	Papeete2	55.12	95	eS	S	16 14 27.3	+2.6
	comp=Z,96nm,26.2s						
PPT2				eLR	LR	16 22 37.4	
	comp=Z,208nm,25.2s						
PPT	Papeete	55.13	94	LR	LR	16 25 40.3	
	comp=Z,52nm,21.9s,baz=289,slow=31						
MJAR	Matsushiro Arr	62.64	348	P	P	16 07 31.2	-2.0
	comp=Z,1.9nm,1.0s,baz=174,slow=8.2,SNR=3.3						
QSPA	South Pole Qui	64.89	180		P	16 07 47.8	-0.2
KSRS	Korea Array	66.10	340	P	P	16 07 56.0	+0.2
	comp=Z,1.9nm,0.8s,baz=157,slow=7.1,SNR=5.6						
KSRS				LR	LR	16 33 31.3	
	comp=Z,56nm,21.1s,baz=158,slow=33						
MAW	Mawson	66.43	205	LR	LR	16 34 02.3	
	comp=Z,130nm,19.1s,baz=64,slow=33						
CMAR	Chiang Mai Arr	66.99	305	P	P	16 08 03.2	+1.3
	comp=Z,2.7nm,0.9s,baz=139,slow=4.9,SNR=21						
CMAR	Chiang Mai Arr	66.99	305	P	P	16 08 01.0	-0.9
CHTO	Chiang Mai	67.21	305	P	P	16 08 03.6	+0.2
KMI	Kunming	68.66	313	⇑P	P	16 08 14.1	+1.5
KMI				pmax	pmax		
	comp=Z,7.0nm,0.9s						
USRK	Ussuriysk Ar.	71.30	345	P	P	16 08 28.6	+0.5
	comp=Z,4.0nm,0.9s,baz=174,slow=5.8,SNR=3.8						
XAN	Xi'an	71.39	324	P	P	16 08 29.4	+0.4
XAN				pP	PcP	16 08 41.5	-7.1
XAN				pmax	pmax		
	comp=Z,12nm,1.7s						
XAN	Xi'an	71.39	324	P	P	16 08 28.2	-0.8
XAN				IAmb	IAmb	16 08 49.9	
	comp=Z,15nm,1.3s						
CD2	Chengdu	72.04	318	eP	P	16 08 32.9	0.0
CD2				pmax	pmax		
	comp=Z,10.0nm,1.1s						
LZH	Lanzhou	75.69	322	eP	P	16 08 54.4	0.0
LZH				pP	sP	16 08 59.9	+0.9
LZH				sP	PcP	16 09 03.0	-4.1
LZH				pmax	pmax		
	comp=Z,9.0nm,1.3s						
SHL	Shillong	76.49	307	P	P	16 08 59.0	-0.2
BELA	Belgrano 2	77.11	179	P	P	16 09 00.4	-1.3
PETK	Petropavlovsk-	78.15	4	LR	LR	16 38 27.4	
	comp=Z,65nm,19.7s,baz=192,slow=32						
LSA	Lhasa	79.48	310	P	P	16 09 16.3	+0.2
GTA	Gaotai	80.30	322	P	P	16 09 21.1	+1.2
GTA				pP	sP	16 09 24.8	+0.3
GTA				sP	PcP	16 09 27.3	+0.3
GTA				pmax	pmax		
	comp=Z,3.0nm,1.5s						
ODAN	Odare	80.53	306	eP	P	16 09 22.2	+0.6
	comp=Z,38nm,0.9s						
TAPN	Taplejung	80.57	306	eP	P	16 09 22.6	+0.8
	comp=Z,44nm,1.0s						
RAMN	Ramite	81.16	305	eP	P	16 09 25.4	+0.4
	comp=Z,7.5nm,0.6s						
GUN	Gumba	82.23	306	eP	P	16 09 31.3	+0.6
	comp=Z,58nm,1.3s						
PKI	Pulchoki	82.39	305	eP	P	16 09 31.9	+0.4
	comp=Z,32nm,1.0s						
PKIN	Phulchoki	82.40	305	eP	P	16 09 31.7	+0.2
	comp=Z,24nm,0.9s						
KKN	Kakani	82.60	305	eP	P	16 09 33.1	+0.6
	comp=Z,34nm,0.9s						
DMN	Daman	82.63	305	eP	P	16 09 32.9	+0.2
	comp=Z,46nm,1.2s						
ULN	Ulaanbaatar	82.91	332	P	P	16 09 33.9	+0.4
ULN				IAmb	IAmb	16 09 43.1	
	comp=Z,6.0nm,1.0s						
VNA3	Neumayer Olymp	82.92	186	P	P	16 09 35.8	+2.5
VNA2	Neumayer--Watz	83.00	187	P	P	16 09 35.6	+2.0
SONM	Songino Array	83.17	331	P	P	16 09 35.9	+1.1
	comp=Z,1.9nm,0.8s,baz=156,slow=6.7,SNR=8.1						
SONM	Songino Array	83.17	331	P	P	16 09 34.9	0.0
GKN	Gorkha	83.20	305	eP	P	16 09 35.7	+0.2
	comp=Z,37nm,1.0s						
VNA1	Neumayer--Stat	83.35	187	P	P	16 09 38.4	+3.0
DANN	Dangsing	84.03	305	eP	P	16 09 39.8	-0.2
	comp=Z,27nm,0.9s						
RPN	Rapa Nui	86.45	118	LR	LR	16 43 23.0	
	comp=Z,32nm,19.8s,baz=202,slow=32						
TLY	Talaya	87.24	333	LR	LR	16 46 58.1	
	comp=Z,68nm,21.1s,baz=136,slow=34						
WMQ	Urumqi	90.08	320	eP	P	16 10 09.5	+0.8
WMQ				pmax	pmax		
	comp=Z,9.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,210nm,5.3s						
WMQ				LR	LR		
	comp=Z,2μm,29.1s						
MK31	Makanchi Array	94.90	320	P	P	16 10 30.2	-0.7
MKAR	Makanchi Array	94.90	320	P	P	16 10 31.0	+0.1
	comp=Z,0.8nm,0.7s,baz=118,slow=4.4,SNR=5.7						
MKAR	Makanchi Array	94.90	320	P	P	16 10 30.0	-0.9
RAGM	Ragged Mountai	99.76	27	Pdif	Pdif	16 10 52.9	+0.4
AKASG	Malin Array Be	129.30	316	PKP	PKPdf	16 16 15.7	-1.2
	comp=Z,0.2nm,0.4s,baz=106,slow=3.3,SNR=1.9						
GERES	GERESS Array B	139.50	317	PKP	PKiKP	16 16 38.2	-0.4
	comp=Z,0.7nm,0.7s,baz=112,slow=1.4,SNR=4.2						
EKA	Eskdalemuir Ar	144.57	335	PKP	PKPdf	16 16 44.1	-0.9
	comp=Z,3.4nm,0.6s,baz=30,slow=2.3,SNR=9.3						
TORD	Torodi Ar. Bea	149.06	253	PKPbc	PKPbc	16 16 57.4	-0.4
	comp=Z,4.5nm,1.0s,baz=94,slow=2.6,SNR=11						
TORD	Torodi Ar. Bea	149.06	253		PKPbc	16 16 56.9	-1.0
DBIC	Dimbokro	150.76	235	PKPbc	PKiKP	16 17 03.6	+0.9
	comp=Z,3.3nm,0.8s,baz=90,slow=4.1,SNR=3.0						
DBIC	Dimbokro	150.76	235		PKPbc	16 17 00.9	-1.1

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*BJI **15** 16:00:36.5±0.0, 19°.40S×175°.70W, h161^{km}, mB5.2/15, mb4.7/20*

*NEIC **15** 16:00:38.0±1.4, 19°.4S±0°.1×175°.7W±0°.1, h164^{km}±7^{km}, mb4.7/72, Error ellipse: s-maj=16.8km s-min=14.6km az=136.0*

*NOU **15** 16:00:42.4, 19°.21S×175°.10W, h255^{km}, mb4.4, Tonga Islands*

*IDC **15** 16:00:45.1±2.6, 19°.60S×175°.74W, h233^{km}±24^{km}, mb4.0/17, mb1 4.2/19, mb1mx4.1/32, mbtmp4.6/19, Error ellipse: s-maj=16.2km s-min=14.1km az=135.0*

ISC 15 16:00:41.4±0.5, **19°.50S**±0°.08×**175°.61W**±0°.08, **h200**^{km}**, n198, σ1^{s}03**/194, **mb4.6**/47, **16C-8D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	Niue	5.38	86		Pn	16 01 57.4	-3.3
NIUE	Niue	5.38	86	P	Pn	16 01 57.4	-3.3
MSVF	Nonsavu	6.27	285	P	Pn	16 02 16.4	+4.1
	6.7nm,0.3s,baz=116,slow=13,SNR=86						
MSVF	Nonsavu	6.27	285		Pn	16 02 15.4	+3.2
AFI	Afiamalu	6.66	34	Pn	Pn	16 02 11.7	-5.7
AFI	Afiamalu	6.66	34	P	Pn	16 02 12.1	-5.3
PINNC	Pines Island,	16.12	256	P	Pn	16 04 20.4	+3.2
YATNC	Mamie plateau,	16.56	258	P	Pn	16 04 25.4	+2.8
OUENC	Ouen Island, N	16.65	257	P	Pn	16 04 25.7	+2.1
SANVU	Saraoutou	16.89	281	P	P	16 04 23.8	-1.4
SANVU				IAmb	IAmb	16 04 29.4	
	comp=Z,32nm,0.6s						
SANVU	Saraoutou	16.89	281	P	Pn	16 04 28.3	+1.9
DZM	Mont Dzumac	16.98	258	P	Pn	16 04 29.2	+1.6
	comp=Z,4.0nm,0.3s,baz=78,slow=19,SNR=25						
DZM	Mont Dzumac	16.98	258		Pn	16 04 29.0	+1.4
DZM				IAmb	IAmb	16 04 30.8	
	comp=Z,46nm,0.6s						
DZM	Mont Dzumac	16.98	258	P	Pn	16 04 29.4	+1.8
KNTN	Kanton	17.05	13	P	P	16 04 24.8	-2.2
KNTN				IAmb	IAmb	16 04 39.4	
	comp=Z,44nm,1.1s						
NOUC	Port Laguerre	17.11	258	P	Pn	16 04 31.1	+2.0
OUZ	Omahuta	18.34	209	P	Pn	16 04 42.0	-1.3
OUZ				IAmb	IAmb	16 05 00.1	
	comp=Z,25nm,1.3s						
MXZ	Matakaoa Point	18.76	195	P	Pn	16 04 47.3	-1.0
KOUNC	Koumac, New Ca	18.92	263	P	Pn	16 04 49.1	-1.3
HAZ	Te Kaha	19.08	196	P	P	16 04 49.0	+0.2
TWGZ	Tauwhareparae	19.43	195	P	P	16 04 53.4	+0.8
OPRZ	Ohinepanea	19.51	199	P	Pn	16 04 55.3	-1.9
CNGZ	Carnagh Statio	19.66	195	P	P	16 04 55.1	+0.1
MWZ	Matawai	19.69	196	P	P	16 04 55.4	-0.1
TKGZ	Te Karaka	19.71	195	P	P	16 04 52.6	-3.0
URZ	Urewera	19.73	197	P	P	16 04 54.9	-1.0
	comp=Z,2.9nm,0.3s,baz=258,slow=3.9,SNR=31						
URZ	Urewera	19.73	197	P	P	16 04 54.8	-1.1
URZ				IAmb	IAmb	16 04 55.4	
	comp=Z,24nm,1.0s						
URZ	Urewera	19.73	197	P	P	16 04 54.9	-1.0
RAGZ	Rawiri	19.87	196	P	P	16 04 55.9	-1.5
RIGZ	Rimuhau	19.98	195	P	P	16 04 56.5	-2.0
MUGZ	Murupara	20.03	198	P	P	16 04 58.3	-0.8
HIZ	Hauiti	20.68	202	P	P	16 05 06.3	+0.5
HIZ				IAmb	IAmb	16 05 14.8	
	comp=Z,64nm,1.2s						
BKZ	Black Stump Fm	20.75	198	P	P	16 05 05.5	-1.3
BKZ				IAmb	IAmb	16 05 25.1	
	comp=Z,19nm,1.2s						
QRZ	Quartz Range	23.55	203	P	P	16 05 34.1	+0.4
QRZ				IAmb	IAmb	16 05 34.2	
	comp=Z,74nm,1.5s						
LHI	Lord Howe Isla	25.74	237	P	P	16 05 53.5	0.0
LHI	Lord Howe Isla	25.74	237	P	P	16 05 55.2	+1.7
OXZ	Oxford	25.93	201	P	P	16 05 54.9	-0.2
OXZ				IAmb	IAmb	16 06 00.4	
	comp=Z,15nm,0.6s						
MQZ	McQueen’s Vall	26.07	200	P	P	16 05 56.6	+0.2
MQZ				IAmb	IAmb	16 06 22.4	
	comp=Z,32nm,1.3s						
RPZ	Rata Peaks	26.61	202	P	P	16 06 02.6	+1.3
	comp=Z,5.6nm,0.5s,baz=322,slow=4.8,SNR=7.2						
RPZ	Rata Peaks	26.61	202	P	P	16 06 01.1	-0.1
RPZ				IAmb	IAmb	16 06 17.1	
	comp=Z,32nm,1.5s						

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WHZ   Wether Hill Ro    29.61 204   P        P         16 06 27.2  -0.7
WHZ                                 IAmb     IAmb      16 06 34.0
      comp=Z,18nm,0.8s
COEN  Coen              39.79 271   P        P         16 07 54.8  -0.5
MANU  Manus Island      40.15 291   P        P         16 07 58.9  +0.6
MANU                                IAmb     IAmb      16 07 59.7
      comp=Z,14nm,0.7s
JAY   Jayapura          45.90 286   P        P         16 08 44.0  -0.4
      comp=Z,7.6nm,0.5s,baz=258,slow=22,SNR=4.1
WR0   Warramunga Arr    46.78 261   P        P         16 08 50.0  -1.2
ASAR  Alice Springs     46.94 255   P        P         16 08 51.8  -0.7
      comp=Z,25nm,0.5s,baz=94,slow=8.3,SNR=30
ASAR  Alice Springs     46.94 255   P        P         16 08 51.2  -1.3
WB0   Warramunga Arr    46.95 261   P        P         16 08 50.9  -1.7
WB2   Warramunga Arr    46.96 261   P        P         16 08 51.1  -1.5
WRAB  Tennant Creek     46.97 261   P        P         16 08 51.0  -1.6
WRA   Warramunga Arr    46.98 261   P        P         16 08 51.0  -1.7
      comp=Z,8.5nm,0.5s,baz=96,slow=7.6,SNR=46
WRA   Warramunga Arr    46.98 261   P        P         16 08 51.3  -1.4
FAKI  Fak Fak           53.49 281   P        P         16 09 41.1  -0.6
SIJI  Sorong            55.18 283   P        P         16 09 53.6  -0.3
      comp=Z,27nm,0.6s,baz=95,slow=4.8,SNR=15
FITZ  Fitzroy Crossi    55.40 261   P        P         16 09 54.4  -1.0
      comp=Z,33nm,0.9s,baz=102,slow=9.8,SNR=8.6
FITZ  Fitzroy Crossi    55.40 261   P        P         16 09 55.7  +0.4
SOEI  Soe               58.73 270   P        P         16 10 19.1  +0.2
BATI  Baumata           59.17 270   P        P         16 10 21.6  -0.2
      comp=Z,13nm,0.7s,baz=90,slow=20,SNR=3.2
TNTI  Ternate           59.41 283   P        P         16 10 23.5  +0.1
PSA00 Pilbara Seismi    60.09 256   P        P         16 10 26.9  -1.1
MMRI  Maumere           60.98 271   P        P         16 10 33.2  -0.8
MMRI                                IAmb     IAmb      16 10 38.8
      comp=Z,20nm,0.9s
MORW  Morawa            62.29 247   P        P         16 10 40.0  -2.6
LUWI  Luwuk             62.98 279   P        P         16 10 44.1  -3.3
GIRL  Giralia           64.99 254   P        P         16 11 00.3   0.0
TOLI2 Tolitoli          65.62 280   P        P         16 11 05.1  +0.6
TOLI2                               IAmb     IAmb      16 11 06.2
      comp=Z,5.7nm,0.7s
QSPA  South Pole Qui    70.56 180   P        P         16 11 35.2  +0.7
QSPA                                IAmb     IAmb      16 11 35.9
      comp=Z,5.6nm,0.8s
JGF   Kuroka            70.63 321   P        P         16 11 35.0  -0.3
JGF                                 IAmb     IAmb      16 11 59.0
      comp=Z,20nm,1.5s
MJAR  Matsushiro Arr    70.78 322   P        P         16 11 35.9  -0.2
      comp=Z,5.5nm,0.8s,baz=157,slow=5.8,SNR=16
MJAR  Matsushiro Arr    70.78 322   P        P         16 11 35.5  -0.6
MAJO  Matsushiro        70.78 322   P        P         16 11 36.1   0.0
MAJO                                IAmb     IAmb      16 11 36.7
      comp=Z,6.9nm,0.8s
MAT   Matsushiro        70.78 322   P        P         16 11 35.3  -0.8
MAT                                eS        S         16 20 34.2  -0.3
KKM   Kota Kinabalu     71.70 283   P        P         16 11 41.7  -0.5
KKM                                 IAmb     IAmb      16 11 53.4
      comp=Z,29nm,1.3s
ERM   Erimo             72.10 329   P        P         16 11 41.7  -2.2
UGM   Wanagama          72.24 268   P        P         16 11 44.5  -0.8
JHS   Saijyo            72.84 318   P        P         16 11 47.9  -0.6
JHS                                 IAmb     IAmb      16 11 58.8
      comp=Z,38nm,1.4s
YULB  Yu-li             74.86 302   P        P         16 11 59.2  -1.1
YULB                                IAmb     IAmb      16 12 02.2
      comp=Z,35nm,1.4s
SSLB  Suanglung         75.33 302   P        P         16 12 01.7  -1.4
SSLB                                IAmb     IAmb      16 12 02.6
      comp=Z,10nm,0.7s
TPUB  Ta-pu             75.35 302   P        P         16 12 01.6  -1.7
TPUB                                IAmb     IAmb      16 12 02.5
      comp=Z,18nm,0.6s
KSM   Kuching           75.52 277   P        P         16 12 03.7  -0.6
KSM                                 IAmb     IAmb      16 12 05.4
      comp=Z,16nm,0.9s
PMPB  Monarch Peak      75.85  43   P        P         16 12 06.5  +0.7
PMPB                                IAmb     IAmb      16 12 25.4
      comp=Z,17nm,1.3s
PEA0B Petropavlovsk-    75.92 344   P        P         16 12 05.6  -0.1
PETK  Petropavlovsk-    75.92 344   P        P         16 12 05.8  +0.1
      comp=Z,3.4nm,0.7s,baz=121,slow=7.1,SNR=5.2
PETK  Petropavlovsk-    75.92 344   P        P         16 12 05.6  -0.1
KMRM  Mail Ridge        76.57  38   P        P         16 12 10.6  +0.8
KMRM                                IAmb     IAmb      16 12 16.1
      comp=Z,29nm,1.2s
ESJX  Sierra Juarez     76.71  49   P        P         16 12 12.1  +1.2
KSRS  Korea Array       77.66 317   P        P         16 12 16.8  +1.0
      comp=Z,1.3nm,0.8s,baz=133,slow=7.1,SNR=4.1
OMMB  Old Mammoth Mi    77.84  43   P        P         16 12 18.0  +0.7
WAKR  Walker            78.09  42   P        P         16 12 19.4  +0.9
PNTR  Pine Nut          78.34  41   P        P         16 12 20.6  +0.7
BEKR  Beckworth         78.35  40   P        P         16 12 20.4  +0.6
YERR  Yerington         78.50  41   P        P         16 12 21.3  +0.6
RYN   Ryan              78.74  42   P        P         16 12 22.6  +0.7
NVAR  Mina Array Bea    78.77  42   P        P         16 12 23.2  +1.0
      comp=Z,2.9nm,0.7s,baz=225,slow=8.2,SNR=25
NVAR  Mina Array Bea    78.77  42   P        P         16 12 23.0  +0.8
PAHR  Pah Rah Range     78.85  41   P        P         16 12 23.3  +0.8
NV11  Mina Array Sit    78.86  42   P        P         16 12 23.3  +0.7
NV11                                IAmb     IAmb      16 12 24.3
      comp=Z,8.9nm,1.4s
TPNV  Topopah Spring    79.25  45   P        P         16 12 25.5  +0.7
USRK  Ussuriysk Ar.     79.43 325   P        P         16 12 25.4  +0.1
      comp=Z,2.3nm,0.8s,baz=143,slow=3.8,SNR=5.0
SHPR  Sheep Range       79.73  45   P        P         16 12 28.4  +1.0
K05A  Summer Lake       79.79  38   P        P         16 12 28.2  +0.6
K05A                                IAmb     IAmb      16 12 29.7
      comp=Z,7.5nm,1.1s
NJ2   Nanjing           81.00 309  eP        P         16 12 34.1  +0.1
NJ2                                 pmax     pmax
      comp=Z,5.0nm,0.5s
MDJ   Mudanjiang        81.02 324   P        P         16 12 35.3  +1.5
MDJ                                 pmax     pmax
      comp=Z,15nm,0.8s
MDJ                                 pmax     pmax
      comp=Z,240nm,4.1s
MDJ   Mudanjiang        81.02 324   P        P         16 12 34.6  +0.8
MDJ                                 IAmb     IAmb      16 12 36.0
      comp=Z,10nm,0.8s
X16A  Lo Mia Camp, P    81.19  49   P        P         16 12 35.9  +0.6
U15A  North Rim         81.64  47   P        P         16 12 38.8  +1.2
G08A  Pilot Rock        82.47  36   P        P         16 12 41.5  -0.1
F10A  Beach Ranch, E    83.85  37   P        P         16 12 48.5   0.0
TMUT  Trail Mountain    83.86  45   P        P         16 12 50.2  +1.1
HLID  Hailey            84.11  40   P        P         16 12 50.7  +0.7
MNTX  Cornudas Mount    84.34  54   P        P         16 12 52.1  +0.8
TX31  Lajitas Ar. Si    84.63  56   P        P         16 12 53.7  +0.9
TX31                                IAmb     IAmb      16 12 55.3
      comp=Z,21nm,1.2s
TX32  Lajitas Array     84.63  56   P        P         16 12 53.9  +1.0
TX32                                IAmb     IAmb      16 12 55.3
      comp=Z,6.5nm,1.1s
TXAR  Lajitas Array     84.63  56   P        P         16 12 54.5  +1.6
      comp=Z,3.7nm,1.1s,baz=219,slow=8.2,SNR=17
TXAR  Lajitas Array     84.63  56   P        P         16 12 53.9  +1.0
IPM   Ipoh              85.25 276   P        P         16 12 55.7  -0.5
IPM                                 IAmb     IAmb      16 12 56.9
      comp=Z,14nm,0.6s
PDAR  Pinedale Array    86.70  42   P        P         16 13 03.1  +0.1
      comp=Z,0.4nm,0.6s,baz=198,slow=4.4,SNR=6.8
BJI   Beijing           86.78 314   P        P         16 13 03.9  +0.8
BJI                                 pmax     pmax
      comp=Z,4.0nm,1.2s
ILAR  Eielson Array     86.86  12   P        P         16 13 02.2  -0.7
      comp=Z,0.3nm,0.4s,baz=219,slow=7.0,SNR=5.1
ENH   Enshi             87.36 303   P        P         16 13 05.6  -0.5
ENH                                 IAmb     IAmb      16 13 07.6
      comp=Z,6.5nm,0.6s
SYO   Syowa Base        88.18 192⇓ePcP     P         16 13 11.6  +2.4
XAN   Xi'an             89.33 306   P        P         16 13 16.3  +0.9
XAN                                 pP       pP        16 13 53.5  -10
XAN                                 pmax     pmax
      comp=Z,8.0nm,1.3s
XAN   Xi'an             89.33 306   P        P         16 13 16.0  +0.6
XAN                                 IAmb     IAmb      16 13 17.0
      comp=Z,5.2nm,0.9s
HHC   Hu-ho-hao-te      90.28 314  eP        P         16 13 19.6  -0.1
HHC                                 pmax     pmax
      comp=Z,6.0nm,1.3s
HHC                                 pmax     pmax
      comp=Z,230nm,7.4s
HHC                                 LR       LR
      comp=Z,250nm,17.7s
HHC                                 LR       LR
      comp=Z,480nm,18.6s
HHC                                 LR       LR
      comp=Z,400nm,18.9s
CMAR  Chiang Mai Arr    91.91 289   P        P         16 13 28.6  +1.0
      comp=Z,2.2nm,0.9s,baz=124,slow=2.9,SNR=9.1
CMAR  Chiang Mai Arr    91.91 289   P        P         16 13 28.1  +0.5
LZH   Lanzhou           93.96 307  eP        P         16 13 37.6  +0.7
LZH                                 pmax     pmax
      comp=Z,9.0nm,1.2s
YKA   Yellowknife Ar    94.68  24   P        P         16 13 39.2   0.0
      comp=Z,0.3nm,0.7s,baz=233,slow=3.7,SNR=8.1
MKAR  Makanchi Array   112.15 314   PKiKP    PKiKP     16 18 51.9  -1.1
      comp=Z,0.4nm,0.4s,baz=181,slow=0.8,SNR=21
KURBB Kurchatov Arra   114.84 318   PKP      PKPdf     16 18 56.9  -1.2
      comp=Z,0.6nm,0.3s,baz=105,slow=1.8,SNR=1.7
KSH   Kashi            116.16 305   PKP      PKiKP     16 19 04.8  +3.7
KSH                                 PP       PP        16 20 09.6   0.0
KSH                                 AMB      AMB
      comp=Z,460nm,5.1s
ARCES ARCESS Array B   128.33 351   PKP      PKPdf     16 19 22.9  -0.5
      comp=Z,1.7nm,0.4s,baz=24,slow=1.7,SNR=21
FINES FINESS Array B   135.42 345   PKhKP    PKPpre    16 19 32.1
      comp=Z,2.6nm,0.9s,baz=66,slow=2.3,SNR=3.4
FINES                               PKP      PKPdf     16 19 37.4  +0.5
      comp=Z,2.3nm,0.8s,baz=16,slow=2.7,SNR=8.1
AKASG Malin Array Be   143.18 334   PKhKP    PKPpre    16 19 47.4
      comp=Z,1.4nm,0.4s,baz=40,slow=4.3,SNR=12
BSEG  Bad Segeberg     145.33 354  ePKPbc    PKPab     16 19 55.8  +0.1
      baz=13,slow=1.7
SORM  Soroca           145.47 331  ⇑P        PKPdf     16 19 55.7  +0.2
FLTG  Flechtingen      146.80 352  ePKPbc    PKPbc     16 19 59.9  +0.2
      baz=13,slow=1.7
OJC   Ojcow            146.99 342  ePKP      PKPbc     16 20 00.2  -0.1
BURAR Bucovina Array   147.24 334  ⇑P        PKiKP     16 20 02.8  -0.5
KOLS  Kolonicke sedl   147.30 338  ePKP      PKPab     16 20 03.7  +0.2
KSP   Ksiaz            147.34 346  ePKP      PKPbc     16 20 01.8  +0.6
BIZ   Bicaz            147.38 332  ⇑P        PKPbc     16 20 02.5  +1.0
CLZ   Clausthal        147.39 353  ePKPbc    PKPbc     16 20 01.3  -0.1
      baz=13,slow=1.7
CLL   Collm            147.54 350  i PKPbc   PKPbc     16 20 01.6  -0.2
      comp=Z,10.0nm,0.8s
CLL                                i PKPab   PKiKP     16 20 03.6  -0.1
      comp=Z,3.0nm,0.7s
CLL   Collm            147.54 350  ePKPbc    PKPbc     16 20 01.9  +0.1
      baz=13,slow=1.7
CRVS  Cervenica-Dubn   147.61 339  ePKP      PKPab     16 20 05.7  +1.0
OSTC  Ostas            147.62 346  ePKP      PKPbc     16 20 02.2  +0.1
BRTR  Keskin Array B   147.78 315   PKPbc    PKPbc     16 20 02.7  -0.3
      comp=Z,3.3nm,0.8s,baz=125,slow=3.8,SNR=17
BRTR  Keskin Array B   147.78 315            PKPbc     16 20 02.4  -0.6
TPGR  Topolog          147.79 327  ⇑P        PKiKP     16 20 03.9  -0.6
DPC   Dobruska-Polom   147.79 346  ePKP      PKPbc     16 20 02.2  -0.3
BRG   Berggiesshubel   147.79 349  ePKP      PKPbc     16 20 02.1  -0.4
BRG                                 Amp                16 20 03.8
      comp=Z,5.7nm,1.0s
VRI   Vrincioaia       147.90 330  ⇑P        PKPbc     16 20 03.8  +0.9
MORC  Moravsky Berou   148.01 344  ⇑P        PKPbc     16 20 03.9  +0.7
LANS  Liptovska Anna   148.03 341  ePKP      PKiKP     16 20 04.4  -0.5
HARR  Harsova          148.15 327  ⇑P        PKPbc     16 20 04.2  +0.6
DOPR  Dopca            148.44 331  ⇑P        PKPbc     16 20 04.8  +0.5
TANN  Tannenbergstha   148.49 350  ePKPbc    PKPbc     16 20 04.2  -0.1
      baz=13,slow=1.7
MLR   Muntele Rosu     148.54 330  ⇑P        PKPbc     16 20 05.2  +0.4
GUNZ  Gunzen           148.56 350  ePKPbc    PKPbc     16 20 04.8  +0.3
      baz=13,slow=1.7
VYHS  Vyhne            148.81 341  ePKP      PKPbc     16 20 05.6  +0.4
MEM   Membach          148.93 358  dPKP      PKPbc     16 20 05.1  -0.3
BTNL  Ternell          148.95 358  dPKiKP    PKPbc     16 20 05.7  +0.2
MANZ  Manzenberg       148.97 350  ePKPbc    PKPbc     16 20 05.6   0.0
      baz=13,slow=1.7
BSTI  Sart Tilman      148.97 359  dPKiKP    PKPbc     16 20 05.9  +0.5
VOIR                   149.00 331  ⇓P        PKPbc     16 20 06.2  +0.3
SNF   Seneffe          149.06   0  dPKiKP    PKPbc     16 20 06.1  +0.5
ROTZ  Rotzenmuhle      149.16 350  ePKPbc    PKPbc     16 20 06.6  +0.6
      baz=13,slow=1.7
TNS   Taunus Mts       149.18 355  ePKPbc    PKPbc     16 20 06.6  +0.5
      baz=13,slow=1.7
ARR   Arges            149.24 332  ⇑P        PKiKP     16 20 07.6  +0.1
MODS  Modra-Piesok     149.37 343  ePKP      PKPbc     16 20 06.6   0.0
GRF   Grafenberg Arr   149.39 351  ePKPbc    PKPbc     16 20 07.0  +0.5
      baz=13,slow=1.7
GRF                                eL        L         17 29 53.2
      comp=Z,64nm,21.0s
DOU   Dourbes          149.47 360  dPKiKP    PKPbc     16 20 07.2  +0.4
KHC   Kasperske Hory   149.53 348  ePKP      PKPbc     16 20 06.6  -0.4
CKRC  Cesky Krumlov    149.68 347  ePKP      PKPbc     16 20 07.2  -0.1
GEC2  GERESS Array S   149.78 348  ePKPbc    PKPbc     16 20 07.8  +0.1
      baz=13,slow=1.7
GERES GERESS Array B   149.78 348   PKPbc    PKPbc     16 20 08.0  +0.3
      comp=Z,1.9nm,0.7s,baz=28,slow=2.0,SNR=13
WLF   Walferdange      149.87 358  dPKiKP    PKiKP     16 20 08.3  -0.2
WLF   Walferdange      149.87 358  ePKPbc    PKiKP     16 20 08.4  -0.2
      baz=13,slow=1.7
GZR   Gura Zlata       150.03 334  ⇑P        PKPbc     16 20 07.6  -0.7
CONA  Conrad Observa   150.15 344  eP        PKiKP     16 20 09.1  -0.2
      comp=Z,5.1nm,0.7s
ZIMR                   150.18 329  ⇑P        PKPbc     16 20 08.9  +0.3
BZS   Buzias           150.32 335  ⇑P        PKPbc     16 20 09.2  +0.2
HERR  Herculane        150.59 333  ⇑P        PKPbc     16 20 09.7  +0.1
MOA   Molln            150.60 346  eP        PKPbc     16 20 09.6   0.0
      comp=Z,2.2nm,0.5s
PLVB  Pleven           150.74 329  ⇑P        PKiKP     16 20 10.4  -0.2
FUR   Furstenfeldbru   150.87 351  ePKPbc    PKPbc     16 20 10.5  +0.3
      baz=13,slow=1.7
MORH  Mrgy, Hungar     150.89 339  ⇑P        PKPbc     16 20 10.4  +0.2
RJOB  Jochberg         151.02 348  ePKPbc    PKPbc     16 20 10.5  -0.1
      baz=13,slow=1.7
BFO   Black Forest     151.06 355  ePKPbc    PKPbc     16 20 10.6   0.0
      baz=13,slow=1.7
UBR   Ueberruh         151.51 352  ePKPbc    PKPbc     16 20 11.8  +0.1
      baz=13,slow=1.7
SOKA  Soboth           151.52 345  i P       PKPbc     16 20 11.3  -0.5
      comp=Z,2.0nm,0.6s,SNR=4.4
KBA   Koelnbreinsper   151.53 347  eP        PKPbc     16 20 11.1  -0.8
      comp=Z,2.5nm,0.5s
WATA  Walderalm        151.62 350  i P       PKPbc     16 20 11.7  -0.4
      comp=Z,6.3nm,0.5s,SNR=9.4
WTTA  Wattenberg       151.68 350  eP        PKPbc     16 20 12.1  -0.2
      comp=Z,12nm,0.4s,SNR=18
SQTA  Sankt Quirin     151.80 350  eP        PKPbc     16 20 12.3  -0.2
      comp=Z,4.9nm,0.6s
MYKA  Terra Mystica    151.90 346  i P       PKPbc     16 20 11.7  -0.9
      comp=Z,2.1nm,0.4s,SNR=4.6
ABTA  Abfaltersbach    152.02 348  i P       PKPbc     16 20 12.2  -0.7
      comp=Z,8.3nm,0.5s,SNR=12
FETA  Feichten         152.07 351  eP        PKPbc     16 20 13.0  -0.1
      comp=Z,5.5nm,0.8s
```

IDC ***15*** *16:20:54.4±4.7, 19°.44N×144°.85E, h0km, mb3.7/7, mb1 3.8/7, mb1mx3.6/34, mbtmp3.7/7, Error ellipse: s-maj=135.5km s-min=44.7km az=11.0*

NEIC ***15*** *16:20:55.5±0.6, 19°.3N±0°.2×144°.8E±0°.1, h10km±1km, mb4.1/8, Error ellipse: s-maj=31.5km s-min=16.9km az=166.0*

ISC 15 16:20:53.7±0.8**, 19°.0N**±0°.1×**144°.8E**±0°.2**, h10**km**, n19, σ0ˢ.75**/18**, mb4.0**/11**, Mariana Islands**

```
Code  Station Name       Δ°   AZ°    Phase ID           Time      Res
                                     Op       ISC       h  m  s   ISC
ANA2  Anatahan           2.81 161            Pn        16 21 38.3  -0.5
JHJ2  Mitsune           14.71 343   P        P         16 24 27.0  -1.1
KSRS  Korea Array       23.54 325   P        P         16 26 03.5  -0.8
      1.0nm,0.7s,baz=148,slow=9.2,SNR=7.3
SONM  Songino Array     42.34 322   P        P         16 28 48.2   0.0
      0.2nm,0.3s,baz=122,slow=5.1,SNR=4.5
SONM  Songino Array     42.34 322   IAmb     IAmb      16 28 54.3
      comp=Z,1.0nm,1.2s
ZAA0  Zalesovo Array    57.23 323   P        P         16 30 41.3  +0.2
ZAA0                                IAmb     IAmb      16 30 42.9
      comp=Z,2.3nm,1.3s
ZALV  Zalesovo Beam     57.23 323   P        P         16 30 41.2  +0.2
      comp=Z,0.6nm,0.5s,baz=108,slow=8.0,SNR=4.1
MK31  Makanchi Array    57.61 314   P        P         16 30 44.2  +0.2
MKAR  Makanchi Array    57.61 314   P        P         16 30 45.1  +1.1
      comp=Z,0.2nm,0.4s,baz=90,slow=9.1,SNR=6.9
MKAR  Makanchi Array    57.61 314   P        P         16 30 44.3  +0.3
MAKZ  Makanchi          57.82 314   P        P         16 30 46.2  +0.7
MAKZ                                IAmb     IAmb      16 31 03.7
      comp=Z,2.7nm,1.5s
SII   Sitkinak Islan    58.43  35   P        P         16 30 50.2  +0.7
KURK  Kurchatov         60.45 318   P        P         16 31 03.4  -0.1
KURK                                IAmb     IAmb      16 31 05.3
      comp=Z,1.1nm,0.7s
KURBB Kurchatov Arra    60.49 318   P        P         16 31 04.0  +0.2
      comp=Z,1.3nm,0.6s,baz=92,slow=7.6,SNR=22
TOLK  Toolik Lake Re    63.61  22   P        P         16 31 24.4  -0.2
TOLK                                IAmb     IAmb      16 31 40.8
      comp=Z,2.4nm,1.2s
KKAR  Karatay Array     65.89 309   P        P         16 31 41.7  +1.8
ARU   Arti              72.30 324   P        P         16 32 18.7  -0.7
YKA   Yellowknife Ar    78.11  28   P        P         16 32 53.0  +0.3
      comp=Z,0.4nm,0.7s,baz=288,slow=5.5,SNR=5.0
FINES FINESS Array B    86.22 335   P        P         16 33 35.6  +0.4
      comp=Z,0.6nm,0.3s,baz=63,slow=5.8,SNR=10
```

VAO ***15*** *16:36:18.0±0.5, 24°.82S×68°.18W, h10km, mb4.5*

IDC ***15*** *16:36:23.5±2.4, 24°.97S×68°.20W, h83km±19km, mb4.1/3, mb1 4.2/8, mb1mx3.7/33, mbtmp4.4/8, MS2.7/2, Ms1 2.8/2, ms1mx2.5/25, Error ellipse: s-maj=26.9km s-min=17.9km az=52.0*

SJA ***15*** *16:36:24.0±0.6, 24°.90S×68°.60W, h137km±6km, ML4.3, MW4.2*

NEIC ***15*** *16:36:24.1±3.0, 24°.93S±0°.04×68°.6W±0°.1, h124km±9km, Error ellipse: s-maj=14.8km s-min=3.1km az=107.0*

GUC ***15*** *16:36:25.1±0.6, 24°.86S×68°.70W, h144km±10km, ML4.6*

ISC 15 16:36:23.8±0.7**, 24°.91S**±0°.04×**68°.57W**±0°.04**, h116**km±8km**, n104, σ2ˢ.03**/123**, mb4.2**/4**, 10C-3D, Chile-Argentina border region**

```
Code  Station Name       Δ°   AZ°    Phase ID           Time      Res
                                     Op       ISC       h  m  s   ISC
GO02  Mina Guanaco       0.96 254   Pn       Pn        16 36 47.7  +2.3
GO02                                Sn       Sn        16 37 03.8  +2.0
PB14  IPOC Station P     1.69 279⇓iP        Pn        16 36 55.4  +1.8
PB14                               i S       Sn        16 37 18.0  +1.8
PB14  IPOC Station P     1.69 279            Pn        16 36 55.3  +1.8
PB14  IPOC Station P     1.69 279  eP        Pn        16 36 55.6  +2.1
PB14                               eS        Sn        16 37 18.9  +2.7
PB14                                IAML               16 37 23.7
      comp=Z,2μm,0.3s
PB15  IPOC Station P     1.88 334⇑iP        Pn        16 36 57.8  +2.1
PB15                               i S       Sn        16 37 22.7  +2.6
PB15  IPOC Station P     1.88 334            Pn        16 36 57.7  +1.9
PB15  IPOC Station P     1.88 334  eP        Pn        16 36 57.9  +2.1
PB15                               eS        Sn        16 37 22.9  +2.7
AC02  Maricunga          1.99 195⇑iP        Pn        16 37 00.3  +2.9
AC02  Maricunga          1.99 195            Pn        16 37 00.2  +2.9
AC01  Pan de Azucar      2.21 236⇑iP        Pn        16 37 01.5  +1.7
AC01                               i S       Sn        16 37 27.6  +0.3
AC01                                IAML               16 37 29.4
      comp=E,3μm,0.2s
AC01  Pan de Azucar      2.21 236            Pn        16 37 01.3  +1.6
PB10  IPOC Station P     2.28 307⇓iP        Pn        16 37 02.8  +2.2
PB10                               i S       Sn        16 37 31.5  +2.6
PB10                                IAML               16 37 39.8
      comp=N,2μm,0.2s
PB10  IPOC Station P     2.28 307            Pn        16 37 02.5  +1.9
PB10  IPOC Station P     2.28 307  eP        Pn        16 37 03.1  +2.5
PB10                               eS        Sn        16 37 30.6  +1.7
PB10                                IAML               16 37 38.2
      comp=Z,2μm,0.5s
LVC   Limon Verde        2.31 352   P        Pn        16 37 03.3  +2.0
      comp=Z,117nm,0.3s,baz=156,slow=11,SNR=909
LVC                                 S        Sn        16 37 31.2  +1.2
      comp=Z,424nm,0.3s,baz=32,slow=21,SNR=41
LVC   Limon Verde        2.31 352⇑iP        Pn        16 37 03.2  +2.0
LVC                                i S       Sn        16 37 31.7  +1.7
LVC   Limon Verde        2.31 352  eP        Pn        16 37 03.3  +2.0
LVC                                eS        Sn        16 37 32.8  +2.8
LVC                                 IAML               16 37 38.1
      comp=Z,874nm,0.3s
PB06  IPOC Station P     2.38 337  eP        Pn        16 37 03.7  +1.8
PB06                               i S       Sn        16 37 32.4  +1.2
PB06                                IAML               16 37 34.4
      comp=N,4μm,0.3s
PB06  IPOC Station P     2.38 337            Pn        16 37 03.8  +1.8
PB06  IPOC Station P     2.38 337  eP        Pn        16 37 04.0  +2.0
PB06                               eS        Sn        16 37 32.8  +1.5
PB06                                IAML               16 37 38.3
      comp=Z,3μm,0.3s
SLA   San Lorenzo        2.79  87  eP        Pn        16 37 09.9  +2.5
SLA                                eS        Sn        16 37 43.5  +2.6
PB04  IPOC Station P     2.94 330⇓iP        Pn        16 37 10.9  +1.5
PB04                               i S       Sn        16 37 40.0  -4.5
PB04                                IAML               16 38 00.3
      comp=N,3μm,0.5s
PB04  IPOC Station P     2.94 330            Pn        16 37 10.6  +1.3
PB04  IPOC Station P     2.94 330  eP        Pn        16 37 11.0  +1.6
PB04                               eS        Sn        16 37 45.6  +1.1
PB04                                IAML               16 37 57.0
      comp=Z,2μm,0.5s
GO03  Copiap             3.07 209   Pn       Pn        16 37 12.2  +1.3
PB09  IPOC Station P     3.16 349⇑iP        Pn        16 37 14.7  +2.4
PB09                                IAML               16 38 01.6
      comp=E,1μm,0.5s
PB09  IPOC Station P     3.16 349            Pn        16 37 14.4  +2.2
PB09  IPOC Station P     3.16 349  eP        Pn        16 37 14.6  +2.4
PB09                               eS        Sn        16 37 53.3  +3.8
PB09                                IAML               16 37 57.2
      comp=Z,1μm,1.2s
PB07  IPOC Station P     3.39 339⇑iP        Pn        16 37 16.6  +1.3
PB07  IPOC Station P     3.39 339            Pn        16 37 16.3  +1.0
PB07  IPOC Station P     3.39 339  eP        Pn        16 37 16.7  +1.4
PB07                               eS        Sn        16 37 55.8  +0.8
PB07                                IAML               16 38 03.2
      comp=Z,1μm,0.4s
PB02  IPOC Station P     3.77 341⇑iP        Pn        16 37 21.4  +1.1
VCA   Vinchina           3.83 175⇑iP        Pn        16 37 24.2  +3.1
YJA   Yavi               3.90  47  eP        Pn        16 37 25.4  +3.0
PB01  IPOC Station P     3.94 347⇑iP        Pn        16 37 23.5  +1.0
PB01  IPOC Station P     3.94 347            Pn        16 37 23.4  +0.8
AC04  Llanos de Chal     3.98 214  eP        Pn        16 37 23.1  +0.2
AC04  Llanos de Chal     3.98 214   Pn       Pn        16 37 23.5  +0.5
AC05  El Transito        4.20 201            Pn        16 37 27.2  +1.1
PATCX Punta Patache      4.32 340  eP        Pn        16 37 27.7  +0.1
PATCX Punta Patache      4.32 340   Pn       Pn        16 37 27.6  -0.1
LCO   Las Campanas       4.51 204   Pn       Pn        16 37 30.4  +0.1
TA01  Diego Aracena      4.57 341  eP        Pn        16 37 30.6  -0.3
TA01  Diego Aracena      4.57 341            Pn        16 37 30.3  -0.6
HMBC  Humberstone        4.76 345  eP        Pn        16 37 33.3  -0.3
PB08  IPOC Station P     4.77 353⇑iP        Pn        16 37 34.7  +0.7
PB08  IPOC Station P     4.77 353            Pn        16 37 34.5  +0.5
CO01  Juntas del Tor     5.23 195            Pn        16 37 41.2  +1.2
ACDV  Cuesta del Vie     5.27 185  eP        Pn        16 37 42.2  +1.8
ACDV                                IAML               16 38 50.0
      comp=Z,93nm,0.6s
AROD  Rodeo              5.30 189  eP        Pn        16 37 43.3  +2.3
PSGCX Pisagua            5.47 344   Pn       Pn        16 37 41.4  -1.8
GO04  Tololo Observa     5.61 200            Pn        16 37 44.2  -0.8
ACCO  Cerro Coronel      5.68 184  eP        Pn        16 37 47.9  +1.8
ACCO                                IAML               16 39 02.1
      comp=Z,70nm,2.1s
MNMC  Minye Minye        5.83 350   Pn       Pn        16 37 47.0  -1.1
CO03  El Pedregal        6.20 197            Pn        16 37 52.1  -0.8
RTLL  Cerro Villicun     6.40 179  eP        Pn        16 37 56.7  +1.1
RTLL                               eS        Sn        16 39 05.8  -1.5
RTLL                                IAML               16 39 11.3
      comp=Z,79nm,0.5s
PB16  IPOC Station P     6.60 352            Pn        16 37 59.1  +0.3
ZON   Zonda              6.62 181            Pn        16 37 58.8  +0.3
ZON   Zonda              6.62 181  eP        Pn        16 37 59.5  +1.0
ZON                                eS        Sn        16 39 11.9  -0.7
ZON                                 IAML               16 39 16.8
      comp=Z,28nm,1.2s
AP01  Chacalluta         6.71 345   Pn       Pn        16 37 59.2  -0.6
RTCV  Cerro Valdivia     6.93 180  eP        Pn        16 38 03.7  +0.9
RTCV                                IAML               16 39 53.6
      comp=Z,36nm,3.4s
VA03  San Esteban        8.02 192            Pn        16 38 16.6  -0.9
PEL   Peldehue           8.41 192   Pn       Pn        16 38 20.8  -2.1
LPAZ  La Paz             8.58   3   P        Pn        16 38 26.6  +0.8
      comp=Z,9.1nm,0.3s,baz=178,slow=7.4,SNR=100
LPAZ                                LR       LR        16 43 01.0
      comp=Z,66nm,21.7s,baz=184,slow=46
LPAZ  La Paz             8.58   3   Pn       Pn        16 38 25.4  -0.3
MT02  Curacav            8.62 195            Pn        16 38 22.4  -3.2
MT05  Renca              8.67 192   Pn       Pn        16 38 25.4  -0.8
BO02  Sierra Bellavi    10.04 191   Pn       Pn        16 38 41.7  -3.1
CPUP  Villa Florida     10.24 100   P        Pn        16 38 43.1  -4.4
      comp=Z,0.2nm,0.3s,baz=271,slow=9.6,SNR=4.3
CPUP                                LR       LR        16 43 28.9
      comp=Z,37nm,18.1s,baz=331,slow=43
CPUP  Villa Florida     10.24 100   Pn       Pn        16 38 46.3  -1.2
SIV   San Ignacio       11.31  40   P        Pn        16 38 58.6  -3.5
      comp=Z,12nm,0.3s,baz=244,slow=9.5,SNR=95
SIV                                 S        Sn        16 40 59.6  -7.0
      comp=Z,0.1nm,0.3s,baz=258,slow=15,SNR=2.7
```

ITQB	**Itaqui**	**11.63**	**117**	*e*P	Pn	16 39 00.8	-5.4
BI02	**San Fabin de**	**11.95**	**191**	Pn	**Pn**	**16 39 09.1**	**-1.3**
LC01	**Cunco**	**14.23**	**191**	Pn	**Pn**	**16 39 40.3**	**+0.4**
VILB	**Vilhena**	**14.28**	**35**	*e*P	**Pn**	**16 39 37.3**	**-3.4**
ETMB	**Extrema**	**15.17**	**9**	*e*P	**Pn**	**16 39 51.7**	**-0.3**
PLCA	**Paso Flores**	**15.87**	**186**	P	**Pn**	**16 40 01.2**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=6.7,slow=15,SNR=4.8						
PLCA	**Paso Flores**	**15.87**	**186**	P	**Pn**	**16 39 60.0**	**-0.6**
PLCA				IAmb	IAmb	16 40 05.8	
	comp=Z,11nm,1.4s						
PLCA	**Paso Flores**	**15.87**	**186**	*e*P	**P**	**16 40 03.0**	**+1.0**
SAML	**Samuel**	**16.68**	**19**		**Pn**	**16 40 07.7**	**-3.0**
SAML	**Samuel**	**16.68**	**19**	*e*P	**Pn**	**16 40 08.7**	**-2.0**
CZSB	**Cruzeiro do Su**	**17.53**	**346**	*e*P	**Pn**	**16 40 23.2**	**+2.2**
BB19B	**Bebedouro**	**18.84**	**82**	*e*P	**P**	**16 40 33.5**	**-1.3**
IPMB	**Ipameri, GO**	**20.15**	**74**	*e*P	**P**	**16 40 48.7**	**-0.2**
SNDB	**Serra Nova Dou**	**20.80**	**55**	*e*P	**P**	**16 40 55.6**	**-0.3**
BDFB	**Brasilia**	**21.35**	**68**	P	**P**	**16 41 00.7**	**-1.3**
	comp=Z,4.2nm,0.6s,baz=235,slow=8.3,SNR=8.9						
BDFB	**Brasilia**	**21.35**	**68**	P	**P**	**16 41 00.8**	**-1.1**
BDFB				IAmb	IAmb	16 41 02.4	
	comp=Z,4.9nm,0.7s						
MACA	**Manacapuru-AM**	**22.91**	**21**	*e*P	**P**	**16 41 18.4**	**+0.5**
PEXB	**Peixe**	**23.01**	**60**	*e*P	**P**	**16 41 20.1**	**+1.2**
PTGA	**Pitinga**	**25.43**	**20**	P	**P**	**16 41 42.5**	**+1.7**
	comp=Z,4.9nm,0.3s,baz=208,slow=10.0,SNR=13						
PTGA	**Pitinga**	**25.43**	**20**	P	**P**	**16 41 41.6**	**+0.8**
PTGA	**Pitinga**	**25.43**	**20**	*e*P	**P**	**16 41 42.7**	**+1.9**
SMTB	**Santa Maria do**	**25.58**	**55**	*e*P	**P**	**16 41 43.8**	**+1.6**
MALB	**Monte Alegre**	**26.76**	**33**	*e*P	**P**	**16 41 56.9**	**+4.1**
BELA	**Belgrano 2**	**55.35**	**172**	P	**P**	**16 45 43.1**	**-1.9**
TOA0	**Torodi Ar. Sit**	**78.23**	**69**	P	**P**	**16 48 12.1**	**+1.1**
TOA0				IAmb	IAmb	16 48 14.2	
	comp=Z,3.2nm,0.7s						
TORD	**Torodi Ar. Bea**	**78.23**	**69**	P	**P**	**16 48 13.8**	**+2.7**
	comp=Z,2.1nm,0.7s,baz=254,slow=5.5,SNR=10						
TORD	**Torodi Ar. Bea**	**78.23**	**69**	P	**P**	**16 48 12.2**	**+1.1**
ASAR	**Alice Springs**	**127.03**	**206**	PKP	**PKiKP**	**16 55 17.8**	**+2.4**
	comp=Z,0.8nm,0.7s,baz=132,slow=1.8,SNR=9.2						
WRA	**Warramunga Arr**	**130.16**	**209**	PKP	**PKiKP**	**16 55 23.9**	**+2.2**
	comp=Z,0.6nm,0.8s,baz=159,slow=1.7,SNR=7.1						
ZALV	**Zalesovo Beam**	**144.86**	**27**	PKP	**PKPdf**	**16 55 49.9**	**+3.2**
	comp=Z,3.0nm,0.8s,baz=308,slow=5.5,SNR=10						
AAK	**Ala-Archa**	**144.91**	**50**	PKP	**PKiKP**	**16 55 50.9**	**-0.2**
	comp=Z,0.9nm,0.9s,baz=256,slow=4.2,SNR=3.9						
KSH	**Kashi**	**146.88**	**55**	PKPbc	**PKPdf**	**16 55 45.6**	**-5.2**
KSH				pPKP	pPKPbc	16 56 25.8	+0.4
KSH				PP	PP	16 59 10.3	-7.9
KSH				AMB	AMB		
	comp=Z,64nm,4.2s						
MKAR	**Makanchi Array**	**148.13**	**39**	PKPbc	**PKiKP**	**16 55 59.3**	**+1.8**
	comp=Z,0.5nm,0.6s,baz=330,slow=2.2,SNR=10						

IDC ***15*** *16:44:04.5±0.8, 22°.66N×121°.50E, h0^{km}, mb3.9/13, mb1 4.0/14, mb1mx3.7/53, mbtmp3.9/14, ML3.8/1, MS3.5/12, Ms1 3.5/12, ms1mx3.2/41, Error ellipse: s-maj=22.0km s-min=15.6km az=72.0*
JMA ***15*** *16:44:06.3±0.2, 22°.69N×121°.28E, h30^{km}±4^{km}, M4.4*
NIED ***15*** *16:44:06.3, 22°.69N×121°.28E, h30^{km}, MW4.2, Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M$_{rr}$0.60; M$_{\theta\theta}$1.88; M$_{\phi\phi}$-2.48; M$_{r\theta}$-1.00; M$_{\theta\phi}$-0.02; M$_{\phi r}$0.10; Fault plane solution: M$_0$2.45000×10^{15} NP1: φ$_s$319.00000°, δ72.00000°, λ23.00000°. NP2: φ$_s$222.00000°, δ69.00000°, λ160.00000°.*
TAP ***15*** *16:44:07.7, 22°.71N×121°.27E, h19^{km}, ML4.3, B*
NEIC ***15*** *16:44:07.2±1.4, 22°.76N±0°.06×121°.36E±0°.04, h18^{km}, mb4.2/27, ML4.1(TAP), Error ellipse: s-maj=9.2km s-min=5.7km az=188.0*
BJI ***15*** *16:44:08.4±0.0, 22°.79N×121°.23E, h22^{km}, mB4.5/20, mb3.8/24, ML4.0/1, Ms4.1/20, Ms7 3.9/19*
ISC 15 16:44:08.0±0.4**, 22°.69N**±0°.02×**121°.36E**±0°.02**, h20**^{km}±1^{km}**, n237, σ1^{s}.46**/331**, mb4.0**/26**, MS3.4**/12**, 12C-30D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LDUT	**Ludao**	**0.10**	**98**	⇓*i*P	**Pb**	**16 44 12.7**	**-0.8**
	baz=102						
LDUT				*i* S	**Sb**	**16 44 16.7**	**-0.7**
	baz=102						
TTN	**Taitung**	**0.21**	**289**	⇑*i*P	**Pb**	**16 44 12.4**	**-1.2**
	baz=290						
TTN				S	**Sb**	**16 44 16.1**	**-1.4**
	baz=290						
EDH	**Donghe**	**0.29**	**350**	⇑*i*P	**Pb**	**16 44 13.9**	**-0.6**
	baz=3.0						
EDH				S	**Sb**	**16 44 18.7**	**-0.3**
	baz=3.0						
TWGBT	**Beinan**	**0.29**	**297**	⇑*i*P	**Pb**	**16 44 13.2**	**-1.4**
	baz=308						
TWGBT				*i* S	**Sb**	**16 44 17.8**	**-1.3**
	baz=308						
TWG	**Pinlang**	**0.30**	**297**	⇑*i*P	**Pb**	**16 44 13.2**	**-1.5**
	baz=308						
TWG				*i* S	**Sb**	**16 44 17.6**	**-1.6**
	baz=308						
TWG	**Pinlang**	**0.30**	**297**		**Pb**	**16 44 13.2**	**-1.5**
TWG				Sg	**Sb**	**16 44 17.2**	**-2.0**
LONT	**Longtian**	**0.30**	**316**	⇑*i*P	**Pb**	**16 44 13.7**	**-1.1**
	baz=333						
LONT				*e*S	**Sb**	**16 44 18.0**	**-1.4**
	baz=333						
ECL	**Taimali**	**0.39**	**257**	⇓*i*P	**Pb**	**16 44 14.6**	**-1.5**
	baz=247						
ECL				*i* S	**Sb**	**16 44 19.4**	**-2.1**
	baz=247						
CHKT	**Chengkung**	**0.41**	**1**	⇑P	**Pb**	**16 44 16.0**	**-0.5**
	baz=25						
CHKT				*i* S	**Sb**	**16 44 22.2**	**0.0**
	baz=25						
FULB	**Fuli**	**0.51**	**353**	⇑*i*P	**Pb**	**16 44 17.6**	**-0.8**
	baz=347						
FULB				S	**Sb**	**16 44 25.2**	**-0.2**
	baz=347						
TAW	**Tawu**	**0.54**	**233**	*e*P	**Pb**	**16 44 17.4**	**-1.5**
	baz=233						
TAW				S	**Sb**	**16 44 24.5**	**-1.7**
	baz=233						
EAST	**Anshuo**	**0.56**	**237**	⇑P	**Pb**	**16 44 17.6**	**-1.6**
	baz=235						
EAST				*e*S	**Sb**	**16 44 24.8**	**-2.1**
	baz=235						
ELDTW	**Lidau**	**0.59**	**328**	⇓*i*P	**Pb**	**16 44 17.8**	**-2.0**
	baz=334						
ELDTW				S	**Sb**	**16 44 23.9**	**-4.0**
	baz=334						
EYUL	**Yuli**	**0.66**	**357**	*e*P	**Pb**	**16 44 19.6**	**-1.3**
	baz=351						
EYUL				*e*S	**Sb**	**16 44 29.7**	**0.0**
	baz=351						
TSMG	**Majia**	**0.66**	**272**	⇓P	**Pb**	**16 44 18.9**	**-2.0**
	baz=263						
TSMG				*i* S	**Sb**	**16 44 26.3**	**-3.3**
	baz=263						
TWF1	**Yuli**	**0.66**	**355**	⇓*i*P	**Pb**	**16 44 19.2**	**-1.8**
	baz=353						
LAY	**Lan-yu**	**0.67**	**165**	*e*P	**Pb**	**16 44 20.3**	**-0.8**
	baz=148						
LAY				*e*S	**Sb**	**16 44 30.6**	**+0.7**
	baz=148						
SSD	**Sandimen**	**0.67**	**275**	⇓*i*P	**Pb**	**16 44 19.0**	**-2.2**
	baz=269						
SSD				*e*S	**Sb**	**16 44 26.9**	**-3.2**
	baz=269						
MASBT	**Mashibuluo**	**0.68**	**264**	⇓*i*P	**Pb**	**16 44 19.3**	**-1.9**
	baz=254						
MASBT				*i* S	**Sb**	**16 44 26.8**	**-3.3**
	baz=254						
SLIU	**Shizi**	**0.70**	**228**	⇑*e*P	**Pb**	**16 44 19.9**	**-1.6**
	baz=205						
YULB	**Yu-li**	**0.70**	**355**	Pg	**Pb**	**16 44 19.5**	**-2.2**
STYH	**Taoyuan**	**0.72**	**312**	⇓*i*P	**Pb**	**16 44 20.4**	**-1.6**
	baz=315						
STYH				*e*S	**Sb**	**16 44 29.1**	**-2.3**
	baz=315						
SLGT	**Liugui**	**0.72**	**295**	*i* P	**Pb**	**16 44 20.2**	**-1.8**
	baz=296						
SLGT				*e*S	**Sb**	**16 44 29.0**	**-2.5**
	baz=296						
STYT	**Tauyuan**	**0.73**	**311**	⇓*i*P	**Pb**	**16 44 20.3**	**-1.8**
	baz=314						
STYT				*e*S	**Sb**	**16 44 28.3**	**-3.4**
	baz=314						
SCZT	**Fangliau**	**0.75**	**245**	*e*P	**Pb**	**16 44 20.8**	**-1.6**
	baz=239						
SCZT				*e*S	**Sb**	**16 44 30.0**	**-2.2**
	baz=239						
SSPT	**Xinbi**	**0.76**	**255**	P	**Pb**	**16 44 21.6**	**-0.9**
	baz=245						
SSPT				*e*S	**Sb**	**16 44 31.2**	**-1.2**
	baz=245						
TSPT	**Pingtung City**	**0.80**	**269**	P	**Pb**	**16 44 22.2**	**-1.0**
	baz=261						
TSPT				*e*S	**Sb**	**16 44 31.9**	**-1.6**
	baz=261						
HGSD	**Ruisui**	**0.80**	**4**	*e*P	**Pb**	**16 44 22.5**	**-0.8**
	baz=19						
HGSD				*e*S	**Sn**	**16 44 35.5**	**-0.1**
	baz=19						
SGLT	**Jiouru**	**0.80**	**273**	*e*P	**Pb**	**16 44 22.5**	**-0.7**
	baz=270						
SGLT				*e*S	**Sb**	**16 44 33.1**	**-0.6**
	baz=270						
EHY	**Hungye**	**0.81**	**358**	P	**Pb**	**16 44 21.4**	**-2.1**
	baz=5.0						
SGST	**Jiashian**	**0.82**	**299**	⇓*i*P	**Pb**	**16 44 21.5**	**-2.0**
	baz=300						
SGST				*e*S	**Sb**	**16 44 32.6**	**-1.5**
	baz=300						
SCST	**Cishan**	**0.82**	**284**	*e*P	**Pb**	**16 44 22.6**	**-1.0**
	baz=278						
TWM1	**Shoushan**	**0.88**	**279**	⇓*e*P	**Pb**	**16 44 24.1**	**-0.5**
	baz=277						
TWM1				*e*S	**Sn**	**16 44 36.3**	**-1.1**
	baz=277						
YUS	**Yu-Shan**	**0.88**	**335**	⇓P	**Pb**	**16 44 23.1**	**-1.8**
	baz=340						
YUS				*e*S	**Sb**	**16 44 34.4**	**-2.1**
	baz=340						
WTP	**Ta-pu**	**0.88**	**309**	⇓*i*P	**Pb**	**16 44 23.6**	**-1.1**
	baz=311						
WTP				*e*S	**Sb**	**16 44 35.4**	**-0.7**
	baz=311						
HEN	**Hengchun**	**0.89**	**220**	*e*P	**Pb**	**16 44 23.9**	**-0.8**
	baz=199						
TSEB	**Hengchuen, Pin**	**0.89**	**209**	*e*P	**Pb**	**16 44 22.8**	**-2.0**
	baz=193						
TWKBT	**Hengchun**	**0.90**	**214**	⇑*i*P	**Pb**	**16 44 23.4**	**-1.5**
	baz=195						
TWKBT				*e*S	**Sb**	**16 44 35.4**	**-1.1**
	baz=195						
TWK1	**Hengchun**	**0.90**	**215**	⇑P	**Pb**	**16 44 23.4**	**-1.6**
	baz=195						
TWK1				*e*S	**Sb**	**16 44 35.8**	**-0.7**
	baz=195						
TPUB	**Ta-pu**	**0.91**	**312**	⇓*i*P	**Pb**	**16 44 24.1**	**-1.1**
	baz=314						
TPUB				*e*S	**Sn**	**16 44 37.2**	**-1.0**
	baz=314						
TPUB	**Ta-pu**	**0.91**	**312**	Pg	**Pb**	**16 44 23.9**	**-1.2**
CHN1	**Nanshi**	**0.91**	**303**	⇓*i*P	**Pb**	**16 44 24.6**	**-0.6**
	baz=313						
CHN1				*e*S	**Sn**	**16 44 37.4**	**-0.9**
	baz=313						
SNW	**Nanwan**	**0.92**	**218**	*e*P	**Pb**	**16 44 24.5**	**-0.7**
	baz=200						
SNW				*e*S	**Sb**	**16 44 36.2**	**-0.8**
	baz=200						
SNJT	**Kaohsiung City**	**0.95**	**274**	P	**Pn**	**16 44 26.5**	**+0.3**
	baz=272						
SNJT				*e*S	**Sn**	**16 44 41.1**	**+2.0**
	baz=272						
SNST	**Tainan City**	**0.95**	**304**	⇓P	**Pb**	**16 44 25.3**	**-0.6**
	baz=317						
ALS	**Alishan**	**0.96**	**328**	⇓*i*P	**Pb**	**16 44 24.9**	**-1.4**
	baz=338						
ALS				*e*S	**Sb**	**16 44 36.4**	**-2.2**
	baz=338						
CHN4	**Tsaushan**	**0.97**	**313**	⇓*i*P	**Pb**	**16 44 25.2**	**-0.9**
	baz=315						
WLCH	**Liuqiu**	**0.97**	**250**	⇓*e*P	**Pn**	**16 44 28.6**	**+2.2**
	baz=240						
EGFH	**Guangfu**	**0.98**	**4**	*e*P	**Pb**	**16 44 24.0**	**-2.3**
	baz=355						
EGFH				*e*S	**Sb**	**16 44 37.7**	**-1.1**
	baz=355						
KAU	**Kaohsiung**	**0.98**	**263**	*e*P	**Pn**	**16 44 27.6**	**+1.0**
	baz=255						
KAU				*e*S	**Sn**	**16 44 41.6**	**+1.8**
	baz=255						
TWP	**Hsiaoliuchiu**	**0.98**	**250**	*e*P	**Pn**	**16 44 28.0**	**+1.4**
	baz=241						
TWP				*e*S	**Sn**	**16 44 39.1**	**-0.9**
	baz=241						
TWK	**Hsinying**	**0.99**	**306**	⇓*i*P	**Pb**	**16 44 25.6**	**-0.9**
	baz=317						
TWK				*e*S	**Sn**	**16 44 38.8**	**-1.4**
	baz=317						
CHN3	**Shinhua**	**0.99**	**293**	*e*P	**Pn**	**16 44 26.6**	**-0.2**
	baz=293						
CHN3				*e*S	**Sn**	**16 44 42.3**	**+2.0**
	baz=293						
VWDT	**VWDT**	**1.08**	**349**	⇓*i*P	**Pb**	**16 44 26.2**	**-1.8**
	baz=2.0						
VWDT				*e*S	**Sb**	**16 44 39.3**	**-2.4**
	baz=2.0						
CHN5	**Tsauling**	**1.10**	**325**	*i* P	**Pb**	**16 44 27.6**	**-0.9**
	baz=327						
CHN5				*e*S	**Sn**	**16 44 44.3**	**+1.3**
	baz=327						
TAI1	**Yung-k'ang**	**1.10**	**289**	*e*P	**Pn**	**16 44 28.7**	**+0.4**
	baz=287						
TAI1				*e*S	**Sn**	**16 44 41.9**	**-0.9**
	baz=287						
WHYT	**Xinyi Township**	**1.11**	**335**	*e*P	**Pn**	**16 44 27.6**	**-0.8**
	baz=344						
WHYT				*e*S	**Sn**	**16 44 42.1**	**-1.0**
	baz=344						
ESL	**Shilin**	**1.12**	**3**	*e*P	**Pn**	**16 44 27.2**	**-1.4**
	baz=358						
ESL				*e*S	**Sb**	**16 44 41.1**	**-1.8**
	baz=358						
SSLB	**Suanglung**	**1.16**	**341**	⇓*i*P	**Pn**	**16 44 27.7**	**-1.4**
	baz=354						
SSLB				*e*S	**Sn**	**16 44 44.2**	**-0.2**
	baz=354						
SSLB	**Suanglung**	**1.16**	**341**		**Pn**	**16 44 27.5**	**-1.6**
CHN2	**Minshiung**	**1.17**	**316**	⇓*i*P	**Pb**	**16 44 29.3**	**-0.2**
	baz=317						
CHN2				*e*S	**Sn**	**16 44 44.5**	**-0.1**
	baz=317						
SCLT	**Jiali**	**1.18**	**295**	*e*P	**Pb**	**16 44 29.3**	**-0.4**
	baz=293						
SCLT				*e*S	**Sn**	**16 44 46.0**	**+1.3**
	baz=293						
CHY	**Chiayi**	**1.18**	**313**	⇓*i*P	**Pb**	**16 44 29.3**	**-0.4**
	baz=314						
CHY				*e*S	**Sn**	**16 44 44.1**	**-0.7**
	baz=314						
ICHU	**Yijhu**	**1.20**	**304**	*e*P	**Pn**	**16 44 29.2**	**-0.4**
	baz=304						
ICHU				*e*S	**Sn**	**16 44 45.4**	**+0.1**
	baz=304						
WGK	**Gukeng**	**1.23**	**324**	⇓P	**Pb**	**16 44 30.3**	**-0.3**
	baz=324						
WGK				*e*S	**Sn**	**16 44 47.0**	**+0.8**
	baz=324						
CHN8	**Yiju**	**1.25**	**302**	*e*P	**Pb**	**16 44 30.1**	**-0.7**
	baz=312						
CHN8				*e*S	**Sn**	**16 44 48.3**	**+1.9**
	baz=312						
WDLH	**Douliu**	**1.25**	**323**	⇓P	**Pb**	**16 44 30.5**	**-0.4**
	baz=323						
WDLH				*e*S	**Sn**	**16 44 48.0**	**+1.4**
	baz=323						
SMLT	**Sun Moon Lake**	**1.26**	**341**	⇓P	**Pn**	**16 44 30.0**	**-0.6**
	baz=354						
SMLT				S	**Sn**	**16 44 47.7**	**+0.6**
	baz=354						
WJS	**Zhushan**	**1.27**	**333**	*e*P	**Pb**	**16 44 31.1**	**-0.1**
	baz=334						
WJS				*e*S	**Sn**	**16 44 48.4**	**+1.3**
	baz=334						
TYC	**Yuchr**	**1.30**	**339**	*i* P	**Pb**	**16 44 31.0**	**-0.7**
	baz=352						
TYC				*e*S	**Sb**	**16 44 48.3**	**+0.4**
	baz=352						
HWA	**Hwalien**	**1.30**	**10**	*e*P	**Pn**	**16 44 28.5**	**-2.6**
	baz=359						
HWA				*e*S	**Sn**	**16 44 47.4**	**-0.4**
	baz=359						
WNT	**Mingjian**	**1.34**	**332**	⇓P	**Pb**	**16 44 32.0**	**-0.4**
	baz=332						
WNT				*e*S	**Sb**	**16 44 50.1**	**+1.0**
	baz=332						
WTK	**Tuku**	**1.34**	**318**	*e*P	**Pb**	**16 44 31.5**	**-0.9**
	baz=319						
WTK				*e*S	**Sb**	**16 44 49.2**	**+0.1**
	baz=319						
WNT1	**Nantou City**	**1.36**	**333**	*e*P	**Pb**	**16 44 32.7**	**-0.1**
	baz=332						
WNT1				*e*S	**Sb**	**16 44 49.7**	**-0.2**
	baz=332						
WPL	**Puli Township**	**1.37**	**344**	*e*P	**Pn**	**16 44 31.9**	**-0.1**
	baz=348						
CHGB	**Renai**	**1.38**	**353**	*e*P	**Pn**	**16 44 31.0**	**-1.3**
	baz=5.0						
CHGB				*e*S	**Sn**	**16 44 49.5**	**-0.5**
	baz=5.0						
DPDB	**Guoxing**	**1.40**	**344**	*e*P	**Pn**	**16 44 32.5**	**0.0**
	baz=355						
DPDB				*e*S	**Sb**	**16 44 50.5**	**-0.4**
	baz=355						
TWD	**Chiawan**	**1.40**	**9**	*e*P	**Pn**	**16 44 30.4**	**-2.0**
	baz=9.0						
TWD				*e*S	**Sn**	**16 44 49.5**	**-0.8**
	baz=9.0						
WSF	**Szhu**	**1.41**	**312**	*e*P	**Pn**	**16 44 32.0**	**-0.5**
	baz=311						
WSF				*e*S	**Sb**	**16 44 51.0**	**-0.2**
	baz=311						
WCS	**Beigang Elemen**	**1.42**	**343**	*e*P	**Pb**	**16 44 32.9**	**-1.0**
	baz=354						
WCS				*e*S	**Sb**	**16 44 51.8**	**+0.2**
	baz=354						
WHF	**Hehuan Shan**	**1.45**	**357**	*e*P	**Pn**	**16 44 31.9**	**-1.6**
	baz=12						
WHF				*e*S	**Sn**	**16 44 50.4**	**-1.8**
	baz=12						
NACB	**Ninganchiao**	**1.50**	**8**	*e*P	**Pn**	**16 44 31.4**	**-2.4**
	baz=8.0						
NACB				*e*S	**Sn**	**16 44 51.4**	**-1.2**
	baz=8.0						
NACB	**Ninganchiao**	**1.50**	**8**		**Pn**	**16 44 31.9**	**-1.8**
RLNB	**Erlin**	**1.51**	**323**	*e*P	**Pn**	**16 44 34.0**	**+0.1**
	baz=323						
ETLH	**Xiulin Townshi**	**1.52**	**4**	*e*P	**Pn**	**16 44 32.0**	**-2.1**
	baz=4.0						
ETLH				*e*S	**Sn**	**16 44 51.3**	**-2.0**
	baz=4.0						
FUSS	**Fushou**	**1.56**	**356**	*e*P	**Pn**	**16 44 33.8**	**-1.0**
	baz=9.0						
FUSS				*e*S	**Sn**	**16 44 54.1**	**-0.4**
	baz=9.0						
TWT	**Tachien**	**1.57**	**354**	*e*P	**Pn**	**16 44 34.4**	**-0.5**
	baz=6.0						
TWT				*e*S	**Sb**	**16 44 55.2**	**-0.7**
	baz=6.0						
TDCB	**Techi**	**1.57**	**353**	P	**Pn**	**16 44 34.3**	**-0.5**
	baz=5.0						
TDCB				*e*S	**Sn**	**16 44 53.7**	**-1.0**
	baz=5.0						
WCHH	**Zhanghua**	**1.57**	**332**	*e*P	**Pn**	**16 44 34.9**	**+0.1**
	baz=331						
WCHH				*e*S	**Sb**	**16 44 54.7**	**-1.1**
	baz=331						
TCU	**Taichung**	**1.58**	**337**	*e*P	**Pb**	**16 44 35.8**	**-0.8**
	baz=336						
TCU				*e*S	**Sb**	**16 44 57.2**	**+1.1**
	baz=336						
WHP	**Taichung City**	**1.63**	**347**	*e*P	**Pb**	**16 44 36.5**	**-0.9**
	baz=358						
WHP				S	**Sb**	**16 44 59.3**	**+1.7**
	baz=358						
WDGT	**Dungji**	**1.67**	**290**	P	**Pn**	**16 44 35.1**	**-0.9**
	baz=288						
WDGT				*e*S	**Sn**	**16 44 55.0**	**-1.9**
	baz=288						
NNSB	**Datong**	**1.73**	**1**	*e*P	**Pn**	**16 44 36.0**	**-1.1**
	baz=14						
NNSB				*e*S	**Sn**	**16 44 58.9**	**+0.2**
	baz=14						
NNSH	**Datong**	**1.73**	**1**	*e*P	**Pn**	**16 44 35.9**	**-1.2**
	baz=17						
TWQ1	**Liyutan**	**1.74**	**342**	*e*P	**Pb**	**16 44 38.0**	**-1.3**
	baz=340						
TWQ1				*e*S	**Sb**	**16 44 59.9**	**-0.8**
	baz=340						
NNS	**Nan Shan**	**1.74**	**0**	*e*P	**Pn**	**16 44 37.0**	**-0.2**
	baz=17						
ENA	**Nanau**	**1.77**	**11**	*e*P	**Pn**	**16 44 36.9**	**-0.6**
	baz=359						
ENA				*e*S	**Sn**	**16 44 58.8**	**-0.5**
	baz=359						
WDJ	**Dajia District**	**1.78**	**338**	*e*P	**Pb**	**16 44 38.4**	**-1.6**
	baz=336						
WDJ				*e*S	**Sb**	**16 45 01.6**	**-0.2**
	baz=336						
NSY	**Sanyi**	**1.81**	**342**	*e*P	**Pb**	**16 44 39.1**	**-1.3**
	baz=340						
NSY				*e*S	**Sb**	**16 45 03.4**	**+0.8**
	baz=340						
PHUB	**P'eng-hu**	**1.84**	**297**	*e*P	**Pn**	**16 44 37.1**	**-1.3**
	baz=295						
PHUB				*e*S	**Sn**	**16 45 00.1**	**-1.0**
	baz=295						
VCHM	**Qimei**	**1.85**	**287**	*e*P	**Pn**	**16 44 37.3**	**-1.3**
	baz=285						
VCHM				*e*S	**Sn**	**16 44 59.5**	**-2.0**
	baz=285						
PNG	**Penghu**	**1.88**	**298**	*e*P	**Pn**	**16 44 37.9**	**-1.0**
	baz=296						
PNG				*e*S	**Sn**	**16 45 00.2**	**-1.9**
	baz=296						
NDT	**Datong Townshi**	**1.91**	**4**	*e*P	**Pn**	**16 44 39.5**	**+0.1**
	baz=16						
NDT				*e*S	**Sn**	**16 45 03.1**	**+0.1**
	baz=16						
NMLH	**Miaoli**	**1.91**	**344**	*e*P	**Pn**	**16 44 40.0**	**+0.5**
	baz=341						
NMLH				*e*S	**Sb**	**16 45 05.0**	**-0.7**
	baz=341						
ENTT	**Nioudou**	**1.95**	**6**	*e*P	**Pn**	**16 44 40.0**	**0.0**
	baz=4.0						
ENTT				*e*S	**Sn**	**16 45 03.1**	**-0.9**
	baz=4.0						
NSTT	**Nanjuang**	**1.96**	**350**	*e*P	**Pn**	**16 44 41.0**	**+0.8**
	baz=4.0						
NDS	**Dongshan**	**1.96**	**10**	*e*P	**Pn**	**16 44 40.2**	**0.0**
	baz=7.0						
NDS				*e*S	**Sn**	**16 45 02.5**	**-1.8**
	baz=7.0						
TWC	**Suao**	**1.96**	**13**	*e*P	**Pn**	**16 44 40.1**	**-0.1**
	baz=359						
TWC				*e*S	**Sn**	**16 45 04.2**	**0.0**
	baz=359						
YHNB	**Yeheng**	**1.97**	**0**		**Pn**	**16 44 39.3**	**-1.1**
LIOB	**Emei**	**1.97**	**351**	*e*P	**Pn**	**16 44 40.7**	**+0.3**
	baz=347						
LIOB				*e*S	**Sb**	**16 45 05.6**	**-1.9**
	baz=347						
NSK	**Sanguang**	**1.98**	**360**	*e*P	**Pn**	**16 44 40.1**	**-0.3**
	baz=12						
NSK				*e*S	**Sn**	**16 45 04.4**	**-0.3**
	baz=12						
TWE	**Neicheng**	**2.04**	**8**	*e*P	**Pn**	**16 44 40.5**	**-0.7**
	baz=6.0						
TWE				*e*S	**Sn**	**16 45 06.0**	**-0.1**
	baz=6.0						
NJD	**Zhudong**	**2.05**	**353**	*e*P	**Pn**	**16 44 40.9**	**-0.6**
	baz=353						
NWLT	**Wulai**	**2.08**	**4**	*e*P	**Pn**	**16 44 41.5**	**-0.4**
	baz=20						
HSN1	**Hsinchu**	**2.10**	**352**	*e*P	**Pn**	**16 44 42.7**	**+0.6**
	baz=351						
SBCB	**Hsinchu**	**2.12**	**351**	*e*P	**Pn**	**16 44 42.2**	**-0.1**
	baz=347						
SBCB				*e*S	**Sn**	**16 45 09.1**	**+0.9**
	baz=347						
NTC	**Toucheng**	**2.20**	**11**	*e*P	**Pn**	**16 44 42.9**	**-0.5**
	baz=12						
NHDH	**Xindian Distri**	**2.27**	**4**	*e*P	**Pn**	**16 44 43.9**	**-0.5**
	baz=16						
NCUH	**Zhongli**	**2.28**	**356**	*e*P	**Pb**	**16 44 47.7**	**-0.8**
	baz=339						
JYNG	**Yonagunijimaku**	**2.28**	**39**	P	**Pn**	**16 44 43.4**	**-1.1**
JYNG				*e*S	**Sn**	**16 45 11.3**	**-0.7**
TATO	**Taipei**	**2.28**	**3**	*e*P	**Pn**	**16 44 44.7**	**+0.2**
	baz=18						

TWA	**Mucha**	**2.29**	**5**	eP	**Pn**	**16 44 45.9**	**+1.2**
	baz=14						
TWA				eS	**Sn**	**16 45 12.9**	**+0.6**
	baz=14						
TIPB	**Shuangxi**	**2.31**	**11**	eP	**Pn**	**16 44 45.6**	**+0.6**
	baz=10.0						
YOJ	**Yonaguni jima**	**2.33**	**40**	P	**Pn**	**16 44 45.6**	**+0.5**
YOJ				eS	**Sn**	**16 45 13.1**	**0.0**
YOJ	**Yonaguni jima**	**2.33**	**40**		**Pn**	**16 44 45.7**	**+0.5**
TWB1	**Santiao Chiao**	**2.38**	**14**	eP	**Pn**	**16 44 47.1**	**+1.3**
	baz=359						
TWB1				eS	**Sn**	**16 45 14.7**	**+0.3**
	baz=359						
TWS1	**Kuangyinshan**	**2.40**	**1**	eP	**Pn**	**16 44 47.3**	**+1.1**
	baz=12						
TWS1				eS	**Sn**	**16 45 16.1**	**+1.1**
	baz=12						
NWF	**Wu-fen Shan**	**2.40**	**9**	eP	**Pn**	**16 44 47.5**	**+1.2**
	baz=9.0						
WFSB	**Wu-fen Shan**	**2.40**	**9**	eP	**Pn**	**16 44 46.9**	**+0.7**
	baz=9.0						
NTST	**Danshui**	**2.47**	**2**	eP	**Pn**	**16 44 48.0**	**+0.9**
	baz=17						
ANP	**Anpu**	**2.49**	**3**	eP	**Pn**	**16 44 48.4**	**+0.9**
	baz=18						
HATJ	**Hateruma jima**	**2.63**	**58**	P	**Pn**	**16 44 49.2**	**-0.1**
HATJ				eS	**Sn**	**16 45 19.7**	**-0.9**
IRIF	**Iriomote-Funau**	**2.72**	**53**	P	**Pn**	**16 44 50.6**	**0.0**
IRIF				eS	**Sn**	**16 45 23.1**	**+0.1**
JKRS	**Kuro-shima**	**2.88**	**57**	P	**Pn**	**16 44 52.8**	**0.0**
JKRS				eS	**Sn**	**16 45 26.3**	**-0.5**
VWUC	**VWUC**	**2.88**	**323**	eP	**Pn**	**16 44 51.9**	**-0.9**
	baz=322						
PCYT	**Pengchaiyu**	**3.00**	**12**	eP	**Pn**	**16 44 55.4**	**+1.0**
	baz=11						
JIJ	**Ishigaki jima**	**3.05**	**56**	P	**Pn**	**16 44 55.1**	**0.0**
JIJ				S	**Sn**	**16 45 28.9**	**-2.1**
PTMZ	**Houxiangcun**	**3.11**	**319**	eP	**Pn**	**16 44 54.9**	**-1.0**
	baz=318						
PTTC	**Pingtan**	**3.15**	**333**	eP	**Pn**	**16 44 55.5**	**-1.0**
	baz=331						
KNM	**Kinmen**	**3.19**	**303**	eP	**Pn**	**16 44 57.8**	**+0.8**
	baz=299						
KNMB	**Chin-men Tao**	**3.25**	**304**	eP	**Pn**	**16 44 56.4**	**-1.4**
	baz=301						
KNMB	**Chin-men Tao**	**3.25**	**304**	Pn	**Pn**	**16 44 56.5**	**-1.3**
JISG	**Ishigakijimahi**	**3.30**	**54**	P	**Pn**	**16 44 58.4**	**-0.1**
JISG				eS	**Sn**	**16 45 35.1**	**-2.1**
QZH	**Quanzhou**	**3.39**	**312**	⇓iPn	**Pn**	**16 44 58.5**	**-1.2**
QZH				Sn	**Sn**	**16 45 36.5**	**-2.8**
QZH				LR	LR		
	comp=N,790nm,10.8s						
QZH				LR	LR		
	comp=E,800nm,10.4s						
QZH				LR	LR		
	comp=Z,1μm,12.8s						
JTJ	**Tarama**	**3.63**	**57**	P	**Pn**	**16 45 03.2**	**+0.1**
JTJ				S	**Sn**	**16 45 45.1**	**-0.2**
MATB	**Ma-tsu**	**3.68**	**340**	eP	**Pn**	**16 45 02.7**	**-1.1**
	baz=338						
MSUT	**Lienchiang**	**3.71**	**340**	eP	**Pn**	**16 45 02.3**	**-1.8**
	baz=338						
AXDP	**Jialang**	**3.81**	**306**	eP	**Pn**	**16 45 04.9**	**-0.5**
	baz=303						
MHZQ	**Yeshan**	**4.01**	**328**	eP	**Pn**	**16 45 07.5**	**-0.8**
	baz=327						
JIRB	**Irabujima**	**4.09**	**58**	P	**Pn**	**16 45 09.8**	**+0.4**
JIRB				eS	**Sn**	**16 45 55.7**	**-1.0**
LYJJ	**Jianjiangzhen**	**4.11**	**340**	eP	**Pn**	**16 45 08.6**	**-1.1**
	baz=338						
JMJ2	**Miyako jima3**	**4.17**	**60**	P	**Pn**	**16 45 10.6**	**+0.1**
JMJ2				eS	**Sn**	**16 45 57.8**	**-0.9**
JMJ	**Miyako jima 2**	**4.18**	**59**	eP	**Pn**	**16 45 10.5**	**-0.1**
	baz=66						
JIKM	**Ikemajima**	**4.20**	**57**	P	**Pn**	**16 45 11.3**	**+0.4**
JIKM				eS	**Sn**	**16 45 58.7**	**-0.7**
JOGS	**Gusukube**	**4.24**	**60**	P	**Pn**	**16 45 11.7**	**+0.2**
JOGS				eS	**Sn**	**16 45 59.9**	**-0.6**
VDOS	**Pratas Island**	**4.74**	**246**	eP	**Pn**	**16 45 17.8**	**-0.5**
	baz=245						
JOW	**Kunigami**	**7.52**	**55**	Pn	**Pn**	**16 45 54.2**	**-2.3**
	3.1nm,0.3s,baz=141,slow=17,SNR=5.7						
JOW				Sn	**Sn**	**16 47 17.7**	**-3.5**
	1.5nm,0.3s,baz=256,slow=8.3,SNR=2.9						
TGY	**Tagaytay City**	**8.55**	**183**	LR	LR	16 50 00.1	
	comp=Z,280nm,18.7s,baz=99,slow=42						
WHN	**Wuhan**	**10.02**	**323**	P	Pn	16 46 35.9	+5.0
WHN				LR	LR		
	comp=N,620nm,5.8s						
WHN				LR	LR		
	comp=E,750nm,6.5s						
QIZ	**Qiongzhong**	**11.37**	**253**	P	**Pn**	**16 46 48.8**	**-0.5**
QIZ				S	**Sn**	**16 48 56.3**	**+0.5**
QIZ				LR	LR		
	comp=N,370nm,16.4s						
QIZ				LR	LR		
	comp=E,330nm,13.2s						
QIZ				LR	LR		
	comp=Z,480nm,15.5s						
QIZ	**Qiongzhong**	**11.37**	**253**	Pn	**Pn**	**16 46 49.3**	**0.0**
GYA	**Guiyang**	**13.89**	**289**	⇓P	**Pn**	**16 47 24.9**	**+1.0**
GYA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
XAN	**Xi'an**	**15.72**	**319**	P	**P**	**16 47 52.8**	**+0.5**
XAN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
XAN				LR	LR		
	comp=N,410nm,17.3s						
XAN				LR	LR		
	comp=E,460nm,14.1s						
XAN				LR	LR		
	comp=Z,850nm,16.3s						
KSRS	**Korea Array**	**15.77**	**20**	Pn	**Pn**	**16 47 50.2**	**+1.4**
	0.1nm,0.3s,baz=196,slow=10,SNR=5.3						
KSRS				LR	LR	16 53 25.4	
	comp=Z,87nm,19.5s,baz=201,slow=36						
KMI	**Kunming**	**17.20**	**282**	⇑P	**P**	**16 48 08.0**	**-0.9**
KMI				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KMI				LR	LR		
	comp=N,65nm,21.1s						
KMI				LR	LR		
	comp=E,280nm,14.9s						
KMI				LR	LR		
	comp=Z,310nm,11.0s						
KKM	**Kota Kinabalu**	**17.28**	**197**	P	**P**	**16 48 13.0**	**+3.4**
KKM				IAmb	IAmb	16 48 22.8	
	comp=Z,21nm,1.1s						
MYLDM	**Lahad Datu**	**17.62**	**189**		**P**	**16 48 14.0**	**+0.6**
MYLDM				IAmb	IAmb	16 48 25.8	
	comp=Z,22nm,1.2s						
CD2	**Chengdu**	**17.70**	**301**	P	**P**	**16 48 16.1**	**+1.9**
CD2				pmax	pmax		
	comp=Z,10.0nm,1.1s						
BJT	**Baijiatuau**	**17.83**	**347**	P	**P**	**16 48 15.4**	**0.0**
HHC	**Hu-ho-hao-te**	**19.91**	**338**	eP	**Pn**	**16 48 39.3**	**-0.8**
HHC				S	**S**	**16 52 21.4**	**-0.2**
HHC				pmax	pmax		
	comp=Z,3.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,100nm,4.0s						
HHC				LR	LR		
	comp=Z,120nm,11.3s						
HHC				LR	LR		
	comp=Z,240nm,11.0s						
HHC				LR	LR		
	comp=Z,140nm,10.4s						
MJAR	**Matsushiro Arr**	**20.09**	**43**	P	**P**	**16 48 41.0**	**+0.7**
	comp=Z,1.2nm,0.8s,baz=225,slow=8.7,SNR=4.4						
LZH	**Lanzhou**	**20.23**	**315**	eP	Pn	16 48 44.3	+0.2
LZH				pP	sP	16 48 50.8	+0.1
LZH				sP	pP	16 48 53.9	+6.3
LZH				pmax	pmax		
	comp=Z,13nm,1.0s						
LZH				LR	LR		
	comp=Z,250nm,10.8s						
LZH				LR	LR		
	comp=Z,420nm,11.1s						
LZH				LR	LR		
	comp=Z,300nm,12.7s						
CM35	**Chiang Mai Arr**	**21.15**	**263**	P	**P**	**16 48 55.0**	**+3.0**
CM36	**Chiang Mai Arr**	**21.24**	**263**	P	**P**	**16 48 58.0**	**+5.0**
CM33	**Chiang Mai Arr**	**21.30**	**264**	P	**P**	**16 48 58.0**	**+4.4**
CMMT	**Chiang Mai**	**21.30**	**264**	P	**P**	**16 48 57.6**	**+4.0**
	comp=Z,2.2nm,0.9s						
CM04	**Chiang Mai Arr**	**21.38**	**263**	P	**P**	**16 48 59.8**	**+5.3**
	comp=Z,4.4nm,1.0s						
CM01	**Chiang Mai Arr**	**21.39**	**263**	P	P	16 49 01.6	+7.0
	comp=Z,3.2nm,0.9s						
CMAR	**Chiang Mai Arr**	**21.40**	**263**	P	**P**	**16 48 56.0**	**+1.3**
	comp=Z,1.8nm,1.0s,baz=65,slow=7.9,SNR=11						
CMAR				LR	LR	16 58 20.4	
	comp=Z,236nm,18.0s,baz=130,slow=40						
CMAR	**Chiang Mai Arr**	**21.40**	**263**	P	**P**	**16 48 55.6**	**+1.0**
CM05	**Chiang Mai Arr**	**21.41**	**263**	P	**P**	**16 48 59.1**	**+4.4**
	comp=Z,2.1nm,1.0s						
CM32	**Chiang Mai Arr**	**21.44**	**263**	P	**P**	**16 49 00.0**	**+5.0**
CM13	**Chiang Mai Arr**	**21.44**	**263**	P	**P**	**16 49 00.0**	**+4.9**
TOLI2	**Tolitoli**	**21.45**	**182**	P	**P**	**16 48 57.4**	**+2.2**
TOLI2				IAmb	IAmb	16 49 01.3	
	comp=Z,11nm,0.9s						
SBUM	**Sibu**	**21.99**	**205**	P	**P**	**16 49 00.2**	**-0.7**
SBUM				IAmb	IAmb	16 49 22.4	
	comp=Z,6.4nm,0.9s						
USRK	**Ussuriysk Ar.**	**23.18**	**20**	LR	LR	16 59 28.8	
	comp=Z,61nm,18.0s,baz=49,slow=40						
LUWI	**Luwuk**	**23.63**	**176**	P	**P**	**16 49 17.9**	**-0.1**
GUMO	**Guam**	**24.07**	**108**	LR	LR	16 56 48.7	
	comp=Z,65nm,21.8s,baz=238,slow=32						
GTA	**Gaotai**	**24.77**	**317**	eP	**P**	**16 49 29.0**	**+0.4**
GTA				pP	pP	16 49 34.8	+0.3
GTA				sP	sP	16 49 37.9	+0.8
GTA				pmax	pmax		
	comp=Z,2.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,50nm,4.2s						
GTA				LR	LR		
	comp=Z,150nm,16.0s						
GTA				LR	LR		
	comp=Z,250nm,17.8s						
GTA				LR	LR		
	comp=Z,310nm,16.0s						
KAPI	**Kappang**	**27.58**	**183**	P	**P**	**16 49 54.1**	**+0.2**
	comp=Z,6.6nm,0.6s,baz=342,slow=7.5,SNR=9.1						
KAPI				LR	LR	17 01 04.2	
	comp=Z,52nm,21.0s,baz=28,slow=37						
KAPI	**Kappang**	**27.58**	**183**	P	**P**	**16 49 52.5**	**-1.4**
ULN	**Ulaanbaatar**	**27.61**	**339**	P	**P**	**16 49 53.5**	**-0.6**
ULN				IAmb	IAmb	16 49 58.6	
	comp=Z,2.5nm,0.7s						
KLR	**Kul'dur**	**27.74**	**15**	LR	LR	17 02 08.8	
	comp=Z,86nm,19.4s,baz=186,slow=39						
SONM	**Songino Array**	**27.81**	**338**	P	**P**	**16 49 55.4**	**-0.5**
	comp=Z,1.0nm,0.6s,baz=150,slow=10,SNR=5.1						
SONM				LR	LR	17 02 32.8	
	comp=Z,221nm,18.2s,baz=127,slow=40						
SONM	**Songino Array**	**27.81**	**338**	P	**P**	**16 49 54.4**	**-1.5**
PSI	**Prapat**	**29.40**	**231**	LR	LR	17 01 26.0	
	comp=Z,57nm,18.4s,baz=58,slow=35						
JAY	**Jayapura**	**31.37**	**141**	LR	LR	17 00 26.3	
	comp=Z,74nm,20.8s,baz=42,slow=31						
WMQ	**Urumqi**	**34.82**	**315**	eP	**P**	**16 50 57.9**	**+0.4**
MK31	**Makanchi Array**	**39.53**	**317**	P	**P**	**16 51 36.4**	**-1.1**
MKAR	**Makanchi Array**	**39.53**	**317**	P	**P**	**16 51 38.1**	**+0.6**
	comp=Z,1.2nm,0.7s,baz=109,slow=9.5,SNR=12						
MKAR	**Makanchi Array**	**39.53**	**317**	P	**P**	**16 51 37.1**	**-0.4**
MAKZ	**Makanchi**	**39.73**	**317**	P	**P**	**16 51 38.9**	**-0.2**
MAKZ				IAmb	IAmb	16 51 47.4	
	comp=Z,2.1nm,0.8s						
PETK	**Petropavlovsk-**	**41.02**	**33**	LR	LR	17 09 28.3	
	comp=Z,50nm,18.6s,baz=293,slow=37						
ZALV	**Zalesovo Beam**	**41.59**	**328**	P	**P**	**16 51 53.5**	**-0.8**
	comp=Z,1.5nm,0.6s,baz=113,slow=7.6,SNR=7.6						
ZALV	**Zalesovo Beam**	**41.59**	**328**	P	**P**	**16 51 53.0**	**-1.3**
H11N1	**WAKE ISLAND Hy**	**42.43**	**85**	T	T	17 37 14.2	
	baz=282,slow=75,SNR=44						
H11N2	**WAKE ISLAND Hy**	**42.43**	**85**	T	T	17 37 17.0	
	baz=282,slow=75,SNR=75						
H11N3	**WAKE ISLAND Hy**	**42.45**	**85**	T	T	17 37 18.2	
	baz=282,slow=75,SNR=67						
H11S3	**WAKE ISLAND Hy**	**42.52**	**87**	T	T	17 37 24.3	
	baz=284,slow=75,SNR=92						
H11S1	**WAKE ISLAND Hy**	**42.52**	**87**	T	T	17 37 21.8	
	baz=284,slow=75,SNR=53						
H11S2	**WAKE ISLAND Hy**	**42.53**	**87**	T	T	17 37 23.5	
	baz=284,slow=75,SNR=56						
KURK	**Kurchatov**	**43.34**	**321**	P	**P**	**16 52 07.3**	**-1.4**
KURK	**Kurchatov**	**43.34**	**321**	IAmb	IAmb	16 52 24.1	
	comp=Z,5.2nm,1.4s						
KURBB	**Kurchatov Arra**	**43.36**	**321**	P	**P**	**16 52 07.3**	**-1.5**
	comp=Z,1.2nm,0.9s,baz=117,slow=7.0,SNR=3.8						
PSA00	**Pilbara Seismi**	**44.02**	**182**	P	**P**	**16 52 11.8**	**-2.5**
WB0	**Warramunga Arr**	**44.07**	**162**	P	**P**	**16 52 12.7**	**-2.1**
WRAB	**Tennant Creek**	**44.22**	**162**	P	**P**	**16 52 13.9**	**-2.1**
WRAB				IAmb	IAmb	16 52 22.6	
	comp=Z,7.5nm,1.4s						
WRA	**Warramunga Arr**	**44.23**	**162**	P	**P**	**16 52 13.6**	**-2.5**
	comp=Z,1.8nm,0.7s,baz=344,slow=8.8,SNR=12						
WRA	**Warramunga Arr**	**44.23**	**162**	P	**P**	**16 52 13.8**	**-2.3**
WB2	**Warramunga Arr**	**44.23**	**162**	P	**P**	**16 52 13.3**	**-2.7**
WB2				IAmb	IAmb	16 52 17.5	
	comp=Z,6.9nm,1.1s						
WR0	**Warramunga Arr**	**44.30**	**162**	P	**P**	**16 52 14.2**	**-2.4**
WR0				IAmb	IAmb	16 52 26.2	
	comp=Z,6.8nm,1.2s						
KKAR	**Karatay Array**	**46.51**	**308**	P	**P**	**16 52 34.1**	**0.0**
AS31	**Alice Springs**	**47.66**	**164**	P	**P**	**16 52 42.1**	**-1.0**
ASAR	**Alice Springs**	**47.66**	**164**	P	**P**	**16 52 41.8**	**-1.4**
BRVK	**Borovoye**	**49.01**	**322**	P	**P**	**16 52 53.4**	**+0.2**
BRVK				IAmb	IAmb	16 53 02.3	
	comp=Z,2.5nm,0.7s						
ARU	**Arti**	**56.40**	**324**	P	**P**	**16 53 47.6**	**-0.2**
	comp=Z,0.7nm,0.4s,baz=63,slow=11,SNR=2.7						
ARU	**Arti**	**56.40**	**324**	IAmb	IAmb	16 54 05.1	
	comp=Z,6.1nm,1.2s						
BBOO	**Buckleboo**	**56.94**	**165**	P	**P**	**16 53 51.7**	**-0.2**
STKA	**Stephens Creek**	**57.61**	**160**	P	**P**	**16 53 55.9**	**-0.7**
	comp=Z,2.0nm,0.9s,baz=353,slow=8.1,SNR=3.6						
STKA	**Stephens Creek**	**57.61**	**160**	P	**P**	**16 53 55.9**	**-0.7**
STKA				IAmb	IAmb	16 54 00.7	
	comp=Z,3.3nm,1.5s						
SANVU	**Saraoutou**	**58.74**	**126**	P	**P**	**16 54 04.5**	**-0.3**
TOO	**Toolangi**	**64.10**	**159**	P	**P**	**16 54 41.5**	**+0.8**
KBZ	**Khabaz**	**66.54**	**309**	P	**P**	**16 54 58.1**	**+1.6**
	comp=Z,0.7nm,0.7s,baz=45,slow=4.3,SNR=2.2						
BRLK	**Bradley Lake**	**69.57**	**33**	P	**P**	**16 55 14.6**	**-0.8**
FINES	**FINESS Array B**	**72.81**	**330**	P	**P**	**16 55 37.3**	**+2.4**
	comp=Z,1.9nm,0.8s,baz=69,slow=3.6,SNR=7.4						
NOA	**NORSAR Array B**	**79.62**	**332**	LR	LR	17 33 46.4	
	comp=Z,51nm,20.0s,baz=240,slow=37						
YKA	**Yellowknife Ar**	**84.28**	**23**	P	**P**	**16 56 38.0**	**-0.1**
	comp=Z,0.3nm,0.7s,baz=323,slow=4.4,SNR=4.4						

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*SOME **15** 16:57:07.2, 41°.57N×78°.95E, h15^{km}*
*KRNET **15** 16:57:07.0±0.1, 41°.49N×78°.75E, h0^{km}, mb3.1*
*NNC **15** 16:57:08.8±0.7, 41°.64N×78°.92E, h0^{km}, mb3.6, mpv3.4,*
Error ellipse: s-maj=4.7km s-min=2.8km az=157.0
ISC 15 16:57:08.9±1.6**, 41°.56N**±0°.07×**78°.90E**±0°.04**, h10^{km}, n63,**
σ1^{s}.**17**/103**, 29C-16D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRZ	**Przheval'sk**	**0.99**	**338**	⇓iP	**Pg**	**16 57 26.4**	**-1.6**
	baz=46						
PRZ				⇓iS	**Sg**	**16 57 40.9**	**0.0**
	baz=46						
KDJ	**Kajisay**	**1.40**	**294**	⇑iP	**Pn**	**16 57 32.7**	**-2.0**
	baz=99						
KDJ				⇑iS	**Sn**	**16 57 50.5**	**-2.9**
	baz=99						
ANVS	**Anan'yevo**	**1.52**	**323**	⇑eP	**Pn**	**16 57 36.5**	**+0.1**
	baz=29						
ANVS				⇑iS	**Sb**	**16 57 57.3**	**+0.5**
	baz=29						
SATY	**Saty**	**1.54**	**346**	eP	**Pn**	**16 57 36.2**	**-0.3**
	21nm,0.3s						
SATY				eS	**Sb**	**16 57 57.2**	**+0.1**
	24nm,0.1s						
SATY	**Saty**	**1.54**	**346**	P	**Pn**	**16 57 36.2**	**-0.3**
	21nm,0.3s						
SATY				S	**Sb**	**16 57 57.2**	**+0.1**
	24nm,0.1s						
UZB	**Uzynbulak**	**1.58**	**3**	eP	**Pn**	**16 57 36.2**	**-1.0**
	18nm,0.3s						
UZB				eS	**Sn**	**16 57 57.2**	**-0.6**
	42nm,0.2s						
UZB	**Uzynbulak**	**1.58**	**3**	P	**Pn**	**16 57 36.2**	**-1.0**
	18nm,0.3s						
UZB				S	**Sn**	**16 57 57.2**	**-0.6**
	42nm,0.2s						
ZHN	**Zhinishke**	**1.64**	**348**	eP	**Pn**	**16 57 38.1**	**+0.2**
	8.9nm,0.3s						
ZHN				eS	**Sb**	**16 58 00.2**	**+0.2**
	17nm,0.2s						
ZHN	**Zhinishke**	**1.64**	**348**	P	**Pn**	**16 57 38.1**	**+0.2**
	8.9nm,0.3s						
ZHN				S	**Sb**	**16 58 00.2**	**+0.2**
	21nm,0.2s						
SHLS	**Shalkode**	**1.65**	**15**	⇓eP	**Pb**	**16 57 39.3**	**-0.1**
	15nm,0.2s						
SHLS				eS	**Sg**	**16 58 02.3**	**+0.5**
	110nm,0.5s						
SHLS	**Shalkode**	**1.65**	**15**	P	**Pb**	**16 57 39.3**	**-0.1**
	15nm,0.2s						
SHLS				S	**Sg**	**16 58 02.3**	**+0.5**
	110nm,0.5s						
PDGK	**Podgornoye**	**1.82**	**14**	P	**Pn**	**16 57 40.3**	**-0.1**
	4.2nm,0.2s						
PDGK				S	**Sn**	**16 58 04.0**	**+0.5**
	31nm,0.3s						
PDGK	**Podgornoye**	**1.82**	**14**	⇑P	**Pn**	**16 57 40.2**	**-0.1**
	3.6nm,0.3s						
PDGK				⇓S	**Sn**	**16 58 03.3**	**-0.2**
	51nm,0.7s						
KPKS	**Kokpek**	**1.91**	**355**	eP	**Pn**	**16 57 42.4**	**+0.9**
	74nm,0.3s						
KPKS				eS	**Sb**	**16 58 07.6**	**-0.2**
	117nm,0.3s						
KURS	**Kuram**	**2.00**	**345**	⇓eP	**Pb**	**16 57 44.3**	**-1.0**
	24nm,0.3s						
KURS				eS	**Sb**	**16 58 11.1**	**+0.8**
	15nm,0.5s						
KURS	**Kuram**	**2.00**	**345**	Pg	**Pb**	**16 57 44.3**	**-1.0**
	24nm,0.3s						
KURS				Lg	Lg	16 58 11.1	
	15nm,0.5s						
TNSS	**Tian-Shan**	**2.06**	**316**	⇓eP	**Pb**	**16 57 45.6**	**-1.1**
	25nm,0.2s						
TNSS				eS	**Sb**	**16 58 13.3**	**+0.7**
	72nm,0.4s						
TNSS	**Tian-Shan**	**2.06**	**316**	Pg	**Pb**	**16 57 45.6**	**-1.1**
	25nm,0.2s						
TNSS				Lg	Lg	16 58 13.3	
	72nm,0.4s						
ULHL	**Ulahol**	**2.10**	**290**	⇑iP	**Pn**	**16 57 44.5**	**+0.2**
	baz=93						
ULHL				⇑iS	**Sn**	**16 58 11.9**	**+1.4**
	baz=93						
MDOK	**Medeo**	**2.10**	**320**	⇑eP	**Pb**	**16 57 46.0**	**-1.2**
	12nm,0.6s						
MDOK				eS	**Sb**	**16 58 14.1**	**+0.6**
	59nm,0.4s						
MDOK	**Medeo**	**2.10**	**320**	⇑Pn	**Pn**	**16 57 45.9**	**+1.5**
	8.4nm,0.5s						
MDOK				⇑Lg	Lg	16 58 14.2	
	90nm,0.9s						
MDOK	**Medeo**	**2.10**	**320**	Pg	**Pb**	**16 57 46.0**	**-1.2**
	12nm,0.6s						
MDOK				Lg	Lg	16 58 14.1	
	59nm,0.4s						
KOTS	**Kotyrbulak**	**2.13**	**322**	⇓eP	**Pb**	**16 57 46.6**	**-1.0**
	24nm,0.2s						
KOTS				eS	**Sb**	**16 58 15.1**	**+0.9**
	79nm,0.6s						
KOTS	**Kotyrbulak**	**2.13**	**322**	Pg	**Pb**	**16 57 46.7**	**-1.0**
	24nm,0.2s						
KOTS				Lg	Lg	16 58 15.1	
	79nm,0.6s						
KTMS	**Ketmen**	**2.17**	**29**	eP	**Pn**	**16 57 46.3**	**+1.2**
	1.6nm,0.3s						
KTMS				eS	**Sb**	**16 58 14.5**	**-0.7**
	41nm,0.3s						
KTMS	**Ketmen**	**2.17**	**29**	Pg	**Pn**	**16 57 46.3**	**+1.2**
	1.6nm,0.3s						
KTMS				Lg	Lg	16 58 14.5	
	41nm,0.3s						
KNDC	**Almaty**	**2.19**	**320**	⇓Pn	**Pn**	**16 57 46.8**	**+1.5**
	21nm,0.6s						
KNDC				⇓Lg	Lg	16 58 16.8	
	176nm,0.8s						
IZV	**Izvestkoviy**	**2.24**	**312**	eP	**Pb**	**16 57 49.5**	**-0.1**
	13nm,0.2s						
IZV				eS	**Sb**	**16 58 19.5**	**+2.0**
	138nm,0.4s						
IZV	**Izvestkoviy**	**2.24**	**312**	Pg	**Pb**	**16 57 48.7**	**-0.9**
	14nm,0.4s						
IZV				Lg	Lg	16 58 19.0	
	138nm,0.4s						
KST	**Kastek**	**2.63**	**305**	eP	**Pb**	**16 57 55.7**	**-0.5**
	5.1nm,0.3s						
KST				eS	**Sb**	**16 58 30.7**	**+2.1**
	106nm,0.5s						
KST	**Kastek**	**2.63**	**305**	Pg	**Pb**	**16 57 55.7**	**-0.5**
	5.1nm,0.3s						
KST				Lg	Lg	16 58 30.7	
	106nm,0.5s						
CHKK	**Chushkaly**	**2.69**	**329**	eP	**Pb**	**16 57 56.8**	**-0.3**
	6.8nm,0.2s						
CHKK				eS	**Sb**	**16 58 32.3**	**+2.2**
	171nm,0.5s						
CHKK	**Chushkaly**	**2.69**	**329**	Pg	**Pb**	**16 57 56.8**	**-0.3**
	6.8nm,0.2s						
CHKK				Lg	Lg	16 58 32.3	
	171nm,0.5s						
KTBS	**Karatobe**	**2.70**	**323**	eP	**Pb**	**16 57 56.6**	**-0.7**
	1.6nm,0.3s						
KTBS				eS	**Sb**	**16 58 32.1**	**+1.6**
	72nm,0.3s						
KTBS	**Karatobe**	**2.70**	**323**	Pg	**Pb**	**16 57 56.6**	**-0.7**
	1.6nm,0.3s						
KTBS				Lg	Lg	16 58 32.1	
	72nm,0.3s						
ARXS	**Arharly**	**2.76**	**344**	eP	**Pb**	**16 57 57.8**	**-0.6**
	34nm,0.6s						
ARXS				eS	**Sb**	**16 58 34.0**	**+1.7**
	35nm,0.3s						
ARXS	**Arharly**	**2.76**	**344**	Pg	**Pb**	**16 57 57.8**	**-0.6**
	34nm,0.6s						
ARXS				Lg	Lg	16 58 34.0	
	35nm,0.3s						
TKM2	**Tokmak 2**	**2.80**	**300**	⇑iP	**Pn**	**16 57 54.8**	**+0.9**
	baz=3.0						
TKM2				⇑iS	**Sn**	**16 58 29.7**	**+1.8**
	baz=3.0						
TKM2	**Tokmak 2**	**2.80**	**300**	⇓Pn	**Pn**	**16 57 56.4**	**+2.4**
	3.5nm,0.5s						
TKM2				⇑Lg	Lg	16 58 37.4	
	58nm,0.6s						
DGS	**Degeres**	**2.86**	**307**	eP	**Pb**	**16 57 59.6**	**-0.5**
	3.7nm,0.3s						
DGS				eS	**Sb**	**16 58 37.4**	**+2.2**
	33nm,0.7s						
DGS	**Degeres**	**2.86**	**307**	Pg	**Pb**	**16 57 59.6**	**-0.5**
	3.7nm,0.3s						
DGS				Lg	Lg	16 58 37.4	
	33nm,0.7s						
KUU	**Kurty**	**3.00**	**322**	eP	**Pb**	**16 58 01.6**	**-0.7**
	2.8nm,0.3s						
KUU				eS	**Sb**	**16 58 41.0**	**+2.0**
	21nm,0.5s						
KUU	**Kurty**	**3.00**	**322**	Pg	**Pb**	**16 58 01.7**	**-0.7**
	2.8nm,0.3s						
KUU				Lg	Lg	16 58 41.0	
	21nm,0.5s						
KBK	**Karagaybulak**	**3.13**	**292**	⇓iP	**Pn**	**16 57 59.2**	**+0.7**
	baz=94						
KBK				⇓iS	**Sn**	**16 58 36.6**	**+0.5**
	baz=94						
KRBS	**Karabastau**	**3.19**	**313**	eP	**Pb**	**16 58 05.2**	**-0.6**
	3.6nm,0.5s						
KRBS				eS	**Sb**	**16 58 46.9**	**+2.1**
	14nm,0.4s						
KRBS	**Karabastau**	**3.19**	**313**	Pg	**Pb**	**16 58 05.2**	**-0.6**
	3.6nm,0.5s						
KRBS				Lg	Lg	16 58 46.9	
	14nm,0.4s						
UCH	**Uchtor**	**3.34**	**283**	⇑iP	**Pn**	**16 58 01.0**	**-0.6**
	baz=85						
UCH				⇑iS	**Sn**	**16 58 40.5**	**-1.0**
	baz=85						
ARLS	**Aral**	**3.44**	**276**	⇓eP	**Pn**	**16 58 02.6**	**-0.1**
	baz=78						
ARLS				⇓iS	**Sn**	**16 58 43.1**	**-0.4**
	baz=78						
AAK	**Ala-Archa**	**3.45**	**290**	⇑iP	**Pn**	**16 58 03.2**	**+0.4**
	baz=91						
AAK				⇑iS	**Sn**	**16 58 43.8**	**0.0**
	baz=91						
AAK	**Ala-Archa**	**3.45**	**290**	⇑Pg	**Pb**	**16 58 10.7**	**+0.6**
	3.0nm,0.7s						

AAK				⇑Lg	Lg	16 58 57.5	
	34nm,0.8s						
TDK	**Taldyqorghan**	**3.46**	**354**	*e*P	**Pb**	**16 58 10.2**	**+0.1**
	7.7nm,0.2s						
TDK				*e*S	**Sb**	**16 58 55.5**	**+3.3**
	35nm,0.4s						
TDK	**Taldyqorghan**	**3.46**	**354**	Pg	**Pb**	**16 58 10.2**	**+0.1**
	7.7nm,0.2s						
TDK				Lg	Lg	16 58 55.5	
	35nm,0.4s						
USP	**Ospenovka**	**3.67**	**299**	⇑*i*P	**Pn**	**16 58 07.0**	**+1.2**
	baz=1.0						
USP				⇑*i*S	**Sn**	**16 58 51.0**	**+1.8**
	baz=1.0						
SGDS	**Sogindy**	**3.68**	**302**	Pg	**Pb**	**16 58 14.2**	**+0.3**
	2.5nm,0.3s						
SGDS				Lg	Lg	16 59 02.4	
	20nm,0.7s						
KAPS	**Kapalarasan**	**3.73**	**5**	*e*P	**Pb**	**16 58 14.3**	**-0.6**
	3.7nm,0.3s						
KAPS				*e*S	**Sb**	**16 59 02.2**	**+2.0**
	12nm,0.3s						
KAPS	**Kapalarasan**	**3.73**	**5**	Pg	**Pb**	**16 58 14.3**	**-0.6**
	3.7nm,0.3s						
KAPS				Lg	Lg	16 59 02.2	
	12nm,0.3s						
AML	**Almayashu**	**3.93**	**280**	⇑*i*P	**Pn**	**16 58 09.4**	**-0.2**
	baz=81						
AML				⇑*i*S	**Sn**	**16 58 54.7**	**-1.3**
	baz=81						
EKS2	**Erkin-Say**	**3.96**	**288**	⇑*e*P	**Pn**	**16 58 09.8**	**-0.1**
	baz=89						
EKS2				⇑*e*S	**Sn**	**16 58 56.0**	**-0.5**
	baz=89						
MRKS	**Merke**	**4.38**	**288**	*e*P	**Pb**	**16 58 28.1**	**+2.2**
	2.7nm,0.4s						
MRKS				*e*S	**Sg**	**16 59 26.0**	**-3.4**
	24nm,0.5s						
MRKS	**Merke**	**4.38**	**288**	Pg	**Pb**	**16 58 28.1**	**+2.2**
	2.7nm,0.4s						
MAKZ	**Makanchi**	**5.69**	**22**	⇑Pn	**Pn**	**16 58 34.0**	**+0.6**
	3.3nm,1.1s						
MAKZ				⇑Sn	**Sn**	**16 59 39.7**	**+0.9**
	0.6nm,0.4s						
MAKZ				⇑Lg	Lg	17 00 03.7	
	3.0nm,0.7s						
MK31	**Makanchi Array**	**5.77**	**24**	⇓Pn	**Pn**	**16 58 34.8**	**+0.3**
	0.1nm,0.2s,baz=197,slow=12,SNR=4.8						
MK31				⇑Sn	**Sn**	**16 59 40.5**	**-0.2**
	1.7nm,0.6s						
MK31				⇓Lg	Lg	17 00 07.1	
	2.6nm,0.5s						
KK31	**Karatay Array**	**6.40**	**287**	Pg	Pg	16 59 06.3	-5.1
	0.7nm,0.6s,baz=98,slow=16,SNR=14						
KK31				Lg	Lg	17 00 34.4	
	2.1nm,0.5s,baz=104,slow=27,SNR=15						

IDC 15 16:58:40.6±1.6**,6°.28N×123°.60E,h0^{km},mb3.5**/4**,**
mb1 3.6/4**,mb1mx3.3**/30**,mbtmp3.5**/4**,Error ellipse:**
s-maj=196.7km s-min=26.7km az=68.0,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**31.42**	**162**	P	P	17 05 03.8	0.0
	0.4nm,1.0s,baz=336,slow=7.5,SNR=4.8						
SONM	**Songino Array**	**43.94**	**343**	P	P	17 06 50.4	+0.9
	0.2nm,0.6s,baz=158,slow=8.7,SNR=3.6						
MKAR	**Makanchi Array**	**53.70**	**326**	P	P	17 08 05.1	+0.7
	0.9nm,0.5s,baz=119,slow=7.6,SNR=27						
ZALV	**Zalesovo Beam**	**56.93**	**334**	P	P	17 08 25.8	-1.7
	0.3nm,0.3s,baz=120,slow=8.5,SNR=2.3						

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*IDC **15** 17:20:46.0±3.4,8°.74S×110°.66E,h0^{km},mb3.4/4,*
mb1 3.6/4,mb1mx3.3/38,mbtmp3.4/4,Error ellipse:
s-maj=161.4km s-min=22.5km az=51.0
*DJA **15** 17:20:57.3±0.5,9°S±14°×11°1E±°,h70^{km}±46^{km},M4.2/9,*
mb4.9/1,MLv3.9/9
ISC 15 17:20:58.7±1.2**,8°.7S**±0°.2×**111°.18E**±0°.08**,h100^{km},n10,**
σ**1^{s}28**/10**,mb3.2**/4**,Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UGM	**Wanagama**	**0.97**	**318**	P	**Pn**	**17 21 18.4**	**-0.5**
SMRI	**Semarang**	**1.75**	**335**	P	**Pn**	**17 21 28.8**	**+0.8**
JAGI	**Jajag, Banyuwa**	**2.95**	**87**	P	**Pn**	**17 21 42.7**	**-1.0**
ABJI	**Asem Bagus**	**3.14**	**75**	P	**Pn**	**17 21 46.6**	**+0.3**
CISI	**Cisompet, Garu**	**3.50**	**288**	P	**Pn**	**17 21 50.6**	**-0.6**
SRBI	**Singaraja**	**4.03**	**82**	P	**Pn**	**17 21 57.3**	**-1.0**
WRA	**Warramunga Arr**	**25.06**	**119**	P	**P**	**17 26 15.5**	**+1.5**
	0.6nm,1.1s,baz=276,slow=10,SNR=3.7						
ASAR	**Alice Springs**	**26.39**	**127**	P	**P**	**17 26 28.1**	**+2.2**
	0.2nm,0.5s,baz=303,slow=9.6,SNR=5.7						
SONM	**Songino Array**	**56.39**	**356**	P	**P**	**17 30 29.4**	**-0.3**
	0.2nm,0.4s,baz=172,slow=9.0,SNR=3.7						
MKAR	**Makanchi Array**	**60.90**	**338**	P	**P**	**17 30 59.9**	**-1.0**
	0.6nm,0.5s,baz=152,slow=7.2,SNR=24						

IDC 15 17:35:21.6±3.4**,10°.63S×160°.78E,h0^{km},mb3.6**/4**,**
mb1 3.9/4**,mb1mx3.5**/40**,mbtmp3.6**/4**,Error ellipse:**
s-maj=69.8km s-min=25.6km az=87.0,
Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.44**	**325**	Pn	Pn	17 35 48.9	-0.1
	12nm,0.3s,baz=191,slow=3.2,SNR=12						
HNR				LR	LR	17 35 56.8	
	comp=Z,78nm,19.6s,baz=346,slow=24						
HNR				Sn	Sn	17 36 09.2	+0.5
	105nm,0.3s,baz=179,slow=6.6,SNR=14						
WRA	**Warramunga Arr**	**27.10**	**247**	P	P	17 41 06.7	+0.3
	1.7nm,1.0s,baz=74,slow=10,SNR=16						
ASAR	**Alice Springs**	**28.70**	**240**	P	P	17 41 20.0	-0.8
	0.3nm,0.8s,baz=75,slow=11,SNR=4.8						
CMAR	**Chiang Mai Arr**	**67.50**	**295**	P	P	17 46 20.9	+0.8
	0.5nm,0.8s,baz=114,slow=4.6,SNR=5.6						
SONM	**Songino Array**	**75.50**	**326**	P	P	17 47 07.5	-0.5
	0.5nm,0.9s,baz=140,slow=5.9,SNR=2.6						

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*IDC **15** 17:35:57.2±0.9,18°.16S×176°.74E,h0^{km},mb4.2/6,*
mb1 4.4/6,mb1mx4.0/35,mbtmp4.2/6,MS3.7/15,
Ms1 3.7/15,ms1mx3.5/31,Error ellipse: s-maj=21.1km
s-min=16.6km az=152.0
*NEIC **15** 17:35:58.1±1.5,18°.1S±0°.1×176°.74E±0°.10,h23^{km}±5^{km},*
mb4.5/7,Error ellipse: s-maj=20.7km s-min=12.4km
az=161.0
ISC 15 17:36:01.5±0.8**,18°.2S**±0°.2×**176°.7E**±0°.1**,h35^{km},n31,**
σ**1^{s}74**/18**,mb4.3**/9**,MS3.7**/14**,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**1.33**	**70**	Pn	**Pn**	**17 36 21.5**	**-2.2**
	104nm,0.3s,baz=250,slow=14,SNR=242						
MSVF				Sn	**Sn**	**17 36 40.6**	**+0.4**
	290nm,0.3s,baz=240,slow=20,SNR=11						
DZM	**Mont Dzumac**	**10.41**	**247**	LR	LR	17 41 42.7	
	comp=Z,596nm,21.5s,baz=74,slow=33						
DZM	**Mont Dzumac**	**10.41**	**247**	*e*LQ	LQ	17 40 31.2	
	384nm,25.6s						
DZM				*e*LR	LR	17 40 58.7	
	comp=Z,885nm,25.9s						
RAO	**Raoul Island**	**12.03**	**157**	LR	LR	17 42 33.9	
	comp=Z,642nm,19.1s,baz=105,slow=33						
URZ	**Urewera**	**19.98**	**179**	P	**P**	**17 40 32.6**	**+1.7**
	24nm,0.9s,baz=348,slow=4.5,SNR=7.6						
URZ				LR	LR	17 46 26.9	
	comp=Z,232nm,18.0s,baz=31,slow=31						
URZ	**Urewera**	**19.98**	**179**		**P**	**17 40 30.9**	**+0.1**
LTZ	**Lake Taylor**	**24.79**	**188**	P	**P**	**17 41 21.3**	**+1.1**
LTZ				IAmb	IAmb	17 41 36.3	
	comp=Z,18nm,1.1s						
ARMA	**Armidale**	**25.85**	**237**	P	**P**	**17 41 27.7**	**-2.3**
ARMA				IAmb	IAmb	17 41 44.3	
	comp=Z,11nm,1.1s						
RPZ	**Rata Peaks**	**25.88**	**189**	P	**P**	**17 41 32.2**	**+2.2**
	comp=Z,12nm,0.9s,baz=40,slow=9.9,SNR=5.1						
TBI	**Tubuai**	**31.96**	**105**	*e*LQ	LQ	17 49 27.0	
	comp=Z,401nm,28.0s						
TBI				*e*LR	LR	17 50 47.9	
	comp=Z,255nm,28.8s						
PPT2	**Papeete2**	**32.03**	**94**	*e*LQ	LQ	17 49 33.7	
	comp=Z,258nm,25.2s						
PPT2				*e*LR	LR	17 50 53.9	
	comp=Z,361nm,25.8s						
PPT	**Papeete**	**32.04**	**94**	LR	LR	17 53 03.3	
	comp=Z,43nm,20.0s,baz=287,slow=32						
STKA	**Stephens Creek**	**34.47**	**240**	LR	LR	17 56 01.4	
	comp=Z,118nm,18.6s,baz=36,slow=35						
WB0	**Warramunga Arr**	**40.00**	**261**	P	**P**	**17 43 30.5**	**-2.7**
WB0				IAmb	IAmb	17 43 42.4	
	comp=Z,16nm,1.4s						
WRAB	**Tennant Creek**	**40.03**	**260**	P	**P**	**17 43 31.5**	**-2.0**
WRAB				IAmb	IAmb	17 43 51.2	
	comp=Z,9.9nm,1.2s						
WRA	**Warramunga Arr**	**40.04**	**260**	P	**P**	**17 43 32.5**	**-1.0**
	comp=Z,2.2nm,0.9s,baz=91,slow=8.9,SNR=6.5						
WRA				LR	LR	17 58 40.5	
	comp=Z,89nm,18.4s,baz=95,slow=34						
WRA	**Warramunga Arr**	**40.04**	**260**	P	**P**	**17 43 32.3**	**-1.3**
AS31	**Alice Springs**	**40.27**	**255**	P	**P**	**17 43 34.9**	**-0.6**
ASAR	**Alice Springs**	**40.27**	**255**	P	**P**	**17 43 35.0**	**-0.5**
	comp=Z,4.3nm,0.9s,baz=82,slow=8.9,SNR=25						
ASAR				LR	LR	18 00 05.6	
	comp=Z,173nm,18.2s,baz=115,slow=36						
ASAR	**Alice Springs**	**40.27**	**255**	P	**P**	**17 43 33.8**	**-1.6**
VNDA	**Vanda**	**59.81**	**184**	LR	LR	18 09 10.9	
	comp=Z,40nm,18.3s,baz=356,slow=33						
MJAR	**Matsushiro Arr**	**65.50**	**327**	LR	LR	18 16 13.8	
	comp=Z,18nm,18.3s,baz=235,slow=37						
KSRS	**Korea Array**	**71.94**	**321**	LR	LR	18 18 00.3	
	comp=Z,16nm,18.6s,baz=104,slow=35						
PETK	**Petropavlovsk-**	**72.90**	**348**	LR	LR	18 13 38.7	
	comp=Z,90nm,21.3s,baz=139,slow=31						
NVAR	**Mina Array Bea**	**82.89**	**46**	LR	LR	18 19 32.9	
	comp=Z,57nm,19.8s,baz=52,slow=32						
CMAR	**Chiang Mai Arr**	**84.67**	**291**	P	**P**	**17 48 33.9**	**+1.7**
	comp=Z,0.8nm,1.0s,baz=108,slow=3.6,SNR=5.5						
ILAR	**Eielson Array**	**87.28**	**15**	P	**P**	**17 48 46.2**	**+2.2**
	comp=Z,0.8nm,0.9s,baz=224,slow=3.8,SNR=3.5						
ILAR				LR	LR	18 20 51.3	
	comp=Z,49nm,19.6s,baz=235,slow=31						
TXAR	**Lajitas Array**	**90.08**	**59**	LR	LR	18 21 00.6	
	comp=Z,47nm,21.7s,baz=0.0,slow=30						
SONM	**Songino Array**	**90.81**	**321**	LR	LR	18 25 14.8	
	comp=Z,27nm,20.6s,baz=32,slow=33						
CLL	**Collm**	**144.54**	**342**	*e*PKiKP	**PKiKP**	**17 55 37.0**	**-0.8**
CLL				*e*(pPKPdf)		17 55 42.0	
GERES	**GERESS Array B**	**146.49**	**340**	PKPbc	**PKPab**	**17 55 40.9**	**+0.8**
	comp=Z,1.3nm,0.9s,baz=48,slow=4.2,SNR=5.0						

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*IDC **15** 17:39:06.1±3.3,6°.75N×126°.72E,h58^{km}±30^{km},mb3.2/3,*
mb1 3.6/5,mb1mx3.2/44,mbtmp3.8/5,ML4.0/2,Error
ellipse: s-maj=49.5km s-min=16.2km az=50.0
*DJA **15** 17:39:07.2±4.3,7°N±37°×12°6E±1°1,h127^{km}±21^{km},*
M4.3/7,mB4.5/1,mb4.2/6,MLv4.4/7,Mw(mB)3.6/1
*MAN **15** 17:39:08.5,6°.67N×126°.15E,h16^{km},mb4.6,ML3.5,MS3.3*
ISC 15 17:39:04.1±1.6**,6°.60N**±0°.05×**126°.58E**±0°.07**,h29**^{km}±14^{km}**,**
n20,σ**2^{s}50**/28**,mb3.5**/3**,2D,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATI	**Mati**	**0.47**	**317**	*e*P	**Pn**	**17 39 16.0**	**+1.1**
MATI				*e*S	**Sn**	**17 39 24.3**	**+2.0**
DDMP	**Don Marcelino,**	**1.00**	**240**	*e*P	**Pn**	**17 39 21.8**	**-0.3**
DDMP				*e*S	**Sn**	**17 39 35.5**	**+0.2**
DAV	**Davao City (W)**	**1.10**	**295**	P	**Pb**	**17 39 24.8**	**+0.2**
	118nm,0.3s,baz=109,slow=4.3,SNR=17						
DAV				S	**Sn**	**17 39 41.7**	**+3.9**
	118nm,0.3s,baz=77,slow=23,SNR=17						
KCP	**Kidapawan**	**1.54**	**285**	⇓*i*P	**Pb**	**17 39 30.8**	**-1.2**
KCP				*i* S	**Sn**	**17 39 43.7**	**-5.0**
SKMP	**Bagumbayan, Su**	**2.03**	**268**	*e*P	**Pn**	**17 39 35.6**	**-0.8**
SKMP				*e*S	**Sn**	**17 39 56.1**	**-4.6**
BUTP	**Butuan**	**2.54**	**338**	*e*P	**Pb**	**17 39 47.2**	**-1.8**
BUTP				*e*S	**Sb**	**17 40 24.5**	**+4.6**
CGP	**Cagayan de Oro**	**2.63**	**315**	⇓*e*P	**Pn**	**17 39 46.5**	**+1.9**
CGP				*e*S	**Sn**	**17 40 18.0**	**+2.5**
GLSP	**General Luna,**	**3.19**	**352**	*e*P	**Pb**	**17 39 57.4**	**-2.8**
GLSP				*e*S	**Sb**	**17 40 35.7**	**-3.0**
PAGZ	**Pagadian**	**3.41**	**292**	*e*P	**Pn**	**17 39 56.7**	**+1.3**
PAGZ				*e*S	Sn	17 40 26.3	-8.5
GTOI	**Gorontalo**	**6.92**	**211**	P	**Pn**	**17 40 43.7**	**+0.2**
	0.2nm492nm45nm,0.7s						
MRSI	**Marisa**	**7.65**	**217**	P	**Pn**	**17 40 55.3**	**+1.7**
	0.1nm29nm,0.5s						
SANI	**Sanana**	**8.61**	**184**	P	**Pn**	**17 41 06.5**	**-0.4**
	16nm,0.9s						
SIJI	**Sorong**	**8.77**	**148**	P	**Pn**	**17 41 12.3**	**+3.2**
	1.2nm,0.3s,baz=244,slow=22,SNR=9.9						
SIJI				S	**Sn**	**17 42 47.0**	**0.0**
	0.3nm,0.3s,baz=143,slow=20,SNR=3.2						
APSI	**Ampana**	**8.94**	**214**	P	Pn	17 41 16.6	+5.2
NLAI	**Namlea**	**9.79**	**177**	P	**Pn**	**17 41 24.7**	**+1.7**
	37nm,1.5s						
MSAI	**Masohi**	**10.15**	**167**	P	**Pn**	**17 41 29.4**	**+1.4**
KAPI	**Kappang**	**13.40**	**211**	P	**Pn**	**17 42 15.0**	**+2.5**
	0.8nm,0.3s,baz=25,slow=12,SNR=6.8						
WRA	**Warramunga Arr**	**27.46**	**164**	P	**P**	**17 44 48.7**	**+0.9**
	0.3nm,0.6s,baz=345,slow=10,SNR=4.7						
ASAR	**Alice Springs**	**30.92**	**167**	P	**P**	**17 45 18.1**	**-0.5**
	0.3nm,0.3s,baz=341,slow=7.4,SNR=11						
MKAR	**Makanchi Array**	**55.14**	**324**	P	**P**	**17 48 32.4**	**-1.6**
	0.4nm,0.5s,baz=131,slow=6.5,SNR=5.6						

IDC 15 17:58:35.5±7.8**,11°.99S×166°.70E,h208**^{km}±80^{km}**,mb3.4**/4**,**
mb1 3.7/5**,mb1mx3.2**/37**,mbtmp4.0**/5**,Error ellipse:**
s-maj=69.9km s-min=25.6km az=154.0,Santa Cruz
Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**10.03**	**181**	P	Pn	18 00 54.9	-0.2
	0.3nm,0.3s,baz=162,slow=20,SNR=11						
STKA	**Stephens Creek**	**30.42**	**225**	P	P	18 04 28.6	+0.1
	0.4nm,0.3s,baz=31,slow=12,SNR=3.2						
WRA	**Warramunga Arr**	**32.05**	**252**	P	P	18 04 43.2	+0.3
	0.9nm,0.4s,baz=82,slow=8.9,SNR=20						
ASAR	**Alice Springs**	**33.22**	**245**	P	P	18 04 52.7	-0.4
	1.3nm,0.6s,baz=68,slow=10,SNR=13						
ILAR	**Eielson Array**	**84.11**	**18**	P	P	18 10 42.8	+0.2
	1.2nm,0.6s,baz=230,slow=5.6,SNR=16						
ARCES	**ARCESS Array B**	**117.48**	**346**	PKP	PKPdf	18 16 55.3	-0.5
	4.7nm,0.9s,baz=74,slow=1.8,SNR=9.2						

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*GCG **15** 18:25:36.4±0.3,16°.75N×90°.55W,h74^{km}±224^{km},MD3.6*
*MEX **15** 18:25:38.5±0.3,16°.57N×90°.36W,h16^{km}±151^{km},MD4.0*
ISC 15 18:25:38.8±3.3**,16°.7N**±0°.2×**90°.5W**±0°.1**,h35^{km},n5,**σ**0^{s}97**/8**,**
Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CCIG	**Comitan**	**1.62**	**255**	*i* P	**Pn**	**18 26 04.8**	**-0.2**
CCIG				*i* S	**Sn**	**18 26 24.9**	**+0.1**
MRL	**Marmol**	**1.81**	**154**	*e*P	**Pn**	**18 26 07.2**	**-0.6**
MRL				*e*S	**Sn**	**18 26 31.2**	**+1.6**
NBG	**Las Nubes**	**2.12**	**176**	*e*P	**Pn**	**18 26 11.4**	**-0.7**
FUG	**Fuego 3**	**2.28**	**188**	*e*P	**Pn**	**18 26 13.1**	**-1.1**
FUG				*e*S	**Sn**	**18 26 41.6**	**+0.5**
PCIG		**2.79**	**249**	*e*P	**Pn**	**18 26 21.0**	**0.0**

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*IDC **15** 18:27:07.7±0.9,37°.31N×97°.98W,h0^{km},mb3.9/2,*
mb1 4.1/6,mb1mx3.6/50,mbtmp3.8/6,ML4.3/3,MS3.0/2,
Ms1 2.9/2,ms1mx2.5/44,Error ellipse: s-maj=12.7km
s-min=10.6km az=109.0
*ANF **15** 18:27:08.6±0.3,37°.17N×97°.88W,h5^{km},ML4.8/18,Error*
ellipse: s-maj=3.3km s-min=2.6km az=36.0
*NEIC **15** 18:27:08.4±0.6,37°.19N±0°.03×97°.90W±0°.02,h5^{km}±1^{km},*
mb_Lg3.8/144,Mwr3.6/20(SLM),Error ellipse:
s-maj=5.8km s-min=2.9km az=28.0
*NEIC **15** 18:27:08.4,37°.18N×97°.90W,h3^{km},Moment Tensor*
Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-0.08;
$M_{\theta\theta}$0.00; $M_{\phi\phi}$0.08; $M_{r\theta}$0.46; $M_{\theta\phi}$-2.61; $M_{\phi r}$0.22; Fault
plane solution: $M_0$2.66000×10^{14} NP1:ϕ_s180.00000°,
δ80.00000°,λ-5.00000°. NP2:ϕ_s271.00000°,δ85.00000°,
λ-170.00000°. Principal axes: T 2.6602, Plg4.0000°,
Azm45.0000°; N 0.0003, Plg79.0000°, Azm297.0000°; P
-2.6605, Plg11.0000°, Azm136.0000°;
ISC 15 18:27:08.2±0.7**,37°.20N**±0°.03×**97°.92W**±0°.02**,h13**^{km}±4^{km}**,**
n145,σ**2^{s}13**/129**,Kansas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAN08	**Anthony NE Sta**	**0.05**	**301**		**Pg**	**18 27 10.1**	**-0.6**
KAN08				Sg	**Sg**	**18 27 11.7**	**-0.7**
KAN12	**Harper NE Stat**	**0.11**	**327**		**Pg**	**18 27 11.2**	**-0.2**
KAN01	**Argonia South**	**0.14**	**111**		**Pg**	**18 27 11.0**	**-0.7**
KAN01				Sg	**Sg**	**18 27 13.0**	**-1.2**
KAN10	**Anthony SW Sta**	**0.16**	**240**		**Pg**	**18 27 11.8**	**-0.2**
KS21	**Milan North St**	**0.22**	**68**		**Pg**	**18 27 12.7**	**-0.4**
KAN14	**Manchester OK**	**0.25**	**188**		**Pg**	**18 27 13.2**	**-0.2**
KAN13	**South Haven SW**	**0.40**	**118**		**Pg**	**18 27 15.8**	**-0.4**
KAN13				Sg	**Sg**	**18 27 21.4**	**-0.2**
CROK	**Carrier**	**0.70**	**184**		**Pg**	**18 27 21.5**	**-0.3**
T35A	**Sooner Cattle**	**1.16**	**104**		**Pg**	**18 27 29.6**	**-1.0**
T35A				Sg	**Sg**	**18 27 45.2**	**-0.5**
T35B	**Sooner Cattle**	**1.16**	**104**	P		18 27 29.6	
	baz=284,SNR=394						
T35B				S		18 27 44.7	
	baz=284						
U32A	**Winter Ranch,**	**1.20**	**227**		**Pg**	**18 27 30.6**	**-0.6**
U32A	**Winter Ranch,**	**1.20**	**227**	P		18 27 30.6	
	baz=47						
U32A				S		18 27 47.8	
	baz=47						
R32A	**Long Quarter,**	**1.37**	**333**		**Pn**	**18 27 33.8**	**+0.7**
R32A	**Long Quarter,**	**1.37**	**333**	P		18 27 33.9	
	baz=153,SNR=728						
QUOK	**Quay**	**1.42**	**136**	Pn	**Pn**	**18 27 33.9**	**+0.2**
OK029	**Liberty Lake**	**1.45**	**165**		**Pn**	**18 27 34.7**	**+0.5**
OK031	**S. Brethren Rd**	**1.52**	**145**		**Pn**	**18 27 35.6**	**+0.5**
BCOK	**Bluff Creek, N**	**1.56**	**171**		**Pn**	**18 27 36.4**	**+0.7**
BCOK				IAmb_Lg		18 27 59.3	
	comp=Z,825nm,0.7s						
OK030	**Cody Creek RV**	**1.57**	**144**		**Pn**	**18 27 36.4**	**+0.6**
OK025	**Westminster Rd**	**1.69**	**164**		**Pn**	**18 27 38.5**	**+1.1**
OKCFA	**Oklahoma City**	**1.82**	**168**	Pn	**Pn**	**18 27 40.4**	**+1.1**
OKCSW	**OKLAHOMA CITY**	**1.84**	**168**		**Pn**	**18 27 40.8**	**+1.4**
FNO	**Franklin**	**1.99**	**168**		**Pn**	**18 27 42.8**	**+1.3**
TUL1	**Leonard**	**2.15**	**126**	P	**Pn**	**18 27 44.5**	**+0.8**
	baz=307,SNR=229						
TUL1				S	**Sb**	**18 28 13.3**	**-0.1**
	baz=307						
TUL1	**Leonard**	**2.15**	**126**	Pn	**Pn**	**18 27 44.7**	**+1.0**
TUL1				IAmb_Lg		18 28 19.6	
	comp=Z,638nm,1.1s						
TUL1	**Leonard**	**2.15**	**126**	P		18 27 44.6	
	baz=307,SNR=182						
CBKS	**Cedar Bluff**	**2.16**	**319**	P	**Pn**	**18 27 45.7**	**+1.8**
	baz=138,SNR=97						
CBKS				S	**Sn**	**18 28 14.1**	**+3.5**
	baz=138						
CBKS	**Cedar Bluff**	**2.16**	**319**	Pn	**Pn**	**18 27 45.8**	**+1.8**
CBKS				IAmb_Lg		18 28 23.0	
	comp=Z,296nm,0.8s						
CBKS	**Cedar Bluff**	**2.16**	**319**	P		18 27 45.8	
	baz=138,SNR=156						
CBKS				S		18 28 13.9	
	baz=138						
KSU1	**Kansas State U**	**2.16**	**28**	P	**Pn**	**18 27 45.4**	**+1.5**
	baz=208,SNR=75						
KSU1				S	**Sb**	**18 28 14.9**	**+1.0**
	baz=208						
KSU1	**Kansas State U**	**2.16**	**28**		**Pn**	**18 27 45.6**	**+1.7**
KSU1				IAmb_Lg		18 28 16.5	
	comp=Z,348nm,0.8s						
KSU1	**Kansas State U**	**2.16**	**28**	P		18 27 45.6	
	baz=208,SNR=40						
KSU1				S		18 28 14.8	
	baz=208						
WMOK	**Wichita Mounta**	**2.56**	**196**	P	**Pn**	**18 27 50.5**	**+1.1**
	baz=16,SNR=17						
WMOK	**Wichita Mounta**	**2.56**	**196**		**Pn**	**18 27 51.0**	**+1.6**
WMOK	**Wichita Mounta**	**2.56**	**196**	P		18 27 50.4	
	baz=16,SNR=47						
X34A	**Smith Ranch, M**	**2.60**	**178**	Pn	**Pn**	**18 27 51.3**	**+1.4**
X34A				IAmb_Lg		18 28 33.3	
	comp=Z,288nm,0.7s						
U38A	**Gravette**	**2.94**	**104**		**Pn**	**18 27 56.0**	**+1.4**
U38A				IAmb_Lg		18 28 47.9	
	comp=Z,455nm,0.9s						
U38A	**Gravette**	**2.94**	**104**	P		18 27 56.0	
	baz=286,SNR=63						
U38A				S		18 28 31.7	
	baz=286						
HHAR	**Hobbs**	**3.33**	**105**		**Pn**	**18 28 01.1**	**+1.1**
HHAR				IAmb_Lg		18 28 57.0	
	comp=Z,248nm,0.8s						
X37A	**Clayton**	**3.33**	**141**		**Pn**	**18 28 01.2**	**+1.2**
X37A				IAmb_Lg		18 28 58.0	
	comp=Z,259nm,0.8s						
X37A	**Clayton**	**3.33**	**141**	P		18 28 01.2	
	baz=322						
N33B	**J Bar K, Exete**	**3.55**	**6**	P		18 28 04.0	
	baz=186,SNR=20						
N33B				S		18 28 46.1	
	baz=186						
N33A	**J Bar K, Exete**	**3.55**	**6**		**Pn**	**18 28 04.0**	**+1.0**
N33A				IAmb_Lg		18 29 06.4	
	comp=Z,236nm,0.8s						
S39A	**Bolivar**	**3.69**	**81**	Pn	**Pn**	**18 28 05.9**	**+0.9**
S39A	**Bolivar**	**3.69**	**81**	P		18 28 05.8	
	baz=263,SNR=52						
AMTX	**Amarillo**	**3.83**	**234**	P	**Pn**	**18 28 09.0**	**+2.1**
	baz=52						
AMTX				Sb	**Sb**	**18 29 07.2**	**+5.3**
	baz=52						
AMTX	**Amarillo**	**3.83**	**234**	Pn	**Pn**	**18 28 08.8**	**+1.9**
AMTX	**Amarillo**	**3.83**	**234**	P		18 28 09.1	
	baz=52,SNR=38						
W39A	**Magazine**	**3.90**	**120**	Pn	**Pn**	**18 28 08.4**	**+0.5**
	baz=302						
W39A				Pb	**Pb**	**18 28 17.8**	**+1.0**
	baz=302,SNR=42						
W39A				Sn	**Sn**	**18 28 54.3**	**+0.8**
	baz=302						
W39A				Sb	**Sb**	**18 29 07.8**	**+3.9**
	baz=302						
W39A	**Magazine**	**3.90**	**120**		**Pn**	**18 28 09.4**	**+1.6**
W39A				IAmb_Lg		18 29 17.3	
	comp=Z,358nm,0.9s						
W39A	**Magazine**	**3.90**	**120**	P		18 28 08.4	
	baz=302,SNR=7.3						
Z35A	**Perchaven, San**	**3.90**	**172**		**Pn**	**18 28 08.9**	**+1.0**
Z35A	**Perchaven, San**	**3.90**	**172**	P		18 28 08.5	
	baz=352,SNR=11						
Z35A				S		18 28 55.4	
	baz=352						
N35A	**Tabor**	**4.06**	**25**		**Pn**	**18 28 11.2**	**+1.1**
KSCO	**Kaye Shedlock'**	**4.13**	**297**	P	**Pn**	**18 28 13.5**	**+2.3**
	baz=115						
KSCO	**Kaye Shedlock'**	**4.13**	**297**	Pn	**Pn**	**18 28 13.3**	**+2.2**
KSCO				IAmb_Lg		18 29 28.6	
	comp=Z,240nm,1.0s						
U40A	**Yellville**	**4.16**	**100**	P	**Pn**	**18 28 12.4**	**+1.1**
	baz=283,SNR=33						
U40A				S	**Sn**	**18 28 59.7**	**-0.1**
	baz=283						
U40A	**Yellville**	**4.16**	**100**	Pn	**Pn**	**18 28 12.4**	**+1.1**
U40A				IAmb_Lg		18 29 20.6	
	comp=Z,298nm,0.7s						
U40A	**Yellville**	**4.16**	**100**	P		18 28 12.4	
	baz=283,SNR=60						
U40A				P		18 28 12.4	
	baz=283,SNR=60						
BGNE	**Belgrade**	**4.20**	**358**	P	**Pn**	**18 28 13.3**	**+1.2**
	baz=177,SNR=5.8						
BGNE				Sn	**Sn**	**18 29 01.7**	**+0.6**
	baz=177						
BGNE				Sb	**Sg**	**18 29 19.5**	**-3.6**
	baz=177						
BGNE	**Belgrade**	**4.20**	**358**	Pn	**Pn**	**18 28 13.6**	**+1.6**
BGNE				IAmb_Lg		18 29 22.3	
	comp=Z,294nm,0.7s						
BGNE	**Belgrade**	**4.20**	**358**	P		18 28 13.3	
	baz=177,SNR=49						
P38A	**Dawn**	**4.21**	**54**	Pn	**Pn**	**18 28 13.5**	**+1.4**
P38A	**Dawn**	**4.21**	**54**	P		18 28 13.2	
	baz=236,SNR=27						
MIAR	**Mount Ida**	**4.41**	**126**	P	**Pn**	**18 28 15.8**	**+0.9**
	baz=308,SNR=6.8						
MIAR				S	**Sn**	**18 29 07.8**	**+1.7**
	baz=308						
MIAR	**Mount Ida**	**4.41**	**126**	Pn	**Pn**	**18 28 15.8**	**+0.9**
MIAR				IAmb_Lg		18 29 28.2	
	comp=Z,218nm,1.0s						
MIAR	**Mount Ida**	**4.41**	**126**	P		18 28 15.7	

	baz=308,SNR=14						
MGMO	**Mountain Grove**	**4.51**	**89**		**Pn**	**18 28 17.7**	**+1.4**
Z38A	**Mt. Pleasant**	**4.61**	**148**	Pn	**Pn**	**18 28 18.5**	**+0.9**
Z38A				IAmb_Lg		18 29 44.0	
	comp=Z,142nm,0.8s						
Z38A	**Mt. Pleasant**	**4.61**	**148**	P		18 28 18.6	
	baz=330,SNR=8.3						
R40A	**Maddies Statio**	**4.61**	**75**	IAmb_Lg		18 29 40.3	
	comp=Z,153nm,0.8s						
R40A	**Maddies Statio**	**4.61**	**75**	P		18 28 18.6	
	baz=258,SNR=36						
ABTX	**Abilene, Hawle**	**4.78**	**198**	S	**Sn**	**18 29 17.2**	**+1.9**
	baz=17						
FCAR	**Ozark Folk Cen**	**4.85**	**104**		**Pn**	**18 28 21.4**	**+0.6**
FCAR				IAmb_Lg		18 29 43.6	
	comp=Z,147nm,0.7s						
OGNE	**Ogallala**	**4.92**	**321**	P	**Pn**	**18 28 24.8**	**+2.8**
	baz=138,SNR=12						
OGNE				S	**Sn**	**18 29 21.5**	**+2.7**
	baz=138						
OGNE	**Ogallala**	**4.92**	**321**		**Pn**	**18 28 24.0**	**+2.1**
WHAR	**Wooly Hollow**	**4.94**	**111**		**Pn**	**18 28 22.9**	**+0.8**
WHAR				IAmb_Lg		18 29 53.5	
	comp=Z,200nm,0.8s						
X40A	**Basin Creek Fa**	**4.94**	**122**	P	**Pn**	**18 28 23.4**	**+1.2**
	baz=305						
X40A				S	**Sn**	**18 29 19.9**	**+0.8**
	baz=305						
X40A	**Basin Creek Fa**	**4.94**	**122**		**Pn**	**18 28 23.2**	**+1.1**
X40A				IAmb_Lg		18 29 45.0	
	comp=Z,182nm,0.9s						
X40A	**Basin Creek Fa**	**4.94**	**122**	P		18 28 23.2	
	baz=305,SNR=14						
X40A				P		18 28 23.2	
	baz=305,SNR=14						
W41B	**Gary Mavity, V**	**5.01**	**112**	P	**Pn**	**18 28 23.8**	**+0.7**
	baz=295						
W41B				Sb	**Sb**	**18 29 41.4**	**+5.4**
	baz=295						
W41B	**Gary Mavity, V**	**5.01**	**112**	P		18 28 23.8	
	baz=295,SNR=13						
MSTX	**Muleshoe**	**5.10**	**232**	P	**Pn**	**18 28 26.5**	**+2.0**
	baz=50						
MSTX				S	**Sn**	**18 29 25.8**	**+2.4**
	baz=50						
N38A	**Joes South For**	**5.12**	**44**	IAmb_Lg		18 30 02.3	
	comp=Z,165nm,0.8s						
N38A	**Joes South For**	**5.12**	**44**	P		18 28 25.4	
	baz=227,SNR=25						
P40A	**Paris**	**5.17**	**61**	IAmb_Lg		18 29 57.9	
	comp=Z,112nm,0.8s						
P40A	**Paris**	**5.17**	**61**	P		18 28 26.2	
	baz=245						
T25A	**Trinidad**	**5.18**	**271**	Sb	**Sg**	**18 29 49.5**	**-5.1**
	baz=88						
WHTX	**Lake Whitney,**	**5.21**	**176**	P	**Pn**	**18 28 26.6**	**+0.7**
	baz=356						
WHTX				Sn	**Sn**	**18 29 25.1**	**-0.8**
	baz=356						
WHTX				Sb	**Sg**	**18 29 49.0**	**-6.6**
	baz=356						
WHTX	**Lake Whitney,**	**5.21**	**176**	IAmb_Lg		18 30 04.8	
	comp=Z,121nm,1.1s						
WHTX	**Lake Whitney,**	**5.21**	**176**	P		18 28 26.3	
	baz=356,SNR=31						
WLAR	**White Oak Lake**	**5.26**	**130**	IAmb_Lg		18 29 56.8	
	comp=Z,110nm,0.9s						
CCM	**Cathedral Cave**	**5.37**	**79**	P	**Pn**	**18 28 29.8**	**+1.8**
	baz=263						
CCM				Sb	**Sg**	**18 29 53.7**	**-6.8**
	baz=263						
CCM	**Cathedral Cave**	**5.37**	**79**	IAmb_Lg		18 30 01.1	
	comp=Z,222nm,0.8s						
K31A	**O'Neill**	**5.45**	**354**	P		18 28 30.6	
	baz=173						
T42A	**Van Buren**	**5.46**	**90**	IAmb_Lg		18 30 05.3	
	comp=Z,215nm,0.7s						
T42A	**Van Buren**	**5.46**	**90**	P		18 28 29.9	
	baz=274,SNR=9.4						
237A	**Washetta, Mont**	**5.47**	**161**	Pn	**Pn**	**18 28 29.4**	**0.0**
237A				IAmb_Lg		18 30 13.0	
	comp=Z,114nm,0.8s						
237A	**Washetta, Mont**	**5.47**	**161**	P		18 28 29.5	
	baz=342,SNR=15						
Z41A	**Richland Creek**	**5.75**	**132**	P	**Pn**	**18 28 33.8**	**+0.6**
	baz=315						
Z41A				S	**Sn**	**18 29 37.4**	**-1.6**
	baz=315						
SCIA	**State Center**	**5.94**	**36**	P	**Pn**	**18 28 37.3**	**+1.5**
	baz=219						
SCIA	**State Center**	**5.94**	**36**		**Pn**	**18 28 36.9**	**+1.0**
SCIA				IAmb_Lg		18 30 24.9	
	comp=Z,176nm,0.8s						
SCIA	**State Center**	**5.94**	**36**	P		18 28 37.1	
	baz=219						
Q24A	**Divide**	**5.97**	**289**	P	**Pn**	**18 28 37.9**	**+1.3**
	baz=105						
Q24A				S	**Sn**	**18 29 45.5**	**+0.6**
	baz=105						
CCAR	**Cane Creek**	**5.99**	**121**	IAmb_Lg		18 30 23.6	
	comp=Z,135nm,0.9s						
FVM	**French Village**	**6.00**	**80**	IAmb_Lg		18 30 28.9	
	comp=Z,140nm,0.8s						
FVM	**French Village**	**6.00**	**80**	P		18 28 37.4	
	baz=265						
SDCO	**Great Sand Dun**	**6.05**	**277**	Sb	**Sg**	**18 30 17.2**	**-5.3**
	baz=93						
NATX	**Nacogdoches**	**6.06**	**153**	P	**Pn**	**18 28 37.9**	**+0.3**
	baz=335						
NATX				S	**Sn**	**18 29 45.2**	**-1.6**
	baz=335						
X43A	**Marvell**	**6.31**	**113**	Sb	**Sg**	**18 30 23.1**	**-7.7**
	baz=297						
435B	**Jarrell**	**6.41**	**177**	P	**Pn**	**18 28 42.6**	**+0.2**
	baz=358						
435B	**Jarrell**	**6.41**	**177**	IAmb_Lg		18 30 39.1	
	comp=Z,140nm,0.8s						
N41A	**Harden Midland**	**6.52**	**55**	Pn	**Pn**	**18 28 44.7**	**+0.9**
N41A				IAmb_Lg		18 30 44.6	
	comp=Z,174nm,0.7s						
N41A	**Harden Midland**	**6.52**	**55**	P		18 28 45.2	
	baz=240,SNR=9.0						
ISCO	**Idaho Springs**	**6.57**	**296**	P	**Pn**	**18 28 46.4**	**+1.7**
	baz=111						
ISCO	**Idaho Springs**	**6.57**	**296**		**Pn**	**18 28 46.5**	**+1.7**
ISCO	**Idaho Springs**	**6.57**	**296**	P		18 28 46.4	
	baz=111,SNR=13						
ECSD	**EROS Data Cent**	**6.60**	**8**	P	**Pn**	**18 28 45.1**	**+0.1**
	baz=189						
ECSD				S	**Sn**	**18 29 58.2**	**-1.8**
	baz=189						
ECSD	**EROS Data Cent**	**6.60**	**8**	Pn	**Pn**	**18 28 45.3**	**+0.3**
ECSD				IAmb_Lg		18 30 42.9	
	comp=Z,91nm,0.9s						
ECSD	**EROS Data Cent**	**6.60**	**8**	P		18 28 45.2	
	baz=189,SNR=27						
JCT	**Junction City**	**6.89**	**194**	IAmb_Lg		18 31 01.5	
	comp=Z,173nm,0.9s						
S44A	**Carbondale**	**6.91**	**83**	P		18 28 49.5	
	baz=268,SNR=9.6						
P43A	**Skaggs, Pawnee**	**7.03**	**67**		**Pn**	**18 28 51.0**	**+0.1**
P43A				IAmb_Lg		18 30 53.0	
	comp=Z,155nm,0.8s						
P43A	**Skaggs, Pawnee**	**7.03**	**67**	P		18 28 51.2	
	baz=252						
L40A	**Anamosa**	**7.09**	**45**	Pn	**Pn**	**18 28 52.2**	**+0.5**
L40A				IAmb_Lg		18 31 00.9	
	comp=Z,176nm,1.2s						
Q44A	**Meyer Farm, Va**	**7.23**	**74**	IAmb_Lg		18 31 04.2	
	comp=Z,162nm,0.8s						
N23A	**Red Feather La**	**7.25**	**303**	P	**Pn**	**18 28 56.3**	**+2.1**
	baz=118						
ANMO	**Albuquerque**	**7.27**	**254**	Pn	Pn	18 29 01.4	+7.1
	comp=Z,0.1nm,0.3s,baz=76,slow=17,SNR=2.9						
ANMO				Lg	Lg	18 30 54.1	
	comp=Z,2.0nm,0.3s,baz=151,slow=23,SNR=7.0						
ANMO	**Albuquerque**	**7.27**	**254**	Sb	**Sg**	**18 30 53.9**	**-7.7**
	baz=70						
ANMO	**Albuquerque**	**7.27**	**254**	IAmb_Lg		18 31 08.1	
	comp=Z,45nm,0.9s						
ANMO				IAmb_Lg		18 31 08.2	
	comp=Z,46nm,0.9s						
SUSD	**Miller**	**7.28**	**354**	P	**Pn**	**18 28 55.6**	**+1.3**
	baz=173						
SUSD				S	**Sn**	**18 30 16.2**	**-0.5**
	baz=173						
SUSD	**Miller**	**7.28**	**354**	IAmb_Lg		18 31 10.4	
	comp=Z,120nm,0.7s						
W45A	**Hickory Valley**	**7.35**	**104**	IAmb_Lg		18 31 01.6	
	comp=Z,158nm,0.8s						
OXF	**Oxford**	**7.41**	**109**	P	**Pn**	**18 28 57.1**	**+1.0**
	baz=294						
OXF				S	**Sn**	**18 30 16.3**	**-3.8**
	baz=294						
HKT	**Hockley**	**7.44**	**166**	IAmb_Lg		18 31 21.7	
	comp=Z,6.9nm,0.9s						
HDIL	**Hopedale**	**7.51**	**61**	P	**Pn**	**18 28 58.5**	**+1.0**
	baz=246,SNR=8.5						
HDIL				S	**Sn**	**18 30 20.6**	**-2.0**
	baz=246						
HDIL	**Hopedale**	**7.51**	**61**		**Pn**	**18 28 57.5**	**0.0**
Y45A	**Yeager Farm, C**	**7.60**	**114**	IAmb_Lg		18 31 18.1	
	comp=Z,129nm,0.9s						
I37A	**Lemond, Waseca**	**7.62**	**25**	IAmb_Lg		18 31 26.4	
	comp=Z,134nm,1.1s						
O44A	**Mansfield**	**7.96**	**65**	IAmb_Lg		18 31 29.1	
	comp=Z,148nm,0.8s						
L42A	**Oliver, Polo**	**7.97**	**50**		**Pn**	**18 29 03.6**	**-0.2**
L42A				IAmb_Lg		18 31 40.0	
	comp=Z,82nm,0.9s						
USIN	**University of**	**8.18**	**82**	IAmb_Lg		18 31 37.5	
	comp=Z,150nm,0.8s						
WVT	**Waverly**	**8.18**	**94**	IAmb_Lg		18 31 41.9	
	comp=Z,90nm,1.0s						
JFWS	**Jewell Farm**	**8.19**	**43**	P	**Pn**	**18 29 06.7**	**0.0**
	baz=228						
JFWS	**Jewell Farm**	**8.19**	**43**		**Pn**	**18 29 06.8**	**0.0**
JFWS				IAmb_Lg		18 31 51.6	
	comp=Z,68nm,0.8s						
JFWS	**Jewell Farm**	**8.19**	**44**	P		18 29 06.6	
	baz=228,SNR=11						
MNTX	**Cornudas Mount**	**8.25**	**230**	P	**Pn**	**18 29 09.0**	**+1.4**
	baz=46						
MNTX	**Cornudas Mount**	**8.25**	**230**		**Pn**	**18 29 08.3**	**+0.7**
MNTX	**Cornudas Mount**	**8.25**	**230**	P		18 29 08.3	
	baz=46,SNR=7.8						
PLAL	**Pickwick Lake**	**8.27**	**103**	IAmb_Lg		18 31 32.6	
	comp=Z,62nm,0.8s						
735A	**Kenedy**	**8.32**	**179**	IAmb_Lg		18 31 53.5	
	comp=Z,128nm,1.1s						
RSSD	**Black Hills**	**8.32**	**328**	P	**Pn**	**18 29 13.2**	**+4.4**
	baz=144						
RSSD	**Black Hills**	**8.32**	**328**	Pn	**Pn**	**18 29 11.3**	**+2.5**
RSSD				IAmb_Lg		18 31 42.4	
	comp=Z,60nm,1.0s						
K22A	**Casper**	**8.56**	**312**	IAmb_Lg		18 32 01.8	
	comp=Z,88nm,1.1s						
PV02	**Paradox Valley**	**8.63**	**280**	IAmb_Lg		18 31 53.6	
	comp=Z,88nm,1.1s						
I40A	**Norwalk**	**8.69**	**37**	IAmb_Lg		18 32 03.2	
	comp=Z,54nm,0.9s						
PV13	**Radium Mtn., P**	**8.70**	**280**	IAmb_Lg		18 31 53.9	
	comp=Z,65nm,1.2s						
F33A	**5 Mile Ranch,**	**8.71**	**8**	IAmb_Lg		18 31 42.7	
	comp=Z,55nm,0.9s						
M44A	**Midewin, Midew**	**8.72**	**58**	IAmb_Lg		18 31 43.7	
	comp=Z,61nm,0.9s						
PV11	**David Mesa, Pa**	**8.74**	**281**	IAmb_Lg		18 31 50.9	
	comp=Z,61nm,1.2s						
PV04	**Paradox Valley**	**8.78**	**281**	IAmb_Lg		18 32 00.2	
	comp=Z,59nm,1.3s						
PV23	**Carpenter Ridg**	**8.87**	**281**	IAmb_Lg		18 32 00.6	
	comp=Z,76nm,1.3s						
Z47A	**Carrollton**	**9.00**	**113**	IAmb_Lg		18 32 08.0	
	comp=Z,88nm,1.1s						
SFIN	**Lafayette**	**9.03**	**66**	IAmb_Lg		18 31 50.6	
	comp=Z,119nm,0.8s						
HQIL	**Hanson Quary C**	**9.03**	**56**	IAmb_Lg		18 31 57.5	
	comp=Z,99nm,1.1s						
L44A	**Lake County Fo**	**9.17**	**54**	IAmb_Lg		18 32 11.3	
	comp=Z,89nm,1.0s						
TX31	**Lajitas Ar. Si**	**9.20**	**213**		**Pn**	**18 29 22.1**	**+1.3**
TXAR	**Lajitas Array**	**9.20**	**213**	Pn	**Pn**	**18 29 21.3**	**+0.6**
	comp=Z,0.5nm,0.3s,baz=37,slow=10.0,SNR=30						
TXAR				Pg		18 29 50.7	
	comp=Z,0.6nm,0.3s,baz=34,slow=12,SNR=4.1						
TXAR				Lg	Lg	18 31 51.0	
	comp=Z,1.5nm,0.3s,baz=55,slow=22,SNR=3.9						
TXAR				LR	LR	18 32 44.2	
	comp=Z,36nm,21.6s,baz=0.0,slow=36						
X48A	**Hartselle**	**9.25**	**104**	IAmb_Lg		18 32 02.8	
	comp=Z,55nm,0.9s						
WCI	**Wyandotte Cave**	**9.27**	**80**	IAmb_Lg		18 32 01.9	
	comp=Z,98nm,0.7s						
CLTN	**Cedars of Leba**	**9.38**	**93**	IAmb_Lg		18 32 05.4	
	comp=Z,71nm,0.9s						
E28A	**Huff**	**9.59**	**348**	IAmb_Lg		18 32 30.0	
	comp=Z,81nm,1.0s						
G40A	**Rib Lake**	**9.93**	**33**		**Pn**	**18 29 30.4**	**-0.2**
D32A	**Dogwood Acres,**	**9.95**	**4**	IAmb_Lg		18 32 37.0	
	comp=Z,72nm,0.8s						
Y49A	**Blount Mountai**	**9.96**	**106**	IAmb_Lg		18 32 40.0	
	comp=Z,61nm,0.9s						
PDAR	**Pinedale Array**	**10.51**	**306**	Pn	**Pn**	**18 29 38.8**	**0.0**
	comp=Z,0.5nm,0.3s,baz=118,slow=14,SNR=17						
PDAR				Pg		18 30 21.5	
	comp=Z,0.8nm,0.3s,baz=112,slow=16,SNR=8.3						
PDAR				Lg	Lg	18 32 30.8	
	comp=Z,0.4nm,0.3s,baz=109,slow=31,SNR=2.3						
MSU	**Marysvale**	**11.35**	**281**	Pn	**Pn**	**18 29 50.4**	**+0.2**
TKL	**Tuckaleechee C**	**11.50**	**93**	Pn	**Pn**	**18 29 52.1**	**-0.1**
	comp=Z,0.6nm,0.3s,baz=239,slow=5.9,SNR=1.9						
TKL				Lg	Lg	18 33 04.2	
	comp=Z,5.3nm,0.3s,baz=6.0,slow=23,SNR=9.5						
ULM	**Lac du Bonnet**	**13.12**	**6**	Pn	Pn	18 30 10.3	-3.9
	comp=Z,0.5nm,0.3s,baz=182,slow=12,SNR=6.8						
ULM				Sn	Sn	18 32 27.1	-13
	comp=Z,0.4nm,0.3s,baz=114,slow=20,SNR=3.3						
ULM				Lg	Lg	18 33 45.2	
	comp=Z,0.4nm,0.3s,baz=85,slow=20,SNR=3.0						
ILAR	**Eielson Array**	**39.77**	**330**	P	**P**	**18 34 42.7**	**+2.3**
	comp=Z,0.3nm,0.7s,baz=103,slow=7.7,SNR=3.3						
KDAK	**Kodiak Island**	**40.91**	**318**	LR	LR	18 50 52.9	
	comp=Z,43nm,19.5s,baz=71,slow=35						
ARCES	**ARCESS Array B**	**65.86**	**19**	P	**P**	**18 37 53.4**	**+0.3**
	comp=Z,4.8nm,0.9s,baz=325,slow=4.6,SNR=3.9						

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*NEIC **15** 18:27:16.4±1.9, 34°.85S±0°.06×77°.3E±0°.2, $h10^{km}\pm1^{km}$, mb4.7/13, Error ellipse: s-maj=26.0km s-min=5.8km az=108.0*

*IDC **15** 18:27:18.5±2.2, 34°.19S×77°.29E, $h0^{km}$, mb3.8/7, mb1 3.9/7, mb1mx3.7/46, mbtmp3.8/7, MS3.8/11, Ms1 3.8/11, ms1mx3.5/28, Error ellipse: s-maj=73.7km s-min=31.0km az=31.0*

ISC 15 18:27:15.2±0.8, **35°.1S**±0°.2×**77°.1E**±0°.2, **$h10^{km}$, n40,** σ**1ṡ90**/26, **mb4.1**/13, **MS3.8**/11, **Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAF	**Port-aux-Franc**	**15.15**	**197**	Pn	**P**	**18 30 52.9**	**-1.4**
RER	**Riviere de l'E**	**23.29**	**301**	P	**P**	**18 32 22.8**	**-0.6**
H08S2	**Diego Garcia H**	**27.60**	**350**	T	T	19 00 52.4	
	baz=173,slow=74,SNR=3.6						
H08S1	**Diego Carcia H**	**27.60**	**350**	T	T	19 00 51.7	
	baz=173						
H08S3	**Diego Garcia H**	**27.62**	**350**	T	T	19 00 52.3	
	baz=173,slow=74,SNR=20						
H01W2	**Cape Leeuwin H**	**30.26**	**101**	T	T	19 04 40.9	
	baz=261,slow=74,SNR=6.5						
H01W3	**Cape Leeuwin H**	**30.26**	**101**	T	T	19 04 48.1	
	baz=261,slow=74,SNR=5.5						
H01W1	**Cape Leeuwin H**	**30.27**	**101**	T	T	19 04 43.3	
	baz=261,slow=74,SNR=6.8						
ABPO	**Ambohimpanom**	**30.86**	**293**	P	P	18 33 37.1	+5.2
ABPO				IAmb	IAmb	18 33 45.5	
	comp=Z,9.0nm,1.3s						
NWAO	**Narrogin (SRO)**	**33.21**	**98**	LR	LR	18 44 36.6	
	comp=Z,127nm,18.6s,baz=288,slow=31						
MAW	**Mawson**	**33.60**	**190**	LR	LR	18 45 10.0	
	comp=Z,144nm,20.4s,baz=52,slow=31						
LEM	**Lembang**	**39.72**	**52**	LR	LR	18 47 01.0	
	comp=Z,141nm,20.9s,baz=231,slow=30						
BOSA	**Boshof**	**44.09**	**263**	LR	LR	18 50 11.6	
	comp=Z,118nm,19.0s,baz=148,slow=31						
BATI	**Baumata**	**49.03**	**71**	LR	LR	18 51 34.3	
	comp=Z,91nm,20.0s,baz=254,slow=30						
ASAR	**Alice Springs**	**50.23**	**93**	P	**P**	**18 36 14.8**	**+3.1**
	comp=Z,1.5nm,0.9s,baz=258,slow=6.3,SNR=4.8						
ASAR	**Alice Springs**	**50.23**	**93**	P	**P**	**18 36 11.3**	**-0.4**
WRA	**Warramunga Arr**	**52.32**	**89**	P	**P**	**18 36 30.3**	**+2.9**
	comp=Z,1.6nm,0.6s,baz=241,slow=7.6,SNR=7.2						
VNDA	**Vanda**	**54.95**	**165**	LR	LR	18 58 20.4	
	comp=Z,86nm,20.1s,baz=300,slow=33						
CMAR	**Chiang Mai Arr**	**57.13**	**25**	P	**P**	**18 37 01.3**	**-0.8**
	comp=Z,0.5nm,1.0s,baz=215,slow=7.3,SNR=3.9						
CMAR				LR	LR	18 58 56.7	
	comp=Z,35nm,18.7s,baz=212,slow=34						
RAYN	**Ar Rayn**	**65.50**	**328**	P	**P**	**18 37 59.3**	**+0.6**
LSA	**Lhasa**	**65.76**	**13**	P	**P**	**18 37 59.3**	**-1.5**
NIL	**Nilore**	**68.44**	**357**	P	**P**	**18 38 16.6**	**-0.6**
NIL				IAmb	IAmb	18 38 24.5	
	comp=Z,9.2nm,1.4s						
KBL	**Kabul**	**69.64**	**353**	P	**P**	**18 38 25.0**	**+0.1**
KBL				IAmb	IAmb	18 38 32.7	
	comp=Z,9.2nm,1.4s						
KK31	**Karatay Array**	**78.01**	**355**	P	**P**	**18 39 16.0**	**+2.4**
KK31				IAmb	IAmb	18 39 17.2	
	comp=Z,5.9nm,1.1s						
KKAR	**Karatay Array**	**78.01**	**355**	P	**P**	**18 39 16.1**	**+2.6**
KKAR				IAmb	IAmb	18 39 17.2	
	comp=Z,5.9nm,1.1s						
KKAR	**Karatay Array**	**78.01**	**355**	P	**P**	**18 39 15.7**	**+2.2**
JMZ	**Minamidaito 2**	**79.31**	**48**	P	**P**	**18 39 16.9**	**-4.2**
MK31	**Makanchi Array**	**81.61**	**4**	P	**P**	**18 39 33.5**	**+0.5**
MKAR	**Makanchi Array**	**81.61**	**4**	P	**P**	**18 39 33.0**	**0.0**
	comp=Z,0.8nm,0.8s,baz=167,slow=5.7,SNR=9.7						
MKAR				LR	LR	19 13 49.9	
	comp=Z,63nm,18.9s,baz=182,slow=35						
MKAR	**Makanchi Array**	**81.61**	**4**	P	**P**	**18 39 33.3**	**+0.3**
BRTR	**Keskin Array B**	**84.52**	**328**	P	**P**	**18 39 48.6**	**+0.2**
	comp=Z,0.7nm,0.8s,baz=186,slow=8.7,SNR=2.5						
BRTR	**Keskin Array B**	**84.52**	**328**	P	**P**	**18 39 48.1**	**-0.3**
ABKAR	**Akbulak array**	**85.31**	**349**	P	**P**	**18 39 52.8**	**+0.9**
KURK	**Kurchatov**	**85.41**	**1**	P	**P**	**18 39 54.1**	**+1.8**
KURK				IAmb	IAmb	18 39 56.6	
	comp=Z,7.1nm,1.4s						
TORD	**Torodi Ar. Bea**	**85.84**	**289**	LR	LR	19 17 51.6	
	comp=Z,39nm,18.0s,baz=5.0,slow=35						
SONM	**Songino Array**	**86.59**	**19**	P	**P**	**18 39 58.5**	**0.0**
	comp=Z,0.2nm,0.4s,baz=214,slow=5.0,SNR=4.3						
SONM				LR	LR	19 15 45.0	
	comp=Z,71nm,21.6s,baz=210,slow=34						
SONM	**Songino Array**	**86.59**	**19**	P	**P**	**18 39 57.9**	**-0.6**
ZALV	**Zalesovo Beam**	**88.89**	**5**	P	**P**	**18 40 10.4**	**+1.3**
	comp=Z,0.6nm,0.6s,baz=342,slow=0.5,SNR=4.9						
ZALV				LR	LR	19 16 53.9	
	comp=Z,35nm,20.3s,baz=90,slow=34						
DLBC	**Dease Lake**	**150.51**	**29**	PKPbc	**PKPab**	**18 47 10.8**	**-2.4**
	comp=Z,1.7nm,0.9s,baz=312,slow=7.3,SNR=3.5						
YKA	**Yellowknife Ar**	**151.57**	**11**	PKPbc	**PKiKP**	**18 47 12.6**	**+3.3**
	comp=Z,1.8nm,0.9s,baz=356,slow=2.5,SNR=18						

KRSC 15 18:28:05.0±2.0, **49°.37N×156°.03E, $h80^{km}$**$\pm25^{km}$**, ML4.3, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.32**	**2**	*e*P	Pn	18 28 28.7	+0.7
SKR				*e*S	Sn	18 28 47.1	+1.8
PAU	**Pauzhetka**	**2.16**	**13**	*e*P	Pn	18 28 40.2	+1.2
PAU				*e*S	Sn	18 29 06.9	+1.9
KDTR	**Khodutka, Kamc**	**2.77**	**27**	*e*S	Sn	18 29 21.7	+2.1
MTVR	**Mutnovka**	**3.40**	**23**	*e*P	Pn	18 28 58.7	+2.8
MTVR				*e*S	Sn	18 29 38.3	+3.1
GRL	**Gorelyy**	**3.44**	**21**	*e*P	Pn	18 28 59.4	+3.0
RUS	**Russkaya**	**3.45**	**26**	*e*P	Pn	18 28 58.9	+2.6
RUS				*e*S	Sn	18 29 38.2	+2.2
APC	**Apacha**	**3.63**	**11**	*e*P	Pn	18 28 59.2	+0.3
KRMR	**Karymshinskiy**	**3.71**	**20**	*e*P	Pn	18 29 03.6	+3.7
PET	**Petropavlovsk**	**4.02**	**23**	*e*P	Pn	18 29 07.6	+3.6
DALK	**Dalny**	**4.05**	**24**	*e*P	Pn	18 29 07.0	+2.5
DALK				*e*S	Sn	18 29 52.5	+1.9
UGLR	**Uglovaya**	**4.23**	**23**	*e*P	Pn	18 29 09.4	+2.3
KOK	**Koryaka**	**4.26**	**22**	*e*P	Pn	18 29 11.1	+3.7
AVH	**Avacha**	**4.26**	**22**	*e*P	Pn	18 29 11.3	+3.9
SMAR	**Somma**	**4.27**	**23**	*e*P	Pn	18 29 10.6	+2.9
KRER	**Koryakskii**	**4.29**	**22**	*e*P	Pn	18 29 11.3	+3.2
KRX	**Arik**	**4.32**	**21**	*e*P	Pn	18 29 11.5	+3.1
GNL	**Ganaly**	**4.50**	**15**	*e*P	Pn	18 29 12.7	+2.0
KZV	**Kizimen**	**6.32**	**23**	*e*P	Pn	18 29 39.2	+3.6
TUMD	**Tumrok D**	**6.43**	**23**	*e*P	Pn	18 29 40.2	+3.2
TUMR	**Tumrok**	**6.44**	**21**	*e*P	Pn	18 29 42.0	+4.8
KBTR	**Krutoberegovo**	**7.99**	**28**	*e*P	Pn	18 30 00.2	+2.0

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*IDC **15** 18:30:59.2±2.2, 6°.34S×130°.34E, $h133^{km}\pm24^{km}$, mb3.0/2, mb1 3.3/7, mb1mx3.1/43, mbtmp3.7/7, Error ellipse: s-maj=27.6km s-min=18.5km az=104.0*

ISC 15 18:30:58.8±1.0, **6°.33S**±0°.07×**130°.4E**±0°.1, **$h150^{km}$, n7,** σ**2ṡ74**/10, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.49**	**9**	P	**Pn**	**18 32 19.4**	**+0.6**
	1.4nm,0.3s,baz=42,slow=3.2,SNR=34						
SIJI				S	**Sn**	**18 33 16.6**	**-4.7**
	8.4nm,0.3s,baz=83,slow=23,SNR=16						
BATI	**Baumata**	**7.74**	**240**	P	**Pn**	**18 32 48.8**	**0.0**
	4.9nm,0.3s,baz=104,slow=2.6,SNR=13						
BATI				S	**Sn**	**18 34 12.8**	**-2.4**
	8.2nm,0.3s,baz=141,slow=18,SNR=10						
FITZ	**Fitzroy Crossi**	**12.60**	**201**	P	**Pn**	**18 33 52.2**	**-0.7**
	0.2nm,0.3s,baz=36,slow=10.0,SNR=18						
FITZ				S	Sn	18 36 02.5	-10
	1.2nm,0.3s,baz=241,slow=19,SNR=8.7						
WRA	**Warramunga Arr**	**14.05**	**165**	P	**Pn**	**18 34 11.9**	**+0.5**
	0.3nm,0.3s,baz=349,slow=14,SNR=23						
WRA				S	Sn	18 36 37.6	-10
	0.3nm,0.3s,baz=340,slow=22,SNR=6.5						
ASAR	**Alice Springs**	**17.55**	**169**	P	**Pn**	**18 34 56.9**	**+2.5**
	0.3nm,0.3s,baz=345,slow=10,SNR=53						
ASAR				S	**S**	**18 38 04.8**	**-3.5**
	0.2nm,0.3s,baz=356,slow=26,SNR=3.9						
CMAR	**Chiang Mai Arr**	**39.65**	**309**	P	**P**	**18 38 18.1**	**+1.8**
	0.3nm,0.7s,baz=142,slow=8.3,SNR=4.3						
MKAR	**Makanchi Array**	**67.91**	**326**	P	**P**	**18 41 43.0**	**+1.6**
	0.2nm,0.3s,baz=111,slow=8.2,SNR=8.0						

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*IDC **15** 18:37:09.0±2.8, 18°.62S×176°.88E, $h0^{km}$, mb4.1/4, mb1 4.4/4, mb1mx3.9/31, mbtmp4.1/4, MS3.5/11, Ms1 3.6/11, ms1mx3.4/27, Error ellipse: s-maj=151.4km s-min=19.5km az=153.0*

*NEIC **15** 18:37:09.1±1.5, 18°.1S±0°.2×176°.8E±0°.1, $h10^{km}\pm2^{km}$, mb4.6/11, Error ellipse: s-maj=41.1km s-min=18.1km az=342.0*

ISC 15 18:37:14.0±0.7, **18°.4S**±0°.2×**176°.8E**±0°.1, **$h35^{km}$, n32,** σ**1ṡ58**/21, **mb4.5**/11, **MS3.6**/11, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**1.31**	**62**	Pn	**Pn**	**18 37 34.0**	**-1.8**
	56nm,0.3s,baz=251,slow=15,SNR=186						
MSVF				Sn	**Sn**	**18 37 52.6**	**+0.5**
	114nm,0.3s,baz=274,slow=23,SNR=14						
MSVF	**Nonsavu**	**1.31**	**62**		**Pn**	**18 37 33.2**	**-2.6**
DZM	**Mont Dzumac**	**10.44**	**248**	*e*LR	LR	18 41 21.9	
	comp=Z,602nm,25.8s						
HNR	**Honiara**	**18.64**	**296**	LR	LR	18 46 48.5	
	comp=Z,104nm,20.6s,baz=106,slow=31						
URZ	**Urewera**	**19.83**	**179**	LR	LR	18 47 18.6	
	comp=Z,206nm,20.3s,baz=31,slow=31						
BFZ	**Birch Farm**	**22.25**	**181**	P	**P**	**18 42 08.5**	**+0.7**
BFZ				IAmb	IAmb	18 42 10.8	
	comp=Z,43nm,0.9s						
PLWZ	**Palliser**	**23.17**	**183**	P	**P**	**18 42 17.6**	**+0.2**
THZ	**Tophouse**	**23.57**	**187**	P	**P**	**18 42 21.0**	**-0.3**
THZ				IAmb	IAmb	18 42 30.5	
	comp=Z,40nm,1.3s						
KHZ	**Kahutara**	**24.14**	**186**	P	**P**	**18 42 27.7**	**+1.1**
LTZ	**Lake Taylor**	**24.65**	**188**	P	**P**	**18 42 32.9**	**+1.5**
LTZ				IAmb	IAmb	18 42 41.7	
	comp=Z,16nm,0.9s						
RPZ	**Rata Peaks**	**25.74**	**190**	LR	LR	18 51 02.2	
	comp=Z,165nm,18.9s,baz=356,slow=33						
ARMA	**Armidale**	**25.85**	**238**	P	**P**	**18 42 41.4**	**-1.1**
ARMA				IAmb	IAmb	18 42 50.7	
	comp=Z,6.2nm,0.9s						
TBI	**Tubuai**	**31.83**	**105**	*e*LR	LR	18 52 07.6	
	comp=Z,172nm,30.0s						
PPT2	**Papeete2**	**31.93**	**94**	*e*S	S	18 48 56.0	+10
	comp=Z,67nm,24.0s						
PPT2				*e*LR	LR	18 52 25.7	
	comp=Z,275nm,25.5s						
PPT	**Papeete**	**31.93**	**94**	LR	LR	18 53 18.5	
	comp=Z,128nm,20.0s,baz=224,slow=30						
BBOO	**Buckleboo**	**39.25**	**240**	P	**P**	**18 44 39.2**	**-0.1**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BBOO				IAmb	IAmb	18 44 40.8	
	comp=Z,24nm,1.4s						
WR0	Warramunga Arr	39.92	261	P	P	18 44 42.9	-2.1
WB0	Warramunga Arr	40.07	261	P	P	18 44 44.5	-1.8
WB0				IAmb	IAmb	18 44 50.6	
	comp=Z,9.6nm,0.9s						
WB2	Warramunga Arr	40.10	261	P	P	18 44 44.8	-1.8
WB2				IAmb	IAmb	18 44 50.9	
	comp=Z,10nm,1.1s						
WRA	Warramunga Arr	40.11	261	P	P	18 44 45.4	-1.2
	comp=Z,4.9nm,0.9s,baz=94,slow=8.8,SNR=14						
AS31	Alice Springs	40.32	255	P	P	18 44 47.5	-0.9
ASAR	Alice Springs	40.32	255	P	P	18 44 47.8	-0.6
	comp=Z,5.7nm,0.8s,baz=85,slow=9.6,SNR=29						
ASAR				LR	LR	19 00 40.9	
	comp=Z,118nm,18.8s,baz=137,slow=35						
ASAR	Alice Springs	40.32	255	P	P	18 44 47.5	-0.8
FITZ	Fitzroy Crossi	48.50	262	LR	LR	19 05 30.1	
	comp=Z,84nm,18.6s,baz=144,slow=35						
FITZ	Fitzroy Crossi	48.50	262	P	P	18 45 52.1	-1.7
BATI	Baumata	52.02	271	LR	LR	19 06 52.8	
	comp=Z,46nm,20.1s,baz=126,slow=34						
VNDA	Vanda	59.66	184	LR	LR	19 08 45.8	
	comp=Z,49nm,21.5s,baz=336,slow=32						
LEM	Lembang	68.19	270	LR	LR	19 18 26.8	
	comp=Z,28nm,19.4s,baz=195,slow=36						
NVAR	Mina Array Bea	82.93	46	P	P	18 49 38.3	+2.6
	comp=Z,0.1nm,0.4s,baz=226,slow=7.3,SNR=2.3						
CMAR	Chiang Mai Arr	84.81	291	P	P	18 49 47.7	+2.3
	comp=Z,1.3nm,1.0s,baz=116,slow=3.5,SNR=9.6						
CMAR				LR	LR	19 27 08.7	
	comp=Z,4.9nm,20.6s,baz=260,slow=35						
TXAR	Lajitas Array	90.08	59	LR	LR	19 24 10.5	
	comp=Z,38nm,18.5s,baz=0.0,slow=31						
GERES	GERESS Array B	146.67	340	PKPbc	PKPab	18 56 53.5	+0.2
	comp=Z,0.3nm,0.6s,baz=74,slow=5.2,SNR=2.9						

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*IDC **15** 18:38:40.9±0.8, 15°.37S×173°.34W, h0^{km}, mb4.1/11, mb1 4.3/11, mb1mx4.1/39, mbtmp4.1/11, MS3.6/4, Ms1 3.7/4, ms1mx3.1/30, Error ellipse: s-maj=45.9km s-min=16.7km az=139.0*

*NEIC **15** 18:38:45.1±1.4, 15°.38S±0°.10×173°.25W±0°.08, h35^{km}±2^{km}, mb4.0/4, Error ellipse: s-maj=20.2km s-min=6.9km az=320.0*

ISC 15 18:38:46.4±0.6**, 15°.38S**±0°.08×**173°.3W**±0°.1**, h42**^{km}**, n26, σ0^s.96**/23**, mb3.9**/13**, MS3.8**/3**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	2.07	45		Pn	18 39 16.7	-2.0
NIUE	Niue	4.89	139		Pn	18 39 55.3	-2.0
MSVF	Nonsavu	8.63	253	LR	LR	18 43 49.1	
	comp=Z,251nm,20.6s,baz=105,slow=36						
FUNA	Funafuti	10.02	312	Pn	Pn	18 41 06.7	-1.0
KNTN	Kanton	12.62	7	Pn	Pn	18 41 42.9	-0.4
URZ	Urewera	24.32	199	P	P	18 44 00.0	0.0
	8.1nm,0.5s,baz=22,slow=5.0,SNR=8.6						
LTZ	Lake Taylor	29.99	202	P	P	18 44 51.8	+0.7
LTZ				IAmb	IAmb	18 44 59.9	
	comp=Z,17nm,1.5s						
STKA	Stephens Creek	44.14	240	P	P	18 46 51.2	+0.2
	comp=Z,0.9nm,0.4s,baz=12,slow=7.2,SNR=4.2						
STKA	Stephens Creek	44.14	240	IAmb	IAmb	18 47 06.0	
	comp=Z,1.4nm,1.2s						
WRA	Warramunga Arr	49.95	257	P	P	18 47 36.6	0.0
	comp=Z,0.3nm,0.4s,baz=94,slow=6.6,SNR=12						
WRA	Warramunga Arr	49.95	257	P	P	18 47 35.0	-1.5
AS31	Alice Springs	50.22	252	P	P	18 47 38.4	-0.2
AS31				IAmb	IAmb	18 47 46.6	
	comp=Z,1.1nm,0.8s						
ASAR	Alice Springs	50.22	252	P	P	18 47 38.3	-0.3
	comp=Z,1.8nm,0.5s,baz=88,slow=7.6,SNR=43						
ASAR	Alice Springs	50.22	252	P	P	18 47 38.2	-0.4
YBH	Yreka Blue Hor	73.52	37	P	P	18 50 15.9	+1.0
	comp=Z,2.4nm,0.7s,baz=277,slow=8.1,SNR=6.8						
NVAR	Mina Array Bea	74.24	42	P	P	18 50 20.6	+1.2
	comp=Z,1.6nm,0.8s,baz=231,slow=9.4,SNR=9.0						
NVAR				LR	LR	19 16 08.7	
	comp=Z,64nm,20.0s,baz=314,slow=30						
TXAR	Lajitas Array	80.51	56	P	P	18 50 55.8	+1.2
	comp=Z,0.9nm,0.9s,baz=225,slow=5.1,SNR=7.6						
PDAR	Pinedale Array	82.18	42	P	P	18 51 04.0	+0.7
	comp=Z,1.0nm,0.8s,baz=224,slow=4.1,SNR=7.9						
PDAR				LR	LR	19 21 09.6	
	comp=Z,28nm,19.5s,baz=344,slow=31						
ILAR	Eielson Array	82.40	11	P	P	18 51 04.5	+0.8
	comp=Z,0.9nm,0.7s,baz=226,slow=6.3,SNR=12						
INK	Inuvik	88.22	14	P	P	18 51 32.2	-0.3
	comp=Z,0.9nm,0.8s,baz=220,slow=7.9,SNR=3.3						
YKA	Yellowknife Ar	90.03	23	P	P	18 51 41.9	+0.7
	comp=Z,0.5nm,0.8s,baz=228,slow=3.9,SNR=7.8						
LPAZ	La Paz	99.72	110	LR	LR	19 30 04.6	
	comp=Z,32nm,19.7s,baz=110,slow=31						
KHC	Kasperske Hory	145.87	352	*e*PKP	PKPab	18 58 22.2	+0.5
CKRC	Cesky Krumlov	146.07	351	*e*PKP	PKPab	18 58 22.4	0.0
GERES	GERESS Array B	146.13	352	PKPbc	PKPab	18 58 23.0	+0.2
	comp=Z,0.9nm,0.8s,baz=37,slow=6.9,SNR=4.7						
BRTR	Keskin Array B	146.20	321	PKPbc	PKPab	18 58 23.4	0.0
	comp=Z,2.1nm,1.1s,baz=116,slow=2.9,SNR=7.1						

IDC 15 19:16:56.3±1.6**, 28°.90N**×**140°.25E, h0**^{km}**, mb3.6**/2**, mb1 3.6**/4**, mb1mx3.3**/30**, mbtmp3.5**/4**, ML2.8**/2**, Error ellipse: s-maj=67.7km s-min=26.9km az=66.0, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	2.48	136	Pn	Pn	19 17 38.4	+0.4
	5.5nm,0.3s,baz=288,slow=19,SNR=1.6						
JCJ				Sn	Sn	19 18 04.9	-4.0
	18nm,0.3s,baz=330,slow=20,SNR=4.6						
MJAR	Matsushiro Arr	7.81	348	Pn	Pn	19 18 49.4	-1.8
	0.1nm,0.3s,baz=161,slow=12,SNR=5.2						
WRA	Warramunga Arr	48.89	187	P	P	19 25 43.2	-0.8
	0.5nm,0.8s,baz=5.1,slow=7.5,SNR=5.8						
BRTR	Keskin Array B	83.53	312	P	P	19 29 27.4	+1.0
	0.6nm,0.9s,baz=54,slow=7.3,SNR=4.4						

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*NEIC **15** 19:34:55.6±0.8, 34°.3S±0°.2×77°.4E±0°.1, h10^{km}±1^{km}, mb4.6/8, Error ellipse: s-maj=30.3km s-min=15.9km az=184.0*

*IDC **15** 19:34:56.5±3.3, 33°.96S×77°.68E, h0^{km}, mb3.7/6, mb1 3.8/6, mb1mx3.5/53, mbtmp3.7/6, MS3.4/9, Ms1 3.4/9, ms1mx3.1/33, Error ellipse: s-maj=124.8km s-min=30.8km az=30.0*

ISC 15 19:34:55.4±0.8**, 34°.3S**±0°.2×**77°.3E**±0°.2**, h10**^{km}**, n25, σ1^s.18**/18**, mb4.1**/10**, MS3.4**/9**, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NWAO	Narrogin (SRO)	33.14	99	LR	LR	19 51 23.0	
	comp=Z,55nm,20.0s,baz=286,slow=30						
MAW	Mawson	34.36	190	P	P	19 41 42.7	+0.7
LEM	Lembang	39.13	53	LR	LR	19 54 23.0	
	comp=Z,55nm,18.8s,baz=192,slow=30						
FORT	Forrest	42.58	100	P	P	19 42 49.9	-1.7
FORT				IAmb	IAmb	19 42 53.5	
	comp=Z,17nm,1.0s						
BOSA	Boshof	44.36	263	LR	LR	19 57 24.9	
	comp=Z,51nm,21.9s,baz=96,slow=30						
ASAR	Alice Springs	50.08	94	P	P	19 43 50.9	+0.1
	comp=Z,0.2nm,0.5s,baz=239,slow=6.7,SNR=8.2						
ASAR				LR	LR	20 03 18.8	
	comp=Z,42nm,18.1s,baz=191,slow=34						
AS31	Alice Springs	50.08	94	P	P	19 43 50.1	-0.7
AS31				IAmb	IAmb	19 44 03.5	
	comp=Z,1.2nm,0.4s						
WRA	Warramunga Arr	52.13	90	P	P	19 44 06.8	+0.6
	comp=Z,0.9nm,0.7s,baz=245,slow=7.2,SNR=4.6						
WR0	Warramunga Arr	52.28	90	P	P	19 44 05.2	-2.1
WR0				IAmb	IAmb	19 44 10.7	
	comp=Z,13nm,1.4s						
MBAR	Mbarara	54.91	297	P	P	19 44 24.8	-2.0
MBAR				IAmb	IAmb	19 44 42.0	
	comp=Z,2.9nm,0.8s						
VNDA	Vanda	55.61	165	LR	LR	20 05 58.4	
	comp=Z,41nm,18.8s,baz=287,slow=33						
CMAR	Chiang Mai Arr	56.38	25	LR	LR	20 05 13.3	
	comp=Z,14nm,19.0s,baz=166,slow=32						
DZM	Mont Dzumac	77.22	108	LR	LR	20 20 03.1	
	comp=Z,31nm,18.2s,baz=53,slow=35						
MK31	Makanchi Array	80.87	3	P	P	19 47 09.5	+0.2
MKAR	Makanchi Array	80.87	3	P	P	19 47 10.2	+0.9
	comp=Z,0.8nm,0.7s,baz=176,slow=6.3,SNR=10						
MKAR	Makanchi Array	80.87	3	P	P	19 47 09.5	+0.2
BR131	Keskin Array S	84.00	328	P	P	19 47 26.0	+0.1
BR131				IAmb	IAmb	19 47 39.5	
	comp=Z,7.0nm,1.5s						
BRTR	Keskin Array B	84.00	328	P	P	19 47 28.3	+2.4
	comp=Z,0.4nm,0.8s,baz=163,slow=6.0,SNR=3.5						
BRTR	Keskin Array B	84.00	328	P	P	19 47 26.4	+0.5
KSRS	Korea Array	85.53	38	LR	LR	20 24 10.3	
	comp=Z,6.7nm,19.2s,baz=350,slow=35						
SONM	Songino Array	85.84	19	P	P	19 47 35.8	+0.8
	comp=Z,0.3nm,0.7s,baz=180,slow=6.3,SNR=4.0						
SONM				LR	LR	20 23 20.9	
	comp=Z,31nm,21.7s,baz=170,slow=34						
SONM	Songino Array	85.84	19	P	P	19 47 35.2	+0.2
ZALV	Zalesovo Beam	88.15	4	P	P	19 47 46.0	+0.1
	comp=Z,0.4nm,0.6s,baz=137,slow=5.2,SNR=3.7						
ZALV	Zalesovo Beam	88.15	4	P	P	19 47 45.6	-0.3
YKA	Yellowknife Ar	150.82	11	PKPbc	PKiKP	19 54 48.6	+0.7
	comp=Z,1.0nm,0.9s,baz=347,slow=2.5,SNR=12						

IDC 15 19:39:21.2±1.5**, 3°.39S**×**130°.69E, h0**^{km}**, mb3.3**/2**, mb1 3.6**/5**, mb1mx3.3**/56**, mbtmp3.4**/5**, ML3.1**/3**, MS4.0**/1**, Ms1 4.0**/1**, ms1mx2.5**/20**, Error ellipse: s-maj=60.1km s-min=22.5km az=86.0, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	2.56	13	Pn	Pn	19 40 02.3	-1.7
	2.3nm,0.3s,baz=53,slow=23,SNR=21						
SIJI				Sn	Sn	19 40 30.1	-5.9
	5.2nm,0.3s,baz=194,slow=24,SNR=15						
FITZ	Fitzroy Crossi	15.44	198	Pn	Pn	19 42 59.8	-0.6
	0.0nm,0.3s,baz=21,slow=14,SNR=2.6						
WRA	Warramunga Arr	16.84	168	Pn	Pn	19 43 18.4	0.0
	0.1nm,0.3s,baz=346,slow=11,SNR=5.1						
ASAR	Alice Springs	20.40	172	P	P	19 43 59.6	-0.3
	1.7nm,0.5s,baz=351,slow=11,SNR=43						
DZM	Mont Dzumac	39.34	121	LR	LR	20 04 25.9	
	comp=Z,214nm,18.8s,baz=187,slow=38						
MKAR	Makanchi Array	65.62	326	P	P	19 50 07.9	+0.7
	0.1nm,0.4s,baz=119,slow=7.7,SNR=2.3						

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*IDC **15** 19:46:52.3±9.7, 21°.00S×177°.54W, h568^{km}±61^{km}, mb2.9/4, mb1 3.3/5, mb1mx2.9/39, mbtmp3.9/5, Error ellipse: s-maj=206.7km s-min=26.8km az=142.0*

ISC 15 19:46:48.9±1.8**, 21°.4S**±0°.4×**177°.2W**±0°.3**, h550**^{km}**, n8, σ1^s.09**/8**, mb3.5**/4**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	5.79	308	P	P	19 48 25.8	+0.1
	16nm,0.3s,baz=99,slow=23,SNR=10.0						
ASAR	Alice Springs	45.08	257	P	P	19 54 17.2	+0.7
	1.8nm,0.8s,baz=91,slow=7.6,SNR=19						
WRA	Warramunga Arr	45.26	263	P	P	19 54 16.9	-0.9
	0.9nm,0.5s,baz=98,slow=8.0,SNR=19						
ILAR	Eielson Array	89.00	12	P	P	19 58 44.7	-0.1
	0.3nm,0.6s,baz=202,slow=6.8,SNR=4.4						
CMAR	Chiang Mai Arr	91.14	289	P	P	19 58 55.9	+0.1
	0.2nm,0.7s,baz=151,slow=2.5,SNR=4.1						
AKASG	Malin Array Be	144.15	331	PKP	PKPdf	20 05 20.5	-1.6
	0.6nm,0.4s,baz=45,slow=4.2,SNR=6.0						
BRTR	Keskin Array B	148.00	312	PKPbc	PKPbc	20 05 33.0	0.0
	0.3nm,0.6s,baz=151,slow=4.4,SNR=1.9						
GERES	GERESS Array B	151.25	345	PKPbc	PKiKP	20 05 42.1	+1.5
	0.1nm,0.5s,baz=4.3,slow=3.9,SNR=3.8						

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*DJA **15** 20:03:36.5±0.7, 8°S±5°×10°9E±°, h35^{km}±13^{km}, M4.4/7, mb4.5/3, mB5.0/1, MLv4.3/7, Mw(mB)4.3/1*

*IDC **15** 20:03:38.3±1.4, 7°.80S×109°.50E, h104^{km}±16^{km}, mb3.5/10, mb1 3.7/13, mb1mx3.5/47, mbtmp3.9/13, MS2.6/3, Ms1 2.7/3, ms1mx2.5/28, Error ellipse: s-maj=33.1km s-min=11.1km az=45.0*

ISC 15 20:03:36.9±0.7**, 8°.0S**±0°.1×**109°.30E**±0°.05**, h100**^{km}**, n23, σ1^s.61**/26**, mb3.9**/10**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UGM	Wanagama	1.21	84	P	Pn	20 03 59.3	-0.5
UGM				S	Sn	20 04 16.8	-0.3
SMRI	Semarang	1.49	49	P	Pn	20 04 04.9	+1.7
CISI	Cisompet, Garu	1.55	288	P	Pn	20 04 01.8	-2.1
CISI				S	Sn	20 04 20.7	-3.6
JCJI	Jatiwangi	1.84	326	P	Pn	20 04 06.2	-1.4
JCJI				S	Sn	20 04 29.0	-1.9
LEM	Lembang	2.06	306	P	Pn	20 04 11.3	+0.8
	15nm,0.3s,baz=44,slow=14,SNR=13						
LEM				S	Sn	20 04 39.5	+3.4
	38nm,0.3s,baz=44,slow=21,SNR=14						
LEM				LR	LR	20 04 54.8	
	comp=Z,65nm,19.6s,baz=62,slow=36						
DBJI	Dramaga	2.93	300	P	Pn	20 04 27.6	+5.8
TNG	Tangerang	3.22	305	P	Pn	20 04 18.4	-7.3
BLSI	Bandar Lampung	4.82	303	P	Pn	20 04 51.8	+4.5
KASI	Kota Agung	5.38	297	P	Pn	20 04 56.8	+1.9
	32nm,1.0s						
KSI	Kapahiang	7.97	303	P	Pn	20 05 32.6	+2.5
KAPI	Kappang	10.80	75	LR	LR	20 10 31.1	
	comp=Z,29nm,18.6s,baz=278,slow=39						
BATI	Baumata	14.34	100	P	Pn	20 06 54.0	-1.4
	1.4nm,0.3s,baz=143,slow=5.1,SNR=2.4						
FITZ	Fitzroy Crossi	18.78	124	P	Pn	20 07 50.3	+0.2
	0.1nm,0.3s,baz=349,slow=10,SNR=5.4						
WRA	Warramunga Arr	26.98	119	P	P	20 09 09.3	-0.2
	1.0nm,0.8s,baz=287,slow=12,SNR=4.6						
ASAR	Alice Springs	28.24	126	P	P	20 09 21.9	+1.1
	1.3nm,0.6s,baz=305,slow=9.4,SNR=16						
ASAR				PcP	PcP	20 12 33.4	+1.3
	0.3nm,0.4s,baz=310,slow=2.1,SNR=6.9						
CMAR	Chiang Mai Arr	28.24	339	P	P	20 09 21.0	+0.3
	0.4nm,0.5s,baz=172,slow=8.2,SNR=5.9						
CMAR				LR	LR	20 22 03.9	
	comp=Z,27nm,18.9s,baz=145,slow=39						
STKA	Stephens Creek	38.26	133	P	P	20 10 48.3	+0.7
	1.9nm,0.5s,baz=320,slow=7.0,SNR=10						
MJAR	Matsushiro Arr	51.99	30	P	P	20 12 35.2	-0.8
	0.7nm,0.6s,baz=202,slow=8.1,SNR=4.6						
SONM	Songino Array	55.68	358	P	P	20 13 01.9	-1.0
	0.3nm,0.5s,baz=169,slow=7.4,SNR=4.3						
SONM				PcP	PcP	20 14 02.1	+0.9
	0.6nm,0.9s,baz=186,slow=3.9,SNR=4.4						
MKAR	Makanchi Array	59.65	339	P	P	20 13 29.8	-0.8
	0.4nm,0.3s,baz=151,slow=7.1,SNR=16						
MKAR				PcP	PcP	20 14 17.8	+1.0
	0.6nm,0.7s,baz=153,slow=6.0,SNR=4.3						
KLR	Kul'dur	60.32	17	P	P	20 13 34.6	-0.5
	1.0nm,0.6s,baz=178,slow=4.9,SNR=4.6						
ZALV	Zalesovo Beam	65.12	344	P	P	20 14 05.9	-1.0
	0.8nm,0.3s,baz=156,slow=6.6,SNR=6.6						
BRTR	Keskin Array B	84.22	311	P	P	20 15 58.2	+0.5
	1.7nm,0.7s,baz=139,slow=7.5,SNR=13						

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*IDC **15** 20:04:10.7±9.9, 36°.18N×142°.73E, h0^{km}, mb3.4/2, mb1 3.3/3, mb1mx3.1/54, mbtmp3.3/3, ML2.2/1, Error ellipse: s-maj=171.0km s-min=83.5km az=145.0*

*JMA **15** 20:04:14.8±0.2, 36°.20N×142°.48E, h53^{km}, M2.9*

ISC 15 20:04:15.4±2.4**, 36°.2N**±0°.1×**142°.4E**±0°.2**, h18**^{km}**, n10, σ0^s.69**/12**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	1.33	249	P	Pn	20 04 38.7	-0.4
JHYU	Hitachinakayam	1.46	276	P	Pn	20 04 40.6	-0.3
JHYU				*e*S	Sn	20 04 59.6	+0.1
JHO	Hitachi	1.52	286	P	Pn	20 04 41.1	-0.6
ONAJ	Iwakimizuishiy	1.56	306	*e*S	Sn	20 05 01.8	-0.4
JMM	Marumori	2.10	323	*e*S	Sn	20 05 14.5	-0.7
JFT	Otama	2.11	309	P	Pn	20 04 49.8	0.0
JFT				*e*S	Sn	20 05 15.9	+0.4
JAG	Ashikaga	2.38	276	*e*S	Sn	20 05 22.2	0.0
MJAR	Matsushiro Arr	3.39	277	Pn	Pn	20 05 07.9	+0.5
	0.2nm,0.3s,baz=91,slow=16,SNR=13						
SONM	Songino Array	28.90	305	P	P	20 10 14.6	+1.3
	0.4nm,0.8s,baz=93,slow=9.8,SNR=2.7						
MKAR	Makanchi Array	45.23	303	P	P	20 12 30.5	-1.0
	0.4nm,0.8s,baz=77,slow=6.5,SNR=4.0						

WEL 15 20:06:56.9, 45°S±2°×**16°8E**±°**, h118**^{km}±3^{km}**, M3.6**/16**, MLv3.6**/16**, Error ellipse: s-maj=0.0km s-min=0.0km az=72.3, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DCZ	Deep Cove	0.47	216	P	Pn	20 07 14.0	-0.3
DCZ				S	Sn	20 07 26.7	-0.9
MSZ	Milford Sound	0.49	34	P	Pn	20 07 14.9	+0.4
MSZ				S	Sn	20 07 27.6	-0.2
MLZ	Mavora Lakes	0.49	125	P	Pn	20 07 15.2	+0.6
MLZ				S	Sn	20 07 28.7	+0.7
WHZ	Wether Hill Ro	0.86	161	P	Pn	20 07 18.1	+0.7
WHZ				S	Sn	20 07 33.6	+0.8
WKZ	Wanaka	1.08	77	P	Pn	20 07 20.5	+1.0
WKZ				S	Sn	20 07 37.3	+0.6
PYZ	Puysegur Point	1.24	209	P	Pn	20 07 21.3	+0.1
PYZ				S	Sn	20 07 39.0	-0.7
EAZ	Earnscleugh	1.26	97	P	Pn	20 07 22.4	+1.0
EAZ				S	Sn	20 07 40.0	0.0
JCZ	Jackson Bay	1.34	42	P	Pn	20 07 22.3	-0.2
JCZ				S	Sn	20 07 40.6	-1.3
TUZ	Tuapeka	1.71	121	P	Pn	20 07 27.8	+1.3
TUZ				S	Sn	20 07 48.7	-0.5
APZ	The Paps	1.77	170	P	Pn	20 07 27.9	+0.5
APZ				S	Sn	20 07 51.1	+0.3
SYZ	Scrubby Hill	1.83	143	P	Pn	20 07 29.3	+1.2
SYZ				S	Sn	20 07 52.0	0.0
LBZ	Lake Benmore	2.01	71	P	Pn	20 07 29.9	-0.4
LBZ				S	Sn	20 07 54.3	-1.6
ODZ	Otahua Downs	2.20	90	P	Pn	20 07 32.9	+0.2
ODZ				S	Sn	20 07 58.4	-1.7
FOZ	Fox Glacier	2.25	47	P	Pn	20 07 32.3	-1.1
FOZ				S	Sn	20 07 59.3	-2.0
HHSZ	Highcliff Hill	2.29	112	P	Pn	20 07 34.9	+1.0
HHSZ				S	Sn	20 08 01.2	-1.1
TMZ	Timaru	2.56	75	P	Pn	20 07 36.7	-0.7
GCSZ	Gaunt Creek Bo	2.67	50	P	Pn	20 07 37.3	-1.5
ARCZ	Arundel	2.84	68	P	Pn	20 07 40.2	-0.8
RPZ	Rata Peaks	2.86	63	P	Pn	20 07 40.3	-1.0
RPZ				S	Sn	20 08 13.2	-2.3
WVZ	Waitaha Valley	3.05	50	P	Pn	20 07 42.6	-1.2
WVZ				S	Sn	20 08 16.6	-3.4
INZ	Inchbonnie	3.67	51	P	Pn	20 07 50.5	-1.5
OXZ	Oxford	3.68	63	P	Pn	20 07 51.2	-0.8
MQZ	McQueen's Vall	3.91	71	P	Pn	20 07 55.1	0.0
LTZ	Lake Taylor	4.12	58	P	Pn	20 07 55.9	-2.1
OKCZ	Okains Bay	4.18	73	P	Pn	20 07 59.3	+0.6
GVZ	Greta Valley S	4.49	64	P	Pn	20 08 02.2	-0.7
DSZ	Denniston Nort	4.56	44	P	Pn	20 08 01.9	-2.0
THZ	Tophouse	5.12	51	P	Pn	20 08 09.4	-2.1
QRZ	Quartz Range	5.61	42	P	Pn	20 08 16.7	-1.3
OTVZ	Oturere	8.45	48	P	Pn	20 08 55.5	-1.0

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*DJA **15** 20:09:48.4±0.9, 2°N±7°×12°9E±°, h175^{km}±17^{km}, M3.7/6, MLv3.7/6*

*IDC **15** 20:09:57.8±4.5, 1°.89N×128°.13E, h129^{km}±52^{km}, mb3.2/5, mb1 3.4/6, mb1mx3.1/44, mbtmp3.7/6, MS3.1/1, Ms1 3.1/1, ms1mx2.5/14, Error ellipse: s-maj=74.5km s-min=17.8km az=78.0*

ISC 15 20:09:57.8±1.0**, 1°.9N**±0°.1×**128°.1E**±0°.1**, h134**^{km}**, n10, σ1^s.05**/8**, mb3.6**/4**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.33	214	P	Pn	20 10 25.0	+0.6
SGSI	Sangihe	3.15	305	P	Pn	20 10 45.9	-0.6
SWI	Sorong	4.16	131	P	Pn	20 10 45.6	-14
SIJI	Sorong	4.17	131	P	Pn	20 10 59.6	-0.2
	3.4nm,0.3s,baz=302,slow=19,SNR=9.3						
FITZ	Fitzroy Crossi	20.00	187	P	Pn	20 14 21.1	-1.9
	3.0nm,1.1s,baz=7.3,slow=8.7,SNR=4.3						
WRA	Warramunga Arr	22.53	165	P	P	20 14 47.1	+0.5
	1.3nm,0.4s,baz=344,slow=11,SNR=22						
ASAR	Alice Springs	26.01	168	P	P	20 15 19.0	+0.5
	0.7nm,0.6s,baz=352,slow=7.7,SNR=11						
PSI	Prapat	29.18	272	LR	LR	20 27 14.9	
	comp=Z,43nm,21.9s,baz=212,slow=36						
SONM	Songino Array	49.49	341	P	P	20 18 35.3	+0.6
	0.3nm,0.5s,baz=148,slow=8.7,SNR=3.7						
MKAR	Makanchi Array	59.86	325	P	P	20 19 49.7	+0.3
	0.4nm,0.3s,baz=114,slow=7.7,SNR=16						

JMA 15 20:31:10.9±0.2**, 37°.43N**×**144°.67E, h57**^{km}**, M3.7, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	2.68	290	P	Pn	20 31 52.9	+1.3
JIKH				S	Sn	20 32 24.1	+1.2
JIO	Ouri	2.82	292	P	Pn	20 31 55.1	+1.7
JIO				S	Sn	20 32 27.7	+1.5
JKMT	Kesennumamotoy	2.87	300	P	Pn	20 31 55.3	+1.1
JKMT				S	Sn	20 32 28.9	+1.3
OFUJ	Ofunato	2.88	306	P	Pn	20 31 55.7	+1.4
OFUJ				*e*S	Sn	20 32 29.2	+1.5
JMK	Ichinoseki	3.11	300	P	Pn	20 31 59.1	+1.6
JMK				*e*S	Sn	20 32 35.3	+1.8
JOM	Ohasama	3.34	309	S	Sn	20 32 41.5	+2.3
BSO1	Boso 1	4.08	228	*e*S	Sn	20 32 55.8	-0.6
JRY	Ryogami san	4.84	255	P	Pn	20 32 21.7	+0.4
JRY				S	Sn	20 33 14.8	-1.2
JCH	Churui	5.27	349	P	Pn	20 32 26.4	-0.7
NEM2	Nemuro 2	5.99	8	P	Pn	20 32 34.0	-2.8
JTKR	Abashiri--Toko	6.56	355	P	Pn	20 32 43.9	-0.8

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*IDC **15** 20:33:24.2±1.3, 3°.31S×139°.97E, h0^{km}, mb3.6/3, mb1 4.0/4, mb1mx3.6/22, mbtmp3.8/4, ML4.0/1, MS3.0/1, Ms1 3.0/1, ms1mx2.4/24, Error ellipse: s-maj=47.1km s-min=11.5km az=130.0*

*DJA **15** 20:33:24.1±1.0, 3°S±5°×14°0E±°, h10^{km}, M3.7/3, MLv3.7/3*

ISC 15 20:33:27.6±1.1**, 3°.41S**±0°.08×**140°.4E**±0°.2**, h35**^{km}**, n8, σ0^s.99**/9**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GENI	Genyem	0.84	345	P	Pn	20 33 42.4	-0.5
GENI				S	Sn	20 33 55.3	+1.3
JAY	Jayapura	0.94	20	Pg	Pn	20 33 45.1	+0.7
	2.9nm,0.3s,baz=68,slow=22,SNR=36						
JAY				Lg	Lg	20 33 59.6	
	21nm,0.3s,baz=87,slow=19,SNR=17						
JAY	Jayapura	0.94	20	P	Pn	20 33 44.7	+0.3
JAY				S	Sn	20 33 55.4	-1.3
WRA	Warramunga Arr	17.46	199	P	Pn	20 37 28.0	-0.5
	0.5nm,0.3s,baz=21,slow=13,SNR=13						
GUMO	Guam	17.46	15	LR	LR	20 43 25.2	
	comp=Z,45nm,20.0s,baz=111,slow=34						
FITZ	Fitzroy Crossi	20.54	224	P	P	20 38 02.7	-0.5
	2.6nm,0.9s,baz=30,slow=8.1,SNR=2.4						
ASAR	Alice Springs	21.09	197	P	P	20 38 10.2	+1.1
	5.5nm,0.8s,baz=25,slow=8.8,SNR=47						
MKAR	Makanchi Array	71.36	322	P	P	20 44 43.9	-0.2
	0.3nm,1.0s,baz=114,slow=6.6,SNR=1.8						

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*IDC **15** 20:51:37.0±0.7, 10°.02N×91°.58E, h0^{km}, mb4.0/11, mb1 4.1/12, mb1mx3.9/36, mbtmp4.0/12, ML3.9/1, MS4.2/2, Ms1 4.2/2, ms1mx3.1/38, Error ellipse: s-maj=31.7km s-min=14.8km az=57.0*

*NEIC **15** 20:51:40.5±0.9, 9°.96N±0°.09×91°.7E±0°.2, h35^{km}±2^{km}, mb4.0/8, Error ellipse: s-maj=30.5km s-min=15.7km az=97.0*

*NDI **15** 20:51:51.1±6.1, 11°.28N×91°.74E, h42^{km}±999^{km}, ML3.0, mb4.0(NEIC)*

ISC 15 20:51:41.8±0.7**, 10°.1N**±0°.1×**91°.5E**±0°.1**, h35**^{km}**, n45, σ1^s.23**/41**, mb4.0**/13**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBA	Port Blair	1.93	38	*e*P	Pn	20 52 10.9	-1.2
PBA				*e*S	Sn	20 52 18.1	-17
PBA				IAML		20 52 29.4	
	comp=E,309nm,0.7s						
PBA				IAML		20 52 46.0	
	comp=N,257nm,0.7s						
PBA	Port Blair	1.93	38	Pn	Pn	20 52 11.0	-1.2
DGPR	DIGLIPUR	3.33	24	*e*x	x	20 52 28.5	
DGPR				*e*S	Sn	20 52 42.6	-27
DGPR				IAML		20 52 52.5	

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       comp=N,122nm,0.9s
DGPR                               IAML            20 52 52.9
       comp=E,115nm,1.6s
CMAR   Chiang Mai Arr    10.96  40 Pn      Pn      20 54 16.9 +0.7
       comp=E,0.2nm,0.3s,baz=238,slow=15,SNR=9.5
CMAR                               LR      LR      20 59 05.4
       comp=E,35nm,20.0s,baz=205,slow=41
VIS    Vishakhapatnam    10.98 314 eP      Pn      20 54 14.9 -1.6
BWNR   Bhubaneshwar      11.53 332 eP      Pn      20 54 20.2 -3.8
BWNR                               ex      x       20 56 20.4
SHL    Shillong          15.37   1 Pn      Pn      20 55 15.3 -1.0
SHL                                IAmb    IAmb    20 55 21.6
       comp=Z,7.9nm,0.7s
SLVN   Son La            16.30  45         P       20 55 29.6 -1.2
ODAN   Odare             17.11 347 eP      P       20 55 38.9 -1.0
       comp=Z,10.0nm,0.6s
RAMN   Ramite            17.38 345 eP      P       20 55 42.6 -0.4
       comp=Z,20nm,0.6s
TAPN   Taplejung         17.51 349 eP      P       20 55 43.5 -1.0
       comp=Z,9.9nm,0.6s
PKI    Pulchoki          18.29 342 eP      Pn      20 55 54.4 +1.2
       comp=Z,13nm,0.6s
PKIN   Phulchoki         18.30 342 eP      Pn      20 55 54.4 +1.1
       comp=Z,15nm,0.5s
DMN    Daman             18.42 342 eP      Pn      20 55 55.9 +1.2
       comp=Z,18nm,0.7s
GUN    Gumba             18.48 344 eP      Pn      20 55 56.3 +0.8
GKN    Gorkha            18.94 341 eP      Pn      20 56 01.0 +0.1
       comp=Z,21nm,0.7s
DANN   Dangsing          19.55 339 eP      Pn      20 56 08.2 -0.2
       comp=Z,16nm,0.8s
H08S3  Diego Garcia H    25.90 228 T       T       21 24 01.6
       baz=48,slow=76,SNR=182
H08S2  Diego Garcia H    25.91 228 T       T       21 23 58.6
       baz=48,slow=76,SNR=70
H08S1  Diego Carcia H    25.92 228 T       T       21 23 59.7
       baz=48,slow=76,SNR=31
MK31   Makanchi Array    37.38 350 P       P       20 58 51.8 +0.5
MK31                               IAmb    IAmb    20 58 53.1
       comp=Z,1.5nm,0.8s
MKAR   Makanchi Array    37.38 350 P       P       20 58 52.3 +1.1
       comp=Z,1.8nm,0.6s,baz=169,slow=8.4,SNR=21
MKAR                               PcP     PcP     21 01 10.8 +1.1
       comp=Z,0.5nm,0.6s,baz=201,slow=3.1,SNR=6.4
MKAR   Makanchi Array    37.38 350 P       P       20 58 51.6 +0.3
KKAR   Karatay Array     37.63 335 P       P       20 58 52.4 -1.0
SONM   Songino Array     39.62  16 P       P       20 59 11.4 +1.2
       comp=Z,1.2nm,0.5s,baz=199,slow=9.2,SNR=14
SONM                               PcP     PcP     21 01 17.8 +1.0
       comp=Z,0.3nm,0.7s,baz=208,slow=5.7,SNR=2.6
SONM   Songino Array     39.62  16 P       P       20 59 09.9 -0.3
GEYT   Alibeck           40.82 318 P       P       20 59 22.4 +2.3
       comp=Z,1.6nm,0.5s,baz=139,slow=9.5,SNR=4.6
GEYT   Alibeck           40.82 318 P       P       20 59 20.6 +0.4
KURBB  Kurchatov Arra    41.78 348 P       P       20 59 29.1 +1.3
       comp=Z,1.3nm,0.9s,baz=174,slow=7.4,SNR=14
KURBB                              PcP     PcP     21 01 24.3 +0.8
       comp=Z,0.5nm,0.7s,baz=166,slow=3.5,SNR=6.3
KURK   Kurchatov         41.85 348 P       P       20 59 28.2 -0.1
KURK                               IAmb    IAmb    20 59 30.6
       comp=Z,6.2nm,1.4s
ZALV   Zalesovo Beam     44.04 354 P       P       20 59 46.6 +0.6
       comp=Z,1.0nm,0.4s,baz=162,slow=10,SNR=9.3
ZALV   Zalesovo Beam     44.04 354 P       P       20 59 46.2 +0.2
ABKAR  Akbulak array     47.05 332 P       P       21 00 10.8 +0.9
WRA    Warramunga Arr    51.65 125 P       P       21 00 45.0 -0.5
       comp=Z,2.9nm,0.7s,baz=305,slow=8.7,SNR=28
WRA    Warramunga Arr    51.65 125 P       P       21 00 42.1 -3.4
ASAR   Alice Springs     53.32 130 P       P       21 00 57.5 -0.4
       comp=Z,1.5nm,0.7s,baz=307,slow=7.6,SNR=13
ASAR                               PcP     PcP     21 02 05.5 +0.3
       comp=Z,0.7nm,0.7s,baz=299,slow=3.5,SNR=4.4
KBZ    Khabaz            53.71 318 P       P       21 01 01.2 +0.9
       comp=Z,0.9nm,0.8s,baz=121,slow=3.3,SNR=4.5
BRTR   Keskin Array B    59.02 310 P       P       21 01 38.5 -0.1
       comp=Z,0.8nm,0.6s,baz=136,slow=6.9,SNR=5.9
STKA   Stephens Creek    63.51 133 P       P       21 02 08.4 -0.4
       comp=Z,1.7nm,0.5s,baz=313,slow=4.0,SNR=5.8
CLL    Collm             75.00 320 eP      P       21 03 19.0 -0.7
HFS    Hagfors           75.23 330 LR      LR      21 37 31.5
       comp=Z,52nm,18.3s,baz=281,slow=37
ILAR   Eielson Array     93.62  21 P       P       21 04 54.1 -0.1
       comp=Z,0.3nm,0.7s,baz=225,slow=4.0,SNR=4.2
VNDA   Vanda             95.64 168 LR      LR      21 45 01.8
       comp=Z,217nm,18.0s,baz=2.0,slow=34
NVAR   Mina Array Bea   124.25  28 PKP     PKiKP   21 10 39.4 +1.5
       comp=Z,0.4nm,0.4s,baz=266,slow=2.6,SNR=3.6
PLCA   Paso Flores      145.64 204 PKPbc   PKPab   21 11 18.1 +0.6
       comp=Z,1.3nm,0.7s,baz=144,slow=1.6,SNR=4.3
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BJI ***15*** *21:08:40.2±0.0, 10°.65S×165°.79E, h40km, mB5.2/44, mb5.0/73, Ms4.9/36, Ms7 4.6/38*

MOS ***15*** *21:08:40.2±0.9, 10°.80S×165°.55E, h39km, mb5.3/24, Error ellipse: s-maj=8.6km s-min=6.9km az=119.2*

IDC ***15*** *21:08:42.5±2.4, 10°.85S×165°.66E, h46km±21km, mb4.8/24, mb1 4.9/26, mb1mx4.9/35, mbtmp5.0/26, ML5.2/2, MS4.4/28, Ms1 4.4/28, ms1mx4.4/34, Error ellipse: s-maj=15.1km s-min=11.9km az=74.0*

GCMT ***15*** *21:08:42.0±0.2, 10°.90S±0°.02×165°.38E±0°.01, h30km, MW5.1/98, Moment Tensor Solution. s90,c134; s98,c140; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-5.56±.14; $M_{\theta\theta}$0.67±.11; $M_{\phi\phi}$4.89±.10; $M_{r\theta}$-1.41±.19; $M_{\theta\phi}$-1.09±.09; $M_{\phi r}$1.26±.13; Best double couple: $M_0$5.67000×10^{16} NP1:ϕ_s355.00000°,δ38.00000°, λ-75.00000°. NP2:ϕ_s156.00000°,δ54.00000°, λ-101.00000°. Principal axes: T 5.3810, Plg8.0000°, Azm255.0000°; N 0.5780, Plg9.0000°, Azm163.0000°; P -5.9590, Plg78.0000°, Azm26.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***15*** *21:08:44.0±0.8, 10°.91S±0°.07×165°.58E±0°.08, h64km±2km, mb5.2/252 Error ellipse: s-maj=13.3km s-min=8.6km az=51.0*

ISC 15 21:08:41.4±0.7**, 10°.86S**±0°.05×**165°.72E**±0°.05**, h40**km±5km**, n656,** σ**1^s.18**/620**, mB5.2**/197**, MS4.6**/40**, 30C-41D, Fault plane solution: NP1:**ϕ_s330.72284°, δ33.74860°, λ-83.07327°. **NP2:**ϕ_s142.41028°, δ56.53036°, λ-94.60683°. **Principal axes:** T Plg11.4189°, Azm235.7319°; N Plg3.8416°, Azm144.9547°; P Plg77.9356°, Azm36.6434°; **Santa Cruz Islands**

```
Code   Station Name          Δ°  AZ° Phase ID        Time       Res
                                   Op      ISC      h  m  s    ISC
SANVU  Saraoutou          4.78 163 Pn      Pn      21 09 51.9 +0.9
SANVU                              Sn      Sn      21 10 46.6 +1.4
SANVU  Saraoutou          4.78 163 P       Pn      21 09 52.7 +1.7
HNR    Honiara            5.86 284 P       Pn      21 10 06.5 +0.8
       154nm,0.3s,baz=155,slow=2.3,SNR=31
HNR                                S       Sn      21 11 11.5 -0.1
       74nm,0.3s,baz=196,slow=23,SNR=6.9
HNR                                LR      LR      21 12 33.3
       comp=Z,8μm,19.2s,baz=128,slow=40
HNR    Honiara            5.86 284 Pn      Pn      21 10 06.4 +0.8
HNR                                        Sn      21 11 10.4 -1.2
HNR    Honiara            5.86 284 P       Pn      21 10 06.7 +1.0
DVP    Devils Point       7.23 161 P       Pn      21 10 28.6 +4.0
KOUNC  Koumac, New Ca     9.73 188 P       Pn      21 11 00.6 +1.7
LIFNC  LIFOU              9.97 172 P       Pn      21 11 03.6 +1.5
DZM    Mont Dzumac       11.17 177 P       Pn      21 11 20.3 +1.6
       7.2nm,0.3s,baz=308,slow=21,SNR=80
DZM                                LR      LR      21 14 54.6
       comp=Z,1μm,21.6s,baz=35,slow=33
DZM    Mont Dzumac       11.17 177 ePn     Pn      21 11 21.9 +3.2
       274nm,1.3s
DZM                                eSn     Sn      21 13 19.0 -3.3
       170nm,1.1s
DZM                                eLR     LR      21 13 55.2
       comp=Z,2μm,24.6s
DZM    Mont Dzumac       11.17 177 Pn      Pn      21 11 20.2 +1.6
DZM                                Sn      Sn      21 13 22.8 +0.5
DZM    Mont Dzumac       11.17 177 P       Pn      21 11 20.3 +1.6
YATNC  Mamie plateau,    11.19 174 P       Pn      21 11 20.6 +1.7
ONTNC  Ouen Toro         11.41 177 P       Pn      21 11 24.4 +2.6
OUENC  Ouen Island, N    11.54 175 P       Pn      21 11 26.4 +2.7
MSVF   Nonsavu           13.76 121 LR      LR      21 16 10.1
       comp=Z,4μm,19.8s,baz=311,slow=32
MSVF   Nonsavu           13.76 121 i P     Pn      21 11 52.7 -1.4
MSVF   Nonsavu           13.76 121 P       P       21 12 02.9 +1.0
RABL   Rabaul            14.97 295 P       P       21 12 14.3 -1.0
PMG    Port Moresby      18.33 273 LR      LR      21 20 00.2
       comp=Z,3μm,19.1s,baz=118,slow=37
PMG    Port Moresby      18.33 273 i P     Pn      21 12 55.8 +3.1
PMG                                pmax    pmax
       comp=Z,25nm,1.1s
EIDS   Eidsvold          20.01 222 P       Pn      21 13 13.4 +0.6
       baz=20,SNR=7.7
EIDS   Eidsvold          20.01 222         P       21 13 10.3 -0.5
CTAO   Charters Tower    20.86 242 P       P       21 13 19.8 -0.3
CTAO                               pmax    pmax
       comp=Z,120nm,1.0s
CTAO   Charters Tower    20.86 242 P       P       21 13 19.8 -0.3
CTAO                               IAmb    IAmb    21 13 34.1
       comp=Z,120nm,1.0s
MTSU   Mount Surprise    21.93 248 P       P       21 13 32.3 +0.7
       baz=22,SNR=24
COEN   Coen              22.23 260 P       P       21 13 34.7 -0.1
RMQ    Roma              22.31 224 P       P       21 13 37.8 +2.2
       baz=22,SNR=5.1
ARMA   Armidale          23.46 212 P       P       21 13 48.8 +1.4
       baz=24,SNR=11
ARMA   Armidale          23.46 212 P       P       21 13 48.9 +1.4
KNTN   Kanton            23.78  72 P       P       21 13 51.5 +1.0
RAO    Raoul Island      23.84 142 LR      LR      21 21 37.6
       comp=Z,2μm,19.7s,baz=136,slow=32
OUZ    Omahuta           25.29 165 P       P       21 14 04.5 +0.4
OUZ                                IAmb    IAmb    21 14 07.9
       comp=Z,89nm,0.9s
JAY    Jayapura          26.17 287 LR      LR      21 25 44.4
       comp=Z,1μm,18.1s,baz=70,slow=39
QIS    Mount Isa         26.88 246 P       P       21 14 19.6 +0.8
       baz=27,SNR=6.7
CNB    Canberra Magne    28.53 209 P       P       21 14 35.0 +1.6
       baz=29,SNR=6.5
WHRZ   Whale Island      28.72 161 P       P       21 14 38.4 +3.5
OMRZ   Omania            28.76 162 P       P       21 14 39.3 +4.0
HAZ    Te Kaha           28.89 160 P       P       21 14 39.3 +2.9
RUGZ   Raukumara Rang    29.05 160 P       P       21 14 39.8 +1.8
PKGZ   Pakihiroa         29.11 160 P       P       21 14 41.4 +2.9
URZ    Urewera           29.13 161 P       P       21 14 38.9 +0.4
       comp=Z,50nm,0.9s,baz=2.8,slow=4.9,SNR=17
URZ    Urewera           29.13 161 P       P       21 14 40.1 +1.5
MUGZ   Murupara          29.23 162 P       P       21 14 42.0 +2.6
MWZ    Matawai           29.33 161 P       P       21 14 41.5 +1.1
TWGZ   Tauwhareparae     29.34 160 P       P       21 14 42.2 +1.7
KATZ   Kakaramea         29.38 164 P       P       21 14 44.1 +3.2
RTZ    Ruatahuna         29.42 162 P       P       21 14 42.7 +1.5
RAGZ   Rawiri            29.44 161 P       P       21 14 43.2 +1.7
MRHZ   Matea Rd          29.45 163 P       P       21 14 44.6 +3.2
TMVZ   Te Maari          29.52 164 P       P       21 14 45.3 +3.2
ETVZ   East Tongariro    29.54 164 P       P       21 14 47.7 +5.4
NGZ    Ngauruhoe         29.54 164 P       P       21 14 46.3 +3.9
OTVZ   Oturere           29.55 164 P       P       21 14 45.7 +3.2
MTHZ   Maungataniwha     29.59 162 P       P       21 14 44.7 +2.0
SNGZ   Shannon Statio    29.68 161 P       P       21 14 44.9 +1.5
CNGZ   Carnagh Statio    29.69 160 P       P       21 14 44.7 +1.2
RAHZ   Arahi             29.73 162 P       P       21 14 45.7 +1.9
RIGZ   Rimuhau           29.75 161 P       P       21 14 45.2 +1.2
BKZ    Black Stump Fm    29.78 163 P       P       21 14 44.8 +0.4
BKZ    Black Stump Fm    29.78 163 P       P       21 14 46.2 +1.8
ARHZ   Aropaoanui        30.02 162 P       P       21 14 48.1 +1.7
TSZ    Takapari Road     30.47 164 P       P       21 14 51.8 +1.4
STKA   Stephens Creek    30.56 223 P       P       21 14 52.6 +1.3
       baz=31,SNR=8.5
STKA   Stephens Creek    30.56 223 P       P       21 14 50.8 -0.5
       comp=Z,6.3nm,0.8s,baz=45,slow=8.6,SNR=14
STKA                               PcP     PcP     21 17 50.4 +0.9
       comp=Z,9.0nm,0.8s,baz=89,slow=2.8,SNR=5.5
STKA                               LR      LR      21 26 47.8
       comp=Z,1μm,18.3s,baz=43,slow=36
STKA   Stephens Creek    30.56 223 P       P       21 14 51.0 -0.2
PXZ    Pawanui           30.69 163 P       P       21 14 52.9 +0.6
BFZ    Birch Farm        31.13 164 P       P       21 14 56.8 +0.6
TUWZ   Tuamarina         31.30 168 P       P       21 14 58.1 +0.5
WR0    Warramunga Arr    31.34 249 P       P       21 14 55.0 -3.4
THZ    Tophouse          31.42 170 P       P       21 14 59.4 +0.5
THZ                                IAmb    IAmb    21 15 10.6
       comp=Z,57nm,0.8s
WB0    Warramunga Arr    31.43 250 P       P       21 14 58.7 -0.5
WB0                                IAmb    IAmb    21 15 00.2
       comp=Z,35nm,0.8s
WRAB   Tennant Creek     31.51 250ceP      P       21 14 58.8 -1.0
WRAB                               pmax    pmax
       comp=Z,77nm,2.5s
WB2    Warramunga Arr    31.51 250 P       P       21 14 59.2 -0.7
WB2                                IAmb    IAmb    21 15 01.3
       comp=Z,41nm,1.1s
WRA    Warramunga Arr    31.52 250 P       P       21 14 58.9 -1.1
       comp=Z,25nm,0.9s,baz=82,slow=9.2,SNR=72
WRA                                PcP     PcP     21 17 53.1 +0.8
       comp=Z,6.3nm,0.8s,baz=79,slow=3.0,SNR=8.0
WRA                                LR      LR      21 27 44.0
       comp=Z,2μm,18.2s,baz=80,slow=36
WRA    Warramunga Arr    31.52 250 i P     P       21 14 58.9 -1.1
WRA                                pmax    pmax
       comp=Z,22nm,0.8s
WRA    Warramunga Arr    31.52 250 P       P       21 14 58.8 -1.1
WRA                                        PcP     21 17 51.7 -0.6
MSWZ   Moikau Station    31.57 166 P       P       21 15 00.6 +0.5
PLWZ   Palliser          31.72 166 P       P       21 15 01.9 +0.5
GUMO   Guam              31.90 319 LR      LR      21 25 28.5
       comp=Z,252nm,20.3s,baz=120,slow=32
TOO    Toolangi          32.22 211 P       P       21 15 07.5 +1.6
       baz=32,SNR=6.3
TOO    Toolangi          32.22 211 P       P       21 15 05.7 -0.2
TOO                                pmax    pmax
       comp=Z,30nm,0.9s
TOO    Toolangi          32.22 211 P       P       21 15 05.7 -0.2
TOO                                IAmb    IAmb    21 15 16.8
       comp=Z,30nm,0.8s
LTZ    Lake Taylor       32.31 171 P       P       21 15 06.9 +0.2
KDU    Kakadu            32.58 263 P       P       21 15 07.5 -1.8
       baz=32,SNR=3.3
FOZ    Fox Glacier       32.74 174 P       P       21 15 10.2 -0.1
FOZ                                IAmb    IAmb    21 15 24.4
       comp=Z,36nm,0.8s
OXZ    Oxford            32.81 171 P       P       21 15 11.0 +0.1
OXZ                                IAmb    IAmb    21 15 21.7
       comp=Z,42nm,0.8s
AS31   Alice Springs     32.85 243 P       P       21 15 11.1 -0.5
ASAR   Alice Springs     32.85 243 P       P       21 15 10.8 -0.8
       comp=Z,26nm,0.8s,baz=65,slow=10,SNR=202
ASAR                               PcP     PcP     21 17 56.8 +0.8
       comp=Z,7.8nm,0.7s,baz=68,slow=2.9,SNR=14
ASAR                               LR      LR      21 27 28.6
       comp=Z,950nm,20.1s,baz=68,slow=34
ASAR   Alice Springs     32.85 243 P       P       21 15 10.7 -0.9
ASAR                                       PcP     21 17 57.1 +1.2
RPZ    Rata Peaks        33.06 173 P       P       21 15 13.9 +0.8
       comp=Z,22nm,0.8s,baz=323,slow=1.7,SNR=12
RPZ                                LR      LR      21 28 04.2
       comp=Z,390nm,18.9s,baz=293,slow=35
RPZ    Rata Peaks        33.06 173 P       P       21 15 13.3 +0.2
RPZ                                IAmb    IAmb    21 15 23.5
       comp=Z,58nm,1.1s
MQZ    McQueen's Vall    33.27 171 P       P       21 15 15.2 +0.3
MQZ                                IAmb    IAmb    21 15 26.4
       comp=Z,35nm,0.7s
HTT    Hallett           33.29 223 P       P       21 15 16.4 +1.0
       baz=33,SNR=7.7
LBZ    Lake Benmore      33.63 174 P       P       21 15 19.1 +1.0
DCZ    Deep Cove         34.51 178 P       P       21 15 25.9 +0.3
DCZ                                IAmb    IAmb    21 15 41.5
       comp=Z,29nm,1.2s
BBOO   Buckleboo         34.93 227 P       P       21 15 30.2 +0.7
       baz=35,SNR=7.4
BBOO   Buckleboo         34.93 227 P       P       21 15 28.9 -0.6
BBOO                               IAmb    IAmb    21 15 31.1
       comp=Z,40nm,0.9s
WRKA   Warakurna         38.14 243 P       P       21 15 56.8 -0.3
       baz=38,SNR=29
FITZ   Fitzroy Crossi    39.40 255 P       P       21 16 07.1 -0.5
       baz=39,SNR=15
FITZ   Fitzroy Crossi    39.40 255 P       P       21 16 06.7 -0.9
FITZ                               IAmb    IAmb    21 16 09.2
       comp=Z,18nm,0.8s
BATI   Baumata           41.33 267 P       P       21 16 24.7 +1.0
       comp=Z,19nm,0.8s
MMRI   Maumere           42.88 269 P       P       21 16 36.1 -0.2
       comp=Z,2μmcomp=Z,47nm,1.0s
EDFI   Ende, Flores      43.41 269 P       P       21 16 39.3 -1.4
       comp=Z,10nm,1.0s
PPT2   Papeete2          43.77 104 eS      S       21 23 26.0 +14
       comp=Z,323nm,26.2s
PPT2                               eLQ     LQ      21 27 10.6
       comp=Z,4μm,39.0s
PPT2                               eLR     LR      21 29 09.6
       comp=Z,1μm,21.5s,baz=278
GTOI   Gorontalo         43.97 282 P       P       21 16 45.5 +0.4
       comp=Z,21nm,1.3s
TBI    Tubuai            44.43 112 eS      S       21 23 32.0 +11
       comp=Z,285nm,28.0s
TBI                                eLQ     LQ      21 27 31.4
       comp=Z,496nm,34.2s
TBI                                eLR     LR      21 29 24.5
       comp=Z,1μm,24.5s,baz=287
APSI   Ampana            44.87 280 P       P       21 16 52.2 -0.1
       comp=Z,439nmcomp=Z,26nm,1.3s
PSA00  Pilbara Seismi    45.17 250 P       P       21 16 53.6 -0.9
PSA00                              IAmb    IAmb    21 17 05.4
       comp=Z,23nm,0.9s
PSA00  Pilbara Seismi    45.17 250 P       P       21 16 53.8 -0.8
PSA00                              IAmb    IAmb    21 17 04.7
       comp=Z,11nm,0.7s
KMBL   Kambalda          45.33 236 P       P       21 16 56.7 +0.9
       baz=45,SNR=6.3
BNSI   Bone              45.62 274 P       P       21 16 56.0 -2.2
       comp=Z,60nm,1.1s
SPSI   Sidrap Palu       46.03 275 P       P       21 17 00.2 -1.3
       comp=Z,15nm,0.9s
MEEK   Meekatharra       47.00 244 P       P       21 17 09.8 +0.8
       baz=47,SNR=32
PLAI   Plampang          47.24 268 P       P       21 17 09.6 -1.4
       comp=Z,43nm,1.2s
TWSI   Taliwang, Sumb    48.13 268 P       P       21 17 16.4 -1.5
       comp=Z,11nm,0.8s
KLBR   Kellerberrin      48.78 237 P       P       21 17 23.5 +0.8
       baz=49,SNR=11
BLDU   Ballidu           49.43 239 P       P       21 17 28.3 +0.6
       baz=49,SNR=7.4
NWAO   Narrogin (SRO)    49.54 236 P       P       21 17 30.0 +1.5
       baz=50,SNR=4.6
NWAO   Narrogin (SRO)    49.54 236 P       P       21 17 28.0 -0.5
NWAO                               pmax    pmax
       comp=Z,56nm,1.1s
NWAO   Narrogin (SRO)    49.54 236 P       P       21 17 28.0 -0.5
JMZ    Minamidaito 2     49.56 318 P       P       21 17 28.9 +0.3
MYLDM  Lahad Datu        49.63 286 P       P       21 17 28.6 -0.8
MYLDM                              IAmb    IAmb    21 17 39.3
       comp=Z,26nm,1.0s
MORW   Morawa            49.69 241 P       P       21 17 30.7 +1.0
       baz=50,SNR=12
MORW   Morawa            49.69 241 P       P       21 17 29.0 -0.7
MUN    Mundaring         50.15 237 P       P       21 17 34.3 +1.2
       baz=50,SNR=3.7
BBKI   Banjar Baru       50.95 274 P       P       21 17 39.8 +0.4
       comp=Z,2μmcomp=Z,14nm,1.4s
SPMM   Sapulut           51.41 285 P       P       21 17 43.0 +0.2
KKM    Kota Kinabalu     52.06 286 P       P       21 17 46.8 -1.0
INU    Inuyama           53.38 331 P       P       21 17 57.0 +0.1
INU                                IAmb    IAmb    21 18 08.2
       comp=Z,40nm,1.1s
JMN    Monobe            53.70 327 P       P       21 17 59.4 -0.1
MJAR   Matsushiro Arr    53.79 333 P       P       21 17 59.8 -0.3
       comp=Z,24nm,0.9s,baz=167,slow=8.3,SNR=44
MJAR                               LR      LR      21 38 33.1
       comp=Z,163nm,21.8s,baz=200,slow=33
MJAR   Matsushiro Arr    53.79 333 P       P       21 17 59.7 -0.3
MAJO   Matsushiro        53.80 333 i P     P       21 17 59.8 -0.3
MAJO                               pmax    pmax
       comp=Z,51nm,1.1s
MAT    Matsushiro        53.80 333 P       P       21 17 59.9 -0.2
MAT                                eS      S       21 25 20.0 -12
JMM    Marumori          53.80 336 P       P       21 18 00.1 +0.1
MJB9   Matsu-Tunnel      53.80 333 P       P       21 18 00.2  0.0
JSU    Suzuyama          54.00 322 P       P       21 18 01.6 -0.1
SBUM   Sibu              54.84 281 P       P       21 18 09.0 +0.9
JNU    Nakatsue          54.91 324 P       P       21 18 08.2 -0.1
JSD    Sado              55.01 334 P       P       21 18 08.7 -0.2
JHS    Saijyo            55.07 327 P       P       21 18 09.3 -0.2
JHS                                IAmb    IAmb    21 18 10.7
       comp=Z,32nm,0.9s
YHNB   Yeheng            55.84 310 P       P       21 18 13.4 -1.8
YHNB                               IAmb    IAmb    21 18 25.3
       comp=Z,30nm,0.9s
JTM    Tenmabayashi      56.21 338 P       P       21 18 18.5 +1.0
KSM    Kuching           56.45 279 P       P       21 18 20.0 +0.3
RKT    Rikitea           57.68 110 eLR     LR      21 35 33.3
       comp=Z,1μm,23.8s
QZH    Quanzhou          58.11 308 eP      P       21 18 32.3 +1.1
SSE    Sheshan           59.70 316 P       P       21 18 42.0 -0.1
SSE                                IAmb    IAmb    21 18 43.1
       comp=Z,23nm,1.0s
KSRS   Korea Array       59.71 326 P       P       21 18 42.7 +0.7
       comp=Z,5.4nm,0.8s,baz=139,slow=7.3,SNR=17
KSAR   Wonju Array Be    59.72 326 P       P       21 18 40.5 -1.6
KSAR   Wonju Array Be    59.72 326 P       P       21 18 40.5 -1.6
YSS    Yuzh-Sakhalins    61.10 342 eP      P       21 18 52.2 +0.9
YSS                                pmax    pmax
       comp=Z,90nm,1.1s
YSS    Yuzh-Sakhalins    61.10 342 P       P       21 18 51.7 +0.4
TEY    Ternei            61.54 337⇓eP      P       21 18 54.7 +0.4
TEY                                pmax    pmax
       comp=Z,50nm,1.0s
NJ2    Nanjing           61.87 315⇓iP      P       21 18 57.6 +0.8
NJ2                                pmax    pmax
       comp=Z,22nm,0.8s
MSHR   Mys Shultsa       61.88 332ceP      P       21 18 57.7 +1.0
MSHR                               pmax    pmax
       comp=Z,16nm,0.9s
QIZ    Qiongzhong        62.57 298 P       P       21 19 01.9 +0.1
QIZ                                S       S       21 27 27.5 +0.3
QIZ                                LR      LR
       comp=Z,160nm,15.3s
QIZ                                LR      LR
       comp=Z,220nm,22.9s
QIZ                                LR      LR
       comp=Z,320nm,24.3s
USA0B  Ussuriysk Arra    62.77 333d iP     P       21 19 03.5 +0.9
USA0B  Ussuriysk Arra    62.77 333 P       P       21 19 02.7 +0.1
USA0B                              IAmb    IAmb    21 19 13.9
       comp=Z,37nm,1.1s
USRK   Ussuriysk Ar.     62.77 333 P       P       21 19 03.7 +1.1
       comp=Z,18nm,0.9s,baz=141,slow=6.4,SNR=25
USRK                               LR      LR      21 44 09.8
       comp=Z,133nm,20.2s,baz=147,slow=34
USRK   Ussuriysk Ar.     62.77 333 P       P       21 19 02.9 +0.3
PEA0B  Petropavlovsk-    64.08 355ceP      P       21 19 11.6 +0.5
PEA0B  Petropavlovsk-    64.08 355 P       P       21 19 11.5 +0.5
PETK   Petropavlovsk-    64.08 355 P       P       21 19 12.0 +0.9
       comp=Z,20nm,1.0s,baz=141,slow=7.3,SNR=9.3
PETK                               LR      LR      21 41 26.4
       comp=Z,269nm,21.4s,baz=177,slow=31
PETK   Petropavlovsk-    64.08 355 P       P       21 19 11.6 +0.5
MDJ    Mudanjiang        64.17 332 P       P       21 19 13.4 +1.5
MDJ                                pmax    pmax
       comp=Z,34nm,1.2s
MDJ                                pmax    pmax
       comp=Z,260nm,4.1s
MDJ    Mudanjiang        64.17 332 P       P       21 19 12.1 +0.2
MDJ                                IAmb    IAmb    21 19 23.0
       comp=Z,27nm,1.0s
WHN    Wuhan             64.25 312 P       P       21 19 20.9 +8.2
WHN                                LR      LR
       comp=Z,930nm,15.4s
DL2    Dalian            64.31 323 P       P       21 19 13.6 +0.7
DL2                                pP      sP      21 19 27.6 -1.2
DL2                                eS      S       21 27 50.6 +2.4
DL2                                pmax    pmax
       comp=Z,36nm,1.0s
DL2                                LR      LR
       comp=Z,250nm,13.0s
DL2                                LR      LR
       comp=Z,230nm,12.0s
DL2                                LR      LR
       comp=Z,330nm,17.3s
UBPT   Khong Chiam       65.07 292 P       P       21 19 17.5 -0.8
BKNI   Bangkinang        65.22 275 P       P       21 19 18.4 -1.0
BKNI   Bangkinang        65.22 275 P       P       21 19 19.9 +0.5
       comp=Z,904nmcomp=Z,86nm,1.0s
CN2    Changchun         65.57 329 eP      P       21 19 21.3 +0.3
CN2                                epP     pP      21 19 29.3 -3.2
CN2                                eS      S       21 28 02.8 -0.7
CN2                                pmax    pmax
       comp=Z,20nm,1.2s
CN2                                LR      LR
       comp=Z,290nm,17.0s
CN2                                LR      LR
       comp=Z,220nm,17.0s
CN2                                LR      LR
       comp=Z,310nm,15.0s
IPM    Ipoh              66.16 280 P       P       21 19 24.4 -1.0
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IPM				IAmb	IAmb	21 19 35.5	
	comp=Z,30nm,0.9s						
IPM	**Ipoh**	**66.16**	**280**	P	**P**	**21 19 26.0**	**+0.5**
GRNR	**Gornyy**	**66.46**	**340**	⇓*i*P	**P**	**21 19 28.0**	**+1.4**
GRNR				pmax	pmax		
	comp=Z,20nm,1.2s						
VNDA	**Vanda**	**66.68**	**181**	P	**P**	**21 19 29.9**	**+2.3**
	comp=Z,12nm,1.1s,baz=52,slow=4.8,SNR=3.9						
KULM	**Kulim**	**66.72**	**281**	P	P	21 19 37.0	+8.0
KLR	**Kul'dur**	**66.88**	**337**	LR	LR	21 44 43.4	
	comp=Z,199nm,21.4s,baz=158,slow=32						
KLR	**Kul'dur**	**66.88**	**337**	*ce*P	**P**	**21 19 30.1**	**+0.9**
KLR				pmax	pmax		
	comp=Z,32nm,1.3s						
ENH	**Enshi**	**67.76**	**309**	P	**P**	**21 19 34.6**	**-0.7**
ENH				IAmb	IAmb	21 19 36.1	
	comp=Z,24nm,1.0s						
RPSI	**Rantau Prapat**	**67.80**	**277**	P	**P**	**21 19 34.8**	**-1.1**
RPSI				IAmb	IAmb	21 19 46.7	
	comp=Z,20nm,1.1s						
PSI	**Prapat**	**67.82**	**278**	P	**P**	**21 19 34.8**	**-1.3**
PSI				pmax	pmax		
	comp=Z,20nm,1.1s						
GYA	**Guiyang**	**68.29**	**304**	⇓P	**P**	**21 19 39.3**	**+0.5**
GYA				pP	sP	21 19 56.1	+0.9
GYA				pmax	pmax		
	comp=Z,12nm,0.7s						
GYA				LR	LR		
	comp=Z,230nm,20.0s						
BJT	**Baijiatuau**	**68.31**	**321**	P	**P**	**21 19 38.2**	**-0.3**
BJT				pmax	pmax		
	comp=Z,11nm,0.9s						
BJT	**Baijiatuau**	**68.31**	**321**	P	**P**	**21 19 38.2**	**-0.3**
BJI	**Beijing**	**68.32**	**321**	P	**P**	**21 19 39.4**	**+0.9**
BJI				pmax	pmax		
	comp=Z,13nm,0.9s						
BJI				LR	LR		
	comp=Z,200nm,21.6s						
BJI				LR	LR		
	comp=Z,130nm,14.6s						
BJI				LR	LR		
	comp=Z,280nm,29.4s						
SLVN	**Son La**	**68.60**	**298**	P	**P**	**21 19 39.7**	**-1.0**
GSI	**Gunungsitoli**	**68.81**	**276**	P	**P**	**21 19 42.3**	**+0.1**
	comp=Z,56nm,1.0s						
XAN	**Xi'an**	**69.98**	**312**	P	**P**	**21 19 49.3**	**+0.3**
XAN				pP	pP	21 19 58.1	-2.7
XAN				S	**S**	**21 29 01.0**	**+4.3**
XAN				pmax	pmax		
	comp=Z,18nm,1.2s						
XAN				LR	LR		
	comp=Z,250nm,20.6s						
XAN				LR	LR		
	comp=Z,290nm,24.9s						
XAN				LR	LR		
	comp=Z,560nm,23.9s						
XAN	**Xi'an**	**69.98**	**312**	P	**P**	**21 19 48.5**	**-0.5**
XAN				pmax	pmax		
	comp=Z,11nm,0.8s						
XAN	**Xi'an**	**69.98**	**312**	P	**P**	**21 19 48.5**	**-0.5**
KMI	**Kunming**	**71.00**	**301**	⇓P	**P**	**21 19 56.9**	**+1.2**
KMI				pP	sP	21 20 11.0	-1.1
KMI				sP	PcP	21 20 15.0	-0.9
KMI				PP	**PP**	**21 22 39.1**	**+5.5**
KMI				S	**S**	**21 29 13.5**	**+4.1**
KMI				pmax	pmax		
	comp=Z,16nm,1.3s						
KMI				pmax	pmax		
	comp=Z,87nm,3.5s						
KMI				LR	LR		
	comp=Z,170nm,18.3s						
KMI				LR	LR		
	comp=Z,230nm,22.5s						
KMI				LR	LR		
	comp=Z,300nm,19.0s						
KMI	**Kunming**	**71.00**	**301**	P	**P**	**21 19 54.5**	**-1.2**
KMI				pmax	pmax		
	comp=Z,18nm,1.1s						
KMI	**Kunming**	**71.00**	**301**	P	**P**	**21 19 54.5**	**-1.2**
MA2	**Magadan**	**71.22**	**352**	LR	LR	21 45 57.5	
	comp=Z,446nm,21.5s,baz=169,slow=31						
MA2	**Magadan**	**71.22**	**352**	*ce*P	**P**	**21 19 54.8**	**-1.2**
MA2				pmax	pmax		
	comp=Z,34nm,2.5s						
MA2	**Magadan**	**71.22**	**352**	P	**P**	**21 19 56.3**	**+0.3**
HHC	**Hu-ho-hao-te**	**71.67**	**320**	*e*P	**P**	**21 19 59.8**	**+0.5**
HHC				sP	sP	21 20 15.1	-0.5
HHC				pmax	pmax		
	comp=Z,19nm,1.1s						
HHC				pmax	pmax		
	comp=Z,160nm,6.9s						
HHC				LR	LR		
	comp=Z,250nm,17.9s						
HHC				LR	LR		
	comp=Z,380nm,16.9s						
HHC				LR	LR		
	comp=Z,470nm,19.3s						
CM31	**Chiang Mai Arr**	**72.01**	**293**	P	**P**	**21 20 00.7**	**-1.0**
CMAR	**Chiang Mai Arr**	**72.01**	**293**	P	**P**	**21 20 02.5**	**+0.9**
	comp=Z,5.6nm,0.8s,baz=121,slow=4.5,SNR=46						
CMAR				LR	LR	21 53 09.5	
	comp=Z,90nm,18.9s,baz=162,slow=37						
CMAR	**Chiang Mai Arr**	**72.01**	**293**	P	**P**	**21 20 00.6**	**-1.0**
CHTO	**Chiang Mai**	**72.12**	**294**	P	**P**	**21 20 01.3**	**-1.0**
CHTO				pmax	pmax		
	comp=Z,9.0nm,1.1s						
CHTO	**Chiang Mai**	**72.12**	**294**	P	**P**	**21 20 01.3**	**-1.0**
ZEA	**Zeya**	**72.16**	**337**	*e*P	**P**	**21 20 03.2**	**+1.4**
ZEA				pmax	pmax		
	comp=Z,30nm,1.3s						
HIA	**Hailar**	**72.20**	**330**	P	**P**	**21 20 02.0**	**-0.1**
HIA				pmax	pmax		
	comp=Z,13nm,0.9s						
HIA	**Hailar**	**72.20**	**330**	P	**P**	**21 20 02.0**	**-0.1**
CD2	**Chengdu**	**72.47**	**307**	⇓P	**P**	**21 20 04.5**	**+0.3**
CD2				pP	pP	21 20 15.3	-0.8
CD2				S	**S**	**21 29 26.1**	**+0.4**
CD2				pmax	pmax		
	comp=Z,40nm,0.9s						
CD2				pmax	pmax		
	comp=Z,140nm,4.4s						
CD2				LR	LR		
	comp=Z,300nm,19.7s						
CD2				LR	LR		
	comp=Z,340nm,12.8s						
CD2				LR	LR		
	comp=Z,360nm,12.3s						
BTO	**Baotou**	**72.53**	**319**	*e*P	**P**	**21 20 03.1**	**-1.3**
SEY	**Seymchan**	**74.29**	**354**	LR	LR	21 47 49.3	
	comp=Z,605nm,21.4s,baz=158,slow=32						
SEY	**Seymchan**	**74.29**	**354**	*i* P	**P**	**21 20 15.1**	**+1.0**
LZH	**Lanzhou**	**74.61**	**312**	*e*P	**P**	**21 20 18.4**	**+1.6**
LZH				pP	PcP	21 20 30.6	-0.4
LZH				sP	sP	21 20 36.5	+3.3
LZH				pmax	pmax		
	comp=Z,36nm,1.2s						
LZH				LR	LR		
	comp=Z,380nm,10.0s						
LZH				LR	LR		
	comp=Z,570nm,11.4s						
LZH				LR	LR		
	comp=Z,380nm,15.2s						
GAMB	**Gambell**	**76.39**	**10**	P	**P**	**21 20 27.0**	**+0.8**
YAK	**Yakutsk**	**77.91**	**344**	LR	LR	21 50 36.5	
	comp=Z,219nm,22.0s,baz=100,slow=32						
YAK	**Yakutsk**	**77.91**	**344**	*e*P	**P**	**21 20 34.7**	**0.0**
YAK				*e*		21 20 41.4	
YAK				*e*S	**S**	**21 30 21.1**	**-3.7**
YAK				*e*		21 30 46.6	
YAK				pmax	pmax		
	comp=Z,26nm,0.8s						
YAK				pmax	pmax		
	comp=N,5.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,2.0nm,0.9s						
YAK				smax	smax		
	comp=E,226nm,4.3s						
YAK				smax	smax		
	comp=N,138nm,4.5s						
YAK				MLR	MLR		
	comp=Z,413nm,20.0s						
YAK				MLR	MLR		
	comp=N,151nm,18.0s						
YAK				MLR	MLR		
	comp=E,119nm,18.0s						
YAK	**Yakutsk**	**77.91**	**344**	P	**P**	**21 20 35.3**	**+0.6**
YAK				IAmb	IAmb	21 20 36.0	
	comp=Z,29nm,0.7s						
SVW2	**Sparrevohn**	**77.95**	**18**	P	**P**	**21 20 35.7**	**+0.7**
SVW2				IAmb	IAmb	21 20 37.5	
	comp=Z,40nm,1.2s						
ULN	**Ulaanbaatar**	**78.14**	**324**	*ce*P	**P**	**21 20 37.3**	**+0.8**
ULN				pmax	pmax		
	comp=Z,29nm,0.9s						
ULN	**Ulaanbaatar**	**78.14**	**324**	P	**P**	**21 20 36.2**	**-0.4**
ULN				IAmb	IAmb	21 20 38.5	
	comp=Z,29nm,0.8s						
CNPM	**China Poot**	**78.18**	**21**	P	**P**	**21 20 37.0**	**+0.7**
RSO	**Redoubt South**	**78.36**	**20**	P	**P**	**21 20 38.1**	**+0.6**
MOKO	**MOKOCHONG**	**78.37**	**300**	*e*P	**P**	**21 20 37.8**	**-0.5**
MOKO				IAmb	IAmb	21 20 44.7	
	comp=Z,16nm,0.6s						
BRLK	**Bradley Lake**	**78.48**	**21**	P	**P**	**21 20 38.6**	**+0.6**
SONM	**Songino Array**	**78.50**	**324**	P	**P**	**21 20 39.1**	**+0.6**
	comp=Z,11nm,0.9s,baz=142,slow=7.6,SNR=77						
SONM				LR	LR	21 54 55.2	
	comp=Z,121nm,19.4s,baz=114,slow=35						
SONM	**Songino Array**	**78.50**	**324**	P	**P**	**21 20 38.2**	**-0.3**
KOHI	**KOHIMA**	**78.53**	**299**	*e*P	**P**	**21 20 38.1**	**-1.1**
KOHI				IAmb	IAmb	21 20 42.0	
	comp=Z,32nm,0.4s						
SAIH	**SAIHA**	**78.55**	**296**	*e*P	**P**	**21 20 39.5**	**+0.1**
TNA	**Tin City**	**78.70**	**11**	P	**P**	**21 20 40.0**	**+1.0**
	baz=206						
TNA	**Tin City**	**78.70**	**11**	P	**P**	**21 20 39.8**	**+0.8**
GTA	**Gaotai**	**78.91**	**314**	⇓P	**P**	**21 20 41.9**	**+0.9**
GTA				pP	PcP	21 20 50.4	+0.9
GTA				sP	pP	21 20 54.1	+1.2
GTA				pmax	pmax		
	comp=Z,25nm,1.1s						
GTA				pmax	pmax		
	comp=Z,120nm,5.1s						
GTA				LR	LR		
	comp=Z,190nm,18.9s						
GTA				LR	LR		
	comp=Z,250nm,19.6s						
GTA				LR	LR		
	comp=Z,310nm,21.4s						
QSPA	**South Pole Qui**	**79.14**	**180**	P	**P**	**21 20 41.9**	**+0.1**
TTA	**Tatalina**	**79.26**	**17**	P	**P**	**21 20 43.0**	**+0.7**
TTA				pmax	pmax		
	comp=Z,33nm,1.1s						
TTA	**Tatalina**	**79.26**	**17**	P	**P**	**21 20 43.0**	**+0.7**
TTA				IAmb	IAmb	21 20 44.6	
	comp=Z,32nm,1.1s						
ZIRO	**ZIRO**	**79.31**	**301**	*e*P	**P**	**21 20 44.7**	**+1.2**
ZIRO				IAmb	IAmb	21 20 46.0	
	comp=Z,14nm,0.9s						
O22K	**Cooper Landing**	**79.40**	**21**	P	**P**	**21 20 43.8**	**+0.9**
	baz=225						
SUA	**Susitna One**	**79.76**	**20**	P	**P**	**21 20 45.6**	**+0.5**
SUA				IAmb	IAmb	21 20 49.6	
	comp=Z,27nm,0.9s						
RC01	**Rabbit Creek A**	**79.83**	**20**	P	**P**	**21 20 46.1**	**+0.8**
	baz=224						
TEZP	**TEZPUR**	**79.93**	**300**	*e*P	**P**	**21 20 46.5**	**-0.2**
TEZP				IAmb	IAmb	21 20 47.6	
	comp=Z,18nm,0.9s						
BOD	**Bodaibo**	**80.35**	**335**	*e*P	**P**	**21 20 47.4**	**-0.8**
BOD				pmax	pmax		
	comp=Z,12nm,1.6s						
SHL	**Shillong**	**80.40**	**298**	P	**P**	**21 20 48.5**	**-0.9**
SHL				pmax	pmax		
	comp=Z,12nm,1.0s						
SHL	**Shillong**	**80.40**	**298**	*e*P	**P**	**21 20 49.7**	**+0.3**
SHL				IAmb	IAmb	21 20 53.2	
	comp=Z,7.0nm,0.5s						
SHL	**Shillong**	**80.40**	**298**	P	**P**	**21 20 48.5**	**-0.9**
KNK	**Knik Glacier**	**80.50**	**20**	P	**P**	**21 20 49.7**	**+0.8**
KNK				IAmb	IAmb	21 20 51.6	
	comp=Z,22nm,1.0s						
GHO	**Glory Hole Cre**	**80.59**	**20**	P	**P**	**21 20 50.1**	**+0.6**
GHO				IAmb	IAmb	21 20 53.8	
	comp=Z,24nm,1.0s						
CUT	**Chulitna**	**80.60**	**19**	P	**P**	**21 20 49.5**	**0.0**
	baz=224						
SML	**Sawmill**	**80.81**	**20**	P	**P**	**21 20 51.4**	**+0.7**
SML				IAmb	IAmb	21 20 52.6	
	comp=Z,43nm,1.2s						
RAGM	**Ragged Mountai**	**81.16**	**23**	P	**P**	**21 20 53.2**	**+0.7**
RAGM				IAmb	IAmb	21 20 54.7	
	comp=Z,34nm,1.0s						
SCM	**Sheep Creek Mo**	**81.18**	**21**	P	**P**	**21 20 53.3**	**+0.6**
SCM				pmax	pmax		
	comp=Z,39nm,1.0s						
SCM	**Sheep Creek Mo**	**81.18**	**21**	P	**P**	**21 20 53.3**	**+0.6**
SCM				IAmb	IAmb	21 20 54.6	
	comp=Z,39nm,1.0s						
KTH	**Kantishna Hill**	**81.23**	**18**	P	**P**	**21 20 53.4**	**+0.5**
KTH				IAmb	IAmb	21 20 55.9	
	comp=Z,20nm,0.8s						
TRF	**Thorofare Moun**	**81.35**	**18**	P	**P**	**21 20 54.2**	**+0.5**
KLU	**Klutina**	**81.44**	**21**	P	**P**	**21 20 54.6**	**+0.6**
KLU				IAmb	IAmb	21 20 56.1	
	comp=Z,36nm,1.0s						
ZAK	**Zakamensk**	**81.53**	**325**	*e*P	**P**	**21 20 54.7**	**-0.1**
ZAK				pmax	pmax		
	comp=Z,13nm,1.1s						
BPAW	**Bear Paw Mtn.**	**81.61**	**18**	P	**P**	**21 20 55.5**	**+0.7**
M24K	**Tolsona, Glenn**	**81.76**	**21**	P	**P**	**21 20 57.0**	**+1.3**
	baz=228,SNR=7.8						
M24K	**Tolsona, Glenn**	**81.76**	**21**	P	**P**	**21 20 56.4**	**+0.7**
RND	**Reindeer**	**81.77**	**19**	P	**P**	**21 20 56.4**	**+0.6**
RND				pmax	pmax		
	comp=Z,48nm,1.1s						
RND	**Reindeer**	**81.77**	**19**	P	**P**	**21 20 56.4**	**+0.6**
RND				IAmb	IAmb	21 20 59.2	
	comp=Z,48nm,1.1s						
RDOG	**Red Dog Mine**	**81.85**	**11**	P	**P**	**21 20 56.6**	**+0.7**
RDOG				IAmb	IAmb	21 20 58.5	
	comp=Z,38nm,0.9s						
TLY	**Talaya**	**81.95**	**326**	*d i*P	**P**	**21 20 57.1**	**+0.2**
TLY				pmax	pmax		
	comp=Z,18nm,1.0s						
TLY	**Talaya**	**81.95**	**326**	P	**P**	**21 20 56.8**	**-0.1**
MCK	**McKinley**	**81.98**	**19**	P	**P**	**21 20 57.1**	**+0.3**
	baz=225,SNR=16						
CRQM	**Cirque**	**81.98**	**23**	P	**P**	**21 20 57.6**	**+0.5**
N25K	**Chitina, Valde**	**81.99**	**22**	P	**P**	**21 20 58.0**	**+1.1**
	baz=229,SNR=15						
N25K	**Chitina, Valde**	**81.99**	**22**	P	**P**	**21 20 57.6**	**+0.6**
TGL	**Tana Glacier**	**82.10**	**23**	P	**P**	**21 20 58.1**	**+0.6**
TGL				IAmb	IAmb	21 20 59.6	
	comp=Z,39nm,1.0s						
BWN	**Browne**	**82.13**	**18**	P	**P**	**21 20 58.6**	**+1.1**
VRDI	**Verde Repeater**	**82.16**	**22**	P	**P**	**21 20 58.4**	**+0.4**
VRDI				IAmb	IAmb	21 20 59.7	
	comp=Z,29nm,0.9s						
GLB	**Gilahina Butte**	**82.17**	**22**	P	**P**	**21 20 58.5**	**+0.7**
LSA	**Lhasa**	**82.23**	**302**	P	**P**	**21 20 58.2**	**-1.2**
LSA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
LSA	**Lhasa**	**82.23**	**302**	P	**P**	**21 20 58.2**	**-1.2**
IMAR	**Indian Mountai**	**82.25**	**16**	P	**P**	**21 20 58.9**	**+0.8**
MLY	**Manley**	**82.37**	**17**	P	**P**	**21 20 59.6**	**+0.8**
	baz=223,SNR=15						
KCPM	**Cahto Peak**	**82.45**	**47**	P	**P**	**21 21 00.2**	**+0.3**
BALM	**Baldy**	**82.46**	**23**	P	**P**	**21 21 00.1**	**+0.6**
BALM				IAmb	IAmb	21 21 01.3	
	comp=Z,33nm,0.8s						
KMRM	**Mail Ridge**	**82.55**	**47**	P	**P**	**21 21 00.7**	**+0.4**
NEA2	**Nenana**	**82.55**	**18**	P	**P**	**21 20 59.7**	**0.0**
	baz=225,SNR=11						
TABL	**Table Mountain**	**82.55**	**24**	P	**P**	**21 21 00.6**	**+0.5**
HOPS	**Hopland Field**	**82.57**	**48**	P	**P**	**21 21 00.8**	**+0.4**
HOPS				IAmb	IAmb	21 21 02.9	
	comp=Z,43nm,1.1s						
PAX	**Paxson**	**82.59**	**20**	P	**P**	**21 21 00.7**	**+0.6**
PAX				pmax	pmax		
	comp=Z,13nm,1.2s						
PAX	**Paxson**	**82.59**	**20**	P	**P**	**21 21 00.7**	**+0.6**
GDXM	**Geysers**	**82.71**	**48**	P	**P**	**21 21 01.4**	**+0.2**
GDXM				IAmb	IAmb	21 21 04.0	
	comp=Z,22nm,0.9s						
BARN	**Barnard Glacie**	**82.73**	**23**	P	**P**	**21 21 01.4**	**+0.5**
KHMM	**Horse Mountain**	**82.76**	**46**	P	**P**	**21 21 01.7**	**+0.2**
KHMM				IAmb	IAmb	21 21 04.5	
	comp=Z,31nm,1.0s						
WRH	**Wood River Hil**	**82.76**	**18**	P	**P**	**21 21 01.1**	**+0.3**
WRH				IAmb	IAmb	21 21 03.0	
	comp=Z,34nm,0.9s						
CTGM	**Chitina Glacie**	**82.80**	**23**	P	**P**	**21 21 01.8**	**+0.5**
I23K	**Minto, Yukon-K**	**82.86**	**18**	P	**P**	**21 21 02.9**	**+1.7**
	baz=224,SNR=5.2						
I23K	**Minto, Yukon-K**	**82.86**	**18**	P	**P**	**21 21 02.1**	**+0.8**
CCB	**Clear Creek Bu**	**82.97**	**18**	P	**P**	**21 21 01.9**	**+0.1**
CCB				IAmb	IAmb	21 21 03.8	
	comp=Z,19nm,0.8s						
SAO	**San Andreas Ge**	**83.04**	**51**	P	**P**	**21 21 03.2**	**+0.3**
SAO				pmax	pmax		
	comp=Z,25nm,1.1s						
SAO	**San Andreas Ge**	**83.04**	**51**	P	**P**	**21 21 03.2**	**+0.3**
SAO				IAmb	IAmb	21 21 05.3	
	comp=Z,25nm,1.1s						
MDM	**Murphy Dome**	**83.06**	**18**	P	**P**	**21 21 02.3**	**-0.1**
MDM				IAmb	IAmb	21 21 04.4	
	comp=Z,36nm,0.9s						
HDA	**Harding Lake**	**83.08**	**19**	P	**P**	**21 21 03.2**	**+0.7**
	baz=227,SNR=60						
HDA	**Harding Lake**	**83.08**	**19**	P	**P**	**21 21 03.2**	**+0.7**
TCOL	**CIGO, UAF Yank**	**83.12**	**18**	P	**P**	**21 21 03.1**	**+0.4**
	baz=226,SNR=12						
TCOL	**CIGO, UAF Yank**	**83.12**	**18**	P	**P**	**21 21 03.0**	**+0.4**
COLA	**College**	**83.12**	**18**	P	**P**	**21 21 03.0**	**+0.4**
COLA				pmax	pmax		
	comp=Z,57nm,0.8s						
COLA	**College**	**83.12**	**18**	P	**P**	**21 21 03.0**	**+0.4**
O02D	**Mt. Diablo Mer**	**83.19**	**47**	P	**P**	**21 21 05.4**	**+1.7**
	baz=250,SNR=18						
L02E	**Cave Junction**	**83.31**	**45**	P	**P**	**21 21 05.9**	**+1.7**
	baz=249						
IL31		**83.35**	**19**	P	**P**	**21 21 03.8**	**0.0**
IL31				IAmb	IAmb	21 21 05.4	
	comp=Z,21nm,0.8s						
ILAR	**Eielson Array**	**83.35**	**19**	P	**P**	**21 21 03.6**	**-0.2**
	comp=Z,22nm,0.8s,baz=230,slow=5.7,SNR=114						
ILAR				LR	LR	21 51 44.4	
	comp=Z,178nm,21.0s,baz=272,slow=31						
PMPB	**Monarch Peak**	**83.35**	**51**	P	**P**	**21 21 04.9**	**+0.3**
PMPB				IAmb	IAmb	21 21 07.4	
	comp=Z,38nm,1.1s						
MOY	**Mondy**	**83.41**	**325**	*e*P	P	21 21 09.6	+5.0
POKR	**Poker Plat Res**	**83.42**	**18**	P	**P**	**21 21 04.5**	**+0.3**
	baz=226,SNR=13						
POKR	**Poker Plat Res**	**83.42**	**18**	P	**P**	**21 21 04.5**	**+0.3**
POKR				IAmb	IAmb	21 21 05.1	
	comp=Z,22nm,0.8s						
J01E	**Myrtle Point**	**83.45**	**44**	P	**P**	**21 21 06.5**	**+1.7**
	baz=249						
K02D	**Willamette Mer**	**83.46**	**44**	P	**P**	**21 21 06.7**	**+1.7**
	baz=249,SNR=8.7						
WDC	**Whiskeytown Da**	**83.50**	**47**	P	**P**	**21 21 05.6**	**+0.4**
WDC				pmax	pmax		
	comp=Z,13nm,1.1s						
WDC	**Whiskeytown Da**	**83.50**	**47**	P	**P**	**21 21 05.6**	**+0.4**
DOT	**Dot Lake**	**83.51**	**20**	P	**P**	**21 21 05.5**	**+0.7**
N02D	**Trinity Center**	**83.53**	**46**	P	**P**	**21 21 07.1**	**+1.7**
	baz=250,SNR=14						
M02C	**Callahan**	**83.56**	**46**	P	**P**	**21 21 07.4**	**+1.8**
	baz=250,SNR=12						
PAGB	**Antelope Grade**	**83.62**	**52**	P	**P**	**21 21 06.3**	**+0.3**
PKM	**Mcpherson Peak**	**83.71**	**53**	P	**P**	**21 21 07.8**	**+1.2**
	baz=252						
SCRK	**Sand Creek**	**83.75**	**20**	P	**P**	**21 21 07.1**	**+1.0**
	baz=230,SNR=34						
YBH	**Yreka Blue Hor**	**83.78**	**46**	P	**P**	**21 21 07.7**	**+1.0**
	comp=Z,21nm,0.9s,baz=220,slow=2.3,SNR=42						
YBH	**Yreka Blue Hor**	**83.78**	**46**	P	**P**	**21 21 07.1**	**+0.4**
YBH				IAmb	IAmb	21 21 09.4	
	comp=Z,27nm,0.9s						
ORV	**Oroville**	**83.91**	**48**	P	**P**	**21 21 07.6**	**+0.3**
ORV				pmax	pmax		
	comp=Z,17nm,0.9s						
ORV	**Oroville**	**83.91**	**48**	P	**P**	**21 21 07.6**	**+0.3**
ORV				IAmb	IAmb	21 21 09.2	
	comp=Z,17nm,0.9s						
HUMO	**Hull Mountain**	**83.92**	**45**	P	**P**	**21 21 07.6**	**+0.3**
HUMO				IAmb	IAmb	21 21 09.9	
	comp=Z,28nm,0.9s						
BCAR	**Beaver Creek A**	**83.93**	**21**	P	**P**	**21 21 07.6**	**+0.6**
O03E	**Paynes Creek**	**83.94**	**47**	P	**P**	**21 21 08.6**	**+1.1**
	baz=250,SNR=21						
I03D	**Drain, OR**	**84.04**	**44**	P	**P**	**21 21 09.1**	**+1.2**
	baz=249						
AFDM	**Forest Hills D**	**84.10**	**49**	P	**P**	**21 21 08.8**	**+0.4**
AFDM				IAmb	IAmb	21 21 10.4	
	comp=Z,30nm,1.0s						
BESE	**Bessie Mountai**	**84.13**	**27**	P	**P**	**21 21 08.7**	**+0.6**
BESE				IAmb	IAmb	21 21 11.5	
	comp=Z,21nm,1.1s						
COLD	**Coldfoot**	**84.13**	**16**	P	**P**	**21 21 09.2**	**+1.5**
	baz=224,SNR=16						
COLD	**Coldfoot**	**84.13**	**16**	P	**P**	**21 21 08.6**	**+0.8**
JIS	**Juneau Island**	**84.18**	**27**	P	**P**	**21 21 09.0**	**+0.8**
JIS				IAmb	IAmb	21 21 10.7	
	comp=Z,20nm,1.1s						
WRAK	**Wrangell Islan**	**84.19**	**30**	P	**P**	**21 21 09.1**	**+0.8**
WRAK				IAmb	IAmb	21 21 10.2	
	comp=Z,34nm,1.0s						
HYT	**Haines Junctio**	**84.23**	**24**	P	**P**	**21 21 09.2**	**+0.6**
HYT				IAmb	IAmb	21 21 10.6	
	comp=Z,28nm,0.9s						
L04D	**Klamath Falls**	**84.24**	**45**	P	**P**	**21 21 10.5**	**+1.4**
	baz=250,SNR=9.9						
CMB	**Columbia Colle**	**84.24**	**50**	P	**P**	**21 21 09.5**	**+0.4**
CMB				pmax	pmax		
	comp=Z,20nm,1.0s						
CMB	**Columbia Colle**	**84.24**	**50**	P	**P**	**21 21 09.4**	**+0.4**
CMB				IAmb	IAmb	21 21 11.1	
	comp=Z,20nm,0.9s						
SKAG	**Skagway**	**84.39**	**26**	P	**P**	**21 21 10.0**	**+0.8**
SKAG				IAmb	IAmb	21 21 14.8	
	comp=Z,21nm,1.0s						
M04C	**Macdoel**	**84.41**	**46**	P	**P**	**21 21 11.3**	**+1.3**
	baz=250,SNR=15						
TAPN	**Taplejung**	**84.49**	**299**	*e*P	**P**	**21 21 11.1**	**+0.2**
	comp=Z,25nm,1.2s						
ARVC	**Arvin**	**84.55**	**53**	P	**P**	**21 21 11.6**	**+1.0**
	baz=253						
VES	**Vestal, Richgr**	**84.56**	**52**	P	**P**	**21 21 11.2**	**+0.5**
	baz=252,SNR=8.6						
G03D	**McMinnville, O**	**84.64**	**42**	P	**P**	**21 21 12.0**	**+1.2**
	baz=249						
ODAN	**Odare**	**84.64**	**299**	*e*P	**P**	**21 21 11.7**	**+0.1**
	comp=Z,40nm,0.9s						
I04A	**Tendick Farm,**	**84.71**	**44**	P	**P**	**21 21 12.1**	**+0.7**
	baz=250						
J04D	**Umpqua Nationa**	**84.72**	**44**	P	**P**	**21 21 12.9**	**+1.3**
	baz=250,SNR=7.9						
H04D	**Lebanon**	**84.74**	**43**	P	**P**	**21 21 12.3**	**+0.9**
	baz=249,SNR=5.5						
K04D	**Chiloquin, OR**	**84.76**	**45**	P	**P**	**21 21 13.3**	**+1.6**
	baz=250,SNR=5.1						
BEKR	**Beckworth**	**84.84**	**48**	P	**P**	**21 21 12.4**	**+0.2**
BEKR				IAmb	IAmb	21 21 14.3	
	comp=Z,20nm,0.9s						
MWC	**Mount Wilson**	**84.89**	**54**	P	**P**	**21 21 12.7**	**+0.1**
MWC				pmax	pmax		
	comp=Z,17nm,1.0s						
MWC	**Mount Wilson**	**84.89**	**54**	P	**P**	**21 21 12.7**	**+0.1**
MWC				IAmb	IAmb	21 21 16.1	
	comp=Z,17nm,1.0s						
E03A	**Lebam**	**84.93**	**41**	P	**P**	**21 21 12.8**	**+0.6**
ISA	**Isabella, Lake**	**84.98**	**52**	P	**P**	**21 21 14.1**	**+1.2**
	baz=253,SNR=12						
ISA	**Isabella, Lake**	**84.98**	**52**	IAmb	IAmb	21 21 15.1	
	comp=Z,22nm,1.1s						
FYU	**Fort Yukon**	**85.07**	**18**	IAmb	IAmb	21 21 15.7	
	comp=Z,19nm,1.0s						
WAKR	**Walker**	**85.10**	**49**	IAmb	IAmb	21 21 16.8	
	comp=Z,33nm,1.2s						
MDPB	**Devils Postpil**	**85.10**	**50**	IAmb	IAmb	21 21 15.9	
	comp=Z,26nm,1.0s						
EDW2	**Edwards Air Fo**	**85.13**	**53**	P	**P**	**21 21 14.9**	**+1.3**
	baz=253,SNR=23						
OMMB	**Old Mammoth Mi**	**85.16**	**50**	IAmb	IAmb	21 21 16.3	
	comp=Z,22nm,1.2s						
PNTR	**Pine Nut**	**85.16**	**49**	IAmb	IAmb	21 21 16.2	
	comp=Z,23nm,0.9s						
H04A	**Detroit Lake**	**85.17**	**43**	IAmb	IAmb	21 21 15.3	
	comp=Z,30nm,1.2s						
BFSC	**Mount Baldy Ra**	**85.22**	**54**	P	**P**	**21 21 15.3**	**+1.1**
	baz=254,SNR=8.0						
MLAC	**Mammoth, Mammo**	**85.29**	**50**	P	**P**	**21 21 16.5**	**+1.9**
	baz=252						
TOLK	**Toolik Lake Re**	**85.32**	**15**	P	**P**	**21 21 15.1**	**+1.2**
	baz=224,SNR=6.8						

J05D	**Fort Rock, OR**	**85.34**	**44**	P	**P**	**21 21 16.1**	**+1.4**
	baz=250,SNR=32						
RAMN	**Ramite**	**85.34**	**298**	*e*P	**P**	**21 21 14.9**	**-0.2**
	comp=Z,15nm,1.0s						
K05A	**Summer Lake**	**85.39**	**45**	P	**P**	**21 21 15.0**	**0.0**
MURC	**Murrieta**	**85.41**	**55**	P	**P**	**21 21 15.9**	**+0.8**
	baz=254						
PAHR	**Pah Rah Range**	**85.51**	**48**	IAmb	IAmb	21 21 17.7	
	comp=Z,24nm,1.0s						
CWC	**Cottonwood Cre**	**85.51**	**52**	P	**P**	**21 21 16.6**	**+1.0**
	baz=253						
MOD	**Modoc Plateau**	**85.54**	**46**	IAmb	IAmb	21 21 17.7	
	comp=Z,18nm,0.9s						
LRMC	**Laurel Mtn Rad**	**85.55**	**53**	P	**P**	**21 21 16.9**	**+1.1**
	baz=253,SNR=18						
E04D	**Cinebar**	**85.57**	**41**	P	**P**	**21 21 16.6**	**+1.2**
	baz=249						
D03D	**Eldon**	**85.59**	**40**	P	**P**	**21 21 16.5**	**+1.0**
	baz=249						
I05D	**Terrebonne, OR**	**85.62**	**43**	P	**P**	**21 21 16.7**	**+0.8**
	baz=250						
LHV	**Little Huntoon**	**85.72**	**50**	IAmb	IAmb	21 21 19.1	
	comp=Z,26nm,1.0s						
A21K	**Barrow**	**85.80**	**11**	P	**P**	**21 21 17.2**	**+1.2**
	baz=217,SNR=14						
RYN	**Ryan**	**85.82**	**50**	IAmb	IAmb	21 21 19.3	
	comp=Z,20nm,1.0s						
MONP2	**Monument Peak**	**85.83**	**56**	P	**P**	**21 21 18.7**	**+1.3**
	baz=254,SNR=12						
BMAR	**Burnt Mountain**	**85.84**	**17**	P	**P**	**21 21 17.0**	**+0.6**
MPMC	**Manual Prospec**	**85.86**	**52**	P	**P**	**21 21 18.5**	**+1.0**
	baz=254,SNR=16						
TIXI	**Tiksi**	**85.90**	**349**	P	**P**	**21 21 17.0**	**+0.5**
TIXI				pmax	pmax		
	comp=Z,18nm,1.1s						
TIXI	**Tiksi**	**85.90**	**349**	P	**P**	**21 21 17.0**	**+0.5**
TIXI				IAmb	IAmb	21 21 17.8	
	comp=Z,18nm,1.1s						
NVAR	**Mina Array Bea**	**85.93**	**50**	P	**P**	**21 21 18.6**	**+0.9**
	comp=Z,17nm,1.0s,baz=234,slow=7.4,SNR=63						
NVAR				LR	LR	21 53 27.5	
	comp=Z,477nm,19.4s,baz=264,slow=31						
NVAR	**Mina Array Bea**	**85.93**	**50**	P	**P**	**21 21 17.6**	**-0.1**
G05D	**Wamic, OR**	**85.94**	**43**	P	**P**	**21 21 18.6**	**+1.2**
	baz=250						
PFO	**Pinyon Flats O**	**86.00**	**55**	P	**P**	**21 21 18.5**	**+0.5**
	comp=Z,6.8nm,0.9s,baz=233,slow=2.5,SNR=9.9						
PFO	**Pinyon Flats O**	**86.00**	**55**	P	**P**	**21 21 18.2**	**+0.2**
	baz=254,SNR=7.7						
PFO	**Pinyon Flats O**	**86.00**	**55**	P	**P**	**21 21 18.0**	**-0.1**
TPFO	**Pinon Flats**	**86.00**	**55**	P	**P**	**21 21 18.8**	**+0.7**
	baz=254,SNR=8.1						
IKP	**In-Ko-Pah, Jac**	**86.02**	**56**	P	**P**	**21 21 19.3**	**+1.1**
	baz=254						
RMX	**La Rumorosa**	**86.04**	**56**	IAmb	IAmb	21 21 20.9	
	comp=Z,18nm,1.1s						
NV11	**Mina Array Sit**	**86.04**	**50**	IAmb	IAmb	21 21 20.4	
	comp=Z,29nm,1.1s						
F05D	**White Salmon**	**86.06**	**42**	P	**P**	**21 21 19.3**	**+1.4**
	baz=250						
GSC	**Goldstone, Bar**	**86.19**	**53**	P	**P**	**21 21 20.1**	**+1.2**
	baz=254,SNR=8.0						
GUN	**Gumba**	**86.20**	**299**	*e*P	**P**	**21 21 19.4**	**-0.1**
	comp=Z,29nm,1.0s						
DLBC	**Dease Lake**	**86.26**	**28**	P	**P**	**21 21 19.2**	**+0.5**
	comp=Z,9.2nm,1.0s,baz=250,slow=6.4,SNR=15						
SWSC	**Sam W. Stewart**	**86.35**	**56**	P	**P**	**21 21 21.1**	**+1.4**
	baz=255						
HEC	**Hector,Ludlow**	**86.43**	**54**	P	**P**	**21 21 21.2**	**+1.1**
	baz=254,SNR=12						
FURC	**Furnace Creek,**	**86.46**	**52**	P	**P**	**21 21 21.4**	**+1.3**
	baz=254,SNR=6.9						
B05A	**Bryant**	**86.47**	**40**	P	**P**	**21 21 20.7**	**+0.8**
	baz=250						
BELC	**Belle Mtn. Jos**	**86.47**	**55**	P	**P**	**21 21 21.6**	**+1.1**
	baz=254,SNR=25						
PKI	**Pulchoki**	**86.52**	**299**	*e*P	**P**	**21 21 20.8**	**-0.3**
	comp=Z,41nm,1.2s						
PKIN	**Phulchoki**	**86.54**	**299**	*e*P	**P**	**21 21 20.7**	**-0.3**
	comp=Z,31nm,1.1s						
KKN	**Kakani**	**86.69**	**299**	*e*P	**P**	**21 21 21.1**	**-0.6**
	comp=Z,50nm,1.3s						
I07A	**Izee**	**86.78**	**44**	IAmb	IAmb	21 21 23.9	
	comp=Z,19nm,0.9s						
DMN	**Daman**	**86.79**	**299**	*e*P	**P**	**21 21 22.2**	**-0.1**
	comp=Z,61nm,1.2s						
BC3	**Big Chuckawall**	**86.82**	**55**	P	**P**	**21 21 23.4**	**+1.3**
	baz=255,SNR=14						
WVOR	**Wild Horse Val**	**86.88**	**46**	IAmb	IAmb	21 21 24.5	
	comp=Z,25nm,1.1s						
GMRC	**Granite Mounta**	**86.95**	**54**	P	**P**	**21 21 23.7**	**+0.9**
	baz=255,SNR=9.5						
LTY	**Liberty**	**87.03**	**41**	IAmb	IAmb	21 21 24.4	
	comp=Z,14nm,1.0s						
TPNV	**Topopah Spring**	**87.07**	**52**	P	**P**	**21 21 23.9**	**+0.6**
	baz=254,SNR=6.5						
F07A	**Phinny Hill Vi**	**87.08**	**42**	IAmb	IAmb	21 21 25.6	
	comp=Z,30nm,1.2s						
GLA	**Glamis**	**87.17**	**56**	P	**P**	**21 21 25.7**	**+2.0**
	baz=255,SNR=5.7						
GLA	**Glamis**	**87.17**	**56**	IAmb	IAmb	21 21 28.1	
	comp=Z,18nm,0.9s						
IRM	**Iron Mountain**	**87.20**	**55**	P	**P**	**21 21 25.0**	**+1.2**
	baz=255,SNR=22						
GKN	**Gorkha**	**87.29**	**299**	*e*P	**P**	**21 21 23.9**	**-0.7**
	comp=Z,39nm,1.3s						
E07A	**Sunnyside**	**87.34**	**42**	IAmb	IAmb	21 21 26.3	
	comp=Z,21nm,1.0s						
HAWA	**Hanford**	**87.49**	**42**	IAmb	IAmb	21 21 27.1	
	comp=Z,19nm,0.9s						
G08A	**Pilot Rock**	**87.53**	**43**	IAmb	IAmb	21 21 27.8	
	comp=Z,28nm,1.1s						
EPYK	**Eagle Plains**	**87.65**	**20**	P	**P**	**21 21 25.7**	**+0.4**
	baz=236						
NEE2	**Needles Airpor**	**87.77**	**54**	P	**P**	**21 21 28.0**	**+1.4**
	baz=255						
R11A	**Troy Canyon, C**	**87.95**	**50**	P	**P**	**21 21 28.0**	**+0.5**
	baz=254,SNR=12						
R11A	**Troy Canyon, C**	**87.95**	**50**	IAmb	IAmb	21 21 29.7	
	comp=Z,13nm,1.1s						
PDMCI	**Parker Dam,Lak**	**88.04**	**55**	P	**P**	**21 21 29.2**	**+1.4**
	baz=256,SNR=14						
D08A	**Wollman Farm,**	**88.10**	**41**	IAmb	IAmb	21 21 29.9	
	comp=Z,17nm,1.1s						
DANN	**Dangsing**	**88.12**	**299**	*e*P	**P**	**21 21 27.8**	**-0.9**
	comp=Z,24nm,0.9s						
B08A	**Colville Reser**	**88.24**	**40**	IAmb	IAmb	21 21 30.1	
	comp=Z,14nm,1.1s						
W13A	**Hualapai Mount**	**88.44**	**54**	IAmb	IAmb	21 21 33.2	
	comp=Z,18nm,1.1s						
E09A	**Wood Farm, Sta**	**88.44**	**42**	IAmb	IAmb	21 21 31.4	
	comp=Z,14nm,1.1s						
214A	**Organ Pipe Nat**	**88.55**	**57**	P	**P**	**21 21 32.1**	**+1.8**
	baz=256						
F10A	**Beach Ranch, E**	**88.89**	**43**	IAmb	IAmb	21 21 33.4	
	comp=Z,14nm,0.8s						
WMQ	**Urumqi**	**88.94**	**315**	*e*P	**P**	**21 21 32.5**	**+0.5**
WMQ				pP	pP	21 21 44.0	0.0
WMQ				sP	sP	21 21 48.8	+0.4
WMQ				pmax	pmax		
	comp=Z,18nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,140nm,4.7s						
WMQ				LR	LR		
	comp=Z,270nm,25.9s						
WMQ				LR	LR		
	comp=Z,230nm,27.1s						
WMQ	**Urumqi**	**88.94**	**315**	IAmb	IAmb	21 21 34.5	
	comp=Z,10nm,0.9s						
MFID	**Camas Ranch**	**89.14**	**46**	IAmb	IAmb	21 21 35.0	
	comp=Z,12nm,1.0s						
SLBS	**Sierra La Lagu**	**89.19**	**66**	P	**P**	**21 21 33.3**	**-0.3**
SLBS				IAmb	IAmb	21 21 37.0	
	comp=Z,8.0nm,0.8s						
NEW	**Newport**	**89.62**	**41**	P	**P**	**21 21 35.3**	**+0.4**
	baz=253						
INK	**Inuvik**	**89.73**	**19**	P	**P**	**21 21 34.6**	**-0.3**
	comp=Z,8.0nm,1.1s,baz=194,slow=6.5,SNR=8.9						
HLID	**Hailey**	**90.17**	**46**	P	**P**	**21 21 39.2**	**+1.4**
	baz=255						
HLID	**Hailey**	**90.17**	**46**	IAmb	IAmb	21 21 40.3	
	comp=Z,13nm,0.9s						
X16A	**Lo Mia Camp, P**	**90.24**	**55**	IAmb	IAmb	21 21 41.2	
	comp=Z,13nm,0.9s						
TUC	**Tucson**	**90.31**	**57**	P	**P**	**21 21 40.3**	**+1.6**
	baz=257						
TUC	**Tucson**	**90.31**	**57**	P	**P**	**21 21 38.6**	**0.0**
TUC				pmax	pmax		
	comp=Z,11nm,1.1s						
TUC	**Tucson**	**90.31**	**57**	P	**P**	**21 21 38.6**	**0.0**
TUC				IAmb	IAmb	21 21 41.5	
	comp=Z,11nm,1.1s						
DUG	**Dugway, Tooele**	**90.50**	**49**	P	**P**	**21 21 40.8**	**+1.3**
	baz=256						
DUG	**Dugway, Tooele**	**90.50**	**49**	IAmb	IAmb	21 21 41.6	
	comp=Z,11nm,0.9s						
WUAZ	**Wupatki**	**90.53**	**54**	P	**P**	**21 21 41.9**	**+2.2**
	baz=257						
WUAZ	**Wupatki**	**90.53**	**54**	IAmb	IAmb	21 21 42.5	
	comp=Z,18nm,0.9s						
BELA	**Belgrano 2**	**90.67**	**176**	P	**P**	**21 21 39.7**	**+0.3**
DGZ	**Jazzator, Alta**	**90.74**	**321**	*d i*P	**P**	**21 21 39.9**	**-0.4**
DGZ				pmax	pmax		
	comp=Z,12nm,0.9s						
MSO	**Missoula**	**91.31**	**43**	P	**P**	**21 21 43.2**	**+0.2**
	baz=256						
JTMT	**Jette**	**91.32**	**42**	IAmb	IAmb	21 21 44.2	
	comp=Z,11nm,0.9s						
319A	**Douglas**	**91.36**	**58**	IAmb	IAmb	21 21 46.4	
	comp=Z,14nm,0.9s						
X18A	**Snowflake**	**91.46**	**55**	IAmb	IAmb	21 21 46.7	
	comp=Z,11nm,0.9s						
ZSN	**Zaisan**	**91.80**	**318**	*e*P	**P**	**21 21 44.5**	**-0.7**
	comp=Z,2.5nm,0.9s,baz=318						
ZSN	**Zaisan**	**91.80**	**318**	*e*P	**P**	**21 21 44.4**	**-0.7**
ZSN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BOZ	**Bozeman (W)**	**92.58**	**44**	P	**P**	**21 21 50.4**	**+1.4**
	baz=257						
REDW	**Red Top Meadow**	**92.64**	**46**	IAmb	IAmb	21 21 54.4	
	comp=Z,7.9nm,1.0s						
SNOW	**Snow King Moun**	**92.73**	**46**	IAmb	IAmb	21 21 52.1	
	comp=Z,9.2nm,0.8s						
121A	**Cookes Peak, D**	**92.84**	**58**	P	**P**	**21 21 52.0**	**+1.5**
	baz=259						
FLWY	**Flagg Ranch**	**92.90**	**46**	IAmb	IAmb	21 21 52.9	
	comp=Z,7.5nm,0.8s						
H17A	**Grant Village**	**93.06**	**46**	P	**P**	**21 21 53.7**	**+2.4**
	baz=258						
H17A	**Grant Village**	**93.06**	**46**	IAmb	IAmb	21 21 54.6	
	comp=Z,8.7nm,0.8s						
PV12	**Saucer Basin,**	**93.14**	**52**	IAmb	IAmb	21 21 54.9	
	comp=Z,12nm,0.9s						
C36M	**Paulatuk**	**93.27**	**20**	P	**P**	**21 21 51.2**	**-0.1**
	baz=248						
MK31	**Makanchi Array**	**93.37**	**317**	*ce*P	**P**	**21 21 52.4**	**0.0**
MK31	**Makanchi Array**	**93.37**	**317**	IAmb	IAmb	21 21 53.5	
	comp=Z,13nm,0.9s						
MKAR	**Makanchi Array**	**93.37**	**317**	P	**P**	**21 21 52.4**	**0.0**
	comp=Z,10nm,0.7s,baz=95,slow=6.3,SNR=120						
MKAR				PP	**PP**	**21 25 35.0**	**-1.9**
	comp=Z,1.6nm,1.0s,baz=102,slow=11,SNR=4.3						
MKAR				PKKPbc	**PKKPdf**	**21 38 59.2**	**-0.6**
	comp=Z,1.9nm,0.6s,baz=285,slow=2.8,SNR=22						
MKAR				LR	LR	22 06 46.2	
	comp=Z,89nm,18.2s,baz=98,slow=37						
MKAR	**Makanchi Array**	**93.37**	**317**	P	**P**	**21 21 52.1**	**-0.3**
ZAA0	**Zalesovo Array**	**93.39**	**324**	IAmb	IAmb	21 21 52.4	
	comp=Z,14nm,1.1s						
ZALV	**Zalesovo Beam**	**93.39**	**324**	P	**P**	**21 21 51.6**	**-0.7**
	comp=Z,9.3nm,0.8s,baz=111,slow=4.2,SNR=39						
ZALV				LR	LR	22 01 40.3	
	comp=Z,108nm,21.9s,baz=82,slow=34						
ZALV	**Zalesovo Beam**	**93.39**	**324**	P	**P**	**21 21 51.1**	**-1.1**
BW06	**Boulder Array**	**93.45**	**47**	P	**P**	**21 21 54.1**	**+1.0**
	baz=258						
BW06	**Boulder Array**	**93.45**	**47**	IAmb	IAmb	21 21 54.6	
	comp=Z,7.6nm,1.1s						
PD31	**Pinedale Array**	**93.45**	**47**	IAmb	IAmb	21 21 54.6	
	comp=Z,8.1nm,1.1s						
PDAR	**Pinedale Array**	**93.45**	**47**	P	**P**	**21 21 53.5**	**+0.4**
	comp=Z,5.4nm,0.9s,baz=256,slow=2.6,SNR=31						
PDAR				PKKPbc	**PKKPdf**	**21 38 59.6**	**-0.3**
	comp=Z,0.6nm,0.8s,baz=94,slow=4.8,SNR=4.2						
PDAR				LR	LR	21 57 05.2	
	comp=Z,112nm,18.9s,baz=282,slow=31						
PDAR	**Pinedale Array**	**93.45**	**47**	P	**P**	**21 21 53.0**	**-0.1**
MAKZ	**Makanchi**	**93.58**	**317**	P	**P**	**21 21 53.0**	**-0.4**
MAKZ				pmax	pmax		
	comp=Z,18nm,1.0s						
MAKZ	**Makanchi**	**93.58**	**317**	P	**P**	**21 21 53.0**	**-0.4**
O20A	**White River Ci**	**93.91**	**50**	P	**P**	**21 21 56.3**	**+1.0**
	baz=259						
RLMT	**Red Lodge**	**94.12**	**45**	P	**P**	**21 21 57.1**	**+1.0**
	baz=259						
SMLA	**Simla**	**94.30**	**301**	*e*x	x	21 21 31.0	
SMLA				*i* x	x	21 21 56.1	
SMLA				*e*P	**P**	**21 21 56.6**	**-0.4**
EGMT	**Eagleton**	**94.35**	**42**	P	**P**	**21 21 57.5**	**+0.6**
	baz=259						
EGMT	**Eagleton**	**94.35**	**42**	P	**P**	**21 21 57.2**	**+0.2**
ANMO	**Albuquerque**	**94.37**	**55**	P	**P**	**21 21 58.4**	**+0.9**
	baz=260						
ANMO	**Albuquerque**	**94.37**	**55**	P	**P**	**21 21 57.2**	**-0.3**
ANMO				pmax	pmax		
	comp=Z,5.0nm,1.1s						
ANMO	**Albuquerque**	**94.37**	**55**	P	**P**	**21 21 57.2**	**-0.3**
S22A	**4UR Ranch, Cre**	**94.56**	**53**	P	**P**	**21 21 58.6**	**+0.1**
	baz=260						
SHLS	**Shalkode**	**94.62**	**313**	*e*P	**P**	**21 21 56.3**	**-2.2**
	comp=Z,3.4nm,1.1s,baz=313						
SHLS	**Shalkode**	**94.62**	**313**	*e*P	**P**	**21 21 56.2**	**-2.2**
SHLS				pmax	pmax		
	comp=Z,3.0nm,1.1s						
MNTX	**Cornudas Mount**	**94.69**	**59**	P	**P**	**21 21 59.5**	**+0.6**
	baz=260						
YKA	**Yellowknife Ar**	**94.82**	**27**	P	**P**	**21 21 57.7**	**-0.9**
	comp=Z,5.3nm,0.8s,baz=252,slow=4.1,SNR=55						
YKA				PKKPbc	**PKKPdf**	**21 38 56.2**	**-1.4**
	comp=Z,0.7nm,0.9s,baz=66,slow=3.1,SNR=4.4						
YKA				LR	LR	21 58 55.5	
	comp=Z,328nm,19.9s,baz=0.0,slow=32						
KPKS	**Kokpek**	**95.24**	**313**	*e*P	**P**	**21 22 00.5**	**-0.7**
	comp=Z,1.7nm,0.9s,baz=313						
KPKS	**Kokpek**	**95.24**	**313**	*e*P	**P**	**21 22 00.4**	**-0.7**
KPKS				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SATY	**Saty**	**95.37**	**313**	*e*P	**P**	**21 22 01.1**	**-0.8**
	baz=313						
SATY	**Saty**	**95.37**	**313**	*e*P	**P**	**21 22 01.0**	**-0.8**
SEM	**Semipalatinsk**	**95.40**	**320**	*e*P	**P**	**21 21 59.9**	**-2.0**
	comp=Z,2.3nm,0.8s,baz=320						
SEM	**Semipalatinsk**	**95.40**	**320**	*e*P	**P**	**21 21 59.9**	**-2.0**
SEM				pmax	pmax		
	comp=Z,2.0nm,0.8s						
SDCO	**Great Sand Dun**	**95.60**	**53**	P	**P**	**21 22 04.2**	**+1.0**
	baz=261						
TDK	**Taldyqorghan**	**95.69**	**315**	*e*P	**P**	**21 22 02.5**	**-0.6**
	comp=Z,6.8nm,0.8s,baz=315						
TDK	**Taldyqorghan**	**95.69**	**315**	*e*P	**P**	**21 22 02.5**	**-0.6**
TDK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
TXAR	**Lajitas Array**	**95.77**	**61**	P	**P**	**21 22 04.5**	**+0.6**
	comp=Z,0.8nm,0.7s,baz=218,slow=6.2,SNR=9.7						
TXAR				PKKPbc	**PKKPbc**	**21 38 54.1**	**0.0**
	comp=Z,0.5nm,0.7s,baz=111,slow=3.5,SNR=4.4						
TXAR				LR	LR	22 01 34.7	
	comp=Z,335nm,18.0s,baz=0.0,slow=33						
TXAR	**Lajitas Array**	**95.77**	**61**	P	**P**	**21 22 03.5**	**-0.4**
N23A	**Red Feather La**	**95.77**	**50**	P	**P**	**21 22 05.5**	**+1.7**
	baz=261						
NRIK	**Noril'sk**	**95.94**	**340**	P	**P**	**21 22 03.0**	**-0.6**
	comp=Z,5.6nm,0.8s,baz=100,slow=2.5,SNR=7.1						
NRIK				PP	**PP**	**21 25 53.6**	**-2.6**
	comp=Z,1.7nm,0.7s,baz=117,slow=5.7,SNR=5.1						
NRIK				LR	LR	22 04 39.5	
	comp=Z,199nm,20.4s,baz=64,slow=35						
T25A	**Trinidad**	**96.36**	**54**	P	**P**	**21 22 07.3**	**+0.8**
	baz=261						
MDOK	**Medeo**	**96.37**	**313**	*e*P	**P**	**21 22 05.5**	**-0.9**
	baz=313						
MDOK	**Medeo**	**96.37**	**313**	*e*P	**P**	**21 22 05.4**	**-0.9**
TNSS	**Tian-Shan**	**96.42**	**312**	*e*P	**P**	**21 22 05.9**	**-1.0**
	baz=312						
TNSS	**Tian-Shan**	**96.42**	**312**	*e*P	**P**	**21 22 05.9**	**-1.0**
KURK	**Kurchatov**	**96.48**	**320**	P	**P**	**21 22 05.9**	**-0.6**
KURK	**Kurchatov**	**96.48**	**320**	P	**P**	**21 22 05.9**	**-0.6**
LAO	**LASA Array**	**96.48**	**44**	P	**P**	**21 22 08.4**	**+1.7**
	baz=261						
CHKK	**Chushkaly**	**96.52**	**313**	*e*P	**P**	**21 22 05.5**	**-1.3**
	baz=313						
CHKK	**Chushkaly**	**96.52**	**313**	*e*P	**P**	**21 22 05.5**	**-1.3**
KURBB	**Kurchatov Arra**	**96.52**	**320**	PKKPbc	PKKPbc	21 38 52.0	-0.8
	comp=Z,1.3nm,0.8s,baz=284,slow=2.9,SNR=9.9						
KSH	**Kashi**	**96.62**	**309**	P	**P**	**21 22 08.4**	**+0.8**
KSH				S	**S**	**21 33 27.4**	**+1.3**
KSH				pmax	pmax		
	comp=Z,3.0nm,0.3s						
KSH				pmax	pmax		
	comp=Z,72nm,5.8s						
KUU	**Kurty**	**96.98**	**313**	*e*P	**P**	**21 22 07.7**	**-1.4**
	comp=Z,3.2nm,0.7s,baz=313						
KUU	**Kurty**	**96.98**	**313**	*e*P	**P**	**21 22 07.6**	**-1.4**
KUU				pmax	pmax		
	comp=Z,3.0nm,0.7s						
VNA3	**Neumayer Olymp**	**98.03**	**182**	P	Pdif	21 22 14.5	+1.3
DGMT	**Dagmar**	**98.09**	**42**	P	Pdif	21 22 14.7	+0.8
	baz=263						
AAK	**Ala-Archa**	**98.15**	**312**	PKKPbc	PKKPbc	21 38 48.0	-0.2
	comp=Z,0.8nm,0.7s,baz=215,slow=2.5,SNR=5.8						
AAK	**Ala-Archa**	**98.15**	**312**	P	**P**	**21 22 13.7**	**-0.8**
AAK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
AAK	**Ala-Archa**	**98.15**	**312**	P	**P**	**21 22 13.7**	**-0.8**
VNA2	**Neumayer--Watz**	**98.27**	**182**	P	Pdif	21 22 14.9	+0.6
VNA1	**Neumayer--Stat**	**98.58**	**182**	P	**P**	**21 22 14.3**	**-1.3**
BRVK	**Borovoye**	**101.85**	**322**	*i* P	**Pdif**	**21 22 29.3**	**-1.2**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
FRB	**Frobisher Bay**	**115.01**	**23**	PKP	**PKiKP**	**21 27 16.5**	**-1.1**
	comp=Z,2.0nm,0.7s,baz=254,slow=2.3,SNR=4.4						
ARCES	**ARCESS Array B**	**116.15**	**345**	PKP	**PKiKP**	**21 27 18.8**	**-1.0**
	comp=Z,2.9nm,0.9s,baz=47,slow=1.7,SNR=12						
ARCES	**ARCESS Array B**	**116.15**	**345**	PKIKP	**PKPdf**	**21 27 20.1**	**+0.4**
ARCES	**ARCESS Array B**	**116.15**	**345**		**PKPdf**	**21 27 20.1**	**+0.4**
VRH	**Novokhopyorsk**	**119.41**	**323**	*e*PKIKP	**PKPdf**	**21 27 25.3**	**-1.2**
VRH				pmax	pmax		
	comp=Z,8.0nm,0.7s						
LPAZ	**La Paz**	**120.29**	**116**	PKP	**PKiKP**	**21 27 30.2**	**+0.1**
	comp=Z,4.0nm,0.8s,baz=292,slow=2.1,SNR=10						
LPSR	**Galich'ya Gora**	**120.47**	**325**	*e*PKIKP	**PKPdf**	**21 27 25.6**	**-2.9**
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.2s						
KBZ	**Khabaz**	**120.99**	**315**	PKP	**PKiKP**	**21 27 30.3**	**+0.4**
	comp=Z,1.6nm,0.9s,baz=78,slow=6.1,SNR=5.4						
KIV	**Kislovodsk**	**121.08**	**315**	*e*PKIKP	**PKPdf**	**21 27 28.0**	**-2.1**
KIV				pmax	pmax		
	comp=Z,6.0nm,1.1s						
FINES	**FINESS Array B**	**121.59**	**339**	PKP	**PKPdf**	**21 27 29.9**	**-0.4**
	comp=Z,5.5nm,0.9s,baz=135,slow=1.3,SNR=6.2						
RAYN	**Ar Rayn**	**121.87**	**291**	PKIKP	**PKPdf**	**21 27 31.1**	**-1.0**
RAYN	**Ar Rayn**	**121.87**	**291**	PKPdf	**PKPdf**	**21 27 31.1**	**-1.0**
CPUP	**Villa Florida**	**124.17**	**132**	PKP	**PKiKP**	**21 27 36.9**	**+0.1**
	comp=Z,5.6nm,0.8s,baz=223,slow=2.1,SNR=10						
CPUP	**Villa Florida**	**124.17**	**132**		**PKPdf**	**21 27 35.8**	**-0.7**
SDV	**Santo Domingo**	**124.51**	**87**	PKPdf	**PKPdf**	**21 27 36.4**	**-1.2**
BOSA	**Boshof**	**125.23**	**223**	PKP	**PKiKP**	**21 27 39.1**	**+0.1**
	comp=Z,9.0nm,0.8s,baz=61,slow=0.4,SNR=12						
NACGM	**Naroch**	**125.49**	**332**	*i* PKP	**PKPdf**	**21 27 38.2**	**+0.2**
NACGM				*i* PKP	**PKPdf**	**21 27 38.2**	**+0.2**
NACGM				*i* PKP	**PKPdf**	**21 27 38.2**	**+0.2**
NACGM				*i* PP	PP	21 29 11.4	-18
NACGM				*i* PPP	PPP	21 31 46.6	
NACGM				*i* SKS	**SKSdf**	**21 34 46.4**	**-0.2**
NACGM				*i* SKKS	SKKSac	21 36 54.2	+30
NACGM				*i* PS	PS	21 39 05.7	-25
NACGM				*i* PS	PS	21 39 05.7	-25
NACGM				*i* SS	**SS**	**21 46 32.5**	**+7.9**
NACGM				*i* SSS	SSS	21 51 34.6	
NACGM				*i* LQ	LQ	22 17 32.8	
NACGM				*i* LR	LR	22 24 28.2	
NB2	**NORSAR Subarra**	**126.52**	**345**	PKPdf	**PKPdf**	**21 27 39.3**	**-0.6**
	comp=Z,6.2nm,1.0s,baz=31,slow=1.9						
NB2	**NORSAR Subarra**	**126.52**	**345**	PKPdf	**PKPdf**	**21 27 39.3**	**-0.6**
	baz=31,slow=1.9						
NOA	**NORSAR Array B**	**126.52**	**345**	PKP	**PKPdf**	**21 27 39.9**	**-0.1**
	comp=Z,3.7nm,0.8s,baz=33,slow=2.0,SNR=8.8						
HFS	**Hagfors**	**126.60**	**343**	PKP	**PKPdf**	**21 27 39.7**	**-0.3**
	comp=Z,4.3nm,0.8s,baz=140,slow=4.8,SNR=3.6						
AKASG	**Malin Array Be**	**126.69**	**327**	PKP	**PKPdf**	**21 27 40.1**	**-0.4**
	comp=Z,3.9nm,0.9s,baz=58,slow=2.1,SNR=11						
AKASG	**Malin Array Be**	**126.69**	**327**	PKIKP	**PKPdf**	**21 27 40.2**	**-0.3**
AKASG	**Malin Array Be**	**126.69**	**327**	PKPdf	**PKPdf**	**21 27 40.2**	**-0.3**
AKBB	**Malin Array Si**	**126.69**	**327**	*c i*PKIKP	**PKiKP**	**21 27 41.1**	**+0.1**
KMBO	**Kilima Mbogo**	**127.39**	**260**	PKP	**PKiKP**	**21 27 44.2**	**+0.4**
	comp=Z,2.2nm,0.9s,baz=57,slow=5.6,SNR=4.3						
SAML	**Samuel**	**127.52**	**110**	PKIKP	**PKPdf**	**21 27 42.2**	**-1.0**
SAML	**Samuel**	**127.52**	**110**	PKPdf	**PKPdf**	**21 27 42.2**	**-1.0**
BR131	**Keskin Array S**	**128.82**	**313**	PKIKP	**PKPdf**	**21 27 44.5**	**-0.6**
BR131	**Keskin Array S**	**128.82**	**313**	PKPdf	**PKPdf**	**21 27 44.5**	**-0.6**
BRTR	**Keskin Array B**	**128.82**	**313**	PKP	**PKPdf**	**21 27 44.5**	**-0.6**
	comp=Z,2.5nm,1.0s,baz=132,slow=1.8,SNR=11						
BRTR	**Keskin Array B**	**128.82**	**313**	PKPdf	**PKPdf**	**21 27 44.4**	**-0.6**
OBIP	**Obispado Ponce**	**128.97**	**76**	PKPdf	**PKPdf**	**21 27 44.6**	**-1.1**
SJG	**San Juan**	**129.40**	**75**	PKIKP	**PKPdf**	**21 27 45.7**	**-0.9**
SJG	**San Juan**	**129.40**	**75**		**PKPdf**	**21 27 45.7**	**-0.9**
MTP	**Monte Pirata**	**129.97**	**75**		**PKPdf**	**21 27 46.7**	**-0.9**
LSZ	**Lusaka**	**130.56**	**239**	PKIKP	**PKPdf**	**21 27 47.7**	**-1.4**
LSZ	**Lusaka**	**130.56**	**239**	PKPdf	**PKPdf**	**21 27 47.7**	**-1.4**
BURAR	**Bucovina Array**	**130.59**	**325**		**PKPdf**	**21 27 47.8**	**-0.4**
KOLS	**Kolonicke sedl**	**131.38**	**328**	*e*PKIKP	**PKiKP**	**21 27 51.5**	**+1.0**
KOLS	**Kolonicke sedl**	**131.38**	**328**	*e*PKP	**PKiKP**	**21 27 51.5**	**+1.0**
CRVS	**Cervenica-Dubn**	**131.82**	**329**	*e*PKIKP	**PKiKP**	**21 27 52.2**	**+0.8**
CRVS	**Cervenica-Dubn**	**131.82**	**329**	*e*PKP	**PKiKP**	**21 27 52.2**	**+0.8**
LANS	**Liptovska Anna**	**132.65**	**330**	*e*PKIKP	**PKiKP**	**21 27 54.0**	**+0.9**
LANS	**Liptovska Anna**	**132.65**	**330**	*e*PKP	**PKiKP**	**21 27 54.0**	**+0.9**
BSEG	**Bad Segeberg**	**132.77**	**340**	*e*L	L	22 26 02.1	
	comp=Z,222nm,21.2s						
MORC	**Moravsky Berou**	**133.13**	**332**	*e*PKP	**PKiKP**	**21 27 53.6**	**-0.4**
PTGA	**Pitinga**	**133.15**	**101**	PKPdf	**PKPdf**	**21 27 52.9**	**-1.0**
VYHS	**Vyhne**	**133.40**	**330**	*e*PKIKP	**PKiKP**	**21 27 54.6**	**0.0**
VYHS	**Vyhne**	**133.40**	**330**	*e*PKP	**PKiKP**	**21 27 54.6**	**0.0**
JAVC	**Velka Javorina**	**133.71**	**331**	*e*PKP	**PKiKP**	**21 27 55.7**	**+0.5**
BRG	**Berggiesshubel**	**133.88**	**335**	*e*PKP	**PKiKP**	**21 27 55.1**	**-0.3**
BRG				Amp		21 27 56.7	
	comp=Z,6.3nm,1.1s						
BRG	**Berggiesshubel**	**133.88**	**335**	*e*PKPdf	**PKiKP**	**21 27 55.1**	**-0.3**
	baz=38,slow=1.2						
VRAC	**Vranov**	**133.90**	**332**	*e*PKP	**PKiKP**	**21 27 55.2**	**-0.3**
CLL	**Collm**	**133.92**	**336**	*e*PKPpre	PKPpre	21 27 48.0	
CLL				*e*PKPdf	**PKPdf**	**21 27 52.0**	**-2.2**
CLL				*i* PKiKP	**PKiKP**	**21 27 55.6**	**+0.1**
	comp=Z,9.0nm,1.1s						
CLL				*e*PP	**PP**	**21 30 24.0**	**+0.2**
CLL				*e*SKPdf	**SKPdf**	**21 31 26.0**	**-0.3**
CLL	**Collm**	**133.92**	**336**	*e*PKIKP	**PKPdf**	**21 27 48.0**	**-6.2**
CLL				*i*		21 27 55.6	
CLL	**Collm**	**133.92**	**336**	*e*L	L	22 31 14.6	
	comp=Z,236nm,20.0s						
KRUC	**Moravsky**	**134.16**	**332**	*e*PKP	**PKPdf**	**21 27 55.2**	**+0.5**
MODS	**Modra-Piesok**	**134.24**	**331**	*e*PKIKP	**PKiKP**	**21 27 56.0**	**-0.3**
MODS	**Modra-Piesok**	**134.24**	**331**	*e*PKP	**PKiKP**	**21 27 56.0**	**-0.3**
PRU	**Pruhonice**	**134.31**	**334**	*e*PKIKP	**PKiKP**	**21 27 56.3**	**0.0**
PRU	**Pruhonice**	**134.31**	**334**	*e*PKPDF	**PKiKP**	**21 27 56.3**	**0.0**
CLZ	**Clausthal**	**134.48**	**339**	*e*PKPdf	**PKiKP**	**21 27 56.1**	**-0.6**
	baz=38,slow=1.2						
GUNZ	**Gunzen**	**134.93**	**336**	*e*PKPdf	**PKiKP**	**21 27 58.2**	**+0.5**
	baz=38,slow=1.2						
CONA	**Conrad Observa**	**135.22**	**331**	*e*P	**PKPdf**	**21 27 57.5**	**+0.7**
	comp=Z,4.2nm,0.7s						
CKRC	**Cesky Krumlov**	**135.28**	**333**	*e*PKPDF	**PKPdf**	**21 27 57.2**	**+0.3**
MANZ	**Manzenberg**	**135.31**	**336**	*e*PKPdf	**PKiKP**	**21 27 58.1**	**-0.3**
	baz=38,slow=1.2						
KHC	**Kasperske Hory**	**135.36**	**334**	*c i*PKIKP	**PKiKP**	**21 27 58.4**	**-0.2**
KHC				pmax	pmax		
	comp=Z,17nm,1.0s						
KHC	**Kasperske Hory**	**135.36**	**334**	*e*PKPDF	**PKPdf**	**21 27 57.2**	**+0.2**
GEC2	**GERESS Array S**	**135.53**	**334**	*e*PKPdf	**PKiKP**	**21 27 58.3**	**-0.6**
	baz=38,slow=1.2						
GEC2				*e*L	L	22 27 03.1	
	comp=Z,256nm,19.9s						
GERES	**GERESS Array B**	**135.53**	**334**	PKP	**PKPdf**	**21 27 56.9**	**-0.6**
	comp=Z,3.9nm,0.9s,baz=48,slow=2.0,SNR=18						
GERES	**GERESS Array B**	**135.53**	**334**	PKIKP	**PKPdf**	**21 27 57.1**	**-0.3**
GERES	**GERESS Array B**	**135.53**	**334**	PKPdf	**PKPdf**	**21 27 57.1**	**-0.3**
WET	**Wettzell**	**135.65**	**335**	*e*PKPdf	**PKPdf**	**21 27 58.1**	**+0.6**
	baz=38,slow=1.2						
WET				*e*L	L	22 26 42.0	
	comp=Z,211nm,22.0s						
KASTN	**Kahler Asten**	**135.69**	**340**	*e*PKPdf	**PKPdf**	**21 27 58.3**	**+0.7**
	baz=38,slow=1.2						
GRF	**Grafenberg Arr**	**135.90**	**336**	*e*PKPdf	**PKiKP**	**21 27 59.4**	**-0.2**
	baz=38,slow=1.2						
GRF				*e*L	L	22 32 05.5	
	comp=Z,243nm,18.8s						
MOA	**Molln**	**136.02**	**332**	*e*P	**PKPdf**	**21 27 58.2**	**-0.1**
	comp=Z,4.1nm,1.4s						
TNS	**Taunus Mts**	**136.51**	**339**	*e*PKPdf	**PKiKP**	**21 28 01.1**	**+0.3**
	baz=38,slow=1.2						

TNS				*e*L	L	22 30 04.1	
	comp=Z,212nm,21.5s						
SOKA	Soboth	136.51	331	*e*P	PKPdf	21 27 58.3	-1.0
	comp=Z,4.8nm,1.2s						
MEM	Membach	137.00	341	*d*PKP	PKPdf	21 28 00.4	+0.5
MEM				*d*PKiKP	PKiKP	21 28 02.1	+0.3
KBA	Koelnbreinsper	137.01	332	*e*P	PKPdf	21 27 59.9	-0.4
	comp=Z,5.5nm,1.1s						
FUR	Furstenfeldbru	137.08	335	*e*L	L	22 30 45.0	
	comp=Z,260nm,18.8s						
BDFB	Brasilia	137.47	128	PKP	PKPdf	21 28 00.4	-1.6
	comp=Z,7.9nm,0.9s,baz=156,slow=2.1,SNR=12						
BDFB	Brasilia	137.47	128	PKIKP	PKPdf	21 28 00.8	-1.2
BDFB	Brasilia	137.47	128	PKPdf	PKPdf	21 28 00.8	-1.2
WATA	Walderalm	137.60	334	*e*P	PKPdf	21 28 01.4	0.0
	comp=Z,6.5nm,1.1s						
WTTA	Wattenberg	137.63	334	*e*P	PKPdf	21 28 01.1	-0.3
	comp=Z,5.3nm,1.0s						
ABTA	Abfaltersbach	137.63	333	*e*P	PKPdf	21 28 00.7	-0.7
	comp=Z,4.4nm,1.1s						
BMRD	Maredsous	137.65	342	*d*PKiKP	PKiKP	21 28 03.1	0.0
MOTA	Moosalm	137.80	334	*e*P	PKPdf	21 28 02.0	+0.2
	comp=Z,5.1nm,1.0s						
SQTA	Sankt Quirin	137.85	334	*e*P	PKPdf	21 28 02.0	+0.2
	comp=Z,5.4nm,0.9s						
UBR	Ueberruh	137.95	335	*e*PKPdf	PKPdf	21 28 02.8	+0.9
	baz=38,slow=1.2						
BFO	Black Forest	138.12	337	*e*PKPdf	PKiKP	21 28 04.5	+0.3
	baz=38,slow=1.2						
BFO				*e*L	L	22 38 53.0	
	comp=Z,151nm,20.0s						
FETA	Feichten	138.21	334	*e*P	PKPdf	21 28 02.9	+0.3
	comp=Z,10nm,1.4s						
VSL	Villasalto	144.56	328		PKPbc	21 28 13.1	+0.4
CMAH	Djebel Manchou	147.72	326	P	PKPbc	21 28 22.6	+0.3
PBRG	Braganca	148.47	349	*e*PKPbc	PKPbc	21 28 24.4	+0.3
PGAV	Gavieira, Arco	148.57	351	*e*PKPbc	PKPbc	21 28 25.1	+0.7
DFRA	Djebel Bou Aff	148.60	328	P	PKiKP	21 28 26.0	-0.2
POLO	Lamas de Olo	149.07	350	*e*PKPbc	PKiKP	21 28 26.5	-0.5
SET	Setif	149.11	328	P	PKPab	21 28 29.0	-1.3
MVO	Moncorvo	149.15	349	*e*PKPbc	PKiKP	21 28 26.6	-0.5
PVIS	Viseu	149.73	350	*e*PKPbc	PKiKP	21 28 28.2	-0.1
MTE	Manteigas	149.98	350		PKPbc	21 28 27.4	-0.6
MTE	Manteigas	149.98	350	*e*PKPbc	PKPbc	21 28 27.1	-0.8
PAB	San Pablo	150.09	344	PKP2	PKPbc	21 28 27.7	-0.6
PAB	San Pablo	150.09	344		PKPbc	21 28 27.6	-0.6
COI	Coimbra	150.31	351	*e*PKPbc	PKiKP	21 28 29.5	+0.1
PCAS	Casmilo, Conde	150.48	351	*e*PKPbc	PKiKP	21 28 30.0	+0.2
PCBR	Castelo Branco	150.51	349	*e*PKPbc	PKiKP	21 28 29.8	-0.1
PMRV	Marv??o	150.90	349	*e*PKPbc	PKiKP	21 28 30.8	+0.1
PSBE	So Bento	151.05	351	*e*PKPbc	PKiKP	21 28 31.6	+0.6
PMTG	Montargil	151.39	350	*e*PKPbc	PKiKP	21 28 31.7	0.0
EVO	Evora	151.88	350	*e*PKPbc	PKiKP	21 28 33.0	+0.3
PBEJ	Beja	152.34	349	*e*PKPbc	PKiKP	21 28 34.6	+0.9
PNCL	Nicolau / Gran	152.38	350	*e*PKPbc	PKiKP	21 28 34.3	+0.5
MESJ	Messejana	152.59	350	*e*PKPbc	PKiKP	21 28 34.9	+0.7
PCVE	Castro Verde	152.76	349	*e*PKPbc	PKiKP	21 28 35.2	+0.6
RCBR	Riachuelo	152.83	127	PKIKP	PKPbc	21 28 33.8	-1.5
RCBR	Riachuelo	152.83	127		PKPbc	21 28 33.8	-1.5
PVAQ	Vaqueiros	152.92	348	*e*PKPbc	PKiKP	21 28 35.6	+0.7
TOA0	Torodi Ar. Sit	164.21	280		PKPdf	21 28 40.3	-1.2
TORD	Torodi Ar. Bea	164.21	280	PKP	PKPdf	21 28 40.3	-1.2
	comp=Z,3.7nm,1.0s,baz=24,slow=1.5,SNR=13						
TORD				PKPab	PKPab	21 29 35.0	-0.4
	comp=Z,4.4nm,1.1s,baz=64,slow=3.4,SNR=5.1						
KOWA	Kowa	169.35	291		PKPdf	21 28 44.2	-1.2
KIC	Kosan Boka	169.56	245	*e*PKIKP	PKPdf	21 28 45.8	+0.2
	comp=Z,26nm,1.5s						
KIC	Kosan Boka	169.56	245	*e*PKP1	PKPab	21 30 00.0	+0.9
	comp=Z,10.0nm,0.7s						
LIC	Lamto	169.75	244	*e*PKIKP	PKPdf	21 28 45.8	+0.1
	comp=Z,73nm,1.6s						
LIC	Lamto	169.75	244	*e*PKP1	PKPab	21 30 01.0	+1.0
	comp=Z,34nm,1.3s						
DBIC	Dimbokro	169.80	247	PKPab	PKPab	21 29 60.0	-0.2
	comp=Z,4.5nm,0.8s,baz=102,slow=3.0,SNR=4.1						
DBIC	Dimbokro	169.80	247	PKP2	PKPab	21 30 00.0	-0.2
TIC	Toumodi	169.93	246	*e*PKIKP	PKPdf	21 28 46.0	+0.1
TIC	Toumodi	169.93	246	*e*PKP1	PKPab	21 30 00.4	-0.4

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*IDC **15** 21:08:54.9±2.0, 43.°06N×105.°10W, h0^{km}, mb2.6/1, mb1 3.3/5, mb1mx3.2/41, mbtmp3.0/5, ML2.4/3, MS2.7/2, Ms1 2.7/2, ms1mx2.5/14 Error ellipse: s-maj=39.8km s-min=10.1km az=153.0*

*NEIC **15** 21:08:56.6±0.5, 43.°78N±0.°05×105.°36W±0.°06, h0^{km}±2^{km}, ML3.5/58, Error ellipse: s-maj=9.3km s-min=6.7km az=332.0*

ISC 15 21:08:56.8±0.9**, 43.°74N**±0.°06×**105.°43W**±0.°05**, h0^{km}, n67, σ0^{s}.89**/64**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	Black Hills	1.08	69		Pg	21 09 15.9	-1.6
RSSD				IAML		21 09 36.0	
	875nm,0.6s						
K22A	Casper	1.35	217	Pn	Pb	21 09 23.8	+0.7
K22A				IAML		21 09 45.7	
	comp=N,478nm,0.3s						
K22A				IAML		21 09 48.7	
	comp=E,419nm,0.5s						
RWWY	Rawlins	2.43	213	Pn	Pn	21 09 38.7	+0.6
RWWY				IAML		21 10 19.2	
	comp=E,329nm,0.6s						
RWWY				IAML		21 10 23.8	
	comp=E,178nm,0.5s						
PHWY	Pilot Hill	2.44	180	Pn	Pn	21 09 38.4	+0.2
LAO	LASA Array	3.00	350	Pn	Pn	21 09 45.1	-0.6
LAO				IAML		21 10 52.3	
	comp=E,222nm,0.8s						
LAO				IAML		21 10 55.6	
	comp=E,192nm,0.9s						
RLMT	Red Lodge	3.07	298	Pn	Pn	21 09 46.9	+0.1
RLMT				IAML		21 10 51.8	
	comp=E,72nm,0.7s						
BW06	Boulder Array	3.17	253		Pn	21 09 48.0	-0.2
PD31	Pinedale Array	3.17	253		Pn	21 09 46.8	-1.3
PDAR	Pinedale Array	3.17	253	Pn	Pb	21 09 52.5	-1.6
	comp=E,4.2nm,0.3s,baz=56,slow=16,SNR=46						
PDAR				Pg	Pg	21 09 55.9	-1.6
	comp=E,4.4nm,0.3s,baz=66,slow=18,SNR=32						
PDAR				Lg	Lg	21 10 39.6	
	comp=E,9.7nm,0.3s,baz=76,slow=31,SNR=2.2						
PDAR	Pinedale Array	3.17	253		Pn	21 09 49.1	+1.0
YNE	Yellowstone No	3.52	293		Pn	21 09 52.3	-0.6
YMP	Mirror Lake Pl	3.54	288		Pn	21 09 53.4	+0.1
GCMT	Greycliff	3.65	306		Pn	21 09 54.5	-0.1
LKWY	Lake	3.67	285	Pn	Pn	21 09 55.0	-0.1
LKWY				IAML		21 10 19.9	
	comp=E,102nm,0.6s						
LKWY				IAML		21 10 20.2	
	comp=E,54nm,0.8s						
LOHW	Long Hollow	3.75	270	Pn	Pn	21 09 55.5	-0.7
H17A	Grant Village	3.76	282	Pn	Pn	21 09 56.8	+0.4
OGNE	Ogallala	3.76	137	Pn	Pn	21 09 55.7	-0.5
FLWY	Flagg Ranch	3.82	277	Pn	Pn	21 09 57.5	+0.4
FLWY				IAML		21 11 15.6	
	comp=E,43nm,1.3s						
SNOW	Snow King Moun	3.88	268	Pn	Pn	21 09 58.4	+0.5
SNOW				IAML		21 11 20.5	
	comp=E,46nm,1.1s						
SNOW				IAML		21 11 23.6	
	comp=E,62nm,1.8s						
YNR	Norris Junctio	3.89	286	Pn	Pn	21 09 58.4	+0.3
YPP	Pitchstone Pla	3.91	280	Pn	Pn	21 09 58.5	+0.1
ISCO	Idaho Springs	3.94	182	Pn	Pn	21 09 58.9	0.0
ISCO				IAML		21 11 05.6	
	comp=E,40nm,0.6s						
ISCO				IAML		21 11 07.2	
	comp=E,52nm,0.7s						
REDW	Red Top Meadow	3.96	266	Pn	Pn	21 09 59.6	+0.7
REDW				IAML		21 11 17.6	
	comp=E,86nm,0.7s						
REDW				IAML		21 11 29.4	
	comp=E,60nm,1.0s						
YHH	Holmes Hill	4.03	287	Pn	Pn	21 10 00.4	+0.4
O20A	White River Ci	4.17	211	Pn	Pn	21 10 02.4	+0.5
O20A				IAML		21 11 25.9	
	comp=N,51nm,0.8s						
O20A				IAML		21 11 50.2	
	comp=E,54nm,4.0s						
YHL	Hebgen Lake	4.27	287	Pn	Pn	21 10 03.6	+0.2
ECR	Eagle Creek	4.38	263	Pn	Pn	21 10 05.3	+0.5
QLMT	Earthquake Lak	4.44	286	Pn	Pn	21 10 06.1	+0.5
SMCO	Snowmass	4.71	195	Pn	Pn	21 10 09.8	+0.4
SMCO				IAML		21 12 01.3	
	comp=E,33nm,4.8s						
SMCO				IAML		21 12 18.7	
	comp=E,28nm,1.2s						
SUSD	Miller	4.72	79	Pn	Pn	21 10 08.0	-1.3
BOZ	Bozeman (W)	4.79	295	Pn	Pn	21 10 11.0	+0.6
DGMT	Dagmar	4.81	10	Pn	Pn	21 10 09.5	-0.9
K31A	O'Neill	5.01	101	Pn	Pn	21 10 12.4	-0.9
TCUT	Toone Canyon	5.14	241		Pn	21 10 15.3	0.0
KSCO	Kaye Shedlock'	5.18	155	Pn	Pn	21 10 16.1	+0.5
EGMT	Eagleton	5.24	326	Pn	Pn	21 10 15.9	-0.5
EGMT				IAML		21 11 59.5	
	comp=E,53nm,0.8s						
DLMT	Dillon	5.37	290		Pn	21 10 18.2	-0.1
HRY	Holter Researc	5.41	306		Pn	21 10 18.7	-0.1
LRM	Limekiln Ridge	5.41	295	Pn	Pn	21 10 19.3	+0.3
MCMT	McKenzie Canyo	5.43	284	Pn	Pn	21 10 19.1	-0.2
JLU	Jordanelle	5.46	237	Pn	Pn	21 10 19.5	-0.2
HVU	Hansel Valley	5.75	253	Pn	Pn	21 10 23.7	+0.1
MDND	Maddock	5.79	43	Pn	Pn	21 10 22.4	-1.5
P17A	Butcher Ranch,	5.83	225	Pn	Pn	21 10 25.4	+0.7
PV15	Paradox Valley	5.87	204	Pn	Pn	21 10 25.6	+0.3
PV23	Carpenter Ridg	5.94	208	Pn	Pn	21 10 27.6	+1.4
MPU	Maple Canyon	5.94	233	Pn	Pn	21 10 26.9	+0.7
PV12	Saucer Basin,	5.99	206	Pn	Pn	21 10 26.7	-0.2
SDCO	Great Sand Dun	5.99	181	Pn	Pn	21 10 27.2	+0.2
SRU	San Rafael Swe	6.00	221	Pn	Pn	21 10 26.4	-0.7
PV16	Nyswonger Mesa	6.03	207		Pn	21 10 28.0	+0.5
PV19	Morning Glory	6.05	208	Pn	Pn	21 10 26.7	-1.1
PV03	Paradox Valley	6.06	206	Pn	Pn	21 10 28.2	+0.3
PV02	Paradox Valley	6.07	205	Pn	Pn	21 10 29.6	+1.6
PV13	Radium Mtn., P	6.14	206	Pn	Pn	21 10 30.6	+1.7
TMUT	Trail Mountain	6.21	226	Pn	Pn	21 10 31.0	+1.0
PV05	Paradox Valley	6.30	207	Pn	Pn	21 10 30.1	-1.1
ECSD	EROS Data Cent	6.39	87	Pn	Pn	21 10 31.5	-0.7
CBKS	Cedar Bluff	6.53	137	Pn	Pn	21 10 33.7	-0.4
ELK	Elko	7.87	251	Pn	Pn	21 10 53.3	+0.6
	comp=E,0.0nm,0.3s,baz=104,slow=8.3,SNR=1.3						
ANMO	Albuquerque	8.82	185	LR	LR	21 13 40.0	
	comp=E,20nm,21.9s,baz=14,slow=35						
I10CA	LAC DU BONNET	9.11	42	*i*		22 06 10.0	
	baz=220,slow=332,SNR=3.8						
ULM	Lac du Bonnet	9.22	42	Pn	Pn	21 11 12.1	+1.2
	comp=E,0.3nm,0.3s,baz=187,slow=16,SNR=3.4						
ULM				Lg	Lg	21 13 49.8	
	comp=E,0.7nm,0.3s,baz=323,slow=22,SNR=3.9						
NEW	Newport	9.30	303	Lg	Lg	21 13 59.2	
	comp=E,0.1nm,0.3s,baz=44,slow=16,SNR=1.9						
NVAR	Mina Array Bea	11.06	246	Pn	Pn	21 11 37.0	+0.5
	comp=E,0.2nm,0.3s,baz=48,slow=14,SNR=2.6						
YKA	Yellowknife Ar	19.54	347	P	Pn	21 13 30.2	+3.4
	comp=E,0.3nm,0.7s,baz=154,slow=13,SNR=4.0						
YKA				Lg	Lg	21 19 28.5	
	comp=E,0.6nm,0.8s,baz=150,slow=32,SNR=4.1						
DLBC	Dease Lake	21.15	323	LR	LR	21 22 36.3	
	comp=E,56nm,18.8s,baz=214,slow=38						

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*IDC **15** 21:25:40.2±4.6, 33.°34S×78.°03E, h0^{km}, mb3.6/5, mb1 3.7/5, mb1mx3.5/35, mbtmp3.6/5, Error ellipse: s-maj=161.7km s-min=38.0km az=36.0*

ISC 15 21:25:46.4±4.0**, 32.°6S**±0.°8×**78.°8E**±0.°6**, h10^{km}, n6, σ0^{s}.17**/6**, mb3.5**/5**, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	48.95	94	P	P	21 34 33.0	-0.1
	0.4nm,0.9s,baz=253,slow=7.0,SNR=2.8						
WRA	Warramunga Arr	50.88	90	P	P	21 34 47.9	+0.1
	0.2nm,0.8s,baz=243,slow=7.6,SNR=3.7						
MKAR	Makanchi Array	79.09	2	P	P	21 37 50.6	0.0
	0.4nm,0.8s,baz=177,slow=7.0,SNR=5.4						
KURBB	Kurchatov Arra	82.86	360	P	P	21 38 10.4	-0.2
	0.3nm,0.6s,baz=198,slow=5.3,SNR=3.7						
SONM	Songino Array	83.82	18	P	P	21 38 15.9	+0.1
	0.4nm,0.8s,baz=177,slow=3.2,SNR=4.4						
YKA	Yellowknife Ar	148.89	12	PKPbc	PKPdf	21 45 29.7	+0.1
	0.5nm,0.8s,baz=342,slow=2.8,SNR=6.2						

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*IDC **15** 21:26:38.2±0.8, 78.°12N×19.°91W, h0^{km}, mb3.6/12, mb1 3.8/15, mb1mx3.6/41, mbtmp3.7/15, ML3.1/3, Error ellipse: s-maj=28.1km s-min=14.9km az=19.0*

*NEIC **15** 21:26:38.8±1.3, 78.°30N±0.°04×20.°4W±0.°4, h10^{km}±1^{km}, mb4.1/5, Error ellipse: s-maj=13.5km s-min=6.1km az=288.0*

*DNK **15** 21:26:40.2±1.2, 78.°51N×17.°86W, h80^{km}±65^{km}, ML3.6*

*IEPN **15** 21:26:41.0, 78.°06N×18.°69W, h10^{km}*

*NAO **15** 21:26:44.2±11.0, 78.°13N×18.°62W, h18^{km}±47^{km}, ML3.8*

ISC 15 21:26:39.1±0.5**, 78.°32N**±0.°04×**19.°81W**±0.°05**, h10^{km}, n56, σ1^{s}.81**/68**, mb3.9**/18**, Eastern Kalaallit Nunaat**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAG	Danmarks Havn	1.58	170	*i* P	Pb	21 27 08.2	-0.1
DAG				*i* S	Sg	21 27 29.8	0.0
DAG	Danmarks Havn	1.58	170	*i* PKIKP	Pb	21 27 08.2	-0.1
DAG	Danmarks Havn	1.58	170	*i* P	Pb	21 27 08.3	-0.1
DAG				*i* S	Sg	21 27 29.8	0.0
DAG				IAML		21 27 31.7	
	comp=Z,299nm,0.5s						
DBG	Daneborg	4.04	182	Pn	Pn	21 27 42.0	+1.1
DBG				Sn	Sn	21 28 26.5	-1.7
DBG				Lg	Lg	21 28 46.8	
DBG	Daneborg	4.04	182	Pn	Pn	21 27 42.0	+1.1
DBG				Sn	Sn	21 28 26.5	-1.7
DBG				Sg	Sg	21 28 46.8	-1.9
DBG	Daneborg	4.04	182	*i* P	Pn	21 27 42.0	+1.1
DBG				*i*		21 27 43.7	
DBG				*i* S	Sn	21 28 26.0	-2.1
DBG				IAML		21 28 47.1	
	comp=Z,41nm,0.5s						
KBS	Kingsbay	6.25	69	*e*P	Pn	21 28 12.1	+0.9
KBS				*e*S	Sn	21 29 17.0	-5.6
KBS				IAML		21 29 23.4	
	comp=Z,24nm,0.4s						
SPA0	Spitsbergen Ar	7.30	73	Pn	Pn	21 28 26.3	+0.7
	baz=249,slow=7.9						
SPA0				Sn	Sn	21 29 45.5	-2.8
	baz=249,slow=22						
SPA0	Spitsbergen Ar	7.30	73	Pn	Pn	21 28 25.9	+0.3
SPA0	Spitsbergen Ar	7.30	73	Pn	Pn	21 28 26.3	+0.7
	baz=249,slow=7.9						
SPA0				Sn	Sn	21 29 45.5	-2.8
	baz=249,slow=22						
SPITS	Spitsbergen Ar	7.30	73	Pn	Pn	21 28 26.4	+0.9
	baz=230,slow=6.3,SNR=13						
SPITS				Sn	Sn	21 29 44.1	-4.2
	baz=246,slow=12,SNR=1.3						
SUMG	Summit	7.39	228	*i* P	Pn	21 28 27.4	+0.2
SUMG	Summit	7.39	228		Pn	21 28 27.5	+0.4
SUMG				Sn	Sn	21 29 48.8	-2.3
SUMG	Summit	7.39	228	*i* P	Pn	21 28 27.4	+0.2
SUMG				IAML		21 29 52.7	
	comp=Z,38nm,0.4s						
SCO	Scoresbysund	7.91	185	Pn	Pn	21 28 32.9	-0.9
SCO				Sn	Sn	21 30 01.7	-1.5
SCO	Scoresbysund	7.91	185	*e*P	Pn	21 28 36.8	+2.9
KULLO	Kullorsuaq	9.38	266	*i* P	Pn	21 28 53.9	-0.1
KULLO	Kullorsuaq	9.38	266	*i* P	Pn	21 28 53.9	-0.1
KULLO				IAML		21 30 59.5	
	comp=Z,12nm,0.4s						
TULEG	Thule	10.55	285	Pn	Pn	21 29 07.5	-2.6
TULEG	Thule	10.55	285	*i* P	Pn	21 29 07.9	-2.2
TULEG				IAML		21 31 08.0	
	comp=Z,19nm,0.5s						
ICESG	Greenland Ices	10.72	221	*i* P	Pn	21 29 12.0	-0.7
EUNU	Eureka	11.99	310		Pn	21 29 28.7	-1.0
SFJD	Kangerlussuaq	14.30	235	Pn	Pn	21 29 57.8	-3.5
	comp=Z,0.4nm,0.3s,baz=26,slow=10.0,SNR=4.4						
ARCES	ARCESS Array B	14.79	102	Pn	P	21 30 11.1	-2.8
	baz=14,slow=12,SNR=2.0						
RES	Resolute Bay	16.71	297	Pn	Pn	21 30 28.1	-4.7
	comp=Z,0.6nm,0.3s,baz=50,slow=12,SNR=14						
RES				Sn	Sn	21 33 22.0	-16
	comp=Z,0.2nm,0.3s,baz=337,slow=22,SNR=2.0						
NB2	NORSAR Subarra	19.91	133	P	Pn	21 31 15.9	+3.8
	comp=Z,3.1nm,0.8s,baz=337,slow=7.4						
NOA	NORSAR Array B	19.91	133	P	P	21 31 08.7	-1.8
	comp=Z,0.0nm,0.3s,baz=348,slow=7.6,SNR=2.0						
NC405	NORSAR Array S	19.92	132	P	P	21 31 10.6	+0.1
NC405				IAmb	IAmb	21 31 17.7	
	comp=Z,11nm,1.0s						
NRA0	NORESS Array S	20.25	132	P	P	21 31 14.9	+0.8
NRA0	NORESS Array S	20.25	132	P	P	21 31 14.9	+0.8
HFS	Hagfors	21.16	130	P	P	21 31 22.7	-1.1
	comp=Z,3.5nm,1.0s,baz=15,slow=6.0,SNR=1.9						
HFS	Hagfors	21.16	130	P	P	21 31 25.5	+1.6
	baz=326,slow=7.4						
HFS	Hagfors	21.16	130	P	P	21 31 25.5	+1.6
	baz=326,slow=7.4						
AMDE	Amderma	21.82	68	*e*P	P	21 31 30.1	-0.8
	comp=Z,7.2nm,1.2s						
TMCR	Tamitsa	21.94	97	*e*P	P	21 31 32.2	0.0
	comp=Z,19nm,0.7s						
FIA0	FINESS Array S	22.07	113	P	P	21 31 34.8	+1.1
	baz=344,slow=12						
FIA0	FINESS Array S	22.07	113	P	P	21 31 34.8	+1.1
	baz=344,slow=12						
FIA1	FINESS Array S	22.07	113	P	P	21 31 34.5	+0.9
FINES	FINESS Array B	22.07	113	P	P	21 31 34.6	+0.9
	comp=Z,2.4nm,0.5s,baz=343,slow=11,SNR=23						
LSH	Leshukonskoye	22.88	88	*e*P	P	21 31 42.0	-0.2
	comp=Z,53nm,2.7s						
KLMR	Klimovskoe	25.23	99	P	P	21 32 04.2	-0.4
	comp=Z,38nm,2.2s						
YKA	Yellowknife Ar	30.77	295	P	P	21 32 53.7	-0.4
	comp=Z,0.1nm,0.6s,baz=22,slow=8.0,SNR=1.8						
AKASG	Malin Array Be	32.81	118	P	P	21 33 10.3	-1.7
	comp=Z,0.7nm,0.5s,baz=344,slow=9.4,SNR=4.3						
ILAR	Eielson Array	33.70	322	P	P	21 33 22.8	+3.0
	comp=Z,0.2nm,0.8s,baz=21,slow=7.7,SNR=1.5						
BUR08	Bucovina Ar. S	35.05	124	P	P	21 33 31.9	+0.2
BURAR	Bucovina Array	35.08	124	P	P	21 33 32.9	+0.9
KBZ	Khabaz	42.09	106	P	P	21 34 32.3	+1.7
	comp=Z,1.8nm,0.9s,baz=360,slow=5.8,SNR=7.2						
KURK	Kurchatov	42.54	68	P	P	21 34 35.9	+1.6
KURK				IAmb	IAmb	21 34 42.4	
	comp=Z,4.8nm,1.0s						
BRTR	Keskin Array B	44.21	117	P	P	21 34 49.1	+1.1
	comp=Z,0.3nm,0.6s,baz=330,slow=7.1,SNR=1.6						
MK31	Makanchi Array	47.00	67	P	P	21 35 10.6	+0.7
MK31				IAmb	IAmb	21 35 17.6	
	comp=Z,1.0nm,1.0s						
MKAR	Makanchi Array	47.00	67	P	P	21 35 11.0	+1.2
	comp=Z,0.3nm,0.5s,baz=355,slow=5.6,SNR=9.9						
MKAR	Makanchi Array	47.00	67	P	P	21 35 10.4	+0.5
PDAR	Pinedale Array	48.47	280	P	P	21 35 23.1	+1.6
	comp=Z,0.8nm,1.0s,baz=57,slow=6.6,SNR=3.6						
TXAR	Lajitas Array	60.25	271	P	P	21 36 48.3	+1.0
	comp=Z,0.3nm,0.8s,baz=40,slow=7.1,SNR=2.2						
TORD	Torodi Ar. Bea	66.05	157	P	P	21 37 25.0	-0.7
	comp=Z,0.9nm,0.8s,baz=355,slow=6.9,SNR=4.9						
CMAR	Chiang Mai Arr	77.58	58	P	P	21 38 34.9	-0.1
	comp=Z,0.5nm,0.3s,baz=329,slow=6.8,SNR=1.7						

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*IDC **15** 21:35:39.6±1.8, 10.°80S×160.°81E, h0^{km}, mb3.7/6, mb1 4.0/6, mb1mx3.7/41, mbtmp3.7/6, MS3.5/5, Ms1 3.5/5, ms1mx3.2/25, Error ellipse: s-maj=41.9km s-min=26.5km az=100.0*

ISC 15 21:35:42.3±1.5**, 10.°9S**±0.°1×**160.°8E**±0.°2**, h18^{km}, n11, σ1^{s}.38**/8**, mb3.6**/6**, MS3.6**/3**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	1.66	329	Pn	Pn	21 36 09.8	-0.6
	22nm,0.3s,baz=177,slow=6.1,SNR=2.7						
HNR				Sn	Sn	21 36 32.2	+1.0
	81nm,0.3s,baz=204,slow=7.6,SNR=6.0						
HNR				LR	LR	21 36 59.2	
	comp=Z,660nm,20.6s,baz=168,slow=50						
DZM	Mont Dzumac	12.38	155	LR	LR	21 42 25.9	
	comp=Z,127nm,19.1s,baz=256,slow=33						
PMG	Port Moresby	13.51	275	LR	LR	21 43 34.3	
	comp=Z,248nm,21.3s,baz=85,slow=35						
WRA	Warramunga Arr	27.02	247	P	P	21 41 25.3	+1.6
	1.8nm,1.0s,baz=74,slow=9.4,SNR=5.3						
STKA	Stephens Creek	27.42	217	LR	LR	21 51 34.3	
	comp=Z,143nm,18.0s,baz=29,slow=35						
ASAR	Alice Springs	28.60	240	P	P	21 41 37.8	0.0
	0.8nm,0.9s,baz=66,slow=9.3,SNR=5.3						
ASAR				LR	LR	21 51 12.5	
	comp=Z,185nm,19.3s,baz=64,slow=33						
GUMO	Guam	28.99	327	LR	LR	21 53 39.0	
	comp=Z,43nm,18.9s,baz=157,slow=37						
CMAR	Chiang Mai Arr	67.61	295	P	P	21 46 38.8	+0.3
	0.6nm,0.5s,baz=119,slow=4.8,SNR=6.6						
SONM	Songino Array	75.71	326	P	P	21 47 26.2	-0.7
	0.4nm,0.7s,baz=90,slow=3.0,SNR=2.4						
ILAR	Eielson Array	84.94	20	P	P	21 48 17.5	+1.5
	0.3nm,0.9s,baz=327,slow=32,SNR=3.3						
MKAR	Makanchi Array	90.09	318	P	P	21 48 39.6	-1.7
	0.3nm,0.6s,baz=93,slow=7.2,SNR=5.2						

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*IDC **15** 21:40:11.9±0.5, 13.°73N×144.°91E, h119^{km}±3^{km}, mb3.6/12, mb1 3.8/12, mb1mx3.4/49, mbtmp4.0/12, Error ellipse: s-maj=23.6km s-min=13.4km az=84.0*

*NEIC **15** 21:40:11.8±1.6, 13.°67N±0.°08×144.°7E±0.°1, h124^{km}±1^{km}, mb4.0/16, ML4.5/6, Error ellipse: s-maj=17.4km s-min=12.2km az=91.0*

ISC 15 21:40:11.6±0.7**, 13.°67N**±0.°08×**144.°8E**±0.°1**, h126^{km}**±6^{km}**, n52, σ1^{s}.06**/47**, mb3.9**/19**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	0.10	140	P	Pn	21 40 29.5	+0.7
	3µm,0.3s,baz=170,slow=23,SNR=796						
GUMO				S	Sn	21 40 41.5	-0.2
	2µm,0.3s,baz=109,slow=22,SNR=9.6						
GUMO	Guam	0.10	140	Pn	Pn	21 40 29.2	+0.4
GUMO				Sn	Sn	21 40 41.2	-0.5
GUMO	Guam	0.10	140	IAML		21 40 42.3	
	11µm,0.1s						
ANA2	Anatahan	2.80	18	Pn	Pn	21 40 56.7	+1.1
PATS	Pohnpei	14.92	116	Pn	P	21 43 36.9	-1.8
JOW	Kunigami	20.27	313	P	P	21 44 35.1	-2.2
JOW				IAmb	IAmb	21 44 50.9	
	comp=Z,2.0nm,0.6s						
H11S3	WAKE ISLAND Hy	21.56	74	T	T	22 07 06.4	
	baz=261,slow=75,SNR=16						
H11S1	WAKE ISLAND Hy	21.58	74	T	T	22 07 04.7	
	baz=261,slow=75,SNR=13						
H11S2	WAKE ISLAND Hy	21.58	74	T	T	22 07 03.9	
	baz=261,slow=75,SNR=10						
H11N1	WAKE ISLAND Hy	21.99	71	T	T	22 07 56.7	
	baz=257,slow=75,SNR=9.4						
H11N2	WAKE ISLAND Hy	22.00	71	T	T	22 08 06.0	
	baz=257,slow=75,SNR=13						
H11N3	WAKE ISLAND Hy	22.00	71	T	T	22 08 09.0	
	baz=257,slow=75,SNR=21						
YOJ	Yonaguni jima	23.19	301	P	P	21 45 06.3	-1.2
WB0	Warramunga Arr	34.77	197	P	P	21 46 50.6	+0.4
WB0				IAmb	IAmb	21 47 00.0	
	comp=Z,3.7nm,0.5s						
WR0	Warramunga Arr	34.91	197	P	P	21 46 52.0	+0.7
WR0				IAmb	IAmb	21 47 01.6	
	comp=Z,3.7nm,0.6s						
WB2	Warramunga Arr	34.95	197	P	P	21 46 52.9	+1.2
WB2				IAmb	IAmb	21 47 07.0	
	comp=Z,1.0nm,0.7s						
WRA	Warramunga Arr	34.95	197	P	P	21 46 52.8	+1.0
	comp=Z,0.5nm,0.2s,baz=23,slow=8.6,SNR=20						
WRA	Warramunga Arr	34.95	197	P	P	21 46 52.7	+0.9
FITZ	Fitzroy Crossi	36.79	211	P	P	21 47 07.6	+0.2
FITZ				IAmb	IAmb	21 47 20.1	
	comp=Z,3.7nm,1.1s						
AS31	Alice Springs	38.60	196	P	P	21 47 23.6	+0.9
AS31				IAmb	IAmb	21 47 33.4	
	comp=Z,0.6nm,0.5s						
ASAR	Alice Springs	38.60	196	P	P	21 47 23.9	+1.2
	comp=Z,0.4nm,0.4s,baz=22,slow=12,SNR=7.6						
DZM	Mont Dzumac	41.38	149	P	P	21 47 46.7	+1.0
	comp=Z,12nm,0.7s,baz=267,slow=1.8,SNR=8.9						
DZM	Mont Dzumac	41.38	149	P	P	21 47 46.5	+0.8
STKA	Stephens Creek	45.39	184	P	P	21 48 18.8	+1.2
	comp=Z,1.3nm,0.4s,baz=357,slow=6.4,SNR=6.4						
STKA	Stephens Creek	45.39	184	P	P	21 48 18.0	+0.4
SONM	Songino Array	46.63	325	P	P	21 48 29.6	+2.2
	comp=Z,0.9nm,0.8s,baz=128,slow=7.0,SNR=2.4						
SONM	Songino Array	46.63	325	P	P	21 48 27.5	+0.1
BBOO	Buckleboo	46.96	190	P	P	21 48 30.9	+1.0
BBOO				IAmb	IAmb	21 48 32.1	
	comp=Z,6.6nm,0.7s						
FORT	Forrest	47.03	200	P	P	21 48 29.1	-1.4

MK31	Makanchi Array	61.39	316	P	P	21 50 15.8	+1.4
MKAR	Makanchi Array	61.39	316	P	P	21 50 16.3	+1.8
	comp=Z,0.3nm,0.5s,baz=93,slow=8.9,SNR=11						
MKAR	Makanchi Array	61.39	316	P	P	21 50 14.7	+0.2
ZALV	Zalesovo Beam	61.52	324	P	P	21 50 17.0	+1.8
	comp=Z,0.3nm,0.3s,baz=82,slow=10,SNR=2.1						
MAKZ	Makanchi	61.60	316	P	P	21 50 14.9	-1.0
MAKZ				IAmb	IAmb	21 50 20.6	
	comp=Z,0.7nm,0.7s						
ILAR	Eielson Array	68.53	25	P	P	21 50 59.1	-1.2
	comp=Z,1.0nm,0.5s,baz=248,slow=5.7,SNR=28						
BVAR	Borovoye Array	69.83	322	P	P	21 51 09.1	+0.6
	comp=Z,0.4nm,0.3s,baz=77,slow=13,SNR=11						
YKA	Yellowknife Ar	82.82	27	P	P	21 52 21.8	+0.2
	comp=Z,0.8nm,0.6s,baz=288,slow=4.6,SNR=9.9						
PINE	Pine Mountain	83.71	47	P	P	21 52 27.5	+0.6
NVAR	Mina Array Bea	86.92	51	P	P	21 52 44.7	+1.6
	comp=Z,1.0nm,0.6s,baz=274,slow=5.6,SNR=6.6						
NVAR	Mina Array Bea	86.92	51	P	P	21 52 43.6	+0.6
FINES	FINESS Array B	91.06	335	P	P	21 53 00.8	-0.9
	comp=Z,2.4nm,1.0s,baz=41,slow=4.4,SNR=3.5						
TORD	Torodi Ar. Bea	134.77	305	PKP	PKiKP	21 59 18.2	+0.2
	comp=Z,0.3nm,0.5s,baz=72,slow=1.2,SNR=6.2						
TORD	Torodi Ar. Bea	134.77	305		PKPdf	21 59 16.2	-0.3
DBIC	Dimbokro	143.73	302	PKP	PKPdf	21 59 32.0	-0.9
	comp=Z,2.7nm,0.7s,baz=42,slow=2.4,SNR=7.1						
DBIC	Dimbokro	143.73	302		PKPdf	21 59 32.0	-0.9
KIC	Kosan Boka	143.80	301	*e*PKP1	PKPdf	21 59 32.2	-0.8
	comp=Z,5.1nm,0.5s						
TIC	Toumodi	143.88	302	*e*PKP1	PKPdf	21 59 32.2	-1.0
LIC	Lamto	144.12	302	*e*PKP1	PKPdf	21 59 33.1	-0.5
	comp=Z,11nm,0.3s						
PB16	IPOC Station P	146.73	103		PKPbc	21 59 40.3	-0.2
LPAZ	La Paz	148.10	99	PKPbc	PKiKP	21 59 46.1	+0.1
	comp=Z,3.3nm,0.7s,baz=260,slow=2.9,SNR=8.8						
LPAZ	La Paz	148.10	99		PKPbc	21 59 43.5	-0.8
SAML	Samuel	152.17	83		PKiKP	21 59 53.6	-0.1

*MOS **15** 22:11:28.5±0.0, 43°.98N×42°.71E, h10km, MPVA4.6*
*NORS **15** 22:11:29.7±0.0, 43°.87N×42°.80E, h14km, MPVA5.0*
ISC 15 22:11:28.8±0.7**, 43°.97N**±0°.02×**42°.75E**±0°.02**, h11**km±3km**,**
n105, σ1ˢ.36/170**, 15C-10D, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIV0	Kislovodsk Arr	0.04	252	*i* Pg	Pg	22 11 30.9	-0.1
KIV0				*e*Sg	Sg	22 11 32.3	-0.2
KIV	Kislovodsk	0.04	254	⇓*i*PG	Pg	22 11 31.0	0.0
KIV	Kislovodsk	0.04	254	*i* Pg	Pg	22 11 31.0	0.0
KIV				*i* Sg	Sg	22 11 32.4	-0.2
BEYR	Belyy Ugol+	0.07	49	⇑*i*PG	Pg	22 11 30.4	-0.8
BEYR	Belyy Ugol+	0.07	49	*e*Pg	Pg	22 11 30.2	-1.0
BEYR				*e*Sg	Sg	22 11 31.5	-1.4
SHA1	Shidzhatmaz	0.24	196	⇓*i*PG	Pb	22 11 34.4	-0.9
SHA1	Shidzhatmaz	0.24	196	*e*Pg	Pb	22 11 34.3	-0.9
	2µm,0.2s						
SHA1				*e*Sg	Sg	22 11 38.5	+1.3
	9µm,0.5s						
KBZ	Khabaz	0.26	155	⇑*i*PG	Pb	22 11 34.5	-1.1
KBZ	Khabaz	0.26	155	*i* Pg	Pb	22 11 34.5	-1.1
KBZ				*i* Sg	Sg	22 11 38.8	+1.0
PYA1	Pyatigorsk	0.27	69	⇑*i*PG	Pg	22 11 33.6	-0.7
PYA1	Pyatigorsk	0.27	69	*i* Pg	Pg	22 11 33.5	-0.9
PYA1				*e*Sg	Sg	22 11 36.8	-1.3
NEY	Neytrino	0.72	181	*e*PG	Pb	22 11 42.9	-0.6
NEY				*e*S	Sb	22 11 52.7	-0.7
NEY	Neytrino	0.72	181	*e*Pg	Pb	22 11 42.9	-0.6
	3µm,0.3s						
NEY				*e*Sg	Sb	22 11 52.7	-0.7
	13µm,0.4s						
NCK	Nalchik	0.78	127	⇑*i*PG	Pb	22 11 44.1	-0.3
NCK				*e*S	Sn	22 11 55.6	-1.8
NCK	Nalchik	0.78	127	*i* Pg	Pb	22 11 44.1	-0.3
NCK				*e*Sg	Sn	22 11 55.5	-2.0
LSNR	Lesken	1.04	131	⇓*i*PG	Pn	22 11 49.5	0.0
LSNR				*e*S	Sn	22 12 04.4	+0.3
LSNR	Lesken	1.04	131	*e*Pg	Pn	22 11 49.2	-0.2
	602nm,0.3s						
LSNR				*e*Sg	Sn	22 12 04.4	+0.3
	2µm,0.3s						
GOF	Gofitskoye	1.11	11	*e*Pg	Pb	22 11 49.2	-0.9
GOF				*e*Sg	Sb	22 12 04.0	-0.5
STDR	Stavd-Durt	1.13	122	⇓*i*PG	Pn	22 11 51.7	+1.1
STDR				*e*S	Sn	22 12 08.4	+2.3
STDR	Stavd-Durt	1.13	122	*i* Pg	Pn	22 11 51.3	+0.7
STDR				*e*Sg	Sn	22 12 08.4	+2.3
PRTR	Priterechnaya	1.13	100	⇓*i*PG	Pg	22 11 51.1	+0.5
PRTR				*e*S	Sn	22 12 08.0	+1.8
PRTR	Priterechnaya	1.13	100	*i* Pg	Pg	22 11 51.1	+0.5
PRTR				*e*Sg	Sn	22 12 07.8	+1.6
ARXR	Arkhyz	1.14	250	⇑*i*PG	Pb	22 11 49.7	-0.9
ARXR				*i* S	Sg	22 12 05.6	0.0
ARXR	Arkhyz	1.14	250	*i* Pg	Pb	22 11 49.5	-1.1
ARXR				*i* Sg	Sb	22 12 04.2	-1.3
DIGR	Digorskoe uzhe	1.23	150	⇓*i*PG	Pn	22 11 51.8	-0.4
DIGR				*e*S	Sn	22 12 07.8	-1.1
DIGR	Digorskoe uzhe	1.23	150	*e*Pg	Pb	22 11 51.6	-0.6
DIGR				*e*Sg	Sn	22 12 07.8	-1.1
AHMR	Akhmetovskaya	1.24	279	*i* Pg	Pn	22 11 51.2	-1.0
AHMR				*i* Sg	Sb	22 12 07.5	-0.9
KORR	Kora	1.30	132	*e*PG	Pg	22 11 54.0	+0.1
KORR				*e*S	Sg	22 12 12.5	+1.7
KORR	Kora	1.30	132	*e*Pg	Pg	22 11 53.3	-0.5
KORR				*e*Sg	Sg	22 12 12.0	+1.2
CHVG	Ch'k'valeri	1.34	201	P	Pg	22 11 54.9	+0.4
CHVG	Ch'k'valeri	1.34	201	PG	Pg	22 11 54.9	+0.4
BTKR	Batakoyurt	1.43	114	*e*PG	Pg	22 11 56.3	0.0
BTKR				*e*S	Sg	22 12 17.3	+2.4
BTKR	Batakoyurt	1.43	114	*e*Pg	Pg	22 11 55.8	-0.5
BTKR				*e*Sg	Sg	22 12 17.3	+2.4
ZEI	Tsey	1.45	144	*e*PG	Pg	22 11 56.0	-0.6
ZEI				*e*S	Sg	22 12 15.8	+0.3
ZEI	Tsey	1.45	144	*e*Pg	Pb	22 11 55.5	-0.4
	421nm,0.1s						
ZEI				*e*Sg	Sg	22 12 14.7	-0.8
	1µm,0.3s						
TRKR	Terskaya	1.46	99	⇓*i*PG	Pb	22 11 56.3	+0.3
TRKR				*e*S	Sg	22 12 17.4	+1.7
TRKR	Terskaya	1.46	99	*i* Pg	Pb	22 11 56.1	+0.2
	584nm,0.3s						
TRKR				*e*Sg	Sg	22 12 17.3	+1.7
	4µm,0.4s						
ONI	Oni	1.47	159	P	Pg	22 11 56.8	-0.3
ONI				S	Sg	22 12 16.4	+0.3
ONI	Oni	1.47	159	*i* PG	Pg	22 11 57.1	+0.1
ONI				*e*S	Sg	22 12 16.7	+0.6
ONI	Oni	1.47	159	*i* Pg	Pg	22 11 56.6	-0.4
ONI				*e*Sg	Sg	22 12 16.6	+0.5
LABN	Labinsk	1.60	296	*i* Pg	Pn	22 11 58.0	+0.9
LABN				*i* Sg	Sg	22 12 21.0	+0.7
LACR	Lac	1.61	135	⇑*i*PN	Pb	22 11 58.3	-0.3
LACR				*e*S	Sg	22 12 19.8	-0.7
LACR	Lac	1.61	135	*i* Pg	Pb	22 11 58.1	-0.5
	2µm,0.2s						
LACR				*e*Sg	Sg	22 12 19.8	-0.7
	2µm,0.5s						
VLKR	Vladikavkaz	1.68	123	*e*PN	Pg	22 12 01.0	-0.1
VLKR				*e*S	Sg	22 12 25.1	+2.3
VLKR	Vladikavkaz	1.68	123	*e*Pg	Pg	22 12 01.0	-0.1
VLKR				*e*Sg	Sg	22 12 25.1	+2.3
KMGR	Komgaron	1.79	120	*e*PN	Pb	22 12 02.1	+0.4
KMGR				*e*S	Sg	22 12 26.7	+0.3
KMGR	Komgaron	1.79	120	*e*Pg	Pb	22 12 01.1	-0.5
KMGR				*e*Sg	Sg	22 12 26.7	+0.3
RPOR	Krasnaya Polya	1.81	262	*d* *i*PN	Pn	22 12 00.4	+0.3
RPOR	Krasnaya Polya	1.81	262	*i* Pg	Pn	22 12 00.6	+0.5
RPOR				*e*Sg	Sn	22 12 23.7	+0.6
GUZR	Guzeripl'	1.90	272	*i* PN	Pn	22 12 01.2	0.0
GUZR	Guzeripl'	1.90	272	*i* Pg	Pn	22 12 01.1	0.0
GUZR				*i* Sg	Sn	22 12 25.3	+0.1
GUDG	Gudauri	1.96	139	P	Pg	22 12 05.5	-1.0
GUDG				S	Sg	22 12 31.7	-0.3
GUDG	Gudauri	1.96	139	PN	Pg	22 12 05.5	-1.0
VSLR	Vesyoloye	2.03	257	*e*Pg	Pb	22 12 05.0	-0.8
VSLR				*e*Sg	Sb	22 12 29.8	-1.2
ABS	Abastumani	2.21	179	P	Pg	22 12 09.7	-1.5
ABS				S	Sg	22 12 41.6	+1.7
ABS	Abastumani	2.21	179	PN	Pg	22 12 09.7	-1.5
SOC	Sochi	2.23	261	*e*PN	Pn	22 12 07.2	+1.5
SOC				*e*PPP	PPP	22 12 12.4	
SOC				*e*		22 12 33.2	
SOC				*e*SSS	SSS	22 12 42.3	
SOC				pmax	pmax		
	comp=Z,20nm,0.6s						
SOC				MLR	MLR		
	comp=Z,35nm,5.0s						
SOC	Sochi	2.23	261	*i* Pg	Pn	22 12 06.9	+1.2
SOC				*e*Sg	Sn	22 12 33.2	0.0
BKRG	Bakuriani	2.28	165	P	Pb	22 12 09.4	-0.7
BKRG				S	Sg	22 12 43.5	+1.5
BKRG	Bakuriani	2.28	165	PN	Pb	22 12 09.4	-0.7
BKRG				S	Sg	22 12 43.6	+1.5
GROC	Groznyy	2.34	108	*e*PN	Pn	22 12 07.6	+0.3
GROC				*e*		22 12 11.7	
GROC				*e*		22 12 46.2	
GROC				pmax	pmax		
	comp=Z,17nm,0.4s						
GROC				pmax	pmax		
	comp=Z,58nm,0.2s						
GROC				smax	smax		
	comp=N,203nm,0.4s						
GROC				smax	smax		
	comp=N,181nm,0.5s						
GROC				MLR	MLR		
	comp=Z,63nm,2.0s						
GROC	Groznyy	2.34	108	*e*Pn	Pn	22 12 08.0	+0.7
GROC				*e*Sn	Sb	22 12 40.1	+0.1
ERBR	Yeremizino-Bor	2.38	318	*e*Pn	Pb	22 12 11.5	-0.1
ERBR				*e*Sn	Sb	22 12 40.4	-0.5
LZRR	Lazarevskoye	2.43	270	*d* *i*PN	Pn	22 12 09.7	+1.2
LZRR	Lazarevskoye	2.43	270	*i* Pn	Pn	22 12 09.6	+1.2
LZRR				*e*Sn	Sn	22 12 40.1	+1.8
BRNG	Burnasheti	2.48	161	P	Pb	22 12 12.4	-1.0
AKH	Akhalkalaki	2.62	168	P	Pg	22 12 17.8	-1.1
AKH				S	Sg	22 12 53.2	+0.3
TPSR	Tuapse	2.63	274	*i* PN	Pn	22 12 12.4	+1.1
TPSR	Tuapse	2.63	274	*e*Pn	Pb	22 12 14.8	-1.2
TPSR				*e*Sn	Sn	22 12 44.5	+1.3
DVE	Vedeno	2.66	111	*i* PN	Pn	22 12 11.5	-0.2
DVE	Vedeno	2.66	111	*e*Pn	Pn	22 12 11.6	-0.2
DVE				*e*Sn	Sn	22 12 45.2	+1.2
BGD	Bogdanovka	2.77	167	P	Pg	22 12 21.3	-0.7
BGD				S	Sg	22 12 59.4	+1.5
BGD	Bogdanovka	2.77	167	PN	Pg	22 12 21.3	-0.7
BGD				S	Sg	22 12 59.4	+1.5
DMNI	Dmanisi	2.84	158	P	Pb	22 12 16.5	-3.2
DMNI	Dmanisi	2.84	158	PN	Pb	22 12 16.5	-3.2
BTLR	Botlikh	2.85	116	*i* PN	Pn	22 12 14.5	+0.1
BTLR	Botlikh	2.85	116	*e*Pn	Pn	22 12 14.5	+0.1
BTLR				*e*Sn	Sn	22 12 47.6	-1.2
DBC	Dubki	3.12	106	*e*Pn	Pn	22 12 17.9	-0.2
DBC				*e*Sn	Sn	22 12 55.2	-0.1
XNZR	Khunzakh	3.23	115	*e*Pn	Pn	22 12 19.6	0.0
XNZR				*e*Sn	Sn	22 12 59.0	+0.9
BUJR	Buynaksk	3.38	108	*e*Pn	Pb	22 12 30.7	+2.0
BUJR				*e*Sn	Sn	22 13 02.1	+0.5
GL1R	Gelendzhik	3.41	281	*e*Pn	Pn	22 12 24.1	+2.2
GL1R				*e*Sn	Sn	22 13 03.2	+0.8
KANR	Karaman	3.53	101	*e*Pn	Pn	22 12 22.9	-0.7
KANR				*e*Sn	Sn	22 13 07.9	+2.5
DDFL	Dedoflistskaro	3.54	134	P	Pb	22 12 30.1	-1.4
DDFL	Dedoflistskaro	3.54	134	PN	Pb	22 12 30.1	-1.4
MAK	Makhachkala	3.61	105	*i* PN	Pn	22 12 25.6	+1.0
ANN	Anapa	3.90	284	*i* PN	Pn	22 12 29.0	+0.4
ANN				*i*		22 13 16.4	
ANN				*i*		22 13 26.6	
ANN				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ANN				smax	smax		
	comp=N,24nm,0.7s						
ANN				smax	smax		
	comp=E,17nm,0.7s						
ANN	Anapa	3.90	284	*e*Pn	Pn	22 12 32.5	+3.8
ANN				*e*Sn	Sn	22 13 15.9	+1.5
URKR	Urkarakh	4.01	115	*e*Pn	Pn	22 12 32.7	+2.4
URKR				*e*Sn	Sn	22 13 19.7	+2.4
GNI	Garni	4.09	158	*e*Pn	Pn	22 12 34.6	+3.1
AKT	Akhty	4.43	122	*i* PN	Pn	22 12 36.4	+0.3
AKT	Akhty	4.43	122	*e*Pn	Pn	22 12 39.2	+3.0
AKT				*e*Sn	Sn	22 13 28.2	+0.3
VRH	Novokhopyorsk	7.27	355	*e*P	Pn	22 13 17.3	+2.4
VRH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
VRH				MLR	MLR		
	comp=Z,30nm,1.0s						
VORD	Divnogorie	7.38	343	*e*P	Pn	22 13 15.3	-1.1
VORD				pmax	pmax		
	comp=Z,10.0nm,1.8s						
VORD				MLR	MLR		
	comp=Z,10.0nm,1.0s						
VSR	Storozhevoye	7.64	343	*e*P	Pn	22 13 20.8	+0.7
VSR				pmax	pmax		
	comp=Z,3.0nm,0.4s						
VSR				MLR	MLR		
	comp=Z,80nm,3.0s						
LPSR	Galich'ya Gora	9.01	345	*e*P	Pn	22 13 42.6	+3.9
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.5s						
LPSR				MLR	MLR		
	comp=Z,10.0nm,1.0s						
CFR	Carcaliu	10.50	282	⇑P	Pn	22 14 02.5	+3.3
VRI	Vrincioaia	11.52	285	⇑P	Pn	22 14 16.3	+3.2
PLOR	Plostina	11.57	285	⇑P	Pn	22 14 17.0	+3.1
TESR	Tescani	11.63	288	⇑P	Pn	22 14 17.0	+2.2
MLR	Muntele Rosu	12.05	283	⇑P	Pn	22 14 22.9	+2.4
AKTO	Aktyubinsk	12.22	53	⇑Pn	Pn	22 14 19.6	-3.2
	comp=Z,3.2nm,0.9s						
AKTO				⇓Sn	Sn	22 16 29.3	-10
	comp=Z,3.4nm,1.1s						
BURAR	Bucovina Array	12.76	293	⇑P	Pn	22 14 31.0	+0.7
AB31	Akbulak array	12.94	60	⇑Pn	Pn	22 14 29.5	-3.1
	comp=Z,0.5nm,0.4s,baz=243,slow=10						
AB31				⇑Sn	Sn	22 16 44.8	-12
	comp=Z,0.8nm,0.4s,baz=250,slow=20						
AAK	Ala-Archa	23.07	82	*i* P	P	22 16 34.8	+0.3
KURK	Kurchatov	25.04	62	*i* P	P	22 16 53.5	+0.7

*DJA **15** 23:02:45.2±6.5, 8°S±46°×11°9E±°, h25km±43km, M3.4/4, MLv3.4/4*
*IDC **15** 23:03:42.4±3.3, 12°.34S×121°.74E, h0km, mb3.3/1, mb1 3.4/3, mb1mx3.2/28, mbtmp3.2/3, ML3.2/2, Error ellipse: s-maj=230.8km s-min=35.4km az=47.0*
ISC 15 23:02:44.4±3.2**, 8°.1S**±0°.4×**118°.84E**±0°.08**, h10**km**, n5,**
σ1ˢ.56/5**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLAI	Plampang	1.29	234	P	Pn	23 03 09.9	+1.4
TWSI	Taliwang, Sumb	2.05	251	P	Pn	23 03 19.0	+0.1
EDFI	Ende, Flores	2.90	104	P	Pn	23 03 31.8	+1.1
WRA	Warramunga Arr	19.09	130	Pn	Pn	23 07 07.3	-0.9
	0.1nm,0.3s,baz=301,slow=13,SNR=5.5						
ASAR	Alice Springs	21.19	139	Pn	P	23 07 29.2	-1.0
	0.1nm,0.3s,baz=314,slow=9.1,SNR=1.9						

*IDC **15** 23:03:06.2±2.4, 22°.99S×171°.36E, h0km, mb4.0/6, mb1 4.3/7, mb1mx4.0/28, mbtmp4.0/7, ML4.1/1, MS3.4/7, Ms1 3.4/7, ms1mx3.2/21, Error ellipse: s-maj=106.6km s-min=26.8km az=162.0*
*NEIC **15** 23:03:11.9±1.8, 23°.1S±0°.1×171°.22E±0°.07, h35km±2km, mb4.5/4, Error ellipse: s-maj=23.7km s-min=7.3km az=161.0*
*NOU **15** 23:03:43.5, 22°.25S×168°.58E, h0km, MLv3.1, New Caledonia*
ISC 15 23:03:11.0±0.7**, 23°.1S**±0°.1×**171°.25E**±0°.07**, h31**km**, n50,**
σ0ˢ.88/47**, mb4.1**/7**, MS3.4**/5**, 4C, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OUENC	Ouen Island, N	4.12	278	P	Pn	23 04 12.8	+1.0
YATNC	Mamie plateau,	4.15	283	P	Pn	23 04 12.0	-0.2
ONTNC	Ouen Toro	4.49	279	P	Pn	23 04 17.8	+0.9
DZM	Mont Dzumac	4.55	282	Pn	Pn	23 04 18.6	+0.8
	7.8nm,0.3s,baz=119,slow=20,SNR=96						
DZM				Sn	Sn	23 05 10.3	+0.6
	4.1nm,0.3s,baz=189,slow=21,SNR=4.9						
DZM				LR	LR	23 06 06.4	
	comp=Z,325nm,19.3s,baz=152,slow=39						
DZM	Mont Dzumac	4.55	282	*e*Pn	Pn	23 04 18.5	+0.6
	32nm,0.3s						
DZM				*e*Sn	Sn	23 05 07.6	-2.1
	16nm,0.2s						
DZM				*e*LR	LR	23 05 26.0	
	comp=Z,369nm,23.9s						
DZM	Mont Dzumac	4.55	282		Pn	23 04 18.4	+0.6
DZM					Sn	23 05 10.5	+0.8
DZM	Mont Dzumac	4.55	282	P	Pn	23 04 18.4	+0.6
NOUC	Port Laguerre	4.67	281	P	Pn	23 04 20.1	+0.7
MSVF	Nonsavu	8.29	51	Pn	Pn	23 05 10.9	+1.7
	0.4nm,0.3s,baz=240,slow=23,SNR=2.7						
MSVF	Nonsavu	8.29	51		Pn	23 05 09.8	+0.5
HIZ	Hauiti	15.70	169	Pn	Pn	23 06 49.9	0.0
HIZ				IAmb	IAmb	23 06 51.9	
	comp=Z,41nm,1.1s						
URZ	Urewera	15.96	163	LR	LR	23 11 47.7	
	comp=Z,167nm,20.8s,baz=31,slow=33						
ASAR	Alice Springs	34.23	261	P	P	23 09 54.2	0.0
	comp=Z,2.7nm,1.0s,baz=83,slow=9.2,SNR=12						
WRA	Warramunga Arr	34.42	268	P	P	23 09 56.1	+0.2
	comp=Z,0.3nm,0.3s,baz=101,slow=8.4,SNR=11						
WRA				LR	LR	23 23 46.2	
	comp=Z,76nm,18.7s,baz=90,slow=36						
FITZ	Fitzroy Crossi	42.85	268	LR	LR	23 28 46.6	
	comp=Z,32nm,18.6s,baz=115,slow=36						
SIJI	Sorong	44.64	294	LR	LR	23 29 34.9	
	comp=Z,45nm,18.4s,baz=176,slow=36						
BATI	Baumata	47.15	278	LR	LR	23 32 20.8	
	comp=Z,96nm,18.6s,baz=136,slow=37						
VNDA	Vanda	54.70	182	LR	LR	23 31 51.7	
	comp=Z,23nm,18.8s,baz=252,slow=32						
CMAR	Chiang Mai Arr	81.77	294	P	P	23 15 28.9	+1.7
	comp=Z,0.9nm,0.3s,baz=135,slow=4.1,SNR=10						
CMAR	Chiang Mai Arr	81.77	294	P	P	23 15 28.8	+1.6
CHTO	Chiang Mai	81.94	294	P	P	23 15 27.2	-0.9
CHTO				IAmb	IAmb	23 15 31.6	
	comp=Z,4.8nm,1.0s						
NVAR	Mina Array Bea	89.94	48	P	P	23 16 07.7	+0.2
	comp=Z,0.6nm,0.7s,baz=222,slow=8.1,SNR=4.9						
SONM	Songino Array	91.39	322	P	P	23 16 13.0	-0.9
	comp=Z,1.1nm,1.1s,baz=144,slow=4.7,SNR=4.3						
SONM	Songino Array	91.39	322	IAmb	IAmb	23 16 15.8	
	comp=Z,1.5nm,1.2s						
ILAR	Eielson Array	93.33	17	P	P	23 16 20.1	-2.2
	comp=Z,0.7nm,1.1s,baz=229,slow=6.6,SNR=2.5						
ARR	Arges	144.93	318	⇑P	PKPdf	23 22 46.2	+1.1
DRGR		145.37	321	⇑P	PKPab	23 22 47.2	+1.3
GZR	Gura Zlata	146.06	319	⇑P	PKPab	23 22 49.2	+0.7
MORC	Moravsky Berou	146.30	329	*e*PKP	PKPbc	23 22 48.3	-0.1
KRLC	Kraliky	146.45	330	*e*PKP	PKPab	23 22 49.3	-0.5
DPC	Dobruska-Polom	146.47	331	*e*PKP	PKPdf	23 22 47.1	-0.4
JAVC	Velka Javorina	146.85	327	*e*PKP	PKPab	23 22 51.6	+0.2
VRAC	Vranov	147.07	329	*e*PKP	PKPab	23 22 51.5	-0.7
CLL	Collm	147.16	335	*e*PKPbc	PKPbc	23 22 51.0	+0.2
KRUC	Moravsky	147.33	329	*e*PKP	PKPbc	23 22 51.9	+0.6
PRU	Pruhonice	147.52	332	*e*PKP	PKPbc	23 22 52.5	+0.7
MORH	Mrgy, Hungar	148.01	323	⇑P	PKiKP	23 22 54.3	-0.7
CONA	Conrad Observa	148.37	328	*i* P	PKiKP	23 22 55.0	-0.9
	comp=Z,0.5nm,0.3s						
CKRC	Cesky Krumlov	148.48	330	*e*PKP	PKPbc	23 22 54.9	+0.4
KHC	Kasperske Hory	148.58	331	*e*PKP	PKiKP	23 22 55.2	-1.0
GERES	GERESS Array B	148.73	331	PKPbc	PKiKP	23 22 55.8	-0.8
	comp=Z,2.1nm,0.8s,baz=42,slow=2.2,SNR=14						
MOA	Molln	149.19	329	*e*P	PKPbc	23 22 56.0	-0.3
	comp=Z,0.8nm,0.5s						
SOKA	Soboth	149.63	327	*e*P	PKPbc	23 22 57.2	-0.3
	comp=Z,1.3nm,0.6s						
MYKA	Terra Mystica	150.36	328	*i* P	PKPbc	23 22 59.1	-0.1
	comp=Z,1.4nm,0.4s						
WATA	Walderalm	150.81	331	*e*P	PKPbc	23 23 00.2	-0.2
	comp=Z,1.4nm,0.4s						
ABTA	Abfaltersbach	150.81	329	*e*P	PKPbc	23 22 59.9	-0.5
	comp=Z,1.7nm,0.6s						
WTTA	Wattenberg	150.84	331	*e*P	PKiKP	23 23 00.7	-0.5
	comp=Z,1.7nm,0.5s						
MOTA	Moosalm	151.01	332	*i* P	PKiKP	23 23 00.9	-0.6
	comp=Z,1.3nm,0.5s						
RETA	Reutte	151.05	332	*i* P	PKiKP	23 23 01.4	0.0
	comp=Z,1.5nm,0.7s						
SQTA	Sankt Quirin	151.06	331	*i* P	PKiKP	23 23 01.3	-0.2
	comp=Z,2.8nm,0.6s						

*IDC **15** 23:23:41.4±4.5, 5°.86S×102°.88E, h0km, mb3.6/5, mb1 3.7/5, mb1mx3.4/47, mbtmp3.6/5, MS3.2/2, Ms1 3.2/2, ms1mx2.6/32, Error ellipse: s-maj=197.1km s-min=23.5km az=53.0*
*DJA **15** 23:23:42.8±2.6, 6°S±24°×10°4E±°, h10km, M3.7/6, MLv3.7/6*
ISC 15 23:23:36.4±2.4**, 6°.8S**±0°.3×**103°.5E**±0°.2**, h10**km**, n13,**
σ0ˢ.82/9**, mb3.6**/5**, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KASI	Kota Agung	1.62	39	P	Pn	23 24 04.9	-0.1
LWLI	Liwa	1.85	18	P	Pn	23 24 07.6	-0.8
KLSI		2.43	31	P	Pn	23 24 16.9	+0.7
MNAI	Manna	2.47	348	P	Pn	23 24 16.9	+0.2
LHSI	Lahat	2.94	1	P	Pn	23 24 24.1	+0.8
LEM	Lembang	4.11	91	LR	LR	23 26 54.0	
	comp=Z,75nm,18.6s,baz=256,slow=40						
WRA	Warramunga Arr	32.67	117	P	P	23 30 24.7	+16
	0.2nm,0.4s,baz=308,slow=8.7,SNR=1.5						
ASAR	Alice Springs	33.69	123	P	P	23 30 33.1	+15
	0.5nm,0.3s,baz=299,slow=7.7,SNR=7.3						
SONM	Songino Array	54.45	2	P	P	23 33 03.9	-0.2
	0.5nm,0.8s,baz=174,slow=11,SNR=4.2						
MKAR	Makanchi Array	56.58	343	P	P	23 33 18.0	-1.2
	0.4nm,0.6s,baz=148,slow=8.5,SNR=5.2						
ZALV	Zalesovo Beam	62.52	348	P	P	23 34 00.7	+0.6
	0.6nm,0.5s,baz=163,slow=11,SNR=5.3						
NRIK	Noril'sk	76.76	354	LR	LR	00 13 19.1	
	comp=Z,40nm,18.6s,baz=125,slow=39						
TXAR	Lajitas Array	145.98	45	PKPbc	PKiKP	23 43 21.2	+0.5
	0.4nm,0.8s,baz=248,slow=1.1,SNR=4.7						

IDC 15 23:50:47.7±31.0**, 4°.74S**×**155°.61E, h0**km**, mb3.9**/4**, mb1 4.1**/4**, mb1mx3.6**/40**, mbtmp3.9**/4**, MS2.9**/1**, Ms1 2.9**/1**, ms1mx2.4**/29**, Error ellipse: s-maj=525.9km s-min=86.3km az=44.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	9.58	241	LR	LR	23 56 19.8	
	comp=Z,65nm,18.1s,baz=270,slow=35						
WRA	Warramunga Arr	25.64	232	P	P	23 56 19.3	0.0
	0.9nm,0.4s,baz=57,slow=9.8,SNR=14						
ASAR	Alice Springs	28.14	226	P	P	23 56 41.8	-0.1
	0.7nm,0.6s,baz=57,slow=8.8,SNR=9.6						
STKA	Stephens Creek	30.03	204	P	P	23 56 58.2	-0.2
	2.0nm,0.8s,baz=12,slow=14,SNR=3.4						
FITZ	Fitzroy Crossi	32.16	243	P	P	23 57 17.7	+0.2
	1.6nm,0.8s,baz=86,slow=11,SNR=1.6						

*JMA **15** 23:59:49.4±0.1, 37°.72N×142°.32E, h31km±3km, M3.4*
*IDC **16** 00:00:19.1±3.8, 37°.16N×139°.40E, h165km±18km, mb2.9/4, mb1 3.1/4, mb1mx2.8/33, mbtmp3.4/4, Error ellipse: s-maj=86.1km s-min=25.9km az=64.0*
ISC 15 23:59:46.6±2.5**, 37°.70N**±0°.06×**142°.32E**±0°.10**, h4**km±11km**,**
n18, σ0ˢ.95/25**, mb3.4**/4**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	Ishinomakikobu	0.91	312	P	Pn	00 00 05.9	-0.1
JIKH				*e*S	Sb	00 00 17.5	+0.3
JIO	Ouri	1.07	315	P	Pn	00 00 08.4	+0.1
JIO				S	Sg	00 00 21.8	+0.8
JMST	Minamisoumatoc	1.13	271	P	Pn	00 00 09.3	+0.1
JMST				S	Sg	00 00 23.5	+0.5
JFK	Kawauchi	1.19	254	P	Pg	00 00 10.4	+0.9
JFK				*e*S	Sn	00 00 25.6	-1.1
JMM	Marumori	1.22	278	P	Pg	00 00 10.7	+0.8
JMM				S	Sg	00 00 26.0	+0.3
JOU	Okura	1.46	297	P	Pg	00 00 14.9	+0.3
JOU				*e*S	Sb	00 00 33.6	+0.3
JMK	Ichinoseki	1.52	326	P	Pg	00 00 15.1	-0.5
JMK				*e*S	Sn	00 00 33.4	-1.2
JFT	Otama	1.58	264	P	Pg	00 00 16.9	0.0
JFT				*e*S	Sb	00 00 36.6	-0.1
JYS	Shirataka	1.85	287	P	Pg	00 00 21.1	-1.0
JYS				*e*S	Sb	00 00 44.6	+0.1
JOM	Ohasama	1.94	336	P	Pb	00 00 21.2	-1.3

JYK	Kaneyama	1.96	309	P	Pb	00 00 22.0	-0.8
JRG	Rokugo	2.14	323	P	Pb	00 00 24.9	-1.0
JYA	Atsumi	2.23	294	P	Pb	00 00 27.0	-0.5
MJAR	Matsushiro Arr	3.48	252	P	Pb	00 00 46.4	-2.4
	0.2nm,0.3s,baz=74,slow=8.1,SNR=5.3						
SONM	Songino Array	28.02	303	P	P	00 05 40.3	+1.7
	0.4nm,0.6s,baz=98,slow=8.4,SNR=4.7						
ZALV	Zalesovo Beam	42.00	312	P	P	00 07 43.3	+4.7
	0.3nm,0.4s,baz=90,slow=8.6,SNR=1.8						
MKAR	Makanchi Array	44.38	302	P	P	00 07 58.4	+0.4
	0.2nm,0.6s,baz=86,slow=9.0,SNR=5.4						
WRA	Warramunga Arr	57.83	189	P	P	00 09 47.8	+8.6
	0.5nm,0.9s,baz=4.4,slow=7.3,SNR=2.1						

*DJA **16** 00:25:11.9±3.1, 5°N±34°×12°6E±1°0, h44^{km}±52^{km}, M4.0/5, mb4.4/1, MLv3.7/5*

ISC 16 00:25:15.5±2.0**, 4°36N**±0°07×**125°6E**±0°2**, h35**^{km}**, n4, σ0^{s}84**/5**, 1D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	Sangihe	0.67	185	P	Pn	00 25 28.7	+0.2
KCP	Kidapawan	2.68	349	⇓*i*P	Pn	00 25 56.1	-0.1
KCP				*i* S	Sn	00 26 27.7	+0.2
GTOI	Gorontalo	4.50	215	P	Pn	00 26 20.3	-1.0
MRSI	Marisa	5.30	223	P	Pn	00 26 32.9	+0.7

IDC 16 00:27:46.4±2.2**, 0°70N×126°99E, h0**^{km}**, mb3.3**/3**, mb1 3.6**/3**, mb1mx3.3**/33**, mbtmp3.3**/3**, Error ellipse: s-maj=174.7km s-min=28.3km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	21.75	161	P	P	00 32 39.5	-0.3
	1.0nm,0.7s,baz=340,slow=11,SNR=8.0						
ASAR	Alice Springs	25.14	165	P	P	00 33 13.6	+0.2
	0.5nm,0.5s,baz=346,slow=11,SNR=11						
MKAR	Makanchi Array	60.19	326	P	P	00 37 56.2	-0.1
	0.2nm,0.7s,baz=127,slow=9.3,SNR=1.8						

*NEIC **16** 00:28:10.7±0.5, 8°7S±0°2×158°6E±0°1, h35^{km}±10^{km}, mb4.1/7, Error ellipse: s-maj=30.7km s-min=12.3km az=201.0*

*IDC **16** 00:28:13.0±4.9, 8°97S×158°67E, h52^{km}±55^{km}, mb3.6/7, mb1 3.8/7, mb1mx3.6/31, mbtmp3.9/7, Error ellipse: s-maj=43.6km s-min=20.3km az=146.0*

ISC 16 00:28:10.3±0.7**, 8°9S**±0°1×**158°63E**±0°07**, h29**^{km}**, n19, σ0^{s}99**/20**, mb3.9**/11**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	1.40	112	P	Pn	00 28 35.0	+1.0
	68nm,0.3s,baz=219,slow=3.7,SNR=10						
HNR				S	Sn	00 28 52.1	+0.6
	393nm,0.3s,baz=260,slow=24,SNR=26						
HNR	Honiara	1.40	112		Pb	00 28 35.1	-0.8
HNR				Sn	Sb	00 28 53.5	+0.1
DZM	Mont Dzumac	15.10	151	Pn	P	00 31 45.1	-1.7
DZM				IAmb	IAmb	00 31 45.2	
	comp=Z,13nm,1.0s						
WR0	Warramunga Arr	25.75	242	P	P	00 33 38.9	+0.1
WR0				IAmb	IAmb	00 33 58.1	
	comp=Z,3.8nm,1.1s						
WB0	Warramunga Arr	25.81	243	P	P	00 33 39.1	-0.2
WB0				IAmb	IAmb	00 33 54.1	
	comp=Z,7.1nm,1.1s						
WB2	Warramunga Arr	25.91	242	P	P	00 33 40.7	+0.5
WB2				IAmb	IAmb	00 33 43.6	
	comp=Z,2.4nm,0.7s						
WRA	Warramunga Arr	25.92	242	P	P	00 33 40.8	+0.5
	comp=Z,1.3nm,0.6s,baz=66,slow=8.8,SNR=8.6						
STKA	Stephens Creek	27.81	212	P	P	00 33 57.8	+0.7
	comp=Z,2.1nm,0.5s,baz=46,slow=13,SNR=6.5						
ASAR	Alice Springs	27.84	235	P	P	00 33 56.9	-0.7
	comp=Z,0.7nm,0.8s,baz=67,slow=9.6,SNR=5.3						
H11N1	WAKE ISLAND Hy	29.57	16	T	T	01 04 26.6	
	baz=195,slow=76,SNR=12						
H11N3	WAKE ISLAND Hy	29.58	16	T	T	01 04 29.2	
	baz=195,slow=76,SNR=12						
H11N2	WAKE ISLAND Hy	29.59	16	T	T	01 04 28.7	
	baz=195,slow=76,SNR=11						
FITZ	Fitzroy Crossi	33.31	251	P	P	00 34 45.8	-0.1
	comp=Z,4.6nm,1.1s,baz=82,slow=9.2,SNR=3.6						
KHZ	Kahutara	35.87	161	P	P	00 35 08.4	+0.7
PSA00	Pilbara Seismi	39.37	247	P	P	00 35 37.5	-0.1
PSA00				IAmb	IAmb	00 35 51.9	
	comp=Z,9.0nm,1.1s						
SONM	Songino Array	72.89	326	P	P	00 39 38.3	+1.4
	comp=Z,0.6nm,0.6s,baz=128,slow=5.8,SNR=4.9						
SONM				pP	PcP	00 39 51.9	-1.9
	comp=Z,0.9nm,0.7s,baz=136,slow=5.6,SNR=7.1						
ILAR	Eielson Array	83.85	21	P	P	00 40 36.2	-0.7
	comp=Z,0.5nm,1.0s,baz=256,slow=7.3,SNR=1.9						
MKAR	Makanchi Array	87.21	318	P	P	00 40 53.8	-0.3
	comp=Z,0.2nm,0.6s,baz=117,slow=5.0,SNR=2.5						
MKAR				pP	sP	00 41 07.7	+1.5
	comp=Z,0.2nm,0.5s,baz=107,slow=6.4,SNR=5.2						
MKAR	Makanchi Array	87.21	318	P	P	00 40 53.0	-1.0

*ISN **16** 00:50:12.3±0.8, 37°76N×43°08E, h13^{km}±183^{km}, ML2.8*

*DDA **16** 00:50:15.6, 37°45N×43°01E, h7^{km}±2^{km}, ML2.7*

*ISK **16** 00:50:15.2, 37°45N×43°01E, h5^{km}, ML3.1/17*

*TEH **16** 00:50:16.0, 37°48N×43°01E, h4^{km}, ML3.0*

ISC 16 00:50:16.5±1.1**, 37°46N**±0°03×**42°99E**±0°02**, h5**^{km}±10^{km}**, n54, σ1^{s}03**/71**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIRT	Sirnak	0.44	276	PG	Pg	00 50 25.2	+0.1
SIRT				SG	Sb	00 50 32.7	-1.1
SIRT	Sirnak	0.44	276	*e*Pg	Pg	00 50 25.1	0.0
SIRN	Sırnak	0.46	275	*i* P	Pg	00 50 25.5	+0.1
SIRN				*i* S	Sg	00 50 32.3	+0.8
SIRN				IAML		00 50 35.0	
	comp=N,1µm,0.3s						
SIRN				IAML		00 50 36.0	
	comp=E,1µm,0.6s						
CUKT	Cukurca	0.53	113	PG	Pg	00 50 25.9	-0.8
CUKT				SG	Sg	00 50 34.4	+0.8
CUKT	Cukurca	0.53	113	*i* P	Pg	00 50 25.9	-0.8
CUKT				*i* S	Sg	00 50 33.5	-0.1
CUKT	Cukurca	0.53	113	*e*Pg	Pg	00 50 25.8	-0.9
HAKT	HAKKARI	0.58	80	*i* P	Pg	00 50 27.3	-0.3
HAKT				IAML		00 50 38.0	
	comp=E,552nm,0.5s						
HAKT				IAML		00 50 39.0	
	comp=N,380nm,0.7s						
PERV	Siirt/Pervari-	0.61	324	*i* P	Pg	00 50 27.8	-0.4
PERV				*i* S	Sg	00 50 36.4	+0.3
GEVA	Gevas	0.86	3	*i* P	Pg	00 50 32.0	-1.0
GEVA				IAML		00 50 46.0	
	comp=N,158nm,0.5s						
GEVA				IAML		00 50 47.0	
	comp=E,196nm,0.5s						
AKDM	Akdamar-Van	0.87	359	PG	Pg	00 50 32.3	-0.9
AKDM				SG	Sg	00 50 45.5	+0.9
AKDM	Akdamar-Van	0.87	359	*e*Pg	Pg	00 50 32.3	-0.9
SRTM	Siirt_Merkez	1.00	303	*i* P	Pg	00 50 35.2	-0.6
TVAN	Van	1.12	17	*i* P	Pg	00 50 38.0	0.0
TVAN				IAML		00 51 03.0	
	comp=N,175nm,0.6s						
TVAN				IAML		00 51 05.0	
	comp=E,162nm,0.5s						
VANB	Van	1.18	15	PN	Pg	00 50 37.8	-1.4
VANB				SN	Sg	00 50 53.6	-0.8
VANB	Van	1.18	15	*e*Pn	Pg	00 50 37.7	-1.4
BLIS	Bitlis-Merkez	1.18	324	*i* P	Pg	00 50 38.2	-1.0
BLIS				*i* S	Sb	00 50 55.4	+0.2
BLIS				IAML		00 50 56.0	
	comp=N,137nm,0.4s						
BLIS				IAML		00 51 00.0	
	comp=E,195nm,1.0s						
MIDY	Mardin/Midyat-	1.27	268	*i* P	Pn	00 50 41.0	0.0
MIDY				IAML		00 51 01.0	
	comp=E,422nm,0.8s						
MIDY				IAML		00 51 01.0	
	comp=N,553nm,0.3s						
GURO	Guroymak-BITLI	1.33	325	PN	Pn	00 50 41.4	-0.5
GURO				SN	Sn	00 51 01.7	+1.6
GURO	Guroymak-BITLI	1.33	325	*e*Pn	Pn	00 50 41.6	-0.3
ADCV	BITLIS_Adilcev	1.37	351	*i* P	Pn	00 50 41.6	-0.8
ADCV				*i* S	Sb	00 51 01.0	+0.4
ADCV				IAML		00 51 04.0	
	comp=E,124nm,0.4s						
ADCV				IAML		00 51 04.0	
	comp=N,120nm,0.7s						
BTMN	Batman	1.44	288	*i* P	Pn	00 50 43.7	+0.4
BTMN				*i* S	Sg	00 51 04.8	+2.2
BTMN				IAML		00 51 09.0	
	comp=E,361nm,0.5s						
BTMN				IAML		00 51 11.0	
	comp=N,412nm,0.5s						
SVAN	Silvan-Diyarba	1.58	297	PN	Pn	00 50 45.6	+0.4
SVAN				SN	Sg	00 51 07.9	+0.5
SVAN	Silvan-Diyarba	1.58	297	*i* P	Pn	00 50 45.2	-0.1
SVAN				*i* S	Sg	00 51 07.7	+0.3
SVAN				IAML		00 51 09.0	
	comp=N,232nm,0.4s						
SVAN				IAML		00 51 10.0	
	comp=E,75nm,0.4s						
SVAN	Silvan-Diyarba	1.58	297	*e*Pn	Pn	00 50 45.4	+0.2
ERCV	ERCIS-VAN	1.58	10	PN	Pn	00 50 45.7	+0.3
ERCV	ERCIS-VAN	1.58	10	*e*Pn	Pn	00 50 45.9	+0.5
MLAZ	Malazgirt-MUS	1.72	348	PN	Pn	00 50 48.2	+1.0
MLAZ	Malazgirt-MUS	1.72	348	*e*Pn	Pn	00 50 47.7	+0.5
MUSM	Mu-Merkez	1.72	318	*i* P	Pn	00 50 47.7	+0.4
MUSM				*i* S	Sb	00 51 10.9	+0.2
MUSM				IAML		00 51 12.0	
	comp=E,69nm,0.4s						
MUSM				IAML		00 51 13.0	
	comp=N,101nm,0.5s						
MARD	Mardin	1.77	266	*i* P	Pb	00 50 48.9	-0.6
MARD				IAML		00 51 14.0	
	comp=E,337nm,0.4s						
MARD				*i* S	Sg	00 51 14.2	+0.9
MARD				IAML		00 51 15.0	
	comp=N,438nm,0.5s						
CLDR	Caldiran	1.83	23	PN	Pn	00 50 49.7	+0.8
CLDR	Caldiran	1.83	23	*e*Pn	Pn	00 50 49.5	+0.6
VRTB	Varto-Mus	2.09	325	PN	Pb	00 50 54.0	-0.9
VRTB	Varto-Mus	2.09	325	*e*Pn	Pn	00 50 53.0	+0.7
AGRB	Hanur-Agry	2.12	360	PN	Pn	00 50 53.7	+1.0
DYBB	Diyarbakir	2.32	283	PN	Pn	00 50 55.7	+0.3
BNGB	Bingl	2.38	311	PN	Pn	00 50 57.4	+1.1
KARO	Karliova-Bingo	2.40	321	PN	Pn	00 50 57.6	+1.0
BINT	Bingol	2.43	306	*e*Pn	Pn	00 50 57.1	+0.1
IMRD	Marand	2.48	59	*e*Pn	Pn	00 50 59.6	+1.9
IMRD				*e*		00 51 39.0	
	comp=Z,99nm,0.6s						
ITBZ	Tabriz	2.61	72	*e*Pn	Pn	00 51 00.8	+1.3
KOPR	Koprukoy-ERZUR	2.69	341	PN	Pn	00 51 01.4	+0.9
YEDI	Yedisu-Bingol	2.76	317	PN	Pn	00 51 02.8	+1.2
YEDI	Yedisu-Bingol	2.76	317	*e*Pn	Pn	00 51 02.7	+1.2
GNI	Garni	3.02	26	PN	Pn	00 51 06.0	+0.9
SENK	Senkaya-Erzuru	3.14	351	PN	Pn	00 51 07.9	+1.1
SENK	Senkaya-Erzuru	3.14	351	*e*Pn	Pn	00 51 07.9	+1.1
IHRS	Heris	3.32	74	*e*Pn	Pn	00 51 11.9	+2.7
IHRS				*e*		00 51 31.1	
	comp=Z,99nm,0.4s						
IDHR	Dehrash	3.89	134	*e*Pn	Pn	00 51 18.9	+1.8
IDHR				*e*		00 52 30.7	
	comp=Z,99nm,0.6s						
IGHG	Ghaleghazi	4.26	136	*e*Pn	Pn	00 51 23.8	+1.6
BHD	Baghdad	4.33	164	*e*Pn	Pn	00 51 23.0	+0.1
	baz=347						
BHD				*e*Sn	Sn	00 52 12.5	-1.2
IBDR	Badra	4.96	150	*e*Pn	Pn	00 51 32.0	+0.5
IBDR				*e*Sn	Sn	00 52 27.0	-2.2
IBDR				AML	AML	00 53 13.1	
	comp=E,13nm,0.8s						
IBDR				AML	AML	00 53 13.5	
	comp=N,13nm,0.6s						
QABG	Abgarm-Qazvin	5.58	106	*e*Pn	Pn	00 51 41.5	+1.1
HSAM	Samen	5.59	124	*e*Pn	Pn	00 51 42.9	+2.4

*IDC **16** 01:04:05.4±0.6, 14°64S×166°75E, h0^{km}, mb4.3/16, mb1 4.5/17, mb1mx4.4/31, mbtmp4.3/17, ML4.3/1, MS3.8/16, Ms1 3.8/16, ms1mx3.5/42, Error ellipse: s-maj=22.9km s-min=17.0km az=95.0*

*NOU **16** 01:04:06.1, 14°74S×166°83E, h0^{km}, MLv4.9, Vanuatu Islands*

*BJI **16** 01:04:08.8±0.0, 14°69S×167°02E, h29^{km}, mB5.0/26, mb4.7/46, Ms4.7/7, Ms7 4.5/7*

*NEIC **16** 01:04:09.3±1.8, 14°89S±0°07×167°0E±0°1, h29^{km}±5^{km}, mb4.7/23, Error ellipse: s-maj=20.1km s-min=9.5km az=74.0*

ISC 16 01:04:10.7±0.4**, 14°81S**±0°06×**166°94E**±0°09**, h35**^{km}**, n107, σ1^{s}87**/93**, mb4.6**/43**, MS3.8**/15**, 3C, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	Saraoutou	0.69	158	Pn	Pn	01 04 21.0	-3.0
SANVU				Sn	Sn	01 04 30.1	-3.3
SANVU	Saraoutou	0.69	158	P	Pn	01 04 21.2	-2.7
DVP	Devils Point	3.14	158	P	Pn	01 04 58.7	+1.0
LIFNC	LIFOU	5.95	177	P	Pn	01 05 36.9	+0.7
KOUNC	Koumac, New Ca	6.25	203	P	Pn	01 05 39.6	-0.8
YATNC	Mamie plateau,	7.21	180	P	Pn	01 05 53.4	-0.3
DZM	Mont Dzumac	7.24	184	Pn	Pn	01 05 53.3	-0.8
	4.4nm,0.3s,baz=334,slow=13,SNR=31						
DZM				Sn	Sn	01 07 12.6	-2.7
	2.3nm,0.3s,baz=339,slow=22,SNR=1.8						
DZM				LR	LR	01 08 32.6	
	comp=Z,1µm,18.5s,baz=25,slow=36						
DZM	Mont Dzumac	7.24	184	*e*Pn	Pn	01 05 53.2	-0.9
	22nm,0.2s						
DZM				*e*Sn	Sn	01 07 13.4	-1.8
	22nm,0.3s						
DZM				*e*LR	LR	01 07 43.6	
	comp=Z,1µm,23.8s						
DZM	Mont Dzumac	7.24	184	Pn	Pn	01 05 52.7	-1.4
DZM	Mont Dzumac	7.24	184	P	Pn	01 05 53.5	-0.6
NOUC	Port Laguerre	7.28	185	P	Pn	01 05 54.8	+0.2
ONTNC	Ouen Toro	7.48	183	P	Pn	01 05 56.9	-0.4
OUENC	Ouen Island, N	7.57	181	P	Pn	01 05 59.1	+0.5
HNR	Honiara	8.67	307	LR	LR	01 09 20.1	
	comp=Z,577nm,19.4s,baz=118,slow=37						
MSVF	Nonsavu	11.06	107	LR	LR	01 10 09.2	
	comp=Z,768nm,18.9s,baz=312,slow=32						
CTAO	Charters Tower	20.41	252	P	P	01 08 45.2	+0.3
MKAZ	Moumakai	23.39	163	P	P	01 09 20.7	+4.5
KMRZ	Kaimai	24.30	162	P	P	01 09 28.0	+3.1
HAZ	Te Kaha	24.80	159	P	P	01 09 32.8	+3.4
URZ	Urewera	25.04	161	P	P	01 09 33.0	+1.5
	6.7nm,0.5s,baz=144,slow=4.1,SNR=5.7						
URZ	Urewera	25.04	161	P	P	01 09 33.6	+2.1
MWZ	Matawai	25.24	160	P	P	01 09 34.0	+0.6
RTZ	Ruatahuna	25.32	161	P	P	01 09 37.5	+3.3
OTVZ	Oturere	25.45	164	P	P	01 09 40.4	+4.9
SNGZ	Shannon Statio	25.59	161	P	P	01 09 38.8	+2.3
CNGZ	Carnagh Statio	25.60	159	P	P	01 09 40.5	+3.8
RIGZ	Rimuhau	25.65	160	P	P	01 09 39.8	+2.6
BKZ	Black Stump Fm	25.68	163	P	P	01 09 39.2	+1.8
BHHZ	Black Hill Sta	25.86	164	P	P	01 09 42.3	+3.2
STKA	Stephens Creek	28.70	229	P	P	01 10 03.3	-1.3
	1.2nm,0.4s,baz=57,slow=9.8,SNR=4.5						
STKA				LR	LR	01 20 43.2	
	comp=Z,234nm,19.6s,baz=51,slow=35						
STKA	Stephens Creek	28.70	229	P	P	01 10 04.5	-0.2
RPZ	Rata Peaks	29.03	174	LR	LR	01 20 00.1	
	comp=Z,168nm,19.9s,baz=358,slow=33						
WB0	Warramunga Arr	31.43	256	P	P	01 10 26.7	-2.3
WB0				IAmb	IAmb	01 10 36.8	
	comp=Z,7.2nm,1.0s						
WB2	Warramunga Arr	31.48	256		P	01 10 28.4	-1.0
WB2				IAmb	IAmb	01 10 34.3	
	comp=Z,8.3nm,1.3s						
WRA	Warramunga Arr	31.50	256	P	P	01 10 27.5	-2.0
	comp=Z,1.8nm,0.9s,baz=83,slow=7.7,SNR=5.1						
WRA				LR	LR	01 22 45.0	
	comp=Z,340nm,19.0s,baz=85,slow=36						
WRA	Warramunga Arr	31.50	256	P	P	01 10 28.5	-1.0
AS31	Alice Springs	32.34	249	P	P	01 10 34.8	-2.2
ASAR	Alice Springs	32.35	249	P	P	01 10 34.6	-2.3
	comp=Z,1.3nm,0.7s,baz=71,slow=9.6,SNR=13						
ASAR	Alice Springs	32.35	249	P	P	01 10 36.5	-0.5
BBOO	Buckleboo	33.28	232	P	P	01 10 44.8	-0.2
SIJI	Sorong	37.86	288	LR	LR	01 27 02.1	
	comp=Z,166nm,19.5s,baz=66,slow=37						
FITZ	Fitzroy Crossi	39.69	259	LR	LR	01 27 55.5	
	comp=Z,161nm,18.4s,baz=97,slow=36						
FITZ	Fitzroy Crossi	39.69	259	P	P	01 11 38.9	-0.8
FITZ				IAmb	IAmb	01 11 46.0	
	comp=Z,15nm,0.8s						
PPT2	Papeete2	41.79	100	*e*LR	LR	01 23 12.6	
	comp=Z,129nm,24.8s						
BATI	Baumata	42.45	271	LR	LR	01 29 19.8	
	comp=Z,58nm,18.8s,baz=84,slow=36						
MJAR	Matsushiro Arr	57.82	333	P	P	01 13 57.1	-1.6
	comp=Z,2.8nm,0.8s,baz=162,slow=8.3,SNR=5.0						
ASAJ	Asahikawa	62.70	340	LR	LR	01 38 03.7	
	comp=Z,71nm,20.7s,baz=136,slow=33						
VNDA	Vanda	62.78	181	P	P	01 14 35.0	+2.9
	comp=Z,4.6nm,0.8s,baz=16,slow=7.6,SNR=7.4						
VNDA	Vanda	62.78	181	P	P	01 14 36.4	+4.3
KSRS	Korea Array	63.62	326	P	P	01 14 38.4	+0.2
	comp=Z,1.4nm,0.7s,baz=139,slow=8.1,SNR=2.4						
KSRS				LR	LR	01 41 47.0	
	comp=Z,23nm,18.3s,baz=151,slow=36						
NJ2	Nanjing	65.51	316	*e*P	P	01 14 53.8	+3.2
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
USRK	Ussuriysk Ar.	66.81	333	P	P	01 14 58.7	0.0
	comp=Z,4.6nm,0.9s,baz=123,slow=7.0,SNR=6.8						
USRK	Ussuriysk Ar.	66.81	333	P	P	01 14 59.0	+0.2
MDJ	Mudanjiang	68.20	332	P	P	01 15 07.8	+0.3
MDJ				sP	sP	01 15 21.4	-0.5
MDJ				pmax	pmax		
	comp=Z,9.0nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,270nm,5.4s						
ATKA	Atka Island	68.71	12	P	P	01 15 09.3	-1.2
CN2	Changchun	69.55	329	*e*P	P	01 15 20.8	+4.9
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
GYA	Guiyang	71.49	305	*e*P	P	01 15 34.0	+5.7
GYA				pmax	pmax		
	comp=Z,6.0nm,1.7s						
XAN	Xi'an	73.50	313	P	P	01 15 40.1	0.0
XAN				pP	pP	01 15 51.3	+0.6
XAN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
XAN				pmax	pmax		
	comp=Z,81nm,4.3s						
KMI	Kunming	74.07	302	⇑P	P	01 15 44.5	+0.7
KMI				pP	pP	01 15 55.0	+0.5
KMI				sP	PcP	01 16 00.9	+2.0
KMI				pmax	pmax		
	comp=Z,10.0nm,1.2s						
CMAR	Chiang Mai Arr	74.69	294	P	P	01 15 46.8	-0.5
	comp=Z,1.3nm,0.3s,baz=111,slow=4.6,SNR=7.4						
CMAR				LR	LR	01 49 24.2	
	comp=Z,6.4nm,18.5s,baz=340,slow=36						
QSPA	South Pole Qui	75.22	180	P	P	01 15 53.2	+3.6
QSPA				IAmb	IAmb	01 16 01.5	
	comp=Z,6.8nm,1.1s						
HHC	Hu-ho-hao-te	75.44	320	*e*P	P	01 15 51.8	+0.6
HHC				pmax	pmax		
	comp=Z,6.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,97nm,4.4s						
CD2	Chengdu	75.80	308	P	P	01 15 53.3	-0.2
CD2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
LZH	Lanzhou	78.13	312	*e*P	P	01 16 08.8	+2.2
LZH				pP	pP	01 16 17.3	0.0
LZH				sP	sP	01 16 21.9	+0.7
LZH				pmax	pmax		
	comp=Z,12nm,1.3s						
YAK	Yakutsk	82.01	343	LR	LR	01 49 56.2	
	comp=Z,55nm,19.2s,baz=226,slow=34						
TNA	Tin City	82.33	10	P	P	01 16 29.5	+1.1
TNA				IAmb	IAmb	01 16 29.9	
	comp=Z,6.9nm,1.1s						
SONM	Songino Array	82.37	324	P	P	01 16 27.5	-1.6
	comp=Z,0.7nm,0.5s,baz=123,slow=5.5,SNR=5.4						
SONM	Songino Array	82.37	324	P	P	01 16 29.1	-0.1
GTA	Gaotai	82.49	314	⇑P	P	01 16 30.3	+0.3
GTA				pP	sP	01 16 42.9	-1.7
GTA				sP	pP	01 16 46.6	+5.9
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,91nm,5.1s						
GTA				LR	LR		
	comp=Z,120nm,13.1s						
GTA				LR	LR		
	comp=Z,83nm,13.5s						
GTA				LR	LR		
	comp=Z,94nm,15.3s						
TTA	Tatalina	82.68	16	P	P	01 16 31.4	+1.0
KTH	Kantishna Hill	84.60	18	P	P	01 16 40.0	-0.2
KTH				IAmb	IAmb	01 16 41.0	
	comp=Z,9.2nm,1.1s						
TRF	Thorofare Moun	84.71	18	P	P	01 16 40.8	0.0
RND	Reindeer	85.11	18	P	P	01 16 42.8	+0.1
RND				IAmb	IAmb	01 16 44.5	
	comp=Z,9.6nm,1.1s						
RDOG	Red Dog Mine	85.47	11	P	P	01 16 44.1	-0.2
MDM	Murphy Dome	86.44	17	P	P	01 16 49.0	-0.2
MDM				IAmb	IAmb	01 16 50.7	
	comp=Z,8.7nm,1.2s						
IL31		86.70	18	P	P	01 16 48.8	-1.6
IL31				IAmb	IAmb	01 16 50.8	
	comp=Z,4.5nm,1.1s						
ILAR	Eielson Array	86.70	18	P	P	01 16 48.9	-1.6
	comp=Z,1.6nm,0.7s,baz=233,slow=4.7,SNR=18						
ILAR	Eielson Array	86.70	18	P	P	01 16 50.0	-0.4
ODAN	Odare	87.56	298	*e*P	P	01 16 49.6	-6.2
	comp=Z,16nm,0.6s						
NVAR	Mina Array Bea	87.56	49	P	P	01 16 55.8	+0.2
	comp=Z,0.8nm,0.9s,baz=205,slow=5.5,SNR=4.0						
NVAR				LR	LR	01 48 21.6	
	comp=Z,86nm,20.2s,baz=232,slow=30						
NVAR	Mina Array Bea	87.56	49	P	P	01 16 54.0	-1.6
RAMN	Ramite	88.26	298	*e*P	P	01 16 58.9	-0.3
	comp=Z,4.5nm,0.2s						
SYO	Syowa Base	88.54	197	⇑*e*P	P	01 16 59.4	0.0
GUN	Gumba	89.15	299	*e*P	P	01 17 11.5	+8.0
	comp=Z,6.8nm,0.3s						
PKIN	Phulchoki	89.46	299	*e*P	P	01 17 14.9	+10
	comp=Z,4.4nm,0.2s						
G08A	Pilot Rock	89.59	43	P	P	01 17 04.6	-0.3
G08A				IAmb	IAmb	01 17 08.1	
	comp=Z,3.6nm,1.1s						
DMN	Daman	89.72	299	*e*P	P	01 17 19.2	+13
	comp=Z,5.3nm,0.4s						
TIXI	Tiksi	89.98	349	P	P	01 17 04.9	-1.0
TIXI				IAmb	IAmb	01 17 09.9	
	comp=Z,3.5nm,1.1s						
WMQ	Urumqi	92.55	315	*e*P	P	01 17 19.8	+1.2
SNAA	Sanae	93.45	183	P	P	01 17 22.5	+0.1
VNA3	Neumayer Olymp	94.13	181	P	P	01 17 22.4	-3.0
VNA2	Neumayer--Watz	94.39	182	P	P	01 17 22.5	-4.0
VNA1	Neumayer--Stat	94.69	182	P	P	01 17 25.3	-2.5
PDAR	Pinedale Array	95.23	47	P	P	01 17 31.6	+0.5
	comp=Z,0.4nm,0.8s,baz=58,slow=3.7,SNR=4.7						
PDAR				LR	LR	01 56 07.5	
	comp=Z,39nm,18.2s,baz=308,slow=33						
TXAR	Lajitas Array	96.59	62	LR	LR	01 54 24.9	
	comp=Z,26nm,20.0s,baz=0.0,slow=31						
MK31	Makanchi Array	97.04	316	P	P	01 17 38.6	-0.4
MKAR	Makanchi Array	97.04	316	P	P	01 17 38.3	-0.7
	comp=Z,1.2nm,0.9s,baz=81,slow=5.7,SNR=7.6						
MKAR	Makanchi Array	97.04	316	P	P	01 17 39.0	0.0
ZALV	Zalesovo Beam	97.26	324	P	P	01 17 37.1	-2.7
	comp=Z,1.2nm,0.8s,baz=109,slow=8.0,SNR=5.0						
ZALV	Zalesovo Beam	97.26	324	P	Pdif	01 17 40.4	+0.5
YKA	Yellowknife Ar	97.76	27	P	P	01 17 40.0	-1.9
	comp=Z,0.8nm,0.8s,baz=254,slow=3.7,SNR=8.2						
KSH	Kashi	99.99	308	P	Pdif	01 17 54.8	+2.2
KSH				sP	sP	01 18 11.5	+4.1
KSH				pmax	pmax		
	comp=Z,13nm,2.0s						
ARCES	ARCESS Array B	120.24	345	PKP	PKPdf	01 22 57.5	+0.1
	comp=Z,3.0nm,0.6s,baz=64,slow=1.8,SNR=24						
FINES	FINESS Array B	125.67	338	PKP	PKiKP	01 23 09.3	+0.9
	comp=Z,2.0nm,0.8s,baz=242,slow=5.8,SNR=1.9						
BDFB	Brasilia	134.09	130	PKP	PKPdf	01 23 25.6	0.0
	comp=Z,1.4nm,0.7s,baz=198,slow=4.4,SNR=3.2						
KOLS	Kolonicke sedl	135.33	327	*e*PKP	PKPdf	01 23 27.2	+0.4
GERES	GERESS Array B	139.56	333	PKP	PKPdf	01 23 35.0	+0.3
	comp=Z,0.5nm,0.7s,baz=56,slow=2.4,SNR=4.6						

GUC ***16*** *01:19:32.8±0.7, 19°.41S×69°.15W, h109^{km}±3^{km}, ML3.5*
IDC ***16*** *01:19:33.1±1.2, 19°.46S×68°.82W, h122^{km}±10^{km}, mb3.6/5, mb1 3.6/8, mb1mx3.4/26, mbtmp4.0/8, Error ellipse: s-maj=30.7km s-min=8.7km az=99.0*
ISC 16 01:19:31.4±0.8**, 19°.43S**±0°.04×**69°.18W**±0°.08**, h114**^{km}±8^{km}**, n25, σ1^{s}.50**/37**, mb3.7**/4**, 4C-1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNMC	Minye Minye	0.49	306	⇑iP	Pn	01 19 49.3	+0.2
MNMC				i S	Sn	01 20 03.1	+0.8
PB08	IPOC Station P	0.71	178	⇓iP	Pn	01 19 51.4	+0.7
PB08				i S	Sn	01 20 06.0	+0.7
PB08				IAML		01 20 07.7	
	comp=N,2µm,0.3s						
PSGC	Pisagua	0.91	259	⇑iP	Pn	01 19 52.3	+0.1
PSGC				i S	Sn	01 20 07.5	-0.3
PSGC				IAML		01 20 13.7	
	comp=E,1µm,0.3s						
HMBC	Humberstone	1.08	218	⇑iP	Pn	01 19 54.2	+0.3
HMBC				i S	Sn	01 20 11.1	+0.2
HMBC				IAML		01 20 14.9	
	comp=N,1µm,0.4s						
TA02	Huaiquique	1.23	227	eP	Pn	01 19 55.6	+0.2
TA02				i S	Sn	01 20 14.0	+0.4
TA01	Diego Aracena	1.48	220	eP	Pn	01 19 58.6	+0.4
TA01				i S	Sn	01 20 18.4	-0.2
TA01				IAML		01 20 25.2	
	comp=E,369nm,0.2s						
AP01	Chacalluta	1.52	313	eP	Pn	01 19 59.0	+0.3
AP01				i S	Sn	01 20 20.2	+0.7
PB01	IPOC Station P	1.64	190	i P	Pn	01 20 00.9	+0.7
PB01				i S	Sn	01 20 23.1	+0.9
PB01				IAML		01 20 24.3	
	comp=E,988nm,0.5s						
PATCX	Punta Patache	1.67	213	eP	Pn	01 20 01.1	+0.5
PATCX				i S	Sn	01 20 23.2	+0.5
PATCX				IAML		01 20 30.1	
	comp=E,353nm,0.4s						
PB09	IPOC Station P	2.36	182	eP	Pn	01 20 10.5	+1.2
PB09				i S	Sn	01 20 39.5	+1.0
PB09				IAML		01 20 42.8	
	comp=E,191nm,0.3s						
PB07	IPOC Station P	2.38	196	⇑iP	Pn	01 20 11.0	+1.3
PB07				i S	Sn	01 20 39.5	+0.4
PB07				IAML		01 20 48.0	
	comp=E,248nm,0.3s						
PB03	IPOC Station P	2.67	192	eP	Pn	01 20 14.0	+0.7
PB03				i S	Sn	01 20 40.9	-4.6
PB03				IAML		01 20 50.7	
	comp=E,159nm,0.6s						
PB04	IPOC Station P	3.03	197	eP	Pn	01 20 20.0	+1.9
PB04				IAML		01 21 06.4	
	comp=E,117nm,0.1s						
LVC	Limon Verde	3.18	176	P	Pn	01 20 22.7	+2.4
	comp=E,4.5nm,0.3s,baz=360,slow=8.1,SNR=29						
LVC				S	Sn	01 20 58.9	+1.0
	comp=E,14nm,0.3s,baz=140,slow=22,SNR=19						
LPAZ	La Paz	3.27	18	P	Pn	01 20 23.9	+2.1
	comp=E,4.5nm,0.3s,baz=177,slow=4.5,SNR=62						
LPAZ				S	Sn	01 21 01.5	+1.0
	baz=98,slow=20,SNR=1.3						
PB06	IPOC Station P	3.29	186	eP	Pn	01 20 22.9	+1.4
PB06				i S	Sn	01 20 58.1	-2.0
PB06				IAML		01 21 09.7	
	comp=N,79nm,0.6s						
SIV	San Ignacio	8.44	67	P	Pn	01 21 28.0	-3.0
	comp=N,1.8nm,0.3s,baz=266,slow=9.9,SNR=35						
BDFB	Brasilia	20.52	83	P	P	01 23 59.6	-1.3
	comp=N,1.4nm,0.5s,baz=281,slow=9.9,SNR=3.8						
PLCA	Paso Flores	21.27	183	P	P	01 24 11.1	+2.4
	comp=N,2.6nm,0.9s,baz=1.1,slow=11,SNR=3.9						
DBIC	Dimbokro	68.40	74	P	P	01 30 19.5	-1.8
	comp=N,3.9nm,1.0s,baz=220,slow=7.9,SNR=5.0						
TORD	Torodi Ar. Bea	76.91	71	P	P	01 31 10.9	-0.8
	comp=N,0.6nm,0.5s,baz=253,slow=5.1,SNR=9.0						
YKA	Yellowknife Ar	89.16	341	P	P	01 32 14.6	+0.9
	comp=N,0.4nm,0.6s,baz=127,slow=5.6,SNR=7.8						
H11S2	WAKE ISLAND Hy	127.34	279	T	T	03 58 02.8	
	baz=100,slow=74,SNR=8.7						
H11S1	WAKE ISLAND Hy	127.35	279	T	T	03 58 02.7	
	baz=100,slow=74,SNR=4.6						
H11S3	WAKE ISLAND Hy	127.36	279	T	T	03 58 04.5	
	baz=100,slow=74,SNR=5.6						

WEL ***16*** *01:58:00, 45°.00S×167°.56E, h96^{km}, ML4.2, Mw4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15} Nm; M$_{rr}$0.66; M$_{\theta\theta}$-0.69; M$_{\phi\phi}$0.03; M$_{r\theta}$-0.25; M$_{\theta\phi}$-0.83; M$_{\phi r}$0.40; Fault plane solution: M$_0$1.16000×10^{15} NP1: φ$_s$271.00000°, δ58.00000°, λ143.00000°. NP2: φ$_s$23.00000°, δ59.00000°, λ38.00000°. Principal axes: T -123.5200, Plg48.0000°, Azm238.0000°; N 14.5100, Plg42.0000°, Azm56.0000°; P 109.0000, Plg1.0000°, Azm147.0000°;*
NEIC ***16*** *01:58:50.9±2.6, 44°.93S±0°.09×167°.5E±0°.1, h103^{km}±8^{km} Error ellipse: s-maj=16.6km s-min=6.7km az=138.0*
WEL ***16*** *01:58:51.2, 45°S±2°×16°8E±°, h104^{km}±3^{km}, M4.2/15, ML4.4/13, MLv4.2/15, Error ellipse: s-maj=0.0km s-min=0.0km az=73.5*
IDC ***16*** *01:58:52.5±4.4, 44°.76S×167°.71E, h110^{km}±38^{km}, mb3.2/2, mb1 3.5/3, mb1mx3.3/17, mbtmp3.6/3, Error ellipse: s-maj=62.7km s-min=24.8km az=13.0*
ISC 16 01:58:51.3±0.8**, 44°.98S**±0°.06×**167°.58E**±0°.05**, h106**^{km}±6^{km}**, n89, σ1^{s}.35**/98**, mb4.0**/4**, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSZ	Milford Sound	0.39	39	P	Pn	01 59 07.6	+0.5
MSZ				S	Sn	01 59 18.6	-0.2
MLZ	Mavora Lakes	0.55	135	Pn	Pn	01 59 08.7	+0.6
MLZ				Sn	Sn	01 59 20.5	-0.2
MLZ	Mavora Lakes	0.55	135	P	Pn	01 59 08.5	+0.4
MLZ				S	Sn	01 59 20.6	-0.2
DCZ	Deep Cove	0.57	211		Pn	01 59 08.0	-0.3
DCZ				Sn	Sn	01 59 19.3	-1.6
DCZ	Deep Cove	0.57	211	P	Pn	01 59 07.8	-0.4
DCZ				S	Sn	01 59 19.7	-1.2
WHZ	Wether Hill Ro	0.95	164	Pn	Pn	01 59 12.2	+0.5
WHZ				Sn	Sn	01 59 27.0	0.0
WHZ	Wether Hill Ro	0.95	164	P	Pn	01 59 12.1	+0.4
WKZ	Wanaka	1.04	82	Pn	Pn	01 59 13.8	+1.2
WKZ				Sn	Sn	01 59 30.4	+1.8
WKZ	Wanaka	1.04	82	P	Pn	01 59 13.7	+1.1
WKZ				S	Sn	01 59 29.5	+0.9
EAZ	Earnscleugh	1.25	102	P	Pn	01 59 16.0	+1.0
JCZ	Jackson Bay	1.25	44	P	Pn	01 59 15.3	+0.2
PYZ	Puysegur Point	1.34	208	Pn	Pn	01 59 16.5	+0.5
PYZ				Sn	Sn	01 59 33.7	-1.0
PYZ	Puysegur Point	1.34	208	P	Pn	01 59 16.3	+0.3
TUZ	Tuapeka	1.74	125	P	Pn	01 59 21.8	+1.0
APZ	The Paps	1.88	171	P	Pn	01 59 22.7	+0.1
SYZ	Scrubby Hill	1.90	145	P	Pn	01 59 23.5	+0.7
LBZ	Lake Benmore	1.95	73	Pn	Pn	01 59 23.7	+0.2
LBZ				Sn	Sn	01 59 46.9	-1.3
LBZ	Lake Benmore	1.95	73	P	Pn	01 59 23.4	-0.1
FOZ	Fox Glacier	2.16	49	Pn	Pn	01 59 25.8	-0.4
FOZ	Fox Glacier	2.16	49	P	Pn	01 59 25.7	-0.4
ODZ	Otahua Downs	2.18	93	Pn	Pn	01 59 26.7	+0.3
ODZ				Sn	Sn	01 59 51.5	-1.8
ODZ	Otahua Downs	2.18	93	P	Pn	01 59 26.7	+0.3
HHSZ	Highcliff Hill	2.31	114	P	Pn	01 59 29.1	+1.0
TMZ	Timaru	2.52	78	P	Pn	01 59 30.4	-0.5
GCSZ	Gaunt Creek Bo	2.58	51	P	Pn	01 59 30.8	-0.9
ARCZ	Arundel	2.78	69	P	Pn	01 59 33.3	-1.0
RPZ	Rata Peaks	2.80	64	P	Pn	01 59 33.7	-0.8
	23nm,0.3s,baz=227,slow=5.9,SNR=81						
RPZ				S	Sn	02 00 05.4	-2.3
	90nm,0.3s,baz=45,slow=23,SNR=46						
RPZ	Rata Peaks	2.80	64	Pn	Pn	01 59 33.8	-0.8
RPZ				Sn	Sn	02 00 06.2	-1.5
RPZ	Rata Peaks	2.80	64	P	Pn	01 59 33.7	-0.8
WVZ	Waitaha Valley	2.97	51	P	Pn	01 59 35.8	-1.0
WACZ	Wakanui South	3.22	73	P	Pn	01 59 39.4	-0.8
RACZ	Rakaia	3.50	71	P	Pn	01 59 43.2	-0.7
INZ	Inchbonnie	3.59	52	P	Pn	01 59 44.1	-0.9
OXZ	Oxford	3.61	64		Pn	01 59 43.7	-1.6
OXZ	Oxford	3.61	64	P	Pn	01 59 43.7	-1.6
MQZ	McQueen's Vall	3.86	73	Pn	Pn	01 59 48.7	+0.1
MQZ	McQueen's Vall	3.86	73	P	Pn	01 59 47.7	-0.9
LTZ	Lake Taylor	4.04	59	Pn	Pn	01 59 49.6	-1.6
LTZ	Lake Taylor	4.04	59	P	Pn	01 59 49.6	-1.6
AMCZ	Amberley	4.08	66	P	Pn	01 59 50.6	-1.0
OKCZ	Okains Bay	4.13	74	P	Pn	01 59 52.4	+0.1
GVZ	Greta Valley S	4.42	65	P	Pn	01 59 55.3	-0.9
DSZ	Denniston Nort	4.47	45	P	Pn	01 59 56.6	-0.4
KHZ	Kahutara	5.03	61	Pn	Pn	02 00 03.3	-1.1
KHZ	Kahutara	5.03	61	P	Pn	02 00 03.0	-1.3
THZ	Tophouse	5.04	52	Pn	Pn	02 00 02.8	-1.9
THZ	Tophouse	5.04	52	P	Pn	02 00 03.2	-1.5
QRZ	Quartz Range	5.52	43	Pn	Pn	02 00 10.6	-0.5
QRZ	Quartz Range	5.52	43	P	Pn	02 00 10.0	-1.1
BSWZ	Blackbirch Sta	5.63	57	Pn	Pn	02 00 13.3	+0.7
NNZ	Nelson	5.67	51	Pn	Pn	02 00 12.6	-0.6
NNZ	Nelson	5.67	51	P	Pn	02 00 13.0	-0.2
TUWZ	Tuamarina	5.85	55	Pn	Pn	02 00 17.4	+1.9
TUWZ	Tuamarina	5.85	55	P	Pn	02 00 17.9	+2.4
TCW	Tory Channel	6.18	55	P	Pn	02 00 20.5	+0.4
DUWZ	D'Urville Isla	6.26	50	P	Pn	02 00 22.5	+1.4
MSWZ	Moikau Station	6.64	60	Pn	Pn	02 00 24.7	-1.6
CAW	Cannon Point	6.71	57	P	Pn	02 00 25.2	-2.1
MRZ	Mangatainoka R	7.29	57	P	Pn	02 00 33.5	-1.7
NBEZ	Newall Road No	7.38	42	P	Pn	02 00 36.9	+0.6
KHEZ	Kahui Hut	7.42	42	P	Pn	02 00 38.2	+1.2
NEZ	North Egmont	7.48	43	P	Pn	02 00 39.6	+1.8
DREZ	Durham Road	7.60	43	P	Pn	02 00 37.4	-1.9
VRZ	Vera Road	7.92	45	P	Pn	02 00 46.0	+2.3
TUVZ	Tukino	8.28	49	P	Pn	02 00 52.9	+4.2
NGZ	Ngauruhoe	8.32	49	P	Pn	02 00 52.3	+3.1
WTVZ	West Tongariro	8.36	48	P	Pn	02 00 53.4	+3.7
OTVZ	Oturere	8.36	49	P	Pn	02 00 52.9	+3.1
TMVZ	Te Maari	8.42	49	P	Pn	02 00 54.3	+3.7
HIZ	Hauiti	8.44	43	Pn	Pn	02 00 50.8	0.0
HIZ	Hauiti	8.44	43	P	Pn	02 00 51.0	+0.3
TLZ	Tolley Road	8.92	45	P	Pn	02 00 59.0	+1.7
NGRZ	Ngongotaha	9.42	46	P	Pn	02 01 12.1	+7.9
WCZ	Waipu Caves	10.39	32	P	Pn	02 01 18.3	+1.1
OUZ	Omahuta	10.78	27	Pn	Pn	02 01 24.0	+1.5
OUZ	Omahuta	10.78	27	P	Pn	02 01 24.7	+2.2
ASAR	Alice Springs	34.64	297	P	P	02 05 31.2	+0.8
	0.3nm,0.5s,baz=129,slow=6.5,SNR=5.9						
WC3	Warramunga Arr	37.09	301	P	P	02 05 51.9	+0.5
WC3				IAmb	IAmb	02 06 04.6	
	comp=Z,7.9nm,1.4s						
WB2	Warramunga Arr	37.12	301	P	P	02 05 52.0	+0.4
WB2				IAmb	IAmb	02 05 52.1	
	comp=Z,6.4nm,1.2s						
WRA	Warramunga Arr	37.12	301	P	P	02 05 51.8	+0.1
	comp=Z,0.3nm,0.4s,baz=137,slow=7.7,SNR=9.1						
H01W1	Cape Leeuwin H	41.51	265	T	T	02 50 29.2	
	baz=120,slow=76,SNR=12						
H01W2	Cape Leeuwin H	41.52	265	T	T	02 50 28.6	
	baz=120,slow=76,SNR=12						
H01W3	Cape Leeuwin H	41.53	265	T	T	02 50 29.4	
	baz=120,slow=76,SNR=9.6						
MKAR	Makanchi Array	118.15	309	PKP	PKPdf	02 17 25.1	-0.1
	comp=Z,0.1nm,0.5s,baz=168,slow=1.7,SNR=2.1						
BRTR	Keskin Array B	145.92	278	PKPbc	PKPab	02 18 18.8	-0.1
	comp=Z,0.7nm,0.8s,baz=143,slow=4.6,SNR=6.0						
TORD	Torodi Ar. Bea	146.07	205	PKPbc	PKPbc	02 18 19.5	+0.4
	comp=Z,1.8nm,0.6s,baz=146,slow=2.1,SNR=12						
ARCES	ARCESS Array B	148.91	335	PKPbc	PKPbc	02 18 25.1	-0.2
	comp=Z,5.4nm,0.9s,baz=51,slow=2.9,SNR=5.0						
AKASG	Malin Array Be	151.75	297	PKPbc	PKiKP	02 18 32.9	-0.1
	comp=Z,0.5nm,0.4s,baz=71,slow=2.5,SNR=5.0						
FINES	FINESS Array B	152.22	320	PKPbc	PKiKP	02 18 33.8	+0.2
	comp=Z,3.3nm,0.9s,baz=199,slow=3.8,SNR=5.0						

IDC ***16*** *02:53:43.9±2.8, 39°.21N×142°.01E, h0^{km}, mb3.6/3, mb1 3.7/6, mb1mx3.4/38, mbtmp3.6/6, ML3.1/3, Error ellipse: s-maj=60.6km s-min=31.9km az=169.0*
JMA ***16*** *02:54:10.2±0.1, 41°.08N×141°.07E, h99^{km}±1^{km}, M2.8*
ISC 16 02:54:09.8±1.1**, 41°.07N**±0°.04×**141°.04E**±0°.05**, h100**^{km}**, n21, σ0^{s}.59**/28**, mb3.3**/3**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JARK	Aomorirokkasho	0.26	104	P	Pn	02 54 24.2	0.0
JARK				eS	Sn	02 54 34.9	0.0
JTM	Tenmabayashi	0.28	176	P	Pn	02 54 24.6	+0.2
JTM				eS	Sn	02 54 35.2	0.0
JAHD	Aomorihigashid	0.30	49	P	Pn	02 54 24.6	+0.2
JAHD				eS	Sn	02 54 35.5	+0.2
JOT	Ohata	0.31	1	P	Pn	02 54 24.9	+0.4
JSR	Shiriuchi	0.66	315	P	Pn	02 54 27.2	+0.4
JSR				eS	Sn	02 54 39.6	0.0
JANG	Nango	0.79	152	P	Pn	02 54 27.9	-0.2
JANG				S	Sn	02 54 41.2	-0.5
JKB	Kayabe	0.82	360	P	Pn	02 54 28.6	+0.3
JOMM	Oshimamatsumae	0.90	301	P	Pn	02 54 29.1	-0.1
JOMM				eS	Sn	02 54 43.9	+0.2
JIW	Iwasaki	0.92	239	P	Pn	02 54 30.1	+0.7
JIW				eS	Sn	02 54 44.8	+0.7
JAH	Hinai	0.93	199	P	Pn	02 54 30.2	+0.7
JAH				eS	Sn	02 54 45.5	+1.2
JYM2	Yakumo 2	1.16	335	P	Pn	02 54 32.9	+0.9
JNB	Noboribetsu	1.40	360	P	Pn	02 54 35.6	+0.8
JOSM	Okushiri--Mats	1.55	311	P	Pn	02 54 36.6	0.0
JOM	Ohasama	1.61	173	P	Pn	02 54 38.1	+0.7
JNBK	Urakawa-nobuka	1.76	46	P	Pn	02 54 39.6	+0.3
ASAJ	Asahikawa	3.25	20	Pn	Pn	02 54 59.2	+0.3
	1.1nm,0.3s,baz=209,slow=14,SNR=6.3						
ASAJ				Sn	Sn	02 55 37.8	+1.0
	1.5nm,0.3s,baz=249,slow=30,SNR=1.6						
USRK	Ussuriysk Ar.	7.37	298	Pn	Pn	02 55 54.3	-0.3
	baz=103,slow=15,SNR=4.5						
KSRS	Korea Array	10.79	255	Pn	Pn	02 56 25.7	-16
	0.5nm,0.3s,baz=83,slow=14,SNR=5.9						
ZALV	Zalesovo Beam	39.07	309	P	P	03 01 26.7	0.0
	1.2nm,0.6s,baz=88,slow=7.7,SNR=5.5						
MKAR	Makanchi Array	41.84	298	P	P	03 01 48.3	-1.4
	0.4nm,0.8s,baz=90,slow=7.2,SNR=5.6						
PDAR	Pinedale Array	75.06	46	P	P	03 05 32.0	-8.8
	0.1nm,0.4s,baz=240,slow=1.8,SNR=1.6						

IDC 16 03:15:34.6±2.5**, 5°.93S**×**129°.10E, h0**^{km}**, mb3.3**/1**, mb1 3.5**/3**, mb1mx3.2**/35**, mbtmp3.3**/3**, ML3.4**/2**, Error ellipse: s-maj=166.1km s-min=32.9km az=68.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.83	160	Pn	Pn	03 19 06.5	+0.6
	0.1nm,0.3s,baz=340,slow=10.0,SNR=1.6						
WRA				Sn	Sn	03 21 37.6	-13
	0.5nm,0.3s,baz=326,slow=24,SNR=5.6						
ASAR	Alice Springs	18.23	166	P	Pn	03 19 48.8	-0.5
	0.2nm,0.3s,baz=346,slow=11,SNR=11						
ASAR				S	Sn	03 22 59.5	-14
	0.1nm,0.3s,baz=344,slow=23,SNR=2.7						
MKAR	Makanchi Array	66.84	327	P	P	03 26 28.5	+0.1
	0.2nm,0.6s,baz=127,slow=7.8,SNR=2.8						

BEO ***16*** *03:17:22.0±0.6, 40°.02N×19°.58E, h8^{km}±3^{km}, ML3.2/13*
IDC ***16*** *03:17:22.0±9.9, 40°.28N×19°.66E, h0^{km}, mb3.6/4, mb1 3.5/6, mb1mx3.3/46, mbtmp3.4/6, ML3.1/2, Error ellipse: s-maj=189.1km s-min=22.4km az=34.0*
TIR ***16*** *03:17:23.2, 40°.27N×19°.86E, h2^{km}±1^{km}, Ml3.4*
ATH ***16*** *03:17:23.3, 40°.26N×19°.77E, h37^{km}±5^{km}, ML3.2/27, Error ellipse: s-maj=6.0km s-min=1.7km az=207.0*
THE ***16*** *03:17:23.9, 40°.27N×19°.88E, h10^{km}±5^{km}, ML3.2/7, Error ellipse: s-maj=5.8km s-min=0.9km az=233.0*
PDG ***16*** *03:17:24.8±0.4, 40°.30N×19°.71E, h10^{km}±1^{km}, ML3.0/13, Error ellipse: s-maj=0.5km s-min=0.8km az=0.0*
ISC 16 03:17:23.7±1.1**, 40°.27N**±0°.02×**19°.79E**±0°.02**, h1**^{km}±9^{km}**, n182, σ1^{s}.31**/229**, mb3.7**/4**, 16C-7D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TPE	Tepelena	0.17	80	P	Pg	03 17 26.3	-0.7
	baz=78						
TPE				S	Sg	03 17 29.2	0.0
	baz=79						
VLO	Vlora	0.30	312	P	Pg	03 17 30.6	+1.0
VLO				S	Sb	03 17 36.5	-1.0
	7µm,0.5s						
VLO	Vlora	0.30	312	P	Pg	03 17 30.5	+1.0
	baz=306						
VLO				S	Sb	03 17 36.4	-1.1
	baz=306						
VLO				AMP			
	comp=N,36nm,0.6s,baz=306						
SRN	Sarande	0.42	157	P	Pg	03 17 31.6	-0.1
SRN				S	Sg	03 17 38.6	+1.6
	comp=N,6µm,0.3s						
SRN	Sarande	0.42	157	P	Pg	03 17 31.6	-0.1
	baz=164						
SRN				S	Sg	03 17 38.3	+1.2
	baz=164						
KASA	Kassiopi	0.53	168	P	Pg	03 17 33.7	-0.1
KASA				S	Sg	03 17 41.5	+0.8
KASA				AML	AML	03 17 44.6	
	comp=N,4844µm,0.2s						
KASA				AML	AML	03 17 44.9	
	comp=E,4188µm,0.7s						
KEK	Kerkira	0.55	179	P	Pg	03 17 34.0	-0.2
KEK				S	Sg	03 17 42.4	+1.0
	comp=E,2µm,0.5s						
KEK	Kerkira	0.55	179	P	Pg	03 17 34.3	+0.1
KEK				S	Sg	03 17 43.7	+2.3
KEK				AML	AML	03 17 45.3	
	comp=N,3881µm,0.3s						
KEK				AML	AML	03 17 48.7	
	comp=E,4256µm,0.6s						
LSK	Leskovik	0.63	100	P	Pg	03 17 34.7	-1.1
LSK				S	Sg	03 17 42.3	-1.6
	comp=E,3µm,0.7s						
LSK	Leskovik	0.63	100	P	Pg	03 17 35.1	-0.7
	baz=101						
LSK				S	Sg	03 17 44.8	+0.9
	baz=101						
LSK				AMP			
	comp=E,8.5nm,0.7s,baz=101						
KBN	Korca	0.84	64	P	Pg	03 17 38.2	-1.6
KBN	Korca	0.84	64	P	Pg	03 17 39.3	-0.5
	baz=63						
KBN				S	Sg	03 17 51.4	+0.7
	baz=63						
KBN				AMP			
	comp=E,3.0nm,0.4s,baz=63						
NEST	Nestorio	0.97	81	P	Pg	03 17 41.3	-1.0
NEST	Nestorio	0.97	81	P	Pg	03 17 41.4	-1.0
NEST				AML	AML	03 18 04.5	
	comp=E,2217µm,0.6s						
NEST				AML	AML	03 18 05.7	
	comp=N,2736µm,0.6s						
SCTE	Santa Cesarea	1.03	260	P	Pg	03 17 43.2	-0.2
SCTE				AML	AML	03 18 06.2	
	comp=E,2034µm,0.6s						
SCTE				AML	AML	03 18 11.6	
	comp=N,765µm,0.4s						
PENT	Pentalofos	1.03	93	P	Pg	03 17 43.0	-0.5
PENT	Pentalofos	1.03	93	P	Pg	03 17 42.5	-1.0
PENT				AML	AML	03 18 04.8	
	comp=N,1776µm,0.7s						
PENT				AML	AML	03 18 04.9	
	comp=E,2421µm,0.9s						
TIR	Tirane	1.08	3	P	Pg	03 17 44.5	0.0
TIR	Tirane	1.08	3	ePg	Pg	03 17 44.5	0.0
TIR				eSg	Sn	03 18 05.9	+4.1
TIR	Tirane	1.08	3	⇑P	Pg	03 17 44.4	0.0
TIR				⇓S	Sb	03 18 00.0	+0.1
TIR	Tirane	1.08	3	P	Pg	03 17 44.6	0.0
	baz=0.0						
TIR				S	Sn	03 18 00.9	-0.8
	baz=0.0						
TIR				AMP			
	comp=N,1.6nm,0.6s,baz=0.0						
TIR	Tirane	1.08	3	P	Pg	03 17 44.4	0.0
TIR				AML	AML	03 18 07.1	
	comp=E,2830µm,0.8s						
TIR				AML	AML	03 18 11.4	
	comp=N,2048µm,0.6s						
OHR	Ohrid	1.14	42	i Pn	Pg	03 17 44.8	-0.8
KPRO	Kipourio	1.25	104	P	Pg	03 17 46.6	-0.9
KPRO	Kipourio	1.25	104	P	Pg	03 17 47.0	-0.6
KPRO				AML	AML	03 18 13.7	
	comp=E,3708µm,0.7s						
KPRO				AML	AML	03 18 14.0	
	comp=N,3018µm,0.5s						
FNA	Florina	1.31	66	P	Pg	03 17 47.2	-1.7
FNA	Florina	1.31	66	ePn	Pg	03 17 49.0	+0.1
FNA				eSn	Sn	03 18 11.7	+4.1
FNA	Florina	1.31	66	P	Pg	03 17 47.2	-1.7
FNA				AML	AML	03 18 13.2	
	comp=E,3055µm,0.7s						
FNA				AML	AML	03 18 17.2	
	comp=N,3132µm,0.7s						
PHP	Peshkopia	1.50	19	P	Pn	03 17 50.4	-1.5
PHP	Peshkopia	1.50	19	P	Pn	03 17 52.3	+0.4
	baz=17						
PHP				S	Sn	03 18 14.6	+2.4
	baz=17						
PHP				AMP			
	comp=N,3.1nm,1.3s,baz=17						
KZN	Kozani	1.52	88	P	Pn	03 17 50.2	-1.9
KZN	Kozani	1.52	88	P	Pn	03 17 50.7	-1.4
KZN				AML	AML	03 18 21.2	
	comp=N,2801µm,0.6s						
KZN				AML	AML	03 18 22.6	
	comp=E,2388µm,0.6s						
TSLK	Tsoukalades, L	1.58	155	P	Pn	03 17 51.7	-1.3
TSLK	Tsoukalades, L	1.58	155	P	Pn	03 17 52.6	-0.4
TSLK				AML	AML	03 18 19.2	
	comp=E,1768µm,0.5s						
TSLK				AML	AML	03 18 22.0	
	comp=N,2014µm,0.5s						
LKD2	Lefkada island	1.62	155	P	Pn	03 17 51.2	-2.3
LKD2	Lefkada island	1.62	155	P	Pn	03 17 53.6	+0.1
LKD2				AML	AML	03 18 20.9	
	comp=E,1216µm,0.5s						
LKD2				AML	AML	03 18 25.2	
	comp=N,1024µm,0.5s						
NYDR	Nydri-Lefkada	1.70	155	P	Pn	03 17 52.9	-1.6
NYDR	Nydri-Lefkada	1.70	155	P	Pn	03 17 54.3	-0.3
ULC	Ulcinj	1.75	347	⇑iPn	Pn	03 17 55.1	-0.1
ULC				i Sn	Sg	03 18 19.6	-0.2
EVGI	Lefkada island	1.77	158	P	Pn	03 17 53.9	-1.6
EVGI	Lefkada island	1.77	158	P	Pn	03 17 55.8	+0.2
PUK	Puka	1.78	2	P	Pb	03 17 56.8	-0.3
	baz=0.0						
PUK				S	Sg	03 18 23.5	+2.6
	baz=0.0						
PUK				AMP			
	comp=E,1.1nm,0.8s,baz=0.0						
THL	Klokotos Trika	1.85	112	P	Pn	03 17 55.7	-0.9
THL	Klokotos Trika	1.85	112	P	Pn	03 17 57.1	+0.6
THL				AML	AML	03 18 28.3	
	comp=E,658µm,0.8s						
THL				AML	AML	03 18 33.2	
	comp=N,670µm,0.6s						
FSK	Fiskardo	1.90	161	P	Pn	03 17 56.2	-1.1
FSK	Fiskardo	1.90	161	P	Pn	03 17 56.9	-0.3
FSK				AML	AML	03 18 35.8	
	comp=N,488µm,0.4s						
FSK				AML	AML	03 18 37.0	
	comp=E,547µm,0.5s						
DRME	Dracevica, Mon	1.97	347	ePn	Pn	03 17 58.4	+0.1
DRME	Dracevica, Mon	1.97	347	⇑iPn	Pn	03 17 58.7	+0.4
DRME				i Sn	Sb	03 18 25.3	-0.3
PDO	Prodromos	1.98	147	P	Pn	03 17 57.1	-1.3
PDO	Prodromos	1.98	147	P	Pn	03 17 58.8	+0.3
PDO				AML	AML	03 18 34.2	
	comp=E,597µm,0.4s						
PDO				AML	AML	03 18 36.3	
	comp=N,786µm,0.5s						
EVR	Evrytania	2.06	130	P	Pn	03 17 59.0	-0.6
EVR	Evrytania	2.06	130	P	Pn	03 18 01.2	+1.7
EVR				AML	AML	03 18 45.9	
	comp=N,523µm,1.0s						
EVR				AML	AML	03 18 51.7	
	comp=E,541µm,0.9s						
DMLN	Damoulianata-K	2.07	167	P	Pn	03 17 59.1	-0.6
DMLN	Damoulianata-K	2.07	167	P	Pn	03 17 58.7	-1.0
LIT	Litokhoron	2.07	94	P	Pn	03 18 01.3	+1.6
LIT				AML	AML	03 18 40.1	
	comp=N,817µm,0.6s						
LIT				AML	AML	03 18 44.9	
	comp=E,549µm,0.8s						
GRG	Griva	2.10	70	P	Pn	03 17 57.6	-2.5
KEF3	Kipouria, Keph	2.10	168	P	Pn	03 17 58.0	-2.1
KEF3	Kipouria, Keph	2.10	168	P	Pn	03 17 59.0	-1.1
BCI	Bajram Curri	2.11	6	P	Pb	03 18 02.0	-0.8
	baz=4.0						

BCI				S	**Sg**	**03 18 33.0**	**+1.5**
	baz=4.0						
BCI				AMP			
	comp=E,1.3nm,0.6s,baz=4.0						
SKO	**Skopje**	**2.11**	**36**	*i* Pn	**Pb**	**03 18 02.3**	**-0.5**
NOCI	**Noci**	**2.14**	**285**	P	**Pn**	**03 18 00.3**	**-0.3**
NOCI				AML	AML	03 18 46.2	
	comp=N,806µm,0.6s						
NOCI				AML	AML	03 18 47.1	
	comp=E,745µm,0.6s						
BUM	**Brajici-Budva**	**2.14**	**342**	⇑*i*Pn	**Pn**	**03 18 01.0**	**+0.3**
BUM				*i* Sn	**Sb**	**03 18 29.2**	**-1.3**
VLS	**Valsamata**	**2.17**	**163**	P	**Pn**	**03 17 58.6**	**-2.5**
MAKR	**Makrakomi, Fth**	**2.20**	**124**	P	**Pn**	**03 18 03.8**	**+2.4**
MAKR				AML	AML	03 18 40.8	
	comp=N,1254µm,0.6s						
MAKR				AML	AML	03 18 52.7	
	comp=E,1550µm,0.6s						
PDG	**Podgorica**	**2.20**	**350**	*e*Pn	**Pn**	**03 18 02.0**	**+0.6**
PDG				*e*Sn	**Sb**	**03 18 32.2**	**+0.1**
PDG	**Podgorica**	**2.20**	**350**	⇑P	**Pn**	**03 18 01.7**	**+0.2**
PDG				⇓S	**Sb**	**03 18 30.6**	**-1.5**
PDG	**Podgorica**	**2.20**	**350**	*e*Pn	**Pn**	**03 18 01.2**	**-0.2**
TTG	**Podgorica**	**2.20**	**350**	*e*Pn	**Pn**	**03 18 01.6**	**+0.2**
TTG				*i* Sn	**Sb**	**03 18 30.8**	**-1.3**
PSDA	**Pessada-Kefalo**	**2.23**	**164**	P	**Pn**	**03 18 01.3**	**-0.6**
PSDA	**Pessada-Kefalo**	**2.23**	**164**	P	**Pn**	**03 18 01.3**	**-0.6**
STIP	**Stip**	**2.31**	**51**	*i* Pn	**Pb**	**03 18 06.4**	**+0.2**
AGG	**Agios Georgios**	**2.32**	**122**	P	**Pn**	**03 18 01.3**	**-1.8**
AGG	**Agios Georgios**	**2.32**	**122**	P	**Pn**	**03 18 04.6**	**+1.4**
AGG				AML	AML	03 18 51.3	
	comp=E,456µm,0.5s						
AGG				AML	AML	03 18 51.4	
	comp=N,456µm,0.6s						
PVY	**Plav**	**2.33**	**3**	*e*Pn	**Pn**	**03 18 03.9**	**+0.5**
PVY				*i* Sn	**Sb**	**03 18 34.2**	**-1.8**
ANX	**Ano Chora**	**2.35**	**135**	P	**Pn**	**03 18 02.4**	**-1.1**
ANX	**Ano Chora**	**2.35**	**135**	P	**Pn**	**03 18 05.5**	**+1.9**
ANX				AML	AML	03 18 48.7	
	comp=E,736µm,0.5s						
ANX				AML	AML	03 18 54.2	
	comp=N,841µm,0.5s						
VAY	**Valandovo**	**2.36**	**63**	*i* Pn	**Pn**	**03 18 04.8**	**+1.2**
CEME	**Cevo**	**2.37**	**344**	*e*Pn	**Pn**	**03 18 03.8**	**-0.1**
CEME				*i* Sn	**Sn**	**03 18 34.7**	**+1.0**
MATE	**Matera**	**2.39**	**280**	⇑P	**Pb**	**03 18 06.7**	**-0.8**
MATE				⇑S	**Sn**	**03 18 35.7**	**+1.9**
HCY	**Herceg Novi**	**2.39**	**336**	*e*Pn	**Pn**	**03 18 03.9**	**-0.1**
HCY	**Herceg Novi**	**2.39**	**336**	*e*Pn	**Pn**	**03 18 04.4**	**+0.4**
HCY				*i* Sn	**Sn**	**03 18 35.0**	**+1.0**
AXS	**Araxos**	**2.41**	**149**	P	**Pn**	**03 18 02.0**	**-2.2**
THE	**Thessaloniki**	**2.45**	**80**	P	**Pn**	**03 18 05.9**	**+1.1**
EFP	**Efpalio**	**2.46**	**138**	P	**Pn**	**03 18 06.3**	**+1.3**
VLMS	**Volimes, Zakyn**	**2.48**	**164**	P	**Pn**	**03 18 04.8**	**-0.5**
KNT	**Kendrikon**	**2.53**	**68**	P	**Pn**	**03 18 07.3**	**+1.4**
KNT	**Kendrikon**	**2.53**	**68**	P	**Pn**	**03 18 07.3**	**+1.4**
HORT	**Hortiatis**	**2.55**	**81**	P	**Pn**	**03 18 07.3**	**+1.0**
HORT	**Hortiatis**	**2.55**	**81**	P	**Pn**	**03 18 07.0**	**+0.7**
HORT				AML	AML	03 18 43.0	
	comp=E,156µm,0.5s						
HORT				AML	AML	03 18 53.7	
	comp=N,223µm,0.8s						
SERG	**Sergoula**	**2.55**	**136**	P	**Pn**	**03 18 08.2**	**+1.9**
SERG	**Sergoula**	**2.55**	**136**	P	**Pn**	**03 18 08.2**	**+1.9**
SERG				AML	AML	03 18 53.5	
	comp=N,546µm,0.4s						
SERG				AML	AML	03 18 57.2	
	comp=E,416µm,0.5s						
RLS	**Riolos of Patr**	**2.56**	**149**	P	**Pn**	**03 18 06.0**	**-0.4**
RLS	**Riolos of Patr**	**2.56**	**149**	P	**Pn**	**03 18 06.7**	**+0.3**
NKME	**Niksic**	**2.58**	**346**	*e*Pn	**Pn**	**03 18 07.3**	**+0.6**
NKME				*e*Sn	**Sn**	**03 18 40.1**	**+1.4**
TIP	**Timpagrande**	**2.58**	**246**	⇑P	**Pn**	**03 18 08.5**	**+1.8**
TIP				⇑S	**Sb**	**03 18 42.8**	**-0.2**
TIP	**Timpagrande**	**2.58**	**246**	P	**Pn**	**03 18 06.5**	**-0.2**
KOME	**Kolasin**	**2.59**	**356**	*e*Pn	**Pn**	**03 18 07.9**	**+1.0**
KOME				*i* Sn	**Sn**	**03 18 40.2**	**+1.1**
IVA	**Berane**	**2.61**	**2**	*e*Pn	**Pn**	**03 18 08.0**	**+0.9**
IVA				*e*Sn	**Sb**	**03 18 41.2**	**-2.7**
KALE	**Kalithea**	**2.61**	**135**	P	**Pn**	**03 18 09.2**	**+2.1**
KALE	**Kalithea**	**2.61**	**135**	P	**Pn**	**03 18 09.0**	**+1.9**
KALE				AML	AML	03 18 55.4	
	comp=N,439µm,0.7s						
KALE				AML	AML	03 19 02.2	
	comp=E,333µm,0.5s						
NKY	**Niksic**	**2.62**	**347**	*e*Pn	**Pn**	**03 18 07.9**	**+0.6**
NKY				*e*Sn	**Sn**	**03 18 40.9**	**+1.2**
LAKA	**Lakka**	**2.64**	**139**	P	**Pn**	**03 18 08.4**	**+0.9**
LAKA	**Lakka**	**2.64**	**139**	P	**Pn**	**03 18 08.7**	**+1.2**
AXAR	**Agios Charalam**	**2.68**	**123**	P	**Pn**	**03 18 10.5**	**+2.5**
AXAR	**Agios Charalam**	**2.68**	**123**	P	**Pn**	**03 18 10.4**	**+2.5**
TREB	**Trebinje**	**2.68**	**337**	*e*Pn	**Pn**	**03 18 07.1**	**-0.9**
TREB				*e*Sn	**Sn**	**03 18 42.2**	**+1.1**
TREB	**Trebinje**	**2.68**	**337**	*e*Pn	**Pn**	**03 18 07.5**	**-0.5**
DBRK	**Dubrovnik**	**2.70**	**333**	*i* Pn	**Pn**	**03 18 06.1**	**-2.2**
DBRK				Sn	**Sn**	**03 18 39.5**	**-2.2**
XOR	**Xorichti**	**2.77**	**108**	P	**Pn**	**03 18 10.8**	**+1.5**
XOR	**Xorichti**	**2.77**	**108**	P	**Pn**	**03 18 10.7**	**+1.4**
XOR				AML	AML	03 19 04.5	
	comp=E,332µm,1.2s						
XOR				AML	AML	03 19 11.8	
	comp=N,397µm,1.0s						
SOH	**Sokhos**	**2.77**	**77**	P	**Pn**	**03 18 10.7**	**+1.4**
SOH	**Sokhos**	**2.77**	**77**	P	**Pn**	**03 18 11.0**	**+1.6**
SOH				AML	AML	03 19 02.1	
	comp=N,344µm,0.6s						
SOH				AML	AML	03 19 03.2	
	comp=E,399µm,0.8s						
PLG	**Polygyros**	**2.80**	**87**	P	**Pn**	**03 18 10.6**	**+0.9**
PLG	**Polygyros**	**2.80**	**87**	P	**Pn**	**03 18 10.6**	**+0.9**
PLG				AML	AML	03 18 52.1	
	comp=N,260µm,0.9s						
PLG				AML	AML	03 18 55.7	
	comp=E,168µm,0.6s						
BRY	**Bratogost**	**2.80**	**341**	*e*Pn	**Pn**	**03 18 10.6**	**+0.8**
BRY	**Bratogost**	**2.80**	**341**	*e*Pn	**Pn**	**03 18 09.9**	**+0.1**
BRY				*e*Sn	**Sn**	**03 18 45.2**	**+0.9**
NEO	**Neokhori**	**2.81**	**109**	P	**Pn**	**03 18 11.4**	**+1.5**
NEO	**Neokhori**	**2.81**	**109**	P	**Pn**	**03 18 11.3**	**+1.5**
NEO				AML	AML	03 19 05.8	
	comp=E,314µm,0.7s						
NEO				AML	AML	03 19 13.1	
	comp=N,344µm,0.9s						
ATAL	**Atalanti**	**2.95**	**121**	P	**Pn**	**03 18 13.7**	**+1.9**
LKR	**Lokris**	**2.96**	**122**	P	**Pn**	**03 18 13.3**	**+1.4**
BARS	**Barje**	**2.97**	**30**	*e*Pn	Pg	03 18 29.9	+9.3
BARS				*e*Sn	Sg	03 19 20.0	+21
SMIA	**Simia**	**2.98**	**117**	P	**Pn**	**03 18 13.9**	**+1.7**
UPM	**Unac-Piva**	**3.01**	**348**	*e*Pn	**Pb**	**03 18 18.8**	**+0.6**
UPM	**Unac-Piva**	**3.01**	**348**	*e*Pn	**Pn**	**03 18 13.4**	**+0.7**
UPM				*e*Sn	**Sn**	**03 18 50.4**	**+0.8**
BOSS	**Bosilegrad**	**3.01**	**41**	*e*Pn	**Pn**	**03 18 13.8**	**+1.2**
BOSS				*e*Sn	**Sn**	**03 18 51.5**	**+2.2**
SRS	**Serrai**	**3.01**	**72**	P	**Pn**	**03 18 13.8**	**+1.2**
STON	**Ston**	**3.04**	**330**	*i* Pn	**Pn**	**03 18 10.9**	**-2.1**
STON				Sn	**Sn**	**03 18 48.3**	**-1.7**
CUC	**Castrocucco**	**3.06**	**266**	P	**Pn**	**03 18 15.1**	**+1.8**
PLE	**Pljevlja**	**3.08**	**355**	*e*Pn	**Pn**	**03 18 14.4**	**+0.8**
PLE				*e*Sn	**Sn**	**03 18 52.5**	**+1.4**
LSTV	**Lastovo**	**3.32**	**320**	*i* Pn	**Pn**	**03 18 15.5**	**-1.3**
IVAS	**Ivanjica**	**3.32**	**5**	*e*Pn	**Pn**	**03 18 17.6**	**+0.7**
IVAS				*e*Sn	**Sn**	**03 18 59.6**	**+2.6**
VTS	**Vitosha**	**3.50**	**47**	*e*Pn	**Pn**	**03 18 21.2**	**+1.8**
VTS	**Vitosha**	**3.50**	**47**	⇑P	**Pn**	**03 18 20.6**	**+1.2**
BBLS	**Lazići**	**3.61**	**356**	*e*Pn	**Pn**	**03 18 21.8**	**+0.9**
BBLS				*e*Sn	**Sn**	**03 19 07.1**	**+2.9**
BBLS	**Lazići**	**3.61**	**356**	*e*Pn	**Pn**	**03 18 21.9**	**+1.0**
MAKA	**Makarska**	**3.66**	**326**	*i* Pn	**Pn**	**03 18 21.2**	**-0.3**
ZAPS	**Zavoj**	**3.68**	**34**	*e*Pn	**Pn**	**03 18 22.9**	**+1.1**
ZAPS				*e*Sn	**Sn**	**03 19 08.3**	**+2.4**
GRUS	**Gruza**	**3.69**	**10**	*e*Pn	**Pn**	**03 18 24.0**	**+2.1**
GRUS	**Gruza**	**3.69**	**10**	⇓P	**Pn**	**03 18 22.7**	**+0.9**
RICI	**Ricice**	**3.79**	**329**	*e*Pn	**Pn**	**03 18 22.4**	**-0.9**
DIVS	**Divibare**	**3.83**	**2**	*e*Pn	**Pn**	**03 18 24.7**	**+0.7**
DIVS				*e*Sn	**Sn**	**03 19 11.0**	**+1.3**
DIVS	**Divibare**	**3.83**	**2**	*e*Pn	**Pn**	**03 18 22.4**	**-1.6**
HVAR	**Hvar**	**3.84**	**320**	*i* Pn	**Pn**	**03 18 21.9**	**-2.0**
HVAR				Sn	**Sn**	**03 19 10.1**	**+0.4**
HAPS	**Han Pijesak,Bl**	**3.87**	**351**	*e*Pn	**Pn**	**03 18 24.3**	**-0.2**
HAPS				*e*Sn	**Sn**	**03 19 11.7**	**+1.0**
HAPS	**Han Pijesak,Bl**	**3.87**	**351**	*e*Pn	**Pn**	**03 18 23.0**	**-1.5**
TRUS	**Trudelj**	**3.98**	**6**	*e*Pn	**Pn**	**03 18 26.0**	**+0.1**
TRUS				*e*Sn	**Sn**	**03 19 14.5**	**+1.2**
ZAGS	**Zajecar**	**3.98**	**26**	*e*Pn	**Pn**	**03 18 27.3**	**+1.4**
ZAGS				*e*Sn	**Sn**	**03 19 14.3**	**+1.0**
BLKB	**Belogradchik**	**3.98**	**32**	*e*Pn	**Pn**	**03 18 27.1**	**+1.1**
BLKB	**Belogradchik**	**3.98**	**32**	⇑S	**Sn**	**03 19 12.6**	**-0.8**
KUBS	**Kucevo**	**4.37**	**18**	*e*Pn	**Pn**	**03 18 31.6**	**+0.3**
KIJV	**Kijevo**	**4.51**	**327**	*e*Pn	**Pn**	**03 18 32.4**	**-0.7**
ZIRJ	**Zirje**	**4.59**	**319**	*e*Pn	**Pn**	**03 18 32.9**	**-1.3**
MORI	**Morici**	**4.71**	**321**	*e*Pn	**Pn**	**03 18 34.9**	**-1.1**
BLY	**Banja Luka**	**4.88**	**338**	*e*Pn	**Pn**	**03 18 37.0**	**-1.2**
FRGS	**Fruska Gora**	**4.89**	**0**	*e*Pn	**Pn**	**03 18 38.7**	**+0.3**
FRGS	**Fruska Gora**	**4.89**	**0**	⇓P	**Pn**	**03 18 37.7**	**-0.7**
FRGS	**Fruska Gora**	**4.89**	**0**	*e*Pn	**Pn**	**03 18 36.7**	**-1.7**
HERR	**Herculane**	**5.00**	**22**	⇑P	**Pn**	**03 18 40.9**	**+0.9**
UDBI	**Udbina**	**5.20**	**326**	*e*Pn	**Pn**	**03 18 43.2**	**+0.5**
BZS	**Buzias**	**5.51**	**13**	⇑P	**Pn**	**03 18 47.3**	**+0.3**
GZR	**Gura Zlata**	**5.58**	**22**	⇓P	**Pn**	**03 18 49.1**	**+1.2**
NVLJ	**Novalja**	**5.63**	**321**	*e*Pn	**Pn**	**03 18 48.0**	**-0.6**
MORH	**Mrgy, Hungar**	**6.01**	**352**	⇑P	**Pn**	**03 18 54.4**	**+0.7**
RIY	**Rijeka**	**6.39**	**324**	*e*Pn	**Pn**	**03 18 58.4**	**-0.6**
CRES	**Cresnjev**	**6.40**	**332**	*e*Pn	**Pn**	**03 18 57.5**	**-1.6**
VOIR		**6.45**	**35**	⇑P	**Pn**	**03 19 00.9**	**+0.9**
CEY	**Cerknica**	**6.74**	**326**	*e*Pn	**Pn**	**03 19 00.4**	**-3.4**
DRGR		**6.86**	**17**	⇓P	**Pn**	**03 19 05.4**	**-0.1**
MLR	**Muntele Rosu**	**6.91**	**39**	⇑P	**Pn**	**03 19 06.8**	**+0.6**
SOKA	**Soboth**	**7.28**	**333**	*e*Pn	**Pn**	**03 19 10.4**	**-0.9**
	comp=N,0.6nm,0.3s						
OBKA	**Obir**	**7.32**	**330**	*e*Pn	**Pn**	**03 19 11.4**	**-0.4**
	comp=N,1.0nm,0.3s						
VRI	**Vrincioaia**	**7.56**	**40**	⇓P	**Pn**	**03 19 15.9**	**+0.9**
ABTA	**Abfaltersbach**	**8.36**	**323**	*e*Pn	**Pn**	**03 19 25.7**	**-0.5**
	comp=N,0.4nm,0.3s						
WTTA	**Wattenberg**	**9.15**	**323**	*e*Pn	**Pn**	**03 19 38.3**	**+1.3**
	comp=N,1.2nm,0.5s						
SQTA	**Sankt Quirin**	**9.32**	**321**	*e*Pn	**Pn**	**03 19 39.5**	**+0.3**
	comp=N,1.2nm,0.4s						
MOTA	**Moosalm**	**9.46**	**321**	*e*Pn	**Pn**	**03 19 41.5**	**+0.3**
	comp=N,1.6nm,0.5s						
GERES	**GERESS Array B**	**9.61**	**335**	Pn	**Pn**	**03 19 41.6**	**-1.7**
	comp=N,0.1nm,0.3s,baz=160,slow=14,SNR=2.2						
BRTR	**Keskin Array B**	**10.64**	**88**	Pn	**Pn**	**03 19 58.4**	**+1.0**
	comp=N,0.1nm,0.3s,baz=298,slow=9.2,SNR=1.4						
FINES	**FINESS Array B**	**21.55**	**8**	P	**P**	**03 22 13.4**	**-0.9**
	comp=N,3.9nm,1.0s,baz=195,slow=10,SNR=2.3						
MKAR	**Makanchi Array**	**44.72**	**60**	P	**P**	**03 25 36.8**	**-1.6**
	comp=N,0.5nm,0.6s,baz=280,slow=8.2,SNR=11						
ZALV	**Zalesovo Beam**	**44.75**	**50**	P	**P**	**03 25 38.1**	**-0.4**
	comp=N,0.7nm,0.5s,baz=293,slow=9.3,SNR=3.0						
SONM	**Songino Array**	**59.58**	**51**	P	**P**	**03 27 29.1**	**0.0**
	comp=N,0.2nm,0.5s,baz=284,slow=5.8,SNR=2.2						

IDC ***16*** *03:27:56.5±2.2, 6°.26S×130°.58E, h110^{km}±21^{km}, mb4.1/12, mb1 4.2/17, mb1mx4.0/34, mbtmp4.5/17, MS3.6/1, Ms1 3.5/1, ms1mx2.5/31, Error ellipse: s-maj=23.6km s-min=14.5km az=84.0*

DJA ***16*** *03:27:58.6±0.3, 6°S±2°×13°1E±°, h144^{km}±5^{km}, M4.7/13, mb4.5/12, mB5.4/4, MLv4.7/13, Mw(mB)4.8/4*

NEIC ***16*** *03:27:58.9±1.8, 6°.13S±0°.06×130°.52E±0°.03, h126^{km}±7^{km}, mb4.4/27, Error ellipse: s-maj=8.7km s-min=3.3km az=197.0*

ISC 16 03:28:00.1±0.4**, 6°.38S**±0°.04×**130°.51E**±0°.06**, h150**^{km}**, n104,** σ**1^{s}73**/102**, mb4.4**/35**, 2D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.78**	**154**		**Pn**	**03 28 32.4**	**-0.3**
SAUI				Sn	**Sn**	**03 28 58.0**	**+0.2**
SAUI	**Saumlaki**	**1.78**	**154**	P	**Pn**	**03 28 32.4**	**-0.3**
SAUI				S	**Sn**	**03 28 58.3**	**+0.6**
BNDI	**Bandanaira**	**1.94**	**342**	P	**Pn**	**03 28 31.2**	**-3.3**
BNDI				S	**Sn**	**03 28 57.2**	**-3.8**
MSAI	**Masohi**	**3.40**	**332**	P	**Pn**	**03 28 49.5**	**-3.1**
FAKI	**Fak Fak**	**3.84**	**27**		Pn	03 28 53.1	-5.2
FAKI	**Fak Fak**	**3.84**	**27**	P	Pn	03 28 53.2	-5.2
NLAI	**Namlea**	**4.61**	**312**	P	**Pn**	**03 29 07.0**	**-1.4**
SIJI	**Sorong**	**5.52**	**8**	P	Pn	03 29 15.5	-5.0
	18nm,0.3s,baz=226,slow=18,SNR=36						
SIJI				S	Sn	03 30 11.0	-12
	33nm,0.3s,baz=256,slow=23,SNR=8.6						
SWI	**Sorong**	**5.53**	**8**	P	Pn	03 29 15.6	-4.9
	1.7nm10µm60nm,0.7s						
RKPI	**Ransiki, Papua**	**6.06**	**37**	P	**Pn**	**03 29 24.4**	**-3.2**
	2.6nm149nm,0.7s						
SANI	**Sanana**	**6.23**	**313**	P	**Pn**	**03 29 28.8**	**-1.1**
	0.2nm33nm,0.7s						
SOEI	**Soe**	**7.04**	**241**		**Pn**	**03 29 40.9**	**+0.1**
SOEI	**Soe**	**7.04**	**241**	P	**Pn**	**03 29 41.1**	**+0.3**
	0.7nm70nm,0.9s						
BAKI	**Biak**	**7.59**	**48**	P	**Pn**	**03 29 46.1**	**-2.0**
	1.1nm396nm,0.8s						
BATI	**Baumata**	**7.77**	**240**	P	**Pn**	**03 29 49.3**	**-1.3**
	14nm,0.3s,baz=331,slow=1.4,SNR=9.4						
BATI				S	**Sn**	**03 31 15.3**	**-2.1**
	14nm,0.3s,baz=99,slow=22,SNR=7.6						
BATI	**Baumata**	**7.77**	**240**	P	**Pn**	**03 29 51.3**	**+0.7**
	0.2nm46nm,0.8s						
EDFI	**Ende, Flores**	**9.06**	**254**	P	**Pn**	**03 30 08.2**	**+0.4**
	7.3nm,0.9s						
MRSI	**Marisa**	**10.94**	**308**	P	**Pn**	**03 30 32.0**	**-0.5**
	32nm,0.8s						
TTSI	**Tana Toraja**	**11.16**	**287**	P	P	03 30 51.8	+8.1
TOLI2	**Tolitoli**	**12.23**	**307**	Pn	**Pn**	**03 30 48.9**	**-0.6**
FITZ	**Fitzroy Crossi**	**12.59**	**202**	P	**Pn**	**03 30 52.3**	**-1.7**
	2.4nm,0.3s,baz=25,slow=11,SNR=71						
FITZ				S	**Sn**	**03 33 05.2**	**-8.0**
	1.9nm,0.3s,baz=58,slow=16,SNR=7.1						
PLAI	**Plampang**	**12.86**	**258**	P	**Pn**	**03 30 57.5**	**-0.1**
	19nm,0.9s						
WB0	**Warramunga Arr**	**13.84**	**165**	Pn	**Pn**	**03 31 07.2**	**-2.8**
WRA	**Warramunga Arr**	**13.99**	**165**	P	**Pn**	**03 31 09.2**	**-2.7**
	0.8nm,0.3s,baz=334,slow=13,SNR=21						
WRA				S	Sn	03 33 38.3	-8.8
	3.0nm,0.3s,baz=350,slow=23,SNR=12						
WRA	**Warramunga Arr**	**13.99**	**165**		**Pn**	**03 31 09.0**	**-2.9**
WB2	**Warramunga Arr**	**13.99**	**165**	Pn	**Pn**	**03 31 09.8**	**-2.2**
WC3	**Warramunga Arr**	**14.01**	**165**	Pn	**Pn**	**03 31 09.7**	**-2.5**
WR0	**Warramunga Arr**	**14.06**	**164**	Pn	**Pn**	**03 31 11.1**	**-1.8**
COEN	**Coen**	**14.56**	**122**	Pn	**Pn**	**03 31 18.5**	**-0.6**
BBKI	**Banjar Baru**	**15.88**	**280**	P	**P**	**03 31 40.0**	**+3.8**
AS31	**Alice Springs**	**17.50**	**170**	P	**Pn**	**03 31 55.9**	**+0.9**
ASAR	**Alice Springs**	**17.50**	**170**	P	**Pn**	**03 31 55.4**	**+0.4**
	0.6nm,0.3s,baz=342,slow=9.0,SNR=42						
ASAR				S	**S**	**03 35 01.9**	**-6.7**
	0.4nm,0.3s,baz=352,slow=27,SNR=7.0						
ASAR	**Alice Springs**	**17.50**	**170**	P	**Pn**	**03 31 56.6**	**+1.6**
PSAD1	**Pilbara Seismi**	**18.21**	**214**	P	**Pn**	**03 32 03.8**	**+0.4**
PSAD1				IAmb	IAmb	03 32 13.3	
	comp=Z,41nm,1.4s						
PSA00	**Pilbara Seismi**	**18.30**	**213**	P	**Pn**	**03 32 05.1**	**+0.7**
KKM	**Kota Kinabalu**	**18.86**	**311**	P	**P**	**03 32 09.4**	**+0.4**
KKM				IAmb	IAmb	03 32 17.0	
	comp=Z,29nm,0.9s						
CTAO	**Charters Tower**	**20.48**	**133**	P	Pn	03 32 30.2	0.0
CTAO				IAmb	IAmb	03 32 57.1	
	comp=Z,22nm,1.1s						
KASI	**Kota Agung**	**25.89**	**270**	P	**P**	**03 33 15.4**	**-2.9**
STKA	**Stephens Creek**	**27.40**	**159**	P	**P**	**03 33 32.8**	**+1.1**
	comp=Z,0.7nm,0.4s,baz=329,slow=13,SNR=2.9						
STKA				LR	LR	03 46 06.5	
	comp=Z,112nm,20.0s,baz=198,slow=40						
CMAR	**Chiang Mai Arr**	**39.73**	**309**	P	**P**	**03 35 17.9**	**-0.4**
	comp=Z,4.9nm,0.5s,baz=140,slow=7.8,SNR=23						
CMAR	**Chiang Mai Arr**	**39.73**	**309**	P	**P**	**03 35 18.3**	**+0.1**
WHN	**Wuhan**	**39.84**	**338**	⇓P	**P**	**03 35 19.8**	**+0.8**
WHN				pmax	pmax		
	comp=Z,30nm,0.8s						
CHTO	**Chiang Mai**	**39.94**	**309**	P	**P**	**03 35 20.0**	**+0.1**
JWT	**Wachi**	**41.69**	**6**	P	**P**	**03 35 33.9**	**-0.2**
MJAR	**Matsushiro Arr**	**43.30**	**9**	P	**P**	**03 35 45.1**	**-2.0**
	comp=Z,2.7nm,0.8s,baz=186,slow=9.3,SNR=7.9						
XAN	**Xi'an**	**45.09**	**334**	P	**P**	**03 36 00.3**	**-1.1**
XAN				pmax	pmax		
	comp=Z,7.0nm,1.1s						
XAN	**Xi'an**	**45.09**	**334**	P	**P**	**03 35 59.6**	**-1.8**
BJT	**Baijiatuau**	**48.02**	**345**	P	**P**	**03 36 23.8**	**-0.3**
BJT				IAmb	IAmb	03 36 24.5	
	comp=Z,7.2nm,0.7s						
LZH	**Lanzhou**	**49.10**	**331**	*e*P	P	03 36 38.8	+6.2
LZH				pP	pwP	03 37 15.3	+5.5
LZH				sP	sP	03 37 30.6	+8.5
LZH				pmax	pmax		
	comp=Z,13nm,1.1s						
HHC	**Hu-ho-hao-te**	**50.12**	**341**	*e*P	**P**	**03 36 40.1**	**0.0**
HHC				pmax	pmax		
	comp=Z,7.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,54nm,4.4s						
USRK	**Ussuriysk Ar.**	**50.36**	**1**	P	**P**	**03 36 41.8**	**+0.1**
	comp=Z,2.4nm,0.7s,baz=186,slow=8.7,SNR=5.8						
GTA	**Gaotai**	**53.68**	**331**	⇓P	**P**	**03 37 07.3**	**+0.7**
GTA				pP	pP	03 37 20.3	-20
GTA				sP	pwP	03 37 29.6	-14
GTA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,95nm,5.5s						
GTA				LR	LR		
	comp=N,110nm,15.6s						
GTA				LR	LR		
	comp=E,110nm,15.6s						
GTA				LR	LR		
	comp=Z,99nm,15.6s						
ULN	**Ulaanbaatar**	**57.84**	**342**	P	**P**	**03 37 36.9**	**+0.9**
SONM	**Songino Array**	**58.02**	**341**	P	**P**	**03 37 37.3**	**0.0**
	comp=Z,1.7nm,0.4s,baz=163,slow=6.7,SNR=7.7						
SONM	**Songino Array**	**58.02**	**341**	P	**P**	**03 37 38.3**	**+1.0**
WMQ	**Urumqi**	**63.16**	**327**	*e*P	**P**	**03 38 15.3**	**+3.2**
PEA0B	**Petropavlovsk-**	**63.58**	**18**	P	**P**	**03 38 15.1**	**+0.5**
PETK	**Petropavlovsk-**	**63.58**	**18**	P	**P**	**03 38 15.3**	**+0.7**
	comp=Z,4.8nm,0.6s,baz=108,slow=2.4,SNR=7.9						
PETK	**Petropavlovsk-**	**63.58**	**18**	P	**P**	**03 38 15.1**	**+0.5**
ZSN	**Zaisan**	**67.01**	**328**	*e*P	**P**	**03 38 37.1**	**+0.2**
	comp=Z,3.2nm,0.9s,baz=328						
SHLS	**Shalkode**	**67.54**	**322**	*e*P	**P**	**03 38 38.1**	**-2.4**
	comp=Z,8.5nm,1.1s,baz=322						
UZB	**Uzynbulak**	**67.81**	**322**	*e*P	**P**	**03 38 42.5**	**+0.3**
	comp=Z,2.6nm,0.9s,baz=322						
KSH	**Kashi**	**67.91**	**317**	P	**P**	**03 38 44.4**	**+1.6**
KSH				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KSH				pmax	pmax		
	comp=Z,230nm,4.6s						
MK31	**Makanchi Array**	**67.99**	**326**	P	**P**	**03 38 44.0**	**+1.0**
MKAR	**Makanchi Array**	**67.99**	**326**	P	**P**	**03 38 43.9**	**+0.9**
	comp=Z,19nm,0.7s,baz=124,slow=7.9,SNR=236						
SATY	**Saty**	**68.14**	**321**	*e*P	**P**	**03 38 44.2**	**0.0**
	comp=Z,8.0nm,1.1s,baz=321						
MAKZ	**Makanchi**	**68.17**	**326**	P	**P**	**03 38 45.1**	**+1.0**
KPKS	**Kokpek**	**68.19**	**322**	*e*P	**P**	**03 38 44.9**	**+0.5**
	comp=Z,8.1nm,0.7s,baz=322						
TNSS	**Tian-Shan**	**69.04**	**321**	*e*P	**P**	**03 38 51.0**	**+0.9**
	baz=321						
MDOK	**Medeo**	**69.04**	**321**	*e*P	**P**	**03 38 50.0**	**+0.2**
	baz=321						
TDK	**Taldyqorghan**	**69.19**	**323**	*e*P	**P**	**03 38 50.1**	**-0.4**
	baz=323						
CHKK	**Chushkaly**	**69.44**	**322**	*e*P	**P**	**03 38 52.5**	**+0.4**
	baz=321						
KUU	**Kurty**	**69.86**	**321**	*e*P	**P**	**03 38 55.0**	**+0.3**
	comp=Z,19nm,0.9s,baz=321						
SGDS	**Sogindy**	**70.71**	**320**	*e*P	**P**	**03 39 00.1**	**+0.2**
	baz=320						
KBL	**Kabul**	**70.76**	**310**	P	**P**	**03 39 01.4**	**+0.9**
SEY	**Seymchan**	**71.10**	**10**	P	**P**	**03 39 02.0**	**+0.3**
	comp=Z,6.8nm,0.8s,baz=198,slow=4.2,SNR=30						
SEM	**Semipalatinsk**	**71.23**	**329**	*e*P	**P**	**03 39 02.5**	**-0.6**
	baz=328						
ZAA0	**Zalesovo Array**	**71.25**	**333**	P	**P**	**03 39 02.6**	**-0.2**
ZAA0				IAmb	IAmb	03 39 03.4	
	comp=Z,5.2nm,0.7s						
ZALV	**Zalesovo Beam**	**71.25**	**333**	P	**P**	**03 39 02.8**	**0.0**
	comp=Z,6.1nm,0.8s,baz=121,slow=5.0,SNR=21						
ZALV	**Zalesovo Beam**	**71.25**	**333**	P	**P**	**03 39 02.3**	**-0.5**
BTLS	**Baital**	**71.85**	**322**	*e*P	**P**	**03 39 06.8**	**+0.2**
	baz=321						
KURK	**Kurchatov**	**72.26**	**328**	P	**P**	**03 39 09.7**	**+0.8**
KURK				IAmb	IAmb	03 39 10.3	
	comp=Z,10nm,0.9s						
DZA	**Taraz**	**72.58**	**319**	*e*P	**P**	**03 39 11.7**	**+0.6**
	baz=318						
VNDA	**Vanda**	**73.00**	**173**	P	**P**	**03 39 15.1**	**+2.2**
VNDA				IAmb	IAmb	03 39 19.7	
	comp=Z,10nm,1.4s						
KK05	**Karatay Array**	**73.21**	**319**	P	**P**	**03 39 15.6**	**+0.9**
KK31	**Karatay Array**	**73.21**	**319**	P	**P**	**03 39 15.2**	**+0.4**
KK31				IAmb	IAmb	03 39 16.6	
	comp=Z,6.9nm,1.1s						
KKAR	**Karatay Array**	**73.21**	**319**	P	**P**	**03 39 15.8**	**+1.0**
BRLS	**Borolday**	**73.63**	**318**	*e*P	**P**	**03 39 17.7**	**+0.5**
	comp=Z,8.1nm,0.8s,baz=318						
BRZS	**Berezniki**	**75.09**	**326**	*e*P	**P**	**03 39 25.2**	**-0.3**
	baz=325						
TIXI	**Tiksi**	**77.88**	**359**	P	**P**	**03 39 41.0**	**+0.4**
TIXI				IAmb	IAmb	03 39 41.3	
	comp=Z,3.9nm,0.6s						
BRVK	**Borovoye**	**77.88**	**328**	P	**P**	**03 39 42.0**	**+0.9**
BRVK				IAmb	IAmb	03 39 42.4	
	comp=Z,7.2nm,0.8s						
SOCY	**Socotra**	**78.27**	**284**	P	**P**	**03 39 44.7**	**+0.6**
SOCY				IAmb	IAmb	03 39 46.6	
	comp=Z,4.9nm,0.9s						
GEYT	**Alibeck**	**80.20**	**310**	P	**P**	**03 39 55.3**	**+1.2**
	comp=Z,2.1nm,0.7s,baz=217,slow=9.1,SNR=4.2						
GEYT	**Alibeck**	**80.20**	**310**	IAmb	IAmb	03 39 56.2	
	comp=Z,2.5nm,0.8s						
NRIK	**Noril'sk**	**81.08**	**346**	P	**P**	**03 39 59.1**	**+1.0**
	comp=Z,5.8nm,0.8s,baz=121,slow=6.7,SNR=8.7						
AB03	**Akbulak array**	**82.34**	**321**	P	**P**	**03 40 05.0**	**0.0**
AB31	**Akbulak array**	**82.34**	**321**	P	**P**	**03 40 05.6**	**+0.5**
ABKAR	**Akbulak array**	**82.34**	**321**	P	**P**	**03 40 05.5**	**+0.4**
ABKAR	**Akbulak array**	**82.34**	**321**	P	**P**	**03 40 05.3**	**+0.2**
QSPA	**South Pole Qui**	**83.60**	**180**	P	**P**	**03 40 13.4**	**+2.0**
QSPA				IAmb	IAmb	03 40 14.4	
	comp=Z,7.4nm,1.1s						
TTA	**Tatalina**	**88.21**	**26**	P	**P**	**03 40 34.8**	**+0.8**
TTA				IAmb	IAmb	03 40 38.4	
	comp=Z,3.7nm,1.1s						
ILAR	**Eielson Array**	**92.57**	**25**	P	**P**	**03 40 53.1**	**-1.0**
	comp=Z,0.6nm,0.8s,baz=274,slow=4.7,SNR=5.3						
VYHS	**Vyhne**	**109.06**	**319**	*e*PDIFF	**Pdif**	**03 42 09.1**	**+0.6**
LPAZ	**La Paz**	**150.89**	**141**	PKPbc	**PKiKP**	**03 47 38.2**	**+0.9**
	comp=Z,1.7nm,0.3s,baz=130,slow=1.5,SNR=11						

IDC ***16*** *03:28:25.5±1.1, 52°.83N×32°.18W, h0^{km}, mb3.6/7, mb1 3.9/8, mb1mx3.6/43, mbtmp3.7/8, ML4.2/1, MS3.5/1, Ms1 3.4/1, ms1mx2.6/36, Error ellipse: s-maj=43.2km s-min=18.1km az=5.0*

ISC 16 03:28:27.0±1.0**, 52°.9N**±0°.2×**32°.1W**±0°.1**, h10**^{km}**, n10,** σ**0^{s}70**/9**, mb3.6**/8**, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EKA	**Eskdalemuir Ar**	**17.12**	**70**	P	**P**	**03 32 27.7**	**-0.1**
	baz=272,slow=8.6,SNR=6.6						
FINES	**FINESS Array B**	**31.69**	**51**	P	**P**	**03 34 50.1**	**-0.2**
	2.3nm,0.9s,baz=260,slow=8.3,SNR=1.7						
AKASG	**Malin Array Be**	**37.01**	**68**	P	**P**	**03 35 35.5**	**-0.9**
	0.6nm,0.6s,baz=299,slow=8.3,SNR=2.3						
YKA	**Yellowknife Ar**	**42.17**	**317**	P	**P**	**03 36 20.2**	**+1.0**
	0.8nm,1.0s,baz=66,slow=7.5,SNR=4.6						
BRTR	**Keskin Array B**	**45.72**	**79**	P	**P**	**03 36 49.0**	**+0.7**
	1.4nm,0.7s,baz=304,slow=6.0,SNR=10						
TORD	**Torodi Ar. Bea**	**47.90**	**133**	P	**P**	**03 37 05.6**	**+0.3**
	18nm,1.0s,baz=345,slow=4.9,SNR=2.3						
KBZ	**Khabaz**	**48.60**	**69**	LR	LR	04 01 10.5	
	comp=Z,51nm,18.5s,baz=346,slow=40						
PDAR	**Pinedale Array**	**50.57**	**291**	P	**P**	**03 37 25.2**	**-0.5**
	0.5nm,0.5s,baz=70,slow=5.9,SNR=9.0						
TXAR	**Lajitas Array**	**56.27**	**275**	P	**P**	**03 38 07.2**	**-0.5**
	0.3nm,0.8s,baz=72,slow=8.6,SNR=3.6						
NVAR	**Mina Array Bea**	**58.40**	**293**	P	**P**	**03 38 22.6**	**-0.1**
	0.1nm,0.3s,baz=50,slow=7.2,SNR=1.7						

NOU ***16*** *03:44:00.8, 39°.33S×177°.97E, h74^{km}, MLv4.0, Off E. Coast of N. Island, N.Z.*

WEL 16 03:44:02.9, 39°S±1°×**17°8E**±°**, h58**^{km}±2^{km}**, M3.9**/21**, ML4.2**/21**, MLv3.9**/21**, Error ellipse: s-maj=0.0km s-min=0.0km az=96.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MHGZ	**Mahia Peninsul**	**0.08**	**50**	P	Pn	03 44 12.2	+0.5
KNZ	**Kokohu**	**0.22**	**326**	P	Pn	03 44 12.1	-0.1
KNZ				S	Sn	03 44 18.7	-0.2
PRGZ	**Paritu Road**	**0.28**	**8**	P	Pn	03 44 13.0	+0.2
PRGZ				S	Sn	03 44 20.4	+0.6

WHHZ	Waihua	0.48	285	P	Pn	03 44 14.8	+0.3
WHHZ				S	Sn	03 44 23.3	+0.4
RIGZ	Rimuhau	0.50	354	P	Pn	03 44 15.1	+0.4
RIGZ				S	Sn	03 44 24.5	+1.2
SNGZ	Shannon Statio	0.57	318	P	Pn	03 44 15.7	+0.2
RAHZ	Arahi	0.65	296	P	Pn	03 44 16.7	+0.2
RAHZ				S	Sn	03 44 26.8	+0.5
ARHZ	Aropaoanui	0.65	264	P	Pn	03 44 17.0	+0.6
ARHZ				S	Sn	03 44 27.8	+1.4
CKHZ	Cape Kidnapper	0.74	232	P	Pn	03 44 17.8	+0.3
CKHZ				S	Sn	03 44 29.3	+1.1
TKGZ	Te Karaka	0.76	1	P	Pn	03 44 18.0	+0.2
CNGZ	Carnagh Statio	0.78	22	P	Pn	03 44 18.8	+0.8
RAGZ	Rawiri	0.78	335	P	Pn	03 44 18.2	+0.1
RAGZ				S	Sn	03 44 29.2	0.0
NMHZ	Naumai	0.80	277	P	Pn	03 44 18.8	+0.4
MTHZ	Maungataniwha	0.85	294	P	Pn	03 44 18.9	0.0
MTHZ				S	Sn	03 44 30.4	-0.3
RTZ	Ruatahuna	0.89	311	P	Pn	03 44 19.5	0.0
RTZ				S	Sn	03 44 31.1	-0.5
MWZ	Matawai	0.90	345	P	Pn	03 44 19.6	+0.1
MCHZ	McNeill Hill	0.91	254	P	Pn	03 44 20.3	+0.6
KAHZ	Kahuranaki	0.94	231	P	Pn	03 44 20.4	+0.2
TWGZ	Tauwhareparae	1.03	7	P	Pn	03 44 21.9	+0.6
BKZ	Black Stump Fm	1.04	272	P	Pn	03 44 21.6	+0.2
URZ	Urewera	1.10	329	P	Pn	03 44 22.1	0.0
URZ				S	Sn	03 44 35.8	-0.6
MUGZ	Murupara	1.10	311	P	Pn	03 44 22.4	+0.2
KWHZ	Kaweka Forest	1.11	258	P	Pn	03 44 22.7	+0.2
PXZ	Pawanui	1.11	222	P	Pn	03 44 22.0	-0.3
MRHZ	Matea Rd	1.16	288	P	Pn	03 44 23.5	+0.5
PUZ	Puketiti	1.18	17	P	Pn	03 44 23.3	+0.1
KRHZ	Kereru	1.21	248	P	Pn	03 44 23.6	-0.1
RUGZ	Raukumara Rang	1.24	354	P	Pn	03 44 23.9	-0.2
PRRZ	Plateau Road	1.32	302	P	Pn	03 44 25.3	+0.1
ALRZ	Allen Road	1.32	298	P	Pn	03 44 25.3	+0.1
PKGZ	Pakihiroa	1.33	8	P	Pn	03 44 25.6	+0.4
RRRZ	Republican Roa	1.34	310	P	Pn	03 44 25.7	+0.2
WPHZ	Waipukurau	1.38	231	P	Pn	03 44 25.7	-0.1
EDRZ	Edgecumbe	1.39	322	P	Pn	03 44 26.3	+0.2
HATZ	Hinemaiaia	1.39	282	P	Pn	03 44 26.5	+0.4
BHHZ	Black Hill Sta	1.40	258	P	Pn	03 44 26.5	+0.2
PRHZ	Porangahau	1.41	221	P	Pn	03 44 25.8	-0.5
TARZ	Mount Tarawera	1.42	313	P	Pn	03 44 26.8	+0.3
HAZ	Te Kaha	1.45	358	P	Pn	03 44 27.0	+0.3
PNHZ	Pukenui	1.45	240	P	Pn	03 44 26.6	-0.2
WMGZ	Waiomatatini S	1.46	19	P	Pn	03 44 27.2	+0.3
HRRZ	Handcock Road	1.46	303	P	Pn	03 44 27.1	+0.1
WPRZ	Whakapapatarin	1.47	297	P	Pn	03 44 27.6	+0.4
HLRZ	Highlands Stat	1.50	309	P	Pn	03 44 27.8	+0.3
WHRZ	Whale Island	1.50	333	P	Pn	03 44 27.8	+0.2
MKRZ	Makatiti	1.51	314	P	Pn	03 44 28.7	+1.1
MARZ	Manawahe	1.52	323	P	Pn	03 44 28.3	+0.5
HSRZ	Hossack Road	1.53	305	P	Pn	03 44 28.1	+0.2
RITZ	Rihia Road	1.55	278	P	Pn	03 44 29.0	+0.8
WHTZ	Whakaora	1.56	290	P	Pn	03 44 28.8	+0.5
OMRZ	Omania	1.58	313	P	Pn	03 44 28.6	0.0
GRRZ	Galatos Road	1.59	302	P	Pn	03 44 29.3	+0.5
MOVZ	Moawhango	1.62	262	P	Pn	03 44 30.0	+0.7
ANWZ	Angora Road	1.63	219	P	Pn	03 44 28.5	-0.8
RATZ	Rangitukua	1.64	281	P	Pn	03 44 29.9	+0.4
UTU	Utuhina	1.64	308	P	Pn	03 44 30.0	+0.6
ETVZ	East Tongariro	1.65	272	P	Pn	03 44 30.2	+0.5
LIRZ	Lichensteins R	1.65	316	P	Pn	03 44 29.6	0.0
TMVZ	Te Maari	1.66	272	P	Pn	03 44 30.3	+0.5
KATZ	Kakaramea	1.68	277	P	Pn	03 44 30.5	+0.5
TSZ	Takapari Road	1.68	239	P	Pn	03 44 29.6	-0.4
MXZ	Matakaoa Point	1.68	13	P	Pn	03 44 30.6	+0.6
OTVZ	Oturere	1.68	271	P	Pn	03 44 30.7	+0.5
OPRZ	Ohinepanea	1.69	323	P	Pn	03 44 29.5	-0.5
DVHZ	Dannevirke	1.69	229	P	Pn	03 44 29.5	-0.6
TUVZ	Tukino	1.69	267	P	Pn	03 44 30.9	+0.7
NGRZ	Ngongotaha	1.69	310	P	Pn	03 44 30.7	+0.5
KRVZ	Karewarewa	1.71	273	P	Pn	03 44 30.8	+0.4
WATZ	Wairara	1.71	286	P	Pn	03 44 30.6	+0.2
KARZ	Kaharoa	1.71	313	P	Pn	03 44 30.4	0.0
KUTZ	Kaahu Road	1.72	294	P	Pn	03 44 30.7	+0.2
NGZ	Ngauruhoe	1.73	270	P	Pn	03 44 31.3	+0.5
WNVZ	Wahianoa	1.74	265	P	Pn	03 44 31.4	+0.6
WHVZ	Whangaehu Hut	1.74	267	P	Pn	03 44 31.5	+0.5
WTVZ	West Tongariro	1.74	272	P	Pn	03 44 31.5	+0.5
DRZ	Dome Shelter	1.76	267	P	Pn	03 44 31.9	+0.6
TRVZ	Turoa	1.77	266	P	Pn	03 44 31.9	+0.4
MTVZ	Mangateitei	1.84	264	P	Pn	03 44 32.7	+0.5
TWVZ	Taurewa	1.87	273	P	Pn	03 44 32.6	0.0
BFZ	Birch Farm	1.92	219	P	Pn	03 44 32.0	-1.2
PKVZ	Pokaka	1.93	267	P	Pn	03 44 34.0	+0.6
PRWZ	Pori Road	1.97	226	P	Pn	03 44 33.5	-0.4
POWZ	Post Office Ro	1.98	233	P	Pn	03 44 33.8	-0.3
TLZ	Tolley Road	1.99	295	P	Pn	03 44 34.1	-0.1
CPWZ	Castlepoint	2.11	216	P	Pn	03 44 35.0	-0.8
TIWZ	Tintock	2.17	223	P	Pn	03 44 35.8	-0.9
OHWZ	Ohakea	2.18	242	P	Pn	03 44 37.1	+0.3
MRZ	Mangatainoka R	2.26	229	P	Pn	03 44 37.0	-0.9
WAZ	Wanganui	2.27	255	P	Pn	03 44 39.1	+1.1
VRZ	Vera Road	2.39	271	P	Pn	03 44 40.1	+0.5
TMWZ	Te Maipa	2.41	217	P	Pn	03 44 38.3	-1.7
HIZ	Hauiti	2.42	286	P	Pn	03 44 40.5	+0.4
HOWZ	Holdsworth Sta	2.45	226	P	Pn	03 44 39.1	-1.4
OGWZ	Otaki Gorge	2.60	231	P	Pn	03 44 41.3	-1.2
MTW	Mount Morrison	2.65	222	P	Pn	03 44 41.0	-2.1
LREZ	Lake Rotokare	2.67	263	P	Pn	03 44 44.4	+1.0
MHEZ	Mangahewa	2.73	272	P	Pn	03 44 45.9	+1.7
TRWZ	Traveller	2.74	216	P	Pn	03 44 42.1	-2.2
KIW	Kapiti Island	2.79	233	P	Pn	03 44 43.9	-1.1
DREZ	Durham Road	2.82	269	P	Pn	03 44 46.9	+1.4
CAW	Cannon Point	2.85	227	P	Pn	03 44 44.2	-1.7
PAWZ	Paruwai Farm	2.85	219	P	Pn	03 44 43.7	-2.2
PREZ	Palmer Road	2.85	266	P	Pn	03 44 47.4	+1.4
NEZ	North Egmont	2.90	267	P	Pn	03 44 47.9	+1.2
MSWZ	Moikau Station	2.96	221	P	Pn	03 44 45.1	-2.4
KHEZ	Kahui Hut	2.96	267	P	Pn	03 44 49.0	+1.5
KUZ	Kuaotunu	2.97	325	P	Pn	03 44 46.8	-0.7
MKAZ	Moumakai	2.97	314	P	Pn	03 44 47.8	+0.3
PKE	Pukeiti	2.99	269	P	Pn	03 44 49.0	+1.2
NMEZ	Namu Road	3.07	265	P	Pn	03 44 50.1	+1.2
PLWZ	Palliser	3.08	219	P	Pn	03 44 46.3	-2.7
NBEZ	Newall Road No	3.08	268	P	Pn	03 44 50.3	+1.2
WEL	Wellington	3.13	227	P	Pn	03 44 47.9	-1.8
BHW	Baring Head	3.16	225	P	Pn	03 44 47.7	-2.4
WIAZ	Waiheke Island	3.21	318	P	Pn	03 44 50.3	-0.6
AWAZ	Awhitu Peninsu	3.30	309	P	Pn	03 44 52.9	+0.8
MBAZ	Motutapu North	3.36	315	P	Pn	03 44 53.9	+1.0
TCW	Tory Channel	3.38	232	P	Pn	03 44 51.1	-2.1
DUWZ	D'Urville Isla	3.40	241	P	Pn	03 44 51.7	-1.7
WTAZ	Waiatarua	3.43	310	P	Pn	03 44 54.9	+1.1
GRZ	Great Barrier	3.50	327	P	Pn	03 44 54.8	+0.1
ABAZ	Army Bay	3.52	317	P	Pn	03 44 56.0	+1.0
NNZ	Nelson	3.96	238	P	Pn	03 44 59.3	-1.7
WCZ	Waipu Caves	4.28	319	P	Pn	03 45 06.0	+0.6
QRZ	Quartz Range	4.38	247	P	Pn	03 45 04.5	-2.3
OUZ	Omahuta	5.22	318	P	Pn	03 45 19.4	+1.1
GVZ	Greta Valley S	5.22	222	P	Pn	03 45 16.9	-1.5
CTZ	Chatham Island	6.16	139	P	Pn	03 45 31.8	+0.7
RPZ	Rata Peaks	6.80	226	P	Pn	03 45 37.9	-2.1
GCSZ	Gaunt Creek Bo	6.99	232	P	Pn	03 45 40.6	-1.9

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*IDC **16** 03:45:20.9±1.8, 21.°01S×178.°85W, h622km±16km, mb3.3/5, mb1 3.6/8, mb1mx3.2/24, mbtmp4.4/8, Error ellipse: s-maj=32.6km s-min=17.9km az=140.0*

*NEIC **16** 03:45:22.3±2.9, 20.°8S±0.°1×179.°0W±0.°1, h632km±11km, mb4.5/24, Error ellipse: s-maj=25.3km s-min=14.3km az=220.0*

ISC 16 03:45:21.4±0.8**, 20.°8S**±0.°1×**178.°9W**±0.°1**, h619**km**, n40, σ1ˢ17**/42**, mb4.4**/16**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	4.19	317	P	P	03 46 50.7	+0.8
	16nm,0.3s,baz=147,slow=7.8,SNR=95						
MSVF	Nonsavu	4.19	317	P	P	03 46 50.5	+0.7
DZM	Mont Dzumac	13.68	262	P	P	03 48 16.4	-0.3
	0.5nm,0.3s,baz=95,slow=18,SNR=5.8						
DZM	Mont Dzumac	13.68	262	P	P	03 48 15.6	-1.2
OUZ	Omahuta	15.78	203	P	P	03 48 37.8	+2.1
OUZ				IAmb	IAmb	03 48 41.4	
	comp=Z,59nm,1.5s						
URZ	Urewera	17.71	190	P	P	03 48 50.7	-2.6
	comp=Z,1.7nm,0.3s,baz=289,slow=17,SNR=3.2						
BFZ	Birch Farm	20.22	191	P	P	03 49 14.4	-1.7
MSWZ	Moikau Station	21.11	192	P	P	03 49 23.1	-1.0
SNZO	South Karori	21.13	193	P	P	03 49 22.6	-1.6
QRZ	Quartz Range	21.22	198	P	P	03 49 24.6	-0.4
QRZ				IAmb	IAmb	03 49 24.7	
	comp=Z,22nm,1.4s						
PLWZ	Palliser	21.26	192	P	P	03 49 23.9	-1.5
NNZ	Nelson	21.35	196	P	P	03 49 24.6	-1.6
NNZ				IAmb	IAmb	03 49 34.5	
	comp=Z,19nm,1.1s						
THZ	Tophouse	21.99	196	P	P	03 49 30.1	-1.9
THZ				IAmb	IAmb	03 49 39.6	
	comp=Z,12nm,1.2s						
MQZ	McQueen's Vall	23.87	195	P	P	03 49 47.5	-1.0
MQZ				IAmb	IAmb	03 50 02.5	
	comp=Z,17nm,1.2s						
FOZ	Fox Glacier	24.52	200	P	P	03 49 53.7	-0.5
LBZ	Lake Benmore	25.18	199	P	P	03 49 58.7	-1.4
LBZ				IAmb	IAmb	03 50 00.7	
	comp=Z,15nm,1.5s						
WHZ	Wether Hill Ro	27.23	200	P	P	03 50 18.5	+0.5
EIDS	Eidsvold	27.92	255	P	P	03 50 25.0	+0.7
EIDS				IAmb	IAmb	03 50 34.6	
	comp=Z,18nm,1.4s						
CTAO	Charters Tower	32.59	265	P	P	03 51 05.2	+0.9
COEN	Coen	36.74	274	P	P	03 51 39.1	+0.3
COEN				IAmb	IAmb	03 51 43.1	
	comp=Z,17nm,1.4s						
BBOO	Buckleboo	41.62	244	P	P	03 52 17.8	+0.2
BBOO				IAmb	IAmb	03 52 23.0	
	comp=Z,19nm,1.4s						
WR0	Warramunga Arr	43.51	263	P	P	03 52 32.1	-0.3
AS31	Alice Springs	43.60	257	P	P	03 52 33.8	+0.7
ASAR	Alice Springs	43.60	257	P	P	03 52 33.4	+0.3
	comp=Z,6.3nm,0.6s,baz=96,slow=7.7,SNR=65						
ASAR				ScP	ScP	03 57 01.0	+1.1
	comp=Z,0.6nm,0.7s,baz=98,slow=4.6,SNR=5.9						
ASAR				S	S	03 58 18.0	-1.3
	comp=Z,0.9nm,0.8s,baz=93,slow=16,SNR=5.5						
WB0	Warramunga Arr	43.67	263	P	P	03 52 33.5	-0.2
WB0				IAmb	IAmb	03 52 34.1	
	comp=Z,10nm,0.5s						
WB2	Warramunga Arr	43.68	263	P	P	03 52 33.5	-0.2
WRA	Warramunga Arr	43.70	263	P	P	03 52 33.8	-0.1
	comp=Z,3.6nm,0.3s,baz=97,slow=7.6,SNR=101						
WRA	Warramunga Arr	43.70	263	P	P	03 52 33.4	-0.5
FORT	Forrest	48.37	247	P	P	03 53 08.6	-0.3
FORT				IAmb	IAmb	03 53 25.1	
	comp=Z,12nm,1.1s						
FITZ	Fitzroy Crossi	52.12	263	P	P	03 53 36.5	+0.1
PSA00	Pilbara Seismi	56.75	257	P	P	03 54 08.3	-0.3
VNDA	Vanda	57.51	185	P	P	03 54 14.4	+1.6
VNDA				IAmb	IAmb	03 54 17.6	
	comp=Z,33nm,1.5s						
QSPA	South Pole Qui	69.25	180	P	P	03 55 28.5	+0.8
MJAR	Matsushiro Arr	69.96	324	P	P	03 55 31.9	-0.3
	comp=Z,1.4nm,0.6s,baz=144,slow=6.0,SNR=3.1						
PETK	Petropavlovsk-	76.36	346	P	P	03 56 09.3	+1.1
	comp=Z,2.3nm,0.6s,baz=126,slow=9.1,SNR=2.4						
BELA	Belgrano 2	79.35	173	P	P	03 56 23.6	-0.3
ILAR	Eielson Array	88.82	13	P	P	03 57 10.3	-0.1
	comp=Z,0.3nm,0.4s,baz=215,slow=5.3,SNR=7.7						
AKASG	Malin Array Be	142.87	330	PKP	PKPdf	04 03 43.4	-2.1
	comp=Z,2.8nm,0.4s,baz=44,slow=4.2,SNR=17						
BRTR	Keskin Array B	146.41	311	PKPbc	PKPbc	04 03 53.0	-1.7
	comp=Z,0.3nm,0.4s,baz=66,slow=3.5,SNR=4.7						
BRTR	Keskin Array B	146.41	311		PKPbc	04 03 53.0	-1.7

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*IDC **16** 05:03:25.6±2.6, 31.°19S×68.°88W, h92km±22km, mb3.1/2, mb1 3.5/7, mb1mx3.4/30, mbtmp3.7/7, Error ellipse: s-maj=36.2km s-min=24.9km az=97.0*

ISC 16 05:03:27.0±0.9**, 31.°2S**±0.°1×**68.°8W**±0.°2**, h111**km**, n10, σ1ˢ16**/10**, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	Limon Verde	8.54	359	P	Pn	05 05 26.4	-1.8
	2.4nm,0.3s,baz=180,slow=8.3,SNR=20						
PLCA	Paso Flores	9.63	188	P	Pn	05 05 41.8	-0.9
	0.1nm,0.3s,baz=10,slow=15,SNR=1.1						
CPUP	Villa Florida	11.15	67	P	Pn	05 06 02.2	-1.0
	0.2nm,0.3s,baz=265,slow=10.0,SNR=4.1						
LPAZ	La Paz	14.84	2	P	Pn	05 06 52.0	+0.1
	0.3nm,0.3s,baz=176,slow=7.7,SNR=15						
SIV	San Ignacio	16.68	27	P	Pn	05 07 15.4	+1.2
	0.2nm,0.3s,baz=221,slow=10,SNR=6.7						
TXAR	Lajitas Array	68.73	328	P	P	05 14 19.4	+0.5
	0.1nm,0.6s,baz=142,slow=8.9,SNR=1.9						
TORD	Torodi Ar. Bea	80.65	69	P	P	05 15 29.4	+1.5
	0.8nm,0.9s,baz=257,slow=3.7,SNR=2.6						
WRA	Warramunga Arr	124.53	207	PKP	PKPdf	05 22 13.9	+0.1
	0.5nm,0.9s,baz=162,slow=1.5,SNR=5.0						
ZALV	Zalesovo Beam	150.39	32	PKPbc	PKiKP	05 23 05.9	+0.3
	0.9nm,0.5s,baz=320,slow=2.6,SNR=2.4						
MKAR	Makanchi Array	152.84	47	PKPbc	PKiKP	05 23 11.6	+0.6
	0.2nm,0.7s,baz=254,slow=2.2,SNR=2.3						

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*IDC **16** 05:16:24.5±2.5, 51.°36N×179.°64E, h0km, mb3.7/10, mb1 3.8/10, mb1mx3.6/43, mbtmp3.7/10, Error ellipse: s-maj=71.4km s-min=20.5km az=175.0*

*AEIC **16** 05:16:28±2.9, 51.°05N±0.°05×179.°59E±0.°06, h16km±5km, ML3.4, mb4.1/12(NEIC), Error ellipse: s-maj=8.6km s-min=4.5km az=210.0*

*NEIC **16** 05:16:31.0±1.1, 51.°17N±0.°08×179.°61E±0.°07, h50km±10km, Error ellipse: s-maj=12.2km s-min=6.1km az=192.0*

ISC 16 05:16:30.4±0.9**, 51.°1N**±0.°1×**179.°60E**±0.°04**, h48**km**, n46, σ1ˢ05**/49**, mb3.8**/13**, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AMKA	Amchitka	0.30	322		Pn	05 16 37.3	-2.1
AMKA	Amchitka	0.30	322		Sn	05 16 43.5	-2.2
CESW	Semis' Southwe	0.76	358		Pn	05 16 44.9	0.0
CERAA	Semis' Rag'd T	0.77	4		Pn	05 16 44.8	-0.2
CERB	Semis' Cerberu	0.79	1		Pn	05 16 45.3	0.0
CETU	Semis' Tuman	0.83	356		Pn	05 16 46.0	+0.2
CEAP	Semis' Anvil P	0.86	359		Pn	05 16 46.5	+0.3
LSPA	Little Sitkin	1.04	322		Pn	05 16 48.9	+0.2
LSPA					Sn	05 17 04.7	+2.7
LSSA	Little Sitkin	1.05	320		Pn	05 16 49.0	+0.2
LSNW	Little Sitkin	1.07	321		Pn	05 16 49.1	+0.1
GALAA	Gareloi Lava P	1.19	58		Pn	05 16 51.1	+0.4
TASE	Tanaga Southea	1.63	64		Pn	05 16 57.0	+0.3
TAFP	Tanaga Falls P	1.69	62		Pn	05 16 57.7	+0.2
TAFP					Sn	05 17 19.8	+1.9
KIMD	Kanaga Island	2.08	71		Pn	05 17 03.6	+0.9
KIKV	Kanaga Island	2.15	69		Pn	05 17 04.3	+0.5
ADK	Adak	2.44	71		Pn	05 17 08.2	+0.5
ADK					Sn	05 17 36.5	+0.2
GSTD	Great Sitkin T	2.81	69		Pn	05 17 13.5	+0.7
GSMY	Great Sitkin M	2.86	70		Pn	05 17 13.9	+0.5
GSTR	Great Sitkin T	2.87	69	Pn	Pn	05 17 12.5	-1.1
SMY	Shemya	3.76	297	Pn	Pn	05 17 28.8	+3.0
ATKA	Atka Island	4.01	72		Pn	05 17 30.4	+1.2
TTA	Tatalina	17.62	39	P	P	05 20 32.8	+0.1
PPLA	Purkeypile	19.15	41	P	Pn	05 20 51.7	+0.9
PPLA				IAmb	IAmb	05 21 15.9	
	comp=Z,19nm,1.4s						
SUA	Susitna One	19.25	46	P	P	05 20 50.8	+0.2
KTH	Kantishna Hill	19.95	40	P	P	05 20 59.0	+0.8
KTH				IAmb	IAmb	05 21 03.1	
	comp=Z,9.4nm,1.0s						
IMAR	Indian Mountai	20.11	32	P	P	05 21 00.5	+0.7
GHO	Glory Hole Cre	20.17	46	P	P	05 21 00.0	-0.6
GHO				IAmb	IAmb	05 21 09.5	
	comp=Z,21nm,1.3s						
SCM	Sheep Creek Mo	20.91	47	P	P	05 21 08.0	-0.7
WRH	Wood River Hil	21.46	39	P	P	05 21 13.7	-0.7
WRH				IAmb	IAmb	05 21 27.0	
	comp=Z,5.9nm,1.4s						
KLU	Klutina	21.48	48	P	P	05 21 16.5	+1.8
M24K	Tolsona, Glenn	21.51	46	P	P	05 21 14.7	-0.4
MDM	Murphy Dome	21.61	38	P	P	05 21 16.2	+0.2
ILAR	Eielson Array	22.06	39	P	P	05 21 19.6	-1.2
	comp=Z,0.3nm,0.5s,baz=242,slow=9.7,SNR=2.0						
N25K	Chitina, Valde	22.12	48	P	P	05 21 21.3	-0.3
N25K				IAmb	IAmb	05 21 26.5	
	comp=Z,7.1nm,1.1s						
GLB	Gilahina Butte	22.46	49	P	P	05 21 24.0	-1.2
GLB				IAmb	IAmb	05 21 26.0	
	comp=Z,14nm,1.2s						
KLR	Kul'dur	30.27	285	P	P	05 22 37.1	+0.5
	comp=Z,0.6nm,0.5s,baz=114,slow=10.0,SNR=2.1						
YKA	Yellowknife Ar	36.12	46	P	P	05 23 26.8	-0.6
	comp=Z,0.5nm,0.4s,baz=283,slow=7.3,SNR=7.5						
SONM	Songino Array	45.85	296	P	P	05 24 48.5	+0.8
	comp=Z,0.3nm,0.8s,baz=45,slow=4.4,SNR=1.8						
PDAR	Pinedale Array	47.34	71	P	P	05 24 58.9	-0.6
	comp=Z,0.8nm,0.7s,baz=304,slow=2.6,SNR=10						
PDAR	Pinedale Array	47.34	71	P	P	05 25 00.1	+0.5
ARCES	ARCESS Array B	58.15	350	P	P	05 26 17.1	-1.5
	comp=Z,3.7nm,0.9s,baz=24,slow=9.0,SNR=1.7						
KURBB	Kurchatov Arra	58.55	313	P	P	05 26 20.6	-1.0
	comp=Z,0.7nm,0.3s,baz=46,slow=6.7,SNR=4.9						
MKAR	Makanchi Array	59.39	308	P	P	05 26 27.5	-0.1
	comp=Z,0.2nm,0.3s,baz=49,slow=6.2,SNR=9.1						
MKAR	Makanchi Array	59.39	308	P	P	05 26 27.8	+0.2
BVAR	Borovoye Array	60.41	319	P	P	05 26 34.7	+0.2
	comp=Z,0.3nm,0.5s,baz=50,slow=12,SNR=3.2						
NOA	NORSAR Array B	67.78	354	P	P	05 27 21.7	-1.0
	comp=Z,0.5nm,0.7s,baz=18,slow=4.7,SNR=2.1						

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*IDC **16** 05:31:10.0±2.3, 25.°12N×95.°18E, h0km, mb3.7/3, mb1 3.7/4, mb1mx3.4/34, mbtmp3.7/4, ML3.8/1, Error ellipse: s-maj=72.0km s-min=30.8km az=67.0*

*NEIC **16** 05:31:15.4±1.1, 25.°1N±0.°1×95.°3E±0.°2, h35km±2km, mb4.0/4, Error ellipse: s-maj=31.9km s-min=13.8km az=223.0*

ISC 16 05:31:15.0±1.0**, 25.°1N**±0.°1×**95.°3E**±0.°2**, h35**km**, n11, σ0ˢ63**/11**, mb4.0**/5**, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHL	Shillong	3.13	279	Pn	Pn	05 32 02.5	+0.4
LSA	Lhasa	5.87	322		Pn	05 32 41.1	+1.1
CHTO	Chiang Mai	7.12	151	Pn	Pn	05 32 57.5	+0.7
CMAR	Chiang Mai Arr	7.44	152	Pn	Pn	05 33 00.8	-0.3
	0.4nm,0.3s,baz=326,slow=14,SNR=8.4						
MK31	Makanchi Array	24.00	338	P	P	05 36 26.6	+0.3
MK31				IAmb	IAmb	05 36 27.1	
	comp=Z,3.0nm,0.6s						
MKAR	Makanchi Array	24.00	338	P	P	05 36 26.4	0.0
	comp=Z,4.3nm,0.5s,baz=152,slow=9.2,SNR=107						
MKAR	Makanchi Array	24.00	338	P	P	05 36 26.5	+0.2
SONM	Songino Array	24.31	18	P	P	05 36 29.2	-0.1
	comp=Z,0.3nm,0.4s,baz=205,slow=13,SNR=5.8						
KURK	Kurchatov	28.61	338	P	P	05 37 07.5	-0.3
ZALV	Zalesovo Beam	29.84	348	P	P	05 37 18.4	-0.4
	comp=Z,0.3nm,0.4s,baz=171,slow=10,SNR=1.9						
ABKAR	Akbulak array	36.56	320	P	P	05 38 16.4	-0.9
ABKAR				IAmb	IAmb	05 38 33.1	
	comp=Z,2.6nm,1.2s						

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*NEIC **16** 05:32:42.3±1.1, 21.°6S±0.°1×176.°4W±0.°1, h176km±12km, mb4.3/15, Error ellipse: s-maj=24.0km s-min=16.2km az=222.0*

*IDC **16** 05:32:48.7±3.8, 21.°67S×176.°63W, h227km±29km, mb3.5/5, mb1 3.6/7, mb1mx3.3/33, mbtmp4.0/7, Error ellipse: s-maj=33.7km s-min=21.5km az=81.0*

ISC 16 05:32:42.8±0.8**, 21.°6S**±0.°1×**176.°4W**±0.°1**, h183**km**, n31, σ0ˢ54**/30**, mb4.2**/10**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	6.52	305	P	Pn	05 34 21.6	+4.9
	1.4nm,0.3s,baz=280,slow=24,SNR=2.7						
NIUE	Niue	6.53	69	Pn	Pn	05 34 16.5	-0.2
AFI	Afiamalu	8.80	30	Pn	Pn	05 34 46.8	+0.2
URZ	Urewera	17.54	197	P	P	05 36 35.5	+0.9
	0.7nm,0.3s,baz=165,slow=2.0,SNR=5.6						
URZ	Urewera	17.54	197	P	P	05 36 34.6	0.0
URZ				IAmb	IAmb	05 36 35.6	
	comp=Z,21nm,1.4s						
BKZ	Black Stump Fm	18.56	198	P	P	05 36 45.2	-0.6
BKZ				IAmb	IAmb	05 36 58.8	
	comp=Z,9.2nm,1.2s						
QRZ	Quartz Range	21.37	204	P	P	05 37 15.3	-0.4
QRZ				IAmb	IAmb	05 37 19.3	
	comp=Z,13nm,1.0s						
THZ	Tophouse	22.05	202	P	P	05 37 23.8	+0.9
THZ				IAmb	IAmb	05 37 30.3	
	comp=Z,17nm,1.3s						
MQZ	McQueen's Vall	23.87	200	P	P	05 37 39.6	+0.3
RPZ	Rata Peaks	24.42	202	P	P	05 37 45.2	+0.9
	comp=Z,4.4nm,0.6s,baz=294,slow=4.0,SNR=3.8						
RPZ	Rata Peaks	24.42	202	P	P	05 37 44.8	+0.4
RPZ				IAmb	IAmb	05 37 58.2	
	comp=Z,20nm,1.4s						
HNR	Honiara	25.79	294	P	P	05 37 56.6	-0.5
	comp=Z,138nm,0.5s,baz=172,slow=3.6,SNR=5.4						
CTAO	Charters Tower	34.92	266	P	P	05 39 18.1	+0.8
STKA	Stephens Creek	38.72	246	P	P	05 39 49.0	-0.2
	comp=Z,0.8nm,0.5s,baz=111,slow=8.6,SNR=1.8						
STKA	Stephens Creek	38.72	246	P	P	05 39 49.4	+0.1
BBOO	Buckleboo	43.45	245	P	P	05 40 26.9	-0.9
AS31	Alice Springs	45.77	258	P	P	05 40 47.0	+0.7
ASAR	Alice Springs	45.77	258	P	P	05 40 45.9	-0.5
	comp=Z,1.6nm,0.6s,baz=98,slow=8.2,SNR=21						
ASAR				PcP	PcP	05 42 20.9	0.0
	comp=Z,0.5nm,0.5s,baz=105,slow=3.7,SNR=5.8						
ASAR	Alice Springs	45.77	258	P	P	05 40 46.7	+0.3
WR0	Warramunga Arr	45.79	263	P	P	05 40 45.9	-0.6
WR0				IAmb	IAmb	05 40 55.6	
	comp=Z,13nm,1.4s						
WB0	Warramunga Arr	45.96	263	P	P	05 40 47.4	-0.5
WB0				IAmb	IAmb	05 41 15.1	
	comp=Z,10nm,1.4s						
WB2	Warramunga Arr	45.97	263	P	P	05 40 47.1	-0.7
WRA	Warramunga Arr	45.98	263	P	P	05 40 47.1	-0.8
	comp=Z,1.0nm,0.5s,baz=97,slow=6.9,SNR=15						
WRA	Warramunga Arr	45.98	263	P	P	05 40 47.5	-0.5
FITZ	Fitzroy Crossi	54.41	263	P	P	05 41 51.1	-0.2
	comp=Z,1.5nm,0.4s,baz=105,slow=4.9,SNR=13						
FITZ	Fitzroy Crossi	54.41	263	P	P	05 41 51.4	+0.1
FITZ				IAmb	IAmb	05 41 54.6	
	comp=Z,2.6nm,1.0s						
AKASG	Malin Array Be	144.70	332	PKP	PKPab	05 51 56.4	-0.3
	comp=Z,2.2nm,0.5s,baz=42,slow=4.1,SNR=16						
AKASG	Malin Array Be	144.70	332		PKPbc	05 51 56.7	0.0
BRTR	Keskin Array B	148.71	312	PKPbc	PKPbc	05 52 08.8	+0.1
	comp=Z,1.1nm,0.6s,baz=140,slow=4.9,SNR=7.8						
BRTR	Keskin Array B	148.71	312		PKPbc	05 52 09.0	+0.3
GERES	GERESS Array B	151.64	346	PKPbc	PKiKP	05 52 16.1	+0.3
	comp=Z,0.2nm,0.4s,baz=328,slow=3.5,SNR=2.3						

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*BJI **16** 05:42:44.8±0.0, 7.°49S×117.°32E, h589km, mB4.7/22, mb4.4/33*

*NEIC **16** 05:42:45.6±1.5, 7.°25S±0.°07×117.°48E±0.°10, h568km±7km, mb4.5/37, Error ellipse: s-maj=14.9km s-min=7.7km az=62.0*

*IDC **16** 05:42:46.7±1.0, 7.°17S×117.°56E, h584km±12km, mb3.7/13, mb1 3.9/18, mb1mx3.6/41, mbtmp4.7/18, Error ellipse: s-maj=18.4km s-min=8.6km az=75.0*

*DJA **16** 05:42:46.5±0.1, 7°S±2°×11°8E±°, h571km±2km, M4.4/32, mB5.0/17, mb4.7/32, MLv4.7/25, Mw(mB)4.3/17*

*KLM **16** 05:42:46, 7.°36S×117.°54E, h580km, mb4.8*

ISC 16 05:42:45.1±0.4**, 7.°32S**±0.°05×**117.°58E**±0.°05**, h550**km**, n180, σ2ˢ42**/196**, mb4.4**/49**, 1D, Bali Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLAI	Plampang	1.51	172	P	P	05 43 56.7	+3.8
PLAI				S	S	05 44 51.5	+3.6
TWSI	Taliwang, Sumb	1.56	206	P	P	05 43 57.1	+4.1
TWSI				S	S	05 44 51.1	+2.8
SRBI	Singaraja	2.46	252	P	P	05 44 00.9	+3.9
SRBI				S	S	05 44 59.2	+3.7
DNP	Denpasar	2.70	240	P	P	05 44 02.2	+3.9
DNP				S	S	05 45 02.2	+4.3
BSSI	Bau Bau, Buton	3.12	68	P	P	05 44 04.8	+3.9
KAPI	Kappang	3.15	43	P	P	05 44 05.6	+4.4
	64nm,0.3s,baz=195,slow=3.4,SNR=200						
KAPI				S	S	05 45 07.8	+4.9
	baz=76,slow=21,SNR=6.8						
KAPI	Kappang	3.15	43	P	P	05 44 05.3	+4.2
BKSI	Bulukumba	3.22	52	P	P	05 44 06.3	+4.8
BKSI				S	S	05 45 10.1	+6.4
ABJI	Asem Bagus	3.35	262	P	P	05 44 06.4	+4.1

ABJI				S	S	05 45 09.2	+4.0
JAGI	Jajag, Banyuwa	3.58	251	P	P	05 44 05.8	+1.9
JAGI				S	S	05 45 07.9	-0.2
JAGI	Jajag, Banyuwa	3.58	251	P	P	05 44 06.0	+2.1
KMMI	Kalianget	3.59	274	P	P	05 44 08.7	+4.7
KMMI				S	S	05 45 14.9	+6.6
BNSI	Bone	3.84	41	P	P	05 44 10.7	+4.9
SPSI	Sidrap Palu	3.99	33	P	P	05 44 10.9	+4.0
BASI	Baing, Sumba	4.13	134	P	P	05 44 12.1	+4.1
BASI				S	S	05 45 20.4	+4.9
KBKI	Kotabaru	4.24	341	P	P	05 44 13.1	+4.3
KBKI				S	S	05 45 22.6	+5.6
EDFI	Ende, Flores	4.31	109	P	P	05 44 12.1	+2.6
BBKI	Banjar Baru	4.70	324	P	P	05 44 17.0	+4.5
BBKI				S	S	05 45 29.9	+6.1
MMRI	Maumere	4.80	106	P	P	05 44 16.2	+2.9
MMRI				S	S	05 45 27.3	+2.2
TTSI	Tana Toraja	4.80	28	P	P	05 44 17.2	+3.9
BKB	Balikpapan	6.06	354	P	P	05 44 30.4	+6.1
BATI	Baumata	6.66	116	P	P	05 44 33.0	+3.1
	35nm,0.3s,baz=127,slow=2.6,SNR=26						
BATI				S	S	05 45 56.1	+0.4
	53nm,0.3s,baz=313,slow=22,SNR=7.6						
BATI	Baumata	6.66	116	P	P	05 44 33.0	+3.1
UGM	Wanagama	7.02	265	P	P	05 44 35.2	+1.9
UGM	Wanagama	7.02	265	P	P	05 44 35.6	+2.3
	1.4nm198nm,0.7s						
SOEI	Soe	7.04	111	P	P	05 44 35.8	+2.1
SOEI	Soe	7.04	111	P	P	05 44 35.8	+2.1
	1.5nm1µm110nm,0.8s						
SMRI	Semarang	7.08	272	P	P	05 44 36.8	+2.8
SMRI	Semarang	7.08	272	P	P	05 44 36.9	+2.9
	2.4nm7µm569nm,0.7s						
PBKI	Pangkalan Bun	7.46	308	P	P	05 44 41.1	+3.5
	1.3nm6µm423nm,0.9s						
APSI	Ampana	7.55	33	P	P	05 44 41.5	+3.0
	0.4nm1µm123nm,0.6s						
LUWI	Luwuk	8.11	40	P	P	05 44 46.9	+2.9
LUWI	Luwuk	8.11	40	P	P	05 44 47.2	+3.2
	4µm295nm,0.8s						
MRSI	Marisa	8.89	30	P	P	05 44 53.9	+2.1
	3µm260nm,0.7s						
TOLI2	Tolitoli	8.97	21	P	P	05 44 53.6	+1.0
GTOI	Gorontalo	9.59	35	P	P	05 45 01.1	+2.2
	2µm189nm,0.7s						
CISI	Cisompet, Garu	9.68	268	P	P	05 45 00.4	+0.5
CISI	Cisompet, Garu	9.68	268	P	P	05 45 00.1	+0.2
	9µm190nm,0.6s						
SANI	Sanana	9.88	58	P	P	05 45 04.0	+2.1
	36nm,0.7s						
LEM	Lembang	9.90	272	P	P	05 45 03.9	+1.7
	13nm,0.3s,baz=36,slow=8.6,SNR=19						
KMSI	Cibinong	10.12	39	P	P	05 45 06.7	+2.4
	123nm,0.5s						
NLAI	Namlea	10.31	67	P	P	05 45 09.2	+2.9
	3µm174nm,0.6s						
CBJI	Citeko	10.69	274	P	P	05 45 10.2	+0.1
	332nm,0.9s						
DBJI	Dramaga	10.78	273	P	P	05 45 11.9	+0.8
	11µm155nm,0.7s						
TPI	Tanjungpandan	10.87	294	P	P	05 45 13.0	+0.9
	37nm,0.8s						
SBUM	Sibu	11.08	331	P	P	05 45 16.7	+2.5
SBUM	Sibu	11.08	331	P	P	05 45 17.0	+2.8
KSM	Kuching	11.36	320	P	P	05 45 18.8	+1.7
KSM	Kuching	11.36	320	P	P	05 45 19.0	+1.9
SPMM	Sapulut	12.00	355	P	P	05 45 26.0	+2.2
XMIS	Christmas Isla	12.19	254	P	P	05 45 25.5	-0.2
MYLDM	Lahad Datu	12.46	4	P	P	05 45 31.1	+2.7
PPBI	Pangkal Pinang	12.50	294	P	P	05 45 29.7	+0.8
	17µm54nm,0.6s						
KASI	Kota Agung	13.12	277	P	P	05 45 33.4	-1.9
	36nm,0.6s						
FITZ	Fitzroy Crossi	13.28	144	P	P	05 45 38.7	+1.8
	baz=13,SNR=71						
FITZ	Fitzroy Crossi	13.28	144	P	P	05 45 38.7	+1.8
	3.2nm,0.3s,baz=334,slow=9.0,SNR=123						
FITZ				S	S	05 47 59.8	+1.5
	0.6nm,0.3s,baz=58,slow=22,SNR=11						
KKM	Kota Kinabalu	13.35	354	P	P	05 45 37.2	-0.5
PSA00	Pilbara Seismi	14.34	171	P	P	05 45 48.7	+1.0
PSA00	Pilbara Seismi	14.34	171	P	P	05 45 49.5	+1.8
MNAI	Manna	14.84	281	P	P	05 45 50.3	-2.7
SWI	Sorong	15.08	65	P	P	05 45 54.8	-0.7
	1µm82nm,0.7s						
SIJI	Sorong	15.08	65	P	P	05 45 53.8	-1.7
	6.3nm,0.3s,baz=303,slow=5.6,SNR=12						
FAKI	Fak Fak	15.25	74	P	P	05 45 55.6	-1.6
GIRL	Giralia	15.57	192	P	P	05 46 02.3	+2.0
	baz=16,SNR=19						
GIRL	Giralia	15.57	192	P	P	05 46 02.4	+2.0
KDU	Kakadu	15.60	111	P	P	05 46 00.6	-0.2
	baz=16,SNR=38						
MEEK	Meekatharra	19.23	177	P	P	05 46 34.9	+0.6
	baz=19,SNR=48						
IPM	Ipoh	20.25	305	P	P	05 46 44.0	+0.3
WRKA	Warakurna	20.38	151	P	P	05 46 45.8	+1.1
	baz=20,SNR=56						
WB0	Warramunga Arr	20.47	129	P	P	05 46 46.2	+0.7
WRA	Warramunga Arr	20.53	129	P	P	05 46 47.4	+1.3
	29nm,0.4s,baz=311,slow=9.5,SNR=455						
WRA				S	S	05 49 58.2	-3.0
	3.6nm,0.7s,baz=293,slow=20,SNR=7.5						
WRA	Warramunga Arr	20.53	129	P	P	05 46 46.4	+0.3
WB2	Warramunga Arr	20.54	129	P	P	05 46 46.7	+0.5
WC3	Warramunga Arr	20.57	129	P	P	05 46 47.0	+0.6
	baz=21						
WR0	Warramunga Arr	20.70	129	P	P	05 46 48.6	+1.1
MORW	Morawa	21.68	184	P	P	05 46 57.1	+0.9
	baz=22,SNR=16						
MORW	Morawa	21.68	184	P	P	05 46 57.2	+0.9
ASPA	Alice Springs	22.57	138	P	P	05 47 05.3	+0.8
	baz=23						
AS31	Alice Springs	22.58	138	P	P	05 47 04.8	+0.4
ASAR	Alice Springs	22.58	138	P	P	05 47 05.4	+1.0
	22nm,0.5s,baz=315,slow=8.0,SNR=450						
ASAR				S	S	05 50 30.5	-2.9
	7.6nm,0.8s,baz=311,slow=15,SNR=15						
ASAR				ScP	ScP	05 53 18.1	-4.7
	2.1nm,0.6s,baz=333,slow=2.6,SNR=9.6						
ASAR	Alice Springs	22.58	138	P	P	05 47 04.4	0.0
BLDU	Ballidu	23.18	182	P	P	05 47 09.8	+0.1
	baz=23,SNR=7.6						
KLBR	Kellerberrin	24.15	180	P	P	05 47 18.8	+0.6
	baz=24,SNR=6.7						
KMBL	Kambalda	24.26	171	P	P	05 47 19.9	+0.7
	baz=24,SNR=15						
QIS	Mount Isa	25.06	124	P	P	05 47 27.3	+0.9
	baz=25,SNR=18						
FORT	Forrest	25.32	159	P	P	05 47 29.9	+1.3
	baz=26,SNR=14						
FORT	Forrest	25.32	159	P	P	05 47 29.6	+1.0
FORT				IAmb	IAmb	05 47 30.5	
	comp=Z,14nm,0.7s						
UBPT	Khong Chiam	25.46	332	P	P	05 47 30.3	+0.3
	comp=Z,4.8nm,1.0s						
UBPT	Khong Chiam	25.46	332	P	P	05 47 29.5	-0.5
UBPT				IAmb	IAmb	05 47 30.6	
	comp=Z,6.2nm,0.6s						
NWAO	Narrogin (SRO)	25.48	181	P	P	05 47 31.1	+1.0
	baz=26,SNR=14						
NWAO	Narrogin (SRO)	25.48	181	P	P	05 47 30.9	+1.0
	comp=Z,17nm,0.5s,baz=31,slow=7.8,SNR=21						
NWAO	Narrogin (SRO)	25.48	181	P	P	05 47 30.9	+1.0
NWAO				IAmb	IAmb	05 47 31.6	
	comp=Z,14nm,0.7s						
COEN	Coen	25.99	107	P	P	05 47 35.2	+0.4
COEN				IAmb	IAmb	05 47 42.5	
	comp=Z,26nm,1.1s						
SRAK	Srakaew	26.21	324	P	P	05 47 33.2	-3.5
	comp=Z,4µmcomp=Z,381nm,0.6s						
CHAI	Chaiyaphum	27.76	326	P	P	05 47 51.4	+1.1
	comp=Z,34nm,0.7s						
MTSU	Mount Surprise	28.17	115	P	P	05 47 55.0	+1.2
	baz=28,SNR=52						
NONG	Nongkai	28.97	331	P	P	05 48 00.9	+0.1
	comp=Z,9µmcomp=Z,22nm,0.9s						
UTHA	Uthaitani	28.98	322	P	P	05 48 01.2	+0.4
	comp=Z,270nmcomp=Z,22nm,0.6s						
PMG	Port Moresby	29.34	96	P	P	05 48 05.1	+1.0
LOEI	Loei	29.47	327	P	P	05 48 04.5	-0.6
	comp=Z,2µmcomp=Z,12nm,1.5s						
UTTA	Uttaradit	30.05	326	P	P	05 48 10.3	+0.2
	comp=Z,20nm,0.7s						
SUKH	Sukhothai	30.36	324	P	P	05 48 13.3	+0.5
	comp=Z,18nm,0.6s						
CTAO	Charters Tower	30.55	117	P	P	05 48 15.9	+1.5
CTAO				IAmb	IAmb	05 48 16.5	
	comp=Z,19nm,0.9s						
BBOO	Buckleboo	30.62	148	P	P	05 48 15.8	+0.9
	baz=31,SNR=18						
BBOO	Buckleboo	30.62	148	P	P	05 48 15.9	+1.1
BBOO				IAmb	IAmb	05 48 16.6	
	comp=Z,10nm,0.7s						
LAMP	Lampang	31.19	326	P	P	05 48 20.0	+0.1
	comp=Z,13nm,0.7s						
CM36	Chiang Mai Arr	31.49	325	P	P	05 48 22.0	-0.5
CM15	Chiang Mai Arr	31.54	325	P	P	05 48 34.3	+11
CM35	Chiang Mai Arr	31.59	325	P	P	05 48 23.0	-0.3
CM34	Chiang Mai Arr	31.73	325	P	P	05 48 24.0	-0.5
PAYA	Payao	31.74	327	P	P	05 48 25.0	+0.4
	comp=Z,2µmcomp=Z,107nm,0.9s						
QLP	Quilpie	31.77	130	P	P	05 48 25.5	+0.7
	baz=32,SNR=6.0						
CMMT	Chiang Mai	31.81	325	P	P	05 48 24.5	-0.7
	comp=Z,4.5nm,1.4s						
CM33	Chiang Mai Arr	31.82	325	P	P	05 48 25.0	-0.3
HTT	Hallett	32.64	146	P	P	05 48 33.6	+1.4
	baz=33,SNR=12						
STKA	Stephens Creek	33.13	141	P	P	05 48 37.5	+1.2
	baz=33,SNR=34						
STKA	Stephens Creek	33.13	141	P	P	05 48 37.4	+1.2
	comp=Z,15nm,0.4s,baz=326,slow=8.0,SNR=53						
STKA	Stephens Creek	33.13	141	P	P	05 48 37.5	+1.2
GYA	Guiyang	35.21	343	*e*P	P	05 48 52.8	-1.0
GYA				pmax	pmax		
	comp=Z,7.0nm,1.6s						
KMI	Kunming	35.34	336⇓	*e*P	P	05 48 55.6	+0.5
KMI				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KMI				pmax	pmax		
	comp=Z,100nm,6.1s						
EIDS	Eidsvold	36.66	123	P	P	05 49 06.7	+1.0
	baz=37,SNR=3.7						
EIDS	Eidsvold	36.66	123	P	P	05 49 06.8	+1.0
EIDS				IAmb	IAmb	05 49 18.9	
	comp=Z,15nm,1.5s						
ENH	Enshi	38.18	349	P	P	05 49 16.4	-1.6
ENH				IAmb	IAmb	05 49 17.9	
	comp=Z,23nm,1.1s						
YNG	Young	39.08	138	P	P	05 49 26.8	+1.5
	baz=39,SNR=5.0						
NJ2	Nanjing	39.17	2	*e*P	P	05 49 28.5	+2.5
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
ARMA	Armidale	39.31	130	P	P	05 49 30.1	+2.7
ARMA				IAmb	IAmb	05 49 30.4	
	comp=Z,7.0nm,0.7s						
CD2	Chengdu	40.26	341	P	P	05 49 33.3	-1.5
CD2				pmax	pmax		
	comp=Z,40nm,0.6s						
MGCD	Mangrove Creek	40.34	134	P	P	05 49 37.1	+1.7
	baz=40,SNR=7.7						
SHL	Shillong	41.15	323	P	P	05 49 40.4	-1.8
XAN	Xi'an	41.95	349	P	P	05 49 46.3	-1.8
XAN				pmax	pmax		
	comp=Z,11nm,0.7s						
XAN				pmax	pmax		
	comp=Z,100nm,5.7s						
LZH	Lanzhou	45.07	344	*e*P	P	05 50 20.0	+7.5
LZH				pP	PP	05 52 08.4	+0.7
LZH				sP	sP	05 53 09.1	+15
LZH				pmax	pmax		
	comp=Z,16nm,1.2s						
KSRS	Korea Array	45.58	12	P	P	05 50 14.6	-1.6
	comp=Z,3.1nm,1.0s,baz=193,slow=7.5,SNR=7.2						
BJI	Beijing	47.14	359	P	P	05 50 26.3	-1.6
BJI				pmax	pmax		
	comp=Z,8.0nm,0.6s						
BJI				pmax	pmax		
	comp=Z,200nm,5.0s						
MJAR	Matsushiro Arr	47.74	23	P	P	05 50 29.7	-2.8
	comp=Z,0.8nm,0.3s,baz=188,slow=7.8,SNR=2.1						
HHC	Hu-ho-hao-te	48.25	354	*e*P	P	05 50 38.8	+2.4
HHC				pmax	pmax		
	comp=Z,5.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,17nm,5.4s						
GTA	Gaotai	49.33	342	*e*P	P	05 50 43.1	-1.3
GTA				S	S	05 57 15.4	+4.9
GTA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,100nm,6.2s						
MDJ	Mudanjiang	52.82	11	P	P	05 51 08.3	-1.2
MDJ				S	S	05 58 00.3	+3.3
MDJ				pmax	pmax		
	comp=Z,16nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,140nm,4.1s						
USRK	Ussuriysk Ar.	52.91	13	P	P	05 51 08.6	-1.5
	comp=Z,4.2nm,0.6s,baz=203,slow=8.0,SNR=13						
USRK	Ussuriysk Ar.	52.91	13	P	P	05 51 08.8	-1.3
ULN	Ulaanbaatar	55.73	351	P	P	05 51 28.3	-1.8
SONM	Songino Array	55.80	351	P	P	05 51 28.8	-1.6
	comp=Z,4.8nm,0.4s,baz=170,slow=8.3,SNR=52						
SONM	Songino Array	55.80	351	P	P	05 51 28.9	-1.6
WMQ	Urumqi	57.64	335	*e*P	P	05 51 42.1	-1.0
WMQ				pmax	pmax		
	comp=Z,11nm,0.6s						
WMQ				pmax	pmax		
	comp=Z,290nm,7.3s						
LBZ	Lake Benmore	58.66	138	P	P	05 51 49.1	-0.8
RPZ	Rata Peaks	58.98	137	P	P	05 51 52.7	+0.5
RPZ				IAmb	IAmb	05 51 52.9	
	comp=Z,17nm,0.7s						
QRZ	Quartz Range	59.02	134	P	P	05 51 53.6	+1.2
QRZ				IAmb	IAmb	05 52 13.8	
	comp=Z,38nm,1.5s						
THZ	Tophouse	59.59	134	P	P	05 51 56.9	+0.6
THZ				IAmb	IAmb	05 51 57.5	
	comp=Z,18nm,0.7s						
MSVF	Nonsavu	59.72	106	P	P	05 51 57.8	+0.2
MSVF				IAmb	IAmb	05 52 12.2	
	comp=Z,20nm,1.4s						
MQZ	McQueen's Vall	60.07	137	P	P	05 51 59.7	+0.3
MQZ				IAmb	IAmb	05 52 01.0	
	comp=Z,36nm,1.4s						
TUWZ	Tuamarina	60.22	134	P	P	05 51 59.3	-1.1
KHZ	Kahutara	60.25	135	P	P	05 52 00.4	-0.1
KHZ				IAmb	IAmb	05 52 19.1	
	comp=Z,17nm,1.1s						
KSH	Kashi	60.43	324	P	P	05 51 59.6	-2.4
KSH				S	S	05 59 38.8	+3.7
KSH				pmax	pmax		
	comp=Z,25nm,0.5s						
KSH				pmax	pmax		
	comp=Z,310nm,6.7s						
SHLS	Shalkode	61.00	329	*e*P	P	05 52 01.6	-4.0
	baz=329						
PLWZ	Palliser	61.20	134	P	P	05 52 06.8	-0.2
BKZ	Black Stump Fm	61.46	131	P	P	05 52 08.4	-0.3
BKZ				IAmb	IAmb	05 52 08.9	
	comp=Z,9.7nm,0.6s						
SATY	Saty	61.48	328	*e*P	P	05 52 06.0	-2.7
	baz=328						
KPKS	Kokpek	61.62	329	*e*P	P	05 52 06.8	-2.9
	baz=329						
URZ	Urewera	61.70	130	P	P	05 52 09.6	-0.6
URZ				IAmb	IAmb	05 52 09.9	
	comp=Z,11nm,1.0s						
ZSN	Zaisan	61.74	335	*e*P	P	05 52 07.6	-2.6
	baz=335						
MDOK	Medeo	62.27	328	*e*P	P	05 52 11.7	-2.2
	baz=327						
MK31	Makanchi Array	62.33	333	P	P	05 52 12.3	-1.9
MKAR	Makanchi Array	62.33	333	P	P	05 52 12.3	-1.8
	comp=Z,2.7nm,0.4s,baz=145,slow=7.4,SNR=66						
MAKZ	Makanchi	62.48	333	P	P	05 52 13.4	-1.7
KUU	Kurty	63.14	328	*e*P	P	05 52 16.3	-3.1
	baz=328						
AAK	Ala-Archa	63.31	326	P	P	05 52 19.1	-1.6
IUG	Iuzhnay	65.59	323	*e*P	P	05 52 32.4	-2.6
	baz=323						
SEM	Semipalatinsk	65.96	335	*e*P	P	05 52 34.1	-3.1
	baz=335						
ZALV	Zalesovo Beam	66.99	340	P	P	05 52 40.4	-2.8
	comp=Z,3.5nm,0.5s,baz=146,slow=4.7,SNR=5.8						
BRZS	Berezniki	69.09	331	*e*P	P	05 52 53.5	-2.7
	baz=331						
PETK	Petropavlovsk-	69.13	25	P	P	05 52 53.8	-2.5
	comp=Z,2.6nm,1.0s,baz=117,slow=2.3,SNR=5.2						
PETK	Petropavlovsk-	69.13	25	P	P	05 52 55.4	-1.0
VNDA	Vanda	73.85	171	P	P	05 53 23.1	-0.4
	comp=Z,1.5nm,0.4s,baz=315,slow=5.3,SNR=9.8						
VNDA	Vanda	73.85	171	P	P	05 53 23.8	+0.3
VNDA				IAmb	IAmb	05 53 41.2	
	comp=Z,25nm,1.4s						
ABKAR	Akbulak array	75.39	325	P	P	05 53 30.4	-2.1
QSPA	South Pole Qui	82.66	180	P	P	05 54 10.3	-0.7
	comp=Z,1.4nm,0.5s,baz=162,slow=0.6,SNR=18						
TORD	Torodi Ar. Bea	116.77	281	PKP	PKPdf	06 00 25.3	-2.9
	comp=Z,0.9nm,0.9s,baz=44,slow=2.3,SNR=4.2						
NVAR	Mina Array Bea	121.02	49	PKP	PKPdf	06 00 33.2	-2.9
	comp=Z,0.3nm,0.6s,baz=90,slow=3.0,SNR=3.8						
ULM	Lac du Bonnet	128.93	27	SKPbc	SKiKP	06 03 15.2	-20
	comp=Z,0.7nm,0.4s,baz=294,slow=3.9,SNR=4.8						
TXAR	Lajitas Array	135.48	55	SKPbc	SKPbc	06 03 38.3	-5.3
	comp=Z,0.5nm,0.8s,baz=247,slow=1.7,SNR=6.2						
CPUP	Villa Florida	146.18	188	PKPbc	PKPdf	06 01 23.2	+0.5
	comp=Z,0.6nm,0.4s,baz=261,slow=3.5,SNR=3.7						

IDC 16 05:46:44.2±2.1**, 1°.87N**×**126°.19E, h0^{km}, mb3.6**/3**, mb1 3.9**/3**, mb1mx3.5**/34**, mbtmp3.7**/3**, Error ellipse: s-maj=179.2km s-min=27.1km az=65.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	23.10	160	P	P	05 51 50.4	-1.5
	1.9nm,0.6s,baz=338,slow=11,SNR=5.2						
ASAR	Alice Springs	26.46	164	P	P	05 52 24.8	+1.6
	0.4nm,0.3s,baz=344,slow=12,SNR=2.1						
MKAR	Makanchi Array	58.78	326	P	P	05 56 44.1	-0.1
	0.2nm,0.4s,baz=120,slow=7.4,SNR=4.9						

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*AUST **16** 05:56:49.0±0.7, 25°.05S×151°.46E, h0^{km}, Error ellipse: s-maj=10.2km s-min=5.2km az=76.0*

*IDC **16** 05:56:51.5±8.1, 25°.65S×151°.20E, h0^{km}, mb1 3.7/3, mb1mx3.4/31, mbtmp3.5/3, ML3.5/3, Error ellipse: s-maj=77.3km s-min=53.2km az=72.0*

ISC 16 05:56:53.2±1.3**, 25°.50S**±0°.08×**151°.26E**±0°.08**, h10^{km}, n9, σ2^{s}20**/14**, Near east coast of Australia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EIDS	Eidsvold	0.21	308	P	Pg	05 56 57.8	+0.3
	baz=0.5,SNR=1000						
EIDS				S	Sg	05 57 04.2	+3.7
	baz=0.5						
AUBSH	Beerwah State	2.03	132	P	Pn	05 57 27.1	-0.4
	baz=2.3						
AUBSH				S	Sg	05 57 57.2	-1.4
	baz=2.3						
AUTOO	Toowoomba Stat	2.14	163	S	Sg	05 58 05.6	+3.6
	baz=2.5						
RMQ	Roma	2.46	246	P	Pn	05 57 35.2	+1.8
	baz=2.8,SNR=37						
ARMA	Armidale	4.91	176	P	Pn	05 58 09.4	+2.2
	baz=5.4,SNR=7.2						
QLP	Quilpie	6.41	259	P	Pn	05 58 28.4	+0.6
	baz=6.7,SNR=9.6						
QLP				S	Sn	05 59 40.7	-0.3
	baz=6.7						
STKA	Stephens Creek	10.60	231	Pn	Pn	05 59 24.5	-0.7
	0.2nm,0.3s,baz=63,slow=11,SNR=1.3						
STKA				Sn	Sn	06 01 22.6	-1.4
	0.8nm,0.3s,baz=316,slow=21,SNR=3.3						
ASAR	Alice Springs	15.90	273	Pn	Pn	06 00 34.8	-2.4
	0.1nm,0.3s,baz=101,slow=14,SNR=3.0						
ASAR				Sn	Sn	06 03 31.4	-2.2
	0.1nm,0.3s,baz=95,slow=22,SNR=5.9						
WRA	Warramunga Arr	16.56	286	Pn	Pn	06 00 43.9	-1.7
	0.3nm,0.3s,baz=111,slow=11,SNR=9.6						
WRA				Lg	Lg	06 05 41.3	
	0.1nm,0.3s,baz=120,slow=28,SNR=4.5						

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*IDC **16** 06:01:56.4±1.4, 2°.53N×126°.59E, h0^{km}, mb3.6/4, mb1 3.8/5, mb1mx3.5/47, mbtmp3.7/5, ML4.2/1, Error ellipse: s-maj=66.8km s-min=21.7km az=63.0*

*DJA **16** 06:02:07.0±1.4, 3°N±4°×12°8E±°, h23^{km}±14^{km}, M4.3/9, mb4.4/7, mB4.8/2, MLv4.3/9, Mw(mB)4.1/2*

ISC 16 06:01:54.3±1.6**, 3°.3N**±0°.1×**128°.4E**±0°.1**, h10^{km}, n10, σ2^{s}64**/12**, mb3.5**/4**, North of Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	Sangihe	2.85	278	P	Pb	06 02 44.1	-1.2
SGSI				S	Sn	06 03 12.6	-1.7
SIJI	Sorong	5.04	145	Pn	Pb	06 03 23.1	+0.3
	7.4nm,0.3s,baz=272,slow=24,SNR=7.9						
SIJI				Sn	Sb	06 04 20.8	-2.7
	6.3nm,0.3s,baz=166,slow=21,SNR=12						
SANI	Sanana	5.79	204	P	Pn	06 03 23.2	+2.8
	0.1nm1µm16nm,0.7s						
GTOI	Gorontalo	5.95	244	P	Pn	06 03 24.6	+2.1
	0.1nm18nm,0.6s						
MRSI	Marisa	6.99	247	P	Pn	06 03 39.3	+2.5
	0.2nm35nm,0.5s						
APSI	Ampana	7.89	238	P	Pn	06 03 52.4	+3.2
	0.1nm19nm,0.7s						
FITZ	Fitzroy Crossi	21.41	187	P	P	06 06 38.0	-4.4
	1.5nm,0.8s,baz=13,slow=7.9,SNR=1.8						
WRA	Warramunga Arr	23.81	166	P	P	06 07 08.7	+1.1
	1.5nm,0.8s,baz=337,slow=11,SNR=8.5						
ASAR	Alice Springs	27.32	169	P	P	06 07 40.6	+1.0
	0.3nm,0.5s,baz=350,slow=9.4,SNR=1.5						
MKAR	Makanchi Array	58.85	325	P	P	06 11 54.0	+0.6
	0.6nm,0.3s,baz=116,slow=7.9,SNR=22						

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*NEIC **16** 06:27:26.9, 41°.86N×119°.64W, h8^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-4.20; $M_{\theta\theta}$-0.29; $M_{\phi\phi}$4.49; $M_{r\theta}$-0.58; $M_{\theta\phi}$1.55; $M_{\phi r}$-0.24; Fault plane solution: $M_0$4.66000×10^{14} NP1:ϕ_s24.11000°, δ48.01000°, λ-79.47000°. NP2:ϕ_s188.58000°, δ43.06000°, λ-101.48000°. Principal axes: T 4.9655, Plg2.0000°, Azm107.0000°; N -0.6782, Plg8.0000°, Azm197.0000°; P -4.2873, Plg82.0000°, Azm359.0000°;*

*REN **16** 06:27:26.9±2.8, 41°.86N±0°.04×119°.64W±0°.03, h8^{km}±7^{km}, ML3.6/9, ML3.6/54(SEA), ML3.9/6(NEIC), Mwr3.7/50(NEIC) Error ellipse: s-maj=5.8km s-min=2.8km az=174.0*

*ANF **16** 06:27:26.0±0.6, 41°.83N×119°.55W, h8^{km}, ML3.8/18, Error ellipse: s-maj=5.4km s-min=2.8km az=88.0*

*NEIC **16** 06:27:27.4±2.9, 41°.86N±0°.04×119°.65W±0°.02, h5^{km}±2^{km}, Error ellipse: s-maj=6.1km s-min=3.1km az=1.0*

*SEA **16** 06:27:27.9±2.9, 41°.85N±0°.04×119°.65W±0°.03, h3^{km}±7^{km}, Error ellipse: s-maj=5.6km s-min=2.8km az=174.0*

*IDC **16** 06:27:28.8±1.7, 41°.85N×119°.41W, h0^{km}, mb2.9/1, mb1 3.3/4, mb1mx3.2/51, mbtmp3.0/4, ML3.2/3, MS3.1/1, Ms1 3.1/1, ms1mx2.6/7, Error ellipse: s-maj=15.0km s-min=11.9km az=108.0*

ISC 16 06:27:27.3±0.8**, 41°.85N**±0°.03×**119°.64W**±0°.02**, h10^{km}, n103, σ1^{s}45**/121**, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOD	Modoc Plateau	0.50	277		Pg	06 27 36.7	-0.3
MOD					Sg	06 27 43.8	+0.1
MOD				IAML		06 27 44.3	
	comp=E,8µm,0.4s						
LKVW	Lakeview	0.66	305		Pg	06 27 39.4	-0.7
LKVW					Sg	06 27 48.9	+0.1
WVOR	Wild Horse Val	0.95	51	Pg	Pg	06 27 45.0	-0.6
WVOR				Sg	Sg	06 27 57.8	-0.1
K05A	Summer Lake	1.28	314	Pn	Pn	06 27 50.9	-0.5
K05A				IAML		06 28 11.9	
	comp=E,2µm,0.8s						
LASM	Arnica Sink	1.47	261		Pn	06 27 53.8	-0.3
LTIM	Timbered Crate	1.54	245		Pn	06 27 54.9	0.0
HOG	Hogback Mounta	1.59	285		Pn	06 27 55.7	0.0
LBCM	Butte Creek Ri	1.64	233		Pn	06 27 56.2	-0.1
M04C	Macdoel	1.65	269	P	Pn	06 27 56.0	-0.4
	baz=87,SNR=408						
M04C				S	Sg	06 28 20.0	-0.3
	baz=87						
M04C	Macdoel	1.65	269		Pn	06 27 56.0	-0.4
K04D	Chiloquin, OR	1.75	297	Pn	Pn	06 27 57.5	-0.4
	baz=116,SNR=112						
K04D				Pb	Pb	06 27 58.9	-0.7

	baz=116						
K04D				Sb	Sg	06 28 23.8	+0.1
	baz=116						
K04D	Chiloquin, OR	1.75	297		Pn	06 27 57.7	-0.2
J05D	Fort Rock, OR	1.86	321	Pn	Pn	06 27 59.3	-0.1
	baz=140,SNR=594						
J05D				Pb	Pb	06 28 00.9	-0.5
	baz=140						
J05D				Sb	Sg	06 28 26.9	-0.2
	baz=140						
J05D	Fort Rock, OR	1.86	321		Pb	06 28 00.9	-0.5
L04D	Klamath Falls	2.02	282	P	Pn	06 28 00.9	-0.7
	baz=100,SNR=250						
L04D				S	Sb	06 28 30.8	+1.3
	baz=100						
L04D	Klamath Falls	2.02	282		Pn	06 28 01.1	-0.5
BEKR	Beckworth	2.05	196		Pn	06 28 02.8	+0.8
TMBU	Tom Butte, New	2.08	328		Pb	06 28 05.2	0.0
PAHR	Pah Rah Range	2.15	175		Pn	06 28 03.9	+0.6
PINE	Pine Mountain	2.17	334		Pn	06 28 05.1	+1.4
I07A	Izee	2.24	2		Pn	06 28 05.1	+0.6
O03E	Paynes Creek	2.25	227	Pn	Pn	06 28 04.8	+0.1
	baz=46,SNR=215						
O03E				Pb	Pb	06 28 07.7	-0.4
	baz=46						
O03E				Sb	Sb	06 28 37.3	+1.2
	baz=46						
J04D	Umpqua Nationa	2.30	308	Pn	Pn	06 28 05.7	+0.2
	baz=126,SNR=183						
J04D				Pb	Pb	06 28 09.2	+0.3
	baz=126						
J04D				Sb	Sg	06 28 40.2	-0.9
	baz=126						
YBH	Yreka Blue Hor	2.30	268		Pn	06 28 04.6	-0.8
M02C	Callahan	2.45	260	P	Pn	06 28 06.5	-1.0
	baz=78,SNR=43						
M02C				Sb	Sg	06 28 43.9	-2.2
	baz=78						
N02D	Trinity Center	2.46	250	P	Pn	06 28 06.7	-0.9
	baz=68,SNR=9.9						
N02D				Sb	Sg	06 28 45.2	-1.3
	baz=68						
WDC	Whiskeytown Da	2.53	241		Pn	06 28 08.0	-0.4
VCNR	Virginia City	2.55	180		Pn	06 28 09.5	+0.6
HUMO	Hull Mountain	2.58	288		Pn	06 28 08.5	-0.7
ORV	Oroville	2.69	212	Pn	Pn	06 28 11.2	+0.5
PNTR	Pine Nut	2.75	179	Pn	Pn	06 28 14.1	+2.3
I05D	Terrebonne, OR	2.79	334	Pb	Pb	06 28 16.7	-0.5
	baz=153,SNR=35						
RUBR	Rubicon Trail	2.82	188		Pn	06 28 14.6	+1.9
I04A	Tendick Farm,	2.82	315	Pb	Pb	06 28 17.9	+0.1
	baz=133,SNR=59						
I04A				Sb	Sg	06 28 55.6	-2.3
	baz=133						
YERR	Yerington	2.87	174		Pn	06 28 14.5	+1.2
O02D	Mt. Diablo Mer	2.91	236	Pn	Pn	06 28 13.6	-0.1
	baz=54,SNR=46						
O02D				Pb	Pb	06 28 18.6	-0.7
	baz=54						
O02D				Sb	Sb	06 28 57.4	+2.5
	baz=54						
L02E	Cave Junction	2.97	277	P	Pn	06 28 15.1	+0.6
	baz=94,SNR=58						
L02E				Sb	Sb	06 28 58.9	+2.2
	baz=94						
AFDM	Forest Hills D	3.07	200	Pn	Pn	06 28 16.9	+1.0
K02D	Willamette Mer	3.11	287	P	Pn	06 28 16.8	+0.3
	baz=104,SNR=340						
KRMB	Red Mountain	3.21	266	Pn	Pn	06 28 18.6	+0.6
MFID	Camas Ranch	3.22	60	Pn	Pn	06 28 18.4	+0.4
I03D	Drain, OR	3.30	305	Sb	Sg	06 29 10.0	-3.3
	baz=123						
RYN	Ryan	3.33	165		Pn	06 28 21.7	+2.1
WAKR	Walker	3.34	177		Pn	06 28 22.4	+2.6
H04A	Detroit Lake	3.39	328	Pn	Pn	06 28 22.4	+2.0
KBO	Bosley Butte	3.44	278	Pn	Pn	06 28 21.5	+0.5
BMO	Blue Mountains	3.45	29	Pn	Pn	06 28 23.1	+1.9
JCC	Jacoby Creek,	3.46	254	Pn	Pn	06 28 21.4	+0.1
ELK	Elko	3.49	107	Pn	Pn	06 28 24.0	+2.2
	comp=E,5.5nm,0.3s,baz=285,slow=19,SNR=48						
ELK				Pg	Pb	06 28 27.3	-2.1
	comp=E,3.9nm,0.3s,baz=286,slow=18,SNR=32						
ELK				Lg	Lg	06 29 14.1	
	comp=E,21nm,0.3s,baz=191,slow=20,SNR=11						
ELK	Elko	3.49	107		Pn	06 28 24.1	+2.2
H04D	Lebanon	3.51	321	Pb	Pb	06 28 29.8	+0.3
	baz=139,SNR=32						
NVAR	Mina Array Bea	3.56	163	Pn	Pn	06 28 24.6	+1.8
	comp=E,0.9nm,0.3s,baz=342,slow=12,SNR=31						
NVAR				Lg	Lg	06 29 20.7	
	comp=E,17nm,0.3s,baz=349,slow=30,SNR=16						
NVAR	Mina Array Bea	3.56	163	Pn	Pn	06 28 24.3	+1.5
NV11	Mina Array Sit	3.59	161	Pn	Pn	06 28 25.4	+2.2
KEBM	Edson Butte	3.63	288	Pn	Pn	06 28 24.4	+0.8
KCPM	Cahto Peak	3.69	236	Pn	Pn	06 28 26.5	+2.0
LHV	Little Huntoon	3.69	166		Pn	06 28 27.6	+3.1
I02D	Swisshome	3.83	308	Pb	Pb	06 28 36.8	+2.0
	baz=125						
COR	Corvallis	3.83	317	Pn	Pn	06 28 27.1	+0.8
CMB	Columbia Colle	3.85	189		Pn	06 28 28.5	+1.8
TPH	Tonopah	4.20	153		Pn	06 28 34.6	+3.1
HLID	Hailey	4.22	64		Pn	06 28 32.8	+1.0
MDPB	Devils Postpil	4.23	174	Pn	Pn	06 28 32.1	+0.1
OMMB	Old Mammoth Mi	4.25	173	Pn	Pn	06 28 33.4	+0.9
MCCM	Marconi Confer	4.46	215	Pn	Pn	06 28 35.2	+0.3
F10A	Beach Ranch, E	4.48	22	Pn	Pn	06 28 35.4	+0.1
HAWA	Hanford	4.55	1	Pn	Pn	06 28 36.6	+0.4
R11A	Troy Canyon, C	4.67	137	P	Pn	06 28 41.1	+3.0
	baz=320						
R11A				Sg	Sg	06 29 53.6	-3.8
	baz=320						
R11A	Troy Canyon, C	4.67	137		Pn	06 28 40.4	+2.3
E07A	Sunnyside	4.71	358	Pn	Pn	06 28 37.7	-0.8
E09A	Wood Farm, Sta	4.79	12	Pn	Pn	06 28 40.3	+0.8
BGU	Big Grassy Mou	5.06	98	Pn	Pn	06 28 44.6	+1.3
HVU	Hansel Valley	5.13	88		Pn	06 28 44.7	+0.3
BCYI	Bear Canyon	5.19	60	Pn	Pn	06 28 45.0	-0.1
SPUT	South Promonto	5.42	93	Pn	Pn	06 28 50.7	+2.4
DUG	Dugway, Tooele	5.42	105	P	Pn	06 28 50.7	+2.4
	baz=290						
DUG	Dugway, Tooele	5.42	105	Pn	Pn	06 28 49.1	+0.8
PSUT	Pine Spring	5.53	125		Pn	06 28 52.3	+2.5
TPNV	Topopah Spring	5.55	151	Sg	Sg	06 30 22.6	-2.9
	baz=333						
PRN	Pahroc Range	5.67	140	Pn	Pn	06 28 54.5	+2.7
MCMT	McKenzie Canyo	5.78	57	Pn	Pn	06 28 55.5	+2.2
NLU	North Lily Min	6.03	106		Pn	06 28 58.6	+1.8
CTU	Camp Tracy	6.05	98	Pn	Pn	06 28 56.5	-0.5
TCUT	Toone Canyon	6.22	94	Pn	Pn	06 29 01.2	+1.8
ECR	Eagle Creek	6.24	76	Pn	Pn	06 28 58.1	-1.4
JLU	Jordanelle	6.30	99		Pn	06 29 02.9	+2.4
MPU	Maple Canyon	6.33	104	Pn	Pn	06 29 03.8	+2.9
TCRU	Three Creeks R	6.38	118		Pn	06 29 01.4	-0.2
AHID	Auburn Hatcher	6.40	79	Pn	Pn	06 29 01.4	-0.4
MSO	Missoula	6.44	37	Pn	Pn	06 29 04.1	+1.8
CCUT	Cedar City	6.46	130	Pn	Pn	06 29 05.4	+2.6
MVU	Marysvale	6.59	118	Pn	Pn	06 29 04.2	-0.3
SZCU	Shurtz Canyon	6.60	128		Pn	06 29 05.9	+1.4
GSC	Goldstone, Bar	6.90	160	Pn	Pn	06 29 07.9	-0.7
BOZ	Bozeman (W)	6.91	54	Pn	Pn	06 29 10.2	+1.5
YPP	Pitchstone Pla	6.91	67		Pn	06 29 08.4	-0.5
LCMT	Little Creek M	6.91	132	Pn	Pn	06 29 08.7	-0.1
FLWY	Flagg Ranch	6.93	68	Pn	Pn	06 29 09.0	-0.1
H17A	Grant Village	7.10	66		Pn	06 29 11.3	-0.2
SRU	San Rafael Swe	7.46	108	Pn	Pn	06 29 16.1	-0.4
PDAR	Pinedale Array	7.53	80	Pn	Pn	06 29 22.2	+4.8
	comp=E,0.1nm,0.3s,baz=263,slow=11,SNR=4.2						
ANMO	Albuquerque	12.42	119	LR	LR	06 36 11.9	
	comp=E,78nm,18.2s,baz=292,slow=43						
YKA	Yellowknife Ar	20.90	7	P	Pn	06 32 11.6	-0.4
	comp=E,0.5nm,0.8s,baz=190,slow=11,SNR=7.5						

*WEL **16** 06:28:00, 43°.57S×172°.39E, h5km, ML3.8, Mw3.7, Moment Tensor Solution. s5 Moment tensor: Scale 10^{14} Nm; M_{rr}-0.51; $M_{\theta\theta}$1.66; $M_{\phi\phi}$-1.15; $M_{r\theta}$0.24; $M_{\theta\phi}$-3.11; $M_{\phi r}$0.73; Fault plane solution: $M_0$3.51000×10^{14} NP1: ϕ_s259.00000°, δ78.00000°, λ-171.00000°. NP2: ϕ_s167.00000°, δ82.00000°, λ-12.00000°. Principal axes: T 36.7400, Plg3.0000°, Azm213.0000°; N -33.5100, Plg75.0000°, Azm314.0000°; P -3.2400, Plg14.0000°, Azm123.0000°;*

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*NOU **16** 06:28:57.8, 43°.74S×172°.63E, h10km, MLv3.9, South Island, New Zealand*

WEL 16 06:28:58.3, 43°.6S±0°.8×**172°.4E**±0°.9, **h8**km±1km, **M3.7**/13, **ML3.9**/13, **MLv3.7**/13, **Error ellipse: s-maj=0.0km s-min=0.0km az=128.3, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RACZ	Rakaia	0.23	227	P	Pg	06 29 04.8	+1.9
MQZ	McQueen's Vall	0.24	125	P	Pg	06 29 04.9	+1.8
MQZ				S	Sg	06 29 08.5	+2.1
OXZ	Oxford	0.35	314	P	Pb	06 29 06.8	+0.1
OXZ				S	Sb	06 29 11.9	-0.5
AMCZ	Amberley	0.44	27	P	Pn	06 29 09.6	-1.3
OKCZ	Okains Bay	0.52	108	P	Pb	06 29 10.3	+0.7
WACZ	Wakanui South	0.54	226	P	Pb	06 29 10.7	+0.6
MHCZ	Mount Hutt	0.59	273	P	Pb	06 29 11.6	+0.7
GVZ	Greta Valley S	0.77	39	P	Pn	06 29 15.4	-0.1
LTZ	Lake Taylor	0.79	354	P	Pn	06 29 15.6	-0.2
ARCZ	Arundel	0.95	246	P	Pn	06 29 17.6	-0.4
RPZ	Rata Peaks	0.97	261	P	Pn	06 29 18.1	-0.2
INZ	Inchbonnie	1.09	321	P	Pn	06 29 19.8	-0.1
TMZ	Timaru	1.28	230	P	Pn	06 29 22.2	-0.4
WVZ	Waitaha Valley	1.30	292	P	Pg	06 29 23.1	0.0
KHZ	Kahutara	1.43	37	P	Pn	06 29 24.5	-0.1
GCSZ	Gaunt Creek Bo	1.52	279	P	Pb	06 29 26.7	+0.1
LBZ	Lake Benmore	1.78	242	P	Pn	06 29 29.5	+0.1
THZ	Tophouse	1.85	12	P	Pn	06 29 30.5	+0.2
FOZ	Fox Glacier	1.86	270	P	Pb	06 29 31.9	-0.6
DSZ	Denniston Nort	1.87	347	P	Pn	06 29 31.4	+0.8
ODZ	Otahua Downs	1.93	220	P	Pn	06 29 31.0	-0.4
BSWZ	Blackbirch Sta	2.16	31	P	Pn	06 29 35.3	+0.8
TUWZ	Tuamarina	2.43	29	P	Pn	06 29 39.6	+1.3
NNZ	Nelson	2.46	18	P	Pn	06 29 39.5	+0.8
HHSZ	Highcliff Hill	2.64	208	P	Pn	06 29 40.4	-0.8
JCZ	Jackson Bay	2.65	258	P	Pn	06 29 41.7	+0.3
QRZ	Quartz Range	2.74	2	P	Pn	06 29 43.4	+0.8
TCW	Tory Channel	2.74	31	P	Pn	06 29 43.7	+1.1
EAZ	Earnscleugh	2.76	232	P	Pn	06 29 42.4	-0.4
BHW	Baring Head	2.84	41	P	Pn	06 29 43.8	-0.1
PLWZ	Palliser	2.92	48	P	Pn	06 29 44.1	-0.9
DUWZ	D'Urville Isla	2.99	23	P	Pb	06 29 49.1	-2.7
MSWZ	Moikau Station	3.02	46	P	Pn	06 29 46.0	-0.4
TUZ	Tuapeka	3.09	218	P	Pn	06 29 46.9	-0.4
CAW	Cannon Point	3.17	40	P	Pn	06 29 47.7	-0.7
TRWZ	Traveller	3.27	50	P	Pn	06 29 49.4	-0.4
KIW	Kapiti Island	3.29	36	P	Pn	06 29 50.8	+0.6
MTW	Mount Morrison	3.34	45	P	Pn	06 29 50.3	-0.6
MSZ	Milford Sound	3.39	249	P	Pn	06 29 51.4	-0.1
OGWZ	Otaki Gorge	3.44	38	P	Pn	06 29 53.2	+1.0
MLZ	Mavora Lakes	3.54	238	P	Pn	06 29 53.0	-0.7
SYZ	Scrubby Hill	3.75	217	P	Pn	06 29 56.2	-0.3
MRZ	Mangatainoka R	3.76	40	P	Pn	06 29 56.4	-0.2
WHZ	Wether Hill Ro	3.92	232	P	Pn	06 29 57.4	-1.4
BFZ	Birch Farm	4.07	46	P	Pn	06 30 00.1	-0.8
DCZ	Deep Cove	4.19	241	P	Pn	06 30 02.2	-0.3
ANWZ	Angora Road	4.35	46	P	Pn	06 30 05.1	+0.3
KHEZ	Kahui Hut	4.44	17	P	Pn	06 30 09.0	+2.9
NEZ	North Egmont	4.48	17	P	Pn	06 30 10.0	+3.4
APZ	The Paps	4.50	222	P	Pn	06 30 05.8	-1.0
PKE	Pukeiti	4.54	16	P	Pn	06 30 09.2	+2.0
PYZ	Puysegur Point	4.81	235	P	Pn	06 30 09.8	-1.2
WNVZ	Wahianoa	4.88	31	P	Pn	06 30 14.7	+2.6
TUVZ	Tukino	4.95	31	P	Pn	06 30 15.7	+2.5
NGZ	Ngauruhoe	5.01	30	P	Pn	06 30 17.1	+3.1
OTVZ	Oturere	5.05	30	P	Pn	06 30 15.9	+1.5
WTVZ	West Tongariro	5.06	30	P	Pn	06 30 18.0	+3.4
TMVZ	Te Maari	5.10	30	P	Pn	06 30 17.2	+2.0
KWHZ	Kaweka Forest	5.13	38	P	Pn	06 30 18.6	+3.0
HIZ	Hauiti	5.39	21	P	Pn	06 30 20.1	+1.1
RUGZ	Raukumara Rang	6.89	37	P	Pn	06 30 40.4	+0.6

NNC 16 06:30:53.2±2.4, **54°.13N**×**86°.47E, h0**km, **mb3.6, mpv2.9, 7C-4D, Error ellipse: s-maj=21.2km s-min=11.6km az=13.0, Suspected Mining explosion., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	0.99	260	⇑P	Pg	06 31 11.2	-0.8
	0.5nm,0.3s						
ZAA0				⇓S	Sb	06 31 26.3	-0.4
	1.3nm,0.3s						
KURK	Kurchatov	5.89	238	⇑Pn	Pn	06 32 22.9	+1.3
	0.8nm,0.4s						
KURK				⇓Sn	Sn	06 33 29.9	+0.2
	0.9nm,0.7s						
KURK				⇑Lg	Lg	06 34 01.6	
	3.0nm,0.8s						
KURBB	Kurchatov Arra	5.99	237	⇑Pn	Pn	06 32 24.2	+1.1
	2.8nm,0.5s						
KURBB				⇓Sn	Sn	06 33 33.0	+0.7
	1.3nm,0.4s						
KURBB				⇓Lg	Lg	06 34 03.4	
	3.2nm,0.7s						
MK31	Makanchi Array	7.81	202	⇑Pn	Pn	06 32 49.4	+1.5
	0.4nm,0.3s,baz=25,slow=13,SNR=63						
MK31				⇑Sn	Sn	06 34 16.6	-0.4
	0.4nm,0.6s,baz=20,slow=28,SNR=2.6						
MK31				⇑Lg	Lg	06 35 00.5	
	0.6nm,0.6s						

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*IDC **16** 06:47:50.1±0.7, 0°.35S×132°.30E, h0km, mb4.4/8, mb1 4.7/10, mb1mx4.3/34, mbtmp4.5/10, ML4.5/2, MS3.3/14, Ms1 3.3/14, ms1mx3.2/41, Error ellipse: s-maj=16.4km s-min=11.5km az=135.0*

*DJA **16** 06:47:53.2±0.5, 0°S±6°×13°2E±°, h10km, M4.7/10, mb4.7/2, mB4.7/1, MLv4.7/10, Mw(mB)3.9/1*

*NEIC **16** 06:47:55.2±1.5, 0°.37S±0°.09×132°.10E±0°.06, h35km±1km, mb4.6/27, Error ellipse: s-maj=14.9km s-min=9.8km az=17.0*

ISC 16 06:47:54.8±0.5, **0°.39S**±0°.06×**132°.12E**±0°.05, **h31**km, **n73,** σ**1ˢ80**/60, **mb4.5**/19, **MS3.3**/8, **Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	0.97	241	Pg	Pn	06 48 12.5	+0.1
	129nm,0.3s,baz=238,slow=22,SNR=272						
SIJI				Lg	Lg	06 48 28.1	
	555nm,0.3s,baz=196,slow=22,SNR=19						
SIJI				LR	LR	06 48 50.0	
	comp=Z,2µm,20.3s,baz=93,slow=52						
SWI	Sorong	0.98	241	P	Pn	06 48 12.5	+0.1
SWI				S	Sn	06 48 26.4	+1.2
RKPI	Ransiki, Papua	2.34	118	P	Pn	06 48 31.4	+0.2
FAKI	Fak Fak	2.51	177		Pn	06 48 34.1	+0.5
FAKI	Fak Fak	2.51	177	P	Pn	06 48 34.3	+0.7
BAKI	Biak	4.07	101	P	Pn	06 48 54.5	-0.4
MSAI	Masohi	4.33	227	P	Pn	06 49 00.5	+1.9
BNDI	Bandanaira	4.66	208	P	Pn	06 49 04.6	+1.5
NLAI	Namlea	5.76	241	P	Pn	06 49 17.6	-0.6
JAY	Jayapura	8.84	104	LR	LR	06 53 52.3	
	comp=Z,307nm,20.2s,baz=352,slow=42						
DAV	Davao City (W)	9.88	319	LR	LR	06 54 31.1	
	comp=Z,291nm,18.5s,baz=150,slow=40						
SOEI	Soe	12.15	220	Pn	Pn	06 50 41.8	-4.1
BATI	Baumata	12.88	221	Pn	Pn	06 50 56.5	+0.7
	12nm,0.3s,baz=71,slow=1.1,SNR=9.6						
BATI				LR	LR	06 56 16.7	
	comp=Z,187nm,18.1s,baz=52,slow=39						
KAPI	Kappang	13.18	249	LR	LR	06 58 04.5	
	comp=Z,76nm,18.6s,baz=60,slow=46						
MYLDM	Lahad Datu	14.69	292	Pn	Pn	06 51 19.4	-1.2
COEN	Coen	17.36	141		Pn	06 51 55.3	+0.3
FITZ	Fitzroy Crossi	18.71	200	P	P	06 52 08.6	-2.3
	1.0nm,0.3s,baz=33,slow=12,SNR=16						
FITZ				S	Sn	06 55 30.5	-9.5
	0.8nm,0.3s,baz=214,slow=12,SNR=5.2						
GUMO	Guam	18.78	42	LR	LR	06 59 20.1	
	comp=Z,25nm,18.3s,baz=270,slow=37						
WB0	Warramunga Arr	19.38	174	P	P	06 52 18.4	+0.1
WB0				IAmb	IAmb	06 52 21.8	
	comp=Z,27nm,1.1s						
WRAB	Tennant Creek	19.54	174	P	P	06 52 16.4	-3.7
WRA	Warramunga Arr	19.55	174	P	P	06 52 18.4	-1.8
	comp=Z,0.8nm,0.3s,baz=352,slow=12,SNR=42						
WRA				S	S	06 55 49.7	-10
	comp=Z,0.7nm,0.3s,baz=354,slow=23,SNR=7.6						
WRA				LR	LR	07 01 34.4	
	comp=Z,103nm,19.2s,baz=5.0,slow=42						
WRA	Warramunga Arr	19.55	174	P	P	06 52 20.2	0.0
WB2	Warramunga Arr	19.55	174	P	P	06 52 20.0	-0.1
WR0	Warramunga Arr	19.59	173	P	P	06 52 20.3	-0.3
WR0				IAmb	IAmb	06 52 22.9	
	comp=Z,38nm,1.1s						
AS31	Alice Springs	23.20	176	P	P	06 52 58.9	-0.4
AS31				IAmb	IAmb	06 53 01.9	
	comp=Z,17nm,1.1s						
ASAR	Alice Springs	23.20	176	P	P	06 52 59.0	-0.2
	comp=Z,61nm,0.9s,baz=356,slow=9.2,SNR=134						
ASAR				S	S	06 57 15.5	+6.3
	comp=Z,2.6nm,0.8s,baz=360,slow=29,SNR=4.6						
ASAR				LR	LR	07 04 05.4	
	comp=Z,128nm,18.1s,baz=26,slow=42						
CTAO	Charters Tower	23.97	146	P	P	06 53 07.7	+1.0
CTAO				IAmb	IAmb	06 53 23.9	
	comp=Z,33nm,1.4s						
PSA00	Pilbara Seismi	24.22	209	P	P	06 53 09.6	+0.7
PSA00				IAmb	IAmb	06 53 13.0	
	comp=Z,14nm,0.8s						
FORT	Forrest	30.46	187	P	P	06 54 05.9	+1.0
BBOO	Buckleboo	32.46	174	P	P	06 54 22.5	0.0
BBOO				IAmb	IAmb	06 54 24.9	
	comp=Z,12nm,1.1s						
STKA	Stephens Creek	32.57	165	P	P	06 54 23.1	-0.4
	comp=Z,3.5nm,0.5s,baz=339,slow=8.0,SNR=13						
STKA				LR	LR	07 08 33.7	
	comp=Z,81nm,19.1s,baz=10,slow=38						
STKA	Stephens Creek	32.57	165	P	P	06 54 23.0	-0.4
PSI	Prapat	33.34	276	LR	LR	07 08 57.9	
	comp=Z,42nm,20.0s,baz=272,slow=38						
ARMA	Armidale	35.15	150	P	P	06 54 45.7	-0.4
MJAR	Matsushiro Arr	37.18	8	LR	LR	07 09 04.9	
	comp=Z,38nm,19.7s,baz=235,slow=34						
CMAR	Chiang Mai Arr	37.60	302	LR	LR	07 11 00.6	
	comp=Z,29nm,20.6s,baz=190,slow=37						
KSRS	Korea Array	37.86	355	LR	LR	07 09 46.4	
	comp=Z,36nm,20.1s,baz=162,slow=35						
H11S3	WAKE ISLAND Hy	38.80	59	T	T	07 37 58.4	
	baz=314,slow=74,SNR=12						
H11S2	WAKE ISLAND Hy	38.82	59	T	T	07 38 00.0	
	baz=255,slow=74,SNR=9.6						
H11S1	WAKE ISLAND Hy	38.82	59	T	T	07 36 28.1	
	SNR=4.1						
H11N1	WAKE ISLAND Hy	39.51	58	T	T	07 37 09.7	
	baz=246,slow=75,SNR=22						
H11N2	WAKE ISLAND Hy	39.52	58	T	T	07 37 17.3	
	baz=246,slow=75,SNR=22						
H11N3	WAKE ISLAND Hy	39.52	58	T	T	07 37 13.4	
	baz=246,slow=75,SNR=25						
SONM	Songino Array	52.99	339	P	P	06 57 08.1	-0.7
	comp=Z,1.4nm,0.8s,baz=151,slow=6.9,SNR=8.1						
SONM	Songino Array	52.99	339	P	P	06 57 07.3	-1.4
THZ	Tophouse	55.18	143	P	P	06 57 25.1	+0.3
THZ				IAmb	IAmb	06 57 40.8	
	comp=Z,12nm,1.1s						
MK31	Makanchi Array	64.01	324	P	P	06 58 25.8	+0.3
MKAR	Makanchi Array	64.01	324	P	P	06 58 25.9	+0.4
	comp=Z,1.3nm,0.5s,baz=115,slow=8.0,SNR=22						
MKAR				LR	LR	07 27 52.8	
	comp=Z,26nm,18.7s,baz=336,slow=38						
MKAR	Makanchi Array	64.01	324	P	P	06 58 25.6	+0.1
MAKZ	Makanchi	64.20	324	P	P	06 58 27.5	+0.7
MAKZ				IAmb	IAmb	06 58 29.9	
	comp=Z,4.4nm,1.1s						
SEY	Seymchan	64.97	10	P	P	06 58 32.4	+1.0
	comp=Z,4.7nm,0.7s,baz=199,slow=5.1,SNR=18						
ZALV	Zalesovo Beam	66.71	332	P	P	06 58 42.5	-0.2
	comp=Z,0.7nm,0.3s,baz=92,slow=3.4,SNR=4.0						
ZALV	Zalesovo Beam	66.71	332	P	P	06 58 42.3	-0.5
AAK	Ala-Archa	67.01	317	LR	LR	07 29 48.3	
	comp=Z,43nm,19.3s,baz=68,slow=38						
KURK	Kurchatov	68.11	327	P	P	06 58 52.3	+0.6
KURK				IAmb	IAmb	06 59 09.5	
	comp=Z,8.5nm,1.4s						
KKAR	Karatay Array	69.90	317	P	P	06 59 03.4	+0.4
TIXI	Tiksi	71.95	359	P	P	06 59 14.0	-0.9
BRVK	Borovoye	73.77	326	P	P	06 59 26.0	0.0
VNDA	Vanda	78.72	174	P	P	06 59 53.6	-0.1
	comp=Z,7.3nm,0.9s,baz=345,slow=4.1,SNR=5.7						
VNDA	Vanda	78.72	174	P	P	06 59 54.6	+0.8
ABKAR	Akbulak array	78.73	321	P	P	06 59 54.9	+0.6
ABKAR				IAmb	IAmb	07 00 00.4	
	comp=Z,4.3nm,0.9s						
TTA	Tatalina	82.17	26	P	P	07 00 12.3	-0.2
TTA				IAmb	IAmb	07 00 13.5	
	comp=Z,4.4nm,1.1s						
PPLA	Purkeypile	83.85	27	P	P	07 00 20.4	-1.0
PPLA				IAmb	IAmb	07 00 30.9	
	comp=Z,8.8nm,1.1s						
IMAR	Indian Mountai	83.93	23	P	P	07 00 21.8	+0.2
RND	Reindeer	85.44	26	P	P	07 00 28.7	-0.5
ILAR	Eielson Array	86.51	25	P	P	07 00 32.8	-1.7
	comp=Z,1.5nm,0.8s,baz=252,slow=5.0,SNR=13						
ILAR	Eielson Array	86.51	25	P	P	07 00 33.4	-1.1
RAYN	Ar Rayn	87.05	293	P	P	07 00 37.5	-0.5
RAYN				IAmb	IAmb	07 00 39.7	
	comp=Z,7.0nm,1.2s						
QSPA	South Pole Qui	89.54	180	P	P	07 00 49.2	+0.2
PLCA	Paso Flores	134.17	156	PKP	PKiKP	07 07 11.2	-0.1
	comp=Z,1.9nm,0.8s,baz=254,slow=3.0,SNR=3.8						
PLCA	Paso Flores	134.17	156	PKPdf	PKiKP	07 07 11.4	+0.2
CPUP	Villa Florida	151.91	162	PKPbc	PKPbc	07 07 47.4	-0.2
	comp=Z,2.5nm,0.7s,baz=188,slow=3.2,SNR=6.2						
LPAZ	La Paz	154.04	131	PKPab	PKPab	07 08 08.0	+1.4
	comp=Z,1.6nm,0.8s,baz=187,slow=5.9,SNR=5.4						

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*IDC **16** 07:07:25.0±1.3, 6°.39S×103°.75E, h0km, mb4.0/12, mb1 4.1/13, mb1mx3.8/53, mbtmp4.0/13, ML3.9/1, MS2.9/2, Ms1 2.9/2, ms1mx2.6/31, Error ellipse: s-maj=46.5km s-min=14.7km az=53.0*

*DJA **16** 07:07:27.1±0.4, 7°S±3°×10°4E±°, h10km, M4.1/9, MLv4.1/9*

*NEIC **16** 07:07:31.5±1.9, 6°.3S±0°.1×104°.1E±0°.1, h35km±1km, mb4.5/11, Error ellipse: s-maj=31.0km s-min=10.7km az=220.0*

ISC 16 07:07:32.3±0.8, **6°.42S**±0°.08×**103°.96E**±0°.08, **h48**km, **n43,** σ**1ˢ00**/46, **mb4.1**/16, **Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KASI	Kota Agung	1.04	31	P	Pn	07 07 48.8	-1.7
LWLI	Liwa	1.40	4	P	Pn	07 07 54.9	-0.6
BLSI	Bandar Lampung	1.65	51	P	Pn	07 07 58.2	-0.7
KLSI		1.88	24	P	Pn	07 08 01.7	-0.3
KLSI				S	Sn	07 08 26.6	+2.0
MNAI	Manna	2.28	334	Pn	Pn	07 08 07.6	+0.1
MNAI	Manna	2.28	334	P	Pn	07 08 06.8	-0.7
MNAI				S	Sn	07 08 36.8	+2.5
LHSI	Lahat	2.61	350	P	Pn	07 08 12.4	+0.3
DBJI	Dramaga	2.77	93	P	Pn	07 08 12.5	-1.8
LEM	Lembang	3.65	97	Pn	Pn	07 08 27.5	+1.0
	8.7nm,0.3s,baz=130,slow=23,SNR=5.2						
LEM				Sn	Sn	07 09 10.3	+1.8
	10nm,0.3s,baz=198,slow=22,SNR=4.4						
CISI	Cisompet, Garu	3.99	107	Pn	Pn	07 08 29.8	-1.2
CISI	Cisompet, Garu	3.99	107	P	Pn	07 08 29.2	-1.8
UGM	Wanagama	6.68	103		Pn	07 09 08.1	+0.2
JAGI	Jajag, Banyuwa	10.31	102	Pn	Pn	07 09 58.3	+0.6
KAPI	Kappang	15.77	86	LR	LR	07 17 02.1	
	comp=Z,36nm,18.3s,baz=237,slow=36						
FITZ	Fitzroy Crossi	24.12	121	P	P	07 12 44.3	+0.4
	1.8nm,0.9s,baz=309,slow=13,SNR=2.1						
FITZ				LR	LR	07 22 56.1	
	comp=Z,33nm,19.7s,baz=268,slow=38						
FITZ	Fitzroy Crossi	24.12	121	P	P	07 12 43.8	0.0
FITZ				IAmb	IAmb	07 13 12.0	
	comp=Z,25nm,1.6s						
WB0	Warramunga Arr	32.40	117	P	P	07 13 57.6	-0.2
WRA	Warramunga Arr	32.41	117	P	P	07 13 58.0	+0.1
	comp=Z,1.5nm,0.6s,baz=286,slow=13,SNR=18						
WRA				PcP	PcP	07 16 44.4	-0.3
	comp=Z,0.3nm,0.4s,baz=301,slow=2.1,SNR=5.5						
WRA	Warramunga Arr	32.41	117	P	P	07 13 57.8	-0.1
WB2	Warramunga Arr	32.42	117	P	P	07 13 57.7	-0.3
WR0	Warramunga Arr	32.59	117	P	P	07 13 59.7	+0.2
WR0				IAmb	IAmb	07 14 34.3	
	comp=Z,36nm,1.9s						
ASAR	Alice Springs	33.50	124	P	P	07 14 08.0	+0.5
	comp=Z,0.5nm,0.4s,baz=309,slow=8.4,SNR=14						
ASAR	Alice Springs	33.50	124	P	P	07 14 08.1	+0.6
AS31	Alice Springs	33.50	124	P	P	07 14 08.2	+0.8
STKA	Stephens Creek	43.28	131	P	P	07 15 30.5	+1.0
	comp=Z,2.0nm,0.5s,baz=308,slow=8.7,SNR=8.9						

STKA	Stephens Creek	43.28	131	P	P	07 15 30.3	+0.8
KSRS	Korea Array	49.04	25	P	P	07 16 14.4	-0.2
	comp=Z,1.3nm,0.7s,baz=216,slow=8.1,SNR=3.3						
SONM	Songino Array	54.06	2	P	P	07 16 51.7	-0.4
	comp=Z,1.8nm,0.8s,baz=177,slow=8.2,SNR=15						
SONM	Songino Array	54.06	2	P	P	07 16 52.0	-0.1
MK31	Makanchi Array	56.37	342	P	P	07 17 08.0	-0.6
MK31				IAmb	IAmb	07 17 45.8	
	comp=Z,6.5nm,1.9s						
MKAR	Makanchi Array	56.37	342	P	P	07 17 08.0	-0.6
	comp=Z,0.8nm,0.5s,baz=155,slow=9.0,SNR=15						
USRK	Ussuriysk Ar.	56.37	24	P	P	07 17 08.1	-0.5
	comp=Z,2.1nm,0.5s,baz=208,slow=5.3,SNR=6.5						
KLR	Kul'dur	60.49	21	P	P	07 17 35.8	-1.5
	comp=Z,0.6nm,0.4s,baz=224,slow=2.5,SNR=6.8						
KURBB	Kurchatov Arra	60.92	342	P	P	07 17 38.4	-1.7
	comp=Z,0.3nm,0.3s,baz=153,slow=6.4,SNR=6.1						
ZAA0	Zalesovo Array	62.26	347	P	P	07 17 48.6	-0.6
ZAA0				IAmb	IAmb	07 17 50.1	
	comp=Z,3.0nm,1.1s						
ZALV	Zalesovo Beam	62.26	347	P	P	07 17 48.3	-0.9
	comp=Z,1.6nm,0.4s,baz=149,slow=5.4,SNR=9.5						
ZALV	Zalesovo Beam	62.26	347	P	P	07 17 48.1	-1.1
BVAR	Borovoye Array	65.69	338	P	P	07 18 10.7	-1.1
	comp=Z,0.7nm,0.5s,baz=75,slow=7.9,SNR=4.5						
ABKAR	Akbulak array	67.40	330	P	P	07 18 22.1	-0.6
ABKAR				IAmb	IAmb	07 18 36.0	
	comp=Z,8.0nm,1.6s						
TXAR	Lajitas Array	145.38	45	PKPbc	PKPab	07 27 06.4	+0.5
	comp=Z,1.0nm,0.6s,baz=247,slow=1.1,SNR=14						
TXAR	Lajitas Array	145.38	45	PKPbc	PKPab	07 27 06.6	+0.6
TKL	Tuckaleechee C	150.04	13	PKPbc	PKPbc	07 27 17.1	-1.1
	comp=Z,2.1nm,0.8s,baz=65,slow=1.2,SNR=4.3						
TKL	Tuckaleechee C	150.04	13		PKPbc	07 27 18.3	+0.1

IDC 16 07:40:11.2±4.4, 5°.78S×131°.26E, h0^{km}, mb3.9/1, mb1 3.6/3, mb1mx3.4/20, mbtmp3.4/3, ML3.6/2, Error ellipse: s-maj=328.8km s-min=30.5km az=72.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.39	168	Pn	Pn	07 43 38.2	+1.8
	0.4nm,0.3s,baz=351,slow=14,SNR=17						
WRA				Sn	Sn	07 46 06.8	-10
	0.4nm,0.3s,baz=341,slow=24,SNR=6.1						
ASAR	Alice Springs	17.96	172	P	Pn	07 44 21.4	-1.2
	0.1nm,0.3s,baz=337,slow=9.2,SNR=6.2						
MKAR	Makanchi Array	67.91	326	P	P	07 51 11.8	0.0
	0.6nm,0.5s,baz=117,slow=8.1,SNR=16						

IDC 16 07:50:34.7±1.8, 2°.81N×127°.70E, h0^{km}, mb3.6/5, mb1 3.8/5, mb1mx3.5/36, mbtmp3.6/5, MS2.9/2, Ms1 2.9/2, ms1mx2.4/37, Error ellipse: s-maj=102.5km s-min=24.7km az=68.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	20.87	185	P	P	07 55 18.9	+0.4
	2.2nm,1.0s,baz=31,slow=12,SNR=1.9						
FITZ				LR	LR	08 03 40.2	
	comp=Z,21nm,18.4s,baz=170,slow=38						
WRA	Warramunga Arr	23.53	164	P	P	07 55 45.4	-1.4
	0.7nm,0.5s,baz=344,slow=11,SNR=8.4						
ASAR	Alice Springs	27.00	167	P	P	07 56 19.6	+1.0
	0.4nm,0.6s,baz=344,slow=8.6,SNR=6.0						
PSI	Prapat	28.74	271	LR	LR	08 08 34.1	
	comp=Z,31nm,19.1s,baz=271,slow=38						
STKA	Stephens Creek	36.94	160	P	P	07 57 45.6	0.0
	2.9nm,0.7s,baz=342,slow=9.8,SNR=6.2						
MKAR	Makanchi Array	58.86	325	P	P	08 00 35.2	-0.1
	0.2nm,0.4s,baz=125,slow=6.6,SNR=4.4						

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*IDC **16** 07:56:26.2±1.0, 21°.23S×68°.10W, h104^{km}±10^{km}, mb4.3/9, mb1 4.2/13, mb1mx4.0/28, mbtmp4.5/13, Error ellipse: s-maj=19.4km s-min=11.1km az=127.0*

*SJA **16** 07:56:27.5±0.7, 21°.39S×68°.39W, h143^{km}±4^{km}, ML4.3, MW4.0*

*VAO **16** 07:56:27.5±0.3, 21°.25S×68°.25W, h122^{km}±6^{km}, mb4.5*

*NEIC **16** 07:56:27.2±1.6, 21°.37S±0°.04×68°.18W±0°.07, h119^{km}±6^{km}, Error ellipse: s-maj=10.2km s-min=5.6km az=75.0*

*GUC **16** 07:56:29.0±0.6, 21°.41S×68°.32W, h131^{km}±4^{km}, ML4.3*

ISC 16 07:56:27.7±0.5, 21°.37S±0°.03×68°.29W±0°.04, h132^{km}±5^{km}, n149, σ1^{s}.41/182, mb4.7/27, 14C, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	IPOC Station P	0.99	244	⇑*i*P	Pn	07 56 51.6	+0.8
PB09				*i* S	Sn	07 57 08.7	+0.4
PB09				IAML		07 57 11.7	
	comp=N,3µm,0.6s						
PB09	IPOC Station P	0.99	244		Pn	07 56 51.6	+0.8
PB09				Sn	Sn	07 57 09.0	+0.7
PB09	IPOC Station P	0.99	244	*e*P	Pn	07 56 51.6	+0.8
PB09				*e*S	Sn	07 57 09.0	+0.7
PB09				IAML		07 57 10.2	
	comp=Z,4µm,0.5s						
PB01	IPOC Station P	1.17	286	⇑*i*P	Pn	07 56 52.5	+0.1
PB01				*i* S	Sn	07 57 10.9	-0.3
PB01				IAML		07 57 13.0	
	comp=E,6µm,0.5s						
PB01	IPOC Station P	1.17	286		Pn	07 56 52.5	+0.1
PB01				Sn	Sn	07 57 11.2	0.0
PB01	IPOC Station P	1.17	286	*e*P	Pn	07 56 52.6	+0.1
PB01				*e*S	Sn	07 57 11.8	+0.6
PB01				IAML		07 57 13.8	
	comp=Z,2µm,0.2s						
LVC	Limon Verde	1.36	205	P	Pn	07 56 55.5	+0.7
	comp=Z,213nm,0.3s,baz=17,slow=9.5,SNR=1613						
LVC				S	Sn	07 57 14.6	-0.8
	comp=Z,126nm,0.3s,baz=172,slow=19,SNR=24						
LVC	Limon Verde	1.36	205	*e*P	Pn	07 56 55.5	+0.7
LVC				*e*S	Sn	07 57 15.7	+0.3
LVC	Limon Verde	1.36	205		Pn	07 56 55.5	+0.7
LVC				Sn	Sn	07 57 16.0	+0.6
LVC	Limon Verde	1.36	205	*e*P	Pn	07 56 55.5	+0.7
LVC				*e*S	Sn	07 57 16.6	+1.1
LVC	Limon Verde	1.36	205	*e*P	Pn	07 56 55.5	+0.7
LVC				*e*S	Sn	07 57 16.1	+0.7
PB08	IPOC Station P	1.47	326	⇑*i*P	Pn	07 56 57.3	+1.3
PB08				*i* S	Sn	07 57 18.7	+1.3
PB08				IAML		07 57 19.7	
	comp=N,2µm,0.4s						
PB08	IPOC Station P	1.47	326		Pn	07 56 57.1	+1.1
PB08				Sn	Sn	07 57 19.2	+1.7
PB08	IPOC Station P	1.47	326	*e*P	Pn	07 56 57.2	+1.3
PB08				*e*S	Sn	07 57 19.1	+1.7
PB08				IAML		07 57 22.9	
	comp=Z,1µm,0.8s						
PB07	IPOC Station P	1.53	256	⇑*i*P	Pn	07 56 56.6	+0.2
PB07				*i* S	Sn	07 57 17.8	-0.5
PB07				IAML		07 57 19.3	
	comp=E,6µm,0.4s						
PB07	IPOC Station P	1.53	256		Pn	07 56 56.6	+0.2
PB07				Sn	Sn	07 57 18.1	-0.2
PB07	IPOC Station P	1.53	256	*e*P	Pn	07 56 56.6	+0.2
PB07				*e*S	Sn	07 57 18.2	-0.1
PB07				IAML		07 57 19.1	
	comp=Z,4µm,0.6s						
PB06	IPOC Station P	1.79	222	⇑*i*P	Pn	07 56 59.7	+0.4
PB06				*i* S	Sn	07 57 23.4	-0.2
PB06				IAML		07 57 24.9	
	comp=E,3µm,0.6s						
PB06	IPOC Station P	1.79	222		Pn	07 56 59.8	+0.4
PB06				Sn	Sn	07 57 23.7	+0.1
PB06	IPOC Station P	1.79	222	*e*P	Pn	07 56 59.8	+0.4
PB06				*e*S	Sn	07 57 23.9	+0.4
PB06				IAML		07 57 24.8	
	comp=Z,978nm,0.2s						
PATCX	Punta Patache	1.83	287	⇑*i*P	Pn	07 57 00.1	+0.4
PATCX				*i* S	Sn	07 57 24.0	-0.2
PATCX	Punta Patache	1.83	287		Pn	07 57 00.1	+0.4
PATCX	Punta Patache	1.83	287	*e*P	Pn	07 57 00.1	+0.4
HMBC	Humberstone	1.85	306	⇑*i*P	Pn	07 57 00.1	0.0
HMBC				*e*S	Sn	07 57 24.4	-0.5
HMBC				IAML		07 57 28.8	
	comp=N,3µm,0.3s						
TA01	Diego Aracena	1.94	294	⇑*i*P	Pn	07 57 01.1	+0.1
TA01				*i* S	Sn	07 57 26.0	-0.5
TA01				IAML		07 57 27.7	
	comp=N,6µm,0.4s						
TA01	Diego Aracena	1.94	294	Pn	Pn	07 57 01.1	+0.1
PB04	IPOC Station P	1.98	241	⇑*i*P	Pn	07 57 01.5	-0.1
PB04				*i* S	Sn	07 57 26.4	-1.3
PB04				IAML		07 57 35.4	
	comp=N,2µm,0.2s						
PB04	IPOC Station P	1.98	241		Pn	07 57 01.5	-0.1
PB04	IPOC Station P	1.98	241	*e*P	Pn	07 57 02.0	+0.3
PB04				*e*S	Sn	07 57 27.4	-0.3
PB04				IAML		07 57 29.3	
	comp=Z,2µm,0.2s						
PB15	IPOC Station P	2.13	211	⇑*i*P	Pn	07 57 04.1	+0.6
PB15				*e*S	Sn	07 57 31.4	+0.3
PB15	IPOC Station P	2.13	211		Pn	07 57 04.2	+0.6
PB15	IPOC Station P	2.13	211	*e*P	Pn	07 57 04.3	+0.7
PB15				*e*S	Sn	07 57 32.2	+1.1
PB15				IAML		07 57 38.3	
	comp=Z,3µm,0.2s						
PSGC	Pisagua	2.46	315	⇑*i*P	Pn	07 57 07.2	-0.4
PSGC				*i* S	Sn	07 57 37.1	-1.2
PSGC				IAML		07 57 39.5	
	comp=E,1µm,0.3s						
PSGCX	Pisagua	2.46	315	Pn	Pn	07 57 07.2	-0.4
PSGCX	Pisagua	2.46	315	*e*P	Pn	07 57 07.2	-0.4
MNMC	Minye Minye	2.54	331	⇑*i*P	Pn	07 57 09.8	+1.0
MNMC				*e*S	Sn	07 57 41.2	+0.8
MNMC	Minye Minye	2.54	331		Pn	07 57 09.9	+1.1
MNMCX	Minye Minye	2.54	331	*e*P	Pn	07 57 09.6	+0.8
YJA	Yavi	2.70	108	*e*P	Pn	07 57 13.1	+2.2
YJA				*e*S	Sn	07 57 48.1	+4.0
PB10	IPOC Station P	2.99	224	*e*P	Pn	07 57 14.4	+0.1
PB10				*i* S	Sn	07 57 46.3	-3.9
PB10				IAML		07 58 01.8	
	comp=N,402nm,0.4s						
PB10	IPOC Station P	2.99	224	Pn	Pn	07 57 14.6	+0.4
PB10	IPOC Station P	2.99	224	*e*P	Pn	07 57 14.5	+0.2
PB10				*e*S	Sn	07 57 48.8	-1.4
AP01	Chacalluta	3.56	327	Pn	Pn	07 57 21.2	-0.4
PB14	IPOC Station P	3.78	211	Pn	Pn	07 57 24.8	-0.1
PB14	IPOC Station P	3.78	211	*e*P	Pn	07 57 26.5	+1.6
PB14				*e*S	Sn	07 58 06.9	-2.3
PB14				IAML		07 58 19.7	
	comp=Z,338nm,1.0s						
GO02	Mina Guanaco	3.96	197	*e*P	Pn	07 57 26.9	-0.4
GO02	Mina Guanaco	3.96	197	Pn	Pn	07 57 27.1	-0.2
SLA	San Lorenzo	4.21	143	*e*P	Pn	07 57 32.7	+2.4
LPAZ	La Paz	5.06	2	P	Pn	07 57 42.2	0.0
	comp=Z,8.9nm,0.3s,baz=168,slow=6.9,SNR=61						
LPAZ	La Paz	5.06	2		Pn	07 57 44.2	+2.0
AC01	Pan de Azucar	5.21	204	Pn	Pn	07 57 41.8	-1.8
AC02	Maricunga	5.50	188	Pn	Pn	07 57 47.4	-0.5
AHML	Horco Molle	6.03	154	*e*P	Pn	07 57 56.4	+1.8
GO03	Copiap	6.45	196	Pn	Pn	07 57 57.8	-2.5
AC04	Llanos de Chal	7.26	200	Pn	Pn	07 58 07.3	-3.8
AC05	El Transito	7.65	193	Pn	Pn	07 58 14.1	-2.5
LCO	Las Campanas	7.92	196	Pn	Pn	07 58 16.6	-3.6
SIV	San Ignacio	8.68	53	P	Pn	07 58 27.6	-2.7
	comp=Z,26nm,0.3s,baz=256,slow=10,SNR=434						
SIV				S	Sn	07 59 59.0	-7.7
	comp=Z,1.3nm,0.3s,baz=339,slow=20,SNR=7.1						
CO01	Juntas del Tor	8.72	190	Pn	Pn	07 58 30.6	-0.5
GO04	Tololo Observa	9.05	194	Pn	Pn	07 58 32.7	-2.8
CO03	El Pedregal	9.67	192	Pn	Pn	07 58 39.5	-4.2
CPUP	Villa Florida	11.18	118	P	Pn	07 59 00.6	-3.1
	comp=Z,0.2nm,0.3s,baz=317,slow=10,SNR=5.7						
CPUP	Villa Florida	11.18	118		Pn	07 59 02.6	-1.0
VILB	Vilhena	11.39	44	*e*P	Pn	07 59 04.8	-1.8
VA03	San Esteban	11.53	190		Pn	07 59 08.3	-0.1
ETMB	Extrema	11.66	10	*e*P	Pn	07 59 08.5	-1.6
MT02	Curacav	12.11	191	Pn	Pn	07 59 15.5	-0.4
PP1B	Ponte de Pedra	13.19	76	*e*P	Pn	07 59 30.1	+0.1
SAML	Samuel	13.29	22	Pn	Pn	07 59 31.0	-0.4
SAML	Samuel	13.29	22	*e*P	Pn	07 59 29.2	-2.2
BO02	Sierra Bellavi	13.55	189	Pn	Pn	07 59 34.5	-0.1
TRCB	Terra Rica	14.58	98	*e*P	Pn	07 59 47.4	-0.4
PTGB	Pitanga	15.30	106	*e*P	Pn	07 59 56.7	-0.1
BI02	San Fabin de	15.46	189	Pn	Pn	07 59 57.8	-0.9
ITAB	Concordia	15.84	115	*e*P	P	08 00 04.2	-0.3
PCMB	Pacaembu	15.85	94	*e*P	Pn	08 00 03.9	+0.3
CPSB	Cacapava Do Su	16.09	127	*e*P	P	08 00 07.5	+0.2
ARAG	Araguaiana, MT	16.60	73	*e*P	P	08 00 13.1	+0.1
FRTB	Fartura	17.43	100	*e*P	Pn	08 00 22.5	-0.3
LC01	Cunco	17.74	189	P	P	08 00 24.4	-0.9
BB19B	Bebedouro	18.43	93	*e*P	P	08 00 33.3	+0.2
SNDB	Serra Nova Dou	18.75	63	*e*P	P	08 00 36.3	-0.3
NPGB	Novo Progresso	18.95	43	*e*P	P	08 00 37.5	-1.2
IPMB	Ipameri, GO	19.20	83	*e*P	P	08 00 41.8	+0.3
PLCA	Paso Flores	19.40	185	P	Pn	08 00 45.1	-0.9
	comp=Z,0.2nm,0.3s,baz=0.9,slow=12,SNR=14						
PLCA	Paso Flores	19.40	185	P	Pn	08 00 45.2	-0.7
MACA	Manacapuru-AM	19.55	23	*e*P	P	08 00 44.1	-1.2
VAO	Valinhos	19.81	99	*e*P	P	08 00 47.6	-0.5
BDFB	Brasilia	20.04	77	P	P	08 00 49.2	-1.5
	comp=Z,0.9nm,0.3s,baz=263,slow=11,SNR=7.4						
BDFB	Brasilia	20.04	77	P	P	08 00 50.1	-0.6
ITTB	Itaituba	20.84	38	*e*P	P	08 00 58.4	-0.7
PEXB	Peixe	21.22	67	*e*P	P	08 01 02.0	-1.3
PTGA	Pitinga	22.06	23	P	P	08 01 10.0	-2.1
	comp=Z,4.8nm,0.4s,baz=325,slow=23,SNR=12						
PTGA	Pitinga	22.06	23	P	P	08 01 10.0	-2.1
PTGA	Pitinga	22.06	23	*e*P	P	08 01 10.2	-1.9
GO07	Milladeo Hill,	22.14	190	P	P	08 01 14.0	+1.4
GO07				IAmb	IAmb	08 01 22.9	
	comp=Z,76nm,1.5s						
PRPB	Parauapebas	23.41	52	*e*P	P	08 01 24.4	-0.7
SMTB	Santa Maria do	23.50	61	*e*P	P	08 01 25.9	0.0
JANB	Januaria	23.61	79	*e*P	P	08 01 27.2	+0.3
MALB	Monte Alegre	23.73	37	*e*P	P	08 01 27.4	-0.4
SDBA	SAO DESIDERIO	24.06	72	*e*P	P	08 01 30.3	-0.6
MCPB	Macapa, AP	26.21	39	*e*P	P	08 01 50.5	+0.1
GDU01	Guandu, BA	28.38	79	*e*P	P	08 02 09.4	-0.4
GRGR	Grenville	33.92	12	P	P	08 02 58.8	+0.4
RCBR	Riachuelo	34.95	68	P	P	08 03 07.0	-0.4
	comp=Z,9.2nm,1.0s,baz=123,slow=0.8,SNR=5.1						
RCBR	Riachuelo	34.95	68	P	P	08 03 07.7	+0.3
RCBR				IAmb	IAmb	08 03 35.4	
	comp=Z,28nm,1.3s						
SVB	Belmont	35.11	12	P	P	08 03 08.0	-0.6
FDF	Fort de France	36.55	12	P	P	08 03 21.6	+0.7
MLPR	Magueyes Islan	39.12	2	P	P	08 03 40.7	-1.6
MLPR				IAmb	IAmb	08 03 56.6	
	comp=Z,27nm,1.1s						
PDPR	Patillas Dam,	39.21	3	P	P	08 03 41.3	-1.8
PDPR				IAmb	IAmb	08 03 42.7	
	comp=Z,18nm,1.1s						
SJG	San Juan	39.29	3	P	P	08 03 42.4	-1.4
	comp=Z,6.2nm,0.3s,baz=172,slow=21,SNR=5.7						
SJG	San Juan	39.29	3	P	P	08 03 42.9	-0.9
SJG				IAmb	IAmb	08 03 43.4	
	comp=Z,12nm,0.7s						
MTP	Monte Pirata	39.31	4	P	P	08 03 42.3	-1.7
MTP				IAmb	IAmb	08 03 56.0	
	comp=Z,33nm,1.2s						
MPR	Mayaguez	39.35	2	P	P	08 03 44.0	-0.3
CBYP	Canovanas	39.47	4	P	P	08 03 44.4	-0.9
GCPR	Guaynabo City	39.49	3	P	P	08 03 44.1	-1.4
GCPR				IAmb	IAmb	08 03 56.9	
	comp=Z,25nm,1.1s						
AOPR	Arecibo Observ	39.50	2	P	P	08 03 45.0	-0.6
CUPR	Culebra, Puert	39.54	4	P	P	08 03 43.8	-2.1
PMSA	Palmer Station	43.48	177	P	P	08 04 14.3	-3.1
	comp=Z,22nm,0.6s,baz=18,slow=9.1,SNR=5.0						
W50A	Signal Mountai	58.53	344	P	P	08 06 10.9	+0.6
W50A				IAmb	IAmb	08 06 13.9	
	comp=Z,5.6nm,1.1s						
SWET	Sewanee	58.71	343	P	P	08 06 12.8	+1.2
SWET				IAmb	IAmb	08 06 17.6	
	comp=Z,10.0nm,1.3s						
V52A	Sevierville	58.72	345	P	P	08 06 12.7	+1.2
V52A				IAmb	IAmb	08 06 13.5	
	comp=Z,8.8nm,1.1s						
U49A	Red Boiling Sp	59.90	344	P	P	08 06 20.7	+1.1
U49A				IAmb	IAmb	08 06 22.6	
	comp=Z,5.5nm,1.1s						
WVT	Waverly	60.10	342	P	P	08 06 22.2	+1.1
WVT				IAmb	IAmb	08 06 22.9	
	comp=Z,7.9nm,1.2s						
S54A	Dingess, Beckl	60.12	348	P	P	08 06 22.6	+1.4
S54A				IAmb	IAmb	08 06 23.1	
	comp=Z,16nm,1.1s						
WCI	Wyandotte Cave	61.65	344	P	P	08 06 32.2	+0.7
WCI				IAmb	IAmb	08 06 32.6	
	comp=Z,20nm,1.4s						
O53A	New Philadelph	62.47	349	P	P	08 06 38.3	+1.4
FVM	French Village	62.60	340	P	P	08 06 39.1	+1.3
FVM				IAmb	IAmb	08 06 39.7	
	comp=Z,6.2nm,1.1s						
CCM	Cathedral Cave	62.93	340	P	P	08 06 41.3	+1.3
CCM				IAmb	IAmb	08 06 41.5	
	comp=Z,3.2nm,0.8s						
S39A	Bolivar	63.30	338	P	P	08 06 43.9	+1.4
R40A	Maddies Statio	63.48	339	P	P	08 06 45.2	+1.6
R40A				IAmb	IAmb	08 07 09.1	
	comp=Z,8.1nm,1.4s						
GDL2	Guadalupe Moun	63.48	326	P	P	08 06 45.1	+1.2
LIC	Lamto	67.79	74	*e*P	P	08 07 12.0	+0.1
	comp=Z,11nm,0.4s						
TIC	Toumodi	67.98	73	*e*P	P	08 07 14.0	+0.9
KIC	Kosan Boka	68.11	74	*e*P	P	08 07 14.2	+0.3
	comp=Z,36nm,0.5s						
DBIC	Dimbokro	68.14	73	P	P	08 07 14.5	+0.5
	comp=Z,18nm,0.7s,baz=221,slow=7.2,SNR=28						
DBIC	Dimbokro	68.14	73	P	P	08 07 14.7	+0.6
DBIC				IAmb	IAmb	08 07 15.2	
	comp=Z,16nm,0.8s						
QSPA	South Pole Qui	68.82	180	P	P	08 07 19.9	+2.3
	comp=Z,1.0nm,0.5s,baz=297,slow=1.3,SNR=11						
QSPA	South Pole Qui	68.82	180	P	P	08 07 20.6	+3.0
ULM	Lac du Bonnet	75.37	342	P	P	08 07 57.6	+1.1
	comp=Z,1.7nm,0.4s,baz=153,slow=7.1,SNR=9.0						
ULM	Lac du Bonnet	75.37	342	IAmb	IAmb	08 07 58.1	
	comp=Z,2.0nm,0.4s						
SYO	Syowa Base	76.42	159	⇑*e*PcP	PcP	08 08 12.0	-1.5
SYO	Syowa Base	76.42	159	⇑*e*pP	pP	08 08 33.6	-3.0
TORD	Torodi Ar. Bea	76.77	70	P	P	08 08 05.7	+0.6
	comp=Z,18nm,0.6s,baz=254,slow=5.5,SNR=80						
BOSA	Boshof	83.00	118	P	P	08 08 39.6	+0.9
	comp=Z,4.0nm,0.8s,baz=181,slow=10,SNR=4.9						
YKA	Yellowknife Ar	91.26	340	P	P	08 09 19.6	+1.9
	comp=Z,1.2nm,0.6s,baz=128,slow=5.3,SNR=32						
YKA				pP	pP	08 09 53.1	+0.2
	comp=Z,0.5nm,0.6s,baz=131,slow=5.3,SNR=6.5						
ZALV	Zalesovo Beam	141.59	25	PKP	PKiKP	08 15 45.4	-0.5
	comp=Z,0.6nm,0.4s,baz=356,slow=4.6,SNR=4.6						
ZALV	Zalesovo Beam	141.59	25	PKPdf	PKiKP	08 15 46.0	+0.1
MKAR	Makanchi Array	145.19	36	PKP	PKPab	08 15 51.6	+1.8
	comp=Z,6.8nm,0.7s,baz=321,slow=3.5,SNR=75						

IDC 16 07:59:47.4±1.8, 5°.01S×130°.96E, h0^{km}, mb3.5/1, mb1 3.9/5, mb1mx3.6/34, mbtmp3.7/5, ML3.6/4, Error ellipse: s-maj=80.8km s-min=22.4km az=86.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	4.13	4	Pn	Pn	08 00 52.1	+0.3
	2.3nm,0.3s,baz=315,slow=19,SNR=2.4						
SIJI				Sn	Sn	08 01 40.6	-0.1
	1.5nm,0.3s,baz=285,slow=23,SNR=1.5						
FITZ	Fitzroy Crossi	14.01	201	Pn	Pn	08 03 06.1	-1.2
	0.2nm,0.3s,baz=36,slow=11,SNR=6.0						
WRA	Warramunga Arr	15.20	168	Pn	Pn	08 03 21.5	-2.1
	0.2nm,0.3s,baz=352,slow=13,SNR=14						
WRA				Sn	Sn	08 06 06.7	-6.1
	0.2nm,0.3s,baz=325,slow=25,SNR=5.1						
ASAR	Alice Springs	18.76	172	P	Pn	08 04 08.9	+0.3
	0.4nm,0.3s,baz=355,slow=9.0,SNR=31						
MKAR	Makanchi Array	67.11	326	P	P	08 10 43.1	+0.2
	0.4nm,0.7s,baz=121,slow=7.9,SNR=5.0						

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*DJA **16** 08:10:23.2±0.5, 12°S±5°×11°7E±°, h10^{km}, M3.6/6, mb3.7/2, MLv3.6/6*

*IDC **16** 08:10:33.0±3.7, 11°.72S×117°.97E, h0^{km}, mb3.4/1, mb1 3.4/4, mb1mx3.3/28, mbtmp3.2/4, ML3.2/3, Error ellipse: s-maj=243.4km s-min=27.9km az=47.0*

ISC 16 08:10:13.4±1.7, 11°.56S±0°.09×117°.35E±0°.09, h10^{km}, n9, σ0^{s}.95/9, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	Plampang	2.75	9	P	Pg	08 11 07.8	+1.7
PLAI				S	Sb	08 11 35.5	-1.0
TWSI	Taliwang, Sumb	2.84	351	P	Pg	08 11 07.9	0.0
WSI	Waingapu	3.45	57	P	Pg	08 11 20.0	+0.4
SRBI	Singaraja	4.05	328	P	Pb	08 11 24.6	-0.2
EDFI	Ende, Flores	5.10	57	P	Pb	08 11 42.4	-0.5
	0.0nm3.1nm,1.0s						
FITZ	Fitzroy Crossi	10.31	130	Pn	Pn	08 12 53.2	+12
	0.2nm,0.3s,baz=319,slow=11,SNR=13						
FITZ				Sn	Sn	08 14 38.0	+0.7
	0.1nm,0.3s,baz=320,slow=17,SNR=2.1						
WRA	Warramunga Arr	18.34	119	P	P	08 14 40.6	+13
	0.1nm,0.3s,baz=287,slow=14,SNR=4.7						
WRA				S	Sn	08 17 53.1	+0.1
	0.1nm,0.3s,baz=289,slow=26,SNR=1.3						
ASAR	Alice Springs	19.82	130	P	Pn	08 15 01.2	+15
	0.1nm,0.3s,baz=310,slow=12,SNR=6.1						
ASAR				S	S	08 18 26.9	-0.8
	baz=303,slow=22,SNR=2.2						
MKAR	Makanchi Array	66.02	334	P	P	08 21 23.8	+24
	0.2nm,0.5s,baz=131,slow=6.2,SNR=3.0						

IDC 16 08:57:55.6±1.6, 2°.65N×127°.48E, h0^{km}, mb3.7/5, mb1 3.9/5, mb1mx3.5/48, mbtmp3.7/5, MS2.7/1, Ms1 2.7/1, ms1mx2.2/40, Error ellipse: s-maj=98.4km s-min=22.0km az=68.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	4.78	337	LR	LR	09 00 57.7	
	comp=Z,80nm,18.2s,baz=22,slow=38						
FITZ	Fitzroy Crossi	20.70	185	P	Pn	09 02 39.5	-0.3
	3.4nm,1.1s,baz=13,slow=11,SNR=1.8						
WRA	Warramunga Arr	23.44	164	P	P	09 03 06.3	-0.6
	1.3nm,0.6s,baz=342,slow=11,SNR=14						
ASAR	Alice Springs	26.90	167	P	P	09 03 37.8	-0.8
	0.3nm,0.4s,baz=345,slow=7.3,SNR=6.8						
STKA	Stephens Creek	36.86	160	P	P	09 05 06.0	+0.1
	3.5nm,0.9s,baz=317,slow=6.9,SNR=6.8						
MKAR	Makanchi Array	58.86	325	P	P	09 07 56.4	+0.1
	0.3nm,0.4s,baz=121,slow=7.3,SNR=9.8						

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*NEIC **16** 09:50:26.3±1.5, 35°.837N±0°.006×97°.45W±0°.02, h5^{km}±2^{km}, Error ellipse: s-maj=3.1km s-min=2.9km az=248.0*

*NEIC **16** 09:50:26.2, 35°.87N×97°.34W, h4^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-0.36; $M_{\theta\theta}$1.84; $M_{\phi\phi}$-1.47; $M_{r\theta}$0.52; $M_{\theta\phi}$0.74; $M_{\phi r}$1.16; Fault plane solution: $M_0$2.24000×10^{14} NP1:ϕ_s120.00000°, δ55.00000°, λ-10.00000°. NP2:ϕ_s216.00000°, δ82.00000°, λ-145.00000°. Principal axes: T 2.2387, Plg18.0000°, Azm343.0000°; N -0.0018, Plg54.0000°, Azm227.0000°; P -2.2369, Plg30.0000°, Azm84.0000°;*

*IDC **16** 09:50:26.7±0.8, 35°.93N×97°.47W, h0^{km}, mb3.6/2, mb1 3.8/11, mb1mx3.6/55, mbtmp3.6/11, ML3.7/8, MS3.4/2, Ms1 3.4/2, ms1mx2.6/38 Error ellipse: s-maj=11.9km s-min=9.8km az=151.0*

*IASPEI **16** 09:50:26.2±1.0, 35°.84N±0°.03×97°.44W±0°.03, h6^{km}±7^{km}, Error ellipse: s-maj=4.3km s-min=3.9km az=84.1, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*ANF **16** 09:50:26.5±0.2, 35°.79N×97°.42W, h5^{km}, ML4.7/16, Error ellipse: s-maj=3.0km s-min=2.5km az=17.0*

*TUL **16** 09:50:26.2±1.6, 35°.82N±0°.02×97°.45W±0°.03, h5^{km}±5^{km}, ML3.7, mb_Lg3.9/154(NEIC), Mwr3.5/9(SLM), Error ellipse: s-maj=3.1km s-min=2.1km az=107.0*

ISC 16 09:50:26.3±0.9, 35°.85N±0°.02×97°.44W±0°.02, h3^{km}±7^{km}, n174, σ1^{s}.50/193, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK029	Liberty Lake	0.05	190	Pg	Pg	09 50 27.6	+0.2
OK029				Sg	Sg	09 50 28.5	+0.2
BCOK	Bluff Creek, N	0.23	215	Pg	Pg	09 50 30.7	-0.1
BCOK				Sg	Sg	09 50 34.1	+0.2
OK009	Oakdale Elemen	0.27	177	Sg	Sg	09 50 35.1	+0.2
OK025	Westminster Rd	0.28	162	Pg	Pg	09 50 31.6	-0.1

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OK025                             Sg       Sg    09 50 35.6 +0.3
OK001 Jones High Sch     0.31 156  Sg       Sg    09 50 36.6 +0.2
OK031 S. Brethren Rd     0.50  78           Pg    09 50 36.5 +0.6
OK031                             Sg       Sg    09 50 43.6 +1.2
OK030 Cody Creek RV      0.54  81           Pg    09 50 37.0 +0.3
FNO   Franklin           0.59 177           Pg    09 50 37.5 -0.1
FNO                               Sg       Sg    09 50 45.2 -0.1
QUOK  Quay               0.68  61  Pg       Pg    09 50 39.6 +0.4
QUOK                              Sg       Sg    09 50 48.6 +0.5
CROK  Carrier            0.79 326           Pg    09 50 41.8 +0.4
CROK                              Sg       Sg    09 50 52.1 +0.6
KAN13 South Haven SW     1.16 359           Pg    09 50 48.7 +0.1
KAN14 Manchester OK      1.18 339           Pg    09 50 48.8 -0.1
KAN14                             Sn       Sg    09 51 05.2 +1.0
T35A  Sooner Cattle      1.30  35           Pn    09 50 50.9 -0.5
T35B  Sooner Cattle      1.30  35  P              09 50 50.8
      baz=213,SNR=104
T35B                              S              09 51 08.6
      baz=213
KAN05 Bluff City Nor     1.30 345           Pn    09 50 51.0 -0.4
KAN05                                      Sg    09 51 09.2 +1.0
KAN05                             Sn       Sn    09 51 09.4 +0.1
KAN01 Argonia South      1.33 349           Pn    09 50 51.2 -0.5
TUL1  Leonard            1.34  87  P        Pn    09 50 50.6 -1.3
      baz=269,SNR=225
TUL1                              S        Sb    09 51 08.9 -0.7
      baz=269
TUL1  Leonard            1.34  87  Pn       Pn    09 50 50.6 -1.3
TUL1                              Sn       Sb    09 51 08.9 -0.7
TUL1                              IAmb_Lg        09 51 10.4
      comp=Z,906nm,1.0s
TUL1  Leonard            1.34  87  P              09 50 50.5
      baz=269,SNR=266
TUL1                              S              09 51 08.8
      baz=269
U32A  Winter Ranch,      1.37 293           Pn    09 50 51.5 -0.8
U32A  Winter Ranch,      1.37 293  P              09 50 51.5
      baz=110
U32A                              S              09 51 10.8
      baz=110
KAN10 Anthony SW Sta     1.38 338           Pn    09 50 51.9 -0.5
KAN08 Anthony NE Sta     1.44 343           Pn    09 50 53.2  0.0
KAN12 Harper NE Stat     1.51 343           Pn    09 50 54.6 +0.3
WMOK  Wichita Mounta     1.56 225  P        Pn    09 50 54.0 -0.9
      baz=46,SNR=66
WMOK                              S        Sn    09 51 14.3 -1.3
      baz=46
WMOK  Wichita Mounta     1.56 225  Pn       Pn    09 50 54.6 -0.3
WMOK  Wichita Mounta     1.56 225  P              09 50 54.0
      baz=46,SNR=59
WMOK                              S              09 51 14.5
      baz=46
X37A  Clayton            2.11 126           Pn    09 51 02.1 -0.3
X37A  Clayton            2.11 126  P              09 51 02.2
      baz=309
Z35A  Perchaven, San     2.52 176  Pn       Pn    09 51 08.4 +0.4
Z35A  Perchaven, San     2.52 176  S              09 51 40.5
      baz=358
U38A  Gravette           2.54  76  Pn       Pn    09 51 08.6 +0.1
U38A                              IAmb_Lg        09 51 47.7
      comp=Z,361nm,0.9s
U38A  Gravette           2.54  76  P              09 51 09.1
      baz=258,SNR=24
R32A  Long Quarter,      2.76 339  Pn       Pn    09 51 12.3 +0.9
HHAR  Hobbs              2.87  80           Pn    09 51 13.0 +0.1
W39A  Magazine           3.06 101  P        Pn    09 51 15.2 -0.2
      baz=284,SNR=83
W39A                              S        Sn    09 51 52.8 +0.3
      baz=284
W39A  Magazine           3.06 101           Pn    09 51 15.2 -0.2
W39A                              IAmb_Lg        09 52 10.3
      comp=Z,541nm,1.1s
W39A  Magazine           3.06 101  P              09 51 15.3
      baz=284,SNR=62
Z38A  Mt. Pleasant       3.28 141  Pn       Pn    09 51 18.3 -0.3
Z38A                              IAmb_Lg        09 52 11.9
      comp=Z,359nm,0.7s
Z38A  Mt. Pleasant       3.28 141  P              09 51 18.1
      baz=324,SNR=49
KSU1  Kansas State U     3.31  11  Pn       Pn    09 51 19.5 +0.5
      baz=190,SNR=19
KSU1                              Pb       Pb    09 51 27.6 +1.9
      baz=190
KSU1  Kansas State U     3.31  11           Pn    09 51 19.2 +0.2
KSU1                              IAmb_Lg        09 52 20.3
      comp=Z,389nm,1.0s
KSU1  Kansas State U     3.31  11  P              09 51 19.4
      baz=190,SNR=15
MIAR  Mount Ida          3.42 111  P        Pn    09 51 20.8 +0.3
      baz=294,SNR=115
MIAR                              S        Sn    09 52 01.6  0.0
      baz=294
MIAR  Mount Ida          3.42 111  Pn       Pn    09 51 20.5  0.0
MIAR                              IAmb_Lg        09 52 24.0
      comp=Z,202nm,0.8s
MIAR  Mount Ida          3.42 111  P              09 51 20.3
      baz=294,SNR=148
CBKS  Cedar Bluff        3.48 329  Pn       Pn    09 51 22.0 +0.7
      baz=146,SNR=8.8
CBKS                              Pb       Pb    09 51 29.9 +1.4
      baz=146
CBKS                              Sn       Sn    09 52 06.1 +3.1
      baz=146
CBKS                              Sb       Sg    09 52 16.7 -1.3
      baz=146
CBKS  Cedar Bluff        3.48 329  Pn       Pn    09 51 21.7 +0.4
CBKS  Cedar Bluff        3.48 329  P              09 51 22.0
      baz=146,SNR=22
AMTX  Amarillo           3.59 256  P        Pn    09 51 24.2 +1.2
      baz=73
AMTX                              Sb       Sb    09 52 17.0 +2.4
      baz=73
AMTX  Amarillo           3.59 256           Pn    09 51 24.2 +1.2
AMTX  Amarillo           3.59 256  P              09 51 24.1
      baz=73,SNR=11
ABTX  Abilene, Hawle     3.70 210  Pn       Pn    09 51 23.6 -0.8
      baz=30,SNR=37
ABTX                              Pb       Pb    09 51 32.9 +0.6
      baz=30
ABTX  Abilene, Hawle     3.70 210           Pn    09 51 23.1 -1.2
ABTX  Abilene, Hawle     3.70 210  P              09 51 23.6
      baz=30,SNR=8.3
U40A  Yellville          3.75  81  P        Pn    09 51 24.3 -0.8
      baz=264,SNR=18
U40A                              Sb       Sb    09 52 22.5 +3.5
      baz=264
U40A  Yellville          3.75  81  Pn       Pn    09 51 24.1 -1.0
U40A                              IAmb_Lg        09 52 29.2
      comp=Z,221nm,0.8s
U40A  Yellville          3.75  81  P              09 51 24.2
      baz=264,SNR=17
U40A                              P              09 51 24.2
      baz=264,SNR=17
S39A  Bolivar            3.78  60  Pn       Pn    09 51 25.4 -0.1
S39A                              IAmb_Lg        09 52 31.1
      comp=Z,304nm,0.8s
S39A  Bolivar            3.78  60  P              09 51 25.4
      baz=242,SNR=54
WHTX  Lake Whitney,      3.85 180  P        Pn    09 51 25.6 -0.7
      baz=1.4,SNR=7.2
WHTX                              Sb       Sb    09 52 22.8 +1.1
      baz=1.4
WHTX  Lake Whitney,      3.85 180           Pn    09 51 26.6 +0.3
WHTX  Lake Whitney,      3.85 180  P              09 51 25.5
      baz=1.4,SNR=22
X40A  Basin Creek Fa     4.01 108  P        Pn    09 51 28.5 -0.1
      baz=292,SNR=30
X40A  Basin Creek Fa     4.01 108           Pn    09 51 28.4 -0.3
X40A                              IAmb_Lg        09 52 36.9
      comp=Z,406nm,0.7s
X40A  Basin Creek Fa     4.01 108  P              09 51 28.5
      baz=292,SNR=83
X40A                              P              09 51 28.5
      baz=292,SNR=83
237A  Washetta, Mont     4.07 160  Pn       Pn    09 51 28.1 -1.3
237A  Washetta, Mont     4.07 160  P              09 51 28.4
      baz=342,SNR=17
WLAR  White Oak Lake     4.17 120  Pn       Pn    09 51 30.1 -0.6
WLAR                              IAmb_Lg        09 52 39.8
      comp=Z,230nm,0.8s
WHAR  Wooly Hollow       4.24  96  Pn       Pn    09 51 31.5 -0.2
WHAR                              IAmb_Lg        09 52 42.5
      comp=Z,218nm,0.8s
W41B  Gary Mavity, V     4.29  98  Pn       Pn    09 51 32.0 -0.4
      baz=281
W41B                              Pb       Pb    09 51 41.2 -1.1
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      baz=281
W41B  Gary Mavity, V     4.29  98  P              09 51 31.9
      baz=281
FCAR  Ozark Folk Cen     4.32  88           Pn    09 51 31.9 -0.9
FCAR                              IAmb_Lg        09 52 48.7
      comp=Z,148nm,0.9s
MGMO  Mountain Grove     4.37  71           Pn    09 51 33.6 +0.1
MGMO                              IAmb_Lg        09 52 53.4
      comp=Z,235nm,0.8s
Z41A  Richland Creek     4.62 123  P        Pn    09 51 36.1 -0.8
      baz=306
NATX  Nacogdoches        4.69 150  Pn       Pn    09 51 37.7 -0.3
MSTX  Muleshoe           4.76 248  P        Pn    09 51 40.1 +1.1
      baz=65,SNR=7.4
MSTX                              Sb       Sb    09 52 52.6 +4.4
      baz=65
MSTX  Muleshoe           4.76 248  Pn       Pn    09 51 40.0 +0.9
R40A  Maddies Statio     4.80  58           Pn    09 51 39.2 -0.3
R40A                              IAmb_Lg        09 53 08.9
      comp=Z,158nm,0.8s
R40A  Maddies Statio     4.80  58  P              09 51 39.2
      baz=241,SNR=38
P38A  Dawn               4.88  38  Pn       Pn    09 51 41.1 +0.6
P38A                              IAmb_Lg        09 53 05.4
      comp=Z,167nm,0.8s
P38A  Dawn               4.88  38  P              09 51 40.7
      baz=220,SNR=9.6
N33A  J Bar K, Exete     4.88 360  Pn       Pn    09 51 41.7 +1.2
CCAR  Cane Creek         5.04 111  IAmb_Lg        09 53 14.1
      comp=Z,251nm,0.9s
435B  Jarrell            5.05 181  P        Pn    09 51 42.4 -0.5
      baz=2.2
435B                              Sb       Sg    09 53 01.8 -6.9
      baz=2.2
435B  Jarrell            5.05 181  Pn       Pn    09 51 43.2 +0.3
435B  Jarrell            5.05 181  P              09 51 42.5
      baz=2.2,SNR=7.1
LCAR  Lake Charles       5.11  86           Pn    09 51 42.4 -1.2
LCAR  Lake Charles       5.11  86  P              09 51 42.3
      baz=270
KSCO  Kaye Shedlock’     5.19 309  P        Pn    09 51 46.4 +1.4
      baz=125,SNR=16
KSCO                              Sb       Sg    09 53 09.4 -3.7
      baz=125
KSCO  Kaye Shedlock’     5.19 309  Pn       Pn    09 51 46.2 +1.3
KSCO  Kaye Shedlock’     5.19 309  P              09 51 45.4
      baz=125,SNR=19
N35A  Tabor              5.20  15           Pn    09 51 45.5 +0.6
N35A  Tabor              5.20  15  P              09 51 44.8
      baz=196
T42A  Van Buren          5.25  75           Pn    09 51 45.6  0.0
T42A                              IAmb_Lg        09 53 19.3
      comp=Z,118nm,0.8s
T42A  Van Buren          5.25  75  P              09 51 45.4
      baz=259,SNR=29
CCM   Cathedral Cave     5.43  64  P        Pn    09 51 48.2 +0.1
      baz=248
CCM   Cathedral Cave     5.43  64  Pn       Pn    09 51 47.9 -0.2
CCM                               IAmb_Lg        09 53 20.6
      comp=Z,172nm,0.9s
CCM   Cathedral Cave     5.43  64  P              09 51 47.7
      baz=248,SNR=15
X43A  Marvell            5.54 102  P        Pn    09 51 49.6  0.0
      baz=286
BGNE  Belgrade           5.58 355  P        Pn    09 51 49.6 -0.6
      baz=173
BGNE  Belgrade           5.58 355  Pn       Pn    09 51 49.1 -1.1
BGNE  Belgrade           5.58 355  P              09 51 49.5
      baz=173,SNR=14
P40A  Paris              5.64  48  Pn       Pn    09 51 50.9  0.0
P40A  Paris              5.64  48  P              09 51 50.8
      baz=230,SNR=13
JCT   Junction City      5.71 201  P        Pn    09 51 51.2 -0.8
      baz=20
JCT   Junction City      5.71 201  P              09 51 51.2
      baz=20,SNR=7.7
T25A  Trinidad           5.76 285  P        Pn    09 51 52.6 -0.2
      baz=100,SNR=12
T25A                              Sb       Sg    09 53 25.1 -6.1
      baz=100
LPAR  Lepanto            5.82  90  IAmb_Lg        09 53 37.1
      comp=Z,222nm,0.8s
143A  Socs Landing,      5.90 120  IAmb_Lg        09 53 43.1
      comp=Z,123nm,0.8s
143A  Socs Landing,      5.90 120  P              09 51 54.0
      baz=304,SNR=6.6
N38A  Joes South For     5.94  33           Pn    09 51 54.5 -0.6
N38A  Joes South For     5.94  33  P              09 51 54.3
      baz=214
FVM   French Village     6.01  67           Pn    09 51 56.3 +0.2
FVM                               IAmb_Lg        09 53 38.0
      comp=Z,202nm,1.0s
HKT   Hockley            6.04 167  IAmb_Lg        09 53 53.9
      comp=Z,9.7nm,0.8s
MET   Memphis--Engin     6.17  95  IAmb_Lg        09 53 45.3
      comp=Z,102nm,0.8s
OGNE  Ogallala           6.23 326  P        Pn    09 51 59.6 +0.4
      baz=143,SNR=12
OGNE  Ogallala           6.23 326  Pn       Pn    09 51 59.7 +0.4
OGNE  Ogallala           6.23 326  P              09 51 59.6
      baz=143,SNR=14
PVMO  Portageville       6.29  83  IAmb_Lg        09 53 53.3
      comp=Z,196nm,0.8s
SLM   Saint Louis        6.39  62  IAmb_Lg        09 53 48.9
      comp=Z,239nm,0.8s
HALT  Halls              6.58  87  IAmb_Lg        09 54 09.1
      comp=Z,146nm,0.8s
GLAT  Glass              6.62  84  IAmb_Lg        09 53 54.9
      comp=Z,185nm,0.7s
HICK  Hickman            6.68  82  Pn       Pn    09 52 06.5 +1.3
OXF   Oxford             6.71  99  P        Pn    09 52 04.4 -1.3
      baz=284,SNR=6.5
OXF   Oxford             6.71  99  Pn       Pn    09 52 04.5 -1.2
OXF                               IAmb_Lg        09 54 03.1
      comp=Z,104nm,1.0s
OXF   Oxford             6.71  99  P              09 52 04.3
      baz=284,SNR=22
SDCO  Great Sand Dun     6.74 289  P        Pn    09 52 07.2 +0.9
      baz=104,SNR=47
SDCO                              Sb       Sg    09 53 55.5 -7.1
      baz=104
SDCO  Great Sand Dun     6.74 289  Pn       Pn    09 52 07.3 +0.9
SDCO  Great Sand Dun     6.74 289  P              09 52 07.2
      baz=104,SNR=29
W45A  Hickory Valley     6.77  93  Pn       Pn    09 52 06.0 -0.5
W45A                              IAmb_Lg        09 54 15.1
      comp=Z,149nm,0.7s
W45A  Hickory Valley     6.77  93  P              09 52 05.7
      baz=278,SNR=12
Y45A  Yeager Farm, C     6.79 105  Pn       Pn    09 52 05.3 -1.4
Y45A                              IAmb_Lg        09 54 19.6
      comp=Z,98nm,0.8s
S44A  Carbondale         6.83  72           Pn    09 52 06.7 -0.6
S44A                              IAmb_Lg        09 54 05.8
      comp=Z,140nm,0.8s
SIUC  Southern Illin     6.86  72           Pn    09 52 06.8 -0.9
SIUC                              IAmb_Lg        09 54 03.2
      comp=Z,180nm,0.8s
Q24A  Divide             6.88 299  P        Pn    09 52 09.9 +1.6
      baz=114,SNR=8.2
SCIA  State Center       6.89  27  P        Pn    09 52 08.8 +0.6
      baz=209
SCIA                              S        Sn    09 53 24.7 -2.3
      baz=209
SCIA  State Center       6.89  27  IAmb_Lg        09 54 12.0
      comp=Z,175nm,0.8s
T45A  Paducah            7.19  78  IAmb_Lg        09 54 25.6
      comp=Z,223nm,0.7s
P43A  Skaggs, Pawnee     7.33  57  Pn       Pn    09 52 13.6 -0.6
P43A  Skaggs, Pawnee     7.33  57  P              09 52 13.5
      baz=241,SNR=8.7
Q44A  Meyer Farm, Va     7.37  63           Pn    09 52 14.8 +0.1
ANMO  Albuquerque        7.42 266  Pn       Pn    09 52 17.2 +1.6
      comp=Z,0.2nm,0.3s,baz=79,slow=18,SNR=5.1
ANMO                              Pg       Pg    09 52 42.4 -6.0
      comp=Z,2.4nm,0.3s,baz=84,slow=18,SNR=21
ANMO                              Lg       Lg    09 54 19.0
      comp=Z,3.4nm,0.3s,baz=17,slow=16,SNR=3.4
ANMO                              LR       LR    09 55 09.0
      comp=Z,62nm,19.6s,baz=74,slow=38
ANMO  Albuquerque        7.42 266  Pn       Pn    09 52 17.0 +1.4
ISCO  Idaho Springs      7.57 304  P        Pn    09 52 17.7 -0.1
      baz=118,SNR=12
ISCO  Idaho Springs      7.57 304  Pn       Pn    09 52 17.5 -0.3
ISCO  Idaho Springs      7.57 304  P              09 52 17.7
      baz=118,SNR=27
146A  Union              7.65 112           Pn    09 52 17.6 -0.9
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K38A  Parkersburg        7.69  27           Pn    09 52 19.5 +0.3
K38A                              IAmb_Lg        09 54 44.8
      comp=Z,162nm,0.8s
PLAL  Pickwick Lake      7.70  94           Pn    09 52 18.3 -0.9
BNM   Barren Site        7.73 260  Pn       Pn    09 52 21.0 +1.2
MNTX  Cornudas Mount     7.80 240  P        Pn    09 52 21.0 +0.4
      baz=56,SNR=11
MNTX  Cornudas Mount     7.80 240  Pn       Pn    09 52 20.8 +0.2
MNTX  Cornudas Mount     7.80 240  P              09 52 21.1
      baz=56,SNR=6.2
WVT   Waverly            7.80  85  Pn       Pn    09 52 19.7 -0.9
L40A  Anamosa            7.87  36  Pn       Pn    09 52 20.1 -1.5
L40A                              IAmb_Lg        09 54 36.8
      comp=Z,120nm,0.9s
ECSD  EROS Data Cent     7.90   4  P        Pn    09 52 20.5 -1.5
      baz=184
ECSD                              S        Sn    09 53 48.0 -3.9
      baz=184
ECSD  EROS Data Cent     7.90   4  Pn       Pn    09 52 22.2 +0.2
ECSD  EROS Data Cent     7.90   4  P              09 52 20.4
      baz=184,SNR=14
HDIL  Hopedale           7.95  51  P        Pn    09 52 21.6 -1.1
      baz=236,SNR=19
HDIL                              S        Sn    09 53 48.4 -4.7
      baz=236
HDIL  Hopedale           7.95  51           Pn    09 52 21.5 -1.1
HDIL  Hopedale           7.95  51  P              09 52 21.5
      baz=236,SNR=14
OLIL  Olney              7.98  66  Pn       Pn    09 52 22.6 -0.5
Z47A  Carrollton         8.17 106  Pn       Pn    09 52 25.2 -0.6
O44A  Mansfield          8.28  56           Pn    09 52 26.7 -0.6
PHWY  Pilot Hill         8.31 313           Pn    09 52 27.4 -0.5
TX31  Lajitas Ar. Si     8.35 221  Pn       Pn    09 52 28.6 +0.3
TXAR  Lajitas Array      8.35 221  Pn       Pn    09 52 28.1 -0.3
      comp=Z,0.2nm,0.3s,baz=44,slow=11,SNR=17
TXAR                              Lg       Lg    09 54 47.4
      comp=Z,3.5nm,0.3s,baz=53,slow=27,SNR=5.8
N23A  Red Feather La     8.36 310  P        Pn    09 52 29.2 +0.6
      baz=124,SNR=12
T47A  Sharon Grove       8.41  79  Pn       Pn    09 52 27.7 -1.3
L42A  Oliver, Polo       8.63  42  Pn       Pn    09 52 31.3 -0.6
X48A  Hartselle          8.63  96  P              09 52 30.6
      baz=282,SNR=5.1
SUSD  Miller             8.66 353  S        Sn    09 54 06.8 -3.9
      baz=171
SUSD  Miller             8.66 353  Pn       Pn    09 52 32.2 -0.2
I37A  Lemond, Waseca     8.72  20  Pn       Pn    09 52 32.0 -1.3
P46A  Rosedale           8.94  62  Pn       Pn    09 52 36.6 +0.3
JFWS  Jewell Farm        8.98  36  P        Pn    09 52 36.1 -0.9
      baz=220
JFWS  Jewell Farm        8.98  36  Pn       Pn    09 52 36.0 -0.9
LRAL  Lakeview Retre     9.07 105  P        Pn    09 52 36.3 -1.8
      baz=291
LRAL  Lakeview Retre     9.07 105  Pn       Pn    09 52 36.7 -1.4
M44A  Midewin, Midew     9.20  50  Pn       Pn    09 52 39.3 -0.5
WCI   Wyandotte Cave     9.22  72  Pn       Pn    09 52 39.9 -0.3
Y49A  Blount Mountai     9.28  99  Pn       Pn    09 52 39.5 -1.5
BLO   Bloomington        9.29  66  Pn       Pn    09 52 40.8 -0.2
SFIN  Lafayette          9.32  58  P        Pn    09 52 41.2 -0.3
      baz=244
PV03  Paradox Valley     9.43 288  Pn       Pn    09 52 44.8 +1.6
PV22  Blue Mesa, Par     9.44 290  Pn       Pn    09 52 45.4 +2.0
U49A  Red Boiling Sp     9.45  83  Pn       Pn    09 52 44.3 +1.0
PV16  Nyswonger Mesa     9.49 288  Pn       Pn    09 52 45.5 +1.5
I40A  Norwalk            9.59  31  Pn       Pn    09 52 43.3 -1.9
RWWY  Rawlins            9.60 310  Pn       Pn    09 52 43.6 -1.9
RSSD  Black Hills        9.68 331  P        Pn    09 52 48.0 +1.3
      baz=146
RSSD                              S        Sn    09 54 37.9 +1.8
      baz=146
RSSD  Black Hills        9.68 331  Pn       Pn    09 52 46.2 -0.5
K43A  Burlington         9.83  43  Pn       Pn    09 52 47.4 -1.1
K43A  Burlington         9.83  43  P              09 52 47.1
      baz=228,SNR=7.0
SPMN  Marine on St.     10.01  19  Pn       Pn    09 52 49.9 -1.0
F33A  5 Mile Ranch,     10.02   5  Pn       Pn    09 52 49.8 -1.3
P48A  Milroy            10.19  66  Pn       Pn    09 52 51.9 -1.5
I42A  Draeger Farm,     10.36  37  Pn       Pn    09 52 53.9 -1.9
Z51A  Franklin          10.43 100  Pn       Pn    09 52 53.5 -3.1
F36A  Milaca            10.43  15  Pn       Pn    09 52 54.2 -2.5
CPCT  Cooper Cave       10.52  88  Pn       Pn    09 52 56.5 -1.5
V51A  Loudon            10.63  86  Pn       Pn    09 52 58.2 -1.2
G40A  Rib Lake          10.90  28  Pn       Pn    09 53 01.9 -1.2
TKL   Tuckaleechee C    11.11  87  Pn       Pn    09 53 05.4 -0.7
      comp=Z,0.3nm,0.3s,baz=260,slow=12,SNR=5.6
TKL                               Lg       Lg    09 56 10.6
      comp=Z,1.4nm,0.3s,baz=189,slow=20,SNR=6.6
S51A  Beattyville       11.26  77  Pn       Pn    09 53 07.9 -0.1
BW06  Boulder Array     11.64 310  Pn       Pn    09 53 12.9 -0.6
PD31  Pinedale Array    11.64 310  Pn       Pn    09 53 13.4 -0.2
PDAR  Pinedale Array    11.64 310  Pn       Pn    09 53 12.8 -0.7
      comp=Z,0.3nm,0.3s,baz=116,slow=14,SNR=10
PDAR                              Lg       Lg    09 56 27.8
      comp=Z,0.6nm,0.3s,baz=116,slow=28,SNR=3.8
PDAR  Pinedale Array    11.64 310  Pn       Pn    09 53 11.6 -2.0
ULM   Lac du Bonnet     14.44   4  Pn       Pn    09 53 46.3 -5.1
      comp=Z,0.3nm,0.3s,baz=185,slow=11,SNR=5.5
ULM                               Sn       Sn    09 56 16.8  -15
      comp=Z,0.4nm,0.3s,baz=125,slow=18,SNR=2.6
ULM                               Lg       Lg    09 57 52.8
      comp=Z,0.5nm,0.3s,baz=274,slow=20,SNR=1.8
SADO  Sadowa            16.53  52  Pn       Pn    09 54 16.0 -3.0
      comp=Z,0.2nm,0.3s,baz=232,slow=11,SNR=1.1
SADO                              Lg       Lg    09 58 58.6
      comp=Z,0.8nm,0.3s,baz=330,slow=19,SNR=4.7
NVAR  Mina Array Bea    16.83 285  Pn       P     09 54 24.7 -0.6
      comp=Z,0.1nm,0.3s,baz=104,slow=11,SNR=3.2
TEIG  Tepich            17.52 150  P        P     09 54 34.9 +2.1
      comp=Z,0.2nm,0.3s,baz=307,slow=5.1,SNR=1.5
NEW   Newport           19.10 317  P        Pn    09 54 51.0 +0.1
      comp=Z,0.1nm,0.3s,baz=79,slow=10,SNR=2.7
YBH   Yreka Blue Hor    20.52 294  P        Pn    09 55 06.7 -1.1
      comp=Z,1.7nm,0.5s,baz=127,slow=10,SNR=5.8
ILAR  Eielson Array     41.13 330  P        P     09 58 13.3 +2.0
      comp=Z,0.6nm,0.7s,baz=107,slow=7.1,SNR=8.3
AKASG Malin Array Be    81.87  31  LR       LR    10 38 01.0
      comp=Z,82nm,18.3s,baz=330,slow=35
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*NOU **16** 10:01:29.3, 36°.52S×179°.61E, h81^{km}, MLv4.0, Off E. Coast of N. Island, N.Z.*

WEL 16 10:01:42.7±0.7**, 37°S**±4°×**17°8E**±°**, h33**^{km}**, M3.0**/42, **ML3.2**/41, **MLv3.0**/42, **Error ellipse: s-maj=0.0km s-min=0.0km az=53.4, Off east coast of North Island**

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Code  Station Name          Δ°  AZ°   Phase ID          Time       Res
                                   Op       ISC     h  m  s     ISC
MXZ   Matakaoa Point     0.70 179  P        Pn    10 01 55.8 -0.5
MXZ                               S        Sb    10 02 06.2 +0.3
WMGZ  Waiomatatini S     0.96 174  P        Pb    10 02 00.4 -0.5
WMGZ                              S        Sb    10 02 16.4 +3.1
HAZ   Te Kaha            0.98 204  P        Pn    10 01 59.5 -0.6
HAZ                               S        Sb    10 02 17.5 +3.6
PKGZ  Pakihiroa          1.04 190  P        Pn    10 02 01.3 +0.3
RUGZ  Raukumara Rang     1.21 204  P        Pn    10 02 03.2 -0.2
PUZ   Puketiti           1.21 181  P        Pn    10 02 03.1 -0.2
PUZ                               S        Sb    10 02 20.3 -0.1
TWGZ  Tauwhareparae      1.34 191  P        Pn    10 02 05.5 +0.4
MWZ   Matawai            1.59 202  P        Pn    10 02 08.7 +0.1
TKGZ  Te Karaka          1.62 193  P        Pn    10 02 09.0 +0.2
CNGZ  Carnagh Statio     1.62 182  P        Pn    10 02 08.6 -0.3
URZ   Urewera            1.69 214  P        Pn    10 02 09.5 -0.2
URZ                               S        Sn    10 02 30.6 +0.4
RAGZ  Rawiri             1.78 203  P        Pn    10 02 11.7 +0.6
RIGZ  Rimuhau            1.89 193  P        Pn    10 02 12.1 -0.6
TARZ  Mount Tarawera     1.98 225  P        Pn    10 02 14.7 +0.8
KARZ  Kaharoa            2.00 234  P        Pn    10 02 14.4 +0.2
MUGZ  Murupara           2.02 216  P        Pn    10 02 14.4 +0.1
MUGZ                              S        Sb    10 02 41.0 -2.5
RRRZ  Republican Roa     2.04 223  P        Pn    10 02 14.9 +0.1
SNGZ  Shannon Statio     2.06 201  P        Pn    10 02 15.2 +0.2
SNGZ                              S        Sn    10 02 41.5 +1.9
KUZ   Kuaotunu           2.07 272  P        Pn    10 02 15.2 +0.2
KUZ                               S        Sn    10 02 39.1 -0.7
KMRZ  Kaimai             2.12 242  P        Pn    10 02 14.6 -1.2
PRRZ  Plateau Road       2.23 222  P        Pn    10 02 17.4 +0.1
PRRZ                              S        Sn    10 02 45.0 +1.4
RAHZ  Arahi              2.27 205  P        Pn    10 02 18.0 +0.2
RAHZ                              S        Sn    10 02 45.2 +0.6
ALRZ  Allen Road         2.30 222  P        Pn    10 02 18.7 +0.4
MTHZ  Maungataniwha      2.30 210  P        Pn    10 02 18.2 -0.1
MTHZ                              S        Sn    10 02 47.9 +2.4
MHGZ  Mahia Peninsul     2.31 188  P        Pn    10 02 17.0 -1.4
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GRZ	Great Barrier	2.37	284	P	Pn	10 02 19.0	-0.1
GRZ				S	Sn	10 02 47.6	+0.6
MRHZ	Matea Rd	2.47	216	P	Pn	10 02 20.5	-0.1
MKAZ	Moumakai	2.52	264	P	Pn	10 02 22.0	+0.7
MKAZ				S	Sn	10 02 51.2	+0.4
NMHZ	Naumai	2.52	207	P	Pn	10 02 21.4	-0.1
NMHZ				S	Sn	10 02 52.4	+1.3
WIAZ	Waiheke Island	2.54	271	P	Pn	10 02 22.2	+0.7
WIAZ				S	Sn	10 02 50.8	-0.5
KUTZ	Kaahu Road	2.55	230	P	Pn	10 02 22.4	+0.7
ARHZ	Aropaoanui	2.61	203	P	Pn	10 02 21.8	-0.7
ARHZ				S	Sn	10 02 53.1	+0.1
HATZ	Hinemaiaia	2.67	220	P	Pn	10 02 23.5	+0.1
ETAZ	East Tamaki Re	2.70	267	P	Pn	10 02 24.8	+1.1
ETAZ				S	Sn	10 02 56.6	+1.3
BKZ	Black Stump Fm	2.71	211	P	Pn	10 02 23.4	-0.5
BKZ				S	Sn	10 02 55.8	+0.3
RITZ	Rihia Road	2.86	222	P	Pn	10 02 26.5	+0.5
MCHZ	McNeill Hill	2.87	206	P	Pn	10 02 25.5	-0.6
MCHZ				S	Sn	10 02 60.0	+0.4
KWHZ	Kaweka Forest	2.96	209	P	Pn	10 02 26.4	-0.9
RVAZ	Riverhead Bore	2.98	271	P	Pn	10 02 29.0	+1.3
TMVZ	Te Maari	3.04	221	P	Pn	10 02 28.8	+0.2
ETVZ	East Tongariro	3.06	221	P	Pn	10 02 28.9	+0.1
KRVZ	Karewarewa	3.06	222	P	Pn	10 02 30.0	+1.1
OTVZ	Oturere	3.10	221	P	Pn	10 02 29.7	+0.3
KAHZ	Kahuranaki	3.14	200	P	Pn	10 02 28.1	-1.7
KAHZ				S	Sn	10 03 04.0	-2.1
NGZ	Ngauruhoe	3.14	222	P	Pn	10 02 30.1	+0.1
BHHZ	Black Hill Sta	3.16	213	P	Pn	10 02 29.2	-0.9
KRHZ	Kereru	3.17	208	P	Pn	10 02 28.6	-1.6
KRHZ				S	Sn	10 03 05.1	-1.7
TUVZ	Tukino	3.18	220	P	Pn	10 02 30.5	0.0
HIZ	Hauiti	3.19	238	P	Pn	10 02 31.8	+1.3
MOVZ	Moawhango	3.24	217	P	Pn	10 02 30.1	-1.1
WNVZ	Wahianoa	3.26	220	P	Pn	10 02 31.7	+0.2
PXZ	Pawanui	3.36	199	P	Pn	10 02 30.1	-2.7
PKVZ	Pokaka	3.36	223	P	Pn	10 02 34.0	+1.1
MTVZ	Mangateitei	3.37	221	P	Pn	10 02 32.5	-0.5
PRHZ	Porangahau	3.64	200	P	Pn	10 02 33.7	-3.0
WAZ	Wanganui	3.89	221	P	Pn	10 02 40.9	+0.8
NEZ	North Egmont	4.10	233	P	Pn	10 02 46.7	+3.7
BFZ	Birch Farm	4.14	202	P	Pn	10 02 40.2	-3.3
KHEZ	Kahui Hut	4.16	233	P	Pn	10 02 47.6	+3.6
MRZ	Mangatainoka R	4.35	208	P	Pn	10 02 43.2	-3.3
QRZ	Quartz Range	6.00	227	P	Pn	10 03 06.6	-2.4
THZ	Tophouse	6.44	219	P	Pn	10 03 12.7	-2.4
KHZ	Kahutara	6.65	212	P	Pn	10 03 15.4	-2.7
CTZ	Chatham Island	7.89	152	P	Pn	10 03 31.3	-3.7

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*NEIC **16** 10:39:28.0±1.4, 17°.17N±0°.06×94°.84W±0°.05, h130^{km}±9^{km}, Error ellipse: s-maj=8.5km s-min=6.2km az=205.0*

*MEX **16** 10:39:28.6±1.8, 17°.20N×94°.84W, h137^{km}±9^{km}, MD4.2*

ISC 16 10:39:27.9±1.3**, 17°.12N**±0°.05×**94°.82W**±0°.03**,**
h127^{km}±10^{km}**, n47, σ1^{s}25**/80**, Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMIG	Matias Romero	0.07	243	*i* P	Pn	10 39 46.0	+0.7
CMIG				*i* S	Sn	10 39 59.4	+1.2
CMIG	Matias Romero	0.07	243		Pn	10 39 46.0	+0.7
CMIG					Sn	10 39 59.4	+1.2
TUIG	Tuzandepetl	0.98	23	*e*P	Pn	10 39 50.4	0.0
TUIG				*i* S	Sn	10 40 07.2	-0.4
TUIG	Tuzandepetl	0.98	23		Pn	10 39 50.4	0.0
TUIG					Sn	10 40 07.2	-0.4
TGIG		1.66	102	*e*P	Pn	10 39 58.5	+0.7
TGIG				*i* S	Sn	10 40 21.0	+0.5
TGIG		1.66	102		Pn	10 39 58.5	+0.7
TGIG					Sn	10 40 21.0	+0.5
TGBT	Tuxtla Gutierr	1.69	101	*i* P	Pn	10 39 58.5	+0.4
TGBT				*i* S	Sn	10 40 21.1	+0.1
TGBT	Tuxtla Gutierr	1.69	101		Pn	10 39 58.5	+0.4
TGBT					Sn	10 40 21.1	+0.1
OXBJ	Oaxaca	1.82	269	*e*P	Pn	10 40 00.7	+0.9
OXBJ	Oaxaca	1.82	269		Pn	10 40 00.7	+0.9
HUIG	Huatulco	1.82	223	*e*P	Pn	10 39 58.6	-1.0
HUIG				*i* S	Sn	10 40 24.6	+0.8
HUIG	Huatulco	1.82	223		Pn	10 39 58.6	-1.0
HUIG					Sn	10 40 24.6	+0.8
VHO	Vista Hermosa	1.83	269	*e*P	Pn	10 40 00.8	+0.9
VHO				*i* S	Sn	10 40 27.0	+2.7
PCIG		2.09	132	*e*P	Pn	10 40 04.0	+1.2
PCIG				*e*S	Sn	10 40 30.7	+1.2
PCIG				*i* S	Sn	10 40 31.7	+2.2
PCIG		2.09	132		Pn	10 40 04.0	+1.2
PCIG					Sn	10 40 31.7	+2.2
TOIG	Toxpalan	2.35	295	*e*P	Pn	10 40 06.6	+0.4
TOIG				*e*S	Sn	10 40 34.6	-0.9
PEIG	Puerto Escondi	2.49	244	*e*P	Pn	10 40 06.5	-1.5
PEIG				*e*S	Sn	10 40 38.5	-0.2
YOIG	Yosondua	2.62	265	*e*P	Pn	10 40 09.6	-0.2
YOIG				*e*S	Sn	10 40 40.2	-1.7
CCIG	Comitan	2.71	108		Pn	10 40 11.5	+0.7
TXIG	Tlaxiaco	2.82	273	*i* P	Pn	10 40 12.7	+0.4
TXIG				*i* S	Sn	10 40 47.2	+0.6
HLIG	Huajuapan de L	2.93	284	*i* P	Pn	10 40 14.3	+0.6
HLIG				*i* S	Sn	10 40 48.3	-0.8
PNIG	Pinotepa	3.25	258	*i* P	Pn	10 40 16.3	-1.5
PNIG				*i* S	Sn	10 40 54.1	-2.1
PNIG	Pinotepa	3.25	258		Pn	10 40 16.3	-1.5
PNIG					Sn	10 40 54.1	-2.1
FTIG	Fresnillo de T	3.25	284	*e*P	Pn	10 40 18.6	+0.7
FTIG				*i* S	Sn	10 40 57.4	+0.9
THIG		3.30	131	*i* P	Pn	10 40 17.6	-0.8
THIG				*i* S	Sn	10 40 58.1	+0.7
THIG		3.30	131		Pn	10 40 17.6	-0.8
THIG					Sn	10 40 58.1	+0.7
TLIG	Tlapa	3.60	278	*e*P	Pn	10 40 22.8	+0.3
TLIG				*i* S	Sn	10 41 05.6	+0.9
TLIG	Tlapa	3.60	278		Pn	10 40 22.8	+0.3
TLIG					Sn	10 41 05.6	+0.9
HMTT	Tlapaneco	3.63	281	*i* S	Sn	10 41 05.4	+0.1
HMTT	Tlapaneco	3.63	281		Sn	10 41 05.4	+0.1
HUEH	Huehuetenango	3.66	119		Pn	10 40 23.9	+0.5
RTAL	Retalhuleu	3.97	130	Pn	Pn	10 40 28.6	+1.4
CRIG	Cruz Grande	4.14	265	*e*P	Pn	10 40 28.2	-1.3
CRIG				*i* S	Sn	10 41 17.8	+0.5
PLIG	Platanillo	4.63	287	*i* P	Pn	10 40 37.2	+1.0
PLIG				*i* S	Sn	10 41 30.7	+1.4
PLIG	Platanillo	4.63	287		Pn	10 40 37.2	+1.0
PLIG					Sn	10 41 30.7	+1.4
MEIG	Mezcala	4.65	281	*e*P	Pn	10 40 37.1	+0.7
MEIG				*i* S	Sn	10 41 30.7	+1.2
MEIG	Mezcala	4.65	281		Pn	10 40 37.1	+0.7
MEIG					Sn	10 41 30.7	+1.2
PETF	Flores	4.75	92		Pn	10 40 37.0	-0.6
CAIG	El Cayaco	5.21	270	*i* P	Pn	10 40 42.9	-0.9
CAIG	El Cayaco	5.21	270		Pn	10 40 42.9	-0.9
ARIG	Puente Sto Nin	5.39	283	*e*P	Pn	10 40 45.5	-0.7
ARIG	Puente Sto Nin	5.39	283		Pn	10 40 45.5	-0.7
ESQI	Esquipulas	5.86	115	Pn	Pn	10 40 53.5	+0.8
ZIIG	Zihuatanejo	6.36	275	*e*P	Pn	10 40 59.5	+0.2
ZIIG	Zihuatanejo	6.36	275		Pn	10 40 59.5	+0.2
TEIG	Tepich	6.93	63	*e*P	Pn	10 41 04.1	-2.9
TEIG				*i* S	Sn	10 42 20.9	-3.6
TEIG	Tepich	6.93	63		Pn	10 41 04.1	-2.9
TEIG					Sn	10 42 20.9	-3.6

IDC 16 10:42:49.3±366.0**, 51°.86N×44°.35E, h0**^{km}**, Error ellipse:**
s-maj=153.8km s-min=113.7km az=146.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I43RU	DUBNA INFRASON	6.42	322	*i*		11 22 30.0	
	baz=136,slow=344,SNR=1.3						
I31KZ	AKTYUBINSK INF	8.73	94	*i*		11 38 10.0	
	baz=282,slow=312,SNR=4.7						
I46RU	ZALESOVO INFRA	24.27	69	*i*		13 13 30.0	
	baz=282,slow=332,SNR=1.0						
I34MN	SONGINO INFRAS	39.17	71	*i*		14 39 00.0	
	baz=304,slow=329,SNR=1.9						

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*NORS **16** 11:37:57.1±0.0, 42°.65N×46°.25E, h52^{km}, MPVA3.5*

*MOS **16** 11:37:57.1±0.0, 42°.63N×46°.24E, h50^{km}, MPVA3.4*

*DRS **16** 11:37:58.8±0.0, 42°.59N×46°.18E, h56^{km}, ML2.1/6*

ISC 16 11:37:59.2±1.4**, 42°.63N**±0°.04×**46°.22E**±0°.04**, h49**^{km}±10^{km}**,**
n14, σ1^{s}52/28**, 10C-2D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BTLR	Botlikh	0.03	9	⇑*e*Pg	Pn	11 38 06.2	-0.7
	27nm,0.1s						
BTLR				⇑*e*Sg	Sn	11 38 13.0	+0.7
	54nm,0.3s						
DVE	Vedeno	0.33	348	*i* Pg	Pn	11 38 07.7	-1.0
DVE				*e*Sg	Sn	11 38 16.3	+1.0
XNZR	Khunzakh	0.37	104	*e*Pg	Pn	11 38 08.4	-0.8
XNZR				*e*Sg	Sn	11 38 17.0	+0.7
DLMR	Dylym	0.53	35	⇑*e*Pg	Pn	11 38 10.0	-0.8
	50nm,0.2s						
DLMR				⇑*i*Sg	Sn	11 38 20.7	+1.5
	232nm,0.3s						
KRNR	Karanay	0.55	69	⇑*i*Pg	Pn	11 38 09.9	-1.2
	9.2nm,0.4s						
KRNR				⇑*i*Sg	Sn	11 38 20.2	+0.7
	76nm,0.2s						
ARKR	Arakani	0.57	93	⇓*e*Pg	Pn	11 38 10.4	-1.0
	16nm,0.2s						
ARKR				⇓*i*Sg	Sn	11 38 20.9	+0.7
	80nm,0.3s						
DBC	Dubki	0.59	49	⇑*e*Pg	Pn	11 38 10.3	-1.3
	12nm,0.3s						
DBC				⇑*e*Sg	Sn	11 38 21.4	+0.8
	28nm,0.1s						
GNBR	Gunib	0.60	114	⇑*i*Pg	Pn	11 38 10.9	-0.8
	47nm,0.1s						
GNBR				⇑*i*Sg	Sn	11 38 21.3	+0.5
	204nm,0.2s						
GROC	Groznyy	0.65	332	*i* Pg	Pn	11 38 11.6	-0.6
GROC				*e*Sg	Sn	11 38 23.5	+1.9
LGD	Lagodekhi	0.80	179	P	Pn	11 38 12.5	-1.7
LGD				S	Sn	11 38 24.9	-0.3
KMGR	Komgaron	1.08	294	*e*Pg	Pn	11 38 19.1	+1.1
KMGR				*e*Sg	Sn	11 38 34.2	+2.3
PNSH	Pansheti	1.18	271	P	Pn	11 38 18.0	-1.6
PNSH				S	Sn	11 38 32.4	-2.2
DDFL	Dedoflistskaro	1.19	184	P	Pn	11 38 19.8	+0.2
DDFL				S	Sn	11 38 39.0	+4.3
LACR	Lac	1.43	278	*e*Pg	Pn	11 38 21.4	-1.4
LACR				*e*Sg	Sn	11 38 40.1	-0.4

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*IDC **16** 11:52:06.6±0.6, 1°.79N×97°.33W, h0^{km}, mb4.3/19, mb1 4.4/20, mb1mx4.4/39, mbtmp4.3/20, ML3.2/1, MS4.2/18, Ms1 4.2/18, ms1mx4.0/29, Error ellipse: s-maj=24.3km s-min=11.7km az=52.0*

*NEIC **16** 11:52:09.0±1.2, 1°.9N±0°.1×97°.0W±0°.1, h10^{km}±1^{km}, mb4.8/144, Error ellipse: s-maj=25.1km s-min=17.3km az=241.0*

*GCMT **16** 11:52:11.0±0.4, 2°.12N±0°.02×96°.69W±0°.03, h14^{km}±1^{km}, MW4.8/83, Moment Tensor Solution. s24,c26; s83,c106; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.90±.13; $M_{\theta\theta}$-2.09±.10; $M_{\phi\phi}$0.19±.08; $M_{r\theta}$-0.19±.20; $M_{\theta\phi}$0.02±.06; $M_{\phi r}$0.58±.23; Best double couple: $M_0$2.09500×10^{16} NP1:ϕ_s74.00000°, δ45.00000°, λ65.00000°. NP2: ϕ_s287.00000°, δ50.00000°, λ112.00000°. Principal axes: T 2.0890, Plg73.0000°, Azm262.0000°; N 0.0150, Plg17.0000°, Azm92.0000°; P -2.1000, Plg3.0000°, Azm1.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 16 11:52:08.6±0.5**, 1°.93N**±0°.08×**97°.06W**±0°.09**, h10**^{km}**, n331,**
σ1^{s}29/316**, mb4.8**/80**, MS4.1**/20**, West of Galapagos Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTS	Las Juntas de	14.62	55	Pn	Pn	11 55 33.5	-2.3
CCIG	Comitan	15.06	18		Pn	11 55 41.6	-0.3
CMIG	Matias Romero	15.22	8	Pn	Pn	11 55 45.2	+1.4
	0.1nm,0.3s,baz=177,slow=15,SNR=2.5						
CMIG				LR	LR	12 00 11.2	
	comp=Z,2µm,20.2s,baz=130,slow=32						
TLIG	Tlapa	15.61	355	P	P	11 55 53.1	-0.1
OTAV	Otavalo	18.68	95	P	Pn	11 56 29.5	+1.5
OTAV	Otavalo	18.68	95	*e*P	Pn	11 56 30.2	+2.2
BBAC	Balboa, Cauca	19.80	89	*e*P	P	11 56 38.9	-0.8
BBAC				*e*P	Pn	11 56 41.2	-0.1
PIZC	Pizarro, Choco	19.89	81	*e*P	Pn	11 56 46.6	+4.5
TEIG	Tepich	20.11	25	P	Pn	11 56 45.5	+0.9
	7.2nm,0.8s,baz=203,slow=7.7,SNR=3.2						
PCON	Cinco Dias	20.65	89	*e*P	P	11 56 49.4	+0.1
ATAH	Atahualpa	20.69	116	P	Pn	11 56 52.8	+1.0
	14nm,1.2s,baz=291,slow=14,SNR=7.2						
YOTC	Yotoco, Valle	20.78	84	*e*P	P	11 56 48.8	-1.5
PLMC	San Jos del P	20.95	81	*e*P	P	11 56 50.1	-1.9
FLOC	Florencia	21.40	91	*e*P	P	11 56 53.3	-3.5
ZAIG	Zacatecas	21.40	346	P	P	11 56 59.0	+2.0
ZAIG				IAmb	IAmb	11 57 06.2	
	comp=Z,80nm,1.5s						
GARC	Garzon, Huila	21.55	89	*e*P	P	11 56 58.8	+0.1
TOLC	Tolima	21.86	83	*e*P	P	11 57 02.8	+0.6
RREF	El Recreo	21.87	82	*e*P	P	11 57 02.8	+0.2
ORTC	Ortega, Tolima	21.87	84	*e*P	P	11 57 00.7	-1.3
GUY2C	Guyana, Caldas	21.89	81	*e*P	P	11 56 57.1	-5.5
PRAC	Prado	22.21	85	*e*P	P	11 56 60.0	-5.7
PTLC	Puerto Leguiza	22.32	94	*e*P	P	11 57 01.7	-5.1
MOTC	Monteria, Cord	22.35	71	*e*P	P	11 57 01.0	-6.0
NORC	Norcasia	22.43	80	*e*P	P	11 57 08.2	+0.2
ROSC	El Rosal	22.88	82	P	P	11 57 16.1	+3.0
	comp=Z,9.8nm,0.7s,baz=143,slow=3.0,SNR=5.9						
ROSC				LR	LR	12 04 54.4	
	comp=Z,237nm,20.9s,baz=263,slow=33						
ROSC	El Rosal	22.88	82	P	P	11 57 13.7	+0.6
ROSC				IAmb	IAmb	11 57 39.7	
	comp=Z,31nm,1.2s						
ROSC	El Rosal	22.88	82	*e*P	P	11 57 06.5	-6.6
PTBC	PUERTO BERRIO,	22.99	78	*e*P	P	11 57 14.1	+0.2
MACC	Macarena, Meta	23.20	89	*e*P	P	11 57 14.2	-1.8
SPBC	San Pablo de B	23.23	80	*e*P	P	11 57 03.7	-13
CHIC	Chingaza	23.44	83	*e*P	P	11 57 11.9	-6.9
BRRC	Barranca, Sant	23.83	77	*e*P	P	11 57 18.7	-3.5
SMLC	San Martn de	23.87	73	*e*P	P	11 57 20.5	-2.1
RUSC	La Rusia	24.24	80	*e*P	P	11 57 22.3	-4.3
CZSB	Cruzeiro do Su	26.12	112	*e*P	P	11 57 45.2	+2.0
HPIG		26.20	342	P	P	11 57 44.9	+1.0
HPIG				IAmb	IAmb	11 57 49.6	
	comp=Z,21nm,1.5s						
833A	Chaparral WMA,	26.34	355	P	P	11 57 46.1	+1.2
	baz=175,SNR=5.1						
SDV	Santo Domingo	27.18	74	P	P	11 57 54.9	+1.9
	comp=Z,5.9nm,0.7s,baz=255,slow=5.8,SNR=6.8						
SDV	Santo Domingo	27.18	74	P	P	11 57 55.2	+2.2
SDV				IAmb	IAmb	11 57 59.5	
	comp=Z,19nm,1.1s						
HKT	Hockley	27.89	2	P	P	11 57 59.3	+0.5
HKT				IAmb	IAmb	11 58 01.4	
	comp=Z,22nm,1.4s						
TX31	Lajitas Ar. Si	27.97	348	P	P	11 58 00.1	+0.4
TX31				IAmb	IAmb	11 58 01.1	
	comp=Z,16nm,1.2s						
TX32	Lajitas Array	27.97	348	P	P	11 58 00.0	+0.3
TXAR	Lajitas Array	27.97	348	P	P	11 58 00.2	+0.5
	comp=Z,1.5nm,0.9s,baz=161,slow=8.9,SNR=14						
TXAR				PcP	PcP	12 01 14.9	-0.1
	comp=Z,0.7nm,0.9s,baz=182,slow=5.2,SNR=4.7						
TXAR				LR	LR	12 08 04.4	
	comp=Z,728nm,18.4s,baz=0.0,slow=34						
TXAR	Lajitas Array	27.97	348	P	P	11 57 59.6	-0.1
JCT	Junction City	28.52	355	P	P	11 58 05.4	+0.9
	baz=174						
JCT	Junction City	28.52	355	P	P	11 58 04.9	+0.5
JCT				IAmb	IAmb	11 58 07.1	
	comp=Z,34nm,1.4s						
MNTX	Cornudas Mount	30.64	346	P	P	11 58 23.6	+0.3
	baz=164						
319A	Douglas	31.48	340	P	P	11 58 31.8	+1.0
319A				IAmb	IAmb	11 58 39.6	
	comp=Z,15nm,1.4s						
TIGA	Tifton	31.99	22	P	P	11 58 37.9	+2.8
	baz=206						
121A	Cookes Peak, D	32.07	343	P	P	11 58 37.1	+1.0
	baz=160						
121A	Cookes Peak, D	32.07	343	P	P	11 58 37.2	+1.1
121A				IAmb	IAmb	11 58 47.1	
	comp=Z,16nm,1.3s						
MSTX	Muleshoe	32.32	351	P	P	11 58 38.8	+0.6
	baz=169,SNR=6.5						
MSTX	Muleshoe	32.32	351	P	P	11 58 39.0	+0.9
LRAL	Lakeview Retre	32.35	16	P	P	11 58 39.6	+1.3
	baz=199						
X34A	Smith Ranch, M	32.51	359	P	P	11 58 41.4	+1.7
MIAR	Mount Ida	32.61	5	P	P	11 58 41.4	+0.8
	baz=186						
WMOK	Wichita Mounta	32.68	357	P	P	11 58 41.9	+0.6
	baz=177						
ETMB	Extrema	32.86	111	*e*P	P	11 58 43.2	+0.2
AMTX	Amarillo	33.07	353	P	P	11 58 45.5	+0.8
	baz=172						
AMTX	Amarillo	33.07	353	P	P	11 58 45.4	+0.7
W39A	Magazine	33.24	5	P	P	11 58 46.9	+0.9
	baz=186						
W39A	Magazine	33.24	5	P	P	11 58 47.1	+1.0
W39A				IAmb	IAmb	11 58 48.1	
	comp=Z,18nm,1.3s						
214A	Organ Pipe Nat	33.36	335	P	P	11 58 47.7	+0.5
	baz=150						
W41B	Gary Mavity, V	33.38	7	P	P	11 58 48.1	+0.8
	baz=189						
GOGA	Godfrey	33.81	21	P	P	11 58 52.3	+1.2
	baz=205						
LPAZ	La Paz	33.82	123	P	P	11 58 53.0	+0.9
	comp=Z,3.0nm,1.0s,baz=306,slow=7.3,SNR=7.8						
LPAZ				LR	LR	12 11 02.8	
	comp=Z,245nm,18.8s,baz=309,slow=33						
LPAZ	La Paz	33.82	123	P	P	11 58 52.9	+0.9
LPAZ				IAmb	IAmb	11 59 02.0	
	comp=Z,10nm,1.3s						
LPAZ	La Paz	33.82	123	*e*P	P	11 58 53.2	+1.1
TUL1	Leonard	33.83	2	P	P	11 58 52.1	+0.9
	baz=182,SNR=5.1						
TUL1	Leonard	33.83	2	P	P	11 58 51.6	+0.4
W45A	Hickory Valley	33.86	12	P	P	11 58 51.6	+0.1
PLAL	Pickwick Lake	33.93	13	P	P	11 58 53.0	+0.9
PLAL				IAmb	IAmb	11 58 53.6	
	comp=Z,9.9nm,1.2s						
ANMO	Albuquerque	34.00	346	P	P	11 58 54.2	+1.3
	baz=163						
ANMO	Albuquerque	34.00	346	P	P	11 58 52.5	-0.5
ANMO				IAmb	IAmb	11 58 55.7	
	comp=Z,11nm,1.4s						
FCAR	Ozark Folk Cen	34.10	7	P	P	11 58 54.3	+0.8
FCAR				IAmb	IAmb	11 58 59.3	
	comp=Z,11nm,1.4s						
U38A	Gravette	34.43	4	P	P	11 58 57.1	+0.7
U38A				IAmb	IAmb	11 58 58.4	
	comp=Z,26nm,1.5s						
113A	Mohawk Valley,	34.46	335	P	P	11 58 56.7	0.0
U40A	Yellville	34.48	6	P	P	11 58 57.9	+1.1
	baz=187						
X18A	Snowflake	34.59	341	P	P	11 58 58.7	+0.6
X18A				IAmb	IAmb	11 59 16.8	
	comp=Z,12nm,1.5s						
T35A	Sooner Cattle	34.82	1	P	P	11 58 59.8	0.0
T35A				IAmb	IAmb	11 59 07.6	
	comp=Z,25nm,1.4s						
V48A	Smith Brothers	34.96	15	P	P	11 59 00.6	-0.4
X16A	Lo Mia Camp, P	35.00	339	P	P	11 59 02.1	+0.5
W18A	Petrified Fore	35.07	342	P	P	11 59 03.3	+1.2
	baz=158						
W18A	Petrified Fore	35.07	342	P	P	11 59 02.8	+0.6
W18A				IAmb	IAmb	11 59 16.9	
	comp=Z,12nm,1.5s						
WVT	Waverly	35.09	13	P	P	11 59 02.4	+0.3
	baz=196						
WVT	Waverly	35.09	13	P	P	11 59 02.0	-0.1
WVT				IAmb	IAmb	11 59 03.3	
	comp=Z,34nm,1.5s						
PBMO	Poplar Bluff	35.22	9	P	P	11 59 03.0	-0.2
PBMO				IAmb	IAmb	11 59 05.4	
	comp=Z,29nm,1.4s						
MGMO	Mountain Grove	35.33	7	P	P	11 59 05.0	+0.8
CLTN	Cedars of Leba	35.42	15	P	P	11 59 05.3	+0.3
CLTN				IAmb	IAmb	11 59 06.4	
	comp=Z,25nm,1.5s						
IKP	In-Ko-Pah, Jac	35.42	332	P	P	11 59 07.5	+2.4
	baz=146						
SAML	Samuel	35.45	108	P	P	11 59 04.6	-0.8
SAML				IAmb	IAmb	11 59 06.8	
	comp=Z,12nm,1.1s						
SAML	Samuel	35.45	108	*e*P	P	11 59 05.3	-0.2
T25A	Trinidad	35.69	350	P	P	11 59 08.6	+1.1
	baz=167						
S39A	Bolivar	35.76	5	P	P	11 59 07.7	-0.2
S39A				IAmb	IAmb	11 59 09.9	
	comp=Z,25nm,1.4s						
TKL	Tuckaleechee C	35.76	19	P	P	11 59 09.4	+1.6
	comp=Z,12nm,1.1s,baz=183,slow=8.5,SNR=5.7						
TKL	Tuckaleechee C	35.76	19	P	P	11 59 08.9	+1.0
PDMCI	Parker Dam,Lak	35.94	336	P	P	11 59 10.4	+1.0
	baz=150						
BC3	Big Chuckawall	35.96	333	P	P	11 59 10.5	+0.7
	baz=148						
U49A	Red Boiling Sp	35.96	16	P	P	11 59 09.9	+0.3
U49A				IAmb	IAmb	11 59 12.0	
	comp=Z,23nm,1.4s						
WUAZ	Wupatki	35.97	340	P	P	11 59 11.3	+1.4
	baz=155						
WUAZ	Wupatki	35.97	340	P	P	11 59 10.7	+0.8
WUAZ				IAmb	IAmb	11 59 12.3	
	comp=Z,13nm,1.4s						
T47A	Sharon Grove	36.08	14	P	P	11 59 10.4	-0.2
T47A				IAmb	IAmb	11 59 26.5	
	comp=Z,8.8nm,1.1s						
IRM	Iron Mountain	36.24	334	P	P	11 59 13.2	+1.1
	baz=148						
S44A	Carbondale	36.31	10	P	P	11 59 13.0	+0.4
SIUC	Southern Illin	36.34	11	P	P	11 59 12.8	0.0
SIUC				IAmb	IAmb	11 59 15.8	
	comp=Z,23nm,1.1s						
CCM	Cathedral Cave	36.35	8	P	P	11 59 12.8	0.0
	baz=190						
CCM	Cathedral Cave	36.35	8	P	P	11 59 13.5	+0.6
R32A	Long Quarter,	36.35	358	P	P	11 59 13.5	+0.5
R40A	Maddies Statio	36.45	6	P	P	11 59 14.1	+0.3
SDCO	Great Sand Dun	36.48	349	P	P	11 59 15.2	+0.8
	baz=166,SNR=7.0						
SDCO	Great Sand Dun	36.48	349	P	P	11 59 14.8	+0.4
MVCO	Mesa Verde	36.66	345	P	P	11 59 16.3	+0.4
	baz=161						
MVCO	Mesa Verde	36.66	345	P	P	11 59 16.4	+0.6
MVCO				IAmb	IAmb	11 59 17.7	
	comp=Z,22nm,1.5s						
MACA	Manacapuru-AM	36.71	98	*e*P	P	11 59 16.6	+0.3
LVC	Limon Verde	36.72	133	P	P	11 59 18.0	+1.3
	comp=Z,2.4nm,0.8s,baz=304,slow=3.6,SNR=3.1						
LVC				LR	LR	12 10 43.8	
	comp=Z,361nm,19.5s,baz=300,slow=30						
LVC	Limon Verde	36.72	133	P	P	11 59 16.8	0.0
LVC	Limon Verde	36.72	133	*e*P	P	11 59 18.3	+1.5
S22A	4UR Ranch, Cre	36.76	347	P	P	11 59 18.0	+1.2
	baz=164,SNR=6.0						
CBKS	Cedar Bluff	36.79	357	P	P	11 59 17.2	+0.5
	baz=176						
CBKS	Cedar Bluff	36.79	357	P	P	11 59 16.9	+0.1
CBKS				IAmb	IAmb	11 59 20.2	
	comp=Z,22nm,1.4s						
GMRC	Granite Mounta	37.00	334	P	P	11 59 19.7	+1.1
	baz=148						
KSU1	Kansas State U	37.00	1	P	P	11 59 19.0	+0.6
	baz=181						
KSU1	Kansas State U	37.00	1	P	P	11 59 18.8	+0.4
KSU1				IAmb	IAmb	11 59 19.9	
	comp=Z,42nm,1.5s						
V56A	Mocksville	37.05	23	P	P	11 59 19.7	+0.8
	baz=208						
U15A	North Rim	37.11	339	P	P	11 59 20.9	+1.1
PTGA	Pitinga	37.18	94	LR	LR	12 13 17.5	
	comp=Z,209nm,18.4s,baz=290,slow=34						
PTGA	Pitinga	37.18	94	P	P	11 59 21.1	+0.8
PTGA	Pitinga	37.18	94	*e*P	P	11 59 20.8	+0.5
KSCO	Kaye Shedlock’	37.26	353	P	P	11 59 22.0	+1.2
	baz=171						
KSCO	Kaye Shedlock’	37.26	353	P	P	11 59 20.9	+0.1
V57A	Coltrane Farms	37.40	23	P	P	11 59 22.3	+0.4
	baz=209						
WCI	Wyandotte Cave	37.45	14	P	P	11 59 22.9	+0.6
	baz=198						
WCI	Wyandotte Cave	37.45	14	P	P	11 59 22.4	+0.1
PV01	Paradox Valley	37.55	345	P	P	11 59 24.1	+0.7
P38A	Dawn	37.66	4	P	P	11 59 24.1	+0.1
P38A				IAmb	IAmb	11 59 26.2	
	comp=Z,35nm,1.4s						

P40A	Paris	37.70	6	P	P	11 59 24.9	+0.5
P40A				IAmb	IAmb	11 59 30.1	
	comp=Z,37nm,1.4s						
PV03	Paradox Valley	37.73	345	P	P	11 59 24.8	-0.2
PV12	Saucer Basin,	37.78	345	P	P	11 59 25.4	0.0
PV12				IAmb	IAmb	11 59 40.1	
	comp=Z,17nm,1.4s						
R49A	Shelbyville	37.80	15	P	P	11 59 25.3	+0.1
R49A				IAmb	IAmb	11 59 27.5	
	comp=Z,33nm,1.5s						
GSC	Goldstone, Bar	37.94	333	P	P	11 59 26.9	+0.3
LCMT	Little Creek M	37.97	339	P	P	11 59 27.4	+0.5
U57A	Blanch	38.05	23	P	P	11 59 28.4	+1.0
	baz=210						
EDW2	Edwards Air Fo	38.15	332	P	P	11 59 28.9	+0.6
	baz=145						
SMCO	Snowmass	38.16	347	P	P	11 59 29.8	+1.0
SHOC	Shoshone, Teco	38.21	334	P	P	11 59 30.1	+1.3
	baz=148						
T56A	Rocky Mt	38.30	22	P	P	11 59 30.6	+1.1
	baz=208						
SZCU	Shurtz Canyon	38.44	339	P	P	11 59 31.5	+0.6
LRMC	Laurel Mtn Rad	38.49	332	P	P	11 59 32.4	+1.1
	baz=146						
ISCO	Idaho Springs	38.49	349	P	P	11 59 32.5	+1.0
	baz=166						
ISCO	Idaho Springs	38.49	349	P	P	11 59 32.0	+0.6
P46A	Rosedale	38.57	12	P	P	11 59 32.2	+0.4
N35A	Tabor	38.78	2	P	P	11 59 33.3	-0.1
N35A				IAmb	IAmb	11 59 35.0	
	comp=Z,34nm,1.4s						
P48A	Milroy	38.83	14	P	P	11 59 33.4	-0.5
N38A	Joes South For	38.84	5	P	P	11 59 33.8	-0.2
MPMC	Manual Prospec	38.88	333	P	P	11 59 35.8	+1.2
	baz=146						
MSU	Marysvale	38.95	341	P	P	11 59 36.2	+0.9
MVU	Marysvale	38.96	341	P	P	11 59 35.9	+0.6
MVU				IAmb	IAmb	11 59 37.1	
	comp=Z,24nm,1.5s						
N41A	Harden Midland	39.01	7	P	P	11 59 35.5	+0.2
N41A				IAmb	IAmb	11 59 41.0	
	comp=Z,42nm,1.4s						
HDIL	Hopedale	39.09	9	P	P	11 59 36.6	+0.6
	baz=192						
HDIL	Hopedale	39.09	9	P	P	11 59 36.0	0.0
OGNE	Ogallala	39.10	354	P	P	11 59 37.5	+1.2
	baz=172						
OGNE	Ogallala	39.10	354	P	P	11 59 36.3	+0.1
OGNE				IAmb	IAmb	11 59 46.7	
	comp=Z,39nm,1.4s						
H03N2	Juan Fernandez	39.11	156	T	T	12 41 13.1	
	baz=332,slow=77						
H03N1	Juan Fernandez	39.12	156	T	T	12 41 13.3	
	baz=332,slow=77						
H03N3	Juan Fernandez	39.13	156	T	T	12 41 13.1	
	baz=332,slow=77						
BGNE	Belgrade	39.31	359	P	P	11 59 38.1	+0.2
O20A	White River Ci	39.36	346	P	P	11 59 39.3	+0.7
	baz=162						
TMUT	Trail Mountain	39.37	343	P	P	11 59 36.3	-2.5
P17A	Butcher Ranch,	39.40	343	P	P	11 59 39.1	+0.3
Q53A	Leroy	39.40	19	P	P	11 59 39.6	+0.9
	baz=205						
VES	Vestal, Richgr	39.44	331	P	P	11 59 40.0	+0.9
	baz=144						
VILB	Vilhena	39.45	113	*e*P	P	11 59 40.8	+1.3
S58A	Poland Farm, P	39.58	24	P	P	11 59 40.6	+0.5
	baz=211						
S58A	Poland Farm, P	39.58	24	P	P	11 59 40.7	+0.5
S58A				IAmb	IAmb	11 59 41.8	
	comp=Z,35nm,1.2s						
N23A	Red Feather La	39.61	349	P	P	11 59 41.7	+0.9
	baz=166						
SIV	San Ignacio	39.77	118	P	P	11 59 42.8	+0.7
	comp=Z,5.2nm,1.1s,baz=300,slow=7.5,SNR=8.7						
SIV				LR	LR	12 15 15.6	
	comp=Z,212nm,18.1s,baz=293,slow=35						
O49A	Covington	39.80	15	P	P	11 59 41.2	-0.8
O49A				IAmb	IAmb	11 59 42.7	
	comp=Z,46nm,1.4s						
PHWY	Pilot Hill	39.92	350	P	P	11 59 43.6	+0.2
SCIA	State Center	39.95	4	P	P	11 59 43.3	0.0
	baz=186						
SCIA	State Center	39.95	4	P	P	11 59 43.2	0.0
R57A	Stanardsville	39.98	23	P	P	11 59 44.4	+0.9
	baz=210						
NLU	North Lily Min	40.24	342	P	P	11 59 44.2	-1.7
L40A	Anamosa	40.30	7	P	P	11 59 47.1	+1.0
L40A				IAmb	IAmb	11 59 54.0	
	comp=Z,18nm,1.4s						
L42A	Oliver, Polo	40.45	8	P	P	11 59 46.1	-1.2
TPH	Tonopah	40.45	335	P	P	11 59 48.5	+0.7
K31A	O'Neill	40.55	358	P	P	11 59 48.6	+0.4
K31A				IAmb	IAmb	11 59 58.5	
	comp=Z,13nm,0.8s						
DUG	Dugway, Tooele	40.69	341	P	P	11 59 50.4	+0.8
	baz=155,SNR=6.0						
DUG	Dugway, Tooele	40.69	341	P	P	11 59 50.3	+0.8
K38A	Parkersburg	40.72	5	P	P	11 59 48.9	-0.7
TCUT	Toone Canyon	41.11	343	P	P	11 59 54.5	+1.4
NV11	Mina Array Sit	41.15	335	P	P	11 59 53.4	+0.1
NVAR	Mina Array Bea	41.21	334	P	P	11 59 54.5	+0.5
	comp=Z,1.0nm,0.8s,baz=160,slow=9.2,SNR=11						
NVAR				PcP	PcP	12 01 53.2	+0.2
	comp=Z,0.5nm,0.9s,baz=134,slow=2.6,SNR=3.9						
NVAR	Mina Array Bea	41.21	334	P	P	11 59 54.2	+0.2
P57A	Homestead Farm	41.21	23	P	P	11 59 54.7	+1.0
	baz=210						
P57A	Homestead Farm	41.21	23	P	P	11 59 54.8	+1.2
P57A				IAmb	IAmb	11 59 56.8	
	comp=Z,18nm,1.2s						
JFWS	Jewell Farm	41.26	8	P	P	11 59 54.0	-0.1
	baz=190						
ECSD	EROS Data Cent	41.63	0	P	P	11 59 56.7	-0.4
	baz=181,SNR=10						
ECSD	EROS Data Cent	41.63	0	P	P	11 59 55.9	-1.2
ECSD				IAmb	IAmb	12 00 05.2	
	comp=Z,37nm,1.4s						
ITTB	Itaituba	41.76	99	*e*P	P	11 59 57.4	-1.3
M52A	Chesterland	41.90	18	P	P	11 59 59.6	+0.3
M52A				IAmb	IAmb	12 00 00.5	
	comp=Z,37nm,1.4s						
ELK	Elko	42.00	339	P	P	12 00 00.8	+0.4
I37A	Lemond, Waseca	42.03	4	P	P	12 00 00.4	0.0
I37A				IAmb	IAmb	12 00 03.8	
	comp=Z,32nm,1.5s						
YERR	Yerington	42.08	334	P	P	12 00 02.5	+1.4
HVU	Hansel Valley	42.12	342	P	P	12 00 01.4	+0.1
BW06	Boulder Array	42.17	346	P	P	12 00 02.0	+0.2
	baz=161						
BW06	Boulder Array	42.17	346	P	P	12 00 01.5	-0.3
PD31	Pinedale Array	42.17	346	P	P	12 00 01.4	-0.4
PDAR	Pinedale Array	42.17	346	P	P	12 00 01.6	-0.2
	comp=Z,1.8nm,0.8s,baz=151,slow=7.3,SNR=11						
PDAR				PcP	PcP	12 01 54.1	-2.0
	comp=Z,0.5nm,0.9s,baz=151,slow=2.1,SNR=2.8						
PDAR				LR	LR	12 17 05.9	
	comp=Z,490nm,18.7s,baz=154,slow=36						
PNTR	Pine Nut	42.32	334	P	P	12 00 03.8	+0.7
SUSD	Miller	42.37	358	P	P	12 00 02.6	-0.5
SUSD				IAmb	IAmb	12 00 04.0	
	comp=Z,29nm,1.2s						
RSSD	Black Hills	42.47	353	P	P	12 00 05.1	+0.9
	baz=170						
RSSD	Black Hills	42.47	353	P	P	12 00 04.5	+0.3
RSSD				IAmb	IAmb	12 00 06.0	
	comp=Z,17nm,1.3s						
VCNR	Virginia City	42.52	334	P	P	12 00 05.7	+1.1
PAHR	Pah Rah Range	42.74	334	P	P	12 00 07.6	+1.3
MALB	Monte Alegre	42.95	95	*e*P	P	12 00 08.2	-0.1
REDW	Red Top Meadow	43.05	345	P	P	12 00 08.4	-0.5
SNOW	Snow King Moun	43.12	345	P	P	12 00 09.2	-0.3
SNOW				IAmb	IAmb	12 00 20.2	
	comp=Z,18nm,1.4s						
LOHW	Long Hollow	43.22	346	P	P	12 00 11.7	+1.3
SPMN	Marine on St.	43.28	4	P	P	12 00 11.0	+0.5
	baz=186						
SPMN	Marine on St.	43.28	4	P	P	12 00 09.8	-0.7
SPMN				IAmb	IAmb	12 00 11.9	
	comp=Z,33nm,1.4s						
BEKR	Beckworth	43.30	334	P	P	12 00 10.9	0.0
ORV	Oroville	43.56	332	P	P	12 00 14.2	+1.4
F36A	Milaca	43.86	4	P	P	12 00 15.2	0.0
F36A				IAmb	IAmb	12 00 16.8	
	comp=Z,21nm,1.4s						
HLID	Hailey	44.24	342	P	P	12 00 19.2	+0.7
	baz=155						
HLID	Hailey	44.24	342	P	P	12 00 18.5	+0.1
TAOE	Nuku Hiva Isla	44.26	255	*e*T	T	12 47 20.8	
	comp=Z,24nm,0.2s						
O03E	Paynes Creek	44.29	333	P	P	12 00 20.1	+1.3
	baz=143						
YMR	Madison River	44.30	346	P	P	12 00 19.9	+0.9
BINY	Binghamton	44.33	22	P	P	12 00 19.8	+0.8
	baz=211						
YHH	Holmes Hill	44.39	346	P	P	12 00 20.7	+0.9
YNE	Yellowstone No	44.40	347	P	P	12 00 20.0	+0.3
MDP	Montagnes des	44.44	85	LR	LR	12 17 21.1	
	comp=Z,210nm,21.3s,baz=260,slow=34						
M61A	Granite Spring	44.48	25	P	P	12 00 20.8	+0.7
	baz=214						
YHL	Hebgen Lake	44.53	346	P	P	12 00 21.3	+0.4
RKT	Rikitea	44.53	234	*e*LR	LR	12 12 45.6	
	comp=Z,175nm,30.5s						
COWI	Conover	44.54	8	P	P	12 00 20.8	+0.2
COWI				IAmb	IAmb	12 00 22.1	
	comp=Z,32nm,1.5s						
E28A	Huff	44.58	356	P	P	12 00 21.0	0.0
WVOR	Wild Horse Val	44.72	337	P	P	12 00 23.2	+0.9
MCMT	McKenzie Canyo	44.94	344	P	P	12 00 23.4	-0.8
MOD	Modoc Plateau	44.95	335	P	P	12 00 24.3	+0.2
MOD				IAmb	IAmb	12 00 27.0	
	comp=Z,13nm,1.4s						
MCPB	Macapa, AP	45.05	92	*e*P	P	12 00 24.1	-1.1
GCMT	Greycliff	45.07	348	P	P	12 00 24.7	-0.3
BI02	San Fabin de	45.27	151	P	P	12 00 27.6	+1.0
BI02				IAmb	IAmb	12 00 29.4	
	comp=Z,21nm,1.3s						
M04C	Macdoel	45.51	334	P	P	12 00 28.7	+0.2
	baz=144						
YBH	Yreka Blue Hor	45.85	333	P	P	12 00 30.3	-1.0
	comp=Z,1.7nm,0.8s,baz=156,slow=9.3,SNR=6.5						
YBH	Yreka Blue Hor	45.85	333	P	P	12 00 29.5	-1.7
PP1B	Ponte de Pedra	45.86	117	*e*P	P	12 00 31.9	+0.3
K05A	Summer Lake	45.87	335	P	P	12 00 32.2	+0.7
L04D	Klamath Falls	46.06	334	P	P	12 00 33.1	+0.2
	baz=144						
EYMN	Ely	46.09	5	P	P	12 00 32.0	-0.9
	baz=188						
AGMN	Agassiz Nation	46.20	1	P	P	12 00 33.6	-0.1
	baz=182,SNR=7.6						
AGMN	Agassiz Nation	46.20	1	P	P	12 00 32.6	-1.1
AGMN				IAmb	IAmb	12 00 34.6	
	comp=Z,18nm,1.1s						
B35A	Bob, Littlefor	46.34	3	P	P	12 00 33.9	-1.0
B35A				IAmb	IAmb	12 00 39.8	
	comp=Z,16nm,1.4s						
J05D	Fort Rock, OR	46.48	336	P	P	12 00 36.5	+0.3
	baz=146						
DGMT	Dagmar	46.77	353	P	P	12 00 38.4	+0.1
	baz=170						
DGMT	Dagmar	46.77	353	P	P	12 00 37.9	-0.3
PINE	Pine Mountain	46.78	336	P	P	12 00 39.0	+0.4
PINE				IAmb	IAmb	12 00 40.6	
	comp=Z,16nm,1.4s						
K02D	Willamette Mer	47.05	333	P	P	12 00 41.5	+0.9
	baz=142,SNR=5.6						
G08A	Pilot Rock	47.29	339	P	P	12 00 42.9	+0.4
G08A				IAmb	IAmb	12 00 43.7	
	comp=Z,14nm,1.5s						
SNDB	Serra Nova Dou	47.52	108	*e*P	P	12 00 45.3	+0.8
CPUP	Villa Florida	47.54	129	P	P	12 00 44.7	+0.1
	comp=Z,4.0nm,1.1s,baz=307,slow=5.1,SNR=3.2						
CPUP				LR	LR	12 19 50.4	
	comp=Z,98nm,21.6s,baz=312,slow=35						
CPUP	Villa Florida	47.54	129	*e*P	P	12 00 46.0	+1.4
PRPB	Parauapebas	47.85	100	*e*P	P	12 00 46.9	-0.3
ARAG	Araguaiana, MT	48.03	113	*e*P	P	12 00 47.9	-0.6
E09A	Wood Farm, Sta	48.07	340	P	P	12 00 48.2	-0.2
E09A				IAmb	IAmb	12 00 50.0	
	comp=Z,11nm,1.3s						
ULM	Lac du Bonnet	48.16	1	P	P	12 00 48.2	-0.7
	comp=Z,3.1nm,0.7s,baz=203,slow=9.5,SNR=5.8						
ULM				LR	LR	12 20 58.8	
	comp=Z,178nm,19.8s,baz=166,slow=36						
ULM	Lac du Bonnet	48.16	1	P	P	12 00 48.0	-0.9
F07A	Phinny Hill Vi	48.16	339	P	P	12 00 49.0	-0.1
PLCA	Paso Flores	48.86	153	P	P	12 00 52.7	-1.9
	comp=Z,5.0nm,1.1s,baz=328,slow=8.1,SNR=4.2						
PLCA				LR	LR	12 17 09.3	
	comp=Z,470nm,18.2s,baz=326,slow=31						
NEW	Newport	49.30	342	P	P	12 00 58.9	+1.1
	baz=153						
NEW	Newport	49.30	342	P	P	12 00 57.0	-0.8
NEW				IAmb	IAmb	12 00 59.5	
	comp=Z,12nm,1.4s						
PEXB	Peixe	50.40	107	*e*P	P	12 01 07.6	+0.9
SMTB	Santa Maria do	50.45	103	*e*P	P	12 01 08.5	+1.4
PTGB	Pitanga	51.03	124	*e*P	P	12 01 12.3	+0.9
BDFB	Brasilia	51.52	112	P	P	12 01 14.7	-0.6
	comp=Z,1.6nm,0.4s,baz=330,slow=9.7,SNR=3.9						
IPMB	Ipameri, GO	51.99	115	*e*P	P	12 01 19.3	+0.6
BB19B	Bebedouro	52.68	118	*e*P	P	12 01 24.4	+0.6
FFC	Flin Flon	52.78	356	P	P	12 01 24.0	+0.2
SDBA	SAO DESIDERIO	53.71	107	*e*P	P	12 01 32.0	+0.6
PPT2	Papeete2	55.25	247	*e*LR	LR	12 17 50.9	
	comp=Z,178nm,25.5s						
TBI	Tubuai	56.82	240	*e*LR	LR	12 18 32.0	
	comp=Z,125nm,27.8s						
TBI	Tubuai	56.82	240	*e*T	T	13 03 04.7	
	comp=Z,3.7nm,0.3s						
NBLI	Livramento-PB	60.67	99	*e*P	P	12 02 18.8	-2.0
YKA	Yellowknife Ar	61.83	351	P	P	12 02 27.0	-0.7
	comp=Z,3.4nm,1.1s,baz=151,slow=7.1,SNR=18						
YKA				LR	LR	12 29 02.9	
	comp=Z,310nm,18.6s,baz=0.0,slow=36						
NBPV	Pedro Velho	62.21	98	*e*P	P	12 02 30.5	-0.6
BCAR	Beaver Creek A	69.32	340	P	P	12 03 13.9	-2.3
EPYK	Eagle Plains	70.08	344	P	P	12 03 21.0	+0.3
	baz=137						
EPYK	Eagle Plains	70.08	344	P	P	12 03 20.3	-0.4
SCRK	Sand Creek	70.67	340	P	P	12 03 24.3	-0.1
	baz=129						
INK	Inuvik	70.74	346	P	P	12 03 24.9	+0.3
	comp=Z,17nm,1.2s,baz=146,slow=6.4,SNR=16						
INK	Inuvik	70.74	346	P	P	12 03 24.7	+0.1
SML	Sawmill	70.95	337	P	P	12 03 26.5	+0.3
RND	Reindeer	72.06	338	P	P	12 03 32.5	-0.3
IL31		72.15	340	P	P	12 03 32.1	-1.2
IL31				IAmb	IAmb	12 03 33.3	
	comp=Z,7.7nm,0.8s						
ILAR	Eielson Array	72.15	340	P	P	12 03 32.8	-0.5
	comp=Z,5.4nm,0.7s,baz=146,slow=4.8,SNR=40						
ILAR				LR	LR	12 35 54.9	
	comp=Z,241nm,18.1s,baz=112,slow=36						
ILAR	Eielson Array	72.15	340	P	P	12 03 32.3	-1.0
NEA2	Nenana	72.81	339	P	P	12 03 37.2	-0.1
	baz=124						
PPLA	Purkeypile	73.06	337	P	P	12 03 38.8	-0.1
BMAR	Burnt Mountain	73.06	343	P	P	12 03 37.7	-1.0
I23K	Minto, Yukon-K	73.23	340	P	P	12 03 39.7	0.0
	baz=124						
I23K	Minto, Yukon-K	73.23	340	P	P	12 03 39.9	+0.3
I23K				IAmb	IAmb	12 03 51.4	
	comp=Z,15nm,1.2s						
MLY	Manley	73.65	339	P	P	12 03 42.0	-0.3
	baz=123						
COLD	Coldfoot	74.68	341	P	P	12 03 49.0	+0.8
	baz=124,SNR=6.1						
COLD	Coldfoot	74.68	341	P	P	12 03 48.5	+0.3
TOLK	Toolik Lake Re	75.29	343	P	P	12 03 51.7	0.0
	baz=125						
TOLK	Toolik Lake Re	75.29	343	P	P	12 03 52.2	+0.5
TOLK				IAmb	IAmb	12 03 53.1	
	comp=Z,14nm,1.4s						
ANM	Nome	79.07	336	P	P	12 04 13.8	+0.9
ANM				IAmb	IAmb	12 04 15.0	
	comp=Z,12nm,1.3s						
RDOG	Red Dog Mine	79.36	340	P	P	12 04 14.5	+0.1
RDOG				IAmb	IAmb	12 04 17.9	
	comp=Z,6.6nm,1.0s						
TNA	Tin City	80.41	337	P	P	12 04 21.1	+1.0
	baz=107						
TNA	Tin City	80.41	337	P	P	12 04 21.0	+0.8
TNA				IAmb	IAmb	12 04 22.2	
	comp=Z,15nm,1.4s						
VNDA	Vanda	94.27	192	LR	LR	12 38 54.6	
	comp=Z,98nm,19.6s,baz=172,slow=30						
H11N3	WAKE ISLAND Hy	95.03	290	T	T	13 50 51.5	
	baz=86,slow=75,SNR=30						
H11N2	WAKE ISLAND Hy	95.05	290	T	T	13 50 50.0	
	baz=86,slow=75,SNR=21						
H11N1	WAKE ISLAND Hy	95.05	290	T	T	13 50 54.1	
	baz=86,slow=75,SNR=23						
H11S2	WAKE ISLAND Hy	95.31	289	T	T	13 51 12.5	
	baz=86,slow=75,SNR=51						
H11S1	WAKE ISLAND Hy	95.31	289	T	T	13 51 09.8	
	baz=86,slow=75,SNR=61						
H11S3	WAKE ISLAND Hy	95.33	289	T	T	13 51 13.8	
	baz=86,slow=75,SNR=39						
NOA	NORSAR Array B	97.08	28	LR	LR	12 49 59.5	
	comp=Z,88nm,18.8s,baz=310,slow=36						
HFS	Hagfors	98.53	28	LR	LR	12 50 29.5	
	comp=Z,136nm,18.1s,baz=332,slow=36						
ARCES	ARCESS Array B	99.09	17	LR	LR	12 51 10.9	
	comp=Z,162nm,18.1s,baz=280,slow=36						
ASAR	Alice Springs	126.19	242	PKP	PKPdf	12 11 11.6	-0.9
	comp=Z,1.0nm,0.9s,baz=115,slow=1.9,SNR=6.2						
ASAR	Alice Springs	126.19	242	PKPdf	PKPdf	12 11 11.3	-1.1
SONM	Songino Array	126.37	341	PKP	PKPdf	12 11 11.4	-0.8
	comp=Z,0.7nm,0.7s,baz=101,slow=0.8,SNR=4.3						
WRA	Warramunga Arr	126.72	247	PKP	PKPdf	12 11 12.4	-1.1
	comp=Z,0.5nm,0.9s,baz=96,slow=2.5,SNR=6.4						
HHC	Hu-ho-hao-te	130.07	332	*e*PKP	PKPdf	12 11 19.1	-0.3
MKAR	Makanchi Array	131.48	1	PKP	PKPdf	12 11 21.2	-0.7
	comp=Z,1.1nm,1.0s,baz=264,slow=1.7,SNR=7.7						
NJ2	Nanjing	132.05	318	*e*PKP	PKPdf	12 11 22.3	-1.0
WMQ	Urumqi	134.26	355	*e*PKP	PKPdf	12 11 27.3	+0.1
WSAR	Wadi Sarin	145.56	42	PKPbc	PKPdf	12 11 48.1	0.0
	comp=Z,9.0nm,0.9s,baz=306,slow=4.2,SNR=15						
CMAR	Chiang Mai Arr	154.34	323	PKP	PKPdf	12 12 01.9	-0.1
	comp=Z,0.3nm,0.3s,baz=344,slow=1.6,SNR=8.1						
CMAR				PKPbc	PKPbc	12 12 09.8	-0.5
	comp=Z,0.3nm,0.6s,baz=345,slow=2.5,SNR=6.8						
CMAR				PKPab	PKPab	12 12 24.7	+0.5
	comp=Z,1.5nm,0.9s,baz=18,slow=3.3,SNR=6.2						
CMAR	Chiang Mai Arr	154.34	323	PKPdf	PKPdf	12 12 02.5	+0.4
CMAR				PKPbc	PKPbc	12 12 10.2	-0.1
CMAR					PKPab	12 12 24.8	+0.5

HLW ***16*** *11:52:40.4, 37°.50N×29°.22E, h20^{km}±31^{km}, Ml5.1*

BJI ***16*** *11:52:42.7±0.0, 37°.12N×29°.98E, h12^{km}, mB5.2/26, mb4.5/42, Ms4.7/13, Ms7 4.4/15*

DDA ***16*** *11:52:42.9, 37°.15N×30°.09E, h31^{km}±3^{km}, MW4.7*

THE ***16*** *11:52:43.6, 37°.23N×30°.22E, h0^{km}±1^{km}, ML4.9/1, Error ellipse: s-maj=6.0km s-min=0.7km az=72.0*

ISK ***16*** *11:52:43.7, 37°.18N×30°.02E, h5^{km}, ML4.6/67*

IDC ***16*** *11:52:44.5±0.4, 37°.27N×30°.03E, h0^{km}, mb4.3/34, mb1 4.4/44, mb1mx4.3/64, mbtmp4.3/44, ML4.0/8, MS4.1/34, Ms1 4.1/34, ms1mx3.9/48, Error ellipse: s-maj=10.3km s-min=8.4km az=124.0*

MOS ***16*** *11:52:44.9±1.2, 37°.19N×30°.08E, h14^{km}, mb4.8/30, Error ellipse: s-maj=5.5km s-min=3.7km az=75.7*

NIC ***16*** *11:52:44.7±0.0, 37°.19N×29°.86E, h0^{km}±6^{km}, Ml4.7/5*

MED_RC ***16*** *11:52:45.0±0.2, 36°.91N×30°.02E, h10^{km}, MW5.0/30, Moment Tensor Solution. Body waves: s2,c2;Mantle waves: s30,c47; Duration: 1^{s}1 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.69±.09; $M_{\theta\theta}$0.00±.08; $M_{\phi\phi}$2.69±.06; $M_{r\theta}$-1.94±.37; $M_{\theta\phi}$-0.13±.07; $M_{\phi r}$1.92±.25; Best double couple: $M_0$3.79000×10^{16} NP1:ϕ_s15.00000°, δ29.00000°, λ-50.00000°. NP2:ϕ_s151.00000°, δ68.00000°, λ-110.00000°. Principal axes: T 3.4800, Plg21.0000°, Azm256.0000°; N 0.6400, Plg18.0000°, Azm158.0000°; P -4.1100, Plg62.0000°, Azm31.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=35s.*

NEIC ***16*** *11:52:46.2±2.0, 37°.22N±0°.05×30°.08E±0°.06, h10^{km}±1^{km}, mb4.7/52, ML4.6(ISK) Error ellipse: s-maj=9.3km s-min=8.7km az=180.0*

GCMT ***16*** *11:52:48.2±0.2, 37°.06N±0°.02×30°.01E±0°.01, h12^{km}, MW4.9/120, Moment Tensor Solution. s45,c59; s120,c184; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.02±.06; $M_{\theta\theta}$0.20±.07; $M_{\phi\phi}$2.82±.05; $M_{r\theta}$0.56±.28; $M_{\theta\phi}$-0.14±.05; $M_{\phi r}$0.25±.19; Best double couple: $M_0$2.98200×10^{16} NP1:ϕ_s347.00000°, δ44.00000°, λ-104.00000°. NP2:ϕ_s187.00000°, δ48.00000°, λ-77.00000°. Principal axes: T 2.8360, Plg2.0000°, Azm267.0000°; N 0.2920, Plg10.0000°, Azm358.0000°; P -3.1270, Plg80.0000°, Azm165.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

BGR ***16*** *11:52:50.9±0.0, 37°.65N×30°.42E, h10^{km}, mb4.6, Ms3.8*

ISC 16 11:52:45.5±0.6, **37°.16N**±0°.02×**30°.04E**±0°.01, **h8**^{km}±3^{km}, **n560**, σ**1^{s}69**/620, **mb4.8**/99, **MS4.1**/31, **47C-29D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KORT	Korkueli	0.30	123	PG	Pg	11 52 50.2	-1.2
KORT				SG	Sg	11 52 56.4	+1.0
KORT	Korkueli	0.30	123	⇑*i*P	Pg	11 52 50.0	-1.5
KORT				*i* S	Sg	11 52 54.9	-0.6
GOLH	Golhisar	0.39	281	⇑*i*P	Pg	11 52 51.7	-1.3
GOLH				*i* S	Sb	11 53 02.3	+1.5
ELL	Elmali	0.42	194	PG	Pg	11 52 52.8	-1.0
ELL				SG	Sb	11 53 01.0	-0.9
ELL	Elmali	0.42	194	P	Pg	11 52 53.2	-0.6
ELL	Elmali	0.42	194		Pg	11 52 53.1	-0.6
ELL	Elmali	0.42	194	P	Pg	11 52 52.5	-1.3
ELL				S	Sg	11 53 00.2	+0.8
BUCA	Burdur, Bucak-	0.45	68	⇑*i*P	Pg	11 52 52.0	-2.3
BUCA				*i* S	Sb	11 53 01.1	-1.5
BCK	Bucak	0.53	56	PG	Pg	11 52 55.3	-0.5
BRDR	BURDUR-Merkez	0.53	2	⇓*i*P	Pg	11 52 53.4	-2.5
BRDR				*i* S	Sg	11 53 02.7	-0.1
ANTB	Antalya	0.56	118	PG	Pg	11 52 55.6	-0.7
CAEL	Denizli, Camel	0.57	266	⇑*i*P	Pg	11 52 55.0	-1.6
CAEL				*i* S	Sb	11 53 06.5	+0.3
KEMT	Kemer-ANTALYA	0.70	143	PG	Pg	11 52 58.4	-0.5
BASM	Basmaki-Afyon	0.76	1	PG	Pg	11 52 59.4	-0.7
ISP	Isparta	0.77	30	PG	Pg	11 52 58.6	-1.6
ISP	Isparta	0.77	30	P	Pg	11 52 59.2	-1.0
ISP	Isparta	0.77	30	Pg	Pg	11 52 59.2	-1.0
AKUM	Antalya-Kumluc	0.87	163	⇑*i*P	Pg	11 53 00.3	-1.9
AKUM				*i* S	Sn	11 53 17.8	+0.9
FETY	Fethiye	0.93	236	PG	Pg	11 53 02.1	-1.2
FETY				SG	Sb	11 53 16.5	+0.2
DEMR	Demre-Antalya	0.93	186	PG	Pg	11 53 03.4	+0.1
TAVA	DENIZLI_Tavas	0.94	289	⇑*i*P	Pg	11 53 01.1	-2.5
TAVA				*i* S	Sb	11 53 16.4	-0.4
BAGO	Egridir - ISPA	1.02	36	⇑*i*P	Pg	11 53 01.5	-3.6
BAGO				*i* S	Sn	11 53 22.2	+1.4
KSL	Kastellorizon	1.07	200	P	Pg	11 53 05.7	-0.4
KSL				S	Sn	11 53 23.4	+1.5
	54μm,1.2s						
KSL	Kastellorizon	1.07	200	P	Pg	11 53 05.4	-0.7
KSL				S	Sn	11 53 24.3	+2.4
KZIL	AFYON_Kizioren	1.10	4	⇑*i*P	Pg	11 53 04.0	-2.5
KZIL				*i* S	Sn	11 53 25.2	+2.5
DALY	Dalyan (Mula)	1.16	253	PN	Pg	11 53 05.9	-1.8
DALY	Dalyan (Mula)	1.16	253	⇑*i*P	Pg	11 53 05.5	-2.2
DALY				*i* S	Sn	11 53 24.6	+0.6
KHL	Karahalli	1.23	341	PN	Pg	11 53 07.8	-1.3
KHAL	Karahalli	1.28	341	⇑*i*P	Pn	11 53 07.0	-2.8
KHAL				*i* S	Sn	11 53 30.1	+2.8
MULA	Mugla, Merkez-	1.37	274	⇑*i*P	Pn	11 53 09.3	-1.7
MULA				*i* S	Sg	11 53 31.9	+2.3
YER	Yerkesik	1.40	269	P	Pn	11 53 10.6	-0.8
YER	Yerkesik	1.40	269	PN	Pn	11 53 10.7	-0.7
SEDI	Konya, Seydise	1.40	78	⇑*i*P	Pn	11 53 10.2	-1.2
SEDI				*i* S	Sg	11 53 32.9	+2.3
SHUT	Suhut-Afyon	1.45	16	PN	Pn	11 53 11.9	-0.2
YVAC	Isparta, Yalva	1.46	40	⇑*i*P	Pn	11 53 10.6	-1.7
YVAC				*i* S	Sg	11 53 33.4	+0.8
TURN	Turunc	1.48	255	PN	Pn	11 53 12.3	-0.2
TURN	Turunc	1.48	255	⇑*i*P	Pn	11 53 11.5	-0.9
TURN				*i* S	Sg	11 53 36.5	+3.3
MRSB	Marmaris-Mugla	1.54	254	PN	Pn	11 53 13.3	+0.1
DOGA	KONYA_Doganhis	1.60	54	⇑*i*P	Pn	11 53 13.7	-0.6
DOGA				*i* S	Sg	11 53 37.6	+0.6
AFYO	Afyonkarahisar	1.64	7	⇓*i*P	Pn	11 53 13.9	-0.8
AFYO				*i* S	Sg	11 53 46.8	+8.7
ALAN	Alanya-ANTALYA	1.71	110	PN	Pn	11 53 15.6	0.0
KULA	Kula-Manisa	1.73	322	P	Pn	11 53 14.7	-1.3
KULA	Kula-Manisa	1.73	322	PN	Pn	11 53 15.0	-1.0
USAK	Uak-Merkez	1.75	333	⇑*i*P	Pn	11 53 15.0	-1.1
USAK				*i* S	Sg	11 53 47.9	+6.3

MANT	Manisa	1.77	319	*i* P	Pn	11 53 15.3	-1.3
MANT				*i* S	Sg	11 53 41.3	-1.0
MANT	Manisa	1.77	319		Pn	11 53 15.5	-1.1
ARG	Arkhangelos	1.80	239	P	Pn	11 53 16.9	+0.1
ARG	Arkhangelos	1.80	239	PN	Pb	11 53 17.9	-0.8
ARG	Arkhangelos	1.80	239	P	Pn	11 53 16.9	+0.1
ARG				S	Sg	11 53 43.7	+0.3
MLSB	Milas	1.81	275	PN	Pn	11 53 17.5	+0.5
AYDB	Zeytinkoy-Aydi	1.88	295	PN	Pn	11 53 17.2	-0.8
GEDZ	Gediz	1.94	345	PN	Pn	11 53 19.3	+0.4
DATC	Datca-Mugla	1.94	259	PN	Pn	11 53 19.0	+0.2
KMER	Konya-Meram	1.95	71	⇑*i*P	Pn	11 53 19.9	+0.9
KMER				*i* S	Sg	11 53 47.2	-1.0
SHAP	Saphane-Kutahy	1.96	341	PN	Pn	11 53 19.4	+0.2
KONT	Konya--Tatoy	2.01	66	PN	Pn	11 53 20.7	+1.0
KONT	Konya--Tatoy	2.01	66	*i* P	Pn	11 53 20.5	+0.8
KONT				*i* S	Sb	11 53 48.0	+0.6
GAZI	Gazipasa	2.05	116	PN	Pb	11 53 21.9	-1.1
GAZI	Gazipasa	2.05	116	*i* P	Pn	11 53 20.1	-0.2
GAZI				*i* S	Sg	11 53 56.7	+5.2
BDRM	Kayabasi	2.07	268	⇑*i*P	Pn	11 53 21.1	+0.5
BDRM				*i* S	Sg	11 53 51.6	-0.5
SIMA	Simav-Kutahya	2.09	337	PN	Pn	11 53 20.1	-0.8
LADK	Ladik-KONYA	2.12	60	PN	Pn	11 53 21.9	+0.6
KDHN	Kadinhani	2.13	50	*i* P	Pn	11 53 21.6	0.0
KDHN				*i* S	Sb	11 53 51.5	+0.3
BODT	Bodrum	2.18	268	P	Pn	11 53 21.5	-0.6
BODT	Bodrum	2.18	268	PN	Pn	11 53 22.5	+0.4
DDIM	Aydin, Didim	2.25	278	*i* P	Pn	11 53 23.4	+0.5
DDIM				*i* S	Sg	11 53 60.0	+2.3
GOMA	Golmarmara-Man	2.28	313	PN	Pn	11 53 23.2	-0.2
GCAM	G?zelcaml?	2.29	284	PN	Pn	11 53 23.7	+0.1
GCAM	G?zelcaml?	2.29	284	*i* P	Pn	11 53 23.4	-0.2
GCAM				*i* S	Sg	11 53 59.7	+0.5
KKBE	Karaman, Kazim	2.32	88	⇑*i*P	Pn	11 53 23.9	-0.1
KKBE				*i* S	Sb	11 53 54.9	-1.6
TVSB	Tavsanli	2.33	349	PN	Pn	11 53 24.2	0.0
CIFT	Cifteler, Eski	2.34	20	PN	Pn	11 53 23.6	-0.7
CIFT	Cifteler, Eski	2.34	20	*i* P	Pn	11 53 23.4	-1.0
CIFT				*i* S	Sg	11 54 10.4	+10
ANDZ	Kutahya, Merke	2.35	357	*i* P	Pn	11 53 24.4	0.0
ANDZ				*i* S	Sg	11 54 05.4	+4.6
ERMK	Ermenek	2.36	102	⇑*i*P	Pn	11 53 24.0	-0.8
ERMK				*i* S	Sb	11 53 58.7	+0.9
NISR	Nisiros	2.39	258	P	Pb	11 53 27.3	-1.5
SGAZ	Eskisehir, Sey	2.45	15	*i* P	Pn	11 53 24.7	-1.1
SGAZ				*i* S	Sg	11 54 11.1	+7.0
KOSK	Kos Island	2.48	261	PN	Pn	11 53 27.3	+1.1
ALIN	Konya, Altinte	2.52	62	*i* P	Pn	11 53 27.2	+0.3
ALIN				*i* S	Sb	11 54 00.1	-2.3
AUSIV	SIVRIHISAR	2.56	27	PN	Pn	11 53 27.9	+0.5
AUSIV	SIVRIHISAR	2.56	27	*i* P	Pn	11 53 26.3	-1.1
AUSIV				*i* S	Sg	11 54 13.8	+6.0
SVRH	Sivrihisar-ESK	2.56	27	PN	Pn	11 53 27.6	+0.2
SMG	Samos	2.60	283	P	Pn	11 53 27.7	-0.2
DGB	zmir	2.66	290	*i* P	Pn	11 53 28.4	-0.2
BLCB	Balcova	2.67	298	P	Pn	11 53 28.3	-0.4
BLCB	Balcova	2.67	298	PN	Pn	11 53 29.3	+0.6
TEKE	Tekeli-Mersin	2.68	111	PN	Pn	11 53 30.4	+1.5
DST	Dursunbey	2.68	336	PN	Pn	11 53 29.3	+0.3
BERE	Bereket-Mersin	2.69	107	PN	Pn	11 53 30.5	+1.4
AUBOZ	BOZOYUK	2.74	360	PN	Pn	11 53 29.4	-0.5
KARP	Karpathos	2.83	236	P	Pn	11 53 32.0	+1.1
KARP	Karpathos	2.83	236	PN	Pn	11 53 32.4	+1.5
KARP	Karpathos	2.83	236		Pn	11 53 32.1	+1.1
TEVE	Tevekalti-Mers	2.83	104	PN	Pn	11 53 32.5	+1.4
AKMS	Akamas	2.84	138	P	Pb	11 53 33.7	-2.7
AKMS				S	Sb	11 54 12.0	+0.8
AKMS				AML	AML	11 54 26.0	
	18nm,1.1s						
AKMS				AML	AML	11 54 26.0	
	18nm,1.1s						
AKMS				AML	AML	11 54 27.9	
	30nm,0.9s						
AKMS				AML	AML	11 54 27.9	
	30nm,0.9s						
ALFC	Alefka	2.88	133	P	Pn	11 53 31.3	-0.4
ALFC				S	Sb	11 54 10.8	-1.9
ALFC				AML	AML	11 54 19.6	
	17nm,0.9s						
ALFC				AML	AML	11 54 19.6	
	17nm,0.9s						
ALFC				AML	AML	11 54 32.2	
	14nm,0.9s						
ALFC				AML	AML	11 54 32.2	
	14nm,0.9s						
YORU	Yoruktepe-Mers	2.89	109	PN	Pn	11 53 33.6	+1.8
OREN	Orenkoy-Mersin	2.91	108	PN	Pn	11 53 33.8	+1.7
SRCK	Saricakaya, Es	2.91	9	PN	Pn	11 53 32.5	+0.4
ZEDA	zmir-Bergama	2.95	309	*i* P	Pn	11 53 31.8	-0.8
TEPK	Tepekoy-MERSIN	2.97	107	PN	Pn	11 53 34.4	+1.4
GULN	MERSIN_Gulnar	2.98	108	*i* P	Pn	11 53 33.9	+0.8
AKK1	Akkuyu-Mersin	3.00	109	PN	Pn	11 53 34.4	+1.2
BILE	Bilecik/Merkez	3.00	358	*i* P	Pn	11 53 32.6	-0.8
AKKU	Akkuyu-Mersin	3.00	108	PN	Pn	11 53 34.9	+1.6
ZEYE	Izmir, Urla-Ze	3.00	292	*i* P	Pn	11 53 33.2	-0.1
AKK2	Akkuyu-Mersin	3.00	109	PN	Pn	11 53 34.9	+1.5
AKDN	Akdeniz- Kıbrı	3.01	127	PN	Pn	11 53 35.6	+2.1
YESY	Yesilyurt	3.01	77	PN	Pn	11 53 34.9	+1.3
KKUL	Konya-Kulu	3.03	48	*i* P	Pn	11 53 35.0	+1.2
FOCM	Foa	3.04	302	PN	Pn	11 53 34.9	+1.1
KEBE	Keben-Mersin	3.04	102	PN	Pn	11 53 35.4	+1.5
CAVI	Cavuskoy	3.04	357	PN	Pn	11 53 34.4	+0.5
YESI	Yesilovacik-Me	3.06	107	PN	Pn	11 53 35.4	+1.3
ULDT	Uludag	3.06	347	*i* P	Pn	11 53 33.4	-0.9
IKL	Isikli	3.08	106	PN	Pn	11 53 36.3	+2.0
LEF	Lefka	3.08	131	⇑P	Pn	11 53 35.6	+1.2
LEF				⇑S	Sb	11 54 15.4	-2.9
LEF	Lefka	3.08	131	PN	Pn	11 53 36.2	+1.8
TISA	Tisan-Mersin	3.10	108	PN	Pn	11 53 36.2	+1.6
KARG	Kargicak-Mersi	3.10	107	PN	Pn	11 53 36.8	+2.0
DKL	Dikili	3.12	309	PN	Pn	11 53 36.4	+1.5
NATA	Nata	3.14	138	P	Pn	11 53 37.7	+2.4
NATA				S	Sg	11 54 27.9	+1.4
NATA				AML	AML	11 54 38.4	
	123nm,1.2s						
NATA				AML	AML	11 54 38.4	
	123nm,1.2s						
NATA				AML	AML	11 54 41.3	
	81nm,1.1s						
NATA				AML	AML	11 54 41.3	
	81nm,1.1s						
SILI	Silifke-Mersin	3.22	103	PN	Pn	11 53 38.2	+1.8
SLFK	Silifke-Mersin	3.23	103	PN	Pn	11 53 38.6	+2.1
ADVT	Abdulvahap	3.27	356	PN	Pn	11 53 37.4	+0.3
GULT	Gulveren	3.29	6	PN	Pn	11 53 38.8	+1.5
SERE	Sereflikochisa	3.31	56	PN	Pn	11 53 38.9	+1.3
SZAC	Souni	3.33	135	P	Pn	11 53 41.1	+3.2
SZAC				S	Sg	11 54 33.2	+0.7
SZAC				AML	AML	11 54 48.0	
	26nm,1.1s						
SZAC				AML	AML	11 54 48.0	
	26nm,1.1s						
SZAC				AML	AML	11 54 53.9	
	23nm,1.9s						
SZAC				AML	AML	11 54 53.9	
	23nm,1.9s						
CHOS	Chios island	3.38	292	P	Pn	11 53 38.9	+0.2
CHOS	Chios island	3.38	292	PN	Pn	11 53 39.8	+1.1
ATHAL	Athalassa	3.39	126	P	Pn	11 53 41.9	+3.3
MDUB	Mudurnu	3.43	15	PN	Pn	11 53 40.4	+1.1
MDUB	Mudurnu	3.43	15		Pn	11 53 39.1	-0.1
BR231	Keskin MP Arra	3.43	38		Pn	11 53 39.4	0.0
YLV	Yalova	3.44	352	PN	Pn	11 53 40.2	+0.8
CSS	Mathiatis	3.46	128	PN	Pn	11 53 41.8	+2.2
CSS	Mathiatis	3.46	128		Pn	11 53 40.9	+1.3
CSS	Mathiatis	3.46	128	P	Pn	11 53 41.4	+1.8
CSS				S	Sb	11 54 27.6	-1.5
CSS				AML	AML	11 54 41.6	
	5.1nm,1.9s						
CSS				AML	AML	11 54 41.6	
	5.1nm,1.9s						
CSS				AML	AML	11 54 56.1	
	3.1nm,1.3s						
CSS				AML	AML	11 54 56.1	
	3.1nm,1.3s						
LOD	Lodumlu	3.46	37	PN	Pn	11 53 41.6	+1.8
YAYX	Yaylak	3.47	58	PN	Pn	11 53 40.9	+1.0
YUVA	Yuva-Kibriscik	3.47	21	PN	Pn	11 53 41.6	+1.7
TRML	Termal-Yalova	3.51	349	PN	Pn	11 53 41.8	+1.5
AKIN	Akıncılar- Kıb	3.51	127	PN	Pn	11 53 42.2	+1.9
ARMT	Armutlu	3.52	345	PN	Pn	11 53 41.0	+0.5
ASGA	Asgata	3.52	131	P	Pn	11 53 43.6	+3.1
GULA	Gulagac	3.53	69	PN	Pn	11 53 41.6	+0.9
KIBS	BOLU	3.55	23	*i* P	Pn	11 53 41.1	+0.1
SAUV	Serdivan-Sakar	3.58	4	PN	Pn	11 53 42.9	+1.6
APE	Apeiranthos	3.60	270	P	Pn	11 53 42.5	+0.8
APE	Apeiranthos	3.60	270	⇑P	Pn	11 53 42.6	+1.0
APE	Apeiranthos	3.60	270	PN	Pn	11 53 42.9	+1.3
APE	Apeiranthos	3.60	270	*ce*P	Pn	11 53 42.4	+0.8
EDC	Edincik	3.60	333	PN	Pn	11 53 42.4	+0.8
MVOU	Mavrovouni	3.62	125	P	Pn	11 53 41.8	0.0
PRK	Paraskevi	3.62	306	P	Pn	11 53 43.3	+1.4
KAMT	Kaman	3.64	52	PN	Pn	11 53 43.1	+0.9
HRT	Hereke	3.67	356	PN	Pn	11 53 43.9	+1.4
ZKR	Zakros	3.71	238	P	Pn	11 53 44.6	+1.6
ZKR	Zakros	3.71	238	PN	Pn	11 53 45.0	+2.0
EREN	Erenkoy	3.71	115	PN	Pn	11 53 45.2	+2.1
STIA	Sitia Lasithi	3.74	240	P	Pn	11 53 45.3	+1.8
SANT	Santorini	3.76	259	⇑P	Pn	11 53 46.5	+2.7
SANT				⇑S	Sb	11 54 33.4	-4.5
SANT	Santorini	3.76	259	PN	Pn	11 53 45.4	+1.6
SANT	Santorini	3.76	259		Pn	11 53 45.7	+1.9
THT2	Imerovigli	3.77	260	PN	Pn	11 53 45.4	+1.4
OSC1	CSNet OBS 1	3.79	164	P	Pn	11 53 45.6	+1.4
OSC1				S	Sn	11 54 31.0	+2.1
BR131	Keskin Array S	3.81	47	P	Pn	11 53 44.3	-0.3
BR131	Keskin Array S	3.81	47		Pn	11 53 44.3	-0.3
BRTR	Keskin Array B	3.81	47	Pn	Pn	11 53 44.4	-0.3
	3.3nm,0.3s,baz=223,slow=17,SNR=48						
BRTR				Sn	Sn	11 54 31.6	+1.8
	8.8nm,0.3s,baz=213,slow=27,SNR=12						
BRTR				LR	LR	11 55 38.0	
	comp=Z,7µm,18.6s,baz=212,slow=46						
BRTR	Keskin Array B	3.81	47	PN	Pn	11 53 44.9	+0.2
BRTR	Keskin Array B	3.81	47	*i* P	Pn	11 53 44.4	-0.3
BRTR				pmax	pmax		
	comp=Z,24nm,0.6s						
BRTR	Keskin Array B	3.81	47		Pn	11 53 43.9	-0.7
KOCA	Canakkale, Ayv	3.85	309	*i* P	Pn	11 53 44.0	-1.0
SIGR	SIGRI	3.88	303	P	Pn	11 53 45.6	+0.2
EZN	Ezine	3.94	314	P	Pn	11 53 46.0	-0.3
CMRD	Camardi-Nigde	3.98	81	PN	Pn	11 53 48.4	+1.5
KARA	Karaisali	4.01	87	PN	Pn	11 53 49.0	+1.8
NPS	Neapolis	4.05	243	P	Pn	11 53 47.9	+0.2
LAST	Lasithi	4.19	243	P	Pn	11 53 50.7	+0.9
OSC2	CSNet OBS 4	4.47	155	P	Pn	11 53 52.8	-0.7
OSC2				S	Sn	11 54 46.5	+0.8
LIA	Limnos Island	4.68	307	P	Pn	11 53 54.8	-1.6
SIVA	Sivas	4.74	245	P	Pn	11 53 59.6	+2.3
ILGA	Ilgaz	4.83	35		Pn	11 53 59.4	+0.8
SMTH	Samothraki Isl	4.83	315	P	Pn	11 53 58.1	-0.3
ALN	Alexandroupoli	4.85	321	P	Pn	11 53 58.4	-0.4
ALN	Alexandroupoli	4.85	321	P	Pn	11 53 59.0	+0.2
ALN	Alexandroupoli	4.85	321		Pn	11 53 59.0	+0.2
VAM	Vamos	5.03	251	P	Pn	11 54 05.0	+3.8
EDRB	Edirne	5.33	332	P	Pn	11 54 04.7	-0.6
HWQ	Hawqa	5.60	119	*e*P	Pn	11 54 12.1	+2.8
BHL	Bhannes	5.62	124	*e*P	Pn	11 54 11.9	+2.5
KTHA	Kythira Island	5.67	263	P	Pn	11 54 13.6	+3.5
DQRL	Deir Qamar	5.68	126	*e*P	Pn	11 54 13.4	+3.1
VLI	Veliai	5.70	268	P	Pn	11 54 12.3	+1.8
KTHR	Kythira	5.72	263	P	Pn	11 54 14.0	+3.3
GAZ	Gaziantep	5.73	88		Pn	11 54 11.6	+0.7
GAZ	Gaziantep	5.73	88	P	Pn	11 54 14.6	+3.7
GAZ				S	Sb	11 55 35.9	+1.3
QRWL	Qaraoun	5.86	126	*e*P	Pn	11 54 14.0	+1.3
TOKA	Tokat	5.94	56	Pn	Pn	11 54 13.2	-0.6
RCY	Rachaya	5.99	126	*e*P	Pn	11 54 15.6	+1.0
SHBL	Chebaa	6.02	127	*e*P	Pn	11 54 16.8	+1.8
MMAI	Mount Meron Ar	6.04	132	Pn	Pn	11 54 16.0	+0.8
	comp=Z,56nm,0.3s,baz=316,slow=12,SNR=77						
MMAI				Sn	Sn	11 55 26.2	+1.7
	comp=Z,25nm,0.3s,baz=309,slow=26,SNR=5.2						
AGG	Agios Georgios	6.35	289	P	Pn	11 54 20.0	+0.6
AGG	Agios Georgios	6.35	289		Pn	11 54 20.0	+0.6
KALE	Kalithea	6.37	283	P	Pn	11 54 22.0	+2.3
ITM	Ithomi	6.47	273		Pn	11 54 22.6	+1.5
LAKA	Lakka	6.48	282	P	Pn	11 54 24.4	+3.2
MAKR	Makrakomi, Fth	6.50	289	P	Pn	11 54 24.7	+3.2
EFP	Efpalio	6.56	284	P	Pn	11 54 24.5	+2.3
ANX	Ano Chora	6.58	285	P	Pn	11 54 24.9	+2.4
THL	Klokotos Trika	6.74	293	P	Pn	11 54 26.7	+2.0
SLUM	Salum	6.92	217	P	Pn	11 54 28.3	+1.1
	baz=211						
SLUM				AMP		11 55 00.0	
	baz=211						
SLUM				S	Sn	11 55 38.7	-7.4
	baz=211						
VAY	Valandovo	7.13	308	*i* P	Pn	11 54 32.8	+2.8
KOT	Kottamia	7.37	168	P	Pn	11 54 34.1	+0.7
	baz=163						
KOT				AMP		11 55 00.0	
	baz=163						
HMYD	Mayadein	7.38	175	P	Pn	11 54 34.3	+0.9
	baz=169						
TIRR	Tirgusor	7.39	351	⇑P	Pn	11 54 34.7	+1.1
TIRR	Tirgusor	7.39	351	P	Pn	11 54 33.3	-0.3
TIRR	Tirgusor	7.39	351		Pn	11 54 33.3	-0.3
HHAG	Hagoal	7.39	166	P	Pn	11 54 34.6	+0.9
	baz=161						
PLVB	Pleven	7.47	328	⇓P	Pn	11 54 35.7	+1.0
HNAT	Natroun	7.53	176	P	Pn	11 54 35.5	-0.1
	baz=171						
HNAT				S	Sn	11 55 58.6	-2.4
	baz=171						
VTS	Vitosha	7.55	318	⇓P	Pn	11 54 37.6	+1.7
VTS	Vitosha	7.55	318	P	Pn	11 54 36.8	+0.8
VTS	Vitosha	7.55	318		Pn	11 54 36.8	+0.8
STIP	Stip	7.57	309	*i* P	Pn	11 54 35.2	-1.0
HSAF	As Saff	7.63	170	P	Pn	11 54 37.2	+0.2
	baz=165						
FNA	Florina	7.65	301	P	Pn	11 54 39.2	+1.9
FNA	Florina	7.65	301		Pn	11 54 39.2	+1.9
GLL	Jalalah	7.69	169	P	Pn	11 54 38.1	+0.3
	baz=164						
TPGR	Topolog	7.78	351	⇑P	Pn	11 54 39.4	+0.4
SEV	Sevastopol'	7.87	19	*e*P	Pn	11 54 39.4	-0.8
SEV				*e*S	Sn	11 56 08.0	-1.4
YAL	Yalta	7.96	22	*e*P	Pn	11 54 43.8	+2.5
RYAN	Fayoum	8.06	178	P	Pn	11 54 43.2	+0.4
	baz=173						
TLCR		8.07	354	⇑P	Pn	11 54 44.0	+1.1
CFR	Carcaliu	8.13	350	⇓P	Pn	11 54 44.4	+0.6
ALU	Alushta	8.21	22	*e*P	Pn	11 54 43.1	-1.7
EIL	Elat	8.53	150	Pn	Pn	11 54 49.5	+0.2
	comp=Z,7.7nm,0.3s,baz=332,slow=7.6,SNR=47						
EIL				Sn	Sn	11 56 23.2	-2.4
	comp=Z,8.9nm,0.3s,baz=284,slow=17,SNR=5.8						
MARD	Mardin	8.57	86		Pn	11 54 50.4	+0.4
SUDU	Sudak	8.58	24	*e*P	Pn	11 54 50.5	+0.6
SUDU				*e*S	Sn	11 56 24.8	-2.1
KOPT	Kop Dagi	8.67	68	Pn	Pn	11 54 51.4	-0.1
MLR	Muntele Rosu	8.87	341	Pn	Pn	11 54 54.4	+0.4
	comp=Z,0.4nm,0.3s,baz=147,slow=10,SNR=2.5						
MLR	Muntele Rosu	8.87	341	⇑P	Pn	11 54 55.6	+1.6
MLR	Muntele Rosu	8.87	341	P	Pn	11 54 54.8	+0.8
MLR	Muntele Rosu	8.87	341		Pn	11 54 54.8	+0.8
TIR	Tirane	8.93	301	P	Pn	11 54 55.6	+0.9
TIR	Tirane	8.93	301	Pn	Pn	11 54 55.6	+0.9
VRI	Vrincioaia	9.04	345	⇓P	Pn	11 54 57.6	+1.4
PLOR	Plostina	9.04	345	⇓P	Pn	11 54 56.8	+0.5
BOVS	Bovan	9.06	318	⇑P	Pn	11 54 58.3	+1.7
VOIR		9.08	337	⇑P	Pn	11 54 58.0	+1.2
ARR	Arges	9.15	335	⇓P	Pn	11 54 58.8	+1.0
ANN	Anapa	9.46	34	*e*P	Pn	11 54 59.6	-2.3
ANN				*e*S	Sn	11 56 46.3	-2.1
ANN				pmax	pmax		
	comp=Z,48nm,1.1s						
HERR	Herculane	9.62	326	⇓P	Pn	11 55 04.5	+0.4
TESR	Tescani	9.68	346	⇑P	Pn	11 55 05.1	+0.1
GRUS	Gruza	9.77	316	⇑P	Pn	11 55 07.9	+1.7
SOC	Sochi	9.78	46	*e*P	Pn	11 55 06.4	0.0
SOC				*e*		11 56 58.5	
SOC				pmax	pmax		
	comp=Z,36nm,0.9s						
SOC				MLR	MLR		
	comp=Z,647nm,12.0s						
GZR	Gura Zlata	9.87	329	⇑P	Pn	11 55 08.9	+1.3
HFRF	Wahat Farafira	10.09	189	S	Sn	11 56 56.7	-7.4
	baz=185						
BIZ	Bicaz	10.20	345	⇑P	Pn	11 55 13.6	+1.5
GEVA	Gevas	10.38	80	Pn	Pn	11 55 15.6	+0.8
BZS	Buzias	10.54	326	⇑P	Pn	11 55 17.9	+1.0
TIP	Timpagrande	10.65	285	⇓P	Pn	11 55 20.1	+1.7
TIP	Timpagrande	10.65	285		Pn	11 55 19.8	+1.4
BURAR	Bucovina Array	11.03	343	⇑P	Pn	11 55 24.7	+1.1
BURAR	Bucovina Array	11.03	343		Pn	11 55 24.8	+1.1
SORM	Soroca	11.04	354	⇑P	Pn	11 55 24.1	+0.5
DRGR		11.05	333	⇑P	Pn	11 55 24.1	+0.2
CEL	Celeste	11.26	280		Pn	11 55 26.5	-0.2
KIV	Kislovodsk	11.77	51	*e*P	Pn	11 55 37.2	+3.5
KIV				pmax	pmax		
	comp=Z,50nm,1.0s						
KIV				MLR	MLR		
	comp=Z,528nm,11.0s						
KVAR	Kislovodsk Arr	11.77	51	Pn	Pn	11 55 36.0	+2.3
	baz=241,slow=18,SNR=1.3						
KBZ	Khabaz	11.79	52	Pn	Pn	11 55 37.5	+3.7
	comp=Z,0.1nm,0.3s,baz=253,slow=9.9,SNR=8.8						
KBZ				LR	LR	12 00 48.0	
	comp=Z,483nm,19.1s,baz=247,slow=41						
GNI	Garni	11.88	71	Pn	Pn	11 55 39.4	+4.1
	comp=Z,0.9nm,0.3s,baz=324,slow=12,SNR=6.7						
GNI				LR	LR	12 00 55.2	
	comp=Z,4µm,18.7s,baz=276,slow=41						
GNI	Garni	11.88	71		Pn	11 55 36.0	+0.7
ZEI	Tsey	12.03	58	*e*P	Pn	11 55 42.1	+4.8
ZEI				pmax	pmax		
	comp=Z,22nm,1.8s						
NCK	Nalchik	12.12	54	⇓*i*P	Pn	11 55 43.9	+5.4
NCK				pmax	pmax		
	comp=Z,191nm,2.1s						
GOF	Gofitskoye	12.58	47	⇑*e*P	Pn	11 55 48.4	+3.8
KOLS	Kolonicke sedl	13.05	337	*e*P	P	11 55 58.2	-3.4
KOLS	Kolonicke sedl	13.05	337	*e*PN	P	11 55 58.2	-3.4
PSZ	Piszkesteto	13.08	328	P	Pn	11 55 52.2	+0.6
PSZ	Piszkesteto	13.08	328		Pn	11 55 52.2	+0.6
GROC	Groznyy	13.47	59	*e*P	Pn	11 55 55.6	-1.2
GROC				*e*S	Sn	11 58 26.8	+0.1
GROC				pmax	pmax		
	comp=Z,12nm,0.6s						
AKASG	Malin Array Be	13.55	358	Pn	Pn	11 55 57.3	-0.5
	comp=Z,0.6nm,0.3s,baz=175,slow=12,SNR=5.2						
AKBB	Malin Array Si	13.55	358	⇓*e*P	Pn	11 56 00.9	+3.1
AKBB				pmax	pmax		
	comp=Z,13nm,1.0s						
AKBB	Malin Array Si	13.55	358		Pn	11 55 57.8	-0.1
VYHS	Vyhne	13.97	328	*e*	P	11 56 16.1	+4.3
NIE	Niedzica	14.14	333	*e*P	Pn	11 56 09.4	+3.5
NRCA	Norcia	14.15	299		Pn	11 56 05.5	-0.7
MAK	Makhachkala	14.57	61	*e*P	Pn	11 56 10.9	-1.0
MAK				*e*S	Sn	11 58 53.1	-0.4
MAK				pmax	pmax		
	comp=Z,77nm,0.9s						
MAK				MLR	MLR		
	comp=Z,329nm,15.0s						
MODS	Modra-Piesok	14.58	324	*e*P	P	11 56 18.7	+0.1
MODS	Modra-Piesok	14.58	324	*e*PN	P	11 56 18.7	+0.1
SOKA	Soboth	14.64	315	*e*P	P	11 56 18.1	-1.2
	comp=Z,12nm,1.7s						
ARSA	Arzberg	14.72	318	*e*P	Pn	11 56 16.2	+2.3
	comp=Z,12nm,1.4s						
JAVC	Velka Javorina	14.76	326	*e*PN	P	11 56 23.9	+3.3
OBKA	Obir	14.82	314	P	P	11 56 18.9	-2.5
	comp=Z,17nm,1.4s						
CONA	Conrad Observa	14.97	320	*e*P	P	11 56 20.6	-2.4
	comp=Z,8.1nm,1.2s						
OJC	Ojcow	14.98	334	*e*P	Pn	11 56 16.4	-1.1
OJC	Ojcow	14.98	334	P	Pn	11 56 16.6	-0.9
OJC	Ojcow	14.98	334		Pn	11 56 16.6	-0.9
KRUC	Moravsky	15.48	324	*e*PN	P	11 56 29.3	+0.7
MORC	Moravsky Berou	15.50	328	*e*PN	P	11 56 30.1	+1.2
MORC	Moravsky Berou	15.50	328	P	Pn	11 56 25.1	+0.7
MORC				pmax	pmax		
	comp=Z,85nm,1.9s						
MORC	Moravsky Berou	15.50	328		Pn	11 56 25.1	+0.7
MORC				IAmb	IAmb	11 56 33.6	
	comp=Z,85nm,1.9s						
VRAC	Vranov	15.57	325	Pn	Pn	11 56 23.6	-1.6
	comp=Z,0.4nm,0.3s,baz=150,slow=13,SNR=1.8						
VRAC				LR	LR	12 02 23.2	
	comp=Z,299nm,18.8s,baz=148,slow=37						
VRAC	Vranov	15.57	325	*e*PN	P	11 56 30.0	+0.5
OSSC	Osservatorio P	15.66	300		Pn	11 56 27.9	+1.5
OSSC				IAmb	IAmb	11 56 51.9	
	comp=Z,90nm,1.4s						
MOA	Molln	15.76	318	*e*P	P	11 56 33.4	+1.8
	comp=Z,8.6nm,1.1s						
ZOU	Zoufplan	15.77	312		Pn	11 56 29.5	+1.4
KBA	Koelnbreinsper	15.83	314	*e*P	P	11 56 35.5	+2.9
	comp=Z,32nm,2.0s						
KRLC	Kraliky	16.05	328	*e*P	P	11 56 36.5	+1.6
KRLC	Kraliky	16.05	328	*e*P	P	11 56 36.5	+1.6
RST	Umm Al-Ruwaisa	16.09	113	*e*P		11 56 30.6	
MIB	Mutribah	16.18	112	*e*P		11 56 32.3	
VRH	Novokhopyorsk	16.32	27	*e*P	Pn	11 56 36.0	+1.2
VRH				pmax	pmax		
	comp=Z,70nm,1.7s						
CKRC	Cesky Krumlov	16.34	320	*e*P	P	11 56 41.7	+3.6
CTI	Castel Tesino	16.34	309	P	P	11 56 37.9	-0.3
CTI				pmax	pmax		
	comp=Z,134nm,1.8s						
CTI	Castel Tesino	16.34	309	P	P	11 56 37.9	-0.3
CTI				IAmb	IAmb	11 56 45.0	
	comp=Z,134nm,1.8s						
VSL	Villasalto	16.38	284	P	P	11 56 38.2	-0.4
VSL				IAmb	IAmb	11 56 46.8	
	comp=Z,128nm,1.4s						
DPC	Dobruska-Polom	16.45	328	*e*P	P	11 56 40.5	+1.1
DPC	Dobruska-Polom	16.45	328	*e*P	P	11 56 40.5	+1.1
RJOB	Jochberg	16.50	315	*e*L	L	12 02 22.2	
	comp=Z,2µm,18.5s						
UMR	Umm Al-Rimmam	16.59	112	*e*P		11 56 37.7	
LPSR	Galich'ya Gora	16.65	19	*e*P	P	11 56 40.9	-0.6
LPSR				pmax	pmax		
	comp=Z,20nm,0.9s						
GEC2	GERESS Array S	16.66	320	P	P	11 56 40.7	-1.0
GEC2	GERESS Array S	16.66	320	*e*P	P	11 56 44.5	+2.7
	comp=Z,127nm,2.3s,baz=123,slow=12						
GEC2				*e*L	L	12 03 52.2	
	comp=Z,683nm,19.5s						
GERES	GERESS Array B	16.66	320	Pn	P	11 56 41.7	-0.1
	comp=Z,0.2nm,0.3s,baz=128,slow=11,SNR=16						
GERES				LR	LR	12 04 03.3	
	comp=Z,682nm,19.4s,baz=141,slow=41						
GERES	GERESS Array B	16.66	320		Pn	11 56 40.1	+0.7
KEST	Kesra	16.71	271	Pn	P	11 56 43.6	+1.3
	comp=Z,0.2nm,0.3s,baz=41,slow=12,SNR=6.4						
KEST				LR	LR	12 03 54.1	
	comp=Z,582nm,19.9s,baz=40,slow=40						
KEST	Kesra	16.71	271		P	11 56 41.2	-1.2
CHVC	Chvalec	16.74	328	*e*P	P	11 56 44.9	+2.3
KSP	Ksiaz	16.84	329	*e*P	P	11 56 43.1	-0.4
KHC	Kasperske Hory	16.91	320	*e*P	P	11 56 46.3	+1.9
KHC	Kasperske Hory	16.91	320	*e*P	P	11 56 46.3	+1.9
KHC				AMS	AMS	12 01 50.0	
KHC	Kasperske Hory	16.91	320		Pn	11 56 41.8	-0.6
WTTA	Wattenberg	16.92	312	*e*P	P	11 56 46.3	+1.6
	comp=Z,54nm,2.6s						
WATA	Walderalm	16.99	313	*e*P	P	11 56 45.1	-0.3
	comp=Z,37nm,1.4s,SNR=5.6						
SQTA	Sankt Quirin	17.15	312	*e*P	P	11 56 49.0	+1.8
	comp=Z,29nm,1.6s,SNR=6.3						
WET	Wettzell	17.27	319	*e*P	P	11 56 49.7	+1.2
	comp=Z,54nm,1.5s,baz=123,slow=12						
WET				*e*L	L	12 04 20.7	
	comp=Z,690nm,18.9s						
MOTA	Moosalm	17.28	312	*e*P	P	11 56 49.4	+0.7
	comp=Z,34nm,1.2s						
FETA	Feichten	17.35	311	*e*P	P	11 56 52.2	+2.8
	comp=Z,25nm,1.4s,SNR=6.6						
PVCC	Panska Ves	17.36	325	*e*P	P	11 56 54.5	+5.2
PVCC	Panska Ves	17.36	325	*e*P	P	11 56 54.5	+5.2
MNK	Minsk	17.41	356	*e*P	Pn	11 56 44.0	-4.5
MNK	Minsk	17.41	356	*i* P	Pn	11 56 44.6	-3.9
	comp=E,4.0nm,1.2s						
MNK				*i* P	Pn	11 56 44.6	-3.9
	comp=N,28nm,1.3s						
MNK				*i* P	Pn	11 56 44.6	-3.9
	comp=Z,10.0nm,0.9s						
MNK				*i* PP	sP	11 56 54.7	+0.9
MNK				*i* PPP	PPP	11 57 02.4	
MNK				*i* S	Sn	11 59 58.6	-3.6
MNK				*i* SS	SnSn	12 00 13.5	-2.1
MNK				*i* SSS	SSS	12 00 26.3	
MNK				*i* LQ	LQ	12 01 53.6	

Code	Station	Dist	Azi	Phase	ISC phase	Time	Res
MNK				i LR	LR	12 03 22.0	
MNK				i LRM	MLR	12 05 22.5	
	comp=Z,145nm,10.2s						
MNK				i LRM	MLR	12 05 33.3	
	comp=N,291nm,16.2s						
MNK				i LRM	MLR	12 05 36.8	
	comp=E,20nm,8.9s						
RETA	Reutte	17.55	312	eP	P	11 56 54.8	+3.2
	comp=E,16nm,1.4s						
FUR	Furstenfeldbru	17.59	315	eL	L	12 04 26.6	
	comp=E,956nm,19.8s						
DAVOX	Davos/Dischmat	17.76	309	P	P	11 56 55.7	+1.7
	comp=E,0.1nm,0.3s,baz=97,slow=11,SNR=5.8						
DAVOX				LR	LR	12 04 52.2	
	comp=E,991nm,19.6s,baz=88,slow=41						
BRG	Berggiesshubel	17.88	325	eP	P	11 56 58.1	+3.0
BRG				Amp		11 57 01.0	
	comp=Z,33nm,1.5s						
NACGM	Naroch	17.89	354	i P	P	11 56 55.2	+0.1
NACGM				i P	P	11 56 55.2	+0.1
NACGM				i P	P	11 56 55.2	+0.1
NACGM				i PP	PnPn	11 57 12.5	+7.4
NACGM				i S	S	12 00 32.9	+12
NACGM				i SS	SnSn	12 00 58.7	+31
NACGM				i LQ	LQ	12 02 47.5	
NACGM				i LR	LR	12 04 05.1	
TUE	Stuetta	17.96	308	P	Pn	11 56 55.8	0.0
TUE				IAmb	IAmb	11 57 06.8	
	comp=Z,56nm,1.3s						
DAVA	Damuels	17.98	311	eP	P	11 56 59.0	+2.6
	comp=Z,15nm,1.2s						
UBR	Ueberruh	18.03	312	eL	L	12 03 38.7	
	comp=Z,308nm,21.5s						
IDID	Didziasalis	18.30	354	eP	Pn	11 56 58.0	-1.5
IIGN	Ignalina	18.38	353	eP	Pn	11 56 59.1	-1.4
IIGN				IAmb	IAmb	11 57 09.0	
	comp=Z,8.7nm,0.8s						
GRF	Grafenberg Arr	18.47	319	eP	Pn	11 57 05.0	+3.3
	comp=Z,48nm,1.6s,baz=123,slow=12						
GRF				eL	L	12 05 08.4	
	comp=Z,712nm,19.4s						
OBN	Obninsk	18.50	12	eP	P	11 57 00.9	-1.0
OBN				pmax	pmax		
	comp=Z,27nm,1.3s						
ISAL	Salakas	18.61	353	eP	P	11 57 00.5	-2.5
ISAL				IAmb	IAmb	11 57 08.6	
	comp=Z,6.7nm,1.0s						
CLL	Collm	18.61	325	e(P)	Pn	11 57 06.0	+2.6
CLL				e		11 57 17.0	
CLL				ePPP	PPP	11 57 22.0	
CLL				eS	Sn	12 00 30.0	-1.5
CLL				LmH		12 03 00.0	
	comp=N,700nm,20.7s						
CLL				LmH		12 03 00.0	
	comp=E,1µm,18.3s						
CLL	Collm	18.61	325	eP	Pn	11 57 06.0	+2.6
CLL	Collm	18.61	325	eL	L	12 05 31.2	
	comp=E,428nm,18.5s						
PABE	Paberze	18.81	349	eP	P	11 57 03.6	-1.6
PABE				IAmb	IAmb	11 57 10.3	
	comp=Z,34nm,1.0s						
RAYN	Ar Rayn	19.02	131	P	Pn	11 57 09.6	+1.0
RAYN				pmax	pmax		
	comp=Z,90nm,1.5s						
RAYN	Ar Rayn	19.02	131	P	Pn	11 57 09.6	+1.0
RAYN				IAmb	IAmb	11 57 15.4	
	comp=Z,90nm,1.4s						
SENIN	Lac Senin/Sane	19.24	306	P	P	11 57 09.6	-0.7
SENIN				IAmb	IAmb	11 57 30.0	
	comp=Z,53nm,1.2s						
BNI	Bardonecchia	19.24	301	P	Pn	11 57 10.7	-0.5
BNI				pmax	pmax		
	comp=Z,140nm,2.0s						
BNI	Bardonecchia	19.24	301	P	Pn	11 57 10.7	-0.5
BNI				IAmb	IAmb	11 57 26.6	
	comp=Z,140nm,2.0s						
MOS	Moscow	19.28	13	eP	Pn	11 57 11.5	+0.1
BFO	Black Forest	19.39	312	P	Pn	11 57 13.0	+0.1
BFO				pmax	pmax		
	comp=Z,21nm,1.0s						
BFO	Black Forest	19.39	312	P	Pn	11 57 13.0	+0.1
BFO	Black Forest	19.39	312	eP	Pn	11 57 15.2	+2.4
	comp=Z,54nm,1.5s,baz=123,slow=12						
BFO				eL	L	12 05 36.8	
	comp=Z,372nm,21.7s						
BELG	Belogornoye	19.61	33	P	Pn	11 57 15.2	-0.1
	comp=Z,1.1nm,0.3s,baz=54,slow=16,SNR=6.8						
BELG				LR	LR	12 06 15.7	
	comp=Z,307nm,20.4s,baz=222,slow=42						
BELG	Belogornoye	19.61	33	⇑eP	Pn	11 57 17.6	+2.2
BELG				pmax	pmax		
	comp=Z,13nm,1.3s						
ECH	Echery	20.04	311	P	P	11 57 19.5	+0.6
ECH				pmax	pmax		
	comp=Z,21nm,0.9s						
ECH	Echery	20.04	311	P	P	11 57 19.5	+0.6
TNS	Taunus Mts	20.26	317	eP	Pn	11 57 24.9	+1.8
	comp=Z,131nm,1.9s,baz=123,slow=12						
TNS				eL	L	12 04 39.1	
	comp=Z,294nm,20.2s						
WLF	Walferdange	21.27	314	dP	P	11 57 33.2	+1.0
VSU	Vasula	21.42	355	eP	P	11 57 32.4	-1.2
VSU	Vasula	21.42	355	⇓eP	P	11 57 34.3	+0.7
VSU				pmax	pmax		
	comp=Z,166nm,1.9s						
BSEG	Bad Segeberg	21.60	327	eL	L	12 04 52.8	
	comp=Z,291nm,21.0s						
MEM	Membach	21.80	316	dP	P	11 57 38.4	+0.6
BCLA	Clavier	22.11	315	dP	P	11 57 41.4	+0.3
GEYT	Alibeck	22.25	79	P	P	11 57 43.4	+0.6
	comp=Z,1.9nm,0.5s,baz=275,slow=7.1,SNR=2.8						
GEYT				LR	LR	12 08 50.2	
	comp=Z,285nm,19.3s,baz=245,slow=43						
GEYT	Alibeck	22.25	79	P	P	11 57 42.1	-0.7
GEYT				IAmb	IAmb	11 57 50.7	
	comp=Z,42nm,1.8s						
BMRD	Maredsous	22.36	314	dP	P	11 57 43.8	0.0
DOU	Dourbes	22.37	313	dsP	sP	11 57 47.6	-0.3
DOU				dx	x	11 57 49.4	
DOU				dPnPn	PnPn	11 58 06.8	+0.2
AKTO	Aktyubinsk	24.00	48	P	P	11 57 59.9	-0.6
	comp=Z,11nm,0.9s,baz=241,slow=9.4,SNR=18						
AKTO				LR	LR	12 10 00.5	
	comp=Z,366nm,20.9s,baz=240,slow=43						
FINES	FINESS Array B	24.43	355	P	P	11 58 03.1	-1.2
	comp=Z,6.3nm,0.7s,baz=154,slow=11,SNR=20						
KLMR	Klimovskoe	24.46	11	eP	P	11 58 04.3	-0.3
KLMR				pmax	pmax		
	comp=Z,69nm,1.2s						
KLMR	Klimovskoe	24.46	11	eP	P	11 58 04.4	-0.2
KLMR				AMP		11 58 22.4	
	comp=Z,69nm,1.2s						
AB31	Akbulak array	24.75	51	i P	P	11 58 06.5	-0.9
ABKAR	Akbulak array	24.75	51	P	P	11 58 06.5	-0.9
ABKAR	Akbulak array	24.75	51	P	P	11 58 06.2	-1.2
ABKAR				IAmb	IAmb	11 58 19.9	
	comp=Z,18nm,1.3s						
KIRV	Kirov	24.89	24	P	P	11 58 07.8	-0.7
	comp=Z,16nm,0.8s,baz=218,slow=7.6,SNR=6.5						
KIRV				LR	LR	12 10 01.7	
	comp=Z,334nm,18.4s,baz=205,slow=42						
KIRV	Kirov	24.89	24	⇑iP	P	11 58 08.3	-0.2
HFS	Hagfors	25.25	341	P	P	11 58 12.1	+0.3
	comp=Z,4.0nm,0.8s,baz=160,slow=9.1,SNR=5.3						
HFS				LR	LR	12 10 06.9	
	comp=Z,345nm,21.3s,baz=154,slow=41						
UOSS	Minazif	25.42	111	P	P	11 58 15.3	+1.7
TAM	Tamanrasset	25.52	243	P	P	11 58 15.8	+1.1
TAM				pmax	pmax		
	comp=Z,41nm,1.4s						
TAM	Tamanrasset	25.52	243	P	P	11 58 15.8	+1.1
NOA	NORSAR Array B	26.69	340	P	P	11 58 23.2	-1.6
	comp=Z,2.8nm,0.9s,baz=145,slow=9.4,SNR=1.5						
NOA				LR	LR	12 11 07.4	
	comp=Z,268nm,18.6s,baz=150,slow=42						
PAB	San Pablo	26.97	286	P	P	11 58 29.6	+1.9
PAB				pmax	pmax		
	comp=Z,27nm,1.4s						
PAB	San Pablo	26.97	286	P	P	11 58 29.6	+1.9
PAB				IAmb	IAmb	11 58 35.6	
	comp=Z,27nm,1.4s						
ARU	Arti	27.12	36	P	P	11 58 29.0	+0.3
	comp=Z,2.8nm,0.7s,baz=231,slow=7.7,SNR=12						
ARU				LR	LR	12 09 45.7	
	comp=Z,334nm,21.8s,baz=236,slow=38						
ARU	Arti	27.12	36	c iP	P	11 58 29.6	+0.9
ARU						11 59 07.9	
ARU				S	S	12 03 11.4	+4.5
ARU				SS	SnSn	12 04 13.8	+0.4
ARU				pmax	pmax		
	comp=Z,32nm,1.9s						
ARU	Arti	27.12	36	P	P	11 58 29.2	+0.5
ARU				IAmb	IAmb	11 58 39.0	
	comp=Z,19nm,0.9s						
WSAR	Wadi Sarin	28.21	111	P	P	11 58 40.6	+1.8
	comp=Z,3.5nm,0.6s,baz=333,slow=4.9,SNR=6.0						
WSAR				LR	LR	12 13 21.8	
	comp=Z,230nm,18.5s,baz=326,slow=44						
MDT	Midelt	28.61	272	P	P	11 58 41.9	-0.5
	comp=Z,1.8nm,0.3s,baz=93,slow=8.3,SNR=8.4						
MDT				LR	LR	12 13 11.3	
	comp=Z,229nm,18.2s,baz=108,slow=43						
EKA	Eskdalemuir Ar	28.88	320	P	P	11 58 44.3	-0.2
	comp=Z,1.4nm,0.6s,baz=160,slow=28,SNR=6.0						
IUG	Iuzhnay	30.99	68	eP	P	11 59 02.6	-0.8
	baz=68						
IUG	Iuzhnay	30.99	68	eP	P	11 59 02.6	-0.8
KK31	Karatay Array	31.28	66	P	P	11 59 05.8	-0.1
KK31				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KK31	Karatay Array	31.28	66	P	P	11 59 05.8	-0.1
KKAR	Karatay Array	31.28	66	P	P	11 59 05.0	-0.9
KKAR				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KKAR	Karatay Array	31.28	66	P	P	11 59 05.0	-0.9
KKAR	Karatay Array	31.28	66	P	P	11 59 04.8	-1.1
BRVK	Borovoye	32.05	47	P	P	11 59 12.2	-0.2
BRVK				pmax	pmax		
	comp=Z,13nm,1.4s						
BRVK	Borovoye	32.05	47	P	P	11 59 12.2	-0.2
BRVK				IAmb	IAmb	11 59 18.2	
	comp=Z,13nm,1.4s						
ARCES	ARCESS Array B	32.52	357	P	P	11 59 15.4	-1.0
	comp=Z,5.4nm,0.8s,baz=170,slow=9.9,SNR=9.8						
ARCES				LR	LR	12 14 08.1	
	comp=Z,384nm,20.4s,baz=250,slow=40						
SOCY	Socotra	32.86	133	P	P	11 59 17.5	-2.5
BRZS	Berezniki	32.99	53	eP	P	11 59 20.4	-0.4
	baz=54						
BRZS	Berezniki	32.99	53	eP	P	11 59 20.4	-0.4
BTLS	Baital	33.74	62	eP	P	11 59 27.3	-0.1
	baz=62						
BTLS	Baital	33.74	62	eP	P	11 59 27.3	-0.1
AAK	Ala-Archa	34.24	67	P	P	11 59 31.6	-0.3
	comp=Z,1.9nm,0.5s,baz=248,slow=8.0,SNR=6.1						
AAK	Ala-Archa	34.24	67	⇑iP	P	11 59 33.2	+1.3
AAK				pmax	pmax		
	comp=Z,11nm,1.0s						
AAK	Ala-Archa	34.24	67	P	P	11 59 31.9	-0.1
AAK				IAmb	IAmb	11 59 44.9	
	comp=Z,7.8nm,1.1s						
TOA0	Torodi Ar. Sit	34.83	234	P	P	11 59 37.3	+0.2
TORD	Torodi Ar. Bea	34.83	234	P	P	11 59 37.8	+0.8
	comp=Z,19nm,0.8s,baz=31,slow=7.2,SNR=5.0						
NIL	Nilore	35.18	83	P	P	11 59 39.2	-0.8
NIL				pmax	pmax		
	comp=Z,21nm,1.1s						
NIL	Nilore	35.18	83	P	P	11 59 39.1	-0.8
KUU	Kurty	35.46	64	eP	P	11 59 41.4	-0.9
	comp=Z,8.0nm,1.6s,baz=64						
KUU	Kurty	35.46	64	eP	P	11 59 41.3	-0.9
KUU				pmax	pmax		
	comp=Z,8.0nm,1.6s						
KSH	Kashi	35.81	72	P	P	11 59 44.3	-1.2
KSH				pmax	pmax		
	comp=Z,15nm,1.3s						
KSH				pmax	pmax		
	comp=Z,260nm,6.2s						
CHKK	Chushkaly	35.93	64	eP	P	11 59 46.9	+0.5
	baz=64						
CHKK	Chushkaly	35.93	64	eP	P	11 59 46.8	+0.5
TNSS	Tian-Shan	35.99	66	eP	P	11 59 47.2	-0.1
	baz=66						
TNSS	Tian-Shan	35.99	66	eP	P	11 59 47.2	-0.1
MDOK	Medeo	36.05	65	eP	P	11 59 46.8	-0.7
	baz=66						
MDOK	Medeo	36.05	65	eP	P	11 59 46.8	-0.7
KURBB	Kurchatov Arra	36.78	53	P	P	11 59 52.8	-0.7
	comp=Z,5.0nm,0.8s,baz=276,slow=8.7,SNR=31						
KURBB				PcP	PcP	12 02 16.6	+1.1
	comp=Z,2.3nm,1.1s,baz=278,slow=4.1,SNR=4.4						
TDK	Taldyqorghan	36.83	62	eP	P	11 59 54.0	-0.1
	baz=62						
TDK	Taldyqorghan	36.83	62	eP	P	11 59 53.9	-0.1
KURK	Kurchatov	36.84	53	P	P	11 59 52.8	-1.2
KURK						12 02 16.6	
KURK	Kurchatov	36.84	53	P	P	11 59 52.6	-1.4
KURK				IAmb	IAmb	12 00 17.4	
	comp=Z,9.6nm,0.8s						
SATY	Saty	37.05	65	eP	P	11 59 55.1	-0.9
	baz=66						
SATY	Saty	37.05	65	eP	P	11 59 55.1	-0.9
MBAR	Mbarara	37.58	179	P	P	12 00 02.5	+1.8
	comp=Z,2.0nm,0.3s,baz=3.2,slow=8.6,SNR=6.2						
MBAR	Mbarara	37.58	179	ceP	P	12 00 02.9	+2.2
MBAR				pmax	pmax		
	comp=Z,13nm,1.7s						
MBAR	Mbarara	37.58	179	P	P	12 00 02.2	+1.5
MBAR				IAmb	IAmb	12 00 03.3	
	comp=Z,13nm,1.2s						
KOWA	Kowa	37.75	242	P	P	12 00 02.4	+0.4
	comp=Z,3.8nm,0.8s,baz=28,slow=6.8,SNR=9.5						
SEM	Semipalatinsk	37.88	53	eP	P	12 00 02.4	-0.7
	baz=53						
SEM	Semipalatinsk	37.88	53	eP	P	12 00 02.3	-0.7
KMBO	Kilima Mbogo	38.68	168	P	P	12 00 11.8	+1.7
	comp=Z,1.1nm,0.3s,baz=333,slow=7.5,SNR=7.8						
KMBO				LR	LR	12 17 34.8	
	comp=Z,119nm,18.4s,baz=95,slow=38						
MAKZ	Makanchi	39.16	59	P	P	12 00 13.4	-0.2
MAKZ				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MAKZ	Makanchi	39.16	59	P	P	12 00 13.4	-0.2
MK31	Makanchi Array	39.37	59	deP	P	12 00 15.1	-0.4
MK31	Makanchi Array	39.37	59	P	P	12 00 15.0	-0.4
MKAR	Makanchi Array	39.37	59	P	P	12 00 15.2	-0.2
	comp=Z,3.0nm,0.7s,baz=278,slow=7.0,SNR=27						
MKAR				LR	LR	12 18 05.8	
	comp=Z,199nm,21.7s,baz=278,slow=39						
ZAA0	Zalesovo Array	40.76	48	P	P	12 00 26.9	+0.2
ZALV	Zalesovo Beam	40.76	48	P	P	12 00 26.9	+0.2
	comp=Z,4.3nm,0.6s,baz=262,slow=8.7,SNR=14						
ZALV				LR	LR	12 20 54.3	
	comp=Z,218nm,19.2s,baz=263,slow=42						
ZALV	Zalesovo Beam	40.76	48	i P	P	12 00 28.6	+1.9
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.6s						
ZALV	Zalesovo Beam	40.76	48	P	P	12 00 25.2	-1.5
ZSN	Zaisan	41.06	58	eP	P	12 00 29.2	-0.2
	baz=58						
ZSN	Zaisan	41.06	58	eP	P	12 00 29.1	-0.2
DGZ	Jazzator, Alta	42.53	54	⇓iP	P	12 00 41.4	-0.1
DGZ				pmax	pmax		
	comp=Z,10.0nm,1.7s						
WMQ	Urumqi	43.59	63	eP	P	12 00 49.4	-0.7
WMQ				pP	sP	12 00 54.9	+0.6
WMQ				PP	PcP	12 02 35.3	-2.3
WMQ				pmax	pmax		
	comp=Z,10.0nm,2.3s						
WMQ				pmax	pmax		
	comp=Z,240nm,5.7s						
WMQ				LR	LR		
	comp=Z,170nm,29.1s						
WMQ				LR	LR		
	comp=Z,1µm,29.0s						
WMQ				LR	LR		
	comp=Z,230nm,29.2s						
DBIC	Dimbokro	43.92	235	P	P	12 00 53.1	+0.2
	comp=Z,7.1nm,0.9s,baz=14,slow=6.8,SNR=6.8						
DBIC				LR	LR	12 21 34.9	
	comp=Z,213nm,21.5s,baz=20,slow=39						
TIC	Toumodi	44.05	235	ePKP1	P	12 00 55.6	+1.6
KIC	Kosan Boka	44.08	235	ePKP1	P	12 00 55.1	+0.9
	comp=Z,16nm,0.8s						
LIC	Lamto	44.37	235	ePKP1	P	12 00 54.3	-2.2
	comp=Z,30nm,1.0s						
NRIK	Noril'sk	44.39	25	P	P	12 00 55.5	-0.5
	comp=Z,1.7nm,0.3s,baz=256,slow=9.0,SNR=5.8						
NRIK				LR	LR	12 21 39.6	
	comp=Z,207nm,18.5s,baz=240,slow=39						
NRIK	Noril'sk	44.39	25	⇓eP	P	12 00 57.0	+0.9
NRIK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
NRIK	Noril'sk	44.39	25	P	P	12 00 55.5	-0.5
NRIK				IAmb	IAmb	12 01 05.2	
	comp=Z,19nm,1.5s						
DANN	Dangsing	45.51	85	eP	P	12 01 05.3	-0.6
	comp=Z,200nm,0.8s						
GKN	Gorkha	46.36	85	eP	P	12 01 11.1	-1.4
	comp=Z,110nm,1.1s						
HYB	Hyderabad	46.83	101	i P	P	12 01 15.0	-1.1
DMN	Daman	46.91	85	eP	P	12 01 16.3	-0.6
	comp=Z,90nm,0.7s						
KKN	Kakani	46.97	85	eP	P	12 01 16.4	-0.9
PKIN	Phulchoki	47.15	85	eP	P	12 01 18.1	-0.7
	comp=Z,43nm,0.8s						
PKI	Pulchoki	47.16	85	eP	P	12 01 18.2	-0.8
	comp=Z,52nm,0.9s						
GUN	Gumba	47.39	84	eP	P	12 01 20.1	-0.6
	comp=Z,89nm,1.1s						
RAMN	Ramite	48.39	85	eP	P	12 01 26.2	-2.2
	comp=Z,55nm,0.8s						
ODAN	Odare	49.06	85	eP	P	12 01 32.6	-0.9
	comp=Z,28nm,1.0s						
TAPN	Taplejung	49.09	84	eP	P	12 01 35.8	+2.0
LSA	Lhasa	50.78	80	P	P	12 01 45.7	-1.2
LSA				IAmb	IAmb	12 01 58.8	
	comp=Z,9.0nm,1.1s						
LSZ	Lusaka	52.19	182	P	P	12 01 58.5	+1.6
	comp=Z,4.3nm,0.9s,baz=25,slow=7.0,SNR=3.9						
LSZ	Lusaka	52.19	182	P	P	12 01 58.3	+1.4
LSZ				IAmb	IAmb	12 02 04.2	
	comp=Z,23nm,1.4s						
TLY	Talaya	52.33	49	P	P	12 01 55.8	-1.8
	comp=Z,0.6nm,0.4s,baz=252,slow=22,SNR=1.4						
TLY	Talaya	52.33	49	⇓eP	P	12 02 00.1	+2.5
TLY				pmax	pmax		
	comp=Z,9.0nm,1.5s						
ZAK	Zakamensk	52.45	51	eP	P	12 01 57.8	-0.8
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.2s						
SHL	Shillong	53.23	84	P	P	12 02 02.9	-1.9
SHL				pmax	pmax		
	comp=Z,10.0nm,0.8s						
SHL	Shillong	53.23	84	P	P	12 02 02.9	-1.9
SHL				IAmb	IAmb	12 02 17.7	
	comp=Z,9.8nm,0.8s						
GTA	Gaotai	53.54	65	eP	P	12 02 05.4	-1.5
GTA				pP	pP	12 02 09.1	-0.8
GTA				sP	sP	12 02 12.0	+0.9
GTA				pmax	pmax		
	comp=Z,4.0nm,1.7s						
GTA				pmax	pmax		
	comp=Z,97nm,6.5s						
GTA				LR	LR		
	comp=Z,170nm,16.0s						
GTA				LR	LR		
	comp=Z,200nm,16.4s						
GTA				LR	LR		
	comp=Z,170nm,17.5s						
SONM	Songino Array	55.15	53	P	P	12 02 18.5	0.0
	comp=Z,0.9nm,0.6s,baz=294,slow=4.7,SNR=7.6						
SONM				LR	LR	12 28 08.4	
	comp=Z,139nm,19.6s,baz=275,slow=39						
SONM	Songino Array	55.15	53	P	P	12 02 17.3	-1.1
ULN	Ulaanbaatar	55.56	53	⇓eP	P	12 02 21.1	-0.3
ULN				pmax	pmax		
	comp=Z,9.0nm,1.7s						
TULEG	Thule	56.23	344	P	P	12 02 25.9	+0.3
TSUM	Tsumeb	57.28	194	P	P	12 02 34.9	+1.1
	comp=Z,2.4nm,0.8s,baz=20,slow=10,SNR=2.5						
MATP	Matopo	57.30	182	P	P	12 02 35.4	+1.5
	comp=Z,7.5nm,0.9s,baz=359,slow=7.9,SNR=6.7						
LZH	Lanzhou	57.78	67	eP	P	12 02 37.0	-0.4
LZH				pP	pP	12 02 40.4	-0.1
LZH				sP	sP	12 02 42.4	+0.7
LZH				pmax	pmax		
	comp=Z,18nm,1.1s						
LZH				LR	LR		
	comp=Z,290nm,13.8s						
LZH				LR	LR		
	comp=Z,380nm,14.1s						
LZH				LR	LR		
	comp=Z,320nm,15.2s						
TIXI	Tiksi	57.88	22	⇓eP	P	12 02 37.0	-0.3
TIXI				pmax	pmax		
	comp=Z,31nm,1.7s						
EUNU	Eureka	57.96	349	P	P	12 02 39.0	+1.0
EUNU				IAmb	IAmb	12 02 41.3	
	comp=Z,13nm,1.4s						
CD2	Chengdu	60.01	72	P	P	12 02 50.8	-2.0
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
HHC	Hu-ho-hao-te	61.24	59	eP	P	12 03 00.6	-0.5
HHC				S	S	12 11 25.6	+4.3
HHC				pmax	pmax		
	comp=Z,12nm,0.8s						
HHC				pmax	pmax		
	comp=Z,130nm,4.7s						
HHC				LR	LR		
	comp=Z,240nm,15.3s						
HHC				LR	LR		
	comp=Z,180nm,16.2s						
HHC				LR	LR		
	comp=Z,210nm,13.6s						
MHMT	Maesarieng	61.82	88	P	P	12 03 04.0	-1.2
	comp=Z,25nm,0.9s						
LBTB	Lobatse	61.99	185	P	P	12 03 07.7	+1.6
LBTB				pmax	pmax		
	comp=Z,40nm,1.6s						
LBTB	Lobatse	61.99	185	P	P	12 03 07.7	+1.6
CHTO	Chiang Mai	62.28	87	P	P	12 03 06.0	-2.4
CHTO				pmax	pmax		
	comp=Z,6.0nm,0.8s						
CHTO	Chiang Mai	62.28	87	P	P	12 03 06.0	-2.4
CHTO				IAmb	IAmb	12 03 11.5	
	comp=Z,5.5nm,0.8s						
CMMT	Chiang Mai	62.29	87	P	P	12 03 06.5	-1.8
	comp=Z,4.9nm,0.9s						
XAN	Xi'an	62.42	67	P	P	12 03 08.3	-0.8
XAN				pP	sP	12 03 20.9	+7.5
XAN				pmax	pmax		
	comp=Z,8.0nm,1.2s						
XAN				pmax	pmax		
	comp=Z,150nm,5.2s						
XAN	Xi'an	62.42	67	P	P	12 03 08.5	-0.6
XAN				pmax	pmax		
	comp=Z,23nm,1.7s						
XAN	Xi'an	62.42	67	P	P	12 03 08.4	-0.6
CM15	Chiang Mai Arr	62.46	87	P	P	12 03 09.0	-0.5
	comp=Z,9.7nm,0.9s						
CM13	Chiang Mai Arr	62.46	87	P	P	12 03 08.8	-0.8
	comp=Z,70nmcomp=Z,8.7nm,0.9s						
CMAR	Chiang Mai Arr	62.47	87	P	P	12 03 07.9	-1.7
	comp=Z,9.0nm,0.9s,baz=298,slow=7.9,SNR=29						
CMAR				LR	LR	12 35 53.5	
	comp=Z,101nm,19.6s,baz=338,slow=41						
CMAR	Chiang Mai Arr	62.47	87	i P	P	12 03 08.6	-1.0
CMAR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
CMAR	Chiang Mai Arr	62.47	87	P	P	12 03 08.2	-1.4
CM02	Chiang Mai Arr	62.49	87	P	P	12 03 09.1	-0.6
	comp=Z,105nmcomp=Z,15nm,0.9s						
CM01	Chiang Mai Arr	62.51	87	P	P	12 03 09.0	-0.8
	comp=Z,87nmcomp=Z,15nm,0.9s						
CM09	Chiang Mai Arr	62.52	87	P	P	12 03 09.0	-0.9
	comp=Z,72nmcomp=Z,9.4nm,0.8s						
CM04	Chiang Mai Arr	62.53	87	P	P	12 03 09.3	-0.7
	comp=Z,92nmcomp=Z,14nm,0.9s						
LAMP	Lampang	62.99	87	P	P	12 03 12.7	-0.4
	comp=Z,32nm,0.9s						
SUKH	Sukhothai	63.55	88	P	P	12 03 16.0	-0.8
	comp=Z,31nm,0.9s						
UMPA	Umpang Tak	63.64	89	P	P	12 03 17.9	+0.5
	comp=Z,3µmcomp=Z,38nm,0.9s						
UTTA	Uttaradit	64.14	87	P	P	12 03 23.1	+2.5
	comp=Z,17nm,0.8s						
PHIT	Phitsanulok	64.34	87	P	P	12 03 25.4	+3.5
	comp=Z,120nm,0.9s						
GYA	Guiyang	64.39	75	eP	P	12 03 23.3	+0.9
GYA				pmax	pmax		
	comp=Z,5.0nm,1.4s						
UTHA	Uthaitani	64.46	89	P	P	12 03 22.8	0.0
	comp=Z,229nmcomp=Z,26nm,0.9s						
BJI	Beijing	64.74	58	P	P	12 03 23.9	-0.4
BJI				PP	PP	12 05 44.1	-2.2
BJI				pmax	pmax		

	comp=Z,6.0nm,0.9s						
BJI				LR	LR		
	comp=Z,350nm,47.4s						
SLVN	**Son La**	**64.88**	**82**	P	**P**	**12 03 23.8**	**-1.8**
SLVN				IAmb	IAmb	12 03 40.9	
	comp=Z,10.0nm,1.4s						
BOSA	**Boshof**	**65.58**	**185**	P	**P**	**12 03 30.4**	**+0.6**
	comp=Z,7.3nm,1.0s,baz=344,slow=4.2,SNR=5.0						
BOSA				LR	LR	12 32 50.5	
	comp=Z,180nm,19.5s,baz=0.5,slow=37						
BOSA	**Boshof**	**65.58**	**185**	P	**P**	**12 03 29.9**	**+0.1**
NONG	**Nongkai**	**66.03**	**85**	P	**P**	**12 03 34.2**	**+1.2**
	comp=Z,9.4nm,1.0s						
PHET	**Kaeng Krachan**	**66.10**	**92**	P	**P**	**12 03 36.7**	**+3.2**
	comp=Z,374nmcomp=Z,31nm,0.9s						
KHON	**Khomkaen**	**66.73**	**87**	P	**P**	**12 03 39.8**	**+2.3**
KLR	**Kul'dur**	**69.64**	**43**	⇓*e*P	**P**	**12 03 58.5**	**+3.3**
KLR				pmax	pmax		
	comp=Z,5.0nm,1.1s						
SEY	**Seymchan**	**70.16**	**24**	⇓*e*P	**P**	**12 03 58.8**	**+0.6**
NJ2	**Nanjing**	**70.63**	**64**	*e*P	**P**	**12 04 00.0**	**-1.6**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.6s						
PSI	**Prapat**	**71.54**	**101**	P	**P**	**12 04 07.2**	**-0.3**
	comp=Z,4.7nm,0.4s,baz=180,slow=9.0,SNR=4.4						
MA2	**Magadan**	**71.94**	**27**	⇑*e*P	**P**	**12 04 09.8**	**+0.7**
MA2				pmax	pmax		
	comp=Z,12nm,1.7s						
C36M	**Paulatuk**	**72.10**	**351**	P	**P**	**12 04 09.5**	**-0.3**
C36M				IAmb	IAmb	12 04 13.2	
	comp=Z,6.3nm,0.7s						
USRK	**Ussuriysk Ar.**	**72.61**	**48**	P	**P**	**12 04 12.8**	**-0.5**
	comp=Z,0.9nm,0.6s,baz=274,slow=7.1,SNR=2.4						
USRK				LR	LR	12 38 46.4	
	comp=Z,124nm,21.9s,baz=309,slow=38						
KSRS	**Korea Array**	**73.92**	**55**	P	**P**	**12 04 20.7**	**-0.5**
	comp=Z,0.9nm,0.6s,baz=306,slow=5.1,SNR=3.8						
KSRS				LR	LR	12 39 54.3	
	comp=Z,176nm,18.9s,baz=308,slow=38						
BMAR	**Burnt Mountain**	**75.65**	**358**	P	**P**	**12 04 31.4**	**+0.7**
YKA	**Yellowknife Ar**	**76.69**	**344**	P	**P**	**12 04 35.2**	**-1.5**
	comp=Z,2.5nm,1.0s,baz=35,slow=5.6,SNR=12						
YKA	**Yellowknife Ar**	**76.69**	**344**	*i* P	**P**	**12 04 36.5**	**-0.1**
YKA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
YSS	**Yuzh-Sakhalins**	**76.89**	**40**	*e*P	P	12 04 28.2	-10
YSS				pmax	pmax		
	comp=Z,10.0nm,1.3s						
COLA	**College**	**78.28**	**359**	⇓*e*P	**P**	**12 04 47.6**	**+2.1**
COLA				pmax	pmax		
	comp=Z,15nm,1.7s						
PETK	**Petropavlovsk-**	**79.30**	**29**	LR	LR	12 43 13.6	
	comp=Z,90nm,18.1s,baz=325,slow=38						
FFC	**Flin Flon**	**79.64**	**334**	P	**P**	**12 04 53.5**	**+0.3**
FFC				pmax	pmax		
	comp=Z,17nm,1.6s						
FFC	**Flin Flon**	**79.64**	**334**	P	**P**	**12 04 53.5**	**+0.3**
FFC				IAmb	IAmb	12 04 55.8	
	comp=Z,17nm,1.6s						
BCAR	**Beaver Creek A**	**79.90**	**356**	P	**P**	**12 04 53.2**	**-1.3**
ULM	**Lac du Bonnet**	**80.77**	**328**	LR	LR	12 41 46.3	
	comp=Z,83nm,18.2s,baz=58,slow=36						
MJAR	**Matsushiro Arr**	**81.03**	**51**	LR	LR	12 47 07.9	
	comp=Z,72nm,18.2s,baz=330,slow=40						
HYT	**Haines Junctio**	**81.83**	**354**	P	**P**	**12 05 05.2**	**+0.2**
L40A	**Anamosa**	**84.67**	**320**	P	**P**	**12 05 19.6**	**-0.2**
CPCT	**Cooper Cave**	**85.63**	**312**	P	**P**	**12 05 24.2**	**-0.5**
LAO	**LASA Array**	**87.77**	**332**	P	**P**	**12 05 35.5**	**+0.5**
EGMT	**Eagleton**	**87.92**	**334**	P	**P**	**12 05 36.4**	**+0.6**
BDFB	**Brasilia**	**90.10**	**250**	P	**P**	**12 05 47.5**	**+1.0**
	comp=Z,2.8nm,0.7s,baz=124,slow=7.7,SNR=3.9						
BDFB				LR	LR	12 47 48.9	
	comp=Z,143nm,19.8s,baz=49,slow=37						
YNE	**Yellowstone No**	**90.60**	**333**	P	**P**	**12 05 48.5**	**-0.1**
YNE				IAmb	IAmb	12 05 56.0	
	comp=Z,7.6nm,1.2s						
PDAR	**Pinedale Array**	**92.35**	**331**	P	**P**	**12 05 57.7**	**+0.9**
	comp=Z,0.3nm,0.7s,baz=41,slow=5.9,SNR=2.5						
PDAR				LR	LR	12 49 32.1	
	comp=Z,136nm,19.1s,baz=40,slow=37						
ROSC	**El Rosal**	**98.45**	**283**	LR	LR	12 48 26.4	
	comp=Z,77nm,18.1s,baz=46,slow=34						
NVAR	**Mina Array Bea**	**99.31**	**335**	LR	LR	12 55 00.5	
	comp=Z,138nm,18.1s,baz=19,slow=38						

TAP 16 12:09:35.5, 23°.04N × 120°.82E, h6^{km}, ML1.6, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STYH	**Taoyuan**	**0.13**	**341**	*i* P	Pg	12 09 39.2	+0.9
	baz=341						
STYH				*i* S	Sg	12 09 41.3	+1.2
	baz=341						
STYT	**Tauyuan**	**0.13**	**333**	*i* P	Pg	12 09 39.0	+0.7
	baz=336						
STYT				S	Sg	12 09 41.0	+0.8
	baz=336						
SLGT	**Liugui**	**0.17**	**253**	*i* P	Pg	12 09 39.9	+1.0
	baz=252						
SLGT				S	Sg	12 09 43.0	+1.8
	baz=252						
SGST	**Jiashian**	**0.22**	**280**	*e*P	Pg	12 09 40.4	+0.5
	baz=279						
SGST				*e*S	Sg	12 09 44.1	+1.2
	baz=279						
ELDTW	**Lidau**	**0.23**	**51**	*i* P	Pg	12 09 41.1	+1.1
	baz=52						
ELDTW				S	Sg	12 09 45.2	+2.1
	baz=52						
WTP	**Ta-pu**	**0.28**	**316**	*i* P	Pb	12 09 42.1	-0.8
	baz=317						
WTP				*i* S	Sb	12 09 46.7	-1.3
	baz=317						
CHN1	**Nanshi**	**0.30**	**297**	*e*P	Pb	12 09 42.6	-0.8
	baz=297						
CHN1				S	Sb	12 09 48.1	-0.6
	baz=297						
TPUB	**Ta-pu**	**0.31**	**325**	*i* P	Pb	12 09 43.1	-0.4
	baz=325						
TPUB				*i* S	Sb	12 09 48.0	-0.8
	baz=325						
LONT	**Longtian**	**0.32**	**116**	*i* P	Pb	12 09 42.9	-0.6
	baz=115						
LONT				S	Sb	12 09 48.4	-0.6
	baz=115						
TWG	**Pinlang**	**0.32**	**134**	P	Pb	12 09 43.3	-0.4
	baz=133						
TWG				S	Sb	12 09 48.9	-0.2
	baz=133						
TWGBT	**Beinan**	**0.33**	**133**	*i* P	Pb	12 09 43.2	-0.6
	baz=133						
TWGBT				S	Sb	12 09 48.9	-0.5
	baz=133						
SCST	**Cishan**	**0.34**	**243**	*e*P	Pb	12 09 43.5	-0.5
	baz=242						
SCST				*e*S	Sb	12 09 49.3	-0.3
	baz=242						
SSD	**Sandimen**	**0.34**	**211**	P	Pg	12 09 43.0	+0.7
	baz=209						
SSD				*e*S	Sb	12 09 49.1	-0.7
	baz=209						
SNST	**Tainan City**	**0.35**	**300**	*e*P	Pb	12 09 43.5	-0.6
	baz=300						
SNST				*e*S	Sb	12 09 49.3	-0.6
	baz=300						
CHN4	**Tsaushan**	**0.37**	**325**	*i* P	Pb	12 09 44.7	+0.2
	baz=325						
TSMG	**Majia**	**0.38**	**206**	*e*P	Pb	12 09 44.0	-0.5
	baz=205						
TWK	**Hsinying**	**0.38**	**306**	*e*P	Pb	12 09 44.8	+0.1
	baz=306						
EDH	**Donghe**	**0.45**	**99**	*e*P	Pb	12 09 45.4	-0.4
	baz=99						
EDH				*e*S	Sb	12 09 53.0	+0.2
	baz=99						
ECL	**Taimali**	**0.46**	**165**	*e*P	Pb	12 09 45.5	-0.5
	baz=163						
FULB	**Fuli**	**0.46**	**70**	*e*P	Pb	12 09 46.1	+0.1
	baz=70						
MASBT	**Mashibuluo**	**0.46**	**202**	P	Pg	12 09 45.2	+0.7
	baz=202						
ALS	**Alishan**	**0.47**	**358**	P	Pb	12 09 45.7	-0.6
	baz=359						
TWF1	**Yuli**	**0.53**	**55**	*e*P	Pb	12 09 46.9	-0.4
	baz=55						
TWF1				*e*S	Sb	12 09 55.3	0.0
	baz=55						
EYUL	**Yuli**	**0.55**	**56**	*e*P	Pb	12 09 47.5	0.0
	baz=56						
YULB	**Yu-li**	**0.56**	**51**	*e*P	Pg	12 09 47.0	+0.7
	baz=51						
YULB				*e*S	Sb	12 09 56.5	+0.5
	baz=51						
CHN5	**Tsauling**	**0.57**	**347**	*e*P	Pb	12 09 47.6	-0.3
	baz=346						
CHN5				*e*S	Sb	12 09 56.8	+0.5
	baz=346						
EHY	**Hungye**	**0.65**	**45**	*e*P	Pb	12 09 49.4	+0.1
	baz=45						
EHY				*e*S	Sb	12 09 59.5	+0.9
	baz=45						
EAST	**Anshuo**	**0.66**	**178**	*e*P	Pb	12 09 49.3	-0.1
	baz=177						
EAST				*e*S	Sb	12 09 59.3	+0.4
	baz=177						
LDUT	**Ludao**	**0.70**	**122**	*e*P	Pb	12 09 50.2	0.0
	baz=121						
LDUT				*e*S	Sb	12 10 00.7	+0.6
	baz=121						
HGSD	**Ruisui**	**0.71**	**51**	P	Pb	12 09 50.9	+0.6
	baz=51						
HGSD				*e*S	Sb	12 10 01.2	+0.8
	baz=51						
SSLB	**Suanglung**	**0.75**	**9**	*e*P	Pb	12 09 51.2	+0.2
	baz=9.0						
SSLB				*e*S	Sb	12 10 02.6	+1.0
	baz=9.0						
VWDT	**VWDT**	**0.77**	**22**	*e*P	Pb	12 09 51.1	-0.1
	baz=22						
VWDT				*e*S	Sb	12 10 02.8	+0.8
	baz=22						
SLIU	**Shizi**	**0.82**	**181**	*e*P	Pg	12 09 51.1	-0.2
	baz=181						
SLIU				*e*S	Sb	12 10 03.1	-0.5
	baz=181						
TYC	**Yuchr**	**0.86**	**2**	*e*P	Pb	12 09 53.0	+0.2
	baz=2.0						
TYC				*e*S	Sb	12 10 05.6	+1.0
	baz=2.0						
WCS	**Beigang Elemen**	**1.01**	**5**	*e*P	Pn	12 09 57.5	+1.2
	baz=4.0						
WCS				*e*S	Sn	12 10 10.3	-0.5
	baz=4.0						
CHGB	**Renai**	**1.06**	**18**	*e*P	Pn	12 09 57.3	+0.1
	baz=17						
CHGB				*e*S	Sn	12 10 12.1	-0.3
	baz=17						

TAP 16 12:09:43.4, 23°.05N × 120°.81E, h7^{km}, ML1.8, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STYT	**Tauyuan**	**0.13**	**338**	*i* P	Pg	12 09 47.0	+0.9
	baz=341						
STYT				*i* S	Sg	12 09 49.1	+1.1
	baz=341						
STYH	**Taoyuan**	**0.13**	**347**	*i* P	Pg	12 09 47.3	+1.1
	baz=346						
STYH				*i* S	Sg	12 09 49.3	+1.3
	baz=346						
SLGT	**Liugui**	**0.16**	**251**	P	Pg	12 09 48.0	+1.3
	baz=250						
SLGT				S	Sg	12 09 50.4	+1.5
	baz=250						
SGST	**Jiashian**	**0.21**	**280**	P	Pg	12 09 48.2	+0.6
	baz=279						
SGST				S	Sg	12 09 51.5	+1.1
	baz=279						
ELDTW	**Lidau**	**0.24**	**53**	P	Pg	12 09 49.2	+1.1
	baz=55						
ELDTW				S	Sg	12 09 53.3	+1.9
	baz=55						
WTP	**Ta-pu**	**0.27**	**318**	*e*P	Pb	12 09 49.8	-0.8
	baz=319						
WTP				*e*S	Sb	12 09 53.9	-1.5
	baz=319						
CHN1	**Nanshi**	**0.29**	**298**	*e*P	Pb	12 09 50.4	-0.6
	baz=298						
CHN1				*e*S	Sb	12 09 55.2	-0.9
	baz=298						
TPUB	**Ta-pu**	**0.30**	**327**	P	Pb	12 09 50.8	-0.4
	baz=327						
TPUB				S	Sb	12 09 55.3	-1.1
	baz=327						
LONT	**Longtian**	**0.33**	**115**	*i* P	Pb	12 09 51.1	-0.4
	baz=115						
LONT				*e*S	Sb	12 09 56.0	-1.1
	baz=115						
SCST	**Cishan**	**0.33**	**241**	*e*P	Pb	12 09 51.4	-0.2
	baz=241						
SCST				*e*S	Sb	12 09 56.6	-0.5
	baz=241						
TWG	**Pinlang**	**0.33**	**133**	*e*P	Pb	12 09 51.2	-0.4
	baz=132						
TWG				*e*S	Sb	12 09 56.3	-0.8
	baz=132						
SNST	**Tainan City**	**0.33**	**301**	P	Pb	12 09 51.1	-0.6
	baz=301						
SNST				*e*S	Sb	12 09 56.7	-0.6
	baz=301						
TWGBT	**Beinan**	**0.34**	**132**	P	Pb	12 09 51.2	-0.6
	baz=132						
TWGBT				*e*S	Sb	12 09 56.4	-1.0
	baz=132						
SSD	**Sandimen**	**0.34**	**209**	P	Pb	12 09 51.1	-0.7
	baz=207						
SSD				*e*S	Sb	12 09 56.9	-0.5
	baz=207						
CHN4	**Tsaushan**	**0.36**	**327**	*e*P	Pb	12 09 52.2	0.0
	baz=327						
CHN4				*e*S	Sb	12 09 58.2	+0.1
	baz=327						
TWK	**Hsinying**	**0.37**	**307**	*e*P	Pb	12 09 51.7	-0.6
	baz=307						
TWK				*e*S	Sb	12 09 57.5	-0.7
	baz=307						
TSMG	**Majia**	**0.37**	**204**	*e*P	Pb	12 09 51.5	-0.8
	baz=203						
TSMG				*e*S	Sb	12 09 58.1	-0.2
	baz=203						
TSMG	**Majia**	**0.37**	**204**	*e*S	Pb	12 09 51.2	-1.1
	baz=205						
TWM1	**Shoushan**	**0.42**	**238**	*e*P	Pb	12 09 52.6	-0.5
	baz=237						
TTN	**Taitung**	**0.43**	**133**	*e*P	Pb	12 09 53.5	+0.3
	baz=132						
TTN				*e*S	Sb	12 10 00.5	+0.6
	baz=132						
MASBT	**Mashibuluo**	**0.46**	**201**	P	Pb	12 09 53.3	-0.5
	baz=200						
MASBT				*e*S	Sb	12 10 01.1	+0.3
	baz=200						
MASBT	**Mashibuluo**	**0.46**	**201**	S	Pb	12 09 53.0	-0.8
	baz=202						
ALS	**Alishan**	**0.46**	**360**	P	Pb	12 09 53.6	-0.5
ALS				S	Sb	12 10 00.9	-0.4
ALS	**Alishan**	**0.46**	**360**	*e*S	Pb	12 09 53.2	-0.8
	baz=359						
EDH	**Donghe**	**0.46**	**99**	*e*P	Pb	12 09 53.5	-0.3
	baz=99						
EDH				*e*S	Sb	12 10 01.2	+0.3
	baz=99						
ECL	**Taimali**	**0.47**	**163**	*e*P	Pb	12 09 53.5	-0.5
	baz=162						
ECL				*e*S	Sb	12 10 01.4	+0.4
	baz=162						
ECL	**Taimali**	**0.47**	**163**	*e*S	Pb	12 09 53.4	-0.5
	baz=163						
FULB	**Fuli**	**0.47**	**71**	*e*P	Pg	12 09 53.3	+0.7
	baz=71						
FULB				S	Sb	12 10 01.3	+0.1
	baz=71						
FULB	**Fuli**	**0.47**	**71**	*e*S	Pg	12 09 53.3	+0.8
	baz=70						
TWF1	**Yuli**	**0.54**	**56**	*e*P	Pb	12 09 54.7	-0.6
	baz=56						
TWF1				*e*S	Sb	12 10 03.9	+0.6
	baz=56						
EYUL	**Yuli**	**0.56**	**57**	P	Pb	12 09 54.9	-0.6
	baz=57						
EYUL				*e*S	Sb	12 10 03.9	+0.2
	baz=57						
EYUL	**Yuli**	**0.56**	**57**	*e*S	Pb	12 09 55.1	-0.4
	baz=56						
CHN5	**Tsauling**	**0.56**	**348**	*e*P	Pb	12 09 55.4	-0.2
	baz=347						
CHN5				*e*S	Sb	12 10 04.3	+0.4
	baz=347						
YULB	**Yu-li**	**0.57**	**52**	*e*P	Pb	12 09 55.3	-0.4
	baz=52						
YULB				*e*S	Sb	12 10 04.5	+0.5
	baz=52						
EHY	**Hungye**	**0.66**	**46**	*e*P	Pb	12 09 57.3	0.0
	baz=46						
EHY				*e*S	Sb	12 10 07.2	+0.7
	baz=46						
EAST	**Anshuo**	**0.66**	**177**	P	Pb	12 09 57.2	-0.1
	baz=176						
EAST				*e*S	Sb	12 10 06.8	+0.1
	baz=176						
LDUT	**Ludao**	**0.71**	**121**	*e*P	Pb	12 09 58.2	+0.1
	baz=121						
LDUT				*e*S	Sb	12 10 08.8	+0.6
	baz=121						
HGSD	**Ruisui**	**0.72**	**52**	*e*P	Pb	12 09 58.8	+0.6
	baz=51						
HGSD				*e*S	Sb	12 10 09.4	+1.0
	baz=51						
SSLB	**Suanglung**	**0.75**	**10**	*e*P	Pb	12 09 58.8	0.0
	baz=10.0						
SSLB				*e*S	Sb	12 10 10.3	+1.0
	baz=10.0						
VWDT	**VWDT**	**0.77**	**23**	*e*P	Pg	12 09 58.5	+0.3
	baz=23						
VWDT				*e*S	Sb	12 10 10.7	+1.0
	baz=23						
SLIU	**Shizi**	**0.83**	**181**	*e*P	Pb	12 10 00.1	0.0
	baz=180						
SLIU				*e*S	Sb	12 10 12.5	+1.1
	baz=180						
SMLT	**Sun Moon Lake**	**0.84**	**6**	*e*P	Pb	12 10 00.3	-0.1
	baz=6.0						
TYC	**Yuchr**	**0.85**	**3**	*e*P	Pb	12 10 01.2	+0.6
	baz=3.0						
TYC				*e*S	Sn	12 10 15.1	+0.4
	baz=3.0						

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*IDC **16** 12:10:36.2±8.2, 8°.19N×82°.03W, h0^{km}, mb3.7/5, mb1 4.1/7, mb1mx3.8/32, mbtmp3.8/7, ML3.2/2, MS3.2/3, Ms1 3.3/3, ms1mx2.8/37, Error ellipse: s-maj=229.7km s-min=35.3km az=15.0*

ISC 16 12:10:28.2±1.0, 6°.5N±0°.1×82°.4W±0°.1, h10^{km}, n23, σ1^{s}.56/20, mb3.8/5, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BCIP	**Isla Barro Col**	**3.69**	**43**	*e*P	**Pn**	**12 11 22.9**	**-2.5**
SOLC	**Bahia Solano**	**4.96**	**93**	*e*P	**Pn**	**12 11 40.0**	**-3.0**
YOTC	**Yotoco, Valle**	**6.51**	**112**	*e*P	**Pn**	**12 12 03.1**	**-1.3**
BBAC	**Balboa, Cauca**	**6.78**	**131**	*e*P	Pn	12 11 59.4	-8.6
POPC	**Popayan, Colom**	**6.91**	**124**	*e*P	**Pn**	**12 12 07.8**	**-2.1**
MOTC	**Monteria, Cord**	**7.05**	**71**	*e*P	**Pn**	**12 12 12.9**	**+1.2**
GUY2C	**Guyana, Caldas**	**7.11**	**100**	*e*P	**Pn**	**12 12 15.8**	**+3.0**
RREF	**El Recreo**	**7.19**	**102**	*e*P	**Pn**	**12 12 13.7**	**-0.3**
PCON	**Cinco Dias**	**7.26**	**124**	*e*P	**Pn**	**12 12 15.1**	**+0.1**
TOLC	**Tolima**	**7.29**	**105**	*e*P	**Pn**	**12 12 14.5**	**-0.7**
MARP	**Paez Belalcaza**	**7.36**	**119**	*e*P	**Pn**	**12 12 16.8**	**+0.6**
ORTC	**Ortega, Tolima**	**7.56**	**109**	*e*P	**Pn**	**12 12 18.6**	**-0.1**
BETC	**Betania**	**7.89**	**118**	*e*P	Pn	12 12 15.8	-7.4
PRAC	**Prado**	**7.97**	**110**	*e*P	**Pn**	**12 12 24.9**	**+0.7**
GARC	**Garzon, Huila**	**8.09**	**121**	*e*P	**Pn**	**12 12 27.4**	**+1.2**
SDV	**Santo Domingo**	**11.90**	**78**	Pn	**Pn**	**12 13 20.3**	**+2.0**
	0.3nm,0.3s,baz=249,slow=8.6,SNR=4.6						
SDV				LR	LR	12 17 34.7	
	comp=Z,47nm,21.2s,baz=316,slow=37						
CMIG	**Matias Romero**	**16.14**	**312**	Pn	**Pn**	**12 14 15.9**	**+0.6**
	0.6nm,0.3s,baz=104,slow=12,SNR=5.5						
CMIG				LR	LR	12 19 26.2	
	comp=Z,91nm,19.7s,baz=122,slow=35						
LPAZ	**La Paz**	**26.66**	**148**	LR	LR	12 27 20.6	
	comp=Z,145nm,20.4s,baz=322,slow=36						
TXAR	**Lajitas Array**	**30.33**	**321**	P	**P**	**12 16 40.4**	**+0.1**
	0.3nm,0.9s,baz=121,slow=8.7,SNR=2.4						
PDAR	**Pinedale Array**	**43.38**	**331**	P	**P**	**12 18 30.6**	**-0.6**
	0.4nm,0.8s,baz=144,slow=9.9,SNR=2.6						
NVAR	**Mina Array Bea**	**45.46**	**320**	P	**P**	**12 18 49.0**	**+1.1**
	1.7nm,0.9s,baz=128,slow=7.0,SNR=15						
YKA	**Yellowknife Ar**	**60.69**	**344**	P	**P**	**12 20 38.6**	**-0.9**
	0.7nm,0.8s,baz=135,slow=7.3,SNR=11						
ILAR	**Eielson Array**	**73.47**	**336**	P	**P**	**12 22 00.9**	**+0.2**
	1.0nm,0.8s,baz=112,slow=4.7,SNR=9.0						

IDC 16 12:20:26.4±2.4, 6°.73N×124°.86E, h0^{km}, mb3.6/3, mb1 3.8/3, mb1mx3.4/38, mbtmp3.6/3, Error ellipse: s-maj=227.6km s-min=24.5km az=64.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**28.10**	**161**	P	P	12 26 20.1	0.0
	0.2nm,0.3s,baz=341,slow=9.2,SNR=7.4						
ASAR	**Alice Springs**	**31.48**	**164**	P	P	12 26 50.0	-0.1
	0.2nm,0.3s,baz=341,slow=7.5,SNR=9.3						
MKAR	**Makanchi Array**	**54.04**	**325**	P	P	12 29 52.6	-0.1
	0.5nm,0.4s,baz=121,slow=7.5,SNR=15						

IDC 16 12:47:14.6±1.7, 1°.92S×137°.64E, h0^{km}, mb3.4/2, mb1 3.8/4, mb1mx3.5/38, mbtmp3.6/4, ML3.5/2, Error ellipse: s-maj=37.8km s-min=29.0km az=74.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**3.12**	**101**	Pn	Pn	12 48 04.6	-0.5
	2.1nm,0.3s,baz=253,slow=15,SNR=5.2						
JAY				Sn	Sn	12 48 40.2	-2.9
	4.9nm,0.3s,baz=324,slow=19,SNR=4.3						
WRA	**Warramunga Arr**	**18.20**	**190**	P	Pn	12 51 29.1	+0.1
	0.3nm,0.3s,baz=11,slow=12,SNR=8.5						
WRA				S	Sn	12 54 37.9	-15
	0.2nm,0.3s,baz=8.6,slow=23,SNR=5.6						
ASAR	**Alice Springs**	**21.92**	**189**	P	P	12 52 09.4	-0.4
	1.1nm,0.6s,baz=13,slow=11,SNR=18						
ASAR				S	S	12 56 08.0	-5.0
	1.4nm,0.9s,baz=9.7,slow=23,SNR=6.2						
MKAR	**Makanchi Array**	**68.51**	**323**	P	P	12 58 19.4	+0.4
	0.3nm,0.7s,baz=101,slow=6.0,SNR=4.1						

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*IDC **16** 12:54:12.4±1.9, 37°.03N×98°.28W, h0^{km}, mb1 3.4/3, mb1mx3.2/48, mbtmp3.1/3, ML2.9/3, Error ellipse: s-maj=29.3km s-min=11.2km az=102.0*

*TUL **16** 12:54:13±1.4, 36°.81N±0°.02×98°.28W±0°.02, h4^{km}±7^{km}, ML3.5, mb_Lg3.4/108(NEIC), Error ellipse: s-maj=3.8km s-min=1.3km az=143.0*

*NEIC **16** 12:54:13.4±1.7, 36°.77N±0°.02×98°.24W±0°.04, h5^{km}±2^{km}, Error ellipse: s-maj=6.4km s-min=3.0km az=127.0*

ISC 16 12:54:13.2±1.1, 36°.80N±0°.03×98°.27W±0°.04, h5^{km}±11^{km}, n104, σ0^{s}.80/93, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAN14	**Manchester OK**	**0.29**	**57**		**Pg**	**12 54 19.3**	**+0.4**
KAN14				Sg	**Sg**	**12 54 23.2**	**+0.4**
KAN10	**Anthony SW Sta**	**0.35**	**23**		**Pg**	**12 54 20.3**	**+0.3**
KAN10				Sg	**Sg**	**12 54 24.9**	**+0.2**
CROK	**Carrier**	**0.37**	**142**	Pg	**Pg**	**12 54 21.0**	**+0.6**
CROK				Sg	**Sg**	**12 54 26.0**	**+0.8**
KAN05	**Bluff City Nor**	**0.45**	**46**		**Pg**	**12 54 22.0**	**+0.2**
KAN05				Sg	**Sg**	**12 54 28.0**	**+0.4**
KAN08	**Anthony NE Sta**	**0.49**	**29**		**Pg**	**12 54 22.8**	**+0.2**
KAN08				Sg	**Sg**	**12 54 29.0**	**0.0**
KAN01	**Argonia South**	**0.54**	**49**		**Pg**	**12 54 23.8**	**+0.2**
KAN01				Sg	**Sg**	**12 54 30.3**	**-0.3**
KAN12	**Harper NE Stat**	**0.54**	**24**	Pg	**Pg**	**12 54 23.5**	**-0.2**
KAN12				Sg	**Sg**	**12 54 31.2**	**+0.5**
KAN13	**South Haven SW**	**0.67**	**71**		**Pg**	**12 54 25.2**	**-0.9**
KAN13				Sg	**Sg**	**12 54 34.9**	**+0.1**
U32A	**Winter Ranch,**	**0.72**	**235**		**Pg**	**12 54 27.0**	**0.0**
U32A				Sg	**Sg**	**12 54 35.4**	**-1.0**
U32A	**Winter Ranch,**	**0.72**	**235**	P		12 54 27.0	
	baz=53						
OK029	**Liberty Lake**	**1.20**	**146**		**Pg**	**12 54 35.5**	**-0.6**
BCOK	**Bluff Creek, N**	**1.26**	**155**		**Pg**	**12 54 36.6**	**-0.7**
QUOK	**Quay**	**1.41**	**116**		**Pn**	**12 54 39.3**	**-0.1**
T35A	**Sooner Cattle**	**1.42**	**85**	Pn	**Pn**	**12 54 39.4**	**-0.1**
T35B	**Sooner Cattle**	**1.42**	**85**	P		12 54 39.3	

	baz=266,SNR=57						
T35B				S		12 54 58.5	
	baz=266						
OK025	Westminster Rd	1.43	148		Pn	12 54 39.5	-0.2
OK025				IAmb_Lg		12 55 01.9	
	comp=Z,215nm,0.7s						
OK031	S. Brethren Rd	1.43	126		Pn	12 54 39.6	-0.1
OK030	Cody Creek RV	1.48	125		Pn	12 54 40.4	0.0
OKCFA	Oklahoma City	1.53	154		Pn	12 54 40.9	-0.2
OKCSW	OKLAHOMA CITY	1.54	154		Pn	12 54 41.5	+0.2
R32A	Long Quarter,	1.66	348	Pn	Pn	12 54 43.1	+0.1
R32A	Long Quarter,	1.66	348	P		12 54 43.4	
	baz=168,SNR=18						
R32A				S		12 55 05.4	
	baz=168						
FNO	Franklin	1.69	155		Pn	12 54 44.2	+0.8
WMOK	Wichita Mounta	2.10	192	Pn	Pn	12 54 50.1	+1.2
WMOK	Wichita Mounta	2.10	192	P		12 54 49.8	
	baz=11						
TUL1	Leonard	2.19	113		Pn	12 54 51.5	+1.4
TUL1				IAmb_Lg		12 55 24.7	
	comp=Z,195nm,0.7s						
TUL1	Leonard	2.19	113	P		12 54 52.0	
	baz=295,SNR=30						
TUL1				S		12 55 21.3	
	baz=295						
X34A	Smith Ranch, M	2.22	171	Pn	Pn	12 54 51.9	+1.3
CBKS	Cedar Bluff	2.32	330	Pn	Pn	12 54 52.7	+0.6
CBKS	Cedar Bluff	2.32	330	P		12 54 53.3	
	baz=150						
KSU1	Kansas State U	2.65	29		Pn	12 54 57.9	+1.4
KSU1				IAmb_Lg		12 55 41.2	
	comp=Z,184nm,0.9s						
KSU1	Kansas State U	2.65	29	S		12 55 30.1	
	baz=210						
U38A	Gravette	3.15	95		Pn	12 55 04.7	+1.4
U38A	Gravette	3.15	95	P		12 55 04.3	
	baz=278,SNR=13						
X37A	Clayton	3.23	132		Pn	12 55 05.1	+0.6
X37A	Clayton	3.23	132	P		12 55 05.0	
	baz=314						
AMTX	Amarillo	3.37	236	Pn	Pn	12 55 07.9	+1.4
AMTX				IAmb_Lg		12 56 09.1	
	comp=Z,82nm,0.8s						
AMTX	Amarillo	3.37	236	P		12 55 07.7	
	baz=54						
HHAR	Hobbs	3.52	97		Pn	12 55 09.5	+0.9
Z35A	Perchaven, San	3.56	166		Pn	12 55 09.5	+0.5
Z35A	Perchaven, San	3.56	166	S		12 55 52.7	
	baz=347						
W39A	Magazine	3.97	112		Pn	12 55 15.8	+1.1
W39A	Magazine	3.97	112	P		12 55 15.8	
	baz=295						
N33A	J Bar K, Exete	3.99	9	IAmb_Lg		12 56 28.1	
	comp=Z,73nm,0.8s						
S39A	Bolivar	4.05	76		Pn	12 55 15.7	-0.1
S39A	Bolivar	4.05	76	P		12 55 16.1	
	baz=259,SNR=18						
KSCO	Kaye Shedlock’	4.09	304	Pn	Pn	12 55 17.1	+0.6
KSCO				IAmb_Lg		12 56 28.4	
	comp=Z,63nm,0.7s						
ABTX	Abilene, Hawle	4.31	196		Pn	12 55 21.3	+1.9
U40A	Yellville	4.38	94		Pn	12 55 20.8	+0.4
U40A				IAmb_Lg		12 56 34.8	
	comp=Z,79nm,0.7s						
U40A	Yellville	4.38	94	P		12 55 20.5	
	baz=278,SNR=14						
U40A				P		12 55 20.5	
	baz=278,SNR=14						
MIAR	Mount Ida	4.43	119		Pn	12 55 21.9	+0.8
MIAR	Mount Ida	4.43	119	P		12 55 21.9	
	baz=302,SNR=21						
Z38A	Mt. Pleasant	4.44	142	Pn	Pn	12 55 21.2	+0.1
Z38A	Mt. Pleasant	4.44	142	P		12 55 21.6	
	baz=324						
N35A	Tabor	4.55	26		Pn	12 55 23.4	+0.9
BGNE	Belgrade	4.61	1	Pn	Pn	12 55 23.7	+0.3
BGNE				IAmb_Lg		12 56 48.1	
	comp=Z,103nm,0.8s						
BGNE	Belgrade	4.61	1	P		12 55 23.7	
	baz=181,SNR=16						
P38A	Dawn	4.68	51		Pn	12 55 24.2	-0.2
P38A				IAmb_Lg		12 56 42.6	
	comp=Z,56nm,0.7s						
P38A	Dawn	4.68	51	P		12 55 24.4	
	baz=234,SNR=6.9						
MGMO	Mountain Grove	4.82	84		Pn	12 55 26.9	+0.6
MGMO				IAmb_Lg		12 56 48.3	
	comp=Z,56nm,0.7s						
X40A	Basin Creek Fa	4.99	116		Pn	12 55 29.7	+1.1
X40A				IAmb_Lg		12 56 56.9	
	comp=Z,83nm,0.8s						
X40A	Basin Creek Fa	4.99	116	P		12 55 29.2	
	baz=299,SNR=13						
X40A				P		12 55 29.2	
	baz=299,SNR=13						
R40A	Maddies Statio	5.00	71		Pn	12 55 28.5	-0.3
R40A	Maddies Statio	5.00	71	P		12 55 28.9	
	baz=255,SNR=13						
FCAR	Ozark Folk Cen	5.04	99		Pn	12 55 30.4	+1.0
FCAR				IAmb_Lg		12 56 56.6	
	comp=Z,52nm,0.7s						
WHAR	Wooly Hollow	5.08	105		Pn	12 55 30.1	+0.3
WHAR				IAmb_Lg		12 57 05.2	
	comp=Z,53nm,0.8s						
OGNE	Ogallala	5.08	326		Pn	12 55 30.3	+0.4
237A	Washetta, Mont	5.20	156	Pn	Pn	12 55 30.6	-0.9
WLAR	White Oak Lake	5.24	125	Pn	Pn	12 55 31.8	-0.3
WLAR				IAmb_Lg		12 57 06.3	
	comp=Z,55nm,0.8s						
L34A	Svendsen Farm,	5.37	15		Pn	12 55 33.3	-0.6
N38A	Joes South For	5.60	43		Pn	12 55 37.0	-0.1
N38A				IAmb_Lg		12 57 16.4	
	comp=Z,58nm,0.8s						
N38A	Joes South For	5.60	43	P		12 55 36.9	
	baz=226,SNR=7.7						
P40A	Paris	5.61	59		Pn	12 55 38.4	+1.2
P40A				IAmb_Lg		12 57 24.8	
	comp=Z,54nm,0.8s						
CCM	Cathedral Cave	5.73	75		Pn	12 55 40.5	+1.6
CCM				IAmb_Lg		12 57 16.1	
	comp=Z,45nm,0.7s						
T42A	Van Buren	5.76	86	Pn	Pn	12 55 39.6	+0.4
T42A				IAmb_Lg		12 57 17.6	
	comp=Z,46nm,0.8s						
LCAR	Lake Charles	5.78	95		Pn	12 55 40.2	+0.7
LCAR				IAmb_Lg		12 57 18.1	
	comp=Z,48nm,0.8s						
K31A	O'Neill	5.83	356		Pn	12 55 41.0	+0.8
SDCO	Great Sand Dun	5.84	281		Pn	12 55 41.8	+1.1
435B	Jarrell	6.03	174	IAmb_Lg		12 57 29.4	
	comp=Z,46nm,0.9s						
PBMO	Poplar Bluff	6.29	88		Pn	12 55 47.4	+0.9
PBMO				IAmb_Lg		12 57 46.0	
	comp=Z,76nm,0.7s						
FVM	French Village	6.36	77	Pn	Pn	12 55 46.8	-0.7
FVM				IAmb_Lg		12 57 35.1	
	comp=Z,48nm,0.8s						
JCT	Junction City	6.43	192		Pn	12 55 49.5	+0.9
SCIA	State Center	6.43	36	IAmb_Lg		12 57 49.7	
	comp=Z,57nm,0.7s						
ISCO	Idaho Springs	6.51	300		Pn	12 55 49.1	-0.7
GDL2	Guadalupe Moun	6.81	229		Pn	12 55 53.0	-0.7
ANMO	Albuquerque	6.90	257		Pn	12 55 55.1	+0.1
143A	Socs Landing,	6.97	124	IAmb_Lg		12 58 13.5	
	comp=Z,33nm,0.8s						
N41A	Harden Midland	6.99	54		Pn	12 55 54.9	-1.2
N41A				IAmb_Lg		12 58 08.1	
	comp=Z,35nm,0.8s						
ECSD	EROS Data Cent	7.04	10		Pn	12 55 57.5	+0.6
ECSD				IAmb_Lg		12 58 06.8	
	comp=Z,30nm,1.0s						
PHWY	Pilot Hill	7.17	311	Pn	Pn	12 55 58.8	-0.2
PHWY				IAmb_Lg		12 58 14.2	
	comp=Z,33nm,0.9s						
K38A	Parkersburg	7.22	34	IAmb_Lg		12 58 08.3	
	comp=Z,64nm,0.8s						
S44A	Carbondale	7.25	80	Pn	Pn	12 56 00.5	+0.8
SMCO	Snowmass	7.27	292		Pn	12 56 00.4	0.0
BNM	Barren Site	7.31	251		Pn	12 56 00.3	-0.4
P43A	Skaggs, Pawnee	7.45	65		Pn	12 56 03.2	+0.8
P43A				IAmb_Lg		12 58 18.9	
	comp=Z,55nm,0.9s						
W45A	Hickory Valley	7.54	100	Pn	Pn	12 56 03.4	-0.3
Y22D	IRIS PASSCAL I	7.56	251	IAmb_Lg		12 58 17.2	
	comp=Z,39nm,0.7s						
L40A	Anamosa	7.58	44		Pn	12 56 04.1	-0.1
L40A				IAmb_Lg		12 58 17.4	
	comp=Z,40nm,0.8s						
SUSD	Miller	7.66	356	IAmb_Lg		12 58 31.5	
	comp=Z,32nm,0.8s						
MNTX	Cornudas Mount	7.78	231		Pn	12 56 07.8	+0.8
HDIL	Hopedale	7.96	59	Pn	Pn	12 56 09.0	-0.5
HDIL				IAmb_Lg		12 58 42.1	
	comp=Z,43nm,0.7s						
I37A	Lemond, Waseca	8.11	26	IAmb_Lg		12 58 43.3	
	comp=Z,28nm,0.8s						
OLIL	Olney	8.29	73	IAmb_Lg		12 58 46.5	
	comp=Z,53nm,1.0s						
O44A	Mansfield	8.39	63	IAmb_Lg		12 58 42.0	
	comp=Z,33nm,0.8s						
WVT	Waverly	8.44	91	IAmb_Lg		12 58 40.7	
	comp=Z,16nm,0.8s						
L42A	Oliver, Polo	8.45	49	IAmb_Lg		12 58 43.3	
	comp=Z,29nm,0.9s						
RSSD	Black Hills	8.53	331		Pn	12 56 18.9	+1.4
K22A	Casper	8.63	315		Pn	12 56 19.0	+0.2
K22A				IAmb_Lg		12 59 08.9	
	comp=Z,24nm,1.0s						
JFWS	Jewell Farm	8.68	43	Pn	Pn	12 56 18.5	-0.8
JFWS				IAmb_Lg		12 58 53.4	
	comp=Z,36nm,0.8s						
TXAR	Lajitas Array	8.71	213	Pn	Pn	12 56 19.6	-0.3
	comp=Z,0.2nm,0.3s,baz=33,slow=11,SNR=5.9						
TXAR				Sn	Sn	12 58 00.8	+2.3
	comp=Z,0.3nm,0.3s,baz=30,slow=13,SNR=1.5						
TXAR				Lg	Lg	12 58 47.2	
	comp=Z,0.6nm,0.3s,baz=33,slow=25,SNR=6.9						
TXAR	Lajitas Array	8.71	213	Pn	Pn	12 56 20.1	+0.2
T47A	Sharon Grove	8.95	85	IAmb_Lg		12 59 06.6	
	comp=Z,31nm,0.8s						
P46A	Rosedale	9.15	69	IAmb_Lg		12 59 03.8	
	comp=Z,42nm,0.9s						
I40A	Norwalk	9.18	37	IAmb_Lg		12 59 06.6	
	comp=Z,26nm,1.0s						
V48A	Smith Brothers	9.31	93	IAmb_Lg		12 59 05.2	
	comp=Z,21nm,0.9s						
X48A	Hartselle	9.43	101	IAmb_Lg		12 59 13.4	
	comp=Z,32nm,1.2s						
WCI	Wyandotte Cave	9.62	78	IAmb_Lg		12 59 27.9	
	comp=Z,24nm,0.8s						
K43A	Burlington	9.66	49	IAmb_Lg		12 59 28.2	
	comp=Z,31nm,0.8s						
F36A	Milaca	9.73	20	Pn	Pn	12 56 34.4	+0.6
E28A	Huff	9.94	350	IAmb_Lg		12 59 39.8	
	comp=Z,26nm,1.0s						
G40A	Rib Lake	10.42	33	Pn	Pn	12 56 42.2	-1.0
PDAR	Pinedale Array	10.53	308	Pn	Pn	12 56 44.0	-0.9
	comp=Z,0.0nm,0.3s,baz=117,slow=17,SNR=2.7						
PDAR				Pg		12 57 28.3	
	comp=Z,0.3nm,0.3s,baz=113,slow=18,SNR=6.5						
PDAR				Lg	Lg	12 59 36.0	
	comp=Z,0.2nm,0.3s,baz=123,slow=16,SNR=2.6						
COWI	Conover	11.54	34	Pn	Pn	12 56 57.2	-1.3
E43A	Lone Tree Farm	12.75	38	Pn	Pn	12 57 13.7	-1.2
ULM	Lac du Bonnet	13.56	7	Pn	Pn	12 57 18.8	-7.2
	comp=Z,0.1nm,0.3s,baz=185,slow=12,SNR=1.4						
ULM				Sn	Sn	12 59 38.6	-18
	comp=Z,0.1nm,0.3s,baz=184,slow=15,SNR=1.4						
ULM				Lg	Lg	13 01 10.6	
	comp=Z,0.3nm,0.3s,baz=239,slow=7.3,SNR=3.3						

SOME **16** *13:12:36.3, 41°.88N×72°.17E, h5^{km}*
KRNET **16** *13:12:36.1±0.1, 41°.81N×72°.15E, h18^{km}, mb2.1*
NNC **16** *13:12:39.4±2.3, 42°.03N×72°.10E, h0^{km}, mb2.8, mpv2.8, Error ellipse: s-maj=28.1km s-min=8.8km az=177.0*
ISC 16 13:12:35.5±1.1, **41°.81N**±0°.02×**72°.16E**±0°.02, **h11**^{km}±14^{km}, **n29**, σ**1**^{s}.**48**/55, **25C-10D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNAS	Manas	0.72	21	⇑*i*P	Pb	13 12 50.1	-0.2
	baz=21						
MNAS				⇑*i*S	Sg	13 13 00.3	+1.2
	baz=21						
ARSB	Arslanbob	0.79	128	⇓*i*P	Pb	13 12 51.4	0.0
	baz=28						
ARSB				⇓*i*S	Sg	13 13 02.0	+0.9
	baz=28						
TRKS	Terek-Say	0.81	250	⇑*i*P	Pb	13 12 51.6	-0.1
	baz=45						
TRKS				⇑*i*S	Sg	13 13 02.6	+0.8
	baz=45						
AML	Almayashu	1.19	74	⇓*i*P	Pb	13 12 58.4	0.0
	baz=74						
AML				⇓*i*S	Sg	13 13 14.6	+0.6
	baz=74						
MRKS	Merke	1.23	40	*e*P	Pg	13 12 59.4	+0.3
	7.0nm,0.2s						
MRKS				*e*S	Sg	13 13 15.8	+0.7
	24nm,0.3s						
MRKS	Merke	1.23	40	P	Pg	13 12 59.4	+0.3
	7.0nm,0.2s						
MRKS				S	Sg	13 13 15.9	+0.9
	24nm,0.3s						
OHH	Osh	1.37	159	⇓*i*P	Pb	13 13 01.8	+0.6
	baz=59						
OHH				⇓*i*S	Sg	13 13 20.7	+1.1
	baz=59						
EKS2	Erkin-Say	1.48	54	⇑*i*P	Pb	13 13 03.3	+0.2
	baz=54						
EKS2				⇑*i*S	Sg	13 13 23.1	+0.1
	baz=54						
ARLS	Aral	1.62	87	⇑*i*P	Pb	13 13 05.9	+0.3
	baz=88						
ARLS				⇑*i*S	Sg	13 13 27.6	-0.1
	baz=88						
KK31	Karatay Array	1.77	317	Pn	Pb	13 13 08.8	+0.7
	1.1nm,0.2s,baz=133,slow=12,SNR=27						
KK31				⇓Sn	Sg	13 13 32.1	-0.5
	3.4nm,0.3s,baz=136,slow=29,SNR=11						
UCH	Uchtor	1.81	76	⇑*i*P	Pb	13 13 09.4	+0.5
	baz=76						
UCH				⇑*i*S	Sg	13 13 33.5	-0.2
	baz=76						
AAK	Ala-Archa	1.93	64	⇑*i*P	Pb	13 13 11.2	+0.4
	baz=64						
AAK				⇑*i*S	Sg	13 13 36.8	-0.6
	baz=64						
AAK	Ala-Archa	1.93	64	⇑Pn	Pg	13 13 12.4	-0.1
	0.9nm,0.4s						
AAK				⇓Sn	Sg	13 13 37.6	+0.2
	1.0nm,0.3s						
BTK	Batken	2.02	211	⇑*i*P	Pb	13 13 12.8	+0.4
	baz=10.0						
BTK				⇑*i*S	Sb	13 13 38.8	+1.2
	baz=10.0						
SFK	Sufi-Kurgan	2.06	150	⇑*i*P	Pb	13 13 13.3	+0.1
	baz=50						
SFK				⇑*i*S	Sb	13 13 40.1	+1.1
	baz=50						
BRLS	Borolday	2.11	306	*e*P	Pb	13 13 14.5	+0.7
	9.1nm,0.4s						
BRLS				*e*S	Sg	13 13 41.6	-1.6
	26nm,0.5s						
BRLS	Borolday	2.11	306	Pg	Pb	13 13 14.5	+0.7
	22nm,0.2s						
BRLS				Lg	Lg	13 13 41.6	
	26nm,0.5s						
CHMS	Chumysh	2.26	57	⇑*i*P	Pb	13 13 15.9	-0.5
	baz=58						
CHMS				⇑*i*S	Sb	13 13 44.9	+0.5
	baz=58						
USP	Ospenovka	2.26	49	⇑*i*P	Pb	13 13 16.0	-0.5
	baz=49						
USP				⇑*i*S	Sb	13 13 45.1	+0.6
	baz=49						
DRK	Karamyk	2.34	187	⇑*i*P	Pb	13 13 16.6	-1.4
	baz=87						
DRK				⇑*i*S	Sb	13 13 46.7	-0.3
	baz=87						
TKM2	Tokmak 2	2.78	65	⇓Pn	Pb	13 13 27.1	+1.7
	0.7nm,0.4s						
TKM2				⇓Sn	Sg	13 14 03.4	-1.5
	1.5nm,0.4s						
DGS	Degeres	3.03	61	*e*P	Pg	13 13 32.1	-1.6
	0.8nm,0.6s						
DGS				*e*S	Sg	13 14 11.8	-1.1
	4.4nm,0.6s						
ULHL	Ulahol	3.08	80	⇑*i*P	Pb	13 13 27.3	-3.1
	baz=81						
ULHL				⇑*i*S	Sb	13 14 04.8	-3.2
	baz=81						
KST	Kastek	3.08	65	*e*P	Pb	13 13 32.7	+2.4
	1.3nm,0.3s						
KST				*e*S	Sg	13 14 12.9	-1.5
	6.4nm,0.4s						
KST	Kastek	3.08	65	Pg	Pb	13 13 32.7	+2.4
	1.3nm,0.3s						
KST				Lg	Lg	13 14 12.9	
	6.4nm,0.4s						
BTLS	Baital	3.51	22	*e*P	Pg	13 13 40.7	-2.1
	0.6nm,0.2s						
BTLS				*e*S	Sg	13 14 26.3	-1.9
	1.7nm,0.4s						
KUU	Kurty	3.71	55	*e*P	Pb	13 13 44.0	+2.8
	0.2nm,0.1s						
KUU				*e*S	Sg	13 14 31.9	-2.9
	2.5nm,0.4s						
KTBS	Karatobe	3.84	59	*e*P	Pb	13 13 45.2	+1.9
	0.4nm,0.2s						
KTBS				*e*S	Sb	13 14 34.3	+4.5
	4.4nm,0.3s						
KTBS	Karatobe	3.84	59	Pg	Pb	13 13 45.2	+1.9
	0.4nm,0.2s						
KTBS				Lg	Lg	13 14 34.3	
	4.4nm,0.3s						

BJI **16** *13:13:53.7±0.0, 5°.81S×153°.80E, h16^{km}, mB5.1/29, mb4.7/50, Ms4.7/5, Ms7 4.5/5*
IDC **16** *13:13:53.9±0.7, 5°.90S×153°.49E, h0^{km}, mb4.2/15, mb1 4.3/16, mb1mx4.2/37, mbtmp4.2/16, ML2.3/1, MS3.5/16, Ms1 3.5/16, ms1mx3.4/38, Error ellipse: s-maj=23.0km s-min=16.1km az=100.0*
DJA **16** *13:13:58.9±2.1, 6°S±4°×15°3E±°, h23^{km}±16^{km}, M4.6/9, mB5.4/2, mb4.8/9, MLv4.5/3, Mw(mB)4.9/2*
NEIC **16** *13:13:58.7±1.8, 5°.82S±0°.08×153°.44E±0°.09, h28^{km}±3^{km}, mb4.6/29, Error ellipse: s-maj=13.5km s-min=10.3km az=115.0*
ISC 16 13:13:59.1±0.5, **5°.85S**±0°.07×**153°.44E**±0°.08, **h32**^{km}, **n90**, σ**1**^{s}.**48**/81, **mb4.6**/36, **MS3.4**/16, **1C, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	2.08	322	Pn	Pn	13 14 31.0	-0.9
PMG	Port Moresby	7.16	240	Pn	Pn	13 15 41.2	-0.5
	3.1nm,0.3s,baz=79,slow=6.7,SNR=13						
PMG				Sn	Sn	13 17 00.2	-1.7
	baz=360,slow=23,SNR=1.8						
PMG				LR	LR	13 18 12.2	
	comp=Z,226nm,21.1s,baz=346,slow=36						
PMG	Port Moresby	7.16	240	Pn	Pn	13 15 41.4	-0.3
SANVU	Saraoutou	16.54	126	P	P	13 17 51.6	+0.5
SANVU				IAmb	IAmb	13 18 07.3	
	comp=Z,67nm,1.0s						
DZM	Mont Dzumac	20.45	143	P	P	13 18 32.7	-1.5
	comp=Z,9.5nm,1.0s,baz=337,slow=15,SNR=1.4						
GUMO	Guam	21.10	336	LR	LR	13 27 24.5	
	comp=Z,55nm,18.5s,baz=128,slow=38						
WR0	Warramunga Arr	23.11	231	P	P	13 19 03.6	+1.0
WR0				IAmb	IAmb	13 19 21.4	
	comp=Z,30nm,1.4s						
WB0	Warramunga Arr	23.12	232	P	P	13 19 03.5	+0.8
WB0				IAmb	IAmb	13 19 16.2	
	comp=Z,20nm,1.2s						
WRAB	Tennant Creek	23.24	231	P	P	13 19 05.0	+1.0
WRAB				IAmb	IAmb	13 19 20.4	
	comp=Z,16nm,1.1s						
WB2	Warramunga Arr	23.25	231	P	P	13 19 04.6	+0.6
WRA	Warramunga Arr	23.26	231	P	P	13 19 02.7	-1.4
	comp=Z,5.1nm,1.0s,baz=54,slow=11,SNR=10						
WRA				LR	LR	13 28 36.7	
	comp=Z,167nm,18.1s,baz=65,slow=38						
ARMA	Armidale	24.50	184	P	P	13 19 17.0	+1.2
ARMA				IAmb	IAmb	13 19 28.7	
	comp=Z,16nm,1.1s						
ASAR	Alice Springs	25.83	225	P	P	13 19 26.8	-1.0
	comp=Z,5.2nm,0.9s,baz=56,slow=9.0,SNR=29						
ASAR				LR	LR	13 28 53.2	
	comp=Z,116nm,19.9s,baz=47,slow=35						
ASAR	Alice Springs	25.83	225	P	P	13 19 26.1	-1.7
STKA	Stephens Creek	28.17	202	P	P	13 19 47.2	-1.5
	comp=Z,4.8nm,0.9s,baz=9.5,slow=6.1,SNR=3.3						
STKA				LR	LR	13 30 02.8	
	comp=Z,79nm,21.3s,baz=21,slow=34						
STKA	Stephens Creek	28.17	202	P	P	13 19 50.9	+2.2
FITZ	Fitzroy Crossi	29.74	243	LR	LR	13 32 45.6	
	comp=Z,75nm,18.8s,baz=72,slow=38						
FITZ	Fitzroy Crossi	29.74	243	P	P	13 20 02.3	-0.5
BATI	Baumata	29.79	260	LR	LR	13 31 35.6	
	comp=Z,99nm,21.0s,baz=94,slow=36						
BATI	Baumata	29.79	260	P	P	13 20 00.1	-3.3
	comp=Z,13nm,0.8s						
EDFI	Ende, Flores	31.61	263	P	P	13 20 19.0	-0.6
	comp=Z,9.6nm,1.0s						
FORT	Forrest	34.40	221	P	P	13 20 42.6	-0.9
JCJ	Chichijima	34.51	342	LR	LR	13 32 33.2	
	comp=Z,83nm,20.8s,baz=308,slow=32						
URZ	Urewera	38.77	150	LR	LR	13 37 00.6	
	comp=Z,125nm,19.1s,baz=34,slow=36						
MJAR	Matsushiro Arr	44.52	342	P	P	13 22 06.0	-1.8
	comp=Z,2.2nm,0.9s,baz=162,slow=7.5,SNR=4.5						
MJAR				LR	LR	13 38 24.5	
	comp=Z,26nm,22.0s,baz=165,slow=33						
KSRS	Korea Array	49.22	333	P	P	13 22 44.0	-0.5
	comp=Z,2.3nm,0.9s,baz=140,slow=9.9,SNR=5.7						
KSRS				LR	LR	13 43 08.8	
	comp=Z,20nm,18.2s,baz=160,slow=36						
NJ2	Nanjing	50.05	321	*e*P	P	13 22 53.5	+2.5
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
USA0B	Ussuriysk Arra	53.44	341	P	P	13 23 16.6	+0.5
USA0B				IAmb	IAmb	13 23 17.6	
	comp=Z,9.7nm,1.1s						
USRK	Ussuriysk Ar.	53.44	341	P	P	13 23 16.8	+0.8
	comp=Z,3.7nm,0.9s,baz=174,slow=7.3,SNR=7.0						
USRK	Ussuriysk Ar.	53.44	341	P	P	13 23 16.6	+0.5
ENH	Enshi	55.33	313	P	P	13 23 29.6	-0.6
ENH				IAmb	IAmb	13 23 31.6	
	comp=Z,8.9nm,1.1s						
JCUZ	Jacuzzi	56.51	62	P	P	13 23 37.2	-1.6
XAN	Xi'an	57.81	317	P	P	13 23 48.3	+0.5
XAN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
XAN	Xi'an	57.81	317	P	P	13 23 47.7	-0.1
XAN				IAmb	IAmb	13 23 49.0	
	comp=Z,4.9nm,0.9s						
KMI	Kunming	58.10	304	⇑P	P	13 23 51.5	+1.4
KMI				pP	sP	13 24 00.8	-0.4
KMI				sP	pwP	13 24 04.6	-0.9
KMI				pmax	pmax		
	comp=Z,6.0nm,1.0s						
CM35	Chiang Mai Arr	58.78	296	P	P	13 23 56.0	+1.3
CM36	Chiang Mai Arr	58.78	296	P	P	13 23 56.0	+1.3
CM34	Chiang Mai Arr	58.84	296	P	P	13 24 09.0	+14
PETK	Petropavlovsk-	58.84	3	P	P	13 23 54.9	+0.4
	comp=Z,4.0nm,0.8s,baz=150,slow=6.2,SNR=5.7						
PETK				LR	LR	13 50 47.7	
	comp=Z,27nm,18.1s,baz=127,slow=38						
PETK	Petropavlovsk-	58.84	3	P	P	13 23 54.6	+0.1
CM04	Chiang Mai Arr	58.85	295	P	P	13 23 57.5	+2.3
CM09	Chiang Mai Arr	58.85	296	P	P	13 24 01.2	+6.0
CM01	Chiang Mai Arr	58.87	295	P	P	13 23 57.9	+2.5
CM05	Chiang Mai Arr	58.88	295	P	P	13 23 58.5	+3.1
CM02	Chiang Mai Arr	58.89	295	P	P	13 23 59.0	+3.5
CMAR	Chiang Mai Arr	58.90	296	P	P	13 23 56.3	+0.7
	comp=Z,1.2nm,0.5s,baz=122,slow=5.2,SNR=12						
CMAR	Chiang Mai Arr	58.90	296	P	P	13 23 55.9	+0.3
CM15	Chiang Mai Arr	58.91	296	P	P	13 23 59.6	+3.9
CM13	Chiang Mai Arr	58.92	295	P	P	13 23 58.0	+2.2
CMMT	Chiang Mai	59.01	296	P	P	13 23 58.4	+2.1
CM33	Chiang Mai Arr	59.01	296	P	P	13 23 59.0	+2.6
CHTO	Chiang Mai	59.01	296	P	P	13 23 56.6	+0.3
CHTO				IAmb	IAmb	13 24 09.4	
	comp=Z,7.7nm,1.3s						
CM32	Chiang Mai Arr	59.05	296	P	P	13 24 10.0	+13
CD2	Chengdu	59.90	311	P	P	13 24 03.0	+0.7
CD2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HHC	Hu-ho-hao-te	60.26	324	*e*P	P	13 24 05.8	+1.1
HHC				S	S	13 32 12.4	-4.5
HHC				pmax	pmax		
	comp=Z,9.0nm,0.7s						
HHC				pmax	pmax		

	comp=Z,66nm,4.7s						
HIA	Hailar	62.24	336	P	P	13 24 18.6	+0.8
HIA				IAmb	IAmb	13 24 32.0	
	comp=Z,4.7nm,0.8s						
LZH	Lanzhou	62.42	316	*e*P	P	13 24 21.1	+1.6
LZH				pP	pP	13 24 29.5	+2.0
LZH				sP	pwP	13 24 34.3	-0.9
LZH				pmax	pmax		
	comp=Z,12nm,1.1s						
MA2	Magadan	65.25	359	P	P	13 24 37.2	-0.2
MA2				IAmb	IAmb	13 24 38.9	
	comp=Z,5.8nm,0.8s						
GTA	Gaotai	66.85	317	*e*P	P	13 24 50.1	+1.8
GTA				pP	pP	13 24 57.4	+1.1
GTA				sP	sP	13 25 01.4	+2.0
GTA				pmax	pmax		
	comp=Z,5.0nm,1.5s						
GTA				pmax	pmax		
	comp=Z,32nm,4.7s						
GTA				LR	LR		
	comp=Z,100nm,15.6s						
GTA				LR	LR		
	comp=Z,130nm,15.3s						
ULN	Ulaanbaatar	67.22	328	P	P	13 24 51.5	+1.0
ULN				IAmb	IAmb	13 24 53.2	
	comp=Z,9.6nm,1.3s						
SHL	Shillong	67.38	301	P	P	13 24 51.7	-0.3
SONM	Songino Array	67.55	328	P	P	13 24 53.2	+0.7
	comp=Z,1.7nm,0.7s,baz=146,slow=4.9,SNR=9.6						
SONM	Songino Array	67.55	328	P	P	13 24 53.0	+0.5
YAK	Yakutsk	70.12	348	P	P	13 25 09.3	+1.3
TLY	Talaya	71.30	330	LR	LR	13 58 10.3	
	comp=Z,42nm,18.7s,baz=127,slow=37						
WMQ	Urumqi	76.94	317	*e*P	P	13 25 49.9	+1.2
MK31	Makanchi Array	81.53	319	P	P	13 26 14.4	+0.8
MKAR	Makanchi Array	81.53	319	P	P	13 26 14.0	+0.4
	comp=Z,2.0nm,0.8s,baz=102,slow=6.4,SNR=11						
MKAR	Makanchi Array	81.53	319	P	P	13 26 14.1	+0.5
MAKZ	Makanchi	81.74	319	P	P	13 26 14.9	+0.2
ZAA0	Zalesovo Array	82.37	326	P	P	13 26 17.4	-0.4
ZALV	Zalesovo Beam	82.37	326	P	P	13 26 17.4	-0.5
	comp=Z,2.9nm,0.8s,baz=105,slow=4.9,SNR=9.4						
ZALV	Zalesovo Beam	82.37	326	P	P	13 26 17.1	-0.7
ILAR	Eielson Array	82.89	22	P	P	13 26 18.4	-1.9
	comp=Z,0.9nm,0.9s,baz=221,slow=4.8,SNR=6.4						
ILAR				LR	LR	13 56 59.5	
	comp=Z,37nm,20.3s,baz=222,slow=31						
KSH	Kashi	84.10	311	P	P	13 26 26.9	-0.4
KSH				pmax	pmax		
	comp=Z,16nm,1.8s						
KSH				pmax	pmax		
	comp=Z,170nm,6.1s						
QSPA	South Pole Qui	84.12	180	P	P	13 26 27.8	+0.9
KURK	Kurchatov	84.98	322	P	P	13 26 31.2	-0.1
AAK	Ala-Archa	85.84	313	P	P	13 26 36.0	0.0
AAK				IAmb	IAmb	13 26 40.7	
	comp=Z,4.6nm,1.2s						
NRIK	Noril'sk	87.16	341	P	P	13 26 42.0	+0.4
	comp=Z,1.5nm,0.3s,baz=131,slow=6.7,SNR=4.1						
BRVK	Borovoye	90.52	323	P	P	13 26 57.9	+0.1
BRVK				IAmb	IAmb	13 27 00.6	
	comp=Z,4.9nm,0.9s						
NVAR	Mina Array Bea	92.23	52	LR	LR	14 02 44.1	
	comp=Z,58nm,19.1s,baz=266,slow=32						
YKA	Yellowknife Ar	96.05	28	P	P	13 27 22.5	-0.6
	comp=Z,0.4nm,0.9s,baz=267,slow=4.4,SNR=5.1						
PDAR	Pinedale Array	99.08	48	LR	LR	14 08 03.2	
	comp=Z,68nm,18.6s,baz=36,slow=33						
CLL	Collm	124.07	331	*e*PKPdf	PKiKP	13 32 57.0	+2.4
GERES	GERESS Array B	125.28	328	PKP	PKiKP	13 32 58.0	+0.7
	comp=Z,0.2nm,0.3s,baz=79,slow=2.9,SNR=3.9						
LPAZ	La Paz	133.36	119	PKP	PKPdf	13 33 13.8	0.0
	comp=Z,0.4nm,0.3s,baz=300,slow=8.9,SNR=2.7						
SDV	Santo Domingo	136.21	83	PKP	PKPdf	13 33 18.8	+0.1
	comp=Z,2.5nm,0.4s,baz=319,slow=11,SNR=1.9						
SIV	San Ignacio	139.53	123	PKP	PKPdf	13 33 23.3	-1.3
	comp=Z,0.7nm,0.6s,baz=248,slow=3.0,SNR=3.9						
PTGA	Pitinga	146.01	100	PKPbc	PKPab	13 33 37.7	+0.2
	comp=Z,2.7nm,0.8s,baz=156,slow=7.2,SNR=5.7						
BDFB	Brasilia	149.88	135	PKPbc	PKPbc	13 33 46.0	-1.3
	comp=Z,3.6nm,0.7s,baz=43,slow=1.9,SNR=5.7						

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*NOU **16** 13:14:09.4, 40°.53S×173°.31E, h185^{km}, MLv3.8, Cook Strait, New Zealand*

*NEIC **16** 13:14:09.7±1.5, 40°.53S±0°.06×173°.33E±0°.09, h187^{km}±6^{km}, mb4.4/5, Error ellipse: s-maj=10.2km s-min=9.1km az=117.0*

*WEL **16** 13:14:10.0, 41°S±2°×17°3E±°, h185^{km}±3^{km}, M3.6/35, MLv3.6/35, Error ellipse: s-maj=0.0km s-min=0.0km az=60.6*

ISC 16 13:14:09.1±0.7**, 40°.56S**±0°.04×**173°.33E**±0°.04**, h190**^{km}±5^{km}**, n174, σ0^{s}.97**/196**, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DUWZ	D'Urville Isla	0.51	119	P	Pn	13 14 35.9	+0.8
DUWZ				S	Sn	13 14 54.4	-0.8
NNZ	Nelson	0.66	177	Pn	Pn	13 14 36.4	+0.7
NNZ				Sn	Sn	13 14 54.9	-1.5
NNZ	Nelson	0.66	177	P	Pn	13 14 36.5	+0.9
NNZ				S	Sn	13 14 56.2	-0.2
QRZ	Quartz Range	0.67	246		Pn	13 14 36.5	+0.8
QRZ				Sn	Sn	13 14 54.4	-1.9
QRZ	Quartz Range	0.67	246	P	Pn	13 14 36.5	+0.8
QRZ				S	Sn	13 14 55.1	-1.3
TCW	Tory Channel	0.97	133	P	Pn	13 14 38.6	+1.1
TCW				S	Sn	13 14 58.3	-1.3
TUWZ	Tuamarina	0.99	152		Pn	13 14 38.6	+1.0
TUWZ	Tuamarina	0.99	152	P	Pn	13 14 38.7	+1.0
TUWZ				S	Sn	13 14 58.8	-1.1
NMEZ	Namu Road	1.22	20	P	Pn	13 14 39.8	+0.3
NMEZ				S	Sn	13 15 02.4	-0.5
BSWZ	Blackbirch Sta	1.23	161		Pn	13 14 40.5	+1.1
BSWZ				Sn	Sn	13 15 01.5	-1.7
BSWZ	Blackbirch Sta	1.23	161	P	Pn	13 14 40.7	+1.2
BSWZ				S	Sn	13 15 02.7	-0.6
KIW	Kapiti Island	1.24	105	P	Pn	13 14 40.3	+0.7
KIW				S	Sn	13 15 00.9	-2.4
THZ	Tophouse	1.25	195		Pn	13 14 40.6	+0.9
THZ				Sn	Sn	13 15 02.1	-1.5
THZ	Tophouse	1.25	195	P	Pn	13 14 40.8	+1.1
THZ				S	Sn	13 15 02.8	-0.8
SNZO	South Karori	1.28	126		Pn	13 14 40.7	+0.8
WEL	Wellington	1.31	124	P	Pn	13 14 41.0	+0.9
CMWZ	Cape Campbell	1.36	151		Pn	13 14 41.9	+1.3
CMWZ	Cape Campbell	1.36	151	P	Pn	13 14 42.2	+1.5
KHEZ	Kahui Hut	1.37	23	P	Pn	13 14 41.1	+0.2
PREZ	Palmer Road	1.37	28	P	Pn	13 14 41.1	+0.3
PREZ				S	Sn	13 15 04.7	-0.7
LREZ	Lake Rotokare	1.37	37	P	Pn	13 14 41.2	+0.5
LREZ				S	Sn	13 15 04.3	-0.9
NEZ	North Egmont	1.42	25	P	Pn	13 14 41.2	-0.1
NEZ				S	Sn	13 15 05.0	-1.1
OGWZ	Otaki Gorge	1.42	101	P	Pn	13 14 42.0	+0.9
OGWZ				S	Sn	13 15 04.7	-1.3
CAW	Cannon Point	1.43	113	P	Pn	13 14 42.0	+0.8
CAW				S	Sn	13 15 04.9	-1.3
BHW	Baring Head	1.44	127		Pn	13 14 41.7	+0.4
BHW	Baring Head	1.44	127	P	Pn	13 14 42.0	+0.7
BHW				S	Sn	13 15 04.4	-2.0
PKE	Pukeiti	1.45	21	P	Pn	13 14 41.6	+0.1
PKE				S	Sn	13 15 05.7	-0.9
WAZ	Wanganui	1.50	58	P	Pn	13 14 42.8	+0.9
WAZ				S	Sn	13 15 07.3	0.0
DREZ	Durham Road	1.52	26	P	Pn	13 14 42.4	+0.3
DREZ				S	Sn	13 15 06.7	-1.0
OHWZ	Ohakea	1.56	78	P	Pn	13 14 43.3	+0.9
OHWZ				S	Sn	13 15 07.8	-0.3
DSZ	Denniston Nort	1.65	224	P	Pn	13 14 44.2	+0.9
MHEZ	Mangahewa	1.67	28	P	Pn	13 14 43.9	+0.4
MSWZ	Moikau Station	1.69	121		Pn	13 14 44.1	+0.5
MSWZ	Moikau Station	1.69	121	P	Pn	13 14 44.3	+0.6
HOWZ	Holdsworth Sta	1.70	102	P	Pn	13 14 44.4	+0.7
MRZ	Mangatainoka R	1.72	94	P	Pn	13 14 44.5	+0.6
MTW	Mount Morrison	1.75	111	P	Pn	13 14 44.9	+0.6
PLWZ	Palliser	1.77	125		Pn	13 14 45.0	+0.5
PLWZ	Palliser	1.77	125	P	Pn	13 14 45.1	+0.5
PAWZ	Paruwai Farm	1.79	118	P	Pn	13 14 45.2	+0.6
VRZ	Vera Road	1.81	38	P	Pn	13 14 44.5	-0.3
KHZ	Kahutara	1.86	175		Pn	13 14 46.0	+0.7
KHZ	Kahutara	1.86	175	P	Pn	13 14 46.2	+0.9
POWZ	Post Office Ro	1.87	86	P	Pn	13 14 45.9	+0.5
TIWZ	Tintock	1.96	97	P	Pn	13 14 47.1	+0.7
TRWZ	Traveller	1.97	116	P	Pn	13 14 47.3	+0.7
PKVZ	Pokaka	2.00	51	P	Pn	13 14 46.9	0.0
PRWZ	Pori Road	2.01	91	P	Pn	13 14 47.9	+1.0
TMWZ	Te Maipa	2.02	107	P	Pn	13 14 47.7	+0.7
MTVZ	Mangateitei	2.02	55	P	Pn	13 14 47.2	+0.1
TSZ	Takapari Road	2.07	77	P	Pn	13 14 47.9	+0.3
TRVZ	Turoa	2.12	54	P	Pn	13 14 48.8	+0.5
WNVZ	Wahianoa	2.13	56	P	Pn	13 14 48.3	-0.2
WHVZ	Whangaehu Hut	2.15	54	P	Pn	13 14 48.8	+0.1
DVHZ	Dannevirke	2.18	84	P	Pn	13 14 49.1	+0.3
MOVZ	Moawhango	2.19	59	P	Pn	13 14 48.5	-0.5
TWVZ	Taurewa	2.20	48	P	Pn	13 14 48.7	-0.4
TUVZ	Tukino	2.20	55	P	Pn	13 14 49.1	-0.1
CPWZ	Castlepoint	2.21	100	P	Pn	13 14 50.2	+1.2
BFZ	Birch Farm	2.22	94		Pn	13 14 49.7	+0.5
BFZ	Birch Farm	2.22	94	P	Pn	13 14 49.8	+0.6
NGZ	Ngauruhoe	2.23	52	P	Pn	13 14 49.1	-0.3
WTVZ	West Tongariro	2.26	51	P	Pn	13 14 49.6	-0.2
OTVZ	Oturere	2.27	53	P	Pn	13 14 49.7	-0.3
PNHZ	Pukenui	2.29	75	P	Pn	13 14 50.1	+0.1
KRVZ	Karewarewa	2.30	51	P	Pn	13 14 50.0	-0.3
ETVZ	East Tongariro	2.32	53	P	Pn	13 14 50.4	0.0
TMVZ	Te Maari	2.33	53	P	Pn	13 14 50.5	0.0
BHHZ	Black Hill Sta	2.35	64	P	Pn	13 14 50.3	-0.5
HIZ	Hauiti	2.36	31	Pn	Pn	13 14 50.1	-0.7
HIZ	Hauiti	2.36	31	P	Pn	13 14 50.2	-0.5
LTZ	Lake Taylor	2.36	199		Pn	13 14 51.6	+0.8
LTZ	Lake Taylor	2.36	199	P	Pn	13 14 51.7	+0.9
ANWZ	Angora Road	2.40	89	P	Pn	13 14 51.9	+0.8
KATZ	Kakaramea	2.41	50	P	Pn	13 14 51.2	-0.3
GVZ	Greta Valley S	2.42	185	P	Pn	13 14 52.0	+0.7
WPHZ	Waipukurau	2.43	79	P	Pn	13 14 52.1	+0.5
KRHZ	Kereru	2.50	70	P	Pn	13 14 52.3	-0.1
RITZ	Rihia Road	2.51	52	P	Pn	13 14 52.5	0.0
RATZ	Rangitukua	2.53	49	P	Pn	13 14 52.8	0.0
PRHZ	Porangahau	2.54	84	P	Pn	13 14 53.5	+0.7
INZ	Inchbonnie	2.58	213	P	Pn	13 14 53.8	+0.6
WATZ	Wairara	2.62	46	P	Pn	13 14 53.7	0.0
KWHZ	Kaweka Forest	2.63	66	P	Pn	13 14 53.9	-0.1
AMCZ	Amberley	2.67	191	P	Pn	13 14 54.8	+0.6
HATZ	Hinemaiaia	2.70	53	P	Pn	13 14 53.9	-0.8
PXZ	Pawanui	2.75	80	P	Pn	13 14 55.6	+0.4
BKZ	Black Stump Fm	2.80	61		Pn	13 14 55.2	-0.6
BKZ	Black Stump Fm	2.80	61	P	Pn	13 14 55.3	-0.6
TLZ	Tolley Road	2.81	38	P	Pn	13 14 55.1	-0.9
MCHZ	McNeill Hill	2.82	68	P	Pn	13 14 56.3	+0.3
KAHZ	Kahuranaki	2.82	75	P	Pn	13 14 56.6	+0.5
KUTZ	Kaahu Road	2.83	44	P	Pn	13 14 56.1	-0.1
OXZ	Oxford	2.93	199		Pn	13 14 57.3	+0.1
OXZ	Oxford	2.93	199	P	Pn	13 14 57.5	+0.2
MRHZ	Matea Rd	2.94	55	P	Pn	13 14 56.4	-1.1
CKHZ	Cape Kidnapper	3.01	74	P	Pn	13 14 59.3	+1.0
NMHZ	Naumai	3.05	63	P	Pn	13 14 59.4	+0.5
ARHZ	Aropaoanui	3.10	67	P	Pn	13 14 59.4	0.0
OKCZ	Okains Bay	3.17	184	P	Pn	13 15 00.0	-0.1
WVZ	Waitaha Valley	3.17	217	P	Pn	13 15 00.4	+0.2
MQZ	McQueen's Vall	3.19	189	Pn	Pn	13 14 59.6	-0.7
MQZ	McQueen's Vall	3.19	189	P	Pn	13 14 59.6	-0.7
MHCZ	Mount Hutt	3.25	203	P	Pn	13 15 01.6	+0.5
RACZ	Rakaia	3.29	195	P	Pn	13 15 01.8	+0.3
RAHZ	Arahi	3.33	62	P	Pn	13 15 02.2	0.0
MUGZ	Murupara	3.38	53	P	Pn	13 15 03.6	+0.9
RTZ	Ruatahuna	3.42	57	P	Pn	13 15 00.7	-2.7
GCSZ	Gaunt Creek Bo	3.55	218	P	Pn	13 15 05.1	+0.3
WACZ	Wakanui South	3.56	198	P	Pn	13 15 05.2	+0.3
SNGZ	Shannon Statio	3.57	61	P	Pn	13 15 04.8	-0.3
RPZ	Rata Peaks	3.58	207	Pn	Pn	13 15 05.1	-0.1
RPZ	Rata Peaks	3.58	207	P	Pn	13 15 05.3	+0.1
AWAZ	Awhitu Peninsu	3.64	17	P	Pn	13 15 06.4	+0.5
KNZ	Kokohu	3.68	67	P	Pn	13 15 05.9	-0.5
URZ	Urewera	3.72	53	Pn	Pn	13 15 05.2	-1.7
URZ	Urewera	3.72	53	P	Pn	13 15 05.3	-1.7
MKAZ	Moumakai	3.73	23	P	Pn	13 15 07.2	0.0
ARCZ	Arundel	3.75	205	P	Pn	13 15 07.1	-0.1
RAGZ	Rawiri	3.77	58	P	Pn	13 15 07.6	-0.1
MHGZ	Mahia Peninsul	3.79	70	P	Pn	13 15 08.0	+0.1
ETAZ	East Tamaki Re	3.81	20	P	Pn	13 15 08.4	+0.3
PRGZ	Paritu Road	3.87	67	P	Pn	13 15 08.3	-0.6
RIGZ	Rimuhau	3.89	63	P	Pn	13 15 08.5	-0.6
RVAZ	Riverhead Bore	3.91	15	P	Pn	13 15 09.6	+0.3
MWZ	Matawai	3.94	57	P	Pn	13 15 08.3	-1.4
FOZ	Fox Glacier	3.96	220	Pn	Pn	13 15 09.5	-0.3
FOZ	Fox Glacier	3.96	220	P	Pn	13 15 09.6	-0.3
MBAZ	Motutapu North	3.98	18	P	Pn	13 15 11.1	+0.9
WIAZ	Waiheke Island	4.01	21	P	Pn	13 15 11.3	+0.6
TKGZ	Te Karaka	4.09	60	P	Pn	13 15 10.7	-0.8
TMZ	Timaru	4.19	203	P	Pn	13 15 13.1	+0.3
KUZ	Kuaotunu	4.24	27	P	Pn	13 15 13.3	-0.2
RUGZ	Raukumara Rang	4.25	54	P	Pn	13 15 11.8	-2.0
CNGZ	Carnagh Statio	4.30	63	P	Pn	13 15 14.1	-0.2
TWGZ	Tauwhareparae	4.32	58	P	Pn	13 15 14.5	-0.1
HAZ	Te Kaha	4.45	52	P	Pn	13 15 13.9	-2.2
LBZ	Lake Benmore	4.48	210	Pn	Pn	13 15 16.1	-0.4
LBZ	Lake Benmore	4.48	210	P	Pn	13 15 16.3	-0.2
PKGZ	Pakihiroa	4.55	56	P	Pn	13 15 16.2	-1.3
PUZ	Puketiti	4.56	59	P	Pn	13 15 16.2	-1.3
WMGZ	Waiomatatini S	4.80	57	P	Pn	13 15 19.0	-1.7
JCZ	Jackson Bay	4.87	222	P	Pn	13 15 21.1	-0.4
MXZ	Matakaoa Point	4.89	54	Pn	Pn	13 15 20.4	-1.5
MXZ	Matakaoa Point	4.89	54	P	Pn	13 15 20.4	-1.5
ODZ	Otahua Downs	4.90	203		Pn	13 15 21.8	0.0
ODZ	Otahua Downs	4.90	203	P	Pn	13 15 22.3	+0.5
WKZ	Wanaka	5.32	215	Pn	Pn	13 15 26.2	-1.1
WKZ	Wanaka	5.32	215	P	Pn	13 15 26.3	-1.0
OUZ	Omahuta	5.33	2	Pn	Pn	13 15 28.4	+0.9
OUZ	Omahuta	5.33	2	P	Pn	13 15 28.5	+0.9
EAZ	Earnscleugh	5.53	211	P	Pn	13 15 28.9	-1.0
HHSZ	Highcliff Hill	5.69	200	P	Pn	13 15 33.1	+1.1
MSZ	Milford Sound	5.73	222	P	Pn	13 15 32.0	-0.5
MLZ	Mavora Lakes	6.14	217	Pn	Pn	13 15 37.1	-0.8
MLZ	Mavora Lakes	6.14	217	P	Pn	13 15 37.3	-0.6
WHZ	Wether Hill Ro	6.62	215	Pn	Pn	13 15 42.8	-1.4
WHZ	Wether Hill Ro	6.62	215	P	Pn	13 15 42.8	-1.4
DCZ	Deep Cove	6.67	221	Pn	Pn	13 15 43.0	-1.8
SYZ	Scrubby Hill	6.71	206	P	Pn	13 15 45.2	0.0
APZ	The Paps	7.37	210	P	Pn	13 15 52.7	-1.2
PYZ	Puysegur Point	7.41	219	Pn	Pn	13 15 53.7	-0.8
CTZ	Chatham Island	8.12	116	P	Pn	13 16 07.7	+3.9
RAO	Raoul Island	13.36	35		P	13 17 14.6	+0.2
AS31	Alice Springs	37.05	285	P	P	13 21 02.0	+1.2
ASAR	Alice Springs	37.05	285	P	P	13 21 01.8	+0.9
WB2	Warramunga Arr	39.03	290	P	P	13 21 18.9	+1.5
WB0	Warramunga Arr	39.11	290	P	P	13 21 19.6	+1.5
WB0				IAmb	IAmb	13 21 52.9	
	comp=Z,31nm,1.8s						
QSPA	South Pole Qui	49.57	180	P	P	13 22 43.2	+2.8
QSPA				IAmb	IAmb	13 23 09.2	
	comp=Z,13nm,1.6s						
BELA	Belgrano 2	60.61	173	P	P	13 23 58.3	-0.7
VNA3	Neumayer Olymp	68.49	179	P	P	13 24 50.4	+0.2
VNA2	Neumayer--Watz	68.83	180	P	P	13 24 50.2	-2.1
VNA1	Neumayer--Stat	69.10	179	P	P	13 24 50.7	-3.1
HHC	Hu-ho-hao-te	98.54	317	*e*P	Pdif	13 27 29.8	+4.0

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*NEIC **16** 13:22:38.6±1.9, 2°.04N±0°.09×126°.68E±0°.07, h50^{km}±7^{km}, mb4.5/24, Error ellipse: s-maj=14.1km s-min=8.9km az=214.0*

*DJA **16** 13:22:39.8±0.9, 2°N±2°×12°7E±°, h34^{km}±15^{km}, M4.4/14, mB5.2/3, mb4.6/14, MLv4.3/12, Mw(mB)4.6/3*

*IDC **16** 13:22:41.5±2.1, 1°.83N×126°.48E, h67^{km}±19^{km}, mb3.7/8, mb1 3.9/11, mb1mx3.6/37, mbtmp4.0/11, MS3.2/3, Ms1 3.2/3, ms1mx2.7/44, Error ellipse: s-maj=29.7km s-min=10.8km az=78.0*

ISC 16 13:22:39.2±0.5**, 1°.97N**±0°.04×**126°.63E**±0°.05**, h47**^{km}**, n72, σ1^{s}.57**/79**, mb4.4**/21**, 1D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.40	148	Pn	Pn	13 23 02.2	0.0
TNTI	Ternate	1.40	148	P	Pn	13 23 02.6	+0.3
TNTI				S	Sn	13 23 21.1	+1.6
SGSI	Sangihe	2.03	327	P	Pn	13 23 09.6	-1.4
SGSI				S	Sn	13 23 36.2	+1.0
KMSI	Cibinong	2.99	242	P	Pn	13 23 24.6	+0.5
KMSI				S	Sn	13 24 01.0	+2.3
GTOI	Gorontalo	3.85	250	P	Pn	13 23 36.3	+0.3
GTOI				S	Sn	13 24 16.8	-3.2
SANI	Sanana	4.04	189	P	Pn	13 23 37.3	-1.3
SANI				S	Sn	13 24 23.9	-0.7
LUWI	Luwuk	4.88	232	Pn	Pn	13 23 51.3	+1.2
LUWI	Luwuk	4.88	232	P	Pn	13 23 50.1	0.0
LUWI				S	Sn	13 24 45.3	0.0
MRSI	Marisa	4.92	253	P	Pn	13 23 52.3	+1.7
NLAI	Namlea	5.19	175	P	Pn	13 23 54.6	+0.2
	0.2nm3µm28nm,0.6s						
KCP	Kidapawan	5.24	343	⇓*e*P	Pn	13 24 00.5	+5.4
SIJI	Sorong	5.42	121	P	Pn	13 23 59.9	+2.3
	1.7nm,0.3s,baz=343,slow=18,SNR=5.1						
SIJI				LR	LR	13 26 27.9	
	comp=Z,181nm,20.2s,baz=218,slow=41						
APSI	Ampana	5.74	240	P	Pn	13 24 03.3	+1.4
	0.5nm1µm114nm,0.7s						
TOLI2	Tolitoli	5.91	262	Pn	Pn	13 24 02.4	-1.8
FAKI	Fak Fak	7.42	131	Pn	Pn	13 24 24.4	-0.6
TTSI	Tana Toraja	8.43	234	P	Pn	13 24 38.2	-0.7
	44nm,0.8s						
MYLDM	Lahad Datu	8.72	292	Pn	Pn	13 24 44.1	+1.3
SPSI	Sidrap Palu	9.04	229	P	Pn	13 24 47.5	+0.3
	29nm,0.9s						
BNSI	Bone	9.08	226	P	Pn	13 24 45.3	-2.5
	22nm,0.8s						
BKSI	Bulukumba	9.73	222	P	Pn	13 24 56.0	-0.6
	17nm,0.6s						
KAPI	Kappang	9.76	225	P	Pn	13 24 57.9	+0.8
	2.4nm,0.3s,baz=41,slow=11,SNR=5.5						
KAPI	Kappang	9.76	225	Pn	Pn	13 24 57.5	+0.5
BSSI	Bau Bau, Buton	10.12	217	P	Pn	13 25 02.1	+0.1
	43nm,0.5s						
KKM	Kota Kinabalu	11.15	292	Pn	Pn	13 25 18.1	+1.9
SOEI	Soe	11.88	191	P	Pn	13 25 28.6	+2.4
	22nm,1.1s						
PLAI	Plampang	13.89	219	P	Pn	13 25 54.2	+0.7
	21nm,1.0s						
TWSI	Taliwang, Sumb	14.40	222	P	Pn	13 26 01.2	+0.8
	26nm,1.0s						
SBUM	Sibu	14.41	272		P	13 26 06.7	+0.4
JAGI	Jajag, Banyuwa	16.20	230	P	P	13 26 27.2	+1.1
JAGI				IAmb	IAmb	13 26 29.2	
	comp=Z,27nm,0.8s						
KSM	Kuching	16.32	269	P	P	13 26 27.6	0.0
KSM				IAmb	IAmb	13 26 38.0	
	comp=Z,20nm,1.1s						
FITZ	Fitzroy Crossi	19.96	183	P	P	13 27 06.9	-0.7
	comp=Z,0.2nm,0.3s,baz=16,slow=7.4,SNR=2.5						
FITZ	Fitzroy Crossi	19.96	183	P	P	13 27 07.3	-0.2
LEM	Lembang	20.89	245	LR	LR	13 36 46.8	
	comp=Z,70nm,20.6s,baz=72,slow=41						
YULB	Yu-li	21.92	347	P	P	13 27 26.3	-2.3
YULB				IAmb	IAmb	13 27 39.6	
	comp=Z,33nm,1.4s						
TPUB	Ta-pu	21.99	345	P	P	13 27 27.4	-2.1
TPUB				IAmb	IAmb	13 27 39.6	
	comp=Z,54nm,1.4s						
SSLB	Suanglung	22.38	346	P	P	13 27 31.6	-2.0
SSLB				IAmb	IAmb	13 27 38.5	
	comp=Z,11nm,0.9s						
WB0	Warramunga Arr	22.90	161	P	P	13 27 37.6	-1.6
WB0				IAmb	IAmb	13 27 45.3	
	comp=Z,10.0nm,0.8s						
WRAB	Tennant Creek	23.04	161	P	P	13 27 39.9	-0.7
WRAB				IAmb	IAmb	13 27 45.2	
	comp=Z,27nm,1.2s						
WRA	Warramunga Arr	23.05	161	P	P	13 27 39.4	-1.3
	comp=Z,5.2nm,0.6s,baz=339,slow=11,SNR=28						
WRA				PcP	PcP	13 31 29.0	0.0
	comp=Z,0.3nm,0.5s,baz=322,slow=2.2,SNR=1.7						
WRA				S	S	13 31 45.5	-2.7
	comp=Z,1.2nm,1.0s,baz=343,slow=18,SNR=2.6						
WRA	Warramunga Arr	23.05	161	P	P	13 27 39.7	-1.0
WB2	Warramunga Arr	23.05	161	P	P	13 27 39.9	-0.9
WB2				IAmb	IAmb	13 27 45.2	
	comp=Z,17nm,1.0s						
WR0	Warramunga Arr	23.13	161	P	P	13 27 40.3	-1.2
RABL	Rabaul	26.24	104	P	P	13 28 08.0	-2.2
AS31	Alice Springs	26.44	165	P	P	13 28 11.3	-0.6
ASAR	Alice Springs	26.44	165	P	P	13 28 11.6	-0.3
	comp=Z,1.3nm,0.4s,baz=344,slow=7.7,SNR=24						
ASAR				PcP	PcP	13 31 36.8	+0.3
	comp=Z,0.8nm,0.6s,baz=357,slow=1.7,SNR=7.0						
ASAR				S	S	13 32 42.0	-0.6
	comp=Z,0.4nm,1.0s,baz=344,slow=19,SNR=2.9						
NJ2	Nanjing	30.81	347	*e*P	P	13 28 51.3	+0.7
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
CMAR	Chiang Mai Arr	31.71	303	LR	LR	13 40 58.4	
	comp=Z,44nm,20.5s,baz=206,slow=35						
MORW	Morawa	32.48	197	P	P	13 29 04.9	-0.5
MORW				IAmb	IAmb	13 29 29.7	
	comp=Z,13nm,1.1s						
FORT	Forrest	32.59	178	P	P	13 29 04.9	-1.4
KSRS	Korea Array	35.34	2	P	P	13 29 33.4	+3.4
	comp=Z,0.9nm,0.6s,baz=173,slow=9.8,SNR=5.3						
BBOO	Buckleboo	35.72	166	P	P	13 29 33.1	-0.3
NWAO	Narrogin (SRO)	35.82	194	P	P	13 29 34.4	+0.1
MJAR	Matsushiro Arr	36.03	16	P	P	13 29 39.1	+3.0
	comp=Z,1.5nm,0.7s,baz=178,slow=10.0,SNR=4.4						
STKA	Stephens Creek	36.53	158	P	P	13 29 40.9	+0.5
	comp=Z,0.9nm,0.3s,baz=345,slow=6.7,SNR=9.1						
STKA	Stephens Creek	36.53	158	P	P	13 29 40.8	+0.5
LZH	Lanzhou	39.97	331	*e*P	P	13 30 09.8	+0.3
LZH				pP	pwP	13 30 24.3	+0.3
LZH				sP	sP	13 30 30.3	+3.4
LZH				pmax	pmax		
	comp=Z,16nm,1.1s						
ARMA	Armidale	40.07	145	P	P	13 30 11.7	+1.4
ARMA				IAmb	IAmb	13 30 22.4	
	comp=Z,21nm,1.5s						
HHC	Hu-ho-hao-te	41.04	343	*e*P	P	13 30 14.6	-3.5
HHC				pmax	pmax		
	comp=Z,5.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,57nm,5.3s						
SONM	Songino Array	48.93	342	P	P	13 31 20.2	-0.6
	comp=Z,0.5nm,0.4s,baz=132,slow=6.4,SNR=3.4						
WMQ	Urumqi	54.11	326	*e*P	P	13 32 00.1	+0.6
PEA0B	Petropavlovsk-	57.09	22	P	P	13 32 18.0	-2.7
PETK	Petropavlovsk-	57.09	22	P	P	13 32 20.9	+0.2
	comp=Z,1.7nm,0.9s,baz=153,slow=4.1,SNR=5.5						
PETK	Petropavlovsk-	57.09	22	P	P	13 32 17.7	-2.9
MK31	Makanchi Array	58.95	326	P	P	13 32 33.0	-0.8
MKAR	Makanchi Array	58.95	326	P	P	13 32 33.2	-0.6
	comp=Z,1.5nm,0.5s,baz=120,slow=7.4,SNR=21						
MKAR	Makanchi Array	58.95	326	P	P	13 32 33.1	-0.7
MAKZ	Makanchi	59.13	326	P	P	13 32 34.4	-0.7
MAKZ				IAmb	IAmb	13 32 38.6	
	comp=Z,4.7nm,1.3s						
KURK	Kurchatov	63.17	328	P	P	13 33 01.0	-1.3
KURK				IAmb	IAmb	13 33 05.0	
	comp=Z,3.9nm,0.4s						
KKAR	Karatay Array	64.45	318	P	P	13 33 10.1	-0.9
ABKAR	Akbulak array	73.45	321	P	P	13 34 06.2	-0.5
SNAA	Sanae	103.49	195	Pdiff	Pdif	13 36 30.7	-3.9
VNA2	Neumayer--Watz	105.10	194	Pdiff	Pdif	13 36 45.7	+4.0

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*ANF **16** 13:36:55.9±0.2, 37°.16N×117°.26W, h11^{km}±1^{km}, ML3.3/26, Error ellipse: s-maj=1.9km s-min=1.7km az=162.0*

*REN **16** 13:36:56.0±1.5, 37°.14N±0°.03×117°.26W±0°.02, h15^{km}±6^{km}, ML3.4/7, ML3.0/80(NEIC), Error ellipse: s-maj=4.4km s-min=2.6km az=197.0*

NEIC 16 13:36:55.7±1.4**, 37°.16N**±0°.02×**117°.25W**±0°.04**, h3**^{km}±6^{km}**, Error ellipse: s-maj=4.5km s-min=1.0km az=118.0, California-Nevada border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GRAC	Grapevine Rang	0.18	210	P	Pg	13 37 00.3	+1.1
	baz=30,SNR=168						
GRAC				S	Sg	13 37 03.5	+1.8
	baz=30						
FURC	Furnace Creek,	0.75	155	P	Pg	13 37 10.7	+0.5
	baz=335,SNR=183						
FURC				S	Sb	13 37 21.5	-0.7
	baz=335						
TIN	Tinemaha, Big	0.79	263	P	Pg	13 37 11.1	+0.3
	baz=83,SNR=151						
TIN				S	Sg	13 37 21.7	+0.6
	baz=83						
TPNV	Topopah Spring	0.83	104	P	Pg	13 37 12.1	+0.4
	baz=284,SNR=365						
TPNV	Topopah Spring	0.83	104	Pg	Pg	13 37 12.0	+0.4

TPH	Tonopah	0.92	2		Pg	13 37 13.5	+0.2
TPH				Sg	Sg	13 37 25.6	+0.3
TPH	Tonopah	0.92	2	IAML		13 37 26.4	
	comp=E,777nm,0.4s						
CWC	Cottonwood Cre	0.97	223	P	Pg	13 37 14.7	+0.3
	baz=43						
CWC				S	Sg	13 37 27.6	+0.6
	baz=43						
MPMC	Manual Prospec	1.11	190	P	Pg	13 37 16.9	-0.1
	baz=9.5,SNR=172						
MPMC				S	Sg	13 37 31.1	-0.3
	baz=9.5						
MPMC	Manual Prospec	1.11	190		Pg	13 37 17.2	+0.2
JRC2	Joshua Ridge	1.25	201		Pg	13 37 19.8	+0.1
WRVM	Rose V. Centra	1.25	204		Pb	13 37 19.9	-0.1
MLAC	Mammoth, Mammo	1.35	291	Pb	Pg	13 37 21.2	-0.3
	baz=111,SNR=78						
MLAC				S	Sb	13 37 39.6	+0.1
	baz=111						
CLC	China Lake	1.36	192		Pn	13 37 21.2	-0.5
TOW	Tower One	1.40	197		Pn	13 37 22.2	0.0
WNMM	Nine Mile Cany	1.41	202		Pn	13 37 22.0	-0.2
NV11	Mina Array Sit	1.46	331	Pn	Pn	13 37 22.3	-0.9
NV11				IAML		13 37 45.3	
	comp=E,174nm,0.6s						
NV11				IAML		13 37 45.4	
	comp=N,138nm,0.4s						
OMMB	Old Mammoth Mi	1.47	289		Pn	13 37 22.7	-0.6
OMMB				IAML		13 37 46.2	
	comp=N,109nm,1.0s						
LHV	Little Huntoon	1.48	318	Pn	Pn	13 37 22.8	-0.4
LHV				IAML		13 37 55.9	
	comp=E,291nm,0.7s						
SHOC	Shoshone, Teco	1.48	148	P	Pn	13 37 22.6	-0.7
	baz=328,SNR=178						
SHOC				S	Sb	13 37 42.8	-0.3
	baz=328						
SHOC	Shoshone, Teco	1.48	148		Sn	13 37 43.1	0.0
SRTC	Snort	1.51	195		Pn	13 37 23.7	0.0
NVAR	Mina Array Bea	1.52	327	Pn	Pn	13 37 22.8	-1.2
MDPB	Devils Postpil	1.53	289		Pn	13 37 23.6	-0.6
SPG2	Springville 2	1.54	232		Sb	13 37 45.0	+0.1
CCCA	Chr Cany lake	1.63	183		Pn	13 37 25.2	-0.1
WORM	Onyx Ranch	1.66	209		Pn	13 37 25.4	-0.3
WHFM	Hanning Flat	1.70	212		Pn	13 37 26.1	-0.3
LRMC	Laurel Mtn Rad	1.71	192	P	Pn	13 37 25.9	-0.6
	baz=11,SNR=26						
LRMC				Sb	Sg	13 37 50.5	-0.1
	baz=11						
LUL	Lundy Lake	1.77	301		Pn	13 37 27.1	-0.4
PRN	Pahroc Range	1.77	81	Pn	Pn	13 37 26.9	-0.5
R11A	Troy Canyon, C	1.78	47	Pn	Pn	13 37 26.8	-0.7
	baz=228						
R11A				Pb	Pb	13 37 28.9	-0.2
	baz=228,SNR=53						
R11A				Sb	Sg	13 37 52.6	-0.3
	baz=228						
R11A	Troy Canyon, C	1.78	47		Pn	13 37 26.8	-0.8
R11A				IAML		13 37 54.4	
	comp=N,94nm,0.3s						
R11A				IAML		13 37 55.8	
	comp=E,164nm,0.2s						
RYN	Ryan	1.78	326	Pn	Pn	13 37 26.7	-0.8
RYN				IAML		13 37 54.1	
	comp=N,198nm,0.3s						
ISA	Isabella, Lake	1.79	214	Pn	Pn	13 37 27.2	-0.3
	baz=33,SNR=21						
ISA	Isabella, Lake	1.79	214		Pn	13 37 26.9	-0.6
SHPR	Sheep Range	1.80	110	Pn	Pn	13 37 27.4	-0.4
SHPR				IAML		13 37 55.2	
	comp=N,224nm,0.3s						
SHPR				IAML		13 37 57.9	
	comp=E,193nm,0.5s						
GSC	Goldstone, Bar	1.88	169	Pn	Pn	13 37 28.4	-0.5
	baz=349,SNR=54						
GSC				Pg	Pg	13 37 31.5	-0.3
	baz=349						
GSC				Sb	Sg	13 37 55.9	-0.3
	baz=349						
GSC	Goldstone, Bar	1.88	169		Pn	13 37 28.0	-0.9
GSC				IAML		13 37 58.6	
	comp=N,182nm,0.5s						
GSC				IAML		13 38 00.0	
	comp=E,206nm,0.6s						
VOG	Valley Oaks Go	1.90	245	Sb	Sg	13 37 56.3	-0.5
	baz=64						
VES	Vestal, Richgr	1.97	229	Sb	Sg	13 37 58.5	-0.6
	baz=48						
WAKR	Walker	2.19	309		Pn	13 37 32.6	-0.7
HYS	Haystack Butte	2.30	186		Pn	13 37 34.6	0.0
BAKC	Calstate	2.34	220		Pg	13 37 42.6	+1.9
EDW2	Edwards Air Fo	2.35	195	P	Pn	13 37 35.1	-0.1
	baz=14,SNR=9.7						
EDW2				Sb	Sg	13 38 10.3	-0.8
	baz=14						
YERR	Yerington	2.41	320		Pn	13 37 35.6	-0.6
YERR				IAML		13 38 14.4	
	comp=N,98nm,0.8s						
YERR				IAML		13 38 15.1	
	comp=E,122nm,0.4s						
HEC	Hector,Ludlow	2.44	162	P	Pn	13 37 36.0	-0.5
	baz=342,SNR=10.0						
HEC				Sb	Sb	13 38 12.3	+1.6
	baz=342						
CMB	Columbia Colle	2.64	290		Pn	13 37 38.7	-0.5
PNTR	Pine Nut	2.67	317		Pn	13 37 39.2	-0.7
PNTR				IAML		13 38 26.0	
	comp=E,73nm,0.7s						
PNTR				IAML		13 38 28.7	
	comp=N,72nm,0.8s						
GMRC	Granite Mounta	2.69	151	Pb	Pb	13 37 44.7	+0.1
	baz=332,SNR=24						
GMRC				Sb	Sg	13 38 20.8	-1.5
	baz=332						
PAGB	Antelope Grade	2.80	240	Pn	Pn	13 37 41.8	+0.4
VCNR	Virginia City	2.85	319		Pn	13 37 41.7	-0.6
VCNR				IAML		13 38 30.4	
	comp=E,75nm,0.6s						
VCNR				IAML		13 38 35.8	
	comp=N,53nm,0.7s						
SMMC	Simmler	2.88	231	Sb	Sb	13 38 25.4	+2.0
	baz=50						
BBRC	Big Bear Solar	2.90	175	Sb	Sg	13 38 27.9	-1.0
	baz=355						
BFSC	Mount Baldy Ra	2.93	187	P	Pn	13 37 43.5	+0.2
	baz=6.2						
BFSC				Sb	Sg	13 38 28.5	-1.3
	baz=6.2						
MWC	Mount Wilson	3.00	193	Pn	Pn	13 37 44.7	+0.4
MWC				IAML		13 38 39.7	
	comp=N,35nm,1.1s						
PSUT	Pine Spring	3.02	62	Pn	Pn	13 37 44.2	-0.5
PAHR	Pah Rah Range	3.05	327	Pn	Pn	13 37 44.4	-0.5
PAHR				IAML		13 38 34.7	
	comp=E,32nm,0.7s						
PASC	Pasadena Art C	3.07	195	Pn	Pn	13 37 44.0	-1.1
CCUT	Cedar City	3.13	82		Pn	13 37 45.7	-0.4
CCUT				IAML		13 38 39.3	
	comp=E,26nm,0.6s						
CCUT				IAML		13 38 42.8	
	comp=N,40nm,0.6s						
NEE2	Needles Airpor	3.20	137	Pg	Pg	13 37 56.2	-0.8
	baz=319,SNR=31						
NEE2	Needles Airpor	3.20	137		Pg	13 37 56.3	-0.8
LCMT	Little Creek M	3.21	91		Pn	13 37 46.7	-0.4
LCMT				IAML		13 38 38.6	
	comp=N,59nm,0.7s						
LCMT				IAML		13 38 42.5	
	comp=E,26nm,0.6s						
BELC	Belle Mtn. Jos	3.31	162	P	Pn	13 37 48.4	-0.1
	baz=342,SNR=5.4						
BELC				Sb	Sg	13 38 40.0	-2.0
	baz=342						
SME	Santa Rosa Min	3.33	181		Pb	13 37 52.1	-3.2
SZCU	Shurtz Canyon	3.35	81		Pn	13 37 48.9	-0.3
SZCU				IAML		13 38 45.7	
	comp=E,51nm,0.3s						
SZCU				IAML		13 38 48.8	
	comp=N,34nm,0.7s						
IRM	Iron Mountain	3.45	150	P	Pn	13 37 50.5	+0.2
	baz=331,SNR=18						
POB	Polly Butte	3.47	175		Pn	13 37 51.4	+0.7
KNB	Kanab	3.55	91	Pn	Pn	13 37 52.2	+0.4
KNB				IAML		13 38 54.0	
	comp=E,43nm,0.7s						
MURC	Murrieta	3.55	179	P	Pn	13 37 52.2	+0.5
	baz=359						
PMD	Palm Desert	3.57	168		Pn	13 37 52.1	+0.1
PFO	Pinyon Flats O	3.59	169	P	Pn	13 37 52.5	+0.1
	baz=350						
PFO				S	Sn	13 38 34.9	-0.5
	baz=350						
PFO	Pinyon Flats O	3.59	169		Pn	13 37 52.3	-0.1
BEKR	Beckworth	3.64	319	Pn	Pn	13 37 53.4	+0.3
ELK	Elko	3.91	23	Pn	Pn	13 37 56.5	-0.5
ELK				IAML		13 39 01.6	
	comp=E,17nm,0.6s						
U15A	North Rim	4.05	99		Pn	13 37 59.4	+0.5
TCRU	Three Creeks R	4.07	68	Pn	Pn	13 37 59.5	+0.4
TCRU				IAML		13 39 13.4	
	comp=N,30nm,0.9s						
TCRU				IAML		13 39 17.2	
	comp=E,30nm,1.2s						
ORV	Oroville	4.11	307	Pn	Pn	13 37 59.6	+0.2
MTPU	Mount Pierson	4.12	76	Pn	Pn	13 37 60.0	+0.1
MTPU				IAML		13 39 08.1	
	comp=E,20nm,3.9s						
MTPU				IAML		13 39 16.7	
	comp=N,23nm,4.8s						
MVU	Marysvale	4.21	70		Pn	13 38 00.9	-0.1
MSU	Marysvale	4.24	70		Pn	13 38 01.9	+0.5
BAR	Barrett	4.49	174	Pn	Pn	13 38 04.9	+0.2
BAR				IAML		13 39 18.6	
	comp=E,13nm,0.8s						
BAR				IAML		13 40 03.4	
	comp=N,7.7nm,4.9s						
DUG	Dugway, Tooele	4.61	47	Pn	Pn	13 38 06.8	+0.3
DUG				IAML		13 39 24.3	
	comp=N,15nm,0.7s						
DUG				IAML		13 39 31.0	
	comp=N,12nm,1.3s						
WUAZ	Wupatki	5.02	107	Sb	Sb	13 39 30.7	+5.6
	baz=291						
ESJX	Sierra Juarez	5.25	168	Pn	Pn	13 38 15.9	+0.7
ESJX				IAML		13 39 31.4	
	comp=E,4.9nm,4.5s						
ESJX				IAML		13 41 22.1	
	comp=N,4.6nm,4.7s						
MOD	Modoc Plateau	5.29	335	Pn	Pn	13 38 17.2	+1.4
MOD				IAML		13 39 48.9	
	comp=E,12nm,4.8s						
MOD				IAML		13 40 18.8	
	comp=N,10nm,4.7s						

IDC 16 14:14:59.7±66.0**, 21.°23S**×**178.°90W, h0^{km}, mb3.6**/3**, mb1 3.8**/3**, mb1mx3.5**/27**, mbtmp3.6**/3**, Error ellipse: s-maj=1188.0km s-min=168.6km az=84.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	36.72	245	P	P	14 22 07.8	-0.9
	0.5nm,0.5s,baz=71,slow=9.6,SNR=2.9						
ASAR	Alice Springs	43.54	258	P	P	14 23 05.7	+0.1
	0.2nm,0.4s,baz=96,slow=7.2,SNR=14						
WRA	Warramunga Arr	43.67	263	P	P	14 23 06.7	+0.1
	0.5nm,0.5s,baz=96,slow=8.5,SNR=15						

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*IDC **16** 14:39:11.3±2.3, 51.°53N×179.°14E, h0^{km}, mb3.3/6, mb1 3.6/6, mb1mx3.5/39, mbtmp3.3/6, MS2.8/1, Ms1 2.8/1, ms1mx2.2/31, Error ellipse: s-maj=71.0km s-min=25.1km az=179.0*

*NEIC **16** 14:39:24±1.5, 51.°8N±0.°2×179.°2E±0.°1, h98^{km}±7^{km}, Error ellipse: s-maj=32.3km s-min=12.8km az=176.0*

*AEIC **16** 14:39:24±1.0, 51.°8N±0.°2×179.°2E±0.°1, h95^{km}±4^{km}, ML3.2, mb4.3/25(NEIC), Error ellipse: s-maj=28.2km s-min=10.7km az=182.0*

ISC 16 14:39:24.0±0.9**, 51.°8N**±0.°1×**179.°20E**±0.°06**, h100^{km}, n52, σ0.^{s}71**/50**, mb3.6**/11**, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CESW	Semis' Southwe	0.26	61		Pn	14 39 37.8	-0.6
CETU	Semis' Tuman	0.27	44		Pn	14 39 37.9	-0.6
CERB	Semis' Cerberu	0.31	60		Pn	14 39 38.4	-0.3
CEAP	Semis' Anvil P	0.33	46		Pn	14 39 38.4	-0.4
CERAA	Semis' Rag'd T	0.33	66		Pn	14 39 38.3	-0.5
AMKA	Amchitka	0.40	170		Pn	14 39 38.6	-0.6
LSSE	Little Sitkin	0.42	293		Pn	14 39 39.1	-0.2
LSPA	Little Sitkin	0.43	296		Pn	14 39 39.0	-0.3
TASE	Tanaga Southea	1.72	87		Pn	14 39 53.0	0.0
TAFP	Tanaga Falls P	1.75	85		Pn	14 39 53.2	-0.2
KIMD	Kanaga Island	2.22	89		Pn	14 39 59.4	0.0
KIRH	Kanaga Island	2.31	85		Pn	14 40 00.5	-0.1
ADK	Adak	2.56	86		Pn	14 40 03.6	-0.2
GSTD	Great Sitkin T	2.90	83		Pn	14 40 08.7	+0.2
GSTR	Great Sitkin T	2.96	82	Pn	Pn	14 40 08.9	-0.2
ATKA	Atka Island	4.11	81	Pn	Pn	14 40 24.1	-0.5
CNBA	Chernabura Isl	13.04	68	Pn	Pn	14 42 25.1	-0.1
OHAK	Old Harbor	16.82	60	Pn	Pn	14 43 11.9	-1.1
KDAK	Kodiak Island	17.27	59		Pn	14 43 17.9	-0.7
SKT	Skwentna	18.80	46	P	Pn	14 43 36.8	-0.2
SKT				IAmb	IAmb	14 44 02.8	
	comp=Z,16nm,1.5s						
PPLA	Purkeypile	18.85	43	P	Pn	14 43 37.0	-0.6
PPLA				IAmb	IAmb	14 43 41.2	
	comp=Z,25nm,1.3s						
SUA	Susitna One	19.00	48	P	P	14 43 38.3	+0.7
SUA				IAmb	IAmb	14 44 07.4	
	comp=Z,9.0nm,1.3s						
KTH	Kantishna Hill	19.64	42	P	Pn	14 43 46.1	-0.7
KTH				IAmb	IAmb	14 43 53.4	
	comp=Z,29nm,1.5s						
IMAR	Indian Mountai	19.71	33	P	Pn	14 43 46.2	-1.3
PMR	Palmer	19.78	48	P	P	14 43 47.0	+1.2
PMR				IAmb	IAmb	14 43 57.5	
	comp=Z,10nm,1.2s						
TRF	Thorofare Moun	19.86	42	P	P	14 43 48.0	+1.0
GHO	Glory Hole Cre	19.92	47	P	P	14 43 48.5	+0.9
KNK	Knik Glacier	20.04	49	P	P	14 43 49.6	+0.8
KNK				IAmb	IAmb	14 43 59.7	
	comp=Z,33nm,1.5s						
SML	Sawmill	20.20	48	P	P	14 43 51.3	+0.8
SML				IAmb	IAmb	14 43 55.0	
	comp=Z,29nm,1.4s						
SCM	Sheep Creek Mo	20.67	48	P	P	14 43 56.1	+0.5
WRH	Wood River Hil	21.14	40	P	P	14 44 01.9	+1.4
KLU	Klutina	21.25	49	P	P	14 44 02.5	+0.7
KLU				IAmb	IAmb	14 44 04.0	
	comp=Z,18nm,1.3s						
MDM	Murphy Dome	21.27	39	P	P	14 44 03.5	+1.5
CCB	Clear Creek Bu	21.32	40	P	P	14 44 03.4	+0.9
ILAR	Eielson Array	21.73	40	P	P	14 44 06.8	0.0
	comp=Z,0.2nm,0.3s,baz=239,slow=9.2,SNR=5.9						
N25K	Chitina, Valde	21.89	49	P	P	14 44 10.2	+1.5
N25K				IAmb	IAmb	14 44 20.6	
	comp=Z,24nm,1.3s						
GLB	Gilahina Butte	22.24	50	P	P	14 44 12.7	+0.4
GLB				IAmb	IAmb	14 44 18.3	
	comp=Z,22nm,1.3s						
TOLK	Toolik Lake Re	22.52	30	P	P	14 44 15.5	+0.3
BALM	Baldy	22.89	51	P	P	14 44 19.4	+0.4
BALM				IAmb	IAmb	14 44 37.2	
	comp=Z,19nm,1.3s						
BARN	Barnard Glacie	23.22	51	P	P	14 44 22.2	-0.1
CTGM	Chitina Glacie	23.37	51	P	P	14 44 23.7	+0.1
CTGM				IAmb	IAmb	14 44 27.1	
	comp=Z,22nm,1.4s						
TABL	Table Mountain	23.42	53	P	P	14 44 23.5	-0.6
BCAR	Beaver Creek A	23.45	46	P	P	14 44 24.9	+0.7
EGAK	Eagle	24.08	42	P	P	14 44 29.0	-0.8
ASAJ	Asahikawa	25.47	267	LR	LR	14 55 26.4	
	comp=Z,21nm,19.4s,baz=323,slow=38						
JTM	Tenmabayashi	28.24	262	P	P	14 45 08.3	+1.0
YKA	Yellowknife Ar	35.87	46	P	P	14 46 13.5	-0.2
	comp=Z,0.4nm,0.5s,baz=283,slow=7.2,SNR=8.9						
SONM	Songino Array	45.35	295	P	P	14 47 32.6	+0.5
	comp=Z,0.2nm,0.5s,baz=76,slow=6.1,SNR=2.4						
SONM	Songino Array	45.35	295	IAmb	IAmb	14 47 38.9	
	comp=Z,0.9nm,1.3s						
PDAR	Pinedale Array	47.37	71	P	P	14 47 47.7	-0.4
	comp=Z,0.6nm,0.6s,baz=323,slow=3.1,SNR=10						
MKAR	Makanchi Array	58.80	307	P	P	14 49 10.9	-0.7
	comp=Z,0.1nm,0.4s,baz=36,slow=5.7,SNR=1.7						
TXAR	Lajitas Array	59.82	80	P	P	14 49 19.3	+0.4
	comp=Z,0.2nm,0.4s,baz=284,slow=3.6,SNR=2.1						

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*IDC **16** 14:56:52.8±1.1, 55.°59N×162.°57E, h0^{km}, mb3.4/7, mb1 3.7/8, mb1mx3.5/41, mbtmp3.4/8, ML2.6/1, MS3.1/2, Ms1 3.1/2, ms1mx2.7/38, Error ellipse: s-maj=36.8km s-min=19.5km az=150.0*

*KRSC **16** 14:56:53.8±0.7, 55.°43N×162.°61E, h57^{km}±20^{km}, ML4.3*

*MOS **16** 14:56:55.4±0.6, 55.°47N×162.°62E, h39^{km}, mb3.9/1, Error ellipse: s-maj=8.2km s-min=5.1km az=73.6*

ISC 16 14:56:54.2±1.4**, 55.°49N**±0.°03×**162.°57E**±0.°03**, h13^{km}**±9^{km}**, n89, σ1.^{s}10**/132**, mb3.5**/7**, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.74	11	PN	Pn	14 57 09.1	-1.2
KBTR				S	Sn	14 57 20.8	-0.6
KBTR	Krutoberegovo	0.74	11	*e*P	Pn	14 57 09.1	-1.2
KBTR				*e*S	Sn	14 57 20.8	-0.6
KBG	Krutoberegovo	0.77	6	PN	Pn	14 57 09.7	-1.1
KBG				S	Sn	14 57 21.5	-0.8
KBG	Krutoberegovo	0.77	6	*e*P	Pn	14 57 09.7	-1.1
KBG				*e*S	Sn	14 57 21.5	-0.8
ZLN	Zelenaya	1.13	299	PN	Pg	14 57 16.0	0.0
ZLN	Zelenaya	1.13	299	*e*P	Pg	14 57 16.0	0.0
BZGR	Bezymyannyi-Gr	1.15	294	PN	Pb	14 57 15.9	-0.2
BZGR				S	Sb	14 57 31.5	+0.6
BZGR	Bezymyannyi-Gr	1.15	294	*e*P	Pb	14 57 15.9	-0.2
BZGR				*e*S	Sb	14 57 31.5	+0.6
SMKR	Semkarok	1.26	331	PN	Pb	14 57 17.5	-0.4
SMKR				S	Sg	14 57 34.8	0.0
SMKR	Semkarok	1.26	331	*e*P	Pb	14 57 17.5	-0.4
SMKR				*e*S	Sg	14 57 34.8	0.0
BZWR	Bezymyannyi-We	1.27	293	PN	Pn	14 57 17.4	-0.4
BZWR				S	Sn	14 57 34.8	+0.1
BZWR	Bezymyannyi-We	1.27	293	*e*P	Pn	14 57 17.4	-0.4
BZWR				*e*S	Sn	14 57 34.8	+0.1
TUMD	Tumrok D	1.27	258	*e*P	Pn	14 57 17.0	-0.7
TUMD				*e*S	Sb	14 57 33.9	-0.4
BDR	Baidarnaya	1.33	325	PN	Pb	14 57 18.7	-0.3
BDR				S	Sg	14 57 37.1	+0.1
BDR	Baidarnaya	1.33	325	*e*P	Pb	14 57 18.7	-0.3
BDR				*e*S	Sg	14 57 37.1	+0.1
KIRR	Kirishev	1.34	291	PN	Pn	14 57 18.9	+0.1
KIRR				S	Sn	14 57 36.7	+0.1
KIRR	Kirishev	1.34	291	*e*P	Pn	14 57 18.9	+0.1
KIRR				*e*S	Sn	14 57 36.7	+0.1
KRSR	Krestovskiy	1.34	304	PN	Pn	14 57 18.0	-0.8
KRSR				S	Sb	14 57 35.0	-1.5
KRSR	Krestovskiy	1.34	304	*e*P	Pn	14 57 18.0	-0.8
KRSR				*e*S	Sb	14 57 35.0	-1.5
KMNR	Kamenistaya	1.35	283	PN	Pn	14 57 19.0	+0.2
KMNR				S	Sb	14 57 37.2	+0.6
KMNR	Kamenistaya	1.35	283	*e*P	Pn	14 57 19.0	+0.2
KMNR				*e*S	Sb	14 57 37.2	+0.6
KZV	Kizimen	1.35	255	PN	Pn	14 57 18.4	-0.5
KZV				S	Sn	14 57 35.9	-0.9
KZV	Kizimen	1.35	255	*e*P	Pn	14 57 18.4	-0.5
KZV				*e*S	Sn	14 57 35.9	-0.9
KLY	Klyuchi	1.36	308	PN	Pn	14 57 17.5	-1.4
KLY				S	Sn	14 57 34.3	-2.4
KLY	Klyuchi	1.36	308	*e*P	Pn	14 57 17.5	-1.4
KLY				*e*S	Sn	14 57 34.3	-2.4
TUMR	Tumrok	1.40	263	PN	Pn	14 57 19.5	0.0
TUMR				S	Sn	14 57 38.2	+0.4
TUMR	Tumrok	1.40	263	*e*P	Pn	14 57 19.5	0.0
TUMR				*e*S	Sn	14 57 38.2	+0.4
SRKR	Sorokina	1.41	327	PN	Pb	14 57 19.8	-0.6
SRKR				S	Sb	14 57 38.3	0.0
SRKR	Sorokina	1.41	327	*e*P	Pb	14 57 19.8	-0.6
SRKR				*e*S	Sb	14 57 38.3	0.0
KOZ	Kozyrevsk	1.63	292	PN	Pn	14 57 23.2	+0.6
KOZ				S	Sb	14 57 45.4	+0.9
KOZ	Kozyrevsk	1.63	292	*e*P	Pn	14 57 23.2	+0.6
KOZ				*e*S	Sb	14 57 45.4	+0.9
SRDR	Sredinnyy	1.81	299	PN	Pb	14 57 26.3	-0.9
SRDR				S	Sb	14 57 49.4	-0.4
SRDR	Sredinnyy	1.81	299	*e*P	Pb	14 57 26.3	-0.9
SRDR				*e*S	Sb	14 57 49.4	-0.4
BKI	Bering	1.96	97	PN	Pn	14 57 27.5	+0.3
BKI				S	Sn	14 57 51.5	-0.1
BKI	Bering	1.96	97	*e*P	Pn	14 57 27.5	+0.3
BKI				*e*S	Sn	14 57 51.5	-0.1
ESO	Esso	2.23	283	PN	Pn	14 57 31.3	+0.4
ESO	Esso	2.23	283	*e*P	Pn	14 57 31.3	+0.4
KII	Karymskiy	2.32	232	PN	Pn	14 57 32.1	0.0
KII	Karymskiy	2.32	232	*e*P	Pn	14 57 32.1	0.0
SPN	Mys Shipunski	2.82	213	PN	Pn	14 57 37.8	-1.1
SPN				S	Sn	14 58 09.0	-3.7
SPN	Mys Shipunski	2.82	213	*e*P	Pn	14 57 37.8	-1.1
SPN				*e*S	Sn	14 58 09.0	-3.7
NLC	Nalytchevo	2.99	220	PN	Pn	14 57 41.3	0.0
NLC				S	Sn	14 58 15.5	-1.4
NLC	Nalytchevo	2.99	220	*e*P	Pn	14 57 41.3	0.0
NLC				*e*S	Sn	14 58 15.5	-1.4
SDLR	Sedlovina	3.09	226	PN	Pn	14 57 42.8	+0.1
SDLR				S	Sn	14 58 18.1	-1.4
SDLR	Sedlovina	3.09	226	*e*P	Pn	14 57 42.8	+0.1
SDLR				*e*S	Sn	14 58 18.1	-1.4
KRER	Koryakskii	3.12	227	PN	Pn	14 57 43.6	+0.3
KRER	Koryakskii	3.12	227	*e*P	Pn	14 57 43.6	+0.3
KRX	Arik	3.13	229	PN	Pn	14 57 43.5	+0.2
KRX	Arik	3.13	229	*e*P	Pn	14 57 43.5	+0.2
SMAR	Somma	3.13	226	PN	Pn	14 57 43.4	-0.1
SMAR	Somma	3.13	226	*e*P	Pn	14 57 43.4	-0.1
AVH	Avacha	3.16	227	PN	Pn	14 57 44.1	+0.4
AVH	Avacha	3.16	227	*e*P	Pn	14 57 44.1	+0.4
UGLR	Uglovaya	3.16	225	PN	Pn	14 57 43.9	+0.1
UGLR	Uglovaya	3.16	225	*e*P	Pn	14 57 43.9	+0.1
KOK	Koryaka	3.18	228	PN	Pn	14 57 44.3	+0.3
KOK	Koryaka	3.18	228	*e*P	Pn	14 57 44.3	+0.3
GNL	Ganaly	3.23	238	PN	Pn	14 57 45.3	+0.5
GNL	Ganaly	3.23	238	*e*P	Pn	14 57 45.3	+0.5
DALK	Dalny	3.33	224	PN	Pn	14 57 45.6	-0.3
DALK				S	Sn	14 58 22.8	-2.4
DALK	Dalny	3.33	224	*e*P	Pn	14 57 45.6	-0.3
DALK				*e*S	Sn	14 58 22.8	-2.4
PET	Petropavlovsk	3.37	225	PN	Pn	14 57 46.5	0.0
PET				S	Sn	14 58 24.0	-2.3
PET	Petropavlovsk	3.37	225	*e*P	Pn	14 57 46.5	0.0
PET				*e*S	Sn	14 58 24.0	-2.3
PETK	Petropavlovsk-	3.72	232	Pn	Pn	14 57 52.0	+0.7
	2.2nm,0.3s,baz=59,slow=14,SNR=79						
PETK				Sn	Sn	14 58 39.5	+4.7
	2.4nm,0.3s,baz=112,slow=23,SNR=1.9						
KRMR	Karymshinskiy	3.73	226	PN	Pn	14 57 52.5	+1.1
KRMR				S	Sn	14 58 34.9	-0.2
KRMR	Karymshinskiy	3.73	226	*e*P	Pn	14 57 52.5	+1.1
KRMR				*e*S	Sn	14 58 34.9	-0.2
OSSR	Ossora	3.78	4	PN	Pn	14 57 53.5	+1.4
OSSR	Ossora	3.78	4	*e*P	Pn	14 57 53.5	+1.4
RUS	Russkaya	3.88	220	PN	Pn	14 57 53.9	+0.3
RUS				S	Sn	14 58 37.5	-1.5
RUS	Russkaya	3.88	220	*e*P	Pn	14 57 53.9	+0.3
RUS				*e*S	Sn	14 58 37.5	-1.5
GRL	Gorelyy	3.96	224	PN	Pn	14 57 56.0	+1.3
GRL	Gorelyy	3.96	224	*e*P	Pn	14 57 56.0	+1.3
MTVR	Mutnovka	3.97	222	PN	Pn	14 57 55.4	+0.5
MTVR	Mutnovka	3.97	222	*e*P	Pn	14 57 55.4	+0.5
APC	Apacha	4.08	233	PN	Pn	14 57 57.8	+1.5
APC	Apacha	4.08	233	*e*P	Pn	14 57 57.8	+1.5
MJAR	Matsushiro Arr	25.18	231	LR	LR	15 12 37.4	
	comp=Z,31nm,19.7s,baz=290,slow=37						
ILAR	Eielson Array	26.12	49	P	P	15 02 25.9	-1.5
	0.5nm,0.8s,baz=266,slow=7.4,SNR=4.7						
ILAR	Eielson Array	26.12	49	P	P	15 02 26.0	-1.5
SONM	Songino Array	34.81	281	P	P	15 03 46.2	+1.7
	0.1nm,0.5s,baz=61,slow=10,SNR=1.6						
H11N2	WAKE ISLAND Hy	35.85	173	T	T	15 42 21.8	
	baz=356,slow=76,SNR=8.0						
H11N3	WAKE ISLAND Hy	35.86	173	T	T	15 42 26.6	
	baz=356,slow=76,SNR=16						
H11N1	WAKE ISLAND Hy	35.87	173	T	T	15 42 24.0	
	baz=356,slow=76,SNR=5.9						
YKA	Yellowknife Ar	40.43	45	P	P	15 04 32.2	+0.5
	0.2nm,0.7s,baz=302,slow=7.7,SNR=3.3						
MKAR	Makanchi Array	48.44	295	P	P	15 05 35.4	-0.5
	0.2nm,0.5s,baz=46,slow=7.3,SNR=4.3						
FINES	FINESS Array B	58.48	337	P	P	15 06 48.9	-0.5
	4.0nm,1.0s,baz=35,slow=7.0,SNR=6.4						
TXAR	Lajitas Array	68.40	70	P	P	15 07 57.3	+1.7

	0.2nm,0.5s,baz=335,slow=6.2,SNR=2.0						
MSVF	Nonsavu	74.11	165	LR	LR	15 44 57.1	
	comp=Z,16nm,18.3s,baz=311,slow=39						
ASAR	Alice Springs	82.55	206	P	P	15 09 16.7	+0.2
	0.3nm,0.7s,baz=23,slow=5.0,SNR=2.4						

IDC 16 15:09:17.1±999.0,52°.13N×32°.46E,h0^{km},Error ellipse: s-maj=431.0km s-min=117.2km az=34.0,Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I43RU	DUBNA INFRASON	5.37	29	*i*		15 40 20.0	
	baz=212,slow=339,SNR=0.5						
I31KZ	AKTYUBINSK INF	16.08	86	*i*		16 47 20.0	
	baz=284,slow=322,SNR=1.0						
I34MN	SONGINO INFRAS	45.86	65	*i*		19 54 40.0	
	baz=311,slow=324,SNR=0.9						

IDC 16 15:14:24.3±1.2,26°.61N×127°.08E,h0^{km},mb3.3/4, mb1 3.5/5,mb1mx3.2/59,mbtmp3.4/5,ML3.5/1,Error ellipse: s-maj=23.8km s-min=20.4km az=1.0
JMA 16 15:14:26.0,26°.33N×127°.11E,h2^{km},M3.6
JMA Felt II J1.
ISC 16 15:14:26.1±0.9,26°.41N±0°.06×127°.10E±0°.04,h17^{km}±7^{km}, n10,σ1.^{s}29/15,mb3.4/4,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAGN	Aguni-jima	0.22	36	P	Pg	15 14 31.9	+0.6
JAGN				S	Sg	15 14 36.0	+1.1
JKE	Kume jima 2	0.29	254	P	Pg	15 14 32.0	-0.4
JKE				S	Sg	15 14 36.0	-0.7
JJT3	Tamagusuku3	0.67	113	P	Pg	15 14 39.1	-0.2
JJT3				S	Sg	15 14 48.0	-0.2
JNTH	Nagotoyohara	0.84	82	P	Pg	15 14 41.6	-0.9
JNTH				S	Sg	15 14 52.1	-1.4
JOW	Kunigami	1.14	68	Pn	Pb	15 14 47.1	-0.2
	baz=238,slow=11						
JOW				Sn	Sb	15 15 01.8	0.0
	192nm,0.3s,baz=119,slow=26,SNR=3.5						
JNU	Nakatsue	7.46	25	Pn	Pn	15 16 13.8	-0.4
	0.8nm,0.3s,baz=221,slow=9.3,SNR=2.5						
SONM	Songino Array	26.86	328	P	P	15 20 04.8	-1.2
	0.7nm,0.9s,baz=145,slow=9.7,SNR=4.2						
MKAR	Makanchi Array	40.66	312	P	P	15 22 04.5	-0.9
	0.1nm,0.5s,baz=98,slow=9.3,SNR=1.5						
WRA	Warramunga Arr	46.61	171	P	P	15 22 55.6	+2.1
	0.5nm,1.0s,baz=353,slow=8.8,SNR=1.2						
ASAR	Alice Springs	50.21	172	P	P	15 23 23.8	+2.5
	0.5nm,1.1s,baz=354,slow=8.6,SNR=5.0						

IDC 16 15:26:04.7±9.5,18°.46S×179°.26E,h0^{km},mb3.8/3, mb1 4.0/3,mb1mx3.6/24,mbtmp3.8/3,Error ellipse: s-maj=175.5km s-min=33.6km az=58.0
NEIC 16 15:26:06.0±1.0,18°.1S±0°.3×179°.65E±0°.08,h41^{km}±22^{km}, mb4.1/6,Error ellipse: s-maj=47.6km s-min=4.1km az=192.0
ISC 16 15:26:05.6±4.9,18°.1S±0°.5×179°.7E±0°.4,h35^{km},n10, σ0.^{s}61/10,mb4.1/5,Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	1.58	284	Pn	Pn	15 26 31.0	-0.2
	0.3nm,0.3s,baz=246,slow=20,SNR=1.4						
MSVF				Sn	Sn	15 26 50.3	-0.1
	0.8nm,0.3s,baz=186,slow=22,SNR=5.0						
HIZ	Hauiti	20.74	191	P	P	15 30 43.3	+0.1
BKZ	Black Stump Fm	21.14	187	P	P	15 30 46.8	-0.8
BKZ				IAmb	IAmb	15 31 07.0	
	comp=Z,12nm,1.4s						
STKA	Stephens Creek	36.91	241	P	P	15 33 11.5	+0.2
	comp=Z,0.8nm,0.5s,baz=80,slow=11,SNR=3.3						
STKA	Stephens Creek	36.91	241	IAmb	IAmb	15 33 25.2	
	comp=Z,1.9nm,1.5s						
WB2	Warramunga Arr	42.77	260	P	P	15 34 00.2	+0.1
WB2				IAmb	IAmb	15 34 11.0	
	comp=Z,12nm,1.4s						
WRA	Warramunga Arr	42.78	260	P	P	15 33 59.8	-0.5
	comp=Z,0.4nm,0.8s,baz=96,slow=8.2,SNR=5.2						
AS31	Alice Springs	42.96	255	P	P	15 34 02.3	+0.7
ASAR	Alice Springs	42.96	255	P	P	15 34 02.6	+1.0
	comp=Z,2.6nm,0.7s,baz=89,slow=8.0,SNR=78						
ASAR	Alice Springs	42.96	255	P	P	15 34 02.1	+0.5

SOME 16 15:26:45.1,41°.18N×75°.12E,h5^{km}
NNC 16 15:26:45.5±1.2,41°.15N×75°.15E,h0^{km},mb4.1,mpv3.7, Error ellipse: s-maj=9.5km s-min=6.1km az=173.0
KRNET 16 15:26:46.1±0.1,41°.26N×75°.15E,h17^{km},mb3.4
ISC 16 15:26:45.7±1.2,41°.25N±0°.03×75°.15E±0°.02,h6^{km}±11^{km}, n78,σ1.^{s}51/120,26C-28D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARLS	Aral	0.86	315	⇓iP	Pb	15 27 02.3	-0.9
	baz=14						
ARLS				⇓iS	Sb	15 27 14.1	-1.0
	baz=14						
UCH	Uchtor	1.08	334	⇓iP	Pb	15 27 06.7	-0.4
	baz=34						
UCH				⇓iS	Sn	15 27 21.7	-1.6
	baz=34						
UCH	Uchtor	1.08	334	P	Pn	15 27 06.9	-0.9
	SNR=140						
ULHL	Ulahol	1.29	39	⇓iP	Pb	15 27 09.9	-0.5
	baz=39						
ULHL				⇓iS	Sg	15 27 27.3	+0.2
	baz=39						
AML	Almayashu	1.40	309	⇓iP	Pb	15 27 12.4	0.0
	baz=9.0						
AML				⇓iS	Sg	15 27 31.3	+0.7
	baz=9.0						
AML	Almayashu	1.40	309	P	Pg	15 27 12.8	+0.3
	SNR=31						
KBK	Karagaybulak	1.41	354	⇑iP	Pb	15 27 12.6	+0.1
	baz=54						
KBK				⇑iS	Sg	15 27 31.9	+0.9
	baz=54						
KBK	Karagaybulak	1.41	354	P	Pg	15 27 13.0	+0.3
	SNR=57						
AAK	Ala-Archa	1.47	341	⇓iP	Pb	15 27 13.5	+0.1
	baz=41						
AAK				⇓iS	Sg	15 27 33.7	+0.9
	baz=41						
AAK	Ala-Archa	1.47	341	P	Pg	15 27 13.9	+0.1
	SNR=40						
AAK	Ala-Archa	1.47	341	⇑Pn	Pg	15 27 13.6	-0.1
	18nm,0.3s						
AAK				⇑Lg	Lg	15 27 40.0	
	78nm,0.4s						
FRU1	Bishkek	1.60	346	⇑iP	Pb	15 27 15.8	+0.1
	baz=46						
FRU1				⇑iS	Sg	15 27 37.7	+0.5
	baz=46						
ARSB	Arslanbob	1.63	273	⇑iP	Pb	15 27 16.6	+0.3
	baz=73						
ARSB				⇑iS	Sg	15 27 39.0	+0.9
	baz=73						
TKM2	Tokmak 2	1.70	11	⇓iP	Pb	15 27 17.4	-0.1
	baz=11						
TKM2				⇓iS	Sg	15 27 40.6	+0.3
	baz=11						
TKM2	Tokmak 2	1.70	11	P	Pg	15 27 18.0	-0.3
	SNR=26						
TKM2	Tokmak 2	1.70	11	⇓Pn	Pb	15 27 17.6	+0.1
	35nm,0.5s						
TKM2				⇑Lg	Lg	15 27 44.6	
	90nm,0.5s						
EKS2	Erkin-Say	1.74	324	⇓iP	Pb	15 27 18.2	+0.1
	baz=24						
EKS2				⇓iS	Sg	15 27 41.7	+0.2
	baz=24						
EKS2	Erkin-Say	1.74	324	P	Pg	15 27 19.4	+0.4
	SNR=27						
KDJ	Kajisay	1.76	59	⇑iP	Pb	15 27 18.5	+0.1
	baz=60						
KDJ				⇑iS	Sg	15 27 42.2	0.0
	baz=60						
CHMS	Chumysh	1.77	351	⇓iP	Pb	15 27 18.7	+0.2
	baz=50						
CHMS				⇓iS	Sg	15 27 42.6	+0.1
	baz=50						
CHMS	Chumysh	1.77	351	P	Pg	15 27 19.3	-0.3
	SNR=112						
KST	Kastek	1.89	19	eP	Pg	15 27 23.3	+1.5
	53nm,0.3s						
KST				eS	Sg	15 27 51.0	+4.6
	234nm,0.5s						
KST	Kastek	1.89	19	Pg	Pg	15 27 23.1	+1.3
	53nm,0.3s						
KST				Lg	Lg	15 27 50.3	
	234nm,0.5s						
OHH	Osh	1.93	249	⇓iP	Pb	15 27 21.9	+0.6
	baz=49						
OHH				⇓iS	Sg	15 27 47.4	-0.4
	baz=49						
DGS	Degeres	2.04	13	eP	Pg	15 27 25.6	+0.8
	55nm,0.2s						
DGS				eS	Sg	15 27 54.9	+3.6
	186nm,0.7s						
DGS	Degeres	2.04	13	Pg	Pg	15 27 25.3	+0.5
	55nm,0.2s						
DGS				Lg	Lg	15 27 54.9	
	186nm,0.7s						
MRKS	Merke	2.06	317	eP	Pg	15 27 24.9	-0.4
	81nm,0.3s						
MRKS				eS	Sg	15 27 53.7	+1.6
	98nm,0.3s						
MRKS	Merke	2.06	317	Pg	Pg	15 27 24.8	-0.5
	81nm,0.3s						
MRKS				Lg	Lg	15 27 52.8	
	98nm,0.3s						
USP	Ospenovka	2.07	347	⇓iP	Pb	15 27 23.7	+0.1
	baz=47						
USP				⇓iS	Sg	15 27 50.6	-1.5
	baz=47						
USP	Ospenovka	2.07	347	P	Pg	15 27 24.7	-0.6
	SNR=172						
IZV	Izvestkoviy	2.09	31	eP	Pg	15 27 25.4	-0.3
	23nm,0.4s						
IZV				eS	Sg	15 27 54.7	+1.9
	74nm,0.4s						
IZV	Izvestkoviy	2.09	31	Pg	Pg	15 27 25.3	-0.4
	23nm,0.4s						
IZV				Lg	Lg	15 27 54.8	
	74nm,0.4s						
TNSS	Tian-Shan	2.23	36	eP	Pg	15 27 28.2	-0.2
	23nm,0.4s						
TNSS				eS	Sg	15 27 59.0	+1.7
	58nm,0.5s						
TNSS	Tian-Shan	2.23	36	Pg	Pg	15 27 28.2	-0.2
	23nm,0.4s						
TNSS				Lg	Lg	15 27 59.0	
	58nm,0.5s						
MNAS	Manas	2.33	303	⇑iP	Pb	15 27 27.4	-0.7
	baz=3.0						
MNAS				⇑iS	Sb	15 27 57.3	+0.2
	baz=3.0						
AAA	Alma-Ata	2.35	33	eP	Pg	15 27 30.5	-0.3
	16nm,0.1s						
AAA				eS	Sg	15 28 03.0	+1.7
	32nm,0.2s						
AAA	Alma-Ata	2.35	33	Pg	Pg	15 27 30.5	-0.3
	37nm,0.3s						
AAA				Lg	Lg	15 28 03.0	
	79nm,0.4s						
MDOK	Medeo	2.37	36	eP	Pg	15 27 30.8	-0.4
	25nm,0.5s						
MDOK				eS	Sg	15 28 03.2	+1.3
	47nm,0.7s						
MDOK	Medeo	2.37	36	⇑Pg	Pg	15 27 30.0	-1.2
	20nm,0.6s						
MDOK				⇑Lg	Lg	15 28 02.9	
	55nm,0.8s						
MDOK	Medeo	2.37	36	Pg	Pg	15 27 30.6	-0.5
	25nm,0.5s						
MDOK				Lg	Lg	15 28 03.1	
	47nm,0.7s						
KNDC	Almaty	2.38	34	⇑Pg	Pb	15 27 29.6	+0.5
	46nm,0.5s						
KNDC				⇑Lg	Lg	15 28 04.6	
	120nm,0.6s						
ANVS	Anan'yevo	2.42	50	⇑iP	Pb	15 27 28.7	-1.1
	baz=50						
ANVS				⇑iS	Sb	15 27 59.4	-0.5
	baz=50						
KOTS	Kotyrbulak	2.46	36	eP	Pg	15 27 32.0	-0.8
	92nm,0.5s						
KOTS				eS	Sg	15 28 05.7	+1.0
	307nm,0.7s						
KOTS	Kotyrbulak	2.46	36	Pg	Pg	15 27 32.0	-0.8
	92nm,0.5s						
KOTS				Lg	Lg	15 28 05.7	
	307nm,0.7s						
KRBS	Karabastau	2.47	9	eP	Pg	15 27 32.1	-0.9
	2.1nm,0.8s						
KRBS				eS	Sg	15 28 05.8	+0.7
	87nm,0.4s						
KRBS	Karabastau	2.47	9	Pg	Pg	15 27 32.1	-0.9
	2.1nm,0.8s						
KRBS				Lg	Lg	15 28 05.8	
	87nm,0.4s						
PRZ	Przheval'sk	2.72	62	⇑iP	Pb	15 27 32.9	-2.0
	baz=62						
PRZ				⇑iS	Sb	15 28 06.9	-1.7
	baz=62						
KUU	Kurty	2.78	18	eP	Pb	15 27 37.1	+1.3
	12nm,0.3s						
KUU				eS	Sg	15 28 14.5	-0.5
	142nm,0.6s						
KUU	Kurty	2.78	18	Pg	Pb	15 27 37.1	+1.3
	12nm,0.3s						
KUU				Lg	Lg	15 28 14.5	
	142nm,0.6s						
CHKK	Chushkaly	2.93	27	eP	Pg	15 27 40.1	-1.8
	10nm,0.6s						
CHKK				eS	Sg	15 28 19.8	-0.1
	49nm,0.3s						
CHKK	Chushkaly	2.93	27	Pg	Pg	15 27 40.1	-1.8
	10nm,0.6s						
CHKK				Lg	Lg	15 28 19.8	
	49nm,0.3s						
SATY	Saty	3.02	52	eP	Pb	15 27 41.6	+1.6
	9.2nm,0.5s						
SATY				eS	Sg	15 28 21.9	-0.8
	25nm,0.4s						
SATY	Saty	3.02	52	Pg	Pb	15 27 41.6	+1.6
	9.2nm,0.5s						
SATY				Lg	Lg	15 28 21.9	
	25nm,0.4s						
TRKS	Terek-Say	3.03	277	⇓iP	Pn	15 27 36.4	+2.1
	baz=75						
TRKS				⇓iS	Sb	15 28 13.3	-4.0
	baz=75						
ZHN	Zhinishke	3.10	51	eP	Pb	15 27 42.9	+1.5
	193nm,0.4s						
ZHN				eS	Sg	15 28 24.4	-0.9
	17nm,0.4s						
ZHN	Zhinishke	3.10	51	Pg	Pb	15 27 42.9	+1.5
	193nm,0.4s						
ZHN				Lg	Lg	15 28 24.4	
	17nm,0.4s						
DRK	Karamyk	3.11	236	⇑iP	Pn	15 27 38.0	+2.5
	baz=36						
DRK				⇑iS	Sb	15 28 16.7	-3.1
	baz=36						
KURS	Kuram	3.16	44	eP	Pb	15 27 43.6	+1.2
	9.8nm,0.7s						
KURS				eS	Sg	15 28 25.7	-1.5
	20nm,0.6s						
KURS	Kuram	3.16	44	Pg	Pb	15 27 43.6	+1.2
	9.8nm,0.7s						
KURS				Lg	Lg	15 28 25.7	
	20nm,0.6s						
KPKS	Kokpek	3.43	49	eP	Pg	15 27 49.2	-2.2
	15nm,0.3s						
KPKS				eS	Sg	15 28 35.6	-0.2
	47nm,0.3s						
UZB	Uzynbulak	3.45	55	eP	Pb	15 27 48.5	+1.4
	8.7nm,0.5s						
UZB				eS	Sg	15 28 34.6	-1.8
	32nm,0.3s						
UZB	Uzynbulak	3.45	55	Pg	Pb	15 27 48.5	+1.4
	8.7nm,0.5s						
UZB				Lg	Lg	15 28 34.6	
	32nm,0.3s						
BTK	Batken	3.50	251	⇓iP	Pn	15 27 43.7	+3.0
	baz=51						
BTK				⇓iS	Sn	15 28 25.3	+2.8
	baz=51						
ARXS	Arharly	3.56	33	eP	Pb	15 27 51.2	+2.2
	15nm,0.4s						
ARXS				eS	Sg	15 28 38.7	-1.2
	57nm,0.3s						
ARXS	Arharly	3.56	33	Pg	Pg	15 27 51.6	-2.2
	15nm,0.4s						
ARXS				Lg	Lg	15 28 38.7	
	57nm,0.3s						
MNBS	Baschi	3.71	39	eP	Pg	15 27 56.2	-0.5
	12nm,0.3s						
MNBS				eS	Sg	15 28 47.5	+2.8
	29nm,0.4s						
MNBS	Baschi	3.71	39	Pg	Pg	15 27 56.2	-0.5
	12nm,0.3s						
MNBS				Lg	Lg	15 28 47.5	
	29nm,0.4s						
PDGK	Podgornoye	3.83	56	Pg	Pb	15 27 55.5	+1.8
	2.7nm,0.6s						
PDGK				Lg	Lg	15 28 46.9	
	8.8nm,0.5s						
PDGK	Podgornoye	3.83	56	⇑Pn	Pb	15 27 50.8	-3.0
	0.8nm,0.4s						
PDGK				⇑Pg	Pg	15 28 00.8	+1.7
	6.4nm,0.8s						
PDGK				⇓Lg	Lg	15 28 46.5	
	23nm,0.7s						
BTLS	Baital	3.87	348	eP	Pb	15 27 56.3	+2.0
	7.0nm,0.2s						
BTLS				eS	Sg	15 28 47.3	-2.6
	22nm,0.6s						
BTLS	Baital	3.87	348	Pg	Pb	15 27 56.3	+2.0
	7.0nm,0.2s						
BTLS				Lg	Lg	15 28 47.3	
	22nm,0.6s						
KK31	Karatay Array	3.91	300	⇓Pg	Pg	15 27 57.9	-2.6
	2.7nm,0.5s,baz=122,slow=16,SNR=8.6						
KK31				⇓Lg	Lg	15 28 49.7	
	6.5nm,0.5s,baz=126,slow=28,SNR=5.3						
BRLS	Boroldlay	4.33	296	eP	Pg	15 28 06.4	-2.2
	5.0nm,0.2s						
BRLS				eS	Sg	15 29 04.8	+0.1
	10nm,0.4s						
DJR	Jarkent	4.60	46	eP	Pg	15 28 12.3	-1.5
	1.8nm,0.4s						
DJR				eS	Sg	15 29 14.8	+1.5
	8.9nm,0.5s						
DJR	Jarkent	4.60	46	Pg	Pg	15 28 12.3	-1.5
	3.7nm,0.3s						
DJR				Lg	Lg	15 29 14.8	
	14nm,0.6s						
KAPS	Kapalarasan	5.07	36	eP	Pg	15 28 19.4	-3.3
	4.9nm,0.5s						
KAPS				eS	Sg	15 29 26.8	-1.6
	14nm,0.6s						
KAPS	Kapalarasan	5.07	36	Pg	Pg	15 28 19.4	-3.3
	4.9nm,0.5s						
KAPS				Lg	Lg	15 29 26.8	
	14nm,0.6s						
MK31	Makanchi Array	7.56	41	⇑Lg	Lg	15 30 47.6	
	1.1nm,0.6s,baz=353,slow=71,SNR=4.1						

SNET 16 15:39:46.4±0.9,13°.16N×89°.15W,h62^{km}±5^{km},ML3.7
UCR 16 15:39:46.4±0.9,13°.16N×89°.14W,h62^{km}±5^{km},ML3.8
INET 16 15:39:47.3,13°.21N×89°.11W,h53^{km},MW3.3
ISC 16 15:39:47.0±2.0,13°.1N±0°.1×89°.15W±0°.05,h54^{km}±12^{km}, n40,σ0.^{s}58/61,2C-2D,El Salvador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LALI	Alcalda de L	0.41	335	eP	Pn	15 39 57.1	-0.5
LALI				eS	Sn	15 40 05.4	+0.2
LALI	Alcalda de L	0.41	335	eP	Pn	15 39 57.1	-0.5
LALI				eS	Sn	15 40 05.4	+0.2
LFRS	El Faro	0.51	9	i P	Pn	15 39 58.3	-0.5
LFRS	El Faro	0.51	9	i P	Pn	15 39 58.3	-0.5
COEG	Centro de Oper	0.56	27	i P	Pn	15 39 58.7	-0.6
COEG				eS	Sn	15 40 08.4	+0.1
COEG				eS	Sn	15 40 08.6	+0.2
COEG				IAML		15 40 10.5	
	comp=Z,2µm,0.2s						
COEG	Centro de Oper	0.56	27	i P	Pn	15 39 58.7	-0.6
COEG				eS	Sn	15 40 08.4	+0.1
COEG				eS	Sn	15 40 08.6	+0.2
COEG				IAML		15 40 10.5	
	comp=Z,2µm,0.2s						
SNET	Serv Nac Est T	0.57	352	eP	Pn	15 39 59.0	-0.5
SNET				eS	Sn	15 40 08.8	+0.2
SNET				IAML		15 40 10.1	
	comp=Z,3µm,0.2s						
SNET	Serv Nac Est T	0.57	352	eP	Pn	15 39 59.0	-0.5
SNET				eS	Sn	15 40 08.8	+0.2
SNET				IAML		15 40 10.1	
	comp=Z,3µm,0.2s						
OPAM	Oficina de Pla	0.59	355	eS	Sn	15 40 09.6	+0.7
OPAM				IAML		15 40 11.5	
	comp=Z,4µm,0.3s						
OPAM	Oficina de Pla	0.59	355	eS	Sn	15 40 09.6	+0.7
OPAM				IAML		15 40 11.5	
	comp=Z,4µm,0.3s						
JAYA	Jayaque - finc	0.61	331	⇑iP	Pn	15 39 59.4	-0.7
JAYA				eS	Sn	15 40 09.5	+0.1
JAYA				IAML		15 40 10.6	
	comp=Z,5µm,0.2s						
JAYA	Jayaque - finc	0.61	331	⇑iP	Pn	15 39 59.4	-0.7
JAYA				eS	Sn	15 40 09.5	+0.1
JAYA				IAML		15 40 10.6	
	comp=Z,5µm,0.2s						
LBRS	Las Brisas	0.63	9	eP	Pn	15 40 00.1	-0.1
LBRS	Las Brisas	0.63	9	eP	Pn	15 40 00.1	-0.1
BOQS	Boqueron	0.63	348	eP	Pn	15 40 00.0	-0.3
BOQS				eS	Sn	15 40 10.4	+0.5
BOQS	Boqueron	0.63	348	eP	Pn	15 40 00.0	-0.3
BOQS				eS	Sn	15 40 10.4	+0.5
LFU	La Fuente	0.63	3	eS	Sn	15 40 10.4	+0.7
LFU	La Fuente	0.63	3	eS	Sn	15 40 10.4	+0.7
CEDA	San Andres	0.72	341	eP	Pn	15 40 00.9	-0.4
CEDA				eS	Sn	15 40 12.2	+0.5
CEDA				IAML		15 40 19.6	
	comp=Z,2µm,0.1s						
CEDA	San Andres	0.72	341	eP	Pn	15 40 00.9	-0.4
CEDA				eS	Sn	15 40 12.2	+0.5
CEDA				IAML		15 40 19.6	
	comp=Z,2µm,0.1s						
TECA	Tecapa	0.73	59	eP	Pn	15 40 01.3	-0.2
TECA	Tecapa	0.73	59	eP	Pn	15 40 01.3	-0.2
PQSS	Presa 15 de Se	0.76	48	eP	Pn	15 40 01.4	-0.3
PQSS				eS	Sn	15 40 13.1	+0.6
CEVE	Cerro Verde	0.85	327	eP	Pn	15 40 02.6	-0.5
CEVE				eS	Sn	15 40 16.7	+1.9
CEVE				IAML		15 40 19.6	
	comp=Z,3µm,0.3s						
CEVE	Cerro Verde	0.85	327	eP	Pn	15 40 02.6	-0.5
CEVE				eS	Sn	15 40 16.7	+1.9
CEVE				IAML		15 40 19.6	
	comp=Z,3µm,0.3s						
TACO	Tacachico	0.87	347	eP	Pn	15 40 02.4	-0.9
TACO	Tacachico	0.87	347	eP	Pn	15 40 02.4	-0.9
PACA	Pacayal	0.87	66	eP	Pn	15 40 03.7	+0.4
PACA	Pacayal	0.87	66	eP	Pn	15 40 03.7	+0.4
JUCU	Jucuar¡n	0.89	81	eP	Pn	15 40 03.1	-0.3
JUCU	Jucuar¡n	0.89	81	eP	Pn	15 40 03.1	-0.3
RTR	El Retiro	0.92	328	eP	Pn	15 40 03.7	-0.2
RTR	El Retiro	0.92	328	eP	Pn	15 40 03.7	-0.2
LCND	La Caada	1.24	81	eP	Pn	15 40 07.6	-0.4
LCND				eS	Sn	15 40 24.0	+0.3
LCND	La Caada	1.24	81	eP	Pn	15 40 07.6	-0.4
LCND				eS	Sn	15 40 24.0	+0.3
CNCH	Conchagua	1.29	83	eP	Pn	15 40 08.3	-0.5
CNCH	Conchagua	1.29	83	eP	Pn	15 40 08.3	-0.5
MTO3	Montecristo	1.29	351	⇓iP	Pn	15 40 08.3	-0.7
MTO3				eS	Sn	15 40 25.2	-0.1
MTO3	Montecristo	1.29	351	⇓iP	Pn	15 40 08.3	-0.7
MTO3				eS	Sn	15 40 25.2	-0.1
ESQI	Esquipulas	1.45	352	eP	Pn	15 40 10.7	-0.3

IDC 16 15:42:11.1±1.8,2°.55N×124°.88E,h0^{km},mb3.6/3, mb1 3.8/3,mb1mx3.4/32,mbtmp3.6/3,Error ellipse: s-maj=183.6km s-min=23.2km az=64.0
DJA 16 15:42:34.8±0.7,2°N±4°×12°5E±°,h254^{km}±6^{km},M3.6/7, MLv3.6/7
ISC 16 15:42:36.8±1.3,2°.2N±0°.1×124°.64E±0°.08,h250^{km},n7,

σ1.^{s}62/9, mb3.5/3, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	**Ternate**	**3.05**	**117**	P	**Pn**	**15 43 29.6**	**-0.2**
TNTI				S	**S**	**15 44 09.6**	**-2.2**
MRSI	**Marisa**	**3.17**	**238**	P	**Pn**	**15 43 29.2**	**-1.9**
LUWI	**Luwuk**	**3.68**	**211**	P	**Pn**	**15 43 37.3**	**+0.4**
LUWI				S	**S**	**15 44 24.1**	**-0.5**
SANI	**Sanana**	**4.38**	**162**	P	**Pn**	**15 43 44.4**	**-0.8**
WRA	**Warramunga Arr** 0.6nm,0.3s,baz=336,slow=10,SNR=18	**23.93**	**157**	P	**P**	**15 47 29.4**	**+0.9**
ASAR	**Alice Springs** 0.3nm,0.4s,baz=339,slow=7.8,SNR=15	**27.20**	**161**	P	**P**	**15 48 00.1**	**+2.3**
MKAR	**Makanchi Array** 0.5nm,0.4s,baz=123,slow=7.3,SNR=23	**57.69**	**327**	P	**P**	**15 52 01.9**	**+0.5**

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*TAP **16** 15:59:09.7, 24.°79N×122.°44E, h93^{km}, ML3.4, D*

*JMA **16** 15:59:09.1±0.1, 24.°74N×122.°41E, h101^{km}±2^{km}, M2.0*

ISC 16 15:59:10.6±1.4**, 24.°76N**±0.°04×**122.°44E**±0.°02**, h89^{km}**±8^{km}**,**

n105, σ0.^{s}61/188**, 6D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao** baz=298	**0.48**	**302**	⇓ *i*P	**Pn**	**15 59 24.7**	**-0.3**
TWB1	baz=298			*i* S	**Sn**	**15 59 35.8**	**0.0**
TWC	**Suao** baz=251	**0.55**	**255**	*i* P	**Pn**	**15 59 25.2**	**-0.4**
TWC	baz=251			*i* S	**Sn**	**15 59 36.7**	**-0.1**
JYNG	**Yonagunijimaku**	**0.56**	**123**	P	**Pn**	**15 59 25.6**	**-0.1**
JYNG				*e*S	**Sn**	**15 59 37.7**	**+0.8**
TIPB	**Shuangxi** baz=288	**0.59**	**291**	⇓ *i*P	**Pn**	**15 59 25.8**	**-0.3**
TIPB	baz=288			*i* S	**Sn**	**15 59 37.3**	**-0.2**
YOJ	**Yonaguni jima** baz=121	**0.60**	**119**	P	**Pn**	**15 59 26.0**	**-0.1**
YOJ	baz=121			S	**Sn**	**15 59 38.7**	**+1.1**
YOJ	**Yonaguni jima**	**0.60**	**119**	P	**Pn**	**15 59 25.8**	**-0.3**
YOJ				S	**Sn**	**15 59 38.5**	**+0.9**
NDS	**Dongshan** baz=256	**0.67**	**259**	P	**Pn**	**15 59 26.6**	**0.0**
NDS	baz=256			S	**Sn**	**15 59 38.9**	**+0.2**
NWF	**Wu-fen Shan** baz=295	**0.67**	**298**	*i* P	**Pn**	**15 59 26.6**	**-0.3**
NWF	baz=295			S	**Sn**	**15 59 39.0**	**+0.1**
WFSB	**Wu-fen Shan** baz=295	**0.67**	**298**	⇓P	**Pn**	**15 59 26.5**	**-0.2**
WFSB	baz=295			S	**Sn**	**15 59 39.1**	**+0.3**
EWUT	**Wuta** baz=240	**0.67**	**243**	P	**Pn**	**15 59 26.7**	**0.0**
EWUT	baz=240			S	**Sn**	**15 59 39.7**	**+1.0**
TWE	**Neicheng** baz=264	**0.70**	**267**	⇓ *i*P	**Pn**	**15 59 26.8**	**-0.1**
TWE	baz=264			*i* S	**Sn**	**15 59 39.6**	**+0.4**
ENA	**Nanau** baz=240	**0.71**	**243**	*i* P	**Pn**	**15 59 27.3**	**+0.2**
ENA	baz=240			*i* S	**Sn**	**15 59 40.5**	**+1.0**
TNOU	**National Taiwa** baz=300	**0.72**	**303**	P	**Pn**	**15 59 26.4**	**-0.7**
ENTT	**Nioudou** baz=259	**0.80**	**262**	*i* P	**Pn**	**15 59 28.2**	**+0.1**
ENTT	baz=259			S	**Sn**	**15 59 41.2**	**+0.1**
TWA	**Mucha** baz=283	**0.80**	**286**	⇓ *i*P	**Pn**	**15 59 27.6**	**-0.5**
TWA	baz=283			*i* S	**Sn**	**15 59 41.0**	**-0.2**
NWLT	**Wulai** baz=269	**0.85**	**271**	*e*P	**Pn**	**15 59 28.1**	**-0.4**
NWLT	baz=269			*e*S	**Sn**	**15 59 41.8**	**-0.2**
NHDH	**Xindian Distri** baz=282	**0.85**	**284**	*e*P	**Pn**	**15 59 27.9**	**-0.6**
NHDH	baz=282			*e*S	**Sn**	**15 59 41.6**	**-0.4**
NDT	**Datong Townshi** baz=257	**0.85**	**260**	*i* P	**Pn**	**15 59 29.0**	**+0.4**
NDT	baz=257			*i* S	**Sn**	**15 59 42.9**	**+0.8**
YM01	**YM01** baz=294	**0.88**	**296**	P	**Pn**	**15 59 27.5**	**-1.4**
YM01	baz=294			S	**Sn**	**15 59 41.6**	**-0.9**
YM08	**YM08** baz=297	**0.88**	**299**	P	**Pn**	**15 59 28.1**	**-0.7**
YM08	baz=297			S	**Sn**	**15 59 42.2**	**-0.3**
YM11	**YM11** baz=295	**0.88**	**298**	*e*P	**Pn**	**15 59 28.3**	**-0.6**
YM11	baz=295			*e*S	**Sn**	**15 59 42.5**	**-0.2**
YM05	**YM05** baz=295	**0.89**	**297**	P	**Pn**	**15 59 28.4**	**-0.7**
YM05	baz=295			S	**Sn**	**15 59 43.1**	**+0.3**
YM10	**YM10** baz=294	**0.89**	**297**	*i* P	**Pn**	**15 59 28.5**	**-0.5**
YM10	baz=294			S	**Sn**	**15 59 42.7**	**-0.1**
TAP	**Taipei** baz=286	**0.89**	**289**	S	**Sn**	**15 59 42.9**	**+0.2**
YM04	**YM04** baz=294	**0.91**	**296**	P	**Pn**	**15 59 28.6**	**-0.6**
YM04	baz=294			S	**Sn**	**15 59 42.8**	**-0.3**
YM03	**YM03** baz=295	**0.91**	**297**	P	**Pn**	**15 59 29.9**	**+0.5**
YM03	baz=295			*e*S	**Sn**	**15 59 44.0**	**+0.6**
TWY	**Chenhua** baz=302	**0.92**	**304**	*i* P	**Pn**	**15 59 28.8**	**-0.5**
TWY	baz=302			*i* S	**Sn**	**15 59 43.5**	**+0.2**
PCYT	**Pengchaiyu** baz=338	**0.93**	**339**	*i* P	**Pn**	**15 59 28.9**	**-0.5**
PCYT	baz=338			S	**Sn**	**15 59 43.7**	**+0.2**
ANP	**Anpu** baz=295	**0.93**	**297**	*i* P	**Pn**	**15 59 29.2**	**-0.3**
ANP	baz=295			*i* S	**Sn**	**15 59 43.3**	**-0.4**
BACT	**New Taipei Cit** baz=283	**0.93**	**285**	*e*S	**Sn**	**15 59 44.0**	**+0.4**
NACB	**Ninganchiao** baz=231	**0.96**	**233**	P	**Pn**	**15 59 29.2**	**-0.6**
NACB	baz=231			S	**Sn**	**15 59 44.7**	**+0.6**
YHNB	**Yeheng** baz=263	**0.97**	**265**	P	**Pn**	**15 59 29.9**	**0.0**
YHNB	baz=263			S	**Sn**	**15 59 44.6**	**+0.2**
NSK	**Sanguang** baz=263	**0.98**	**265**	*i* P	**Pn**	**15 59 29.9**	**-0.2**
NSK	baz=263			*i* S	**Sn**	**15 59 44.6**	**-0.1**
NTST	**Danshui** baz=292	**0.98**	**295**	*e*P	**Pn**	**15 59 29.6**	**-0.4**
NTST	baz=292			*e*S	**Sn**	**15 59 44.5**	**-0.1**
TWS1	**Kuangyinshan** baz=288	**0.98**	**290**	⇓ *i*P	**Pn**	**15 59 29.7**	**-0.3**
TWS1	baz=288			*i* S	**Sn**	**15 59 44.5**	**-0.1**
NNSB	**Datong** baz=249	**1.01**	**251**	P	**Pn**	**15 59 30.4**	**-0.2**
NNSB	baz=249			S	**Sn**	**15 59 45.4**	**0.0**
NNSH	**Datong** baz=249	**1.01**	**251**	*e*P	**Pn**	**15 59 30.8**	**+0.2**
NNSH	baz=249			*i* S	**Sn**	**15 59 45.9**	**+0.5**
NNS	**Nan Shan** baz=250	**1.02**	**252**	*i* P	**Pn**	**15 59 30.4**	**-0.2**
NNS	baz=250			*i* S	**Sn**	**15 59 45.5**	**-0.1**
TWD	**Chiawan** baz=227	**1.02**	**229**	*i* P	**Pn**	**15 59 30.2**	**-0.3**
TWD	baz=227			*i* S	**Sn**	**15 59 45.4**	**+0.1**
ETLH	**Xiulin Townshi** baz=236	**1.03**	**238**	P	**Pn**	**15 59 30.2**	**-0.4**
ETLH	baz=236			S	**Sn**	**15 59 45.6**	**-0.1**
NCUH	**Zhongli** baz=279	**1.15**	**281**	*e*S	**Sn**	**15 59 48.5**	**+0.4**
FUSS	**Fushou** baz=243	**1.20**	**245**	*e*P	**Pn**	**15 59 32.9**	**+0.1**
FUSS	baz=243			*e*S	**Sn**	**15 59 49.2**	**-0.3**
NJD	**Zhudong** baz=267	**1.22**	**269**	S	**Sn**	**15 59 50.3**	**+0.6**
WHF	**Hehuan Shan** baz=238	**1.23**	**240**	P	**Pn**	**15 59 33.0**	**-0.3**
WHF	baz=238			S	**Sn**	**15 59 49.8**	**-0.6**
TWT	**Tachien** baz=245	**1.25**	**247**	*e*P	**Pn**	**15 59 33.5**	**+0.1**
TWT	baz=245			*i* S	**Sn**	**15 59 50.9**	**+0.4**
IRIF	**Iriomote-Funau**	**1.25**	**109**	*e*S	**Sn**	**15 59 50.3**	**+0.1**
TDCB	**Techi** baz=245	**1.27**	**247**	*e*P	**Pn**	**15 59 34.3**	**+0.7**
TDCB	baz=245			S	**Sn**	**15 59 51.1**	**+0.3**
NHW	**Xinwu Township** baz=279	**1.28**	**281**	S	**Sn**	**15 59 51.6**	**+0.6**
HSN1	**Hsinchu** baz=269	**1.29**	**271**	S	**Sn**	**15 59 51.4**	**+0.3**
LIOB	**Emei** baz=263	**1.29**	**265**	P	**Pn**	**15 59 33.9**	**+0.1**
LIOB	baz=263			*e*S	**Sn**	**15 59 51.4**	**+0.1**
NSTT	**Nanjuang** baz=263	**1.31**	**265**	P	**Pn**	**15 59 34.0**	**+0.1**
NSTT	baz=263			*i* S	**Sn**	**15 59 51.4**	**-0.2**
ESL	**Shilin** baz=223	**1.31**	**224**	*i* P	**Pn**	**15 59 32.7**	**-1.3**
ESL	baz=223			S	**Sn**	**15 59 50.9**	**-0.6**
SBCB	**Hsinchu** baz=270	**1.32**	**272**	*e*S	**Sn**	**15 59 52.0**	**+0.3**
HSN	**Hsinchu** baz=271	**1.33**	**272**	S	**Sn**	**15 59 51.1**	**-0.9**
CHGB	**Renai** baz=237	**1.34**	**239**	P	**Pn**	**15 59 34.6**	**0.0**
CHGB	baz=237			S	**Sn**	**15 59 52.6**	**0.0**
EGFH	**Guangfu** baz=219	**1.42**	**220**	P	**Pn**	**15 59 34.6**	**-0.7**
EGFH	baz=219			S	**Sn**	**15 59 54.0**	**-0.1**
HATJ	**Hateruma jima**	**1.43**	**119**	*e*S	**Sn**	**15 59 55.5**	**+1.3**
WHP	**Taichung City** baz=249	**1.44**	**251**	P	**Pn**	**15 59 36.3**	**+0.7**
WHP	baz=249			S	**Sn**	**15 59 54.8**	**+0.3**
NMLH	**Miaoli** baz=260	**1.51**	**262**	*e*P	**Pn**	**15 59 36.6**	**+0.1**
NMLH	baz=260			*e*S	**Sn**	**15 59 56.3**	**+0.3**
JKRS	**Kuro-shima**	**1.52**	**110**	P	**Pn**	**15 59 36.1**	**-0.5**
JKRS				*e*S	**Sn**	**15 59 57.2**	**+0.9**
WPL	**Puli Township** baz=240	**1.54**	**241**	*e*S	**Sn**	**15 59 56.8**	**+0.1**
VWDT	**VWDT** baz=229	**1.55**	**230**	P	**Pn**	**15 59 36.8**	**-0.1**
VWDT	baz=229			S	**Sn**	**15 59 56.1**	**-0.7**
DPDB	**Guoxing** baz=241	**1.55**	**243**	P	**Pn**	**15 59 37.7**	**+0.6**
DPDB	baz=241			S	**Sn**	**15 59 57.6**	**+0.6**
WCS	**Beigang Elemen** baz=242	**1.55**	**244**	*e*P	**Pn**	**15 59 37.7**	**+0.7**
WCS	baz=242			S	**Sn**	**15 59 58.3**	**+1.3**
NSY	**Sanyi** baz=256	**1.56**	**258**	S	**Sn**	**15 59 57.4**	**+0.2**
HGSD	**Ruisui** baz=215	**1.56**	**216**	P	**Pn**	**15 59 36.0**	**-1.2**
HGSD	baz=215			S	**Sn**	**15 59 57.9**	**+0.7**
TWQ1	**Liyutan** baz=253	**1.57**	**255**	P	**Pn**	**15 59 37.5**	**+0.3**
TWQ1	baz=253			S	**Sn**	**15 59 57.2**	**-0.1**
JIJ	**Ishigaki jima**	**1.60**	**104**	P	**Pn**	**15 59 37.1**	**-0.5**
JIJ				S	**Sn**	**15 59 58.0**	**-0.1**
EHY	**Hungye** baz=218	**1.61**	**219**	P	**Pn**	**15 59 36.4**	**-1.3**
EHY	baz=218			*e*S	**Sn**	**15 59 57.2**	**-1.1**
SMLT	**Sun Moon Lake** baz=237	**1.65**	**238**	*e*P	**Pn**	**15 59 39.4**	**+1.1**
SMLT	baz=237			S	**Sn**	**15 59 59.1**	**-0.2**
SSLB	**Suanglung** baz=233	**1.66**	**235**	P	**Pn**	**15 59 39.1**	**+0.7**
SSLB	baz=233			*e*S	**Sn**	**16 00 00.0**	**+0.5**
TYC	**Yuchr** baz=238	**1.67**	**240**	P	**Pn**	**15 59 39.4**	**+0.9**
TYC	baz=238			*e*S	**Sn**	**15 59 59.8**	**+0.2**
YULB	**Yu-li** baz=216	**1.71**	**218**	*e*P	**Pn**	**15 59 37.5**	**-1.6**
JISG	**Ishigakijimahi**	**1.71**	**95**	P	**Pn**	**15 59 38.7**	**-0.4**
JISG				*e*S	**Sn**	**16 00 01.2**	**+0.5**
EYUL	**Yuli** baz=215	**1.74**	**216**	*e*P	**Pn**	**15 59 39.0**	**-0.4**
EYUL	baz=215			*e*S	**Sn**	**16 00 01.5**	**+0.4**
TWF1	**Yuli** baz=215	**1.74**	**217**	*e*P	**Pn**	**15 59 38.1**	**-1.4**
WHYT	**Xinyi Township** baz=233	**1.79**	**234**	*e*P	**Pn**	**15 59 41.0**	**+0.9**
WHYT	baz=233			*e*S	**Sn**	**16 00 04.1**	**+1.7**
WJS	**Zhushan** baz=238	**1.81**	**239**	*e*P	**Pn**	**15 59 41.2**	**+0.8**
WJS	baz=238			*e*S	**Sn**	**16 00 03.3**	**+0.3**
WNT	**Mingjian** baz=240	**1.82**	**242**	*e*S	**Sn**	**16 00 03.7**	**+0.6**
FULB	**Fuli** baz=213	**1.87**	**214**	P	**Pn**	**15 59 40.9**	**-0.2**
FULB	baz=213			*e*S	**Sn**	**16 00 04.9**	**+0.5**
CHKT	**Chengkung** baz=210	**1.92**	**211**	*e*P	**Pn**	**15 59 42.5**	**+0.7**
CHKT	baz=210			*e*S	**Sn**	**16 00 04.1**	**-1.3**
ALS	**Alishan** baz=229	**1.94**	**230**	P	**Pn**	**15 59 42.9**	**+0.6**
ALS	baz=229			*e*S	**Sn**	**16 00 07.0**	**+0.6**
CHN5	**Tsauling** baz=233	**1.98**	**235**	P	**Pn**	**15 59 43.3**	**+0.7**
CHN5	baz=233			*e*S	**Sn**	**16 00 07.2**	**+0.2**
ELDTW	**Lidau** baz=219	**2.03**	**220**	*e*P	**Pn**	**15 59 43.5**	**+0.2**
ELDTW	baz=219			*e*S	**Sn**	**16 00 07.8**	**-0.4**
WDLH	**Douliu** baz=237	**2.03**	**239**	*e*P	**Pn**	**15 59 43.8**	**+0.5**
WDLH	baz=237			*e*S	**Sn**	**16 00 07.6**	**-0.5**
EDH	**Donghe** baz=209	**2.06**	**210**	*e*P	**Pn**	**15 59 42.2**	**-1.3**
EDH	baz=209			*e*S	**Sn**	**16 00 07.6**	**-1.1**
JTJ	**Tarama**	**2.07**	**93**	*e*S	**Sn**	**16 00 09.1**	**+0.3**
WTK	**Tuku** baz=239	**2.15**	**241**	*e*P	**Pn**	**15 59 45.1**	**+0.3**
WTK	baz=239			*e*S	**Sn**	**16 00 11.1**	**+0.2**
CHN4	**Tsaushan** baz=229	**2.19**	**231**	P	**Pn**	**15 59 45.9**	**+0.5**
CHN4	baz=229			*e*S	**Sn**	**16 00 11.5**	**-0.3**
STYH	**Taoyuan** baz=223	**2.19**	**224**	*e*P	**Pn**	**15 59 45.7**	**+0.4**
STYH	baz=223			*e*S	**Sn**	**16 00 11.9**	**+0.1**
LONT	**Longtian** baz=212	**2.20**	**213**	*e*S	**Sn**	**16 00 12.6**	**+0.6**
TPUB	**Ta-pu** baz=228	**2.20**	**229**	P	**Pn**	**15 59 45.9**	**+0.5**
TPUB	baz=228			*e*S	**Sn**	**16 00 12.2**	**+0.1**
STYT	**Tauyuan** baz=223	**2.21**	**224**	P	**Pn**	**15 59 46.1**	**+0.5**
STYT	baz=223			S	**Sn**	**16 00 12.8**	**+0.5**
CHY	**Chiayi** baz=234	**2.23**	**236**	*e*S	**Sn**	**16 00 12.8**	**+0.2**
WTP	**Ta-pu** baz=227	**2.25**	**228**	P	**Pn**	**15 59 46.6**	**+0.5**
WTP	baz=227			*e*S	**Sn**	**16 00 11.9**	**-1.3**
LDUT	**Ludao** baz=202	**2.26**	**203**	*e*P	**Pn**	**15 59 45.1**	**-1.1**
LDUT	baz=202			*e*S	**Sn**	**16 00 11.7**	**-1.6**
TWGBT	**Beinan** baz=212	**2.30**	**213**	*e*P	**Pn**	**15 59 45.9**	**-0.8**
TWG	**Pinlang** baz=212	**2.30**	**213**	*e*P	**Pn**	**15 59 45.7**	**-1.0**
TWG	baz=212			*e*S	**Sn**	**16 00 14.8**	**+0.4**
WSF	**Szhu** baz=240	**2.31**	**242**	*e*P	**Pn**	**15 59 47.7**	**+0.8**
WSF	baz=240			*e*S	**Sn**	**16 00 15.0**	**+0.4**
TWK	**Hsinying** baz=229	**2.32**	**231**	*e*P	**Pn**	**15 59 47.7**	**+0.6**
TWK	baz=229			*e*S	**Sn**	**16 00 15.0**	**0.0**
SNST	**Tainan City** baz=228	**2.34**	**230**	*e*S	**Sn**	**16 00 16.3**	**+0.8**
CHN1	**Nanshi** baz=227	**2.34**	**228**	*e*P	**Pn**	**15 59 48.3**	**+0.9**
CHN1	baz=227			*e*S	**Sn**	**16 00 15.6**	**+0.1**
SGST	**Jiashian** baz=224	**2.38**	**226**	*e*P	**Pn**	**15 59 48.1**	**+0.3**
SLGT	**Liugui** baz=222	**2.40**	**223**	*e*P	**Pn**	**15 59 48.8**	**+0.6**
SLGT	baz=222			*e*S	**Sn**	**16 00 17.1**	**+0.3**
SSD	**Sandimen** baz=219	**2.60**	**220**	*e*P	**Pn**	**15 59 50.9**	**+0.2**
SSD	baz=219			*e*S	**Sn**	**16 00 21.9**	**+0.4**

TAP 16 16:05:32.4, 23.°04N×120.°83E, h3^{km}±1^{km}, ML0.6, C,

Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STYH	**Taoyuan** baz=338	**0.14**	**339**	*e*P	Pg	16 05 36.1	+1.0
STYH	baz=338			S	Sg	16 05 39.1	+2.1
STYT	**Tauyuan** baz=333	**0.14**	**331**	P	Pg	16 05 36.2	+1.1
STYT	baz=333			*i* S	Sg	16 05 38.4	+1.3
SLGT	**Liugui** baz=255	**0.18**	**255**	*e*P	Pg	16 05 36.3	+0.5
SLGT	baz=255			*e*S	Sg	16 05 40.2	+2.1
ELDTW	**Lidau** baz=50	**0.23**	**49**	*e*P	Pg	16 05 37.7	+0.9
ELDTW	baz=50			S	Sg	16 05 42.2	+2.4
SGST	**Jiashian** baz=280	**0.23**	**281**	P	Pg	16 05 38.0	+1.1
SGST	baz=280			*e*S	Sg	16 05 42.2	+2.3
WTP	**Ta-pu** baz=316	**0.29**	**316**	*e*P	Pg	16 05 38.9	+1.0
WTP	baz=316			S	Sb	16 05 44.1	-1.3
LONT	**Longtian** baz=115	**0.30**	**116**	*e*S	Sb	16 05 45.0	-0.9
TWG	**Pinlang** baz=133	**0.31**	**134**	P	Pb	16 05 40.0	-0.6
CHN1	**Nanshi** baz=297	**0.32**	**298**	*e*P	Pb	16 05 40.2	-0.4
TWGBT	**Beinan** baz=133	**0.32**	**134**	*e*P	Pg	16 05 39.5	+1.0
TPUB	**Ta-pu** baz=324	**0.32**	**325**	P	Pb	16 05 39.8	-0.9
TPUB	baz=324			S	Sb	16 05 45.4	-1.0

TAP 16 16:05:39.7, 22.°95N×120.°83E, h11^{km}, ML0.7, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLGT	**Liugui** baz=284	**0.18**	**285**	P	Pg	16 05 44.1	+0.5
STYT	**Tauyuan** baz=344	**0.23**	**342**	*i* P	Pb	16 05 45.3	-0.6
STYT	baz=344			*i* S	Sg	16 05 49.3	+1.6
STYH	**Taoyuan** baz=347	**0.23**	**347**	P	Pg	16 05 45.0	+0.5
STYH	baz=347			S	Sg	16 05 49.3	+1.5
TWG	**Pinlang** baz=119	**0.26**	**120**	P	Pb	16 05 45.9	-0.5
TWG	baz=119			S	Sb	16 05 50.8	0.0
TWG	**Pinlang** baz=133	**0.26**	**120**	S	Pb	16 05 45.6	-0.8
TWGBT	**Beinan** baz=119	**0.26**	**119**	*e*P	Pg	16 05 45.6	+0.4
TWGBT	baz=119			*e*S	Sb	16 05 51.5	+0.4
TWGBT	**Beinan** baz=133	**0.26**	**119**	*e*S	Pg	16 05 45.3	+0.1
SGST	**Jiashian** baz=300	**0.27**	**300**	*e*P	Pb	16 05 46.0	-0.5
SGST	baz=300			*e*S	Sb	16 05 50.7	-0.4
SSD	**Sandimen** baz=210	**0.27**	**222**	*e*S	Pg	16 05 45.9	+0.5
SSD	**Sandimen** baz=221	**0.27**	**222**	P	Pg	16 05 45.9	+0.5
SSD	baz=221			S	Sb	16 05 51.0	-0.3
LONT	**Longtian** baz=98	**0.28**	**98**	*e*S	Sb	16 05 51.7	+0.2
ELDTW	**Lidau** baz=36	**0.29**	**35**	*e*P	Pb	16 05 46.5	-0.6
ELDTW	baz=36			S	Sb	16 05 52.0	0.0
TSMG	**Majia** baz=215	**0.30**	**215**	*e*S	Sb	16 05 52.3	+0.3
SCST	**Cishan** baz=258	**0.32**	**259**	*e*P	Pb	16 05 46.9	-0.5
SCST	baz=258			*e*S	Sb	16 05 52.6	0.0
WTP	**Ta-pu** baz=326	**0.36**	**326**	P	Pb	16 05 48.0	-0.2
WTP	baz=326			S	Sb	16 05 53.4	-0.4
CHN1	**Nanshi** baz=310	**0.36**	**310**	*e*P	Pg	16 05 47.4	+0.3
CHN1	baz=310			S	Sb	16 05 54.1	+0.1
ECL	**Taimali** baz=160	**0.37**	**162**	*e*P	Pb	16 05 47.8	-0.5
ECL	baz=160			*e*S	Sb	16 05 53.9	-0.1
TPUB	**Ta-pu** baz=332	**0.40**	**332**	*e*P	Pb	16 05 49.0	+0.2
TPUB	baz=332			*e*S	Sb	16 05 54.8	-0.1

KRSC 16 16:13:22.2±2.2**, 49.°60N×156.°69E, h7^{km}**±28^{km}**, ML4.2,**

Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.15**	**342**	*e*P	Pg	16 13 43.9	-0.3

SKR				*e*S	Sg	16 13 57.9	-1.2
PAU	Pauzhetka	1.87	2	*e*P	Pb	16 13 55.9	-0.9
PAU				*e*S	Sn	16 14 19.4	+0.8
KDTR	Khodutka, Kamc	2.38	21	*e*P	Pb	16 14 03.6	-1.9
KDTR				*e*S	Sn	16 14 32.7	+1.5
MTVR	Mutnovka	3.04	18	*e*P	Pn	16 14 13.2	+2.3
RUS	Russkaya	3.07	21	*e*P	Pn	16 14 12.9	+1.9
GRL	Gorelyy	3.09	16	*e*P	Pn	16 14 14.1	+2.6
GRL				*e*S	Sn	16 14 50.7	+2.0
APC	Apacha	3.35	5	*e*P	Pn	16 14 16.2	+1.3
KRMR	Karymshinskiy	3.36	15	*e*P	Pb	16 14 19.2	-2.9
KRMR				*e*S	Sb	16 15 02.5	-0.7
PET	Petropavlovsk	3.65	19	*e*P	Pn	16 14 22.3	+3.3
DALK	Dalny	3.68	20	*e*P	Pn	16 14 22.3	+2.9
UGLR	Uglovaya	3.86	19	*e*P	Pn	16 14 25.7	+3.7
AVH	Avacha	3.89	18	*e*P	Pb	16 14 26.9	-4.3
KOK	Koryaka	3.90	18	*e*P	Pb	16 14 27.0	-4.3
SMAR	Somma	3.90	19	*e*P	Pn	16 14 26.9	+4.1
KRER	Koryakskii	3.93	18	*e*P	Pn	16 14 27.2	+4.1
SDLR	Sedlovina	3.94	20	*e*P	Pn	16 14 26.2	+3.1
KRX	Arik	3.96	17	*e*P	Pn	16 14 27.7	+4.2
KRX				*e*S	Sb	16 15 16.0	-4.6
SPN	Mys Shipunski	4.08	30	*e*P	Pn	16 14 28.3	+3.3
GNL	Ganaly	4.18	10	*e*P	Pn	16 14 30.2	+3.7
KZV	Kizimen	5.95	20	*e*P	Pn	16 14 54.6	+3.8
TUMD	Tumrok D	6.06	21	*e*P	Pn	16 14 58.5	+6.3
TUMR	Tumrok	6.08	19	*e*P	Pn	16 14 57.4	+4.9

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*JMA **16** 16:44:47.2±0.2, 24°.48N×122°.00E, h70^{km}±3^{km}, M2.7*
*TAP **16** 16:44:47.6, 24°.56N×122°.02E, h62^{km}, ML3.5, B*
ISC 16 16:44:48.6±1.2**, 24°.54N**±0°.02×**122°.04E**±0°.02**, h57**^{km}±6^{km}**,**
n115, σ0^{s}.63/205**, 6C-1D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWC	Suao baz=289	0.19	292	⇑*i*P	Pn	16 44 57.8	+0.2
TWC	baz=289			*i* S	Sn	16 45 04.9	+0.8
EWUT	Wuta baz=243	0.26	248	P	Pn	16 44 57.8	-0.2
EWUT	baz=243			*e*S	Sn	16 45 03.7	-1.2
ENA	Nanau baz=242	0.29	248	⇑*i*P	Pn	16 44 58.2	-0.1
ENA	baz=242			*i* S	Sn	16 45 06.1	+0.8
NDS	Dongshan baz=285	0.31	288	⇑P	Pn	16 44 58.5	+0.1
NDS	baz=285			S	Sn	16 45 06.2	+0.6
ILA	Ilan baz=310	0.35	310	*i* P	Pn	16 44 59.2	+0.4
ILA	baz=310			*i* S	Sn	16 45 07.9	+1.8
NTC	Toucheng baz=329	0.37	329	*e*P	Pn	16 44 59.0	+0.1
NTC	baz=329			*e*S	Sn	16 45 06.6	+0.1
TWE	Neicheng baz=297	0.39	298	⇑*i*P	Pn	16 44 59.4	+0.3
TWE	baz=297			*i* S	Sn	16 45 07.5	+0.8
ENTT	Nioudou baz=281	0.44	283	*i* P	Pn	16 44 59.7	0.0
ENTT	baz=281			*i* S	Sn	16 45 08.3	+0.5
TWB1	Santiao Chiao baz=356	0.47	354	⇑*i*P	Pn	16 44 59.5	-0.4
TWB1	baz=356			*i* S	Sn	16 45 07.7	-0.5
TIPB	Shuangxi baz=336	0.47	336	*i* P	Pn	16 44 59.8	-0.2
TIPB	baz=336			*i* S	Sn	16 45 08.1	-0.2
NDT	Datong Townshi baz=275	0.48	277	*i* P	Pn	16 45 00.2	+0.1
NDT	baz=275			*i* S	Sn	16 45 08.7	+0.1
NWLT	Wulai baz=294	0.54	296	*i* P	Pn	16 45 00.8	0.0
NWLT	baz=294			*i* S	Sn	16 45 10.0	+0.3
NACB	Ninganchiao baz=225	0.55	228	P	Pn	16 44 59.9	-0.9
NACB	baz=225			S	Sn	16 45 09.9	+0.2
NWF	Wu-fen Shan baz=336	0.58	336	*i* P	Pn	16 45 01.1	-0.2
NWF	baz=336			*i* S	Sn	16 45 10.1	-0.4
WFSB	Wu-fen Shan baz=336	0.58	336	P	Pn	16 45 01.0	-0.2
WFSB	baz=336			S	Sn	16 45 10.1	-0.2
TWA	Mucha baz=316	0.60	317	*i* P	Pn	16 45 01.3	-0.2
TWA	baz=316			*i* S	Sn	16 45 10.6	-0.3
ETLH	Xiulin Townshi baz=234	0.61	237	P	Pn	16 45 01.0	-0.6
ETLH	baz=234			S	Sn	16 45 10.7	-0.4
NNSB	Datong baz=257	0.61	260	⇑P	Pn	16 45 01.2	-0.5
NNSB	baz=257			S	Sn	16 45 11.1	-0.1
NNSH	Datong baz=257	0.61	260	*i* P	Pn	16 45 01.3	-0.4
NNSH	baz=257			*i* S	Sn	16 45 11.2	0.0
TWD	Chiawan baz=218	0.61	222	*i* P	Pn	16 45 00.6	-1.0
TWD	baz=218			*i* S	Sn	16 45 10.9	-0.1
NNS	Nan Shan baz=258	0.62	261	*i* P	Pn	16 45 01.3	-0.5
NNS	baz=258			*i* S	Sn	16 45 10.6	-0.8
YHNB	Yeheng baz=280	0.62	282	P	Pn	16 45 01.4	-0.4
YHNB	baz=280			S	Sn	16 45 11.0	-0.3
NHDH	Xindian Distri baz=311	0.63	312	*e*P	Pn	16 45 01.7	-0.1
NHDH	baz=311			*e*S	Sn	16 45 11.4	0.0
NSK	Sanguang baz=281	0.64	282	*i* P	Pn	16 45 01.5	-0.5
NSK	baz=281			S	Sn	16 45 11.1	-0.6
TNOU	National Taiwa baz=338	0.65	338	P	Pn	16 45 01.6	-0.5
TNOU	baz=338			S	Sn	16 45 11.2	-0.8
TATO	Taipei baz=310	0.66	311	⇓P	Pn	16 45 01.9	-0.3
TATO	baz=310			S	Sn	16 45 11.8	-0.4
TAP1	Taipei baz=315	0.68	317	*e*S	Sn	16 45 12.7	+0.1
HWA	Hwalien baz=212	0.69	215	*i* P	Pn	16 45 02.1	-0.3
HWA	baz=212			S	Sn	16 45 13.8	+1.2
TAP	Taipei baz=315	0.69	316	P	Pn	16 45 02.2	-0.3
TAP	baz=315			S	Sn	16 45 13.1	+0.3
BACT	New Taipei Cit baz=309	0.71	310	P	Pn	16 45 02.6	-0.1
BACT	baz=309			S	Sn	16 45 14.2	+1.1
YM01	YM01 baz=324	0.74	325	P	Pn	16 45 01.7	-1.5
YM01	baz=324			S	Sn	16 45 12.5	-1.4
YM10	YM10 baz=324	0.75	325	*e*P	Pn	16 45 02.6	-0.7
YM10	baz=324			S	Sn	16 45 13.6	-0.6
YM11	YM11 baz=326	0.75	326	P	Pn	16 45 03.0	-0.4
YM11	baz=326			S	Sn	16 45 13.8	-0.4
YM05	YM05 baz=325	0.76	325	P	Pn	16 45 02.9	-0.6
YM05	baz=325			*e*S	Sn	16 45 13.2	-1.1
YM04	YM04 baz=323	0.76	323	P	Pn	16 45 03.0	-0.5
YM04	baz=323			S	Sn	16 45 13.6	-0.8
YM08	YM08 baz=327	0.76	328	*i* P	Pn	16 45 02.6	-0.9
YM08	baz=327			S	Sn	16 45 13.1	-1.3
YM03	YM03 baz=324	0.78	325	*i* P	Pn	16 45 03.2	-0.5
YM03	baz=324			*e*S	Sn	16 45 15.0	+0.1
FUSS	Fushou baz=246	0.78	248	*i* P	Pn	16 45 03.5	-0.5
FUSS	baz=246			S	Sn	16 45 15.9	+0.8
TWS1	Kuangyinshan baz=314	0.80	315	*i* P	Pn	16 45 03.7	-0.2
TWS1	baz=314			*i* S	Sn	16 45 15.1	+0.1
ANP	Anpu baz=324	0.80	324	*i* P	Pn	16 45 03.6	-0.4
ANP	baz=324			S	Sn	16 45 16.3	+1.0
WHF	Hehuan Shan baz=239	0.81	241	*i* P	Pn	16 45 03.8	-0.7
WHF	baz=239			*i* S	Sn	16 45 15.3	-0.7
NTY	Taoyuan baz=304	0.82	304	P	Pn	16 45 03.9	-0.2
NTY	baz=304			*e*S	Sn	16 45 15.7	+0.2
NTST	Danshui baz=319	0.82	319	*i* P	Pn	16 45 03.9	-0.3
NTST	baz=319			S	Sn	16 45 16.4	+0.8
JYNG	Yonagunijimaku	0.83	96	P	Pn	16 45 04.3	+0.1
JYNG				*e*S	Sn	16 45 16.1	+0.3
TWY	Chenhua baz=332	0.83	331	P	Pn	16 45 04.6	+0.3
TWY	baz=332			S	Sn	16 45 15.7	-0.2
TWT	Tachien baz=248	0.84	250	*i* P	Pn	16 45 04.7	+0.1
TWT	baz=248			*i* S	Sn	16 45 16.3	0.0
TDCB	Techi baz=248	0.85	251	P	Pn	16 45 04.6	-0.2
TDCB	baz=248			S	Sn	16 45 15.9	-0.7
NCU	National Centr baz=298	0.89	299	*i* P	Pn	16 45 04.7	-0.4
NCU	baz=298			*i* S	Sn	16 45 17.2	+0.1
NCUH	Zhongli baz=298	0.89	299	*i* P	Pn	16 45 04.7	-0.3
NCUH	baz=298			S	Sn	16 45 16.9	-0.2
YOJ	Yonaguni jima baz=95	0.89	95	P	Pn	16 45 05.2	+0.2
YOJ	baz=95			S	Sn	16 45 17.5	+0.4
YOJ	Yonaguni jima	0.89	95	P	Pn	16 45 04.9	-0.1
YOJ				*e*S	Sn	16 45 17.2	+0.1
ESL	Shilin baz=215	0.91	218	P	Pn	16 45 03.9	-1.4
ESL	baz=215			S	Sn	16 45 16.4	-1.2
CHGB	Renai baz=237	0.92	239	P	Pn	16 45 05.3	-0.4
CHGB	baz=237			S	Sn	16 45 17.6	-0.7
LIOB	Emei baz=275	0.94	277	*i* P	Pn	16 45 05.3	-0.4
LIOB	baz=275			S	Sn	16 45 18.5	+0.2
NSTT	Nanjuang baz=274	0.95	276	P	Pn	16 45 05.4	-0.4
NSTT	baz=274			*i* S	Sn	16 45 18.4	-0.2
HSN1	Hsinchu baz=283	0.96	284	P	Pn	16 45 05.8	-0.2
HSN1	baz=283			S	Sn	16 45 18.8	0.0
SBCB	Hsinchu baz=283	0.99	285	*e*P	Pn	16 45 05.8	-0.5
NHW	Xinwu Township baz=296	1.01	297	P	Pn	16 45 06.2	-0.5
NHW	baz=296			S	Sn	16 45 19.9	-0.2
WHP	Taichung City baz=254	1.03	256	P	Pn	16 45 07.2	+0.2
WHP	baz=254			S	Sn	16 45 20.8	+0.2
EGFH	Guangfu baz=211	1.03	213	P	Pn	16 45 05.8	-1.1
EGFH	baz=211			*e*S	Sn	16 45 21.2	+0.7
NJN	Zhunan baz=276	1.07	278	*e*S	Sn	16 45 22.7	+1.2
PCYT	Pengchaiyu baz=2.0	1.08	1	P	Pn	16 45 07.4	-0.3
PCYT	baz=2.0			S	Sn	16 45 22.0	+0.2
WPL	Puli Township baz=241	1.12	242	P	Pn	16 45 08.4	+0.3
WPL	baz=241			*e*S	Sn	16 45 22.9	+0.3
DPDB	Guoxing baz=242	1.14	244	P	Pn	16 45 08.5	+0.2
DPDB	baz=242			*e*S	Sn	16 45 23.9	+0.8
VWDT	VWDT baz=225	1.14	227	P	Pn	16 45 07.9	-0.4
VWDT	baz=225			*e*S	Sn	16 45 22.9	0.0
WCS	Beigang Elemen baz=243	1.14	245	P	Pn	16 45 08.5	+0.2
WCS	baz=243			S	Sn	16 45 23.7	+0.7
NMLH	Miaoli baz=269	1.14	270	P	Pn	16 45 08.3	0.0
NMLH	baz=269			*e*S	Sn	16 45 23.0	0.0
TWQ1	Liyutan baz=259	1.17	261	P	Pn	16 45 08.5	-0.3
TWQ1	baz=259			S	Sn	16 45 23.5	-0.3
NSY	Sanyi baz=262	1.17	264	P	Pn	16 45 08.9	+0.1
NSY	baz=262			S	Sn	16 45 24.4	+0.6
HGSD	Ruisui baz=207	1.19	209	P	Pn	16 45 07.9	-1.0
SMLT	Sun Moon Lake baz=236	1.23	238	P	Pn	16 45 10.0	+0.3
SMLT	baz=236			*e*S	Sn	16 45 26.1	+0.8
SSLB	Suanglung baz=231	1.24	233	P	Pn	16 45 09.9	+0.2
TYC	Yuchr baz=238	1.25	240	P	Pn	16 45 10.1	+0.2
TYC	baz=238			S	Sn	16 45 25.6	-0.1
WDJ	Dajia District baz=260	1.29	262	*e*S	Sn	16 45 26.9	+0.2
WWF	Wufeng baz=247	1.32	248	*e*P	Pn	16 45 10.0	-0.8
WWF	baz=247			*e*S	Sn	16 45 27.5	+0.1
EYUL	Yuli baz=208	1.36	209	P	Pn	16 45 11.3	0.0
EYUL	baz=208			*e*S	Sn	16 45 28.8	+0.5
TWF1	Yuli baz=208	1.36	210	*e*P	Pn	16 45 11.3	0.0
WHYT	Xinyi Township baz=231	1.37	232	P	Pn	16 45 12.1	+0.6
WHYT	baz=231			*e*S	Sn	16 45 30.3	+1.6
WNT1	Nantou City baz=242	1.39	243	*e*P	Pn	16 45 12.9	+1.1
WNT1	baz=242			*e*S	Sn	16 45 29.8	+0.6
WJS	Zhushan baz=238	1.40	239	*e*P	Pn	16 45 12.1	+0.3
WJS	baz=238			*e*S	Sn	16 45 30.5	+1.3
WNT	Mingjian baz=240	1.40	242	P	Pn	16 45 12.5	+0.6
WNT	baz=240			S	Sn	16 45 30.1	+0.8
WCHH	Zhanghua baz=250	1.43	252	*e*S	Sn	16 45 30.1	+0.2
FULB	Fuli baz=206	1.50	207	P	Pn	16 45 12.3	-0.9
FULB	baz=206			*e*S	Sn	16 45 30.5	-1.3
ALS	Alishan baz=226	1.53	228	P	Pn	16 45 14.3	+0.5
ALS	baz=226			*e*S	Sn	16 45 33.7	+1.0
IRIF	Iriomote-Funau	1.55	97	P	Pn	16 45 13.5	-0.4
IRIF				S	Sn	16 45 32.8	-0.2
CHN5	Tsauling baz=232	1.56	233	P	Pn	16 45 14.5	+0.5
CHN5	baz=232			*e*S	Sn	16 45 34.1	+0.8
WDLH	Douliu baz=237	1.61	239	*e*P	Pn	16 45 15.3	+0.6
WDLH	baz=237			*e*S	Sn	16 45 34.7	+0.2
ELDTW	Lidau baz=213	1.64	215	*e*P	Pn	16 45 13.8	-1.4
ELDTW	baz=213			*e*S	Sn	16 45 34.1	-1.2
HATJ	Hateruma jima	1.68	106	P	Pn	16 45 15.3	-0.3
HATJ				*e*S	Sn	16 45 36.9	+0.8
EDH	Donghe baz=202	1.70	204	*e*P	Pn	16 45 14.2	-1.7
EDH	baz=202			*e*S	Sn	16 45 35.1	-1.5
WTK	Tuku baz=239	1.73	241	P	Pn	16 45 16.6	+0.3
WTK	baz=239			*e*S	Sn	16 45 37.4	+0.1
CHN2	Minshiung baz=234	1.75	235	*e*P	Pn	16 45 16.7	+0.1
CHN4	Tsaushan baz=227	1.78	228	P	Pn	16 45 17.8	+0.8
CHN4	baz=227			*e*S	Sn	16 45 38.6	+0.1
TPUB	Ta-pu baz=225	1.79	227	P	Pn	16 45 17.5	+0.4
STYH	Taoyuan baz=219	1.79	221	P	Pn	16 45 17.9	+0.8
STYH	baz=219			*e*S	Sn	16 45 39.0	+0.3
CHY	Chiayi baz=234	1.81	235	*e*P	Pn	16 45 17.4	+0.1
STYT	Tauyuan baz=219	1.81	221	*e*P	Pn	16 45 18.2	+0.8
JKRS	Kuro-shima	1.82	99	P	Pn	16 45 17.7	+0.2
JKRS				S	Sn	16 45 39.5	0.0
LONT	Longtian baz=206	1.83	207	*e*P	Pn	16 45 16.7	-1.0
LONT	baz=206			*e*S	Sn	16 45 40.0	+0.3
WTP	Ta-pu baz=224	1.83	226	*e*P	Pn	16 45 18.0	+0.2
TWK	Hsinying baz=227	1.90	229	*e*P	Pn	16 45 18.9	+0.2
JIJ	Ishigaki jima	1.92	95	P	Pn	16 45 18.5	-0.4
JIJ				S	Sn	16 45 41.5	-0.5
TWG	Pinlang baz=206	1.93	208	*e*P	Pn	16 45 18.8	-0.3
TWGBT	Beinan baz=206	1.93	207	*e*P	Pn	16 45 18.8	-0.3
CHN1	Nanshi baz=225	1.93	226	*e*P	Pn	16 45 19.5	+0.4
SGST	Jiashian baz=221	1.97	223	*e*P	Pn	16 45 19.3	-0.3
ICHU	Yijhu baz=233	1.99	234	P	Pn	16 45 20.7	+0.8
SLGT	Liugui baz=219	2.00	220	*e*P	Pn	16 45 21.0	+1.0
JISG	Ishigakijimahi	2.07	88	P	Pn	16 45 20.6	-0.3
JISG				*e*S	Sn	16 45 44.6	-0.9
SCST	Cishan baz=220	2.17	221	*e*P	Pn	16 45 21.4	-0.9
SSD	Sandimen baz=215	2.20	216	*e*P	Pn	16 45 23.3	+0.5
TSMG	Majia baz=214	2.23	215	*e*P	Pn	16 45 23.1	0.0
MASBT	Mashibuluo baz=213	2.31	214	P	Pn	16 45 25.0	+0.7
JTJ	Tarama	2.42	87	P	Pn	16 45 26.3	+0.5
JTJ				S	Sn	16 45 55.1	+0.8
JIRB	Irabujima	2.86	84	*e*S	Sn	16 46 06.5	+1.5

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*IDC **16** 16:47:44.5±6.5, 1°.16N×127°.09E, h105^{km}±73^{km}, mb3.3/4, mb1 3.4/6, mb1mx3.2/45, mbtmp3.6/6, ML3.2/2, MS3.0/1, Ms1 3.0/1, ms1mx2.3/21, Error ellipse: s-maj=83.8km s-min=19.8km az=79.0*
ISC 16 16:47:44.1±1.1**, 1°.1N**±0°.2×**127°.0E**±0°.2**, h100**^{km}**, n7,**
σ0^{s}.33/6**, mb3.5**/4**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong 0.5nm,0.3s,baz=319,slow=20,SNR=1.5	4.71	115	P	Pn	16 48 53.0	+0.1
JAY	Jayapura comp=Z,62nm,18.1s,baz=164,slow=41	14.17	105	LR	LR	16 57 20.0	
FITZ	Fitzroy Crossi 0.1nm,0.3s,baz=2.9,slow=11,SNR=1.4	19.16	184	P	P	16 51 59.8	0.0
WRA	Warramunga Arr 1.2nm,0.4s,baz=340,slow=11,SNR=32	22.15	161	P	P	16 52 31.4	-0.5
ASAR	Alice Springs 0.6nm,0.3s,baz=345,slow=12,SNR=35	25.55	165	P	P	16 53 03.9	+0.2
SONM	Songino Array 0.3nm,0.8s,baz=159,slow=6.2,SNR=2.7	49.83	342	P	P	16 56 27.2	+0.1
MKAR	Makanchi Array 0.4nm,0.4s,baz=121,slow=7.7,SNR=12	59.84	326	P	P	16 57 39.0	-0.1

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*NEIC **16** 16:49:26.5±1.3, 17°.6S±0°.1×178°.8W±0°.1, h568^{km}±10^{km}, mb4.4/19, Error ellipse: s-maj=17.6km s-min=15.4km az=102.0*
*IDC **16** 16:49:29.0±1.8, 17°.31S×178°.95W, h587^{km}±17^{km}, mb3.3/9, mb1 3.6/10, mb1mx3.1/50, mbtmp4.2/10, Error ellipse: s-maj=62.9km s-min=15.2km az=152.0*
ISC 16 16:49:25.1±0.6**, 17°.6S**±0°.2×**178°.7W**±0°.1**, h550**^{km}**, n38,**
σ0^{s}.81/37**, mb4.3**/19**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu 13nm,0.3s,baz=123,slow=2.4,SNR=131	3.06	267	P	P	16 50 46.4	+5.7
MSVF	Nonsavu	3.06	267	P	P	16 50 46.0	+5.4
AFI	Afiamalu	7.63	62	P	P	16 51 19.5	+0.1
NIUE	Niue	8.50	101	P	P	16 51 27.8	0.0
SANVU	Saraoutou	13.65	277	P	P	16 52 22.0	+1.3
EIDS	Eidsvold	29.08	249	P	P	16 54 42.4	+0.6
ARMA	Armidale	29.83	239	P	P	16 54 49.1	+0.8
ARMA	comp=Z,16nm,1.4s			IAmb	IAmb	16 54 54.9	
CTAO	Charters Tower	33.19	260	P	P	16 55 17.1	+0.1
CTAO	comp=Z,16nm,1.2s			IAmb	IAmb	16 55 29.1	
CAN	Canberra	33.65	232	P	P	16 55 21.2	+0.5
COEN	Coen	36.79	270	P	P	16 55 48.4	+1.4
COEN	comp=Z,16nm,1.4s			IAmb	IAmb	16 56 18.2	
TOO	Toolangi	37.13	230	P	P	16 55 50.1	+0.6
TOO	comp=Z,18nm,1.4s			IAmb	IAmb	16 56 02.7	
STKA	Stephens Creek comp=Z,3.3nm,0.5s,baz=86,slow=12,SNR=13	38.51	241	P	P	16 56 01.6	+0.8
STKA	Stephens Creek comp=Z,0.9nm,0.7s	38.51	241	IAmb	IAmb	16 56 02.0	
BBOO	Buckleboo	43.29	241	P	P	16 56 38.9	+0.2
WB0	Warramunga Arr	44.34	260	P	P	16 56 46.7	-0.4
WB0	comp=Z,15nm,1.4s			IAmb	IAmb	16 56 49.1	
WB2	Warramunga Arr	44.37	259	P	P	16 56 47.0	-0.2
WB2	comp=Z,9.5nm,1.1s			IAmb	IAmb	16 56 47.6	
WRAB	Tennant Creek	44.37	259	P	P	16 56 47.0	-0.3
WRA	Warramunga Arr comp=Z,1.7nm,0.5s,baz=92,slow=6.8,SNR=47	44.38	259	P	P	16 56 47.2	-0.2

WRA				PcP	PcP	16 58 19.0	-0.3
	comp=Z,0.3nm,0.4s,baz=103,slow=3.1,SNR=2.1						
WRA	Warramunga Arr	44.38	259	P	P	16 56 46.8	-0.6
AS31	Alice Springs	44.57	254	P	P	16 56 49.0	+0.2
AS31				IAmb	IAmb	16 56 49.8	
	comp=Z,4.9nm,0.7s						
ASAR	Alice Springs	44.58	254	P	P	16 56 49.1	+0.3
	comp=Z,18nm,0.6s,baz=88,slow=8.3,SNR=422						
ASAR				PcP	PcP	16 58 19.6	-0.4
	comp=Z,0.5nm,0.4s,baz=101,slow=4.0,SNR=5.1						
ASAR	Alice Springs	44.58	254	P	P	16 56 48.6	-0.2
ASAR					PcP	16 58 19.3	-0.7
FORT	Forrest	49.86	244	P	P	16 57 27.8	-0.6
FORT				IAmb	IAmb	16 57 48.7	
	comp=Z,22nm,1.1s						
FITZ	Fitzroy Crossi	52.77	260	P	P	16 57 50.1	+0.5
	comp=Z,0.9nm,0.3s,baz=98,slow=4.7,SNR=15						
FITZ	Fitzroy Crossi	52.77	260	IAmb	IAmb	16 57 58.6	
	comp=Z,9.5nm,1.4s						
BATI	Baumata	56.22	269	P	P	16 58 13.9	0.0
	comp=Z,12nm,0.4s,baz=95,slow=4.4,SNR=12						
PSA00	Pilbara Seismi	57.68	255	P	P	16 58 23.6	-0.2
PSA00				IAmb	IAmb	16 58 24.3	
	comp=Z,13nm,1.1s						
MORW	Morawa	60.32	246	P	P	16 58 39.8	-1.6
GIRL	Giralia	62.68	253	P	P	16 58 56.7	-0.1
SSE	Sheshan	75.29	310	P	P	17 00 09.8	-2.5
SSE				IAmb	IAmb	17 00 18.9	
	comp=Z,17nm,1.3s						
NVAR	Mina Array Bea	79.41	44	P	P	17 00 35.4	+0.5
	comp=Z,0.3nm,0.5s,baz=228,slow=7.8,SNR=4.1						
IMAR	Indian Mountai	85.42	10	P	P	17 01 04.6	+0.4
ILAR	Eielson Array	85.64	13	P	P	17 01 05.0	-0.3
	comp=Z,0.4nm,0.9s,baz=223,slow=5.3,SNR=4.1						
TXAR	Lajitas Array	86.09	58	P	P	17 01 09.9	+1.5
	comp=Z,0.8nm,0.6s,baz=194,slow=6.5,SNR=5.2						
PDAR	Pinedale Array	87.34	44	P	P	17 01 14.2	+0.1
	comp=Z,0.3nm,0.6s,baz=225,slow=3.2,SNR=4.5						
MKAR	Makanchi Array	108.68	314	PKiKP	PKiKP	17 06 50.4	-1.4
	comp=Z,0.1nm,0.5s,baz=94,slow=1.2,SNR=1.7						
BRTR	Keskin Array B	144.33	315	PKP	PKPdf	17 07 58.8	-0.4
	comp=Z,0.8nm,0.5s,baz=33,slow=3.4,SNR=4.0						
GERES	GERESS Array B	147.22	345	PKPbc	PKPdf	17 08 04.0	+0.2
	comp=Z,0.2nm,0.3s,baz=348,slow=4.4,SNR=3.6						

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*BJI **16** 16:51:29.3±0.0, 21°.52N×143°.35E, h292^{km}, mB4.6/21, mb4.2/25*

*IDC **16** 16:51:32.7±1.1, 21°.66N×143°.08E, h287^{km}±10^{km}, mb3.9/34, mb1 4.0/38, mb1mx3.9/58, mbtmp4.6/38, Error ellipse: s-maj=11.2km s-min=6.9km az=102.0*

*NEIC **16** 16:51:32.7±1.2, 21°.62N±0°.07×143°.1E±0°.1, h291^{km}±6^{km}, mb4.5/145, Error ellipse: s-maj=13.6km s-min=10.6km az=84.0*

*JMA **16** 16:51:34.4±0.1, 22°.10N×143°.83E, h327^{km}±1^{km}, M5.0*

ISC 16 16:51:33.5±0.3**, 21°.69N**±0°.04×**143°.11E**±0°.06**, h300**^{km}**, n239,** σ**1**§**36**/256**, mb4.4**/106**, 1C-1D, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHH2	Haha-jima-NKT2	5.00	350	P	Pn	16 52 50.8	-0.2
JHH2				S	S	16 53 50.6	-2.6
CBIJ	Chichi jima	5.45	351	P	Pn	16 52 55.7	-0.6
CBIJ				*e*S	S	16 53 59.5	-3.4
JCJ	Chichijima	5.45	351	P	Pn	16 52 56.1	-0.2
	99nm,0.3s,baz=103,slow=23,SNR=40						
JCJ				S	S	16 54 00.2	-2.7
	109nm,0.3s,baz=314,slow=24,SNR=11						
JCJ	Chichijima	5.45	351	Pn	Pn	16 52 55.6	-0.6
JHJ2	Mitsune	11.75	346	P	P	16 54 15.3	+0.7
JHJ	Hachijo jima 2	11.77	346	P	Pn	16 54 14.3	+1.2
	30nm,0.3s,baz=257,slow=21,SNR=5.8						
BSO3	Boso 3	13.27	351	P	Pn	16 54 30.2	-0.8
JSG	Sagara	13.65	343	P	Pn	16 54 36.6	+0.9
JTNC	Tanabenakahech	13.78	333	P	Pn	16 54 38.7	+1.2
JIE	Ise	13.86	337	P	P	16 54 38.2	+0.3
JKN2	Miekihoku	13.88	336	P	P	16 54 38.8	+0.6
JOD2	Odawara 2	13.98	346	P	P	16 54 38.7	-0.6
JOD2				*e*S	S	16 57 05.9	-7.5
JMN	Monobe	14.51	328	P	Pn	16 54 47.7	+1.6
INU	Inuyama	14.62	340	P	P	16 54 46.3	-0.1
JYT	Yasato	14.71	351	P	P	16 54 47.5	+0.2
JRY	Ryogami san	14.75	346	P	P	16 54 47.5	-0.2
JRY				*e*S	S	16 57 21.3	-7.7
JGF	Kuroka	14.75	341	P	P	16 54 48.5	+0.7
JAG	Ashikaga	15.03	349	P	P	16 54 50.3	-0.5
JAG				*e*S	S	16 57 26.6	-8.0
JWT	Wachi	15.14	335	P	P	16 54 52.7	+0.7
JWT				IAmb	IAmb	16 54 55.0	
	comp=Z,22nm,0.8s						
MJAR	Matsushiro Arr	15.41	345	P	P	16 54 54.3	-0.7
	comp=Z,0.7nm,0.3s,baz=164,slow=10,SNR=34						
MJAR				S	S	16 57 36.7	-5.5
	comp=Z,0.1nm,0.3s,baz=166,slow=15,SNR=2.7						
MJAR	Matsushiro Arr	15.41	345	P	P	16 54 54.1	-0.9
MAJO	Matsushiro	15.41	345	P	P	16 54 54.9	-0.1
MAT	Matsushiro	15.41	345	P	P	16 54 54.9	-0.1
MAT				S	S	16 57 38.3	-3.9
JNU	Nakatsue	15.73	319	P	P	16 54 59.0	+0.5
	comp=Z,0.8nm,0.3s,baz=46,slow=7.5,SNR=4.7						
JNU	Nakatsue	15.73	319	Pn	Pn	16 55 00.9	+0.5
JNU				IAmb	IAmb	16 55 01.5	
	comp=Z,24nm,1.0s						
JHS	Saijyo	15.90	329		Pn	16 55 02.3	-0.2
JMM	Marumori	16.25	353	Pn	P	16 55 06.2	+2.1
JSD	Sado	16.83	347	P	P	16 55 10.4	+0.1
JTU	Tsushima	17.58	320	P	P	16 55 19.6	+1.0
JTM	Tenmabayashi	19.12	355	P	P	16 55 35.5	+0.5
NACB	Ninganchiao	19.97	281	P	P	16 55 43.6	-0.6
NACB				IAmb	IAmb	16 55 47.5	
	comp=Z,21nm,1.2s						
YHNB	Yeheng	20.20	283	P	P	16 55 45.9	-0.8
YHNB				IAmb	IAmb	16 55 59.6	
	comp=Z,30nm,1.4s						
ERM	Erimo	20.27	0	P	P	16 55 48.8	+1.8
KSRS	Korea Array	20.49	323	P	P	16 55 48.8	-0.4
	comp=Z,2.8nm,0.7s,baz=146,slow=8.4,SNR=17						
KSRS				ScP	ScP	17 02 56.3	+1.3
	comp=Z,0.5nm,0.7s,baz=139,slow=2.7,SNR=5.2						
KSAR	Wonju Array Be	20.50	323	P	P	16 55 50.9	+1.5
SSLB	Suanglung	20.54	280	P	P	16 55 50.2	+0.1
SSLB				IAmb	IAmb	16 56 13.6	
	comp=Z,29nm,1.4s						
KS19	Wonju Array Si	20.55	323	P	P	16 55 50.3	+0.3
KS19				IAmb	IAmb	16 55 57.2	
	comp=Z,17nm,1.2s						
TPUB	Ta-pu	20.84	279	P	P	16 55 52.6	-0.3
TPUB				IAmb	IAmb	16 56 04.0	
	comp=Z,26nm,1.3s						
JEW	Eniwo	21.14	357	P	P	16 55 56.3	+0.7
JKA	Kamikawa-asahi	22.37	359	P	P	16 56 07.2	+0.5
JKA				IAmb	IAmb	16 56 19.7	
	comp=Z,25nm,1.2s						
ASAJ	Asahikawa	22.38	359	P	P	16 56 07.5	+0.8
	comp=Z,9.8nm,0.7s,baz=224,slow=12,SNR=11						
KNMB	Chin-men Tao	22.91	282	P	P	16 56 12.4	+0.5
NJ2	Nanjing	23.93	301	*e*P	P	16 56 22.5	+1.5
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.5s						
USA0B	Ussuriysk Arra	24.27	340	P	P	16 56 24.3	+0.3
USRK	Ussuriysk Ar.	24.27	340	P	P	16 56 24.5	+0.6
	comp=Z,3.9nm,0.7s,baz=149,slow=8.8,SNR=8.8						
USRK	Ussuriysk Ar.	24.27	340	P	P	16 56 24.2	+0.2
MDJ	Mudanjiang	25.45	337	P	P	16 56 35.3	+0.8
MDJ				pP	pP	16 57 28.0	-0.7
MDJ				sP	sP	16 58 04.0	-1.3
MDJ				S	S	17 00 43.3	+4.6
MDJ				sS	sS	17 02 21.6	+2.1
MDJ				ScP	ScP	17 03 08.4	+0.4
MDJ				PcS	PcS	17 03 38.3	0.0
MDJ				ScS	ScS	17 06 56.9	-0.4
MDJ				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,180nm,2.9s						
FAKI	Fak Fak	26.66	205	P	P	16 56 44.7	-1.0
FAKI				IAmb	IAmb	16 57 09.1	
	comp=Z,25nm,1.2s						
KLR	Kul'dur	28.93	345	P	P	16 57 06.0	+0.6
	comp=Z,32nm,0.7s,baz=160,slow=7.8,SNR=158						
MYLDM	Lahad Datu	28.94	239	P	P	16 57 07.0	+1.1
MYLDM				IAmb	IAmb	16 57 08.8	
	comp=Z,27nm,1.0s						
TOLI2	Tolitoli	29.86	230	P	P	16 57 13.9	0.0
TOLI2				IAmb	IAmb	16 57 15.8	
	comp=Z,11nm,0.8s						
KKM	Kota Kinabalu	30.31	243	P	P	16 57 17.9	-0.1
KKM				IAmb	IAmb	16 57 28.6	
	comp=Z,17nm,1.0s						
PMG	Port Moresby	31.15	172	P	P	16 57 24.6	-0.5
HHC	Hu-ho-hao-te	32.79	313	*e*P	P	16 57 40.3	+1.0
PEA0B	Petropavlovsk-	33.30	16	P	P	16 57 44.3	+0.9
PETK	Petropavlovsk-	33.30	16	P	P	16 57 44.1	+0.7
	comp=Z,2.0nm,0.7s,baz=243,slow=7.9,SNR=10						
GYA	Guiyang	33.54	285	⇓P	P	16 57 46.5	+0.5
GYA				pmax	pmax		
	comp=Z,4.0nm,1.3s						
DLV	T Lat	34.46	259	P	P	16 57 55.0	+1.0
DLV				IAmb	IAmb	16 57 58.7	
	comp=Z,39nm,1.4s						
SBUM	Sibu	35.61	242	P	P	16 58 04.0	+0.4
SBUM				IAmb	IAmb	16 58 06.1	
	comp=Z,9.1nm,0.5s						
SOEI	Soe	36.31	213	P	P	16 58 07.7	-1.9
SOEI				IAmb	IAmb	16 58 13.2	
	comp=Z,16nm,1.2s						
SLVN	Son La	36.41	277	P	P	16 58 11.1	+0.7
KMI	Kunming	37.12	283	⇑P	P	16 58 13.3	-3.1
KSM	Kuching	37.73	242	P	P	16 58 21.3	-0.1
KSM				IAmb	IAmb	16 58 26.6	
	comp=Z,20nm,1.5s						
MA2	Magadan	38.25	6	P	P	16 58 25.7	+0.7
	comp=Z,4.2nm,0.7s,baz=192,slow=8.2,SNR=10						
MA2	Magadan	38.25	6	P	P	16 58 25.6	+0.5
ULN	Ulaanbaatar	38.93	321	P	P	16 58 31.8	+0.7
SONM	Songino Array	39.31	321	P	P	16 58 34.9	+0.8
	comp=Z,2.0nm,0.6s,baz=133,slow=8.2,SNR=20						
SONM				ScP	ScP	17 03 56.8	+1.1
	comp=Z,0.2nm,0.5s,baz=155,slow=3.6,SNR=2.4						
SONM	Songino Array	39.31	321	P	P	16 58 34.6	+0.5
AMKA	Amchitka	40.82	34	P	P	16 58 46.0	-0.3
JAGI	Jajag, Banyuwa	41.30	227	P	P	16 58 49.1	-1.5
JAGI				IAmb	IAmb	16 58 50.3	
	comp=Z,20nm,0.6s						
YAK	Yakutsk	41.37	350	P	P	16 58 50.5	-0.1
	comp=Z,12nm,0.5s,baz=58,slow=0.7,SNR=24						
YAK	Yakutsk	41.37	350	P	P	16 58 50.0	-0.5
YAK				IAmb	IAmb	16 58 51.5	
	comp=Z,29nm,0.8s						
CHTO	Chiang Mai	41.44	274	P	P	16 58 51.7	0.0
CM31	Chiang Mai Arr	41.51	274	P	P	16 58 52.5	+0.1
CMAR	Chiang Mai Arr	41.51	274	P	P	16 58 53.0	+0.7
	comp=Z,2.4nm,0.5s,baz=81,slow=6.3,SNR=25						
CMAR	Chiang Mai Arr	41.51	274	P	P	16 58 52.6	+0.3
SEY	Seymchan	41.70	6	P	P	16 58 54.0	+0.8
	comp=Z,3.6nm,0.9s,baz=181,slow=6.0,SNR=22						
WR0	Warramunga Arr	42.23	192	P	P	16 58 57.4	-0.6
WR0				IAmb	IAmb	16 58 58.5	
	comp=Z,22nm,1.1s						
WRAB	Tennant Creek	42.24	192	P	P	16 58 57.6	-0.5
WRAB				IAmb	IAmb	16 58 58.2	
	comp=Z,25nm,0.5s						
WB2	Warramunga Arr	42.25	192	P	P	16 58 57.6	-0.5
WB2				IAmb	IAmb	16 58 58.3	
	comp=Z,26nm,0.5s						
WRA	Warramunga Arr	42.25	192	P	P	16 58 57.9	-0.3
	comp=Z,18nm,0.6s,baz=17,slow=9.0,SNR=162						
WRA				PcP	PcP	17 00 46.1	+0.1
	comp=Z,0.8nm,0.6s,baz=10,slow=3.3,SNR=2.7						
WRA				ScP	ScP	17 04 09.2	+1.6
	comp=Z,0.6nm,0.9s,baz=20,slow=4.3,SNR=4.5						
WRA	Warramunga Arr	42.25	192	P	P	16 58 57.0	-1.2
MYKOM	Kota Tinggi	43.02	248	P	P	16 59 05.3	+0.9
MYKOM				IAmb	IAmb	16 59 29.3	
	comp=Z,28nm,1.4s						
FITZ	Fitzroy Crossi	43.08	205	P	P	16 59 04.5	-0.3
	comp=Z,7.8nm,0.6s,baz=22,slow=8.8,SNR=31						
FITZ	Fitzroy Crossi	43.08	205	P	P	16 59 04.3	-0.5
ADK	Adak	43.23	36	P	P	16 59 06.6	+1.1
ADK				IAmb	IAmb	16 59 07.5	
	comp=Z,51nm,1.2s						
UGM	Wanagama	43.45	231	P	P	16 59 07.5	-0.3
UGM				IAmb	IAmb	16 59 22.1	
	comp=Z,46nm,1.0s						
KULM	Kulim	44.20	255	P	P	16 59 14.5	+0.7
KULM				IAmb	IAmb	16 59 15.9	
	comp=Z,14nm,0.7s						
IPM	Ipoh	44.22	253	P	P	16 59 14.4	+0.4
ATKA	Atka Island	44.74	36	P	P	16 59 18.6	+1.1
LEM	Lembang	44.88	235	P	P	16 59 19.6	+0.3
	comp=Z,29nm,0.6s,baz=24,slow=5.6,SNR=11						
CISI	Cisompet, Garu	45.20	234	P	P	16 59 19.1	-2.6
CISI				IAmb	IAmb	16 59 24.8	
	comp=Z,32nm,0.7s						
AS31	Alice Springs	45.96	192	P	P	16 59 26.3	-1.1
ASAR	Alice Springs	45.96	192	P	P	16 59 26.6	-0.8
	comp=Z,3.6nm,0.5s,baz=16,slow=11,SNR=58						
ASAR				ScP	ScP	17 04 24.2	+1.5
	comp=Z,0.3nm,0.8s,baz=15,slow=3.8,SNR=2.2						
ASAR	Alice Springs	45.96	192	P	P	16 59 26.4	-1.0
PSI	Prapat	46.85	253	P	P	16 59 35.6	+1.0
	comp=Z,6.1nm,0.4s,baz=0.5,slow=2.4,SNR=9.1						
SHL	Shillong	46.87	285	P	P	16 59 34.5	-0.2
SHL				IAmb	IAmb	16 59 35.1	
	comp=Z,9.0nm,0.4s						
MNAI	Manna	47.07	241	P	P	16 59 35.3	-0.9
LSA	Lhasa	47.18	291	P	P	16 59 37.2	-0.1
PSA00	Pilbara Seismi	48.62	209	P	P	16 59 47.3	-0.5
PSA00				IAmb	IAmb	16 59 52.1	
	comp=Z,19nm,1.1s						
PSA00	Pilbara Seismi	48.62	209	P	P	16 59 46.7	-1.1
PSA00				IAmb	IAmb	17 00 00.6	
	comp=Z,8.4nm,0.7s						
GSI	Gunungsitoli	48.73	252	P	P	16 59 48.8	0.0
GSI				IAmb	IAmb	16 59 49.5	
	comp=Z,21nm,0.6s						
UNV	Unalaska Valle	49.66	37	P	P	16 59 55.9	+0.8
PINNC	Pines Island,	50.01	150	P	P	16 59 57.5	-0.7
	comp=Z,96nm,1.5s						
AKUT	Akutan	50.16	37	P	P	16 59 59.8	+0.9
TAPN	Taplejung	50.39	288	*e*P	P	17 00 02.0	+0.6
	comp=Z,7.3nm,0.3s						
WMQ	Urumqi	50.54	309	*e*P	P	17 00 03.8	+1.8
WMQ				pmax	pmax		
	comp=Z,8.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,220nm,6.3s						
TIXI	Tiksi	50.66	354	P	P	17 00 01.9	-0.4
ODAN	Odare	50.73	288	*e*P	P	17 00 04.2	+0.3
	comp=Z,7.7nm,0.3s						
RAMN	Ramite	51.42	288	*e*P	P	17 00 03.7	-5.3
	comp=Z,7.3nm,0.5s						
GUN	Gumba	51.94	289	*e*P	P	17 00 14.1	+1.1
	comp=Z,12nm,0.5s						
PKI	Pulchoki	52.39	289	*e*P	P	17 00 15.7	-0.6
	comp=Z,4.4nm,0.5s						
PKIN	Phulchoki	52.40	289	*e*P	P	17 00 16.2	-0.1
	comp=Z,4.9nm,0.5s						
KKN	Kakani	52.48	289	*e*P	P	17 00 17.6	+0.8
DMN	Daman	52.65	289	*e*P	P	17 00 16.3	-1.8
GKN	Gorkha	53.02	289	*e*P	P	17 00 21.5	+0.9
	comp=Z,7.7nm,0.6s						
STKA	Stephens Creek	53.28	182	P	P	17 00 21.7	-0.3
	comp=Z,8.2nm,0.5s,baz=359,slow=7.3,SNR=22						
STKA	Stephens Creek	53.28	182	P	P	17 00 21.4	-0.7
SDPT	Sand Point	53.45	36	P	P	17 00 23.4	+0.4
DANN	Dangsing	53.74	290	*e*P	P	17 00 26.6	+0.6
CNBA	Chernabura Isl	53.81	37	P	P	17 00 26.2	+0.5
FORT	Forrest	54.13	196	P	P	17 00 27.8	-0.5
FORT				IAmb	IAmb	17 00 28.9	
	comp=Z,21nm,0.7s						
ZAA0	Zalesovo Array	54.18	322	P	P	17 00 28.6	+0.3
ZALV	Zalesovo Beam	54.18	322	P	P	17 00 28.8	+0.5
	comp=Z,1.5nm,0.4s,baz=107,slow=7.1,SNR=7.8						
ZALV				PcP	PcP	17 01 28.4	-0.3
	comp=Z,1.3nm,0.5s,baz=114,slow=4.7,SNR=2.7						
ZALV	Zalesovo Beam	54.18	322	P	P	17 00 28.2	-0.1
MK31	Makanchi Array	54.66	313	P	P	17 00 32.5	+0.5
MKAR	Makanchi Array	54.66	313	P	P	17 00 32.5	+0.6
	comp=Z,0.7nm,0.5s,baz=90,slow=8.6,SNR=17						
MKAR				PcP	PcP	17 01 31.0	+0.3
	comp=Z,0.4nm,0.4s,baz=78,slow=4.5,SNR=6.0						
MKAR				ScP	ScP	17 05 00.2	+0.3
	comp=Z,0.6nm,0.9s,baz=90,slow=4.3,SNR=4.2						
MKAR	Makanchi Array	54.66	313	P	P	17 00 32.3	+0.4
CHGN	Chignik	54.82	36	P	P	17 00 33.1	+0.3
MAKZ	Makanchi	54.87	313	P	P	17 00 33.9	+0.4
MORW	Morawa	56.81	208	P	P	17 00 46.8	-0.5
MORW				IAmb	IAmb	17 01 14.9	
	comp=Z,23nm,1.4s						
RDOG	Red Dog Mine	56.91	21	P	P	17 00 46.1	-1.2
SII	Sitkinak Islan	57.17	36	P	P	17 00 50.6	+1.2
KURK	Kurchatov	57.44	317	P	P	17 00 52.3	+0.9
TTA	Tatalina	57.74	28	P	P	17 00 53.6	+0.3
TTA				IAmb	IAmb	17 01 06.5	
	comp=Z,11nm,1.4s						
OHAK	Old Harbor	57.78	35	P	P	17 00 54.2	+0.7
OHAK				IAmb	IAmb	17 01 07.9	
	comp=Z,26nm,1.1s						
NRIK	Noril'sk	57.98	340	P	P	17 00 54.9	0.0
	comp=Z,2.3nm,0.5s,baz=116,slow=8.1,SNR=9.6						
NRIK	Noril'sk	57.98	340	P	P	17 00 55.3	+0.4
KDAK	Kodiak Island	58.25	35	P	P	17 00 55.7	-1.1
	comp=Z,7.1nm,0.5s,baz=274,slow=15,SNR=1.3						
KDAK	Kodiak Island	58.25	35	P	P	17 00 56.1	-0.7
TOO	Toolangi	58.98	178	P	P	17 01 02.1	0.0
TOO				IAmb	IAmb	17 01 08.2	
	comp=Z,12nm,1.2s						
KSH	Kashi	59.18	304	P	P	17 01 07.4	+3.6
KSH				pmax	pmax		
	comp=Z,120nm,6.0s						
CNPM	China Poot	59.23	33	P	P	17 01 03.4	-0.2
PPLA	Purkeypile	59.43	29	P	P	17 01 05.3	+0.3
PPLA				IAmb	IAmb	17 01 11.5	
	comp=Z,11nm,1.2s						
BRLK	Bradley Lake	59.45	32	P	P	17 01 05.2	+0.2
NWAO	Narrogin (SRO)	59.67	205	P	P	17 01 06.6	-0.2
KTH	Kantishna Hill	60.12	28	P	P	17 01 10.5	+0.9
KTH				IAmb	IAmb	17 01 11.8	
	comp=Z,18nm,1.2s						
BPAW	Bear Paw Mtn.	60.21	28	P	P	17 01 11.4	+1.3
BPAW				IAmb	IAmb	17 01 12.5	
	comp=Z,12nm,1.0s						
SEW	Seward	60.22	32	P	P	17 01 10.5	+0.4
A21K	Barrow	60.24	19	P	P	17 01 11.2	+1.1
A21K				IAmb	IAmb	17 01 12.3	
	comp=Z,8.7nm,0.8s						
TRF	Thorofare Moun	60.38	28	P	P	17 01 12.0	+0.5
TRF				IAmb	IAmb	17 01 13.4	
	comp=Z,12nm,0.9s						
PMR	Palmer	60.59	31	P	P	17 01 12.8	+0.1
PMR				IAmb	IAmb	17 01 13.4	
	comp=Z,14nm,1.0s						
GHO	Glory Hole Cre	60.72	30	P	P	17 01 14.3	+0.6
GHO				IAmb	IAmb	17 01 18.1	
	comp=Z,29nm,1.3s						
BWN	Browne	60.88	28	P	P	17 01 15.7	+1.1
BWN				IAmb	IAmb	17 01 22.6	
	comp=Z,24nm,1.0s						
KNK	Knik Glacier	60.88	31	P	P	17 01 14.9	+0.2
KNK				IAmb	IAmb	17 01 16.3	
	comp=Z,15nm,0.7s						
XMAS	Kiritimati	60.95	100	P	P	17 01 14.1	-1.8
SML	Sawmill	61.00	30	P	P	17 01 16.1	+0.6
SML				IAmb	IAmb	17 01 16.8	
	comp=Z,23nm,1.0s						
RND	Reindeer	61.01	29	P	P	17 01 15.9	+0.3
RND				IAmb	IAmb	17 01 35.7	
	comp=Z,11nm,1.4s						
I23K	Minto, Yukon-K	61.10	26	P	P	17 01 17.4	+1.4
I23K				IAmb	IAmb	17 01 18.8	
	comp=Z,6.6nm,0.6s						
COLD	Coldfoot	61.20	24	P	P	17 01 17.7	+1.0
SCM	Sheep Creek Mo	61.48	30	P	P	17 01 18.9	+0.2
WRH	Wood River Hil	61.52	27	P	P	17 01 19.2	+0.4
MDM	Murphy Dome	61.54	27	P	P	17 01 19.4	+0.3
CCB	Clear Creek Bu	61.67	27	P	P	17 01 20.0	+0.1
TOLK	Toolik Lake Re	61.76	23	P	P	17 01 22.0	+1.6
TOLK				IAmb	IAmb	17 01 23.0	
	comp=Z,8.1nm,0.6s						
POKR	Poker Plat Res	61.90	27	P	P	17 01 23.0	+1.6
POKR				IAmb	IAmb	17 01 51.0	
	comp=Z,4.9nm,0.7s						
HDA	Harding Lake	62.00	28	P	P	17 01 21.9	-0.2
HDA				IAmb	IAmb	17 01 22.6	
	comp=Z,8.2nm,1.1s						
M24K	Tolsona, Glenn	62.05	30	P	P	17 01 23.8	+1.3
IL31		62.08	27	P	P	17 01 22.1	-0.4
ILAR	Eielson Array	62.08	27	P	P	17 01 22.4	-0.2
	comp=Z,4.0nm,0.7s,baz=258,slow=5.3,SNR=37						
ILAR	Eielson Array	62.08	27	P	P	17 01 22.2	-0.4
KLU	Klutina	62.10	31	P	P	17 01 23.9	+1.1
KLU				IAmb	IAmb	17 01 39.0	
	comp=Z,19nm,1.4s						
PAX	Paxson	62.47	29	P	P	17 01 26.1	+0.8
PAX				IAmb	IAmb	17 01 27.0	
	comp=Z,15nm,1.5s						
BRVK	Borovoye	62.70	320	P	P	17 01 27.4	+0.6
N25K	Chitina, Valde	62.75	31	P	P	17 01 28.3	+1.2
N25K				IAmb	IAmb	17 01 51.1	
	comp=Z,19nm,1.4s						
KK31	Karatay Array	63.01	308	P	P	17 01 29.5	+0.4
KKAR	Karatay Array	63.01	308	P	P	17 01 29.6	+0.5
KKAR	Karatay Array	63.01	308	P	P	17 01 29.1	0.0
FYU	Fort Yukon	63.01	25	P	P	17 01 30.3	+1.6
FYU				IAmb	IAmb	17 01 52.5	
	comp=Z,14nm,1.4s						
SUCK	Suckling Hills	63.04	33	P	P	17 01 29.5	+0.5
RAO	Raoul Island	63.04	142	P	P	17 01 29.1	-0.3
GLB	Gilahina Butte	63.11	31	P	P	17 01 30.4	+1.0
GLB				IAmb	IAmb	17 01 53.1	
	comp=Z,8.1nm,1.1s						
DOT	Dot Lake	63.17	29	P	P	17 01 30.1	+0.3
VRDI	Verde Repeater	63.27	31	P	P	17 01 31.5	+0.8
VRDI				IAmb	IAmb	17 01 48.4	
	comp=Z,24nm,1.3s						
CRQM	Cirque	63.39	32	P	P	17 01 32.5	+1.0
MCARA	McCarthy VSAT	63.48	31	P	P	17 01 33.4	+1.5
TGL	Tana Glacier	63.55	32	P	P	17 01 33.2	+0.8
BALM	Baldy	63.80	32	P	P	17 01 34.8	+0.8
TABL	Table Mountain	64.37	32	P	P	17 01 38.7	+0.9
EGAK	Eagle	64.52	27	P	P	17 01 39.0	+0.5
HYT	Haines Junctio	66.16	32	P	P	17 01 50.0	+0.9
HYT				IAmb	IAmb	17 01 52.4	
	comp=Z,10nm,1.1s						
INK	Inuvik	67.60	24	P	P	17 01 58.7	+0.8
	comp=Z,2.7nm,0.6s,baz=286,slow=2.4						
INK	Inuvik	67.60	24	P	P	17 01 58.4	+0.5
URZ	Urewera	67.64	152	P	P	17 01 58.0	-0.5
BESE	Bessie Mountai	67.64	34	P	P	17 01 59.4	+1.0
QRZ	Quartz Range	67.94	156	P	P	17 01 59.3	-1.0
QRZ				IAmb	IAmb	17 02 27.6	
	comp=Z,9.5nm,1.0s						
BKZ	Black Stump Fm	68.12	153	P	P	17 02 01.0	-0.5
BKZ				IAmb	IAmb	17 02 02.6	
	comp=Z,15nm,1.4s						
THZ	Tophouse	68.89	157	P	P	17 02 06.4	+0.2
THZ				IAmb	IAmb	17 02 28.9	
	comp=Z,19nm,1.4s						
SNZO	South Karori	69.19	155	P	P	17 02 07.2	-0.8
WRAK	Wrangell Islan	69.23	36	P	P	17 02 09.5	+1.4
WRAK				IAmb	IAmb	17 02 33.9	
	comp=Z,18nm,1.1s						
ARU	Arti	69.24	324	P	P	17 02 08.8	+0.6
BFZ	Birch Farm	69.28	154	P	P	17 02 08.2	-0.3
MSWZ	Moikau Station	69.50	155	P	P	17 02 09.2	-0.7
ABKAR	Akbulak array	69.51	316	P	P	17 02 10.1	+0.1
ABKAR	Akbulak array	69.51	316	P	P	17 02 10.0	0.0
PLWZ	Palliser	69.63	155	P	P	17 02 10.0	-0.7
DLBC	Dease Lake	70.17	34	P	P	17 02 16.2	+2.3
	comp=Z,2.2nm,0.8s,baz=330,slow=4.3,SNR=4.3						
C36M	Paulatuk	70.90	22	P	P	17 02 18.1	+0.2
C36M				IAmb	IAmb	17 02 19.0	
	comp=Z,6.9nm,0.6s						
EUNU	Eureka	75.12	8	P	P	17 02 43.0	+0.4
NLWA	Neilton Lookou	76.33	44	P	P	17 02 52.0	+2.1
NLWA				IAmb	IAmb	17 02 57.9	
	comp=Z,24nm,1.4s						
YKA	Yellowknife Ar	76.50	28	P	P	17 02 51.0	+0.6
	comp=Z,5.2nm,0.6s,baz=293,slow=4.9,SNR=93						
KRMB	Red Mountain	78.09	50	P	P	17 03 01.4	+1.5
KRMB				IAmb	IAmb	17 03 25.2	
	comp=Z,13nm,1.3s						
KEV	Kevo	78.35	341	P	P	17 03 00.8	+0.3
HUMO	Hull Mountain	78.42	49	P	P	17 03 03.4	+1.9
KHMM	Horse Mountain	78.42	51	P	P	17 03 03.8	+2.1
KHMM				IAmb	IAmb	17 03 28.2	
	comp=Z,21nm,1.5s						
LTY	Liberty	78.44	44	P	P	17 03 02.5	+0.9
LTY				IAmb	IAmb	17 03 03.0	
	comp=Z,6.9nm,1.4s						

YBH	Yreka Blue Hor	78.88	50	P	P	17 03 05.5	+1.4
	comp=Z,2.7nm,0.9s,baz=295,slow=4.2,SNR=6.4						
YBH	Yreka Blue Hor	78.88	50	IAmb	IAmb	17 03 06.7	
	comp=Z,3.4nm,0.9s						
ARCES	ARCESS Array B	78.91	341	P	P	17 03 03.8	+0.2
	comp=Z,5.7nm,0.6s,baz=72,slow=8.1,SNR=32						
KCPM	Cahto Peak	78.91	52	P	P	17 03 06.2	+1.8
KCPM				IAmb	IAmb	17 03 06.9	
	comp=Z,7.8nm,0.6s						
B08A	Colville Reser	78.92	42	P	P	17 03 05.3	+1.2
PINE	Pine Mountain	79.42	47	P	P	17 03 08.7	+1.6
PINE				IAmb	IAmb	17 03 09.8	
	comp=Z,6.4nm,0.7s						
K05A	Summer Lake	79.82	48	P	P	17 03 10.8	+1.6
K05A				IAmb	IAmb	17 03 12.3	
	comp=Z,5.6nm,1.1s						
NEW	Newport	80.33	42	P	P	17 03 13.1	+1.4
	comp=Z,3.8nm,0.7s,baz=272,slow=6.1,SNR=5.0						
BMO	Blue Mountains	81.48	45	P	P	17 03 19.1	+1.2
CMB	Columbia Colle	81.82	52	P	P	17 03 20.7	+1.0
CMB				IAmb	IAmb	17 03 21.7	
	comp=Z,3.8nm,0.7s						
KBZ	Khabaz	82.33	314	P	P	17 03 22.9	+0.8
	comp=Z,3.7nm,0.8s,baz=81,slow=4.5,SNR=10						
FINES	FINESS Array B	83.16	334	P	P	17 03 25.5	-0.5
	comp=Z,3.7nm,0.4s,baz=67,slow=5.0,SNR=33						
NVAR	Mina Array Bea	83.20	51	P	P	17 03 28.2	+1.2
	comp=Z,2.5nm,0.7s,baz=276,slow=5.4,SNR=21						
ELK	Elko	84.48	48	P	P	17 03 34.7	+1.3
	comp=Z,1.7nm,0.5s,baz=309,slow=3.4,SNR=8.7						
ELK	Elko	84.48	48	P	P	17 03 33.1	-0.3
ELK				IAmb	IAmb	17 03 36.0	
	comp=Z,5.7nm,1.1s						
AKASG	Malin Array Be	87.48	324	P	P	17 03 46.3	-1.1
	comp=Z,0.3nm,0.3s,baz=50,slow=5.2,SNR=1.3						
NOA	NORSAR Array B	88.93	339	P	P	17 03 53.5	-0.7
	comp=Z,1.4nm,1.1s,baz=51,slow=4.2,SNR=3.7						
FRB	Frobisher Bay	91.32	14	P	P	17 04 05.1	+0.1
	comp=Z,2.1nm,0.8s,baz=27,slow=5.5,SNR=3.6						
VNA2	Neumayer--Watz	127.81	192	PKPdf	PKPdf	17 10 02.9	+0.1
VNA1	Neumayer--Stat	128.21	192	PKPdf	PKPdf	17 09 56.1	-7.3
PLCA	Paso Flores	145.80	131	PKPbc	PKPab	17 10 38.9	+0.1
	comp=Z,10nm,0.6s,baz=240,slow=4.1,SNR=43						
PLCA	Paso Flores	145.80	131		PKPbc	17 10 38.3	+0.5
LPAZ	La Paz	150.00	85	PKPbc	PKiKP	17 10 51.4	+0.4
	comp=Z,1.4nm,0.5s,baz=217,slow=5.1,SNR=8.2						

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*IDC **16** 17:20:30.0±0.5, 14°.89S×166°.94E, h0^{km}, mb4.4/22, mb1 4.5/24, mb1mx4.4/41, mbtmp4.4/24, ML4.7/2, MS3.7/12, Ms1 3.7/12, ms1mx3.4/36, Error ellipse: s-maj=19.3km s-min=13.6km az=89.0*

*BJI **16** 17:20:33.2±0.0, 14°.74S×167°.06E, h27^{km}, mB5.0/22, mb4.6/39, Ms4.8/4, Ms7 4.6/5*

*NEIC **16** 17:20:34.0±1.4, 14°.94S±0°.08×166°.9E±0°.1, h30^{km}±4^{km}, mb4.8/45, Error ellipse: s-maj=18.6km s-min=1.9km az=54.0*

ISC 16 17:20:36.9±0.4**, 15°.01S**±0°.05×**166°.99E**±0°.07**, h57^{km}, n134, σ1^{s}55**/133**, mb4.5**/63**, MS3.7**/10**, 3C-2D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.48	154		Pn	17 20 45.3	-3.2
SANVU				Sg	Sn	17 20 53.4	-3.5
DZM	Mont Dzumac	7.04	184	Pn	Pn	17 22 17.5	0.0
	6.1nm,0.3s,baz=12,slow=23,SNR=16						
DZM				Sn	Sn	17 23 36.7	+0.5
	4.9nm,0.3s,baz=141,slow=23,SNR=5.8						
DZM				LR	LR	17 24 55.2	
	comp=Z,767nm,18.2s,baz=20,slow=37						
DZM	Mont Dzumac	7.04	184	*e*Pn	Pn	17 22 16.7	-0.8
	29nm,0.3s						
DZM				*e*Sn	Sn	17 23 31.3	-4.9
	28nm,0.3s						
DZM				*e*LR	LR	17 23 49.9	
	comp=Z,850nm,23.6s						
DZM	Mont Dzumac	7.04	184	Pn	Pn	17 22 14.7	-2.8
HNR	Honiara	8.83	308	Pn	Pn	17 22 39.8	-2.2
	17nm,0.3s,baz=188,slow=3.6,SNR=13						
HNR				Sn	Sn	17 24 14.2	-5.9
	13nm,0.3s,baz=200,slow=12,SNR=2.0						
HNR				LR	LR	17 25 47.5	
	comp=Z,462nm,18.4s,baz=178,slow=36						
HNR	Honiara	8.83	308	Pn	Pn	17 22 37.7	-4.3
MSVF	Nonsavu	10.96	106	Pn	Pn	17 23 17.8	+6.7
	0.4nm,0.3s,baz=248,slow=10,SNR=6.4						
MSVF				LR	LR	17 26 41.8	
	comp=Z,656nm,18.6s,baz=289,slow=34						
MSVF	Nonsavu	10.96	106	Pn	Pn	17 23 08.6	-2.5
TARA	Tarawa	17.29	20	Pn	Pn	17 24 30.9	-3.6
TARA				IAmb	IAmb	17 24 42.8	
	comp=Z,75nm,0.8s						
PMG	Port Moresby	20.16	284	P	Pn	17 25 10.7	+1.7
	comp=Z,9.1nm,0.9s,baz=18,slow=6.4,SNR=2.4						
PMG	Port Moresby	20.16	284	P	P	17 25 06.8	+0.1
PMG				IAmb	IAmb	17 25 18.4	
	comp=Z,54nm,1.4s						
ARMA	Armidale	20.84	220	P	P	17 25 14.2	+0.1
OUZ	Omahuta	20.98	165		P	17 25 13.5	-2.0
OUZ				IAmb	IAmb	17 25 28.8	
	comp=Z,27nm,1.0s						
URZ	Urewera	24.83	161	P	P	17 25 56.1	+2.3
	comp=Z,3.2nm,0.3s,baz=74,slow=6.5,SNR=3.0						
URZ				LR	LR	17 34 56.0	
	comp=Z,120nm,19.4s,baz=30,slow=35						
BKZ	Black Stump Fm	25.47	163	P	P	17 26 02.1	+2.4
MSWZ	Moikau Station	27.27	166	P	P	17 26 17.3	+1.4
KHZ	Kahutara	27.89	170	P	P	17 26 22.5	+1.2
KHZ				IAmb	IAmb	17 26 50.5	
	comp=Z,20nm,1.3s						
LTZ	Lake Taylor	28.05	172	P	P	17 26 23.0	+0.2
LTZ				IAmb	IAmb	17 26 30.5	
	comp=Z,14nm,1.1s						
STKA	Stephens Creek	28.60	230	P	P	17 26 28.2	+0.3
	comp=Z,1.7nm,0.7s,baz=58,slow=9.2,SNR=5.6						
STKA	Stephens Creek	28.60	230	P	P	17 26 27.4	-0.4
RPZ	Rata Peaks	28.82	174	P	P	17 26 31.5	+1.8
	comp=Z,8.5nm,0.9s,baz=36,slow=23,SNR=4.1						
RPZ				LR	LR	17 36 24.5	
	comp=Z,148nm,19.4s,baz=2.0,slow=33						
RPZ	Rata Peaks	28.82	174	P	P	17 26 30.9	+1.2
RPZ				IAmb	IAmb	17 26 51.9	
	comp=Z,30nm,1.4s						
WB0	Warramunga Arr	31.43	257	P	P	17 26 51.8	-1.2
WB0				IAmb	IAmb	17 27 17.0	
	comp=Z,12nm,1.4s						
WB2	Warramunga Arr	31.48	256	P	P	17 26 52.1	-1.4
WRA	Warramunga Arr	31.49	256	P	P	17 26 52.0	-1.6
	comp=Z,1.0nm,0.6s,baz=85,slow=9.2,SNR=12						
WRA				PcP	PcP	17 29 46.5	+0.8
	comp=Z,1.8nm,1.0s,baz=87,slow=2.4,SNR=4.8						
WRA				LR	LR	17 39 10.3	
	comp=Z,272nm,19.0s,baz=95,slow=36						
WRA	Warramunga Arr	31.49	256	P	P	17 26 52.1	-1.5
ASAR	Alice Springs	32.32	249	P	P	17 27 00.9	+0.1
	comp=Z,4.3nm,0.8s,baz=71,slow=8.8,SNR=15						
ASAR				PcP	PcP	17 29 48.9	+1.0
	comp=Z,0.6nm,0.9s,baz=77,slow=5.8,SNR=2.2						
ASAR				LR	LR	17 39 40.2	
	comp=Z,177nm,18.1s,baz=82,slow=36						
ASAR	Alice Springs	32.32	249	P	P	17 27 00.5	-0.3
BBOO	Buckleboo	33.19	232	P	P	17 27 09.2	+0.8
BBOO				IAmb	IAmb	17 27 15.2	
	comp=Z,26nm,1.4s						
SIJI	Sorong	37.97	288	LR	LR	17 43 28.3	
	comp=Z,115nm,18.6s,baz=120,slow=36						
FORT	Forrest	38.92	239	P	P	17 27 57.3	0.0
FITZ	Fitzroy Crossi	39.69	260	P	P	17 28 03.6	-0.3
MORW	Morawa	48.90	244	P	P	17 29 17.2	-0.2
MORW				IAmb	IAmb	17 29 35.7	
	comp=Z,22nm,1.3s						
KKM	Kota Kinabalu	54.49	289	P	P	17 30 00.4	+1.0
JGF	Kuroka	57.63	332	P	P	17 30 20.5	-0.9
JGF				IAmb	IAmb	17 30 26.2	
	comp=Z,4.9nm,0.7s						
JMN	Monobe	57.84	327	P	P	17 30 22.4	-0.4
MJAR	Matsushiro Arr	58.03	333	P	P	17 30 23.5	-0.6
	comp=Z,3.3nm,0.9s,baz=166,slow=8.8,SNR=8.6						
MJAR	Matsushiro Arr	58.03	333	P	P	17 30 24.1	0.0
MAJO	Matsushiro	58.03	333	P	P	17 30 23.9	-0.2
MAJO				IAmb	IAmb	17 30 47.5	
	comp=Z,13nm,1.3s						
MAT	Matsushiro	58.03	333	P	P	17 30 23.7	-0.4
JNU	Nakatsue	58.99	325	P	P	17 30 31.2	+0.4
	comp=Z,6.7nm,0.8s,baz=140,slow=12,SNR=1.8						
TPUB	Ta-pu	59.21	309	P	P	17 30 32.0	-0.6
JHS	Saijyo	59.22	328	P	P	17 30 32.6	+0.2
SSLB	Suanglung	59.25	310	P	P	17 30 32.3	-0.5
SSLB				IAmb	IAmb	17 30 46.5	
	comp=Z,6.5nm,0.9s						
JSD	Sado	59.26	334	P	P	17 30 33.0	+0.5
JTM	Tenmabayashi	60.50	338	P	P	17 30 41.4	+0.4
VNDA	Vanda	62.58	181	P	P	17 30 56.4	+1.8
	comp=Z,3.3nm,0.7s,baz=357,slow=7.7,SNR=7.2						
VNDA	Vanda	62.58	181	P	P	17 30 56.2	+1.7
VNDA				IAmb	IAmb	17 31 03.0	
	comp=Z,9.8nm,0.9s						
JKA	Kamikawa-asahi	62.91	340	P	P	17 30 57.0	-0.1
KSRS	Korea Array	63.82	326	P	P	17 31 03.1	-0.2
	comp=Z,1.9nm,0.9s,baz=148,slow=7.4,SNR=4.6						
KSRS				LR	LR	17 57 14.4	
	comp=Z,31nm,19.9s,baz=19,slow=35						
NJ2	Nanjing	65.69	316	*e*P	P	17 31 18.6	+3.0
NJ2				pmax	pmax		
	comp=Z,2.0nm,0.5s						
USRK	Ussuriysk Ar.	67.01	333	P	P	17 31 23.6	-0.3
	comp=Z,3.0nm,0.7s,baz=132,slow=8.0,SNR=6.1						
USRK	Ussuriysk Ar.	67.01	333	P	P	17 31 24.2	+0.4
WHN	Wuhan	67.93	312	⇑P	P	17 31 30.9	+1.0
PETK	Petropavlovsk-	68.31	354	P	P	17 31 32.6	+0.8
	comp=Z,11nm,0.9s,baz=137,slow=6.6,SNR=12						
PETK				LR	LR	17 53 21.2	
	comp=Z,44nm,22.0s,baz=168,slow=29						
PETK	Petropavlovsk-	68.31	354	P	P	17 31 32.2	+0.4
MDJ	Mudanjiang	68.40	332	P	P	17 31 33.1	+0.5
MDJ				IAmb	IAmb	17 31 36.1	
	comp=Z,9.9nm,1.0s						
CN2	Changchun	69.75	329	*e*P	P	17 31 41.8	+0.9
KLR	Kul'dur	71.15	336	P	P	17 31 50.5	+1.2
	comp=Z,3.0nm,0.7s,baz=141,slow=6.2,SNR=5.9						
ENH	Enshi	71.33	310	P	P	17 31 51.1	+0.2
ENH				IAmb	IAmb	17 31 52.2	
	comp=Z,14nm,1.0s						
GYA	Guiyang	71.65	305	⇓P	P	17 31 54.4	+1.4
GYA				pmax	pmax		
	comp=Z,4.0nm,1.4s						
BJT	Baijiatuau	72.30	321	P	P	17 31 56.2	-0.3
XAN	Xi'an	73.68	313	P	P	17 32 05.8	+1.0
XAN				pP	PcP	17 32 17.4	-3.0
XAN				pmax	pmax		
	comp=Z,9.0nm,0.8s						
XAN	Xi'an	73.68	313	P	P	17 32 04.7	-0.2
XAN				IAmb	IAmb	17 32 06.2	
	comp=Z,5.3nm,0.7s						
KMI	Kunming	74.22	302	⇑P	P	17 32 10.3	+1.9
KMI				pP	PcP	17 32 19.3	-3.8
KMI				sP	pP	17 32 24.8	+0.6
KMI				pmax	pmax		
	comp=Z,8.0nm,1.0s						
LAMP	Lampang	74.23	295	P	P	17 32 17.0	+8.7
	comp=Z,20nm,0.8s						
CM36	Chiang Mai Arr	74.70	294	P	P	17 32 13.0	+1.9
CM35	Chiang Mai Arr	74.71	294	P	P	17 32 12.0	+0.9
CM04	Chiang Mai Arr	74.76	294	P	P	17 32 13.0	+1.6
	comp=Z,4.9nm,1.0s						
CM09	Chiang Mai Arr	74.77	294	P	P	17 32 14.0	+2.5
	comp=Z,5.1nm,1.0s						
CM01	Chiang Mai Arr	74.78	294	P	P	17 32 14.6	+3.0
	comp=Z,4.7nm,1.0s						
CM05	Chiang Mai Arr	74.79	294	P	P	17 32 14.1	+2.5
	comp=Z,3.7nm,0.9s						
CM02	Chiang Mai Arr	74.80	294	P	P	17 32 14.2	+2.5
	comp=Z,4.3nm,0.9s						
CM31	Chiang Mai Arr	74.81	294	P	P	17 32 14.8	+3.1
	comp=Z,113nm,1.0s						
CM31	Chiang Mai Arr	74.81	294	P	P	17 32 11.2	-0.6
CMAR	Chiang Mai Arr	74.81	294	P	P	17 32 13.7	+1.9
	comp=Z,2.7nm,0.9s,baz=126,slow=4.8,SNR=25						
CMAR				LR	LR	18 04 07.9	
	comp=Z,12nm,20.3s,baz=200,slow=35						
CMAR	Chiang Mai Arr	74.81	294	P	P	17 32 12.9	+1.2
CM15	Chiang Mai Arr	74.83	294	P	P	17 32 14.0	+2.2
	comp=Z,38nmcomp=Z,4.7nm,0.9s						
CM13	Chiang Mai Arr	74.83	294	P	P	17 32 14.0	+2.2
	comp=Z,3.3nm,0.9s						
CMMT	Chiang Mai	74.94	295	P	P	17 32 13.2	+0.8
	comp=Z,2.6nm,1.5s						
CM33	Chiang Mai Arr	74.94	295	P	P	17 32 14.0	+1.5
CHTO	Chiang Mai	74.94	295	P	P	17 32 10.9	-1.6
CM32	Chiang Mai Arr	74.97	294	P	P	17 32 24.0	+11
QSPA	South Pole Qui	75.02	180	P	P	17 32 12.8	+0.5
QSPA				IAmb	IAmb	17 32 20.5	
	comp=Z,11nm,0.9s						
MA2	Magadan	75.48	352	P	P	17 32 12.8	-1.8
HHC	Hu-ho-hao-te	75.62	320	*e*P	P	17 32 16.8	+0.8
HHC				pmax	pmax		
	comp=Z,4.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,170nm,5.4s						
CD2	Chengdu	75.96	308	P	P	17 32 19.1	+1.0
CD2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
LZH	Lanzhou	78.31	312	*e*P	P	17 32 33.8	+2.5
LZH				pP	pP	17 32 45.9	-1.2
LZH				sP	sP	17 32 49.1	-4.2
LZH				pmax	pmax		
	comp=Z,18nm,1.1s						
ULN	Ulaanbaatar	82.20	324	P	P	17 32 51.6	-0.3
YAK	Yakutsk	82.22	343	P	P	17 32 51.5	0.0
TNA	Tin City	82.53	10	P	P	17 32 53.3	+0.3
TNA				IAmb	IAmb	17 32 55.5	
	comp=Z,5.6nm,1.0s						
SONM	Songino Array	82.56	324	P	P	17 32 54.3	+0.5
	comp=Z,1.1nm,0.9s,baz=156,slow=8.0,SNR=7.1						
SONM	Songino Array	82.56	324	P	P	17 32 53.9	+0.1
GTA	Gaotai	82.66	314	⇓P	P	17 32 56.5	+1.9
GTA				pP	pP	17 33 07.8	-2.6
GTA				sP	sP	17 33 11.6	-5.0
GTA				pmax	pmax		
	comp=Z,6.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,43nm,4.4s						
GTA				LR	LR		
	comp=Z,160nm,14.5s						
GTA				LR	LR		
	comp=Z,130nm,16.0s						
GTA				LR	LR		
	comp=Z,130nm,15.6s						
SHL	Shillong	83.46	299	P	P	17 32 59.7	+0.6
SHL				IAmb	IAmb	17 33 01.0	
	comp=Z,8.0nm,0.8s						
RDOG	Red Dog Mine	85.66	11	P	P	17 33 09.4	+0.4
YBH	Yreka Blue Hor	85.81	45	P	P	17 33 11.3	+0.9
	comp=Z,0.6nm,0.4s,baz=172,slow=4.2,SNR=3.9						
YBH				LR	LR	18 03 03.2	
	comp=Z,35nm,20.6s,baz=251,slow=30						
YBH	Yreka Blue Hor	85.81	45	P	P	17 33 11.8	+1.4
YBH				IAmb	IAmb	17 33 13.0	
	comp=Z,5.2nm,1.4s						
IMAR	Indian Mountai	85.91	15	P	P	17 33 11.5	+1.2
TLY	Talaya	86.07	326	P	P	17 33 11.3	-0.1
	comp=Z,5.2nm,0.6s,baz=117,slow=14,SNR=2.6						
BELA	Belgrano 2	86.47	176	P	P	17 33 13.7	+0.7
ILAR	Eielson Array	86.88	18	P	P	17 33 15.0	0.0
	comp=Z,2.1nm,0.7s,baz=237,slow=4.8,SNR=30						
ILAR	Eielson Array	86.88	18	P	P	17 33 14.7	-0.3
TAPN	Taplejung	87.57	299	*e*P	P	17 33 20.4	+0.8
	comp=Z,6.3nm,0.7s						
NVAR	Mina Array Bea	87.66	49	P	P	17 33 20.9	+1.2
	comp=Z,0.7nm,0.8s,baz=227,slow=7.6,SNR=4.5						
NVAR	Mina Array Bea	87.66	49	P	P	17 33 19.0	-0.7
ODAN	Odare	87.69	298	*e*P	P	17 33 20.9	+0.8
	comp=Z,9.7nm,0.8s						
COLD	Coldfoot	87.77	15	P	P	17 33 19.6	+0.3
COLD				IAmb	IAmb	17 33 24.4	
	comp=Z,5.8nm,1.0s						
SYO	Syowa Base	88.36	197	⇑*e*pP	pP	17 33 33.4	-5.1
RAMN	Ramite	88.39	298	*e*P	P	17 33 24.1	+0.6
	comp=Z,4.5nm,0.5s						
GUN	Gumba	89.29	299	*e*P	P	17 33 28.6	+0.8
	comp=Z,11nm,0.8s						
PKI	Pulchoki	89.59	299	*e*P	P	17 33 29.7	+0.5
	comp=Z,8.8nm,0.7s						
PKIN	Phulchoki	89.60	299	*e*P	P	17 33 29.6	+0.4
	comp=Z,9.4nm,0.7s						
KKN	Kakani	89.76	299	*e*P	P	17 33 30.3	+0.4
	comp=Z,10nm,0.8s						
DMN	Daman	89.86	299	*e*P	P	17 33 31.1	+0.8
	comp=Z,19nm,0.9s						
GKN	Gorkha	90.37	299	*e*P	P	17 33 32.7	+0.1
	comp=Z,14nm,1.1s						
DANN	Dangsing	91.21	299	*e*P	P	17 33 36.7	0.0
	comp=Z,4.7nm,0.6s						
WMQ	Urumqi	92.73	315	*e*P	P	17 33 45.0	+1.9
VNA3	Neumayer Olymp	93.93	181	P	P	17 33 47.8	-0.3
VNA2	Neumayer--Watz	94.19	182	P	P	17 33 47.6	-1.7
VNA1	Neumayer--Stat	94.49	182	P	P	17 33 48.1	-2.5
TXAR	Lajitas Array	96.65	62	P	P	17 34 01.8	+0.4
	comp=Z,0.2nm,0.4s,baz=251,slow=5.6,SNR=1.5						
MKAR	Makanchi Array	97.22	316	P	Pdif	17 34 04.4	+0.9
	comp=Z,0.9nm,0.8s,baz=93,slow=6.0,SNR=8.1						
ZALV	Zalesovo Beam	97.45	324	P	P	17 34 04.0	-0.3
	comp=Z,0.9nm,0.6s,baz=116,slow=3.4,SNR=6.8						
ZALV	Zalesovo Beam	97.45	324	P	P	17 34 03.5	-0.8
YKA	Yellowknife Ar	97.92	27	P	P	17 34 05.4	-0.8
	comp=Z,0.5nm,0.6s,baz=252,slow=3.9,SNR=12						
LPAZ	La Paz	117.32	118	PKP	PKiKP	17 39 18.9	+1.2
	comp=Z,0.8nm,0.6s,baz=304,slow=3.6,SNR=2.6						
ARCES	ARCESS Array B	120.45	345	PKP	PKiKP	17 39 23.4	+1.9
	comp=Z,3.2nm,0.8s,baz=57,slow=1.8,SNR=13						
ARCES	ARCESS Array B	120.45	345		PKiKP	17 39 22.2	+0.7
FINES	FINESS Array B	125.88	338	PKP	PKiKP	17 39 33.4	+1.0
	comp=Z,1.9nm,0.8s,baz=347,slow=4.3,SNR=5.4						
BDFB	Brasilia	133.92	130	PKP	PKPdf	17 39 49.4	+0.6
	comp=Z,1.7nm,0.8s,baz=164,slow=8.0,SNR=3.6						
CLL	Collm	138.20	336	*e*PKPdf	PKPdf	17 39 56.0	+0.5
KEST	Kesra	151.25	320	PKPbc	PKiKP	17 40 26.2	+1.2
	comp=Z,7.8nm,0.8s,baz=14,slow=4.2,SNR=4.1						
TORD	Torodi Ar. Bea	165.61	264	PKPab	PKPab	17 41 35.5	+0.3
	baz=129,slow=3.9						

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*NEIC **16** 17:47:47.3±1.5, 35°.55N±0°.05×140°.24E±0°.08, h63^{km}±8^{km}, mb4.2/3, Error ellipse: s-maj=10.2km s-min=7.1km az=119.0*

*JMA **16** 17:47:47.6±0.1, 35°.57N×140°.06E, h69^{km}±2^{km}, M3.6 Broadband fault plane solution: P waves. NP1: ϕ_s245.00000°, δ37.00000°, λ-127.00000°. NP2: ϕ_s108.00000°, δ61.00000°, λ-66.00000°. Principal axes: T Plg13.0000°, Azm181.0000°; N Plg21.0000°, Azm276.0000°; P Plg65.0000°, Azm62.0000°;*

JMA Felt I J1.

*NIED **16** 17:47:47.6, 35°.57N×140°.06E, h69^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-3.48; $M_{\theta\theta}$3.62; $M_{\phi\phi}$-0.14; $M_{r\theta}$-1.90; $M_{\theta\phi}$2.57; $M_{\phi r}$3.02; Fault plane solution: $M_0$5.55000×10^{14} NP1:ϕ_s95.00000°, δ58.00000°, λ-45.00000°. NP2:ϕ_s213.00000°, δ53.00000°, λ-139.00000°.*

*IDC **16** 17:47:48.2±1.4, 35°.46N×140°.16E, h70^{km}±15^{km}, mb3.4/13, mb1 3.7/16, mb1mx3.5/41, mbtmp3.8/16, MS3.3/3, Ms1 3.4/3, ms1mx2.9/30 Error ellipse: s-maj=18.3km s-min=8.0km az=73.0*

ISC 16 17:47:48.3±0.7**, 35°.59N**±0°.05×**140°.13E**±0°.04**, h67^{km}**±7^{km}**, n58, σ1^{s}58**/60**, mb3.7**/14**, 3C-3D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSMT	Sammumatsuo	0.27	77	⇓P	Pn	17 47 59.4	+0.6
JSMT				S	Sn	17 48 08.7	+2.2
JIHU	Itakohorinouch	0.50	40	P	Pn	17 48 01.2	+0.5
JIHU				S	Sn	17 48 11.4	+1.5
CHOJ	Chosi	0.60	79	P	Pn	17 48 02.2	+0.4
CHOJ				*e*S	Sn	17 48 13.5	+1.7
JYT	Yasato	0.64	5	⇑P	Pn	17 48 01.7	-0.6
JYT				*e*S	Sn	17 48 11.8	-0.8
JYT	Yasato	0.64	5		Pn	17 48 01.7	-0.6
BSO3	Boso 3	0.84	158	⇓P	Pn	17 48 03.9	-0.4
JOD2	Odawara 2	0.91	250	⇓P	Pn	17 48 04.7	-0.8
JOD2				S	Sn	17 48 16.6	-1.6
JAG	Ashikaga	1.00	327	⇑P	Pn	17 48 06.4	-0.2
JIM2	Oshima 3	1.04	214	P	Pn	17 48 05.7	-1.4
BSO1	Boso 1	1.16	143	⇑P	Pn	17 48 07.5	-0.6
BSO1				S	Sn	17 48 24.0	+1.0
JKT	Katashina	1.38	329	P	Pn	17 48 11.1	-0.5
JKT				S	Sn	17 48 28.9	-0.2
MJAR	Matsushiro Arr	1.83	302	P	Pn	17 48 17.6	+0.1
	3.7nm,0.3s,baz=152,slow=14,SNR=111						
MJAR				S	Sn	17 48 41.3	+1.6
	9.0nm,0.3s,baz=163,slow=26,SNR=5.3						
MJAR	Matsushiro Arr	1.83	302		Pn	17 48 17.1	-0.4
MAJO	Matsushiro	1.83	302		Pn	17 48 17.9	+0.4
MAT	Matsushiro	1.83	302	P	Pn	17 48 17.9	+0.4
MAT				S	Sn	17 48 41.5	+1.8
MJB9	Matsu-Tunnel	1.83	302		Pn	17 48 18.2	+0.7
JSG	Sagara	1.83	241		Pn	17 48 17.5	-0.1
JGF	Kuroka	2.26	271		Pn	17 48 24.1	+0.7
JMM	Marumori	2.34	13		Pn	17 48 24.8	+0.4
JHJ	Hachijo jima 2	2.48	187	P	Pn	17 48 25.7	-0.6
	69nm,0.3s,baz=72,slow=22,SNR=14						
JHJ				S	Sn	17 48 52.7	-2.7
	95nm,0.3s,baz=73,slow=19,SNR=2.4						
JHJ2	Mitsune	2.48	186	Pn	Pn	17 48 25.2	-1.1
INU	Inuyama	2.55	266		Pn	17 48 27.3	0.0
JSD	Sado	2.87	329		Pn	17 48 31.7	+0.1
JWT	Wachi	3.87	267		Pn	17 48 45.9	+0.5
JTM	Tenmabayashi	5.25	8	Pn	Pn	17 49 04.6	+0.5
JMN	Monobe	5.47	252	Pn	Pn	17 49 05.4	-1.9
JHS	Saijyo	5.77	266	Pn	Pn	17 49 13.0	+1.7
ERM	Erimo	6.84	19	Pn	Pn	17 49 23.9	-1.9
JEW	Eniwo	7.32	8	Pn	Pn	17 49 31.1	-1.3
JCJ	Chichijima	8.64	168	P	Pn	17 49 45.4	-5.3
	14nm,0.3s,baz=300,slow=20,SNR=2.6						
JCJ				S	Sn	17 51 08.1	-18
	15nm,0.3s,baz=88,slow=23,SNR=2.3						
JCJ	Chichijima	8.64	168		Pn	17 49 46.2	-4.4
ASAJ	Asahikawa	8.73	12	P	Pn	17 49 49.8	-1.9
	0.9nm,0.3s,baz=213,slow=13,SNR=18						
ASAJ				S	Sn	17 51 22.2	-6.3
	0.1nm,0.3s,baz=146,slow=33,SNR=2.1						
ASAJ				LR	LR	17 53 15.6	
	comp=Z,49nm,21.8s,baz=145,slow=37						
JKA	Kamikawa-asahi	8.73	12		Pn	17 49 49.5	-2.2
KSRS	Korea Array	10.00	284	P	Pn	17 50 12.0	+2.9
	0.1nm,0.3s,baz=96,slow=14,SNR=2.9						
USRK	Ussuriysk Ar.	10.63	326	P	Pn	17 50 20.1	+2.4
	baz=150,slow=12,SNR=3.5						
PETK	Petropavlovsk-	21.46	30	P	P	17 52 31.3	+0.4
	3.2nm,1.0s,baz=236,slow=20,SNR=3.5						
MA2	Magadan	24.99	13	P	P	17 53 05.6	+0.2
	2.4nm,0.5s,baz=187,slow=13,SNR=4.4						
MA2	Magadan	24.99	13	P	P	17 53 04.4	-1.0
MA2				IAmb	IAmb	17 53 08.1	
	comp=Z,3.8nm,0.8s						
SONM	Songino Array	27.77	307	P	P	17 53 31.8	+1.0
	comp=Z,0.4nm,0.6s,baz=109,slow=8.2,SNR=3.6						
H11N2	WAKE ISLAND Hy	28.36	117	T	T	18 23 17.3	
	baz=308,slow=75,SNR=31						
H11N1	WAKE ISLAND Hy	28.37	117	T	T	18 23 18.8	
	baz=308,slow=75,SNR=20						
H11N3	WAKE ISLAND Hy	28.38	117	T	T	18 23 19.1	
	baz=308,slow=75,SNR=22						
SEY	Seymchan	28.41	12	P	P	17 53 37.0	+0.9
	comp=Z,0.3nm,0.4s,baz=211,slow=5.1,SNR=4.8						
H11S1	WAKE ISLAND Hy	29.01	119	T	T	18 23 55.5	
	baz=312,slow=76,SNR=14						
H11S3	WAKE ISLAND Hy	29.01	119	T	T	18 23 50.9	
	baz=312,slow=76,SNR=9.7						
H11S2	WAKE ISLAND Hy	29.02	119	T	T	18 23 53.2	
	baz=312,slow=76,SNR=9.5						
ZALV	Zalesovo Beam	42.14	314	P	P	17 55 34.6	+0.7
	comp=Z,0.5nm,0.5s,baz=98,slow=8.9,SNR=2.8						
MKAR	Makanchi Array	44.03	303	P	P	17 55 49.3	+0.1
	comp=Z,0.4nm,0.6s,baz=89,slow=10,SNR=5.7						
KURK	Kurchatov	46.02	309	P	P	17 56 04.9	0.0
KURK				IAmb	IAmb	17 56 21.9	
	comp=Z,6.8nm,1.4s						
PSI	Prapat	50.16	239	LR	LR	18 20 22.4	
	comp=Z,38nm,18.6s,baz=356,slow=39						
ILAR	Eielson Array	51.27	32	P	P	17 56 45.5	+0.5
	comp=Z,0.7nm,0.7s,baz=266,slow=6.1,SNR=7.6						
WRA	Warramunga Arr	55.49	187	P	P	17 57 14.5	-1.9
	comp=Z,0.8nm,0.6s,baz=0.2,slow=7.7,SNR=22						
ASAR	Alice Springs	59.22	187	P	P	17 57 41.6	-1.0
	comp=Z,0.3nm,0.5s,baz=21,slow=11,SNR=15						
YKA	Yellowknife Ar	65.58	29	P	P	17 58 24.2	-0.4
	comp=Z,0.3nm,0.6s,baz=303,slow=6.1,SNR=8.4						
FINES	FINESS Array B	69.61	332	P	P	17 58 49.7	-0.3
	comp=Z,3.8nm,1.0s,baz=20,slow=6.1,SNR=4.4						
NOA	NORSAR Array B	75.11	337	LR	LR	18 37 33.2	
	comp=Z,72nm,18.5s,baz=275,slow=40						
NVAR	Mina Array Bea	76.69	52	P	P	17 59 33.6	+1.2

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
	comp=Z,0.5nm,0.5s,baz=310,slow=5.1,SNR=5.7						
PDAR	Pinedale Array	79.42	45	P	P	17 59 47.4	-0.1
	comp=Z,0.6nm,0.6s,baz=271,slow=1.3,SNR=7.1						

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*IDC **16** 18:44:57.6±4.6, 20°.54S×169°.55E, h192km±41km, mb3.4/2, mb1 3.5/3, mb1mx3.1/37, mbtmp3.7/3, Error ellipse: s-maj=209.6km s-min=45.8km az=155.0*

*NOU **16** 18:45:19.9, 21°.25S×168°.02E, h0km, MLv2.9, Loyalty Islands*

ISC 16 18:44:58.0±2.6**, 20°.5S**±0°.3×**169°.5E**±0°.3**, h200km, n10, σ1ˢ24**/11**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LIFNC	LIFOU	2.10	261	P	Pn	18 45 36.5	-1.0
YATNC	Mamie plateau,	2.87	236	P	Pn	18 45 44.3	-1.8
OUENC	Ouen Island, N	3.11	231	P	Pn	18 45 48.1	-0.9
DZM	Mont Dzumac	3.23	240	P	Pn	18 45 51.4	+0.9
	0.9nm,0.3s,baz=128,slow=19,SNR=6.5						
DZM				S	Sn	18 46 30.9	-0.6
	2.2nm,0.3s,baz=348,slow=18,SNR=2.8						
DZM	Mont Dzumac	3.23	240	P	Pn	18 45 49.6	-0.9
ONTNC	Ouen Toro	3.34	236	P	Pn	18 45 53.3	+1.6
NOUC	Port Laguerre	3.36	240	P	Pn	18 45 51.5	-0.4
WRA	Warramunga Arr	32.92	265	P	P	18 51 14.9	+1.1
	0.5nm,0.4s,baz=96,slow=8.7,SNR=14						
ASAR	Alice Springs	33.05	258	P	P	18 51 15.9	+1.0
	1.4nm,0.6s,baz=86,slow=8.9,SNR=25						
GERES	GERESS Array B	145.66	331	PKPbc	PKPbc	19 04 12.7	-0.6
	0.8nm,0.6s,baz=29,slow=2.2,SNR=7.9						

IDC 16 18:46:54.4±1.7**, 1°.51N×127°.32E, h0km, mb3.4**/4**, mb1 3.6**/4**, mb1mx3.2**/48**, mbtmp3.4**/4**, Error ellipse: s-maj=139.6km s-min=22.1km az=67.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.41	162	P	P	18 51 53.9	-0.9
	0.3nm,0.5s,baz=342,slow=11,SNR=5.0						
ASAR	Alice Springs	25.83	166	P	P	18 52 28.2	+0.6
	0.3nm,0.6s,baz=346,slow=13,SNR=5.8						
MKAR	Makanchi Array	59.70	326	P	P	18 57 01.1	+0.3
	0.3nm,0.4s,baz=120,slow=8.1,SNR=8.9						
KURBB	Kurchatov Arra	63.91	328	P	P	18 57 28.7	-0.4
	0.5nm,0.6s,baz=127,slow=6.5,SNR=5.3						

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*IDC **16** 18:49:27.3±2.0, 7°.63S×128°.23E, h143km±27km, mb2.6/1, mb1 3.3/6, mb1mx2.9/49, mbtmp3.7/6, Error ellipse: s-maj=25.6km s-min=19.5km az=124.0*

ISC 16 18:49:26.6±1.0**, 7°.82S**±0°.07×**128°.42E**±0°.09**, h150km, n6, σ2ˢ60**/10**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	5.26	243	P	Pn	18 50 44.7	+1.1
	14nm,0.3s,baz=117,slow=3.1,SNR=35						
BATI				S	Sn	18 51 42.5	-1.2
	4.1nm,0.3s,baz=330,slow=20,SNR=6.3						
SIJI	Sorong	7.46	22	P	Pn	18 51 11.9	-1.0
	1.1nm,0.3s,baz=225,slow=23,SNR=12						
FITZ	Fitzroy Crossi	10.57	195	P	Pn	18 51 55.2	+1.0
	0.3nm,0.3s,baz=23,slow=10.0,SNR=21						
FITZ				S	Sn	18 53 48.0	-3.2
	0.4nm,0.3s,baz=310,slow=19,SNR=2.2						
WRA	Warramunga Arr	13.35	155	P	P	18 52 33.3	-1.3
	0.3nm,0.3s,baz=323,slow=14,SNR=9.1						
WRA				S	Sn	18 54 56.7	-1.4
	0.5nm,0.3s,baz=321,slow=25,SNR=8.3						
ASAR	Alice Springs	16.61	162	P	Pn	18 53 16.2	+5.3
	0.2nm,0.3s,baz=340,slow=11,SNR=13						
ASAR				S	S	18 56 14.9	-0.8
	0.1nm,0.3s,baz=334,slow=19,SNR=2.2						
MKAR	Makanchi Array	68.06	328	P	P	19 00 09.8	-0.2
	0.1nm,0.4s,baz=128,slow=4.6,SNR=1.8						

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*IDC **16** 18:58:31.7±1.0, 39°.62N×75°.57E, h0km, mb3.6/10, mb1 3.7/16, mb1mx3.5/44, mbtmp3.5/16, ML2.8/5, MS2.6/1, Ms1 2.6/1, ms1mx2.3/39, Error ellipse: s-maj=19.6km s-min=16.2km az=62.0*

*SOME **16** 18:58:34.1, 39°.92N×75°.55E, h5km*

*KRNET **16** 18:58:35.0±0.1, 39°.75N×75°.55E, mb4.0*

*NNC **16** 18:58:38.9±0.8, 40°.07N×75°.62E, h0km, mb4.4, mpv4.1, Error ellipse: s-maj=6.2km s-min=4.4km az=160.0*

ISC 16 18:58:33.1±1.4**, 39°.92N**±0°.04×**75°.57E**±0°.02**, h0km**±9km**, n116, σ1ˢ84**/164**, mb3.7**/9**, 33C-23D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSH	Kashi	0.50	142	Pg	Pn	18 58 50.8	+3.2
KSH				Sg	Sn	18 59 00.6	+3.5
KSH				smax	smax		
	comp=N,3μm,0.3s						
KSH				smax	smax		
	comp=E,1μm,0.4s						
ARLS	Aral	2.16	334	⇓iP	Pg	18 59 14.6	0.0
	baz=37						
ARLS				⇓iS	Sg	18 59 44.0	+1.4
	baz=37						
OHH	Osh	2.22	287	⇓iP	Pb	18 59 14.3	+0.2
	baz=91						
OHH				⇓iS	Sb	18 59 42.7	+0.5
	baz=91						
ULHL	Ulahol	2.38	12	⇑iP	Pb	18 59 18.3	+1.3
	baz=12						
ULHL				⇑iS	Sg	18 59 49.9	+0.2
	baz=12						
ULHL	Ulahol	2.38	12	P	Pb	18 59 18.3	+1.3
	SNR=41						
ARSB	Arslanbob	2.42	306	⇑iP	Pb	18 59 17.5	-0.1
	baz=10.0						
ARSB				⇑iS	Sb	18 59 48.7	+0.6
	baz=10.0						
UCH	Uchtor	2.45	341	⇑iP	Pb	18 59 19.1	+0.9
	baz=43						
UCH				⇑iS	Sg	18 59 51.1	-0.6
	baz=43						
UCH	Uchtor	2.45	341	P	Pb	18 59 19.4	+1.2
	SNR=46						
KDJ	Kajisay	2.52	28	⇑iP	Pb	18 59 20.0	+0.6
	baz=27						
KDJ				⇑iS	Sb	18 59 53.1	+2.0
	baz=27						
AML	Almayashu	2.63	328	⇑iP	Pb	18 59 21.5	+0.2
	baz=30						
AML				⇑iS	Sb	18 59 55.3	+1.0
	baz=30						
AML	Almayashu	2.63	328	P	Pb	18 59 21.9	+0.6
	SNR=24						
KBK	Karagaybulak	2.78	350	⇓iP	Pb	18 59 23.9	+0.2
	baz=51						
KBK				⇓iS	Sb	18 59 59.2	+0.8
	baz=51						
KBK	Karagaybulak	2.78	350	P	Pb	18 59 24.2	+0.5
	SNR=280						
AAK	Ala-Archa	2.84	344	Pn	Pb	18 59 25.2	+0.4
	comp=E,20nm,0.3s,baz=145,slow=7.5,SNR=145						
AAK				Sn	Sb	19 00 00.4	+0.2
	comp=E,8.7nm,0.3s,baz=42,slow=21,SNR=7.3						
AAK				LR	LR	19 00 57.0	
	comp=E,103nm,20.9s,baz=204,slow=47						
AAK	Ala-Archa	2.84	344	⇓iP	Pb	18 59 24.6	-0.1
	baz=45						
AAK				⇓iS	Sb	19 00 00.3	+0.2
	baz=45						
AAK	Ala-Archa	2.84	344	P	Pb	18 59 25.2	+0.4
	SNR=32						
AAK	Ala-Archa	2.84	344	⇑Pn	Pb	18 59 25.1	+0.4
	comp=E,98nm,0.7s						
AAK				⇓Lg	Lg	19 00 01.0	
	comp=E,155nm,0.7s						
DRK	Karamyk	2.94	263	⇑eP	Pn	18 59 23.3	+1.9
	baz=66						
DRK				⇑iS	Sn	18 59 58.4	+0.9
	baz=66						
FRU1	Bishkek	2.98	347	⇑iP	Pb	18 59 26.3	-0.8
	baz=48						
FRU1				⇑iS	Sb	19 00 03.9	-0.1
	baz=48						
TKM2	Tokmak 2	3.00	0	⇑iP	Pb	18 59 26.9	-0.7
	baz=1.0						
TKM2				⇑iS	Sb	19 00 04.6	-0.3
	baz=1.0						
TKM2	Tokmak 2	3.00	0	P	Pb	18 59 27.5	-0.1
	SNR=82						
TKM2	Tokmak 2	3.00	0	⇑Pn	Pb	18 59 27.3	-0.3
	comp=E,46nm,0.4s						
TKM2				⇓Lg	Lg	19 00 10.4	
	comp=E,202nm,0.6s						
EKS2	Erkin-Say	3.06	334	⇑iP	Pb	18 59 27.2	-1.3
	baz=36						
EKS2				⇑iS	Sb	19 00 05.3	-1.1
	baz=36						
EKS2	Erkin-Say	3.06	334	P	Pb	18 59 28.2	-0.2
	SNR=74						
KST	Kastek	3.14	5	eP	Pg	18 59 33.3	0.0
	comp=E,91nm,0.5s						
KST				eS	Sg	19 00 15.6	+1.7
	comp=E,304nm,0.8s						
CHMS	Chumysh	3.14	349	⇓iP	Pb	18 59 28.4	-1.4
	baz=50						
CHMS				⇓iS	Sb	19 00 07.7	-1.0
	baz=50						
CHMS	Chumysh	3.14	349	P	Pb	18 59 29.1	-0.7
	SNR=14						
IZV	Izvestkoviy	3.21	14	eP	Pg	18 59 34.5	-0.2
	comp=E,100nm,0.4s						
IZV				eS	Sg	19 00 17.6	+1.2
	comp=E,264nm,0.6s						
IZV	Izvestkoviy	3.21	14	Pg	Pg	18 59 35.0	+0.3
	comp=E,100nm,0.4s						
IZV				Lg	Lg	19 00 17.7	
	comp=E,264nm,0.6s						
ANVS	Anan'yevo	3.27	28	⇓iP	Pb	18 59 30.6	-1.5
	baz=27						
ANVS				⇓iS	Sb	19 00 11.1	-1.4
	baz=27						
TNSS	Tian-Shan	3.29	18	eP	Pg	18 59 35.4	-0.7
	comp=E,45nm,0.4s						
TNSS				eS	Sg	19 00 19.2	+0.5
	comp=E,105nm,0.9s						
TNSS	Tian-Shan	3.29	18	Pg	Pg	18 59 36.0	-0.1
	comp=E,45nm,0.4s						
TNSS				Lg	Lg	19 00 19.5	
	comp=E,105nm,0.9s						
DGS	Degeres	3.33	3	eP	Pg	18 59 36.3	-0.6
	comp=E,74nm,0.5s						
DGS				eS	Sg	19 00 20.8	+0.8
	comp=E,141nm,0.7s						
DGS	Degeres	3.33	3	Pg	Pg	18 59 36.9	0.0
	comp=E,74nm,0.5s						
DGS				Lg	Lg	19 00 20.9	
	comp=E,141nm,0.7s						
MRKS	Merke	3.33	329	eP	Pg	18 59 36.3	-0.7
	comp=E,68nm,0.6s						
MRKS				eS	Sg	19 00 20.7	+0.5
	comp=E,67nm,0.4s						
MRKS	Merke	3.33	329	Pg	Pg	18 59 37.1	+0.1
	comp=E,68nm,0.6s						
MRKS				Lg	Lg	19 00 20.9	
	comp=E,67nm,0.4s						
PRZ	Przheval'sk	3.34	39	⇑iP	Pb	18 59 31.2	-2.0
	baz=37						
PRZ				⇑iS	Sb	19 00 12.0	-2.4
	baz=37						
MDOK	Medeo	3.43	18	eP	Pg	18 59 38.1	-0.7
	comp=E,52nm,0.4s						
MDOK				eS	Sg	19 00 23.8	+0.5
	comp=E,250nm,0.8s						
MDOK	Medeo	3.43	18	⇑Pn	Pb	18 59 32.4	-2.4
	comp=E,36nm,0.6s						
MDOK				⇓Lg	Lg	19 00 22.4	
	comp=E,282nm,0.7s						
MDOK	Medeo	3.43	18	Pg	Pg	18 59 38.3	-0.5
	comp=E,52nm,0.4s						
MDOK				Lg	Lg	19 00 23.4	
	comp=E,250nm,0.8s						
AAA	Alma-Ata	3.44	17	eP	Pg	18 59 38.8	-0.3
	comp=E,46nm,0.4s						
AAA				eS	Sg	19 00 24.9	+1.3
	comp=E,148nm,0.8s						
AAA	Alma-Ata	3.44	17	Pg	Pg	18 59 39.4	+0.3
	comp=E,46nm,0.4s						
AAA				Lg	Lg	19 00 24.9	
	comp=E,148nm,0.8s						
USP	Ospenovka	3.44	347	⇓iP	Pb	18 59 32.7	-2.3
	baz=48						
USP				⇓iS	Sb	19 00 14.9	-2.5
	baz=48						
USP	Ospenovka	3.44	347	P	Pb	18 59 32.9	-2.1
	SNR=67						
MNAS	Manas	3.46	319	⇓iP	Pn	18 59 32.0	+3.7
	baz=21						
MNAS				⇓iS	Sn	19 00 13.6	+3.5
	baz=21						
KNDC	Almaty	3.46	17	⇓Pn	Pb	18 59 33.7	-1.6
	comp=E,86nm,0.7s						
KNDC				⇑Lg	Lg	19 00 25.0	
	comp=E,944nm,0.8s						
KOTS	Kotyrbulak	3.51	19	eP	Pg	18 59 39.7	-0.7
	comp=E,99nm,0.4s						
KOTS				eS	Sg	19 00 26.7	+0.8
	comp=E,732nm,0.8s						
KOTS	Kotyrbulak	3.51	19	Pg	Pg	18 59 39.9	-0.5
	comp=E,99nm,0.4s						
KOTS				Lg	Lg	19 00 26.4	
	comp=E,732nm,0.8s						
BTK	Batken	3.66	274	⇑iP	Pn	18 59 33.1	+2.1
	baz=76						
BTK				⇑iS	Sn	19 00 15.6	+0.8
	baz=76						
TRKS	Terek-Say	3.73	297	⇑iP	Pn	18 59 34.8	+2.7
	baz=99						
TRKS				⇑iS	Sn	19 00 18.6	+1.7
	baz=99						
KRBS	Karabastau	3.78	1	eP	Pg	18 59 44.5	-1.0
	comp=E,34nm,0.2s						
KRBS				eS	Sg	19 00 34.9	+0.4
	comp=E,73nm,0.4s						
KRBS	Karabastau	3.78	1	Pg	Pg	18 59 44.5	-1.0
	comp=E,34nm,0.2s						
KRBS				Lg	Lg	19 00 33.6	
	comp=E,73nm,0.4s						
SATY	Saty	3.79	33	eP	Pg	18 59 44.5	-1.3
	comp=E,38nm,0.8s						
SATY				eS	Sg	19 00 34.9	-0.1
	comp=E,88nm,0.6s						
SATY	Saty	3.79	33	Pg	Pg	18 59 45.6	-0.3
	comp=E,38nm,0.8s						
SATY				Lg	Lg	19 00 35.2	
	comp=E,88nm,0.6s						
KTBS	Karatobe	3.88	12	eP	Pg	18 59 46.2	-1.3
	comp=E,42nm,0.7s						
KTBS				eS	Sg	19 00 38.0	+0.1
	comp=E,299nm,0.3s						
KTBS	Karatobe	3.88	12	Pg	Pg	18 59 46.6	-0.9
	comp=E,42nm,0.7s						
KTBS				Lg	Lg	19 00 38.0	
	comp=E,299nm,0.3s						
ZHN	Zhinishke	3.90	33	eP	Pg	18 59 47.0	-0.7
	comp=E,6.0nm,0.2s						
ZHN				eS	Sg	19 00 39.1	+0.9
	comp=E,37nm,0.7s						
ZHN	Zhinishke	3.90	33	Pg	Pg	18 59 47.7	-0.1
	comp=E,6.0nm,0.2s						
ZHN				Lg	Lg	19 00 38.8	
	comp=E,37nm,0.7s						
KUU	Kurty	4.02	8	eP	Pg	18 59 48.4	-1.7
	comp=E,25nm,0.4s						
KUU				eS	Sg	19 00 41.4	-0.7
	comp=E,180nm,0.9s						
KUU	Kurty	4.02	8	Pg	Pg	18 59 48.9	-1.2
	comp=E,25nm,0.4s						
KUU				Lg	Lg	19 00 40.0	
	comp=E,180nm,0.9s						
KURS	Kuram	4.07	28	eP	Pg	18 59 49.7	-1.3
	comp=E,30nm,0.5s						
KURS				eS	Sg	19 00 43.6	-0.1
	comp=E,69nm,0.9s						
KURS	Kuram	4.07	28	Pg	Pg	18 59 50.4	-0.6
	comp=E,30nm,0.5s						
KURS				Lg	Lg	19 00 43.5	
	comp=E,69nm,0.9s						
CHKK	Chushkaly	4.08	15	eP	Pg	18 59 49.6	-1.6
	comp=E,38nm,0.7s						
CHKK				eS	Sg	19 00 43.6	-0.4
	comp=E,219nm,0.8s						
CHKK	Chushkaly	4.08	15	Pg	Pg	18 59 50.1	-1.1
	comp=E,38nm,0.7s						
CHKK				Lg	Lg	19 00 43.9	
	comp=E,219nm,0.8s						
UZB	Uzynbulak	4.14	38	eP	Pg	18 59 50.8	-1.7
	comp=E,25nm,0.5s						
UZB				eS	Sg	19 00 45.7	-0.3
	comp=E,29nm,0.5s						
UZB	Uzynbulak	4.14	38	Pg	Pg	18 59 51.1	-1.3
	comp=E,25nm,0.5s						
UZB				Lg	Lg	19 00 45.8	
	comp=E,29nm,0.5s						
KPKS	Kokpek	4.24	32	eP	Pg	18 59 52.6	-1.8
	comp=E,44nm,0.7s						
KPKS				eS	Sg	19 00 48.6	-0.8
	comp=E,6μm,0.6s						
SHLS	Shalkode	4.36	41	eP	Pg	18 59 59.8	+3.1
	comp=E,57nm,0.7s						
SHLS				eS	Sg	19 01 01.0	+7.8
	comp=E,120nm,0.7s						
SHLS	Shalkode	4.36	41	Pg	Pg	19 00 00.3	+3.6
	comp=E,57nm,0.7s						
SHLS				Lg	Lg	19 01 00.8	
	comp=E,120nm,0.7s						
PDGK	Podgornoye	4.50	39	Pg	Pg	18 59 57.9	-1.4
	comp=E,9.9nm,0.6s						
PDGK				Lg	Lg	19 00 56.5	
	comp=E,25nm,0.6s						
PDGK	Podgornoye	4.50	39	⇑Pn	Pn	18 59 46.7	+4.0
	comp=E,9.6nm,0.8s						
PDGK				⇓Pg	Pb	18 59 54.7	+1.7
	comp=E,17nm,0.6s						
PDGK				⇑Lg	Lg	19 00 56.3	
	comp=E,100nm,1.1s						
ARXS	Arharly	4.61	21	eP	Pb	18 59 59.0	+4.1
	comp=E,63nm,0.4s						
ARXS				eS	Sg	19 00 59.8	-1.4
	comp=E,68nm,0.5s						
ARXS	Arharly	4.61	21	Pg	Pg	18 59 59.1	-2.3
	comp=E,63nm,0.4s						
ARXS				Lg	Lg	19 00 59.4	
	comp=E,68nm,0.5s						
MNBS	Baschi	4.66	26	eP	Pg	19 00 01.2	-1.3
	comp=E,24nm,0.5s						
MNBS				eS	Sg	19 01 03.2	+0.3
	comp=E,60nm,0.6s						
MNBS	Baschi	4.66	26	Pg	Pg	19 00 00.8	-1.7
	comp=E,24nm,0.5s						
MNBS				Lg	Lg	19 01 02.1	
	comp=E,60nm,0.6s						
KK31	Karatay Array	4.96	312	Pn	Pn	18 59 52.0	+3.2
	comp=E,0.8nm,0.3s,baz=125,slow=12,SNR=30						
KK31				Pg	Pg	19 00 06.5	-1.6
	comp=E,5.4nm,0.6s,baz=133,slow=16,SNR=14						
KK31				⇑Lg	Lg	19 01 13.3	
	comp=E,13nm,0.6s,baz=125,slow=28,SNR=6.5						
KTMS	Ketmen	5.03	44	eP	Pb	19 00 06.6	+4.7
	comp=E,8.2nm,1.1s						
KTMS				eS	Sg	19 01 12.8	-1.7
	comp=E,34nm,0.7s						
KTMS	Ketmen	5.03	44	Pg	Pg	19 00 07.6	-1.8
	comp=E,0.5nm,0.3s						
KTMS				Lg	Lg	19 01 13.0	
	comp=E,34nm,0.7s						
BTLS	Baital	5.25	348	eP	Pg	19 00 11.1	-2.5
	comp=E,9.9nm,0.6s						
BTLS				eS	Sg	19 01 20.5	-1.1
	comp=E,41nm,0.3s						
BTLS	Baital	5.25	348	Pg	Pg	19 00 12.9	-0.8
	comp=E,9.9nm,0.6s						
BTLS				Lg	Lg	19 01 22.8	
	comp=E,41nm,0.3s						
BRLS	Borolday	5.32	308	eP	Pg	19 00 13.6	-1.4
	comp=E,29nm,0.4s						
BRLS				eS	Sg	19 01 24.4	+0.6
	comp=E,22nm,0.6s						
BRLS	Borolday	5.32	308	Pg	Pg	19 00 14.8	-0.2
	comp=E,29nm,0.4s						
BRLS				Lg	Lg	19 01 25.6	
	comp=E,22nm,0.6s						
DJR	Jarkent	5.41	34	eP	Pg	19 00 13.7	-3.1
	comp=E,6.2nm,0.4s						
DJR				eS	Sg	19 01 24.8	-2.2
	comp=E,20nm,0.6s						
DJR	Jarkent	5.41	34	Pg	Pg	19 00 14.2	-2.7
	comp=E,6.2nm,0.4s						
DJR				Lg	Lg	19 01 24.5	
	comp=E,20nm,0.6s						
TDK	Taldyqorghan	5.50	21	Pg	Pg	19 00 15.6	-2.9
TDK				Lg	Lg	19 01 26.7	
KAPS	Kapalarasan	6.05	26	eP	Pb	19 00 24.6	+5.2
	comp=E,8.6nm,0.5s						
KAPS				eS	Sg	19 01 43.6	-3.8
	comp=E,15nm,0.6s						
KAPS	Kapalarasan	6.05	26	Pg	Pg	19 00 25.5	-3.5
	comp=E,8.6nm,0.5s						
KAPS				Lg	Lg	19 01 44.0	
	comp=E,15nm,0.6s						
THW	Thamme Wali	7.75	205	P	Pn	19 00 30.3	+3.2
MAKZ	Makanchi	8.32	32	⇓Pn	Pn	19 00 38.3	+3.4
	comp=E,0.6nm,0.5s						
MAKZ				⇑Lg	Lg	19 02 56.8	
	comp=E,5.1nm,1.1s						
MK31	Makanchi Array	8.44	33	⇑Pn	Pn	19 00 39.9	+3.4
	comp=E,1.1nm,0.5s,baz=206,slow=14,SNR=25						
MK31				⇓Lg	Lg	19 03 03.6	
	comp=E,2.9nm,0.8s,baz=212,slow=29,SNR=4.1						
MKAR	Makanchi Array	8.44	33	Pn	Pn	19 00 39.9	+3.4
	comp=E,0.4nm,0.3s,baz=208,slow=14,SNR=24						
MKAR				Lg	Lg	19 02 57.4	
	comp=E,0.1nm,0.3s,baz=222,slow=16,SNR=2.6						
WMQ	Urumqi	9.85	63	eP	Pn	19 00 58.6	+2.7
WMQ				smax	smax		
	comp=N,9.0nm,0.5s						
WMQ				smax	smax		
	comp=E,10.0nm,0.9s						
KURBB	Kurchatov Arra	10.91	10	Pn	Pn	19 01 12.3	+1.9
	comp=E,0.0nm,0.3s,baz=192,slow=12,SNR=4.1						
KURBB				Lg	Lg	19 04 16.8	
	comp=E,0.1nm,0.3s,baz=190,slow=29,SNR=8.1						
DANN	Dangsing	13.37	147	eP	Pn	19 01 41.1	-3.3
	comp=E,5.7nm,0.2s						
BVAR	Borovoye Array	13.59	347	Pn	Pn	19 01 47.3	+0.4
	comp=E,0.1nm,0.3s,baz=165,slow=20,SNR=5.8						
BVAR				Lg	Lg	19 05 42.5	
	comp=E,0.1nm,0.3s,baz=116,slow=23,SNR=2.7						
GKN	Gorkha	14.05	145	eP	Pn	19 01 50.7	-2.8
	comp=E,11nm,0.3s						
KKN	Kakani	14.52	143	eP	Pn	19 01 58.2	-1.9
	comp=E,4.6nm,0.3s						
GUN	Gumba	14.70	141	eP	Pn	19 02 01.1	-1.5
	comp=E,5.2nm,0.4s						
PKIN	Phulchoki	14.76	144	eP	Pn	19 02 00.9	-2.4
	comp=E,11nm,0.5s						
PKI	Pulchoki	14.77	143	eP	Pn	19 02 00.7	-2.8
	comp=E,8.1nm,0.5s						
ZALV	Zalesovo Beam	15.37	21	Pn	Pn	19 02 12.7	+1.6
	comp=E,0.1nm,0.3s,baz=212,slow=13,SNR=4.4						
RAMN	Ramite	15.85	141	eP	Pn	19 02 14.6	-3.2
	comp=E,12nm,0.6s						
TAPN	Taplejung	16.08	138	eP	Pn	19 02 20.1	-0.7
	comp=E,2.0nm,0.2s						
AKTO	Aktyubinsk	16.20	316	Pn	Pn	19 02 22.5	+0.5
	comp=E,0.1nm,0.3s,baz=117,slow=13,SNR=2.4						
ODAN	Odare	16.32	139	eP	Pn	19 02 20.8	-3.0
	comp=E,6.8nm,0.6s						
GTA	Gaotai	18.66	84	eP	P	19 02 50.4	-2.2
GTA				pP		19 02 54.8	
GTA				sP		19 02 57.6	
GTA				pmax	pmax		
	comp=Z,1.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,97nm,5.5s						
GTA				LR	LR		
	comp=N,170nm,14.9s						
GTA				LR	LR		
	comp=E,150nm,16.4s						
GTA				LR	LR		
	comp=Z,100nm,15.6s						
ARU	Arti	19.95	332	P	Pn	19 03 07.8	-0.3
	comp=Z,0.3nm,0.4s,baz=108,slow=20,SNR=1.7						
BELG	Belogornoye	22.87	312	P	P	19 03 39.0	+1.1
	comp=Z,2.4nm,0.6s,baz=350,slow=6.1,SNR=2.0						
SONM	Songino Array	23.47	60	P	P	19 03 44.1	-0.2
	comp=Z,0.4nm,0.7s,baz=265,slow=10.0,SNR=5.1						
FINES	FINESS Array B	36.82	322	P	P	19 05 42.6	+0.2
	comp=Z,3.6nm,1.1s,baz=116,slow=8.9,SNR=3.9						
GERES	GERESS Array B	44.00	303	P	P	19 06 42.4	+0.2
	comp=Z,0.8nm,0.8s,baz=60,slow=7.9,SNR=5.0						
TORD	Torodi Ar. Bea	69.36	270	P	P	19 09 40.7	-2.1
	comp=Z,0.5nm,0.7s,baz=48,slow=4.2						
ILAR	Eielson Array	70.47	18	P	P	19 09 47.4	-1.5

	comp=Z,0.3nm,0.7s,baz=335,slow=4.0,SNR=3.0						
YKA	**Yellowknife Ar** comp=Z,1.0nm,0.7s,baz=354,slow=5.3,SNR=18	**77.61**	**5**	P	**P**	**19 10 30.0**	**-0.7**
WRA	**Warramunga Arr** comp=Z,0.4nm,0.8s,baz=341,slow=5.7,SNR=1.4	**80.88**	**125**	P	**P**	**19 10 48.1**	**-1.0**
ASAR	**Alice Springs** comp=Z,0.3nm,0.7s,baz=314,slow=4.6,SNR=6.6	**83.39**	**128**	P	**P**	**19 11 00.9**	**-1.3**

IDC 16 19:26:53.2±7.0**, 19°.59S×177°.18W, h0km, mb3.8**/3**, mb1 4.1**/3**, mb1mx3.6**/32**, mbtmp3.8**/3**, Error ellipse: s-maj=302.6km s-min=37.7km az=144.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs** 0.7nm,0.5s,baz=89,slow=7.8,SNR=18	**45.49**	**256**	P	P	19 35 14.6	-0.1
WRA	**Warramunga Arr** 0.4nm,0.4s,baz=98,slow=7.2,SNR=17	**45.50**	**261**	P	P	19 35 14.7	-0.2
ILAR	**Eielson Array** 0.3nm,0.4s,baz=214,slow=5.1,SNR=5.8	**87.26**	**12**	P	P	19 39 41.2	0.0

BUC 16 19:34:11.6±0.4**, 45°.63N×26°.58E, h161km**±2km**, ml3.6**/27**, 70C-58D, Error ellipse: s-maj=2.2km s-min=1.9km az=161.0, Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BISRR	**Bisoca**	**0.12**	**133**	⇑P	Pn	19 34 33.5	+0.3
BISRR				⇓S	Sn	19 34 51.0	+1.3
BISRR	**Bisoca**	**0.12**	**133**	⇑P	Pn	19 34 33.5	+0.3
BISRR				⇓S	Sn	19 34 51.0	+1.3
PLOR	**Plostina**	**0.22**	**13**	⇓P	Pn	19 34 33.4	+0.1
PLOR				⇑S	Sn	19 34 50.1	+0.1
PLOR	**Plostina**	**0.22**	**13**	⇓P	Pn	19 34 33.4	+0.1
PLOR				⇑S	Sn	19 34 50.1	+0.1
VRI	**Vrincioaia**	**0.25**	**24**	⇓P	Pn	19 34 33.6	+0.3
VRI				⇓S	Sn	19 34 50.1	0.0
VRI	**Vrincioaia**	**0.25**	**24**	⇓P	Pn	19 34 33.6	+0.3
VRI				⇓S	Sn	19 34 50.1	0.0
NEHR	**Nehoiu**	**0.29**	**224**	⇓P	Pn	19 34 34.0	+0.5
NEHR				⇑S	Sn	19 34 50.7	+0.6
NEHR	**Nehoiu**	**0.29**	**224**	⇓P	Pn	19 34 34.0	+0.5
NEHR				⇑S	Sn	19 34 50.7	+0.6
ODBI	**Odobesti**	**0.36**	**69**	⇑S	Sn	19 34 52.2	+1.8
ODBI	**Odobesti**	**0.36**	**69**	⇑S	Sn	19 34 52.2	+1.8
PETR	**Petresti**	**0.47**	**79**	⇑S	Sn	19 34 52.5	+1.4
PETR	**Petresti**	**0.47**	**79**	⇑S	Sn	19 34 52.5	+1.4
MLR	**Muntele Rosu**	**0.47**	**252**	⇓P	Pn	19 34 34.4	+0.1
MLR				⇓S	Sn	19 34 51.9	+0.4
MLR	**Muntele Rosu**	**0.47**	**252**	⇓P	Pn	19 34 34.4	+0.1
MLR				⇓S	Sn	19 34 51.9	+0.4
ISR	**Istrita**	**0.52**	**183**	⇑S	Sn	19 34 52.4	+0.6
ISR	**Istrita**	**0.52**	**183**	⇑S	Sn	19 34 52.4	+0.6
GHRR		**0.72**	**53**	⇓P	Pn	19 34 36.3	+0.9
GHRR				⇓S	Sn	19 34 54.6	+0.9
GHRR		**0.72**	**53**	⇓P	Pn	19 34 36.3	+0.9
GHRR				⇓S	Sn	19 34 54.6	+0.9
TUDR		**0.77**	**93**	⇓S	Sn	19 34 54.6	+0.6
TUDR		**0.77**	**93**	⇓S	Sn	19 34 54.6	+0.6
TESR	**Tescani**	**0.88**	**3**	⇑P	Pn	19 34 36.2	-0.3
TESR				⇑S	Sn	19 34 54.2	-1.5
TESR	**Tescani**	**0.88**	**3**	⇑P	Pn	19 34 36.2	-0.3
TESR				⇑S	Sn	19 34 54.2	-1.5
SCHL	**Schela**	**0.89**	**98**	⇑P	Pn	19 34 37.4	+0.9
SCHL				⇑S	Sn	19 34 56.0	+0.4
SCHL	**Schela**	**0.89**	**98**	⇑P	Pn	19 34 37.4	+0.9
SCHL				⇑S	Sn	19 34 56.0	+0.4
DOPR	**Dopca**	**0.90**	**292**	⇓P	Pn	19 34 36.4	-0.3
DOPR				⇓S	Sn	19 34 56.5	+0.6
DOPR	**Dopca**	**0.90**	**292**	⇓P	Pn	19 34 36.4	-0.3
DOPR				⇓S	Sn	19 34 56.5	+0.6
VARL	**Varlezi**	**0.93**	**73**	⇑P	Pn	19 34 37.3	+0.6
VARL				⇑S	Sn	19 34 56.2	+0.1
VARL	**Varlezi**	**0.93**	**73**	⇑P	Pn	19 34 37.3	+0.6
VARL				⇑S	Sn	19 34 56.2	+0.1
BIR	**Birlad**	**0.97**	**49**	⇓P	Pn	19 34 37.3	+0.2
BIR				⇑S	Sn	19 34 56.7	-0.1
BIR	**Birlad**	**0.97**	**49**	⇓P	Pn	19 34 37.3	+0.2
BIR				⇑S	Sn	19 34 56.7	-0.1
SULR		**0.98**	**194**	⇓P	Pn	19 34 37.8	+0.5
SULR				⇓S	Sn	19 34 58.2	+1.3
SULR		**0.98**	**194**	⇓P	Pn	19 34 37.8	+0.5
SULR				⇓S	Sn	19 34 58.2	+1.3
VOIR		**1.09**	**260**	⇑P	Pn	19 34 38.0	-0.3
VOIR				⇑S	Sn	19 34 58.1	-0.7
VOIR		**1.09**	**260**	⇑P	Pn	19 34 38.0	-0.3
VOIR				⇑S	Sn	19 34 58.1	-0.7
MTUR	**Matau**	**1.14**	**250**	⇑P	Pn	19 34 38.8	0.0
MTUR	**Matau**	**1.14**	**250**	⇑P	Pn	19 34 38.8	0.0
GIUM	**Giurgiulesti**	**1.15**	**97**	⇓S	Sn	19 35 00.1	+0.7
GIUM	**Giurgiulesti**	**1.15**	**97**	⇓S	Sn	19 35 00.1	+0.7
LEHL	**Lehliu**	**1.17**	**172**	⇑S	Sn	19 35 00.9	+1.1
LEHL	**Lehliu**	**1.17**	**172**	⇑S	Sn	19 35 00.9	+1.1
CFR	**Carcaliu**	**1.19**	**112**	⇓P	Pn	19 34 39.5	+0.5
CFR				⇓S	Sn	19 34 59.9	-0.1
CFR	**Carcaliu**	**1.19**	**112**	⇓P	Pn	19 34 39.5	+0.5
CFR				⇓S	Sn	19 34 59.9	-0.1
VASR	**Vaslui**	**1.31**	**39**	⇓P	Pn	19 34 40.5	+0.4
VASR				⇓S	Sn	19 35 01.4	-0.7
VASR	**Vaslui**	**1.31**	**39**	⇓P	Pn	19 34 40.5	+0.4
VASR				⇓S	Sn	19 35 01.4	-0.7
HARR	**Harsova**	**1.34**	**134**	⇑P	Pn	19 34 40.9	+0.5
HARR	**Harsova**	**1.34**	**134**	⇑P	Pn	19 34 40.9	+0.5
BUC1	**Bucharest**	**1.34**	**197**	⇓S	Sn	19 35 03.5	+0.9
BUC1	**Bucharest**	**1.34**	**197**	⇓S	Sn	19 35 03.5	+0.9
BIZ	**Bicaz**	**1.35**	**346**	⇑S	Sn	19 35 03.5	+0.7
BIZ	**Bicaz**	**1.35**	**346**	⇑S	Sn	19 35 03.5	+0.7
STFAR	**Stefanesti-Arg**	**1.38**	**237**	⇑S	Sn	19 35 03.9	+0.6
STFAR	**Stefanesti-Arg**	**1.38**	**237**	⇑S	Sn	19 35 03.9	+0.6
ARR	**Arges**	**1.40**	**260**	⇓S	Sn	19 35 04.2	+0.5
ARR	**Arges**	**1.40**	**260**	⇓S	Sn	19 35 04.2	+0.5
SGRR	**Singureni**	**1.48**	**197**	⇓S	Sn	19 35 04.5	-0.4
SGRR	**Singureni**	**1.48**	**197**	⇓S	Sn	19 35 04.5	-0.4
TLBR	**Topalu**	**1.50**	**136**	⇓P	Pn	19 34 42.6	+0.5
TLBR				⇑S	Sn	19 35 05.1	-0.3
TLBR	**Topalu**	**1.50**	**136**	⇓P	Pn	19 34 42.6	+0.5
TLBR				⇑S	Sn	19 35 05.1	-0.3
TPGR	**Topolog**	**1.51**	**120**	⇑P	Pn	19 34 41.2	-1.0
TPGR				⇓S	Sn	19 35 04.8	-0.8
TPGR	**Topolog**	**1.51**	**120**	⇑P	Pn	19 34 41.2	-1.0
TPGR				⇓S	Sn	19 35 04.8	-0.8
HUMR	**Humele**	**1.58**	**226**	⇓P	Pn	19 34 42.5	-0.4
HUMR				⇑S	Sn	19 35 06.2	-0.7
HUMR	**Humele**	**1.58**	**226**	⇓P	Pn	19 34 42.5	-0.4
HUMR				⇑S	Sn	19 35 06.2	-0.7
TLCR		**1.64**	**105**	⇓S	Sn	19 35 08.0	+0.2
TLCR		**1.64**	**105**	⇓S	Sn	19 35 08.0	+0.2
IAS	**Iasi**	**1.70**	**23**	⇑P	Pn	19 34 44.0	-0.1
IAS				⇑S	Sn	19 35 08.6	-0.5
IAS	**Iasi**	**1.70**	**23**	⇑P	Pn	19 34 44.0	-0.1
IAS				⇑S	Sn	19 35 08.6	-0.5
TIRR	**Tirgusor**	**1.75**	**132**	⇑P	Pn	19 34 45.1	+0.4
TIRR				⇓S	Sn	19 35 09.2	-0.8
TIRR	**Tirgusor**	**1.75**	**132**	⇑P	Pn	19 34 45.1	+0.4
TIRR				⇓S	Sn	19 35 09.2	-0.8
COPA	**Copaceanca**	**1.79**	**213**	⇑S	Sn	19 35 11.1	+0.5
COPA	**Copaceanca**	**1.79**	**213**	⇑S	Sn	19 35 11.1	+0.5
LOT	**Lotru**	**1.98**	**266**	⇑P	Pn	19 34 47.4	+0.1
LOT				⇑S	Sn	19 35 14.5	-0.4
LOT	**Lotru**	**1.98**	**266**	⇑P	Pn	19 34 47.4	+0.1
LOT				⇑S	Sn	19 35 14.5	-0.4
MILM	**Milestii Mici**	**2.01**	**50**	⇑P	Pn	19 34 47.5	+0.1
MILM	**Milestii Mici**	**2.01**	**50**	⇑P	Pn	19 34 47.5	+0.1
BURAR	**Bucovina Array**	**2.19**	**335**	⇑P	Pn	19 34 51.2	+1.5
BURAR				⇑S	Sn	19 35 20.8	+1.6
BURAR	**Bucovina Array**	**2.19**	**335**	⇑P	Pn	19 34 51.2	+1.5
BURAR				⇑S	Sn	19 35 20.8	+1.6
GZR	**Gura Zlata**	**2.69**	**266**	⇑P	Pn	19 34 56.4	+0.9
GZR				⇑S	Sn	19 35 29.7	+0.2
GZR	**Gura Zlata**	**2.69**	**266**	⇑P	Pn	19 34 56.4	+0.9
GZR				⇑S	Sn	19 35 29.7	+0.2
SORM	**Soroca**	**2.78**	**25**	⇑P	Pn	19 34 56.0	-0.6
SORM	**Soroca**	**2.78**	**25**	⇑P	Pn	19 34 56.0	-0.6
DRGR		**2.92**	**295**	⇓P	Pn	19 34 58.0	-0.5
DRGR		**2.92**	**295**	⇓P	Pn	19 34 58.0	-0.5

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*TAP **16** 19:46:11.0, 24°.85N×121°.99E, h7km, ML2.9, C*
*JMA **16** 19:46:12.1±0.2, 24°.82N×121°.93E, h22km, M2.1*
ISC 16 19:46:11.2±0.8**, 24°.84N**±0°.02×**121°.99E**±0°.02**, h11km**±6km**, n94, σ0s.89**/152**, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NTC	**Toucheng** baz=281	**0.15**	**277**	*i* P	**Pg**	**19 46 14.6**	**-0.1**
NTC	baz=281			S	**Sg**	**19 46 17.4**	**+0.3**
TWB1	**Santiao Chiao** baz=3.0	**0.17**	**359**	*i* P	**Pg**	**19 46 14.7**	**-0.3**
TWB1	baz=3.0			S	**Sg**	**19 46 17.3**	**-0.4**
TIPB	**Shuangxi** baz=309	**0.20**	**312**	*i* P	**Pg**	**19 46 15.6**	**0.0**
TIPB	baz=309			*i* S	**Sg**	**19 46 18.6**	**0.0**
ILA	**Ilan** baz=248	**0.23**	**252**	P	**Pb**	**19 46 16.8**	**-0.6**
TWC	**Suao** baz=207	**0.26**	**210**	*i* P	**Pg**	**19 46 16.8**	**+0.2**
TWC	baz=207			S	**Sg**	**19 46 20.3**	**+0.1**
NWF	**Wu-fen Shan** baz=305	**0.30**	**321**	*i* P	**Pg**	**19 46 17.7**	**+0.3**
NWF	baz=305			*i* S	**Sg**	**19 46 22.1**	**+0.6**
WFSB	**Wu-fen Shan** baz=319	**0.30**	**321**	P	**Pg**	**19 46 17.7**	**+0.4**
WFSB	baz=319			S	**Sg**	**19 46 22.3**	**+0.9**
TWE	**Neicheng** baz=245	**0.32**	**249**	*i* P	**Pg**	**19 46 17.8**	**+0.3**
TWE	baz=245			*e*S	**Sg**	**19 46 22.2**	**+0.4**
NDS	**Dongshan** baz=230	**0.32**	**231**	P	**Pg**	**19 46 17.9**	**+0.2**
NDS	baz=230			*e*S	**Sb**	**19 46 23.0**	**-1.2**
TNOU	**National Taiwa** baz=314	**0.37**	**328**	P	**Pg**	**19 46 19.0**	**+0.4**
TNOU	baz=314			S	**Sg**	**19 46 23.9**	**+0.4**
TWA	**Mucha** baz=289	**0.40**	**291**	*i* P	**Pb**	**19 46 19.6**	**-0.7**
TWA	baz=289			S	**Sb**	**19 46 25.2**	**-1.1**
ENTT	**Nioudou** baz=241	**0.43**	**243**	*i* P	**Pb**	**19 46 20.2**	**-0.7**
EWUT	**Wuta** baz=206	**0.44**	**207**	P	**Pg**	**19 46 19.9**	**+0.1**
EWUT	baz=206			S	**Sb**	**19 46 26.6**	**-0.8**
NHDH	**Xindian Distri** baz=275	**0.44**	**287**	P	**Pg**	**19 46 19.8**	**-0.1**
NHDH	baz=275			*e*S	**Sb**	**19 46 26.7**	**-0.9**
NWLT	**Wulai** baz=261	**0.45**	**263**	*i* P	**Pg**	**19 46 20.1**	**+0.1**
NWLT	baz=261			S	**Sb**	**19 46 26.3**	**-1.5**
ENA	**Nanau** baz=208	**0.47**	**209**	*i* P	**Pg**	**19 46 20.4**	**0.0**
ENA	baz=208			*e*S	**Sb**	**19 46 28.0**	**-0.3**
TATO	**Taipei** baz=276	**0.48**	**287**	P	**Pg**	**19 46 20.8**	**+0.3**
TATO	baz=276			S	**Sb**	**19 46 28.1**	**-0.6**
TAP	**Taipei** baz=293	**0.48**	**295**	S	**Sb**	**19 46 28.2**	**-0.6**
YM01	**YM01** baz=307	**0.49**	**309**	P	**Pg**	**19 46 20.6**	**-0.2**
YM01	baz=307			S	**Sg**	**19 46 27.3**	**-0.1**
NDT	**Datong Townshi** baz=241	**0.49**	**242**	P	**Pb**	**19 46 21.3**	**-0.6**
YM11	**YM11** baz=309	**0.50**	**311**	P	**Pb**	**19 46 22.1**	**0.0**
YM10	**YM10** baz=308	**0.50**	**309**	P	**Pb**	**19 46 22.0**	**-0.1**
YM08	**YM08** baz=312	**0.51**	**314**	P	**Pb**	**19 46 21.6**	**-0.5**
YM05	**YM05** baz=309	**0.51**	**310**	P	**Pb**	**19 46 21.8**	**-0.4**
YM04	**YM04** baz=306	**0.52**	**307**	P	**Pb**	**19 46 22.1**	**-0.3**
BACT	**New Taipei Cit** baz=273	**0.53**	**288**	S	**Sb**	**19 46 30.1**	**+0.1**
YM03	**YM03** baz=308	**0.53**	**310**	P	**Pb**	**19 46 22.2**	**-0.4**
ANP	**Anpu** baz=308	**0.55**	**309**	*e*P	**Pg**	**19 46 22.1**	**+0.1**
TWY	**Chenhua** baz=320	**0.56**	**321**	*i* P	**Pb**	**19 46 23.0**	**-0.1**
TWS1	**Kuangyinshan** baz=295	**0.58**	**297**	*i* P	**Pb**	**19 46 23.7**	**+0.3**
TWS1	baz=295			S	**Sb**	**19 46 31.9**	**+0.2**
YHNB	**Yeheng** baz=263	**0.58**	**254**	P	**Pg**	**19 46 22.7**	**+0.1**
NTST	**Danshui** baz=302	**0.59**	**304**	P	**Pb**	**19 46 23.8**	**+0.2**
NTST	baz=302			S	**Sb**	**19 46 31.8**	**-0.1**
NSK	**Sanguang** baz=263	**0.60**	**255**	*i* P	**Pg**	**19 46 22.9**	**0.0**
NNSB	**Datong** baz=240	**0.69**	**234**	P	**Pb**	**19 46 24.9**	**-0.4**
NNSH	**Datong** baz=234	**0.69**	**234**	*i* P	**Pg**	**19 46 24.7**	**+0.2**
NNS	**Nan Shan** baz=241	**0.69**	**235**	*i* P	**Pb**	**19 46 25.0**	**-0.3**
NCU	**National Centr** baz=268	**0.74**	**280**	S	**Sn**	**19 46 38.0**	**-0.8**
NCUH	**Zhongli** baz=268	**0.74**	**280**	P	**Pn**	**19 46 27.0**	**-0.6**
NCUH	baz=268			S	**Sn**	**19 46 37.9**	**-1.0**
NACB	**Ninganchiao** baz=209	**0.75**	**209**	P	**Pg**	**19 46 25.9**	**+0.2**
NACB	baz=209			S	**Sb**	**19 46 37.2**	**+0.7**
ETLH	**Xiulin Townshi** baz=217	**0.78**	**217**	P	**Pb**	**19 46 26.9**	**+0.1**
ETLH	baz=217			*e*S	**Sn**	**19 46 39.0**	**-1.0**
PCYT	**Pengchaiyu** baz=5.0	**0.79**	**5**	*i* P	**Pg**	**19 46 27.1**	**+0.6**
PCYT	baz=5.0			*e*S	**Sn**	**19 46 39.8**	**-0.3**
NJD	**Zhudong** baz=253	**0.83**	**263**	*e*P	**Pn**	**19 46 28.1**	**-0.7**
NJD	baz=253			*e*S	**Sn**	**19 46 39.9**	**-1.1**
TWD	**Chiawan** baz=197	**0.83**	**206**	*i* P	**Pb**	**19 46 27.8**	**+0.1**
TWD	baz=197			S	**Sb**	**19 46 39.2**	**+0.2**
HSN1	**Hsinchu** baz=257	**0.89**	**266**	*e*S	**Sn**	**19 46 43.6**	**+1.1**
FUSS	**Fushou** baz=229	**0.90**	**229**	P	**Pn**	**19 46 29.2**	**-0.8**
FUSS	baz=229			*e*S	**Sn**	**19 46 41.9**	**-1.2**
LIOB	**Emei** baz=249	**0.91**	**258**	P	**Pn**	**19 46 29.7**	**-0.2**
LIOB	baz=249			*e*S	**Sn**	**19 46 42.5**	**-0.5**
SBCB	**Hsinchu** baz=266	**0.92**	**267**	*e*S	**Sn**	**19 46 43.5**	**+0.4**
NSTT	**Nanjuang** baz=256	**0.92**	**257**	P	**Pn**	**19 46 30.5**	**+0.4**
NSTT	baz=256			S	**Sn**	**19 46 42.6**	**-0.7**
TWT	**Tachien** baz=227	**0.94**	**232**	*i* P	**Pn**	**19 46 30.5**	**0.0**
TWT	baz=227			*e*S	**Sn**	**19 46 43.7**	**-0.4**
JYNG	**Yonagunijimaku**	**0.95**	**114**	P	**Pb**	**19 46 30.2**	**+0.6**
JYNG				*e*S	**Sb**	**19 46 41.9**	**-0.3**
TDCB	**Techi** baz=227	**0.96**	**233**	P	**Pn**	**19 46 30.4**	**-0.3**
TDCB	baz=227			*e*S	**Sn**	**19 46 43.0**	**-1.3**
YOJ	**Yonaguni jima** baz=113	**1.00**	**112**	P	**Pb**	**19 46 29.6**	**-0.9**
YOJ	**Yonaguni jima**	**1.00**	**112**	P	**Pb**	**19 46 30.4**	**-0.1**
YOJ				*e*S	**Sb**	**19 46 43.7**	**+0.1**
CHGB	**Renai** baz=224	**1.07**	**224**	P	**Pn**	**19 46 32.1**	**-0.3**
CHGB	baz=224			*e*S	**Sn**	**19 46 46.3**	**-1.0**
WHP	**Taichung City** baz=240	**1.10**	**240**	*i* P	**Pg**	**19 46 33.9**	**+1.4**
WHP	baz=240			*e*S	**Sn**	**19 46 47.4**	**-0.5**
NMLH	**Miaoli** baz=254	**1.13**	**255**	*e*P	**Pg**	**19 46 34.2**	**+1.2**
NMLH	baz=254			S	**Sn**	**19 46 51.1**	**+2.6**
ESL	**Shilin** baz=207	**1.14**	**207**	*i* P	**Pg**	**19 46 33.2**	**+0.1**
ESL	baz=207			*e*S	**Sn**	**19 46 48.0**	**-0.6**
NSY	**Sanyi** baz=249	**1.20**	**250**	*e*S	**Sg**	**19 46 51.3**	**+1.5**
TWQ1	**Liyutan** baz=246	**1.21**	**247**	*e*P	**Pg**	**19 46 35.4**	**+0.9**
TWQ1	baz=246			*e*S	**Sg**	**19 46 52.0**	**+1.8**
WCS	**Beigang Elemen** baz=241	**1.25**	**232**	P	**Pg**	**19 46 36.0**	**+0.7**
WCS	baz=241			*e*S	**Sg**	**19 46 51.2**	**-0.4**
DPDB	**Guoxing** baz=239	**1.26**	**231**	P	**Pg**	**19 46 35.9**	**+0.5**
DPDB	baz=239			*e*S	**Sg**	**19 46 52.1**	**+0.4**
WDJ	**Dajia District** baz=248	**1.32**	**249**	*e*S	**Sg**	**19 46 55.5**	**+1.7**
VWDT	**VWDT** baz=217	**1.33**	**216**	P	**Pb**	**19 46 35.8**	**-0.3**
VWDT	baz=217			*e*S	**Sg**	**19 46 54.0**	**0.0**
TYC	**Yuchr** baz=221	**1.39**	**228**	*i* P	**Pg**	**19 46 38.7**	**+0.8**
TYC	baz=221			S	**Sg**	**19 46 55.5**	**-0.5**
SSLB	**Suanglung** baz=214	**1.41**	**222**	P	**Pg**	**19 46 38.8**	**+0.5**
SSLB	baz=214			*e*S	**Sg**	**19 46 56.0**	**-0.6**
HGSD	**Ruisui** baz=219	**1.44**	**201**	*e*P	**Pg**	**19 46 38.4**	**-0.3**
EHY	**Hungye** baz=207	**1.46**	**205**	*i* P	**Pb**	**19 46 38.6**	**+0.2**
EHY	baz=207			*e*S	**Sg**	**19 46 58.1**	**0.0**
WNT	**Mingjian** baz=219	**1.53**	**232**	*e*P	**Pg**	**19 46 41.9**	**+1.4**
WNT	baz=219			*e*S	**Sg**	**19 47 04.0**	**+3.6**
WJS	**Zhushan** baz=219	**1.53**	**229**	*e*P	**Pg**	**19 46 41.4**	**+0.8**
WJS	baz=219			*e*S	**Sg**	**19 47 03.2**	**+2.7**
YULB	**Yu-li** baz=216	**1.57**	**204**	P	**Pn**	**19 46 39.3**	**+0.3**
YULB	baz=216			*e*S	**Sg**	**19 47 01.2**	**-0.6**
EYUL	**Yuli** baz=215	**1.60**	**203**	*e*P	**Pb**	**19 46 41.4**	**+0.6**
TWF1	**Yuli** baz=215	**1.61**	**203**	P	**Pb**	**19 46 41.5**	**+0.6**
IRIF	**Iriomote-Funau**	**1.66**	**107**	P	**Pn**	**19 46 40.6**	**+0.4**
ALS	**Alishan** baz=221	**1.71**	**220**	*i* P	**Pg**	**19 46 43.9**	**-0.1**
ALS	baz=221			*e*S	**Sg**	**19 47 07.4**	**+1.2**
CHN5	**Tsauling** baz=225	**1.72**	**224**	*i* P	**Pg**	**19 46 45.8**	**+1.6**
CHN5	baz=225			*e*S	**Sg**	**19 47 07.7**	**+1.1**
FULB	**Fuli** baz=216	**1.75**	**202**	*e*P	**Pb**	**19 46 43.2**	**-0.1**
ELDTW	**Lidau** baz=213	**1.87**	**209**	P	**Pb**	**19 46 44.7**	**-0.6**
ELDTW	baz=213			*e*S	**Sb**	**19 47 09.5**	**+0.8**
JKRS	**Kuro-shima**	**1.93**	**108**	P	**Pn**	**19 46 45.0**	**+1.1**
CHN4	**Tsaushan** baz=211	**1.96**	**221**	P	**Pg**	**19 46 48.7**	**0.0**
CHN4	baz=211			*e*S	**Sg**	**19 47 14.2**	**+0.2**
TPUB	**Ta-pu** baz=210	**1.97**	**219**	P	**Pg**	**19 46 48.4**	**-0.7**
TPUB	baz=210			S	**Sg**	**19 47 15.3**	**+0.7**
STYH	**Taoyuan** baz=207	**2.00**	**214**	P	**Pb**	**19 46 48.4**	**+0.9**
STYH	baz=207			*e*S	**Sg**	**19 47 13.7**	**-1.8**
STYT	**Tauyuan** baz=207	**2.01**	**214**	*i* P	**Pg**	**19 46 49.1**	**-0.8**
STYT	baz=207			*e*S	**Sg**	**19 47 14.6**	**-1.3**
JIJ	**Ishigaki jima**	**2.01**	**103**	P	**Pb**	**19 46 47.2**	**-0.6**
WTP	**Ta-pu** baz=210	**2.02**	**219**	*e*P	**Pg**	**19 46 49.9**	**-0.1**
WTP	baz=210			*e*S	**Sg**	**19 47 17.2**	**+0.9**
TWK	**Hsinying** baz=222	**2.08**	**222**	*i* P	**Pg**	**19 46 50.5**	**-0.7**
TWK	baz=222			*e*S	**Sg**	**19 47 17.9**	**-0.2**
CHN1	**Nanshi** baz=211	**2.12**	**219**	*e*P	**Pg**	**19 46 50.7**	**-1.1**
CHN1	baz=211			*e*S	**Sg**	**19 47 18.1**	**-1.2**
SGST	**Jiashian** baz=207	**2.17**	**217**	*e*P	**Pb**	**19 46 50.0**	**-0.5**
SLGT	**Liugui** baz=218	**2.21**	**214**	P	**Pb**	**19 46 50.9**	**-0.3**
SLGT	baz=218			*e*S	**Sg**	**19 47 21.5**	**-0.8**
MATB	**Ma-tsu** baz=303	**2.27**	**306**	*e*P	**Pn**	**19 46 49.5**	**+0.9**
MATB	baz=303			*e*S	**Sb**	**19 47 18.6**	**-1.5**
VWUC	**VWUC** baz=272	**2.31**	**274**	*e*P	**Pn**	**19 46 50.4**	**+1.2**
MASBT	**Mashibuluo** baz=215	**2.54**	**210**	*e*P	**Pb**	**19 46 55.8**	**-1.0**
PTMZ	**Houxiangcun** baz=273	**2.62**	**275**	*e*P	**Pn**	**19 46 54.0**	**+0.6**
XPSS	**Dashiqiu** baz=324	**2.64**	**322**	P	**Pn**	**19 46 55.4**	**+1.6**
XPSS	baz=324			*e*S	**Sb**	**19 47 27.8**	**-3.2**
EAST	**Anshuo** baz=196	**2.66**	**203**	*e*P	**Pn**	**19 46 56.0**	**+2.1**

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*IDC **16** 20:02:06.1±1.7, 22°.77N×100°.29E, h0km, mb3.4/3, mb1 3.3/4, mb1mx3.2/33, mbtmp3.3/4, ML3.2/1, MS3.7/2, Ms1 3.7/2, ms1mx2.8/41, Error ellipse: s-maj=46.3km s-min=17.2km az=98.0*
ISC 16 20:02:07.8±1.1**, 22°.69N**±0°.08×**99°.8E**±0°.1**, h10km, n22, σ1s.90**/21**, mb3.4**/3**, Myanmar-China border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CM33	**Chiang Mai Arr**	**3.93**	**192**	P	**Pg**	**20 03 21.0**	**-2.2**
CMMT	**Chiang Mai** 0.2nm301nm21nm,0.8s	**3.94**	**192**	P	**Pg**	**20 03 19.9**	**-3.4**
CM35	**Chiang Mai Arr**	**4.03**	**189**	P	**Pb**	**20 03 18.0**	**-1.0**
CM32	**Chiang Mai Arr**	**4.11**	**192**	P	**Pg**	**20 03 24.0**	**-2.6**
LAMP	**Lampang**	**4.15**	**182**	P	**Pg**	**20 03 26.0**	**-1.4**
CM36	**Chiang Mai Arr**	**4.20**	**189**	P	**Pg**	**20 03 27.0**	**-1.3**
CM31	**Chiang Mai Arr** 8.3nm18μm2μm,0.6s	**4.28**	**191**	P	**Pg**	**20 03 29.4**	**-0.5**
CMAR	**Chiang Mai Arr** 0.3nm,0.3s,baz=12,slow=12,SNR=5.8	**4.28**	**191**	Pn	**Pn**	**20 03 14.8**	**+1.6**
CMAR	4.4nm,0.3s,baz=11,slow=15,SNR=102			Pg	**Pg**	**20 03 28.7**	**-1.2**
CMAR	3.0nm,0.3s,baz=11,slow=29,SNR=11			Lg	Lg	20 04 27.2	
CMAR	comp=Z,17nm,19.7s,baz=40,slow=35			LR	LR	20 04 44.0	
CM09	**Chiang Mai Arr** 0.4nm427nm34nm,0.8s	**4.29**	**190**	P	**Pg**	**20 03 28.0**	**-2.0**
CM15	**Chiang Mai Arr** 0.2nm582nm56nm,0.8s	**4.29**	**191**	P	**Pg**	**20 03 27.9**	**-2.1**

CM02	**Chiang Mai Arr**	**4.30**	**191**	P	**Pg**	**20 03 29.4**	**-0.9**
	0.4nm341nm50nm,0.8s						
CM01	**Chiang Mai Arr**	**4.32**	**190**	P	**Pg**	**20 03 29.0**	**-1.6**
	0.4nm364nm41nm,0.8s						
CM13	**Chiang Mai Arr**	**4.33**	**191**	P	**Pg**	**20 03 29.4**	**-1.3**
	0.3nm328nm38nm,0.7s						
CM04	**Chiang Mai Arr**	**4.33**	**190**	P	**Pg**	**20 03 29.6**	**-1.3**
	0.3nm508nm49nm,0.9s						
CM05	**Chiang Mai Arr**	**4.34**	**191**	P	**Pb**	**20 03 25.9**	**+1.7**
	0.2nm333nm34nm,0.8s						
MHMT	**Maesarieng**	**4.81**	**201**	P	**Pg**	**20 03 41.6**	**+1.5**
NONG	**Nongkai**	**5.58**	**145**	P	**Pb**	**20 03 47.0**	**+1.7**
SONM	**Songino Array**	**25.64**	**10**	P	**P**	**20 07 35.2**	**-2.5**
	0.3nm,0.6s,baz=189,slow=8.3,SNR=2.9						
MKAR	**Makanchi Array**	**27.89**	**334**	P	**P**	**20 07 59.5**	**+1.6**
	0.4nm,0.6s,baz=138,slow=8.3,SNR=5.3						
ZALV	**Zalesovo Beam**	**33.20**	**344**	P	**P**	**20 08 45.0**	**+0.4**
	0.3nm,0.5s,baz=152,slow=9.7,SNR=1.9						
GEYT	**Alibeck**	**38.71**	**303**	LR	LR	20 28 54.3	
	comp=Z,49nm,19.7s,baz=350,slow=41						
STKA	**Stephens Creek**	**67.41**	**142**	LR	LR	20 44 49.5	
	comp=Z,94nm,18.1s,baz=4.7,slow=38						

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*NEIC **16** 20:10:32.6±1.7, 45°.18N±0°.04×83°.58W±0°.06, h0^{km}±2^{km}, Error ellipse: s-maj=7.7km s-min=6.7km az=16.0*

*OTT **16** 20:10:34.4±0.2, 45°.07N×83°.50W, h0^{km}, MN2.5/3, Probable blast, Michigan, U.S. 131km south from Thessalon, On Mining explosion.*

ISC 16 20:10:31.9±1.1, **45°.26N**±0°.08×**83°.45W**±0°.04, **h0**^{km}**, n7,** σ**0^{s}53**/10, **Michigan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLMI	**Grayling**	**0.93**	**243**		**Pg**	**20 10 49.8**	**0.0**
E46A	**Sault Ste Mari**	**1.26**	**332**		**Pb**	**20 10 56.2**	**-0.3**
G45A	**Suttons Bay**	**1.58**	**263**	Pn	**Pg**	**20 11 02.2**	**+0.2**
BMRO	**Meriville Lake**	**1.72**	**112**	PN	**Pg**	**20 11 05.0**	**+0.2**
BMRO				SG	**Sg**	**20 11 27.4**	**+0.2**
BMRO				Trac		20 11 28.2	
	comp=Z,61nm,0.9s						
BASO	**Ashfield**	**1.78**	**134**	SN	**Sn**	**20 11 27.9**	**+0.6**
BWLO	**Walkerton**	**2.01**	**124**	PN	**Pb**	**20 11 08.5**	**-0.7**
BWLO				SN	**Sn**	**20 11 33.3**	**+0.5**
BWLO				Trac		20 11 39.0	
	comp=Z,35nm,0.5s						
KLBO	**Killbear Provi**	**2.29**	**86**	PN	**Pb**	**20 11 13.3**	**-0.7**
KLBO				SN	**Sb**	**20 11 42.9**	**+0.1**
KLBO				Trac		20 11 45.8	
	comp=Z,19nm,0.6s						

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*IDC **16** 20:22:48.1±0.7, 2°.60S×139°.16E, h0^{km}, mb4.0/10, mb1 4.2/11, mb1mx4.0/36, mbtmp4.1/11, ML4.6/2, MS3.4/12, Ms1 3.4/12, ms1mx3.2/42, Error ellipse: s-maj=18.3km s-min=16.2km az=92.0*

*NEIC **16** 20:22:52.8±1.9, 2°.66S±0°.10×139°.12E±0°.07, h35^{km}±9^{km}, mb4.5/24, Error ellipse: s-maj=14.3km s-min=9.7km az=178.0*

*DJA **16** 20:22:53.6±0.4, 2°S±4°×13°9E±°, h40^{km}±5^{km}, M4.6/21, mB5.0/5, mb4.6/21, MLv4.7/7, Mw(mB)4.3/5*

ISC 16 20:22:53.5±0.5, **2°.74S**±0°.06×**139°.07E**±0°.05, **h37**^{km}**, n69,** σ**1^{s}44**/64, **mb4.3**/17, **MS3.4**/9, **Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GENI	**Genyem**	**1.11**	**82**	P	**Pn**	**20 23 10.3**	**-2.1**
JAY	**Jayapura**	**1.65**	**82**	Pn	**Pn**	**20 23 17.0**	**-2.9**
	26nm,0.3s,baz=251,slow=12,SNR=99						
JAY				Sn	**Sn**	**20 23 39.6**	**-0.3**
	53nm,0.3s,baz=325,slow=20,SNR=7.7						
SRPI	**Serui, Papua**	**2.96**	**287**	P	**Pn**	**20 23 37.1**	**-0.8**
SRPI				S	**Sn**	**20 24 11.3**	**-0.8**
BAKI	**Biak**	**3.34**	**297**	P	**Pn**	**20 23 42.4**	**-0.7**
MMPI	**Merauke**	**5.84**	**167**	P	Pn	20 24 23.7	+6.2
	3.5nm565nm,0.7s						
FAKI	**Fak Fak**	**6.81**	**268**		**Pn**	**20 24 31.4**	**+0.5**
FAKI	**Fak Fak**	**6.81**	**268**	P	**Pn**	**20 24 31.6**	**+0.7**
	0.2nm41nm,0.8s						
FAKI				S	**Sn**	**20 25 46.0**	**-1.3**
	0.2nm41nm,0.8s						
SIJI	**Sorong**	**8.02**	**283**	LR	LR	20 28 50.0	
	comp=Z,136nm,19.7s,baz=146,slow=45						
MSAI	**Masohi**	**10.14**	**266**	P	**Pn**	**20 25 18.2**	**+1.6**
	358nm12nm,0.7s						
PMG	**Port Moresby**	**10.42**	**130**	Pn	**Pn**	**20 25 24.2**	**+3.8**
	0.8nm,0.3s,baz=306,slow=21,SNR=3.3						
PMG	**Port Moresby**	**10.42**	**130**		**Pn**	**20 25 20.8**	**+0.5**
COEN	**Coen**	**11.86**	**160**	Pn	**Pn**	**20 25 39.5**	**-0.7**
NLAI	**Namlea**	**11.96**	**267**	P	**Pn**	**20 25 41.1**	**-0.4**
	2µm43nm,0.6s						
SANI	**Sanana**	**13.09**	**273**	P	**Pn**	**20 25 57.4**	**+0.5**
	25nm,0.6s						
SOEI	**Soe**	**16.27**	**244**	P	**P**	**20 26 41.9**	**-0.3**
SOEI	**Soe**	**16.27**	**244**	P	**P**	**20 26 44.0**	**+1.8**
	107nm,1.1s						
LUWI	**Luwuk**	**16.38**	**276**	Pn	**Pn**	**20 26 40.0**	**-0.7**
LUWI				IAmb	IAmb	20 27 06.0	
	comp=Z,32nm,1.0s						
LUWI	**Luwuk**	**16.38**	**276**	P	**Pn**	**20 26 40.5**	**-0.2**
	comp=Z,2µmcomp=Z,33nm,0.9s						
KNRA	**Kununurra**	**16.38**	**218**	Pn	**Pn**	**20 26 38.7**	**-2.1**
BATI	**Baumata**	**17.00**	**243**	P	**P**	**20 26 51.2**	**+1.1**
	comp=Z,6.3nm,0.3s,baz=128,slow=1.5,SNR=27						
BATI	**Baumata**	**17.00**	**243**	P	**P**	**20 26 51.9**	**+1.8**
	comp=Z,510nmcomp=Z,36nm,1.1s						
GUMO	**Guam**	**17.21**	**19**	LR	LR	20 31 33.9	
	comp=Z,179nm,20.6s,baz=158,slow=31						
MRSI	**Marisa**	**17.42**	**280**	P	**P**	**20 26 54.6**	**-0.1**
	comp=Z,24nm,1.1s						
APSI	**Ampana**	**17.50**	**276**	P	**P**	**20 26 56.5**	**+0.8**
	comp=Z,277nmcomp=Z,28nm,1.1s						
WB0	**Warramunga Arr**	**17.53**	**195**		**Pn**	**20 26 55.2**	**0.0**
WB0				IAmb	IAmb	20 27 01.6	
	comp=Z,28nm,1.1s						
WR0	**Warramunga Arr**	**17.68**	**194**	P	**Pn**	**20 26 56.5**	**-0.5**
WR0				IAmb	IAmb	20 27 19.5	
	comp=Z,57nm,1.5s						
WRAB	**Tennant Creek**	**17.70**	**195**	P	**Pn**	**20 26 57.0**	**-0.3**
WRAB				IAmb	IAmb	20 27 03.6	
	comp=Z,36nm,1.2s						
WB2	**Warramunga Arr**	**17.71**	**195**	P	**Pn**	**20 26 56.5**	**-0.8**
WB2				IAmb	IAmb	20 27 03.7	
	comp=Z,42nm,1.2s						
WRA	**Warramunga Arr**	**17.71**	**195**	P	**Pn**	**20 26 56.6**	**-0.8**
	comp=Z,1.2nm,0.3s,baz=17,slow=13,SNR=33						
WRA				S	**Sn**	**20 30 07.2**	**-6.6**
	comp=Z,0.2nm,0.3s,baz=25,slow=22,SNR=4.0						
WRA				LR	LR	20 34 57.2	
	comp=Z,252nm,19.2s,baz=25,slow=41						
WRA	**Warramunga Arr**	**17.71**	**195**	P	**Pn**	**20 26 56.4**	**-0.9**
MMRI	**Maumere**	**17.74**	**250**	P	**P**	**20 26 59.0**	**+0.8**
	comp=Z,19nm,1.2s						
EDFI	**Ende, Flores**	**18.29**	**250**	P	**P**	**20 27 04.4**	**0.0**
	comp=Z,5.1nm,1.1s						
CTAO	**Charters Tower**	**18.62**	**158**		**P**	**20 27 08.1**	**+0.2**
CTAO				IAmb	IAmb	20 27 18.2	
	comp=Z,24nm,1.2s						
TOLI2	**Tolitoli**	**18.68**	**282**	P	**P**	**20 27 08.4**	**-0.2**
KAPI	**Kappang**	**19.40**	**263**	LR	LR	20 36 59.3	
	comp=Z,92nm,18.8s,baz=96,slow=44						
FITZ	**Fitzroy Crossi**	**20.16**	**220**	P	**P**	**20 27 24.8**	**0.0**
	comp=Z,8.5nm,1.1s,baz=48,slow=14,SNR=11						
FITZ	**Fitzroy Crossi**	**20.16**	**220**	P	**P**	**20 27 24.5**	**-0.2**
AS31	**Alice Springs**	**21.39**	**193**	P	**P**	**20 27 38.9**	**+0.8**
ASAR	**Alice Springs**	**21.40**	**193**	P	**P**	**20 27 38.9**	**+0.7**
	comp=Z,2.7nm,0.8s,baz=17,slow=9.3,SNR=27						
ASAR				S	Sn	20 31 44.9	+2.2
	comp=Z,5.0nm,1.0s,baz=15,slow=25,SNR=7.5						
ASAR				LR	LR	20 37 20.8	
	comp=Z,176nm,19.4s,baz=17,slow=40						
ASAR	**Alice Springs**	**21.40**	**193**	P	**P**	**20 27 38.4**	**+0.2**
HNR	**Honiara**	**21.79**	**109**	LR	LR	20 35 48.7	
	comp=Z,74nm,21.6s,baz=268,slow=36						
MYLDM	**Lahad Datu**	**22.00**	**291**	P	**P**	**20 27 44.4**	**-0.3**
MYLDM				IAmb	IAmb	20 28 03.4	
	comp=Z,63nm,1.5s						
KKM	**Kota Kinabalu**	**24.43**	**291**	P	**P**	**20 28 08.5**	**-0.5**
KKM				IAmb	IAmb	20 28 15.8	
	comp=Z,26nm,1.1s						
EIDS	**Eidsvold**	**25.30**	**154**	P	**P**	**20 28 19.4**	**+2.7**
EIDS				IAmb	IAmb	20 28 27.3	
	comp=Z,22nm,1.1s						
PSA00	**Pilbara Seismi**	**26.46**	**223**	P	**P**	**20 28 27.3**	**0.0**
PSA00				IAmb	IAmb	20 28 33.9	
	comp=Z,27nm,1.4s						
STKA	**Stephens Creek**	**29.08**	**176**	P	**P**	**20 28 52.7**	**+2.1**
	comp=Z,1.4nm,0.7s,baz=14,slow=8.0,SNR=6.2						
STKA	**Stephens Creek**	**29.08**	**176**	P	**P**	**20 28 51.2**	**+0.6**
JCJ	**Chichijima**	**29.81**	**6**	LR	LR	20 38 13.7	
	comp=Z,40nm,19.9s,baz=178,slow=31						
TOO	**Toolangi**	**35.16**	**171**	P	**P**	**20 29 45.8**	**+2.0**
JHJ2	**Mitsune**	**35.66**	**1**	P	**P**	**20 29 46.4**	**-1.7**
JHJ	**Hachijo jima 2**	**35.67**	**1**	LR	LR	20 41 21.7	
	comp=Z,69nm,19.3s,baz=204,slow=31						
JWT	**Wachi**	**37.98**	**355**	P	**P**	**20 30 07.8**	**0.0**
MJAR	**Matsushiro Arr**	**39.09**	**359**	LR	LR	20 44 02.2	
	comp=Z,26nm,21.4s,baz=170,slow=33						
ENH	**Enshi**	**43.31**	**321**	P	**P**	**20 30 51.2**	**-0.8**
ENH				IAmb	IAmb	20 31 08.3	
	comp=Z,6.2nm,1.1s						
CMAR	**Chiang Mai Arr**	**44.76**	**300**	P	**P**	**20 31 04.7**	**+0.9**
	comp=Z,0.7nm,0.4s,baz=109,slow=4.6,SNR=6.6						
CMAR				LR	LR	20 50 53.0	
	comp=Z,12nm,19.9s,baz=100,slow=38						
KLR	**Kul'dur**	**52.15**	**354**	P	**P**	**20 32 00.0**	**-0.1**
	comp=Z,1.0nm,0.6s,baz=187,slow=6.5,SNR=7.5						
GTA	**Gaotai**	**55.31**	**323**	*e*P	**P**	**20 32 24.9**	**+1.3**
GTA				pP	pP	20 32 30.5	-4.5
GTA				sP	sP	20 32 34.0	-5.1
GTA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,120nm,5.8s						
GTA				LR	LR		
	comp=N,110nm,15.6s						
GTA				LR	LR		
	comp=E,130nm,16.4s						
GTA				LR	LR		
	comp=Z,160nm,16.7s						
PETK	**Petropavlovsk-**	**57.81**	**13**	LR	LR	20 53 45.2	
	comp=Z,38nm,21.5s,baz=188,slow=32						
SONM	**Songino Array**	**57.90**	**335**	P	**P**	**20 32 42.2**	**+0.3**
	comp=Z,0.3nm,0.6s,baz=153,slow=6.3,SNR=3.2						
SONM				LR	LR	20 59 46.5	
	comp=Z,60nm,18.1s,baz=44,slow=38						
MK31	**Makanchi Array**	**70.03**	**322**	P	**P**	**20 34 01.4**	**-0.2**
MKAR	**Makanchi Array**	**70.03**	**322**	P	**P**	**20 34 01.6**	**0.0**
	comp=Z,2.5nm,0.6s,baz=99,slow=8.0,SNR=35						
MKAR	**Makanchi Array**	**70.03**	**322**	P	**P**	**20 34 01.4**	**-0.2**
MAKZ	**Makanchi**	**70.23**	**322**	P	**P**	**20 34 02.8**	**0.0**
MAKZ				IAmb	IAmb	20 34 05.8	
	comp=Z,4.6nm,0.6s						
ZALV	**Zalesovo Beam**	**72.14**	**330**	P	**P**	**20 34 13.1**	**-1.1**
	comp=Z,1.1nm,0.6s,baz=120,slow=7.2,SNR=4.9						
ZALV	**Zalesovo Beam**	**72.14**	**330**	P	**P**	**20 34 14.0**	**-0.2**
VNDA	**Vanda**	**75.72**	**175**	P	**P**	**20 34 36.4**	**+1.7**
	comp=Z,3.9nm,1.0s,baz=298,slow=11,SNR=2.4						
BRVK	**Borovoye**	**79.61**	**325**	P	**P**	**20 34 56.4**	**-0.4**
BRVK				IAmb	IAmb	20 35 21.8	
	comp=Z,3.4nm,1.1s						
ILAR	**Eielson Array**	**85.71**	**24**	P	**P**	**20 35 26.9**	**-1.4**
	comp=Z,1.1nm,0.6s,baz=258,slow=4.6,SNR=13						
ILAR	**Eielson Array**	**85.71**	**24**	P	**P**	**20 35 27.1**	**-1.2**

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*IDC **16** 20:23:07.2±1.2, 41°.03N×19°.87E, h0^{km}, mb3.8/11, mb1 3.9/17, mb1mx3.8/57, mbtmp3.8/17, ML3.6/5, MS3.3/6, Ms1 3.3/6, ms1mx2.9/69, Error ellipse: s-maj=19.6km s-min=11.9km az=21.0*

*ATH **16** 20:23:09.9, 41°.25N×19°.91E, h43^{km}±3^{km}, ML3.6/8, Error ellipse: s-maj=4.0km s-min=1.3km az=337.0*

*SKO **16** 20:23:10.6, 41°.03N×19°.91E, h13^{km}*

*BEO **16** 20:23:10.8±0.7, 41°.08N×20°.03E, h8^{km}±2^{km}, ML3.8/15*

*PDG **16** 20:23:11.4±0.5, 41°.18N×19°.99E, h14^{km}, MD3.8/7, ML3.7/13, Error ellipse: s-maj=0.4km s-min=0.8km az=0.0*

*PRU **16** 20:23:12.9±0.0, 41°.16N×19°.90E, h10^{km}*

*ROM **16** 20:23:12.1±0.2, 41°.13N±0°.01×19°.91E±0°.03, h19^{km}±1^{km}, ML3.7/52, Error ellipse: s-maj=2.8km s-min=1.3km az=87.0*

*LDG **16** 20:23:12.2±0.1, 41°.17N×19°.99E, h20^{km}, Ml3.5/11, Error ellipse: s-maj=2.6km s-min=1.6km az=37.0*

*TIR **16** 20:23:12.2, 41°.23N×20°.08E, h20^{km}±8^{km}, Md4.1, Ml3.9*

*THE **16** 20:23:12.0, 41°.15N×20°.05E, h0^{km}±2^{km}, ML3.4/7, Error ellipse: s-maj=2.4km s-min=0.8km az=277.0*

ISC 16 20:23:11.5±0.7, **41°.15N**±0°.02×**19°.96E**±0°.02, **h23**^{km}±5^{km}, **n290,** σ**1^{s}94**/378, **mb4.0**/8, **53C-52D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.21**	**340**	P	**Pb**	**20 23 17.1**	**0.0**
TIR	**Tirane**	**0.21**	**340**	*e*Pg	**Pb**	**20 23 16.9**	**-0.3**
TIR				*e*Sg	**Sb**	**20 23 21.6**	**+0.6**
TIR	**Tirane**	**0.21**	**340**	P	**Pb**	**20 23 17.2**	**0.0**
TIR				S	**Sb**	**20 23 21.7**	**+0.8**
TIR	**Tirane**	**0.21**	**340**	P	**Pb**	**20 23 17.1**	**0.0**
	baz=308						
TIR				S	**Sb**	**20 23 21.2**	**+0.2**
	baz=308						
TIR	**Tirane**	**0.21**	**340**	⇑*i*Pg	**Pb**	**20 23 17.2**	**0.0**
TIR	**Tirane**	**0.21**	**340**	⇑P	**Pb**	**20 23 17.2**	**0.0**
TIR				S	**Sb**	**20 23 21.9**	**+1.0**
TIR				AML	AML		
	comp=E,50200µm,0.3s						
TIR				AML	AML		
	comp=N,86950µm,0.3s						
TIR				AML	AML		
	comp=N,86950µm,0.3s						
TIR				AML	AML		
	comp=E,50200µm,0.3s						
TIR	**Tirane**	**0.21**	**340**	P	**Pb**	**20 23 17.2**	**0.0**
TIR				S	**Sb**	**20 23 22.0**	**+1.0**
TIR				AML	AML	20 23 22.1	
TIR				AML	AML	20 23 25.8	
	comp=E,80531µm,0.3s						
LACI	**Lac**	**0.52**	**339**	P	**Pb**	**20 23 22.6**	**+0.6**
	baz=327						
LACI				S	**Sb**	**20 23 30.5**	**+1.4**
	baz=327						
OHR	**Ohrid**	**0.64**	**93**	⇑*i*Pg	**Pb**	**20 23 23.3**	**-0.7**
OHR				*i* Sg	**Sb**	**20 23 33.0**	**+0.5**
OHR				*e*Lg	Lg	20 23 33.1	
	comp=N,896nm,0.6s						
OHR				*e*Lg	Lg	20 23 33.6	
	comp=E,1µm,0.6s						
PHP	**Peshkopia**	**0.65**	**34**	P	**Pb**	**20 23 23.0**	**-1.2**
PHP				S	**Sb**	**20 23 33.3**	**+0.5**
PHP	**Peshkopia**	**0.65**	**34**	P	**Pb**	**20 23 23.0**	**-1.2**
	baz=30						
PHP				S	**Sb**	**20 23 31.8**	**-1.1**
	baz=30						
VLO	**Vlora**	**0.77**	**207**	P	**Pn**	**20 23 28.0**	**+1.2**
	baz=211						
VLO				S	**Sn**	**20 23 40.2**	**+2.6**
	baz=211						
VLO	**Vlora**	**0.77**	**207**	P	**Pn**	**20 23 27.5**	**+0.6**
VLO				AML	AML		
	comp=E,16150µm,0.8s						
VLO				AML	AML		
	comp=N,17550µm,0.5s						
VLO				AML	AML		
	comp=N,17550µm,0.5s						
KBN	**Korca**	**0.82**	**130**	P	**Pb**	**20 23 26.7**	**-0.5**
KBN				S	**Sb**	**20 23 36.9**	**-0.9**
	comp=N,4µm,0.7s						
KBN	**Korca**	**0.82**	**130**	P	**Pb**	**20 23 26.5**	**-0.7**
	baz=137						
KBN				S	**Sb**	**20 23 37.8**	**-0.1**
	baz=137						
TPE	**Tepelena**	**0.86**	**177**	P	**Pn**	**20 23 29.2**	**+1.1**
	baz=184						
PUK	**Puka**	**0.89**	**357**	P	**Pb**	**20 23 28.4**	**0.0**
	baz=351						
PUK				S	**Sn**	**20 23 41.3**	**+0.3**
	baz=351						
PUK	**Puka**	**0.89**	**357**	⇑P	**Pb**	**20 23 28.1**	**-0.2**
PUK				S	**Sn**	**20 23 44.1**	**+3.1**
PUK				AML	AML		
	comp=N,7380µm,1.3s						
PUK				AML	AML		
	comp=E,5970µm,0.6s						
PUK				AML	AML		
	comp=N,7385µm,1.3s						
ULC	**Ulcinj**	**0.97**	**327**	*i* Pg	**Pn**	**20 23 29.5**	**-0.3**
ULC	**Ulcinj**	**0.97**	**327**	⇑*i*Pg	**Pn**	**20 23 29.5**	**-0.3**
ULC				*i* Sg	**Sn**	**20 23 44.6**	**+1.8**
NEST	**Nestorio**	**1.11**	**131**	P	**Pb**	**20 23 32.5**	**+0.4**
NEST				S	**Sn**	**20 23 47.6**	**+1.3**
	comp=N,1µm,0.6s						
NEST	**Nestorio**	**1.11**	**131**	P	**Pn**	**20 23 31.8**	**+0.1**
NEST				AML	AML	20 23 53.7	
	comp=N,3934µm,0.4s						
NEST				AML	AML	20 23 56.5	
	comp=E,2551µm,0.5s						
LSK	**Leskovik**	**1.11**	**154**	P	**Pn**	**20 23 31.8**	**+0.1**
LSK	**Leskovik**	**1.11**	**154**	P	**Pn**	**20 23 32.3**	**+0.5**
	baz=159						
LSK				S	**Sn**	**20 23 48.0**	**+1.6**
	baz=159						
FNA	**Florina**	**1.14**	**108**	P	**Pn**	**20 23 31.9**	**-0.1**
FNA				S	**Sb**	**20 23 47.6**	**+0.7**
	comp=E,3µm,0.4s						
FNA	**Florina**	**1.14**	**108**	⇑*i*Pg	**Pn**	**20 23 31.9**	**-0.1**
FNA	**Florina**	**1.14**	**108**	P	**Pn**	**20 23 31.9**	**-0.1**
FNA				S	**Sb**	**20 23 48.2**	**+1.3**
FNA				AML	AML	20 23 52.8	
	comp=N,5237µm,0.5s						
FNA				AML	AML	20 23 55.4	
	comp=E,6459µm,0.4s						
DRME	**Dracevica, Mon**	**1.19**	**331**	*e*Pn	**Pn**	**20 23 32.9**	**+0.2**
DRME	**Dracevica, Mon**	**1.19**	**331**	⇓*i*Pg	**Pn**	**20 23 33.3**	**+0.6**
DRME				*i* Sg	**Sb**	**20 23 51.8**	**+3.5**
BCI	**Bajram Curri**	**1.22**	**4**	P	**Pn**	**20 23 33.8**	**+0.7**
	baz=0.0						
BCI				S	**Sb**	**20 23 51.0**	**+1.8**
	baz=0.0						
PRZK	**Prizren**	**1.22**	**29**	*e*Pg	**Pn**	**20 23 33.2**	**0.0**
PRZK				*i* Sg	**Sb**	**20 23 54.1**	**+4.9**
SRN	**Sarande**	**1.27**	**179**	P	**Pb**	**20 23 35.9**	**+1.2**
SRN	**Sarande**	**1.27**	**179**	P	**Pb**	**20 23 35.9**	**+1.2**
	baz=183						
SRN				S	**Sb**	**20 23 54.7**	**+4.1**
	baz=183						
SRN	**Sarande**	**1.27**	**179**	P	**Pb**	**20 23 36.0**	**+1.3**
SRN				AML	AML		
	comp=N,2355µm,0.7s						
SRN				AML	AML		
	comp=E,1610µm,1.1s						
PENT	**Pentalofos**	**1.31**	**136**	P	**Pb**	**20 23 36.0**	**+0.5**
PENT				S	**Sb**	**20 23 54.5**	**+2.6**
	comp=E,1µm,0.8s						
PENT	**Pentalofos**	**1.31**	**136**	P	**Pb**	**20 23 35.5**	**-0.1**
PENT				AML	AML	20 23 58.4	
	comp=E,3000µm,0.8s						
PENT				AML	AML	20 24 00.4	
	comp=N,2366µm,0.8s						
PDG	**Podgorica**	**1.38**	**338**	*e*Pg	**Pb**	**20 23 37.5**	**+0.8**
PDG				*e*Sg	**Sb**	**20 23 56.9**	**+3.0**
PDG	**Podgorica**	**1.38**	**338**	⇓P	**Pb**	**20 23 37.0**	**+0.3**
PDG				⇓S	**Sb**	**20 23 54.6**	**+0.8**
PDG	**Podgorica**	**1.38**	**338**	*e*Pn	**Pb**	**20 23 36.9**	**+0.3**
PDG	**Podgorica**	**1.38**	**338**	*i* Pg	**Pb**	**20 23 37.0**	**+0.3**
PDG				*i* Sg	**Sb**	**20 23 58.0**	**+4.2**
PDG	**Podgorica**	**1.38**	**338**	P	**Pb**	**20 23 37.3**	**+0.6**
PDG				S	**Sb**	**20 23 57.2**	**+3.3**
PDG				AML	AML		
	comp=E,5055µm,0.4s						
PDG				AML	AML		
	comp=N,3845µm,0.4s						
PDG				AML	AML		
	comp=N,4915µm,0.4s						
PDG				AML	AML		
	comp=E,4000µm,0.4s						
SKO	**Skopje**	**1.38**	**53**	⇓*i*Pg	**Pn**	**20 23 36.3**	**+0.9**
SKO				*i* Sg	**Sb**	**20 23 57.5**	**+3.6**
TTG	**Podgorica**	**1.38**	**338**	*e*Pg	**Pb**	**20 23 37.0**	**+0.3**
TTG				*i* Sg	**Sb**	**20 23 57.8**	**+3.9**
BUM	**Brajici-Budva**	**1.40**	**326**	*e*Pg	**Pb**	**20 23 37.5**	**+0.5**
BUM				*i* Sg	**Sb**	**20 23 58.3**	**+3.9**
KASA	**Kassiopi**	**1.40**	**181**	P	**Pb**	**20 23 37.2**	**+0.2**
KASA				S	**Sb**	**20 23 56.7**	**+2.2**
KASA				AML	AML	20 23 60.0	
	comp=N,3869µm,0.3s						
KASA				AML	AML	20 24 01.1	
	comp=E,4942µm,0.3s						
KEK	**Kerkira**	**1.44**	**185**	P	**Pb**	**20 23 37.8**	**+0.1**
KEK				AML	AML		
	comp=E,411µm,0.6s						
KEK				AML	AML		
	comp=N,418µm,0.8s						
KEK	**Kerkira**	**1.44**	**185**	P	**Pb**	**20 23 37.6**	**-0.1**
KEK				S	**Sb**	**20 23 57.6**	**+2.0**
KEK				AML	AML	20 24 02.6	
	comp=N,2743µm,0.3s						
KEK				AML	AML	20 24 04.7	
	comp=E,2600µm,0.3s						
PVY	**Plav**	**1.44**	**0**	⇓*i*Pg	**Pb**	**20 23 37.8**	**0.0**
PVY				*i* Sg	**Sb**	**20 23 58.9**	**+3.1**
PEJK	**Peje**	**1.51**	**9**	*i* Pn	**Pb**	**20 23 38.9**	**0.0**
SCTE	**Santa Cesarea**	**1.56**	**227**	⇑P	**Pn**	**20 23 38.7**	**+0.8**
SCTE				AML	AML		
	comp=N,3020µm,0.8s						
SCTE				AML	AML		
	comp=N,3025µm,0.8s						
SCTE				AML	AML		
	comp=E,4035µm,0.7s						
SCTE	**Santa Cesarea**	**1.56**	**227**	P	**Pn**	**20 23 38.5**	**+0.6**
CEME	**Cevo**	**1.60**	**331**	*e*Pn	**Pb**	**20 23 40.2**	**-0.2**
CEME				*e*Sn	**Sb**	**20 24 03.1**	**+3.0**
KPRO	**Kipourio**	**1.60**	**138**	P	**Pb**	**20 23 41.0**	**+0.5**
KPRO				S	**Sb**	**20 24 02.4**	**+2.1**
	comp=E,945nm,0.7s						
KPRO	**Kipourio**	**1.60**	**138**	P	**Pb**	**20 23 40.4**	**-0.1**
KPRO				S	**Sb**	**20 24 02.4**	**+2.1**
KZN	**Kozani**	**1.62**	**121**	P	**Pb**	**20 23 40.9**	**+0.2**
KZN				S	**Sb**	**20 24 02.8**	**+2.1**
	comp=E,820nm,0.6s						
KZN	**Kozani**	**1.62**	**121**	P	**Pb**	**20 23 40.5**	**-0.2**
KZN				AML	AML	20 24 06.5	
	comp=N,1790µm,0.6s						
KZN				AML	AML	20 24 12.0	
	comp=E,1494µm,0.5s						
IGT	**Igoumenitsa**	**1.64**	**170**	P	**Pb**	**20 23 40.9**	**-0.2**
IGT				S	**Sb**	**20 24 03.0**	**+1.6**
	comp=E,1µm,0.5s						
IGT	**Igoumenitsa**	**1.64**	**170**	*i* Pn	**Pb**	**20 23 41.2**	**+0.1**
IGT	**Igoumenitsa**	**1.64**	**170**	P	**Pb**	**20 23 40.9**	**-0.2**
IGT				AML	AML	20 24 12.3	
	comp=N,1807µm,0.7s						
IGT				AML	AML	20 24 12.8	
	comp=E,2366µm,0.6s						
HCY	**Herceg Novi**	**1.70**	**320**	⇑*i*Pn	**Pn**	**20 23 41.0**	**+1.3**
HCY	**Herceg Novi**	**1.70**	**320**	*e*Pn	**Pn**	**20 23 41.0**	**+1.3**
HCY				*i* Sn	**Sb**	**20 24 05.9**	**+3.0**
GJIK	**Gjilan**	**1.71**	**40**	*i* Pn	**Pb**	**20 23 41.8**	**-0.5**
IVA	**Berane**	**1.72**	**358**	*e*Pn	**Pb**	**20 23 42.2**	**-0.3**
IVA				*e*Sn	**Sb**	**20 24 06.6**	**+2.9**
KOME	**Kolasin**	**1.73**	**349**	*e*Pn	**Pb**	**20 23 42.5**	**-0.2**
KOME				*e*Sn	**Sb**	**20 24 06.6**	**+2.6**
NKME	**Niksic**	**1.78**	**335**	*e*Pn	**Pn**	**20 23 42.7**	**+1.8**
NKME				*i* Sn	**Sb**	**20 24 08.1**	**+2.7**
NKY	**Niksic**	**1.81**	**337**	*e*Pn	**Pn**	**20 23 43.1**	**+1.7**
NKY				*e*Sn	**Sb**	**20 24 08.5**	**+2.2**
GRG	**Griva**	**1.86**	**95**	P	**Pn**	**20 23 43.1**	**+1.2**
GRG	**Griva**	**1.86**	**95**	*i* Pn	**Pn**	**20 23 43.0**	**+1.0**
TREB	**Trebinje**	**1.97**	**323**	*e*Pn	**Pn**	**20 23 44.8**	**+1.3**
TREB				*e*Sn	**Sb**	**20 24 11.8**	**+0.9**
TREB	**Trebinje**	**1.97**	**323**	⇑*i*Pn	**Pn**	**20 23 44.6**	**+1.1**
VAY	**Valandovo**	**1.98**	**84**	*i* Pn	**Pn**	**20 23 44.2**	**+0.7**
DBRK	**Dubrovnik**	**2.03**	**319**	*e*Pn	**Pn**	**20 23 44.4**	**+0.1**
DBRK				Sn	**Sn**	**20 24 09.4**	**+0.5**
BRY	**Bratogost**	**2.04**	**329**	⇑*i*Pn	**Pb**	**20 23 47.3**	**-0.7**
BRY	**Bratogost**	**2.04**	**329**	*e*Pn	**Pn**	**20 23 46.3**	**+1.7**
BRY				*e*Sn	**Sb**	**20 24 13.9**	**+0.8**
LIT	**Litokhoron**	**2.19**	**118**	P	**Pn**	**20 23 48.1**	**+1.5**
LIT	**Litokhoron**	**2.19**	**118**	*i* Pn	**Pn**	**20 23 48.3**	**+1.8**
UPM	**Unac-Piva**	**2.19**	**339**	*e*Pn	**Pb**	**20 23 49.5**	**-1.1**
UPM	**Unac-Piva**	**2.19**	**339**	*e*Pn	**Pn**	**20 23 48.7**	**+2.0**
UPM				*e*Sn	**Sb**	**20 24 17.7**	**+0.2**
PLE	**Pljevlja**	**2.22**	**349**	⇑*i*Pn	**Pn**	**20 23 48.7**	**+1.7**
PLE				*i* Sn	**Sb**	**20 24 17.8**	**-0.3**
NOCI	**Noci**	**2.22**	**262**	P	**Pn**	**20 23 47.4**	**+0.5**
NOCI				AML	AML		
	comp=E,1225µm,0.6s						
NOCI				AML	AML		
	comp=N,1700µm,0.5s						
BOSS	**Bosilegrad**	**2.31**	**54**	*e*Pn	**Pn**	**20 23 49.4**	**+1.2**
BOSS				*e*Sn	**Sn**	**20 24 17.1**	**+1.1**
THE	**Thessaloniki**	**2.34**	**102**	*i* Pn	**Pn**	**20 23 50.4**	**+1.9**

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STON Ston             2.41 316 ePn   Pn   20 23 49.4  0.0
STON                           Sn    Sn   20 24 18.4 +0.2
IVAS Ivanjica         2.43   3 ePn   Pn   20 23 51.5 +1.7
IVAS                           eSn   Sb   20 24 23.8 -0.3
RUDO Rudo             2.50 350 ePn   Pn   20 23 53.2 +2.4
AMUR Altamura         2.55 266 ⇑P    Pn   20 23 52.1 +0.6
AMUR                           AML   AML
     comp=E,496µm,0.4s
AMUR                           AML   AML
     comp=N,560µm,0.5s
SOH  Sokhos           2.59  96 P     Pn   20 23 53.6 +1.6
SOH  Sokhos           2.59  96 i Pn  Pn   20 23 53.7 +1.6
MIGL Miglionico       2.72 260 ⇓P    Pn   20 23 55.2 +1.4
MIGL                           AML   AML
     comp=N,3970µm,0.8s
MIGL                           AML   AML
     comp=E,2320µm,0.8s
BBLS Lazi&#263;i      2.74 352 ePn   Pn   20 23 56.5 +2.3
BBLS                           eSn   Sb   20 24 30.6 -2.5
BBLS Lazi&#263;i      2.74 352 ePn   Pn   20 23 56.0 +1.8
SRS  Serrai           2.75  90 P     Pn   20 23 55.0 +0.9
SRS  Serrai           2.75  90 i Pn  Pn   20 23 54.8 +0.7
GRUS Gruza            2.79  11 ePn   Pn   20 23 57.5 +2.7
GRUS                           eSn   Sn   20 24 31.1 +3.4
GRUS Gruza            2.79  11 ⇑P    Pn   20 23 57.0 +2.3
BOVS Bovan            2.80  27 ePn   Pn   20 23 57.1 +2.3
BOVS                           eSn   Sn   20 24 30.8 +2.9
BOVS Bovan            2.80  27 ⇑P    Pn   20 23 56.6 +1.7
LSTV Lastovo          2.80 306 i Pn  Pn   20 23 55.3 +0.5
LSTV                           Sn    Sn   20 24 27.2 -0.7
MRVN Minervino Murg   2.84 269 P     Pn   20 23 56.6 +1.1
MRVN                           AML   AML
     comp=E,405µm,1.1s
MRVN                           AML   AML
     comp=N,392µm,1.6s
VTS  Vitosha          2.85  58 ⇓P    Pn   20 23 57.1 +1.4
VTS  Vitosha          2.85  58 i Pn  Pn   20 23 57.1 +1.4
VTS  Vitosha          2.85  58 ⇓P    Pn   20 23 57.0 +1.4
VTS                            AML   AML
     comp=N,576µm,0.8s
VTS                            AML   AML
     comp=E,176µm,0.9s
ORI  Oriolo Calabro   2.88 249 ⇓P    Pn   20 23 55.5 -0.5
ORI                            AML   AML
     comp=N,1535µm,0.7s
ORI                            AML   AML
     comp=E,1225µm,0.5s
ZAPS Zavoj            2.91  42 ePn   Pn   20 23 58.4 +2.0
ZAPS                           eSn   Sn   20 24 32.6 +2.0
PIPA Pietrapaola      2.92 236 P     Pn   20 23 57.4 +0.8
PIPA                           AML   AML
     comp=E,746µm,0.6s
PIPA                           AML   AML
     comp=E,688µm,1.6s
PIPA                           AML   AML
     comp=N,402µm,0.7s
PIPA                           AML   AML
     comp=N,485µm,0.7s
DIVS Divibare         2.94   0 ePn   Pn   20 23 59.7 +2.8
DIVS                           eSn   Sn   20 24 35.6 +4.0
DIVS Divibare         2.94   0 ePn   Pn   20 23 59.2 +2.3
DIVS Divibare         2.94   0 ⇓P    Pn   20 23 59.4 +2.4
DIVS                           AML   AML
     comp=N,254µm,1.1s
DIVS                           AML   AML
     comp=E,221µm,1.3s
VLS  Valsamata        3.01 170 P     Pn   20 23 56.6 -1.1
VLS                            AML   AML
     comp=E,158µm,0.8s
VLS                            AML   AML
     comp=N,116µm,0.7s
HAPS Han Pijesak,Bl   3.03 346 ePn   Pn   20 23 59.2 +1.1
HAPS                           eSn   Sn   20 24 35.9 +2.3
HAPS Han Pijesak,Bl   3.03 346⇑iPn   Pn   20 23 59.0 +0.9
PALZ Palazzo San Ge   3.03 267 ⇑P    Pn   20 24 00.1 +2.0
PALZ                           AML   AML
     comp=E,1235µm,0.8s
PALZ                           AML   AML
     comp=N,1230µm,1.1s
SALB San Lorenzo Be   3.03 246 P     Pn   20 23 58.6 +0.4
SALB                           AML   AML
     comp=E,386µm,0.5s
SALB                           AML   AML
     comp=N,371µm,0.5s
SALB                           AML   AML
     comp=N,352µm,0.4s
SALB                           AML   AML
     comp=E,391µm,0.6s
MAKA Makarska         3.05 315 ePn   Pn   20 23 59.6 +1.3
MAKA                           Sn    Sn   20 24 34.2 +0.2
ACER Acerenza         3.06 264 ⇑P    Pn   20 24 00.4 +1.9
ACER                           S     Sn   20 24 36.0 +1.6
ACER                           AML   AML
     comp=E,1145µm,0.5s
ACER                           AML   AML
     comp=N,1008µm,0.7s
ACER                           AML   AML
     comp=E,1190µm,0.5s
ACER                           AML   AML
     comp=N,1050µm,0.7s
TRUS Trudelj          3.09   6 ePn   Pn   20 24 01.2 +2.4
TRUS                           eSn   Sn   20 24 38.9 +3.9
MSAG Monte S. Angel   3.10 282 P     Pn   20 23 59.3 +0.3
MSAG                           AML   AML
     comp=E,336µm,0.8s
MSAG                           AML   AML
     comp=N,650µm,0.7s
MSAG                           AML   AML
     comp=E,375µm,0.8s
MSAG                           AML   AML
     comp=N,652µm,0.7s
SCHR S. Chirico Rap   3.10 253 ⇓P    Pn   20 24 00.3 +1.2
SCHR                           AML   AML
     comp=N,398µm,0.6s
SCHR                           AML   AML
     comp=E,362µm,0.6s
RICI Ricice           3.14 319 ePn   Pn   20 24 00.5 +1.0
TIP  Timpagrande      3.15 232 ⇓P    Pn   20 24 00.7 +1.0
TIP  Timpagrande      3.15 232 ⇓P    Pn   20 24 00.5 +0.8
TIP                            AML   AML
     comp=N,174µm,1.1s
TIP                            AML   AML
     comp=E,235µm,0.7s
TIP                            AML   AML
     comp=E,214µm,0.7s
TIP                            AML   AML
     comp=N,224µm,1.0s
ZAGS Zajecar          3.15  32 ePn   Pn   20 24 01.1 +1.5
ZAGS                           eSn   Sn   20 24 37.6 +1.2
SGRT San Giovanni R   3.22 282 P     Pn   20 24 01.2 +0.5
SGRT                           AML   AML
     comp=E,353µm,1.0s
SGRT                           AML   AML
     comp=N,227µm,1.3s
SIRI Monte Sirino -   3.26 254 ⇑P    Pn   20 24 02.3 +1.1
SIRI                           AML   AML
     comp=E,352µm,0.5s
SIRI                           AML   AML
     comp=N,324µm,1.1s
SIRI                           AML   AML
     comp=E,354µm,0.5s
SIRI                           AML   AML
     comp=N,320µm,0.5s
MCEL Monticello       3.26 257 ⇑P    Pn   20 24 02.9 +1.6
MCEL                           AML   AML
     comp=N,614µm,0.9s
MCEL                           AML   AML
     comp=E,402µm,0.6s
MCEL                           AML   AML
     comp=N,608µm,0.9s
MCEL                           AML   AML
     comp=E,391µm,0.6s
T0702 Acquaformosa (  3.28 245 ⇑P    Pn   20 24 03.6 +2.0
HVAR Hvar             3.30 309 ePn   Pn   20 24 02.1 +0.4
MTSN Montesano sull   3.32 256 ⇑P    Pn   20 24 04.0 +2.0
MTSN                           AML   AML
     comp=N,363µm,0.7s
MTSN                           AML   AML
     comp=E,358µm,0.7s
SPS2 Spezzano della   3.33 237 P     Pn   20 24 01.1 -1.1
SPS2                           AML   AML
     comp=N,88µm,0.9s
SPS2                           AML   AML
     comp=E,90µm,1.2s
MRLC Muro Lucano      3.41 265 P     Pn   20 24 04.9 +1.7
MRLC                           AML   AML
     comp=E,286µm,0.7s
MRLC                           AML   AML
     comp=N,296µm,0.6s
CAR1 CAROLEI          3.44 238 ⇑P    Pn   20 24 05.6 +1.9
CAR1                           AML   AML
     comp=E,410µm,0.7s
CAR1                           AML   AML
     comp=N,432µm,0.6s
CAR1                           AML   AML
     comp=N,336µm,0.7s
CAR1                           AML   AML
     comp=E,446µm,1.0s
CET2 Cetraro          3.46 243 ⇑P    Pn   20 24 05.7 +1.7
CET2                           AML   AML
     comp=E,760µm,0.7s
CET2                           AML   AML
     comp=N,1300µm,0.7s
SGTA Sant Agata di    3.47 271 ⇑P    Pn   20 24 06.3 +2.2
SGTA                           AML   AML
     comp=E,446µm,0.6s
SGTA                           AML   AML
     comp=N,336µm,0.7s
SGTA                           AML   AML
     comp=E,432µm,0.7s
SGTA                           AML   AML
     comp=N,352µm,0.8s
KUBS Kucevo           3.50  21 ePn   Pn   20 24 05.2 +0.8
KUBS                           eSn   Sn   20 24 47.7 +2.6
MGR  Morigerati       3.50 255 ⇓P    Pn   20 24 06.2 +1.7
MGR                            AML   AML
     comp=E,298µm,1.3s
MGR                            AML   AML
     comp=N,354µm,0.7s
CAFE Carife           3.57 270 ⇓P    Pn   20 24 07.2 +1.7
CAFE                           AML   AML
     comp=E,390µm,0.9s
CAFE                           AML   AML
     comp=N,264µm,1.6s
CDRU Civita di Ruta   3.59 261 ⇓P    Pn   20 24 07.0 +1.2
CDRU                           AML   AML
     comp=E,162µm,0.8s
CDRU                           AML   AML
     comp=N,105µm,0.6s
SNAL S. Angelo Dei    3.60 268 ⇑P    Pn   20 24 07.6 +1.7
SNAL                           AML   AML
     comp=E,474µm,0.8s
SNAL                           AML   AML
     comp=N,536µm,0.8s
SNAL                           AML   AML
     comp=E,500µm,0.8s
SNAL                           AML   AML
     comp=N,510µm,0.8s
MCRV Calabrutti - M   3.65 266 ⇓P    Pn   20 24 08.2 +1.6
MCRV                           AML   AML
     comp=N,292µm,0.4s
MCRV                           AML   AML
     comp=E,254µm,0.7s
MELA Melanico ??? S   3.67 280 ⇑P    Pn   20 24 08.0 +1.1
MELA                           AML   AML
     comp=E,538µm,0.7s
MELA                           AML   AML
     comp=N,632µm,1.0s
MELA                           AML   AML
     comp=E,528µm,0.8s
MELA                           AML   AML
     comp=N,646µm,0.9s
MRB1 Monte Rocchett   3.77 271 ⇑P    Pn   20 24 09.9 +1.8
MRB1                           AML   AML
     comp=E,330µm,0.7s
MRB1                           AML   AML
     comp=N,444µm,0.7s
PUNG Punghina         3.82  34 ⇑P    Pn   20 24 10.4 +1.6
PLAC Placanica        3.82 226 ⇓P    Pn   20 24 09.4 +0.4
PLAC                           AML   AML
     comp=E,160µm,1.2s
PLAC                           AML   AML
     comp=N,166µm,0.6s
PLAC                           AML   AML
     comp=E,150µm,0.6s
PLAC                           AML   AML
     comp=N,141µm,0.6s
MDVR Moldovita        3.85  19 ⇓P    Pn   20 24 10.9 +1.5
KIJV Kijevo           3.88 319 ePn   Pn   20 24 11.1 +1.5
KIJV                           Sn    Sn   20 24 54.4  0.0
PSB1 Pescosannita     3.88 273 ⇑P    Pn   20 24 10.7 +0.9
MGRS Mrkonjic Grad    3.89 328 ePn   Pn   20 24 12.1 +2.2
SACR S. Croce Del S   3.97 275 ⇓P    Pn   20 24 12.8 +1.8
SACR                           AML   AML
     comp=E,161µm,1.6s
SACR                           AML   AML
     comp=N,153µm,0.7s
FRGS Fruska Gora      4.01 359 ePn   Pn   20 24 12.7 +1.2
FRGS                           eSn   Sn   20 25 00.5 +2.8
FRGS Fruska Gora      4.01 359 ⇑P    Pn   20 24 12.6 +1.2
FRGS Fruska Gora      4.01 359⇓iPn   Pn   20 24 12.6 +1.2
VITU Vitulano (BN)    4.02 272 P     Pn   20 24 14.2 +2.5
VITU                           AML   AML
     comp=E,280µm,0.7s
VITU                           AML   AML
     comp=N,259µm,0.5s
JOPP Joppolo          4.03 232 ⇓P    Pn   20 24 12.7 +0.8
JOPP                           AML   AML
     comp=N,139µm,1.4s
JOPP                           AML   AML
     comp=E,137µm,1.1s
BSSO Busso            4.06 277 ⇓P    Pn   20 24 14.9 +2.7
ZIRJ Zirje            4.06 309 ePn   Pn   20 24 12.8 +0.7
ZIRJ                           Sn    Sn   20 24 58.9 +0.1
PTRJ Pietraroja       4.10 275 P     Pb   20 24 24.3 +1.3
TRIV Trivento         4.11 280 ⇓P    Pn   20 24 14.7 +1.8
TRIV                           AML   AML
     comp=N,254µm,0.7s
TRIV                           AML   AML
     comp=E,196µm,1.6s
TRIV                           AML   AML
     comp=E,214µm,1.6s
TRIV                           AML   AML
     comp=N,256µm,0.7s
PLVB Pleven           4.12  56 ⇑P    Pn   20 24 14.8 +1.9
BLY  Banja Luka       4.13 331 ePn   Pn   20 24 13.9 +0.7
HERR Herculane        4.14  25 ⇑P    Pn   20 24 15.2 +1.9
MORI Morici           4.15 312 ePn   Pn   20 24 14.9 +1.5
SGG  Gregorio Mates   4.21 275 ⇓P    Pn   20 24 16.8 +2.5
SGG                            AML   AML
     comp=E,324µm,0.5s
SGG                            AML   AML
     comp=N,155µm,0.6s
SRE  Strehaia         4.24  33 ⇑P    Pn   20 24 16.6 +1.9
MIDA Miranda          4.32 278 ⇓P    Pn   20 24 17.6 +1.8
MIDA                           AML   AML
     comp=N,146µm,0.5s
MIDA                           AML   AML
     comp=E,125µm,0.9s
VAGA Valle Agricola   4.32 275 ⇑P    Pn   20 24 17.9 +2.0
VAGA                           AML   AML
     comp=E,196µm,1.6s
VAGA                           AML   AML
     comp=N,262µm,0.8s
MSCL Scilla           4.34 229 ⇓P    Pn   20 24 17.1 +1.0
MSCL                           AML   AML
     comp=N,366µm,0.7s
MSCL                           AML   AML
     comp=E,268µm,0.9s
GMB  Gambarie         4.36 228 P     Pn   20 24 16.8 +0.3
GMB                            AML   AML
     comp=E,687µm,0.4s
GMB                            AML   AML
     comp=N,546µm,0.3s
RNI2 Rionero Sannit   4.40 279 ⇓P    Pn   20 24 19.0 +2.1
RNI2                           AML   AML
     comp=E,156µm,0.7s
RNI2                           AML   AML
     comp=N,163µm,1.4s
MPAZ Palizzi          4.42 225 ⇓P    Pn   20 24 17.7 +0.6
MPAZ                           AML   AML
     comp=E,168µm,0.3s
MPAZ                           AML   AML
     comp=N,116µm,0.7s
LPEL Lama dei Pelig   4.42 284 ⇓P    Pn   20 24 20.6 +3.4
CERA Filignano        4.49 278 ⇓P    Pn   20 24 21.0 +2.8
CERA                           AML   AML
     comp=N,302µm,0.9s
CERA                           AML   AML
     comp=E,282µm,0.8s
CERA                           AML   AML
     comp=N,304µm,0.9s
CERA                           AML   AML
     comp=E,270µm,1.2s
UDBI Udbina           4.57 319 ePn   Pn   20 24 21.4 +2.2
MODR Mondragone       4.59 272 ⇓P    Pn   20 24 20.8 +1.4
DUGI Dugi Otok        4.60 310 i Pn  Pn   20 24 20.6 +1.1
BZS  Buzias           4.62  15 ⇓P    Pn   20 24 21.4 +1.5
BZS  Buzias           4.62  15 ⇓P    Pn   20 24 21.4 +1.5
BZS                            AML   AML
     comp=N,112µm,0.4s
BZS                            AML   AML
     comp=E,90µm,1.2s
GZR  Gura Zlata       4.71  25 ⇑P    Pn   20 24 22.7 +1.5
MCSR Castroreale      4.77 231 ⇓P    Pn   20 24 21.8 -0.2
AIO  Antillo          4.84 231 ⇑P    Pn   20 24 23.3 +0.3
IFIL Filicudi I Eol   4.89 240 ⇓P    Pn   20 24 24.0 +0.4
HUMR Humele           5.00  46 ⇓P    Pn   20 24 26.9 +1.8
MOSL Moslavina        5.03 333 ePn   Pn   20 24 26.6 +1.0
AQU  L'Aquila         5.05 286 ePn   Pn   20 24 27.0 +1.2
NVLJ Novalja          5.06 314 ePn   Pn   20 24 27.1 +1.2
LOT  Lotru            5.12  32 ⇑P    Pn   20 24 28.4 +1.6
MORH Mrgy, Hungar     5.15 350 ⇑P    Pn   20 24 28.6 +1.5
MORH Mrgy, Hungar     5.15 350 ePn   Pn   20 24 29.2 +2.1
FIAM Fiamignano       5.24 285 P     Pn   20 24 30.7 +2.2
SIRR Siria            5.26  13 ⇑P    Pn   20 24 31.4 +2.7
LNSS Leonessa         5.36 288 ⇑P    Pn   20 24 31.8 +1.6
NRCA Norcia           5.37 291 ⇑P    Pn   20 24 31.9 +1.6
ARR  Arges            5.42  37 ⇑P    Pn   20 24 32.9 +1.9
FDMO Fiordimonte      5.45 292 ⇓P    Pn   20 24 32.4 +1.1
HLNI Lentini          5.48 228 ⇑P    Pn   20 24 30.2 -1.5
CING Cingoli          5.49 296 ⇓P    Pn   20 24 32.5 +0.7
SSY  Sortino          5.51 225 ⇑P    Pn   20 24 30.5 -1.6
OZLJ Ozalj            5.53 325 ePn   Pn   20 24 33.8 +1.4
EL6  Elcito           5.54 295 ⇓P    Pn   20 24 33.1 +0.6
BOJS Bojanci          5.54 323 ⇓P    Pn   20 24 35.1 +2.6
PTJ  Puntijarka       5.57 330 ePn   Pn   20 24 33.4 +0.5
SAMA S.Maria delle    5.57 279 ⇑P    Pb   20 24 53.9 +5.9
KALN Kalnik           5.59 334 ePn   Pn   20 24 34.0 +0.8
MEU  Monte Lauro      5.62 226 P     Pn   20 24 33.5 -0.3
HAVL Avola            5.63 223 ⇓P    Pn   20 24 31.8 -1.9
VOIR                  5.67  39 ⇓P    Pn   20 24 37.0 +2.7
ARVD Arcevia          5.71 297 ⇓P    Pn   20 24 35.4 +0.6
CRES Cresnjev         5.71 326 i Pn  Pn   20 24 36.0 +1.2
CRES                           eSn   Sn   20 25 37.2 -2.3
CRES Cresnjev         5.71 326 ePn   Pn   20 24 35.8 +1.0
ASSB Assisi San Ben   5.75 292 P     Pn   20 24 36.9 +1.5
FOSV Fossato di Vic   5.76 294 ⇓P    Pn   20 24 36.4 +0.8
RIY  Rijeka           5.78 318 ePn   Pn   20 24 36.6 +0.9
SSFR Montelago di S   5.79 296 ⇓P    Pn   20 24 36.8 +0.8
BEHE Becsehely        5.79 338 ePn   Pn   20 24 40.1 +4.1
HPAC Pachino          5.83 222 ⇑P    Pn   20 24 35.5 -1.0
MPAG Monte Paganucc   5.88 297 ⇓P    Pn   20 24 38.0 +0.7
FSSB Fossombrone      5.89 298 ⇓P    Pn   20 24 38.1 +0.8
ATFO Monte Foce - G   5.91 294 P     Pn   20 24 38.8 +1.1
APE  Apeiranthos      5.95 131 ⇑P    Pn   20 24 39.9 +1.7
DRGR                  5.98  18 ⇑P    Pn   20 24 40.1 +1.5
PDKS Podkum           6.09 325 ePn   Pn   20 24 41.1 +1.0
CEY  Cerknica         6.10 321 ePn   Pn   20 24 41.2 +1.0
MLR  Muntele Rosu     6.15  43 Pn    Pn   20 24 44.7 +3.6
     comp=E,0.9nm,0.3s,baz=161,slow=10,SNR=9.3
MLR                            Sn    Sn   20 25 52.1 +1.4
     comp=E,0.5nm,0.3s,baz=294,slow=20,SNR=2.1
MLR                            LR    LR   20 27 41.2
     comp=E,194nm,21.3s,baz=187,slow=44
MLR  Muntele Rosu     6.15  43 ⇓P    Pn   20 24 44.9 +3.8
DOPR Dopca            6.22  38 ⇑P    Pn   20 24 44.2 +2.3
LJU  Ljubljana        6.28 323 ePn   Pn   20 24 43.5 +0.8
SOKA Soboth           6.57 329 ePn   Pn   20 24 47.3 +0.6
     comp=E,4.5nm,0.4s,SNR=7.7
SOKA                           eSn   Sn   20 25 60.0 -0.9
     comp=E,8.8nm,0.8s
OBKA Obir             6.63 326 ePn   Pn   20 24 48.8 +1.2
     comp=E,3.6nm,0.3s
OBKA                           eSn   Sn   20 26 02.4  0.0
     comp=E,13nm,0.5s
PLOR Plostina         6.76  44 ⇓P    Pn   20 24 52.3 +2.9
PSZ  Piszkesteto      6.77 360 ⇑P    Pn   20 24 51.5 +2.1
VRI  Vrincioaia       6.81  44 ⇑P    Pn   20 24 53.0 +3.0
ARSA Arzberg          6.88 334 ePn   Pn   20 24 52.2 +1.3
     comp=E,2.8nm,0.4s,SNR=5.5
ARSA                           eSn   Sn   20 26 05.6 -2.8
     comp=E,5.6nm,0.5s
MYKA Terra Mystica    7.13 322 ePn   Pn   20 24 55.8 +1.5
     comp=E,3.1nm,0.5s
MYKA                           i Sn  Sn   20 26 16.1 +1.6
     comp=E,5.4nm,0.5s
CFR  Carcaliu         7.21  53 ⇓P    Pn   20 24 57.0 +1.7
MTCR Monte La Croce   7.21 296 ⇑P    Pn   20 24 58.3 +2.8
KECS Kecovo           7.34   3 ePN   Pn   20 25 00.3 +3.1
CONA Conrad Observa   7.38 338 i Pn  Pn   20 24 59.8 +2.0
     comp=E,1.2nm,0.4s
CONA                           eSn   Sn   20 26 20.7 -0.1
     comp=E,3.9nm,0.5s
VYHS Vyhne            7.38 354 ePN   Pn   20 25 03.5 +5.7
VYHS                           e          20 26 25.9
MODS Modra-Piesok     7.47 346 eSN   Sn   20 26 20.6 -2.3
BURAR Bucovina Array  7.48  28 ⇓P    Pn   20 25 02.4 +3.2
KOLL Kolacno          7.51 352 eSN   Sn   20 26 21.1 -2.7
KBA  Koelnbreinsper   7.60 323 ePn   Pn   20 25 02.0 +1.1
     comp=E,2.9nm,0.4s
KBA                            i Sn  Sn   20 26 23.4 -2.9
     comp=E,3.6nm,0.4s
ABTA Abfaltersbach    7.75 319 ePn   Pn   20 25 03.7 +0.8
     comp=E,4.0nm,0.3s,SNR=12
ABTA                           eSn   Sn   20 26 29.1 -0.9
     comp=E,4.6nm,0.4s
CRVS Cervenica-Dubn   7.82   7 ePN   Pn   20 25 08.3 +4.5
MOA  Molln            7.83 331 ePn   Pn   20 25 05.9 +1.9
     comp=E,3.2nm,0.4s,SNR=4.4
MOA                            i Sn  Sn   20 26 29.5 -2.4
     comp=E,2.2nm,0.3s
LANS Liptovska Anna   8.01 358 ePN   Pn   20 25 11.4 +5.0
RISI Rein             8.11 318 ⇑P    Pn   20 25 09.6 +1.7
PGF  Pioggiola        8.30 283 eP    Pn   20 25 15.0 +4.5
PGF                            eSn   Sn   20 26 38.0 -5.5
     comp=E,9.1nm,0.3s
VRAC Vranov           8.49 345 LR    LR   20 28 29.4
     comp=E,164nm,21.5s,baz=189,slow=38
WTTA Wattenberg       8.54 318 i Pn  Pn   20 25 15.6 +1.7
     comp=E,7.5nm,0.5s
WTTA                           eSn   Sn   20 26 49.5 -0.1
     comp=E,17nm,0.6s
WATA Walderalm        8.62 319 ePn   Pn   20 25 17.0 +2.0
     comp=E,11nm,0.5s,SNR=8.4
CKRC Cesky Krumlov    8.65 334 ePN   Pn   20 25 17.4 +2.3
CKRC                           eSN   Sn   20 26 48.2 -3.7
SQTA Sankt Quirin     8.73 317 i Pn  Pn   20 25 17.8 +1.4
     comp=E,5.4nm,0.4s,SNR=8.7
SQTA                           eSn   Sn   20 26 52.3 -1.8
     comp=E,8.0nm,0.5s
FETA Feichten         8.86 315 i Pn  Pn   20 25 20.1 +1.9
     comp=E,2.2nm,0.4s
FETA                           eSn   Sn   20 26 56.7 -0.6
     comp=E,2.9nm,0.5s
MOTA Moosalm          8.87 317 ePn   Pn   20 25 20.4 +2.1
     comp=E,4.1nm,0.5s,SNR=6.0
MOTA                           eSn   Sn   20 26 57.0 -0.5
     comp=E,10nm,0.6s
GERES GERESS Array B  8.88 332 Pn    Pn   20 25 19.2 +0.9
     comp=E,0.5nm,0.3s,baz=154,slow=13,SNR=13
GERES                          Sn    Sn   20 26 59.0 +1.4
     comp=E,0.4nm,0.3s,baz=152,slow=23,SNR=5.6
GERES                          LR    LR   20 29 29.4
     comp=E,237nm,20.4s,baz=348,slow=43
KHC  Kasperske Hory   9.16 333 ePN   Pn   20 25 22.9 +0.7
KHC                            eSN   Sn   20 27 02.6 -1.9
DAVOX Davos/Dischmat  9.19 311 Pn    Pn   20 25 22.5 -0.2
     baz=145,slow=16
DAVOX                          Sn    Sn   20 27 06.1 +0.7
     comp=E,0.4nm,0.3s,baz=306,slow=19,SNR=2.9
DAVA Damuels          9.48 314 ePn   Pn   20 25 28.8 +2.1
     comp=E,2.8nm,0.4s
SBF  Sospel           9.64 290 ePn   Pn   20 25 27.6 -1.2
FRF  La Foret Royal  10.14 288 ePn   Pn   20 25 34.4 -1.2
FRF  La Foret Royal  10.14 288 eP    Pn   20 25 40.4 +4.8
FRF                            eSn   Sn   20 27 21.4 -7.2
     comp=E,0.5nm,0.2s
LMR  La Mourre       10.21 287 eP    Pn   20 25 41.3 +4.8
LMR                            eSn   Sn   20 27 22.6 -7.6
     comp=E,0.4nm,0.1s
MBDF Montbardon      10.31 295 ePn   Pn   20 25 37.2 -0.8
MBDF                           eSn   Sn   20 27 25.1 -7.7
LPG  La Plagne       10.55 299 ePn   Pn   20 25 40.4 -1.1
LPG                            eSn   Sn   20 27 31.2 -7.9
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	comp=E,1.9nm,0.3s						
LPL	La Plagne	10.57	299	*e*Pn	Pn	20 25 40.8	-0.9
ORIF	Oris-en-Rattie	10.97	295	*e*Pn	Pn	20 25 46.0	-1.0
ORIF				*e*Sn	Sn	20 27 40.4	-8.6
CABF	La Chapelle	11.40	303	*e*Pn	Pn	20 25 51.5	-1.4
CABF				*e*Sn	Sn	20 27 51.4	-8.0
	comp=E,0.7nm,0.3s						
HINF	Hinteralfeld	11.48	310	*e*Pn	Pn	20 25 52.3	-1.7
HINF				*e*Sn	Sn	20 27 52.7	-8.7
	comp=E,2.2nm,0.3s						
CDF	Champ du Feu	11.56	313	*e*Pn	Pn	20 25 54.7	-0.4
CDF				*e*Sn	Sn	20 27 54.6	-8.9
	comp=E,1.0nm,0.3s						
VIVF	Saint-Julien-l	11.79	293	*e*Pn	Pn	20 25 56.9	-1.3
HAU	Haudompre	11.87	310	*e*Pn	Pn	20 25 57.8	-1.5
HAU				*e*Sn	Sn	20 28 02.2	-8.7
	comp=E,2.4nm,0.3s						
SFTF	Sexfontaines	12.73	309	*e*Pn	Pn	20 26 09.2	-1.8
	baz=134						
SMF	Signal de Mont	12.85	301	*e*Pn	Pn	20 26 11.1	-1.5
SMF				*e*Sn	Sn	20 28 25.1	-10
LOR	Lormes	13.06	303	*e*Pn	Pn	20 26 13.9	-1.6
	baz=123						
LOR				*e*Sn	Sn	20 28 30.7	-9.2
	comp=E,1.7nm,0.3s						
AVF	Avril sur Loir	13.21	301	*e*Pn	Pn	20 26 15.9	-1.7
AVF				*e*Sn	Sn	20 28 34.2	-9.5
	comp=E,0.1nm,0.1s						
BGF	Bois d'Agland	13.47	299	*e*Pn	Pn	20 26 19.5	-1.6
BGF				*e*Sn	Sn	20 28 40.6	-9.4
	comp=E,0.4nm,0.2s						
MMAI	Mount Meron Ar	14.75	118	Pn	Pn	20 26 37.1	-1.6
	comp=E,0.4nm,0.3s,baz=318,slow=11,SNR=5.7						
MMAI				LR	LR	20 34 20.7	
	comp=E,33nm,18.4s,baz=20,slow=46						
KBZ	Khabaz	17.12	74	Pn	P	20 27 11.9	+1.2
	comp=E,0.1nm,0.3s,baz=299,slow=10.0,SNR=5.5						
HFS	Hagfors	19.40	351	P	P	20 27 35.7	0.0
	comp=E,0.5nm,0.3s,baz=148,slow=14,SNR=11						
NOA	NORSAR Array B	20.62	348	P	P	20 27 48.7	-0.3
	comp=E,0.6nm,0.5s,baz=154,slow=10,SNR=4.0						
FINES	FINESS Array B	20.66	8	P	P	20 27 48.4	-0.9
	comp=E,2.6nm,0.7s,baz=182,slow=8.9,SNR=9.0						
EKA	Eskdalemuir Ar	20.80	321	P	P	20 27 50.7	-0.2
	comp=E,1.5nm,0.8s,baz=108,slow=14,SNR=2.2						
AKTO	Aktyubinsk	27.84	58	P	P	20 28 58.8	-0.3
	comp=E,0.5nm,0.5s,baz=48,slow=18,SNR=1.8						
ARCES	ARCESS Array B	28.60	4	P	P	20 29 04.4	-1.1
	comp=E,6.6nm,1.1s,baz=189,slow=11,SNR=2.2						
ZALV	Zalesovo Beam	44.08	50	P	P	20 31 17.9	+0.5
	comp=E,2.5nm,0.6s,baz=278,slow=8.4,SNR=12						
ZALV				LR	LR	20 51 14.4	
	comp=E,80nm,18.2s,baz=346,slow=38						
MKAR	Makanchi Array	44.17	61	P	P	20 31 18.0	-0.4
	comp=E,0.2nm,0.3s,baz=278,slow=7.5,SNR=18						
MKAR				PcP	PP	20 33 02.1	+0.8
	comp=E,0.4nm,0.7s,baz=288,slow=2.9,SNR=4.7						
MKAR				LR	LR	20 52 41.0	
	comp=E,66nm,19.5s,baz=304,slow=40						
SONM	Songino Array	58.93	52	P	P	20 33 08.8	0.0
	comp=E,1.3nm,0.7s,baz=286,slow=8.7,SNR=11						
YKA	Yellowknife Ar	70.45	339	P	P	20 34 23.5	0.0
	comp=E,0.3nm,0.6s,baz=46,slow=5.6,SNR=6.6						
ULM	Lac du Bonnet	73.06	323	P	P	20 34 38.8	-0.6
	comp=E,0.8nm,0.2s,baz=11,slow=7.6,SNR=4.0						
PDAR	Pinedale Array	84.86	325	P	P	20 35 44.3	-0.2
	comp=E,0.5nm,0.7s,baz=75,slow=10,SNR=4.0						

IDC ***16*** *20:33:43.3±0.9, 30°.23S×71°.67W, h0^{km}, mb3.9/6, mb1 4.2/11, mb1mx4.1/25, mbtmp4.0/11, ML4.3/5, MS3.4/9, Ms1 3.4/9, ms1mx3.2/27, Error ellipse: s-maj=27.6km s-min=25.6km az=119.0*
SJA ***16*** *20:33:45.3±0.6, 30°.18S×71°.77W, h19^{km}±5^{km}, ML4.6, MW4.4*
VAO ***16*** *20:33:46.5±0.6, 30°.21S×71°.52W, h10^{km}, mb4.2*
NEIC ***16*** *20:33:46.9±2.1, 30°.25S±0°.05×71°.79W±0°.08, h31^{km}±5^{km}, Error ellipse: s-maj=10.3km s-min=6.8km az=92.0*
GUC ***16*** *20:33:47.1±0.6, 30°.28S×71°.53W, h36^{km}±4^{km}, ML4.8*
ISC 16 20:33:45.6±1.1, **30°.23S**±0°.03×**71°.74W**±0°.04, **h19**^{km}±4^{km}, **n141**, σ**1^{s}.42**/145, **mb4.5**/12, **MS3.3**/3, **2C-2D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO04	Tololo Observa	0.82	86	⇑*i*P	Pg	20 34 01.6	-0.1
GO04				*i* S	Sg	20 34 11.6	-0.9
GO04				IAML		20 34 14.4	
	comp=E,71µm,0.2s						
GO04	Tololo Observa	0.82	86		Pg	20 34 01.7	0.0
GO04	Tololo Observa	0.82	86	*e*P	Pg	20 34 01.9	+0.2
GO04				*e*S	Sn	20 34 14.1	0.0
CO03	El Pedregal	1.09	124	*e*P	Pb	20 34 04.8	-1.1
CO03				*i* S	Sb	20 34 18.0	-1.8
CO03				IAML		20 34 18.8	
	comp=N,37µm,0.2s						
CO03	El Pedregal	1.09	124		Pb	20 34 05.2	-0.8
CO02	Combarbal	1.16	147	⇓*i*P	Pn	20 34 06.8	-0.2
CO02				*i* S	Sb	20 34 20.9	-1.0
CO02				IAML		20 34 23.1	
	comp=E,78µm,0.4s						
CO02	Combarbal	1.16	147		Pn	20 34 06.8	-0.2
CO01	Juntas del Tor	1.45	80	*e*P	Pb	20 34 12.0	-0.2
CO01				*i* S	Sn	20 34 29.1	-0.7
CO01	Juntas del Tor	1.45	80		Pb	20 34 11.9	-0.2
LCO	Las Campanas	1.52	37	⇓*i*P	Pb	20 34 13.4	+0.1
LCO	Las Campanas	1.52	37	Pn	Pn	20 34 12.9	+0.8
AC05	El Transito	1.89	43	⇑*i*P	Pb	20 34 18.6	-1.0
AC05				*i* S	Sb	20 34 42.6	-0.4
AC05	El Transito	1.89	43		Pb	20 34 18.7	-1.0
AROD	Rodeo	1.96	89	*e*P	Pb	20 34 21.0	0.0
AC04	Llanos de Chal	2.10	16	*i* P	Pn	20 34 21.4	+1.5
AC04				*i* S	Sb	20 34 49.5	+0.6
AC04				IAML		20 34 56.3	
	comp=N,4µm,0.4s						
AC04	Llanos de Chal	2.10	16	Pn	Pn	20 34 21.2	+1.3
ACDV	Cuesta del Vie	2.27	89	*e*P	Pb	20 34 25.7	-0.4
ACCO	Cerro Coronel	2.34	99	*e*P	Pb	20 34 26.9	-0.5
VA03	San Esteban	2.72	158	*e*P	Pn	20 34 30.1	+1.6
VA03				*e*S	Sn	20 35 02.9	+2.0
VA03	San Esteban	2.72	158		Pn	20 34 30.0	+1.6
ROCH	El Roble	2.80	167	*e*P	Pn	20 34 31.9	+2.2
ROCH				*e*S	Sn	20 35 06.1	+3.0
ROCH				IAML		20 35 17.0	
	comp=N,7µm,0.6s						
ROC1	El Roble	2.80	167	*e*P	Pn	20 34 30.9	+1.1
ROC1				*e*S	Sb	20 35 10.4	+1.1
AUSP	Uspallata	2.83	135	*e*P	Pn	20 34 33.1	+2.9
ZON	Zonda	2.94	117		Pn	20 34 31.2	-0.2
ZON	Zonda	2.94	117	*e*P	Pb	20 34 34.5	-3.0
GO03	Copiap	2.94	27	*e*P	Pn	20 34 33.1	+1.6
GO03				*e*S	Sb	20 35 11.1	-2.1
GO03				IAML		20 35 22.1	
	comp=E,2µm,0.7s						
GO03	Copiap	2.94	27		Pn	20 34 33.0	+1.4
GO03	Copiap	2.94	27	*e*P	Pn	20 34 33.5	+2.0
GO03				*e*S	Sn	20 35 09.1	+2.7
RTLL	Cerro Villicun	3.01	112	*e*P	Pb	20 34 35.6	-3.1
RTLL				IAML		20 35 23.9	
	comp=Z,2µm,0.8s						
PEL	Peldehue	3.04	163	*e*P	Pn	20 34 34.4	+1.6
PEL				IAML		20 35 21.7	
	comp=E,5µm,0.3s						
PEL	Peldehue	3.04	163	Pn	Pn	20 34 34.2	+1.5
PEL	Peldehue	3.04	163	*e*P	Pn	20 34 34.6	+1.8
MT02	Curacav	3.06	171	*e*P	Pn	20 34 34.7	+1.7
MT02				*e*S	Sn	20 35 11.0	+1.8
MT02				IAML		20 35 27.0	
	comp=E,2µm,0.7s						
MT02	Curacav	3.06	171		Pn	20 34 34.1	+1.1
RTCV	Cerro Valdivia	3.19	121	*e*P	Pn	20 34 37.9	+3.0
RTCV				IAML		20 35 29.4	
	comp=Z,1µm,1.5s						
MT05	Renca	3.26	165	Pn	Pn	20 34 37.2	+1.4
VCA	Vinchina	3.42	65	*e*P	Pb	20 34 43.0	-2.8
AC02	Maricunga	4.09	35	Pn	Pn	20 34 49.6	+1.9
AC01	Pan de Azucar	4.19	14	Pn	Pn	20 34 48.2	-0.4
APLL	PUNTA DE LOS L	4.51	93	*e*P	Pn	20 34 55.4	+2.3
BO02	Sierra Bellavi	4.62	170	Pn	Pn	20 34 55.4	+0.9
LAMA	Las Malvinas	5.15	156	*e*P	Pn	20 35 06.5	+4.7
COIS	El Sosneado	5.19	160	*e*P	Pn	20 35 05.9	+3.6
RFA	San Rafael	5.30	149	*e*P	Pn	20 35 06.7	+2.7
RFA				IAML		20 36 42.0	
	comp=Z,314nm,0.9s						
GO02	Mina Guanaco	5.40	21	Pn	Pn	20 35 05.4	-0.1
PUMA	Malargue	5.59	160	*e*P	Pn	20 35 10.8	+2.9
MRA	San Martin	5.59	114	*e*P	Pn	20 35 08.9	+0.9
PB14	IPOC Station P	5.71	12	Pn	Pn	20 35 08.1	-1.7
PB14	IPOC Station P	5.71	12	*e*P	Pb	20 35 21.9	-3.0
PB14				*e*S	Sb	20 36 34.7	+1.6
PB14				IAML		20 36 45.9	
	comp=Z,353nm,0.9s						
EDS3	Malargue	5.86	161	*e*P	Pn	20 35 18.7	+7.0
BI02	San Fabin de	6.42	177	Pn	Pn	20 35 19.8	+0.4
FSA	Cafayete	6.54	52	*e*P	Pn	20 35 24.1	+3.1
BI03	Tigo	6.68	189		Pn	20 35 22.6	-0.2
PB10	IPOC Station P	6.78	9	Pn	Pn	20 35 24.5	+0.4
PB10	IPOC Station P	6.78	9	*e*P	Pn	20 35 24.9	+0.7
PB10				IAML		20 37 25.7	
	comp=Z,118nm,0.8s						
H03N1	Juan Fernandez	6.89	241	Pn	Pn	20 35 25.9	+0.4
	baz=116,slow=18,SNR=100						
H03N1				T	T	20 42 29.9	
	baz=71,slow=72						
H03N2	Juan Fernandez	6.90	241	Pn	Pn	20 35 26.1	+0.5
	baz=116,slow=18,SNR=91						
H03N2				T	T	20 42 27.0	
	baz=71,slow=72,SNR=6518						
H03N3	Juan Fernandez	6.90	240	Pn	Pn	20 35 26.4	+0.7
	baz=116,slow=18,SNR=104						
H03N3				T	T	20 42 28.6	
	baz=71,slow=72,SNR=5954						
VA04	Juan Fernndez	6.92	239	Pn	Pn	20 35 25.5	-0.5
H03S3	Juan Fernandez	7.06	238	Pn	Pn	20 35 27.3	-0.5
	baz=104,slow=79,SNR=9.7						
H03S1	Juan Fernandez	7.07	238	Pn	Pn	20 35 26.5	-1.4
	baz=104,slow=79,SNR=7.9						
H03S2	Juan Fernandez	7.08	238	Pn	Pn	20 35 27.2	-0.8
	baz=104,slow=79,SNR=12						
PB15	IPOC Station P	7.29	17	Pn	Pn	20 35 31.5	+0.1
PB05	IPOC Station P	7.48	11	*e*P	Pb	20 35 50.0	-4.9
PB06	IPOC Station P	7.75	15	Pn	Pn	20 35 37.4	-0.2
PB04	IPOC Station P	8.00	11	Pn	Pn	20 35 40.4	-0.6
LVC	Limon Verde	8.00	19	Pn	Pn	20 35 39.8	-1.6
	comp=Z,2.0nm,0.3s,baz=152,slow=7.7,SNR=8.6						
LVC				Sn	Sn	20 36 59.8	-12
	comp=Z,13nm,0.3s,baz=354,slow=11,SNR=4.2						
LVC				Lg	Lg	20 37 38.3	
	comp=Z,8.2nm,0.3s,baz=89,slow=14,SNR=1.9						
LVC				LR	LR	20 38 44.3	
	comp=Z,357nm,18.7s,baz=216,slow=38						
LVC	Limon Verde	8.00	19	*e*P	Pn	20 35 40.8	-0.6
PB07	IPOC Station P	8.63	12	Pn	Pn	20 35 49.5	-0.4
LC01	Cunco	8.64	181	Pn	Pn	20 35 48.8	-1.0
PB09	IPOC Station P	8.70	16	Pn	Pn	20 35 50.2	-0.5
PB01	IPOC Station P	9.37	13		Pn	20 35 58.0	-1.9
PATCX	Punta Patache	9.48	9	Pn	Pn	20 36 00.7	-0.6
TA01	Diego Aracena	9.73	9	Pn	Pn	20 36 02.4	-2.3
PB08	IPOC Station P	10.32	14	Pn	Pn	20 36 13.0	-0.1
PLCA	Paso Flores	10.52	175	Pn	Pn	20 36 16.2	+0.7
	comp=Z,0.4nm,0.3s,baz=344,slow=10,SNR=13						
PLCA				LR	LR	20 40 48.8	
	comp=Z,225nm,18.5s,baz=358,slow=40						
PLCA	Paso Flores	10.52	175	Pn	Pn	20 36 15.4	-0.1
PLCA	Paso Flores	10.52	175	*e*P	Pn	20 36 17.8	+2.3
ITQB	Itaqui	13.12	91	*e*P	Pn	20 36 49.3	-1.8
CPUP	Villa Florida	13.28	76	Pn	Pn	20 36 52.2	-1.0
	comp=Z,0.3nm,0.3s,baz=203,slow=7.5,SNR=2.3						
CPUP				Lg	Lg	20 40 33.9	
	comp=Z,0.2nm,0.3s,baz=126,slow=20,SNR=1.9						
CPUP				LR	LR	20 42 36.3	
	comp=Z,111nm,18.2s,baz=248,slow=40						
CPUP	Villa Florida	13.28	76	*e*P	Pn	20 36 52.5	-0.7
LPAZ	La Paz	14.27	14	Pn	Pn	20 37 08.5	+1.1
	comp=Z,0.8nm,0.3s,baz=182,slow=8.0,SNR=12						
LPAZ				LR	LR	20 43 31.1	
	comp=Z,138nm,18.6s,baz=152,slow=41						
LPAZ	La Paz	14.27	14	Pn	Pn	20 37 06.0	-1.4
LPAZ	La Paz	14.27	14	*e*P	Pn	20 37 08.5	+1.1
PLTB	Pedras Altas	15.63	100	*e*P	Pn	20 37 24.3	-0.6
SIV	San Ignacio	17.22	37	P	Pn	20 37 46.3	+1.0
	comp=Z,1.9nm,0.3s,baz=224,slow=10,SNR=48						
SIV				LR	LR	20 45 35.1	
	comp=Z,181nm,20.9s,baz=222,slow=41						
AQDB	Aquidauana	17.43	60	*e*P	Pn	20 37 48.7	+0.8
ITAB	Concordia	17.45	85	*e*P	Pn	20 37 48.5	+0.3
PTGB	Pitanga	18.30	77	*e*P	P	20 37 59.9	+1.2
TRCB	Terra Rica	18.62	71	*e*P	Pn	20 38 02.6	+0.1
NNA	Nana	18.76	344	LR	LR	20 43 48.1	
	comp=Z,55nm,21.8s,baz=186,slow=32						
VILB	Vilhena	20.24	34	*e*P	P	20 38 20.1	+0.1
PCMB	Pacaembu	20.30	70	*e*P	P	20 38 21.0	+0.4
ETMB	Extrema	20.96	15	*e*P	P	20 38 29.4	+1.8
ITRB	Iturama	22.00	66	*e*P	P	20 38 39.4	+0.5
CZSB	Cruzeiro do Su	22.41	357	*e*P	P	20 38 45.0	+1.8
PET01	Itanhaem-SP	22.52	81	*e*P	P	20 38 44.0	-0.4
SAML	Samuel	22.64	22	P	P	20 38 45.3	-0.4
SAML	Samuel	22.64	22	*e*P	P	20 38 47.1	+1.4
VAO	Valinhos	23.26	78	*e*P	P	20 38 51.2	-1.0
ARAG	Araguaiana, MT	23.30	56	*e*P	P	20 38 52.6	-0.1
ATAH	Atahualpa	23.81	343	LR	LR	20 47 38.7	
	comp=Z,70nm,18.2s,baz=186,slow=35						
IPMB	Ipameri, GO	24.64	66	*e*P	P	20 39 03.7	-1.5
BDFB	Brasilia	26.16	62	P	P	20 39 18.5	-0.6
	comp=Z,4.1nm,0.6s,baz=243,slow=11,SNR=8.5						
BDFB				LR	LR	20 50 19.1	
	comp=Z,92nm,21.8s,baz=268,slow=38						
BDFB	Brasilia	26.16	62	P	P	20 39 17.1	-2.1
SNDB	Serra Nova Dou	26.26	51	*e*P	P	20 39 20.6	+0.6
PEXB	Peixe	28.24	55	*e*P	P	20 39 36.9	-0.8
JANB	Januaria	29.37	65	*e*P	P	20 39 49.0	+1.1
MLPR	Magueyes Islan	48.14	6	P	P	20 42 24.1	-0.5
PDPR	Patillas Dam,	48.29	7	P	P	20 42 26.0	+0.3
BELA	Belgrano 2	50.54	170	P	P	20 42 42.1	-0.2
SNAA	Sanae	54.98	159	P	P	20 43 15.3	0.0
SNAA				IAmb	IAmb	20 43 26.9	
	comp=Z,16nm,1.3s						
X48A	Hartselle	65.94	346	P	P	20 44 30.7	+0.3
X48A				IAmb	IAmb	20 44 41.2	
	comp=Z,7.6nm,0.9s						
TXAR	Lajitas Array	66.60	330	P	P	20 44 35.4	+0.5
	comp=Z,0.9nm,0.8s,baz=145,slow=9.0,SNR=6.1						
TXAR	Lajitas Array	66.60	330	P	P	20 44 34.2	-0.7
V52A	Sevierville	66.67	350	P	P	20 44 34.5	-0.6
V52A				IAmb	IAmb	20 44 57.1	
	comp=Z,18nm,1.4s						
U49A	Red Boiling Sp	67.69	348	P	P	20 44 41.5	-0.1
U49A				IAmb	IAmb	20 44 44.2	
	comp=Z,8.4nm,1.4s						
LCAR	Lake Charles	68.43	343	P	P	20 44 45.9	-0.3
LCAR				IAmb	IAmb	20 44 48.5	
	comp=Z,8.1nm,1.3s						
R40A	Maddies Statio	70.82	343	P	P	20 45 01.1	+0.2
R40A				IAmb	IAmb	20 45 02.8	
	comp=Z,5.7nm,0.8s						
DBIC	Dimbokro	73.76	72	P	P	20 45 19.4	+0.4
	comp=Z,2.0nm,0.8s,baz=64,slow=16,SNR=2.0						
MAW	Mawson	76.71	164	LR	LR	21 18 58.9	
	comp=Z,54nm,18.5s,baz=243,slow=35						
PDAR	Pinedale Array	80.53	333	P	P	20 45 58.2	+1.4
	comp=Z,0.1nm,0.4s,baz=158,slow=9.7,SNR=1.4						
NVAR	Mina Array Bea	80.95	325	P	P	20 46 00.6	+1.5
	comp=Z,0.1nm,0.4s,baz=130,slow=2.8,SNR=1.8						
YKA	Yellowknife Ar	98.58	341	P	P	20 47 22.5	-0.1
	comp=Z,0.2nm,0.5s,baz=121,slow=5.8,SNR=4.2						
WRA	Warramunga Arr	124.15	210	PKP	PKPdf	20 52 43.5	-0.2
	comp=Z,0.3nm,0.6s,baz=153,slow=1.7,SNR=8.2						
H11S2	WAKE ISLAND Hy	126.00	272	T	T	23 11 43.6	
	baz=115,slow=74,SNR=84						
H11S1	WAKE ISLAND Hy	126.01	272	T	T	23 11 34.4	
	baz=115,slow=74,SNR=54						
H11S3	WAKE ISLAND Hy	126.02	272	T	T	23 11 32.0	
	baz=115,slow=74,SNR=60						
H11N3	WAKE ISLAND Hy	126.31	273	T	T	23 11 54.0	
	baz=116,slow=75,SNR=14						
H11N1	WAKE ISLAND Hy	126.33	273	T	T	23 11 59.4	
	baz=116,slow=75,SNR=5.7						
H11N2	WAKE ISLAND Hy	126.33	273	T	T	23 11 55.4	
	baz=116,slow=75,SNR=18						
KKAR	Karatay Array	147.38	56		PKPbc	20 53 28.1	0.0
KURBB	Kurchatov Arra	149.87	39	PKPbc	PKPbc	20 53 35.1	+0.8
	comp=Z,1.1nm,0.5s,baz=302,slow=3.2,SNR=9.7						
KURK	Kurchatov	149.87	39		PKPbc	20 53 35.0	+0.7
AAK	Ala-Archa	150.34	56	PKPbc	PKPbc	20 53 37.0	+1.1
	comp=Z,1.3nm,0.6s,baz=210,slow=2.8,SNR=10						
AAK	Ala-Archa	150.34	56		PKPdf	20 53 28.8	-1.9
ZAA0	Zalesovo Array	150.86	29		PKPbc	20 53 36.6	+0.1
ZALV	Zalesovo Beam	150.86	29	PKPbc	PKPbc	20 53 37.0	+0.6
	comp=Z,6.1nm,0.6s,baz=301,slow=3.2,SNR=31						
ZALV	Zalesovo Beam	150.86	29		PKPbc	20 53 36.5	+0.1
KSH	Kashi	152.06	62	PKPbc	PKPbc	20 53 37.8	-2.1
KSH				PP	PP	20 57 21.3	-0.4
KSH				AMB	AMB		
	comp=Z,180nm,7.1s						
MKAR	Makanchi Array	153.97	43	PKPbc	PKPbc	20 53 43.7	-0.1
	comp=Z,0.2nm,0.6s,baz=345,slow=1.9,SNR=3.3						

NOU ***16*** *21:01:17.7, 36°.87S×178°.27E, h210^{km}, MLv4.1, Off E. Coast of N. Island, N.Z.*
WEL ***16*** *21:01:32.3±1.0, 37°S±6°×17°7E±°, h113^{km}±9^{km}, M3.4/39, ML3.7/7, MLv3.4/39, Error ellipse: s-maj=0.0km s-min=0.0km az=43.0*
IDC ***16*** *21:01:33.5±1.7, 37°.95S×177°.40E, h138^{km}±8^{km}, mb3.1/2, mb1 3.4/3, mb1mx3.2/37, mbtmp3.7/3, Error ellipse: s-maj=54.7km s-min=25.5km az=126.0*
ISC 16 21:01:28.6±1.4, **37°.41S**±0°.07×**177°.44E**±0°.07, **h156**^{km}±8^{km}, **n137**, σ**1^{s}.77**/140, **Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HAZ	Te Kaha	0.44	142	P	Pn	21 01 50.3	0.0
HAZ				S	Sn	21 02 04.2	-2.8
WHRZ	Whale Island	0.58	219	P	Pn	21 01 51.1	0.0
RUGZ	Raukumara Rang	0.59	161	P	Pn	21 01 50.9	-0.3
PKGZ	Pakihiroa	0.70	134	P	Pn	21 01 52.7	+0.9
MXZ	Matakaoa Point	0.71	103	P	Pn	21 01 52.7	+0.9
MXZ				S	Sn	21 02 09.9	+0.5
OPRZ	Ohinepanea	0.83	238	P	Pn	21 01 52.1	-0.4
MARZ	Manawahe	0.84	226	P	Pn	21 01 52.7	-0.1
WMGZ	Waiomatatini S	0.88	118	P	Pn	21 01 54.5	+1.6
TWGZ	Tauwhareparae	0.88	151	P	Pn	21 01 54.8	+1.8
URZ	Urewera	0.89	197	P	Pn	21 01 53.5	+0.5
	40nm,0.3s,baz=263,slow=3.3,SNR=257						
URZ				S	Sn	21 02 09.2	-2.7
	116nm,0.3s,baz=215,slow=23,SNR=15						
URZ	Urewera	0.89	197	P	Pn	21 01 53.5	+0.5
URZ				S	Sn	21 02 10.3	-1.6
EDRZ	Edgecumbe	0.89	218	P	Pn	21 01 53.5	+0.4
PUZ	Puketiti	0.93	136	P	Pn	21 01 53.4	0.0
MWZ	Matawai	0.93	176	P	Pn	21 01 54.7	+1.3
TGRZ	Tauranga	0.99	251	P	Pn	21 01 53.7	-0.2
MKRZ	Makatiti	1.06	226	P	Pn	21 01 55.7	+1.2
TKGZ	Te Karaka	1.08	163	P	Pn	21 01 55.9	+1.3
RAGZ	Rawiri	1.09	181	P	Pn	21 01 57.0	+2.3
RAGZ				S	Sn	21 02 15.6	+0.7
OMRZ	Omania	1.10	230	P	Pn	21 01 55.4	+0.6
TARZ	Mount Tarawera	1.11	222	P	Pn	21 01 55.9	+0.9
KARZ	Kaharoa	1.13	237	P	Pn	21 01 55.5	+0.5
RRRZ	Republican Roa	1.19	218	P	Pn	21 01 58.4	+2.9
MUGZ	Murupara	1.19	206	P	Pn	21 01 56.7	+1.1
HLRZ	Highlands Stat	1.21	225	P	Pn	21 01 56.9	+1.1
CNGZ	Carnagh Statio	1.23	151	P	Pn	21 01 58.5	+2.5
RTZ	Ruatahuna	1.26	197	P	Pn	21 01 57.3	+0.9
KMRZ	Kaimai	1.27	249	P	Pn	21 01 56.8	+0.4
RIGZ	Rimuhau	1.32	169	P	Pn	21 01 59.0	+2.1
HRRZ	Handcock Road	1.34	223	P	Pn	21 01 58.4	+1.4
PRRZ	Plateau Road	1.37	217	P	Pn	21 01 58.6	+1.3
SNGZ	Shannon Statio	1.38	183	P	Pn	21 01 59.2	+1.8
ALRZ	Allen Road	1.44	217	P	Pn	21 01 59.6	+1.5
WPRZ	Whakapapatarin	1.50	222	P	Pn	21 02 00.4	+1.7
MTHZ	Maungataniwha	1.52	198	P	Pn	21 02 00.1	+1.3
KUZ	Kuaotunu	1.53	295	P	Pn	21 01 58.4	-0.4
RAHZ	Arahi	1.53	190	P	Pn	21 02 00.7	+1.8
PRGZ	Paritu Road	1.55	167	P	Pn	21 02 01.8	+2.7
KNZ	Kokohu	1.62	174	P	Pn	21 02 02.1	+2.2
MRHZ	Matea Rd	1.64	209	P	Pn	21 02 01.8	+1.6
KUTZ	Kaahu Road	1.67	229	P	Pn	21 02 02.3	+1.8
WHHZ	Waihua	1.68	186	P	Pn	21 02 03.1	+2.6
NMHZ	Naumai	1.76	196	P	Pn	21 02 03.9	+2.4
TLZ	Tolley Road	1.77	238	P	Pn	21 02 03.1	+1.7
MHGZ	Mahia Peninsul	1.78	168	P	Pn	21 02 04.1	+2.5
HATZ	Hinemaiaia	1.82	215	P	Pn	21 02 04.3	+2.2
MKAZ	Moumakai	1.84	279	P	Pn	21 02 03.3	+1.0
WATZ	Wairara	1.87	226	P	Pn	21 02 04.8	+2.2
ARHZ	Aropaoanui	1.89	191	P	Pn	21 02 04.6	+1.9
BKZ	Black Stump Fm	1.91	203	P	Pn	21 02 04.8	+1.7
WIAZ	Waiheke Island	1.94	288	P	Pn	21 02 04.4	+1.0
RATZ	Rangitukua	1.96	222	P	Pn	21 02 06.3	+2.6
GRZ	Great Barrier	1.96	305	P	Pn	21 02 04.2	+0.5
RITZ	Rihia Road	2.00	218	P	Pn	21 02 06.9	+2.8
KATZ	Kakaramea	2.08	221	P	Pn	21 02 07.7	+2.5
MCHZ	McNeill Hill	2.12	196	P	Pn	21 02 07.9	+2.5
KWHZ	Kaweka Forest	2.17	201	P	Pn	21 02 07.6	+1.5
TMVZ	Te Maari	2.19	218	P	Pn	21 02 08.9	+2.5
ETVZ	East Tongariro	2.20	218	P	Pn	21 02 08.9	+2.4
KRVZ	Karewarewa	2.20	219	P	Pn	21 02 09.5	+2.9
OTVZ	Oturere	2.24	218	P	Pn	21 02 09.4	+2.3
WTVZ	West Tongariro	2.24	220	P	Pn	21 02 09.5	+2.5
AWAZ	Awhitu Peninsu	2.26	278	P	Pn	21 02 09.0	+1.9
CKHZ	Cape Kidnapper	2.27	187	P	Pn	21 02 09.1	+1.9
NGZ	Ngauruhoe	2.28	219	P	Pn	21 02 10.1	+2.6
TWVZ	Taurewa	2.29	223	P	Pn	21 02 10.4	+2.8
HIZ	Hauiti	2.32	241	P	Pn	21 02 10.5	+2.7
TUVZ	Tukino	2.33	217	P	Pn	21 02 10.2	+2.1
BHHZ	Black Hill Sta	2.34	207	P	Pn	21 02 09.7	+1.6
WHVZ	Whangaehu Hut	2.37	217	P	Pn	21 02 10.8	+2.1
KRHZ	Kereru	2.39	200	P	Pn	21 02 09.8	+1.1
MOVZ	Moawhango	2.40	213	P	Pn	21 02 10.3	+1.5
WNVZ	Wahianoa	2.40	216	P	Pn	21 02 11.0	+2.0
TRVZ	Turoa	2.41	218	P	Pn	21 02 12.4	+3.3
KAHZ	Kahuranaki	2.42	190	P	Pn	21 02 10.7	+1.6
PKVZ	Pokaka	2.50	221	P	Pn	21 02 12.5	+2.5
MTVZ	Mangateitei	2.51	217	P	Pn	21 02 12.9	+2.7
PXZ	Pawanui	2.66	190	P	Pn	21 02 13.3	+1.4
PNHZ	Pukenui	2.69	201	P	Pn	21 02 13.3	+1.0
VRZ	Vera Road	2.72	230	P	Pn	21 02 16.0	+3.4
WPHZ	Waipukurau	2.77	196	P	Pn	21 02 14.6	+1.4
TSZ	Takapari Road	2.89	203	P	Pn	21 02 15.7	+0.9
PRHZ	Porangahau	2.92	192	P	Pn	21 02 16.1	+0.9
WAZ	Wanganui	3.03	219	P	Pn	21 02 19.1	+2.5
DVHZ	Dannevirke	3.06	199	P	Pn	21 02 17.7	+0.8
ANWZ	Angora Road	3.14	194	P	Pn	21 02 18.9	+1.0
LREZ	Lake Rotokare	3.15	228	P	Pn	21 02 21.0	+3.0
NEZ	North Egmont	3.22	234	P	Pn	21 02 23.6	+4.5
PREZ	Palmer Road	3.22	232	P	Pn	21 02 23.8	+4.8
OHWZ	Ohakea	3.25	210	P	Pn	21 02 21.9	+2.6
PKE	Pukeiti	3.25	236	P	Pn	21 02 23.3	+4.0
POWZ	Post Office Ro	3.25	203	P	Pn	21 02 20.3	+0.9
KHEZ	Kahui Hut	3.29	234	P	Pn	21 02 24.3	+4.4
PRWZ	Pori Road	3.35	200	P	Pn	21 02 21.5	+1.0
BFZ	Birch Farm	3.40	196	P	Pn	21 02 21.8	+0.5
MRZ	Mangatainoka R	3.56	203	P	Pn	21 02 23.6	+0.4
TIWZ	Tintock	3.58	199	P	Pn	21 02 24.2	+0.7
CPWZ	Castlepoint	3.63	195	P	Pn	21 02 25.5	+1.3
HOWZ	Holdsworth Sta	3.79	203	P	Pn	21 02 26.3	-0.1
OGWZ	Otaki Gorge	3.84	207	P	Pn	21 02 27.2	+0.4
TMWZ	Te Maipa	3.89	198	P	Pn	21 02 27.9	+0.3
KIW	Kapiti Island	3.97	209	P	Pn	21 02 28.9	+0.3
MTW	Mount Morrison	4.04	201	P	Pn	21 02 29.2	-0.2
CAW	Cannon Point	4.13	206	P	Pn	21 02 30.5	-0.2
TRWZ	Traveller	4.21	198	P	Pn	21 02 31.7	-0.1
PAWZ	Paruwai Farm	4.26	201	P	Pn	21 02 32.1	-0.4
MSWZ	Moikau Station	4.35	202	P	Pn	21 02 32.9	-0.6
DUWZ	D’Urville Isla	4.36	218	P	Pn	21 02 33.8	+0.1
WEL	Wellington	4.39	207	P	Pn	21 02 34.0	-0.1
BHW	Baring Head	4.46	206	P	Pn	21 02 34.4	-0.6
PLWZ	Palliser	4.49	201	P	Pn	21 02 34.6	-0.8
TCW	Tory Channel	4.52	212	P	Pn	21 02 35.4	-0.3
TUWZ	Tuamarina	4.84	213	P	Pn	21 02 39.8	-0.2
NNZ	Nelson	4.94	218	P	Pn	21 02 41.1	-0.1
BSWZ	Blackbirch Sta	5.11	212	P	Pn	21 02 43.1	-0.4
QRZ	Quartz Range	5.12	227	P	Pn	21 02 44.0	+0.3
THZ	Tophouse	5.58	217	P	Pn	21 02 49.8	0.0
KHZ	Kahutara	5.83	210	P	Pn	21 02 52.6	-0.4
GVZ	Greta Valley S	6.50	210	P	Pn	21 03 00.7	-1.2
LTZ	Lake Taylor	6.67	215	P	Pn	21 03 03.2	-1.1
AMCZ	Amberley	6.83	211	P	Pn	21 03 06.1	-0.2
INZ	Inchbonnie	7.02	219	P	Pn	21 03 08.6	-0.3
OKCZ	Okains Bay	7.14	206	P	Pn	21 03 08.9	-1.5
OXZ	Oxford	7.21	213	P	Pn	21 03 09.4	-1.9
MQZ	McQueen’s Vall	7.27	209	P	Pn	21 03 10.1	-2.0
RACZ	Rakaia	7.49	211	P	Pn	21 03 13.8	-1.3
WACZ	Wakanui South	7.79	211	P	Pn	21 03 17.6	-1.5
RPZ	Rata Peaks	7.96	216	P	Pn	21 03 20.5	-0.8
	1.9nm,0.3s,baz=240,slow=2.7,SNR=16						
RPZ				S	Sn	21 04 43.5	-6.6
	1.1nm,0.3s,baz=338,slow=23,SNR=8.9						

RPZ	**Rata Peaks**	**7.96**	**216**	P	**Pn**	**21 03 20.8**	**-0.5**
ARCZ	**Arundel**	**8.08**	**214**	P	**Pn**	**21 03 22.1**	**-0.9**
FOZ	**Fox Glacier**	**8.44**	**221**	P	**Pn**	**21 03 26.2**	**-1.5**
TMZ	**Timaru**	**8.50**	**213**	P	**Pn**	**21 03 28.0**	**-0.6**
LBZ	**Lake Benmore**	**8.87**	**216**	P	**Pn**	**21 03 33.1**	**-0.4**
ODZ	**Otahua Downs**	**9.19**	**212**	P	**Pn**	**21 03 36.2**	**-1.5**
JCZ	**Jackson Bay**	**9.35**	**222**	P	**Pn**	**21 03 38.1**	**-1.8**
ASAR	**Alice Springs**	**39.58**	**278**	P	P	21 08 52.1	+7.3
	0.4nm,0.6s,baz=122,slow=8.1,SNR=5.2						
WRA	**Warramunga Arr**	**41.23**	**283**	P	P	21 09 05.1	+6.7
	0.5nm,0.7s,baz=123,slow=7.9,SNR=5.4						
FINES	**FINESS Array B**	**150.03**	**333**	PKPbc	**PKPab**	**21 21 07.4**	**+1.2**
	4.4nm,1.1s,baz=15,slow=5.8,SNR=1.9						

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*IDC **16** 21:08:09.2±2.6, 6°.21S×147°.43E, h88^{km}±28^{km}, mb3.5/5, mb1 3.7/7, mb1mx3.4/33, mbtmp3.9/7, MS2.9/3, Ms1 2.9/3, ms1mx2.6/30, Error ellipse: s-maj=49.1km s-min=16.3km az=108.0*

ISC 16 21:08:08.1±1.4, **6°.17S**±0°.10×**147°.4E**±0°.3, **h77**^{km}, **n8**, σ**0ˢ.75**/9, **mb3.6**/5, **Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.23**	**184**	P	**Pn**	**21 08 55.8**	**-0.7**
	20nm,0.3s,baz=352,slow=5.7,SNR=35						
PMG				S	**Sn**	**21 09 35.3**	**+1.4**
	57nm,0.3s,baz=205,slow=22,SNR=12						
PMG				LR	LR	21 10 14.7	
	comp=Z,81nm,21.4s,baz=94,slow=39						
WRA	**Warramunga Arr**	**18.68**	**222**	P	**P**	**21 12 19.9**	**-0.3**
	0.6nm,0.3s,baz=46,slow=11,SNR=20						
WRA				S	S	21 15 39.9	-8.9
	0.1nm,0.3s,baz=37,slow=23,SNR=1.9						
GUMO	**Guam**	**19.79**	**353**	LR	LR	21 19 02.5	
	comp=Z,47nm,20.5s,baz=108,slow=33						
ASAR	**Alice Springs**	**21.72**	**215**	P	**P**	**21 12 53.1**	**0.0**
	1.6nm,0.4s,baz=52,slow=8.3,SNR=27						
ASAR				S	**S**	**21 16 48.8**	**-0.6**
	0.5nm,0.9s,baz=32,slow=27,SNR=3.4						
FITZ	**Fitzroy Crossi**	**24.33**	**239**	P	**P**	**21 13 19.3**	**+0.4**
	6.9nm,0.6s,baz=67,slow=8.4,SNR=19						
FITZ				LR	LR	21 24 14.8	
	comp=Z,51nm,18.2s,baz=79,slow=40						
STKA	**Stephens Creek**	**26.15**	**191**	P	**P**	**21 13 34.8**	**-0.4**
	1.3nm,0.6s,baz=6.8,slow=8.7,SNR=7.1						
SEY	**Seymchan**	**69.01**	**2**	P	**P**	**21 19 05.0**	**-0.1**
	0.2nm,0.3s,baz=117,slow=6.6,SNR=1.2						
MKAR	**Makanchi Array**	**77.89**	**320**	P	**P**	**21 19 58.1**	**+0.5**
	0.2nm,0.6s,baz=100,slow=7.2,SNR=1.8						

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*IDC **16** 21:24:13.6±1.1, 41°.56S×87°.15W, h0^{km}, mb4.2/7, mb1 4.5/8, mb1mx4.3/25, mbtmp4.3/8, ML3.5/1, MS4.1/8, Ms1 4.1/8, ms1mx3.7/38, Error ellipse: s-maj=37.3km s-min=26.5km az=0.0*

*NEIC **16** 21:24:20.3±2.7, 41°.0S±0°.1×86°.5W±0°.2, h10^{km}±2^{km}, mb4.5/25, Error ellipse: s-maj=23.9km s-min=18.1km az=286.0*

ISC 16 21:24:17.9±0.7, **41°.1S**±0°.1×**86°.8W**±0°.1, **h10**^{km}, **n76**, σ**1ˢ.61**/65, **mb4.4**/12, **MS4.1**/7, **West Chile Rise**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H03S2	**Juan Fernandez**	**9.56**	**43**	T	T	21 37 11.7	
	baz=216,slow=73,SNR=235						
H03S1	**Juan Fernandez**	**9.56**	**43**	T	T	21 36 56.2	
	baz=216,slow=73,SNR=343						
H03S3	**Juan Fernandez**	**9.57**	**43**	T	T	21 37 03.0	
	baz=216,slow=73,SNR=444						
VA04	**Juan Fernndez**	**9.76**	**43**	Pn	**Pn**	**21 26 35.9**	**-2.3**
H03N3	**Juan Fernandez**	**9.86**	**42**	T	T	21 37 21.4	
	baz=218,slow=73,SNR=260						
H03N2	**Juan Fernandez**	**9.87**	**42**	T	T	21 37 11.1	
	baz=218,slow=73,SNR=247						
H03N1	**Juan Fernandez**	**9.88**	**42**	T	T	21 37 15.0	
	baz=218,slow=73,SNR=171						
LC01	**Cunco**	**11.64**	**84**	Pn	**Pn**	**21 27 02.8**	**-1.2**
PLCA	**Paso Flores**	**12.29**	**94**	Pn	**Pn**	**21 27 15.5**	**+2.6**
	0.1nm,0.3s,baz=266,slow=13,SNR=7.6						
PLCA				LR	LR	21 31 04.7	
	comp=Z,436nm,18.3s,baz=259,slow=33						
PLCA	**Paso Flores**	**12.29**	**94**	Pn	**Pn**	**21 27 13.8**	**+0.9**
PLCA	**Paso Flores**	**12.29**	**94**	eP	Pn	21 27 18.5	+5.6
BI02	**San Fabin de**	**12.86**	**75**		**Pn**	**21 27 17.5**	**-3.3**
BO02	**Sierra Bellavi**	**14.10**	**69**	Pn	**Pn**	**21 27 35.3**	**-2.3**
GO09	**Cerro Castillo**	**14.24**	**140**	Pn	**Pn**	**21 27 40.5**	**+0.9**
ROC1	**El Roble**	**14.96**	**62**	Pn	**Pn**	**21 27 48.5**	**-1.0**
VA03	**San Esteban**	**15.39**	**62**	Pn	**Pn**	**21 27 54.2**	**-1.0**
CO02	**Combarbal**	**16.09**	**57**	Pn	**Pn**	**21 28 02.8**	**-1.5**
CO02				IAmb	IAmb	21 28 07.1	
	comp=Z,36nm,1.0s						
CO03	**El Pedregal**	**16.54**	**57**	P	**Pn**	**21 28 10.2**	**+0.3**
CO03				IAmb	IAmb	21 28 13.6	
	comp=Z,48nm,1.4s						
GO04	**Tololo Observa**	**16.93**	**55**		**Pn**	**21 28 13.4**	**-1.6**
ZON	**Zonda**	**17.39**	**63**		**Pn**	**21 28 21.2**	**+0.5**
CO01	**Juntas del Tor**	**17.50**	**56**	Pn	**Pn**	**21 28 20.7**	**-1.5**
LCO	**Las Campanas**	**17.81**	**52**	P	**Pn**	**21 28 26.3**	**+0.2**
LCO				IAmb	IAmb	21 28 29.2	
	comp=Z,31nm,1.1s						
GO03	**Copiap**	**19.14**	**50**	P	**P**	**21 28 39.4**	**-1.8**
GO03				IAmb	IAmb	21 28 56.3	
	comp=Z,40nm,1.5s						
AC02	**Maricunga**	**20.35**	**51**	P	**P**	**21 28 56.7**	**+1.7**
AC02				IAmb	IAmb	21 29 13.6	
	comp=Z,26nm,1.1s						
PB14	**IPOC Station P**	**21.36**	**45**	P	**P**	**21 29 07.6**	**+1.9**
GO02	**Mina Guanaco**	**21.38**	**47**	P	**P**	**21 29 07.8**	**+2.0**
PB15	**IPOC Station P**	**23.00**	**44**	P	**P**	**21 29 24.2**	**+1.1**
RPN	**Rapa Nui**	**23.21**	**300**	LR	LR	21 35 54.9	
	comp=Z,704nm,20.1s,baz=95,slow=30						
LVC	**Limon Verde**	**23.79**	**45**	P	**P**	**21 29 32.7**	**+1.6**
	comp=Z,21nm,0.9s,baz=212,slow=8.5,SNR=11						
LVC				LR	LR	21 36 37.2	
	comp=Z,453nm,19.2s,baz=232,slow=31						
LVC	**Limon Verde**	**23.79**	**45**	P	**P**	**21 29 32.0**	**+0.9**
LVC	**Limon Verde**	**23.79**	**45**	eP	**P**	**21 29 32.7**	**+1.6**
PB09	**IPOC Station P**	**24.28**	**43**	P	**P**	**21 29 36.0**	**+0.4**
PB09				IAmb	IAmb	21 29 44.9	
	comp=Z,18nm,1.2s						
PB01	**IPOC Station P**	**24.79**	**41**	P	**P**	**21 29 40.7**	**+0.7**
PB08	**IPOC Station P**	**25.71**	**41**	P	**P**	**21 29 51.6**	**+2.8**
PB08				IAmb	IAmb	21 29 54.5	
	comp=Z,9.3nm,1.1s						
MNMC	**Minye Minye**	**26.36**	**39**	P	**P**	**21 29 55.0**	**+0.4**
PMSA	**Palmer Station**	**27.09**	**159**	LR	LR	21 37 24.0	
	comp=Z,370nm,21.0s,baz=156,slow=30						
CPUP	**Villa Florida**	**28.41**	**68**	LR	LR	21 40 48.2	
	comp=Z,450nm,18.9s,baz=240,slow=34						
CPUP	**Villa Florida**	**28.41**	**68**	P	**P**	**21 30 12.9**	**+0.3**
CPUP				IAmb	IAmb	21 30 14.2	
	comp=Z,9.9nm,1.3s						
LPAZ	**La Paz**	**29.51**	**39**	P	**P**	**21 30 25.0**	**+1.9**
	comp=Z,1.4nm,0.7s,baz=187,slow=8.4,SNR=5.5						
LPAZ				LR	LR	21 39 50.8	
	comp=Z,232nm,18.0s,baz=194,slow=31						
LPAZ	**La Paz**	**29.51**	**39**	P	**P**	**21 30 24.3**	**+1.2**
LPAZ				IAmb	IAmb	21 30 34.4	
	comp=Z,7.7nm,1.2s						
LPAZ	**La Paz**	**29.51**	**39**	eP	**P**	**21 30 24.3**	**+1.2**
PP1B	**Ponte de Pedra**	**36.02**	**59**	eP	**P**	**21 31 20.1**	**+0.7**
ETMB	**Extrema**	**36.06**	**36**	eP	**P**	**21 31 19.9**	**+0.3**
VILB	**Vilhena**	**36.41**	**47**	eP	**P**	**21 31 23.0**	**+0.3**
SAML	**Samuel**	**38.23**	**40**	P	**P**	**21 31 37.5**	**-0.6**
SAML	**Samuel**	**38.23**	**40**	eP	**P**	**21 31 38.5**	**+0.4**
ESAR	**Angra dos Reis**	**39.71**	**76**	eP	**P**	**21 31 52.6**	**+2.2**
IPMB	**Ipameri, GO**	**40.24**	**67**	eP	**P**	**21 31 56.2**	**+1.3**
BDFB	**Brasilia**	**41.99**	**64**	P	**P**	**21 32 09.4**	**-0.1**
	comp=Z,9.8nm,0.8s,baz=224,slow=7.5,SNR=17						
BDFB				LR	LR	21 48 55.1	
	comp=Z,294nm,20.8s,baz=214,slow=35						
BDFB	**Brasilia**	**41.99**	**64**	P	**P**	**21 32 08.7**	**-0.8**
BDFB				IAmb	IAmb	21 32 10.4	
	comp=Z,11nm,0.9s						
SNDB	**Serra Nova Dou**	**42.51**	**57**	eP	**P**	**21 32 13.9**	**+0.3**
NPGB	**Novo Progresso**	**43.95**	**48**	eP	**P**	**21 32 24.5**	**-0.6**
PEXB	**Peixe**	**44.34**	**61**	eP	**P**	**21 32 28.4**	**0.0**
JANB	**Januaria**	**44.95**	**67**	eP	**P**	**21 32 33.4**	**+0.1**
ITTB	**Itaituba**	**45.95**	**46**	eP	**P**	**21 32 40.7**	**-0.5**
SDBA	**SAO DESIDERIO**	**46.40**	**64**	eP	**P**	**21 32 45.1**	**+0.4**
ROSC	**El Rosal**	**47.11**	**17**	LR	LR	21 50 19.9	
	comp=Z,418nm,21.5s,baz=200,slow=33						
SMTB	**Santa Maria do**	**47.23**	**58**	eP	**P**	**21 32 52.0**	**+0.8**
MCPB	**Macapa, AP**	**51.29**	**47**	eP	**P**	**21 33 22.4**	**+0.2**
SDV	**Santo Domingo**	**51.91**	**20**	P	**P**	**21 33 26.3**	**-0.7**
SDV				IAmb	IAmb	21 33 28.3	
	comp=Z,10nm,1.1s						
SDV	**Santo Domingo**	**51.91**	**20**	eP	**P**	**21 33 26.4**	**-0.5**
TXAR	**Lajitas Array**	**71.80**	**345**	P	**P**	**21 35 39.8**	**-0.8**
	comp=Z,1.2nm,0.6s,baz=161,slow=8.6,SNR=5.8						
KAN05	**Bluff City Nor**	**78.48**	**351**	P	**P**	**21 36 22.0**	**+3.2**
W13A	**Hualapai Mount**	**79.81**	**338**	P	**P**	**21 36 28.5**	**+2.1**
NVAR	**Mina Array Bea**	**84.22**	**336**	P	**P**	**21 36 48.3**	**-1.2**
	comp=Z,1.0nm,0.8s,baz=176,slow=5.2,SNR=4.4						
PDAR	**Pinedale Array**	**85.97**	**343**	P	**P**	**21 36 58.8**	**+0.6**
	comp=Z,0.5nm,0.6s,baz=150,slow=6.0,SNR=5.9						
BOSA	**Boshof**	**86.41**	**125**	P	**P**	**21 36 57.5**	**-3.4**
	comp=Z,1.3nm,0.5s,baz=221,slow=7.2,SNR=5.3						
HLID	**Hailey**	**87.87**	**340**	P	**P**	**21 37 10.0**	**+2.7**
HLID				IAmb	IAmb	21 37 16.6	
	comp=Z,2.5nm,0.9s						
GERES	**GERESS Array B**	**125.62**	**53**	PKP	**PKiKP**	**21 43 19.3**	**0.0**
	comp=Z,0.3nm,0.5s,baz=151,slow=4.3,SNR=2.6						
SEY	**Seymchan**	**139.42**	**323**	PKP	**PKPdf**	**21 43 42.6**	**-1.7**
	comp=Z,0.4nm,0.3s,baz=56,slow=1.9,SNR=3.7						
MJAR	**Matsushiro Arr**	**144.95**	**278**	PKP	**PKPab**	**21 43 49.8**	**-4.5**
	comp=Z,1.3nm,0.6s,baz=160,slow=3.3,SNR=5.4						
KLR	**Kul'dur**	**151.89**	**300**	PKPbc	**PKPdf**	**21 44 08.8**	**+2.9**
	comp=Z,2.4nm,0.9s,baz=44,slow=3.2,SNR=7.7						
KURBB	**Kurchatov Arra**	**166.04**	**42**	PKPab	**PKPab**	**21 45 21.9**	**-0.9**
	comp=Z,1.4nm,0.8s,baz=307,slow=4.7,SNR=12						
MKAR	**Makanchi Array**	**170.28**	**50**	PKPab	**PKPab**	**21 45 42.4**	**+0.6**
	comp=Z,0.4nm,0.9s,baz=342,slow=1.3,SNR=2.7						
LZH	**Lanzhou**	**170.30**	**242**	ePKP	**PKPdf**	**21 44 25.1**	**-0.9**
LZH				pPKP	sPKPdf	21 44 37.5	+8.5
LZH				sPKP		21 44 44.0	
LZH				PKP	**sPKPab**	**21 45 47.3**	**+2.0**
GTA	**Gaotai**	**174.68**	**254**	PKP	PKPdf	21 44 38.4	+11
GTA				LR	LR		
	comp=N,1µm,18.5s						
GTA				LR	LR		
	comp=E,1µm,18.2s						
GTA				LR	LR		
	comp=Z,2µm,20.0s						

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*IDC **16** 21:26:35.1±0.6, 43°.97N×151°.45E, h0^{km}, mb4.1/22, mb1 4.2/27, mb1mx4.1/43, mbtmp4.0/27, ML3.3/5, MS3.1/6, Ms1 3.1/6, ms1mx2.7/60, Error ellipse: s-maj=17.4km s-min=13.1km az=157.0*

*NIED **16** 21:26:38.1, 44°.23N×151°.29E, h30^{km}, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-1.29; $M_{\theta\theta}$0.99; $M_{\phi\phi}$0.30; $M_{r\theta}$0.87; $M_{\theta\phi}$0.34; $M_{\phi r}$0.26; Fault plane solution: $M_0$1.51000×10^{15} NP1: ϕ_s251.00000°, δ63.00000°, λ-88.00000°. NP2: ϕ_s66.00000°, δ27.00000°, λ-95.00000°.*

*JMA **16** 21:26:38.1±0.7, 44°.23N×151°.29E, h30^{km}, M4.6*

*SKHL **16** 21:26:39.6±0.5, 43°.90N×151°.20E, h48^{km}±3^{km}, mb4.5/5*

*MOS **16** 21:26:39.1±1.1, 43°.83N×151°.26E, h40^{km}, mb4.8/10, Error ellipse: s-maj=9.6km s-min=7.8km az=29.4*

*NEIC **16** 21:26:40.5±2.0, 44°.03N±0°.10×151°.4E±0°.1, h32^{km}±5^{km}, mb4.5/36, Error ellipse: s-maj=17.0km s-min=10.0km az=137.0*

ISC 16 21:26:38.7±0.5, **43°.83N**±0°.06×**151°.28E**±0°.05, **h24**^{km}, **n207**, σ**1ˢ.77**/223, **mb4.4**/47, **MS3.4**/6, **10C-13D**, **East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**2.81**	**301**	ePN	**Pn**	**21 27 22.8**	**+0.7**
KUR				eS	**Sn**	**21 27 53.1**	**-2.1**
KUR				pmax	pmax		
	comp=Z,141nm,0.4s						
KUR				pmax	pmax		
	comp=E,95nm,0.2s						
KUR				pmax	pmax		
	comp=N,53nm,0.4s						
KUR				smax	smax		
	comp=N,590nm,0.3s						
KUR				smax	smax		
	comp=E,421nm,0.4s						
KUR	**Kuril'sk**	**2.81**	**301**	eP	**Pn**	**21 27 21.2**	**-0.9**
KUR				AMB	AMB	21 27 23.0	
	comp=E,50nm,0.4s						
KUR				AMB	AMB	21 27 23.0	
	comp=E,100nm,0.4s						
KUR				AMB	AMB	21 27 23.0	
	comp=E,140nm,0.4s						
KUR				eS	**Sn**	**21 27 52.5**	**-2.7**
KUR				A	A	21 27 55.0	
	comp=E,590nm,0.4s						
KUR				A	A	21 27 55.0	
	comp=E,420nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**3.92**	**275**	PN	**Pn**	**21 27 37.5**	**+0.2**
YUK	**Yuzh-Kuril'sk**	**3.92**	**275**	eP	**Pn**	**21 27 37.5**	**+0.2**
YUK				eS	**Sn**	**21 28 20.6**	**-1.9**
YUK				A	A	21 28 23.0	
	comp=E,362nm,0.2s						
YUK				A	A	21 28 23.0	
	comp=E,199nm,0.2s						
GRPR	**Tuman**	**3.98**	**274**	ePN	**Pn**	**21 27 38.3**	**+0.1**
GRPR	**Tuman**	**3.98**	**274**	eP	**Pn**	**21 27 38.3**	**+0.1**
GRPR				eS	**Sn**	**21 28 22.4**	**-1.7**
GRPR				A	A	21 28 26.0	
	comp=E,213nm,0.2s						
GRPR				A	A	21 28 26.0	
	comp=E,364nm,0.2s						
NEM2	**Nemuro 2**	**4.05**	**265**	P	**Pn**	**21 27 38.1**	**-1.0**
NEM2				eS	**Sn**	**21 28 22.1**	**-3.6**
NMR	**Nemuro--Hokkai**	**4.06**	**265**	⇓iPN	**Pn**	**21 27 38.6**	**-0.6**
NMR	**Nemuro--Hokkai**	**4.06**	**265**	i P	**Pn**	**21 27 38.6**	**-0.6**
NMR				i S	**Sn**	**21 28 23.0**	**-2.9**
JRA	**Rausu**	**4.45**	**273**	P	**Pn**	**21 27 45.1**	**+0.5**
JNK	**Nakash**	**4.76**	**269**	P	**Pn**	**21 27 48.1**	**-0.8**
JNK				eS	**Sn**	**21 28 40.3**	**-3.0**
JAK	**Akkeshi**	**4.87**	**262**	P	**Pn**	**21 27 49.8**	**-0.5**
JAK				eS	**Sn**	**21 28 43.3**	**-2.6**
JTKR	**Abashiri--Toko**	**5.33**	**274**	P	**Pn**	**21 27 57.0**	**+0.3**
JAR	**Ashorobuto**	**5.48**	**267**	P	**Pn**	**21 27 58.9**	**+0.1**
JAR				eS	**Sn**	**21 28 59.0**	**-2.1**
JOB	**Onbets**	**5.50**	**263**	P	**Pn**	**21 27 58.7**	**-0.4**
JMP	**Maruseppu**	**5.72**	**274**	P	**Pn**	**21 28 03.2**	**+1.1**
JCH	**Churui**	**5.91**	**261**	P	**Pn**	**21 28 04.4**	**-0.3**
JCH				eS	**Sn**	**21 29 08.6**	**-3.0**
HRK	**Horoka**	**5.92**	**269**	eP	**Pn**	**21 28 05.7**	**+0.8**
MYR	**Moyori**	**6.05**	**258**	eP	**Pn**	**21 28 07.3**	**+0.6**
MYR				eS	**Sn**	**21 29 13.6**	**-1.6**
JKK2	**Kamakawa 2**	**6.17**	**273**	P	**Pn**	**21 28 09.7**	**+1.5**
JEM	**Erimo**	**6.23**	**256**	Pn	**Pn**	**21 28 10.5**	**+1.4**
ERM	**Erimo**	**6.23**	**256**	⇓ePN	**Pn**	**21 28 10.7**	**+1.6**
ERM	**Erimo**	**6.23**	**256**	Pn	**Pn**	**21 28 10.6**	**+1.6**
ERM	**Erimo**	**6.23**	**256**	eP	**Pn**	**21 28 10.3**	**+1.2**
ERM				eS	**Sn**	**21 29 17.2**	**-2.3**
JKA	**Kamikawa-asahi**	**6.27**	**276**	Pn	**Pn**	**21 28 12.1**	**+2.5**
JKA	**Kamikawa-asahi**	**6.27**	**276**	eP	**Pn**	**21 28 12.1**	**+2.5**
ASAJ	**Asahikawa**	**6.27**	**276**	Pn	**Pn**	**21 28 12.1**	**+2.5**
	comp=E,2.6nm,0.3s,baz=62,slow=10,SNR=17						
ASAJ				Sn	Sn	21 29 30.2	+10
	comp=E,0.7nm,0.3s,baz=18,slow=29,SNR=1.7						
JFR	**Furan**	**6.35**	**267**	P	**Pn**	**21 28 11.6**	**+0.8**
JNBK	**Urakawa-nobuka**	**6.43**	**259**	P	**Pn**	**21 28 11.6**	**-0.3**
JNBK				eS	**Sn**	**21 29 20.0**	**-4.5**
JAB	**Ashibetsu**	**6.58**	**270**	P	**Pn**	**21 28 16.1**	**+2.3**
JBT2	**Biratori 2**	**6.59**	**264**	P	**Pn**	**21 28 13.6**	**-0.4**
JBT2				eS	**Sn**	**21 29 20.3**	**-8.0**
YSS	**Yuzh-Sakhalins**	**6.76**	**300**	ePN	**Pn**	**21 28 12.3**	**-4.1**
YSS				MLR	MLR		
	comp=Z,300nm,15.0s						
YSS	**Yuzh-Sakhalins**	**6.76**	**300**	eP	**Pn**	**21 28 16.4**	**0.0**
YSS				AMB	AMB	21 28 17.6	
	comp=Z,10.0nm,0.3s						
YSS				eS	**Sn**	**21 29 29.2**	**-3.4**
JWK2	**Keihoku**	**6.86**	**286**	P	**Pn**	**21 28 20.7**	**+3.0**
JEW	**Eniwo**	**7.23**	**266**	Pn	**Pn**	**21 28 24.5**	**+1.7**
SKR	**Severo-Kuril’s**	**7.60**	**24**	eP	**Pn**	**21 28 28.5**	**+0.7**
SKR				AMB	AMB	21 28 28.9	
	comp=Z,10.0nm,0.2s						
JNB	**Noboribetsu**	**7.61**	**263**	P	**Pn**	**21 28 28.1**	**+0.1**
JNB				eS	**Sn**	**21 29 50.2**	**-3.3**
JKB	**Kayabe**	**7.77**	**259**	P	**Pn**	**21 28 30.5**	**+0.3**
JKB				eS	**Sn**	**21 29 51.7**	**-5.7**
JTH	**Tanohata**	**8.03**	**244**	P	**Pn**	**21 28 31.2**	**-2.5**
JTH				eS	**Sn**	**21 29 56.3**	**-7.4**
JANG	**Nango**	**8.04**	**248**	P	**Pn**	**21 28 32.0**	**-1.9**
JANG				eS	**Sn**	**21 29 56.8**	**-7.2**
JTM	**Tenmabayashi**	**8.15**	**252**	P	**Pn**	**21 28 34.8**	**-0.7**
JTM				eS	**Sn**	**21 30 00.7**	**-6.1**
JSR	**Shiriuchi**	**8.32**	**258**	P	**Pn**	**21 28 38.4**	**+0.6**
JRG	**Rokugo**	**9.12**	**245**	P	**Pn**	**21 28 48.4**	**-0.3**
JIO	**Ouri**	**9.21**	**238**	P	**Pn**	**21 28 49.2**	**-0.8**
JIO				eS	Sn	21 30 22.5	-10
JFK	**Kawauchi**	**10.21**	**234**	eS	Sn	21 30 47.5	-10
PEA0B	**Petropavlovsk-**	**10.21**	**22**	⇑ePN	**Pn**	**21 29 01.9**	**-1.7**
PEA0B	**Petropavlovsk-**	**10.21**	**22**	Pn	**Pn**	**21 29 00.7**	**-2.9**
PETK	**Petropavlovsk-**	**10.21**	**22**	Pn	**Pn**	**21 28 60.0**	**-3.7**
	comp=Z,0.3nm,0.3s,baz=182,slow=9.9,SNR=6.2						
PETK	**Petropavlovsk-**	**10.21**	**22**	PN	**Pn**	**21 29 00.3**	**-3.3**
PETK	**Petropavlovsk-**	**10.21**	**22**		**Pn**	**21 29 00.3**	**-3.3**
JSD	**Sado**	**11.42**	**244**	Pn	**Pn**	**21 29 19.7**	**-0.4**
MJAR	**Matsushiro Arr**	**12.36**	**238**	Pn	**Pn**	**21 29 33.4**	**+0.3**
	comp=Z,0.0nm,0.3s,baz=41,slow=12,SNR=2.8						
USRK	**Ussuriysk Ar.**	**13.89**	**278**	Pn	**Pn**	**21 29 53.3**	**-0.6**
	baz=86,slow=14,SNR=6.6						
USRK	**Ussuriysk Ar.**	**13.89**	**278**	P	**Pn**	**21 29 54.2**	**+0.3**
USRK	**Ussuriysk Ar.**	**13.89**	**278**	Pn	**Pn**	**21 29 54.1**	**+0.3**
USA0B	**Ussuriysk Arra**	**13.89**	**278**	P	**Pn**	**21 29 54.0**	**+0.1**
USA0B	**Ussuriysk Arra**	**13.89**	**278**	Pn	**Pn**	**21 29 54.0**	**+0.1**
KLR	**Kul'dur**	**14.47**	**299**	Pn	**P**	**21 30 06.3**	**-2.1**
	comp=Z,0.2nm,0.3s,baz=115,slow=15,SNR=7.4						
KLR				LR	LR	21 36 48.9	
	comp=Z,21nm,19.4s,baz=105,slow=42						
JWT	**Wachi**	**14.91**	**240**	P	**P**	**21 30 16.0**	**+2.7**
JWT				IAmb	IAmb	21 30 18.5	
	comp=Z,17nm,1.1s						
EKMR	**Ekimchan**	**15.23**	**314**	eP	**Pn**	**21 30 08.7**	**-3.4**
EKMR				AMB	AMB	21 30 13.0	
	comp=Z,10.0nm,0.7s						
BMKR	**Bomnak**	**18.16**	**315**	eP	**Pn**	**21 30 48.4**	**-0.6**
BMKR				AMB	AMB	21 30 48.7	
	comp=Z,10.0nm,0.5s						
CN2	**Changchun**	**18.62**	**279**	eP	**P**	**21 30 53.3**	**-1.0**
KROS	**Kirovskiy**	**19.02**	**312**	eP	**P**	**21 30 58.0**	**-0.6**
KROS				AMB	AMB	21 30 58.8	
	comp=Z,10.0nm,0.4s						
SEY	**Seymchan**	**19.15**	**2**	P	**P**	**21 30 56.9**	**-3.0**
	comp=Z,0.3nm,0.3s,baz=189,slow=9.6,SNR=9.4						
SEY	**Seymchan**	**19.15**	**2**	⇓eP	**P**	**21 30 57.9**	**-2.0**
SEY	**Seymchan**	**19.15**	**2**	eP	**Pn**	**21 31 01.0**	**+0.1**
YAK	**Yakutsk**	**22.20**	**333**	P	**P**	**21 31 30.5**	**-2.5**
	comp=Z,6.9nm,0.4s,baz=139,slow=2.3,SNR=5.8						
YAK				LR	LR	21 40 04.4	
	comp=Z,36nm,21.8s,baz=99,slow=37						
YAK	**Yakutsk**	**22.20**	**333**	deP	**P**	**21 31 30.1**	**-2.9**
YAK				pmax	pmax		
	comp=Z,14nm,0.7s						
YAK	**Yakutsk**	**22.20**	**333**	P	**P**	**21 31 30.3**	**-2.7**
YAK				IAmb	IAmb	21 31 36.5	
	comp=Z,14nm,0.6s						
YAK	**Yakutsk**	**22.20**	**333**	eP	**P**	**21 31 31.8**	**-1.2**
H11N2	**WAKE ISLAND Hy**	**27.36**	**147**	T	T	22 00 59.1	
	baz=342						
H11N1	**WAKE ISLAND Hy**	**27.37**	**147**	T	T	22 01 01.0	
	baz=342						
H11N3	**WAKE ISLAND Hy**	**27.38**	**146**	T	T	22 01 08.4	
	baz=342						
H11S1	**WAKE ISLAND Hy**	**28.39**	**148**	T	T	22 02 19.1	
	baz=341						
H11S3	**WAKE ISLAND Hy**	**28.39**	**148**	T	T	22 02 22.5	
	baz=341						
H11S2	**WAKE ISLAND Hy**	**28.41**	**148**	T	T	22 02 20.5	
	baz=341						
TIXI	**Tiksi**	**29.95**	**346**	⇓eP	**P**	**21 32 45.5**	**+1.0**
TIXI	**Tiksi**	**29.95**	**346**	P	**P**	**21 32 42.2**	**-2.3**
TIXI	**Tiksi**	**29.95**	**346**	eP	**P**	**21 32 45.5**	**+1.0**
GUMO	**Guam**	**30.64**	**192**	LR	LR	21 44 28.1	
	comp=Z,24nm,18.5s,baz=48,slow=35						
ULN	**Ulaanbaatar**	**30.75**	**293**	⇓eP	**P**	**21 32 53.0**	**+1.0**
ULN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ULN	**Ulaanbaatar**	**30.75**	**293**	P	**P**	**21 32 53.5**	**+1.5**
ULN	**Ulaanbaatar**	**30.75**	**293**	eP	**P**	**21 32 53.0**	**+1.0**
SONM	**Songino Array**	**31.19**	**293**	P	**P**	**21 32 57.0**	**+1.1**
	comp=Z,1.5nm,0.7s,baz=80,slow=8.2,SNR=15						
SONM				PcP	**PcP**	**21 35 49.9**	**-0.3**
	comp=Z,0.4nm,0.6s,baz=115,slow=2.9,SNR=4.6						
SONM	**Songino Array**	**31.19**	**293**	P	**P**	**21 32 56.7**	**+0.8**
TTA	**Tatalina**	**35.49**	**39**	P	**P**	**21 33 33.0**	**-0.1**
TTA				pmax	pmax		
	comp=Z,11nm,1.5s						
TTA	**Tatalina**	**35.49**	**39**	P	**P**	**21 33 33.0**	**-0.1**
TTA				IAmb	IAmb	21 33 38.2	
	comp=Z,11nm,1.5s						
LZH	**Lanzhou**	**36.75**	**274**	eP	**P**	**21 33 45.5**	**+1.2**
LZH				pP	pwP	21 34 04.1	+6.2
LZH				sP	sP	21 34 11.9	+20
LZH				pmax	pmax		
	comp=Z,13nm,1.1s						
IMAR	**Indian Mountai**	**36.90**	**34**	P	**P**	**21 33 45.1**	**0.0**
GTA	**Gaotai**	**38.22**	**282**	P	**P**	**21 33 57.4**	**+0.7**
GTA				pP	pP	21 34 01.9	-0.1
GTA				sP	sP	21 34 04.8	+0.7
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,100nm,5.8s						
GTA				LR	LR		
	comp=N,120nm,13.1s						
GTA				LR	LR		
	comp=E,170nm,14.2s						
GTA				LR	LR		
	comp=Z,120nm,13.5s						
MDM	**Murphy Dome**	**39.09**	**36**	P	**P**	**21 34 03.7**	**+0.2**
ILAR	**Eielson Array**	**39.65**	**36**	P	**P**	**21 34 06.1**	**-2.1**
	comp=Z,0.5nm,0.6s,baz=281,slow=9.3,SNR=5.7						
ILAR	**Eielson Array**	**39.65**	**36**	eP	**P**	**21 34 10.1**	**+1.9**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NRIK	**Noril'sk**	**40.63**	**331**	PcP	**PcP**	**21 36 17.8**	**+0.1**
	comp=Z,1.1nm,0.3s,baz=66,slow=0.2,SNR=4.6						
BCAR	**Beaver Creek A**	**41.97**	**39**	P	**P**	**21 34 27.7**	**+0.3**
BARN	**Barnard Glacie**	**42.25**	**42**	P	**P**	**21 34 29.7**	**-0.2**
CTGM	**Chitina Glacie**	**42.42**	**42**	P	**P**	**21 34 31.4**	**+0.2**
DGZ	**Jazzator, Alta**	**42.95**	**301**	⇓eP	**P**	**21 34 38.3**	**+2.7**
ZAA0	**Zalesovo Array**	**43.32**	**308**	P	**P**	**21 34 38.5**	**+0.1**
ZALV	**Zalesovo Beam**	**43.32**	**308**	P	**P**	**21 34 37.9**	**-0.5**
	comp=Z,1.7nm,0.6s,baz=69,slow=6.3,SNR=8.1						
ZALV				PcP	**PcP**	**21 36 26.9**	**+0.1**
	comp=Z,1.2nm,0.7s,baz=95,slow=3.4,SNR=3.8						
ZALV				LR	LR	21 55 22.7	
	comp=Z,39nm,19.3s,baz=330,slow=40						
ZALV	**Zalesovo Beam**	**43.32**	**308**	P	**P**	**21 34 38.1**	**-0.3**
INK	**Inuvik**	**44.81**	**31**	P	**P**	**21 34 48.0**	**-2.1**
	comp=Z,1.0nm,0.4s,baz=265,slow=8.3,SNR=4.2						
INK	**Inuvik**	**44.81**	**31**	P	**P**	**21 34 48.0**	**-2.1**
SLVN	**Son La**	**45.05**	**256**	P	**P**	**21 34 55.3**	**+2.6**
MK31	**Makanchi Array**	**47.18**	**299**	deP	**P**	**21 35 09.7**	**+0.6**
MK31	**Makanchi Array**	**47.18**	**299**	P	**P**	**21 35 10.2**	**+1.0**
MK31				IAmb	IAmb	21 35 10.7	
	comp=Z,2.0nm,0.7s						
MKAR	**Makanchi Array**	**47.18**	**299**	P	**P**	**21 35 09.8**	**+0.6**
	comp=Z,1.4nm,0.6s,baz=76,slow=8.0,SNR=25						
MKAR				PcP	**PcP**	**21 36 40.4**	**0.0**
	comp=Z,0.4nm,0.7s,baz=60,slow=3.6,SNR=2.1						
MKAR				LR	LR	21 55 40.7	
	comp=Z,49nm,19.4s,baz=326,slow=37						
MKAR	**Makanchi Array**	**47.18**	**299**	P	**P**	**21 35 10.0**	**+0.9**
MKAR	**Makanchi Array**	**47.18**	**299**	eP	**P**	**21 35 09.8**	**+0.7**
MAKZ	**Makanchi**	**47.37**	**299**	P	**P**	**21 35 11.8**	**+1.2**
MAKZ				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MAKZ	**Makanchi**	**47.37**	**299**	P	**P**	**21 35 11.8**	**+1.2**
KURK	**Kurchatov**	**47.94**	**305**	⇓eP	**P**	**21 35 15.8**	**+0.8**
KURK				pmax	pmax		
	comp=Z,10.0nm,1.3s						
KURK	**Kurchatov**	**47.94**	**305**	P	**P**	**21 35 16.6**	**+1.7**
KURK				IAmb	IAmb	21 35 27.4	
	comp=Z,6.2nm,0.9s						
KURK	**Kurchatov**	**47.94**	**305**	eP	**P**	**21 35 15.8**	**+0.8**
CMAR	**Chiang Mai Arr**	**50.44**	**257**	P	**P**	**21 35 36.9**	**+2.4**
	comp=Z,0.7nm,0.3s,baz=49,slow=7.0,SNR=4.5						
BRVK	**Borovoye**	**51.79**	**311**	⇑eP	**P**	**21 35 44.7**	**+0.6**
BRVK				pmax	pmax		
	comp=Z,14nm,2.5s						
BRVK	**Borovoye**	**51.79**	**311**	eP	**P**	**21 35 44.7**	**+0.6**
TAPN	**Taplejung**	**52.99**	**274**	eP	**P**	**21 35 55.0**	**+1.2**
	comp=Z,8.3nm,0.9s						
ODAN	**Odare**	**53.51**	**274**	eP	**P**	**21 35 59.3**	**+1.8**
HNR	**Honiara**	**53.59**	**169**	LR	LR	21 55 02.9	
	comp=Z,33nm,19.8s,baz=272,slow=32						

GUN	Gumba	53.99	276	eP	P	21 36 01.9	+0.7
AAK	Ala-Archa	53.99	297	P	P	21 36 01.6	+0.8
	comp=Z,1.7nm,0.9s,baz=65,slow=12,SNR=3.1						
AAK	Ala-Archa	53.99	297	⇑eP	P	21 36 00.4	-0.4
AAK				pmax	pmax		
	comp=Z,10.0nm,1.2s						
AAK	Ala-Archa	53.99	297	P	P	21 36 02.3	+1.5
AAK				IAmb	IAmb	21 36 04.9	
	comp=Z,3.5nm,1.1s						
AAK	Ala-Archa	53.99	297	eP	P	21 36 00.4	-0.4
RAMN	Ramite	54.03	274	eP	P	21 36 02.2	+0.9
	comp=Z,10nm,0.5s						
YKA	Yellowknife Ar	54.05	35	P	P	21 36 00.1	-0.6
	comp=Z,1.4nm,0.9s,baz=296,slow=6.3,SNR=14						
YKA				PcP	PcP	21 37 04.5	-0.8
	comp=Z,0.3nm,0.7s,baz=298,slow=3.2,SNR=5.0						
KKN	Kakani	54.49	276	eP	P	21 36 06.3	+1.6
DMN	Daman	54.72	276	eP	P	21 36 07.5	+1.1
GKN	Gorkha	54.83	277	eP	P	21 36 07.5	+0.5
KBS	Kingsbay	55.18	351	⇓eP	P	21 36 11.1	+2.4
DANN	Dangsing	55.26	278	eP	P	21 36 11.6	+1.3
KKAR	Karatay Array	56.29	300	P	P	21 36 16.5	-0.7
KKAR	Karatay Array	56.29	300	P	P	21 36 16.5	-0.7
ARU	Arti	56.30	318	c iP	P	21 36 16.8	-0.2
ARU						21 38 21.2	
ARU				S	S	21 44 07.7	+2.3
ARU				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ARU	Arti	56.30	318	P	P	21 36 17.2	+0.1
ARU				IAmb	IAmb	21 36 17.9	
	comp=Z,3.5nm,0.7s						
ARU	Arti	56.30	318	iP	P	21 36 16.8	-0.2
ABKAR	Akbulak array	59.32	310	P	P	21 36 39.0	+0.7
NIL	Nilore	59.61	289	P	P	21 36 42.4	+1.8
NIL				pmax	pmax		
	comp=Z,9.0nm,0.9s						
NIL	Nilore	59.61	289	P	P	21 36 42.4	+1.8
YBH	Yreka Blue Hor	60.31	59	P	P	21 36 45.6	+0.2
	comp=Z,1.0nm,0.6s,baz=207,slow=8.0,SNR=3.8						
KBL	Kabul	61.95	292	P	P	21 36 57.3	+0.5
KBL				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KBL	Kabul	61.95	292	P	P	21 36 57.3	+0.5
KBL				IAmb	IAmb	21 36 57.6	
	comp=Z,3.6nm,0.8s						
GSI	Gunungsitoli	63.65	244	P	P	21 37 10.6	+2.7
FFC	Flin Flon	63.82	38	P	P	21 37 08.8	+0.2
FFC				pmax	pmax		
	comp=Z,9.0nm,1.3s						
FFC	Flin Flon	63.82	38	P	P	21 37 08.8	+0.2
BELG	Belogornoye	63.85	318	⇑eP	P	21 37 10.4	+1.6
FCC	Fort Churchill	64.42	32	P	P	21 37 11.4	-1.0
FCC				pmax	pmax		
	comp=Z,4.0nm,0.6s						
FCC	Fort Churchill	64.42	32	P	P	21 37 11.4	-1.0
FCC				IAmb	IAmb	21 37 11.5	
	comp=Z,4.0nm,0.6s						
BOZ	Bozeman (W)	64.62	50	P	P	21 37 14.3	+0.1
BOZ				pmax	pmax		
	comp=Z,3.0nm,1.5s						
BOZ	Bozeman (W)	64.62	50	P	P	21 37 14.3	+0.1
NVAR	Mina Array Bea	64.97	60	P	P	21 37 16.5	-0.2
	comp=Z,1.1nm,0.7s,baz=298,slow=6.7,SNR=6.3						
NVAR	Mina Array Bea	64.97	60	P	P	21 37 16.9	+0.1
WB0	Warramunga Arr	65.15	198	P	P	21 37 18.0	+0.4
WB0				IAmb	IAmb	21 37 18.6	
	comp=Z,3.6nm,0.8s						
WB2	Warramunga Arr	65.33	198	P	P	21 37 19.3	+0.5
WB2				IAmb	IAmb	21 37 24.5	
	comp=Z,4.9nm,1.1s						
WRA	Warramunga Arr	65.33	198	P	P	21 37 19.1	+0.3
	comp=Z,1.9nm,0.8s,baz=18,slow=6.8,SNR=10						
WRA	Warramunga Arr	65.33	198	P	P	21 37 19.3	+0.5
WRA	Warramunga Arr	65.33	198	P	P	21 37 19.2	+0.5
FITZ	Fitzroy Crossi	65.95	207	P	P	21 37 24.8	+2.0
FINES	FINESS Array B	66.12	335	P	P	21 37 23.1	-0.4
	comp=Z,2.6nm,0.6s,baz=44,slow=8.2,SNR=12						
OBN	Obninsk	66.98	325	eP	P	21 37 28.2	-0.8
OBN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
OBN	Obninsk	66.98	325	eP	P	21 37 28.2	-0.8
GEYT	Alibeck	66.99	301	P	P	21 37 30.2	+0.7
	comp=Z,1.6nm,0.5s,baz=41,slow=4.6,SNR=4.7						
TPNV	Topopah Spring	67.17	60	P	P	21 37 30.4	-0.4
TPNV				pmax	pmax		
	comp=Z,4.0nm,1.3s						
TPNV	Topopah Spring	67.17	60	P	P	21 37 30.4	-0.4
TPNV				IAmb	IAmb	21 37 31.1	
	comp=Z,4.1nm,1.3s						
BW06	Boulder Array	67.54	52	P	P	21 37 32.7	-0.4
BW06				IAmb	IAmb	21 37 44.1	
	comp=Z,5.0nm,1.5s						
PDAR	Pinedale Array	67.54	52	P	P	21 37 32.4	-0.7
	comp=Z,0.6nm,0.6s,baz=267,slow=0.5,SNR=5.6						
PDAR	Pinedale Array	67.54	52	P	P	21 37 32.2	-1.0
MVU	Marysvale	68.69	57	P	P	21 37 39.5	-0.8
RDMU	Red Mountain	68.94	54	P	P	21 37 41.9	0.0
ASAR	Alice Springs	69.03	197	P	P	21 37 43.5	+1.2
	comp=Z,0.8nm,0.6s,baz=15,slow=6.0,SNR=8.1						
NC405	NORSAR Array S	70.38	340	P	P	21 37 50.0	-0.1
NB2	NORSAR Subarra	70.56	341	P	P	21 37 50.8	-0.5
	comp=Z,1.3nm,0.6s,baz=28,slow=6.5						
NOA	NORSAR Array B	70.56	341	P	P	21 37 50.8	-0.5
	comp=Z,2.9nm,0.8s,baz=28,slow=6.4,SNR=6.8						
PV10	Paradox Valley	70.67	55	P	P	21 37 52.6	-0.1
X16A	Lo Mia Camp, P	71.79	60	P	P	21 37 58.2	-1.2
X16A				IAmb	IAmb	21 38 07.2	
	comp=Z,3.0nm,0.6s						
KIV	Kislovodsk	71.90	314	eP	P	21 38 00.6	+0.8
KIV				pmax	pmax		
	comp=Z,14nm,1.1s						
KBZ	Khabaz	71.94	314	P	P	21 38 00.8	+0.9
	comp=Z,6.0nm,0.9s,baz=83,slow=2.4,SNR=14						
KBZ	Khabaz	71.94	314	eP	P	21 38 01.3	+1.4
KBZ				pmax	pmax		
	comp=Z,6.0nm,0.9s						
AKASG	Malin Array Be	73.24	326	P	P	21 38 07.2	-0.3
	comp=Z,2.4nm,0.6s,baz=38,slow=6.1,SNR=10						
SORM	Soroca	75.59	325	⇓P	P	21 38 21.3	+0.1
BUR08	Bucovina Ar. S	77.28	326	P	P	21 38 31.5	+0.6
BUR08				IAmb	IAmb	21 38 31.6	
	comp=Z,2.9nm,0.7s						
BURAR	Bucovina Array	77.29	326	⇑P	P	21 38 31.5	+0.5
BURAR	Bucovina Array	77.29	326	P	P	21 38 31.3	+0.3
CFR	Carcaliu	77.99	323	⇓P	P	21 38 33.9	-0.8
ARCR	ARCALIA	78.07	326	⇑P	P	21 38 36.5	+1.2
DPC	Dobruska-Polom	78.33	332	eP	P	21 38 37.4	+0.8
DPC	Dobruska-Polom	78.33	332	eP	P	21 38 37.4	+0.8
CLL	Collm	78.57	335	iP	P	21 38 37.4	-0.5
CLL	Collm	78.57	335	P	P	21 38 37.7	-0.2
CLL				pmax	pmax		
	comp=Z,4.0nm,0.5s						
CLL	Collm	78.57	335	P	P	21 38 37.7	-0.2
CLL				IAmb	IAmb	21 38 37.9	
	comp=Z,3.5nm,0.5s						
DRGR		78.96	327	⇑P	P	21 38 39.4	-0.8
VOIR		79.11	325	⇓P	P	21 38 41.5	+0.5
BRTR	Keskin Array B	79.61	316	P	P	21 38 44.9	+0.9
	comp=Z,0.8nm,0.7s,baz=230,slow=8.1,SNR=2.6						
TXAR	Lajitas Array	80.08	59	P	P	21 38 45.2	-1.5
	comp=Z,0.9nm,0.6s,baz=297,slow=2.7,SNR=5.2						
TXAR	Lajitas Array	80.08	59	P	P	21 38 46.2	-0.5
TXAR	Lajitas Array	80.08	59	P	P	21 38 46.2	-0.5
KHC	Kasperske Hory	80.28	333	⇑eP	P	21 38 47.2	-0.1
KHC				pmax	pmax		
	comp=Z,44nm,3.8s						
KHC	Kasperske Hory	80.28	333	eP	P	21 38 46.8	-0.5
BZS	Buzias	80.36	327	⇑P	P	21 38 47.5	-0.2
GERES	GERESS Array B	80.49	333	P	P	21 38 48.0	-0.5
	comp=Z,0.4nm,0.5s,baz=24,slow=5.9,SNR=3.9						
GERES	GERESS Array B	80.49	333	P	P	21 38 48.5	0.0
GERES	GERESS Array B	80.49	333	P	P	21 38 48.5	0.0
BATG	Bathurst New B	83.48	25	P	P	21 39 03.4	-0.7
BDFB	Brasilia	147.46	36	PKPbc	PKPbc	21 46 20.5	-0.5
	comp=Z,2.5nm,0.7s,baz=295,slow=1.4,SNR=4.8						
BDFB	Brasilia	147.46	36	PKP2	PKPbc	21 46 20.8	-0.1
BDFB	Brasilia	147.46	36		PKPbc	21 46 20.8	-0.1

IDC 16 21:35:23.4±1.5, 28°.03N×101°.45E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.2/51, mbtmp3.6/3, Error ellipse: s-maj=82.9km s-min=25.2km az=61.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	9.80	194	Pg	Pn	21 38 23.1	+37
	0.4nm,0.3s,baz=5.8,slow=18,SNR=4.4						
MKAR	Makanchi Array	24.02	326	P	P	21 40 39.7	-0.3
	1.0nm,0.8s,baz=130,slow=10,SNR=10						
KURBB	Kurchatov Arra	28.48	329	P	P	21 41 20.5	+0.4
	0.2nm,0.2s,baz=146,slow=7.8,SNR=5.0						
WRA	Warramunga Arr	57.32	143	P	P	21 45 13.1	-0.3
	0.4nm,0.6s,baz=329,slow=7.5,SNR=4.7						

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*IDC **16** 21:41:41.7±1.5, 21°.60N×143°.33E, h267km±14km, mb3.5/21, mb1 3.7/24, mb1mx3.5/58, mbtmp4.2/24, Error ellipse: s-maj=15.8km s-min=9.0km az=82.0*

*NEIC **16** 21:41:42.3±1.5, 21°.54N±0°.09×143°.3E±0°.1, h271km±7km, mb4.3/33, Error ellipse: s-maj=19.6km s-min=13.0km az=88.0*

ISC 16 21:41:40.0±0.4, 21°.51N±0°.06×143°.37E±0°.10, h250km, n79, σ1ˢ02/85, mb4.0/39, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	5.66	349	P	Pn	21 43 06.0	+2.1
	21nm,0.3s,baz=83,slow=24,SNR=9.1						
JCJ				S	S	21 44 10.5	-0.5
	37nm,0.3s,baz=275,slow=23,SNR=11						
JMN	Monobe	14.78	327	P	Pn	21 45 00.6	+3.0
JGF	Kuroka	14.99	341	P	Pn	21 45 01.0	+1.0
JWT	Wachi	15.40	335	P	Pn	21 45 05.9	+1.1
JWT				IAmb	IAmb	21 45 06.8	
	comp=Z,10.0nm,0.7s						
MJAR	Matsushiro Arr	15.64	344	P	P	21 45 06.6	-0.2
	comp=Z,0.3nm,0.3s,baz=168,slow=9.9,SNR=13						
MJAR	Matsushiro Arr	15.64	344	P	P	21 45 06.0	-0.8
MAJO	Matsushiro	15.64	344	P	Pn	21 45 07.2	-0.5
MAJO				IAmb	IAmb	21 45 08.4	
	comp=Z,10nm,0.7s						
MAT	Matsushiro	15.64	344	P	Pn	21 45 06.8	-1.0
JNU	Nakatsue	16.01	319	P	Pn	21 45 12.7	+0.4
	comp=Z,1.0nm,0.3s,baz=123,slow=1.1,SNR=6.0						
JNU	Nakatsue	16.01	319	P	Pn	21 45 12.9	+0.6
JNU				IAmb	IAmb	21 45 13.4	
	comp=Z,14nm,0.9s						
JHS	Saijyo	16.18	328	P	Pn	21 45 14.7	+0.5
JHS				IAmb	IAmb	21 45 25.3	
	comp=Z,17nm,1.2s						
JSD	Sado	17.05	346	P	P	21 45 22.5	+0.3
ERM	Erimo	20.44	360	P	P	21 46 00.6	+2.0
KSRS	Korea Array	20.77	323	P	P	21 46 02.1	+0.1
	comp=Z,1.8nm,0.8s,baz=146,slow=10.0,SNR=5.2						
KLR	Kul'dur	29.16	344	P	P	21 47 17.6	-0.5
	comp=Z,2.3nm,0.5s,baz=167,slow=8.3,SNR=13						
SBUM	Sibu	35.74	242	P	P	21 48 16.8	+1.3
SBUM				IAmb	IAmb	21 48 17.4	
	comp=Z,5.2nm,0.5s						
SOEI	Soe	36.30	213	P	P	21 48 19.8	-0.5
BATI	Baumata	36.99	213	P	P	21 48 25.6	-0.5
	comp=Z,9.8nm,0.4s,baz=110,slow=2.8,SNR=5.5						
SONM	Songino Array	39.59	321	P	P	21 48 47.8	+0.4
	comp=Z,0.3nm,0.3s,baz=128,slow=6.1,SNR=6.3						
SONM				PcP	PcP	21 50 48.2	-1.1
	comp=Z,0.4nm,0.7s,baz=126,slow=3.9,SNR=3.6						
SONM	Songino Array	39.59	321	P	P	21 48 47.9	+0.4
AMKA	Amchitka	40.83	34	P	P	21 48 58.5	+1.3
WB0	Warramunga Arr	41.96	193	P	P	21 49 07.4	+0.6
WB0				IAmb	IAmb	21 49 12.1	
	comp=Z,13nm,1.4s						
WR0	Warramunga Arr	42.12	192	P	P	21 49 08.5	+0.4
WRAB	Tennant Creek	42.13	193	P	P	21 49 08.9	+0.7
WRAB				IAmb	IAmb	21 49 09.1	
	comp=Z,8.7nm,0.5s						
WB2	Warramunga Arr	42.14	193	P	P	21 49 08.9	+0.7
WB2				IAmb	IAmb	21 49 09.4	
	comp=Z,14nm,0.9s						
WRA	Warramunga Arr	42.14	193	P	P	21 49 08.9	+0.6
	comp=Z,4.4nm,0.3s,baz=16,slow=9.7,SNR=79						
WRA	Warramunga Arr	42.14	193	P	P	21 49 07.6	-0.6
FITZ	Fitzroy Crossi	43.03	205	P	P	21 49 15.8	+0.4
FITZ				IAmb	IAmb	21 49 16.6	
	comp=Z,8.5nm,0.7s						
KULM	Kulim	44.39	255	P	P	21 49 27.6	+1.3
KULM				IAmb	IAmb	21 49 28.3	
	comp=Z,7.6nm,0.7s						
AS31	Alice Springs	45.84	192	P	P	21 49 38.1	+0.5
ASAR	Alice Springs	45.84	192	P	P	21 49 37.9	+0.3
	comp=Z,1.4nm,0.6s,baz=13,slow=9.0,SNR=23						
ASAR				PcP	PcP	21 51 10.4	-0.1
	comp=Z,0.3nm,0.4s,baz=13,slow=5.3,SNR=4.9						
ASAR	Alice Springs	45.84	192	P	P	21 49 37.8	+0.2
PSI	Prapat	47.03	253	P	P	21 49 47.6	+0.5
	comp=Z,3.4nm,0.4s,baz=179,slow=2.1,SNR=1.6						
EIDS	Eidsvold	47.20	170	P	P	21 49 48.1	+0.1
EIDS				IAmb	IAmb	21 49 60.0	
	comp=Z,16nm,1.3s						
PSA00	Pilbara Seismi	48.59	210	P	P	21 49 59.1	+0.4
PSA00				IAmb	IAmb	21 49 60.0	
	comp=Z,12nm,1.4s						
DZM	Mont Dzumac	48.82	151	P	P	21 50 00.4	-0.1
	comp=Z,3.8nm,0.6s,baz=76,slow=23,SNR=1.9						
DZM	Mont Dzumac	48.82	151	P	P	21 50 01.8	+1.3
DZM				IAmb	IAmb	21 50 14.1	
	comp=Z,13nm,1.2s						
GSI	Gunungsitoli	48.91	252	P	P	21 50 01.6	+0.3
TAPN	Taplejung	50.67	288	eP	P	21 50 14.7	-0.1
	comp=Z,4.3nm,0.4s						
ODAN	Odare	51.01	288	eP	P	21 50 15.1	-2.1
	comp=Z,4.9nm,0.6s						
RAMN	Ramite	51.70	288	eP	P	21 50 19.5	-2.8
	comp=Z,2.1nm,0.3s						
GUN	Gumba	52.22	289	eP	P	21 50 26.1	-0.2
	comp=Z,4.6nm,0.4s						
PKI	Pulchoki	52.68	289	eP	P	21 50 28.7	-0.9
	comp=Z,2.4nm,0.3s						
PKIN	Phulchoki	52.69	289	eP	P	21 50 28.7	-0.9
	comp=Z,2.7nm,0.4s						
KKN	Kakani	52.76	289	eP	P	21 50 29.6	-0.5
	comp=Z,2.0nm,0.2s						
STKA	Stephens Creek	53.12	182	P	P	21 50 32.2	+0.1
	comp=Z,0.6nm,0.3s,baz=6.5,slow=10,SNR=3.0						
STKA	Stephens Creek	53.12	182	P	P	21 50 32.9	+0.7
GKN	Gorkha	53.30	289	eP	P	21 50 34.0	0.0
	comp=Z,3.5nm,0.3s						
DANN	Dangsing	54.03	290	eP	P	21 50 39.1	-0.3
	comp=Z,31nm,0.2s						
FORT	Forrest	54.03	196	P	P	21 50 39.4	+0.6
ZALV	Zalesovo Beam	54.46	322	P	P	21 50 40.7	-1.0
	comp=Z,1.7nm,0.6s,baz=110,slow=7.2,SNR=8.5						
ZALV				PcP	pwP	21 51 40.1	+0.3
	comp=Z,1.7nm,0.6s,baz=113,slow=3.3,SNR=7.9						
BBOO	Buckleboo	54.47	188	P	P	21 50 42.2	+0.3
BBOO				IAmb	IAmb	21 50 43.3	
	comp=Z,13nm,1.2s						
MKAR	Makanchi Array	54.95	313	P	P	21 50 44.9	-0.5
	comp=Z,0.5nm,0.6s,baz=91,slow=8.0,SNR=9.0						
MKAR				PcP	pwP	21 51 42.8	-0.7
	comp=Z,1.0nm,0.6s,baz=70,slow=4.7,SNR=10						
MKAR				ScP	ScP	21 55 14.0	-4.3
	comp=Z,0.1nm,0.5s,baz=83,slow=6.1,SNR=4.1						
MKAR	Makanchi Array	54.95	313	P	P	21 50 45.0	-0.4
MAKZ	Makanchi	55.17	313	P	P	21 50 46.6	-0.3
MORW	Morawa	56.78	209	P	P	21 50 58.1	-0.3
KURK	Kurchatov	57.73	317	P	P	21 51 04.0	-0.8
KURBB	Kurchatov Arra	57.78	317	P	P	21 51 04.1	-1.0
	comp=Z,2.0nm,0.7s,baz=94,slow=7.5,SNR=32						
TOLK	Toolik Lake Re	61.82	23	P	P	21 51 33.2	+0.8
ILAR	Eielson Array	62.12	27	P	P	21 51 32.9	-1.4
	comp=Z,0.3nm,0.8s,baz=242,slow=3.5,SNR=4.2						
ILAR	Eielson Array	62.12	27	P	P	21 51 33.6	-0.7
BRVK	Borovoye	62.99	320	P	P	21 51 39.4	-0.8
KKAR	Karatay Array	63.31	308	P	P	21 51 42.2	-0.4
ARU	Arti	69.52	324	P	P	21 52 20.4	-1.1
ARU				IAmb	IAmb	21 52 37.2	
	comp=Z,7.1nm,1.3s						
ABKAR	Akbulak array	69.80	316	P	P	21 52 22.4	-1.0
GEYT	Alibeck	73.50	305	P	P	21 52 46.3	+0.6
	comp=Z,0.5nm,0.4s,baz=171,slow=12,SNR=2.0						
YKA	Yellowknife Ar	76.53	28	P	P	21 53 01.9	-0.4
	comp=Z,0.7nm,0.5s,baz=293,slow=5.1,SNR=9.2						
ARCES	ARCESS Array B	79.15	342	P	P	21 53 16.1	-0.6
	comp=Z,8.0nm,1.1s,baz=64,slow=6.9,SNR=5.0						
ARCES	ARCESS Array B	79.15	342	P	P	21 53 16.6	-0.1
KBZ	Khabaz	82.62	314	P	P	21 53 35.2	-0.2
	comp=Z,5.1nm,0.8s,baz=68,slow=3.6,SNR=12						
NVAR	Mina Array Bea	83.12	52	P	P	21 53 38.5	0.0
	comp=Z,0.5nm,0.7s,baz=298,slow=4.7,SNR=3.7						
FIA1	FINESS Array S	83.42	335	P	P	21 53 37.8	-1.4
FINES	FINESS Array B	83.42	335	P	P	21 53 37.5	-1.7
	comp=Z,2.3nm,0.5s,baz=72,slow=4.5,SNR=28						
ELK	Elko	84.41	48	P	P	21 53 44.4	-0.5
	comp=Z,0.4nm,0.5s,baz=304,slow=19,SNR=1.9						
PFO	Pinyon Flats O	86.35	55	P	P	21 53 53.9	-0.6
	comp=Z,1.5nm,0.6s,baz=236,slow=12,SNR=1.7						
KOWA	Kowa	131.99	315	PKP	PKPdf	22 00 24.6	0.0
	comp=Z,2.2nm,0.5s,baz=59,slow=2.7,SNR=11						
PLCA	Paso Flores	145.50	132	PKPbc	PKPab	22 00 49.6	-0.1
	comp=Z,4.2nm,0.4s,baz=231,slow=4.5,SNR=15						
LPAZ	La Paz	149.78	86	PKPbc	PKPbc	22 01 02.1	+0.2
	comp=Z,3.2nm,0.5s,baz=32,slow=1.4,SNR=11						
LPAZ	La Paz	149.78	86		PKiKP	22 01 02.4	-0.4

IDC 16 21:48:49.1±4.6, 8°.03N×101°.94W, h0km, mb3.4/4, mb1 3.9/4, mb1mx3.6/41, mbtmp3.4/4, MS3.4/3, Ms1 3.4/3, ms1mx2.9/39, Error ellipse: s-maj=212.9km s-min=64.9km az=93.0, Northern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	11.34	37	LR	LR	21 54 05.2	
	comp=Z,56nm,18.8s,baz=190,slow=28						
LPIG	La Paz	17.89	334	LR	LR	21 57 39.3	
	comp=Z,194nm,20.9s,baz=180,slow=30						
TEIG	Tepich	17.94	46	LR	LR	21 59 24.3	
	comp=Z,195nm,19.4s,baz=195,slow=35						
TXAR	Lajitas Array	21.26	356	P	P	21 53 37.7	+0.6
	0.5nm,0.6s,baz=183,slow=13,SNR=2.0						
NVAR	Mina Array Bea	33.68	336	P	P	21 55 32.6	+0.4
	0.8nm,0.8s,baz=169,slow=10,SNR=2.5						
PDAR	Pinedale Array	35.25	350	P	P	21 55 44.0	-1.7
	0.7nm,0.9s,baz=168,slow=9.2,SNR=3.4						
H03N2	Juan Fernandez	46.67	153	T	T	22 48 25.0	
	baz=329,slow=77,SNR=9.4						
H03N1	Juan Fernandez	46.68	153	T	T	22 48 30.4	
	baz=329,slow=77,SNR=8.9						
H03N3	Juan Fernandez	46.69	153	T	T	22 48 25.3	
	baz=329,slow=77,SNR=15						
ILAR	Eielson Array	64.81	340	P	P	21 59 30.2	+0.7
	0.6nm,0.8s,baz=143,slow=6.2,SNR=5.3						
CMAR	Chiang Mai Arr	146.58	322	PKPbc	PKPdf	22 08 32.5	+0.3
	0.5nm,0.3s,baz=21,slow=2.3,SNR=5.8						

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*IDC **16** 21:52:18.5±0.8, 15°.50N×60°.22W, h0km, mb3.9/13, mb1 4.2/17, mb1mx4.0/54, mbtmp4.0/17, ML3.8/4, MS3.4/3, Ms1 3.4/3, ms1mx3.0/60, Error ellipse: s-maj=21.4km s-min=16.3km az=85.0*

*TRN **16** 21:52:21.0, 15°.37N×60°.39W, h17km, MD3.8*

*NEIC **16** 21:52:24.6±2.6, 15°.40N±0°.01×60°.32W±0°.05, h36km±8km, mb4.4/17, Error ellipse: s-maj=7.5km s-min=2.1km az=92.0*

ISC 16 21:52:24.3±0.6, 15°.40N±0°.03×60°.31W±0°.07, h38km±2km, n140, σ1ˢ33/162, mb4.3/18, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ILAM	Ilet Lapin Mar	0.83	221	eP	Pn	21 52 38.1	-1.4
DLPL	La Plaine	0.91	266	eP	Pn	21 52 39.8	-0.8
DLPL				eS	Sn	21 52 53.0	+0.5
DLPL	La Plaine	0.91	266		Pn	21 52 39.8	-0.8
DLPL				Sn	Sn	21 52 51.6	-0.9
BAMF	Morne Balai	1.00	234	eP	Pn	21 52 40.9	-0.9
SVN	Savane Anatole	1.00	236	eP	Pn	21 52 41.1	-0.8
MVM	Montagne Vaucl	1.01	214	eP	Pn	21 52 40.5	-1.6
CXM	Morne La Croix	1.02	235	eP	Pn	21 52 41.4	-0.8
LPMF	Morne Lapointe	1.04	218	eP	Pn	21 52 40.5	-1.8
PML	Morne Lenard	1.05	234	eP	Pn	21 52 41.6	-0.9
PCM	Pelee Case Pet	1.05	236	eP	Pn	21 52 41.6	-0.9
FDF	Fort de France	1.05	231	eP	Pn	21 52 41.4	-1.1
FDF				eS	Sn	21 52 56.0	0.0
FDF	Fort de France	1.05	231		Pn	21 52 41.5	-1.1
FDF				Sn	Sn	21 52 55.9	-0.1
DSLB	Salisbury	1.07	272	eP	Pn	21 52 41.9	-1.0
ZAM	Aeronautique	1.08	220	eP	Pn	21 52 41.2	-1.6
MAGL	Barre de l’ile	1.08	300	eP	Pn	21 52 41.7	-1.3
MAGL	Barre de l’ile	1.08	300	eP	Pn	21 52 41.9	-1.1
MAGL				eS	Sn	21 52 57.6	+0.8
MPOM	Morne Pois Mar	1.09	209	eP	Pn	21 52 41.5	-1.6
MPOM				eS	Sn	21 52 56.7	-0.2
H05S1	Guadeloupe/Mar	1.10	208	Pn	Pn	21 52 41.4	-1.7
H05S1				Sn	Sn	21 52 54.7	-2.4
TRMF	Trois Ilets	1.12	220	eP	Pn	21 52 41.9	-1.6
BIM	Bigot	1.15	220	eP	Pn	21 52 42.8	-1.1
BIM				eS	Sn	21 52 58.5	+0.1
H05N1	Guadeloupe/Mar	1.16	322	Pn	Pn	21 52 41.8	-2.3
H05N1				Sn	Sn	21 52 56.5	-2.2
TDBA	Terre de Bas,	1.35	289	eP	Pn	21 52 45.9	-0.8
TDBA				eS	Sn	21 53 03.7	+0.3
TBG	Guadaloupe-3	1.36	289	eP	Pn	21 52 46.0	-0.8
TBG				eS	Sn	21 53 03.2	-0.4
CBE	Ff, Capester	1.42	298	eP	Pn	21 52 46.9	-0.7
CBE				eS	Sn	21 53 06.6	+1.6
SLBI	Saint Lucia, B	1.51	205	eP	Pn	21 52 48.0	-0.9
SLBI				eS	Sn	21 53 06.7	-0.6
SLCP	Castries, St.	1.53	206	eP	Pn	21 52 48.8	-0.4
SLCP				eS	Sn	21 53 07.8	-0.1
ABD	La Joyeuse, An	1.56	313	eP	Pn	21 52 48.0	-1.5
SLB	Belfond	1.72	204	eP	Pn	21 52 53.0	+1.2
SLB				eS	Sn	21 53 13.0	+0.5
MCLT	Moule a Chique	1.79	200	eP	Pn	21 52 51.5	-1.2
MCLT	Moule a Chique	1.79	200	Pn	Pn	21 52 51.4	-1.4
ANBD	Bethesda, Anti	2.15	320	eP	Pn	21 52 56.8	-0.9
ANBD				eS	Sn	21 53 23.6	+0.4
BPA	Boggy Peak	2.21	318	eP	Pn	21 52 58.5	0.0
BPA				eS	Sn	21 53 25.9	+1.3
MLYT	Lee's Yard	2.23	306	eP	Pn	21 52 58.9	+0.1
MLYT				eS	Sn	21 53 27.1	+1.8
SVV	Soufriere Volc	2.25	203	eP	Pn	21 53 00.5	+1.4
SVV				eS	Sn	21 53 27.0	+1.4
SVB	Belmont	2.31	203	eP	Pn	21 53 00.0	+0.2
SVB				eS	Sn	21 53 28.8	+1.9
SVB	Belmont	2.31	203	Pn	Pn	21 52 59.8	0.0
BBGH	Gun Hill	2.36	162	Pn	Pn	21 53 01.8	+1.2
SVOC	Richmond Hill,	2.40	202	eP	Pn	21 53 01.8	+0.6
SVOC				eS	Sn	21 53 31.3	+2.0
ANWB	Willy Bob	2.66	328	eP	Pn	21 53 05.3	+0.7
ANWB				eS	Sn	21 53 37.1	+1.4
ANWB	Willy Bob	2.66	328	Pn	Pn	21 53 04.8	+0.1
SKOC	St. Kitts, UWI	2.99	309	eP	Pn	21 53 09.3	+0.1
SKOC				eS	Sn	21 53 44.9	+1.1
SKI	Saint Kitts	3.02	310	eP	Pn	21 53 09.8	+0.1
SKI				eS	Sn	21 53 46.0	+1.4
SKI	Saint Kitts	3.02	310	Pn	Pn	21 53 11.1	+1.5
SEUS	St. Eustatius	3.30	309	eP	Pn	21 53 14.2	+0.8
SEUS	St. Eustatius	3.30	309	Pn	Pn	21 53 16.8	+3.3
GRGR	Grenville	3.50	202	Pn	Pn	21 53 16.9	+0.6
SABA	Saba	3.58	309	Pn	Pn	21 53 19.8	+2.6
CDVI	St. Croix	4.87	299	Pn	Pn	21 53 35.9	+0.9
CUPR	Culebra, Puert	5.57	302	Pn	Pn	21 53 45.8	+1.1
MTP	Monte Pirata	5.69	299	Pn	Pn	21 53 47.3	+1.0
HUMP	Col San Antoni	5.97	298	Pn	Pn	21 53 51.0	+0.9
CBYP	Canovanas	6.03	299	Pn	Pn	21 53 52.4	+1.3
PDPR	Patillas Dam,	6.06	296	Pn	Pn	21 53 52.0	+0.5
SJG	San Juan	6.21	297	Pn	Pn	21 53 54.2	+0.7
	4.1nm,0.3s,baz=151,slow=23,SNR=3.1						
SJG				Sn	Sn	21 55 01.4	-1.8
	7.8nm,0.3s,baz=27,slow=20,SNR=2.4						
SJG				LR	LR	21 56 24.9	
	comp=Z,254nm,20.0s,baz=82,slow=39						
SJG	San Juan	6.21	297	Pn	Pn	21 53 54.9	+1.4
GCPR	Guaynabo City	6.24	298	Pn	Pn	21 53 55.5	+1.6
OBIP	Obispado Ponce	6.58	294	Pn	Pn	21 53 57.6	-1.0
PLCV	Puerto La Cruz	6.67	219		Pn	21 54 01.2	+1.3
PLCV					Sn	21 55 16.5	+1.8
PCRV	Puerto La Cruz	6.69	220	Pn	Pn	21 54 01.2	+1.0
	1.3nm,0.3s,baz=330,slow=13,SNR=2.0						
PCRV				Sn	Sn	21 55 16.5	+1.3
	0.3nm,0.3s,baz=358,slow=12,SNR=1.1						
AOPR	Arecibo Observ	6.83	296	Pn	Pn	21 54 02.6	+0.6
MLPR	Magueyes Islan	6.94	293	Pn	Pn	21 54 02.4	-1.1
DR12	Loma Pena Alta	9.30	292	Pn	Pn	21 54 40.2	+4.2
SDDR	Presa de Saban	11.08	290	Pn	Pn	21 55 02.4	+2.1
SDDR	Presa de Saban	11.08	290	eP	Pn	21 55 03.2	+2.9
SDV	Santo Domingo	11.99	238	Pn	Pn	21 55 14.2	+1.2
	0.8nm,0.3s,baz=57,slow=11,SNR=7.5						
SDV				LR	LR	22 00 09.0	
	comp=Z,148nm,18.1s,baz=98,slow=39						

SDV	Santo Domingo	11.99	238	Pn	Pn	21 55 14.0	+1.1
SOCV	Socops	12.51	237	eP	Pn	21 55 19.5	-0.3
MDP	Montagnes des	12.71	143	Pn	Pn	21 55 17.0	-5.7
	0.4nm,0.3s,baz=167,slow=1.3,SNR=1.7						
MDP				Sn	Sn	21 57 30.1	-13
	1.7nm,0.3s,baz=56,slow=20,SNR=7.9						
PAMC	Pamplona, Colo	14.54	238	eP	Pn	21 55 50.3	+2.3
SMLC	San Martn de	14.96	246	eP	Pn	21 55 51.7	-1.6
BARC	Barichara	15.36	237	eP	P	21 56 06.1	+3.2
RUSC	La Rusia	15.70	234	eP	P	21 56 07.5	+0.6
PTGA	Pitinga	16.03	179	Pn	Pn	21 56 05.9	-1.2
	2.1nm,0.3s,baz=2.9,slow=14,SNR=18						
PTGA				Sn	Sn	21 58 51.1	-13
	1.3nm,0.3s,baz=34,slow=10,SNR=8.0						
PTGA	Pitinga	16.03	179	Pn	Pn	21 56 05.8	-1.2
PTBC	PUERTO BERRIO,	16.43	239	eP	P	21 56 14.0	-0.6
SPBC	San Pablo de B	16.63	236	eP	P	21 56 16.8	0.0
CHIC	Chingaza	16.99	232	eP	P	21 56 23.8	+2.6
CBOG1	Bogota, SGC	17.25	233	eP	P	21 56 24.1	+0.1
ROSC	El Rosal	17.32	234	P	P	21 56 27.8	+3.1
	4.3nm,0.3s,baz=292,slow=20,SNR=7.0						
ROSC				LR	LR	22 03 18.4	
	comp=Z,164nm,18.1s,baz=34,slow=38						
ROSC	El Rosal	17.32	234	P	P	21 56 28.1	+3.4
ROSC	El Rosal	17.32	234	eP	P	21 56 28.4	+3.7
NORC	Norcasia	17.32	237	eP	Pn	21 56 23.1	-0.2
DBBC	Dabeiba	17.67	244	eP	Pn	21 56 28.3	+0.6
GUY2C	Guyana, Caldas	17.92	237	eP	P	21 56 32.5	+1.0
RREF	El Recreo	18.09	236	eP	P	21 56 35.0	+1.4
CBOC	Ciudad Bolivar	18.10	240	eP	P	21 56 35.1	+2.0
TOLC	Tolima	18.26	235	eP	P	21 56 35.0	-0.1
ANIL	Santa Ana	18.38	235	eP	P	21 56 36.7	+0.3
PRAC	Prado	18.46	232	eP	Pn	21 56 38.2	+0.8
ORTC	Ortega, Tolima	18.61	234	eP	Pn	21 56 39.9	+0.7
MACC	Macarena, Meta	18.75	227	eP	P	21 56 39.3	-0.9
PLMC	San Jos del P	18.85	238	eP	P	21 56 41.8	+0.5
BETC	Betania	19.55	231	eP	Pn	21 56 51.2	+0.7
MARP	Paez Belalcaza	19.83	233	eP	P	21 56 51.5	-0.8
GARC	Garzon, Huila	19.91	230	eP	Pn	21 56 55.0	+0.1
PCON	Cinco Dias	20.50	232	eP	P	21 57 00.5	+0.7
POPC	Popayan, Colom	20.58	233	eP	P	21 57 01.5	+1.1
BBAC	Balboa, Cauca	21.35	233	eP	P	21 57 05.0	-3.6
GR1C	Gorgona, Isla	21.48	237	eP	P	21 57 10.8	+1.1
OTAV	Otavalo	23.41	232	P	P	21 57 29.6	-1.0
OTAV				IAmb	IAmb	21 57 31.7	
	comp=Z,16nm,1.2s						
OTAV	Otavalo	23.41	232	eP	P	21 57 29.8	-0.7
SAML	Samuel	24.36	187	P	P	21 57 39.7	+0.8
SAML	Samuel	24.36	187	eP	P	21 57 39.2	+0.3
MTO3	Montecristo	28.08	272	P	P	21 58 15.1	+2.2
MTO3				IAmb	IAmb	21 58 16.7	
	comp=Z,9.0nm,1.2s						
PLAL	Pickwick Lake	31.63	313	P	P	21 58 44.9	+1.1
LPAZ	La Paz	32.42	194	P	P	21 58 52.3	+0.8
	comp=Z,2.9nm,0.8s,baz=23,slow=9.4,SNR=9.8						
LPAZ	La Paz	32.42	194	P	P	21 58 52.7	+1.2
LPAZ				IAmb	IAmb	21 59 00.2	
	comp=Z,4.5nm,0.8s						
LPAZ	La Paz	32.42	194	eP	P	21 58 50.4	-1.1
SADO	Sadowa	33.33	335	P	P	21 58 58.3	-0.3
	comp=Z,1.6nm,0.5s,baz=173,slow=8.0,SNR=5.8						
SADO	Sadowa	33.33	335	P	P	21 58 58.8	+0.3
PB01	IPOC Station P	37.32	194	P	P	21 59 32.8	-0.4
PB01				IAmb	IAmb	21 59 35.2	
	comp=Z,5.6nm,0.8s						
LVC	Limon Verde	38.70	193	P	P	21 59 45.3	+0.2
LVC				IAmb	IAmb	22 00 00.8	
	comp=Z,7.3nm,1.1s						
GO02	Mina Guanaco	41.32	193	P	P	22 00 06.6	-0.2
TXAR	Lajitas Array	42.18	297	P	P	22 00 12.7	-1.0
	comp=Z,0.5nm,0.5s,baz=96,slow=5.7,SNR=1.8						
TXAR	Lajitas Array	42.18	297	P	P	22 00 12.6	-1.1
AC01	Pan de Azucar	42.49	194	P	P	22 00 15.8	-0.2
MNTX	Cornudas Mount	44.06	300	P	P	22 00 28.6	-0.1
ULM	Lac du Bonnet	45.09	328	P	P	22 00 34.6	-1.9
	comp=Z,0.8nm,0.4s,baz=144,slow=8.9,SNR=2.2						
FRB	Frobisher Bay	48.63	355	P	P	22 01 04.0	0.0
	comp=Z,1.4nm,0.4s,baz=154,slow=10,SNR=5.8						
PDAR	Pinedale Array	50.04	313	P	P	22 01 15.7	+0.1
	comp=Z,1.1nm,0.7s,baz=108,slow=9.7,SNR=4.6						
PDAR	Pinedale Array	50.04	313	P	P	22 01 15.9	+0.3
H10N3	ASCENSION HYDR	50.92	114	T	T	22 56 44.7	
	baz=296,slow=75,SNR=10						
H10N2	ASCENSION HYDR	50.93	114	T	T	22 56 45.3	
	baz=296,slow=75,SNR=9.8						
H10N1	ASCENSION HYDR	50.94	114	T	T	22 56 46.3	
	baz=296,slow=75,SNR=22						
H10S3	ASCENSION HYDR	51.29	115	T	T	22 57 21.1	
	SNR=4.8						
KOWA	Kowa	54.26	83	P	P	22 01 46.3	-0.7
	comp=Z,3.8nm,0.8s,baz=284,slow=6.5,SNR=8.4						
KOWA	Kowa	54.26	83	P	P	22 01 46.1	-0.9
KOWA				IAmb	IAmb	22 01 47.2	
	comp=Z,3.1nm,0.8s						
NVAR	Mina Array Bea	55.61	306	P	P	22 01 56.8	+0.1
	comp=Z,0.4nm,0.5s,baz=112,slow=6.3,SNR=2.1						
PLCA	Paso Flores	56.65	189	P	P	22 02 04.5	+0.7
	comp=Z,1.3nm,0.4s,baz=354,slow=8.2,SNR=4.1						
PLCA	Paso Flores	56.65	189	P	P	22 02 04.7	+1.0
PLCA				IAmb	IAmb	22 02 23.1	
	comp=Z,5.6nm,1.3s						
NEW	Newport	56.69	318	P	P	22 02 03.5	-0.5
	comp=Z,1.4nm,0.4s,baz=115,slow=9.3,SNR=2.8						
NEW	Newport	56.69	318	P	P	22 02 04.0	0.0
NEW				IAmb	IAmb	22 02 18.6	
	comp=Z,3.2nm,0.8s						
I07A	Izee	57.39	313	P	P	22 02 09.8	+0.6
I07A				IAmb	IAmb	22 02 28.4	
	comp=Z,3.9nm,1.3s						
K05A	Summer Lake	58.16	311	P	P	22 02 15.9	+1.2
YKA	Yellowknife Ar	60.32	334	P	P	22 02 28.1	-0.9
	comp=Z,0.7nm,0.6s,baz=106,slow=8.0,SNR=7.8						
GERES	GERESS Array B	68.06	43	P	P	22 03 19.7	-0.5
	comp=Z,0.2nm,0.3s,baz=280,slow=5.9,SNR=3.6						
BCAR	Beaver Creek A	72.54	332	P	P	22 03 48.1	+0.9
ILAR	Eielson Array	74.74	334	P	P	22 03 59.5	-0.5
	comp=Z,0.5nm,0.6s,baz=119,slow=4.0,SNR=5.7						
CMAR	Chiang Mai Arr	140.63	32	PKP	PKPdf	22 11 50.5	-0.2
	comp=Z,0.3nm,0.4s,baz=202,slow=0.5,SNR=1.7						
ASAR	Alice Springs	164.29	236	PKPab	PKPab	22 13 17.3	-1.3
	comp=Z,0.3nm,0.7s,baz=111,slow=3.9,SNR=5.1						

BJI ***16*** *22:00:51.1±0.0, 55°.30S×28°.05W, h10^{km}, mB6.1/45, Ms6.3/42, Ms7 6.3/49*

MOS ***16*** *22:00:52.2±1.0, 55°.53S×28°.35W, h10^{km}, mb6.0/16, MS6.3/41, Error ellipse: s-maj=15.0km s-min=8.5km az=104.0*

NEIC ***16*** *22:00:53.2, 55°.51S×28°.22W, h19^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}0.92; $M_{\theta\theta}$-0.78; $M_{\phi\phi}$-0.14; $M_{r\theta}$-0.78; $M_{\theta\phi}$0.71; $M_{\phi r}$1.41; Fault plane solution: $M_0$1.96000×10^{18} NP1:ϕ_s96.62000°, δ23.05000°, λ42.33000°. NP2:ϕ_s326.66000°, δ74.71000°, λ107.46000°. Principal axes: T 1.9214, Plg57.0000°, Azm259.0000°; N 0.0713, Plg17.0000°, Azm142.0000°; P -1.9927, Plg28.0000°, Azm43.0000°;*

IDC ***16*** *22:00:53.2±1.0, 55°.45S×28°.11W, h12^{km}±5^{km}, mb5.7/27, mb1 5.7/29, mb1mx5.6/32, mbtmp5.8/29, ML5.7/2, MS6.2/18, Ms1 6.2/18, ms1mx5.8/27 Error ellipse: s-maj=13.6km s-min=9.1km az=37.0*

NEIC ***16*** *22:00:53.6±1.9, 55°.52S±0°.09×28°.3W±0°.1, h13^{km}±1^{km}, mb6.1/149, Ms_20 6.3/906, Mwb6.1/34, Mwc6.2/36, Mww6.2, Mwc6.3(GCMT), Error ellipse: s-maj=15.5km s-min=13.4km az=203.0*

NEIC ***16*** *22:00:57, 55°.42S×28°.25W, h30^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}0.95; $M_{\theta\theta}$-0.23; $M_{\phi\phi}$-0.72; $M_{r\theta}$-0.74; $M_{\theta\phi}$1.25; $M_{\phi r}$2.38; Fault plane solution: $M_0$2.92000×10^{18} NP1:ϕ_s107.00000°, δ21.00000°, λ35.00000°. NP2:ϕ_s343.00000°, δ78.00000°, λ108.00000°. Principal axes: T 2.6490, Plg54.0000°, Azm275.0000°; N 0.4823, Plg17.0000°, Azm159.0000°; P -3.1313, Plg31.0000°, Azm59.0000°;*

GCMT ***16*** *22:00:59.6±0.1, 55°.50S×28°.14W, h14^{km}, MW6.3/170, Moment Tensor Solution. s169,c369; s170,c564; Duration: 3^{s}3 Moment tensor: Scale 10^{18}Nm; M_{rr}1.00±.01; $M_{\theta\theta}$-0.61±.01; $M_{\phi\phi}$-0.38±.01; $M_{r\theta}$-0.91±.03; $M_{\theta\phi}$1.11±.01; $M_{\phi r}$2.71±.08; Best double couple: $M_0$3.18700×10^{18} NP1:ϕ_s100.00000°, δ19.00000°, λ32.00000°. NP2:ϕ_s339.00000°, δ80.00000°, λ107.00000°. Principal axes: T 3.1040, Plg52.0000°, Azm269.0000°; N 0.1620, Plg16.0000°, Azm156.0000°; P -3.2690, Plg33.0000°, Azm56.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

NEIC ***16*** *22:01:01, 55°.53S×28°.18W, h13^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}1.10; $M_{\theta\theta}$-0.70; $M_{\phi\phi}$-0.40; $M_{r\theta}$-0.82; $M_{\theta\phi}$1.21; $M_{\phi r}$2.85; Fault plane solution: $M_0$3.34000×10^{18} NP1:ϕ_s100.00000°, δ21.00000°, λ30.00000°. NP2:ϕ_s341.00000°, δ80.00000°, λ108.00000°. Principal axes: T 3.2988, Plg52.0000°, Azm272.0000°; N 0.0880, Plg18.0000°, Azm158.0000°; P -3.3868, Plg32.0000°, Azm56.0000°;*

NEIC ***16*** *22:01:10.1, 55°.15S×27°.78W, h39^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}1.69; $M_{\theta\theta}$-0.86; $M_{\phi\phi}$-0.82; $M_{r\theta}$-0.79; $M_{\theta\phi}$1.32; $M_{\phi r}$1.48; Fault plane solution: $M_0$2.57000×10^{18} NP1:ϕ_s117.74000°, δ26.98000°, λ62.94000°. NP2:ϕ_s327.57000°, δ66.17000°, λ103.04000°. Principal axes: T 2.3796, Plg66.0000°, Azm261.0000°; N 0.3719, Plg12.0000°, Azm142.0000°; P -2.7515, Plg20.0000°, Azm48.0000°;*

ISC 16 22:00:54.3±0.5, **55°.52S**±0°.04×**28°.23W**±0°.04, **h18**^{km}±2^{km}, **h19**^{km}**:pP-P, n1348,** σ**2**^{s}**07**/1005, **mb6.0**/106, **MS6.3**/524, **97C-35D, Fault plane solution: NP1:**ϕ_s132.43260°, δ42.00440°, λ60.71725°. **NP2:**ϕ_s349.47275°, δ54.29045°, λ113.77222°. **Principal axes:** T Plg69.7462°, Azm314.8968°; N Plg19.1058°, Azm155.0546°; P Plg6.4724°, Azm62.8024°; **Fault plane solution: NP1:** ϕ_s293.83991°, δ52.45293°, λ90.76471°. **NP2:** ϕ_s112.58520°, δ37.55370°, λ89.00523°. **Principal axes:** T Plg82.5250°, Azm208.0000°; N Plg0.6063°, Azm113.3739°; P Plg7.4500°, Azm23.2946°; **South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	Hope Point	4.92	281	P	Pn	22 02 07.5	+0.2
HOPE	Hope Point	4.92	281	Pn	Pn	22 02 07.5	+0.2
VNA1	Neumayer--Stat	17.51	158	P	P	22 04 58.5	+0.3
VNA3	Neumayer Olymp	17.69	160	P	P	22 05 00.7	+0.5
VNA2	Neumayer--Watz	17.91	158	P	P	22 05 02.6	0.0
	baz=315,slow=13						
VNA2				S	S	22 08 34.6	+7.4
EFI	East Falkland	18.05	270	P	P	22 05 04.6	+0.4
EFI				pmax	pmax		
	comp=Z,962nm,1.1s						
EFI	East Falkland	18.05	270		P	22 05 04.6	+0.4
SNAA	Sanae	19.47	156	P	P	22 05 20.0	+0.3
SNAA	Sanae	19.47	156	P	P	22 05 19.4	-0.3
	comp=Z,17nm,0.3s,baz=302,slow=9.5,SNR=143						
SNAA				PcP	PcP	22 09 38.9	-0.9
	comp=Z,0.7nm,0.3s,baz=239,slow=12,SNR=1.3						
SNAA				LR	LR	22 11 29.3	
	comp=Z,40µm,20.1s,baz=316,slow=33						
SNAA				ScP	ScP	22 13 13.5	-1.0
	comp=Z,1.3nm,0.3s,baz=188,slow=0.5,SNR=5.0						
SNAA	Sanae	19.47	156		P	22 05 18.8	-1.0
SNAA				IAmb	IAmb	22 05 37.0	
	comp=Z,661nm,1.0s						
PMSA	Palmer Station	19.81	228	P	Pn	22 05 25.9	+0.8
	comp=Z,24nm,0.3s,baz=62,slow=6.5,SNR=20						
PMSA				PcP	PcP	22 09 39.7	-0.7
	comp=Z,2.9nm,0.3s,baz=135,slow=1.4,SNR=2.1						
PMSA				LR	LR	22 11 53.6	
	comp=Z,112µm,20.4s,baz=64,slow=33						
PMSA				ScP	ScP	22 13 13.4	-1.9
	comp=Z,4.1nm,0.3s,baz=63,slow=2.4,SNR=5.9						
PMSA	Palmer Station	19.81	228		Pn	22 05 24.7	-0.4
PMSA				IAmb	IAmb	22 05 35.0	
	comp=Z,1µm,1.1s						
PMSA	Palmer Station	19.81	228	eP	P	22 05 23.3	-0.2
H09W1	TRISTAN DA CUN	21.36	37	P	P	22 05 41.2	+0.9
	baz=309						
H09N1	TRISTAN DA CUN	21.39	37	P	P	22 05 41.8	+1.1
BELA	Belgrano 2	22.57	184	P	P	22 05 53.1	+0.1
USHA	Ushuaia	22.75	255	P	P	22 05 55.5	+0.3
	comp=Z,144nm,0.8s,baz=108,slow=13,SNR=19						
USHA				LR	LR	22 12 48.4	
	comp=Z,106µm,18.8s,baz=97,slow=31						
NVL	N'lazarevskaya	23.03	147	⇑iP	P	22 05 58.8	+0.9
NVL				eS	S	22 10 03.6	-3.8
NVL				pmax	pmax		
	comp=Z,175nm,1.0s						
NVL				MLR	MLR		
	comp=Z,28µm,16.0s						
GO10	Punta Arenas	24.79	258	P	P	22 06 15.4	+0.5
GO10				IAMs_20	IAMs_20	22 14 12.9	
	comp=Z,75µm,20.0s						
GO09	Cerro Castillo	26.30	261	P	P	22 06 28.2	-0.3
GO09				IAmb	IAmb	22 06 49.9	
	comp=Z,798nm,1.3s						
GO09				IAMs_20	IAMs_20	22 15 51.8	
	comp=Z,91µm,19.0s						
LPA	La Plata	29.00	303	eP	P	22 06 46.0	-6.8
LPA				PP	PnPn	22 07 37.6	-7.1
LPA				PCP	PcP	22 10 06.1	+5.2
LPA				S	S	22 11 43.0	+0.1
LPA				PS	PgS	22 12 06.3	-1.6
LPA				SS	SS	22 13 50.5	+4.7
LPA				PKIKS		22 21 22.2	
PLTB	Pedras Altas	29.70	313	eP	P	22 06 59.4	+0.3
CNLB	Canela	30.78	319	eP	P	22 07 10.1	+1.4
CPSB	Cacapava Do Su	30.82	314	eP	P	22 07 09.9	+0.9
LL01	San Ignacio de	31.29	276	P	P	22 07 14.0	+1.0
PLCA	Paso Flores	31.33	280	P	P	22 07 12.7	-0.8
	comp=Z,37nm,0.9s,baz=140,slow=9.1,SNR=26						
PLCA				ScP	ScP	22 13 46.9	-2.0
	comp=Z,10nm,0.8s,baz=99,slow=1.7,SNR=4.1						
PLCA	Paso Flores	31.33	280	P	P	22 07 12.3	-1.2
PLCA	Paso Flores	31.33	280	eP	P	22 07 13.4	0.0
GO07	Milladeo Hill,	31.53	274		P	22 07 14.1	-1.0
GO07				IAmb	IAmb	22 07 23.8	
	comp=Z,124nm,0.5s						
GO07				IAMs_20	IAMs_20	22 19 56.7	
	comp=Z,79µm,20.0s						
SYO	Syowa Base	32.37	141	⇑eP	P	22 07 18.8	-3.4
SYO	Syowa Base	32.37	141	⇓epP	P	22 07 21.0	-1.2
SYO	Syowa Base	32.37	141	⇓isP	P	22 07 23.4	+1.2
SYO	Syowa Base	32.37	141	⇓iPnPn	PnPn	22 08 23.8	-4.9
ITQB	Itaqui	32.80	310	eP	P	22 07 26.6	+0.3
ITAB	Concordia	33.14	319	eP	P	22 07 30.3	+1.0
LC01	Cunco	33.33	281	P	P	22 07 29.5	-1.4
PET01	Itanhaem-SP	34.21	328	eP	P	22 07 40.2	+1.6
BI02	San Fabin de	34.59	285	P	P	22 07 40.5	-1.5
BI02				IAMs_20	IAMs_20	22 20 50.1	
	comp=Z,40µm,21.0s						
ESAR	Angra dos Reis	34.62	333	eP	P	22 07 43.8	+1.6
PARB	Paraibuna	34.63	331	eP	P	22 07 44.9	+2.5
MAN01	Angra dos Reis	34.65	334	eP	P	22 07 44.5	+1.9
QSPA	South Pole Qui	34.73	180	P	P	22 07 43.0	-0.1
QSPA	South Pole Qui	34.73	180	IAMs_20	IAMs_20	22 21 56.1	
	comp=Z,38µm,18.0s						
SPB	Sao Paulo	34.91	328	P	P	22 07 44.7	0.0
SPB	Sao Paulo	34.91	328	eP	P	22 07 45.9	+1.1
VAS01	Vassouras-RJ	35.08	335	eP	P	22 07 48.2	+2.0
CAM01	Campos-RJ	35.11	338	eP	P	22 07 47.7	+1.2
VAO	Valinhos	35.33	329	eP	P	22 07 49.5	+1.0
PTGB	Pitanga	35.40	321	eP	P	22 07 49.3	+0.3
BI03	Tigo	35.43	283	P	P	22 07 49.7	+0.6
BI03				IAMs_20	IAMs_20	22 24 14.2	
	comp=Z,47µm,18.0s						
BO02	Sierra Bellavi	35.71	288	P	P	22 07 50.4	-1.2
BO02				IAmb	IAmb	22 08 18.2	
	comp=Z,274nm,1.4s						
CPUP	Villa Florida	36.02	312	P	P	22 07 53.5	-0.8
	comp=Z,215nm,0.9s,baz=150,slow=7.7,SNR=233						
CPUP				ScP	ScP	22 14 04.5	-0.9
	comp=Z,23nm,0.8s,baz=168,slow=2.3,SNR=12						
CPUP				LR	LR	22 21 30.9	
	comp=Z,33µm,20.9s,baz=157,slow=34						
CPUP	Villa Florida	36.02	312	P	P	22 07 53.4	-0.8
CPUP				IAmb	IAmb	22 07 56.1	
	comp=Z,268nm,0.9s						
ALF01	Guarapari-ES	36.09	340	eP	P	22 07 57.0	+2.1
BSCB	Bom Sucesso	36.64	334	eP	P	22 08 00.7	+1.0
MT05	Renca	36.74	289	P	P	22 08 00.5	0.0
MT05				IAmb	IAmb	22 08 19.9	
	comp=Z,389nm,1.0s						
MT05				IAMs_20	IAMs_20	22 20 57.2	
	comp=Z,34µm,22.0s						
PEL	Peldehue	36.91	289	P	P	22 08 01.7	-0.1
PEL				pmax	pmax		
	comp=Z,367nm,0.8s						
PEL				MLR	MLR		
	comp=Z,26µm,22.0s						
PEL	Peldehue	36.91	289	P	P	22 08 01.7	-0.1
PEL				IAmb	IAmb	22 08 04.6	
	comp=Z,367nm,0.8s						
MT02	Curacav	37.06	289	P	P	22 08 02.7	-0.4
MT02				IAmb	IAmb	22 08 26.2	
	comp=Z,199nm,0.9s						
ZON	Zonda	37.09	293	IAmb	IAmb	22 08 18.6	
	comp=Z,264nm,0.9s						
ZON				IAMs_20	IAMs_20	22 23 03.2	
	comp=Z,53µm,20.0s						
RIB01	Linhares ES	37.30	341	eP	P	22 08 03.2	-2.0
TRCB	Terra Rica	37.36	321	eP	P	22 08 06.5	+0.7
BB19B	Bebedouro	37.62	328	eP	P	22 08 09.0	+1.1
BSFB	Barra de Sao F	37.86	340	eP	P	22 08 10.6	+0.7
PCMB	Pacaembu	37.98	324	eP	P	22 08 11.6	+0.6
SJMB	Sao Joao De Ma	38.05	340	eP	P	22 08 11.8	+0.3
CO02	Combarbal	38.58	291	P	P	22 08 16.2	+0.1
CO02				IAmb	IAmb	22 08 21.6	
	comp=Z,321nm,0.8s						
CO02				IAMs_20	IAMs_20	22 22 45.8	
	comp=Z,40µm,22.0s						
NAN01	Guarapari, ES	38.69	342	eP	P	22 08 17.0	+0.1
CO03	El Pedregal	38.70	292	IAmb	IAmb	22 08 39.5	
	comp=Z,298nm,1.1s						
CO03				IAMs_20	IAMs_20	22 22 37.8	
	comp=Z,63µm,21.0s						
CO01	Juntas del Tor	39.07	293	IAmb	IAmb	22 08 30.4	
	comp=Z,339nm,0.8s						
CO01				IAMs_20	IAMs_20	22 22 36.6	
	comp=Z,55µm,22.0s						
GO04	Tololo Observa	39.28	292	IAmb	IAmb	22 08 26.6	
	comp=Z,399nm,1.0s						
GO04				IAMs_20	IAMs_20	22 24 09.2	
	comp=Z,43µm,19.0s						
ITRB	Iturama	39.46	326	eP	P	22 08 24.2	+0.8
AC05	El Transito	40.07	294	P	P	22 08 29.0	+0.4
AC05				IAmb	IAmb	22 08 35.1	
	comp=Z,500nm,1.1s						
AC05				IAMs_20	IAMs_20	22 24 44.2	
	comp=Z,44µm,20.0s						
LCO	Las Campanas	40.16	293	P	P	22 08 28.7	-0.7
LCO				pmax	pmax		
	comp=Z,297nm,0.9s						
LCO				MLR	MLR		
	comp=Z,32µm,20.0s						
LCO	Las Campanas	40.16	293	P	P	22 08 28.7	-0.7
LCO				IAmb	IAmb	22 08 36.7	
	comp=Z,297nm,0.9s						
LCO	Las Campanas	40.16	293	IAMs_20	IAMs_20	22 24 55.4	
	comp=Z,31µm,20.0s						
IPMB	Ipameri, GO	40.44	330	eP	P	22 08 32.0	+0.4
AQDB	Aquidauana	40.61	318	eP	P	22 08 32.3	-0.6
MAW	Mawson	40.93	144	P	P	22 08 35.9	+0.9
	comp=Z,89nm,0.8s,baz=239,slow=5.6,SNR=8.8						
MAW	Mawson	40.93	144	P	P	22 08 35.8	+0.8
AC04	Llanos de Chal	41.00	294	P	P	22 08 36.0	0.0
AC04				IAMs_20	IAMs_20	22 24 21.1	
	comp=Z,41µm,20.0s						
GO03	Copiap	41.06	295	IAmb	IAmb	22 08 41.9	
	comp=Z,265nm,0.9s						
SUR	Sutherland	41.08	77	P	P	22 08 38.3	+1.3
SUR	Sutherland	41.08	77	IAMs_20	IAMs_20	22 21 04.8	
	comp=Z,32µm,21.0s						
AC02	Maricunga	41.11	297	P	P	22 08 38.0	+0.3
AC02				IAmb	IAmb	22 08 48.6	
	comp=Z,418nm,1.1s						
JANB	Januaria	42.24	337	eP	P	22 08 47.0	+0.6
AC01	Pan de Azucar	42.42	296	IAmb	IAmb	22 08 53.9	
	comp=Z,512nm,1.1s						
BDFB	Brasilia	42.61	331	P	P	22 08 49.9	+0.4
	comp=Z,45nm,0.9s,baz=156,slow=6.7,SNR=51						
BDFB				ScP	ScP	22 14 31.9	+0.8
	comp=Z,14nm,0.9s,baz=104,slow=4.7,SNR=3.9						
BDFB				LR	LR	22 25 43.7	
	comp=Z,20µm,18.0s,baz=165,slow=35						
BDFB	Brasilia	42.61	331	P	P	22 08 50.6	+1.1
GDU01	Guandu, BA	42.63	344	eP	P	22 08 49.8	+0.3
GO02	Mina Guanaco	42.72	298	IAMs_20	IAMs_20	22 26 19.2	
	comp=Z,28µm,21.0s						
PP1B	Ponte de Pedra	42.95	321	eP	P	22 08 53.0	+0.9
SHEL	Horse Pasture	43.09	33	P	P	22 08 53.9	+0.6
SHEL				pmax	pmax		
	comp=Z,303nm,1.0s						
SHEL				MLR	MLR		
	comp=Z,34µm,22.0s						
SHEL	Horse Pasture	43.09	33	P	P	22 08 53.9	+0.6
SHEL				IAmb	IAmb	22 09 25.7	
	comp=Z,303nm,1.0s						
SHEL	Horse Pasture	43.09	33	IAMs_20	IAMs_20	22 21 44.3	
	comp=Z,34µm,22.0s						
PB14	IPOC Station P	43.58	298	P	P	22 08 57.3	-0.2
ARAG	Araguaiana, MT	43.67	326	eP	P	22 08 58.3	+0.4
PB15	IPOC Station P	44.30	300	IAMs_20	IAMs_20	22 26 38.9	
	comp=Z,25µm,21.0s						
LVC	Limon Verde	44.52	301	P	P	22 09 05.8	+0.7
	comp=Z,263nm,0.8s,baz=158,slow=4.9,SNR=105						
LVC				ScP	ScP	22 14 38.4	-0.7
	comp=Z,12nm,0.9s,baz=268,slow=1.8,SNR=4.1						
LVC	Limon Verde	44.52	301	P	P	22 09 05.3	+0.2
LVC				IAmb	IAmb	22 09 14.8	
	comp=Z,294nm,0.9s						
LVC	Limon Verde	44.52	301	eP	P	22 09 06.1	+0.9
PB06	IPOC Station P	44.77	300	IAmb	IAmb	22 09 45.7	
	comp=Z,170nm,1.0s						
PB06				IAMs_20	IAMs_20	22 25 59.4	
	comp=Z,25µm,22.0s						
SDBA	SAO DESIDERIO	44.94	337	eP	P	22 09 07.7	-0.4
PB04	IPOC Station P	45.37	300	IAmb	IAmb	22 09 20.6	
	comp=Z,278nm,0.9s						
PB04				IAMs_20	IAMs_20	22 26 29.2	
	comp=Z,28µm,22.0s						
PB07	IPOC Station P	45.75	300	IAmb	IAmb	22 09 23.8	
	comp=Z,325nm,1.0s						
PEXB	Peixe	46.06	332	eP	P	22 09 18.0	+1.0
PB01	IPOC Station P	46.13	301	P	P	22 09 17.8	+0.2
PB01				IAMs_20	IAMs_20	22 27 51.6	
	comp=Z,32µm,21.0s						
BOSA	Boshof	46.42	77	P	P	22 09 18.2	-1.6
	comp=Z,50nm,1.0s,baz=223,slow=6.9,SNR=33						
BOSA				ScP	ScP	22 14 47.0	+0.4
	comp=Z,20nm,1.0s,baz=241,slow=3.4,SNR=4.9						
BOSA				LR	LR	22 24 41.6	
	comp=Z,40µm,21.3s,baz=214,slow=31						
BOSA	Boshof	46.42	77	P	P	22 09 18.3	-1.6
BOSA				IAmb	IAmb	22 09 38.2	
	comp=Z,150nm,1.1s						
SBA	Scott Base	46.57	184	P	P	22 09 21.1	+0.9
SBA				pmax	pmax		
	comp=Z,492nm,1.7s						
SBA				MLR	MLR		
	comp=Z,15µm,20.0s						
SBA	Scott Base	46.57	184	P	P	22 09 21.1	+0.9
PATCX	Punta Patache	46.65	301	IAmb	IAmb	22 09 24.5	
	comp=Z,236nm,0.9s						
SIV	San Ignacio	46.78	314	P	P	22 09 21.8	-0.9
	comp=Z,44nm,0.8s,baz=164,slow=7.3,SNR=124						
SIV				ScP	ScP	22 14 48.6	+0.4
	comp=Z,9.8nm,0.9s,baz=175,slow=5.1,SNR=2.7						
TA01	Diego Aracena	46.88	301	IAmb	IAmb	22 09 32.4	
	comp=Z,233nm,1.1s						
SNDB	Serra Nova Dou	47.03	328	eP	P	22 09 24.9	+0.3
NBRF	Rio Formoso -	47.04	351	eP	P	22 09 24.6	0.0
VNDA	Vanda	47.08	183	P	P	22 09 25.0	+0.8
	comp=Z,45nm,0.6s,baz=185,slow=6.8,SNR=86						
VNDA				ScP	ScP	22 14 44.7	-3.8
	comp=Z,4.2nm,0.7s,baz=112,slow=5.4,SNR=2.2						
VNDA	Vanda	47.08	183	P	P	22 09 25.0	+0.8
VNDA				pmax	pmax		
	comp=Z,105nm,0.8s						
VNDA	Vanda	47.08	183	P	P	22 09 25.0	+0.8
VNDA				IAmb	IAmb	22 09 31.3	
	comp=Z,105nm,0.8s						
H10S2	ASCENSION HYDR	47.67	18	T	T	23 01 29.2	
	baz=190,slow=74,SNR=44						
H10S3	ASCENSION HYDR	47.67	18	T	T	23 01 30.9	
	baz=30,slow=74,SNR=83						
MNMC	Minye Minye	47.82	303	P	P	22 09 31.6	+0.6
NBLI	Livramento-PB	48.52	348	eP	P	22 09 36.1	-0.1
CRZF	Crozet Islands	48.57	115	P	P	22 09 36.2	0.0
ASCN	Ascension	48.72	18	P	P	22 09 37.7	0.0
ASCN				IAmb	IAmb	22 09 46.2	

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       comp=Z,179nm,1.0s
H10N1 ASCENSION HYDR48.79  18 T        T        23 02 54.5
       baz=194,slow=71,SNR=25
H10N3 ASCENSION HYDR48.79  18 T        T        23 02 50.7
       baz=194,slow=71,SNR=75
H10N2 ASCENSION HYDR48.80  18 T        T        23 02 51.8
       baz=194,slow=71,SNR=55
AP01  Chacalluta      48.83 302 P        P        22 09 39.0 +0.6
SMTB  Santa Maria do  48.99 334 eP       P        22 09 40.1 +0.3
VILB  Vilhena         49.19 317 eP       P        22 09 41.2 -0.1
LBTB  Lobatse         49.42  75 P        P        22 09 42.6 -0.5
LBTB                            pmax     pmax
       comp=Z,615nm,1.8s
LBTB  Lobatse         49.42  75 P        P        22 09 42.5 -0.5
LPAZ  La Paz          49.59 306 P        P        22 09 45.3 +0.3
       comp=Z,302nm,0.8s,baz=145,slow=6.3,SNR=389
LPAZ                            ScP      ScP      22 15 00.4 -0.3
       comp=Z,7.8nm,1.0s,baz=105,slow=2.2,SNR=3.1
LPAZ                            S        S        22 16 54.0 +1.4
       comp=Z,1.8nm,0.9s,baz=253,slow=21,SNR=1.3
LPAZ                            LR       LR       22 31 21.7
       comp=Z,14µm,20.7s,baz=164,slow=37
LPAZ                            P4KPbc            22 47 21.6
       comp=Z,0.7nm,0.5s,baz=150,slow=3.8,SNR=3.7
LPAZ  La Paz          49.59 306 P        P        22 09 45.1 +0.1
LPAZ  La Paz          49.59 306⇑iP       P        22 09 45.4 +0.3
LPAZ  La Paz          49.59 306 eP       P        22 09 45.5 +0.4
RCBR  Riachuelo       49.93 350 P        P        22 09 45.8 -1.1
       baz=122,slow=9.5
RCBR  Riachuelo       49.93 350 P        P        22 09 47.6 +0.7
RCBR                            pmax     pmax
       comp=Z,250nm,1.7s
RCBR                            MLR      MLR
       comp=Z,17µm,18.0s
RCBR  Riachuelo       49.93 350 P        P        22 09 47.6 +0.7
RCBR                            IAmb     IAmb     22 10 39.5
       comp=Z,250nm,1.7s
RCBR  Riachuelo       49.93 350 IAMs_20  IAMs_20  22 27 39.1
       comp=Z,17µm,18.0s
RCBR  Riachuelo       49.93 350 eP       P        22 09 47.4 +0.4
TSUM  Tsumeb          49.94  62 P        P        22 09 46.5 -0.7
TSUM  Tsumeb          49.94  62 IAMs_20  IAMs_20  22 29 23.2
       comp=Z,26µm,18.0s
NBPA  Parau_RN        50.13 348 eP       P        22 09 49.1 +0.6
PRPB  Parauapebas     52.15 332 eP       P        22 10 04.7 +1.1
NBMO  Morrinhos-CE    52.92 345 eP       P        22 10 09.8 +0.6
NPGB  Novo Progresso  52.94 325 eP       P        22 10 08.9 -0.6
SAML  Samuel          54.01 316 P        P        22 10 16.1 -1.2
SAML                            pmax     pmax
       comp=Z,472nm,1.4s
SAML                            MLR      MLR
       comp=Z,20µm,22.0s
SAML  Samuel          54.01 316 P        P        22 10 16.1 -1.2
SAML  Samuel          54.01 316 IAMs_20  IAMs_20  22 31 19.0
       comp=Z,20µm,22.0s
ROSB  Rosrio          54.02 340 eP       P        22 10 17.8 +0.6
ETMB  Extrema         54.47 312 eP       P        22 10 20.1 -0.5
CASY  Casey           54.61 161 P        P        22 10 21.3 +0.3
CASY                            IAmb     IAmb     22 10 27.2
       comp=Z,176nm,0.9s
CASY  Casey           54.61 161 IAMs_20  IAMs_20  22 32 40.3
       comp=Z,32µm,20.0s
TMAB  Tom-Au,PA,Br    55.37 336 eP       P        22 10 28.9 +1.7
PAF   Port-aux-Franc  55.41 128 IAMs_20  IAMs_20  22 32 39.4
       comp=Z,28µm,20.0s
ITTB  Itaituba        55.58 326 eP       P        22 10 29.3 +0.6
ITZ   Itezhi-Tezhi    57.19  68 eP       P        22 10 31.4 -8.9
ITZ                             eS       S        22 18 29.8 -5.2
ITZ                             Lg       Lg       22 26 16.2
NNA   Nana            57.48 299 P        P        22 10 42.8 +0.6
       comp=Z,78nm,0.8s,baz=160,slow=5.3,SNR=29
NNA   Nana            57.48 299 P        P        22 10 42.0 -0.2
NNA                             IAmb     IAmb     22 11 01.0
       comp=Z,248nm,1.2s
NNA   Nana            57.48 299 IAMs_20  IAMs_20  22 38 14.5
       comp=Z,15µm,18.0s
MALB  Monte Alegre    57.51 329 eP       P        22 10 43.5 +1.1
MCPB  Macapa, AP      58.31 332 eP       P        22 10 48.8 +0.9
MACA  Manacapuru-AM   58.38 321 eP       P        22 10 47.9 -0.6
CZSB  Cruzeiro do Su  59.20 306 eP       P        22 10 53.6 -0.6
PTGA  Pitinga         60.39 323 P        P        22 11 01.9 -0.5
       comp=Z,41nm,0.9s,baz=158,slow=7.6,SNR=58
PTGA  Pitinga         60.39 323 P        P        22 11 02.1 -0.3
PTGA                            IAmb     IAmb     22 11 19.6
       comp=Z,110nm,1.1s
PTGA  Pitinga         60.39 323 eP       P        22 11 02.4 +0.1
ATAH  Atahualpa       62.42 301 P        P        22 11 17.6 +0.9
       comp=Z,87nm,0.9s,baz=158,slow=4.3,SNR=44
RPN   Rapa Nui        63.16 261 P        P        22 11 21.8 +0.8
       comp=Z,164nm,0.9s,baz=162,slow=17,SNR=7.2
RPN   Rapa Nui        63.16 261 P        P        22 11 21.8 +0.8
RPN                             pmax     pmax
       comp=Z,442nm,1.2s
RPN                             MLR      MLR
       comp=Z,24µm,21.0s
RPN   Rapa Nui        63.16 261 P        P        22 11 21.8 +0.8
RPN   Rapa Nui        63.16 261 IAMs_20  IAMs_20  22 32 23.1
       comp=Z,24µm,21.0s
MDP   Montagnes des   63.69 333 P        P        22 11 23.3 -1.2
       comp=Z,70nm,0.9s,baz=170,slow=7.7,SNR=11
LIC   Lamto           64.46  26 eP       P        22 11 29.0 -0.5
       comp=Z,458nm,0.8s
KIC   Kosan Boka      64.67  26 eP       P        22 11 30.3 -0.6
       comp=Z,194nm,0.9s
TIC   Toumodi         64.87  26 eP       P        22 11 31.6 -0.6
DBIC  Dimbokro        64.93  26 P        P        22 11 32.1 -0.4
       comp=Z,71nm,0.7s,baz=173,slow=7.7,SNR=80
DBIC                            LR       LR       22 32 45.3
       comp=Z,9µm,21.3s,baz=182,slow=30
DBIC  Dimbokro        64.93  26 P        P        22 11 32.2 -0.4
DBIC                            pmax     pmax
       comp=Z,102nm,0.8s
DBIC  Dimbokro        64.93  26 P        P        22 11 32.2 -0.4
DBIC                            IAmb     IAmb     22 11 34.4
       comp=Z,102nm,0.8s
ABPO  Ambohimpanom    66.33  89 P        P        22 11 43.0 +1.1
ABPO                            pmax     pmax
       comp=Z,145nm,1.3s
ABPO                            MLR      MLR
       comp=Z,56µm,19.0s
ABPO  Ambohimpanom    66.33  89 P        P        22 11 43.0 +1.1
ABPO                            IAmb     IAmb     22 11 57.2
       comp=Z,145nm,1.3s
PTLC  Puerto Leguiza  67.14 308⇑iP       P        22 11 43.3 -3.6
AIS   Amsterdam Isla  67.71 125 IAMs_20  IAMs_20  22 38 00.8
       comp=Z,15µm,19.0s
GUVC  San Jose del G  68.30 311 eP       P        22 11 53.2 -1.0
MACC  Macarena, Meta  68.47 310⇑iP       P        22 11 54.8 -0.5
FLOC  Florencia       68.77 308⇑iP       P        22 11 56.3 -0.9
CFLOR Florencia       68.78 308 eP       P        22 11 56.7 -0.5
OTAV  Otavalo         68.87 305 P        P        22 11 58.3  0.0
OTAV                            pmax     pmax
       comp=Z,372nm,1.5s
OTAV                            MLR      MLR
       comp=Z,15µm,21.0s
OTAV  Otavalo         68.87 305 P        P        22 11 58.3  0.0
OTAV  Otavalo         68.87 305 IAMs_20  IAMs_20  22 42 21.8
       comp=Z,15µm,21.0s
OTAV  Otavalo         68.87 305⇑iP       P        22 11 58.7 +0.4
OTAV  Otavalo         68.87 305 eP       P        22 11 59.2 +0.9
GCUF  Volcan Galeras  69.23 306⇑iP       P        22 12 01.7 +1.2
GARC  Garzon, Huila   69.24 308⇑iP       P        22 11 59.1 -1.2
RER   Riviere de l'E  69.46  98 P        P        22 12 03.1 +1.7
RER                             IAMs_20  IAMs_20  22 37 36.8
       comp=Z,25µm,20.0s
PTGC  Puerto Gaitan,  69.58 312 eP       P        22 12 01.0 -1.2
BETC  Betania         69.65 309⇑iP       P        22 12 01.9 -0.8
SOTA  Rioblanco       69.69 307 eP       P        22 12 05.3 +1.9
PCON  Cinco Dias      69.77 307⇑iP       P        22 12 03.4 -0.6
BBAC  Balboa, Cauca   69.88 307⇑iP       P        22 12 02.7 -1.5
MARP  Paez Belalcaza  70.03 308⇑iP       P        22 12 04.9 -0.3
POPC  Popayan, Colom  70.08 307⇑iP       P        22 12 05.2 -0.3
MCQ   Macquarie Isla  70.19 184 IAMs_20  IAMs_20  22 45 01.1
       comp=Z,15µm,18.0s
MBO   M'Bour          70.29  12 P        P        22 12 06.8 +0.5
MBO   M'Bour          70.29  12 IAMs_20  IAMs_20  22 35 14.2
       comp=Z,12µm,22.0s
PRAC  Prado           70.33 310⇑iP       P        22 12 05.2 -1.6
TUMC  Tumaco          70.39 305⇑iP       P        22 12 07.7 +0.5
CHIC  Chingaza        70.65 311⇑iP       P        22 12 06.0 -3.1
ORTC  Ortega, Tolima  70.66 309⇑iP       P        22 12 08.1 -0.8
ELOV  Elorza          71.05 316⇑iP       P        22 12 10.6 -0.4
ROSC  El Rosal        71.09 311 P        P        22 12 12.3 +0.5
       comp=Z,94nm,0.9s,baz=235,slow=1.3,SNR=27
ROSC                            LR       LR       22 43 55.4
       comp=Z,12µm,21.7s,baz=186,slow=36
ROSC  El Rosal        71.09 311 IAmb     IAmb     22 12 21.7
       comp=Z,124nm,0.8s
ROSC                            IAMs_20  IAMs_20  22 44 16.8
       comp=Z,14µm,19.0s
ROSC  El Rosal        71.09 311⇑iP       P        22 12 11.4 -0.4
GR1C  Gorgona, Isla   71.17 306 eP       P        22 12 13.2 +1.4
YOTC  Yotoco, Valle   71.21 308⇑iP       P        22 12 10.9 -1.3
ANIL  Santa Ana       71.25 309⇑iP       P        22 12 11.0 -1.7
TOLC  Tolima          71.30 310 eP       P        22 12 11.7 -1.3
TAMC  Tame, Arauca    71.46 314 eP       P        22 12 12.1 -1.5
RUSC  La Rusia        71.51 312⇑iP       P        22 12 12.6 -1.8
TRN   Trinidad (W)    71.52 325 eP       P        22 12 13.9 +0.1
RREF  El Recreo       71.59 310⇑iP       P        22 12 14.6 -0.5
MALC  Bahia Malaga    71.69 307 eP       P        22 12 17.2 +2.2
SPBC  San Pablo de B  71.71 311⇑iP       P        22 12 11.8 -3.4
GUY2C Guyana, Caldas  71.89 310⇑iP       P        22 12 13.4 -3.3
NORC  Norcasia        71.97 310⇑iP       P        22 12 12.6 -4.1
PLMC  San Jos del P   72.01 309⇑iP       P        22 12 15.9 -1.1
PCRV  Puerto La Cruz  72.17 322 P        P        22 12 17.8  0.0
       comp=Z,140nm,0.9s,baz=183,slow=2.9,SNR=45
BARC  Barichara       72.18 312 eP       P        22 12 15.7 -2.5
BAUV  El Baul         72.27 318 eP       P        22 12 15.8 -2.6
MBAR  Mbarara         72.44  64 P        P        22 12 20.7 +1.0
MBAR                            pmax     pmax
       comp=Z,136nm,1.5s
MBAR                            MLR      MLR
       comp=Z,28µm,21.0s
MBAR  Mbarara         72.44  64 P        P        22 12 20.7 +1.0
MBAR  Mbarara         72.44  64 eP       P        22 12 20.1 +0.4
PAMC  Pamplona, Colo  72.65 313 eP       P        22 12 18.4 -2.9
PTBC  PUERTO BERRIO,  72.67 311⇑eP       P        22 12 17.5 -3.3
KOWA  Kowa            72.68  25 LR       LR       22 37 26.3
       comp=Z,10µm,21.6s,baz=177,slow=30
KOWA  Kowa            72.68  25 P        P        22 12 20.7 -0.1
KOWA                            IAmb     IAmb     22 12 25.2
       comp=Z,125nm,0.9s
CBOC  Ciudad Bolivar  72.74 310⇑iP       P        22 12 16.7 -4.7
SOCV  Socops          72.76 315⇑iP       P        22 12 21.3 -0.1
BRRC  Barranca, Sant  72.86 312⇑iP       P        22 12 19.2 -2.8
TOA0  Torodi Ar. Sit  72.89  31 P        P        22 12 21.6 -0.4
TORD  Torodi Ar. Bea  72.89  31 P        P        22 12 21.3 -0.8
       comp=Z,169nm,0.8s,baz=196,slow=5.5,SNR=207
GRGR  Grenville       73.00 326 eP       P        22 12 21.9 -0.8
GRGR  Grenville       73.00 326 P        P        22 12 23.9 +1.2
GRGR                            IAMs_20  IAMs_20  22 45 03.4
       comp=Z,12µm,20.0s
SDV   Santo Domingo   73.22 316 P        P        22 12 23.8 -0.4
       comp=Z,197nm,0.9s,baz=178,slow=3.7,SNR=113
SDV   Santo Domingo   73.22 316 P        P        22 12 23.9 -0.4
SDV                             IAmb     IAmb     22 12 33.9
       comp=Z,213nm,0.8s
SDV   Santo Domingo   73.22 316⇑iP       P        22 12 22.5 -1.8
SDV   Santo Domingo   73.22 316 eP       P        22 12 24.0 -0.3
GCMP  Grenada, Carri  73.26 326 eP       P        22 12 23.3 -0.9
BBGH  Gun Hill        73.30 328 IAMs_20  IAMs_20  22 46 58.4
       comp=Z,19µm,20.0s
SOLC  Bahia Solano    73.68 308 eP       P        22 12 25.6 -1.2
OCAC  Ocana           73.72 313 eP       P        22 12 23.6 -3.6
SVOC  Richmond Hill,  73.82 326 eP       P        22 12 33.8 +6.3
DBBC  Dabeiba         73.86 310⇑iP       P        22 12 26.7 -1.3
SVB   Belmont         73.94 326 eP       P        22 12 28.9 +0.6
SVB   Belmont         73.94 326 IAmb     IAmb     22 12 37.3
       comp=Z,99nm,0.8s
SVV   Soufriere Volc  73.97 327 eP       P        22 12 32.2 +3.8
PAYG  Puerto Ayora    73.97 293 P        P        22 12 29.8 +1.2
PAYG                            IAmb     IAmb     22 12 32.5
       comp=Z,273nm,1.0s
PAYG  Puerto Ayora    73.97 293 IAMs_20  IAMs_20  22 42 27.8
       comp=Z,17µm,20.0s
PAYG  Puerto Ayora    73.97 293⇑eP       P        22 12 30.6 +2.0
UREC  San Jos de Ur   74.22 311⇑iP       P        22 12 24.9 -5.0
MCLT  Moule a Chique  74.25 327 eP       P        22 12 30.2 +0.2
MCLT  Moule a Chique  74.25 327 IAmb     IAmb     22 12 39.0
       comp=Z,304nm,1.1s
SLB   Belfond         74.40 327 eP       P        22 12 34.5 +3.6
SMLC  San Martn de    74.54 313⇑iP       P        22 12 29.1 -2.7
SLCP  Castries, St.   74.55 327 eP       P        22 12 34.8 +3.0
SLBI  Saint Lucia, B  74.56 327 eP       P        22 12 33.2 +1.4
PTAC  Punta Ardita,   74.68 308⇑eP       P        22 12 33.4 +0.8
MPOM  Morne Pois Mar  74.92 327 eP       P        22 12 32.6 -1.3
MVM   Montagne Vaucl  75.04 327 eP       P        22 12 25.3 -9.3
BIM   Bigot           75.06 327 eP       P        22 12 27.6 -7.2
BIM   Bigot           75.06 327 eP       P        22 12 33.5 -1.2
TRMF  Trois Ilets     75.07 327 eP       P        22 12 26.8 -8.0
DABV  Dabajuro        75.07 317 eP       P        22 12 31.4 -3.5
LPMF  Morne Lapointe  75.08 327⇓eP       P        22 12 25.4 -9.5
ZAM   Aeronautique    75.09 327 eP       P        22 12 26.1 -8.8
MOTC  Monteria, Cord  75.19 311⇑iP       P        22 12 34.8 -0.8
ILAM  Ilet Lapin Mar  75.24 327 eP       P        22 12 23.0  -13
ILAM  Ilet Lapin Mar  75.24 327 eP       P        22 12 34.9 -0.8
FDF   Fort de France  75.28 327 eP       P        22 12 33.5 -2.6
FDF   Fort de France  75.28 327 P        P        22 12 37.0 +0.9
FDF                             pmax     pmax
       comp=Z,452nm,1.6s
FDF                             MLR      MLR
       comp=Z,7µm,22.0s
FDF   Fort de France  75.28 327 P        P        22 12 37.0 +0.9
PML   Morne Lenard    75.34 327 eP       P        22 12 26.9 -9.4
BAMF  Morne Balai     75.36 327 eP       P        22 12 26.4  -10
CXM   Morne La Croix  75.36 327 eP       P        22 12 26.9  -10
PCM   Pelee Case Pet  75.38 327 eP       P        22 12 27.1 -9.5
SVN   Savane Anatole  75.39 327 eP       P        22 12 26.4  -10
KMBO  Kilima Mbogo    75.40  70 P        P        22 12 39.9 +2.7
       comp=Z,8.0nm,1.0s,baz=205,slow=6.4,SNR=15
KMBO                            LR       LR       22 44 57.6
       comp=Z,37µm,18.1s,baz=190,slow=35
ARGC  Ariguani, Magd  75.56 313⇑iP       P        22 12 34.8 -2.9
DLPL  La Plaine       75.88 327 eP       P        22 12 39.1 -0.4
UPD2  Meteti          76.01 309 eP       P        22 12 40.4 +0.2
DSLB  Salisbury       76.03 327 eP       P        22 12 40.5 +0.2
CRJC  Cerrejon, Guaj  76.05 315⇑iP       P        22 12 38.9 -1.7
PTCN  Pitcairn Islan  76.08 246 IAMs_20  IAMs_20  22 38 06.7
       comp=Z,22µm,19.0s
URIC  Uribia, Colomb  76.32 316⇑iP       P        22 12 39.8 -2.2
AZU   Azuero          76.36 306 eP       P        22 12 41.2 -1.0
AZU   Azuero          76.36 306⇑iP       P        22 12 42.0 -0.3
MAGL  Barre de l'ile  76.47 327 eP       P        22 12 41.9 -0.9
TDBA  Terre de Bas,   76.48 327 eP       P        22 12 43.2 +0.4
TBG   Guadaloupe-3    76.49 327 eP       P        22 12 44.2 +1.4
CBE   Ff, Capester    76.68 327 eP       P        22 12 42.3 -1.7
SMRC  Santa Marta, M  76.73 314⇑iP       P        22 12 43.9 -0.4
H05N1 Guadeloupe/Mar  76.75 328 P        P        22 12 46.1 +1.8
       SNR=11
GMAL  Guarumal, Vera  76.78 306 eP       P        22 12 45.6 +1.0
PNME  Penonome        77.00 307⇑iP       P        22 12 44.6 -1.2
ABD   La Joyeuse, An  77.03 327 eP       P        22 12 47.4 +1.6
UPA   Univ. de Panam  77.07 308⇑iP       P        22 12 46.0 -0.2
ZANG  Zanguenga, Cho  77.20 307 eP       P        22 12 48.3 +1.3
BCIP  Isla Barro Col  77.38 308 eP       P        22 12 43.5 -4.5
BCIP  Isla Barro Col  77.38 308 IAmb     IAmb     22 13 03.4
       comp=Z,207nm,1.2s
BCIP  Isla Barro Col  77.38 308⇑iP       P        22 12 48.4 +0.5
MLYT  Lee's Yard      77.48 327 eP       P        22 12 45.1 -3.3
ANBD  Bethesda, Anti  77.65 327 eP       P        22 12 49.3 -0.1
PYZ   Puysegur Point  77.91 191 IAMs_20  IAMs_20  22 45 19.0
       comp=Z,14µm,19.0s
WHZ   Wether Hill Ro  78.04 191 IAMs_20  IAMs_20  22 47 20.5
       comp=Z,15µm,18.0s
CCOL  Caracol de Cor  78.15 304 eP       P        22 12 53.1 +0.8
SKI   Saint Kitts     78.22 326 eP       P        22 12 52.5 -0.1
SKI   Saint Kitts     78.22 326 IAMs_20  IAMs_20  22 50 27.1
       comp=Z,11µm,21.0s
ANWB  Willy Bob       78.25 327 eP       P        22 12 52.2 -0.5
ANWB  Willy Bob       78.25 327 P        P        22 12 52.9 +0.2
ANWB                            IAmb     IAmb     22 12 54.7
       comp=Z,229nm,1.0s
CDITO Canoas          78.25 305 eP       P        22 12 52.4 -0.4
PIRO  Carate, Puerto  78.32 304 eP       P        22 12 53.6 +0.4
SEUS  St. Eustatius   78.45 326 eP       P        22 12 48.0 -5.8
SEUS  St. Eustatius   78.45 326 IAmb     IAmb     22 13 00.9
       comp=Z,244nm,0.9s
MLZ   Mavora Lakes    78.54 192 IAMs_20  IAMs_20  22 48 40.8
       comp=Z,17µm,18.0s
ODZ   Otahua Downs    78.55 194 IAMs_20  IAMs_20  22 43 11.9
       comp=Z,13µm,20.0s
DCZ   Deep Cove       78.55 191 P        P        22 12 54.5 +0.3
DCZ                             IAMs_20  IAMs_20  22 48 31.0
       comp=Z,15µm,18.0s
SABA  Saba            78.65 326 eP       P        22 12 56.8 +1.9
SABA  Saba            78.65 326 P        P        22 12 55.8 +0.8
SABA                            IAMs_20  IAMs_20  22 51 14.4
       comp=Z,10µm,20.0s
RIOS  Rincon, Osa     78.66 304 eP       P        22 12 55.4 +0.3
POTG  Potrero Grande  78.78 305 eP       P        22 12 56.0 +0.2
WKZ   Wanaka          78.97 192 IAMs_20  IAMs_20  22 45 46.0
       comp=Z,15µm,20.0s
TMZ   Timaru          79.14 194 P        P        22 13 43.4  +46
LBZ   Lake Benmore    79.25 193 P        P        22 12 58.0 -0.1
LBZ                             IAmb     IAmb     22 13 15.9
       comp=Z,167nm,1.4s
LBZ                             IAMs_20  IAMs_20  22 43 34.6
       comp=Z,16µm,21.0s
CDVI  St. Croix       79.27 325 eP       P        22 12 56.3 -2.0
CDVI  St. Croix       79.27 325 P        P        22 12 58.9 +0.6
CDVI                            IAmb     IAmb     22 13 20.6
       comp=Z,164nm,1.1s
PEZE  Perez Zeledon,  79.33 304 eP       P        22 12 59.1 +0.2
WACZ  Wakanui South   79.46 195 P        P        22 13 33.2  +34
CDM   Cerro de Muert  79.53 304 eP       P        22 13 00.6 +0.2
MQZ   McQueen's Vall  79.57 195 IAMs_20  IAMs_20  22 46 15.1
       comp=Z,18µm,19.0s
RACZ  Rakaia          79.63 195 P        P        22 13 35.6  +36
RPZ   Rata Peaks      79.80 194 LR       LR       22 47 16.8
       comp=Z,13µm,18.5s,baz=163,slow=35
RPZ   Rata Peaks      79.80 194 IAMs_20  IAMs_20  22 46 37.0
       comp=Z,12µm,19.0s
LCR2  La Lucha 2      79.80 304 eP       P        22 13 01.3 -0.3
MTP   Monte Pirata    79.85 324 IAmb     IAmb     22 13 20.0
       comp=Z,188nm,1.3s
CVTR  Volcan Turrial  79.93 304 eP       P        22 13 03.0 +0.4
VTUC  Crater, Volcan  79.94 304 eP       P        22 13 02.6 +0.1
CUPR  Culebra, Puert  79.96 324 P        P        22 13 02.9 +0.9
CUPR                            IAmb     IAmb     22 13 03.9
       comp=Z,258nm,1.1s
ICMP  Isla Caja de M  79.98 323 P        P        22 13 02.2  0.0
OXZ   Oxford          80.04 195 IAMs_20  IAMs_20  22 46 49.4
       comp=Z,17µm,19.0s
JACO  JACO, Garabito  80.04 303 eP       P        22 13 02.7 +0.1
SJG   San Juan        80.06 324 P        P        22 13 02.9 +0.3
       comp=Z,49nm,1.0s,baz=39,slow=1.7,SNR=8.6
SJG   San Juan        80.06 324 eP       P        22 13 00.0 -2.6
SJG   San Juan        80.06 324 P        P        22 13 02.0 -0.6
SJG   San Juan        80.06 324⇑iP       P        22 13 03.0 +0.4
HDC   Heredia         80.08 304 eP       P        22 13 03.3 +0.3
HDC   Heredia         80.08 304 IAmb     IAmb     22 13 17.2
       comp=Z,242nm,1.0s
HDC3  Heredia 3       80.08 304 eP       P        22 13 03.3 +0.3
CBYP  Canovanas       80.11 324 IAmb     IAmb     22 13 04.4
       comp=Z,156nm,1.1s
FOZ   Fox Glacier     80.14 193 P        P        22 13 02.3 -0.6
FOZ                             IAMs_20  IAMs_20  22 44 14.1
       comp=Z,20µm,21.0s
RKT   Rikitea         80.19 243 ePP      PP       22 16 02.4 -3.1
       comp=Z,1µm,25.5s
RKT                             eS       S        22 23 08.6 +1.1
       comp=Z,7µm,31.8s
RKT   Rikitea         80.19 243 eLQ      LQ       22 34 41.4
       comp=Z,8µm,31.2s
RKT                             eLR      LR       22 38 01.2
       comp=Z,22µm,26.8s
MLPR  Magueyes Islan  80.24 323 P        P        22 13 02.9 -0.7
MLPR                            IAmb     IAmb     22 13 23.2
       comp=Z,179nm,1.2s
LAFE  Finca La Fe, P  80.29 303 eP       P        22 13 03.1 -0.9
LTZ   Lake Taylor     80.53 195 IAmb     IAmb     22 13 19.4
       comp=Z,188nm,1.1s
LTZ                             IAMs_20  IAMs_20  22 45 19.6
       comp=Z,17µm,20.0s
LTZ   Lake Taylor     80.53 195 P        P        22 13 25.3  +20
KHZ   Kahutara        80.70 196 P        P        22 13 06.0 +0.1
KHZ                             IAmb     IAmb     22 13 30.7
       comp=Z,77nm,0.5s
KHZ                             IAMs_20  IAMs_20  22 46 54.9
       comp=Z,19µm,20.0s
KHZ   Kahutara        80.70 196 P        P        22 13 20.9  +15
INZ   Inchbonnie      80.71 195 P        P        22 13 34.4  +28
GRZA  Playa Garza     80.73 303 eP       P        22 13 06.4 +0.1
JTS   Las Juntas de   80.73 304 P        P        22 13 06.3 -0.1
       comp=Z,110nm,1.0s,baz=144,slow=2.9,SNR=28
JTS   Las Juntas de   80.73 304 P        P        22 13 07.2 +0.8
JTS                             pmax     pmax
       comp=Z,175nm,1.0s
JTS                             MLR      MLR
       comp=Z,7µm,21.0s
JTS   Las Juntas de   80.73 304 eP       P        22 13 04.7 -1.6
JTS   Las Juntas de   80.73 304 P        P        22 13 07.2 +0.8
JTS                             IAmb     IAmb     22 13 20.7
       comp=Z,175nm,1.0s
JTS   Las Juntas de   80.73 304⇑iP       P        22 13 06.2 -0.2
ARE1  Arenal 1        80.77 304 eP       P        22 13 07.2 +0.6
COVE  Coope Vega, Sa  80.84 304 eP       P        22 13 06.2 -0.7
PLVR  Palo Verde      80.97 303 eP       P        22 13 08.6 +0.8
CUI   Cuipilapa       81.15 304 eP       P        22 13 09.5 +0.9
CMWZ  Cape Campbell   81.24 197 P        P        22 13 12.4 +3.6
BSWZ  Blackbirch Sta  81.33 197 P        P        22 13 12.1 +2.8
THZ   Tophouse        81.44 196 IAmb     IAmb     22 13 18.8
       comp=Z,132nm,0.6s
THZ   Tophouse        81.44 196 P        P        22 13 11.2 +1.3
BHW   Baring Head     81.46 197 P        P        22 13 12.4 +2.4
TMWZ  Te Maipa        81.58 198 P        P        22 13 13.2 +2.5
SNZO  South Karori    81.58 197 P        P        22 13 10.7 +0.1
SNZO                            IAmb     IAmb     22 13 15.7
       comp=Z,181nm,1.1s
SNZO  South Karori    81.58 197 IAMs_20  IAMs_20  22 45 30.4
       comp=Z,15µm,20.0s
TUWZ  Tuamarina       81.59 197 P        P        22 13 10.0 -0.7
TUWZ  Tuamarina       81.59 197 P        P        22 13 12.6 +1.9
MTW   Mount Morrison  81.60 198 P        P        22 13 11.1 +0.4
TCW   Tory Channel    81.75 197 P        P        22 13 13.6 +2.0
PRVC  Isla de Provid  81.78 308 eP       P        22 13 11.4 -0.4
HOWZ  Holdsworth Sta  81.85 198 P        P        22 13 14.6 +2.5
TAU   Tasmania Unive  81.87 177 P        P        22 13 11.9 -0.2
TAU                             pmax     pmax
       comp=Z,148nm,1.0s
TAU                             MLR      MLR
       comp=Z,21µm,18.0s
TAU   Tasmania Unive  81.87 177 P        P        22 13 11.9 -0.2
TAU                             IAmb     IAmb     22 13 29.9
       comp=Z,148nm,1.0s
NNZ   Nelson          81.89 196 IAmb     IAmb     22 13 35.3
       comp=Z,150nm,1.1s
NNZ                             IAMs_20  IAMs_20  22 46 06.5
       comp=Z,15µm,20.0s
NNZ   Nelson          81.89 196 P        P        22 13 12.1 -0.2
BFZ   Birch Farm      81.93 199 IAMs_20  IAMs_20  22 48 38.5
       comp=Z,12µm,18.0s
BFZ   Birch Farm      81.93 199 P        P        22 13 15.1 +2.6
KIW   Kapiti Island   81.99 198 P        P        22 13 15.6 +2.7
MRZ   Mangatainoka R  82.07 198 P        P        22 13 14.7 +1.5
ESPN  Las Esperanzas  82.08 305 eP       P        22 13 12.3 -1.1
ESPN  Las Esperanzas  82.08 305 IAmb     IAmb     22 13 15.5
       comp=Z,209nm,1.1s
DUWZ  D'Urville Isla  82.21 197 P        P        22 13 14.9 +0.9
PRHZ  Porangahau      82.26 199 P        P        22 13 17.0 +2.7
ACON  Acoyapa         82.29 304 eP       P        22 13 12.9 -1.6
DVHZ  Dannevirke      82.31 199 P        P        22 13 16.1 +1.6
QRZ   Quartz Range    82.41 196 IAmb     IAmb     22 13 17.0
       comp=Z,66nm,0.6s
SDDR  Presa de Saban  82.69 319 P        P        22 13 17.1 +0.5
SDDR                            IAmb     IAmb     22 13 20.1
       comp=Z,117nm,1.1s
SDDR                            IAMs_20  IAMs_20  22 48 48.2
       comp=Z,15µm,22.0s
SDDR  Presa de Saban  82.69 319 eP       P        22 13 11.9 -4.7
LGNH  Logne           82.75 318 P        P        22 13 17.5 +0.7
KRHZ  Kereru          82.91 199 P        P        22 13 20.3 +2.6
KWHZ  Kaweka Forest   83.11 199 P        P        22 13 21.8 +3.0
BHHZ  Black Hill Sta  83.12 199 P        P        22 13 23.3 +4.5
TAM   Tamanrasset     83.13  31 P        P        22 13 20.3 +1.3
TAM                             pmax     pmax
       comp=Z,135nm,1.2s
TAM                             MLR      MLR
       comp=Z,16µm,20.0s
TAM   Tamanrasset     83.13  31 P        P        22 13 20.3 +1.3
TAM                             IAmb     IAmb     22 13 29.1
       comp=Z,134nm,1.2s
TAM                             IAMs_20  IAMs_20  22 44 07.5
       comp=Z,16µm,20.0s
BKZ   Black Stump Fm  83.35 199 IAmb     IAmb     22 13 43.6
       comp=Z,151nm,1.4s
PKVZ  Pokaka          83.44 198 P        P        22 13 23.0 +2.5
NGZ   Ngauruhoe       83.50 198 P        P        22 13 23.5 +2.6
OTVZ  Oturere         83.50 198 P        P        22 13 23.2 +2.2
ETVZ  East Tongariro  83.52 199 P        P        22 13 23.3 +2.4
TMVZ  Te Maari        83.55 199 P        P        22 13 23.1 +2.0
WTVZ  West Tongariro  83.56 198 P        P        22 13 24.2 +3.0
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TWVZ	Taurewa	83.64	198	P	P	22 13 23.5	+2.0
KHEZ	Kahui Hut	83.67	197	P	P	22 13 23.3	+1.7
KATZ	Kakaramea	83.68	199	P	P	22 13 30.1	+8.3
VRZ	Vera Road	83.70	198	P	P	22 13 23.4	+1.7
NBEZ	Newall Road No	83.72	197	P	P	22 13 18.3	-3.5
HIZ	Hauiti	84.28	198	IAmb	IAmb	22 13 24.9	
	comp=Z,153nm,1.3s						
HIZ				IAMs_20	IAMs_20	22 50 24.8	
	comp=Z,11µm,18.0s						
HIZ	Hauiti	84.28	198	P	P	22 13 26.0	+1.3
FURI	Furi	84.60	66	P	P	22 13 28.5	+1.6
FURI				IAmb	IAmb	22 14 03.5	
	comp=Z,133nm,1.4s						
FURI	Furi	84.60	66	eP	P	22 13 33.5	+6.5
AAE	Adis Abeba	84.76	66	eP	P	22 13 33.8	+6.1
GRTK	Grand Turk	84.95	320	IAMs_20	IAMs_20	22 53 15.9	
	comp=Z,8µm,20.0s						
GTBY	Guantanamo Bay	85.00	316	IAmb	IAmb	22 13 32.1	
	comp=Z,106nm,0.9s						
GTBY				IAMs_20	IAMs_20	22 49 52.6	
	comp=Z,16µm,22.0s						
GTBY	Guantanamo Bay	85.00	316	eP	P	22 13 24.5	-3.8
TGUH	Tegucigalpa,Un	85.10	303	⇑iP	P	22 13 28.1	-1.0
CBCY	The Bluff, Cay	86.72	312	P	P	22 13 37.7	+0.9
TBI	Tubuai	86.95	232	ePP	PP	22 16 58.9	-1.7
	comp=Z,1µm,26.2s						
TBI				eS	S	22 24 16.6	+0.8
	comp=Z,10µm,26.8s						
TBI				eSS	SS	22 29 58.6	+1.3
	comp=Z,2µm,25.2s						
TBI				eLQ	LQ	22 37 31.9	
	comp=Z,3µm,29.8s						
TBI				eLR	LR	22 41 07.5	
	comp=Z,30µm,29.8s,baz=157						
NWAO	Narrogin (SRO)	87.08	151	P	P	22 13 40.0	+1.3
	baz=87,SNR=11						
NWAO	Narrogin (SRO)	87.08	151	P	P	22 13 38.3	-0.4
NWAO				pmax	pmax		
	comp=Z,192nm,1.9s						
NWAO	Narrogin (SRO)	87.08	151	P	P	22 13 38.3	-0.4
NWAO				IAmb	IAmb	22 13 44.4	
	comp=Z,192nm,1.9s						
NWAO	Narrogin (SRO)	87.08	151	P	P	22 13 38.0	-0.6
NWAO				IAmb	IAmb	22 13 44.5	
	comp=Z,238nm,1.9s						
TOO	Toolangi	87.12	175	P	P	22 13 38.9	+0.1
	baz=87,SNR=5.5						
TOO	Toolangi	87.12	175	P	P	22 13 39.1	+0.2
TOO				pmax	pmax		
	comp=Z,50nm,1.3s						
TOO				MLR	MLR		
	comp=Z,13µm,18.0s						
TOO	Toolangi	87.12	175	P	P	22 13 39.1	+0.2
TOO				IAMs_20	IAMs_20	22 57 42.8	
	comp=Z,13µm,18.0s						
RTAL	Retalhuleu	87.65	300	IAMs_20	IAMs_20	22 51 28.2	
	comp=Z,8µm,18.0s						
ARPS	Mount Arapiles	87.68	172	P	P	22 13 43.6	+2.1
	baz=88,SNR=6.5						
MUN	Mundaring	87.69	150	P	P	22 13 41.2	-0.4
	baz=88,SNR=23						
OUZ	Omahuta	87.71	198	IAMs_20	IAMs_20	22 50 54.5	
	comp=Z,13µm,19.0s						
HUEH	Huehuetenango	88.23	300	IAMs_20	IAMs_20	22 52 00.8	
	comp=Z,11µm,19.0s						
KLBR	Kellerberrin	88.48	151	P	P	22 13 44.9	-0.5
	baz=88,SNR=33						
PMOZ	Porto Moniz, M	88.49	9	A	A	22 57 55.3	
	comp=Z,3µm,18.0s						
PETF	Flores	88.81	303	IAmb	IAmb	22 13 52.0	
	comp=Z,153nm,1.2s						
ATD	Arta Tunnel	89.00	68	LR	LR	22 53 18.9	
	comp=Z,19µm,18.2s,baz=200,slow=35						
ATD	Arta Tunnel	89.00	68	P	P	22 13 50.5	+2.6
ATD				IAmb	IAmb	22 14 13.4	
	comp=Z,131nm,1.3s						
ATD	Arta Tunnel	89.00	68	eP	P	22 13 53.7	+5.7
CCIG	Comitan	89.37	300	IAmb	IAmb	22 14 22.4	
	comp=Z,61nm,0.9s						
CCIG				IAMs_20	IAMs_20	22 52 44.8	
	comp=Z,11µm,19.0s						
CAN	Canberra	89.49	178	P	P	22 13 48.9	-1.3
CAN				pmax	pmax		
	comp=Z,84nm,1.3s						
CAN				MLR	MLR		
	comp=Z,16µm,19.0s						
CAN	Canberra	89.49	178	P	P	22 13 48.9	-1.3
CAN				IAMs_20	IAMs_20	22 53 10.6	
	comp=Z,16µm,19.0s						
CNB	Canberra Magne	89.50	178	P	P	22 13 50.7	+0.5
	baz=89,SNR=5.5						
KMBL	Kambalda	89.76	155	P	P	22 13 50.2	-1.2
	baz=90,SNR=32						
DGAR	Diego Garcia	89.95	103	IAMs_20	IAMs_20	22 45 34.2	
	comp=Z,17µm,20.0s						
AVE	Averroes	90.24	17	P	P	22 13 55.1	+1.8
AVE	Averroes	90.24	17	P	P	22 13 58.2	+5.0
AVE				S	S	22 24 49.4	+3.5
MORW	Morawa	90.38	149	P	P	22 13 56.3	+2.0
	baz=90,SNR=7.4						
MORW	Morawa	90.38	149	P	P	22 13 54.0	-0.3
YNG	Young	90.50	177	P	P	22 13 54.4	-0.5
	baz=90,SNR=5.1						
HTT	Hallett	90.72	169	P	P	22 13 55.4	-0.5
	baz=90,SNR=9.1						
IFR	Ifrane	90.86	19	P	P	22 13 58.2	+1.9
IFR				S	S	22 24 56.5	+4.4
TEIG	Tepich	90.92	306	P	P	22 13 57.0	+0.3
	comp=Z,344nm,0.9s,baz=173,slow=1.3,SNR=68						
TEIG	Tepich	90.92	306	P	P	22 13 57.0	+0.3
TEIG	Tepich	90.92	306	⇑iP	P	22 13 56.1	-0.6
BBOO	Buckleboo	91.00	167	P	P	22 13 56.5	-0.6
	baz=91,SNR=11						
BBOO	Buckleboo	91.00	167	P	P	22 13 57.0	-0.2
BBOO				IAMs_20	IAMs_20	22 53 54.7	
	comp=Z,12µm,19.0s						
CMIG	Matias Romero	91.42	299	P	P	22 13 59.6	+0.5
	comp=Z,49nm,0.9s,baz=142,slow=3.7,SNR=48						
MGCD	Mangrove Creek	91.63	179	P	P	22 14 00.9	+0.8
	baz=91						
RAO	Raoul Island	91.67	206	IAMs_20	IAMs_20	22 46 57.9	
	comp=Z,11µm,22.0s						
FORT	Forrest	91.68	160	P	P	22 13 59.5	-0.8
	baz=92,SNR=17						
FORT	Forrest	91.68	160	P	P	22 13 59.8	-0.6
FORT				IAmb	IAmb	22 14 05.0	
	comp=Z,183nm,1.6s						
FORT				IAMs_20	IAMs_20	22 54 50.9	
	comp=Z,9µm,19.0s						
PPTF	Pamatai, Papee	92.01	235	IAMs_20	IAMs_20	22 49 24.0	
	comp=Z,12µm,19.0s						
PPT2	Papeete2	92.01	235	ePP	PP	22 17 40.2	-1.0
	comp=Z,1µm,24.2s						
PPT2				eSKSac	SKSac	22 24 35.0	+0.6
	comp=Z,6µm,25.8s						
PPT2	Papeete2	92.01	235	ePS	PS	22 26 16.6	+1.9
	comp=Z,8µm,27.5s						
PPT2				eSS	SS	22 31 15.4	+4.3
	comp=Z,3µm,25.0s						
PPT2				eLQ	LQ	22 39 38.9	
	comp=Z,5µm,27.8s						
PPT2				eLR	LR	22 43 25.7	
	comp=Z,18µm,22.2s,baz=155						
PPT	Papeete	92.03	235	LR	LR	22 49 17.5	
	comp=Z,11µm,18.1s,baz=184,slow=32						
STKA	Stephens Creek	92.52	171	P	P	22 14 03.9	-0.4
	baz=92,SNR=27						
STKA	Stephens Creek	92.52	171	P	P	22 14 03.4	-0.8
	comp=Z,12nm,0.7s,baz=137,slow=6.0,SNR=14						
STKA				PP	PP	22 17 44.6	+0.1
	comp=Z,3.2nm,0.6s,baz=185,slow=15,SNR=3.5						
STKA				LR	LR	22 55 11.4	
	comp=Z,12µm,19.2s,baz=174,slow=35						
STKA	Stephens Creek	92.52	171	c iP	P	22 14 03.6	-0.6
STKA	Stephens Creek	92.52	171	P	P	22 14 03.5	-0.8
061Z	Ochoppi	92.65	314	IAMs_20	IAMs_20	22 55 20.0	
	comp=Z,7µm,21.0s						
MELI	Melilla	93.01	20	P	P	22 14 07.0	+1.0
MELI				S	S	22 25 18.8	+8.0
LHI	Lord Howe Isla	93.09	186	IAMs_20	IAMs_20	22 53 50.8	
	comp=Z,9µm,19.0s						
CEU	Ceuta	93.13	18	P	P	22 14 09.1	+2.5
CEU				S	S	22 25 18.4	+6.5
RAR	Rarotonga	93.21	224	LR	LR	22 47 43.9	
	comp=Z,8µm,21.5s,baz=188,slow=30						
RAR	Rarotonga	93.21	224	IAMs_20	IAMs_20	22 46 47.3	
	comp=Z,9µm,22.0s						
MEEK	Meekatharra	93.40	151	P	P	22 14 09.2	+0.8
	baz=93,SNR=7.6						
060A	Indiantown	93.47	315	IAMs_20	IAMs_20	22 55 09.8	
	comp=Z,16µm,22.0s						
SFS	San Fernando	93.54	18	P	P	22 14 16.7	+8.3
SFS				S	S	22 25 19.5	+4.0
SFS	San Fernando	93.54	18	IAMs_20	IAMs_20	22 50 45.0	
	comp=Z,9µm,21.0s						
TLIG	Tlapa	93.68	296	IAmb	IAmb	22 14 13.3	
	comp=Z,121nm,1.1s						
TLIG				IAMs_20	IAMs_20	22 50 15.9	
	comp=Z,13µm,22.0s						
MORF	Marmelete	93.96	16	eP	P	22 14 10.4	-0.1
MORF				eSKSac	SKSac	22 24 46.0	+2.2
MORF				AMS	AMS	22 51 17.0	
	comp=Z,5µm,21.1s						
MORF	Marmelete	93.96	16	eP	P	22 14 10.3	-0.1
MORF				e		22 24 46.0	
PBDV	Barranco-do-Ve	94.01	16	A	A	22 14 35.1	
	comp=Z,123nm,1.5s						
EMAL	Malaga-Limoner	94.14	19	P	P	22 14 12.3	+1.1
EMAL				S	S	22 25 24.6	+3.9
PVAQ	Vaqueiros	94.20	16	P	P	22 14 12.4	+1.0
PVAQ				IAmb	IAmb	22 14 36.0	
	comp=Z,151nm,1.6s						
PVAQ	Vaqueiros	94.20	16	eP	P	22 14 14.7	+3.2
	comp=Z,128nm,1.7s						
PVAQ				A	A	22 50 20.9	
	comp=Z,5µm,24.0s						
PCVE	Castro Verde	94.38	16	eP	P	22 14 15.6	+3.3
	comp=Z,113nm,1.5s						
ARMA	Armidale	94.41	180	P	P	22 14 14.1	+1.1
	baz=94,SNR=4.2						
ARMA	Armidale	94.41	180	P	P	22 14 13.5	+0.4
ARMA				IAMs_20	IAMs_20	22 55 16.8	
	comp=Z,14µm,20.0s						
MESJ	Messejana	94.55	16	eP	P	22 14 13.0	-0.1
MESJ				eSKSac	SKSac	22 24 49.0	+2.2
MESJ				AMS	AMS	22 51 27.9	
	comp=Z,6µm,21.3s						
MESJ	Messejana	94.55	16	eP	P	22 14 12.9	-0.1
MESJ				e		22 24 49.0	
MESJ	Messejana	94.55	16	eP	P	22 14 15.8	+2.8
	comp=Z,92nm,1.5s						
PNCL	Nicolau / Gran	94.77	15	eP	P	22 14 17.3	+3.3
	comp=Z,90nm,1.6s						
PBEJ	Beja	94.79	16	eP	P	22 14 17.6	+3.4
DWPF	Disney Wildern	94.85	315	IAMs_20	IAMs_20	22 56 15.4	
	comp=Z,13µm,22.0s						
PBAR	Barrancos	95.07	17	eP	P	22 14 19.7	+4.3
	comp=Z,101nm,1.7s						
EVO	Evora	95.26	16	P	P	22 14 20.8	+4.5
EVO				S	S	22 25 36.6	+6.2
LIS	Lisbon	95.27	15	eP	P	22 14 16.1	-0.2
LIS				eSKSac	SKSac	22 24 52.9	+2.3
LIS				AMS	AMS	22 55 52.7	
	comp=Z,7µm,16.7s						
LIS	Lisbon	95.27	15	eP	P	22 14 16.1	-0.2
LIS				e		22 24 52.9	
UNM	Universidad Na	95.47	296	IAMs_20	IAMs_20	22 52 37.5	
	comp=Z,10µm,21.0s						
CART	Cartagena	95.62	21	P	P	22 14 21.5	+3.6
CART				S	S	22 25 39.2	+5.7
CART	Cartagena	95.62	21	IAMs_20	IAMs_20	22 52 20.0	
	comp=Z,13µm,21.0s						
PESTR	Estremoz	95.66	16	P	P	22 14 19.4	+1.3
PMTG	Montargil	95.76	16	eP	P	22 14 21.6	+3.1
	comp=Z,75nm,1.8s						
GIRL	Giralia	95.84	146	IAMs_20	IAMs_20	22 53 56.6	
	comp=Z,10µm,20.0s						
PMRV	Marv??o	96.24	16	eP	P	22 14 22.7	+2.0
	comp=Z,66nm,1.7s						
PMRV	Marv??o	96.24	16	A	A	23 24 38.1	
	comp=Z,5µm,18.0s						
KEST	Kesra	96.40	30	P	P	22 14 21.1	-0.5
	comp=Z,22nm,1.2s,baz=196,slow=4.8,SNR=4.9						
KEST				LR	LR	22 52 22.4	
	comp=Z,24µm,21.8s,baz=155,slow=32						
KEST	Kesra	96.40	30	IAmb	IAmb	22 14 27.5	
	comp=Z,56nm,1.4s						
656A	Willston	96.41	314	IAMs_20	IAMs_20	22 57 14.7	
	comp=Z,13µm,22.0s						
COI	Coimbra	96.84	15	IAMs_20	IAMs_20	22 52 07.4	
	comp=Z,10µm,21.0s						
PAB	San Pablo	96.86	18	P	P	22 14 25.2	+1.5
PAB				pmax	pmax		
	comp=Z,36nm,1.3s						
PAB	San Pablo	96.86	18	P	P	22 14 25.2	+1.5
PAB	San Pablo	96.86	18	IAMs_20	IAMs_20	22 52 37.9	
	comp=Z,7µm,21.0s						
MTE	Manteigas	97.16	16	A	A	22 55 24.6	
	comp=Z,5µm,18.0s						
WRKA	Warakurna	97.30	159	P	P	22 14 25.6	-0.7
	baz=97,SNR=18						
456A	Hilliard	97.40	316	IAMs_20	IAMs_20	22 58 11.0	
	comp=Z,13µm,21.0s						
UCM	Universidad Co	97.81	19	P	Pdif	22 14 38.3	+10
UCM				S	S	22 25 55.0	+2.6
553A	Crawfordville	97.91	313	IAMs_20	IAMs_20	23 06 44.4	
	comp=Z,7µm,18.0s						
QLP	Quilpie	97.98	173	P	Pdif	22 14 29.7	+0.5
	baz=98,SNR=6.6						
MVO	Moncorvo	97.99	16	A	A	22 57 27.4	
	comp=Z,5µm,18.0s						
257A	Skidaway Islan	98.12	317	IAMs_20	IAMs_20	22 56 14.0	
	comp=Z,10µm,22.0s						
RMQ	Roma	98.29	177	P	Pdif	22 14 31.6	+0.9
	baz=98,SNR=5.0						
PSAD3	Pilbara Seismi	98.46	150	IAMs_20	IAMs_20	23 02 29.9	
	comp=Z,8µm,19.0s						
PSAB3	Pilbara Seismi	98.53	150	IAMs_20	IAMs_20	23 02 42.7	
	comp=Z,8µm,20.0s						
PSAA1	Pilbara Seismi	98.54	150	IAMs_20	IAMs_20	23 02 31.9	
	comp=Z,8µm,20.0s						
PSAA3	Pilbara Seismi	98.54	150	IAMs_20	IAMs_20	23 02 42.1	
	comp=Z,7µm,18.0s						
PSAB1	Pilbara Seismi	98.54	150	IAMs_20	IAMs_20	23 02 41.0	
	comp=Z,8µm,19.0s						
PSA00	Pilbara Seismi	98.55	150	IAMs_20	IAMs_20	23 02 33.1	
	comp=Z,7µm,19.0s						
PSAB2	Pilbara Seismi	98.57	150	IAMs_20	IAMs_20	23 02 41.7	
	comp=Z,7µm,18.0s						
PSAC2	Pilbara Seismi	98.57	150	IAMs_20	IAMs_20	22 55 23.8	
	comp=Z,6µm,20.0s						
PSAC1	Pilbara Seismi	98.57	150	IAMs_20	IAMs_20	23 02 32.8	
	comp=Z,8µm,19.0s						
PGAV	Gavieira, Arco	98.59	15	A	A	22 53 06.8	
	comp=Z,7µm,22.0s						
255A	Hazlehurst	98.64	316	IAMs_20	IAMs_20	22 57 59.9	
	comp=Z,12µm,22.0s						
PSAD1	Pilbara Seismi	98.65	150	IAMs_20	IAMs_20	22 59 08.0	
	comp=Z,7µm,19.0s						
NHSC	New Hope	98.80	318	Pdiff	Pdif	22 14 35.2	+2.8
	baz=153						
451A	Vernon	98.83	313	IAMs_20	IAMs_20	23 08 35.8	
	comp=Z,5µm,18.0s						
MBWA	Marble Bar	98.91	150	IAMs_20	IAMs_20	22 59 49.7	
	comp=Z,7µm,19.0s						
352A	Blakely	99.24	314	IAMs_20	IAMs_20	23 00 21.7	
	comp=Z,9µm,20.0s						
RAFF	Raffo Rosso	99.28	33	IAMs_20	IAMs_20	22 54 10.9	
	comp=Z,8µm,21.0s						
V62A	Hyde County Ai	99.46	322	IAMs_20	IAMs_20	22 59 36.5	
	comp=Z,7µm,21.0s						
154A	Montrose	99.50	316	IAMs_20	IAMs_20	22 58 13.6	
	comp=Z,11µm,22.0s						
ASAR	Alice Springs	99.67	163	P	Pdif	22 14 34.8	-2.1
	comp=Z,4.6nm,0.8s,baz=190,slow=3.9,SNR=32						
ASAR				PP	PP	22 18 40.2	+0.2
	comp=Z,16nm,1.0s,baz=197,slow=5.6,SNR=4.6						
ASAR				PKKP	PKKPdf	22 30 58.4	+0.2
	comp=Z,3.3nm,0.8s,baz=2.5,slow=2.8,SNR=14						
ASAR				PKPPKP	P'P'df	22 39 12.7	-7.1
	comp=Z,0.8nm,1.0s,baz=325,slow=1.1,SNR=4.3						
ASAR				LR	LR	22 56 04.3	
	comp=Z,9µm,21.9s,baz=190,slow=33						
VSL	Villasalto	99.93	29	IAMs_20	IAMs_20	22 53 51.2	
	comp=Z,13µm,22.0s						
V60A	Jim Taylor Roa	100.10	321	IAMs_20	IAMs_20	22 59 28.5	
	comp=Z,6µm,22.0s						
U61A	Possum Corner	100.32	322	IAMs_20	IAMs_20	23 00 01.4	
	comp=Z,7µm,21.0s						
GOGA	Godfrey	100.34	316	IAMs_20	IAMs_20	22 58 14.9	
	comp=Z,10µm,22.0s						
RAYN	Ar Rayn	100.38	64	IAMs_20	IAMs_20	22 58 36.0	
	comp=Z,13µm,20.0s						
CEL	Celeste	100.71	34	IAMs_20	IAMs_20	22 54 14.9	
	comp=Z,9µm,22.0s						
Y52A	Lilburn	100.98	315	IAMs_20	IAMs_20	23 00 35.7	
	comp=Z,9µm,20.0s						
KMSC	Kings Mountain	101.04	318	Pdiff	Pdif	22 14 44.1	+1.7
	baz=152						
T60A	Surry	101.15	322	IAMs_20	IAMs_20	23 00 02.3	
	comp=Z,6µm,22.0s						
V56A	Mocksville	101.32	319	Pdiff	Pdif	22 14 45.4	+1.8
	baz=153						
LRAL	Lakeview Retre	101.45	313	IAMs_20	IAMs_20	23 05 54.3	
	comp=Z,11µm,18.0s						
DZM	Mont Dzumac	101.72	194	ePdif	Pdif	22 14 45.4	-0.6
	comp=Z,530nm,25.0s						
DZM	Mont Dzumac	101.72	194	ePP	PP	22 18 57.8	+2.3
	comp=Z,859nm,24.9s						
DZM				eSKSac	SKSac	22 25 25.0	+0.3
	comp=Z,3µm,26.4s						
DZM				eSdif	Sdif	22 26 25.5	-1.1
	comp=Z,4µm,27.4s						
DZM	Mont Dzumac	101.72	194	ePS	PS	22 28 00.0	+0.3
	comp=Z,3µm,25.1s						
DZM				eSS	SS	22 33 26.9	-0.3
	comp=Z,5µm,25.9s						
DZM	Mont Dzumac	101.72	194	eLR	LR	22 48 02.5	
	comp=Z,24µm,23.2s						
DZM	Mont Dzumac	101.72	194	IAMs_20	IAMs_20	22 54 15.3	
	comp=Z,12µm,22.0s						
ITM	Ithomi	101.77	39	IAMs_20	IAMs_20	23 07 33.8	
	comp=Z,6µm,20.0s						
TIP	Timpagrande	101.82	34	IAMs_20	IAMs_20	22 56 01.3	
	comp=Z,8µm,21.0s						
X51A	Calhoun	101.91	315	IAMs_20	IAMs_20	22 59 50.4	
	comp=Z,8µm,22.0s						
W52A	Murphy	102.00	316	IAMs_20	IAMs_20	23 00 20.8	
	comp=Z,7µm,21.0s						
V53A	Saluda	102.07	317	IAMs_20	IAMs_20	23 06 23.6	
	comp=Z,6µm,19.0s						
FPAL	Fort Paine	102.19	315	IAMs_20	IAMs_20	23 00 49.8	
	comp=Z,14µm,22.0s						
KARP	Karpathos	102.28	43	IAMs_20	IAMs_20	23 01 06.4	
	comp=Z,8µm,20.0s						
TKL	Tuckaleechee C	102.44	317	PP	PP	22 18 58.2	-3.7
	comp=Z,13nm,1.0s,baz=157,slow=13,SNR=5.1						
TKL				PKKPbc	PKKPbc	22 30 51.1	+2.7
	comp=Z,4.1nm,1.0s,baz=0.0,slow=3.0,SNR=4.6						
V52A	Sevierville	102.53	317	IAMs_20	IAMs_20	22 58 46.7	
	comp=Z,9µm,22.0s						
W50A	Signal Mountai	102.64	315	IAMs_20	IAMs_20	23 00 23.8	
	comp=Z,7µm,22.0s						
X48A	Hartselle	102.70	314	IAMs_20	IAMs_20	23 01 11.3	
	comp=Z,16µm,22.0s						
PAOL	Paolisi	102.84	32	IAMs_20	IAMs_20	22 59 24.2	
	comp=Z,7µm,20.0s						
SWET	Sewanee	102.91	315	IAMs_20	IAMs_20	23 00 37.8	
	comp=Z,10µm,22.0s						
MNCY	Minicoy	103.14	95	IAMs_20	IAMs_20	22 55 03.3	
	comp=Z,14µm,15.8s						
M65A	Busby, Falmout	103.21	329	IAMs_20	IAMs_20	23 00 59.9	
	comp=Z,9µm,21.0s						
Y45A	Yeager Farm, C	103.24	311	IAMs_20	IAMs_20	23 07 49.6	
	comp=Z,8µm,19.0s						
M64A	Tiverton	103.37	328	IAMs_20	IAMs_20	23 01 25.0	
	comp=Z,7µm,20.0s						
WC4	Warramunga Arr	103.37	163	IAMs_20	IAMs_20	23 00 59.4	
	comp=Z,9µm,19.0s						
WB1	Warramunga Ar.	103.38	163	IAMs_20	IAMs_20	23 04 10.5	
	comp=Z,9µm,20.0s						
WC3	Warramunga Arr	103.38	163	IAMs_20	IAMs_20	23 04 19.6	
	comp=Z,9µm,20.0s						
WR1	Warramunga Arr	103.39	163	IAMs_20	IAMs_20	23 04 10.9	
	comp=Z,7µm,20.0s						
WR2	Warramunga Arr	103.39	163	IAMs_20	IAMs_20	23 04 21.9	
	comp=Z,10µm,22.0s						
WRA	Warramunga Arr	103.39	163	Pdiff	Pdif	22 14 52.3	-1.1
	comp=Z,2.2nm,0.8s,baz=194,slow=3.9,SNR=6.2						
WRA				PP	PP	22 19 08.2	+0.2
	comp=Z,12nm,1.1s,baz=193,slow=5.6,SNR=6.9						
WRA				PKKP	PKKPdf	22 30 48.2	-3.3
	comp=Z,2.3nm,0.5s,baz=356,slow=2.8,SNR=21						
WB2	Warramunga Arr	103.39	163	IAMs_20	IAMs_20	23 04 11.0	
	comp=Z,9µm,20.0s						
WR3	Warramunga Arr	103.39	163	IAMs_20	IAMs_20	23 04 11.0	
	comp=Z,9µm,20.0s						
WR4	Warramunga Arr	103.39	163	IAMs_20	IAMs_20	23 04 11.0	
	comp=Z,9µm,20.0s						
WR6	Warramunga Arr	103.40	163	IAMs_20	IAMs_20	23 04 11.1	
	comp=Z,9µm,20.0s						
WR7	Warramunga Arr	103.40	163	IAMs_20	IAMs_20	22 57 59.2	
	comp=Z,10µm,21.0s						
WRAB	Tennant Creek	103.40	163	IAMs_20	IAMs_20	23 04 20.2	
	comp=Z,8µm,20.0s						
WR8	Warramunga Arr	103.40	163	IAMs_20	IAMs_20	22 57 58.3	
	comp=Z,11µm,22.0s						
WR9	Warramunga Arr	103.40	163	IAMs_20	IAMs_20	22 57 58.3	
	comp=Z,10µm,21.0s						
WR0	Warramunga Arr	103.41	163	IAMs_20	IAMs_20	23 01 01.3	
	comp=Z,10µm,19.0s						
WC1	Warramunga Arr	103.41	163	IAMs_20	IAMs_20	23 04 11.4	
	comp=Z,8µm,19.0s						
WC2	Warramunga Arr	103.41	163	IAMs_20	IAMs_20	22 57 47.5	
	comp=Z,10µm,21.0s						
WB3	Warramunga Arr	103.41	163	IAMs_20	IAMs_20	22 57 47.5	
	comp=Z,10µm,21.0s						
WB4	Warramunga Arr	103.43	163	IAMs_20	IAMs_20	23 04 21.0	
	comp=Z,8µm,20.0s						
WB5	Warramunga Arr	103.46	163	IAMs_20	IAMs_20	23 04 11.7	
	comp=Z,8µm,20.0s						
WB6	Warramunga Arr	103.48	163	IAMs_20	IAMs_20	22 57 49.3	
	comp=Z,9µm,21.0s						
M63A	Gales Ferry	103.49	328	IAMs_20	IAMs_20	22 59 48.1	
	comp=Z,7µm,22.0s						
WB7	Warramunga Arr	103.50	163	IAMs_20	IAMs_20	22 57 50.2	
	comp=Z,8µm,22.0s						
WB8	Warramunga Arr	103.52	163	IAMs_20	IAMs_20	22 57 50.4	
	comp=Z,10µm,22.0s						
CPNY	Central Park	103.53	326	IAMs_20	IAMs_20	23 02 38.1	
	comp=Z,7µm,20.0s						
INTR	Introdacqua	103.54	31	IAMs_20	IAMs_20	22 56 26.8	
	comp=Z,15µm,21.0s						
WB9	Warramunga Arr	103.55	163	IAMs_20	IAMs_20	22 57 52.0	
	comp=Z,10µm,21.0s						
WB0	Warramunga Arr	103.57	163	IAMs_20	IAMs_20	22 57 51.7	
	comp=Z,10µm,22.0s						
PLAL	Pickwick Lake	103.58	313	IAMs_20	IAMs_20	23 01 28.8	
	comp=Z,13µm,22.0s						
MVL	Millersville	103.59	324	IAMs_20	IAMs_20	23 05 26.9	
	comp=Z,6µm,20.0s						
L64A	Middleborough	103.61	329	IAMs_20	IAMs_20	23 01 11.4	
	comp=Z,10µm,20.0s						
BRNJ	Basking Ridge	103.62	326	IAMs_20	IAMs_20	23 04 53.7	
	comp=Z,6µm,19.0s						
YLE	Yale	103.68	327	IAMs_20	IAMs_20	23 00 15.2	
	comp=Z,6µm,21.0s						
PAL	Palisades	103.70	326	IAMs_20	IAMs_20	23 02 34.9	
	comp=Z,6µm,19.0s						
MSVF	Nonsavu	103.71	206	IAMs_20	IAMs_20	22 54 16.2	
	comp=Z,9µm,20.0s						
V48A	Smith Brothers	103.72	314	IAMs_20	IAMs_20	23 01 37.3	
	comp=Z,14µm,22.0s						
L63A	North Scituate	103.78	328	IAMs_20	IAMs_20	22 58 08.8	
	comp=Z,6µm,21.0s						
BRYW	Bryant College	103.80	328	IAMs_20	IAMs_20	22 59 12.5	
	comp=Z,6µm,20.0s						
UCCT	U. Connecticut	103.90	328	IAMs_20	IAMs_20	23 00 00.0	
	comp=Z,8µm,22.0s						
TRNY	Table Rock, Ra	103.93	326	IAMs_20	IAMs_20	23 02 51.9	
	comp=Z,6µm,20.0s						
U49A	Red Boiling Sp	103.97	316	IAMs_20	IAMs_20	23 01 22.9	
	comp=Z,7µm,22.0s						
T50A	Nancy	104.04	316	IAMs_20	IAMs_20	22 59 45.8	
	comp=Z,7µm,22.0s						
BCX	Boston College	104.08	329	IAMs_20	IAMs_20	23 01 34.7	
	comp=Z,8µm,20.0s						
R53A	Hurricane	104.08	319	IAMs_20	IAMs_20	23 01 49.0	
	comp=Z,7µm,22.0s						
S51A	Beattyville	104.10	318	IAMs_20	IAMs_20	23 03 39.1	
	comp=Z,6µm,22.0s						
WES	Weston	104.17	329	IAMs_20	IAMs_20	23 01 38.1	
	comp=Z,9µm,21.0s						
SSB	Saint Sauveur	104.17	23	IAMs_20	IAMs_20	23 01 52.5	
	comp=Z,7µm,18.0s						
W45A	Hickory Valley	104.20	312	IAMs_20	IAMs_20	23 07 26.9	
	comp=Z,8µm,19.0s						
L62A	Suffield	104.25	327	IAMs_20	IAMs_20	23 00 21.3	
	comp=Z,6µm,21.0s						
MURB	Monte Urbino	104.30	29	IAMs_20	IAMs_20	22 59 33.8	
	comp=Z,7µm,20.0s						

AFI	**Afiamalu**	**104.34**	**217**	IAMs_20	IAMs_20	22 53 39.8	
	comp=Z,14µm,20.0s						
HRV	**Adam Dziewonsk**	**104.35**	**328**	IAMs_20	IAMs_20	23 01 43.9	
	comp=Z,9µm,21.0s						
QUA2	**Belchertown**	**104.38**	**328**	IAMs_20	IAMs_20	23 00 02.7	
	comp=Z,7µm,21.0s						
GBN	**Guysborough**	**104.41**	**336**	IAMs_20	IAMs_20	23 00 35.6	
	comp=Z,9µm,20.0s						
N58A	**Sunbury**	**104.47**	**324**	IAMs_20	IAMs_20	23 06 04.1	
	comp=Z,6µm,19.0s						
MET	**Memphis--Engin**	**104.48**	**312**	IAMs_20	IAMs_20	23 03 24.5	
	comp=Z,6µm,20.0s						
K63A	**Dunstable**	**104.51**	**329**	IAMs_20	IAMs_20	23 01 48.1	
	comp=Z,8µm,20.0s						
VLC	**Villacollemand**	**104.55**	**28**	IAMs_20	IAMs_20	22 56 21.4	
	comp=Z,15µm,22.0s						
SLBS	**Sierra La Lagu**	**104.68**	**290**	IAMs_20	IAMs_20	22 55 51.4	
	comp=Z,7µm,20.0s						
K62A	**Royalston**	**104.70**	**328**	IAMs_20	IAMs_20	23 02 06.1	
	comp=Z,7µm,19.0s						
FNA	**Florina**	**104.79**	**37**	IAMs_20	IAMs_20	22 58 57.0	
	comp=Z,6µm,20.0s						
KSPA	**Keystone Colle**	**104.80**	**325**	IAMs_20	IAMs_20	23 02 50.9	
	comp=Z,6µm,21.0s						
HALT	**Halls**	**104.91**	**313**	IAMs_20	IAMs_20	23 03 37.7	
	comp=Z,11µm,20.0s						
T47A	**Sharon Grove**	**104.91**	**315**	IAMs_20	IAMs_20	23 01 59.9	
	comp=Z,6µm,22.0s						
M57A	**Sunshine Farm,**	**105.05**	**324**	IAMs_20	IAMs_20	23 06 20.5	
	comp=Z,7µm,19.0s						
HPIG		**105.08**	**296**	IAMs_20	IAMs_20	22 59 35.1	
	comp=Z,12µm,19.0s						
PRMA	**PARMA**	**105.09**	**27**	IAMs_20	IAMs_20	22 57 04.8	
	comp=Z,13µm,22.0s						
LNXT	**Lenox**	**105.13**	**313**	IAMs_20	IAMs_20	23 03 54.7	
	comp=Z,10µm,20.0s						
L59A	**Walton**	**105.14**	**326**	IAMs_20	IAMs_20	22 58 24.8	
	comp=Z,6µm,21.0s						
HBAR	**Harrisburg**	**105.16**	**312**	IAMs_20	IAMs_20	23 03 56.4	
	comp=Z,7µm,20.0s						
GLAT	**Glass**	**105.19**	**313**	IAMs_20	IAMs_20	23 03 44.2	
	comp=Z,13µm,20.0s						
TRY	**Troy**	**105.19**	**327**	IAMs_20	IAMs_20	23 01 10.3	
	comp=Z,6µm,21.0s						
EMMW	**East Machias**	**105.22**	**332**	IAMs_20	IAMs_20	23 03 17.0	
	comp=Z,6µm,21.0s						
GNAR	**Gosnell**	**105.24**	**312**	IAMs_20	IAMs_20	23 08 07.5	
	comp=Z,7µm,19.0s						
FFD	**Franklin Falls**	**105.26**	**329**	IAMs_20	IAMs_20	23 01 59.0	
	comp=Z,8µm,20.0s						
R49A	**Shelbyville**	**105.28**	**317**	IAMs_20	IAMs_20	22 59 56.5	
	comp=Z,6µm,22.0s						
P52A	**Corning**	**105.30**	**320**	IAMs_20	IAMs_20	23 03 05.1	
	comp=Z,7µm,21.0s						
PEBM	**Pemiscott Bayo**	**105.30**	**312**	IAMs_20	IAMs_20	23 03 50.1	
	comp=Z,9µm,20.0s						
HICK	**Hickman**	**105.40**	**313**	IAMs_20	IAMs_20	23 03 28.8	
	comp=Z,14µm,21.0s						
I63A	**Otisfield**	**105.48**	**330**	IAMs_20	IAMs_20	23 02 42.8	
	comp=Z,7µm,20.0s						
PVMO	**Portageville**	**105.49**	**313**	IAMs_20	IAMs_20	23 03 55.1	
	comp=Z,13µm,20.0s						
PENMO	**Penman**	**105.49**	**313**	IAMs_20	IAMs_20	23 03 33.3	
	comp=Z,12µm,21.0s						
I62A	**Tamworth**	**105.53**	**329**	IAMs_20	IAMs_20	23 01 56.3	
	comp=Z,8µm,20.0s						
M56A	**Emporium**	**105.54**	**323**	IAMs_20	IAMs_20	23 02 39.4	
	comp=Z,7µm,22.0s						
TRD	**Trivandrum**	**105.56**	**98**	IAMs_20	IAMs_20	22 55 32.8	
	comp=Z,30µm,15.8s						
PDG	**Podgorica**	**105.57**	**35**	IAMs_20	IAMs_20	22 58 38.5	
	comp=Z,6µm,22.0s						
ISP	**Isparta**	**105.58**	**45**	IAMs_20	IAMs_20	23 02 13.2	
	comp=Z,8µm,21.0s						
HENM	**Henderson Moun**	**105.65**	**313**	IAMs_20	IAMs_20	23 03 57.4	
	comp=Z,13µm,20.0s						
HNH	**Hanover**	**105.66**	**328**	IAMs_20	IAMs_20	22 58 50.6	
	comp=Z,8µm,22.0s						
WVL	**Waterville**	**105.69**	**331**	IAMs_20	IAMs_20	23 00 38.4	
	comp=Z,8µm,20.0s						
G65A	**Princeton**	**105.70**	**332**	IAMs_20	IAMs_20	22 58 53.8	
	comp=Z,7µm,21.0s						
M55A	**Ridgway**	**105.72**	**323**	IAMs_20	IAMs_20	23 03 06.3	
	comp=Z,6µm,21.0s						
PARMO	**Parma**	**105.72**	**313**	IAMs_20	IAMs_20	23 03 50.3	
	comp=Z,13µm,20.0s						
ACCN	**Adirondack Com**	**105.79**	**327**	IAMs_20	IAMs_20	23 03 19.0	
	comp=Z,6µm,22.0s						
LCAR	**Lake Charles**	**105.81**	**311**	IAMs_20	IAMs_20	23 04 16.6	
	comp=Z,6µm,20.0s						
K58A	**Earlville**	**105.85**	**326**	IAMs_20	IAMs_20	23 07 49.6	
	comp=Z,7µm,19.0s						
L56A	**Greenwood**	**105.91**	**324**	IAMs_20	IAMs_20	22 59 55.3	
	comp=Z,6µm,21.0s						
SALO	**Salr**	**105.94**	**27**	IAMs_20	IAMs_20	22 59 12.3	
	comp=Z,11µm,19.0s						
USIN	**University of**	**105.98**	**315**	IAMs_20	IAMs_20	23 09 17.1	
	comp=Z,5µm,19.0s						
TEOL	**Teolo**	**106.00**	**28**	IAMs_20	IAMs_20	22 57 53.0	
	comp=Z,15µm,22.0s						
TXAR	**Lajitas Array**	**106.02**	**298**	Pdiff	**Pdif**	**22 15 06.6**	**+1.8**
	comp=Z,2.3nm,0.8s,baz=147,slow=5.2,SNR=6.0						
TXAR				PKiKP	**PKiKP**	**22 19 16.6**	**-0.2**
	comp=Z,3.1nm,1.0s,baz=116,slow=2.9,SNR=5.1						
TXAR				PP	**PP**	**22 19 29.1**	**+0.2**
	comp=Z,2.0nm,0.8s,baz=141,slow=4.8,SNR=4.9						
TXAR				PKKPab	**PKKPab**	**22 30 54.2**	**+1.3**
	comp=Z,0.7nm,0.7s,baz=230,slow=2.2,SNR=2.4						
LBNH	**Lisbon**	**106.04**	**329**	IAMs_20	IAMs_20	23 02 21.7	
	comp=Z,9µm,21.0s						
FCAR	**Ozark Folk Cen**	**106.07**	**311**	IAMs_20	IAMs_20	23 08 51.6	
	comp=Z,8µm,19.0s						
PBMO	**Poplar Bluff**	**106.11**	**312**	IAMs_20	IAMs_20	23 04 25.4	
	comp=Z,10µm,20.0s						
H62A	**Milan**	**106.12**	**330**	IAMs_20	IAMs_20	23 01 25.9	
	comp=Z,8µm,20.0s						
W39A	**Magazine**	**106.21**	**309**	IAMs_20	IAMs_20	23 05 34.3	
	comp=Z,6µm,20.0s						
PKME	**Peaks-Kenny Pk**	**106.23**	**331**	IAMs_20	IAMs_20	23 04 14.7	
	comp=Z,6µm,21.0s						
CLF	**Chambon-Foret**	**106.30**	**21**	IAMs_20	IAMs_20	22 58 31.7	
	comp=Z,9µm,22.0s						
ALLY	**Alegheny Colle**	**106.36**	**322**	IAMs_20	IAMs_20	22 59 58.2	
	comp=Z,6µm,22.0s						
M53A	**WI Miller and**	**106.36**	**322**	IAMs_20	IAMs_20	23 00 36.2	
	comp=Z,6µm,22.0s						
VT1	**Waterbury**	**106.37**	**328**	IAMs_20	IAMs_20	22 59 10.1	
	comp=Z,8µm,21.0s						
TUE	**Stuetta**	**106.44**	**26**	IAMs_20	IAMs_20	22 57 09.4	
	comp=Z,11µm,22.0s						
KNRA	**Kununurra**	**106.46**	**157**	IAMs_20	IAMs_20	23 09 31.5	
	comp=Z,5µm,18.0s						
WVNY	**West Valley, N**	**106.50**	**323**	IAMs_20	IAMs_20	23 02 33.9	
	comp=Z,6µm,21.0s						
F64A	**Sherman**	**106.53**	**332**	IAMs_20	IAMs_20	23 04 05.6	
	comp=Z,7µm,21.0s						
G62A	**West of Eustis**	**106.53**	**330**	IAMs_20	IAMs_20	23 01 14.8	
	comp=Z,9µm,20.0s						
F63A	**Nahmakanta, Br**	**106.58**	**331**	IAMs_20	IAMs_20	23 04 37.1	
	comp=Z,7µm,20.0s						
T42A	**Van Buren**	**106.60**	**312**	IAMs_20	IAMs_20	23 03 15.5	
	comp=Z,8µm,21.0s						
O49A	**Covington**	**106.60**	**318**	IAMs_20	IAMs_20	23 03 57.6	
	comp=Z,6µm,20.0s						
CTI	**Castel Tesino**	**106.64**	**28**	IAMs_20	IAMs_20	22 58 04.6	
	comp=Z,12µm,21.0s						
J56A	**Wolcott**	**106.70**	**325**	IAMs_20	IAMs_20	23 07 36.1	
	comp=Z,5µm,20.0s						
U40A	**Yellville**	**106.78**	**310**	IAMs_20	IAMs_20	23 09 14.3	
	comp=Z,9µm,18.0s						
TRI	**Trieste**	**106.90**	**29**	IAMs_20	IAMs_20	23 03 04.6	
	comp=Z,6µm,20.0s						
J55A	**Hilton**	**107.00**	**324**	IAMs_20	IAMs_20	23 04 48.2	
	comp=Z,6µm,19.0s						
E63A	**Oxbow**	**107.06**	**332**	IAMs_20	IAMs_20	22 59 56.8	
	comp=Z,6µm,21.0s						
FRNY	**Flat Rock**	**107.08**	**328**	IAMs_20	IAMs_20	22 59 43.1	
	comp=Z,8µm,21.0s						
MGMO	**Mountain Grove**	**107.20**	**311**	IAMs_20	IAMs_20	23 04 59.5	
	comp=Z,8µm,20.0s						
BATG	**Bathurst New B**	**107.25**	**334**	IAMs_20	IAMs_20	23 04 52.7	
	comp=Z,7µm,19.0s						
J54A	**Appleton**	**107.28**	**324**	IAMs_20	IAMs_20	23 03 57.6	
	comp=Z,7µm,22.0s						
FETA	**Feichten**	**107.30**	**27**	*e*P	**Pdif**	**22 15 18.8**	**+8.7**
	comp=Z,9.8nm,1.9s						
FETA				P	**PKiKP**	**22 19 18.2**	**-0.5**
	comp=Z,16nm,1.5s						
DAVA	**Damuels**	**107.33**	**26**	*e*P	**PKiKP**	**22 19 22.3**	**+3.6**
	comp=Z,17nm,1.0s						
ABTA	**Abfaltersbach**	**107.51**	**28**	*e*P	**Pdif**	**22 15 21.0**	**+10**
	comp=Z,8.9nm,1.4s						
ABTA				P	**PKiKP**	**22 19 18.4**	**-0.6**
	comp=Z,17nm,1.5s						
U38A	**Gravette**	**107.52**	**309**	IAMs_20	IAMs_20	23 11 17.9	
	comp=Z,5µm,18.0s						
CCM	**Cathedral Cave**	**107.53**	**312**	IAMs_20	IAMs_20	23 05 05.2	
	comp=Z,13µm,20.0s						
ECH	**Echery**	**107.54**	**24**	IAMs_20	IAMs_20	22 59 22.5	
	comp=Z,8µm,20.0s						
SQTA	**Sankt Quirin**	**107.61**	**27**	*e*P	**Pdif**	**22 15 21.6**	**+10**
	comp=Z,18nm,1.6s						
SQTA				P	**PKiKP**	**22 19 18.6**	**-0.6**
	comp=Z,21nm,1.4s						
MOTA	**Moosalm**	**107.69**	**27**	*e*P	**Pdif**	**22 15 21.7**	**+10**
	comp=Z,9.0nm,1.4s						
MOTA				*e*P	**PKiKP**	**22 19 16.2**	**-3.2**
	comp=Z,21nm,1.7s						
MYKA	**Terra Mystica**	**107.71**	**29**	P	**PKiKP**	**22 19 17.2**	**-2.2**
	comp=Z,19nm,1.5s						
N47A	**Urbana**	**107.72**	**318**	IAMs_20	IAMs_20	23 08 38.2	
	comp=Z,5µm,19.0s						
RETA	**Reutte**	**107.74**	**27**	*e*P	**Pdif**	**22 15 18.0**	**+6.0**
	comp=Z,9.8nm,1.7s						
RETA				*e*P	**PKiKP**	**22 19 19.7**	**+0.3**
	comp=Z,8.1nm,1.0s						
WTTA	**Wattenberg**	**107.76**	**27**	*i* P	**Pdif**	**22 15 20.3**	**+8.1**
	comp=Z,15nm,1.3s						
WTTA				*e*P	**PKiKP**	**22 19 19.8**	**+0.2**
	comp=Z,11nm,1.4s						
WATA	**Walderalm**	**107.81**	**27**	*e*P	**Pdif**	**22 15 22.8**	**+11**
	comp=Z,13nm,1.5s						
WATA				*e*P	**PKiKP**	**22 19 24.3**	**+4.7**
	comp=Z,13nm,1.3s						
GAZ	**Gaziantep**	**107.82**	**50**	IAMs_20	IAMs_20	23 03 22.0	
	comp=Z,14µm,21.0s						
OBKA	**Obir**	**107.85**	**30**	*e*P	**Pdif**	**22 15 21.6**	**+9.2**
	comp=Z,15nm,1.6s						
OBKA				P	**PKiKP**	**22 19 25.1**	**+5.5**
	comp=Z,23nm,1.7s						
BFO	**Black Forest**	**107.92**	**25**	IAMs_20	IAMs_20	22 58 19.6	
	comp=Z,14µm,22.0s						
KBA	**Koelnbreinsper**	**108.04**	**28**	*e*P	**PKiKP**	**22 19 16.9**	**-3.1**
	comp=Z,9.6nm,1.5s						
DELO	**Deloro Mine**	**108.05**	**325**	IAMs_20	IAMs_20	23 02 50.0	
	comp=Z,5µm,21.0s						
S39A	**Bolivar**	**108.11**	**311**	IAMs_20	IAMs_20	23 05 49.4	
	comp=Z,8µm,20.0s						
SANVU	**Saraoutou**	**108.12**	**196**	IAMs_20	IAMs_20	22 58 04.0	
	comp=Z,8µm,21.0s						
UGM	**Wanagama**	**108.13**	**137**	IAMs_20	IAMs_20	23 00 21.6	
	comp=Z,10µm,19.0s						
MNAI	**Manna**	**108.14**	**128**	IAMs_20	IAMs_20	23 00 58.5	
	comp=Z,7µm,19.0s						
R40A	**Maddies Statio**	**108.16**	**312**	IAMs_20	IAMs_20	23 05 39.9	
	comp=Z,9µm,20.0s						
P43A	**Skaggs, Pawnee**	**108.16**	**315**	IAMs_20	IAMs_20	23 04 25.0	
	comp=Z,7µm,22.0s						
L48A	**N Adams**	**108.16**	**319**	IAMs_20	IAMs_20	23 04 50.0	
	comp=Z,6µm,21.0s						
O44A	**Mansfield**	**108.17**	**316**	IAMs_20	IAMs_20	23 03 50.3	
	comp=Z,6µm,21.0s						
K50A	**Casco**	**108.23**	**321**	IAMs_20	IAMs_20	23 01 54.6	
	comp=Z,6µm,22.0s						
BCOK	**Bluff Creek, N**	**108.31**	**307**	IAMs_20	IAMs_20	23 11 56.0	
	comp=Z,9µm,19.0s						
BRTR	**Keskin Array B**	**108.47**	**46**	PKiKP	**PKiKP**	**22 19 20.7**	**-0.4**
	comp=Z,1.0nm,0.5s,baz=211,slow=1.5,SNR=2.2						
BRTR				PP	**PP**	**22 19 47.5**	**+0.7**
	comp=Z,6.3nm,1.1s,baz=186,slow=2.5,SNR=7.0						
STU	**Stuttgart**	**108.54**	**25**	IAMs_20	IAMs_20	22 59 22.0	
	comp=Z,12µm,21.0s						
WLF	**Walferdange**	**108.68**	**23**	IAMs_20	IAMs_20	23 03 42.5	
	comp=Z,7µm,18.0s						
SADO	**Sadowa**	**108.78**	**324**	PP	**PP**	**22 19 48.1**	**-0.7**
	comp=Z,6.9nm,0.9s,baz=204,slow=6.5,SNR=4.7						
ARSA	**Arzberg**	**108.80**	**30**	*e*P	**Pdif**	**22 15 25.7**	**+9.1**
	comp=Z,6.9nm,1.3s						
ARSA				P	**PKiKP**	**22 19 22.6**	**+1.3**
	comp=Z,10nm,1.5s						
MNTX	**Cornudas Mount**	**108.80**	**299**	IAMs_20	IAMs_20	23 03 21.8	
	comp=Z,8µm,18.0s						
SRIG	**Santa Rosalia**	**108.83**	**291**	IAMs_20	IAMs_20	22 58 06.4	
	comp=Z,8µm,21.0s						
SMRI	**Semarang**	**108.88**	**136**	IAMs_20	IAMs_20	23 01 04.7	
	comp=Z,7µm,19.0s						
JAGI	**Jajag, Banyuwa**	**108.98**	**140**	IAMs_20	IAMs_20	23 05 45.1	
	comp=Z,6µm,18.0s						
MOA	**Molln**	**109.00**	**29**	*e*P	**Pdif**	**22 15 27.7**	**+10**
	comp=Z,8.1nm,1.8s						
M44A	**Midewin, Midew**	**109.06**	**317**	IAMs_20	IAMs_20	23 06 01.8	
	comp=Z,6µm,22.0s						
BZS	**Buzias**	**109.18**	**35**	⇓P	**PKiKP**	**22 19 23.3**	**+1.3**
CROK	**Carrier**	**109.19**	**307**	IAMs_20	IAMs_20	23 11 43.8	
	comp=Z,6µm,18.0s						
HQIL	**Hanson Quary C**	**109.34**	**317**	IAMs_20	IAMs_20	23 05 35.1	
	comp=Z,6µm,20.0s						
GZR	**Gura Zlata**	**109.36**	**35**	⇑P	PKiKP	22 19 33.0	+11
UCC	**Uccle**	**109.37**	**21**	IAMs_20	IAMs_20	23 01 09.7	
	comp=Z,9µm,18.0s						
EPT	**El Paso**	**109.42**	**298**	IAMs_20	IAMs_20	23 01 44.2	
	comp=Z,11µm,20.0s						
J47A	**Sunmer**	**109.43**	**320**	IAMs_20	IAMs_20	23 07 49.4	
	comp=Z,7µm,20.0s						
GOA	**Goa**	**109.44**	**91**	*i* PP	**PP**	**22 19 53.5**	**-0.1**
CONA	**Conrad Observa**	**109.51**	**30**	*e*P	**PKiKP**	**22 19 27.2**	**+4.5**
	comp=Z,16nm,1.2s						
AMTX	**Amarillo**	**109.58**	**303**	IAMs_20	IAMs_20	23 05 11.4	
	comp=Z,5µm,19.0s						
N41A	**Harden Midland**	**109.61**	**314**	IAMs_20	IAMs_20	23 04 34.2	
	comp=Z,11µm,22.0s						
ILGA	**Ilgaz**	**109.62**	**45**	IAMs_20	IAMs_20	23 04 19.7	
	comp=Z,8µm,21.0s						
LOT	**Lotru**	**109.74**	**36**	⇑P	**PKiKP**	**22 19 28.3**	**+5.0**
GEC2	**GERESS Array S**	**109.75**	**28**	IAMs_20	IAMs_20	23 00 06.1	
	comp=Z,11µm,21.0s						
GERES	**GERESS Array B**	**109.75**	**28**	PKiKP	**PKiKP**	**22 19 22.8**	**-0.4**
	comp=Z,1.9nm,0.8s,baz=204,slow=2.9,SNR=7.1						
GERES				PP	**PP**	**22 19 54.0**	**-1.9**
	comp=Z,6.1nm,1.1s,baz=188,slow=8.1,SNR=5.9						
GERES				PKKPbc	**PKKPbc**	**22 30 25.4**	**-0.8**
	comp=Z,0.7nm,0.8s,baz=26,slow=4.8,SNR=2.7						
P38A	**Dawn**	**109.81**	**312**	IAMs_20	IAMs_20	23 06 08.6	
	comp=Z,10µm,21.0s						
GRA1	**Grafenberg Arr**	**109.89**	**26**	IAMs_20	IAMs_20	22 59 46.7	
	comp=Z,6µm,22.0s						
CKRC	**Cesky Krumlov**	**109.89**	**28**	*e*SKS	**SKSac**	**22 25 59.8**	**+0.5**
CKRC				AMS	AMS	23 00 20.0	
	comp=Z,13µm,20.9s						
ARR	**Arges**	**109.96**	**37**	⇓P	**PKiKP**	**22 19 27.3**	**+3.7**
KHC	**Kasperske Hory**	**109.98**	**28**	*e*PKP	**PKiKP**	**22 19 26.8**	**+3.3**
KHC				*e*PP	**PP**	**22 19 50.0**	**-7.5**
KHC				*e*SKS	**SKSac**	**22 25 56.4**	**-3.3**
KHC				*e*SP	SP	22 29 20.4	-3.0
KHC				*e*PKKP	**PKKPbc**	**22 30 26.5**	**+1.1**
KHC				*e*x	x	22 30 38.5	
KHC				AMS	AMS	22 59 40.0	
	comp=Z,21µm,22.2s						
VOIR		**110.16**	**37**	⇑P	**PKiKP**	**22 19 24.7**	**+0.7**
VOIR		**110.16**	**37**	⇑PKIKP	**PKiKP**	**22 19 24.7**	**+0.7**
PMBI	**Palembang**	**110.22**	**129**	IAMs_20	IAMs_20	23 04 05.4	
	comp=Z,8µm,18.0s						
L42A	**Oliver, Polo**	**110.22**	**316**	IAMs_20	IAMs_20	23 05 26.5	
	comp=Z,6µm,22.0s						
COEN	**Coen**	**110.41**	**171**	IAMs_20	IAMs_20	23 05 44.6	
	comp=Z,9µm,19.0s						
BATI	**Baumata**	**110.43**	**150**	PKKPbc	PKKPbc	22 30 25.8	+2.8
	comp=Z,9.3nm,0.4s,baz=37,slow=5.1,SNR=4.2						
TIRR	**Tirgusor**	**110.50**	**40**	IAMs_20	IAMs_20	23 11 32.8	
	comp=Z,11µm,22.0s						
319A	**Douglas**	**110.52**	**296**	IAMs_20	IAMs_20	23 03 08.2	
	comp=Z,8µm,20.0s						
MLR	**Muntele Rosu**	**110.52**	**38**	⇓P	**PKiKP**	**22 19 30.3**	**+5.6**
MLR	**Muntele Rosu**	**110.52**	**38**	⇓PKIKP	**PKiKP**	**22 19 30.3**	**+5.6**
MLR	**Muntele Rosu**	**110.52**	**38**	IAMs_20	IAMs_20	23 02 58.3	
	comp=Z,7µm,20.0s						
DRGR		**110.57**	**35**	⇑P	**PKiKP**	**22 19 31.9**	**+7.2**
DRGR		**110.57**	**35**	⇑PKIKP	**PKiKP**	**22 19 31.9**	**+7.2**
I45A	**Fountain**	**110.64**	**319**	IAMs_20	IAMs_20	23 08 36.4	
	comp=Z,5µm,18.0s						
TREC	**Trest**	**110.65**	**29**	AMS	AMS	23 01 00.0	
	comp=Z,14µm,19.8s						
121A	**Cookes Peak, D**	**110.68**	**297**	IAMs_20	IAMs_20	23 02 46.5	
	comp=Z,10µm,20.0s						
PSZ	**Piszkesteto**	**110.69**	**32**	IAMs_20	IAMs_20	23 01 31.8	
	comp=Z,9µm,21.0s						
KRUC	**Moravsky**	**110.69**	**30**	*e*PP	**PP**	**22 20 00.6**	**-1.9**
NKC	**Novy Kostel**	**110.70**	**27**	*e*PKIKP	**PKiKP**	**22 19 30.6**	**+5.8**
NKC				MLR	MLR		
	comp=Z,8µm,23.3s						
NKC	**Novy Kostel**	**110.70**	**27**	*e*PKP	**PKiKP**	**22 19 30.6**	**+5.8**
NKC				AMS	AMS	23 00 00.0	
	comp=Z,8µm,23.3s						
KSU1	**Kansas State U**	**110.71**	**309**	IAMs_20	IAMs_20	23 06 02.3	
	comp=Z,8µm,22.0s						
VYHS	**Vyhne**	**110.88**	**31**	*e*P	**Pdif**	**22 15 34.3**	**+8.5**
VYHS				*e*		22 19 26.5	
VYHS				*e*		22 29 39.9	
VYHS				*e*SS	SS	22 35 51.2	+17
VYHS	**Vyhne**	**110.88**	**31**	*e*PDIFF	**Pdif**	**22 15 34.3**	**+8.5**
VYHS				*e*		22 19 26.4	
VYHS				*e*		22 29 39.9	
VYHS				*e*SS	SS	22 35 51.2	+17
L40A	**Anamosa**	**110.90**	**315**	IAMs_20	IAMs_20	23 10 06.3	
	comp=Z,5µm,19.0s						
VRAC	**Vranov**	**110.97**	**30**	*e*PP	**PP**	**22 20 02.8**	**-1.8**
PRU	**Pruhonice**	**111.02**	**28**	*e*SKS	**SKSac**	**22 26 06.0**	**+2.2**
PRU				AMS	AMS	23 00 20.0	
	comp=Z,17µm,22.0s						
PRA	**Prague**	**111.07**	**28**	*e*SKS	**SKSac**	**22 26 01.8**	**-2.2**
PRA				AMS	AMS	23 00 30.0	
	comp=Z,8µm,21.2s						
R32A	**Long Quarter,**	**111.09**	**307**	IAMs_20	IAMs_20	23 13 23.4	
	comp=Z,4µm,18.0s						
MDRS	**Chennai**	**111.13**	**98**	*i* PP	**PP**	**22 20 02.2**	**-3.5**
JFWS	**Jewell Farm**	**111.22**	**316**	IAMs_20	IAMs_20	23 05 55.0	
	comp=Z,6µm,22.0s						
BKNI	**Bangkinang**	**111.38**	**124**	IAMs_20	IAMs_20	23 01 24.8	
	comp=Z,9µm,19.0s						
Y22D	**IRIS PASSCAL I**	**111.48**	**299**	IAMs_20	IAMs_20	23 02 58.7	
	comp=Z,9µm,20.0s						
PVCC	**Panska Ves**	**111.52**	**28**	*e*PKIKP	**PKiKP**	**22 19 28.6**	**+2.3**
PVCC				MLR	MLR		
	comp=Z,10µm,19.3s						
PVCC	**Panska Ves**	**111.52**	**28**	*e*PKP	**PKiKP**	**22 19 28.6**	**+2.3**
PVCC				AMS	AMS	23 00 50.0	
	comp=Z,10µm,19.3s						
I42A	**Draeger Farm,**	**111.53**	**317**	IAMs_20	IAMs_20	23 05 23.0	
	comp=Z,6µm,21.0s						
H43A	**Windswept, Lux**	**111.58**	**318**	IAMs_20	IAMs_20	23 03 51.4	
	comp=Z,6µm,22.0s						
MORC	**Moravsky Berou**	**111.66**	**30**	IAMs_20	IAMs_20	23 01 52.5	
	comp=Z,7µm,22.0s						
BRG	**Berggiesshubel**	**111.67**	**27**	SS	SS	22 35 48.0	+3.9
KRLC	**Kraliky**	**111.71**	**29**	*e*PKIKP	**PKiKP**	**22 19 28.4**	**+1.7**
KRLC				MLR	MLR		
	comp=Z,8µm,21.2s						
KRLC	**Kraliky**	**111.71**	**29**	*e*PKP	**PKiKP**	**22 19 28.4**	**+1.7**
KRLC				AMS	AMS	23 01 30.0	
	comp=Z,8µm,21.2s						
N35A	**Tabor**	**111.74**	**311**	IAMs_20	IAMs_20	23 07 11.6	
	comp=Z,9µm,21.0s						
CLL	**Collm**	**111.83**	**26**	*e*PKiKP	**PKiKP**	**22 19 30.0**	**+3.2**
CLL				*e*PP	**PP**	**22 20 08.0**	**-2.7**
CLL				*e*		22 20 25.0	
CLL				*e*SKSac	**SKSac**	**22 26 09.0**	**+2.0**
CLL				*e*SKKSac	**SKKSac**	**22 27 16.0**	**+5.2**
CLL				*e*Sdif	Sdif	22 27 54.0	+5.1
CLL				*e*PS	PKKPbc	22 29 48.0	-31
CLL				*e*PPS	PPS	22 30 52.0	
CLL				*e*SS	**SS**	**22 35 41.0**	**-5.2**
CLL				*e*SSS	SSS	22 39 54.0	
CLL	**Collm**	**111.83**	**26**	*e*PKIKP	**PKiKP**	**22 19 30.0**	**+3.2**
CLL				*e*		22 20 08.0	
CLL				*e*		22 26 09.0	
CLL	**Collm**	**111.83**	**26**	IAMs_20	IAMs_20	23 00 45.9	
	comp=Z,6µm,22.0s						
DPC	**Dobruska-Polom**	**111.83**	**29**	*e*PKIKP	**PKiKP**	**22 19 28.7**	**+1.7**
DPC				*e*		22 26 08.0	
DPC				MLR	MLR		
	comp=Z,5µm,21.5s						
DPC	**Dobruska-Polom**	**111.83**	**29**	*e*PKP	**PKiKP**	**22 19 28.7**	**+1.7**
DPC				*e*SKS	**SKSac**	**22 26 08.0**	**+0.7**
DPC				AMS	AMS	23 02 00.0	
	comp=Z,5µm,21.5s						
OKC	**Ostrava-Krasne**	**111.89**	**30**	AMS	AMS	22 59 30.0	
	comp=Z,4µm,23.7s						
UPC	**Upice**	**111.89**	**29**	AMS	AMS	23 00 40.0	
	comp=Z,10µm,22.5s						
ANMO	**Albuquerque**	**111.94**	**300**	Pdiff	**Pdif**	**22 15 30.9**	**-0.3**
	comp=Z,0.5nm,0.4s,baz=68,slow=5.4,SNR=1.1						
ANMO				PKiKP	**PKiKP**	**22 19 27.7**	**-0.2**
	comp=Z,2.3nm,0.9s,baz=117,slow=2.3,SNR=2.9						
ANMO				PP	**PP**	**22 20 12.4**	**+0.4**
	comp=Z,4.4nm,0.9s,baz=130,slow=9.8,SNR=4.4						
ANMO				PKKPab	**PKKPab**	**22 30 24.2**	**-2.5**
	comp=Z,3.1nm,0.9s,baz=296,slow=4.2,SNR=4.0						
ANMO	**Albuquerque**	**111.94**	**300**	⇑*i*PKIKP	**PKiKP**	**22 19 27.9**	**0.0**
ANMO				MLR	MLR		
	comp=Z,5µm,16.0s						
ANMO	**Albuquerque**	**111.94**	**300**	IAMs_20	IAMs_20	23 04 00.0	
	comp=Z,7µm,19.0s						
CHVC	**Chvalec**	**111.98**	**29**	*e*SKS	**SKSac**	**22 26 12.2**	**+4.4**
CHVC				AMS	AMS	23 00 40.0	
	comp=Z,10µm,21.9s						
OSTC	**Ostas**	**111.99**	**29**	*e*PKP	**PKiKP**	**22 19 28.7**	**+1.5**
OSTC				AMS	AMS	23 00 40.0	
	comp=Z,9µm,23.1s						
K38A	**Parkersburg**	**112.02**	**314**	IAMs_20	IAMs_20	23 05 56.9	
	comp=Z,7µm,22.0s						
TUC	**Tucson**	**112.03**	**295**	PKiKP	**PKiKP**	**22 19 29.0**	**+1.0**
	baz=143						
TUC	**Tucson**	**112.03**	**295**	IAMs_20	IAMs_20	23 04 15.3	
	comp=Z,7µm,20.0s						
UZH	**Uzhgorod**	**112.06**	**34**	*e*PKIKP	**PKiKP**	**22 19 30.2**	**+2.9**
UZH				*i*		22 26 11.8	
UZH				*i*		22 29 48.4	
UZH				MLR	MLR		
	comp=N,900nm,19.0s						
UZH				MLR	MLR		
	comp=E,800nm,19.0s						
UZH				MLR	MLR		
	comp=Z,400nm,19.0s						
BURAR	**Bucovina Array**	**112.12**	**36**	⇓P	**PKiKP**	**22 19 29.7**	**+2.0**
BURAR	**Bucovina Array**	**112.12**	**36**	⇓PKIKP	**PKiKP**	**22 19 29.7**	**+2.0**
I40A	**Norwalk**	**112.19**	**316**	IAMs_20	IAMs_20	23 07 21.6	
	comp=Z,7µm,21.0s						
N33A	**J Bar K, Exete**	**112.42**	**310**	IAMs_20	IAMs_20	23 08 35.6	
	comp=Z,9µm,20.0s						
PSI	**Prapat**	**112.52**	**120**	PKKPab	PKKPab	22 30 27.4	-0.4
	comp=Z,14nm,0.9s,baz=1.4,slow=2.3,SNR=10						
MILM	**Milestii Mici**	**112.75**	**39**	⇓P	**PKiKP**	**22 19 29.9**	**+1.2**
214A	**Organ Pipe Nat**	**112.81**	**293**	PKiKP	**PKiKP**	**22 19 30.6**	**+1.2**
	baz=142						
E43A	**Lone Tree Farm**	**112.91**	**320**	IAMs_20	IAMs_20	23 04 20.6	
	comp=Z,5µm,21.0s						
L34A	**Svendsen Farm,**	**112.96**	**311**	IAMs_20	IAMs_20	23 06 41.0	
	comp=Z,11µm,22.0s						
KWP	**Kalwaria Pacla**	**113.07**	**33**	IAMs_20	IAMs_20	23 07 15.9	
	comp=Z,5µm,20.0s						
BHUJ	**Bhuj**	**113.24**	**83**	*i* PP	**PP**	**22 20 20.1**	**-1.0**
BHUJ				IAMs_20	IAMs_20	22 55 36.8	
	comp=Z,14µm,22.7s						
BGNE	**Belgrade**	**113.27**	**310**	IAMs_20	IAMs_20	23 09 11.2	
	comp=Z,9µm,20.0s						
KSCO	**Kaye Shedlock'**	**113.36**	**305**	IAMs_20	IAMs_20	23 08 09.5	
	comp=Z,5µm,21.0s						
X18A	**Snowflake**	**113.36**	**297**	IAMs_20	IAMs_20	23 02 14.4	
	comp=Z,9µm,22.0s						
I37A	**Lemond, Waseca**	**113.41**	**314**	IAMs_20	IAMs_20	23 12 28.7	
	comp=Z,5µm,19.0s						
SPX	**San Pedro Mart**	**113.48**	**291**	IAMs_20	IAMs_20	23 06 23.8	
	comp=Z,6µm,19.0s						
HYB	**Hyderabad**	**113.67**	**94**	*i* PP	**PP**	**22 20 24.2**	**+0.1**
HYB				IAMs_20	IAMs_20	22 55 04.8	
	comp=Z,7µm,23.6s						
SDCO	**Great Sand Dun**	**113.71**	**302**	P	**PKiKP**	**22 19 31.3**	**0.0**
	baz=143						
SDCO	**Great Sand Dun**	**113.71**	**302**	IAMs_20	IAMs_20	23 10 54.7	
	comp=Z,6µm,18.0s						
W18A	**Petrified Fore**	**113.72**	**298**	IAMs_20	IAMs_20	23 07 14.9	
	comp=Z,9µm,18.0s						
X16A	**Lo Mia Camp, P**	**114.03**	**296**	IAMs_20	IAMs_20	23 05 31.2	
	comp=Z,7µm,20.0s						
AKH	**Akhalkalaki**	**114.07**	**51**	⇑P	**PKiKP**	**22 19 33.4**	**+1.7**
SPMN	**Marine on St.**	**114.17**	**316**	IAMs_20	IAMs_20	23 06 59.8	
	comp=Z,5µm,20.0s						
SOC	**Sochi**	**114.20**	**48**	*i* PKIKP	**PKiKP**	**22 19 32.5**	**+0.9**
SOC				*e*		22 20 27.2	
SOC				*e*PPP	PPP	22 22 51.2	

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SOC                                  i PS      PKKPbc  22 30 09.8 -1.3
SOC                                  eSS       SS      22 36 16.6 -1.2
SOC                                    MLR     MLR
      comp=Z,4µm,18.0s
ANN   Anapa              114.25  45  eP        Pdif    22 15 43.1 +2.3
ANN                                    pmax    pmax
      comp=Z,86nm,1.1s
ANN                                    pmax    pmax
      comp=Z,81nm,1.2s
S22A  4UR Ranch, Cre     114.35 301    P       PKiKP   22 19 32.8 +0.3
      baz=142
SAUI  Saumlaki           114.47 158    IAMs_20 IAMs_20 23 13 41.7
      comp=Z,10µm,18.0s
ECSD  EROS Data Cent     114.50 312    P       PKPdf   22 19 32.2 -0.1
      baz=145
K31A  O'Neill            114.52 310    IAMs_20 IAMs_20 23 07 59.2
      comp=Z,9µm,22.0s
OGNE  Ogallala           114.63 307    IAMs_20 IAMs_20 23 14 30.2
      comp=Z,5µm,18.0s
KNTN  Kanton             114.65 221    IAMs_20 IAMs_20 23 02 06.2
      comp=Z,8µm,19.0s
GLA   Glamis             114.72 293    IAMs_20 IAMs_20 23 00 49.4
      comp=Z,6µm,22.0s
MVCO  Mesa Verde         114.74 300    IAMs_20 IAMs_20 23 06 46.1
      comp=Z,7µm,20.0s
E38A  The Farm, Brul     114.82 317    IAMs_20 IAMs_20 23 10 19.1
      comp=Z,6µm,21.0s
WUAZ  Wupatki            114.86 297    IAMs_20 IAMs_20 23 02 12.1
      comp=Z,6µm,21.0s
RGN   Rugen              114.87  25    IAMs_20 IAMs_20 23 03 15.3
      comp=Z,6µm,21.0s
HNR   Honiara            114.93 189    IAMs_20 IAMs_20 23 11 32.3
      comp=Z,9µm,18.0s
F36A  Milaca             114.98 316    IAMs_20 IAMs_20 23 06 38.3
      comp=Z,6µm,22.0s
IPM   Ipoh               115.00 122    IAMs_20 IAMs_20 23 15 56.7
      comp=Z,12µm,22.0s
RMX   La Rumorosa        115.03 291    IAMs_20 IAMs_20 23 04 17.9
      comp=Z,5µm,20.0s
IKP   In-Ko-Pah, Jac     115.08 291    P       PKiKP   22 19 35.4 +1.5
      baz=141
PMG   Port Moresby       115.20 175    IAMs_20 IAMs_20 23 08 39.7
      comp=Z,10µm,20.0s
NEY   Neytrino           115.21  50⇓iPKIKP    PKPdf   22 19 33.7 -0.1
PDMCI Parker Dam,Lak     115.33 294    P       PKiKP   22 19 35.0 +0.9
      baz=141,SNR=6.6
ZEI   Tsey               115.36  51  i PKIKP   PKiKP   22 19 34.6 +0.4
ZEI                                    pmax    pmax
      comp=Z,6.0nm,1.3s
ISCO  Idaho Springs      115.39 304    P       PKiKP   22 19 35.2 +0.7
      baz=142
MONP2 Monument Peak      115.43 291    P       PKiKP   22 19 36.1 +1.5
      baz=141
BC3   Big Chuckawall     115.52 293    P       PKiKP   22 19 35.0 +0.3
      baz=141
SMCO  Snowmass           115.55 302    IAMs_20 IAMs_20 23 07 41.3
      comp=Z,5µm,22.0s
PV15  Paradox Valley     115.62 301    IAMs_20 IAMs_20 23 09 28.4
      comp=Z,6µm,18.0s
PV13  Radium Mtn., P     115.64 300    IAMs_20 IAMs_20 23 08 60.0
      comp=Z,7µm,18.0s
KBZ   Khabaz             115.67  50    PKP     PKPdf   22 19 34.3 -0.1
      comp=Z,3.3nm,0.8s,baz=297,slow=6.8,SNR=5.8
KBZ                                    SKP     SKPdf   22 23 08.7 +0.1
      comp=Z,5.1nm,1.0s,baz=185,slow=5.3,SNR=3.6
MUD   Monsted U'grnd     115.68  22  i P       PKiKP   22 19 47.6  +14
MUD   Monsted U'grnd     115.68  22  i P       PKiKP   22 19 47.6  +14
IRM   Iron Mountain      115.74 293    P       PKiKP   22 19 36.1 +1.1
      baz=141,SNR=6.6
PV18  Skein Mesa, Pa     115.76 300    IAMs_20 IAMs_20 23 09 02.9
      comp=Z,7µm,19.0s
KIV   Kislovodsk         115.76  49  ⇓P        PKiKP   22 19 35.1 +0.4
KIV   Kislovodsk         115.76  49  eP        Pdif    22 15 47.9 +0.2
KIV                                  i                 22 19 35.0
KIV                                  e                 22 20 38.4
KIV                                  e                 22 26 24.0
KIV                                  ePS       PKKPab  22 30 19.5  +10
KIV                                  eSS       SS      22 36 41.0 +2.4
KIV                                    pmax    pmax
      comp=Z,42nm,1.1s
KIV                                    MLR     MLR
      comp=Z,22µm,22.0s
KIV   Kislovodsk         115.76  49            PKPdf   22 19 34.6 -0.2
PV07  Paradox Valley     115.78 301    IAMs_20 IAMs_20 23 09 33.6
      comp=Z,7µm,19.0s
PV11  David Mesa, Pa     115.78 300    IAMs_20 IAMs_20 23 09 13.6
      comp=Z,9µm,19.0s
NCK   Nalchik            115.79  50⇑iPKIKP    PKiKP   22 19 36.4 +1.7
109C  Camp Elliot, M     115.79 291    IAMs_20 IAMs_20 23 01 59.9
      comp=Z,5µm,22.0s
PV17  East Wray Mesa     115.81 300    IAMs_20 IAMs_20 23 09 12.3
      comp=Z,8µm,20.0s
PV16  Nyswonger Mesa     115.81 300    IAMs_20 IAMs_20 23 09 13.4
      comp=Z,7µm,19.0s
PV19  Morning Glory      115.84 300    IAMs_20 IAMs_20 23 09 05.2
      comp=Z,7µm,19.0s
PV04  Paradox Valley     115.87 300    IAMs_20 IAMs_20 23 09 24.9
      comp=Z,8µm,21.0s
EYMN  Ely                115.91 318    P       PKiKP   22 19 35.1 +0.3
      baz=146
EYMN  Ely                115.91 318    IAMs_20 IAMs_20 23 13 27.8
      comp=Z,5µm,19.0s
PV14  Lion Creek, Pa     115.91 300    IAMs_20 IAMs_20 23 09 17.0
      comp=Z,7µm,20.0s
PV10  Paradox Valley     115.92 300    IAMs_20 IAMs_20 23 07 22.5
      comp=Z,8µm,18.0s
PV23  Carpenter Ridg     115.97 300    IAMs_20 IAMs_20 23 09 19.5
      comp=Z,8µm,22.0s
XPFO  Pion Flat          116.01 292    IAMs_20 IAMs_20 23 02 17.5
      comp=Z,6µm,21.0s
PFO   Pinyon Flats O     116.01 292    PKP     PKiKP   22 19 36.9 +1.3
      comp=Z,5.0nm,0.9s,baz=175,slow=2.5,SNR=5.0
PFO   Pinyon Flats O     116.01 292    P       PKiKP   22 19 36.9 +1.3
      baz=141
PFO   Pinyon Flats O     116.01 292            PKiKP   22 19 36.0 +0.4
PFO   Pinyon Flats O     116.01 292    IAMs_20 IAMs_20 23 02 17.5
      comp=Z,6µm,21.0s
U15A  North Rim          116.03 297    IAMs_20 IAMs_20 23 07 20.1
      comp=Z,7µm,20.0s
BELC  Belle Mtn. Jos     116.07 292    P       PKiKP   22 19 37.0 +1.3
      baz=141,SNR=8.3
SUSD  Miller             116.07 311    IAMs_20 IAMs_20 23 08 47.3
      comp=Z,12µm,22.0s
F33A  5 Mile Ranch,      116.08 314    IAMs_20 IAMs_20 23 09 58.5
      comp=Z,6µm,20.0s
AKASG Malin Array Be     116.12  37    PKP     PKPdf   22 19 34.2 -0.8
      comp=Z,5.0nm,0.7s,baz=239,slow=1.7,SNR=9.0
AKASG                                  PP      PP      22 20 39.4 -1.7
      comp=Z,3.1nm,0.9s,baz=214,slow=3.5,SNR=4.1
AKASG                                  SKP     SKPdf   22 23 08.1 -1.2
      comp=Z,2.1nm,0.8s,baz=219,slow=1.8,SNR=4.6
AKASG                                  PKKPab  PKKPab  22 30 06.3 -0.6
      comp=Z,2.3nm,0.9s,baz=38,slow=4.1,SNR=6.3
AKBB  Malin Array Si     116.12  37⇓iPKIKP    PKiKP   22 19 35.1  0.0
AKBB                                   MLR     MLR
      comp=Z,3µm,20.0s
AKBB  Malin Array Si     116.12  37            PKPdf   22 19 34.8 -0.2
AKBB                                   IAMs_20 IAMs_20 23 18 18.5
      comp=Z,13µm,22.0s
N23A  Red Feather La     116.40 304    P       PKiKP   22 19 36.6 +0.2
      baz=142
GMRC  Granite Mounta     116.50 293    P       PKiKP   22 19 37.4 +0.9
      baz=141,SNR=9.2
GROC  Groznyy            116.53  52  eP        Pdif    22 15 51.9 +0.9
GROC                                 i                 22 19 37.4
GROC                                 e                 22 20 45.0
GROC                                 e                 22 26 44.3
GROC                                   pmax    pmax
      comp=Z,10.0nm,0.5s
GOF   Gofitskoye         116.80  49⇑ePKIKP    PKiKP   22 19 40.1 +3.5
GOF                                    pmax    pmax
      comp=Z,27nm,1.5s
PBA   Port Blair         116.86 110  i PP      PP      22 20 45.7 -0.6
HEC   Hector,Ludlow      116.88 293    P       PKiKP   22 19 37.7 +0.5
      baz=141
CIS   Catalina Islan     116.89 290    P       PKiKP   22 19 39.0 +1.8
      baz=140
O20A  White River Ci     116.90 302    P       PKPdf   22 19 36.6 -0.6
      baz=141
O20A  White River Ci     116.90 302    IAMs_20 IAMs_20 23 07 36.2
      comp=Z,8µm,18.0s
SUW   Suwalki            117.04  31  eP        PKPdf   22 19 32.3 -4.4
SUW   Suwalki            117.04  31    IAMs_20 IAMs_20 23 18 20.0
      comp=Z,11µm,21.0s
B35A  Bob, Littlefor     117.10 317    IAMs_20 IAMs_20 23 09 40.3
      comp=Z,6µm,21.0s
MAK   Makhachkala        117.11  53  eP        Pdif    22 15 57.9 +4.3
MAK                                  i                 22 19 36.2
MAK                                  e                 22 20 46.8
MAK                                  ePS       PKKPdf  22 30 33.8 +5.3
MAK                                    pmax    pmax
      comp=Z,237nm,1.3s
BFSC  Mount Baldy Ra     117.13 291    P       PKiKP   22 19 38.2 +0.4
      baz=140
SNCC  San Nicolas Is     117.36 289    IAMs_20 IAMs_20 23 05 51.4
      comp=Z,4µm,20.0s
Q16A  Castle Valley      117.39 299            PKiKP   22 19 38.3 +0.1
D32A  Dogwood Acres,     117.42 314    IAMs_20 IAMs_20 23 16 01.8
      comp=Z,5µm,19.0s
GSC   Goldstone, Bar     117.49 293    P       PKiKP   22 19 38.9 +0.5
      baz=140,SNR=6.9
GSC   Goldstone, Bar     117.49 293    IAMs_20 IAMs_20 23 10 06.8
      comp=Z,5µm,20.0s
SHOC  Shoshone, Teco     117.67 294    P       PKiKP   22 19 39.5 +0.9
      baz=140
HRA   Herat              117.80  69            PKiKP   22 19 39.8 +0.6
EDW2  Edwards Air Fo     117.80 292    P       PKPdf   22 19 38.5 -0.4
      baz=140,SNR=18
AGMN  Agassiz Nation     117.89 316    P       PKPdf   22 19 38.2 -0.3
      baz=144
OSI   Osito Audit: C     117.98 291    IAMs_20 IAMs_20 23 04 07.7
      comp=Z,5µm,22.0s
K22A  Casper             118.04 305    P       PKPdf   22 19 38.3 -1.0
      baz=141
K22A  Casper             118.04 305    IAMs_20 IAMs_20 23 11 16.3
      comp=Z,6µm,19.0s
RSSD  Black Hills        118.05 308    P       PKPdf   22 19 38.3 -1.0
      baz=141
RSSD  Black Hills        118.05 308    PKIKP   PKPdf   22 19 38.8 -0.6
RSSD                                   MLR     MLR
      comp=Z,10µm,20.0s
RSSD  Black Hills        118.05 308            PKPdf   22 19 38.8 -0.6
RSSD  Black Hills        118.05 308    IAMs_20 IAMs_20 23 11 43.4
      comp=Z,10µm,20.0s
LRMC  Laurel Mtn Rad     118.09 292    P       PKiKP   22 19 39.8 +0.1
      baz=140,SNR=7.1
PRN   Pahroc Range       118.19 296    IAMs_20 IAMs_20 23 10 46.4
      comp=Z,6µm,18.0s
DGPR  DIGLIPUR           118.23 109  i PP      PP      22 20 56.2 +0.4
GEYT  Alibeck            118.35  64    PKP     PKiKP   22 19 40.2 +0.3
      comp=Z,2.4nm,0.8s,baz=243,slow=4.7,SNR=3.3
GEYT  Alibeck            118.35  64            PKiKP   22 19 40.3 +0.4
FURC  Furnace Creek,     118.41 294    P       PKiKP   22 19 41.6 +1.7
      baz=140
MPMC  Manual Prospec     118.43 293    P       PKiKP   22 19 40.6 +0.2
      baz=140
TPNV  Topopah Spring     118.46 294    P       PKiKP   22 19 40.9 +0.6
      baz=140
E28A  Huff               118.51 312    IAMs_20 IAMs_20 23 10 06.6
      comp=Z,10µm,22.0s
ISA   Isabella, Lake     118.65 292    P       PKiKP   22 19 41.1 +0.5
      baz=140,SNR=13
ISA   Isabella, Lake     118.65 292    PKIKP   PKPdf   22 19 40.5 -0.1
ISA                                    MLR     MLR
      comp=Z,6µm,18.0s
ISA   Isabella, Lake     118.65 292    PKPdf   PKPdf   22 19 40.5 -0.1
ISA                                    IAMs_20 IAMs_20 23 09 44.4
      comp=Z,6µm,18.0s
PKM   Mcpherson Peak     118.77 290    P       PKiKP   22 19 42.0 +1.0
      baz=140
NACGM Naroch             118.89  33⇑iPKP      PKiKP   22 19 40.8 +0.5
NACGM                              ⇑iPKP      PKiKP   22 19 40.8 +0.5
NACGM                              ⇑iPKP      PKiKP   22 19 40.8 +0.5
NACGM                                i PP      PP      22 21 01.3 +1.0
NACGM                                i PPP     PPP     22 23 33.0
NACGM                                i SKS     SKSdf   22 26 39.5  -11
NACGM                                i SKKS            22 29 10.2
NACGM                                i PS      PKKPdf  22 30 44.3  +19
NACGM                                i SS      SS      22 37 21.7 +3.0
NACGM                                i SSS     SSS     22 42 18.1
NACGM                                i LQ      LQ      23 01 04.1
NACGM                                i LR      LR      23 13 05.9
MNK   Minsk              118.89  34  ePKIKP    PKiKP   22 19 45.0 +4.7
MNK                                  e                 22 21 06.0
MNK                                  e                 22 37 16.0
MNK   Minsk              118.89  34  i PKP     PKiKP   22 19 41.8 +1.4
      comp=E,4.0nm,1.4s
MNK                                  i PKP     PKiKP   22 19 41.8 +1.4
      comp=N,32nm,1.6s
MNK                                  i PKP     PKiKP   22 19 41.8 +1.4
      comp=Z,38nm,1.1s
MNK                                  i pPKP    pPKPdf  22 19 45.2 -0.6
MNK                                  i PP      PP      22 21 02.0 +1.7
MNK                                  i SKP     SKPdf   22 23 17.2 +2.8
MNK                                  i PKS             22 23 18.5
MNK                                  i PPP     PPP     22 23 31.9
MNK                                  i SKS     SKSdf   22 26 53.9 +3.1
MNK                                  i PS      PS      22 30 48.7 +1.9
MNK                                  i SS      SS      22 37 22.4 +3.6
MNK                                  i SKKS    SKKSdf  22 37 37.8 +1.3
MNK                                  i SSS     SSS     22 41 46.3
MNK                                  i LQ      LQ      23 03 52.4
MNK                                  i LR      LR      23 09 51.1
MNK                                  i LRM     MLR     23 12 26.1
      comp=N,2µm,16.6s
MNK                                  i LRM     MLR     23 12 27.0
      comp=E,174nm,17.6s
MNK                                  i LRM     MLR     23 12 27.3
      comp=Z,2µm,19.2s
CWC   Cottonwood Cre     119.03 293    P       PKiKP   22 19 41.5  0.0
      baz=140
SPR3  Spring Creek 3     119.04 297    IAMs_20 IAMs_20 23 08 22.7
      comp=Z,6µm,20.0s
MDND  Maddock            119.05 313    IAMs_20 IAMs_20 23 10 15.9
      comp=Z,7µm,22.0s
GRAC  Grapevine Rang     119.08 294    P       PKiKP   22 19 42.3 +0.9
      baz=140
IIGN  Ignalina           119.10  32  eP        PKiKP   22 19 41.9 +1.2
R11A  Troy Canyon, C     119.18 296    IAMs_20 IAMs_20 23 11 10.6
      comp=Z,5µm,18.0s
DUG   Dugway, Tooele     119.19 299    P       PKPdf   22 19 41.4 -0.1
      baz=140
DUG   Dugway, Tooele     119.19 299    IAMs_20 IAMs_20 23 15 08.7
      comp=Z,5µm,19.0s
SMMC  Simmler            119.19 291    P       PKiKP   22 19 42.9 +1.3
      baz=140
ISAL  Salakas            119.26  32  eP        PKiKP   22 19 41.9 +0.9
ULM   Lac du Bonnet      119.46 317    PKP     PKPdf   22 19 39.7 -1.8
      comp=Z,9.1nm,0.8s,baz=169,slow=1.8,SNR=14
ULM                                    PP      PP      22 20 60.0 -4.3
      comp=Z,32nm,1.1s,baz=136,slow=6.3,SNR=6.1
ULM                                    SKP     SKPdf   22 23 13.1 -2.7
      comp=Z,2.5nm,0.6s,baz=103,slow=1.6,SNR=2.0
ULM                                    PKKPbc  PKKPbc  22 29 51.9 -0.7
      comp=Z,3.1nm,1.0s,baz=310,slow=6.5,SNR=3.1
BW06  Boulder Array      119.56 303    P       PKiKP   22 19 42.4  0.0
      baz=140
BW06  Boulder Array      119.56 303    IAMs_20 IAMs_20 23 10 26.5
      comp=Z,7µm,19.0s
PDAR  Pinedale Array     119.56 303    PKP     PKPdf   22 19 40.3 -2.0
      comp=Z,2.6nm,0.5s,baz=138,slow=5.1,SNR=27
PDAR                                   SKP     SKPdf   22 23 15.0 -1.5
      comp=Z,0.9nm,0.5s,baz=134,slow=5.5,SNR=5.9
PDAR                                   PKKPbc  PKKPab  22 29 53.2  0.0
      comp=Z,0.4nm,0.6s,baz=319,slow=2.6,SNR=2.7
PDAR  Pinedale Array     119.56 303            PKPdf   22 19 41.4 -0.9
TIN   Tinemaha, Big      119.57 293    P       PKiKP   22 19 43.6 +1.2
      baz=139
FAKI  Fak Fak            119.59 157    IAMs_20 IAMs_20 23 22 08.6
      comp=Z,10µm,21.0s
PAGB  Antelope Grade     119.64 291    IAMs_20 IAMs_20 23 06 00.6
      comp=Z,5µm,18.0s
VORD  Divnogorie         119.98  42  ePKIKP    PKPdf   22 19 41.8 -0.7
VORD                                 e                 22 21 08.8
VORD                                   pmax    pmax
      comp=Z,10.0nm,0.9s
VSR   Storozhevoye       120.13  42  ePKIKP    PKPdf   22 19 42.2 -0.6
VSR                                  e                 22 21 09.8
VSR                                    pmax    pmax
      comp=Z,20nm,1.0s
VSR                                    MLR     MLR
      comp=Z,3µm,23.0s
PMPB  Monarch Peak       120.30 291    PKPdf   PKiKP   22 19 44.7 +0.9
PMPB                                   IAMs_20 IAMs_20 23 05 59.1
      comp=Z,6µm,19.0s
AHID  Auburn Hatcher     120.30 302    IAMs_20 IAMs_20 23 10 36.0
      comp=Z,6µm,20.0s
NB2   NORSAR Subarra     120.32  21    PKPdf   PKPdf   22 19 42.9  0.0
      comp=Z,66nm,2.0s,baz=202,slow=1.9
NB2   NORSAR Subarra     120.32  21    PKPdf   PKPdf   22 19 42.9  0.0
      baz=202,slow=1.9
NOA   NORSAR Array B     120.32  21    PKP     PKPdf   22 19 41.8 -1.1
      comp=Z,7.0nm,1.0s,baz=206,slow=2.0,SNR=8.4
NOA                                    SKP     SKPdf   22 23 18.2 +1.1
      comp=Z,3.9nm,1.0s,baz=202,slow=1.8,SNR=5.4
NOA                                    PKKPbc  PKKPbc  22 29 49.5 -0.2
      comp=Z,2.9nm,1.0s,baz=28,slow=3.1,SNR=4.3
OMMB  Old Mammoth Mi     120.40 293    IAMs_20 IAMs_20 23 05 02.7
      comp=Z,6µm,22.0s
MDPB  Devils Postpil     120.45 293    IAMs_20 IAMs_20 23 05 15.2
      comp=Z,6µm,22.0s
RABL  Rabaul             120.50 180    IAMs_20 IAMs_20 23 14 52.4
      comp=Z,10µm,20.0s
LHV   Little Huntoon     120.61 294    IAMs_20 IAMs_20 23 12 28.5
      comp=Z,5µm,18.0s
REDW  Red Top Meadow     120.63 303    IAMs_20 IAMs_20 23 19 15.8
      comp=Z,6µm,18.0s
NVAR  Mina Array Bea     120.64 294    PKP     PKiKP   22 19 44.6 -0.1
      comp=Z,2.8nm,0.5s,baz=144,slow=2.8,SNR=23
NVAR                                   PP      PP      22 21 12.6 -0.4
      comp=Z,5.6nm,0.9s,baz=147,slow=8.3,SNR=4.5
NVAR                                   PKKPbc  PKKPab  22 29 50.6 +1.5
      comp=Z,0.3nm,0.4s,baz=304,slow=2.9,SNR=4.1
NVAR  Mina Array Bea     120.64 294            PKPdf   22 19 44.1 -0.4
SNOW  Snow King Moun     120.66 303    IAMs_20 IAMs_20 23 10 46.6
      comp=Z,7µm,20.0s
LOHW  Long Hollow        120.70 303    IAMs_20 IAMs_20 23 11 08.7
      comp=Z,8µm,19.0s
ELK   Elko               120.81 298    PKP     PKiKP   22 19 45.1 +0.2
      comp=Z,7.5nm,0.8s,baz=123,slow=3.6,SNR=15
ELK                                    PP      PP      22 21 14.2 +0.1
      comp=Z,10nm,1.1s,baz=263,slow=2.3,SNR=4.0
ELK   Elko               120.81 298    IAMs_20 IAMs_20 23 09 56.7
      comp=Z,6µm,20.0s
RYN   Ryan               120.91 294    IAMs_20 IAMs_20 23 12 40.2
      comp=Z,5µm,18.0s
LAO   LASA Array         121.01 308    P       PKPdf   22 19 44.3 -0.4
      baz=140,SNR=7.4
LAO   LASA Array         121.01 308    IAMs_20 IAMs_20 23 13 15.8
      comp=Z,9µm,19.0s
SAO   San Andreas Ge     121.05 291    PKIKP   PKiKP   22 19 46.4 +1.2
SAO                                    MLR     MLR
      comp=Z,6µm,21.0s
SAO   San Andreas Ge     121.05 291    PKPdf   PKiKP   22 19 46.4 +1.2
SAO                                    IAMs_20 IAMs_20 23 04 13.1
      comp=Z,6µm,21.0s
FLWY  Flagg Ranch        121.10 303    IAMs_20 IAMs_20 23 13 14.3
      comp=Z,8µm,19.0s
VRH   Novokhopyorsk      121.11  44  ePKIKP    PKPdf   22 19 44.3 -0.3
VRH                                  e                 22 21 18.8
VRH                                    pmax    pmax
      comp=Z,40nm,0.7s
VRH                                    MLR     MLR
      comp=Z,4µm,20.0s
LPSR  Galich'ya Gora     121.14  41  ePKIKP    PKPdf   22 19 44.6  0.0
LPSR                                 e                 22 21 15.5
LPSR                                   pmax    pmax
      comp=Z,20nm,1.1s
LPSR                                   MLR     MLR
      comp=Z,4µm,19.0s
RLMT  Red Lodge          121.21 305    P       PKPdf   22 19 45.0 -0.4
      baz=139,SNR=6.0
RLMT  Red Lodge          121.21 305    IAMs_20 IAMs_20 23 14 03.2
      comp=Z,8µm,19.0s
H17A  Grant Village      121.28 304    P       PKiKP   22 19 46.2 +0.5
      baz=139
WAKR  Walker             121.29 293    IAMs_20 IAMs_20 23 05 45.4
      comp=Z,6µm,21.0s
SIJI  Sorong             121.35 156    PKP     PKPdf   22 19 46.5  0.0
      comp=Z,10nm,0.6s,baz=24,slow=12,SNR=4.8
CMB   Columbia Colle     121.44 292    IAMs_20 IAMs_20 23 05 18.3
      comp=Z,7µm,21.0s
DGMT  Dagmar             121.48 311    P       PKiKP   22 19 45.7  0.0
      baz=140,SNR=6.0
DGMT  Dagmar             121.48 311    IAMs_20 IAMs_20 23 12 16.1
      comp=Z,9µm,22.0s
KBL   Kabul              121.58  74    PKIKP   PKPdf   22 19 45.7 -0.7
KBL                                    MLR     MLR
      comp=Z,18µm,22.0s
KBL   Kabul              121.58  74            PKPdf   22 19 45.7 -0.7
VSU   Vasula             121.88  30  eP        PKiKP   22 19 46.2 +0.2
VSU   Vasula             121.88  30⇓ePKIKP    PKPdf   22 19 44.9 -1.0
TNTI  Ternate            121.93 151    IAMs_20 IAMs_20 23 21 02.0
      comp=Z,5µm,20.0s
RUBR  Rubicon Trail      122.07 293    IAMs_20 IAMs_20 23 05 57.1
      comp=Z,5µm,20.0s
PAHR  Pah Rah Range      122.16 294    IAMs_20 IAMs_20 23 13 46.4
      comp=Z,5µm,18.0s
OBN   Obninsk            122.28  38⇓iPKIKP    PKiKP   22 19 47.3 +0.4
OBN                                  e                 22 21 22.0
OBN                                  e                 22 26 54.3
OBN                                    pmax    pmax
      comp=Z,98nm,1.7s
OBN                                    MLR     MLR
      comp=Z,2µm,19.0s
OBN   Obninsk            122.28  38            PKiKP   22 19 46.8 -0.1
AFDM  Forest Hills D     122.42 293    IAMs_20 IAMs_20 23 05 19.3
      comp=Z,5µm,22.0s
HLID  Hailey             122.50 301    P       PKiKP   22 19 48.5 +0.5
      baz=138,SNR=9.2
HLID  Hailey             122.50 301    IAMs_20 IAMs_20 23 12 12.4
      comp=Z,6µm,20.0s
MANU  Manus Island       122.52 175    IAMs_20 IAMs_20 23 20 56.9
      comp=Z,8µm,20.0s
BOZ   Bozeman (W)        122.67 304    P       PKiKP   22 19 48.3  0.0
      baz=138,SNR=10
BOZ   Bozeman (W)        122.67 304    IAMs_20 IAMs_20 23 19 46.8
      comp=Z,6µm,18.0s
BEKR  Beckworth          122.78 294    IAMs_20 IAMs_20 23 06 44.8
      comp=Z,6µm,20.0s
MCCM  Marconi Confer     122.84 291    IAMs_20 IAMs_20 23 08 46.4
      comp=Z,5µm,19.0s
DLMT  Dillon             122.95 303    IAMs_20 IAMs_20 23 14 10.4
      comp=Z,6µm,20.0s
MFID  Camas Ranch        123.09 300            PKiKP   22 19 49.8 +0.7
MFID                                   IAMs_20 IAMs_20 23 13 02.9
      comp=Z,6µm,21.0s
MOS   Moscow             123.15  38  i PKIKP   PKPdf   22 19 48.3 -0.1
MOS                                  e                 22 21 34.1
MOS                                  ePPP      PPP     22 24 13.7
MOS                                    pmax    pmax
      comp=Z,48nm,0.8s
ORV   Oroville           123.15 293    IAMs_20 IAMs_20 23 05 40.5
      comp=Z,6µm,22.0s
MYLDM Lahad Datu         123.19 139            PKiKP   22 19 50.4 +0.3
NIL   Nilore             123.24  78    PKIKP   PKiKP   22 19 49.7 +0.1
NIL                                    MLR     MLR
      comp=Z,29µm,21.0s
NIL   Nilore             123.24  78            PKiKP   22 19 49.7 +0.1
GDXM  Geysers            123.28 291    IAMs_20 IAMs_20 23 09 14.1
      comp=Z,7µm,19.0s
SFJD  Kangerlussuaq      123.34 350    PKP     PKPdf   22 19 46.7 -1.7
      comp=Z,40nm,1.1s,baz=126,slow=2.3,SNR=8.0
SFJD  Kangerlussuaq      123.34 350  i P       PKiKP   22 19 48.8 +0.1
SFJD  Kangerlussuaq      123.34 350    PKIKP   PKiKP   22 19 49.0 +0.3
SFJD                                   MLR     MLR
      comp=Z,6µm,20.0s
SFJD  Kangerlussuaq      123.34 350            PKiKP   22 19 49.0 +0.3
SFJD  Kangerlussuaq      123.34 350    IAMs_20 IAMs_20 23 18 29.8
      comp=Z,6µm,20.0s
SFJD  Kangerlussuaq      123.34 350  i P       PKiKP   22 19 48.8 +0.1
DDI   Dehra Dun          123.44  84  i PP      PP      22 21 31.4 -0.3
SMLA  Simla              123.55  83  i PP      PP      22 21 30.5 -1.8
HOPS  Hopland Field      123.56 291    IAMs_20 IAMs_20 23 09 20.6
      comp=Z,7µm,18.0s
EGMT  Eagleton           123.60 307    P       PKiKP   22 19 50.4 +0.4
      baz=138
O03E  Paynes Creek       123.85 293    P       PKPdf   22 19 50.1 -0.3
      baz=137,SNR=38
DHRM  DHARAMSHALA        123.90  81  i PP      PP      22 21 35.1 +0.1
FINES FINESS Array B     124.19  28    PKP     PKPdf   22 19 49.1 -1.1
      comp=Z,15nm,0.5s,baz=148,slow=2.2,SNR=53
FINES                                  SKP     SKPdf   22 23 24.0 -0.4
      comp=Z,9.8nm,0.9s,baz=255,slow=5.3,SNR=4.8
FINES                                  PKKPab  PKKPab  22 29 32.1 +0.2
      comp=Z,4.4nm,1.0s,baz=32,slow=5.4,SNR=1.6
FINES FINESS Array B     124.19  28            PKPdf   22 19 48.9 -1.3
FIA1  FINESS Array S     124.19  28            PKPdf   22 19 49.2 -1.0
MOD   Modoc Plateau      124.24 296    IAMs_20 IAMs_20 23 08 28.4
      comp=Z,5µm,21.0s
O02D  Mt. Diablo Mer     124.28 292    P       PKiKP   22 19 52.3 +0.8
      baz=137,SNR=15
KCPM  Cahto Peak         124.34 291    IAMs_20 IAMs_20 23 09 34.1
      comp=Z,5µm,20.0s
BELG  Belogornoye        124.39  46    PKP     PKPdf   22 19 50.4 -0.5
      comp=Z,48nm,0.9s,baz=265,slow=1.3,SNR=12
BELG                                   SKP     SKPdf   22 23 24.3 -0.7
      comp=Z,60nm,1.0s,baz=296,slow=0.6,SNR=5.2
BELG  Belogornoye        124.39  46d iPKIKP   PKiKP   22 19 51.1 -0.1
ICESG Greenland Ices     124.58 355  i P       PKiKP   22 19 51.9 +0.4
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ICESG				IAmb	IAmb	22 19 54.7	
	comp=Z,51nm,0.9s						
MSO	**Missoula**	**124.67**	**304**	P	**PKPdf**	**22 19 51.4**	**-0.4**
	baz=136						
MSO	**Missoula**	**124.67**	**304**	IAMs_20	IAMs_20	23 16 19.6	
	comp=Z,8µm,19.0s						
N02D	**Trinity Center**	**124.81**	**293**	P	**PKiKP**	**22 19 52.5**	**0.0**
	baz=136,SNR=34						
BMO	**Blue Mountains**	**124.86**	**300**	IAMs_20	IAMs_20	23 12 14.9	
	comp=Z,6µm,20.0s						
M04C	**Macdoel**	**124.94**	**294**	P	**PKPdf**	**22 19 52.5**	**0.0**
	baz=136,SNR=23						
K05A	**Summer Lake**	**125.14**	**296**		**PKiKP**	**22 19 53.9**	**+0.6**
K05A				IAMs_20	IAMs_20	23 10 31.2	
	comp=Z,5µm,20.0s						
M02C	**Callahan**	**125.19**	**293**	P	**PKiKP**	**22 19 53.4**	**+0.1**
	baz=136,SNR=31						
KHMM	**Horse Mountain**	**125.28**	**292**	IAMs_20	IAMs_20	23 08 40.9	
	comp=Z,5µm,21.0s						
FFC	**Flin Flon**	**125.29**	**317**	PKIKP	**PKPdf**	**22 19 52.7**	**+0.1**
FFC				MLR	MLR		
	comp=Z,4µm,21.0s						
FFC	**Flin Flon**	**125.29**	**317**		**PKPdf**	**22 19 52.7**	**+0.1**
FFC	**Flin Flon**	**125.29**	**317**	IAMs_20	IAMs_20	23 14 02.8	
	comp=Z,4µm,21.0s						
YBH	**Yreka Blue Hor**	**125.36**	**294**	PKP	**PKPdf**	**22 19 52.6**	**-0.7**
	comp=Z,9.7nm,0.8s,baz=113,slow=2.2,SNR=12						
JCC	**Jacoby Creek,**	**125.39**	**292**	IAMs_20	IAMs_20	23 10 10.0	
	comp=Z,4µm,19.0s						
I07A	**Izee**	**125.41**	**298**	IAMs_20	IAMs_20	23 15 41.2	
	comp=Z,5µm,19.0s						
JTMT	**Jette**	**125.49**	**304**	IAMs_20	IAMs_20	23 15 43.4	
	comp=Z,9µm,20.0s						
L04D	**Klamath Falls**	**125.50**	**294**	P	**PKPdf**	**22 19 53.6**	**0.0**
	baz=136,SNR=13						
FCC	**Fort Churchill**	**125.50**	**324**	PKIKP	**PKPdf**	**22 19 52.1**	**-0.7**
FCC				MLR	MLR		
	comp=Z,6µm,21.0s						
FCC	**Fort Churchill**	**125.50**	**324**		**PKPdf**	**22 19 52.1**	**-0.7**
FCC				IAMs_20	IAMs_20	23 10 11.4	
	comp=Z,6µm,21.0s						
ILULI	**Ilulissat**	**125.54**	**350**	*i* P	**PKPdf**	**22 19 52.6**	**0.0**
	comp=Z,43nm,0.9s						
ILULI	**Ilulissat**	**125.54**	**350**	PKIKP	**PKiKP**	**22 19 52.8**	**-0.2**
ILULI				MLR	MLR		
	comp=Z,7µm,20.0s						
ILULI	**Ilulissat**	**125.54**	**350**		**PKiKP**	**22 19 52.8**	**-0.2**
ILULI				IAMs_20	IAMs_20	23 05 42.9	
	comp=Z,7µm,20.0s						
ILULI	**Ilulissat**	**125.54**	**350**	*i* P	**PKPdf**	**22 19 52.6**	**0.0**
ILULI				IAmb	IAmb	22 19 58.5	
	comp=Z,43nm,0.9s						
BELO	**BELONIA**	**125.58**	**101**	*i* PP	PP	22 21 46.0	+0.2
F10A	**Beach Ranch, E**	**125.63**	**301**	IAMs_20	IAMs_20	23 16 47.2	
	comp=Z,4µm,20.0s						
J05D	**Fort Rock, OR**	**125.71**	**296**	P	**PKiKP**	**22 19 54.5**	**+0.1**
	baz=136,SNR=23						
CM31	**Chiang Mai Arr**	**125.80**	**111**		**PKPdf**	**22 19 54.8**	**0.0**
CMAR	**Chiang Mai Arr**	**125.80**	**111**	PKP	**PKPdf**	**22 19 54.5**	**-0.2**
	comp=Z,16nm,1.0s,baz=232,slow=3.8,SNR=46						
CMAR				SKKPbc	SKKPbc	22 33 18.2	+2.4
	comp=Z,1.1nm,0.4s,baz=28,slow=4.1,SNR=2.2						
CMAR	**Chiang Mai Arr**	**125.80**	**111**	*c i*PKIKP	**PKiKP**	**22 19 55.2**	**+0.1**
CMAR				pmax	pmax		
	comp=Z,16nm,1.0s						
CMAR	**Chiang Mai Arr**	**125.80**	**111**		**PKPdf**	**22 19 53.9**	**-0.8**
SAIH	**SAIHA**	**125.83**	**103**	*i* PP	PP	22 21 47.4	-0.3
PINE	**Pine Mountain**	**125.92**	**297**	IAMs_20	IAMs_20	23 08 56.0	
	comp=Z,6µm,22.0s						
AGT	**Agartala**	**125.97**	**100**	*i* PP	PP	22 21 48.3	-0.1
G08A	**Pilot Rock**	**126.00**	**299**	IAMs_20	IAMs_20	23 11 47.9	
	comp=Z,7µm,21.0s						
CHTO	**Chiang Mai**	**126.10**	**111**	PKIKP	**PKPdf**	**22 19 55.0**	**-0.3**
CHTO				MLR	MLR		
	comp=Z,22µm,20.0s						
CHTO	**Chiang Mai**	**126.10**	**111**		**PKPdf**	**22 19 55.0**	**-0.3**
HUMO	**Hull Mountain**	**126.11**	**294**	IAMs_20	IAMs_20	23 07 26.0	
	comp=Z,5µm,20.0s						
J04D	**Umpqua Nationa**	**126.13**	**295**	P	**PKiKP**	**22 19 55.6**	**+0.3**
	baz=136,SNR=11						
L02E	**Cave Junction**	**126.13**	**294**	P	**PKiKP**	**22 19 55.6**	**+0.5**
	baz=136,SNR=17						
E09A	**Wood Farm, Sta**	**126.46**	**301**	IAMs_20	IAMs_20	23 12 00.2	
	comp=Z,7µm,22.0s						
UBPT	**Khong Chiam**	**126.48**	**120**		**PKPdf**	**22 19 55.6**	**-0.4**
I05D	**Terrebonne, OR**	**126.52**	**297**	P	**PKiKP**	**22 19 56.3**	**+0.4**
	baz=135,SNR=9.0						
K02D	**Willamette Mer**	**126.55**	**294**	P	**PKiKP**	**22 19 56.0**	**0.0**
	baz=135,SNR=21						
I04A	**Tendick Farm,**	**126.68**	**296**	P	**PKPdf**	**22 19 55.4**	**-0.3**
	baz=135,SNR=13						
E08A	**Dider Farm, El**	**126.89**	**300**	IAMs_20	IAMs_20	23 26 25.6	
	comp=Z,6µm,20.0s						
F07A	**Phinny Hill Vi**	**126.90**	**299**	IAMs_20	IAMs_20	23 26 25.9	
	comp=Z,7µm,20.0s						
J01E	**Myrtle Point**	**127.01**	**294**	P	**PKiKP**	**22 19 57.5**	**+0.8**
	baz=135						
HAWA	**Hanford**	**127.06**	**300**	IAMs_20	IAMs_20	23 13 52.0	
	comp=Z,6µm,20.0s						
I03D	**Drain, OR**	**127.09**	**295**	P	**PKiKP**	**22 19 57.2**	**+0.3**
	baz=135						
G05D	**Wamic, OR**	**127.14**	**298**	P	**PKiKP**	**22 19 57.3**	**+0.3**
	baz=135						
GTK	**Tadong**	**127.15**	**95**	*i* PP	PP	22 21 53.4	-3.2
H04A	**Detroit Lake**	**127.19**	**297**	PKPdf	**PKPdf**	**22 19 56.5**	**-0.1**
H04A				IAMs_20	IAMs_20	23 26 32.4	
	comp=Z,6µm,21.0s						
NEW	**Newport**	**127.20**	**303**	PKP	**PKPdf**	**22 19 56.5**	**0.0**
	comp=Z,6.2nm,0.8s,baz=333,slow=1.6,SNR=8.6						
NEW	**Newport**	**127.20**	**303**	P	**PKiKP**	**22 19 56.8**	**-0.2**
	baz=135,SNR=7.4						
D08A	**Wollman Farm,**	**127.22**	**301**	IAMs_20	IAMs_20	23 18 02.3	
	comp=Z,5µm,20.0s						
E07A	**Sunnyside**	**127.33**	**300**	IAMs_20	IAMs_20	23 09 38.2	
	comp=Z,7µm,21.0s						
H04D	**Lebanon**	**127.36**	**296**	P	**PKiKP**	**22 19 58.5**	**+1.1**
	baz=135,SNR=7.2						
C09A	**Chrisman Ranch**	**127.43**	**302**	IAMs_20	IAMs_20	23 26 20.8	
	comp=Z,6µm,19.0s						
AKTO	**Aktyubinsk**	**127.48**	**54**	PKP	**PKiKP**	**22 19 57.2**	**-0.2**
	comp=Z,32nm,1.0s,baz=198,slow=3.2,SNR=27						
AKTO				SKPab	SKiKP	22 23 11.9	-20
	comp=Z,16nm,1.0s,baz=226,slow=2.7,SNR=5.1						
I02D	**Swisshome**	**127.63**	**295**	P	**PKiKP**	**22 19 59.3**	**+1.4**
	baz=134						
IUG	**Iuzhnay**	**127.64**	**68**	*e*PKP	**PKPdf**	**22 19 57.8**	**+0.1**
	baz=68						
IUG	**Iuzhnay**	**127.64**	**68**	*e*PKIKP	**PKPdf**	**22 19 57.7**	**+0.1**
SHL	**Shillong**	**127.64**	**99**	*i* PP	PP	22 21 58.9	-1.0
COR	**Corvallis**	**127.69**	**296**	PKIKP	**PKiKP**	**22 19 58.9**	**+0.9**
COR				MLR	MLR		
	comp=Z,7µm,18.0s						
COR	**Corvallis**	**127.69**	**296**		**PKiKP**	**22 19 58.9**	**+0.9**
COR	**Corvallis**	**127.69**	**296**	IAMs_20	IAMs_20	23 28 22.7	
	comp=Z,7µm,18.0s						
KLMR	**Klimovskoe**	**127.72**	**35**	*e*PKIKP	**PKPdf**	**22 19 56.9**	**-0.1**
KLMR				*e*		22 21 57.6	
KLMR				*e*		22 27 03.1	
KLMR				*e*PS	PS	22 32 02.8	-2.1
KLMR				pmax	pmax		
	comp=Z,107nm,1.3s						
KLMR	**Klimovskoe**	**127.72**	**35**	*e*PKPdf	**PKPdf**	**22 19 56.9**	**-0.1**
KLMR				AMP		22 20 02.3	
	comp=Z,107nm,1.3s						
KLMR				*e*PP	**PP**	**22 21 57.6**	**-2.2**
KLMR				*e*SKSac	**SKSac**	**22 27 03.2**	**+1.0**
KLMR				*e*SKSac	**SKSac**	**22 27 03.2**	**+1.0**
KLMR				*e*SKKSac	**SKKSac**	**22 28 52.1**	**-2.6**
KLMR				*e*SKKSac	**SKKSac**	**22 28 52.1**	**-2.6**
KLMR				*e*PS	**PS**	**22 32 02.8**	**-2.1**
KLMR				*e*PS	**PS**	**22 32 02.8**	**-2.1**
NUUG	**Nuugaatsiaq**	**127.98**	**350**	*i* P	**PKiKP**	**22 19 57.6**	**-0.2**
NUUG				IAmb	IAmb	22 20 03.7	
	comp=Z,57nm,1.3s						
SUMG	**Summit**	**128.00**	**356**	*i* P	**PKiKP**	**22 19 58.2**	**-0.2**
SUMG	**Summit**	**128.00**	**356**	PKIKP	**PKiKP**	**22 19 59.0**	**+0.6**
SUMG				MLR	MLR		
	comp=Z,11µm,18.0s						
SUMG	**Summit**	**128.00**	**356**		**PKiKP**	**22 19 59.0**	**+0.6**
SUMG	**Summit**	**128.00**	**356**	*i* P	**PKiKP**	**22 19 58.2**	**-0.2**
GUWA	**GUWAHATI**	**128.02**	**99**	*i* PP	PP	22 22 02.0	0.0
G03D	**McMinnville, O**	**128.10**	**297**	P	**PKiKP**	**22 19 59.8**	**+0.9**
	baz=134						
BRLS	**Borolday**	**128.15**	**67**	*e*PKP	**PKPdf**	**22 19 57.6**	**-1.0**
	baz=68						
BRLS	**Borolday**	**128.15**	**67**	*e*PKIKP	**PKPdf**	**22 19 57.5**	**-1.0**
LTY	**Liberty**	**128.22**	**300**	IAMs_20	IAMs_20	23 12 38.6	
	comp=Z,6µm,22.0s						
B08A	**Colville Reser**	**128.33**	**302**	IAMs_20	IAMs_20	23 26 12.5	
	comp=Z,7µm,18.0s						
LON	**Longmire**	**128.44**	**299**	IAMs_20	IAMs_20	23 26 11.4	
	comp=Z,7µm,21.0s						
KK31	**Karatay Array**	**128.56**	**68**	PKIKP	**PKPdf**	**22 19 58.5**	**-0.8**
KK31	**Karatay Array**	**128.56**	**68**		**PKPdf**	**22 19 58.5**	**-0.8**
KKAR	**Karatay Array**	**128.56**	**68**	PKIKP	**PKPdf**	**22 19 58.5**	**-0.8**
KKAR	**Karatay Array**	**128.56**	**68**		**PKPdf**	**22 19 58.5**	**-0.8**
F04D	**Rainier, OR**	**128.58**	**297**	P	**PKiKP**	**22 20 01.2**	**+1.4**
	baz=134						
E04D	**Cinebar**	**128.68**	**298**	P	**PKiKP**	**22 20 00.5**	**+0.5**
	baz=134						
D05A	**Enumclaw**	**128.83**	**299**	IAMs_20	IAMs_20	23 13 25.7	
	comp=Z,6µm,21.0s						
DZA	**Taraz**	**128.85**	**69**	*e*PKP	**PKPdf**	**22 19 59.9**	**+0.1**
	baz=69						
DZA	**Taraz**	**128.85**	**69**	*e*PKIKP	**PKPdf**	**22 19 59.9**	**+0.1**
TEZP	**TEZPUR**	**128.97**	**99**	*i* PP	PP	22 22 07.5	-0.8
KSH	**Kashi**	**128.99**	**75**	PKP	**PKPdf**	**22 19 58.8**	**-1.5**
KSH				PP	**PP**	**22 22 01.6**	**-7.1**
KSH				PKS		22 23 34.8	
KSH				SKS	**SKSdf**	**22 27 08.3**	**-2.5**
KSH				SKKS	**SKKSac**	**22 29 00.6**	**-3.4**
KSH				SS	**SS**	**22 39 24.1**	**-3.1**
KSH				AMB	AMB		
	comp=Z,2µm,9.6s						
KSH				LR	LR		
	comp=Z,8µm,24.5s						
KSH				LR	LR		
	comp=Z,7µm,22.6s						
KSH				LR	LR		
	comp=Z,16µm,28.0s						
KOHI	**KOHIMA**	**129.01**	**101**	*i* PP	PP	22 22 09.4	+0.7
E03A	**Lebam**	**129.18**	**298**	IAMs_20	IAMs_20	23 27 25.0	
	comp=Z,8µm,19.0s						
B06A	**Marblemount**	**129.48**	**301**	IAMs_20	IAMs_20	23 18 21.1	
	comp=Z,7µm,19.0s						
KIRV	**Kirov**	**129.56**	**42**	PKP	**PKPdf**	**22 19 58.9**	**-1.7**
	comp=Z,25nm,0.9s,baz=278,slow=0.2,SNR=11						
KIRV				SKPbc	SKPab	22 23 20.0	-0.6
	comp=Z,74nm,1.0s,baz=236,slow=3.3,SNR=11						
KIRV	**Kirov**	**129.56**	**42**	*ce*PKIKP	**PKPdf**	**22 20 00.8**	**+0.2**
AML	**Almayashu**	**129.58**	**71**	P	**PKPdf**	**22 19 58.5**	**-3.2**
	SNR=25						
D03D	**Eldon**	**129.61**	**299**	P	**PKiKP**	**22 20 03.0**	**+1.2**
	baz=133						
B05A	**Bryant**	**129.61**	**300**	P	**PKiKP**	**22 20 01.8**	**+0.1**
	baz=133,SNR=17						
DBG	**Daneborg**	**129.66**	**3**	*i* P	**PKiKP**	**22 20 02.2**	**+1.1**
DBG				IAmb	IAmb	22 20 06.3	
	comp=Z,73nm,1.3s						
TMCR	**Tamitsa**	**129.72**	**31**	*e*PKIKP	**PKPdf**	**22 19 59.6**	**-1.1**
TMCR				pmax	pmax		
	comp=Z,204nm,1.1s						
NLWA	**Neilton Lookou**	**129.90**	**298**	IAMs_20	IAMs_20	23 27 07.2	
	comp=Z,6µm,19.0s						
EKS2	**Erkin-Say**	**129.99**	**70**	P	**PKiKP**	**22 20 03.4**	**+0.4**
	SNR=18						
UCH	**Uchtor**	**130.09**	**71**	P	**PKiKP**	**22 20 03.7**	**+0.1**
	SNR=17						
ZIRO	**ZIRO**	**130.27**	**100**	*i* PP	PP	22 22 16.7	-0.3
AAK	**Ala-Archa**	**130.36**	**71**	PKP	**PKPdf**	**22 20 01.1**	**-1.7**
	comp=Z,23nm,1.1s,baz=207,slow=2.9,SNR=5.2						
AAK				SKPbc	**SKPbc**	**22 23 25.1**	**+0.1**
	comp=Z,28nm,1.1s,baz=219,slow=5.4,SNR=8.5						
AAK	**Ala-Archa**	**130.36**	**71**	P	**PKiKP**	**22 20 03.6**	**-0.1**
	SNR=17						
AAK	**Ala-Archa**	**130.36**	**71**		**PKPdf**	**22 20 02.6**	**-0.2**
LSA	**Lhasa**	**130.41**	**95**	PKP	**PKPdf**	**22 20 03.4**	**-0.4**
LSA				LR	LR		
	comp=Z,23µm,22.1s						
LSA				LR	LR		
	comp=Z,13µm,19.2s						
LSA				LR	LR		
	comp=Z,44µm,22.8s						
KBK	**Karagaybulak**	**130.61**	**71**	P	**PKiKP**	**22 20 03.9**	**-0.4**
	SNR=13						
ARCES	**ARCESS Array B**	**130.67**	**22**	PKP	**PKPdf**	**22 20 01.9**	**-0.5**
	comp=Z,103nm,1.1s,baz=106,slow=2.6,SNR=5.3						
ARCES				PP	**PP**	**22 22 18.5**	**-0.4**
	comp=Z,10.0nm,0.8s,baz=208,slow=5.6,SNR=2.9						
ARCES				SKPbc	**SKPab**	**22 23 25.4**	**+0.3**
	comp=Z,20nm,1.0s,baz=195,slow=3.8,SNR=4.9						
ARCES	**ARCESS Array B**	**130.67**	**22**		**PKPdf**	**22 20 02.2**	**-0.2**
CHMS	**Chumysh**	**130.74**	**71**	P	**PKPdf**	**22 20 02.5**	**-0.9**
	SNR=13						
SLVN	**Son La**	**130.78**	**114**		**PKPdf**	**22 20 03.9**	**-0.3**
USP	**Ospenovka**	**130.79**	**70**	P	**PKiKP**	**22 20 05.1**	**+0.7**
	SNR=12						
DIBR	**DIBRUGARH**	**130.82**	**101**	*i* PP	PP	22 22 22.2	+1.9
APA	**Apatity**	**130.99**	**27**	⇓*i*PKIKP	**PKPdf**	**22 20 01.7**	**-1.3**
APA				*i*		22 27 15.0	
APA				pmax	pmax		
	comp=Z,34nm,0.9s						
APA				MLR	MLR		
	comp=Z,9µm,24.0s						
SGDS	**Sogindy**	**130.99**	**70**	*e*PKP	**PKPdf**	**22 20 03.7**	**-0.3**
	baz=70						
SGDS	**Sogindy**	**130.99**	**70**	*e*PKIKP	**PKPdf**	**22 20 03.6**	**-0.3**
TKM2	**Tokmak 2**	**131.14**	**71**	P	**PKiKP**	**22 20 05.7**	**+0.3**
	SNR=9.6						
LKP	**Lekhapani**	**131.23**	**102**	*i* PP	PP	22 22 21.7	-1.3
KULLO	**Kullorsuaq**	**131.26**	**350**	*i* P	**PKPdf**	**22 19 58.8**	**-4.6**
	comp=Z,84nm,1.2s						
KULLO	**Kullorsuaq**	**131.26**	**350**	*i* PKIKP	**PKPdf**	**22 19 58.8**	**-4.6**
KULLO				pmax	pmax		
	comp=Z,84nm,1.2s						
KULLO	**Kullorsuaq**	**131.26**	**350**	*i* P	**PKPdf**	**22 19 58.8**	**-4.6**
KULLO				IAmb	IAmb	22 20 07.6	
	comp=Z,84nm,1.2s						
JOHN	**Johnston Islan**	**131.35**	**233**		**PKiKP**	**22 20 06.2**	**0.0**
LVZ	**Lovozero**	**131.55**	**27**	PKIKP	**PKiKP**	**22 20 04.7**	**-0.4**
LVZ				MLR	MLR		
	comp=Z,17µm,21.0s						
LVZ	**Lovozero**	**131.55**	**27**		**PKiKP**	**22 20 04.7**	**-0.4**
ARU	**Arti**	**131.78**	**48**	PKhKP	PKPpre	22 20 00.7	
	comp=Z,1.7nm,0.5s,baz=337,slow=9.7,SNR=3.6						
ARU				PKP	**PKPdf**	**22 20 05.1**	**+0.3**
	comp=Z,9.0nm,0.6s,baz=217,slow=1.3,SNR=18						
ARU				SKPbc	**SKPbc**	**22 23 29.5**	**+0.1**
	comp=Z,15nm,1.0s,baz=238,slow=3.8,SNR=8.7						
ARU	**Arti**	**131.78**	**48**	*i* PKIKP	**PKPdf**	**22 20 04.5**	**-0.4**
ARU						22 22 23.5	
ARU						22 27 14.7	
ARU	**Arti**	**131.78**	**48**		**PKiKP**	**22 20 05.5**	**-0.3**
QIZ	**Qiongzhong**	**131.83**	**122**	PKP	**PKPdf**	**22 20 06.6**	**+0.4**
QIZ				PP	**PP**	**22 22 27.8**	**+1.2**
QIZ				SS	SS	22 40 04.4	+3.3
QIZ				AMB	AMB		
	comp=Z,880nm,11.8s						
QIZ				LR	LR		
	comp=Z,4µm,23.5s						
QIZ				LR	LR		
	comp=Z,4µm,21.6s						
QIZ				LR	LR		
	comp=Z,7µm,22.1s						
AAA	**Alma-Ata**	**132.05**	**72**	*e*PKP	**PKiKP**	**22 20 07.1**	**0.0**
	baz=72						
AAA				*e*PP	**PP**	**22 22 28.8**	**+0.3**
	baz=72						
AAA	**Alma-Ata**	**132.05**	**72**	*e*PKIKP	**PKiKP**	**22 20 07.0**	**0.0**
AAA				*e*		22 22 28.7	
MDOK	**Medeo**	**132.09**	**72**	*e*PKP	**PKPdf**	**22 20 05.8**	**-0.3**
	baz=72						
MDOK				*e*PP	**PP**	**22 22 28.3**	**-0.5**
	baz=72						
MDOK	**Medeo**	**132.09**	**72**	*e*PKIKP	**PKPdf**	**22 20 05.8**	**-0.3**
MDOK				*e*		22 22 28.2	
DAG	**Danmarks Havn**	**132.16**	**3**	*i* P	**PKiKP**	**22 20 05.7**	**-0.4**
	comp=Z,66nm,1.3s						
DAG	**Danmarks Havn**	**132.16**	**3**	*i* PKIKP	**PKiKP**	**22 20 05.7**	**-0.4**
DAG				pmax	pmax		
	comp=Z,66nm,1.3s						
DAG	**Danmarks Havn**	**132.16**	**3**	*i* P	**PKiKP**	**22 20 05.8**	**-0.4**
DAG				IAmb	IAmb	22 20 09.9	
	comp=Z,66nm,1.3s						
KUU	**Kurty**	**132.20**	**71**	*e*PKP	**PKPdf**	**22 20 05.4**	**-0.8**
	baz=71						
KUU	**Kurty**	**132.20**	**71**	*e*PKIKP	**PKPdf**	**22 20 05.3**	**-0.8**
SATY	**Saty**	**132.76**	**73**	*e*PKP	**PKPdf**	**22 20 06.9**	**-0.5**
	baz=73						
SATY	**Saty**	**132.76**	**73**	*e*PKIKP	**PKPdf**	**22 20 06.8**	**-0.5**
SVE	**Sverdlovsk**	**132.91**	**49**	*c i*PKIKP	**PKPdf**	**22 20 07.3**	**+0.3**
SVE				*e*		22 22 35.6	
SVE				*e*		22 45 08.0	
SVE				pmax	pmax		
	comp=Z,137nm,1.6s						
UZB	**Uzynbulak**	**133.15**	**73**	*e*PKP	**PKiKP**	**22 20 09.7**	**+0.4**
	baz=73						
UZB	**Uzynbulak**	**133.15**	**73**	*e*PKIKP	**PKiKP**	**22 20 09.7**	**+0.4**
KPKS	**Kokpek**	**133.18**	**73**	*e*PKP	**PKiKP**	**22 20 08.8**	**-0.6**
	baz=73						
KPKS				*e*PP	**PP**	**22 22 35.9**	**+0.2**
	baz=73						
KPKS	**Kokpek**	**133.18**	**73**	*e*PKIKP	**PKiKP**	**22 20 08.7**	**-0.6**
KPKS				*e*		22 22 35.8	
KMI	**Kunming**	**133.26**	**110**	⇑PKP	**PKPdf**	**22 20 07.3**	**-1.7**
KMI				PP	**PP**	**22 22 37.5**	**+1.3**
KMI				SKKS		22 29 27.3	
KMI				SS	**SS**	**22 40 17.3**	**-2.0**
KMI				AMB	AMB		
	comp=Z,940nm,9.1s						
KMI				LR	LR		
	comp=Z,5µm,24.3s						
KMI				LR	LR		
	comp=Z,5µm,24.3s						
KMI				LR	LR		
	comp=Z,7µm,24.7s						
SHLS	**Shalkode**	**133.40**	**74**	*i* PKP	**PKiKP**	**22 20 09.9**	**0.0**
	baz=74						
SHLS	**Shalkode**	**133.40**	**74**	*i* PKIKP	**PKiKP**	**22 20 09.8**	**0.0**
TDK	**Taldyqorghan**	**134.04**	**71**	*e*PKP	**PKPdf**	**22 20 09.7**	**+0.1**
	baz=71						
TDK				*e*PP	**PP**	**22 22 40.6**	**-0.4**
	baz=71						
TDK	**Taldyqorghan**	**134.04**	**71**	*e*PKIKP	**PKPdf**	**22 20 09.6**	**+0.1**
TDK				*e*		22 22 40.6	
BRZS	**Berezniki**	**134.24**	**62**	*e*PKP	**PKPdf**	**22 20 09.6**	**-0.2**
	baz=62						
BRZS	**Berezniki**	**134.24**	**62**	*e*PKIKP	**PKPdf**	**22 20 09.6**	**-0.2**
TULEG	**Thule**	**134.30**	**348**	IAMs_20	IAMs_20	23 12 06.0	
	comp=Z,5µm,20.0s						
TULEG	**Thule**	**134.30**	**348**	*e*P	**PKPdf**	**22 20 05.1**	**-4.0**
BRVK	**Borovoye**	**134.96**	**58**	PKIKP	**PKPdf**	**22 20 11.3**	**+0.3**
BRVK				MLR	MLR		
	comp=Z,24µm,20.0s						
BRVK	**Borovoye**	**134.96**	**58**		**PKPdf**	**22 20 11.3**	**+0.3**
BVAR	**Borovoye Array**	**134.99**	**58**	PKhKP	PKPpre	22 20 06.3	
	comp=Z,5.5nm,0.7s,baz=19,slow=9.4,SNR=10.0						
BVAR				PKP	**PKPdf**	**22 20 10.6**	**-0.5**
	comp=Z,9.8nm,0.8s,baz=121,slow=2.1,SNR=21						
BVAR				SKPbc	**SKPbc**	**22 23 39.5**	**-0.8**
	comp=Z,11nm,1.0s,baz=240,slow=32,SNR=7.0						
BBB	**Bella Bella**	**135.09**	**301**	PKP	**PKPdf**	**22 20 11.5**	**+0.3**
	comp=Z,19nm,1.0s,baz=262,slow=3.0,SNR=5.1						
BBB				SKPbc	**SKPbc**	**22 23 41.4**	**+0.7**
	comp=Z,13nm,0.8s,baz=198,slow=0.4,SNR=7.7						
YKA	**Yellowknife Ar**	**135.38**	**319**	PKhKP	PKPpre	22 20 00.0	
	comp=Z,2.6nm,0.8s,baz=117,slow=3.6,SNR=13						
YKA				PKP	**PKPdf**	**22 20 11.4**	**-0.1**
	comp=Z,29nm,1.0s,baz=117,slow=2.8,SNR=38						
YKA				PP	**PP**	**22 22 48.1**	**-1.1**
	comp=Z,13nm,0.9s,baz=121,slow=7.1,SNR=7.3						
YKA				SKPbc	**SKPbc**	**22 23 40.2**	**-1.0**
	comp=Z,10nm,0.7s,baz=126,slow=4.7,SNR=15						
YKA				PKKP	**PKKPdf**	**22 29 54.1**	**+0.4**
	comp=Z,0.4nm,0.7s,baz=304,slow=1.2,SNR=2.7						
YKA				SKKPbc	**SKKPbc**	**22 32 44.0**	**-1.4**
	comp=Z,5.4nm,1.0s,baz=314,slow=3.7,SNR=6.8						
SPA0	**Spitsbergen Ar**	**136.17**	**12**		**PKPdf**	**22 20 12.9**	**+0.3**
SPITS	**Spitsbergen Ar**	**136.17**	**12**	PKP	**PKPdf**	**22 20 10.2**	**-2.4**
	comp=Z,67nm,1.1s,baz=162,slow=9.6,SNR=4.1						
SPITS				SKPbc	**SKPbc**	**22 23 44.4**	**+1.1**
	comp=Z,22nm,1.0s,baz=186,slow=6.7,SNR=4.2						
KBS	**Kingsbay**	**136.30**	**10**	⇑*i*PKIKP	**PKiKP**	**22 20 14.6**	**+0.1**
KBS	**Kingsbay**	**136.30**	**10**	*e*P	**PKiKP**	**22 20 15.0**	**+0.6**
GYA	**Guiyang**	**136.41**	**113**	⇑PKP	**PKiKP**	**22 20 15.8**	**-0.6**
GYA				PP	**PP**	**22 22 56.1**	**+0.1**
GYA				SKKS		22 29 45.6	
GYA				SS	**SS**	**22 40 55.8**	**-1.1**
GYA				AMB	AMB		
	comp=Z,1µm,10.5s						
GYA				LR	LR		
	comp=Z,27µm,13.6s						
GZH	**Guangzhou**	**136.97**	**123**	PKP	**PKiKP**	**22 20 17.3**	**-0.2**
GZH				PP	**PP**	**22 23 06.4**	**+7.2**
GZH				SS	SS	22 41 12.4	+9.4
MAKZ	**Makanchi**	**137.12**	**71**	PKIKP	**PKPdf**	**22 20 13.4**	**-1.8**
MAKZ				MLR	MLR		
	comp=Z,582µm,18.0s						
MAKZ	**Makanchi**	**137.12**	**71**		**PKPdf**	**22 20 13.4**	**-1.8**
RES	**Resolute Bay**	**137.15**	**339**	PKhKP	PKPpre	22 20 07.0	
	baz=115,slow=3.9						
RES				PKP	**PKPdf**	**22 20 14.4**	**0.0**
	comp=Z,28nm,1.0s,baz=156,slow=3.6						
RES				SKPbc	**SKPbc**	**22 23 46.4**	**+0.1**
	comp=Z,5.5nm,0.7s,baz=116,slow=6.0,SNR=4.1						
RES				SKKPbc	**SKKPbc**	**22 32 35.9**	**-3.4**
	comp=Z,3.1nm,1.0s,baz=310,slow=5.3,SNR=4.3						
MK31	**Makanchi Array**	**137.28**	**72**	⇓*i*PKIKP	**PKPdf**	**22 20 11.8**	**-3.7**
MKAR	**Makanchi Array**	**137.28**	**72**	PKhKP	PKPpre	22 20 05.2	
	comp=Z,1.2nm,0.6s,baz=246,slow=2.1,SNR=17						
MKAR				PKP	**PKPdf**	**22 20 14.2**	**-1.3**
	comp=Z,4.5nm,0.8s,baz=221,slow=2.9,SNR=12						
MKAR				SKPbc	**SKPbc**	**22 23 46.2**	**-1.4**
	comp=Z,21nm,1.0s,baz=262,slow=3.6,SNR=9.9						
MKAR				PKKP	**PKKPdf**	**22 29 46.0**	**-3.7**
	comp=Z,0.7nm,0.9s,baz=54,slow=0.9,SNR=1.5						
MKAR	**Makanchi Array**	**137.28**	**72**		PKPpre	22 20 06.1	
MKAR					**PKPdf**	**22 20 11.9**	**-3.6**
KURBB	**Kurchatov Arra**	**137.61**	**65**	PKhKP	PKPpre	22 20 07.8	
	comp=Z,2.8nm,0.6s,baz=237,slow=3.4,SNR=11						
KURBB				SKPbc	**SKPbc**	**22 23 47.5**	**-0.9**
	comp=Z,26nm,1.0s,baz=238,slow=3.3,SNR=12						
KURBB				PKKP	**PKKPdf**	**22 29 49.6**	**+0.5**
	comp=Z,0.6nm,0.8s,baz=47,slow=1.8,SNR=6.3						
KURBB				SKKPbc	**SKKPbc**	**22 32 32.5**	**-3.4**
	comp=Z,0.4nm,0.5s,baz=53,slow=4.4,SNR=5.1						
KURK	**Kurchatov**	**137.71**	**65**	⇓*i*PKIKP	**PKPdf**	**22 20 16.9**	**+0.8**
KURK				MLR	MLR		
	comp=Z,25µm,18.0s						
KURK	**Kurchatov**	**137.71**	**65**		**SKPbc**	**22 23 47.5**	**-1.2**
KURK	**Kurchatov**	**137.71**	**65**		PKPpre	22 20 07.8	
CD2	**Chengdu**	**138.37**	**106**	PKP	**PKPdf**	**22 20 18.3**	**+0.2**
CD2				PP	**PP**	**22 23 05.8**	**-2.4**
CD2				SKS	**SKSdf**	**22 27 24.8**	**-2.8**
CD2				SKKS	**SKKSac**	**22 29 56.8**	**-4.4**
CD2				SS	**SS**	**22 41 18.8**	**-1.3**
CD2				AMB	AMB		
	comp=Z,700nm,10.6s						
CD2				LR	LR		
	comp=Z,4µm,22.6s						
CD2				LR	LR		
	comp=Z,4µm,23.5s						
CD2				LR	LR		
	comp=Z,5µm,22.1s						
WMQ	**Urumqi**	**138.37**	**79**	PKP	**PKPdf**	**22 20 16.9**	**-0.8**
WMQ				sPKP		22 20 26.3	
WMQ				PP	**PP**	**22 23 14.6**	**+6.3**
WMQ				SKKS		22 30 01.8	
WMQ				AMB	AMB		
	comp=Z,2µm,8.3s						
WMQ				LR	LR		
	comp=Z,30µm,26.5s						
ZSN	**Zaisan**	**139.07**	**72**	*e*PKP	**PKPdf**	**22 20 18.5**	**-0.4**
	baz=72						
ZSN	**Zaisan**	**139.07**	**72**	*e*PKIKP	**PKPdf**	**22 20 18.4**	**-0.4**
EUNU	**Eureka**	**139.28**	**347**		**PKPdf**	**22 20 19.2**	**+0.8**
DLBC	**Dease Lake**	**139.53**	**308**	PKhKP	PKPpre	22 20 12.9	
	comp=Z,5.6nm,0.9s,baz=159,slow=17,SNR=2.7						
DLBC				PKP	**PKPdf**	**22 20 18.1**	**-1.3**
	comp=Z,28nm,1.1s,baz=156,slow=1.9,SNR=8.1						
DLBC				SKPbc	**SKPbc**	**22 23 53.3**	**-0.3**
	comp=Z,14nm,0.8s,baz=29,slow=1.7,SNR=6.1						
DLBC				SKPab	**SKPab**	**22 24 05.5**	**+1.1**
	comp=Z,9.0nm,0.8s,baz=178,slow=4.0,SNR=3.5						
QZH	**Quanzhou**	**140.99**	**128**	⇓*i*PKP	**PKPdf**	**22 20 18.8**	**-4.2**
QZH				PP	**PP**	**22 23 26.4**	**+2.4**
QZH				SS	SS	22 41 47.6	-2.7
QZH				AMB	AMB		
	comp=Z,870nm,10.1s						
QZH				LR	LR		
	comp=Z,1µm,18.5s						
QZH				LR	LR		
	comp=Z,1µm,21.3s						
QZH				LR	LR		
	comp=Z,2µm,28.1s						
DGZ	**Jazzator, Alta**	**141.76**	**71**	⇓*i*PKIKP	**PKPdf**	**22 20 23.9**	**+0.1**
DGZ				MLR	MLR		
	comp=Z,19µm,20.0s						

C36M	Paulatuk	142.14	325	P	PKPdf	22 20 24.8	+1.2
	baz=113						
C36M	Paulatuk	142.14	325	IAMs_20	IAMs_20	23 16 26.2	
	comp=Z,5µm,21.0s						
LZH	Lanzhou	142.28	101	ePKP	PKPdf	22 20 21.4	-3.8
LZH				pPKP	pPKPdf	22 20 30.3	-0.3
LZH				PP	PP	22 23 34.8	+2.4
LZH				SKS	SKSdf	22 27 32.8	-1.2
LZH				SS	SS	22 42 04.1	-2.2
LZH				AMB	AMB		
	comp=Z,1µm,5.4s						
LZH				LR	LR		
	comp=Z,1µm,17.1s						
LZH				LR	LR		
	comp=Z,2µm,14.9s						
LZH				LR	LR		
	comp=Z,1µm,20.1s						
GTA	Gaotai	142.34	93	⇑PKP	PKPdf	22 20 22.3	-2.8
GTA				PP	PP	22 23 35.5	+2.8
GTA				SKKS		22 30 22.4	
GTA				AMB	AMB		
	comp=Z,1µm,8.7s						
GTA				LR	LR		
	comp=Z,32µm,19.6s						
SKAG	Skagway	142.43	307		PKPpre	22 20 21.3	
ZALV	Zalesovo Beam	142.66	64	PKhKP	PKPpre	22 20 20.6	
	comp=Z,9.5nm,0.5s,baz=226,slow=4.2,SNR=29						
ZALV				PKP	PKPdf	22 20 23.7	-1.3
	comp=Z,16nm,0.6s,baz=266,slow=4.3,SNR=29						
ZALV				SKP	SKPdf	22 23 59.4	+1.1
	comp=Z,19nm,0.9s,baz=198,slow=3.5,SNR=5.4						
ZALV	Zalesovo Beam	142.66	64		PKPpre	22 20 19.4	
XAN	Xi'an	143.56	108	PKP	PKPbc	22 20 24.6	-0.2
XAN				pPKP	sPKPdf	22 20 33.8	-0.9
XAN				PP	PP	22 23 38.3	-1.6
XAN				SKS	SKSdf	22 27 28.3	-7.5
XAN				AMB	AMB		
	comp=Z,1µm,13.3s						
XAN				LR	LR		
	comp=Z,2µm,24.4s						
XAN				LR	LR		
	comp=Z,1µm,24.9s						
XAN				LR	LR		
	comp=Z,4µm,24.7s						
WHN	Wuhan	143.67	118	PKP	PKPdf	22 20 26.5	-1.1
WHN				PP	PP	22 23 39.1	-1.2
WHN				PKS		22 24 02.4	
WHN				AMB	AMB		
	comp=Z,5µm,14.6s						
MIDW	Midway	144.85	232		PKPbc	22 20 29.1	+0.2
INK	Inuvik	145.02	321	PKPbc	PKPbc	22 20 27.7	-0.5
	comp=Z,516nm,1.0s,baz=100,slow=4.0,SNR=158						
INK				SKP	SKPdf	22 24 04.2	+2.5
	comp=Z,12nm,0.8s,baz=63,slow=2.8,SNR=2.6						
INK	Inuvik	145.02	321		PKPbc	22 20 28.0	-0.2
EPYK	Eagle Plains	145.63	317	P	PKPdf	22 20 29.8	-0.2
	baz=107						
EPYK	Eagle Plains	145.63	317		PKPab	22 20 30.6	0.0
JOW	Kunigami	146.65	140	PKPbc	PKPab	22 20 35.4	-0.2
	comp=Z,101nm,0.8s,baz=212,slow=5.8,SNR=11						
JOW	Kunigami	146.65	140		PKPab	22 20 35.1	-0.5
NJ2	Nanjing	147.12	122	ePKPbc	PKPdf	22 20 33.8	+0.4
NJ2				PKPab	PKPab	22 20 36.8	-0.5
NJ2				pPKP	pPKPdf	22 20 39.5	+0.7
NJ2				PP	PP	22 24 00.5	-0.3
NJ2				PKS		22 24 11.3	
NJ2				SKKS		22 30 51.0	
NJ2				SS	SS	22 43 03.4	+2.6
NJ2				AMB	AMB		
	comp=Z,950nm,8.8s						
SSE	Sheshan	147.43	126	PKPbc	PKPdf	22 20 34.5	+0.5
SSE				PP	PP	22 24 10.6	+8.1
SSE				SS	SS	22 43 04.6	+0.4
SSE				AMB	AMB		
	comp=Z,510nm,11.6s						
N25K	Chitina, Valde	147.48	307	P	PKPdf	22 20 32.3	-0.9
	baz=109,SNR=6.2						
N25K	Chitina, Valde	147.48	307	PKPdf	PKPdf	22 20 32.6	-0.6
SCRK	Sand Creek	147.91	312	P	PKPdf	22 20 33.4	-0.5
	baz=105						
TIY	Taiyuan	148.20	107	ePKPbc	PKPbc	22 20 38.5	0.0
TIY				PKPab	sPKPdf	22 20 42.3	-0.2
TIY				PP	PP	22 24 05.5	-1.9
TIY				AMB	AMB		
	comp=Z,600nm,7.9s						
M24K	Tolsona, Glenn	148.35	308	P	PKPdf	22 20 33.8	-0.8
	baz=107,SNR=19						
BTO	Baotou	148.91	101	ePKPbc	PKPdf	22 20 35.9	-0.4
NRIK	Noril'sk	148.96	38	PKPbc	PKPbc	22 20 38.8	-0.6
	comp=Z,54nm,1.0s,baz=29,slow=0.4,SNR=47						
NRIK	Noril'sk	148.96	38		PKPdf	22 20 36.8	+1.5
HDA	Harding Lake	149.27	312	P	PKPdf	22 20 34.3	-1.7
	baz=103						
IL31		149.32	313	PKPbc	PKPbc	22 20 39.5	-0.9
ILAR	Eielson Array	149.32	313	PKP	PKPdf	22 20 34.4	-1.6
	comp=Z,6.9nm,0.9s,baz=75,slow=0.6,SNR=24						
ILAR				PKPbc	PKPbc	22 20 39.9	-0.5
	comp=Z,225nm,1.0s,baz=121,slow=1.6,SNR=122						
TIA	Tai'an	149.56	115	PKPbc	PKPdf	22 20 38.0	+0.7
TIA				AMB	AMB		
	comp=Z,940nm,13.1s						
POKR	Poker Plat Res	149.62	313	P	PKPdf	22 20 34.6	-1.9
	baz=101,SNR=16						
RC01	Rabbit Creek A	149.69	305	P	PKPdf	22 20 33.5	-3.2
	baz=106,SNR=11						
COLA	College	149.75	313	PKHKP	PKPpre	22 20 37.4	
COLA				MLR	MLR		
	comp=Z,30µm,18.0s						
COLA	College	149.75	313		PKPdf	22 20 37.4	+0.7
HHC	Hu-ho-hao-te	149.93	102	ePKPbc	PKPdf	22 20 37.8	-0.1
HHC				PP	PP	22 24 16.0	-1.5
HHC				SKKS		22 31 08.4	
MCK	McKinley	149.98	310	P	PKPdf	22 20 35.1	-2.0
	baz=102,SNR=8.9						
KDAK	Kodiak Island	150.05	298	PKPbc	PKPbc	22 20 42.1	-0.2
	comp=Z,48nm,0.4s,baz=250,slow=3.2,SNR=26						
KDAK	Kodiak Island	150.05	298	⇓ePKP2	PKiKP	22 20 43.7	+0.5
MOY	Mondy	150.17	76	ePKIKP	PKPdf	22 20 37.8	-0.1
MOY				pmax	pmax		
	comp=Z,346nm,1.6s						
I23K	Minto, Yukon-K	150.43	313	P	PKPdf	22 20 35.5	-2.2
	baz=100						
JCJ	Chichijima	150.76	162	PKPbc	PKPbc	22 20 44.1	-0.9
	comp=Z,86nm,0.5s,baz=76,slow=18,SNR=7.7						
JCJ	Chichijima	150.76	162		PKPdf	22 20 41.2	+1.7
ZAK	Zakamensk	150.83	80	ePKIKP	PKPdf	22 20 38.4	-0.6
ZAK				pmax	pmax		
	comp=Z,192nm,1.2s						
TOLK	Toolik Lake Re	150.89	320	P	PKPdf	22 20 36.7	-1.8
	baz=93,SNR=18						
MLY	Manley	150.99	312	P	PKPdf	22 20 37.4	-1.3
	baz=99,SNR=27						
COLD	Coldfoot	151.03	317	P	PKPdf	22 20 37.1	-1.5
	baz=95,SNR=17						
SONM	Songino Array	151.28	86	PKP	PKPdf	22 20 39.3	-0.5
	comp=Z,8.0nm,0.9s,baz=206,slow=3.2,SNR=30						
SONM				PKPbc	pPKPdf	22 20 44.9	-0.3
	comp=Z,51nm,0.8s,baz=219,slow=3.9,SNR=65						
SONM	Songino Array	151.28	86		PKPdf	22 20 38.6	-1.2
TLY	Talaya	151.64	77	PKPbc	PKPbc	22 20 45.9	-0.5
	comp=Z,32nm,0.8s,baz=216,slow=3.3,SNR=12						
TLY	Talaya	151.64	77	i PKIKP	PKPdf	22 20 41.2	+1.1
TLY				e		22 20 46.8	
TLY				pmax	pmax		
	comp=Z,356nm,1.5s						
TLY	Talaya	151.64	77		PKPdf	22 20 40.4	+0.3
ULN	Ulaanbaatar	151.67	87	cePKIKP	PKPdf	22 20 39.6	-0.8
ULN	Ulaanbaatar	151.67	87		PKPdf	22 20 39.4	-1.1
BJI	Beijing	151.90	108	PKPbc	PKPdf	22 20 41.3	+0.5
BJI				pPKP	pPKPdf	22 20 43.9	-2.3
BJI				PP	PP	22 24 31.8	+3.2
BJI				SS	SS	22 43 55.9	+1.5
BJI				AMB	AMB		
	comp=Z,810nm,6.5s						
BJI				LR	LR		
	comp=Z,17µm,13.3s						
IRK	Irkutsk	152.24	77	ePKIKP	PKPdf	22 20 39.8	-1.1
IRK				pmax	pmax		
	comp=Z,198nm,1.6s						
JNU	Nakatsue	153.28	138	PKPbc	PKiKP	22 20 52.1	+1.3
	comp=Z,32nm,0.9s,baz=80,slow=6.6,SNR=9.6						
DL2	Dalian	153.93	117	PKPbc	PKPdf	22 20 42.9	-0.9
DL2				PKPab	PKPab	22 21 03.8	-1.3
DL2				PP	PP	22 24 40.4	+0.4
DL2				SS	SS	22 44 19.9	+3.4
DL2				AMB	AMB		
	comp=Z,700nm,8.5s						
DL2				LR	LR		
	comp=Z,650nm,17.7s						
DL2				LR	LR		
	comp=Z,820nm,19.7s						
DL2				LR	LR		
	comp=Z,920nm,18.4s						
KSAR	Wonju Array Be	155.76	128	PKIKP	PKPdf	22 20 45.3	-1.1
KSAR	Wonju Array Be	155.76	128		PKPdf	22 20 45.2	-1.1
KSRS	Korea Array	155.79	128	PKP	PKPdf	22 20 46.1	-0.3
	comp=Z,2.4nm,0.8s,baz=204,slow=2.7,SNR=6.1						
CIT	Chita	157.34	83	ePKP2	PKPab	22 21 21.0	+1.5
CIT				e		22 25 07.6	
CIT				pmax	pmax		
	comp=Z,253nm,1.9s						
JGF	Kuroka	157.76	148		PKPdf	22 20 48.9	-0.1
TNA	Tin City	158.19	314	P	PKPdf	22 20 45.6	-2.9
	baz=82						
MJAR	Matsushiro Arr	158.88	148	PKP	PKPdf	22 20 50.2	-0.2
	comp=Z,8.3nm,1.1s,baz=217,slow=1.3,SNR=9.4						
MJAR				PKPab	PKPab	22 21 25.6	-0.9
	comp=Z,20nm,1.1s,baz=195,slow=2.9,SNR=7.6						
MJAR				PP	PP	22 25 07.1	0.0
	comp=Z,2.0nm,0.9s,baz=202,slow=6.7,SNR=2.3						
MAJO	Matsushiro	158.88	148	⇓ePKIKP	PKPdf	22 20 50.2	-0.2
MAJO	Matsushiro	158.88	148		PKPdf	22 20 50.0	-0.4
MAT	Matsushiro	158.88	148	PKP	PKPdf	22 20 49.4	-1.0
CN2	Changchun	159.46	114	ePKP	PKPdf	22 20 50.8	0.0
CN2				PP	PP	22 25 12.0	+1.3
CN2				SS	SS	22 45 13.9	-2.1
CN2				AMB	AMB		
	comp=Z,1µm,10.0s						
TIXI	Tiksi	161.10	22	dePKIKP	PKPdf	22 20 49.0	-2.7
MSHR	Mys Shultsa	161.38	125	dePKIKP	PKPdf	22 20 53.8	+0.9
MDJ	Mudanjiang	162.15	118	PKP	PKPdf	22 20 52.6	-1.1
MDJ				SKS	SKSdf	22 27 54.4	-2.7
MDJ				AMB	AMB		
	comp=Z,1µm,11.1s						
USA0B	Ussuriysk Arra	163.01	124	dePKIKP	PKPdf	22 20 56.2	+1.7
USRK	Ussuriysk Ar.	163.01	124	PKP	PKPdf	22 20 54.2	-0.3
	comp=Z,3.1nm,0.9s,baz=232,slow=6.3,SNR=6.7						
USRK				PKPab	PKPab	22 21 44.8	+0.5
	comp=Z,5.7nm,0.8s,baz=264,slow=1.9,SNR=6.7						
USRK	Ussuriysk Ar.	163.01	124		PKPdf	22 20 53.5	-1.0
USRK					PKPab	22 21 45.0	+0.6
JEW	Eniwo	165.65	148		PKPdf	22 20 57.6	+0.7
ZEA	Zeya	165.71	87	ePKIKP	PKPdf	22 20 56.6	0.0
ZEA				pmax	pmax		
	comp=N,10.0nm,1.5s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.6s						
KLR	Kul'dur	166.27	109	PKP	PKPdf	22 20 56.8	-0.4
	comp=Z,4.2nm,1.0s,baz=228,slow=2.1,SNR=12						
KLR				PKPab	PKPab	22 21 59.5	+0.8
	comp=Z,11nm,1.1s,baz=174,slow=2.7,SNR=5.8						
YAK	Yakutsk	166.86	51	ePKIKP	PKPdf	22 20 53.2	-4.0
YAK				e		22 25 45.6	
YAK				pmax	pmax		
	comp=Z,16nm,1.5s						
YAK				pmax	pmax		
	comp=N,4.0nm,1.4s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.5s						
YAK				pmax	pmax		
	comp=Z,117nm,2.2s						
YAK				pmax	pmax		
	comp=N,32nm,1.8s						
YAK				pmax	pmax		
	comp=E,33nm,1.9s						
ASAJ	Asahikawa	167.16	149	PKP	PKPdf	22 20 57.7	-0.4
	comp=E,17nm,1.1s,baz=226,slow=5.3,SNR=4.3						
ASAJ	Asahikawa	167.16	149	PKIKP	PKPdf	22 20 58.4	+0.4
JKA	Kamikawa-asahi	167.16	149		PKPdf	22 20 58.4	+0.3
YUK	Yuzh-Kuril'sk	167.89	159	c iPKIKP	PKPdf	22 21 00.5	+2.0
YUK				MLR	MLR		
	comp=Z,304µm,19.0s						
KUR	Kuril'sk	169.41	165	ePKIKP	PKPdf	22 21 00.6	+1.1
KUR				e		22 26 00.8	
KUR				e		22 28 02.8	
KUR				PPP	PPP	22 30 08.0	
KUR				eSS	SS	22 46 57.2	+0.4
KUR				eSSS	SSS	22 53 33.2	
GRNR	Gornyy	169.63	111	ePKIKP	PKPdf	22 20 56.2	-3.3
GRNR				MLR	MLR		
	comp=E,390nm,18.0s						
YSS	Yuzh-Sakhalins	169.74	143	d iPKIKP	PKPdf	22 20 57.8	-1.8
YSS				e		22 26 02.1	
YSS				e		22 27 58.5	
YSS				ePPP	PPP	22 30 11.5	
YSS				eSS	SS	22 47 00.0	-0.6
YSS				pmax	pmax		
	comp=Z,2µm,10.5s						
YSS	Yuzh-Sakhalins	169.74	143		PKPdf	22 20 59.2	-0.4
SEY	Seymchan	172.56	358	PKP	PKPdf	22 20 58.4	-2.2
	comp=Z,21nm,1.2s,baz=89,slow=1.3,SNR=8.9						
SEY				PKPab	PKPab	22 22 23.9	-2.1
	comp=Z,0.9nm,0.3s,baz=18,slow=11,SNR=0.7						
SKR	Severo-Kuril's	174.50	210	ePKIKP	PKPdf	22 20 59.0	-2.6
SKR				ePPP	PPP	22 30 37.7	
SKR				MLR	MLR		
	comp=Z,18µm,16.0s						
PET	Petropavlovsk	175.25	241	i PKIKP	PKPdf	22 20 50.2	-12
PET				e		22 26 30.5	
PET				eSS	SS	22 47 47.7	-7.4
PET				pmax	pmax		
	comp=Z,2µm,11.6s						
PET				pmax	pmax		
	comp=Z,73nm,1.1s						
PET				pmax	pmax		
	comp=Z,4µm,20.0s						
PET				MLR	MLR		
	comp=Z,12µm,22.0s						
PEA0B	Petropavlovsk-	175.77	238	PKIKP	PKPdf	22 21 00.8	-1.2
PEA0B	Petropavlovsk-	175.77	238		PKPdf	22 21 00.8	-1.2
PETK	Petropavlovsk-	175.77	238	PKP	PKPdf	22 20 60.0	-2.0
	comp=Z,13nm,1.0s,baz=85,slow=4.9,SNR=12						
PETK				PKPab	PKPab	22 22 39.2	-1.4
	comp=Z,4.7nm,0.8s,baz=115,slow=6.8,SNR=2.2						
PETK				PP	PP	22 26 40.2	+6.2
	comp=Z,9.5nm,1.1s,baz=87,slow=7.7,SNR=4.5						
PETK	Petropavlovsk-	175.77	238		PKPdf	22 20 58.3	-3.7
MA2	Magadan	175.90	7	PKP	PKPdf	22 21 00.1	-1.7
	comp=Z,1.8nm,0.3s,baz=223,slow=1.2,SNR=5.7						
MA2				PKPab	PKPab	22 22 41.9	+1.0
	comp=Z,3.4nm,0.2s,baz=52,slow=3.9,SNR=5.8						
MA2				PP	PP	22 26 37.6	+3.7
	comp=Z,2.0nm,0.3s,baz=216,slow=2.6,SNR=4.4						
MA2	Magadan	175.90	7		PKPdf	22 20 58.7	-3.1

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*IDC **16** 22:08:27.4±1.3, 55°.46S×28°.13W, h0^{km}, mb4.4/3, mb1 4.5/4, mb1mx4.1/31, mbtmp4.3/4, ML4.3/1 Error ellipse: s-maj=98.0km s-min=29.0km az=45.0*

ISC 16 22:08:28.8±1.3, **55°.5S**±0°.4×**28°.2W**±0°.5, **h10^{km}, n10,**
σ**0^{s}.44**/7, **mb4.3**/3, **South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNAA	Sanae	19.50	156	P	P	22 12 55.8	+0.1
	0.9nm,0.3s,baz=302,slow=12,SNR=2.4						
CPUP	Villa Florida	36.01	312	P	P	22 15 30.0	+0.2
	7.0nm,0.8s,baz=141,slow=6.5,SNR=2.4						
LVC	Limon Verde	44.53	301	P	P	22 16 40.3	-0.6
	3.3nm,0.7s,baz=158,slow=5.4,SNR=1.7						
H10N1	ASCENSION HYDR	48.73	18	T	T	23 08 00.2	
	baz=195						
H10N3	ASCENSION HYDR	48.73	18	T	T	23 08 11.4	
	baz=195						
H10N2	ASCENSION HYDR	48.74	18	T	T	23 08 18.3	
	baz=195						
LPAZ	La Paz	49.59	306	P	P	22 17 21.1	+0.3
	1.9nm,0.6s,baz=180,slow=7.1,SNR=1.8						
INK	Inuvik	145.00	321	PKPbc	PKPab	22 28 04.0	+0.1
	1.8nm,0.5s,baz=81,slow=5.7,SNR=3.6						
ILAR	Eielson Array	149.31	313	PKPbc	PKPbc	22 28 16.4	+0.2
	1.7nm,0.7s,baz=126,slow=2.6,SNR=6.6						
SONM	Songino Array	151.24	86	PKPbc	PKPbc	22 28 21.1	-0.5
	0.8nm,0.5s,baz=246,slow=2.0,SNR=4.2						

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*IDC **16** 22:10:53.4±1.2, 55°.44S×28°.19W, h0^{km}, mb4.2/2, mb1 4.5/3, mb1mx4.0/31, mbtmp4.3/3, ML4.6/1, Error ellipse: s-maj=72.4km s-min=29.4km az=61.0*

ISC 16 22:10:55.7±1.1, **55°.6S**±0°.3×**28°.7W**±0°.4, **h10^{km}, n10,**
σ**2^{s}.18**/7, **South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNAA	Sanae	19.50	156	P	P	22 15 22.8	+0.1
	1.7nm,0.3s,baz=301,slow=10,SNR=11						
VNDA	Vanda	46.97	183	P	P	22 19 26.3	+0.2
	3.3nm,0.8s,baz=162,slow=6.4,SNR=0.8						
H10N1	ASCENSION HYDR	48.96	19	T	T	23 12 45.2	
	baz=189						
H10N3	ASCENSION HYDR	48.96	19	T	T	23 12 48.9	
	baz=189						
H10N2	ASCENSION HYDR	48.98	19	T	T	23 12 41.4	
	baz=189						
LPAZ	La Paz	49.41	307	P	P	22 19 46.6	+0.4
	3.2nm,1.0s,baz=146,slow=7.3,SNR=3.9						
NB2	NORSAR Subarra	120.50	21	PKP	PKiKP	22 29 49.6	+3.5
	comp=Z,8.0nm,1.1s,baz=27,slow=2.9						
INK	Inuvik	144.91	321	PKP	PKPab	22 30 29.3	-1.2
	comp=Z,8.4nm,0.9s,baz=90,slow=4.5,SNR=8.6						
ILAR	Eielson Array	149.17	312	PKPbc	PKiKP	22 30 42.6	-1.4
	comp=Z,3.1nm,0.9s,baz=129,slow=1.7,SNR=6.8						
SONM	Songino Array	151.57	87	PKPbc	PKPbc	22 30 47.4	-1.8
	comp=Z,1.9nm,0.9s,baz=224,slow=2.7,SNR=6.1						

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*SNET **16** 22:14:32.1±0.7, 13°.27N×89°.97W, h26^{km}±3^{km}, ML2.3*
*GCG **16** 22:14:33.7±0.4, 13°.84N×90°.51W, h144^{km}±28^{km}, MD3.6*

ISC 16 22:14:32.7±2.5, **13°.2N**±0°.1×**89°.98W**±0°.07, **h35^{km}, n11,**
σ**1^{s}.08**/15, **1D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SBLS	San Blas	0.71	29	⇓iP	Pn	22 14 45.6	-0.9
SNJE	San Jose	0.75	30	eP	Pn	22 14 46.0	-1.0
RTR	El Retiro	0.75	26	eP	Pn	22 14 46.3	-0.8
BOQS	Boqueron	0.86	53	eP	Pn	22 14 47.7	-0.9
LFRS	El Faro	0.99	66	eP	Pn	22 14 49.4	-0.8
LFRS				eS	Sn	22 15 03.7	+0.7
PCG	Pacaya	1.32	333	eP	Pn	22 14 55.7	+0.8
MTO3	Montecristo	1.32	27	eP	Pn	22 14 54.4	-0.5
MTO3				eS	Sn	22 15 12.5	+1.0
MTO3				IAML		22 15 13.9	
	comp=Z,55nm,0.1s						
NBG	Las Nubes	1.41	346	eP	Pn	22 14 56.9	+0.7
NBG				eS	Sn	22 15 15.4	+1.7
ESQI	Esquipulas	1.48	25	eP	Pn	22 14 56.5	-0.4
FUG	Fuego 3	1.48	326	eP	Pn	22 14 56.3	-0.8
FUG				eS	Sn	22 15 13.5	-1.8
PACA	Pacayal	1.64	81	eP	Pn	22 14 59.7	+0.5

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*DJA **16** 22:17:38.4±0.3, 1°N±2°×12°1E±°, h10^{km}, M4.0/8, mb4.1/1, MLv4.0/8*

ISC 16 22:17:41.7±1.2, **1°.10N**±0°.06×**120°.92E**±0°.08, **h10^{km}, n10,**
σ**1^{s}.93**/14, **1C, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRSI	Marisa	1.20	121	P	Pn	22 18 01.5	-3.0
MRSI				S	Sn	22 18 21.8	+1.0
APSI	Ampana	2.13	160	P	Pn	22 18 15.2	-2.2
APSI				S	Sn	22 18 46.7	+2.8
LUWI	Luwuk	2.82	139	P	Pn	22 18 27.8	+0.9
LUWI				S	Sb	22 19 05.5	-1.4
KMSI	Cibinong	3.11	100	P	Pn	22 18 30.3	-0.5
KMSI				S	Sn	22 19 09.6	+1.6
TTSI	Tana Toraja	4.26	195	P	Pn	22 18 47.1	+0.3
TTSI				S	Sn	22 19 37.4	+0.8
SPSI	Sidrap Palu	5.16	193	P	Pn	22 18 59.2	+0.1
SKMP	Bagumbayan, Su	6.48	34	eP	Pg	22 19 52.9	+6.9
PAGZ	Pagadian	7.14	20	eP	Pn	22 19 29.4	+3.1
KCP	Kidapawan	7.19	35	⇑eP	Pg	22 19 58.0	-1.5
GUIM	Jordan	9.61	10	eP	Pn	22 20 00.4	+0.2

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*IDC **16** 22:28:44.9±0.7, 44°.66N×124°.22E, h0^{km}, mb3.8/16, mb1 3.9/19, mb1mx3.7/67, mbtmp3.8/19, ML2.5/2, Error ellipse: s-maj=15.2km s-min=12.9km az=18.0*
*BJI **16** 22:28:46.9±0.0, 44°.65N×124°.15E, h10^{km}, mb4.1/9, ML4.2/18*
*NEIC **16** 22:28:48.1±1.7, 44°.61N±0°.09×124°.1E±0°.1, h15^{km}±5^{km}, mb4.4/8, Error ellipse: s-maj=13.6km s-min=10.6km az=179.0*

ISC 16 22:28:47.1±0.5, **44°.63N**±0°.04×**124°.06E**±0°.05, **h10^{km}, n44,**
σ**1^{s}.49**/51, **mb3.9**/19, **1D, Northeastern China**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CN2	Changchun	1.30	129	ePg	Pn	22 29 10.8	-0.5
CN2				eSg	Sb	22 29 27.8	-0.5
CN2				smax	smax		
	comp=N,4µm,0.6s						
CN2				smax	smax		
	comp=E,4µm,0.6s						
SNY	Shenyang	2.83	187	⇓Pn	Pn	22 29 32.4	+0.1
SNY				Pg	Pb	22 29 34.4	-3.2
SNY				Sg	Sg	22 30 16.4	-1.4
SNY				smax	smax		
	comp=N,280nm,0.7s						
SNY				smax	smax		
	comp=E,420nm,0.5s						
MDJ	Mudanjiang	3.95	88		Pn	22 29 46.1	-1.6
HIA	Hailar	5.50	329		Pn	22 30 06.8	-2.2
USA0B	Ussuriysk Arra	5.70	92	Pn	Pn	22 30 13.8	+2.1
USRK	Ussuriysk Ar.	5.70	92	Pn	Pn	22 30 09.5	-2.2
	baz=270,slow=12,SNR=2.4						
USRK				Pg	Pb	22 30 29.0	+2.4
	baz=287,slow=18,SNR=15						
USRK				Lg	Lg	22 31 43.0	
	baz=276,slow=28,SNR=8.0						
DL2	Dalian	6.00	198	Pn	Pn	22 30 18.8	+2.9
DL2				Sn	Sb	22 31 35.8	-7.9
DL2				Sg	Sg	22 32 02.8	+3.0
DL2				smax	smax		
	comp=N,71nm,0.5s						
DL2				smax	smax		
	comp=E,90nm,0.7s						
KLR	Kul'dur	6.99	46	Pn	Pn	22 30 27.5	-1.9
	4.6nm,0.3s,baz=242,slow=13,SNR=72						
KLR				Sn	Sn	22 31 48.2	-0.7
	2.4nm,0.3s,baz=346,slow=23,SNR=1.7						
KLR				Lg	Lg	22 32 24.9	
	10nm,0.3s,baz=167,slow=18,SNR=6.3						
BJI	Beijing	7.43	235	Pg	Pb	22 31 02.4	+6.4
BJI				Sn	Sn	22 31 58.6	-1.1
BJI				Sg	Sg	22 32 47.0	+1.7
BJI				smax	smax		
	comp=N,110nm,0.9s						
BJI				smax	smax		
	comp=E,96nm,0.8s						
BJT	Baijiatuau	7.44	234	Pn	Pn	22 30 39.4	+3.7
KSRS	Korea Array	7.74	157	Pn	Pn	22 30 39.7	-0.1
	0.4nm,0.3s,baz=339,slow=14,SNR=2.5						
KSRS				Sn	Sn	22 32 08.2	+0.7
	0.4nm,0.3s,baz=349,slow=41,SNR=1.4						
KSRS				Lg	Lg	22 32 50.7	
	2.3nm,0.3s,baz=337,slow=28,SNR=5.0						
SONM	Songino Array	12.64	291	Sn	Sn	22 33 59.4	-8.4
	0.3nm,0.3s,baz=97,slow=20,SNR=5.1						
SONM				Lg	Lg	22 35 21.5	
	0.4nm,0.3s,baz=92,slow=30,SNR=3.8						
TLY	Talaya	15.31	305	Lg	Lg	22 36 57.2	
	0.0nm,0.3s,baz=260,slow=19,SNR=2.4						
XAN	Xi'an	15.76	233	P	Pn	22 32 30.3	+1.2
XAN				pmax	pmax		
	comp=Z,3.0nm,0.7s						
PETK	Petropavlovsk-	23.51	57	P	P	22 33 58.1	+1.1
WMQ	Urumqi	25.94	281	eP	P	22 34 22.1	+2.6
TIXI	Tiksi	27.19	3	P	P	22 34 30.4	0.0
TIXI				IAmb	IAmb	22 34 30.9	
	comp=Z,4.1nm,0.8s						
MKAR	Makanchi Array	29.00	289	P	P	22 34 46.8	-0.1
	comp=Z,0.6nm,0.8s,baz=84,slow=9.7,SNR=3.4						
MKAR				PcP	PcP	22 37 54.6	-0.6
	comp=Z,0.2nm,0.7s,baz=60,slow=3.5,SNR=2.2						
MKAR	Makanchi Array	29.00	289	P	P	22 34 47.3	+0.4
MAKZ	Makanchi	29.21	289	P	P	22 34 49.7	+0.9
KURK	Kurchatov	30.80	298	P	P	22 35 03.2	+0.5
KURK				IAmb	IAmb	22 35 16.7	
	comp=Z,4.6nm,1.3s						
KURBB	Kurchatov Arra	30.87	298	P	P	22 35 03.5	+0.1
	comp=Z,1.1nm,0.7s,baz=85,slow=9.7,SNR=15						

AAK	Ala-Archa	35.49	285	P	P	22 35 44.9	+1.0
	comp=Z,0.6nm,0.6s,baz=161,slow=6.2,SNR=3.6						
BVAR	Borovoye Array	35.56	303	P	P	22 35 44.2	0.0
	comp=Z,0.3nm,0.4s,baz=343,slow=25,SNR=5.1						
ARU	Arti	41.70	311	P	P	22 36 35.7	0.0
	comp=Z,0.3nm,0.4s,baz=153,slow=8.3,SNR=3.4						
ABKAR	Akbulak array	42.85	300	P	P	22 36 45.9	+0.7
AKTO	Aktyubinsk	43.64	302	P	P	22 36 52.0	+0.5
	comp=Z,0.6nm,0.6s,baz=72,slow=12,SNR=2.1						
ILAR	Eielson Array	50.38	34	P	P	22 37 42.9	-1.1
	comp=Z,0.6nm,0.8s,baz=284,slow=7.1,SNR=5.7						
ILAR	Eielson Array	50.38	34	P	P	22 37 44.5	+0.5
INK	Inuvik	53.64	27	P	P	22 38 07.5	-0.6
	comp=Z,1.5nm,0.7s,baz=292,slow=7.5,SNR=4.5						
INK	Inuvik	53.64	27	P	P	22 38 08.8	+0.7
INK				IAmb	IAmb	22 38 26.6	
	comp=Z,6.3nm,1.5s						
FINES	FINESS Array B	55.50	325	P	P	22 38 21.7	-0.1
	comp=Z,1.3nm,0.6s,baz=57,slow=7.0,SNR=7.2						
FINES	FINESS Array B	55.50	325	P	P	22 38 23.2	+1.5
AKASG	Malin Array Be	59.86	313	P	P	22 38 52.5	0.0
	comp=Z,2.0nm,0.6s,baz=48,slow=7.6,SNR=10						
DLBC	Dease Lake	60.49	36	P	P	22 38 55.0	-1.9
	comp=Z,4.9nm,0.7s,baz=44,slow=4.3,SNR=7.5						
YKA	Yellowknife Ar	63.40	26	P	P	22 39 13.9	-2.3
	comp=Z,0.4nm,0.8s,baz=317,slow=5.9,SNR=6.6						
BURAR	Bucovina Array	63.81	312	P	P	22 39 18.9	-0.5
WB0	Warramunga Arr	64.78	169	P	P	22 39 25.4	-0.4
OJC	Ojcow	64.94	317	P	P	22 39 27.8	+1.2
OJC				IAmb	IAmb	22 39 41.2	
	comp=Z,9.3nm,1.4s						
WRA	Warramunga Arr	64.94	169	P	P	22 39 25.9	-1.0
	comp=Z,1.2nm,0.8s,baz=353,slow=7.4,SNR=6.9						
ASAR	Alice Springs	68.56	170	P	P	22 39 49.4	-0.5
	comp=Z,0.8nm,1.0s,baz=0.0,slow=5.6,SNR=2.0						
GERES	GERESS Array B	68.80	318	P	P	22 39 50.9	-0.5
	comp=Z,0.4nm,0.6s,baz=40,slow=7.7,SNR=2.5						
DAVOX	Davos/Dischmat	72.08	319	P	P	22 40 10.8	-0.7
	comp=Z,1.4nm,0.7s,baz=328,slow=9.5,SNR=2.6						
FORT	Forrest	75.14	176	P	P	22 40 28.4	-0.8

NEIC ***16*** *22:32:14.0±1.6, 24°.15S±0°.08×67°.3W±0°.1, h229^{km}±11^{km}, Error ellipse: s-maj=17.7km s-min=10.9km az=94.0*

GUC ***16*** *22:32:15.1±0.6, 24°.13S×67°.26W, h222^{km}±8^{km}, ML4.3*

ISC 16 22:32:13.5±1.1**, 24°.14S**±0°.04×**67°.14W**±0°.08**, h218**^{km}±10^{km}**, n42,** σ1^{s}.**15**/66**, 6C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	2.23	313	*i* P	Pn	22 32 56.8	+0.7
LVC				*i* S	S	22 33 28.6	-0.5
LVC	Limon Verde	2.23	313	Pn	Pn	22 32 56.8	+0.7
LVC				S	S	22 33 28.2	-0.9
PB15	IPOC Station P	2.33	293	⇑*i*P	Pn	22 32 58.1	+1.1
PB15				*e*S	S	22 33 30.3	-0.3
PB15	IPOC Station P	2.33	293	Pn	Pn	22 32 58.1	+1.1
PB15				S	S	22 33 29.8	-0.8
GO02	Mina Guanaco	2.45	245	⇑*i*P	Pn	22 32 59.3	+1.1
GO02				*e*S	S	22 33 33.5	+0.5
GO02				IAML		22 33 34.8	
	comp=N,2µm,0.1s						
GO02	Mina Guanaco	2.45	245	Pn	Pn	22 32 59.4	+1.1
GO02				S	S	22 33 33.1	0.0
PB06	IPOC Station P	2.65	302	⇓*i*P	Pn	22 33 01.4	+1.0
PB06				*e*S	S	22 33 36.0	-0.7
PB06				IAML		22 33 39.5	
	comp=N,910nm,0.2s						
PB06	IPOC Station P	2.65	302	Pn	Pn	22 33 01.4	+1.0
PB06				S	S	22 33 35.7	-1.0
PB14	IPOC Station P	3.02	260	⇑*i*P	Pn	22 33 05.4	+0.8
PB14				*i* S	S	22 33 43.7	-0.6
PB14				IAML		22 33 46.5	
	comp=E,273nm,0.1s						
PB14	IPOC Station P	3.02	260	Pn	Pn	22 33 05.4	+0.8
PB09	IPOC Station P	3.03	320	*e*P	Pn	22 33 06.0	+1.3
PB09				*e*S	S	22 33 44.7	+0.1
PB09				IAML		22 33 45.9	
	comp=N,285nm,0.5s						
PB09	IPOC Station P	3.03	320	Pn	Pn	22 33 05.7	+1.0
PB09				S	S	22 33 44.5	0.0
PB05	IPOC Station P	3.09	294	*e*P	Pn	22 33 06.1	+0.8
PB05				*i* S	S	22 33 44.4	-1.2
PB05				IAML		22 33 47.8	
	comp=E,349nm,0.2s						
AHML	Horco Molle	3.10	149	*e*P	Pn	22 33 04.2	-1.0
PB10	IPOC Station P	3.19	281	*i* P	Pn	22 33 07.3	+1.0
PB10				*i* S	S	22 33 47.0	-0.4
PB10	IPOC Station P	3.19	281	Pn	Pn	22 33 06.9	+0.6
PB10				S	S	22 33 47.5	+0.1
AC02	Maricunga	3.23	213	Pn	Pn	22 33 08.2	+1.0
PB04	IPOC Station P	3.30	302	*e*P	Pn	22 33 08.9	+1.1
PB04				*e*S	S	22 33 49.3	-0.8
PB04	IPOC Station P	3.30	302	Pn	Pn	22 33 08.6	+0.8
PB04				S	S	22 33 48.3	-1.8
PB07	IPOC Station P	3.49	313	*e*P	Pn	22 33 10.4	+0.4
PB07				*i* S	S	22 33 51.5	-2.6
PB07	IPOC Station P	3.49	313	Pn	Pn	22 33 10.4	+0.4
PB07				S	S	22 33 52.0	-2.1
AC01	Pan de Azucar	3.72	237	⇑*i*P	Pn	22 33 12.6	+0.1
AC01				*i* S	S	22 33 57.1	-1.6
AC01	Pan de Azucar	3.72	237	Pn	Pn	22 33 12.7	+0.2
AC01				S	S	22 33 56.8	-2.0
PB01	IPOC Station P	3.77	324	⇑*i*P	Pn	22 33 13.5	+0.1
PB01				*i* S	S	22 33 57.8	-2.3
PB01	IPOC Station P	3.77	324	Pn	Pn	22 33 13.5	+0.1
PB01				S	S	22 33 57.6	-2.4
PB02	IPOC Station P	3.79	317	⇑*i*P	Pn	22 33 13.8	+0.2
PB02				*i* S	S	22 33 57.7	-2.8
PATCX	Punta Patache	4.32	319	Pn	Pn	22 33 20.7	+0.6
PB08	IPOC Station P	4.40	334		Pn	22 33 22.0	+0.7
GO03	Copiap	4.43	218	*e*P	Pn	22 33 21.1	-0.1
GO03				*i* S	S	22 34 12.4	-2.1
GO03	Copiap	4.43	218	Pn	Pn	22 33 21.2	0.0
TA01	Diego Aracena	4.54	321	Pn	Pn	22 33 23.0	+0.4
PSGCX	Pisagua	5.30	328	Pn	Pn	22 33 32.0	-0.4
AC04	Llanos de Chal	5.37	220	Pn	Pn	22 33 32.5	-0.5
AC05	El Transito	5.46	210	Pn	Pn	22 33 34.1	-0.1
MNMC	Minye Minye	5.48	335	Pn	Pn	22 33 34.9	+0.1
LCO	Las Campanas	5.80	213	Pn	Pn	22 33 38.2	-0.6
CO01	Juntas del Tor	6.38	204	Pn	Pn	22 33 47.6	+1.4
GO04	Tololo Observa	6.83	208	Pn	Pn	22 33 50.4	-1.6
LPAZ	La Paz	7.87	353	Pn	Pn	22 34 06.5	+0.7
BDFB	Brasilia	19.86	68	P	P	22 36 29.4	+1.0
BDFB				IAmb	IAmb	22 36 29.9	
	comp=Z,11nm,0.8s						
MTO3	Montecristo	44.03	328	P	P	22 39 58.7	-1.4
MTO3				IAmb	IAmb	22 40 08.8	
	comp=Z,10.0nm,1.5s						
V53A	Saluda	61.31	345	P	P	22 42 07.9	+1.8
V53A				IAmb	IAmb	22 42 17.5	
	comp=Z,9.4nm,1.4s						

WEL ***16*** *22:34:50.1±0.6, 35°S±5°×17°9E±°, h218^{km}±9^{km}, M3.7/25, mB4.3/12, MLv4.3/25, Mw(mB)3.4/12, Error ellipse: s-maj=0.0km s-min=0.0km az=114.0*

IDC ***16*** *22:34:52.9±7.4, 34°.80S×179°.37E, h221^{km}±74^{km}, mb3.6/2, mb1 3.8/3, mb1mx3.4/33, mbtmp4.1/3, Error ellipse: s-maj=97.3km s-min=55.4km az=4.0*

NEIC ***16*** *22:34:53.7±1.6, 34°.54S±0°.06×178°.8E±0°.2, h188^{km}±11^{km}, mb4.4/11, Error ellipse: s-maj=26.2km s-min=7.0km az=103.0*

ISC 16 22:34:54.3±0.9**, 34°.74S**±0°.07×**178°.90E**±0°.09**, h200**^{km}**, n67,** σ1^{s}.**86**/91**, mb4.2**/8**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	2.86	190	Pn	Pn	22 35 42.6	+0.4
MXZ				Sn	Sn	22 36 22.4	+2.6
MXZ	Matakaoa Point	2.86	190	P	Pn	22 35 42.9	+0.6
MXZ				S	Sn	22 36 21.0	+1.2
HAZ	Te Kaha	3.15	196	P	Pn	22 35 47.2	+1.6
HAZ				S	Sn	22 36 27.6	+1.7
PKGZ	Pakihiroa	3.21	192	P	Pn	22 35 47.2	+0.7
PKGZ				S	Sn	22 36 31.0	+3.5
URZ	Urewera	3.80	202	P	Pn	22 35 55.4	+1.9
	2.0nm,0.3s,baz=40,slow=8.3,SNR=21						
URZ				S	Sn	22 36 42.5	+2.4
	8.3nm,0.3s,baz=92,slow=22,SNR=11						
URZ	Urewera	3.80	202	Pn	Pn	22 35 54.9	+1.4
RAGZ	Rawiri	3.94	197	P	Pn	22 35 55.4	0.0
RAGZ				S	Sn	22 36 46.1	+2.8
RTZ	Ruatahuna	4.17	201	P	Pn	22 35 57.0	-1.2
RTZ				S	Sn	22 36 49.0	+0.5
SNGZ	Shannon Statio	4.23	197	P	Pn	22 35 58.4	-0.5
SNGZ				S	Sn	22 36 52.7	+2.9
MTHZ	Maungataniwha	4.43	201	P	Pn	22 36 02.8	+1.4
MTHZ				S	Sn	22 36 57.9	+3.5
MHGZ	Mahia Peninsul	4.48	190	P	Pn	22 36 03.5	+1.5
MRHZ	Matea Rd	4.55	205	P	Pn	22 36 04.6	+1.6
MRHZ				S	Sn	22 37 00.3	+3.2
ARHZ	Aropaoanui	4.77	198	P	Pn	22 36 06.9	+1.2
ARHZ				S	Sn	22 37 03.1	+1.1
BKZ	Black Stump Fm	4.82	203	Pn	Pn	22 36 07.1	+0.6
BKZ	Black Stump Fm	4.82	203	P	Pn	22 36 07.3	+0.8
BKZ				S	Sn	22 37 04.7	+1.4
HIZ	Hauiti	4.98	220	P	Pn	22 36 13.8	+5.4
KWHZ	Kaweka Forest	5.08	202	P	Pn	22 36 09.2	-0.5
KWHZ				S	Sn	22 37 12.2	+2.8
OTVZ	Oturere	5.12	209	P	Pn	22 36 11.7	+1.4
TWVZ	Taurewa	5.14	212	P	Pn	22 36 15.7	+5.2
NGZ	Ngauruhoe	5.16	210	P	Pn	22 36 15.4	+4.5
BHHZ	Black Hill Sta	5.26	205	P	Pn	22 36 12.9	+0.9
BHHZ				S	Sn	22 37 15.3	+1.9
KRHZ	Kereru	5.30	202	P	Pn	22 36 11.7	-0.8
KRHZ				S	Sn	22 37 14.8	+0.6
KAHZ	Kahuranaki	5.30	197	P	Pn	22 36 12.0	-0.5
KAHZ				S	Sn	22 37 15.3	+1.0
PNHZ	Pukenui	5.60	202	P	Pn	22 36 15.1	-1.2
PNHZ				S	Sn	22 37 20.2	-1.0
TSZ	Takapari Road	5.80	203	P	Pn	22 36 17.9	-1.1
ANWZ	Angora Road	6.03	198	P	Pn	22 36 22.2	+0.4
GLKZ	Green Lake	6.09	27	S	Sn	22 37 14.4	-18
POWZ	Post Office Ro	6.17	203	P	Pn	22 36 23.4	-0.2
POWZ				S	Sn	22 37 34.4	-0.1
BFZ	Birch Farm	6.30	199	Pn	Pn	22 36 24.4	-0.9
BFZ	Birch Farm	6.30	199	P	Pn	22 36 24.4	-0.9
BFZ				S	Sn	22 37 36.0	-1.5
MRZ	Mangatainoka R	6.47	203	P	Pn	22 36 25.6	-2.0
MRZ				S	Sn	22 37 38.8	-2.9
TIWZ	Tintock	6.48	201	P	Pn	22 36 27.6	-0.2
TIWZ				S	Sn	22 37 39.8	-2.1
HOWZ	Holdsworth Sta	6.71	203	P	Pn	22 36 28.5	-2.2
HOWZ				S	Sn	22 37 44.9	-2.3
OGWZ	Otaki Gorge	6.75	205	P	Pn	22 36 29.1	-2.1
OGWZ				S	Sn	22 37 46.1	-2.0
KIW	Kapiti Island	6.88	206	P	Pn	22 36 30.6	-2.3
KIW				S	Sn	22 37 48.9	-2.3
MTW	Mount Morrison	6.95	202	P	Pn	22 36 32.4	-1.4
MTW				S	Sn	22 37 49.2	-3.6
CAW	Cannon Point	7.04	204	P	Pn	22 36 32.3	-2.7
TRWZ	Traveller	7.12	200	P	Pn	22 36 34.8	-1.2
TRWZ				S	Sn	22 37 52.7	-4.1
SNZO	South Karori	7.35	206	Pn	Pn	22 36 41.4	+2.5
PLWZ	Palliser	7.40	202	Pn	Pn	22 36 41.2	+1.5
PLWZ	Palliser	7.40	202	P	Pn	22 36 37.0	-2.7
PLWZ				S	Sn	22 37 59.0	-4.5
NNZ	Nelson	7.80	212	Pn	Pn	22 36 46.4	+1.6
CMWZ	Cape Campbell	7.91	206		Pn	22 36 48.2	+1.9
THZ	Tophouse	8.45	212	Pn	Pn	22 36 52.1	-1.3
KHZ	Kahutara	8.74	207	Pn	Pn	22 36 55.2	-1.8
LTZ	Lake Taylor	9.55	211		Pn	22 37 06.1	-1.6
CTZ	Chatham Island	9.63	160	P	Pn	22 37 10.6	+2.0
CTZ				S	Sn	22 38 53.0	-3.3
MQZ	McQueen's Vall	10.18	207	Pn	Pn	22 37 14.8	-0.9
ODZ	Otahua Downs	12.08	209		Pn	22 37 41.5	+1.4
CTAO	Charters Tower	32.28	288	P	P	22 41 06.0	+1.6
CTAO				IAmb	IAmb	22 41 12.1	
	comp=Z,23nm,1.3s						
AS31	Alice Springs	40.50	273	P	P	22 42 14.2	+0.3
ASAR	Alice Springs	40.51	273	P	P	22 42 14.1	+0.2
	comp=Z,2.9nm,0.7s,baz=113,slow=8.3,SNR=21						
ASAR	Alice Springs	40.51	273	P	P	22 42 13.6	-0.3
WR0	Warramunga Arr	41.73	279	P	P	22 42 23.6	-0.3
WR0				IAmb	IAmb	22 42 33.8	
	comp=Z,11nm,1.4s						
WC3	Warramunga Arr	41.87	279	P	P	22 42 24.7	-0.3
WC3				IAmb	IAmb	22 42 30.1	
	comp=Z,13nm,1.4s						
WB2	Warramunga Arr	41.89	279	P	P	22 42 24.9	-0.3
WB2				IAmb	IAmb	22 42 30.3	
	comp=Z,9.3nm,1.2s						
WRA	Warramunga Arr	41.90	279	P	P	22 42 24.6	-0.7
	comp=Z,2.2nm,0.6s,baz=117,slow=7.6,SNR=26						
WRA	Warramunga Arr	41.90	279	P	P	22 42 24.7	-0.6
WB0	Warramunga Arr	41.94	279	P	P	22 42 25.1	-0.6
WB0				IAmb	IAmb	22 42 31.3	
	comp=Z,9.9nm,1.1s						
FORT	Forrest	42.58	261	P	P	22 42 32.3	+1.7
FORT				IAmb	IAmb	22 42 46.7	
	comp=Z,18nm,1.1s						
KNRA	Kununurra	48.64	280	P	P	22 43 15.7	-2.6
QSPA	South Pole Qui	55.38	180	P	P	22 44 10.1	+2.7
HLP	Hilina Pali	59.06	29		P	22 44 33.5	-0.1
LIC	Lamto	151.39	172	*e*PKIKP	PKiKP	22 54 24.3	-1.0
	comp=Z,13nm,0.6s						
KIC	Kosan Boka	151.56	172	*e*PKIKP	PKiKP	22 54 24.7	-1.0
	comp=Z,6.7nm,0.6s						
TIC	Toumodi	151.81	172	*e*PKIKP	PKiKP	22 54 25.1	-1.1
AKASG	Malin Array Be	152.85	315	PKPbc	PKPbc	22 54 23.5	-3.6
	comp=Z,0.3nm,0.3s,baz=57,slow=2.9,SNR=1.8						

BJI ***16*** *22:45:02.4±0.0, 3°.98S×134°.69E, h10^{km}, mb4.5/30*

IDC ***16*** *22:45:06.8±0.6, 3°.27S×134°.53E, h0^{km}, mb4.4/18, mb1 4.5/22, mb1mx4.3/42, mbtmp4.4/22, ML4.1/4, MS4.6/2, Ms1 4.6/2, ms1mx3.8/53, Error ellipse: s-maj=23.7km s-min=14.0km az=61.0*

NEIC ***16*** *22:45:08.5±1.7, 3°.31S±0°.08×134°.57E±0°.08, h12^{km}±4^{km}, mb4.6/35, Error ellipse: s-maj=13.0km s-min=9.8km az=48.0*

DJA ***16*** *22:45:09.1±0.2, 3°S±4°×13°4E±°, h10^{km}, M4.7/11, mb4.7/7, mB5.1/2, MLv4.7/11, Mw(mB)4.5/2*

ISC 16 22:45:10.3±0.4**, 3°.36S**±0°.05×**134°.56E**±0°.04**, h24**^{km}**, n101,** σ1^{s}.**65**/105**, mb4.5**/33**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRPI	Serui, Papua	2.24	49	P	Pn	22 45 44.4	-1.5
SRPI				S	Sn	22 46 11.9	-0.8
FAKI	Fak Fak	2.35	281		Pn	22 45 46.8	-0.6
FAKI	Fak Fak	2.35	281	P	Pn	22 45 47.0	-0.4
BAKI	Biak	2.65	36	P	Pn	22 45 51.1	-0.5
SIJI	Sorong	4.12	307	Pn	Pn	22 46 10.5	-1.3
	17nm,0.3s,baz=211,slow=23,SNR=43						
SIJI				Sn	Sn	22 46 59.8	+0.5
	2.5nm,0.3s,baz=121,slow=15,SNR=1.3						
SIJI				LR	LR	22 48 16.2	
	comp=Z,2µm,18.9s,baz=178,slow=47						
SWI	Sorong	4.13	307	P	Pn	22 46 11.7	-0.2
SMPI	Sarmi	4.36	72	P	Pn	22 46 15.5	+0.4
BNDI	Bandanaira	4.79	256	P	Pn	22 46 21.3	+0.3
BNDI				S	Sn	22 47 15.9	+0.2
MSAI	Masohi	5.62	270	P	Pn	22 46 31.9	-0.6
	0.2nm828nm40nm,0.7s						
MSAI				S	Sn	22 47 34.2	-2.2
	0.2nm828nm40nm,0.7s						
GENI	Genyem	5.65	82	P	Pn	22 46 34.3	+1.5
	0.8nm243nm,0.8s						
NLAI	Namlea	7.45	271	P	Pn	22 46 57.9	+0.3
	0.2nm3µm41nm,0.9s						
SANI	Sanana	8.66	278	P	Pn	22 47 13.8	-0.4
	31nm,0.6s						
SOEI	Soe	12.04	238	P	Pn	22 48 03.7	+3.1
	46nm,1.4s						
BATI	Baumata	12.78	237	Pn	Pn	22 48 09.3	-1.3
	2.3nm,0.3s,baz=84,slow=9.2,SNR=2.6						
BATI				Sn	Sn	22 50 39.6	+7.4
	1.4nm,0.3s,baz=291,slow=23,SNR=4.2						
BATI	Baumata	12.78	237	P	Pn	22 48 08.9	-1.7
	18nm,0.7s						
APSI	Ampana	13.13	280	P	Pn	22 48 14.8	-0.6
MMRI	Maumere	13.33	246	Pn	Pn	22 48 17.9	-0.2
COEN	Coen	13.53	142		Pn	22 48 18.5	-2.4
PMG	Port Moresby	13.88	116	Pn	Pn	22 48 26.5	+0.8
	5.5nm,0.3s,baz=313,slow=8.4,SNR=2.3						
WB0	Warramunga Arr	16.31	181		Pn	22 48 56.4	-1.4
WRAB	Tennant Creek	16.47	181	Pn	Pn	22 48 58.9	-1.1
WRAB				IAmb	IAmb	22 49 13.7	
	comp=Z,33nm,0.8s						
WB2	Warramunga Arr	16.48	181	Pn	Pn	22 48 57.5	-2.6
WB2				IAmb	IAmb	22 49 05.4	
	comp=Z,35nm,0.8s						
WRA	Warramunga Arr	16.48	181	Pn	Pn	22 48 56.7	-3.4
	comp=Z,0.6nm,0.3s,baz=3.9,slow=13,SNR=22						
WRA				Sn	Sn	22 51 53.0	-9.5
	comp=Z,0.4nm,0.3s,baz=10,slow=22,SNR=4.9						
WRA				Lg	Lg	22 53 53.7	
	baz=7.8,slow=26,SNR=1.3						
WRA	Warramunga Arr	16.48	181		Pn	22 48 57.2	-2.9
WR0	Warramunga Arr	16.50	180	Pn	Pn	22 48 59.2	-1.0
WR0				IAmb	IAmb	22 49 07.2	
	comp=Z,42nm,1.1s						
FITZ	Fitzroy Crossi	17.06	210	P	Pn	22 49 05.9	-1.4
	comp=Z,1.1nm,0.3s,baz=36,slow=12,SNR=14						
FITZ				S	Sn	22 52 03.9	-13
	comp=Z,0.3nm,0.3s,baz=87,slow=17,SNR=3.6						
FITZ	Fitzroy Crossi	17.06	210		Pn	22 49 05.9	-1.4
MYLDM	Lahad Datu	18.15	298	P	P	22 49 21.1	0.0
CTAO	Charters Tower	20.16	146	P	Pn	22 49 44.9	-0.2
AS31	Alice Springs	20.19	182	P	P	22 49 44.8	+1.4
AS31				IAmb	IAmb	22 49 50.1	
	comp=Z,19nm,0.7s						
ASAR	Alice Springs	20.20	182	P	P	22 49 44.3	+0.8
	comp=Z,37nm,0.6s,baz=6.4,slow=11,SNR=133						
ASAR				S	S	22 53 22.0	-7.2
	comp=Z,2.5nm,0.8s,baz=6.1,slow=28,SNR=4.6						
ASAR				Lg	Lg	22 55 51.0	
	comp=Z,3.9nm,1.0s,baz=14,slow=32,SNR=2.3						
ASAR	Alice Springs	20.20	182	P	P	22 49 43.9	+0.4
KKM	Kota Kinabalu	20.57	297		Pn	22 49 48.1	-1.9
PSA00	Pilbara Seismi	23.07	217	P	P	22 50 14.6	+0.3
PSA00				IAmb	IAmb	22 50 33.2	
	comp=Z,13nm,0.8s						
KSM	Kuching	24.72	281	P	P	22 50 31.0	+1.0
KSM				IAmb	IAmb	22 50 33.5	
	comp=Z,18nm,1.1s						
FORT	Forrest	27.95	192	P	P	22 51 00.9	+1.9
STKA	Stephens Creek	29.13	168	P	P	22 51 09.9	+0.5
	comp=Z,4.6nm,0.9s,baz=351,slow=9.2,SNR=7.2						
STKA	Stephens Creek	29.13	168	P	P	22 51 09.7	+0.2
BBOO	Buckleboo	29.33	177	P	P	22 51 11.1	-0.1
ARMA	Armidale	31.38	151	P	P	22 51 31.3	+1.7
ARMA				IAmb	IAmb	22 51 32.7	
	comp=Z,7.3nm,0.8s						
RPSI	Rantau Prapat	36.13	279	P	P	22 52 09.9	-1.0
PSI	Prapat	36.14	279	P	P	22 52 09.9	-1.3
	comp=Z,1.4nm,0.3s,baz=165,slow=0.1,SNR=3.9						
NJ2	Nanjing	38.25	338	*e*P	P	22 52 32.6	+4.0
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
JWT	Wachi	38.45	1	P	P	22 52 32.2	+1.9
JWT				IAmb	IAmb	22 52 33.6	
	comp=Z,16nm,1.0s						
CMAR	Chiang Mai Arr	41.24	303	P	P	22 52 53.6	-0.1
	comp=Z,2.0nm,0.3s,baz=132,slow=6.0,SNR=15						
CHTO	Chiang Mai	41.41	303	P	P	22 52 55.1	0.0
XAN	Xi'an	44.37	329	P	P	22 53 18.0	-1.0
XAN				pP	pP	22 53 22.8	-3.7
XAN				pmax	pmax		
	comp=Z,6.0nm,1.2s						
CD2	Chengdu	44.99	321	*e*P	P	22 53 23.8	-0.2
CD2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
LZH	Lanzhou	48.62	327	*e*P	P	22 53 53.4	+0.9
LZH				pP	pP	22 53 56.6	-3.5
LZH				sP	sP	22 54 00.1	-2.9
LZH				pmax	pmax		
	comp=Z,14nm,1.1s						
HHC	Hu-ho-hao-te	48.77	337	*e*P	P	22 53 52.6	-0.8
SHL	Shillong	50.37	307	P	P	22 54 05.5	-0.6
SHL				IAmb	IAmb	22 54 06.3	
	comp=Z,5.7nm,0.7s						
TUWZ	Tuamarina	51.78	143	P	P	22 54 16.1	-0.1
GTA	Gaotai	53.23	327	*e*P	P	22 54 27.0	-0.1
GTA				pP	pP	22 54 33.0	-1.7
GTA				sP	sP	22 54 35.5	-2.1
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
SONM	Songino Array	56.64	338	P	P	22 54 50.5	-1.1
	comp=Z,0.9nm,0.9s,baz=148,slow=7.4,SNR=7.4						
WMQ	Urumqi	63.01	324	*e*P	P	22 55 38.0	+2.6
RAR	Rarotonga	66.12	112	LR	LR	23 22 22.4	
	comp=Z,2µm,21.6s,baz=244,slow=34						
MK31	Makanchi Array	67.83	324	P	P	22 56 07.0	+0.5
MK31				IAmb	IAmb	22 56 07.9	
	comp=Z,3.9nm,0.8s						
MKAR	Makanchi Array	67.83	324	P	P	22 56 07.4	+0.9
	comp=Z,3.4nm,0.5s,baz=116,slow=7.9,SNR=22						
MKAR	Makanchi Array	67.83	324	P	P	22 56 06.6	0.0
MAKZ	Makanchi	68.02	324	P	P	22 56 07.5	-0.3
NIL	Nilore	68.43	308	P	P	22 56 10.8	+0.2
KSH	Kashi	68.56	315	P	P	22 56 10.5	-0.9
KSH				PP	PP	22 58 46.4	+3.4
KSH				S	S	23 05 07.3	-5.4
KSH				pmax	pmax		
	comp=Z,4.0nm,1.2s						
ZAA0	Zalesovo Array	70.47	331	P	P	22 56 21.9	-0.7
ZALV	Zalesovo Beam	70.47	331	P	P	22 56 21.6	-1.1
	comp=Z,1.0nm,0.5s,baz=114,slow=6.6,SNR=4.4						
ZALV	Zalesovo Beam	70.47	331	P	P	22 56 22.1	-0.6
AAK	Ala-Archa	70.84	317	P	P	22 56 26.4	+0.9
	comp=Z,1.4nm,0.6s,baz=189,slow=12,SNR=4.3						
AAK	Ala-Archa	70.84	317	P	P	22 56 26.1	+0.7
AAK				IAmb	IAmb	22 56 36.4	
	comp=Z,7.8nm,1.4s						
KURK	Kurchatov	71.91	326	P	P	22 56 32.1	+0.6
KURK				IAmb	IAmb	22 56 49.9	
	comp=Z,5.5nm,1.1s						
KURBB	Kurchatov Arra	71.92	326	P	P	22 56 31.1	-0.4
	comp=Z,4.0nm,1.0s,baz=118,slow=5.5,SNR=8.8						
KBL	Kabul	72.03	308	P	P	22 56 32.3	-0.5
KBL				IAmb	IAmb	22 56 33.8	
	comp=Z,4.7nm,1.1s						
KKAR	Karatay Array	73.72	317	P	P	22 56 41.6	-0.9
TIXI	Tiksi	74.97	358	P	P	22 56 49.2	+0.2
VNDA	Vanda	75.53	174	P	P	22 56 54.6	+2.4
	comp=Z,3.1nm,0.8s,baz=17,slow=6.9,SNR=3.6						
VNDA	Vanda	75.53	174	P	P	22 56 54.1	+1.8
HRA	Herat	77.41	306	P	P	22 57 03.1	-0.9
BVAR	Borovoye Array	77.51	326	P	P	22 57 04.1	+0.2
	comp=Z,1.2nm,0.7s,baz=153,slow=13,SNR=4.7						
BRVK	Borovoye	77.58	326	P	P	22 57 04.5	+0.2
BRVK				IAmb	IAmb	22 57 05.4	
	comp=Z,5.2nm,0.8s						
WSAR	Wadi Sarin	78.44	294	P	P	22 57 10.1	+0.3
	comp=Z,2.2nm,0.7s,baz=131,slow=1.2,SNR=3.7						
NRIK	Noril'sk	79.22	345	P	P	22 57 13.1	+0.1
	comp=Z,2.2nm,0.6s,baz=105,slow=4.3,SNR=5.6						
NRIK	Noril'sk	79.22	345	P	P	22 57 11.6	-1.4
NRIK				IAmb	IAmb	22 57 13.8	
	comp=Z,9.2nm,1.2s						
GEYT	Alibeck	81.41	309	P	P	22 57 25.8	+0.2
	comp=Z,1.8nm,0.7s,baz=84,slow=14,SNR=5.0						
GEYT	Alibeck	81.41	309	P	P	22 57 26.4	+0.8
ABKAR	Akbulak array	82.56	320	P	P	22 57 30.8	-0.5
ABKAR	Akbulak array	82.56	320	P	P	22 57 31.2	-0.1
ABKAR				IAmb	IAmb	22 57 32.6	
	comp=Z,4.9nm,1.2s						
AKTO	Aktyubinsk	84.05	321	P	P	22 57 38.5	-0.4
	comp=Z,2.6nm,1.1s,baz=100,slow=6.1,SNR=3.4						
IMAR	Indian Mountai	85.69	23	P	P	22 57 46.8	-0.1
OPO	Ambohidratompo	86.46	252	P	P	22 57 52.4	+0.5
	comp=Z,3.3nm,0.7s,baz=63,slow=6.3,SNR=3.4						
I23K	Minto, Yukon-K	87.21	24	P	P	22 57 54.6	+0.3
ILAR	Eielson Array	88.15	25	P	P	22 57 57.9	-1.0
	comp=Z,1.7nm,0.9s,baz=262,slow=5.0,SNR=9.1						
ILAR	Eielson Array	88.15	25	P	P	22 57 59.2	+0.3
BMAR	Burnt Mountain	89.57	22	P	P	22 58 05.8	+0.2
BELG	Belogornoye	90.77	322	P	P	22 58 11.0	-0.3
	comp=Z,3.3nm,0.7s,baz=149,slow=5.9,SNR=1.4						
ARCES	ARCESS Array B	99.74	340	P	Pdif	22 58 50.0	-1.9
	comp=Z,6.6nm,1.1s,baz=61,slow=5.6,SNR=1.8						
ARCES	ARCESS Array B	99.74	340		Pdif	22 58 49.6	-2.4
ATAH	Atahualpa	145.49	108	PKPbc	PKPab	23 04 48.4	+0.1
	comp=Z,3.7nm,0.7s,baz=238,slow=3.9,SNR=1.4						
CPUP	Villa Florida	148.32	159	PKPbc	PKPbc	23 04 54.9	-0.4
	comp=Z,5.5nm,0.9s,baz=205,slow=2.5,SNR=6.7						
CPUP	Villa Florida	148.32	159		PKPbc	23 04 55.3	0.0
LPAZ	La Paz	150.26	132	PKPbc	PKiKP	23 05 02.5	+0.4
	comp=Z,5.1nm,0.9s,baz=225,slow=0.4,SNR=12						
LPAZ	La Paz	150.26	132	PKPbc	PKiKP	23 05 02.1	0.0
ROSC	El Rosal	151.16	86	PKPbc	PKiKP	23 05 04.0	+0.3
	comp=Z,7.0nm,0.4s,baz=88,slow=5.9,SNR=4.2						
ROSC	El Rosal	151.16	86	PKPbc	PKiKP	23 05 04.4	+0.7

*IDC **16** 22:46:36.5±0.9, 42°.76N×86°.57E, h0^{km}, mb3.9/12, mb1 3.9/18, mb1mx3.7/65, mbtmp3.8/18, ML3.4/6, Error ellipse: s-maj=21.5km s-min=14.3km az=45.0*

*NEIC **16** 22:46:42.3±1.6, 42°.91N±0°.08×86°.46E±0°.08, h25^{km}±6^{km}, mb4.2/9, Error ellipse: s-maj=12.4km s-min=8.0km az=155.0*

*NNC **16** 22:46:43.8±2.0, 43°.14N×86°.16E, h0^{km}, mb4.4, mpv4.0, Error ellipse: s-maj=16.3km s-min=10.0km az=112.0*

*SOME **16** 22:46:57.9, 43°.47N×85°.72E, h15^{km}*

ISC 16 22:46:39.7±0.6**, 42°.95N**±0°.05×**86°.50E**±0°.03**, h10**^{km}**, n67, σ2^{s}42**/90**, mb3.9**/13**, 11C-13D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMQ	Urumqi	1.24	45	Pg	Pg	22 47 04.4	+0.9
WMQ				Sg	Sn	22 47 21.4	+1.4
WMQ				smax	smax		
	comp=N,550nm,0.5s						
WMQ				smax	smax		
	comp=E,690nm,0.7s						
WMQ	Urumqi	1.24	45		Pg	22 47 04.5	+0.9
WMQ				Sn	Sn	22 47 21.2	+1.2
KTMS	Ketmen	4.52	278	*e*P	Pg	22 48 08.4	+2.1
	comp=E,7.5nm,0.2s						
KTMS				*e*S	Sb	22 48 59.0	+5.2
	comp=E,130nm,0.4s						
ZSN	Zaisan	4.65	346	*e*P	Pg	22 48 12.1	+3.4
	comp=E,52nm,0.9s						
ZSN				*e*S	Sg	22 49 05.6	-3.4
	comp=E,143nm,0.5s						
MK31	Makanchi Array	4.87	324	⇓Pn	Pn	22 47 54.8	+1.8
	comp=E,3.4nm,0.5s,baz=143,slow=13,SNR=257						
MK31				Pg	Pb	22 48 08.7	+3.6
	comp=E,16nm,0.5s,baz=136,slow=16,SNR=11						
MK31				⇓Sn	Sn	22 48 50.9	+1.4
	comp=E,22nm,0.5s,baz=140,slow=26,SNR=4.1						
MK31				⇓Lg	Lg	22 49 09.9	
	comp=E,77nm,0.6s,baz=140,slow=30,SNR=8.8						
MK31	Makanchi Array	4.87	324		Pn	22 47 54.9	+1.8
MKAR	Makanchi Array	4.87	324	Pn	Pn	22 47 54.7	+1.7
	comp=E,2.0nm,0.3s,baz=139,slow=14,SNR=68						
MKAR				Pg	Pb	22 48 08.2	+3.0
	comp=E,5.2nm,0.3s,baz=138,slow=16,SNR=14						
MKAR				Sn	Sn	22 48 51.5	+2.0
	comp=E,12nm,0.3s,baz=144,slow=27,SNR=6.7						
MKAR				Lg	Lg	22 49 09.4	
	comp=E,25nm,0.3s,baz=151,slow=25,SNR=9.4						
MAKZ	Makanchi	5.02	322	⇓Pn	Pn	22 47 56.9	+1.8
	comp=E,8.4nm,0.5s						
MAKZ				⇑Pg	Pb	22 48 10.9	+3.3
	comp=E,15nm,0.7s						
MAKZ				⇓Sn	Sn	22 48 54.0	+0.8
	comp=E,20nm,0.4s						
MAKZ				⇓Lg	Lg	22 49 15.2	
	comp=E,82nm,0.7s						
MAKZ	Makanchi	5.02	322		Pn	22 47 56.9	+1.8
DJR	Jarkent	5.06	288	*e*P	Pg	22 48 18.9	+2.3
	comp=E,26nm,0.5s						
DJR				*e*S	Sg	22 49 17.4	-4.7
	comp=E,108nm,0.7s						
PDGK	Podgornoye	5.14	277	⇑Pn	Pn	22 47 58.7	+1.8
	comp=E,9.3nm,0.4s						
PDGK				⇓Pg	Pb	22 48 13.6	+3.8
	comp=E,44nm,0.8s						
PDGK				⇑Lg	Lg	22 49 19.4	
	comp=E,117nm,0.6s						
SHLS	Shalkode	5.16	275	*e*P	Pb	22 48 14.1	+4.0
	comp=E,44nm,0.5s						
SHLS				*e*S	Sb	22 49 09.0	-3.1
	comp=E,355nm,0.6s						
KAPS	Kapalarasan	5.65	297	*e*P	Pg	22 48 30.0	+2.2
	comp=E,13nm,0.5s						
KAPS				*e*S	Sg	22 49 36.3	-4.6
	comp=E,100nm,0.7s						
MNBS	Baschi	5.99	284	*e*P	Pg	22 48 33.9	-0.6
	comp=E,16nm,0.3s						
MNBS				*e*S	Sb	22 49 43.2	+7.0
	comp=E,64nm,0.4s						
TDK	Taldyqorghan	6.19	292	*e*P	Pg	22 48 39.8	+1.6
	comp=E,71nm,0.6s						
TDK				*e*S	Sg	22 49 52.8	-5.5
	comp=E,446nm,0.9s						
ARXS	Arharly	6.42	284	*e*P	Pg	22 48 45.2	+2.5
	comp=E,31nm,0.6s						
ARXS				*e*S	Sg	22 50 02.3	-3.5
	comp=E,81nm,0.5s						
MDOK	Medeo	6.92	275	⇓Pn	Pn	22 48 23.6	+2.2
	comp=E,12nm,0.5s						
MDOK				⇑Sn	Sn	22 49 40.4	+0.2
	comp=E,24nm,0.8s						
MDOK				⇓Lg	Lg	22 50 12.9	
	comp=E,34nm,0.7s						
ULHL	Ulahol	7.60	268	P	Pn	22 48 31.7	+1.1
	SNR=14						
TKM2	Tokmak 2	8.00	274	P	Pn	22 48 37.4	+1.3
	SNR=20						
TKM2	Tokmak 2	8.00	274	⇓Pn	Pn	22 48 37.7	+1.5
	comp=E,5.2nm,0.4s						
TKM2				⇑Sn	Sn	22 50 07.3	+0.5
	comp=E,16nm,0.9s						
TKM2				⇑Lg	Lg	22 50 52.2	
	comp=E,20nm,0.7s						
KBK	Karagaybulak	8.50	272	P	Pn	22 48 44.4	+1.5
	SNR=10						
USP	Ospenovka	8.78	276	P	Pn	22 48 47.9	+1.2
	SNR=7.5						
AAK	Ala-Archa	8.83	272	Pn	Pn	22 48 48.3	+0.8
	comp=E,1.1nm,0.3s,baz=109,slow=8.9,SNR=33						
AAK				Lg	Lg	22 51 16.3	
	comp=E,0.2nm,0.3s,baz=214,slow=23,SNR=1.7						
AAK	Ala-Archa	8.83	272	P	Pn	22 48 48.6	+1.1
	SNR=5.5						
AAK	Ala-Archa	8.83	272	⇑Pn	Pn	22 48 48.4	+0.8
	comp=E,2.7nm,0.5s						
AAK				⇓Lg	Lg	22 51 22.0	
	comp=E,16nm,0.8s						
UCH	Uchtor	8.87	269	P	Pn	22 48 50.0	+1.6
	SNR=18						
EKS2	Erkin-Say	9.36	273	P	Pn	22 48 55.6	+0.9
	SNR=7.0						
KURBB	Kurchatov Arra	9.42	327	Pn	Pn	22 48 55.5	+0.1
	comp=E,0.2nm,0.3s,baz=134,slow=13,SNR=25						
KURBB				Sn	Sn	22 50 37.3	-3.9
	comp=E,0.5nm,0.3s,baz=160,slow=28,SNR=7.8						
KURBB				Lg	Lg	22 51 33.1	
	comp=E,0.5nm,0.3s,baz=139,slow=26,SNR=2.5						
KURBB	Kurchatov Arra	9.42	327	⇓Pn	Pn	22 48 55.5	+0.1
	comp=E,4.1nm,0.6s						
KURBB				⇓Sn	Sn	22 50 37.4	-3.9
	comp=E,25nm,0.6s						
KURBB				⇑Lg	Lg	22 51 37.3	
	comp=E,102nm,0.7s						
KURK	Kurchatov	9.46	328	⇑Pn	Pn	22 48 56.3	+0.4
	comp=E,4.4nm,0.9s						
KURK				⇑Sn	Sn	22 50 37.5	-4.7
	comp=E,14nm,0.8s						
KURK				⇑Lg	Lg	22 51 37.1	
	comp=E,43nm,0.7s						
KURK	Kurchatov	9.46	328	Pn	Pn	22 48 56.5	+0.6
ZAA0	Zalesovo Array	11.07	355	Pn	Pn	22 49 18.4	+0.5
ZALV	Zalesovo Beam	11.07	355	Pn	Pn	22 49 18.2	+0.3
	comp=E,1.4nm,0.3s,baz=176,slow=13,SNR=22						
ZALV				Sn	Sn	22 51 17.3	-4.3
	comp=E,2.4nm,0.3s,baz=169,slow=25,SNR=12						
ZALV				Lg	Lg	22 52 27.7	
	baz=183,slow=27,SNR=1.2						
ZALV	Zalesovo Beam	11.07	355	Pn	Pn	22 49 17.8	-0.1
NIL	Nilore	13.92	233	Pn	Pn	22 49 56.4	-0.6
BVAR	Borovoye Array	14.73	319	Pn	Pn	22 50 05.5	-2.4
	comp=E,0.2nm,0.3s,baz=140,slow=18,SNR=3.4						
BVAR				Sn	Sn	22 52 44.1	-7.1
	comp=E,0.2nm,0.3s,baz=126,slow=16,SNR=2.2						
BVAR				Lg	Lg	22 54 22.3	
	comp=E,0.0nm,0.3s,baz=108,slow=30,SNR=0.9						
SONM	Songino Array	14.80	64	Pn	Pn	22 50 08.8	-0.3
	comp=E,0.1nm,0.3s,baz=296,slow=11,SNR=1.8						
SONM				Lg	Lg	22 54 25.3	
	comp=E,0.1nm,0.3s,baz=262,slow=32,SNR=2.3						
SONM	Songino Array	14.80	64	P	P	22 50 17.2	+2.1
BRVK	Borovoye	14.80	319	Pn	Pn	22 50 09.4	+0.4
KBL	Kabul	15.97	244	P	P	22 50 28.7	+0.5
ABKAR	Akbulak array	19.41	298	P	P	22 51 06.3	+0.5
AKTO	Aktyubinsk	20.83	301	P	P	22 51 20.7	-0.6
	comp=E,1.6nm,0.6s,baz=113,slow=7.7,SNR=2.5						
GEYT	Alibeck	22.12	267	P	P	22 51 34.8	-0.5
	comp=E,1.8nm,0.7s,baz=109,slow=8.0,SNR=4.6						
ARU	Arti	22.36	317	P	P	22 51 37.6	0.0
	comp=E,0.5nm,0.3s,baz=279,slow=21,SNR=3.4						
ARU	Arti	22.36	317	P	P	22 51 38.4	+0.8
ARU				IAmb	IAmb	22 51 56.2	
	comp=Z,13nm,1.3s						
NRIK	Noril'sk	26.46	1	P	P	22 52 17.1	+0.5
	comp=Z,0.9nm,0.3s,baz=192,slow=13,SNR=1.4						
NRIK	Noril'sk	26.46	1	P	P	22 52 17.6	+1.1
NRIK				IAmb	IAmb	22 52 28.6	
	comp=Z,6.2nm,0.9s						
CMAR	Chiang Mai Arr	26.59	153	P	P	22 52 14.3	-3.8
	comp=Z,0.9nm,0.3s,baz=332,slow=9.6,SNR=1.8						
CMAR	Chiang Mai Arr	26.59	153	P	P	22 52 18.0	-0.1
RAYN	Ar Rayn	38.91	253	P	P	22 54 05.6	0.0
FINES	FINESS Array B	39.69	319	P	P	22 54 11.3	-0.3
	comp=Z,1.5nm,0.6s,baz=98,slow=5.8,SNR=7.9						
FINES	FINESS Array B	39.69	319	P	P	22 54 11.6	-0.1
ARCES	ARCESS Array B	40.47	332	P	P	22 54 18.2	+0.1
	comp=Z,4.0nm,1.0s,baz=90,slow=7.2,SNR=4.5						
ARCES	ARCESS Array B	40.47	332	P	P	22 54 20.5	+2.4
MMAI	Mount Meron Ar	40.92	273	P	P	22 54 19.3	-3.0
	comp=Z,2.3nm,0.7s,baz=33,slow=8.6,SNR=3.5						
BUR08	Bucovina Ar. S	42.39	298	P	P	22 54 33.9	-0.3
BUR08				IAmb	IAmb	22 54 45.3	
	comp=Z,3.5nm,1.4s						
NC405	NORSAR Array S	46.60	320	P	P	22 55 08.1	+0.6
NOA	NORSAR Array B	46.86	320	P	P	22 55 08.9	-0.7
	comp=Z,0.6nm,0.6s,baz=76,slow=7.7,SNR=2.0						
CLL	Collm	48.74	307	*e*pP	pP	22 55 33.0	+4.6
TOLK	Toolik Lake Re	61.22	20	P	P	22 56 54.9	+0.6
TOLK				IAmb	IAmb	22 57 01.9	
	comp=Z,4.8nm,1.3s						
ILAR	Eielson Array	64.81	22	P	P	22 57 16.5	-1.6
	comp=Z,0.5nm,0.8s,baz=324,slow=4.5,SNR=4.6						
ILAR	Eielson Array	64.81	22	P	P	22 57 17.4	-0.8
BCAR	Beaver Creek A	67.55	22	P	P	22 57 37.4	+1.5
HYT	Haines Junctio	70.55	21	P	P	22 57 55.6	+1.0
YKA	Yellowknife Ar	73.55	10	P	P	22 58 11.1	-1.2
	comp=Z,0.7nm,0.8s,baz=347,slow=5.6,SNR=11						
WRA	Warramunga Arr	76.50	134	P	P	22 58 28.9	-0.9
	comp=Z,1.3nm,0.8s,baz=332,slow=5.6,SNR=2.8						
WR0	Warramunga Arr	76.62	134	P	P	22 58 30.4	-0.2

IDC 16 22:55:52.9±47.0**, 4°.04S**×**68°.62E, h0**^{km}**, mb3.4**/3**, mb1 3.4**/3**, mb1mx3.1**/57**, mbtmp3.4**/3**, Error ellipse: s-maj=1011.0km s-min=207.0km az=31.0, Chagos Archipelago region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	Makanchi Array	52.04	12	P	P	23 05 04.3	-0.1
	0.1nm,0.5s,baz=196,slow=8.3,SNR=2.2						
ZALV	Zalesovo Beam	59.35	11	P	P	23 05 56.6	-0.1
	0.2nm,0.3s,baz=212,slow=5.1,SNR=1.6						
SONM	Songino Array	61.34	28	P	P	23 06 10.6	0.0
	0.7nm,1.0s,baz=210,slow=8.3,SNR=5.5						

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*NEIC **16** 22:56:43.4±2.5, 5°.3S±0°.2×68°.1E±0°.1, h10^{km}±2^{km}, mb4.6/22, Error ellipse: s-maj=27.8km s-min=19.7km az=215.0*

*IDC **16** 22:56:44.5±1.0, 4°.80S×68°.27E, h0^{km}, mb4.1/11, mb1 4.2/11, mb1mx3.8/58, mbtmp4.1/11, Error ellipse: s-maj=27.2km s-min=21.6km az=45.0*

ISC 16 22:56:45.3±0.8**, 5°.0S**±0°.1×**68°.2E**±0°.1**, h10**^{km}**, n46, σ1^{s}37**/42**, mb4.5**/20**, Chagos Archipelago region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DGAR	Diego Garcia	4.83	120	Pn	Pn	22 57 54.1	-4.1
H08S3	Diego Garcia H	4.97	122	T	T	23 02 54.9	
	baz=311,slow=74						
H08S1	Diego Carcia H	4.97	122	T	T	23 02 56.3	
	baz=311						
H08S2	Diego Garcia H	4.98	122	T	T	23 02 51.8	
	baz=311,slow=74						
PALK	Pallekele	17.43	46	P	P	23 00 52.2	+2.1
CMAR	Chiang Mai Arr	38.22	52	P	P	23 04 05.6	-0.2
	0.6nm,0.3s,baz=246,slow=9.2,SNR=7.2						
CMAR	Chiang Mai Arr	38.22	52	P	P	23 04 06.1	+0.3
NIL	Nilore	38.74	7	P	P	23 04 11.2	+1.2
NIL				IAmb	IAmb	23 04 19.3	
	comp=Z,12nm,1.1s						
LEM	Lembang	39.21	95	P	P	23 04 15.0	+0.6
	comp=Z,9.8nm,0.5s,baz=189,slow=5.7,SNR=5.1						
KBL	Kabul	39.34	1	P	P	23 04 15.5	+0.3
LSZ	Lusaka	40.64	252	P	P	23 04 27.3	+1.2
	comp=Z,0.5nm,0.5s,baz=61,slow=13,SNR=1.3						
LSA	Lhasa	40.92	31	P	P	23 04 29.6	+0.9
SBUM	Sibu	44.57	81	P	P	23 04 57.4	-0.6
SBUM				IAmb	IAmb	23 05 00.1	
	comp=Z,12nm,1.1s						
AAK	Ala-Archa	47.76	6	P	P	23 05 21.8	-1.1
	comp=Z,1.0nm,0.8s,baz=187,slow=8.7,SNR=7.0						
AAK	Ala-Archa	47.76	6	P	P	23 05 23.5	+0.6
KK31	Karatay Array	47.93	2	P	P	23 05 26.5	+2.5
KK31				IAmb	IAmb	23 05 28.2	
	comp=Z,5.5nm,1.4s						
KKAR	Karatay Array	47.93	2	P	P	23 05 26.8	+2.8
WMQ	Urumqi	51.68	18	P	P	23 05 53.3	+0.7
WMQ				IAmb	IAmb	23 06 07.1	
	comp=Z,18nm,1.4s						
ENH	Enshi	52.82	46	P	P	23 05 59.6	-1.7
MAKZ	Makanchi	53.01	12	P	P	23 06 00.9	-1.5
MAKZ				IAmb	IAmb	23 06 10.0	
	comp=Z,10nm,1.4s						
MK31	Makanchi Array	53.06	12	P	P	23 06 01.9	-0.9
MKAR	Makanchi Array	53.06	12	P	P	23 06 01.2	-1.6
	comp=Z,0.9nm,0.7s,baz=184,slow=8.8,SNR=12						
MKAR	Makanchi Array	53.06	12	P	P	23 06 01.0	-1.8
KBZ	Khabaz	53.63	337	P	P	23 06 06.5	-0.4
	comp=Z,4.1nm,1.0s,baz=166,slow=10,SNR=5.3						
MMRI	Maumere	53.71	97	P	P	23 06 07.6	-0.6
ABKAR	Akbulak array	54.52	353	P	P	23 06 12.6	-0.8
XAN	Xi'an	54.63	42	P	P	23 06 13.2	-1.3
SOEI	Soe	55.73	98	P	P	23 06 23.4	+0.6
KURK	Kurchatov	56.22	8	P	P	23 06 28.1	+2.5
KURK				IAmb	IAmb	23 06 33.7	
	comp=Z,8.7nm,1.2s						
BRVK	Borovoye	57.88	1	P	P	23 06 36.8	-0.4
BRVK				IAmb	IAmb	23 06 46.4	
	comp=Z,12nm,1.4s						
ZAA0	Zalesovo Array	60.37	11	P	P	23 06 52.4	-2.1
ZAA0				IAmb	IAmb	23 07 01.9	
	comp=Z,7.6nm,1.1s						
ZALV	Zalesovo Beam	60.37	11	P	P	23 06 52.9	-1.7
	comp=Z,2.0nm,0.7s,baz=211,slow=6.0,SNR=8.1						
ZALV	Zalesovo Beam	60.37	11	P	P	23 06 52.0	-2.6
SONM	Songino Array	62.38	28	P	P	23 07 08.1	-0.4
	comp=Z,2.6nm,0.9s,baz=219,slow=6.2,SNR=13						
SONM	Songino Array	62.38	28	P	P	23 07 08.1	-0.4
ULN	Ulaanbaatar	62.71	28	P	P	23 07 11.4	+0.7
ULN				IAmb	IAmb	23 07 15.2	
	comp=Z,4.8nm,1.4s						
ASAR	Alice Springs	65.74	114	P	P	23 07 31.8	+0.8
	comp=Z,0.8nm,0.8s,baz=282,slow=8.6,SNR=4.7						
WRA	Warramunga Arr	65.86	110	P	P	23 07 32.4	+0.6
	comp=Z,2.8nm,0.9s,baz=278,slow=5.9,SNR=7.2						
WRA	Warramunga Arr	65.86	110	P	P	23 07 30.9	-0.9
NRIK	Noril'sk	75.37	7	P	P	23 08 28.8	+0.1
	comp=Z,1.1nm,0.3s,baz=203,slow=4.1,SNR=4.0						
NRIK	Noril'sk	75.37	7	P	P	23 08 27.5	-1.2
NRIK				IAmb	IAmb	23 08 31.7	
	comp=Z,5.9nm,1.1s						
YKA	Yellowknife Ar	122.60	2	PKP	PKiKP	23 15 41.6	+0.4
	comp=Z,0.4nm,0.8s,baz=348,slow=2.0,SNR=5.7						
PDAR	Pinedale Array	142.35	357	PKP	PKiKP	23 16 20.7	-1.3
	comp=Z,0.3nm,0.6s,baz=53,slow=4.6,SNR=2.9						
PDAR	Pinedale Array	142.35	357		PKPdf	23 16 16.7	-2.3
NVAR	Mina Array Bea	146.21	9	PKPbc	PKPbc	23 16 26.8	0.0
	comp=Z,1.9nm,0.8s,baz=350,slow=2.7,SNR=6.1						
TXAR	Lajitas Array	154.62	343	PKPbc	PKiKP	23 16 48.7	+1.2
	comp=Z,0.7nm,0.8s,baz=46,slow=3.9,SNR=2.3						

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*IDC **16** 23:00:07.8±0.9, 7°.25S×155°.11E, h0^{km}, mb4.0/10, mb1 4.2/11, mb1mx4.0/51, mbtmp4.0/11, ML2.1/1, MS4.9/1, Ms1 4.9/1, ms1mx3.8/43, Error ellipse: s-maj=31.3km s-min=18.7km az=129.0*

*NEIC **16** 23:00:15.7±2.4, 7°.19S±0°.06×154°.82E±0°.10, h57^{km}±9^{km}, mb4.5/15, Error ellipse: s-maj=15.3km s-min=6.2km az=61.0*

ISC 16 23:00:14.2±0.6**, 7°.16S**±0°.09×**154°.91E**±0°.08**, h41**^{km}**, n33, σ1^{s}52**/34**, mb4.3**/17**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	4.03	317	Pn	Pn	23 01 14.4	+1.0
HNR	Honiara	5.47	115	Pn	Pn	23 01 36.6	+3.4
PMG	Port Moresby	7.99	253	Pn	Pn	23 02 08.9	+1.1
	1.2nm,0.3s,baz=199,slow=11,SNR=1.7						
PMG				Sn	Sn	23 03 40.0	+3.0
	1.9nm,0.3s,baz=278,slow=12,SNR=2.9						
PMG	Port Moresby	7.99	253	Pn	Pn	23 02 07.8	-0.1
WR0	Warramunga Arr	23.50	235	P	P	23 05 19.8	-0.8
WR0				IAmb	IAmb	23 05 35.8	
	comp=Z,16nm,0.9s						
WB0	Warramunga Arr	23.53	236	P	P	23 05 20.7	-0.1
WB0				IAmb	IAmb	23 05 39.2	
	comp=Z,24nm,1.4s						
WRAB	Tennant Creek	23.64	235	P	P	23 05 24.6	+2.6
WB2	Warramunga Arr	23.65	235	P	P	23 05 21.7	-0.3
WB2				IAmb	IAmb	23 05 40.8	
	comp=Z,12nm,1.1s						
WRA	Warramunga Arr	23.66	235	P	P	23 05 20.9	-1.2
	comp=Z,4.7nm,0.9s,baz=62,slow=9.6,SNR=21						
WRA				PcP	PcP	23 09 06.6	+0.6
	comp=Z,0.6nm,0.7s,baz=69,slow=2.7,SNR=2.2						
WRA	Warramunga Arr	23.66	235	P	P	23 05 21.3	-0.8
ASAR	Alice Springs	26.00	229	P	P	23 05 42.9	-0.6
	comp=Z,0.7nm,0.5s,baz=58,slow=9.2,SNR=10						
STKA	Stephens Creek	27.55	205	P	P	23 05 56.8	-0.5
	comp=Z,3.0nm,0.6s,baz=30,slow=9.9,SNR=6.2						
STKA	Stephens Creek	27.55	205	P	P	23 05 57.7	+0.4
BBOO	Buckleboo	30.95	212	P	P	23 06 25.7	-1.8
BBOO				IAmb	IAmb	23 06 43.2	
	comp=Z,9.4nm,1.2s						
NNZ	Nelson	37.69	157	P	P	23 07 24.8	-0.8
BFZ	Birch Farm	38.43	154	P	P	23 07 31.9	0.0
BHW	Baring Head	38.45	156	P	P	23 07 31.0	-1.0
MSWZ	Moikau Station	38.61	155	P	P	23 07 30.0	-3.4
RPZ	Rata Peaks	39.06	161	LR	LR	23 23 21.8	
	comp=Z,2µm,18.3s,baz=154,slow=36						
JOW	Kunigami	42.53	324	P	P	23 08 04.3	-1.7
NWAO	Narrogin (SRO)	43.32	229	P	P	23 08 11.4	-1.0
NWAO				IAmb	IAmb	23 08 21.4	
	comp=Z,31nm,1.4s						
SBUM	Sibu	43.66	281	P	P	23 08 13.3	-2.0
CMAR	Chiang Mai Arr	60.78	296	P	P	23 10 25.2	+2.7
	comp=Z,1.1nm,0.3s,baz=114,slow=4.9,SNR=7.9						
SONM	Songino Array	69.43	327	P	P	23 11 18.6	+0.3
	comp=Z,1.0nm,0.8s,baz=136,slow=6.4,SNR=9.3						
MK31	Makanchi Array	83.48	319	P	P	23 12 38.8	+1.1
MK31				IAmb	IAmb	23 12 53.5	
	comp=Z,3.6nm,0.9s						
MKAR	Makanchi Array	83.48	319	P	P	23 12 38.3	+0.6
	comp=Z,0.8nm,0.7s,baz=113,slow=5.7,SNR=9.7						
MKAR	Makanchi Array	83.48	319	P	P	23 12 37.9	+0.2
ILAR	Eielson Array	83.56	22	P	P	23 12 36.9	-0.8
	comp=Z,0.3nm,0.4s,baz=235,slow=5.6,SNR=8.0						
MAKZ	Makanchi	83.69	319	P	P	23 12 39.9	+1.1
MAKZ				IAmb	IAmb	23 12 55.2	
	comp=Z,8.4nm,1.1s						
ZALV	Zalesovo Beam	84.27	326	P	P	23 12 41.7	+0.2
	comp=Z,0.3nm,0.4s,baz=90,slow=5.8,SNR=2.0						
NVAR	Mina Array Bea	91.89	52	P	P	23 13 17.2	-1.6
	comp=Z,0.2nm,0.4s,baz=262,slow=6.8,SNR=2.4						
YKA	Yellowknife Ar	96.52	28	P	P	23 13 39.2	+0.1
	comp=Z,0.6nm,0.6s,baz=263,slow=4.1,SNR=9.5						
BDFB	Brasilia	147.92	135	PKPbc	PKPbc	23 19 56.5	+0.3
	comp=Z,2.0nm,0.7s,baz=144,slow=9.9,SNR=3.0						

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*NEIC **16** 22:59:49.5±1.6, 21°.9S±0°.2×174°.09W±0°.09, h68^{km}±16^{km}, mb4.1/6, Error ellipse: s-maj=24.9km s-min=7.1km az=157.0*

*IDC **16** 23:00:28.1±5.2, 19°.61S×178°.47W, h554^{km}±36^{km}, mb2.9/4, mb1 3.3/5, mb1mx3.0/46, mbtmp3.8/5, Error ellipse: s-maj=149.9km s-min=23.3km az=149.0*

ISC 16 23:00:24.9±1.1**, 20°.5S**±0°.1×**178°.2W**±0°.2**, h550**^{km}**, n11, σ1^{s}95**/11**, mb3.8**/6**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	4.50	306	P	P	23 01 48.9	-1.8
	11nm,0.3s,baz=101,slow=16,SNR=60						
MSVF				S	S	23 03 00.3	-0.4
	1.2nm,0.3s,baz=266,slow=23,SNR=1.5						
MSVF	Nonsavu	4.50	306		P	23 01 49.1	-1.6
URZ	Urewera	18.22	192		P	23 03 55.4	-9.1
URZ				IAmb	IAmb	23 04 04.5	
	comp=Z,8.6nm,1.2s						
PLWZ	Palliser	21.79	193	P	P	23 04 33.8	-3.1
QRZ	Quartz Range	21.81	199	P	P	23 04 38.0	+0.9
QRZ				IAmb	IAmb	23 04 45.3	
	comp=Z,13nm,1.1s						
LTZ	Lake Taylor	23.68	198	P	P	23 04 53.4	-0.4
LTZ				IAmb	IAmb	23 05 04.3	
	comp=Z,3.8nm,1.0s						
OXZ	Oxford	24.25	198	P	P	23 04 56.4	-2.3
OXZ				IAmb	IAmb	23 04 57.4	
	comp=Z,7.7nm,0.5s						
ASAR	Alice Springs	44.39	257	PcP	PcP	23 09 21.0	+1.9
	comp=Z,0.2nm,0.5s,baz=92,slow=4.7,SNR=1.9						
ASAR	Alice Springs	44.39	257	P	P	23 07 49.4	+2.1
	comp=Z,0.9nm,0.5s,baz=89,slow=8.0,SNR=7.5						
NVAR	Mina Array Bea	81.08	43	P	P	23 11 43.8	+0.5
	comp=Z,0.7nm,0.8s,baz=222,slow=4.9,SNR=4.0						
ILAR	Eielson Array	88.30	13	P	P	23 12 17.6	+0.1
	comp=Z,0.7nm,1.0s,baz=212,slow=5.7,SNR=2.5						

JMA 16 23:06:24.1±0.4**, 39°.77N**×**143°.30E, h24**^{km}±4^{km}**, 6C-6D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTH	Tanohata	1.12	279	⇓P	Pn	23 06 44.4	+0.1
MIYJ	Miyakonagasawa	1.16	261	⇓P	Pn	23 06 44.7	-0.1
JKEN	Kujiedanarisaw	1.30	290	⇓P	Pn	23 06 46.5	-0.2
JKEN				*e*S	Sn	23 07 03.2	-0.1
JANG	Nango	1.50	294	⇓P	Pn	23 06 49.7	+0.2
JOM	Ohasama	1.58	260	⇓P	Pb	23 06 51.6	-1.0
JMK	Ichinoseki	1.81	244	⇓P	Pn	23 06 54.7	+1.0
JIO	Ouri	2.01	230	⇑P	Pn	23 06 56.9	+0.4
JAH	Hinai	2.09	282	⇑P	Pb	23 06 59.7	-1.6
JRG	Rokugo	2.09	261	⇑P	Pn	23 06 59.3	+1.6
JOT	Ohata	2.35	314	⇑P	Pn	23 07 02.5	+1.3
JYK	Kaneyama	2.43	250	⇑P	Pn	23 07 04.0	+1.7
JNBK	Urakawa-nobuka	2.54	351	⇑P	Pb	23 07 06.7	-2.3
JKB	Kayabe	2.73	322	P	Pn	23 07 08.9	+2.6

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*BJI **16** 23:06:24.3±0.0, 40°.05N×143°.05E, h10^{km}, mB6.9/64, mb5.8/61, Ms7.4/91, Ms7 7.3/83*

*IDC **16** 23:06:24.1±0.3, 39°.80N×143°.04E, h0^{km}, mb5.1/35, mb1 5.2/43, mb1mx5.1/48, mbtmp5.1/43, ML4.2/7, MS6.7/37, Ms1 6.7/37, ms1mx6.3/54, Error ellipse: s-maj=11.3km s-min=8.6km az=114.0*

*MOS **16** 23:06:27.6±1.1, 39°.91N×142°.91E, h31^{km}, mb6.4/47, MS7.1/53, Error ellipse: s-maj=5.1km s-min=3.3km az=103.2*

*NEIC **16** 23:06:28.3±1.9, 39°.86N±0°.04×142°.88E±0°.06, h23^{km}±1^{km}, mb6.2/523, Ms_20 6.6/793, Mww6.7, Mwc6.8(GCMT), Error ellipse: s-maj=9.9km s-min=3.5km az=136.0*

*BGR **16** 23:06:31.7±0.0, 40°.24N×143°.36E, h33^{km}, mb6.5, mB_BB6.9, Ms7.3*

*NIED **16** 23:06:34.7, 39°.87N×143°.19E, h13^{km}, MW6.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{19}Nm; M_{rr}0.83; $M_{\theta\theta}$0.00; $M_{\phi\phi}$-0.84; $M_{r\theta}$0.46; $M_{\theta\phi}$-0.20; $M_{\phi r}$0.88; Fault plane solution: $M_0$1.31000×10^{19} NP1:ϕ_s24.00000°, δ70.00000°, λ98.00000°. NP2:ϕ_s181.00000°, δ22.00000°, λ69.00000°.*

*JMA **16** 23:06:34.6±0.2, 39°.87N×143°.19E, h13^{km}±3^{km}, M6.9*

JMA Felt IV J1.

*GCMT **16** 23:06:39.3±0.0, 39°.78N×143°.22E, h22^{km}, MW6.7/178, Moment Tensor Solution. s175,c446; s178,c832; Duration: 5^{s}7 Moment tensor: Scale 10^{19}Nm; M_{rr}0.86±.00; $M_{\theta\theta}$-0.02±.00; $M_{\phi\phi}$-0.84±.00; $M_{r\theta}$0.62±.01; $M_{\theta\phi}$-0.22±.00; $M_{\phi r}$1.16±.01; Best double couple:*

$M_0$1.58300×10^{19} NP1:ϕ_s182.00000°,δ18.00000°, λ68.00000°. NP2:ϕ_s26.00000°,δ73.00000°,λ97.00000°. Principal axes: T 1.5820, Plg61.0000°, Azm306.0000°; N 0.0000, Plg7.0000°, Azm204.0000°; P -1.5830, Plg28.0000°, Azm110.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function

*NEIC **16** 23:06:39, 39°.79N×143°.26E, h21^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{19}Nm; M_{rr}0.82; $M_{\theta\theta}$0.01; $M_{\phi\phi}$-0.83; $M_{r\theta}$0.70; $M_{\theta\phi}$-0.22; $M_{\phi r}$1.42; Fault plane solution: $M_0$1.80000×10^{19} NP1:ϕ_s182.00000°, δ15.00000°,λ68.00000°. NP2:ϕ_s25.00000°,δ76.00000°, λ96.00000°. Principal axes: T 1.7879, Plg59.0000°, Azm303.0000°; N 0.0255, Plg6.0000°, Azm203.0000°; P -1.8134, Plg31.0000°, Azm110.0000°;*

*NEIC **16** 23:06:42, 39°.84N×143°.24E, h24^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{19}Nm; M_{rr}0.85; $M_{\theta\theta}$-0.07; $M_{\phi\phi}$-0.78; $M_{r\theta}$0.35; $M_{\theta\phi}$-0.19; $M_{\phi r}$1.28; Fault plane solution: $M_0$1.57000×10^{19} NP1:ϕ_s192.00000°, δ16.00000°,λ87.00000°. NP2:ϕ_s15.00000°,δ74.00000°, λ91.00000°. Principal axes: T 1.5795, Plg61.0000°, Azm286.0000°; N -0.0200, Plg1.0000°, Azm195.0000°; P -1.5595, Plg29.0000°, Azm104.0000°;*

ISC 16 23:06:28.1±0.2**, 39°.95N**±0°.02×**143°.18E**±0°.02**, h11**^{km}±1^{km}**, h11**^{km}**:pP-P, n2188,** σ**2**^{s}**27**/1465**, mb6.2**/516**, MS6.6**/529**, 106C-89D, Fault plane solution: NP1:**ϕ_s14.15080°**,** δ71.33323°**,**λ57.41798°. **NP2:**ϕ_s257.54837°**,**δ37.03229°**,** λ147.89766°. **Principal axes:** T Plg52.2603°**,** Azm245.6800°**;** N Plg30.6757°**,** Azm25.7111°**;** P Plg19.7649°**,** Azm128.0180°**; Fault plane solution: NP1:**ϕ_s152.25099°**,**δ27.31778°**,**λ41.68374°. **NP2:** ϕ_s23.90171°**,**δ72.23018°**,**λ111.09460°. **Principal axes:** T Plg57.5704°**,** Azm322.2331°**;** N Plg20.0438°**,** Azm197.1871°**;** P Plg24.3583°**,** Azm97.6796°**; Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTH	**Tanohata**	**1.01**	**270**	P	Pn	23 06 53.9	+5.7
JTH				*e*S	**Sn**	**23 07 07.1**	**+4.7**
MIYJ	**Miyakonagasawa**	**1.11**	**251**	P	Pg	23 06 54.8	+5.4
MIYJ				*e*S	**Sn**	**23 07 09.9**	**+5.0**
JANG	**Nango**	**1.34**	**289**	P	Pg	23 06 59.4	+5.5
JANG				*e*S	**Sg**	**23 07 17.4**	**+6.1**
JOM	**Ohasama**	**1.53**	**253**	P	**Pg**	**23 07 02.2**	**+4.8**
JOM				*e*S	**Sg**	**23 07 22.6**	**+5.3**
JMK	**Ichinoseki**	**1.81**	**237**	*e*S	**Sb**	**23 07 28.7**	**+4.7**
JTM	**Tenmabayashi**	**1.82**	**298**	⇑P	**Pn**	**23 06 57.8**	**-1.5**
JTM	**Tenmabayashi**	**1.82**	**298**	P	**Pg**	**23 07 07.1**	**+4.2**
JTM	**Tenmabayashi**	**1.82**	**298**	Pn	**Pn**	**23 06 58.2**	**-1.0**
JRG	**Rokugo**	**2.04**	**255**	*e*S	**Sg**	**23 07 38.4**	**+4.8**
JIO	**Ouri**	**2.06**	**224**	*e*S	**Sb**	**23 07 34.7**	**+3.6**
ERM	**Erimo**	**2.07**	**360**	P	**Pn**	**23 07 02.4**	**-0.3**
ERM	**Erimo**	**2.07**	**360**	Pn	**Pn**	**23 07 02.4**	**-0.3**
JMM	**Marumori**	**2.79**	**223**		Pn	23 07 07.1	-5.5
JEW	**Eniwo**	**3.17**	**336**	Pn	**Pn**	**23 07 16.9**	**-1.0**
NMR	**Nemuro--Hokkai**	**3.92**	**28**	⇑*i*P	**Pn**	**23 07 26.3**	**-1.9**
NMR				*i* S	**Sn**	**23 08 10.9**	**-3.2**
JKA	**Kamikawa-asahi**	**4.19**	**354**	Pn	**Pn**	**23 07 31.8**	**-0.1**
ASAJ	**Asahikawa**	**4.19**	**354**	Pn	**Pn**	**23 07 32.1**	**+0.3**
	34nm,0.3s,baz=206,slow=13,SNR=94						
ASAJ				Lg	Lg	23 08 37.9	
	291nm,0.3s,baz=265,slow=24,SNR=4.6						
ASAJ	**Asahikawa**	**4.19**	**354**	P	**Pn**	**23 07 32.2**	**+0.3**
JSD	**Sado**	**4.28**	**245**	Pn	Pn	23 07 29.6	-3.5
JYT	**Yasato**	**4.40**	**213**	Pn	Pn	23 07 29.8	-4.9
GRPR	**Tuman**	**4.48**	**25**	⇓*i*P	**Pn**	**23 07 35.4**	**-0.5**
GRPR				*i* S	**Sn**	**23 08 25.8**	**-2.2**
GRPR				pmax	pmax		
	comp=Z,6µm,0.3s						
GRPR				pmax	pmax		
	comp=N,2µm,0.2s						
GRPR				pmax	pmax		
	comp=E,1µm,0.2s						
GRPR				smax	smax		
	comp=N,13µm,0.4s						
GRPR				smax	smax		
	comp=E,43µm,0.5s						
YUK	**Yuzh-Kuril'sk**	**4.55**	**25**	*c i*P	**Pn**	**23 07 35.6**	**-1.2**
YUK				*i* S	**Sn**	**23 08 27.3**	**-2.4**
YUK				pmax	pmax		
	comp=Z,10µm,1.2s						
YUK				pmax	pmax		
	comp=E,1µm,0.3s						
YUK				pmax	pmax		
	comp=Z,7µm,0.3s						
YUK				pmax	pmax		
	comp=N,829nm,0.1s						
YUK				smax	smax		
	comp=N,24µm,0.4s						
YUK				smax	smax		
	comp=E,39µm,0.7s						
MJAR	**Matsushiro Arr**	**5.18**	**231**	Pn	Pn	23 07 42.0	-3.6
	comp=E,4.0nm,0.3s,baz=71,slow=14,SNR=146						
MJAR				Lg	Lg	23 09 03.1	
	baz=32,slow=23,SNR=1.5						
MJAR				LR	LR	23 10 03.9	
	comp=E,1518µm,18.4s,baz=40,slow=44						
MJAR	**Matsushiro Arr**	**5.18**	**231**	P	Pn	23 07 42.0	-3.6
MJAR	**Matsushiro Arr**	**5.18**	**231**	Pn	Pn	23 07 41.7	-3.9
MJB9	**Matsu-Tunnel**	**5.18**	**231**		Pn	23 07 41.2	-4.4
MAJO	**Matsushiro**	**5.18**	**231**	*c i*P	Pn	23 07 42.4	-3.2
MAJO	**Matsushiro**	**5.18**	**231**	Pn	Pn	23 07 41.3	-4.3
MAT	**Matsushiro**	**5.18**	**231**	P	Pn	23 07 42.3	-3.3
MAT				*e*S	Sn	23 08 36.7	-8.7
KUR	**Kuril'sk**	**6.32**	**32**	*de*P	**Pn**	**23 08 00.6**	**-0.5**
JGF	**Kuroka**	**6.33**	**229**		Pn	23 07 56.9	-4.5
JSG	**Sagara**	**6.60**	**219**		Pn	23 08 01.0	-4.0
INU	**Inuyama**	**6.70**	**229**		Pn	23 08 01.6	-4.9
YSS	**Yuzh-Sakhalins**	**7.01**	**358**	*c i*P	**Pn**	**23 08 11.0**	**+0.4**
YSS				*e*S	**Sn**	**23 09 29.5**	**-0.8**
YSS				pmax	pmax		
	comp=Z,20µm,5.6s						
YSS				smax	smax		
	comp=E,920nm,1.3s						
YSS				MLR	MLR		
	comp=N,611µm,17.6s						
YSS	**Yuzh-Sakhalins**	**7.01**	**358**	Pn	**Pn**	**23 08 10.3**	**-0.4**
TEY	**Ternei**	**7.03**	**318**	⇑*e*P	**Pn**	**23 08 12.9**	**+2.0**
TEY				pmax	pmax		
	comp=N,90nm,1.8s						
TEY				pmax	pmax		
	comp=E,110nm,1.8s						
TEY				pmax	pmax		
	comp=Z,130nm,1.7s						
JHJ2	**Mitsune**	**7.34**	**203**		Pn	23 08 10.0	-5.2
JHJ	**Hachijo jima 2**	**7.34**	**203**	Pn	Pn	23 08 09.7	-5.5
	comp=Z,69nm,0.3s,baz=338,slow=20,SNR=11						
JHJ				Sn	Sn	23 09 31.6	-6.9
	comp=Z,669nm,0.3s,baz=74,slow=21,SNR=2.0						
JHJ				LR	LR	23 11 15.0	
	comp=Z,431µm,21.5s,baz=50,slow=41						
JHJ	**Hachijo jima 2**	**7.34**	**203**		Sn	23 09 31.6	-6.9
JWT	**Wachi**	**7.73**	**235**	Pn	Pn	23 08 17.3	-3.2
UGL	**Uglegorsk**	**9.16**	**355**	*c i*P	**Pn**	**23 08 39.8**	**-0.4**
UGL				S	**Sn**	**23 10 20.6**	**-2.6**
UGL				pmax	pmax		
	comp=Z,14µm,8.0s						
UGL				pmax	pmax		
	comp=Z,1µm,1.0s						
UGL				smax	smax		
	comp=E,42µm,5.9s						
UGL				smax	smax		
	comp=N,47µm,8.9s						
UGL				MLR	MLR		
	comp=N,795µm,17.0s						
UGL				MLR	MLR		
	comp=E,873µm,17.0s						
USA0B	**Ussuriysk Arra**	**9.34**	**301**	*c i*P	**Pn**	**23 08 42.4**	**-0.2**
USA0B	**Ussuriysk Arra**	**9.34**	**301**	Pn	**Pn**	**23 08 41.8**	**-0.8**
USRK	**Ussuriysk Ar.**	**9.34**	**301**	Pn	**Pn**	**23 08 43.9**	**+1.3**
	baz=100,slow=14,SNR=60						
USRK				LR	LR	23 12 13.8	
	comp=E,1020µm,21.7s,baz=102,slow=38						
USRK	**Ussuriysk Ar.**	**9.34**	**301**	P	**Pn**	**23 08 41.4**	**-1.2**
USRK	**Ussuriysk Ar.**	**9.34**	**301**	Pn	**Pn**	**23 08 41.4**	**-1.2**
I45RU	**USSURIYSK INFR**	**9.35**	**301**	Pn	**Pn**	**23 08 45.9**	**+3.2**
	baz=114,slow=15,SNR=2.5						
I45RU				*i*		00 06 30.0	
	baz=126,slow=333,SNR=1.5						
JHS	**Saijyo**	**9.40**	**241**	Pn	Pn	23 08 39.4	-4.1
MSHR	**Mys Shultsa**	**9.43**	**290**	*c i*P	**Pn**	**23 08 42.7**	**-1.1**
MSHR				pmax	pmax		
	comp=Z,368nm,1.7s						
TYV	**Tymovskoe**	**10.92**	**358**	*e*P	**Pn**	**23 09 04.0**	**-0.2**
TYV				*e*S	**Sn**	**23 11 07.3**	**+0.9**
TYV				pmax	pmax		
	comp=Z,1µm,3.7s						
TYV				pmax	pmax		
	comp=Z,56nm,1.0s						
TYV				smax	smax		
	comp=N,151nm,1.4s						
TYV				smax	smax		
	comp=N,8µm,3.8s						
TYV				MLR	MLR		
	comp=Z,808µm,17.0s						
TYV				MLR	MLR		
	comp=E,522µm,16.0s						
MDJ	**Mudanjiang**	**11.09**	**299**	P	**Pn**	**23 09 06.4**	**-0.2**
MDJ				pP		23 09 12.3	
MDJ				sP		23 09 15.6	
MDJ				S	Sn	23 11 02.8	-7.7
MDJ				sS		23 11 10.9	
MDJ				pmax	pmax		
	comp=E,5µm,4.1s						
MDJ				LR	LR		
	comp=E,803µm,14.8s						
MDJ				LR	LR		
	comp=E,1361µm,16.5s						
MDJ				LR	LR		
	comp=E,2219µm,18.4s						
GRNR	**Gornyy**	**11.81**	**339**	⇓*i*P	**Pn**	**23 09 17.1**	**+0.7**
GRNR				*e*S	**Sn**	**23 11 32.3**	**+4.1**
GRNR				pmax	pmax		
	comp=N,30nm,0.6s						
GRNR				pmax	pmax		
	comp=E,20nm,0.6s						
GRNR				pmax	pmax		
	comp=Z,50nm,0.7s						
GRNR				smax	smax		
	comp=N,30nm,0.6s						
GRNR				MLR	MLR		
	comp=E,367µm,15.0s						
GRNR				MLR	MLR		
	comp=N,191µm,16.0s						
GRNR				MLR	MLR		
	comp=Z,390µm,14.0s						
JNU	**Nakatsue**	**12.00**	**239**	Pn	Pn	23 09 15.2	-4.0
	comp=Z,1.2nm,0.3s,baz=59,slow=11,SNR=7.2						
JNU				LR	LR	23 14 21.4	
	comp=Z,1297µm,18.8s,baz=44,slow=40						
JNU	**Nakatsue**	**12.00**	**239**	Pn	Pn	23 09 14.2	-4.9
KSRS	**Korea Array**	**12.18**	**263**	Pn	**Pn**	**23 09 20.5**	**-0.9**
	comp=Z,3.9nm,0.3s,baz=82,slow=13,SNR=27						
KSRS				LR	LR	23 13 54.5	
	comp=Z,1026µm,18.6s,baz=76,slow=37						
KS19	**Wonju Array Si**	**12.21**	**263**		Pn	23 09 20.0	-1.9
KSAR	**Wonju Array Be**	**12.21**	**263**	P	Pn	23 09 18.9	-3.0
KSAR	**Wonju Array Be**	**12.21**	**263**		Pn	23 09 18.9	-3.0
JTU	**Tsushima**	**12.24**	**248**	Pn	Pn	23 09 18.3	-4.0
KLR	**Kul'dur**	**12.34**	**323**	Pn	**Pn**	**23 09 23.5**	**-0.1**
	comp=Z,0.7nm,0.3s,baz=134,slow=13,SNR=32						
KLR				LR	LR	23 14 33.9	
	comp=Z,963µm,19.7s,baz=140,slow=40						
KLR	**Kul'dur**	**12.34**	**323**	P	**Pn**	**23 09 23.5**	**-0.1**
KLR	**Kul'dur**	**12.34**	**323**		**Pn**	**23 09 23.5**	**-0.1**
JCJ	**Chichijima**	**12.84**	**184**	Pn	Pn	23 09 25.4	-5.3
	comp=Z,68nm,0.3s,baz=294,slow=22,SNR=12						
JCJ				Sn	Sn	23 11 36.8	-17
	comp=Z,86nm,0.3s,baz=114,slow=23,SNR=2.5						
JCJ	**Chichijima**	**12.84**	**184**		Pn	23 09 25.8	-4.8
TJN	**Taejon**	**12.95**	**259**	*c i*P	Pn	23 09 29.7	-2.2
INCN	**Inchon**	**13.15**	**264**	P	**Pn**	**23 09 34.8**	**0.0**
INCN	**Inchon**	**13.15**	**264**	Pn	**Pn**	**23 09 34.8**	**0.0**
NKL	**Nikolayevsk**	**13.32**	**353**	*e*P	**Pn**	**23 09 39.0**	**+2.1**
NKL				pmax	pmax		
	comp=N,12nm,1.3s						
NKL				pmax	pmax		
	comp=E,42nm,1.2s						
NKL				pmax	pmax		
	comp=Z,464nm,1.2s						
JSU	**Suzuyama**	**13.32**	**235**	Pn	Pn	23 09 33.9	-3.3
OKH	**Okha**	**13.61**	**359**	*c i*P	Pn	23 09 46.8	+5.9
OKH				pmax	pmax		
	comp=Z,7µm,17.7s						
OKH				MLR	MLR		
	comp=N,813µm,18.0s						
OKH				MLR	MLR		
	comp=Z,541µm,18.0s						
CN2	**Changchun**	**13.76**	**292**	*e*P	Pn	23 09 40.8	-2.2
CN2				*e*S	Sn	23 12 10.3	-5.5
CN2				pmax	pmax		
	comp=Z,240nm,2.0s						
CN2				pmax	pmax		
	comp=Z,48µm,13.0s						
CN2				LR	LR		
	comp=Z,620µm,17.0s						
CN2				LR	LR		
	comp=Z,987µm,17.0s						
CN2				LR	LR		
	comp=Z,1035µm,17.0s						
SKR	**Severo-Kuril's**	**14.05**	**36**	*e*P	**Pn**	**23 09 43.9**	**-3.1**
SKR				*e*S	**Sn**	**23 12 23.8**	**+1.0**
SKR				pmax	pmax		
	comp=Z,47nm,0.8s						
SKR				pmax	pmax		
	comp=Z,1µm,2.8s						
SNY	**Shenyang**	**14.95**	**284**	⇑P	**Pn**	**23 10 03.8**	**+4.6**
SNY				S	**Sn**	**23 12 55.3**	**+11**
SNY				pmax	pmax		
	comp=Z,380nm,3.0s						
SNY				pmax	pmax		
	comp=Z,73µm,15.2s						
SNY				LR	LR		
	comp=N,556µm,14.7s						
SNY				LR	LR		
	comp=E,1008µm,18.1s						
SNY				LR	LR		
	comp=Z,1432µm,17.7s						
PEA0B	**Petropavlovsk-**	**16.48**	**32**	*de*P	**Pn**	**23 10 20.0**	**+0.9**
PEA0B	**Petropavlovsk-**	**16.48**	**32**		**Pn**	**23 10 16.4**	**-2.8**
PETK	**Petropavlovsk-**	**16.48**	**32**	Pn	**Pn**	**23 10 17.9**	**-1.2**
	comp=Z,0.7nm,0.3s,baz=201,slow=7.9,SNR=8.5						
PETK				LR	LR	23 16 08.8	
	comp=Z,98µm,21.4s,baz=222,slow=35						
PETK	**Petropavlovsk-**	**16.48**	**32**	P	**Pn**	**23 10 17.9**	**-1.2**
PETK	**Petropavlovsk-**	**16.48**	**32**	Pn	**Pn**	**23 10 17.1**	**-2.0**
DL2	**Dalian**	**16.68**	**273**	⇑*i*P	Pn	23 10 17.8	-4.0
DL2				sP	**P**	**23 10 27.1**	**+3.0**
DL2				S	**Sn**	**23 13 21.6**	**-5.4**
DL2				sS	**S**	**23 13 33.6**	**-4.6**
DL2				pmax	pmax		
	comp=Z,280nm,1.0s						
DL2				pmax	pmax		
	comp=Z,16µm,3.9s						
DL2				LR	LR		
	comp=Z,447µm,13.5s						
DL2				LR	LR		
	comp=Z,425µm,15.8s						
DL2				LR	LR		
	comp=Z,701µm,15.7s						
PET	**Petropavlovsk**	**16.82**	**34**	*e*P	**Pn**	**23 10 24.7**	**+1.3**
PET				*e*S	**Sn**	**23 13 30.5**	**+0.4**
PET				pmax	pmax		
	comp=Z,1µm,1.2s						
PET				pmax	pmax		
	comp=Z,10µm,9.1s						
PET				pmax	pmax		
	comp=Z,6µm,11.1s						
PET				MLR	MLR		
	comp=Z,183µm,17.0s						
PET	**Petropavlovsk**	**16.82**	**34**	Pn	**Pn**	**23 10 23.1**	**-0.3**
JMZ	**Minamidaito 2**	**17.28**	**219**	Pn	Pn	23 10 22.6	-6.7
JMZ				IAmb	IAmb	23 11 17.2	
	comp=Z,4µm,1.7s						
ZEA	**Zeya**	**17.52**	**327**	*e*P	**Pn**	**23 10 28.8**	**-3.4**
ZEA				*e*S	Sn	23 13 35.7	-11
ZEA				pmax	pmax		
	comp=E,220nm,1.7s						
ZEA				pmax	pmax		
	comp=N,330nm,1.4s						
ZEA				pmax	pmax		
	comp=Z,510nm,1.6s						
ZEA				pmax	pmax		
	comp=Z,9µm,5.9s						
ZEA				smax	smax		
	comp=E,7µm,5.2s						
ZEA				MLR	MLR		
	comp=E,340µm,15.0s						
ZEA				MLR	MLR		
	comp=N,290µm,18.0s						
ZEA				MLR	MLR		
	comp=Z,400µm,16.0s						
JOW	**Kunigami**	**18.02**	**228**	P	Pn	23 10 32.6	-5.9
	comp=Z,1.2nm,0.3s,baz=18,slow=9.0,SNR=7.1						
JOW				Sn	Sn	23 13 51.7	-7.8
	comp=Z,1.0nm,0.3s,baz=4.8,slow=15,SNR=1.7						
JOW	**Kunigami**	**18.02**	**228**	Pn	Pn	23 10 32.2	-6.3
HIA	**Hailar**	**19.05**	**307**	P	**P**	**23 10 46.0**	**-4.2**
HIA				pmax	pmax		
	comp=Z,521nm,0.8s						
HIA	**Hailar**	**19.05**	**307**	P	**P**	**23 10 46.0**	**-4.2**
SSE	**Sheshan**	**19.92**	**251**	P	**P**	**23 10 56.3**	**-3.5**
SSE				S	S	23 14 36.6	-7.2
SSE	**Sheshan**	**19.92**	**251**	P	**P**	**23 10 56.4**	**-3.5**
SSE				IAmb	IAmb	23 11 35.8	
	comp=Z,2µm,1.1s						
MA2	**Magadan**	**20.23**	**11**	*c i*P	**P**	**23 11 02.0**	**-0.9**
MA2				pmax	pmax		
	comp=Z,924nm,0.9s						
MA2				MLR	MLR		
	comp=Z,137µm,17.0s						
MA2	**Magadan**	**20.23**	**11**	P	**P**	**23 11 01.9**	**-1.1**
MA2				IAmb	IAmb	23 11 11.1	
	comp=Z,983nm,0.9s						
MA2				IAMs_20	IAMs_20	23 20 13.3	
	comp=Z,149µm,18.0s						
BJI	**Beijing**	**20.66**	**279**	P	P	23 11 02.3	-5.5
BJI				S	**S**	**23 14 53.6**	**-4.9**
BJI				pmax	pmax		
	comp=Z,120nm,1.0s						
BJI				pmax	pmax		
	comp=Z,10µm,3.3s						
BJI				LR	LR		
	comp=Z,390µm,14.8s						
BJI				LR	LR		
	comp=Z,297µm,21.6s						
BJI				LR	LR		
	comp=Z,390µm,17.3s						
BJT	**Baijiatuau**	**20.67**	**279**	IAmb	IAmb	23 11 29.7	
	comp=Z,853nm,1.1s						
BJT	**Baijiatuau**	**20.67**	**279**	IAMs_20	IAMs_20	23 19 07.6	
	comp=Z,612µm,18.0s						
TIA	**Tai'an**	**20.82**	**268**	P	P	23 11 04.3	-5.3
TIA				pmax	pmax		
	comp=Z,23µm,6.9s						
TIA				LR	LR		
	comp=Z,482µm,12.8s						
TIA				LR	LR		
	comp=Z,1096µm,18.6s						
TIA				LR	LR		
	comp=Z,1534µm,13.7s						
NJ2	**Nanjing**	**21.15**	**256**	*e*P	P	23 11 07.1	-6.1
NJ2				sP	pP	23 11 14.9	-0.9
NJ2				S	**S**	**23 15 02.5**	**-5.8**
NJ2				sS	sS	23 15 07.5	-5.1
NJ2				pmax	pmax		
	comp=Z,360nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,5µm,4.0s						
NJ2				LR	LR		
	comp=Z,626µm,19.9s						
NJ2				LR	LR		
	comp=Z,544µm,17.1s						
NJ2				LR	LR		
	comp=Z,695µm,16.1s						
YOJ	**Yonaguni jima**	**22.93**	**234**	P	P	23 11 26.1	-6.1
YOJ				pmax	pmax		
	comp=Z,494nm,0.8s						
YOJ				MLR	MLR		
	comp=Z,277µm,21.0s						
YOJ	**Yonaguni jima**	**22.93**	**234**	P	P	23 11 26.1	-6.1
YOJ				IAmb	IAmb	23 11 51.2	
	comp=Z,494nm,0.8s						
YOJ				IAMs_20	IAMs_20	23 20 39.6	
	comp=Z,277µm,21.0s						
SARN	**Sarigan**	**23.27**	**174**	P	**P**	**23 11 38.7**	**+2.9**
	comp=Z,306nm,2.0s						
TATO	**Taipei**	**23.53**	**237**	IAMs_20	IAMs_20	23 21 54.3	
	comp=Z,798µm,18.0s						
TATO	**Taipei**	**23.53**	**237**	P	P	23 11 32.5	-5.8
TATO				P	P	23 11 32.5	-5.8
TATO				P	P	23 11 32.5	-5.8
YAK	**Yakutsk**	**23.59**	**344**	*c i*P	**P**	**23 11 35.2**	**-3.3**
YAK				*e**PP	**pP**	**23 11 43.7**	**+2.3**
YAK				*e*PPP	PPP	23 12 11.7	
YAK				*e*S	**S**	**23 15 52.1**	**-0.4**
YAK				*e*SS	**SnSn**	**23 16 30.1**	**+1.0**
YAK				*e*SSS	SSS	23 16 48.2	
YAK				pmax	pmax		
	comp=Z,158nm,1.2s						
YAK				pmax	pmax		
	comp=N,160nm,1.5s						
YAK				pmax	pmax		
	comp=E,55nm,1.6s						
YAK				smax	smax		
	comp=N,15µm,2.8s						
YAK				smax	smax		
	comp=E,5µm,2.8s						
YAK				MLR	MLR		
	comp=Z,67µm,14.0s						
YAK				MLR	MLR		
	comp=N,52µm,15.0s						
YAK	**Yakutsk**	**23.59**	**344**	P	**P**	**23 11 35.0**	**-3.5**
ANA2	**Anatahan**	**23.62**	**174**	P	**P**	**23 11 37.4**	**-1.9**
ANA2	**Anatahan**	**23.62**	**174**	P	**P**	**23 11 39.4**	**+0.1**
SEY	**Seymchan**	**23.67**	**11**	S	**S**	**23 15 59.1**	**+5.3**
	comp=N,39nm,1.2s,baz=48,slow=21,SNR=1.0						
SEY				LR	LR	23 22 44.1	
	comp=N,157µm,18.0s,baz=199,slow=41						
SEY	**Seymchan**	**23.67**	**11**	*ce*P	**P**	**23 11 37.8**	**-1.6**
CIT	**Chita**	**23.68**	**310**	*e*P	P	23 11 34.5	-5.2
CIT				*e*		23 12 15.3	
CIT				pmax	pmax		
	comp=Z,1µm,1.9s						
YHNB	**Yeheng**	**23.82**	**237**	IAmb	IAmb	23 12 03.6	
	comp=Z,579nm,1.1s						
TIY	**Taiyuan**	**24.00**	**275**	*e*P	P	23 11 36.6	-6.2
TIY				pP	pP	23 11 45.5	-0.2
TIY				sS	sS	23 16 06.9	+2.5
TIY				pmax	pmax		
	comp=Z,640nm,1.9s						
TIY				pmax	pmax		
	comp=Z,10µm,8.1s						
TIY				LR	LR		
	comp=Z,468µm,15.1s						
TIY				LR	LR		
	comp=Z,324µm,15.6s						
TIY				LR	LR		
	comp=Z,471µm,17.9s						
HHC	**Hu-ho-hao-te**	**24.03**	**282**	*e*P	P	23 11 37.1	-6.0
HHC				S	S	23 15 48.8	-11
HHC				sS	pS	23 16 02.3	-0.9
HHC				LR	LR		
	comp=Z,355µm,16.2s						
HHC				LR	LR		
	comp=Z,1065µm,17.0s						
HHC				LR	LR		
	comp=Z,1316µm,17.0s						
NACB	**Ninganchiao**	**24.03**	**236**	IAMs_20	IAMs_20	23 21 25.7	
	comp=Z,188µm,21.0s						
SMY	**Shemya**	**24.67**	**48**	P	**P**	**23 11 48.5**	**-0.2**
SMY				pmax	pmax		
	comp=Z,2µm,1.7s						
SMY	**Shemya**	**24.67**	**48**	P	**P**	**23 11 48.5**	**-0.2**
SSLB	**Suanglung**	**24.71**	**236**	IAMs_20	IAMs_20	23 22 43.8	
	comp=Z,338µm,18.0s						
YULB	**Yu-li**	**24.78**	**235**	IAmb	IAmb	23 12 04.5	
	comp=Z,672nm,1.1s						
YULB				IAMs_20	IAMs_20	23 22 01.6	
	comp=Z,287µm,20.0s						
BTO	**Baotou**	**25.23**	**282**	*e*P	**P**	**23 11 50.0**	**-4.0**
BTO				S	**S**	**23 16 19.4**	**0.0**
WHN	**Wuhan**	**25.25**	**257**	⇓P	P	23 11 49.6	-4.6
WHN				S	**S**	**23 16 19.0**	**-0.7**
WHN				pmax	pmax		
	comp=Z,580nm,1.0s						
WHN				LR	LR		
	comp=Z,1296µm,16.6s						
WHN				LR	LR		
	comp=Z,859µm,15.8s						
WHN				LR	LR		

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      comp=Z,1469µm,17.4s
TPUB  Ta-pu              25.27 236   IAMs_20 IAMs_20  23 22 28.5
      comp=Z,447µm,20.0s
TWG   Pinlang            25.34 234   IAMs_20 IAMs_20  23 23 17.5
      comp=Z,245µm,20.0s
QZH   Quanzhou           25.47 241⇑iP        P        23 11 50.0  -6.2
QZH                                  S       S        23 16 23.8  +0.6
QZH                                  pmax    pmax
      comp=Z,430nm,1.6s
QZH                                  pmax    pmax
      comp=Z,22µm,4.5s
QZH                                  LR      LR
      comp=Z,263µm,16.6s
QZH                                  LR      LR
      comp=Z,167µm,14.7s
QZH                                  LR      LR
      comp=Z,329µm,15.2s
BOD   Bodaibo            25.91 323⇓iP        P        23 11 57.4  -2.5
BOD                                  pmax    pmax
      comp=Z,1µm,1.3s
KNMB  Chin-men Tao       25.93 241   P       P        23 11 56.7  -3.6
GUMO  Guam               26.30 176   P       P        23 12 05.1  +1.4
      comp=Z,142nm,1.0s,baz=24,slow=16,SNR=2.0
GUMO                                 LR      LR       23 24 34.7
      comp=Z,23µm,18.5s,baz=7.0,slow=42
GUMO  Guam               26.30 176   P       P        23 12 02.6  -1.1
GUMO                                 pmax    pmax
      comp=Z,744nm,1.2s
GUMO                                 MLR     MLR
      comp=Z,101µm,22.0s
GUMO  Guam               26.30 176   P       P        23 12 02.6  -1.1
GUMO                                 IAmb    IAmb     23 12 48.2
      comp=Z,744nm,1.1s
GUMO  Guam               26.30 176   IAMs_20 IAMs_20  23 20 33.1
      comp=Z,101µm,22.0s
BBP   Basco              26.60 229  eP       P        23 12 02.8  -3.7
ULN   Ulaanbaatar        27.01 299   P       P        23 12 07.6  -2.5
ULN                                  pmax    pmax
      comp=Z,3µm,1.9s
ULN                                  MLR     MLR
      comp=Z,1095µm,18.0s
ULN   Ulaanbaatar        27.01 299   P       P        23 12 07.6  -2.5
ULN   Ulaanbaatar        27.01 299   IAMs_20 IAMs_20  23 23 32.7
      comp=Z,1095µm,18.0s
ULN   Ulaanbaatar        27.01 299   P       P        23 12 06.9  -3.3
ULN                                  P       P        23 12 06.9  -3.3
ULN                                  P       P        23 12 06.9  -3.3
AMKA  Amchitka           27.44  53   P       P        23 12 14.5  +0.7
SONM  Songino Array      27.45 299   P       P        23 12 12.0  -2.1
      comp=Z,94nm,0.9s,baz=91,slow=7.0,SNR=80
SONM                                 S       S        23 16 58.6  +4.1
      comp=Z,22nm,1.1s,baz=53,slow=22,SNR=2.0
SONM                                 LR      LR       23 23 58.0
      comp=Z,1030µm,18.4s,baz=99,slow=38
SONM                                 P3KPbc           23 44 54.5
      comp=Z,0.9nm,1.0s,baz=260,slow=2.5,SNR=5.1
SONM  Songino Array      27.45 299   P       P        23 12 12.0  -2.1
SONM  Songino Array      27.45 299   P       P        23 12 10.9  -3.1
XAN   Xi'an              27.88 269   P       P        23 12 12.3  -5.6
XAN                                  pP      pP       23 12 18.0  -2.8
XAN                                  sP      sP       23 12 21.1  -0.9
XAN                                  PP      PnPn     23 13 05.1  +0.8
XAN                                  S       S        23 16 52.5  -8.7
XAN                                  SS      SnSn     23 18 20.3  +5.9
XAN                                  pmax    pmax
      comp=Z,130nm,1.2s
XAN                                  pmax    pmax
      comp=Z,17µm,6.8s
XAN                                  LR      LR
      comp=Z,322µm,13.3s
XAN                                  LR      LR
      comp=Z,846µm,14.9s
XAN                                  LR      LR
      comp=Z,939µm,14.9s
XAN   Xi'an              27.88 269   P       P        23 12 13.3  -4.6
XAN                                  pmax    pmax
      comp=Z,458nm,1.0s
XAN                                  MLR     MLR
      comp=Z,469µm,18.0s
XAN   Xi'an              27.88 269   P       P        23 12 13.3  -4.6
XAN                                  IAmb    IAmb     23 12 36.4
      comp=Z,458nm,1.0s
XAN   Xi'an              27.88 269   IAMs_20 IAMs_20  23 23 55.8
      comp=Z,469µm,18.0s
SGCP  Mt. Cagua          28.30 226  eP       P        23 12 19.6  -2.2
H11N2 WAKE ISLAND Hy     28.64 128   T       T        23 43 17.2
      baz=318,slow=75,SNR=1649
H11N1 WAKE ISLAND Hy     28.65 128   T       T        23 43 20.6
      baz=318,slow=75,SNR=1490
H11N3 WAKE ISLAND Hy     28.66 128   T       T        23 43 19.1
      baz=318,slow=75,SNR=1584
WAKE  Wake Island        28.84 129   P       P        23 12 27.5  +1.0
WAKE                                 IAmb    IAmb     23 13 03.2
      comp=Z,882nm,1.4s
WAKE  Wake Island        28.84 129   IAMs_20 IAMs_20  23 24 06.6
      comp=Z,50µm,20.0s
CVP   Callao Caves       28.86 226  eP       P        23 12 23.4  -3.3
ENH   Enshi              29.06 261   P       P        23 12 23.8  -4.7
APYP  Conner             29.06 227  eP       P        23 12 29.7  +1.3
IRK   Irkutsk            29.29 308  eP       P        23 12 28.9  -1.3
IRK                                  pmax    pmax
      comp=Z,2µm,3.4s
SIPP  Brgy, Tapao        29.45 228⇑eP        P        23 12 33.4  +1.4
H11S1 WAKE ISLAND Hy     29.46 130   T       T        23 44 24.3
      baz=319,slow=76,SNR=331
H11S3 WAKE ISLAND Hy     29.47 130   T       T        23 44 19.4
      baz=319,slow=76,SNR=471
H11S2 WAKE ISLAND Hy     29.48 130   T       T        23 44 20.3
      baz=319,slow=76,SNR=546
TLY   Talaya             29.59 307   LR      LR       23 25 09.3
      comp=Z,247µm,20.4s,baz=95,slow=38
TLY   Talaya             29.59 307c iP       P        23 12 30.2  -2.7
TLY                                 e                 23 13 43.8
TLY                                  pmax    pmax
      comp=Z,1µm,1.4s
TLY                                  MLR     MLR
      comp=Z,774µm,13.0s
TLY   Talaya             29.59 307   P       P        23 12 30.9  -2.0
TLY                                  IAmb    IAmb     23 12 46.6
      comp=Z,546nm,1.1s
TLY   Talaya             29.59 307   P       P        23 12 32.7  -0.3
TLY                                  P       P        23 12 32.7  -0.3
TLY                                  P       P        23 12 32.7  -0.3
ZAK   Zakamensk          29.67 304  eP       P        23 12 31.5  -2.3
ZAK                                  pmax    pmax
      comp=Z,2µm,1.7s
SZP   Santa              29.75 228   P       P        23 12 32.6  -2.0
SZP                                  IAmb    IAmb     23 13 19.6
      comp=Z,632nm,1.0s
SZP                                  IAMs_20 IAMs_20  23 26 25.6
      comp=Z,126µm,19.0s
ADK   Adak               29.99  53   P       P        23 12 36.6  +0.2
ADK                                  pmax    pmax
      comp=Z,177nm,1.2s
ADK   Adak               29.99  53   P       P        23 12 36.6  +0.2
HKC   Hong Kong Obse     30.24 243 ⇑P        P        23 12 36.0  -2.9
GZH   Guangzhou          30.29 245   P       P        23 12 33.0  -6.4
GZH                                  S       S        23 17 29.5   -10
GZH                                  LR      LR
      comp=Z,219µm,20.7s
GZH                                  LR      LR
      comp=Z,247µm,23.0s
GSTR  Great Sitkin T     30.40  53   P       P        23 12 39.6  -0.5
SMPP  San Manuel, Pa     30.75 226  eP       P        23 12 35.9  -7.7
MCO   Taipa Grande       30.78 244   P       P        23 12 45.0  +1.3
BOLP  Bolinao            31.00 227  eP       P        23 12 56.9   +11
LZH   Lanzhou            31.05 276  eP       P        23 12 42.4  -3.8
LZH                                  pP      pP       23 12 51.8  +2.7
LZH                                  sP      sP       23 12 56.5  +6.2
LZH                                  PP      PP       23 13 42.8   -13
LZH                                 eS       S        23 17 39.5   -12
LZH                                  pmax    pmax
      comp=Z,14µm,4.3s
LZH                                  LR      LR
      comp=Z,290µm,13.0s
LZH                                  LR      LR
      comp=Z,827µm,13.6s
LZH                                  LR      LR
      comp=Z,851µm,14.4s
MOY   Mondy              31.23 306  eP       P        23 12 45.3  -2.2
MOY                                  pmax    pmax
      comp=Z,2µm,2.3s
JCNP  Jose Panganiba     31.24 221  eP       P        23 12 46.2  -1.5
SCSP  San Jose Seism     31.38 219  eP       P        23 12 54.2  +5.2
ATKA  Atka Island        31.55  53   P       P        23 12 50.0  -0.1
ATKA                                 IAmb    IAmb     23 13 40.7
      comp=Z,356nm,1.2s
QVP   Quezon City--P     31.83 224  eP       P        23 12 58.1  +5.1
CNP   Catarman           31.84 216  eP       P        23 12 58.3  +5.3
LQP   Lukban             31.98 222⇑eP        P        23 13 01.2  +6.7
AUQP  San Andres         32.07 220  eP       P        23 13 06.7   +12
MACP  Maragondon, Ca     32.28 224  eP       P        23 12 59.5  +2.5
TGY   Tagaytay City      32.30 223   P       P        23 12 54.1  -3.1
      comp=Z,95nm,0.3s,baz=139,slow=19,SNR=1.3
TGY   Tagaytay City      32.30 223   P       P        23 12 54.1  -3.1
TGY   Tagaytay City      32.30 223   P       P        23 12 54.1  -3.1
BOAC  Boac               32.37 221  eP       P        23 13 00.8  +3.1
TIXI  Tiksi              32.59 352   P       P        23 12 57.1  -2.0
TIXI                                 pmax    pmax
      comp=Z,138nm,0.9s
TIXI  Tiksi              32.59 352   P       P        23 12 57.1  -2.0
TIXI                                 IAMs_20 IAMs_20  23 27 25.5
      comp=Z,143µm,20.0s
PGP   Puerto Galera      32.80 223⇑eP        P        23 13 07.5  +6.0
LUBP  Lubang             32.98 224  eP       P        23 13 03.2  +0.2
GTA   Gaotai             33.13 283 ⇑P        P        23 13 01.1  -3.3
GTA                                  pP      pP       23 13 09.5  +2.2
GTA                                  sP      sP       23 13 13.6  +5.1
GTA                                  S       S        23 18 16.9  -6.8
GTA                                  LR      LR
      comp=Z,304µm,18.5s
GTA                                  LR      LR
      comp=Z,1013µm,17.4s
GTA                                  LR      LR
      comp=Z,1204µm,18.2s
CD2   Chengdu            33.14 267 ⇑P        P        23 12 59.5  -5.0
CD2                                  pP      pP       23 13 08.1  +0.8
CD2                                  PP      PP       23 14 14.6  -4.7
CD2                                  S       S        23 18 16.1  -7.7
CD2                                  pmax    pmax
      comp=Z,150nm,1.0s
CD2                                  pmax    pmax
      comp=Z,9µm,4.9s
CD2                                  LR      LR
      comp=Z,846µm,12.5s
CD2                                  LR      LR
      comp=Z,613µm,15.7s
CD2                                  LR      LR
      comp=Z,1014µm,13.9s
GYA   Guiyang            33.14 257 ⇑P        P        23 13 00.0  -4.6
GYA                                  S       S        23 18 16.4  -7.6
GYA                                  sS      pS       23 18 31.4  +3.9
GYA                                  pmax    pmax
      comp=Z,170nm,1.6s
GYA                                  LR      LR
      comp=Z,253µm,17.4s
GYA                                  LR      LR
      comp=Z,249µm,19.3s
GYA                                  LR      LR
      comp=Z,389µm,15.4s
OCLP  Ormoc              33.15 215  eP       P        23 13 12.6  +8.0
SJMP  San Jose           33.59 222  eP       P        23 13 15.1  +6.7
GLSP  General Luna,      33.66 211  eP       P        23 13 08.2  -0.8
MSLP  Maasin             33.86 214  eP       P        23 13 14.8  +4.0
GUIM  Jordan             34.45 218  eP       P        23 13 18.1  +2.3
BUSP  Coron              34.45 222  eP       P        23 13 14.8  -1.1
MIDW  Midway             34.45  98   P       P        23 13 15.6  -0.1
MIDW                                 IAmb    IAmb     23 13 27.5
      comp=Z,420nm,1.1s
BUTP  Butuan             34.60 212  eP       P        23 13 26.4  +9.3
NIKH  Nikolski High      34.85  52   IAMs_20 IAMs_20  23 25 51.4
      comp=Z,24µm,21.0s
CNOP  Candoni, Negro     35.12 217  eP       P        23 13 23.2  +1.5
QIZ   Qiongzhong         35.42 244   P       P        23 13 21.6  -2.7
QIZ                                  sP      pP       23 13 30.1  +2.9
QIZ                                  PP      PnPn     23 14 39.3  -3.6
QIZ                                  S       S        23 19 05.3  +6.2
QIZ                                  LR      LR
      comp=Z,245µm,14.7s
QIZ                                  LR      LR
      comp=Z,199µm,16.1s
QIZ                                  LR      LR
      comp=Z,284µm,14.7s
QIZ   Qiongzhong         35.42 244   P       P        23 13 21.7  -2.5
QIZ                                  IAmb    IAmb     23 14 03.1
      comp=Z,307nm,1.3s
QIZ   Qiongzhong         35.42 244   IAMs_20 IAMs_20  23 29 01.4
      comp=Z,317µm,18.0s
CGP   Cagayan de Oro     35.44 213⇓eP        P        23 13 37.8   +13
GAMB  Gambell            35.52  33   P       P        23 13 24.5   0.0
GAMB                                 IAmb    IAmb     23 14 14.4
      comp=Z,396nm,1.9s
GAMB                                 IAMs_20 IAMs_20  23 29 41.8
      comp=Z,65µm,19.0s
ENPP  El Nido            35.52 223  eP       P        23 13 23.0  -2.1
MATI  Mati               36.20 209  eP       P        23 13 31.2  +0.3
UNV   Unalaska Valle     36.29  50   IAMs_20 IAMs_20  23 25 50.4
      comp=Z,20µm,20.0s
DAV   Davao City (W)     36.34 210   P       P        23 13 31.7  -0.4
      comp=Z,126nm,0.4s,baz=333,slow=2.3,SNR=1.8
DAV   Davao City (W)     36.34 210   IAMs_20 IAMs_20  23 29 51.1
      comp=Z,106µm,20.0s
DAV   Davao City (W)     36.34 210⇑eP        P        23 13 33.0  +0.9
PAGZ  Pagadian           36.54 214  eP       P        23 13 38.5  +4.7
KCP   Kidapawan          36.59 211⇑eP        P        23 13 31.2  -3.1
AKUT  Akutan             36.73  50   IAMs_20 IAMs_20  23 26 28.6
      comp=Z,29µm,21.0s
KMI   Kunming            36.83 259⇑iP        P        23 13 32.3  -4.2
KMI                                  pP      pP       23 13 41.3  +1.9
KMI                                  sP      sP       23 13 45.5  +4.9
KMI                                  S       S        23 19 19.3  -1.7
KMI                                  pmax    pmax
      comp=Z,62nm,1.2s
KMI                                  pmax    pmax
      comp=Z,13µm,4.4s
KMI                                  LR      LR
      comp=Z,334µm,14.9s
KMI                                  LR      LR
      comp=Z,406µm,16.6s
KMI                                  LR      LR
      comp=Z,478µm,15.7s
KMI   Kunming            36.83 259   P       P        23 13 32.6  -3.9
KMI                                  pmax    pmax
      comp=Z,864nm,1.2s
KMI                                  MLR     MLR
      comp=Z,406µm,18.0s
KMI   Kunming            36.83 259   P       P        23 13 32.6  -3.9
KMI   Kunming            36.83 259   IAMs_20 IAMs_20  23 29 48.6
      comp=Z,406µm,18.0s
DDMP  Don Marcelino,     37.18 210  eP       P        23 13 42.0  +2.7
SKMP  Bagumbayan, Su     37.26 212  eP       P        23 13 40.2  +0.3
TNA   Tin City           37.64  31   P       P        23 13 42.6  -0.1
      baz=252,SNR=37
TNA   Tin City           37.64  31   P       P        23 13 42.1  -0.6
TNA                                  IAmb    IAmb     23 14 16.0
      comp=Z,617nm,1.4s
TNA                                  IAMs_20 IAMs_20  23 31 29.9
      comp=Z,57µm,18.0s
KWAJ  Kwajalein Atol     37.91 138   P       P        23 13 44.5  -1.0
KWAJ                                 pmax    pmax
      comp=Z,642nm,1.5s
KWAJ                                 MLR     MLR
      comp=Z,41µm,19.0s
KWAJ  Kwajalein Atol     37.91 138   P       P        23 13 44.5  -1.0
KWAJ                                 IAmb    IAmb     23 13 59.6
      comp=Z,642nm,1.4s
KWAJ  Kwajalein Atol     37.91 138   IAMs_20 IAMs_20  23 26 08.0
      comp=Z,41µm,19.0s
KWAJ  Kwajalein Atol     37.91 138   P       P        23 13 47.3  +1.8
FALS  False Pass         38.11  49   IAMs_20 IAMs_20  23 27 16.5
      comp=Z,34µm,19.0s
SLVN  Son La             38.17 253   P       P        23 13 43.7  -4.0
SLVN                                 IAmb    IAmb     23 14 06.8
      comp=Z,357nm,1.0s
SLVN                                 IAMs_20 IAMs_20  23 29 51.3
      comp=Z,76µm,21.0s
BATP  Bataraza           38.40 223  eP       P        23 13 45.6  -4.0
SDPT  Sand Point         39.80  48   IAMs_20 IAMs_20  23 25 20.1
      comp=Z,17µm,21.0s
DGZ   Jazzator, Alta     39.88 303c iP       P        23 14 00.3  -1.6
DGZ                                  pmax    pmax
      comp=Z,3µm,1.0s
DGZ                                  MLR     MLR
      comp=Z,1272µm,16.0s
RDOG  Red Dog Mine       40.28  28   IAMs_20 IAMs_20  23 32 49.5
      comp=Z,53µm,20.0s
CNBA  Chernabura Isl     40.33  49   P       P        23 14 05.6  +0.3
WMQ   Urumqi             40.84 294   P       P        23 14 17.5  +7.7
WMQ   Urumqi             40.84 294   P       P        23 14 07.5  -2.3
WMQ                                  pP      pP       23 14 15.3  +2.6
WMQ                                  PP      PP       23 15 48.8  +5.1
WMQ                                  PcS     PcS      23 19 56.6  -4.7
WMQ                                  S       S        23 20 22.3  +1.6
WMQ                                  sS      pS       23 20 25.9  +1.9
WMQ                                  SS      SS       23 23 17.1  -4.5
WMQ                                  pmax    pmax
      comp=Z,110nm,0.9s
WMQ                                  pmax    pmax
      comp=Z,3µm,3.7s
WMQ                                  LR      LR
      comp=Z,56µm,13.5s
WMQ                                  LR      LR
      comp=Z,66µm,17.9s
WMQ   Urumqi             40.84 294   IAMs_20 IAMs_20  23 31 34.1
      comp=Z,172µm,19.0s
LKP   Lekhapani          40.92 267  eP       P        23 14 07.8  -2.7
ZAA0  Zalesovo Array     41.04 310   P       P        23 14 08.7  -2.5
ZAA0                                 IAmb    IAmb     23 14 31.8
      comp=Z,716nm,1.1s
ZALV  Zalesovo Beam      41.04 310   P       P        23 14 08.8  -2.5
      comp=Z,37nm,0.5s,baz=91,slow=7.8,SNR=92
ZALV                                 PcP     PcP      23 16 09.1  -1.7
      comp=Z,92nm,0.9s,baz=64,slow=3.4,SNR=1.6
ZALV                                 LR      LR       23 32 11.3
      comp=Z,334µm,19.3s,baz=80,slow=38
ZALV                                 PKPPKP  P'P'df   23 46 22.8   -10
      comp=Z,0.4nm,0.4s,baz=279,slow=2.9,SNR=3.6
ZALV                                 PKP2bc           23 46 43.5
      comp=Z,1.8nm,0.7s,baz=309,slow=4.4,SNR=4.7
ZALV  Zalesovo Beam      41.04 310   P       P        23 14 08.8  -2.4
ZALV                                                  23 16 09.1
ZALV  Zalesovo Beam      41.04 310   P       P        23 14 07.9  -3.3
MYLDM Lahad Datu         41.14 219   P       P        23 14 09.8  -2.6
MYLDM                                IAmb    IAmb     23 14 51.0
      comp=Z,911nm,1.3s
NRIK  Noril'sk           41.24 334   P       P        23 14 10.7  -2.0
      comp=Z,40nm,1.1s,baz=111,slow=7.4,SNR=39
NRIK                                 S       S        23 20 28.2  +2.2
      comp=Z,34nm,1.1s,baz=261,slow=5.9,SNR=1.8
NRIK                                 LR      LR       23 32 43.4
      comp=Z,431µm,18.3s,baz=104,slow=38
NRIK  Noril'sk           41.24 334   P       P        23 14 10.7  -2.0
NRIK  Noril'sk           41.24 334   P       P        23 14 10.5  -2.1
DLV   T  Lat             41.40 237   IAmb    IAmb     23 14 34.6
      comp=Z,482nm,1.1s
DLV                                  IAMs_20 IAMs_20  23 31 12.0
      comp=Z,87µm,21.0s
KKM   Kota Kinabalu      41.55 223   IAmb    IAmb     23 15 19.2
      comp=Z,449nm,1.4s
KKM                                  IAMs_20 IAMs_20  23 34 00.6
      comp=Z,103µm,18.0s
TNTI  Ternate            41.57 204   P       P        23 14 12.9  -3.0
TNTI                                 IAmb    IAmb     23 14 38.9
      comp=Z,517nm,1.3s
TNTI  Ternate            41.57 204   P       P        23 14 19.6  +3.7
      comp=Z,13µmcomp=Z,9µmcomp=Z,355nm,1.8s
SWI   Sorong             42.05 198   P       P        23 14 20.1  +0.3
      comp=Z,22µmcomp=Z,9µmcomp=Z,179nm,1.4s
SIJI  Sorong             42.06 198   P       P        23 14 15.7  -4.2
      comp=Z,60nm,0.9s,baz=359,slow=13,SNR=10
RKPI  Ransiki, Papua     42.07 193   P       P        23 14 18.4  -1.6
      comp=Z,21µmcomp=Z,236nm,0.9s
SRPI  Serui, Papua       42.10 190   P       P        23 14 21.1  +0.9
TTA   Tatalina           42.25  36   P       P        23 14 21.1   0.0
TTA                                  pmax    pmax
      comp=Z,171nm,1.4s
TTA                                  MLR     MLR
      comp=Z,61µm,18.0s
TTA   Tatalina           42.25  36   P       P        23 14 21.1   0.0
TTA                                  IAMs_20 IAMs_20  23 35 25.1
      comp=Z,61µm,18.0s
JAY   Jayapura           42.32 184   P       P        23 14 21.9  -0.1
      comp=Z,47nm,1.0s,baz=344,slow=8.6,SNR=5.5
JAY                                  LR      LR       23 29 54.8
      comp=Z,26µm,21.4s,baz=344,slow=34
JAY   Jayapura           42.32 184   P       P        23 14 22.0  -0.1
      comp=Z,157nm,1.2s
ZIRO  ZIRO               42.36 269  eP       P        23 14 19.8  -2.7
SVW2  Sparrevohn         42.38  39   P       P        23 14 22.9  +0.8
GENI  Genyem             42.42 184   P       P        23 14 23.8  +0.9
      comp=Z,15µmcomp=Z,356nm,2.2s
JORH  JORHAT             42.45 267  eP       P        23 14 22.2  -0.9
JORH                                 IAmb    IAmb     23 14 32.7
      comp=Z,2µm,1.1s
MOKO  MOKOCHONG          42.46 267  eP       P        23 14 21.2  -2.1
MOKO                                 IAmb    IAmb     23 14 32.8
      comp=Z,2µm,1.1s
SPMM  Sapulut            42.56 221   P       P        23 14 30.0  +5.9
KMSI  Cibinong           42.92 209   P       P        23 14 26.0  -0.9
      comp=Z,772nmcomp=Z,9µmcomp=Z,505nm,0.9s
KOHI  KOHIMA             43.08 266  ex       P        23 14 26.4  -2.0
GTOI  Gorontalo          43.23 210   P       P        23 14 27.3  -2.1
      comp=Z,6µmcomp=Z,166nm,1.2s
A21K  Barrow             43.24  24   P       P        23 14 28.0  -0.9
      baz=257,SNR=32
A21K  Barrow             43.24  24   IAmb    IAmb     23 14 51.9
      comp=Z,393nm,1.0s
LSA   Lhasa              43.38 273   P       P        23 14 28.1  -3.1
LSA                                  S       S        23 20 53.5  -5.9
LSA                                  LR      LR
      comp=Z,129µm,13.5s
LSA                                  LR      LR
      comp=Z,187µm,15.7s
LSA                                  LR      LR
      comp=Z,252µm,17.1s
LSA   Lhasa              43.38 273   P       P        23 14 29.6  -1.5
LSA   Lhasa              43.38 273   P       P        23 14 28.6  -2.6
LSA                                  pmax    pmax
      comp=Z,359nm,0.9s
LSA                                  MLR     MLR
      comp=Z,489µm,18.0s
LSA   Lhasa              43.38 273   P       P        23 14 28.6  -2.6
LSA                                  IAmb    IAmb     23 14 50.1
      comp=Z,359nm,0.9s
LSA   Lhasa              43.38 273   P       P        23 14 29.6  -1.5
CHTO  Chiang Mai         43.38 254   P       P        23 14 27.0  -3.7
CHTO                                 pmax    pmax
      comp=Z,564nm,1.2s
CHTO                                 MLR     MLR
      comp=Z,228µm,18.0s
CHTO  Chiang Mai         43.38 254   P       P        23 14 27.0  -3.7
CHTO                                 IAmb    IAmb     23 15 01.8
      comp=Z,564nm,1.2s
CHTO  Chiang Mai         43.38 254   P       P        23 14 27.3  -3.4
CHTO                                 P       P        23 14 27.3  -3.4
IMAR  Indian Mountai     43.45  32   P       P        23 14 29.0  -1.6
CM31  Chiang Mai Arr     43.61 254   P       P        23 14 29.2  -3.3
CMAR  Chiang Mai Arr     43.61 254   P       P        23 14 29.1  -3.4
      comp=Z,16nm,0.8s,baz=46,slow=7.1,SNR=45
CMAR                                 S       S        23 21 05.6  +3.6
      comp=Z,1.7nm,0.4s,baz=63,slow=8.2,SNR=1.6
CMAR                                 LR      LR       23 34 26.2
      comp=Z,111µm,19.2s,baz=98,slow=39
CMAR  Chiang Mai Arr     43.61 254   P       P        23 14 29.1  -3.4
CMAR  Chiang Mai Arr     43.61 254   P       P        23 14 28.2  -4.3
TEZP  TEZPUR             43.62 268  eP       P        23 14 30.4  -2.2
OHAK  Old Harbor         43.70  45   P       P        23 14 34.3  +1.6
OHAK                                 IAmb    IAmb     23 15 07.5
      comp=Z,492nm,1.6s
TOLI2 Tolitoli           43.70 213   P       P        23 14 29.6  -3.7
TOLI2                                IAmb    IAmb     23 15 09.1
      comp=Z,633nm,1.7s
TOLI2                                IAMs_20 IAMs_20  23 34 40.0
      comp=Z,45µm,19.0s
RSO   Redoubt South      43.77  40   P       P        23 14 35.2  +1.5
MRSI  Marisa             43.80 212   P       P        23 14 30.9  -3.1
      comp=Z,34µmcomp=Z,13µmcomp=Z,523nm,1.1s
MK31  Makanchi Array     43.81 300c iP       P        23 14 30.9  -3.0
MKAR  Makanchi Array     43.81 300   P       P        23 14 31.3  -2.6
      comp=Z,46nm,0.8s,baz=83,slow=7.3,SNR=84
MKAR                                 S       S        23 21 05.9  +1.5
      comp=Z,9.0nm,1.1s,baz=84,slow=15,SNR=1.2
MKAR                                 LR      LR       23 33 55.8
      comp=Z,518µm,18.5s,baz=72,slow=38
MKAR                                 PKPPKP  P'P'df   23 46 17.3   -12
      comp=Z,1.3nm,1.1s,baz=236,slow=1.6,SNR=4.3
MKAR                                 PKP2bc           23 46 52.9
      comp=Z,0.9nm,0.6s,baz=297,slow=2.9,SNR=9.1
MKAR                                 P4KPbc           23 52 30.6
      comp=Z,0.2nm,0.4s,baz=73,slow=5.0,SNR=5.0
MKAR  Makanchi Array     43.81 300   P       P        23 14 31.3  -2.6
MKAR  Makanchi Array     43.81 300   P       P        23 14 30.3  -3.5
FAKI  Fak Fak            43.82 196   IAmb    IAmb     23 14 59.4
      comp=Z,251nm,0.9s
FAKI  Fak Fak            43.82 196   P       P        23 14 32.7  -1.5
      comp=Z,10µmcomp=Z,307nm,1.1s
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MAKZ	Makanchi	44.01	300	P	P	23 14 32.8	-2.7
MAKZ				pmax	pmax		
	comp=Z,585nm,1.1s						
MAKZ				MLR	MLR		
	comp=Z,582µm,18.0s						
MAKZ	Makanchi	44.01	300	P	P	23 14 32.8	-2.7
MAKZ				IAmb	IAmb	23 14 55.5	
	comp=Z,585nm,1.1s						
KDAK	Kodiak Island	44.03	44	P	P	23 14 33.8	-1.6
	comp=Z,42nm,1.0s,baz=277,slow=4.1,SNR=7.1						
KDAK	Kodiak Island	44.03	44	P	P	23 14 36.9	+1.5
KDAK				pmax	pmax		
	comp=Z,195nm,1.1s						
KDAK	Kodiak Island	44.03	44	P	P	23 14 36.9	+1.5
SKT	Skwentna	44.32	38	P	P	23 14 38.9	+1.2
SEM	Semipalatinsk	44.33	305	*e*P	P	23 14 32.8	-5.5
	comp=Z,280nm,1.1s,baz=305						
SEM				*e*PcP	PP	23 16 16.8	-4.6
	baz=305						
SEM				LR	LR	23 32 38.0	
	comp=Z,49µm,14.3s,baz=305						
SEM	Semipalatinsk	44.33	305	*e*P	P	23 14 32.7	-5.5
SEM				*e*		23 16 16.7	
SEM				pmax	pmax		
	comp=Z,280nm,1.1s						
SEM				MLR	MLR		
	comp=Z,49µm,14.0s						
BPAW	Bear Paw Mtn.	44.54	35	P	P	23 14 40.9	+1.4
KTH	Kantishna Hill	44.57	36	IAmb	IAmb	23 15 43.6	
	comp=Z,292nm,1.0s						
CNPM	China Poot	44.59	41	P	P	23 14 40.0	0.0
CNPM				IAmb	IAmb	23 15 49.0	
	comp=Z,902nm,1.9s						
MLY	Manley	44.66	34	P	P	23 14 40.3	-0.1
	baz=269,SNR=42						
SANI	Sanana	44.66	205	P	P	23 14 37.6	-3.3
	comp=Z,29µmcomp=Z,12µmcomp=Z,285nm,1.1s						
GUWA	GUWAHATI	44.69	268	*e*P	P	23 14 38.3	-2.9
GUWA				*i* x	x	23 21 21.8	
RABL	Rabaul	44.69	167	P	P	23 14 38.9	-2.3
RABL				IAmb	IAmb	23 14 54.7	
	comp=Z,330nm,1.1s						
RABL	Rabaul	44.69	167	P	P	23 14 41.7	+0.5
BRLK	Bradley Lake	44.75	41	P	P	23 14 42.3	+1.1
TRF	Thorofare Moun	44.85	36	P	P	23 14 42.7	+0.5
LUWI	Luwuk	44.86	210	P	P	23 14 43.3	+0.8
	comp=Z,34µmcomp=Z,8µmcomp=Z,486nm,1.8s						
SHL	Shillong	44.87	267	P	P	23 14 39.4	-3.4
SHL				pmax	pmax		
	comp=Z,655nm,1.1s						
SHL				MLR	MLR		
	comp=Z,237µm,19.0s						
SHL	Shillong	44.87	267	*e*P	P	23 14 45.6	+2.8
SHL				IAmb	IAmb	23 14 55.2	
	comp=Z,219nm,0.8s						
SHL	Shillong	44.87	267	P	P	23 14 39.4	-3.4
SHL	Shillong	44.87	267	P	P	23 14 44.7	+1.9
CUT	Chulitna	44.90	37	P	P	23 14 45.0	+2.7
	baz=272						
COLD	Coldfoot	44.94	30	P	P	23 14 42.7	0.0
	baz=268,SNR=7.2						
COLD	Coldfoot	44.94	30	P	P	23 14 43.6	+1.0
MSAI	Masohi	45.03	200	P	P	23 14 43.1	-0.7
	comp=Z,2µmcomp=Z,73nm,1.7s						
APSI	Ampana	45.17	211	P	P	23 14 43.0	-2.0
	comp=Z,7µmcomp=Z,369nm,1.2s						
RC01	Rabbit Creek A	45.22	39	P	P	23 14 43.3	-1.6
	baz=274						
I23K	Minto, Yukon-K	45.24	33	P	P	23 14 44.7	-0.3
	baz=270,SNR=22						
I23K	Minto, Yukon-K	45.24	33	IAmb	IAmb	23 15 52.6	
	comp=Z,419nm,1.5s						
I23K				IAMs_20	IAMs_20	23 37 29.9	
	comp=Z,40µm,18.0s						
TOLK	Toolik Lake Re	45.25	28	P	P	23 14 44.0	-1.1
	baz=267,SNR=20						
TOLK	Toolik Lake Re	45.25	28	IAmb	IAmb	23 15 35.8	
	comp=Z,730nm,1.7s						
O22K	Cooper Landing	45.27	40	P	P	23 14 46.1	+0.8
O22K				IAmb	IAmb	23 15 07.4	
	comp=Z,341nm,0.8s						
KURK	Kurchatov	45.28	306	P	P	23 14 43.4	-2.1
KURK	Kurchatov	45.28	306	P	P	23 14 42.6	-3.0
KURK	Kurchatov	45.28	306		P	23 14 43.9	-1.6
KURK				IAMs_20	IAMs_20	23 34 21.7	
	comp=Z,93µm,19.0s						
KURK	Kurchatov	45.28	306		S	23 21 25.4	-0.2
KURK	Kurchatov	45.28	306	P	P	23 14 42.2	-3.3
KURBB	Kurchatov Arra	45.36	306	P	P	23 14 43.4	-2.7
	comp=Z,121nm,0.9s,baz=81,slow=8.6,SNR=154						
KURBB				S	S	23 21 25.4	-1.3
	comp=Z,9.5nm,1.2s,baz=79,slow=9.5,SNR=1.4						
NEA2	Nenana	45.37	34	P	P	23 14 46.0	-0.1
	baz=271,SNR=14						
SEW	Seward	45.44	40	P	P	23 14 48.4	+1.8
SEW				IAmb	IAmb	23 15 39.1	
	comp=Z,391nm,1.3s						
NLAI	Namlea	45.44	203	P	P	23 14 46.0	-1.1
	comp=Z,5µmcomp=Z,125nm,1.5s						
MCK	McKinley	45.45	35	P	P	23 14 46.6	-0.2
	baz=272,SNR=13						
RND	Reindeer	45.50	36	IAmb	IAmb	23 15 14.9	
	comp=Z,266nm,1.1s						
RND				IAMs_20	IAMs_20	23 36 43.9	
	comp=Z,44µm,19.0s						
GHO	Glory Hole Cre	45.56	38	IAmb	IAmb	23 15 26.5	
	comp=Z,273nm,0.9s						
SAIH	SAIHA	45.70	263	*e*P	P	23 14 44.8	-4.5
MDM	Murphy Dome	45.72	34	IAmb	IAmb	23 16 14.9	
	comp=Z,633nm,1.6s						
WRH	Wood River Hil	45.80	34	IAMs_20	IAMs_20	23 35 38.7	
	comp=Z,44µm,19.0s						
KNK	Knik Glacier	45.81	39	P	P	23 14 49.6	0.0
KNK				IAmb	IAmb	23 15 17.8	
	comp=Z,515nm,1.5s						
TCOL	CIGO, UAF Yank	45.88	34	P	P	23 14 51.1	+1.0
	baz=272						
TCOL	CIGO, UAF Yank	45.88	34	IAmb	IAmb	23 15 15.7	
	comp=Z,254nm,0.9s						
COLA	College	45.89	34	P	P	23 14 50.8	+0.7
COLA				pmax	pmax		
	comp=Z,273nm,1.0s						
COLA				MLR	MLR		
	comp=Z,30µm,18.0s						
COLA	College	45.89	34	P	P	23 14 50.8	+0.7
COLA				IAmb	IAmb	23 15 15.7	
	comp=Z,273nm,0.9s						
COLA	College	45.89	34	IAMs_20	IAMs_20	23 37 50.9	
	comp=Z,30µm,18.0s						
BNDI	Bandanaira	45.91	199	P	P	23 14 56.8	+6.0
CCB	Clear Creek Bu	45.91	34	IAMs_20	IAMs_20	23 35 50.8	
	comp=Z,43µm,19.0s						
POKR	Poker Plat Res	46.05	33	P	P	23 14 50.9	-0.6
	baz=272,SNR=58						
POKR	Poker Plat Res	46.05	33	IAmb	IAmb	23 16 12.2	
	comp=Z,550nm,1.4s						
AGT	Agartala	46.26	266	*e*P	P	23 14 51.7	-1.8
AGT				*i* x	x	23 21 50.7	
HDA	Harding Lake	46.29	34	P	P	23 14 53.3	-0.1
	baz=273						
IL31		46.30	34	IAmb	IAmb	23 15 19.0	
	comp=Z,205nm,0.8s						
ILAR	Eielson Array	46.30	34	P	P	23 14 52.0	-1.3
	comp=Z,12nm,0.9s,baz=265,slow=5.1,SNR=58						
ILAR				S	S	23 21 44.6	+4.6
	comp=Z,1.8nm,1.0s,baz=275,slow=9.8,SNR=1.7						
ILAR				LR	LR	23 36 13.2	
	comp=Z,22µm,20.2s,baz=296,slow=38						
ILAR	Eielson Array	46.30	34	P	P	23 14 52.1	-1.3
ILAR	Eielson Array	46.30	34	P	P	23 14 52.1	-1.3
SCM	Sheep Creek Mo	46.31	38	IAmb	IAmb	23 15 43.6	
	comp=Z,247nm,1.0s						
GTK	Tadong	46.49	272	*e*P	P	23 14 54.5	-1.2
PDGK	Podgornoye	46.69	296	*i* P	P	23 14 53.3	-3.6
PDGK				pmax	pmax		
	comp=Z,937nm,1.2s						
SBUM	Sibu	46.70	225	P	P	23 14 56.0	-1.1
SHLS	Shalkode	46.77	296	*e*P	P	23 14 50.4	-7.1
	comp=Z,123µm,15.1s,baz=296						
SHLS				LR	LR	23 34 36.2	
	baz=296						
SHLS	Shalkode	46.77	296	*e*P	P	23 14 50.4	-7.1
M24K	Tolsona, Glenn	46.83	37	P	P	23 14 57.1	-0.6
	baz=276,SNR=7.6						
M24K	Tolsona, Glenn	46.83	37	P	P	23 14 59.7	+2.1
M24K				IAmb	IAmb	23 16 01.7	
	comp=Z,250nm,0.9s						
PRP	Porcupine Dome	46.84	33	IAmb	IAmb	23 15 15.7	
	comp=Z,182nm,0.8s						
PRP				IAMs_20	IAMs_20	23 38 02.1	
	comp=Z,39µm,18.0s						
HIN	Hinchinbrook I	46.87	40	P	P	23 14 58.9	+1.0
HIN				IAMs_20	IAMs_20	23 38 32.4	
	comp=Z,42µm,19.0s						
TDK	Taldyqorghan	46.91	298	*e*P	P	23 14 53.8	-4.7
	comp=Z,148µm,14.6s,baz=298						
TDK				LR	LR	23 34 24.3	
	baz=298						
TDK	Taldyqorghan	46.91	298	*e*P	P	23 14 53.7	-4.8
JOHN	Johnston Islan	46.95	106	P	P	23 14 58.9	-0.2
TARA	Tarawa	46.98	137	P	P	23 14 58.1	-1.2
TARA	Tarawa	46.98	137	P	P	23 15 02.7	+3.5
	comp=Z,633nm,1.7s						
KLU	Klutina	47.01	38	IAmb	IAmb	23 15 26.9	
	comp=Z,248nm,1.1s						
PAX	Paxson	47.06	36	IAmb	IAmb	23 16 47.3	
	comp=Z,210nm,1.2s						
UZB	Uzynbulak	47.07	296	*e*P	P	23 14 55.2	-4.7
	comp=Z,236nm,1.2s,baz=296						
UZB				LR	LR	23 34 44.6	
	comp=Z,63µm,14.4s,baz=296						
UZB	Uzynbulak	47.07	296	*e*P	P	23 14 55.2	-4.8
UZB				pmax	pmax		
	comp=Z,235nm,1.2s						
UZB				MLR	MLR		
	comp=Z,63µm,14.0s						
BMAR	Burnt Mountain	47.12	30	P	P	23 14 59.8	-0.1
TAPN	Taplejung	47.16	272	*e*P	P	23 14 57.8	-3.2
	comp=Z,1µm,1.3s						
KPKS	Kokpek	47.20	296	*e*P	P	23 14 56.2	-4.7
	comp=Z,355nm,1.0s,baz=296						
KPKS	Kokpek	47.20	296	*e*P	P	23 14 56.1	-4.8
KPKS				pmax	pmax		
	comp=Z,355nm,1.0s						
EYAK	Cordova Ski Ar	47.22	40	P	P	23 14 59.4	-1.2
EYAK				IAmb	IAmb	23 15 26.9	
	comp=Z,197nm,1.1s						
SATY	Saty	47.53	296	*e*P	P	23 14 59.2	-4.3
	comp=Z,99nm,0.9s,baz=296						
SATY				*e*S	S	23 21 51.8	-6.6
	baz=296						
SATY				LR	LR	23 35 18.9	
	comp=Z,104µm,15.8s,baz=296						
SATY	Saty	47.53	296	*e*P	P	23 14 59.2	-4.3
SATY				*e*S	S	23 21 51.7	-6.6
SATY				pmax	pmax		
	comp=Z,99nm,0.9s						
SATY				MLR	MLR		
	comp=Z,104µm,16.0s						
BKB	Balikpapan	47.53	217	P	P	23 14 59.5	-4.1
BKB	Balikpapan	47.53	217	P	P	23 15 00.3	-3.3
	comp=Z,52µmcomp=Z,16µmcomp=Z,720nm,1.2s						
KDI	Kendari	47.60	208	P	P	23 15 03.2	-0.9
	comp=Z,7µmcomp=Z,165nm,1.5s						
SCRK	Sand Creek	47.62	35	P	P	23 15 02.3	-1.6
	baz=276,SNR=35						
N25K	Chitina, Valde	47.63	38	P	P	23 15 05.0	+1.0
ODAN	Odare	47.66	272	*e*P	P	23 15 01.4	-3.4
	comp=Z,1µm,1.2s						
RAGM	Ragged Mountai	47.77	40	IAMs_20	IAMs_20	23 39 00.2	
	comp=Z,45µm,19.0s						
TTSI	Tana Toraja	47.85	212	P	P	23 15 04.5	-1.5
	comp=Z,4µmcomp=Z,122nm,1.0s						
MENT	Mentasta	47.86	36	IAMs_20	IAMs_20	23 38 08.5	
	comp=Z,46µm,20.0s						
HMT	Hamilton	47.98	40	IAMs_20	IAMs_20	23 39 06.8	
	comp=Z,35µm,20.0s						
GLB	Gilahina Butte	48.03	38	P	P	23 15 07.5	+0.5
GLB				IAmb	IAmb	23 16 05.6	
	comp=Z,662nm,2.0s						
MTKI	Muara Teweh, K	48.20	219	P	P	23 15 07.1	-1.7
	comp=Z,30µmcomp=Z,10µmcomp=Z,342nm,1.3s						
RAMN	Ramite	48.22	272	*e*P	P	23 15 05.7	-3.5
	comp=Z,2µm,0.9s						
VRDI	Verde Repeater	48.23	38	IAmb	IAmb	23 15 49.5	
	comp=Z,194nm,1.1s						
CHKK	Chushkaly	48.24	297	*e*P	P	23 15 03.6	-5.2
	baz=297						
CHKK	Chushkaly	48.24	297	*e*P	P	23 15 03.6	-5.2
MMPI	Merauke	48.24	184	P	P	23 15 10.5	+1.5
	comp=Z,1µm,1.0s						
GUN	Gumba	48.29	274	*e*P	P	23 15 06.7	-3.1
	comp=Z,1µm,1.0s						
MCARA	McCarthy VSAT	48.41	38	IAmb	IAmb	23 15 54.2	
	comp=Z,272nm,1.1s						
MDOK	Medeo	48.43	297	*e*P	P	23 15 06.3	-4.2
	baz=296						
MDOK				*e*S	S	23 22 04.7	-6.5
	baz=296						
MDOK				LR	LR	23 34 57.9	
	comp=Z,285µm,15.8s,baz=296						
MDOK	Medeo	48.43	297	*e*P	P	23 15 06.2	-4.3
MDOK				*e*S	S	23 22 04.6	-6.5
MDOK				MLR	MLR		
	comp=Z,285µm,16.0s						
CRQM	Cirque	48.46	39	IAMs_20	IAMs_20	23 34 39.0	
	comp=Z,43µm,21.0s						
AAA	Alma-Ata	48.50	297	*e*P	P	23 15 07.2	-3.8
	comp=Z,214nm,0.9s,baz=297						
AAA				LR	LR	23 35 18.9	
	comp=Z,262µm,16.4s,baz=297						
AAA	Alma-Ata	48.50	297	*e*P	P	23 15 15.0	+4.0
TNSS	Tian-Shan	48.54	296	*e*P	P	23 15 07.2	-4.4
	baz=296						
TNSS	Tian-Shan	48.54	296	*e*P	P	23 15 07.2	-4.5
KSM	Kuching	48.56	226	IAmb	IAmb	23 15 34.0	
	comp=Z,206nm,1.0s						
KSM				IAMs_20	IAMs_20	23 37 58.2	
	comp=Z,64µm,18.0s						
KSM	Kuching	48.56	226	P	P	23 15 11.0	-0.6
TGL	Tana Glacier	48.61	39	P	P	23 15 12.8	+1.3
TGL				IAmb	IAmb	23 15 51.7	
	comp=Z,277nm,1.0s						
KUU	Kurty	48.66	298	*e*P	P	23 15 06.8	-5.3
	comp=Z,410nm,0.8s,baz=298						
KUU				LR	LR	23 35 31.4	
	comp=Z,116µm,14.1s,baz=298						
KUU	Kurty	48.66	298	*e*P	P	23 15 06.8	-5.3
KUU				pmax	pmax		
	comp=Z,410nm,0.8s						
KUU				MLR	MLR		
	comp=Z,116µm,14.0s						
SPSI	Sidrap Palu	48.71	212	P	P	23 15 11.3	-1.3
	comp=Z,31µmcomp=Z,8µmcomp=Z,264nm,1.2s						
BCAR	Beaver Creek A	48.72	36	P	P	23 15 11.5	-0.8
EGAK	Eagle	48.74	34	IAmb	IAmb	23 15 53.5	
	comp=Z,266nm,1.2s						
BALM	Baldy	48.79	39	IAmb	IAmb	23 15 33.6	
	comp=Z,149nm,0.9s						
KKN	Kakani	48.81	274	*e*P	P	23 15 10.5	-3.2
	comp=Z,2µm,0.8s						
PKI	Pulchoki	48.82	274	*e*P	P	23 15 10.2	-3.7
	comp=Z,545nm,0.9s						
PKIN	Phulchoki	48.83	274	*e*P	P	23 15 10.3	-3.6
	comp=Z,896nm,1.0s						
SAUI	Saumlaki	48.94	196	P	P	23 15 11.5	-2.9
SAUI	Saumlaki	48.94	196	P	P	23 15 14.9	+0.5
	comp=Z,16µmcomp=Z,408nm,1.1s						
BNSI	Bone	48.97	211	P	P	23 15 13.0	-1.6
	comp=Z,12µmcomp=Z,453nm,1.0s						
DMN	Daman	49.03	274	*e*P	P	23 15 12.4	-3.0
	comp=Z,3µm,1.5s						
STKI	Sintang	49.10	224	P	P	23 15 14.1	-1.6
	comp=Z,74nm,1.2s						
BARN	Barnard Glacie	49.12	38	P	P	23 15 16.7	+1.2
BRZS	Berezniki	49.15	306	*e*P	P	23 15 11.0	-4.8
	comp=Z,125nm,1.1s,baz=306						
BRZS	Berezniki	49.15	306	*e*P	P	23 15 10.9	-4.8
BRZS				pmax	pmax		
	comp=Z,125nm,1.1s						
GKN	Gorkha	49.20	275	*e*P	P	23 15 13.2	-3.4
	comp=Z,2µm,1.3s						
PMG	Port Moresby	49.24	175	P	P	23 15 15.4	-1.3
PMG				pmax	pmax		
	comp=Z,109nm,1.0s						
PMG				MLR	MLR		
	comp=Z,29µm,22.0s						
PMG	Port Moresby	49.24	175	P	P	23 15 15.4	-1.3
PMG	Port Moresby	49.24	175	P	P	23 15 17.2	+0.5
CTGM	Chitina Glacie	49.29	39	IAmb	IAmb	23 16 18.7	
	comp=Z,398nm,1.6s						
ULHL	Ulahol	49.31	296	P	P	23 15 14.6	-2.8
	SNR=15						
TABL	Table Mountain	49.48	39	P	P	23 15 20.9	+2.6
TKM2	Tokmak 2	49.51	297	P	P	23 15 16.6	-2.2
	SNR=168						
TKM2	Tokmak 2	49.51	297	*i* P	P	23 15 16.4	-2.5
TKM2				pmax	pmax		
	comp=Z,1µm,1.0s						
KBKI	Kotabaru	49.67	216	P	P	23 15 19.1	-0.9
	comp=Z,3µmcomp=Z,182nm,1.1s						
KAPI	Kappang	49.67	211	P	P	23 15 15.2	-4.8
	comp=Z,16nm,0.7s,baz=58,slow=6.1,SNR=10						
KAPI	Kappang	49.67	211	P	P	23 15 16.0	-4.0
KAPI				pmax	pmax		
	comp=Z,1µm,1.5s						
KAPI	Kappang	49.67	211	P	P	23 15 16.0	-4.0
BVAR	Borovoye Array	49.68	311	P	P	23 15 17.8	-1.9
	comp=Z,31nm,0.8s,baz=40,slow=21,SNR=88						
BVAR	Borovoye Array	49.68	311	P	P	23 15 17.8	-1.9
DANN	Dangsing	49.70	276	*e*P	P	23 15 17.7	-2.8
	comp=Z,2µm,0.7s						
DANN	Dangsing	49.70	276	*e*P	P	23 15 17.7	-2.8
	comp=Z,2µm,0.7s						
BRVK	Borovoye	49.73	311	P	P	23 15 17.9	-2.2
BRVK				pmax	pmax		
	comp=Z,515nm,0.9s						
BRVK				MLR	MLR		
	comp=Z,301µm,20.0s						
BRVK	Borovoye	49.73	311	P	P	23 15 17.9	-2.2
BRVK	Borovoye	49.73	311	P	P	23 15 18.0	-2.2
BRVK				P	P	23 15 18.0	-2.2
BTLS	Baital	49.82	300	*e*P	P	23 15 15.8	-5.1
	comp=Z,77nm,0.8s,baz=300						
BTLS				LR	LR	23 36 30.2	
	comp=Z,42µm,12.2s,baz=300						
BTLS	Baital	49.82	300	*e*P	P	23 15 15.7	-5.2
BTLS				pmax	pmax		
	comp=Z,77nm,0.8s						
BTLS				MLR	MLR		
	comp=Z,42µm,12.0s						
SGDS	Sogindy	49.98	298	*e*P	P	23 15 17.3	-4.9
	comp=Z,110nm,1.0s,baz=298						
SGDS	Sogindy	49.98	298	*e*P	P	23 15 17.3	-5.0
SGDS				pmax	pmax		
	comp=Z,110nm,1.0s						
KBK	Karagaybulak	50.05	297	P	P	23 15 20.4	-2.5
	SNR=158						
CHMS	Chumysh	50.06	297	P	P	23 15 20.1	-2.7
	SNR=27						
USP	Ospenovka	50.14	298	P	P	23 15 20.6	-2.8
	SNR=79						
EPYK	Eagle Plains	50.32	31	P	P	23 15 23.9	-0.5
	baz=280,SNR=22						
EPYK	Eagle Plains	50.32	31	IAmb	IAmb	23 15 50.3	
	comp=Z,358nm,1.1s						
AAK	Ala-Archa	50.37	297	S	S	23 22 36.9	-1.4
	comp=Z,6.8nm,1.1s,baz=139,slow=23,SNR=0.9						
AAK	Ala-Archa	50.37	297	P	P	23 15 22.7	-2.7
	SNR=33						
AAK	Ala-Archa	50.37	297	*i* P	P	23 15 22.4	-2.9
	SNR=60						
AAK	Ala-Archa	50.37	297	P	P	23 15 22.6	-2.7
AAK				pmax	pmax		
	comp=Z,716nm,1.3s						
AAK				MLR	MLR		
	comp=Z,400µm,19.0s						
AAK	Ala-Archa	50.37	297	P	P	23 15 22.6	-2.8
AAK	Ala-Archa	50.37	297	P	P	23 15 25.1	-0.2
AAK				P	P	23 15 25.1	-0.2
BSSI	Bau Bau, Buton	50.41	210	P	P	23 15 23.7	-1.9
	comp=Z,18µmcomp=Z,5µmcomp=Z,330nm,1.4s						
BBKI	Banjar Baru	50.43	218	P	P	23 15 23.3	-2.5
	comp=Z,35µmcomp=Z,7µmcomp=Z,260nm,1.0s						
UCH	Uchtor	50.51	296	P	P	23 15 24.4	-2.3
	SNR=28						
KSH	Kashi	50.53	293	P	P	23 15 27.5	+1.0
KSH				sP	sP	23 15 36.0	+5.3
KSH				PP	PP	23 17 28.0	+5.9
KSH				S	S	23 22 38.1	-2.5
KSH				pmax	pmax		
	comp=Z,52nm,1.1s						
KSH				pmax	pmax		
	comp=Z,21µm,5.9s						
KSH				LR	LR		
	comp=Z,64µm,15.9s						
KSH				LR	LR		
	comp=Z,65µm,16.3s						
KSH				LR	LR		
	comp=Z,155µm,34.0s						
EKS2	Erkin-Say	50.85	297	P	P	23 15 26.3	-2.6
	SNR=57						
AML	Almayashu	51.11	296	P	P	23 15 29.1	-2.1
	SNR=69						
HYT	Haines Junctio	51.15	38	IAmb	IAmb	23 16 00.2	
	comp=Z,485nm,1.1s						
INK	Inuvik	51.17	28	P	P	23 15 30.2	-0.5
	comp=Z,5.9nm,0.6s,baz=280,slow=7.0,SNR=11						
INK				S	S	23 22 51.5	+3.2
	comp=Z,2.1nm,0.5s,baz=49,slow=30,SNR=5.1						
INK				LR	LR	23 40 49.6	
	comp=Z,25µm,19.0s,baz=273,slow=40						
INK	Inuvik	51.17	28	P	P	23 15 30.2	-0.5
INK	Inuvik	51.17	28	IAMs_20	IAMs_20	23 40 38.2	
	comp=Z,42µm,20.0s						
PBKI	Pangkalan Bun	51.34	222	P	P	23 15 32.0	-0.6
	comp=Z,368nm,0.9s						
DGPR	DIGLIPUR	51.41	253	*e*P	P	23 15 31.6	-1.6
DGPR				IAmb	IAmb	23 15 44.3	
	comp=Z,615nm,0.5s						
KULM	Kulim	51.48	239	P	P	23 15 29.8	-4.0
KULM				IAMs_20	IAMs_20	23 36 55.2	
	comp=Z,73µm,22.0s						
KULM	Kulim	51.48	239	P	P	23 15 31.0	-2.8
HNR	Honiara	51.53	159	P	P	23 15 32.0	-2.0
	comp=Z,31nm,0.3s,baz=288,slow=9.6,SNR=1.4						
HNR	Honiara	51.53	159	P	P	23 15 33.8	-0.2
HNR				pmax	pmax		
	comp=Z,293nm,1.0s						
HNR				MLR	MLR		
	comp=Z,53µm,21.0s						
HNR	Honiara	51.53	159	P	P	23 15 33.8	-0.2
HNR				IAmb	IAmb	23 16 34.6	
	comp=Z,293nm,1.0s						
HNR	Honiara	51.53	159	IAMs_20	IAMs_20	23 34 55.0	
	comp=Z,53µm,21.0s						
IPM	Ipoh	51.84	238	P	P	23 15 31.9	-4.6
IPM				IAmb	IAmb	23 16 29.5	
	comp=Z,527nm,1.4s						
IPM	Ipoh	51.84	238	P	P	23 15 33.0	-3.5
MMRI	Maumere	52.08	207	P	P	23 15 33.8	-4.3
	comp=Z,28µmcomp=Z,15µmcomp=Z,678nm,1.1s						
MYKOM	Kota Tinggi	52.10	233	P	P	23 15 35.9	-2.5
MYKOM	Kota Tinggi	52.10	233	P	P	23 15 40.0	+1.6
EDFI	Ende, Flores	52.38	207	P	P	23 15 36.0	-4.5
	comp=Z,19µmcomp=Z,5µmcomp=Z,227nm,1.1s						
DZA	Taraz	52.43	298	*e*P	P	23 15 36.3	-4.3
	comp=Z,269nm,0.9s,baz=298						
DZA				LR	LR	23 38 12.3	
	comp=Z,36µm,14.0s,baz=298						
DZA	Taraz	52.43	298	*e*P	P	23 15 36.3	-4.3
DZA				pmax	pmax		
	comp=Z,269nm,0.9s						
DZA				MLR	MLR		
	comp=Z,36µm,14.0s						
BWNR	Bhubaneshwar	52.44	266	*e*P	P	23 15 36.6	-4.3
BWNR				IAmb	IAmb	23 15 46.0	
	comp=Z,252nm,0.8s						
BWNR				IAMs_20	IAMs_20	23 43 40.5	
	comp=Z,134µm,16.5s						
SOEI	Soe	52.47	204	IAMs_20	IAMs_20	23 35 11.9	
	comp=Z,48µm,21.0s						
SOEI	Soe	52.47	204	P	P	23 15 40.6	-0.5
	comp=Z,12µmcomp=Z,684nm,1.0s						
PBA	Port Blair	52.55	252	*e*P	P	23 15 35.3	-6.4
PBA	Port Blair	52.55	252	P	P	23 15 38.4	-3.4
PBA	Port Blair	52.55	252	P	P	23 15 36.3	-5.4
SKAG	Skagway	52.56	40	P	P	23 15 42.0	+0.8
KIP	Kipapa	52.90	92	P	P	23 15 44.9	+0.6
KIP				pmax	pmax		
	comp=Z,465nm,1.2s						
KIP	Kipapa	52.90	92	P	P	23 15 44.9	+0.6
KIP				IAmb	IAmb	23 15 59.3	
	comp=Z,465nm,1.2s						
KK31	Karatay Array	52.90	299	P	P	23 15 41.1	-3.0
KK31				pmax	pmax		
	comp=Z,721nm,1.3s						
KK31	Karatay Array	52.90	299	P	P	23 15 41.1	-3.0
KKAR	Karatay Array	52.90	299	P	P	23 15 40.1	-4.0

KKAR	**Karatay Array**	**52.90**	**299**	P	P	23 15 40.1	-4.0
DDI	**Dehra Dun**	**53.06**	**281**	*e*P	**P**	**23 15 43.4**	**-2.1**
DDI				IAmb	IAmb	23 16 03.0	
	comp=Z,285nm,0.9s						
DDI				*i* x	x	23 23 34.6	
BATI	**Baumata**	**53.08**	**204**	P	P	23 15 42.9	-2.7
	comp=Z,6µmcomp=Z,203nm,1.0s						
SIT	**Sitka**	**53.29**	**42**	P	**P**	**23 15 46.0**	**-0.6**
SIT				pmax	pmax		
	comp=Z,167nm,1.2s						
SIT				MLR	MLR		
	comp=Z,18µm,20.0s						
SIT	**Sitka**	**53.29**	**42**	P	**P**	**23 15 46.0**	**-0.6**
SMLA	**Simla**	**53.34**	**282**	*e*P	P	23 15 44.7	-2.7
SMLA				IAmb	IAmb	23 15 58.7	
	comp=Z,2µm,0.3s						
SMLA				*i* x	x	23 23 40.1	
BRLS	**Borolday**	**53.38**	**299**	*e*P	P	23 15 45.3	-2.3
	comp=Z,108nm,1.3s,baz=299						
BRLS	**Borolday**	**53.38**	**299**	*e*P	P	23 15 45.3	-2.3
BRLS				pmax	pmax		
	comp=Z,108nm,1.3s						
JIS	**Juneau Island**	**53.39**	**41**	P	**P**	**23 15 48.0**	**+0.7**
DHRM	**DHARAMSHALA**	**53.46**	**284**	*e*P	P	23 15 43.6	-5.0
DHRM				IAmb	IAmb	23 15 54.0	
	comp=Z,290nm,0.6s						
DHRM				*i* x	x	23 23 29.8	
TPI	**Tanjungpandan**	**53.53**	**226**	P	**P**	**23 15 48.4**	**-0.5**
	comp=Z,56µmcomp=Z,8µmcomp=Z,228nm,1.1s						
IUG	**Iuzhnay**	**53.61**	**298**	*e*P	P	23 15 44.8	-4.6
	comp=Z,172nm,1.3s,baz=298						
IUG				*e*S	S	23 23 15.9	-6.9
	baz=298						
IUG				LR	LR	23 38 45.1	
	comp=Z,29µm,13.2s,baz=298						
IUG	**Iuzhnay**	**53.61**	**298**	*e*P	P	23 15 44.7	-4.7
IUG				*e*S	S	23 23 15.9	-6.9
IUG				pmax	pmax		
	comp=Z,172nm,1.3s						
IUG				MLR	MLR		
	comp=Z,29µm,13.0s						
WSI	**Waingapu**	**53.73**	**208**	P	P	23 15 45.6	-4.7
	comp=Z,12µmcomp=Z,585nm,0.8s						
PPBI	**Pangkal Pinang**	**53.90**	**228**	P	**P**	**23 15 51.4**	**-0.2**
	comp=Z,53µmcomp=Z,10µmcomp=Z,276nm,2.1s						
SVE	**Sverdlovsk**	**53.91**	**318**	*d i*P	**P**	**23 15 49.6**	**-1.6**
SVE				*e*		23 17 54.9	
SVE				*e*S	**S**	**23 23 27.4**	**+1.2**
SVE				pmax	pmax		
	comp=Z,804nm,1.0s						
SVE				pmax	pmax		
	comp=Z,25µm,22.0s						
SVE				MLR	MLR		
	comp=N,151µm,16.0s						
SVE				MLR	MLR		
	comp=E,539µm,15.0s						
SVE				MLR	MLR		
	comp=Z,764µm,15.0s						
PLAI	**Plampang**	**53.93**	**212**	P	**P**	**23 15 50.3**	**-1.5**
	comp=Z,34µmcomp=Z,5µmcomp=Z,202nm,1.3s						
KMMI	**Kalianget**	**53.98**	**217**	P	**P**	**23 15 52.8**	**+0.6**
	comp=Z,39µmcomp=Z,9µmcomp=Z,259nm,2.1s						
LHMI	**Lhok Sumawe**	**54.02**	**243**	P	**P**	**23 15 51.0**	**-1.5**
LHMI	**Lhok Sumawe**	**54.02**	**243**	P	**P**	**23 15 50.5**	**-2.0**
	comp=Z,91µmcomp=Z,20µmcomp=Z,438nm,1.3s						
BASI	**Baing, Sumba**	**54.13**	**208**	P	**P**	**23 15 52.0**	**-1.3**
	comp=Z,4µmcomp=Z,384nm,1.0s						
TSI	**Tuntungan**	**54.19**	**240**	P	**P**	**23 15 51.6**	**-2.2**
	comp=Z,75µmcomp=Z,15µmcomp=Z,304nm,1.0s						
C36M	**Paulatuk**	**54.21**	**26**	P	**P**	**23 15 51.9**	**-1.3**
	baz=289,SNR=27						
TWSI	**Taliwang, Sumb**	**54.21**	**213**	P	P	23 15 50.1	-3.7
	comp=Z,16µmcomp=Z,3µmcomp=Z,171nm,1.1s						
SRBI	**Singaraja**	**54.34**	**215**	P	**P**	**23 15 53.2**	**-1.6**
	comp=Z,38µmcomp=Z,17µmcomp=Z,339nm,1.3s						
NDI	**New Delhi**	**54.51**	**280**	*e*P	**P**	**23 15 54.0**	**-2.0**
ABJI	**Asem Bagus**	**54.52**	**216**	P	**P**	**23 15 56.5**	**+0.4**
	comp=Z,38µmcomp=Z,15µmcomp=Z,280nm,1.3s						
HLK	**Haleakala**	**54.63**	**92**	P	**P**	**23 15 57.1**	**-0.2**
HLK				IAmb	IAmb	23 16 11.1	
	comp=Z,341nm,1.1s						
RGRI	**Rengat**	**54.71**	**233**	P	**P**	**23 15 56.0**	**-1.6**
	comp=Z,38µmcomp=Z,166nm,0.5s						
DNP	**Denpasar**	**54.87**	**215**	P	**P**	**23 16 02.1**	**+3.5**
	comp=Z,38µmcomp=Z,428nm,1.2s						
JMBI	**JAMBI**	**54.93**	**231**	P	**P**	**23 16 02.8**	**+3.7**
BKNI	**Bangkinang**	**54.99**	**235**	P	P	23 15 55.9	-3.7
BKNI	**Bangkinang**	**54.99**	**235**	P	**P**	**23 15 59.1**	**-0.5**
	comp=Z,66µmcomp=Z,12µmcomp=Z,759nm,1.1s						
NIL	**Nilore**	**55.05**	**287**	P	P	23 15 57.6	-2.3
NIL				pmax	pmax		
	comp=Z,938nm,1.0s						
NIL				MLR	MLR		
	comp=Z,140µm,19.0s						
NIL	**Nilore**	**55.05**	**287**	P	P	23 15 57.6	-2.3
NIL	**Nilore**	**55.05**	**287**	P	**P**	**23 15 58.4**	**-1.5**
NIL				P	**P**	**23 15 58.4**	**-1.5**
WRAK	**Wrangell Islan**	**55.05**	**42**	P	**P**	**23 16 01.0**	**+1.5**
ARU	**Arti**	**55.12**	**318**	S	**S**	**23 23 47.1**	**+4.6**
	comp=Z,4.2nm,0.9s,baz=177,slow=23,SNR=1.8						
ARU	**Arti**	**55.12**	**318**	*c i*P	**P**	**23 15 57.8**	**-2.2**
ARU						23 16 55.8	
ARU						23 18 00.4	
ARU				PPP	PPP	23 19 10.2	
ARU				S	**S**	**23 23 40.3**	**-2.2**
ARU						23 25 39.8	
ARU				pmax	pmax		
	comp=Z,226nm,1.4s						
ARU				pmax	pmax		
	comp=Z,16µm,16.1s						
ARU				MLR	MLR		
	comp=Z,680µm,16.0s						
ARU	**Arti**	**55.12**	**318**	P	**P**	**23 15 57.8**	**-2.2**
JAGI	**Jajag, Banyuwa**	**55.15**	**216**	IAmb	IAmb	23 16 30.7	
	comp=Z,502nm,1.6s						
JAGI	**Jajag, Banyuwa**	**55.15**	**216**	P	**P**	**23 16 00.5**	**-0.2**
	comp=Z,35µmcomp=Z,5µmcomp=Z,182nm,1.4s						
TPTI		**55.30**	**241**	P	**P**	**23 16 04.6**	**+2.8**
	comp=Z,3µmcomp=Z,61nm,1.1s						
PMBI	**Palembang**	**55.30**	**229**	P	**P**	**23 16 00.2**	**-1.7**
PMBI				IAMs_20	IAMs_20	23 40 32.4	
	comp=Z,46µm,19.0s						
DLBC	**Dease Lake**	**55.49**	**40**	P	**P**	**23 16 02.1**	**-0.7**
	comp=Z,20nm,0.9s,baz=283,slow=11,SNR=14						
DLBC				LR	LR	23 40 24.8	
	comp=Z,17µm,21.4s,baz=303,slow=37						
HUH	**Hualalai**	**55.56**	**92**	P	**P**	**23 16 02.6**	**-1.5**
HUH				IAmb	IAmb	23 16 37.2	
	comp=Z,315nm,1.3s						
KHLU	**Kahalu`u**	**55.57**	**93**	P	**P**	**23 16 04.2**	**+0.3**
KHLU				IAmb	IAmb	23 16 17.2	
	comp=Z,197nm,1.0s						
SMRI	**Semarang**	**55.68**	**221**	IAMs_20	IAMs_20	23 43 17.0	
	comp=Z,61µm,18.0s						
SMRI	**Semarang**	**55.68**	**221**	P	**P**	**23 16 04.9**	**+0.4**
	comp=Z,41µmcomp=Z,19µmcomp=Z,660nm,1.5s						
SDSI	**Sungai Dareh**	**55.73**	**234**	P	**P**	**23 16 03.7**	**-1.2**
	comp=Z,52µmcomp=Z,11µmcomp=Z,480nm,1.3s						
POHA	**Pohakuloa**	**55.76**	**92**	P	**P**	**23 16 04.9**	**-0.5**
MLOA	**Mauna Loa Obse**	**55.85**	**92**	P	**P**	**23 16 06.6**	**+0.3**
MLOA				IAmb	IAmb	23 16 19.4	
	comp=Z,422nm,1.2s						
MWH	**Moku‘aweowe**	**55.86**	**92**	P	**P**	**23 16 06.4**	**-0.1**
HMH	**Humu‘ula Sheep**	**55.88**	**92**	P	**P**	**23 16 05.8**	**-0.5**
HMH				IAmb	IAmb	23 16 25.8	
	comp=Z,371nm,1.1s						
KHU	**Kahuku**	**55.99**	**93**	P	**P**	**23 16 06.0**	**-1.0**
KHU				pmax	pmax		
	comp=Z,899nm,1.4s						
KHU	**Kahuku**	**55.99**	**93**	P	**P**	**23 16 06.0**	**-1.0**
MLH	**Mauna Loa**	**56.02**	**92**	P	**P**	**23 16 07.4**	**+0.1**
MLH				IAmb	IAmb	23 16 20.8	
	comp=Z,226nm,0.9s						
AIN	**Ainahou**	**56.03**	**92**	P	**P**	**23 16 07.7**	**+0.3**
RSD	**Rainshed**	**56.12**	**92**	P	**P**	**23 16 08.9**	**+1.0**
DIB	**Dawson Inlet,**	**56.19**	**46**	P	**P**	**23 16 08.6**	**+0.9**
HLP	**Hilina Pali**	**56.20**	**92**	P	**P**	**23 16 07.5**	**-0.8**
PUH	**Pauahi**	**56.22**	**92**	P	**P**	**23 16 08.1**	**-0.5**
PUH				IAmb	IAmb	23 16 23.3	
	comp=Z,439nm,1.3s						
PDSI	**Padang**	**56.31**	**235**	P	**P**	**23 16 08.0**	**-1.1**
	comp=Z,30µmcomp=Z,10µmcomp=Z,72nm,1.2s						
UGM	**Wanagama**	**56.38**	**220**	IAMs_20	IAMs_20	23 40 21.6	
	comp=Z,42µm,20.0s						
UGM	**Wanagama**	**56.38**	**220**	P	P	23 16 06.8	-2.7
	comp=Z,39µmcomp=Z,18µmcomp=Z,865nm,1.3s						
GSI	**Gunungsitoli**	**56.48**	**239**	P	P	23 16 06.4	-3.9
GSI	**Gunungsitoli**	**56.48**	**239**	P	P	23 16 07.4	-2.9
	comp=Z,80µmcomp=Z,22µmcomp=Z,698nm,1.5s						
LHSI	**Lahat**	**56.76**	**230**	P	**P**	**23 16 10.8**	**-1.4**
	comp=Z,43µmcomp=Z,17µmcomp=Z,619nm,1.2s						
KLSI		**56.76**	**228**	P	P	23 16 08.3	-3.9
	comp=Z,18µmcomp=Z,6µmcomp=Z,129nm,2.1s						
MDSI	**Maura Dua**	**56.91**	**228**	P	P	23 16 08.7	-4.6
	comp=Z,9µmcomp=Z,326nm,1.3s						
LEM	**Lembang**	**56.94**	**224**	P	P	23 16 08.9	-4.8
	baz=80,slow=6.3						
LEM	**Lembang**	**56.94**	**224**	P	P	23 16 09.0	-4.7
LEM	**Lembang**	**56.94**	**224**	P	P	23 16 08.9	-4.8
	comp=Z,23µmcomp=Z,7µmcomp=Z,295nm,1.1s						
KNRA	**Kununurra**	**56.94**	**197**	P	**P**	**23 16 10.8**	**-2.6**
MASI	**Maura Aman, Be**	**56.97**	**231**	P	P	23 16 09.5	-4.3
	comp=Z,15µmcomp=Z,957nm,1.6s						
BLSI	**Bandar Lampung**	**57.02**	**227**	P	**P**	**23 16 13.9**	**-0.2**
	comp=Z,36µmcomp=Z,7µmcomp=Z,238nm,1.3s						
EUNU	**Eureka**	**57.10**	**9**	IAmb	IAmb	23 16 38.1	
	comp=Z,296nm,1.2s						
ALE	**Alert**	**57.12**	**4**	IAMs_20	IAMs_20	23 44 51.1	
	comp=Z,60µm,18.0s						
NGP	**Nagpur**	**57.14**	**271**	*e*P	P	23 16 11.3	-3.7
NGP				IAmb	IAmb	23 16 24.7	
	comp=Z,541nm,1.1s						
NGP				IAMs_20	IAMs_20	23 42 26.5	
	comp=Z,91µm,16.2s						
AB31	**Akbulak array**	**57.15**	**309**	⇑*e*P	P	23 16 11.9	-2.7
AB31				pmax	pmax		
	comp=Z,189nm,0.6s						
ABKAR	**Akbulak array**	**57.15**	**309**	P	P	23 16 11.0	-3.6
KSI	**Kapahiang**	**57.17**	**231**	P	**P**	**23 16 15.2**	**0.0**
	comp=Z,10µmcomp=Z,202nm,1.9s						
BHPL	**Bhopal**	**57.23**	**274**	*e*P	P	23 16 09.3	-6.3
BHPL				IAmb	IAmb	23 16 20.9	
	comp=Z,822nm,1.4s						
LWLI	**Liwa**	**57.41**	**228**	P	**P**	**23 16 19.2**	**+2.2**
	comp=Z,6µmcomp=Z,175nm,0.8s						
CISI	**Cisompet, Garu**	**57.45**	**223**	IAmb	IAmb	23 16 33.0	
	comp=Z,161nm,0.8s						
CISI	**Cisompet, Garu**	**57.45**	**223**	P	**P**	**23 16 19.3**	**+2.1**
	comp=Z,31µmcomp=Z,5µmcomp=Z,210nm,0.9s						
MNAI	**Manna**	**57.52**	**230**	P	P	23 16 14.1	-3.5
MNAI	**Manna**	**57.52**	**230**	P	**P**	**23 16 15.5**	**-2.1**
	comp=Z,40µmcomp=Z,12µmcomp=Z,370nm,1.4s						
HOPEN	**Hopen**	**57.56**	**346**	*e*P	**P**	**23 16 16.5**	**-0.6**
HOPEN				*e*sP	**sP**	**23 16 23.4**	**+2.2**
HOPEN				*e*		23 24 21.6	
HOPEN				IVMs_BB	IVMs_BB	23 43 08.2	
	comp=Z,29µm,18.7s						
KASI	**Kota Agung**	**57.57**	**227**	P	**P**	**23 16 16.0**	**-2.0**
	comp=Z,37µmcomp=Z,5µmcomp=Z,192nm,1.0s						
KBL	**Kabul**	**57.69**	**290**	P	P	23 16 15.3	-3.7
KBL				pmax	pmax		
	comp=Z,959nm,1.1s						
KBL				MLR	MLR		
	comp=Z,263µm,19.0s						
KBL	**Kabul**	**57.69**	**290**	P	P	23 16 15.3	-3.6
KBL	**Kabul**	**57.69**	**290**	P	P	23 16 15.9	-3.1
KBL				P	P	23 16 15.9	-3.1
AKTO	**Aktyubinsk**	**57.78**	**311**	S	**S**	**23 24 21.8**	**+3.8**
	comp=Z,2.6nm,0.9s,baz=339,slow=23,SNR=0.9						
SPA0	**Spitsbergen Ar**	**57.94**	**349**	P	**P**	**23 16 18.4**	**-1.4**
SPA0				IAmb	IAmb	23 17 01.9	
	comp=Z,223nm,1.0s						
SPA0	**Spitsbergen Ar**	**57.94**	**349**	*e*P	**P**	**23 16 23.8**	**+4.0**
SPA0				*e*sP	**pP**	**23 16 25.8**	**+3.0**
SPITS	**Spitsbergen Ar**	**57.94**	**349**	S	**S**	**23 24 21.2**	**+1.9**
	comp=Z,24nm,1.1s,baz=90,slow=10,SNR=1.6						
KBS	**Kingsbay**	**58.03**	**350**	P	**P**	**23 16 20.4**	**0.0**
KBS				pmax	pmax		
	comp=Z,386nm,1.0s						
KBS				MLR	MLR		
	comp=Z,33µm,20.0s						
KBS	**Kingsbay**	**58.03**	**350**	P	**P**	**23 16 20.4**	**0.0**
KBS	**Kingsbay**	**58.03**	**350**	IAMs_20	IAMs_20	23 41 33.0	
	comp=Z,33µm,20.0s						
KBS	**Kingsbay**	**58.03**	**350**	*e*P	**P**	**23 16 21.2**	**+0.8**
KBS				*e*sP	**sP**	**23 16 26.7**	**+2.2**
KBS				*e*S	**S**	**23 24 22.7**	**+2.3**
KBS				IVMs_BB	IVMs_BB	23 52 11.2	
	comp=Z,20µm,13.3s						
KBS	**Kingsbay**	**58.03**	**350**	*i* P	**P**	**23 16 19.1**	**-1.3**
KBS				IAmb	IAmb	23 16 28.3	
	comp=Z,1µm,1.1s						
FUNA	**Funafuti**	**58.61**	**137**	P	**P**	**23 16 22.4**	**-2.8**
FUNA				IAmb	IAmb	23 16 39.4	
	comp=Z,210nm,1.1s						
KIRV	**Kirov**	**58.78**	**322**	S	**S**	**23 24 33.9**	**+3.2**
	comp=Z,7.3nm,0.7s,baz=347,slow=22,SNR=1.4						
KIRV	**Kirov**	**58.78**	**322**	*c i*P	**P**	**23 16 23.7**	**-2.2**
HSPB	**Hornsund (broa**	**58.89**	**348**	*e*P	**P**	**23 16 25.4**	**-1.0**
HSPB				*e*pP	**pP**	**23 16 31.8**	**+2.4**
HSPB				*e*S	**S**	**23 24 34.0**	**+2.4**
HSPB				*e*L	L	23 43 43.4	
	comp=Z,89µm,21.4s						
HSPB	**Hornsund (broa**	**58.89**	**348**	*e*P	**P**	**23 16 25.6**	**-0.8**
HSPB				*e*sP	**pP**	**23 16 32.4**	**+3.0**
HSPB				*e*S	**S**	**23 24 35.2**	**+3.6**
BBB	**Bella Bella**	**59.03**	**46**	P	**P**	**23 16 27.1**	**-0.6**
	comp=Z,24nm,1.0s,baz=257,slow=13,SNR=5.4						
BBB	**Bella Bella**	**59.03**	**46**	P	**P**	**23 16 27.4**	**-0.3**
BBB				IAmb	IAmb	23 17 54.2	
	comp=Z,337nm,1.8s						
KNTN	**Kanton**	**59.25**	**125**	P	**P**	**23 16 29.9**	**+0.1**
KNTN	**Kanton**	**59.25**	**125**	P	**P**	**23 16 30.8**	**+1.1**
RES	**Resolute Bay**	**59.44**	**15**	P	**P**	**23 16 28.7**	**-1.5**
	comp=Z,25nm,0.8s,baz=312,slow=7.1,SNR=43						
RES	**Resolute Bay**	**59.44**	**15**	P	**P**	**23 16 28.7**	**-1.5**
SANVU	**Saraoutou**	**59.48**	**153**	P	**P**	**23 16 28.7**	**-2.4**
SANVU				IAMs_20	IAMs_20	23 37 14.8	
	comp=Z,34µm,22.0s						
SANVU	**Saraoutou**	**59.48**	**153**	P	**P**	**23 16 29.6**	**-1.6**
HYB	**Hyderabad**	**59.68**	**268**	*i* P	P	23 16 28.0	-4.8
	comp=Z,260nm,1.0s						
HYB				*e*pP	pP	23 16 37.0	+1.2
HYB				*e*PP	**PP**	**23 18 52.0**	**+7.6**
HYB				*e*S	**S**	**23 24 44.0**	**+0.5**
HYB				*e*LR	LR		
	comp=Z,48nm,18.0s						
HYB	**Hyderabad**	**59.68**	**268**	*e*P	P	23 16 29.5	-3.3
HYB				*i* x	x	23 24 55.8	
CTAO	**Charters Tower**	**59.79**	**177**	P	**P**	**23 16 31.5**	**-1.8**
CTAO				pmax	pmax		
	comp=Z,124nm,1.3s						
CTAO				MLR	MLR		
	comp=Z,21µm,22.0s						
CTAO	**Charters Tower**	**59.79**	**177**	P	**P**	**23 16 31.5**	**-1.8**
WB0	**Warramunga Arr**	**59.97**	**190**	IAMs_20	IAMs_20	23 41 34.8	
	comp=Z,35µm,21.0s						
WB9	**Warramunga Arr**	**59.99**	**190**	IAMs_20	IAMs_20	23 41 45.5	
	comp=Z,35µm,20.0s						
BJO1	**Bjornoya**	**60.01**	**345**	*e*S	**S**	**23 24 47.8**	**+1.6**
WB8	**Warramunga Arr**	**60.01**	**190**	IAMs_20	IAMs_20	23 41 47.1	
	comp=Z,35µm,20.0s						
FITZ	**Fitzroy Crossi**	**60.02**	**199**	PKP2bc		23 46 09.0	
	comp=Z,5.8nm,1.2s,baz=226,slow=6.8,SNR=3.8						
FITZ				PKP2ab		23 46 19.1	
	comp=Z,6.0nm,1.2s,baz=214,slow=5.3,SNR=4.1						
FITZ	**Fitzroy Crossi**	**60.02**	**199**	IAmb	IAmb	23 16 45.1	
	comp=Z,218nm,1.1s						
LVZ	**Lovozero**	**60.03**	**336**	P	**P**	**23 16 33.5**	**-1.0**
LVZ				pmax	pmax		
	comp=Z,182nm,0.9s						
LVZ				MLR	MLR		
	comp=Z,106µm,18.0s						
LVZ	**Lovozero**	**60.03**	**336**	P	**P**	**23 16 33.5**	**-1.0**
LVZ				IAmb	IAmb	23 16 57.2	
	comp=Z,182nm,0.9s						
WB7	**Warramunga Arr**	**60.04**	**190**	IAMs_20	IAMs_20	23 41 47.5	
	comp=Z,30µm,20.0s						
WB6	**Warramunga Arr**	**60.06**	**190**	IAMs_20	IAMs_20	23 41 47.2	
	comp=Z,36µm,20.0s						
WB5	**Warramunga Arr**	**60.08**	**190**	IAMs_20	IAMs_20	23 41 48.8	
	comp=Z,32µm,21.0s						
WB3	**Warramunga Arr**	**60.12**	**190**	IAMs_20	IAMs_20	23 41 50.2	
	comp=Z,37µm,20.0s						
WC2	**Warramunga Arr**	**60.13**	**190**	IAMs_20	IAMs_20	23 41 49.7	
	comp=Z,36µm,20.0s						
WC1	**Warramunga Arr**	**60.13**	**190**	IAMs_20	IAMs_20	23 41 50.1	
	comp=Z,36µm,20.0s						
WRAB	**Tennant Creek**	**60.13**	**190**	P	P	23 16 32.3	-3.3
WRAB				pmax	pmax		
	comp=Z,243nm,1.1s						
WRAB				MLR	MLR		
	comp=Z,36µm,20.0s						
WRAB	**Tennant Creek**	**60.13**	**190**	P	P	23 16 32.3	-3.4
WRAB				IAmb	IAmb	23 16 54.3	
	comp=Z,243nm,1.1s						
WRAB	**Tennant Creek**	**60.13**	**190**	IAMs_20	IAMs_20	23 41 50.3	
	comp=Z,36µm,20.0s						
WR0	**Warramunga Arr**	**60.14**	**189**	IAmb	IAmb	23 16 54.2	
	comp=Z,186nm,1.1s						
WR8	**Warramunga Arr**	**60.14**	**189**	IAMs_20	IAMs_20	23 41 50.7	
	comp=Z,35µm,21.0s						
WB2	**Warramunga Arr**	**60.15**	**190**	P	P	23 16 29.5	-6.2
WB2				IAmb	IAmb	23 17 22.2	
	comp=Z,218nm,1.0s						
WB2				IAMs_20	IAMs_20	23 41 50.5	
	comp=Z,37µm,20.0s						
WR1	**Warramunga Arr**	**60.15**	**190**	IAMs_20	IAMs_20	23 41 50.6	
	comp=Z,31µm,20.0s						
WRA	**Warramunga Arr**	**60.15**	**190**	P	P	23 16 29.8	-5.9
	comp=Z,38nm,0.8s,baz=8.2,slow=6.9,SNR=49						
WRA				S	S	23 24 40.3	-8.8
	comp=Z,16nm,1.2s,baz=5.9,slow=12,SNR=4.7						
WRA				LR	LR	23 42 11.3	
	comp=Z,28µm,19.3s,baz=10.0,slow=36						
WRA				PKPPKP		23 45 57.6	
	comp=Z,1.7nm,1.1s,baz=192,slow=2.0,SNR=1.3						
WRA				PKP2bc		23 46 10.4	
	comp=Z,6.8nm,1.1s,baz=212,slow=1.6,SNR=6.0						
WRA				PKP2ab		23 46 19.5	
	comp=Z,20nm,1.1s,baz=212,slow=2.3,SNR=13						
WRA	**Warramunga Arr**	**60.15**	**190**		P'P'bc	23 45 57.6	-4.1
WC3	**Warramunga Arr**	**60.16**	**190**	IAMs_20	IAMs_20	23 41 50.5	
	comp=Z,37µm,20.0s						
WB1	**Warramunga Ar.**	**60.16**	**190**	IAMs_20	IAMs_20	23 41 51.2	
	comp=Z,37µm,20.0s						
WC4	**Warramunga Arr**	**60.16**	**190**	IAMs_20	IAMs_20	23 41 51.1	
	comp=Z,39µm,20.0s						
YKA	**Yellowknife Ar**	**60.60**	**31**	P	**P**	**23 16 36.4**	**-2.0**
	comp=Z,7.3nm,1.1s,baz=299,slow=6.2,SNR=39						
YKA				PKPPKP		23 45 55.8	
	comp=Z,1.4nm,0.9s,baz=118,slow=2.6,SNR=6.8						
YKA				LR	LR	23 46 21.2	
	comp=Z,16µm,18.8s,baz=0.0,slow=39						
YKA	**Yellowknife Ar**	**60.60**	**31**	*ce*P	**P**	**23 16 36.4**	**-2.0**
APA	**Apatity**	**60.61**	**336**	⇓*i*P	**P**	**23 16 36.5**	**-1.9**
APA				*i*		23 18 53.0	
APA				*i* PPP	PPP	23 20 17.0	
APA				*i* S	**S**	**23 24 48.0**	**-6.0**
APA				*i* PS		23 25 04.0	
APA				*i*		23 26 17.0	
APA				*i* SS	**SS**	**23 28 47.0**	**-4.5**
APA				pmax	pmax		
	comp=Z,117nm,1.0s						
TMCR	**Tamitsa**	**60.86**	**331**	*e*P	**P**	**23 16 37.9**	**-2.2**
TMCR				*e*S	**S**	**23 24 54.2**	**-3.1**
TMCR				pmax	pmax		
	comp=Z,183nm,0.8s						
MDRS	**Chennai**	**61.02**	**263**	*e*P	**P**	**23 16 39.9**	**-2.0**
XMIS	**Christmas Isla**	**61.05**	**223**	P	P	23 16 37.2	-4.8
KEV	**Kevo**	**61.22**	**339**	P	P	23 16 39.8	-2.6
KEV				pmax	pmax		
	comp=Z,272nm,1.0s						
KEV				MLR	MLR		
	comp=Z,93µm,21.0s						
KEV	**Kevo**	**61.22**	**339**	P	P	23 16 39.8	-2.6
KEV				IAmb	IAmb	23 16 55.3	
	comp=Z,272nm,1.0s						
HAMF	**Hammerfest**	**61.53**	**341**	*e*P	**P**	**23 16 44.8**	**+0.2**
HAMF				*e*sP	**pP**	**23 16 50.0**	**+2.4**
HAMF				*e*S	**S**	**23 25 07.7**	**+2.1**
HAMF				IVMs_BB	IVMs_BB	23 51 09.8	
	comp=Z,33µm,14.5s						
ARA0	**ARCESS Array S**	**61.76**	**339**	*e*P	**P**	**23 16 45.9**	**-0.3**
ARCES	**ARCESS Array B**	**61.76**	**339**	P	**P**	**23 16 44.3**	**-1.9**
	comp=Z,12nm,0.8s,baz=48,slow=5.4,SNR=12						
ARCES				S	**S**	**23 25 09.1**	**+0.3**
	comp=Z,6.0nm,1.1s,baz=52,slow=15,SNR=1.3						
ARCES				LR	LR	23 47 02.4	
	comp=Z,89µm,21.2s,baz=60,slow=39						
ARCES	**ARCESS Array B**	**61.76**	**339**	P	**P**	**23 16 44.7**	**-1.5**
ARCES				pmax	pmax		
	comp=Z,124nm,1.0s						
ARCES	**ARCESS Array B**	**61.76**	**339**	P	**P**	**23 16 44.7**	**-1.5**
ARCES				IAmb	IAmb	23 16 58.6	
	comp=Z,124nm,0.9s						
TULEG	**Thule**	**62.03**	**8**	*i* P	**P**	**23 16 45.2**	**-2.6**
TULEG				IAmb	IAmb	23 16 54.0	
	comp=Z,103nm,0.9s						
KLMR	**Klimovskoe**	**62.04**	**327**	*e*P	P	23 16 43.8	-4.4
KLMR				*e*		23 18 58.9	
KLMR				*e*S	**S**	**23 25 06.1**	**-6.3**
KLMR				*e*SS	**SS**	**23 29 09.8**	**-4.4**
KLMR				pmax	pmax		
	comp=Z,638nm,1.3s						
KLMR				MLR	MLR		
	comp=Z,182µm,17.0s						
KLMR	**Klimovskoe**	**62.04**	**327**	*e*P	P	23 16 43.9	-4.3
KLMR				AMP		23 17 00.7	
	comp=Z,638nm,1.3s						
KLMR				*e*PP	**PP**	**23 18 59.0**	**-5.2**
KLMR				*e*S	**S**	**23 25 06.2**	**-6.2**
KLMR				*e*S	**S**	**23 25 06.2**	**-6.2**
KLMR				*e*SS	**SS**	**23 29 09.9**	**-4.3**
KLMR				*e*SS	**SS**	**23 29 09.9**	**-4.3**
KLMR				LQ	LQ	23 39 28.3	
KLMR				LQ	LQ	23 39 28.3	
KLMR				LR	LR	23 42 55.5	
KLMR				AMP		23 46 17.1	
	comp=Z,182µm,16.8s						
BELG	**Belogornoye**	**62.63**	**317**	S	**S**	**23 25 18.6**	**-1.4**
	comp=Z,14nm,0.9s,baz=275,slow=20,SNR=1.1						
BELG	**Belogornoye**	**62.63**	**317**	*ce*P	P	23 16 49.7	-2.5
BELG				pmax	pmax		
	comp=Z,278nm,1.0s						
BELG				MLR	MLR		
	comp=Z,56µm,18.0s						
BELG	**Belogornoye**	**62.63**	**317**		**S**	**23 25 18.6**	**-1.4**
HRA	**Herat**	**62.63**	**293**	P	P	23 16 50.2	-2.6
KTK1	**Kautokeino**	**62.72**	**339**	IVMs_BB	IVMs_BB	23 49 56.4	
	comp=Z,60µm,14.9s						
DAG	**Danmarks Havn**	**62.99**	**355**	*i* P	**P**	**23 16 52.2**	**-2.1**
	comp=Z,296nm,1.0s						
DAG	**Danmarks Havn**	**62.99**	**355**	*i* P	**P**	**23 16 52.2**	**-2.1**
DAG				pmax	pmax		
	comp=Z,300nm,1.0s						
DAG	**Danmarks Havn**	**62.99**	**355**	*i* P	**P**	**23 16 52.2**	**-2.1**
DAG				IAmb	IAmb	23 17 01.0	
	comp=Z,296nm,1.0s						
BHUJ	**Bhuj**	**63.15**	**279**	*e*P	P	23 16 52.2	-4.0
BHUJ				IAmb	IAmb	23 17 07.8	
	comp=Z,137nm,0.8s						
PGC	**Sidney**	**63.34**	**48**	P	**P**	**23 16 56.8**	**-0.2**
PGC				IAmb	IAmb	23 18 19.6	
	comp=Z,331nm,2.0s						
TRO	**Tromso**	**63.41**	**341**	*e*P	**P**	**23 16 56.9**	**-0.2**
TRO				*e*sP	**pP**	**23 17 02.9**	**+2.8**
TRO				*e*S	**S**	**23 25 33.9**	**+4.6**
TRO				IVMs_BB	IVMs_BB	23 50 44.4	
	comp=Z,61µm,14.9s						
GEYT	**Alibeck**	**63.65**	**298**	P	P	23 16 56.3	-3.0
	comp=Z,34nm,0.8s,baz=28,slow=3.5,SNR=39						
GEYT				S	**S**	**23 25 31.6**	**-1.8**
	comp=Z,1.2nm,0.4s,baz=104,slow=12,SNR=1.6						
GEYT				LR	LR	23 46 48.0	
	comp=Z,151µm,18.6s,baz=70,slow=38						
GEYT	**Alibeck**	**63.65**	**298**		**S**	**23 25 31.6**	**-1.8**
GEYT	**Alibeck**	**63.65**	**298**	P	P	23 16 56.4	-2.9
GEYT				IAmb	IAmb	23 17 23.6	
	comp=Z,264nm,1.2s						
GYA0B	**ALIBECK ARRAY**	**63.65**	**298**	IAmb	IAmb	23 17 23.6	
	comp=Z,763nm,1.4s						
GYA0B				IAMs_20	IAMs_20	23 47 26.7	
	comp=Z,158µm,18.0s						
NLWA	**Neilton Lookou**	**63.75**	**49**	IAmb	IAmb	23 17 14.2	
	comp=Z,160nm,1.2s						
ASAR	**Alice Springs**	**63.87**	**189**	P	P	23 16 55.5	-5.2
	comp=Z,20nm,0.7s,baz=9.2,slow=5.3,SNR=32						
ASAR				S	S	23 25 28.6	-7.5
	comp=Z,0.8nm,1.0s,baz=14,slow=14,SNR=1.4						
ASAR				LR	LR	23 44 06.3	
	comp=Z,34µm,20.4s,baz=5.5,slow=36						
ASAR				PKPPKP	**P'P'df**	**23 45 50.6**	**+4.4**
	comp=Z,1.4nm,1.0s,baz=207,slow=5.1,SNR=4.2						
ASAR				PKP2bc		23 46 03.9	
	comp=Z,10nm,1.1s,baz=169,slow=3.1,SNR=13						
ASAR	**Alice Springs**	**63.87**	**189**	P	P	23 16 55.5	-5.2
ASAR	**Alice Springs**	**63.87**	**189**	P	P	23 16 57.2	-3.5

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ASAR  Alice Springs    63.87 189           S         23 25 28.6  -7.5
A05A  Maple Falls      63.93  47   P       P         23 17 01.1 +0.2
A05A                               IAmb    IAmb      23 18 35.8
      comp=Z,387nm,1.7s
D03D  Eldon            64.12  49   P       P         23 17 03.8 +1.6
      baz=302,SNR=13
B05A  Bryant           64.31  48   P       P         23 17 04.8 +1.4
      baz=302,SNR=11
PALK  Pallekele        64.35 257   P       P         23 17 01.4  -2.8
PALK                               pmax    pmax
      comp=Z,180nm,1.1s
PALK                               MLR     MLR
      comp=Z,75µm,20.0s
PALK  Pallekele        64.35 257   P       P         23 17 01.4  -2.9
PALK                               IAmb    IAmb      23 17 22.2
      comp=Z,180nm,1.1s
E03A  Lebam            64.37  50   P       P         23 17 03.6  -0.2
E03A                               IAmb    IAmb      23 17 58.6
      comp=Z,217nm,1.1s
LIFNC LIFOU            64.45 155   P       P         23 17 07.4 +2.9
GOA   Goa              64.46 269  eP       P         23 16 60.0  -4.9
GOA                                IAmb    IAmb      23 17 16.4
      comp=Z,2µm,1.9s
B06A  Marblemount      64.52  47   P       P         23 17 04.2  -0.6
D05A  Enumclaw         64.94  49   P       P         23 17 07.0  -0.6
D05A                               IAmb    IAmb      23 17 52.0
      comp=Z,298nm,1.2s
E04D  Cinebar          64.94  49   P       P         23 17 07.6   0.0
      baz=302,SNR=30
KULLO Kullorsuaq       64.95   6  i P      P         23 17 05.0  -2.2
      comp=Z,170nm,1.0s
KULLO Kullorsuaq       64.95   6  i P      P         23 17 05.0  -2.2
KULLO                              pmax    pmax
      comp=Z,170nm,1.0s
KULLO Kullorsuaq       64.95   6  i P      P         23 17 05.0  -2.2
KULLO                              IAmb    IAmb      23 17 14.0
      comp=Z,170nm,1.0s
PSA00 Pilbara Seismi   64.96 204   P       P         23 17 03.1  -4.7
PSA00 Pilbara Seismi   64.96 204   IAmb    IAmb      23 17 37.0
      comp=Z,415nm,1.6s
LON   Longmire         65.28  49   P       P         23 17 10.4 +0.5
LON                                pmax    pmax
      comp=Z,65nm,1.0s
LON   Longmire         65.28  49   P       P         23 17 10.4 +0.5
N2IH  Innhavet         65.37 341  eP       P         23 17 07.8  -2.2
NOUC  Port Laguerre    65.39 156   P       P         23 17 10.0  -0.6
EIDS  Eidsvold         65.39 172   IAmb    IAmb      23 17 22.3
      comp=Z,177nm,1.2s
DZM   Mont Dzumac      65.41 156   S       S         23 25 51.0  -4.2
      comp=Z,4.4nm,0.8s,baz=20,slow=17,SNR=1.1
DZM   Mont Dzumac      65.41 156  eP       P         23 17 13.1 +2.2
      comp=Z,581nm,1.2s
DZM                               eS       S         23 25 54.3  -0.9
      comp=Z,47µm,27.9s
DZM   Mont Dzumac      65.41 156  eLR      LR        23 36 46.3
      comp=Z,75µm,22.8s
DZM   Mont Dzumac      65.41 156   P       P         23 17 09.9  -1.0
DZM                                IAmb    IAmb      23 17 27.4
      comp=Z,274nm,1.2s
DZM                                IAMs_20 IAMs_20   23 45 54.4
      comp=Z,47µm,20.0s
DZM   Mont Dzumac      65.41 156   P       P         23 17 09.9  -1.0
DBG   Daneborg         65.49 355  i P      P         23 17 08.4  -2.3
DBG                                IAmb    IAmb      23 17 17.3
      comp=Z,283nm,1.4s
I02D  Swisshome        65.49  52   P       P         23 17 11.1  -0.1
      baz=303
YATNC Mamie plateau,   65.53 156   P       P         23 17 11.1  -0.5
XMAS  Kiritimati       65.54 109   P       P         23 17 15.6 +3.7
COR   Corvallis        65.56  52   P       P         23 17 12.1 +0.4
COR                                pmax    pmax
      comp=Z,217nm,1.0s
COR                                MLR     MLR
      comp=Z,12µm,19.0s
COR   Corvallis        65.56  52   P       P         23 17 12.1 +0.4
COR                                IAmb    IAmb      23 17 24.2
      comp=Z,217nm,1.0s
STEI  Steigen          65.58 341  eP       P         23 17 10.1  -1.2
STEI                              esP      pP        23 17 17.0 +2.6
STEI                              eS       S         23 25 57.8 +1.8
STEI                               IVMs_BB IVMs_BB   23 50 53.5
      comp=Z,57µm,17.1s
ONTNC Ouen Toro        65.63 156   P       P         23 17 12.0  -0.2
LTY   Liberty          65.66  48   IAmb    IAmb      23 17 34.8
      comp=Z,409nm,1.7s
MOS   Moscow           65.74 323  eP       P         23 17 09.8  -2.8
MOS                               e                  23 17 39.4
MOS                               e                  23 19 37.1
MOS                               ePPP     PPP       23 21 13.8
MOS                               eS       S         23 26 00.1 +1.6
MOS                               e                  23 26 28.0
MOS                               eSS      SS        23 30 13.9 +1.9
MOS                                pmax    pmax
      comp=Z,769nm,1.9s
MOS                                MLR     MLR
      comp=Z,260µm,15.0s
MOS                                MLR     MLR
      comp=N,182µm,16.0s
MOS                                MLR     MLR
      comp=E,174µm,15.0s
B08A  Colville Reser   65.81  46   P       P         23 17 11.9  -1.3
B08A                               IAmb    IAmb      23 17 48.9
      comp=Z,285nm,1.6s
LOF   Lofoten          65.84 342  eP       P         23 17 12.4  -0.7
LOF                                IVmB_BB           23 17 15.2
      comp=Z,4µm,3.8s
LOF                               esP      pP        23 17 19.1 +3.0
LOF                               eS       S         23 26 03.2 +3.9
LOF                                IVMs_BB IVMs_BB   23 51 47.7
      comp=Z,37µm,13.6s
OUENC Ouen Island, N   65.86 156   P       P         23 17 15.3 +1.7
N2ST  Straumen         65.92 340  e        P         23 17 15.1 +1.6
H04D  Lebanon          65.94  51   P       P         23 17 14.8 +0.7
      baz=303,SNR=7.9
J01E  Myrtle Point     65.95  53   P       P         23 17 14.9 +0.7
      baz=303,SNR=22
MSVF  Nonsavu          65.95 143   P       P         23 17 11.7  -2.7
      comp=Z,2.4nm,0.4s,baz=329,slow=9.2,SNR=6.0
MSVF  Nonsavu          65.95 143   P       P         23 17 13.9  -0.5
MSVF                               pmax    pmax
      comp=Z,138nm,1.2s
MSVF                               MLR     MLR
      comp=Z,29µm,22.0s
MSVF  Nonsavu          65.95 143   P       P         23 17 13.9  -0.5
MSVF  Nonsavu          65.95 143   IAMs_20 IAMs_20   23 39 25.6
      comp=Z,29µm,22.0s
MSVF  Nonsavu          65.95 143   P       P         23 17 14.0  -0.5
F05D  White Salmon     65.95  50   P       P         23 17 15.7 +1.5
      baz=303
FAUS  Fauske           65.97 340  eP       P         23 17 12.2  -1.7
FAUS                               IVmB_BB           23 17 19.7
      comp=Z,5µm,2.8s
FAUS                              esP                23 17 19.7
FAUS                              eS       S         23 26 02.4 +1.4
FAUS                               IVMs_BB IVMs_BB   23 51 45.7
      comp=Z,53µm,15.4s
I03D  Drain, OR        66.02  52   P       P         23 17 15.0 +0.5
      baz=303,SNR=40
NBB08 Skaug oppvekst   66.14 341  e        P         23 17 14.9   0.0
H04A  Detroit Lake     66.18  51   P       P         23 17 14.8  -0.9
H04A                               IAmb    IAmb      23 17 35.8
      comp=Z,184nm,1.0s
KBO   Bosley Butte     66.28  54   P       P         23 17 16.4   0.0
KBO                                IAmb    IAmb      23 17 34.3
      comp=Z,201nm,1.0s
NBB28 Valnes           66.33 341  eP       P         23 17 18.4 +2.3
VRH   Novokhopyorsk    66.36 318  eP       P         23 17 14.1  -2.5
VRH                               eS       S         23 26 00.9  -5.2
VRH                                pmax    pmax
      comp=Z,820nm,1.0s
VRH                                pmax    pmax
      comp=Z,1µm,1.9s
VRH                                smax    smax
      comp=N,3µm,10.3s
VRH                                MLR     MLR
      comp=Z,591µm,16.0s
K02D  Willamette Mer   66.37  53   P       P         23 17 16.5  -0.5
      baz=303,SNR=41
TRD   Trivandrum       66.38 261  eP       P         23 17 14.4  -2.9
PUL   Pulkovo          66.39 329⇑eP       P         23 17 15.2  -1.5
PUL                                pmax    pmax
      comp=Z,321nm,0.9s
PUL                                MLR     MLR
      comp=Z,201µm,18.0s
G05D  Wamic, OR        66.39  50   P       P         23 17 16.7  -0.4
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      baz=304,SNR=32
N2VA  Vr¸y             66.41 342  eP       P         23 17 19.0 +2.3
E07A  Sunnyside        66.51  48   IAmb    IAmb      23 17 34.6
      comp=Z,137nm,1.0s
I04A  Tendick Farm,    66.53  52   P       P         23 17 17.7  -0.2
      baz=304,SNR=52
OBN   Obninsk          66.60 323   S       S         23 26 11.1 +2.2
      comp=Z,0.8nm,0.3s,baz=353,slow=21,SNR=1.0
OBN   Obninsk          66.60 323 ⇑P        P         23 17 15.7  -2.4
OBN   Obninsk          66.60 323ceP        P         23 17 15.2  -2.9
OBN                               e*PP     sP        23 17 24.5 +2.2
OBN                               e*SP     pwP       23 17 29.5 +8.4
OBN                               e                  23 17 44.0
OBN                               e                  23 19 43.0
OBN                               i S      S         23 26 11.6 +2.7
OBN                               i SS     SS        23 30 23.9  -1.3
OBN                                pmax    pmax
      comp=Z,193nm,1.0s
OBN                                pmax    pmax
      comp=Z,4µm,2.7s
OBN                                MLR     MLR
      comp=Z,316µm,15.0s
OBN   Obninsk          66.60 323   P       P         23 17 15.6  -2.4
NBB30 Finnes           66.68 341  eP       P         23 17 19.0 +0.6
L02E  Cave Junction    66.70  54   P       P         23 17 18.3  -0.8
      baz=304,SNR=34
C09A  Chrisman Ranch   66.72  47   IAMs_20 IAMs_20   23 50 07.8
      comp=Z,22µm,18.0s
D08A  Wollman Farm,    66.77  47   IAMs_20 IAMs_20   23 50 19.2
      comp=Z,24µm,19.0s
HAWA  Hanford          66.79  48   IAmb    IAmb      23 17 54.6
      comp=Z,207nm,1.5s
F07A  Phinny Hill Vi   66.84  49   P       P         23 17 20.1 +0.3
F07A                               IAmb    IAmb      23 17 31.7
      comp=Z,138nm,0.9s
I05D  Terrebonne, OR   66.88  51   P       P         23 17 20.1   0.0
      baz=304,SNR=27
FINES FINESS Array B   66.88 332   P       P         23 17 17.6  -2.2
      comp=Z,29nm,0.8s,baz=65,slow=6.2,SNR=76
FINES                              LR      LR        23 49 38.9
      comp=Z,288µm,18.1s,baz=44,slow=39
FINES FINESS Array B   66.88 332   P       P         23 17 17.6  -2.2
FINES FINESS Array B   66.88 332   P       P         23 17 17.4  -2.4
LPSR  Galich'ya Gora   66.96 320  eP       P         23 17 17.9  -2.5
LPSR                              e                  23 19 47.9
LPSR                              eS       S         23 26 09.9  -3.5
LPSR                              eSS      SS        23 30 30.1  -0.9
LPSR                               pmax    pmax
      comp=Z,2µm,2.0s
LPSR                               pmax    pmax
      comp=Z,800nm,1.0s
LPSR                               smax    smax
      comp=E,7µm,11.1s
LPSR                               MLR     MLR
      comp=Z,362µm,14.0s
J04D  Umpqua Nationa   67.02  52   P       P         23 17 21.5 +0.2
      baz=304,SNR=41
NEW   Newport          67.09  46   P       P         23 17 19.6  -1.9
      baz=305,SNR=12
NEW   Newport          67.09  46   P       P         23 17 20.1  -1.4
NEW                                pmax    pmax
      comp=Z,176nm,1.3s
NEW                                MLR     MLR
      comp=Z,16µm,19.0s
NEW   Newport          67.09  46   P       P         23 17 20.1  -1.4
NEW                                IAmb    IAmb      23 17 35.6
      comp=Z,176nm,1.2s
JCC   Jacoby Creek,    67.17  55   P       P         23 17 22.3 +0.3
JCC                                IAmb    IAmb      23 17 39.8
      comp=Z,162nm,1.0s
KONS  Konsvik          67.20 341  eP       P         23 17 23.9 +2.1
KONS                               IVMs_BB IVMs_BB   23 52 09.7
      comp=Z,46µm,14.6s
NBB40 Tonnes           67.22 341  eP       P         23 17 25.7 +3.9
KHMM  Horse Mountain   67.33  55   IAmb    IAmb      23 17 43.4
      comp=Z,267nm,1.1s
VORR  Voronezh         67.37 319  eP       P         23 17 19.0  -4.1
VORR                               pmax    pmax
      comp=Z,300nm,2.0s
COCO  West Island      67.37 230   IAMs_20 IAMs_20   23 48 56.6
      comp=Z,30µm,20.0s
PINE  Pine Mountain    67.42  51   IAmb    IAmb      23 17 41.1
      comp=Z,268nm,0.9s
L04D  Klamath Falls    67.47  53   P       P         23 17 22.9  -1.2
      baz=304,SNR=107
E09A  Wood Farm, Sta   67.52  48   IAmb    IAmb      23 17 40.8
      comp=Z,229nm,1.1s
J05D  Fort Rock, OR    67.53  52   P       P         23 17 23.7  -0.7
      baz=304,SNR=61
M02C  Callahan         67.59  54   P       P         23 17 24.1  -0.7
      baz=304,SNR=60
VSR   Storozhevoye     67.66 319  eP       P         23 17 22.4  -2.5
VSR                               e                  23 19 55.6
VSR                               eS       S         23 26 20.4  -1.4
VSR                                pmax    pmax
      comp=Z,1µm,1.9s
VSR                                pmax    pmax
      comp=Z,830nm,1.1s
VSR                                smax    smax
      comp=N,530nm,5.3s
VSR                                MLR     MLR
      comp=Z,120µm,16.0s
VORD  Divnogorie       67.74 318  eP       P         23 17 23.2  -2.2
VORD                              e                  23 19 50.8
VORD                              eS       S         23 26 18.5  -4.3
VORD                               pmax    pmax
      comp=Z,1µm,2.2s
VORD                               pmax    pmax
      comp=Z,510nm,1.1s
VORD                               smax    smax
      comp=N,310nm,4.0s
VORD                               MLR     MLR
      comp=Z,149µm,15.0s
G08A  Pilot Rock       67.74  49   P       P         23 17 25.2  -0.5
MAK   Makhachkala      67.76 308  eP       P         23 17 21.7  -4.0
MAK                               e                  23 19 51.5
MAK                               ePPP     PPP       23 21 31.8
MAK                               eS       S         23 26 17.3  -6.0
MAK                               eSS      SS        23 30 40.2  -3.6
MAK                                pmax    pmax
      comp=Z,823nm,1.6s
MAK                                pmax    pmax
      comp=Z,7µm,2.9s
MAK                                MLR     MLR
      comp=N,161µm,15.0s
MAK                                MLR     MLR
      comp=E,194µm,14.0s
MAK                                MLR     MLR
      comp=Z,147µm,14.0s
SUMG  Summit           67.77   1  i P      P         23 17 24.5  -1.3
      comp=Z,2µm,1.2s
SUMG  Summit           67.77   1  i P      P         23 17 24.5  -1.3
SUMG                               pmax    pmax
      comp=Z,2µm,1.2s
SUMG  Summit           67.77   1   P       P         23 17 24.5  -1.3
SUMG  Summit           67.77   1  i P      P         23 17 24.5  -1.3
SUMG                               IAmb    IAmb      23 17 33.4
      comp=Z,2µm,1.2s
N02D  Trinity Center   67.92  55   P       P         23 17 26.2  -0.6
      baz=304,SNR=42
M04C  Macdoel          68.00  53   P       P         23 17 26.4  -1.0
      baz=304,SNR=59
KCPM  Cahto Peak       68.08  56   IAmb    IAmb      23 17 52.6
      comp=Z,150nm,0.9s
NUUG  Nuugaatsiaq      68.21   6  eP       P         23 17 25.1  -2.9
WDC   Whiskeytown Da   68.24  55   IAmb    IAmb      23 17 46.1
      comp=Z,148nm,1.0s
O02D  Mt. Diablo Mer   68.31  55   P       P         23 17 28.2  -1.1
      baz=305,SNR=55
WALA  Waterton Lakes   68.36  44   IAMs_20 IAMs_20   23 52 19.1
      comp=Z,25µm,18.0s
VSU   Vasula           68.65 330  eP       P         23 17 30.4  -0.5
VSU   Vasula           68.65 330⇓eP       P         23 17 29.1  -1.9
VSU                                pmax    pmax
      comp=Z,1µm,0.9s
VSU                                MLR     MLR
      comp=Z,411µm,18.0s
GROC  Groznyy          68.65 309  eP       P         23 17 28.8  -2.5
GROC                              e                  23 17 54.6
GROC                              e                  23 20 00.2
GROC                              ePPP     PPP       23 21 42.4
GROC                              eS       S         23 26 33.7  -0.3
GROC                               pmax    pmax
      comp=Z,260nm,1.1s
O03E  Paynes Creek     68.87  55   P       P         23 17 31.8  -1.0
      baz=305,SNR=46
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JTMT  Jette            68.94  45   IAmb    IAmb      23 17 50.0
      comp=Z,224nm,1.2s
NSS   Namsos           69.04 340  eP       P         23 17 32.4  -1.0
NSS                               esP      pP        23 17 38.8 +2.4
NSS                                IVMs_BB IVMs_BB   23 54 25.1
      comp=Z,35µm,14.9s
GDXM  Geysers          69.08  57   IAmb    IAmb      23 17 49.4
      comp=Z,182nm,1.3s
GOF   Gofitskoye       69.19 312⇑iP       P         23 17 32.5  -2.1
GOF                                pmax    pmax
      comp=Z,970nm,0.9s
SCO   Scoresbysund     69.35 355   IAmb    IAmb      23 17 54.7
      comp=Z,256nm,1.3s
SCO                                IAMs_20 IAMs_20   23 53 49.6
      comp=Z,43µm,18.0s
MCCM  Marconi Confer   69.41  57   IAmb    IAmb      23 17 52.6
      comp=Z,126nm,0.9s
MNCY  Minicoy          69.53 264  eP       P         23 17 33.4  -3.7
MNCY                               IAmb    IAmb      23 17 43.5
      comp=Z,687nm,1.3s
MTSE  Matsula          69.58 331  eP       P         23 17 31.5  -5.3
MSO   Missoula         69.68  46   P       P         23 17 37.6  -0.1
      baz=307,SNR=14
NCK   Nalchik          69.79 310ceP        P         23 17 36.1  -2.3
NCK                                pmax    pmax
      comp=Z,478nm,1.1s
AAL   Aland            69.90 334  eP       P         23 17 38.5  -0.2
BEKR  Beckworth        70.02  54   IAmb    IAmb      23 17 51.8
      comp=Z,132nm,0.9s
ZEI   Tsey             70.02 309  eP       P         23 17 33.6  -6.5
ZEI                                pmax    pmax
      comp=Z,387nm,1.0s
KIV   Kislovodsk       70.05 311 ⇓P        P         23 17 38.7  -1.3
KIV   Kislovodsk       70.05 311  i P      P         23 17 37.6  -2.4
      SNR=109
KIV   Kislovodsk       70.05 311  eP       P         23 17 38.0  -2.1
KIV                               e                  23 20 13.0
KIV                               eS       S         23 26 48.8  -1.8
KIV                               eSS      SS        23 31 18.0  -1.3
KIV                                pmax    pmax
      comp=Z,1µm,4.3s
KIV                                MLR     MLR
      comp=Z,610µm,18.0s
KIV   Kislovodsk       70.05 311   P       P         23 17 38.2  -1.9
KIV   Kislovodsk       70.05 311   P       P         23 17 37.5  -2.6
KIV                                P       P         23 17 37.5  -2.6
KBZ   Khabaz           70.06 311   P       P         23 17 37.9  -2.0
      comp=Z,68nm,0.9s,baz=67,slow=7.0,SNR=50
KBZ                                S       S         23 26 53.3 +2.8
      comp=Z,3.6nm,0.9s,baz=352,slow=22,SNR=1.8
KBZ                                LR      LR        23 51 13.5
      comp=Z,126µm,20.5s,baz=52,slow=38
KBZ   Khabaz           70.06 311ceP        P         23 17 38.0  -2.0
KBZ                                pmax    pmax
      comp=Z,744nm,1.1s
KBZ   Khabaz           70.06 311           S         23 26 53.3 +2.8
AFDM  Forest Hills D   70.17  56   P       P         23 17 40.9 +0.1
NEY   Neytrino         70.45 310c iP       P         23 17 40.8  -1.8
NEY                                pmax    pmax
      comp=Z,108nm,1.0s
NEY                                MLR     MLR
      comp=Z,74µm,15.0s
ARMA  Armidale         70.45 172   IAmb    IAmb      23 17 55.2
      comp=Z,231nm,1.2s
FFC   Flin Flon        70.51  34   P       P         23 17 41.0  -1.6
FFC                                pmax    pmax
      comp=Z,116nm,1.0s
FFC                                MLR     MLR
      comp=Z,22µm,19.0s
FFC   Flin Flon        70.51  34   P       P         23 17 41.0  -1.6
FFC   Flin Flon        70.51  34   IAMs_20 IAMs_20   23 52 36.1
      comp=Z,22µm,19.0s
TBLU  Trondheim        70.52 339  eP       P         23 17 38.7  -3.8
TBLU                              esP      pP        23 17 46.5 +0.9
TBLU                              eS       S         23 26 55.9 +0.6
TBLU                               IVMs_BB IVMs_BB   23 54 11.4
      comp=Z,34µm,17.3s
RUBR  Rubicon Trail    70.62  55   IAmb    IAmb      23 17 55.3
      comp=Z,208nm,0.9s
ILULI Ilulissat        70.64   5  i P      P         23 17 41.3  -1.8
      comp=Z,281nm,1.2s
ILULI Ilulissat        70.64   5  i P      P         23 17 41.3  -1.8
ILULI                              pmax    pmax
      comp=Z,280nm,1.2s
ILULI Ilulissat        70.64   5   IAmb    IAmb      23 17 50.1
      comp=Z,220nm,1.1s
ILULI Ilulissat        70.64   5  i P      P         23 17 41.4  -1.8
ILULI                              IAmb    IAmb      23 17 49.7
      comp=Z,281nm,1.2s
PAHR  Pah Rah Range    70.72  54   IAmb    IAmb      23 18 01.4
      comp=Z,187nm,1.0s
FCC   Fort Churchill   70.78  28   IAmb    IAmb      23 18 00.2
      comp=Z,285nm,1.3s
FCC                                IAMs_20 IAMs_20   23 54 42.0
      comp=Z,32µm,18.0s
IDID  Didziasalis      70.79 327  eP       P         23 17 43.1  -1.1
VCNR  Virginia City    70.80  55   IAmb    IAmb      23 18 04.0
      comp=Z,105nm,0.8s
MNK   Minsk            70.86 326  eP       P         23 17 42.0  -2.7
MNK                               e                  23 18 06.0
MNK                               e                  23 20 24.0
MNK                               e                  23 21 56.0
MNK                               eS       S         23 26 56.0  -3.5
MNK                               e                  23 27 24.0
MNK                               e                  23 27 32.0
MNK                               e                  23 31 28.0
MNK                               e                  23 34 38.0
MNK                                pmax    pmax
      comp=Z,2µm,1.0s
MNK                                pmax    pmax
      comp=E,720nm,2.0s
MNK                                pmax    pmax
      comp=N,790nm,1.0s
MNK                                smax    smax
      comp=E,2µm,8.0s
MNK                                MLR     MLR
      comp=Z,253µm,16.0s
MNK                                MLR     MLR
      comp=N,265µm,18.0s
MNK                                MLR     MLR
      comp=E,178µm,18.0s
MNK   Minsk            70.86 326  i P      P         23 17 41.7  -3.0
      comp=E,34nm,1.0s
MNK                               i P      P         23 17 41.7  -3.0
      comp=N,222nm,1.0s
MNK                               i P      P         23 17 41.7  -3.0
      comp=Z,488nm,0.9s
MNK                               i PcP    PcP       23 18 02.5  -2.8
MNK                               i PP     PP        23 20 17.8  -3.3
MNK                               i PPP    PPP       23 22 00.2
MNK                               i S      S         23 26 54.2  -5.3
MNK                               i ScS    SKSac     23 27 44.9  -1.9
MNK                               i SS     SS        23 31 28.6  -2.4
MNK                               i SSS    SSS       23 34 47.1
MNK                               i LQ     LQ        23 43 49.0
MNK                               i LR     LR        23 48 15.6
MNK                               i LRM    MLR       23 51 47.0
      comp=N,129µm,16.3s
MNK                               i LRM    MLR       23 51 50.5
      comp=Z,127µm,15.3s
MNK                               i LRM    MLR       23 51 54.7
      comp=E,13µm,16.6s
ISAL  Salakas          70.86 328  eP       P         23 17 44.4  -0.3
SLIT  Slitere, Latvi   70.92 331  eP       P         23 17 45.0   0.0
UPP   Uppsala          70.94 334  eP       P         23 17 44.2  -0.9
PNTR  Pine Nut         70.95  55   IAmb    IAmb      23 18 19.8
      comp=Z,219nm,1.1s
IIGN  Ignalina         70.98 327  eP       P         23 17 44.7  -0.7
NACGM Naroch           71.05 327  i P      P         23 17 43.9  -1.9
NACGM                             i P      P         23 17 43.9  -1.9
NACGM                             i P      P         23 17 43.9  -1.9
NACGM                             i PcP    PcP       23 18 02.2  -3.9
NACGM                             i PP     PP        23 20 15.6  -7.1
NACGM                             i PPP    PPP       23 22 05.8
NACGM                             i S      S         23 27 03.4 +1.6
NACGM                             i SS     SS        23 31 41.2 +7.3
NACGM                             i SSS    SSS       23 35 01.4
NACGM                             i LQ     LQ        23 44 29.5
NACGM                             i LR     LR        23 49 00.2
CMB   Columbia Colle   71.07  56   IAmb    IAmb      23 18 05.1
      comp=Z,190nm,1.1s
GNI   Garni            71.08 307   S       S         23 27 08.7 +5.8
      comp=Z,9.1nm,1.1s,baz=339,slow=22,SNR=2.2
GNI   Garni            71.08 307   P       P         23 17 45.4  -1.1
GNI                                pmax    pmax
```

	comp=Z,641nm,1.2s						
GNI				MLR	MLR		
	comp=Z,159µm,19.0s						
GNI	**Garni**	**71.08**	**307**	P	**P**	**23 17 45.4**	**-1.1**
GNI	**Garni**	**71.08**	**307**		**S**	**23 27 08.7**	**+5.8**
GNI	**Garni**	**71.08**	**307**	P	P	23 17 41.0	-5.5
GNI				P	P	23 17 41.0	-5.5
AKH	**Akhalkalaki**	**71.09**	**308**	⇑P	**P**	**23 17 46.0**	**-0.5**
CHVG	**Ch'k'valeri**	**71.14**	**310**	⇑P	**P**	**23 17 45.6**	**-1.1**
EGMT	**Eagleton**	**71.18**	**43**	P	**P**	**23 17 45.2**	**-1.7**
	baz=309,SNR=11						
YERR	**Yerington**	**71.24**	**55**	IAmb	IAmb	23 18 04.7	
	comp=Z,236nm,1.0s						
ICESG	**Greenland Ices**	**71.26**	**1**	*i* P	**P**	**23 17 45.9**	**-1.4**
ICESG				IAmb	IAmb	23 17 54.6	
	comp=Z,651nm,1.0s						
HLID	**Hailey**	**71.39**	**49**	P	**P**	**23 17 46.2**	**-2.1**
	baz=308,SNR=50						
STKA	**Stephens Creek**	**71.48**	**181**	P	**P**	**23 17 46.0**	**-2.5**
	comp=Z,10nm,0.7s,baz=343,slow=9.8,SNR=11						
STKA				S	**S**	**23 27 03.5**	**-3.4**
	comp=Z,0.6nm,0.4s,baz=119,slow=12,SNR=1.6						
STKA				LR	LR	23 49 11.9	
	comp=Z,16µm,21.1s,baz=360,slow=36						
STKA	**Stephens Creek**	**71.48**	**181**	⇓*e*P	**P**	**23 17 46.0**	**-2.5**
STKA	**Stephens Creek**	**71.48**	**181**	P	**P**	**23 17 45.9**	**-2.7**
TASB	**TASBURUN-IGDIR**	**71.48**	**307**	P	P	23 17 46.4	-2.5
JLN	**Jalan Bani Buh**	**71.51**	**284**	P	**P**	**23 17 53.4**	**+4.2**
JLN				P	**P**	**23 17 53.4**	**+4.2**
WBK	**Wadi Bani Khal**	**71.57**	**284**	P	**P**	**23 17 51.0**	**+1.4**
WBK				P	**P**	**23 17 51.0**	**+1.4**
BANOM	**Banah**	**71.59**	**289**	*i* P	**P**	**23 17 48.0**	**-1.7**
	SNR=56						
BANOM	**Banah**	**71.59**	**289**	P	**P**	**23 17 47.8**	**-1.9**
BANOM				P	**P**	**23 17 47.8**	**-1.9**
SHME	**Shamm**	**71.63**	**289**	*i* P	P	23 17 47.1	-2.7
	SNR=13						
BIDO	**Bidbid**	**71.66**	**286**	P	**P**	**23 17 48.9**	**-1.1**
BIDO				P	**P**	**23 17 48.9**	**-1.1**
BOZ	**Bozeman (W)**	**71.70**	**46**	P	**P**	**23 17 49.3**	**-0.9**
	baz=309,SNR=16						
BOZ	**Bozeman (W)**	**71.70**	**46**	IAMs_20	IAMs_20	23 54 05.6	
	comp=Z,22µm,19.0s						
FORT	**Forrest**	**71.75**	**194**	P	**P**	**23 17 48.2**	**-2.0**
FORT				IAmb	IAmb	23 18 07.1	
	comp=Z,178nm,0.8s						
FORT				IAMs_20	IAMs_20	23 47 55.7	
	comp=Z,38µm,21.0s						
PABE	**Paberze**	**71.79**	**328**	*e*P	**P**	**23 17 49.0**	**-1.2**
DOMB	**Dombas**	**71.83**	**339**	*e*P	**P**	**23 17 48.7**	**-1.8**
DOMB				IVMs_BB	IVMs_BB	23 55 13.2	
	comp=Z,42µm,15.2s						
PMPB	**Monarch Peak**	**71.88**	**58**	IAmb	IAmb	23 18 18.8	
	comp=Z,196nm,1.1s						
MDH	**Madha**	**71.96**	**288**	*i* P	P	23 17 49.2	-2.6
	SNR=58						
MDH	**Madha**	**71.96**	**288**	P	P	23 17 47.7	-4.1
MDH				P	P	23 17 47.7	-4.1
SOC	**Sochi**	**71.98**	**312**c	*i*P	P	23 17 48.9	-2.8
SOC				e*PP	pP	23 17 56.4	+1.7
SOC				e*SP	pwP	23 18 01.5	+6.8
SOC				*e*PPP	PPP	23 22 15.9	
SOC				*e*S	**S**	**23 27 08.2**	**-4.7**
SOC				*e*		23 27 45.8	
SOC				*e*SS	SS	23 31 37.9	-11
SOC				pmax	pmax		
	comp=Z,94nm,0.8s						
SOC				MLR	MLR		
	comp=Z,110µm,18.0s						
SMDO	**Samad**	**71.99**	**285**	P	**P**	**23 17 50.3**	**-1.9**
SMDO				P	**P**	**23 17 50.3**	**-1.9**
MASF	**Masafi**	**72.02**	**288**	P	P	23 17 49.8	-2.4
MSFE	**Esma-Masafi**	**72.03**	**288**	*i* P	P	23 17 49.9	-2.4
	SNR=17						
NB2	**NORSAR Subarra**	**72.03**	**338**	P	**P**	**23 17 49.5**	**-2.2**
	comp=Z,527nm,1.0s,baz=38,slow=6.2						
NB2	**NORSAR Subarra**	**72.03**	**338**	P	**P**	**23 17 49.5**	**-2.2**
	baz=38,slow=6.2						
NOA	**NORSAR Array B**	**72.03**	**338**	P	**P**	**23 17 49.7**	**-2.0**
	comp=Z,6.2nm,0.6s,baz=55,slow=7.0,SNR=49						
NOA				LR	LR	23 55 18.5	
	comp=Z,93µm,18.5s,baz=35,slow=41						
NOA	**NORSAR Array B**	**72.03**	**338**	P	**P**	**23 17 49.7**	**-2.0**
NVAR	**Mina Array Bea**	**72.16**	**55**	P	**P**	**23 17 51.9**	**-1.3**
	comp=Z,20nm,0.8s,baz=295,slow=6.2,SNR=32						
NVAR				S	**S**	**23 27 17.9**	**+2.3**
	comp=Z,1.6nm,1.1s,baz=328,slow=3.3,SNR=1.1						
NVAR				LR	LR	23 44 42.0	
	comp=Z,6µm,21.6s,baz=318,slow=32						
NVAR				PKPPKP		23 45 22.3	
	comp=Z,1.4nm,1.0s,baz=99,slow=4.1,SNR=4.1						
NVAR	**Mina Array Bea**	**72.16**	**55**	P	**P**	**23 17 51.5**	**-1.6**
NC602	**NORSAR Array S**	**72.18**	**337**	*e*P	**P**	**23 17 54.7**	**+2.2**
NC602				*e*sP	**pP**	**23 17 57.8**	**+2.2**
CLDR	**Caldiran**	**72.19**	**306**	P	P	23 17 50.5	-2.8
PBUR	**Paburge**	**72.22**	**330**	*e*P	**P**	**23 17 51.0**	**-1.9**
HOQ	**Hoqain**	**72.23**	**286**	P	P	23 17 50.1	-3.4
HOQ				P	P	23 17 50.1	-3.4
UOSS	**Minazif**	**72.24**	**288**	*i* P	P	23 17 50.5	-3.0
	SNR=31						
UOSS	**Minazif**	**72.24**	**288**	P	P	23 17 50.4	-3.1
UOSS	**Minazif**	**72.24**	**288**	P	P	23 17 48.1	-5.4
NV11	**Mina Array Sit**	**72.25**	**55**	IAmb	IAmb	23 18 10.2	
	comp=Z,195nm,1.1s						
AKN	**Aaknes**	**72.27**	**340**	*e*P	**P**	**23 17 53.0**	**0.0**
AKN				*e*S	**S**	**23 27 13.0**	**-2.7**
AKN				*i*		23 27 54.3	
SENK	**Senkaya-Erzuru**	**72.29**	**308**	P	**P**	**23 17 51.9**	**-1.9**
UMQ	**Umm Al-Quwin**	**72.29**	**289**	*i* P	**P**	**23 17 51.7**	**-2.1**
	SNR=23						
UMQ	**Umm Al-Quwin**	**72.29**	**289**	P	**P**	**23 17 52.8**	**-1.0**
MLAC	**Mammoth, Mammo**	**72.30**	**56**	P	**P**	**23 17 55.3**	**+1.3**
	baz=307,SNR=13						
JMDO	**Jabal Madar**	**72.36**	**285**	P	P	23 17 51.8	-2.5
JMDO				P	P	23 17 51.8	-2.5
HATD	**Hatta, Dubai**	**72.36**	**288**	*i* P	P	23 17 52.0	-2.3
	SNR=26						
HATD	**Hatta, Dubai**	**72.36**	**288**	P	P	23 17 49.2	-5.1
HATD				P	P	23 17 49.2	-5.1
SOHO	**SOHO**	**72.47**	**287**	*i* P	P	23 17 52.0	-2.9
	SNR=25						
SOHO	**SOHO**	**72.47**	**287**	P	P	23 17 52.6	-2.4
SOHO				P	P	23 17 52.6	-2.4
AGRB	**Hanur-Agry**	**72.50**	**307**	P	**P**	**23 17 53.6**	**-1.5**
ASHO	**Ashiyiah**	**72.50**	**288**	P	P	23 17 50.6	-4.5
ANN	**Anapa**	**72.51**	**314**	*e*P	P	23 17 48.9	-5.9
ANN				i *PP	pP	23 18 00.3	+2.5
ANN				*i*		23 18 06.0	
ANN				*e*		23 20 30.2	
ANN				*e*PPP	PPP	23 22 14.7	
ANN				*e*S	S	23 27 09.3	-10
ANN				pmax	pmax		
	comp=N,31nm,1.4s						
ANN				pmax	pmax		
	comp=Z,98nm,1.3s						
ANN				pmax	pmax		
	comp=E,37nm,1.2s						
ANN				smax	smax		
	comp=E,11µm,9.8s						
PAGB	**Antelope Grade**	**72.53**	**58**	IAmb	IAmb	23 18 06.8	
	comp=Z,213nm,1.0s						
NAZ	**Nazwa, Dubai**	**72.61**	**288**	*i* P	**P**	**23 17 54.0**	**-1.7**
	SNR=8.8						
NAZ	**Nazwa, Dubai**	**72.61**	**288**	P	P	23 17 53.0	-2.7
NAZ				P	P	23 17 53.0	-2.7
BBOO	**Buckleboo**	**72.69**	**186**	IAmb	IAmb	23 18 16.3	
	comp=Z,234nm,1.1s						
FAQ	**Al Faqa, Dubai**	**72.80**	**288**	*i* P	**P**	**23 17 55.0**	**-1.9**
	SNR=67						
FAQ				*i* P	**pP**	**23 17 55.1**	**-4.9**
	SNR=20						
FAQ	**Al Faqa, Dubai**	**72.80**	**288**	P	P	23 17 51.5	-5.4
FAQ				P	P	23 17 51.5	-5.4
BSY	**Bisya**	**72.80**	**285**	P	P	23 17 51.8	-5.2
BSY				P	P	23 17 51.8	-5.2
AKASG	**Malin Array Be**	**72.84**	**323**	P	**P**	**23 17 54.2**	**-2.4**
	comp=Z,11nm,0.5s,baz=42,slow=6.5,SNR=45						
AKASG				S	**S**	**23 27 20.8**	**-1.6**
	comp=Z,0.2nm,0.3s,baz=39,slow=11,SNR=1.6						
AKASG				LR	LR	23 53 42.6	
	comp=Z,78µm,21.8s,baz=55,slow=39						
AKASG	**Malin Array Be**	**72.84**	**323**	P	**P**	**23 17 54.2**	**-2.4**
AKASG	**Malin Array Be**	**72.84**	**323**	P	P	23 17 54.0	-2.7
AKBB	**Malin Array Si**	**72.84**	**323**c	*i*P	P	23 17 53.7	-2.9
AKBB				pmax	pmax		
	comp=Z,436nm,1.2s						
AKBB				MLR	MLR		
	comp=Z,187µm,16.0s						
SFJD	**Kangerlussuaq**	**72.86**	**6**	LR	LR	23 52 05.1	
	comp=Z,78µm,21.0s,baz=348,slow=38						
SFJD	**Kangerlussuaq**	**72.86**	**6**	*i* P	**P**	**23 17 54.4**	**-2.1**
SFJD	**Kangerlussuaq**	**72.86**	**6**	P	**P**	**23 17 54.9**	**-1.6**
SFJD				pmax	pmax		
	comp=Z,319nm,1.3s						
SFJD				MLR	MLR		
	comp=Z,78µm,20.0s						
SFJD	**Kangerlussuaq**	**72.86**	**6**	P	**P**	**23 17 54.9**	**-1.6**
SFJD				IAmb	IAmb	23 18 03.5	
	comp=Z,319nm,1.2s						
SFJD	**Kangerlussuaq**	**72.86**	**6**	*i* P	**P**	**23 17 54.4**	**-2.1**
CHOM	**Cayeli-Rize**	**72.91**	**309**	P	**P**	**23 17 55.2**	**-2.1**
KOPR	**Koprukoy-ERZUR**	**72.94**	**308**	P	**P**	**23 17 56.1**	**-1.6**
ARQ	**Araqi**	**72.95**	**286**	P	P	23 17 52.0	-5.9
ARQ				P	P	23 17 52.0	-5.9
TIN	**Tinemaha, Big**	**73.03**	**56**	P	**P**	**23 17 59.0**	**+0.8**
	baz=308						
MLAZ	**Malazgirt-MUS**	**73.03**	**307**	P	**P**	**23 17 56.7**	**-1.5**
H17A	**Grant Village**	**73.04**	**46**	P	**P**	**23 17 58.3**	**0.0**
	baz=310,SNR=14						
OSL	**Oslo**	**73.06**	**337**	*e*P	**P**	**23 17 56.1**	**-1.7**
OSL				*e*sP	**pP**	**23 18 03.5**	**+2.6**
OSL				*e*S	**S**	**23 27 26.7**	**+2.0**
ASUD	**Al Ashush, Dub**	**73.06**	**288**	*i* P	P	23 17 56.1	-2.4
	SNR=18						
ASUD	**Al Ashush, Dub**	**73.06**	**288**	P	P	23 17 52.2	-6.3
ASUD				P	P	23 17 52.2	-6.3
ALNE	**Al Ain**	**73.09**	**287**	*i* P	P	23 17 55.5	-3.2
	SNR=20						
ALNE	**Al Ain**	**73.09**	**287**	P	P	23 17 53.4	-5.2
MORW	**Morawa**	**73.16**	**205**	P	P	23 17 54.6	-4.0
MORW				IAmb	IAmb	23 18 36.9	
	comp=Z,225nm,1.4s						
SKAR	**Skarslia**	**73.16**	**339**	*e*P	**P**	**23 17 57.9**	**-0.6**
SKAR				*e*sP	**pP**	**23 18 04.5**	**+2.9**
SKAR				*e*S	**S**	**23 27 28.4**	**+2.5**
SKAR				IVMs_BB	IVMs_BB	23 53 40.0	
	comp=Z,32µm,18.4s						
SUW	**Suwalki**	**73.17**	**328**	*e*P	P	23 17 55.8	-2.8
SUW				*e*pP	pP	23 18 02.7	+1.0
SUW				*e*S	**S**	**23 27 28.7**	**+2.5**
SUW				*e*L	L	23 52 34.7	
	comp=Z,189µm,18.7s						
SUW	**Suwalki**	**73.17**	**328**	*e*P	**P**	**23 17 57.4**	**-1.2**
SUW	**Suwalki**	**73.17**	**328**	IAmb	IAmb	23 18 11.4	
	comp=Z,546nm,1.0s						
SUW				IAMs_20	IAMs_20	23 52 49.3	
	comp=Z,187µm,18.0s						
NIUE	**Niue**	**73.20**	**134**	P	**P**	**23 17 57.3**	**-1.7**
NIUE				IAmb	IAmb	23 18 25.0	
	comp=Z,408nm,1.2s						
NIUE	**Niue**	**73.20**	**134**	P	**P**	**23 18 01.5**	**+2.4**
VES	**Vestal, Richgr**	**73.22**	**57**	P	**P**	**23 17 59.4**	**+0.2**
	baz=308,SNR=9.1						
GEVA	**Gevas**	**73.23**	**306**	IAmb	IAmb	23 18 12.2	
	comp=Z,240nm,1.1s						
FOO	**Floro**	**73.26**	**341**	*e*P	**P**	**23 17 57.7**	**-1.2**
FOO				IVMs_BB	IVMs_BB	00 00 05.8	
	comp=Z,24µm,16.5s						
AKDM	**Akdamar-Van**	**73.27**	**306**	P	**P**	**23 17 57.7**	**-1.9**
MHTO	**MHTO**	**73.28**	**284**	P	P	23 17 57.1	-2.6
MHTO				P	P	23 17 57.1	-2.6
PKM	**Mcpherson Peak**	**73.32**	**58**	P	**P**	**23 17 59.9**	**-0.1**
	baz=307,SNR=29						
HYA	**Hoyanger**	**73.33**	**340**	*e*P	**P**	**23 17 58.8**	**-0.6**
HYA				*e*		23 27 32.4	
AJN	**Ajban**	**73.35**	**288**	*i* P	**P**	**23 17 58.4**	**-1.8**
	SNR=42						
AJN	**Ajban**	**73.35**	**288**	P	P	23 17 52.5	-7.6
AJN				P	P	23 17 52.5	-7.6
CWC	**Cottonwood Cre**	**73.50**	**56**	P	**P**	**23 18 00.8**	**-0.3**
	baz=308						
CUKT	**Cukurca**	**73.53**	**305**	P	P	23 17 57.2	-4.0
KTUT	**Trabzon**	**73.57**	**310**	⇓P	**P**	**23 18 00.0**	**-1.1**
GRAC	**Grapevine Rang**	**73.62**	**55**	P	**P**	**23 18 01.0**	**-0.6**
	baz=308,SNR=30						
FRB	**Frobisher Bay**	**73.62**	**14**	LR	LR	23 52 13.9	
	comp=Z,50µm,21.8s,baz=344,slow=37						
KONO	**Kongsberg**	**73.63**	**337**	P	**P**	**23 18 00.4**	**-0.8**
KONO				pmax	pmax		
	comp=Z,201nm,1.0s						
KONO				MLR	MLR		
	comp=Z,134µm,21.0s						
KONO	**Kongsberg**	**73.63**	**337**	P	**P**	**23 18 00.4**	**-0.8**
KONO				IAmb	IAmb	23 18 08.2	
	comp=Z,201nm,0.9s						
KONO	**Kongsberg**	**73.63**	**337**	*e*P	**P**	**23 17 59.9**	**-1.3**
KONO				*e*sP	**pP**	**23 18 07.0**	**+2.7**
KONO				*e*S	**S**	**23 27 35.2**	**+4.1**
VRTB	**Varto-Mus**	**73.69**	**308**	P	**P**	**23 18 00.7**	**-1.4**
DGMT	**Dagmar**	**73.71**	**40**	P	**P**	**23 18 02.4**	**+0.5**
	baz=312						
GURO	**Guroymak-BITLI**	**73.72**	**307**	P	**P**	**23 18 00.6**	**-1.6**
ISA	**Isabella, Lake**	**73.72**	**57**	P	**P**	**23 18 01.2**	**-1.1**
	baz=308,SNR=28						
KOPT	**Kop Dagi**	**73.74**	**309**	P	**P**	**23 18 01.2**	**-1.3**
SUE	**Sulen**	**73.80**	**340**	*e*P	**P**	**23 18 04.6**	**+2.6**
SUE				*e*		23 27 46.2	
ARVC	**Arvin**	**73.82**	**58**	P	**P**	**23 18 03.1**	**+0.4**
	baz=308						
BGU	**Big Grassy Mou**	**73.83**	**50**	P	**P**	**23 18 02.0**	**-1.0**
LAO	**LASA Array**	**73.88**	**42**	IAMs_20	IAMs_20	23 56 16.9	
	comp=Z,27µm,18.0s						
R11A	**Troy Canyon, C**	**73.90**	**53**	P	**P**	**23 18 02.1**	**-1.2**
	baz=308,SNR=58						
MPMC	**Manual Prospec**	**74.11**	**56**	P	**P**	**23 18 02.8**	**-1.9**
	baz=308,SNR=76						
ASK	**Askoy**	**74.17**	**340**	*e*P	**P**	**23 18 03.6**	**-0.7**
OSI	**Osito Audit: C**	**74.20**	**58**	P	**P**	**23 18 05.3**	**+0.2**
BER	**Bergen**	**74.22**	**340**	*e*P	**P**	**23 18 05.4**	**+0.8**
BER				IVMs_BB	IVMs_BB	23 56 54.5	
	comp=Z,48µm,14.9s						
SIM	**Simferopol'**	**74.22**	**316**	*e*P	**P**	**23 18 03.0**	**-1.9**
SIM				*e*		23 20 56.0	
SIM				*e*S	**SKiKP**	**23 27 34.0**	**+1.8**
SIM				pmax	pmax		
	comp=Z,105nm,0.6s						
DQM	**DQM**	**74.23**	**283**	P	**P**	**23 18 06.3**	**+0.9**
DQM				P	**P**	**23 18 06.3**	**+0.9**
FURC	**Furnace Creek,**	**74.26**	**56**	P	**P**	**23 18 03.9**	**-1.3**
	baz=308,SNR=37						
ODD1	**Odda**	**74.26**	**339**	*e*P	**P**	**23 18 03.8**	**-1.1**
ODD1				⇑*e*		23 27 37.6	
BNGB	**Bingl**	**74.27**	**308**	P	**P**	**23 18 03.9**	**-1.5**
LRMC	**Laurel Mtn Rad**	**74.34**	**57**	P	**P**	**23 18 04.2**	**-1.7**
	baz=308,SNR=36						
TPNV	**Topopah Spring**	**74.35**	**55**	P	**P**	**23 18 04.6**	**-1.5**
	baz=308,SNR=70						
TPNV	**Topopah Spring**	**74.35**	**55**	IAmb	IAmb	23 18 17.4	
	comp=Z,230nm,1.0s						
DUG	**Dugway, Tooele**	**74.42**	**50**	P	**P**	**23 18 04.6**	**-1.8**
	baz=309,SNR=31						
DUG	**Dugway, Tooele**	**74.42**	**50**	IAmb	IAmb	23 18 23.9	
	comp=Z,237nm,1.2s						
SVAN	**Silvan-Diyarba**	**74.48**	**307**	P	P	23 18 01.3	-5.3
SNCC	**San Nicolas Is**	**74.50**	**60**	P	**P**	**23 18 07.5**	**+0.7**
SNCC				IAmb	IAmb	23 18 23.7	
	comp=Z,207nm,1.1s						
EDW2	**Edwards Air Fo**	**74.51**	**57**	P	**P**	**23 18 05.0**	**-1.9**
	baz=308,SNR=36						
MZWR	**Madinat Zayed**	**74.64**	**288**	P	P	23 17 59.8	-7.9
PDAR	**Pinedale Array**	**74.65**	**47**	P	**P**	**23 18 07.3**	**-0.5**
	comp=Z,21nm,0.7s,baz=324,slow=4.5,SNR=9.4						
PDAR				S	**S**	**23 27 42.3**	**-1.5**
	comp=Z,0.8nm,1.0s,baz=269,slow=8.2,SNR=1.4						
PDAR				PKPPKP		23 45 34.5	
	comp=Z,1.0nm,1.0s,baz=111,slow=3.3,SNR=4.8						
PDAR	**Pinedale Array**	**74.65**	**47**	P	**P**	**23 18 09.0**	**+1.2**
JRN	**Qarnain Island**	**74.68**	**290**	P	P	23 18 02.8	-5.0
BLS5	**Blasjo**	**74.72**	**339**	*e*P	**P**	**23 18 06.8**	**-0.8**
BLS5				IVmB_BB		23 18 13.4	
	comp=Z,6µm,4.7s						
BLS5				*e*S	**S**	**23 27 49.5**	**+6.0**
BLS5				IVMs_BB	IVMs_BB	23 54 28.8	
	comp=Z,30µm,18.1s						
ANGG	**Ammassalik, Gr**	**74.77**	**0**	*i* P	**P**	**23 18 09.9**	**+2.2**
ANGG				IAmb	IAmb	23 18 13.9	
	comp=Z,140nm,1.1s						
PRN	**Pahroc Range**	**74.81**	**54**	IAMs_20	IAMs_20	23 55 17.6	
	comp=Z,17µm,18.0s						
MWC	**Mount Wilson**	**74.87**	**58**	IAmb	IAmb	23 18 25.9	
	comp=Z,223nm,1.2s						
BORG	**Borgarnes**	**74.93**	**353**	LR	LR	23 52 40.1	
	comp=Z,11µm,18.0s,baz=7.6,slow=37						
BORG	**Borgarnes**	**74.93**	**353**	IAMs_20	IAMs_20	23 51 29.8	
	comp=Z,23µm,21.0s						
SHOC	**Shoshone, Teco**	**74.98**	**56**	P	**P**	**23 18 08.9**	**-0.6**
	baz=309,SNR=9.3						
SORM	**Soroca**	**75.01**	**321**	⇓P	**P**	**23 18 07.3**	**-2.1**
GSC	**Goldstone, Bar**	**75.02**	**56**	P	**P**	**23 18 08.0**	**-1.8**
	baz=309,SNR=33						
CAN	**Canberra**	**75.09**	**175**	IAMs_20	IAMs_20	23 50 27.7	
	comp=Z,19µm,20.0s						
HOMB	**Homborsund**	**75.09**	**337**	*e*P	**P**	**23 18 09.3**	**-0.3**
HOMB				*e*sP	**pP**	**23 18 15.0**	**+2.3**
HOMB				*e*S	**S**	**23 27 50.0**	**+2.6**
HOMB	**Homborsund**	**75.09**	**337**	*e*P	**P**	**23 18 08.2**	**-1.4**
HOMB				*i* P	**pP**	**23 18 11.0**	**-1.7**
BFSC	**Mount Baldy Ra**	**75.12**	**58**	P	**P**	**23 18 11.0**	**+0.5**
	baz=308,SNR=26						
CIS	**Catalina Islan**	**75.14**	**59**	P	**P**	**23 18 10.6**	**+0.1**
	baz=308						
DYBB	**Diyarbakir**	**75.25**	**307**	P	**P**	**23 18 09.2**	**-1.9**
SHPR	**Sheep Range**	**75.31**	**55**	IAmb	IAmb	23 18 28.4	
	comp=Z,199nm,1.2s						
RSDY	**Resadiye-TOKAT**	**75.37**	**311**	P	**P**	**23 18 09.7**	**-2.0**
SNART	**Snartemo**	**75.42**	**338**	*e*P	**P**	**23 18 10.3**	**-1.3**
SNART				*e*S	**S**	**23 27 49.9**	**-1.3**
SNART	**Snartemo**	**75.42**	**338**	*i* P	P	23 18 08.0	-3.5
SNART				*e*P	pP	23 18 09.2	-5.4
UMR	**Umm Al-Rimmam**	**75.52**	**296**	*e*P		23 18 08.3	
BSD	**Bornholm Skovb**	**75.53**	**332**	*e*P	**P**	**23 18 11.3**	**-0.9**
NUUK	**Nuuk**	**75.54**	**7**	*i* P	**P**	**23 18 11.0**	**-1.1**
NUUK				IAmb	IAmb	23 18 19.3	
	comp=Z,267nm,1.0s						
KIS	**Kishinev**	**75.57**	**320**	*e*P	P	23 18 10.0	-2.6
	comp=Z,2µm,5.2s						
KIS	**Kishinev**	**75.57**	**320**	*e*PP	PP	23 21 07.0	+5.6
KIS	**Kishinev**	**75.57**	**320**	⇑P	**P**	**23 18 12.3**	**-0.4**
KIS	**Kishinev**	**75.57**	**320**	*e*P	P	23 18 10.0	-2.6
KIS				*e*		23 21 07.0	
KIS				*e*PPP	PPP	23 22 53.0	
KIS				*e*S	**S**	**23 27 50.0**	**-3.2**
KIS				pmax	pmax		
	comp=Z,2µm,5.2s						
KIS				smax	smax		
	comp=N,3µm,13.0s						
KIS				smax	smax		
	comp=E,4µm,8.9s						
KIS				MLR	MLR		
	comp=E,46µm,16.0s						
KIS				MLR	MLR		
	comp=Z,69µm,16.0s						
HEC	**Hector,Ludlow**	**75.61**	**57**	P	**P**	**23 18 13.1**	**-0.1**
	baz=309,SNR=28						
MIB	**Mutribah**	**75.62**	**297**	*e*P		23 18 09.0	
MILM	**Milestii Mici**	**75.63**	**320**	⇓P	**P**	**23 18 11.7**	**-1.3**
DIKM	**Dikmen**	**75.75**	**313**	⇑P	**P**	**23 18 13.7**	**-0.1**
BEL	**Belsk**	**75.76**	**327**	*e*P	**P**	**23 18 12.0**	**-1.6**
BEL				*e*pP	**pP**	**23 18 18.7**	**+2.0**
BEL				*e*S	**S**	**23 27 58.5**	**+3.4**
BEL				*e*L	L	23 55 09.9	
	comp=Z,193µm,17.5s						
CCUT	**Cedar City**	**75.77**	**53**	IAmb	IAmb	23 18 31.2	
	comp=Z,233nm,1.2s						
MURC	**Murrieta**	**75.82**	**58**	P	**P**	**23 18 13.8**	**-0.6**
	baz=309						
LVV	**L'vov**	**75.83**	**324**	*e*P	P	23 18 11.5	-2.6
LVV				*e*		23 21 10.1	
LVV				*e*S	**S**	**23 27 50.3**	**-5.8**
LVV				*e*PS	**PnS**	**23 28 31.0**	**-1.0**
LVV				MLR	MLR		
	comp=E,283µm,16.0s						
LVV				MLR	MLR		
	comp=N,171µm,15.0s						
LVV				MLR	MLR		
	comp=Z,318µm,16.0s						
MVU	**Marysvale**	**75.86**	**52**	IAMs_20	IAMs_20	23 44 48.0	
	comp=Z,41µm,21.0s						
SZCU	**Shurtz Canyon**	**75.91**	**53**	P	**P**	**23 18 14.5**	**-0.6**
RDF	**Al-Radifah**	**76.02**	**296**	*e*P		23 18 11.6	
RST	**Umm Al-Ruwaisa**	**76.05**	**297**	*e*P		23 18 11.2	
SLWR	**Sila**	**76.05**	**290**	P	P	23 18 08.1	-7.6
IAS	**Iasi**	**76.05**	**321**	⇑P	**P**	**23 18 14.5**	**-0.9**
MALT	**Malatya**	**76.06**	**308**	P	**P**	**23 18 14.6**	**-1.2**
GMRC	**Granite Mounta**	**76.07**	**56**	P	**P**	**23 18 15.1**	**-0.8**
	baz=309,SNR=30						
GKP	**Gorka Klasztor**	**76.09**	**330**	*e*P	**P**	**23 18 13.2**	**-2.3**
GKP				*e*pP	**pP**	**23 18 20.1**	**+1.5**
GKP				*e*S	**S**	**23 28 01.9**	**+3.1**
GKP				*e*L	L	23 54 46.3	
	comp=Z,159µm,19.0s						
GKP	**Gorka Klasztor**	**76.09**	**330**	*e*P	**P**	**23 18 15.4**	**-0.1**
PFO	**Pinyon Flats O**	**76.29**	**58**	P	**P**	**23 18 17.1**	**-0.1**
	baz=309,SNR=9.8						
PFO	**Pinyon Flats O**	**76.29**	**58**	P	**P**	**23 18 16.6**	**-0.6**
PFO				pmax	pmax		
	comp=Z,136nm,1.2s						
PFO	**Pinyon Flats O**	**76.29**	**58**	P	**P**	**23 18 16.6**	**-0.6**
TPFO	**Pinon Flats**	**76.30**	**58**	P	**P**	**23 18 15.6**	**-1.6**
	baz=309,SNR=18						
ULM	**Lac du Bonnet**	**76.32**	**35**	P	**P**	**23 18 14.0**	**-2.9**
	comp=Z,29nm,1.0s,baz=325,slow=7.6,SNR=9.7						
ULM	**Lac du Bonnet**	**76.32**	**35**	P	**P**	**23 18 14.0**	**-2.9**
VASR	**Vaslui**	**76.32**	**320**	⇓P	**P**	**23 18 16.0**	**-1.0**
BELC	**Belle Mtn. Jos**	**76.35**	**57**	P	**P**	**23 18 16.8**	**-0.7**
	baz=309,SNR=18						
MDND	**Maddock**	**76.36**	**38**	IAMs_20	IAMs_20	23 58 18.7	
	comp=Z,33µm,18.0s						
URFA	**Urfa**	**76.38**	**307**	P	P	23 18 14.9	-2.7
NWAO	**Narrogin (SRO)**	**76.39**	**202**	P	**P**	**23 18 14.7**	**-2.6**
NWAO				pmax	pmax		
	comp=Z,164nm,1.1s						
NWAO	**Narrogin (SRO)**	**76.39**	**202**	P	**P**	**23 18 14.7**	**-2.6**
KNB	**Kanab**	**76.44**	**53**	IAmb	IAmb	23 18 35.2	
	comp=Z,281nm,1.2s						
DARE	**Darende-Malaty**	**76.46**	**309**	P	**P**	**23 18 16.7**	**-1.3**
SRU	**San Rafael Swe**	**76.47**	**50**	P	**P**	**23 18 18.1**	**-0.1**
SRU				pmax	pmax		
	comp=Z,153nm,1.0s						
SRU	**San Rafael Swe**	**76.47**	**50**	P	**P**	**23 18 18.1**	**-0.1**
KWP	**Kalwaria Pacla**	**76.56**	**325**	*e*P	**P**	**23 18 16.5**	**-1.8**
KWP				*e*pP	**pP**	**23 18 23.2**	**+1.9**
KWP				*e*S	**S**	**23 28 09.0**	**+4.8**
KWP				*e*L	L	23 55 29.1	
	comp=Z,379µm,15.6s						
PRAR	**RASCA**	**76.58**	**321**	⇑P	**P**	**23 18 18.1**	**-0.3**
BIR	**Birlad**	**76.67**	**320**	⇓P	**P**	**23 18 18.4**	**-0.5**
E28A	**Huff**	**76.73**	**40**	IAMs_20	IAMs_20	23 59 05.8	
	comp=Z,17µm,18.0s						
RSSD	**Black Hills**	**76.75**	**43**	IAMs_20	IAMs_20	23 58 01.9	
	comp=Z,25µm,19.0s						
MONP2	**Monument Peak**	**76.77**	**58**	P	**P**	**23 18 20.2**	**+0.2**
	baz=309						
IRM	**Iron Mountain**	**76.80**	**57**	P	**P**	**23 18 19.6**	**-0.3**
	baz=310,SNR=41						
VARL	**Varlezi**	**76.81**	**320**	⇓P	**P**	**23 18 19.1**	**-0.7**
SHAO	**Shalim**	**76.83**	**282**	*i* P	P	23 18 17.3	-3.0
	SNR=13						
SHAO	**Shalim**	**76.83**	**282**	P	**P**	**23 18 21.1**	**+0.9**
TLCR		**76.83**	**319**	⇓P	**P**	**23 18 19.1**	**-0.7**
BUR08	**Bucovina Ar. S**	**76.86**	**322**	IAmb	IAmb	23 18 27.4	
	comp=Z,195nm,0.9s						
BURAR	**Bucovina Array**	**76.88**	**322**	⇑P	**P**	**23 18 18.5**	**-1.7**
BURAR	**Bucovina Array**	**76.88**	**322**	P	**P**	**23 18 18.0**	**-2.2**
BURAR				IAmb	IAmb	23 18 27.7	
	comp=Z,169nm,0.8s						
BC3	**Big Chuckawall**	**76.92**	**57**	P	**P**	**23 18 19.9**	**-0.8**
	baz=310,SNR=21						
GHRR		**76.92**	**320**	⇓P	**P**	**23 18 19.6**	**-0.7**
BIZ	**Bicaz**	**76.94**	**321**	⇑P	**P**	**23 18 19.6**	**-0.8**
CBX	**Cerro Bola**	**76.97**	**59**	P	**P**	**23 18 21.3**	**+0.2**
TESR	**Tescani**	**76.97**	**321**	⇓P	**P**	**23 18 18.9**	**-1.7**
SCHL	**Schela**	**77.10**	**319**	⇑P	**P**	**23 18 20.6**	**-0.7**
IKP	**In-Ko-Pah, Jac**	**77.12**	**58**	P	**P**	**23 18 22.1**	**+0.3**
	baz=309,SNR=16						
SWSC	**Sam W. Stewart**	**77.14**	**58**	P	**P**	**23 18 22.3**	**+0.5**
	baz=310						
U15A	**North Rim**	**77.14**	**53**	IAmb	IAmb	23 18 39.7	
	comp=Z,142nm,0.9s						
CFR	**Carcaliu**	**77.17**	**319**	⇑P	**P**	**23 18 20.8**	**-1.0**
SARI	**SarD1z-Kayseri**	**77.20**	**310**	P	P	23 18 19.7	-2.6
PETR	**Petresti**	**77.25**	**320**	⇓P	**P**	**23 18 21.4**	**-0.7**
BNN	**Bunyan**	**77.25**	**310**	P	P	23 18 19.4	-3.1

TPGR	**Topolog**	**77.26**	**319**	⇓P	**P**	**23 18 21.6**	**-0.7**
KOLS	**Kolonicke sedl**	**77.27**	**325**	*e*P	**P**	**23 18 20.0**	**-2.3**
KOLS				pmax	pmax		
	comp=Z,124nm,1.0s						
KOLS	**Kolonicke sedl**	**77.27**	**325**	*e*P	**P**	**23 18 20.0**	**-2.3**
KOLS				*e*		23 18 28.2	
KOLS				*e*S	**S**	**23 28 11.3**	**-0.6**
KOLS				*e*L	L	23 56 10.6	
ODBI	**Odobesti**	**77.30**	**320**	⇑P	**P**	**23 18 21.7**	**-0.8**
PDMCI	**Parker Dam,Lak**	**77.35**	**56**	P	**P**	**23 18 22.1**	**-0.8**
	baz=310,SNR=29						
OJC	**Ojcow**	**77.38**	**327**	*e*P	**P**	**23 18 20.9**	**-2.0**
OJC				*e*pP	**pP**	**23 18 27.7**	**+1.8**
OJC				*e*S	**S**	**23 28 08.6**	**-4.5**
OJC				*e*L	L	23 55 30.7	
	comp=Z,234µm,18.4s						
VRI	**Vrincioaia**	**77.39**	**320**	⇑P	**P**	**23 18 21.1**	**-1.9**
VRI				⇑P	**pP**	**23 18 22.4**	**-3.7**
UZH	**Uzhgorod**	**77.48**	**324**	*e*P	P	23 18 19.7	-3.7
UZH				*e*		23 18 26.3	
UZH				*i*		23 18 33.9	
UZH				*i* S	S	23 28 07.1	-7.0
UZH				*i*		23 28 27.9	
UZH				MLR	MLR		
	comp=N,45µm,16.0s						
UZH				MLR	MLR		
	comp=E,51µm,16.0s						
UZH				MLR	MLR		
	comp=Z,43µm,16.0s						
DMTO	**DMTO**	**77.52**	**283**	P	**P**	**23 18 26.1**	**+2.0**
GAZ	**Gaziantep**	**77.53**	**308**	P	**P**	**23 18 22.5**	**-1.6**
TIRR	**Tirgusor**	**77.54**	**318**	⇑P	**P**	**23 18 23.0**	**-0.8**
TIRR	**Tirgusor**	**77.54**	**318**	⇑P	**P**	**23 18 23.0**	**-0.8**
DOK	**Doka**	**77.58**	**284**	P	**P**	**23 18 22.9**	**-1.6**
GRER		**77.62**	**320**	⇓P	**P**	**23 18 24.0**	**-0.3**
BISRR	**Bisoca**	**77.63**	**320**	⇓P	**P**	**23 18 23.6**	**-0.8**
BMR	**Baia Mare**	**77.64**	**323**	⇑P	**P**	**23 18 22.8**	**-1.5**
CRVS	**Cervenica-Dubn**	**77.65**	**325**	*e*P	**P**	**23 18 22.4**	**-2.0**
CRVS				*e*		23 18 30.8	
CRVS				*e*S	**S**	**23 28 16.4**	**+0.4**
CRVS				pmax	pmax		
	comp=Z,603nm,1.5s						
CRVS	**Cervenica-Dubn**	**77.65**	**325**	*e*P	**P**	**23 18 22.4**	**-2.0**
CRVS				*e*		23 18 30.8	
CRVS				*e*S	**S**	**23 28 16.4**	**+0.4**
ARCR	**ARCALIA**	**77.66**	**322**	⇑P	**P**	**23 18 23.4**	**-1.1**
TLBR	**Topalu**	**77.67**	**318**	⇓P	**P**	**23 18 24.5**	**0.0**
OZUR		**77.69**	**321**	⇓P	**P**	**23 18 23.4**	**-1.3**
GLA	**Glamis**	**77.70**	**57**	P	**P**	**23 18 24.4**	**-0.7**
	baz=310,SNR=21						
GLA	**Glamis**	**77.70**	**57**	IAmb	IAmb	23 18 41.4	
	comp=Z,293nm,1.4s						
MFTR	**Murfatlar**	**77.73**	**318**	⇑P	**P**	**23 18 24.6**	**-0.3**
SKMB	**Sankelmark Bun**	**77.73**	**335**	*e*P	**P**	**23 18 23.2**	**-1.4**
	comp=Z,6µm,2.7s,baz=35,slow=5.3						
AGMN	**Agassiz Nation**	**77.76**	**36**	P	**P**	**23 18 22.6**	**-2.5**
	baz=318,SNR=19						
AGMN	**Agassiz Nation**	**77.76**	**36**	IAMs_20	IAMs_20	23 57 10.0	
	comp=Z,26µm,19.0s						
RAO	**Raoul Island**	**77.77**	**146**	IAMs_20	IAMs_20	23 49 14.7	
	comp=Z,23µm,20.0s						
NIE	**Niedzica**	**77.77**	**326**	*e*P	**P**	**23 18 23.5**	**-1.6**
NIE				*e*pP	**pP**	**23 18 30.5**	**+2.2**
NIE				*e*S	**S**	**23 28 18.2**	**+0.8**
NIE				*e*L	L	23 55 54.8	
	comp=Z,134µm,18.7s						
PV23	**Carpenter Ridg**	**77.79**	**50**	IAmb	IAmb	23 18 42.4	
	comp=Z,403nm,1.2s						
PV04	**Paradox Valley**	**77.89**	**50**	P	**P**	**23 18 26.1**	**-0.1**
PV04				IAmb	IAmb	23 18 41.2	
	comp=Z,446nm,1.5s						
N23A	**Red Feather La**	**77.91**	**46**	P	**P**	**23 18 30.3**	**+3.9**
	baz=313						
NEHR	**Nehoiu**	**77.92**	**320**	⇓P	**P**	**23 18 25.1**	**-0.9**
PGOR	**Pogoanele**	**77.94**	**319**	⇓P	**P**	**23 18 25.4**	**-0.6**
BRTR	**Keskin Array B**	**77.95**	**312**	P	**P**	**23 18 24.4**	**-2.0**
	comp=Z,21nm,1.0s,baz=46,slow=5.3,SNR=16						
BRTR				LR	LR	23 58 31.9	
	comp=Z,100µm,19.3s,baz=58,slow=40						
BRTR	**Keskin Array B**	**77.95**	**312**	P	**P**	**23 18 24.4**	**-2.0**
BRTR	**Keskin Array B**	**77.95**	**312**	P	P	23 18 23.3	-3.1
DOPR	**Dopca**	**77.98**	**321**	⇓P	**P**	**23 18 24.9**	**-1.4**
AMRR	**Amara**	**77.98**	**319**	⇑P	**P**	**23 18 26.3**	**+0.1**
PV18	**Skein Mesa, Pa**	**77.99**	**50**	P	**P**	**23 18 26.0**	**-0.7**
PV18				IAmb	IAmb	23 18 41.7	
	comp=Z,200nm,1.0s						
PV18				IAMs_20	IAMs_20	23 57 46.4	
	comp=Z,18µm,19.0s						
ISR	**Istrita**	**78.02**	**320**	⇓P	**P**	**23 18 26.3**	**-0.3**
PV03	**Paradox Valley**	**78.02**	**50**	IAMs_20	IAMs_20	23 57 47.2	
	comp=Z,17µm,19.0s						
RUE	**Ruedersdorf**	**78.02**	**331**	*e*P	**P**	**23 18 24.2**	**-2.1**
	comp=Z,531nm,1.2s,baz=35,slow=5.3						
MLR	**Muntele Rosu**	**78.05**	**320**	⇓P	**P**	**23 18 26.2**	**-0.6**
MLR	**Muntele Rosu**	**78.05**	**320**	IAmb	IAmb	23 19 10.5	
	comp=Z,385nm,1.3s						
BSEG	**Bad Segeberg**	**78.08**	**334**	*e*P	**P**	**23 18 24.6**	**-2.0**
	comp=Z,405nm,1.0s,baz=35,slow=5.3						
BSEG				*e*L	L	23 55 38.7	
	comp=Z,168µm,19.9s						
D32A	**Dogwood Acres,**	**78.09**	**37**	IAMs_20	IAMs_20	23 58 01.8	
	comp=Z,23µm,18.0s						
ICOR	**Ion Corvin**	**78.09**	**318**	⇓P	**P**	**23 18 25.7**	**-1.2**
PV13	**Radium Mtn., P**	**78.10**	**50**	IAMs_20	IAMs_20	23 57 49.3	
	comp=Z,20µm,19.0s						
BIGH	**Upper Bighouse**	**78.15**	**343**	*e*P	**P**	**23 18 29.9**	**+2.9**
RAC	**Raciborz**	**78.16**	**327**	*e*P	**P**	**23 18 26.0**	**-1.2**
RAC				*e*S	**S**	**23 28 17.2**	**-4.2**
RAC				MLR	MLR		
	comp=Z,250µm,19.7s						
KOZT	**Kozan**	**78.16**	**309**	P	**P**	**23 18 25.4**	**-2.1**
RBK	**Rabkut**	**78.21**	**283**	P	P	23 18 22.5	-5.5
WHFO	**Wadi Hawf**	**78.28**	**284**	P	P	23 18 23.8	-4.6
CJR	**Cluj-Napoca**	**78.29**	**322**	⇑P	**P**	**23 18 26.8**	**-1.3**
WUAZ	**Wupatki**	**78.30**	**53**	P	**P**	**23 18 29.5**	**+1.1**
	baz=311,SNR=11						
WUAZ	**Wupatki**	**78.30**	**53**	P	**P**	**23 18 27.6**	**-0.9**
WUAZ				IAmb	IAmb	23 18 45.9	
	comp=Z,271nm,1.1s						
LANS	**Liptovska Anna**	**78.33**	**326**	*e*P	**P**	**23 18 27.7**	**-0.5**
LANS				*e*		23 18 35.8	
LANS				pmax	pmax		
	comp=Z,103nm,1.0s						
LANS	**Liptovska Anna**	**78.33**	**326**	*e*P	**P**	**23 18 27.7**	**-0.5**
LANS				*e*		23 18 35.8	
LEHL	**Lehliu**	**78.34**	**319**	⇑P	**P**	**23 18 27.6**	**-0.7**
KSP	**Ksiaz**	**78.34**	**329**	*e*P	**P**	**23 18 26.3**	**-1.9**
KSP				*e*pP	**pP**	**23 18 33.1**	**+1.8**
KSP				*e*S	**S**	**23 28 25.7**	**+2.3**
KSP				*e*L	L	23 55 57.2	
	comp=Z,183µm,18.8s						
OKC	**Ostrava-Krasne**	**78.37**	**327**	*e*P	**P**	**23 18 28.7**	**+0.4**
OKC				*e*		23 18 34.6	
OKC				MLR	MLR		
	comp=Z,205µm,18.8s						
OKC	**Ostrava-Krasne**	**78.37**	**327**	*e*P	**P**	**23 18 28.7**	**+0.4**
OKC				*e*pP	**pP**	**23 18 34.6**	**+3.2**
OKC				AMS	AMS	23 56 00.0	
	comp=Z,205µm,18.8s						
KECS	**Kecovo**	**78.39**	**325**	*e*	P	23 18 34.9	+6.4
AFSR	**Afar-Bala (An**	**78.46**	**312**	P	P	23 18 25.8	-3.4
SULR		**78.47**	**320**	⇑P	**P**	**23 18 28.3**	**-0.7**
CEYT	**Ceyhan**	**78.52**	**309**	P	**P**	**23 18 27.8**	**-1.6**
VOIR		**78.52**	**321**	⇑P	**P**	**23 18 28.4**	**-1.0**
SPX	**San Pedro Mart**	**78.57**	**59**	P	**P**	**23 18 29.7**	**-0.6**
OSTC	**Ostas**	**78.60**	**329**	*e*P	**P**	**23 18 28.3**	**-1.4**
OSTC				*e*S	S	23 28 35.6	+9.4
OSTC				AMS	AMS	23 56 10.0	
	comp=Z,156µm,18.0s						
CHVC	**Chvalec**	**78.64**	**329**	*e*P	**P**	**23 18 28.0**	**-1.9**
CHVC				*e*x	x	23 18 35.9	
CHVC				AMS	AMS	23 56 00.0	
	comp=Z,164µm,18.7s						
DRGR		**78.65**	**323**	⇓P	**P**	**23 18 29.3**	**-0.8**
MORC	**Moravsky Berou**	**78.66**	**327**	⇑P	**P**	**23 18 28.2**	**-1.9**
MORC	**Moravsky Berou**	**78.66**	**327**	*e*P	**P**	**23 18 28.0**	**-2.1**
MORC				*e*S	**S**	**23 28 25.4**	**-1.6**
MORC	**Moravsky Berou**	**78.66**	**327**	IAmb	IAmb	23 18 37.6	
	comp=Z,232nm,0.9s						
B35A	**Bob, Littlefor**	**78.66**	**35**	IAmb	IAmb	23 18 42.6	
	comp=Z,295nm,1.4s						
B35A				IAMs_20	IAMs_20	23 56 59.8	
	comp=Z,25µm,19.0s						
MTUR	**Matau**	**78.67**	**321**	⇑P	**P**	**23 18 28.9**	**-1.3**
DPC	**Dobruska-Polom**	**78.72**	**328**	*e*P	**P**	**23 18 28.7**	**-1.6**
DPC				*e*S	**S**	**23 28 32.5**	**+5.0**
DPC				MLR	MLR		
	comp=Z,142µm,17.6s						
DPC	**Dobruska-Polom**	**78.72**	**328**	*e*P	**P**	**23 18 28.7**	**-1.6**
DPC				*e*S	**S**	**23 28 32.5**	**+5.0**
DPC				AMS	AMS	23 56 20.0	
	comp=Z,142µm,17.6s						
UPC	**Upice**	**78.72**	**329**	*e*P	**P**	**23 18 28.3**	**-2.0**
UPC				*e*S	S	23 28 37.2	+10
UPC				MLR	MLR		
	comp=Z,170µm,19.0s						
UPC	**Upice**	**78.72**	**329**	*e*P	**P**	**23 18 28.3**	**-2.0**
UPC				*e*SKS	S	23 28 37.2	+10
UPC				AMS	AMS	23 56 00.0	
	comp=Z,170µm,19.0s						
KRLC	**Kraliky**	**78.74**	**328**	*e*P	**P**	**23 18 28.7**	**-1.8**
KRLC				*e*		23 18 36.7	
KRLC				*e*S	**S**	**23 28 36.4**	**+8.6**
KRLC				MLR	MLR		
	comp=Z,148µm,15.7s						
KRLC	**Kraliky**	**78.74**	**328**	*e*P	**P**	**23 18 28.7**	**-1.8**
KRLC				*e*pP	**pP**	**23 18 36.7**	**+3.1**
KRLC				*e*SKS	**S**	**23 28 36.4**	**+8.6**
KRLC				AMS	AMS	23 58 00.0	
	comp=Z,148µm,15.7s						
KARA	**Karaisali**	**78.77**	**309**	P	**P**	**23 18 28.8**	**-2.0**
ARR	**Arges**	**78.78**	**321**	⇓P	**P**	**23 18 29.8**	**-1.0**
ISCO	**Idaho Springs**	**78.84**	**47**	P	P	23 18 36.4	+4.9
	baz=313						
MVCO	**Mesa Verde**	**78.92**	**51**	P	**P**	**23 18 32.3**	**+0.3**
	baz=312,SNR=11						
MVCO	**Mesa Verde**	**78.92**	**51**	P	**P**	**23 18 30.9**	**-1.1**
MVCO				IAmb	IAmb	23 18 48.6	
	comp=Z,205nm,1.1s						
ABTO	**Aybut**	**78.98**	**283**	P	P	23 18 28.9	-3.4
FLTG	**Flechtingen**	**79.07**	**332**	*e*P	P	23 18 29.4	-2.7
	comp=Z,395nm,1.1s,baz=35,slow=5.3						
PSZ	**Piszkesteto**	**79.08**	**325**	⇑P	**P**	**23 18 30.6**	**-1.8**
VYHS	**Vyhne**	**79.10**	**326**	*e*P	**P**	**23 18 30.6**	**-1.9**
VYHS				*e*		23 18 38.8	
VYHS				*e*S	**S**	**23 28 39.0**	**+7.4**
VYHS				pmax	pmax		
	comp=Z,207nm,1.1s						
VYHS				MLR	MLR		
	comp=Z,197µm,18.6s						
VYHS	**Vyhne**	**79.10**	**326**	*e*P	**P**	**23 18 30.5**	**-1.9**
VYHS				*e*		23 18 38.8	
VYHS	**Vyhne**	**79.10**	**326**	*e*L	L	23 57 12.0	
VYHS	**Vyhne**	**79.10**	**326**	*e*S	**S**	**23 28 39.0**	**+7.4**
SUSD	**Miller**	**79.11**	**40**	P	**P**	**23 18 33.5**	**+0.9**
	baz=316,SNR=6.6						
SUSD	**Miller**	**79.11**	**40**	P	**P**	**23 18 31.6**	**-1.0**
SUSD				IAmb	IAmb	23 18 54.7	
	comp=Z,255nm,1.0s						
LOT	**Lotru**	**79.13**	**321**	⇑P	**P**	**23 18 31.3**	**-1.5**
RAZG	**Razgrad**	**79.14**	**319**	⇑P	**P**	**23 18 32.2**	**-0.5**
HUMR	**Humele**	**79.21**	**320**	⇓P	**P**	**23 18 31.8**	**-1.3**
DEV	**Deva**	**79.23**	**322**	⇓P	**P**	**23 18 32.4**	**-0.8**
BRG	**Berggiesshubel**	**79.24**	**330**	*e*P	**P**	**23 18 30.8**	**-2.3**
BRG				Amp		23 18 34.5	
	comp=Z,41nm,1.0s						
BRG				*e*x	x	23 18 39.4	
BRG				Amp		23 18 40.4	
	comp=Z,238nm,1.1s						
BRG				*e*x	x	23 18 45.0	
BRG				Amp		23 18 45.9	
	comp=Z,246nm,1.2s						
BRG				PP	**PP**	**23 21 34.9**	**+2.9**
BRG				Amp		23 21 39.6	
	comp=Z,116nm,1.3s						
BRG	**Berggiesshubel**	**79.24**	**330**	S	**S**	**23 28 38.0**	**+5.1**
BRG	**Berggiesshubel**	**79.24**	**330**	SS	SS	23 33 45.0	+6.9
BRG	**Berggiesshubel**	**79.24**	**330**	*e*P	**P**	**23 18 30.8**	**-2.3**
	comp=Z,2µm,2.9s,baz=35,slow=5.3						
DRUM	**Mains of Drumt**	**79.25**	**342**	*e*P	**P**	**23 18 32.1**	**-0.9**
DRUM				IAmb	IAmb	23 18 39.9	
	comp=Z,309nm,1.0s						
CLL	**Collm**	**79.25**	**331**	*i* P	**P**	**23 18 30.8**	**-2.4**
	comp=Z,59nm,1.2s						
CLL				*e*Plp		23 18 34.0	
	comp=Z,8µm,23.1s						
CLL				*i* P(2)		23 18 35.6	
	comp=Z,74nm,1.0s						
CLL				*i* Pmax		23 18 38.2	
	comp=Z,311nm,1.0s						
CLL				*e*Pmax		23 18 40.0	
CLL				*i*		23 18 44.2	
	comp=Z,366nm,1.2s						
CLL				*e*PP	**PP**	**23 21 28.0**	**-4.1**
CLL				*e*sPP		23 21 39.0	
CLL				*e*PPP	PPP	23 23 15.0	
CLL				*e*sPPP		23 23 34.0	
CLL				*e*PPPP		23 24 34.0	
CLL				*e*S	**S**	**23 28 31.0**	**-2.0**
	comp=N,10µm,26.0s						
CLL				*e*S	**S**	**23 28 31.0**	**-2.0**
	comp=E,20µm,26.1s						
CLL				*e*S	**S**	**23 28 31.0**	**-2.0**
	comp=Z,6µm,27.1s						
CLL				*e*SKSac	**SKSac**	**23 28 50.0**	**+0.9**
CLL				*e*SP	ScS	23 29 07.0	+11
CLL				*e*PPS	PPS	23 29 32.0	
CLL				*e*SS	**SS**	**23 33 36.0**	**-2.2**
CLL				*e*		23 34 36.0	
CLL				Lm	MLR	23 56 00.0	
	comp=N,80µm,18.1s						
CLL				Lm	MLR	23 56 00.0	
	comp=E,76µm,18.6s						
CLL				Lm	MLR	23 56 00.0	
	comp=Z,127µm,18.5s						
CLL				Lmax		23 57 00.0	
CLL	**Collm**	**79.25**	**331**	*i* P	**P**	**23 18 30.8**	**-2.4**
CLL				*i*		23 18 35.6	
CLL				*i*		23 18 38.2	
CLL				*i*		23 18 44.2	
CLL				*e*S	**S**	**23 28 31.0**	**-2.0**
CLL				pmax	pmax		
	comp=Z,311nm,1.0s						
CLL				MLR	MLR		
	comp=Z,127µm,18.5s						
CLL	**Collm**	**79.25**	**331**	IAmb	IAmb	23 18 40.0	
	comp=Z,258nm,0.9s						
CLL	**Collm**	**79.25**	**331**	*e*P	P	23 18 30.5	-2.7
	comp=Z,311nm,1.0s,baz=35,slow=5.3						
CLL				*e*L	L	23 56 53.0	
	comp=Z,127µm,18.5s						
PVCC	**Panska Ves**	**79.27**	**329**	*e*P	**P**	**23 18 31.8**	**-1.5**
PVCC				*e*		23 18 39.7	
PVCC				MLR	MLR		
	comp=Z,180µm,17.0s						
PVCC	**Panska Ves**	**79.27**	**329**	*e*P	**P**	**23 18 31.8**	**-1.5**
PVCC				*e*pP	**sP**	**23 18 39.7**	**+2.2**
PVCC				AMS	AMS	23 56 50.0	
	comp=Z,180µm,17.0s						
JAVC	**Velka Javorina**	**79.32**	**327**	*e*P	**P**	**23 18 32.6**	**-1.1**
JAVC	**Velka Javorina**	**79.32**	**327**	*e*S	**S**	**23 28 37.6**	**+3.6**
F33A	**5 Mile Ranch,**	**79.38**	**38**	IAmb	IAmb	23 18 50.1	
	comp=Z,224nm,1.2s						
BSZH	**Besenyszg**	**79.38**	**324**	⇑P	**P**	**23 18 33.0**	**-0.9**
COPA	**Copaceanca**	**79.38**	**320**	⇓P	**P**	**23 18 33.2**	**-0.8**
VRAC	**Vranov**	**79.42**	**328**	⇓P	**P**	**23 18 33.0**	**-1.2**
VRAC	**Vranov**	**79.42**	**328**	*e*P	**P**	**23 18 32.4**	**-1.8**
VRAC				*e*PP	**PP**	**23 21 30.8**	**-2.8**
VRAC				*e*S	**S**	**23 28 29.0**	**-5.9**
FBE	**Freiberg**	**79.42**	**330**	*e*P	**P**	**23 18 32.0**	**-2.1**
	comp=Z,373nm,1.2s,baz=35,slow=5.3						
ASSE	**Asse, Remlinge**	**79.43**	**332**	*e*P	**P**	**23 18 31.9**	**-2.2**
	comp=Z,349nm,1.3s,baz=35,slow=5.3						
SIRR	**Siria**	**79.52**	**323**	⇓P	**P**	**23 18 32.9**	**-1.9**
S22A	**4UR Ranch, Cre**	**79.54**	**49**	P	**P**	**23 18 34.8**	**-0.6**
	baz=313,SNR=15						
PIX	**Pinacate**	**79.55**	**58**	P	**P**	**23 18 34.7**	**-0.4**
W18A	**Petrified Fore**	**79.57**	**53**	P	**P**	**23 18 36.4**	**+0.9**
	baz=312						
W18A	**Petrified Fore**	**79.57**	**53**	P	**P**	**23 18 35.1**	**-0.3**
ADVT	**Abdulvahap**	**79.64**	**315**	P	P	23 18 32.9	-2.6
GZR	**Gura Zlata**	**79.65**	**322**	⇓P	**P**	**23 18 34.4**	**-1.2**
ZIMR		**79.65**	**319**	⇓P	**P**	**23 18 33.8**	**-1.7**
Q24A	**Divide**	**79.68**	**47**	P	P	23 18 32.8	-3.4
	baz=314						
PRA	**Prague**	**79.69**	**329**	*e*P	**P**	**23 18 33.9**	**-1.7**
PRA				MLR	MLR		
	comp=Z,79µm,18.0s						
PRA	**Prague**	**79.69**	**329**	*e*P	**P**	**23 18 33.9**	**-1.7**
PRA				AMS	AMS	23 57 00.0	
	comp=Z,79µm,18.0s						
SMOL	**Smolenice**	**79.69**	**327**	*e*P	**P**	**23 18 34.1**	**-1.5**
SMOL				*e*		23 18 40.9	
SMOL				pmax	pmax		
	comp=Z,116nm,1.1s						
SMOL	**Smolenice**	**79.69**	**327**	*e*P	**P**	**23 18 34.1**	**-1.5**
SMOL				*e*		23 18 40.9	
KRUC	**Moravsky**	**79.69**	**328**	*e*P	**P**	**23 18 33.6**	**-2.0**
KRUC				*e*PP	**PP**	**23 21 33.5**	**-2.3**
KRUC				*e*S	**S**	**23 28 38.3**	**+0.5**
LADK	**Ladik-KONYA**	**79.71**	**312**	P	P	23 18 33.5	-2.6
PRU	**Pruhonice**	**79.71**	**329**	*e*P	**P**	**23 18 34.0**	**-1.7**
PRU				*e*		23 18 41.8	
PRU				*e*S	**S**	**23 28 44.1**	**+6.2**
PRU				MLR	MLR		
	comp=Z,146µm,17.7s						
PRU	**Pruhonice**	**79.71**	**329**	*e*P	**P**	**23 18 34.0**	**-1.7**
PRU				*e*pP	**pP**	**23 18 41.8**	**+3.0**
PRU				*e*SKS	**S**	**23 28 44.1**	**+6.2**
PRU				AMS	AMS	23 56 50.0	
	comp=Z,146µm,17.7s						
214A	**Organ Pipe Nat**	**79.71**	**57**	P	**P**	**23 18 35.5**	**-0.6**
	baz=311						
CLZ	**Clausthal**	**79.78**	**332**	*e*P	**P**	**23 18 34.1**	**-2.0**
	comp=Z,435nm,1.2s,baz=35,slow=5.3						
NEUB	**Neuenburg**	**79.78**	**331**	*e*P	**P**	**23 18 33.7**	**-2.4**
	comp=Z,429nm,1.1s,baz=35,slow=5.3						
X18A	**Snowflake**	**79.83**	**53**	P	**P**	**23 18 35.2**	**-1.6**
SRO	**Srobarova**	**79.85**	**326**	*e*	P	23 18 43.4	+6.9
SRO2	**Moca**	**79.85**	**326**	*e*P	P	23 18 41.9	+5.4
SRO2	**Moca**	**79.85**	**326**	*e*	P	23 18 41.9	+5.4
MODS	**Modra-Piesok**	**79.86**	**327**	*e*P	P	23 18 34.0	-2.6
MODS				*e*		23 18 42.2	
MODS				*e*S	**S**	**23 28 43.6**	**+4.0**
MODS				pmax	pmax		
	comp=Z,280nm,1.2s						
MODS				MLR	MLR		
	comp=Z,222µm,19.8s						
MODS	**Modra-Piesok**	**79.86**	**327**	*e*P	P	23 18 34.0	-2.6
MODS				*e*		23 18 42.2	
MODS	**Modra-Piesok**	**79.86**	**327**	*e*S	**S**	**23 28 43.6**	**+4.0**
MODS				*e*L	L	23 57 29.8	
TREC	**Trest**	**79.88**	**328**	*e*P	**P**	**23 18 35.1**	**-1.6**
TREC				MLR	MLR		
	comp=Z,161µm,15.9s						
TREC	**Trest**	**79.88**	**328**	*e*P	**P**	**23 18 35.1**	**-1.6**
TREC				AMS	AMS	23 58 40.0	
	comp=Z,161µm,15.9s						
VLAD	**Vladila**	**79.88**	**320**	⇓P	**P**	**23 18 36.0**	**-0.8**
KONT	**Konya--Tatoy**	**79.89**	**311**	P	P	23 18 34.2	-2.7
OUZ	**Omahuta**	**79.89**	**155**	P	**P**	**23 18 35.4**	**-1.2**
OUZ				IAMs_20	IAMs_20	23 49 15.0	
	comp=Z,37µm,22.0s						
AMBH	**Ambrzfalva**	**79.89**	**324**	⇓P	**P**	**23 18 35.6**	**-1.1**
EYMN	**Ely**	**79.95**	**34**	P	**P**	**23 18 34.7**	**-2.4**
	baz=321,SNR=20						
EYMN	**Ely**	**79.95**	**34**	IAMs_20	IAMs_20	00 00 03.6	
	comp=Z,27µm,19.0s						
OGNE	**Ogallala**	**80.02**	**44**	P	**P**	**23 18 37.9**	**+0.2**
	baz=315						
BZS	**Buzias**	**80.03**	**323**	⇓P	**P**	**23 18 36.3**	**-1.3**
INVG	**Invergeldie, C**	**80.06**	**342**	*e*P	**P**	**23 18 35.6**	**-1.8**
ZST	**Bratislava**	**80.07**	**327**	*e*P	**P**	**23 18 36.5**	**-1.2**
ZST				*e*		23 18 44.0	
ZST				*e*S	**S**	**23 28 50.5**	**+8.7**
ZST				pmax	pmax		
	comp=Z,852nm,1.4s						
ZST	**Bratislava**	**80.07**	**327**	*e*P	**P**	**23 18 36.5**	**-1.2**
ZST				*e*		23 18 44.0	
ZST	**Bratislava**	**80.07**	**327**	*e*S	**S**	**23 28 50.5**	**+8.7**
KEBE	**Keben-Mersin**	**80.11**	**309**	P	P	23 18 35.8	-2.4
TIM	**Timisoara**	**80.12**	**323**	⇓P	**P**	**23 18 37.9**	**-0.2**
PBCC	**Pribram**	**80.16**	**329**	*e*P	**P**	**23 18 36.7**	**-1.5**
PBCC				*e*x	x	23 18 43.7	
PBCC				*e*S	**S**	**23 28 47.1**	**+4.3**
GTTG	**Gottingen**	**80.17**	**332**	*e*P	**P**	**23 18 35.9**	**-2.2**
	comp=Z,328nm,1.1s,baz=35,slow=5.3						
TANN	**Tannenbergstha**	**80.17**	**331**	*e*P	**P**	**23 18 36.0**	**-2.3**
	comp=Z,2µm,2.9s,baz=35,slow=5.3						
HERR	**Herculane**	**80.20**	**322**	⇑P	**P**	**23 18 37.4**	**-1.1**
HWQ	**Hawqa**	**80.21**	**307**	*e*P	P	23 18 34.8	-4.1
PLVB	**Pleven**	**80.22**	**319**	⇑P	**P**	**23 18 37.3**	**-1.3**
PLN	**Plauen**	**80.23**	**331**	*e*P	**P**	**23 18 36.2**	**-2.3**
	comp=Z,1µm,2.7s,baz=35,slow=5.3						
GUNZ	**Gunzen**	**80.26**	**331**	*e*P	**P**	**23 18 36.5**	**-2.2**
	comp=Z,280nm,1.4s,baz=35,slow=5.3						
IKL	**Isikli**	**80.27**	**309**	P	P	23 18 36.0	-3.0
TEVE	**Tevekalti-Mers**	**80.28**	**310**	P	P	23 18 36.3	-2.8
IBBN	**Ibbenburen**	**80.29**	**334**	*e*P	**P**	**23 18 36.4**	**-2.4**
	comp=Z,424nm,1.1s,baz=35,slow=5.3						
WERN	**Wernitzgruen**	**80.31**	**330**	*e*P	**P**	**23 18 36.8**	**-2.2**
	comp=Z,220nm,1.1s,baz=35,slow=5.3						
SDCO	**Great Sand Dun**	**80.31**	**49**	P	**P**	**23 18 38.5**	**-1.1**
	baz=314,SNR=11						
NKC	**Novy Kostel**	**80.32**	**330**	*e*P	**P**	**23 18 37.2**	**-1.9**
NKC				*e*		23 18 44.9	
NKC				MLR	MLR		
	comp=Z,104µm,16.8s						
NKC	**Novy Kostel**	**80.32**	**330**	*e*P	**P**	**23 18 37.2**	**-1.9**
NKC				*e*pP	**pP**	**23 18 44.9**	**+2.7**
NKC				AMS	AMS	23 57 30.0	
	comp=Z,104µm,16.8s						
EAB	**Aberfoyle**	**80.34**	**342**	*e*P	**P**	**23 18 37.2**	**-1.8**
BAIL	**Bailesti**	**80.39**	**321**	⇓P	**P**	**23 18 38.2**	**-1.3**
AKKU	**Akkuyu-Mersin**	**80.40**	**309**	P	P	23 18 36.7	-3.0
EBL	**Broad Law**	**80.41**	**341**	*e*P	**P**	**23 18 37.4**	**-2.0**
BANR	**Banloc**	**80.43**	**323**	⇑P	**P**	**23 18 39.4**	**-0.3**
BERE	**Bereket-Mersin**	**80.47**	**310**	P	P	23 18 37.3	-3.0
LAWE	**Loch Awe, Argy**	**80.52**	**343**	*e*P	**P**	**23 18 37.8**	**-2.1**
K31A	**O'Neill**	**80.53**	**41**	IAMs_20	IAMs_20	23 59 48.8	
	comp=Z,19µm,18.0s						
MDVR	**Moldovita**	**80.61**	**322**	⇓P	**P**	**23 18 39.5**	**-1.2**
BHL	**Bhannes**	**80.64**	**307**	*e*P	**P**	**23 18 39.3**	**-1.8**
F36A	**Milaca**	**80.64**	**36**	IAMs_20	IAMs_20	23 59 16.3	
	comp=Z,22µm,18.0s						
MANZ	**Manzenberg**	**80.65**	**330**	*e*P	**P**	**23 18 38.6**	**-2.3**
	comp=Z,2µm,2.8s,baz=35,slow=5.3						
TEKE	**Tekeli-Mersin**	**80.67**	**310**	P	P	23 18 37.9	-3.3
PGBU	**Glenifferbraes**	**80.72**	**342**	*e*P	**P**	**23 18 39.1**	**-1.9**
CKRC	**Cesky Krumlov**	**80.73**	**329**	*e*P	**P**	**23 18 39.0**	**-2.3**
CKRC				*e*x	x	23 18 47.1	
CKRC				*e*S	S	23 28 57.9	+9.1
CKRC				AMS	AMS	23 57 30.0	
	comp=Z,118µm,18.3s						
UBBA	**Unterbreizbach**	**80.75**	**332**	*e*P	**P**	**23 18 38.8**	**-2.3**
	comp=Z,893nm,2.5s,baz=35,slow=5.3						
KHC	**Kasperske Hory**	**80.77**	**329**	*e*P	**P**	**23 18 39.3**	**-2.2**
KHC				*e*		23 18 47.6	
KHC				*e*S	**S**	**23 28 55.6**	**+6.3**
KHC				MLR	MLR		
	comp=Z,175µm,18.6s						
KHC	**Kasperske Hory**	**80.77**	**329**	*e*P	**P**	**23 18 39.3**	**-2.2**
KHC				*e*pP	**pP**	**23 18 47.6**	**+3.0**
KHC				*e*PP	PP	23 21 54.4	+10
KHC				*e*SKS	**S**	**23 28 55.6**	**+6.3**
KHC				AMS	AMS	23 57 40.0	
	comp=Z,175µm,18.6s						
KHC	**Kasperske Hory**	**80.77**	**329**	IAmb	IAmb	23 18 49.0	
	comp=Z,279nm,1.0s						
TUC	**Tucson**	**80.77**	**56**	P	**P**	**23 18 42.1**	**+0.2**
	baz=312						
TUC	**Tucson**	**80.77**	**56**	P	**P**	**23 18 41.2**	**-0.7**
TUC				pmax	pmax		
	comp=Z,110nm,1.3s						
TUC				MLR	MLR		
	comp=Z,10µm,21.0s						
TUC	**Tucson**	**80.77**	**56**	P	**P**	**23 18 41.2**	**-0.7**
ECSD	**EROS Data Cent**	**80.78**	**39**	P	**P**	**23 18 40.7**	**-1.0**
	baz=318,SNR=12						
ROTZ	**Rotzenmuhle**	**80.79**	**330**	*e*P	**P**	**23 18 39.6**	**-2.0**
	comp=Z,3µm,3.0s,baz=35,slow=5.3						
CONA	**Conrad Observa**	**80.80**	**327**	*i* P	**P**	**23 18 40.3**	**-1.4**
	comp=Z,113nm,0.9s,SNR=24						
CONA				*e*P	**PP**	**23 21 44.9**	**-0.3**
	comp=Z,60nm,1.4s						
RCY	**Rachaya**	**80.80**	**306**	⇓*e*P	P	23 18 39.6	-2.5
RAYN	**Ar Rayn**	**80.82**	**293**	*i* P	P	23 18 38.9	-3.3
	SNR=50						
RAYN	**Ar Rayn**	**80.82**	**293**	P	P	23 18 38.7	-3.5
RAYN				pmax	pmax		
	comp=Z,341nm,1.4s						
RAYN				MLR	MLR		

	comp=Z,122µm,18.0s						
RAYN	Ar Rayn	80.82	293	P	P	23 18 38.7	-3.5
RAYN				IAmb	IAmb	23 19 17.8	
	comp=Z,341nm,1.4s						
ESK	Eskdalemuir	80.86	341	P	P	23 18 41.2	-0.6
ESK				pmax	pmax		
	comp=Z,161nm,1.1s						
ESK				MLR	MLR		
	comp=Z,60µm,19.0s						
ESK	Eskdalemuir	80.86	341	P	P	23 18 41.2	-0.6
MORH	Mrgy, Hungar	80.93	325	⇑iP	P	23 18 39.3	-3.0
GEC2	GERESS Array S	80.95	329	eP	P	23 18 40.0	-2.5
	comp=Z,1µm,2.8s,baz=35,slow=5.3						
GEC2				eL	L	23 57 34.5	
	comp=Z,126µm,19.8s						
GERES	GERESS Array B	80.95	329	P	P	23 18 40.3	-2.3
	comp=Z,4.6nm,0.5s,baz=39,slow=5.7,SNR=34						
GERES				PKKPbc	PKKPbc	23 37 21.9	+2.7
	comp=Z,0.7nm,0.7s,baz=211,slow=0.8,SNR=4.9						
GERES				PKPPKP		23 45 21.6	
	comp=Z,0.5nm,1.0s,baz=206,slow=6.5,SNR=3.5						
GERES				LR	LR	23 57 54.8	
	comp=Z,131µm,19.6s,baz=26,slow=38						
GERES	GERESS Array B	80.95	329	P	P	23 18 40.7	-1.9
GERES	GERESS Array B	80.95	329	P	P	23 18 40.7	-1.9
E38A	The Farm, Brul	80.95	35	IAMs_20	IAMs_20	23 58 38.4	
	comp=Z,24µm,18.0s						
EDMD	Edmundbyers	80.99	340	eP	P	23 18 43.1	+0.6
KASTN	Kahler Asten	80.99	333	eP	P	23 18 40.3	-2.4
	comp=Z,2µm,3.2s,baz=35,slow=5.3						
ISP	Isparta	81.02	312	P	P	23 18 40.9	-2.3
ISP				pmax	pmax		
	comp=Z,180nm,1.1s						
ISP				MLR	MLR		
	comp=Z,64µm,20.0s						
ISP	Isparta	81.02	312	P	P	23 18 40.9	-2.3
ISP				IAmb	IAmb	23 19 23.5	
	comp=Z,180nm,1.1s						
WET	Wettzell	81.04	330	eP	P	23 18 40.9	-2.0
	comp=Z,292nm,1.2s,baz=35,slow=5.3						
WET				eL	L	23 58 07.5	
	comp=Z,173µm,18.7s						
KSCO	Kaye Shedlock'	81.06	46	P	P	23 18 43.8	+0.4
	baz=315						
BUG	Bochum--Univer	81.19	334	eP	P	23 18 41.0	-2.6
	comp=Z,337nm,1.2s,baz=35,slow=5.3						
FRGS	Fruska Gora	81.21	323	⇑iP	P	23 18 40.4	-3.5
GRF	Grafenberg Arr	81.22	331	eP	P	23 18 42.0	-1.9
	comp=Z,918nm,1.2s,baz=35,slow=5.3						
GRF				eL	L	23 57 54.3	
	comp=Z,82µm,19.3s						
GRFO	Grafenberg	81.23	331	P	P	23 18 42.6	-1.3
GRFO				pmax	pmax		
	comp=Z,207nm,1.2s						
GRFO				MLR	MLR		
	comp=Z,21µm,19.0s						
GRFO	Grafenberg	81.23	331	P	P	23 18 42.6	-1.3
GRFO				IAmb	IAmb	23 18 57.0	
	comp=Z,207nm,1.2s						
GRFO				IAMs_20	IAMs_20	23 57 53.4	
	comp=Z,21µm,19.0s						
NEWG	New Galloway	81.29	342	eP	P	23 18 41.8	-2.3
ALN	Alexandroupoli	81.30	317	P	P	23 18 41.5	-2.9
ALN	Alexandroupoli	81.30	317	P	P	23 18 42.8	-1.6
ALN				pmax	pmax		
	comp=Z,350nm,1.5s						
ALN				MLR	MLR		
	comp=Z,172µm,18.0s						
ALN	Alexandroupoli	81.30	317	P	P	23 18 42.8	-1.6
ALN				IAmb	IAmb	23 18 56.9	
	comp=Z,350nm,1.5s						
CSS	Mathiatis	81.35	309	IAmb	IAmb	23 18 59.7	
	comp=Z,303nm,1.1s						
T25A	Trinidad	81.36	48	P	P	23 18 45.4	+0.3
	baz=314,SNR=11						
RDO	Rodhopi	81.38	317	P	P	23 18 49.5	+4.7
SPMN	Marine on St.	81.46	36	IAMs_20	IAMs_20	23 59 59.9	
	comp=Z,20µm,18.0s						
BOVS	Bovan	81.47	321	⇑P	P	23 18 43.9	-1.4
ARSA	Arzberg	81.47	327	iP	P	23 18 43.3	-2.0
	comp=Z,71nm,0.8s,SNR=16						
ARSA				eP	PP	23 21 46.5	-4.2
	comp=Z,50nm,1.4s						
VTS	Vitosha	81.48	320	⇓P	P	23 18 44.3	-1.2
VTS	Vitosha	81.48	320	IAmb	IAmb	23 18 53.1	
	comp=Z,282nm,0.9s						
LEF	Lefka	81.50	309	⇓P	P	23 18 46.4	+0.8
MOA	Molln	81.52	328	iP	P	23 18 43.6	-1.9
	comp=Z,37nm,0.8s,SNR=16						
MOA				eP	PP	23 21 49.5	-1.5
	comp=Z,82nm,1.6s						
BEHE	Becsehely	81.55	326	⇑iP	P	23 18 45.2	-0.5
GAL1	Galloway	81.64	342	eP	P	23 18 43.7	-2.2
GAL1				IAmb	IAmb	23 18 52.8	
	comp=Z,273nm,0.9s						
ANMO	Albuquerque	81.67	51	P	P	23 18 45.4	-1.3
	baz=313						
ANMO	Albuquerque	81.67	51	P	P	23 18 45.6	-1.2
ANMO				pmax	pmax		
	comp=Z,197nm,1.2s						
ANMO				MLR	MLR		
	comp=Z,12µm,22.0s						
ANMO	Albuquerque	81.67	51	P	P	23 18 45.6	-1.2
ANMO				IAmb	IAmb	23 19 03.6	
	comp=Z,197nm,1.1s						
SOCY	Socotra	81.68	279	P	P	23 18 42.8	-4.1
HPK	Haverah Park	81.68	340	eP	P	23 18 45.6	-0.6
BGNE	Belgrade	81.72	42	P	P	23 18 46.5	-0.2
	baz=317,SNR=9.9						
BGNE	Belgrade	81.72	42	P	P	23 18 44.8	-2.0
BGNE				IAMs_20	IAMs_20	23 57 33.5	
	comp=Z,18µm,20.0s						
CLGH	Cloghs, Cushen	81.77	343	eP	P	23 18 45.4	-1.2
CLGH				IAmb	IAmb	23 18 53.8	
	comp=Z,344nm,1.1s						
KOGS	Kog	81.80	326	iP	P	23 18 44.1	-2.8
KOGS				i		23 18 51.2	
KOGS				e		23 19 06.9	
KOGS				ePP	PP	23 22 01.5	+8.2
KOGS				eS	S	23 29 02.8	+2.9
TNS	Taunus Mts	81.80	333	eP	P	23 18 44.5	-2.4
	comp=Z,244nm,1.3s,baz=35,slow=5.3						
TNS				eL	L	23 58 29.9	
	comp=Z,144µm,19.1s						
SMTH	Samothraki Isl	81.87	317	P	P	23 18 51.7	+4.2
D41A	Chassel	81.88	33	IAMs_20	IAMs_20	00 01 09.7	
	comp=Z,18µm,19.0s						
DIVS	Divibare	81.93	322	⇑iP	P	23 18 45.0	-2.8
DIVS	Divibare	81.93	322	IAmb	IAmb	23 19 20.9	
	comp=Z,179nm,1.1s						
KALN	Kalnik	81.96	326	iP	P	23 18 44.6	-3.2
AHRW	Bad Neuenahr-A	82.01	333	eP	P	23 18 45.6	-2.3
	comp=Z,259nm,1.2s,baz=35,slow=5.3						
KAVA	Kavala	82.02	318	P	P	23 18 52.8	+4.6
NVR	Nevrokopi	82.09	318	P	P	23 18 47.5	-1.2
GROS	Grobnik	82.11	326	eP	P	23 18 46.2	-2.5
I37A	Lemond, Waseca	82.11	37	IAMs_20	IAMs_20	23 58 48.1	
	comp=Z,22µm,22.0s						
BNM	Barren Site	82.11	52	P	P	23 18 49.4	+0.3
PERS	Pernice	82.13	327	eP	P	23 18 46.5	-2.3
PERS				eS	S	23 29 07.2	+3.7
SOKA	Soboth	82.13	327	iP	P	23 18 46.6	-2.2
	comp=Z,209nm,0.8s,SNR=34						
WACR	West Acre	82.16	338	eP	P	23 18 47.9	-0.8
RJOB	Jochberg	82.20	329	eP	P	23 18 47.2	-2.0
	comp=Z,1µm,1.0s,baz=35,slow=5.3						
LBWR	Ladybower, Pea	82.21	340	eP	P	23 18 46.7	-2.3
L34A	Svendsen Farm,	82.21	40	IAMs_20	IAMs_20	00 01 26.2	
	comp=Z,22µm,18.0s						
MOSL	Moslavina	82.23	325	iP	P	23 18 46.3	-3.0
BEBN	Eben Emael	82.27	334	dP	P	23 18 47.0	-2.3
BEBN				dPcP	pP	23 18 51.7	-0.7
BEBN				dpP	sP	23 18 53.9	+0.3
BTNL	Ternell	82.30	334	dP	P	23 18 46.5	-3.0
BTNL				dPcP	pP	23 18 52.0	-0.6
BTNL				dpP	sP	23 18 54.4	+0.6
BTNL				dPP	PP	23 21 54.4	-2.9
MEM	Membach	82.32	334	dP	P	23 18 47.1	-2.5
MEM				dPcP	pP	23 18 51.2	-1.5
MEM				dpP	sP	23 18 54.2	+0.4
MEM				dPP	PP	23 21 54.6	-2.8
PTJ	Puntijarka	82.34	326	P	P	23 18 46.3	-3.6
319A	Douglas	82.35	55	IAmb	IAmb	23 19 06.7	
	comp=Z,254nm,1.1s						
PRK	Paraskevi	82.37	316	P	P	23 18 55.2	+5.1
BBLS	Lazići	82.38	323	⇑iP	P	23 18 48.0	-2.2
COWI	Conover	82.40	34	IAMs_20	IAMs_20	00 01 15.4	
	comp=Z,18µm,19.0s						
ZAG	Zagreb	82.40	326	⇑iP	P	23 18 54.2	+4.1
SRS	Serrai	82.40	318	P	P	23 18 54.6	+4.3
HAPS	Han Pijesak,Bl	82.43	323	⇑iP	P	23 18 47.9	-2.5
FUR	Furstenfeldbru	82.45	330	eP	P	23 18 48.2	-2.2
	comp=Z,557nm,1.0s,baz=35,slow=5.3						
FUR				eL	L	23 59 00.6	
	comp=Z,167µm,18.9s						
OBKA	Obir	82.47	327	iP	P	23 18 48.3	-2.3
	comp=Z,97nm,0.8s,SNR=11						
OBKA				eP	PP	23 21 56.9	-2.1
	comp=Z,82nm,1.1s						
LIA	Limnos Island	82.47	317	P	P	23 18 54.9	+4.3
BSTI	Sart Tilman	82.49	334	dP	P	23 18 48.2	-2.2
BSTI				dpP	pP	23 18 54.6	+1.0
121A	Cookes Peak, D	82.50	54	P	P	23 18 49.7	-1.5
	baz=313,SNR=13						
121A	Cookes Peak, D	82.50	54	IAmb	IAmb	23 19 07.9	
	comp=Z,191nm,1.2s						
KBA	Koelnbreinsper	82.51	328	iP	P	23 18 48.9	-2.1
	comp=Z,140nm,0.8s,SNR=28						
BHOU	Houvegnez	82.53	334	dP	P	23 18 48.1	-2.7
BHOU				dPcP	pP	23 18 53.0	-0.9
BHOU				dpP	sP	23 18 55.7	+0.7
TAU	Tasmania Unive	82.56	177	IAMs_20	IAMs_20	23 49 50.3	
	comp=Z,23µm,22.0s						
BLCB	Balcova	82.57	315	P	P	23 18 55.0	+3.9
N33A	J Bar K, Exete	82.57	42	IAMs_20	IAMs_20	23 57 35.0	
	comp=Z,25µm,22.0s						
G40A	Rib Lake	82.59	35	IAMs_20	IAMs_20	00 00 04.6	
	comp=Z,20µm,18.0s						
SIGR	SIGRI	82.61	316	P	P	23 18 55.5	+4.2
CRES	Cresnjev	82.63	326	⇑iP	P	23 18 48.3	-3.0
FETY	Fethiye	82.67	312	P	P	23 18 54.4	+2.6
STIP	Stip	82.68	320	iP	P	23 18 48.3	-3.4
CWF	Charnwood Fore	82.69	339	eP	P	23 18 49.5	-2.0
CWF				IAmb	IAmb	23 18 57.2	
	comp=Z,254nm,1.0s						
UCC	Uccle	82.70	335	dP	P	23 18 47.5	-4.0
UCC				dPcP	pP	23 18 52.0	-2.6
UCC				dpP	sP	23 18 54.7	-1.1
UCC	Uccle	82.70	335	IAmb	IAmb	23 19 03.8	
	comp=Z,314nm,1.5s						
BCLA	Clavier	82.71	334	dPcP	P	23 18 51.5	-0.2
BLY	Banja Luka	82.72	324	⇑iP	P	23 18 49.2	-2.6
KSL	Kastellorizon	82.73	312	P	P	23 18 49.5	-2.5
STU	Stuttgart	82.74	331	eP	P	23 18 49.4	-2.4
	comp=Z,396nm,0.9s,baz=35,slow=5.3						
SOH	Sokhos	82.74	318	P	P	23 18 56.2	+4.1
MYKA	Terra Mystica	82.75	328	iP	P	23 18 49.3	-2.8
	comp=Z,186nm,1.1s,SNR=16						
VAY	Valandovo	82.77	319	iP	P	23 18 49.9	-2.3
YER	Yerkesik	82.77	313	P	P	23 18 50.4	-1.9
CBKS	Cedar Bluff	82.78	45	P	P	23 18 50.9	-1.3
	baz=317,SNR=6.0						
CBKS	Cedar Bluff	82.78	45	IAmb	IAmb	23 19 07.6	
	comp=Z,296nm,1.3s						
CBKS				IAMs_20	IAMs_20	00 02 07.5	
	comp=Z,19µm,19.0s						
OUR	Ouranopolis	82.78	318	P	P	23 18 56.4	+4.2
OZLJ	Ozalj	82.79	326	iP	P	23 18 49.0	-3.1
PLE	Pljevlja	82.80	322	⇑iP	P	23 18 51.0	-1.4
BGES	Gesves	82.81	334	dP	P	23 18 50.0	-2.2
BGES				dPcP	pP	23 18 54.8	-0.5
BGES				dpP	sP	23 18 56.4	0.0
SKO	Skopje	82.84	320	iP	P	23 18 51.0	-1.6
LJU	Ljubljana	82.85	327	eP	P	23 18 49.7	-2.8
LJU				i		23 18 56.6	
LJU				ePP	PP	23 22 10.3	+8.3
LJU				eS	S	23 29 13.4	+2.7
LJU	Ljubljana	82.85	327	⇑iP	P	23 18 49.4	-3.1
IVA	Berane	82.91	322	eP	P	23 18 50.4	-2.6
RCHB	Rochefort	82.96	334	dP	P	23 18 50.3	-2.7
RCHB				dPcP	pP	23 18 55.0	-1.0
SNF	Seneffe	82.97	335	dP	P	23 18 50.3	-2.7
SNF				dpP	pP	23 18 57.5	+1.4
BMRD	Maredsous	82.99	335	dP	P	23 18 50.5	-2.6
BMRD				dPcP	pP	23 18 55.6	-0.6
BMRD				dpP	PcP	23 18 57.7	-0.1
WATA	Walderalm	83.01	329	iP	P	23 18 51.2	-2.3
	comp=Z,234nm,1.2s,SNR=18						
WATA				eP	PP	23 22 02.4	-1.0
	comp=Z,92nm,1.4s						
MGRS	Mrkonjic Grad	83.02	324	eP	P	23 18 51.0	-2.4
PLG	Polygyros	83.03	318	P	P	23 18 57.5	+3.9
HORT	Hortiatis	83.04	318	P	P	23 18 57.2	+3.5
WTTA	Wattenberg	83.05	329	iP	P	23 18 51.6	-2.1
	comp=Z,223nm,1.5s,SNR=16						
WTTA				eP	PP	23 22 03.1	-0.6
	comp=Z,101nm,1.3s						
WLF	Walferdange	83.07	333	dP	P	23 18 50.9	-2.7
WLF				dPcP	pP	23 18 56.0	-0.7
WLF				dpP	PcP	23 18 58.3	+0.1
WLF	Walferdange	83.07	333	IAmb	IAmb	23 19 31.4	
	comp=Z,170nm,1.1s						
WLF	Walferdange	83.07	333	eP	P	23 18 51.4	-2.1
	comp=Z,1µm,2.3s,baz=35,slow=5.3						
E43A	Lone Tree Farm	83.08	32	IAmb	IAmb	23 19 07.1	
	comp=Z,376nm,2.0s						
E43A				IAMs_20	IAMs_20	00 03 10.7	
	comp=Z,24µm,20.0s						
THE	Thessaloniki	83.08	319	P	P	23 18 57.4	+3.7
F42A	Maple Grove Fa	83.09	33	IAMs_20	IAMs_20	23 59 18.8	
	comp=Z,18µm,20.0s						
CHOS	Chios island	83.10	315	P	P	23 18 58.4	+4.4
KOME	Kolasin	83.11	322	⇑iP	P	23 18 51.5	-2.5
ABTA	Abfaltersbach	83.12	328	iP	P	23 18 51.0	-3.0
	comp=Z,133nm,1.0s,SNR=13						
UPM	Unac-Piva	83.12	323	eP	P	23 18 52.5	-1.7
UPM	Unac-Piva	83.12	323	⇑iP	P	23 18 51.7	-2.5
GRG	Griva	83.13	319	P	P	23 18 58.0	+4.0
CEY	Cerknica	83.14	327	⇑iP	P	23 18 46.9	-7.1
JAVS	Javornik	83.17	327	eP	P	23 18 50.8	-3.4
SMG	Samos	83.17	314	P	P	23 18 58.1	+3.8
MOTA	Moosalm	83.19	329	iP	P	23 18 52.2	-2.2
	comp=Z,297nm,1.0s,SNR=17						
MOTA				P	PP	23 22 03.6	-1.3
	comp=Z,96nm,1.2s						
RETA	Reutte	83.21	330	iP	P	23 18 52.3	-2.1
	comp=Z,401nm,1.3s,SNR=25						
DOU	Dourbes	83.23	335	dP	P	23 18 52.0	-2.3
DOU				dsP	pP	23 19 00.2	+2.8
PAIG	Paliouri	83.24	318	P	P	23 18 58.6	+4.0
SQTA	Sankt Quirin	83.25	329	iP	P	23 18 52.6	-2.1
	comp=Z,295nm,1.4s,SNR=14						
SQTA				eP	PP	23 22 04.1	-1.2
	comp=Z,107nm,1.5s						
UBR	Ueberruh	83.30	330	eP	P	23 18 52.3	-2.5
	comp=Z,2µm,3.2s,baz=35,slow=5.3						
UBR				eL	L	23 59 27.9	
	comp=Z,143µm,18.8s						
HIZ	Hauiti	83.30	155	P	P	23 18 53.5	-1.1
HLM1	Long Mynd	83.31	340	eP	P	23 18 54.2	-0.6
BODT	Bodrum	83.37	314	P	P	23 18 50.1	-5.2
NKY	Niksic	83.38	322	eP	P	23 18 53.1	-2.3
N35A	Tabor	83.40	41	IAMs_20	IAMs_20	00 02 05.7	
	comp=Z,23µm,18.0s						
BFO	Black Forest	83.42	332	P	P	23 18 53.1	-2.4
BFO				pmax	pmax		
	comp=Z,1µm,2.0s						
BFO	Black Forest	83.42	332	P	P	23 18 53.1	-2.4
BFO	Black Forest	83.42	332	eP	P	23 18 53.0	-2.5
	comp=Z,975nm,2.0s,baz=35,slow=5.3						
BFO				eL	L	23 59 16.6	
	comp=Z,61µm,19.6s						
NKME	Niksic	83.44	322	eP	P	23 18 53.0	-2.6
TRI	Trieste	83.44	327	IAmb	IAmb	23 19 06.8	
	comp=Z,256nm,1.0s						
RIY	Rijeka	83.44	326	P	P	23 18 52.0	-3.6
RIY	Rijeka	83.44	326	⇑iP	P	23 18 59.4	+3.9
K38A	Parkersburg	83.45	38	IAMs_20	IAMs_20	00 00 35.7	
	comp=Z,20µm,20.0s						
I40A	Norwalk	83.48	36	IAMs_20	IAMs_20	00 00 21.3	
	comp=Z,19µm,19.0s						
ARG	Arkhangelos	83.51	312	P	P	23 18 54.4	-1.7
UDBI	Udbina	83.52	325	iP	P	23 18 56.0	-0.1
BRY	Bratogost	83.53	323	⇑iP	P	23 18 52.7	-3.5
BRY	Bratogost	83.53	323	eP	P	23 18 52.9	-3.3
PHP	Peshkopia	83.55	321	P	P	23 18 53.8	-2.4
PDG	Podgorica	83.55	322	⇓P	P	23 18 55.4	-0.8
PDG	Podgorica	83.55	322	⇑iP	P	23 18 53.4	-2.7
TTG	Podgorica	83.55	322	⇑iP	P	23 18 53.5	-2.6
FETA	Feichten	83.60	329	iP	P	23 18 54.1	-2.4
	comp=Z,238nm,1.0s,SNR=19						
FETA				eP	PP	23 22 06.7	-1.5
	comp=Z,61nm,1.1s						
MXZ	Matakaoa Point	83.60	153	IAMs_20	IAMs_20	23 51 36.1	
	comp=Z,25µm,22.0s						
R32A	Long Quarter,	83.61	44	IAMs_20	IAMs_20	00 00 54.6	
	comp=Z,22µm,20.0s						
CEME	Cevo	83.62	322	⇑iP	P	23 18 54.0	-2.6
KIJV	Kijevo	83.65	324	iP	P	23 18 53.8	-2.8
DAVA	Damuels	83.71	330	iP	P	23 18 55.1	-2.0
	comp=Z,378nm,1.1s,SNR=27						
MATQ	Matagami	83.71	25	P	P	23 18 54.2	-2.7
	baz=330,SNR=9.4						
RICI	Ricice	83.72	324	P	P	23 18 54.0	-3.0
LIT	Litokhoron	83.72	318	P	P	23 19 00.7	+3.6
TREB	Trebinje	83.76	323	eP	P	23 18 53.6	-3.6
FNA	Florina	83.77	320	P	P	23 19 00.7	+3.3
FNA	Florina	83.77	320	IAmb	IAmb	23 19 03.8	
	comp=Z,186nm,1.0s						
DRME	Dracevica, Mon	83.77	322	⇑iP	P	23 18 54.7	-2.6
DRME	Dracevica, Mon	83.77	322	⇑iP	P	23 18 55.0	-2.3
STRD	Stroud	83.78	339	eP	P	23 18 56.4	-0.7
SCIA	State Center	83.80	39	P	P	23 18 57.2	-0.3
	baz=320,SNR=11						
SCIA	State Center	83.80	39	P	P	23 18 56.1	-1.4
SCIA				IAmb	IAmb	23 19 28.6	
	comp=Z,234nm,1.1s						
SCIA				IAMs_20	IAMs_20	00 01 12.2	
	comp=Z,16µm,19.0s						
OHR	Ohrid	83.81	320	iP	P	23 18 54.8	-2.8
MCH1	Michaelchurch	83.81	340	eP	P	23 18 55.5	-1.8
URZ	Urewera	83.81	154	P	P	23 18 56.4	-0.8
	comp=Z,22nm,0.9s,baz=302,slow=19,SNR=2.9						
URZ	Urewera	83.81	154	IAMs_20	IAMs_20	23 53 35.5	
	comp=Z,21µm,20.0s						
BUM	Brajici-Budva	83.82	322	⇑iP	P	23 18 55.5	-2.2
NVLJ	Novalja	83.88	326	iP	P	23 18 54.6	-3.1
HMNX	Herstmonceux	83.89	337	eP	P	23 18 57.1	-0.6
HMNX				IAmb	IAmb	23 19 04.0	
	comp=Z,540nm,0.9s						
DBRK	Dubrovnik	83.89	323	iP	P	23 18 53.3	-4.6
HCY	Herceg Novi	83.90	322	eP	P	23 18 54.3	-3.7
HCY	Herceg Novi	83.90	322	⇑iP	P	23 18 56.2	-1.8
XOR	Xorichti	83.91	318	P	P	23 19 01.4	+3.3
ULC	Ulcinj	83.92	322	⇑iP	P	23 18 55.9	-2.2
SWN1	Swindon	83.92	339	eP	P	23 18 56.9	-1.0
MAKA	Makarska	83.93	324	iP	P	23 18 54.8	-3.2
KZN	Kozani	83.93	319	P	P	23 19 01.6	+3.3
NEO	Neokhori	83.93	317	P	P	23 19 01.3	+3.1
WOL	Wolverton	83.94	338	eP	P	23 18 56.0	-2.0
STON	Ston	83.94	323	iP	P	23 18 52.3	-5.8
ECH	Echery	83.94	332	IAmb	IAmb	23 19 04.9	
	comp=Z,196nm,1.0s						
KYMI	Kymi, Euboea I	83.97	317	P	P	23 19 02.0	+3.6
CTI	Castel Tesino	84.03	328	IAmb	IAmb	23 19 09.9	
	comp=Z,227nm,1.0s						
MORI	Morici	84.07	325	iP	P	23 18 55.6	-3.1
TIR	Tirane	84.09	321	P	P	23 19 03.0	+4.1
TIR	Tirane	84.09	321	⇓P	P	23 18 58.4	-0.5
TIR	Tirane	84.09	321	P	P	23 18 56.3	-2.6
TIR				pmax	pmax		
	comp=Z,477nm,1.1s						
TIR				MLR	MLR		
	comp=Z,176µm,18.0s						
TIR	Tirane	84.09	321	P	P	23 18 56.3	-2.6
E46A	Sault Ste Mari	84.17	31	IAMs_20	IAMs_20	00 03 05.9	
	comp=Z,28µm,18.0s						
KBN	Korca	84.18	320	P	P	23 18 57.7	-1.8
NEST	Nestorio	84.21	319	P	P	23 18 57.9	-1.8
EREA	Eretria	84.22	316	P	P	23 19 03.1	+3.4
KSU1	Kansas State U	84.22	43	P	P	23 18 59.4	-0.2
	baz=318,SNR=8.4						
KSU1	Kansas State U	84.22	43	IAmb	IAmb	23 19 15.5	
	comp=Z,134nm,0.8s						
KSU1	Kansas State U	84.22	43	IAMs_20	IAMs_20	23 59 02.6	
	comp=Z,17µm,21.0s						
I42A	Draeger Farm,	84.24	35	IAMs_20	IAMs_20	00 03 05.4	
	comp=Z,21µm,20.0s						
DUGI	Dugi Otok	84.25	325	iP	P	23 18 56.6	-3.1
ZIRJ	Zirje	84.26	325	iP	P	23 18 59.5	-0.3
HVAR	Hvar	84.28	324	iP	P	23 18 55.5	-4.4
H43A	Windswept, Lux	84.28	34	IAMs_20	IAMs_20	00 04 05.7	
	comp=Z,22µm,20.0s						
PENT	Pentalofos	84.33	319	P	P	23 19 03.9	+3.6
APE	Apeiranthos	84.35	315	⇑P	P	23 19 00.3	-0.1
THL	Klokotos Trika	84.36	318	P	P	23 19 03.4	+3.1
KPRO	Kipourio	84.40	319	P	P	23 19 02.1	+1.5
JFWS	Jewell Farm	84.41	36	P	P	23 18 58.8	-1.8
	baz=322						
JFWS	Jewell Farm	84.41	36	IAMs_20	IAMs_20	00 01 51.0	
	comp=Z,22µm,18.0s						
BKZ	Black Stump Fm	84.43	155	IAMs_20	IAMs_20	23 51 57.2	
	comp=Z,32µm,22.0s						
DION	Dionisos Attik	84.47	316	P	P	23 19 03.9	+2.9
AMTX	Amarillo	84.52	48	P	P	23 18 59.7	-1.6
	baz=316						
LKR	Lokris	84.54	317	P	P	23 18 57.2	-4.0
LSQQ	Lebel-sur-Quev	84.54	25	P	P	23 18 59.6	-1.4
	baz=330						
KARP	Karpathos	84.54	313	P	P	23 19 04.5	+3.1
MNTX	Cornudas Mount	84.56	53	P	P	23 19 00.3	-1.2
	baz=314,SNR=30						
MNTX	Cornudas Mount	84.56	53	IAmb	IAmb	23 19 18.3	
	comp=Z,114nm,1.0s						
AGG	Agios Georgios	84.61	318	P	P	23 18 57.8	-3.9
L40A	Anamosa	84.63	37	IAmb	IAmb	23 19 17.2	
	comp=Z,180nm,1.1s						
L40A				IAMs_20	IAMs_20	00 04 22.4	
	comp=Z,25µm,19.0s						
ATHU	Athens Univers	84.63	316	P	P	23 19 04.7	+2.9
N38A	Joes South For	84.64	39	IAmb	IAmb	23 19 18.2	
	comp=Z,168nm,0.8s						
N38A				IAMs_20	IAMs_20	23 59 56.5	
	comp=Z,20µm,22.0s						
ATH	Athens Observa	84.66	316	P	P	23 19 04.4	+2.5
G45A	Suttons Bay	84.71	32	IAMs_20	IAMs_20	00 04 06.5	
	comp=Z,26µm,19.0s						
QRZ	Quartz Range	84.72	158	IAMs_20	IAMs_20	23 51 17.6	
	comp=Z,36µm,22.0s						
PPT	Papeete	84.73	118	LR	LR	23 47 44.5	
	comp=Z,10µm,21.5s,baz=300,slow=29						
PPT2	Papeete2	84.75	118	eS	S	23 29 30.1	-0.4
	comp=Z,56µm,34.0s						
PPT2	Papeete2	84.75	118	eLR	LR	23 45 28.6	
	comp=Z,62µm,27.0s,baz=315						
PPT2	Papeete2	84.75	118	eT	T	00 51 17.8	
	comp=Z,38nm,0.3s						
PAE	Paea	84.80	118	eT	T	00 51 20.7	
	comp=Z,10nm,0.4s						
KAN12	Harper NE Stat	84.82	45	IAmb	IAmb	23 19 18.6	
	comp=Z,255nm,1.2s						
TIAR	Tiarei	84.88	118	eT	T	00 51 27.0	
	comp=Z,16nm,0.3s						
KAN08	Anthony NE Sta	84.89	45	P	P	23 19 02.0	-1.1
KAN08				IAmb	IAmb	23 19 18.9	
	comp=Z,206nm,1.2s						
U32A	Winter Ranch,	84.94	46	IAMs_20	IAMs_20	00 03 43.1	
	comp=Z,22µm,18.0s						
EVR	Evrytania	84.95	318	P	P	23 19 06.7	+3.2
KS21	Milan North St	85.01	44	IAMs_20	IAMs_20	00 01 48.6	
	comp=Z,21µm,19.0s						
KAN01	Argonia South	85.05	45	IAmb	IAmb	23 19 19.9	
	comp=Z,210nm,1.1s						
TVO	Taravao	85.11	118	eT	T	00 51 43.6	
	comp=Z,3.8nm,0.3s						
HTL	Hartland	85.11	340	eP	P	23 19 03.2	-0.7
HTL				IAmb	IAmb	23 19 11.5	
	comp=Z,387nm,1.1s						
SRN	Sarande	85.14	320	P	P	23 19 07.9	+3.7
VLDQ	Val d'Or	85.20	26	IAmb	IAmb	23 19 18.6	
	comp=Z,224nm,1.1s						
IGT	Igoumenitsa	85.24	319	P	P	23 19 08.4	+3.6
EFP	Efpalio	85.27	318	P	P	23 19 01.1	-3.8
I45A	Fountain	85.28	33	IAMs_20	IAMs_20	00 04 04.7	
	comp=Z,30µm,18.0s						
GLMI	Grayling	85.31	32	P	P	23 19 03.5	-1.5
	baz=325,SNR=10						
GLMI	Grayling	85.31	32	IAMs_20	IAMs_20	00 02 51.3	
	comp=Z,27µm,19.0s						
NNZ	Nelson	85.33	158	P	P	23 19 03.3	-1.5
NNZ				IAmb	IAmb	23 19 41.5	
	comp=Z,298nm,1.7s						
NNZ				IAMs_20	IAMs_20	23 51 58.8	
	comp=Z,21µm,21.0s						

KEK	Kerkira	85.37	320	P	P	23 19 08.9	+3.5
P38A	Dawn	85.39	40	IAmb	IAmb	23 19 36.5	
	comp=Z,157nm,1.1s						
P38A				IAMs_20	IAMs_20	00 02 46.4	
	comp=Z,23µm,20.0s						
L42A	Oliver, Polo	85.39	37	IAMs_20	IAMs_20	00 01 14.0	
	comp=Z,25µm,19.0s						
KRND	KRANIDI	85.40	316	P	P	23 19 07.4	+1.8
CROK	Carrier	85.41	45	IAMs_20	IAMs_20	00 02 05.3	
	comp=Z,27µm,21.0s						
K43A	Burlington	85.44	35	IAmb	IAmb	23 19 21.2	
	comp=Z,172nm,1.1s						
K43A				IAMs_20	IAMs_20	00 04 33.7	
	comp=Z,20µm,19.0s						
SENIN	Lac Senin/Sane	85.46	331	IAmb	IAmb	23 19 18.1	
	comp=Z,248nm,1.1s						
DYA	Yadsworthy	85.48	340	eP	P	23 19 04.1	-1.6
DYA				IAmb	IAmb	23 19 12.4	
	comp=Z,554nm,1.3s						
PDO	Prodromos	85.52	318	P	P	23 19 09.8	+3.6
NPS	Neapolis	85.61	313	P	P	23 19 09.6	+2.8
LKD2	Lefkada island	85.64	319	P	P	23 19 10.6	+3.8
TUWZ	Tuamarina	85.69	157	P	P	23 19 04.9	-1.7
THZ	Tophouse	85.69	158	P	P	23 19 05.5	-1.2
THZ				IAmb	IAmb	23 19 45.3	
	comp=Z,166nm,1.5s						
THZ				IAMs_20	IAMs_20	23 52 09.4	
	comp=Z,31µm,22.0s						
BFZ	Birch Farm	85.72	155	IAMs_20	IAMs_20	23 53 44.3	
	comp=Z,19µm,21.0s						
AXS	Araxos	85.72	318	P	P	23 19 10.7	+3.5
LAST	Lasithi	85.76	313	P	P	23 19 11.2	+3.6
EVGI	Lefkada island	85.77	319	P	P	23 19 07.1	-0.3
RLS	Riolos of Patr	85.78	318	P	P	23 19 11.1	+3.6
SNZO	South Karori	85.81	157	IAMs_20	IAMs_20	23 51 53.6	
	comp=Z,35µm,22.0s						
VLX	Vlachokerasia	85.82	317	P	P	23 19 10.6	+2.8
N41A	Harden Midland	85.86	38	IAMs_20	IAMs_20	00 04 15.4	
	comp=Z,22µm,18.0s						
T35A	Sooner Cattle	85.90	44	IAmb	IAmb	23 19 24.2	
	comp=Z,230nm,1.1s						
T35A				IAMs_20	IAMs_20	23 59 55.1	
	comp=Z,16µm,21.0s						
MEH	Mehetia	85.98	117	eT	T	00 52 48.6	
	comp=Z,217nm,0.3s						
L44A	Lake County Fo	86.05	35	IAMs_20	IAMs_20	00 05 10.8	
	comp=Z,16µm,20.0s						
JSA	Saint Aubin	86.12	338	eP	P	23 19 07.2	-1.7
JSA				IAmb	IAmb	23 19 15.2	
	comp=Z,446nm,1.1s						
KEF5	Kardakata, Kep	86.12	318	P	P	23 19 12.3	+3.1
VLS	Valsamata	86.14	318	P	P	23 19 11.0	+1.7
MATE	Matera	86.14	322	⇓P	P	23 19 08.2	-1.0
KEF4	Livadi, Kephal	86.16	318	P	P	23 19 13.0	+3.6
PSDA	Pessada-Kefalo	86.19	318	P	P	23 19 09.9	+0.4
P40A	Paris	86.20	40	IAmb	IAmb	23 19 41.1	
	comp=Z,233nm,1.1s						
P40A				IAMs_20	IAMs_20	00 01 04.6	
	comp=Z,20µm,22.0s						
ITM	Ithomi	86.20	317	P	P	23 19 12.8	+3.2
PLWZ	Palliser	86.21	156	P	P	23 19 08.1	-1.2
OK029	Liberty Lake	86.22	45	IAmb	IAmb	23 19 24.3	
	comp=Z,144nm,0.9s						
BCOK	Bluff Creek, N	86.24	45	IAMs_20	IAMs_20	23 59 30.3	
	comp=Z,36µm,22.0s						
KEF3	Kipouria, Keph	86.24	318	P	P	23 19 13.0	+3.2
SIVA	Sivas	86.24	314	P	P	23 19 13.7	+3.9
OSSC	Osservatorio P	86.26	327	IAmb	IAmb	23 19 58.0	
	comp=Z,250nm,1.3s						
WMOK	Wichita Mounta	86.27	47	P	P	23 19 08.0	-2.0
	baz=317,SNR=14						
WMOK	Wichita Mounta	86.27	47	IAmb	IAmb	23 19 26.0	
	comp=Z,190nm,1.4s						
WMOK	Wichita Mounta	86.27	47	IAMs_20	IAMs_20	00 04 35.2	
	comp=Z,15µm,19.0s						
KTHA	Kythira Island	86.28	316	P	P	23 19 12.5	+2.5
AQU	L'Aquila	86.29	325	⇑iP	P	23 19 06.8	-3.2
VAM	Vamos	86.29	314	P	P	23 19 13.9	+3.8
KTHR	Kythira	86.31	316	P	P	23 19 12.7	+2.5
QUOK	Quay	86.35	45	IAmb	IAmb	23 19 26.3	
	comp=Z,233nm,1.3s						
IMMV	Iera Moni Meta	86.37	314	P	P	23 19 13.1	+2.6
OK031	S. Brethren Rd	86.44	45	IAmb	IAmb	23 19 26.9	
	comp=Z,206nm,1.2s						
OK031				IAMs_20	IAMs_20	00 02 43.6	
	comp=Z,19µm,20.0s						
OK025	Westminster Rd	86.44	45	IAMs_20	IAMs_20	23 59 46.7	
	comp=Z,18µm,22.0s						
ANKY	Antikythira Is	86.44	315	P	P	23 19 10.3	-0.5
LTZ	Lake Taylor	86.46	159	IAMs_20	IAMs_20	23 58 09.5	
	comp=Z,18µm,20.0s						
KHZ	Kahutara	86.48	158	P	P	23 19 11.1	+0.7
OK030	Cody Creek RV	86.49	45	P	P	23 19 11.1	0.0
OK030				IAmb	IAmb	23 19 35.9	
	comp=Z,173nm,1.3s						
OK030				IAMs_20	IAMs_20	00 02 44.8	
	comp=Z,18µm,19.0s						
OKCFA	Oklahoma City	86.50	45	IAMs_20	IAMs_20	00 04 29.4	
	comp=Z,15µm,18.0s						
PYL	PYLOS	86.51	317	P	P	23 19 13.7	+2.6
FOZ	Fox Glacier	86.51	161	IAMs_20	IAMs_20	23 55 47.7	
	comp=Z,18µm,20.0s						
J47A	Sunmer	86.53	33	IAmb	IAmb	23 19 24.2	
	comp=Z,215nm,1.1s						
J47A				IAMs_20	IAMs_20	00 04 41.6	
	comp=Z,17µm,20.0s						
M44A	Midewin, Midew	86.62	36	IAmb	IAmb	23 19 27.4	
	comp=Z,249nm,1.1s						
M44A				IAMs_20	IAMs_20	00 02 34.4	
	comp=Z,19µm,19.0s						
HDIL	Hopedale	86.71	37	P	P	23 19 10.5	-1.5
	baz=323,SNR=8.7						
HDIL	Hopedale	86.71	37	IAmb	IAmb	23 19 28.0	
	comp=Z,180nm,0.9s						
HDIL				IAMs_20	IAMs_20	00 04 54.9	
	comp=Z,25µm,20.0s						
LATE	Laterza	86.77	326	IAmb	IAmb	23 19 24.6	
	comp=Z,128nm,1.2s						
GVD	Gavdhos	86.77	314	P	P	23 19 16.2	+3.7
BNI	Bardonecchia	86.80	331	IAmb	IAmb	23 19 43.6	
	comp=Z,161nm,1.2s						
D55A	Sainte-Anne-du	86.81	25	P	P	23 19 10.3	-2.1
	baz=332,SNR=6.7						
ALGO	Algonquin Park	86.86	27	P	P	23 19 09.7	-2.9
	baz=330,SNR=5.3						
L46A	Eue Claire	86.89	35	IAMs_20	IAMs_20	00 05 47.0	
	comp=Z,25µm,19.0s						
OXZ	Oxford	86.90	159	IAmb	IAmb	23 19 34.2	
	comp=Z,165nm,1.1s						
OXZ				IAMs_20	IAMs_20	23 54 59.2	
	comp=Z,23µm,21.0s						
S39A	Bolivar	86.97	41	IAmb	IAmb	23 19 27.8	
	comp=Z,100nm,1.0s						
S39A				IAMs_20	IAMs_20	00 03 41.4	
	comp=Z,22µm,20.0s						
RPZ	Rata Peaks	87.00	160	P	P	23 19 10.0	-3.0
	comp=Z,3.3nm,0.3s,baz=333,slow=11,SNR=1.6						
RPZ	Rata Peaks	87.00	160	IAMs_20	IAMs_20	23 55 10.7	
	comp=Z,25µm,21.0s						
D56A	ZEC Mazanza, M	87.02	25	P	P	23 19 11.1	-2.4
	baz=332,SNR=18						
TUL1	Leonard	87.03	44	P	P	23 19 13.1	-0.6
	baz=319,SNR=8.5						
TUL1	Leonard	87.03	44	IAMs_20	IAMs_20	00 00 30.3	
	comp=Z,18µm,21.0s						
R40A	Maddies Statio	87.05	40	IAMs_20	IAMs_20	00 04 26.2	
	comp=Z,17µm,20.0s						
TX32	Lajitas Array	87.26	53	IAmb	IAmb	23 19 31.0	
	comp=Z,194nm,1.4s						
TXAR	Lajitas Array	87.26	53	P	P	23 19 13.5	-1.6
	comp=Z,3.1nm,0.7s,baz=302,slow=2.8,SNR=11						
TXAR				PKKPbc	PKKPbc	23 37 07.1	+2.9
	comp=Z,1.4nm,0.9s,baz=156,slow=6.0,SNR=3.5						
TXAR	Lajitas Array	87.26	53	P	P	23 19 13.5	-1.6
TXAR	Lajitas Array	87.26	53	P	P	23 19 12.5	-2.6
TIP	Timpagrande	87.27	321	⇑P	P	23 19 14.8	-0.1
ABTX	Abilene, Hawle	87.32	49	P	P	23 19 14.6	-0.6
	baz=317,SNR=11						
ABTX	Abilene, Hawle	87.32	49	IAmb	IAmb	23 19 31.3	
	comp=Z,248nm,1.2s						
G54A	Lake Saint Pet	87.32	28	P	P	23 19 16.5	+1.5
	baz=330,SNR=5.9						
P43A	Skaggs, Pawnee	87.33	38	IAmb	IAmb	23 20 03.7	
	comp=Z,126nm,1.1s						
P43A				IAMs_20	IAMs_20	00 06 04.9	
	comp=Z,25µm,18.0s						
E56A	St. Veronique	87.37	25	P	P	23 19 13.5	-1.6
	baz=332,SNR=7.7						
U38A	Gravette	87.38	43	IAMs_20	IAMs_20	00 04 15.3	
	comp=Z,20µm,18.0s						
SSB	Saint Sauveur	87.39	332	P	P	23 19 13.2	-2.1
SSB				pmax	pmax		
	comp=Z,213nm,1.3s						
SSB				MLR	MLR		
	comp=Z,77µm,21.0s						
SSB	Saint Sauveur	87.39	332	P	P	23 19 13.2	-2.1
SSB				IAmb	IAmb	23 19 27.9	
	comp=Z,214nm,1.3s						
LBZ	Lake Benmore	87.41	161	IAmb	IAmb	23 19 37.5	
	comp=Z,108nm,1.0s						
LBZ				IAMs_20	IAMs_20	23 53 16.3	
	comp=Z,20µm,20.0s						
O44A	Mansfield	87.41	37	IAMs_20	IAMs_20	00 03 52.5	
	comp=Z,22µm,19.0s						
WKZ	Wanaka	87.53	162	IAMs_20	IAMs_20	23 52 22.6	
	comp=Z,30µm,22.0s						
D58A	Chemin du LacG	87.57	24	P	P	23 19 17.0	+0.9
	baz=333,SNR=8.2						
I51A	Listowel	87.59	30	P	P	23 19 15.0	-1.3
	baz=328,SNR=6.1						
HHAR	Hobbs	87.73	43	IAmb	IAmb	23 19 32.5	
	comp=Z,96nm,1.1s						
HHAR				IAMs_20	IAMs_20	00 01 42.6	
	comp=Z,18µm,22.0s						
CCM	Cathedral Cave	87.74	40	P	P	23 19 14.7	-2.4
	baz=322						
CCM	Cathedral Cave	87.74	40	P	P	23 19 13.8	-3.2
CCM				pmax	pmax		
	comp=Z,347nm,1.4s						
CCM				MLR	MLR		
	comp=Z,16µm,19.0s						
CCM	Cathedral Cave	87.74	40	P	P	23 19 13.8	-3.2
CCM	Cathedral Cave	87.74	40	IAMs_20	IAMs_20	00 01 52.4	
	comp=Z,15µm,19.0s						
L48A	N Adams	87.75	33	IAMs_20	IAMs_20	00 05 39.1	
	comp=Z,31µm,19.0s						
SLM	Saint Louis	87.78	39	IAMs_20	IAMs_20	00 03 33.3	
	comp=Z,18µm,19.0s						
E57A	Chemin Saint G	87.78	25	P	P	23 19 15.0	-2.2
	baz=332,SNR=8.1						
AAM	Ann Arbor	87.78	33	P	P	23 19 15.8	-1.4
	baz=326						
AAM	Ann Arbor	87.78	33	IAMs_20	IAMs_20	00 05 19.8	
	comp=Z,17µm,19.0s						
K50A	Casco	87.81	32	IAMs_20	IAMs_20	00 04 09.6	
	comp=Z,28µm,19.0s						
MLZ	Mavora Lakes	87.83	163	P	P	23 19 15.9	-1.2
MLZ				IAMs_20	IAMs_20	23 55 34.4	
	comp=Z,21µm,21.0s						
H53A	Bobcaygeon	87.85	28	P	P	23 19 16.2	-1.3
	baz=329						
SFIN	Lafayette	87.86	36	P	P	23 19 15.7	-1.9
	baz=324,SNR=11						
SFIN	Lafayette	87.86	36	IAmb	IAmb	23 19 30.3	
	comp=Z,126nm,1.1s						
SFIN				IAMs_20	IAMs_20	00 03 22.2	
	comp=Z,24µm,19.0s						
MGMO	Mountain Grove	87.92	41	IAmb	IAmb	23 19 31.8	
	comp=Z,92nm,1.1s						
MGMO				IAMs_20	IAMs_20	00 04 46.6	
	comp=Z,22µm,20.0s						
D59A	Saint-Raymond	87.97	23	P	P	23 19 16.6	-1.4
	baz=334						
PLVO	Plevna	87.99	27	IAmb	IAmb	23 19 30.5	
	comp=Z,96nm,1.2s						
N47A	Urbana	88.08	35	IAMs_20	IAMs_20	00 06 50.4	
	comp=Z,27µm,18.0s						
E58A	La Victoria	88.09	24	P	P	23 19 19.6	+1.0
	baz=333,SNR=11						
F57A	Harrington	88.13	25	P	P	23 19 16.6	-2.2
	baz=332						
ODZ	Otahua Downs	88.14	161	IAMs_20	IAMs_20	23 52 33.7	
	comp=Z,24µm,22.0s						
Q44A	Meyer Farm, Va	88.15	38	IAMs_20	IAMs_20	00 06 29.6	
	comp=Z,20µm,18.0s						
Z35A	Perchaven, San	88.16	47	IAMs_20	IAMs_20	00 04 19.3	
	comp=Z,17µm,20.0s						
FVM	French Village	88.19	40	IAmb	IAmb	23 19 35.2	
	comp=Z,105nm,1.1s						
FVM				IAMs_20	IAMs_20	00 06 13.7	
	comp=Z,18µm,18.0s						
E59A	St. Maurice	88.23	24	P	P	23 19 18.5	-0.7
	baz=334						
U40A	Yellville	88.24	42	P	P	23 19 17.2	-2.3
	baz=321,SNR=32						
U40A	Yellville	88.24	42	IAmb	IAmb	23 19 35.1	
	comp=Z,181nm,1.0s						
U40A				IAMs_20	IAMs_20	00 01 42.9	
	comp=Z,18µm,21.0s						
DELO	Deloro Mine	88.25	28	P	P	23 19 17.6	-1.8
DELO				IAmb	IAmb	23 19 34.5	
	comp=Z,101nm,1.1s						
X37A	Clayton	88.25	45	IAmb	IAmb	23 19 46.6	
	comp=Z,203nm,1.6s						
X37A				IAMs_20	IAMs_20	00 01 21.6	
	comp=Z,20µm,22.0s						
D61A	St Aubert, Com	88.28	22	P	P	23 19 19.8	+0.3
	baz=335,SNR=5.1						
WHZ	Wether Hill Ro	88.29	163	IAMs_20	IAMs_20	23 55 48.5	
	comp=Z,16µm,20.0s						
D60A	Saint Jean D'O	88.33	23	P	P	23 19 22.1	+2.4
	baz=335,SNR=9.9						
F58A	St-Lin Laurent	88.37	25	P	P	23 19 23.0	+3.1
	baz=333						
P46A	Rosedale	88.42	37	IAmb	IAmb	23 19 35.6	
	comp=Z,159nm,0.9s						
P46A				IAMs_20	IAMs_20	00 03 41.1	
	comp=Z,21µm,18.0s						
T42A	Van Buren	88.61	41	IAmb	IAmb	23 19 37.0	
	comp=Z,117nm,1.1s						
T42A				IAMs_20	IAMs_20	00 02 01.3	
	comp=Z,14µm,20.0s						
W39A	Magazine	88.64	43	P	P	23 19 24.2	+2.8
	baz=320						
W39A	Magazine	88.64	43	IAMs_20	IAMs_20	00 05 05.8	
	comp=Z,25µm,18.0s						
G57A	Newington	88.66	26	P	P	23 19 24.2	+2.9
	baz=332,SNR=9.2						
E60A	Ste Agathe de	88.66	23	P	P	23 19 23.8	+2.5
	baz=334						
N49A	Columbus Grove	88.70	34	IAmb	IAmb	23 19 37.0	
	comp=Z,190nm,1.1s						
N49A				IAMs_20	IAMs_20	00 06 10.2	
	comp=Z,27µm,19.0s						
F59A	Saint Guilaume	88.71	24	P	P	23 19 23.9	+2.4
	baz=333						
OLIL	Olney	88.72	38	IAMs_20	IAMs_20	00 04 45.1	
	comp=Z,21µm,18.0s						
JCT	Junction City	88.78	50	P	P	23 19 21.4	-0.8
	baz=317						
M50A	Fremont	88.78	33	IAMs_20	IAMs_20	00 05 21.3	
	comp=Z,17µm,19.0s						
TBI	Tubuai	88.86	122	eS	S	23 30 08.2	-1.8
	comp=Z,23µm,29.5s						
TBI	Tubuai	88.86	122	eLR	LR	23 47 22.2	
	comp=Z,39µm,31.5s,baz=313						
TBI	Tubuai	88.86	122	eT	T	00 56 27.0	
	comp=Z,173nm,0.3s						
F60A	Warwick	88.87	24	P	P	23 19 25.8	+3.6
	baz=334						
E61A	Lac Etchemin	88.89	23	P	P	23 19 26.7	+4.3
	baz=335						
G58A	Ormstown	88.93	25	P	P	23 19 25.2	+2.7
	baz=332						
J54A	Appleton	88.95	29	IAMs_20	IAMs_20	00 05 25.3	
	comp=Z,27µm,18.0s						
FCAR	Ozark Folk Cen	88.97	42	IAMs_20	IAMs_20	00 04 54.4	
	comp=Z,18µm,19.0s						
PECO	Prince Edward	88.98	28	IAmb	IAmb	23 19 38.0	
	comp=Z,106nm,1.2s						
S44A	Carbondale	88.99	39	IAmb	IAmb	23 19 38.0	
	comp=Z,156nm,0.9s						
S44A				IAMs_20	IAMs_20	00 07 03.1	
	comp=Z,23µm,20.0s						
SIUC	Southern Illin	88.99	39	IAMs_20	IAMs_20	00 06 53.6	
	comp=Z,25µm,20.0s						
D63A	Stockholm	89.02	21	P	P	23 19 21.8	-1.1
	baz=337						
WHTX	Lake Whitney,	89.03	48	P	P	23 19 22.6	-0.7
	baz=318						
WHTX	Lake Whitney,	89.03	48	IAMs_20	IAMs_20	00 05 27.6	
	comp=Z,16µm,20.0s						
H57A	Richville	89.08	27	P	P	23 19 25.0	+1.7
	baz=332,SNR=8.7						
BLO	Bloomington	89.09	36	P	P	23 19 22.4	-1.0
BLO				pmax	pmax		
	comp=Z,132nm,1.2s						
BLO				MLR	MLR		
	comp=Z,22µm,20.0s						
BLO	Bloomington	89.09	36	P	P	23 19 22.4	-1.0
BLO				IAmb	IAmb	23 19 39.6	
	comp=Z,132nm,1.1s						
BLO				IAMs_20	IAMs_20	00 03 26.9	
	comp=Z,22µm,20.0s						
PBMO	Poplar Bluff	89.14	40	IAmb	IAmb	23 19 39.1	
	comp=Z,178nm,1.1s						
PBMO				IAMs_20	IAMs_20	00 05 59.5	
	comp=Z,17µm,19.0s						
F61A	St Evariste	89.15	23	P	P	23 19 23.6	0.0
	baz=335						
LONY	Lake Ozonia	89.22	26	P	P	23 19 24.0	0.0
	baz=332						
O49A	Covington	89.24	34	IAMs_20	IAMs_20	00 05 48.5	
	comp=Z,22µm,18.0s						
MIAR	Mount Ida	89.25	44	P	P	23 19 22.4	-1.8
	baz=320,SNR=7.9						
MIAR	Mount Ida	89.25	44	IAmb	IAmb	23 19 40.3	
	comp=Z,283nm,1.6s						
MIAR				IAMs_20	IAMs_20	00 05 26.8	
	comp=Z,21µm,18.0s						
J55A	Hilton	89.26	29	IAmb	IAmb	23 19 39.0	
	comp=Z,123nm,0.9s						
J55A				IAMs_20	IAMs_20	00 06 37.4	
	comp=Z,26µm,19.0s						
G59A	Clarenceville	89.27	25	P	P	23 19 22.8	-1.3
	baz=333						
WHAR	Wooly Hollow	89.35	42	IAmb	IAmb	23 19 39.3	
	comp=Z,161nm,1.0s						
WHAR				IAMs_20	IAMs_20	00 04 23.4	
	comp=Z,20µm,21.0s						
P48A	Milroy	89.35	36	IAmb	IAmb	23 19 47.6	
	comp=Z,361nm,1.8s						
P48A				IAMs_20	IAMs_20	00 07 34.2	
	comp=Z,23µm,19.0s						
FRNY	Flat Rock	89.36	25	IAMs_20	IAMs_20	00 02 11.6	
	comp=Z,34µm,21.0s						
M52A	Chesterland	89.36	32	IAmb	IAmb	23 19 39.5	
	comp=Z,207nm,1.1s						
M52A				IAMs_20	IAMs_20	00 06 39.5	
	comp=Z,31µm,19.0s						
ERPA	Erie	89.42	31	P	P	23 19 24.0	-0.9
	baz=328,SNR=8.6						
ERPA	Erie	89.42	31	IAMs_20	IAMs_20	00 04 08.9	
	comp=Z,28µm,21.0s						
L53A	Girard	89.45	31	P	P	23 19 24.0	-1.0
	baz=328,SNR=16						
W41B	Gary Mavity, V	89.46	42	P	P	23 19 27.7	+2.5
	baz=321,SNR=11						
N51A	Ashland	89.47	33	IAMs_20	IAMs_20	00 04 43.4	
	comp=Z,25µm,20.0s						
Z38A	Mt. Pleasant	89.47	45	IAMs_20	IAMs_20	00 04 38.8	
	comp=Z,21µm,20.0s						
H59A	Cadyville	89.49	25	P	P	23 19 26.4	+1.2
	baz=333,SNR=5.7						
H58A	Gabriels	89.53	26	P	P	23 19 27.9	+2.5
	baz=332,SNR=11						
USIN	University of	89.53	38	IAMs_20	IAMs_20	00 04 54.8	
	comp=Z,20µm,18.0s						
PARMO	Parma	89.56	40	IAMs_20	IAMs_20	00 07 03.8	
	comp=Z,17µm,19.0s						
J56A	Wolcott	89.60	28	P	P	23 19 28.1	+2.4
	baz=331,SNR=9.2						
J56A	Wolcott	89.60	28	IAmb	IAmb	23 19 41.6	
	comp=Z,175nm,1.1s						
J56A				IAMs_20	IAMs_20	00 03 19.4	
	comp=Z,22µm,20.0s						
P49A	Miami Univ. Ec	89.61	35	P	P	23 19 24.3	-1.5
	baz=326,SNR=11						
P49A	Miami Univ. Ec	89.61	35	IAmb	IAmb	23 19 41.8	
	comp=Z,211nm,1.1s						
P49A				IAMs_20	IAMs_20	00 03 37.4	
	comp=Z,20µm,19.0s						
G61A	St-Isidore-de-	89.61	24	P	P	23 19 25.2	-0.5
	baz=334						
HENM	Henderson Moun	89.66	40	IAMs_20	IAMs_20	00 07 13.4	
	comp=Z,23µm,18.0s						
X40A	Basin Creek Fa	89.69	43	P	P	23 19 25.0	-1.3
	baz=321,SNR=9.1						
X40A	Basin Creek Fa	89.69	43	IAmb	IAmb	23 20 28.0	
	comp=Z,166nm,1.6s						
X40A				IAMs_20	IAMs_20	00 04 33.4	
	comp=Z,18µm,21.0s						
MMNY	Mt. Morris Dam	89.69	29	IAmb	IAmb	23 19 42.2	
	comp=Z,191nm,1.1s						
MMNY				IAMs_20	IAMs_20	00 04 12.8	
	comp=Z,23µm,19.0s						
WVNY	West Valley, N	89.71	30	IAmb	IAmb	23 19 42.5	
	comp=Z,258nm,1.2s						
M53A	WI Miller and	89.72	31	P	P	23 19 25.3	-1.1
	baz=328,SNR=12						
M53A	WI Miller and	89.72	31	IAMs_20	IAMs_20	00 05 01.0	
	comp=Z,19µm,20.0s						
ALLY	Alegheny Colle	89.75	31	IAMs_20	IAMs_20	00 04 10.8	
	comp=Z,31µm,22.0s						
ACSO	Alum Creek Sta	89.78	34	P	P	23 19 25.4	-1.3
	baz=327,SNR=12						
ACSO	Alum Creek Sta	89.78	34	IAmb	IAmb	23 19 41.6	
	comp=Z,153nm,0.9s						
ACSO				IAMs_20	IAMs_20	00 06 57.8	
	comp=Z,24µm,19.0s						
PVMO	Portageville	89.79	40	IAMs_20	IAMs_20	00 07 20.8	
	comp=Z,17µm,20.0s						
PENMO	Penman	89.79	40	IAMs_20	IAMs_20	00 08 02.4	
	comp=Z,19µm,21.0s						
T45A	Paducah	89.82	39	IAMs_20	IAMs_20	00 06 47.6	
	comp=Z,18µm,18.0s						
435B	Jarrell	89.86	49	P	P	23 19 29.5	+2.3
	baz=318						
435B	Jarrell	89.86	49	IAMs_20	IAMs_20	00 05 51.4	
	comp=Z,19µm,21.0s						
H60A	Morristown	89.89	25	P	P	23 19 31.2	+4.1
	baz=334						
I58A	Old Forge	89.90	27	P	P	23 19 30.7	+3.5
	baz=332,SNR=5.2						
HICK	Hickman	89.92	40	IAMs_20	IAMs_20	00 07 29.3	
	comp=Z,21µm,18.0s						
K56A	Middlesex	89.93	29	P	P	23 19 30.7	+3.4
	baz=330,SNR=6.9						
PEBM	Pemiscott Bayo	89.94	40	IAMs_20	IAMs_20	00 03 57.9	
	comp=Z,17µm,22.0s						
F63A	Nahmakanta, Br	89.96	22	IAMs_20	IAMs_20	00 04 20.1	
	comp=Z,28µm,20.0s						
237A	Washetta, Mont	89.96	47	IAMs_20	IAMs_20	00 07 02.9	
	comp=Z,16µm,18.0s						
WCI	Wyandotte Cave	89.96	37	P	P	23 19 30.2	+2.6
	baz=324						
WCI	Wyandotte Cave	89.96	37	P	P	23 19 25.8	-1.8
WCI				pmax	pmax		
	comp=Z,86nm,1.0s						
WCI	Wyandotte Cave	89.96	37	P	P	23 19 25.8	-1.8
G62A	West of Eustis	89.97	23	P	P	23 19 30.3	+2.8
	baz=335						
GNAR	Gosnell	89.98	41	IAMs_20	IAMs_20	00 07 56.5	
	comp=Z,20µm,19.0s						
HBAR	Harrisburg	89.98	41	IAMs_20	IAMs_20	00 07 25.1	
	comp=Z,20µm,20.0s						
M54A	Oil Creek Stat	90.06	31	P	P	23 19 29.6	+1.6
	baz=329,SNR=13						
M54A	Oil Creek Stat	90.06	31	IAmb	IAmb	23 19 44.3	
	comp=Z,162nm,1.0s						
M54A				IAMs_20	IAMs_20	00 04 39.0	
	comp=Z,29µm,20.0s						
VT1	Waterbury	90.08	25	IAMs_20	IAMs_20	00 02 50.9	
	comp=Z,31µm,20.0s						
GLAT	Glass	90.10	40	IAMs_20	IAMs_20	00 07 36.2	
	comp=Z,19µm,19.0s						
LPAR	Lepanto	90.13	41	IAMs_20	IAMs_20	00 07 46.3	
	comp=Z,15µm,20.0s						
LNXT	Lenox	90.14	40	IAMs_20	IAMs_20	00 07 42.1	
	comp=Z,20µm,20.0s						
H61A	Lyndonville	90.16	24	P	P	23 19 31.1	+2.8
	baz=334,SNR=8.4						
N53A	Lisbon	90.19	32	IAmb	IAmb	23 19 45.0	
	comp=Z,185nm,1.2s						
N53A				IAMs_20	IAMs_20	00 05 57.5	
	comp=Z,29µm,18.0s						
K57A	Scipio Center	90.20	28	P	P	23 19 31.1	+2.5
	baz=331						
J59A	Piesco	90.26	26	P	P	23 19 31.4	+2.5
	baz=332,SNR=9.8						
PKME	Peaks-Kenny Pk	90.30	22	IAMs_20	IAMs_20	00 05 35.2	
	comp=Z,32µm,20.0s						

L56A	Greenwood	90.33	29	P	P	23 19 28.1	-1.2
	baz=330,SNR=8.9						
L56A	Greenwood	90.33	29	IAmb	IAmb	23 19 43.8	
	comp=Z,145nm,0.8s						
L56A				IAMs_20	IAMs_20	00 07 03.8	
	comp=Z,27µm,19.0s						
I60A	Shoreham	90.34	25	P	P	23 19 32.1	+3.0
	baz=333						
G63A	Kingsbury	90.34	23	P	P	23 19 31.4	+2.2
	baz=336						
HALT	Halls	90.36	40	IAMs_20	IAMs_20	00 07 47.1	
	comp=Z,19µm,18.0s						
O52A	Adamsville	90.36	33	IAMs_20	IAMs_20	00 05 20.1	
	comp=Z,26µm,21.0s						
H62A	Milan	90.37	24	P	P	23 19 32.7	+3.4
	baz=335,SNR=6.4						
P51A	Williamsport	90.37	34	IAMs_20	IAMs_20	00 07 00.5	
	comp=Z,26µm,20.0s						
VSL	Villasalto	90.38	326	P	P	23 19 26.3	-3.2
N54A	Moraine State	90.40	31	P	P	23 19 32.8	+3.2
	baz=328,SNR=8.1						
N54A	Moraine State	90.40	31	IAmb	IAmb	23 19 46.0	
	comp=Z,182nm,1.1s						
N54A				IAMs_20	IAMs_20	00 04 31.9	
	comp=Z,30µm,21.0s						
R49A	Shelbyville	90.42	36	IAMs_20	IAMs_20	00 06 27.1	
	comp=Z,20µm,19.0s						
LBNH	Lisbon	90.42	24	IAMs_20	IAMs_20	00 03 19.8	
	comp=Z,26µm,22.0s						
M55A	Ridgway	90.45	30	IAMs_20	IAMs_20	00 05 59.1	
	comp=Z,31µm,20.0s						
ATD	Arta Tunnel	90.46	285	IAmb	IAmb	23 19 37.8	
	comp=Z,251nm,1.2s						
ATD	Arta Tunnel	90.46	285	*e*P	P	23 19 28.6	-1.7
ATD				*e*S	SKSac	23 30 05.8	+3.7
G64A	Maxfield	90.47	22	P	P	23 19 28.7	-1.1
	baz=336						
K58A	Earlville	90.48	27	P	P	23 19 28.8	-1.1
	baz=331,SNR=10						
K58A	Earlville	90.48	27	IAMs_20	IAMs_20	00 06 10.6	
	comp=Z,32µm,20.0s						
O53A	New Philadelph	90.51	32	P	P	23 19 32.7	+2.7
	baz=328,SNR=10						
O53A	New Philadelph	90.51	32	IAMs_20	IAMs_20	00 06 00.9	
	comp=Z,31µm,19.0s						
T47A	Sharon Grove	90.58	38	IAmb	IAmb	23 19 46.7	
	comp=Z,136nm,1.1s						
HDBT	Hernando Brdge	90.60	41	IAMs_20	IAMs_20	00 07 17.3	
	comp=Z,13µm,18.0s						
ACCN	Adirondack Com	90.62	26	IAmb	IAmb	23 19 46.8	
	comp=Z,167nm,1.2s						
ACCN				IAMs_20	IAMs_20	00 05 18.1	
	comp=Z,28µm,20.0s						
Q51A	Peebles	90.63	34	IAmb	IAmb	23 19 46.8	
	comp=Z,182nm,1.0s						
Q51A				IAMs_20	IAMs_20	00 06 40.3	
	comp=Z,25µm,19.0s						
H63A	New Sharon	90.63	23	P	P	23 19 32.0	+1.5
	baz=335						
P52A	Corning	90.64	33	P	P	23 19 32.9	+2.2
	baz=327,SNR=8.8						
P52A	Corning	90.64	33	IAMs_20	IAMs_20	00 05 11.5	
	comp=Z,23µm,20.0s						
Z41A	Richland Creek	90.65	44	P	P	23 19 34.2	+3.4
	baz=321						
M56A	Emporium	90.66	30	P	P	23 19 29.6	-1.2
	baz=330,SNR=15						
M56A	Emporium	90.66	30	IAMs_20	IAMs_20	00 04 38.6	
	comp=Z,27µm,20.0s						
X43A	Marvell	90.68	42	P	P	23 19 33.8	+2.9
	baz=322						
MET	Memphis--Engin	90.69	41	IAMs_20	IAMs_20	00 08 20.2	
	comp=Z,17µm,19.0s						
L57A	Andrews Acres	90.71	29	P	P	23 19 29.8	-1.2
	baz=331,SNR=6.6						
K59A	Cooperstown	90.75	27	P	P	23 19 33.6	+2.4
	baz=332,SNR=12						
NATX	Nacogdoches	90.78	46	IAMs_20	IAMs_20	00 05 27.6	
	comp=Z,20µm,20.0s						
HNH	Hanover	90.79	25	IAMs_20	IAMs_20	00 03 11.4	
	comp=Z,31µm,21.0s						
R50A	Paris	90.81	35	P	P	23 19 30.3	-1.2
R50A				IAMs_20	IAMs_20	00 08 18.8	
	comp=Z,18µm,19.0s						
J60A	Lant Hill Farm	90.83	26	P	P	23 19 33.5	+2.0
	baz=333						
WVL	Waterville	90.83	23	P	P	23 19 30.1	-1.3
WVL				IAmb	IAmb	23 19 48.1	
	comp=Z,154nm,1.3s						
BINY	Binghamton	90.85	28	P	P	23 19 34.2	+2.6
	baz=331,SNR=5.8						
BINY	Binghamton	90.85	28	IAmb	IAmb	23 19 47.2	
	comp=Z,186nm,1.2s						
BINY				IAMs_20	IAMs_20	00 03 22.5	
	comp=Z,30µm,22.0s						
O54A	Avella	90.91	32	IAMs_20	IAMs_20	00 06 27.4	
	comp=Z,26µm,18.0s						
WVT	Waverly	90.93	39	P	P	23 19 33.9	+1.9
	baz=324						
WVT	Waverly	90.93	39	P	P	23 19 30.8	-1.3
WVT				pmax	pmax		
	comp=Z,61nm,1.1s						
WVT	Waverly	90.93	39	P	P	23 19 30.8	-1.3
WVT	Waverly	90.93	39	IAMs_20	IAMs_20	00 05 37.8	
	comp=Z,19µm,18.0s						
I62A	Tamworth	90.94	24	IAMs_20	IAMs_20	00 05 57.4	
	comp=Z,21µm,20.0s						
I63A	Otisfield	91.02	24	P	P	23 19 32.7	+0.4
	baz=335						
W45A	Hickory Valley	91.03	40	IAMs_20	IAMs_20	00 08 52.3	
	comp=Z,19µm,20.0s						
L58A	Harry Jones Me	91.04	28	P	P	23 19 34.3	+1.8
	baz=331,SNR=12						
N56A	West Decatur	91.10	30	P	P	23 19 35.5	+2.6
	baz=330						
GGN	Saint George	91.13	21	P	P	23 19 30.4	-2.4
Q52A	Bidwell	91.14	34	IAMs_20	IAMs_20	00 08 56.0	
	comp=Z,24µm,18.0s						
735A	Kenedy	91.15	50	IAMs_20	IAMs_20	00 08 17.0	
	comp=Z,16µm,20.0s						
M57A	Sunshine Farm,	91.18	29	P	P	23 19 32.5	-0.7
	baz=330,SNR=15						
M57A	Sunshine Farm,	91.18	29	IAMs_20	IAMs_20	00 07 56.4	
	comp=Z,27µm,19.0s						
TRY	Troy	91.20	26	IAMs_20	IAMs_20	00 05 58.4	
	comp=Z,29µm,20.0s						
L59A	Walton	91.20	27	P	P	23 19 31.5	-1.8
	baz=332,SNR=12						
FFD	Franklin Falls	91.20	25	IAMs_20	IAMs_20	00 03 33.4	
	comp=Z,25µm,20.0s						
K60A	Five Rivers En	91.22	26	P	P	23 19 32.3	-1.0
	baz=333						
K61A	Williamstown	91.39	26	P	P	23 19 37.3	+3.2
	baz=333,SNR=7.4						
M58A	Price’s Panora	91.40	29	P	P	23 19 37.4	+3.1
	baz=331,SNR=11						
HKT	Hockley	91.48	48	P	P	23 19 33.5	-1.1
HKT				pmax	pmax		
	comp=Z,97nm,1.4s						
HKT	Hockley	91.48	48	P	P	23 19 33.5	-1.1
HKT				IAmb	IAmb	23 20 01.7	
	comp=Z,97nm,1.4s						
HKT	Hockley	91.48	48	IAMs_20	IAMs_20	00 08 05.1	
	comp=Z,22µm,19.0s						
KSPA	Keystone Colle	91.49	28	IAMs_20	IAMs_20	00 03 42.5	
	comp=Z,32µm,22.0s						
N57A	Milroy	91.53	30	P	P	23 19 38.1	+3.3
	baz=330,SNR=11						
Q53A	Leroy	91.55	33	P	P	23 19 37.2	+2.3
	baz=328						
O56A	Blue Knob Stat	91.56	31	P	P	23 19 38.3	+3.3
	baz=329,SNR=8.9						
O56A	Blue Knob Stat	91.56	31	IAMs_20	IAMs_20	00 05 35.4	
	comp=Z,25µm,20.0s						
MCWV	Mont Chateau	91.57	32	P	P	23 19 37.0	+2.0
	baz=329						
U49A	Red Boiling Sp	91.59	37	IAmb	IAmb	23 19 51.2	
	comp=Z,94nm,1.1s						
U49A				IAMs_20	IAMs_20	00 04 58.2	
	comp=Z,29µm,20.0s						
T50A	Nancy	91.61	37	IAmb	IAmb	23 19 50.5	
	comp=Z,111nm,1.2s						
T50A				IAMs_20	IAMs_20	00 05 40.7	
	comp=Z,24µm,19.0s						
M59A	Waymart	91.63	28	P	P	23 19 38.2	+2.9
	baz=332,SNR=7.9						
TEND	Ethiopian Broa	91.65	287	*e*P	P	23 19 33.0	-2.8
TEND				*e*S	SKSac	23 30 11.5	+2.7
L60A	Shokan	91.66	27	P	P	23 19 38.2	+2.8
	baz=332,SNR=5.1						
S51A	Beattyville	91.67	35	IAMs_20	IAMs_20	00 06 16.9	
	comp=Z,25µm,20.0s						
L61A	Hillsdale 1, H	91.71	26	P	P	23 19 37.2	+1.6
	baz=333						
PLAL	Pickwick Lake	91.72	40	IAMs_20	IAMs_20	00 05 46.1	
	comp=Z,22µm,21.0s						
V48A	Smith Brothers	91.72	39	IAMs_20	IAMs_20	00 09 04.4	
	comp=Z,21µm,18.0s						
Q54A	Coxs Mills	91.73	33	IAMs_20	IAMs_20	00 05 33.4	
	comp=Z,27µm,20.0s						
K62A	Royalston	91.74	25	P	P	23 19 38.4	+2.7
	baz=334						
K62A	Royalston	91.74	25	IAMs_20	IAMs_20	00 03 31.6	
	comp=Z,26µm,22.0s						
N58A	Sunbury	91.77	29	P	P	23 19 39.5	+3.6
	baz=331,SNR=6.9						
N58A	Sunbury	91.77	29	IAMs_20	IAMs_20	00 08 22.0	
	comp=Z,23µm,18.0s						
L61B	Northampton	91.78	26	P	P	23 19 38.1	+2.2
	baz=334						
R53A	Hurricane	91.81	34	IAMs_20	IAMs_20	00 08 10.5	
	comp=Z,24µm,19.0s						
143A	Socs Landing,	91.82	43	IAMs_20	IAMs_20	00 06 17.9	
	comp=Z,23µm,21.0s						
Y45A	Yeager Farm, C	91.88	41	IAMs_20	IAMs_20	00 06 57.1	
	comp=Z,17µm,18.0s						
K63A	Dunstable	91.94	25	P	P	23 19 39.8	+3.1
	baz=334,SNR=5.0						
K63A	Dunstable	91.94	25	IAMs_20	IAMs_20	00 06 14.0	
	comp=Z,26µm,19.0s						
O57A	Amberson	91.97	30	P	P	23 19 40.2	+3.3
	baz=330						
QUA2	Belchertown	92.04	26	IAMs_20	IAMs_20	00 05 48.7	
	comp=Z,22µm,20.0s						
N59A	State Game Lan	92.05	28	P	P	23 19 34.2	-3.0
	baz=331,SNR=7.6						
N59A	State Game Lan	92.05	28	IAmb	IAmb	23 19 53.2	
	comp=Z,149nm,1.1s						
N59A				IAMs_20	IAMs_20	00 04 01.3	
	comp=Z,28µm,22.0s						
HRV	Adam Dziewonsk	92.10	25	P	P	23 19 36.9	-0.5
	baz=334						
HRV	Adam Dziewonsk	92.10	25	IAMs_20	IAMs_20	00 06 20.1	
	comp=Z,28µm,20.0s						
P56A	Dayton Farm, R	92.10	31	P	P	23 19 40.8	+3.4
	baz=329,SNR=7.1						
M60A	Port Jervis	92.11	28	P	P	23 19 39.7	+2.3
	baz=332						
L62A	Suffield	92.16	26	P	P	23 19 42.2	+4.5
	baz=334						
L62A	Suffield	92.16	26	IAMs_20	IAMs_20	00 03 36.8	
	comp=Z,24µm,21.0s						
WES	Weston	92.28	25	IAMs_20	IAMs_20	00 06 23.0	
	comp=Z,30µm,20.0s						
O58A	Lewisberry	92.31	30	P	P	23 19 38.6	+0.2
	baz=331						
N60A	Cedar Hill Far	92.34	28	P	P	23 19 43.6	+5.1
	baz=332						
R54A	Victor	92.34	33	P	P	23 19 41.3	+2.6
	baz=328						
342A	Flagon Creek P	92.35	45	IAMs_20	IAMs_20	00 06 40.2	
	comp=Z,20µm,19.0s						
Q56A	Snyder Ridge,	92.36	32	P	P	23 19 41.7	+3.0
	baz=329						
Q56A	Snyder Ridge,	92.36	32	IAMs_20	IAMs_20	00 06 58.8	
	comp=Z,25µm,18.0s						
441A	DeRidder	92.36	46	IAMs_20	IAMs_20	00 08 06.5	
	comp=Z,18µm,19.0s						
BCX	Boston College	92.38	25	IAMs_20	IAMs_20	00 06 34.5	
	comp=Z,29µm,20.0s						
M61A	Granite Spring	92.42	27	P	P	23 19 40.9	+2.0
	baz=333						
O59A	Robesonia	92.43	29	P	P	23 19 43.3	+4.3
	baz=331						
P57A	Homestead Farm	92.45	31	P	P	23 19 42.7	+3.7
	baz=330						
P57A	Homestead Farm	92.45	31	IAMs_20	IAMs_20	00 06 11.0	
	comp=Z,28µm,19.0s						
UCCT	U. Connecticut	92.52	26	P	P	23 19 38.1	-1.2
UCCT				IAmb	IAmb	23 19 55.0	
	comp=Z,109nm,1.1s						
UCCT				IAMs_20	IAMs_20	00 06 12.3	
	comp=Z,25µm,20.0s						
S54A	Dingess, Beckl	92.53	34	P	P	23 19 44.0	+4.5
	baz=328						
S54A	Dingess, Beckl	92.53	34	IAMs_20	IAMs_20	00 06 18.5	
	comp=Z,27µm,21.0s						
SWET	Sewanee	92.57	38	P	P	23 19 38.5	-1.2
SWET				IAmb	IAmb	23 19 54.4	
	comp=Z,96nm,1.2s						
SWET				IAMs_20	IAMs_20	00 09 52.8	
	comp=Z,30µm,19.0s						
TZTN	Tazewell	92.59	36	P	P	23 19 42.9	+3.1
	baz=326,SNR=6.9						
TZTN	Tazewell	92.59	36	IAMs_20	IAMs_20	00 07 34.5	
	comp=Z,25µm,20.0s						
BRYW	Bryant College	92.63	25	IAMs_20	IAMs_20	00 06 28.3	
	comp=Z,27µm,20.0s						
MVL	Millersville	92.64	29	IAMs_20	IAMs_20	00 08 49.9	
	comp=Z,20µm,18.0s						
PAL	Palisades	92.64	27	P	P	23 19 44.2	+4.3
	baz=333						
PAL	Palisades	92.64	27	P	P	23 19 39.0	-0.9
PAL				pmax	pmax		
	comp=Z,331nm,1.8s						
PAL	Palisades	92.64	27	P	P	23 19 39.0	-0.9
X48A	Hartselle	92.66	39	IAMs_20	IAMs_20	00 06 39.6	
	comp=Z,18µm,20.0s						
L63A	North Scituate	92.66	25	IAMs_20	IAMs_20	00 06 20.0	
	comp=Z,27µm,20.0s						
VBMS	Vicksburg	92.66	43	P	P	23 19 44.2	+4.0
	baz=322						
VBMS	Vicksburg	92.66	43	IAMs_20	IAMs_20	00 04 57.2	
	comp=Z,17µm,21.0s						
Q57A	Strasburg	92.67	31	P	P	23 19 42.6	+2.4
	baz=330						
WSPT	Westport, CT	92.70	27	IAmb	IAmb	23 19 56.0	
	comp=Z,140nm,1.4s						
YLE	Yale	92.70	26	IAMs_20	IAMs_20	00 07 21.4	
	comp=Z,25µm,20.0s						
O60A	Telford	92.71	29	P	P	23 19 44.4	+4.1
	baz=332						
N61A	South Mountain	92.73	28	P	P	23 19 42.7	+2.4
	baz=332						
V51A	Loudon	92.84	37	IAMs_20	IAMs_20	00 06 39.2	
	comp=Z,27µm,19.0s						
L64A	Middleborough	92.84	25	P	P	23 19 40.6	-0.2
L64A				IAmb	IAmb	23 19 56.7	
	comp=Z,162nm,1.3s						
N62A	Caumsett State	92.86	27	P	P	23 19 41.8	+0.9
	baz=333						
W50A	Signal Mountai	92.88	38	IAMs_20	IAMs_20	00 05 48.4	
	comp=Z,16µm,20.0s						
M63A	Gales Ferry	92.93	26	P	P	23 19 40.3	-0.9
M63A				IAmb	IAmb	23 20 47.0	
	comp=Z,93nm,1.2s						
M63A				IAMs_20	IAMs_20	00 06 44.1	
	comp=Z,30µm,19.0s						
WUPA	West Chester U	92.97	29	IAMs_20	IAMs_20	00 10 04.3	
	comp=Z,19µm,19.0s						
Q58A	Fox Den Farm,	93.04	31	P	P	23 19 42.8	+1.0
	baz=330						
CPCT	Cooper Cave	93.05	37	IAMs_20	IAMs_20	00 07 18.7	
	comp=Z,25µm,18.0s						
P60A	Greenville	93.07	29	P	P	23 19 43.9	+2.0
	baz=331						
M64A	Tiverton	93.07	25	IAMs_20	IAMs_20	00 06 57.9	
	comp=Z,30µm,20.0s						
146A	Union	93.09	42	IAMs_20	IAMs_20	00 07 23.5	
	comp=Z,16µm,19.0s						
DESE	Dese	93.10	287	*e*P	P	23 19 43.4	+0.5
DESE				*e*S	SKSac	23 29 51.7	-26
344A	Westbrook Farm	93.15	44	IAMs_20	IAMs_20	00 07 02.1	
	comp=Z,24µm,20.0s						
Z47A	Carrollton	93.15	41	IAMs_20	IAMs_20	00 04 48.8	
	comp=Z,18µm,20.0s						
V52A	Sevierville	93.15	36	IAMs_20	IAMs_20	00 07 53.3	
	comp=Z,29µm,20.0s						
O61A	Allentown	93.22	28	P	P	23 19 47.2	+4.7
	baz=332						
TKL	Tuckaleechee C	93.22	37	IAMs_20	IAMs_20	00 07 16.2	
	comp=Z,22µm,20.0s						
R57A	Stanardsville	93.26	32	P	P	23 19 43.1	+0.3
	baz=329						
FPAL	Fort Paine	93.28	38	IAMs_20	IAMs_20	00 10 23.5	
	comp=Z,23µm,18.0s						
S56A	Natural Bridge	93.37	33	P	P	23 19 45.7	+2.4
	baz=329						
U54A	Nelsons Funny	93.38	35	P	P	23 19 45.6	+2.1
	baz=327						
U54A	Nelsons Funny	93.38	35	IAMs_20	IAMs_20	00 09 15.2	
	comp=Z,29µm,19.0s						
BLA	Blacksburg	93.40	33	P	P	23 19 44.3	+0.7
	baz=328						
Y49A	Blount Mountai	93.44	39	IAMs_20	IAMs_20	00 05 25.4	
	comp=Z,24µm,22.0s						
R58A	Rapidan	93.47	31	P	P	23 19 47.1	+3.3
	baz=330						
KEST	Kesra	93.52	324	P	P	23 19 43.4	-0.8
	comp=Z,8.3nm,1.1s,baz=278,slow=7.9,SNR=3.5						
KEST				PP	PP	23 23 21.2	-6.5
	comp=Z,19nm,1.2s,baz=207,slow=1.9,SNR=2.1						
KEST				LR	LR	00 06 56.7	
	comp=Z,129µm,18.7s,baz=338,slow=39						
KEST	Kesra	93.52	324	P	P	23 19 42.5	-1.7
S57A	Dark Hollow, R	93.55	32	P	P	23 19 46.8	+2.7
	baz=329						
S57A	Dark Hollow, R	93.55	32	IAMs_20	IAMs_20	00 07 38.3	
	comp=Z,23µm,18.0s						
X51A	Calhoun	93.61	38	IAMs_20	IAMs_20	00 10 39.3	
	comp=Z,19µm,18.0s						
W52A	Murphy	93.62	37	IAMs_20	IAMs_20	00 07 02.7	
	comp=Z,29µm,19.0s						
V53A	Saluda	93.65	36	IAMs_20	IAMs_20	00 09 06.5	
	comp=Z,21µm,20.0s						
T56A	Rocky Mt	93.72	33	P	P	23 19 44.7	-0.3
	baz=328						
CBN	Corbin Frederi	93.80	31	P	P	23 19 48.0	+2.7
	baz=330						
CBN	Corbin Frederi	93.80	31	IAMs_20	IAMs_20	00 07 01.9	
	comp=Z,27µm,20.0s						
R58B	Mineral	93.81	31	P	P	23 19 49.3	+4.0
	baz=330						
R58B	Mineral	93.81	31	IAMs_20	IAMs_20	00 06 46.1	
	comp=Z,30µm,20.0s						
LRAL	Lakeview Retre	93.82	40	P	P	23 19 48.3	+2.9
	baz=324						
LRAL	Lakeview Retre	93.82	40	IAMs_20	IAMs_20	00 07 21.4	
	comp=Z,18µm,21.0s						
346A	Big Creek Wild	93.87	43	IAMs_20	IAMs_20	00 08 38.1	
	comp=Z,14µm,19.0s						
R59A	King George, V	93.91	31	P	P	23 19 49.8	+4.0
	baz=330						
ANKE	Ethiopia-Afar	94.03	286	*e*P	P	23 19 45.5	-1.8
S58A	Poland Farm, P	94.04	32	IAMs_20	IAMs_20	00 09 22.3	
	comp=Z,29µm,20.0s						
T57A	Hurt	94.07	33	P	P	23 19 51.3	+4.7
	baz=329						
T57A	Hurt	94.07	33	IAMs_20	IAMs_20	00 06 08.4	
	comp=Z,25µm,21.0s						
U56A	King	94.15	34	P	P	23 19 51.8	+4.9
	baz=328						
BG3	Lake Jocassee	94.16	36	IAMs_20	IAMs_20	00 08 33.0	
	comp=Z,21µm,20.0s						
PBRG	Braganca	94.17	338	*e*P	P	23 19 51.3	+4.3
V55A	Taylorsville	94.21	35	IAMs_20	IAMs_20	00 07 53.1	
	comp=Z,31µm,20.0s						
S59A	Mechanicsville	94.22	31	P	P	23 19 48.3	+1.1
	baz=330						
T58A	Grand View Acr	94.42	32	P	P	23 19 51.2	+3.0
	baz=329						
PGAV	Gavieira, Arco	94.45	339	A	A	00 08 38.0	
	comp=Z,33µm,18.0s						
Z51A	Franklin	94.48	39	IAMs_20	IAMs_20	00 10 56.4	
	comp=Z,27µm,18.0s						
U57A	Blanch	94.52	33	P	P	23 19 49.6	+0.9
	baz=329						
V56A	Mocksville	94.56	34	P	P	23 19 51.3	+2.5
	baz=328						
Y52A	Lilburn	94.56	38	IAMs_20	IAMs_20	00 08 24.9	
	comp=Z,20µm,19.0s						
KMSC	Kings Mountain	94.75	35	P	P	23 19 49.7	0.0
	baz=328						
KMSC	Kings Mountain	94.75	35	IAMs_20	IAMs_20	00 09 59.5	
	comp=Z,29µm,19.0s						
V57A	Coltrane Farms	94.80	34	P	P	23 19 50.7	+0.7
	baz=328						
MVO	Moncorvo	94.84	338	*e*P	P	23 19 53.7	+3.6
MVO	Moncorvo	94.84	338	A	A	00 08 05.0	
	comp=Z,72µm,20.0s						
POLO	Lamas de Olo	94.86	338	*e*P	P	23 19 55.1	+4.8
U58A	Oxford	94.88	33	P	P	23 19 52.4	+2.1
	baz=329						
T60A	Surry	94.97	31	IAMs_20	IAMs_20	00 09 28.0	
	comp=Z,31µm,20.0s						
MCQ	Macquarie Isla	95.05	171	IAMs_20	IAMs_20	00 02 31.3	
	comp=Z,15µm,21.0s						
HODGE	Hodges	95.10	36	IAMs_20	IAMs_20	00 09 20.8	
	comp=Z,25µm,20.0s						
AAE	Adis Abeba	95.12	286	*e*P	P	23 19 47.8	-4.3
V58A	Windy Hill, Pi	95.16	33	P	P	23 19 51.3	-0.2
V58A				IAmb	IAmb	23 20 04.8	
	comp=Z,136nm,1.9s						
GOGA	Godfrey	95.22	38	P	P	23 19 55.5	+3.7
	baz=326						
GOGA	Godfrey	95.22	38	IAMs_20	IAMs_20	00 08 59.2	
	comp=Z,20µm,19.0s						
U59A	Littleton	95.23	32	IAMs_20	IAMs_20	00 08 36.9	
	comp=Z,27µm,19.0s						
152A	Waverly Hall	95.23	39	IAMs_20	IAMs_20	00 08 25.7	
	comp=Z,18µm,18.0s						
FURI	Furi	95.27	286	*e*P	P	23 19 50.4	-2.4
FURI				*e*S	SKSac	23 30 25.6	-3.7
BRAL	Brewton	95.29	41	IAMs_20	IAMs_20	00 08 26.5	
	comp=Z,18µm,21.0s						
PVIS	Viseu	95.50	338	*e*P	P	23 19 57.8	+4.7
JSC	Jenkinsville	95.50	36	IAMs_20	IAMs_20	00 10 34.6	
	comp=Z,17µm,18.0s						
V59A	Middlesex	95.55	33	P	P	23 19 55.3	+1.9
	baz=330						
BIRD	Birdtown, Kers	95.55	35	IAMs_20	IAMs_20	00 08 42.8	
	comp=Z,28µm,20.0s						
MTE	Manteigas	95.69	338	P	P	23 19 53.4	-0.6
MTE	Manteigas	95.69	338	*e*P	P	23 19 59.0	+5.0
MTE	Manteigas	95.69	338	A	A	00 11 56.1	
	comp=Z,45µm,16.0s						
U61A	Possum Corner	95.79	31	P	P	23 19 55.4	+1.0
	baz=331						
W59A	Clinton	95.98	33	P	P	23 19 56.1	+0.8
	baz=329						
154A	Montrose	96.05	38	IAMs_20	IAMs_20	00 08 38.2	
	comp=Z,24µm,19.0s						
352A	Blakely	96.10	40	IAMs_20	IAMs_20	00 11 43.0	
	comp=Z,16µm,19.0s						
COI	Coimbra	96.12	339	*e*P	P	23 20 00.8	+5.0
CNNC	Cliffs of the	96.15	33	IAMs_20	IAMs_20	00 09 09.3	
	comp=Z,24µm,20.0s						
PCBR	Castelo Branco	96.19	338	*e*P	P	23 20 01.3	+5.1
451A	Vernon	96.39	41	IAMs_20	IAMs_20	00 11 03.7	
	comp=Z,17µm,18.0s						
PMRV	Marv??o	96.55	337	A	A	00 08 26.1	
	comp=Z,57µm,20.0s						
TIGA	Tifton	96.78	39	IAMs_20	IAMs_20	00 08 32.8	
	comp=Z,17µm,20.0s						
Y59A	Loris	96.80	34	IAMs_20	IAMs_20	00 06 51.7	
	comp=Z,23µm,21.0s						
255A	Hazlehurst	96.91	38	IAMs_20	IAMs_20	00 11 00.1	
	comp=Z,20µm,18.0s						
NHSC	New Hope	96.98	35	IAMs_20	IAMs_20	00 09 47.6	
	comp=Z,24µm,20.0s						
Y60A	Bolivia	97.07	34	IAMs_20	IAMs_20	00 07 28.8	
	comp=Z,22µm,22.0s						
PMTG	Montargil	97.12	338	*e*P	Pdif	23 20 05.8	+5.3
553A	Crawfordville	97.40	40	IAMs_20	IAMs_20	00 09 41.4	
	comp=Z,16µm,19.0s						
PBAR	Barrancos	97.60	337	*e*P	Pdif	23 20 05.4	+2.7
LIS	Lisbon	97.71	338	*e*P	P	23 20 00.9	-2.3
LIS				*e*PP	PP	23 23 59.2	-0.7
LIS				*e*SKSac	SKSac	23 30 36.9	-3.8
LIS				AMS	AMS	00 09 57.7	
	comp=Z,73µm,20.6s						
LIS	Lisbon	97.71	338	*e*P	P	23 20 00.8	-2.3
LIS				*e*		23 23 59.1	
LIS				*e*		23 30 36.8	
PBEJ	Beja	97.98	337	*e*P	Pdif	23 20 08.5	+4.1
456A	Hilliard	98.13	38	IAMs_20	IAMs_20	00 11 13.3	
	comp=Z,21µm,20.0s						
MESJ	Messejana	98.26	337	*e*P	P	23 20 03.6	-2.0
MESJ				*e*PP	PP	23 24 03.3	-0.8
MESJ				*e*SKSac	SKSac	23 30 39.7	-3.8
MESJ				*e*SS	SS	23 38 15.2	+0.7
MESJ				AMS	AMS	00 10 57.6	
	comp=Z,76µm,17.6s						

MESJ	Messejana	98.26	337	eP	P	23 20 03.5	-2.0
MESJ				e		23 30 39.7	
MESJ				eSS	SS	23 38 15.2	+0.6
PVAQ	Vaqueiros	98.52	337	A	A	00 09 52.6	
	comp=Z,165µm,20.0s						
RKT	Rikitea	98.59	113	ePP	PP	23 24 07.0	-1.2
	comp=Z,2µm,29.8s						
RKT				eSKSac	SKSac	23 30 44.6	-0.6
	comp=Z,20µm,30.2s						
RKT	Rikitea	98.59	113	ePS	PS	23 33 03.6	+1.1
	comp=Z,21µm,31.0s						
RKT				eSS	SS	23 38 24.2	+2.1
	comp=Z,14µm,29.2s						
RKT	Rikitea	98.59	113	eLR	LR	23 51 49.6	
	comp=Z,36µm,33.2s						
MORF	Marmelete	98.88	338	eP	P	23 20 06.4	-2.1
MORF				ePP	PP	23 24 08.3	-0.6
MORF				eSKSac	SKSac	23 30 43.0	-3.8
MORF				eSS	SS	23 38 23.9	+0.5
MORF				AMS	AMS	00 08 53.9	
	comp=E,51µm,21.0s						
MORF	Marmelete	98.88	338	eP	P	23 20 06.3	-2.1
MORF				e		23 24 08.3	
MORF				e		23 30 42.9	
MORF				eSS	SS	23 38 23.9	+0.5
656A	Willston	99.00	39	IAMs_20	IAMs_20	00 13 02.7	
	comp=Z,20µm,18.0s						
IFR	Ifrane	101.24	333	P	PKiKP	23 24 35.8	-8.0
ROSA	Rosais	101.32	353	IAMs_20	IAMs_20	00 11 48.6	
	comp=Z,18µm,21.0s						
CMLA	Cha da Macela	101.97	351	IAMs_20	IAMs_20	00 13 18.8	
	comp=Z,15µm,19.0s						
060A	Indiantown	102.00	39	IAMs_20	IAMs_20	00 14 44.0	
	comp=Z,23µm,20.0s						
KMBO	Kilima Mbogo	102.91	279	P	Pdif	23 20 24.4	-2.5
	comp=Z,3.8nm,1.0s,baz=44,slow=6.7,SNR=5.4						
KMBO				PP	PP	23 24 39.8	-1.3
	comp=Z,7.1nm,0.9s,baz=82,slow=2.4,SNR=5.7						
KMBO	Kilima Mbogo	102.91	279	P	Pdif	23 20 24.5	-2.5
KMBO	Kilima Mbogo	102.91	279		Pdif	23 20 24.4	-2.5
PTCN	Pitcairn Islan	103.28	112	IAMs_20	IAMs_20	00 07 17.3	
	comp=Z,14µm,18.0s						
BBSR	BB Station	103.55	24	IAMs_20	IAMs_20	00 11 18.1	
	comp=Z,20µm,20.0s						
PETF	Flores	104.92	52	IAMs_20	IAMs_20	00 17 57.5	
	comp=Z,14µm,22.0s						
PMOZ	Porto Moniz, M	105.35	343	A	A	00 18 30.8	
	comp=Z,19µm,20.0s						
ESQI	Esquipulas	107.05	53	IAMs_20	IAMs_20	00 19 43.0	
	comp=Z,12µm,21.0s						
PAF	Port-aux-Franc	109.67	222	IAMs_20	IAMs_20	00 11 16.8	
	comp=Z,16µm,20.0s						
GTBY	Guantanamo Bay	110.55	39	IAMs_20	IAMs_20	00 20 31.4	
	comp=Z,12µm,19.0s						
MTDJ	Mount Denham	110.80	42	IAMs_20	IAMs_20	00 15 09.3	
	comp=Z,17µm,21.0s						
GRTK	Grand Turk	110.99	34	IAMs_20	IAMs_20	00 17 48.4	
	comp=Z,21µm,20.0s						
ESPN	Las Esperanzas	111.95	51	IAMs_20	IAMs_20	00 20 51.0	
	comp=Z,11µm,22.0s						
HDC	Heredia	113.78	52	IAMs_20	IAMs_20	00 22 17.7	
	comp=Z,13µm,22.0s						
OBIP	Obispado Ponce	115.97	32	IAMs_20	IAMs_20	00 21 45.2	
	comp=Z,17µm,19.0s						
SJG	San Juan	116.09	31	IAMs_20	IAMs_20	00 21 57.4	
	comp=Z,11µm,20.0s						
BCIP	Isla Barro Col	116.99	49	IAMs_20	IAMs_20	00 26 01.5	
	comp=Z,13µm,20.0s						
ANWB	Willy Bob	118.14	27	IAMs_20	IAMs_20	00 15 47.9	
	comp=Z,14µm,22.0s						
CRZF	Crozet Islands	118.30	232	IAMs_20	IAMs_20	00 13 51.2	
	comp=Z,21µm,20.0s						
LSZ	Lusaka	118.74	274	PKP	PKPdf	23 25 13.6	-3.3
	comp=Z,5.2nm,1.1s,baz=22,slow=11,SNR=2.7						
LSZ				PP	PP	23 26 33.0	-2.1
	comp=Z,7.5nm,0.9s,baz=26,slow=3.2,SNR=3.2						
LSZ	Lusaka	118.74	274	PKIKP	PKPdf	23 25 13.6	-3.3
LSZ	Lusaka	118.74	274		PKPdf	23 25 13.6	-3.3
URIC	Uribia, Colomb	119.12	40	eP	PKiKP	23 25 24.6	+7.0
MOTC	Monteria, Cord	119.66	46	eP	PKiKP	23 25 27.8	+9.1
RPN	Rapa Nui	119.73	102	IAMs_20	IAMs_20	00 21 56.8	
	comp=Z,10µm,18.0s						
UREC	San Jos de Ur	120.58	46	eP	PKiKP	23 25 29.1	+8.6
DBBC	Dabeiba	120.81	47	eP	PKiKP	23 25 26.0	+4.9
FDF	Fort de France	121.07	28	IAMs_20	IAMs_20	00 18 10.8	
	comp=Z,21µm,22.0s						
ZARC	Zaragoza, Cauc	121.17	46	eP	PKPdf	23 25 23.3	+1.8
OCAC	Ocana	121.38	44	eP	PKPdf	23 25 21.9	-0.3
MATP	Matopo	121.53	269	PKP	PKPdf	23 25 19.9	-2.2
	comp=Z,5.7nm,0.5s,baz=23,slow=0.9,SNR=14						
MATP				PP	PP	23 26 55.1	+0.8
	comp=Z,11nm,0.9s,baz=102,slow=3.2,SNR=1.5						
CBOC	Ciudad Bolivar	121.86	48	eP	PKiKP	23 25 28.0	+4.7
MCLT	Moule a Chique	122.09	28	IAMs_20	IAMs_20	00 19 25.7	
	comp=Z,20µm,21.0s						
BRRC	Barranca, Sant	122.11	45	eP	PKiKP	23 25 28.4	+4.9
PTBC	PUERTO BERRIO,	122.18	46	eP	PKPdf	23 25 22.2	-1.3
SDV	Santo Domingo	122.21	41	PKPdf	PKPdf	23 25 23.0	-0.8
SDV	Santo Domingo	122.21	41	IAMs_20	IAMs_20	00 21 19.7	
	comp=Z,20µm,22.0s						
SDV	Santo Domingo	122.21	41	eP	PKPdf	23 25 24.9	+1.1
SDV	Santo Domingo	122.21	41	eP	PKPdf	23 25 24.5	+0.7
SVB	Belmont	122.38	28	IAMs_20	IAMs_20	00 19 05.7	
	comp=Z,22µm,22.0s						
PAMC	Pamplona, Colo	122.46	44	eP	PKPdf	23 25 24.3	-0.3
PLMC	San Jos del P	122.48	49	eP	PKPdf	23 25 26.0	+1.8
GUY2C	Guyana, Caldas	122.75	48	eP	PKiKP	23 25 27.6	+2.2
NORC	Norcasia	122.75	47	eP	PKiKP	23 25 32.6	+7.7
BARC	Barichara	122.83	44	eP	PKPdf	23 25 26.8	+1.8
RREF	El Recreo	123.02	48	eP	PKiKP	23 25 32.5	+6.3
BBGH	Gun Hill	123.11	27	IAMs_20	IAMs_20	00 24 57.5	
	comp=Z,14µm,20.0s						
SPBC	San Pablo de B	123.12	46	eP	PKiKP	23 25 27.6	+2.0
YOTC	Yotoco, Valle	123.19	49	eP	PKPdf	23 25 25.9	+0.3
TOLC	Tolima	123.30	48	eP	PKPdf	23 25 26.2	+0.2
ANIL	Santa Ana	123.33	48	eP	PKiKP	23 25 30.4	+4.1
RUSC	La Rusia	123.47	45	eP	PKiKP	23 25 29.3	+2.4
ROSC	El Rosal	123.65	47	PKP	PKPdf	23 25 26.3	-0.5
	comp=Z,5.7nm,0.4s,baz=267,slow=4.6,SNR=4.2						
ROSC	El Rosal	123.65	47	PKIKP	PKPdf	23 25 26.3	-0.5
ROSC	El Rosal	123.65	47	IAMs_20	IAMs_20	00 29 18.6	
	comp=Z,14µm,20.0s						
ROSC	El Rosal	123.65	47	eP	PKPdf	23 25 25.0	-1.8
TAMC	Tame, Arauca	123.70	43	eP	PKiKP	23 25 29.3	+2.5
ORTC	Ortega, Tolima	123.89	48	eP	PKiKP	23 25 29.3	+2.2
SACV	Santiago Islan	124.00	345	IAMs_20	IAMs_20	00 20 25.7	
	comp=Z,20µm,21.0s						
CHIC	Chingaza	124.16	46	eP	PKPdf	23 25 28.4	+0.6
POPC	Popayan, Colom	124.16	51	eP	PKPdf	23 25 26.1	-1.5
BBAC	Balboa, Cauca	124.23	52	eP	PKPdf	23 25 24.3	-3.4
PRAC	Prado	124.25	48	eP	PKPdf	23 25 27.0	-0.5
MARP	Paez Belalcaza	124.34	50	eP	PKPdf	23 25 22.2	-5.8
ELOV	Elorza	124.40	40	eP	PKiKP	23 25 31.8	+3.7
PCON	Cinco Dias	124.49	51	eP	PKiKP	23 25 32.8	+3.8
BETC	Betania	124.77	49	eP	PKPdf	23 25 29.3	+0.7
GCUF	Volcan Galeras	124.80	52	eP	PKPdf	23 25 18.2	-11
OTAV	Otavalo	124.89	54	IAMs_20	IAMs_20	00 30 10.3	
	comp=Z,10µm,22.0s						
DBIC	Dimbokro	125.03	320	PKP	PKPdf	23 25 27.7	-1.3
	comp=Z,5.1nm,0.8s,baz=354,slow=5.3,SNR=5.9						
DBIC				PP	PP	23 27 16.6	-0.1
	comp=Z,37nm,1.1s,baz=12,slow=8.7,SNR=7.4						
DBIC	Dimbokro	125.03	320	PKIKP	PKPdf	23 25 27.7	-1.3
TIC	Toumodi	125.13	320	ePKP1	PKPdf	23 25 30.2	+1.0
GARC	Garzon, Huila	125.14	50	eP	PKPdf	23 25 26.8	-2.7
KIC	Kosan Boka	125.24	320	ePKP1	PKPdf	23 25 30.5	+1.1
	comp=Z,33nm,0.9s						
LIC	Lamto	125.50	320	ePKP1	PKPdf	23 25 31.1	+1.2
	comp=Z,70nm,1.0s						
FLOC	Florencia	125.53	50	eP	PKPdf	23 25 28.3	-1.7
MACC	Macarena, Meta	126.12	48	eP	PKPdf	23 25 27.6	-3.5
LBTB	Lobatse	126.29	266	PKP	PKPdf	23 25 30.2	-0.9
	comp=Z,25nm,1.1s,baz=123,slow=1.7,SNR=9.7						
LBTB				PP	PP	23 27 25.7	-0.7
	comp=Z,22nm,1.1s,baz=53,slow=5.6,SNR=2.1						
LBTB	Lobatse	126.29	266	PKIKP	PKPdf	23 25 30.2	-0.9
PTLC	Puerto Leguiza	127.16	51	eP	PKPdf	23 25 30.1	-3.0
BOSA	Boshof	128.40	262	PKP	PKPdf	23 25 34.5	-0.6
	comp=Z,6.1nm,0.9s,baz=163,slow=2.6,SNR=4.9						
BOSA	Boshof	128.40	262	PKIKP	PKPdf	23 25 34.5	-0.6
TSUM	Tsumeb	129.19	277	PKP	PKPdf	23 25 35.4	-1.4
	comp=Z,7.9nm,1.0s,baz=78,slow=4.3,SNR=5.5						
TSUM	Tsumeb	129.19	277	PKPdf	PKPdf	23 25 35.8	-1.1
QSPA	South Pole Qui	129.69	180	IAMs_20	IAMs_20	00 19 37.9	
	comp=Z,17µm,22.0s						
SYO	Syowa Base	131.43	208⇑	ePKPdf	PKPdf	23 25 39.0	-0.3
SUR	Sutherland	133.56	260	PKP	PKPdf	23 25 41.6	-3.2
	comp=Z,5.4nm,0.7s,baz=66,slow=9.6,SNR=1.9						
CZSB	Cruzeiro do Su	134.65	55	eP	PKPdf	23 25 48.7	+1.5
NNA	Nana	135.08	63	IAMs_20	IAMs_20	00 35 51.1	
	comp=Z,11µm,21.0s						
PTGA	Pitinga	135.64	34	IAMs_20	IAMs_20	00 27 35.9	
	comp=Z,15µm,22.0s						
PTGA	Pitinga	135.64	34	eP	PKPdf	23 25 50.4	+1.3
MACA	Manacapuru-AM	137.48	37	eP	PKPdf	23 25 53.7	+1.3
MCPB	Macapa, AP	138.22	23	eP	PKPdf	23 25 55.0	+1.1
MALB	Monte Alegre	138.90	27	eP	PKPdf	23 25 55.2	+0.1
ETMB	Extrema	140.22	49	eP	PKPdf	23 25 58.0	+0.6
NVL	N'lazarevskaya	140.51	203	ePKIKP	PKPdf	23 25 57.0	+0.8
NVL				e		23 28 59.0	
NVL				eSS	SS	23 47 19.5	-0.5
NVL				eSSS	SSS	23 52 28.2	
ITTB	Itaituba	140.67	31	eP	PKPdf	23 25 58.3	0.0
SAML	Samuel	141.20	44	PKIKP	PKPdf	23 25 56.3	-2.9
SAML	Samuel	141.20	44		PKPdf	23 25 56.3	-2.9
SAML	Samuel	141.20	44	IAMs_20	IAMs_20	00 34 58.6	
	comp=Z,14µm,21.0s						
SAML	Samuel	141.20	44	eP	PKPdf	23 25 59.9	+0.7
TMAB	Tom-Au,PA,Br	141.22	18	eP	PKPdf	23 25 59.0	-0.3
ROSB	Rosrio	142.53	12	eP	PKPdf	23 26 01.4	-0.2
NPGB	Novo Progresso	143.26	32	eP	PKPbc	23 26 02.8	+3.0
NBMO	Morrinhos-CE	143.41	5	eP	PKPdf	23 26 04.1	+0.9
SNAA	Sanae	143.94	197	PKPdf	PKPab	23 25 57.8	-1.9
SNAA	Sanae	143.94	197	IAMs_20	IAMs_20	00 42 02.0	
	comp=Z,11µm,18.0s						
AP01	Chacalluta	144.00	63	IAMs_20	IAMs_20	00 41 48.6	
	comp=Z,13µm,20.0s						
LPAZ	La Paz	144.00	58	PKP	PKPab	23 26 01.8	-0.4
	comp=Z,3.2nm,0.5s,baz=358,slow=3.2,SNR=10						
LPAZ	La Paz	144.00	58	PKIKP	PKPab	23 26 01.8	-0.4
LPAZ	La Paz	144.00	58		PKPab	23 26 01.8	-0.4
LPAZ	La Paz	144.00	58	eP	PKPab	23 25 55.9	-6.3
LPAZ	La Paz	144.00	58	eP	PKPbc	23 26 05.4	+2.7
NBPS	Pedro II - PI	144.36	8	eP	PKPbc	23 26 05.8	+2.6
PSGCX	Pisagua	144.99	64	IAMs_20	IAMs_20	00 42 13.8	
	comp=Z,10µm,21.0s						
MNMC	Minye Minye	145.03	63	IAMs_20	IAMs_20	00 36 51.0	
	comp=Z,11µm,21.0s						
VNA2	Neumayer--Watz	145.50	197	PKPdf	PKPdf	23 26 03.3	-1.8
	baz=111,slow=3.0						
VNA3	Neumayer Olymp	145.73	195	PKPdf	PKPdf	23 26 01.6	-3.8
VNA1	Neumayer--Stat	145.90	197	PKPdf	PKPdf	23 26 04.6	-1.1
VA04	Juan Fernndez	146.02	93	IAMs_20	IAMs_20	00 26 09.5	
	comp=Z,7µm,20.0s						
RCBR	Riachuelo	146.02	358	PKP2	PKPdf	23 26 06.9	-0.9
RCBR	Riachuelo	146.02	358	PKPdf	PKPdf	23 26 06.9	-0.9
PB08	IPOC Station P	146.02	64	IAMs_20	IAMs_20	00 43 11.3	
	comp=Z,11µm,21.0s						
VILB	Vilhena	146.14	44	eP	PKPdf	23 26 07.7	-0.2
PB01	IPOC Station P	146.39	66	IAMs_20	IAMs_20	00 42 02.1	
	comp=Z,11µm,21.0s						
PB04	IPOC Station P	146.76	68	IAMs_20	IAMs_20	00 24 21.0	
	comp=Z,12µm,21.0s						
PB09	IPOC Station P	147.06	66	IAMs_20	IAMs_20	00 40 12.8	
	comp=Z,10µm,20.0s						
PB10	IPOC Station P	147.20	70	IAMs_20	IAMs_20	00 44 11.9	
	comp=Z,13µm,21.0s						
NBLI	Livramento-PB	147.56	0	eP	PKPdf	23 26 11.3	+0.9
SMTB	Santa Maria do	147.59	20	eP	PKPdf	23 26 11.7	+1.4
PB15	IPOC Station P	147.79	69	IAMs_20	IAMs_20	00 25 38.5	
	comp=Z,9µm,20.0s						
LVC	Limon Verde	147.81	67	PKIKP	PKPdf	23 26 08.5	-2.4
LVC	Limon Verde	147.81	67	PKPdf	PKPdf	23 26 08.5	-2.4
LVC	Limon Verde	147.81	67	IAMs_20	IAMs_20	00 39 16.0	
	comp=Z,13µm,21.0s						
LVC	Limon Verde	147.81	67	eP	PKPdf	23 26 10.3	-0.6
NBRF	Rio Formoso -	148.83	357	eP	PKPdf	23 26 13.9	+1.6
GO02	Mina Guanaco	148.90	72	IAMs_20	IAMs_20	00 24 44.8	
	comp=Z,14µm,20.0s						
SNDB	Serra Nova Dou	149.34	29	eP	PKPdf	23 26 14.7	+1.5
AC04	Llanos de Chal	149.49	78	IAMs_20	IAMs_20	00 28 05.3	
	comp=Z,10µm,20.0s						
GO03	Copiap	149.79	76	IAMs_20	IAMs_20	00 29 21.7	
	comp=Z,12µm,20.0s						
LCO	Las Campanas	150.18	79	IAMs_20	IAMs_20	00 32 31.1	
	comp=Z,12µm,20.0s						
PEXB	Peixe	150.47	23	eP	PKPdf	23 26 15.1	+0.1
GO04	Tololo Observa	150.68	81	IAMs_20	IAMs_20	00 28 51.2	
	comp=Z,11µm,21.0s						
CO02	Combarbal	151.01	83	IAMs_20	IAMs_20	00 20 50.9	
	comp=Z,8µm,21.0s						
CO03	El Pedregal	151.08	82	IAMs_20	IAMs_20	00 41 12.8	
	comp=Z,10µm,21.0s						
CO01	Juntas del Tor	151.12	80	IAMs_20	IAMs_20	00 28 56.9	
	comp=Z,12µm,20.0s						
BI03	Tigo	151.58	95	IAMs_20	IAMs_20	00 26 20.6	
	comp=Z,10µm,20.0s						
SDBA	SAO DESIDERIO	151.66	17	eP	PKPdf	23 26 16.4	-0.4
MT02	Curacav	151.78	87	IAMs_20	IAMs_20	00 27 25.2	
	comp=Z,11µm,20.0s						
VA03	San Esteban	152.03	86	IAMs_20	IAMs_20	00 29 37.9	
	comp=Z,12µm,20.0s						
PEL	Peldehue	152.08	87	IAMs_20	IAMs_20	00 32 33.4	
	comp=Z,11µm,20.0s						
MT05	Renca	152.14	87		PKPbc	23 26 23.3	-0.3
MT05				IAMs_20	IAMs_20	00 39 46.8	
	comp=Z,9µm,21.0s						
ARAG	Araguaiana, MT	152.53	33	eP	PKPdf	23 26 18.9	+0.9
BO02	Sierra Bellavi	152.63	90	IAMs_20	IAMs_20	00 48 15.7	
	comp=Z,11µm,22.0s						
PP1B	Ponte de Pedra	152.79	40	eP	PKPdf	23 26 18.9	+0.6
BI02	San Fabin de	152.87	94	IAMs_20	IAMs_20	00 31 58.8	
	comp=Z,13µm,19.0s						
ZON	Zonda	152.93	82	IAMs_20	IAMs_20	00 50 17.8	
	comp=Z,11µm,22.0s						
GO09	Cerro Castillo	152.96	127	IAMs_20	IAMs_20	00 44 20.1	
	comp=Z,9µm,19.0s						
LC01	Cunco	153.00	99	IAMs_20	IAMs_20	00 49 30.0	
	comp=Z,11µm,22.0s						
BDFB	Brasilia	153.89	25	PKPbc	PKPdf	23 26 22.8	+2.7
	comp=Z,7.0nm,1.1s,baz=70,slow=1.5,SNR=7.3						
BDFB				PKPab	pPKPbc	23 26 32.2	+1.0
	comp=Z,17nm,0.8s,baz=216,slow=2.9,SNR=17						
BDFB	Brasilia	153.89	25	PKIKP	PKPdf	23 26 23.0	+2.9
BDFB	Brasilia	153.89	25		PKPdf	23 26 23.0	+2.9
JANB	Januaria	154.35	17	eP	PKPdf	23 26 22.1	+1.4
PLCA	Paso Flores	154.37	103	PKP	PKPdf	23 26 18.1	-1.9
	comp=Z,2.8nm,1.1s,baz=279,slow=14,SNR=2.4						
PLCA	Paso Flores	154.37	103	PKIKP	PKPdf	23 26 18.2	-1.9
PLCA	Paso Flores	154.37	103		PKPdf	23 26 23.9	+3.9
PLCA	Paso Flores	154.37	103	eP	PKPdf	23 26 18.1	-1.9
IPMB	Ipameri, GO	156.00	28	eP	PKPdf	23 26 23.8	+0.9
ITRB	Iturama	156.71	34	eP	PKPdf	23 26 24.6	+0.9
DIAM	Diamantina, MG	157.63	17	eP	PKPdf	23 26 25.9	+0.8
PCMB	Pacaembu	157.96	38	eP	PKPdf	23 26 26.3	+1.1
CPUP	Villa Florida	158.18	58	PKP	PKPdf	23 26 25.1	-0.3
	comp=Z,11nm,1.2s,baz=72,slow=7.4,SNR=5.4						
CPUP	Villa Florida	158.18	58	PKIKP	PKPdf	23 26 25.1	-0.3
TRCB	Terra Rica	158.27	43	eP	PKPdf	23 26 26.3	+0.7
SJMB	Sao Joao De Ma	158.50	11	eP	PKPdf	23 26 27.2	+1.2
BSFB	Barra de Sao F	158.67	11	eP	PKPdf	23 26 26.7	+0.6
BB19B	Bebedouro	158.69	31	eP	PKPdf	23 26 26.7	+0.6
BSCB	Bom Sucesso	159.93	22	eP	PKPdf	23 26 28.4	+0.8
PTGB	Pitanga	160.13	45	eP	PKPdf	23 26 28.9	+1.0
ITQB	Itaqui	160.82	64	eP	PKPdf	23 26 30.1	+1.8
VAO	Valinhos	161.04	30	eP	PKPdf	23 26 31.0	+2.1
SPB	Sao Paulo	161.39	32	eP	PKPdf	23 26 29.7	+0.6
CAM01	Campos-RJ	161.47	14	eP	PKPdf	23 26 30.5	+1.4
VAS01	Vassouras-RJ	161.51	20	eP	PKPdf	23 26 30.1	+0.8
DUB01	Friburgo-RJ	161.57	16	eP	PKPdf	23 26 30.1	+0.7
CPSB	Cacapava Do Su	163.43	60	eP	PKPdf	23 26 32.2	+1.3

*IDC **16** 23:16:46.7±2.9, 39°.86N×143°.60E, h0^{km}, mb3.9/5, mb1 4.0/6, mb1mx3.7/47, mbtmp3.9/6, ML2.6/1 Error ellipse: s-maj=73.3km s-min=29.4km az=70.0*

*JMA **16** 23:16:57.2±0.2, 39°.70N×143°.58E, h25^{km}, M4.0*

ISC 16 23:16:46.5±1.6**, 39°.8N**±0°.1×**144°.0E**±0°.1**, h10^{km}, n11,** σ**1^{s}.47**/12**, mb4.0**/5**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MIYJ	Miyakonagasawa	1.71	264	P	Pg	23 17 21.1	+1.8
MIYJ				eS	Sn	23 17 38.3	+0.1
JOM	Ohasama	2.13	263	P	Pg	23 17 27.9	+0.6
JMK	Ichinoseki	2.32	250	P	Pg	23 17 30.0	-1.0
JIO	Ouri	2.46	238	P	Pb	23 17 31.7	+0.9
JTM	Tenmabayashi	2.47	295	P	Pg	23 17 34.4	+0.5
MJAR	Matsushiro Arr	5.60	237	Pn	Pn	23 18 08.0	-1.8
	0.2nm,0.3s,baz=45,slow=11,SNR=2.4						
SONM	Songino Array	28.10	299	P	P	23 22 38.5	+0.1
	1.9nm,1.0s,baz=81,slow=7.1,SNR=1.0						
ZALV	Zalesovo Beam	41.65	310	P	P	23 24 33.2	-1.5
	2.9nm,0.8s,baz=96,slow=8.1,SNR=1.6						
MKAR	Makanchi Array	44.45	300	P	P	23 24 55.5	-2.1
	2.1nm,0.8s,baz=73,slow=7.4,SNR=2.6						
KURBB	Kurchatov Arra	45.98	306	P	P	23 25 09.7	+0.1
	1.2nm,0.7s,baz=78,slow=8.5,SNR=1.5						
WRA	Warramunga Arr	60.09	191	P	P	23 26 55.8	+1.9
	1.7nm,0.8s,baz=6.5,slow=6.8,SNR=5.0						

*SKHL **16** 23:17:02.4±0.5, 43°.20N×145°.40E, h101^{km}±1^{km}, mb4.2/2, msha4.8/3*

*JMA **16** 23:17:02.2±0.1, 43°.22N×145°.45E, h101^{km}±1^{km}, M3.5*

JMA Felt I J1.

ISC 16 23:17:01.7±2.0**, 43°.20N**±0°.07×**145°.46E**±0°.07**, h103^{km}**±11^{km}**, n17,** σ**0^{s}.52**/31**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKHN	Kushirohamanak	0.24	242	P	Pn	23 17 16.9	+0.5
JKHN				eS	Sn	23 17 27.9	+0.5
NMR	Nemuro--Hokkai	0.26	49	i P	Pn	23 17 16.7	+0.2
NMR				i S	Sn	23 17 27.0	-0.5
NEM2	Nemuro 2	0.27	51	P	Pn	23 17 16.7	+0.2
NEM2				eS	Sn	23 17 27.4	-0.2
JAK	Akkeshi	0.59	250	P	Pn	23 17 18.8	+0.3
JAK				eS	Sn	23 17 31.1	+0.1
JNK	Nakash	0.66	306	P	Pn	23 17 18.9	-0.2
JNK				eS	Sn	23 17 31.5	-0.6
JNSB	Nemuroshibetsu	0.67	331	P	Pn	23 17 19.3	+0.2
JNSB				eS	Sn	23 17 32.1	0.0
JRA	Rausu	0.78	342	P	Pn	23 17 20.2	+0.1
JRA				eS	Sn	23 17 33.9	0.0
GRPR	Tuman	0.83	16	eP	Pn	23 17 20.1	-0.5
GRPR				AMB	AMB	23 17 21.0	
	70nm,0.3s						
GRPR				eS	Sn	23 17 34.1	-0.7
GRPR				A	A	23 17 35.9	
	270nm,0.4s						
GRPR				A	A	23 17 35.9	
	280nm,0.4s						
YUK	Yuzh-Kuril'sk	0.89	19	eP	Pn	23 17 21.3	+0.1
YUK				AMB	AMB	23 17 21.7	
	110nm,0.3s						
YUK				AMB	AMB	23 17 21.7	
	80nm,0.3s						
YUK				AMB	AMB	23 17 21.7	
	120nm,0.3s						
YUK				eS	Sn	23 17 35.4	-0.4
YUK				A	A	23 17 36.0	
	250nm,0.3s						
YUK				A	A	23 17 36.0	
	190nm,0.3s						
JOB	Onbets	1.22	257	P	Pn	23 17 25.4	+0.6
JOB				eS	Sn	23 17 42.6	+0.3
JAR	Ashorobuto	1.24	275	P	Pn	23 17 25.4	+0.4
JAR				eS	Sn	23 17 42.4	-0.2
JTKR	Abashiri--Toko	1.36	305	P	Pn	23 17 26.8	+0.4
JCH	Churui	1.64	250	P	Pn	23 17 30.4	+0.5
JCH				eS	Sn	23 17 50.6	-0.7
HRK	Horoka	1.72	280	eP	Pn	23 17 31.4	+0.5
HRK				eS	Sn	23 17 52.9	-0.2
JMP	Maruseppu	1.72	299	P	Pn	23 17 31.2	+0.3
MYR	Moyori	1.84	241	i P	Pn	23 17 31.9	-0.4
MYR				eS	Sn	23 17 54.1	-1.5
KUR	Kuril'sk	2.67	40	eS	Sn	23 18 15.7	+0.7
KUR				A	A	23 18 18.6	
	80nm,0.5s						
KUR				A	A	23 18 18.6	
	50nm,0.5s						

*IDC **16** 23:22:32.0±3.1, 39°.80N×143°.35E, h0^{km}, mb3.6/5, mb1 3.7/6, mb1mx3.5/48, mbtmp3.5/6, ML2.1/1, Error ellipse: s-maj=75.9km s-min=31.4km az=73.0*

*JMA **16** 23:22:34.9±0.3, 39°.75N×143°.45E, h25^{km}, M3.4*

ISC 16 23:22:32.5±1.5**, 39°.81N**±0°.10×**143°.43E**±0°.10**, h6^{km}, n13,** σ**0^{s}.76**/15**, mb3.6**/5**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	1.21	276	eS	Sn	23 23 12.7	+0.1
MIYJ	Miyakonagasawa	1.26	260	P	Pn	23 22 57.5	+0.9
OFUJ	Ofunato	1.55	242	P	Pb	23 23 01.1	-0.4
JKZ	Kuzumaki	1.62	277	P	Pb	23 23 02.7	-0.1
JKZ				eS	Sb	23 23 23.3	-0.3
JOM	Ohasama	1.68	259	P	Pb	23 23 04.1	+0.3
JOM				eS	Sb	23 23 24.9	-0.4
JTM	Tenmabayashi	2.05	299	P	Pb	23 23 09.6	-0.5
JAH	Hinai	2.18	281	P	Pb	23 23 12.6	+0.3
MJAR	Matsushiro Arr	5.25	233	Pn	Pn	23 23 51.3	-0.2
	0.1nm,0.3s,baz=45,slow=12,SNR=2.5						
SONM	Songino Array	27.68	299	P	P	23 28 19.6	-1.6
	1.5nm,1.1s,baz=93,slow=9.4,SNR=2.3						
ZALV	Zalesovo Beam	41.27	310	P	P	23 30 18.2	0.0
	0.4nm,0.5s,baz=98,slow=8.9,SNR=2.0						
MKAR	Makanchi Array	44.04	300	P	P	23 30 42.4	+1.5
	0.6nm,0.8s,baz=74,slow=8.0,SNR=1.8						
KURBB	Kurchatov Arra	45.59	306	P	P	23 30 53.7	+0.5
	0.5nm,0.7s,baz=78,slow=8.4,SNR=3.1						
WRA	Warramunga Arr	60.05	190	P	P	23 32 40.3	+0.1
	1.0nm,1.0s,baz=7.0,slow=7.2,SNR=1.4						

*IDC **16** 23:24:33.4±3.0, 39°.93N×143°.87E, h0^{km}, mb3.6/3, mb1 3.7/4, mb1mx3.4/43, mbtmp3.5/4, ML2.1/1, Error ellipse: s-maj=76.8km s-min=32.2km az=74.0*

*JMA **16** 23:24:39.8±0.2, 39°.77N×143°.26E, h25^{km}±5^{km}, M3.3*

ISC 16 23:24:36.6±1.6**, 39°.9N**±0°.2×**143°.3E**±0°.1**, h6^{km}, n9,** σ**1^{s}.41**/11**, mb3.6**/3**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	1.12	273	eS	Sb	23 25 13.5	+0.3
MIYJ	Miyakonagasawa	1.19	256	P	Pn	23 25 00.3	+0.4
MIYJ				eS	Sb	23 25 14.6	-0.7
JOM	Ohasama	1.61	256	P	Pn	23 25 06.8	+1.2
JOM				eS	Sn	23 25 26.2	-0.6
JMK	Ichinoseki	1.87	241	eS	Sn	23 25 31.8	-1.3
MJAR	Matsushiro Arr	5.23	232	Pn	Pn	23 25 58.2	+2.9
	0.1nm,0.3s,baz=44,slow=11,SNR=1.7						
ZALV	Zalesovo Beam	41.16	310	P	P	23 32 21.8	+0.3
	0.6nm,0.4s,baz=96,slow=9.4,SNR=4.1						
MKAR	Makanchi Array	43.93	300	P	P	23 32 43.6	-0.5
	0.4nm,0.8s,baz=86,slow=8.0,SNR=2.1						
KURBB	Kurchatov Arra	45.48	306	P	P	23 32 57.0	+0.6
	baz=80,slow=8.7						
WRA	Warramunga Arr	60.10	190	P	P	23 34 43.2	-1.6
	0.8nm,0.9s,baz=7.0,slow=7.5,SNR=1.5						

*IDC **16** 23:26:07.8±2.6, 39°.77N×143°.46E, h0^{km}, mb3.6/4, mb1 3.6/6, mb1mx3.4/45, mbtmp3.5/6, ML3.0/2, Error ellipse: s-maj=60.3km s-min=25.5km az=85.0*

*JMA **16** 23:26:10.8±0.2, 39°.87N×143°.40E, h28^{km}, M3.4*

ISC 16 23:26:09.1±1.2**, 39°.81N**±0°.06×**143°.39E**±0°.07**, h6^{km}, n19,** σ**1^{s}.27**/24**, mb3.6**/4**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	1.18	277	P	Pg	23 26 31.6	-0.1
JTH				eS	Sg	23 26 47.1	+0.1
MIYJ	Miyakonagasawa	1.23	259	P	Pg	23 26 33.1	+0.4
JKEN	Kujiedanarisaw	1.34	288	P	Pn	23 26 33.9	-0.5
JANG	Nango	1.54	292	P	Pn	23 26 36.7	-0.4
JANG				eS	Sn	23 26 56.5	-0.9
JOM	Ohasama	1.65	259	P	Pb	23 26 39.5	-0.4
JOM				eS	Sn	23 27 00.0	-0.2
JMK	Ichinoseki	1.89	244	P	Pn	23 26 42.4	+0.6
JTM	Tenmabayashi	2.02	300	P	Pn	23 26 44.1	+0.4
JIO	Ouri	2.08	230	P	Pn	23 26 44.7	+0.1
JAH	Hinai	2.15	281	P	Pn	23 26 46.6	+1.2
JOT	Ohata	2.37	312	P	Pn	23 26 50.0	+1.5
JYK	Kaneyama	2.51	250	P	Pn	23 26 51.9	+1.5
JNBK	Urakawa-nobuka	2.51	349	P	Pn	23 26 51.4	+0.9
JCH	Churui	2.80	360	P	Pn	23 26 54.1	-0.3
JCH				S	Sn	23 27 25.7	-2.8
ASAJ	Asahikawa	4.34	352	Pn	Pn	23 27 17.1	+1.5
	1.3nm,0.3s,baz=288,slow=6.0,SNR=1.3						
ASAJ				Sn	Sn	23 28 09.9	+3.4

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	0.6nm,0.3s,baz=74,slow=32,SNR=1.3						
MJAR	Matsushiro Arr	5.22	233	Pn	Pn	23 27 29.3	+1.5
	0.1nm,0.3s,baz=50,slow=11,SNR=1.9						
SONM	Songino Array	27.65	299	P	P	23 31 56.8	-0.9
	0.5nm,0.7s,baz=99,slow=8.9,SNR=2.7						
ZALV	Zalesovo Beam	41.25	310	P	P	23 33 54.9	+0.1
	1.0nm,0.4s,baz=95,slow=8.8,SNR=5.6						
MKAR	Makanchi Array	44.01	300	P	P	23 34 17.4	0.0
	0.3nm,0.6s,baz=80,slow=9.6,SNR=2.2						
WRA	Warramunga Arr	60.04	190	P	P	23 36 16.1	-0.7
	0.6nm,0.7s,baz=7.9,slow=7.1,SNR=1.9						

BUC 16 23:26:13.6±0.4, 45°.61N×26°.37E, h111km±2km, ml3.2/14, 66C-54D, Error ellipse: s-maj=2.3km s-min=1.7km az=165.0, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEHR	Nehoiu	0.19	197	⇑P	Pn	23 26 29.9	+0.7
NEHR				⇑S	Sn	23 26 41.6	+0.8
NEHR	Nehoiu	0.19	197	⇑P	Pn	23 26 29.9	+0.7
NEHR				⇑S	Sn	23 26 41.6	+0.8
BISRR	Bisoca	0.24	104	⇑S	Sn	23 26 42.3	+1.1
BISRR	Bisoca	0.24	104	⇑S	Sn	23 26 42.3	+1.1
PLOR	Plostina	0.31	38	⇑P	Pn	23 26 29.8	+0.2
PLOR				⇑S	Sn	23 26 41.6	0.0
PLOR	Plostina	0.31	38	⇑P	Pn	23 26 29.8	+0.2
PLOR				⇑S	Sn	23 26 41.6	0.0
MLR	Muntele Rosu	0.32	249	⇑P	Pn	23 26 30.4	+0.6
MLR				⇑S	Sn	23 26 43.0	+1.1
MLR	Muntele Rosu	0.32	249	⇑P	Pn	23 26 30.4	+0.6
MLR				⇑S	Sn	23 26 43.0	+1.1
VRI	Vrincioaia	0.36	44	⇑P	Pn	23 26 30.1	+0.3
VRI				⇑S	Sn	23 26 42.2	+0.2
VRI	Vrincioaia	0.36	44	⇑P	Pn	23 26 30.1	+0.3
VRI				⇑S	Sn	23 26 42.2	+0.2
ODBI	Odobesti	0.50	72	⇓P	Pn	23 26 31.7	+1.1
ODBI				⇑S	Sn	23 26 44.5	+1.2
ODBI	Odobesti	0.50	72	⇓P	Pn	23 26 31.7	+1.1
ODBI				⇑S	Sn	23 26 44.5	+1.2
PETR	Petresti	0.61	79	⇓P	Pn	23 26 32.0	+0.7
PETR				⇓S	Sn	23 26 45.1	+0.5
PETR	Petresti	0.61	79	⇓P	Pn	23 26 32.0	+0.7
PETR				⇓S	Sn	23 26 45.1	+0.5
OZUR		0.64	320	⇑P	Pn	23 26 31.8	+0.2
OZUR				⇓S	Sn	23 26 44.6	-0.6
OZUR		0.64	320	⇑P	Pn	23 26 31.8	+0.2
OZUR				⇓S	Sn	23 26 44.6	-0.6
DOPR	Dopca	0.78	298	⇑P	Pn	23 26 33.3	+0.5
DOPR				⇑S	Sn	23 26 47.3	+0.1
DOPR	Dopca	0.78	298	⇑P	Pn	23 26 33.3	+0.5
DOPR				⇑S	Sn	23 26 47.3	+0.1
PGOR	Pogoanele	0.82	148	⇓P	Pn	23 26 33.8	+0.7
PGOR				⇓S	Sn	23 26 48.6	+0.8
PGOR	Pogoanele	0.82	148	⇓P	Pn	23 26 33.8	+0.7
PGOR				⇓S	Sn	23 26 48.6	+0.8
GHRR		0.85	58	⇓P	Pn	23 26 33.8	+0.4
GHRR				⇓S	Sn	23 26 49.4	+1.1
GHRR		0.85	58	⇓P	Pn	23 26 33.8	+0.4
GHRR				⇓S	Sn	23 26 49.4	+1.1
TUDR		0.91	90	⇑P	Pn	23 26 33.7	-0.2
TUDR				⇑S	Sn	23 26 48.4	-0.8
TUDR		0.91	90	⇑P	Pn	23 26 33.7	-0.2
TUDR				⇑S	Sn	23 26 48.4	-0.8
TESR	Tescani	0.92	12	⇑P	Pn	23 26 34.3	+0.2
TESR				⇓S	Sn	23 26 48.7	-0.9
TESR	Tescani	0.92	12	⇑P	Pn	23 26 34.3	+0.2
TESR				⇓S	Sn	23 26 48.7	-0.9
SULR		0.93	185	⇓P	Pn	23 26 34.9	+0.7
SULR				⇑S	Sn	23 26 50.5	+0.9
SULR		0.93	185	⇓P	Pn	23 26 34.9	+0.7
SULR				⇑S	Sn	23 26 50.5	+0.9
VOIR		0.95	260	⇓P	Pn	23 26 35.1	+0.7
VOIR				⇑S	Sn	23 26 50.2	+0.1
VOIR		0.95	260	⇓P	Pn	23 26 35.1	+0.7
VOIR				⇑S	Sn	23 26 50.2	+0.1
SCHL	Schela	1.03	95	⇓P	Pn	23 26 34.8	-0.3
SCHL	Schela	1.03	95	⇓P	Pn	23 26 34.8	-0.3
VARL	Varlezi	1.07	74	⇑P	Pn	23 26 36.0	+0.4
VARL				⇓S	Sn	23 26 52.4	+0.2
VARL	Varlezi	1.07	74	⇑P	Pn	23 26 36.0	+0.4
VARL				⇓S	Sn	23 26 52.4	+0.2
BIR	Birlad	1.09	53	⇓P	Pn	23 26 36.3	+0.5
BIR				⇑S	Sn	23 26 52.7	+0.1
BIR	Birlad	1.09	53	⇓P	Pn	23 26 36.3	+0.5
BIR				⇑S	Sn	23 26 52.7	+0.1
LEHL	Lehliu	1.18	164	⇑S	Sn	23 26 55.1	+0.9
LEHL	Lehliu	1.18	164	⇑S	Sn	23 26 55.1	+0.9
ARR	Arges	1.25	260	⇑P	Pn	23 26 38.2	+0.6
ARR				⇑S	Sn	23 26 56.6	+0.8
ARR	Arges	1.25	260	⇑P	Pn	23 26 38.2	+0.6
ARR				⇑S	Sn	23 26 56.6	+0.8
BUC1	Bucharest	1.28	191	⇓S	Sn	23 26 57.4	+1.0
BUC1	Bucharest	1.28	191	⇓S	Sn	23 26 57.4	+1.0
CFR	Carcaliu	1.31	108	⇑P	Pn	23 26 38.1	-0.1
CFR	Carcaliu	1.31	108	⇑P	Pn	23 26 38.1	-0.1
SGRR	Singureni	1.41	192	⇑S	Sn	23 26 59.2	+0.2
SGRR	Singureni	1.41	192	⇑S	Sn	23 26 59.2	+0.2
VASR	Vaslui	1.43	43	⇓P	Pn	23 26 39.8	+0.3
VASR				⇓S	Sn	23 26 58.7	-0.6
VASR	Vaslui	1.43	43	⇓P	Pn	23 26 39.8	+0.3
VASR				⇓S	Sn	23 26 58.7	-0.6
HARR	Harsova	1.43	129	⇓P	Pn	23 26 39.8	+0.2
HARR	Harsova	1.43	129	⇓P	Pn	23 26 39.8	+0.2
HUMR	Humele	1.46	223	⇓S	Sn	23 27 00.3	+0.3
HUMR	Humele	1.46	223	⇓S	Sn	23 27 00.3	+0.3
TLBR	Topalu	1.59	131	⇓P	Pn	23 26 41.8	+0.2
TLBR	Topalu	1.59	131	⇓P	Pn	23 26 41.8	+0.2
TPGR	Topolog	1.63	117	⇑P	Pn	23 26 41.9	-0.1
TPGR				⇑S	Sn	23 27 03.8	+0.2
TPGR	Topolog	1.63	117	⇑P	Pn	23 26 41.9	-0.1
TPGR				⇑S	Sn	23 27 03.8	+0.2
COPA	Copaceanca	1.69	210	⇓S	Sn	23 27 03.7	-1.1
COPA	Copaceanca	1.69	210	⇓S	Sn	23 27 03.7	-1.1
CVDA	Cernavoda	1.74	137	⇑P	Pn	23 26 43.6	+0.3
CVDA				⇑S	Sn	23 27 05.0	-0.9
CVDA	Cernavoda	1.74	137	⇑P	Pn	23 26 43.6	+0.3
CVDA				⇑S	Sn	23 27 05.0	-0.9
TLCR		1.77	103	⇑P	Pn	23 26 44.4	+0.7
TLCR				⇑S	Sn	23 27 05.4	-1.3
TLCR		1.77	103	⇑P	Pn	23 26 44.4	+0.7
TLCR				⇑S	Sn	23 27 05.4	-1.3
ICOR	Ion Corvin	1.80	145	⇓P	Pn	23 26 44.9	+0.7
ICOR				⇓S	Sn	23 27 07.5	+0.1
ICOR	Ion Corvin	1.80	145	⇓P	Pn	23 26 44.9	+0.7
ICOR				⇓S	Sn	23 27 07.5	+0.1
LOT	Lotru	1.84	266	⇑P	Pn	23 26 43.8	-0.8
LOT				⇓S	Sn	23 27 08.0	-0.4
LOT	Lotru	1.84	266	⇑P	Pn	23 26 43.8	-0.8
LOT				⇓S	Sn	23 27 08.0	-0.4
TIRR	Tirgusor	1.85	128	⇓P	Pn	23 26 44.8	+0.2
TIRR	Tirgusor	1.85	128	⇓P	Pn	23 26 44.8	+0.2
MILM	Milestii Mici	2.14	51	⇑P	Pn	23 26 48.4	+0.1
MILM	Milestii Mici	2.14	51	⇑P	Pn	23 26 48.4	+0.1
GZR	Gura Zlata	2.54	266	⇓S	Sn	23 27 25.1	+0.8
GZR	Gura Zlata	2.54	266	⇓S	Sn	23 27 25.1	+0.8
BAIL	Bailesti	2.68	235	⇓S	Sn	23 27 27.1	-0.3
BAIL	Bailesti	2.68	235	⇓S	Sn	23 27 27.1	-0.3

*IDC **16** 23:27:12.2±1.3, 39°.71N×143°.36E, h0km, mb3.6/6, mb1 3.7/8, mb1mx3.6/46, mbtmp3.6/8, ML3.0/2, Error ellipse: s-maj=34.6km s-min=21.5km az=90.0*

*JMA **16** 23:27:14.4±0.1, 39°.65N×143°.48E, h35km, M3.9*

ISC 16 23:27:13.6±1.0, 39°.70N±0°.06×143°.38E±0°.07, h11km, n15, σ0ˢ.93/18, mb3.6/6, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	1.19	282	P	Pg	23 27 36.6	+0.1
JTH				*e*S	Sg	23 27 52.6	+0.7
MIYJ	Miyakonagasawa	1.21	265	P	Pg	23 27 36.8	0.0
JANG	Nango	1.58	296	P	Pb	23 27 42.3	-0.5
JOM	Ohasama	1.63	263	*e*S	Sb	23 28 04.1	0.0
JMK	Ichinoseki	1.83	247	P	Pb	23 27 45.5	-1.6
JIO	Ouri	2.01	232	P	Pn	23 27 47.4	0.0
JTM	Tenmabayashi	2.08	302	P	Pb	23 27 49.2	-2.0
JTM				*e*S	Sn	23 28 15.3	+1.1
ASAJ	Asahikawa	4.45	353	Pn	Pn	23 28 21.9	+0.9
	0.9nm,0.3s,baz=317,slow=30,SNR=2.8						
ASAJ				Sn	Sn	23 29 11.5	-1.3
	0.7nm,0.3s,baz=252,slow=33,SNR=1.1						
MJAR	Matsushiro Arr	5.15	234	Pn	Pn	23 28 31.7	+1.0
	0.2nm,0.3s,baz=35,slow=12,SNR=5.8						
SONM	Songino Array	27.70	299	P	P	23 33 02.0	+0.2
	0.6nm,0.8s,baz=82,slow=9.8,SNR=3.0						
ZALV	Zalesovo Beam	41.32	310	P	P	23 34 58.7	-0.2
	0.6nm,0.4s,baz=96,slow=9.6,SNR=2.6						
MKAR	Makanchi Array	44.06	300	P	P	23 35 21.3	-0.1
	0.4nm,0.7s,baz=88,slow=9.8,SNR=3.7						
ILAR	Eielson Array	46.42	34	P	P	23 35 40.5	+0.6
	0.4nm,0.8s,baz=278,slow=6.1,SNR=2.6						
WRA	Warramunga Arr	59.93	190	P	P	23 37 20.0	+0.3
	1.2nm,0.9s,baz=8.7,slow=7.6,SNR=2.0						
ASAR	Alice Springs	63.65	190	P	P	23 37 44.7	-0.1
	0.4nm,0.6s,baz=18,slow=4.3,SNR=2.2						

*IDC **16** 23:28:31.2±3.1, 39°.83N×143°.80E, h0km, mb3.8/4, mb1 3.8/5, mb1mx3.5/44, mbtmp3.7/5, ML2.4/1, Error ellipse: s-maj=75.1km s-min=32.5km az=71.0*

*JMA **16** 23:28:35.2±0.2, 39°.79N×143°.47E, h27km, M3.6*

ISC 16 23:28:33.3±1.3, 39°.87N±0°.09×143°.49E±0°.08, h6km, n10, σ0ˢ.98/10, mb3.7/4, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	1.25	274	*e*S	Sg	23 29 13.1	-0.5
MIYJ	Miyakonagasawa	1.32	258	*e*S	Sb	23 29 14.5	-1.2
JTM	Tenmabayashi	2.07	297	*e*S	Sn	23 29 35.0	+0.4
JCH	Churui	2.74	358	*e*S	Sn	23 29 50.6	-0.7
JAK	Akkeshi	3.25	16	*e*S	Sn	23 30 03.7	-0.1
MJAR	Matsushiro Arr	5.32	233	Pn	Pn	23 29 54.5	+1.2
	0.1nm,0.3s,baz=47,slow=11,SNR=1.3						
SONM	Songino Array	27.70	299	P	P	23 34 22.9	+0.7
	0.6nm,0.7s,baz=93,slow=8.7,SNR=3.2						
ZALV	Zalesovo Beam	41.28	310	P	P	23 36 19.9	+0.7
	1.0nm,0.4s,baz=88,slow=8.2,SNR=4.0						
MKAR	Makanchi Array	44.06	300	P	P	23 36 42.2	+0.4
	0.9nm,1.0s,baz=78,slow=9.0,SNR=2.8						
WRA	Warramunga Arr	60.11	190	P	P	23 38 40.2	-1.3
	1.5nm,1.0s,baz=6.1,slow=7.4,SNR=3.3						

*IDC **16** 23:40:22.4±1.2, 55°.02S×27°.40W, h0km, mb4.6/2, mb1 4.6/3, mb1mx4.0/19, mbtmp4.5/3, ML4.2/1, Error ellipse: s-maj=104.6km s-min=25.4km az=50.0*

*NEIC **16** 23:40:26.1±1.6, 55°.6S±0°.2×28°.4W±0°.2, h10km±1km, mb4.4/7, Error ellipse: s-maj=27.3km s-min=15.7km az=24.0*

ISC 16 23:40:26.0±0.9, 55°.6S±0°.1×28°.5W±0°.1, h10km, n13, σ1ˢ.02/13, mb4.4/4, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	4.79	283	Pn	Pn	23 41 39.7	+1.6
HOPE				Sn	Sn	23 42 32.1	-1.4
SNAA	Sanae	19.44	156	P	P	23 44 51.6	-0.8
	0.7nm,0.3s,baz=308,slow=13,SNR=12						
SNAA	Sanae	19.44	156	P	P	23 44 51.8	-0.5
SNAA				IAmb	IAmb	23 45 01.2	
	comp=Z,19nm,1.4s						
PMSA	Palmer Station	19.63	228	P	Pn	23 44 55.8	+0.2
QSPA	South Pole Qui	34.63	180	P	P	23 47 15.4	+0.3
MAW	Mawson	40.94	144	P	P	23 48 08.0	0.0
	comp=Z,13nm,0.4s,baz=231,slow=11,SNR=11						
MAW	Mawson	40.94	144	IAmb	IAmb	23 48 10.8	
	comp=Z,15nm,1.2s						
PB01	IPOC Station P	46.05	302	P	P	23 48 50.1	+0.2
PB01				IAmb	IAmb	23 48 53.8	
	comp=Z,2.4nm,0.8s						
LPAZ	La Paz	49.52	306	P	P	23 49 16.4	-1.1
	comp=Z,1.4nm,0.6s,baz=153,slow=6.2,SNR=5.7						
LPAZ	La Paz	49.52	306	P	P	23 49 17.1	-0.3
LPAZ				IAmb	IAmb	23 49 25.6	
	comp=Z,4.6nm,1.4s						
LBTB	Lobatse	49.60	75	P	P	23 49 17.8	+0.3
LBTB				IAmb	IAmb	23 49 17.9	
	comp=Z,7.5nm,1.1s						
ILAR	Eielson Array	149.27	312	PKPbc	PKPbc	00 00 11.7	-1.6
	comp=Z,1.2nm,0.8s,baz=124,slow=2.0,SNR=9.4						
SONM	Songino Array	151.45	87	PKPbc	PKPdf	00 00 14.0	+0.9
	comp=Z,0.2nm,0.4s,baz=239,slow=2.5,SNR=2.1						

IDC 16 23:44:59.5±2.0, 2°.05N×126°.44E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.4/39, mbtmp3.6/3, Error ellipse: s-maj=183.6km s-min=23.7km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.19	161	P	P	23 50 06.9	-1.2
	1.2nm,0.6s,baz=339,slow=11,SNR=12						
ASAR	Alice Springs	26.57	165	P	P	23 50 41.0	+1.4
	0.4nm,0.5s,baz=344,slow=11,SNR=5.6						
MKAR	Makanchi Array	58.77	326	P	P	23 54 59.3	-0.2
	0.4nm,0.4s,baz=121,slow=8.0,SNR=15						

JMA 16 23:53:37.8±0.3, 39°.82N×143°.47E, h40km, M3.2, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	1.24	276	P	Pn	23 53 59.3	+0.6
JTH				*e*S	Sn	23 54 15.2	+1.0
MIYJ	Miyakonagasawa	1.30	260	P	Pn	23 54 00.1	+0.7
JKEN	Kujiedanarisaw	1.41	286	P	Pn	23 54 00.7	-0.2
JOM	Ohasama	1.72	259	P	Pn	23 54 06.7	+1.5
JMK	Ichinoseki	1.95	244	P	Pn	23 54 09.2	+0.9
JIO	Ouri	2.14	231	P	Pn	23 54 11.4	+0.4
JYK	Kaneyama	2.57	251	P	Pn	23 54 18.8	+1.8

*JMA **16** 23:53:53.4±0.2, 39°.56N×143°.59E, h29km, M3.6*

*IDC **16** 23:53:58.8±6.5, 40°.13N×142°.16E, h0km, mb3.6/3, mb1 3.4/5, mb1mx3.1/63, mbtmp3.5/5, ML2.8/2, Error ellipse: s-maj=126.5km s-min=30.6km az=111.0*

ISC 16 23:53:54.4±2.2, 39°.6N±0°.1×143°.7E±0°.2, h35km, n9, σ1ˢ.33/11, mb3.6/3, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	1.41	283	P	Pn	23 54 17.3	-0.3
JTH				*e*S	Sn	23 54 35.0	+0.1
JOM	Ohasama	1.83	266	P	Pn	23 54 23.5	+0.2
JNBK	Urakawa-nobuka	2.73	346	*e*S	Sn	23 55 10.5	+2.9
JCH	Churui	2.99	356	*e*S	Sn	23 55 14.1	+0.1
ASAJ	Asahikawa	4.55	350	Pn	Pn	23 55 00.8	0.0
	0.9nm,0.3s,baz=265,slow=18,SNR=2.4						
ASAJ				Sn	Sn	23 55 51.9	-0.6
	1.1nm,0.3s,baz=359,slow=32,SNR=2.3						
MJAR	Matsushiro Arr	5.28	236	Pn	Pn	23 55 11.6	+0.8
	0.1nm,0.3s,baz=38,slow=14,SNR=2.1						
ZALV	Zalesovo Beam	41.52	310	P	P	00 01 35.9	-2.1
	0.4nm,0.3s,baz=78,slow=9.1,SNR=3.0						
MKAR	Makanchi Array	44.28	300	P	P	00 02 00.3	-0.3
	0.6nm,0.8s,baz=73,slow=6.8,SNR=4.9						
KURBB	Kurchatov Arra	45.84	306	P	P	00 02 13.3	+0.5
	0.5nm,0.5s,baz=80,slow=8.0,SNR=5.7						

*IDC **16** 23:54:35.4±2.8, 39°.84N×144°.48E, h0km, mb3.6/3, mb1 3.6/5, mb1mx3.2/64, mbtmp3.5/5, ML3.1/2, Error ellipse: s-maj=69.0km s-min=30.5km az=81.0*

*JMA **16** 23:54:39.5±0.3, 39°.74N×143°.21E, h28km, M3.1*

ISC 16 23:54:41.5±1.7, 39°.8N±0°.1×143°.2E±0°.1, h35km, n9, σ0ˢ.61/10, mb3.7/3, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	1.01	277	P	Pn	23 54 58.4	-0.8
JTH				*e*S	Sn	23 55 12.2	0.0
MIYJ	Miyakonagasawa	1.07	257	P	Pn	23 54 59.5	-0.5
MIYJ				*e*S	Sn	23 55 13.4	-0.3
JKEN	Kujiedanarisaw	1.18	289	P	Pn	23 55 01.4	-0.1
JKEN				*e*S	Sn	23 55 16.9	+0.5
JOM	Ohasama	1.49	257	P	Pn	23 55 05.5	-0.3
JOM				*e*S	Sn	23 55 25.1	+1.0
ASAJ	Asahikawa	4.30	355	Pn	Pn	23 55 44.2	-0.3
	1.2nm,0.3s,baz=87,slow=22,SNR=2.1						
MJAR	Matsushiro Arr	5.10	232	Pn	Pn	23 56 04.4	+8.9
	0.2nm,0.3s,baz=48,slow=12,SNR=1.8						
MKAR	Makanchi Array	43.86	300	P	P	00 02 49.1	+4.8
	0.7nm,1.0s,baz=78,slow=7.7,SNR=1.4						
KURBB	Kurchatov Arra	45.42	306	P	P	00 03 03.1	+6.5
	0.5nm,0.5s,baz=80,slow=8.7,SNR=4.0						
WRA	Warramunga Arr	60.03	190	P	P	00 04 45.1	+0.3
	0.6nm,0.8s,baz=7.7,slow=7.1,SNR=0.9						

IDC 16 23:55:05.5±7.9, 30°.03S×177°.42W, h40km±61km, mb3.4/2, mb1 3.7/2, mb1mx3.4/37, mbtmp3.6/2, Error ellipse: s-maj=70.5km s-min=60.2km az=143.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	0.89	330	Pn	Pn	23 55 21.4	-0.1
	174nm,0.3s,baz=32,slow=17,SNR=12						
RAO				Sn	Sn	23 55 33.8	+0.5
	423nm,0.3s,baz=108,slow=18,SNR=7.9						
ASAR	Alice Springs	43.63	266	P	P	00 03 06.2	-0.2
	0.3nm,0.5s,baz=97,slow=8.5,SNR=4.4						
WRA	Warramunga Arr	44.59	271	P	P	00 03 13.9	-0.2
	0.8nm,0.4s,baz=110,slow=8.1,SNR=12						
FINES	FINESS Array B	144.97	341	PKP	PKPab	00 14 37.1	+0.1
	1.9nm,0.6s,baz=41,slow=4.6,SNR=6.0						

*IDC **16** 23:56:05.8±0.7, 34°.62N×141°.77E, h0km, mb4.0/15, mb1 4.0/19, mb1mx3.8/69, mbtmp4.0/19, ML2.8/3, Error ellipse: s-maj=19.5km s-min=15.6km az=84.0*

*JMA **16** 23:56:07.8±0.3, 34°.68N×141°.90E, h43km±3km, M3.6*

*NEIC **16** 23:56:09.8±1.9, 34°.64N±0°.06×141°.83E±0°.10, h30km±6km, mb4.5/9, Error ellipse: s-maj=11.7km s-min=7.9km az=104.0*

ISC 16 23:56:06.7±2.1, 34°.67N±0°.05×141°.89E±0°.06, h11km±13km, n70, σ1ˢ.63/69, mb4.2/24, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	Boso 1	0.75	269	P	Pn	23 56 22.1	-0.6
BSO3	Boso 3	1.14	277	P	Pn	23 56 28.4	0.0
BSO4	Boso 4	1.32	285	P	Pg	23 56 31.0	-0.9
CHOJ	Chosi	1.33	321	*e*S	Sb	23 56 46.6	-2.2
JKUC	kamogawauchiur	1.47	290	P	Pn	23 56 32.8	-0.4
JKUC				*e*S	Sn	23 56 51.0	-1.4
JIM2	Oshima 3	2.03	272	P	Pn	23 56 40.3	-0.5
JIM2				*e*S	Sn	23 57 04.5	-1.6
JMKN	Mikurajimanish	2.05	249	P	Pn	23 56 40.6	-0.6
JMKN				S	Sn	23 57 04.5	-2.3
JYT	Yasato	2.08	319	Pn	Pn	23 56 41.3	-0.2
JHJ2	Mitsune	2.32	229	*e*S	Sn	23 57 12.3	-1.0
JHJ2	Mitsune	2.32	229	Pn	Pn	23 56 45.6	+0.8
JHJ	Hachijo jima 2	2.33	229	Pn	Pn	23 56 44.6	-0.4
	33nm,0.3s,baz=68,slow=19,SNR=2.3						
JHJ				Sn	Sn	23 57 11.7	-2.0
	110nm,0.3s,baz=97,slow=22,SNR=10						
JOD2	Odawara 2	2.38	285	P	Pn	23 56 45.0	-0.6
JOD2				*e*S	Sn	23 57 12.9	-1.9
JMM	Marumori	3.31	345	Pn	Pn	23 56 58.6	+0.2
MJAR	Matsushiro Arr	3.53	303	Pn	Pn	23 57 02.1	+0.5
	0.9nm,0.3s,baz=98,slow=15,SNR=33						
MJAR	Matsushiro Arr	3.53	303	Pn	Pn	23 57 01.8	+0.3
MAJO	Matsushiro	3.54	303	Pn	Pn	23 57 02.4	+0.8
JGF	Kuroka	3.83	285	Pn	Pn	23 57 07.0	+1.4
INU	Inuyama	4.06	281		Pn	23 57 10.1	+1.4
JSD	Sado	4.46	320	Pn	Pn	23 57 14.2	0.0
JWT	Wachi	5.36	278	Pn	Pn	23 57 28.3	+1.6
JMN	Monobe	6.70	264	Pn	Pn	23 57 46.0	+0.9
JHS	Saijyo	7.22	275	Pn	Pn	23 57 52.3	+0.1
ERM	Erimo	7.40	7	Pn	Pn	23 57 53.0	-1.6
JCJ	Chichijima	7.55	178	Pn	Pn	23 57 56.8	+0.1
	7.5nm,0.3s,baz=263,slow=16,SNR=1.9						
JCJ				Sn	Sn	23 59 14.9	-7.5
	9.5nm,0.3s,baz=272,slow=23,SNR=3.3						
JCJ	Chichijima	7.55	178	Pn	Pn	23 57 57.4	+0.7
JKA	Kamikawa-asahi	9.45	3	Pn	Pn	23 58 21.4	-1.4
ASAJ	Asahikawa	9.45	3	Pn	Pn	23 58 20.5	-2.2
	2.0nm,0.3s,baz=336,slow=34,SNR=3.1						
ASAJ				Sn	Sn	00 00 02.2	-6.7
	1.3nm,0.3s,baz=46,slow=30,SNR=4.3						
KSRS	Korea Array	11.64	288	Pn	Pn	23 58 55.4	+2.7
	0.2nm,0.3s,baz=100,slow=14,SNR=6.5						
USRK	Ussuriysk Ar.	12.21	324	Pn	Pn	23 59 00.7	+0.2
	baz=128,slow=13,SNR=1.9						
H11N2	WAKE ISLAND Hy	26.66	117	T	T	00 29 55.4	
	baz=320						
H11N1	WAKE ISLAND Hy	26.67	117	T	T	00 29 54.9	
	baz=320						
H11N3	WAKE ISLAND Hy	26.68	117	T	T	00 29 53.7	
	baz=320						
H11S3	WAKE ISLAND Hy	27.30	120	T	T	00 30 46.8	
	baz=312						
H11S1	WAKE ISLAND Hy	27.30	120	T	T	00 30 47.2	
	baz=312						
H11S2	WAKE ISLAND Hy	27.32	120	T	T	00 30 46.2	
	baz=312						
SONM	Songino Array	29.48	307	P	P	00 02 12.0	+1.2
	2.6nm,0.8s,baz=108,slow=9.4,SNR=14						
SONM	Songino Array	29.48	307	P	P	00 02 11.9	+1.1
ZALV	Zalesovo Beam	43.82	314	P	P	00 04 12.8	+0.3
	1.5nm,0.6s,baz=94,slow=7.9,SNR=8.0						
ZALV				PcP	PcP	00 05 59.4	+0.6
	0.9nm,0.7s,baz=80,slow=3.5,SNR=2.6						
NRIK	Noril'sk	45.58	336	P	P	00 04 27.1	+0.8
	1.1nm,0.4s,baz=14,slow=2.7,SNR=3.9						
NRIK	Noril'sk	45.58	336	IAmb	IAmb	00 04 27.9	
	comp=Z,3.3nm,1.0s						
MKAR	Makanchi Array	45.73	304	P	P	00 04 28.2	+0.3
	comp=Z,1.7nm,0.7s,baz=90,slow=9.1,SNR=16						
MKAR	Makanchi Array	45.73	304	P	P	00 04 28.0	+0.1
MAKZ	Makanchi	45.95	304	P	P	00 04 30.1	+0.6
RAMN	Ramite	47.61	277	*e*P	P	00 04 42.4	-0.7
	comp=Z,14nm,0.9s						
KURK	Kurchatov	47.72	310	P	P	00 04 43.3	0.0
KURBB	Kurchatov Arra	47.78	310	P	P	00 04 44.0	+0.2
	comp=Z,7.5nm,0.8s,baz=85,slow=7.9,SNR=19						
GUN	Gumba	47.82	278	*e*P	P	00 04 44.9	0.0
	comp=Z,18nm,0.9s						
PKI	Pulchoki	48.34	278	*e*P	P	00 04 48.1	-0.7
	comp=Z,7.6nm,0.8s						
PKIN	Phulchoki	48.34	278	*e*P	P	00 04 48.0	-0.8
	comp=Z,6.2nm,0.5s						
KKN	Kakani	48.36	278	*e*P	P	00 04 48.6	-0.3
GKN	Gorkha	48.80	279	*e*P	P	00 04 51.7	-0.5
	comp=Z,10nm,0.7s						
DANN	Dangsing	49.38	280	*e*P	P	00 04 56.7	-0.1
	comp=Z,10nm,0.6s						
ILAR	Eielson Array	51.30	31	P	P	00 05 12.3	+1.9
	comp=Z,1.3nm,1.0s,baz=272,slow=7.0,SNR=7.2						
ILAR	Eielson Array	51.30	31	P	P	00 05 11.8	+1.4
BVAR	Borovoye Array	52.47	314	P	P	00 05 19.9	+0.5
	comp=Z,1.0nm,0.8s,baz=223,slow=30,SNR=6.9						
KK31	Karatay Array	54.67	302	IAmb	IAmb	00 05 37.3	
	comp=Z,8.2nm,1.0s						
KKAR	Karatay Array	54.67	302	P	P	00 05 36.1	+0.5
KKAR	Karatay Array	54.67	302	IAmb	IAmb	00 05 37.3	
	comp=Z,8.2nm,1.0s						
WRA	Warramunga Arr	54.78	189	P	P	00 05 37.0	+0.5
	comp=Z,2.0nm,0.7s,baz=6.2,slow=7.5,SNR=15						
WRA	Warramunga Arr	54.78	189	P	P	00 05 36.5	0.0
ARU	Arti	58.40	320	P	P	00 06 01.8	-0.2
	comp=Z,1.0nm,0.7s,baz=169,slow=5.8,SNR=6.0						
ASAR	Alice Springs	58.51	189	P	P	00 06 02.9	-0.1
	comp=Z,0.6nm,0.9s,baz=14,slow=9.2,SNR=2.9						
AKTO	Aktyubinsk	60.56	313	P	P	00 06 17.2	+0.3
	comp=Z,2.0nm,0.8s,baz=80,slow=12,SNR=6.2						
YKA	Yellowknife Ar	65.66	30	P	P	00 06 51.9	+1.2
	comp=Z,0.5nm,0.9s,baz=288,slow=5.8,SNR=5.2						
FINES	FINESS Array B	71.09	333	P	P	00 07 25.8	+1.2
	comp=Z,1.7nm,0.8s,baz=14,slow=6.2,SNR=1.2						
MDPB	Devils Postpil	76.02	54	P	P	00 07 55.8	+1.4
MDPB				IAmb	IAmb	00 08 03.3	
	comp=Z,3.0nm,0.8s						
NVAR	Mina Array Bea	76.10	53	P	P	00 07 55.8	+1.0
	comp=Z,0.1nm,0.3s,baz=280,slow=5.4,SNR=1.9						
PV03	Paradox Valley	82.24	49	P	P	00 08 29.2	+0.8
GERES	GERESS Array B	84.92	329	P	P	00 08 41.9	0.0
	comp=Z,0.4nm,0.7s,baz=23,slow=7.2,SNR=3.8						
LPAZ	La Paz	147.48	63	PKPbc	PKiKP	00 15 54.5	+0.3
	comp=Z,0.8nm,0.7s,baz=307,slow=5.1,SNR=2.1						

*JMA **17** 00:02:56.3±0.2, 39°.71N×143°.24E, h29km±4km, M3.4*

IDC 17 00:02:59.3±1.8,40°.20N×142°.45E,h0^{km},mb3.5/5,mb1 3.5/7,mb1mx3.3/55,mbtmp3.4/7,ML2.8/2,Error ellipse: s-maj=48.4km s-min=21.5km az=81.0

ISC 17 00:02:57.6±1.1,39°.95N±0°.05×143°.04E±0°.07,h12^{km},n19,σ1^{s}.50/23,mb3.6/5,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTH	**Tanohata**	0.90	269	P	Pb	00 03 15.4	+0.2
JTH				S	Sn	00 03 30.0	+0.9
MIYJ	**Miyakonagasawa**	1.01	249	P	Pb	00 03 16.1	-1.0
MIYJ				eS	Sb	00 03 30.3	0.0
JANG	**Nango**	1.24	290	P	Pg	00 03 21.3	-0.2
JOM	**Ohasama**	1.43	251	P	Pn	00 03 22.6	-0.8
JOM				eS	Sn	00 03 42.3	+0.2
JTM	**Tenmabayashi**	1.72	300	P	Pb	00 03 29.0	-0.1
JTM				eS	Sg	00 03 53.8	+0.9
JMK	**Ichinoseki**	1.73	235	eS	Sn	00 03 46.6	-2.8
JAH	**Hinai**	1.86	278	eS	Sb	00 03 54.5	-0.2
JIO	**Ouri**	1.99	222	P	Pn	00 03 28.3	-2.8
JEM	**Erimo**	2.06	2	eS	Sb	00 04 00.2	-0.4
JOT	**Ohata**	2.08	314	P	Pb	00 03 35.1	-0.2
JYK	**Kaneyama**	2.32	244	eS	Sn	00 04 02.9	-1.1
JNBK	**Urakawa-nobuka**	2.33	355	P	Pb	00 03 38.1	-1.5
ASAJ	**Asahikawa**	4.17	356	Pn	Pn	00 04 01.1	0.0
	0.8nm,0.3s,baz=150,slow=33,SNR=2.0						
ASAJ				Sn	Sn	00 04 49.8	0.0
	0.8nm,0.3s,baz=225,slow=28,SNR=2.0						
MJAR	**Matsushiro Arr**	5.10	230	Pn	Pn	00 04 15.9	+2.0
	0.1nm,0.3s,baz=40,slow=11,SNR=2.5						
SONM	**Songino Array**	27.35	299	P	P	00 08 41.9	-0.7
	0.4nm,0.7s,baz=114,slow=7.0,SNR=3.1						
MKAR	**Makanchi Array**	43.71	300	P	P	00 11 00.8	-1.7
	0.3nm,0.7s,baz=80,slow=10.0,SNR=4.5						
KURBB	**Kurchatov Arra**	45.27	306	P	P	00 11 14.2	-0.5
	0.5nm,0.6s,baz=80,slow=8.2,SNR=5.0						
WRA	**Warramunga Arr**	60.13	189	P	P	00 13 08.9	+3.9
	1.1nm,0.8s,baz=7.3,slow=6.9,SNR=3.2						
ASAR	**Alice Springs**	63.86	189	P	P	00 13 35.5	+5.5
	0.4nm,0.8s,baz=4.7,slow=5.7,SNR=4.1						

IDC 17 00:06:52.8±23.0,39°.79N×143°.84E,h0^{km},mb3.5/4,mb1 3.5/5,mb1mx3.2/47,mbtmp3.5/5,ML2.5/1,Error ellipse: s-maj=421.1km s-min=51.6km az=111.0

JMA 17 00:06:57.1±0.2,39°.71N×143°.51E,h24^{km},M3.5

ISC 17 00:06:55.7±1.7,39°.71N±0°.08×143°.6E±0°.1,h11^{km},n16,σ0^{s}.93/20,mb3.4/4,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTH	**Tanohata**	1.34	281	P	Pn	00 07 20.1	-0.2
JTH				eS	Sn	00 07 37.0	-1.1
MIYJ	**Miyakonagasawa**	1.36	265	P	Pn	00 07 20.5	-0.1
JOM	**Ohasama**	1.78	263	P	Pn	00 07 26.9	+0.6
JIO	**Ouri**	2.14	235	P	Pn	00 07 31.1	-0.1
JTM	**Tenmabayashi**	2.20	300	P	Pn	00 07 32.8	+0.7
JTM				eS	Sn	00 07 59.4	0.0
JRG	**Rokugo**	2.29	263	P	Pn	00 07 34.3	+0.9
JAH	**Hinai**	2.31	283	P	Pn	00 07 34.2	+0.6
JOT	**Ohata**	2.55	312	P	Pn	00 07 38.5	+1.5
JYK	**Kaneyama**	2.62	254	P	Pn	00 07 38.9	+1.1
JNBK	**Urakawa-nobuka**	2.65	347	P	Pn	00 07 39.4	+1.1
JNBK				eS	Sn	00 08 10.4	+0.1
JCH	**Churui**	2.91	357	P	Pn	00 07 42.4	+0.5
JCH				eS	Sn	00 08 14.7	-2.1
MJAR	**Matsushiro Arr**	5.28	235	Pn	Pn	00 08 15.8	+1.3
	0.1nm,0.3s,baz=42,slow=12,SNR=4.6						
SONM	**Songino Array**	27.83	299	P	P	00 12 45.2	+0.1
	0.2nm,0.4s,baz=96,slow=14,SNR=2.5						
ZALV	**Zalesovo Beam**	41.43	310	P	P	00 14 41.4	-0.6
	0.4nm,0.3s,baz=104,slow=8.5,SNR=2.2						
MKAR	**Makanchi Array**	44.19	300	P	P	00 15 04.6	0.0
	0.2nm,0.4s,baz=91,slow=6.0,SNR=8.9						
KURBB	**Kurchatov Arra**	45.75	306	P	P	00 15 16.4	-0.3
	0.4nm,0.6s,baz=79,slow=8.4,SNR=3.7						

JMA 17 00:14:46.5±0.3,39°.83N×143°.14E,h21^{km}±3^{km},M3.7

IDC 17 00:14:47.3±13.0,40°.05N×142°.64E,h0^{km},mb3.3/3,mb1 3.3/4,mb1mx3.2/33,mbtmp3.3/4,ML2.2/1,Error ellipse: s-maj=256.3km s-min=50.0km az=101.0

ISC 17 00:14:46.7±2.2,39°.85N±0°.05×143°.05E±0°.09,h14^{km}±12^{km},n24,σ0^{s}.69/25,mb3.0/3,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTH	**Tanohata**	0.92	276	P	Pg	00 15 04.8	+0.4
JTH				eS	Sn	00 15 17.6	-0.5
MIYJ	**Miyakonagasawa**	0.98	254	P	Pb	00 15 05.5	0.0
JKEN	**Kujiedanarisaw**	1.09	290	P	Pn	00 15 07.5	0.0
JANG	**Nango**	1.29	295	P	Pn	00 15 10.5	+0.3
JANG				eS	Sb	00 15 27.5	+0.4
JOM	**Ohasama**	1.41	255	P	Pb	00 15 12.5	-0.2
JOM				eS	Sg	00 15 31.5	-0.5
JMK	**Ichinoseki**	1.68	238	P	Pn	00 15 15.9	+0.3
JMK				eS	Sb	00 15 37.3	-0.9
JTM	**Tenmabayashi**	1.78	302	P	Pb	00 15 18.2	-0.9
JTM				eS	Sb	00 15 41.5	+0.3
JAH	**Hinai**	1.88	281	P	Pb	00 15 20.4	-0.4
JRG	**Rokugo**	1.92	257	P	Pb	00 15 21.6	+0.2
JRG				eS	Sb	00 15 45.9	+0.7
JIO	**Ouri**	1.92	224	P	Pn	00 15 18.3	-0.6
JOT	**Ohata**	2.16	316	P	Pb	00 15 24.6	-0.9
JOT				S	Sb	00 15 52.3	+0.2
JEM	**Erimo**	2.17	2	P	Pn	00 15 22.5	+0.2
JYK	**Kaneyama**	2.28	247	eS	Sn	00 15 53.2	+1.4
JNBK	**Urakawa-nobuka**	2.44	355	P	Pn	00 15 27.3	+1.2
MJAR	**Matsushiro Arr**	5.04	231	Pn	Pn	00 16 02.6	+0.7
	0.1nm,0.3s,baz=38,slow=13,SNR=2.8						
SONM	**Songino Array**	27.41	299	P	P	00 20 32.3	+0.5
	0.2nm,0.6s,baz=89,slow=7.4,SNR=2.2						
H11N2	**WAKE ISLAND Hy**	28.66	127	T	T	00 51 30.5	
	baz=318,slow=75,SNR=3.3						
H11N1	**WAKE ISLAND Hy**	28.67	127	T	T	00 51 37.4	
	baz=318,slow=75,SNR=4.9						
H11N3	**WAKE ISLAND Hy**	28.68	127	T	T	00 51 37.7	
	baz=318,slow=75,SNR=4.1						
H11S1	**WAKE ISLAND Hy**	29.48	129	T	T	00 52 19.0	
	baz=321						
H11S3	**WAKE ISLAND Hy**	29.48	129	T	T	00 52 33.6	
	baz=321						
H11S2	**WAKE ISLAND Hy**	29.50	129	T	T	00 52 33.2	
	baz=321						
MKAR	**Makanchi Array**	43.77	300	P	P	00 22 50.6	-1.1
	0.2nm,0.7s,baz=91,slow=8.3,SNR=2.6						
KURBB	**Kurchatov Arra**	45.33	306	P	P	00 23 03.7	-0.4
	0.3nm,0.5s,baz=79,slow=8.8,SNR=3.2						

IDC 17 00:24:38.5±2.1,20°.61S×71°.14W,h0^{km},mb3.3/1,mb1 3.6/2,mb1mx3.4/22,mbtmp3.3/2,ML3.3/1,Error ellipse: s-maj=69.9km s-min=45.3km az=129.0,Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	5.16	34	Pn	Pn	00 25 57.3	-0.4
	0.6nm,0.3s,baz=237,slow=6.3,SNR=13						
LPAZ				Sn	Sn	00 27 00.8	+2.6
	0.2nm,0.3s,baz=283,slow=14,SNR=1.7						
H03N1	**Juan Fernandez**	14.53	207	T	T	00 44 34.6	
	baz=32,slow=72,SNR=9.2						
H03N2	**Juan Fernandez**	14.53	207	T	T	00 44 41.6	
	baz=32,slow=72,SNR=7.3						
H03N3	**Juan Fernandez**	14.54	207	T	T	00 44 27.3	
	baz=32,slow=72,SNR=6.4						
TORD	**Torodi Ar. Bea**	79.04	71	P	P	00 36 44.9	-0.2
	baz=268,slow=5.4						
YKA	**Yellowknife Ar**	89.67	341	P	P	00 37 37.4	-0.5
	0.1nm,0.6s,baz=126,slow=6.2,SNR=2.4						
MKAR	**Makanchi Array**	146.09	33	PKPbc	PKPbc	00 44 20.7	+0.1
	0.2nm,0.7s,baz=325,slow=2.3,SNR=2.1						

IDC 17 00:28:02.5±1.7,20°.10S×177°.40W,h397^{km}±17^{km},mb3.9/16,mb1 4.0/19,mb1mx3.9/38,mbtmp4.6/19,Error ellipse: s-maj=18.9km s-min=13.0km az=118.0

NEIC 17 00:28:03.9±2.4,19°.99S±0°.04×177°.51W±0°.10,h406^{km}±7^{km},mb4.4/56,Error ellipse: s-maj=13.0km s-min=6.3km az=90.0

ISC 17 00:28:03.2±0.3,20°.04S±0°.05×177°.49W±0°.06,h400^{km},n148,σ1^{s}.52/164,mb4.3/42,17C-6D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	4.81	298	P	Pn	00 29 24.2	+0.8
	21nm,0.3s,baz=132,slow=10,SNR=102						
MSVF	**Nonsavu**	4.81	298	Pn	Pn	00 29 24.4	+1.0
NIUE	**Niue**	7.19	84		Pn	00 29 49.7	+0.6
NIUE					S	00 31 16.1	+0.5
AFI	**Afiamalu**	8.18	43	P	Pn	00 29 56.8	-3.7
RAO	**Raoul Island**	9.18	182	S	S	00 31 53.9	-3.2
	102nm,0.3s,baz=270,slow=23,SNR=2.1						
GLKZ	**Green Lake**	9.19	182	P	P	00 30 10.3	-1.5
GLKZ				S	S	00 31 54.1	-3.2
FUNA	**Funafuti**	11.89	344	P	P	00 30 42.5	+0.6
DZM	**Mont Dzumac**	15.14	259	P	P	00 31 19.1	+1.7
	1.1nm,0.3s,baz=75,slow=18,SNR=13						
DZM	**Mont Dzumac**	15.14	259	P	P	00 31 18.9	+1.5
OUZ	**Omahuta**	17.05	206	P	P	00 31 42.1	+4.6
OUZ				IAmb	IAmb	00 31 43.5	
	comp=Z,14nm,0.7s						
MXZ	**Matakaoa Point**	17.84	191	P	P	00 31 46.4	+0.5
MXZ	**Matakaoa Point**	17.84	191	P	P	00 31 47.3	+1.4
MXZ				S	S	00 34 47.6	-2.6
KNTN	**Kanton**	18.06	19	P	P	00 31 46.9	-1.7
WMGZ	**Waiomatatini S**	18.07	191	P	P	00 31 50.5	+2.1
WMGZ				S	S	00 34 50.8	-3.8
HAZ	**Te Kaha**	18.13	192	P	P	00 31 49.5	+0.6
HAZ				S	S	00 34 52.5	-3.1
PKGZ	**Pakihiroa**	18.20	191	P	P	00 31 50.7	+0.8
PKGZ				S	S	00 34 53.6	-3.4
RUGZ	**Raukumara Rang**	18.35	192	P	P	00 31 51.3	-0.2
TWGZ	**Tauwhareparae**	18.50	191	P	P	00 31 53.9	+1.0
TWGZ				S	S	00 35 01.2	-1.1
MWZ	**Matawai**	18.74	192	P	P	00 31 55.2	-0.3
MWZ				S	S	00 35 02.9	-3.5
URZ	**Urewera**	18.75	193	P	P	00 31 53.4	-2.1
	comp=Z,3.7nm,0.3s,baz=355,slow=7.4,SNR=15						
URZ				S	S	00 35 02.5	-4.0
	comp=Z,1.1nm,0.3s,baz=251,slow=13,SNR=2.8						
URZ	**Urewera**	18.75	193	P	P	00 31 55.0	-0.5
CNGZ	**Carnagh Statio**	18.75	191	P	P	00 31 56.1	+0.5
RAGZ	**Rawiri**	18.91	192	P	P	00 31 57.2	-0.2
RAGZ				S	S	00 35 10.1	+0.6
BKZ	**Black Stump Fm**	19.76	194	P	P	00 32 04.0	-1.3
BKZ				IAmb	IAmb	00 32 08.7	
	comp=Z,10.0nm,0.6s						
BKZ	**Black Stump Fm**	19.76	194	P	P	00 32 03.9	-1.4
BKZ				S	S	00 35 25.5	+2.2
TMVZ	**Te Maari**	19.90	196	P	P	00 32 06.9	+0.1
KWHZ	**Kaweka Forest**	20.02	194	P	P	00 32 06.6	-1.2
BHHZ	**Black Hill Sta**	20.16	195	P	P	00 32 07.4	-1.7
BHHZ				S	S	00 35 32.5	+2.6
KRHZ	**Kereru**	20.24	194	P	P	00 32 10.3	+0.5
KRHZ				S	S	00 35 36.2	+5.2
KAHZ	**Kahuranaki**	20.28	193	P	P	00 32 10.0	-0.1
KAHZ				S	S	00 35 38.6	+6.9
TSZ	**Takapari Road**	20.73	194	P	P	00 32 14.4	+0.2
TSZ				S	S	00 35 40.3	+1.3
BFZ	**Birch Farm**	21.26	193	P	P	00 32 18.2	-0.8
BFZ				IAmb	IAmb	00 32 37.2	
	comp=Z,24nm,1.1s						
MSWZ	**Moikau Station**	22.19	195	P	P	00 32 26.1	-1.3
SNZO	**South Karori**	22.22	196	P	P	00 32 27.3	-0.4
BHW	**Baring Head**	22.27	195	P	P	00 32 28.6	+0.4
PLWZ	**Palliser**	22.33	194	P	P	00 32 29.6	+0.8
QRZ	**Quartz Range**	22.40	200	P	P	00 32 30.9	+1.5
NNZ	**Nelson**	22.50	198	P	P	00 32 30.1	-0.1
NNZ				IAmb	IAmb	00 32 32.5	
	comp=Z,13nm,0.6s						
TUWZ	**Tuamarina**	22.53	197	P	P	00 32 31.1	+0.6
BSWZ	**Blackbirch Sta**	22.82	197	P	P	00 32 34.5	+1.4
KHZ	**Kahutara**	23.56	197	P	P	00 32 39.6	-0.2
KHZ				IAmb	IAmb	00 32 45.7	
	comp=Z,14nm,0.9s						
LTZ	**Lake Taylor**	24.26	199	P	P	00 32 47.5	+1.4
MQZ	**McQueen's Vall**	25.00	197	P	P	00 32 56.3	+3.6
MQZ				IAmb	IAmb	00 33 08.6	
	comp=Z,8.7nm,0.9s						
RPZ	**Rata Peaks**	25.48	200	P	P	00 32 58.0	+1.0
	comp=Z,11nm,0.6s,baz=22,slow=2.7,SNR=3.5						
RPZ	**Rata Peaks**	25.48	200	IAmb	IAmb	00 33 02.2	
	comp=Z,12nm,0.7s						
PPTF	**Pamatai, Papee**	26.53	89	P	P	00 33 07.3	+0.6
DCZ	**Deep Cove**	28.35	203	P	P	00 33 22.0	-0.4
DCZ				IAmb	IAmb	00 33 24.3	
	comp=Z,11nm,0.7s						
WHZ	**Wether Hill Ro**	28.44	202	P	P	00 33 24.5	+1.4
WHZ				IAmb	IAmb	00 33 25.2	
	comp=Z,17nm,0.7s						
EIDS	**Eidsvold**	29.43	254	P	P	00 33 32.1	-0.1
ARMA	**Armidale**	29.70	243	P	P	00 33 35.4	+0.8
ARMA				IAmb	IAmb	00 33 36.2	
	comp=Z,10.0nm,0.7s						
KWAJ	**Kwajalein Atol**	32.20	332	P	P	00 33 56.3	+0.1
CTAO	**Charters Tower**	34.02	264	P	P	00 34 11.9	+0.1
CTAO				IAmb	IAmb	00 34 14.9	
	comp=Z,12nm,0.7s						
TOO	**Toolangi**	36.56	233	P	P	00 34 33.0	0.0
TOO				IAmb	IAmb	00 34 33.8	
	comp=Z,10nm,0.8s						
TAU	**Tasmania Unive**	37.29	224	P	P	00 34 40.1	+1.2
TAU				IAmb	IAmb	00 34 59.0	
	comp=Z,11nm,0.9s						
COEN	**Coen**	38.04	273	P	P	00 34 45.5	0.0
STKA	**Stephens Creek**	38.42	244	P	P	00 34 48.7	+0.3
	comp=Z,7.1nm,0.5s,baz=88,slow=11,SNR=28						
STKA	**Stephens Creek**	38.42	244	P	P	00 34 48.7	+0.3
BBOO	**Buckleboo**	43.18	243	P	P	00 35 26.1	-0.7
BBOO				IAmb	IAmb	00 35 27.1	
	comp=Z,16nm,0.8s						
HMH	**Humu'ula Sheep**	44.91	30	P	P	00 35 41.2	+0.5
WR0	**Warramunga Arr**	44.95	261	P	P	00 35 40.0	-0.8
AS31	**Alice Springs**	45.09	256	P	P	00 35 41.4	-0.5
ASAR	**Alice Springs**	45.09	256	P	P	00 35 41.4	-0.5
	comp=Z,12nm,0.7s,baz=92,slow=7.8,SNR=124						
ASAR				PcP	PcP	00 37 14.6	-0.2
	comp=Z,1.4nm,0.5s,baz=104,slow=4.0,SNR=5.3						
ASAR				ScP	ScP	00 40 29.4	+1.0
	comp=Z,1.3nm,0.8s,baz=108,slow=4.4,SNR=6.3						
ASAR				S	S	00 41 46.9	-3.8
	comp=Z,3.8nm,1.1s,baz=94,slow=16,SNR=12						
WB0	**Warramunga Arr**	45.12	262	P	P	00 35 41.1	-1.1
WB2	**Warramunga Arr**	45.13	261	P	P	00 35 41.0	-1.2
WRA	**Warramunga Arr**	45.14	261	P	P	00 35 41.5	-0.9
	comp=Z,2.6nm,0.3s,baz=96,slow=7.5,SNR=198						
WRA	**Warramunga Arr**	45.14	261	P	P	00 35 40.5	-1.9
FORT	**Forrest**	49.92	246	P	P	00 36 17.7	-0.7
FORT				IAmb	IAmb	00 36 18.1	
	comp=Z,20nm,0.7s						
FAKI	**Fak Fak**	51.87	282	P	P	00 36 32.1	-0.8
FAKI				IAmb	IAmb	00 36 43.0	
	comp=Z,16nm,1.0s						
FITZ	**Fitzroy Crossi**	53.57	262	P	P	00 36 45.0	-0.2
VNDA	**Vanda**	58.41	185	P	P	00 37 20.0	+2.0
MORW	**Morawa**	60.45	247	P	P	00 37 31.8	-0.9
MORW				IAmb	IAmb	00 37 45.2	
	comp=Z,11nm,1.1s						
GIRL	**Giralia**	63.14	254	P	P	00 37 50.5	0.0
TOLI2	**Tolitoli**	63.98	282	P	P	00 37 56.2	+0.1
CASY	**Casey**	64.58	205	P	P	00 37 59.3	+0.4
QSPA	**South Pole Qui**	70.03	180	P	P	00 38 34.4	+1.6
QSPA				IAmb	IAmb	00 38 35.4	
	comp=Z,12nm,0.8s						
MJAR	**Matsushiro Arr**	70.13	323	P	P	00 38 33.2	-0.6
	comp=Z,14nm,0.7s,baz=158,slow=6.1,SNR=25						
MJAR	**Matsushiro Arr**	70.13	323		P	00 38 33.1	-0.6
MAT	**Matsushiro**	70.13	323	P	P	00 38 33.1	-0.7
PETK	**Petropavlovsk-**	75.95	345	P	P	00 39 07.0	-0.1
	comp=Z,6.5nm,0.6s,baz=111,slow=8.1,SNR=6.9						
KSRS	**Korea Array**	76.86	318	P	P	00 39 13.0	+0.5
	comp=Z,1.6nm,0.7s,baz=136,slow=6.3,SNR=5.4						
KMRM	**Mail Ridge**	78.10	39	IAmb	IAmb	00 39 21.9	
	comp=Z,9.6nm,0.8s						
USRK	**Ussuriysk Ar.**	78.86	326	P	P	00 39 24.4	+1.3
	comp=Z,6.8nm,0.8s,baz=128,slow=4.2,SNR=7.6						
YBH	**Yreka Blue Hor**	79.63	38		P	00 39 28.7	+1.1
PNTR	**Pine Nut**	79.92	42	P	P	00 39 28.4	-0.9
PNTR				IAmb	IAmb	00 39 34.5	
	comp=Z,6.5nm,0.8s						
NVAR	**Mina Array Bea**	80.36	43	P	P	00 39 32.5	+0.9
	comp=Z,1.2nm,0.7s,baz=220,slow=9.7,SNR=9.8						
NVAR	**Mina Array Bea**	80.36	43		P	00 39 32.7	+1.0
MDJ	**Mudanjiang**	80.42	325	P	P	00 39 32.7	+1.2
MDJ				IAmb	IAmb	00 39 35.6	
	comp=Z,8.2nm,0.9s						
K05A	**Summer Lake**	81.31	38		P	00 39 37.8	+1.3
K05A				IAmb	IAmb	00 39 38.8	
	comp=Z,9.6nm,1.0s						
PINE	**Pine Mountain**	81.93	38	IAmb	IAmb	00 39 42.1	
	comp=Z,6.8nm,0.9s						
KLR	**Kul'dur**	82.38	329	P	P	00 39 42.5	+1.0
	comp=Z,2.7nm,0.8s,baz=129,slow=3.1,SNR=9.8						
I07A	**Izee**	82.93	38		P	00 39 45.4	+0.7
U15A	**North Rim**	83.30	47	P	P	00 39 47.8	+0.9
G08A	**Pilot Rock**	83.96	37	P	P	00 39 50.1	+0.3
F10A	**Beach Ranch, E**	85.35	37	P	P	00 39 56.5	0.0
F10A				IAmb	IAmb	00 39 57.9	
	comp=Z,4.1nm,0.8s						
SEY	**Seymchan**	86.04	347	P	P	00 39 59.0	-0.4
	comp=Z,7.7nm,0.7s,baz=133,slow=4.7,SNR=20						
CCB	**Clear Creek Bu**	87.47	12	IAmb	IAmb	00 40 05.3	
	comp=Z,3.1nm,0.6s						
MDM	**Murphy Dome**	87.66	12	IAmb	IAmb	00 40 07.8	
	comp=Z,9.1nm,1.0s						
IL31		87.76	13	IAmb	IAmb	00 40 08.2	
	comp=Z,3.8nm,0.8s						
ILAR	**Eielson Array**	87.76	13	P	P	00 40 06.2	-1.3
	comp=Z,2.2nm,0.8s,baz=219,slow=4.5,SNR=18						
ILAR	**Eielson Array**	87.76	13		P	00 40 07.0	-0.5
PDAR	**Pinedale Array**	88.30	43	P	P	00 40 11.7	+0.8
	comp=Z,0.4nm,0.6s,baz=212,slow=4.0,SNR=5.2						
VNA3	**Neumayer Olymp**	88.57	176	P	P	00 40 11.2	-0.2
VNA2	**Neumayer--Watz**	89.01	177	P	P	00 40 14.1	+0.6
VNA1	**Neumayer--Stat**	89.24	176	P	P	00 40 10.9	-3.6
PLCA	**Paso Flores**	89.24	133	P	P	00 40 17.7	+2.4
	comp=Z,3.8nm,1.1s,baz=228,slow=4.4,SNR=2.9						
COLD	**Coldfoot**	89.34	10		P	00 40 14.7	-0.2
COLD				IAmb	IAmb	00 40 16.8	
	comp=Z,6.0nm,0.8s						
CMAR	**Chiang Mai Arr**	90.42	289	P	P	00 40 22.6	+1.6
	comp=Z,1.6nm,0.3s,baz=113,slow=2.8,SNR=8.9						
BMAR	**Burnt Mountain**	90.55	12	P	P	00 40 20.9	+0.4
INK	**Inuvik**	93.70	15	P	P	00 40 33.7	-1.3
	comp=Z,1.8nm,0.8s,baz=228,slow=4.6,SNR=5.0						
YKA	**Yellowknife Ar**	95.90	25	P	P	00 40 43.6	-1.5
	comp=Z,0.5nm,0.9s,baz=238,slow=4.0,SNR=4.7						
ARCES	**ARCESS Array B**	128.56	350	PKP	PKPdf	00 46 19.9	-2.8
	comp=Z,3.1nm,0.9s,baz=33,slow=2.9,SNR=6.9						
ARCES	**ARCESS Array B**	128.56	350		PKPdf	00 46 22.8	+0.1
FINES	**FINESS Array B**	135.47	344	PKP	PKPdf	00 46 34.7	-1.2
	comp=Z,3.3nm,1.0s,baz=52,slow=3.1,SNR=6.8						
AKASG	**Malin Array Be**	142.84	332	PKhKP	PKPpre	00 46 45.7	
	comp=Z,1.5nm,0.4s,baz=42,slow=4.2,SNR=13						
SORM	**Soroca**	145.06	329	⇑P	PKPdf	00 46 53.8	+0.2
BUR08	**Bucovina Ar. S**	146.88	331		PKPbc	00 47 00.1	+0.7
BRTR	**Keskin Array B**	146.88	313	PKPbc	PKPbc	00 46 58.8	-0.9
	comp=Z,1.8nm,0.6s,baz=119,slow=4.4,SNR=4.0						
BURAR	**Bucovina Array**	146.89	331	⇓P	PKPdf	00 46 57.4	+0.5
BURAR	**Bucovina Array**	146.89	331		PKPbc	00 47 00.1	+0.7
BIZ	**Bicaz**	146.98	330	⇑P	PKPbc	00 47 00.6	+1.0
OSTC	**Ostas**	147.67	344	⇑ePKP	PKPbc	00 47 02.0	+0.7
ARCR	**ARCALIA**	147.68	332	⇑P	PKPbc	00 47 01.8	+0.4
CHVC	**Chvalec**	147.69	344	⇑ePKP	PKPab	00 47 04.9	0.0
CLL	**Collm**	147.72	348	⇓iPKPbc	PKPbc	00 47 01.8	+0.4
	comp=Z,8.0nm,0.7s						
CLL				ePKPab	PKPab	00 47 05.0	0.0
UPC	**Upice**	147.77	344	⇑ePKP	PKPbc	00 47 02.2	+0.6
DPC	**Dobruska-Polom**	147.83	343	⇑ePKP	PKPbc	00 47 02.4	+0.6
DPC				ePKPAB	PKPab	00 47 05.5	0.0
DOPR	**Dopca**	148.03	329	⇓P	PKPbc	00 47 02.6	+0.3
PRA	**Prague**	148.57	345	⇑ePKP	PKPbc	00 47 04.0	+0.4
VOIR		148.57	329	⇑P	PKPab	00 47 09.0	+0.2
PRU	**Pruhonice**	148.62	345	⇑ePKP	PKPbc	00 47 03.9	+0.2
DRGR		148.62	333	⇓P	PKPbc	00 47 04.7	+0.8
ARR	**Arges**	148.83	329	⇓P	PKiKP	00 47 05.5	-0.1
NKC	**Novy Kostel**	148.85	348	⇑ePKP	PKPbc	00 47 04.5	+0.2
KHC	**Kasperske Hory**	149.65	346	⇑ePKP	PKPbc	00 47 05.9	-0.4
KHC				ePKPAB	PKPab	00 47 13.4	+0.4
GZR	**Gura Zlata**	149.68	331	⇑P	PKPbc	00 47 06.5	-0.1
CKRC	**Cesky Krumlov**	149.76	344	⇑ePKP	PKPbc	00 47 06.8	+0.2
CKRC				ePKPAB	PKPab	00 47 12.2	-1.2
GERES	**GERESS Array B**	149.88	345	PKPbc	PKPbc	00 47 06.9	-0.1
	comp=Z,2.3nm,0.6s,baz=30,slow=2.5,SNR=20						
GERES				PKPab	PKPab	00 47 13.5	-0.6
	comp=Z,0.9nm,0.6s,baz=22,slow=4.3,SNR=5.9						
GERES	**GERESS Array B**	149.88	345		PKPbc	00 47 07.2	+0.3
BZS	**Buzias**	150.02	333	⇑P	PKPbc	00 47 07.5	+0.3
CONA	**Conrad Observa**	150.15	342	eP	PKiKP	00 47 08.2	-0.1
	comp=Z,3.2nm,0.5s						
HERR	**Herculane**	150.23	331	⇓P	PKPbc	00 47 07.8	0.0
MORH	**Mrgy, Hungar**	150.72	337	⇑P	PKPbc	00 47 09.2	+0.4
VTS	**Vitosha**	151.51	327	⇑P	PKPbc	00 47 11.0	0.0
WTTA	**Wattenberg**	151.84	347	eP	PKiKP	00 47 12.1	+0.2
	comp=Z,6.7nm,0.9s						
MYKA	**Terra Mystica**	151.96	344	eP	PKPbc	00 47 11.3	-0.4
	comp=Z,2.2nm,0.6s						
SQTA	**Sankt Quirin**	151.98	347	eP	PKiKP	00 47 12.5	+0.4
	comp=Z,4.3nm,0.7s						
ABTA	**Abfaltersbach**	152.13	345	eP	PKPbc	00 47 11.9	-0.3
	comp=Z,3.1nm,0.6s						
FETA	**Feichten**	152.26	348	eP	PKiKP	00 47 13.3	+0.5
	comp=Z,6.7nm,1.2s						

IDC 17 00:37:31.3±0.8,39°.72N×143°.15E,h0^{km},mb3.8/15,mb1 4.0/16,mb1mx3.9/43,mbtmp3.8/16,ML3.5/1,Error ellipse: s-maj=23.7km s-min=16.4km az=95.0

JMA 17 00:37:33.3±0.2,39°.80N×143°.19E,h15^{km}±3^{km},M4.2

NEIC 17 00:37:36.6±1.2,39°.71N±0°.02×143°.1E±0°.1,h34^{km}±6^{km},mb4.4/7,Error ellipse: s-maj=14.0km s-min=3.0km az=96.0

ISC 17 00:37:33.4±2.2,39°.74N±0°.04×143°.14E±0°.06,h11^{km}±13^{km},n69,σ1^{s}.17/72,mb4.0/21,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTH	**Tanohata**	1.00	282	P	Pb	00 37 52.5	-0.3
JTH				S	Sg	00 38 06.1	+0.2
MIYJ	**Miyakonagasawa**	1.03	262	P	Pn	00 37 53.2	-0.6
JKEN	**Kujiedanarisaw**	1.20	294	P	Pn	00 37 55.7	-0.4
JKEN				eS	Sb	00 38 11.5	0.0
JANG	**Nango**	1.40	298	P	Pn	00 37 58.5	-0.4
JANG				eS	Sn	00 38 15.9	-1.5
JOM	**Ohasama**	1.45	260	P	Pb	00 38 00.2	-0.3
JOM				S	Sg	00 38 19.8	-0.4
JMK	**Ichinoseki**	1.68	243	P	Pb	00 38 03.8	-0.6
JMK				eS	Sb	00 38 24.9	-0.7
JIO	**Ouri**	1.89	228	P	Pb	00 38 06.3	-1.7
JTM	**Tenmabayashi**	1.90	304	P	Pn	00 38 06.1	+0.3
JTM				eS	Sn	00 38 29.2	-0.5
JTM	**Tenmabayashi**	1.90	304	Pn	Pn	00 38 06.4	+0.6
JRG	**Rokugo**	1.97	261	P	Pb	00 38 08.4	-0.9
JRG				S	Sg	00 38 35.7	-1.0
JAH	**Hinai**	1.98	284	P	Pb	00 38 08.0	-1.4
JAH				eS	Sb	00 38 33.0	-1.1
ERM	**Erimo**	2.28	0	Pn	Pn	00 38 11.3	+0.3
JEM	**Erimo**	2.28	0	P	Pn	00 38 10.9	0.0
JEM				S	Sn	00 38 38.2	-0.8
JOT	**Ohata**	2.29	317	eS	Sn	00 38 40.3	+1.0
JYK	**Kaneyama**	2.31	250	P	Pb	00 38 13.1	-1.9
JNBK	**Urakawa-nobuka**	2.56	354	P	Pn	00 38 15.7	+0.9
JMM	**Marumori**	2.62	225	Pn	Pn	00 38 16.2	+0.6
JEW	**Eniwo**	3.35	338	Pn	Pn	00 38 25.8	+0.1
JSD	**Sado**	4.17	248	Pn	Pn	00 38 38.4	+1.5
JYT	**Yasato**	4.21	215	Pn	Pn	00 38 37.3	-0.1
JKA	**Kamikawa-asahi**	4.39	355		Pn	00 38 40.9	+0.9
ASAJ	**Asahikawa**	4.40	355	Pn	Pn	00 38 40.9	+0.9
	2.1nm,0.3s,baz=217,slow=14,SNR=4.9						
ASAJ				Sn	Sn	00 39 32.5	+1.2
	1.5nm,0.3s,baz=255,slow=29,SNR=1.6						
MJAR	**Matsushiro Arr**	5.03	232	Pn	Pn	00 38 51.1	+2.3
	0.2nm,0.3s,baz=34,slow=12,SNR=8.7						
MJAR	**Matsushiro Arr**	5.03	232	Pn	Pn	00 38 50.6	+1.8
MAJO	**Matsushiro**	5.03	232	Pn	Pn	00 38 50.3	+1.5
MAT	**Matsushiro**	5.03	232	P	Pn	00 38 51.3	+2.5
MAT				eS	Sn	00 39 47.9	+1.0
JGF	**Kuroka**	6.17	230	Pn	Pn	00 39 07.1	+2.5
JWT	**Wachi**	7.59	237	Pn	Pn	00 39 26.4	+2.5
USRK	**Ussuriysk Ar.**	9.43	302	Pn	Pn	00 39 52.4	+3.3
	baz=95,slow=15,SNR=5.4						
USRK	**Ussuriysk Ar.**	9.43	302		Pn	00 39 51.9	+2.8
KLR	**Kul'dur**	12.49	323	Pn	Pn	00 40 33.8	+2.8
	0.1nm,0.3s,baz=153,slow=14,SNR=1.6						
MA2	**Magadan**	20.44	11	P	P	00 42 10.0	-0.5
	3.3nm,0.5s,baz=184,slow=5.7,SNR=3.8						
SEY	**Seymchan**	23.89	10	P	P	00 42 45.2	-1.5

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      2.9nm,0.6s,baz=234,slow=7.9,SNR=8.1
ULN   Ulaanbaatar        27.09 299  P      P      00 43 15.6 -0.5
SONM  Songino Array      27.53 299  P      P      00 43 20.3 +0.2
      1.2nm,0.8s,baz=100,slow=8.8,SNR=8.8
SONM  Songino Array      27.53 299  IAmb   IAmb   00 43 21.1
      comp=Z,1.2nm,1.0s
AMKA  Amchitka           27.59  53  P      P      00 43 21.7 +1.3
H11N2 WAKE ISLAND Hy     28.54 127  T      T      01 14 19.0
      baz=318,slow=75,SNR=41
H11N1 WAKE ISLAND Hy     28.55 127  T      T      01 14 26.5
      baz=318,slow=75,SNR=37
H11N3 WAKE ISLAND Hy     28.55 127  T      T      01 14 24.2
      baz=318,slow=75,SNR=48
H11S1 WAKE ISLAND Hy     29.35 129  T      T      01 14 42.9
      baz=316,slow=74,SNR=8.0
H11S3 WAKE ISLAND Hy     29.36 129  T      T      01 14 46.2
      baz=316,slow=74,SNR=7.3
H11S2 WAKE ISLAND Hy     29.37 129  T      T      01 15 15.3
      baz=316
ZALV  Zalesovo Beam      41.16 310  P      P      00 45 17.4  0.0
      comp=Z,1.3nm,0.5s,baz=89,slow=9.3,SNR=6.8
IMAR  Indian Mountai     43.64  32  P      P      00 45 37.3 -0.2
MK31  Makanchi Array     43.89 300  P      P      00 45 39.3 -0.6
MK31                                IAmb   IAmb   00 46 00.6
      comp=Z,7.8nm,2.0s
MKAR  Makanchi Array     43.89 300  P      P      00 45 39.6 -0.3
      comp=Z,1.0nm,0.7s,baz=84,slow=9.2,SNR=15
MKAR  Makanchi Array     43.89 300         P      00 45 39.8 -0.1
MAKZ  Makanchi           44.09 300  P      P      00 45 41.3 -0.2
MAKZ                                IAmb   IAmb   00 45 42.3
      comp=Z,2.9nm,1.1s
ILAR  Eielson Array      46.49  34  P      P      00 46 00.1 -0.2
      comp=Z,0.5nm,0.7s,baz=263,slow=6.1,SNR=3.2
RAMN  Ramite             48.20 273 eP      P      00 46 14.6 +0.3
      comp=Z,10nm,0.6s
GUN   Gumba              48.28 274 eP      P      00 46 15.2 +0.2
      comp=Z,12nm,0.5s
PKI   Pulchoki           48.81 274 eP      P      00 46 19.4 +0.3
DANN  Dangsing           49.69 276 eP      P      00 46 26.1 +0.3
      comp=Z,16nm,0.5s
KKAR  Karatay Array      52.98 299  P      P      00 46 49.3 -0.7
ABKAR Akbulak array      57.26 309  P      P      00 47 20.4 -0.3
ABKAR Akbulak array      57.26 309  P      P      00 47 20.4 -0.3
ABKAR                               IAmb   IAmb   00 47 21.2
      comp=Z,2.3nm,0.6s
WB0   Warramunga Arr     59.75 190  P      P      00 47 37.5 -0.9
FITZ  Fitzroy Crossi     59.81 199  P      P      00 47 38.6  0.0
      comp=Z,1.0nm,0.8s,baz=9.5,slow=6.1,SNR=1.5
WR0   Warramunga Arr     59.92 189  P      P      00 47 38.8 -0.7
WR0                                 IAmb   IAmb   00 49 16.0
      comp=Z,45nm,1.9s
WRA   Warramunga Arr     59.93 190  P      P      00 47 38.5 -1.1
      comp=Z,1.7nm,1.0s,baz=6.8,slow=7.3,SNR=6.7
YKA   Yellowknife Ar     60.80  31  P      P      00 47 45.2 +0.2
      comp=Z,0.1nm,0.5s,baz=296,slow=5.7,SNR=2.3
ASAR  Alice Springs      63.66 189  P      P      00 48 04.4 -0.2
      comp=Z,0.4nm,0.5s,baz=18,slow=7.0,SNR=3.2
FINES FINESS Array B     67.06 332  P      P      00 48 25.1 -1.1
      comp=Z,3.6nm,1.0s,baz=52,slow=9.0,SNR=4.6
KBZ   Khabaz             70.17 311  P      P      00 48 46.1 +0.2
      comp=Z,2.3nm,0.8s,baz=4.3,slow=1.5,SNR=5.0
NOA   NORSAR Array B     72.22 338  P      P      00 48 57.5 -0.6
      comp=Z,0.7nm,0.5s,baz=38,slow=6.5,SNR=3.8
NVAR  Mina Array Bea     72.30  55  P      P      00 49 00.0 +0.7
      comp=Z,0.1nm,0.3s,baz=316,slow=5.0,SNR=2.1
GERES GERESS Array B     81.12 329  P      P      00 49 47.9 -0.8
      comp=Z,0.2nm,0.4s,baz=18,slow=6.6,SNR=1.4
LPAZ  La Paz            144.14  58  PKP    PKPbc  00 57 07.9 -0.5
      comp=Z,0.6nm,0.3s,baz=310,slow=7.9,SNR=7.1
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MOS ***17*** *00:50:00.6±0.9, 39°.91N×143°.25E, h11km, mb4.9/49, Error ellipse: s-maj=6.8km s-min=4.2km az=115.6*

IDC ***17*** *00:50:00.5±0.6, 39°.85N×143°.36E, h0km, mb4.3/24, mb1 4.4/28, mb1mx4.2/53, mbtmp4.2/28, ML3.8/3, MS4.5/1, Ms1 4.7/1, ms1mx3.6/51, Error ellipse: s-maj=16.5km s-min=13.2km az=112.0*

BJI ***17*** *00:50:00.9±0.0, 39°.82N×143°.12E, h11km, mB5.5/28, mb4.7/64, Ms5.0/14, Ms7 4.8/13*

JMA ***17*** *00:50:02.3±0.2, 39°.94N×143°.32E, h15km±3km, M4.6*

JMA Felt I J1.

NEIC ***17*** *00:50:02.6±1.1, 39°.86N±0°.06×143°.17E±0°.09, h10km±1km, mb4.6/45, Error ellipse: s-maj=12.8km s-min=8.3km az=119.0*

ISC 17 00:50:02.0±0.5**, 39°.89N**±0°.05×**143°.35E**±0°.05**, h10km, n302,** σ**1s.25**/314**, mb4.7**/100**, MS4.6**/6**, 34C-7D, Off east coast of Honshu**

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Code  Station Name        Δ°   AZ°  Phase ID        Time       Res
                                    Op     ISC     h  m  s     ISC
JTH   Tanohata            1.14 273  P      Pb     00 50 22.9 -0.9
JTH                                eS      Sg     00 50 37.6 -1.1
MIYJ  Miyakonagasawa      1.22 255  P      Pb     00 50 24.4 -0.7
MIYJ                                S      Sn     00 50 40.5 -1.1
JKEN  Kujiedanarisaw      1.29 285  P      Pn     00 50 25.2 -0.9
JANG  Nango               1.48 289  P      Pn     00 50 28.1 -0.6
JOM   Ohasama             1.64 256  P      Pb     00 50 31.4 -0.9
JOM                                eS      Sg     00 50 52.5 -2.2
JMK   Ichinoseki          1.90 241  P      Pn     00 50 34.5 +0.1
JTM   Tenmabayashi        1.96 298  P      Pn     00 50 35.7 +0.5
JTM   Tenmabayashi        1.96 298  Pn     Pn     00 50 35.8 +0.5
JAH   Hinai               2.10 279  P      Pn     00 50 38.2 +1.0
JIO   Ouri                2.11 228  P      Pn     00 50 36.8 -0.6
ERM   Erimo               2.12 356 i P     Pn     00 50 39.1 +1.5
ERM   Erimo               2.12 356         Pn     00 50 37.8 +0.3
JOT   Ohata               2.29 311  P      Pn     00 50 40.5 +0.6
JNBK  Urakawa-nobuka      2.43 350  P      Pn     00 50 43.2 +1.5
JYK   Kaneyama            2.51 248  P      Pn     00 50 43.5 +0.6
JKB   Kayabe              2.65 319  P      Pn     00 50 46.0 +1.2
JCH   Churui              2.72   0  P      Pn     00 50 46.3 +0.6
JCH                                eS      Sn     00 51 17.4 -1.3
JMM   Marumori            2.84 225         Pn     00 50 46.4 -1.0
JEW   Eniwo               3.27 335  Pn     Pn     00 50 53.7 +0.4
NMR   Nemuro--Hokkai      3.91  26⇑eP      Pn     00 51 01.4 -0.6
NMR                                eS      Sn     00 51 43.7 -4.2
ASAJ  Asahikawa           4.26 353  Pn     Pn     00 51 08.6 +1.7
      11nm,0.3s,baz=230,slow=8.9,SNR=23
ASAJ                                Sn     Sn     00 51 60.0 +3.4
      13nm,0.3s,baz=232,slow=14,SNR=4.8
JKA   Kamikawa-asahi      4.26 353  Pn     Pn     00 51 07.5 +0.7
JSD   Sado                4.38 247  Pn     Pn     00 51 07.8 -0.6
JYT   Yasato              4.42 215  Pn     Pn     00 51 08.0 -1.2
GRPR  Tuman               4.48  23 eP      Pn     00 51 09.3 -0.6
GRPR                               eS      Sn     00 51 58.0 -4.1
GRPR                                pmax   pmax
      comp=Z,172nm,0.3s
GRPR                                pmax   pmax
      comp=E,32nm,0.1s
GRPR                                pmax   pmax
      comp=N,75nm,0.2s
GRPR                                smax   smax
      comp=N,987nm,0.4s
GRPR                                smax   smax
      comp=E,2µm,0.5s
YUK   Yuzh-Kuril'sk       4.54  24 eP      Pn     00 51 11.6 +0.8
YUK                                eS      Sn     00 51 59.7 -3.9
YUK                                 pmax   pmax
      comp=N,113nm,0.2s
YUK                                 pmax   pmax
      comp=Z,277nm,0.2s
YUK                                 pmax   pmax
      comp=E,66nm,0.1s
YUK                                 smax   smax
      comp=N,2µm,0.4s
YUK                                 smax   smax
      comp=E,1µm,0.4s
MAJO  Matsushiro          5.25 232c iP     Pn     00 51 21.8 +1.3
MAJO  Matsushiro          5.25 232  Pn     Pn     00 51 20.6  0.0
MAT   Matsushiro          5.25 232  P      Pn     00 51 21.9 +1.4
MAT                                eS      Sn     00 52 21.5 +0.4
MJAR  Matsushiro Arr      5.25 232  Pn     Pn     00 51 21.5 +1.0
      comp=E,1.2nm,0.3s,baz=36,slow=12,SNR=57
MJAR  Matsushiro Arr      5.25 232         Pn     00 51 19.9 -0.6
KUR   Kuril'sk            6.29  31 eP      Pn     00 51 35.1 +0.3
KUR                                eS      Sn     00 52 43.1 -3.7
KUR                                 smax   smax
      comp=E,437nm,0.4s
KUR                                 smax   smax
      comp=N,246nm,0.3s
JGF   Kuroka              6.39 230  Pn     Pn     00 51 36.0 -0.3
INU   Inuyama             6.77 230  Pn     Pn     00 51 40.1 -1.3
YSS   Yuzh-Sakhalins      7.07 357 eP      Pn     00 51 47.6 +2.1
YSS                                eS      Sn     00 53 05.3 -0.6
YSS                                 pmax   pmax
      comp=Z,30nm,0.8s
TEY   Ternei              7.16 318⇑eP      Pn     00 51 44.4 -2.3
TEY                                 pmax   pmax
      comp=Z,10.0nm,1.3s
TEY                                 MLR    MLR
      comp=N,200nm,14.0s
TEY                                 MLR    MLR
      comp=Z,200nm,14.0s
JWT   Wachi               7.80 236  Pn     Pn     00 51 56.6 +1.0
USA0B Ussuriysk Arra      9.48 301 eP      Pn     00 52 19.6 +1.1
USA0B Ussuriysk Arra      9.48 301         Pn     00 52 19.4 +0.8
USRK  Ussuriysk Ar.       9.48 301  Pn     Pn     00 52 23.6 +5.1
      baz=90,slow=14,SNR=32
USRK  Ussuriysk Ar.       9.48 301  P      Pn     00 52 19.6 +1.1
USRK  Ussuriysk Ar.       9.48 301  Pn     Pn     00 52 19.6 +1.1
JHS   Saijyo              9.48 242         Pn     00 52 18.6 -0.1
MSHR  Mys Shultsa         9.57 290 eP      Pn     00 52 19.9 +0.2
MDJ   Mudanjiang         11.23 299  P      Pn     00 52 45.8 +3.3
MDJ                                 pmax   pmax
      comp=Z,20nm,1.2s
MDJ                                 pmax   pmax
      comp=Z,1µm,12.6s
MDJ   Mudanjiang         11.23 299  Pn     Pn     00 52 42.8 +0.2
KSRS  Korea Array        12.30 263  Pn     Pn     00 53 01.6 +4.5
      comp=Z,1.1nm,0.3s,baz=80,slow=13,SNR=10
KLR   Kul'dur            12.46 322  Pn     Pn     00 52 59.9 +0.7
      comp=Z,0.1nm,0.3s,baz=143,slow=14,SNR=8.5
KLR   Kul'dur            12.46 322⇓iP      Pn     00 53 00.2 +0.9
CN2   Changchun          13.90 292 eP      P      00 53 26.4 -0.8
PETK  Petropavlovsk-     16.46  32  Pn     Pn     00 53 53.2 +0.3
      baz=178,slow=14,SNR=2.1
ZEA   Zeya               17.64 327 eP      Pn     00 54 05.4 -2.2
ZEA                                 pmax   pmax
      comp=N,20nm,0.7s
ZEA                                 pmax   pmax
      comp=E,20nm,0.7s
ZEA                                 pmax   pmax
      comp=Z,20nm,0.9s
HIA   Hailar             19.18 307 eP      P      00 54 24.3 -1.4
HIA   Hailar             19.18 307  P      P      00 54 24.3 -1.4
MA2   Magadan            20.25  11ceP      P      00 54 36.7 -0.6
MA2                                 pmax   pmax
      comp=Z,23nm,1.0s
MA2   Magadan            20.25  11         P      00 54 38.7 +1.4
MA2                                 IAmb   IAmb   00 54 39.7
      comp=Z,19nm,0.8s
BJI   Beijing            20.80 279  P      P      00 54 41.3 -2.0
BJI                                 pmax   pmax
      comp=Z,8.0nm,1.1s
BJT   Baijiatuau         20.81 279  P      P      00 54 42.0 -1.5
BJT                                 pmax   pmax
      comp=Z,11nm,1.0s
BJT   Baijiatuau         20.81 279  P      P      00 54 42.0 -1.5
TIA   Tai'an             20.95 268  P      P      00 54 43.6 -1.4
TIA                                 pmax   pmax
      comp=Z,13nm,0.9s
NJ2   Nanjing            21.27 256 eP      P      00 54 49.3 +0.9
NJ2                                 pmax   pmax
      comp=Z,13nm,0.6s
YAK   Yakutsk            23.68 344  P      P      00 55 12.4 -1.0
      comp=Z,14nm,0.4s,baz=335,slow=0.7,SNR=5.4
YAK   Yakutsk            23.68 344 eP      P      00 55 12.2 -1.3
YAK                                e*PP    pP     00 55 16.5 +0.5
YAK                                e              00 55 38.3
YAK                                e              00 58 55.9
YAK                                eS      S      00 59 26.6 -1.4
YAK                                e*SS    sS     00 59 32.3 -0.1
YAK                                 pmax   pmax
      comp=Z,31nm,0.9s
YAK                                 pmax   pmax
      comp=N,7.0nm,1.1s
YAK                                 pmax   pmax
      comp=E,2.0nm,1.0s
YAK                                 pmax   pmax
      comp=N,19nm,1.1s
YAK                                 pmax   pmax
      comp=Z,33nm,1.1s
YAK                                 pmax   pmax
      comp=E,31nm,1.5s
YAK                                 smax   smax
      comp=N,74nm,3.6s
YAK                                 smax   smax
      comp=E,32nm,1.8s
YAK                                 MLR    MLR
      comp=Z,1µm,16.0s
YAK                                 MLR    MLR
      comp=N,351nm,16.0s
YAK                                 MLR    MLR
      comp=E,824nm,16.0s
YAK   Yakutsk            23.68 344  IAmb   IAmb   00 55 14.4
      comp=Z,35nm,0.7s
SEY   Seymchan           23.70  10  P      P      00 55 12.5 -1.2
      comp=Z,15nm,0.8s,baz=189,slow=7.2,SNR=28
SEY   Seymchan           23.70  10 i P     P      00 55 13.6 -0.1
CIT   Chita              23.82 311 eP      P      00 55 11.6 -3.4
CIT                                e              00 55 46.2
HHC   Hu-ho-hao-te       24.17 283 eP      P      00 55 17.0 -1.5
HHC                                 pmax   pmax
      comp=Z,7.0nm,1.1s
HHC                                 pmax   pmax
      comp=Z,1µm,6.6s
WHN   Wuhan              25.37 257 ⇑P      P      00 55 29.0 -0.3
WHN                                 pmax   pmax
      comp=Z,60nm,0.7s
BOD   Bodaibo            26.03 323 eP      P      00 55 34.7 -0.4
BOD                                 pmax   pmax
      comp=Z,25nm,1.0s
ULN   Ulaanbaatar        27.15 299d iP     P      00 55 46.2 +0.8
ULN                                 pmax   pmax
      comp=Z,20nm,1.3s
ULN   Ulaanbaatar        27.15 299  P      P      00 55 45.0 -0.4
ULN                                 IAmb   IAmb   00 55 46.9
      comp=Z,16nm,1.1s
SONM  Songino Array      27.59 299  P      P      00 55 49.8 +0.5
      comp=Z,8.5nm,0.8s,baz=90,slow=8.3,SNR=42
SONM  Songino Array      27.59 299  P      P      00 55 49.6 +0.3
SONM                                IAmb   IAmb   00 55 51.8
      comp=Z,8.9nm,1.0s
XAN   Xi'an              28.00 269  P      P      00 55 51.1 -2.0
XAN                                 pP     pwP    00 55 59.0 +1.0
XAN                                 pmax   pmax
      comp=Z,9.0nm,0.9s
XAN   Xi'an              28.00 269  P      P      00 55 51.5 -1.6
XAN                                 pmax   pmax
      comp=Z,6.0nm,0.7s
XAN   Xi'an              28.00 269  P      P      00 55 51.5 -1.6
XAN                                 IAmb   IAmb   00 55 53.5
      comp=Z,5.8nm,0.7s
H11N2 WAKE ISLAND Hy     28.51 128  T      T      01 26 50.0
      baz=318,slow=74,SNR=200
H11N1 WAKE ISLAND Hy     28.52 128  T      T      01 26 55.2
      baz=318,slow=74,SNR=164
H11N3 WAKE ISLAND Hy     28.52 128  T      T      01 26 51.3
      baz=318,slow=74,SNR=169
ENH   Enshi              29.18 261  P      P      00 56 03.0 -0.5
H11S1 WAKE ISLAND Hy     29.33 130  T      T      01 26 59.4
      baz=322,slow=76,SNR=31
H11S3 WAKE ISLAND Hy     29.33 130  T      T      01 26 57.1
      baz=322,slow=76,SNR=24
H11S2 WAKE ISLAND Hy     29.35 130  T      T      01 26 58.3
      baz=322,slow=76,SNR=18
TLY   Talaya             29.72 307  P      P      00 56 08.0 -0.1
      comp=Z,1.5nm,0.4s,baz=108,slow=12,SNR=3.4
TLY   Talaya             29.72 307ceP      P      00 56 09.4 +1.2
TLY                                 pmax   pmax
      comp=Z,5.0nm,1.3s
TLY   Talaya             29.72 307  P      P      00 56 07.9 -0.3
TLY                                 IAmb   IAmb   00 56 10.3
      comp=Z,9.5nm,1.4s
ZAK   Zakamensk          29.81 304 eP      P      00 56 09.0 -0.1
LZH   Lanzhou            31.19 276 eP      P      00 56 22.3 +0.8
LZH                                 pP     pwP    00 56 26.8 +0.4
LZH                                 sP     sP     00 56 29.3 +4.3
LZH                                 pmax   pmax
      comp=Z,12nm,1.0s
TIXI  Tiksi              32.66 352⇑iP      P      00 56 33.4 -0.4
TIXI                                pmax   pmax
      comp=Z,17nm,1.5s
GYA   Guiyang            33.26 258 ⇓P      P      00 56 39.3 -0.4
GYA                                 pmax   pmax
      comp=Z,20nm,1.0s
CD2   Chengdu            33.27 267  P      P      00 56 39.0 -0.6
CD2                                 pmax   pmax
      comp=Z,20nm,0.8s
GTA   Gaotai             33.27 283 ⇓P      P      00 56 40.3 +0.6
GTA                                 pP     pwP    00 56 44.8 +0.2
GTA                                 sP     sP     00 56 47.8 +4.6
GTA                                 PcP    PcP    00 59 23.0 +1.2
GTA                                 pmax   pmax
      comp=Z,14nm,1.0s
GTA                                 pmax   pmax
      comp=Z,390nm,5.5s
GTA                                 LR     LR
      comp=Z,1µm,16.0s
GTA                                 LR     LR
      comp=Z,1µm,17.5s
GTA                                 LR     LR
      comp=Z,1µm,18.9s
KMI   Kunming            36.94 259 ⇑P      P      00 57 11.3 -0.3
KMI                                 pP     pP     00 57 13.9 -0.2
KMI                                 sP     pwP    00 57 16.3 -0.1
KMI                                 pmax   pmax
      comp=Z,14nm,1.2s
KMI                                 pmax   pmax
      comp=Z,490nm,5.7s
KMI                                 LR     LR
      comp=Z,1µm,20.4s
KMI                                 LR     LR
      comp=Z,990nm,17.9s
KMI                                 LR     LR
      comp=Z,2µm,19.7s
KMI   Kunming            36.94 259  P      P      00 57 11.1 -0.5
KMI                                 pmax   pmax
      comp=Z,28nm,1.4s
KMI   Kunming            36.94 259  P      P      00 57 11.1 -0.5
KMI                                 IAmb   IAmb   00 57 12.6
      comp=Z,28nm,1.4s
SLVN  Son La             38.28 253  P      P      00 57 22.2 -0.5
DGZ   Jazzator, Alta     40.02 303c iP     P      00 57 38.3 +1.2
DGZ                                 pmax   pmax
      comp=Z,20nm,0.7s
WMQ   Urumqi             40.98 294 eP      P      00 57 45.8 +0.8
WMQ                                 sP     pwP    00 57 58.1 +8.2
WMQ                                 pmax   pmax
      comp=Z,17nm,0.9s
WMQ                                 pmax   pmax
      comp=Z,550nm,11.8s
WMQ                                 LR     LR
      comp=Z,2µm,12.7s
WMQ                                 LR     LR
      comp=Z,2µm,15.5s
WMQ                                 LR     LR
      comp=Z,610nm,21.3s
WMQ   Urumqi             40.98 294  P      P      00 57 44.7 -0.3
WMQ                                 pmax   pmax
      comp=Z,16nm,0.8s
WMQ   Urumqi             40.98 294  P      P      00 57 44.6 -0.3
WMQ                                 IAmb   IAmb   00 57 47.5
      comp=Z,16nm,0.8s
ZAA0  Zalesovo Array     41.17 310  P      P      00 57 46.3  0.0
ZAA0                                IAmb   IAmb   00 57 47.3
      comp=Z,12nm,0.6s
ZALV  Zalesovo Beam      41.17 310  P      P      00 57 46.8 +0.5
      comp=Z,11nm,0.4s,baz=94,slow=8.2,SNR=67
ZALV                                PcP    PcP    00 59 45.6 +0.3
      comp=Z,2.3nm,0.6s,baz=100,slow=2.5,SNR=3.6
ZALV  Zalesovo Beam      41.17 310  P      P      00 57 46.2 -0.2
NRIK  Noril'sk           41.34 334  P      P      00 57 47.8 +0.2
      comp=Z,1.7nm,0.4s,baz=114,slow=9.1,SNR=7.9
NRIK  Noril'sk           41.34 334  P      P      00 57 48.0 +0.4
NRIK                                pmax   pmax
      comp=Z,11nm,1.4s
NRIK  Noril'sk           41.34 334  P      P      00 57 48.0 +0.4
ZSN   Zaisan             42.09 300 eP      P      00 57 53.7 -0.3
      comp=Z,8.8nm,1.4s,baz=300
ZSN   Zaisan             42.09 300 eP      P      00 57 53.7 -0.3
ZSN                                 pmax   pmax
      comp=Z,9.0nm,1.4s
CHTO  Chiang Mai         43.49 254  P      P      00 58 05.2 -0.5
CHTO                                pmax   pmax
      comp=Z,4.0nm,0.8s
CHTO  Chiang Mai         43.49 254  P      P      00 58 05.2 -0.5
LSA   Lhasa              43.51 273  P      P      00 58 06.4 +0.1
LSA                                 pmax   pmax
      comp=Z,5.0nm,0.7s
LSA   Lhasa              43.51 273  P      P      00 58 06.4 +0.1
CMAR  Chiang Mai Arr     43.72 254  P      P      00 58 07.4 -0.1
      comp=Z,1.5nm,0.5s,baz=48,slow=6.6,SNR=9.1
CMAR                                LR     LR     01 17 34.6
      comp=Z,557nm,18.4s,baz=260,slow=38
CMAR  Chiang Mai Arr     43.72 254 i P     P      00 58 08.0 +0.5
CMAR                                pmax   pmax
      comp=Z,1.0nm,0.4s
MK31  Makanchi Array     43.95 300  P      P      00 58 09.2 +0.1
MK31                                pmax   pmax
      comp=Z,7.0nm,0.9s
MK31  Makanchi Array     43.95 300  P      P      00 58 09.2 +0.1
MK31                                IAmb   IAmb   00 58 10.1
      comp=Z,7.3nm,0.8s
MKAR  Makanchi Array     43.95 300  P      P      00 58 09.1  0.0
      comp=Z,5.7nm,0.8s,baz=83,slow=9.7,SNR=62
MKAR  Makanchi Array     43.95 300  P      P      00 58 09.0 -0.1
MAKZ  Makanchi           44.15 300  P      P      00 58 10.8 +0.1
MAKZ                                pmax   pmax
      comp=Z,10.0nm,1.1s
MAKZ  Makanchi           44.15 300  P      P      00 58 10.8 +0.1
MAKZ                                IAmb   IAmb   00 58 11.9
      comp=Z,10.0nm,1.1s
SEM   Semipalatinsk      44.46 305 eP      P      00 58 11.8 -1.6
      baz=305
SEM   Semipalatinsk      44.46 305 eP      P      00 58 11.7 -1.6
BWN   Browne             45.18  35  P      P      00 58 19.9 +1.3
KURK  Kurchatov          45.42 306  P      P      00 58 20.1 -0.6
KURK                                *PP    pP     00 58 20.5 -2.7
KURK                                pmax   pmax
      comp=Z,15nm,0.7s
KURK  Kurchatov          45.42 306  P      P      00 58 20.1 -0.6
KURK                                       pP     00 58 20.5 -2.7
COLA  College            45.86  34⇑eP      P      00 58 15.9 -8.0
COLA                                pmax   pmax
      comp=Z,33nm,2.8s
ILAR  Eielson Array      46.27  34  P      P      00 58 28.4 +1.1
      comp=Z,1.4nm,0.8s,baz=269,slow=6.1,SNR=10.0
PDGK  Podgornoye         46.83 296 i P     P      00 58 31.5 -0.6
PDGK                                pmax   pmax
      comp=Z,7.0nm,0.8s
SHLS  Shalkode           46.90 296 eP      P      00 58 29.5 -3.2
      comp=Z,7.6nm,0.9s,baz=296
SHLS  Shalkode           46.90 296 eP      P      00 58 29.4 -3.2
SHLS                                pmax   pmax
      comp=Z,8.0nm,0.9s
TDK   Taldyqorghan       47.05 299 eP      P      00 58 33.7  0.0
      baz=298
TDK   Taldyqorghan       47.05 299 eP      P      00 58 33.6  0.0
UZB   Uzynbulak          47.21 296 eP      P      00 58 34.3 -0.8
      comp=Z,8.7nm,1.1s,baz=296
UZB   Uzynbulak          47.21 296 eP      P      00 58 34.3 -0.8
UZB                                 pmax   pmax
      comp=Z,9.0nm,1.1s
TAPN  Taplejung          47.30 272 eP      P      00 58 36.4 +0.3
      comp=Z,14nm,0.7s
KPKS  Kokpek             47.34 297 eP      P      00 58 35.5 -0.5
      comp=Z,9.8nm,0.9s,baz=296
KPKS  Kokpek             47.34 297 eP      P      00 58 35.5 -0.5
KPKS                                pmax   pmax
      comp=Z,10.0nm,0.9s
SATY  Saty               47.67 296 eP      P      00 58 38.5 -0.2
      comp=Z,2.9nm,0.7s,baz=296
SATY  Saty               47.67 296 eP      P      00 58 38.4 -0.2
SATY                                pmax   pmax
      comp=Z,3.0nm,0.7s
ODAN  Odare              47.79 272 eP      P      00 58 40.1 +0.2
      comp=Z,11nm,0.3s
RAMN  Ramite             48.35 273 eP      P      00 58 44.4 +0.2
      comp=Z,52nm,0.9s
CHKK  Chushkaly          48.38 298 eP      P      00 58 43.6 -0.4
      baz=297
CHKK  Chushkaly          48.38 298 eP      P      00 58 43.6 -0.4
CRQM  Cirque             48.42  39  P      P      00 58 46.8 +2.5
GUN   Gumba              48.42 274 eP      P      00 58 45.1 +0.2
      comp=Z,51nm,0.7s
MDOK  Medeo              48.57 297 eP      P      00 58 45.2 -0.4
      baz=296
MDOK  Medeo              48.57 297 eP      P      00 58 45.2 -0.4
AAA   Alma-Ata           48.64 297 eP      P      00 58 46.2  0.0
      baz=297
AAA   Alma-Ata           48.64 297 eP      P      00 58 46.1  0.0
TNSS  Tian-Shan          48.68 297 eP      P      00 58 47.1 +0.3
      baz=296
TNSS  Tian-Shan          48.68 297 eP      P      00 58 47.1 +0.3
```

BCAR	**Beaver Creek A**	**48.69**	**36**	P	**P**	**00 58 47.5**	**+1.4**
KUU	**Kurty**	**48.80**	**298**	*e*P	**P**	**00 58 46.2**	**-1.1**
	comp=Z,18nm,0.9s,baz=298						
KUU	**Kurty**	**48.80**	**298**	*e*P	**P**	**00 58 46.2**	**-1.1**
KUU				pmax	pmax		
	comp=Z,18nm,0.9s						
KKN	**Kakani**	**48.94**	**274**	*e*P	**P**	**00 58 48.9**	**+0.1**
	comp=Z,37nm,0.7s						
PKI	**Pulchoki**	**48.95**	**274**	*e*P	**P**	**00 58 48.9**	**-0.1**
PKIN	**Phulchoki**	**48.96**	**274**	*e*P	**P**	**00 58 49.3**	**+0.3**
DMN	**Daman**	**49.17**	**274**	*e*P	**P**	**00 58 50.9**	**+0.4**
	comp=Z,18nm,0.7s						
BRZS	**Berezniki**	**49.28**	**307**	*e*P	**P**	**00 58 50.1**	**-0.7**
	comp=Z,4.4nm,1.2s,baz=306						
BRZS	**Berezniki**	**49.28**	**307**	*e*P	**P**	**00 58 50.1**	**-0.7**
BRZS				pmax	pmax		
	comp=Z,4.0nm,1.2s						
GKN	**Gorkha**	**49.33**	**275**	*e*P	**P**	**00 58 51.6**	**-0.1**
	comp=Z,22nm,0.7s						
TKM2	**Tokmak 2**	**49.65**	**297**	P	**P**	**00 58 54.8**	**+0.8**
	SNR=27						
TKM2	**Tokmak 2**	**49.65**	**297**	*i* P	**P**	**00 58 54.5**	**+0.5**
TKM2				pmax	pmax		
	comp=Z,26nm,0.8s						
DANN	**Dangsing**	**49.83**	**276**	*e*P	**P**	**00 58 56.1**	**+0.5**
	comp=Z,56nm,0.6s						
BRVK	**Borovoye**	**49.86**	**311**	⇑*i*P	**P**	**00 58 55.8**	**+0.6**
BRVK				pmax	pmax		
	comp=Z,8.0nm,0.7s						
BRVK	**Borovoye**	**49.86**	**311**	P	**P**	**00 58 55.6**	**+0.4**
BRVK				IAmb	IAmb	00 58 56.6	
	comp=Z,9.6nm,0.8s						
BTLS	**Baital**	**49.96**	**300**	*e*P	**P**	**00 58 55.0**	**-1.0**
	baz=300						
BTLS	**Baital**	**49.96**	**300**	*e*P	**P**	**00 58 55.0**	**-1.0**
SGDS	**Sogindy**	**50.12**	**298**	*e*P	**P**	**00 58 56.6**	**-0.8**
	baz=298						
SGDS	**Sogindy**	**50.12**	**298**	*e*P	**P**	**00 58 56.5**	**-0.8**
KBK	**Karagaybulak**	**50.19**	**297**	P	**P**	**00 58 58.6**	**+0.5**
	SNR=25						
USP	**Ospenovka**	**50.28**	**298**	P	**P**	**00 58 58.8**	**+0.3**
	SNR=8.5						
AAK	**Ala-Archa**	**50.51**	**297**	P	**P**	**00 59 00.7**	**+0.3**
	SNR=5.2						
AAK	**Ala-Archa**	**50.51**	**297**	*ce*P	**P**	**00 59 00.5**	**+0.1**
AAK				pmax	pmax		
	comp=Z,16nm,0.8s						
AAK	**Ala-Archa**	**50.51**	**297**	P	**P**	**00 59 00.6**	**+0.2**
AAK				IAmb	IAmb	00 59 01.0	
	comp=Z,4.7nm,0.6s						
KSH	**Kashi**	**50.67**	**293**	P	**P**	**00 59 05.3**	**+3.7**
KSH				PcP	**PcP**	**01 00 21.0**	**+2.0**
KSH				S	**S**	**01 06 21.9**	**+5.2**
KSH				ScS	**ScS**	**01 08 51.8**	**-1.0**
KSH				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KSH				pmax	pmax		
	comp=Z,1µm,12.9s						
KSH				LR	LR		
	comp=Z,660nm,9.4s						
KSH				LR	LR		
	comp=Z,2µm,21.5s						
KSH				LR	LR		
	comp=Z,3µm,20.0s						
EKS2	**Erkin-Say**	**50.99**	**297**	P	**P**	**00 59 04.1**	**0.0**
	SNR=9.6						
HYT	**Haines Junctio**	**51.11**	**38**	P	**P**	**00 59 06.6**	**+2.0**
INK	**Inuvik**	**51.15**	**28**	P	**P**	**00 59 06.0**	**+1.3**
	comp=Z,0.8nm,0.5s,baz=214,slow=3.6,SNR=2.1						
INK	**Inuvik**	**51.15**	**28**	P	**P**	**00 59 06.0**	**+1.3**
INK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
AML	**Almayashu**	**51.25**	**297**	P	**P**	**00 59 06.6**	**+0.3**
	SNR=10						
DZA	**Taraz**	**52.57**	**298**	*e*P	**P**	**00 59 15.8**	**+0.1**
	comp=Z,7.7nm,0.8s,baz=298						
DZA	**Taraz**	**52.57**	**298**	*e*P	**P**	**00 59 15.8**	**+0.1**
DZA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KK31	**Karatay Array**	**53.04**	**299**	P	**P**	**00 59 19.0**	**-0.2**
KK31				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KK31	**Karatay Array**	**53.04**	**299**	P	**P**	**00 59 18.9**	**-0.2**
KK31				IAmb	IAmb	00 59 19.4	
	comp=Z,6.3nm,0.8s						
KKAR	**Karatay Array**	**53.04**	**299**	P	**P**	**00 59 18.6**	**-0.5**
KKAR	**Karatay Array**	**53.04**	**299**	P	**P**	**00 59 18.6**	**-0.5**
KKAR	**Karatay Array**	**53.04**	**299**	P	**P**	**00 59 18.4**	**-0.8**
KKAR				IAmb	IAmb	00 59 19.4	
	comp=Z,6.3nm,0.8s						
IUG	**Iuzhnay**	**53.75**	**298**	*e*P	**P**	**00 59 24.1**	**-0.4**
	baz=298						
IUG	**Iuzhnay**	**53.75**	**298**	*e*P	**P**	**00 59 24.0**	**-0.4**
SVE	**Sverdlovsk**	**54.03**	**318**	*e*P	**P**	**00 59 27.1**	**+0.9**
SVE				pmax	pmax		
	comp=Z,17nm,1.3s						
NIL	**Nilore**	**55.19**	**287**	P	**P**	**00 59 35.0**	**0.0**
NIL				pmax	pmax		
	comp=Z,17nm,0.9s						
NIL	**Nilore**	**55.19**	**287**	P	**P**	**00 59 35.0**	**0.0**
ARU	**Arti**	**55.25**	**318**	*c i*P	**P**	**00 59 35.5**	**+0.5**
ARU						01 01 34.1	
ARU				S	**S**	**01 07 21.4**	**+3.1**
ARU				SS	**SS**	**01 11 00.0**	**-1.9**
ARU				pmax	pmax		
	comp=Z,14nm,1.0s						
ARU	**Arti**	**55.25**	**318**	P	**P**	**00 59 35.4**	**+0.5**
KSI	**Kapahiang**	**57.23**	**231**	P	P	00 59 58.9	+9.2
AB31	**Akbulak array**	**57.28**	**309**	⇑*e*P	**P**	**00 59 49.6**	**0.0**
AB31				pmax	pmax		
	comp=Z,4.0nm,0.5s						
ABKAR	**Akbulak array**	**57.28**	**309**	P	**P**	**00 59 49.7**	**+0.1**
ABKAR				IAmb	IAmb	00 59 50.2	
	comp=Z,7.9nm,0.7s						
ABKAR	**Akbulak array**	**57.28**	**309**	P	**P**	**00 59 49.4**	**-0.3**
KBL	**Kabul**	**57.83**	**290**	P	**P**	**00 59 53.2**	**-0.8**
KBL				pmax	pmax		
	comp=Z,14nm,0.9s						
KBL	**Kabul**	**57.83**	**290**	P	**P**	**00 59 53.2**	**-0.8**
KIRV	**Kirov**	**58.90**	**322**	⇑*i*P	**P**	**01 00 01.1**	**+0.3**
RES	**Resolute Bay**	**59.45**	**15**	P	**P**	**01 00 05.1**	**+0.7**
	comp=Z,2.1nm,0.8s,baz=321,slow=8.6,SNR=6.9						
FITZ	**Fitzroy Crossi**	**60.01**	**200**	P	**P**	**01 00 08.9**	**+0.1**
	comp=Z,2.3nm,0.9s,baz=346,slow=7.8,SNR=2.2						
WRAB	**Tennant Creek**	**60.10**	**190**	*i* P	**P**	**01 00 08.6**	**-0.9**
WRAB				pmax	pmax		
	comp=Z,1.0nm,0.8s						
WRA	**Warramunga Arr**	**60.11**	**190**	P	**P**	**01 00 08.6**	**-0.9**
	comp=Z,0.9nm,0.6s,baz=7.4,slow=7.2,SNR=7.7						
WRA	**Warramunga Arr**	**60.11**	**190**	P	**P**	**01 00 10.1**	**+0.5**
WRA	**Warramunga Arr**	**60.11**	**190**	P	**P**	**01 00 10.1**	**+0.5**
YKA	**Yellowknife Ar**	**60.58**	**31**	P	**P**	**01 00 13.0**	**+0.7**
	comp=Z,0.2nm,0.6s,baz=302,slow=5.7,SNR=3.2						
ARCES	**ARCESS Array B**	**61.86**	**339**	P	**P**	**01 00 22.5**	**+1.5**
	comp=Z,4.6nm,1.0s,baz=42,slow=7.3,SNR=1.7						
KLMR	**Klimovskoe**	**62.16**	**327**	*e*P	**P**	**01 00 21.8**	**-1.2**
KLMR				pmax	pmax		
	comp=Z,20nm,1.5s						
KLMR	**Klimovskoe**	**62.16**	**327**	*e*P	**P**	**01 00 21.9**	**-1.1**
KLMR				AMP		01 00 30.4	
	comp=Z,20nm,1.5s						
BELG	**Belogornoye**	**62.75**	**317**	*c i*P	**P**	**01 00 27.4**	**+0.3**
BELG				pmax	pmax		
	comp=Z,5.0nm,0.9s						
HRA	**Herat**	**62.77**	**293**	P	**P**	**01 00 27.4**	**-0.4**
HRA				IAmb	IAmb	01 00 28.7	
	comp=Z,3.2nm,0.8s						
DAG	**Danmarks Havn**	**63.05**	**355**	*i* P	**P**	**01 00 28.8**	**0.0**
	comp=Z,4.2nm,0.9s						
DAG	**Danmarks Havn**	**63.05**	**355**	*i* P	**P**	**01 00 28.8**	**0.0**
DAG				pmax	pmax		
	comp=Z,4.0nm,0.9s						
DAG	**Danmarks Havn**	**63.05**	**355**	*i* P	**P**	**01 00 28.8**	**0.0**
DAG				IAmb	IAmb	01 00 29.9	
	comp=Z,4.2nm,0.9s						
GEYT	**Alibeck**	**63.79**	**299**	P	**P**	**01 00 34.3**	**0.0**
	comp=Z,4.8nm,0.8s,baz=42,slow=2.4,SNR=10						
GEYT	**Alibeck**	**63.79**	**299**	P	**P**	**01 00 34.1**	**-0.2**
GEYT				IAmb	IAmb	01 00 35.3	
	comp=Z,3.7nm,0.8s						
GYA0B	**ALIBECK ARRAY**	**63.79**	**299**	P	**P**	**01 00 34.5**	**+0.2**
GYA0B				IAmb	IAmb	01 00 44.5	
	comp=Z,6.1nm,0.8s						
ASAR	**Alice Springs**	**63.84**	**190**	P	**P**	**01 00 34.4**	**-0.2**
	comp=Z,0.9nm,0.7s,baz=5.1,slow=5.8,SNR=7.3						
ASAR	**Alice Springs**	**63.84**	**190**	P	**P**	**01 00 33.8**	**-0.8**
VRH	**Novokhopyorsk**	**66.48**	**318**	*e*P	**P**	**01 00 49.9**	**-1.6**
VRH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
OBN	**Obninsk**	**66.72**	**323**	⇑*i*P	**P**	**01 00 53.2**	**+0.3**
OBN				*e*		01 01 24.6	
OBN				*e*		01 03 18.9	
OBN				*e*S	**S**	**01 09 42.5**	**-2.0**
OBN				*e*SS	**SS**	**01 14 06.3**	**+5.1**
OBN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
FINES	**FINESS Array B**	**66.99**	**332**	P	**P**	**01 00 54.5**	**-0.1**
	comp=Z,4.4nm,0.7s,baz=53,slow=6.0,SNR=12						
FINES	**FINESS Array B**	**66.99**	**332**	*i* P	**P**	**01 00 55.0**	**+0.4**
FINES				pmax	pmax		
	comp=Z,4.0nm,0.7s						
LPSR	**Galich'ya Gora**	**67.08**	**320**	*e*P	**P**	**01 00 54.1**	**-1.2**
LPSR				pmax	pmax		
	comp=Z,9.0nm,0.8s						
VSR	**Storozhevoye**	**67.78**	**319**	*e*P	**P**	**01 00 58.7**	**-1.1**
VSR				pmax	pmax		
	comp=Z,8.0nm,0.7s						
SUMG	**Summit**	**67.82**	**1**	*i* P	**P**	**01 01 01.2**	**+1.0**
	comp=Z,17nm,0.9s						
SUMG	**Summit**	**67.82**	**1**	*i* P	**P**	**01 01 01.2**	**+1.0**
SUMG				pmax	pmax		
	comp=Z,17nm,0.9s						
SUMG	**Summit**	**67.82**	**1**	*i* P	**P**	**01 01 01.2**	**+1.0**
SUMG				IAmb	IAmb	01 01 02.3	
	comp=Z,17nm,0.9s						
GOF	**Gofitskoye**	**69.32**	**312**	⇑*e*P	**P**	**01 01 10.0**	**+0.5**
ZEI	**Tsey**	**70.16**	**309**	*e*P	P	01 01 06.7	-8.3
ZEI				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KIV	**Kislovodsk**	**70.18**	**311**	⇑P	**P**	**01 01 15.9**	**+1.0**
KIV	**Kislovodsk**	**70.18**	**311**	P	**P**	**01 01 16.1**	**+1.1**
KIV				pmax	pmax		
	comp=Z,21nm,0.9s						
KIV	**Kislovodsk**	**70.18**	**311**	P	**P**	**01 01 16.1**	**+1.1**
KBZ	**Khabaz**	**70.19**	**311**	P	**P**	**01 01 15.9**	**+1.1**
	comp=Z,8.4nm,0.8s,baz=66,slow=4.9,SNR=18						
KBZ	**Khabaz**	**70.19**	**311**	*c i*P	**P**	**01 01 15.7**	**+0.9**
KBZ				pmax	pmax		
	comp=Z,11nm,0.9s						
AKH	**Akhalkalaki**	**71.22**	**308**	⇑P	**P**	**01 01 22.7**	**+1.3**
ICESG	**Greenland Ices**	**71.31**	**1**	*i* P	**P**	**01 01 22.0**	**+0.3**
NVAR	**Mina Array Bea**	**72.08**	**55**	P	**P**	**01 01 27.3**	**+0.6**
	comp=Z,0.5nm,0.8s,baz=297,slow=6.0,SNR=2.9						
NB2	**NORSAR Subarra**	**72.13**	**338**	P	**P**	**01 01 26.8**	**+0.4**
	comp=Z,1.9nm,0.7s,baz=37,slow=6.2						
NOA	**NORSAR Array B**	**72.13**	**338**	P	**P**	**01 01 26.6**	**+0.2**
	comp=Z,3.3nm,0.8s,baz=39,slow=6.0,SNR=9.4						
ANN	**Anapa**	**72.64**	**314**	*e*P	**P**	**01 01 28.3**	**-1.3**
ANN				*e*		01 01 44.4	
ANN				*e*S	**S**	**01 10 49.0**	**-5.4**
ANN				pmax	pmax		
	comp=Z,68nm,1.1s						
AKASG	**Malin Array Be**	**72.96**	**323**	P	**P**	**01 01 31.1**	**-0.3**
	comp=Z,4.4nm,0.8s,baz=42,slow=5.7,SNR=8.7						
AKASG	**Malin Array Be**	**72.96**	**323**	*ce*P	**P**	**01 01 31.5**	**+0.1**
AKASG				pmax	pmax		
	comp=Z,8.0nm,1.0s						
AKASG	**Malin Array Be**	**72.96**	**323**	IAmb	IAmb	01 01 32.0	
	comp=Z,2.2nm,1.0s						
AKBB	**Malin Array Si**	**72.96**	**323**	⇑*i*P	**P**	**01 01 31.3**	**-0.1**
AKBB				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ECR	**Eagle Creek**	**73.39**	**48**	P	**P**	**01 01 34.6**	**+0.2**
PDAR	**Pinedale Array**	**74.60**	**47**	P	**P**	**01 01 40.5**	**-1.0**
	comp=Z,0.2nm,0.5s,baz=248,slow=1.6,SNR=4.0						
MARD	**Mardin**	**75.40**	**306**	P	**P**	**01 01 46.0**	**-0.1**
BUR08	**Bucovina Ar. S**	**76.98**	**322**	P	**P**	**01 01 55.2**	**+0.3**
BURAR	**Bucovina Array**	**77.00**	**322**	⇑P	**P**	**01 01 55.5**	**+0.5**
BURAR	**Bucovina Array**	**77.00**	**322**	⇑P	**P**	**01 01 55.5**	**+0.5**
BURAR	**Bucovina Array**	**77.00**	**322**	P	**P**	**01 01 55.5**	**+0.5**
KOLS	**Kolonicke sedl**	**77.39**	**325**	*e*P	**P**	**01 01 57.4**	**+0.4**
KOLS	**Kolonicke sedl**	**77.39**	**325**	*e*P	**P**	**01 01 57.4**	**+0.4**
BMR	**Baia Mare**	**77.76**	**323**	⇑P	P	01 01 45.8	-13
CRVS	**Cervenica-Dubn**	**77.77**	**325**	*e*P	**P**	**01 01 59.5**	**+0.3**
CRVS	**Cervenica-Dubn**	**77.77**	**325**	*e*P	**P**	**01 01 59.5**	**+0.3**
DOPR	**Dopca**	**78.10**	**321**	⇑P	**P**	**01 02 02.8**	**+1.7**
VOIR		**78.65**	**321**	⇑P	**P**	**01 02 07.8**	**+3.6**
VOIR		**78.65**	**321**	⇑P	**P**	**01 02 07.8**	**+3.6**
MORC	**Moravsky Berou**	**78.78**	**328**	⇑P	**P**	**01 02 05.7**	**+0.9**
MORC	**Moravsky Berou**	**78.78**	**328**	*e*P	**P**	**01 02 05.5**	**+0.7**
MORC	**Moravsky Berou**	**78.78**	**328**	⇑P	**P**	**01 02 05.7**	**+0.9**
MORC	**Moravsky Berou**	**78.78**	**328**	P	**P**	**01 02 05.5**	**+0.7**
MORC				IAmb	IAmb	01 02 06.6	
	comp=Z,12nm,1.3s						
DPC	**Dobruska-Polom**	**78.83**	**329**	*e*P	**P**	**01 02 05.8**	**+0.8**
DPC	**Dobruska-Polom**	**78.83**	**329**	*e*P	**P**	**01 02 05.8**	**+0.8**
ARR	**Arges**	**78.90**	**321**	⇑P	**P**	**01 02 08.0**	**+2.5**
VYHS	**Vyhne**	**79.22**	**326**	*e*P	**P**	**01 02 07.2**	**0.0**
VYHS	**Vyhne**	**79.22**	**326**	*e*P	**P**	**01 02 07.2**	**0.0**
CLL	**Collm**	**79.36**	**331**	*e*(P)	**P**	**01 02 08.0**	**+0.2**
CLL	**Collm**	**79.36**	**331**	*e*P	**P**	**01 02 08.0**	**+0.2**
JAVC	**Velka Javorina**	**79.43**	**327**	*e*P	**P**	**01 02 10.2**	**+1.8**
VRAC	**Vranov**	**79.53**	**328**	⇓P	**P**	**01 02 10.0**	**+1.1**
VRAC	**Vranov**	**79.53**	**328**	*e*P	**P**	**01 02 10.0**	**+1.1**
VRAC	**Vranov**	**79.53**	**328**	⇓P	**P**	**01 02 10.0**	**+1.1**
KRUC	**Moravsky**	**79.81**	**328**	*e*P	**P**	**01 02 11.0**	**+0.7**
PRU	**Pruhonice**	**79.82**	**329**	*e*P	**P**	**01 02 10.2**	**-0.2**
PRU	**Pruhonice**	**79.82**	**329**	*e*P	**P**	**01 02 10.2**	**-0.2**
CKRC	**Cesky Krumlov**	**80.84**	**329**	*e*P	**P**	**01 02 16.2**	**+0.3**
CKRC				*e*x	x	01 02 32.0	
KHC	**Kasperske Hory**	**80.88**	**329**	*e*P	**P**	**01 02 16.7**	**+0.5**
KHC	**Kasperske Hory**	**80.88**	**329**	*e*P	**P**	**01 02 16.7**	**+0.5**
KHC				*e*x	x	01 02 27.6	
KHC				*e*x	x	01 02 34.7	
CONA	**Conrad Observa**	**80.92**	**327**	*i* P	**P**	**01 02 17.6**	**+1.2**
	comp=Z,5.0nm,1.1s						
RAYN	**Ar Rayn**	**80.96**	**293**	P	**P**	**01 02 16.3**	**-0.7**
RAYN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
RAYN	**Ar Rayn**	**80.96**	**293**	P	**P**	**01 02 16.3**	**-0.7**
GERES	**GERESS Array B**	**81.06**	**329**	P	**P**	**01 02 17.5**	**+0.2**
	comp=Z,0.8nm,0.5s,baz=44,slow=5.9,SNR=9.8						
VTS	**Vitosha**	**81.60**	**320**	⇑P	**P**	**01 02 21.4**	**+1.2**
VTS	**Vitosha**	**81.60**	**320**	⇑P	**P**	**01 02 21.4**	**+1.2**
VTS	**Vitosha**	**81.60**	**320**	P	**P**	**01 02 20.4**	**+0.2**
VTS				IAmb	IAmb	01 02 22.2	
	comp=Z,5.2nm,0.9s						
SOKA	**Soboth**	**82.25**	**327**	*i* P	**P**	**01 02 24.1**	**+0.6**
	comp=Z,7.2nm,0.9s						
MYKA	**Terra Mystica**	**82.86**	**328**	*e*P	**P**	**01 02 26.9**	**+0.2**
	comp=Z,8.4nm,1.4s						
WATA	**Walderalm**	**83.12**	**329**	*i* P	**P**	**01 02 29.4**	**+1.3**
	comp=Z,7.4nm,1.6s						
MOTA	**Moosalm**	**83.30**	**330**	*i* P	**P**	**01 02 30.3**	**+1.3**
	comp=Z,18nm,1.8s						
SQTA	**Sankt Quirin**	**83.36**	**329**	*e*P	**P**	**01 02 30.4**	**+1.1**
	comp=Z,8.6nm,1.5s						
PDG	**Podgorica**	**83.67**	**322**	⇓P	**P**	**01 02 31.1**	**+0.3**
PDG	**Podgorica**	**83.67**	**322**	P	**P**	**01 02 31.2**	**+0.4**
FETA	**Feichten**	**83.71**	**330**	*e*P	**P**	**01 02 31.9**	**+0.7**
	comp=Z,5.0nm,1.1s						
CROK	**Carrier**	**85.36**	**45**	P	**P**	**01 02 40.4**	**+0.9**
TXAR	**Lajitas Array**	**87.19**	**54**	P	**P**	**01 02 48.9**	**+0.1**
	comp=Z,0.4nm,0.6s,baz=302,slow=2.8,SNR=4.6						

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*IDC **17** 00:56:58.3±1.2, 39°.69N×143°.35E, h0^{km}, mb3.5/6, mb1 3.7/7, mb1mx3.4/50, mbtmp3.5/7, ML2.9/1, Error ellipse: s-maj=29.9km s-min=25.7km az=86.0*

*JMA **17** 00:57:01.4±0.3, 39°.80N×143°.39E, h28^{km}, M3.6*

ISC 17 00:56:59.7±2.1**, 39°.77N**±0°.05×**143°.37E**±0°.07**, h9**^{km}±13^{km}**,**
n21, σ1^{s}34/29**, mb3.5**/6**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	**Tanohata**	**1.17**	**279**	P	**Pb**	**00 57 22.2**	**+0.1**
MIYJ	**Miyakonagasawa**	**1.21**	**261**	P	**Pg**	**00 57 23.5**	**+0.5**
JKEN	**Kujiedanarisaw**	**1.35**	**289**	P	**Pn**	**00 57 24.7**	**0.0**
JKEN				*e*S	**Sn**	**00 57 41.2**	**-1.6**
JANG	**Nango**	**1.55**	**294**	P	**Pn**	**00 57 27.3**	**-0.2**
JOM	**Ohasama**	**1.63**	**260**	P	**Pb**	**00 57 29.8**	**-0.2**
JOM				*e*S	**Sb**	**00 57 50.3**	**-0.4**
JMK	**Ichinoseki**	**1.86**	**245**	P	**Pb**	**00 57 32.6**	**-1.2**
JTM	**Tenmabayashi**	**2.04**	**301**	P	**Pn**	**00 57 35.2**	**+1.1**
JTM				S	**Sn**	**00 58 00.3**	**+0.6**
JIO	**Ouri**	**2.05**	**231**	P	**Pn**	**00 57 34.6**	**+0.3**
JIO				*e*S	**Sn**	**00 57 57.9**	**-2.1**
JAH	**Hinai**	**2.14**	**282**	P	**Pb**	**00 57 37.2**	**-1.5**
JAH				*e*S	**Sn**	**00 58 03.2**	**+0.8**
JOT	**Ohata**	**2.39**	**313**	P	**Pb**	**00 57 41.2**	**-1.7**
JYK	**Kaneyama**	**2.49**	**251**	P	**Pb**	**00 57 42.1**	**-2.4**
JNBK	**Urakawa-nobuka**	**2.55**	**350**	P	**Pn**	**00 57 42.6**	**+1.3**
JNBK				*e*S	**Sn**	**00 58 12.9**	**+0.4**
JCH	**Churui**	**2.84**	**360**	P	**Pn**	**00 57 44.8**	**-0.5**
JCH				*e*S	**Sn**	**00 58 16.7**	**-2.9**
ASAJ	**Asahikawa**	**4.38**	**353**	Pn	**Pn**	**00 58 06.6**	**+0.2**
	0.5nm,0.3s,baz=234,slow=19,SNR=1.3						
ASAJ				Sn	**Sn**	**00 58 58.6**	**+1.0**
	0.7nm,0.3s,baz=139,slow=8.6,SNR=3.7						
MJAR	**Matsushiro Arr**	**5.19**	**233**	Pn	**Pn**	**00 58 20.0**	**+2.4**
	0.0nm,0.3s,baz=37,slow=11,SNR=5.4						
SONM	**Songino Array**	**27.66**	**299**	P	**P**	**01 02 49.5**	**+1.5**
	0.6nm,0.8s,baz=103,slow=9.4,SNR=3.3						
ZALV	**Zalesovo Beam**	**41.27**	**310**	P	**P**	**01 04 45.0**	**0.0**
	0.5nm,0.5s,baz=76,slow=6.3,SNR=2.8						
MKAR	**Makanchi Array**	**44.03**	**300**	P	**P**	**01 05 07.2**	**-0.4**
	0.4nm,0.9s,baz=85,slow=9.8,SNR=3.1						
ILAR	**Eielson Array**	**46.37**	**34**	P	**P**	**01 05 26.2**	**+0.3**
	0.7nm,1.0s,baz=270,slow=7.5,SNR=4.7						
WRA	**Warramunga Arr**	**60.00**	**190**	P	**P**	**01 07 05.5**	**-1.1**
	0.8nm,0.8s,baz=6.8,slow=7.5,SNR=4.7						
NVAR	**Mina Array Bea**	**72.14**	**55**	P	**P**	**01 08 26.1**	**+1.1**
	0.4nm,0.7s,baz=316,slow=6.3,SNR=2.3						

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*IDC **17** 01:01:56.7±7.8, 6°.49N×76°.34W, h59^{km}±78^{km}, mb3.0/1, mb1 3.5/2, mb1mx3.1/29, mbtmp3.5/2, ML2.5/1, Error ellipse: s-maj=102.3km s-min=37.3km az=65.0*

*RSNC **17** 01:01:57.9±1.1, 7°.07N×73°.49W, h106^{km}±5^{km}, ML3.3, Mw3.7, Fault plane solution: NP1:ϕ_s68.00000°, δ12.00000°, λ-112.00000°.*

ISC 17 01:01:58.2±0.9**, 7°.05N**±0°.03×**73°.48W**±0°.03**, h105**^{km}±6^{km}**,**
n36, σ1^{s}81/65**, 5C-2D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRRC	**Barranca, Sant**	**0.24**	**283**	⇓*i*P	**Pn**	**01 02 12.8**	**-0.3**
BRRC				*e*S	**Sn**	**01 02 24.3**	**+0.1**
BRRC				*i*		01 02 25.0	
	comp=Z,606nm,0.1s						
BARC	**Barichara**	**0.54**	**147**	⇑*i*P	**Pn**	**01 02 15.0**	**0.0**
BARC				*e*S	**Sn**	**01 02 28.1**	**+0.4**
PAMC	**Pamplona, Colo**	**0.82**	**70**	⇓*i*P	**Pn**	**01 02 17.6**	**-0.1**
PAMC				*e*S	**Sn**	**01 02 32.6**	**+0.2**
PAMC				*i*		01 02 34.9	
	comp=Z,275nm,0.4s						
PTBC	**PUERTO BERRIO,**	**1.10**	**242**	⇑*i*P	**Pn**	**01 02 18.5**	**-1.5**
PTBC				*e*S	**Sn**	**01 02 35.2**	**-1.3**
PTBC				*i*		01 02 39.5	
	comp=Z,297nm,0.4s						
OCAC	**Ocana**	**1.19**	**8**	*e*P	**Pn**	**01 02 20.4**	**-0.8**
OCAC				*e*S	**Sn**	**01 02 38.0**	**-0.6**
OCAC				*i*		01 02 39.4	
	comp=Z,447nm,0.2s						
RUSC	**La Rusia**	**1.22**	**161**	⇑*e*P	**Pn**	**01 02 21.2**	**-0.7**
RUSC				*e*S	**Sn**	**01 02 39.1**	**-0.6**
RUSC				*i*		01 02 43.0	
	comp=Z,278nm,0.5s						
ZARC	**Zaragoza, Cauc**	**1.44**	**288**	*e*P	**Pn**	**01 02 23.5**	**-0.4**
ZARC				*e*S	**Sn**	**01 02 44.4**	**+0.9**
ZARC				*i*		01 02 46.1	
	comp=Z,446nm,0.2s						
SPBC	**San Pablo de B**	**1.51**	**203**	*e*P	**Pn**	**01 02 23.8**	**-1.2**
SPBC				*e*S	**Sn**	**01 02 48.2**	**+3.0**
SPBC				*i*		01 02 49.4	
	comp=Z,304nm,0.5s						
TAMC	**Tame, Arauca**	**1.78**	**110**	⇑*e*P	**Pn**	**01 02 28.2**	**0.0**
TAMC				*e*S	**Sn**	**01 02 51.0**	**-0.2**
TAMC				*i*		01 02 52.1	
	comp=Z,167nm,0.2s						
SMLC	**San Martn de**	**1.83**	**341**	*e*P	**Pn**	**01 02 27.2**	**-1.6**
SMLC				*e*S	**Sn**	**01 02 50.5**	**-1.8**
SMLC				*i*		01 02 55.1	
	comp=Z,432nm,0.3s						
NORC	**Norcasia**	**2.02**	**223**	⇑*e*P	**Pn**	**01 02 29.9**	**-1.4**
NORC				*e*S	**Sn**	**01 02 55.6**	**-1.0**
NORC				*i*		01 03 02.9	
	comp=Z,126nm,0.2s						
UREC	**San Jos de Ur**	**2.15**	**289**	*e*P	**Pn**	**01 02 31.3**	**-1.6**
UREC				*e*S	**Sn**	**01 02 57.3**	**-2.3**
ROSC	**El Rosal**	**2.35**	**201**	P	**Pn**	**01 02 36.7**	**+0.8**
	comp=Z,19nm,0.3s,baz=240,slow=20,SNR=18						
ROSC				S	**Sn**	**01 03 07.9**	**+3.2**
	comp=Z,36nm,0.3s,baz=190,slow=21,SNR=16						
ROSC	**El Rosal**	**2.35**	**201**	*e*P	**Pn**	**01 02 36.0**	**+0.2**
ROSC				*e*S	**Sn**	**01 03 07.9**	**+3.2**
CHIC	**Chingaza**	**2.42**	**186**	*e*S	**Sn**	**01 03 07.0**	**+0.7**
CHIC				*i*		01 03 18.7	
	comp=Z,86nm,0.5s						
CHIC	**Chingaza**	**2.42**	**186**	*e*P	**Pn**	**01 02 36.4**	**-0.4**
GUY2C	**Guyana, Caldas**	**2.61**	**226**	*e*P	**Pn**	**01 02 39.8**	**+0.4**
GUY2C				*e*S	**Sn**	**01 03 11.1**	**+0.2**
GUY2C				*i*		01 03 22.5	
	comp=Z,86nm,0.4s						
DBBC	**Dabeiba**	**2.71**	**269**	*e*P	**Pn**	**01 02 39.8**	**-0.5**
DBBC				*e*S	**Sn**	**01 03 06.8**	**-5.8**
DBBC				*i*		01 03 22.8	
	comp=Z,301nm,0.7s						
RREF	**El Recreo**	**2.83**	**221**	*e*P	**Pn**	**01 02 42.4**	**0.0**
RREF				*e*S	**Sn**	**01 03 16.8**	**+0.4**
ARGC	**Ariguani, Magd**	**2.89**	**345**	*e*P	**Pn**	**01 02 43.1**	**+0.5**
ARGC				*e*S	**Sn**	**01 03 21.3**	**+4.5**
ARGC				*i*		01 03 27.2	
	comp=Z,120nm,0.2s						
TOLC	**Tolima**	**3.06**	**217**	*e*P	**Pn**	**01 02 45.3**	**+0.1**
TOLC				*e*S	**Sn**	**01 03 22.4**	**+1.0**
TOLC				*i*		01 03 29.4	
	comp=Z,83nm,0.7s						
PTGC	**Puerto Gaitan,**	**3.13**	**155**	*e*P	**Pn**	**01 02 43.9**	**-2.0**
PTGC				*e*S	**Sn**	**01 03 20.7**	**-1.9**
PTGC				*i*		01 03 28.8	
	comp=Z,74nm,0.3s						
ANIL	**Santa Ana**	**3.18**	**217**	*e*P	**Pn**	**01 02 46.9**	**+0.1**
ANIL				*e*S	**Sn**	**01 03 23.8**	**-0.5**
SDV	**Santo Domingo**	**3.36**	**57**	*e*P	**Pn**	**01 02 48.5**	**-0.5**
SDV				*e*S	**Sn**	**01 03 25.0**	**-3.2**
CVALL	**Valledupar, Ce**	**3.44**	**4**	*e*P	**Pn**	**01 02 49.0**	**-1.0**
CVALL				*e*S	**Sn**	**01 03 32.6**	**+2.6**
CVALL				*i*		01 03 36.5	
	comp=Z,132nm,0.5s						
PLMC	**San Jos del P**	**3.51**	**233**	*e*P	**Pn**	**01 02 50.2**	**-0.7**
PLMC				*e*S	**Sn**	**01 03 32.5**	**+0.8**
PLMC				*i*		01 03 35.7	
	comp=Z,24nm,0.6s						
ORTC	**Ortega, Tolima**	**3.58**	**209**	*e*P	**Pn**	**01 02 51.6**	**-0.3**
ORTC				*e*S	**Sn**	**01 03 36.4**	**+3.0**
ORTC				*i*		01 03 42.1	
	comp=Z,49nm,0.4s						
PRAC	**Prado**	**3.60**	**203**	*e*P	**Pn**	**01 02 51.5**	**-0.6**
PRAC				*e*S	**Sn**	**01 03 34.4**	**+0.5**
PRAC				*i*		01 03 46.2	
	comp=Z,132nm,0.3s						
MARP	**Paez Belalcaza**	**4.85**	**211**	*e*P	**Pn**	**01 03 06.6**	**-2.6**
MARP				*e*S	**Sn**	**01 04 07.6**	**+3.1**
MACC	**Macarena, Meta**	**4.89**	**184**	*e*P	**Pn**	**01 03 07.3**	**-2.2**
MACC				*e*S	**Sn**	**01 04 01.4**	**-3.5**
MACC				*i*		01 04 24.5	
	comp=Z,39nm,0.4s						
GARC	**Garzon, Huila**	**5.23**	**203**	*e*P	**Pn**	**01 03 12.4**	**-1.9**
GARC				*e*S	**Sn**	**01 04 10.5**	**-3.1**
GARC				*i*		01 04 16.8	
	comp=Z,32nm,0.2s						
POPC	**Popayan, Colom**	**5.50**	**216**	*e*P	**Pn**	**01 03 18.5**	**+0.6**
PCON	**Cinco Dias**	**5.52**	**212**	*e*P	**Pn**	**01 03 17.7**	**-0.9**
YKA	**Yellowknife Ar**	**62.93**	**340**	P	**P**	**01 12 14.0**	**+0.8**
	comp=Z,0.2nm,0.4s,baz=137,slow=6.6,SNR=2.2						
ASAR	**Alice Springs**	**148.95**	**235**	PKPbc	**PKPdf**	**01 21 30.9**	**+0.3**
	comp=Z,0.3nm,0.4s,baz=126,slow=3.0,SNR=4.6						
WRA	**Warramunga Arr**	**150.13**	**242**	PKPbc	**PKPdf**	**01 21 34.1**	**+1.5**
	comp=Z,0.6nm,0.4s,baz=106,slow=2.7,SNR=19						

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*DJA **17** 01:06:15.7±0.6, 8°S±4°×12°0E±°, h147^{km}±9^{km}, M3.5/10, mb3.7/1, MLv3.5/10*

*IDC **17** 01:06:23.5±5.2, 8°.17S×120°.29E, h254^{km}±62^{km}, mb3.0/3, mb1 3.1/4, mb1mx2.9/39, mbtmp3.6/4, Error ellipse: s-maj=137.5km s-min=18.2km az=49.0*

ISC 17 01:06:14.2±0.9**, 8°.27S**±0°.06×**119°.84E**±0°.05**, h150**^{km}**, n14,**
σ**2^{s}93**/19**, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WSI	Waingapu	1.46	162	P	Pn	01 06 44.5	+1.1
EDFI	Ende, Flores	1.89	105	P	Pn	01 06 51.8	+3.6
EDFI				S	Sn	01 07 17.1	+2.8
BASI	Baing, Sumba	2.07	159	P	Pn	01 06 53.8	+3.6
BASI				S	Sn	01 07 17.9	0.0
PLAI	Plampang	2.11	255	P	Pn	01 06 53.0	+2.3
PLAI				S	Sn	01 07 21.0	+2.3
BSSI	Bau Bau, Buton	2.21	17	P	Pn	01 06 52.2	+0.4
BKSI	Bulukumba	2.94	6	P	Pn	01 07 03.7	+2.8
TWSI	Taliwang, Sumb	2.96	261	P	Pn	01 07 02.9	+1.8
TWSI				S	Sn	01 07 38.2	+0.9
BATI	Baumata	4.24	117	P	Pn	01 07 20.4	+2.8
SOEI	Soe	4.62	109	P	Pn	01 07 24.3	+1.6
JAGI	Jajag, Banyuwa	5.63	268	P	Pn	01 07 35.9	-0.1
WRA	Warramunga Arr	18.21	131	P	P	01 10 15.5	-0.4
	0.4nm,0.3s,baz=302,slow=12,SNR=19						
WRA				S	S	01 13 28.5	-8.2
	0.0nm,0.3s,baz=295,slow=27,SNR=1.3						
ASAR	Alice Springs	20.40	140	P	P	01 10 39.1	-0.4
	1.1nm,0.4s,baz=314,slow=8.8,SNR=22						
STKA	Stephens Creek	31.00	142	P	P	01 12 16.9	-0.7
	1.1nm,0.3s,baz=327,slow=14,SNR=4.2						
MKAR	Makanchi Array	64.19	332	P	P	01 16 31.8	-1.1
	0.1nm,0.4s,baz=156,slow=8.3,SNR=1.5						

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*IDC **17** 01:11:59.2±2.5, 39°.67N×143°.92E, h0^{km}, mb3.8/4, mb1 3.7/7, mb1mx3.5/36, mbtmp3.7/7, ML2.8/3, Error ellipse: s-maj=55.5km s-min=25.0km az=82.0*
*JMA **17** 01:12:04.7±0.2, 39°.92N×143°.36E, h27^{km}, M3.5*
ISC 17 01:12:03.5±1.3**, 39°.76N**±0°.06×**143°.32E**±0°.08**, h6**^{km}**, n24, σ1^{s}.81**/24**, mb3.6**/4**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	1.13	279	P	Pn	01 12 24.8	-1.1
JTH				*e*S	Sb	01 12 39.3	-1.2
MIYJ	Miyakonagasawa	1.17	261	P	Pn	01 12 26.7	+0.3
MIYJ				*e*S	Sb	01 12 42.1	+0.5
JKEN	Kujiedanarisaw	1.31	290	P	Pn	01 12 27.8	-0.6
JKEN				*e*S	Sn	01 12 44.2	-2.0
JANG	Nango	1.51	294	P	Pn	01 12 30.0	-1.2
JOM	Ohasama	1.59	260	P	Pn	01 12 33.2	+1.0
JMK	Ichinoseki	1.82	244	P	Pn	01 12 36.2	+0.9
JMK				*e*S	Sn	01 12 59.8	+1.2
JTM	Tenmabayashi	2.00	301	P	Pn	01 12 37.9	0.0
JIO	Ouri	2.01	230	P	Pn	01 12 38.7	+0.7
JAH	Hinai	2.10	283	P	Pn	01 12 39.8	+0.5
JRG	Rokugo	2.11	261	P	Pb	01 12 42.9	+0.8
ASAJ	Asahikawa	4.39	353	Pn	Pn	01 13 10.9	+0.3
	0.8nm,0.3s,baz=200,slow=12,SNR=2.1						
ASAJ				Sn	Sn	01 14 05.6	+3.6
	1.0nm,0.3s,baz=259,slow=6.6,SNR=5.5						
MJAR	Matsushiro Arr	5.15	233	Pn	Pn	01 13 23.2	+2.0
	0.1nm,0.3s,baz=46,slow=11,SNR=9.0						
MAT	Matsushiro	5.15	233	P	Pn	01 13 23.8	+2.6
MAT				*e*S	Sn	01 14 22.9	+1.9
USRK	Ussuriysk Ar.	9.53	301	Pn	Pn	01 14 25.4	+4.2
	baz=88,slow=12,SNR=4.5						
SONM	Songino Array	27.63	299	P	P	01 17 51.5	-0.4
	0.7nm,0.7s,baz=89,slow=8.1,SNR=5.8						
H11N2	WAKE ISLAND Hy	28.44	128	T	T	01 47 55.9	
	baz=320,slow=75,SNR=14						
H11N1	WAKE ISLAND Hy	28.45	128	T	T	01 47 53.5	
	baz=320,slow=75,SNR=8.2						
H11N3	WAKE ISLAND Hy	28.46	128	T	T	01 47 54.4	
	baz=320,slow=75,SNR=10						
H11S1	WAKE ISLAND Hy	29.26	130	T	T	01 48 56.8	
	baz=332						
H11S3	WAKE ISLAND Hy	29.27	130	T	T	01 48 57.4	
	baz=332						
H11S2	WAKE ISLAND Hy	29.28	130	T	T	01 49 00.6	
	baz=332						
ZALV	Zalesovo Beam	41.24	310	P	P	01 19 48.6	-0.4
	1.4nm,0.4s,baz=89,slow=8.8,SNR=8.2						
MKAR	Makanchi Array	43.99	300	P	P	01 20 11.3	-0.3
	0.8nm,0.8s,baz=82,slow=9.5,SNR=8.8						
WRA	Warramunga Arr	59.98	190	P	P	01 22 07.7	-3.1
	0.5nm,0.9s,baz=6.9,slow=7.1,SNR=1.8						

JMA 17 01:14:30.7±0.3**, 39°.75N×143°.09E, h25**^{km}±5^{km}**, M2.6, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	0.96	282	P	Pn	01 14 48.4	-0.2
JTH				*e*S	Sb	01 15 00.9	-0.1
MIYJ	Miyakonagasawa	1.00	260	P	Pn	01 14 49.1	0.0
MIYJ				*e*S	Sb	01 15 02.1	+0.1
JKEN	Kujiedanarisaw	1.15	294	*e*S	Sn	01 15 05.9	-0.3
OFUJ	Ofunato	1.29	239	P	Pn	01 14 53.2	+0.1
OFUJ				*e*S	Sn	01 15 09.5	0.0
JKZ	Kuzumaki	1.38	280	P	Pn	01 14 54.9	+0.6
JKZ				S	Sb	01 15 12.4	-0.5
JOM	Ohasama	1.42	259	P	Pb	01 14 56.1	-0.3
JOM				S	Sb	01 15 14.1	+0.1
JMK	Ichinoseki	1.66	242	*e*S	Sn	01 15 19.7	+1.1
JRG	Rokugo	1.93	260	*e*S	Sb	01 15 29.1	+0.2

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*BJI **17** 01:15:00.6±0.0, 39°.75N×142°.91E, h9^{km}, mB5.4/24, mb4.5/52, Ms4.8/9, Ms7 4.6/9*
*IDC **17** 01:15:00.5±0.7, 39°.71N×143°.07E, h0^{km}, mb4.0/21, mb1 4.1/23, mb1mx4.1/38, mbtmp4.0/23, ML3.3/2, Error ellipse: s-maj=19.1km s-min=15.1km az=112.0*
*JMA **17** 01:15:03.5±0.3, 39°.80N×143°.07E, h19^{km}±3^{km}, M4.3*
*NEIC **17** 01:15:06.6±1.5, 39°.80N±0°.04×142°.78E±0°.07, h35^{km}±2^{km}, mb4.5/34, Error ellipse: s-maj=10.5km s-min=4.7km az=123.0*
ISC 17 01:15:02.1±1.4**, 39°.75N**±0°.03×**143°.02E**±0°.05**, h8**^{km}±8^{km}**, n138, σ1^{s}.21**/150**, mb4.3**/49**, MS4.7**/4**, 3D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	0.91	282	P	Pn	01 15 21.0	-0.1
JTH				*e*S	Sb	01 15 33.2	+0.9
MIYJ	Miyakonagasawa	0.94	260	P	Pn	01 15 21.7	+0.1
MIYJ				*e*S	Sn	01 15 34.7	-0.5
JKEN	Kujiedanarisaw	1.10	295	P	Pb	01 15 23.3	-0.1
JKEN				*e*S	Sg	01 15 37.5	-0.1
JANG	Nango	1.31	299	P	Pg	01 15 27.1	-0.2
JOM	Ohasama	1.36	259	P	Pg	01 15 28.7	+0.5
JOM				*e*S	Sg	01 15 47.2	+1.3
JMK	Ichinoseki	1.61	241	P	Pb	01 15 32.2	+0.3
JMK				*e*S	Sb	01 15 53.0	+0.7
JTM	Tenmabayashi	1.82	305	P	Pb	01 15 34.6	-1.0
JTM				*e*S	Sb	01 15 57.9	-0.6
JTM	Tenmabayashi	1.82	305		Pb	01 15 34.9	-0.6
JTM				Sn	Sn	01 15 54.5	-2.3
JIO	Ouri	1.83	226	P	Pb	01 15 35.0	-0.8
JIO				*e*S	Sb	01 15 58.5	-0.3
JRG	Rokugo	1.88	260	P	Pb	01 15 36.8	+0.2
JAH	Hinai	1.88	284	P	Pb	01 15 36.4	-0.3
JOT	Ohata	2.22	318	P	Pb	01 15 41.1	-1.3
ERM	Erimo	2.27	3	Pn	Pn	01 15 39.9	+0.1
ERM				Sn	Sn	01 16 07.8	-0.1
JMM	Marumori	2.56	223		Pn	01 15 43.1	-0.7
JEW	Eniwo	3.31	340		Pn	01 15 53.1	-1.0
JEW				Sn	Sn	01 16 33.5	-0.1
JSD	Sado	4.09	247	Pn	Pn	01 16 03.6	-1.2
JSD				Sn	Sn	01 16 50.1	-2.7
JYT	Yasato	4.16	213	Pn	Pn	01 16 05.3	-0.5
JYT				Sn	Sn	01 16 54.5	-0.2
JKA	Kamikawa-asahi	4.38	356	Pn	Pn	01 16 10.0	+1.2
JKA				Sn	Sn	01 17 02.1	+2.2
ASAJ	Asahikawa	4.38	356	Pn	Pn	01 16 09.4	+0.6
	1.6nm,0.3s,baz=216,slow=12,SNR=4.1						
ASAJ				Sn	Sn	01 17 04.2	+4.3
	4.0nm,0.3s,baz=163,slow=24,SNR=3.7						
MJAR	Matsushiro Arr	4.96	231	Pn	Pn	01 16 19.5	+2.6
	0.8nm,0.3s,baz=34,slow=12,SNR=22						
MJAR	Matsushiro Arr	4.96	231	Pn	Pn	01 16 17.6	+0.8
MAJO	Matsushiro	4.96	231	Pn	Pn	01 16 19.1	+2.3
MAT	Matsushiro	4.96	231	P	Pn	01 16 19.9	+3.0
MAT				*e*S	Sn	01 17 18.0	+3.6
JGF	Kuroka	6.11	229	Pn	Pn	01 16 35.0	+2.4
INU	Inuyama	6.48	229	Pn	Pn	01 16 36.7	-1.0
JHS	Saijyo	9.20	242	Pn	Pn	01 17 14.6	-0.4
USA0B	Ussuriysk Arra	9.34	302		Pn	01 17 16.5	-0.4
USRK	Ussuriysk Ar.	9.34	302	Pn	Pn	01 17 20.6	+3.7
	baz=105,slow=13,SNR=13						
USRK	Ussuriysk Ar.	9.34	302		Pn	01 17 16.2	-0.6
KSRS	Korea Array	12.03	264	Pn	Pn	01 17 59.2	+5.4
	0.7nm,0.3s,baz=79,slow=13,SNR=6.3						
KLR	Kul'dur	12.42	323	Pn	Pn	01 18 02.5	+3.5
	0.1nm,0.3s,baz=144,slow=12,SNR=3.9						
PETK	Petropavlovsk-	16.71	32	Pn	Pn	01 18 55.2	-1.2
	0.2nm,0.3s,baz=307,slow=5.2,SNR=6.9						
HIA	Hailar	19.07	308	P	P	01 19 22.8	-1.9
MA2	Magadan	20.44	11	P	P	01 19 40.2	+0.5
	4.3nm,0.4s,baz=185,slow=12,SNR=6.4						
MA2	Magadan	20.44	11	P	P	01 19 38.2	-1.4
BJI	Beijing	20.58	279	P	P	01 19 39.8	-1.4
BJI				pmax	pmax		
	comp=Z,5.0nm,0.7s						
TIA	Tai'an	20.69	268	P	P	01 19 42.8	+0.3
TIA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
NJ2	Nanjing	20.99	256	*e*P	P	01 19 45.1	-0.6
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
YAK	Yakutsk	23.75	344	P	P	01 20 12.5	-1.9
SEY	Seymchan	23.89	11	P	P	01 20 15.4	-0.4
	7.2nm,0.9s,baz=199,slow=9.3,SNR=12						
HHC	Hu-ho-hao-te	23.95	283	*e*P	P	01 20 16.0	-0.8
HHC				pmax	pmax		
	comp=Z,5.0nm,1.3s						
HHC				pmax	pmax		
	comp=Z,1μm,8.0s						
WHN	Wuhan	25.09	257	⇓P	P	01 20 27.5	+0.4
ULN	Ulaanbaatar	27.00	299	P	P	01 20 43.2	-1.2
SONM	Songino Array	27.44	299	P	P	01 20 49.0	+0.7
	3.1nm,0.9s,baz=90,slow=8.3,SNR=18						
SONM	Songino Array	27.44	299	P	P	01 20 47.8	-0.6
XAN	Xi'an	27.75	269	P	P	01 20 50.6	-0.6
XAN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
H11N2	WAKE ISLAND Hy	28.62	127	T	T	01 51 48.8	
	baz=318,slow=75,SNR=79						
H11N1	WAKE ISLAND Hy	28.63	127	T	T	01 51 49.5	
	baz=318,slow=75,SNR=85						
H11N3	WAKE ISLAND Hy	28.64	127	T	T	01 51 50.2	
	baz=318,slow=75,SNR=72						
ENH	Enshi	28.91	261	P	P	01 20 59.5	-2.0
H11S1	WAKE ISLAND Hy	29.43	129	T	T	01 52 08.5	
	baz=321,slow=76,SNR=14						
H11S3	WAKE ISLAND Hy	29.43	129	T	T	01 52 02.1	
	baz=321,slow=76,SNR=14						
H11S2	WAKE ISLAND Hy	29.45	129	T	T	01 52 09.9	
	baz=321,slow=76,SNR=13						
LZH	Lanzhou	30.95	276	*e*P	P	01 21 21.1	+1.4
LZH				pP	sP	01 21 25.5	+2.8
LZH				sP	pP	01 21 28.3	+6.5
LZH				pmax	pmax		
	comp=Z,13nm,1.3s						
GYA	Guiyang	32.98	257	⇓P	P	01 21 37.5	-0.1
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CD2	Chengdu	33.01	267	P	P	01 21 36.5	-1.2
CD2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GTA	Gaotai	33.06	284	*e*P	P	01 21 38.9	+0.7
GTA				pP	sP	01 21 46.6	+5.4
GTA				sP	pP	01 21 50.0	+10
GTA				PcP	PcP	01 24 20.8	-0.8
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,850nm,7.3s						
GTA				LR	LR		
	comp=N,840nm,16.0s						
GTA				LR	LR		
	comp=E,780nm,16.7s						
GTA				LR	LR		
	comp=Z,1μm,16.7s						
KMI	Kunming	36.67	259	⇓P	P	01 22 10.3	+0.7
KMI				pP	sP	01 22 12.5	-0.1
KMI				sP	pP	01 22 14.6	+2.9
KMI				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KMI				pmax	pmax		
	comp=Z,310nm,6.2s						
KMI				LR	LR		
	comp=N,760nm,18.4s						
KMI				LR	LR		
	comp=E,710nm,17.4s						
KMI				LR	LR		
	comp=Z,1μm,22.1s						
WMQ	Urumqi	40.81	294	*e*P	P	01 22 45.3	+1.4
WMQ				sP	sP	01 22 53.4	+6.5
WMQ				pmax	pmax		
	comp=Z,15nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,390nm,11.3s						
WMQ				LR	LR		
	comp=N,700nm,25.5s						
WMQ				LR	LR		
	comp=E,1μm,29.1s						
WMQ				LR	LR		
	comp=Z,900nm,25.5s						
WMQ	Urumqi	40.81	294	P	P	01 22 42.3	-1.6
WMQ				IAmb	IAmb	01 22 46.5	
	comp=Z,8.0nm,0.7s						
ZAA0	Zalesovo Array	41.08	310	P	P	01 22 45.2	-0.6
ZAA0				IAmb	IAmb	01 22 57.4	
	comp=Z,3.3nm,0.7s						
ZALV	Zalesovo Beam	41.08	310	P	P	01 22 46.1	+0.2
	comp=Z,1.5nm,0.3s,baz=81,slow=9.2,SNR=14						
ZALV	Zalesovo Beam	41.08	310	P	P	01 22 45.4	-0.5
NRIK	Noril'sk	41.36	334	P	P	01 22 48.1	0.0
	comp=Z,0.7nm,0.3s,baz=104,slow=18,SNR=5.7						
ZSN	Zaisan	41.94	300	*e*P	P	01 22 53.3	+0.2
	baz=301						
CHTO	Chiang Mai	43.21	254	P	P	01 23 03.6	-0.2
CHTO				IAmb	IAmb	01 23 20.7	
	comp=Z,3.4nm,0.6s						
LSA	Lhasa	43.27	273	P	P	01 23 02.8	-1.8
LSA				IAmb	IAmb	01 23 19.0	
	comp=Z,5.3nm,0.9s						
CMAR	Chiang Mai Arr	43.44	254	P	P	01 23 05.9	+0.4
	comp=Z,1.1nm,0.3s,baz=47,slow=6.6,SNR=5.6						
CMAR	Chiang Mai Arr	43.44	254	P	P	01 23 03.9	-1.7
IMAR	Indian Mountai	43.68	32	P	P	01 23 08.3	+1.4
MK31	Makanchi Array	43.80	300	P	P	01 23 07.7	-0.6
MKAR	Makanchi Array	43.80	300	P	P	01 23 08.2	0.0
	comp=Z,4.3nm,0.9s,baz=83,slow=9.3,SNR=28						
MKAR	Makanchi Array	43.80	300	P	P	01 23 07.8	-0.4
MAKZ	Makanchi	44.01	300	P	P	01 23 09.0	-0.9
MAKZ				IAmb	IAmb	01 23 26.8	
	comp=Z,3.9nm,0.8s						
SEM	Semipalatinsk	44.34	306	*e*P	P	01 23 12.1	-0.7
	baz=306						
LUWI	Luwuk	44.63	210	P	P	01 23 14.0	-1.0
KTH	Kantishna Hill	44.80	36	P	P	01 23 16.7	+0.6
KURK	Kurchatov	45.30	306		P	01 23 19.5	-0.6
KURK				IAmb	IAmb	01 23 21.0	
	comp=Z,11nm,1.1s						
ILAR	Eielson Array	46.53	34	P	P	01 23 29.1	-0.6
	comp=Z,0.4nm,0.6s,baz=256,slow=6.2,SNR=4.2						
SCM	Sheep Creek Mo	46.54	38	P	P	01 23 30.1	+0.2
TAPN	Taplejung	47.05	272	*e*P	P	01 23 36.1	+1.6
KPKS	Kokpek	47.18	297	*e*P	P	01 23 35.0	-0.1
	baz=297						
RAMN	Ramite	48.11	273	*e*P	P	01 23 43.0	+0.3
	comp=Z,30nm,0.8s						
GUN	Gumba	48.18	274	*e*P	P	01 23 43.9	+0.5
	comp=Z,38nm,0.6s						
CHKK	Chushkaly	48.22	298	*e*P	P	01 23 42.9	-0.2
	baz=298						
KUU	Kurty	48.65	298	*e*P	P	01 23 45.5	-0.9
	comp=Z,4.9nm,0.8s,baz=298						
KKN	Kakani	48.70	274	*e*P	P	01 23 47.9	+0.7
	comp=Z,20nm,0.5s						
PKI	Pulchoki	48.71	274	*e*P	P	01 23 47.4	-0.1
PKIN	Phulchoki	48.72	274	*e*P	P	01 23 47.5	+0.1
DMN	Daman	48.93	274	*e*P	P	01 23 49.5	+0.5
DANN	Dangsing	49.59	276	*e*P	P	01 23 54.8	+0.6
	comp=Z,54nm,0.6s						
BRVK	Borovoye	49.77	311	P	P	01 23 54.3	-0.5
BRVK				IAmb	IAmb	01 24 06.8	
	comp=Z,4.1nm,0.9s						
BTLS	Baital	49.81	300	*e*P	P	01 23 54.7	-0.5
	baz=300						
AAK	Ala-Archa	50.35	297	P	P	01 23 58.9	-0.6
AAK				IAmb	IAmb	01 24 12.3	
	comp=Z,3.1nm,0.9s						
KSH	Kashi	50.49	293	P	P	01 24 03.1	+2.5
KSH				sP	sP	01 24 14.1	+10
KSH				PcP	PcP	01 25 18.6	-0.1
KSH				S	S	01 31 16.8	+2.1
KSH				ScS	ScS	01 33 49.6	-2.5
KSH				SS	SS	01 34 51.9	+3.6
KSH				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KSH				pmax	pmax		
	comp=Z,610nm,8.8s						
KSH				LR	LR		
	comp=Z,990nm,13.2s						
KSH				LR	LR		
	comp=Z,640nm,12.0s						
KSH				LR	LR		
	comp=Z,2μm,11.9s						
INK	Inuvik	51.40	28	P	P	01 24 07.4	+0.5
	comp=Z,0.4nm,0.4s,baz=231,slow=6.5,SNR=1.5						
KK31	Karatay Array	52.89	299	P	P	01 24 16.4	-2.0
KK31				IAmb	IAmb	01 24 29.5	
	comp=Z,3.4nm,0.7s						
KKAR	Karatay Array	52.89	299	P	P	01 24 18.0	-0.4
IUG	Iuzhnay	53.59	298	*e*P	P	01 24 23.3	-0.3
	baz=298						
NIL	Nilore	54.99	287	P	P	01 24 33.3	-0.6
ARU	Arti	55.19	318	P	P	01 24 34.5	-0.4
ARU				IAmb	IAmb	01 24 48.5	
	comp=Z,7.4nm,1.0s						
AB06	Akbulak array	57.16	309	P	P	01 24 48.7	-0.4
AB07	Akbulak array	57.17	309	P	P	01 24 48.7	-0.5
AB01	Akbulak array	57.18	309	P	P	01 24 48.8	-0.4
ABKAR	Akbulak array	57.18	309	P	P	01 24 49.1	-0.2
ABKAR				IAmb	IAmb	01 24 50.1	
	comp=Z,4.5nm,0.6s						
ABKAR	Akbulak array	57.18	309	P	P	01 24 49.0	-0.2
AB08	Akbulak array	57.19	309	P	P	01 24 48.8	-0.5
KBL	Kabul	57.65	290	P	P	01 24 51.5	-1.5
WB0	Warramunga Arr	59.75	189	P	P	01 25 07.0	-0.4
WB0				IAmb	IAmb	01 25 21.6	
	comp=Z,5.0nm,0.8s						
FITZ	Fitzroy Crossi	59.79	199	P	P	01 25 08.0	+0.3
FITZ				IAmb	IAmb	01 25 20.4	
	comp=Z,3.8nm,1.1s						
WB2	Warramunga Arr	59.93	189	P	P	01 25 08.8	+0.1
WB2				IAmb	IAmb	01 25 12.6	
	comp=Z,8.3nm,1.1s						
WRA	Warramunga Arr	59.93	189	P	P	01 25 07.7	-0.9
	comp=Z,0.9nm,0.5s,baz=7.1,slow=7.1,SNR=16						
WRA	Warramunga Arr	59.93	189	P	P	01 25 07.5	-1.1
WC3	Warramunga Arr	59.94	189	P	P	01 25 08.8	+0.1
WC3				IAmb	IAmb	01 25 25.2	
	comp=Z,2.9nm,0.8s						
YKA	Yellowknife Ar	60.83	31	P	P	01 25 14.3	-0.1
	comp=Z,0.2nm,0.7s,baz=300,slow=6.0,SNR=1.5						
GEYT	Alibeck	63.64	298	P	P	01 25 33.1	-0.6
	comp=Z,4.4nm,1.0s,baz=290,slow=4.3,SNR=4.4						
GEYT	Alibeck	63.64	298	P	P	01 25 33.5	-0.2
GEYT				IAmb	IAmb	01 25 34.4	
	comp=Z,1.7nm,0.8s						
ASAR	Alice Springs	63.66	189	P	P	01 25 33.9	+0.2
	comp=Z,0.7nm,0.8s,baz=5.9,slow=5.5,SNR=6.1						
ASAR	Alice Springs	63.66	189	P	P	01 25 34.5	+0.8
COR	Corvallis	65.78	51	P	P	01 25 48.3	+0.8
FINES	FINESS Array B	67.00	332	P	P	01 25 54.5	-0.4
	comp=Z,2.0nm,0.7s,baz=46,slow=11,SNR=7.8						
KIV	Kislovodsk	70.08	311	P	P	01 26 13.4	-1.3
KBZ	Khabaz	70.09	311	P	P	01 26 15.6	+1.0
	comp=Z,4.4nm,0.9s,baz=52,slow=3.6,SNR=7.3						
NOA	NORSAR Array B	72.17	338	P	P	01 26 26.9	0.0
	comp=Z,2.4nm,0.9s,baz=38,slow=6.0,SNR=4.5						
NVAR	Mina Array Bea	72.37	55	P	P	01 26 28.6	-0.2
	comp=Z,0.2nm,0.5s,baz=318,slow=1.2,SNR=1.3						
NVAR	Mina Array Bea	72.37	55	P	P	01 26 29.2	+0.5
AKASG	Malin Array Be	72.92	323	P	P	01 26 31.4	-0.1
	comp=Z,1.3nm,0.5s,baz=46,slow=5.7,SNR=5.2						
PDAR	Pinedale Array	74.88	47	P	P	01 26 43.8	+0.3
	comp=Z,0.3nm,0.8s,baz=67,slow=5.1,SNR=2.3						
BURAR	Bucovina Array	76.96	322	P	P	01 26 54.9	-0.2
BRTR	Keskin Array B	77.99	312	P	P	01 27 00.8	-0.3
	comp=Z,1.4nm,0.9s,baz=68,slow=12,SNR=4.0						
DPC	Dobruska-Polom	78.82	328	*e*P	P	01 27 12.4	+7.1
KHC	Kasperske Hory	80.88	329	*e*P	P	01 27 17.1	+0.6
GERES	GERESS Array B	81.06	329	P	P	01 27 17.1	-0.4
	comp=Z,0.3nm,0.5s,baz=36,slow=5.0,SNR=4.2						
DSB	Dublin	83.67	342	P	P	01 27 30.8	-0.2
DSB				IAmb	IAmb	01 27 49.1	
	comp=Z,4.4nm,0.7s						
SNAA	Sanae	143.71	197	PKPdf	PKPdf	01 34 36.6	+0.2
VNA2	Neumayer--Watz	145.27	197	PKPbc	PKPdf	01 34 39.8	+0.8
VNA3	Neumayer Olymp	145.51	195	PKPbc	PKPab	01 34 41.4	+1.5
VNA1	Neumayer--Stat	145.67	196	PKPbc	PKPab	01 34 41.1	+0.7

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*UCR **17** 01:22:37.6±1.1, 13°.34N×89°.72W, h44^{km}±8^{km}, ML3.6*
*SNET **17** 01:22:37.8±1.1, 13°.37N×89°.69W, h47^{km}±7^{km}, ML3.6*
*GCG **17** 01:22:38.8±0.8, 14°.26N×90°.25W, h169^{km}±10^{km}, MD3.7*
ISC 17 01:22:39.0±2.1**, 13°.35N**±0°.07×**89°.66W**±0°.04**, h39**^{km}±3^{km}**, n68, σ0^{s}.81**/94**, 8D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LALI	Alcalda de L	0.36	67	*e*P	Pn	01 22 47.5	-0.3
LALI				*e*S	Sn	01 22 54.2	0.0
LALI	Alcalda de L	0.36	67	*e*P	Pn	01 22 47.5	-0.3
LALI				*e*S	Sn	01 22 54.2	0.0
JAYA	Jayaque - finc	0.37	34	⇓*i*P	Pn	01 22 47.9	-0.3
JAYA				*e*S	Sn	01 22 55.1	+0.4
JAYA				IAML		01 22 59.0	
	comp=Z,7μm,0.2s						
JAYA	Jayaque - finc	0.37	34	⇓*i*P	Pn	01 22 47.9	-0.3
JAYA				*e*S	Sn	01 22 55.1	+0.4
JAYA				IAML		01 22 59.0	
	comp=Z,7μm,0.2s						
CEVE	Cerro Verde	0.48	4	*e*P	Pn	01 22 48.8	-0.9
CEVE				*e*S	Sn	01 22 57.6	+0.4
CEVE				IAML		01 23 00.4	
	comp=Z,7μm,0.2s						
CEVE	Cerro Verde	0.48	4	*e*P	Pn	01 22 48.8	-0.9
CEVE				*e*S	Sn	01 22 57.6	+0.4
CEVE				IAML		01 23 00.4	
	comp=Z,7μm,0.2s						
SBLS	San Blas	0.49	4	*e*P	Pn	01 22 49.2	-0.7
SBLS				*e*S	Sn	01 22 57.6	+0.2
SBLS	San Blas	0.49	4	*e*P	Pn	01 22 49.2	-0.7
SBLS				*e*S	Sn	01 22 57.6	+0.2
MAGS	Ministerio de	0.49	47	*e*P	Pn	01 22 50.0	+0.2
MAGS				*e*S	Sn	01 22 58.6	+1.3
PMON	Piamonte	0.50	43	*e*P	Pn	01 22 49.3	-0.4
PMON				*e*S	Sn	01 22 58.3	+1.0
PMON	Piamonte	0.50	43	*e*P	Pn	01 22 49.3	-0.4
PMON				*e*S	Sn	01 22 58.3	+1.0
CEDA	San Andres	0.52	29	*e*P	Pn	01 22 49.6	-0.5
CEDA				*e*S	Sn	01 22 58.2	+0.3
CEDA				IAML		01 23 04.1	
	comp=Z,4μm,0.3s						
CEDA	San Andres	0.52	29	*e*P	Pn	01 22 49.6	-0.5
CEDA				*e*S	Sn	01 22 58.2	+0.3
CEDA				IAML		01 23 04.1	
	comp=Z,4μm,0.3s						
SNJE	San Jose	0.52	6	*e*P	Pn	01 22 49.5	-0.7
SNJE				*e*S	Sn	01 22 58.6	+0.5
SNJE	San Jose	0.52	6	*e*P	Pn	01 22 49.5	-0.7
SNJE				*e*S	Sn	01 22 58.6	+0.5
BOQS	Boqueron	0.54	44	*e*P	Pn	01 22 49.9	-0.6
BOQS				*e*S	Sn	01 22 59.5	+1.1
BOQS	Boqueron	0.54	44	*e*P	Pn	01 22 49.9	-0.6
BOQS				*e*S	Sn	01 22 59.5	+1.1
SNET	Serv Nac Est T	0.54	51	*e*P	Pn	01 22 49.5	-0.9
SNET				IAML		01 23 02.0	
	comp=Z,2μm,0.2s						
SNET	Serv Nac Est T	0.54	51	*e*P	Pn	01 22 49.5	-0.9
SNET				IAML		01 23 02.0	
	comp=Z,2μm,0.2s						
RTR	El Retiro	0.55	1	*e*P	Pn	01 22 50.0	-0.7
RTR	El Retiro	0.55	1	*e*P	Pn	01 22 50.0	-0.7
UEES	Universidad Ev	0.55	48	*e*P	Pn	01 22 50.0	-0.6
UEES				IAML		01 23 04.2	
	comp=Z,2μm,0.2s						
UEES	Universidad Ev	0.55	48	*e*P	Pn	01 22 50.0	-0.6
UEES				IAML		01 23 04.2	
	comp=Z,2μm,0.2s						
OPAM	Oficina de Pla	0.58	51	*e*P	Pn	01 22 50.3	-0.6

OPAM				IAML		01 23 02.9	
	comp=Z,2µm,0.3s						
OPAM	Oficina de Pla	0.58	51	eP	Pn	01 22 50.3	-0.6
OPAM				IAML		01 23 02.9	
	comp=Z,2µm,0.3s						
UESS	Universidad de	0.58	50	eP	Pn	01 22 50.3	-0.7
UESS				IAML		01 23 04.5	
	comp=Z,2µm,0.2s						
UESS	Universidad de	0.58	50	eP	Pn	01 22 50.3	-0.7
UESS				IAML		01 23 04.5	
	comp=Z,2µm,0.2s						
IGN	Direccin Gen	0.60	52	eP	Pn	01 22 50.6	-0.6
IGN	Direccin Gen	0.60	52	eP	Pn	01 22 50.6	-0.6
UDBS	Universidad Do	0.61	53	eP	Pn	01 22 50.9	-0.5
UDBS				IAML		01 23 02.7	
	comp=Z,3µm,0.3s						
UDBS	Universidad Do	0.61	53	eP	Pn	01 22 50.9	-0.5
UDBS				IAML		01 23 02.7	
	comp=Z,3µm,0.3s						
AEIL	Aeropuerto Ilo	0.63	56	eP	Pn	01 22 51.4	-0.2
AEIL	Aeropuerto Ilo	0.63	56	eP	Pn	01 22 51.4	-0.2
UNIC	Universidad Ca	0.64	10	eP	Pn	01 22 51.1	-0.7
UNIC	Universidad Ca	0.64	10	eP	Pn	01 22 51.1	-0.7
LFRS	El Faro	0.64	65⇓	eP	Pn	01 22 51.2	-0.6
LFRS				eS	Sn	01 23 01.6	+0.7
LFRS	El Faro	0.64	65⇓	eP	Pn	01 22 51.2	-0.6
LFRS				eS	Sn	01 23 01.6	+0.7
LFU	La Fuente	0.67	53	eP	Pn	01 22 51.7	-0.4
LFU				eS	Sn	01 23 02.5	+1.1
LFU	La Fuente	0.67	53	eP	Pn	01 22 51.7	-0.4
LFU				eS	Sn	01 23 02.5	+1.1
TACO	Tacachico	0.69	26	eP	Pn	01 22 51.4	-1.0
TACO	Tacachico	0.69	26	eP	Pn	01 22 51.4	-1.0
LBRS	Las Brisas	0.71	57	eP	Pn	01 22 52.4	-0.3
LBRS	Las Brisas	0.71	57	eP	Pn	01 22 52.4	-0.3
COEG	Centro de Oper	0.81	70	eP	Pn	01 22 53.4	-0.6
COEG				IAML		01 23 10.2	
	comp=Z,1µm,0.3s						
COEG	Centro de Oper	0.81	70	eP	Pn	01 22 53.4	-0.6
COEG				IAML		01 23 10.2	
	comp=Z,1µm,0.3s						
UESV	Universidad de	0.90	71	eP	Pn	01 22 54.7	-0.4
UESV	Universidad de	0.90	71	eP	Pn	01 22 54.7	-0.4
MTO3	Montecristo	1.09	15⇓	eP	Pn	01 22 56.9	-1.1
MTO3	Montecristo	1.09	15⇓	eP	Pn	01 22 56.9	-1.1
TECA	Tecapa	1.14	82	eP	Pn	01 22 57.6	-1.0
TECA				eS	Sn	01 23 14.4	+1.3
TECA	Tecapa	1.14	82	eP	Pn	01 22 57.6	-1.0
TECA				eS	Sn	01 23 14.4	+1.3
ESQI	Esquipulas	1.25	14	eP	Pn	01 22 58.6	-1.4
PACA	Pacayal	1.31	84	eP	Pn	01 23 00.5	-0.3
PACA	Pacayal	1.31	84	eP	Pn	01 23 00.5	-0.3
LCY	Lacayo	1.33	87	eP	Pn	01 23 00.8	-0.4
LCY	Lacayo	1.33	87	eP	Pn	01 23 00.8	-0.4
RANC	El Ranchito	1.34	86	eP	Pn	01 23 00.8	-0.5
RANC	El Ranchito	1.34	86	eP	Pn	01 23 00.8	-0.5
JUCU	Jucuar¡n	1.38	94	eP	Pn	01 23 00.5	-1.3
JUCU				IAML		01 23 23.6	
	comp=Z,483nm,0.4s						
JUCU	Jucuar¡n	1.38	94	eP	Pn	01 23 00.5	-1.3
JUCU				IAML		01 23 23.6	
	comp=Z,483nm,0.4s						
PCG	Pacaya	1.39	319	eP	Pn	01 23 03.0	+0.9
PCG				eS	Sn	01 23 21.5	+2.1
NBG	Las Nubes	1.40	332	eP	Pn	01 23 02.3	-0.1
NBG				eS	Sn	01 23 22.1	+2.3
FUG	Fuego 3	1.59	314	eP	Pn	01 23 04.0	-0.8
FUG				eS	Sn	01 23 22.8	-1.4
LCND	La Caada	1.72	91⇓	eP	Pn	01 23 05.7	-0.8
LCND				IAML		01 23 31.8	
	comp=Z,322nm,0.3s						
LCND	La Caada	1.72	91⇓	eP	Pn	01 23 05.7	-0.8
LCND				IAML		01 23 31.8	
	comp=Z,322nm,0.3s						
MRL	Marmol	1.73	359	eP	Pn	01 23 05.8	-1.0
MRL	Marmol	1.73	359	eP	Pn	01 23 05.8	-1.0
MRL	Marmol	1.73	359	eP	Pn	01 23 06.3	-0.5

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*TAP **17** 01:22:49.6, 24°.96N × 122°.87E, h143^{km}, ML3.7, D*
*JMA **17** 01:22:49.5±0.3, 24°.89N × 122°.85E, h147^{km}±3^{km}, M3.2*
ISC 17 01:22:49.1±1.4**, 24°.89N**±0°.04×**122°.85E**±0°.03**, h148**^{km}±7^{km}**,**
n118, **σ1^{s}.03**/216**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.44	169	P	Pn	01 23 10.6	+0.6
JYNG				S	Sn	01 23 26.1	+0.3
YOJ	Yonaguni jima	0.45	161	P	Pn	01 23 10.4	+0.4
	baz=163						
YOJ				S	Sn	01 23 25.7	-0.1
	baz=163						
YOJ	Yonaguni jima	0.45	161	P	Pn	01 23 10.6	+0.6
YOJ				eS	Sn	01 23 26.3	+0.4
TWB1	Santiao Chiao	0.79	279	eP	Pn	01 23 12.3	+0.3
	baz=273						
TWB1				eS	Sn	01 23 28.7	-0.8
	baz=273						
NTC	Toucheng	0.93	268	eP	Pn	01 23 13.0	-0.1
	baz=259						
NTC				eS	Sn	01 23 30.0	-1.3
	baz=259						
TIPB	Shuangxi	0.94	275	P	Pn	01 23 13.8	+0.6
	baz=266						
TIPB				eS	Sn	01 23 30.8	-0.7
	baz=266						
TWC	Suao	0.95	253	P	Pn	01 23 13.5	+0.3
	baz=242						
TWC				S	Sn	01 23 30.8	-0.9
	baz=242						
IRIF	Iriomote-Funau	0.97	124	P	Pn	01 23 13.8	+0.4
NWF	Wu-fen Shan	0.99	281	eP	Pn	01 23 14.3	+0.6
	baz=276						
NWF				eS	Sn	01 23 30.3	-2.1
	baz=276						
WFSB	Wu-fen Shan	0.99	281	eP	Pn	01 23 14.3	+0.7
	baz=276						
WFSB				eS	Sn	01 23 30.0	-2.2
	baz=276						
ILA	Ilan	1.01	263	eP	Pn	01 23 13.6	-0.2
	baz=258						
ILA				eS	Sn	01 23 32.1	-0.4
	baz=258						
PCYT	Pengchaiyu	1.02	316	P	Pn	01 23 14.0	+0.2
	baz=312						
PCYT				eS	Sn	01 23 32.6	-0.2
	baz=312						
NDS	Dongshan	1.06	256	eP	Pn	01 23 14.7	+0.5
	baz=247						
NDS				eS	Sn	01 23 32.8	-0.6
	baz=247						
EWUT	Wuta	1.07	246	P	Pn	01 23 14.6	+0.3
	baz=238						
EWUT				eS	Sn	01 23 32.6	-0.9
	baz=238						
TWE	Neicheng	1.09	261	P	Pn	01 23 15.2	+0.7
	baz=252						
TWE				eS	Sn	01 23 33.2	-0.6
	baz=252						
ENA	Nanau	1.11	246	eP	Pn	01 23 15.4	+0.7
	baz=238						
ENA				eS	Sn	01 23 33.8	-0.3
	baz=238						
TWA	Mucha	1.16	275	eS	Sn	01 23 34.5	-0.3
	baz=261						
YM08	YM08	1.18	285	eS	Sn	01 23 35.5	+0.2
	baz=286						
YM01	YM01	1.19	283	eP	Pn	01 23 15.2	-0.3
	baz=279						
YM01				eS	Sn	01 23 34.9	-0.6
	baz=279						
YM11	YM11	1.19	284	eP	Pn	01 23 16.6	+1.1
	baz=280						
YM11				eS	Sn	01 23 34.8	-0.9
	baz=280						
ENTT	Nioudou	1.20	258	P	Pn	01 23 16.1	+0.7
	baz=250						
ENTT				eS	Sn	01 23 34.7	-0.9
	baz=250						
YM05	YM05	1.20	283	eP	Pn	01 23 15.8	+0.3
	baz=279						
YM05				eS	Sn	01 23 35.8	+0.1
	baz=279						
HATJ	Hateruma jima	1.20	133	P	Pn	01 23 16.6	+1.1
HATJ				S	Sn	01 23 36.3	+0.7
TWY	Chenhua	1.20	289	eP	Pn	01 23 16.4	+1.0
	baz=290						
TWY				eS	Sn	01 23 35.9	+0.3
	baz=290						
YM10	YM10	1.20	283	eP	Pn	01 23 16.1	+0.6
	baz=279						
YM10				eS	Sn	01 23 35.8	0.0
	baz=279						
NHDH	Xindian Distri	1.21	274	eP	Pn	01 23 15.2	-0.4
	baz=262						
NHDH				eS	Sn	01 23 34.1	-1.6
	baz=262						
YM04	YM04	1.22	283	eP	Pn	01 23 16.6	+0.9
	baz=273						
YM04				eS	Sn	01 23 35.9	-0.2
	baz=273						
YM03	YM03	1.23	284	eP	Pn	01 23 15.9	+0.1
	baz=275						
YM03				eS	Sn	01 23 35.5	-0.7
	baz=275						
NWLT	Wulai	1.23	265	eP	Pn	01 23 16.3	+0.5
	baz=269						
NWLT				eS	Sn	01 23 35.3	-0.9
	baz=269						
JKRS	Kuro-shima	1.24	121	P	Pn	01 23 16.9	+1.1
JKRS				S	Sn	01 23 36.1	-0.1
TATO	Taipei	1.24	274	eP	Pn	01 23 16.0	+0.1
	baz=263						
TATO				eS	Sn	01 23 35.7	-0.6
	baz=263						
ANP	Anpu	1.25	284	eP	Pn	01 23 16.5	+0.5
	baz=275						
ANP				eS	Sn	01 23 37.0	+0.5
	baz=275						
NDT	Datong Townshi	1.25	257	P	Pn	01 23 17.2	+1.2
	baz=250						
NDT				eS	Sn	01 23 34.9	-1.6
	baz=250						
JIJ	Ishigaki jima	1.28	114	P	Pn	01 23 16.7	+0.4
JIJ				S	Sn	01 23 35.9	-1.2
NTST	Danshui	1.30	282	eP	Pn	01 23 17.0	+0.6
	baz=274						
NTST				eS	Sn	01 23 37.6	+0.3
	baz=274						
TWS1	Kuangyinshan	1.32	279	eS	Sn	01 23 37.9	+0.2
	baz=269						
NACB	Ninganchiao	1.35	238	eP	Pn	01 23 16.7	-0.2
	baz=232						
NACB				eS	Sn	01 23 36.7	-1.5
	baz=232						
JISG	Ishigakijimahi	1.36	102	P	Pn	01 23 17.3	+0.3
JISG				S	Sn	01 23 37.5	-0.9
YHNB	Yeheng	1.36	261	eP	Pn	01 23 18.0	+0.8
	baz=258						
YHNB				eS	Sn	01 23 38.4	-0.1
	baz=258						
NSK	Sanguang	1.38	261	eP	Pn	01 23 17.9	+0.6
	baz=258						
NSK				eS	Sn	01 23 38.5	-0.3
	baz=258						
TWD	Chiawan	1.40	235	eP	Pn	01 23 17.6	+0.2
	baz=229						
TWD				eS	Sn	01 23 38.0	-1.1
	baz=229						
NNSB	Datong	1.41	251	eP	Pn	01 23 18.5	+0.8
	baz=244						
NNSB				eS	Sn	01 23 38.8	-0.8
	baz=244						
NNSH	Datong	1.41	251	eP	Pn	01 23 18.1	+0.4
	baz=244						
NNSH				eS	Sn	01 23 39.2	-0.4
	baz=244						
NTY	Taoyuan	1.42	275	eS	Sn	01 23 40.0	+0.6
	baz=267						
NNS	Nan Shan	1.42	252	P	Pn	01 23 18.7	+0.9
	baz=244						
NNS				eS	Sn	01 23 38.7	-1.0
	baz=244						
ETLH	Xiulin Townshi	1.42	242	eP	Pn	01 23 18.1	+0.3
	baz=235						
ETLH				eS	Sn	01 23 38.7	-1.0
	baz=235						
HWA	Hwalien	1.46	232	eP	Pn	01 23 18.4	+0.3
	baz=225						
HWA				eS	Sn	01 23 40.8	+0.6
	baz=225						
NCU	National Centr	1.51	273	eS	Sn	01 23 41.0	-0.3
	baz=264						
NCUH	Zhongli	1.52	273	eP	Pn	01 23 19.0	+0.3
	baz=264						
NCUH				eS	Sn	01 23 41.3	0.0
	baz=264						
FUSS	Fushou	1.60	247	eP	Pn	01 23 20.9	+1.1
	baz=240						
FUSS				eS	Sn	01 23 42.6	-0.7
	baz=240						
NJD	Zhudong	1.61	265	eS	Sn	01 23 43.2	+0.1
	baz=254						
WHF	Hehuan Shan	1.62	243	P	Pn	01 23 21.0	+0.7
	baz=241						
WHF				eS	Sn	01 23 43.5	-0.6
	baz=241						
TWT	Tachien	1.65	248	eP	Pn	01 23 21.4	+1.1
	baz=240						
TWT				S	Sn	01 23 44.7	+0.5
	baz=240						
TDCB	Techi	1.67	248	P	Pn	01 23 21.7	+1.2
	baz=240						
TDCB				eS	Sn	01 23 44.0	-0.5
	baz=240						
HSN1	Hsinchu	1.67	267	eS	Sn	01 23 45.0	+0.8
	baz=256						
ESL	Shilin	1.68	231	eP	Pn	01 23 20.3	-0.2
	baz=225						
ESL				eS	Sn	01 23 42.7	-1.8
	baz=225						
LIOB	Emei	1.69	262	P	Pn	01 23 21.0	+0.5
	baz=260						
LIOB				eS	Sn	01 23 44.7	+0.1
	baz=260						
JTJ	Tarama	1.70	98	P	Pn	01 23 21.2	+0.6
JTJ				S	Sn	01 23 44.3	-0.5
NSTT	Nanjuang	1.70	262	eP	Pn	01 23 21.6	+0.9
	baz=259						
NSTT				eS	Sn	01 23 44.9	-0.1
	baz=259						
CHGB	Renai	1.74	242	P	Pn	01 23 22.2	+0.9
	baz=236						
CHGB				eS	Sn	01 23 45.6	-0.4
	baz=236						
WHP	Taichung City	1.84	251	P	Pn	01 23 23.8	+1.4
	baz=256						
WHP				eS	Sn	01 23 48.1	+0.3
	baz=256						
HGSD	Ruisui	1.91	223	eP	Pn	01 23 23.3	+0.2
	baz=223						
HGSD				eS	Sn	01 23 48.6	-0.5
	baz=223						
NMLH	Miaoli	1.91	260	eS	Sn	01 23 48.6	-0.5
	baz=258						
VWDT	VWDT	1.93	234	eP	Pn	01 23 24.0	+0.8
	baz=230						
VWDT				eS	Sn	01 23 48.4	-1.0
	baz=230						
WPL	Puli Township	1.94	244	eP	Pn	01 23 24.5	+1.1
	baz=239						
WPL				eS	Sn	01 23 50.2	+0.6
	baz=239						
DPDB	Guoxing	1.95	245	eP	Pn	01 23 25.5	+1.9
	baz=239						
DPDB				eS	Sn	01 23 50.4	+0.3
	baz=239						
WCS	Beigang Elemen	1.95	245	eP	Pn	01 23 25.0	+1.5
	baz=240						
WCS				eS	Sn	01 23 51.6	+1.6
	baz=240						
NSY	Sanyi	1.96	257	eP	Pn	01 23 24.8	+1.1
	baz=254						
NSY				eS	Sn	01 23 51.0	+0.9
	baz=254						
EHY	Hungye	1.96	226	eP	Pn	01 23 23.4	-0.3
	baz=225						
EHY				eS	Sn	01 23 48.0	-2.2
	baz=225						
TWQ1	Liyutan	1.97	255	eP	Pn	01 23 24.4	+0.7
	baz=253						
TWQ1				eS	Sn	01 23 51.0	+0.7
	baz=253						
SMLT	Sun Moon Lake	2.04	241	eP	Pn	01 23 26.4	+1.6
	baz=237						
SMLT				eS	Sn	01 23 54.1	+2.1
	baz=237						
SSLB	Suanglung	2.05	238	eP	Pn	01 23 25.6	+0.8
	baz=234						
SSLB				eS	Sn	01 23 51.8	-0.3
	baz=234						
YULB	Yu-li	2.06	224	P	Pn	01 23 24.7	-0.1
	baz=231						
YULB				eS	Sn	01 23 50.4	-1.9
	baz=231						
TYC	Yuchr	2.07	242	eP	Pn	01 23 26.6	+1.7
	baz=241						
TYC				eS	Sn	01 23 53.8	+1.5
	baz=241						
EYUL	Yuli	2.08	223	eP	Pn	01 23 25.5	+0.5
	baz=231						
EYUL				eS	Sn	01 23 51.1	-1.6
	baz=231						
WDJ	Dajia District	2.08	255	eP	Pn	01 23 26.1	+1.0
	baz=254						
WDJ				eS	Sn	01 23 52.5	-0.2
	baz=254						
TWF1	Yuli	2.09	223	P	Pn	01 23 25.5	+0.3
	baz=231						
TWF1				eS	Sn	01 23 51.7	-1.2
	baz=231						
JIRB	Irabujima	2.11	91	P	Pn	01 23 25.9	+0.5
TCU	Taichung	2.12	250	eS	Sn	01 23 53.7	+0.3
	baz=248						
WWF	Wufeng	2.14	247	eP	Pn	01 23 26.6	+0.9
	baz=253						
WWF				eS	Sn	01 23 53.9	0.0
	baz=253						
JIKM	Ikemajima	2.17	89	S	Sn	01 23 54.1	-0.5
WHYT	Xinyi Township	2.18	237	P	Pn	01 23 27.9	+1.6
	baz=232						
WHYT				eS	Sn	01 23 57.3	+2.5
	baz=232						
FULB	Fuli	2.21	221	eP	Pn	01 23 27.1	+0.5
	baz=216						
FULB				eS	Sn	01 23 55.6	+0.2
	baz=216						
WJS	Zhushan	2.21	242	eP	Pn	01 23 27.8	+1.2
	baz=240						
WJS				eS	Sn	01 23 56.8	+1.3
	baz=240						
JMJ	Miyako jima 2	2.22	91	eP	Pn	01 23 28.1	+1.4
	baz=95						
JMJ				eS	Sn	01 23 53.8	-1.8
	baz=95						
WNT	Mingjian	2.22	243	eP	Pn	01 23 27.7	+1.0
	baz=242						
WNT				eS	Sn	01 23 56.8	+1.2
	baz=242						
CHKT	Chengkung	2.24	218	eP	Pn	01 23 27.0	0.0
	baz=212						
CHKT				eS	Sn	01 23 55.1	-1.0
	baz=212						
JMJ2	Miyako jima3	2.25	93	P	Pn	01 23 28.3	+1.2
JMJ2				eS	Sn	01 23 55.7	-0.6
ALS	Alishan	2.32	234	P	Pn	01 23 29.6	+1.4
	baz=228						
ALS				eS	Sn	01 24 00.0	+1.7
	baz=228						
CHN5	Tsauling	2.37	238	eP	Pn	01 23 30.1	+1.6
	baz=245						
CHN5				eS	Sn	01 23 59.4	+0.5
	baz=245						
EDH	Donghe	2.38	217	P	Pn	01 23 28.9	+0.3
	baz=211						
EDH				S	Sn	01 23 58.1	-0.9
	baz=211						
ELDTW	Lidau	2.38	225	P	Pn	01 23 29.2	+0.4
	baz=224						
ELDTW				eS	Sn	01 23 58.6	-0.8
	baz=224						
LONT	Longtian	2.53	219	eP	Pn	01 23 30.2	-0.3
	baz=225						
LONT				eS	Sn	01 24 00.8	-1.5
	baz=225						
LDUT	Ludao	2.54	210	eP	Pn	01 23 30.6	-0.1
	baz=214						
LDUT				eS	Sn	01 24 02.1	-0.6
	baz=214						
WTK	Tuku	2.55	242	eP	Pn	01 23 30.4	-0.3
	baz=241						
WTK				eS	Sn	01 24 02.5	-0.2
	baz=241						
STYH	Taoyuan	2.56	228	eP	Pn	01 23 32.4	+1.6
	baz=228						
STYH				eS	Sn	01 24 00.7	-2.2
	baz=228						
CHN4	Tsaushan	2.57	234	P	Pn	01 23 32.4	+1.4
	baz=233						
CHN4				eS	Sn	01 24 05.1	+1.8
	baz=233						
STYT	Tauyuan	2.57	229	eP	Pn	01 23 33.0	+1.8
	baz=228						
STYT				eS	Sn	01 24 04.0	+0.6
	baz=228						
TPUB	Ta-pu	2.58	233	eP	Pn	01 23 32.4	+1.3
	baz=232						
TPUB				eS	Sn	01 24 03.6	+0.2
	baz=232						
WTP	Ta-pu	2.62	232	eP	Pn	01 23 32.7	+1.1
	baz=231						
WTP				eS	Sn	01 24 04.5	0.0
	baz=231						
TWG	Pinlang	2.63	219	eP	Pn	01 23 31.9	+0.2
	baz=222						
TWK	Hsinying	2.70	234	eP	Pn	01 23 33.7	+1.1
	baz=233						
TWK				eS	Sn	01 24 07.7	+1.5
	baz=233						
CHN1	Nanshi	2.72	232	eP	Pn	01 23 34.0	+1.1
	baz=231						
CHN1				eS	Sn	01 24 09.0	+2.3
	baz=231						
SLGT	Liugui	2.76	227	eP	Pn	01 23 34.9	+1.5
	baz=227						
SLGT				eS	Sn	01 24 11.6	+4.0
	baz=227						
ECL	Taimali	2.87	218	eP	Pn	01 23 34.1	-0.7
	baz=217						
TSMG	Majia	2.97	223	eP	Pn	01 23 36.5	+0.5
	baz=223						
TSMG				eS	Sn	01 24 11.6	-0.6
	baz=223						
MASBT	Mashibuluo	3.05	222	eP	Pn	01 23 38.1	+1.1
	baz=222						
LAY	Lan-yu	3.08	203	eP	Pn	01 23 37.5	0.0
	baz=204						
LAY				eS	Sn	01 24 12.5	-2.3
	baz=204						
VWUC	VWUC	3.09	273	eP	Pn	01 23 37.0	-0.6
	baz=271						
VWUC				eS	Sn	01 24 12.2	-2.8
	baz=271						
EAST	Anshuo	3.10	217	eP	Pn	01 23 37.7	0.0
	baz=214						
SCZT	Fangliau	3.24	220	eP	Pn	01 23 39.9	+0.5
	baz=228						
LYJJ	Jianjiangzhen	3.24	301	eP	Pn	01 23 39.7	+0.3
	baz=299						
SLIU	Shizi	3.26	216	eP	Pn	01 23 40.7	+0.9
	baz=215						
PNG	Penghu	3.29	247	eP	Pn	01 23 39.8	-0.2
	baz=246						
PNG				eS	Sn	01 24 17.2	-2.2
	baz=246						
PHUB	P'eng-hu	3.29	246	eP	Pn	01 23 39.1	-1.1
	baz=245						
PHUB				eS	Sn	01 24 16.6	-3.1
	baz=245						
WDGT	Dungji	3.34	242	eP	Pn	01 23 41.1	+0.4
	baz=234						
WDGT				eS	Sn	01 24 18.9	-1.8
	baz=234						
PTMZ	Houxiangcun	3.39	273	eP	Pn	01 23 41.5	+0.2
	baz=272						
PTMZ				eS	Sn	01 24 22.2	+0.4
	baz=272						
VCHM	Qimei	3.55	243	eS	Sn	01 24 24.1	-1.4
	baz=236						

IDC **17** *01:27:38.7±0.8, 39.°71N×143.°42E, h0km, mb3.9/19, mb1 4.0/22, mb1mx3.9/52, mbtmp3.9/22, ML3.5/3, Error ellipse: s-maj=20.1km s-min=17.0km az=121.0*
JMA **17** *01:27:41.8±0.2, 39.°93N×143.°31E, h18km±3km, M4.3*
MOS **17** *01:27:41.2±0.9, 39.°81N×143.°39E, h27km, mb4.4/16, Error ellipse: s-maj=9.8km s-min=6.0km az=114.0*
NEIC **17** *01:27:44.4±1.3, 39.°75N±0.°06×143.°5E±0.°1, h42km±7km, mb4.4/21, Error ellipse: s-maj=14.6km s-min=7.3km az=109.0*

ISC 17 01:27:40.1±0.5, **39.°84N**±0.°04×**143.°37E**±0.°04, **h6km, n133,** σ**1^{s}31**/147, **mb4.2**/45, **1C, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	1.17	275	P	Pg	01 28 02.1	-0.3
JTH				*e*S	Sg	01 28 16.6	-0.9
MIYJ	Miyakonagasawa	1.23	258	P	Pg	01 28 03.7	+0.1
MIYJ				*e*S	Sg	01 28 19.1	-0.4
JKEN	Kujiedanarisaw	1.33	286	P	Pn	01 28 04.3	-0.8
JKEN				*e*S	Sb	01 28 20.9	-1.7
JANG	Nango	1.52	291	P	Pn	01 28 07.3	-0.5
JOM	Ohasama	1.65	258	P	Pb	01 28 10.5	-0.3
JOM				*e*S	Sn	01 28 31.0	0.0
JMK	Ichinoseki	1.89	243	P	Pn	01 28 13.6	+0.8
JMK				*e*S	Sn	01 28 36.8	-0.2
JTM	Tenmabayashi	2.00	299	P	Pn	01 28 14.8	+0.4
JTM				*e*S	Sn	01 28 38.7	-1.0
JIO	Ouri	2.10	229	P	Pn	01 28 16.0	+0.3
JIO				*e*S	Sn	01 28 40.9	-1.2
JAH	Hinai	2.13	280	P	Pn	01 28 17.3	+1.1
JAH				*e*S	Sn	01 28 42.9	0.0
ERM	Erimo	2.18	356	*i* P	Pn	01 28 18.4	+1.6
ERM	Erimo	2.18	356	Pn	Pn	01 28 18.2	+1.4
ERM				Sn	Sb	01 28 46.8	-0.2
JOT	Ohata	2.35	312	P	Pn	01 28 19.6	+0.5
JNBK	Urakawa-nobuka	2.48	349	P	Pn	01 28 22.2	+1.2
JKB	Kayabe	2.71	320	P	Pn	01 28 25.2	+1.1
JKB				*e*S	Sn	01 28 58.2	+1.1
JCH	Churui	2.77	360	P	Pn	01 28 25.4	+0.4
JCH				*e*S	Sn	01 28 57.1	-1.6
JMM	Marumori	2.82	226		Pn	01 28 26.1	+0.5
JMM				Sn	Sn	01 28 58.0	-1.9
JEW	Eniwo	3.33	335	Pn	Pb	01 28 36.7	-2.8
JEW				Sn	Sn	01 29 15.9	+3.5
JKA	Kamikawa-asahi	4.31	353	Pn	Pn	01 28 47.9	+1.8
JKA				Sn	Sn	01 29 38.7	+2.0
ASAJ	Asahikawa	4.31	353	Pn	Pn	01 28 47.5	+1.3
	3.4nm,0.3s,baz=161,slow=11,SNR=10						
ASAJ				Sn	Sb	01 29 45.0	-3.5
	4.2nm,0.3s,baz=147,slow=15,SNR=4.7						
ASAJ	Asahikawa	4.31	353	P	Pn	01 28 47.9	+1.8
ASAJ						01 29 38.7	
JSD	Sado	4.38	247	Pn	Pn	01 28 48.6	+1.6
JYT	Yasato	4.39	216	Pn	Pn	01 28 48.1	+0.8
JYT				Sn	Sn	01 29 37.2	-1.6
MJAR	Matsushiro Arr	5.23	233	Pn	Pn	01 29 00.8	+1.9
	0.5nm,0.3s,baz=37,slow=12,SNR=22						
MJAR	Matsushiro Arr	5.23	233	P	Pn	01 29 01.0	+2.1
MJAR	Matsushiro Arr	5.23	233	Pn	Pn	01 29 01.0	+2.1
MJB9	Matsu-Tunnel	5.23	233		Pn	01 29 01.4	+2.5
MAJO	Matsushiro	5.24	233	P	Pn	01 29 01.2	+2.3
MAJO	Matsushiro	5.24	233	Pn	Pn	01 29 01.2	+2.3
MAT	Matsushiro	5.24	233	P	Pn	01 29 01.1	+2.2
MAT				*e*S	Sn	01 29 59.4	-0.1
JGF	Kuroka	6.38	230	Pn	Pn	01 29 16.9	+2.3
YSS	Yuzh-Sakhalins	7.12	357	*e*P	Pn	01 29 25.2	+0.5
YSS				*e*		01 30 42.7	
JWT	Wachi	7.79	237	Pn	Pn	01 29 37.3	+3.3
JHS	Saijyo	9.48	243	Pn	Pn	01 29 59.5	+2.4
USA0B	Ussuriysk Arra	9.52	301	*i* P	Pn	01 30 00.9	+3.2
USRK	Ussuriysk Ar.	9.52	301	Pn	Pn	01 30 02.9	+5.2
	baz=92,slow=14,SNR=9.6						
USRK	Ussuriysk Ar.	9.52	301	P	Pn	01 30 01.5	+3.8
USRK	Ussuriysk Ar.	9.52	301	Pn	Pn	01 30 01.5	+3.8
KSRS	Korea Array	12.31	264	Pn	Pn	01 30 36.7	+0.8
	0.3nm,0.3s,baz=73,slow=14,SNR=1.6						
KLR	Kul'dur	12.51	322	Pn	Pn	01 30 41.4	+2.9
	0.1nm,0.3s,baz=150,slow=13,SNR=3.9						
HIA	Hailar	19.23	307	*i* P	P	01 32 04.1	-0.7
HIA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MA2	Magadan	20.30	11	P	P	01 32 17.3	+0.9
	comp=Z,6.5nm,0.5s,baz=177,slow=8.2,SNR=7.0						
MA2	Magadan	20.30	11	P	P	01 32 17.3	+0.9
YAK	Yakutsk	23.73	344	*i* P	P	01 32 52.2	-0.4
YAK				pmax	pmax		
	comp=Z,16nm,0.3s						
SEY	Seymchan	23.75	10	P	P	01 32 53.2	+0.4
	comp=Z,4.6nm,0.8s,baz=192,slow=8.1,SNR=7.3						
BOD	Bodaibo	26.09	323	*e*P	P	01 33 14.2	0.0
BOD				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ULN	Ulaanbaatar	27.19	299	*i* P	P	01 33 24.8	+0.3
ULN				pmax	pmax		
	comp=Z,1.0nm,0.2s						
SONM	Songino Array	27.63	299	P	P	01 33 28.9	+0.5
	comp=Z,2.9nm,0.9s,baz=95,slow=8.7,SNR=17						
SONM	Songino Array	27.63	299	P	P	01 33 28.3	-0.1
H11N2	WAKE ISLAND Hy	28.46	128	T	T	02 03 45.4	
	baz=318,SNR=106						
H11N1	WAKE ISLAND Hy	28.47	128	T	T	02 04 40.4	
	baz=318,slow=74,SNR=65						
H11N3	WAKE ISLAND Hy	28.48	128	T	T	02 04 39.5	
	baz=318,slow=74,SNR=54						
H11S1	WAKE ISLAND Hy	29.28	130	T	T	02 04 36.6	
	baz=322,slow=76,SNR=14						
H11S3	WAKE ISLAND Hy	29.28	130	T	T	02 04 36.7	
	baz=322,slow=76,SNR=11						
H11S2	WAKE ISLAND Hy	29.30	130	T	T	02 04 37.5	
	baz=322,slow=76,SNR=14						
ATKA	Atka Island	31.49	53	P	P	01 34 02.1	-0.2
DGZ	Jazzator, Alta	40.07	303	*i* P	P	01 35 16.5	+0.3
DGZ				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ZAA0	Zalesovo Array	41.23	310	P	P	01 35 25.8	+0.4
ZAA0				IAmb	IAmb	01 35 26.3	
	comp=Z,4.7nm,0.5s						
ZALV	Zalesovo Beam	41.23	310	P	P	01 35 25.9	+0.4
	comp=Z,4.6nm,0.4s,baz=94,slow=8.3,SNR=30						
ZALV				PcP	PcP	01 37 24.8	+0.5
	comp=Z,0.7nm,0.5s,baz=64,slow=3.4,SNR=3.2						
ZALV	Zalesovo Beam	41.23	310	P	P	01 35 25.8	+0.4
ZALV						01 37 23.8	
ZALV	Zalesovo Beam	41.23	310	P	P	01 35 25.8	+0.4
ZALV					PcP	01 37 23.8	-0.5
NRIK	Noril'sk	41.40	334	*i* P	P	01 35 27.2	+0.5
ZSN	Zaisan	42.13	300	*e*P	P	01 35 32.9	-0.2
	baz=300						
ZSN	Zaisan	42.13	300	*e*P	P	01 35 32.8	-0.2
MK31	Makanchi Array	43.99	300	P	P	01 35 48.2	+0.1
MK31				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MK31	Makanchi Array	43.99	300	P	P	01 35 48.2	+0.1
MKAR	Makanchi Array	43.99	300	P	P	01 35 48.2	+0.1
	comp=Z,2.6nm,0.8s,baz=84,slow=9.9,SNR=24						
MAKZ	Makanchi	44.20	300	P	P	01 35 49.8	+0.1
MAKZ				pmax	pmax		
	comp=Z,3.0nm,1.1s						
MAKZ	Makanchi	44.20	300	P	P	01 35 49.8	+0.1
KURK	Kurchatov	45.47	306	P	P	01 35 59.8	+0.1
KURK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KURK	Kurchatov	45.47	306	P	P	01 35 59.8	+0.1
KURK				IAmb	IAmb	01 36 05.3	
	comp=Z,5.4nm,0.7s						
RND	Reindeer	45.50	36	P	P	01 35 59.5	-0.4
RND				pmax	pmax		
	comp=Z,8.0nm,0.7s						
RND	Reindeer	45.50	36	P	P	01 35 59.5	-0.4
ILAR	Eielson Array	46.31	34	P	P	01 36 07.2	+1.0
	comp=Z,0.4nm,0.6s,baz=270,slow=7.8,SNR=4.2						
SHLS	Shalkode	46.95	296	*e*P	P	01 36 08.7	-3.0
	baz=296						
SHLS	Shalkode	46.95	296	*e*P	P	01 36 08.6	-3.0
KPKS	Kokpek	47.38	297	*e*P	P	01 36 13.8	-1.2
	comp=Z,2.4nm,1.1s,baz=296						
KPKS	Kokpek	47.38	297	*e*P	P	01 36 13.8	-1.2
KPKS				pmax	pmax		
	comp=Z,2.0nm,1.1s						
ODAN	Odare	47.81	272	*e*P	P	01 36 19.5	+0.8
	comp=Z,8.7nm,0.6s						
RAMN	Ramite	48.38	273	*e*P	P	01 36 23.3	+0.2
	comp=Z,13nm,0.7s						
CHKK	Chushkaly	48.42	298	*e*P	P	01 36 22.6	-0.4
	baz=298						
CHKK	Chushkaly	48.42	298	*e*P	P	01 36 22.6	-0.4
GUN	Gumba	48.45	274	*e*P	P	01 36 24.1	+0.3
	comp=Z,12nm,0.5s						
KUU	Kurty	48.85	298	*e*P	P	01 36 25.6	-0.7
	comp=Z,4.3nm,0.8s,baz=298						
KUU	Kurty	48.85	298	*e*P	P	01 36 25.5	-0.7
KUU				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KKN	Kakani	48.97	274	*e*P	P	01 36 27.7	+0.1
PKI	Pulchoki	48.98	274	*e*P	P	01 36 28.5	+0.7
DANN	Dangsing	49.86	276	*e*P	P	01 36 35.1	+0.6
	comp=Z,22nm,0.6s						
BRVK	Borovoye	49.91	311	*i* P	P	01 36 34.6	+0.4
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BRVK	Borovoye	49.91	311	P	P	01 36 34.4	+0.2
BRVK				IAmb	IAmb	01 36 36.0	
	comp=Z,2.4nm,0.7s						
BTLS	Baital	50.00	300	*e*P	P	01 36 35.0	-0.1
	baz=300						
BTLS	Baital	50.00	300	*e*P	P	01 36 34.9	-0.1
SGDS	Sogindy	50.16	298	*e*P	P	01 36 36.0	-0.4
	comp=Z,1.3nm,0.9s,baz=298						
SGDS	Sogindy	50.16	298	*e*P	P	01 36 36.0	-0.4
SGDS				pmax	pmax		
	comp=Z,1.0nm,0.9s						
AAK	Ala-Archa	50.55	297	P	P	01 36 39.0	-0.4
AAK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
AAK	Ala-Archa	50.55	297	P	P	01 36 39.0	-0.4
AAK				IAmb	IAmb	01 36 40.7	
	comp=Z,3.0nm,1.1s						
INK	Inuvik	51.19	28	P	P	01 36 44.7	+1.1
	comp=Z,0.7nm,0.6s,baz=288,slow=3.2,SNR=1.8						
KK31	Karatay Array	53.08	299	P	P	01 36 57.9	-0.2
KK31				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KK31	Karatay Array	53.08	299	P	P	01 36 57.9	-0.2
KK31				IAmb	IAmb	01 36 58.8	
	comp=Z,2.3nm,0.7s						
KKAR	Karatay Array	53.08	299	P	P	01 36 57.8	-0.4
KKAR	Karatay Array	53.08	299	P	P	01 36 57.7	-0.4
KKAR				IAmb	IAmb	01 36 58.8	
	comp=Z,2.3nm,0.7s						
KKAR	Karatay Array	53.08	299	P	P	01 36 57.8	-0.4
ARU	Arti	55.30	318*c*	*i*P	P	01 37 14.4	+0.3
ARU				S	S	01 44 55.1	-3.0
ARU				SS	SS	01 48 39.7	-2.1
ARU				pmax	pmax		
	comp=Z,7.0nm,1.4s						
ABKAR	Akbulak array	57.33	309	P	P	01 37 28.4	-0.2
ABKAR				IAmb	IAmb	01 37 29.3	
	comp=Z,2.5nm,0.6s						
ABKAR	Akbulak array	57.33	309	P	P	01 37 28.4	-0.2
RES	Resolute Bay	59.50	15	P	P	01 37 43.8	+0.4
	comp=Z,1.1nm,0.7s,baz=322,slow=10,SNR=3.6						
WB0	Warramunga Arr	59.89	190	P	P	01 37 46.5	-0.2
WB0				IAmb	IAmb	01 38 04.8	
	comp=Z,4.5nm,1.1s						
FITZ	Fitzroy Crossi	59.97	200	P	P	01 37 46.3	-0.9
FITZ				IAmb	IAmb	01 37 48.5	
	comp=Z,4.0nm,1.1s						
WR0	Warramunga Arr	60.06	190	P	P	01 37 46.6	-1.2
WR0				IAmb	IAmb	01 37 49.8	
	comp=Z,4.5nm,1.1s						
WB2	Warramunga Arr	60.07	190	P	P	01 37 48.0	+0.1
WRA	Warramunga Arr	60.07	190	P	P	01 37 46.5	-1.4
	comp=Z,0.4nm,0.4s,baz=7.4,slow=7.1,SNR=10.0						
WRA	Warramunga Arr	60.07	190	*e*P	P	01 37 48.3	+0.4
WRA	Warramunga Arr	60.07	190	P	P	01 37 46.7	-1.2
YKA	Yellowknife Ar	60.61	31	P	P	01 37 51.5	+0.3
	comp=Z,0.1nm,0.3s,baz=302,slow=6.2,SNR=3.7						
BELG	Belogornoye	62.81	317	*i* P	P	01 38 06.7	+0.6
BELG				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ASAR	Alice Springs	63.79	190	P	P	01 38 11.8	-1.2
	comp=Z,0.3nm,0.6s,baz=4.9,slow=13,SNR=1.4						
ASAR	Alice Springs	63.79	190	P	P	01 38 11.5	-1.4
GEYT	Alibeck	63.84	299	P	P	01 38 13.3	0.0
	comp=Z,1.4nm,0.7s,baz=205,slow=3.0,SNR=3.6						
GEYT	Alibeck	63.84	299	P	P	01 38 12.9	-0.4
FINES	FINESS Array B	67.05	332	P	P	01 38 33.3	-0.3
	comp=Z,3.1nm,0.9s,baz=104,slow=3.9,SNR=5.1						
KIV	Kislovodsk	70.23	311	*e*P	P	01 38 55.1	+1.2
KIV				pmax	pmax		
	comp=Z,20nm,1.0s						
KBZ	Khabaz	70.24	311	P	P	01 38 55.0	+1.2
	comp=Z,3.5nm,0.8s,baz=24,slow=6.8,SNR=7.7						
KBZ	Khabaz	70.24	311	*e*P	P	01 38 55.5	+1.7
KBZ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
EGMT	Eagleton	71.16	43	P	P	01 38 59.1	-0.4
NVAR	Mina Array Bea	72.09	55	P	P	01 39 05.1	-0.4
	comp=Z,0.2nm,0.5s,baz=348,slow=4.0,SNR=1.5						
NVAR	Mina Array Bea	72.09	55	P	P	01 39 03.6	-1.8
NOA	NORSAR Array B	72.19	338	P	P	01 39 05.2	-0.2
	comp=Z,0.5nm,0.6s,baz=27,slow=4.7,SNR=1.8						
AKASG	Malin Array Be	73.01	323	P	P	01 39 10.0	-0.4
	comp=Z,0.5nm,0.4s,baz=45,slow=5.9,SNR=2.6						
FRB	Frobisher Bay	73.69	14	P	P	01 39 14.3	+0.2
	comp=Z,1.4nm,0.6s,baz=323,slow=5.3,SNR=5.2						
BUR08	Bucovina Ar. S	77.04	322	P	P	01 39 33.9	0.0
BURAR	Bucovina Array	77.05	322	P	P	01 39 34.3	+0.3
CLL	Collm	79.41	331	*e*P	P	01 39 46.0	-0.8
CLL	Collm	79.41	331	*e*P	P	01 39 46.0	-0.8
GERES	GERESS Array B	81.12	329	P	P	01 39 56.5	+0.3
	comp=Z,0.3nm,0.5s,baz=39,slow=6.3,SNR=2.4						

NEIC **17** *01:46:50.9±1.9, 38.°56N±0.°06×142.°4E±0.°1, h49km±8km, mb4.1/11, Error ellipse: s-maj=12.3km s-min=7.9km az=120.0*
JMA **17** *01:46:52.3±0.1, 38.°58N×142.°21E, h61km±1km, M4.2*
JMA Felt II J1.
IDC **17** *01:46:52.8±2.4, 38.°42N×142.°44E, h65km±24km, mb3.5/11, mb1 3.9/15, mb1mx3.6/59, mbtmp4.0/15, Error ellipse: s-maj=22.5km s-min=15.6km az=103.0*

ISC 17 01:46:50.6±1.1, **38.°53N**±0.°04×**142.°40E**±0.°07, **h48km**±11km, **n72,** σ**1^{s}35**/86, **mb3.9**/17, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.77	254	P	Pn	01 47 06.1	+0.9
JIKH				S	Sn	01 47 15.7	-0.1
JKMT	Kesennumamotoy	0.78	291	P	Pn	01 47 05.9	+0.6
JKMT				S	Sn	01 47 15.5	-0.5
OFUJ	Ofunato	0.79	314	P	Pn	01 47 06.2	+0.7
OFUJ				S	Sn	01 47 16.4	0.0
JIO	Ouri	0.83	265	P	Pn	01 47 06.6	+0.6
JIO				S	Sn	01 47 16.6	-0.7
JMK	Ichinoseki	1.02	295	P	Pn	01 47 08.9	+0.4
JMK				S	Sn	01 47 21.0	-0.7
JOM	Ohasama	1.28	318	P	Pn	01 47 12.6	+0.5
JOM				S	Sn	01 47 27.5	-0.6
JOU	Okura	1.38	264	P	Pn	01 47 13.6	+0.2
JOU				S	Sn	01 47 29.4	-1.1
JMM	Marumori	1.43	243	P	Pn	01 47 14.4	+0.2
JMM				S	Sn	01 47 30.6	-1.3
JMM	Marumori	1.43	243		Pn	01 47 14.4	+0.2
JMM				Sn	Sn	01 47 30.0	-1.9
JRG	Rokugo	1.63	303	P	Pn	01 47 16.9	0.0
JRG				S	Sn	01 47 35.7	-0.9
JYK	Kaneyama	1.65	284	P	Pn	01 47 17.2	+0.1
JYK				S	Sn	01 47 35.7	-1.4
JFK	Kawauchi	1.68	227	P	Pn	01 47 18.2	+0.6
JFK				S	Sn	01 47 37.2	-0.8
JYS	Shirataka	1.86	261	P	Pn	01 47 20.5	+0.4
JYS				S	Sn	01 47 41.9	-0.6
JFT	Otama	1.92	239	P	Pn	01 47 21.9	+1.0
JFT				S	Sn	01 47 43.1	-0.8
JANG	Nango	1.96	340	P	Pn	01 47 21.5	0.0
JANG				S	Sn	01 47 43.6	-1.3
JTM	Tenmabayashi	2.48	336		Pn	01 47 28.5	+0.1
JYT	Yasato	2.90	218		Pn	01 47 34.4	+0.1
JSD	Sado	3.30	263		Pn	01 47 39.3	-0.5
ERM	Erimo	3.52	9	Pn	Pn	01 47 43.4	+0.6
MJAR	Matsushiro Arr	3.88	240	P	Pn	01 47 49.8	+2.0
	6.6nm,0.3s,baz=44,slow=11,SNR=249						
MJAR	Matsushiro Arr	3.88	240	Pn	Pn	01 47 49.2	+1.4
MAJO	Matsushiro	3.88	241	Pn	Pn	01 47 49.9	+2.0
MAT	Matsushiro	3.88	241	P	Pn	01 47 49.9	+2.1
MAT				*e*S	Sn	01 48 37.1	+4.9
MJB9	Matsu-Tunnel	3.88	241		Pn	01 47 49.8	+2.0
JEW	Eniwo	4.36	351		Pn	01 47 55.0	+0.7
JGF	Kuroka	4.99	236		Pn	01 48 04.0	+1.0
JGF				Sn	Sn	01 48 59.9	+0.6
INU	Inuyama	5.36	235	Pn	Pn	01 48 08.7	+0.6
ASAJ	Asahikawa	5.58	1	P	Pn	01 48 11.5	+0.5
	17nm,0.3s,baz=206,slow=13,SNR=82						
ASAJ				S	Sn	01 49 09.7	-4.2
	4.4nm,0.3s,baz=64,slow=26,SNR=3.1						
JKA	Kamikawa-asahi	5.58	1		Pn	01 48 11.2	+0.1
JHJ2	Mitsune	5.80	202	Pn	Pn	01 48 14.5	+0.3
JHJ	Hachijo jima 2	5.81	202	P	Pn	01 48 14.7	+0.5
	51nm,0.3s,baz=88,slow=23,SNR=12						
JHJ				S	Sn	01 49 14.2	-5.2
	61nm,0.3s,baz=65,slow=22,SNR=12						
JWT	Wachi	6.48	242	Pn	Pn	01 48 24.2	+0.8
JHS	Saijyo	8.24	248	Pn	Pn	01 48 48.3	+0.6
JMN	Monobe	8.40	238	Pn	Pn	01 48 50.6	+0.9
YSS	Yuzh-Sakhalins	8.42	2		Pn	01 48 49.2	-0.8
USRK	Ussuriysk Ar.	9.66	309	P	Pn	01 49 07.8	+0.9
	baz=121,slow=14,SNR=4.6						
JCJ	Chichijima	11.41	181	P	Pn	01 49 30.4	-0.6
	17nm,0.3s,baz=291,slow=23,SNR=7.4						
KSRS	Korea Array	11.48	269	P	Pn	01 49 35.1	+3.3
	0.4nm,0.3s,baz=80,slow=14,SNR=2.9						
PETK	Petropavlovsk-	18.00	31	P	P	01 50 56.7	-0.5
	baz=201,slow=7.7,SNR=2.6						
MA2	Magadan	21.73	12	P	P	01 51 39.3	+1.8
	6.6nm,0.6s,baz=195,slow=10,SNR=8.2						
MA2	Magadan	21.73	12	P	P	01 51 39.3	+1.8
MA2				IAmb	IAmb	01 51 40.1	
	comp=Z,6.4nm,0.7s						
SEY	Seymchan	25.17	11	P	P	01 52 13.3	+2.1
	comp=Z,1.4nm,0.5s,baz=185,slow=9.8,SNR=6.6						
ENH	Enshi	28.27	263	P	P	01 52 38.5	-0.9
ENH				IAmb	IAmb	01 52 53.9	
	comp=Z,5.5nm,0.6s						
H11N2	WAKE ISLAND Hy	28.29	125	T	T	02 23 03.2	
	baz=316,slow=75,SNR=431						
H11N1	WAKE ISLAND Hy	28.30	125	T	T	02 23 07.5	
	baz=316,slow=75,SNR=361						
H11N3	WAKE ISLAND Hy	28.31	125	T	T	02 23 08.2	
	baz=316,slow=75,SNR=505						
H11S1	WAKE ISLAND Hy	29.07	127	T	T	02 24 03.7	
	baz=318,slow=76,SNR=175						
H11S3	WAKE ISLAND Hy	29.07	127	T	T	02 24 03.8	
	baz=318,slow=76,SNR=232						
H11S2	WAKE ISLAND Hy	29.08	127	T	T	02 24 08.0	
	baz=318,slow=76,SNR=150						
ZALV	Zalesovo Beam	41.50	311	P	P	01 54 33.8	+0.9
	comp=Z,0.6nm,0.4s,baz=67,slow=8.0,SNR=2.6						
ZALV				PcP	PcP	01 56 27.9	-1.6
	comp=Z,0.4nm,0.4s,baz=146,slow=2.8,SNR=1.9						
ZALV	Zalesovo Beam	41.50	311	P	P	01 54 32.6	-0.2
MK31	Makanchi Array	44.01	301	P	P	01 54 53.1	-0.2
MKAR	Makanchi Array	44.01	301	P	P	01 54 54.4	+1.1
	comp=Z,1.6nm,0.7s,baz=85,slow=9.4,SNR=20						
MKAR	Makanchi Array	44.01	301	P	P	01 54 53.4	+0.1
MAKZ	Makanchi	44.21	301	P	P	01 54 54.5	-0.4
MAKZ				IAmb	IAmb	01 54 57.3	
	comp=Z,2.0nm,1.0s						
KURK	Kurchatov	45.64	307	P	P	01 55 06.1	-0.1
KURK				IAmb	IAmb	01 55 09.6	
	comp=Z,2.7nm,0.7s						
ILAR	Eielson Array	47.81	33	P	P	01 55 23.8	+0.8
	comp=Z,0.6nm,0.7s,baz=267,slow=6.3,SNR=6.4						
ABKAR	Akbulak array	57.58	310	P	P	01 56 34.1	-1.3
ABKAR	Akbulak array	57.58	310	P	P	01 56 34.0	-1.3
ABKAR				IAmb	IAmb	01 56 44.7	
	comp=Z,0.8nm,0.8s						
WB0	Warramunga Arr	58.48	189	P	P	01 56 40.7	-1.1
WB0				IAmb	IAmb	01 56 49.5	
	comp=Z,1.6nm,0.6s						
WR0	Warramunga Arr	58.65	189	P	P	01 56 42.2	-0.8
WB2	Warramunga Arr	58.66	189	P	P	01 56 42.0	-1.0
WRA	Warramunga Arr	58.66	189	P	P	01 56 42.6	-0.5
	comp=Z,0.9nm,0.6s,baz=7.2,slow=7.2,SNR=11						
WRA	Warramunga Arr	58.66	189	P	P	01 56 42.5	-0.5
YKA	Yellowknife Ar	62.12	31	P	P	01 57 05.8	-0.4
	comp=Z,0.5nm,0.8s,baz=306,slow=5.9,SNR=4.9						
ASAR	Alice Springs	62.38	189	P	P	01 57 08.0	-0.5
	comp=Z,0.4nm,0.8s,baz=23,slow=7.3,SNR=2.8						
NVAR	Mina Array Bea	73.47	54	P	P	01 58 19.1	+0.7
	comp=Z,0.2nm,0.5s,baz=290,slow=5.0,SNR=4.2						
BW06	Boulder Array	76.06	46	P	P	01 58 33.6	+0.3
BW06				IAmb	IAmb	01 58 34.8	
	comp=Z,1.1nm,0.6s						
PDAR	Pinedale Array	76.06	46	P	P	01 58 34.0	+0.7
	comp=Z,1.0nm,0.5s,baz=281,slow=1.4,SNR=16						
PDAR	Pinedale Array	76.06	46	P	P	01 58 32.9	-0.4
TXAR	Lajitas Array	88.59	53	P	P	01 59 39.8	+1.0
	comp=Z,0.6nm,0.6s,baz=300,slow=3.6,SNR=8.8						
LPAZ	La Paz	145.25	59	PKPbc	PKPdf	02 06 24.2	+0.1
	comp=Z,1.3nm,0.5s,baz=22,slow=1.6,SNR=5.6						

IDC 17 02:10:33.9±5.0, **16.°13S**×**174.°70W, h220km**±40km, **mb3.3**/5, **mb1 3.5**/6, **mb1mx3.2**/48, **mbtmp3.9**/6, **Error ellipse: s-maj=44.5km s-min=35.4km az=112.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	7.12	256	P	Pn	02 12 16.0	+0.1
	0.4nm,0.3s,baz=122,slow=11,SNR=4.1						
URZ	Urewera	23.19	197	P	P	02 15 20.8	-0.3
	4.1nm,0.5s,baz=80,slow=13,SNR=2.9						
H11S2	WAKE ISLAND Hy	38.97	331	T	T	02 58 14.4	
	baz=146,slow=76,SNR=26						
H11S3	WAKE ISLAND Hy	38.99	331	T	T	02 58 13.2	
	baz=146,slow=76,SNR=8.5						
H11S1	WAKE ISLAND Hy	38.99	331	T	T	02 58 15.2	
	baz=146,slow=76,SNR=13						
STKA	Stephens Creek	42.59	240	P	P	02 18 09.3	+0.7
	1.2nm,0.7s,baz=78,slow=14,SNR=1.9						
WRA	Warramunga Arr	48.46	257	P	P	02 18 54.2	-0.5
	0.8nm,0.5s,baz=92,slow=6.7,SNR=31						
ASAR	Alice Springs	48.70	253	P	P	02 18 56.4	-0.1
	2.0nm,0.7s,baz=87,slow=8.8,SNR=18						
ILAR	Eielson Array	83.41	12	P	P	02 22 36.2	+0.1
	0.1nm,0.6s,baz=224,slow=6.3,SNR=1.4						

IDC **17** *02:14:03.9±2.0, 39.°73N×143.°94E, h0km, mb3.4/5, mb1 3.5/7, mb1mx3.4/49, mbtmp3.4/7, ML3.0/2, Error ellipse: s-maj=48.2km s-min=26.9km az=160.0*
JMA **17** *02:14:04.9±0.2, 39.°79N×143.°54E, h29km, M3.6*

ISC 17 02:14:05.4±1.1, **39.°82N**±0.°06×**143.°38E**±0.°08, **h10km, n19,** σ**1^{s}94**/20, **mb3.4**/5, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	1.17	276	P	Pg	02 14 27.5	-0.3
JTH				*e*S	Sn	02 14 43.6	-0.2
MIYJ	Miyakonagasawa	1.23	259	P	Pg	02 14 28.5	-0.4
JANG	Nango	1.53	292	P	Pb	02 14 32.6	-1.2
JOM	Ohasama	1.65	258	P	Pb	02 14 34.7	-1.1
JMK	Ichinoseki	1.89	243	P	Pn	02 14 36.6	-1.0
JTM	Tenmabayashi	2.01	299	P	Pb	02 14 40.6	-1.4
JTM				*e*S	Sb	02 15 06.7	-0.4
JIO	Ouri	2.09	230	P	Pn	02 14 39.4	-1.0
JNBK	Urakawa-nobuka	2.50	349	P	Pn	02 14 45.1	-0.9
JNBK				*e*S	Sn	02 15 13.8	-2.8
JCH	Churui	2.79	360	P	Pn	02 14 49.7	-0.3
JCH				*e*S	Sn	02 15 21.6	-2.1
ASAJ	Asahikawa	4.33	353	Pn	Pn	02 15 13.1	+1.8
	0.8nm,0.3s,baz=180,slow=13,SNR=2.6						
ASAJ				Sn	Sn	02 16 00.5	-1.2
	0.9nm,0.3s,baz=210,slow=20,SNR=1.6						
MJAR	Matsushiro Arr	5.23	233	Pn	Pn	02 15 27.5	+4.0
	0.2nm,0.3s,baz=41,slow=12,SNR=3.7						
SONM	Songino Array	27.64	299	P	P	02 19 56.3	+3.1
	0.4nm,0.7s,baz=86,slow=7.5,SNR=1.8						
H11N2	WAKE ISLAND Hy	28.45	128	T	T	02 49 35.4	
	baz=320,slow=74,SNR=6.7						
H11N1	WAKE ISLAND Hy	28.46	128	T	T	02 49 34.9	
	baz=320,slow=74,SNR=3.4						
H11N3	WAKE ISLAND Hy	28.46	128	T	T	02 49 33.1	
	baz=320,slow=74,SNR=4.0						
ZALV	Zalesovo Beam	41.24	310	P	P	02 21 53.8	+3.6
	0.4nm,0.5s,baz=91,slow=6.2,SNR=2.2						
MKAR	Makanchi Array	44.00	300	P	P	02 22 16.5	+3.6
	0.1nm,0.4s,baz=73,slow=8.8,SNR=2.5						

ILAR	**Eielson Array**	**46.32**	**34**	P	**P**	**02 22 30.4**	**-0.6**
	0.5nm,0.7s,baz=262,slow=6.1,SNR=4.9						
PDAR	**Pinedale Array**	**74.62**	**47**	P	**P**	**02 25 43.2**	**-1.8**
	0.3nm,0.7s,baz=284,slow=6.0,SNR=3.6						

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*BJI **17** 02:14:53.7±0.0, 0°.14N×126°.31E, h35^{km}, mB5.5/35, mb4.8/62, Ms4.9/30, Ms7 4.7/30*

*NEIC **17** 02:14:58.5±1.0, 0°.55N±0°.06×126°.03E±0°.04, h38^{km}±4^{km}, mb5.1/105, Error ellipse: s-maj=8.7km s-min=6.5km az=168.0*

*IDC **17** 02:15:00.6±1.5, 0°.51N×126°.03E, h50^{km}±14^{km}, mb4.6/33, mb1 4.6/38, mb1mx4.6/47, mbtmp4.8/38, ML4.7/5, MS4.5/7, Ms1 4.5/7, ms1mx4.1/50, Error ellipse: s-maj=12.0km s-min=7.2km az=77.0*

*DJA **17** 02:15:01.0±0.2, 1°N±1°×12°6E±°, h57^{km}±3^{km}, M4.8/44, mb4.9/44, mB5.3/19, MLv5.0/18, Mw(mB)4.8/19, MwMwp5.4/2, Mwp5.6/2*

*KLM **17** 02:15:02, 0°.51N×126°.31E, h76^{km}, mb5.1*

*GCMT **17** 02:15:03.5±0.3, 0°.64N±0°.02×126°.12E±0°.03, h33^{km}, MW5.5/79, Moment Tensor Solution. s41,c48; s79,c102; Duration: 1^{s}4 Moment tensor: Scale 10^{17}Nm; M_{rr}2.56±.14; $M_{\theta\theta}$-0.81±.08; $M_{\phi\phi}$-1.74±.09; $M_{r\theta}$-0.69±.10; $M_{\theta\phi}$-0.58±.05; $M_{\phi r}$-0.03±.09; Best double couple: $M_0$2.36800×10^{17} NP1:ϕ_s16.00000°, δ42.00000°, λ74.00000°. NP2:ϕ_s217.00000°, δ50.00000°, λ104.00000°. Principal axes: T 2.6960, Plg79.0000°, Azm185.0000°; N -0.6480, Plg10.0000°, Azm28.0000°; P -2.0400, Plg4.0000°, Azm297.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 17 02:14:59.7±0.7**, 0°.51N**±0°.03×**126°.11E**±0°.03**, h46**^{km}±6^{km}**, n369, σ1^{s}30**/392**, mb5.0**/117**, MS4.4**/12**, 5C-4D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.28**	**78**	Pn	**Pn**	**02 15 19.6**	**-1.5**
TNTI				Sn	**Sn**	**02 15 38.1**	**+1.0**
TNTI	**Ternate**	**1.28**	**78**	P	**Pn**	**02 15 19.8**	**-1.3**
TNTI				S	**Sn**	**02 15 39.6**	**+2.5**
KMSI	**Cibinong**	**2.13**	**272**	P	**Pn**	**02 15 31.5**	**-1.3**
KMSI				S	**Sn**	**02 16 00.2**	**+2.1**
SANI	**Sanana**	**2.55**	**183**	P	**Pn**	**02 15 37.3**	**-1.2**
SANI				S	**Sn**	**02 16 07.3**	**-1.1**
GTOI	**Gorontalo**	**3.10**	**272**	P	**Pn**	**02 15 47.9**	**+1.7**
GTOI				S	**Sn**	**02 16 26.3**	**+4.3**
SGSI	**Sangihe**	**3.21**	**350**	P	**Pn**	**02 15 48.6**	**+1.0**
SGSI				S	**Sn**	**02 16 26.1**	**+1.6**
LUWI	**Luwuk**	**3.68**	**245**	Pn	**Pn**	**02 15 51.2**	**-2.9**
LUWI	**Luwuk**	**3.68**	**245**	P	**Pn**	**02 15 56.9**	**+2.8**
NLAI	**Namlea**	**3.86**	**165**	P	**Pn**	**02 15 56.7**	**+0.2**
NLAI				S	**Sn**	**02 16 40.1**	**-0.5**
MRSI	**Marisa**	**4.17**	**270**	P	**Pn**	**02 15 58.9**	**-1.9**
APSI	**Ampana**	**4.68**	**252**	P	**Pn**	**02 16 08.4**	**+0.6**
APSI				S	**Sn**	**02 17 05.1**	**+4.2**
MSAI	**Masohi**	**4.76**	**144**	P	**Pn**	**02 16 11.4**	**+2.5**
MSAI				S	**Sn**	**02 17 07.1**	**+4.3**
SWI	**Sorong**	**5.33**	**105**	P	**Pn**	**02 16 20.0**	**+3.3**
	0.4nm2μm105nm,0.9s						
SIJI	**Sorong**	**5.33**	**105**	P	**Pn**	**02 16 19.7**	**+2.9**
	9.0nm,0.3s,baz=300,slow=8.4,SNR=11						
TOLI2	**Tolitoli**	**5.36**	**276**	Pn	**Pn**	**02 16 14.8**	**-2.4**
KDI	**Kendari**	**5.65**	**218**	P	**Pn**	**02 16 22.7**	**+1.6**
	0.7nm4μm179nm,0.7s						
KCP	**Kidapawan**	**6.53**	**351**	⇑*i*P	**Pn**	**02 16 36.1**	**+2.8**
DAV	**Davao City (W)**	**6.53**	**355**	P	**Pn**	**02 16 35.1**	**+1.8**
	37nm,0.3s,baz=242,slow=17,SNR=1.0						
DAV	**Davao City (W)**	**6.53**	**355**	Pn	**Pn**	**02 16 29.9**	**-3.4**
FAKI	**Fak Fak**	**7.02**	**119**	Pn	**Pn**	**02 16 41.0**	**+1.1**
FAKI	**Fak Fak**	**7.02**	**119**	P	**Pn**	**02 16 40.5**	**+0.6**
	0.3nm1μm68nm,0.8s						
TTSI	**Tana Toraja**	**7.22**	**241**	P	**Pn**	**02 16 43.5**	**+0.9**
	1.5nm5μm386nm,0.7s						
BNSI	**Bone**	**7.74**	**231**	P	**Pn**	**02 16 50.8**	**+1.0**
	0.5nm2μm136nm,0.6s						
BNSI				S	**Sn**	**02 18 16.5**	**+0.4**
	0.5nm2μm136nm,0.6s						
SPSI	**Sidrap Palu**	**7.74**	**235**	P	**Pn**	**02 16 51.6**	**+1.7**
	0.8nm3μm153nm,0.5s						
SPSI				S	**Sn**	**02 18 15.2**	**-1.1**
	0.8nm3μm153nm,0.5s						
CGP	**Cagayan de Oro**	**8.01**	**350**	⇓*e*P	**Pn**	**02 16 52.6**	**-1.0**
BKSI	**Bulukumba**	**8.33**	**226**	P	**Pn**	**02 16 58.8**	**+0.9**
	2μm96nm,0.9s						
BKSI				S	**Sn**	**02 18 32.8**	**+2.1**
	2μm96nm,0.9s						
KAPI	**Kappang**	**8.40**	**229**	P	**Pn**	**02 17 00.6**	**+1.7**
	19nm,0.3s,baz=108,slow=2.0,SNR=26						
KAPI				S	**Sn**	**02 18 32.6**	**+0.3**
	3.8nm,0.3s,baz=240,slow=20,SNR=2.1						
KAPI	**Kappang**	**8.40**	**229**	Pn	**Pn**	**02 16 57.8**	**-1.1**
KAPI					**Sn**	**02 18 29.9**	**-2.5**
BSSI	**Bau Bau, Buton**	**8.67**	**220**	P	**Pn**	**02 17 05.3**	**+2.7**
	1μm63nm,1.2s						
MYLDM	**Lahad Datu**	**8.90**	**302**	Pn	**Pn**	**02 17 05.6**	**-0.2**
MMRI	**Maumere**	**9.88**	**203**	Pn	**Pn**	**02 17 17.0**	**-2.1**
EDFI	**Ende, Flores**	**10.20**	**205**	P	**Pn**	**02 17 26.0**	**+2.3**
	470nm44nm,1.1s						
SOEI	**Soe**	**10.37**	**190**	Pn	**Pn**	**02 17 23.5**	**-2.4**
SOEI	**Soe**	**10.37**	**190**	P	Pn	02 17 32.2	+6.3
	85nm,1.0s						
SPMM	**Sapulut**	**10.50**	**294**	P	Pn	02 17 33.0	+5.3
KBKI	**Kotabaru**	**10.64**	**249**	P	**Pn**	**02 17 32.1**	**+2.6**
	40nm,1.0s						
BATI	**Baumata**	**10.93**	**193**	P	Pn	02 17 40.6	+7.1
	5.6nm,0.3s,baz=329,slow=6.7,SNR=7.1						
BATI	**Baumata**	**10.93**	**193**	P	Pn	02 17 38.8	+5.3
	53nm,0.7s						
MTKI	**Muara Teweh, K**	**11.31**	**263**	P	**Pn**	**02 17 40.7**	**+2.0**
	33nm,0.9s						
BBKI	**Banjar Baru**	**11.94**	**251**	P	Pn	02 18 01.8	+14
PLAI	**Plampang**	**12.45**	**222**	P	P	02 17 59.6	-5.5
	45nm,1.7s						
SBUM	**Sibu**	**14.02**	**278**	Pn	**Pn**	**02 18 15.4**	**-0.4**
SBUM	**Sibu**	**14.02**	**278**	P	**P**	**02 18 23.0**	**+0.5**
KMMI	**Kalianget**	**14.26**	**238**	P	**P**	**02 18 23.3**	**-1.9**
	117nm,0.9s						
GENI	**Genyem**	**14.39**	**102**	P	**P**	**02 18 27.6**	**+1.0**
	8μm109nm,1.0s						
ABJI	**Asem Bagus**	**14.44**	**235**	P	**Pn**	**02 18 23.6**	**+2.3**
	40nm,0.6s						
KDU	**Kakadu**	**14.55**	**155**	P	**Pn**	**02 18 20.9**	**-2.0**
	baz=14,SNR=21						
JAGI	**Jajag, Banyuwa**	**14.89**	**233**	Pn	**Pn**	**02 18 25.3**	**-2.1**
JAGI	**Jajag, Banyuwa**	**14.89**	**233**	P	**P**	**02 18 31.3**	**-0.9**
	2μm114nm,1.4s						
JAY	**Jayapura**	**14.89**	**102**	LR	LR	02 25 26.4	
	comp=Z,4μm,20.9s,baz=250,slow=42						
KSM	**Kuching**	**15.83**	**274**		**Pn**	**02 18 40.2**	**+0.7**
KSM				IAmb	IAmb	02 18 48.0	
	comp=Z,200nm,1.0s						
KSM	**Kuching**	**15.83**	**274**	P	**P**	**02 18 43.0**	**+0.3**
KNRA	**Kununurra**	**16.30**	**171**	Pn	**Pn**	**02 18 44.3**	**-1.1**
FITZ	**Fitzroy Crossi**	**18.50**	**181**	P	**P**	**02 19 11.5**	**-0.6**
	baz=18,SNR=44						
FITZ	**Fitzroy Crossi**	**18.50**	**181**	P	**P**	**02 19 11.8**	**-0.3**
	comp=Z,1.2nm,0.3s,baz=4.4,slow=7.7,SNR=34						
FITZ	**Fitzroy Crossi**	**18.50**	**181**	P	**P**	**02 19 10.0**	**-2.1**
LEM	**Lembang**	**19.84**	**248**	P	**P**	**02 19 26.4**	**-0.7**
	comp=Z,3.2nm,0.3s,baz=116,slow=3.7,SNR=2.0						
CISI	**Cisompet, Garu**	**19.93**	**246**	P	**P**	**02 19 26.5**	**-1.4**
CISI				IAmb	IAmb	02 19 31.5	
	comp=Z,63nm,0.7s						
CISI	**Cisompet, Garu**	**19.93**	**246**	P	**Pn**	**02 19 30.8**	**+0.9**
WB0	**Warramunga Arr**	**21.73**	**159**	P	**P**	**02 19 46.2**	**-1.0**
WRAB	**Tennant Creek**	**21.87**	**159**	P	**P**	**02 19 47.9**	**-0.8**
WRAB				IAmb	IAmb	02 19 55.2	
	comp=Z,109nm,0.9s						
WRA	**Warramunga Arr**	**21.87**	**159**	P	**P**	**02 19 47.9**	**-0.8**
	comp=Z,46nm,0.5s,baz=338,slow=12,SNR=215						
WRA				S	**S**	**02 23 49.4**	**+1.4**
	comp=Z,3.9nm,0.9s,baz=338,slow=18,SNR=5.5						
WRA	**Warramunga Arr**	**21.87**	**159**	P	**P**	**02 19 46.9**	**-1.8**
WRA				PcP	**PcP**	**02 23 47.1**	**0.0**
WB2	**Warramunga Arr**	**21.88**	**159**	P	**P**	**02 19 47.7**	**-1.1**
WR0	**Warramunga Arr**	**21.96**	**158**	P	**P**	**02 19 49.0**	**-0.7**
WR0				IAmb	IAmb	02 19 56.3	
	comp=Z,61nm,0.9s						
KLSI		**21.98**	**256**	P	**P**	**02 19 48.8**	**-1.1**
	comp=Z,10nm,1.1s						
COEN	**Coen**	**22.19**	**131**	P	**P**	**02 19 52.3**	**+0.1**
MYKOM	**Kota Tinggi**	**22.29**	**273**	P	**P**	**02 19 56.0**	**+2.7**
KASI	**Kota Agung**	**22.40**	**254**	P	**P**	**02 19 54.3**	**-0.2**
	comp=Z,52nm,1.1s						
MDSI	**Maura Dua**	**22.47**	**257**	P	**P**	**02 19 54.0**	**-1.2**
	comp=Z,18nm,0.8s						
GUMO	**Guam**	**22.66**	**54**	P	**P**	**02 19 58.5**	**+1.2**
	comp=Z,96nm,0.6s,baz=190,slow=7.2,SNR=8.8						
GUMO	**Guam**	**22.66**	**54**	P	**P**	**02 19 56.8**	**-0.5**
TWG	**Pinlang**	**22.71**	**348**	P	**P**	**02 19 56.3**	**-1.4**
PSA00	**Pilbara Seismi**	**22.79**	**195**	P	**P**	**02 19 57.8**	**-0.7**
PSA00	**Pilbara Seismi**	**22.79**	**195**	P	**P**	**02 19 57.5**	**-1.0**
PSA00				IAmb	IAmb	02 19 59.8	
	comp=Z,9.8nm,0.8s						
PMG	**Port Moresby**	**23.16**	**116**	P	**P**	**02 20 04.0**	**+1.6**
	comp=Z,16nm,0.6s,baz=307,slow=9.2,SNR=5.3						
PMG				LR	LR	02 31 28.5	
	comp=Z,1μm,18.5s,baz=322,slow=42						
PMG	**Port Moresby**	**23.16**	**116**	P	**P**	**02 20 02.4**	**+0.1**
YULB	**Yu-li**	**23.22**	**349**	P	**P**	**02 19 59.4**	**-3.4**
YULB				IAmb	IAmb	02 20 10.2	
	comp=Z,43nm,0.6s						
TPUB	**Ta-pu**	**23.27**	**347**	P	**P**	**02 19 57.8**	**-5.6**
MNAI	**Manna**	**23.64**	**258**	P	**P**	**02 20 05.8**	**-1.2**
SSLB	**Suanglung**	**23.67**	**348**	P	**P**	**02 20 05.4**	**-1.8**
NACB	**Ninganchiao**	**23.92**	**350**	P	**P**	**02 20 07.2**	**-2.3**
NACB				IAmb	IAmb	02 20 20.2	
	comp=Z,107nm,1.9s						
QIZ	**Qiongzhong**	**24.36**	**320**	P	**P**	**02 20 12.3**	**-1.2**
QIZ				S	**S**	**02 24 32.1**	**+2.1**
QIZ				LR	LR		
	comp=Z,350nm,18.0s						
QIZ				LR	LR		
	comp=Z,520nm,18.4s						
QIZ				LR	LR		
	comp=Z,1μm,19.2s						
QIZ	**Qiongzhong**	**24.36**	**320**	P	**P**	**02 20 13.1**	**-0.5**
YHNB	**Yeheng**	**24.45**	**350**	P	**P**	**02 20 13.4**	**-1.0**
YHNB				IAmb	IAmb	02 20 18.8	
	comp=Z,34nm,0.6s						
KRJI	**Kerinci**	**24.78**	**264**	P	P	02 20 25.9	+8.3
KNMB	**Chin-men Tao**	**24.96**	**343**	P	**P**	**02 20 18.6**	**-0.3**
KNMB				IAmb	IAmb	02 20 49.2	
	comp=Z,44nm,1.1s						
BKNI	**Bangkinang**	**25.07**	**270**	P	**P**	**02 20 20.3**	**+0.2**
BKNI				IAmb	IAmb	02 20 23.4	
	comp=Z,108nm,1.3s						
UBPT	**Khong Chiam**	**25.12**	**307**	P	**P**	**02 20 22.4**	**+1.9**
	comp=Z,11nm,1.9s						
UBPT	**Khong Chiam**	**25.12**	**307**	P	**P**	**02 20 19.9**	**-0.5**
AS31	**Alice Springs**	**25.20**	**163**	P	**P**	**02 20 21.0**	**-0.2**
AS31				IAmb	IAmb	02 20 26.7	
	comp=Z,19nm,0.4s						
ASAR	**Alice Springs**	**25.20**	**163**	P	**P**	**02 20 21.5**	**+0.3**
	comp=Z,23nm,0.4s,baz=346,slow=12,SNR=136						
ASAR				PcP	**PcP**	**02 23 54.5**	**+0.3**
	comp=Z,5.5nm,0.6s,baz=351,slow=2.3,SNR=9.1						
ASAR				S	**S**	**02 24 44.7**	**+1.2**
	comp=Z,0.6nm,0.8s,baz=353,slow=15,SNR=1.8						
ASAR	**Alice Springs**	**25.20**	**163**	P	**P**	**02 20 21.2**	**+0.1**
ASAR					**PcP**	**02 23 54.2**	**0.0**
ASAR					**S**	**02 24 45.0**	**+1.6**
QZH	**Quanzhou**	**25.35**	**344**	P	**P**	**02 20 23.4**	**+0.9**
IPM	**Ipoh**	**25.37**	**279**	P	**P**	**02 20 21.7**	**-1.1**
IPM				IAmb	IAmb	02 20 27.1	
	comp=Z,31nm,0.6s						
IPM	**Ipoh**	**25.37**	**279**	P	**P**	**02 20 21.0**	**-1.8**
WRKA	**Warakurna**	**25.49**	**175**	P	**P**	**02 20 24.3**	**+0.5**
	baz=26,SNR=30						
PDSI	**Padang**	**25.69**	**267**	P	**P**	**02 20 27.2**	**+1.5**
	comp=Z,39nm,1.2s						
GIRL	**Giralia**	**25.76**	**206**	P	**P**	**02 20 26.2**	**0.0**
MTSU	**Mount Surprise**	**25.77**	**137**	P	**P**	**02 20 26.9**	**+0.5**
	baz=26,SNR=14						
KULM	**Kulim**	**25.86**	**281**	P	**P**	**02 20 26.2**	**-1.1**
KULM	**Kulim**	**25.86**	**281**	P	**P**	**02 20 28.0**	**+0.7**
RPSI	**Rantau Prapat**	**27.26**	**275**	P	**P**	**02 20 38.0**	**-1.9**
PSI	**Prapat**	**27.27**	**275**	P	**P**	**02 20 40.1**	**0.0**
	comp=Z,8.7nm,0.5s,baz=180,slow=13,SNR=18						
SRAK	**Srakaew**	**27.34**	**300**	P	**P**	**02 20 41.0**	**+0.5**
	comp=Z,99nm,0.7s						
MEEK	**Meekatharra**	**27.95**	**194**	P	**P**	**02 20 45.6**	**-0.3**
	baz=28,SNR=5.4						
CTA	**Charters Tower**	**28.44**	**137**	P	**P**	**02 20 51.8**	**+1.5**
	comp=Z,4.3nm,0.6s,baz=307,slow=10,SNR=2.5						
CTA				LR	LR	02 33 38.1	
	comp=Z,1μm,21.1s,baz=354,slow=39						
NONG	**Nongkai**	**28.52**	**309**	P	**P**	**02 20 53.2**	**+2.1**
	comp=Z,16nm,0.9s						
GSI	**Gunungsitoli**	**28.54**	**272**	P	**P**	**02 20 50.5**	**-0.9**
PHET	**Kaeng Krachan**	**28.99**	**296**	P	P	02 21 00.9	+5.5
	comp=Z,333nmcomp=Z,13nm,0.6s						
TPTI		**29.04**	**276**	P	**P**	**02 20 55.3**	**-0.5**
	comp=Z,9.5nm,0.6s						
SLVN	**Son La**	**29.96**	**315**	P	**P**	**02 21 03.0**	**-0.9**
UTHA	**Uthaitani**	**30.27**	**301**	P	**P**	**02 21 06.8**	**+0.2**
	comp=Z,30nm,0.6s						
MORW	**Morawa**	**30.95**	**197**	P	**P**	**02 21 11.8**	**-0.7**
	baz=31,SNR=4.6						
MORW	**Morawa**	**30.95**	**197**	P	**P**	**02 21 12.3**	**-0.2**
SUKH	**Sukhothai**	**31.03**	**304**	P	**P**	**02 21 14.1**	**+0.8**
	comp=Z,18nm,0.8s						
FORT	**Forrest**	**31.18**	**177**	P	**P**	**02 21 14.3**	**-0.1**
	baz=31,SNR=26						
FORT	**Forrest**	**31.18**	**177**	P	**P**	**02 21 14.4**	**0.0**
GYA	**Guiyang**	**31.87**	**326**	*e*P	**P**	**02 21 22.1**	**+1.3**
GYA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
WHN	**Wuhan**	**31.89**	**341**	P	**P**	**02 21 22.9**	**+2.2**
KMBL	**Kambalda**	**31.96**	**187**	P	**P**	**02 21 21.9**	**+0.6**
	baz=32,SNR=5.5						
CM35	**Chiang Mai Arr**	**32.03**	**306**	P	P	02 21 37.0	+15
CMAR	**Chiang Mai Arr**	**32.09**	**305**	P	**P**	**02 21 22.8**	**+0.1**
	comp=Z,1.4nm,0.4s,baz=122,slow=6.8,SNR=5.4						
CMAR				PcP	**PcP**	**02 24 13.0**	**+1.6**
	comp=Z,2.0nm,0.4s,baz=174,slow=2.4,SNR=9.5						
CMAR				LR	LR	02 36 41.0	
	comp=Z,506nm,18.6s,baz=80,slow=41						
CMAR	**Chiang Mai Arr**	**32.09**	**305**	P	**P**	**02 21 18.8**	**-3.9**
NJ2	**Nanjing**	**32.11**	**348**	*e*P	**P**	**02 21 23.5**	**+0.9**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.6s						
CMMT	**Chiang Mai**	**32.27**	**306**	P	**P**	**02 21 27.9**	**+3.6**
	comp=Z,4.6nm,2.0s						
CHTO	**Chiang Mai**	**32.27**	**306**	P	**P**	**02 21 23.6**	**-0.6**
CM33	**Chiang Mai Arr**	**32.27**	**306**	P	P	02 21 33.0	+8.8
JNU	**Nakatsue**	**32.74**	**7**	P	**P**	**02 21 28.2**	**0.0**
	comp=Z,16nm,1.0s,baz=196,slow=8.3,SNR=3.1						
KLBR	**Kellerberrin**	**32.90**	**193**	P	**P**	**02 21 29.6**	**+0.1**
	baz=33,SNR=7.3						
KMI	**Kunming**	**33.30**	**319**	⇑P	**P**	**02 21 35.0**	**+1.6**
KMI				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KMI				pmax	pmax		
	comp=Z,460nm,5.2s						
KMI				LR	LR		
	comp=Z,550nm,21.2s						
KMI				LR	LR		
	comp=Z,630nm,22.5s						
KMI				LR	LR		
	comp=Z,1μm,24.2s						
ENH	**Enshi**	**33.55**	**333**	P	**P**	**02 21 34.7**	**-0.6**
ENH				IAmb	IAmb	02 21 37.1	
	comp=Z,22nm,0.7s						
JMN	**Monobe**	**33.84**	**12**	P	**P**	**02 21 36.5**	**-1.2**
NWAO	**Narrogin (SRO)**	**34.30**	**193**	P	**P**	**02 21 41.7**	**-0.1**
	comp=Z,4.8nm,0.7s,baz=15,slow=8.5,SNR=1.7						
NWAO	**Narrogin (SRO)**	**34.30**	**193**	P	**P**	**02 21 41.6**	**-0.1**
NWAO				IAmb	IAmb	02 21 47.0	
	comp=Z,65nm,1.7s						
BBOO	**Buckleboo**	**34.45**	**165**	P	**P**	**02 21 42.8**	**-0.2**
	baz=34,SNR=41						
BBOO	**Buckleboo**	**34.45**	**165**	P	**P**	**02 21 42.8**	**-0.2**
JHS	**Saijyo**	**34.92**	**10**	P	**P**	**02 21 46.8**	**-0.4**
JHS				IAmb	IAmb	02 21 52.4	
	comp=Z,32nm,1.1s						
STKA	**Stephens Creek**	**35.40**	**157**	P	**P**	**02 21 51.2**	**0.0**
	baz=35,SNR=64						
STKA	**Stephens Creek**	**35.40**	**157**	P	**P**	**02 21 51.7**	**+0.5**
	comp=Z,17nm,0.3s,baz=329,slow=8.8,SNR=72						
STKA				PcP	**PcP**	**02 24 21.3**	**+0.8**
	comp=Z,1.9nm,0.5s,baz=39,slow=2.7,SNR=3.0						
STKA	**Stephens Creek**	**35.40**	**157**	P	**P**	**02 21 51.0**	**-0.2**
STKA					**PcP**	**02 24 18.9**	**-1.6**
JWT	**Wachi**	**35.66**	**13**	P	**P**	**02 21 52.8**	**-0.6**
JWT				IAmb	IAmb	02 21 55.7	
	comp=Z,44nm,1.2s						
HTT	**Hallett**	**35.85**	**162**	P	**P**	**02 21 55.6**	**+0.4**
	baz=36,SNR=15						
INU	**Inuyama**	**36.12**	**15**	P	**P**	**02 21 56.7**	**-0.6**
INU				IAmb	IAmb	02 22 05.8	
	comp=Z,29nm,1.0s						
JGF	**Kuroka**	**36.45**	**16**	P	**P**	**02 21 59.7**	**-0.5**
JGF				IAmb	IAmb	02 22 04.0	
	comp=Z,58nm,1.7s						
KSRS	**Korea Array**	**36.80**	**2**	P	**P**	**02 22 03.9**	**+0.8**
	comp=Z,7.9nm,0.8s,baz=182,slow=9.8,SNR=14						
CD2	**Chengdu**	**36.92**	**327**	P	**P**	**02 22 03.4**	**-1.0**
CD2				pmax	pmax		
	comp=Z,10.0nm,1.2s						
XAN	**Xi'an**	**37.04**	**336**	P	**P**	**02 22 05.6**	**+0.3**
XAN				pmax	pmax		
	comp=Z,20nm,1.0s						
XAN	**Xi'an**	**37.04**	**336**	P	**P**	**02 22 04.2**	**-1.1**
XAN					**PcP**	**02 24 24.5**	**-0.9**
MJAR	**Matsushiro Arr**	**37.56**	**16**	P	**P**	**02 22 09.1**	**-0.5**
	comp=Z,8.7nm,0.6s,baz=183,slow=9.4,SNR=13						
MJAR	**Matsushiro Arr**	**37.56**	**16**	P	**P**	**02 22 08.8**	**-0.8**
MAJO	**Matsushiro**	**37.56**	**16**	P	**P**	**02 22 09.0**	**-0.7**
MAJO				IAmb	IAmb	02 22 09.8	
	comp=Z,16nm,0.7s						
MAT	**Matsushiro**	**37.56**	**16**	P	**P**	**02 22 08.7**	**-0.9**
MAT				*e*S	**S**	**02 27 55.2**	**-0.6**
DL2	**Dalian**	**38.43**	**354**	P	**P**	**02 22 18.5**	**+1.7**
DL2				pmax	pmax		
	comp=Z,33nm,0.6s						
JSD	**Sado**	**38.98**	**15**	P	**P**	**02 22 20.9**	**-0.6**
JSD				IAmb	IAmb	02 22 25.4	
	comp=Z,44nm,0.8s						
ARMA	**Armidale**	**39.19**	**144**	P	**P**	**02 22 23.6**	**+0.1**
	baz=39,SNR=7.4						
ARMA	**Armidale**	**39.19**	**144**	P	**P**	**02 22 23.8**	**+0.3**
ARMA				IAmb	IAmb	02 22 27.7	
	comp=Z,50nm,1.6s						
ARPS	**Mount Arapiles**	**39.86**	**160**	P	**P**	**02 22 29.7**	**+0.9**
	baz=40,SNR=12						
BJT	**Baijiatuau**	**40.35**	**348**	P	**P**	**02 22 32.3**	**-0.5**
BJI	**Beijing**	**40.37**	**348**	P	**P**	**02 22 32.9**	**-0.1**
BJI				pmax	pmax		
	comp=Z,5.0nm,0.5s						
LZH	**Lanzhou**	**40.99**	**332**	*e*P	**P**	**02 22 40.6**	**+2.1**
LZH				pP	pP	02 22 47.1	-3.4
LZH				sP	pwP	02 22 49.8	-2.7
LZH				PcP	**PcP**	**02 24 39.6**	**+1.6**
LZH				pmax	pmax		
	comp=Z,12nm,1.0s						
LZH				LR	LR		
	comp=Z,500nm,12.5s						
LZH				LR	LR		
	comp=Z,1μm,13.8s						
LZH				LR	LR		
	comp=Z,1μm,14.6s						
SNY	**Shenyang**	**41.19**	**357**	⇓P	**P**	**02 22 40.1**	**+0.4**
SNY				pmax	pmax		
	comp=Z,31nm,1.1s						
SHL	**Shillong**	**41.36**	**310**	P	**P**	**02 22 40.5**	**-1.1**
HHC	**Hu-ho-hao-te**	**42.26**	**344**	*e*P	**P**	**02 22 48.0**	**-0.7**
HHC				pmax	pmax		
	comp=Z,4.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,490nm,6.6s						
CN2	**Changchun**	**43.10**	**359**	*e*P	**P**	**02 22 58.5**	**+3.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
SANVU	**Saraoutou**	**43.58**	**113**	P	**P**	**02 22 59.4**	**-0.2**
SANVU				IAmb	IAmb	02 23 03.0	
	comp=Z,39nm,0.8s						
USA0B	**Ussuriysk Arra**	**43.81**	**6**	P	**P**	**02 23 00.6**	**-0.4**
USA0B				IAmb	IAmb	02 23 04.9	
	comp=Z,58nm,1.6s						
USRK	**Ussuriysk Ar.**	**43.81**	**6**	P	**P**	**02 23 01.9**	**+0.9**
	comp=Z,11nm,0.5s,baz=185,slow=7.3,SNR=18						
USRK	**Ussuriysk Ar.**	**43.81**	**6**	P	**P**	**02 23 00.6**	**-0.4**
MDJ	**Mudanjiang**	**44.02**	**4**	P	**P**	**02 23 03.3**	**+0.6**
MDJ				pmax	pmax		
	comp=Z,16nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,250nm,5.1s						
MDJ	**Mudanjiang**	**44.02**	**4**	P	**P**	**02 23 02.2**	**-0.5**
MDJ				IAmb	IAmb	02 23 07.1	
	comp=Z,28nm,0.9s						
LSA	**Lhasa**	**44.16**	**314**	P	**P**	**02 23 03.4**	**-1.2**
LSA				IAmb	IAmb	02 23 08.7	
	comp=Z,14nm,0.5s						
DZM	**Mont Dzumac**	**45.27**	**122**	P	**P**	**02 23 15.2**	**+2.1**
	comp=Z,2.8nm,0.4s,baz=278,slow=15,SNR=1.7						
DZM	**Mont Dzumac**	**45.27**	**122**	P	**P**	**02 23 12.1**	**-1.0**
DZM				IAmb	IAmb	02 24 22.7	
	comp=Z,72nm,1.6s						
TAPN	**Taplejung**	**45.49**	**309**	*e*P	**P**	**02 23 13.8**	**-1.2**
	comp=Z,15nm,0.4s						
GTA	**Gaotai**	**45.56**	**331**	*e*P	**P**	**02 23 13.8**	**-1.5**
GTA				PcP	**PcP**	**02 24 53.9**	**+0.6**
GTA				ScP	**ScP**	**02 28 45.3**	**+2.7**
GTA				PcS	**PcS**	**02 28 47.6**	**+0.1**
GTA				ScS	**ScS**	**02 33 06.8**	**-1.1**
GTA				pmax	pmax		
	comp=Z,2.0nm,1.6s						
GTA				pmax	pmax		
	comp=Z,140nm,6.5s						
GTA				LR	LR		
	comp=Z,530nm,17.8s						
GTA				LR	LR		
	comp=Z,650nm,19.3s						
GTA				LR	LR		
	comp=Z,880nm,18.9s						
RAMN	**Ramite**	**46.16**	**308**	*e*P	**P**	**02 23 19.6**	**-0.7**
	comp=Z,35nm,0.5s						
GUN	**Gumba**	**47.18**	**309**	*e*P	**P**	**02 23 27.7**	**-0.7**
	comp=Z,25nm,0.4s						
PKI	**Pulchoki**	**47.39**	**308**	*e*P	**P**	**02 23 29.4**	**-0.6**
	comp=Z,11nm,0.3s						
PKIN	**Phulchoki**	**47.40**	**308**	*e*P	**P**	**02 23 29.0**	**-1.0**
	comp=Z,10.0nm,0.3s						
DMN	**Daman**	**47.64**	**308**	*e*P	**P**	**02 23 30.8**	**-1.1**
GKN	**Gorkha**	**48.19**	**308**	*e*P	**P**	**02 23 35.3**	**-0.7**
YSS	**Yuzh-Sakhalins**	**48.49**	**15**	P	**P**	**02 23 37.7**	**0.0**
YSS				IAmb	IAmb	02 23 41.0	
	comp=Z,18nm,0.9s						
KLR	**Kul'dur**	**48.77**	**5**	P	**P**	**02 23 40.1**	**+0.2**
	comp=Z,6.2nm,0.7s,baz=203,slow=9.0,SNR=14						
HIA	**Hailar**	**48.87**	**354**	P	**P**	**02 23 40.1**	**-0.6**
HIA				IAmb	IAmb	02 23 44.7	
	comp=Z,21nm,0.9s						
DANN	**Dangsing**	**49.04**	**308**	*e*P	**P**	**02 23 41.4**	**-1.3**
	comp=Z,46nm,0.5s						
HYB	**Hyderabad**	**49.69**	**292**	*i* P	**P**	**02 23 46.0**	**-1.5**
ULN	**Ulaanbaatar**	**49.98**	**343**	P	**P**	**02 23 48.8**	**-0.6**
ULN				IAmb	IAmb	02 23 54.2	
	comp=Z,18nm,0.9s						
SONM	**Songino Array**	**50.15**	**343**	P	**P**	**02 23 50.5**	**-0.1**
	comp=Z,12nm,0.8s,baz=160,slow=8.4,SNR=34						
SONM				PcP	**PcP**	**02 25 09.6**	**+0.1**
	comp=Z,3.7nm,0.7s,baz=162,slow=4.3,SNR=5.2						
SONM				LR	LR	02 47 14.0	
	comp=Z,2μm,18.9s,baz=116,slow=39						
SONM	**Songino Array**	**50.15**	**343**	P	**P**	**02 23 50.0**	**-0.6**
TLY	**Talaya**	**54.39**	**343**	P	**P**	**02 24 21.7**	**-0.2**
TLY				IAmb	IAmb	02 24 27.0	
	comp=Z,11nm,0.7s						
WMQ	**Urumqi**	**55.02**	**327**	*e*P	**P**	**02 24 28.8**	**+2.1**
WMQ				pmax	pmax		
	comp=Z,15nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,230nm,3.6s						
WMQ				LR	LR		
	comp=Z,680nm,16.9s						
WMQ				LR	LR		
	comp=Z,550nm,10.3s						
WMQ				LR	LR		
	comp=Z,960nm,23.7s						
WMQ	**Urumqi**	**55.02**	**327**	P	**P**	**02 24 26.4**	**-0.3**
WMQ				IAmb	IAmb	02 24 31.3	
	comp=Z,23nm,1.0s						
PEA0B	**Petropavlovsk-**	**58.62**	**22**	P	**P**	**02 24 51.9**	**0.0**
PETK	**Petropavlovsk-**	**58.62**	**22**	P	**P**	**02 24 53.0**	**+1.1**
	comp=Z,16nm,0.6s,baz=178,slow=4.4,SNR=50						
PETK	**Petropavlovsk-**	**58.62**	**22**	P	**P**	**02 24 51.8**	**-0.1**
ZSN	**Zaisan**	**58.88**	**328**	*e*P	**P**	**02 24 53.2**	**-0.7**
	comp=Z,2.7nm,0.7s,baz=328						
NIL	**Nilore**	**59.44**	**309**	P	**P**	**02 24 57.2**	**-0.8**

NIL				IAmb	IAmb	02 25 03.5	
	comp=Z,11nm,0.6s						
SHLS	Shalkode	59.45	322	eP	P	02 24 55.4	-2.6
	comp=Z,5.1nm,0.9s,baz=322						
UZB	Uzynbulak	59.71	322	eP	P	02 24 58.5	-1.3
	baz=322						
MK31	Makanchi Array	59.86	327	P	P	02 25 00.4	-0.3
MK31				IAmb	IAmb	02 25 05.2	
	comp=Z,9.4nm,0.8s						
MKAR	Makanchi Array	59.86	327	P	P	02 25 00.7	0.0
	comp=Z,8.4nm,0.4s,baz=120,slow=8.4,SNR=88						
MKAR				PcP	PcP	02 25 46.7	-0.1
	comp=Z,4.6nm,0.7s,baz=113,slow=4.6,SNR=3.7						
MKAR	Makanchi Array	59.86	327	P	P	02 25 00.1	-0.6
KSH	Kashi	59.91	317	P	P	02 25 01.6	+0.3
KSH				S	S	02 33 12.5	+2.3
KSH				pmax	pmax		
	comp=Z,22nm,1.2s						
KSH				pmax	pmax		
	comp=Z,1µm,7.0s						
KSH				LR	LR		
	comp=Z,690nm,12.2s						
KSH				LR	LR		
	comp=Z,840nm,7.2s						
KSH				LR	LR		
	comp=Z,1µm,9.3s						
MAKZ	Makanchi	60.04	326	P	P	02 25 01.8	-0.1
MAKZ				IAmb	IAmb	02 25 06.4	
	comp=Z,12nm,0.8s						
SATY	Saty	60.05	321	eP	P	02 25 01.7	-0.5
	comp=Z,7.1nm,0.7s,baz=321						
TUWZ	Tuamarina	60.07	140	P	P	02 25 02.0	-0.2
KPKS	Kokpek	60.09	322	eP	P	02 25 01.6	-0.7
	comp=Z,14nm,0.6s,baz=322						
BKZ	Black Stump Fm	60.65	137	P	P	02 25 06.5	+0.3
URZ	Urewera	60.66	135	P	P	02 25 07.2	+1.0
	comp=Z,4.5nm,0.5s,baz=252,slow=3.2,SNR=2.8						
MDOK	Medeo	60.96	321	eP	P	02 25 07.5	-0.9
	baz=321						
TDK	Taldyqorghan	61.08	323	eP	P	02 25 08.0	-1.0
	comp=Z,6.1nm,0.5s,baz=323						
CHKK	Chushkaly	61.34	321	eP	P	02 25 09.8	-1.0
	baz=321						
YAK	Yakutsk	61.42	2	P	P	02 25 11.1	+0.2
KUU	Kurty	61.77	321	eP	P	02 25 12.9	-0.8
	comp=Z,9.3nm,0.7s,baz=321						
MA2	Magadan	61.95	14	P	P	02 25 15.9	+1.4
	comp=Z,21nm,0.7s,baz=210,slow=6.0,SNR=27						
MA2	Magadan	61.95	14	P	P	02 25 14.6	+0.1
MA2				IAmb	IAmb	02 25 23.7	
	comp=Z,22nm,0.8s						
AAK	Ala-Archa	62.34	319	P	P	02 25 16.8	-0.9
KBL	Kabul	63.01	309	P	P	02 25 21.2	-1.2
KBL				IAmb	IAmb	02 25 27.1	
	comp=Z,11nm,0.8s						
SEM	Semipalatinsk	63.10	329	eP	P	02 25 22.4	-0.3
	comp=Z,3.2nm,0.8s,baz=329						
ZAA0	Zalesovo Array	63.17	334	P	P	02 25 22.3	-0.5
ZALV	Zalesovo Beam	63.17	334	P	P	02 25 22.0	-0.8
	comp=Z,7.6nm,0.7s,baz=137,slow=4.9,SNR=17						
ZALV	Zalesovo Beam	63.17	334	P	P	02 25 22.1	-0.7
BTLS	Baital	63.76	321	eP	P	02 25 25.9	-1.0
	baz=321						
KURK	Kurchatov	64.12	329	P	P	02 25 28.8	-0.3
IUG	Iuzhnay	65.11	317	eP	P	02 25 35.2	-0.7
	comp=Z,3.2nm,0.5s,baz=317						
KK31	Karatay Array	65.18	318	P	P	02 25 35.4	-0.9
KKAR	Karatay Array	65.18	318	P	P	02 25 35.5	-0.8
KKAR	Karatay Array	65.18	318	P	P	02 25 35.4	-0.8
SEY	Seymchan	65.28	13	P	P	02 25 38.3	+1.9
	comp=Z,7.6nm,0.9s,baz=224,slow=3.9,SNR=13						
BRZS	Berezniki	66.96	326	eP	P	02 25 47.5	-0.1
	comp=Z,3.8nm,0.5s,baz=326						
BRVK	Borovoye	69.75	328	P	P	02 26 04.5	-0.4
BRVK				IAmb	IAmb	02 26 10.1	
	comp=Z,29nm,1.3s						
TIXI	Tiksi	71.05	1	P	P	02 26 11.8	-0.6
TIXI				IAmb	IAmb	02 26 16.2	
	comp=Z,22nm,1.2s						
SOCY	Socotra	72.42	283	P	P	02 26 21.0	-0.9
SOCY				IAmb	IAmb	02 26 23.9	
	comp=Z,16nm,0.8s						
GEYT	Alibeck	72.44	310	P	P	02 26 21.9	+0.3
	comp=Z,2.5nm,0.5s,baz=185,slow=7.1,SNR=6.4						
GEYT	Alibeck	72.44	310	P	P	02 26 20.9	-0.6
NRIK	Noril'sk	73.39	347	P	P	02 26 26.9	+0.5
	comp=Z,7.3nm,0.6s,baz=124,slow=5.9,SNR=15						
NRIK	Noril'sk	73.39	347	P	P	02 26 26.5	0.0
NRIK				IAmb	IAmb	02 26 29.2	
	comp=Z,80nm,2.0s						
ABKAR	Akbulak array	74.25	321	P	P	02 26 31.6	-0.3
ARU	Arti	77.32	328	P	P	02 26 48.8	-0.5
ARU				IAmb	IAmb	02 26 52.6	
	comp=Z,13nm,0.8s						
UMR	Umm Al-Rimmam	79.65	300	eP		02 27 02.1	
OPO	Ambohidratompo	79.67	251	LR	LR	02 59 43.0	
	comp=Z,140nm,19.6s,baz=304,slow=34						
TNA	Tin City	79.77	23	P	P	02 27 03.7	+1.1
	baz=248						
MIB	Mutribah	80.00	300	eP		02 27 03.6	
SDPT	Sand Point	80.19	34	P	P	02 27 05.3	+0.3
RST	Umm Al-Ruwaisa	80.27	300	eP		02 27 04.8	
VNDA	Vanda	80.34	173	P	P	02 27 06.0	+0.5
	comp=Z,7.7nm,0.9s,baz=314,slow=7.5,SNR=13						
VNDA				LR	LR	03 01 43.3	
	comp=Z,154nm,20.9s,baz=356,slow=35						
VNDA	Vanda	80.34	173	P	P	02 27 06.0	+0.5
VNDA				IAmb	IAmb	02 27 21.1	
	comp=Z,41nm,1.6s						
RAYN	Ar Rayn	81.18	294	P	P	02 27 10.9	-0.2
LGD	Lagodekhi	82.11	312	P	P	02 27 16.4	+0.8
DDFL	Dedoflistskaro	82.16	312	P	P	02 27 19.4	+3.5
RDOG	Red Dog Mine	82.49	21	P	P	02 27 18.5	+1.5
RDOG				IAmb	IAmb	02 27 20.5	
	comp=Z,40nm,1.5s						
ATD	Arta Tunnel	83.30	281	P	P	02 27 21.5	-0.9
ATD				IAmb	IAmb	02 27 26.5	
	comp=Z,32nm,1.1s						
PNSH	Pansheti	83.39	313	P	P	02 27 20.3	-2.2
KZRT	Kazreti	83.44	311	P	P	02 27 16.0	-6.6
TTA	Tatalina	84.03	27	P	P	02 27 25.5	+0.4
GEVA	Gevas	84.22	308	P	P	02 27 26.2	-0.6
KBZ	Khabaz	84.73	314	P	P	02 27 29.7	+0.7
	comp=Z,5.1nm,0.9s,baz=70,slow=1.3,SNR=12						
KDAK	Kodiak Island	84.92	32	P	P	02 27 30.5	+0.8
	comp=Z,22nm,0.8s,baz=307,slow=2.9,SNR=12						
A21K	Barrow	85.44	18	P	P	02 27 33.3	+1.3
	baz=258						
A21K	Barrow	85.44	18	P	P	02 27 32.6	+0.6
IMAR	Indian Mountai	85.51	24	P	P	02 27 32.7	+0.2
MARD	Mardin	85.97	307	P	P	02 27 35.0	-0.5
MARD				IAmb	IAmb	02 27 40.3	
	comp=Z,12nm,0.6s						
MLY	Manley	86.64	25	P	P	02 27 38.7	+0.6
	baz=264						
RC01	Rabbit Creek A	86.72	29	P	P	02 27 38.9	+0.4
	baz=265						
COLD	Coldfoot	87.08	23	P	P	02 27 40.8	+0.7
	baz=264						
COLD	Coldfoot	87.08	23	P	P	02 27 40.5	+0.4
COLD				IAmb	IAmb	02 27 43.7	
	comp=Z,12nm,0.9s						
I23K	Minto, Yukon-K	87.23	25	P	P	02 27 41.6	+0.7
	baz=265						
I23K	Minto, Yukon-K	87.23	25	P	P	02 27 41.2	+0.3
I23K				IAmb	IAmb	02 27 43.1	
	comp=Z,15nm,1.1s						
MCK	McKinley	87.30	26	P	P	02 27 41.5	+0.2
	baz=266						
NEA2	Nenana	87.31	25	P	P	02 27 41.8	+0.5
	baz=266						
TOLK	Toolik Lake Re	87.44	21	P	P	02 27 43.3	+1.4
	baz=265						
TOLK	Toolik Lake Re	87.44	21	P	P	02 27 42.3	+0.4
TOLK				IAmb	IAmb	02 27 44.5	
	comp=Z,12nm,1.0s						
WRH	Wood River Hil	87.72	26	P	P	02 27 43.0	-0.2
CCB	Clear Creek Bu	87.85	25	P	P	02 27 42.9	-1.0
CCB				IAmb	IAmb	02 27 50.3	
	comp=Z,14nm,1.3s						
KLMR	Klimovskoe	87.89	331	eP	P	02 27 46.0	+1.9
KLMR				AMP		02 27 57.8	
	comp=Z,11nm,0.7s						
HDA	Harding Lake	88.21	26	P	P	02 27 44.6	-1.1
	baz=268						
HDA	Harding Lake	88.21	26	P	P	02 27 44.9	-0.8
HDA				IAmb	IAmb	02 27 46.0	
	comp=Z,9.3nm,0.9s						
IL31		88.25	25	P	P	02 27 44.9	-0.8
IL31				IAmb	IAmb	02 30 51.4	
	comp=Z,36nm,1.9s						
ILAR	Eielson Array	88.25	25	P	P	02 27 44.9	-1.0
	comp=Z,2.2nm,0.5s,baz=248,slow=4.7,SNR=29						
ILAR	Eielson Array	88.25	25	P	P	02 27 44.7	-1.2
M24K	Tolsona, Glenn	88.47	28	P	P	02 27 47.6	+0.6
	baz=268						
KMBO	Kilima Mbogo	88.87	269	P	P	02 27 50.3	+0.2
	comp=Z,2.7nm,0.7s,baz=53,slow=8.9,SNR=6.3						
N25K	Chitina, Valde	89.21	29	P	P	02 27 51.6	+1.1
	baz=270						
SYO	Syowa Base	89.22	201	⇑ePcP	PcP	02 27 53.2	+1.6
BMAR	Burnt Mountain	89.26	23	P	P	02 27 50.9	+0.4
SCRK	Sand Creek	89.50	26	P	P	02 27 52.1	+0.3
	baz=270						
QSPA	South Pole Qui	90.44	180	P	P	02 27 56.7	+0.5
BCAR	Beaver Creek A	90.50	27	P	P	02 27 56.9	+0.4
BRTR	Keskin Array B	91.58	310	P	P	02 28 02.1	0.0
	comp=Z,1.3nm,0.6s,baz=112,slow=3.9,SNR=1.9						
BRTR	Keskin Array B	91.58	310	P	P	02 28 00.3	-1.9
EPYK	Eagle Plains	92.42	24	P	P	02 28 05.5	+0.3
	baz=277						
EPYK	Eagle Plains	92.42	24	P	P	02 28 05.9	+0.7
EPYK				IAmb	IAmb	02 28 07.5	
	comp=Z,16nm,1.1s						
ARCES	ARCESS Array B	93.23	340	P	P	02 28 08.4	-0.5
	comp=Z,10nm,1.1s,baz=69,slow=6.6,SNR=10.0						
ARCES	ARCESS Array B	93.23	340	P	P	02 28 08.7	-0.3
INK	Inuvik	93.36	21	P	P	02 28 09.6	+0.1
	baz=275,slow=3.9						
INK	Inuvik	93.36	21	P	P	02 28 09.5	+0.1
AKASG	Malin Array Be	93.98	321	P	P	02 28 13.1	+0.4
	comp=Z,0.3nm,0.4s,baz=72,slow=4.7,SNR=3.4						
FINES	FINESS Array B	94.35	332	P	P	02 28 15.0	+0.9
	comp=Z,2.0nm,0.7s,baz=90,slow=5.7,SNR=7.2						
FINES	FINESS Array B	94.35	332	P	P	02 28 13.2	-1.0
VRI	Vrincioaia	96.17	316	⇓P	P	02 28 20.8	-2.2
PLOR	Plostina	96.23	316	⇓P	P	02 28 29.5	+6.3
C36M	Paulatuk	96.43	20	P	P	02 28 23.7	+0.2
	baz=289						
C36M	Paulatuk	96.43	20	P	P	02 28 23.8	+0.3
MLR	Muntele Rosu	96.77	316	⇑P	P	02 28 26.2	+0.4
BURAR	Bucovina Array	96.97	318	⇑P	P	02 28 27.0	+0.4
BURAR	Bucovina Array	96.97	318	P	P	02 28 26.2	-0.4
BUR08	Bucovina Ar. S	96.97	318	P	P	02 28 26.5	-0.1
KOLS	Kolonicke sedl	98.69	320	ePDIFF	Pdif	02 28 40.1	+5.9
CRVS	Cervenica-Dubn	99.22	320	ePDIFF	Pdif	02 28 41.4	+4.8
SNAA	Sanae	101.97	195	Pdiff	Pdif	02 28 53.0	+4.7
YKA	Yellowknife Ar	102.66	25	P	Pdif	02 28 52.2	+0.7
	comp=Z,4.9nm,1.2s,baz=301,slow=4.1,SNR=13						
YKA				PKiKP	PKiKP	02 33 12.4	+0.3
	comp=Z,0.3nm,0.6s,baz=327,slow=1.3,SNR=6.3						
YKA				PKKPbc	PKKPbc	02 44 50.1	-3.2
	comp=Z,0.3nm,0.6s,baz=106,slow=3.1,SNR=4.8						
VNA2	Neumayer--Watz	103.58	194	Pdiff	Pdif	02 28 56.7	+1.2
CLL	Collm	103.85	324	ePP	PKiKP	02 33 13.0	-1.7
VNA3	Neumayer Olymp	103.90	193	Pdiff	Pdif	02 28 57.0	+0.1
VNA1	Neumayer--Stat	103.97	194	Pdiff	Pdif	02 28 56.9	-0.3
PDAR	Pinedale Array	114.16	42	PKP	PKiKP	02 33 35.2	+0.6
	comp=Z,0.5nm,0.7s,baz=252,slow=1.7,SNR=5.2						
PDAR				PKKPbc	PKKPbc	02 44 14.6	-2.0
	comp=Z,0.2nm,0.4s,baz=108,slow=6.0,SNR=2.4						
X16A	Lo Mia Camp, P	116.01	51		PKPdf	02 33 38.2	-0.2
RSSD	Black Hills	117.08	38		PKPdf	02 33 40.0	-0.3
ULM	Lac du Bonnet	118.06	29	PKP	PKPdf	02 33 41.3	-0.3
	comp=Z,3.3nm,0.7s,baz=271,slow=2.4,SNR=8.7						
ULM	Lac du Bonnet	118.06	29	PKPdf	PKPdf	02 33 41.1	-0.5
ANMO	Albuquerque	119.62	49		PKPdf	02 33 45.0	-0.3
F33A	5 Mile Ranch,	120.65	33		PKPdf	02 33 46.6	-0.1
EYMN	Ely	121.73	29	PKPdf	PKiKP	02 33 48.9	0.0
MNTX	Cornudas Mount	121.74	52	PKPdf	PKPdf	02 33 49.1	-0.1
ECSD	EROS Data Cent	121.76	35		PKPdf	02 33 48.9	0.0
F36A	Milaca	122.12	32	PKPdf	PKPdf	02 33 49.5	-0.1
E38A	The Farm, Brul	122.63	30	PKPdf	PKPdf	02 33 50.6	+0.1
MSTX	Muleshoe	122.79	48		PKPdf	02 33 50.9	-0.4
TORD	Torodi Ar. Bea	123.27	286	PKKPbc	PKKPbc	02 43 43.0	+0.5
	comp=Z,1.7nm,0.8s,baz=285,slow=4.1,SNR=7.9						
TX31	Lajitas Ar. Si	124.02	54		PKPdf	02 33 53.5	-0.3
TX32	Lajitas Array	124.02	54		PKPdf	02 33 53.3	-0.5
TXAR	Lajitas Array	124.02	54	PKP	PKiKP	02 33 54.7	+0.6
	comp=Z,1.7nm,0.7s,baz=204,slow=1.0,SNR=20						
TXAR	Lajitas Array	124.02	54	PKPdf	PKPdf	02 33 53.5	-0.3
KSU1	Kansas State U	124.47	40	PKPdf	PKPdf	02 33 54.4	+0.1
JFWS	Jewell Farm	125.84	32		PKPdf	02 33 56.9	+0.1
L40A	Anamosa	125.88	34	PKPdf	PKPdf	02 33 57.0	+0.2
P38A	Dawn	126.09	38		PKPdf	02 33 57.3	0.0
E46A	Sault Ste Mari	126.21	26	PKPdf	PKPdf	02 33 57.3	-0.1
JCT	Junction City	126.59	51	PKPdf	PKPdf	02 33 58.0	-0.6
S39A	Bolivar	127.39	39	PKPdf	PKPdf	02 33 59.7	-0.2
R40A	Maddies Statio	127.69	38		PKPdf	02 34 00.5	0.0
U40A	Yellville	128.49	40		PKPdf	02 34 02.1	0.0
L48A	N Adams	129.53	29		PKPdf	02 34 03.8	-0.1
OLIL	Olney	129.88	35		PKPdf	02 34 04.3	-0.3
KIC	Kosan Boka	130.48	279	ePKP2	PKPdf	02 34 06.8	+0.4
	comp=Z,6.9nm,0.8s						
DBIC	Dimbokro	130.56	279	PKP	PKiKP	02 34 07.3	0.0
	comp=Z,2.8nm,0.6s,baz=20,slow=3.2,SNR=5.9						
DBIC	Dimbokro	130.56	279	PKPdf	PKPdf	02 34 05.1	-1.4
TIC	Toumodi	130.72	279	ePKP2	PKiKP	02 34 07.5	-0.3
LIC	Lamto	130.78	279	ePKP2	PKiKP	02 34 08.0	+0.1
	comp=Z,58nm,1.6s						
O49A	Covington	130.89	31		PKPdf	02 34 06.3	-0.1
PLCA	Paso Flores	137.20	161	PKP	PKiKP	02 34 19.9	-0.4
	comp=Z,2.5nm,0.8s,baz=316,slow=3.5,SNR=4.6						
PLCA	Paso Flores	137.20	161		PKPdf	02 34 17.9	-0.5
ROC1	El Roble	143.91	155		PKPdf	02 34 30.4	-0.5
VA03	San Esteban	144.29	156		PKPdf	02 34 31.4	0.0
CO02	Combarbal	145.44	154	PKPdf	PKPbc	02 34 33.2	-0.3
CO03	El Pedregal	145.88	154		PKPdf	02 34 34.2	0.0
ZON	Zonda	146.11	157		PKPdf	02 34 34.4	-0.1
GO04	Tololo Observa	146.40	153		PKPdf	02 34 35.5	+0.2
CO01	Juntas del Tor	146.89	154		PKPbc	02 34 37.7	-0.3
LCO	Las Campanas	147.43	152		PKPab	02 34 40.7	-0.8
AC05	El Transito	147.78	152		PKPbc	02 34 40.1	-0.3
AC02	Maricunga	150.00	152	PKPdf	PKPdf	02 34 40.6	-1.0
GO02	Mina Guanaco	151.18	149	PKPdf	PKPdf	02 34 42.4	-0.9
PB14	IPOC Station P	151.19	148	PKPdf	PKPdf	02 34 42.1	-1.2
CPUP	Villa Florida	154.12	173	PKP	PKPdf	02 34 47.8	+0.7
	comp=Z,2.9nm,0.9s,baz=225,slow=1.4,SNR=4.6						
CPUP				PKPbc	PKiKP	02 34 56.1	+0.8
	comp=Z,7.1nm,1.0s,baz=164,slow=3.6,SNR=9.6						
CPUP				PKPab	PKPab	02 35 10.2	+1.5
	comp=Z,5.5nm,0.8s,baz=147,slow=4.6,SNR=5.8						
CPUP	Villa Florida	154.12	173	PKPdf	PKPdf	02 34 46.3	-0.8
NNA	Nana	154.53	117	PKPdf	PKPdf	02 34 47.3	-0.8
LPAZ	La Paz	158.95	139	PKP	PKPdf	02 34 55.2	+0.8
	comp=Z,3.0nm,0.9s,baz=146,slow=2.1,SNR=6.6						
LPAZ	La Paz	158.95	139	PKPdf	PKPdf	02 34 52.8	-1.6
SDV	Santo Domingo	160.88	60	PKPdf	PKPdf	02 34 54.9	-1.3
SAML	Samuel	167.51	132		PKPdf	02 35 01.2	-0.7

INET ***17*** *02:19:08.4, 12°.44N×87°.75W, h20^{km}, MW3.4*

SNET 17 02:19:10.2±1.0**, 12°.56N×87°.84W, h57**^{km}±14^{km}**, ML3.6,**
Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	Conchagua	0.71	1	eP	Pn	02 19 24.3	-0.3
CNCH				eS	Sn	02 19 36.7	+1.6
LCND	La Caada	0.75	357	eP	Pn	02 19 24.6	-0.3
LCND				eS	Sn	02 19 36.1	+0.5
LCND				IAML		02 19 39.5	
	comp=Z,2µm,0.3s						
LCY	Lacayo	0.96	333	eP	Pn	02 19 28.1	+0.3
LCY				eS	Sn	02 19 42.6	+1.8
RANC	El Ranchito	0.97	334	eP	Pn	02 19 28.2	+0.3
RANC				eS	Sn	02 19 42.2	+1.2
PACA	Pacayal	1.02	333	eP	Pn	02 19 28.9	+0.4
PACA				eS	Sn	02 19 43.5	+1.5
TECA	Tecapa	1.13	325	eP	Pn	02 19 30.2	+0.2
TECA				eS	Sn	02 19 45.7	+1.0
UESV	Universidad de	1.41	319	eP	Pn	02 19 34.3	+0.6
UESV				eS	Sn	02 19 51.8	+0.5
COEG	Centro de Oper	1.46	316	eP	Pn	02 19 34.4	0.0
COEG				eS	Sn	02 19 52.8	+0.3
COEG				IAML		02 19 58.4	
	comp=Z,602nm,0.3s						
TGUH	Tegucigalpa,Un	1.59	20	eP	Pn	02 19 35.9	-0.3
TGUH				eS	Sn	02 19 56.4	+0.6
LFRS	El Faro	1.59	312	eP	Pn	02 19 36.5	+0.3
LFRS				eS	Sn	02 19 56.8	+1.1
LBRS	Las Brisas	1.65	315	eP	Pn	02 19 37.5	+0.5
BOQS	Boqueron	1.82	310	eP	Pn	02 19 40.2	+0.8
BOQS				eS	Sn	02 20 03.9	+2.3
PMON	Piamonte	1.83	309	eP	Pn	02 19 40.2	+0.7
PMON				eS	Sn	02 20 03.4	+1.7
JAYA	Jayaque - finc	1.91	305	eP	Pn	02 19 40.4	-0.1
JAYA				eS	Sn	02 20 04.1	+0.6
JAYA				IAML		02 20 08.5	
	comp=Z,487nm,0.2s						
TACO	Tacachico	2.03	314	eP	Pn	02 19 42.7	+0.6
CEVE	Cerro Verde	2.14	306	eP	Pn	02 19 44.2	+0.4
CEVE				IAML		02 20 15.3	
	comp=Z,557nm,0.2s						
MTO3	Montecristo	2.35	321	eP	Pn	02 19 46.8	+0.2

IDC ***17*** *02:29:47.3±0.6, 39°.64N×143°.23E, h0^{km}, mb4.5/34, mb1 4.6/42, mb1mx4.5/53, mbtmp4.5/42, ML3.4/8, Error ellipse: s-maj=13.7km s-min=11.3km az=132.0*

BJI ***17*** *02:29:48.5±0.0, 39°.62N×143°.05E, h20^{km}, mB5.2/28, mb4.9/70, Ms4.6/32, Ms7 4.6/32*

JMA ***17*** *02:29:48.6±0.2, 39°.63N×143°.33E, h24^{km}±4^{km}, M4.7*

JMA Felt I J1.

NIED ***17*** *02:29:48.6, 39°.63N×143°.33E, h24^{km}, MW4.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}4.25; $M_{\theta\theta}$-0.01; $M_{\phi\phi}$-4.24; $M_{r\theta}$3.17; $M_{\theta\phi}$-2.10; $M_{\phi r}$7.57; Fault plane solution: $M_0$9.45000×10^{15} NP1:ϕ_s23.00000°, δ75.00000°, λ90.00000°. NP2:ϕ_s202.00000°, δ15.00000°, λ89.00000°.*

MOS ***17*** *02:29:50.7±1.0, 39°.73N×143°.12E, h32^{km}, mb5.0/64 Error ellipse: s-maj=6.3km s-min=3.9km az=112.6*

BGR ***17*** *02:29:52.0±0.0, 39°.64N×144°.35E, h33^{km}, mb5.2, Ms4.8*

NEIC ***17*** *02:29:52.1±0.9, 39°.66N±0°.05×142°.98E±0°.09, h29^{km}±5^{km}, mb4.8/83, Error ellipse: s-maj=9.7km s-min=6.9km az=106.0*

ISC 17 02:29:50.9±0.6**, 39°.65N**±0°.04×**143°.30E**±0°.04**, h27**^{km}±3^{km}**,**
h27^{km}:pP-P, n424, σ1^{s}.**45**/452**, mb4.9**/162**, MS4.5**/10**,**
26C-26D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	1.15	285	P	Pn	02 30 09.9	-1.3
JTH				eS	Sn	02 30 25.5	-0.5
MIYJ	Miyakonagasawa	1.15	267	P	Pn	02 30 09.4	-1.8
MIYJ				eS	Sn	02 30 25.0	-1.0
JKEN	Kujiedanarisaw	1.35	295	P	Pn	02 30 12.2	-1.7
OFUJ	Ofunato	1.39	246	P	Pn	02 30 13.3	-1.2
JANG	Nango	1.55	298	P	Pn	02 30 15.3	-1.5
JOM	Ohasama	1.56	264	P	Pn	02 30 16.2	-0.7
JOM				eS	Sn	02 30 35.8	-0.5
JMK	Ichinoseki	1.76	247	P	Pn	02 30 18.9	-0.7
JMK				eS	Sn	02 30 41.4	+0.3
JIO	Ouri	1.93	233	P	Pn	02 30 20.7	-1.3
JTM	Tenmabayashi	2.06	304	P	Pn	02 30 23.1	-0.6
JTM	Tenmabayashi	2.06	304		Pn	02 30 23.2	-0.4
JTM				Sn	Sb	02 30 51.1	-1.6
JRG	Rokugo	2.08	264	P	Pn	02 30 23.8	-0.2
JAH	Hinai	2.12	286	P	Pn	02 30 24.6	0.0
ERM	Erimo	2.37	357	P	Pn	02 30 28.3	+0.3
ERM	Erimo	2.37	357	Pn	Pn	02 30 28.3	+0.3
JEM	Erimo	2.37	357	P	Pn	02 30 28.1	+0.1
JYK	Kaneyama	2.40	253	P	Pn	02 30 28.3	-0.1
JOU	Okura	2.42	239	P	Pn	02 30 28.4	-0.3
JOT	Ohata	2.44	316	P	Pn	02 30 28.8	-0.2
JMM	Marumori	2.65	229		Pn	02 30 30.5	-1.3
JNBK	Urakawa-nobuka	2.66	351	P	Pn	02 30 32.3	+0.3
JNBK				eS	Sn	02 31 04.4	+1.0
JEW	Eniwo	3.48	337		Pn	02 30 42.8	-0.5
NMR	Nemuro--Hokkai	4.14	25	eP	Pn	02 30 50.6	-1.7
NMR				eS	Sn	02 31 35.0	-4.8
JYT	Yasato	4.21	217	Pn	Pn	02 30 52.6	-0.6
JYT				Sn	Sn	02 31 39.2	-2.3
JSD	Sado	4.25	249	Pn	Pn	02 30 52.5	-1.4
ASAJ	Asahikawa	4.50	353	Pn	Pn	02 30 57.6	+0.4
	3.8nm,0.3s,baz=210,slow=13,SNR=44						
ASAJ				Sn	Sn	02 31 49.4	+0.8
	7.6nm,0.3s,baz=81,slow=4.5,SNR=3.7						
ASAJ				Lg	Lg	02 32 09.6	
	6.8nm,0.3s,baz=54,slow=32,SNR=6.7						
JKA	Kamikawa-asahi	4.50	354	Pn	Pn	02 30 57.5	+0.3
GRPR	Tuman	4.72	22	eP	Pn	02 31 00.4	+0.2
GRPR				eS	Sn	02 31 48.9	-5.1
GRPR				pmax	pmax		
	comp=N,86nm,0.1s						
GRPR				pmax	pmax		
	comp=E,93nm,0.1s						
GRPR				pmax	pmax		
	comp=Z,269nm,0.1s						
GRPR				smax	smax		
	comp=N,1µm,0.4s						
GRPR				smax	smax		
	comp=E,2µm,0.5s						
YUK	Yuzh-Kuril'sk	4.78	23	eP	Pn	02 30 59.7	-1.4
YUK				eS	Sn	02 31 51.9	-3.7
YUK				pmax	pmax		
	comp=N,222nm,0.5s						
YUK				pmax	pmax		
	comp=Z,236nm,0.5s						
YUK				pmax	pmax		
	comp=E,86nm,0.1s						
YUK				smax	smax		
	comp=N,1µm,0.4s						
YUK				smax	smax		
	comp=E,1µm,0.4s						
MJAR	Matsushiro Arr	5.08	234	Pn	Pn	02 31 05.9	+0.7
	comp=E,1.2nm,0.3s,baz=40,slow=12,SNR=136						
MJAR	Matsushiro Arr	5.08	234		Pn	02 31 04.1	-1.1
MAJO	Matsushiro	5.08	234	c iP	Pn	02 31 05.7	+0.5
MAJO	Matsushiro	5.08	234	Pn	Pn	02 31 04.4	-0.8
MAT	Matsushiro	5.08	234	P	Pn	02 31 06.0	+0.8
MAT				eS	Sn	02 32 02.5	-0.5
MJB9	Matsu-Tunnel	5.08	234		Pn	02 31 04.4	-0.8
JGF	Kuroka	6.21	231	Pn	Pn	02 31 19.1	-1.7
KUR	Kuril'sk	6.52	30	eP	Pn	02 31 24.9	-0.1
KUR				eS	Sn	02 32 35.0	-3.5
KUR				pmax	pmax		
	comp=E,136nm,0.5s						
KUR				pmax	pmax		
	comp=Z,214nm,0.5s						
KUR				pmax	pmax		
	comp=N,64nm,0.1s						
INU	Inuyama	6.59	231	Pn	Pn	02 31 24.4	-1.5
JHJ	Hachijo jima 2	7.11	205	Pn	Pn	02 31 32.1	-1.0
	comp=N,13nm,0.3s,baz=0.0,slow=9.1,SNR=1.6						
JHJ				Sn	Sn	02 32 45.6	-7.4
	comp=N,14nm,0.3s,baz=270,slow=20,SNR=1.8						
YSS	Yuzh-Sakhalins	7.32	357	eP	Pn	02 31 36.4	+0.5
YSS				eS	Sn	02 32 55.3	-2.7
YSS				pmax	pmax		
	comp=Z,30nm,1.2s						
YSS	Yuzh-Sakhalins	7.32	357	Pn	Pn	02 31 36.4	+0.5
TEY	Ternei	7.32	320	⇑iP	Pn	02 31 38.7	+2.7
TEY				pmax	pmax		
	comp=N,70nm,0.7s						
TEY				pmax	pmax		
	comp=E,80nm,0.7s						
TEY				pmax	pmax		
	comp=Z,80nm,0.8s						
JWT	Wachi	7.64	238	Pn	Pn	02 31 38.5	-2.0
JHS	Saijyo	9.35	243	Pn	Pn	02 32 02.4	-1.5
USA0B	Ussuriysk Arra	9.58	302	ceP	Pn	02 32 08.5	+1.5
USA0B	Ussuriysk Arra	9.58	302		Pn	02 32 05.7	-1.3
USRK	Ussuriysk Ar.	9.58	302	Pn	Pn	02 32 07.8	+0.8
	baz=116,slow=14,SNR=21						
USRK	Ussuriysk Ar.	9.58	302	Pn	Pn	02 32 05.4	-1.5
MDJ	Mudanjiang	11.32	300	Pn	Pn	02 32 29.1	-1.7
JNU	Nakatsue	11.94	241	Pn	Pn	02 32 38.9	-0.4
	comp=Z,0.2nm,0.3s,baz=23,slow=15,SNR=2.7						
GRNR	Gornyy	12.13	339	⇓iP	Pn	02 32 42.2	+0.4
GRNR				eS	Sn	02 34 57.5	+1.5
GRNR				pmax	pmax		
	comp=N,7.0nm,0.9s						
GRNR				pmax	pmax		
	comp=E,7.0nm,0.9s						
GRNR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
GRNR				smax	smax		
	comp=N,3.0nm,0.6s						
GRNR				MLR	MLR		

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      comp=E,570nm,20.0s
GRNR                             MLR     MLR
      comp=N,540nm,14.0s
GRNR                             MLR     MLR
      comp=Z,970nm,15.0s
KSRS  Korea Array      12.24 265 Pn      Pn       02 32 44.6 +1.2
      comp=Z,0.4nm,0.3s,baz=84,slow=13,SNR=16
KLR   Kul'dur          12.63 323 Pn      Pn       02 32 48.5 -0.2
      comp=Z,0.2nm,0.3s,baz=131,slow=14,SNR=12
SKR   Severo-Kuril's   14.24  35 eP      Pn       02 33 10.6  0.0
SKR                              pmax    pmax
      comp=Z,143nm,1.2s
SKR                              MLR     MLR
      comp=Z,1µm,16.0s
SKR                              MLR     MLR
      comp=Z,2µm,14.0s
PETK  Petropavlovsk-   16.68  31 Pn      Pn       02 33 42.9 +0.2
      comp=Z,0.1nm,0.3s,baz=205,slow=6.6,SNR=6.9
PETK  Petropavlovsk-   16.68  31 P       Pn       02 33 43.4 +0.8
PETK  Petropavlovsk-   16.68  31         Pn       02 33 43.4 +0.8
DL2   Dalian           16.80 274 P       Pn       02 33 44.6 +0.4
DL2                              pmax    pmax
      comp=Z,29nm,0.8s
ZEA   Zeya             17.82 328 eP      Pn       02 33 53.9 -2.9
ZEA                              pmax    pmax
      comp=N,20nm,0.8s
ZEA                              pmax    pmax
      comp=E,10.0nm,0.8s
ZEA                              pmax    pmax
      comp=Z,30nm,0.7s
HIA   Hailar           19.30 308 P       P        02 34 12.0 -1.7
HIA                              pmax    pmax
      comp=Z,24nm,0.7s
HIA   Hailar           19.30 308 P       P        02 34 12.0 -1.7
SSE   Sheshan          19.92 251 P       P        02 34 18.9 -1.6
SSE                              IAmb    IAmb     02 34 33.4
      comp=Z,40nm,1.0s
MA2   Magadan          20.50  11 P       P        02 34 27.2 +0.6
      comp=Z,38nm,0.7s,baz=192,slow=12,SNR=22
MA2   Magadan          20.50  11deP      P        02 34 27.2 +0.6
MA2                              pmax    pmax
      comp=Z,37nm,0.7s
MA2   Magadan          20.50  11 P       Pn       02 34 27.8 -1.1
MA2                              IAmb    IAmb     02 34 28.6
      comp=Z,40nm,0.7s
BJI   Beijing          20.81 280 P       P        02 34 27.4 -2.7
BJI                              pmax    pmax
      comp=Z,16nm,1.1s
BJI                              LR      LR
      comp=Z,410nm,14.8s
BJI                              LR      LR
      comp=Z,1µm,17.4s
BJI                              LR      LR
      comp=Z,630nm,18.0s
BJT   Baijiatuau       20.82 280 P       P        02 34 27.5 -2.7
BJT                              pmax    pmax
      comp=Z,16nm,0.8s
BJT   Baijiatuau       20.82 280 P       P        02 34 27.4 -2.7
TIA   Tai'an           20.91 269 P       P        02 34 28.6 -2.6
TIA                              pmax    pmax
      comp=Z,8.0nm,1.1s
TIA                              LR      LR
      comp=Z,540nm,12.8s
TIA                              LR      LR
      comp=Z,1µm,13.5s
TIA                              LR      LR
      comp=Z,1µm,12.8s
NJ2   Nanjing          21.18 257 eP      P        02 34 31.8 -2.3
NJ2                              pmax    pmax
      comp=Z,17nm,0.5s
YAK   Yakutsk          23.91 344 eP      P        02 35 00.1 -2.0
YAK                              e                02 38 43.0
YAK                              eS      S        02 39 16.3 -0.2
YAK                              eSS     SnSn     02 39 55.9 -1.1
YAK                              e                02 46 08.9
YAK                              pmax    pmax
      comp=Z,50nm,0.8s
YAK                              pmax    pmax
      comp=N,14nm,0.9s
YAK                              pmax    pmax
      comp=E,6.0nm,0.9s
YAK                              smax    smax
      comp=N,78nm,2.2s
YAK                              smax    smax
      comp=E,44nm,2.0s
YAK                              MLR     MLR
      comp=Z,553nm,19.0s
YAK                              MLR     MLR
      comp=N,544nm,15.0s
YAK                              MLR     MLR
      comp=E,242nm,18.0s
YAK   Yakutsk          23.91 344 P       P        02 35 00.6 -1.5
SEY   Seymchan         23.95  10 P       P        02 35 03.1 +0.6
      comp=E,34nm,0.9s,baz=191,slow=7.1,SNR=68
CIT   Chita            23.95 311 eP      P        02 35 00.4 -2.4
CIT                              e                02 35 09.4
CIT                              e                02 35 33.2
CIT                              pmax    pmax
      comp=Z,116nm,1.2s
HHC   Hu-ho-hao-te     24.19 283 eP      P        02 35 05.3 +0.1
HHC                              pmax    pmax
      comp=Z,8.0nm,1.2s
HHC                              pmax    pmax
      comp=Z,390nm,7.3s
HHC                              LR      LR
      comp=Z,320nm,20.2s
HHC                              LR      LR
      comp=Z,2µm,16.9s
HHC                              LR      LR
      comp=Z,2µm,16.3s
SSLB  Suanglung        24.63 237 P       P        02 35 07.8 -1.4
SSLB                             IAmb    IAmb     02 35 08.4
      comp=Z,27nm,0.8s
TPUB  Ta-pu            25.18 236 P       P        02 35 12.9 -1.3
WHN   Wuhan            25.28 258⇑iP      P        02 35 14.3 -0.7
WHN                              pP      pwP      02 35 23.9 -0.8
WHN                              sP      sP       02 35 29.6 +4.3
WHN                              pmax    pmax
      comp=Z,120nm,0.8s
BTO   Baotou           25.39 283 eP      P        02 35 13.9 -2.1
BOD   Bodaibo          26.21 324 eP      P        02 35 22.4 -0.7
BOD                              pmax    pmax
      comp=Z,38nm,1.0s
ULN   Ulaanbaatar      27.24 300c iP     P        02 35 32.6 -0.1
ULN                              pmax    pmax
      comp=Z,41nm,1.3s
ULN   Ulaanbaatar      27.24 300 P       P        02 35 31.4 -1.3
ULN                              IAmb    IAmb     02 35 33.9
      comp=Z,37nm,1.1s
SONM  Songino Array    27.68 299 P       P        02 35 37.0 +0.3
      comp=Z,15nm,0.8s,baz=93,slow=8.8,SNR=79
SONM  Songino Array    27.68 299 P       P        02 35 37.0 +0.3
SONM  Songino Array    27.68 299 P       P        02 35 35.5 -1.1
SONM                             IAmb    IAmb     02 35 39.4
      comp=Z,14nm,0.9s
XAN   Xi'an            27.97 269 P       P        02 35 37.8 -1.5
XAN                              pP      pP       02 35 42.9 -3.7
XAN                              pmax    pmax
      comp=Z,19nm,1.3s
XAN                              LR      LR
      comp=Z,730nm,17.1s
XAN                              LR      LR
      comp=Z,1µm,16.5s
XAN                              LR      LR
      comp=Z,2µm,16.8s
XAN   Xi'an            27.97 269 P       P        02 35 37.7 -1.5
XAN                              pmax    pmax
      comp=Z,12nm,0.8s
XAN   Xi'an            27.97 269 P       P        02 35 37.7 -1.5
XAN                              IAmb    IAmb     02 35 40.0
      comp=Z,12nm,0.8s
H11N2 WAKE ISLAND Hy   28.38 128 T       T        03 05 33.1
      baz=321,slow=74
H11N1 WAKE ISLAND Hy   28.39 128 T       T        03 05 32.0
      baz=321
H11N3 WAKE ISLAND Hy   28.40 128 T       T        03 05 36.0
      baz=321,slow=74
ENH   Enshi            29.11 262 P       P        02 35 48.1 -1.3
H11S1 WAKE ISLAND Hy   29.20 129 T       T        03 06 41.3
      baz=321,slow=76,SNR=21
H11S3 WAKE ISLAND Hy   29.20 129 T       T        03 06 38.7
      baz=321,slow=76,SNR=20
H11S2 WAKE ISLAND Hy   29.21 129 T       T        03 06 39.9
      baz=321,slow=76,SNR=21
TLY   Talaya           29.84 307 P       P        02 35 56.0 +0.3
      comp=Z,32nm,1.3s,baz=108,slow=9.9,SNR=6.7
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TLY   Talaya           29.84 307⇓iP      P        02 35 56.0 +0.3
TLY                              pmax    pmax
      comp=Z,17nm,1.5s
TLY   Talaya           29.84 307 P       P        02 35 54.3 -1.5
ZAK   Zakamensk        29.92 304 eP      P        02 35 55.9 -0.6
ZAK                              pmax    pmax
      comp=Z,13nm,1.1s
LZH   Lanzhou          31.18 276 eP      P        02 36 06.4 -1.5
LZH                              pP      pP       02 36 10.3 -4.9
LZH                              sP      sP       02 36 13.8 -4.4
LZH                              pmax    pmax
      comp=Z,21nm,1.2s
TIXI  Tiksi            32.90 352⇓eP      P        02 36 20.9 -1.4
TIXI  Tiksi            32.90 352 P       P        02 36 22.1 -0.2
GYA   Guiyang          33.17 258 ⇓P      P        02 36 24.8 -0.6
GYA                              pmax    pmax
      comp=Z,50nm,0.9s
CD2   Chengdu          33.22 267 P       P        02 36 24.4 -1.3
CD2                              pmax    pmax
      comp=Z,30nm,1.0s
GTA   Gaotai           33.30 284 ⇓P      P        02 36 26.9 +0.5
GTA                              pP      pP       02 36 33.3 -0.5
GTA                              sP      pwP      02 36 36.8 +0.7
GTA                              PcP     PcP      02 39 09.5 +1.5
GTA                              pmax    pmax
      comp=Z,14nm,1.0s
GTA                              pmax    pmax
      comp=Z,130nm,7.3s
GTA                              LR      LR
      comp=Z,540nm,17.1s
GTA                              LR      LR
      comp=Z,1µm,18.2s
GTA                              LR      LR
      comp=Z,1µm,16.7s
KMI   Kunming          36.87 259 ⇓P      P        02 36 57.3  0.0
KMI                              pP      pP       02 37 04.3 -0.5
KMI                              sP      pwP      02 37 06.5 -0.7
KMI                              pmax    pmax
      comp=Z,24nm,1.0s
KMI                              pmax    pmax
      comp=Z,460nm,5.2s
KMI                              LR      LR
      comp=Z,370nm,15.8s
KMI                              LR      LR
      comp=Z,510nm,15.9s
KMI                              LR      LR
      comp=Z,690nm,17.7s
KMI   Kunming          36.87 259 P       P        02 36 56.2 -1.1
KMI                              pmax    pmax
      comp=Z,21nm,0.9s
KMI   Kunming          36.87 259 P       P        02 36 56.2 -1.1
KMI                              IAmb    IAmb     02 36 58.0
      comp=Z,21nm,0.9s
SLVN  Son La           38.18 253 P       P        02 37 07.1 -1.1
DGZ   Jazzator, Alta   40.13 303c iP     P        02 37 25.3 +0.9
DGZ                              pmax    pmax
      comp=Z,21nm,0.9s
WMQ   Urumqi           41.05 295 eP      P        02 37 32.5 +0.5
WMQ                              pP      pP       02 37 36.1 -3.4
WMQ                              sP      pwP      02 37 45.1 +3.3
WMQ                              pmax    pmax
      comp=Z,45nm,0.7s
WMQ                              pmax    pmax
      comp=Z,320nm,5.1s
WMQ                              LR      LR
      comp=Z,430nm,28.8s
WMQ                              LR      LR
      comp=Z,1µm,29.0s
WMQ                              LR      LR
      comp=Z,450nm,29.5s
WMQ   Urumqi           41.05 295 P       P        02 37 31.2 -0.8
WMQ                              pmax    pmax
      comp=Z,37nm,0.8s
WMQ   Urumqi           41.05 295 P       P        02 37 31.2 -0.8
ZAA0  Zalesovo Array   41.31 310 P       P        02 37 33.8 -0.1
ZAA0                             IAmb    IAmb     02 37 34.7
      comp=Z,12nm,0.7s
ZALV  Zalesovo Beam    41.31 310 P       P        02 37 34.0 +0.1
      comp=Z,11nm,0.6s,baz=85,slow=7.9,SNR=43
ZALV                             PcP     PcP      02 39 32.3 +0.3
      comp=Z,3.8nm,0.8s,baz=59,slow=2.4,SNR=4.3
ZALV  Zalesovo Beam    41.31 310 i P     P        02 37 34.0 +0.1
ZALV                             pmax    pmax
      comp=Z,11nm,0.6s
ZALV  Zalesovo Beam    41.31 310 P       P        02 37 33.6 -0.2
NRIK  Noril'sk         41.55 334 P       P        02 37 35.6  0.0
      comp=Z,3.8nm,0.8s,baz=109,slow=5.5,SNR=7.3
NRIK  Noril'sk         41.55 334 P       P        02 37 36.1 +0.4
NRIK                             pmax    pmax
      comp=Z,10.0nm,1.1s
NRIK  Noril'sk         41.55 334 P       P        02 37 36.1 +0.4
ZSN   Zaisan           42.18 301 eP      P        02 37 40.0 -1.1
      comp=Z,5.8nm,0.7s,baz=300
ZSN   Zaisan           42.18 301 eP      P        02 37 40.0 -1.1
ZSN                              pmax    pmax
      comp=Z,6.0nm,0.7s
UTTA  Uttaradit        42.88 252 P       P        02 37 47.6 +0.5
      comp=Z,18nm,1.0s
LAMP  Lampang          43.07 254 P       P        02 37 49.8 +1.1
      comp=Z,18nm,1.0s
CMMT  Chiang Mai       43.40 255 P       P        02 37 50.5 -0.8
      comp=Z,5.6nm,0.9s
CHTO  Chiang Mai       43.40 255 P       P        02 37 50.2 -1.1
CHTO                             pmax    pmax
      comp=Z,10.0nm,0.9s
CHTO  Chiang Mai       43.40 255 P       P        02 37 50.2 -1.1
LSA   Lhasa            43.49 273 P       P        02 37 50.7 -1.9
LSA                              pmax    pmax
      comp=Z,8.0nm,0.6s
LSA   Lhasa            43.49 273 P       P        02 37 50.7 -1.9
LSA                              IAmb    IAmb     02 38 02.9
      comp=Z,7.8nm,0.6s
CMAR  Chiang Mai Arr   43.62 254 P       P        02 37 52.9 -0.1
      comp=Z,2.5nm,0.4s,baz=48,slow=6.3,SNR=18
CMAR  Chiang Mai Arr   43.62 254ceP      P        02 37 53.5 +0.4
CMAR                             pmax    pmax
      comp=Z,3.0nm,0.5s
CMAR  Chiang Mai Arr   43.62 254 P       P        02 37 52.0 -1.1
CM04  Chiang Mai Arr   43.63 254 P       P        02 37 53.0 -0.2
      comp=Z,9.1nm,0.8s
CM02  Chiang Mai Arr   43.63 254 P       P        02 37 55.1 +1.9
      comp=Z,11nm,0.8s
IMAR  Indian Mountai   43.65  32 P       P        02 37 55.1 +2.3
SUKH  Sukhothai        43.72 252 P       P        02 37 54.5 +0.7
      comp=Z,23nm,0.9s
MK31  Makanchi Array   44.04 300c iP     P        02 37 55.9 -0.3
MK31  Makanchi Array   44.04 300 P       P        02 37 55.6 -0.6
MK31                             IAmb    IAmb     02 37 57.1
      comp=Z,19nm,0.8s
MKAR  Makanchi Array   44.04 300 P       P        02 37 56.3 +0.1
      comp=Z,18nm,0.8s,baz=83,slow=9.4,SNR=135
MKAR  Makanchi Array   44.04 300 P       P        02 37 55.7 -0.5
MAKZ  Makanchi         44.25 300 P       P        02 37 57.3 -0.6
MAKZ                             pmax    pmax
      comp=Z,27nm,1.0s
MAKZ  Makanchi         44.25 300 P       P        02 37 57.3 -0.6
MAKZ                             IAmb    IAmb     02 37 58.9
      comp=Z,26nm,1.0s
SRAK  Srakaew          44.26 247 P       P        02 37 55.8 -2.4
      comp=Z,124nm,0.9s
MHMT  Maesarieng       44.55 255 P       P        02 38 02.4 +1.9
      comp=Z,2µmcomp=Z,25nm,0.8s
SEM   Semipalatinsk    44.58 306 eP      P        02 37 59.2 -1.6
      comp=Z,7.9nm,1.1s,baz=306
SEM   Semipalatinsk    44.58 306 eP      P        02 37 59.1 -1.6
SEM                              pmax    pmax
      comp=Z,8.0nm,1.1s
SHL   Shillong         44.96 268 P       P        02 38 02.9 -1.1
SHL                              pmax    pmax
      comp=Z,14nm,1.1s
SHL   Shillong         44.96 268 P       P        02 38 02.9 -1.1
SHL                              IAmb    IAmb     02 38 06.4
      comp=Z,14nm,1.1s
UMPA  Umpang Tak       45.10 252 P       P        02 38 07.7 +2.7
      comp=Z,4µmcomp=Z,26nm,1.1s
TOLK  Toolik Lake Re   45.47  28 P       P        02 38 09.6 +2.3
KURK  Kurchatov        45.54 306 P       P        02 38 08.7 +0.7
KURK  Kurchatov        45.54 306 P       P        02 38 07.9 -0.1
KURBB Kurchatov Arra   45.61 306 P       P        02 38 08.7 +0.1
      comp=Z,29nm,0.9s,baz=81,slow=8.2,SNR=187
POKR  Poker Plat Res   46.25  33 P       P        02 38 15.3 +1.9
POKR                             IAmb    IAmb     02 38 26.2
      comp=Z,9.0nm,0.7s
IL31                   46.50  34 P       P        02 38 16.5 +1.2
IL31                             IAmb    IAmb     02 38 31.8
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      comp=Z,10.0nm,1.1s
ILAR  Eielson Array    46.50  34 P       P        02 38 16.5 +1.1
      comp=Z,1.2nm,0.8s,baz=266,slow=6.4,SNR=13
PHET  Kaeng Krachan    46.72 248 P       P        02 38 19.0 +1.3
PDGK  Podgornoye       46.91 296 i P     P        02 38 17.3 -1.8
PDGK                             pmax    pmax
      comp=Z,19nm,1.0s
SHLS  Shalkode         46.98 296 eP      P        02 38 15.3 -4.4
      comp=Z,9.5nm,0.8s,baz=296
SHLS  Shalkode         46.98 296 eP      P        02 38 15.2 -4.4
SHLS                             pmax    pmax
      comp=Z,10.0nm,0.8s
TDK   Taldyqorghan     47.14 299 eP      P        02 38 20.3 -0.4
      comp=Z,23nm,0.9s,baz=299
TDK   Taldyqorghan     47.14 299 eP      P        02 38 20.3 -0.4
TDK                              pmax    pmax
      comp=Z,23nm,0.9s
TAPN  Taplejung        47.27 273 eP      P        02 38 22.5 +0.2
      comp=Z,54nm,1.0s
UZB   Uzynbulak        47.29 296 eP      P        02 38 21.3 -0.8
      comp=Z,9.6nm,0.9s,baz=296
UZB   Uzynbulak        47.29 296 eP      P        02 38 21.2 -0.8
UZB                              pmax    pmax
      comp=Z,10.0nm,0.9s
KPKS  Kokpek           47.42 297 eP      P        02 38 22.4 -0.7
      comp=Z,21nm,1.1s,baz=297
KPKS  Kokpek           47.42 297 eP      P        02 38 22.3 -0.7
KPKS                             pmax    pmax
      comp=Z,21nm,1.1s
SATY  Saty             47.75 296 eP      P        02 38 24.8 -0.8
      comp=Z,4.3nm,0.7s,baz=296
SATY  Saty             47.75 296 eP      P        02 38 24.8 -0.8
SATY                             pmax    pmax
      comp=Z,4.0nm,0.7s
ODAN  Odare            47.77 272 eP      P        02 38 26.1  0.0
      comp=Z,49nm,1.0s
RAMN  Ramite           48.33 273 eP      P        02 38 30.3 -0.2
      comp=Z,98nm,0.9s
GUN   Gumba            48.41 274 eP      P        02 38 31.2  0.0
      comp=Z,94nm,0.7s
CHKK  Chushkaly        48.46 298 eP      P        02 38 30.4 -0.6
      baz=298
CHKK  Chushkaly        48.46 298 eP      P        02 38 30.4 -0.6
MDOK  Medeo            48.65 297 eP      P        02 38 32.1 -0.6
      baz=297
MDOK  Medeo            48.65 297 eP      P        02 38 32.0 -0.6
AAA   Alma-Ata         48.73 297 eP      P        02 38 32.3 -0.8
      baz=297
AAA   Alma-Ata         48.73 297 eP      P        02 38 32.3 -0.8
TNSS  Tian-Shan        48.76 297 eP      P        02 38 33.6 -0.2
      baz=297
TNSS  Tian-Shan        48.76 297 eP      P        02 38 33.5 -0.2
KUU   Kurty            48.89 298 eP      P        02 38 32.8 -1.5
      comp=Z,22nm,0.8s,baz=298
KUU   Kurty            48.89 298 eP      P        02 38 32.7 -1.5
KUU                              pmax    pmax
      comp=Z,22nm,0.8s
BCAR  Beaver Creek A   48.90  36 P       P        02 38 36.6 +2.5
KKN   Kakani           48.93 275 eP      P        02 38 35.0  0.0
      comp=Z,96nm,0.7s
PKI   Pulchoki         48.94 274 eP      P        02 38 34.7 -0.5
      comp=Z,47nm,0.9s
PKIN  Phulchoki        48.95 274 eP      P        02 38 34.7 -0.5
      comp=Z,24nm,0.6s
DMN   Daman            49.15 274 eP      P        02 38 37.1 +0.3
      comp=Z,46nm,0.9s
GKN   Gorkha           49.32 275 eP      P        02 38 37.7 -0.2
      comp=Z,54nm,0.9s
BRZS  Berezniki        49.41 307 eP      P        02 38 37.1 -1.0
      comp=Z,4.2nm,0.8s,baz=307
BRZS  Berezniki        49.41 307 eP      P        02 38 37.1 -1.0
BRZS                             pmax    pmax
      comp=Z,4.0nm,0.8s
TKM2  Tokmak 2         49.73 297 P       P        02 38 41.2 +0.3
      SNR=38
TKM2  Tokmak 2         49.73 297 i P     P        02 38 41.1 +0.1
TKM2                             pmax    pmax
      comp=Z,46nm,1.0s
DANN  Dangsing         49.82 276 eP      P        02 38 42.1 +0.2
      comp=Z,233nm,0.7s
BVAR  Borovoye Array   49.95 311 P       P        02 38 42.1 -0.1
      comp=Z,8.4nm,0.8s,baz=80,slow=9.2,SNR=53
BRVK  Borovoye         50.00 311ceP      P        02 38 42.4 -0.2
BRVK                             pmax    pmax
      comp=Z,22nm,0.8s
BRVK  Borovoye         50.00 311 P       P        02 38 42.4 -0.2
BTLS  Baital           50.05 300 eP      P        02 38 41.8 -1.4
      comp=Z,10nm,1.2s,baz=300
BTLS  Baital           50.05 300 eP      P        02 38 41.7 -1.4
BTLS                             pmax    pmax
      comp=Z,10.0nm,1.2s
SGDS  Sogindy          50.21 298 eP      P        02 38 43.5 -0.9
      comp=Z,5.2nm,0.8s,baz=298
SGDS  Sogindy          50.21 298 eP      P        02 38 43.5 -0.9
SGDS                             pmax    pmax
      comp=Z,5.0nm,0.8s
KBK   Karagaybulak     50.27 297 P       P        02 38 45.6 +0.6
      SNR=29
CHMS  Chumysh          50.28 297 P       P        02 38 45.1 +0.1
      SNR=6.7
USP   Ospenovka        50.36 298 P       P        02 38 45.6  0.0
      SNR=14
EPYK  Eagle Plains     50.52  31 P       P        02 38 48.5 +2.1
EPYK                             IAmb    IAmb     02 38 59.2
      comp=Z,8.9nm,0.8s
AAK   Ala-Archa        50.59 297 P       P        02 38 47.4  0.0
      comp=Z,6.7nm,0.8s,baz=111,slow=5.1,SNR=13
AAK   Ala-Archa        50.59 297 P       P        02 38 47.6 +0.2
      SNR=6.8
AAK   Ala-Archa        50.59 297 P       P        02 38 46.7 -0.7
AAK                              IAmb    IAmb     02 38 48.5
      comp=Z,14nm,1.1s
KSH   Kashi            50.73 293 P       P        02 38 52.3 +3.8
KSH                              pP      pwP      02 38 59.3 +0.5
KSH                              S       S        02 46 01.8 -0.5
KSH                              pmax    pmax
      comp=Z,12nm,1.0s
KSH                              pmax    pmax
      comp=Z,560nm,6.6s
KSH                              LR      LR
      comp=Z,610nm,7.3s
KSH                              LR      LR
      comp=Z,500nm,7.4s
KSH                              LR      LR
      comp=Z,2µm,18.1s
EKS2  Erkin-Say        51.08 297 P       P        02 38 51.2 +0.2
      SNR=9.8
AML   Almayashu        51.33 297 P       P        02 38 53.9 +0.6
      SNR=16
INK   Inuvik           51.38  28 P       P        02 38 54.2 +1.5
      comp=Z,2.3nm,0.9s,baz=301,slow=3.8,SNR=6.0
INK   Inuvik           51.38  28 P       P        02 38 54.9 +2.2
INK                              pmax    pmax
      comp=Z,5.0nm,1.1s
INK   Inuvik           51.38  28 P       P        02 38 54.9 +2.2
DZA   Taraz            52.66 298 eP      P        02 39 02.1 -0.6
      comp=Z,13nm,0.6s,baz=298
DZA   Taraz            52.66 298 eP      P        02 39 02.1 -0.6
DZA                              pmax    pmax
      comp=Z,13nm,0.6s
KK31  Karatay Array    53.13 299 P       P        02 39 05.4 -0.7
KK31                             pmax    pmax
      comp=Z,13nm,0.9s
KK31  Karatay Array    53.13 299 P       P        02 39 05.4 -0.7
KK31                             IAmb    IAmb     02 39 06.9
      comp=Z,13nm,0.9s
KKAR  Karatay Array    53.13 299 P       P        02 39 05.6 -0.6
KKAR  Karatay Array    53.13 299 P       P        02 39 05.6 -0.6
IUG   Iuzhnay          53.83 298 eP      P        02 39 10.7 -0.8
      comp=Z,6.2nm,1.4s,baz=298
IUG   Iuzhnay          53.83 298 eP      P        02 39 10.6 -0.8
IUG                              pmax    pmax
      comp=Z,6.0nm,1.4s
SVE   Sverdlovsk       54.19 318⇑eP      P        02 39 14.9 +1.2
SVE                              pmax    pmax
      comp=Z,33nm,1.0s
NIL   Nilore           55.23 287 P       P        02 39 20.8 -0.8
NIL                              pmax    pmax
      comp=Z,30nm,0.8s
NIL   Nilore           55.23 287 P       P        02 39 20.8 -0.8
ARU   Arti             55.41 318 P       P        02 39 22.8 +0.3
      comp=Z,6.3nm,0.8s,baz=65,slow=3.8,SNR=26
ARU   Arti             55.41 318d iP     P        02 39 22.6 +0.1
ARU                              S       S        02 47 05.8 +0.6
ARU                              SS      SS       02 50 44.8 -4.5
ARU                              pmax    pmax
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              comp=Z,43nm,1.1s
ARU    Arti              55.41 318   P       P       02 39 22.4  -0.1
KNRA   Kununurra         56.68 197   P       P       02 39 32.3  +0.3
MDSI   Maura Dua         56.79 229   P       P       02 39 32.7  -0.1
              comp=Z,12nm,1.1s
EUNU   Eureka            57.38   9   P       P       02 39 37.2  +0.9
AB31   Akbulak array     57.41 309⇑eP      P       02 39 36.9   0.0
ABKAR  Akbulak array     57.41 309   P       P       02 39 36.9   0.0
KBL    Kabul             57.89 290   P       P       02 39 40.0  -0.7
KBL                                  pmax    pmax
              comp=Z,22nm,0.9s
KBL    Kabul             57.89 290   P       P       02 39 40.0  -0.7
AKTO   Aktyubinsk        58.05 311   P       P       02 39 41.3  -0.1
              comp=Z,11nm,0.8s,baz=71,slow=12,SNR=29
KIRV   Kirov             59.07 322   P       P       02 39 48.5  +0.2
              comp=Z,23nm,0.8s,baz=108,slow=1.6,SNR=13
KIRV   Kirov             59.07 322⇑eP      P       02 39 48.9  +0.6
WB0    Warramunga Arr    59.69 190   P       P       02 39 52.9  -0.1
WB0                                  IAmb    IAmb    02 40 05.0
              comp=Z,8.0nm,0.8s
RES    Resolute Bay      59.70  15   P       P       02 39 53.2  +0.8
              comp=Z,5.4nm,0.8s,baz=310,slow=6.7,SNR=22
WB2    Warramunga Arr    59.87 190   P       P       02 39 54.5  +0.3
WB2                                  IAmb    IAmb    02 40 06.4
              comp=Z,14nm,1.1s
WRA    Warramunga Arr    59.87 190   P       P       02 39 54.1  -0.1
              comp=Z,1.8nm,0.8s,baz=4.7,slow=7.4,SNR=8.8
WRA    Warramunga Arr    59.87 190   P       P       02 39 54.5  +0.3
WRA    Warramunga Arr    59.87 190   P       P       02 39 54.5  +0.3
YKA    Yellowknife Ar    60.81  31   P       P       02 40 01.0  +0.8
              comp=Z,1.2nm,0.9s,baz=301,slow=6.1,SNR=15
YKA    Yellowknife Ar    60.81  31 ceP       P       02 40 01.0  +0.8
YKA                                  pmax    pmax
              comp=Z,1.0nm,0.9s
TMCR   Tamitsa           61.17 331  eP       P       02 40 01.8  -0.8
TMCR                                 pmax    pmax
              comp=Z,24nm,1.1s
ARCES  ARCESS Array B    62.08 339   P       P       02 40 09.2  +0.5
              comp=Z,6.4nm,0.9s,baz=46,slow=6.5,SNR=2.9
KLMR   Klimovskoe        62.35 328  eP       P       02 40 07.3  -3.3
KLMR                                e                02 42 24.9
KLMR                                 pmax    pmax
              comp=Z,26nm,1.3s
KLMR   Klimovskoe        62.35 328  eP       P       02 40 07.4  -3.2
KLMR                                 AMP             02 40 11.8
              comp=Z,26nm,1.3s
KLMR                                ePP      PP      02 42 25.0  -2.4
HRA    Herat             62.84 293   P       P       02 40 13.8  -0.8
HRA                                  IAmb    IAmb    02 40 15.9
              comp=Z,9.1nm,1.1s
BELG   Belogornoye       62.91 317   P       P       02 40 14.9  +0.5
              comp=Z,47nm,0.8s,baz=85,slow=1.3,SNR=24
DAG    Danmarks Havn     63.30 355  i P      P       02 40 16.5  -0.2
              comp=Z,11nm,1.0s
DAG    Danmarks Havn     63.30 355  i P      P       02 40 16.5  -0.2
DAG                                  pmax    pmax
              comp=Z,11nm,1.0s
DAG    Danmarks Havn     63.30 355  i P      P       02 40 16.5  -0.2
DAG                                  IAmb    IAmb    02 40 17.9
              comp=Z,11nm,1.0s
ASAR   Alice Springs     63.59 190   P       P       02 40 19.4  +0.1
              comp=Z,0.7nm,0.7s,baz=11,slow=6.1,SNR=6.4
ASAR   Alice Springs     63.59 190   P       P       02 40 19.5  +0.3
GEYT   Alibeck           63.88 299   P       P       02 40 21.3  +0.1
              comp=Z,6.8nm,0.8s,baz=56,slow=5.6,SNR=14
GEYT   Alibeck           63.88 299   P       P       02 40 20.7  -0.5
GEYT                                 IAmb    IAmb    02 40 22.1
              comp=Z,7.4nm,0.9s
GYA0B  ALIBECK ARRAY     63.88 299   P       P       02 40 20.4  -0.8
GYA0B                                IAmb    IAmb    02 40 29.4
              comp=Z,9.7nm,0.8s
H04A   Detroit Lake      66.29  51   P       P       02 40 38.9  +2.1
H04A                                 IAmb    IAmb    02 40 49.6
              comp=Z,13nm,1.1s
VRH    Novokhopyorsk     66.64 318  eP       P       02 40 37.6  -1.2
VRH                                  pmax    pmax
              comp=Z,20nm,0.9s
OBN    Obninsk           66.89 323   P       P       02 40 40.4  +0.1
              comp=Z,2.4nm,0.5s,baz=321,slow=23,SNR=3.7
OBN    Obninsk           66.89 323⇓eP      P       02 40 40.8  +0.5
OBN                                 e                02 41 10.2
OBN                                 e                02 43 13.5
OBN                                  pmax    pmax
              comp=Z,16nm,1.1s
OBN                                  MLR     MLR
              comp=Z,516nm,14.0s
FINES  FINESS Array B    67.19 332   P       P       02 40 42.4  +0.3
              comp=Z,8.9nm,0.8s,baz=46,slow=11,SNR=12
FINES  FINESS Array B    67.19 332   P       P       02 40 42.6  +0.5
FINES  FINESS Array B    67.19 332   P       P       02 40 42.6  +0.5
LPSR   Galich'ya Gora    67.25 320  eP       P       02 40 40.7  -1.9
LPSR                                 pmax    pmax
              comp=Z,20nm,0.9s
PINE   Pine Mountain     67.53  51   P       P       02 40 46.8  +1.9
VSR    Storozhevoye      67.95 319  eP       P       02 40 44.2  -2.9
VSR                                  pmax    pmax
              comp=Z,10.0nm,0.9s
VORD   Divnogorie        68.03 319  eP       P       02 40 46.0  -1.6
VORD                                 pmax    pmax
              comp=Z,10.0nm,0.7s
SUMG   Summit            68.07   1  i P      P       02 40 49.0  +1.0
              comp=Z,23nm,0.7s
SUMG   Summit            68.07   1   P       P       02 40 49.1  +1.0
SUMG                                 pmax    pmax
              comp=Z,10.0nm,0.8s
SUMG   Summit            68.07   1   P       P       02 40 49.1  +1.1
SUMG                                 IAmb    IAmb    02 40 50.0
              comp=Z,9.8nm,0.8s
SUMG   Summit            68.07   1  i P      P       02 40 49.0  +1.1
SUMG                                 IAmb    IAmb    02 40 50.2
              comp=Z,23nm,0.7s
VSU    Vasula            68.95 330  eP       P       02 40 52.5  -0.7
BMO    Blue Mountains    69.08  49   P       P       02 40 56.3  +1.9
BMO                                  pmax    pmax
              comp=Z,7.0nm,1.2s
BMO    Blue Mountains    69.08  49   P       P       02 40 56.3  +1.9
BMO                                  IAmb    IAmb    02 41 07.0
              comp=Z,6.9nm,1.1s
GOF    Gofitskoye        69.46 312⇑eP      P       02 40 57.3  +0.7
GOF                                  pmax    pmax
              comp=Z,32nm,0.8s
ORV    Oroville          69.57  55   P       P       02 40 59.4  +2.0
ORV                                  pmax    pmax
              comp=Z,3.0nm,0.9s
ORV    Oroville          69.57  55   P       P       02 40 59.4  +2.0
NCK    Nalchik           70.06 310⇓eP      P       02 41 01.3  +0.9
NCK                                  pmax    pmax
              comp=Z,25nm,1.1s
BEKR   Beckworth         70.11  54   P       P       02 41 02.9  +1.9
BEKR                                 IAmb    IAmb    02 41 13.4
              comp=Z,7.2nm,1.0s
ZEI    Tsey              70.29 310  eP       P       02 41 01.1  -0.9
ZEI                                  pmax    pmax
              comp=Z,9.0nm,0.9s
KIV    Kislovodsk        70.32 311  eP       P       02 41 02.3  +0.3
KIV                                  pmax    pmax
              comp=Z,127nm,1.1s
KIV    Kislovodsk        70.32 311   P       P       02 41 01.8  -0.2
KBZ    Khabaz            70.33 311   P       P       02 41 03.0  +1.1
              comp=Z,14nm,0.9s,baz=51,slow=3.1,SNR=24
FFC    Flin Flon         70.71  34   P       P       02 41 06.1  +2.0
FFC                                  pmax    pmax
              comp=Z,4.0nm,0.8s
FFC    Flin Flon         70.71  34   P       P       02 41 06.0  +2.0
PNTR   Pine Nut          71.04  55   P       P       02 41 08.7  +2.0
PNTR                                 IAmb    IAmb    02 41 19.7
              comp=Z,6.4nm,0.9s
HRY    Holter Researc    71.05  45   P       P       02 41 08.0  +1.6
IDID   Didziasalis       71.09 327  eP       P       02 41 06.8  +0.5
CMB    Columbia Colle    71.16  56   P       P       02 41 09.4  +2.2
CMB                                  pmax    pmax
              comp=Z,8.0nm,1.1s
CMB    Columbia Colle    71.16  56   P       P       02 41 09.4  +2.2
CMB                                  IAmb    IAmb    02 41 19.9
              comp=Z,8.1nm,1.1s
ISAL   Salakas           71.17 328  eP       P       02 41 07.2  +0.4
IIGN   Ignalina          71.28 328  eP       P       02 41 07.8  +0.2
YERR   Yerington         71.33  55   P       P       02 41 10.1  +1.7
YERR                                 IAmb    IAmb    02 41 21.2
              comp=Z,12nm,1.1s
AKH    Akhalkalaki       71.35 309  ⇓P       P       02 41 10.0  +1.5
NACGM  Naroch            71.36 327  i P      P       02 41 08.7  +0.7
NACGM                               i P      P       02 41 08.7  +0.7
NACGM                               i P      P       02 41 08.7  +0.7
NACGM                               i PcP    PcP     02 41 25.9  -1.7
NACGM                               i PP     PP      02 43 50.0  +4.2
NACGM                               i PPP    PPP     02 45 48.5
NACGM                               i S      S       02 50 31.6  +7.6
NACGM                               i SS     SS      02 55 19.2  +22
NACGM                               i SSS    SSS     02 58 25.8
NACGM                               i LQ     LQ      03 08 10.5
NACGM                               i LR     LR      03 12 19.6
DLMT   Dillon            71.45  46   P       P       02 41 10.8  +1.9
ICESG  Greenland Ices    71.56   1  i P      P       02 41 09.6  +0.1
ICESG                                IAmb    IAmb    02 41 11.8
              comp=Z,13nm,0.8s
BOZ    Bozeman (W)       71.84  46   P       P       02 41 13.1  +1.7
BOZ                                  pmax    pmax
              comp=Z,3.0nm,0.9s
BOZ    Bozeman (W)       71.84  46   P       P       02 41 13.1  +1.7
PABE   Paberze           72.09 329  eP       P       02 41 12.5  +0.1
LHV    Little Huntoon    72.23  55   P       P       02 41 15.9  +2.3
LHV                                  IAmb    IAmb    02 41 27.1
              comp=Z,14nm,1.1s
NVAR   Mina Array Bea    72.25  55   P       P       02 41 16.3  +2.3
              comp=Z,1.2nm,0.7s,baz=286,slow=7.6,SNR=8.9
NVAR   Mina Array Bea    72.25  55   P       P       02 41 15.8  +1.8
NC204  NORSAR Array S    72.29 338   P       P       02 41 14.1  +0.5
OMMB   Old Mammoth Mi    72.29  56   P       P       02 41 15.8  +1.5
NV11   Mina Array Sit    72.34  55   P       P       02 41 16.2  +1.7
NB2    NORSAR Subarra    72.34 338   P       P       02 41 14.5  +0.6
              comp=Z,5.3nm,0.7s,baz=37,slow=6.2
NOA    NORSAR Array B    72.34 338   P       P       02 41 14.3  +0.4
              comp=Z,8.8nm,0.8s,baz=38,slow=6.0,SNR=23
UOSS   Minazif           72.42 288   P       P       02 41 14.4  -0.5
UOSS                                 IAmb    IAmb    02 41 15.7
              comp=Z,9.0nm,1.0s
PBUR   Paburge           72.53 330  eP       P       02 41 14.6  -0.4
ANN    Anapa             72.78 314  eP       P       02 41 15.8  -0.9
ANN                                  pmax    pmax
              comp=Z,100nm,1.2s
AKASG  Malin Array Be    73.13 323   P       P       02 41 18.6  -0.1
              comp=Z,4.1nm,0.6s,baz=45,slow=6.2,SNR=24
AKBB   Malin Array Si    73.13 323⇓iP      P       02 41 19.0  +0.3
AKBB                                 pmax    pmax
              comp=Z,13nm,1.0s
KOPT   Kop Dagi          74.00 309   P       P       02 41 23.6  -0.8
KOPT                                 IAmb    IAmb    02 41 35.6
              comp=Z,9.9nm,0.9s
TPNV   Topopah Spring    74.44  55   P       P       02 41 28.9  +2.0
TPNV                                 pmax    pmax
              comp=Z,10.0nm,1.2s
TPNV   Topopah Spring    74.44  55   P       P       02 41 28.9  +2.0
TPNV                                 IAmb    IAmb    02 41 39.6
              comp=Z,10nm,1.1s
PDAR   Pinedale Array    74.79  47   P       P       02 41 28.9  +0.1
              comp=Z,0.6nm,0.7s,baz=235,slow=1.3,SNR=7.1
PDAR   Pinedale Array    74.79  47   P       P       02 41 29.4  +0.6
SORM   Soroca            75.31 321  ⇓P       P       02 41 29.9  -1.5
SORM   Soroca            75.31 321  ⇓P       P       02 41 29.9  -1.5
SHPR   Sheep Range       75.40  55   P       P       02 41 34.2  +1.8
MARD   Mardin            75.52 306   P       P       02 41 32.3  -0.7
MILM   Milestii Mici     75.92 320  ⇓P       P       02 41 35.9  +0.9
RDMU   Red Mountain      76.20  49   P       P       02 41 38.6  +1.6
RDMU                                 IAmb    IAmb    02 41 49.7
              comp=Z,9.1nm,1.0s
ULM    Lac du Bonnet     76.51  35   P       P       02 41 38.7  +0.5
              comp=Z,1.0nm,0.7s,baz=300,slow=4.5,SNR=1.7
KWP    Kalwaria Pacla    76.86 325  eP       P       02 41 41.4  +1.1
KWP    Kalwaria Pacla    76.86 325   P       P       02 41 40.8  +0.5
KWP                                  pmax    pmax
              comp=Z,25nm,1.0s
KWP    Kalwaria Pacla    76.86 325   P       P       02 41 40.8  +0.5
BUR08  Bucovina Ar. S    77.16 322   P       P       02 41 42.4  +0.2
BUR08                                IAmb    IAmb    02 41 43.8
              comp=Z,7.2nm,0.9s
BURAR  Bucovina Array    77.17 322  ⇓P       P       02 41 42.3  +0.2
BURAR  Bucovina Array    77.17 322  ⇓P       P       02 41 42.3  +0.2
BURAR  Bucovina Array    77.17 322   P       P       02 41 42.4  +0.2
TESR   Tescani           77.27 321  ⇑P       P       02 41 43.2  +0.6
KOLS   Kolonicke sedl    77.57 325  eP       P       02 41 45.5  +1.2
KOLS                                 pmax    pmax
              comp=Z,16nm,1.5s
KOLS   Kolonicke sedl    77.57 325  eP       P       02 41 45.5  +1.2
OJC    Ojcow             77.69 327  eP       P       02 41 45.5  +0.6
OJC    Ojcow             77.69 327   P       P       02 41 45.3  +0.4
OJC                                  pmax    pmax
              comp=Z,16nm,0.9s
OJC    Ojcow             77.69 327   P       P       02 41 45.3  +0.4
ESJX   Sierra Juarez     77.71  59   P       P       02 41 47.3  +1.7
ESJX                                 IAmb    IAmb    02 42 05.9
              comp=Z,6.9nm,0.5s
GAZ    Gaziantep         77.80 308   P       P       02 41 45.2  -0.6
GAZ                                  IAmb    IAmb    02 41 48.2
              comp=Z,12nm,1.1s
PV10   Paradox Valley    77.94  50   P       P       02 41 48.9  +2.0
CRVS   Cervenica-Dubn    77.95 325  eP       P       02 41 47.1  +0.7
CRVS                                 pmax    pmax
              comp=Z,94nm,2.3s
CRVS   Cervenica-Dubn    77.95 325  eP       P       02 41 47.1  +0.7
PV04   Paradox Valley    78.01  50   P       P       02 41 48.7  +1.5
PV04                                 IAmb    IAmb    02 42 07.0
              comp=Z,12nm,0.9s
NIE    Niedzica          78.08 326  eP       P       02 41 48.6  +1.5
BRTR   Keskin Array B    78.22 312   P       P       02 41 48.4  +0.1
              comp=Z,2.3nm,1.0s,baz=163,slow=1.3,SNR=5.5
ISR    Istrita           78.31 320  ⇓P       P       02 41 45.2  -3.3
ISR    Istrita           78.31 320  ⇓P       P       02 41 45.2  -3.3
WUAZ   Wupatki           78.40  53   P       P       02 41 50.9  +1.6
LANS   Liptovska Anna    78.64 326  eP       P       02 41 52.3  +2.1
LANS                                 pmax    pmax
              comp=Z,4.0nm,0.9s
LANS   Liptovska Anna    78.64 326  eP       P       02 41 52.3  +2.1
KSP    Ksiaz             78.65 329  eP       P       02 41 51.1  +0.9
VOIR                     78.82 321  ⇑P       P       02 41 55.5  +4.2
VOIR                     78.82 321  ⇑P       P       02 41 55.5  +4.2
CHVC   Chvalec           78.94 329  eP       P       02 41 52.6  +0.7
MORC   Moravsky Berou    78.97 328  ⇑P       P       02 41 53.0  +1.0
MORC   Moravsky Berou    78.97 328  eP       P       02 41 53.0  +1.0
MORC   Moravsky Berou    78.97 328  ⇑P       P       02 41 53.0  +1.0
MORC   Moravsky Berou    78.97 328   P       P       02 41 52.2  +0.1
MORC                                 IAmb    IAmb    02 41 54.0
              comp=Z,16nm,1.1s
DPC    Dobruska-Polom    79.02 329  eP       P       02 41 53.0  +0.7
DPC                                 e                02 42 00.4
DPC    Dobruska-Polom    79.02 329  eP       P       02 41 53.0  +0.7
DPC                                 epP      PcP     02 42 00.4  -0.4
UPC    Upice             79.02 329  eP       P       02 41 52.6  +0.3
UPC    Upice             79.02 329  eP       P       02 41 52.6  +0.3
ARR    Arges             79.07 321  ⇑P       P       02 41 55.1  +2.4
PSZ    Piszkesteto       79.38 325  ⇓P       P       02 41 55.3  +0.9
PSZ    Piszkesteto       79.38 325  ⇓P       P       02 41 55.3  +0.9
VYHS   Vyhne             79.41 326  eP       P       02 41 55.2  +0.8
VYHS                                 pmax    pmax
              comp=Z,7.0nm,1.0s
VYHS   Vyhne             79.41 326  eP       P       02 41 55.2  +0.8
CLL    Collm             79.56 331  i P      P       02 41 55.4  +0.3
              comp=Z,15nm,1.0s
CLL                                 e(sP)    pwP     02 42 10.0  +4.1
CLL    Collm             79.56 331  i P      P       02 41 55.4  +0.3
CLL                                 e                02 42 10.0
CLL                                  pmax    pmax
              comp=Z,15nm,1.0s
CLL    Collm             79.56 331   P       P       02 41 55.0  -0.2
CLL                                  IAmb    IAmb    02 41 56.4
              comp=Z,12nm,0.9s
JAVC   Velka Javorina    79.62 327  eP       P       02 41 57.7  +2.1
VRAC   Vranov            79.72 328  ⇓P       P       02 41 57.3  +1.2
VRAC   Vranov            79.72 328  eP       P       02 41 56.7  +0.6
VRAC   Vranov            79.72 328  ⇓P       P       02 41 57.3  +1.2
GZR    Gura Zlata        79.94 322  ⇓P       P       02 41 57.7  +0.2
GZR    Gura Zlata        79.94 322  ⇓P       P       02 41 57.7  +0.2
SMOL   Smolenice         79.99 327  eP       P       02 41 59.0  +1.4
SMOL                                 pmax    pmax
              comp=Z,4.0nm,1.1s
SMOL   Smolenice         79.99 327  eP       P       02 41 59.0  +1.4
KRUC   Moravsky          80.00 328  eP       P       02 41 58.2  +0.6
PRU    Pruhonice         80.02 329  eP       P       02 41 58.1  +0.4
PRU    Pruhonice         80.02 329  eP       P       02 41 58.1  +0.4
MODS   Modra-Piesok      80.16 327  eP       P       02 41 59.0  +0.5
MODS   Modra-Piesok      80.16 327  eP       P       02 41 59.0  +0.5
BZS    Buzias            80.33 323  ⇑P       P       02 41 59.7  +0.3
BZS    Buzias            80.33 323  ⇑P       P       02 41 59.7  +0.3
RAYN   Ar Rayn           81.02 293   P       P       02 42 02.7  -0.9
RAYN                                 pmax    pmax
              comp=Z,4.0nm,1.0s
RAYN   Ar Rayn           81.02 293   P       P       02 42 02.7  -0.9
CKRC   Cesky Krumlov     81.04 329  eP       P       02 42 03.2   0.0
CKRC                                epP      sP      02 42 11.4  -2.6
KHC    Kasperske Hory    81.08 329  eP       P       02 42 03.2  -0.2
KHC                                 e                02 42 11.6
KHC    Kasperske Hory    81.08 329  eP       P       02 42 03.2  -0.2
KHC                                 epP      sP      02 42 11.6  -2.7
KHC    Kasperske Hory    81.08 329   P       P       02 42 03.6  +0.2
KHC                                  IAmb    IAmb    02 42 04.9
              comp=Z,7.2nm,0.9s
CONA   Conrad Observa    81.11 327  eP       P       02 42 04.9  +1.2
              comp=Z,8.6nm,1.0s
MORH   Mrgy, Hungar      81.23 325  ⇑P       P       02 42 04.0  -0.3
GERES  GERESS Array B    81.26 329   P       P       02 42 04.8  +0.3
              comp=Z,1.9nm,0.6s,baz=42,slow=5.2,SNR=16
GERES  GERESS Array B    81.26 329   P       P       02 42 04.5   0.0
FRGS   Fruska Gora       81.51 323  ⇑P       P       02 42 06.1  +0.4
GRA1   Grafenberg Arr    81.53 331   P       P       02 42 06.1  +0.3
GRF    Grafenberg Arr    81.53 331   P       P       02 42 06.1  +0.3
GRF                                  pmax    pmax
              comp=Z,15nm,0.8s
GRF    Grafenberg Arr    81.53 331  eP       P       02 42 07.1  +1.2
              comp=Z,18nm,1.0s,baz=37,slow=4.5
GRF                                 eL       L       03 17 19.3
              comp=Z,428nm,19.6s
GRFO   Grafenberg        81.54 331   P       P       02 42 06.1  +0.3
GRFO                                 pmax    pmax
              comp=Z,14nm,0.9s
GRFO   Grafenberg        81.54 331   P       P       02 42 06.1  +0.3
VTS    Vitosha           81.77 320  ⇑P       P       02 42 08.4  +1.0
VTS    Vitosha           81.77 320  ⇑P       P       02 42 08.4  +1.0
VTS    Vitosha           81.77 320   P       P       02 42 07.2  -0.1
VTS                                  IAmb    IAmb    02 42 09.8
              comp=Z,7.0nm,0.9s
ARSA   Arzberg           81.78 327  i P      P       02 42 08.0  +0.8
              comp=Z,2.0nm,0.6s
SOKA   Soboth            82.44 327  eP       P       02 42 11.4  +0.6
              comp=Z,14nm,0.9s,SNR=13
OBKA   Obir              82.78 327  eP       P       02 42 12.7  +0.2
              comp=Z,5.5nm,0.8s,SNR=4.6
KBA    Koelnbreinsper    82.82 328  eP       P       02 42 13.4  +0.6
              comp=Z,11nm,1.2s
WATA   Walderalm         83.32 329  eP       P       02 42 15.8  +0.4
              comp=Z,10nm,1.2s
MOTA   Moosalm           83.50 330  eP       P       02 42 16.8  +0.6
              comp=Z,19nm,1.1s
RETA   Reutte            83.51 330  eP       P       02 42 16.6  +0.3
              comp=Z,13nm,1.1s
SQTA   Sankt Quirin      83.56 329  eP       P       02 42 16.7  +0.1
              comp=Z,11nm,1.1s
PDG    Podgorica         83.85 322  ⇓P       P       02 42 18.1  +0.1
PDG    Podgorica         83.85 322   P       P       02 42 18.0  +0.1
FETA   Feichten          83.91 330  eP       P       02 42 19.0  +0.6
              comp=Z,9.9nm,1.0s,SNR=6.5
DAVA   Damuels           84.02 330  eP       P       02 42 19.5  +0.6
              comp=Z,9.1nm,0.8s,SNR=5.3
TXAR   Lajitas Array     87.36  54   P       P       02 42 37.1  +1.3
              comp=Z,0.4nm,0.9s,baz=284,slow=3.6,SNR=3.2
SNAA   Sanae            143.68 197   PKPdf   PKPdf   02 49 23.8  +1.6
VNA2   Neumayer--Watz   145.24 196   PKPdf   PKPbc   02 49 24.1  -0.5
VNA3   Neumayer Olymp   145.47 195   PKiKP   PKiKP   02 49 30.8  +1.6
VNA1   Neumayer--Stat   145.64 196   PKiKP   PKiKP   02 49 30.7  +1.2
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IDC ***17*** *02:45:16.2±0.6, 39.°97N×143.°54E, h0^{km}, mb4.0/20, mb1 4.2/24, mb1mx4.0/63, mbtmp4.0/24, ML3.4/4, MS4.0/1, Ms1 4.0/1, ms1mx3.1/43, Error ellipse: s-maj=16.3km s-min=14.5km az=128.0*

NEIC ***17*** *02:45:17.7±1.7, 39.°75N±0.°05×143.°80E±0.°10, h33^{km}±5^{km}, mb4.2/26, Error ellipse: s-maj=10.7km s-min=7.1km az=91.0*

NIED ***17*** *02:45:18.6, 39.°90N×143.°45E, h28^{km}, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}2.62; $M_{\theta\theta}$0.51; $M_{\phi\phi}$-3.13; $M_{r\theta}$0.78; $M_{\theta\phi}$-1.18; $M_{\phi r}$2.08; Fault plane solution: $M_0$3.77000×10^{15} NP1:ϕ_s20.00000°, δ63.00000°, λ93.00000°. NP2:ϕ_s192.00000°, δ27.00000°, λ83.00000°.*

JMA ***17*** *02:45:18.6±0.2, 39.°90N×143.°45E, h28^{km}, M4.5*

ISC 17 02:45:16.1±0.5**, 39.°89N**±0.°04×**143.°52E**±0.°06**, h6^{km}, n116,** σ**1.ˢ56**/118**, mb4.2**/39**, 1C-1D, Off east coast of Honshu**

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Code   Station Name       Δ°   AZ°    Phase ID          Time       Res
                                     Op      ISC     h  m  s      ISC
JTH    Tanohata           1.27 273   P       Pn      02 45 40.1  -0.3
MIYJ   Miyakonagasawa     1.34 257   P       Pn      02 45 41.5  +0.1
MIYJ                                eS       Sb      02 45 57.7  -1.4
JKEN   Kujiedanarisaw     1.42 284   P       Pn      02 45 42.3  -0.2
JKEN                                eS       Sb      02 45 59.3  -2.1
JANG   Nango              1.61 288   P       Pn      02 45 44.9  -0.2
JOM    Ohasama            1.77 257   P       Pn      02 45 48.0  +0.8
JMK    Ichinoseki         2.01 243   P       Pn      02 45 50.6  +0.1
JTM    Tenmabayashi       2.08 296   P       Pn      02 45 52.4  +0.9
JTM                                 eS       Sn      02 46 17.5  -0.1
ERM    Erimo              2.14 353   Pn      Pn      02 45 52.5  +0.1
JEM    Erimo              2.15 353  eS       Sn      02 46 18.7  -0.6
JOT    Ohata              2.40 309   P       Pn      02 45 56.9  +1.0
JNBK   Urakawa-nobuka     2.46 347   P       Pn      02 45 58.1  +1.4
JYK    Kaneyama           2.63 249   P       Pn      02 46 00.2  +1.1
JCH    Churui             2.73 358   P       Pn      02 46 00.4   0.0
JCH                                 eS       Sn      02 46 32.2  -1.5
JKB    Kayabe             2.75 318   P       Pb      02 46 03.1  -2.5
JMM    Marumori           2.93 227           Pn      02 46 02.4  -0.8
JOMM   Oshimamatsumae     3.13 303   P       Pn      02 46 04.3  -1.6
JEW    Eniwo              3.34 333   Pn      Pn      02 46 10.3  +1.5
JKA    Kamikawa-asahi     4.28 351   Pn      Pn      02 46 21.6  -0.2
JKA    Kamikawa-asahi     4.28 351           Sn      02 47 13.4  +1.4
ASAJ   Asahikawa          4.28 351   Pn      Pn      02 46 22.8  +1.0
              2.2nm,0.3s,baz=165,slow=13,SNR=7.9
ASAJ                                 Sn      Sn      02 47 13.4  +1.4
              4.6nm,0.3s,baz=102,slow=20,SNR=2.5
JSD    Sado               4.49 247   Pn      Pn      02 46 25.6  +0.9
JYT    Yasato             4.50 217   Pn      Pn      02 46 22.9  -1.8
JYT                                  Sn      Sn      02 47 15.2  -2.1
MJAR   Matsushiro Arr     5.35 233   Pn      Pn      02 46 38.1  +1.6
              0.7nm,0.3s,baz=42,slow=12,SNR=49
MAJO   Matsushiro         5.35 233   Pn      Pn      02 46 37.1  +0.6
MAT    Matsushiro         5.35 233   P       Pn      02 46 37.9  +1.4
MAT                                 eS       Sn      02 47 36.4  -2.0
JGF    Kuroka             6.49 231   Pn      Pn      02 46 52.0  -0.2
INU    Inuyama            6.86 231           Pn      02 46 57.3   0.0
JHJ    Hachijo jima 2     7.39 205   Pn      Pn      02 47 07.7  +3.2
              7.4nm,0.3s,baz=16,slow=18,SNR=1.7
JHJ                                  Sn      Sn      02 48 20.0  -8.7
              23nm,0.3s,baz=90,slow=20,SNR=1.8
JWT    Wachi              7.91 237   Pn      Pn      02 47 12.4  +0.8
USA0B  Ussuriysk Arra     9.60 300           Pn      02 47 37.5  +2.8
USRK   Ussuriysk Ar.      9.60 300   Pn      Pn      02 47 38.1  +3.4
              baz=107,slow=12,SNR=17
USRK   Ussuriysk Ar.      9.60 300   Pn      Pn      02 47 37.7  +3.0
JHS    Saijyo             9.60 243   Pn      Pn      02 47 36.6  +1.8
KSRS   Korea Array       12.43 264   Pn      Pn      02 48 17.6  +4.2
              0.1nm,0.3s,baz=77,slow=14,SNR=4.2
KSRS                                 LR      LR      02 52 55.1
              comp=Z,716nm,19.4s,baz=48,slow=37
KLR    Kul'dur           12.54 322   Pn      Pn      02 48 16.4  +1.4
              0.1nm,0.3s,baz=135,slow=15,SNR=6.8
HIA    Hailar            19.29 307   P       P       02 49 40.8  -0.8
MA2    Magadan           20.24  11   P       P       02 49 52.5  +0.8
              9.5nm,0.8s,baz=170,slow=11,SNR=4.1
MA2    Magadan           20.24  11   P       P       02 49 47.6  -4.1
MA2                                  IAmb    IAmb    02 49 53.9
              comp=Z,8.9nm,0.9s
BJT    Baijiatuau        20.94 279   P       P       02 49 57.6  -1.9
SEY    Seymchan          23.69  10   P       P       02 50 28.4  +0.1
              comp=Z,7.5nm,0.9s,baz=187,slow=5.4,SNR=14
YAK    Yakutsk           23.72 344   P       P       02 50 27.3  -1.2
HHC    Hu-ho-hao-te      24.30 283  eP       P       02 50 35.8  +1.4
HHC                                  pmax    pmax
              comp=Z,5.0nm,1.1s
HHC                                  pmax    pmax
              comp=Z,160nm,6.6s
WHN    Wuhan             25.49 258⇓iP      P       02 50 45.6  +0.5
WHN                                  pP      pwP     02 50 50.5  +1.7
WHN                                  sP      sP      02 50 54.1  +7.2
WHN                                  pmax    pmax
              comp=Z,52nm,1.0s
ULN    Ulaanbaatar       27.26 299   P       P       02 51 01.2   0.0
ULN                                  IAmb    IAmb    02 51 03.3
              comp=Z,7.7nm,0.9s
SONM   Songino Array     27.70 299   P       P       02 51 06.3  +1.2
              comp=Z,2.7nm,0.6s,baz=86,slow=8.7,SNR=16
SONM   Songino Array     27.70 299   P       P       02 51 05.8  +0.7
XAN    Xi'an             28.13 269   P       P       02 51 08.8  -0.2
XAN                                  pP      pwP     02 51 18.8  +6.1
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XAN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
XAN	Xi'an	28.13	269	P	P	02 51 08.2	-0.8
XAN				IAmb	IAmb	02 51 10.2	
	comp=Z,4.9nm,0.8s						
H11N2	WAKE ISLAND Hy	28.40	128	T	T	03 20 47.5	
	baz=320,slow=74,SNR=30						
H11N1	WAKE ISLAND Hy	28.41	128	T	T	03 20 51.0	
	baz=320,slow=74						
H11N3	WAKE ISLAND Hy	28.42	128	T	T	03 20 45.9	
	baz=320						
H11S1	WAKE ISLAND Hy	29.23	130	T	T	03 21 52.4	
	baz=322,slow=76,SNR=5.8						
H11S3	WAKE ISLAND Hy	29.23	130	T	T	03 21 50.1	
	baz=322,slow=76,SNR=4.8						
H11S2	WAKE ISLAND Hy	29.24	130	T	T	03 21 53.4	
	baz=322,slow=76,SNR=7.9						
ENH	Enshi	29.30	262	P	P	02 51 18.6	-0.8
CD2	Chengdu	33.40	267	P	P	02 51 55.3	-0.2
CD2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GTA	Gaotai	33.40	284	⇑P	P	02 51 56.3	+0.8
GTA				pP	pwP	02 52 00.5	+1.2
GTA				sP	sP	02 52 03.4	+6.1
GTA				pmax	pmax		
	comp=Z,8.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,190nm,7.6s						
GTA				LR	LR		
	comp=N,220nm,16.4s						
GTA				LR	LR		
	comp=E,280nm,17.1s						
GTA				LR	LR		
	comp=Z,450nm,17.8s						
KMI	Kunming	37.07	259	P	P	02 52 26.5	-0.9
SLVN	Son La	38.40	253	P	P	02 52 37.0	-1.5
WMQ	Urumqi	41.10	294	eP	P	02 53 03.6	+2.9
WMQ	Urumqi	41.10	294	P	P	02 53 00.3	-0.4
WMQ				IAmb	IAmb	02 53 03.8	
	comp=Z,7.3nm,0.7s						
ZAA0	Zalesovo Array	41.28	310	P	P	02 53 01.8	-0.1
ZAA0				IAmb	IAmb	02 53 03.4	
	comp=Z,5.1nm,0.9s						
ZALV	Zalesovo Beam	41.28	310	P	P	02 53 02.8	+0.8
	comp=Z,1.4nm,0.4s,baz=79,slow=7.7,SNR=12						
ZALV				PcP	PcP	02 55 00.8	+0.3
	comp=Z,1.3nm,0.7s,baz=92,slow=4.3,SNR=3.6						
ZALV	Zalesovo Beam	41.28	310	P	P	02 53 01.6	-0.3
ZSN	Zaisan	42.20	300	eP	P	02 53 09.8	+0.2
	baz=300						
LSA	Lhasa	43.64	273	P	P	02 53 21.0	-1.0
LSA				IAmb	IAmb	02 53 35.0	
	comp=Z,4.7nm,0.6s						
MK31	Makanchi Array	44.06	300	P	P	02 53 24.7	0.0
MK31				IAmb	IAmb	02 53 26.1	
	comp=Z,3.2nm,0.9s						
MKAR	Makanchi Array	44.06	300	P	P	02 53 25.0	+0.3
	comp=Z,2.8nm,0.9s,baz=83,slow=9.4,SNR=21						
MKAR	Makanchi Array	44.06	300	P	P	02 53 24.3	-0.5
MAKZ	Makanchi	44.27	300	P	P	02 53 25.1	-1.2
MAKZ				IAmb	IAmb	02 53 27.9	
	comp=Z,3.6nm,1.1s						
SEM	Semipalatinsk	44.58	305	eP	P	02 53 28.2	-0.8
	baz=306						
SHL	Shillong	45.13	268	P	P	02 53 31.6	-2.1
KURK	Kurchatov	45.53	306	P	P	02 53 35.8	-0.5
KURBB	Kurchatov Arra	45.60	306	P	P	02 53 37.3	+0.4
	comp=Z,5.0nm,0.8s,baz=79,slow=8.4,SNR=17						
ILAR	Eielson Array	46.21	34	P	P	02 53 41.8	+0.3
	comp=Z,0.7nm,0.7s,baz=250,slow=7.6,SNR=6.2						
ILAR	Eielson Array	46.21	34	P	P	02 53 40.5	-1.0
SHLS	Shalkode	47.02	296	eP	P	02 53 45.9	-2.4
	baz=296						
KPKS	Kokpek	47.46	297	eP	P	02 53 51.7	0.0
	comp=Z,2.9nm,1.0s,baz=297						
CHKK	Chushkaly	48.49	298	eP	P	02 53 59.6	0.0
	baz=298						
GUN	Gumba	48.55	274	eP	P	02 54 01.3	+0.7
	comp=Z,36nm,0.9s						
KUU	Kurty	48.92	298	eP	P	02 54 02.6	-0.3
	comp=Z,7.5nm,0.9s,baz=298						
BRZS	Berezniki	49.39	307	eP	P	02 54 06.5	+0.1
	baz=307						
DANN	Dangsing	49.96	276	eP	P	02 54 12.2	+0.9
	comp=Z,25nm,0.6s						
AAK	Ala-Archa	50.63	297	P	P	02 54 16.3	+0.2
	comp=Z,1.3nm,0.8s,baz=145,slow=2.6,SNR=4.4						
AAK	Ala-Archa	50.63	297	P	P	02 54 16.0	-0.1
KSH	Kashi	50.79	293	P	P	02 54 26.0	+8.7
KSH				pmax	pmax		
	comp=Z,45nm,2.1s						
KSH				pmax	pmax		
	comp=Z,650nm,10.5s						
INK	Inuvik	51.10	28	P	P	02 54 18.5	-0.4
	comp=Z,1.2nm,0.7s,baz=272,slow=7.5,SNR=6.0						
INK	Inuvik	51.10	28	P	P	02 54 18.2	-0.8
INK				IAmb	IAmb	02 54 29.4	
	comp=Z,2.4nm,0.8s						
KK31	Karatay Array	53.16	299	P	P	02 54 34.1	-0.6
KK31				IAmb	IAmb	02 54 35.8	
	comp=Z,2.3nm,0.9s						
KKAR	Karatay Array	53.16	299	P	P	02 54 34.7	-0.1
KKAR	Karatay Array	53.16	299	P	P	02 54 34.2	-0.5
KKAR				IAmb	IAmb	02 54 35.8	
	comp=Z,2.3nm,0.9s						
IUG	Iuzhnay	53.87	298	eP	P	02 54 40.0	0.0
	baz=298						
ABKAR	Akbulak array	57.39	309	P	P	02 55 04.2	-0.9
ABKAR	Akbulak array	57.39	309	P	P	02 55 03.4	-1.7
ABKAR				IAmb	IAmb	02 55 19.2	
	comp=Z,2.2nm,0.6s						
YKA	Yellowknife Ar	60.52	31	P	P	02 55 27.0	+0.4
	comp=Z,0.3nm,0.6s,baz=305,slow=6.0,SNR=8.7						
ASAR	Alice Springs	63.86	190	P	P	02 55 50.4	+1.0
	comp=Z,1.0nm,0.7s,baz=6.3,slow=5.8,SNR=13						
ASAR	Alice Springs	63.86	190	P	P	02 55 44.9	-4.5
FIA1	FINESS Array S	67.06	332	P	P	02 56 09.7	-0.1
FINES	FINESS Array B	67.06	332	P	P	02 56 09.9	+0.1
	comp=Z,2.6nm,0.7s,baz=60,slow=5.3,SNR=7.1						
FINES	FINESS Array B	67.06	332	P	P	02 56 08.8	-0.9
YBH	Yreka Blue Hor	67.31	54	P	P	02 56 12.7	+0.8
	comp=Z,0.8nm,0.8s,baz=275,slow=7.4,SNR=3.1						
YBH	Yreka Blue Hor	67.31	54	P	P	02 56 10.2	-1.7
KBZ	Khabaz	70.29	311	P	P	02 56 31.7	+1.5
	comp=Z,4.2nm,0.8s,baz=37,slow=4.4,SNR=8.3						
STKA	Stephens Creek	71.42	182	P	P	02 56 39.7	+2.7
	comp=Z,0.6nm,0.4s,baz=329,slow=5.7,SNR=3.3						
STKA	Stephens Creek	71.42	182	P	P	02 56 35.3	-1.8
NVAR	Mina Array Bea	71.98	55	P	P	02 56 41.7	+0.9
	comp=Z,0.9nm,0.7s,baz=300,slow=6.1,SNR=7.8						
AKASG	Malin Array Be	73.04	323	P	P	02 56 46.8	+0.2
	comp=Z,2.6nm,0.8s,baz=45,slow=6.0,SNR=8.1						
ISA	Isabella, Lake	73.53	57	P	P	02 56 42.6	-7.3
ISA				IAmb	IAmb	02 56 44.0	
	comp=Z,1.7nm,0.8s						
PDAR	Pinedale Array	74.50	47	P	P	02 56 56.2	+0.5
	comp=Z,0.5nm,0.7s,baz=258,slow=1.2,SNR=5.1						
KOLS	Kolonicke sedl	77.47	325	eP	P	02 57 13.5	+1.3
VYHS	Vyhne	79.30	326	eP	P	02 57 24.0	+1.7
CLL	Collm	79.43	331	eP	P	02 57 23.0	0.0
GERES	GERESS Array B	81.14	329	P	P	02 57 33.1	+0.8
	comp=Z,0.3nm,0.5s,baz=14,slow=7.0,SNR=4.5						
GERES	GERESS Array B	81.14	329	P	P	02 57 31.4	-1.0
TXAR	Lajitas Array	87.09	54	P	P	02 58 04.0	+0.9
	comp=Z,0.3nm,0.6s,baz=293,slow=4.4,SNR=3.8						
TXAR	Lajitas Array	87.09	54	P	P	02 58 01.0	-2.1

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*IDC **17** 02:48:26.1±0.9, 2°.48N×94°.50E, h0^{km}, mb4.2/12, mb1 4.3/14, mb1mx3.9/47, mbtmp4.2/14, ML4.0/2, Error ellipse: s-maj=29.1km s-min=15.9km az=52.0*

*NEIC **17** 02:48:29.3±0.6, 2°.46N±0°.08×94°.6E±0°.1, h28^{km}±4^{km}, mb4.5/29, Error ellipse: s-maj=16.6km s-min=10.7km az=64.0*

*DJA **17** 02:48:43.6±1.4, 2°N±4°×9°6E±1°4, h44^{km}±15^{km}, M4.3/9, mb4.7/6, mB4.8/2, MLv4.1/9, Mw(mB)4.1/2*

ISC 17 02:48:26.1±4.1, 2°.44N±0°.07×94°.47E±0°.08, h5^{km}±24^{km}, n100, σ0^{s}.81/97, mb4.5/32, 1C-1D, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNSI	Sinabang, Aceh	1.85	91	P	Pn	02 48 58.4	-0.1
SNSI				S	Sn	02 49 09.4	-13
TPTI		2.82	73	P	Pn	02 49 11.1	-0.8
GSI	Gunungsitoli	3.30	110		Pn	02 49 18.9	+0.5
GSI	Gunungsitoli	3.30	110	P	Pn	02 49 19.3	+0.8
LHMI	Lhok Sumawe	3.71	42		Pn	02 49 23.7	-0.4
LHMI	Lhok Sumawe	3.71	42	P	Pb	02 49 32.5	+0.3
RPSI	Rantau Prapat	4.45	87		Pn	02 49 34.4	0.0
PSI	Prapat	4.46	85	Pn	Pn	02 49 35.1	+0.5
	2.2nm,0.3s,baz=185,slow=0.3,SNR=11						
PSI				Sn	Sn	02 50 27.8	+0.9
	2.3nm,0.3s,baz=359,slow=4.0,SNR=4.2						
PBSI	Pulau Batu	4.54	123	P	Pn	02 49 36.7	+1.1
KULM	Kulim	6.78	65		Pn	02 50 05.2	-1.1
IPM	Ipoh	6.85	73		Pn	02 50 06.6	-0.7
PDSI	Padang	6.85	119	P	Pn	02 50 07.9	+0.5
	0.2nm21nm,0.5s						
BKNI	Bangkinang	6.89	108	Pn	Pn	02 50 07.1	-0.8
KSI	Kapahiang	10.12	127	P	Pn	02 51 00.2	+7.9
MNAI	Manna	10.84	129	Pn	Pn	02 50 59.2	-2.9
MDSI	Maura Dua	11.89	125	P	Pn	02 51 16.4	-0.1
UTHA	Uthaitani	13.93	20	P	P	02 51 54.2	+1.6
	13nm,0.9s						
SUKH	Sukhothai	15.78	18	P	P	02 52 13.7	+0.5
	29nm,1.0s						
UTTA	Uttaradit	16.34	21	P	P	02 52 19.3	-0.1
	17nm,0.7s						
CM05	Chiang Mai Arr	16.46	15	P	P	02 52 20.6	-0.1
	72nm7.2nm,0.9s						
CM04	Chiang Mai Arr	16.46	15	P	P	02 52 21.1	+0.2
	102nm12nm,1.1s						
CM13	Chiang Mai Arr	16.46	15	P	P	02 52 21.0	+0.2
	8.2nm,1.0s						
CM01	Chiang Mai Arr	16.48	15	P	P	02 52 21.7	+0.7
	12nm,0.9s						
CM02	Chiang Mai Arr	16.49	15	P	P	02 52 21.0	-0.1
	10nm,1.0s						
CM15	Chiang Mai Arr	16.50	15	P	P	02 52 22.4	+1.2
CM09	Chiang Mai Arr	16.51	15	P	P	02 52 22.0	+0.7
	14nm,1.0s						
CM31	Chiang Mai Arr	16.51	15	P	P	02 52 20.6	-0.7
CM31				IAmb	IAmb	02 52 30.6	
	comp=Z,58nm,1.7s						
CMAR	Chiang Mai Arr	16.51	15	Pn	Pn	02 52 18.3	-0.3
	comp=Z,0.6nm,0.3s,baz=208,slow=12,SNR=24						
UBPT	Khong Chiam	16.74	40	P	P	02 52 24.9	+1.1
	comp=Z,552nmcomp=Z,5.2nm,0.9s						
UBPT	Khong Chiam	16.74	40		Pn	02 52 20.9	-0.6
CHTO	Chiang Mai	16.85	15	Pn	Pn	02 52 22.2	-0.7
CMMT	Chiang Mai	16.85	15	P	P	02 52 24.9	-0.2
	comp=Z,5.7nm,1.0s						
NONG	Nongkai	17.70	28	P	P	02 52 34.8	+0.3
	comp=Z,11µmcomp=Z,25nm,0.9s						
SLVN	Son La	20.90	25	P	P	02 53 09.1	-0.6
QIZ	Qiongzhong	22.32	41	P	P	02 53 23.9	-1.0
SHL	Shillong	23.13	354	P	P	02 53 32.2	-1.3
SHL				IAmb	IAmb	02 53 33.3	
	comp=Z,16nm,0.8s						
KMI	Kunming	23.92	19	⇑P	P	02 53 42.1	+0.7
KMI				pP	pP	02 53 44.4	+2.9
KMI				pmax	pmax		
	comp=Z,11nm,0.9s						
KMI				pmax	pmax		
	comp=Z,190nm,4.8s						
KMI				LR	LR		
	comp=Z,190nm,14.1s						
KMI				LR	LR		
	comp=Z,300nm,16.4s						
KMI	Kunming	23.92	19	P	P	02 53 40.7	-0.7
KMI				IAmb	IAmb	02 53 53.9	
	comp=Z,31nm,1.4s						
H08S2	Diego Garcia H	24.11	245	T	T	03 19 18.8	
	baz=66,slow=74						
H08S3	Diego Garcia H	24.11	245	T	T	03 19 14.5	
	baz=66,slow=74						
H08S1	Diego Carcia H	24.13	245	T	T	03 19 17.6	
	baz=66						
ODAN	Odare	25.21	345	eP	P	02 53 53.9	+0.7
	comp=Z,21nm,0.8s						
RAMN	Ramite	25.51	344	eP	P	02 53 57.0	+1.0
	comp=Z,28nm,1.0s						
PKI	Pulchoki	26.45	342	eP	P	02 54 04.2	-0.4
DMN	Daman	26.58	341	eP	P	02 54 05.3	-0.4
GYA	Guiyang	26.59	25	eP	P	02 54 08.1	+2.5
GYA				pmax	pmax		
	comp=Z,8.0nm,0.7s						
KKN	Kakani	26.70	342	eP	P	02 54 05.2	-1.4
LSA	Lhasa	27.29	354	P	P	02 54 11.7	-0.5
CD2	Chengdu	29.65	16	eP	P	02 54 31.6	-1.2
XAN	Xi'an	34.21	22	P	P	02 55 12.1	-0.7
XAN				sP	pwP	02 55 20.4	+1.1
XAN				pmax	pmax		
	comp=Z,8.0nm,0.6s						
XAN	Xi'an	34.21	22	P	P	02 55 12.1	-0.7
GTA	Gaotai	37.12	7	⇓P	P	02 55 37.8	0.0
GTA				pP	sP	02 55 43.4	+5.4
GTA				sP	pwP	02 55 46.4	+2.1
GTA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,480nm,7.6s						
GTA				LR	LR		
	comp=Z,180nm,17.4s						
GTA				LR	LR		
	comp=Z,170nm,17.8s						
GTA				LR	LR		
	comp=Z,250nm,18.2s						
NJ2	Nanjing	37.34	35	eP	P	02 55 40.3	+0.7
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.7s						
HHC	Hu-ho-hao-te	41.23	20	eP	P	02 56 12.8	+0.6
HHC				pmax	pmax		
	comp=Z,7.0nm,1.2s						
HHC				pmax	pmax		
	comp=Z,140nm,6.5s						
H01W3	Cape Leeuwin H	41.46	155	T	T	03 41 03.9	
	baz=332,slow=76,SNR=27						
H01W2	Cape Leeuwin H	41.47	155	T	T	03 40 51.7	
	baz=332,slow=76,SNR=27						
H01W1	Cape Leeuwin H	41.48	155	T	T	03 40 54.6	
	baz=332,slow=76,SNR=30						
WMQ	Urumqi	41.64	353	eP	P	02 56 17.6	+2.1
BJT	Baijiatuau	42.27	25	P	P	02 56 20.0	-0.5
BJT				IAmb	IAmb	02 56 32.7	
	comp=Z,7.3nm,0.8s						
BJI	Beijing	42.29	25	P	P	02 56 21.8	+1.1
BJI				pmax	pmax		
	comp=Z,8.0nm,0.7s						
AAK	Ala-Archa	43.83	339	P	P	02 56 33.7	+0.4
	comp=Z,1.2nm,0.4s,baz=180,slow=13,SNR=2.0						
AAK	Ala-Archa	43.83	339	P	P	02 56 33.3	0.0
WRA	Warramunga Arr	45.00	121	P	P	02 56 43.6	+0.6
	comp=Z,1.6nm,0.9s,baz=299,slow=9.0,SNR=4.8						
WRA	Warramunga Arr	45.00	121	P	P	02 56 41.9	-1.1
MK31	Makanchi Array	45.43	348	P	P	02 56 46.0	0.0
MK31				IAmb	IAmb	02 56 47.5	
	comp=Z,6.3nm,1.1s						
MKAR	Makanchi Array	45.43	348	P	P	02 56 46.6	+0.6
	comp=Z,4.5nm,0.6s,baz=166,slow=9.4,SNR=46						
MKAR				PcP	PcP	02 58 25.7	+0.5
	comp=Z,0.5nm,0.7s,baz=151,slow=4.1,SNR=1.7						
MKAR	Makanchi Array	45.43	348	P	P	02 56 45.8	-0.1
MKAR					PcP	02 58 24.8	-0.4
MAKZ	Makanchi	45.51	348	P	P	02 56 45.5	-1.1
MAKZ				IAmb	IAmb	02 56 48.0	
	comp=Z,3.7nm,0.9s						
ASAR	Alice Springs	46.32	126	P	P	02 56 54.1	+0.8
	comp=Z,1.0nm,0.8s,baz=300,slow=7.1,SNR=6.6						
ASAR				PcP	PcP	02 58 29.6	+0.9
	comp=Z,0.6nm,0.7s,baz=319,slow=3.7,SNR=4.0						
SONM	Songino Array	46.38	11	P	P	02 56 53.8	+0.3
	comp=Z,3.2nm,0.7s,baz=188,slow=9.1,SNR=20						
SONM				PcP	PcP	02 58 29.4	+0.9
	comp=Z,0.8nm,0.6s,baz=189,slow=4.0,SNR=3.2						
SONM	Songino Array	46.38	11	P	P	02 56 53.0	-0.6
SONM					PcP	02 58 27.9	-0.6
KSRS	Korea Array	46.45	37	P	P	02 56 54.2	+0.2
	comp=Z,2.1nm,0.4s,baz=240,slow=8.1,SNR=4.5						
ULN	Ulaanbaatar	46.54	12	P	P	02 56 54.4	-0.4
ULN				IAmb	IAmb	02 56 55.2	
	comp=Z,2.5nm,0.6s						
GEYT	Alibeck	48.53	321	P	P	02 57 11.4	+1.0
	comp=Z,3.9nm,0.8s,baz=153,slow=6.0,SNR=5.6						
GEYT	Alibeck	48.53	321	P	P	02 57 11.0	+0.6
TLY	Talaya	49.67	7	P	P	02 57 19.2	+0.3
	comp=Z,3.2nm,0.6s,baz=186,slow=5.4,SNR=8.6						
TLY	Talaya	49.67	7	P	P	02 57 18.5	-0.4
TLY				IAmb	IAmb	02 57 20.9	
	comp=Z,6.3nm,0.9s						
KURK	Kurchatov	49.94	347	P	P	02 57 20.8	0.0
KURK				IAmb	IAmb	02 57 22.5	
	comp=Z,6.8nm,1.0s						
HIA	Hailar	51.41	21	P	P	02 57 31.5	-0.6
RAYN	Ar Rayn	51.77	298	P	P	02 57 35.2	0.0
RAYN				IAmb	IAmb	02 57 47.3	
	comp=Z,3.3nm,0.8s						
ZAA0	Zalesovo Array	51.95	353	P	P	02 57 36.0	+0.1
ZAA0				IAmb	IAmb	02 57 37.3	
	comp=Z,11nm,1.1s						
ZALV	Zalesovo Beam	51.95	353	P	P	02 57 36.5	+0.5
	comp=Z,5.4nm,0.5s,baz=182,slow=7.0,SNR=30						
ZALV	Zalesovo Beam	51.95	353	P	P	02 57 36.0	0.0
BRVK	Borovoye	54.28	342	P	P	02 57 53.2	0.0
BRVK				IAmb	IAmb	02 57 53.6	
	comp=Z,3.4nm,0.6s						
ABKAR	Akbulak array	55.16	333	P	P	02 57 59.5	0.0
ABKAR	Akbulak array	55.16	333	P	P	02 57 59.6	0.0
ABKAR				IAmb	IAmb	02 58 00.5	
	comp=Z,4.3nm,1.1s						
STKA	Stephens Creek	56.21	131	P	P	02 58 08.3	+0.8
	comp=Z,2.2nm,0.8s,baz=322,slow=9.1,SNR=3.5						
STKA	Stephens Creek	56.21	131	P	P	02 58 06.5	-1.0
KLR	Kul'dur	56.42	28	P	P	02 58 09.2	+0.6
	baz=241,slow=5.9						
MARD	Mardin	60.19	312	P	P	02 58 35.1	-0.3
TIXI	Tiksi	72.47	11	P	P	02 59 53.1	-0.2
TIXI				IAmb	IAmb	03 00 03.2	
	comp=Z,5.6nm,1.0s						
SEY	Seymchan	73.71	24	P	P	03 00 00.8	0.0
	comp=Z,0.4nm,0.3s,baz=78,slow=14,SNR=1.3						
BURAR	Bucovina Array	74.30	319	P	P	03 00 04.5	-0.3
BUR08	Bucovina Ar. S	74.32	319	P	P	03 00 04.7	-0.2
RPZ	Rata Peaks	82.01	135	P	P	03 00 46.7	-0.7
GERES	GERESS Array B	82.09	319	P	P	03 00 48.7	+0.7
	comp=Z,0.8nm,0.8s,baz=84,slow=5.5,SNR=5.7						
CLL	Collm	82.76	321	epP	pP	03 00 58.0	+6.7
TXAR	Lajitas Array	143.94	28	PKP	PKPdf	03 08 02.9	-0.8
	comp=Z,0.2nm,0.5s,baz=344,slow=3.0,SNR=2.3						
CPUP	Villa Florida	143.99	226	PKP	PKPbc	03 08 02.1	+0.7
	comp=Z,1.1nm,0.6s,baz=207,slow=19,SNR=3.0						
CPUP	Villa Florida	143.99	226		PKPdf	03 08 02.6	-1.1

IDC 17 02:51:52.7±2.1, 6°.59S×129°.31E, h0^{km}, mb3.5/1, mb1 3.7/4, mb1mx3.4/31, mbtmp3.6/4, ML3.8/3, Error ellipse: s-maj=89.8km s-min=27.4km az=76.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	11.98	197	Pn	Pn	02 54 45.0	+0.1
	0.2nm,0.3s,baz=16,slow=10,SNR=12						
FITZ				Sn	Sn	02 56 44.8	-15
	0.5nm,0.3s,baz=318,slow=23,SNR=7.8						
WRA	Warramunga Arr	14.14	160	Pn	Pn	02 55 15.0	+0.5
	0.6nm,0.3s,baz=343,slow=12,SNR=22						
WRA				Sn	Sn	02 57 40.5	-12
	0.5nm,0.3s,baz=328,slow=24,SNR=7.4						
ASAR	Alice Springs	17.54	166	P	Pn	02 55 58.4	-0.4
	0.8nm,0.3s,baz=340,slow=9.8,SNR=39						
ASAR				S	Sn	02 58 58.6	-16
	0.1nm,0.3s,baz=352,slow=19,SNR=1.6						
MKAR	Makanchi Array	67.51	327	P	P	03 02 50.7	0.0
	0.2nm,0.3s,baz=125,slow=6.3,SNR=7.5						

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*NNC **17** 02:53:51.1±14.0, 36°.69N×70°.98E, h174^{km}±634^{km}, mb2.8, mpv3.7, Error ellipse: s-maj=213.2km s-min=29.7km az=1.0*

ISC 17 02:53:50.7±4.7, 36°.6N±0°.3×71°.1E±0°.2, h188^{km}, n9, σ0^{s}.64/12, 4C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	Almayashu	5.85	20	P	Pn	02 55 16.5	+0.4
	SNR=26						
UCH	Uchtor	6.18	25	P	Pn	02 55 20.7	+0.1
	SNR=25						
EKS2	Erkin-Say	6.37	18	P	Pn	02 55 23.4	+0.7
	SNR=7.4						
KK31	Karatay Array	6.47	356	⇑P	Pn	02 55 24.0	+0.1
	1.4nm,0.5s,baz=176,slow=12,SNR=10						
KK31				⇓S	Sn	02 56 36.7	-0.8
	1.2nm,0.3s,baz=184,slow=24,SNR=9.4						
AAK	Ala-Archa	6.55	23	P	Pn	02 55 26.0	+0.9
	SNR=6.0						
AAK	Ala-Archa	6.55	23	⇑P	Pn	02 55 25.2	+0.2
	2.7nm,0.3s						
AAK				⇑S	Sn	02 56 39.2	-0.4
	5.1nm,0.8s						
ULHL	Ulahol	6.88	34	P	Pn	02 55 28.8	-0.7
	SNR=7.0						
TKM2	Tokmak 2	7.18	28	P	Pn	02 55 33.3	-0.1
	SNR=5.6						
TKM2	Tokmak 2	7.18	28	⇑P	Pn	02 55 32.8	-0.5
	5.2nm,0.6s						
TKM2				⇓S	Sn	02 56 55.3	+0.7
	2.3nm,1.0s						

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*NEIC **17** 03:06:30.9±0.7, 55°.40S±0°.09×28°.2W±0°.1, h11^{km}±3^{km}, mb5.3/70, Error ellipse: s-maj=13.0km s-min=11.5km az=193.0*

*IDC **17** 03:06:33.0±2.0, 55°.45S×28°.14W, h25^{km}±12^{km}, mb4.8/15, mb1 4.9/17, mb1mx4.9/21, mbtmp5.0/17, ML4.9/2, MS4.8/13, Ms1 4.8/13, ms1mx4.7/18, Error ellipse: s-maj=16.1km s-min=13.9km az=39.0*

*MOS **17** 03:06:33.9±0.9, 55°.49S×28°.55W, h33^{km}, mb5.5/18, Error ellipse: s-maj=19.9km s-min=11.6km az=121.2*

*GCMT **17** 03:06:35.9±0.2, 55°.43S±0°.02×27°.92W±0°.02, h24^{km}, MW5.4/120, Moment Tensor Solution. s49,c60; s120,c185; Duration: 1^{s}.3 Moment tensor: Scale 10^{17} Nm; M_{rr}1.37±.08; $M_{\theta\theta}$-0.56±.05; $M_{\phi\phi}$-0.80±.05; $M_{r\theta}$0.04±.06; $M_{\theta\phi}$0.87±.02; $M_{\phi r}$0.90±.06; Best double couple: $M_0$1.72500×10^{17} NP1:ϕ_s119.00000°, δ37.00000°, λ55.00000°. NP2:ϕ_s340.00000°, δ61.00000°, λ113.00000°. Principal axes: T 1.7430, Plg66.0000°, Azm293.0000°; N -0.0350, Plg20.0000°, Azm148.0000°; P -1.7080, Plg13.0000°, Azm53.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 17 03:06:33.1±0.2**, 55°.46S**±0°.05×**28°.19W**±0°.05**, h26^{km}, n319, σ1^{s}.13**/322**, mb5.2**/52**, MS4.9**/23**, 23C-13D, Fault plane solution: NP1:**ϕ_s88.92643°, δ35.65339°, λ16.21788°. **NP2:**ϕ_s345.62888°, δ80.63094°, λ124.55886°. **Principal axes:** T Plg43.6046°, Azm289.2657°; N Plg34.0341°, Azm159.2310°; P Plg27.3518°, Azm48.7828°; **South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	Hope Point	4.94	280	P	Pn	03 07 45.2	-0.3
HOPE						03 08 41.0	
HOPE	Hope Point	4.94	280	Pn	Pn	03 07 45.2	-0.3
HOPE				Sn	Sn	03 08 41.0	-0.7
VNA1	Neumayer--Stat	17.56	158	P	P	03 10 36.5	+0.1
VNA1				S	S	03 13 57.0	-0.4
VNA3	Neumayer Olymp	17.74	160	P	Pn	03 10 38.2	+0.3
VNA2	Neumayer--Watz	17.95	158	P	Pn	03 10 40.7	+0.2
	baz=312,slow=13						
VNA2				S	S	03 14 04.8	-0.6
EFI	East Falkland	18.07	270	⇑iP	P	03 10 42.7	+0.4
EFI				pmax	pmax		
	comp=Z,182nm,1.0s						
EFI	East Falkland	18.07	270	P	P	03 10 42.5	+0.2
SNAA	Sanae	19.51	156	P	P	03 10 57.5	-0.6
SNAA	Sanae	19.51	156	P	P	03 10 57.5	-0.6
	comp=Z,14nm,0.3s,baz=303,slow=9.6,SNR=168						
SNAA				LR	LR	03 17 31.7	
	comp=Z,2µm,18.3s,baz=348,slow=34						
SNAA				ScP	ScP	03 18 50.1	-1.2
	comp=Z,0.2nm,0.3s,baz=109,slow=1.8,SNR=4.2						
SNAA	Sanae	19.51	156	P	P	03 10 57.8	-0.3
SNAA				IAmb	IAmb	03 11 06.4	
	comp=Z,125nm,0.9s						
PMSA	Palmer Station	19.87	228	P	P	03 11 01.8	0.0
	comp=Z,0.9nm,0.3s,baz=51,slow=12,SNR=7.0						
PMSA				LR	LR	03 17 39.8	
	comp=Z,3µm,18.2s,baz=48,slow=34						
PMSA	Palmer Station	19.87	228	Pn	Pn	03 11 03.9	+0.3
PMSA				IAmb	IAmb	03 11 06.4	

	comp=Z,196nm,0.9s						
PMSA	Palmer Station	19.87	228	eP	Pn	03 11 04.5	+0.9
BELA	Belgrano 2	22.63	184	P	P	03 11 31.6	+0.1
NVL	N'lazarevskaya	23.07	147	eP	P	03 11 35.9	-0.2
NVL				eS	S	03 15 40.7	-4.4
NVL				pmax	pmax		
	comp=Z,64nm,1.2s						
GO10	Punta Arenas	24.82	257	P	P	03 11 52.8	-0.1
GO09	Cerro Castillo	26.33	261	P	P	03 12 05.2	-1.3
GO09				IAmb	IAmb	03 12 16.4	
	comp=Z,58nm,0.9s						
PLTB	Pedras Altas	29.68	312	eP	P	03 12 37.2	+0.6
CNLB	Canela	30.75	319	eP	P	03 12 45.8	-0.3
CPSB	Cacapava Do Su	30.80	314	eP	P	03 12 47.5	+1.1
PLCA	Paso Flores	31.34	280	P	P	03 12 50.5	-0.8
	comp=Z,5.0nm,1.0s,baz=146,slow=7.5,SNR=5.0						
PLCA				LR	LR	03 26 34.0	
	comp=Z,1µm,19.0s,baz=128,slow=38						
PLCA	Paso Flores	31.34	280	P	P	03 12 50.8	-0.5
PLCA				pmax	pmax		
	comp=Z,15nm,1.2s						
PLCA	Paso Flores	31.34	280	P	P	03 12 50.8	-0.5
PLCA	Paso Flores	31.34	280	eP	P	03 12 50.8	-0.5
SYO	Syowa Base	32.40	141	⇑eP	P	03 12 55.8	-4.3
SYO	Syowa Base	32.40	141	⇓epP	P	03 13 00.0	-0.1
ITQB	Itaqui	32.78	310	eP	P	03 13 04.1	+0.2
ITAB	Concordia	33.11	319	eP	P	03 13 08.0	+1.2
MAN01	Angra dos Reis	34.60	334	eP	P	03 13 20.7	+0.9
QSPA	South Pole Qui	34.79	180	P	P	03 13 21.4	+0.2
SPB	Sao Paulo	34.87	328	P	P	03 13 21.4	-0.6
SPB				IAmb	IAmb	03 13 25.0	
	comp=Z,42nm,1.1s						
VAS01	Vassouras-RJ	35.03	335	eP	P	03 13 23.8	+0.2
VAO	Valinhos	35.29	329	eP	P	03 13 26.8	+1.0
PTGB	Pitanga	35.37	321	eP	P	03 13 26.9	+0.4
BO02	Sierra Bellavi	35.71	287	P	P	03 13 28.1	-1.2
FRTB	Fartura	35.77	325	eP	P	03 13 30.7	+0.8
CPUP	Villa Florida	36.00	312	P	P	03 13 31.4	-0.3
	comp=Z,20nm,0.8s,baz=150,slow=7.4,SNR=32						
CPUP				ScP	ScP	03 19 41.0	-1.0
	comp=Z,8.8nm,0.9s,baz=119,slow=2.2,SNR=9.2						
CPUP				LR	LR	03 27 08.0	
	comp=Z,1µm,20.8s,baz=156,slow=34						
CPUP	Villa Florida	36.00	312	P	P	03 13 31.6	-0.1
BSCB	Bom Sucesso	36.59	333	eP	P	03 13 37.4	+0.5
MT05	Renca	36.75	289	P	P	03 13 38.0	-0.2
MT05				IAmb	IAmb	03 13 45.0	
	comp=Z,39nm,0.9s						
PEL	Peldehue	36.91	289	P	P	03 13 39.2	-0.4
PEL				pmax	pmax		
	comp=Z,49nm,0.8s						
PEL	Peldehue	36.91	289	P	P	03 13 39.2	-0.4
PEL				IAmb	IAmb	03 13 58.3	
	comp=Z,48nm,0.8s						
MT02	Curacav	37.06	289	P	P	03 13 40.8	0.0
ZON	Zonda	37.08	293	P	P	03 13 40.7	-0.3
ZON				pmax	pmax		
	comp=Z,36nm,0.7s						
ZON	Zonda	37.08	293	P	P	03 13 40.7	-0.3
ZON				IAmb	IAmb	03 13 47.8	
	comp=Z,36nm,0.7s						
VA03	San Esteban	37.13	290	P	P	03 13 41.2	-0.3
VA03				IAmb	IAmb	03 13 50.7	
	comp=Z,54nm,0.8s						
ROC1	El Roble	37.22	289	P	P	03 13 42.0	-0.4
RIB01	Linhares ES	37.25	341	eP	P	03 13 43.5	+1.0
TRCB	Terra Rica	37.33	321	eP	P	03 13 43.5	+0.3
BB19B	Bebedouro	37.58	328	eP	P	03 13 45.6	+0.3
BSFB	Barra de Sao F	37.81	340	eP	P	03 13 46.8	-0.4
PCMB	Pacaembu	37.95	324	eP	P	03 13 47.7	-0.7
SJMB	Sao Joao De Ma	38.00	340	eP	P	03 13 49.6	+0.8
CO02	Combarbal	38.58	291	P	P	03 13 53.4	-0.3
CO02				IAmb	IAmb	03 14 01.0	
	comp=Z,66nm,1.1s						
NAN01	Guarapari, ES	38.64	342	eP	P	03 13 53.8	-0.4
CO03	El Pedregal	38.70	292	P	P	03 13 54.4	-0.4
DIAM	Diamantina, MG	38.92	336	eP	P	03 13 56.9	+0.1
CO01	Juntas del Tor	39.07	293	P	P	03 13 57.4	-0.6
GO04	Tololo Observa	39.28	292	P	P	03 13 59.3	-0.5
GO04				IAmb	IAmb	03 14 04.9	
	comp=Z,49nm,0.9s						
ITRB	Iturama	39.43	326	eP	P	03 14 01.1	+0.3
AC05	El Transito	40.07	294	P	P	03 14 06.0	-0.3
AC05				IAmb	IAmb	03 14 12.5	
	comp=Z,62nm,0.9s						
LCO	Las Campanas	40.15	293	P	P	03 14 06.7	-0.4
LCO				pmax	pmax		
	comp=Z,30nm,0.9s						
LCO	Las Campanas	40.15	293	P	P	03 14 06.7	-0.4
IPMB	Ipameri, GO	40.40	330	eP	P	03 14 09.7	+0.8
AQDB	Aquidauana	40.58	318	eP	P	03 14 09.5	-0.8
AC04	Llanos de Chal	40.99	294	P	P	03 14 13.8	0.0
AC04				IAmb	IAmb	03 14 15.1	
	comp=Z,81nm,1.0s						
SUR	Sutherland	41.04	77	P	P	03 14 13.3	-1.0
	comp=Z,40nm,0.9s,baz=221,slow=7.2,SNR=13						
SUR				LR	LR	03 27 59.8	
	comp=Z,954nm,21.1s,baz=213,slow=31						
SUR	Sutherland	41.04	77	P	P	03 14 14.0	-0.3
SUR				IAmb	IAmb	03 14 15.8	
	comp=Z,62nm,1.1s						
GO03	Copiap	41.05	295	P	P	03 14 14.2	-0.1
GO03				IAmb	IAmb	03 14 29.5	
	comp=Z,59nm,1.1s						
AC02	Maricunga	41.11	297	P	P	03 14 14.4	-0.8
JANB	Januaria	42.20	336	eP	P	03 14 23.2	-0.5
AC01	Pan de Azucar	42.42	296	P	P	03 14 25.1	-0.3
BDFB	Brasilia	42.57	331	P	P	03 14 26.5	-0.3
	comp=Z,5.8nm,0.6s,baz=159,slow=8.2,SNR=8.7						
BDFB				LR	LR	03 31 29.0	
	comp=Z,1µm,18.1s,baz=142,slow=35						
BDFB	Brasilia	42.57	331	P	P	03 14 26.5	-0.3
GDU01	Guandu, BA	42.58	344	eP	P	03 14 26.5	-0.2
GO02	Mina Guanaco	42.72	298	P	P	03 14 27.6	-0.6
GO02				IAmb	IAmb	03 14 29.6	
	comp=Z,46nm,0.8s						
PP1B	Ponte de Pedra	42.91	321	eP	P	03 14 30.7	+1.2
PB14	IPOC Station P	43.57	297	P	P	03 14 34.5	-0.7
ARAG	Araguaiana, MT	43.64	326	eP	P	03 14 36.2	+0.9
PB15	IPOC Station P	44.29	300	P	P	03 14 40.1	-0.6
LVC	Limon Verde	44.51	301	P	P	03 14 42.0	-0.7
LVC				pmax	pmax		
	comp=Z,38nm,0.9s						
LVC	Limon Verde	44.51	301	P	P	03 14 42.0	-0.7
LVC				IAmb	IAmb	03 14 45.9	
	comp=Z,38nm,0.9s						
LVC	Limon Verde	44.51	301	eP	P	03 14 43.9	+1.2
SDBA	SAO DESIDERIO	44.89	337	eP	P	03 14 45.5	+0.1
PB09	IPOC Station P	45.36	301	P	P	03 14 48.9	-0.4
PEXB	Peixe	46.02	332	eP	P	03 14 54.8	+0.5
PB01	IPOC Station P	46.12	301	P	P	03 14 54.8	-0.4
BOSA	Boshof	46.38	77	P	P	03 14 56.1	-1.1
	comp=Z,35nm,0.9s,baz=209,slow=7.5,SNR=51						
BOSA				LR	LR	03 30 15.5	
	comp=Z,1µm,21.9s,baz=214,slow=31						
BOSA	Boshof	46.38	77	P	P	03 14 56.2	-1.0
BOSA				pmax	pmax		
	comp=Z,41nm,0.9s						
BOSA	Boshof	46.38	77	P	P	03 14 56.2	-1.0
PATCX	Punta Patache	46.64	301	P	P	03 14 58.9	-0.3
NBRF	Rio Formoso -	46.98	351	eP	P	03 15 01.4	-0.4
SNDB	Serra Nova Dou	46.99	328	eP	P	03 15 02.2	+0.2
VNDA	Vanda	47.14	183	P	P	03 15 03.0	+0.6
	comp=Z,22nm,0.6s,baz=192,slow=5.1,SNR=22						
VNDA	Vanda	47.14	183	P	P	03 15 03.1	+0.7
VNDA				pmax	pmax		
	comp=Z,31nm,0.9s						
VNDA	Vanda	47.14	183	P	P	03 15 03.1	+0.7
VNDA				IAmb	IAmb	03 15 08.5	
	comp=Z,31nm,0.8s						
H10S2	ASCENSION HYDR	47.60	18	T	T	04 07 03.8	
	baz=190,slow=74,SNR=24						
H10S3	ASCENSION HYDR	47.61	18	T	T	04 07 05.4	
	baz=30,slow=74,SNR=54						
PSGCX	Pisagua	47.66	302	P	P	03 15 06.8	-0.4
PSGCX				IAmb	IAmb	03 15 08.3	
	comp=Z,27nm,0.9s						
MNMC	Minye Minye	47.81	302	P	P	03 15 07.9	-0.6
NBLI	Livramento-PB	48.47	348	eP	P	03 15 13.0	-0.4
H10N1	ASCENSION HYDR	48.72	18	T	T	04 08 26.5	
	baz=189,slow=75						
H10N3	ASCENSION HYDR	48.72	18	T	T	04 08 29.1	
	baz=189,slow=75						
H10N2	ASCENSION HYDR	48.74	18	T	T	04 08 32.2	
	baz=189,slow=75						
SMTB	Santa Maria do	48.95	334	eP	P	03 15 17.6	+0.6
VILB	Vilhena	49.16	317	eP	P	03 15 18.5	-0.2
NBPV	Pedro Velho	49.23	351	eP	P	03 15 19.6	+0.4
LBTB	Lobatse	49.39	75	P	P	03 15 19.7	-0.7
LBTB				pmax	pmax		
	comp=Z,49nm,1.0s						
LBTB	Lobatse	49.39	75	P	P	03 15 19.7	-0.7
LPAZ	La Paz	49.57	306	P	P	03 15 23.4	+0.8
	comp=Z,29nm,0.8s,baz=110,slow=8.5,SNR=58						
LPAZ				LR	LR	03 36 47.6	
	comp=Z,584nm,20.6s,baz=144,slow=37						
LPAZ	La Paz	49.57	306	P	P	03 15 21.5	-1.0
LPAZ	La Paz	49.57	306	eP	P	03 15 23.6	+1.0
TSUM	Tsumeb	49.90	62	P	P	03 15 23.4	-1.0
TSUM				IAmb	IAmb	03 15 24.3	
	comp=Z,36nm,1.1s						
NBPA	Parau_RN	50.08	348	eP	P	03 15 26.0	+0.4
NBPS	Pedro II - PI	52.02	343	eP	P	03 15 39.9	-0.5
PRPB	Parauapebas	52.10	332	eP	P	03 15 41.7	+0.8
NBMO	Morrinhos-CE	52.87	345	eP	P	03 15 46.6	+0.1
NPGB	Novo Progresso	52.91	325	eP	P	03 15 46.6	-0.2
ROSB	Rosrio	53.97	340	eP	P	03 15 54.8	+0.2
SAML	Samuel	53.98	316	P	P	03 15 54.2	-0.5
SAML				pmax	pmax		
	comp=Z,22nm,0.8s						
SAML	Samuel	53.98	316	P	P	03 15 54.2	-0.5
SAML				IAmb	IAmb	03 15 55.1	
	comp=Z,22nm,0.8s						
SAML	Samuel	53.98	316	eP	P	03 15 54.4	-0.3
ETMB	Extrema	54.45	312	eP	P	03 15 58.1	0.0
TMAB	Tom-Au,PA,Br	55.33	336	eP	P	03 16 05.1	+0.7
ITTB	Itaituba	55.55	326	eP	P	03 16 06.4	+0.4
NNA	Nana	57.47	299	ceP	P	03 16 20.1	+0.3
NNA				pmax	pmax		
	comp=Z,99nm,1.5s						
NNA	Nana	57.47	299	P	P	03 16 19.2	-0.6
NNA				IAmb	IAmb	03 16 27.1	
	comp=Z,43nm,1.1s						
MALB	Monte Alegre	57.47	329	eP	P	03 16 18.6	-1.1
MCPB	Macapa, AP	58.27	332	eP	P	03 16 26.2	+0.9
MACA	Manacapuru-AM	58.35	321	eP	P	03 16 25.0	-0.9
LSZ	Lusaka	58.69	70	P	P	03 16 27.6	-0.9
LSZ				pmax	pmax		
	comp=Z,21nm,1.1s						
LSZ	Lusaka	58.69	70	P	P	03 16 27.6	-0.9
CZSB	Cruzeiro do Su	59.18	306	eP	P	03 16 30.2	-1.5
PTGA	Pitinga	60.36	323	P	P	03 16 39.5	-0.3
PTGA	Pitinga	60.36	323	eP	P	03 16 39.3	-0.5
LIC	Lamto	64.40	26	eP	P	03 17 05.7	-1.0
	comp=Z,175nm,1.0s						
KIC	Kosan Boka	64.60	26	eP	P	03 17 07.2	-0.9
	comp=Z,47nm,0.7s						
TIC	Toumodi	64.81	26	eP	P	03 17 08.4	-1.0
DBIC	Dimbokro	64.87	26	P	P	03 17 09.1	-0.7
	comp=Z,31nm,0.8s,baz=166,slow=9.0,SNR=42						
DBIC	Dimbokro	64.87	26	P	P	03 17 09.6	-0.2
DBIC				pmax	pmax		
	comp=Z,32nm,0.7s						
DBIC	Dimbokro	64.87	26	P	P	03 17 09.6	-0.2
ABPO	Ambohimpanom	66.30	89	P	P	03 17 19.4	0.0
ABPO				pmax	pmax		
	comp=Z,39nm,1.1s						
ABPO	Ambohimpanom	66.30	89	P	P	03 17 19.4	0.0
OTAV	Otavalo	68.86	304	P	P	03 17 35.0	-0.8
OTAV				pmax	pmax		
	comp=Z,16nm,1.0s						
OTAV	Otavalo	68.86	304	P	P	03 17 35.0	-0.8
OTAV				IAmb	IAmb	03 17 47.5	
	comp=Z,16nm,0.9s						
OTAV	Otavalo	68.86	304	eP	P	03 17 37.3	+1.5
RER	Riviere de l'E	69.44	98	P	P	03 17 39.1	+0.1
ROSC	El Rosal	71.07	311	P	P	03 17 49.6	+0.3
	comp=Z,12nm,0.7s,baz=120,slow=15,SNR=9.5						
ROSC				LR	LR	03 49 31.4	
	comp=Z,292nm,21.2s,baz=154,slow=36						
ROSC	El Rosal	71.07	311	P	P	03 17 48.7	-0.6
MBAR	Mbarara	72.39	64	d iP	P	03 17 58.5	+1.5
MBAR				pmax	pmax		
	comp=Z,12nm,1.2s						
MBAR	Mbarara	72.39	64	P	P	03 17 57.0	0.0
KOWA	Kowa	72.61	25	P	P	03 17 58.1	+0.2
KOWA				IAmb	IAmb	03 17 59.0	
	comp=Z,28nm,0.9s						
SDV	Santo Domingo	73.19	316	P	P	03 18 01.5	-0.2
SDV				IAmb	IAmb	03 18 03.4	
	comp=Z,28nm,0.8s						
SDV	Santo Domingo	73.19	316	eP	P	03 18 01.9	+0.2
KMBO	Kilima Mbogo	75.36	70	P	P	03 18 15.4	+0.9
	comp=Z,3.3nm,1.0s,baz=277,slow=1.1,SNR=4.9						
KMBO				LR	LR	03 50 22.3	
	comp=Z,2µm,18.3s,baz=249,slow=35						
WKZ	Wanaka	79.03	192	P	P	03 18 35.0	+0.5
WKZ				IAmb	IAmb	03 18 45.1	
	comp=Z,23nm,0.9s						
MQZ	McQueen's Vall	79.64	195	P	P	03 18 38.3	+0.6
MQZ				IAmb	IAmb	03 18 42.3	
	comp=Z,40nm,1.2s						
RPZ	Rata Peaks	79.86	194	P	P	03 18 38.6	-0.4
	comp=Z,20nm,1.0s,baz=194,slow=8.3,SNR=7.5						
RPZ	Rata Peaks	79.86	194	P	P	03 18 39.5	+0.5
RPZ				IAmb	IAmb	03 18 43.1	
	comp=Z,29nm,1.1s						
RKT	Rikitea	80.24	243	eLR	LR	03 43 39.1	
	comp=Z,577nm,22.0s						
LTZ	Lake Taylor	80.60	195	P	P	03 18 42.9	-0.1
LTZ				IAmb	IAmb	03 18 54.1	
	comp=Z,35nm,1.0s						
JTS	Las Juntas de	80.72	303	c iP	P	03 18 44.3	+0.4
JTS				pmax	pmax		
	comp=Z,87nm,2.0s						
JTS	Las Juntas de	80.72	303	P	P	03 18 43.8	-0.1
JTS				IAmb	IAmb	03 18 52.3	
	comp=Z,27nm,1.1s						
THZ	Tophouse	81.50	196	P	P	03 18 47.8	-0.1
THZ				IAmb	IAmb	03 19 01.7	
	comp=Z,20nm,0.7s						
TAU	Tasmania Unive	81.93	177	P	P	03 18 50.4	+0.4
TAU				pmax	pmax		
	comp=Z,44nm,1.0s						
TAU	Tasmania Unive	81.93	177	P	P	03 18 50.4	+0.4
ACON	Acoyapa	82.28	304	P	P	03 18 52.1	0.0
TAM	Tamanrasset	83.07	31	P	P	03 18 56.5	+0.3
TAM				pmax	pmax		
	comp=Z,19nm,1.1s						
TAM	Tamanrasset	83.07	31	P	P	03 18 56.5	+0.3
TAM				IAmb	IAmb	03 18 59.6	
	comp=Z,19nm,1.1s						
URZ	Urewera	84.18	200	P	P	03 19 01.1	-0.6
	comp=Z,9.9nm,0.9s,baz=128,slow=4.0,SNR=2.2						
TGUH	Tegucigalpa,Un	85.09	303	P	P	03 19 06.4	-0.2
TGUH				IAmb	IAmb	03 19 25.9	
	comp=Z,26nm,1.1s						
MTO3	Montecristo	86.39	302	P	P	03 19 12.9	-0.2
MTO3				IAmb	IAmb	03 19 13.9	
	comp=Z,22nm,0.8s						
ESQI	Esquipulas	86.52	302	P	P	03 19 13.5	-0.2
TBI	Tubuai	87.01	232	eLR	LR	03 46 47.2	
	comp=Z,840nm,29.0s,baz=154						
NWAO	Narrogin (SRO)	87.12	151	P	P	03 19 17.3	+0.8
	comp=Z,4.7nm,0.5s,baz=240,slow=17,SNR=2.6						
NWAO	Narrogin (SRO)	87.12	151	P	P	03 19 16.7	+0.2
NWAO				IAmb	IAmb	03 19 31.5	
	comp=Z,17nm,1.1s						
TEIG	Tepich	90.90	306	P	P	03 19 34.3	+0.1
PPT2	Papeete2	92.07	235	eLR	LR	03 49 03.5	
	comp=Z,582nm,22.5s,baz=157						
PPT	Papeete	92.09	235	LR	LR	03 54 45.7	
	comp=Z,298nm,18.3s,baz=166,slow=31						
STKA	Stephens Creek	92.58	171	P	P	03 19 41.3	-0.7
	comp=Z,3.3nm,0.8s,baz=161,slow=8.6,SNR=6.0						
STKA	Stephens Creek	92.58	171	P	P	03 19 42.4	+0.4
STKA				pmax	pmax		
	comp=Z,1.0nm,1.1s						
STKA	Stephens Creek	92.58	171	P	P	03 19 42.4	+0.4
TLIG	Tlapa	93.67	296	P	P	03 19 47.1	-0.2
TLIG				IAmb	IAmb	03 19 49.2	
	comp=Z,10nm,0.9s						
KEST	Kesra	96.34	30	LR	LR	03 59 50.5	
	comp=Z,654nm,19.3s,baz=164,slow=33						
ASAR	Alice Springs	99.72	163	P	Pdif	03 20 13.6	-1.1
	comp=Z,4.6nm,0.9s,baz=188,slow=3.9,SNR=15						
ASAR				PKKPbc	PKKPdf	03 36 34.5	-1.1
	comp=Z,0.7nm,0.8s,baz=30,slow=2.8,SNR=5.0						
ASAR				LR	LR	04 01 50.6	
	comp=Z,382nm,21.8s,baz=190,slow=33						
DZM	Mont Dzumac	101.78	194	eLR	LR	03 53 44.4	
	comp=Z,611nm,23.8s						
WRA	Warramunga Arr	103.44	163	Pdiff	Pdif	03 20 31.0	-0.2
	comp=Z,0.6nm,0.5s,baz=197,slow=4.1,SNR=6.3						
WRA				PKKPbc	PKKPbc	03 36 22.9	+0.7
	comp=Z,0.9nm,0.7s,baz=6.9,slow=3.3,SNR=5.3						
GERES	GERESS Array B	109.69	28	PKiKP	PKiKP	03 24 59.9	-0.7
	comp=Z,0.5nm,0.8s,baz=199,slow=2.7,SNR=3.4						
CLL	Collm	111.77	26	ePP	PP	03 25 49.0	+1.2
CLL	Collm	111.77	26	ePKIKP	PKiKP	03 25 12.0	+7.8
CLL				e		03 25 49.0	
KBZ	Khabaz	115.61	50	⇑iPKIKP	PKiKP	03 25 13.1	+1.3
KIV	Kislovodsk	115.70	49	i PKIKP	PKiKP	03 25 14.6	+2.4
KIV				pmax	pmax		
	comp=Z,16nm,1.1s						
KIV				MLR	MLR		
	comp=Z,926nm,22.0s						
AKASG	Malin Array Be	116.06	37	PKP	PKiKP	03 25 12.4	-0.1
	comp=Z,1.4nm,0.8s,baz=239,slow=1.6,SNR=4.1						
ULM	Lac du Bonnet	119.43	317	PKP	PKPdf	03 25 18.6	-0.4
	comp=Z,1.3nm,0.6s,baz=162,slow=3.5,SNR=4.1						
PDAR	Pinedale Array	119.55	303	PKP	PKPdf	03 25 19.0	-0.8
	comp=Z,0.8nm,0.7s,baz=152,slow=5.3,SNR=7.4						
PDAR	Pinedale Array	119.55	303	PKPdf	PKiKP	03 25 19.9	+0.1
NB2	NORSAR Subarra	120.25	21	PKPdf	PKiKP	03 25 21.3	+0.9
	comp=Z,6.9nm,1.2s,baz=202,slow=1.9						
NOA	NORSAR Array B	120.25	21	PKP	PKiKP	03 25 20.4	0.0
	comp=Z,1.1nm,0.8s,baz=210,slow=2.1,SNR=3.7						
NVAR	Mina Array Bea	120.64	294	PKP	PKiKP	03 25 22.1	-0.1
	comp=Z,1.5nm,0.8s,baz=148,slow=3.5,SNR=8.8						
NVAR	Mina Array Bea	120.64	294	PKPdf	PKiKP	03 25 22.2	+0.1
VSU	Vasula	121.82	30	⇓iPKIKP	PKPdf	03 25 23.1	-0.2
NIL	Nilore	123.20	78	PKIKP	PKiKP	03 25 27.4	+0.3
NIL	Nilore	123.20	78	PKPdf	PKiKP	03 25 27.4	+0.3
SFJD	Kangerlussuaq	123.29	350	i P	PKiKP	03 25 30.8	+4.7
SFJD	Kangerlussuaq	123.29	350	i PKIKP	PKiKP	03 25 30.8	+4.7
SFJD	Kangerlussuaq	123.29	350	i P	PKiKP	03 25 30.9	+4.7
FINES	FINESS Array B	124.12	28	PKP	PKPdf	03 25 27.2	-0.4
	comp=Z,5.9nm,0.6s,baz=141,slow=1.7,SNR=31						
BELG	Belogornoye	124.33	46	⇓iPKIKP	PKiKP	03 25 28.4	-0.2
ICESG	Greenland Ices	124.52	355	i PKP	PKiKP	03 25 30.2	+1.2
YBH	Yreka Blue Hor	125.36	294	PKIKP	PKiKP	03 25 30.9	-0.3
YBH	Yreka Blue Hor	125.36	294	PKPdf	PKiKP	03 25 30.9	-0.3
ILULI	Ilulissat	125.48	350	i P	PKiKP	03 25 31.5	+1.1
ILULI	Ilulissat	125.48	350	PKIKP	PKiKP	03 25 31.7	+1.3
ILULI	Ilulissat	125.48	350		PKiKP	03 25 31.7	+1.3
ILULI	Ilulissat	125.48	350	i P	PKiKP	03 25 31.5	+1.1
CMAR	Chiang Mai Arr	125.80	111	PKP	PKPdf	03 25 32.3	0.0
	comp=Z,1.7nm,0.4s,baz=238,slow=3.7,SNR=10						
CMAR	Chiang Mai Arr	125.80	111	PKIKP	PKiKP	03 25 32.4	-0.3
ABKAR	Akbulak array	127.50	56	PKPdf	PKPdf	03 25 34.3	-0.2
IUG	Iuzhnay	127.59	68	ePKP	PKiKP	03 25 36.6	+0.9
	baz=68						
IUG	Iuzhnay	127.59	68	ePKIKP	PKiKP	03 25 36.5	+0.9
KLMR	Klimovskoe	127.66	35	ePKIKP	PKPdf	03 25 33.7	-0.7
KLMR				pmax	pmax		
	comp=Z,27nm,1.5s						
KLMR	Klimovskoe	127.66	35	ePKPdf	PKPdf	03 25 33.7	-0.7
KLMR				AMP		03 25 38.9	
	comp=Z,27nm,1.5s						
KLMR				ePP	PP	03 27 28.9	-8.1
KLMR				ePKKP	PKKPdf	03 35 52.5	+6.3
SUMG	Summit	127.94	356	i P	PKiKP	03 25 36.1	+0.3
SUMG	Summit	127.94	356	PKIKP	PKiKP	03 25 36.4	+0.6
SUMG	Summit	127.94	356	PKPdf	PKiKP	03 25 36.4	+0.6
SUMG	Summit	127.94	356	i PKP	PKiKP	03 25 36.1	+0.3
B08A	Colville Reser	128.32	302	PKPdf	PKiKP	03 25 36.7	-0.1
KSH	Kashi	128.95	75	PKP	PKiKP	03 25 38.1	-0.4
KSH				PP	PP	03 27 51.5	+5.5
KSH				AMB	AMB		
	comp=Z,620nm,7.6s						
UPNV	Upernavik	129.41	350	eP	PKiKP	03 25 39.6	+1.4
KIRV	Kirov	129.50	42	⇓ePKIKP	PKPdf	03 25 37.3	-0.7
DBG	Daneborg	129.60	3	i PKP	PKiKP	03 25 39.0	+0.5
TMCR	Tamitsa	129.66	31	ePKIKP	PKiKP	03 25 39.2	+0.3
TMCR				pmax	pmax		
	comp=Z,22nm,1.0s						
AAK	Ala-Archa	130.31	71	PKIKP	PKiKP	03 25 41.0	-0.2
AAK	Ala-Archa	130.31	71		PKiKP	03 25 41.0	-0.2
ARCES	ARCESS Array B	130.60	22	PKP	PKPdf	03 25 39.6	-0.2
	comp=Z,12nm,1.0s,baz=202,slow=1.9,SNR=15						
ARCES	ARCESS Array B	130.60	22	PKIKP	PKPdf	03 25 40.0	+0.2
ARCES	ARCESS Array B	130.60	22		PKPdf	03 25 40.0	+0.2
LVZ	Lovozero	131.48	27	⇑iPKIKP	PKiKP	03 25 43.5	+0.9
BTLS	Baital	131.70	68	ePKP	PKiKP	03 25 43.6	0.0
	baz=68						
BTLS				ePP	PP	03 28 04.3	+0.7
	baz=68						
BTLS	Baital	131.70	68	ePKIKP	PKiKP	03 25 43.6	0.0
BTLS				e		03 28 04.3	
ARU	Arti	131.72	48	i PKIKP	PKiKP	03 25 43.1	-0.2
ARU	Arti	131.72	48		PKiKP	03 25 43.4	+0.1
QIZ	Qiongzhong	131.84	122	PKP	PKiKP	03 25 44.3	-0.4
QIZ				PP	PP	03 28 05.9	+1.6
QIZ				SS	SS	03 45 41.8	+3.7
QIZ				LR	LR		
	comp=Z,270nm,19.8s						
QIZ				LR	LR		
	comp=Z,330nm,15.3s						
QIZ				LR	LR		
	comp=Z,300nm,17.1s						
MDOK	Medeo	132.05	72	ePKP	PKiKP	03 25 44.3	-0.3
	baz=72						
MDOK	Medeo	132.05	72	ePKIKP	PKiKP	03 25 44.3	-0.3
DAG	Danmarks Havn	132.10	3	i P	PKiKP	03 25 43.4	-0.1
DAG	Danmarks Havn	132.10	3	ePKIKP	PKiKP	03 25 43.4	-0.1
DAG	Danmarks Havn	132.10	3	ePKP	PKiKP	03 25 43.4	-0.1
KUU	Kurty	132.16	71	ePKP	PKiKP	03 25 44.3	-0.3
	baz=71						
KUU				ePP	PP	03 28 07.3	+0.7
	baz=71						
KUU	Kurty	132.16	71	ePKIKP	PKiKP	03 25 44.3	-0.3
KUU				e		03 28 07.3	
CHKK	Chushkaly	132.48	71	ePKP	PKiKP	03 25 44.8	-0.5
	baz=72						
CHKK	Chushkaly	132.48	71	ePKIKP	PKiKP	03 25 44.8	-0.5
SVE	Sverdlovsk	132.86	49	ePKIKP	PKiKP	03 25 45.2	-0.4
KMI	Kunming	133.26	110	⇑PKP	PKPdf	03 25 43.1	-3.4
KMI				LR	LR		
	comp=Z,240nm,22.6s						
KMI				LR	LR		
	comp=Z,260nm,18.6s						
KMI				LR	LR		
	comp=Z,460nm,21.5s						
SHLS	Shalkode	133.36	74	ePKP	PKiKP	03 25 47.6	+0.3
	baz=74						
SHLS	Shalkode	133.36	74	ePKIKP	PKiKP	03 25 47.5	+0.3
BRZS	Berezniki	134.19	62	ePKP	PKiKP	03 25 47.7	-0.8
	baz=62						
BRZS	Berezniki	134.19	62	ePKIKP	PKiKP	03 25 47.7	-0.8
TULEG	Thule	134.25	348		PKiKP	03 25 48.0	+0.1
TULEG	Thule	134.25	348	i P	PKPdf	03 25 46.8	+0.3
BRVK	Borovoye	134.91	57	PKIKP	PKiKP	03 25 49.5	-0.3
BRVK	Borovoye	134.91	57	PKPdf	PKiKP	03 25 49.5	-0.3
YKA	Yellowknife Ar	135.35	319	PKhKP	PKPpre	03 25 35.9	
	comp=Z,0.3nm,0.6s,baz=119,slow=4.6,SNR=5.0						
YKA				PKP	PKPdf	03 25 48.8	-0.1
	comp=Z,6.2nm,1.0s,baz=115,slow=2.6,SNR=24						
YKA				PP	PP	03 28 25.7	-0.9
	comp=Z,1.5nm,0.9s,baz=121,slow=7.0,SNR=5.7						
YKA				SKPbc	SKPbc	03 29 17.1	-0.7
	comp=Z,7.6nm,0.9s,baz=121,slow=2.7,SNR=18						
GYA	Guiyang	136.41	113	eP	PKiKP	03 25 59.8	+5.8
GYA				pmax	pmax		
	comp=Z,3.0nm,1.7s						
MK31	Makanchi Array	137.23	71	⇓ePKIKP	PKPdf	03 25 53.3	+0.3
MKAR	Makanchi Array	137.23	71	PKhKP	PKPpre	03 25 43.0	
	comp=Z,0.4nm,0.6s,baz=174,slow=1.7,SNR=4.3						
MKAR				PKP	PKPdf	03 25 52.2	-0.8
	comp=Z,1.5nm,0.7s,baz=230,slow=2.7,SNR=12						
MKAR				PP	PP	03 28 37.0	-1.7
	comp=Z,1.8nm,1.1s,baz=220,slow=7.2,SNR=4.0						
MKAR				SKPbc	SKPbc	03 29 23.2	-1.0
	comp=Z,4.0nm,1.0s,baz=250,slow=2.5,SNR=8.5						
KURK	Kurchatov	137.66	65	PKIKP	PKiKP	03 25 54.8	-0.8
KURK	Kurchatov	137.66	65		PKiKP	03 25 54.8	-0.8
WMQ	Urumqi	138.34	78	ePKP	PKiKP	03 25 58.0	+0.7
WMQ				AMB	AMB		
	comp=Z,270nm,6.3s						
WMQ				LR	LR		
	comp=Z,650nm,29.1s						
WMQ				LR	LR		
	comp=Z,1µm,29.3s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
WMQ				LR	LR		
	comp=Z,100nm,22.7s						
CD2	Chengdu	138.36	106	*e*PKP	PKiKP	03 25 57.1	-0.6
CD2				SKS	SKSdf	03 33 00.3	-4.0
CD2				LR	LR		
	comp=Z,300nm,17.6s						
CD2				LR	LR		
	comp=Z,330nm,21.6s						
CD2				LR	LR		
	comp=Z,370nm,16.3s						
DGZ	Jazzator, Alta	141.72	71	⇑*e*PKHKP	PKPpre	03 25 55.3	
LZH	Lanzhou	142.27	101	*e*PKP	PKPdf	03 26 01.3	-1.4
LZH				SS	SS	03 47 45.0	+2.0
GTA	Gaotai	142.32	93	PKP	PKiKP	03 26 05.0	-0.7
GTA				LR	LR		
	comp=Z,190nm,16.4s						
GTA				LR	LR		
	comp=Z,240nm,18.2s						
GTA				LR	LR		
	comp=Z,240nm,17.4s						
ZAA0	Zalesovo Array	142.61	64		PKPpre	03 25 57.4	
ZALV	Zalesovo Beam	142.61	64	PKhKP	PKPpre	03 25 57.7	
	comp=Z,2.6nm,0.6s,baz=244,slow=4.5,SNR=9.5						
ZALV				PP	PP	03 29 10.9	-0.8
	comp=Z,2.8nm,1.0s,baz=234,slow=6.9,SNR=4.6						
ZALV	Zalesovo Beam	142.61	64	PKHKP	PKPpre	03 25 57.5	
ZALV	Zalesovo Beam	142.61	64	PKPdf	PKPdf	03 25 57.5	-5.0
XAN	Xi'an	143.56	108	PKP	PKiKP	03 26 08.3	0.0
XAN				pPKP	sPKPdf	03 26 14.3	-0.2
XAN				AMB	AMB		
	comp=Z,250nm,13.3s						
XAN				LR	LR		
	comp=Z,200nm,18.4s						
XAN				LR	LR		
	comp=Z,240nm,19.8s						
INK	Inuvik	144.99	321	PKIKP	PKPdf	03 26 06.0	-0.2
INK	Inuvik	144.99	321		PKPdf	03 26 06.0	-0.2
EGAK	Eagle	146.92	314	PKPdf	PKPbc	03 26 11.2	-0.4
NJ2	Nanjing	147.13	122	*e*PKPbc	PKPdf	03 26 11.6	+0.6
PAX	Paxson	148.26	309	PKIKP	PKPdf	03 26 13.0	+1.0
PAX	Paxson	148.26	309	PKPdf	PKPdf	03 26 13.0	+1.0
BMAR	Burnt Mountain	148.87	318		PKiKP	03 26 17.7	-0.4
BTO	Baotou	148.89	101	*e*PKPbc	PKPdf	03 26 13.1	-0.7
NRIK	Noril'sk	148.90	38	PKPbc	PKPbc	03 26 16.9	+0.2
	comp=Z,24nm,1.1s,baz=307,slow=0.4,SNR=15						
NRIK	Noril'sk	148.90	38	PKPdf	PKPdf	03 26 14.0	+1.3
ILAR	Eielson Array	149.30	313	PKPbc	PKPbc	03 26 17.8	-0.1
	comp=Z,35nm,0.8s,baz=128,slow=2.5,SNR=76						
ILAR	Eielson Array	149.30	313	PKPdf	PKPdf	03 26 13.9	+0.4
TIA	Tai'an	149.56	115	PKPbc	PKPbc	03 26 18.8	-0.7
COLA	College	149.72	313	PKP2	PKPbc	03 26 19.2	+0.3
COLA	College	149.72	313		PKPbc	03 26 19.2	+0.3
HHC	Hu-ho-hao-te	149.92	102	*e*PKPbc	PKPbc	03 26 18.3	-2.0
KDAK	Kodiak Island	150.05	298	PKPbc	PKiKP	03 26 20.2	-0.5
	comp=Z,20nm,0.6s,baz=172,slow=1.2,SNR=2.4						
ZAK	Zakamensk	150.79	79	*e*PKIKP	PKPbc	03 26 21.5	-0.6
ZAK				pmax	pmax		
	comp=Z,25nm,1.4s						
SONM	Songino Array	151.25	86	PKPbc	PKPbc	03 26 23.3	0.0
	comp=Z,15nm,0.6s,baz=224,slow=2.9,SNR=61						
SONM	Songino Array	151.25	86	PKIKP	PKPdf	03 26 17.5	+0.2
SONM	Songino Array	151.25	86		PKPdf	03 26 17.5	+0.2
TLY	Talaya	151.61	77	PKPbc	PKiKP	03 26 24.0	-0.3
	comp=Z,6.2nm,0.7s,baz=251,slow=4.8,SNR=10						
TLY	Talaya	151.61	77	PKIKP	PKPdf	03 26 18.4	+0.8
TLY	Talaya	151.61	77	PKPdf	PKPdf	03 26 18.4	+0.8
ULN	Ulaanbaatar	151.64	87	PKIKP	PKPdf	03 26 18.7	+0.8
ULN	Ulaanbaatar	151.64	87	PKPdf	PKPdf	03 26 18.7	+0.8
BJT	Baijiatuau	151.87	108	PKIKP	PKPdf	03 26 18.9	+0.6
BJT	Baijiatuau	151.87	108	PKPdf	PKPdf	03 26 18.9	+0.6
BJI	Beijing	151.89	108	PKPbc	PKPdf	03 26 20.8	+2.5
BJI				PP	PP	03 30 08.8	+2.6
BJI				SS	SS	03 49 33.6	+2.4
BJI				LR	LR		
	comp=Z,140nm,8.6s						
BJI				LR	LR		
	comp=Z,200nm,5.3s						
BJI				LR	LR		
	comp=Z,250nm,24.6s						
IMAR	Indian Mountai	152.32	314		PKPdf	03 26 18.3	+0.1
MJB9	Matsu-Tunnel	158.92	148		PKPab	03 27 05.1	+0.9
BOD	Bodaibo	159.25	68	*e*PKP2	PKPab	03 27 05.1	0.0
BOD				pmax	pmax		
	comp=Z,16nm,1.4s						
TIXI	Tiksi	161.04	22	PKP2	PKPab	03 27 13.0	+0.5
TIXI	Tiksi	161.04	22		PKPab	03 27 13.0	+0.5
USRK	Ussuriysk Ar.	163.03	123	PKPab	PKPab	03 27 21.9	-0.1
	comp=Z,2.1nm,0.8s,baz=207,slow=0.6,SNR=3.2						
ZEA	Zeya	165.68	87	*i* PKP2	PKPab	03 27 25.3	-8.2
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.5s						
YSS	Yuzh-Sakhalins	169.77	143	*e*PKIKP	PKPdf	03 26 38.6	+1.4
SEY	Seymchan	172.50	358	PKP	PKPdf	03 26 37.3	-0.8
	comp=Z,3.7nm,1.0s,baz=129,slow=1.6,SNR=6.1						
PETK	Petropavlovsk-	175.82	238	PKP	PKPdf	03 26 39.2	-0.4
	comp=Z,3.1nm,1.0s,baz=135,slow=0.4,SNR=3.5						
PETK	Petropavlovsk-	175.82	238	PKIKP	PKPdf	03 26 40.4	+0.9
PETK	Petropavlovsk-	175.82	238		PKPdf	03 26 40.4	+0.9

IDC ***17*** *03:06:57.4±1.0, 29°.79N×139°.00E, h403^{km}±13^{km}, mb3.0/10, mb1 3.2/13, mb1mx3.0/35, mbtmp3.8/13 Error ellipse: s-maj=22.2km s-min=14.2km az=64.0*

JMA ***17*** *03:06:59.3±0.2, 30°.00N×139°.78E, h417^{km}, M3.6*

ISC 17 03:06:57.2±0.7**, 29°.82N**±0°.07×**139°.1E**±0°.1**, h400**^{km}**, n19, σ1^{s}52**/23**, mb3.1**/9**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	Mitsune	3.35	11	P	Pn	03 08 05.2	+2.0
CBIJ	Chichi jima	3.87	134	P	Pn	03 08 09.1	+1.0
CBIJ				*e*S	S	03 09 03.0	-2.5
JCJ	Chichijima	3.87	134	P	Pn	03 08 09.0	+0.9
	24nm,0.3s,baz=350,slow=19,SNR=17						
JCJ				S	S	03 09 05.8	+0.3
	58nm,0.3s,baz=243,slow=23,SNR=15						
BSO1	Boso 1	5.09	18	*e*S	S	03 09 24.2	-2.2
BSO3	Boso 3	5.12	14	P	Pn	03 08 21.7	+1.7
BSO3				*e*S	S	03 09 26.4	-1.1
BSO4	Boso 4	5.27	12	*e*S	S	03 09 28.5	-2.1
JHU	Hanno	6.02	2	*e*S	S	03 09 42.4	-3.1
KSRS	Korea Array	11.99	312	P	Pn	03 09 38.7	+0.6
	0.4nm,0.3s,baz=126,slow=10,SNR=6.4						
USRK	Ussuriysk Ar.	15.41	341	P	P	03 10 15.5	+1.6
	baz=150,slow=10.0,SNR=4.2						
KLR	Kul'dur	20.17	346	P	P	03 11 04.2	+1.3
	0.4nm,0.4s,baz=148,slow=12,SNR=4.5						
SONM	Songino Array	30.85	315	P	P	03 12 37.8	-0.5
	0.4nm,0.4s,baz=125,slow=8.7,SNR=6.4						
ZALV	Zalesovo Beam	45.63	318	P	P	03 14 38.8	-0.6
	0.5nm,0.4s,baz=111,slow=9.3,SNR=2.4						
MKAR	Makanchi Array	46.63	308	P	P	03 14 46.6	-0.6
	0.3nm,0.5s,baz=86,slow=9.3,SNR=5.5						
MKAR				PcP	PcP	03 16 12.9	-0.7
	0.2nm,0.5s,baz=103,slow=3.1,SNR=2.4						
WRA	Warramunga Arr	49.68	186	P	P	03 15 10.6	+0.1
	0.2nm,0.4s,baz=360,slow=7.8,SNR=9.6						
ILAR	Eielson Array	56.68	30	P	P	03 16 00.2	0.0
	0.3nm,0.5s,baz=273,slow=5.4,SNR=2.1						
ARCES	ARCESS Array B	70.06	340	P	P	03 17 26.6	-0.1
	3.2nm,0.9s,baz=60,slow=9.5,SNR=3.7						
YKA	Yellowknife Ar	71.05	28	P	P	03 17 33.0	+0.2
	0.2nm,0.4s,baz=299,slow=5.4,SNR=3.9						
FINES	FINESS Array B	74.28	333	P	P	03 17 49.7	-1.8
	5.7nm,1.1s,baz=87,slow=4.7,SNR=4.3						
NVAR	Mina Array Bea	80.97	51	P	P	03 18 30.1	+1.2
	0.6nm,0.7s,baz=281,slow=5.8,SNR=5.6						

JMA 17 03:17:10.1±0.2**, 39°.81N**×**143°.17E, h23**^{km}±3^{km}**, M3.8, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	1.01	278	P	Pn	03 17 28.6	-0.3
MIYJ	Miyakonagasawa	1.07	258	P	Pn	03 17 29.4	-0.2
JOM	Ohasama	1.49	258	P	Pb	03 17 36.3	-0.8
JOM				*e*S	Sb	03 17 55.4	-0.1
JMK	Ichinoseki	1.74	241	P	Pn	03 17 39.8	+1.0
JTM	Tenmabayashi	1.88	302	P	Pn	03 17 42.1	+1.3
JIO	Ouri	1.96	227	P	Pn	03 17 42.4	+0.5
JAH	Hinai	1.98	282	P	Pn	03 17 43.3	+1.1
JRG	Rokugo	2.00	259	P	Pn	03 17 43.9	+1.4
JEM	Erimo	2.20	360	P	Pb	03 17 47.3	-1.9
JOT	Ohata	2.25	315	P	Pn	03 17 47.8	+1.9
MAT	Matsushiro	5.09	232	P	Pn	03 18 27.5	+2.5
MAT				*e*S	Sn	03 19 24.5	+1.4

IDC ***17*** *03:23:17.9±0.9, 39°.83N×143°.27E, h0^{km}, mb3.9/16, mb1 4.1/18, mb1mx3.9/47, mbtmp3.9/18, ML3.4/2, MS3.5/2, Ms1 3.5/2, ms1mx3.0/31, Error ellipse: s-maj=23.8km s-min=16.5km az=113.0*

JMA ***17*** *03:23:20.3±0.3, 39°.93N×143°.19E, h14^{km}±3^{km}, M4.2*

NIED ***17*** *03:23:20.3, 39°.93N×143°.19E, h14^{km}, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}4.03; $M_{\theta\theta}$1.02; $M_{\phi\phi}$-5.05; $M_{r\theta}$3.65; $M_{\theta\phi}$-0.82; $M_{\phi r}$7.34; Fault plane solution: $M_0$9.44000×10^{14} NP1:ϕ_s25.00000°, δ76.00000°, λ101.00000°. NP2:ϕ_s166.00000°, δ18.00000°, λ53.00000°.*

NEIC ***17*** *03:23:23.4±1.1, 39°.80N±0°.06×143°.2E±0°.1, h39^{km}±9^{km}, mb4.3/10 Error ellipse: s-maj=12.9km s-min=7.5km az=107.0*

ISC 17 03:23:20.1±2.5**, 39°.83N**±0°.04×**143°.22E**±0°.07**, h13**^{km}±15^{km}**, n74, σ1^{s}16**/75**, mb4.2**/21**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	1.05	276	P	Pb	03 23 39.2	-0.8
MIYJ	Miyakonagasawa	1.11	257	P	Pn	03 23 41.0	-0.2
MIYJ				*e*S	Sg	03 23 55.4	-0.4
JKEN	Kujiedanarisaw	1.22	289	P	Pn	03 23 41.2	-1.5
JANG	Nango	1.41	293	P	Pn	03 23 44.7	-0.8
JOM	Ohasama	1.53	257	P	Pb	03 23 47.9	-0.3
JMK	Ichinoseki	1.78	241	P	Pn	03 23 50.9	+0.5
JMK				*e*S	Sb	03 24 14.3	-0.3
JTM	Tenmabayashi	1.90	301	P	Pn	03 23 52.3	+0.1
JTM				*e*S	Sn	03 24 15.2	-0.7
JTM	Tenmabayashi	1.90	301	Pn	Pn	03 23 52.8	+0.6
JIO	Ouri	2.00	227	P	Pn	03 23 53.2	-0.3
JIO				*e*S	Sb	03 24 20.5	-0.5
JAH	Hinai	2.01	281	P	Pn	03 23 54.7	+1.0
JRG	Rokugo	2.04	259	P	Pn	03 23 54.8	+0.7
ERM	Erimo	2.19	359	Pn	Pn	03 23 56.1	+0.1
JEM	Erimo	2.19	359	P	Pn	03 23 55.8	-0.3
JOT	Ohata	2.27	314	P	Pn	03 23 57.3	+0.1
JMM	Marumori	2.72	225		Pn	03 24 03.5	0.0
JMM				Sn	Sn	03 24 36.1	-0.1
JEW	Eniwo	3.29	337		Pn	03 24 13.1	+1.8
JEW				Sn	Sn	03 24 51.1	+0.9
JSD	Sado	4.26	247		Pn	03 24 25.6	+1.0
JKA	Kamikawa-asahi	4.31	354	Pn	Pn	03 24 26.2	+1.0
JKA					Sn	03 25 17.0	+1.7
ASAJ	Asahikawa	4.31	354	Pn	Pn	03 24 25.8	+0.5
	2.4nm,0.3s,baz=177,slow=13,SNR=7.6						
ASAJ				Sn	Sn	03 25 16.1	+0.8
	1.8nm,0.3s,baz=194,slow=25,SNR=3.6						
JYT	Yasato	4.31	215	Pn	Pn	03 24 24.4	-0.9
MJAR	Matsushiro Arr	5.13	232	Pn	Pn	03 24 38.4	+1.8
	0.6nm,0.3s,baz=44,slow=11,SNR=23						
MJAR	Matsushiro Arr	5.13	232		Pn	03 24 37.4	+0.8
MAJO	Matsushiro	5.13	232	Pn	Pn	03 24 37.7	+1.1
MAT	Matsushiro	5.13	232	P	Pn	03 24 38.6	+2.0
MAT				*e*S	Sn	03 25 39.7	+4.0
MJB9	Matsu-Tunnel	5.13	232	Pn	Pn	03 24 38.6	+2.0
JGF	Kuroka	6.27	230	Pn	Pn	03 24 52.9	+0.6
INU	Inuyama	6.65	230	Pn	Pn	03 24 58.0	+0.5
JWT	Wachi	7.69	236		Pn	03 25 12.3	+0.6
USA0B	Ussuriysk Arra	9.43	301	Pn	Pn	03 25 36.9	+1.4
USRK	Ussuriysk Ar.	9.43	301	Pn	Pn	03 25 39.2	+3.7
	baz=91,slow=14,SNR=14						
USRK	Ussuriysk Ar.	9.43	301	Pn	Pn	03 25 37.0	+1.5
KSRS	Korea Array	12.19	264	Pn	Pn	03 26 17.9	+4.5
	0.3nm,0.3s,baz=70,slow=15,SNR=2.8						
KLR	Kul'dur	12.45	323	LR	LR	03 30 17.4	
	comp=Z,203nm,20.3s,baz=61,slow=34						
JCJ	Chichijima	12.73	184	Pn	Pn	03 26 21.2	+0.4
MA2	Magadan	20.34	11	P	P	03 27 56.1	+0.3
	3.8nm,0.4s,baz=168,slow=9.3,SNR=2.3						
SEY	Seymchan	23.79	10	P	P	03 28 31.7	-0.4
	3.8nm,0.7s,baz=174,slow=9.6,SNR=5.8						
GUMO	Guam	26.18	176	LR	LR	03 36 52.8	
	comp=Z,105nm,21.0s,baz=268,slow=31						
SONM	Songino Array	27.53	299	P	P	03 29 06.6	+0.1
	2.2nm,0.9s,baz=102,slow=8.8,SNR=3.6						
SONM	Songino Array	27.53	299	P	P	03 29 06.3	-0.2
H11N2	WAKE ISLAND Hy	28.55	128	T	T	03 59 14.2	
	baz=320,slow=74,SNR=73						
H11N1	WAKE ISLAND Hy	28.56	128	T	T	03 59 14.9	
	baz=320,slow=74,SNR=47						
H11N3	WAKE ISLAND Hy	28.57	128	T	T	03 59 07.7	
	baz=320,slow=74,SNR=51						
ENH	Enshi	29.07	261	P	P	03 29 19.4	-0.7
H11S1	WAKE ISLAND Hy	29.37	130	T	T	04 00 15.4	
	baz=322,slow=76,SNR=17						
H11S3	WAKE ISLAND Hy	29.37	130	T	T	04 00 15.5	
	baz=322,slow=76,SNR=12						
H11S2	WAKE ISLAND Hy	29.38	130	T	T	04 00 12.8	
	baz=322,slow=76,SNR=17						
ZALV	Zalesovo Beam	41.14	310	P	P	03 31 03.7	+0.1
	3.4nm,0.4s,baz=94,slow=8.6,SNR=13						
CMAR	Chiang Mai Arr	43.60	254	P	P	03 31 24.1	0.0
	1.4nm,0.3s,baz=38,slow=9.3,SNR=6.3						
CMAR	Chiang Mai Arr	43.60	254	P	P	03 31 23.3	-0.8
MK31	Makanchi Array	43.89	300	P	P	03 31 26.0	-0.2
MKAR	Makanchi Array	43.89	300	P	P	03 31 26.1	0.0
	1.3nm,0.7s,baz=83,slow=10,SNR=8.4						
MKAR	Makanchi Array	43.89	300	P	P	03 31 25.7	-0.5
MAKZ	Makanchi	44.10	300	P	P	03 31 27.6	-0.2
KURK	Kurchatov	45.38	306	P	P	03 31 37.2	-0.7
KURK				IAmb	IAmb	03 31 38.4	
	comp=Z,5.3nm,1.1s						
ILAR	Eielson Array	46.38	34	P	P	03 31 45.4	-0.3
	comp=Z,0.3nm,0.6s,baz=262,slow=6.0,SNR=2.1						
ILAR	Eielson Array	46.38	34	P	P	03 31 46.0	+0.4
DANN	Dangsing	49.74	276	*e*P	P	03 32 12.6	+0.1
	comp=Z,28nm,0.6s						
KK31	Karatay Array	52.98	299	P	P	03 32 35.8	-0.5
KK31				IAmb	IAmb	03 32 36.1	
	comp=Z,2.7nm,0.8s						
KKAR	Karatay Array	52.98	299	P	P	03 32 35.8	-0.4
KKAR				IAmb	IAmb	03 32 36.1	
	comp=Z,2.7nm,0.8s						
KKAR	Karatay Array	52.98	299	P	P	03 32 35.9	-0.4
ABKAR	Akbulak array	57.24	309	P	P	03 33 06.7	-0.3
ABKAR				IAmb	IAmb	03 33 06.9	
	comp=Z,2.8nm,0.7s						
ABKAR	Akbulak array	57.24	309	P	P	03 33 06.6	-0.3
RES	Resolute Bay	59.54	15	P	P	03 33 22.1	-0.4
	comp=Z,0.8nm,0.6s,baz=324,slow=5.4,SNR=4.2						
WB0	Warramunga Arr	59.85	190	P	P	03 33 23.6	-1.7
WB0				IAmb	IAmb	03 33 40.4	
	comp=Z,2.9nm,0.9s						
WR0	Warramunga Arr	60.03	189	P	P	03 33 25.6	-0.9
WRA	Warramunga Arr	60.03	190	P	P	03 33 26.0	-0.6
	comp=Z,0.7nm,0.6s,baz=4.6,slow=6.6,SNR=3.3						
ASAR	Alice Springs	63.76	190	P	P	03 33 51.5	-0.1
	comp=Z,0.5nm,0.7s,baz=12,slow=5.7,SNR=3.3						
FINES	FINESS Array B	67.00	332	P	P	03 34 12.0	-0.1
	comp=Z,4.1nm,0.8s,baz=54,slow=7.3,SNR=5.6						
KBZ	Khabaz	70.16	311	P	P	03 34 32.8	+0.6
	comp=Z,2.1nm,0.9s,baz=40,slow=8.0,SNR=4.2						
NB2	NORSAR Subarra	72.15	338	P	P	03 34 43.3	-0.7
	comp=Z,2.8nm,0.7s,baz=36,slow=6.2						
NOA	NORSAR Array B	72.15	338	P	P	03 34 43.9	-0.2
	comp=Z,0.8nm,0.6s,baz=37,slow=6.1,SNR=4.3						
NVAR	Mina Array Bea	72.20	55	P	P	03 34 45.4	+0.4
	comp=Z,0.3nm,0.7s,baz=311,slow=5.8,SNR=3.6						
AKASG	Malin Array Be	72.95	323	P	P	03 34 48.2	-0.7
	comp=Z,0.8nm,0.5s,baz=44,slow=6.5,SNR=4.6						
GERES	GERESS Array B	81.07	329	P	P	03 35 34.5	-0.3
	comp=Z,0.4nm,0.5s,baz=46,slow=5.7,SNR=2.3						

BJI ***17*** *03:23:23.5±0.0, 0°.11S×126°.48E, h22^{km}, mB5.3/22, mb4.5/37, Ms4.7/4, Ms7 4.3/4*

NEIC ***17*** *03:23:27.9±1.2, 0°.58N±0°.08×126°.11E±0°.05, h9^{km}±4^{km}, mb4.6/39, Error ellipse: s-maj=11.2km s-min=6.7km az=174.0*

IDC ***17*** *03:23:27.1±0.5, 0°.51N×125°.99E, h0^{km}, mb4.5/20, mb1 4.6/22, mb1mx4.5/34, mbtmp4.5/22, ML3.9/2, MS3.7/4, Ms1 3.7/4, ms1mx3.3/35, Error ellipse: s-maj=22.2km s-min=11.4km az=73.0*

DJA ***17*** *03:23:30.8±0.2, 1°N±3°×12°6E±°, h10^{km}, M4.7/17, mB5.4/5, mb4.7/10, MLv4.5/17, Mw(mB)4.8/5*

ISC 17 03:23:32.5±0.5**, 0°.53N**±0°.05×**126°.09E**±0°.05**, h37**^{km}±1^{km}**, n130, σ1^{s}30**/139**, mb4.5**/52**, MS3.8**/4**, 2C-1D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.30	79		Pn	03 23 52.5	-1.6
TNTI				Sn	Sn	03 24 09.0	-1.3
TNTI	Ternate	1.30	79	P	Pn	03 23 53.2	-0.9
TNTI				S	Sn	03 24 13.1	+2.8
KMSI	Cibinong	2.11	271	P	Pn	03 24 05.4	+0.2
SANI	Sanana	2.56	182	P	Pn	03 24 11.5	0.0
GTOI	Gorontalo	3.08	272	P	Pn	03 24 21.6	+3.0
LUWI	Luwuk	3.66	245	Pn	Pn	03 24 26.6	-0.1
LUWI	Luwuk	3.66	245	P	Pn	03 24 29.3	+2.7
NLAI	Namlea	3.88	165	P	Pn	03 24 30.6	+1.0
MRSI	Marisa	4.15	269	P	Pn	03 24 35.2	+1.9
APSI	Ampana	4.66	252	P	Pn	03 24 41.8	+1.4
MSAI	Masohi	4.78	144	P	Pn	03 24 44.0	+2.0
TOLI2	Tolitoli	5.34	276	Pn	Pn	03 24 48.6	-1.1
SWI	Sorong	5.35	105	P	Pn	03 24 53.1	+3.2
SIJI	Sorong	5.36	105	Pn	Pn	03 24 51.3	+1.3
	2.1nm,0.3s,baz=281,slow=16,SNR=3.2						
SIJI				LR	LR	03 27 11.2	
	comp=Z,703nm,21.5s,baz=275,slow=41						
BNDI	Bandanaira	6.30	143	P	Pn	03 25 02.8	-0.1
	8.0nm53µm399nm,0.7s						
KCP	Kidapawan	6.51	351	⇑*e*P	Pn	03 25 12.3	+6.4
FAKI	Fak Fak	7.05	119	Pn	Pn	03 25 10.9	-2.3
FAKI	Fak Fak	7.05	119	P	Pn	03 25 14.6	+1.4
	0.2nm48nm,1.6s						
TTSI	Tana Toraja	7.20	240	P	Pn	03 25 15.8	+0.5
	0.4nm2µm85nm,1.0s						
BNSI	Bone	7.72	231	P	Pn	03 25 23.9	+1.4
	0.2nm56nm,0.8s						
SPSI	Sidrap Palu	7.73	235	P	Pn	03 25 24.1	+1.5
	0.2nm56nm,0.7s						
BKSI	Bulukumba	8.32	226	P	Pn	03 25 32.7	+2.0
	986nm37nm,0.7s						
KAPI	Kappang	8.39	229	Pn	Pn	03 25 33.4	+1.9
	4.0nm,0.3s,baz=82,slow=6.4,SNR=6.1						
KAPI	Kappang	8.39	229	Pn	Pn	03 25 30.4	-1.2
MYLDM	Lahad Datu	8.88	302	Pn	Pn	03 25 35.5	-2.8
EDFI	Ende, Flores	10.20	205	P	Pn	03 25 57.8	+1.2
SBUM	Sibu	13.99	278	Pn	Pn	03 26 47.1	-1.2
JAY	Jayapura	14.92	102	LR	LR	03 34 00.3	
	comp=Z,411nm,20.8s,baz=84,slow=42						
KSM	Kuching	15.80	274	Pn	Pn	03 27 11.2	-1.3
KSM				IAmb	IAmb	03 27 20.5	
	comp=Z,58nm,0.8s						
FITZ	Fitzroy Crossi	18.51	181	P	P	03 27 44.9	-0.9
	comp=Z,0.4nm,0.3s,baz=14,slow=8.5,SNR=15						
FITZ	Fitzroy Crossi	18.51	181	P	P	03 27 45.1	-0.6
WB0	Warramunga Arr	21.75	158	P	P	03 28 20.1	-0.8
WRAB	Tennant Creek	21.89	159	P	P	03 28 21.4	-1.0
WRAB				IAmb	IAmb	03 28 26.7	
	comp=Z,36nm,0.8s						
WRA	Warramunga Arr	21.89	159	P	P	03 28 21.7	-0.7
	comp=Z,33nm,0.7s,baz=339,slow=12,SNR=88						
WRA				PcP	PcP	03 32 21.0	-0.1
	comp=Z,0.8nm,0.6s,baz=311,slow=2.3,SNR=3.6						
WB2	Warramunga Arr	21.90	159	P	P	03 28 21.8	-0.7
WR0	Warramunga Arr	21.98	158	P	P	03 28 22.6	-0.8
WR0				IAmb	IAmb	03 28 28.9	
	comp=Z,21nm,0.9s						
COEN	Coen	22.21	131	P	P	03 28 24.5	-1.5
PSA00	Pilbara Seismi	22.80	195	P	P	03 28 31.2	-0.9
PSA00				IAmb	IAmb	03 28 33.1	
	comp=Z,12nm,0.8s						
PMG	Port Moresby	23.19	116	LR	LR	03 38 57.8	
	comp=Z,144nm,18.7s,baz=323,slow=40						
YULB	Yu-li	23.20	349	P	P	03 28 31.9	-4.4
YULB				IAmb	IAmb	03 28 43.9	
	comp=Z,13nm,0.8s						
AS31	Alice Springs	25.22	163	P	P	03 28 54.3	-0.7
AS31				IAmb	IAmb	03 28 59.7	
	comp=Z,4.8nm,0.5s						
ASAR	Alice Springs	25.22	163	P	P	03 28 54.8	-0.2
	comp=Z,17nm,0.8s,baz=351,slow=15,SNR=78						
ASAR				PcP	PcP	03 32 28.1	0.0
	comp=Z,2.1nm,0.6s,baz=350,slow=2.4,SNR=9.3						
ASAR	Alice Springs	25.22	163	P	P	03 28 54.0	-1.0
IPM	Ipoh	25.34	279	P	P	03 28 54.5	-1.7
IPM				IAmb	IAmb	03 28 59.7	
	comp=Z,9.7nm,0.7s						
RPSI	Rantau Prapat	27.24	275	P	P	03 29 12.3	-1.0
PSI	Prapat	27.25	275	P	P	03 29 12.3	-1.2
	comp=Z,3.2nm,0.4s,baz=180,slow=6.5,SNR=4.2						
PSI				LR	LR	03 39 49.9	
	comp=Z,133nm,19.5s,baz=88,slow=36						
CTA	Charters Tower	28.46	137	P	P	03 29 25.6	+1.4
	comp=Z,6.4nm,1.1s,baz=339,slow=8.0,SNR=1.5						
FORT	Forrest	31.19	177	P	P	03 29 47.7	-0.5
GYA	Guiyang	31.85	326	⇓P	P	03 29 55.9	+1.7
GYA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
CMAR	Chiang Mai Arr	32.06	305	P	P	03 29 55.1	-1.0
	comp=Z,1.8nm,0.3s,baz=134,slow=7.7,SNR=4.4						
CMAR				PcP	PcP	03 32 47.0	+1.7
	comp=Z,1.4nm,0.3s,baz=162,slow=1.8,SNR=5.0						
NJ2	Nanjing	32.09	348	*e*P	P	03 29 57.0	+0.9
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.7s						
CHTO	Chiang Mai	32.24	306	P	P	03 29 56.0	-1.7
KMI	Kunming	33.27	319	⇑P	P	03 30 08.0	+1.2
KMI				pP	pP	03 30 15.3	-1.4
KMI				sP	pwP	03 30 19.3	-0.6
KMI				pmax	pmax		
	comp=Z,5.0nm,0.5s						
KMI				pmax	pmax		
	comp=Z,60nm,5.0s						
BBOO	Buckleboo	34.47	165	P	P	03 30 16.5	-0.4
BBOO				IAmb	IAmb	03 30 17.4	
	comp=Z,9.7nm,0.8s						
STKA	Stephens Creek	35.42	157	P	P	03 30 25.1	+0.1
	comp=Z,9.2nm,0.6s,baz=328,slow=8.8,SNR=21						
STKA				PcP	PcP	03 32 54.5	+0.1
	comp=Z,2.8nm,0.8s,baz=306,slow=8.0,SNR=2.9						
STKA	Stephens Creek	35.42	157	P	P	03 30 24.9	-0.2
KSRS	Korea Array	36.78	2	P	P	03 30 37.5	+0.9
	comp=Z,2.7nm,0.7s,baz=178,slow=9.1,SNR=7.0						
CD2	Chengdu	36.90	327	*e*P	P	03 30 39.3	+1.5
XAN	Xi'an	37.02	336	P	P	03 30 38.3	-0.5
XAN				pP	pP	03 30 46.3	-2.5
XAN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MAT	Matsushiro	37.56	16	P	P	03 30 42.5	-0.8
MJAR	Matsushiro Arr	37.56	16	P	P	03 30 42.3	-1.0
	comp=Z,3.2nm,0.7s,baz=186,slow=9.6,SNR=8.3						
ARMA	Armidale	39.22	144	P	P	03 30 57.1	-0.3
ARMA				IAmb	IAmb	03 30 59.2	
	comp=Z,13nm,1.1s						
BJT	Baijiatuau	40.33	348	P	P	03 31 04.8	-1.6
BJI	Beijing	40.35	348	P	P	03 31 07.8	+1.2
BJI				pmax	pmax		
	comp=Z,6.0nm,1.1s						
HHC	Hu-ho-hao-te	42.24	344	*e*P	P	03 31 22.5	+0.2
HHC				pmax	pmax		
	comp=Z,5.0nm,1.2s						
HHC				pmax	pmax		
	comp=Z,87nm,7.1s						
USRK	Ussuriysk Ar.	43.80	6	P	P	03 31 35.8	+1.2
	comp=Z,3.7nm,0.8s,baz=184,slow=15,SNR=4.9						
USRK	Ussuriysk Ar.	43.80	6	P	P	03 31 34.2	-0.4
TAPN	Taplejung	45.46	309	*e*P	P	03 31 50.8	+2.2
ODAN	Odare	45.47	308	*e*P	P	03 31 50.8	+2.2
	comp=Z,9.8nm,0.7s						
GTA	Gaotai	45.54	331	*e*P	P	03 31 49.4	+0.6
GTA				pP	pP	03 31 55.6	-3.3
GTA				sP	sP	03 31 59.0	-4.4
GTA				PcP	PcP	03 33 28.4	+1.3
GTA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
GTA				pmax	pmax		
	comp=Z,130nm,7.6s						
GTA				LR	LR		
	comp=Z,180nm,15.6s						
GTA				LR	LR		
	comp=Z,190nm,16.0s						
GTA				LR	LR		
	comp=Z,150nm,19.6s						
RAMN	Ramite	46.13	308	*e*P	P	03 31 55.6	+1.8
	comp=Z,15nm,0.6s						
GUN	Gumba	47.15	309	*e*P	P	03 32 02.0	+0.1
	comp=Z,25nm,0.6s						

PKI	Pulchoki	47.36	308	eP	P	03 32 03.4	-0.1
ULN	Ulaanbaatar	49.97	343	P	P	03 32 23.7	+0.7
SONM	Songino Array	50.13	343	P	P	03 32 24.8	+0.6
	comp=Z,2.5nm,0.6s,baz=159,slow=8.2,SNR=11						
SONM				PcP	PcP	03 33 43.8	+0.4
	comp=Z,1.8nm,0.8s,baz=156,slow=5.0,SNR=4.8						
SONM	Songino Array	50.13	343	P	P	03 32 23.5	-0.7
WMQ	Urumqi	55.00	327	eP	P	03 33 01.9	+1.6
WMQ				pP	pP	03 33 08.4	-2.2
WMQ				sP	sP	03 33 14.0	-1.1
WMQ				pmax	pmax		
	comp=Z,12nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,220nm,3.8s						
WMQ				LR	LR		
	comp=Z,450nm,26.7s						
WMQ				LR	LR		
	comp=Z,730nm,29.1s						
WMQ				LR	LR		
	comp=Z,130nm,17.5s						
PETK	Petropavlovsk-	58.62	22	P	P	03 33 26.9	+1.2
	comp=Z,6.6nm,0.7s,baz=197,slow=4.5,SNR=9.8						
PETK	Petropavlovsk-	58.62	22	P	P	03 33 25.3	-0.4
ZSN	Zaisan	58.86	328	eP	P	03 33 30.7	+3.2
	baz=328						
SHLS	Shalkode	59.42	322	eP	P	03 33 31.9	+0.3
	baz=322						
MK31	Makanchi Array	59.83	327	P	P	03 33 33.7	-0.5
MKAR	Makanchi Array	59.83	327	P	P	03 33 34.4	+0.1
	comp=Z,1.8nm,0.4s,baz=123,slow=8.2,SNR=22						
MKAR				PcP	PcP	03 34 21.0	+0.5
	comp=Z,1.6nm,0.8s,baz=121,slow=4.3,SNR=3.5						
MKAR	Makanchi Array	59.83	327	P	P	03 33 33.0	-1.2
MKAR					PcP	03 34 20.1	-0.4
KSH	Kashi	59.88	317	P	P	03 33 33.3	-1.6
KSH				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KSH				pmax	pmax		
	comp=Z,460nm,5.8s						
MAKZ	Makanchi	60.01	326	P	P	03 33 34.5	-1.0
MAKZ				IAmb	IAmb	03 33 37.1	
	comp=Z,4.6nm,1.1s						
SATY	Saty	60.02	321	eP	P	03 33 36.9	+1.2
	baz=321						
KPKS	Kokpek	60.06	322	eP	P	03 33 38.1	+2.1
	baz=322						
KUU	Kurty	61.74	321	eP	P	03 33 46.9	-0.4
	comp=Z,4.0nm,0.7s,baz=321						
MA2	Magadan	61.95	14	P	P	03 33 48.5	+0.2
SEM	Semipalatinsk	63.08	329	eP	P	03 33 58.0	+1.7
	baz=329						
ZALV	Zalesovo Beam	63.15	334	P	P	03 33 55.0	-1.4
	comp=Z,0.8nm,0.4s,baz=131,slow=5.9,SNR=2.5						
ZALV	Zalesovo Beam	63.15	334	P	P	03 33 55.2	-1.2
BTLS	Baital	63.74	321	eP	P	03 34 02.1	+1.6
	baz=321						
KURK	Kurchatov	64.10	329	P	P	03 34 01.7	-1.1
IUG	Iuzhnay	65.08	317	eP	P	03 34 11.8	+2.3
	comp=Z,3.0nm,0.9s,baz=317						
KK31	Karatay Array	65.15	318	P	P	03 34 09.3	-0.5
KKAR	Karatay Array	65.15	318	P	P	03 34 08.7	-1.1
BRZS	Berezniki	66.94	326	eP	P	03 34 23.8	+2.6
	baz=326						
BRVK	Borovoye	69.73	328	P	P	03 34 37.8	-0.8
BRVK				IAmb	IAmb	03 34 46.9	
	comp=Z,5.3nm,1.0s						
TIXI	Tiksi	71.03	1	P	P	03 34 45.5	-0.7
TIXI				IAmb	IAmb	03 34 46.6	
	comp=Z,3.7nm,0.8s						
NRIK	Noril'sk	73.37	347	P	P	03 35 00.1	0.0
	comp=Z,2.9nm,0.5s,baz=101,slow=4.2,SNR=4.4						
NRIK	Noril'sk	73.37	347	P	P	03 34 59.8	-0.4
NRIK				IAmb	IAmb	03 35 05.9	
	comp=Z,3.8nm,0.7s						
ABKAR	Akbulak array	74.22	321	P	P	03 35 05.4	-0.2
ABKAR	Akbulak array	74.22	321	P	P	03 35 05.0	-0.6
ARU	Arti	77.29	328	P	P	03 35 22.1	-0.9
ARU				IAmb	IAmb	03 35 24.2	
	comp=Z,5.9nm,0.8s						
VNDA	Vanda	80.35	173	P	P	03 35 39.8	+0.4
	comp=Z,3.7nm,0.8s,baz=347,slow=6.0,SNR=7.1						
RAYN	Ar Rayn	81.15	294	P	P	03 35 44.8	0.0
RAYN				IAmb	IAmb	03 35 47.9	
	comp=Z,4.9nm,1.0s						
ATD	Arta Tunnel	83.27	281	P	P	03 35 56.7	+0.6
TTA	Tatalina	84.03	27	P	P	03 35 59.8	+0.8
TTA				IAmb	IAmb	03 36 04.4	
	comp=Z,4.2nm,1.2s						
KBZ	Khabaz	84.71	314	P	P	03 36 03.6	+0.9
	comp=Z,3.7nm,0.9s,baz=144,slow=2.6,SNR=5.4						
KDAK	Kodiak Island	84.92	32	P	P	03 36 04.4	+0.9
	comp=Z,14nm,0.9s,baz=281,slow=10,SNR=2.2						
KDAK	Kodiak Island	84.92	32	P	P	03 36 03.9	+0.4
A21K	Barrow	85.44	18	P	P	03 36 07.1	+1.3
PPLA	Purkeypile	85.75	27	P	P	03 36 08.1	+0.4
PPLA				IAmb	IAmb	03 36 23.7	
	comp=Z,9.0nm,1.2s						
COLD	Coldfoot	87.07	23	P	P	03 36 14.8	+0.8
COLD				IAmb	IAmb	03 36 19.2	
	comp=Z,3.6nm,0.8s						
TOLK	Toolik Lake Re	87.44	21	P	P	03 36 16.5	+0.7
TOLK				IAmb	IAmb	03 36 30.6	
	comp=Z,3.3nm,1.0s						
ILAR	Eielson Array	88.25	25	P	P	03 36 18.8	-0.9
	comp=Z,0.8nm,0.6s,baz=243,slow=5.0,SNR=12						
BMAR	Burnt Mountain	89.26	23	P	P	03 36 22.5	-2.0
QSPA	South Pole Qui	90.45	180	P	P	03 36 30.1	-0.1
QSPA				IAmb	IAmb	03 36 34.6	
	comp=Z,4.6nm,1.1s						
ARCES	ARCESS Array B	93.21	340	P	P	03 36 42.9	+0.2
	comp=Z,4.3nm,1.0s,baz=350,slow=3.7,SNR=5.1						
INK	Inuvik	93.36	21	P	P	03 36 43.2	-0.1
	comp=Z,1.6nm,0.7s,baz=287,slow=5.2,SNR=4.1						
C36M	Paulatuk	96.42	20	P	P	03 36 57.2	-0.1
RES	Resolute Bay	101.06	10	P	Pdif	03 37 18.6	+0.6
	comp=Z,0.7nm,0.6s,baz=305,slow=5.0,SNR=2.5						
YKA	Yellowknife Ar	102.66	25	P	Pdif	03 37 26.0	+0.7
	comp=Z,0.2nm,0.7s,baz=301,slow=3.8,SNR=2.5						
YKA				PKiKP	PKiKP	03 41 46.0	-0.1
	comp=Z,0.1nm,0.6s,baz=336,slow=1.0,SNR=4.1						
PDAR	Pinedale Array	114.16	42	PKP	PKiKP	03 42 08.9	+0.4
	comp=Z,0.2nm,0.6s,baz=336,slow=2.0,SNR=1.9						
ULM	Lac du Bonnet	118.06	29	PKP	PKPdf	03 42 15.1	-0.4
	comp=Z,1.5nm,0.6s,baz=324,slow=2.5,SNR=4.5						
TXAR	Lajitas Array	124.03	54	PKP	PKiKP	03 42 28.4	+0.3
	comp=Z,0.6nm,0.7s,baz=275,slow=0.4,SNR=8.3						
TXAR	Lajitas Array	124.03	54		PKPdf	03 42 26.4	-1.3
CPUP	Villa Florida	154.13	173	PKPbc	PKiKP	03 43 29.5	+0.2
	comp=Z,2.1nm,0.8s,baz=141,slow=1.9,SNR=5.0						
CPUP				PKPab	sPKPbc	03 43 43.6	-0.7
	comp=Z,1.4nm,0.6s,baz=170,slow=6.9,SNR=3.6						

*UCR **17** 03:42:44.3±2.1, 9°.66N×82°.63W, h12^{km}±8^{km}, MW4.1*
*UPA **17** 03:42:45.1±2.0, 9°.60N×82°.57W, h20^{km}±3^{km}, MW4.1*
*INET **17** 03:42:47.1, 9°.63N×82°.82W, h46^{km}, MW3.2*
ISC 17 03:42:44.0±1.0, **9°.65N**±0°.04×**82°.56W**±0°.03, **h28**^{km}±6^{km}, **n51**, σ**1^{s}08**/86, **3C-12D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RGM0	Gandoca	0.07	220	⇑iP	Pb	03 42 48.6	-0.3
RGM0				eS	Sb	03 42 53.0	+0.7
CNI2	El Empalme, Bo	0.24	158	⇓iP	Pb	03 42 50.0	-0.5
CNI2				eS	Sb	03 42 54.2	-0.6
LPLA	Las Palmas La	0.76	216	⇓iP	Pb	03 42 57.4	-1.3
LPLA				eS	Sb	03 43 07.6	-1.1
DRK0	Durika	0.78	241	⇓iP	Pb	03 42 57.9	-1.2
DRK0				eS	Sb	03 43 08.7	-0.6
DRK0	Durika	0.78	241	eP	Pb	03 42 57.8	-1.2
POTG	Potrero Grande	0.81	223	eP	Pb	03 42 58.0	-1.5
POTG				eS	Sb	03 43 09.2	-0.9
CHGR2	Aguacate	0.81	150	eP	Pb	03 42 57.8	-1.8
CHGR2				eS	Sb	03 43 09.5	-0.8
EDBA	Buenos Aires	0.85	236	eP	Pb	03 42 59.8	-0.5
EDBA				eS	Sn	03 43 12.2	+0.4
BRU2	Volcan	0.86	189	⇓iP	Pb	03 42 59.1	-1.3
BRU2				eS	Sb	03 43 10.7	-0.9
LNBQ3	Los Naranjos,	0.86	172	i P	Pb	03 42 59.1	-1.4
LNBQ3				eS	Sb	03 43 10.5	-1.2
MLIR3	Monte Lirio, C	0.89	197	⇓iP	Pb	03 43 00.3	-0.6
EDSV	San Vito	0.92	206	eP	Pb	03 43 00.7	-0.7
EDSV				eS	Sn	03 43 14.3	+0.8
BATAN	Batan	0.92	299	eP	Pb	03 43 00.1	-1.3
BATAN				eS	Sn	03 43 13.6	+0.2
BCO2	Palmira	0.92	178	⇓iP	Pb	03 43 00.3	-1.2
BCO2				eS	Sb	03 43 12.8	-0.7
PSOM3	Paja de Sombre	0.98	166	⇓iP	Pb	03 43 01.2	-1.3
PSOM3				eS	Sb	03 43 14.6	-0.5
EDLM	Las Mercedes	1.08	250	eP	Pn	03 43 02.9	-0.4
EDLM				eS	Sb	03 43 16.8	-1.0
CDITO	Canoas	1.11	196	i P	Pn	03 43 03.9	+0.2
CDITO				eS	Sn	03 43 19.0	+0.9
CDITO	Canoas	1.11	196	eP	Pn	03 43 03.6	-0.1
CDITO				eS	Sn	03 43 20.1	+2.1
EDPN	Palmar Norte	1.12	233	eP	Pb	03 43 04.5	-0.2
EDPN				eS	Sn	03 43 20.2	+2.0
PEZE	Perez Zeledon,	1.13	257	eP	Pn	03 43 03.5	-0.6
PEZE				eS	Sb	03 43 18.0	-1.4
GUAL3	Gualaca, Chiri	1.14	167	⇓iP	Pn	03 43 04.1	0.0
GUAL3				eS	Sb	03 43 19.1	-0.3
BAGA3	Bagala, Chiriq	1.17	178	i P	Pn	03 43 05.0	+0.5
BAGA3				eS	Sb	03 43 19.5	-1.0
CDM	Cerro de Muert	1.19	266	eP	Pn	03 43 04.3	-0.9
CDM				eS	Sb	03 43 20.1	-1.3
LOMA3	Las Lomas, Chi	1.22	172	⇑iP	Pn	03 43 05.6	+0.4
LOMA3				eS	Sn	03 43 21.0	+0.3
LOCO3	Loma Colorada,	1.24	173	⇓iP	Pn	03 43 05.8	+0.3
LOCO3				eS	Sn	03 43 21.1	-0.1
CVTR	Volcan Turrial	1.24	288	eP	Pn	03 43 05.0	-0.8
CVTR				eS	Sb	03 43 21.8	-1.0
LESP3	La Esperanza,	1.25	190	⇓iP	Pn	03 43 06.7	+1.0
LESP3				eS	Sb	03 43 23.7	+0.9
PEDE3	Pedregal, Chir	1.26	174	⇓iP	Pn	03 43 06.2	+0.4
PEDE3				eS	Sn	03 43 22.1	+0.3
RIOS	Rincon, Osa	1.33	225	eP	Pn	03 43 06.3	-0.5
EDDO	Dominical	1.34	253	eP	Pn	03 43 07.8	+0.9
EDDO				eS	Sb	03 43 26.3	+0.9
LCR2	La Lucha 2	1.43	274	eP	Pn	03 43 08.0	-0.2
LCR2				eS	Sn	03 43 26.1	0.0
PIRO	Carate, Puerto	1.45	212	⇑iP	Pn	03 43 08.9	+0.5
PIRO				eS	Sb	03 43 28.3	-0.2
PIRO	Carate, Puerto	1.45	212	eP	Pn	03 43 08.7	+0.3
HDC3	Heredia 3	1.57	283	eP	Pn	03 43 11.2	+1.1
HDC3				eS	Sb	03 43 31.8	-0.2
HDC	Heredia	1.57	283	eP	Pn	03 43 11.1	+0.9
HDC				eS	Sb	03 43 32.7	+0.6
HDC	Heredia	1.57	283	eP	Pn	03 43 10.4	+0.2
REME3	Remedios, Chir	1.58	153	eS	Sb	03 43 32.8	+0.5
NANC3	Nancito, Chiri	1.62	150	⇓iP	Pn	03 43 11.8	+1.0
NANC3				eS	Sn	03 43 32.6	+1.9
PVID3	Puerto Vidal,	1.84	149	eS	Sn	03 43 37.8	+1.6
SRA1	San Ramn	1.94	283	eP	Pn	03 43 16.0	+0.8
MESA3	La Mesa, Verag	2.02	138	eS	Sn	03 43 42.7	+2.3
JACO	JACO, Garabito	2.07	271	eP	Pn	03 43 17.8	+0.9
JACO				eS	Sn	03 43 43.9	+2.1
COVE	Coope Vega, Sa	2.10	301	eP	Pn	03 43 18.7	+1.4
GMAL	Guarumal, Vera	2.29	145	eS	Sn	03 43 47.8	+0.7
GMAL	Guarumal, Vera	2.29	145	eP	Pn	03 43 20.5	+0.6
LAFE	Finca La Fe, P	2.32	274	eP	Pn	03 43 22.7	+2.4
JTS	Las Juntas de	2.44	285	eP	Pn	03 43 23.6	+1.5
JTS				eS	Sb	03 43 56.1	-0.8
JTS	Las Juntas de	2.44	285	eP	Pn	03 43 22.7	+0.7
BCIP	Isla Barro Col	2.73	100	eS	Sn	03 43 55.8	-2.3
PLVR	Palo Verde	2.84	284	eP	Pn	03 43 28.9	+1.3
CACAO	El Cacao, Vera	2.84	144	eP	Pb	03 43 32.5	-1.4
CACAO				eS	Sb	03 44 09.9	+1.5

*NEIC **17** 04:16:38.0±1.6, 18°.18N±0°.05×66°.88W±0°.03, h27^{km}±3^{km}, Error ellipse: s-maj=7.5km s-min=3.8km az=177.0*
*RSPR **17** 04:16:39.2, 18°.19N×66°.88W, h18^{km}±1^{km}, MD3.1/15*
ISC 17 04:16:38.3±0.9, **18°.18N**±0°.03×**66°.85W**±0°.03, **h26**^{km}±6^{km}, **n57**, σ**0^{s}66**/62, **15C, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AOPR	Arecibo Observ	0.19	29	⇑eP	Pb	04 16 43.9	-0.2
AOPR	Arecibo Observ	0.19	29	eS	Sb	04 16 47.5	-0.4
AOPR	Arecibo Observ	0.19	29		Pb	04 16 43.9	-0.2
AOPR					Sb	04 16 47.5	-0.4
AOPR	Arecibo Observ	0.19	29	IAML		04 16 47.9	
	comp=E,22µm,0.3s						
AOPR				IAML		04 16 49.4	
	comp=N,11µm,0.3s						
GBPR	Guanica, Bosqu	0.20	187	⇑eP	Pb	04 16 44.5	+0.3
GBPR	Guanica, Bosqu	0.20	187	eS	Sb	04 16 48.7	+0.6
GBPR	Guanica, Bosqu	0.20	187		Pb	04 16 44.5	+0.3
GBPR					Sb	04 16 48.7	+0.6
LSP	Las Mesas	0.22	269	⇑eP	Pb	04 16 44.2	-0.2
LSP	Las Mesas	0.22	269		Pb	04 16 44.2	-0.2
OBIP	Obispado Ponce	0.27	120	⇑eP	Pb	04 16 44.3	-0.7
OBIP	Obispado Ponce	0.27	120	eS	Sb	04 16 49.0	-0.6
OBIP	Obispado Ponce	0.27	120		Pb	04 16 44.3	-0.7
OBIP					Sb	04 16 49.0	-0.6
OBIP	Obispado Ponce	0.27	120	IAML		04 16 50.1	
	comp=E,3µm,0.3s						
OBIP				IAML		04 16 50.2	
	comp=N,3µm,0.2s						
MPR	Mayaguez	0.28	277		Pb	04 16 44.8	-0.3
MPR				Sg	Sb	04 16 48.7	-1.0
MPR				IAML		04 16 50.0	
	comp=N,7µm,0.1s						
MLPR	Magueyes Islan	0.28	221	⇑eP	Pb	04 16 44.1	-1.0
MLPR	Magueyes Islan	0.28	221	eS	Sb	04 16 48.8	-0.9
MLPR	Magueyes Islan	0.28	221		Pb	04 16 44.1	-1.0
MLPR					Sb	04 16 48.8	-0.9
MLPR	Magueyes Islan	0.28	221	IAML		04 16 49.1	
	comp=E,5µm,0.3s						
MLPR				IAML		04 16 49.4	
	comp=N,3µm,0.2s						
CELP	Cerrillos	0.28	112	⇑eP	Pb	04 16 45.4	+0.3
CELP	Cerrillos	0.28	112	eS	Sb	04 16 50.1	+0.3
CELP	Cerrillos	0.28	112		Pb	04 16 45.4	+0.3
CELP					Sb	04 16 50.1	+0.3
ICMP	Isla Caja de M	0.42	133	⇑eP	Pb	04 16 48.1	+0.7
ICMP	Isla Caja de M	0.42	133	eS	Sb	04 16 54.5	+1.1
ICMP	Isla Caja de M	0.42	133		Pb	04 16 48.1	+0.7
ICMP					Sb	04 16 54.5	+1.1
ICMP	Isla Caja de M	0.42	133	IAML		04 16 56.3	
	comp=E,1µm,0.2s						
ICMP				IAML		04 16 56.7	
	comp=N,2µm,0.3s						
EMPR	Esperanza - Ma	0.43	46	⇑eP	Pb	04 16 47.7	+0.3
EMPR	Esperanza - Ma	0.43	46	eS	Sb	04 16 54.3	+0.8
EMPR	Esperanza - Ma	0.43	46		Pb	04 16 47.7	+0.3
EMPR					Sb	04 16 54.3	+0.8
EMPR	Esperanza - Ma	0.43	46	IAML		04 16 54.8	
	comp=E,26µm,0.4s						
EMPR				IAML		04 16 56.2	
	comp=N,12µm,0.5s						
SJG	San Juan	0.67	96	Pg	Pb	04 16 50.9	-0.6
SJG				IAML		04 17 01.1	
	comp=N,2µm,0.5s						
SJG				IAML		04 17 01.4	
	comp=N,2µm,0.2s						
IGPR	InterUniversit	0.74	107	⇑eP	Pb	04 16 52.2	-0.4
IGPR	InterUniversit	0.74	107	eS	Sb	04 17 02.0	-0.3
IGPR	InterUniversit	0.74	107		Sb	04 17 02.0	-0.3
GCPR	Guaynabo City	0.74	80	⇑eP	Pb	04 16 52.1	-0.5
GCPR	Guaynabo City	0.74	80	eS	Sb	04 17 02.3	-0.1
GCPR	Guaynabo City	0.74	80		Pb	04 16 52.1	-0.5
GCPR					Sb	04 17 02.3	-0.1
GCPR	Guaynabo City	0.74	80	IAML		04 17 04.5	
	comp=N,1µm,0.4s						
GCPR				IAML		04 17 04.6	
	comp=E,2µm,0.3s						
PDPR	Patillas Dam,	0.81	101		Pb	04 16 53.0	-0.7
PDPR				IAML		04 17 04.8	
	comp=E,2µm,0.2s						
CBYP	Canovanas	0.95	84	⇑eP	Pb	04 16 55.5	-0.7
CBYP	Canovanas	0.95	84		Pb	04 16 55.5	-0.7
HUMP	Col San Antoni	0.95	92	⇑eP	Pb	04 16 55.3	-0.9
HUMP	Col San Antoni	0.95	92	eS	Sb	04 17 08.4	-0.1
HUMP	Col San Antoni	0.95	92		Pb	04 16 55.3	-0.9
HUMP					Sb	04 17 08.4	-0.1
HUMP	Col San Antoni	0.95	92	IAML		04 17 10.8	
	comp=E,2µm,0.2s						
HUMP				IAML		04 17 12.6	
	comp=N,1µm,0.2s						
MTP	Monte Pirata	1.24	94	⇑eP	Pn	04 17 00.2	+0.2
MTP	Monte Pirata	1.24	94	eS	Sn	04 17 14.6	-1.2
MTP	Monte Pirata	1.24	94		Pn	04 17 00.2	+0.2
MTP					Sn	04 17 14.6	-1.2
MTP	Monte Pirata	1.24	94	IAML		04 17 19.3	
	comp=N,628nm,0.1s						
MTP				IAML		04 17 21.0	
	comp=E,793nm,0.2s						
CUPR	Culebra, Puert	1.50	85	⇑eP	Pn	04 17 03.7	+0.1
CUPR	Culebra, Puert	1.50	85	eS	Sn	04 17 21.7	-0.5
CUPR	Culebra, Puert	1.50	85		Pn	04 17 03.7	+0.1
CUPR					Sn	04 17 21.7	-0.5
CDVI	St. Croix	2.03	102	Pn	Pn	04 17 11.9	+1.0
CDVI				IAML		04 18 02.9	
	comp=N,460nm,0.5s						
TBVI	Tortola	2.14	83	⇑eP	Pn	04 17 12.7	+0.4
TBVI	Tortola	2.14	83	eS	Sn	04 17 38.3	+0.2
TBVI	Tortola	2.14	83		Pn	04 17 12.7	+0.4
TBVI					Sn	04 17 38.3	+0.2
DR12	Loma Pena Alta	2.48	285		Pn	04 17 18.5	+1.4
SDDR	Presa de Saban	4.28	281		Pn	04 17 43.0	+1.1
SDDR				IAML		04 19 01.9	
	comp=N,69nm,0.8s						
SDDR				IAML		04 19 02.7	
	comp=N,48nm,1.0s						

*ISK **17** 04:21:06.5, 35°.15N×27°.17E, h6^{km}, ML2.6/8*
*DDA **17** 04:21:07.0, 35°.30N×26°.73E, h7^{km}±3^{km}, ML2.5*
*ATH **17** 04:21:08.0, 35°.17N×27°.13E, h6^{km}±3^{km}, ML2.6/2, Error ellipse: s-maj=4.6km s-min=1.3km az=331.0*
ISC 17 04:21:07.6±1.7, **35°.19N**±0°.08×**27°.12E**±0°.05, **h9**^{km}±10^{km}, **n19**, σ**0^{s}80**/30, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KARP	Karpathos	0.36	5	PG	Pg	04 21 14.8	0.0
KARP				SG	Sb	04 21 20.9	-1.0
KARP	Karpathos	0.36	5	P	Pg	04 21 14.7	0.0
KARP				S	Sg	04 21 20.7	+1.2
KARP				AML	AML	04 21 21.4	
	comp=N,4386µm,0.1s						
KARP				AML	AML	04 21 21.7	
	comp=E,3704µm,0.2s						
ZKR	Zakros	0.75	264	PG	Pg	04 21 21.9	-0.1
ZKR				SG	Sb	04 21 33.5	+0.4
ZKR	Zakros	0.75	264	P	Pg	04 21 22.0	-0.1
ZKR				S	Sb	04 21 33.1	0.0
ZKR				AML	AML	04 21 36.5	
	comp=E,820µm,0.4s						
ZKR				AML	AML	04 21 36.9	
	comp=N,623µm,0.4s						
NPS	Neapolis	1.24	274	P	Pn	04 21 31.4	+0.3
NPS				S	Sn	04 21 48.2	+0.2
ARG	Arkhangelos	1.31	38	PN	Pb	04 21 32.1	-0.3
ARG	Arkhangelos	1.31	38	P	Pg	04 21 32.7	-0.1
LAST	Lasithi	1.35	269	P	Pg	04 21 33.0	-0.5
LAST				S	Sn	04 21 50.8	0.0
TURN	Turunc	1.82	30	PN	Pn	04 21 39.6	+0.4
TURN	Turunc	1.82	30	i P	Pn	04 21 39.6	+0.4
TURN				i S	Sb	04 22 03.9	-0.2
TURN				IAML		04 22 13.0	
	comp=E,25nm,0.3s						
BODT	Bodrum	1.87	5	PN	Pn	04 21 40.3	+0.4
DALY	Dalyan (Mula)	2.04	37	PN	Pn	04 21 42.5	+0.4
DALY	Dalyan (Mula)	2.04	37	i P	Pb	04 21 43.5	-1.4
DALY				i S	Sg	04 22 13.2	-0.1
DALY				IAML		04 22 17.0	
	comp=N,32nm,1.8s						
YER	Yerkesik	2.15	25	PN	Pn	04 21 44.3	+0.5
APE	Apeiranthos	2.27	326	PN	Pn	04 21 45.5	+0.1
MULA	Mugla, Merkez-	2.28	25	i P	Pn	04 21 46.8	+1.3
MULA				i S	Sn	04 22 15.1	+1.4
CAEL	Denizli, Camel	2.62	42	i P	Pn	04 21 51.8	+1.5
CAEL				i S	Sb	04 22 25.9	-1.3
CAEL				IAML		04 22 41.0	
	comp=N,24nm,0.7s						
CAEL				IAML		04 22 44.0	
	comp=E,32nm,1.1s						
TAVA	DENIZLI_Tavas	2.69	32	i P	Pn	04 21 51.6	+0.5
TAVA				i S	Sb	04 22 27.9	-1.2
GOLH	Golhisar	2.84	43	i P	Pn	04 21 54.3	+1.1
GOLH				IAML		04 22 41.0	
	comp=N,16nm,1.5s						

GUC 17 04:25:50.1±0.6, **21°.20S**×**69°.08W**, **h95**^{km}±3^{km}, **ML3.3, 8C-1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB01	IPOC Station P	0.41	293	⇑iP	Pn	04 26 05.0	+0.1
PB01				i S	Sn	04 26 16.0	+0.1
PB01				IAML		04 26 16.3	
	comp=N,3µm,0.2s						
PB09	IPOC Station P	0.61	194	⇑iP	Pn	04 26 06.9	+0.4
PB09				i S	Sn	04 26 19.7	+1.0
PB09				IAML		04 26 21.0	
	comp=E,729nm,0.3s						
PB07	IPOC Station P	0.91	235	⇑iP	Pn	04 26 09.7	+0.3
PB07				i S	Sn	04 26 24.9	+1.1
PB07				IAML		04 26 29.3	
	comp=E,826nm,0.2s						
PB08	IPOC Station P	1.06	356	⇑iP	Pn	04 26 12.1	+0.8
PB08				i S	Sn	04 26 28.6	+1.5
PB08				IAML		04 26 29.2	
	comp=N,581nm,0.2s						
PATCX	Punta Patache	1.07	291	⇑iP	Pn	04 26 11.9	+0.8
PATCX				i S	Sn	04 26 28.0	+1.2
PATCX				IAML		04 26 33.1	
	comp=N,1µm,0.2s						
HMBC	Humberstone	1.19	320	⇑iP	Pn	04 26 13.0	+0.5
HMBC				i S	Sn	04 26 30.3	+1.0
HMBC				IAML		04 26 31.2	
	comp=E,1µm,0.3s						
TA01	Diego Aracena	1.21	301	⇑iP	Pn	04 26 12.9	+0.4
TA01				i S	Sn	04 26 30.1	+0.7
TA01				IAML		04 26 35.1	
	comp=E,926nm,0.3s						
TA02	Huaiquique	1.35	313	⇑iP	Pn	04 26 14.9	+0.6
TA02				eS	Sn	04 26 33.3	+0.8
TA02				IAML		04 26 39.1	
	comp=N,2µm,0.1s						
LVC	Limon Verde	1.41	174	eP	Pn	04 26 17.3	+1.9
PB04	IPOC Station P	1.50	221	eP	Pn	04 26 16.8	+0.5
PB04				i S	Sn	04 26 37.3	+1.2
PB04				IAML		04 26 41.8	
	comp=N,609nm,0.1s						
PB06	IPOC Station P	1.56	197	eP	Pn	04 26 17.8	+0.7
PB06				i S	Sn	04 26 38.6	+1.1
PB06				IAML		04 26 43.7	
	comp=E,375nm,0.2s						
PSGC	Pisagua	1.87	328	⇓iP	Pn	04 26 21.2	+0.3
PSGC				i S	Sn	04 26 45.5	+1.1
PSGC				IAML		04 26 50.2	
	comp=N,255nm,0.1s						
PB05	IPOC Station P	1.94	212	eP	Pn	04 26 22.7	+0.8

*IDC **17** 04:33:52.1±0.8, 15°.95S×172°.56W, h0^{km}, mb4.1/10, mb1 4.3/10, mb1mx4.1/37, mbtmp4.1/10, MS3.4/4, Ms1 3.4/4, ms1mx3.2/25, Error ellipse: s-maj=45.9km s-min=16.4km az=139.0*
ISC 17 04:33:54.5±0.8, **15°.6S**±0°.2×**172°.9W**±0°.2, **h10**^{km}, **n52**, σ**2^{s}01**/44, **mb4.1**/9, **Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	8.96	255	Pn	Pn	04 36 15.6	+11
	1.0nm,0.3s,baz=104,slow=14,SNR=18						
MSVF				LR	LR	04 39 24.7	
	comp=Z,295nm,20.8s,baz=343,slow=36						
RAR	Rarotonga	13.65	116	Pn	Pn	04 36 53.2	-15
	3.0nm,0.3s,baz=256,slow=9.3,SNR=6.2						
RAR				Sn	Sn	04 38 59.9	-40
	1.1nm,0.3s,baz=151,slow=19,SNR=1.6						
RAR				LR	LR	04 40 15.2	
	comp=Z,80nm,20.1s,baz=290,slow=29						
GLKZ	Green Lake	14.42	198	P	Pn	04 37 11.1	-7.6
DZM	Mont Dzumac	20.61	249	P	P	04 38 33.4	-0.7
	4.1nm,0.8s,baz=81,slow=18,SNR=1.4						
DZM				LR	LR	04 45 11.7	
	comp=Z,148nm,20.8s,baz=46,slow=33						
OUZ	Omahuta	23.04	209	P	P	04 38 55.5	-4.4
GRZ	Great Barrier	23.09	205	P	P	04 38 58.3	-2.2
MXZ	Matakaoa Point	23.27	198	P	P	04 39 03.0	+0.7
WCZ	Waipu Caves	23.29	207	P	P	04 39 00.9	-1.6
KUZ	Kuaotunu	23.42	204	P	P	04 39 03.1	-0.6

HAZ	Te Kaha	23.61	199	P	P	04 39 04.5	-1.1
HAZ				S	S	04 43 05.0	-15
PUZ	Puketiti	23.76	198	P	P	04 39 07.5	+0.4
RUGZ	Raukumara Rang	23.84	199	P	P	04 39 06.7	-1.3
RUGZ				S	S	04 43 12.9	-11
TWGZ	Tauwhareparae	23.94	198	P	P	04 39 07.5	-1.4
MKAZ	Moumakai	23.95	204	P	P	04 39 07.5	-1.4
CNGZ	Carnagh Statio	24.16	197	P	P	04 39 10.1	-0.7
MWZ	Matawai	24.22	199	P	P	04 39 10.1	-1.4
URZ	Urewera	24.29	199	P	P	04 39 08.8	-3.2
	22nm,0.5s,baz=274,slow=3.5,SNR=38						
URZ				S	S	04 43 19.9	-11
	3.5nm,0.9s,baz=85,slow=7.6,SNR=1.6						
URZ	Urewera	24.29	199	P	P	04 39 08.4	-3.6
SNGZ	Shannon Statio	24.69	199	P	P	04 39 16.8	+1.0
KNZ	Kokohu	24.81	198	P	P	04 39 17.3	+0.6
TLZ	Tolley Road	24.89	202	P	P	04 39 18.7	+1.2
HIZ	Hauiti	25.30	203	P	P	04 39 24.0	+2.8
BKZ	Black Stump Fm	25.31	200	P	P	04 39 21.9	+0.5
HNR	Honiara	27.20	280	LR	LR	04 48 52.1	
	comp=Z,149nm,21.5s,baz=120,slow=33						
KIW	Kapiti Island	27.36	200	P	P	04 39 39.4	-0.5
DUWZ	D’Urville Isla	27.65	202	P	P	04 39 43.7	+1.2
TCW	Tory Channel	27.89	201	P	P	04 39 43.7	-0.9
QRZ	Quartz Range	28.20	204	P	P	04 39 50.2	+2.9
TUWZ	Tuamarina	28.20	201	P	P	04 39 48.0	+0.7
NNZ	Nelson	28.21	202	P	P	04 39 51.1	+3.6
THZ	Tophouse	28.86	202	P	P	04 39 55.1	+1.8
KHZ	Kahutara	29.21	201	P	P	04 40 00.4	+4.1
DSZ	Denniston Nort	29.26	204	P	P	04 39 58.4	+1.6
LTZ	Lake Taylor	29.98	202	P	P	04 40 06.7	+3.5
INZ	Inchbonnie	30.24	203	P	P	04 40 07.0	+1.6
OXZ	Oxford	30.54	202	P	P	04 40 12.1	+4.0
MQZ	McQueen’s Vall	30.65	201	P	P	04 40 17.3	+8.3
WVZ	Waitaha Valley	30.81	204	P	P	04 40 13.7	+3.2
RPZ	Rata Peaks	31.23	203	P	P	04 40 19.7	+5.4
ARCZ	Arundel	31.39	202	P	P	04 40 21.5	+5.9
FOZ	Fox Glacier	31.56	204	P	P	04 40 22.0	+4.9
STKA	Stephens Creek	44.40	240	P	P	04 42 05.0	-0.5
	4.4nm,0.8s,baz=86,slow=7.0,SNR=8.3						
WRA	Warramunga Arr	50.30	257	P	P	04 42 52.2	+0.5
	0.4nm,0.4s,baz=97,slow=7.0,SNR=12						
ASAR	Alice Springs	50.54	252	P	P	04 42 54.0	+0.5
	5.0nm,0.8s,baz=88,slow=8.5,SNR=53						
NVAR	Mina Array Bea	74.10	42	P	P	04 45 31.6	+0.2
	1.4nm,0.8s,baz=226,slow=10.0,SNR=13						
TXAR	Lajitas Array	80.28	56	P	P	04 46 04.8	-1.2
	0.8nm,0.9s,baz=214,slow=6.1,SNR=4.2						
PDAR	Pinedale Array	82.04	42	P	P	04 46 14.3	-1.0
	0.5nm,0.8s,baz=251,slow=2.8,SNR=4.5						
ILAR	Eielson Array	82.50	11	P	P	04 46 17.9	+1.0
	0.9nm,0.6s,baz=227,slow=6.2,SNR=17						
YKA	Yellowknife Ar	90.03	23	P	P	04 46 53.3	-0.7
	0.3nm,0.8s,baz=232,slow=4.2,SNR=5.9						
GERES	GERESS Array B	146.36	352	PKPbc	PKPbc	04 53 36.0	+0.3
	0.9nm,0.7s,baz=34,slow=4.2,SNR=7.0						
BRTR	Keskin Array B	146.59	321	PKPbc	PKPab	04 53 38.2	+0.4
	2.0nm,0.8s,baz=338,slow=2.3,SNR=3.9						
DAVOX	Davos/Dischmat	148.78	356	PKPbc	PKPbc	04 53 42.7	+0.1
	2.3nm,0.6s,baz=317,slow=6.0,SNR=5.9						

IDC **17** *04:38:36.9±1.2, 39°.84N×143°.29E, h0*^{km}*, mb4.0/12, mb1 4.1/13, mb1mx3.8/54, mbtmp4.0/13, ML2.9/1, Error ellipse: s-maj=34.5km s-min=20.1km az=86.0*

JMA **17** *04:38:38.7±0.2, 39°.94N×143°.22E, h18*^{km}*±3*^{km}*, M4.0*

NEIC **17** *04:38:41.7±1.8, 39°.74N±0°.07×143°.34E±0°.09, h39*^{km}*±5*^{km}*, mb4.1/10, Error ellipse: s-maj=11.6km s-min=8.0km az=130.0*

ISC 17 04:38:37.4±2.0**, 39°.90N**±0°.05×**143°.25E**±0°.07**, h3**^{km}±11^{km}**, n63,** $\sigma 1^{s}$**50**/67**, mb4.0**/17**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	1.06	273	P	Pg	04 38 58.0	+0.2
JTH				S	Sg	04 39 11.5	-0.1
MIYJ	Miyakonagasawa	1.14	254	P	Pb	04 38 59.5	-0.3
MIYJ				S	Sg	04 39 14.3	+0.1
JKEN	Kujiedanarisaw	1.22	285	P	Pn	04 39 00.1	-1.2
JANG	Nango	1.41	290	P	Pn	04 39 03.1	-0.9
JANG				*e*S	Sn	04 39 20.4	-2.6
JOM	Ohasama	1.56	255	P	Pn	04 39 06.5	+0.4
JOM				*e*S	Sn	04 39 26.8	-0.1
JMK	Ichinoseki	1.83	240	P	Pn	04 39 10.1	+0.4
JMK				S	Sn	04 39 33.4	0.0
JTM	Tenmabayashi	1.89	299	P	Pn	04 39 11.3	+0.8
JTM				*e*S	Sn	04 39 34.2	-0.6
JAH	Hinai	2.02	279	P	Pn	04 39 13.4	+1.0
JAH				*e*S	Sn	04 39 38.2	0.0
JIO	Ouri	2.06	226	P	Pn	04 39 12.8	-0.1
JIO				*e*S	Sn	04 39 39.0	0.0
JRG	Rokugo	2.08	257	P	Pn	04 39 14.3	+1.2
ERM	Erimo	2.12	358	Pn	Pb	04 39 14.7	-1.7
ERM				Sn	Sb	04 39 43.1	0.0
JOT	Ohata	2.24	312	P	Pn	04 39 16.9	+1.6
JNBK	Urakawa-nobuka	2.41	351	P	Pb	04 39 20.1	-1.3
JYK	Kaneyama	2.44	247	P	Pn	04 39 19.4	+1.3
JMM	Marumori	2.79	224		Pn	04 39 23.1	+0.2
JEW	Eniwo	3.24	336		Pb	04 39 32.1	-3.4
JKA	Kamikawa-asahi	4.25	354	Pn	Pn	04 39 46.0	+3.1
JSD	Sado	4.31	246		Pn	04 39 45.5	+1.7
MJAR	Matsushiro Arr	5.19	231	Pn	Pn	04 39 57.6	+1.7
	0.5nm,0.3s,baz=28,slow=13,SNR=21						
MAJO	Matsushiro	5.19	231	Pn	Pn	04 39 57.0	+1.0
MAT	Matsushiro	5.19	231	P	Pn	04 39 58.0	+2.1
MAT				*e*S	Sn	04 40 54.1	-2.2
JGF	Kuroka	6.33	229		Pn	04 40 12.5	+0.8
JWT	Wachi	7.74	236	Pn	Pn	04 40 33.1	+2.1
USRK	Ussuriysk Ar.	9.41	301	Pn	Pn	04 40 58.7	+4.9
	baz=91,slow=14,SNR=8.4						
USRK	Ussuriysk Ar.	9.41	301		Pn	04 40 58.5	+4.7
JHS	Saijyo	9.42	242	Pn	Pn	04 40 56.1	+2.1
KSRS	Korea Array	12.22	263	Pn	Pn	04 41 38.3	+6.0
	0.3nm,0.3s,baz=73,slow=13,SNR=2.5						
KS19	Wonju Array Si	12.25	264	Pn	Pn	04 41 30.6	-2.2
SEY	Seymchan	23.71	10	P	P	04 43 51.2	+1.0
	0.9nm,0.2s,baz=190,slow=11,SNR=6.9						
ULN	Ulaanbaatar	27.08	299	P	P	04 44 23.4	+2.2
SONM	Songino Array	27.52	299	P	P	04 44 25.8	+0.6
	0.6nm,0.4s,baz=87,slow=9.2,SNR=5.0						
SONM	Songino Array	27.52	299	P	P	04 44 24.9	-0.2
H11N2	WAKE ISLAND Hy	28.57	128	T	T	05 14 30.6	
	baz=320,slow=75						
H11N1	WAKE ISLAND Hy	28.58	128	T	T	05 14 31.2	
	baz=320,slow=75						
H11N3	WAKE ISLAND Hy	28.59	128	T	T	05 14 31.6	
	baz=320,slow=75						
H11S1	WAKE ISLAND Hy	29.39	130	T	T	05 15 34.4	
	baz=322,slow=76						
H11S3	WAKE ISLAND Hy	29.39	130	T	T	05 15 37.1	
	baz=322,slow=76						
H11S2	WAKE ISLAND Hy	29.41	130	T	T	05 15 35.7	
	baz=322,slow=76						
ANM	Nome	38.41	33	P	P	04 46 01.4	+1.7
ANM				IAmb	IAmb	04 46 11.6	
	comp=Z,1.7nm,0.7s						
ZAA0	Zalesovo Array	41.11	310	P	P	04 46 22.7	+0.4
ZAA0				IAmb	IAmb	04 46 36.9	
	comp=Z,1.8nm,0.6s						
ZALV	Zalesovo Beam	41.11	310	P	P	04 46 22.9	+0.6
	comp=Z,1.7nm,0.5s,baz=100,slow=7.0,SNR=7.9						
ZALV				PcP	PcP	04 48 22.2	+0.4
	comp=Z,0.3nm,0.4s,baz=94,slow=4.3,SNR=2.0						
ZALV	Zalesovo Beam	41.11	310	P	P	04 46 22.9	+0.6
ZALV					PcP	04 48 20.8	-1.0
IMAR	Indian Mountai	43.46	32	P	P	04 46 42.5	+1.2
MK31	Makanchi Array	43.88	300	P	P	04 46 44.5	-0.5
MKAR	Makanchi Array	43.88	300	P	P	04 46 44.6	-0.4
	comp=Z,0.5nm,0.4s,baz=78,slow=11,SNR=14						
MKAR	Makanchi Array	43.88	300	P	P	04 46 45.3	+0.3
MAKZ	Makanchi	44.08	300	P	P	04 46 46.7	0.0
MAKZ				IAmb	IAmb	04 47 00.9	
	comp=Z,1.9nm,1.1s						
KURK	Kurchatov	45.35	306	P	P	04 46 57.2	+0.6
KURK				IAmb	IAmb	04 47 02.0	
	comp=Z,3.3nm,0.7s						
KURBB	Kurchatov Arra	45.43	306	P	P	04 46 57.3	+0.1
	comp=Z,1.5nm,0.5s,baz=79,slow=8.8,SNR=10						
BVAR	Borovoye Array	49.75	311	P	P	04 47 31.1	+0.3
	comp=Z,1.2nm,0.4s,baz=70,slow=14,SNR=7.8						
KKAR	Karatay Array	52.97	299	P	P	04 47 54.7	-0.4
KNRA	Kununurra	56.91	197	P	P	04 48 19.9	-3.8
ABKAR	Akbulak array	57.22	309	P	P	04 48 25.4	-0.3
ABKAR				IAmb	IAmb	04 48 26.6	
	comp=Z,2.4nm,0.7s						
ABKAR	Akbulak array	57.22	309	P	P	04 48 25.9	+0.2
FITZ	Fitzroy Crossi	59.99	199	P	P	04 48 43.0	-2.1
WB2	Warramunga Arr	60.10	190	P	P	04 48 42.5	-3.4
WRA	Warramunga Arr	60.10	190	P	P	04 48 44.6	-1.4
	comp=Z,1.3nm,1.0s,baz=8.2,slow=6.8,SNR=2.4						
ASAR	Alice Springs	63.83	190	P	P	04 49 11.0	0.0
	comp=Z,0.3nm,0.6s,baz=12,slow=4.7,SNR=5.2						
FINES	FINESS Array B	66.95	332	P	P	04 49 31.0	+0.1
	comp=Z,4.2nm,1.0s,baz=59,slow=8.8,SNR=4.0						
FINES	FINESS Array B	66.95	332	P	P	04 49 31.5	+0.7
HFS	Hagfors	72.07	336	P	P	04 50 03.1	+0.7
	comp=Z,14nm,1.1s,baz=56,slow=8.8,SNR=5.2						
NOA	NORSAR Array B	72.10	338	P	P	04 50 03.4	+0.7
	comp=Z,0.8nm,0.9s,baz=37,slow=2.7,SNR=2.2						
AKASG	Malin Array Be	72.91	323	P	P	04 50 08.0	+0.4
	comp=Z,0.3nm,0.3s,baz=48,slow=6.5,SNR=2.3						

BJI **17** *04:46:36.2±0.0, 39°.99N×142°.07E, h54*^{km}*, mB5.2/58, mb5.3/90, Ms4.9/96, Ms7 4.8/86*

MOS **17** *04:46:37.6±0.8, 40°.13N×141°.98E, h49*^{km}*, mb6.0/111, MS4.7/27, Error ellipse: s-maj=4.8km s-min=3.4km az=100.6*

NEIC **17** *04:46:38.9±0.9, 40°.11N±0°.05×141°.89E±0°.07, h47*^{km}*±1*^{km}*, mb5.7/654, Ms_20 4.8/120, Mwb5.5/28, Mwc5.4(GCMT), Error ellipse: s-maj=8.8km s-min=7.8km az=288.0*

NEIC **17** *04:46:38.9, 40°.16N×141°.92E, h46*^{km}*, Moment Tensor Solution. Moment tensor: Scale* 10^{17}*Nm;* M_{rr}*2.07;* $M_{\theta\theta}$*-0.73;* $M_{\phi\phi}$*-1.35;* $M_{r\theta}$*1.24;* $M_{\theta\phi}$*-1.24;* $M_{\phi r}$*0.41; Fault plane solution:* M_0*2.56000×*10^{17} *NP1:*ϕ_s*200.91000°, δ34.31000°, λ61.04000°. NP2:*ϕ_s*54.73000°, δ60.45000°, λ108.29000°. Principal axes: T 2.5419, Plg69.0000°, Azm3.0000°; N 0.0354, Plg16.0000°, Azm225.0000°; P -2.5774, Plg14.0000°, Azm132.0000°;*

BGR **17** *04:46:38.8±0.0, 40°.32N×142°.85E, h33*^{km}*, mb6.0, mB_BB6.3, Ms5.2*

NIED **17** *04:46:39.4, 40°.09N×142°.11E, h50*^{km}*, MW5.4, Moment Tensor Solution. s3 Moment tensor: Scale* 10^{17}*Nm;* M_{rr}*0.88;* $M_{\theta\theta}$*-0.40;* $M_{\phi\phi}$*-0.48;* $M_{r\theta}$*0.93;* $M_{\theta\phi}$*-0.62;* $M_{\phi r}$*0.47; Fault plane solution:* M_0*1.43000×*10^{17} *NP1:*ϕ_s*59.00000°, δ69.00000°, λ103.00000°. NP2:*ϕ_s*205.00000°, δ24.00000°, λ59.00000°.*

IDC **17** *04:46:39.5±1.2, 40°.11N×142°.03E, h52*^{km}*±10*^{km}*, mb5.3/28, mb1 5.5/35, mb1mx5.4/38, mbtmp5.6/35, MS4.7/36, Ms1 4.7/36, ms1mx4.6/43 Error ellipse: s-maj=11.5km s-min=8.0km az=112.0*

JMA **17** *04:46:39.3, 40°.09N×142°.11E, h50*^{km}*±1*^{km}*, M5.7 Broadband fault plane solution: P waves. NP1:* ϕ_s*185.00000°, δ24.00000°, λ39.00000°. NP2:*ϕ_s*58.00000°, δ75.00000°, λ109.00000°. Principal axes: T Plg56.0000°, Azm352.0000°; N Plg18.0000°, Azm233.0000°; P Plg28.0000°, Azm133.0000°;*

GCMT **17** *04:46:40.9±0.1, 40°.11N±0°.01×142°.05E±0°.01, h52*^{km}*, MW5.5/158, Moment Tensor Solution. s113, c200; s158, c297; Duration:* $1^{s}3$ *Moment tensor: Scale* 10^{17} *Nm;* M_{rr}*1.15±.03;* $M_{\theta\theta}$*-0.27±.02;* $M_{\phi\phi}$*-0.87±.02;* $M_{r\theta}$*1.26±.02;* $M_{\theta\phi}$*-0.67±.02;* $M_{\phi r}$*0.58±.02; Best double couple:* M_0*1.85700×*10^{17} *NP1:*ϕ_s*192.00000°, δ27.00000°, λ49.00000°. NP2:*ϕ_s*56.00000°, δ70.00000°, λ108.00000°. Principal axes: T 1.8960, Plg61.0000°, Azm353.0000°; N -0.0770, Plg17.0000°, Azm230.0000°; P -1.8180, Plg23.0000°, Azm132.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC **17** *04:46:41, 40°.10N×142°.16E, h60*^{km}*, Moment Tensor Solution. Moment tensor: Scale* 10^{17}*Nm;* M_{rr}*1.16;* $M_{\theta\theta}$*-0.25;* $M_{\phi\phi}$*-0.91;* $M_{r\theta}$*1.17;* $M_{\theta\phi}$*-0.81;* $M_{\phi r}$*0.48; Fault plane solution:* M_0*1.84000×*10^{17} *NP1:*ϕ_s*190.00000°, δ30.00000°, λ47.00000°. NP2:*ϕ_s*57.00000°, δ68.00000°, λ111.00000°. Principal axes: T 1.8208, Plg61.0000°, Azm359.0000°; N 0.0304, Plg20.0000°, Azm229.0000°; P -1.8512, Plg21.0000°, Azm131.0000°;*

ISC 17 04:46:39.0±0.3**, 40°.08N**±0°.02×**142°.06E**±0°.03**, h50**^{km}±2^{km}**, h50**^{km}**:pP-P, n1979,** $\sigma 1^{s}$**36**/1910**, mb5.8**/584**, MS4.8**/123**, 580C-100D, Fault plane solution: NP1:**ϕ_s62.58889°, δ64.19987°, λ106.27132°. **NP2:**ϕ_s208.74219°, δ30.20213°, λ59.90386°. **Principal axes:** T Plg66.7626°, Azm2.7316°; N Plg14.6111°, Azm235.3491°; P Plg17.6598°, Azm140.5884°; **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	0.21	226	⇑P	Pn	04 46 48.1	+0.7
JTH				S	Sn	04 46 54.2	+0.8
JKEN	Kujiedanarisaw	0.29	295	⇓P	Pn	04 46 48.6	+0.5
JKEN				S	Sn	04 46 55.3	+0.7
JANG	Nango	0.51	305	⇓P	Pn	04 46 50.9	+0.5
JANG				S	Sn	04 46 59.3	+0.8
MIYJ	Miyakonagasawa	0.54	200	⇑P	Pn	04 46 51.1	+0.3
MIYJ				*i* S	Sn	04 46 59.4	+0.2
JKZ	Kuzumaki	0.57	260	⇓P	Pn	04 46 52.0	+0.8
JKZ				S	Sn	04 47 01.0	+1.1
JOM	Ohasama	0.85	224	⇑P	Pn	04 46 55.4	+0.7
JOM				S	Sn	04 47 06.9	+0.7
JSZI	Iwateshizukuis	0.92	248	⇓P	Pn	04 46 56.9	+1.3
JSZI				S	Sn	04 47 09.5	+1.7
JTM	Tenmabayashi	1.03	313	⇓P	Pn	04 46 57.9	+0.8
JTM	Tenmabayashi	1.03	313	Pn	Pn	04 46 58.0	+0.8
JTM				Sn	Sn	04 47 10.7	+0.2
OFUJ	Ofunato	1.05	197	⇑P	Pn	04 46 57.8	+0.4
JARK	Aomorirokkasho	1.06	330	⇓P	Pn	04 46 57.9	+0.3
JAH	Hinai	1.10	276	⇓P	Pn	04 46 59.1	+1.1
JAH				S	Sn	04 47 13.9	+1.8
JRG	Rokugo	1.30	238	⇑P	Pn	04 47 01.6	+0.9
JAHD	Aomorihigashid	1.30	335	⇓P	Pn	04 47 01.4	+0.6
JMK	Ichinoseki	1.30	210	⇑P	Pn	04 47 01.6	+0.8
JMK				S	Sn	04 47 18.0	+0.9
JKMT	Kesennumamotoy	1.35	200	⇑P	Pn	04 47 02.0	+0.5
JHHS	Hirosakihyakuz	1.42	294	⇓P	Pn	04 47 04.1	+1.7
JNTW	Noshirotokiwa	1.47	278	⇓P	Pn	04 47 04.2	+1.2
JOT	Ohata	1.51	330	⇓P	Pn	04 47 04.2	+0.6
JYW	Yuwa	1.52	250	⇓P	Pn	04 47 05.4	+1.6
JSI2	Shiura 2	1.59	308	⇓P	Pn	04 47 05.9	+1.2
JIW	Iwasaki	1.65	289	⇓P	Pn	04 47 06.8	+1.2
JIO	Ouri	1.72	199	⇑P	Pn	04 47 06.9	+0.4
JOFO	Osakifurukawao	1.73	211	⇑P	Pn	04 47 07.6	+1.0
JYK	Kaneyama	1.76	229	⇓P	Pn	04 47 08.1	+1.1
JIKH	Ishinomakikobu	1.83	195	⇑P	Pn	04 47 08.1	+0.1
JSR	Shiriuchi	1.91	320	⇓P	Pn	04 47 10.2	+1.1
JKB	Kayabe	1.96	337	⇓P	Pn	04 47 10.4	+0.6
JOU	Okura	2.03	213	⇑P	Pn	04 47 11.7	+0.9
ERM	Erimo	2.10	23	*c i*P	Pn	04 47 12.6	+0.9
ERM	Erimo	2.10	23		Pn	04 47 12.6	+0.9
JEM	Erimo	2.10	23	⇑P	Pn	04 47 12.5	+0.8
JOMM	Oshimamatsumae	2.12	313	⇓P	Pn	04 47 13.0	+1.0
JTB	Tobi-shima	2.13	246	⇓P	Pn	04 47 12.9	+0.8
JNBK	Urakawa-nobuka	2.26	13	⇑P	Pn	04 47 15.3	+1.5
JOG3	Oga3	2.29	267	⇓P	Pn	04 47 08.0	-6.4
JSHD	Hidakashinhida	2.34	7	⇑P	Pn	04 47 17.2	+2.2
JYA	Atsumi	2.35	231	⇑P	Pn	04 47 16.4	+1.3
JTHR	Tokachihiroo	2.40	23	⇑P	Pn	04 47 16.7	+1.0
JYM2	Yakumo 2	2.40	328	⇓P	Pn	04 47 16.9	+1.1
JYS	Shirataka	2.42	220	⇑P	Pn	04 47 17.6	+1.5
JMM	Marumori	2.42	204	⇑P	Pn	04 47 16.5	+0.3
JMM	Marumori	2.42	204		Pn	04 47 16.5	+0.3
JNB	Noboribetsu	2.50	342	⇓P	Pn	04 47 17.7	+0.5
JMST	Minamisoumatoc	2.53	202	⇑P	Pn	04 47 17.8	+0.2
JBT2	Biratori 2	2.70	5	⇑P	Pn	04 47 21.3	+1.3
JCH	Churui	2.71	21	⇑P	Pn	04 47 20.9	+0.8
JEW	Eniwo	2.79	351	Pn	Pn	04 47 22.2	+1.0
JOSM	Okushiri--Mats	2.79	316	⇓P	Pn	04 47 21.8	+0.6
JHST	Hiyamasetana	2.86	326	⇓P	Pn	04 47 23.7	+1.6
JFK	Kawauchi	2.87	199	⇑P	Pn	04 47 22.5	+0.2
JFT	Otama	2.89	208	⇑P	Pn	04 47 24.1	+1.5
JSH	Shimam	2.97	330	⇓P	Pn	04 47 24.9	+1.3
JFR	Furan	3.10	7	⇑P	Pn	04 47 26.4	+0.9
JOB	Onbets	3.12	25	⇑P	Pn	04 47 26.2	+0.6
ONAJ	Iwakimizuishiy	3.14	199	⇑P	Pn	04 47 26.1	+0.1
JFY	Yanaizu	3.25	215	⇑P	Pn	04 47 29.4	+1.9
JAB	Ashibetsu	3.42	2	⇑P	Pn	04 47 31.6	+1.8
JAR	Ashorobuto	3.46	21	⇑P	Pn	04 47 30.3	0.0
JAK	Akkeshi	3.52	33	P	Pn	04 47 30.6	-0.5
JSB	Shiboa	3.53	209	P	Pn	04 47 34.4	+3.0
JSD	Sado	3.59	237	⇑P	Pn	04 47 33.4	+1.2
JSD	Sado	3.59	237	Pn	Pn	04 47 33.2	+1.0
JHR	Hokuryu	3.67	356	⇑P	Pn	04 47 34.7	+1.5
JKHN	Kushirohamanak	3.79	37	⇑P	Pn	04 47 34.6	-0.3
JKK2	Kamakawa 2	3.82	7	⇑P	Pn	04 47 36.4	+1.1
JKT	Katashina	3.98	215	⇑P	Pn	04 47 40.5	+2.9
JNK	Nakash	4.02	29	⇑P	Pn	04 47 36.9	-1.2
JMP	Maruseppu	4.04	13	⇑P	Pn	04 47 38.8	+0.5
ASAJ	Asahikawa	4.05	5	P	Pn	04 47 39.5	+1.1
	295nm,0.3s,baz=219,slow=10,SNR=750						
ASAJ				S	Sn	04 48 25.1	+0.6
	209nm,0.3s,baz=78,slow=20,SNR=1.8						
ASAJ				LR	LR	04 48 56.5	
	comp=Z,5µm,20.8s,baz=191,slow=34						
ASAJ	Asahikawa	4.05	5	⇑P	Pn	04 47 39.5	+1.1
JKA	Kamikawa-asahi	4.05	6	Pn	Pn	04 47 39.6	+1.2
JKA				Sn	Sn	04 48 23.5	-1.0
JTKR	Abashiri--Toko	4.12	19	⇑P	Pn	04 47 39.3	-0.1
JYT	Yasato	4.12	201	Pn	Pn	04 47 39.3	-0.1
JAG	Ashikaga	4.19	210	⇓P	Pn	04 47 42.7	+2.3
NMR	Nemuro--Hokkai	4.28	39	⇑*i*P	Pn	04 47 40.4	-1.2
NEM2	Nemuro 2	4.28	39	⇑P	Pn	04 47 40.4	-1.2
JSS	Shosan	4.32	358	⇑P	Pn	04 47 43.6	+1.5
JGK	Kuni	4.43	218	P	Pn	04 47 47.1	+3.4
GLVR	Golovnino	4.47	34	*d i*P	Pn	04 47 43.8	-0.4
GLVR				*e*S	Sn	04 48 32.7	-2.2
GLVR				pmax	pmax		
	comp=Z,4µm,0.7s						
GLVR				pmax	pmax		
	comp=E,1µm,0.4s						
GLVR				pmax	pmax		
	comp=N,1µm,0.7s						
GLVR				smax	smax		
	comp=E,17µm,0.6s						
GLVR				smax	smax		
	comp=N,18µm,0.3s						
MJAR	Matsushiro Arr	4.66	222	P	Pn	04 47 48.7	+1.9
	comp=N,30nm,0.3s,baz=32,slow=13,SNR=704						
MJAR				S	Sn	04 48 40.4	+0.8
	comp=N,3.6nm,0.3s,baz=30,slow=10,SNR=4.2						
MJAR				LR	LR	04 49 48.8	
	comp=N,8µm,20.6s,baz=55,slow=41						
MAJO	Matsushiro	4.66	222	*c i*P	Pn	04 47 49.3	+2.5
MAJO	Matsushiro	4.66	222	Pn	Pn	04 47 48.8	+2.0
MAT	Matsushiro	4.66	222	P	Pn	04 47 49.3	+2.5
MAT				S	Sn	04 48 43.0	+3.5
MAT	Matsushiro	4.66	222	P	Pn	04 47 49.3	+2.5
GRPR	Tuman	4.79	34	*e*P	Pn	04 47 48.0	-0.5
GRPR				*e*S	Sn	04 48 39.9	-2.7
GRPR				pmax	pmax		
	comp=Z,2µm,0.5s						
GRPR				pmax	pmax		
	comp=E,309nm,0.2s						
GRPR				pmax	pmax		
	comp=N,365nm,0.3s						
GRPR				smax	smax		
	comp=E,10µm,0.3s						
GRPR				smax	smax		
	comp=N,18µm,0.4s						
JNG	Nsakai	4.81	222	⇑P	Pn	04 47 51.8	+2.8
YUK	Yuzh-Kuril'sk	4.86	34	*c i*P	Pn	04 47 48.6	-0.9
YUK				*i* S	Sn	04 48 40.4	-4.0
YUK				pmax	pmax		
	comp=Z,3µm,0.4s						
YUK				pmax	pmax		
	comp=E,1µm,0.3s						
YUK				pmax	pmax		
	comp=N,2µm,0.5s						
YUK				smax	smax		
	comp=E,21µm,0.5s						
YUK				smax	smax		
	comp=N,14µm,0.4s						
YUK				MLR	MLR		
	comp=N,5µm,12.0s						
YUK				MLR	MLR		
	comp=Z,5µm,12.0s						
JSGW	Sagamiharawaka	5.01	208	P	Pn	04 47 52.7	+1.0
JKUC	kamogawauchiur	5.13	197	P	Pn	04 47 53.6	+0.3
JWK2	Keihoku	5.23	359	P	Pn	04 47 56.1	+1.5
JOD2	Odawara 2	5.36	207	P	Pn	04 47 56.5	+0.1
JYN	Shimob	5.36	212	P	Pn	04 47 58.4	+1.9
JGN	Niukaw	5.37	226	P	Pn	04 48 00.0	+3.4
AJI	Ajiro2	5.55	206	P	Pn	04 47 58.9	-0.2
JNY	Yasuok	5.77	217	P	Pn	04 48 04.6	+2.4
JGF	Kuroka	5.82	221	⇓P	Pn	04 48 06.0	+3.2
JGF	Kuroka	5.82	221	Pn	Pn	04 48 02.0	-0.8
JIZS	Izushimoda	5.92	206	P	Pn	04 48 04.0	-0.2
JYTA	Yamagatataniai	6.15	225	P	Pn	04 48 10.6	+3.3
INU	Inuyama	6.19	222	Pn	Pn	04 48 07.0	-0.8
JSG	Sagara	6.22	211		Pn	04 48 07.8	-0.4
TEY	Ternei	6.38	323	⇑*i*P	Pn	04 48 13.0	+2.7
TEY				*e*S	Sn	04 49 27.8	+6.0
TEY				pmax	pmax		
	comp=N,230nm,0.5s						
TEY				pmax	pmax		
	comp=E,170nm,0.5s						
TEY				pmax	pmax		
	comp=Z,250nm,0.5s						
TEY				pmax	pmax		
	comp=N,2µm,0.9s						
TEY				pmax	pmax		
	comp=E,2µm,0.9s						
TEY				pmax	pmax		
	comp=Z,3µm,0.8s						
TEY				smax	smax		
	comp=N,700nm,2.7s						
TEY				MLR	MLR		
	comp=E,5µm,20.0s						
TEY				MLR	MLR		
	comp=N,6µm,18.0s						
TEY				MLR	MLR		
	comp=Z,9µm,15.0s						
JFM	Mihama	6.62	229	P	Pn	04 48 18.3	+4.6
KUR	Kuril'sk	6.69	38	*c i*P	Pn	04 48 14.4	-0.2
KUR				*i* S	Sn	04 49 25.5	-4.0
KUR				pmax	pmax		
	comp=Z,3µm,0.6s						
KUR				pmax	pmax		
	comp=N,685nm,0.4s						
KUR				pmax	pmax		
	comp=E,940nm,0.3s						
KUR				MLR	MLR		
	comp=Z,2µm,11.0s						
KUR				MLR	MLR		
	comp=N,2µm,10.0s						
YSS	Yuzh-Sakhalins	6.89	4	α *i*P	Pn	04 48 18.5	+1.2
YSS				*e*S	Sn	04 49 32.4	-1.8
YSS				pmax	pmax		
	comp=Z,2µm,3.4s						
YSS				pmax	pmax		
	comp=Z,870nm,0.8s						
YSS				MLR	MLR		
	comp=Z,8µm,21.0s						
YSS				MLR	MLR		
	comp=N,3µm,17.0s						
YSS	Yuzh-Sakhalins	6.89	4	Pn	Pn	04 48 17.1	-0.2
JHJ	Hachijo jima 2	7.19	195	P	Pn	04 48 20.7	-0.8
	comp=N,250nm,0.3s,baz=300,slow=8.2,SNR=27						
JHJ				S	Sn	04 49 37.6	-4.2
	comp=N,202nm,0.3s,baz=235,slow=23,SNR=1.6						
JHJ2	Mitsune	7.19	195	Pn	Pn	04 48 20.4	-1.1
USA0B	Ussuriysk Arra	8.54	302	*de*P	Pn	04 48 40.9	+1.0
USA0B	Ussuriysk Arra	8.54	302		Pn	04 48 38.4	-1.5
USRK	Ussuriysk Ar.	8.54	302	P	Pn	04 48 41.2	+1.3
	baz=108,slow=19,SNR=304						
USRK				LR	LR	04 51 46.5	
	comp=N,9µm,21.8s,baz=99,slow=36						
USRK	Ussuriysk Ar.	8.54	302		Pn	04 48 39.0	-0.9
MSHR	Mys Shultsa	8.57	290	*de*P	Pn	04 48 41.1	+0.7
UGL	Uglegorsk	8.99	0	*e*P	Pn	04 48 46.2	+0.1
UGL				*e*S	Sn	04 50 26.3	+0.4
UGL				pmax	pmax		
	comp=Z,500nm,1.6s						
UGL				pmax	pmax		
	comp=Z,319nm,1.0s						
UGL				smax	smax		
	comp=N,2µm,4.8s						
UGL				smax	smax		
	comp=E,1µm,2.7s						
UGL				MLR	MLR		
	comp=Z,6µm,22.0s						
UGL				MLR	MLR		
	comp=E,4µm,21.0s						

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UGL                                MLR       MLR
       comp=N,5µm,14.0s
JMN    Monobe              9.12 228          Pn        04 48 47.7  -0.2
MDJ    Mudanjiang         10.28 300  Pn      Pn        04 49 03.2  -0.5
KSRS   Korea Array        11.35 261  P       Pn        04 49 20.3  +2.0
       comp=N,2.9nm,0.3s,baz=65,slow=14,SNR=71
KSRS                                 S       Sn        04 51 26.4  +2.8
       baz=132,slow=36,SNR=1.3
KSRS                                 LR      LR        04 53 28.9
       comp=N,1µm,20.6s,baz=72,slow=36
KSRS                                 PcP     PcP       04 55 09.9  +0.8
       baz=51,slow=0.3,SNR=5.7
JNU    Nakatsue           11.35 236  P       Pn        04 49 20.5  +2.0
       comp=N,3.7nm,0.3s,baz=87,slow=4.2,SNR=8.2
JNU                                  LR      LR        04 54 09.4
       comp=N,858nm,19.4s,baz=44,slow=40
JNU    Nakatsue           11.35 236          Pn        04 49 18.0  -0.5
KSAR   Wonju Array Be     11.38 261  P       Pn        04 49 18.2  -0.6
KSAR   Wonju Array Be     11.38 261          Pn        04 49 18.1  -0.6
GRNR   Gornyy             11.39 342⇓iP       Pn        04 49 20.0  +1.1
GRNR                                eS       Sn        04 51 27.9  +3.3
GRNR                                 pmax    pmax
       comp=N,60nm,0.9s
GRNR                                 pmax    pmax
       comp=E,40nm,0.9s
GRNR                                 pmax    pmax
       comp=Z,70nm,0.9s
GRNR                                 smax    smax
       comp=N,20nm,0.7s
GRNR                                 MLR     MLR
       comp=E,1µm,18.0s
GRNR                                 MLR     MLR
       comp=N,2µm,15.0s
GRNR                                 MLR     MLR
       comp=Z,3µm,16.0s
KLR    Kul'dur            11.71 325  P       Pn        04 49 24.2  +0.9
       comp=Z,0.6nm,0.3s,baz=132,slow=12,SNR=82
KLR                                  LR      LR        04 53 49.5
       comp=Z,7µm,21.3s,baz=140,slow=37
INCN   Inchon             12.32 263  P       Pn        04 49 30.9  -0.8
INCN   Inchon             12.32 263          Pn        04 49 30.9  -0.8
JSU    Suzuyama           12.72 231          Pn        04 49 36.7  -0.4
CN2    Changchun          12.91 292 eP       Pn        04 49 40.5  +0.8
CN2                                 epP      P         04 49 49.8  +0.8
CN2                                 esP                04 49 58.9
CN2                                 eS       Sn        04 52 02.1  +0.3
CN2                                  pmax    pmax
       comp=Z,40nm,1.2s
CN2                                  pmax    pmax
       comp=Z,620nm,3.0s
CN2                                  LR      LR
       comp=Z,2µm,14.0s
CN2                                  LR      LR
       comp=Z,4µm,14.0s
CN2                                  LR      LR
       comp=Z,4µm,17.0s
JCJ    Chichijima         12.96 180  P       Pn        04 49 37.9  -2.5
       comp=Z,51nm,0.3s,baz=287,slow=23,SNR=18
JCJ                                  S       Sn        04 51 50.3   -13
       comp=Z,20nm,0.3s,baz=245,slow=23,SNR=2.5
JCJ    Chichijima         12.96 180          Pn        04 49 37.7  -2.7
NKL    Nikolayevsk        13.10 356 eP       Pn        04 49 33.6  -8.6
NKL                                 eS       Sn        04 51 57.2  -9.1
NKL                                  pmax    pmax
       comp=N,14nm,0.7s
NKL                                  pmax    pmax
       comp=E,80nm,0.7s
NKL                                  pmax    pmax
       comp=Z,395nm,1.1s
NKL                                  smax    smax
       comp=E,86nm,1.6s
NKL                                  smax    smax
       comp=N,636nm,2.5s
NKL                                  MLR     MLR
       comp=E,1µm,16.0s
NKL                                  MLR     MLR
       comp=N,2µm,22.0s
NKL                                  MLR     MLR
       comp=Z,1µm,15.0s
OKH    Okha               13.48     2deP     Pn        04 49 47.0  -0.4
OKH                                 i S      Sn        04 52 23.4  +7.8
OKH                                  pmax    pmax
       comp=Z,300nm,10.3s
OKH                                  smax    smax
       comp=E,300nm,13.5s
OKH                                  MLR     MLR
       comp=Z,4µm,21.0s
OKH                                  MLR     MLR
       comp=N,6µm,19.0s
OKH                                  MLR     MLR
       comp=E,3µm,19.0s
SNY    Shenyang           14.08 283 ⇑P       Pn        04 49 57.8  +2.2
SNY                                  pP      P         04 50 08.6  +6.6
SNY                                  S       Sn        04 52 33.1  +2.9
SNY                                  pmax    pmax
       comp=E,54nm,1.3s
SNY                                  pmax    pmax
       comp=E,830nm,3.5s
SNY                                  LR      LR
       comp=E,950nm,15.7s
SNY                                  LR      LR
       comp=E,3µm,17.4s
SNY                                  LR      LR
       comp=E,5µm,19.0s
SKR    Severo-Kuril's     14.46  38 eP       Pn        04 50 02.0  +1.4
SKR                                 eS       Sn        04 52 44.4  +5.0
SKR                                  pmax    pmax
       comp=Z,300nm,3.1s
SKR                                  pmax    pmax
       comp=Z,168nm,0.9s
SKR                                  pmax    pmax
       comp=Z,900nm,3.7s
SKR                                  MLR     MLR
       comp=Z,2µm,15.0s
SKR                                  MLR     MLR
       comp=Z,2µm,15.0s
DL2    Dalian             15.82 272  P       Pn        04 50 18.8  +0.5
DL2                                  sP      pP        04 50 29.8  -3.0
DL2                                  S       Sn        04 53 16.9  +4.4
DL2                                  sS      S         04 53 28.1  +3.3
DL2                                  ScS     ScS       05 02 14.1  -9.3
DL2                                  pmax    pmax
       comp=Z,250nm,0.9s
DL2                                  pmax    pmax
       comp=Z,660nm,4.1s
DL2                                  LR      LR
       comp=Z,1µm,19.6s
DL2                                  LR      LR
       comp=Z,2µm,19.4s
DL2                                  LR      LR
       comp=Z,3µm,27.4s
PEA0B  Petropavlovsk-     16.84  34  P       Pn        04 50 27.2  -3.8
PEA0B                                pmax    pmax
       comp=Z,94nm,1.2s
PEA0B  Petropavlovsk-     16.84  34          Pn        04 50 27.2  -3.8
PETK   Petropavlovsk-     16.84  34  P       Pn        04 50 26.8  -4.3
       comp=Z,1.4nm,0.3s,baz=205,slow=6.6,SNR=30
PETK                                 PcP     PcP       04 55 17.1  +1.0
       comp=Z,0.4nm,0.3s,baz=122,slow=1.1,SNR=3.8
PETK                                 LR      LR        04 57 22.7
       comp=Z,2µm,18.5s,baz=222,slow=38
PETK   Petropavlovsk-     16.84  34  P       Pn        04 50 26.9  -4.1
PETK   Petropavlovsk-     16.84  34          Pn        04 50 26.9  -4.1
ZEA    Zeya               16.95 329 eP       Pn        04 50 30.9  -1.5
ZEA                                  pmax    pmax
       comp=E,130nm,0.9s
ZEA                                  pmax    pmax
       comp=N,240nm,0.8s
ZEA                                  pmax    pmax
       comp=Z,360nm,0.8s
ZEA                                  pmax    pmax
       comp=E,400nm,3.1s
ZEA                                  pmax    pmax
       comp=N,500nm,3.3s
ZEA                                  pmax    pmax
       comp=Z,600nm,3.8s
ZEA                                  MLR     MLR
       comp=N,2µm,14.0s
ZEA                                  MLR     MLR
       comp=E,2µm,14.0s
ZEA                                  MLR     MLR
       comp=Z,2µm,16.0s
PET    Petropavlovsk      17.20  36 eP       Pn        04 50 33.9  -1.6
PET                                 eS       Sn        04 53 42.2  -3.5
PET                                  pmax    pmax
       comp=Z,119nm,1.0s
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PET                                  MLR     MLR
       comp=Z,4µm,19.0s
PET                                  MLR     MLR
       comp=Z,4µm,19.0s
PET    Petropavlovsk      17.20  36  P       Pn        04 50 35.7  +0.2
JOW    Kunigami           17.49 225  P       Pn        04 50 38.0  -1.3
HIA    Hailar             18.28 308  P       P         04 50 46.5  -2.0
HIA                                  pmax    pmax
       comp=Z,119nm,1.0s
HIA    Hailar             18.28 308  P       P         04 50 46.5  -2.0
SSE    Sheshan            19.16 249  P       P         04 50 57.1  -1.2
SSE                                  pmax    pmax
       comp=Z,120nm,0.9s
SSE                                  pmax    pmax
       comp=Z,150nm,3.9s
SSE                                  LR      LR
       comp=Z,460nm,11.0s
SSE    Sheshan            19.16 249  P       P         04 50 57.6  -0.7
BJI    Beijing            19.80 278  P       P         04 51 03.3  -1.8
BJI                                  sP      pP        04 51 19.0  +2.3
BJI                                  S       S         04 54 40.4  -4.9
BJI                                  sS      sS        04 54 58.6  -5.2
BJI                                  pmax    pmax
       comp=Z,50nm,0.9s
BJI                                  LR      LR
       comp=Z,1µm,16.4s
BJI                                  LR      LR
       comp=Z,1µm,24.3s
BJI                                  LR      LR
       comp=Z,2µm,27.5s
BJT    Baijiatuau         19.80 278  P       P         04 51 03.9  -1.3
BJT                                  pmax    pmax
       comp=Z,88nm,0.9s
BJT    Baijiatuau         19.80 278  P       P         04 51 03.9  -1.3
TIA    Tai'an             19.97 267  P       P         04 51 06.3  -0.7
TIA                                  sP      sP        04 51 27.5  +2.3
TIA                                  S       S         04 54 39.9  -9.0
TIA                                  SS      SnSn      04 55 16.4  +8.8
TIA                                  pmax    pmax
       comp=Z,97nm,1.2s
TIA                                  LR      LR
       comp=Z,2µm,11.4s
TIA                                  LR      LR
       comp=Z,2µm,14.2s
TIA                                  LR      LR
       comp=Z,2µm,19.9s
MA2    Magadan            20.27  13  P       P         04 51 08.6  -1.5
       comp=Z,337nm,0.7s,baz=198,slow=9.6,SNR=173
MA2    Magadan            20.27  13  P       P         04 51 09.1  -1.0
MA2                                  pmax    pmax
       comp=Z,356nm,0.6s
MA2                                  MLR     MLR
       comp=Z,2µm,20.0s
MA2    Magadan            20.27  13  P       P         04 51 09.1  -1.0
MA2                                  IAmb    IAmb      04 51 11.9
       comp=Z,356nm,0.6s
NJ2    Nanjing            20.36 254 eP       P         04 51 09.0  -2.3
NJ2                                  pP      Pn        04 51 18.3  +4.6
NJ2                                  PP      sP        04 51 27.9  -1.5
NJ2                                  S       S         04 54 49.3  -7.3
NJ2                                  sS      Sn        04 55 06.8  +4.5
NJ2                                  SS      SnSn      04 55 16.8  -0.4
NJ2                                  pmax    pmax
       comp=Z,390nm,0.8s
NJ2                                  pmax    pmax
       comp=Z,770nm,4.2s
NJ2                                  LR      LR
       comp=Z,2µm,18.0s
NJ2                                  LR      LR
       comp=Z,2µm,17.1s
NJ2                                  LR      LR
       comp=Z,2µm,20.6s
YOJ    Yonaguni jima      22.33 232  P       P         04 51 32.2  -0.3
YOJ                                  pmax    pmax
       comp=Z,103nm,1.1s
YOJ                                  MLR     MLR
       comp=Z,2µm,20.0s
YOJ    Yonaguni jima      22.33 232  P       P         04 51 32.2  -0.3
YOJ                                  IAMs_20 IAMs_20   05 00 33.9
       comp=Z,2µm,20.0s
TATO   Taipei             22.89 235  IAMs_20 IAMs_20   05 01 38.5
       comp=Z,2µm,18.0s
CIT    Chita              22.94 311 eP       P         04 51 35.4  -3.4
CIT                                 e                  04 51 49.4
CIT                                 e                  04 52 05.8
CIT                                 eS       S         04 55 42.6  -2.5
CIT                                  pmax    pmax
       comp=Z,1µm,1.1s
TIY    Taiyuan            23.13 274 eP       P         04 51 38.1  -2.8
TIY                                  pP      pP        04 51 48.0  -4.9
TIY                                  sP      sP        04 51 55.8  -3.4
TIY                                  S       S         04 55 47.8  -0.7
TIY                                  sS      Sn        04 56 05.1  -3.5
TIY                                  pmax    pmax
       comp=Z,67nm,1.0s
TIY                                  pmax    pmax
       comp=Z,260nm,5.6s
TIY                                  LR      LR
       comp=Z,740nm,11.7s
TIY                                  LR      LR
       comp=Z,900nm,13.2s
TIY                                  LR      LR
       comp=Z,2µm,28.5s
HHC    Hu-ho-hao-te       23.16 282 eP       P         04 51 39.8  -1.4
HHC                                  PP      PnPn      04 52 10.8  +2.7
HHC                                  S       S         04 55 45.8  -3.2
HHC                                  pmax    pmax
       comp=Z,99nm,1.2s
HHC                                  pmax    pmax
       comp=Z,380nm,7.4s
HHC                                  LR      LR
       comp=Z,710nm,17.5s
HHC                                  LR      LR
       comp=Z,3µm,17.3s
HHC                                  LR      LR
       comp=Z,4µm,15.3s
YHNB   Yeheng             23.18 235  P       P         04 51 38.7  -2.8
YHNB                                 IAMs_20 IAMs_20   05 00 46.3
       comp=Z,2µm,21.0s
YAK    Yakutsk            23.23 345  P       P         04 51 39.9  -1.6
       comp=Z,346nm,0.6s,baz=336,slow=5.5,SNR=77
YAK    Yakutsk            23.23 345c iP      P         04 51 38.9  -2.6
YAK                                 e*PP     pP        04 51 54.2  +0.8
YAK                                 e                  04 55 27.3
YAK                                 eS       S         04 55 42.3  -7.2
YAK                                 e                  05 02 43.8
YAK                                  pmax    pmax
       comp=Z,923nm,0.9s
YAK                                  pmax    pmax
       comp=N,392nm,1.0s
YAK                                  pmax    pmax
       comp=E,42nm,0.9s
YAK                                  smax    smax
       comp=E,1µm,3.9s
YAK                                  smax    smax
       comp=N,1µm,2.8s
YAK                                  MLR     MLR
       comp=Z,3µm,17.0s
YAK                                  MLR     MLR
       comp=N,2µm,15.0s
YAK                                  MLR     MLR
       comp=E,763nm,18.0s
YAK    Yakutsk            23.23 345  P       P         04 51 39.2  -2.2
SEY    Seymchan           23.70  12  P       P         04 51 45.2  -0.8
       comp=E,537nm,1.0s,baz=194,slow=7.2,SNR=335
BTO    Baotou             24.36 282 eP       P         04 51 50.4  -1.9
WHN    Wuhan              24.45 256⇓iP       P         04 51 52.9  -0.2
WHN                                  sP      pP        04 52 07.6  +1.5
WHN                                  S       S         04 56 08.9  -0.8
WHN                                  pmax    pmax
       comp=E,280nm,0.9s
WHN                                  LR      LR
       comp=E,7µm,15.7s
WHN                                  LR      LR
       comp=E,3µm,14.9s
WHN                                  LR      LR
       comp=E,3µm,19.8s
TPUB   Ta-pu              24.65 234  IAMs_20 IAMs_20   05 01 40.3
       comp=Z,2µm,21.0s
TWG    Pinlang            24.73 232  P       P         04 51 53.8  -1.9
TWG                                  IAMs_20 IAMs_20   05 01 58.6
       comp=Z,2µm,20.0s
QZH    Quanzhou           24.79 240⇓iP       P         04 51 55.4  -0.8
QZH                                  S       S         04 56 15.6  +0.4
QZH                                  sS      sS        04 56 36.6  -0.1
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QZH                                  pmax    pmax
       comp=Z,71nm,1.2s
QZH                                  LR      LR
       comp=Z,1µm,15.6s
QZH                                  LR      LR
       comp=Z,530nm,15.2s
QZH                                  LR      LR
       comp=Z,1µm,15.6s
SMY    Shemya             25.22  49  P       P         04 52 00.9  +1.0
SMY                                  pmax    pmax
       comp=Z,321nm,1.1s
SMY    Shemya             25.22  49  P       P         04 52 00.8  +1.0
SMY                                  IAmb    IAmb      04 52 03.1
       comp=Z,321nm,1.1s
KNMB   Chin-men Tao       25.25 239  P       P         04 52 00.2  -0.2
BOD    Bodaibo            25.29 324 eP       P         04 51 59.7  -0.8
ULN    Ulaanbaatar        26.19 299  P       P         04 52 08.3  -0.6
ULN                                  pmax    pmax
       comp=Z,60nm,0.9s
ULN                                  MLR     MLR
       comp=Z,4µm,20.0s
ULN    Ulaanbaatar        26.19 299  P       P         04 52 08.3  -0.6
ULN    Ulaanbaatar        26.19 299  IAMs_20 IAMs_20   05 02 45.7
       comp=Z,3µm,20.0s
ULN    Ulaanbaatar        26.19 299  P       P         04 52 08.3  -0.6
ULN                                  P       P         04 52 08.3  -0.6
ULN                                  S       S         04 56 40.0  +2.5
ULN                                  S       S         04 56 40.0  +2.5
GUMO   Guam               26.51 174  IAMs_20 IAMs_20   05 00 54.9
       comp=Z,3µm,22.0s
SONM   Songino Array      26.63 299  P       P         04 52 12.5  -0.4
       comp=Z,41nm,0.6s,baz=94,slow=8.7,SNR=158
SONM                                 PcP     PcP       04 55 36.1  +0.4
       comp=Z,6.9nm,0.7s,baz=107,slow=2.4,SNR=3.0
SONM                                 ScP     ScP       04 59 11.1  -0.3
       comp=Z,7.2nm,1.1s,baz=114,slow=1.7,SNR=6.7
SONM                                 LR      LR        05 03 11.2
       comp=Z,3µm,20.2s,baz=90,slow=37
SONM   Songino Array      26.63 299  P       P         04 52 12.3  -0.6
XAN    Xi'an              27.02 268  P       P         04 52 14.6  -1.8
XAN                                  pP      pP        04 52 26.3  -3.1
XAN                                  sP      sP        04 52 31.8  -3.6
XAN                                  S       S         04 56 48.6  -2.0
XAN                                  sS      sS        04 57 08.0  -4.3
XAN                                  SS      SS        04 58 05.8   -40
XAN                                  pmax    pmax
       comp=Z,73nm,1.2s
XAN                                  pmax    pmax
       comp=Z,250nm,4.9s
XAN                                  LR      LR
       comp=Z,880nm,13.6s
XAN                                  LR      LR
       comp=Z,2µm,14.1s
XAN                                  LR      LR
       comp=Z,2µm,15.5s
XAN    Xi'an              27.02 268  P       P         04 52 14.9  -1.5
XAN                                  pmax    pmax
       comp=Z,43nm,0.7s
XAN                                  MLR     MLR
       comp=Z,1µm,20.0s
XAN    Xi'an              27.02 268  P       P         04 52 14.8  -1.5
AMKA   Amchitka           28.05  54  P       P         04 52 26.2  +0.9
ENH    Enshi              28.23 260  P       P         04 52 25.8  -1.4
IRK    Irkutsk            28.52 308 eP       P         04 52 29.0  -0.6
IRK                                  pmax    pmax
       comp=Z,219nm,1.8s
TLY    Talaya             28.82 307  P       P         04 52 32.6  +0.4
       comp=Z,76nm,0.8s,baz=108,slow=6.2,SNR=168
TLY    Talaya             28.82 307c iP      P         04 52 32.5  +0.3
TLY                                 eS       S         04 57 18.6  +0.2
TLY                                  pmax    pmax
       comp=Z,509nm,1.3s
TLY                                  MLR     MLR
       comp=Z,5µm,17.0s
TLY    Talaya             28.82 307  P       P         04 52 32.0  -0.2
TLY                                  IAmb    IAmb      04 52 33.9
       comp=Z,145nm,1.0s
TLY                                  IAMs_20 IAMs_20   05 04 29.1
       comp=Z,2µm,19.0s
TLY    Talaya             28.82 307  P       P         04 52 32.3  +0.1
TLY                                  P       P         04 52 32.3  +0.1
TLY                                  S       S         04 57 19.2  +0.7
TLY                                  S       S         04 57 19.2  +0.7
ZAK    Zakamensk          28.88 304 eP       P         04 52 32.6  -0.3
ZAK                                  pmax    pmax
       comp=Z,18nm,1.1s
SZP    Santa              29.22 226  P       P         04 52 35.9  -0.1
SZP                                  IAmb    IAmb      04 52 54.3
       comp=Z,135nm,0.8s
H11N2  WAKE ISLAND Hy     29.41 126  T       T         05 23 24.9
       baz=318,slow=75,SNR=4834
H11N1  WAKE ISLAND Hy     29.42 126  T       T         05 23 19.6
       baz=318,slow=75,SNR=3932
H11N3  WAKE ISLAND Hy     29.43 126  T       T         05 23 20.3
       baz=318,slow=75,SNR=5311
GZH    Guangzhou          29.58 244  P       P         04 52 34.8  -4.4
GZH                                  S       S         04 57 22.6  -8.2
GZH                                  pmax    pmax
       comp=Z,51nm,1.1s
GZH                                  LR      LR
       comp=Z,2µm,17.6s
GZH                                  LR      LR
       comp=Z,1µm,15.2s
LZH    Lanzhou            30.19 275 eP       P         04 52 44.3  -0.4
LZH                                  PP      PnPn      04 53 42.8  -0.8
LZH                                 eS       S         04 57 36.1  -4.4
LZH                                  sS      sS        04 57 58.0  -4.3
LZH                                  pmax    pmax
       comp=Z,74nm,1.0s
LZH                                  pmax    pmax
       comp=Z,180nm,4.6s
LZH                                  LR      LR
       comp=Z,540nm,12.2s
LZH                                  LR      LR
       comp=Z,2µm,14.1s
LZH                                  LR      LR
       comp=Z,1µm,15.7s
H11S1  WAKE ISLAND Hy     30.22 128  T       T         05 24 21.6
       baz=320,slow=76,SNR=472
H11S3  WAKE ISLAND Hy     30.22 128  T       T         05 24 30.7
       baz=320,slow=76,SNR=544
H11S2  WAKE ISLAND Hy     30.24 128  T       T         05 24 30.9
       baz=320,slow=76,SNR=255
MOY    Mondy              30.45 306 eP       P         04 52 47.0  +0.2
MOY                                  pmax    pmax
       comp=Z,190nm,1.9s
ADK    Adak               30.59  53  P       P         04 52 48.2  +0.3
ADK                                  pmax    pmax
       comp=Z,80nm,0.9s
ADK    Adak               30.59  53  P       P         04 52 48.2  +0.3
ADK                                  IAmb    IAmb      04 52 49.2
       comp=Z,80nm,0.9s
ATKA   Atka Island        32.15  53  P       P         04 53 01.4  -0.2
ATKA                                 IAmb    IAmb      04 53 02.8
       comp=Z,168nm,0.9s
GTA    Gaotai             32.27 283 ⇑P       P         04 53 02.0  -0.9
GTA                                  PcP     PcP       04 55 50.9  +0.7
GTA                                  S       S         04 58 15.4  +2.5
GTA                                  ScP     ScP       04 59 29.9  +0.3
GTA                                  PcS     PcS       04 59 35.8  +0.6
GTA                                  ScS     ScS       05 03 27.3  -1.5
GTA                                  pmax    pmax
       comp=Z,17nm,1.2s
GTA                                  pmax    pmax
       comp=Z,280nm,4.7s
GTA                                  LR      LR
       comp=Z,1µm,17.1s
GTA                                  LR      LR
       comp=Z,3µm,17.8s
GTA                                  LR      LR
       comp=Z,3µm,20.4s
CD2    Chengdu            32.29 266  P       P         04 53 01.3  -1.8
CD2                                  S       S         04 58 11.4  -1.9
CD2                                  pmax    pmax
       comp=Z,90nm,0.7s
CD2                                  pmax    pmax
       comp=Z,150nm,9.8s
CD2                                  LR      LR
       comp=Z,2µm,13.3s
CD2                                  LR      LR
       comp=Z,1µm,19.0s
CD2                                  LR      LR
       comp=Z,1µm,23.0s
TIXI   Tiksi              32.33 352  P       P         04 53 02.3  -0.6
TIXI                                 pmax    pmax
       comp=Z,55nm,0.6s
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TIXI  Tiksi             32.33 352          P         04 53 02.3 -0.6
TIXI                              IAmb     IAmb      04 53 05.7
      comp=Z,55nm,0.6s
GYA   Guiyang           32.34 256 ⇓P       P         04 53 03.3 -0.4
GYA                               pP       pP        04 53 14.6 -2.2
GYA                               sP       sP        04 53 19.5 -3.3
GYA                               S        S         04 58 10.0 -4.2
GYA                               ScS      ScS       05 03 25.8 -3.7
GYA                               pmax     pmax
      comp=Z,130nm,0.6s
GYA                               LR       LR
      comp=Z,2µm,18.9s
GYA                               LR       LR
      comp=Z,950nm,21.4s
GYA                               LR       LR
      comp=Z,960nm,19.8s
QIZ   Qiongzhong        34.72 242 P        P         04 53 25.3 +1.0
QIZ                               PP       PP        04 54 42.6 -1.1
QIZ                               S        S         04 58 52.3 +1.3
QIZ                               ScS      ScS       05 03 41.8  0.0
QIZ                               pmax     pmax
      comp=Z,25nm,1.4s
QIZ                               LR       LR
      comp=Z,680nm,20.4s
QIZ                               LR       LR
      comp=Z,790nm,19.8s
QIZ                               LR       LR
      comp=Z,630nm,13.9s
QIZ   Qiongzhong        34.72 242 P        P         04 53 24.0 -0.3
GAMB  Gambell           35.87  33 P        P         04 53 34.6 +1.0
KMI   Kunming           36.02 258 ⇑P       P         04 53 35.3 -0.3
KMI                               sP       sP        04 53 52.0 -2.8
KMI                               PP       PP        04 54 58.0 -0.1
KMI                               S        S         04 59 10.6 -0.6
KMI                               sS       sS        04 59 29.8 -3.4
KMI                               pmax     pmax
      comp=Z,49nm,0.8s
KMI                               pmax     pmax
      comp=Z,350nm,3.9s
KMI                               LR       LR
      comp=Z,1µm,18.0s
KMI                               LR       LR
      comp=Z,1µm,18.5s
KMI                               LR       LR
      comp=Z,1µm,25.5s
KMI   Kunming           36.02 258 P        P         04 53 35.0 -0.7
KMI                               pmax     pmax
      comp=Z,101nm,1.2s
KMI                               MLR      MLR
      comp=Z,1µm,22.0s
KMI   Kunming           36.02 258 P        P         04 53 35.0 -0.7
KMI                               IAmb     IAmb      04 53 38.0
      comp=Z,101nm,1.2s
SLVN  Son La            37.40 252 P        P         04 53 46.9 -0.4
SLVN                              IAmb     IAmb      04 53 49.0
      comp=Z,114nm,1.0s
TNA   Tin City          37.97  31 P        P         04 53 53.0 +1.5
      baz=253,SNR=47
TNA   Tin City          37.97  31 P        P         04 53 52.3 +0.8
TNA                               IAmb     IAmb      04 53 54.3
      comp=Z,122nm,1.0s
ANM   Nome              38.75  33 P        P         04 53 59.0 +0.9
ANM                               pmax     pmax
      comp=Z,182nm,0.9s
ANM                               MLR      MLR
      comp=Z,700nm,21.0s
ANM   Nome              38.75  33 P        P         04 53 59.0 +0.9
ANM                               IAmb     IAmb      04 54 01.4
      comp=Z,182nm,0.9s
WMQ   Urumqi            39.99 294 eP       P         04 54 09.3 +0.5
WMQ                               pP       pP        04 54 17.9 -4.2
WMQ                               sP       sP        04 54 26.8 -1.2
WMQ                               PcP      PcP       04 56 14.3 +1.2
WMQ                               S        S         05 00 11.1 +0.3
WMQ                               SS       SS        05 03 04.0 -4.9
WMQ                               pmax     pmax
      comp=Z,350nm,0.7s
WMQ                               pmax     pmax
      comp=Z,660nm,3.7s
WMQ                               LR       LR
      comp=Z,1µm,16.5s
WMQ                               LR       LR
      comp=Z,440nm,13.9s
WMQ                               LR       LR
      comp=Z,710nm,29.5s
WMQ   Urumqi            39.99 294 P        P         04 54 08.5 -0.3
WMQ                               pmax     pmax
      comp=Z,240nm,0.7s
WMQ   Urumqi            39.99 294 P        P         04 54 08.4 -0.3
NONG  Nongkai           40.04 248 P        P         04 54 09.9 +0.6
      comp=Z,6µmcomp=Z,233nm,0.9s
LKP   Lekhapani         40.07 266⇑iP       P         04 54 09.7 +0.2
ZAA0  Zalesovo Array    40.29 310 P        P         04 54 10.8 -0.2
ZAA0                              IAmb     IAmb      04 54 12.2
      comp=Z,125nm,0.8s
ZAA0                              IAMs_20  IAMs_20   05 11 23.8
      comp=Z,2µm,19.0s
ZALV  Zalesovo Beam     40.29 310 P        P         04 54 10.9 -0.1
      comp=Z,64nm,0.5s,baz=86,slow=7.8,SNR=386
ZALV                              PcP      PcP       04 56 13.6 -0.1
      comp=Z,35nm,0.4s,baz=98,slow=3.1,SNR=16
ZALV                              ScP      ScP       04 59 57.9 -0.8
      comp=Z,5.1nm,0.9s,baz=107,slow=5.1,SNR=4.9
ZALV                              LR       LR        05 11 43.9
      comp=Z,2µm,18.9s,baz=80,slow=37
ZALV  Zalesovo Beam     40.29 310 P        P         04 54 10.5 -0.5
ZALV                                       ScP       04 59 58.0 -0.7
RDOG  Red Dog Mine      40.57  28 P        P         04 54 14.0 +0.8
RDOG                              IAMs_20  IAMs_20   05 10 56.6
      comp=Z,992nm,21.0s
MYLDM Lahad Datu        40.72 218 P        P         04 54 14.7 -0.2
MYLDM                             IAmb     IAmb      04 54 25.8
      comp=Z,105nm,1.1s
DIBR  DIBRUGARH         40.72 267 i P      P         04 54 15.9 +1.1
NRIK  Noril'sk          40.74 334 P        P         04 54 14.2 -0.3
      comp=Z,42nm,0.5s,baz=111,slow=9.3,SNR=43
NRIK                              LR       LR        05 12 01.9
      comp=Z,4µm,20.5s,baz=108,slow=37
NRIK  Noril'sk          40.74 334 P        P         04 54 14.2 -0.3
DLV   T  Lat            40.76 236 P        P         04 54 14.7 -0.8
DLV                               IAmb     IAmb      04 54 17.1
      comp=Z,61nm,0.7s
CNBA  Chernabura Isl    40.88  49 P        P         04 54 16.0 +0.1
CNBA                              IAmb     IAmb      04 54 17.8
      comp=Z,124nm,0.8s
KKM   Kota Kinabalu     41.08 221 P        P         04 54 17.4 -0.6
ZSN   Zaisan            41.13 300⇑iP       P         04 54 19.0 +0.8
      comp=Z,102nm,1.0s,baz=300
ZSN                              eS        S         05 00 27.9 +0.3
      baz=300
ZSN   Zaisan            41.13 300c iP      P         04 54 18.9 +0.8
ZSN                              eS        S         05 00 27.9 +0.3
ZSN                               pmax     pmax
      comp=Z,102nm,1.0s
TNTI  Ternate           41.35 203 P        P         04 54 20.0 -0.1
JORH  JORHAT            41.59 266 eP       P         04 54 23.0 +0.9
MOKO  MOKOCHONG         41.61 266 i P      P         04 54 22.9 +0.5
MOKO                              IAmb     IAmb      04 54 25.5
      comp=Z,384nm,0.9s
SWI   Sorong            41.93 196 P        P         04 54 26.6 +1.8
      comp=Z,94nm,1.0s
MANU  Manus Island      42.20 172 P        P         04 54 27.0 -0.1
CHAI  Chaiyaphum        42.31 247 P        P         04 54 27.8 -0.2
      comp=Z,2µmcomp=Z,255nm,0.9s
GENI  Genyem            42.51 183 P        P         04 54 32.1 +2.6
      comp=Z,184nm,1.0s
LSA   Lhasa             42.52 272 P        P         04 54 30.9 +0.8
LSA                               pmax     pmax
      comp=Z,280nm,0.9s
LSA                               LR       LR
      comp=Z,1µm,16.4s
LSA                               LR       LR
      comp=Z,1µm,13.5s
LSA                               LR       LR
      comp=Z,1µm,13.5s
LSA   Lhasa             42.52 272 P        P         04 54 30.6 +0.5
LSA   Lhasa             42.52 272 P        P         04 54 28.9 -1.2
LSA                               pmax     pmax
      comp=Z,76nm,0.9s
LSA                               MLR      MLR
      comp=Z,1µm,19.0s
LSA   Lhasa             42.52 272 P        P         04 54 28.9 -1.2
LSA                               IAMs_20  IAMs_20   05 13 04.2
      comp=Z,1µm,19.0s
CMMT  Chiang Mai        42.60 253 P        P         04 54 29.6 -0.7
      comp=Z,596nmcomp=Z,57nm,1.1s
CHTO  Chiang Mai        42.60 253 P        P         04 54 29.9 -0.5
CHTO                              pmax     pmax
      comp=Z,83nm,0.9s
CHTO                              MLR      MLR
      comp=Z,400nm,20.0s
CHTO  Chiang Mai        42.60 253 P        P         04 54 29.9 -0.5
CHTO                              IAmb     IAmb      04 54 31.9
      comp=Z,83nm,0.9s
CHTO  Chiang Mai        42.60 253 P        P         04 54 30.5 +0.2
CHTO                              S        S         05 00 48.0 -1.7
KMSI  Cibinong          42.63 207 P        P         04 54 39.5 +8.9
TTA   Tatalina          42.65  37 P        P         04 54 31.1 +0.8
TTA                               pmax     pmax
      comp=Z,46nm,1.0s
TTA   Tatalina          42.65  37 P        P         04 54 31.1 +0.8
TEZP  TEZPUR            42.77 267⇑iP       P         04 54 31.3 -0.4
TEZP                              IAmb     IAmb      04 54 33.0
      comp=Z,153nm,0.9s
SVW2  Sparrevohn        42.82  39 P        P         04 54 32.4 +0.8
SVW2                              IAmb     IAmb      04 54 35.0
      comp=Z,140nm,0.9s
CM31  Chiang Mai Arr    42.83 253 P        P         04 54 31.7 -0.5
CMAR  Chiang Mai Arr    42.83 253 P        P         04 54 32.9 +0.7
      comp=Z,3.7nm,0.8s,baz=103,slow=14,SNR=5.5
CMAR                              PcP      PcP       04 56 23.1 +0.4
      comp=Z,9.8nm,0.7s,baz=15,slow=2.9,SNR=4.9
CMAR                              ScP      ScP       05 00 09.9 +0.5
      comp=Z,3.0nm,0.5s,baz=27,slow=3.3,SNR=7.1
CMAR                              LR       LR        05 12 57.2
      comp=Z,378nm,18.8s,baz=92,slow=37
CMAR  Chiang Mai Arr    42.83 253 P        P         04 54 31.4 -0.7
CMAR                                       PcP       04 56 22.3 -0.4
IMP   Imphal            42.84 264⇑iP       P         04 54 31.0 -1.3
CM01  Chiang Mai Arr    42.84 253 P        P         04 54 32.1 -0.1
      comp=Z,384nmcomp=Z,44nm,0.9s
CM15  Chiang Mai Arr    42.84 253 P        P         04 54 33.3 +1.0
      comp=Z,882nmcomp=Z,43nm,0.9s
CM05  Chiang Mai Arr    42.86 253 P        P         04 54 33.0 +0.6
      comp=Z,292nmcomp=Z,36nm,1.1s
GTOI  Gorontalo         42.93 209 P        P         04 54 33.1 +0.2
      comp=Z,631nmcomp=Z,57nm,1.2s
SUKH  Sukhothai         42.95 251 P        P         04 54 33.9 +0.8
      comp=Z,2µmcomp=Z,197nm,0.9s
MK31  Makanchi Array    42.99 299 i P      P         04 54 33.4 +0.1
MK31                              pmax     pmax
      comp=Z,237nm,1.0s
MK31  Makanchi Array    42.99 299 P        P         04 54 33.1 -0.1
MK31                              IAmb     IAmb      04 54 34.6
      comp=Z,143nm,1.0s
MKAR  Makanchi Array    42.99 299 P        P         04 54 33.4 +0.2
      comp=Z,168nm,0.9s,baz=84,slow=8.6,SNR=701
MKAR                              PcP      PcP       04 56 22.8  0.0
      comp=Z,15nm,0.7s,baz=52,slow=2.4,SNR=2.4
MKAR                              LR       LR        05 13 18.3
      comp=Z,2µm,19.2s,baz=72,slow=37
MKAR  Makanchi Array    42.99 299 P        P         04 54 33.2 -0.1
MAKZ  Makanchi          43.20 300 P        P         04 54 35.0 +0.1
MAKZ                              pmax     pmax
      comp=Z,175nm,1.0s
MAKZ                              MLR      MLR
      comp=Z,2µm,19.0s
MAKZ  Makanchi          43.20 300 P        P         04 54 35.0 +0.1
MAKZ                              IAmb     IAmb      04 54 37.4
      comp=Z,175nm,0.9s
MAKZ                              IAMs_20  IAMs_20   05 13 14.4
      comp=Z,2µm,19.0s
TOLI2 Tolitoli          43.35 212 P        P         04 54 34.0 -2.4
A21K  Barrow            43.47  24 P        P         04 54 37.4 +0.7
      baz=258,SNR=88
A21K  Barrow            43.47  24 P        P         04 54 37.2 +0.6
A21K                              IAmb     IAmb      04 54 43.8
      comp=Z,262nm,0.9s
MRSI  Marisa            43.47 210 P        P         04 54 38.4 +1.1
      comp=Z,2µmcomp=Z,236nm,1.1s
SEM   Semipalatinsk     43.55 305⇑iP       P         04 54 37.4 -0.5
      comp=Z,103nm,1.1s,baz=305
SEM                              eS        S         05 01 02.2 -1.2
      baz=305
SEM   Semipalatinsk     43.55 305c iP      P         04 54 37.4 -0.5
SEM                              eS        S         05 01 02.2 -1.2
SEM                               pmax     pmax
      comp=Z,103nm,1.1s
SRAK  Srakaew           43.56 245 P        P         04 54 35.6 -2.5
FAKI  Fak Fak           43.73 194 P        P         04 54 39.4 -0.1
FAKI                              IAmb     IAmb      04 54 42.5
      comp=Z,118nm,1.1s
FAKI  Fak Fak           43.73 194 P        P         04 54 41.6 +2.2
      comp=Z,89nm,1.1s
SILR  SILCHAR           43.74 265 eP       P         04 54 40.9 +1.4
MHMT  Maesarieng        43.74 253 P        P         04 54 39.5 -0.1
      comp=Z,2µmcomp=Z,225nm,0.9s
IMAR  Indian Mountai    43.79  32 P        P         04 54 40.3 +1.0
SHL   Shillong          44.02 267 P        P         04 54 40.8 -1.1
SHL                               pmax     pmax
      comp=Z,66nm,0.6s
SHL   Shillong          44.02 267 i P      P         04 54 41.0 -1.0
SHL                               IAmb     IAmb      04 54 45.0
      comp=Z,47nm,0.4s
SHL   Shillong          44.02 267 P        P         04 54 40.8 -1.1
SHL                               IAmb     IAmb      04 54 46.2
      comp=Z,66nm,0.6s
SHL   Shillong          44.02 267 P        P         04 54 41.6 -0.3
      SNR=32
RSO   Redoubt South     44.22  40 P        P         04 54 43.8 +0.7
UMPA  Umpang Tak        44.34 250 P        P         04 54 46.2 +1.8
      comp=Z,6µmcomp=Z,255nm,1.0s
PPLA  Purkeypile        44.40  37 P        P         04 54 45.4 +1.0
PPLA                              IAmb     IAmb      04 54 47.5
      comp=Z,110nm,0.8s
SANI  Sanana            44.44 203 P        P         04 54 45.3 +0.2
      comp=Z,1µmcomp=Z,120nm,1.5s
KURK  Kurchatov         44.51 306 P        P         04 54 45.9 +0.6
KURK                                                 04 56 27.9
KURK  Kurchatov         44.51 306 P        P         04 54 45.2  0.0
KURK  Kurchatov         44.51 306 P        P         04 54 45.3  0.0
KURK                              P        P         04 54 45.3  0.0
KURK                              S        S         05 01 17.0 +0.2
KURK                              S        S         05 01 17.0 +0.2
KDAK  Kodiak Island     44.52  44 P        P         04 54 45.7 +0.4
KDAK                              pmax     pmax
      comp=Z,179nm,0.8s
KDAK  Kodiak Island     44.52  44 P        P         04 54 45.7 +0.4
KDAK                              IAmb     IAmb      04 54 47.1
      comp=Z,179nm,0.8s
LUWI  Luwuk             44.56 208 P        P         04 54 45.7 -0.4
LUWI                              IAmb     IAmb      04 55 04.9
      comp=Z,118nm,1.0s
LUWI  Luwuk             44.56 208 P        P         04 54 49.4 +3.3
      comp=Z,173nm,0.8s
KURBB Kurchatov Arra    44.58 306 P        P         04 54 45.9  0.0
      comp=Z,126nm,0.6s,baz=81,slow=8.6,SNR=752
KURBB                             PcP      PcP       04 56 27.9 -0.1
      comp=Z,44nm,0.8s,baz=83,slow=3.9,SNR=6.3
SKT   Skwentna          44.74  38 P        P         04 54 47.8 +0.8
HOM   Homer             44.83  41 P        P         04 54 48.9 +1.1
      baz=275
APSI  Ampana            44.86 210 P        P         04 54 49.4 +1.0
      comp=Z,1µmcomp=Z,86nm,0.9s
SAIH  SAIHA             44.86 262⇑iP       P         04 54 48.7  0.0
MSAI  Masohi            44.87 199 P        P         04 54 49.6 +1.1
      comp=Z,3µmcomp=Z,41nm,1.2s
BPAW  Bear Paw Mtn.     44.92  35 P        P         04 54 49.7 +1.3
KTH   Kantishna Hill    44.96  36 P        P         04 54 50.4 +1.5
CAPN  Captain Cook N    44.99  40 P        P         04 54 51.6 +2.6
      baz=274
MLY   Manley            45.02  34 P        P         04 54 51.0 +1.7
      baz=270,SNR=53
CNPM  China Poot        45.05  41 P        P         04 54 50.4 +0.9
CNPM                              IAmb     IAmb      04 54 52.8
      comp=Z,182nm,0.9s
PATY  Pattaya           45.14 245 P        P         04 54 51.7 +1.0
      comp=Z,4µmcomp=Z,260nm,0.8s
SUA   Susitna One       45.14  39 P        P         04 54 51.1 +0.7
BRLK  Bradley Lake      45.21  41 P        P         04 54 51.6 +0.8
BRLK                              IAmb     IAmb      04 54 54.0
      comp=Z,167nm,0.8s
TRF   Thorofare Moun    45.25  36 P        P         04 54 51.9 +0.7
TRF                               IAmb     IAmb      04 55 00.5
      comp=Z,53nm,0.8s
COLD  Coldfoot          45.26  30 P        P         04 54 52.6 +1.5
      baz=269,SNR=88
COLD  Coldfoot          45.26  30 P        P         04 54 52.0 +0.9
COLD                              IAmb     IAmb      04 54 54.0
      comp=Z,167nm,1.2s
CUT   Chulitna          45.31  37 P        P         04 54 52.4 +1.0
      baz=273,SNR=7.2
AGT   Agartala          45.41 265 eP       P         04 54 54.4 +1.6
AGT                               IAmb     IAmb      04 54 57.4
      comp=Z,193nm,0.4s
TOLK  Toolik Lake Re    45.54  28 P        P         04 54 54.8 +1.4
      baz=268,SNR=93
TOLK  Toolik Lake Re    45.54  28 P        P         04 54 54.1 +0.8
TOLK                              IAmb     IAmb      04 54 55.5
      comp=Z,87nm,0.9s
BWN   Browne            45.58  35 P        P         04 54 55.2 +1.5
I23K  Minto, Yukon-K    45.60  33 P        P         04 54 55.3 +1.6
      baz=272,SNR=30
I23K  Minto, Yukon-K    45.60  33 P        P         04 54 54.7 +0.9
I23K                              IAmb     IAmb      04 55 04.6
      comp=Z,63nm,0.8s
BELO  BELONIA           45.61 264 eP       P         04 54 55.2 +0.8
RC01  Rabbit Creek A    45.65  39 P        P         04 54 54.9 +0.6
      baz=275,SNR=15
O22K  Cooper Landing    45.72  40 P        P         04 54 55.6 +0.9
      baz=276,SNR=11
O22K  Cooper Landing    45.72  40 P        P         04 54 55.6 +0.9
NEA2  Nenana            45.74  34 P        P         04 54 56.6 +1.7
      baz=272,SNR=49
MCK   McKinley          45.84  35 P        P         04 54 56.8 +1.1
      baz=273,SNR=28
PDGK  Podgornoye        45.86 296 i P      P         04 54 56.2 -0.1
PDGK                              pmax     pmax
      comp=Z,156nm,1.0s
SEW   Seward            45.89  40 P        P         04 54 56.8 +0.7
SEW                               IAmb     IAmb      04 54 57.8
      comp=Z,144nm,0.9s
RND   Reindeer          45.89  36 P        P         04 54 57.0 +0.8
RND                               pmax     pmax
      comp=Z,123nm,0.8s
RND   Reindeer          45.89  36 P        P         04 54 57.0 +0.8
RND                               IAmb     IAmb      04 54 58.2
      comp=Z,123nm,0.8s
PMR   Palmer            45.90  38 P        P         04 54 57.2 +1.0
PMR                               pmax     pmax
      comp=Z,105nm,0.8s
PMR   Palmer            45.90  38 P        P         04 54 57.2 +1.0
PMR                               IAmb     IAmb      04 54 58.0
      comp=Z,105nm,0.8s
SHLS  Shalkode          45.93 295⇑iP       P         04 54 54.7 -2.2
      comp=Z,69nm,0.8s,baz=295
SHLS                             eS        S         05 01 33.3 -4.7
      baz=295
SHLS  Shalkode          45.93 295c iP      P         04 54 54.6 -2.2
SHLS                             eS        S         05 01 33.2 -4.7
SHLS                              pmax     pmax
      comp=Z,69nm,0.8s
GHO   Glory Hole Cre    45.98  38 P        P         04 54 57.9 +0.9
PHET  Kaeng Krachan     46.01 246 P        P         04 54 58.9 +1.3
MDM   Murphy Dome       46.08  34 P        P         04 54 59.2 +1.6
MDM                               IAmb     IAmb      04 55 00.6
      comp=Z,159nm,1.1s
TDK   Taldyqorghan      46.09 298 i P      P         04 54 58.7 +0.7
      comp=Z,249nm,1.0s,baz=298
TDK                              eS        S         05 01 40.0 +0.1
      baz=298
TDK   Taldyqorghan      46.09 298 i P      P         04 54 58.6 +0.7
TDK                              eS        S         05 01 40.0 +0.1
TDK                               pmax     pmax
      comp=Z,249nm,1.0s
WRH   Wood River Hil    46.17  34 P        P         04 54 59.2 +1.0
WRH                               IAmb     IAmb      04 55 13.3
      comp=Z,68nm,0.9s
SBUM  Sibu              46.20 224 P        P         04 54 59.0 -0.1
SBUM  Sibu              46.20 224 P        P         04 54 59.0 -0.1
KNK   Knik Glacier      46.24  39 P        P         04 54 59.8 +0.9
KNK                               IAmb     IAmb      04 55 00.6
      comp=Z,84nm,0.8s
UZB   Uzynbulak         46.24 295⇑iP       P         04 54 59.3 -0.1
      comp=Z,66nm,1.2s,baz=295
UZB                              eS        S         05 01 41.7 -0.7
      baz=295
UZB   Uzynbulak         46.24 295c iP      P         04 54 59.2 -0.1
UZB                              eS        S         05 01 41.7 -0.7
UZB                               pmax     pmax
      comp=Z,66nm,1.2s
TCOL  CIGO, UAF Yank    46.24  34 P        P         04 55 00.4 +1.6
      baz=273,SNR=20
TCOL  CIGO, UAF Yank    46.24  34 P        P         04 55 00.3 +1.5
COLA  College           46.25  34c iP      P         04 55 00.4 +1.5
COLA                              pmax     pmax
      comp=Z,84nm,0.8s
COLA  College           46.25  34 P        P         04 55 00.0 +1.2
SML   Sawmill           46.26  38 P        P         04 54 59.9 +0.8
CCB   Clear Creek Bu    46.28  34 P        P         04 55 00.1 +1.0
TAPN  Taplejung         46.30 271 eP       P         04 55 00.7 +0.5
      comp=Z,159nm,0.8s
KPKS  Kokpek            46.37 296⇑iP       P         04 55 00.5 +0.2
      comp=Z,118nm,1.1s,baz=296
KPKS  Kokpek            46.37 296c iP      P         04 55 00.5 +0.2
KPKS                              pmax     pmax
      comp=Z,118nm,1.1s
POKR  Poker Plat Res    46.41  33 P        P         04 55 02.2 +2.0
      baz=273,SNR=73
POKR  Poker Plat Res    46.41  33 P        P         04 55 01.5 +1.3
HDA   Harding Lake      46.67  34 P        P         04 55 02.8 +0.6
      baz=274
HDA   Harding Lake      46.67  34 P        P         04 55 02.7 +0.6
HDA                               IAmb     IAmb      04 55 03.9
      comp=Z,113nm,0.8s
IL31                    46.67  34 P        P         04 55 02.9 +0.8
IL31                              IAmb     IAmb      04 55 04.1
      comp=Z,120nm,0.8s
ILAR  Eielson Array     46.67  34 P        P         04 55 02.9 +0.7
      comp=Z,82nm,0.7s,baz=264,slow=6.0,SNR=723
ILAR                              PcP      PcP       04 56 34.4 -0.7
      comp=Z,9.0nm,0.7s,baz=267,slow=5.2,SNR=0.9
ILAR  Eielson Array     46.67  34 P        P         04 55 03.0 +0.8
SATY  Saty              46.69 296⇑iP       P         04 55 03.2 +0.3
      comp=Z,62nm,1.3s,baz=295
SATY  Saty              46.69 296c iP      P         04 55 03.2 +0.3
SATY                              pmax     pmax
      comp=Z,62nm,1.3s
SCM   Sheep Creek Mo    46.73  38 P        P         04 55 03.7 +0.9
SCM                               pmax     pmax
      comp=Z,171nm,0.9s
SCM   Sheep Creek Mo    46.73  38 P        P         04 55 03.7 +0.9
ODAN  Odare             46.80 271 eP       P         04 55 04.4 +0.4
      comp=Z,190nm,0.7s
BKB   Balikpapan        47.14 215 P        P         04 55 05.5 -0.9
BKB                               IAmb     IAmb      04 55 22.1
      comp=Z,124nm,0.8s
PRP   Porcupine Dome    47.19  33 P        P         04 55 07.2 +0.8
PRP                               IAmb     IAmb      04 55 09.2
      comp=Z,146nm,0.8s
FYU   Fort Yukon        47.23  31 P        P         04 55 07.5 +1.0
M24K  Tolsona, Glenn    47.24  37 P        P         04 55 08.8 +2.0
      baz=277,SNR=11
M24K  Tolsona, Glenn    47.24  37 P        P         04 55 07.6 +0.8
RAMN  Ramite            47.36 272 eP       P         04 55 08.6 +0.2
      comp=Z,421nm,0.8s
CHKK  Chushkaly         47.41 297 i P      P         04 55 08.3  0.0
      baz=297
CHKK  Chushkaly         47.41 297 i P      P         04 55 08.3  0.0
GUN   Gumba             47.42 273 eP       P         04 55 09.4 +0.4
      comp=Z,1µm,0.9s
KLU   Klutina           47.44  38 P        P         04 55 09.1 +0.8
PAX   Paxson            47.46  36 P        P         04 55 09.3 +0.8
PAX                               pmax     pmax
      comp=Z,29nm,0.9s
PAX   Paxson            47.46  36 P        P         04 55 09.3 +0.8
MDOK  Medeo             47.60 296 i P      P         04 55 10.5 +0.5
      baz=296
MDOK  Medeo             47.60 296 i P      P         04 55 10.4 +0.5
EYAK  Cordova Ski Ar    47.66  40 P        P         04 55 11.1 +1.2
AAA   Alma-Ata          47.67 296⇑iP       P         04 55 11.2 +0.8
      comp=Z,80nm,1.1s,baz=296
AAA   Alma-Ata          47.67 296 eP       P         04 55 11.4 +1.0
TNSS  Tian-Shan         47.71 296⇑iP       P         04 55 11.9 +0.7
      baz=296
TNSS  Tian-Shan         47.71 296⇑iP       P         04 55 11.8 +0.7
MTKI  Muara Teweh, K    47.77 218 P        P         04 55 13.0 +1.7
      comp=Z,82nm,0.8s
KUU   Kurty             47.84 297⇑iP       P         04 55 11.3 -0.3
      comp=Z,100nm,0.7s,baz=297
KUU   Kurty             47.84 297c iP      P         04 55 11.3 -0.3
KUU                               pmax     pmax
      comp=Z,100nm,0.7s
KKN   Kakani            47.94 273 eP       P         04 55 13.2 +0.3
      comp=Z,530nm,0.8s
PKI   Pulchoki          47.95 273 eP       P         04 55 13.1  0.0
      comp=Z,231nm,1.0s
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PKIN  Phulchoki          47.96 273  eP      P        04 55 12.9 -0.2
            comp=Z,87nm,0.5s
SCRK  Sand Creek         48.00  35   P      P        04 55 13.5 +0.8
            baz=277,SNR=97
DOT   Dot Lake           48.01  35   P      P        04 55 13.4 +0.7
DOT                                  IAmb   IAmb     04 55 13.9
            comp=Z,60nm,0.6s
KSM   Kuching            48.04 225   P      P        04 55 13.4  0.0
KSM                                  IAmb   IAmb     04 55 28.1
            comp=Z,39nm,0.8s
KSM   Kuching            48.04 225   P      P        04 55 14.0 +0.6
N25K  Chitina, Valde     48.05  38   P      P        04 55 14.8 +1.8
            baz=279,SNR=8.4
N25K  Chitina, Valde     48.05  38   P      P        04 55 13.9 +0.8
N25K                                 IAmb   IAmb     04 55 17.9
            comp=Z,44nm,0.8s
DMN   Daman              48.17 273  eP      P        04 55 15.0 +0.3
            comp=Z,242nm,0.9s
MENT  Mentasta           48.26  36   P      P        04 55 15.5 +0.9
GKN   Gorkha             48.33 274  eP      P        04 55 16.0 +0.2
            comp=Z,183nm,0.6s
BRZS  Berezniki          48.38 306⇑iP      P        04 55 15.5 -0.2
            baz=306
BRZS                                eS      S        05 02 11.4 -0.9
            baz=306
BRZS  Berezniki          48.38 306c iP      P        04 55 15.4 -0.2
BRZS                                eS      S        05 02 11.4 -0.9
SPSI  Sidrap Palu        48.38 210   P      P        04 55 17.0 +1.0
            comp=Z,47nm,1.2s
GLB   Gilahina Butte     48.45  38   P      P        04 55 17.0 +0.9
GLB                                  IAmb   IAmb     04 55 18.4
            comp=Z,61nm,1.0s
ULHL  Ulahol             48.47 295   P      P        04 55 17.3 +0.6
            SNR=12
BNSI  Bone               48.65 210   P      P        04 55 19.8 +1.7
            comp=Z,1µmcomp=Z,152nm,1.0s
VRDI  Verde Repeater     48.66  38   P      P        04 55 18.6 +0.8
VRDI                                 IAmb   IAmb     04 55 20.7
            comp=Z,123nm,0.9s
TKM2  Tokmak 2           48.68 296   P      P        04 55 19.3 +0.9
            SNR=15
TKM2  Tokmak 2           48.68 296 i P      P        04 55 19.1 +0.7
TKM2                                 pmax   pmax
            comp=Z,186nm,0.7s
DANN  Dangsing           48.83 275  eP      P        04 55 20.5 +0.7
            comp=Z,1µm,0.7s
MCARA McCarthy VSAT      48.83  38   P      P        04 55 20.0 +1.0
CRQM  Cirque             48.89  39   P      P        04 55 20.7 +1.0
BRVK  Borovoye           48.99 311   P      P        04 55 20.5 +0.2
BRVK                                 pmax   pmax
            comp=Z,63nm,0.7s
BRVK                                 MLR    MLR
            comp=Z,2µm,18.0s
BRVK  Borovoye           48.99 311   P      P        04 55 20.5 +0.2
BRVK                                 IAmb   IAmb     04 55 27.6
            comp=Z,63nm,0.7s
BRVK  Borovoye           48.99 311   IAMs_20 IAMs_20 05 16 59.8
            comp=Z,2µm,18.0s
BRVK  Borovoye           48.99 311   P      P        04 55 20.2 -0.1
BRVK                                 P      P        04 55 20.2 -0.1
BTLS  Baital             49.01 299⇑iP      P        04 55 20.2 -0.3
            comp=Z,39nm,1.2s,baz=299
BTLS  Baital             49.01 299c iP      P        04 55 20.2 -0.3
BTLS                                 pmax   pmax
            comp=Z,39nm,1.2s
TGL   Tana Glacier       49.04  39   P      P        04 55 21.6 +0.9
TGL                                  IAmb   IAmb     04 55 23.6
            comp=Z,130nm,0.9s
EGAK  Eagle              49.10  33   P      P        04 55 21.8 +0.8
BCAR  Beaver Creek A     49.11  36   P      P        04 55 21.9 +0.8
SGDS  Sogindy            49.16 297⇑iP      P        04 55 21.9 +0.1
            comp=Z,52nm,1.5s,baz=297
SGDS  Sogindy            49.16 297c iP      P        04 55 21.9 +0.1
SGDS                                 pmax   pmax
            comp=Z,52nm,1.5s
BALM  Baldy              49.22  39   P      P        04 55 22.9 +0.8
BALM                                 IAmb   IAmb     04 55 24.7
            comp=Z,110nm,0.8s
KBK   Karagaybulak       49.22 296   P      P        04 55 23.1 +0.7
            SNR=9.8
CHMS  Chumysh            49.23 297   P      P        04 55 22.8 +0.4
            SNR=26
USP   Ospenovka          49.31 297   P      P        04 55 23.3 +0.3
            SNR=14
KAPI  Kappang            49.35 210   P      P        04 55 23.6 +0.2
KAPI                                 pmax   pmax
            comp=Z,73nm,1.0s
KAPI  Kappang            49.35 210   P      P        04 55 23.6 +0.2
KAPI                                 IAmb   IAmb     04 55 43.3
            comp=Z,73nm,1.0s
KAPI  Kappang            49.35 210   P      P        04 55 23.4  0.0
KAPI                                 S      S        05 02 27.4 +0.8
PMG   Port Moresby       49.47 173⇓eP      P        04 55 24.9 +0.7
PMG                                  pmax   pmax
            comp=Z,32nm,1.0s
BKSI  Bulukumba          49.49 209   P      P        04 55 25.6 +1.1
            comp=Z,596nmcomp=Z,50nm,0.9s
AAK   Ala-Archa          49.54 296   P      P        04 55 25.2 +0.3
            SNR=39
AAK   Ala-Archa          49.54 296 i P      P        04 55 24.8  0.0
            SNR=12
AAK   Ala-Archa          49.54 296c iP      P        04 55 25.0 +0.1
AAK                                  pmax   pmax
            comp=Z,351nm,1.7s
AAK   Ala-Archa          49.54 296   P      P        04 55 24.5 -0.4
AAK                                  IAmb   IAmb     04 55 28.7
            comp=Z,48nm,0.9s
AAK   Ala-Archa          49.54 296   IAMs_20 IAMs_20 05 17 22.3
            comp=Z,1µm,19.0s
AAK   Ala-Archa          49.54 296   P      P        04 55 25.2 +0.3
AAK                                  P      P        04 55 25.2 +0.3
BARN  Barnard Glacie     49.54  38   P      P        04 55 25.4 +0.7
BARN                                 IAmb   IAmb     04 55 27.4
            comp=Z,74nm,0.8s
UCH   Uchtor             49.68 296   P      P        04 55 26.9 +0.6
            SNR=33
KSH   Kashi              49.68 292   P      P        04 55 30.1 +4.2
KSH                                  pP     pP       04 55 41.8 +2.3
KSH                                  PP     PP       04 57 25.8 +5.2
KSH                                  S      S        05 02 37.9 +6.8
KSH                                  ScS    ScS      05 05 12.8 -0.4
KSH                                  pmax   pmax
            comp=Z,37nm,0.9s
KSH                                  pmax   pmax
            comp=Z,830nm,3.8s
KSH                                  LR     LR
            comp=Z,2µm,13.5s
KSH                                  LR     LR
            comp=Z,2µm,10.9s
KSH                                  LR     LR
            comp=Z,5µm,15.4s
CTGM  Chitina Glacie     49.72  38   P      P        04 55 26.7 +0.8
CTGM                                 IAmb   IAmb     04 55 28.7
            comp=Z,153nm,1.1s
BBKI  Banjar Baru        50.02 217   P      P        04 55 28.8 +0.3
            comp=Z,8µmcomp=Z,3µmcomp=Z,45nm,1.2s
EKS2  Erkin-Say          50.02 297   P      P        04 55 28.8 +0.3
            SNR=12
AML   Almayashu          50.28 296   P      P        04 55 31.6 +0.9
            SNR=77
DGPR  DIGLIPUR           50.63 252  eP      P        04 55 34.1 +0.9
EPYK  Eagle Plains       50.64  31   P      P        04 55 34.8 +2.0
            baz=281,SNR=124
EPYK  Eagle Plains       50.64  31   P      P        04 55 33.7 +0.9
KULM  Kulim              50.82 238   P      P        04 55 34.5 -0.1
KULM                                 IAmb   IAmb     04 55 36.6
            comp=Z,83nm,0.8s
KULM                                 IAMs_20 IAMs_20 05 21 07.4
            comp=Z,486nm,19.0s
KULM  Kulim              50.82 238   P      P        04 55 36.0 +1.4
IPM   Ipoh               51.19 237   P      P        04 55 37.3 -0.1
IPM                                  IAmb   IAmb     04 55 38.5
            comp=Z,63nm,0.9s
IPM                                  IAMs_20 IAMs_20 05 17 09.2
            comp=Z,564nm,20.0s
IPM   Ipoh               51.19 237   P      P        04 55 38.0 +0.6
INK   Inuvik             51.45  28   P      P        04 55 39.7 +1.0
INK                                  pmax   pmax
            comp=Z,147nm,0.9s
INK   Inuvik             51.45  28   P      P        04 55 39.7 +1.0
HYT   Haines Junctio     51.57  38   P      P        04 55 40.7 +0.8
DZA   Taraz              51.61 298⇑iP      P        04 55 40.6 +0.2
            comp=Z,60nm,0.7s,baz=298
DZA                                 eS      S        05 02 57.2 -0.3
            baz=298
DZA   Taraz              51.61 298c iP      P        04 55 40.5 +0.2
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DZA                                 eS      S        05 02 57.2 -0.3
DZA                                  pmax   pmax
            comp=Z,60nm,0.7s
MMRI  Maumere            51.83 205   P      P        04 55 42.2 +0.2
MMRI                                 IAmb   IAmb     04 55 54.9
            comp=Z,101nm,1.0s
MMRI  Maumere            51.83 205   P      P        04 55 47.9 +5.8
            comp=Z,129nm,1.1s
HNR   Honiara            51.98 157   LR     LR       05 16 00.4
            comp=Z,1µm,21.8s,baz=321,slow=34
KK31  Karatay Array      52.08 298   P      P        04 55 43.5 -0.3
KK31                                 pmax   pmax
            comp=Z,71nm,0.9s
KK31  Karatay Array      52.08 298   P      P        04 55 43.5 -0.3
KK31                                 IAmb   IAmb     04 56 01.6
            comp=Z,71nm,0.9s
KKAR  Karatay Array      52.08 298   P      P        04 55 43.5 -0.3
KKAR                                 pmax   pmax
            comp=Z,71nm,0.9s
KKAR  Karatay Array      52.08 298   P      P        04 55 43.5 -0.3
KKAR  Karatay Array      52.08 298   P      P        04 55 43.5 -0.3
KKAR                                 IAmb   IAmb     04 56 01.6
            comp=Z,71nm,0.9s
EDFI  Ende, Flores       52.12 206   P      P        04 55 43.9 -0.4
            comp=Z,548nmcomp=Z,30nm,0.8s
DDI   Dehra Dun          52.20 280  eP      P        04 55 45.0 +0.1
SOEI  Soe                52.26 202   P      P        04 55 45.3 -0.1
SOEI                                 IAmb   IAmb     04 56 01.7
            comp=Z,104nm,0.8s
SOEI  Soe                52.26 202   P      P        04 55 45.8 +0.4
            comp=Z,2µmcomp=Z,196nm,0.9s
SMLA  Simla              52.48 282 i P      P        04 55 46.8  0.0
BRLS  Borolday           52.56 298⇑iP      P        04 55 48.8 +1.3
            comp=Z,28nm,1.2s,baz=298
BRLS  Borolday           52.56 298c iP      P        04 55 48.7 +1.3
BRLS                                 pmax   pmax
            comp=Z,28nm,1.2s
DHRM  DHARAMSHALA        52.59 283 i P      P        04 55 46.9 -1.1
IUG   Iuzhnay            52.78 297⇑iP      P        04 55 49.3 +0.2
            comp=Z,58nm,1.3s,baz=297
IUG   Iuzhnay            52.78 297c iP      P        04 55 49.3 +0.2
IUG                                  pmax   pmax
            comp=Z,59nm,1.3s
BATI  Baumata            52.86 203   P      P        04 55 50.9 +1.1
            comp=Z,684nmcomp=Z,48nm,0.6s
SKAG  Skagway            53.00  39   P      P        04 55 51.5 +1.2
SVE   Sverdlovsk         53.23 317d iP      P        04 55 52.9 +0.9
SVE                                  pmax   pmax
            comp=Z,318nm,0.9s
SVE                                  MLR    MLR
            comp=Z,3µm,16.0s
PPBI  Pangkal Pinang     53.36 227   P      P        04 55 54.2 +0.8
WSI   Waingapu           53.45 207   P      P        04 55 58.2 +4.2
            comp=Z,553nm,0.4s
BESE  Bessie Mountai     53.51  40   P      P        04 55 55.0 +0.8
BESE                                 IAmb   IAmb     04 55 56.9
            comp=Z,58nm,1.0s
NDI   New Delhi          53.64 279  eP      P        04 55 55.0 -0.5
            comp=Z,15nm,0.8s
NDI                                 eS      S        05 03 32.0 +6.4
KIP   Kipapa             53.76  91⇓eP      P        04 55 59.1 +2.7
KIP                                  pmax   pmax
            comp=Z,160nm,2.5s
COEN  Coen               53.77 179   P      P        04 55 56.9 +0.5
COEN                                 IAmb   IAmb     04 55 59.5
            comp=Z,52nm,1.0s
PSI   Prapat             53.82 238   P      P        04 55 57.1 +0.1
PSI                                  pmax   pmax
            comp=Z,61nm,0.8s
PSI                                  MLR    MLR
            comp=Z,400nm,18.0s
JIS   Juneau Island      53.84  41   P      P        04 55 57.5 +1.0
JIS                                  IAmb   IAmb     04 56 00.0
            comp=Z,115nm,1.0s
TWSI  Taliwang, Sumb     53.87 211   P      P        04 55 56.7 -0.5
            comp=Z,25nm,0.8s
RPSI  Rantau Prapat      53.90 238   P      P        04 55 57.0 -0.4
RPSI                                 IAmb   IAmb     04 55 58.1
            comp=Z,61nm,0.8s
ABJI  Asem Bagus         54.13 215   P      P        04 56 00.0 +0.9
            comp=Z,53nm,1.1s
NIL   Nilore             54.19 286   P      P        04 55 58.9 -0.6
NIL                                  pmax   pmax
            comp=Z,316nm,0.8s
NIL   Nilore             54.19 286   P      P        04 55 58.9 -0.6
BKNI  Bangkinang         54.38 234   P      P        04 56 00.6 -0.3
BKNI  Bangkinang         54.38 234   P      P        04 56 02.1 +1.2
            comp=Z,3µmcomp=Z,325nm,1.0s
ARU   Arti               54.44 317c iP      P        04 56 01.1 +0.2
ARU                                  *PP    pP       04 56 16.7 +2.1
ARU                                                  04 57 04.9
ARU                                                  04 58 01.4
ARU                                  S      S        05 03 38.2 +2.6
ARU                                  SS     SS       05 07 21.4 +3.6
ARU                                  pmax   pmax
            comp=Z,391nm,1.3s
ARU                                  MLR    MLR
            comp=Z,3µm,17.0s
ARU   Arti               54.44 317   P      P        04 56 00.8  0.0
C36M  Paulatuk           54.46  26   P      P        04 56 02.0 +1.2
            baz=290,SNR=86
C36M  Paulatuk           54.46  26   P      P        04 56 01.7 +0.9
TPTI                     54.62 240   P      P        04 56 02.1 -0.6
            comp=Z,286nmcomp=Z,16nm,0.7s
SDSI  Sungai Dareh       55.12 233   P      P        04 56 07.1 +0.8
            comp=Z,2µmcomp=Z,199nm,1.0s
PDSI  Padang             55.70 233   P      P        04 56 10.4 -0.1
            comp=Z,6µmcomp=Z,26nm,0.8s
GSI   Gunungsitoli       55.82 238   P      P        04 56 11.1 -0.2
GSI   Gunungsitoli       55.82 238   P      P        04 56 12.1 +0.7
            comp=Z,2µmcomp=Z,188nm,1.2s
UGM   Wanagama           55.94 219   P      P        04 56 12.1 -0.1
UGM                                  IAmb   IAmb     04 56 29.4
            comp=Z,128nm,1.0s
UGM   Wanagama           55.94 219   P      P        04 56 12.7 +0.5
            comp=Z,136nm,1.2s
LHSI  Lahat              56.20 228   P      P        04 56 15.0 +1.0
            comp=Z,2µmcomp=Z,150nm,1.1s
KLSI                     56.22 227   P      P        04 56 14.8 +0.6
            comp=Z,308nmcomp=Z,31nm,1.2s
MDSI  Maura Dua          56.37 227   P      P        04 56 15.2  0.0
            comp=Z,742nmcomp=Z,63nm,1.2s
AB31  Akbulak array      56.39 309 i P      P        04 56 14.9 -0.1
AB31                                 pmax   pmax
            comp=Z,68nm,0.6s
ABKAR Akbulak array      56.39 309   P      P        04 56 15.0  0.0
ABKAR                                IAmb   IAmb     04 56 16.1
            comp=Z,86nm,0.7s
ABKAR Akbulak array      56.39 309   P      P        04 56 14.8 -0.2
KSI   Kapahiang          56.60 229   P      P        04 56 17.7 +0.8
DIB   Dawson Inlet,      56.71  46   P      P        04 56 18.2 +1.0
DIB                                  IAmb   IAmb     04 56 19.8
            comp=Z,80nm,1.0s
KNRA  Kununurra          56.84 195   P      P        04 56 18.8 +0.3
KNRA                                 IAmb   IAmb     04 56 34.8
            comp=Z,32nm,0.7s
KNRA                                 IAMs_20 IAMs_20 05 12 23.1
            comp=Z,533nm,18.0s
KBL   Kabul              56.84 289   P      P        04 56 18.4 -0.3
KBL                                  pmax   pmax
            comp=Z,236nm,0.9s
KBL                                  MLR    MLR
            comp=Z,1µm,21.0s
KBL   Kabul              56.84 289   P      P        04 56 18.4 -0.3
KBL                                  IAMs_20 IAMs_20 05 22 24.7
            comp=Z,999nm,21.0s
KBL   Kabul              56.84 289   P      P        04 56 18.4 -0.3
            SNR=111
KASI  Kota Agung         57.04 226   P      P        04 56 19.4 -0.6
            comp=Z,45nm,1.1s
EUNU  Eureka             57.10   9   P      P        04 56 20.4 +0.7
HOPEN Hopen              57.21 346  eP      P        04 56 21.4 +1.0
SPA0  Spitsbergen Ar     57.64 349   P      P        04 56 23.9 +0.5
SPA0                                 IAmb   IAmb     04 56 31.2
            comp=Z,88nm,1.0s
SPA0  Spitsbergen Ar     57.64 349  eP      P        04 56 23.0 -0.4
KBS   Kingsbay           57.74 350   P      P        04 56 24.7 +0.6
KBS                                  pmax   pmax
            comp=Z,202nm,1.0s
KBS   Kingsbay           57.74 350   P      P        04 56 24.7 +0.6
KBS   Kingsbay           57.74 350  eP      P        04 56 24.9 +0.8
KIRV  Kirov              58.14 322c iP      P        04 56 27.0 -0.2
HSPB  Hornsund (broa     58.58 348  eP      P        04 56 31.0 +1.0
HSPB  Hornsund (broa     58.58 348  eP      P        04 56 30.9 +1.0
HYB   Hyderabad          58.83 267 i P      P        04 56 32.0 -0.6
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HYB                                 esP     sP       04 56 51.0 -1.4
HYB                                 eS      S        05 04 33.0 -1.7
HYB   Hyderabad          58.83 267 i P      P        04 56 31.4 -1.3
HYB                                  IAmb   IAmb     04 56 32.7
            comp=Z,42nm,0.7s
LVZ   Lovozero           59.55 335   P      P        04 56 36.7 -0.2
LVZ                                  pmax   pmax
            comp=Z,68nm,0.7s
LVZ   Lovozero           59.55 335   P      P        04 56 36.7 -0.2
LVZ                                  IAmb   IAmb     04 56 37.8
            comp=Z,68nm,0.7s
FITZ  Fitzroy Crossi     59.87 198   P      P        04 56 39.8 +0.2
FITZ                                 IAmb   IAmb     04 56 41.7
            comp=Z,47nm,1.1s
WB0   Warramunga Arr     59.97 188   P      P        04 56 39.6 -0.6
WB0                                  IAmb   IAmb     04 56 41.3
            comp=Z,76nm,0.9s
WB0                                  IAMs_20 IAMs_20 05 19 42.2
            comp=Z,667nm,20.0s
CTAO  Charters Tower     59.99 175   P      P        04 56 40.4  0.0
CTAO                                 pmax   pmax
            comp=Z,14nm,0.9s
CTAO  Charters Tower     59.99 175   P      P        04 56 40.4  0.0
SANVU Saraoutou          60.00 152   P      P        04 56 41.1 +0.6
SANVU Saraoutou          60.00 152   P      P        04 56 41.7 +1.2
WB8   Warramunga Arr     60.02 188   IAMs_20 IAMs_20 05 21 55.5
            comp=Z,660nm,21.0s
WB7   Warramunga Arr     60.04 188   IAMs_20 IAMs_20 05 20 56.3
            comp=Z,808nm,22.0s
WB6   Warramunga Arr     60.06 188   IAMs_20 IAMs_20 05 21 09.6
            comp=Z,867nm,21.0s
APA   Apatity            60.13 335⇓iP      P        04 56 39.0 -1.8
APA                                 i                04 56 59.0
APA                                 i                04 58 56.0
APA                                 i S     S        05 04 46.0 -4.0
APA                                 i                05 06 26.0
APA                                 i SS    SS       05 08 49.0 +2.3
APA                                  pmax   pmax
            comp=Z,73nm,0.8s
APA                                  MLR    MLR
            comp=Z,2µm,19.0s
WRAB  Tennant Creek      60.14 188deP      P        04 56 40.6 -0.8
WRAB                                 pmax   pmax
            comp=Z,65nm,1.0s
WRAB  Tennant Creek      60.14 188   IAMs_20 IAMs_20 05 20 47.7
            comp=Z,786nm,21.0s
WR0   Warramunga Arr     60.14 188   P      P        04 56 40.7 -0.7
WR0                                  IAmb   IAmb     04 56 42.5
            comp=Z,44nm,0.7s
WR0                                  IAMs_20 IAMs_20 05 21 46.8
            comp=Z,747nm,20.0s
WR8   Warramunga Arr     60.14 188   IAMs_20 IAMs_20 05 21 46.9
            comp=Z,754nm,22.0s
WB2   Warramunga Arr     60.15 188   P      P        04 56 41.0 -0.4
WB2                                  IAmb   IAmb     04 56 56.4
            comp=Z,53nm,0.7s
WB2                                  IAMs_20 IAMs_20 05 20 47.9
            comp=Z,851nm,21.0s
WR1   Warramunga Arr     60.15 188   IAMs_20 IAMs_20 05 20 47.3
            comp=Z,720nm,22.0s
WR4   Warramunga Arr     60.15 188   IAMs_20 IAMs_20 05 20 24.0
            comp=Z,841nm,22.0s
WRA   Warramunga Arr     60.15 188   P      P        04 56 40.8 -0.7
            comp=Z,35nm,0.7s,baz=6.6,slow=7.1,SNR=268
WRA                                  PKP2bc          05 26 13.2
            comp=Z,5.3nm,0.9s,baz=204,slow=2.4,SNR=13
WRA                                  PKP2ab          05 26 32.1
            comp=Z,3.9nm,0.9s,baz=206,slow=2.2,SNR=5.1
WRA   Warramunga Arr     60.15 188 i P      P        04 56 40.9 -0.6
WRA                                  pmax   pmax
            comp=Z,35nm,0.6s
WRA   Warramunga Arr     60.15 188   P      P        04 56 40.8 -0.7
WR3   Warramunga Arr     60.15 188   IAMs_20 IAMs_20 05 20 48.0
            comp=Z,821nm,21.0s
WC3   Warramunga Arr     60.16 188   IAMs_20 IAMs_20 05 20 23.3
            comp=Z,932nm,22.0s
MDRS  Chennai            60.18 262⇑iP      P        04 56 42.7 +0.8
TMCR  Tamitsa            60.33 331  eP      P        04 56 40.4 -1.8
TMCR                                 pmax   pmax
            comp=Z,255nm,0.9s
KEV   Kevo               60.78 339   P      P        04 56 45.6 +0.4
KEV                                  pmax   pmax
            comp=Z,120nm,0.9s
KEV   Kevo               60.78 339   P      P        04 56 45.6 +0.4
YKA   Yellowknife Ar     60.93  31   P      P        04 56 46.8 +0.5
            comp=Z,56nm,0.8s,baz=305,slow=5.9,SNR=511
YKA                                  LR     LR       05 24 58.6
            comp=Z,256nm,20.4s,baz=0.0,slow=38
YKA                                  PKPPKP          05 26 01.1
            comp=Z,0.1nm,0.4s,baz=81,slow=2.9,SNR=5.3
YKA                                  PKP2ab          05 26 21.2
            comp=Z,0.3nm,0.6s,baz=117,slow=2.8,SNR=4.3
YKA   Yellowknife Ar     60.93  31 i P      P        04 56 47.0 +0.7
YKA                                  pmax   pmax
            comp=Z,61nm,0.8s
HAMF  Hammerfest         61.11 340  eP      P        04 56 47.5  0.0
ARA0  ARCESS Array S     61.33 339   P      P        04 56 49.5 +0.5
ARA0                                 IAmb   IAmb     04 56 50.0
            comp=Z,44nm,0.8s
ARA0  ARCESS Array S     61.33 339  eP      P        04 56 49.5 +0.5
ARCES ARCESS Array B     61.33 339   P      P        04 56 48.7 -0.3
            comp=Z,47nm,0.8s,baz=52,slow=7.8,SNR=142
ARCES                                PP     PP       04 59 01.9 -2.0
            comp=Z,14nm,0.8s,baz=36,slow=10,SNR=3.7
ARCES                                LR     LR       05 28 09.0
            comp=Z,691nm,18.1s,baz=40,slow=41
ARCES ARCESS Array B     61.33 339   P      P        04 56 49.2 +0.2
ARCES                                pmax   pmax
            comp=Z,42nm,0.8s
ARCES ARCESS Array B     61.33 339   P      P        04 56 49.2 +0.2
ARCES                                IAmb   IAmb     04 56 50.0
            comp=Z,42nm,0.8s
KLMR  Klimovskoe         61.46 327  eP      P        04 56 47.5 -2.4
KLMR                                e                04 59 02.9
KLMR                                 pmax   pmax
            comp=Z,349nm,1.3s
KLMR  Klimovskoe         61.46 327  eP      P        04 56 47.6 -2.4
KLMR                                 AMP             04 56 51.3
            comp=Z,349nm,1.3s
KLMR                                ePP     PP       04 59 03.0 -2.2
KLMR                                 LQ     LQ       05 18 56.7
KLMR                                 LQ     LQ       05 18 56.7
KLMR                                 LR     LR       05 21 03.3
POO   Poona              61.78 271⇑iP      P        04 56 51.0 -1.8
HRA   Herat              61.79 293   P      P        04 56 53.4 +0.6
HRA                                  IAmb   IAmb     04 56 54.6
            comp=Z,81nm,1.0s
HRA                                  IAMs_20 IAMs_20 05 25 48.6
            comp=Z,1µm,21.0s
BELG  Belogornoye        61.93 316c iP      P        04 56 53.3 +0.1
BELG                                 pmax   pmax
            comp=Z,58nm,0.9s
TULEG Thule              62.01   8   P      P        04 56 53.4  0.0
TULEG Thule              62.01   8⇑iP      P        04 56 53.6 +0.2
TULEG                                IAmb   IAmb     04 56 54.0
            comp=Z,160nm,0.7s
BHUJ  Bhuj               62.28 278  eP      P        04 56 56.1  0.0
BHUJ                                 IAmb   IAmb     04 56 58.6
            comp=Z,45nm,0.8s
KTK1  Kautokeino         62.29 339  eP      P        04 56 55.8 +0.4
DAG   Danmarks Havn      62.78 355⇑iP      P        04 56 58.9 +0.4
            comp=Z,136nm,1.0s
DAG   Danmarks Havn      62.78 355⇑iP      P        04 56 58.9 +0.4
DAG                                  pmax   pmax
            comp=Z,140nm,1.0s
DAG   Danmarks Havn      62.78 355⇑iP      P        04 56 59.0 +0.4
DAG                                  IAmb   IAmb     04 56 59.7
            comp=Z,136nm,1.0s
GEYT  Alibeck            62.83 298   P      P        04 56 59.7 +0.1
            comp=Z,90nm,0.8s,baz=29,slow=3.4,SNR=106
GEYT                                 LR     LR       05 25 23.8
            comp=Z,311nm,20.5s,baz=195,slow=37
GEYT  Alibeck            62.83 298   P      P        04 56 59.4 -0.2
GEYT                                 IAmb   IAmb     04 57 00.8
            comp=Z,75nm,0.8s
GYA0B ALIBECK ARRAY      62.83 298   P      P        04 56 59.6  0.0
GYA0B                                IAMs_20 IAMs_20 05 26 25.1
            comp=Z,745nm,18.0s
TRO   Tromso             63.00 341  eP      P        04 57 00.3 +0.3
PALK  Pallekele          63.54 257   P      P        04 57 04.2 -0.4
PALK                                 pmax   pmax
            comp=Z,58nm,1.2s
PALK  Pallekele          63.54 257   P      P        04 57 04.2 -0.4
PALK                                 IAmb   IAmb     04 57 05.9
            comp=Z,58nm,1.1s
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GOA   Goa              63.61 268 i P      P       04 57 04.7 -0.2
GOA                              IAmb     IAmb    04 57 06.4
      comp=Z,79nm,0.7s
AS31  Alice Springs    63.87 188   P      P       04 57 06.3 -0.1
ASAR  Alice Springs    63.88 188   P      P       04 57 06.3 -0.1
      comp=Z,22nm,0.8s,baz=12,slow=11,SNR=148
ASAR                               LR     LR      05 24 47.1
      comp=Z,507nm,21.9s,baz=8.0,slow=36
ASAR                               PKPPKP P'P'df  05 25 58.0 +4.0
      comp=Z,2.4nm,1.1s,baz=197,slow=2.6,SNR=7.5
ASAR                               PKP2bc         05 26 06.2
      comp=Z,3.7nm,0.8s,baz=158,slow=1.8,SNR=17
ASAR  Alice Springs    63.88 188   P      P       04 57 06.1 -0.3
PGC   Sidney           63.88  47   P      P       04 57 07.3 +1.0
PGC                                IAMs_20 IAMs_20 05 20 49.0
      comp=Z,310nm,18.0s
A04D  Lummi Island     64.26  47   P      P       04 57 10.6 +1.8
      baz=302
NLWA  Neilton Lookou   64.31  49   P      P       04 57 10.0 +0.9
NLWA                               IAmb   IAmb    04 57 12.5
      comp=Z,105nm,1.1s
D03D  Eldon            64.68  48   P      P       04 57 13.7 +2.1
      baz=302,SNR=26
PSA00 Pilbara Seismi   64.74 203   P      P       04 57 11.7 -0.4
PSA00                              IAmb   IAmb    04 57 13.6
      comp=Z,56nm,1.1s
PSAB1 Pilbara Seismi   64.75 203   IAMs_20 IAMs_20 05 22 01.3
      comp=Z,615nm,22.0s
PSAD2 Pilbara Seismi   64.75 203   IAMs_20 IAMs_20 05 27 43.4
      comp=Z,814nm,18.0s
B05A  Bryant           64.85  47   P      P       04 57 14.2 +1.6
      baz=303,SNR=17
KULLO Kullorsuaq       64.90   6⇑iP      P       04 57 12.7 +0.2
      comp=Z,93nm,0.8s
KULLO Kullorsuaq       64.90   6⇑iP      P       04 57 12.7 +0.2
KULLO                              pmax   pmax
      comp=Z,93nm,0.8s
KULLO Kullorsuaq       64.90   6⇑iP      P       04 57 12.8 +0.2
KULLO                              IAmb   IAmb    04 57 13.1
      comp=Z,93nm,0.8s
E03A  Lebam            64.93  49   P      P       04 57 14.1 +1.0
E03A                               IAmb   IAmb    04 57 16.4
      comp=Z,129nm,1.0s
N2IH  Innhavet         64.96 340 eP       P       04 57 12.9  0.0
D04E  Lakebay          65.05  49   P      P       04 57 16.5 +2.6
      baz=303
B06A  Marblemount      65.06  47   P      P       04 57 14.8 +0.8
B06A                               IAmb   IAmb    04 57 15.7
      comp=Z,44nm,0.8s
MOS   Moscow           65.12 323 eP       P       04 57 11.4 -2.8
MOS                              e                04 57 28.5
MOS                              e                05 06 11.8
MOS                                pmax   pmax
      comp=Z,369nm,1.4s
MOS                                pmax   pmax
      comp=Z,700nm,1.7s
MOS                                MLR    MLR
      comp=Z,2μm,17.0s
STEI  Steigen          65.16 341 eP       P       04 57 14.6 +0.3
DBG   Daneborg         65.28 355 i P      P       04 57 15.0  0.0
DBG                                IAmb   IAmb    04 57 15.4
      comp=Z,59nm,1.2s
LOF   Lofoten          65.44 341 eP       P       04 57 15.8 -0.3
D05A  Enumclaw         65.49  48   P      P       04 57 17.6 +0.8
D05A                               IAmb   IAmb    04 57 19.7
      comp=Z,66nm,0.9s
N2ST  Straumen         65.50 340 eP       P       04 57 16.7 +0.2
F04D  Rainier, OR      65.50  50   P      P       04 57 18.4 +1.6
      baz=303
E04D  Cinebar          65.50  49   P      P       04 57 19.1 +2.2
      baz=303,SNR=32
FAUS  Fauske           65.56 340 eP       P       04 57 17.1 +0.3
TRD   Trivandrum       65.56 260 eP       P       04 57 17.4 -0.3
EIDS  Eidsvold         65.66 171   P      P       04 57 18.6 +0.7
VRH   Novokhopyorsk    65.67 317 eP       P       04 57 17.2 -0.7
VRH                                pmax   pmax
      comp=Z,210nm,0.6s
VRH                                MLR    MLR
      comp=Z,2μm,16.0s
C06D  Leavenworth      65.71  47   P      P       04 57 19.7 +1.4
      baz=304
NBB08 Skaug oppvekst   65.72 340 eP       P       04 57 18.7 +0.8
G03D  McMinnville, O   65.83  51   P      P       04 57 20.9 +1.9
      baz=303,SNR=6.2
PUL   Pulkovo          65.83 329ceP       P       04 57 19.2 +0.5
PUL                                pmax   pmax
      comp=Z,221nm,0.6s
LON   Longmire         65.84  49   P      P       04 57 20.0 +0.9
LON                                pmax   pmax
      comp=Z,27nm,1.2s
LON   Longmire         65.84  49   P      P       04 57 20.0 +0.9
NOUC  Port Laguerre    65.87 155   P      P       04 57 19.4 +0.1
      comp=Z,72nm,1.1s
DZM   Mont Dzumac      65.89 155 eP       P       04 57 22.4 +2.8
      comp=Z,136nm,1.4s
DZM   Mont Dzumac      65.89 155 eLR      LR      05 17 07.7
      comp=Z,2μm,22.6s
DZM   Mont Dzumac      65.89 155   P      P       04 57 20.4 +0.9
DZM                                IAmb   IAmb    04 57 35.9
      comp=Z,53nm,1.1s
NBB28 Valnes           65.91 340 eP       P       04 57 19.5 +0.3
OBN   Obninsk          65.97 323c iP      P       04 57 19.5 -0.1
OBN                              e                04 57 54.1
OBN                              e                04 59 50.3
OBN                                pmax   pmax
      comp=Z,362nm,1.3s
OBN                                MLR    MLR
      comp=Z,2μm,16.0s
OBN   Obninsk          65.97 323   P      P       04 57 19.6 -0.1
N2VA  Vr¸y             66.00 341 eP       P       04 57 19.9 +0.2
I02D  Swisshome        66.08  52   P      P       04 57 22.8 +2.2
      baz=303,SNR=5.5
NBB05 Inndyr           66.14 340 eP       P       04 57 21.1 +0.5
COR   Corvallis        66.15  51   P      P       04 57 21.9 +0.8
COR                                pmax   pmax
      comp=Z,141nm,1.2s
COR   Corvallis        66.15  51   P      P       04 57 21.9 +0.8
COR                                IAmb   IAmb    04 57 24.7
      comp=Z,141nm,1.1s
LTY   Liberty          66.21  48   P      P       04 57 22.2 +0.7
NBB30 Finnes           66.27 340 eP       P       04 57 21.7 +0.3
LPSR  Galich'ya Gora   66.30 320 eP       P       04 57 21.5 -0.4
LPSR                               pmax   pmax
      comp=Z,320nm,0.8s
LPSR                               MLR    MLR
      comp=Z,2μm,24.0s
B08A  Colville Reser   66.34  46   P      P       04 57 23.2 +0.9
FIA1  FINESS Array S   66.36 332   P      P       04 57 22.4 +0.3
FINES FINESS Array B   66.36 332   P      P       04 57 22.0 -0.1
      comp=Z,180nm,0.7s,baz=43,slow=8.0,SNR=284
FINES                              PP     PP      04 59 43.4 -4.7
      comp=Z,12nm,0.8s,baz=50,slow=9.3,SNR=2.3
FINES                              LR     LR      05 28 28.9
      comp=Z,2μm,20.0s,baz=44,slow=38
FINES FINESS Array B   66.36 332 i P      P       04 57 22.2 +0.1
FINES                              pmax   pmax
      comp=Z,180nm,0.7s
FINES FINESS Array B   66.36 332   P      P       04 57 22.2 +0.1
KEBM  Edson Butte      66.47  53   P      P       04 57 24.1 +0.9
KEBM                               IAmb   IAmb    04 57 26.6
      comp=Z,135nm,1.1s
F05D  White Salmon     66.52  49   P      P       04 57 25.2 +1.8
      baz=304,SNR=7.6
H04D  Lebanon          66.52  51   P      P       04 57 25.4 +1.9
      baz=304,SNR=16
J01E  Myrtle Point     66.55  53   P      P       04 57 25.8 +2.1
      baz=304,SNR=11
MSVF  Nonsavu          66.58 142⇓iP      P       04 57 25.8 +1.7
MSVF                               pmax   pmax
      comp=Z,86nm,1.5s
MSVF  Nonsavu          66.58 142   P      P       04 57 25.1 +1.0
I03D  Drain, OR        66.61  52   P      P       04 57 26.4 +2.4
      baz=304,SNR=32
VORR  Voronezh         66.70 319 eP       P       04 57 22.0 -2.4
VORR                               pmax   pmax
      comp=Z,400nm,1.4s
UPNV  Upernavik        66.72   6⇑iP      P       04 57 24.5 +0.3
UPNV                               IAmb   IAmb    04 57 25.4
      comp=Z,134nm,1.1s
H04A  Detroit Lake     66.76  51   P      P       04 57 25.9 +0.9
H04A                               IAmb   IAmb    04 57 27.8
      comp=Z,112nm,1.2s
KONS  Konsvik          66.79 340 eP       P       04 57 24.8  0.0
NBB40 Tonnes           66.80 340 eP       P       04 57 31.6 +6.7
KBO   Bosley Butte     66.89  54   P      P       04 57 26.7 +0.7
KBO                                IAmb   IAmb    04 57 28.8
      comp=Z,42nm,0.9s
G05D  Wamic, OR        66.96  50   P      P       04 57 28.1 +1.8
      baz=304,SNR=18
K02D  Willamette Mer   66.97  53   P      P       04 57 28.3 +1.8
      baz=304,SNR=26
VSR   Storozhevoye     66.98 318 eP       P       04 57 25.6 -0.7
VSR                                pmax   pmax
      comp=Z,170nm,0.6s
VSR                                MLR    MLR
      comp=Z,960nm,17.0s
MAK   Makhachkala      67.00 307d iP      P       04 57 25.6 -0.9
MAK                              e*PP     pP      04 57 41.4 +0.8
MAK                              e                04 59 52.6
MAK                              ePPP     PPP     05 01 29.0
MAK                              eS       S       05 06 15.1 -1.0
MAK                              e*SS     sS      05 06 42.5 +2.6
MAK                                pmax   pmax
      comp=Z,521nm,1.7s
MAK                                MLR    MLR
      comp=Z,691nm,13.0s
E07A  Sunnyside        67.06  48   P      P       04 57 27.8 +0.9
E07A                               IAmb   IAmb    04 57 29.9
      comp=Z,72nm,1.1s
VORD  Divnogorie       67.07 318 eP       P       04 57 25.9 -0.9
VORD                               pmax   pmax
      comp=Z,120nm,0.7s
I04A  Tendick Farm,    67.12  51   P      P       04 57 29.0 +1.6
      baz=304,SNR=42
C09A  Chrisman Ranch   67.24  46   P      P       04 57 28.8 +0.8
C09A                               IAmb   IAmb    04 57 30.4
      comp=Z,65nm,0.9s
D08A  Wollman Farm,    67.31  47   P      P       04 57 29.2 +0.8
D08A                               IAmb   IAmb    04 57 30.3
      comp=Z,44nm,0.9s
L02E  Cave Junction    67.31  53   P      P       04 57 30.5 +2.0
      baz=304,SNR=16
HAWA  Hanford          67.34  48   P      P       04 57 29.5 +0.9
F07A  Phinny Hill Vi   67.40  49   P      P       04 57 29.8 +0.8
F07A                               IAmb   IAmb    04 57 31.9
      comp=Z,75nm,1.0s
I05D  Terrebonne, OR   67.45  51   P      P       04 57 31.1 +1.6
      baz=305,SNR=17
HUMO  Hull Mountain    67.46  53   P      P       04 57 30.2 +0.8
KRMB  Red Mountain     67.48  54   P      P       04 57 30.5 +0.7
E08A  Dider Farm, El   67.55  48   P      P       04 57 30.9 +0.9
E08A                               IAmb   IAmb    04 57 32.6
      comp=Z,52nm,1.1s
NEW   Newport          67.61  45   P      P       04 57 31.6 +1.2
      baz=306,SNR=39
NEW   Newport          67.61  45   P      P       04 57 31.2 +0.8
NEW                                pmax   pmax
      comp=Z,44nm,0.9s
NEW   Newport          67.61  45   P      P       04 57 31.1 +0.8
NEW                                IAmb   IAmb    04 57 32.7
      comp=Z,44nm,0.9s
J04D  Umpqua Nationa   67.61  52   P      P       04 57 32.6 +1.9
      baz=305,SNR=25
SUMG  Summit           67.64   0⇑iP      P       04 57 31.8 +1.2
      comp=Z,412nm,0.7s
SUMG  Summit           67.64   0⇑iP      P       04 57 31.8 +1.2
SUMG                               pmax   pmax
      comp=Z,410nm,0.7s
SUMG  Summit           67.64   0   P      P       04 57 30.9 +0.3
SUMG  Summit           67.64   0⇑iP      P       04 57 31.9 +1.2
SUMG                               IAmb   IAmb    04 57 32.3
      comp=Z,413nm,0.7s
JCC   Jacoby Creek,    67.80  55   P      P       04 57 32.4 +0.8
GROC  Groznyy          67.89 308 eP       P       04 57 30.9 -1.3
GROC                             e*PP     sP      04 57 51.0 -1.0
GROC                             e                04 57 58.4
GROC                             e                04 59 57.8
GROC                               pmax   pmax
      comp=Z,85nm,0.8s
KHMM  Horse Mountain   67.95  55   P      P       04 57 33.5 +0.7
PINE  Pine Mountain    68.00  51   P      P       04 57 33.8 +0.6
PINE                               IAmb   IAmb    04 57 36.4
      comp=Z,113nm,1.0s
E09A  Wood Farm, Sta   68.06  47   P      P       04 57 33.9 +0.8
E09A                               IAmb   IAmb    04 57 35.9
      comp=Z,99nm,1.2s
L04D  Klamath Falls    68.07  53   P      P       04 57 35.3 +1.8
      baz=305,SNR=61
VSU   Vasula           68.09 329 eP       P       04 57 33.5 +0.4
VSU   Vasula           68.09 329 eP       P       04 57 33.3 +0.2
VSU                                pmax   pmax
      comp=Z,649nm,1.0s
YBH   Yreka Blue Hor   68.10  53   P      P       04 57 34.3 +0.7
YBH                                pmax   pmax
      comp=Z,29nm,0.9s
YBH   Yreka Blue Hor   68.10  53   P      P       04 57 34.3 +0.7
J05D  Fort Rock, OR    68.11  51   P      P       04 57 35.7 +1.9
      baz=305,SNR=46
NUUG  Nuugaatsiaq      68.15   5⇑iP      P       04 57 33.7 +0.4
NUUG                               IAmb   IAmb    04 57 34.5
      comp=Z,56nm,0.9s
K04D  Chiloquin, OR    68.18  52   P      P       04 57 36.0 +1.8
      baz=305,SNR=5.1
M02C  Callahan         68.20  54   P      P       04 57 36.4 +2.1
      baz=305,SNR=35
G08A  Pilot Rock       68.30  49   P      P       04 57 35.5 +0.6
KMRM  Mail Ridge       68.33  55   P      P       04 57 35.9 +0.8
GOF   Gofitskoye       68.45 311⇑iP      P       04 57 36.1 +0.4
GOF                                pmax   pmax
      comp=Z,465nm,0.8s
N02D  Trinity Center   68.53  54   P      P       04 57 38.3 +2.0
      baz=305,SNR=29
M04C  Macdoel          68.61  53   P      P       04 57 38.7 +1.9
      baz=305,SNR=60
NSS   Namsos           68.61 339 eP       P       04 57 35.9 -0.4
K05A  Summer Lake      68.64  52   P      P       04 57 37.7 +0.6
K05A                               IAmb   IAmb    04 57 40.4
      comp=Z,105nm,1.0s
I07A  Izee             68.68  50   P      P       04 57 37.8 +0.6
KCPM  Cahto Peak       68.72  56   P      P       04 57 38.3 +0.7
WALA  Waterton Lakes   68.85  43   P      P       04 57 39.0 +0.7
WALA                               IAmb   IAmb    04 57 40.6
      comp=Z,52nm,0.8s
WDC   Whiskeytown Da   68.86  54   P      P       04 57 39.0 +0.7
WDC                                pmax   pmax
      comp=Z,32nm,1.1s
WDC   Whiskeytown Da   68.86  54   P      P       04 57 39.0 +0.7
F10A  Beach Ranch, E   68.89  47   P      P       04 57 39.3 +0.8
O02D  Mt. Diablo Mer   68.94  55   P      P       04 57 40.9 +2.1
      baz=305,SNR=36
MTSE  Matsula          69.05 331 eP       P       04 57 39.1 +0.1
SCO   Scoresbysund     69.13 354   P      P       04 57 40.1 +0.7
SCO                                pmax   pmax
      comp=Z,45nm,1.0s
SCO   Scoresbysund     69.13 354   P      P       04 57 40.1 +0.7
ZEI   Tsey             69.27 309 eP       P       04 57 37.9 -3.1
ZEI                                pmax   pmax
      comp=Z,110nm,0.9s
KVAR  Kislovodsk Arr   69.30 310   LR     LR      05 33 28.1
      comp=Z,738nm,18.1s,baz=230,slow=40
KIV   Kislovodsk       69.31 310 ⇑P       P       04 57 41.9 +0.8
KIV   Kislovodsk       69.31 310 i P      P       04 57 42.1 +1.0
      SNR=124
KIV   Kislovodsk       69.31 310 eP       P       04 57 41.8 +0.8
KIV                              eS       S       05 06 44.7 +0.8
KIV                                pmax   pmax
      comp=Z,2μm,1.1s
KIV                                pmax   pmax
      comp=Z,189nm,3.2s
KIV                                MLR    MLR
      comp=Z,2μm,17.0s
KIV   Kislovodsk       69.31 310   P      P       04 57 40.8 -0.3
KIV                                IAMs_20 IAMs_20 05 33 28.2
      comp=Z,929nm,18.0s
KIV   Kislovodsk       69.31 310   P      P       04 57 41.9 +0.8
KBZ   Khabaz           69.31 310   P      P       04 57 41.7 +0.7
      comp=Z,176nm,0.9s,baz=28,slow=2.7,SNR=252
KBZ                                LR     LR      05 33 19.1
      comp=Z,596nm,19.5s,baz=48,slow=40
AAL   Aland            69.39 333 eP       P       04 57 41.2  0.0
HOPS  Hopland Field    69.44  56   P      P       04 57 42.6 +0.8
JTMT  Jette            69.45  44   P      P       04 57 42.6 +0.6
JTMT                               IAmb   IAmb    04 57 44.7
      comp=Z,76nm,0.9s
MOD   Modoc Plateau    69.47  52   P      P       04 57 42.8 +0.6
O03E  Paynes Creek     69.49  54   P      P       04 57 43.4 +1.1
      baz=306,SNR=40
BMO   Blue Mountains   69.51  48   P      P       04 57 42.9 +0.6
BMO                                pmax   pmax
      comp=Z,35nm,1.1s
BMO   Blue Mountains   69.51  48   P      P       04 57 42.9 +0.6
BMO                                IAMs_20 IAMs_20 05 24 02.2
      comp=Z,323nm,18.0s
GDXM  Geysers          69.72  56   P      P       04 57 44.5 +0.7
MCCM  Marconi Confer   70.05  57   P      P       04 57 46.4 +0.8
TBLU  Trondheim        70.09 339 eP       P       04 57 43.6 -1.8
ORV   Oroville         70.11  55   P      P       04 57 46.8 +0.8
ORV                                pmax   pmax
      comp=Z,24nm,1.0s
ORV   Oroville         70.11  55   P      P       04 57 46.8 +0.8
WVOR  Wild Horse Val   70.16  51   P      P       04 57 47.0 +0.6
WVOR                               pmax   pmax
      comp=Z,34nm,1.1s
WVOR  Wild Horse Val   70.16  51   P      P       04 57 47.0 +0.6
MSO   Missoula         70.19  45   P      P       04 57 47.5 +1.0
      baz=308,SNR=38
MSO   Missoula         70.19  45   P      P       04 57 47.3 +0.8
IDID  Didziasalis      70.20 327 eP       P       04 57 47.2 +1.0
MNK   Minsk            70.26 326⇑iP      P       04 57 45.0 -1.6
MNK                                pmax   pmax
      comp=Z,1μm,1.0s
MNK   Minsk            70.26 326 i P      P       04 57 44.5 -2.1
      comp=E,31nm,1.0s
MNK                              i P      P       04 57 44.5 -2.1
      comp=N,184nm,1.0s
MNK                              i P      P       04 57 44.5 -2.1
      comp=Z,426nm,0.8s
MNK                              i pP     pP      04 58 00.9 +0.2
MNK                              i PcP    sP      04 58 05.3 -1.2
MNK                              i PP     PP      05 00 21.0 -1.1
MNK                              i PPP    PPP     05 02 03.8
MNK                              i S      S       05 06 51.4 -3.1
MNK                              i sS     sS      05 07 21.9 +3.6
MNK                              i ScS    SKSac   05 07 42.1 -1.6
MNK                              i SS     SS      05 11 26.6 +2.1
MNK                              i SSS    SSS     05 14 45.3
MNK                              i LQ     LQ      05 23 52.6
MNK                              i LR     LR      05 28 55.4
MNK                              i LRM    MLR     05 31 22.1
      comp=E,69nm,17.2s
MNK                              i LRM    MLR     05 31 22.1
      comp=N,541nm,15.4s
MNK                              i LRM    MLR     05 31 22.1
      comp=Z,833nm,17.2s
ISAL  Salakas          70.29 327 eP       P       04 57 47.7 +1.0
GNI   Garni            70.31 306   LR     LR      05 31 28.4
      comp=Z,660nm,20.3s,baz=84,slow=38
GNI   Garni            70.31 306c iP      P       04 57 48.2 +0.8
GNI                                pmax   pmax
      comp=Z,169nm,1.4s
GNI   Garni            70.31 306   P      P       04 57 47.0 -0.4
GNI                                IAmb   IAmb    04 57 55.7
      comp=Z,127nm,1.0s
GNI   Garni            70.31 306   P      P       04 57 48.6 +1.2
AKH   Akhalkalaki      70.33 308 ⇑P       P       04 57 48.7 +1.2
SLIT  Slitere, Latvi   70.38 330 eP       P       04 57 47.6 +0.3
IIGN  Ignalina         70.40 327 eP       P       04 57 48.6 +1.2
UPP   Uppsala          70.44 334 eP       P       04 57 47.1 -0.5
NACGM Naroch           70.46 326 i P      P       04 57 48.6 +0.8
NACGM                            i P      P       04 57 48.6 +0.8
NACGM                            i P      P       04 57 48.6 +0.8
NACGM                            i PP     PP      05 00 24.6 +0.8
NACGM                            i PPP    PPP     05 02 07.3
NACGM                            i S      S       05 06 57.1 +0.3
NACGM                            i SS     SS      05 11 31.9 +4.4
NACGM                            i SSS    SSS     05 14 50.7
NACGM                            i LQ     LQ      05 24 22.7
NACGM                            i LR     LR      05 28 47.4
ILULI Ilulissat        70.58   5⇑iP      P       04 57 48.8 +0.5
      comp=Z,108nm,0.9s
ILULI Ilulissat        70.58   5   P      P       04 57 48.8 +0.5
ILULI                              pmax   pmax
      comp=Z,118nm,0.9s
ILULI Ilulissat        70.58   5   P      P       04 57 48.8 +0.5
ILULI                              IAmb   IAmb    04 57 50.0
      comp=Z,118nm,0.9s
ILULI Ilulissat        70.58   5⇑iP      P       04 57 48.8 +0.5
ILULI                              IAmb   IAmb    04 57 49.3
      comp=Z,108nm,0.9s
BEKR  Beckworth        70.64  54   P      P       04 57 50.0 +0.5
BEKR                               IAmb   IAmb    04 57 51.9
      comp=Z,53nm,1.0s
BEKR                               IAMs_20 IAMs_20 05 20 43.9
      comp=Z,291nm,19.0s
JLN   Jalan Bani Buh   70.64 283   P      P       04 57 49.9 +0.4
      SNR=11
WBK   Wadi Bani Khal   70.70 284   P      P       04 57 50.7 +0.8
      SNR=14
ARMA  Armidale         70.71 171   P      P       04 57 50.3 +0.7
BANOM Banah            70.73 288 i P      P       04 57 50.4 +0.3
      SNR=13
BANOM Banah            70.73 288   P      P       04 57 50.4 +0.3
      SNR=18
SHME  Shamm            70.78 288 i P      P       04 57 50.1 -0.2
      SNR=82
SHME  Shamm            70.78 288   P      P       04 57 50.6 +0.3
      SNR=25
BIDO  Bidbid           70.79 285   P      P       04 57 50.9 +0.5
      SNR=16
AFDM  Forest Hills D   70.80  55   P      P       04 57 51.0 +0.8
FFC   Flin Flon        70.88  34   P      P       04 57 51.2 +0.8
FFC                                pmax   pmax
      comp=Z,98nm,0.8s
FFC   Flin Flon        70.88  34   P      P       04 57 51.2 +0.8
FFC                                IAmb   IAmb    04 57 52.1
      comp=Z,98nm,0.8s
FCC   Fort Churchill   71.06  27   P      P       04 57 52.0 +0.7
FCC                                pmax   pmax
      comp=Z,89nm,0.9s
FCC   Fort Churchill   71.06  27   P      P       04 57 52.0 +0.7
FCC                                IAmb   IAmb    04 57 52.5
      comp=Z,89nm,0.8s
MDH   Madha            71.10 287 i P      P       04 57 51.7 -0.5
      SNR=13
SMDO  Samad            71.12 285   P      P       04 57 52.8 +0.2
      SNR=17
ICESG Greenland Ices   71.14   1⇑iP      P       04 57 53.2 +1.1
ICESG                              IAmb   IAmb    04 57 54.0
      comp=Z,252nm,1.0s
MASF  Masafi           71.16 288   P      P       04 57 52.9 +0.3
      SNR=11
MSFE  Esma-Masafi      71.17 288 i P      P       04 57 53.0 +0.3
      SNR=37
PABE  Paberze          71.22 328 eP       P       04 57 53.1 +0.7
MFID  Camas Ranch      71.22  49   P      P       04 57 53.5 +0.7
RUBR  Rubicon Trail    71.25  55   P      P       04 57 53.7 +0.5
RUBR                               IAmb   IAmb    04 57 55.8
      comp=Z,48nm,0.9s
SOC   Sochi            71.25 311 eP       P       04 57 51.0 -1.8
SOC                              e                05 00 29.2
SOC                              ePPP     PPP     05 02 10.7
SOC                              eS       S       05 07 03.4 -2.9
SOC                              i                05 07 48.8
SOC                              eSS      SS      05 11 35.9 -4.3
SOC                                pmax   pmax
      comp=Z,144nm,0.8s
SOC                                MLR    MLR
      comp=Z,572nm,15.0s
PAHR  Pah Rah Range    71.33  54   P      P       04 57 54.1 +0.5
HOQ   Hoqain           71.36 285   P      P       04 57 54.0 +0.2
      SNR=21
NC405 NORSAR Array S   71.37 337   P      P       04 57 53.5 +0.3
UOSS  Minazif          71.38 287 i P      P       04 57 54.1 +0.1
      SNR=63
UOSS  Minazif          71.38 287   P      P       04 57 53.3 -0.7
UOSS  Minazif          71.38 287   IAMs_20 IAMs_20 05 32 08.8
      comp=Z,347nm,21.0s
NC303 NORSAR Array S   71.38 337   P      P       04 57 53.6 +0.3
DOMB  Dombas           71.39 339 eP       P       04 57 53.6 +0.2
HRY   Holter Researc   71.40  44   P      P       04 57 54.5 +0.6
VCNR  Virginia City    71.42  54   P      P       04 57 54.7 +0.5
UMQ   Umm Al-Quwin     71.43 288   P      P       04 57 55.2 +1.0
JMDO  Jabal Madar      71.49 284   P      P       04 57 54.9 +0.3
      SNR=17
HATD  Hatta, Dubai     71.50 287 i P      P       04 57 55.0 +0.3
      SNR=55
HATD  Hatta, Dubai     71.50 287   P      P       04 57 55.0 +0.3
NC204 NORSAR Array S   71.52 338   P      P       04 57 54.4 +0.1
NB201 NORSAR Array S   71.54 337   P      P       04 57 54.6 +0.3
PNTR  Pine Nut         71.57  54   P      P       04 57 55.5 +0.4
NB2   NORSAR Subarra   71.57 337   P      P       04 57 54.6  0.0
      comp=Z,140nm,0.8s,baz=38,slow=6.2
NB2   NORSAR Subarra   71.57 337   P      P       04 57 54.6  0.0
      baz=38,slow=6.2
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NOA	NORSAR Array B	71.57	337	P	P	04 57 54.7	+0.1
	comp=Z,123nm,0.8s,baz=38,slow=6.0,SNR=266						
NOA				PP	PP	05 00 27.4	-5.7
	comp=Z,9.3nm,0.9s,baz=38,slow=8.0,SNR=3.7						
NOA				LR	LR	05 34 20.8	
	comp=Z,741nm,19.4s,baz=35,slow=40						
STKA	Stephens Creek	71.60	180	P	P	04 57 55.1	+0.2
	comp=Z,5.8nm,0.6s,baz=352,slow=7.3,SNR=13						
STKA				LR	LR	05 30 49.2	
	comp=Z,222nm,20.7s,baz=10,slow=37						
STKA	Stephens Creek	71.60	180	P	P	04 57 55.6	+0.8
STKA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
STKA	Stephens Creek	71.60	180	P	P	04 57 55.6	+0.8
SOHO	SOHO	71.61	286	i P	P	04 57 55.0	-0.4
	SNR=45						
SOHO	SOHO	71.61	286	P	P	04 57 55.3	0.0
LRM	Limekiln Ridge	71.63	45	P	P	04 57 55.9	+0.5
ASHO	Ashiyiah	71.64	287	i P	P	04 57 55.7	+0.1
	SNR=39						
ASHO	Ashiyiah	71.64	287	P	P	04 57 55.8	+0.3
	SNR=22						
EGMT	Eagleton	71.66	42	P	P	04 57 56.4	+1.1
	baz=310,SNR=20						
EGMT	Eagleton	71.66	42	P	P	04 57 56.0	+0.6
EGMT				IAmb	IAmb	04 57 57.6	
	comp=Z,136nm,1.1s						
PBUR	Paburge	71.67	329	eP	P	04 57 55.6	+0.5
FORT	Forrest	71.69	193	P	P	04 57 56.0	+0.6
FORT				IAmb	IAmb	04 57 57.3	
	comp=Z,56nm,0.8s						
CMB	Columbia Colle	71.71	56	P	P	04 57 56.4	+0.6
CMB				pmax	pmax		
	comp=Z,40nm,1.0s						
CMB	Columbia Colle	71.71	56	P	P	04 57 56.4	+0.6
NBO00	NORSAR Array S	71.71	337	P	P	04 57 55.6	+0.3
NC602	NORSAR Array S	71.72	337	P	P	04 57 55.4	+0.1
NC602				IAmb	IAmb	04 58 14.9	
	comp=Z,56nm,0.8s						
NC602	NORSAR Array S	71.72	337	eP	P	04 57 55.3	-0.1
NAZ	Nazwa, Dubai	71.75	288	i P	P	04 57 56.2	0.0
	SNR=9.1						
NAZ	Nazwa, Dubai	71.75	288	P	P	04 57 56.3	+0.1
	SNR=11						
SAO	San Andreas Ge	71.79	57	P	P	04 57 57.0	+0.8
SAO				pmax	pmax		
	comp=Z,20nm,1.0s						
SAO	San Andreas Ge	71.79	57	P	P	04 57 57.0	+0.8
ANN	Anapa	71.79	314	eP	P	04 57 56.0	-0.1
ANN				e*PP	pP	04 58 10.4	+0.1
ANN				pmax	pmax		
	comp=Z,125nm,0.7s						
NAO01	NORSAR Array S	71.83	337	P	P	04 57 56.4	+0.4
DLMT	Dillon	71.84	46	P	P	04 57 57.2	+0.6
DLMT				IAmb	IAmb	04 57 59.2	
	comp=Z,101nm,1.1s						
AKN	Aaknes	71.84	340	eP	P	04 57 56.8	+0.6
YERR	Yerington	71.86	54	P	P	04 57 57.3	+0.5
YERR				IAmb	IAmb	04 57 59.6	
	comp=Z,59nm,0.9s						
BSY	Bisya	71.94	285	P	P	04 57 57.7	+0.4
	SNR=27						
FAQ	Al Faqa, Dubai	71.94	287	i P	P	04 57 57.4	0.0
	SNR=18						
FAQ				i P	pP	04 57 58.0	-14
	SNR=10						
FAQ	Al Faqa, Dubai	71.94	287	P	P	04 57 57.2	-0.1
	SNR=21						
HLID	Hailey	71.94	48	P	P	04 57 58.7	+1.5
	baz=308,SNR=31						
HLID	Hailey	71.94	48	P	P	04 57 57.9	+0.6
WAKR	Walker	72.02	55	P	P	04 57 58.4	+0.5
MCMT	McKenzie Canyo	72.03	46	P	P	04 57 58.2	+0.4
BCYI	Bear Canyon	72.05	47	P	P	04 57 58.3	+0.4
ARQ	Araqi	72.09	286	P	P	04 57 58.7	+0.4
	SNR=28						
AKASG	Malin Array Be	72.20	322	P	P	04 57 58.4	0.0
	comp=Z,130nm,0.7s,baz=45,slow=6.1,SNR=410						
AKASG				LR	LR	05 32 37.6	
	comp=Z,1µm,19.1s,baz=25,slow=38						
AKASG	Malin Array Be	72.20	322	P	P	04 57 58.5	0.0
AKASG				pmax	pmax		
	comp=Z,86nm,1.0s						
AKASG	Malin Array Be	72.20	322	P	P	04 57 58.5	0.0
AKASG				IAmb	IAmb	04 57 59.9	
	comp=Z,86nm,1.0s						
AKBB	Malin Array Si	72.20	322	P	P	04 57 58.5	+0.1
AKBB				pmax	pmax		
	comp=Z,207nm,0.8s						
AKBB	Malin Array Si	72.20	322	P	P	04 57 58.5	+0.1
ASUD	Al Ashush, Dub	72.20	287	i P	P	04 57 59.3	+0.4
	SNR=35						
ASUD	Al Ashush, Dub	72.20	287	P	P	04 57 60.0	+1.1
	SNR=16						
BOZ	Bozeman (W)	72.22	45	P	P	04 58 00.0	+1.2
	baz=310,SNR=101						
BOZ	Bozeman (W)	72.22	45	P	P	04 57 59.3	+0.5
BOZ				pmax	pmax		
	comp=Z,78nm,1.0s						
BOZ	Bozeman (W)	72.22	45	P	P	04 57 59.3	+0.5
BOZ				IAmb	IAmb	04 58 01.5	
	comp=Z,78nm,0.9s						
ALNE	Al Ain	72.23	287	i P	P	04 57 59.2	+0.1
	SNR=16						
ALNE	Al Ain	72.23	287	P	P	04 57 59.2	+0.1
	SNR=28						
MHTO	MHTO	72.41	283	P	P	04 58 00.5	+0.4
	SNR=59						
GEVA	Gevas	72.45	305	P	P	04 57 59.8	-0.6
GEVA				IAmb	IAmb	04 58 11.5	
	comp=Z,48nm,0.9s						
GEVA				IAMs_20	IAMs_20	05 32 46.0	
	comp=Z,700nm,20.0s						
AJN	Ajban	72.49	288	i P	P	04 58 00.6	0.0
	SNR=10						
AJN	Ajban	72.49	288	P	P	04 58 00.3	-0.3
	SNR=11						
RYN	Ryan	72.52	54	P	P	04 58 01.2	+0.5
PMPB	Monarch Peak	72.53	57	P	P	04 58 01.5	+0.7
SUW	Suwalki	72.60	327	eP	P	04 58 00.6	-0.1
SUW	Suwalki	72.60	327	eP	P	04 58 00.8	+0.1
SUW	Suwalki	72.60	327	P	P	04 58 00.8	+0.1
SUW				pmax	pmax		
	comp=Z,243nm,1.0s						
SUW	Suwalki	72.60	327	P	P	04 58 00.8	+0.1
OSL	Oslo	72.60	337	eP	P	04 58 01.2	+0.6
SKAR	Skarslia	72.71	338	eP	P	04 58 02.2	+0.8
BBOO	Buckleboo	72.74	185	P	P	04 58 02.3	+0.7
LHV	Little Huntoon	72.76	54	P	P	04 58 02.7	+0.8
LHV				IAmb	IAmb	04 58 05.4	
	comp=Z,82nm,1.0s						
MDPB	Devils Postpil	72.77	55	P	P	04 58 02.8	+0.3
NVAR	Mina Array Bea	72.78	54	P	P	04 58 03.9	+1.5
	comp=Z,23nm,0.8s,baz=288,slow=5.8,SNR=161						
NVAR				LR	LR	05 26 40.7	
	comp=Z,91nm,20.3s,baz=332,slow=33						
NVAR	Mina Array Bea	72.78	54	P	P	04 58 02.8	+0.4
SFJD	Kangerlussuaq	72.81	5	⇑iP	P	04 58 02.3	+0.6
	comp=Z,10nm,0.9s						
SFJD	Kangerlussuaq	72.81	5	P	P	04 58 02.4	+0.7
SFJD				pmax	pmax		
	comp=Z,148nm,1.0s						
SFJD	Kangerlussuaq	72.81	5	P	P	04 58 02.4	+0.7
SFJD				IAmb	IAmb	04 58 03.4	
	comp=Z,148nm,0.9s						
SFJD	Kangerlussuaq	72.81	5	⇑iP	P	04 58 02.3	+0.6
SFJD				IAmb	IAmb	04 58 03.4	
	comp=Z,10nm,0.9s						
QLMT	Earthquake Lak	72.81	46	P	P	04 58 02.9	+0.4
KTUT	Trabzon	72.82	309	⇑P	P	04 58 02.4	+0.1
OMMB	Old Mammoth Mi	72.84	55	P	P	04 58 03.1	+0.3
FOO	Floro	72.84	340	eP	P	04 58 02.8	+0.8
HYA	Hoyanger	72.90	339	eP	P	04 58 02.8	+0.5
MLAC	Mammoth, Mammo	72.93	55	P	P	04 58 05.2	+1.9
	baz=308,SNR=19						
YHL	Hebgen Lake	72.94	45	IAmb	IAmb	04 58 06.2	
	comp=Z,69nm,1.1s						
KOPT	Kop Dagi	72.98	308	P	P	04 58 03.0	-0.6
KOPT				IAmb	IAmb	04 58 06.9	
	comp=Z,168nm,1.2s						
YHB	Horse Butte	72.99	46	IAmb	IAmb	04 58 06.4	
	comp=Z,67nm,1.0s						
GCMT	Greycliff	73.15	44	P	P	04 58 04.9	+0.6
YHH	Holmes Hill	73.16	45	P	P	04 58 05.0	+0.4
YMR	Madison River	73.17	45	P	P	04 58 05.0	+0.4
YMR				IAmb	IAmb	04 58 07.7	
	comp=Z,64nm,1.1s						
KONO	Kongsberg	73.17	337	P	P	04 58 04.3	+0.3
KONO				pmax	pmax		
	comp=Z,64nm,0.8s						
KONO	Kongsberg	73.17	337	P	P	04 58 04.3	+0.3
KONO				IAmb	IAmb	04 58 05.0	
	comp=Z,64nm,0.8s						
KONO	Kongsberg	73.17	337	eP	P	04 58 04.4	+0.3
PAGB	Antelope Grade	73.18	57	P	P	04 58 05.2	+0.6
PAGB				IAmb	IAmb	04 58 07.4	
	comp=Z,73nm,0.9s						
ELK	Elko	73.21	51	P	P	04 58 05.5	+0.6
ELK				pmax	pmax		
	comp=Z,16nm,1.0s						
ELK	Elko	73.21	51	P	P	04 58 05.5	+0.6
YNM	Yellowstone No	73.28	45	P	P	04 58 05.5	+0.3
YNR	Norris Junctio	73.30	45	P	P	04 58 05.7	+0.3
DQM	DQM	73.37	282	P	P	04 58 05.7	-0.2
	SNR=15						
SUE	Sulen	73.37	340	eP	P	04 58 05.9	+0.8
VOG	Valley Oaks Go	73.38	56	P	P	04 58 06.5	+0.9
	baz=308						
YNE	Yellowstone No	73.47	45	P	P	04 58 06.8	+0.4
SIM	Simferopol'	73.52	315	c iP	P	04 58 05.5	-0.8
SIM				pmax	pmax		
	comp=Z,170µm,0.7s						
LKWY	Lake	73.55	45	IAmb	IAmb	04 58 11.2	
	comp=Z,73nm,1.1s						
H17A	Grant Village	73.56	46	P	P	04 58 09.9	+3.0
	baz=310,SNR=88						
SMMC	Simmler	73.60	58	P	P	04 58 08.9	+1.8
	baz=308,SNR=7.8						
TIN	Tinemaha, Big	73.66	55	P	P	04 58 09.1	+1.6
	baz=308,SNR=6.4						
TPH	Tonopah	73.66	54	IAmb	IAmb	04 58 09.8	
	comp=Z,172nm,0.9s						
FLWY	Flagg Ranch	73.69	46	P	P	04 58 08.2	+0.5
ASK	Askoy	73.74	339	eP	P	04 58 08.1	+0.8
BER	Bergen	73.79	339	eP	P	04 58 08.6	+1.0
RLMT	Red Lodge	73.80	44	P	P	04 58 09.8	+1.6
	baz=311,SNR=30						
ODD1	Odda	73.82	338	eP	P	04 58 08.4	+0.5
JRN	Qarnain Island	73.82	289	P	P	04 58 07.5	-0.9
	SNR=12						
VES	Vestal, Richgr	73.86	57	P	P	04 58 08.9	+0.4
	baz=308,SNR=31						
PKM	Mcpherson Peak	73.98	58	P	P	04 58 11.2	+1.7
	baz=308,SNR=15						
ECR	Eagle Creek	73.98	47	P	P	04 58 09.8	+0.4
REDW	Red Top Meadow	74.08	46	P	P	04 58 10.4	+0.4
REDW				IAmb	IAmb	04 58 13.2	
	comp=Z,66nm,1.1s						
CWC	Cottonwood Cre	74.14	56	P	P	04 58 11.5	+1.2
	baz=308						
DGMT	Dagmar	74.15	39	P	P	04 58 10.7	+0.7
	baz=313,SNR=23						
DGMT	Dagmar	74.15	39	IAmb	IAmb	04 58 12.0	
	comp=Z,90nm,0.9s						
GRAC	Grapevine Rang	74.24	55	P	P	04 58 12.5	+1.8
	baz=309,SNR=23						
BLS5	Blasjo	74.28	338	eP	P	04 58 11.5	+1.0
SBC	Santa Barbara	74.31	58	P	P	04 58 12.9	+1.8
	baz=308						
LAO	LASA Array	74.35	42	P	P	04 58 12.6	+1.4
	baz=312,SNR=22						
LAO	LASA Array	74.35	42	P	P	04 58 12.0	+0.7
LAO				IAmb	IAmb	04 58 13.9	
	comp=Z,116nm,1.1s						
SORM	Soroca	74.36	320	⇑P	P	04 58 11.2	0.0
ISA	Isabella, Lake	74.36	57	P	P	04 58 11.8	+0.2
	baz=308,SNR=20						
ISA	Isabella, Lake	74.36	57	P	P	04 58 12.1	+0.5
ISA				pmax	pmax		
	comp=Z,22nm,1.0s						
ISA	Isabella, Lake	74.36	57	P	P	04 58 12.1	+0.5
BGU	Big Grassy Mou	74.40	49	P	P	04 58 12.3	+0.5
ARVC	Arvin	74.47	57	P	P	04 58 12.9	+0.8
	baz=308,SNR=5.7						
R11A	Troy Canyon, C	74.50	53	P	P	04 58 13.9	+1.4
	baz=309,SNR=25						
R11A	Troy Canyon, C	74.50	53	P	P	04 58 12.8	+0.4
HOMB	Homborsund	74.63	337	eP	P	04 58 13.0	+0.5
SCZ2	Santa Cruz Isl	74.64	58	P	P	04 58 14.2	+1.1
	baz=308						
UMR	Umm Al-Rimmam	74.69	296	eP		04 58 12.8	
BORG	Borgarnes	74.69	353	P	P	04 58 13.3	+0.5
BORG				pmax	pmax		
	comp=Z,202nm,0.9s						
BORG	Borgarnes	74.69	353	P	P	04 58 13.3	+0.5
MPMC	Manual Prospec	74.75	56	P	P	04 58 15.2	+1.3
	baz=309,SNR=39						
MIB	Mutribah	74.80	296	eP		04 58 13.5	
KMY	Karmoy	74.80	339	eP	P	04 58 14.6	+1.1
OSI	Osito Audit: C	74.85	58	P	P	04 58 15.7	+1.3
	baz=308						
FURC	Furnace Creek,	74.89	55	P	P	04 58 16.1	+1.6
	baz=309,SNR=24						
KIS	Kishinev	74.91	319	eP	P	04 58 13.0	-1.4
	comp=Z,230nm,0.9s						
KIS	Kishinev	74.91	319	eP	P	04 58 13.0	-1.4
KIS				pmax	pmax		
	comp=Z,230nm,0.9s						
SNART	Snartemo	74.96	337	eP	P	04 58 15.2	+0.8
MILM	Milestii Mici	74.97	319	⇑P	P	04 58 14.7	0.0
TPNV	Topopah Spring	74.97	54	P	P	04 58 16.6	+1.4
	baz=309,SNR=61						
TPNV	Topopah Spring	74.97	54	P	P	04 58 15.6	+0.4
TPNV				pmax	pmax		
	comp=Z,46nm,0.9s						
TPNV	Topopah Spring	74.97	54	P	P	04 58 15.6	+0.4
LRMC	Laurel Mtn Rad	74.98	56	P	P	04 58 16.3	+1.0
	baz=309,SNR=22						
DUG	Dugway, Tooele	74.99	50	P	P	04 58 16.8	+1.6
	baz=310,SNR=35						
DUG	Dugway, Tooele	74.99	50	P	P	04 58 15.6	+0.4
DUG				pmax	pmax		
	comp=Z,36nm,1.0s						
DUG	Dugway, Tooele	74.99	50	P	P	04 58 15.6	+0.4
BSD	Bornholm Skovb	75.00	332	eP	P	04 58 15.0	+0.2
EDW2	Edwards Air Fo	75.16	57	P	P	04 58 17.5	+1.4
	baz=309,SNR=34						
SNCC	San Nicolas Is	75.17	59	P	P	04 58 17.5	+1.3
	baz=308						
BEL	Belsk	75.17	327	eP	P	04 58 17.0	+1.2
BW06	Boulder Array	75.18	46	P	P	04 58 17.3	+0.9
	baz=311,SNR=48						
PDAR	Pinedale Array	75.18	46	P	P	04 58 17.2	+0.8
	comp=Z,10nm,0.7s,baz=333,slow=0.7,SNR=102						
PDAR	Pinedale Array	75.18	46	P	P	04 58 16.8	+0.4
RDF	Al-Radifah	75.18	295	eP		04 58 15.8	
SLWR	Sila	75.19	289	P	P	04 58 15.9	-0.4
TCUT	Toone Canyon	75.21	49	P	P	04 58 17.0	+0.4
RST	Umm Al-Ruwaisa	75.22	296	eP		04 58 15.6	
LVV	L'vov	75.22	324	⇓iP	P	04 58 16.6	+0.5
LVV				eS	S	05 07 53.0	+1.9
DECC	Green Verdugo	75.33	58	P	P	04 58 18.2	+1.2
	baz=309,SNR=5.5						
IAS	Iasi	75.40	320	⇑P	P	04 58 17.6	+0.4
PRN	Pahroc Range	75.42	53	P	P	04 58 18.2	+0.5
PRN				IAMs_20	IAMs_20	05 23 39.9	
	comp=Z,306nm,18.0s						
PASC	Pasadena Art C	75.47	58	P	P	04 58 18.6	+0.6
NUUK	Nuuk	75.50	6	⇑iP	P	04 58 18.6	+1.1
NUUK				IAmb	IAmb	04 58 19.4	
	comp=Z,212nm,0.9s						
JLU	Jordanelle	75.52	49	P	P	04 58 18.8	+0.4
MWC	Mount Wilson	75.53	57	P	P	04 58 18.9	+0.5
MWC				pmax	pmax		
	comp=Z,59nm,1.1s						
MWC	Mount Wilson	75.53	57	P	P	04 58 18.9	+0.5
GKP	Gorka Klasztor	75.54	329	eP	P	04 58 18.6	+0.7
GKP	Gorka Klasztor	75.54	329	eP	P	04 58 18.8	+0.9
NLU	North Lily Min	75.58	50	P	P	04 58 19.1	+0.4
SHOC	Shoshone, Teco	75.61	55	P	P	04 58 20.0	+1.3
	baz=309,SNR=15						
GSC	Goldstone, Bar	75.65	56	P	P	04 58 20.2	+1.2
	baz=309,SNR=25						
GSC	Goldstone, Bar	75.65	56	P	P	04 58 19.6	+0.6
GSC				pmax	pmax		
	comp=Z,34nm,1.0s						
GSC	Goldstone, Bar	75.65	56	P	P	04 58 19.6	+0.6
VASR	Vaslui	75.67	320	⇑P	P	04 58 19.3	+0.6
FMP	Fort Macarthur	75.69	58	P	P	04 58 20.3	+1.2
	baz=309						
BFSC	Mount Baldy Ra	75.77	57	P	P	04 58 20.8	+1.1
	baz=309,SNR=29						
MPU	Maple Canyon	75.80	49	P	P	04 58 20.4	+0.5
CIS	Catalina Islan	75.81	58	P	P	04 58 20.6	+0.8
	baz=309,SNR=5.6						
MUD	Monsted U'grnd	75.90	335	i P	P	04 58 20.4	+0.6
	comp=Z,112nm,1.0s						
MUD	Monsted U'grnd	75.90	335	i P	P	04 58 20.4	+0.6
MUD				pmax	pmax		
	comp=Z,110nm,1.0s						
MUD	Monsted U'grnd	75.90	335	i P	P	04 58 20.5	+0.6
MUD				IAmb	IAmb	04 58 21.0	
	comp=Z,113nm,1.0s						
SHPR	Sheep Range	75.93	54	P	P	04 58 21.2	+0.5
PRAR	RASCA	75.93	321	⇑P	P	04 58 20.8	+0.6
KWP	Kalwaria Pacla	75.95	324	i P	P	04 58 21.5	+1.2
KWP	Kalwaria Pacla	75.95	324	P	P	04 58 20.3	0.0
KWP				pmax	pmax		
	comp=Z,304nm,0.9s						
KWP	Kalwaria Pacla	75.95	324	P	P	04 58 20.3	0.0
SHAO	Shalim	75.96	282	i P	P	04 58 20.8	-0.1
	SNR=11						
SHAO	Shalim	75.96	282	P	P	04 58 21.1	+0.2
BIR	Birlad	76.01	319	⇓P	P	04 58 22.1	+1.4
RGN	Rugen	76.02	332	P	P	04 58 20.7	+0.1
VARL	Varlezi	76.15	319	⇓P	P	04 58 22.7	+1.1
TLCR		76.15	318	⇑P	P	04 58 21.9	+0.4
NWAO	Narrogin (SRO)	76.19	201	P	P	04 58 22.0	+0.3
NWAO				pmax	pmax		
	comp=Z,37nm,1.0s						
NWAO	Narrogin (SRO)	76.19	201	P	P	04 58 22.0	+0.3
BUR08	Bucovina Ar. S	76.22	322	P	P	04 58 21.8	-0.3
BUR08				IAmb	IAmb	04 58 23.9	
	comp=Z,138nm,0.8s						
TCRU	Three Creeks R	76.23	51	P	P	04 58 22.9	+0.4
BBRC	Big Bear Solar	76.23	57	P	P	04 58 23.5	+1.0
	baz=309,SNR=8.1						
BURAR	Bucovina Array	76.24	322	⇑P	P	04 58 23.0	+0.9
BURAR	Bucovina Array	76.24	322	P	P	04 58 21.8	-0.3
HEC	Hector,Ludlow	76.25	56	P	P	04 58 23.8	+1.4
	baz=310,SNR=29						
GIUM	Giurgiulesti	76.26	319	⇑P	P	04 58 23.1	+1.0
GHRR		76.26	319	⇑P	P	04 58 23.4	+1.3
BIZ	Bicaz	76.29	321	⇑P	P	04 58 23.2	+0.9
ILGA	Ilgaz	76.29	312	P	P	04 58 22.2	-0.5
TESR	Tescani	76.32	320	⇑P	P	04 58 23.1	+0.6
SCHL	Schela	76.44	319	⇓P	P	04 58 24.6	+1.5
MVU	Marysvale	76.44	51	P	P	04 58 23.9	+0.3
MVU				IAmb	IAmb	04 58 26.2	
	comp=Z,97nm,1.0s						
MURC	Murrieta	76.47	57	P	P	04 58 24.6	+1.0
	baz=309,SNR=9.6						
CFR	Carcaliu	76.50	318	⇑P	P	04 58 24.0	+0.5
TPGR	Topolog	76.58	318	⇑P	P	04 58 24.7	+0.7
PETR	Petresti	76.58	319	⇑P	P	04 58 25.7	+1.7
RDMU	Red Mountain	76.62	48	IAmb	IAmb	04 58 27.3	
	comp=Z,139nm,1.0s						
ODBI	Odobesti	76.64	319	⇑P	P	04 58 26.2	+1.8
DMTO	DMTO	76.65	282	P	P	04 58 24.3	-0.5
KOLS	Kolonicke sedl	76.65	324	eP	P	04 58 24.9	+0.5
KOLS				pmax	pmax		
	comp=Z,85nm,1.1s						
KOLS	Kolonicke sedl	76.65	324	eP	P	04 58 24.9	+0.5
P17A	Butcher Ranch,	76.67	49	P	P	04 58 25.3	+0.4
P17A				IAmb	IAmb	04 58 27.6	
	comp=Z,74nm,1.0s						
ULM	Lac du Bonnet	76.69	34	P	P	04 58 24.4	-0.1
	comp=Z,36nm,0.9s,baz=313,slow=8.6,SNR=38						
ULM				LR	LR	05 35 58.7	
	comp=Z,276nm,18.4s,baz=326,slow=39						
ULM	Lac du Bonnet	76.69	34	P	P	04 58 24.6	+0.1
ULM				pmax	pmax		
	comp=Z,37nm,0.9s						
ULM	Lac du Bonnet	76.69	34	P	P	04 58 24.6	+0.1
GMRC	Granite Mounta	76.71	56	P	P	04 58 26.3	+1.3
	baz=310,SNR=53						
DOK	Doka	76.71	283	P	P	04 58 24.7	-0.4
	SNR=35						
VRI	Vrincioaia	76.73	320	⇓P	P	04 58 25.8	+0.9
MTPU	Mount Pierson	76.76	51	P	P	04 58 25.8	+0.2
GAZ	Gaziantep	76.77	308	P	P	04 58 24.8	-0.5
MDND	Maddock	76.78	38	P	P	04 58 26.0	+0.9
	baz=316,SNR=27						
MDND	Maddock	76.78	38	P	P	04 58 25.7	+0.6
LCMT	Little Creek M	76.78	53	P	P	04 58 25.9	+0.4
LCMT				IAmb	IAmb	04 58 28.5	
	comp=Z,47nm,1.0s						
PLOR	Plostina	76.78	320	⇑P	P	04 58 26.1	+0.9
OJC	Ojcow	76.79	326	i P	P	04 58 26.0	+0.9
OJC	Ojcow	76.79	326	P	P	04 58 25.1	0.0
OJC				pmax	pmax		
	comp=Z,295nm,0.9s						
OJC	Ojcow	76.79	326	P	P	04 58 25.1	0.0
TIRR	Tirgusor	76.86	318	⇑P	P	04 58 26.0	+0.4
TIRR	Tirgusor	76.86	318	⇑P	P	04 58 26.0	+0.4
UZH	Uzhgorod	76.87	324	⇓iP	P	04 58 24.0	-1.5
UZH				e		04 58 41.6	
UZH				e		04 58 44.4	
K22A	Casper	76.92	45	P	P	04 58 27.0	+0.8
	baz=313,SNR=33						
K22A	Casper	76.92	45	P	P	04 58 26.6	+0.5
K22A				IAmb	IAmb	04 58 28.3	
	comp=Z,99nm,1.1s						
PFO	Pinyon Flats O	76.94	57	P	P	04 58 27.4	+1.0
	baz=310,SNR=17						
PFO	Pinyon Flats O	76.94	57	P	P	04 58 26.8	+0.4
PFO				pmax	pmax		
	comp=Z,30nm,1.0s						
PFO	Pinyon Flats O	76.94	57	P	P	04 58 26.8	+0.4
TPFO	Pinon Flats	76.95	57	P	P	04 58 27.4	+1.0
	baz=310,SNR=18						
GRER		76.95	319	⇓P	P	04 58 27.6	+1.5
109C	Camp Elliot, M	76.98	58	P	P	04 58 27.4	+1.0
	baz=310,SNR=5.5						
TLBR	Topalu	76.99	318	⇑P	P	04 58 27.2	+0.9
BELC	Belle Mtn. Jos	76.99	57	P	P	04 58 27.5	+0.8
	baz=310,SNR=22						
BMR	Baia Mare	77.01	322	⇑P	P	04 58 27.5	+1.1
ARCR	ARCALIA	77.03	322	⇑P	P	04 58 28.4	+1.9
KNB	Kanab	77.04	52	IAmb	IAmb	04 58 29.6	
	comp=Z,47nm,1.0s						
OZUR		77.04	320	⇑P	P	04 58 28.0	+1.4
SRU	San Rafael Swe	77.04	50	IAmb	IAmb	04 58 29.4	
	comp=Z,68nm,0.9s						
CRVS	Cervenica-Dubn	77.04	324	eP	P	04 58 27.5	+1.0
CRVS				pmax	pmax		
	comp=Z,137nm,0.9s						
CRVS	Cervenica-Dubn	77.04	324	eP	P	04 58 27.5	+1.0
PKCU	Pink Cliffs	77.07	52	P	P	04 58 27.5	+0.2
E28A	Huff	77.17	39	P	P	04 58 27.9	+0.6
E28A				IAmb	IAmb	04 58 29.3	
	comp=Z,89nm,0.8s						
NIE	Niedzica	77.17	325	i P	P	04 58 28.7	+1.4
RWWY	Rawlins	77.20	46	IAmb	IAmb	04 58 29.1	
	comp=Z,117nm,1.1s						
BR131	Keskin Array S	77.21	311	IAmb	IAmb	04 58 28.9	
	comp=Z,70nm,0.7s						
BRTR	Keskin Array B	77.21	311	P	P	04 58 28.2	+0.4
	comp=Z,34nm,0.6s,baz=103,slow=3.5,SNR=72						
BRTR				PP	PP	05 01 24.5	+2.8
	comp=Z,7.8nm,1.0s,baz=56,slow=9.1,SNR=3.7						
BRTR				LR	LR	05 37 45.3	
	comp=Z,732nm,19.3s,baz=56,slow=40						
BRTR	Keskin Array B	77.21	311	P	P	04 58 27.2	-0.6
RSSD	Black Hills	77.23	42	P	P	04 58 28.6	+0.6
	baz=314						
RSSD	Black Hills	77.23	42	P	P	04 58 28.3	+0.4
RSSD				pmax	pmax		
	comp=Z,70nm,1.0s						
RSSD	Black Hills	77.23	42	P	P	04 58 28.3	+0.4
RSSD				IAmb	IAmb	04 58 29.9	
	comp=Z,70nm,1.0s						
SKMB	Sankelmark Bun	77.23	334	eP	P	04 58 28.7	+1.3
	comp=Z,347nm,1.2s,baz=35,slow=5.4						
NEHR	Nehoiu	77.26	319	⇑P	P	04 58 29.1	+1.2
PGOR	Pogoanele	77.28	319	⇓P	P	04 58 29.5	+1.6
AMRR	Amara	77.31	318	⇑P	P	04 58 29.5	+1.4
DOPR	Dopca	77.33	320	⇑P	P	04 58 29.8	+1.6
RBK	Rabkut	77.34	282	P	P	04 58 28.0	-0.7
	SNR=14						
ISR	Istrita	77.35	319	⇑P	P	04 58 29.8	+1.4
NEE2	Needles Airpor	77.38	55	P	P	04 58 29.7	+1.0
	baz=310						
MLR	Muntele Rosu	77.39	320	⇑P	P	04 58 29.5	+0.8

WHFO	Wadi Hawf	77.41	283	P	P	04 58 28.3	-0.9
	SNR=27						
ICOR	Ion Corvin	77.42	318	⇑P	P	04 58 30.0	+1.3
MONP2	Monument Peak	77.42	58	P	P	04 58 30.2	+1.0
	baz=310,SNR=8.8						
IRM	Iron Mountain	77.44	56	P	P	04 58 30.4	+1.4
	baz=310,SNR=27						
RUE	Ruedersdorf	77.48	331	eP	P	04 58 29.7	+0.9
	comp=Z,269nm,1.3s,baz=35,slow=5.4						
BC3	Big Chuckawall	77.56	57	P	P	04 58 30.9	+1.1
	baz=310,SNR=32						
BSEG	Bad Segeberg	77.57	333	eP	P	04 58 30.3	+1.0
	comp=Z,196nm,1.0s,baz=35,slow=5.4						
BSEG				eL	L	05 34 54.7	
	comp=Z,2µm,21.4s						
RAC	Raciborz	77.58	327	eP	P	04 58 30.8	+1.3
RAC				MLR	MLR		
	comp=Z,2µm,19.9s						
W13A	Hualapai Mount	77.62	55	P	P	04 58 30.6	+0.3
CBX	Cerro Bola	77.63	58	P	P	04 58 30.8	+0.5
CJR	Cluj-Napoca	77.65	322	⇑P	P	04 58 31.3	+1.3
LEHL	Lehliu	77.67	318	⇑P	P	04 58 31.2	+1.1
O20A	White River Ci	77.67	48	P	P	04 58 31.5	+1.0
	baz=312,SNR=24						
O20A	White River Ci	77.67	48	IAmb	IAmb	04 58 32.7	
	comp=Z,56nm,1.1s						
LANS	Liptovska Anna	77.74	326	eP	P	04 58 32.2	+1.7
LANS				pmax	pmax		
	comp=Z,81nm,1.0s						
LANS	Liptovska Anna	77.74	326	eP	P	04 58 32.2	+1.7
U15A	North Rim	77.74	53	IAmb	IAmb	04 58 34.2	
	comp=Z,71nm,1.0s						
PLAR	PLOIESTI	77.76	319	⇑P	P	04 58 32.2	+1.7
KSP	Ksiaz	77.78	328	iP	P	04 58 31.6	+1.0
IKP	In-Ko-Pah, Jac	77.78	58	P	P	04 58 32.3	+1.2
	baz=310,SNR=14						
OKC	Ostrava-Krasne	77.78	327	eP	P	04 58 31.6	+1.0
OKC	Ostrava-Krasne	77.78	327	eP	P	04 58 31.6	+1.0
KECS	Kecovo	77.79	325	eP	P	04 58 31.7	+1.0
KECS				pmax	pmax		
	comp=Z,33nm,1.0s						
KECS	Kecovo	77.79	325	eP	P	04 58 31.7	+1.0
SWSC	Sam W. Stewart	77.79	57	P	P	04 58 31.8	+0.9
	baz=310,SNR=10						
SULR		77.81	319	⇓P	P	04 58 32.0	+1.1
VOIR		77.87	320	⇑P	P	04 58 32.0	+0.7
LTVH	Ltavrtes, Hu	77.96	323	⇑P	P	04 58 33.3	+1.7
PDMCI	Parker Dam,Lak	77.98	55	P	P	04 58 33.2	+1.2
	baz=311,SNR=45						
DRGR		78.02	322	⇑P	P	04 58 32.9	+0.8
OSTC	Ostas	78.03	328	eP	P	04 58 32.7	+0.7
CHVC	Chvalec	78.07	328	eP	P	04 58 32.9	+0.6
MORC	Moravsky Berou	78.08	327	⇑P	P	04 58 33.6	+1.2
MORC	Moravsky Berou	78.08	327	⇑iP	P	04 58 33.4	+1.0
MORC	Moravsky Berou	78.08	327	P	P	04 58 32.2	-0.2
MORC				pmax	pmax		
	comp=Z,188nm,0.8s						
MORC	Moravsky Berou	78.08	327	P	P	04 58 32.2	-0.2
MDUB	Mudurnu	78.10	313	P	P	04 58 32.2	-0.5
ABTO	Aybut	78.11	283	P	P	04 58 33.0	-0.1
	SNR=44						
ARR	Arges	78.12	320	⇑P	P	04 58 34.3	+1.6
DPC	Dobruska-Polom	78.15	328	eP	P	04 58 33.7	+1.0
DPC	Dobruska-Polom	78.15	328	eP	P	04 58 33.7	+1.0
UPC	Upice	78.15	328	eP	P	04 58 33.7	+1.0
UPC	Upice	78.15	328	eP	P	04 58 33.7	+1.0
KRLC	Kraliky	78.17	327	eP	P	04 58 33.7	+0.8
KRLC	Kraliky	78.17	327	eP	P	04 58 33.7	+0.8
HLG	Helgoland	78.19	334	eP	P	04 58 33.5	+0.8
	comp=Z,274nm,0.9s,baz=35,slow=5.4						
ESJX	Sierra Juarez	78.30	58	P	P	04 58 34.4	+0.3
STFAR	Stefanesti-Arg	78.33	320	⇑P	P	04 58 34.7	+0.9
GLA	Glamis	78.35	57	P	P	04 58 35.6	+1.5
	baz=310,SNR=19						
GLA	Glamis	78.35	57	P	P	04 58 34.7	+0.6
GLA				pmax	pmax		
	comp=Z,59nm,0.9s						
GLA	Glamis	78.35	57	P	P	04 58 34.7	+0.6
GLA				IAmb	IAmb	04 58 36.7	
	comp=Z,59nm,0.9s						
PV23	Carpenter Ridg	78.36	49	IAmb	IAmb	04 58 36.5	
	comp=Z,70nm,0.9s						
RAO	Raoul Island	78.37	145	LR	LR	05 26 34.6	
	comp=Z,855nm,20.9s,baz=128,slow=30						
PV10	Paradox Valley	78.39	49	IAMs_20	IAMs_20	05 31 58.7	
	comp=Z,817nm,22.0s						
PV14	Lion Creek, Pa	78.41	49	IAmb	IAmb	04 58 37.2	
	comp=Z,128nm,1.1s						
PHWY	Pilot Hill	78.42	45	P	P	04 58 34.9	+0.2
N23A	Red Feather La	78.44	46	P	P	04 58 36.4	+1.6
	baz=314,SNR=41						
CPBX	Cerro Prieto	78.45	57	IAMs_20	IAMs_20	05 37 44.4	
	comp=Z,404nm,18.0s						
PV04	Paradox Valley	78.46	49	P	P	04 58 35.1	+0.3
PV04				IAmb	IAmb	04 58 37.6	
	comp=Z,70nm,1.0s						
PV19	Morning Glory	78.47	49	IAmb	IAmb	04 58 37.5	
	comp=Z,103nm,0.8s						
PSZ	Piszkesteto	78.47	324	⇑P	P	04 58 35.8	+1.3
LOT	Lotru	78.49	321	⇑P	P	04 58 35.4	+0.6
D32A	Dogwood Acres,	78.50	37	P	P	04 58 34.9	+0.3
PV17	East Wray Mesa	78.50	49	IAmb	IAmb	04 58 37.7	
	comp=Z,119nm,0.9s						
VYHS	Vyhne	78.50	325	eP	P	04 58 35.7	+1.0
VYHS				pmax	pmax		
	comp=Z,121nm,1.1s						
VYHS	Vyhne	78.50	325	eP	P	04 58 35.6	+0.9
PV16	Nyswonger Mesa	78.51	49	IAmb	IAmb	04 58 37.3	
	comp=Z,59nm,0.9s						
PV11	David Mesa, Pa	78.54	49	IAmb	IAmb	04 58 37.5	
	comp=Z,76nm,1.0s						
PV11				IAMs_20	IAMs_20	05 34 35.1	
	comp=Z,830nm,19.0s						
FLTG	Flechtingen	78.54	332	eP	P	04 58 35.1	+0.3
	comp=Z,188nm,0.7s,baz=35,slow=5.4						
HUMR	Humele	78.56	319	⇓P	P	04 58 35.6	+0.6
PV18	Skein Mesa, Pa	78.56	49	IAmb	IAmb	04 58 37.5	
	comp=Z,60nm,0.9s						
PV03	Paradox Valley	78.59	49	IAmb	IAmb	04 58 37.6	
	comp=Z,66nm,1.1s						
DEV	Deva	78.59	322	⇑P	P	04 58 36.2	+1.0
BRG	Berggiesshubel	78.69	329	⇑iP	P	04 58 36.3	+0.7
BRG				Amp		04 58 37.4	
	comp=Z,96nm,0.9s						
BRG				ex	x	04 58 44.7	
BRG				Amp		04 58 46.0	
	comp=Z,28nm,0.9s						
BRG	Berggiesshubel	78.69	329	eP	P	04 58 36.3	+0.7
	comp=Z,96nm,0.9s,baz=35,slow=5.4						
CLL	Collm	78.71	330	⇑iP	P	04 58 36.2	+0.5
	comp=Z,209nm,1.0s						
CLL				e		05 01 21.0	
CLL				eS	S	05 08 30.0	+1.0
CLL				eSKSac	SKSac	05 08 42.0	-4.6
CLL				eSP	ScS	05 09 00.0	+7.2
CLL				ePPS	PPS	05 09 30.0	
CLL				eSSS	SSS	05 16 42.0	
CLL				LmV		05 33 00.0	
	comp=Z,1µm,21.4s						
CLL	Collm	78.71	330	⇑iP	P	04 58 36.2	+0.5
CLL				pmax	pmax		
	comp=Z,209nm,1.0s						
CLL				MLR	MLR		
	comp=Z,1µm,21.4s						
CLL	Collm	78.71	330	P	P	04 58 35.6	-0.1
CLL	Collm	78.71	330	eP	P	04 58 36.1	+0.5
	comp=Z,209nm,1.0s,baz=35,slow=5.4						
CLL				eL	L	05 34 04.4	
	comp=Z,1µm,21.4s						
PVCC	Panska Ves	78.71	329	eP	P	04 58 36.6	+0.8
PVCC	Panska Ves	78.71	329	eP	P	04 58 36.6	+0.8
COPA	Copaceanca	78.72	319	⇑P	P	04 58 36.1	+0.2
JAVC	Velka Javorina	78.73	326	⇑iP	P	04 58 38.0	+2.0
PV15	Paradox Valley	78.74	49	IAMs_20	IAMs_20	05 29 36.3	
	comp=Z,413nm,21.0s						
BSZH	Besenyszg	78.77	324	⇑P	P	04 58 37.7	+1.6
VRAC	Vranov	78.84	327	⇑P	P	04 58 37.8	+1.3
VRAC	Vranov	78.84	327	⇑iP	P	04 58 37.8	+1.3
DRUM	Mains of Drumt	78.84	341	⇑eP	P	04 58 36.9	+0.5
FBE	Freiberg	78.88	330	eP	P	04 58 37.6	+1.0
	comp=Z,160nm,0.8s,baz=35,slow=5.4						
SIRR	Siria	78.89	322	⇑P	P	04 58 37.6	+0.8
WUAZ	Wupatki	78.90	53	P	P	04 58 39.1	+1.8
	baz=312,SNR=54						
WUAZ	Wupatki	78.90	53	P	P	04 58 37.6	+0.3
WUAZ				IAmb	IAmb	04 58 40.3	
	comp=Z,61nm,0.9s						
ASSE	Asse, Remlinge	78.91	332	eP	P	04 58 37.4	+0.7
	comp=Z,88nm,1.1s,baz=35,slow=5.4						
KAC	Achnashellach	78.98	343	⇑eP	P	04 58 37.9	+0.8
ZIMR		78.98	319	⇑P	P	04 58 38.0	+0.7
GZR	Gura Zlata	79.01	321	⇑P	P	04 58 38.2	+0.6
B35A	Bob, Littlefor	79.04	34	IAmb	IAmb	04 58 38.8	
	comp=Z,83nm,0.8s						
SMCO	Snowmass	79.04	48	P	P	04 58 38.4	+0.1
SMOL	Smolenice	79.10	326	eP	P	04 58 39.4	+1.5
SMOL				pmax	pmax		
	comp=Z,83nm,1.1s						
SMOL	Smolenice	79.10	326	eP	P	04 58 39.4	+1.5
KRUC	Moravsky	79.11	327	⇑iP	P	04 58 39.0	+1.0
PRA	Prague	79.13	329	eP	P	04 58 38.8	+0.8
PRA	Prague	79.13	329	eP	P	04 58 38.8	+0.8
PRU	Pruhonice	79.15	329	eP	P	04 58 38.8	+0.6
PRU	Pruhonice	79.15	329	eP	P	04 58 38.8	+0.6
KPL	Plockton	79.21	343	⇑eP	P	04 58 39.2	+0.9
KPL				IAmb	IAmb	04 58 40.1	
	comp=Z,300nm,1.0s						
VLAD	Vladila	79.22	319	⇓P	P	04 58 39.6	+0.9
SPX	San Pedro Mart	79.23	59	P	P	04 58 39.5	+0.1
SPX				IAMs_20	IAMs_20	05 23 39.2	
	comp=Z,305nm,22.0s						
NEUB	Neuenburg	79.25	331	eP	P	04 58 39.3	+0.6
	comp=Z,196nm,0.9s,baz=35,slow=5.4						
SRO	Srobarova	79.25	325	eP	P	04 58 40.5	+1.8
SRO				pmax	pmax		
	comp=Z,246nm,1.1s						
SRO	Srobarova	79.25	325	eP	P	04 58 40.5	+1.8
SRO2	Moca	79.25	325	eP	P	04 58 38.9	+0.2
SRO2				pmax	pmax		
	comp=Z,111nm,0.9s						
SRO2	Moca	79.25	325	eP	P	04 58 38.9	+0.2
CLZ	Clausthal	79.25	332	eP	P	04 58 39.7	+1.0
	comp=Z,245nm,1.2s,baz=35,slow=5.4						
AMBH	Ambrzfalva	79.27	323	⇑P	P	04 58 40.1	+1.3
MODS	Modra-Piesok	79.27	326	eP	P	04 58 39.3	+0.4
MODS				pmax	pmax		
	comp=Z,165nm,1.1s						
MODS	Modra-Piesok	79.27	326	eP	P	04 58 39.3	+0.4
TREC	Trest	79.31	328	eP	P	04 58 40.0	+0.9
TREC	Trest	79.31	328	eP	P	04 58 40.0	+0.9
ISCO	Idaho Springs	79.38	46	P	P	04 58 41.5	+1.5
	baz=314,SNR=40						
BZS	Buzias	79.39	322	⇑P	P	04 58 40.0	+0.4
ZST	Bratislava	79.48	326	eP	P	04 58 41.2	+1.2
ZST				pmax	pmax		
	comp=Z,218nm,1.1s						
ZST	Bratislava	79.48	326	eP	P	04 58 41.2	+1.2
TIM	Timisoara	79.49	322	⇓P	P	04 58 41.6	+1.5
MVCO	Mesa Verde	79.49	50	P	P	04 58 42.1	+1.5
	baz=313,SNR=32						
HERR	Herculane	79.56	321	⇑P	P	04 58 40.7	+0.2
PLVB	Pleven	79.56	319	⇑P	P	04 58 41.1	+0.6
SUSD	Miller	79.56	40	P	P	04 58 41.1	+0.6
	baz=317,SNR=22						
SUSD	Miller	79.56	40	IAMs_20	IAMs_20	05 35 23.4	
	comp=Z,331nm,21.0s						
EDRB	Edirne	79.56	317	P	P	04 58 41.0	+0.4
PBCC	Pribram	79.60	329	eP	P	04 58 41.4	+0.7
TANN	Tannenbergstha	79.62	330	eP	P	04 58 41.4	+0.6
	comp=Z,66nm,1.1s,baz=35,slow=5.4						
SFX	San Felipe	79.64	58	IAMs_20	IAMs_20	05 32 10.0	
	comp=Z,322nm,19.0s						
GTTG	Gottingen	79.64	332	eP	P	04 58 41.7	+0.9
	comp=Z,171nm,1.1s,baz=35,slow=5.4						
INVG	Invergeldie, C	79.66	342	⇑eP	P	04 58 41.3	+0.5
INVG				IAmb	IAmb	04 58 42.6	
	comp=Z,105nm,1.0s						
DJES	Djerdap	79.66	321	⇓P	P	04 58 41.9	+0.8
PLN	Plauen	79.69	330	eP	P	04 58 41.9	+0.8
	comp=Z,67nm,0.9s,baz=35,slow=5.4						
GUNZ	Gunzen	79.72	330	eP	P	04 58 42.2	+0.9
	comp=Z,91nm,0.8s,baz=35,slow=5.4						
BAIL	Bailesti	79.73	320	⇑P	P	04 58 42.8	+1.4
PUNG	Punghina	79.75	320	⇑P	P	04 58 42.2	+0.7
WERN	Wernitzgruen	79.76	330	eP	P	04 58 42.5	+0.9
	comp=Z,107nm,0.7s,baz=35,slow=5.4						
ESY	Stoneypath	79.77	341	⇑eP	P	04 58 42.0	+0.6
NKC	Novy Kostel	79.78	330	eP	P	04 58 42.4	+0.8
NKC	Novy Kostel	79.78	330	eP	P	04 58 42.4	+0.8
IBBN	Ibbenburen	79.79	333	eP	P	04 58 42.2	+0.6
	comp=Z,168nm,0.7s,baz=35,slow=5.4						
F33A	5 Mile Ranch,	79.79	37	IAmb	IAmb	04 58 43.3	
	comp=Z,75nm,0.8s						
BANR	Banloc	79.80	322	⇑P	P	04 58 42.9	+1.1
EAB	Aberfoyle	79.95	342	⇑eP	P	04 58 43.1	+0.7
MDVR	Moldovita	79.97	321	⇑P	P	04 58 42.9	+0.1
RAYN	Ar Rayn	79.97	292	iP	P	04 58 43.0	-0.2
	SNR=66						
RAYN	Ar Rayn	79.97	292	P	P	04 58 42.3	-0.8
RAYN				pmax	pmax		
	comp=Z,92nm,1.1s						
RAYN				MLR	MLR		
	comp=Z,500nm,18.0s						
RAYN	Ar Rayn	79.97	292	P	P	04 58 42.3	-0.8
RAYN				IAmb	IAmb	04 58 44.2	
	comp=Z,92nm,1.1s						
RAYN				IAMs_20	IAMs_20	05 38 08.3	
	comp=Z,463nm,18.0s						
S22A	4UR Ranch, Cre	80.10	49	P	P	04 58 45.8	+1.8
	baz=314,SNR=46						
MANZ	Manzenberg	80.11	330	eP	P	04 58 44.2	+0.8
	comp=Z,132nm,1.2s,baz=35,slow=5.4						
LAWE	Loch Awe, Argy	80.13	342	⇑eP	P	04 58 44.2	+0.8
LAWE				IAmb	IAmb	04 58 44.6	
	comp=Z,102nm,0.7s						
CKRC	Cesky Krumlov	80.16	328	eP	P	04 58 44.5	+0.8
W18A	Petrified Fore	80.17	52	P	P	04 58 45.8	+1.6
	baz=312,SNR=11						
PIX	Pinacate	80.20	57	P	P	04 58 44.6	+0.5
KHC	Kasperske Hory	80.21	329	eP	P	04 58 44.9	+0.9
KHC				e		04 58 55.0	
KHC				e		04 59 02.5	
KHC	Kasperske Hory	80.21	329	eP	P	04 58 44.9	+0.9
KHC				epP	pP	04 58 55.0	-3.4
KHC				esP	sP	04 59 02.5	-1.5
KHC	Kasperske Hory	80.21	329	P	P	04 58 43.9	-0.1
Q24A	Divide	80.21	47	P	P	04 58 45.6	+1.0
	baz=314,SNR=20						
CONA	Conrad Observa	80.22	327	iP	P	04 58 45.4	+1.3
	comp=Z,153nm,1.0s,SNR=79						
UBBA	Unterbreizbach	80.22	331	eP	P	04 58 44.4	+0.6
	comp=Z,98nm,1.4s,baz=35,slow=5.4						
ROTZ	Rotzenmuhle	80.24	330	eP	P	04 58 45.2	+1.1
	comp=Z,122nm,1.0s,baz=35,slow=5.4						
ISP	Isparta	80.29	312	IAMs_20	IAMs_20	05 38 59.3	
	comp=Z,445nm,18.0s						
EYMN	Ely	80.31	33	P	P	04 58 44.6	+0.1
	baz=321,SNR=43						
EYMN	Ely	80.31	33	IAmb	IAmb	04 58 45.8	
	comp=Z,80nm,0.9s						
MORH	Mrgy, Hungar	80.32	324	⇑P	P	04 58 44.8	+0.2
MORH	Mrgy, Hungar	80.32	324	⇑iP	P	04 58 44.5	0.0
PGBU	Glenifferbraes	80.32	342	⇑eP	P	04 58 45.4	+1.0
PGBU				IAmb	IAmb	04 58 46.3	
	comp=Z,275nm,0.9s						
214A	Organ Pipe Nat	80.35	56	P	P	04 58 46.4	+1.3
	baz=312,SNR=32						
GEC2	GERESS Array S	80.39	328	P	P	04 58 44.8	-0.2
GEC2				IAmb	IAmb	04 58 46.6	
	comp=Z,104nm,1.0s						
GEC2	GERESS Array S	80.39	328	eP	P	04 58 45.6	+0.6
	comp=Z,110nm,1.1s,baz=35,slow=5.4						
GEC2				eL	L	05 36 49.9	
	comp=Z,1µm,20.7s						
GERES	GERESS Array B	80.39	328	P	P	04 58 45.3	+0.3
	comp=Z,78nm,0.9s,baz=38,slow=5.4,SNR=368						
GERES				LR	LR	05 37 11.0	
	comp=Z,1µm,20.3s,baz=33,slow=38						
GERES	GERESS Array B	80.39	328	P	P	04 58 44.8	-0.2
ESK	Eskdalemuir	80.45	341	⇑eP	P	04 58 45.7	+0.6
ESK				IAmb	IAmb	04 58 46.5	
	comp=Z,60nm,0.8s						
ESK	Eskdalemuir	80.45	341	P	P	04 58 45.4	+0.3
ESK				pmax	pmax		
	comp=Z,61nm,0.8s						
ESK	Eskdalemuir	80.45	341	P	P	04 58 45.4	+0.3
ESK				IAmb	IAmb	04 58 46.4	
	comp=Z,60nm,0.8s						
KASTN	Kahler Asten	80.48	333	eP	P	04 58 45.9	+0.5
	comp=Z,85nm,1.0s,baz=35,slow=5.4						
WET	Wettzell	80.48	329	eP	P	04 58 46.5	+1.1
	comp=Z,172nm,1.0s,baz=35,slow=5.4						
WET				eL	L	05 37 22.3	
	comp=Z,1µm,20.7s						
OGNE	Ogallala	80.52	44	P	P	04 58 46.7	+0.8
	baz=316,SNR=23						
OGNE	Ogallala	80.52	44	P	P	04 58 46.3	+0.4
OGNE				IAmb	IAmb	04 58 48.0	
	comp=Z,174nm,1.0s						
EDMD	Edmundbyers	80.57	340	eP	P	04 58 45.8	0.0
FRGS	Fruska Gora	80.58	323	⇑P	P	04 58 46.6	+0.6
FRGS	Fruska Gora	80.58	323	⇑iP	P	04 58 46.5	+0.4
CSS	Mathiatis	80.59	308	P	P	04 58 45.7	-0.5
CSS				IAmb	IAmb	04 58 50.2	
	comp=Z,135nm,0.8s						
ALN	Alexandroupoli	80.61	316	P	P	04 58 46.7	+0.5
ALN	Alexandroupoli	80.61	316	P	P	04 58 45.9	-0.3
ALN				pmax	pmax		
	comp=Z,73nm,1.0s						
ALN	Alexandroupoli	80.61	316	P	P	04 58 45.9	-0.3
ALN				IAmb	IAmb	04 58 47.3	
	comp=Z,73nm,1.0s						
MMAI	Mount Meron Ar	80.62	305	LR	LR	05 38 29.1	
	comp=Z,643nm,19.7s,baz=40,slow=39						
BUG	Bochum--Univer	80.68	333	eP	P	04 58 46.8	+0.4
	comp=Z,153nm,1.1s,baz=35,slow=5.4						
GRF	Grafenberg Arr	80.68	330	eP	P	04 58 47.7	+1.2
	comp=Z,330nm,0.9s,baz=35,slow=5.4						
GRF				eL	L	05 36 27.7	
	comp=Z,630nm,20.1s						
GRFO	Grafenberg	80.68	330	P	P	04 58 46.4	-0.1
GRFO				pmax	pmax		
	comp=Z,287nm,0.9s						
GRFO	Grafenberg	80.68	330	P	P	04 58 46.4	-0.1
RDO	Rodhopi	80.70	317	P	P	04 58 47.3	+0.6
LEF	Lefka	80.75	308	⇑P	P	04 58 46.9	-0.1
SOCY	Socotra	80.81	278	P	P	04 58 45.7	-2.0
SOCY				IAmb	IAmb	04 58 47.0	
	comp=Z,135nm,0.9s						
SOCY	Socotra	80.81	278	P	P	04 58 45.8	-2.0
	SNR=17						
VTS	Vitosha	80.81	319	⇑P	P	04 58 48.6	+1.2
BOVS	Bovan	80.82	321	⇑P	P	04 58 47.0	-0.3
SDCO	Great Sand Dun	80.86	48	P	P	04 58 49.4	+1.3
	baz=314,SNR=29						
KULA	Kula-Manisa	80.87	313	P	P	04 58 47.8	0.0
ARSA	Arzberg	80.89	326	iP	P	04 58 48.6	+0.9
	comp=Z,80nm,1.0s,SNR=24						
NEWG	New Galloway	80.89	341	⇑eP	P	04 58 47.7	+0.3
NEWG				IAmb	IAmb	04 58 48.8	
	comp=Z,56nm,0.8s						
MANT	Manisa	80.94	313	P	P	04 58 47.6	-0.8
MOA	Molln	80.94	327	iP	P	04 58 48.8	+0.8
	comp=Z,66nm,1.0s,SNR=23						
BEHE	Becsehely	80.95	325	⇑iP	P	04 58 50.3	+2.3
K31A	O'Neill	80.99	41	P	P	04 58 48.8	+0.5
F36A	Milaca	81.04	36	P	P	04 58 48.1	-0.3
KESW	Keswick, Cumbr	81.08	340	⇑eP	P	04 58 49.1	+0.6
KESW				IAmb	IAmb	04 58 50.3	
	comp=Z,215nm,1.1s						
KOGS	Kog	81.20	325	eP	P	04 58 49.2	-0.1
ECSD	EROS Data Cent	81.22	39	P	P	04 58 49.9	+0.4
	baz=319,SNR=43						
ECSD	EROS Data Cent	81.22	39	IAmb	IAmb	04 58 50.9	
	comp=Z,55nm,0.8s						
EZN	Ezine	81.22	315	P	P	04 58 49.8	+0.3
GAL1	Galloway	81.24	341	⇑eP	P	04 58 49.8	+0.5
GAL1				IAmb	IAmb	04 58 50.7	
	comp=Z,166nm,0.8s						
HPK	Haverah Park	81.25	339	⇑eP	P	04 58 50.2	+0.8
HPK				IAmb	IAmb	04 58 51.0	
	comp=Z,122nm,0.8s						
TNS	Taunus Mts	81.28	332	eP	P	04 58 50.3	+0.6
	comp=Z,81nm,0.8s,baz=35,slow=5.4						
TNS				eL	L	05 38 05.9	
	comp=Z,807nm,20.8s						
DIVS	Divibare	81.30	322	⇑iP	P	04 58 50.1	+0.1
DIVS	Divibare	81.30	322	P	P	04 58 49.4	-0.5
DIVS				IAmb	IAmb	04 58 51.0	
	comp=Z,64nm,0.8s						
E38A	The Farm, Brul	81.33	34	P	P	04 58 49.9	0.0
E38A				IAmb	IAmb	04 58 51.0	
	comp=Z,103nm,1.0s						
KAVA	Kavala	81.34	317	P	P	04 58 50.2	+0.1
KALN	Kalnik	81.36	325	iP	P	04 58 50.2	+0.1
CLGH	Cloghs, Cushen	81.38	342	⇑eP	P	04 58 50.9	+0.8
CLGH				IAmb	IAmb	04 58 51.7	
	comp=Z,250nm,1.0s						
ELL	Elmali	81.39	311	P	P	04 58 49.9	-0.7
ELL				pmax	pmax		
	comp=Z,392nm,0.8s						
ELL	Elmali	81.39	311	P	P	04 58 49.9	-0.7
TUC	Tucson	81.40	55	P	P	04 58 51.1	+0.4
TUC				pmax	pmax		
	comp=Z,25nm,0.9s						
TUC	Tucson	81.40	55	P	P	04 58 51.1	+0.4
NVR	Nevrokopi	81.42	318	P	P	04 58 51.2	+0.6
AHRW	Bad Neuenahr-A	81.50	333	eP	P	04 58 51.4	+0.6
	comp=Z,132nm,1.0s,baz=35,slow=5.4						
SOKA	Soboth	81.55	326	iP	P	04 58 51.9	+0.7
	comp=Z,167nm,0.7s,SNR=73						
KSCO	Kaye Shedlock’	81.58	45	P	P	04 58 52.2	+0.6
	baz=316,SNR=10						
KSCO	Kaye Shedlock’	81.58	45	IAmb	IAmb	04 58 53.0	
	comp=Z,75nm,1.1s						
MOSL	Moslavina	81.63	325	iP	P	04 58 51.5	-0.1
RJOB	Jochberg	81.64	328	eP	P	04 58 52.8	+1.2
	comp=Z,793nm,0.9s,baz=35,slow=5.4						
WACR	West Acre	81.71	337	⇑eP	P	04 58 52.4	+0.6
WACR				IAmb	IAmb	04 58 53.2	
	comp=Z,296nm,0.8s						
SRS	Serrai	81.73	318	P	P	04 58 52.1	-0.1
PTJ	Puntijarka	81.75	325	P	P	04 58 52.3	0.0
IOMK	Kirk Michael	81.75	341	⇑eP	P	04 58 52.6	+0.6
IOMK				IAmb	IAmb	04 58 54.6	
	comp=Z,247nm,1.0s						
BBLS	Lazići	81.75	322	⇑iP	P	04 58 53.2	+0.9
BEBN	Eben Emael	81.77	334	dP	P	04 58 52.3	+0.2
	comp=Z,172nm,0.9s						
LBWR	Ladybower, Pea	81.78	339	⇑eP	P	04 58 52.6	+0.4
BTNL	Ternell	81.79	333	bP	P	04 58 52.5	+0.2
	comp=Z,84nm,1.1s						
HAPS	Han Pijesak,Bl	81.80	322	⇑iP	P	04 58 52.4	-0.2
ZAG	Zagreb	81.80	325	⇑iP	P	04 58 52.8	+0.4
MEM	Membach	81.81	333	bP	P	04 58 52.6	+0.2
	comp=Z,95nm,0.9s						
SPMN	Marine on St.	81.85	36	P	P	04 58 52.8	0.0
	baz=321,SNR=11						
WIM	Isle of Man	81.88	341	⇑eP	P	04 58 53.1	+0.4
OBKA	Obir	81.89	326	iP	P	04 58 53.4	+0.4
	comp=Z,90nm,0.7s,SNR=23						
FUR	Furstenfeldbru	81.90	329	eP	P	04 58 53.9	+0.9
	comp=Z,365nm,0.9s,baz=35,slow=5.4						
FUR				eL	L	05 38 05.9	
	comp=Z,802nm,19.3s						
T25A	Trinidad	81.91	48	P	P	04 58 54.7	+1.2
	baz=315,SNR=41						
KBA	Koelnbreinsper	81.94	327	iP	P	04 58 53.9	+0.5
	comp=Z,199nm,1.0s,SNR=66						
FETY	Fethiye	81.94	312	P	P	04 58 52.9	-0.5
BSTI	Sart Tilman	81.99	334	dP	P	04 58 53.6	+0.3
KSL	Kastellorizon	81.99	311	P	P	04 58 52.9	-0.7
STIP	Stip	82.02	319	iP	P	04 58 53.4	-0.3
BHOU	Houvegnez	82.03	333	dP	P	04 58 53.7	+0.1
	comp=Z,61nm,1.4s						
CRES	Cresnjev	82.03	325	⇑iP	P	04 58 53.7	0.0
YER	Yerkesik	82.05	312	P	P	04 58 54.9	+0.9
OUR	Ouranopolis	82.10	317	P	P	04 58 53.1	-1.0
VAY	Valandovo	82.10	319	iP	P	04 58 54.9	+0.7
BLY	Banja Luka	82.10	324	⇑iP	P	04 58 54.1	0.0
GMM	Mts of Mourne	82.11	342	eP	P	04 58 54.5	+0.6
PLE	Pljevlja	82.16	322	eP	P	04 58 55.6	+1.0
MYKA	Terra Mystica	82.17	327	iP	P	04 58 54.5	+0.1
	comp=Z,85nm,0.6s,SNR=34						
SKO	Skopje	82.19	320	iP	P	04 58 55.8	+1.2
BGNE	Belgrade	82.19	41	P	P	04 58 55.0	+0.4
	baz=318,SNR=30						
BGNE	Belgrade	82.19	41	P	P	04 58 55.1	+0.4
OZLJ	Ozalj	82.19	325	iP	P	04 58 54.4	0.0
STU	Stuttgart	82.20	331	P	P	04 58 54.4	-0.1
STU				pmax	pmax		
	comp=Z,261nm,0.8s						
STU	Stuttgart	82.20	331	P	P	04 58 54.4	-0.1
STU	Stuttgart	82.20	331	eP	P	04 58 55.3	+0.8
	comp=Z,293nm,0.9s,baz=35,slow=5.4						

UCC	Uccle	82.21	334	bP	P	04 58 54.4	-0.1
BCLA	Clavier	82.22	334	bP	P	04 58 54.8	+0.2
	comp=Z,64nm,0.8s						
D41A	Chassel	82.22	32	P	P	04 58 55.2	+0.6
D41A				IAmb	IAmb	04 58 55.6	
	comp=Z,50nm,1.0s						
ANMO	Albuquerque	82.25	50	P	P	04 58 57.0	+1.8
	baz=314						
ANMO	Albuquerque	82.25	50c	iP	P	04 58 56.1	+0.8
ANMO				pmax	pmax		
	comp=Z,49nm,1.1s						
ANMO	Albuquerque	82.25	50	P	P	04 58 55.5	+0.2
ANMO				IAmb	IAmb	04 58 58.3	
	comp=Z,59nm,1.1s						
CWF	Charnwood Fore	82.25	339	⇑eP	P	04 58 54.0	-0.7
LJU	Ljubljana	82.26	326	iP	P	04 58 54.7	-0.2
	comp=Z,132nm,0.8s						
LJU	Ljubljana	82.26	326	⇑iP	P	04 58 54.9	0.0
IVA	Berane	82.27	321	eP	P	04 58 55.8	+0.7
BGES	Gesves	82.32	334	bP	P	04 58 55.2	+0.1
	comp=Z,64nm,0.9s						
PLG	Polygyros	82.35	317	P	P	04 58 56.3	+0.8
HORT	Hortiatis	82.36	318	P	P	04 58 55.4	-0.2
CHOS	Chios island	82.40	315	P	P	04 58 55.2	-0.6
PVY	Plav	82.45	321	eP	P	04 58 56.5	+0.4
WATA	Walderalm	82.45	329	iP	P	04 58 56.5	+0.5
	comp=Z,77nm,0.7s,SNR=39						
GRG	Griva	82.46	318	P	P	04 58 55.7	-0.3
RCHB	Rochefort	82.46	334	bP	P	04 58 55.8	0.0
	comp=Z,75nm,1.1s						
WME	Myndd Eilian	82.47	340	eP	P	04 58 55.6	-0.1
KOME	Kolasin	82.47	321	eP	P	04 58 56.5	+0.4
LENM	Lemitar	82.48	51	P	P	04 58 56.8	+0.3
SNF	Seneffe	82.48	334	dP	P	04 58 55.7	-0.2
	comp=Z,97nm,0.8s						
WTTA	Wattenberg	82.48	328	iP	P	04 58 56.9	+0.6
	comp=Z,139nm,0.8s,SNR=38						
UPM	Unac-Piva	82.49	322	⇑iP	P	04 58 56.2	-0.2
UPM	Unac-Piva	82.49	322	eP	P	04 58 56.2	-0.2
BMRD	Maredsous	82.50	334	bP	P	04 58 56.2	+0.2
	comp=Z,110nm,1.2s						
ZOU	Zoufplan	82.51	327	P	P	04 58 56.0	-0.4
ZOU				IAmb	IAmb	04 58 57.0	
	comp=Z,76nm,0.9s						
ABTA	Abfaltersbach	82.55	328	iP	P	04 58 56.1	-0.3
	comp=Z,124nm,1.1s,SNR=29						
CEY	Cerknica	82.55	326	⇑iP	P	04 58 56.3	-0.1
WLF	Walferdange	82.56	333	dP	P	04 58 56.9	+0.5
WLF	Walferdange	82.56	333	IAmb	IAmb	04 58 59.2	
	comp=Z,53nm,1.0s						
WLF	Walferdange	82.56	333	eP	P	04 58 57.0	+0.7
	comp=Z,52nm,0.9s,baz=35,slow=5.4						
Y22D	IRIS PASSCAL I	82.57	51	P	P	04 58 58.9	+2.0
	baz=314						
Y22D	IRIS PASSCAL I	82.57	51	P	P	04 58 57.2	+0.3
Y22D				IAmb	IAmb	04 58 59.6	
	comp=Z,42nm,0.7s						
JAVS	Javornik	82.58	326	iP	P	04 58 56.2	-0.4
	comp=Z,366nm,1.1s						
WLF1	Llynfaes	82.59	340	eP	P	04 58 56.8	+0.5
WLF1				IAmb	IAmb	04 58 57.4	
	comp=Z,131nm,1.0s						
MOTA	Moosalm	82.63	329	iP	P	04 58 57.6	+0.6
	comp=Z,216nm,0.9s,SNR=82						
BODT	Bodrum	82.65	313	P	P	04 58 56.4	-0.7
RETA	Reutte	82.65	329	iP	P	04 58 57.8	+0.8
	comp=Z,188nm,0.8s,SNR=55						
L34A	Svendsen Farm,	82.66	40	IAmb	IAmb	04 58 58.3	
	comp=Z,83nm,0.8s						
YLL	Llanberis	82.66	340	⇑eP	P	04 58 57.1	+0.3
YRC	Rhoscolyn	82.67	341	⇑eP	P	04 58 56.9	+0.1
SQTA	Sankt Quirin	82.69	329	iP	P	04 58 57.8	+0.6
	comp=Z,93nm,0.7s,SNR=34						
DOU	Dourbes	82.73	334	bP	P	04 58 57.3	+0.1
NKY	Niksic	82.75	322	eP	P	04 58 57.6	0.0
UBR	Ueberruh	82.75	330	eP	P	04 58 57.8	+0.3
	comp=Z,41nm,0.9s,baz=35,slow=5.4						
ARG	Arkhangelos	82.78	312	P	P	04 58 58.1	+0.3
LLW	Llanuwychllyn	82.79	340	⇑eP	P	04 58 58.2	+0.7
NKME	Niksic	82.80	322	eP	P	04 58 57.6	-0.2
RIY	Rijeka	82.85	326	⇑iP	P	04 58 55.8	-2.1
HLM1	Long Mynd	82.88	339	⇑eP	P	04 58 58.5	+0.5
BFO	Black Forest	82.89	331	P	P	04 58 58.0	-0.2
BFO				pmax	pmax		
	comp=Z,108nm,0.8s						
BFO	Black Forest	82.89	331	P	P	04 58 58.0	-0.2
BFO				IAmb	IAmb	04 58 59.7	
	comp=Z,108nm,0.8s						
BFO	Black Forest	82.89	331	eP	P	04 58 58.6	+0.5
	comp=Z,129nm,0.8s,baz=35,slow=5.4						
BFO				eL	L	05 35 27.0	
	comp=Z,808nm,21.7s						
BRY	Bratogost	82.89	322	⇑iP	P	04 58 58.1	-0.3
BRY	Bratogost	82.89	322	eP	P	04 58 58.1	-0.3
PHP	Peshkopia	82.90	320	P	P	04 58 58.5	+0.2
PDG	Podgorica	82.91	321	⇑P	P	04 58 58.6	+0.3
PDG	Podgorica	82.91	321	⇑iP	P	04 58 58.6	+0.3
TTG	Podgorica	82.91	321	eP	P	04 58 58.6	+0.3
UDBI	Udbina	82.91	324	iP	P	04 58 58.2	-0.2
G40A	Rib Lake	82.96	34	IAmb	IAmb	04 58 59.8	
	comp=Z,52nm,0.9s						
319A	Douglas	82.97	55	IAmb	IAmb	04 59 01.6	
	comp=Z,95nm,0.9s						
CEME	Cevo	82.98	321	eP	P	04 58 58.8	0.0
KIJV	Kijevo	83.03	324	iP	P	04 58 59.1	+0.2
N33A	J Bar K, Exete	83.04	41	IAmb	IAmb	04 58 60.0	
	comp=Z,128nm,1.1s						
FETA	Feichten	83.04	329	iP	P	04 58 59.7	+0.6
	comp=Z,111nm,0.9s,SNR=39						
LIT	Litokhoron	83.04	318	P	P	04 58 58.6	-0.5
SSW	Stow on the Wo	83.09	338	⇑eP	P	04 59 00.0	+1.0
RICI	Ricice	83.09	323	P	P	04 58 58.7	-0.5
FNA	Florina	83.11	319	P	P	04 58 59.1	-0.3
FNA	Florina	83.11	319	IAmb	IAmb	04 59 00.6	
	comp=Z,93nm,1.0s						
121A	Cookes Peak, D	83.11	53	P	P	04 59 01.5	+1.7
	baz=314,SNR=28						
121A	Cookes Peak, D	83.11	53	IAmb	IAmb	04 59 02.7	
	comp=Z,66nm,0.8s						
DSB	Dublin	83.12	342	IAmb	IAmb	04 59 02.1	
	comp=Z,87nm,1.0s						
TREB	Trebinje	83.12	322	⇑iP	P	04 58 58.4	-1.0
DRME	Dracevica, Mon	83.13	321	⇑iP	P	04 59 00.0	+0.5
DRME	Dracevica, Mon	83.13	321	eP	P	04 58 59.9	+0.5
EIL	Elat	83.14	303	LR	LR	05 40 53.8	
	comp=Z,404nm,18.1s,baz=62,slow=39						
OHR	Ohrid	83.15	319	iP	P	04 58 60.0	+0.3
DAVA	Damuels	83.16	329	iP	P	04 59 00.3	+0.6
	comp=Z,150nm,0.8s,SNR=46						
BUM	Brajici-Budva	83.18	321	eP	P	04 58 59.8	0.0
XOR	Xorichti	83.22	317	P	P	04 58 59.7	-0.3
DBRK	Dubrovnik	83.26	322	iP	P	04 58 58.5	-1.7
KZN	Kozani	83.26	318	P	P	04 58 59.8	-0.5
HCY	Herceg Novi	83.26	322	⇑iP	P	04 58 59.7	-0.4
HCY	Herceg Novi	83.26	322	eP	P	04 58 59.9	-0.2
ULC	Ulcinj	83.27	321	eP	P	04 59 00.4	+0.2
CBKS	Cedar Bluff	83.28	44	P	P	04 59 00.4	+0.1
	baz=317,SNR=17						
CBKS	Cedar Bluff	83.28	44	IAmb	IAmb	04 59 01.4	
	comp=Z,88nm,0.9s						
NVLJ	Novalja	83.28	325	iP	P	04 58 59.3	-0.9
MAKA	Makarska	83.31	323	iP	P	04 58 59.7	-0.7
STON	Ston	83.31	322	iP	P	04 58 58.0	-2.3
STRD	Stroud	83.35	339	⇑eP	P	04 59 01.1	+0.7
MCH1	Michaelchurch	83.38	339	⇑eP	P	04 59 00.9	+0.4
MCH1				IAmb	IAmb	04 59 02.0	
	comp=Z,170nm,0.7s						
E43A	Lone Tree Farm	83.42	32	IAmb	IAmb	04 59 01.9	
	comp=Z,40nm,0.8s						
ECH	Echery	83.42	332	IAmb	IAmb	04 59 02.2	
	comp=Z,116nm,0.8s						
HMNX	Herstmonceux	83.42	337	eP	P	04 59 00.8	+0.1
TIR	Tirane	83.44	320	P	P	04 59 01.6	+0.6
TIR	Tirane	83.44	320	⇑P	P	04 59 01.7	+0.7
MORI	Morici	83.45	324	iP	P	04 59 00.7	-0.4
SWN1	Swindon	83.48	338	⇑eP	P	04 59 01.5	+0.5
SWN1				IAmb	IAmb	04 59 02.7	
	comp=Z,357nm,0.9s						
WOL	Wolverton	83.49	338	⇑eP	P	04 59 01.2	+0.1
KBN	Korca	83.52	319	P	P	04 59 01.8	+0.2
NEST	Nestorio	83.55	319	P	P	04 59 01.9	+0.1
OLDB	Oldbury-Upon-S	83.56	339	eP	P	04 59 01.6	+0.1
SMIA	Simia	83.57	317	P	P	04 59 01.7	-0.1
APE	Apeiranthos	83.64	314	P	P	04 59 01.1	-1.1
APE	Apeiranthos	83.64	314	⇑P	P	04 59 01.2	-1.0
DUGI	Dugi Otok	83.65	325	iP	P	04 59 01.6	-0.5
HVAR	Hvar	83.66	323	iP	P	04 59 01.6	-0.5
IGLA	Glengowla, Co	83.66	343	eP	P	04 59 01.9	0.0
PENT	Pentalofos	83.67	319	P	P	04 59 02.3	-0.1
THL	Klokotos Trika	83.69	318	P	P	04 59 01.2	-1.1
KPRO	Kipourio	83.73	318	P	P	04 59 02.1	-0.6
LSTV	Lastovo	83.77	323	iP	P	04 59 01.6	-1.1
DION	Dionisos Attik	83.77	316	P	P	04 59 01.4	-1.5
HIZ	Hauiti	83.79	155	IAmb	IAmb	04 59 21.5	
	comp=Z,63nm,1.0s						
SRIG	Santa Rosalia	83.80	59	IAmb	IAmb	04 59 05.4	
	comp=Z,46nm,1.0s						
ATAL	Atalanti	83.81	317	P	P	04 59 02.5	-0.5
KARP	Karpathos	83.81	312	P	P	04 59 03.0	-0.1
LKR	Lokris	83.85	316	P	P	04 59 01.8	-1.4
K38A	Parkersburg	83.86	37	IAmb	IAmb	04 59 04.0	
	comp=Z,36nm,0.8s						
I40A	Norwalk	83.87	35	IAmb	IAmb	04 59 04.5	
	comp=Z,66nm,1.0s						
AGG	Agios Georgios	83.93	317	P	P	04 59 02.4	-1.2
AGG	Agios Georgios	83.93	317	IAmb	IAmb	04 59 03.7	
	comp=Z,103nm,0.9s						
ATHU	Athens Univers	83.93	316	P	P	04 59 01.2	-2.5
AXAR	Agios Charalam	83.94	317	P	P	04 59 03.1	-0.6
MATQ	Matagami	83.95	25	P	P	04 59 03.2	-0.3
	baz=331,SNR=16						
ATH	Athens Observa	83.97	316	P	P	04 59 03.2	-0.6
LSK	Leskovik	83.97	319	P	P	04 59 04.1	+0.2
VLY	Voula,Athens	84.01	315	P	P	04 59 02.2	-1.9
IWEX	Carrickbyrne,	84.02	341	eP	P	04 59 03.9	+0.1
MAKR	Makrakomi, Fth	84.04	317	P	P	04 59 03.4	-0.8
VILL	Villia	84.04	316	P	P	04 59 01.9	-2.4
SNT1	Gialos, Santor	84.16	314	P	P	04 59 03.2	-1.6
SANT	Santorini	84.18	313	⇓P	P	04 59 03.7	-1.3
SCIA	State Center	84.23	38	P	P	04 59 05.7	+0.6
	baz=321						
EVR	Evrytania	84.28	317	P	P	04 59 02.1	-3.4
VLO	Vlora	84.28	320	P	P	04 59 06.0	+0.6
URZ	Urewera	84.32	153	IAMs_20	IAMs_20	05 29 35.1	
	comp=Z,674nm,22.0s						
LTK	Loutraki	84.33	316	P	P	04 59 03.4	-2.3
LOUT	Loutraki	84.35	316	P	P	04 59 02.9	-2.9
ANX	Ano Chora	84.46	317	P	P	04 59 06.6	+0.2
SRN	Sarande	84.48	319	P	P	04 59 06.3	-0.1
THAL	Thalero	84.48	316	P	P	04 59 05.0	-1.4
E46A	Sault Ste Mari	84.48	30	IAmb	IAmb	04 59 06.8	
	comp=Z,47nm,1.1s						
KALE	Kalithea	84.49	317	P	P	04 59 04.9	-1.7
SERG	Sergoula	84.52	317	P	P	04 59 05.6	-1.1
TRIZ	Trizonia	84.55	317	P	P	04 59 05.1	-1.6
IGT	Igoumenitsa	84.57	319	P	P	04 59 06.7	-0.2
EFP	Efpalio	84.59	317	P	P	04 59 05.4	-1.6
I42A	Draeger Farm,	84.62	34	IAmb	IAmb	04 59 08.5	
	comp=Z,93nm,0.9s						
ZKR	Zakros	84.66	312	P	P	04 59 06.5	-0.9
STIA	Sitia Lasithi	84.67	312	P	P	04 59 07.8	+0.4
HTL	Hartland	84.69	340	eP	P	04 59 07.8	+0.6
LAKA	Lakka	84.69	317	P	P	04 59 06.6	-0.9
KSU1	Kansas State U	84.70	42	P	P	04 59 07.6	+0.1
	baz=319,SNR=25						
KSU1	Kansas State U	84.70	42	IAmb	IAmb	04 59 09.6	
	comp=Z,70nm,0.8s						
KRND	KRANIDI	84.70	316	P	P	04 59 05.7	-1.9
KEK	Kerkira	84.70	319	P	P	04 59 07.5	0.0
LSQQ	Lebel-sur-Quev	84.77	25	P	P	04 59 07.7	0.0
	baz=331						
JFWS	Jewell Farm	84.81	36	P	P	04 59 07.9	-0.1
	baz=323,SNR=12						
JFWS	Jewell Farm	84.81	36	IAmb	IAmb	04 59 08.9	
	comp=Z,52nm,1.0s						
PDO	Prodromos	84.84	318	P	P	04 59 07.4	-0.8
NPS	Neapolis	84.89	313	P	P	04 59 06.6	-2.0
BKZ	Black Stump Fm	84.92	154	P	P	04 59 09.2	+0.8
BKZ					PcP	04 59 10.7	-0.9
TSLK	Tsoukalades, L	84.94	318	P	P	04 59 08.1	-0.6
LKD2	Lefkada island	84.97	318	P	P	04 59 08.3	-0.6
NYDR	Nydri-Lefkada	85.00	318	P	P	04 59 08.3	-0.7
FRMA	Ierapetra Chan	85.00	312	P	P	04 59 08.9	-0.2
L40A	Anamosa	85.04	37	IAmb	IAmb	04 59 10.3	
	comp=Z,86nm,0.9s						
AXS	Araxos	85.04	317	P	P	04 59 08.8	-0.4
LAST	Lasithi	85.04	313	P	P	04 59 08.8	-0.6
G45A	Suttons Bay	85.05	32	IAmb	IAmb	04 59 10.5	
	comp=Z,90nm,0.8s						
AMTX	Amarillo	85.06	48	P	P	04 59 10.7	+1.1
	baz=317						
AMTX	Amarillo	85.06	48	IAmb	IAmb	04 59 11.9	
	comp=Z,56nm,0.9s						
MSTX	Muleshoe	85.09	49	P	P	04 59 10.4	+0.7
	baz=316,SNR=26						
MSTX	Muleshoe	85.09	49	IAmb	IAmb	04 59 11.7	
	comp=Z,58nm,0.9s						
EVGI	Lefkada island	85.09	318	P	P	04 59 08.1	-1.4
RLS	Riolos of Patr	85.09	317	P	P	04 59 09.6	+0.1
ZCCA	Zocca	85.12	327	IAmb	IAmb	04 59 11.8	
	comp=Z,84nm,0.9s						
VLX	Vlachokerasia	85.12	316	P	P	04 59 08.7	-1.1
MNTX	Cornudas Mount	85.15	52	P	P	04 59 11.1	+1.1
	baz=315,SNR=20						
QRZ	Quartz Range	85.17	157	IAMs_20	IAMs_20	05 32 34.6	
	comp=Z,732nm,20.0s						
KAN10	Anthony SW Sta	85.40	44	IAmb	IAmb	04 59 12.3	
	comp=Z,61nm,0.7s						
KEF5	Kardakata, Kep	85.45	318	P	P	04 59 11.0	-0.3
U32A	Winter Ranch,	85.46	45	IAmb	IAmb	04 59 13.6	
	comp=Z,57nm,1.0s						
VLS	Valsamata	85.46	318	P	P	04 59 08.4	-3.0
KEF4	Livadi, Kephal	85.49	318	P	P	04 59 11.3	-0.1
MATE	Matera	85.50	322	⇑P	P	04 59 11.5	+0.1
ITM	Ithomi	85.51	316	P	P	04 59 10.5	-1.1
VLC	Villacollemand	85.52	327	IAmb	IAmb	04 59 21.1	
	comp=Z,71nm,0.9s						
SIVA	Sivas	85.52	313	P	P	04 59 11.8	+0.1
DMLN	Damoulianata-K	85.53	318	P	P	04 59 10.7	-1.0
PPT	Papeete	85.56	117	LR	LR	05 29 26.4	
	comp=Z,625nm,21.9s,baz=302,slow=30						
KEF3	Kipouria, Keph	85.57	318	P	P	04 59 11.8	-0.1
PPT2	Papeete2	85.57	117	eS	S	05 09 37.2	-3.1
	comp=Z,119nm,23.8s						
PPT2	Papeete2	85.57	117	eLQ	LQ	05 22 08.4	
	comp=Z,836nm,31.2s						
PPT2				eLR	LR	05 26 01.0	
	comp=Z,1µm,22.8s,baz=311						
PPT2	Papeete2	85.57	117	eT	T	06 32 58.6	
	comp=Z,45nm,0.3s						
KTHA	Kythira Island	85.58	315	P	P	04 59 11.1	-0.9
KAN14	Manchester OK	85.59	44	IAmb	IAmb	04 59 13.8	
	comp=Z,60nm,0.8s						
KTHR	Kythira	85.61	315	P	P	04 59 11.4	-0.7
PAE	Paea	85.62	117	eT	T	06 33 01.4	
	comp=Z,8.4nm,0.3s						
GLMI	Grayling	85.64	31	P	P	04 59 12.8	+0.7
	baz=326,SNR=12						
VLMS	Volimes, Zakyn	85.65	317	P	P	04 59 11.3	-1.0
IMMV	Iera Moni Meta	85.66	314	P	P	04 59 12.2	-0.2
JSA	Saint Aubin	85.66	337	⇑eP	P	04 59 11.6	-0.5
JSA				IAmb	IAmb	04 59 12.6	
	comp=Z,270nm,1.0s						
OSSC	Osservatorio P	85.68	326	IAmb	IAmb	04 59 13.1	
	comp=Z,68nm,0.9s						
AQU	L'Aquila	85.68	325	⇑iP	P	04 59 12.3	-0.2
LTHK	Lithakia	85.69	317	P	P	04 59 11.2	-1.2
TIAR	Tiarei	85.71	117	eT	T	06 33 08.0	
	comp=Z,13nm,0.3s						
MSSA	Maissana	85.75	328	IAmb	IAmb	04 59 13.7	
	comp=Z,46nm,1.0s						
L42A	Oliver, Polo	85.79	36	IAmb	IAmb	04 59 13.8	
	comp=Z,52nm,0.9s						
KAN13	South Haven SW	85.81	44	IAmb	IAmb	04 59 14.9	
	comp=Z,89nm,0.9s						
PYL	PYLOS	85.82	316	P	P	04 59 11.5	-1.6
K43A	Burlington	85.82	35	IAmb	IAmb	04 59 14.8	
	comp=Z,52nm,0.9s						
P38A	Dawn	85.84	40	IAmb	IAmb	04 59 14.4	
	comp=Z,67nm,0.8s						
TVO	Taravao	85.93	117	eT	T	06 33 24.5	
	comp=Z,3.8nm,0.3s						
THZ	Tophouse	86.15	157	IAMs_20	IAMs_20	05 32 56.7	
	comp=Z,708nm,20.0s						
LATE	Laterza	86.18	326	IAmb	IAmb	04 59 15.1	
	comp=Z,37nm,1.1s						
BNI	Bardonecchia	86.25	330	IAmb	IAmb	04 59 20.1	
	comp=Z,47nm,0.9s						
N41A	Harden Midland	86.27	37	IAmb	IAmb	04 59 16.3	
	comp=Z,54nm,0.7s						
T35A	Sooner Cattle	86.39	43	IAmb	IAmb	04 59 17.4	
	comp=Z,57nm,0.8s						
L44A	Lake County Fo	86.43	35	P	P	04 59 16.2	+0.2
	baz=324						
L44A	Lake County Fo	86.43	35	IAmb	IAmb	04 59 17.4	
	comp=Z,62nm,1.1s						
DAMY	Dhamar	86.49	286	IAmb	IAmb	04 59 18.9	
	comp=Z,54nm,1.0s						
DAMY				IAMs_20	IAMs_20	05 43 02.8	
	comp=Z,377nm,19.0s						
DAMY	Dhamar	86.49	286	P	P	04 59 18.3	+1.1
	SNR=8.9						
TIP	Timpagrande	86.62	321	⇑P	P	04 59 17.4	+0.2
TIP	Timpagrande	86.62	321	IAmb	IAmb	04 59 18.7	
	comp=Z,65nm,1.1s						
P40A	Paris	86.63	39	IAmb	IAmb	04 59 19.6	
	comp=Z,86nm,1.0s						
OK029	Liberty Lake	86.73	45	IAmb	IAmb	04 59 19.2	
	comp=Z,65nm,0.7s						
HQIL	Hanson Quary C	86.76	35	IAmb	IAmb	04 59 19.1	
	comp=Z,93nm,1.2s						
WMOK	Wichita Mounta	86.79	46	P	P	04 59 18.6	+0.6
	baz=318,SNR=30						
WMOK	Wichita Mounta	86.79	46	IAmb	IAmb	04 59 19.3	
	comp=Z,23nm,0.8s						
MEH	Mehetia	86.81	116	eT	T	06 34 30.2	
	comp=Z,237nm,0.3s						
QUOK	Quay	86.85	44	IAmb	IAmb	04 59 20.1	
	comp=Z,78nm,1.1s						
SSB	Saint Sauveur	86.86	331	IAmb	IAmb	04 59 19.8	
	comp=Z,79nm,0.9s						
OK031	S. Brethren Rd	86.94	44	IAmb	IAmb	04 59 20.1	
	comp=Z,41nm,1.0s						
OK030	Cody Creek RV	86.99	44	IAmb	IAmb	04 59 20.3	
	comp=Z,35nm,1.0s						
M44A	Midewin, Midew	87.01	35	IAmb	IAmb	04 59 19.8	
	comp=Z,47nm,0.8s						
OKCFA	Oklahoma City	87.02	45	IAmb	IAmb	04 59 22.0	
	comp=Z,59nm,0.9s						
D55A	Sainte-Anne-du	87.05	25	P	P	04 59 19.1	+0.1
	baz=332,SNR=15						
HDIL	Hopedale	87.11	37	P	P	04 59 19.9	+0.5
	baz=323,SNR=25						
ALGO	Algonquin Park	87.12	27	P	P	04 59 19.0	-0.4
	baz=330,SNR=9.7						
FNO	Franklin	87.16	45	IAmb	IAmb	04 59 21.7	
	comp=Z,58nm,0.9s						
D56A	ZEC Mazanza, M	87.25	24	P	P	04 59 20.3	+0.3
	baz=333,SNR=29						
L46A	Eue Claire	87.26	34	IAmb	IAmb	04 59 21.1	
	comp=Z,51nm,0.8s						
E55A	Montcerf-Lytto	87.36	25	P	P	04 59 20.3	-0.1
	baz=332,SNR=9.7						
RPZ	Rata Peaks	87.43	159	LR	LR	05 31 46.0	
	comp=Z,449nm,22.0s,baz=35,slow=31						
S39A	Bolivar	87.44	41	IAmb	IAmb	04 59 21.9	
	comp=Z,75nm,0.8s						
TUL1	Leonard	87.53	43	P	P	04 59 22.3	+0.8
	baz=320,SNR=22						
TUL1	Leonard	87.53	43	IAmb	IAmb	04 59 22.8	
	comp=Z,38nm,0.8s						
LATQ	La Tuque	87.56	23	P	P	04 59 21.6	+0.2
	baz=334						
G54A	Lake Saint Pet	87.59	27	P	P	04 59 21.5	-0.2
	baz=330,SNR=10						
E56A	St. Veronique	87.61	25	P	P	04 59 21.9	+0.2
	baz=333,SNR=18						
P43A	Skaggs, Pawnee	87.74	37	IAmb	IAmb	04 59 24.0	
	comp=Z,72nm,1.0s						
CEL	Celeste	87.76	321	IAmb	IAmb	04 59 23.4	
	comp=Z,59nm,0.8s						
SADO	Sadowa	87.77	28	LR	LR	05 40 39.4	
	comp=Z,398nm,21.8s,baz=352,slow=37						
SLBS	Sierra La Lagu	87.77	61	P	P	04 59 23.3	+0.3
SLBS				IAmb	IAmb	04 59 25.9	
	comp=Z,33nm,1.1s						
D58A	Chemin du LacG	87.79	23	P	P	04 59 22.6	+0.1
	baz=334,SNR=10.0						
O44A	Mansfield	87.82	36	IAmb	IAmb	04 59 24.2	
	comp=Z,60nm,0.9s						
MQZ	McQueen’s Vall	87.86	158	IAMs_20	IAMs_20	05 29 48.6	
	comp=Z,538nm,18.0s						
U38A	Gravette	87.86	42	IAmb	IAmb	04 59 24.5	
	comp=Z,55nm,0.9s						
ABTX	Abilene, Hawle	87.87	48	P	P	04 59 24.0	+0.8
	baz=318,SNR=14						
TX31	Lajitas Ar. Si	87.87	53	IAmb	IAmb	04 59 26.2	
	comp=Z,46nm,0.8s						
TXAR	Lajitas Array	87.87	53	P	P	04 59 24.0	+0.6
	comp=Z,9.9nm,0.8s,baz=286,slow=3.6,SNR=54						
TXAR				PKKPbc	PKKPbc	05 17 08.9	+1.0
	comp=Z,0.5nm,0.7s,baz=153,slow=6.1,SNR=4.5						
TXAR	Lajitas Array	87.87	53	P	P	04 59 23.6	+0.3
I51A	Listowel	87.90	30	P	P	04 59 23.9	+0.8
	baz=329,SNR=12						
E57A	Chemin Saint G	88.01	24	P	P	04 59 24.1	+0.5
	baz=333,SNR=33						
AAM	Ann Arbor	88.13	32	P	P	04 59 24.9	+0.6
	baz=327						
AAM	Ann Arbor	88.13	32	IAmb	IAmb	04 59 26.1	
	comp=Z,64nm,0.9s						
H53A	Bobcaygeon	88.14	28	P	P	04 59 24.4	+0.1
	baz=330,SNR=8.8						
D59A	Saint-Raymond	88.18	22	P	P	04 59 24.5	+0.1
	baz=335,SNR=7.9						
CCM	Cathedral Cave	88.18	39	P	P	04 59 25.1	+0.5
	baz=322						
CCM	Cathedral Cave	88.18	39	P	P	04 59 25.0	+0.5
CCM				pmax	pmax		
	comp=Z,115nm,0.9s						
CCM	Cathedral Cave	88.18	39	P	P	04 59 24.9	+0.4
HHAR	Hobbs	88.21	42	IAmb	IAmb	04 59 26.0	
	comp=Z,40nm,0.8s						
SFIN	Lafayette	88.25	35	P	P	04 59 25.4	+0.6
	baz=325,SNR=8.9						
SFIN	Lafayette	88.25	35	IAmb	IAmb	04 59 26.4	
	comp=Z,66nm,0.9s						
PLVO	Plevna	88.26	27	IAmb	IAmb	04 59 26.0	
	comp=Z,42nm,0.9s						
E58A	La Victoria	88.31	24	P	P	04 59 25.4	+0.4
	baz=334,SNR=12						
HPIG		88.32	56	IAmb	IAmb	04 59 27.8	
	comp=Z,30nm,0.9s						
F57A	Harrington	88.37	25	P	P	04 59 25.2	-0.1
	baz=333						
MGMO	Mountain Grove	88.38	40	IAmb	IAmb	04 59 26.8	
	comp=Z,55nm,0.8s						
E59A	St. Maurice	88.45	23	P	P	04 59 25.8	+0.1
	baz=334						
D61A	St Aubert, Com	88.47	21	P	P	04 59 26.2	+0.4
	baz=336,SNR=6.8						
D60A	Saint Jean D’O	88.53	22	P	P	04 59 26.2	+0.2
	baz=336,SNR=18						
DELO	Deloro Mine	88.53	27	IAmb	IAmb	04 59 27.4	
	comp=Z,57nm,1.1s						
F58A	St-Lin Laurent	88.60	24	P	P	04 59 26.6	+0.2
	baz=334						
FVM	French Village	88.63	39	IAmb	IAmb	04 59 28.4	
	comp=Z,54nm,0.8s						
U40A	Yellville	88.71	41	P	P	04 59 27.5	+0.3
	baz=321,SNR=72						
X37A	Clayton	88.76	44	IAmb	IAmb	04 59 28.6	
	comp=Z,25nm,0.9s						
E60A	Ste Agathe de	88.87	22	P	P	04 59 27.7	+0.1
	baz=335,SNR=6.8						
G57A	Newington	88.90	25	P	P	04 59 27.9	+0.1
	baz=333,SNR=14						
F59A	Saint Guilaume	88.93	24	P	P	04 59 28.4	+0.5
	baz=334,SNR=6.4						
T42A	Van Buren	89.06	40	IAmb	IAmb	04 59 29.8	
	comp=Z,37nm,0.8s						
F60A	Warwick	89.08	23	P	P	04 59 28.9	+0.3
	baz=335						
E61A	Lac Etchemin	89.09	22	P	P	04 59 29.1	+0.4
	baz=336						
OLIL	Olney	89.13	37	IAMs_20	IAMs_20	05 39 32.8	
	comp=Z,656nm,21.0s						
W39A	Magazine	89.13	43	P	P	04 59 29.5	+0.4
	baz=321,SNR=11						
W39A	Magazine	89.13	43	IAmb	IAmb	04 59 30.1	
	comp=Z,27nm,0.9s						
M50A	Fremont	89.13	32	IAmb	IAmb	04 59 30.6	
	comp=Z,41nm,0.9s						
G58A	Ormstown	89.17	25	P	P	04 59 29.2	+0.1
	baz=333,SNR=8.1						
D63A	Stockholm	89.19	20	P	P	04 59 29.6	+0.5

								baz=338,SNR=8.7
PECO	Prince Edward	89.25	27	IAmb	IAmb	04 59 30.9		comp=Z,60nm,1.1s
H57A	Richville	89.34	26	P	P	04 59 30.0	+0.1	baz=332,SNR=11
JCT	Junction City	89.35	50	P	P	04 59 31.0	+0.7	baz=318,SNR=22
JCT	Junction City	89.35	50	IAmb	IAmb	04 59 31.9		comp=Z,43nm,0.8s
F61A	St Evariste	89.36	22	P	P	04 59 30.9	+0.9	baz=336,SNR=11
LONY	Lake Ozonia	89.47	25	P	P	04 59 30.7	+0.1	baz=333
LONY	Lake Ozonia	89.47	25	IAmb	IAmb	04 59 31.2		comp=Z,30nm,1.1s
BLO	Bloomington	89.49	36	IAmb	IAmb	04 59 31.9		comp=Z,36nm,0.9s
G59A	Clarenceville	89.50	24	P	P	04 59 30.8	+0.1	baz=334
WHTX	Lake Whitney,	89.58	47	P	P	04 59 32.1	+0.9	baz=319
WHTX	Lake Whitney,	89.58	47	IAmb	IAmb	04 59 32.7		comp=Z,31nm,0.9s
ATD	Arta Tunnel	89.60	285	IAmb	IAmb	04 59 33.4		comp=Z,40nm,1.0s
O49A	Covington	89.61	34	IAmb	IAmb	04 59 32.8		comp=Z,69nm,0.9s
TBI	Tubuai	89.66	121	*e*S	S	05 10 17.5	-1.6	comp=Z,249nm,25.5s
TBI	Tubuai	89.66	121	*e*LR	LR	05 27 41.4		comp=Z,831nm,26.5s,baz=310
TBI	Tubuai	89.66	121	*e*T	T	06 38 03.6		comp=Z,188nm,0.3s
E63A	Oxbow	89.67	21	P	P	04 59 31.7	+0.3	baz=337,SNR=7.2
H59A	Cadyville	89.73	25	P	P	04 59 31.8	+0.1	baz=334
ERPA	Erie	89.73	30	P	P	04 59 32.7	+0.9	baz=329,SNR=24
P48A	Milroy	89.74	35	IAmb	IAmb	04 59 32.8		comp=Z,40nm,0.9s
MIAR	Mount Ida	89.74	43	P	P	04 59 32.9	+1.0	baz=321,SNR=30
G60A	Masonville	89.75	24	P	P	04 59 32.4	+0.5	baz=334
L53A	Girard	89.77	30	P	P	04 59 33.0	+1.1	baz=329,SNR=47
H58A	Gabriels	89.78	25	P	P	04 59 32.4	+0.4	baz=333,SNR=9.6
LCAR	Lake Charles	89.79	40	IAmb	IAmb	04 59 33.1		comp=Z,25nm,1.0s
G61A	St-Isidore-de-	89.83	23	P	P	04 59 33.2	+1.0	baz=335,SNR=10
E64A	Bridgewater	89.83	20	P	P	04 59 32.5	+0.3	baz=338,SNR=7.8
J56A	Wolcott	89.88	27	P	P	04 59 32.6	+0.2	baz=331,SNR=13
J56A	Wolcott	89.88	27	IAmb	IAmb	04 59 33.9		comp=Z,78nm,1.1s
W41B	Gary Mavity, V	89.94	42	P	P	04 59 33.3	+0.4	baz=322,SNR=20
USIN	University of	89.95	37	IAmb	IAmb	04 59 34.1		comp=Z,37nm,0.9s
Z38A	Mt. Pleasant	89.98	45	IAmb	IAmb	04 59 34.4		comp=Z,46nm,0.8s
P49A	Miami Univ. Ec	89.98	34	P	P	04 59 33.6	+0.6	baz=326,SNR=21
M53A	WI Miller and	90.05	31	P	P	04 59 34.1	+0.8	baz=329,SNR=19
H60A	Morristown	90.12	24	P	P	04 59 34.3	+0.7	baz=334
ACSO	Alum Creek Sta	90.14	33	P	P	04 59 34.4	+0.6	baz=327,SNR=25
F63A	Nahmakanta, Br	90.14	21	P	P	04 59 34.2	+0.5	baz=337
NCB	Newcomb	90.16	25	IAmb	IAmb	04 59 34.9		comp=Z,26nm,0.8s
I58A	Old Forge	90.16	26	P	P	04 59 34.0	+0.1	baz=333
X40A	Basin Creek Fa	90.17	43	P	P	04 59 34.8	+0.8	baz=321,SNR=21
X40A	Basin Creek Fa	90.17	43	IAmb	IAmb	04 59 36.0		comp=Z,42nm,0.9s
G62A	West of Eustis	90.18	22	P	P	04 59 34.9	+1.0	baz=336,SNR=6.1
F64A	Sherman	90.20	21	P	P	04 59 34.4	+0.5	baz=337
F64A	Sherman	90.20	21	IAmb	IAmb	04 59 35.0		comp=Z,38nm,0.8s
K56A	Middlesex	90.22	28	P	P	04 59 34.7	+0.6	baz=331,SNR=9.4
VT1	Waterbury	90.31	24	IAmb	IAmb	04 59 35.9		comp=Z,36nm,0.9s
WCI	Wyandotte Cave	90.36	36	P	P	04 59 35.8	+1.0	baz=325
WCI	Wyandotte Cave	90.36	36	P	P	04 59 35.2	+0.4	
WCI				pmax	pmax			comp=Z,51nm,0.9s
WCI	Wyandotte Cave	90.36	36	P	P	04 59 35.2	+0.4	
WCI				IAmb	IAmb	04 59 36.5		comp=Z,51nm,0.8s
M54A	Oil Creek Stat	90.38	30	P	P	04 59 35.5	+0.7	baz=330,SNR=23
H61A	Lyndonville	90.38	24	P	P	04 59 35.8	+1.0	baz=335,SNR=9.2
435B	Jarrell	90.41	48	P	P	04 59 35.8	+0.6	baz=319
435B	Jarrell	90.41	48	IAmb	IAmb	04 59 36.9		comp=Z,28nm,0.8s
GNAR	Gosnell	90.43	40	IAmb	IAmb	04 59 36.7		comp=Z,27nm,0.7s
K57A	Scipio Center	90.48	27	P	P	04 59 35.7	+0.5	baz=332,SNR=7.0
PKME	Peaks-Kenny Pk	90.49	22	P	P	04 59 36.1	+0.9	baz=337
PKME	Peaks-Kenny Pk	90.49	22	IAmb	IAmb	04 59 37.2		comp=Z,56nm,0.9s
J59A	Piesco	90.52	26	P	P	04 59 35.9	+0.5	baz=333,SNR=12
J59A	Piesco	90.52	26	IAmb	IAmb	04 59 37.0		comp=Z,67nm,1.0s
N53A	Lisbon	90.52	31	IAmb	IAmb	04 59 36.9		comp=Z,60nm,1.1s
G63A	Kingsbury	90.54	22	P	P	04 59 36.4	+0.9	baz=336,SNR=5.5
I60A	Shoreham	90.58	25	P	P	04 59 36.4	+0.7	baz=334,SNR=11
LPAR	Lepanto	90.58	40	IAmb	IAmb	04 59 37.5		comp=Z,56nm,1.0s
H62A	Milan	90.58	23	P	P	04 59 36.8	+1.0	baz=335,SNR=10
L56A	Greenwood	90.62	28	P	P	04 59 36.7	+0.7	baz=331,SNR=18
LBNH	Lisbon	90.65	24	P	P	04 59 37.2	+1.1	baz=335
G64A	Maxfield	90.66	21	P	P	04 59 36.9	+0.9	baz=337,SNR=7.1
O52A	Adamsville	90.71	32	IAmb	IAmb	04 59 38.1		comp=Z,60nm,1.1s
N54A	Moraine State	90.72	30	P	P	04 59 37.3	+0.8	baz=329,SNR=14
N54A	Moraine State	90.72	30	IAmb	IAmb	04 59 37.9		comp=Z,66nm,1.0s
P51A	Williamsport	90.73	33	IAmb	IAmb	04 59 37.9		comp=Z,60nm,0.9s
K58A	Earlville	90.75	27	P	P	04 59 37.2	+0.7	baz=332,SNR=14
H63A	New Sharon	90.83	22	P	P	04 59 37.9	+1.1	baz=336
O53A	New Philadelph	90.85	32	P	P	04 59 37.7	+0.7	baz=328,SNR=11
ACCN	Adirondack Com	90.86	25	IAmb	IAmb	04 59 38.8		comp=Z,66nm,1.1s
M56A	Emporium	90.96	29	P	P	04 59 38.3	+0.8	baz=330,SNR=18
P52A	Corning	90.99	33	P	P	04 59 37.9	+0.2	baz=328,SNR=8.6
P52A	Corning	90.99	33	IAmb	IAmb	04 59 39.1		comp=Z,58nm,1.1s
L57A	Andrews Acres	91.00	28	P	P	04 59 38.4	+0.6	baz=331,SNR=10
K59A	Cooperstown	91.01	26	P	P	04 59 38.4	+0.6	baz=333,SNR=18
HNH	Hanover	91.02	24	IAmb	IAmb	04 59 39.9		comp=Z,51nm,1.0s
G65A	Princeton	91.03	20	P	P	04 59 38.4	+0.6	baz=338,SNR=5.9
WVL	Waterville	91.03	22	IAmb	IAmb	04 59 39.6		comp=Z,42nm,1.0s
J60A	Lant Hill Farm	91.07	25	P	P	04 59 38.7	+0.7	baz=334,SNR=6.2
H64A	Troy	91.09	22	P	P	04 59 38.7	+0.7	baz=337
BINY	Binghamton	91.13	27	P	P	04 59 38.9	+0.6	baz=332,SNR=11
BINY	Binghamton	91.13	27	IAmb	IAmb	04 59 40.1		comp=Z,60nm,1.0s
Z41A	Richland Creek	91.14	43	P	P	04 59 39.5	+1.0	baz=321
X43A	Marvell	91.15	41	P	P	04 59 39.4	+0.9	baz=322
I62A	Tamworth	91.16	23	P	P	04 59 39.3	+0.9	baz=335
833A	Chaparral WMA,	91.17	51	P	P	04 59 39.9	+1.2	baz=318,SNR=5.5
R50A	Paris	91.19	35	IAmb	IAmb	04 59 39.9		comp=Z,28nm,0.9s
I63A	Otisfield	91.23	23	P	P	04 59 40.1	+1.4	baz=336,SNR=7.2
O54A	Avella	91.24	31	IAmb	IAmb	04 59 40.3		comp=Z,31nm,0.8s
J61A	Chester	91.26	24	P	P	04 59 39.9	+1.1	baz=334,SNR=5.5
H65A	Eastbrook	91.31	21	P	P	04 59 39.9	+0.8	baz=337
L58A	Harry Jones Me	91.31	27	P	P	04 59 39.9	+0.7	baz=332,SNR=21
WVT	Waverly	91.36	38	P	P	04 59 40.2	+0.7	baz=324
WVT	Waverly	91.36	38	P	P	04 59 39.9	+0.5	
WVT				pmax	pmax			comp=Z,30nm,0.9s
WVT	Waverly	91.36	38	P	P	04 59 39.9	+0.5	
WVT				IAmb	IAmb	04 59 41.2		comp=Z,30nm,0.9s
N56A	West Decatur	91.41	29	P	P	04 59 40.4	+0.8	baz=330,SNR=13
P53A	Whipple	91.42	32	IAmb	IAmb	04 59 40.9		comp=Z,29nm,1.1s
FFD	Franklin Falls	91.43	24	IAmb	IAmb	04 59 41.9		comp=Z,47nm,0.8s
TRY	Troy	91.45	25	IAmb	IAmb	04 59 41.7		comp=Z,59nm,1.1s
L59A	Walton	91.47	27	P	P	04 59 40.7	+0.7	baz=333,SNR=15
K60A	Five Rivers En	91.48	26	P	P	04 59 40.6	+0.7	baz=333,SNR=7.2
M57A	Sunshine Farm,	91.48	28	P	P	04 59 40.8	+0.9	baz=331,SNR=25
H66A	Whiting	91.48	20	P	P	04 59 40.4	+0.5	baz=338
Q52A	Bidwell	91.50	33	IAmb	IAmb	04 59 40.9		comp=Z,24nm,1.0s
J62A	Henniker	91.60	24	P	P	04 59 41.6	+1.2	baz=335
K61A	Williamstown	91.64	25	P	P	04 59 41.7	+1.1	baz=334,SNR=7.5
M58A	Price's Panora	91.69	28	P	P	04 59 41.6	+0.7	baz=332,SNR=15
KSPA	Keystone Colle	91.77	27	IAmb	IAmb	04 59 43.0		comp=Z,57nm,1.0s
J63A	Strafford	91.78	24	P	P	04 59 42.3	+1.0	baz=335
N57A	Milroy	91.83	29	P	P	04 59 42.3	+0.7	baz=331,SNR=13
O56A	Blue Knob Stat	91.87	30	P	P	04 59 42.4	+0.6	baz=330,SNR=5.6
O56A	Blue Knob Stat	91.87	30	IAmb	IAmb	04 59 43.1		comp=Z,24nm,0.9s
Q53A	Leroy	91.90	33	P	P	04 59 42.7	+0.8	baz=328,SNR=6.7
M59A	Waymart	91.91	27	P	P	04 59 42.3	+0.4	baz=332,SNR=7.0
L60A	Shokan	91.92	26	P	P	04 59 42.7	+0.7	baz=333,SNR=7.7
L61A	Hillsdale 1, H	91.97	26	P	P	04 59 42.9	+0.7	baz=334,SNR=7.5
K62A	Royalston	91.97	25	P	P	04 59 43.1	+0.9	baz=335
U49A	Red Boiling Sp	92.00	37	IAmb	IAmb	04 59 43.6		comp=Z,35nm,0.8s
T50A	Nancy	92.01	36	IAmb	IAmb	04 59 44.1		comp=Z,50nm,1.0s
L61B	Northampton	92.02	25	P	P	04 59 43.0	+0.6	baz=334
S51A	Beattyville	92.05	35	IAmb	IAmb	04 59 44.1		comp=Z,24nm,0.9s
N58A	Sunbury	92.06	28	P	P	04 59 43.2	+0.6	baz=332,SNR=6.7
N58A	Sunbury	92.06	28	IAmb	IAmb	04 59 43.8		comp=Z,31nm,0.9s
Q54A	Coxs Mills	92.08	32	IAmb	IAmb	04 59 44.2		comp=Z,28nm,0.8s
CLTN	Cedars of Leba	92.09	37	IAmb	IAmb	04 59 44.1		comp=Z,20nm,0.8s
V48A	Smith Brothers	92.15	38	IAmb	IAmb	04 59 44.1		comp=Z,24nm,0.8s
PLAL	Pickwick Lake	92.16	39	IAmb	IAmb	04 59 43.9		comp=Z,16nm,0.7s
K63A	Dunstable	92.17	24	P	P	04 59 44.1	+1.0	baz=335
K63A	Dunstable	92.17	24	IAmb	IAmb	04 59 44.9		comp=Z,49nm,0.9s
143A	Socs Landing,	92.31	43	IAmb	IAmb	04 59 46.1		comp=Z,49nm,1.0s
HRV	Adam Dziewonsk	92.33	24	P	P	04 59 44.8	+1.0	baz=335
N59A	State Game Lan	92.34	28	P	P	04 59 44.9	+0.9	baz=332,SNR=11
N59A	State Game Lan	92.34	28	IAmb	IAmb	04 59 45.4		comp=Z,41nm,1.1s
M60A	Port Jervis	92.38	27	P	P	04 59 44.6	+0.6	baz=333,SNR=6.0
L62A	Suffield	92.41	25	P	P	04 59 45.0	+0.8	baz=334
KSCT	Kent School, K	92.41	26	IAmb	IAmb	04 59 46.1		comp=Z,32nm,1.1s
P56A	Dayton Farm, R	92.42	30	P	P	04 59 45.2	+0.9	baz=330,SNR=6.7
ODNJ	Ogdensburg	92.60	27	IAmb	IAmb	04 59 48.0		comp=Z,22nm,1.0s
O58A	Lewisberry	92.61	29	P	P	04 59 45.7	+0.5	baz=331
N60A	Cedar Hill Far	92.61	27	P	P	04 59 45.6	+0.4	baz=333
TRNY	Table Rock, Ra	92.68	27	IAmb	IAmb	04 59 46.6		comp=Z,33nm,0.9s
M61A	Granite Spring	92.68	26	P	P	04 59 46.0	+0.5	baz=334
Q56A	Snyder Ridge,	92.69	31	P	P	04 59 46.1	+0.5	baz=330
R54A	Victor	92.69	33	P	P	04 59 46.2	+0.5	baz=329,SNR=5.9
O59A	Robesonia	92.72	28	P	P	04 59 46.1	+0.4	baz=332
P57A	Homestead Farm	92.76	30	P	P	04 59 46.7	+0.8	baz=331
M62A	Hamden	92.86	26	P	P	04 59 46.2	0.0	baz=334
S54A	Dingess, Beckl	92.89	33	P	P	04 59 47.1	+0.5	baz=328
KEST	Kesra	92.90	323	P	P	04 59 46.3	-0.4	comp=Z,19nm,0.9s,baz=298,slow=2.0,SNR=14
KEST				LR	LR	05 44 57.1		comp=Z,598nm,21.8s,baz=350,slow=38
KEST	Kesra	92.90	323	IAmb	IAmb	04 59 47.1		comp=Z,25nm,1.0s
L63A	North Scituate	92.90	24	P	P	04 59 46.8	+0.4	baz=335
PAL	Palisades	92.91	26	P	P	04 59 47.2	+0.7	baz=333
TZTN	Tazewell	92.98	35	P	P	04 59 47.3	+0.3	baz=327,SNR=5.8
TZTN	Tazewell	92.98	35	IAmb	IAmb	04 59 48.1		comp=Z,22nm,1.0s
SWET	Sewanee	92.99	38	IAmb	IAmb	04 59 48.1		comp=Z,33nm,0.8s
O60A	Telford	93.00	28	P	P	04 59 47.1	+0.2	baz=332
Q57A	Strasburg	93.00	30	P	P	04 59 47.2	+0.2	baz=330
N61A	South Mountain	93.00	27	P	P	04 59 47.6	+0.6	baz=333
L64A	Middleborough	93.07	24	P	P	04 59 47.9	+0.7	baz=336
X48A	Hartselle	93.09	39	IAmb	IAmb	04 59 48.3		comp=Z,28nm,0.8s
N62A	Caumsett State	93.12	26	P	P	04 59 48.1	+0.6	baz=334
VBMS	Vicksburg	93.15	42	P	P	04 59 48.7	+0.9	baz=323
M63A	Gales Ferry	93.17	25	P	P	04 59 48.3	+0.6	baz=335
V51A	Loudon	93.24	36	IAmb	IAmb	04 59 49.6		comp=Z,26nm,0.8s
P59A	Jarrettsville	93.25	29	P	P	04 59 48.5	+0.3	baz=332
W50A	Signal Mountai	93.30	37	IAmb	IAmb	04 59 49.7		comp=Z,21nm,0.8s
P60A	Greenville	93.36	28	P	P	04 59 49.1	+0.5	baz=332
P60A	Greenville	93.36	28	IAmb	IAmb	04 59 49.5		comp=Z,18nm,0.8s
Q58A	Fox Den Farm,	93.36	30	P	P	04 59 49.2	+0.6	baz=331
O61A	Allentown	93.50	27	P	P	04 59 49.7	+0.5	baz=333
V52A	Sevierville	93.54	36	IAmb	IAmb	04 59 50.6		comp=Z,25nm,1.1s
R57A	Stanardsville	93.59	31	P	P	04 59 50.2	+0.5	baz=330
Z47A	Carrollton	93.60	40	IAmb	IAmb	04 59 51.3		comp=Z,31nm,0.9s
TKL	Tuckaleechee C	93.62	36	LR	LR	05 45 04.9		comp=Z,188nm,19.6s,baz=338,slow=37
TKL	Tuckaleechee C	93.62	36	IAmb	IAmb	04 59 51.3		comp=Z,29nm,0.8s
FPAL	Fort Paine	93.70	38	IAmb	IAmb	04 59 51.0		comp=Z,15nm,0.8s
S56A	Natural Bridge	93.71	32	P	P	04 59 50.8	+0.4	baz=330
PBRG	Braganca	93.71	337	*e*P	P	04 59 50.3	0.0	
U54A	Nelsons Funny	93.75	34	P	P	04 59 51.1	+0.5	baz=328
U54A	Nelsons Funny	93.75	34	IAmb	IAmb	04 59 51.5		comp=Z,29nm,1.0s
BLA	Blacksburg	93.76	33	P	P	04 59 51.0	+0.4	baz=329
BLA	Blacksburg	93.76	33	IAmb	IAmb	04 59 52.1		comp=Z,28nm,1.0s
R58A	Rapidan	93.79	30	P	P	04 59 51.1	+0.5	baz=331
Q59A	Harwood	93.82	29	P	P	04 59 51.2	+0.5	baz=332
Y49A	Blount Mountai	93.88	39	IAmb	IAmb	04 59 52.2		comp=Z,25nm,0.8s
S57A	Dark Hollow, R	93.88	31	P	P	04 59 51.6	+0.5	baz=330
S57A	Dark Hollow, R	93.88	31	IAmb	IAmb	04 59 52.9		comp=Z,18nm,1.1s
PGAV	Gavieira, Arco	94.01	338	*e*P	P	04 59 51.7	0.0	
T56A	Rocky Mt	94.07	33	P	P	04 59 52.3	+0.3	baz=329
CBN	Corbin Frederi	94.12	30	P	P	04 59 52.5	+0.3	baz=331
R58B	Mineral	94.13	31	P	P	04 59 52.4	+0.2	baz=331
R59A	King George, V	94.22	30	P	P	04 59 53.0	+0.4	baz=331
LRAL	Lakeview Retre	94.26	40	P	P	04 59 53.4	+0.5	baz=325
Q61A	Milford	94.29	28	P	P	04 59 53.3	+0.4	baz=332
R60A	Leonardtown, M	94.36	30	P	P	04 59 53.5	+0.3	baz=332
S58A	Poland Farm, P	94.37	31	P	P	04 59 53.7	+0.4	baz=330
MVO	Moncorvo	94.38	337	*e*P	P	04 59 53.4	0.0	
POLO	Lamas de Olo	94.42	338	*e*P	P	04 59 53.5	-0.1	
T57A	Hurt	94.42	32	P	P	04 59 53.8	+0.2	baz=330
T57A	Hurt	94.42	32	IAmb	IAmb	04 59 54.5		comp=Z,23nm,1.1s
PVRL	Vila Real	94.48	338	*e*P	P	04 59 54.2	+0.4	
U56A	King	94.51	33	P	P	04 59 54.5	+0.5	baz=329
S59A	Mechanicsville	94.53	30	P	P	04 59 54.4	+0.4	baz=331
BG3	Lake Jocassee	94.55	36	IAmb	IAmb	04 59 55.9		comp=Z,16nm,0.8s
T58A	Grand View Acr	94.75	32	P	P	04 59 55.4	+0.3	baz=330
U57A	Blanch	94.87	32	P	P	04 59 56.0	+0.4	baz=330
Z51A	Franklin	94.91	38	IAmb	IAmb	04 59 56.9		comp=Z,31nm,0.8s
V56A	Mocksville	94.92	33	P	P	04 59 56.2	+0.3	baz=329
Y52A	Lilburn	94.98	37	IAmb	IAmb	04 59 57.7		comp=Z,23nm,0.7s
PAB	San Pablo	95.02	335	P	P	04 59 56.0	-0.4	
PAB				pmax	pmax			comp=Z,23nm,0.8s
PAB	San Pablo	95.02	335	P	P	04 59 56.0	-0.4	
PAB				IAmb	IAmb	04 59 57.3		comp=Z,23nm,0.8s
PVIS	Viseu	95.05	338	*e*P	P	04 59 56.8	+0.3	
KMSC	Kings Mountain	95.13	34	P	P	04 59 57.1	+0.3	baz=328
V57A	Coltrane Farms	95.16	33	P	P	04 59 57.1	+0.1	baz=329
U58A	Oxford	95.22	32	P	P	04 59 57.4	+0.1	baz=330
MTE	Manteigas	95.24	337	*e*P	P	04 59 57.5	+0.2	
T60A	Surry	95.29	30	P	P	04 59 57.6	+0.1	baz=331
250A	Grady	95.48	40	IAmb	IAmb	05 00 00.1		comp=Z,42nm,0.9s
HODGE	Hodges	95.49	36	IAmb	IAmb	05 00 00.0		comp=Z,22nm,1.1s
GOGA	Godfrey	95.63	37	P	P	04 59 59.6	+0.5	baz=327
GOGA	Godfrey	95.63	37	IAmb	IAmb	05 00 00.6		comp=Z,13nm,0.8s
152A	Waverly Hall	95.66	38	IAmb	IAmb	05 00 00.2		comp=Z,14nm,0.8s
COI	Coimbra	95.67	338	*e*P	P	04 59 59.6	+0.4	
U60A	Pendleton	95.71	31	P	P	04 59 59.8	+0.4	baz=331
PCBR	Castelo Branco	95.73	337	*e*P	P	04 59 59.9	+0.4	
PCAS	Casmilo, Conde	95.84	338	*e*P	P	05 00 00.6	+0.6	
V59A	Middlesex	95.89	32	P	P	05 00 00.7	+0.4	baz=330
PMRV	Marv??o	96.09	337	*e*P	P	05 00 01.4	+0.2	
W58A	Raeford	96.13	33	P	P	05 00 01.6	+0.2	baz=330
X57A	Johnson Farm,	96.24	34	P	P	05 00 02.3	+0.4	baz=329
V60A	Jim Taylor Roa	96.29	31	P	P	05 00 02.4	+0.4	baz=331
PSBE	So Bento	96.42	338	*e*P	P	05 00 02.5	-0.2	
W60A	Pink Hill	96.72	32	P	P	05 00 04.5	+0.5	baz=331
PMAFR	Mafra	97.08	338	*e*P	P	05 00 05.5	-0.2	
PNCL	Nicolau / Gran	97.64	337	*e*P	P	05 00 07.9	-0.3	
PCVE	Castro Verde	97.94	336	*e*P	P	05 00 09.5	0.0	
RKT	Rikitea	99.44	112	*e*LR	LR	05 32 24.0		comp=Z,763nm,34.2s
KMBO	Kilima Mbogo	102.04	279	P	Pdif	05 00 28.1	-0.3	comp=Z,5.7nm,1.0s,baz=32,slow=6.4,SNR=8.4
KMBO	Kilima Mbogo	102.04	279	*i* P	Pdif	05 00 28.7	+0.2	
KMBO				pmax	pmax			comp=Z,6.0nm,1.0s
ESPN	Las Esperanzas	112.52	50	IAMs_20	IAMs_20	05 53 06.2		comp=Z,219nm,19.0s
KOWA	Kowa	117.20	323	PKPdf	PKPdf	05 05 18.5	-0.6	
OCAC	Ocana	121.86	42	*e*P	PKPdf	05 05 27.2	-1.0	
SDV	Santo Domingo	122.66	39	PKPdf	PKPdf	05 05 29.4	-0.5	
SDV	Santo Domingo	122.66	39	*e*P	PKPdf	05 05 23.2	-6.7	
SDV	Santo Domingo	122.66	39	*e*P	PKiKP	05 05 32.5	+2.4	
PTBC	PUERTO BERRIO,	122.69	45	*e*P	PKPdf	05 05 23.2	-6.5	
PLMC	San Jos del P	123.03	48	*e*P	PKPdf	05 05 29.3	-1.2	
GUY2C	Guyana, Caldas	123.28	46	*e*P	PKPdf	05 05 25.2	-6.2	
RREF	El Recreo	123.56	47	*e*P	PKPdf	05 05 31.3	-0.8	
SPBC	San Pablo de B	123.64	45	*e*P	PKPdf	05 05 28.2	-3.4	
YOTC	Yotoco, Valle	123.75	48	*e*P	PKPdf	05 05 31.2	-0.7	
TOLC	Tolima	123.83	47	*e*P	PKPdf	05 05 32.1	-0.2	
RUSC	La Rusia	123.97	44	*e*P	PKiKP	05 05 33.3	+0.3	
ROSC	El Rosal	124.18	46	PKP	PKPdf	05 05 32.6	-0.4	comp=Z,8.2nm,0.4s,baz=359,slow=6.0,SNR=5.3
ROSC	El Rosal	124.18	46	*e*P	PKPdf	05 05 29.3	-3.8	
DBIC	Dimbokro	124.37	319	PKP	PKPdf	05 05 32.2	-0.7	comp=Z,17nm,0.6s,baz=11,slow=2.1,SNR=41

ORTC	Ortega, Tolima	124.43	47	*e*P	PKPdf	05 05 27.2	-5.8
TIC	Toumodi	124.47	319	*e*PKIKP	PKPdf	05 05 32.6	-0.5
KIC	Kosan Boka	124.58	319	*e*PKIKP	PKPdf	05 05 32.6	-0.7
	comp=Z,13nm,0.6s						
POPC	Popayan, Colom	124.73	50	*e*P	PKPdf	05 05 31.3	-2.6
LIC	Lamto	124.84	319	*e*PKIKP	PKPdf	05 05 33.1	-0.7
	comp=Z,106nm,1.4s						
MARP	Paez Belalcaza	124.90	49	*e*P	PKPdf	05 05 29.3	-5.0
OTAV	Otavalo	125.50	53	PKIKP	PKPdf	05 05 34.8	-0.9
OTAV	Otavalo	125.50	53	PKPdf	PKPdf	05 05 34.8	-0.9
OTAV	Otavalo	125.50	53	*e*P	PKPdf	05 05 31.3	-4.3
OTAV	Otavalo	125.50	53	*e*P	PKiKP	05 05 38.8	+2.7
GARC	Garzon, Huila	125.70	49	*e*P	PKiKP	05 05 36.0	-0.2
MACC	Macarena, Meta	126.67	47	*e*P	PKPdf	05 05 37.4	0.0
BOSA	Boshof	127.57	262	PKP	PKPdf	05 05 37.8	-0.9
	comp=Z,5.5nm,0.9s,baz=146,slow=1.3,SNR=4.8						
PTLC	Puerto Leguiza	127.73	49	*e*P	PKPdf	05 05 35.4	-4.0
TSUM	Tsumeb	128.32	277	PKPdf	PKPdf	05 05 39.8	-0.6
QSPA	South Pole Qui	129.82	180		PKPdf	05 05 41.7	0.0
BOAV	Boa Vista	132.94	32	*e*P	PKiKP	05 05 52.2	+1.8
CZSB	Cruzeiro do Su	135.26	53	*e*P	PKiKP	05 05 55.2	+0.2
PTGA	Pitinga	136.00	33	PKPdf	PKPdf	05 05 54.8	-0.2
PTGA	Pitinga	136.00	33	*e*P	PKPdf	05 05 49.5	-5.4
PTGA	Pitinga	136.00	33	*e*P	PKiKP	05 05 58.3	+1.7
MACA	Manacapuru-AM	137.87	35	*e*P	PKiKP	05 06 01.6	+1.2
MCPB	Macapa, AP	138.42	22	*e*P	PKiKP	05 06 02.0	+0.5
MALB	Monte Alegre	139.16	25	*e*P	PKiKP	05 06 03.5	+0.5
NVL	N'lazarevskaya	140.29	203	*e*PKHKP	PKPpre	05 05 54.8	
NVL				pmax	pmax		
	comp=Z,32nm,1.3s						
ETMB	Extrema	140.77	48	*e*P	PKiKP	05 06 06.8	+0.6
ITTB	Itaituba	140.98	29	*e*P	PKiKP	05 06 06.4	-0.3
TMAB	Tom-Au,PA,Br	141.34	16	*e*P	PKiKP	05 06 07.5	0.0
SAML	Samuel	141.70	43	*e*P	PKPdf	05 05 53.6	-12
SAML	Samuel	141.70	43	*e*P	PKiKP	05 06 08.5	+0.4
ROSB	Rosrio	142.56	10	*e*P	PKiKP	05 06 09.6	-0.4
NPGB	Novo Progresso	143.59	30	*e*P	PKPdf	05 06 10.2	+1.6
SNAA	Sanae	143.81	198	PKPdf	PKPab	05 06 04.5	0.0
NBPS	Pedro II - PI	144.33	6	*e*P	PKPbc	05 06 09.0	+0.5
VNA2	Neumayer--Watz	145.38	197	PKPdf	PKPbc	05 06 10.0	0.0
VNA3	Neumayer Olymp	145.64	196	PKPdf	PKPdf	05 06 10.6	+0.1
VNA1	Neumayer--Stat	145.78	197	PKPdf	PKPdf	05 06 10.7	0.0
NBPA	Parau_RN	145.81	359	*e*P	PKPab	05 06 13.5	0.0
RCBR	Riachuelo	145.84	356	PKIKP	PKPdf	05 06 12.2	-0.5
RCBR	Riachuelo	145.84	356	PKPdf	PKPdf	05 06 12.2	-0.5
RCBR	Riachuelo	145.84	356	*e*P	PKPab	05 06 13.7	+0.1
NBPV	Pedro Velho	146.40	355	*e*P	PKPbc	05 06 15.0	+0.1
VILB	Vilhena	146.62	42	*e*P	PKPab	05 06 16.8	+0.2
NBLI	Livramento-PB	147.41	358	*e*P	PKPbc	05 06 17.7	-0.1
SMTB	Santa Maria do	147.74	18	*e*P	PKPbc	05 06 18.5	-0.1
LVC	Limon Verde	148.55	66	PKP2	PKPbc	05 06 20.8	-0.2
LVC	Limon Verde	148.55	66	PKPdf	PKPdf	05 06 17.1	-0.2
LVC				PKPbc	PKPbc	05 06 20.8	-0.2
LVC	Limon Verde	148.55	66	*e*P	PKPbc	05 06 19.9	-1.1
NBRF	Rio Formoso -	148.63	355	*e*P	PKPbc	05 06 19.5	-1.4
SNDB	Serra Nova Dou	149.62	27	*e*P	PKPbc	05 06 21.4	-2.0
PEXB	Peixe	150.67	21	*e*P	PKPdf	05 06 22.8	+2.4
LCO	Las Campanas	151.00	78	PKIKP	PKPdf	05 06 20.8	-0.1
LCO	Las Campanas	151.00	78	PKPdf	PKPdf	05 06 20.8	-0.1
LCO				PKPbc	PKPbc	05 06 26.7	0.0
SDBA	SAO DESIDERIO	151.76	14	*e*P	PKPdf	05 06 24.7	+2.6
ARAG	Araguaiana, MT	152.87	30	*e*P	PKPdf	05 06 26.3	+2.6
GDU01	Guandu, BA	153.70	4	*e*P	PKPdf	05 06 27.2	+2.3
BDFB	Brasilia	154.11	23	PKP	PKPdf	05 06 26.0	+0.4
	comp=Z,4.3nm,0.8s,baz=28,slow=3.7,SNR=5.2						
BDFB				PKPbc	PKiKP	05 06 34.2	+0.4
	comp=Z,18nm,1.0s,baz=319,slow=2.7,SNR=14						
BDFB				PKPab	PKPab	05 06 47.6	+0.3
	comp=Z,37nm,0.8s,baz=314,slow=1.8,SNR=22						
BDFB	Brasilia	154.11	23	PKPdf	PKPdf	05 06 25.2	-0.4
BDFB				PKPbc	PKPbc	05 06 33.7	-0.1
BDFB				PKPab	pPKPbc	05 06 48.4	-0.4
PLCA	Paso Flores	155.23	102	PKP	PKPdf	05 06 26.5	+0.1
	comp=Z,1.3nm,0.7s,baz=214,slow=2.4,SNR=1.6						
PLCA				PKPab	PKPab	05 06 52.6	+1.0
	comp=Z,4.8nm,0.7s,baz=229,slow=5.2,SNR=4.8						
PLCA	Paso Flores	155.23	102		PKPdf	05 06 35.9	+10
PLCA	Paso Flores	155.23	102	*e*P	PKPdf	05 06 29.4	+3.0
ITRB	Iturama	157.06	31	*e*P	PKPdf	05 06 32.1	+2.7
DIAM	Diamantina, MG	157.73	14	*e*P	PKPdf	05 06 32.5	+2.1
NAN01	Guarapari, ES	157.76	6	*e*P	PKPdf	05 06 32.5	+2.3
PCMB	Pacaembu	158.37	36	*e*P	PKPdf	05 06 33.8	+2.9
SJMB	Sao Joao De Ma	158.51	8	*e*P	PKPdf	05 06 34.0	+2.8
BSFB	Barra de Sao F	158.67	8	*e*P	PKPdf	05 06 34.0	+2.7
TRCB	Terra Rica	158.74	40	*e*P	PKPdf	05 06 34.2	+2.8
CPUP	Villa Florida	158.82	56	PKP	PKPdf	05 06 31.1	-0.2
	comp=Z,5.4nm,1.1s,baz=36,slow=0.9,SNR=5.4						
CPUP				PKPab	PKPab	05 07 07.5	+0.1
	comp=Z,11nm,0.9s,baz=316,slow=4.8,SNR=3.5						
CPUP	Villa Florida	158.82	56	*e*P	PKPdf	05 06 34.2	+2.9
BB19B	Bebedouro	159.00	29	*e*P	PKPdf	05 06 34.2	+2.5
BSCB	Bom Sucesso	160.10	19	*e*P	PKPdf	05 06 34.8	+1.8
FRTB	Fartura	160.63	34	*e*P	PKPdf	05 06 36.2	+2.7
VAO	Valinhos	161.33	27	*e*P	PKPdf	05 06 36.7	+2.4
CAM01	Campos-RJ	161.53	11	*e*P	PKPdf	05 06 36.5	+2.1
DUB01	Friburgo-RJ	161.66	13	*e*P	PKPdf	05 06 37.1	+2.5

PRU 17 04:57:14.9±0.0**, 51°.54N×16°.28E, h0^{km}, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHVC	Chvalec	0.96	189	*e*PG	Pg	04 57 32.1	-1.2
CHVC				*e*SG	Sg	04 57 45.4	-0.4
OSTC	Ostas	0.99	182	*e*PG	Pg	04 57 33.0	-0.8
OSTC				*e*SG	Sg	04 57 46.7	+0.2
UPC	Upice	1.05	189	*e*PG	Pg	04 57 35.0	0.0
UPC				*e*SG	Sg	04 57 48.5	0.0
DPC	Dobruska-Polom	1.19	179	*e*PG	Pg	04 57 37.4	-0.3
DPC				*e*SG	Sg	04 57 52.9	-0.2

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*IDC **17** 05:04:08.8±2.3, 20°.43S×178°.14W, h572^{km}±22^{km}, mb3.2/3, mb1 3.4/5, mb1mx3.1/24, mbtmp4.1/5, Error ellipse: s-maj=32.6km s-min=18.6km az=101.0*

ISC 17 05:04:04.9±1.3**, 20°.4S**±0°.2×**178°.0W**±0°.3**, h534**^{km}**, n8, σ1^s.67**/8**, mb3.9**/3**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.54	304	P	P	05 05 35.7	+5.6
	9.6nm,0.3s,baz=156,slow=2.7,SNR=32						
DZM	Mont Dzumac	14.60	260	P	P	05 07 15.8	+5.2
	0.5nm,0.3s,baz=49,slow=22,SNR=1.4						
URZ	Urewera	18.34	192	P	P	05 07 48.2	+1.7
	0.8nm,0.3s,baz=312,slow=3.7,SNR=6.2						
URZ				S	S	05 10 45.3	-1.7
	0.1nm,0.3s,baz=53,slow=20,SNR=1.6						
ASAR	Alice Springs	44.54	257	P	P	05 11 29.8	+0.3
	2.9nm,0.7s,baz=93,slow=7.7,SNR=30						
ASAR				PcP	PcP	05 13 01.9	+0.7
	0.5nm,0.6s,baz=120,slow=3.9,SNR=5.4						
WRA	Warramunga Arr	44.61	262	P	P	05 11 29.9	-0.1
	1.4nm,0.3s,baz=96,slow=7.6,SNR=55						
ILAR	Eielson Array	88.17	13	P	P	05 15 59.1	+0.6
	0.4nm,0.5s,baz=216,slow=5.3,SNR=5.0						
AKASG	Malin Array Be	142.87	331	PKP	PKPdf	05 22 34.8	-2.7
	0.5nm,0.5s,baz=40,slow=4.0,SNR=6.9						
GERES	GERESS Array B	150.05	344	PKPbc	PKiKP	05 22 56.0	+0.1
	0.2nm,0.3s,baz=41,slow=3.1,SNR=2.5						

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*IDC **17** 05:24:15.4±0.9, 39°.68N×143°.44E, h0^{km}, mb3.6/10, mb1 3.8/12, mb1mx3.6/51, mbtmp3.6/12, ML2.7/2, MS2.9/2, Ms1 2.9/2, ms1mx2.5/47, Error ellipse: s-maj=24.6km s-min=17.2km az=109.0*

*JMA **17** 05:24:18.4±0.2, 39°.82N×143°.41E, h29^{km}, M3.9*

*NIED **17** 05:24:18.5, 39°.82N×143°.41E, h29^{km}, MW3.8, Moment Tensor Solution. s2 Moment tensor: Scale 10^{14}Nm; M_{rr}4.49; $M_{\theta\theta}$-1.40; $M_{\phi\phi}$-3.09; $M_{r\theta}$-0.30; $M_{\theta\phi}$-1.42; $M_{\phi r}$3.68; Fault plane solution: $M_0$5.53000×10^{14} NP1:ϕ_s9.00000°, δ66.00000°, λ76.00000°. NP2:ϕ_s221.00000°, δ28.00000°, λ118.00000°.*

ISC 17 05:24:17.4±0.8**, 39°.76N**±0°.06×**143°.38E**±0°.07**, h10**^{km}**, n25, σ0^s.95**/25**, mb3.7**/9**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	1.18	279	P	Pb	05 24 39.4	-0.5
MIYJ	Miyakonagasawa	1.22	262	P	Pn	05 24 40.5	0.0
MIYJ				*e*S	Sb	05 24 55.6	-0.7
JKEN	Kujiedanarisaw	1.36	290	P	Pn	05 24 41.7	-0.7
JANG	Nango	1.56	294	P	Pn	05 24 44.8	-0.4
JOM	Ohasama	1.64	261	P	Pn	05 24 46.9	+0.6
JOM				*e*S	Sn	05 25 08.0	+0.6
JMK	Ichinoseki	1.86	245	P	Pn	05 24 49.7	+0.4
JTM	Tenmabayashi	2.04	301	P	Pn	05 24 52.5	+0.6
JYK	Kaneyama	2.49	251	P	Pn	05 24 59.4	+1.4
ASAJ	Asahikawa	4.39	353	Pn	Pn	05 25 24.9	+0.7
	0.4nm,0.3s,baz=217,slow=20,SNR=2.0						
ASAJ				Sn	Sn	05 26 16.9	+1.5
	1.3nm,0.3s,baz=292,slow=31,SNR=3.8						
MJAR	Matsushiro Arr	5.19	233	Pn	Pn	05 25 34.8	-0.4
	0.2nm,0.3s,baz=39,slow=12,SNR=8.1						
MJAR				LR	LR	05 28 02.8	
	comp=Z,74nm,18.3s,baz=150,slow=44						
MAT	Matsushiro	5.19	233	P	Pn	05 25 36.9	+1.7
MAT				*e*S	Sn	05 26 36.8	+1.7
KSRS	Korea Array	12.31	264	LR	LR	05 31 33.0	
	comp=Z,82nm,21.0s,baz=200,slow=35						
MA2	Magadan	20.38	11	P	P	05 28 54.7	+0.6
	2.4nm,0.3s,baz=212,slow=8.7,SNR=3.6						
SEY	Seymchan	23.83	10	P	P	05 29 29.9	-0.4
	0.8nm,0.4s,baz=178,slow=6.4,SNR=5.6						
SONM	Songino Array	27.68	299	P	P	05 30 06.6	+1.0
	0.6nm,0.9s,baz=87,slow=7.5,SNR=3.7						
H11N2	WAKE ISLAND Hy	28.41	128	T	T	06 00 09.3	
	baz=320,slow=75						
H11N1	WAKE ISLAND Hy	28.41	128	T	T	06 00 12.6	
	baz=320,slow=75						
H11N3	WAKE ISLAND Hy	28.42	128	T	T	06 00 02.8	
	baz=320,slow=75						
ZALV	Zalesovo Beam	41.28	310	P	P	05 32 02.7	0.0
	0.7nm,0.4s,baz=76,slow=6.3,SNR=4.0						
MKAR	Makanchi Array	44.04	300	P	P	05 32 25.0	-0.2
	0.4nm,0.7s,baz=83,slow=9.7,SNR=5.4						
ILAR	Eielson Array	46.37	34	P	P	05 32 43.3	-0.1
	0.7nm,0.7s,baz=264,slow=6.1,SNR=7.0						
WRA	Warramunga Arr	59.99	190	P	P	05 34 22.2	-1.9
	0.7nm,0.8s,baz=10,slow=7.2,SNR=4.9						
YKA	Yellowknife Ar	60.68	31	P	P	05 34 27.7	-0.7
	0.1nm,0.4s,baz=292,slow=5.7,SNR=1.5						
ASAR	Alice Springs	63.71	190	P	P	05 34 48.7	-0.5
	0.4nm,0.7s,baz=6.3,slow=5.9,SNR=4.7						
NVAR	Mina Array Bea	72.14	55	P	P	05 35 42.9	+0.5
	0.5nm,0.8s,baz=286,slow=5.8,SNR=6.1						

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*TRN **17** 05:30:11.3, 16°.26N×61°.90W, h179^{km}, MD4.1*

*IDC **17** 05:30:12.2±2.4, 16°.11N×62°.10W, h165^{km}±20^{km}, mb3.7/13, mb1 3.9/17, mb1mx3.6/45, mbtmp4.1/17, Error ellipse: s-maj=30.4km s-min=17.6km az=53.0*

*NEIC **17** 05:30:12.7±0.7, 16°.16N±0°.07×62°.0W±0°.1, h174^{km}±9^{km}, mb4.0/17, Error ellipse: s-maj=15.3km s-min=8.3km az=62.0*

ISC 17 05:30:12.6±0.6**, 16°.17N**±0°.04×**62°.03W**±0°.05**, h173**^{km}±5^{km}**, n108, σ0^s.84**/132**, mb4.0**/20**, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBE	Ff, Capester	0.42	104	*e*P	Pn	05 30 36.5	+0.3
CBE				*e*S	Sn	05 30 55.6	+1.3
TBG	Guadaloupe-3	0.48	130	*e*P	Pn	05 30 36.6	+0.1
TBG				*e*S	Sn	05 30 55.0	+0.2
TDBA	Terre de Bas,	0.49	130	*e*P	Pn	05 30 36.8	+0.2
TDBA				*e*S	Sn	05 30 55.4	+0.5
ABD	La Joyeuse, An	0.60	60	*e*P	Pn	05 30 37.1	+0.1
ABD	La Joyeuse, An	0.60	60	*e*	Pn	05 30 48.5	+12
ABD				*i* S	Sn	05 30 55.1	-0.6
MAGL	Barre de l'ile	0.75	107	*i* P	Pn	05 30 38.0	+0.1
MAGL				*e*S	Sn	05 30 56.8	-0.4
BPA	Boggy Peak	0.89	11	*e*P	Pn	05 30 38.8	0.0
BPA				*e*S	Sn	05 30 57.2	-1.9
ANBD	Bethesda, Anti	0.91	16	*i* P	Pn	05 30 39.0	+0.1
ANBD				*e*S	Sn	05 30 57.7	-1.6
DSLB	Salisbury	0.93	141	*i* P	Pn	05 30 39.5	+0.4
DSLB				*e*S	Sn	05 31 01.2	+1.7
DLPL	La Plaine	1.12	138	*i* P	Pn	05 30 41.3	+0.7
DLPL	La Plaine	1.12	138	*e*	Pn	05 30 51.1	+11
DLPL				*e*S	Sn	05 31 02.4	+0.3
DLPL	La Plaine	1.12	138		Pn	05 30 40.5	-0.1
SKOC	St. Kitts, UWI	1.30	329	*i* P	Pn	05 30 42.7	+0.6
SKOC				*e*S	Sn	05 31 05.3	+0.3
SKI	Saint Kitts	1.34	330	*i* P	Pn	05 30 43.1	+0.6
SKI				*e*S	Sn	05 31 05.8	+0.1
SKI	Saint Kitts	1.34	330		Pn	05 30 43.0	+0.5
ANWB	Willy Bob	1.51	9	*e*P	Pn	05 30 43.8	-0.2
ANWB				*e*S	Sn	05 31 06.6	-1.8
ANWB	Willy Bob	1.51	9		Pn	05 30 44.0	-0.1
SVN	Savane Anatole	1.56	148	*e*P	Pn	05 30 44.6	0.0
PCM	Pelee Case Pet	1.56	149	*e*P	Pn	05 30 44.5	-0.1
PCM	Pelee Case Pet	1.56	149	*e*P	Pn	05 30 44.9	+0.3
CXM	Morne La Croix	1.58	148	*e*P	Pn	05 30 45.0	0.0
BAMF	Morne Balai	1.59	148	*e*P	Pn	05 30 45.0	+0.1
SEUS	St. Eustatius	1.60	325	*i* P	Pn	05 30 45.8	+0.9
SEUS				*e*S	Sn	05 31 09.9	-0.1
SEUS	St. Eustatius	1.60	325	Pn	Pn	05 30 45.4	+0.4
PML	Morne Lenard	1.60	149	*e*P	Pn	05 30 44.8	-0.2
FDF	Fort de France	1.66	149	*i* P	Pn	05 30 45.5	-0.2
FDF				*e*S	Sn	05 31 11.6	+0.4
FDF	Fort de France	1.66	149		Pn	05 30 45.5	-0.2
ILAM	Ilet Lapin Mar	1.78	141	*i* P	Pn	05 30 46.6	-0.2
ILAM	Ilet Lapin Mar	1.78	141	*e*	Pn	05 30 58.6	+12
ILAM				*e*S	Sn	05 31 12.0	-1.3
SABA	Saba	1.85	321	*i* P	Pn	05 30 48.0	+0.5
SABA				*e*S	Sn	05 31 14.4	-0.3
SABA	Saba	1.85	321		Pn	05 30 48.2	+0.6
ZAM	Aeronautique	1.86	149	*e*P	Pn	05 30 47.7	+0.1
TRMF	Trois Ilets	1.88	150	*e*P	Pn	05 30 47.8	-0.1
BIM	Bigot	1.89	150	*i* P	Pn	05 30 47.8	-0.2
BIM				*e*S	Sn	05 31 15.0	-0.4
LPMF	Morne Lapointe	1.89	147	*e*P	Pn	05 30 47.7	-0.3
MVM	Montagne Vaucl	1.94	146	*e*P	Pn	05 30 48.5	-0.1
MPOM	Morne Pois Mar	2.05	146	*i* P	Pn	05 30 49.6	-0.2
MPOM				*e*S	Sn	05 31 17.4	-1.1
SLBI	Saint Lucia, B	2.37	154	*i* P	Pn	05 30 53.1	-0.3
SLBI				*e*S	Sn	05 31 25.4	+0.4
SLCP	Castries, St.	2.37	155	*e*P	Pn	05 30 53.3	-0.1
SLCP				*e*S	Sn	05 31 25.7	+0.6
SLW	Petit Monier	2.38	154	*e*P	Pn	05 30 54.4	+0.8
SLB	Belfond	2.52	158	*i* P	Pn	05 30 56.1	+0.9
SLB				*e*S	Sn	05 31 27.6	-0.6
SLDE	Delcer	2.53	158	*e*P	Pn	05 30 56.3	+1.0
SLPA	Patience	2.54	155	*e*P	Pn	05 30 56.4	+1.0
SLPA				*e*S	Sn	05 31 29.5	+0.9
MCLT	Moule a Chique	2.66	157	*i* P	Pn	05 30 56.7	-0.2
MCLT				*e*S	Sn	05 31 30.7	-0.6
MCLT	Moule a Chique	2.66	157	Pn	Pn	05 30 56.9	0.0
SFAN	Fancy Village	2.89	163	*i* P	Pn	05 31 00.6	+0.9
SVV	Soufriere Volc	2.94	164	*i* P	Pn	05 31 01.4	+1.2
SVV				*e*S	Sn	05 31 38.3	+1.0
SVB	Belmont	2.98	165	*i* P	Pn	05 31 00.7	0.0
SVB				*e*S	Sn	05 31 37.9	-0.3
SVB	Belmont	2.98	165	Pn	Pn	05 31 00.5	-0.2
CDVI	St. Croix	3.06	301	*i* P	Pn	05 31 01.5	-0.1
CDVI				*e*S	Sn	05 31 38.5	-1.3
CDVI	St. Croix	3.06	301		Pn	05 31 01.4	-0.1
SVOC	Richmond Hill,	3.10	165	*e*P	Pn	05 31 01.7	-0.4
SVOC				*e*S	Sn	05 31 41.8	+1.0
GCMP	Grenada, Carri	3.71	171	*i* P	Pn	05 31 09.7	-0.1
GCMP				*e*S	Sn	05 31 53.8	-0.7
CUPR	Culebra, Puert	3.77	305		Pn	05 31 11.1	+0.6
BCHC	Barbados, Cave	3.81	142	*e*P	Pn	05 31 12.4	+1.3
BCHC				*e*S	Sn	05 31 55.5	-1.2
BBGH	Gun Hill	3.84	141	*e*P	Pn	05 31 12.3	+0.7
BBGH				*e*S	Sn	05 31 54.6	-2.9
BBGH	Gun Hill	3.84	141	Pn	Pn	05 31 11.8	+0.2
MTP	Monte Pirata	3.88	300		Pn	05 31 12.0	+0.1
BBSP	Saint Philip	3.93	140	*e*P	Pn	05 31 14.0	+1.4
BBSP				*e*S	Sn	05 31 56.8	-2.8
GRGR	Grenville	4.03	175	*e*P	Pn	05 31 13.8	-0.1
GRGR	Grenville	4.03	175	*e*S	Sn	05 32 02.0	+0.1
GRGR	Grenville	4.03	175	Pn	Pn	05 31 14.1	+0.2
HUMP	Col San Antoni	4.15	299		Pn	05 31 15.3	0.0
CBYP	Canovanas	4.21	300		Pn	05 31 16.4	+0.1
PDPR	Patillas Dam,	4.24	296	Pn	Pn	05 31 17.3	+0.7
SJG	San Juan	4.39	297	P	Pn	05 31 17.3	-1.2
	4.9nm,0.3s,baz=82,slow=13,SNR=6.7						
SJG				S	Sn	05 32 09.1	-0.9
	13nm,0.3s,baz=305,slow=22,SNR=11						
SJG	San Juan	4.39	297	*e*	Pn	05 31 18.2	-0.3
SJG	San Juan	4.39	297	*e*S	Sn	05 32 08.9	-1.1
SJG	San Juan	4.39	297		Pn	05 31 18.2	-0.3
GCPR	Guaynabo City	4.42	299		Pn	05 31 19.4	+0.5
AOPR	Arecibo Observ	5.01	296	*e*P	Pn	05 31 26.6	+0.1
AOPR	Arecibo Observ	5.01	296	*e*S	Sn	05 32 23.8	-0.7
AOPR	Arecibo Observ	5.01	296	Pn	Pn	05 31 26.9	+0.4
TRN	Trinidad (W)	5.52	174	*e*P	Pn	05 31 34.0	+0.7
TRN	Trinidad (W)	5.52	174	*e*S	Sn	05 32 34.2	-2.4
PCRV	Puerto La Cruz	6.47	203	P	Pn	05 31 53.6	+7.7
	1.2nm,0.3s,baz=358,slow=2.4,SNR=6.3						
SDV	Santo Domingo	11.09	230	P	Pn	05 32 46.3	-0.4
	0.5nm,0.3s,baz=301,slow=5.0,SNR=3.5						
MDP	Montagnes des	14.35	139	P	Pn	05 33 26.7	-1.4
	2.2nm,0.3s,baz=321,slow=16,SNR=20						
MDP				S	Sn	05 35 55.1	-13
	5.1nm,0.3s,baz=57,slow=21,SNR=17						
PTGA	Pitinga	16.91	173	P	Pn	05 33 58.4	-1.0
	0.5nm,0.3s,baz=328,slow=19,SNR=1.7						
Y52A	Lilburn	26.53	316	P	P	05 35 31.9	-2.5
SADO	Sadowa	31.96	337	P	P	05 36 22.8	+0.7
	2.7nm,0.5s,baz=177,slow=8.3,SNR=8.4						
SADO	Sadowa	31.96	337	IAmb	IAmb	05 36 26.6	
	comp=Z,6.7nm,1.1s						
ECSD	EROS Data Cent	40.17	320	P	P	05 37 32.2	+0.3
ECSD				IAmb	IAmb	05 37 33.4	
	comp=Z,3.5nm,0.8s						
TXAR	Lajitas Array	40.36	296	P	P	05 37 33.5	-0.3
	comp=Z,0.4nm,0.4s,baz=118,slow=8.1,SNR=7.8						
HPIG		41.79	292	P	P	05 37 44.8	-0.8
HPIG				IAmb	IAmb	05 37 46.6	
	comp=Z,4.7nm,1.0s						
MNTX	Cornudas Mount	42.24	299	P	P	05 37 48.9	-0.1
ULM	Lac du Bonnet	43.57	329	P	P	05 37 59.1	-0.2
	comp=Z,6.5nm,0.3s,baz=130,slow=8.3,SNR=27						
ANMO	Albuquerque	43.82	304	P	P	05 38 02.1	+0.3
	comp=Z,0.8nm,0.8s,baz=101,slow=10,SNR=3.5						
ANMO	Albuquerque	43.82	304	IAmb	IAmb	05 38 11.3	
	comp=Z,2.4nm,1.4s						
319A	Douglas	45.47	298	IAmb	IAmb	05 38 17.0	
	comp=Z,4.2nm,0.7s						
WUAZ	Wupatki	47.87	303	P	P	05 38 33.9	+0.4
WUAZ				IAmb	IAmb	05 38 35.5	
	comp=Z,3.5nm,0.7s						
BW06	Boulder Array	48.31	313	P	P	05 38 37.3	+0.4
BW06				IAmb	IAmb	05 38 37.9	
	comp=Z,2.2nm,0.5s						
PD31	Pinedale Array	48.31	313	P	P	05 38 36.9	0.0
PD31				IAmb	IAmb	05 38 38.8	
	comp=Z,5.1nm,1.4s						
PDAR	Pinedale Array	48.31	313	P	P	05 38 37.2	+0.3
	comp=Z,2.4nm,0.6s,baz=120,slow=9.9,SNR=24						
PDAR	Pinedale Array	48.31	313	P	P	05 38 36.7	-0.2
FCC	Fort Churchill	48.65	338	P	P	05 38 39.4	+0.6
FCC				IAmb	IAmb	05 38 40.0	
	comp=Z,5.2nm,0.8s						
LKWY	Lake	49.47	315	P	P	05 38 46.0	+0.3
LKWY				IAmb	IAmb	05 38 47.7	
	comp=Z,2.8nm,0.6s						
BGU	Big Grassy Mou	50.30	310	P	P	05 38 52.6	+0.8
PSUT	Pine Spring	50.39	307	P	P	05 38 53.6	+0.9
ELK	Elko	51.89	309	P	P	05 39 04.1	+0.3
	comp=Z,0.4nm,0.3s,baz=160,slow=4.8,SNR=3.6						
NVAR	Mina Array Bea	53.82	306	P	P	05 39 18.7	+0.7
	comp=Z,1.2nm,0.7s,baz=91,slow=6.8,SNR=9.8						
NEW	Newport	55.02	318	P	P	05 39 26.6	+0.4
	comp=Z,2.1nm,0.7s,baz=100,slow=6.8,SNR=5.9						
YBH	Yreka Blue Hor	57.61	309	P	P	05 39 43.7	-1.0
	comp=Z,0.6nm,0.4s,baz=38,slow=3.5,SNR=5.4						
YBH	Yreka Blue Hor	57.61	309	IAmb	IAmb	05 39 44.6	
	comp=Z,2.0nm,1.1s						
YKA	Yellowknife Ar	58.92	334	P	P	05 39 53.6	+0.3
	comp=Z,2.9nm,0.6s,baz=107,slow=8.0,SNR=49						
DLBC	Dease Lake	64.87	327	P	P	05 40 34.8	+1.6
	comp=Z,3.2nm,0.7s,baz=160,slow=12,SNR=3.4						
ILAR	Eielson Array	73.32	334	P	P	05 41 25.4	+0.3
	comp=Z,0.6nm,0.4s,baz=99,slow=4.3,SNR=18						
ARCES	ARCESS Array B	74.12	21	P	P	05 41 31.8	+2.2
	comp=Z,3.3nm,0.9s,baz=239,slow=6.2,SNR=1.4						

IDC 17 05:47:36.9±5.6**, 17°.48S**×**178°.69W, h626**^{km}±22^{km}**, mb2.6**/3**, mb1 2.9**/4**, mb1mx2.7**/33**, mbtmp3.5**/4**, Error ellipse: s-maj=234.1km s-min=29.1km az=143.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.12	265	P	P	05 48 59.1	+0.1
	0.6nm,0.3s,baz=90,slow=20,SNR=4.6						
WRA	Warramunga Arr	44.44	259	P	P	05 54 54.6	0.0
	0.3nm,0.4s,baz=95,slow=7.6,SNR=6.5						
ASAR	Alice Springs	44.65	254	P	P	05 54 56.0	-0.1
	1.7nm,0.7s,baz=88,slow=8.6,SNR=18						
ILAR	Eielson Array	85.54	13	P	P	05 59 09.1	-0.8
	0.1nm,0.4s,baz=211,slow=4.5,SNR=4.4						
GERES	GERESS Array B	147.13	345	PKPbc	PKPbc	06 06 11.4	+0.2
	0.3nm,0.5s,baz=12,slow=5.0,SNR=3.6						

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*WEL **17** 05:56:00, 37°.68S×179°.92W, h15^{km}, ML5.2, Mw5.2, Moment Tensor Solution. s4 Moment tensor: Scale 10^{16} Nm; M_{rr}-6.80; $M_{\theta\theta}$2.60; $M_{\phi\phi}$4.20; $M_{r\theta}$1.75; $M_{\theta\phi}$3.08; $M_{\phi r}$-2.41; Fault plane solution: $M_0$7.25000×10^{16} NP1: ϕ_s236.00000°, δ44.00000°, λ-62.00000°. NP2:ϕ_s19.00000°, δ52.00000°, λ-115.00000°. Principal axes: T 6636.6400, Plg4.0000°, Azm126.0000°; N 1221.5700, Plg19.0000°, Azm34.0000°; P -7858.2100, Plg70.0000°, Azm229.0000°;*

*NOU **17** 05:56:55.9, 37°.87S×179°.94W, h32^{km}, mb5.1, East of North Island, N.Z.*

*WEL **17** 05:56:55.8±0.7, 38°S±6°×18°0W±°, h33^{km}, M5.2/25, ML5.5/25, MLv5.2/25, Error ellipse: s-maj=0.0km s-min=0.0km az=9.4*

*GCMT **17** 05:56:56.8±0.2, 37°.36S±0°.02×179°.97E±0°.02, h17^{km}, MW5.1/102, Moment Tensor Solution. s48,c62; s102,c160; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-5.45±.25; $M_{\theta\theta}$1.51±.16; $M_{\phi\phi}$3.94±.16; $M_{r\theta}$3.44±.47; $M_{\theta\phi}$2.55±.09; $M_{\phi r}$-0.50±.36; Best double couple: $M_0$6.40900×10^{16} NP1:ϕ_s12.00000°, δ42.00000°, λ-127.00000°. NP2:ϕ_s237.00000°, δ58.00000°, λ-62.00000°. Principal axes: T 5.7600, Plg8.0000°, Azm307.0000°; N 1.2980, Plg24.0000°, Azm41.0000°; P -7.0580, Plg65.0000°, Azm198.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BJI **17** 05:56:57.5±0.0, 37°.73S×179°.78E, h40^{km}, mB5.7/13, mb5.1/17, Ms5.6/2*

*NEIC **17** 05:56:57.8±2.8, 37°.65S±0°.08×179°.65E±0°.06, h33^{km}±4^{km}, mb5.2/33, Mww5.2, ML5.2(WEL), Error ellipse: s-maj=11.9km s-min=5.9km az=163.0*

*MOS **17** 05:56:58.1±1.0, 37°.48S×179°.44E, h34^{km}, mb5.3/14, Error ellipse: s-maj=18.0km s-min=12.9km az=127.2*

*NEIC **17** 05:56:59, 37°.57S×179°.91E, h18^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-7.83; $M_{\theta\theta}$3.68; $M_{\phi\phi}$4.15; $M_{r\theta}$0.13; $M_{\theta\phi}$4.12; $M_{\phi r}$0.08; Fault plane solution: $M_0$7.94000×10^{16} NP1:ϕ_s43.00000°, δ44.00000°, λ-90.00000°. NP2:ϕ_s224.00000°, δ45.00000°, λ-89.00000°. Principal axes: T 8.0498, Plg1.0000°, Azm313.0000°; N -0.2145, Plg0.0000°, Azm43.0000°; P -7.8353, Plg90.0000°, Azm161.0000°;*

*IDC **17** 05:57:00.6±1.5, 37°.29S×179°.55E, h49^{km}±12^{km}, mb4.5/13, mb1 4.6/16, mb1mx4.5/26, mbtmp4.8/16, ML5.9/2, MS4.3/23, Ms1 4.3/23, ms1mx4.2/29 Error ellipse: s-maj=16.8km s-min=11.0km az=170.0*

ISC 17 05:56:58.2±0.3**, 37°.66S**±0°.04×**179°.77E**±0°.04**, h33**^{km}**, n362, σ1^s.65**/366**, mb5.1**/32**, MS4.4**/24**, 12C-5D, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	1.08	261	P	Pn	05 57 17.6	+0.6
WMGZ				S	Sb	05 57 34.8	+2.5
MXZ	Matakaoa Point	1.16	275	Pn	Pn	05 57 17.4	-0.7
MXZ	Matakaoa Point	1.16	275	P	Pn	05 57 17.2	-0.9
PUZ	Puketiti	1.26	251	P	Pn	05 57 19.9	+0.4
PUZ				S	Sb	05 57 38.9	+1.6
PKGZ	Pakihiroa	1.36	260	P	Pn	05 57 20.8	0.0
PKGZ				S	Sb	05 57 39.9	-0.3
CNGZ	Carnagh Statio	1.48	236	P	Pn	05 57 23.7	+1.3
TWGZ	Tauwhareparae	1.50	250	P	Pn	05 57 23.8	+0.9
HAZ	Te Kaha	1.58	266	P	Pn	05 57 23.8	0.0
RUGZ	Raukumara Rang	1.68	259	P	Pn	05 57 25.3	0.0

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TKGZ  Te Karaka          1.70 242  P      Pn      05 57 26.3 +0.8
MWZ   Matawai            1.89 249  P      Pn      05 57 28.5 +0.3
RIGZ  Rimuhau            1.89 236  P      Pn      05 57 29.0 +0.9
PRGZ  Paritu Road        1.94 229  P      Pn      05 57 29.9 +1.0
RAGZ  Rawiri             2.03 245  P      Pn      05 57 30.9 +0.7
WIZ   White Island       2.05 273  P      Pn      05 57 31.4 +1.0
MHGZ  Mahia Peninsul     2.08 224  P      Pn      05 57 31.3 +0.6
KNZ   Kokohu             2.13 230  P      Pn      05 57 31.6 +0.2
URZ   Urewera            2.18 253  P      Pn      05 57 32.9 +0.8
      983nm,0.3s,baz=108,slow=1.8,SNR=2246
URZ                                S      Sn      05 58 01.0 +3.0
      863nm,0.3s,baz=57,slow=8.5,SNR=6.4
URZ   Urewera            2.18 253  Pn     Pn      05 57 33.1 +0.9
URZ   Urewera            2.18 253  P      Pn      05 57 32.9 +0.8
URZ                                S      Sb      05 58 02.6  -1.0
SNGZ  Shannon Statio     2.21 239  P      Pn      05 57 33.3 +0.7
SNGZ                               S      Sb      05 58 03.4  -1.1
WHRZ  Whale Island       2.22 264  P      Pn      05 57 33.5 +0.9
WHRZ                               S      Sn      05 58 02.3 +3.3
RTZ   Ruatahuna          2.39 246  P      Pn      05 57 36.2 +1.1
RTZ                                S      Sb      05 58 08.1  -1.7
EDRZ  Edgecumbe          2.44 259  P      Pn      05 57 36.3 +0.7
EDRZ                               S      Sn      05 58 06.0 +1.6
WHHZ  Waihua             2.44 234  P      Pn      05 57 36.6 +1.0
WHHZ                               S      Sn      05 58 07.2 +2.8
RAHZ  Arahi              2.45 239  P      Pn      05 57 36.7 +0.9
RAHZ                               S      Sb      05 58 09.1  -2.3
MARZ  Manawahe           2.47 262  P      Pn      05 57 36.8 +0.7
MARZ                               S      Sn      05 58 06.9 +1.8
MUGZ  Murupara           2.50 250  P      Pn      05 57 37.6 +1.1
MUGZ                               S      Sn      05 58 06.8 +0.9
OPRZ  Ohinepanea         2.55 265  P      Pn      05 57 37.1  -0.1
OPRZ                               S      Sn      05 58 07.2 +0.1
MTHZ  Maungataniwha      2.59 242  P      Pn      05 57 38.4 +0.6
MTHZ                               S      Sn      05 58 11.6 +3.5
TARZ  Mount Tarawera     2.64 257  P      Pn      05 57 39.5 +1.0
TARZ                               S      Sn      05 58 11.5 +2.0
MKRZ  Makatiti           2.65 259  P      Pn      05 57 40.4 +1.7
RRRZ  Republican Roa     2.66 254  P      Pn      05 57 39.9 +1.2
RRRZ                               S      Sn      05 58 11.8 +2.0
ARHZ  Aropaoanui         2.70 233  P      Pn      05 57 40.3 +1.1
ARHZ                               S      Sb      05 58 16.2  -2.2
LIRZ  Lichensteins R     2.70 262  P      Pn      05 57 40.7 +1.5
OMRZ  Omania             2.72 260  P      Pn      05 57 40.8 +1.2
NMHZ  Naumai             2.73 238  P      Pn      05 57 40.7 +1.0
NMHZ                               S      Sn      05 58 16.2 +4.5
HLRZ  Highlands Stat     2.76 257  P      Pn      05 57 41.3 +1.1
TGRZ  Tauranga           2.78 268  P      Pn      05 57 39.9  -0.4
PRRZ  Plateau Road       2.79 252  P      Pn      05 57 41.3 +0.8
KARZ  Kaharoa            2.81 262  P      Pn      05 57 41.2 +0.4
KARZ                               S      Sb      05 58 18.9  -2.8
MYRZ  Mayor Island       2.83 277  P      Pn      05 57 40.5  -0.5
HRRZ  Handcock Road      2.84 254  P      Pn      05 57 42.1 +0.8
ALRZ  Allen Road         2.85 251  P      Pn      05 57 42.0 +0.8
HSRZ  Hossack Road       2.86 256  P      Pn      05 57 43.0 +1.6
NGRZ  Ngongotaha         2.87 260  P      Pn      05 57 42.9 +1.4
UTU   Utuhina            2.87 259  P      Pn      05 57 43.4 +1.8
MRHZ  Matea Rd           2.88 245  P      Pn      05 57 42.3 +0.4
CKHZ  Cape Kidnapper     2.90 226  P      Pn      05 57 42.1 +0.2
CKHZ                               S      Sn      05 58 18.5 +2.9
GRRZ  Galatos Road       2.97 256  P      Pn      05 57 44.2 +1.2
WPRZ  Whakapapatarin     2.97 252  P      Pn      05 57 44.0 +1.0
BKZ   Black Stump Fm     2.98 239  Pn     Pn      05 57 43.3 +0.2
BKZ   Black Stump Fm     2.98 239  P      Pn      05 57 43.6 +0.5
MCHZ  McNeill Hill       2.99 233  P      Pn      05 57 43.8 +0.5
KMRZ  Kaimai             3.04 265  P      Pn      05 57 43.8  -0.2
KAHZ  Kahuranaki         3.10 226  P      Pn      05 57 44.8  0.0
HATZ  Hinemaiaia         3.14 246  P      Pn      05 57 45.3  0.0
KWHZ  Kaweka Forest      3.16 235  P      Pn      05 57 45.9 +0.3
WHTZ  Whakaora           3.17 250  P      Pn      05 57 46.9 +1.1
KUTZ  Kaahu Road         3.22 254  P      Pn      05 57 47.2 +0.8
PXZ   Pawanui            3.28 223  P      Pn      05 57 46.4  -0.7
KRHZ  Kereru             3.31 232  P      Pn      05 57 47.7  0.0
RITZ  Rihia Road         3.34 246  P      Pn      05 57 49.3 +1.2
WATZ  Wairara            3.34 251  P      Pn      05 57 49.2 +1.1
KUZ   Kuaotunu           3.36 285  P      Pn      05 57 46.9  -1.4
RATZ  Rangitukua         3.37 248  P      Pn      05 57 49.6 +1.1
TLZ   Tolley Road        3.41 257  P      Pn      05 57 49.9 +0.9
BHHZ  Black Hill Sta     3.43 237  P      Pn      05 57 49.5 +0.2
KATZ  Kakaramea          3.46 247  P      Pn      05 57 50.4 +0.6
TMVZ  Te Maari           3.51 244  P      Pn      05 57 50.7 +0.3
ETVZ  East Tongariro     3.51 244  P      Pn      05 57 50.9 +0.4
WPHZ  Waipukurau         3.53 226  P      Pn      05 57 50.2  -0.5
KRVZ  Karewarewa         3.54 245  P      Pn      05 57 51.4 +0.4
OTVZ  Oturere            3.55 244  P      Pn      05 57 51.2 +0.1
PRHZ  Porangahau         3.56 222  P      Pn      05 57 50.0  -1.1
PNHZ  Pukenui            3.58 230  P      Pn      05 57 51.1  -0.3
WTVZ  West Tongariro     3.59 245  P      Pn      05 57 52.1 +0.5
MOVZ  Moawhango          3.60 240  P      Pn      05 57 51.8 +0.2
NGZ   Ngauruhoe          3.60 244  P      Pn      05 57 52.2 +0.4
TUVZ  Tukino             3.60 242  P      Pn      05 57 52.3 +0.5
WHVZ  Whangaehu Hut      3.66 242  P      Pn      05 57 53.0 +0.4
WNVZ  Wahianoa           3.67 242  P      Pn      05 57 52.7  0.0
DRZ   Dome Shelter       3.67 243  P      Pn      05 57 55.8 +3.0
TWVZ  Taurewa            3.68 246  P      Pn      05 57 54.0 +1.1
TRVZ  Turoa              3.69 242  P      Pn      05 57 53.3 +0.2
MKAZ  Moumakai           3.71 277  P      Pn      05 57 52.3  -0.9
GRZ   Great Barrier      3.73 291  P      Pn      05 57 52.0  -1.4
MTVZ  Mangateitei        3.78 242  P      Pn      05 57 56.2 +2.0
ANWZ  Angora Road        3.79 222  P      Pn      05 57 53.2  -1.0
WIAZ  Waiheke Island     3.80 282  P      Pn      05 57 53.8  -0.6
TSZ   Takapari Road      3.81 230  P      Pn      05 57 54.1  -0.5
PKVZ  Pokaka             3.83 244  P      Pn      05 57 55.7 +0.8
DVHZ  Dannevirke         3.85 226  P      Pn      05 57 54.0  -1.1
ETAZ  East Tamaki Re     3.92 279  P      Pn      05 57 55.9  -0.1
HIZ   Hauiti             3.97 256         Pn      05 57 56.7  0.0
HIZ   Hauiti             3.97 256  P      Pn      05 57 57.8 +1.1
MBAZ  Motutapu North     3.99 281  P      Pn      05 57 57.3 +0.4
BFZ   Birch Farm         4.07 221  Pn     Pn      05 57 56.2  -1.9
ABAZ  Army Bay           4.08 284  P      Pn      05 57 58.2  -0.1
EPAZ  Eden Park BICE     4.08 280  P      Pn      05 57 58.9 +0.7
HBAZ  Herne Bay Bore     4.10 280  P      Pn      05 57 58.8 +0.4
AWAZ  Awhitu Peninsu     4.13 277  P      Pn      05 57 59.3 +0.5
PRWZ  Pori Road          4.13 224  P      Pn      05 57 57.9  -1.0
POWZ  Post Office Ro     4.14 228  P      Pn      05 57 58.6  -0.4
VRZ   Vera Road          4.20 248  P      Pn      05 58 00.9 +1.1
WTAZ  Waiatarua          4.21 278  P      Pn      05 58 00.6 +0.6
RVAZ  Riverhead Bore     4.24 281  P      Pn      05 58 00.6 +0.3
CPWZ  Castlepoint        4.26 219  P      Pn      05 57 59.7  -0.9
WAZ   Wanganui           4.28 239  P      Pn      05 58 01.8 +0.8
OHWZ  Ohakea             4.30 232  P      Pn      05 58 01.6 +0.4
TIWZ  Tintock            4.33 223  P      Pn      05 58 00.4  -1.2
MHEZ  Mangahewa          4.50 250  P      Pn      05 58 07.3 +3.2
LREZ  Lake Rotokare      4.57 245  P      Pn      05 58 06.5 +1.6
DREZ  Durham Road        4.63 249  P      Pn      05 58 07.9 +2.1
WCZ   Waipu Caves        4.68 290  P      Pn      05 58 06.2  -0.2
PREZ  Palmer Road        4.71 247  P      Pn      05 58 09.6 +2.7
NEZ   North Egmont       4.73 248  P      Pn      05 58 09.2 +1.9
OGWZ  Otaki Gorge        4.76 227  P      Pn      05 58 06.3  -1.3
PKE   Pukeiti            4.79 250  P      Pn      05 58 09.8 +1.8
KHEZ  Kahui Hut          4.80 248  P      Pn      05 58 10.4 +2.2
NBEZ  Newall Road No     4.90 249  P      Pn      05 58 13.7 +4.2
NMEZ  Namu Road          4.94 247  P      Pn      05 58 12.5 +2.5
MSWZ  Moikau Station     5.12 222         Pn      05 58 09.0  -3.5
PLWZ  Palliser           5.23 220  Pn     Pn      05 58 11.0  -3.0
BHW   Baring Head        5.32 224         Pn      05 58 12.7  -2.6
SNZO  South Karori       5.35 226         Pn      05 58 13.0  -2.6
OUZ   Omahuta            5.54 294  Pn     Pn      05 58 17.6  -0.7
OUZ   Omahuta            5.54 294  P      Pn      05 58 17.9  -0.4
TUWZ  Tuamarina          5.87 228         Pn      05 58 20.1  -2.6
CMWZ  Cape Campbell      5.91 225         Pn      05 58 22.3  -1.1
BSWZ  Blackbirch Sta     6.08 226         Pn      05 58 23.1  -2.7
NNZ   Nelson             6.08 232  Pn     Pn      05 58 25.8  0.0
NNZ   Nelson             6.08 232  P      Pn      05 58 24.4  -1.3
QRZ   Quartz Range       6.44 238  Pn     Pn      05 58 29.0  -1.7
CTZ   Chatham Island     6.66 157  P      Pn      05 58 34.2 +0.6
CTZ                                S      Sn      05 59 43.4  -4.8
THZ   Tophouse           6.69 230  Pn     Pn      05 58 32.2  -1.8
KHZ   Kahutara           6.73 223  Pn     Pn      05 58 31.7  -2.9
LTZ   Lake Taylor        7.68 226  Pn     Pn      05 58 44.4  -3.3
MQZ   McQueen's Vall     8.10 220  Pn     Pn      05 58 51.0  -2.4
RPZ   Rata Peaks         8.96 225  P      Pn      05 59 03.2  -2.0
      9.1nm,0.3s,baz=229,slow=1.7,SNR=27
RPZ                                S      Sn      06 00 38.2  -6.8
      28nm,0.3s,baz=146,slow=22,SNR=21
FOZ   Fox Glacier        9.57 229  Pn     Pn      05 59 12.2  -1.3
LBZ   Lake Benmore       9.87 224  Pn     Pn      05 59 15.3  -2.4
ODZ   Otahua Downs      10.06 220         Pn      05 59 18.1  -2.2
MLZ   Mavora Lakes      11.63 225  Pn     Pn      05 59 39.9  -1.9
WHZ   Wether Hill Ro    12.05 223  Pn     Pn      05 59 45.8  -1.7

DCZ   Deep Cove         12.24 226         Pn      05 59 47.3  -2.7
PYZ   Puysegur Point    12.91 225  Pn     Pn      05 59 56.4  -2.9
DZM   Mont Dzumac       19.33 320  P      P       06 01 18.3  -2.4
      0.8nm,0.3s,baz=169,slow=12,SNR=6.6
DZM                                LR     LR      06 07 51.5
      comp=Z,2µm,18.9s,baz=146,slow=34
DZM   Mont Dzumac       19.33 320  eP     P       06 01 20.4  -0.4
      118nm,1.6s
DZM                                eS     S       06 04 49.4  -8.4
      516nm,23.8s
DZM                                eLQ    LQ      06 05 04.8
      2µm,27.0s
DZM                                eLR    LR      06 05 50.0
      comp=Z,3µm,24.2s
DZM   Mont Dzumac       19.33 320  P      Pn      06 01 22.3 +0.3
MSVF  Nonsavu           19.91 355  P      P       06 01 24.7  -2.4
      3.9nm,0.3s,baz=227,slow=5.5,SNR=19
MSVF                               LR     LR      06 07 39.8
      comp=Z,1µm,18.5s,baz=182,slow=33
MSVF  Nonsavu           19.91 355  eP     P       06 01 26.4  -0.7
MSVF                               pmax   pmax
      comp=Z,11nm,1.0s
MSVF  Nonsavu           19.91 355  P      P       06 01 25.9  -1.3
MSVF  Nonsavu           19.91 355  P      P       06 01 27.6 +0.5
SANVU Saraoutou         24.77 330  P      P       06 02 15.0  -1.9
SANVU                              IAmb   IAmb    06 02 29.5
      comp=Z,65nm,0.9s
SANVU Saraoutou         24.77 330  P      P       06 02 17.9 +1.0
AFI   Afiamalu          24.83  20  P      P       06 02 18.2 +0.7
AFI                                pmax   pmax
      comp=Z,104nm,1.2s
AFI   Afiamalu          24.83  20  P      P       06 02 18.2 +0.7
AFI                                IAmb   IAmb    06 02 30.2
      comp=Z,104nm,1.1s
TOO   Toolangi          27.07 260  P      P       06 02 38.0 +0.3
      baz=27,SNR=4.8
RMQ   Roma              28.42 284  P      P       06 02 51.7 +1.9
      baz=28,SNR=8.6
TBI   Tubuai            29.95  70  eLQ    LQ      06 09 19.6
      comp=Z,716nm,24.8s
TBI   Tubuai            29.95  70  eT     T       06 33 52.2
      comp=Z,64nm,0.4s
STKA  Stephens Creek    31.73 269  P      P       06 03 18.7  -0.3
      comp=Z,12nm,0.9s,baz=98,slow=9.8,SNR=19
STKA                               PcP    PcP     06 06 10.4 +0.4
      comp=Z,1.3nm,0.6s,baz=50,slow=3.3,SNR=4.4
STKA                               LR     LR      06 15 52.8
      comp=Z,840nm,19.2s,baz=97,slow=36
STKA  Stephens Creek    31.73 269  P      P       06 03 19.2 +0.2
QLP   Quilpie           31.88 280  P      P       06 03 19.4  -1.0
      baz=32,SNR=5.3
HTT   Hallett           33.31 265  P      P       06 03 33.9 +0.9
      baz=33,SNR=5.4
PAE   Paea              33.45  62  eT     T       06 38 09.6
      comp=Z,6.9nm,0.4s
PPT2  Papeete2          33.50  62  eLQ    LQ      06 10 51.4
      comp=Z,637nm,28.5s
PPT2                               eLR    LR      06 12 23.2
      comp=Z,156nm,21.2s
PPT2  Papeete2          33.50  62  eT     T       06 38 13.7
      comp=Z,7.3nm,0.3s
PPT   Papeete           33.51  62  LR     LR      06 15 15.2
      comp=Z,209nm,19.1s,baz=238,slow=33
TVO   Taravao           33.59  62  eT     T       06 38 21.0
      comp=Z,3.5nm,0.4s
CTAO  Charters Tower    33.94 292  P      P       06 03 37.2  -1.2
CTAO                               pmax   pmax
      comp=Z,23nm,1.0s
CTAO  Charters Tower    33.94 292  P      P       06 03 37.2  -1.2
CTAO                               IAmb   IAmb    06 03 47.5
      comp=Z,23nm,1.0s
BBOO  Buckleboo         35.78 264  P      P       06 03 54.2  -0.1
      baz=36,SNR=8.1
BBOO  Buckleboo         35.78 264  P      P       06 03 53.9  -0.4
VAH   Vaihoa            36.47  61  eT     T       06 41 55.6
      comp=Z,12nm,0.3s
MTSU  Mount Surprise    36.58 292  P      P       06 04 01.0  -0.2
      baz=36,SNR=13
QIS   Mount Isa         38.67 285  P      P       06 04 18.3  -0.6
      baz=39,SNR=13
COEN  Coen              40.14 296  P      P       06 04 30.1  -1.0
COEN                               IAmb   IAmb    06 04 32.9
      comp=Z,36nm,0.8s
PMG   Port Moresby      40.67 305  eP     P       06 04 34.4  -1.1
PMG                                pmax   pmax
      comp=Z,25nm,0.9s
VNDA  Vanda             40.70 186  LR     LR      06 18 09.1
      comp=Z,297nm,18.5s,baz=30,slow=31
RKT   Rikitea           41.25  83  eLQ    LQ      06 14 18.7
      comp=Z,596nm,31.0s
ASAR  Alice Springs     41.45 276  P      P       06 04 40.7  -1.2
      comp=Z,37nm,0.7s,baz=119,slow=8.1,SNR=220
ASAR                               PcP    PcP     06 06 38.5  -0.9
      comp=Z,1.7nm,0.6s,baz=135,slow=4.2,SNR=1.9
ASAR                               ScP    ScP     06 10 26.8  -0.1
      comp=Z,1.8nm,0.8s,baz=124,slow=4.4,SNR=6.7
ASAR                               S      S       06 10 51.8  -3.3
      comp=Z,1.6nm,0.8s,baz=116,slow=17,SNR=6.7
ASAR                               LR     LR      06 21 57.6
      comp=Z,476nm,18.3s,baz=122,slow=36
FORT  Forrest           42.86 263  P      P       06 04 52.8  -0.4
      baz=43,SNR=29
FORT  Forrest           42.86 263  P      P       06 04 52.8  -0.4
WR0   Warramunga Arr    42.93 281  P      P       06 04 52.3  -1.7
WB2   Warramunga Arr    43.08 281  P      P       06 04 53.7  -1.6
WB2                                IAmb   IAmb    06 04 55.4
      comp=Z,21nm,0.9s
WRAB  Tennant Creek     43.09 281c iP     P       06 04 54.3  -1.0
WRAB                               pmax   pmax
      comp=Z,15nm,0.7s
WRA   Warramunga Arr    43.09 281  P      P       06 04 53.6  -1.7
      comp=Z,7.4nm,0.4s,baz=121,slow=7.9,SNR=145
WRA                                PcP    PcP     06 06 44.4  -0.5
      comp=Z,5.0nm,0.8s,baz=121,slow=3.4,SNR=7.4
WRA                                ScP    ScP     06 10 33.6 +0.1
      comp=Z,1.6nm,0.9s,baz=123,slow=4.0,SNR=5.5
WRA                                S      S       06 11 14.9  -4.4
      comp=Z,1.8nm,1.0s,baz=123,slow=12,SNR=4.6
WRA                                LR     LR      06 23 39.8
      comp=Z,772nm,18.3s,baz=135,slow=37
WRA   Warramunga Arr    43.09 281  P      P       06 04 53.8  -1.5
WRKA  Warakurna         45.21 271  P      P       06 05 10.0  -2.3
      baz=45,SNR=55
KMBL  Kambalda          47.47 259  P      P       06 05 29.4  -0.5
      baz=47,SNR=6.8
JAY   Jayapura          50.05 305  LR     LR      06 25 44.9
      comp=Z,322nm,20.3s,baz=351,slow=35
NWAO  Narrogin (SRO)    50.43 255  P      P       06 05 51.4  -1.2
      comp=Z,3.9nm,0.6s,baz=109,slow=11,SNR=2.6
NWAO                               LR     LR      06 27 33.8
      comp=Z,397nm,18.1s,baz=98,slow=36
KLBR  Kellerberrin      50.58 257  P      P       06 05 53.0  -0.7
      baz=50,SNR=8.1
FITZ  Fitzroy Crossi    50.94 277  P      P       06 05 55.5  -1.0
      baz=51,SNR=20
FITZ  Fitzroy Crossi    50.94 277  P      P       06 05 55.3  -1.2
      comp=Z,19nm,0.6s,baz=163,slow=7.1,SNR=42
FITZ                               LR     LR      06 28 31.2
      comp=Z,475nm,18.5s,baz=120,slow=37
FITZ  Fitzroy Crossi    50.94 277  IAmb   IAmb    06 05 57.7
      comp=Z,45nm,1.3s
BLDU  Ballidu           51.81 258  P      P       06 06 03.4 +0.4
      baz=52,SNR=4.7
MEEK  Meekatharra       52.12 263  P      P       06 06 03.9  -1.4
      baz=52,SNR=16
QSPA  South Pole Qui    52.46 180  P      P       06 06 11.4 +4.0
      comp=Z,30nm,0.8s,baz=27,slow=1.8,SNR=80
QSPA  South Pole Qui    52.46 180  P      P       06 06 10.4 +2.9
MORW  Morawa            53.01 259  P      P       06 06 11.8  -0.1
      baz=53,SNR=5.1
MORW  Morawa            53.01 259  P      P       06 06 10.8  -1.1
MORW                               IAmb   IAmb    06 06 13.3
      comp=Z,15nm,0.9s
PSA00 Pilbara Seismi    53.66 270  IAmb   IAmb    06 06 16.8
      comp=Z,13nm,0.9s
BATI  Baumata           57.13 283  LR     LR      06 32 39.1
      comp=Z,976nm,18.2s,baz=142,slow=38
GIRL  Giralia           57.55 265  P      P       06 06 43.6  -1.1
      baz=57,SNR=3.5
GIRL  Giralia           57.55 265  P      P       06 06 44.9 +0.2
SIJI  Sorong            57.66 298  LR     LR      06 31 33.1
      comp=Z,463nm,20.4s,baz=66,slow=36
RPN   Rapa Nui          59.51 102  LR     LR      06 28 28.0
      comp=Z,119nm,18.5s,baz=255,slow=32
BELA  Belgrano 2        62.85 172  P      P       06 07 20.7 +0.5
KAPI  Kappang           63.39 285  LR     LR      06 36 15.3
      comp=Z,236nm,18.3s,baz=132,slow=37

MAW   Mawson            64.89 202  LR     LR      06 34 51.6
      comp=Z,433nm,19.0s,baz=151,slow=35
SYO   Syowa Base        69.64 194⇓eX      P       06 08 06.7 +3.0
SYO   Syowa Base        69.64 194⇑epP     pP      06 08 11.2  -1.6
SYO   Syowa Base        69.64 194⇓isP     sP      06 08 15.0  -1.2
SNAA  Sanae             70.95 179  P      P       06 08 14.5 +2.7
SNAA  Sanae             70.95 179ceP      P       06 08 13.0 +1.2
SNAA                               pmax   pmax
      comp=Z,20nm,1.3s
SNAA  Sanae             70.95 179  P      P       06 08 12.4 +0.6
SNAA                               IAmb   IAmb    06 08 16.1
      comp=Z,29nm,1.4s
VNA3  Neumayer Olymp    71.19 177  P      P       06 08 14.9 +1.7
VNA2  Neumayer--Watz    71.59 178  P      P       06 08 16.2 +0.5
      baz=170,slow=6.6
VNA1  Neumayer--Stat    71.84 177  P      P       06 08 17.1 +0.1
H03S2 Juan Fernandez    78.01 123  T      T       07 34 59.8
      baz=231,slow=74
H03S1 Juan Fernandez    78.02 123  T      T       07 35 00.1
      baz=231,slow=74
H03S3 Juan Fernandez    78.03 123  T      T       07 35 00.1
      baz=231,slow=74
H03N3 Juan Fernandez    78.24 123  T      T       07 35 08.2
      baz=235,slow=72
H03N2 Juan Fernandez    78.25 123  T      T       07 35 09.2
      baz=235,slow=72
H03N1 Juan Fernandez    78.26 123  T      T       07 35 13.3
      baz=235,slow=72
PLCA  Paso Flores       78.91 133  P      P       06 09 00.8 +2.5
      comp=Z,18nm,0.9s,baz=226,slow=5.3,SNR=22
PLCA                               LR     LR      06 37 10.2
      comp=Z,119nm,18.5s,baz=30,slow=30
PLCA  Paso Flores       78.91 133  P      P       06 09 01.2 +2.9
PLCA                               pmax   pmax
      comp=Z,24nm,1.0s
PLCA  Paso Flores       78.91 133  P      P       06 09 01.2 +2.9
PLCA                               IAmb   IAmb    06 09 03.2
      comp=Z,24nm,0.9s
LC01  Cunco             79.31 131  P      P       06 09 02.2 +1.7
LC01                               IAmb   IAmb    06 09 04.8
      comp=Z,36nm,1.1s
BI02  San Fabin de      81.12 130  P      P       06 09 13.2 +2.9
BI02                               IAmb   IAmb    06 09 14.9
      comp=Z,29nm,1.0s
BO02  Sierra Bellavi    82.64 129  P      P       06 09 18.6 +0.2
MJAR  Matsushiro Arr    83.25 327  P      P       06 09 19.4  -1.7
      comp=Z,1.0nm,0.3s,baz=325,slow=19,SNR=1.8
MJAR                               LR     LR      06 46 44.5
      comp=Z,34nm,18.8s,baz=345,slow=36
PEL   Peldehue          83.78 127  P      P       06 09 25.3 +1.0
PEL                                pmax   pmax
      comp=Z,51nm,1.0s
PEL   Peldehue          83.78 127  P      P       06 09 25.2 +1.0
GSI   Gunungsitoli      84.60 276  P      P       06 09 26.4  -2.2
GSI                                IAmb   IAmb    06 09 30.4
      comp=Z,21nm,0.9s
CO02  Combarbal         84.85 126  P      P       06 09 31.2 +1.4
CO03  El Pedregal       85.30 126  P      P       06 09 33.0 +1.0
KSRS  Korea Array       88.76 321  P      P       06 09 48.0  -0.2
      comp=Z,1.7nm,0.8s,baz=139,slow=5.8,SNR=3.9
KSRS                               LR     LR      06 48 48.8
      comp=Z,58nm,19.1s,baz=108,slow=35
NJ2   Nanjing           89.64 312  eP     P       06 09 54.4 +1.9
NJ2                                pmax   pmax
      comp=Z,3.0nm,0.5s
GO02  Mina Guanaco      89.78 122  IAmb   IAmb    06 09 58.5
      comp=Z,17nm,1.0s
YSS   Yuzh-Sakhalins    90.53 336⇑iP      P       06 09 56.8 +0.6
YSS                                pmax   pmax
      comp=Z,13nm,0.7s
IKP   In-Ko-Pah, Jac    91.98  49  P      P       06 10 05.8 +2.3
      baz=226
MURC  Murrieta          92.00  48  P      P       06 10 05.5 +2.0
      baz=225
ARVC  Arvin             92.13  46  P      P       06 10 07.3 +3.3
      baz=224
BFSC  Mount Baldy Ra    92.17  47  P      P       06 10 07.5 +3.0
      baz=225
USRK  Ussuriysk Ar.     92.24 328  P      P       06 10 03.7  -0.6
      comp=Z,1.9nm,0.8s,baz=190,slow=9.5,SNR=4.1
USRK                               LR     LR      06 50 40.0
      comp=Z,82nm,19.0s,baz=119,slow=35
SWSC  Sam W. Stewart    92.37  49  P      P       06 10 08.6 +3.4
      baz=226
PETK  Petropavlovsk-    92.41 347  P      P       06 10 04.0  -0.9
      comp=Z,6.1nm,0.8s,baz=150,slow=6.8,SNR=9.4
PETK                               LR     LR      06 42 57.3
      comp=Z,53nm,21.6s,baz=158,slow=30
PETK  Petropavlovsk-    92.41 347  P      P       06 10 04.0  -0.9
PETK  Petropavlovsk-    92.41 347  P      P       06 10 03.7  -1.2
EDW2  Edwards Air Fo    92.44  47  P      P       06 10 08.5 +2.9
      baz=225
TPFO  Pinon Flats       92.44  49  P      P       06 10 08.9 +3.2
      baz=225
PFO   Pinyon Flats O    92.44  49  P      P       06 10 08.9 +3.2
      baz=225
VES   Vestal, Richgr    92.50  45  P      P       06 10 08.3 +2.6
      baz=224
ISA   Isabella, Lake    92.72  46  P      P       06 10 09.5 +2.7
      baz=224
BELC  Belle Mtn. Jos    92.99  49  P      P       06 10 11.1 +2.9
      baz=226
LRMC  Laurel Mtn Rad    93.04  46  P      P       06 10 11.4 +3.0
      baz=225
BC3   Big Chuckawall    93.07  49  P      P       06 10 11.7 +3.1
      baz=226
HEC   Hector,Ludlow     93.36  48  P      P       06 10 13.2 +3.3
      baz=226
GSC   Goldstone, Bar    93.42  47  P      P       06 10 13.3 +3.2
      baz=225
214A  Organ Pipe Nat    93.52  52  P      P       06 10 14.0 +3.4
      baz=227
IRM   Iron Mountain     93.60  49  P      P       06 10 13.2 +2.3
      baz=226
O02D  Mt. Diablo Mer    93.66  40  P      P       06 10 13.8 +2.7
      baz=222
GMRC  Granite Mounta    93.73  48  P      P       06 10 14.7 +3.0
      baz=226
MNMC  Minye Minye       93.80 118  P      P       06 10 13.4 +0.8
CMAR  Chiang Mai Arr    94.09 290  P      P       06 10 13.7 +0.2
      comp=Z,1.1nm,0.3s,baz=161,slow=3.5,SNR=12
CMAR                               LR     LR      06 56 48.3
      comp=Z,48nm,18.1s,baz=189,slow=38
CMAR  Chiang Mai Arr    94.09 290ceP      P       06 10 14.8 +1.3
CMAR                               pmax   pmax
      comp=Z,3.0nm,0.6s
CMAR  Chiang Mai Arr    94.09 290  P      P       06 10 14.8 +1.3
N02D  Trinity Center    94.29  40  P      P       06 10 16.5 +2.6
      baz=222
M02C  Callahan          94.53  39  P      P       06 10 17.7 +2.7
      baz=222
NVAR  Mina Array Bea    94.78  44  P      P       06 10 17.6 +1.1
      comp=Z,0.6nm,0.9s,baz=231,slow=8.0,SNR=5.0
NVAR                               LR     LR      06 48 35.4
      comp=Z,125nm,18.3s,baz=216,slow=33
NVAR  Mina Array Bea    94.78  44  P      P       06 10 17.9 +1.4
TPH   Tonopah           95.13  45  P      P       06 10 18.5 +0.5
TPH                                pmax   pmax
      comp=Z,19nm,1.2s
TPH   Tonopah           95.13  45  P      P       06 10 18.5 +0.5
KMI   Kunming           95.48 297 ⇓P      P       06 10 20.3 +0.3
KMI                                pmax   pmax
      comp=Z,6.0nm,0.5s
KMI                                pmax   pmax
      comp=Z,78nm,4.4s
CPUP  Villa Florida     96.80 131  LR     LR      06 47 46.3
      comp=Z,215nm,18.6s,baz=210,slow=31
HHC   Hu-ho-hao-te      99.96 314  eP     Pdif    06 10 40.3 +0.7
HHC                                pmax   pmax
      comp=Z,3.0nm,1.0s
HHC                                pmax   pmax
      comp=Z,160nm,7.0s
ILAR  Eielson Array    105.40  14  PKiKP  PKiKP   06 15 15.7  -0.8
      comp=Z,0.6nm,0.9s,baz=286,slow=3.4,SNR=4.2
SONM  Songino Array    107.25 317  PKKPbc PKKPbc  06 26 39.0 +1.6
      comp=Z,0.5nm,0.6s,baz=264,slow=2.8,SNR=4.0
SONM                               PKKP   PKKPdf  06 26 54.5 +3.5
      comp=Z,0.5nm,0.8s,baz=314,slow=6.1,SNR=3.6
YKA   Yellowknife Ar   112.76  27  PKiKP  PKiKP   06 15 29.9  -0.4
      comp=Z,0.7nm,0.7s,baz=229,slow=0.9,SNR=15
YKA                                PKKPbc PKKPbc  06 26 18.9  -0.7
      comp=Z,0.2nm,0.7s,baz=52,slow=4.2,SNR=5.1
YKA   Yellowknife Ar   112.76  27 i PKIKP PKiKP   06 15 30.0  -0.4
WMQ   Urumqi           116.14 306 ePKP    PKiKP   06 15 38.8 +1.2
WMQ                                LR     LR
      comp=Z,610nm,29.1s
WMQ                                LR     LR
```

	comp=Z,1μm,29.0s						
ZSN	Zaisan	119.53	309	ePKP	PKPdf	06 15 43.5	-0.5
	baz=309						
ZSN	Zaisan	119.53	309	ePKIKP	PKPdf	06 15 43.4	-0.5
MK31	Makanchi Array	120.87	307	c iPKIKP	PKPdf	06 15 46.2	-0.3
MKAR	Makanchi Array	120.87	307	PKP	PKPdf	06 15 44.9	-1.6
	comp=Z,3.1nm,0.9s,baz=73,slow=2.0,SNR=17						
MKAR				PKKPbc	PKKPbc	06 25 52.4	+1.9
	comp=Z,0.6nm,0.6s,baz=314,slow=4.3,SNR=8.4						
MKAR	Makanchi Array	120.87	307	PKIKP	PKPdf	06 15 45.6	-0.9
MKAR	Makanchi Array	120.87	307	PKPdf	PKPdf	06 15 45.6	-0.9
SHLS	Shalkode	121.24	303	ePKP	PKPdf	06 15 46.8	-0.7
	baz=303						
SHLS	Shalkode	121.24	303	ePKIKP	PKPdf	06 15 46.7	-0.7
KPKS	Kokpek	121.88	303	ePKP	PKPdf	06 15 48.5	-0.2
	baz=303						
KPKS	Kokpek	121.88	303	ePKIKP	PKPdf	06 15 48.5	-0.2
SATY	Saty	121.91	302	ePKP	PKPdf	06 15 48.6	-0.2
	baz=302						
SATY	Saty	121.91	302	ePKIKP	PKPdf	06 15 48.6	-0.2
ZALV	Zalesovo Beam	122.09	316	PKP	PKPdf	06 15 46.1	-2.4
	comp=Z,1.4nm,0.8s,baz=132,slow=2.1,SNR=3.6						
SEM	Semipalatinsk	123.47	311	ePKP	PKPdf	06 15 50.8	-0.9
	baz=311						
SEM	Semipalatinsk	123.47	311	ePKIKP	PKPdf	06 15 50.7	-0.9
KUU	Kurty	123.61	302	ePKP	PKPdf	06 15 51.4	-0.6
	baz=303						
KUU	Kurty	123.61	302	ePKIKP	PKPdf	06 15 51.3	-0.6
KURK	Kurchatov	124.56	311	⇑iPKIKP	PKPdf	06 15 52.1	-1.3
KURK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KURK	Kurchatov	124.56	311	PKPdf	PKPdf	06 15 51.9	-1.5
NRIK	Noril'sk	125.43	334	PKP	PKPdf	06 15 53.7	-0.9
	comp=Z,3.3nm,0.7s,baz=112,slow=3.0,SNR=8.6						
NRIK	Noril'sk	125.43	334	PKIKP	PKiKP	06 15 55.2	+0.3
NRIK	Noril'sk	125.43	334	PKPdf	PKiKP	06 15 55.2	+0.3
BTLS	Baital	125.56	303	ePKP	PKPdf	06 15 55.5	0.0
	baz=303						
BTLS	Baital	125.56	303	ePKIKP	PKPdf	06 15 55.5	0.0
KK31	Karatay Array	127.30	300	PKIKP	PKPdf	06 15 58.1	-0.9
KK31	Karatay Array	127.30	300	PKPdf	PKPdf	06 15 58.1	-0.9
KKAR	Karatay Array	127.30	300	PKIKP	PKPdf	06 15 57.3	-1.7
KKAR	Karatay Array	127.30	300	PKPdf	PKPdf	06 15 57.2	-1.7
IUG	Iuzhnay	127.31	298	ePKP	PKPdf	06 15 58.1	-1.0
	baz=298						
IUG	Iuzhnay	127.31	298	ePKIKP	PKPdf	06 15 58.1	-1.0
BRZS	Berezniki	127.97	308	ePKP	PKPdf	06 15 59.7	-0.4
	baz=309						
BRZS	Berezniki	127.97	308	ePKIKP	PKPdf	06 15 59.6	-0.4
KMBO	Kilima Mbogo	128.15	231	PKP	PKiKP	06 16 03.4	+0.9
	comp=Z,0.6nm,0.4s,baz=77,slow=3.7,SNR=3.6						
BRVK	Borovoye	130.16	312	⇑iPKIKP	PKPdf	06 16 04.5	+0.5
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.7s						
ABKAR	Akbulak array	135.91	305	PKPdf	PKiKP	06 16 16.1	-0.5
ARU	Arti	137.25	316	i PKIKP	PKPdf	06 16 16.2	-1.0
KIRV	Kirov	141.95	320	c iPKIKP	PKPdf	06 16 27.1	+1.4
LVZ	Lovozero	144.05	338	ePKIKP	PKPdf	06 16 29.2	-0.1
LVZ				pmax	pmax		
	comp=Z,92nm,2.5s						
APA	Apatity	144.63	338	⇓iPKHKP	PKPpre	06 16 26.2	
APA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
APA				pmax	pmax		
	comp=Z,11nm,1.0s						
GROC	Groznyy	144.88	294	ePKIKP	PKPdf	06 16 32.8	+1.4
GROC				e		06 19 50.9	
GROC				pmax	pmax		
	comp=Z,29nm,0.8s						
TMCR	Tamitsa	145.08	332	ePKIKP	PKPbc	06 16 30.0	-0.6
TMCR				pmax	pmax		
	comp=Z,42nm,1.1s						
ARCES	ARCESS Array B	145.19	344	PKP	PKPbc	06 16 30.0	-0.8
	comp=Z,14nm,0.9s,baz=39,slow=2.5,SNR=19						
ARCES	ARCESS Array B	145.19	344	PKIKP	PKPbc	06 16 30.6	-0.2
ARCES	ARCESS Array B	145.19	344		PKPbc	06 16 30.6	-0.2
KLMR	Klimovskoe	146.02	326	ePKIKP	PKPdf	06 16 30.9	-1.9
KLMR				pmax	pmax		
	comp=Z,98nm,1.2s						
KLMR	Klimovskoe	146.02	326	ePKPdf	PKPdf	06 16 30.9	-1.9
KLMR				AMP		06 16 34.7	
	comp=Z,98nm,1.2s						
GEVA	Gevas	146.10	285	PKPdf	PKPbc	06 16 34.7	-0.2
ZEI	Tsey	146.21	293	i PKP2	PKPbc	06 16 35.0	-0.1
ZEI				pmax	pmax		
	comp=Z,26nm,1.4s						
GOF	Gofitskoye	147.01	297	⇑ePKP2	PKPbc	06 16 37.6	+0.6
GOF				pmax	pmax		
	comp=Z,76nm,0.9s						
KBZ	Khabaz	147.03	294	PKPbc	PKPdf	06 16 36.0	+1.0
	comp=Z,13nm,0.9s,baz=116,slow=2.5,SNR=19						
KBZ	Khabaz	147.03	294	⇑iPKIKP	PKPdf	06 16 35.4	+0.4
KBZ				i		06 16 37.5	
KIV	Kislovodsk	147.20	295	ePKIKP	PKPdf	06 16 35.4	-0.1
KIV				pmax	pmax		
	comp=Z,38nm,1.0s						
VRH	Novokhopyorsk	147.59	308	ePKP2	PKPbc	06 16 37.3	-1.1
VRH				pmax	pmax		
	comp=Z,90nm,0.8s						
MARD	Mardin	147.64	282		PKPbc	06 16 38.6	-0.7
LIC	Lamto	148.40	171	ePKP1	PKiKP	06 16 43.4	0.0
	comp=Z,95nm,1.4s						
KIC	Kosan Boka	148.57	171	ePKP1	PKiKP	06 16 43.8	+0.1
	comp=Z,34nm,0.8s						
TIC	Toumodi	148.82	171	ePKP1	PKiKP	06 16 44.4	+0.2
DBIC	Dimbokro	148.86	171	PKPbc	PKPbc	06 16 43.7	+0.8
	comp=Z,12nm,0.7s,baz=153,slow=2.7,SNR=14						
DBIC	Dimbokro	148.86	171		PKPbc	06 16 42.4	-0.5
LPSR	Galich'ya Gora	149.03	312	ePKP2	PKiKP	06 16 43.0	-0.4
LPSR				pmax	pmax		
	comp=Z,40nm,1.2s						
VORD	Divnogorie	149.14	308	ePKP2	PKPbc	06 16 41.6	-0.9
VORD				pmax	pmax		
	comp=Z,20nm,0.8s						
VSR	Storozhevoye	149.18	309	ePKP2	PKPbc	06 16 41.8	-0.7
VSR				pmax	pmax		
	comp=Z,40nm,1.1s						
OBN	Obninsk	149.66	317	⇓iPKP2	PKiKP	06 16 44.4	-0.2
OBN				e		06 20 15.1	
OBN				pmax	pmax		
	comp=Z,67nm,1.3s						
OBN				MLR	MLR		
	comp=Z,152nm,10.0s						
GAZ	Gaziantep	150.38	281		PKiKP	06 16 47.1	+0.3
FINES	FINESS Array B	151.10	334	PKPbc	PKPbc	06 16 45.7	-1.2
	comp=Z,16nm,0.9s,baz=98,slow=3.9,SNR=18						
FINES	FINESS Array B	151.10	334	c iPKIKP	PKPbc	06 16 46.4	-0.4
FINES				pmax	pmax		
	comp=Z,16nm,0.9s						
BR131	Keskin Array S	153.57	285	PKIKP	PKPbc	06 16 53.3	0.0
BR131	Keskin Array S	153.57	285		PKPbc	06 16 53.3	0.0
BRTR	Keskin Array B	153.57	285	PKPbc	PKPbc	06 16 51.9	-1.5
	comp=Z,4.2nm,0.9s,baz=134,slow=5.3,SNR=9.1						
NACGM	Naroch	154.83	322	i PKP	PKiKP	06 16 56.4	+1.1
NACGM				i PKP	PKiKP	06 16 56.4	+1.1
NACGM				i PKP	PKiKP	06 16 56.4	+1.1
NACGM				i PP	PP	06 20 15.3	-31
NACGM				i SKS		06 27 59.1	
NACGM				i PS		06 31 18.9	
NACGM				i SS	SS	06 40 12.1	-14
NACGM				i SSS	SSS	06 45 48.9	
AKASG	Malin Array Be	155.37	311	PKPbc	PKPdf	06 16 55.5	+8.0
	comp=Z,2.4nm,0.6s,baz=59,slow=2.5,SNR=7.0						
AKASG	Malin Array Be	155.37	311		PKPdf	06 16 55.8	+8.3
NB2	NORSAR Subarra	155.52	347	PKP	PKPab	06 17 12.0	-1.4
	comp=Z,3.9nm,0.8s,baz=22,slow=3.4						
NOA	NORSAR Array B	155.52	347	PKPab	PKPab	06 17 11.6	-1.8
	comp=Z,2.9nm,0.8s,baz=25,slow=3.4,SNR=7.2						
CRVS	Cervenica-Dubn	160.69	312	ePKP2	PKPab	06 17 37.4	+1.2
KECS	Kecovo	161.46	312	ePKP2	PKPab	06 17 41.8	+2.3
GERES	GERESS Array B	164.93	322	PKPab	PKPab	06 17 54.2	-0.6
	comp=Z,0.5nm,0.8s,baz=71,slow=4.3,SNR=5.0						

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*IDC **17** 06:39:07.5±1.8, 53°.79N×91°.01E, h0^{km}, mb3.4/1, mb1 3.7/4, mb1mx3.4/36, mbtmp3.6/4, ML3.4/2, Error ellipse: s-maj=24.7km s-min=15.7km az=145.0*

*NNC **17** 06:39:10.8±3.4, 53°.76N×90°.51E, h2^{km}±16^{km}, mb3.9, mpv3.6, Error ellipse: s-maj=28.7km s-min=21.3km az=25.0, Suspected Mining explosion.*

ISC 17 06:39:07.2±1.6, **53°.76N**±0°.10×**90°.9E**±0°.1, **h0**^{km}, **n12**, σ**1^{s}.70**/15, **9C-5D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	3.62	275	⇓Pg	Pb	06 40 10.9	-1.1
	3.8nm,0.7s						
ZAA0				⇑Lg	Lg	06 40 59.8	
	30nm,0.8s						
ZALV	Zalesovo Beam	3.62	275	Pn	Pn	06 40 06.8	+2.4
	0.5nm,0.3s,baz=87,slow=12,SNR=5.4						
ZALV				Lg	Lg	06 41 02.3	
	7.4nm,0.3s,baz=96,slow=29,SNR=6.1						
KURK	Kurchatov	8.14	253	⇑Pn	Pn	06 41 09.4	+2.8
	7.4nm,1.0s						
KURK				⇑Sn	Sn	06 42 37.2	-2.0
	14nm,0.8s						
KURK				⇑Lg	Lg	06 43 22.9	
	47nm,1.1s						
KURBB	Kurchatov Arra	8.24	253	Pn	Pn	06 41 09.2	+1.3
	0.3nm,0.3s,baz=68,slow=15,SNR=7.9						
KURBB				Sn	Sn	06 42 41.7	+0.2
	0.2nm,0.3s,baz=66,slow=25,SNR=7.2						
KURBB				Lg	Lg	06 43 27.3	
	0.3nm,0.3s,baz=64,slow=30,SNR=6.2						
KURBB	Kurchatov Arra	8.24	253	⇓Pn	Pn	06 41 09.4	+1.6
	4.1nm,0.5s						
KURBB				⇑Sn	Sn	06 42 39.0	-2.5
	42nm,0.8s						
KURBB				⇓Lg	Lg	06 43 27.9	
	84nm,0.9s						
MK31	Makanchi Array	8.89	222	⇑Pn	Pn	06 41 18.0	+1.1
	1.8nm,0.7s,baz=33,slow=12,SNR=63						
MK31				⇓Sn	Sn	06 42 58.1	+0.4
	5.3nm,0.8s,baz=46,slow=27,SNR=4.2						
MK31				⇑Lg	Lg	06 43 47.6	
	25nm,0.9s,baz=40,slow=30,SNR=2.5						
MKAR	Makanchi Array	8.89	222	Pn	Pn	06 41 18.5	+1.6
	0.7nm,0.3s,baz=29,slow=12,SNR=40						
MKAR				Sn	Sn	06 42 58.0	+0.3
	0.3nm,0.3s,baz=40,slow=25,SNR=8.5						
MKAR				Lg	Lg	06 43 44.9	
	0.3nm,0.3s,baz=43,slow=28,SNR=6.8						
MAKZ	Makanchi	9.01	223	⇑Pn	Pn	06 41 17.8	-0.6
	1.9nm,0.9s						
MAKZ				⇓Sn	Sn	06 43 00.6	+0.1
	6.3nm,0.8s						
MAKZ				⇑Lg	Lg	06 43 56.4	
	16nm,0.8s						
SONM	Songino Array	11.44	115	Lg	Lg	06 45 03.4	
	0.1nm,0.3s,baz=290,slow=27,SNR=9.7						
I34MN	SONGINO INFRAS	11.46	115	i		07 45 50.0	
	baz=312,slow=330,SNR=2.5						
AAK	Ala-Archa	15.57	231	Lg	Lg	06 47 13.4	
	baz=258,slow=4.7,SNR=3.7						
ILAR	Eielson Array	53.74	27	P	P	06 48 29.8	-0.7
	0.5nm,0.9s,baz=334,slow=6.0,SNR=2.8						

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*NOU **17** 06:53:02.3, 37°.51S×179°.02W, h0^{km}, MLv4.2, East of North Island, N.Z.*

WEL 17 06:53:15.8±1.4, **38°S**±11°×**18°0W**±°, **h33**^{km}, **M3.6**/24, **ML4.0**/24, **MLv3.6**/24, **Error ellipse: s-maj=0.0km s-min=0.0km az=34.0, East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	1.27	263	P	Pn	06 53 37.0	-0.2
WMGZ				S	Sn	06 53 53.7	+0.5
MXZ	Matakaoa Point	1.36	274	P	Pn	06 53 36.9	-1.5
MXZ				S	Sn	06 53 53.1	-2.1
PUZ	Puketiti	1.45	253	P	Pn	06 53 39.6	0.0
PUZ				S	Sn	06 53 58.1	+0.6
PKGZ	Pakihiroa	1.55	261	P	Pn	06 53 40.5	-0.6
PKGZ				S	Sn	06 53 59.0	-1.1
CNGZ	Carnagh Statio	1.64	240	P	Pn	06 53 43.3	+1.1
TWGZ	Tauwhareparae	1.69	252	P	Pn	06 53 43.5	+0.5
HAZ	Te Kaha	1.77	266	P	Pn	06 53 43.7	-0.4
RUGZ	Raukumara Rang	1.87	260	P	Pn	06 53 45.1	-0.5
TKGZ	Te Karaka	1.87	245	P	Pn	06 53 45.9	+0.4
RIGZ	Rimuhau	2.05	239	P	Pn	06 53 48.6	+0.6
MWZ	Matawai	2.07	251	P	Pn	06 53 48.2	-0.1
PRGZ	Paritu Road	2.09	233	P	Pn	06 53 49.3	+0.7
RAGZ	Rawiri	2.21	247	P	Pn	06 53 50.6	+0.4
MHGZ	Mahia Peninsul	2.22	227	P	Pn	06 53 51.0	+0.7
KNZ	Kokohu	2.28	233	P	Pn	06 53 51.3	+0.2
URZ	Urewera	2.37	255	P	Pn	06 53 52.8	+0.5
SNGZ	Shannon Statio	2.38	241	P	Pn	06 53 53.0	+0.5
WHRZ	Whale Island	2.41	265	P	Pn	06 53 53.3	+0.4
RTZ	Ruatahuna	2.57	247	P	Pn	06 53 55.8	+0.7
WHHZ	Waihua	2.60	236	P	Pn	06 53 56.4	+0.9
RAHZ	Arahi	2.62	241	P	Pn	06 53 56.4	+0.6
MUGZ	Murupara	2.68	251	P	Pn	06 53 57.1	+0.5
OPRZ	Ohinepanea	2.75	265	P	Pn	06 53 57.0	-0.5
MTHZ	Maungataniwha	2.76	244	P	Pn	06 53 58.1	+0.4
TARZ	Mount Tarawera	2.83	257	P	Pn	06 53 59.6	+0.8
ARHZ	Aropaoanui	2.85	235	P	Pn	06 54 00.1	+1.1
NMHZ	Naumai	2.90	239	P	Pn	06 54 00.6	+1.0
ALRZ	Allen Road	3.03	252	P	Pn	06 54 01.5	+0.1
CKHZ	Cape Kidnapper	3.04	228	P	Pn	06 54 01.7	+0.2
MRHZ	Matea Rd	3.06	247	P	Pn	06 54 01.9	0.0
BKZ	Black Stump Fm	3.14	241	P	Pn	06 54 03.3	+0.3
MCHZ	McNeill Hill	3.15	235	P	Pn	06 54 03.9	+0.9
KAHZ	Kahuranaki	3.24	228	P	Pn	06 54 04.5	+0.2
KWHZ	Kaweka Forest	3.31	237	P	Pn	06 54 05.5	+0.1
HATZ	Hinemaiaia	3.32	247	P	Pn	06 54 04.9	-0.4
KRHZ	Kereru	3.47	234	P	Pn	06 54 07.3	-0.1
KUZ	Kuaotunu	3.55	284	P	Pn	06 54 06.4	-2.1
BHHZ	Black Hill Sta	3.59	238	P	Pn	06 54 09.1	-0.1
WPHZ	Waipukurau	3.67	228	P	Pn	06 54 09.1	-1.2
TMVZ	Te Maari	3.68	246	P	Pn	06 54 10.1	-0.4
ETVZ	East Tongariro	3.68	245	P	Pn	06 54 10.0	-0.5
KRVZ	Karewarewa	3.72	246	P	Pn	06 54 11.3	+0.4
OTVZ	Oturere	3.73	245	P	Pn	06 54 10.7	-0.4
PNHZ	Pukenui	3.73	232	P	Pn	06 54 10.4	-0.6
NGZ	Ngauruhoe	3.78	245	P	Pn	06 54 11.5	-0.3
MKAZ	Moumakai	3.90	277	P	Pn	06 54 12.2	-1.2
GRZ	Great Barrier	3.91	290	P	Pn	06 54 11.7	-1.8
ANWZ	Angora Road	3.92	224	P	Pn	06 54 12.8	-0.8
DVHZ	Dannevirke	3.98	228	P	Pn	06 54 13.6	-1.0
HIZ	Hauiti	4.15	257	P	Pn	06 54 17.6	+0.8
BFZ	Birch Farm	4.20	223	P	Pn	06 54 15.7	-1.8
TIWZ	Tintock	4.46	225	P	Pn	06 54 20.1	-1.0
MRZ	Mangatainoka R	4.56	228	P	Pn	06 54 21.0	-1.4
HOWZ	Holdsworth Sta	4.75	226	P	Pn	06 54 23.7	-1.4
WCZ	Waipu Caves	4.86	289	P	Pn	06 54 25.7	-0.9
NEZ	North Egmont	4.91	249	P	Pn	06 54 29.7	+2.4
PKE	Pukeiti	4.97	250	P	Pn	06 54 29.8	+1.7
KHEZ	Kahui Hut	4.98	249	P	Pn	06 54 30.2	+2.0
KIW	Kapiti Island	5.08	230	P	Pn	06 54 28.6	-1.1
CAW	Cannon Point	5.14	227	P	Pn	06 54 28.7	-1.7
TCW	Tory Channel	5.68	230	P	Pn	06 54 36.3	-1.4
OUZ	Omahuta	5.72	293	P	Pn	06 54 37.6	-0.8
CTZ	Chatham Island	6.58	158	P	Pn	06 54 53.8	+3.6
CTZ				S	Sn	06 56 01.8	-2.1
QRZ	Quartz Range	6.61	239	P	Pn	06 54 49.0	-1.5

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*IDC **17** 07:01:55.8±0.8, 39°.71N×143°.17E, h0^{km}, mb3.7/13, mb1 3.9/15, mb1mx3.7/59, mbtmp3.7/15, ML3.1/2, Error ellipse: s-maj=24.2km s-min=16.2km az=115.0*

*JMA **17** 07:01:58.3±0.2, 39°.78N×143°.23E, h23^{km}±4^{km}, M3.6*

*NIED **17** 07:01:58.4, 39°.78N×143°.23E, h23^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$4.63; M$_{\theta\theta}$-2.68; M$_{\phi\phi}$-1.95; M$_{r\theta}$-1.07; M$_{\theta\phi}$-1.86; M$_{\phi r}$-0.56; Fault plane solution: M$_{0}$4.58000×10^{14} NP1: φ$_{s}$233.00000°, δ53.00000°, λ93.00000°. NP2: φ$_{s}$48.00000°, δ38.00000°, λ86.00000°.*

ISC 17 07:01:57.6±2.0, **39°.77N**±0°.04×**143°.15E**±0°.05, **h10**^{km}±12^{km}, **n36**, σ**1^{s}.14**/42, **mb3.8**/12, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	1.01	280	P	Pg	07 02 17.3	+0.3
JTH				eS	Sn	07 02 31.5	-0.5
MIYJ	Miyakonagasawa	1.05	260	P	Pn	07 02 18.3	0.0
MIYJ				S	Sn	07 02 32.7	-0.3
JKEN	Kujiedanarisaw	1.19	292	P	Pn	07 02 20.2	-0.1
JKEN				eS	Sb	07 02 35.5	-0.3
JANG	Nango	1.40	296	P	Pn	07 02 23.3	+0.2
JANG				eS	Sn	07 02 40.6	-1.0
JOM	Ohasama	1.47	259	P	Pb	07 02 25.2	+0.2
JOM				eS	Sb	07 02 44.2	+0.5
JMK	Ichinoseki	1.71	242	P	Pb	07 02 27.9	-1.1
JTM	Tenmabayashi	1.89	303	P	Pb	07 02 31.1	-1.1
JTM				eS	Sn	07 02 54.7	+0.8
JIO	Ouri	1.92	228	P	Pn	07 02 30.1	-0.2
JAH	Hinai	1.98	283	P	Pb	07 02 32.4	-1.3
JAH				eS	Sb	07 02 57.6	-0.8
JRG	Rokugo	1.98	260	P	Pb	07 02 33.1	-0.6
JEM	Erimo	2.25	0	P	Pn	07 02 34.6	-0.2
JEM				eS	Sn	07 03 01.4	-1.2
JYK	Kaneyama	2.33	250	P	Pn	07 02 37.1	+1.2
JNBK	Urakawa-nobuka	2.53	353	P	Pn	07 02 40.1	+1.4
JNBK				eS	Sn	07 03 11.2	+1.6
JKB	Kayabe	2.66	323	P	Pn	07 02 42.8	+2.3
JKB				eS	Sn	07 03 15.6	+2.8
ASAJ	Asahikawa	4.37	355	Pn	Pn	07 03 05.7	+1.7
	1.5nm,0.3s,baz=225,slow=20,SNR=7.3						
ASAJ				Sn	Sn	07 03 52.5	-2.3
	1.4nm,0.3s,baz=221,slow=26,SNR=1.7						
MJAR	Matsushiro Arr	5.05	232	Pn	Pn	07 03 13.8	+0.4
	0.2nm,0.3s,baz=36,slow=13,SNR=20						
MAT	Matsushiro	5.05	232	P	Pn	07 03 15.6	+2.2
MAT				eS	Sn	07 04 13.7	+1.8
MA2	Magadan	20.41	11	P	P	07 06 34.9	+0.4
	1.8nm,0.3s,baz=226,slow=3.7,SNR=3.9						
SEY	Seymchan	23.86	10	P	P	07 07 10.4	-0.3
	1.4nm,0.2s,baz=170,slow=7.2,SNR=8.4						
SONM	Songino Array	27.52	299	P	P	07 07 44.2	-0.2
	0.4nm,0.4s,baz=96,slow=8.8,SNR=3.0						
H11N2	WAKE ISLAND Hy	28.55	127	T	T	07 37 45.8	
	baz=319,slow=75						
H11N1	WAKE ISLAND Hy	28.56	127	T	T	07 37 46.8	
	baz=319						
H11N3	WAKE ISLAND Hy	28.56	127	T	T	07 37 46.8	
	baz=319,slow=75						
H11S1	WAKE ISLAND Hy	29.36	129	T	T	07 38 59.3	
	baz=320						
H11S3	WAKE ISLAND Hy	29.37	129	T	T	07 38 59.1	
	baz=320						
H11S2	WAKE ISLAND Hy	29.38	129	T	T	07 38 55.1	
	baz=320						
MKAR	Makanchi Array	43.88	300	P	P	07 10 04.1	0.0
	0.7nm,0.7s,baz=86,slow=6.9,SNR=5.1						
KURBB	Kurchatov Arra	45.45	306	P	P	07 10 16.6	+0.1
	0.9nm,0.6s,baz=81,slow=8.5,SNR=5.4						
ILAR	Eielson Array	46.46	34	P	P	07 10 24.5	+0.2
	0.5nm,0.7s,baz=261,slow=6.6,SNR=6.0						
RES	Resolute Bay	59.62	15	P	P	07 12 00.6	-0.4
	0.7nm,0.7s,baz=320,slow=6.3,SNR=4.3						
WRA	Warramunga Arr	59.96	190	P	P	07 12 02.9	-1.2
	0.9nm,0.8s,baz=8.7,slow=7.0,SNR=5.7						
YKA	Yellowknife Ar	60.77	31	P	P	07 12 09.2	+0.1
	0.4nm,1.0s,baz=285,slow=6.8,SNR=4.0						
ASAR	Alice Springs	63.69	189	P	P	07 12 28.6	-0.5
	0.8nm,0.7s,baz=11,slow=6.0,SNR=7.8						
NVAR	Mina Array Bea	72.28	55	P	P	07 13 24.6	+1.2
	0.6nm,0.7s,baz=283,slow=7.5,SNR=5.7						
FRB	Frobisher Bay	73.80	14	P	P	07 13 31.4	-0.3
	0.5nm,0.4s,baz=2.8,slow=8.4,SNR=5.2						
PDAR	Pinedale Array	74.79	47	P	P	07 13 38.2	0.0
	0.3nm,0.6s,baz=335,slow=4.0,SNR=2.5						

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*IDC **17** 07:07:04.6±2.0, 32°.80S×178°.76W, h0^{km}, mb4.3/3, mb1 4.5/4, mb1mx3.9/39, mbtmp4.3/4, ML4.1/1, Error ellipse: s-maj=58.7km s-min=36.4km az=141.0*

*WEL **17** 07:07:09.6±0.9, 33°S±13°×17°9W±3°0, h33^{km}, M4.6/15, mB5.2/8, ML4.9/15, MLv4.7/15, Mw(mB)4.6/8, Error ellipse: s-maj=0.0km s-min=0.0km az=113.2*

ISC 17 07:07:07.2±1.4, **32°.99S**±0°.10×**178°.4W**±0°.2, **h32**^{km}, **n29**, σ**1^{s}.47**/41, **mb4.2**/3, **South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.74	6	P	Pn	07 08 03.3	+0.6
GLKZ				S	Sn	07 08 43.7	-1.8
MXZ	Matakaoa Point	5.30	210	P	Pn	07 08 25.1	+0.9
MXZ				S	Sn	07 09 22.0	-2.2
WMGZ	Waiomatatini S	5.48	208	P	Pn	07 08 28.4	+1.7
WMGZ				S	Sn	07 09 29.4	+0.9
PKGZ	Pakihiroa	5.68	210	P	Pn	07 08 30.0	+0.6
PKGZ				S	Sn	07 09 30.7	-2.8
HAZ	Te Kaha	5.69	212	P	Pn	07 08 30.8	+1.3
HAZ				S	Sn	07 09 35.2	+1.5
PUZ	Puketiti	5.76	207	P	Pn	07 08 31.5	+1.0
PUZ				S	Sn	07 09 35.1	-0.4
RUGZ	Raukumara Rang	5.91	212	P	Pn	07 08 33.2	+0.5
TWGZ	Tauwhareparae	5.96	209	P	Pn	07 08 35.0	+1.7
TWGZ				S	Sn	07 09 39.4	-1.1
CNGZ	Carnagh Statio	6.14	206	P	Pn	07 08 36.8	+1.1
CNGZ				S	Sn	07 09 42.9	-1.9
WHRZ	Whale Island	6.16	217	P	Pn	07 08 37.6	+1.6
TKGZ	Te Karaka	6.24	208	P	Pn	07 08 38.1	+1.0
TKGZ				S	Sn	07 09 48.0	+0.8
MWZ	Matawai	6.29	211	P	Pn	07 08 38.9	+1.2
MWZ				S	Sn	07 09 48.0	-0.4
OPRZ	Ohinepanea	6.37	219	P	Pn	07 08 41.5	+2.8
URZ	Urewera	6.41	214	Pn	Pn	07 08 39.8	+0.5
	4.6nm,0.3s,baz=43,slow=12,SNR=51						
URZ				Sn	Sn	07 09 50.4	-1.0
	10.0nm,0.3s,baz=252,slow=6.3,SNR=8.2						
URZ	Urewera	6.41	214	P	Pn	07 08 39.7	+0.3
URZ				S	Sn	07 09 49.2	-2.2
RIGZ	Rimuhau	6.50	208	P	Pn	07 08 41.5	+0.8
RIGZ				S	Sn	07 09 53.5	-0.3
SNGZ	Shannon Statio	6.74	210	P	Pn	07 08 44.0	+0.1
SNGZ				S	Sn	07 09 59.0	-0.6
RTZ	Ruatahuna	6.76	213	P	Pn	07 08 46.0	+1.8
KNZ	Kokohu	6.81	207	P	Pn	07 08 44.3	-0.6
KNZ				S	Sn	07 09 57.2	-4.1
MHGZ	Mahia Peninsul	6.84	205	P	Pn	07 08 45.3	-0.1
ASAR	Alice Springs	42.71	270	P	P	07 15 01.0	-0.4
	2.6nm,0.7s,baz=110,slow=7.4,SNR=23						
WRA	Warramunga Arr	43.93	275	P	P	07 15 10.6	-0.8
	2.5nm,0.3s,baz=116,slow=7.9,SNR=61						
FITZ	Fitzroy Crossi	52.07	272	P	P	07 16 13.9	-0.4
	1.8nm,0.6s,baz=134,slow=7.7						
H03N3	Juan Fernandez	79.53	123	T	T	08 47 50.1	
	baz=240,slow=72,SNR=14						
H03N2	Juan Fernandez	79.53	123	T	T	08 47 43.4	
	baz=240,slow=72,SNR=13						
H03N1	Juan Fernandez	79.54	123	T	T	08 47 43.3	
	baz=240,slow=72,SNR=24						
FINES	FINESS Array B	147.44	338	PKPbc	PKPbc	07 26 48.1	+1.1
	4.5nm,0.8s,baz=20,slow=3.4,SNR=8.6						
NB2	NORSAR Subarra	151.25	350	PKP	PKiKP	07 26 58.4	+1.2
	comp=Z,1.1nm,0.6s,baz=16,slow=2.6						
NOA	NORSAR Array B	151.25	350	PKPbc	PKiKP	07 26 58.4	+1.2
	comp=Z,1.4nm,0.6s,baz=14,slow=4.1,SNR=5.7						

IDC 17 07:09:06.4±3.3, **55°.60N**×**86°.24E**, **h0**^{km}, **mb1 2.8**/2, **mb1mx2.8**/63, **mbtmp2.8**/2, **ML2.5**/2, **Error ellipse: s-maj=26.9km s-min=25.6km az=38.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.85	207	i		07 20 50.0	
	baz=30,slow=333,SNR=3.4						
ZALV	Zalesovo Beam	1.85	207	Pn	Pn	07 09 38.0	-1.3
	2.2nm,0.3s,baz=27,slow=15,SNR=17						
ZALV				Lg	Lg	07 10 05.0	
	2.4nm,0.3s,baz=23,slow=28,SNR=8.7						
KURBB	Kurchatov Arra	6.81	226	Pn	Pn	07 10 47.0	-0.5
	0.1nm,0.3s,baz=45,slow=14,SNR=4.1						
KURBB				Lg	Lg	07 12 42.4	
	0.0nm,0.3s,baz=42,slow=32,SNR=4.2						
MKAR	Makanchi Array	9.16	197	Pn	Pn	07 11 20.8	+1.1
	0.1nm,0.3s,baz=19,slow=14,SNR=3.5						
MKAR				Lg	Lg	07 13 58.4	
	0.0nm,0.3s,baz=11,slow=34,SNR=3.0						

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*IDC **17** 07:12:26.8±1.5, 39°.65N×143°.54E, h0^{km}, mb3.6/6, mb1 3.6/8, mb1mx3.4/56, mbtmp3.5/8, ML3.0/2, MS3.3/2, Ms1 3.3/2, ms1mx2.6/58, Error ellipse: s-maj=40.0km s-min=20.5km az=88.0*

*JMA **17** 07:12:28.0±0.2, 39°.77N×143°.56E, h25^{km}, M3.7*

ISC 17 07:12:28.7±1.1, **39°.72N**±0°.05×**143°.44E**±0°.08, **h11**^{km}, **n31**, σ**1^{s}.34**/28, **mb3.6**/6, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	1.23	281	P	Pn	07 12 51.1	-0.8
JTH				eS	Sb	07 13 07.7	-0.3
MIYJ	Miyakonagasawa	1.26	264	P	Pn	07 12 51.8	-0.5

JKEN	Kujiedanarisaw	1.42	291	P	Pn	07 12 53.5	-0.9
JANG	Nango	1.62	295	P	Pn	07 12 56.1	-1.1
JOM	Ohasama	1.68	262	P	Pn	07 12 58.3	+0.3
JMK	Ichinoseki	1.88	247	P	Pn	07 13 00.8	0.0
JIO	Ouri	2.06	233	P	Pn	07 13 02.8	-0.4
JTM	Tenmabayashi	2.11	301	P	Pn	07 13 04.4	+0.5
JTM				*e*S	Sn	07 13 30.6	+0.5
JYK	Kaneyama	2.52	253	P	Pn	07 13 10.6	+1.0
JNBK	Urakawa-nobuka	2.61	349	P	Pn	07 13 11.5	+0.6
JNBK				*e*S	Sn	07 13 42.1	-0.5
JKB	Kayabe	2.83	321	P	Pn	07 13 14.9	+1.0
JCH	Churui	2.90	359	*e*S	Sn	07 13 46.1	-3.4
JFT	Otama	3.27	229	P	Pn	07 13 20.5	+0.5
JAK	Akkeshi	3.41	16	*e*S	Sn	07 13 59.4	-2.8
ASAJ	Asahikawa	4.44	352	Pn	Pn	07 13 38.5	+2.5
	0.8nm,0.3s,baz=101,slow=11,SNR=2.2						
ASAJ				Sn	Sn	07 14 30.2	+2.5
	1.3nm,0.3s,baz=93,slow=32,SNR=3.6						
MJAR	Matsushiro Arr	5.20	234	Pn	Pn	07 13 48.0	+1.5
	0.2nm,0.3s,baz=43,slow=12,SNR=12						
MAT	Matsushiro	5.20	234	P	Pn	07 13 47.7	+1.2
MAT				*e*S	Sn	07 14 46.8	+0.3
USRK	Ussuriysk Ar.	9.63	301	LR	LR	07 18 28.6	
	comp=Z,82nm,18.6s,baz=100,slow=37						
SEY	Seymchan	23.86	10	P	P	07 17 42.5	+0.7
	0.8nm,0.5s,baz=192,slow=12,SNR=3.7						
SONM	Songino Array	27.74	299	P	P	07 18 17.8	+0.6
	0.4nm,0.6s,baz=88,slow=7.8,SNR=4.4						
H11N2	WAKE ISLAND Hy	28.34	128	T	T	07 49 16.9	
	baz=319,slow=75,SNR=28						
H11N1	WAKE ISLAND Hy	28.35	128	T	T	07 49 09.4	
	baz=319,slow=75,SNR=16						
H11N3	WAKE ISLAND Hy	28.36	128	T	T	07 49 19.4	
	baz=319,slow=75,SNR=18						
H11S1	WAKE ISLAND Hy	29.16	130	T	T	07 50 13.8	
	baz=321,slow=74						
H11S3	WAKE ISLAND Hy	29.16	130	T	T	07 50 10.7	
	baz=321						
H11S2	WAKE ISLAND Hy	29.18	130	T	T	07 50 14.9	
	baz=321,slow=74						
ZALV	Zalesovo Beam	41.34	310	P	P	07 20 14.2	-0.1
	1.0nm,0.4s,baz=89,slow=8.8,SNR=4.0						
KDAK	Kodiak Island	44.05	44	LR	LR	07 38 59.8	
	comp=Z,69nm,19.6s,baz=246,slow=36						
MKAR	Makanchi Array	44.10	300	P	P	07 20 36.7	-0.1
	0.5nm,0.7s,baz=85,slow=9.1,SNR=6.1						
WRA	Warramunga Arr	59.95	190	P	P	07 22 33.8	-1.3
	0.6nm,1.0s,baz=7.1,slow=7.0,SNR=2.6						
ASAR	Alice Springs	63.68	190	P	P	07 22 59.8	-0.3
	0.3nm,0.7s,baz=10,slow=5.7,SNR=1.5						

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*NIED **17** 07:13:19.6, 39°.86N×143°.08E, h22^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}1.78; $M_{\theta\theta}$1.82; $M_{\phi\phi}$-3.61; $M_{r\theta}$1.99; $M_{\theta\phi}$0.31; $M_{\phi r}$1.59; Fault plane solution: $M_0$4.04000×10^{14} NP1:ϕ_s32.00000°, δ72.00000°, λ132.00000°. NP2:ϕ_s141.00000°, δ45.00000°, λ26.00000°.*

JMA 17 07:13:19.5±0.3**, 39°.86N×143°.08E, h22**^{km}±4^{km}**, M3.5, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	Tanohata	0.94	275	P	Pb	07 13 36.6	-0.5
JTH				*e*S	Sb	07 13 49.0	-0.1
MIYJ	Miyakonagasawa	1.01	254	P	Pb	07 13 38.2	-0.1
JOM	Ohasama	1.43	255	P	Pb	07 13 44.9	-0.6
JOM				*e*S	Sb	07 14 03.7	+0.4
JMK	Ichinoseki	1.70	238	S	Sn	07 14 09.8	+0.9
JIO	Ouri	1.94	224	*e*S	Sn	07 14 16.0	+1.1

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*IDC **17** 07:17:37.7±2.7, 39°.81N×143°.50E, h0^{km}, mb3.4/3, mb1 3.4/5, mb1mx3.3/49, mbtmp3.3/5, ML2.7/2, Error ellipse: s-maj=61.8km s-min=30.0km az=82.0*

*JMA **17** 07:17:39.2±0.2, 39°.90N×143°.55E, h34^{km}, M3.0*

ISC 17 07:17:37.8±1.2**, 39°.87N**±0°.06×**143°.53E**±0°.08**, h6**^{km}**, n16, σ1^{s}.29**/22**, mb3.3**/3**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIYJ	Miyakonagasawa	1.35	258	P	Pn	07 18 02.7	-0.5
MIYJ				*e*S	Sb	07 18 20.1	-1.0
JKEN	Kujiedanarisaw	1.44	284	P	Pn	07 18 03.6	-0.8
JANG	Nango	1.63	289	P	Pn	07 18 06.1	-0.9
JOM	Ohasama	1.78	258	P	Pn	07 18 09.3	+0.3
JMK	Ichinoseki	2.02	244	P	Pn	07 18 12.0	-0.3
JMK				*e*S	Sn	07 18 36.4	-1.4
JOT	Ohata	2.42	309	*e*S	Sn	07 18 47.0	-0.8
JNBK	Urakawa-nobuka	2.48	346	P	Pn	07 18 19.3	+0.7
JNBK				*e*S	Sn	07 18 49.0	-0.2
JYK	Kaneyama	2.64	250	P	Pn	07 18 21.6	+0.7
JCH	Churui	2.74	357	P	Pn	07 18 21.4	-0.9
JCH				S	Sn	07 18 53.0	-2.7
JKB	Kayabe	2.77	318	*e*S	Sn	07 18 56.2	-0.1
JAK	Akkeshi	3.24	15	P	Pn	07 18 28.4	-0.7
JAK				*e*S	Sn	07 19 05.4	-2.6
ASAJ	Asahikawa	4.30	351	Pn	Pn	07 18 45.8	+2.1
	0.5nm,0.3s,baz=195,slow=20,SNR=1.8						
ASAJ				Sn	Sn	07 19 35.5	+1.4
	0.5nm,0.3s,baz=360,slow=32,SNR=1.4						
MJAR	Matsushiro Arr	5.35	233	Pn	Pn	07 18 58.6	+0.4
	0.1nm,0.3s,baz=44,slow=11,SNR=1.8						
SONM	Songino Array	27.72	299	P	P	07 23 26.9	-0.1
	0.4nm,0.7s,baz=94,slow=9.1,SNR=4.2						
MKAR	Makanchi Array	44.08	300	P	P	07 25 48.1	+1.6
	0.3nm,0.8s,baz=79,slow=10,SNR=3.1						
WRA	Warramunga Arr	60.12	190	P	P	07 27 46.1	+0.1
	0.4nm,0.8s,baz=6.9,slow=6.6,SNR=1.5						

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*IDC **17** 07:18:13.2±1.3, 55°.65S×27°.63W, h0^{km}, mb4.2/2, mb1 4.3/2, mb1mx3.9/13, mbtmp4.2/2, MS3.7/4, Ms1 3.6/4, ms1mx3.2/21, Error ellipse: s-maj=55.9km s-min=42.9km az=135.0*

ISC 17 07:18:14.1±1.6**, 55°.4S**±0°.2×**27°.9W**±0°.3**, h10**^{km}**, n16, σ1^{s}.07**/8**, MS3.8**/4**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	17.53	158	P	P	07 22 20.7	+1.4
VNA3	Neumayer Olymp	17.71	161	P	P	07 22 22.3	+0.8
VNA2	Neumayer--Watz	17.92	158	P	P	07 22 24.5	+0.8
	baz=307,slow=11						
SNAA	Sanae	19.48	156	P	Pn	07 22 41.7	-0.4
PLCA	Paso Flores	31.48	280	LR	LR	07 38 09.1	
	comp=Z,48nm,18.5s,baz=148,slow=38						
BOSA	Boshof	46.23	77	P	P	07 26 39.0	-0.4
	3.5nm,0.9s,baz=201,slow=5.8,SNR=4.4						
BOSA				LR	LR	07 43 41.3	
	comp=Z,56nm,19.3s,baz=190,slow=33						
VNDA	Vanda	47.17	183	P	P	07 26 44.9	-1.2
	4.0nm,1.1s,baz=167,slow=6.8,SNR=2.5						
H10S2	ASCENSION HYDR	47.53	18	T	T	08 18 53.3	
	baz=197						
H10S3	ASCENSION HYDR	47.53	18	T	T	08 19 14.5	
	baz=23						
H10N1	ASCENSION HYDR	48.65	18	T	T	08 20 15.9	
	baz=200						
H10N3	ASCENSION HYDR	48.65	18	T	T	08 20 16.0	
	baz=200						
H10N2	ASCENSION HYDR	48.67	18	T	T	08 20 15.5	
	baz=200						
DBIC	Dimbokro	64.78	25	LR	LR	07 50 44.2	
	comp=Z,84nm,18.3s,baz=356,slow=30						
URZ	Urewera	84.25	200	LR	LR	08 02 46.1	
	comp=Z,68nm,18.0s,baz=31,slow=32						
ILAR	Eielson Array	149.39	313	PKPbc	PKPbc	07 38 02.7	+0.9
	1.3nm,0.6s,baz=127,slow=2.5,SNR=18						
SONM	Songino Array	151.10	86	PKPbc	PKPbc	07 38 06.6	0.0
	1.1nm,0.5s,baz=216,slow=3.3,SNR=11						

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*IDC **17** 07:20:21.4±0.7, 36°.34N×140°.94E, h0^{km}, mb4.0/15, mb1 4.2/19, mb1mx4.0/45, mbtmp4.0/19, ML3.7/2, MS3.3/6, Ms1 3.3/6, ms1mx2.9/60, Error ellipse: s-maj=18.7km s-min=15.9km az=95.0*

*JMA **17** 07:20:26.7±0.1, 36°.40N×140°.97E, h45^{km}±1^{km}, M4.0*

JMA Felt II J1.

*NIED **17** 07:20:26.7, 36°.40N×140°.97E, h45^{km}, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.02; $M_{\theta\theta}$-0.51; $M_{\phi\phi}$-0.51; $M_{r\theta}$0.24; $M_{\theta\phi}$-0.49; $M_{\phi r}$0.84; Fault plane solution: $M_0$1.34000×10^{15} NP1:ϕ_s27.00000°, δ66.00000°, λ76.00000°. NP2:ϕ_s239.00000°, δ28.00000°, λ119.00000°.*

ISC 17 07:20:24.9±1.7**, 36°.39N**±0°.04×**141°.07E**±0°.06**, h24**^{km}±12^{km}**, n58, σ1^{s}.58**/45**, mb3.9**/15**, MS3.8**/3**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHYU	Hitachinakayam	0.39	262	P	Pn	07 20 35.6	+0.5
JHYU				S	Sn	07 20 41.7	-0.1
JHO	Hitachi	0.46	298	P	Pn	07 20 36.1	+0.1
JHO				S	Sn	07 20 42.5	-0.9
JIHU	Itakohorinouch	0.61	226	P	Pn	07 20 39.2	+1.1
JIHU				S	Sn	07 20 48.0	+0.8
JYT	Yasato	0.73	257	P	Pn	07 20 39.5	-0.1
JYT				S	Sb	07 20 48.2	-0.2
ONAJ	Iwakimizuishiy	0.74	343	P	Pn	07 20 40.0	+0.1
ONAJ				S	Sb	07 20 49.5	+0.6
JSMT	Sammumatsuo	0.90	214	S	Sn	07 20 54.6	+0.3
JFK	Kawauchi	0.98	351	P	Pn	07 20 43.3	0.0
JFK				S	Sb	07 20 55.0	-0.9
JFT	Otama	1.27	333	P	Pb	07 20 48.5	+0.4
JFT				S	Sb	07 21 04.1	+0.1
JAG	Ashikaga	1.30	272	P	Pn	07 20 47.7	+0.1
MJAR	Matsushiro Arr	2.31	275	Pn	Pn	07 21 02.2	+0.7
	7.0nm,0.3s,baz=104,slow=8.9,SNR=154						
MJAR				LR	LR	07 22 03.5	
	comp=Z,282nm,19.9s,baz=70,slow=47						
MAT	Matsushiro	2.31	275	P	Pn	07 21 02.5	+1.0
MAT				S	Sn	07 21 28.8	-0.4
JHJ	Hachijo jima 2	3.43	198	Pn	Pn	07 21 19.1	+2.1
	33nm,0.3s,baz=149,slow=22,SNR=10						
JHJ				Sn	Sn	07 21 58.4	+1.6
	132nm,0.3s,baz=237,slow=22,SNR=11						
ASAJ	Asahikawa	7.80	8	Pn	Pn	07 22 17.9	+1.1
	2.8nm,0.3s,baz=223,slow=11,SNR=11						
ASAJ				Sn	Sn	07 23 44.1	-0.2
	1.1nm,0.3s,baz=11,slow=33,SNR=1.6						
JCJ	Chichijima	9.32	174	Pn	Pn	07 22 36.5	-1.2
	20nm,0.3s,baz=100,slow=23,SNR=12						
JCJ				Sn	Sn	07 24 14.1	-7.7
	9.8nm,0.3s,baz=300,slow=21,SNR=1.6						
USRK	Ussuriysk Ar.	10.43	321	Pn	Pn	07 22 52.9	0.0
	baz=146,slow=20,SNR=2.1						
KSRS	Korea Array	10.58	280	Pn	Pn	07 22 53.8	-1.1
	0.1nm,0.3s,baz=94,slow=14,SNR=2.1						
KSRS				LR	LR	07 26 14.5	
	comp=Z,74nm,20.6s,baz=60,slow=34						
KLR	Kul'dur	14.52	335	Pn	P	07 23 53.3	-1.9
	0.1nm,0.3s,baz=157,slow=15,SNR=3.5						
KLR				LR	LR	07 28 19.6	
	comp=Z,60nm,19.7s,baz=156,slow=33						
SEY	Seymchan	27.47	11	P	P	07 26 07.8	-1.1
	1.7nm,0.2s,baz=351,slow=23,SNR=2.0						
SEY				LR	LR	07 38 54.5	
	comp=Z,245nm,19.7s,baz=329,slow=40						
SONM	Songino Array	27.92	305	P	P	07 26 12.7	-0.5
	1.4nm,0.7s,baz=109,slow=9.0,SNR=9.7						
H11N2	WAKE ISLAND Hy	28.07	119	T	T	07 55 50.6	
	baz=314,slow=75						
H11N1	WAKE ISLAND Hy	28.07	119	T	T	07 55 58.6	
	baz=314,slow=75,SNR=119						
H11N3	WAKE ISLAND Hy	28.09	119	T	T	07 55 51.9	
	baz=314,slow=75						
H11S1	WAKE ISLAND Hy	28.75	121	T	T	07 56 37.4	
	baz=314,slow=76						
H11S3	WAKE ISLAND Hy	28.75	121	T	T	07 56 44.1	
	baz=314,slow=76						
H11S2	WAKE ISLAND Hy	28.77	121	T	T	07 56 39.8	
	baz=314,slow=76						
LAMP	Lampang	40.49	255	P	P	07 28 01.3	-0.7
CM34	Chiang Mai Arr	40.69	256	P	P	07 28 12.0	+8.4
CM35	Chiang Mai Arr	40.78	256	P	P	07 28 10.0	+5.6
CM33	Chiang Mai Arr	40.86	256	P	P	07 28 15.0	+10
CM36	Chiang Mai Arr	40.91	256	P	P	07 28 09.0	+3.5
CM32	Chiang Mai Arr	41.03	256	P	P	07 28 15.0	+8.5
CM09	Chiang Mai Arr	41.04	256	P	P	07 28 12.5	+6.0
CM31	Chiang Mai Arr	41.07	256	P	P	07 28 14.8	+8.0
CMAR	Chiang Mai Arr	41.07	256	LR	LR	07 44 59.1	
	comp=Z,15nm,18.2s,baz=295,slow=36						
CM04	Chiang Mai Arr	41.07	256	P	P	07 28 11.0	+4.2
CM01	Chiang Mai Arr	41.08	256	P	P	07 28 12.8	+6.0
CM02	Chiang Mai Arr	41.08	256	P	P	07 28 12.0	+5.2
CM15	Chiang Mai Arr	41.09	256	P	P	07 28 13.6	+6.7
SUKH	Sukhothai	41.09	254	P	P	07 28 15.2	+8.3
CM05	Chiang Mai Arr	41.10	256	P	P	07 28 12.0	+5.0
CM13	Chiang Mai Arr	41.12	256	P	P	07 28 13.2	+6.0
ZALV	Zalesovo Beam	42.14	313	P	P	07 28 15.2	0.0
	3.6nm,0.6s,baz=93,slow=7.1,SNR=18						
MKAR	Makanchi Array	44.23	303	P	P	07 28 32.0	-0.2
	1.4nm,0.8s,baz=83,slow=10.0,SNR=14						
ILAR	Eielson Array	50.18	32	P	P	07 29 19.4	+1.2
	1.6nm,0.6s,baz=268,slow=5.7,SNR=23						
INK	Inuvik	55.08	27	P	P	07 29 55.8	+1.4
	1.7nm,0.6s,baz=307,slow=5.8,SNR=14						
WRA	Warramunga Arr	56.39	188	P	P	07 30 03.8	-0.5
	1.7nm,0.7s,baz=4.1,slow=7.5,SNR=14						
ASAR	Alice Springs	60.12	188	P	P	07 30 30.3	-0.1
	0.7nm,0.7s,baz=14,slow=6.6,SNR=7.6						
GEYT	Alibeck	63.90	299	LR	LR	08 01 28.0	
	comp=Z,83nm,18.5s,baz=15,slow=39						
YKA	Yellowknife Ar	64.50	30	P	P	07 31 00.0	+0.8
	0.6nm,0.7s,baz=302,slow=5.9,SNR=12						
FINES	FINESS Array B	69.25	332	P	P	07 31 29.2	-0.3
	2.4nm,0.9s,baz=46,slow=10.0,SNR=1.3						
AKASG	Malin Array Be	74.63	322	P	P	07 32 01.3	-0.7
	2.4nm,0.7s,baz=47,slow=5.9,SNR=2.3						
NOA	NORSAR Array B	74.67	337	P	P	07 32 02.0	0.0
	0.5nm,0.5s,baz=62,slow=7.6,SNR=2.7						
NVAR	Mina Array Bea	75.59	53	P	P	07 32 09.3	+1.3
	0.5nm,0.6s,baz=336,slow=3.3,SNR=5.4						
PDAR	Pinedale Array	78.31	45	P	P	07 32 24.2	+0.9
	0.5nm,0.5s,baz=294,slow=2.9,SNR=7.2						
TXAR	Lajitas Array	90.73	52	P	P	07 33 27.3	+1.1
	0.3nm,0.7s,baz=232,slow=3.0,SNR=3.5						
H03N2	Juan Fernandez	147.23	97	T	T	10 25 05.7	
	baz=291,slow=76,SNR=34						
H03N3	Juan Fernandez	147.24	97	T	T	10 25 01.9	
	baz=291,slow=76,SNR=56						
H03N1	Juan Fernandez	147.24	97	T	T	10 25 09.3	
	baz=291,slow=76,SNR=36						

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*TEH **17** 07:42:15.9, 30°.76N×56°.75E, h12^{km}, ML3.7*

*THR **17** 07:42:15.9±0.5, 30°.75N×56°.79E, h15^{km}±11^{km}, ML3.6*

ISC 17 07:42:16.6±1.1**, 30°.69N**±0°.06×**56°.78E**±0°.04**, h11**^{km}**, n33, σ0^{s}.80**/35**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHGB	Koh Gabri	0.41	219	*e*Pg	Pg	07 42 24.6	-0.1
TVBK	TV Kerman	0.70	181	*e*Pg	Pb	07 42 31.1	0.0
TVBK				*e*		07 42 50.6	
	comp=Z,99nm,0.3s						
KRBR	Kerman	0.71	181	*e*Pg	Pb	07 42 30.8	-0.3
KRBR				*e*Sg	Sb	07 42 41.3	+0.4
KRBR	Kerman	0.71	181	*e*Pg	Pb	07 42 30.8	-0.3
NGRK	Negar Kerman	1.04	182	*e*Pg	Pb	07 42 37.0	+0.1
NGRK				*e*		07 42 57.8	
	comp=Z,99nm,0.3s						
CHMN	Cheshme madani	1.06	141	*e*Pg	Pg	07 42 36.5	-0.5
CHMN				*e*Sg	Sn	07 42 51.9	-0.7
IBAF	Bafgh	1.37	311	*e*Pg	Pn	07 42 39.9	-1.9
IBAF				*e*		07 43 05.3	
	comp=Z,99nm,0.2s						
IMEH	Mehriz	1.98	291	*e*Pn	Pn	07 42 50.8	+0.5
IMEH				*e*		07 43 19.4	
	comp=Z,99nm,0.3s						
KBAM	BAM	2.13	136	*e*Pn	Pb	07 42 54.3	-0.9
KBAM				*e*		07 43 00.6	
	comp=Z,99nm,0.3s						
TPRV	Parvadeh(Tabas	2.33	358	*e*Pn	Pn	07 42 54.8	-0.2
TPRV				*e*		07 43 32.8	
	comp=Z,99nm,0.4s						
BSRN	Basiran	2.38	57	*e*Pn	Pn	07 42 55.9	+0.2
BSRN	Basiran	2.38	57	*e*Pn	Pn	07 42 55.9	+0.2
YZKH	Yazd	2.52	313	*e*Pn	Pn	07 42 58.3	+0.7
YZKH				IAML		07 43 41.9	
	comp=N,238nm,0.4s						
YZKH	Yazd	2.52	313	*e*Pn	Pn	07 42 58.3	+0.7
ICHK	Chekchek	2.55	308	*e*Pn	Pn	07 42 58.9	+0.8
ICHK				*e*		07 43 39.8	
	comp=Z,99nm,0.4s						
IKOO	Kooshah	2.57	47	*e*Pn	Pn	07 42 58.8	+0.4
IKOO				*e*		07 43 38.9	
	comp=Z,99nm,0.7s						
ITEG	Tejag	2.77	37	*e*Pn	Pn	07 43 01.1	0.0
ITEG				*e*		07 43 49.2	
	comp=Z,99nm,0.5s						
NHDN	Nehbandan	2.90	75	*e*Pn	Pn	07 43 04.0	+1.2
TKDS	Koohdasht(Taba	2.93	6	*e*Pn	Pn	07 43 03.4	+0.2
TKDS				*e*		07 44 01.2	
	comp=Z,99nm,1.0s						
TABS	Tabas	2.96	6	*e*Pn	Pn	07 43 03.5	-0.2
TABS	Tabas	2.96	6	*e*Pn	Pn	07 43 03.5	-0.2
TNSJ	Nastanj	3.27	358	*e*Pn	Pn	07 43 08.2	+0.3
AFRZ	Afriz	3.32	34	*e*Pn	Pn	07 43 08.8	+0.1
ANAR	Anarak	3.59	315	*e*Pn	Pn	07 43 12.8	+0.4
ZHSF	Zahedan	3.63	106	*e*Pn	Pn	07 43 14.1	+1.2
ZHSF	Zahedan	3.63	106	*e*Pn	Pn	07 43 14.1	+1.2
IRAM	Ramesheh	3.92	288	*e*Pn	Pn	07 43 18.3	+1.3
IZEF	Zefreh	4.38	301	*e*Pn	Pn	07 43 23.5	+0.2
KLNJ	Kolanjah	4.47	275	*e*Pn	Pn	07 43 24.7	+0.1
KRSH	Karshahi	5.11	311	*e*Pn	Pn	07 43 33.6	+0.3
SBZV	Sabzevar	5.72	7	*e*Pn	Pn	07 43 42.4	+0.6
IGLO	Ghaloghah	6.29	338	*e*Pn	Pn	07 43 51.3	+1.7
ISFR	Sfrayin	6.43	9	*e*Pn	Pn	07 43 53.1	+1.6

IDC 17 07:42:38.9±2.7**, 10°.75S×115°.14E, h0**^{km}**, mb3.5**/4**, mb1 3.8**/5**, mb1mx3.5**/51**, mbtmp3.6**/5**, ML3.4**/1**, MS3.8**/2**, Ms1 3.8**/2**, ms1mx2.8**/34**, Error ellipse: s-maj=172.1km s-min=23.7km az=48.0, South of Bali**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	12.52	127	Pn	Pn	07 45 36.4	-2.1
	0.2nm,0.3s,baz=303,slow=7.1,SNR=12						
FITZ				Sn	Sn	07 47 45.9	-13
	0.2nm,0.3s,baz=130,slow=18,SNR=2.9						
WRA	Warramunga Arr	20.63	119	P	P	07 47 20.2	0.0
	1.2nm,0.6s,baz=289,slow=12,SNR=8.3						
ASAR	Alice Springs	22.02	128	P	P	07 47 35.7	+0.6
	0.8nm,0.6s,baz=304,slow=9.7,SNR=9.5						
PMG	Port Moresby	31.55	91	LR	LR	08 05 33.8	
	comp=Z,120nm,18.4s,baz=144,slow=44						
STKA	Stephens Creek	32.24	135	P	P	07 49 09.4	+0.3
	1.5nm,0.7s,baz=328,slow=9.5,SNR=4.5						
MKAR	Makanchi Array	64.36	336	P	P	07 53 16.4	-0.1
	0.2nm,0.4s,baz=144,slow=6.6,SNR=5.7						
AAK	Ala-Archa	64.83	328	LR	LR	08 24 47.0	
	comp=Z,83nm,18.5s,baz=126,slow=39						

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*IDC **17** 07:49:44.5±1.6, 20°.54S×168°.66E, h0^{km}, mb3.9/3, mb1 4.1/5, mb1mx3.8/32, mbtmp3.8/5, ML4.9/1, MS3.7/9, Ms1 3.7/9, ms1mx3.4/33, Error ellipse: s-maj=84.5km s-min=22.0km az=154.0*

*NOU **17** 07:49:59.8, 22°.12S×168°.09E, h0^{km}, MLv3.5, New Caledonia*

ISC 17 07:49:43.7±1.3**, 22°.3S**±0°.2×**169°.30E**±0°.07**, h10**^{km}**, n20, σ1^{s}.23**/15**, mb3.9**/3**, MS3.6**/9**, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PINNC	Pines Island,	1.75	259	P	Pn	07 50 14.8	+0.8
YATNC	Mamie plateau,	2.25	276	P	Pn	07 50 21.9	+0.9
OUENC	Ouen Island, N	2.28	267	P	Pn	07 50 22.3	+0.9
LIFNC	LIFOU	2.45	308	P	Pb	07 50 28.0	+0.2
ONTNC	Ouen Toro	2.64	269	P	Pn	07 50 27.2	+0.9
DZM	Mont Dzumac	2.66	274	Pn	Pn	07 50 27.1	+0.4
	4.9nm,0.3s,baz=58,slow=12,SNR=22						
DZM				Sn	Sn	07 51 01.2	+2.1
	10nm,0.3s,baz=82,slow=22,SNR=7.6						
DZM				LR	LR	07 51 05.6	
	comp=Z,286nm,21.8s,baz=128,slow=32						
DZM	Mont Dzumac	2.66	274	*e*Pn	Pn	07 50 26.9	+0.2
	22nm,0.3s						
DZM				*e*Sn	Sb	07 51 02.5	-1.7
	28nm,0.3s						
DZM				*e*LR	LR	07 51 02.8	
	comp=Z,1μm,24.8s						
DZM	Mont Dzumac	2.66	274	P	Pn	07 50 27.0	+0.2
NOUC	Port Laguerre	2.79	274	P	Pn	07 50 28.6	+0.2
MSVF	Nonsavu	9.39	63	Pn	Pn	07 51 59.9	+0.7
	0.4nm,0.3s,baz=210,slow=20,SNR=2.4						
MSVF				LR	LR	07 54 41.1	
	comp=Z,704nm,18.1s,baz=233,slow=32						
RPZ	Rata Peaks	21.41	177	LR	LR	08 02 18.4	
	comp=Z,135nm,18.3s,baz=24,slow=32						
STKA	Stephens Creek	26.39	243	LR	LR	08 05 49.0	
	comp=Z,162nm,18.2s,baz=37,slow=36						
ASAR	Alice Springs	32.57	261	P	P	07 56 15.8	+0.4
	1.6nm,0.9s,baz=85,slow=9.0,SNR=9.3						
ASAR				LR	LR	08 08 59.8	
	comp=Z,151nm,18.6s,baz=242,slow=36						
WRA	Warramunga Arr	32.66	268	P	P	07 56 13.7	-2.4
	1.7nm,1.0s,baz=99,slow=9.0,SNR=2.9						
WRA				LR	LR	08 09 19.0	
	comp=Z,203nm,19.6s,baz=100,slow=36						
TBI	Tubuai	37.93	100	*e*LR	LR	08 07 17.6	
	comp=Z,65nm,27.8s						
PPT2	Papeete2	38.85	91	*e*LR	LR	08 07 38.6	
	comp=Z,92nm,26.5s						
PPT	Papeete	38.86	91	LR	LR	08 09 11.8	
	comp=Z,68nm,20.9s,baz=288,slow=30						
VNDA	Vanda	55.39	182	LR	LR	08 19 58.4	
	comp=Z,58nm,19.2s,baz=332,slow=32						
NVAR	Mina Array Bea	90.78	48	P	P	08 02 46.6	-0.8
	0.5nm,0.8s,baz=223,slow=8.6,SNR=4.8						
TXAR	Lajitas Array	98.16	62	LR	LR	08 39 35.1	
	comp=Z,52nm,19.5s,baz=0.0,slow=31						

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*SJA **17** 07:50:04.5±0.5, 31°.12S×67°.31W, h115^{km}±4^{km}, ML4.0, MW4.0*

*NEIC **17** 07:50:05.0±0.7, 31°.12S±0°.08×67°.6W±0°.2, h144^{km}±14^{km}, Error ellipse: s-maj=24.6km s-min=11.3km az=93.0*

*IDC **17** 07:50:05.6±0.8, 31°.11S×67°.31W, h118^{km}±6^{km}, mb3.6/5, mb1 3.7/9, mb1mx3.5/32, mbtmp3.9/9, Error ellipse: s-maj=25.0km s-min=21.3km az=127.0*

ISC 17 07:50:03.8±0.6**, 31°.12S**±0°.06×**67°.31W**±0°.05**, h100**^{km}**, n57, σ1^{s}.78**/63**, mb3.8**/6**, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AVFE	Valle Fertil	0.48	345	*i* P	Pn	07 50 22.9	+3.3
AVFE				*e*S	Sn	07 50 35.5	+4.2
APLL	PUNTA DE LOS L	0.99	43	*i* P	Pn	07 50 26.7	+2.5
RTLL	Cerro Villicun	1.02	258	*e*P	Pn	07 50 27.1	+2.7
RTLL				*e*S	Sn	07 50 44.0	+4.0
RTLL				IAML		07 50 45.2	
	comp=Z,2μm,0.4s						
ZON	Zonda	1.24	250		Pn	07 50 29.8	+2.7
ZON	Zonda	1.24	250	*e*P	Pn	07 50 29.8	+2.7
ZON				*e*S	Sn	07 50 48.4	+3.8
ZON				IAML		07 50 49.7	
	comp=Z,2μm,0.3s						
RTCV	Cerro Valdivia	1.28	235	*e*P	Pn	07 50 30.1	+2.6
ACCO	Cerro Coronel	1.60	289	*e*P	Pn	07 50 34.1	+2.5
ACCO				IAML		07 51 48.8	
	comp=Z,1μm,0.7s						
ACLC	CERRO LA CRUZ	1.72	11	*e*P	Pn	07 50 35.0	+2.0
ACLC				IAML		07 50 59.9	
	comp=Z,1μm,0.2s						
ACDV	Cuesta del Vie	1.82	301	*e*P	Pn	07 50 37.0	+2.7
ACDV				*e*S	Sn	07 51 01.0	+3.5
ACDV				IAML		07 51 48.3	
	comp=Z,1μm,0.6s						
MRA	San Martin	1.88	134	*e*P	Pn	07 50 37.0	+2.2
MRA				IAML		07 51 22.4	
	comp=Z,556nm,0.3s						
AROD	Rodeo	2.09	297	*e*P	Pn	07 50 40.6	+2.8
TCA	Tanti	2.34	96	*e*P	Pn	07 50 42.5	+1.6
TCA				IAML		07 51 29.2	
	comp=Z,339nm,0.2s						
VCA	Vinchina	2.50	342	*e*P	Pn	07 50 45.8	+2.7
VCA				IAML		07 52 03.5	
	comp=Z,1μm,0.7s						
CO01	Juntas del Tor	2.66	295	Pn	Pn	07 50 46.2	+1.0
PIL	Pilar	2.98	101	*e*P	Pn	07 50 52.3	+3.0
PIL				IAML		07 51 45.4	
	comp=Z,347nm,0.5s						
GO04	Tololo Observa	3.15	287	*e*S	Sn	07 51 15.6	-13
VA03	San Esteban	3.20	238	Pn	Pn	07 50 51.5	-0.9
AC05	El Transito	3.43	311	Pn	Pn	07 50 55.0	-0.5
PEL	Peldehue	3.50	234	Pn	Pn	07 50 56.1	-0.1
PEL	Peldehue	3.50	234	*e*P	Pn	07 50 58.0	+1.7

LCO	Las Campanas	3.61	305	Pn	Pn	07 50 57.8	-0.3
ROC1	El Roble	3.65	239	*e*P	Pn	07 50 60.0	+1.5
MT05	Renca	3.68	231	Pn	Pn	07 50 59.3	+0.5
RFA	San Rafael	3.77	195	*i* P	Pn	07 51 01.0	+1.1
RFA				*e*P		07 51 01.1	
RFA				*e*S	Sn	07 51 33.7	-10
RFA				IAML		07 51 46.2	
	comp=Z,318nm,0.6s						
MT02	Curacav	3.88	236	Pn	Pn	07 51 02.6	+1.2
LAMA	Las Malvinas	4.12	202	*e*P	Pn	07 51 05.9	+1.3
GO03	Copiap	4.34	323	Pn	Pn	07 51 07.7	0.0
GO03	Copiap	4.34	323	*e*P	Pn	07 51 09.5	+1.8
AC04	Llanos de Chal	4.38	311	Pn	Pn	07 51 08.0	-0.1
COIS	El Sosneado	4.41	205	*i* P	Pn	07 51 09.3	+0.8
AC02	Maricunga	4.56	339	Pn	Pn	07 51 11.8	+0.8
AHML	Horco Molle	4.66	22	*i* P	Pn	07 51 11.8	-0.1
BO02	Sierra Bellavi	4.68	218	Pn	Pn	07 51 12.6	+0.4
EDS3	Malargue	4.95	200	*e*P	Pn	07 51 17.4	+1.4
AC01	Pan de Azucar	5.74	329	Pn	Pn	07 51 26.9	+0.4
GO02	Mina Guanaco	6.27	341	Pn	Pn	07 51 35.0	+0.9
BI02	San Fabin de	6.43	210	Pn	Pn	07 51 35.8	-0.2
PB14	IPOC Station P	7.03	336	Pn	Pn	07 51 44.6	+0.3
PB10	IPOC Station P	8.11	338	Pn	Pn	07 51 57.9	-0.9
PB15	IPOC Station P	8.11	346	Pn	Pn	07 51 59.2	+0.2
LVC	Limon Verde	8.60	350	P	Pn	07 52 05.6	-0.2
	comp=Z,5.7nm,0.3s,baz=150,slow=12,SNR=43						
LC01	Cunco	8.61	204	Pn	Pn	07 52 05.4	-0.1
PLCA	Paso Flores	9.94	194	P	Pn	07 52 23.5	-0.2
	comp=Z,0.1nm,0.3s,baz=4.0,slow=13,SNR=6.8						
CPUP	Villa Florida	9.98	64	P	Pn	07 52 25.2	+1.0
	comp=Z,0.2nm,0.3s,baz=244,slow=17,SNR=3.4						
SIV	San Ignacio	16.10	22	P	Pn	07 53 44.0	-0.4
	comp=Z,0.2nm,0.3s,baz=205,slow=12,SNR=7.0						
BDFB	Brasilia	23.42	53	P	P	07 55 03.0	-1.2
	comp=Z,1.2nm,0.4s,baz=190,slow=8.4,SNR=4.9						
TXAR	Lajitas Array	69.36	326	P	P	08 01 00.4	-0.4
	comp=Z,0.3nm,0.7s,baz=138,slow=8.4,SNR=4.7						
DBIC	Dimbokro	70.45	69	P	P	08 01 07.0	-0.7
	comp=Z,1.2nm,0.4s,baz=225,slow=5.7,SNR=11						
BOSA	Boshof	77.81	116	pP	pP	08 02 19.7	+3.3
	comp=Z,2.7nm,0.8s,baz=207,slow=6.8,SNR=3.0						
TORD	Torodi Ar. Bea	79.45	68	P	P	08 01 58.9	-0.6
	comp=Z,5.0nm,0.7s,baz=269,slow=6.6						
PDAR	Pinedale Array	83.13	330	P	P	08 02 18.1	-0.5
	comp=Z,0.5nm,0.6s,baz=128,slow=7.4,SNR=5.1						
ASAR	Alice Springs	121.85	203	PKP	PKPdf	08 08 45.4	-1.4
	comp=Z,0.2nm,0.5s,baz=135,slow=1.5,SNR=1.8						
WRA	Warramunga Arr	125.14	205	PKP	PKPdf	08 08 51.6	-1.6
	comp=Z,0.3nm,0.4s,baz=160,slow=1.8,SNR=7.8						
AAK	Ala-Archa	147.62	58	PKPbc	PKPbc	08 09 36.4	-0.3
	comp=Z,2.1nm,0.5s,baz=177,slow=3.4,SNR=9.3						
KURBB	Kurchatov Arra	148.05	43	PKPbc	PKPbc	08 09 37.3	0.0
	comp=Z,4.4nm,0.6s,baz=299,slow=3.2,SNR=19						
KURBB				pPKPbc	pPKPab	08 10 08.5	+1.3
	comp=Z,1.1nm,0.7s,baz=297,slow=3.1,SNR=4.6						
ZALV	Zalesovo Beam	149.65	33	PKPbc	PKPbc	08 09 41.2	-0.1
	comp=Z,3.7nm,0.5s,baz=312,slow=2.8,SNR=12						
ZALV				pPKPbc	pPKPab	08 10 11.7	-1.9
	comp=Z,1.2nm,0.6s,baz=298,slow=2.5,SNR=2.9						
MKAR	Makanchi Array	151.88	48	PKPbc	PKPbc	08 09 46.3	-0.4
	comp=Z,2.6nm,0.6s,baz=287,slow=1.9,SNR=29						
MKAR				PKPab	PKPab	08 09 55.9	-0.4
	comp=Z,0.7nm,0.5s,baz=276,slow=2.6,SNR=5.2						
MKAR				pPKPbc	sPKPdf	08 10 18.6	+0.2
	comp=Z,0.3nm,0.5s,baz=268,slow=3.1,SNR=2.0						

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*NEIC **17** 07:50:44.6±1.2, 30.°97S±0.°04×71.°40W±0.°08, h65^{km}±5^{km}, mb4.6/24, ML4.6(GUC), Error ellipse: s-maj=10.5km s-min=5.2km az=110.0*

*GUC **17** 07:50:44.4±0.8, 30.°96S×71.°30W, h59^{km}±3^{km}, ML4.6*

*IDC **17** 07:50:44.7±0.6, 30.°98S×71.°36W, h62^{km}±4^{km}, mb4.1/9, mb1 4.1/11, mb1mx3.9/30, mbtmp4.3/11, MS3.2/6, Ms1 3.2/6, ms1mx3.1/25, Error ellipse: s-maj=23.6km s-min=15.9km az=69.0*

ISC 17 07:50:44.4±0.5**, 30.°99S**±0.°04×**71.°44W**±0.°06**, h64**^{km}±4^{km}**, n89, σ1^{s}.20**/101**, mb4.6**/20**, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO02	Combarbal	0.43	120	*e*P	Pn	07 50 56.2	0.0
CO02				*i* S	Sn	07 51 04.5	-0.3
CO02				IAML		07 51 05.2	
	comp=N,104µm,0.2s						
CO02	Combarbal	0.43	120	Pn	Pn	07 50 56.2	0.0
CO02				Sn	Sn	07 51 04.5	-0.3
CO03	El Pedregal	0.66	77	*e*P	Pn	07 50 58.1	-0.4
CO03				*i* S	Sn	07 51 07.9	-1.0
CO03				IAML		07 51 08.8	
	comp=N,47µm,0.5s						
CO03	El Pedregal	0.66	77	Pn	Pn	07 50 58.2	-0.4
CO03				Sn	Sn	07 51 07.9	-1.0
GO04	Tololo Observa	0.98	34	*e*P	Pn	07 51 02.6	-0.1
GO04				*i* S	Sn	07 51 16.1	0.0
GO04				IAML		07 51 18.2	
	comp=N,50µm,0.5s						
GO04	Tololo Observa	0.98	34	Pn	Pn	07 51 02.5	-0.1
CO01	Juntas del Tor	1.54	49	*e*P	Pn	07 51 10.6	+0.6
CO01				*i* S	Sn	07 51 29.8	+0.7
CO01				IAML		07 51 30.4	
	comp=N,5µm,0.2s						
CO01	Juntas del Tor	1.54	49	Pn	Pn	07 51 10.4	+0.5
VA03	San Esteban	1.92	157	*e*P	Pn	07 51 16.6	+1.6
VA03				*i* S	Sn	07 51 40.4	+2.1
VA03				IAML		07 51 41.6	
	comp=E,5µm,0.2s						
VA03	San Esteban	1.92	157	Pn	Pn	07 51 16.7	+1.6
LCO	Las Campanas	2.07	18	Pn	Pn	07 51 17.1	-0.1
PEL	Peldehue	2.24	164	*e*P	Pn	07 51 20.3	+1.0
PEL				*i* S	Sn	07 51 48.1	+2.2
PEL	Peldehue	2.24	164	Pn	Pn	07 51 20.2	+0.9
MT02	Curacav	2.28	174	Pn	Pn	07 51 20.3	+0.6
AC05	El Transito	2.37	25	*e*P	Pn	07 51 22.1	+0.9
AC05				*i* S	Sn	07 51 50.4	+1.2
AC05	El Transito	2.37	25	Pn	Pn	07 51 22.0	+0.9
MT05	Renca	2.47	166	*e*P	Pn	07 51 23.5	+1.1
MT05				*i* S	Sn	07 51 54.2	+2.7
MT05				IAML		07 52 06.4	
	comp=E,4µm,0.3s						
MT05	Renca	2.47	166	Pn	Pn	07 51 23.3	+0.9
MT03	Universidad Ad	2.62	163	*e*P	Pn	07 51 25.8	+1.4
MT03				*i* S	Sn	07 51 58.1	+2.9
MT03				IAML		07 52 12.2	
	comp=N,4µm,0.3s						
AC04	Llanos de Chal	2.79	7	Pn	Pn	07 51 26.8	+0.1
LMEL	Las Melosas	3.04	160	*e*P	Pn	07 51 32.4	+2.2
LMEL				*i* S	Sn	07 52 08.3	+2.9
GO03	Copiap	3.54	18	Pn	Pn	07 51 37.7	+0.6
BO02	Sierra Bellavi	3.83	172	Pn	Pn	07 51 41.5	+0.5
AC02	Maricunga	4.61	27	Pn	Pn	07 51 52.2	+0.2
BI02	San Fabin de	5.66	179	Pn	Pn	07 52 06.1	+0.1
BI03	Tigo	5.99	192	Pn	Pn	07 52 09.6	-0.9
H03N1	Juan Fernandez	6.79	247	P	Pn	07 52 22.4	+1.2
	baz=354,slow=70,SNR=18						
H03N1				T	T	07 59 15.8	
	baz=75,slow=72,SNR=1007						
VA04	Juan Fernndez	6.79	245	Pn	Pn	07 52 21.0	-0.5
H03N3	Juan Fernandez	6.80	247	P	Pn	07 52 22.0	+0.6
	baz=354,slow=70,SNR=23						
H03N3				T	T	07 59 12.1	
	baz=75,slow=72,SNR=665						
H03N2	Juan Fernandez	6.81	247	P	Pn	07 52 22.7	+1.3
	baz=354,slow=70,SNR=20						
H03N2				T	T	07 59 14.8	
	baz=75,slow=72,SNR=765						
H03S3	Juan Fernandez	6.92	244	P	Pn	07 52 22.6	-0.3
H03S1	Juan Fernandez	6.93	244	P	Pn	07 52 22.6	-0.4
	baz=25,slow=19,SNR=31						
H03S2	Juan Fernandez	6.94	244	P	Pn	07 52 22.8	-0.4
LC01	Cunco	7.90	182	Pn	Pn	07 52 35.5	-1.1
LVC	Limon Verde	8.64	16	P	Pn	07 52 53.2	+6.0
	comp=N,2.1nm,0.3s,baz=191,slow=8.8,SNR=4.3						
LVC				S	Sn	07 54 30.4	+7.1
	comp=N,2.6nm,0.3s,baz=90,slow=13,SNR=1.7						
LVC				LR	LR	07 56 20.6	
	comp=N,96nm,21.1s,baz=214,slow=39						
PLCA	Paso Flores	9.75	176	P	Pn	07 53 01.9	0.0
	comp=N,0.4nm,0.3s,baz=334,slow=12,SNR=4.0						
PLCA				LR	LR	07 56 46.0	
	comp=N,117nm,19.2s,baz=338,slow=37						
PLCA	Paso Flores	9.75	176		Pn	07 53 02.3	+0.3
CPUP	Villa Florida	13.22	73	LR	LR	07 59 07.4	
	comp=N,85nm,19.8s,baz=248,slow=38						
SIV	San Ignacio	17.68	35	P	Pn	07 54 46.1	-0.4
	comp=N,0.4nm,0.3s,baz=242,slow=10.0,SNR=6.3						
SIV				LR	LR	08 01 22.0	
	comp=N,80nm,19.1s,baz=218,slow=36						
NNA	Nana	19.56	344	LR	LR	08 00 06.8	
	comp=N,40nm,20.0s,baz=152,slow=29						
ATAH	Atahualpa	24.61	343	P	P	07 55 58.4	-0.9
	comp=N,5.5nm,0.4s,baz=135,slow=2.9,SNR=2.2						
BDFB	Brasilia	26.30	60	P	P	07 56 13.3	-1.0
	comp=N,2.2nm,0.5s,baz=243,slow=9.7,SNR=4.5						
BDFB	Brasilia	26.30	60	P	P	07 56 13.4	-1.0
SNAA	Sanae	54.19	159	P	P	08 00 03.6	+0.6
	comp=N,6.1nm,0.7s,baz=296,slow=7.7,SNR=10						
SNAA				pP	pP	08 00 20.0	+0.2
	comp=N,3.5nm,0.7s,baz=274,slow=9.6,SNR=2.7						
SNAA	Sanae	54.19	159	P	P	08 00 03.5	+0.4
SNAA				IAmb	IAmb	08 00 04.5	
	comp=Z,7.1nm,0.8s						
QSPA	South Pole Qui	59.24	180	P	P	08 00 39.6	+0.6
V58A	Windy Hill, Pi	66.82	353	P	P	08 01 29.4	+0.1
V55A	Taylorsville	67.12	351	P	P	08 01 31.1	-0.1
W50A	Signal Mountai	67.12	348	P	P	08 01 30.2	-1.1
TKL	Tuckaleechee C	67.30	349	P	P	08 01 32.4	0.0
TXAR	Lajitas Array	67.38	330	P	P	08 01 34.4	+1.3
	comp=Z,0.7nm,0.7s,baz=149,slow=8.3,SNR=5.9						
TXAR				pP	pP	08 01 51.4	+1.1
	comp=Z,0.9nm,0.6s,baz=153,slow=7.6,SNR=7.8						
TXAR				sP	sP	08 01 57.8	+0.4
	comp=Z,0.8nm,0.9s,baz=159,slow=7.5,SNR=3.5						
TXAR	Lajitas Array	67.38	330	P	P	08 01 33.1	0.0
TX31	Lajitas Ar. Si	67.38	330	P	P	08 01 33.2	+0.1
V52A	Sevierville	67.45	349	P	P	08 01 33.0	-0.3
V52A				IAmb	IAmb	08 01 47.3	
	comp=Z,12nm,1.4s						
CLTN	Cedars of Leba	68.18	347	P	P	08 01 37.8	-0.1
LCAR	Lake Charles	69.23	343	P	P	08 01 43.9	-0.5
LCAR				IAmb	IAmb	08 01 45.8	
	comp=Z,4.9nm,0.8s						
PBMO	Poplar Bluff	69.72	344	P	P	08 01 47.2	-0.2
PBMO				IAmb	IAmb	08 02 05.7	
	comp=Z,4.7nm,0.8s						
U40A	Yellville	69.94	342	P	P	08 01 48.8	0.0
U40A				IAmb	IAmb	08 01 50.5	
	comp=Z,13nm,1.4s						
R40A	Maddies Statio	71.61	343	P	P	08 01 58.5	-0.4
R40A				IAmb	IAmb	08 02 00.1	
	comp=Z,6.7nm,0.7s						
KAN10	Anthony SW Sta	72.21	338	P	P	08 02 01.4	-1.1
DBIC	Dimbokro	73.74	72	P	P	08 02 12.2	+0.1
	comp=Z,9.0nm,0.7s,baz=221,slow=5.5,SNR=9.6						
DBIC	Dimbokro	73.74	72	P	P	08 02 11.8	-0.4
SDCO	Great Sand Dun	75.42	333	P	P	08 02 21.2	-0.5
SADO	Sadowa	75.72	354	P	P	08 02 22.7	-0.2
ECSD	EROS Data Cent	77.85	342	P	P	08 02 34.8	-0.1
ECSD				IAmb	IAmb	08 02 36.6	
	comp=Z,7.7nm,0.9s						
KOWA	Kowa	78.93	66	P	P	08 02 41.8	+0.4
KOWA				IAmb	IAmb	08 02 42.5	
	comp=Z,5.8nm,0.7s						
D41A	Chassel	79.21	348	P	P	08 02 42.3	+0.1
D41A				IAmb	IAmb	08 02 44.4	
	comp=Z,7.0nm,0.8s						
BOSA	Boshof	81.02	118	P	P	08 02 52.5	-0.4
	comp=Z,3.3nm,0.8s,baz=252,slow=5.0,SNR=5.3						
BOSA	Boshof	81.02	118	P	P	08 02 53.2	+0.4
PDAR	Pinedale Array	81.32	333	P	P	08 02 54.5	+0.5
	comp=Z,0.5nm,0.7s,baz=133,slow=7.5,SNR=3.5						
PDAR				pP	pP	08 03 11.3	-0.4
	comp=Z,0.4nm,0.6s,baz=118,slow=3.6,SNR=3.3						
NVAR	Mina Array Bea	81.72	325	LR	LR	08 35 04.6	
	comp=Z,66nm,19.0s,baz=2.0,slow=33						
NVAR	Mina Array Bea	81.72	325	P	P	08 02 55.6	-0.6
TOA0	Torodi Ar. Sit	82.71	70	P	P	08 03 02.1	+0.5
TOA0				IAmb	IAmb	08 03 02.6	
	comp=Z,6.5nm,0.7s						
TORD	Torodi Ar. Bea	82.71	70	P	P	08 03 01.7	+0.1
	comp=Z,3.2nm,0.6s,baz=251,slow=7.5,SNR=12						
TORD				pP	pP	08 03 18.8	-0.7
	comp=Z,0.8nm,0.4s,baz=273,slow=4.8,SNR=2.8						
LBTB	Lobatse	83.11	115	P	P	08 03 03.3	-0.5
LBTB				IAmb	IAmb	08 03 20.8	
	comp=Z,12nm,1.2s						
ULM	Lac du Bonnet	83.73	345	P	P	08 03 06.0	-0.1
	comp=Z,1.9nm,0.7s,baz=139,slow=3.5,SNR=5.1						
K05A	Summer Lake	86.27	326	P	P	08 03 16.5	-2.8
K05A				IAmb	IAmb	08 03 16.9	
	comp=Z,5.6nm,1.1s						
ASAR	Alice Springs	120.47	207	PKP	PKPdf	08 09 28.8	-0.5
	comp=Z,0.5nm,0.5s,baz=125,slow=1.8,SNR=7.4						
ASAR				pPKP	pPKPdf	08 09 46.6	-1.3
	comp=Z,0.4nm,0.8s,baz=161,slow=1.7,SNR=2.4						
WRA	Warramunga Arr	123.63	209	PKP	PKPdf	08 09 35.3	-0.1
	comp=Z,1.7nm,0.6s,baz=160,slow=1.8,SNR=20						
WRA				pPKP	pPKPdf	08 09 52.9	-1.2
	comp=Z,0.5nm,0.4s,baz=159,slow=1.8,SNR=2.2						
H11S2	WAKE ISLAND Hy	126.28	271	T	T	10 28 32.4	
	baz=116,slow=75,SNR=88						
H11S1	WAKE ISLAND Hy	126.29	271	T	T	10 28 33.4	
	baz=116,slow=75,SNR=93						
H11S3	WAKE ISLAND Hy	126.29	271	T	T	10 28 32.4	
	baz=116,slow=75,SNR=94						
H11N3	WAKE ISLAND Hy	126.61	272	T	T	10 28 58.4	
	baz=116,slow=75,SNR=18						
H11N1	WAKE ISLAND Hy	126.63	272	T	T	10 29 01.5	
	baz=116,slow=75,SNR=5.6						
H11N2	WAKE ISLAND Hy	126.63	272	T	T	10 29 07.1	
	baz=116,slow=75,SNR=25						
KURBB	Kurchatov Arra	150.29	40	PKPbc	PKPbc	08 10 28.4	+0.4
	comp=Z,0.5nm,0.5s,baz=300,slow=3.0,SNR=2.5						
AAK	Ala-Archa	150.54	57	PKPbc	PKiKP	08 10 30.0	+0.3
	comp=Z,2.0nm,0.7s,baz=147,slow=1.3,SNR=5.6						
ZALV	Zalesovo Beam	151.39	30	PKPbc	PKPbc	08 10 30.9	+0.4
	comp=Z,2.9nm,0.5s,baz=299,slow=3.2,SNR=9.2						
ZALV				pPKPbc	pPKPbc	08 10 49.2	+0.2
	comp=Z,1.9nm,0.3s,baz=327,slow=3.1,SNR=5.6						
MKAR	Makanchi Array	154.34	45	PKPab	PKPab	08 10 52.4	+0.8
	comp=Z,1.1nm,0.7s,baz=306,slow=2.9,SNR=5.7						
MKAR				pPKPab	pPKPab	08 11 09.0	-0.7
	comp=Z,1.0nm,0.7s,baz=268,slow=4.2,SNR=4.6						

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*IDC **17** 08:21:56.6±1.9, 39.°73N×143.°55E, h0^{km}, mb3.5/6, mb1 3.6/7, mb1mx3.3/63, mbtmp3.5/7, MS3.1/1, Ms1 3.1/1, ms1mx2.4/55, Error ellipse: s-maj=48.4km s-min=28.7km az=86.0*

*JMA **17** 08:21:59.9±0.2, 39.°89N×143.°39E, h22^{km}±4^{km}, M3.4*

ISC 17 08:21:59.3±3.8**, 39.°82N**±0.°06×**143.°36E**±0.°07**, h11**^{km}±24^{km}**, n25, σ0^{s}.99**/26**, mb3.5**/6**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	1.16	277	P	Pn	08 22 21.0	-0.5
JTH				*e*S	Sb	08 22 36.5	0.0
MIYJ	Miyakonagasawa	1.22	259	P	Pn	08 22 22.2	-0.1
MIYJ				*e*S	Sb	08 22 38.1	+0.1
JKEN	Kujiedanarisaw	1.33	288	P	Pn	08 22 23.3	-0.5
JKEN				*e*S	Sn	08 22 40.1	-1.4
JOM	Ohasama	1.64	259	P	Pb	08 22 29.0	-0.5
JOM				*e*S	Sn	08 22 50.3	+1.2
JMK	Ichinoseki	1.87	243	P	Pn	08 22 31.8	+0.5
JMK				*e*S	Sn	08 22 55.2	+0.3
JTM	Tenmabayashi	2.01	300	P	Pn	08 22 33.4	+0.3
JIO	Ouri	2.08	230	P	Pn	08 22 34.1	0.0
JAH	Hinai	2.13	281	P	Pn	08 22 36.0	+1.2
JAH				*e*S	Sn	08 23 03.0	+1.8
JOT	Ohata	2.36	312	P	Pn	08 22 38.2	+0.3
JNBK	Urakawa-nobuka	2.50	350	P	Pn	08 22 40.5	+0.5
JNBK				*e*S	Sn	08 23 09.5	-1.0
ASAJ	Asahikawa	4.33	353	Pn	Pn	08 23 07.1	+2.0
	baz=187,slow=19						
ASAJ				Sn	Sn	08 23 56.4	+0.7
	0.3nm,0.3s,baz=210,slow=29,SNR=1.9						
MJAR	Matsushiro Arr	5.21	233	Pn	Pn	08 23 18.9	+1.7
	0.1nm,0.3s,baz=49,slow=11,SNR=2.5						
KLR	Kul'dur	12.53	323	LR	LR	08 30 07.5	
	comp=Z,86nm,19.4s,baz=64,slow=39						
SEY	Seymchan	23.78	10	P	P	08 27 10.4	-1.2
	0.8nm,0.6s,baz=197,slow=11,SNR=2.2						
SONM	Songino Array	27.64	299	P	P	08 27 47.8	+0.8
	0.5nm,0.8s,baz=92,slow=10,SNR=2.1						
H11N2	WAKE ISLAND Hy	28.45	128	T	T	08 57 48.5	
	baz=320,slow=74,SNR=6.1						
H11N1	WAKE ISLAND Hy	28.46	128	T	T	08 57 43.4	
	baz=320,slow=74,SNR=3.7						
H11N3	WAKE ISLAND Hy	28.47	128	T	T	08 57 42.4	
	baz=320,slow=74,SNR=4.8						
H11S1	WAKE ISLAND Hy	29.27	130	T	T	08 58 51.0	
	baz=325						
H11S3	WAKE ISLAND Hy	29.27	130	T	T	08 58 50.5	
	baz=325						
H11S2	WAKE ISLAND Hy	29.29	130	T	T	08 58 57.8	
	baz=325						
ZALV	Zalesovo Beam	41.23	310	P	P	08 29 44.3	+0.2
	0.6nm,0.4s,baz=92,slow=7.6,SNR=3.0						
MKAR	Makanchi Array	44.00	300	P	P	08 30 07.1	+0.5
	0.2nm,0.6s,baz=87,slow=7.4,SNR=2.7						
KURBB	Kurchatov Arra	45.55	306	P	P	08 30 18.4	-0.4
	0.8nm,0.8s,baz=80,slow=8.1,SNR=6.6						
WRA	Warramunga Arr	60.04	190	P	P	08 32 05.2	-1.1
	0.5nm,0.8s,baz=5.9,slow=7.0,SNR=2.3						

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*IDC **17** 08:25:09.9±0.7, 47.°99S×74.°76W, h0^{km}, mb4.7/10, mb1 4.7/12, mb1mx4.5/26, mbtmp4.6/12, ML4.2/2, MS3.9/7, Ms1 3.9/7, ms1mx3.6/21, Error ellipse: s-maj=29.1km s-min=16.5km az=92.0*

*VAO **17** 08:25:10.3±0.8, 48.°14S×75.°05W, h10^{km}, mb4.8*

*NEIC **17** 08:25:10.9±2.0, 47.°98S±0.°07×74.°9W±0.°3, h14^{km}±5^{km}, mb4.9/46, ML4.9(GUC), Error ellipse: s-maj=26.8km s-min=9.6km az=85.0*

*GUC **17** 08:25:10.4±0.3, 47.°96S×75.°17W, h35^{km}, ML4.9*

ISC 17 08:25:10.7±0.5**, 47.°99S**±0.°06×**75.°04W**±0.°10**, h10**^{km}**, n120, σ1^{s}.10**/114**, mb4.9**/27**, MS4.0**/7**, 1C-2D, Southern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO08	Villa O'Higgin	1.73	107	⇓ *i*P	Pn	08 25 40.1	-0.7
GO08				*e*S	Sn	08 26 02.6	-0.2
GO08				IAML		08 26 04.9	
	comp=N,17µm,0.6s						
GO09	Cerro Castillo	3.73	153	*e*P	Pn	08 26 07.5	-0.7
GO09				*e*S	Sn	08 26 50.6	-1.6
GO09	Cerro Castillo	3.73	153	Pn	Pn	08 26 06.1	-2.1
GO07	Milladeo Hill,	4.97	12	*e*P	Pn	08 26 25.1	-0.2
GO07	Milladeo Hill,	4.97	12	Pn	Pn	08 26 24.4	-0.9
LL02	Futaleuf	5.29	26	*e*P	Pn	08 26 29.3	-0.5
GO10	Punta Arenas	5.76	155	*e*P	Pn	08 26 35.9	-0.3
GO10	Punta Arenas	5.76	155	Pn	Pn	08 26 36.2	-0.1
LL01	San Ignacio de	5.91	19	*e*P	Pn	08 26 38.5	+0.4
LL01	San Ignacio de	5.91	19		Pn	08 26 36.9	-1.2
PLCA	Paso Flores	7.93	26	Pn	Pn	08 27 07.6	+1.5
	comp=N,0.8nm,0.3s,baz=199,slow=12,SNR=34						
PLCA				Lg	Lg	08 29 14.1	
	comp=N,0.4nm,0.3s,baz=288,slow=23,SNR=3.3						
PLCA				LR	LR	08 30 15.2	
	comp=N,662nm,19.7s,baz=198,slow=39						
PLCA	Paso Flores	7.93	26	⇓ *i*P	Pn	08 27 08.0	+2.0
PLCA	Paso Flores	7.93	26	Pn	Pn	08 27 04.6	-1.5
PLCA	Paso Flores	7.93	26	*e*P	Pn	08 27 07.9	+1.8
USHA	Ushuaia	8.00	151	Pn	Pn	08 27 06.1	-0.7
	comp=N,2.5nm,0.3s,baz=345,slow=1.1,SNR=1.6						
USHA				Lg	Lg	08 29 19.0	
	comp=N,2.1nm,0.3s,baz=7.6,slow=15,SNR=2.0						
LC01	Cunco	9.37	15	Pn	Pn	08 27 24.9	-0.8
BI03	Tigo	11.23	8	Pn	Pn	08 27 49.5	-1.7
BI02	San Fabin de	11.65	15	Pn	Pn	08 27 56.4	-0.7
BO02	Sierra Bellavi	13.56	15	Pn	Pn	08 28 22.3	-0.8
MT05	Renca	14.94	14	Pn	Pn	08 28 40.6	-1.3
MT02	Curacav	15.01	13		Pn	08 28 41.3	-1.4
PEL	Peldehue	15.19	14	Pn	Pn	08 28 43.6	-1.6
PEL				IAmb	IAmb	08 28 52.3	
	comp=Z,68nm,1.0s						
VA03	San Esteban	15.58	14		Pn	08 28 48.2	-2.3
CO02	Combarbal	17.04	12	Pn	Pn	08 29 08.4	-0.7
ZON	Zonda	17.12	19		P	08 29 11.5	-0.2
CO03	El Pedregal	17.45	13		Pn	08 29 13.4	-0.8
PMSA	Palmer Station	17.84	165	LR	LR	08 34 37.7	
	comp=Z,316nm,20.6s,baz=300,slow=32						
CO01	Juntas del Tor	18.38	14	P	P	08 29 25.4	-0.4
LCO	Las Campanas	19.24	12		P	08 29 35.7	+0.3
AC05	El Transito	19.48	13		P	08 29 37.6	-0.2
AC04	Llanos de Chal	19.99	10		P	08 29 43.9	+0.7
AC04				IAmb	IAmb	08 29 47.0	
	comp=Z,67nm,1.4s						
GO03	Copiap	20.70	12	P	P	08 29 51.2	+0.2
GO03				IAmb	IAmb	08 29 52.8	
	comp=Z,56nm,0.9s						
AC02	Maricunga	21.62	14		P	08 30 01.0	-0.3
PLTB	Pedras Altas	22.97	53	*e*P	P	08 30 16.6	+1.4
ITQB	Itaqui	23.14	44	*e*P	P	08 30 18.0	+1.1
GO02	Mina Guanaco	23.18	13	P	P	08 30 16.6	-1.2
GO02				IAmb	IAmb	08 30 25.0	
	comp=Z,34nm,0.9s						
PB14	IPOC Station P	23.60	11	P	P	08 30 20.2	-1.8
CPSB	Cacapava Do Su	24.12	51	*e*P	P	08 30 26.7	+0.1
PB15	IPOC Station P	25.12	12	P	P	08 30 33.8	-2.1
PB15				IAmb	IAmb	08 30 49.0	
	comp=Z,26nm,0.9s						
PB06	IPOC Station P	25.60	12	P	P	08 30 38.7	-1.6
CPUP	Villa Florida	25.70	39	P	P	08 30 40.2	-0.7
	comp=Z,15nm,0.8s,baz=208,slow=9.5,SNR=23						
CPUP				LR	LR	08 40 32.0	
	comp=Z,180nm,19.3s,baz=209,slow=36						
CPUP	Villa Florida	25.70	39	P	P	08 30 39.7	-1.2
CPUP				IAmb	IAmb	08 30 43.2	
	comp=Z,20nm,0.9s						
LVC	Limon Verde	25.79	13	P	P	08 30 43.3	+1.2
	comp=Z,31nm,0.7s,baz=190,slow=7.5,SNR=26						
LVC				LR	LR	08 40 15.3	
	comp=Z,224nm,21.0s,baz=188,slow=35						
LVC	Limon Verde	25.79	13	P	P	08 30 40.2	-2.0
LVC	Limon Verde	25.79	13	*e*P	P	08 30 43.5	+1.3
PB07	IPOC Station P	26.53	11	P	P	08 30 47.8	-0.8
PB07				IAmb	IAmb	08 30 50.2	
	comp=Z,22nm,0.8s						
PB01	IPOC Station P	27.25	11	P	P	08 30 55.0	-0.1
PB01				IAmb	IAmb	08 30 57.0	
	comp=Z,25nm,0.9s						
ITAB	Concordia	27.36	49	*e*P	P	08 30 56.3	+0.4
MNMC	Minye Minye	29.12	11	P	P	08 31 11.3	-0.7
MNMC				IAmb	IAmb	08 31 14.1	
	comp=Z,15nm,0.9s						
TRCB	Terra Rica	30.85	43	*e*P	P	08 31 27.3	+0.3
AQDB	Aquidauana	31.58	36	*e*P	P	08 31 32.9	-0.5
PCMB	Pacaembu	32.51	44	*e*P	P	08 31 40.9	-0.7
VAO	Valinhos	33.49	52	*e*P	P	08 31 50.8	+0.6
ITRB	Iturama	34.58	44	*e*P	P	08 32 00.3	+0.7
VILB	Vilhena	37.06	24	*e*P	P	08 32 21.5	+0.6
ETMB	Extrema	38.77	14	*e*P	P	08 32 36.1	+0.8
BDFB	Brasilia	39.19	44	P	P	08 32 38.7	-0.3
	comp=Z,13nm,0.9s,baz=212,slow=7.9,SNR=15						
BDFB				LR	LR	08 50 11.8	
	comp=Z,417nm,18.4s,baz=167,slow=38						
BDFB	Brasilia	39.19	44	P	P	08 32 38.0	-1.0
SNAA	Sanae	39.85	152	P	P	08 32 45.9	+2.0
	comp=Z,5.0nm,0.9s,baz=312,slow=7.8,SNR=4.3						
CZSB	Cruzeiro do Su	40.17	4	*e*P	P	08 32 47.9	+1.0
SAML	Samuel	40.18	18		P	08 32 46.3	-0.8
SAML	Samuel	40.18	18	*e*P	P	08 32 47.6	+0.6
ATAH	Atahualpa	40.81	355	P	P	08 32 55.0	+2.2
	comp=Z,12nm,0.8s,baz=175,slow=6.7,SNR=5.2						
PEXB	Peixe	42.17	41	*e*P	P	08 33 04.0	+0.4
QSPA	South Pole Qui	42.26	180	P	P	08 33 05.7	+1.8
	comp=Z,3.7nm,0.7s,baz=159,slow=2.9,SNR=11						
QSPA	South Pole Qui	42.26	180	P	P	08 33 06.7	+2.8
QSPA				IAmb	IAmb	08 33 10.1	
	comp=Z,21nm,1.3s						
NPGB	Novo Progresso	44.10	29	*e*P	P	08 33 19.1	0.0
SMTB	Santa Maria do	45.37	40	*e*P	P	08 33 30.0	+0.7
ITTB	Itaituba	46.51	27	*e*P	P	08 33 38.1	-0.1
OTAV	Otavalo	48.12	355	P	P	08 33 51.2	-0.1
OTAV				IAmb	IAmb	08 33 54.1	
	comp=Z,8.1nm,0.9s						
OTAV	Otavalo	48.12	355	*e*P	P	08 33 51.8	+0.5
PTGA	Pitinga	48.85	20	P	P	08 33 56.6	+0.3
PTGA				IAmb	IAmb	08 33 57.0	
	comp=Z,9.9nm,0.8s						
PTGA	Pitinga	48.85	20	*e*P	P	08 33 56.6	+0.3
TMAB	Tom-Au,PA,Br	51.04	36	*e*P	P	08 34 14.3	+1.3
ROSC	El Rosal	52.61	1	P	P	08 34 26.5	+1.4
	comp=Z,12nm,0.6s,baz=225,slow=24,SNR=4.7						
ROSC	El Rosal	52.61	1	P	P	08 34 26.7	+1.6
SYO	Syowa Base	53.84	156	⇑ *e*X	P	08 34 26.5	-6.6
SDV	Santo Domingo	56.76	5	*e*P	P	08 34 54.9	-0.1
MAW	Mawson	60.45	163	LR	LR	09 02 06.4	
	comp=Z,176nm,18.9s,baz=238,slow=37						
TBI	Tubuai	62.76	265	*e*LR	LR	08 54 02.7	
	comp=Z,134nm,28.2s						

MEH	Mehetia	65.62	270	*e*T	T	09 46 46.8	
	comp=Z,14nm,0.3s						
PPT2	Papeete2	66.84	269	*e*LR	LR	08 56 04.9	
	comp=Z,149nm,27.0s						
BOSA	Boshof	75.68	117	P	P	08 36 55.8	-0.5
	comp=Z,6.5nm,1.0s,baz=198,slow=3.2,SNR=4.1						
BOSA				LR	LR	09 05 52.7	
	comp=Z,59nm,20.9s,baz=202,slow=32						
TXAR	Lajitas Array	81.15	335	P	P	08 37 26.3	+0.1
	comp=Z,1.5nm,0.8s,baz=144,slow=8.7,SNR=9.6						
TXAR	Lajitas Array	81.15	335	P	P	08 37 25.4	-0.8
JCT	Junction City	81.21	339	P	P	08 37 25.9	-0.6
JCT				IAmb	IAmb	08 37 28.4	
	comp=Z,8.6nm,0.8s						
Z47A	Carrollton	81.66	349	P	P	08 37 27.7	-0.9
DBIC	Dimbokro	81.91	71	P	P	08 37 29.9	-0.5
	comp=Z,6.0nm,0.9s,baz=212,slow=6.8,SNR=4.3						
DBIC	Dimbokro	81.91	71	P	P	08 37 28.7	-1.8
DBIC				IAmb	IAmb	08 37 32.2	
	comp=Z,9.1nm,1.1s						
HODGE	Hodges	82.10	354	P	P	08 37 28.9	-2.1
HODGE				IAmb	IAmb	08 37 35.5	
	comp=Z,17nm,1.4s						
X48A	Hartselle	82.77	350	P	P	08 37 32.0	-2.4
W57A	Gilead	82.89	356	P	P	08 37 33.7	-1.3
W50A	Signal Mountai	83.32	352	P	P	08 37 35.9	-1.4
W50A				IAmb	IAmb	08 37 41.2	
	comp=Z,10nm,1.0s						
V53A	Saluda	83.57	354	P	P	08 37 39.0	+0.4
TKL	Tuckaleechee C	83.64	353	P	P	08 37 39.8	+0.9
W45A	Hickory Valley	83.73	348	P	P	08 37 40.1	+0.7
WHAR	Wooly Hollow	84.33	346	P	P	08 37 42.7	+0.2
WHAR				IAmb	IAmb	08 37 43.8	
	comp=Z,6.5nm,0.9s						
WVT	Waverly	84.52	350	P	P	08 37 43.4	0.0
WVT				IAmb	IAmb	08 37 52.5	
	comp=Z,14nm,1.4s						
U49A	Red Boiling Sp	84.67	351	P	P	08 37 44.3	+0.1
319A	Douglas	84.77	331	P	P	08 37 45.6	+0.7
319A				IAmb	IAmb	08 37 48.1	
	comp=Z,6.7nm,0.8s						
FCAR	Ozark Folk Cen	84.89	346	P	P	08 37 43.8	-1.4
FCAR				IAmb	IAmb	08 37 46.3	
	comp=Z,4.9nm,0.7s						
LCAR	Lake Charles	84.91	347	P	P	08 37 44.2	-1.1
LCAR				IAmb	IAmb	08 37 46.5	
	comp=Z,6.1nm,0.6s						
S39A	Bolivar	86.85	346	P	P	08 37 54.2	-0.7
S39A				IAmb	IAmb	08 37 56.0	
	comp=Z,6.2nm,0.7s						
CCM	Cathedral Cave	86.88	347	P	P	08 37 53.5	-1.5
KOWA	Kowa	88.43	66	P	P	08 38 02.8	-0.3
	comp=Z,1.5nm,0.6s,baz=220,slow=2.7,SNR=4.1						
P40A	Paris	88.44	347	P	P	08 38 01.4	-1.1
P38A	Dawn	88.77	346	P	P	08 38 02.6	-1.4
M56A	Emporium	89.13	358	P	P	08 38 05.4	-0.3
H11N3	WAKE ISLAND Hy	123.10	263	T	T	10 58 44.5	
	baz=137,slow=75,SNR=37						
H11N1	WAKE ISLAND Hy	123.11	263	T	T	10 58 47.6	
	baz=137,slow=75,SNR=14						
H11N2	WAKE ISLAND Hy	123.11	263	T	T	10 58 42.0	
	baz=137,slow=75,SNR=37						
GERES	GERESS Array B	123.12	52	PKP	PKPdf	08 44 06.3	-0.4
	comp=Z,0.4nm,0.5s,baz=159,slow=4.1,SNR=4.0						
ILAR	Eielson Array	125.42	330	PKP	PKiKP	08 44 10.4	-0.5
	comp=Z,0.8nm,0.8s,baz=198,slow=2.3,SNR=6.7						
PETK	Petropavlovsk-	146.74	299	PKPbc	PKPbc	08 44 51.6	-0.2
	comp=Z,3.3nm,0.9s,baz=76,slow=6.1,SNR=5.1						
AKTO	Aktyubinsk	149.63	68	PKPbc	PKPbc	08 44 59.3	-0.3
	comp=Z,0.8nm,0.6s,baz=303,slow=3.4,SNR=4.4						
CMAR	Chiang Mai Arr	150.14	168	PKPbc	PKiKP	08 45 02.9	+0.3
	comp=Z,1.0nm,0.3s,baz=223,slow=3.6,SNR=1.1						
CMAR				PKPab	pPKPab	08 45 09.6	-1.4
	comp=Z,1.2nm,0.4s,baz=216,slow=3.6,SNR=1.3						
ARU	Arti	150.84	56	PKPbc	PKiKP	08 45 02.4	-0.5
	baz=299,slow=11						
KURBB	Kurchatov Arra	162.59	71	PKP	PKPdf	08 45 12.6	+0.7
	comp=Z,0.5nm,0.6s,baz=293,slow=1.7,SNR=8.5						
KURBB				PKPab	PKPab	08 46 00.1	-0.3
	comp=Z,0.8nm,0.8s,baz=283,slow=4.4,SNR=4.4						
MKAR	Makanchi Array	164.61	86	PKPab	PKPab	08 46 08.4	-0.9
	comp=Z,0.2nm,0.6s,baz=286,slow=2.6,SNR=2.4						
SONM	Songino Array	179.02	262	PKPab		08 47 17.1	
	comp=Z,0.7nm,1.0s,baz=145,slow=5.3,SNR=3.7						

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*IDC **17** 08:28:07.7±1.4, 12°.24N×125°.56E, h0^{km}, mb3.6/7, mb1 3.8/7, mb1mx3.4/68, mbtmp3.6/7, MS3.7/1, Ms1 3.7/1, ms1mx2.6/52, Error ellipse: s-maj=68.7km s-min=20.2km az=65.0*

*MAN **17** 08:28:09.6, 12°.46N×125°.69E, h22^{km}, mb4.5, ML3.4, MS3.2*

MAN INTENSITY II - SAN POLICARPO.

ISC 17 08:28:13.4±1.2**, 12°.0N**±0°.1×**125°.1E**±0°.2**, h35**^{km}**, n11, σ1^{s}38**/8**, mb3.6**/7**, 1C, Samar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAP	San Jose, Anti	3.33	248	⇑*e*P	Pn	08 29 02.1	-1.0
CMAR	Chiang Mai Arr	26.01	287	P	P	08 33 46.0	+2.6
	0.7nm,0.4s,baz=94,slow=7.8,SNR=4.5						
WRA	Warramunga Arr	33.04	164	P	P	08 34 46.2	+0.5
	0.5nm,1.0s,baz=346,slow=9.0,SNR=1.7						
ASAR	Alice Springs	36.50	166	P	P	08 35 15.4	-0.2
	0.3nm,0.4s,baz=340,slow=6.9,SNR=5.4						
SONM	Songino Array	38.99	340	P	P	08 35 35.3	-1.2
	0.3nm,0.7s,baz=152,slow=6.5,SNR=2.0						
SONM				LR	LR	08 53 15.8	
	comp=Z,107nm,18.0s,baz=16,slow=39						
H11N1	WAKE ISLAND Hy	40.84	74	T	T	09 18 50.7	
	baz=266,slow=75,SNR=8.8						
H11N2	WAKE ISLAND Hy	40.85	74	T	T	09 18 52.1	
	baz=266,slow=75,SNR=9.6						
H11N3	WAKE ISLAND Hy	40.86	74	T	T	09 18 52.5	
	baz=266,slow=75,SNR=9.4						
MKAR	Makanchi Array	49.94	322	P	P	08 37 03.9	0.0
	0.8nm,0.7s,baz=114,slow=9.5,SNR=8.8						
KURBB	Kurchatov Arra	53.98	325	P	P	08 37 34.0	+0.2
	1.2nm,0.6s,baz=125,slow=7.5,SNR=9.3						
BVAR	Borovoye Array	59.58	325	P	P	08 38 13.6	+0.1
	0.5nm,0.5s,baz=129,slow=13,SNR=4.2						

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*IDC **17** 08:29:47.4±3.1, 52°.87N×33°.00W, h0^{km}, mb3.5/5, mb1 3.7/5, mb1mx3.3/60, mbtmp3.5/5, Error ellipse: s-maj=96.1km s-min=33.0km az=6.0*

ISC 17 08:29:47.5±3.2**, 52°.6N**±0°.7×**33°.1W**±0°.2**, h10**^{km}**, n7, σ0^{s}66**/8**, mb3.5**/5**, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YKA	Yellowknife Ar	41.96	317	P	P	08 37 38.6	+0.5
	0.7nm,0.8s,baz=62,slow=9.6,SNR=5.7						
YKA				PcP	PcP	08 39 32.5	-0.5
	0.1nm,0.3s,baz=68,slow=3.4,SNR=3.9						
ILAR	Eielson Array	52.37	330	P	P	08 38 58.6	-0.6
	0.4nm,0.8s,baz=57,slow=6.6,SNR=2.5						
AKTO	Aktyubinsk	52.99	53	P	P	08 39 03.8	-0.2
	0.8nm,0.5s,baz=311,slow=12,SNR=4.1						
KURBB	Kurchatov Arra	62.09	42	P	P	08 40 08.1	+0.1
	0.2nm,0.5s,baz=323,slow=7.6,SNR=2.4						
MKAR	Makanchi Array	66.64	43	P	P	08 40 37.9	0.0
	0.3nm,0.7s,baz=340,slow=7.2,SNR=2.2						
WRA	Warramunga Arr	145.95	22	PKPbc	PKPab	08 49 28.8	+1.1
	0.8nm,1.0s,baz=344,slow=2.6,SNR=2.8						
ASAR	Alice Springs	149.44	24	PKPbc	PKPbc	08 49 36.5	-0.2
	0.4nm,0.7s,baz=357,slow=1.9,SNR=2.5						

IDC 17 08:33:03.7±999.0**, 48°.95N×9°.21E, h0**^{km}**, Error ellipse: s-maj=645.6km s-min=64.2km az=89.0, Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I26DE	FREYUNG INFRAS	2.98	90	*i*		08 50 30.0	
	baz=274,slow=330,SNR=2.1						
I43RU	DUBNA INFRASON	18.52	55	*i*		10 25 20.0	
	baz=257,slow=324,SNR=1.2						
I31KZ	AKTYUBINSK INF	31.18	68	*i*		11 47 00.0	
	baz=288,slow=323,SNR=0.5						

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*IDC **17** 08:39:28.9±4.5, 12°.42S×166°.97E, h289^{km}±48^{km}, mb3.4/7, mb1 3.6/9, mb1mx3.3/47, mbtmp4.1/9, Error ellipse: s-maj=39.6km s-min=20.0km az=163.0*

*NOU **17** 08:39:53.1, 14°.47S×167°.56E, h157^{km}, MLv4.9, Vanuatu Islands*

ISC 17 08:39:22.2±0.8**, 12°.1S**±0°.1×**166°.9E**±0°.1**, h220**^{km}**, n17, σ1^{s}03**/17**, mb3.8**/7**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	3.37	176	P	Pn	08 40 18.8	+1.6
LIFNC	LIFOU	8.66	178	P	Pn	08 41 23.4	-0.7
YATNC	Mamie plateau,	9.94	180	P	Pn	08 41 41.2	+0.8
DZM	Mont Dzumac	9.96	183	P	Pn	08 41 41.3	+0.5
	1.2nm,0.3s,baz=45,slow=20,SNR=7.5						
DZM	Mont Dzumac	9.96	183	P	Pn	08 41 41.7	+0.9
ONTNC	Ouen Toro	10.19	183	P	Pn	08 41 44.4	+0.7
OUENC	Ouen Island, N	10.29	180	P	Pn	08 41 45.3	+0.3
MSVF	Nonsavu	12.12	119	P	P	08 42 12.9	+0.8
	0.5nm,0.3s,baz=260,slow=7.5,SNR=11						
URZ	Urewera	27.62	163	P	P	08 44 46.6	-2.8
	5.0nm,0.9s,baz=327,slow=23,SNR=3.0						
WRA	Warramunga Arr	32.25	252	P	P	08 45 30.5	0.0
	0.6nm,0.9s,baz=79,slow=9.2,SNR=2.4						
ASAR	Alice Springs	33.40	245	P	P	08 45 40.4	0.0
	0.5nm,0.7s,baz=72,slow=9.2,SNR=5.4						
ASAR				pP	pwP	08 46 37.0	+7.9
	0.7nm,0.7s,baz=75,slow=9.7,SNR=3.1						
ILAR	Eielson Array	84.11	18	P	P	08 51 28.1	0.0
	2.5nm,0.6s,baz=244,slow=5.1,SNR=56						
NVAR	Mina Array Bea	85.79	49	P	P	08 51 37.7	+0.3
	0.6nm,0.7s,baz=233,slow=8.1,SNR=6.5						
MKAR	Makanchi Array	95.06	317	P	P	08 52 20.8	+0.6
	0.5nm,0.7s,baz=88,slow=6.5,SNR=2.3						
YKA	Yellowknife Ar	95.34	27	P	P	08 52 20.2	-0.8
	0.3nm,0.6s,baz=255,slow=3.8,SNR=5.4						
ARCES	ARCESS Array B	117.61	346	PKP	PKPdf	08 57 41.2	-0.2
	4.1nm,1.0s,baz=79,slow=2.5,SNR=12						
FINES	FINESS Array B	123.14	339	PKP	PKPdf	08 57 52.3	0.0
	4.1nm,0.9s,baz=22,slow=4.5,SNR=2.4						

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*IDC **17** 08:50:36.4±1.2, 51°.46N×81°.73E, h0^{km}, mb1 2.2/2, mb1mx2.2/45, mbtmp2.2/2, ML1.6/2, Error ellipse: s-maj=14.6km s-min=11.1km az=147.0*

*NNC **17** 08:50:37.3±1.9, 51°.25N×82°.02E, h0^{km}, mb2.8, mpv2.4, Error ellipse: s-maj=19.0km s-min=7.6km az=24.0, Suspected Mining explosion.*

ISC 17 08:50:36.1±1.0**, 51°.45N**±0°.06×**82°.06E**±0°.07**, h0**^{km}**, n8, σ0^{s}92**/13**, 6C-3D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURK	Kurchatov	2.29	253	⇑Pn	Pn	08 51 15.3	+0.2
	0.9nm,0.3s						
KURK				⇓Sn	Sn	08 51 45.0	+0.9
	2.9nm,0.6s						
KURBB	Kurchatov Arra	2.38	251	Pg	Pn	08 51 15.9	-0.5
	0.2nm,0.3s,baz=70,slow=18,SNR=16						
KURBB				Lg	Lg	08 51 44.7	
	0.2nm,0.3s,baz=71,slow=33,SNR=4.0						
KURBB	Kurchatov Arra	2.38	251	⇑Pn	Pn	08 51 15.9	-0.5
	1.2nm,0.3s						
KURBB				⇑Sn	Sn	08 51 45.9	-0.3
	1.9nm,0.4s						
ZALV	Zalesovo Beam	3.01	33	Pn	Pn	08 51 26.1	+1.1
	0.1nm,0.3s,baz=220,slow=13,SNR=1.9						
ZALV				Pg	Pg	08 51 34.1	+0.3
	0.3nm,0.3s,baz=223,slow=16,SNR=3.3						
ZALV				Sn	Sn	08 51 59.8	-2.0
	0.2nm,0.3s,baz=215,slow=19,SNR=2.0						
ZALV				Lg	Lg	08 52 15.1	
	0.3nm,0.3s,baz=223,slow=29,SNR=3.7						
I46RU	ZALESOVO INFRA	3.01	33	*i*		09 07 40.0	
	baz=214,slow=308,SNR=1.4						
MAKZ	Makanchi	4.65	181	⇑Pg	Pb	08 51 58.7	+0.2
	0.4nm,0.5s						
MAKZ				⇑Lg	Lg	08 52 57.4	
	0.3nm,0.5s						
MK31	Makanchi Array	4.67	178	⇓Pn	Pn	08 51 47.2	-0.6
	0.1nm,0.3s,baz=8.4,slow=11,SNR=14						
MK31				⇓Pg	Pb	08 51 58.7	-0.1
	0.5nm,0.6s						
MK31				⇑Lg	Lg	08 52 57.4	
	0.5nm,0.6s,baz=4.9,slow=29,SNR=5.5						
MKAR	Makanchi Array	4.67	178	Pn	Pn	08 51 48.9	+1.0
	0.1nm,0.3s,baz=359,slow=12,SNR=12						
MKAR				Pg	Pb	08 51 58.2	-0.6
	0.3nm,0.3s,baz=353,slow=16,SNR=5.6						
MKAR				Lg	Lg	08 52 57.1	
	0.1nm,0.3s,baz=0.4,slow=31,SNR=1.7						

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*JMA **17** 09:09:49.7±0.2, 39°.65N×143°.64E, h28^{km}, M3.6*

*NIED **17** 09:09:49.8, 39°.65N×143°.64E, h28^{km}, MW3.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}2.08; $M_{\theta\theta}$-0.30; $M_{\phi\phi}$-1.79; $M_{r\theta}$0.64; $M_{\theta\phi}$-0.82; $M_{\phi r}$0.66; Fault plane solution: $M_0$2.31000×10^{14} NP1:ϕ_s32.00000°, δ57.00000°, λ99.00000°. NP2:ϕ_s196.00000°, δ35.00000°, λ76.00000°.*

*IDC **17** 09:09:50.9±4.0, 39°.77N×143°.32E, h0^{km}, mb3.6/3, mb1 3.5/5, mb1mx3.4/62, mbtmp3.6/5, ML3.1/2, MS3.0/2, Ms1 3.0/2, ms1mx2.5/42 Error ellipse: s-maj=77.0km s-min=27.7km az=122.0*

ISC 17 09:09:50.7±1.3**, 39°.66N**±0°.06×**143°.50E**±0°.07**, h11**^{km}**, n24, σ0^{s}82**/25**, mb3.5**/3**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	1.29	283	P	Pn	09 10 14.1	-0.6
JTH				S	Sb	09 10 31.5	-0.1
MIYJ	Miyakonagasawa	1.30	267	P	Pn	09 10 14.1	-0.7
JKEN	Kujiedanarisaw	1.48	292	P	Pn	09 10 16.4	-0.9
JKEN				*e*S	Sn	09 10 36.0	-0.6
JANG	Nango	1.68	296	P	Pn	09 10 19.3	-0.8
JOM	Ohasama	1.72	264	P	Pn	09 10 20.6	+0.1
JMK	Ichinoseki	1.91	249	P	Pn	09 10 23.0	-0.1
JIO	Ouri	2.06	235	P	Pn	09 10 24.3	-1.0
JTM	Tenmabayashi	2.18	302	P	Pn	09 10 27.0	+0.1
JTM				*e*S	Sn	09 10 54.1	+0.3
JOT	Ohata	2.54	313	P	Pn	09 10 32.1	+0.2
JYK	Kaneyama	2.55	254	P	Pn	09 10 32.3	+0.3
JNBK	Urakawa-nobuka	2.68	348	P	Pn	09 10 34.9	+1.1
JNBK				*e*S	Sn	09 11 05.9	-0.3
JCH	Churui	2.96	358	P	Pn	09 10 37.2	-0.3
JFT	Otama	3.27	230	P	Pn	09 10 41.7	-0.3
JAK	Akkeshi	3.45	15	P	Pn	09 10 43.8	-0.6
JAK				*e*S	Sn	09 11 23.3	-2.0
ASAJ	Asahikawa	4.50	352	Pn	Pn	09 11 00.1	+1.2
	1.6nm,0.3s,baz=187,slow=16,SNR=9.1						
ASAJ				Sn	Sn	09 11 50.7	-0.5
	0.6nm,0.3s,baz=106,slow=13,SNR=1.7						
MJAR	Matsushiro Arr	5.21	235	Pn	Pn	09 11 09.9	+1.3
	0.2nm,0.3s,baz=37,slow=12,SNR=10						
KSRS	Korea Array	12.39	265	LR	LR	09 17 24.0	
	comp=Z,27nm,18.1s,baz=345,slow=37						
SEY	Seymchan	23.91	10	P	P	09 15 05.1	+0.9
	0.6nm,0.3s,baz=208,slow=9.0,SNR=6.3						
SONM	Songino Array	27.81	299	P	P	09 15 40.6	+0.7
	0.7nm,0.8s,baz=85,slow=8.6,SNR=4.1						
H11N2	WAKE ISLAND Hy	28.27	128	T	T	09 45 19.9	
	baz=320						
H11N1	WAKE ISLAND Hy	28.28	128	T	T	09 45 24.0	
	baz=320,slow=74						
H11N3	WAKE ISLAND Hy	28.29	128	T	T	09 45 21.1	
	baz=320,slow=74						
JAY	Jayapura	42.05	184	LR	LR	09 33 02.5	
	comp=Z,39nm,20.8s,baz=254,slow=33						
MKAR	Makanchi Array	44.17	300	P	P	09 17 59.0	-0.4
	0.6nm,0.8s,baz=73,slow=9.0,SNR=5.0						

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*BJI **17** 09:11:25.0±0.0, 27°.90S×177°.80W, h80^{km}, mB5.6/8, mb4.9/19, Ms5.2/2, Ms7 4.9/2*

*IDC **17** 09:11:58.5±0.7, 26°.90S×178°.58W, h344^{km}±7^{km}, mb4.1/24, mb1 4.2/27, mb1mx4.2/40, mbtmp4.8/27, Error ellipse: s-maj=12.0km s-min=10.3km az=52.0*

*NEIC **17** 09:11:58.3±2.6, 26°.91S±0°.08×178°.40W±0°.10, h343^{km}±7^{km}, mb4.6/107, Error ellipse: s-maj=13.1km s-min=11.3km az=101.0*

*NOU **17** 09:11:59.5, 27°.14S×178°.06W, h391^{km}, mb4.7, Kermadec Islands Region*

ISC 17 09:11:58.8±0.3**, 27°.02S**±0°.04×**178°.50W**±0°.05**, h350**^{km}**, h351**^{km}**:pP-P, n269, σ1^{s}55**/279**, mb4.6**/76**, 2C, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RIZ	Raoul Island	2.27	167	P	Pn	09 12 53.3	+1.3
RIZ				S	S	09 13 36.8	+2.0
RAO	Raoul Island	2.28	167	P	Pn	09 12 53.2	+1.1
	2μm,0.3s,baz=252,slow=20,SNR=36						
RAO				S	S	09 13 35.9	+1.0
	2μm,0.3s,baz=109,slow=23,SNR=8.0						
RAO	Raoul Island	2.28	167	Pn	Pn	09 12 53.4	+1.3
RAO	Raoul Island	2.28	167	P	Pn	09 12 53.7	+1.6
GLKZ	Green Lake	2.29	167	P	Pn	09 12 53.3	+1.2
GLKZ				S	S	09 13 35.9	+0.9
MSVF	Nonsavu	9.78	340	P	Pn	09 14 12.5	-1.8
	5.0nm,0.3s,baz=135,slow=13,SNR=46						
MSVF	Nonsavu	9.78	340	Pn	Pn	09 14 12.7	-1.6
OUZ	Omahuta	10.61	218		P	09 14 27.6	+2.7
NIUE	Niue	11.16	47	Pn	Pn	09 14 26.9	-3.8
NIUE				S	S	09 16 31.5	-4.3
NIUE	Niue	11.16	47	P	Pn	09 14 28.7	-2.0
URZ	Urewera	11.80	197	P	P	09 14 37.5	-0.5
	20nm,0.3s,baz=9.8,slow=13,SNR=11						
URZ				S	S	09 16 41.7	-7.7
	28nm,0.3s,baz=42,slow=23,SNR=13						
RAGZ	Rawiri	11.95	196	P	P	09 14 30.9	-8.9
RAGZ				P	S	09 16 45.5	-7.3
PRRZ	Plateau Road	12.22	199	P	Pn	09 14 43.5	+0.4
PRRZ				P	S	09 16 56.6	-1.8
BKZ	Black Stump Fm	12.82	198	P	P	09 14 48.2	-1.2
BKZ				S	S	09 17 04.5	-6.1
TUVZ	Tukino	13.16	200	S	S	09 17 13.4	-4.3
PINNC	Pines Island,	13.50	286	P	Pn	09 15 00.8	+2.6
OUENC	Ouen Island, N	14.09	286	P	Pn	09 15 07.7	+2.5
YATNC	Mamie plateau,	14.18	287	P	Pn	09 15 08.5	+2.2
LIFNC	LIFOU	14.45	292	P	Pn	09 15 10.2	+0.9
ONTNC	Ouen Toro	14.46	286	P	Pn	09 15 12.2	+2.7
AFI	Afiamalu	14.48	27	P	P	09 15 05.5	-2.4
AFI	Afiamalu	14.48	27	P	P	09 15 05.8	-2.1
DZM	Mont Dzumac	14.56	287	P	Pn	09 15 11.0	+0.2
	4.6nm,0.3s,baz=104,slow=13,SNR=31						
DZM	Mont Dzumac	14.56	287	*e*LR	LR	09 17 51.9	
	comp=Z,180nm,23.6s						
DZM	Mont Dzumac	14.56	287	P	Pn	09 15 11.9	+1.2
NOUC	Port Laguerre	14.67	286	P	Pn	09 15 13.6	+1.7
MSWZ	Moikau Station	15.26	198	P	P	09 15 14.9	-1.1
SNZO	South Karori	15.32	200	P	P	09 15 14.3	-2.4
BHW	Baring Head	15.36	199	P	P	09 15 14.9	-2.2
DVP	Devils Point	15.39	304	P	Pn	09 15 21.8	+1.5
	240μm,0.8s						
TUWZ	Tuamarina	15.66	202	P	P	09 15 18.1	-2.4
CMWZ	Cape Campbell	15.87	200	P	P	09 15 21.7	-1.0
BSWZ	Blackbirch Sta	15.94	201		P	09 15 21.7	-1.8
THZ	Tophouse	16.31	203	P	P	09 15 26.9	-0.7
KHZ	Kahutara	16.68	201	P	P	09 15 30.3	-1.1
CTZ	Chatham Island	16.75	175	P	Pn	09 15 46.1	+10
CTZ				S	S	09 18 43.8	+15
SANVU	Saraoutou	17.60	308	P	P	09 15 39.6	-2.0
SANVU	Saraoutou	17.60	308	P	P	09 15 44.4	+2.8
OXZ	Oxford	17.99	203	P	P	09 15 44.8	-0.7
OXZ				IAmb	IAmb	09 16 44.1	
	comp=Z,14nm,0.6s						
RPZ	Rata Peaks	18.68	204	P	P	09 15 53.3	+0.5
	comp=Z,0.6nm,0.3s,baz=63,slow=9.3,SNR=2.6						
RPZ				S	S	09 19 07.3	+0.3
	comp=Z,3.4nm,0.3s,baz=290,slow=22,SNR=12						
RPZ	Rata Peaks	18.68	204	P	P	09 15 50.9	-1.9
RPZ				IAmb	IAmb	09 16 41.0	
	comp=Z,56nm,1.8s						
FOZ	Fox Glacier	19.01	207	P	P	09 15 54.5	-1.7
MLZ	Mavora Lakes	21.21	207	P	P	09 16 18.6	+1.0
DCZ	Deep Cove	21.68	208	P	P	09 16 20.7	-1.2
DCZ				IAmb	IAmb	09 16 29.0	
	comp=Z,38nm,1.5s						
WHZ	Wether Hill Ro	21.71	206	P	P	09 16 21.6	-0.6
WHZ				IAmb	IAmb	09 17 17.5	
	comp=Z,39nm,1.5s						
KNTN	Kanton	24.97	16	P	P	09 16 49.7	-2.2
TBI	Tubuai	26.50	89	*e*LR	LR	09 23 03.2	
	comp=Z,145nm,29.2s						
HNR	Honiara	26.85	307	P	P	09 17 07.3	-1.5
	comp=Z,101nm,0.8s,baz=126,slow=6.8,SNR=2.4						
PPT2	Papeete2	28.30	77	*e*LR	LR	09 24 07.5	
	comp=Z,146nm,40.0s						
CTA	Charters Tower	32.96	274	P	P	09 18 02.0	-0.2
	comp=Z,79nm,0.6s,baz=98,slow=10,SNR=133						
CTAO	Charters Tower	32.96	274	P	P	09 18 02.2	0.0
STKA	Stephens Creek	34.95	252	P	P	09 18 19.3	+0.3
	comp=Z,1.8nm,0.5s,baz=100,slow=14,SNR=9.5						
STKA	Stephens Creek	34.95	252	P	P	09 18 19.1	+0.1
PMG	Port Moresby	36.86	292	P	P	09 18 34.5	-0.7
	comp=Z,31nm,1.0s,baz=115,slow=6.0,SNR=7.1						
PMG	Port Moresby	36.86	292	P	P	09 18 35.5	+0.3
PMG				IAmb	IAmb	09 18 36.5	
	comp=Z,40nm,1.0s						
COEN	Coen	38.03	282	P	P	09 18 44.6	-0.4
COEN				IAmb	IAmb	09 18 46.9	
	comp=Z,37nm,1.2s						
BBOO	Buckleboo	39.58	250	P	P	09 18 57.1	-0.4
BBOO				IAmb	IAmb	09 19 09.1	
	comp=Z,44nm,1.4s						
MANU	Manus Island	41.07	301	P	P	09 19 10.4	+0.6
AS31	Alice Springs	42.95	264	P	P	09 19 23.7	-1.2
ASAR	Alice Springs	42.95	264	P	P	09 19 23.9	-0.9
	comp=Z,10nm,0.5s,baz=96,slow=7.1,SNR=130						
ASAR				pP	pP	09 20 34.5	+1.4
	comp=Z,0.9nm,0.4s,baz=95,slow=6.2,SNR=1.1						
ASAR				ScP	ScP	09 24 25.8	+0.5
	comp=Z,0.8nm,0.9s,baz=118,slow=4.1,SNR=4.3						
ASAR				S	S	09 25 16.5	-6.8
	comp=Z,0.8nm,0.8s,baz=98,slow=14,SNR=4.7						
ASAR	Alice Springs	42.95	264	P	P	09 19 23.8	-1.1
PTCN	Pitcairn Islan	43.32	99	P	P	09 19 26.2	-1.4
WR0	Warramunga Arr	43.45	269	P	P	09 19 26.9	-1.8
WR0				IAmb	IAmb	09 19 30.2	
	comp=Z,71nm,1.2s						
WB2	Warramunga Arr	43.62	269	P	P	09 19 28.3	-1.8
WRAB	Tennant Creek	43.62	269	P	P	09 19 28.4	-1.7
WRAB				IAmb	IAmb	09 19 31.6	
	comp=Z,51nm,0.8s						
WRA	Warramunga Arr	43.63	269	P	P	09 19 29.0	-1.2
	comp=Z,41nm,0.6s,baz=104,slow=8.4,SNR=191						
WRA				S	S	09 25 27.5	-5.6
	comp=Z,1.1nm,0.8s,baz=104,slow=13,SNR=3.8						
WRA	Warramunga Arr	43.63	269	P	P	09 19 28.0	-2.2
WB0	Warramunga Arr	43.64	269	P	P	09 19 29.3	-1.0
JAY	Jayapura	46.02	295	P	P	09 19 48.3	-0.7
	comp=Z,17nm,0.6s,baz=83,slow=2.7,SNR=9.7						
FORT	Forrest	46.58	252	P	P	09 19 51.5	-1.5
FORT				IAmb	IAmb	09 19 53.3	
	comp=Z,22nm,0.6s						
VNDA	Vanda	51.41	185	P	P	09 20 27.5	-1.0
	comp=Z,3.0nm,0.9s,baz=34,slow=8.7,SNR=6.7						
VNDA	Vanda	51.41	185	P	P	09 20 27.4	-1.0
VNDA				IAmb	IAmb	09 21 47.6	
	comp=Z,69nm,2.0s						
FITZ	Fitzroy Crossi	52.00	268	P	P	09 20 33.0	-0.7
	comp=Z,21nm,0.8s,baz=92,slow=6.7,SNR=36						
FITZ				pP	pP	09 21 47.2	+2.1
	comp=Z,5.4nm,0.9s,baz=120,slow=12,SNR=2.4						
FITZ	Fitzroy Crossi	52.00	268	P	P	09 20 33.0	-0.7
FITZ				IAmb	IAmb	09 20 36.2	
	comp=Z,16nm,0.7s						
FAKI	Fak Fak	52.82	288	P	P	09 20 40.3	+0.5
FAKI				IAmb	IAmb	09 21 00.6	
	comp=Z,103nm,2.0s						
SIJI	Sorong	54.74	290	P	P	09 20 52.4	-1.2
	comp=Z,49nm,0.7s,baz=116,slow=6.8,SNR=14						
SWI	Sorong	54.75	290	P	P	09 20 52.6	-1.0
	comp=Z,69nm,0.8s						
PSA00	Pilbara Seismi	55.99	261	P	P	09 21 01.5	-0.8
PSA00				IAmb	IAmb	09 23 06.7	
	comp=Z,47nm,2.0s						
MORW	Morawa	57.13	251	P	P	09 21 10.1	-0.1
MORW				IAmb	IAmb	09 22 30.7	
	comp=Z,57nm,1.7s						
SANI	Sanana	58.61	285	P	P	09 21 19.0	-1.6
	comp=Z,25nm,1.2s						
EDFI	Ende, Flores	59.22	276	P	P	09 21 24.3	-0.6
	comp=Z,12nm,0.7s						
GIRL	Giralia	60.57	258	P	P	09 21 33.6	-0.1
QSPA	South Pole Qui	63.08	180	P	P	09 21 51.5	+1.9
	comp=Z,13nm,0.8s,baz=320,slow=0.5,SNR=51						
QSPA	South Pole Qui	63.08	180	P	P	09 21 51.3	+1.6
QSPA				IAmb	IAmb	09 21 52.8	
	comp=Z,16nm,0.9s						

TOLI2	Tolitoli	64.69	285	P	P	09 22 00.6	-0.2
TOLI2				IAmb	IAmb	09 22 15.3	
	comp=Z,13nm,0.9s						
JAGI	Jajag, Banyuwa	66.05	273	P	P	09 22 09.1	-0.3
BELA	Belgrano 2	73.18	173	P	P	09 22 52.5	+1.0
KSM	Kuching	73.98	280	P	P	09 22 56.6	-0.6
JGF	Kuroka	74.94	324	P	P	09 23 01.9	-0.3
MJAR	Matsushiro Arr	75.23	325	P	P	09 23 02.8	-1.0
	comp=Z,9.6nm,0.8s,baz=163,slow=5.7,SNR=18						
MJAR	Matsushiro Arr	75.23	325	P	P	09 23 03.5	-0.3
MAT	Matsushiro	75.23	325	P	P	09 23 02.8	-1.0
MAW	Mawson	75.31	200	P	P	09 23 05.5	+1.7
	comp=Z,9.4nm,0.7s,baz=154,slow=4.1,SNR=9.8						
MAW	Mawson	75.31	200	P	P	09 23 06.0	+2.2
MAW				IAmb	IAmb	09 25 35.5	
	comp=Z,15nm,1.4s						
JWT	Wachi	75.75	323	P	P	09 23 06.9	+0.1
JWT				IAmb	IAmb	09 23 07.4	
	comp=Z,13nm,0.7s						
JSU	Suzuyama	75.88	317	P	P	09 23 07.4	-0.2
JNU	Nakatsue	76.75	318	P	P	09 23 12.2	-0.2
JHS	Saijyo	76.80	321	P	P	09 23 13.3	+0.6
ASAJ	Asahikawa	79.25	333	P	P	09 23 26.4	+0.6
	comp=Z,5.8nm,0.8s,baz=245,slow=4.9,SNR=6.1						
KSRS	Korea Array	81.50	320	P	P	09 23 38.2	+0.5
	comp=Z,3.3nm,0.9s,baz=149,slow=6.5,SNR=6.8						
SNAA	Sanae	81.53	179	P	P	09 23 38.3	+0.7
SNAA	Sanae	81.53	179	P	P	09 23 38.5	+0.9
VNA3	Neumayer Olymp	81.69	176	P	P	09 23 39.0	+0.7
GO07	Milladeo Hill,	81.92	134	P	P	09 23 41.5	+1.5
VNA2	Neumayer--Watz	82.12	177	P	P	09 23 41.2	+0.6
	baz=176,slow=3.9						
VNA1	Neumayer--Stat	82.36	177	P	P	09 23 42.3	+0.6
PEA0B	Petropavlovsk-	82.44	346	P	P	09 23 42.2	-0.1
PETK	Petropavlovsk-	82.44	346	P	P	09 23 41.8	-0.5
	comp=Z,3.9nm,0.9s,baz=141,slow=9.6,SNR=5.3						
PKM	Mcpherson Peak	82.88	45	P	P	09 23 45.9	+0.6
	baz=229						
SPX	San Pedro Mart	83.37	50	P	P	09 23 47.1	-0.9
SPX				IAmb	IAmb	09 24 18.8	
	comp=Z,14nm,1.7s						
HOPS	Hopland Field	83.61	40	P	P	09 23 49.4	+0.8
HOPS				IAmb	IAmb	09 23 50.3	
	comp=Z,13nm,1.1s						
ESJX	Sierra Juarez	83.62	49	P	P	09 23 50.3	+1.2
ARVC	Arvin	83.66	45	P	P	09 23 49.7	+0.8
	baz=230						
NJ2	Nanjing	83.72	311	*e*P	P	09 23 55.0	+5.8
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
KCPM	Cahto Peak	83.78	39	P	P	09 23 50.2	+0.7
KCPM				IAmb	IAmb	09 23 51.5	
	comp=Z,7.7nm,0.8s						
MONP2	Monument Peak	83.84	48	P	P	09 23 50.4	+0.2
	baz=231						
BFSC	Mount Baldy Ra	83.86	47	P	P	09 23 50.2	+0.1
	baz=230						
IKP	In-Ko-Pah, Jac	83.90	49	P	P	09 23 51.1	+0.8
	baz=231						
VES	Vestal, Richgr	83.95	45	P	P	09 23 50.6	+0.3
	baz=229						
EDW2	Edwards Air Fo	84.04	46	P	P	09 23 51.4	+0.5
	baz=230,SNR=5.6						
KMRM	Mail Ridge	84.08	39	P	P	09 23 49.7	-1.2
USRK	Ussuriysk Ar.	84.11	327	P	P	09 23 50.9	0.0
	comp=Z,2.2nm,0.7s,baz=125,slow=9.0,SNR=5.3						
USRK	Ussuriysk Ar.	84.11	327	P	P	09 23 50.8	-0.1
ISA	Isabella, Lake	84.22	45	P	P	09 23 52.4	+0.6
	baz=230,SNR=7.4						
ISA	Isabella, Lake	84.22	45	P	P	09 23 51.9	+0.1
ISA				IAmb	IAmb	09 23 53.6	
	comp=Z,7.2nm,0.9s						
PFO	Pinyon Flats O	84.25	48	P	P	09 23 52.7	+0.6
	baz=231						
PFO	Pinyon Flats O	84.25	48	P	P	09 23 52.7	+0.6
TPFO	Pinon Flats	84.25	48	P	P	09 23 52.8	+0.8
	baz=231						
SWSC	Sam W. Stewart	84.29	49	P	P	09 23 52.9	+0.8
	baz=232						
KHMM	Horse Mountain	84.51	38	P	P	09 23 52.4	-0.8
KHMM				IAmb	IAmb	09 23 55.2	
	comp=Z,9.7nm,0.9s						
CMB	Columbia Colle	84.56	42	P	P	09 23 53.1	-0.2
CMB				IAmb	IAmb	09 23 54.7	
	comp=Z,8.1nm,0.9s						
O02D	Mt. Diablo Mer	84.56	39	P	P	09 23 54.8	+1.4
	baz=227,SNR=20						
LRMC	Laurel Mtn Rad	84.61	46	P	P	09 23 54.6	+0.8
	baz=230						
BELC	Belle Mtn. Jos	84.80	48	P	P	09 23 55.7	+0.9
	baz=231,SNR=6.5						
ORV	Oroville	84.89	41	P	P	09 23 54.9	0.0
BC3	Big Chuckawall	84.95	48	P	P	09 23 56.7	+1.2
	baz=232						
CWC	Cottonwood Cre	84.96	45	P	P	09 23 56.1	+0.6
	baz=230						
WDC	Whiskeytown Da	84.98	39	P	P	09 23 55.7	+0.4
WDC				IAmb	IAmb	09 23 57.0	
	comp=Z,12nm,1.0s						
GLA	Glamis	85.01	49	P	P	09 23 56.6	+0.8
	baz=232						
GSC	Goldstone, Bar	85.06	46	P	P	09 23 56.4	+0.4
	baz=231,SNR=6.2						
GSC	Goldstone, Bar	85.06	46	P	P	09 23 56.0	0.0
GSC				IAmb	IAmb	09 23 57.6	
	comp=Z,7.5nm,0.9s						
HEC	Hector,Ludlow	85.08	47	P	P	09 23 56.5	+0.4
	baz=231,SNR=10.0						
MDPB	Devils Postpil	85.09	43	P	P	09 23 56.2	-0.1
MPMC	Manual Prospec	85.09	45	P	P	09 23 56.7	+0.5
	baz=230,SNR=5.4						
OMMB	Old Mammoth Mi	85.13	43	P	P	09 23 57.2	+0.7
PLCA	Paso Flores	85.13	133	P	P	09 23 58.0	+1.6
	comp=Z,6.2nm,0.8s,baz=222,slow=5.5,SNR=12						
N02D	Trinity Center	85.15	39	P	P	09 23 57.1	+0.9
	baz=227,SNR=6.7						
GSI	Gunungsitoli	85.17	274	P	P	09 23 56.8	-0.2
GSI	Gunungsitoli	85.17	274	P	P	09 23 57.8	+0.8
O03E	Paynes Creek	85.21	40	P	P	09 23 56.5	-0.1
	baz=227,SNR=7.4						
M02C	Callahan	85.35	39	P	P	09 23 58.3	+1.1
	baz=226,SNR=8.5						
WAKR	Walker	85.43	42	P	P	09 23 57.9	0.0
WAKR				IAmb	IAmb	09 23 59.6	
	comp=Z,7.0nm,1.0s						
IRM	Iron Mountain	85.45	48	P	P	09 23 58.7	+0.8
	baz=232						
GMRC	Granite Mounta	85.49	47	P	P	09 23 58.4	+0.2
	baz=232						
113A	Mohawk Valley,	85.56	50	P	P	09 23 58.6	+0.2
YBH	Yreka Blue Hor	85.65	38	P	P	09 23 59.6	+0.8
YBH				IAmb	IAmb	09 24 00.0	
	comp=Z,15nm,1.7s						
PNTR	Pine Nut	85.71	42	P	P	09 23 59.2	0.0
PNTR				IAmb	IAmb	09 24 00.6	
	comp=Z,6.4nm,0.8s						
214A	Organ Pipe Nat	85.74	51	P	P	09 24 00.1	+0.8
	baz=233						
GRAC	Grapevine Rang	85.75	45	P	P	09 23 59.9	+0.7
	baz=230						
BEKR	Beckworth	85.76	41	P	P	09 23 59.5	+0.1
SHOC	Shoshone, Teco	85.77	46	P	P	09 24 00.1	+0.7
	baz=231						
K02D	Willamette Mer	85.78	37	P	P	09 23 60.0	+0.6
	baz=226						
VCNR	Virginia City	85.81	42	P	P	09 23 58.9	-0.8
VCNR				IAmb	IAmb	09 24 01.0	
	comp=Z,17nm,2.0s						
LHV	Little Huntoon	85.83	43	P	P	09 23 59.6	+0.1
LHV				IAmb	IAmb	09 24 01.2	
	comp=Z,6.3nm,0.9s						
YERR	Yerington	85.85	42	P	P	09 24 00.0	+0.1
YERR				IAmb	IAmb	09 24 01.1	
	comp=Z,16nm,1.6s						
J01E	Myrtle Point	85.96	37	P	P	09 24 00.8	+0.7
	baz=226						
WHN	Wuhan	85.97	307	⇑P	P	09 24 01.1	+0.7
NVAR	Mina Array Bea	86.07	43	P	P	09 24 01.1	+0.1
	comp=Z,3.5nm,0.7s,baz=221,slow=8.3,SNR=41						
NVAR				pP	pwP	09 25 26.2	+2.1
	comp=Z,1.1nm,0.8s,baz=225,slow=8.6,SNR=3.8						
HUMO	Hull Mountain	86.11	38	P	P	09 24 01.0	+0.2
HUMO				IAmb	IAmb	09 24 03.1	
	comp=Z,14nm,1.6s						
NV11	Mina Array Sit	86.16	43	P	P	09 24 01.6	+0.2
M04C	Macdoel	86.17	39	P	P	09 24 01.9	+0.6
	baz=227						
L04D	Klamath Falls	86.20	38	P	P	09 24 02.0	+0.6
	baz=227						
PDMCI	Parker Dam,Lak	86.21	48	P	P	09 24 01.6	+0.2
	baz=232						
PAHR	Pah Rah Range	86.23	42		P	09 24 01.1	-0.6
TPNV	Topopah Spring	86.43	45	P	P	09 24 02.8	+0.1
	baz=231,SNR=6.0						
TPNV	Topopah Spring	86.43	45	P	P	09 24 02.8	+0.1
TPH	Tonopah	86.51	44	P	P	09 24 03.4	+0.3
I03D	Drain, OR	86.64	37	P	P	09 24 04.3	+1.0
	baz=226						
W13A	Hualapai Mount	86.85	48	P	P	09 24 05.5	+0.7
J04D	Umpqua Nationa	87.00	38	P	P	09 24 06.2	+0.9
	baz=227						
MOD	Modoc Plateau	87.11	39	P	P	09 24 06.1	+0.3
MOD				IAmb	IAmb	09 24 07.0	
	comp=Z,5.6nm,0.8s						
I04A	Tendick Farm,	87.20	37	P	P	09 24 06.7	+0.6
	baz=227						
K05A	Summer Lake	87.32	39	P	P	09 24 07.5	+0.7
K05A				IAmb	IAmb	09 24 08.5	
	comp=Z,8.3nm,1.0s						
TIA	Tai'an	87.35	313	P	P	09 24 07.8	+0.9
TIA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
TUC	Tucson	87.36	52	P	P	09 24 08.4	+1.3
	baz=234						
TUC	Tucson	87.36	52	P	P	09 24 06.8	-0.3
TUC				IAmb	IAmb	09 24 09.6	
	comp=Z,7.8nm,0.9s						
PRN	Pahroc Range	87.47	45		P	09 24 08.3	+0.7
PRN				IAmb	IAmb	09 24 09.6	
	comp=Z,7.2nm,0.9s						
J05D	Fort Rock, OR	87.50	38	P	P	09 24 08.1	+0.5
	baz=228						
H04D	Lebanon	87.52	36	P	P	09 24 08.2	+0.7
	baz=226						
G03D	McMinnville, O	87.71	36	P	P	09 24 09.7	+1.4
	baz=226						
319A	Douglas	87.90	53	P	P	09 24 08.9	-0.9
319A				IAmb	IAmb	09 24 12.2	
	comp=Z,10nm,1.1s						
KLR	Kul'dur	87.90	330	P	P	09 24 09.8	+0.6
	baz=110,slow=7.2,SNR=1.5						
H04A	Detroit Lake	87.92	36	P	P	09 24 09.5	+0.1
H04A				IAmb	IAmb	09 24 10.6	
	comp=Z,19nm,1.4s						
PINE	Pine Mountain	88.00	38	P	P	09 24 10.7	+0.7
PINE				IAmb	IAmb	09 24 11.9	
	comp=Z,12nm,1.1s						
X16A	Lo Mia Camp, P	88.09	50	P	P	09 24 11.3	+0.6
X16A				IAmb	IAmb	09 24 13.0	
	comp=Z,6.3nm,0.9s						
I05D	Terrebonne, OR	88.14	37	P	P	09 24 11.6	+1.1
	baz=228						
WVOR	Wild Horse Val	88.41	40	P	P	09 24 11.4	-0.5
WVOR				IAmb	IAmb	09 24 13.3	
	comp=Z,7.8nm,1.2s						
E03A	Lebam	88.47	34	P	P	09 24 12.7	+0.9
CCUT	Cedar City	88.63	46	P	P	09 24 13.5	+0.3
KNB	Kanab	88.67	47	P	P	09 24 14.1	+0.8
U15A	North Rim	88.67	48	P	P	09 24 14.0	+0.5
U15A				IAmb	IAmb	09 24 15.0	
	comp=Z,5.7nm,0.8s						
G05D	Wamic, OR	88.75	36	P	P	09 24 14.2	+1.0
	baz=228						
WUAZ	Wupatki	88.76	49	P	P	09 24 14.9	+1.1
	baz=234						
WUAZ	Wupatki	88.76	49	P	P	09 24 14.1	+0.4
SZCU	Shurtz Canyon	88.83	46	P	P	09 24 14.6	+0.5
I07A	Izee	88.97	38	P	P	09 24 15.0	+0.5
I07A				IAmb	IAmb	09 24 16.1	
	comp=Z,9.7nm,1.0s						
E04D	Cinebar	88.98	35	P	P	09 24 15.6	+1.3
	baz=227						
SLVN	Son La	89.13	294	P	P	09 24 16.2	+0.5
PKCU	Pink Cliffs	89.25	47	P	P	09 24 17.6	+1.4
ENH	Enshi	89.33	305	P	P	09 24 15.8	-0.6
GYA	Guiyang	89.49	300	*e*P	P	09 24 18.8	+1.5
GYA				pmax	pmax		
	comp=Z,5.0nm,1.6s						
121A	Cookes Peak, D	89.59	53	P	P	09 24 18.9	+1.2
	baz=236						
MTPU	Mount Pierson	89.67	46	P	P	09 24 19.2	+1.0
D05A	Enumclaw	89.70	35	P	P	09 24 17.0	-0.6
TCRU	Three Creeks R	89.83	46	P	P	09 24 19.6	+0.9
G08A	Pilot Rock	90.05	37	P	P	09 24 19.9	+0.5
G08A				IAmb	IAmb	09 24 20.9	
	comp=Z,11nm,1.0s						
BMO	Blue Mountains	90.68	39	P	P	09 24 21.9	-0.4
MNTX	Cornudas Mount	90.88	55	P	P	09 24 24.1	+0.6
	baz=237						
TX31	Lajitas Ar. Si	90.94	57	P	P	09 24 24.1	+0.1
TX32	Lajitas Array	90.94	57	P	P	09 24 23.3	-0.7
TX32				IAmb	IAmb	09 24 25.6	
	comp=Z,15nm,1.6s						
TXAR	Lajitas Array	90.94	57	P	P	09 24 23.9	0.0
	comp=Z,1.6nm,0.9s,baz=209,slow=6.9,SNR=7.0						
TMUT	Trail Mountain	91.02	46	P	P	09 24 23.4	-0.9
F10A	Beach Ranch, E	91.42	38	P	P	09 24 25.2	-0.5
HVU	Hansel Valley	91.47	43	P	P	09 24 25.8	-0.4
HLID	Hailey	91.54	41	P	P	09 24 26.8	+0.4
	baz=232						
HLID	Hailey	91.54	41	P	P	09 24 27.0	+0.5
XAN	Xi'an	91.72	308	P	P	09 24 28.3	+0.9
XAN				pmax	pmax		
	comp=Z,7.0nm,1.2s						
ANMO	Albuquerque	91.81	51	P	P	09 24 28.4	+0.4
	baz=237						
CMAR	Chiang Mai Arr	91.87	290	P	P	09 24 29.6	+1.3
	comp=Z,0.6nm,0.3s,baz=143,slow=3.5,SNR=6.2						
CMAR				pP	pwP	09 25 55.1	+2.2
	comp=Z,1.0nm,0.4s,baz=131,slow=2.5,SNR=2.1						
KMI	Kunming	91.91	297	⇑P	P	09 24 30.0	+1.4
KMI				pmax	pmax		
	comp=Z,7.0nm,1.2s						
SEY	Seymchan	92.60	347	P	P	09 24 30.1	-0.5
	comp=Z,1.2nm,0.7s,baz=168,slow=3.8,SNR=5.3						
S22A	4UR Ranch, Cre	93.04	49	P	P	09 24 34.2	+0.5
	baz=237						
REDW	Red Top Meadow	93.54	43	P	P	09 24 35.5	-0.2
REDW				IAmb	IAmb	09 24 37.6	
	comp=Z,11nm,1.6s						
HHC	Hu-ho-hao-te	93.57	314	*e*P	P	09 24 40.5	+4.7
HHC				pmax	pmax		
	comp=Z,3.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,130nm,6.8s						
SNOW	Snow King Moun	93.65	42	P	P	09 24 37.2	+0.9
SNOW				IAmb	IAmb	09 24 37.6	
	comp=Z,4.9nm,0.8s						
CD2	Chengdu	93.91	303	*e*P	P	09 24 42.0	+4.5
CD2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MSTX	Muleshoe	93.93	54	P	P	09 24 38.0	+0.4
	baz=239						
SDCO	Great Sand Dun	93.94	49	P	P	09 24 37.9	+0.1
	baz=238						
BW06	Boulder Array	93.99	44	P	P	09 24 37.8	-0.1
	baz=235						
PDAR	Pinedale Array	93.99	44	P	P	09 24 36.9	-0.9
	comp=Z,1.5nm,0.8s,baz=207,slow=2.9,SNR=14						
MLY	Manley	94.25	11	P	P	09 24 41.0	+2.8
	baz=204						
BOZ	Bozeman (W)	94.34	40	P	P	09 24 39.8	+0.5
	baz=234						
BOZ	Bozeman (W)	94.34	40	P	P	09 24 39.4	+0.2
ILAR	Eielson Array	94.74	13	P	P	09 24 39.2	-1.2
	comp=Z,0.4nm,0.8s,baz=218,slow=5.2,SNR=8.1						
ISCO	Idaho Springs	94.92	48	P	P	09 24 42.1	-0.2
	baz=238						
N23A	Red Feather La	95.27	47	P	P	09 24 44.2	+0.4
	baz=238						
RLMT	Red Lodge	95.46	42	P	P	09 24 46.4	+2.0
	baz=236						
TOLK	Toolik Lake Re	97.73	10	P	Pdif	09 24 58.4	+4.5
	baz=205						
WMQ	Urumqi	110.78	309	*e*PKP	PKiKP	09 29 53.6	+3.2
W58A	Raeford	112.09	61	P	PKiKP	09 29 52.9	-0.2
	baz=251						
T56A	Rocky Mt	112.09	59	P	PKiKP	09 29 52.9	-0.2
	baz=251						
I51A	Listowel	113.31	51	P	PKiKP	09 29 55.9	+0.8
	baz=253						
P56A	Dayton Farm, R	113.71	56	P	PKiKP	09 29 57.4	+1.4
	baz=253						
V60A	Jim Taylor Roa	113.84	61	P	PKiKP	09 29 57.2	+0.8
	baz=252						
R59A	King George, V	114.64	58	P	PKiKP	09 29 58.4	+0.6
	baz=253						
M56A	Emporium	114.72	54	P	PKiKP	09 29 59.0	+1.0
	baz=254						
MKAR	Makanchi Array	115.24	311	PKP	PKPdf	09 29 57.1	-1.7
	comp=Z,0.3nm,0.6s,baz=70,slow=1.8,SNR=3.1						
MKAR				PKKPbc	PKKPbc	09 40 35.4	-0.1
	comp=Z,0.9nm,0.6s,baz=273,slow=3.4,SNR=12						
KSH	Kashi	118.11	302	PKP	PKiKP	09 30 09.3	+4.6
KSH				PP	pPKPdf	09 31 34.3	+3.6
KSH				AMB	AMB		
	comp=Z,440nm,6.7s						
SPITS	Spitsbergen Ar	128.31	356	PKP	PKPdf	09 30 22.8	-0.3
	comp=Z,30nm,1.1s,baz=120,slow=2.8,SNR=2.7						
GEYT	Alibeck	131.67	298	SKPbc	SKPab	09 33 23.8	0.0
	comp=Z,6.1nm,0.9s,baz=45,slow=4.0,SNR=6.7						
ARCES	ARCESS Array B	135.21	348	PKhKP	PKPpre	09 30 30.1	
	comp=Z,3.7nm,1.0s,baz=350,slow=3.9,SNR=1.3						
ARCES				PKP	PKPdf	09 30 35.5	-0.7
	comp=Z,3.8nm,0.9s,baz=347,slow=5.0,SNR=6.9						
FINES	FINESS Array B	141.82	341	PKhKP	PKPpre	09 30 43.3	
	comp=Z,2.6nm,0.8s,baz=46,slow=4.6,SNR=7.8						
NB2	NORSAR Subarra	145.36	352	PKP	PKPdf	09 30 54.2	-0.5
	comp=Z,1.4nm,0.6s,baz=11,slow=3.1						
NOA	NORSAR Array B	145.36	352	PKPbc	PKPdf	09 30 54.2	-0.5
	comp=Z,0.6nm,0.4s,baz=28,slow=4.4,SNR=2.6						
AKASG	Malin Array Be	148.31	326	PKPbc	PKPbc	09 31 02.7	-1.1
	comp=Z,1.8nm,0.4s,baz=44,slow=3.9,SNR=9.7						
BRTR	Keskin Array B	150.49	304	PKPbc	PKiKP	09 31 10.2	0.0
	comp=Z,1.0nm,0.4s,baz=153,slow=1.6,SNR=2.1						
LIC	Lamto	158.40	162	*e*P	PKPab	09 31 52.1	+0.3
	comp=Z,44nm,1.3s						
KIC	Kosan Boka	158.61	163	*e*P	PKPab	09 31 53.1	+0.4
	comp=Z,10nm,0.7s						
TIC	Toumodi	158.81	162	*e*P	PKPab	09 31 54.0	+0.5

WEL 17 09:13:28.2±0.7**,38°S**±5°×**18°0W**±°**,h33km,M3.5**/30**,**
mB5.0/1**,ML3.9**/43**,MLv3.5**/30**,Mw(mB)4.3**/1**,Error**
ellipse: s-maj=0.0km s-min=0.0km az=24.5,East of
North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	1.28	259	P	Pn	09 13 49.7	0.0
MXZ	Matakaoa Point	1.35	271	P	Pn	09 13 49.6	-1.1
PUZ	Puketiti	1.46	250	P	Pn	09 13 52.5	+0.2
PKGZ	Pakihiroa	1.56	259	P	Pn	09 13 53.3	-0.3
CNGZ	Carnagh Statio	1.67	237	P	Pn	09 13 56.3	+1.1
TWGZ	Tauwhareparae	1.70	249	P	Pn	09 13 56.1	+0.4
HAZ	Te Kaha	1.77	264	P	Pn	09 13 56.3	-0.2
HAZ				S	Sn	09 14 18.1	+0.3
RUGZ	Raukumara Rang	1.88	258	P	Pn	09 13 57.8	-0.3
RUGZ				S	Sn	09 14 20.6	-0.1
TKGZ	Te Karaka	1.90	243	P	Pn	09 13 58.7	+0.4
TKGZ				S	Sn	09 14 21.4	+0.4
RIGZ	Rimuhau	2.09	237	P	Pn	09 14 01.5	+0.6
RIGZ				S	Sn	09 14 26.7	+1.0
MWZ	Matawai	2.09	249	P	Pn	09 14 00.9	-0.1
MWZ				S	Sn	09 14 26.1	+0.2
PRGZ	Paritu Road	2.13	231	P	Pn	09 14 02.3	+0.8
PRGZ				S	Sn	09 14 28.9	+2.1
RAGZ	Rawiri	2.23	245	P	Pn	09 14 03.5	+0.5
RAGZ				S	Sn	09 14 30.1	+0.7
MHGZ	Mahia Peninsul	2.27	226	P	Pn	09 14 04.1	+0.8
MHGZ				S	Sn	09 14 29.8	-0.3
KNZ	Kokohu	2.32	231	P	Pn	09 14 04.4	+0.3
KNZ				S	Sn	09 14 32.5	+1.1
URZ	Urewera	2.38	253	P	Pn	09 14 05.4	+0.6
URZ				S	Sn	09 14 33.1	+0.1
SNGZ	Shannon Statio	2.41	240	P	Pn	09 14 05.8	+0.5
SNGZ				S	Sn	09 14 34.5	+0.7
RTZ	Ruatahuna	2.59	246	P	Pn	09 14 08.7	+0.8
RTZ				S	Sn	09 14 39.3	+0.9
WHHZ	Waihua	2.63	235	P	Pn	09 14 09.4	+1.1
RAHZ	Arahi	2.65	239	P	Pn	09 14 09.1	+0.5
MUGZ	Murupara	2.70	250	P	Pn	09 14 09.5	+0.2
OPRZ	Ohinepanea	2.75	264	P	Pn	09 14 09.9	0.0
MTHZ	Maungataniwha	2.79	242	P	Pn	09 14 09.3	-1.2
TARZ	Mount Tarawera	2.84	256	P	Pn	09 14 12.7	+1.4
ARHZ	Aropaoanui	2.89	234	P	Pn	09 14 13.2	+1.3
NMHZ	Naumai	2.93	238	P	Pn	09 14 13.1	+0.6
MRHZ	Matea Rd	3.08	245	P	Pn	09 14 15.1	+0.5
BKZ	Black Stump Fm	3.17	239	P	Pn	09 14 16.2	+0.3
MCHZ	McNeill Hill	3.19	234	P	Pn	09 14 16.7	+0.7
KAHZ	Kahuranaki	3.29	227	P	Pn	09 14 17.5	+0.1
KWHZ	Kaweka Forest	3.35	236	P	Pn	09 14 18.3	0.0
PXZ	Pawanui	3.46	224	P	Pn	09 14 19.4	-0.3
KRHZ	Kereru	3.51	233	P	Pn	09 14 20.1	-0.3
KUZ	Kuaotunu	3.52	283	P	Pn	09 14 19.1	-1.5
BHHZ	Black Hill Sta	3.62	237	P	Pn	09 14 22.1	+0.1
TMVZ	Te Maari	3.71	244	P	Pn	09 14 23.6	+0.4
ETVZ	East Tongariro	3.71	244	P	Pn	09 14 23.2	-0.1
WPHZ	Waipukurau	3.72	227	P	Pn	09 14 23.0	-0.2
PRHZ	Porangahau	3.75	224	P	Pn	09 14 22.8	-0.8
OTVZ	Oturere	3.75	244	P	Pn	09 14 23.4	-0.5
PNHZ	Pukenui	3.77	231	P	Pn	09 14 23.9	-0.1
GRZ	Great Barrier	3.88	289	P	Pn	09 14 24.1	-1.4
MKAZ	Moumakai	3.89	276	P	Pn	09 14 24.9	-0.7
ANWZ	Angora Road	3.97	223	P	Pn	09 14 26.5	-0.2
TSZ	Takapari Road	4.00	231	P	Pn	09 14 26.5	-0.7
DVHZ	Dannevirke	4.03	227	P	Pn	09 14 27.2	-0.4
BFZ	Birch Farm	4.25	222	P	Pn	09 14 29.1	-1.5
PRWZ	Pori Road	4.31	225	P	Pn	09 14 31.1	-0.3
POWZ	Post Office Ro	4.32	228	P	Pn	09 14 32.3	+0.7
RVAZ	Riverhead Bore	4.41	279	P	Pn	09 14 33.2	+0.5
TIWZ	Tintock	4.51	224	P	Pn	09 14 33.1	-1.1
MRZ	Mangatainoka R	4.61	227	P	Pn	09 14 34.2	-1.3
TMWZ	Te Maipa	4.74	221	P	Pn	09 14 36.1	-1.2
HOWZ	Holdsworth Sta	4.80	225	P	Pn	09 14 36.7	-1.4
NEZ	North Egmont	4.93	248	P	Pn	09 14 42.1	+2.1
PKE	Pukeiti	4.99	249	P	Pn	09 14 43.0	+2.3
CAW	Cannon Point	5.19	226	P	Pn	09 14 41.7	-1.8
NNZ	Nelson	6.28	233	P	Pn	09 14 56.9	-1.5
QRZ	Quartz Range	6.64	239	P	Pn	09 15 01.3	-2.1
CTZ	Chatham Island	6.65	158	P	Pn	09 15 06.9	+3.4
CTZ				S	Sn	09 16 16.7	-1.4
THZ	Tophouse	6.88	231	P	Pn	09 15 06.8	+0.1

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*IDC **17** 09:22:56.3±1.4, 39.°56N×143.°79E, h0km, mb3.4/7,*
mb1 3.5/9, mb1mx3.4/52, mbtmp3.4/9, ML2.8/2, Error
ellipse: s-maj=32.7km s-min=23.7km az=123.0
*JMA **17** 09:22:59.9±0.2, 39.°75N×143.°48E, h44km, M3.4*
ISC 17 09:23:01.7±0.9**,39.°74N**±0.°06×**143.°51E**±0.°07**,h35km,n22,**
σ**1**^{s}**83**/24**,mb3.3**/7**,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	1.28	279	P	Pn	09 23 21.3	-1.8
JTH				*e*S	Sn	09 23 37.0	-2.0
MIYJ	Miyakonagasawa	1.31	263	P	Pn	09 23 22.3	-1.2
JANG	Nango	1.66	293	P	Pn	09 23 26.3	-1.9
JANG				*e*S	Sn	09 23 46.3	-2.0
JOM	Ohasama	1.73	262	*e*S	Sn	09 23 49.8	-0.4
JIO	Ouri	2.11	233	P	Pn	09 23 32.9	-1.6
JTM	Tenmabayashi	2.14	300	*e*S	Sn	09 23 59.4	-0.8
JYK	Kaneyama	2.58	252	P	Pn	09 23 40.6	-0.3
JNBK	Urakawa-nobuka	2.60	348	P	Pn	09 23 40.8	-0.4
JNBK				*e*S	Sn	09 24 11.3	-0.3
JCH	Churui	2.88	358	*e*S	Sn	09 24 14.6	-3.7
JAK	Akkeshi	3.38	15	P	Pn	09 23 49.6	-2.2
JAK				*e*S	Sn	09 24 27.7	-2.9
ASAJ	Asahikawa	4.43	351	Pn	Pn	09 24 08.8	+2.5
	0.7nm,0.3s,baz=226,slow=8.7,SNR=4.8						
ASAJ				Sn	Sn	09 24 55.9	-0.7
	0.7nm,0.3s,baz=279,slow=19,SNR=2.2						
MJAR	Matsushiro Arr	5.26	234	Pn	Pn	09 24 17.9	+0.1
	0.1nm,0.3s,baz=42,slow=12,SNR=3.0						
SEY	Seymchan	23.83	10	P	P	09 28 11.2	0.0
	0.5nm,0.5s,baz=163,slow=19,SNR=1.9						
SONM	Songino Array	27.77	299	P	P	09 28 47.9	+0.6
	0.4nm,0.8s,baz=81,slow=8.9,SNR=2.3						
H11N2	WAKE ISLAND Hy	28.31	128	T	T	09 58 37.6	
	baz=320						
H11N1	WAKE ISLAND Hy	28.32	128	T	T	09 58 35.7	
	baz=320						
H11N3	WAKE ISLAND Hy	28.33	128	T	T	09 58 32.9	
	baz=320						

ZALV	Zalesovo Beam	41.37	310	P	P	09 30 46.2	+2.2
	0.5nm,0.3s,baz=77,slow=7.6,SNR=1.7						
MKAR	Makanchi Array	44.13	300	P	P	09 31 09.6	+2.9
	0.4nm,0.8s,baz=78,slow=9.5,SNR=3.0						
ILAR	Eielson Array	46.33	34	P	P	09 31 24.4	+0.6
	0.3nm,0.9s,baz=263,slow=7.0,SNR=2.5						
WRA	Warramunga Arr	59.98	190	P	P	09 33 03.4	-1.3
	0.3nm,0.7s,baz=8.7,slow=8.0,SNR=1.8						
YKA	Yellowknife Ar	60.65	31	P	P	09 33 08.9	+0.2
	0.2nm,0.7s,baz=296,slow=6.1,SNR=2.1						

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*IDC **17** 09:24:51.9±3.2, 5°.96S×145°.82E, h143^{km}±38^{km}, mb3.4/6, mb1 3.5/9, mb1mx3.3/35, mbtmp3.8/9, Error ellipse: s-maj=34.5km s-min=22.6km az=140.0*

ISC 17 09:24:48.3±0.9**, 5°.73S**±0°.09×**145°.6E**±0°.1**, h100^{km}, n9, σ1°.02**/10**, mb3.6**/6**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	3.95	158	P	Pn	09 25 47.9	+1.1
	9.4nm,0.3s,baz=347,slow=5.7,SNR=21						
PMG				S	Sn	09 26 31.5	-0.6
	22nm,0.3s,baz=308,slow=20,SNR=18						
SIJI	Sorong	15.14	288	P	P	09 28 20.5	+0.7
	1.1nm,0.3s,baz=183,slow=24,SNR=2.3						
WRA	Warramunga Arr	17.90	217	P	Pn	09 28 51.0	+0.1
	0.1nm,0.3s,baz=32,slow=13,SNR=1.9						
ASAR	Alice Springs	21.11	211	P	P	09 29 24.5	-0.6
	0.2nm,0.4s,baz=42,slow=7.9,SNR=5.0						
FITZ	Fitzroy Crossi	23.07	236	P	P	09 29 45.0	-0.5
	1.6nm,0.6s,baz=42,slow=8.5,SNR=2.1						
PETK	Petropavlovsk-	59.50	8	P	P	09 34 41.9	+1.0
	1.2nm,0.5s,baz=164,slow=6.6,SNR=7.1						
MKAR	Makanchi Array	76.44	321	P	P	09 36 27.8	+0.7
	0.8nm,0.7s,baz=100,slow=7.0,SNR=10						
ZALV	Zalesovo Beam	78.07	328	P	P	09 36 34.9	-1.1
	0.6nm,0.6s,baz=120,slow=5.7,SNR=2.8						
ILAR	Eielson Array	85.77	23	P	P	09 37 14.8	-1.3
	1.1nm,0.7s,baz=255,slow=4.8,SNR=15						

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*NOU **17** 09:27:16.5, 17°.04S×167°.25E, h0^{km}, MLv4.8, Vanuatu Islands*

*IDC **17** 09:27:17.0±1.5, 16°.96S×167°.11E, h0^{km}, mb3.9/5, mb1 4.2/6, mb1mx3.8/36, mbtmp4.0/6, ML4.5/1, MS3.2/4, Ms1 3.2/4, ms1mx2.9/24, Error ellipse: s-maj=40.2km s-min=27.9km az=69.0*

*NEIC **17** 09:27:18.3±2.0, 16°.93S±0°.06×167°.0E±0°.1, h10^{km}±2^{km}, mb4.3/8, Error ellipse: s-maj=21.5km s-min=10.1km az=89.0*

ISC 17 09:27:17.2±0.7**, 17°.03S**±0°.05×**167°.3E**±0°.1**, h10^{km}, n29, σ1°.62**/27**, mb4.1**/8**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	Devils Point	1.13	128	P	Pg	09 27 37.8	-1.1
SANVU	Saraoutou	1.58	358	Pn	Pn	09 27 44.9	-0.3
SANVU	Saraoutou	1.58	358	P	Pb	09 27 45.3	-1.2
LIFNC	LIFOU	3.73	180	P	Pn	09 28 13.8	-1.0
YATNC	Mamie plateau,	5.01	184	P	Pn	09 28 31.8	-0.7
DZM	Mont Dzumac	5.07	189	Pn	Pn	09 28 33.5	+0.1
	19nm,0.3s,baz=356,slow=16,SNR=92						
DZM				Sn	Sn	09 29 28.3	-3.8
	9.3nm,0.3s,baz=138,slow=23,SNR=13						
DZM				LR	LR	09 30 27.2	
	comp=Z,134nm,19.6s,baz=53,slow=37						
DZM	Mont Dzumac	5.07	189	P	Pn	09 28 33.5	+0.1
NOUC	Port Laguerre	5.12	190	P	Pn	09 28 34.6	+0.6
ONTNC	Ouen Toro	5.30	188	P	Pn	09 28 37.1	+0.6
OUENC	Ouen Island, N	5.37	184	P	Pn	09 28 38.3	+0.8
PINNC	Pines Island,	5.55	178	P	Pn	09 28 40.9	+0.9
MSVF	Nonsavu	10.33	95	Pn	Pn	09 29 51.7	+6.0
HNR	Honiara	10.37	316	LR	LR	09 33 11.1	
	comp=Z,96nm,18.1s,baz=170,slow=35						
URZ	Urewera	22.85	160	P	P	09 32 24.5	+3.8
	1.3nm,0.4s,baz=52,slow=19,SNR=1.7						
URZ				LR	LR	09 39 34.1	
	comp=Z,63nm,18.5s,baz=211,slow=32						
URZ	Urewera	22.85	160	P	P	09 32 23.9	+3.3
URZ				IAmb	IAmb	09 32 38.1	
	comp=Z,8.0nm,1.1s						
BKZ	Black Stump Fm	23.48	162	P	P	09 32 28.8	+1.6
BKZ				IAmb	IAmb	09 32 35.0	
	comp=Z,5.8nm,0.9s						
BFZ	Birch Farm	24.82	164	P	P	09 32 41.1	+1.5
RPZ	Rata Peaks	26.79	174	LR	LR	09 41 12.6	
	comp=Z,79nm,18.9s,baz=350,slow=31						
WB0	Warramunga Arr	31.27	260	P	P	09 33 37.4	-0.2
WB0				IAmb	IAmb	09 33 58.5	
	comp=Z,8.0nm,1.3s						
WB2	Warramunga Arr	31.31	260	P	P	09 33 36.0	-1.9
WB2				IAmb	IAmb	09 33 49.9	
	comp=Z,9.2nm,1.2s						
WRA	Warramunga Arr	31.32	260	P	P	09 33 37.9	-0.1
	comp=Z,0.4nm,0.5s,baz=84,slow=7.9,SNR=5.3						
WRA	Warramunga Arr	31.32	260	P	P	09 33 36.5	-1.5
AS31	Alice Springs	31.90	253	P	P	09 33 42.5	-0.6
ASAR	Alice Springs	31.90	253	P	P	09 33 43.4	+0.2
	comp=Z,1.6nm,0.6s,baz=81,slow=8.6,SNR=22						
ASAR	Alice Springs	31.90	253	P	P	09 33 42.6	-0.5
CMAR	Chiang Mai Arr	75.88	295	P	P	09 39 06.1	+1.7
	comp=Z,0.7nm,0.3s,baz=128,slow=5.8,SNR=5.2						
SONM	Songino Array	84.33	324	P	P	09 39 50.3	+0.7
	comp=Z,0.7nm,0.7s,baz=140,slow=6.2,SNR=6.4						
SONM	Songino Array	84.33	324	P	P	09 39 50.1	+0.5
ARCES	ARCESS Array B	122.46	345	PKP	PKPdf	09 46 11.7	-0.5
	comp=Z,5.1nm,1.1s,baz=47,slow=1.7,SNR=3.7						

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*IDC **17** 10:23:23.1±2.0, 44°.88N×83°.02E, h0^{km}, mb1 3.4/5, mb1mx3.2/42, mbtmp3.4/5, ML3.1/5, Error ellipse: s-maj=24.0km s-min=12.5km az=111.0*

*SOME **17** 10:23:25.4, 44°.82N×82°.63E, h10^{km}*

*NNC **17** 10:23:25.9±1.1, 44°.71N×82°.66E, h10^{km}±9^{km}, mb4.4, mpv4.1, Error ellipse: s-maj=10.0km s-min=4.5km az=123.0*

ISC 17 10:23:22.5±0.7**, 44°.61N**±0°.04×**82°.70E**±0°.04**, h10^{km}, n65, σ1°.80**/90**, 14C-6D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTMS	Ketmen	2.05	236	Pg	Pg	10 24 03.4	+1.7
KTMS				Lg	Lg	10 24 31.2	
DJR	Jarkent	2.10	263	*e*P	Pg	10 24 05.5	+2.9
	237nm,0.3s						
DJR				*e*S	Sg	10 24 33.2	+3.4
	154nm,0.3s						
DJR	Jarkent	2.10	263	Pg	Pg	10 24 04.5	+1.9
	237nm,0.3s						
DJR				Lg	Lg	10 24 33.2	
	154nm,0.3s						
MK31	Makanchi Array	2.20	353	⇑Pn	Pn	10 24 01.3	+2.2
	20nm,0.3s,baz=173,slow=15,SNR=2123						
MK31				⇑Lg	Lg	10 24 31.0	
	32nm,0.2s,baz=163,slow=26,SNR=9.1						
MKAR	Makanchi Array	2.20	353	Pg	Pn	10 24 00.7	+1.5
	15nm,0.3s,baz=166,slow=14,SNR=386						
MKAR				Lg	Lg	10 24 27.6	
	77nm,0.3s,baz=176,slow=18,SNR=14						
MAKZ	Makanchi	2.26	347	⇓Pn	Pn	10 24 01.5	+1.7
	27nm,0.4s						
MAKZ				⇑Lg	Lg	10 24 32.3	
	69nm,0.5s						
KAPS	Kapalarasan	2.46	287	*e*P	Pg	10 24 11.1	+1.4
	14nm,0.3s						
KAPS				*e*S	Sg	10 24 44.1	+2.5
	182nm,0.5s						
KAPS	Kapalarasan	2.46	287	Pg	Pg	10 24 11.4	+1.8
	24nm,0.3s						
KAPS				Lg	Lg	10 24 45.2	
	182nm,0.5s						
PDGK	Podgornoye	2.64	242	Pg	Pg	10 24 13.9	+0.8
	32nm,0.6s						
PDGK				Lg	Lg	10 24 48.8	
	115nm,0.5s						
PDGK	Podgornoye	2.64	242	⇑Pg	Pg	10 24 17.1	+4.0
	18nm,0.3s						
PDGK				⇑Lg	Lg	10 24 51.7	
	54nm,0.3s						
SHLS	Shalkode	2.75	239	*e*P	Pb	10 24 12.1	+0.3
	178nm,0.5s						
SHLS				*e*S	Sb	10 24 45.6	0.0
	251nm,0.5s						
SHLS	Shalkode	2.75	239	Pg	Pb	10 24 12.1	+0.3
	178nm,0.5s						
SHLS				Lg	Lg	10 24 45.6	
	251nm,0.5s						
UZB	Uzynbulak	3.03	242	*e*P	Pg	10 24 20.3	-0.3
	35nm,0.4s						
UZB				*e*S	Sg	10 24 59.5	-0.3
	242nm,0.7s						
UZB	Uzynbulak	3.03	242	Pg	Pg	10 24 20.3	-0.3
	35nm,0.4s						
UZB				Lg	Lg	10 24 59.5	
	242nm,0.7s						
TDK	Taldyqorghan	3.08	279	*e*P	Pg	10 24 23.3	+1.9
	142nm,0.4s						
TDK				*e*S	Sg	10 25 04.8	+3.5
	368nm,0.6s						
TDK	Taldyqorghan	3.08	279	Pg	Pg	10 24 23.3	+1.9
	142nm,0.4s						
TDK				Lg	Lg	10 25 04.8	
	368nm,0.6s						
KPKS	Kokpek	3.11	250	*e*P	Pg	10 24 21.6	-0.4
	63nm,0.2s						
KPKS				*e*S	Sg	10 25 02.2	-0.1
	359nm,0.6s						
MNBS	Baschi	3.13	262	*e*P	Pg	10 24 22.8	+0.5
	42nm,0.3s						
MNBS				*e*S	Sg	10 25 04.1	+1.3
	355nm,0.5s						
MNBS	Baschi	3.13	262	Pg	Pg	10 24 22.8	+0.5
	42nm,0.3s						
MNBS				Lg	Lg	10 25 04.1	
	355nm,0.5s						
ZSN	Zaisan	3.22	27	*e*P	Pb	10 24 21.0	+1.3
	60nm,0.4s						
ZSN				*e*S	Sb	10 25 01.8	+2.8
	134nm,0.5s						
ZSN	Zaisan	3.22	27	Pg	Pb	10 24 21.0	+1.3
	60nm,0.4s						
ZSN				Lg	Lg	10 25 01.8	
	134nm,0.5s						
KURS	Kuram	3.45	253	*e*P	Pg	10 24 28.0	-0.5
	10nm,0.4s						
KURS				*e*S	Sg	10 25 13.1	-0.1
	88nm,0.4s						
KURS	Kuram	3.45	253	Pg	Pg	10 24 28.0	-0.5
	10nm,0.4s						
KURS				Lg	Lg	10 25 13.1	
	88nm,0.4s						
SATY	Saty	3.47	245	*e*P	Pg	10 24 28.0	-0.9
	32nm,0.3s						
SATY				*e*S	Sg	10 25 12.8	-1.0
	134nm,0.3s						
SATY	Saty	3.47	245	Pg	Pg	10 24 28.0	-0.9
	32nm,0.3s						
SATY				Lg	Lg	10 25 12.8	
	134nm,0.3s						
ARXS	Arharly	3.51	265	*e*P	Pg	10 24 29.4	-0.3
	53nm,0.6s						
ARXS				*e*S	Sg	10 25 15.0	-0.2
	188nm,0.5s						
ARXS	Arharly	3.51	265	Pg	Pg	10 24 29.4	-0.3
	53nm,0.6s						
ARXS				Lg	Lg	10 25 15.0	
	188nm,0.5s						
WMQ	Urumqi	3.68	101	*e*Pn	Pn	10 24 21.0	+1.5
WMQ				Sn	Sn	10 25 02.9	0.0
WMQ				Sg	Sb	10 25 14.1	+1.8
WMQ				smax	smax		
	comp=N,150nm,0.7s						
WMQ				smax	smax		
	comp=E,140nm,0.5s						
CHKK	Chushkaly	4.17	262	*e*P	Pg	10 24 40.8	-1.5
	comp=E,37nm,0.3s						
CHKK				*e*S	Sg	10 25 35.3	-1.1
	comp=E,97nm,0.3s						
CHKK	Chushkaly	4.17	262	Pg	Pg	10 24 40.8	-1.5
	comp=E,37nm,0.3s						
CHKK				Lg	Lg	10 25 35.3	
	comp=E,97nm,0.3s						
KOTS	Kotyrbulak	4.26	253	*e*P	Pg	10 24 44.6	+0.5
	comp=E,84nm,0.5s						
KOTS				*e*S	Sg	10 25 40.7	+1.4
	comp=E,126nm,0.4s						
KOTS	Kotyrbulak	4.26	253	Pg	Pg	10 24 44.6	+0.5
	comp=E,84nm,0.5s						
KOTS				Lg	Lg	10 25 40.7	
	comp=E,126nm,0.4s						
MDOK	Medeo	4.33	252	*e*P	Pg	10 24 46.7	+1.3
	comp=E,24nm,0.7s						
MDOK				*e*S	Sg	10 25 45.0	+3.5
	comp=E,87nm,0.5s						
MDOK	Medeo	4.33	252	⇑Pg	Pg	10 24 44.9	-0.5
	comp=E,35nm,0.5s						
MDOK				⇓Lg	Lg	10 25 46.2	
	comp=E,66nm,0.6s						
MDOK	Medeo	4.33	252	Pg	Pg	10 24 46.7	+1.3
	comp=E,24nm,0.7s						
MDOK				Lg	Lg	10 25 45.0	
	comp=E,87nm,0.5s						
KNDC	Almaty	4.37	253	⇑Pg	Pg	10 24 45.6	-0.5
	comp=E,53nm,0.8s						
KNDC				⇓Lg	Lg	10 25 46.9	
	comp=E,135nm,0.5s						
AAA	Alma-Ata	4.40	253	*e*P	Pg	10 24 48.6	+1.8
	comp=E,32nm,0.1s						
AAA				*e*S	Sg	10 25 49.4	+5.5
	comp=E,50nm,0.2s						
AAA	Alma-Ata	4.40	253	Pg	Pg	10 24 48.6	+1.8
	comp=E,32nm,0.1s						
AAA				Lg	Lg	10 25 49.4	
	comp=E,50nm,0.2s						
KTBS	Karatobe	4.42	260	*e*P	Pg	10 24 47.6	+0.5
	comp=E,16nm,0.6s						
KTBS				*e*S	Sg	10 25 46.2	+2.0
	comp=E,115nm,0.6s						
KTBS	Karatobe	4.42	260	Pg	Pg	10 24 47.6	+0.5
	comp=E,16nm,0.6s						
KTBS				Lg	Lg	10 25 46.3	
	comp=E,115nm,0.6s						
TNSS	Tian-Shan	4.45	251	*e*P	Pg	10 24 48.3	+0.7
	comp=E,26nm,0.6s						
TNSS				*e*S	Sg	10 25 47.7	+2.5
	comp=E,38nm,0.6s						
TNSS	Tian-Shan	4.45	251	Pg	Pg	10 24 48.3	+0.7
	comp=E,26nm,0.6s						
TNSS				Lg	Lg	10 25 47.7	
	comp=E,38nm,0.6s						
KUU	Kurty	4.62	263	*e*P	Pg	10 24 49.9	-1.1
	comp=E,11nm,0.5s						
KUU				*e*S	Sg	10 25 50.5	-0.3
	comp=E,72nm,0.5s						
KUU	Kurty	4.62	263	Pg	Pg	10 24 49.9	-1.1
	comp=E,11nm,0.5s						
KUU				Lg	Lg	10 25 50.5	
	comp=E,72nm,0.5s						
IZV	Izvestkoviy	4.67	252	*e*P	Pg	10 24 51.8	-0.2
	comp=E,32nm,0.6s						
IZV				*e*S	Sg	10 25 53.5	+1.0
	comp=E,58nm,0.7s						
IZV	Izvestkoviy	4.67	252	Pg	Pg	10 24 51.8	-0.2
	comp=E,32nm,0.6s						
IZV				Lg	Lg	10 25 53.5	
	comp=E,58nm,0.7s						
KST	Kastek	5.12	255	*e*P	Pg	10 25 00.3	-0.1
	comp=E,14nm,0.7s						
KST				*e*S	Sg	10 26 08.5	+1.8
	comp=E,44nm,0.7s						
KST	Kastek	5.12	255	Pg	Pg	10 25 00.3	-0.1
	comp=E,14nm,0.7s						
KST				Lg	Lg	10 26 08.5	
	comp=E,44nm,0.7s						
KRBS	Karabastau	5.13	262	*e*P	Pg	10 24 58.4	-2.3
	comp=E,5.3nm,0.4s						
KRBS				*e*S	Sg	10 26 04.8	-2.4
	comp=E,32nm,0.3s						
KRBS	Karabastau	5.13	262	Pg	Pg	10 24 58.4	-2.3
	comp=E,5.3nm,0.4s						
KRBS				Lg	Lg	10 26 04.8	
	comp=E,32nm,0.3s						
DGS	Degeres	5.18	257	*e*P	Pg	10 25 01.1	-0.6
	comp=E,11nm,0.4s						
DGS				*e*S	Sg	10 26 09.9	+1.1
	comp=E,51nm,0.6s						
DGS	Degeres	5.18	257	Pg	Pg	10 25 01.1	-0.6
	comp=E,11nm,0.4s						
DGS				Lg	Lg	10 26 09.9	
	comp=E,51nm,0.6s						
TKM2	Tokmak 2	5.41	254	⇑Pn	Pn	10 24 49.8	+6.5
	comp=E,0.8nm,0.5s						
TKM2				⇑Pg	Pg	10 25 06.7	+0.6
	comp=E,13nm,0.6s						
TKM2				⇓Lg	Lg	10 26 18.6	
	comp=E,18nm,0.4s						
SGDS	Sogindy	5.93	262	Pg	Pg	10 25 12.5	-3.4
	comp=E,3.2nm,0.5s						
SGDS				Lg	Lg	10 26 29.2	
	comp=E,29nm,0.8s						
BTLS	Baital	6.17	277	Pg	Pg	10 25 18.5	-2.0
	comp=E,3.2nm,0.3s						
BTLS				Lg	Lg	10 26 39.9	
	comp=E,5.2nm,0.6s						
AAK	Ala-Archa	6.27	255	Pn	Pb	10 25 04.8	-6.9
	comp=E,0.8nm,0.3s,baz=92,slow=6.4,SNR=7.2						
AAK				Pg	Pg	10 25 22.0	-0.5
	comp=E,1.2nm,0.3s,baz=101,slow=8.5,SNR=10						
AAK				Lg	Lg	10 26 42.2	
	comp=E,0.5nm,0.3s,baz=31,slow=24,SNR=1.3						
AAK	Ala-Archa	6.27	255	⇓Pg	Pg	10 25 22.2	-0.3
	comp=E,4.5nm,0.5s						
AAK				⇑Lg	Lg	10 26 44.9	
	comp=E,12nm,0.5s						
KURBB	Kurchatov Arra	6.64	336	Pn	Pn	10 25 00.5	+0.5
	comp=E,0.1nm,0.3s,baz=152,slow=13,SNR=5.1						
KURBB				Lg	Lg	10 26 47.0	
	comp=E,0.5nm,0.3s,baz=129,slow=17,SNR=5.8						
KURBB	Kurchatov Arra	6.64	336	⇑Pn	Pn	10 25 00.3	+0.3
	comp=E,1.4nm,0.6s						
KURBB				⇑Lg	Lg	10 26 55.5	
	comp=E,128nm,0.7s						
KURK	Kurchatov	6.70	337	⇑Pn	Pn	10 25 00.3	-0.5
	comp=E,0.6nm,0.7s						
KURK				⇓Lg	Lg	10 26 56.3	
	comp=E,41nm,0.7s						
KK31	Karatay Array	8.93	265	⇑Pg	Pg	10 26 11.9	-1.5
	comp=E,0.9nm,0.4s,baz=80,slow=16,SNR=4.6						
KK31				Lg	Lg	10 28 07.7	
	comp=E,4.2nm,0.5s,baz=68,slow=25,SNR=7.6						
ZALV	Zalesovo Beam	9.45	8	Pn	Pn	10 25 37.4	-1.2
	comp=E,0.7nm,0.3s,baz=191,slow=15,SNR=6.2						
ZALV				Sn	Sn	10 27 17.4	-7.3
	comp=E,0.8nm,0.3s,baz=162,slow=26,SNR=5.7						
ZALV				Lg	Lg	10 28 13.3	
	baz=158,slow=28,SNR=1.2						
BVAR	Borovoye Array	11.68	321	Pn	Pn	10 26 08.8	-0.2
	comp=E,0.2nm,0.3s,baz=114,slow=14,SNR=1.9						
GTA	Gaotai	13.74	106	*e*P	P	10 26 44.8	-1.3
GTA				pP	Pn	10 26 49.0	+12
GTA				sP		10 26 52.5	
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
SONM	Songino Array	16.70	70	Pn	Pn	10 27 14.8	-1.8
	comp=Z,0.1nm,0.3s,baz=269,slow=14,SNR=4.8						
SONM				Lg	Lg	10 32 03.3	
	comp=Z,0.1nm,0.3s,baz=2.6,slow=25,SNR=2.2						

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*KRSZO **17** 10:33:54.9±0.8, 44°.52N×18°.97E, h13^{km}±9^{km}, ML3.5/20, Error ellipse: s-maj=2.3km s-min=1.9km az=72.0*

*PDG **17** 10:33:54.5±0.3, 44°.55N×18°.93E, h15^{km}, ML2.9/13, Error ellipse: s-maj=0.4km s-min=0.7km az=0.0*

*BEO **17** 10:33:55.7±0.3, 44°.51N×18°.95E, h6^{km}±1^{km}, ML3.2/15*

*RHSSO **17** 10:33:55.9±0.2, 44°.49N×18°.96E, h4^{km}±1^{km}, ML3.2/14*

*PRU **17** 10:33:57.3±0.0, 44°.58N×19°.08E, h10^{km}*

ISC 17 10:33:55.0±1.0**, 44°.53N**±0°.01×**18°.99E**±0°.01**, h8^{km}**±9^{km}**, n197, σ1°.32**/338**, 31C-18D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HAPS	Han Pijesak,Bl	0.44	184	*e*Pg	Pg	10 34 03.0	-0.6
HAPS				*e*Sg	Sg	10 34 08.9	-0.5
HAPS	Han Pijesak,Bl	0.44	184	⇑*i*Pg	Pg	10 34 03.1	-0.6
HAPS				*e*Sg	Sg	10 34 08.9	-0.5
HAPS	Han Pijesak,Bl	0.44	184	Pg	Pg	10 34 03.0	-0.6
HAPS				Pg	Pg	10 34 03.1	-0.6
HAPS				Lg	Lg	10 34 08.9	
BBLS	Lazići	0.73	156	*e*Pg	Pg	10 34 09.2	+0.3
BBLS				*e*Sg	Sb	10 34 19.5	-0.5
BBLS	Lazići	0.73	156	⇑*i*Pg	Pg	10 34 08.8	-0.2
BBLS				*e*Sg	Sg	10 34 19.0	+0.6
BBLS	Lazići	0.73	156	Pb	Pg	10 34 08.8	-0.2
BBLS				Pg	Pg	10 34 09.3	+0.3
	comp=Z,12nm,SNR=50						
BBLS				Sg	Sg	10 34 19.0	+0.6
BBLS				Lg	Lg	10 34 19.5	
DIVS	Divibare	0.84	120	*e*Pg	Pg	10 34 11.0	0.0
DIVS				*e*Sg	Sg	10 34 22.7	+0.7
DIVS	Divibare	0.84	120	⇑*i*Pg	Pg	10 34 11.1	0.0
DIVS				*e*Sg	Sg	10 34 22.6	+0.6
DIVS	Divibare	0.84	120	Pg	Pg	10 34 11.1	0.0
	comp=Z,2.8nm,SNR=72						
DIVS				Sb	Sg	10 34 22.4	+0.4
DIVS				Lg	Lg	10 34 22.6	
DIVS				Sg	Sg	10 34 22.7	+0.7
FRGS	Fruska Gora	0.86	43	*e*Pg	Pb	10 34 12.2	0.0
FRGS				*e*Sg	Sb	10 34 24.1	+0.3
FRGS	Fruska Gora	0.86	43	⇑P	Pb	10 34 12.1	0.0
FRGS				⇑S	Sb	10 34 24.9	+1.1
FRGS	Fruska Gora	0.86	43	⇓*i*Pg	Pg	10 34 12.0	+0.5
FRGS				*e*Sg	Sb	10 34 25.0	+1.1
FRGS	Fruska Gora	0.86	43	Pb	Pg	10 34 12.0	+0.5
FRGS				Pn	Pb	10 34 12.1	0.0
FRGS				Pg	Pb	10 34 12.2	0.0
FRGS				Pg	Pg	10 34 12.4	+0.9
	comp=Z,3.9nm,SNR=76						
FRGS				Sg	Sb	10 34 24.1	+0.3
FRGS				Sb	Sb	10 34 24.9	+1.1
FRGS				Sb	Sb	10 34 25.0	+1.1
FRGS				Lg	Lg	10 34 25.3	
RUDO	Rudo	0.95	163	⇓*i*Pg	Pg	10 34 12.1	-1.1
RUDO				*e*Sg	Sg	10 34 24.9	-0.7
RUDO	Rudo	0.95	163	Pg	Pg	10 34 12.1	-1.1
RUDO				Lg	Lg	10 34 24.9	
TRUS	Trudelj	1.06	106	*e*Pg	Pg	10 34 15.4	+0.1
TRUS				*e*Sg	Sb	10 34 30.1	+0.5
TRUS	Trudelj	1.06	106	Pn	Pg	10 34 15.4	+0.1
TRUS				Lg	Lg	10 34 30.1	
BEO	Beograd	1.09	75	Pn	Pg	10 34 15.5	-0.5
	comp=Z,1.6nm,SNR=13						
BEO				Lg	Lg	10 34 28.7	
PLE	Pljevlja	1.23	166	⇓*i*Pg	Pb	10 34 17.9	-0.6
PLE				*i* Sg	Sn	10 34 37.7	+2.3
IVAS	Ivanjica	1.27	138	*e*Pg	Pn	10 34 18.1	-0.9
IVAS				*e*Sg	Sn	10 34 36.8	+0.5
IVAS	Ivanjica	1.27	138	Pn	Pn	10 34 18.1	-0.9
IVAS				Sn	Sn	10 34 36.8	+0.5
BLY	Banja Luka	1.31	280	*e*Pg	Pn	10 34 19.5	0.0
BLY				*e*Sg	Sb	10 34 36.3	-0.4
BLY	Banja Luka	1.31	280	⇑*i*Pg	Pn	10 34 19.3	-0.2
BLY				*e*Sg	Sb	10 34 36.7	0.0
BLY	Banja Luka	1.31	280	Pn	Pn	10 34 19.3	-0.2
BLY				Pg	Pn	10 34 19.4	0.0
	comp=Z,2.0nm,SNR=35						
BLY				Sn	Sb	10 34 36.3	-0.4
BLY				Lg	Lg	10 34 36.7	
BLY				Sg	Sg	10 34 37.0	0.0
UPM	Unac-Piva	1.33	183	*e*Pg	Pn	10 34 20.0	+0.1
UPM				*e*Sg	Sb	10 34 37.1	-0.3
UPM	Unac-Piva	1.33	183	*e*Pg	Pn	10 34 19.6	-0.3
UPM				*i* Sg	Sn	10 34 40.1	+2.2
UPM	Unac-Piva	1.33	183	Pn	Pn	10 34 20.0	+0.1
UPM				Sn	Sb	10 34 37.1	-0.3
MGRS	Mrkonjic Grad	1.37	266	⇓*i*Pg	Pb	10 34 20.8	0.0
MGRS				*e*Sg	Sn	10 34 38.8	+0.1
MGRS	Mrkonjic Grad	1.37	266	Pn	Pb	10 34 20.8	0.0
MGRS				Sn	Sn	10 34 38.8	+0.1
GRUS	Gruza	1.40	117	*e*Pg	Pg	10 34 22.0	+0.2
GRUS				*e*Sg	Sg	10 34 40.7	+0.8
GRUS	Gruza	1.40	117	⇓P	Pg	10 34 21.9	+0.2
GRUS	Gruza	1.40	117	Pg	Pg	10 34 21.9	+0.2
GRUS				Pg	Pg	10 34 22.0	+0.2
GRUS				Lg	Lg	10 34 40.7	
BRY	Bratogost	1.66	192	*e*Pn	Pn	10 34 24.5	0.0
BRY				*e*Sn	Sn	10 34 46.0	0.0
BRY	Bratogost	1.66	192	⇑*i*Pn	Pn	10 34 24.4	0.0
BRY				*i* Sn	Sg	10 34 47.9	-0.4
BRY	Bratogost	1.66	192	Pn	Pn	10 34 24.5	0.0
BRY				Sn	Sn	10 34 46.0	0.0
PRIJ	Prijedor	1.68	286	*e*Pn	Pb	10 34 25.8	-0.3
PRIJ				*e*Sn	Sb	10 34 48.0	+0.6

PRIJ	Prijedor	1.68	286	Pn	Pb	10 34 25.8	-0.3
PRIJ				Sn	Sb	10 34 48.0	+0.6
RICI	Ricice	1.69	233	*e*Pn	Pb	10 34 25.6	-0.7
RICI				Sn	Sb	10 34 48.1	+0.4
RICI	Ricice	1.69	233	Pn	Pb	10 34 25.6	-0.7
RICI				Sn	Sb	10 34 48.1	+0.4
MORH	Mrgy, Hungar	1.71	352	⇑P	Pn	10 34 24.2	-0.7
MORH				⇑S	Sn	10 34 45.9	-1.0
MORH	Mrgy, Hungar	1.71	352	*e*Pn	Pb	10 34 26.0	-0.5
MORH				*e*Sn	Sb	10 34 49.1	+1.0
MORH	Mrgy, Hungar	1.71	352	Pn	Pn	10 34 24.2	-0.7
MORH				Pb	Pb	10 34 25.3	-1.3
	comp=Z,0.6nm,SNR=11						
MORH				Pg	Pb	10 34 26.0	-0.5
MORH				Sn	Sn	10 34 45.9	-1.0
MORH				Lg	Lg	10 34 49.1	
MORH				Sg	Sg	10 34 50.3	+0.5
NKY	Niksic	1.71	180	⇑*i*Pn	Pn	10 34 25.4	+0.2
NKY				*i* Sn	Sg	10 34 49.4	-0.7
KOME	Kolasin	1.72	167	⇓*i*Pn	Pn	10 34 25.5	+0.2
KOME				*i* Sn	Sg	10 34 49.7	-0.5
NKME	Niksic	1.76	181	⇑*i*Pn	Pn	10 34 25.9	+0.1
NKME				*i* Sn	Sb	10 34 50.5	+0.7
IVA	Berane	1.78	158	⇓*i*Pn	Pn	10 34 26.4	+0.3
IVA				*i* Sn	Sb	10 34 51.3	+0.9
TREB	Trebinje	1.87	195	*e*Pn	Pb	10 34 29.2	-0.1
TREB				*e*Sn	Sn	10 34 51.4	+0.4
TREB	Trebinje	1.87	195	*e*Pn	Pn	10 34 28.3	+1.1
TREB				*e*Sn	Sb	10 34 52.6	-0.2
TREB	Trebinje	1.87	195	Pn	Pn	10 34 28.3	+1.1
TREB				Pg	Pb	10 34 29.2	-0.1
TREB				Sn	Sn	10 34 51.4	+0.4
TREB				Lg	Lg	10 34 52.6	
MAKA	Makarska	1.89	230	*e*Pn	Pb	10 34 29.3	-0.3
MAKA				Sn	Sg	10 34 55.6	0.0
MAKA	Makarska	1.89	230	Pn	Pb	10 34 29.3	-0.3
MAKA				Sn	Sg	10 34 55.6	0.0
STON	Ston	1.90	210	*e*Pn	Pn	10 34 28.6	+1.0
STON	Ston	1.90	210	Pn	Pn	10 34 28.6	+1.0
MOSL	Moslavina	1.92	305	*e*Pn	Pn	10 34 28.0	0.0
MOSL	Moslavina	1.92	305	Pn	Pn	10 34 28.0	0.0
KUBS	Kucevo	1.93	92	*e*Pn	Pb	10 34 29.4	-0.9
KUBS				*e*Sn	Sb	10 34 54.4	-0.1
KUBS	Kucevo	1.93	92	Pn	Pb	10 34 29.4	-0.9
KUBS				Sn	Sb	10 34 54.4	-0.1
KIJV	Kijevo	1.93	255	*i* Pn	Pn	10 34 28.8	+0.8
KIJV	Kijevo	1.93	255	Pn	Pn	10 34 28.8	+0.8
DBRK	Dubrovnik	1.96	199	*i* Pn	Pn	10 34 29.4	+1.0
DBRK	Dubrovnik	1.96	199	Pn	Pn	10 34 29.4	+1.0
MDVR	Moldovita	1.96	82	⇑P	Pn	10 34 28.7	+0.2
MDVR				⇑S	Sg	10 34 58.4	+0.5
MDVR	Moldovita	1.96	82	Pn	Pn	10 34 28.7	+0.2
MDVR				Lg	Lg	10 34 58.4	
CEME	Cevo	1.98	182	⇓*i*Pn	Pn	10 34 28.7	-0.1
CEME				*i* Sn	Sb	10 34 55.8	-0.3
PDG	Podgorica	2.11	175	*e*Pn	Pn	10 34 30.8	+0.3
PDG				*e*Sn	Sn	10 34 57.6	+0.8
PDG	Podgorica	2.11	175	⇑P	Pn	10 34 31.0	+0.5
PDG				⇑S	Sb	10 34 59.2	-0.4
PDG	Podgorica	2.11	175	*e*Pn	Pn	10 34 31.7	+1.2
PDG				*e*Sn	Sn	10 34 57.3	+0.5
PDG	Podgorica	2.11	175	Pn	Pn	10 34 30.8	+0.3
PDG				Pg	Pn	10 34 31.0	+0.5
PDG				Pb	Pn	10 34 31.7	+1.2
PDG				Sn	Sn	10 34 57.3	+0.5
PDG				Lg	Lg	10 34 57.6	
PDG				Sg	Sb	10 34 59.2	-0.4
TTG	Podgorica	2.11	175	⇑*i*Pn	Pn	10 34 30.9	+0.5
TTG				*i* Sn	Sb	10 34 58.9	-0.7
HCY	Herceg Novi	2.11	190	*e*Pn	Pn	10 34 31.5	+0.9
HCY				*e*Sn	Sn	10 34 57.4	+0.4
HCY	Herceg Novi	2.11	190	⇓*i*Pn	Pn	10 34 30.7	+0.1
HCY				*i* Sn	Sb	10 34 58.6	-1.2
HCY	Herceg Novi	2.11	190	Pn	Pn	10 34 31.5	+0.9
HCY				Sn	Sn	10 34 57.4	+0.4
BOVS	Bovan	2.15	114	*e*Pn	Pn	10 34 32.3	+1.2
BOVS				*e*Sn	Sn	10 34 58.8	+0.8
BOVS	Bovan	2.15	114	⇑S	Sg	10 35 04.1	+0.1
BOVS	Bovan	2.15	114	Pn	Pn	10 34 32.3	+1.2
BOVS				Sn	Sn	10 34 58.8	+0.8
BOVS				Lg	Lg	10 35 04.1	
BZS	Buzias	2.16	59	⇑P	Pn	10 34 31.8	+0.6
BZS				⇓S	Sb	10 35 01.9	+0.7
BZS	Buzias	2.16	59	Pn	Pn	10 34 31.8	+0.6
BZS				Pg	Pb	10 34 32.1	-2.1
	comp=Z,0.2nm,SNR=6.3						
BZS				Lg	Lg	10 34 58.4	
BZS				Sn	Sb	10 35 01.9	+0.7
AMBH	Ambrzfalva	2.19	33	⇑P	Pn	10 34 30.7	-1.0
AMBH				⇓S	Sb	10 35 01.2	-1.0
AMBH	Ambrzfalva	2.19	33	Pn	Pn	10 34 30.7	-1.0
AMBH				Sn	Sb	10 35 01.2	-1.0
AMBH				Lg	Lg	10 35 02.8	
BUM	Brajici-Budva	2.23	182	*e*Pn	Pn	10 34 32.7	+0.5
BUM				*i* Sn	Sb	10 35 01.7	-1.5
HVAR	Hvar	2.28	235	*e*Pn	Pn	10 34 34.5	+1.6
HVAR				Sn	Sb	10 35 03.6	-1.1
HVAR	Hvar	2.28	235	Pn	Pn	10 34 34.5	+1.6
HVAR				Sn	Sb	10 35 03.6	-1.1
UDBI	Udbina	2.31	271	*e*Pn	Pn	10 34 33.3	0.0
UDBI	Udbina	2.31	271	Pn	Pn	10 34 33.3	0.0
LSTV	Lastovo	2.33	222	*i* Pn	Pn	10 34 35.0	+1.5
LSTV				Sn	Sn	10 35 03.8	+1.6
LSTV	Lastovo	2.33	222	Pn	Pn	10 34 35.0	+1.5
LSTV				Sn	Sn	10 35 03.8	+1.6
DRME	Dracevica, Mon	2.34	176	*e*Pn	Pn	10 34 35.6	+1.8
DRME				*e*Sn	Sn	10 35 03.8	+1.1
DRME	Dracevica, Mon	2.34	176	⇑*i*Pn	Pn	10 34 34.1	+0.3
DRME				*i* Sn	Sb	10 35 04.7	-1.8
DRME	Dracevica, Mon	2.34	176	Pn	Pn	10 34 35.6	+1.8
DRME				Sn	Sn	10 35 03.8	+1.1
KALN	Kalnik	2.40	313	*i* Pn	Pn	10 34 34.0	-0.6
KALN	Kalnik	2.40	313	Pn	Pn	10 34 34.0	-0.6
ZAGS	Zajecar	2.44	106	*e*Pn	Pn	10 34 35.1	0.0
ZAGS				*e*Sn	Sn	10 35 06.9	+1.8
ZAGS	Zajecar	2.44	106	Pn	Pn	10 34 35.1	0.0
ZAGS				Sn	Sn	10 35 06.9	+1.8
MORI	Morici	2.45	255	*e*Pn	Pn	10 34 36.9	+1.7
MORI				Sn	Sb	10 35 07.8	-1.7
MORI	Morici	2.45	255	Pn	Pn	10 34 36.9	+1.7
MORI				Sn	Sb	10 35 07.8	-1.7
HERR	Herculane	2.47	81	⇑P	Pn	10 34 35.4	-0.1
HERR	Herculane	2.47	81	Pn	Pn	10 34 35.4	-0.1
BEHE	Becsehely	2.49	322	*e*Pn	Pn	10 34 37.8	+2.0
BEHE				*e*Sn	Sb	10 35 08.7	-2.0
BEHE	Becsehely	2.49	322	Pn	Pn	10 34 37.8	+2.0
BEHE				Pg	Pb	10 34 38.4	-1.5
	comp=Z,1.0nm,SNR=10						
BEHE				Sn	Sb	10 35 08.7	-2.0
BEHE				Lg	Lg	10 35 20.5	
TIH	Tihany	2.49	342	Pg	Pg	10 34 44.8	+2.0
TIH				Lg	Lg	10 35 16.4	
DJES	Djerdap	2.53	86	Sn	Sn	10 35 06.1	-1.1
PTJ	Puntijarka	2.54	304	*e*Pn	Pn	10 34 36.1	-0.5
PTJ	Puntijarka	2.54	304	Pn	Pn	10 34 36.1	-0.5
SIRR	Siria	2.56	46	⇓P	Pn	10 34 36.2	-0.6
SIRR	Siria	2.56	46	Pn	Pn	10 34 36.2	-0.6
SIRR				Pg	Pb	10 34 36.5	-4.7
	comp=Z,0.2nm,SNR=5.0						
ZIRJ	Zirje	2.56	251	*e*Pn	Pn	10 34 38.2	+1.5
ZIRJ				Sn	Sn	10 35 09.9	+1.8
ZIRJ	Zirje	2.56	251	Pn	Pn	10 34 38.2	+1.5
ZIRJ				Sn	Sn	10 35 09.9	+1.8
ULC	Ulcinj	2.57	176	*e*Pn	Pn	10 34 37.6	+0.7
ULC				*i* Sn	Sn	10 35 10.1	+1.8
BLKB	Belogradchik	2.81	108	⇑S	Sb	10 35 20.4	+0.5
BLKB	Belogradchik	2.81	108	Lg	Lg	10 35 20.4	
CRES	Cresnjev	2.81	299	*e*Pn	Pn	10 34 40.9	+0.6
CRES				*e*Sn	Sn	10 35 16.4	+2.0
CRES	Cresnjev	2.81	299	Pg	Pn	10 34 40.9	+0.6
CRES				Sn	Sn	10 35 16.4	+2.0
GZR	Gura Zlata	2.83	71	⇓P	Pn	10 34 41.4	+0.9
GZR				⇓S	Sb	10 35 19.5	-0.9
GZR	Gura Zlata	2.83	71	Pn	Pn	10 34 41.4	+0.9
GZR				Pg	Pb	10 34 43.0	-2.7
	comp=Z,0.2nm,SNR=4.3						
GZR				Sn	Sb	10 35 19.5	-0.9
DUGI	Dugi Otok	2.88	261	*e*Pn	Pn	10 34 42.4	+1.4
DUGI	Dugi Otok	2.88	261	Pn	Pn	10 34 42.4	+1.4
CSKK	Cskako	2.88	350	Pn	Pn	10 34 42.3	+1.1
	comp=Z,0.3nm,SNR=19						
CSKK				Lg	Lg	10 35 25.8	
ZAPS	Zavoj	2.92	114	*e*Pn	Pn	10 34 42.4	+0.7
ZAPS				*e*Sn	Sn	10 35 18.3	+1.4
ZAPS	Zavoj	2.92	114	Pn	Pn	10 34 42.4	+0.7
ZAPS				Sn	Sn	10 35 18.3	+1.4
NVLJ	Novalja	2.94	272	*e*Pn	Pn	10 34 43.1	+1.1
NVLJ	Novalja	2.94	272	Pn	Pn	10 34 43.1	+1.1
BUD	Budapest	2.96	0	Pn	Pb	10 34 45.3	-2.5
	comp=Z,0.2nm,SNR=3.8						
BUD				Lg	Lg	10 35 28.1	
SRE	Strehaia	3.02	86	⇓P	Pn	10 34 43.7	+0.7
SRE	Strehaia	3.02	86	Pn	Pn	10 34 43.7	+0.7
EGYH	Egyhazaskeszo	3.11	339	Pn	Pn	10 34 41.4	-3.0
BOSS	Bosilegrad	3.25	127	*e*Pn	Pn	10 34 46.2	-0.1
BOSS				*e*Sn	Sn	10 35 25.5	+0.4
BOSS	Bosilegrad	3.25	127	Pn	Pn	10 34 46.2	-0.1
BOSS				Sn	Sn	10 35 25.5	+0.4
SRO2	Moca	3.26	353	*e*PN	Pn	10 34 46.7	+0.3
SRO2				*e*SG	Sg	10 35 47.1	+7.4
SRO2	Moca	3.26	353	Pn	Pn	10 34 46.7	+0.3
SRO2				Lg	Lg	10 35 47.1	
SRO	Srobarova	3.32	352	*e*PN	Pn	10 34 48.5	+1.3
SRO				*e*SG	Sg	10 35 46.4	+4.9
SRO	Srobarova	3.32	352	Pn	Pn	10 34 48.4	+1.3
	comp=Z,1.0nm,SNR=5.3						
SRO				Lg	Lg	10 35 46.4	
CEY	Cerknica	3.45	292	*e*Pn	Pn	10 34 50.3	+1.3
CEY				*e*Sn	Sn	10 35 30.7	+0.7
CEY	Cerknica	3.45	292	Pn	Pn	10 34 50.3	+1.3
CEY				Sn	Sn	10 35 30.7	+0.7
PSZ	Piszkesteto	3.45	10	⇑P	Pn	10 34 48.0	-1.0
PSZ				⇑S	Sn	10 35 32.0	+1.9
PSZ	Piszkesteto	3.45	10	Pn	Pn	10 34 48.0	-1.0
PSZ				Pg	Pb	10 34 51.6	-4.7
	comp=Z,0.2nm,SNR=3.6						
PSZ				Sn	Sn	10 35 32.0	+1.9
DRGR		3.46	48	⇓P	Pn	10 34 49.2	+0.1
DRGR		3.46	48	Pn	Pn	10 34 49.2	+0.1
DRGR				Pg	Pb	10 34 51.1	-5.3
	comp=Z,0.1nm,SNR=1.9						
SOKA	Soboth	3.51	309	*i* Pn	Pn	10 34 49.2	-0.7
	comp=Z,1.1nm,0.2s						
SOKA	Soboth	3.51	309	Pn	Pn	10 34 49.2	-0.7
	comp=Z,1.1nm,0.2s						
LOT	Lotru	3.51	73	⇓P	Pn	10 34 52.0	+2.0
LOT	Lotru	3.51	73	Pg	Pn	10 34 52.0	+2.0
LOT				Pn	Pb	10 34 52.8	-4.7
	comp=Z,0.1nm,SNR=2.8						
VTS	Vitosha	3.63	120	⇑P	Pn	10 34 53.6	+2.1
VTS				⇓S	Sb	10 35 40.7	-2.9
VTS	Vitosha	3.63	120	Pn	Pn	10 34 53.6	+2.1
VTS				Sn	Sb	10 35 40.7	-2.9
ARSA	Arzberg	3.64	320	*i* Pn	Pn	10 34 51.5	-0.1
	comp=Z,17nm,0.3s,SNR=28						
ARSA				*e*Sn	Sn	10 35 33.2	-1.6
	comp=Z,7.3nm,0.4s						
ARSA	Arzberg	3.64	320	Pg	Pn	10 34 51.5	-0.1
	comp=Z,17nm,0.3s,SNR=28						
ARSA				Pn	Pb	10 34 51.6	-8.0
	comp=Z,0.2nm,SNR=3.5						
ARSA				Lg	Lg	10 35 33.2	
	comp=Z,7.3nm,0.4s						
ARSA				Sn	Sn	10 35 33.5	-1.3
STIP	Stip	3.67	139	*i* Pn	Pn	10 34 53.2	+1.1
OBKA	Obir	3.70	304	*i* Pn	Pn	10 34 53.2	+0.8
	comp=Z,2.5nm,0.3s						
OBKA				*e*Sn	Sn	10 35 36.0	-0.2
	comp=Z,9.0nm,0.5s						
OBKA	Obir	3.70	304	Pn	Pn	10 34 53.2	+0.8
	comp=Z,2.5nm,0.3s						
OBKA				Sn	Sn	10 35 36.0	-0.2
	comp=Z,9.0nm,0.5s						
ZST	Bratislava	3.90	341	*e*PN	Pn	10 34 55.4	+0.3
ZST				*e*SN	Sn	10 35 37.2	-3.7
ZST	Bratislava	3.90	341	Pn	Pn	10 34 55.4	+0.3
ZST				Sn	Sn	10 35 37.2	-3.7
VYHS	Vyhne	3.97	359	*e*PN	Pn	10 34 56.5	+0.4
VYHS				*e*SN	Sn	10 35 42.1	-0.7
VYHS	Vyhne	3.97	359	Pn	Pn	10 34 56.5	+0.4
VYHS				Pg	Pb	10 34 57.1	-8.0
VYHS				Sn	Sn	10 35 42.1	-0.7
MODS	Modra-Piesok	4.03	344	*e*PN	Pn	10 34 56.3	-0.6
MODS				*e*SN	Sn	10 35 42.7	-1.5
MODS	Modra-Piesok	4.03	344	Pn	Pn	10 34 56.3	-0.6
MODS				Sn	Sn	10 35 42.7	-1.5
CONA	Conrad Observa	4.03	329	*e*Pn	Pn	10 34 56.9	-0.2
	comp=Z,6.4nm,0.3s,SNR=11						
CONA				*e*Sn	Sn	10 35 44.6	0.0
	comp=Z,5.4nm,0.3s						
CONA	Conrad Observa	4.03	329	Pn	Pn	10 34 56.9	-0.2
	comp=Z,6.4nm,0.3s,SNR=11						
CONA				Sn	Sn	10 35 44.6	0.0
	comp=Z,5.4nm,0.3s						
KECS	Kecovo	4.09	14	*e*PN	Pn	10 34 59.9	+2.1
KECS	Kecovo	4.09	14	Pn	Pn	10 34 59.9	+2.1
ARR	Arges	4.09	76	⇑P	Pn	10 34 59.7	+1.8
ARR	Arges	4.09	76	Pn	Pn	10 34 59.7	+1.8
SMOL	Smolenice	4.13	345	*e*SN	Sn	10 35 46.5	-0.3
SMOL	Smolenice	4.13	345	Sn	Sn	10 35 46.5	-0.3
MYKA	Terra Mystica	4.30	301	*i* Pn	Pn	10 34 59.2	-1.5
	comp=Z,0.8nm,0.2s						
MYKA	Terra Mystica	4.30	301	Pn	Pn	10 34 59.2	-1.5
	comp=Z,0.8nm,0.2s						
VOIR		4.39	76	⇑P	Pn	10 35 03.0	+1.0
VOIR		4.39	76	Pn	Pn	10 35 03.0	+1.0
JAVC	Velka Javorina	4.43	349	*e*PN	Pn	10 35 02.8	+0.4
JAVC	Velka Javorina	4.43	349	Pn	Pn	10 35 02.8	+0.4
COPA	Copaceanca	4.49	93	⇑P	Pn	10 35 05.1	+1.9
COPA	Copaceanca	4.49	93	Pn	Pn	10 35 05.1	+1.9
MOA	Molln	4.67	317	*i* Pn	Pn	10 35 06.7	+1.0
	comp=Z,2.2nm,0.2s,SNR=7.3						
MOA				*i* Sn	Sn	10 35 59.6	-0.5
	comp=Z,2.9nm,0.2s						
MOA	Molln	4.67	317	Pn	Pn	10 35 06.7	+1.0
	comp=Z,2.2nm,0.2s,SNR=7.3						
MOA				Sn	Sn	10 35 59.6	-0.5
	comp=Z,2.9nm,0.2s						
KRUC	Moravsky	4.87	339	*e*PN	Pn	10 35 07.2	-1.3
KRUC				*e*SN	Sn	10 36 02.1	-3.0
KRUC	Moravsky	4.87	339	Pn	Pn	10 35 07.2	-1.3
KRUC				Sn	Sn	10 36 02.1	-3.0
MLR	Muntele Rosu	5.03	77	⇑P	Pn	10 35 11.1	+0.4
MLR	Muntele Rosu	5.03	77	Pn	Pn	10 35 11.1	+0.4
VRAC	Vranov	5.06	342	*e*PN	Pn	10 35 10.1	-0.9
VRAC				*e*SN	Sn	10 36 05.0	-4.6
VRAC	Vranov	5.06	342	Pn	Pn	10 35 10.1	-0.9
VRAC				Sn	Sn	10 36 05.0	-4.6
MORC	Moravsky Berou	5.34	350	⇑P	Pn	10 35 12.2	-2.8
MORC				⇑S	Sn	10 36 13.7	-3.0
MORC	Moravsky Berou	5.34	350	*e*PN	Pn	10 35 13.5	-1.5
MORC	Moravsky Berou	5.34	350	Pn	Pn	10 35 12.2	-2.8
MORC				Pg	Pb	10 35 13.5	-15
MORC				Sn	Sn	10 36 13.7	-3.0
KRLC	Kraliky	5.75	346	*e*PN	Pn	10 35 21.7	+1.1
KRLC				*e*SN	Sn	10 36 24.6	-2.1
KRLC	Kraliky	5.75	346	Pn	Pn	10 35 21.7	+1.1
KRLC				Sn	Sn	10 36 24.6	-2.1
WTTA	Wattenberg	5.81	301	*i* Pn	Pn	10 35 23.5	+1.8
	comp=Z,1.5nm,0.2s						
WTTA	Wattenberg	5.81	301	Pn	Pn	10 35 23.5	+1.8
	comp=Z,1.5nm,0.2s						
KHC	Kasperske Hory	5.91	323	*e*PN	Pn	10 35 24.0	+1.2
KHC				*e*SN	Sn	10 36 29.4	-1.4
KHC	Kasperske Hory	5.91	323	Pn	Pn	10 35 24.0	+1.2
KHC				Sn	Sn	10 36 29.4	-1.4
SQTA	Sankt Quirin	6.06	299	*i* Pn	Pn	10 35 27.4	+2.4
	comp=Z,1.2nm,0.2s						
SQTA	Sankt Quirin	6.06	299	Pn	Pn	10 35 27.4	+2.4
	comp=Z,1.2nm,0.2s						
DPC	Dobruska-Polom	6.10	344	*e*PN	Pn	10 35 26.0	+0.6
DPC				*e*SN	Sn	10 36 33.8	-1.5
DPC	Dobruska-Polom	6.10	344	Pn	Pn	10 35 26.0	+0.6
DPC				Sn	Sn	10 36 33.8	-1.5
FETA	Feichten	6.29	296	*i* Pn	Pn	10 35 30.7	+2.6
	comp=Z,1.4nm,0.3s						
FETA	Feichten	6.29	296	Pn	Pn	10 35 30.7	+2.6
	comp=Z,1.4nm,0.3s						
OSTC	Ostas	6.32	344	*e*PN	Pn	10 35 30.1	+1.7
OSTC	Ostas	6.32	344	Pn	Pn	10 35 30.1	+1.7
CHVC	Chvalec	6.38	343	*e*PN	Pn	10 35 30.5	+1.3
CHVC	Chvalec	6.38	343	Pn	Pn	10 35 30.5	+1.3

IDC ***17*** *10:36:00.8±1.3, 39°.33N×143°.73E, h0^{km}, mb3.5/8, mb1 3.6/10, mb1mx3.5/34, mbtmp3.5/10, ML3.2/2, Error ellipse: s-maj=30.8km s-min=21.6km az=133.0*

JMA ***17*** *10:36:01.5±0.3, 39°.45N×143°.79E, h23^{km}, M3.7*

NIED ***17*** *10:36:01.6, 39°.45N×143°.79E, h23^{km}, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}2.35; $M_{\theta\theta}$0.03; $M_{\phi\phi}$-2.38; $M_{r\theta}$0.17; $M_{\theta\phi}$-0.95; $M_{\phi r}$0.26; Fault plane solution: $M_0$2.55000×10^{14} NP1:ϕ_s21.00000°, δ48.00000°, λ93.00000°. NP2:ϕ_s197.00000°, δ42.00000°, λ87.00000°.*

ISC 17 10:36:01.9±0.9**, 39°.40N**±0°.06×**143°.76E**±0°.09**, h11^{km}, n27, σ1^{s}.90**/29**, mb3.5**/8**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MIYJ	Miyakonagasawa	1.51	277	P	Pn	10 36 28.1	-0.8
JTH	Tanohata	1.56	291	P	Pn	10 36 28.4	-1.2
OFUJ	Ofunato	1.65	260	P	Pn	10 36 30.3	-0.6
JOM	Ohasama	1.91	273	P	Pn	10 36 34.2	-0.2
JMK	Ichinoseki	2.02	258	P	Pn	10 36 35.8	-0.1
JYK	Kaneyama	2.69	261	P	Pn	10 36 45.4	+0.3
JOT	Ohata	2.87	315	P	Pn	10 36 47.0	-0.5
JNBK	Urakawa-nobuka	2.98	345	P	Pn	10 36 49.4	+0.3
JNBK				*e*S	Sn	10 37 24.0	-0.8
JCH	Churui	3.23	355	P	Pn	10 36 51.9	-0.6
JCH				*e*S	Sn	10 37 28.9	-2.0
JFT	Otama	3.28	236	P	Pn	10 36 53.4	+0.2
JAK	Akkeshi	3.67	11	P	Pn	10 36 57.7	-0.8
JAK				S	Sn	10 37 39.1	-2.6
ASAJ	Asahikawa	4.79	350	Pn	Pn	10 37 14.8	+0.7
	1.1nm,0.3s,baz=172,slow=20,SNR=6.1						
ASAJ				Sn	Sn	10 38 06.0	-3.6
	0.1nm,0.3s,baz=331,slow=29,SNR=1.0						
MJAR	Matsushiro Arr	5.23	239	Pn	Pn	10 37 21.3	+1.3
	0.4nm,0.3s,baz=33,slow=14,SNR=22						
MAT	Matsushiro	5.23	239	P	Pn	10 37 21.5	+1.4
MAT				*e*S	Sn	10 38 19.1	-1.3
JHJ	Hachijo jima 2	7.04	208	Sn	Sn	10 38 58.8	-6.1
	11nm,0.3s,baz=250,slow=7.8,SNR=1.4						
USRK	Ussuriysk Ar.	10.01	302	Pn	Pn	10 38 29.3	+3.7
	baz=102,slow=13,SNR=5.1						
SEY	Seymchan	24.14	10	P	P	10 41 19.4	+1.8
	1.0nm,0.7s,baz=194,slow=8.3,SNR=6.1						
H11N2	WAKE ISLAND Hy	27.95	128	T	T	11 11 13.7	
	baz=316						
H11N1	WAKE ISLAND Hy	27.96	128	T	T	11 11 14.2	
	baz=316						
H11N3	WAKE ISLAND Hy	27.97	128	T	T	11 11 14.2	
	baz=316						
SONM	Songino Array	28.11	300	P	P	10 41 54.4	+0.6
	0.4nm,0.7s,baz=98,slow=10,SNR=2.2						
ZALV	Zalesovo Beam	41.74	310	P	P	10 43 51.0	+0.3
	1.2nm,0.6s,baz=96,slow=7.7,SNR=5.5						
MKAR	Makanchi Array	44.47	300	P	P	10 44 13.5	+0.5
	0.7nm,0.7s,baz=84,slow=9.3,SNR=8.2						
ILAR	Eielson Array	46.51	34	P	P	10 44 30.3	+1.4
	0.1nm,0.5s,baz=270,slow=6.3,SNR=1.9						
INK	Inuvik	51.44	28	P	P	10 45 07.6	+1.1
	0.3nm,0.5s,baz=292,slow=7.5,SNR=4.2						
WRA	Warramunga Arr	59.68	190	P	P	10 46 05.9	-0.4
	0.7nm,1.1s,baz=10,slow=7.0,SNR=1.9						
YKA	Yellowknife Ar	60.84	31	P	P	10 46 14.9	+1.1
	0.1nm,0.5s,baz=300,slow=5.4,SNR=1.9						

IDC 17 10:42:24.5±321.0**, 66°.71N**×**42°.63E, h0^{km}, Error ellipse: s-maj=134.7km s-min=44.5km az=115.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I37NO	I37NO	9.33	296	*i*		11 34 40.0	
	baz=93,slow=338,SNR=0.6						
I31KZ	AKTYUBINSK INF	18.11	147	*i*		12 32 40.0	
	baz=337,slow=342,SNR=4.1						
I46RU	ZALESOVO INFRA	23.90	102	*i*		13 09 30.0	
	baz=315,slow=331,SNR=1.6						
I18DK	QAANAAQ INFRAS	30.35	336	*i*		13 51 10.0	
	baz=37,slow=348,SNR=0.9						

OTT ***17*** *10:49:15.7±0.1, 45°.18N×67°.06W, h5^{km}, MN2.5/6*

OTT 11km northeast from Saint Andrews, Nb. Felt Northern Appalachians Seismic Zone. Felt at Bocabec, Pennfield, St Stephen, Nb.

LDO ***17*** *10:49:15.0, 45°.18N×67°.06W, h5^{km}*

ANF ***17*** *10:49:15.2±0.3, 45°.12N×67°.06W, h16^{km}±1^{km}, ML2.1/2, Error ellipse: s-maj=2.6km s-min=1.8km az=69.0*

NEIC ***17*** *10:49:15.3±1.1, 45°.13N±0°.02×67°.05W±0°.02, h6^{km}±7^{km}, Error ellipse: s-maj=2.8km s-min=1.8km az=188.0*

ISC 17 10:49:14.6±1.0**, 45°.11N**±0°.03×**67°.00W**±0°.02**, h18^{km}**±3^{km}**, n32, σ0^{s}.59**/53**, 1C, New Brunswick**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GGN	Saint George	0.11	88	⇑PG	Pg	10 49 18.7	+0.3
GGN				SG	Sg	10 49 21.1	+0.1
GGN				Trac		10 49 21.3	
	comp=Z,272nm,0.1s						
GGN	Saint George	0.11	88		Pg	10 49 18.7	+0.3
GGN				Sg	Sg	10 49 20.9	0.0
GGN				IAML		10 49 21.8	
	comp=N,152nm,0.1s						
H66A	Whiting	0.40	214	P	Pb	10 49 22.9	-0.2
	baz=24						
H66A				S	Sb	10 49 28.3	-0.6
	baz=24						
G65A	Princeton	0.41	282	P	Pg	10 49 22.8	-0.3
	baz=93,SNR=154						
G65A				S	Sg	10 49 27.9	-0.9
	baz=93						
G65A	Princeton	0.41	282	Pg	Pg	10 49 22.8	-0.3
G65A				Sg	Sg	10 49 27.8	-1.0
EMMW	East Machias	0.52	219	Pg	Pb	10 49 25.1	-0.1
EMMW				IAML		10 49 28.1	
	comp=N,45nm,3.9s						
EMMW				Sg	Sb	10 49 31.9	-0.4
EMMW				IAML		10 49 33.6	
	comp=N,40nm,1.0s						
HANN	Hanwell	0.78	12	PG	Pn	10 49 30.1	-0.7
HANN				SG	Sb	10 49 39.9	0.0
HANN				Trac		10 49 40.5	
	comp=N,25nm,0.1s						
H65A	Eastbrook	0.98	245	P	Pg	10 49 33.3	-0.4
	baz=60,SNR=41						
H65A				S	Sg	10 49 46.0	-0.6
	baz=60						
WCNB	Wards Creek	1.17	63	PG	Pg	10 49 36.9	-0.4
WCNB				SG	Sg	10 49 52.5	-0.2
WCNB				Trac		10 49 54.4	
	comp=N,23nm,0.2s						
SRNB	Snider Mountai	1.20	53	PG	Pg	10 49 37.4	-0.4
SRNB				SG	Sg	10 49 53.2	-0.2
SRNB				Trac		10 49 56.7	
	comp=N,4.8nm,0.1s						
F64A	Sherman	1.21	309	P	Pb	10 49 36.8	-0.2
	baz=126,SNR=22						
F64A				S	Sn	10 49 52.7	+0.2
	baz=126						
F64A	Sherman	1.21	309	Pg	Pg	10 49 37.4	-0.6
F64A				Sg	Sb	10 49 52.2	-0.1
F64A				IAML		10 49 53.8	
	comp=E,32nm,0.1s						
G64A	Maxfield	1.25	277	P	Pb	10 49 37.4	-0.3
	baz=93,SNR=100						
G64A				S	Sn	10 49 53.9	+0.4
	baz=93						
HKNB	Havelock Quarr	1.43	52	PG	Pg	10 49 41.0	-1.1
HKNB				SG	Sg	10 49 59.9	-0.8
HKNB				Trac		10 50 05.9	
	comp=E,38nm,0.2s						
E64A	Bridgewater	1.43	336	P	Pn	10 49 39.8	+0.2
	baz=156,SNR=7.9						
ELNB	Elgin, New Bru	1.49	60	PG	Pg	10 49 42.3	-1.1
ELNB				SG	Sg	10 50 02.6	-0.3
ELNB				Trac		10 50 07.4	
	comp=E,3.3nm,0.2s						
F63A	Nahmakanta, Br	1.60	292	P	Pn	10 49 42.0	+0.1
	baz=109,SNR=5.9						
F63A				Sb	Sb	10 50 03.9	+0.5
	baz=109						
F63A	Nahmakanta, Br	1.60	292	Pn	Pb	10 49 42.8	-0.7

PKME	Peaks-Kenny Pk	1.63	276	PN	Pn	10 49 43.0	+0.6
PKME				SG	Sb	10 50 05.2	+0.9
PKME				Trac		10 50 05.7	
	comp=E,40nm,0.2s						
PKME	Peaks-Kenny Pk	1.63	276	Sb	Sb	10 50 05.1	+0.9
	baz=92						
PKME	Peaks-Kenny Pk	1.63	276	Pn	Pb	10 49 44.1	0.0
E63A	Oxbow	1.65	323	Pn	Pb	10 49 45.0	+0.7
H64A	Troy	1.65	254	P	Pn	10 49 43.0	+0.3
	baz=70,SNR=12						
LMN	Caledonia Moun	1.71	64	PN	Pb	10 49 45.7	+0.2
LMN				SN	Sg	10 50 08.5	-1.2
LMN				Trac		10 50 09.7	
	comp=E,50nm,0.6s						
SVNB	Stilesville Qu	1.82	54	PN	Pb	10 49 47.3	-0.1
SVNB				SN	Sb	10 50 10.3	+0.5
SVNB				Trac		10 50 15.8	
	comp=E,11nm,0.1s						
G63A	Kingsbury	1.86	271	P	Pn	10 49 45.9	+0.4
	baz=87,SNR=7.5						
D63A	Stockholm	2.07	338	P	Pn	10 49 49.0	+0.5
	baz=158,SNR=13						
H63A	New Sharon	2.21	259	S	Sn	10 50 17.7	+0.6
	baz=75						
BATG	Bathurst New B	2.26	16	PN	Pn	10 49 52.4	+1.4
BATG				SN	Sn	10 50 18.4	0.0
BATG				LG	Lg	10 50 25.2	
BATG				Trac		10 50 28.4	
	comp=E,4.7nm,0.1s						
BATG	Bathurst New B	2.26	16	Pg	Pg	10 49 57.8	-0.1
G62A	West of Eustis	2.50	274	Pn	Pn	10 49 55.3	+0.9
G62A				Pg	Pb	10 49 59.8	+0.8
H62A	Milan	3.01	261	S	Sn	10 50 37.0	+0.2
	baz=77						

*IDC **17** 10:59:07.8±1.1, 10°.81N×126°.28E, h0^{km}, mb3.9/9, mb1 4.0/9, mb1mx3.7/42, mbtmp3.9/9, MS2.8/1, Ms1 2.8/1, ms1mx2.3/46, Error ellipse: s-maj=115.7km s-min=16.6km az=70.0*

*MAN **17** 10:59:09.8, 10°.84N×126°.50E, h24^{km}, mb4.6, ML3.5, MS3.3*

ISC 17 10:59:08.1±2.2**, 10°.80N**±0°.06×**126°.40E**±0°.08**, h3**^{km}±13^{km}**, n17, σ0^{s}.62**/22**, mb4.0**/9**, 1C, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLSP	General Luna,	1.04	195	*e*P	Pb	10 59 29.0	+0.2
GLSP				*e*S	Sn	10 59 44.8	+0.1
BESP	Borongan	1.24	310	*e*P	Pg	10 59 32.4	+0.6
BESP				*e*S	Sn	10 59 49.6	+0.2
MSLP	Maasin	1.66	247	*e*P	Pb	10 59 39.4	+0.2
MSLP				*e*S	Sb	11 00 00.7	+0.2
OCLP	Ormoc	1.78	278	*e*P	Pn	10 59 40.0	+0.3
OCLP				*e*S	Sg	11 00 04.3	-0.9
CNP	Catarman	2.41	315	*e*P	Pn	10 59 48.3	0.0
CNP				*e*S	Sn	11 00 18.4	+0.1
KCP	Kidapawan	3.98	199	⇑*e*P	Pb	11 00 18.0	-1.0
KSRS	Korea Array	26.57	3	LR	LR	11 14 45.8	
	comp=Z,20nm,21.4s,baz=0.0,slow=35						
FITZ	Fitzroy Crossi	28.72	182	P	P	11 05 06.8	0.0
	1.8nm,0.9s,baz=0.0,slow=10,SNR=1.8						
WRA	Warramunga Arr	31.53	166	P	P	11 05 31.4	-0.3
	0.3nm,0.8s,baz=345,slow=9.1,SNR=1.6						
ASAR	Alice Springs	35.03	168	P	P	11 06 02.9	+0.6
	0.5nm,0.7s,baz=356,slow=6.5,SNR=3.0						
ASAR				PcP	PcP	11 08 35.4	+1.0
	0.3nm,0.7s,baz=9.5,slow=2.3,SNR=2.0						
SONM	Songino Array	40.57	339	P	P	11 06 49.1	+0.2
	0.4nm,0.7s,baz=168,slow=7.4,SNR=3.5						
STKA	Stephens Creek	44.86	162	P	P	11 07 24.4	+0.6
	2.8nm,0.7s,baz=348,slow=8.7,SNR=4.6						
MKAR	Makanchi Array	51.69	322	P	P	11 08 16.6	+0.1
	1.1nm,0.6s,baz=121,slow=8.5,SNR=14						
ZALV	Zalesovo Beam	54.23	331	P	P	11 08 34.9	-0.1
	0.5nm,0.3s,baz=108,slow=4.7,SNR=4.2						
ARCES	ARCESS Array B	83.75	340	P	P	11 11 37.4	-0.9
	2.7nm,0.9s,baz=73,slow=6.1,SNR=4.5						
FINES	FINESS Array B	85.49	332	P	P	11 11 45.8	-1.3
	1.6nm,0.7s,baz=90,slow=5.7,SNR=5.9						
PLCA	Paso Flores	146.64	156	PKPbc	PKPab	11 18 52.2	-0.4
	2.3nm,1.1s,baz=270,slow=5.1,SNR=4.8						

IDC 17 11:01:21.4±396.0**, 46°.31N×64°.64E, h0**^{km}**, Error ellipse: s-maj=184.9km s-min=118.3km az=153.0, Western Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I31KZ	AKTYUBINSK INF	6.01	315	*i*		11 40 27.8	
	baz=131,slow=328						
I46RU	ZALESOVO INFRA	14.99	52	*i*		12 32 00.0	
	baz=249,slow=314,SNR=0.8						
I34MN	SONGINO INFRAS	28.25	72	*i*		13 54 20.0	
	baz=283,slow=324						
I45RU	USSURIYSK INFR	46.14	67	*i*		15 43 30.0	
	baz=298,slow=328,SNR=1.2						

*IDC **17** 11:09:45.9±4.9, 19°.00S×177°.10W, h241^{km}±45^{km}, mb3.3/4, mb1 3.5/5, mb1mx3.2/31, mbtmp3.9/5, Error ellipse: s-maj=39.7km s-min=18.7km az=81.0*

*NEIC **17** 11:10:15.1±1.5, 20°.0S±0°.1×177°.6W±0°.2, h542^{km}±17^{km}, mb4.3/16, Error ellipse: s-maj=29.6km s-min=13.8km az=50.0*

ISC 17 11:10:12.7±0.9**, 20°.0S**±0°.2×**177°.7W**±0°.2**, h500**^{km}**, n25, σ0^{s}.88**/24**, mb4.1**/10**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.65	299	P	P	11 11 44.8	+8.1
AFI	Afiamalu	8.30	44	P	P	11 12 12.9	+0.5
OUZ	Omahuta	16.98	205	P	P	11 13 46.0	+2.6
URZ	Urewera	18.72	193	P	P	11 13 58.7	-0.8
	1.2nm,0.3s,baz=286,slow=5.0,SNR=14						
URZ				S	S	11 17 29.6	+25
	0.1nm,0.3s,baz=286,slow=22,SNR=1.1						
URZ	Urewera	18.72	193	P	P	11 13 58.9	-0.6
URZ				IAmb	IAmb	11 14 07.5	
	comp=Z,10nm,1.1s						
BKZ	Black Stump Fm	19.72	194	P	P	11 14 08.8	0.0
BKZ				IAmb	IAmb	11 14 20.0	
	comp=Z,14nm,1.4s						
QRZ	Quartz Range	22.35	200	P	P	11 14 33.1	+0.7
THZ	Tophouse	23.09	198	P	P	11 14 39.1	0.0
THZ				IAmb	IAmb	11 14 40.1	
	comp=Z,12nm,1.2s						
WHZ	Wether Hill Ro	28.38	201	P	P	11 15 25.4	-0.3
STKA	Stephens Creek	38.27	244	P	P	11 16 50.8	+1.1
	comp=Z,0.9nm,0.5s,baz=85,slow=9.4,SNR=2.9						
STKA	Stephens Creek	38.27	244	P	P	11 16 48.2	-1.5
BBOO	Buckleboo	43.03	243	P	P	11 17 26.7	-1.1
BBOO				IAmb	IAmb	11 17 48.3	
	comp=Z,15nm,1.1s						
WR0	Warramunga Arr	44.78	262	P	P	11 17 41.6	+0.1
WR0				IAmb	IAmb	11 17 49.5	
	comp=Z,8.4nm,1.4s						
AS31	Alice Springs	44.92	256	P	P	11 17 43.2	+0.6
ASAR	Alice Springs	44.93	256	P	P	11 17 43.2	+0.6
	comp=Z,0.7nm,0.6s,baz=89,slow=8.0,SNR=13						
ASAR	Alice Springs	44.93	256	P	P	11 17 43.1	+0.5
WB0	Warramunga Arr	44.95	262	P	P	11 17 42.9	+0.1
WB0				IAmb	IAmb	11 17 52.9	
	comp=Z,14nm,1.4s						
WB2	Warramunga Arr	44.96	262	P	P	11 17 43.2	+0.3
WB2				IAmb	IAmb	11 17 56.0	
	comp=Z,19nm,1.5s						
WRAB	Tennant Creek	44.96	262	P	P	11 17 43.4	+0.5
WRAB				IAmb	IAmb	11 17 55.6	
	comp=Z,9.9nm,1.3s						
WRA	Warramunga Arr	44.97	262	P	P	11 17 43.2	+0.3
	comp=Z,0.7nm,0.3s,baz=98,slow=7.0,SNR=31						
WRA	Warramunga Arr	44.97	262	P	P	11 17 43.2	+0.3
FITZ	Fitzroy Crossi	53.39	262	P	P	11 18 45.8	+0.4
	comp=Z,1.7nm,0.9s,baz=64,slow=7.6,SNR=1.7						
FITZ	Fitzroy Crossi	53.39	262	P	P	11 18 45.2	-0.2
FITZ				IAmb	IAmb	11 18 47.9	
	comp=Z,14nm,1.5s						
QSPA	South Pole Qui	70.04	180	P	P	11 20 33.8	+0.2
GERES	GERESS Array B	149.83	345	PKPbc	PKPbc	11 29 04.9	-1.1
	comp=Z,0.3nm,0.3s,baz=338,slow=2.1,SNR=3.8						

*SJA **17** 11:28:03.5±0.6, 24°.52S×69°.53W, h97^{km}±5^{km}, ML4.0, MW4.0*

*NEIC **17** 11:28:03.8±2.3, 24°.56S±0°.04×69°.42W±0°.06, h90^{km}±6^{km}, Error ellipse: s-maj=8.2km s-min=5.3km az=107.0*

*IDC **17** 11:28:03.9±0.9, 24°.60S×69°.36W, h85^{km}±6^{km}, mb3.6/6, mb1 3.8/8, mb1mx3.6/26, mbtmp3.9/8, MS2.7/1, Ms1 2.9/1, ms1mx2.3/21, Error ellipse: s-maj=24.6km s-min=10.7km az=100.0*

*GUC **17** 11:28:03.4±0.7, 24°.58S×69°.34W, h82^{km}±5^{km}, ML4.2*

ISC 17 11:28:03.6±0.6**, 24°.57S**±0°.03×**69°.46W**±0°.04**, h86**^{km}±5^{km}**, n76, σ1^{s}.40**/104**, mb4.0**/6**, 1C-4D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO02	Mina Guanaco	0.60	191	*e*P	Pn	11 28 19.3	+0.2
GO02				*i* S	Sn	11 28 31.2	+0.5
GO02				IAML		11 28 35.0	
	comp=N,8μm,0.2s						
GO02	Mina Guanaco	0.60	191		Pn	11 28 19.5	+0.3
GO02				Sn	Sn	11 28 31.1	+0.5
PB14	IPOC Station P	0.86	266	*e*P	Pn	11 28 22.8	+1.1
PB14				IAML		11 28 41.6	
	comp=N,3μm,0.2s						
PB14	IPOC Station P	0.86	266	Pn	Pn	11 28 22.9	+1.1
PB14				Sn	Sn	11 28 37.0	+1.7
PB14	IPOC Station P	0.86	266	*e*P	Pn	11 28 22.9	+1.1
PB14				*e*S	Sn	11 28 37.2	+1.9
PB14				IAML		11 28 41.4	
	comp=Z,3μm,0.1s						
PB15	IPOC Station P	1.36	360	*e*P	Pn	11 28 28.2	+0.6
PB15				*i* S	Sn	11 28 46.6	+1.0
PB15	IPOC Station P	1.36	360		Pn	11 28 28.3	+0.6
PB15				Sn	Sn	11 28 46.1	+0.4
PB15	IPOC Station P	1.36	360	*e*P	Pn	11 28 28.4	+0.8
PB15				*e*S	Sn	11 28 47.1	+1.5
PB10	IPOC Station P	1.45	316	*e*P	Pn	11 28 30.1	+1.5
PB10				*i* S	Sn	11 28 50.2	+2.8
PB10				IAML		11 28 55.0	
	comp=N,2μm,0.3s						
PB10	IPOC Station P	1.45	316		Pn	11 28 30.0	+1.5
PB10				Sn	Sn	11 28 47.1	-0.2
PB10	IPOC Station P	1.45	316	*e*P	Pn	11 28 30.0	+1.5
PB10				*e*S	Sn	11 28 47.8	+0.4
PB10				IAML		11 28 54.7	
	comp=Z,1μm,0.2s						
PB05	IPOC Station P	1.84	338	*e*P	Pn	11 28 34.7	+1.0
PB05				*i* S	Sn	11 29 00.2	+3.6
PB05				IAML		11 29 04.7	
	comp=E,2μm,0.3s						
PB05	IPOC Station P	1.84	338	*e*P	Pn	11 28 34.7	+1.0
PB05				*e*S	Sn	11 29 00.0	+3.4
PB05				IAML		11 29 04.0	
	comp=Z,1μm,0.8s						
PB06	IPOC Station P	1.86	357	*e*P	Pn	11 28 34.7	+0.7
PB06				*i* S	Sn	11 28 58.4	+1.3
PB06				IAML		11 29 04.3	
	comp=E,2μm,0.1s						
PB06	IPOC Station P	1.86	357		Pn	11 28 34.8	+0.8
PB06				Sn	Sn	11 28 57.9	+0.8
PB06	IPOC Station P	1.86	357	*e*S	Sn	11 28 58.2	+1.1
PB06				IAML		11 29 05.0	
	comp=Z,1μm,0.3s						
AC01	Pan de Azucar	1.87	213	⇑*i*P	Pn	11 28 34.7	+0.6
AC01				*i* S	Sn	11 28 59.2	+2.1
AC01				IAML		11 29 03.5	
	comp=N,2μm,0.3s						
AC01	Pan de Azucar	1.87	213		Pn	11 28 34.8	+0.8
AC01				Sn	Sn	11 28 55.0	-2.2
LVC	Limon Verde	2.02	15	P	Pn	11 28 36.7	+0.5
	comp=N,48nm,0.3s,baz=156,slow=9.1,SNR=244						
LVC				S	Sn	11 29 01.7	+0.6
	comp=N,66nm,0.3s,baz=180,slow=16,SNR=13						
LVC	Limon Verde	2.02	15	*e*P	Pn	11 28 36.8	+0.5
LVC				*i* S	Sn	11 29 02.0	+0.9
LVC	Limon Verde	2.02	15	*e*P	Pn	11 28 36.8	+0.5
LVC				*e*S	Sn	11 29 03.4	+2.3
LVC				IAML		11 29 04.8	
	comp=Z,561nm,0.3s						
AC02	Maricunga	2.27	172	*e*P	Pn	11 28 41.0	+1.2
AC02				IAML		11 29 14.3	
	comp=E,1μm,0.2s						
AC02	Maricunga	2.27	172	Pn	Pn	11 28 41.0	+1.2
PB04	IPOC Station P	2.32	344	IAML		11 29 16.8	
	comp=E,1μm,0.3s						
PB04	IPOC Station P	2.32	344		Pn	11 28 40.3	+0.2
PB04	IPOC Station P	2.32	344	*e*P	Pn	11 28 40.7	+0.7
PB04				*e*S	Sn	11 29 08.2	+0.3
PB04				IAML		11 29 21.3	
	comp=Z,950nm,0.3s						
PB09	IPOC Station P	2.77	4	*e*P	Pn	11 28 46.8	+0.7
PB09				IAML		11 29 30.7	
	comp=E,1μm,0.7s						
PB09	IPOC Station P	2.77	4		Pn	11 28 47.3	+1.2
PB09	IPOC Station P	2.77	4	*e*P	Pn	11 28 47.2	+1.0
PB09				*e*S	Sn	11 29 30.1	+11
PB09				IAML		11 29 32.8	
	comp=Z,1μm,0.4s						
PB07	IPOC Station P	2.86	352	⇓*i*P	Pn	11 28 47.4	0.0
PB07				*i* S	Sn	11 29 23.1	+2.1
PB07				IAML		11 29 30.5	
	comp=E,1μm,0.1s						
PB07	IPOC Station P	2.86	352		Pn	11 28 47.3	0.0
GO03	Copiap	3.09	193	*e*P	Pn	11 28 50.2	-0.1
GO03				*i* S	Sn	11 29 27.9	+1.6
GO03				IAML		11 29 33.2	
	comp=N,521nm,0.6s						
GO03	Copiap	3.09	193		Pn	11 28 50.5	+0.3
GO03	Copiap	3.09	193	*e*P	Pn	11 28 52.1	+1.8
GO03				*e*S	Sn	11 29 28.6	+2.3
FSA	Cafayete	3.51	117	*e*P	Pn	11 28 57.8	+1.7
PB01	IPOC Station P	3.51	360	⇓*i*P	Pn	11 28 55.9	-0.2
PB01				*i* S	Sn	11 29 38.5	+1.8
PB01				IAML		11 29 51.6	
	comp=E,986nm,0.4s						
PB01	IPOC Station P	3.51	360		Pn	11 28 56.0	-0.2
SLA	San Lorenzo	3.61	93	*e*P	Pn	11 29 00.0	+2.6
PATCX	Punta Patache	3.79	350	⇓*i*P	Pn	11 28 58.6	-1.2
PATCX	Punta Patache	3.79	350	Pn	Pn	11 28 58.6	-1.2
AC04	Llanos de Chal	3.90	201	Pn	Pn	11 29 00.1	-1.1
TA01	Diego Aracena	4.04	350	⇓*i*P	Pn	11 29 01.6	-1.6
TA01	Diego Aracena	4.04	350	Pn	Pn	11 29 01.8	-1.4
AC05	El Transito	4.31	189	*e*P	Pn	11 29 07.6	+0.7
AC05				*i* S	Sn	11 29 58.1	+2.1
AC05	El Transito	4.31	189	Pn	Pn	11 29 06.9	0.0
YJA	Yavi	4.34	57	*e*P	Pn	11 29 10.3	+2.6
PB08	IPOC Station P	4.42	4	*e*P	Pn	11 29 08.1	-0.6
PB08	IPOC Station P	4.42	4		Pn	11 29 08.2	-0.5
LCO	Las Campanas	4.56	194	Pn	Pn	11 29 09.3	-1.1
PSGC	Pisagua	4.99	353	*e*P	Pn	11 29 13.7	-2.5
PSGCX	Pisagua	4.99	353	Pn	Pn	11 29 14.0	-2.2
CO01	Juntas del Tor	5.41	186		Pn	11 29 22.6	+0.6
MNMC	Minye Minye	5.42	359	Pn	Pn	11 29 21.1	-1.1
GO04	Tololo Observa	5.70	192		Pn	11 29 25.2	-0.8
CO03	El Pedregal	6.34	190		Pn	11 29 35.8	+1.3
CO02	Combarbal	6.74	191		Pn	11 29 38.6	-1.5
LPAZ	La Paz	8.34	9	P	Pn	11 30 03.1	+0.8
	comp=E,0.6nm,0.3s,baz=203,slow=5.8,SNR=15						
LPAZ				LR	LR	11 34 06.1	
	comp=E,50nm,18.3s,baz=78,slow=43						
LPAZ	La Paz	8.34	9		Pn	11 30 03.5	+1.2
MT02	Curacav	8.78	189	Pn	Pn	11 30 10.2	+2.5
RFA	San Rafael	10.20	175	*e*P	Pn	11 30 27.6	+0.5
SIV	San Ignacio	11.61	44	P	Pn	11 30 41.9	-4.5
	comp=E,8.8nm,0.3s,baz=255,slow=8.3,SNR=105						
SIV				S	Sn	11 32 41.3	-13
	comp=E,0.1nm,0.3s,baz=267,slow=17,SNR=1.8						
BDFB	Brasilia	21.99	70	P	P	11 32 50.2	-0.7
	comp=E,2.3nm,0.5s,baz=222,slow=12,SNR=4.3						
BDFB	Brasilia	21.99	70	P	P	11 32 50.8	-0.2
BDFB				IAmb	IAmb	11 32 55.7	
	comp=Z,19nm,1.6s						
TXAR	Lajitas Array	62.87	327	P	P	11 38 22.4	+1.6
	comp=Z,0.3nm,0.7s,baz=142,slow=4.6,SNR=2.8						
PDAR	Pinedale Array	76.52	331	P	P	11 39 44.6	+0.1
	comp=Z,0.2nm,0.6s,baz=126,slow=4.6,SNR=1.9						
PDAR				pP	pP	11 40 07.4	-0.1
	comp=Z,0.1nm,0.5s,baz=78,slow=5.6,SNR=2.2						
ULM	Lac du Bonnet	78.09	343	P	P	11 39 53.3	+0.6
	comp=Z,3.0nm,1.2s,baz=140,slow=6.5,SNR=4.4						
ULM	Lac du Bonnet	78.09	343	P	P	11 39 53.2	+0.4
ULM				IAmb	IAmb	11 40 38.5	
	comp=Z,23nm,1.9s						
TORD	Torodi Ar. Bea	78.88	70	P	P	11 39 57.5	-0.4
	comp=Z,2.2nm,0.5s,baz=261,slow=4.6,SNR=15						
TORD				pP	pP	11 40 20.4	-1.2
	comp=Z,2.5nm,0.6s,baz=257,slow=5.5,SNR=4.7						
TORD	Torodi Ar. Bea	78.88	70	P	P	11 39 57.8	-0.1
YKA	Yellowknife Ar	93.90	341	P	P	11 41 10.8	-0.2
	comp=Z,0.3nm,0.7s,baz=130,slow=5.5,SNR=6.0						
YKA				pP	pP	11 41 33.8	-0.9
	comp=Z,0.3nm,0.7s,baz=137,slow=5.0,SNR=4.2						
ASAR	Alice Springs	126.96	207	PKP	PKiKP	11 46 58.7	-0.1
	comp=Z,0.5nm,0.5s,baz=132,slow=1.7,SNR=11						
ASAR	Alice Springs	126.96	207	PKPdf	PKPdf	11 46 56.5	-1.8
WRA	Warramunga Arr	130.05	210	PKP	PKiKP	11 47 04.4	-0.6
	comp=Z,0.2nm,0.3s,baz=155,slow=1.8,SNR=14						
ZALV	Zalesovo Beam	144.93	27	PKP	PKPdf	11 47 30.9	+0.6
	comp=Z,3.0nm,0.7s,baz=299,slow=4.5,SNR=12						
MKAR	Makanchi Array	148.38	38	PKPbc	PKiKP	11 47 40.6	-1.0
	comp=Z,0.7nm,0.6s,baz=344,slow=2.1,SNR=9.6						
MKAR				pPKPbc	pPKPbc	11 48 03.9	-0.7
	comp=Z,0.2nm,0.5s,baz=327,slow=2.3,SNR=2.8						
MKAR	Makanchi Array	148.38	38	PKPbc	PKiKP	11 47 40.7	-0.9

IDC 17 11:39:50.4±2.3**, 55°.57S×27°.11W, h0**^{km}**, mb3.8**/2**, mb1 3.9**/2**, mb1mx3.8**/20**, mbtmp3.8**/2**, Error ellipse: s-maj=96.7km s-min=51.7km az=7.0, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	50.14	305	P	P	11 48 47.8	-0.3
	0.7nm,0.5s,baz=180,slow=8.1,SNR=2.8						
TORD	Torodi Ar. Bea	72.61	29	P	P	11 51 19.4	+0.1
	0.6nm,0.7s,baz=202,slow=7.9,SNR=1.3						
ILAR	Eielson Array	149.83	312	PKPbc	PKPbc	11 59 40.6	-0.2
	0.5nm,0.8s,baz=122,slow=2.8,SNR=5.5						
SONM	Songino Array	150.65	86	PKPbc	PKPbc	11 59 42.9	-0.5
	0.3nm,0.5s,baz=237,slow=4.0,SNR=2.9						

*IDC **17** 11:56:05.8±1.5, 3°.42S×145°.28E, h0^{km}, mb3.9/4, mb1 4.1/6, mb1mx3.8/31, mbtmp3.9/6, ML3.9/1, MS3.3/7, Ms1 3.3/7, ms1mx3.0/37, Error ellipse: s-maj=43.0km s-min=24.8km az=107.0*

*NEIC **17** 11:56:06.6±0.9, 3°.4S±0°.1×145°.5E±0°.1, h10^{km}±1^{km}, mb4.1/6, Error ellipse: s-maj=27.8km s-min=6.3km az=130.0*

ISC 17 11:56:09.3±1.1**, 3°.5S**±0°.1×**145°.3E**±0°.2**, h23**^{km}**, n22, σ0^{s}.68**/17**, mb4.1**/4**, MS3.2**/5**, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANU	Manus Island	2.51	56	Pn	Pn	11 56 43.1	-5.6
PMG	Port Moresby	6.20	163	Pn	Pn	11 57 40.6	+1.2
	0.7nm,0.3s,baz=342,slow=20,SNR=2.6						
PMG	Port Moresby	6.20	163		Pn	11 57 39.0	-0.3
SIJI	Sorong	14.24	280	LR	LR	12 05 42.6	
	comp=Z,36nm,19.7s,baz=22,slow=40						
WB0	Warramunga Arr	19.39	212	P	P	12 00 33.9	+0.1
WB0				IAmb	IAmb	12 00 49.7	
	comp=Z,12nm,1.1s						
WR0	Warramunga Arr	19.46	212	P	P	12 00 34.9	+0.3
WR0				IAmb	IAmb	12 00 42.1	
	comp=Z,11nm,0.9s						
WRAB	Tennant Creek	19.55	212	P	Pn	12 00 35.9	-1.0
WRAB				IAmb	IAmb	12 00 39.7	
	comp=Z,11nm,0.9s						
WB2	Warramunga Arr	19.55	212	P	Pn	12 00 36.4	-0.6
WRA	Warramunga Arr	19.56	212	P	P	12 00 35.7	0.0
	comp=Z,0.4nm,0.3s,baz=40,slow=12,SNR=30						
WRA				LR	LR	12 08 34.0	
	comp=Z,106nm,18.1s,baz=25,slow=38						
WRA	Warramunga Arr	19.56	212	P	Pn	12 00 36.4	-0.7
AS31	Alice Springs	22.90	208	P	P	12 01 11.8	+0.1
ASAR	Alice Springs	22.91	208	P	P	12 01 12.0	+0.3
	comp=Z,0.9nm,0.6s,baz=33,slow=12,SNR=13						
ASAR				LR	LR	12 11 16.9	
	comp=Z,88nm,21.2s,baz=352,slow=40						
ASAR	Alice Springs	22.91	208	P	P	12 01 11.9	+0.3
FITZ	Fitzroy Crossi	24.12	231	P	P	12 01 23.1	-0.5
	comp=Z,4.6nm,0.7s,baz=50,slow=12,SNR=8.9						
FITZ				LR	LR	12 11 22.9	
	comp=Z,65nm,18.6s,baz=35,slow=38						
FITZ	Fitzroy Crossi	24.12	231	P	P	12 01 23.9	+0.2
STKA	Stephens Creek	28.48	187	LR	LR	12 13 24.5	
	comp=Z,60nm,18.9s,baz=24,slow=36						
JNU	Nakatsue	38.85	341	LR	LR	12 19 42.5	
	comp=Z,110nm,18.2s,baz=355,slow=36						
KSRS	Korea Array	43.79	340	LR	LR	12 21 04.4	
	comp=Z,51nm,18.4s,baz=300,slow=34						
CMAR	Chiang Mai Arr	50.56	297	P	P	12 05 07.4	+0.9
	comp=Z,0.7nm,0.3s,baz=116,slow=4.1,SNR=3.2						
IMAR	Indian Mountai	81.74	21	P	P	12 08 26.0	+0.2
ILAR	Eielson Array	83.84	24	P	P	12 08 36.1	-0.6
	comp=Z,1.1nm,0.9s,baz=255,slow=4.6,SNR=7.3						
ILAR	Eielson Array	83.84	24	P	P	12 08 35.5	-1.2

IDC 17 12:07:03.2±2.2**, 55°.83S×31°.20W, h0**^{km}**, mb3.8**/2**, mb1 4.0**/2**, mb1mx3.8**/19**, mbtmp3.8**/2**, Error ellipse: s-maj=95.4km s-min=47.6km az=13.0, South Georgia Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	48.45	310	P	P	12 15 47.6	-0.4
	1.0nm,0.4s,baz=176,slow=7.8,SNR=7.5						
TORD	Torodi Ar. Bea	74.04	33	P	P	12 18 40.8	+0.1
	0.2nm,0.4s,baz=207,slow=6.6,SNR=1.2						
ILAR	Eielson Array	148.29	313	PKPbc	PKPbc	12 26 49.6	-0.2
	0.7nm,0.7s,baz=111,slow=1.5,SNR=12						
SONM	Songino Array	152.97	89	PKPbc	PKPbc	12 27 01.1	-0.5
	0.3nm,0.5s,baz=250,slow=4.2,SNR=2.7						

*IDC **17** 12:11:32.0±0.9, 2°.81N×126°.27E, h0^{km}, mb3.7/8, mb1 3.9/9, mb1mx3.7/51, mbtmp3.8/9, ML3.6/1, MS3.0/1, Ms1 3.0/1, ms1mx2.4/44, Error ellipse: s-maj=53.3km s-min=15.4km az=71.0*

*DJA **17** 12:11:37.4±2.4, 3°N±7°×12°7E±°, h15^{km}±27^{km}, M4.2/7, mb4.7/1, mB4.9/1, MLv3.9/7, Mw(mB)4.2/1*

*NEIC **17** 12:11:40.0±1.5, 2°.9N±0°.1×126°.6E±0°.1, h70^{km}±9^{km}, mb4.1/9, Error ellipse: s-maj=19.3km s-min=11.7km az=51.0*

ISC 17 12:11:40.5±0.7**, 2°.91N**±0°.07×**126°.7E**±0°.1**, h63**^{km}**, n31, σ1^{s}.66**/28**, mb4.0**/10**, 1C, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	1.37	304	P	Pn	12 12 01.6	-1.9
TNTI	Ternate	2.24	162	Pn	Pn	12 12 15.2	0.0
TNTI	Ternate	2.24	162	P	Pn	12 12 15.3	0.0
GTOI	Gorontalo	4.29	238	P	Pn	12 12 43.2	-0.1
KCP	Kidapawan	4.36	339	⇑*i*P	Pn	12 12 50.4	+6.1
KCP				*i* S	Sn	12 13 39.5	+5.6
MRSI	Marisa	5.30	243	P	Pn	12 12 58.3	+1.2
LUWI	Luwuk	5.53	225	Pn	Pn	12 13 02.9	+2.7
SIJI	Sorong	5.94	129	Pn	Pn	12 13 06.7	+0.8
	1.3nm,0.3s,baz=300,slow=24,SNR=5.3						
TOLI2	Tolitoli	6.14	253	Pn	Pn	12 13 07.4	-1.3
APSI	Ampana	6.29	233	P	Pn	12 13 15.6	+5.0
FAKI	Fak Fak	8.05	136	Pn	Pn	12 13 36.2	+1.4
PBKI	Pangkalan Bun	15.99	250	P	Pn	12 15 10.1	-12
FITZ	Fitzroy Crossi	20.90	183	P	P	12 16 16.3	-1.5
	1.5nm,0.5s,baz=7.4,slow=11,SNR=10						
FITZ	Fitzroy Crossi	20.90	183	P	P	12 16 17.0	-0.8
FITZ				IAmb	IAmb	12 16 39.0	
	comp=Z,11nm,1.4s						
WB0	Warramunga Arr	23.78	162	P	P	12 16 46.0	-1.5
PMG	Port Moresby	23.81	121	LR	LR	12 27 55.4	
	comp=Z,32nm,18.3s,baz=274,slow=41						
WRAB	Tennant Creek	23.93	162	P	P	12 16 47.6	-1.2
WRAB				IAmb	IAmb	12 16 56.1	
	comp=Z,7.1nm,1.1s						
WRA	Warramunga Arr	23.93	162	P	P	12 16 47.2	-1.6
	comp=Z,2.0nm,0.3s,baz=340,slow=10,SNR=58						
WRA	Warramunga Arr	23.93	162	P	P	12 16 47.4	-1.4
WB2	Warramunga Arr	23.93	162	P	P	12 16 47.6	-1.3
WB2				IAmb	IAmb	12 17 10.9	
	comp=Z,11nm,1.2s						
WR0	Warramunga Arr	24.01	162	P	P	12 16 48.3	-1.3
WR0				IAmb	IAmb	12 16 59.6	
	comp=Z,12nm,1.3s						

AS31	Alice Springs	27.34	165	P	P	12 17 18.3	-1.5
ASAR	Alice Springs	27.34	165	P	P	12 17 18.6	-1.1
	comp=Z,0.6nm,0.5s,baz=342,slow=12,SNR=16						
BBOO	Buckleboo	36.63	167	P	P	12 18 41.2	+0.4
STKA	Stephens Creek	37.40	159	P	P	12 18 46.9	-0.5
	comp=Z,0.9nm,0.4s,baz=3.5,slow=8.1,SNR=4.8						
STKA	Stephens Creek	37.40	159	P	P	12 18 47.0	-0.5
USRK	Ussuriysk Ar.	41.38	6	P	P	12 19 20.6	+0.2
	comp=Z,2.2nm,0.8s,baz=202,slow=9.7,SNR=4.0						
SONM	Songino Array	48.05	342	P	P	12 20 13.6	0.0
	comp=Z,0.1nm,0.3s,baz=126,slow=7.3,SNR=1.7						
MKAR	Makanchi Array	58.19	326	P	P	12 21 27.2	-0.8
	comp=Z,0.3nm,0.4s,baz=118,slow=7.5,SNR=5.7						
MKAR	Makanchi Array	58.19	326	P	P	12 21 27.0	-1.0
KURBB	Kurchatov Arra	62.39	328	P	P	12 21 55.5	-1.1
	comp=Z,0.5nm,0.7s,baz=121,slow=6.0,SNR=5.0						

IDC 17 12:33:31.0±999.0**, 51°.39N×31°.97E, h0^{km}, Error ellipse: s-maj=424.7km s-min=136.0km az=36.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I43RU	DUBNA INFRASON	6.17	28	*i*		13 06 10.0	
	baz=211,slow=329,SNR=1.5						
I31KZ	AKTYUBINSK INF	16.45	83	*i*		14 15 50.0	
	baz=283,slow=319,SNR=0.8						
I46RU	ZALESOVO INFRA	31.54	64	*i*		15 48 00.0	
	baz=283,slow=329,SNR=1.7						
I34MN	SONGINO INFRAS	46.46	64	*i*		17 23 00.0	
	baz=304,slow=335,SNR=0.6						

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*IDC **17** 12:45:05.7±2.4, 8°.26S×119°.70E, h199^{km}±21^{km}, mb2.5/2, mb1 2.8/6, mb1mx2.7/35, mbtmp3.3/6, Error ellipse: s-maj=64.9km s-min=14.9km az=53.0*

ISC 17 12:45:05.9±1.2**, 8°.3S**±0°.1×**119°.9E**±0°.2**, h200^{km}, n6, σ3^{s}05**/9**, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAPI	Kappang	3.25	357	P	Pn	12 45 58.8	+0.3
	4.4nm,0.3s,baz=164,slow=21,SNR=5.7						
BATI	Baumata	4.16	118	P	Pn	12 46 10.8	+1.1
	6.1nm,0.3s,baz=244,slow=2.0,SNR=7.9						
BATI				S	Sn	12 46 56.8	-3.0
	1.9nm,0.3s,baz=275,slow=15,SNR=1.4						
FITZ	Fitzroy Crossi	11.23	151	P	Pn	12 47 42.6	+1.5
	0.1nm,0.3s,baz=322,slow=16,SNR=1.3						
FITZ				S	Sn	12 49 42.0	-4.4
	0.2nm,0.3s,baz=194,slow=21,SNR=6.2						
WRA	Warramunga Arr	18.14	131	P	Pn	12 49 05.5	-0.2
	0.1nm,0.3s,baz=308,slow=10,SNR=8.2						
WRA				S	S	12 52 25.1	+4.3
	0.0nm,0.3s,baz=307,slow=24,SNR=2.4						
ASAR	Alice Springs	20.34	140	P	P	12 49 28.9	+1.9
	0.3nm,0.6s,baz=316,slow=10,SNR=7.4						
MKAR	Makanchi Array	64.24	332	P	P	12 55 18.3	-1.3
	0.1nm,0.4s,baz=151,slow=8.2,SNR=2.2						

NNC 17 12:47:10.8±4.1**, 37°.67N×71°.74E, h0^{km}, mb3.5, mpv3.1, 1C-3D, Error ellipse: s-maj=31.0km s-min=27.0km az=170.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	Ala-Archa	5.39	22	P	Pn	12 48 32.7	0.0
	1.0nm,0.4s						
AAK				S	Sn	12 49 35.7	+0.2
	2.3nm,0.8s						
KK31	Karatay Array	5.51	351	⇑P	Pn	12 48 34.9	+0.8
	0.6nm,0.4s,baz=182,slow=14,SNR=6.5						
KK31				⇓S	Sn	12 49 39.2	+1.0
	0.7nm,0.3s,baz=173,slow=21,SNR=6.5						
TKM2	Tokmak 2	6.02	28	⇓P	Pn	12 48 40.2	-1.1
	2.6nm,0.8s						
TKM2				⇓S	Sn	12 49 53.4	+2.5
	1.7nm,0.8s						

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*BJI **17** 13:14:19.0±0.0, 53°.40N×164°.40W, h10^{km}, mB5.1/31, mb4.7/51, Ms5.0/11, Ms7 4.6/9*

*IDC **17** 13:14:21.3±0.6, 53°.50N×164°.59W, h0^{km}, mb4.3/36, mb1 4.4/38, mb1mx4.4/53, mbtmp4.3/38, ML3.6/2, MS3.8/20, Ms1 3.8/20, ms1mx3.6/54, Error ellipse: s-maj=17.3km s-min=9.7km az=178.0*

*AEIC **17** 13:14:22±2.2, 53°.21N±0°.05×164°.38W±0°.07, h14^{km}±4^{km}, Error ellipse: s-maj=8.4km s-min=5.3km az=154.0*

*NEIC **17** 13:14:24.5±1.5, 53°.30N±0°.04×164°.45W±0°.06, h30^{km}±5^{km}, mb4.6/104, ML4.2/6, ML4.3(AEIC), Error ellipse: s-maj=6.4km s-min=4.2km az=214.0*

ISC 17 13:14:25.5±0.5**, 53°.37N**±0°.07×**164°.43W**±0°.04**, h36^{km}**±2^{km}**, n332, σ1^{s}51**/341**, mb4.6**/117**, MS3.8**/25**, 1C, Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKSA	Akutan Strait	1.08	316		Pn	13 14 43.7	-0.3
AKSA					Sn	13 15 01.0	+3.3
AKSA	Akutan Strait	1.08	316		Pn	13 14 43.7	-0.3
AKSA					Sn	13 15 00.5	+2.8
AKUT	Akutan	1.11	315		Pn	13 14 44.1	-0.4
AKUT					Sn	13 14 57.0	-1.5
AKUT				IAML		13 15 02.2	
	comp=N,5µm,0.7s						
AHB	Akutan Harbor	1.11	313		Pn	13 14 44.6	0.0
WESP	Westdahl Peak	1.14	351		Pn	13 14 45.2	+0.2
AKBBA	Akutan Broad B	1.16	310		Pn	13 14 45.0	-0.1
AKBBA					Sn	13 15 02.9	+3.2
ZRO	Akutan Zero	1.17	309		Pn	13 14 45.6	+0.2
WECS	Westdahl Cape	1.18	350		Pn	13 14 45.6	0.0
AKMO	Akutan Morgan	1.19	308		Pn	13 14 45.5	-0.1
AKMO					Sn	13 15 03.7	+3.2
AKV	Akutan Volcano	1.19	310		Pn	13 14 45.6	-0.1
HSB	Akutan Spr’s B	1.20	314		Pn	13 14 45.9	+0.1
AKLV	Akutan Long Va	1.21	312		Pn	13 14 45.5	-0.3
AKLV					Sn	13 15 04.1	+3.1
AKRB	Akutan Reef Bi	1.24	309		Pn	13 14 46.3	0.0
WEBT	Westdahl Beart	1.24	351		Pn	13 14 46.8	+0.4
AKGG	Akutan Green G	1.25	313		Pn	13 14 45.9	-0.5
AKGG					Sn	13 15 04.4	+2.4
UNV	Unalaska Valle	1.33	292	Pn	Pn	13 14 46.8	-0.6
UNV	Unalaska Valle	1.33	292		Sn	13 15 05.1	+1.3
SSLS	Shishaldin Sou	1.37	10		Pn	13 14 48.3	+0.2
SSLW	Shishaldin Wes	1.42	7		Pn	13 14 49.3	+0.5
SSBA	Shishaldin	1.42	7		Pn	13 14 49.0	+0.2
MNAT	Makushin Natee	1.44	292		Pn	13 14 49.0	0.0
MNAT					Sn	13 15 08.8	+2.1
MREP	Makushin Rep’t	1.45	289		Pn	13 14 49.1	-0.1
SSLN	Shishaldin Nor	1.47	10		Pn	13 14 50.2	+0.7
WTUG	Tugumak	1.48	1		Pn	13 14 50.3	+0.6
WTUG					Sn	13 15 11.9	+4.1
MSW	Makushin Switc	1.50	292		Pn	13 14 49.7	-0.3
MSW					Sn	13 15 10.4	+2.1
MGOD	Makushin Gods	1.52	287		Pn	13 14 49.9	-0.2
MAPS	Pakushin South	1.56	287		Pn	13 14 50.5	-0.2
FALS	False Pass	1.61	21	Pn	Pn	13 14 51.6	+0.3
OKFG	Magazine Ridge	2.09	273		Pn	13 14 56.4	-1.5
DT1	Dutton Round H	2.15	35		Pn	13 14 58.8	0.0
OKSO	Okmok South	2.24	271		Pn	13 14 58.4	-1.5
OKSO					Sn	13 15 27.1	+0.7
OKSP	Okmok Steeple	2.32	269		Pn	13 15 00.5	-0.6
HAG	Hague Volcano	2.45	36		Pn	13 15 04.3	+1.4
PS4A	Pavlof South-4	2.49	36		Pn	13 15 04.6	+1.1
NIKH	Nikolski High	2.69	263	Pn	Pn	13 15 05.1	-1.1
NIKH	Nikolski High	2.69	263		Sn	13 15 37.3	-0.3
SDPT	Sand Point	3.05	48	Pn	Pn	13 15 11.6	+0.5
SDPT				IAML		13 16 06.3	
	comp=E,696nm,1.2s						
SDPT				IAML		13 16 14.1	
	comp=N,853nm,1.1s						
CHGN	Chignik	4.55	47	Pn	Pn	13 15 32.2	+0.4
CHGN				IAML		13 17 10.6	
	comp=E,223nm,1.7s						
SPIA	Saint Paul Isl	5.06	321	Pn	Pn	13 15 40.6	+1.8
KOFP	Korovin Flat P	5.96	263		Pn	13 15 52.2	+1.0
KOKL	Mount Kliuchef	6.01	264		Pn	13 15 52.0	+0.1
ATKA	Atka Island	6.04	263	Pn	Pn	13 15 52.1	-0.1
SII	Sitkinak Islan	6.71	57	Pn	Pn	13 15 59.5	-1.8
GSMY	Great Sitkin M	7.19	264		Pn	13 16 08.2	+0.2
GSTD	Great Sitkin T	7.24	264		Pn	13 16 09.3	+0.5
OHAK	Old Harbor	7.44	54	Pn	Pn	13 16 08.5	-2.8
KAHC	Katmai Hardscr	7.47	41		Pn	13 16 14.2	+2.3
ADK	Adak	7.61	264	Pn	Pn	13 16 13.5	-0.2
KIMD	Kanaga Island	7.97	264		Pn	13 16 18.9	+0.2
KDAK	Kodiak Island	8.04	52	Pn	Pn	13 16 17.9	-1.7
	comp=E,1.2nm,0.3s,baz=270,slow=10,SNR=2.2						
KDAK				Sn	Sn	13 17 42.7	-6.3
	baz=180,slow=12,SNR=1.3						
KDAK	Kodiak Island	8.04	52	Pn	Pn	13 16 18.8	-0.8
TASE	Tanaga Southea	8.43	265		Pn	13 16 25.8	+0.8
SVW2	Sparrevohn	9.11	28		Pn	13 16 36.0	+1.8
IVE	Iliamna Volcan	9.15	39		Pn	13 16 38.1	+3.3
CNPM	China Poot	9.55	45	Pn	Pn	13 16 40.4	+0.1
BRLK	Bradley Lake	9.83	44	Pn	Pn	13 16 44.3	+0.1
CESW	Semis’ Southwe	9.85	268		Pn	13 16 45.0	+0.7
AMKA	Amchitka	10.15	265	Pn	Pn	13 16 47.0	-1.5
TTA	Tatalina	10.56	21	Pn	Pn	13 16 54.8	+0.7
SEW	Seward	10.62	45	Pn	Pn	13 16 53.8	-1.1
SUA	Susitna One	10.95	37	Pn	Pn	13 16 59.2	-0.3
SKT	Skwentna	11.03	33	Pn	Pn	13 17 01.2	+0.7
GAMB	Gambell	11.10	343	Pn	Pn	13 17 00.7	-0.7
PPLA	Purkeypile	11.51	29	Pn	Pn	13 17 07.9	+0.7
KNK	Knik Glacier	11.77	40	Pn	Pn	13 17 08.6	-2.0
GHO	Glory Hole Cre	11.81	38	Pn	Pn	13 17 09.2	-2.0
HIN	Hinchinbrook I	12.04	47	Pn	Pn	13 17 12.9	-1.5
SML	Sawmill	12.05	39	Pn	Pn	13 17 12.5	-2.1
KTH	Kantishna Hill	12.39	29	Pn	Pn	13 17 16.6	-2.5
EYAK	Cordova Ski Ar	12.44	47	Pn	Pn	13 17 16.6	-3.2
SCM	Sheep Creek Mo	12.45	40	Pn	Pn	13 17 18.8	-1.3
BPAW	Bear Paw Mtn.	12.79	27	Pn	Pn	13 17 24.5	0.0
KLU	Klutina	12.83	43		Pn	13 17 23.3	-1.9
RND	Reindeer	12.92	33	Pn	Pn	13 17 24.8	-1.5
HMT	Hamilton	13.02	50	Pn	Pn	13 17 26.1	-1.7
M24K	Tolsona, Glenn	13.06	41		Pn	13 17 26.1	-2.2
BWN	Browne	13.28	29	Pn	Pn	13 17 30.9	-0.3
N25K	Chitina, Valde	13.44	44	Pn	Pn	13 17 30.1	-3.4
GLB	Gilahina Butte	13.69	46	Pn	Pn	13 17 34.1	-2.8
VRDI	Verde Repeater	13.75	47	Pn	Pn	13 17 34.6	-3.3
PAX	Paxson	13.82	38	Pn	Pn	13 17 36.0	-2.7
WRH	Wood River Hil	13.91	30	Pn	Pn	13 17 37.9	-1.9
MCARA	McCarthy VSAT	14.01	47	Pn	Pn	13 17 40.0	-1.1
I23K	Minto, Yukon-K	14.05	27		Pn	13 17 40.3	-1.4
CCB	Clear Creek Bu	14.12	30		Pn	13 17 39.9	-2.8
BALM	Baldy	14.16	48	Pn	Pn	13 17 41.3	-2.0
HDA	Harding Lake	14.22	32		Pn	13 17 41.8	-2.2
MDM	Murphy Dome	14.22	29	Pn	Pn	13 17 40.7	-3.4
TCOL	CIGO, UAF Yank	14.27	30	Pn	Pn	13 17 42.5	-2.2
COLA	College	14.27	30		Pn	13 17 42.4	-2.3
MENT	Mentasta	14.47	40	Pn	Pn	13 17 43.9	-3.5
BARN	Barnard Glacie	14.48	49	Pn	Pn	13 17 45.2	-2.5
IL31		14.49	31	Pn	Pn	13 17 43.3	-4.3
ILAR	Eielson Array	14.49	31	Pn	Pn	13 17 45.0	-2.8
	comp=E,0.2nm,0.3s,baz=224,slow=12,SNR=11						
ILAR	Eielson Array	14.49	31	Pn	Pn	13 17 44.6	-3.1
TABL	Table Mountain	14.50	52	Pn	Pn	13 17 46.7	-1.3
CTGM	Chitina Glacie	14.59	49	Pn	Pn	13 17 47.4	-1.9
DOT	Dot Lake	14.73	38	Pn	Pn	13 17 50.6	-0.4
COLD	Coldfoot	15.52	21	Pn	Pn	13 18 01.7	+0.3
FYU	Fort Yukon	16.24	28	Pn	Pn	13 18 09.5	-1.1
HYT	Haines Junctio	16.33	52	Pn	Pn	13 18 11.1	-0.7
EGAK	Eagle	16.42	37	Pn	Pn	13 18 12.2	-0.6
TOLK	Toolik Lake Re	16.84	19	Pn	Pn	13 18 17.3	-0.9
JIS	Juneau Island	17.49	62	Pn	Pn	13 18 25.3	-1.0
A21K	Barrow	18.35	8	P	P	13 18 35.6	-0.9
EPYK	Eagle Plains	18.83	36	P	P	13 18 41.0	-0.9
DLBC	Dease Lake	19.79	61	P	Pn	13 18 55.8	+1.6
	comp=E,0.1nm,0.3s,baz=261,slow=12,SNR=4.2						
DLBC				LR	LR	13 26 31.5	
	comp=E,282nm,19.6s,baz=288,slow=37						
INK	Inuvik	20.88	32	P	P	13 19 02.1	-1.9
	comp=E,3.1nm,0.7s,baz=253,slow=11,SNR=16						
INK	Inuvik	20.88	32	P	P	13 19 02.4	-1.6
INK				IAmb	IAmb	13 19 10.5	
	comp=Z,26nm,1.1s						
BBB	Bella Bella	21.86	78	LR	LR	13 25 10.9	
	comp=Z,116nm,20.4s,baz=312,slow=30						
PEA0B	Petropavlovsk-	22.50	285	P	P	13 19 18.9	-2.7
PEA0B				IAmb	IAmb	13 19 27.6	
	comp=Z,21nm,1.0s						
PETK	Petropavlovsk-	22.50	285	P	P	13 19 20.4	-1.2
	comp=Z,4.4nm,0.6s,baz=80,slow=14,SNR=33						
PETK				LR	LR	13 27 37.4	
	comp=Z,246nm,20.4s,baz=79,slow=36						
PETK	Petropavlovsk-	22.50	285	P	P	13 19 19.7	-1.9
SEY	Seymchan	24.25	310	P	P	13 19 37.7	-1.0
	comp=Z,3.8nm,0.8s,baz=107,slow=8.5,SNR=12						
C36M	Paulatuk	24.43	34	P	P	13 19 40.6	+0.3
C36M				IAmb	IAmb	13 19 41.7	
	comp=Z,16nm,1.1s						
MA2	Magadan	25.11	302	P	P	13 19 46.5	0.0
	comp=Z,10nm,0.7s,baz=92,slow=9.2,SNR=16						
YKA	Yellowknife Ar	27.31	51	P	P	13 20 07.9	+1.5
	comp=Z,1.6nm,0.9s,baz=270,slow=6.9,SNR=21						
YKA				LR	LR	13 31 52.1	
	comp=Z,253nm,18.4s,baz=0.0,slow=38						
H04A	Detroit Lake	28.66	90	P	P	13 20 18.8	+0.1
H04A				IAmb	IAmb	13 20 45.7	
	comp=Z,10nm,1.3s						
NEW	Newport	29.87	80	P	P	13 20 32.2	+2.8
	comp=Z,1.1nm,0.6s,baz=297,slow=9.0,SNR=2.6						
NEW				LR	LR	13 29 49.4	
	comp=Z,133nm,20.1s,baz=292,slow=31						
KHMM	Horse Mountain	29.96	98	P	P	13 20 31.5	+1.2
KHMM				IAmb	IAmb	13 20 55.9	
	comp=Z,12nm,1.2s						
YBH	Yreka Blue Hor	30.04	96	P	P	13 20 34.0	+3.1
	comp=Z,1.3nm,0.9s,baz=249,slow=9.6,SNR=5.0						
YBH				LR	LR	13 30 07.8	
	comp=Z,92nm,18.2s,baz=313,slow=31						
YBH	Yreka Blue Hor	30.04	96	P	P	13 20 31.8	+0.8
G08A	Pilot Rock	30.27	87	P	P	13 20 33.2	+0.3
I07A	Izee	30.59	89	P	P	13 20 34.7	-1.2
PAHR	Pah Rah Range	33.28	96	P	P	13 21 00.0	+0.6
PAHR				IAmb	IAmb	13 21 20.4	
	comp=Z,8.2nm,1.1s						
TIXI	Tiksi	33.45	328	P	P	13 20 59.2	-1.2
TIXI				IAmb	IAmb	13 21 01.6	
	comp=Z,4.3nm,0.7s						
PNTR	Pine Nut	33.54	97	P	P	13 21 00.9	-1.0
PNTR				IAmb	IAmb	13 21 27.1	
	comp=Z,11nm,1.0s						
WAKR	Walker	34.02	97	P	P	13 21 05.2	-0.8
WAKR				IAmb	IAmb	13 21 25.7	
	comp=Z,5.6nm,0.8s						
RES	Resolute Bay	34.16	26	P	P	13 21 06.6	0.0
	comp=Z,1.4nm,0.7s,baz=226,slow=13,SNR=13						
RYN	Ryan	34.48	96	P	P	13 21 10.3	+0.3
RYN				IAmb	IAmb	13 21 25.4	
	comp=Z,5.3nm,1.0s						
LHV	Little Huntoon	34.74	97	P	P	13 21 12.6	+0.6
LHV				IAmb	IAmb	13 21 34.1	
	comp=Z,7.3nm,1.0s						
NVAR	Mina Array Bea	34.74	97	P	P	13 21 14.6	+2.3
	comp=Z,1.7nm,0.8s,baz=297,slow=9.3,SNR=15						
NVAR				LR	LR	13 33 30.1	
	comp=Z,119nm,18.9s,baz=302,slow=33						
NVAR	Mina Array Bea	34.74	97	P	P	13 21 12.0	-0.3
MDPB	Devils Postpil	34.80	98	P	P	13 21 12.4	-0.5
MDPB				IAmb	IAmb	13 21 28.3	
	comp=Z,4.9nm,0.8s						
OMMB	Old Mammoth Mi	34.86	98	P	P	13 21 13.5	+0.1
OMMB				IAmb	IAmb	13 21 34.7	
	comp=Z,9.7nm,1.1s						
ELK	Elko	35.11	91	P	P	13 21 15.4	-0.1
YHH	Holmes Hill	35.37	82	P	P	13 21 18.3	+0.5
JKA	Kamikawa-asahi	35.38	277	P	P	13 21 16.1	-1.4
PAGB	Antelope Grade	35.40	102	P	P	13 21 18.2	+0.4
PAGB				IAmb	IAmb	13 21 28.6	
	comp=Z,7.4nm,1.2s						
EUNU	Eureka	35.91	17	P	P	13 21 22.1	+0.5
ERM	Erimo	36.27	273	P	P	13 21 23.1	-2.0
R11A	Troy Canyon, C	36.41	94	P	P	13 21 26.5	-0.1
R11A				IAmb	IAmb	13 21 46.2	
	comp=Z,6.4nm,1.1s						
TPNV	Topopah Spring	36.94	97	P	P	13 21 31.1	+0.1
TPNV				IAmb	IAmb	13 21 45.0	
	comp=Z,9.9nm,0.9s						
PDAR	Pinedale Array	37.29	84	P	P	13 21 38.9	+4.8
	comp=Z,0.2nm,0.5s,baz=285,slow=4.6,SNR=2.5						
PDAR				LR	LR	13 35 01.1	
	comp=Z,96nm,18.6s,baz=350,slow=33						
PDAR	Pinedale Array	37.29	84	P	P	13 21 33.5	-0.6
PSUT	Pine Spring	37.33	93	P	P	13 21 34.0	-0.4
PRN	Pahroc Range	37.35	95	P	P	13 21 35.2	+0.7
PRN				IAmb	IAmb	13 21 54.6	
	comp=Z,6.2nm,0.8s						
GSC	Goldstone, Bar	37.73	99	P	P	13 21 37.3	-0.4
GSC				IAmb	IAmb	13 21 58.4	
	comp=Z,12nm,1.1s						
FCC	Fort Churchill	37.97	53	P	P	13 21 40.1	+0.8
FCC				IAmb	IAmb	13 21 56.8	
	comp=Z,9.0nm,1.1s						
TCRU	Three Creeks R	38.12	91	P	P	13 21 41.1	0.0
CCUT	Cedar City	38.27	93	P	P	13 21 42.5	+0.2
KLR	Kul'dur	38.94	291	P	P	13 21 46.4	-1.2
	comp=Z,2.0nm,0.7s,baz=69,slow=3.7,SNR=6.4						
KLR				LR	LR	13 37 44.4	
	comp=Z,152nm,20.9s,baz=12,slow=36						
SRU	San Rafael Swe	38.96	89	P	P	13 21 48.0	-0.1
PFO	Pinyon Flats O	39.11	101	P	P	13 21 50.9	+1.5
	comp=Z,0.5nm,0.3s,baz=315,slow=4.3,SNR=2.2						
W13A	Hualapai Mount	39.60	97	P	P	13 21 54.3	+0.8
U15A	North Rim	39.65	94	P	P	13 21 53.5	-0.5
TULEG	Thule	40.13	21	P	P	13 21 57.4	+0.2
TULEG				IAmb	IAmb	13 22 20.4	
	comp=Z,9.5nm,1.0s						
H11N2	WAKE ISLAND Hy	40.19	224	T	T	14 05 07.2	
	baz=26,slow=76,SNR=15						
H11N3	WAKE ISLAND Hy	40.19	224	T	T	14 05 22.6	
	baz=26,slow=76,SNR=13						
H11N1	WAKE ISLAND Hy	40.20	224	T	T	14 05 21.7	
	baz=26,slow=76,SNR=12						
PV17	East Wray Mesa	40.43	89	P	P	13 22 01.0	+0.7
PV17				IAmb	IAmb	13 22 20.0	
	comp=Z,12nm,1.1s						
PV11	David Mesa, Pa	40.47	89	P	P	13 22 00.8	+0.1
PV11				IAmb	IAmb	13 22 16.7	
	comp=Z,8.7nm,0.9s						
PV18	Skein Mesa, Pa	40.48	89	P	P	13 22 01.5	+0.7
PV03	Paradox Valley	40.51	89	P	P	13 22 01.0	0.0
ULM	Lac du Bonnet	41.02	66	P	P	13 22 04.5	-0.3
	comp=Z,0.7nm,0.4s,baz=285,slow=9.3,SNR=3.3						
ULM				LR	LR	13 38 42.6	
	comp=Z,148nm,20.8s,baz=308,slow=36						
H11S1	WAKE ISLAND Hy	41.36	224	T	T	14 06 15.1	
	baz=25,slow=76,SNR=43						
H11S2	WAKE ISLAND Hy	41.37	224	T	T	14 06 17.1	
	baz=25,slow=76,SNR=41						
H11S3	WAKE ISLAND Hy	41.38	224	T	T	14 06 35.7	
	baz=25,slow=76,SNR=43						
X16A	Lo Mia Camp, P	41.53	95	P	P	13 22 10.0	+0.6
USRK	Ussuriysk Ar.	41.59	284	P	P	13 22 08.2	-1.3
	comp=Z,0.9nm,0.6s,baz=60,slow=6.3,SNR=4.4						
USRK				LR	LR	13 39 54.1	
	comp=Z,84nm,19.1s,baz=48,slow=37						
JSD	Sado	41.69	272	P	P	13 22 09.9	-0.6
JSD				IAmb	IAmb	13 22 11.8	
	comp=Z,20nm,0.9s						
X18A	Snowflake	42.34	94	P	P	13 22 16.1	+0.1
214A	Organ Pipe Nat	42.44	99	P	P	13 22 17.3	+0.6
214A				IAmb	IAmb	13 22 30.1	
	comp=Z,9.2nm,1.1s						
MAJO	Matsushiro	42.70	271	P	P	13 22 17.2	-1.5
MAJO				IAmb	IAmb	13 22 21.6	
	comp=Z,18nm,0.9s						
MAT	Matsushiro	42.70	271	P	P	13 22 18.6	-0.2
MAT				*e*S	S	13 28 39.0	-0.7
MJAR	Matsushiro Arr	42.70	271	P	P	13 22 18.6	-0.2
	comp=Z,4.0nm,1.0s,baz=35,slow=6.1,SNR=7.9						
MJAR				LR	LR	13 38 11.6	
	comp=Z,97nm,21.9s,baz=55,slow=34						
MJAR	Matsushiro Arr	42.70	271	P	P	13 22 18.0	-0.8
JGF	Kuroka	43.85	270	P	P	13 22 28.3	+0.3
JGF				IAmb	IAmb	13 22 46.0	
	comp=Z,30nm,1.4s						
ANMO	Albuquerque	44.15	91	P	P	13 22 32.2	+1.6
	comp=Z,0.5nm,0.6s,baz=309,slow=13,SNR=2.7						
ECSD	EROS Data Cent	44.31	74	P	P	13 22 33.3	+1.7
BNM	Barren Site	44.59	92	P	P	13 22 35.0	+0.8
EYMN	Ely	44.70	66	P	P	13 22 35.1	+0.4
EYMN				IAmb	IAmb	13 22 50.8	
	comp=Z,5.1nm,0.9s						
CN2	Changchun	45.60	288	*e*P	P	13 22 41.1	-0.7
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
FRB	Frobisher Bay	46.39	38	P	P	13 22 47.8	0.0
	comp=Z,5.9nm,0.5s,baz=287,slow=9.4,SNR=12						
JHS	Saijyo	46.80	273	P	P	13 22 50.8	-0.5
NRIK	Noril'sk	46.95	332	P	P	13 22 52.3	+0.2
	comp=Z,3.5nm,0.5s,baz=70,slow=8.7,SNR=6.6						
NRIK				LR	LR	13 46 58.7	
	comp=Z,187nm,19.1s,baz=4.5,slow=42						
NRIK	Noril'sk	46.95	332	P	P	13 22 52.0	-0.1
NRIK				IAmb	IAmb	13 22 53.4	
	comp=Z,4.9nm,0.6s						
MNTX	Cornudas Mount	47.05	93	P	P	13 22 53.9	+0.5
MNTX				IAmb	IAmb	13 23 14.6	
	comp=Z,5.8nm,1.0s						
KBS	Kingsbay	47.95	1	P	P	13 23 00.9	+1.2
E43A	Lone Tree Farm	48.09	65	P	P	13 23 00.8	-0.5
E43A				IAmb	IAmb	13 23 19.2	
	comp=Z,22nm,1.4s						
KSRS	Korea Array	48.23	279	P	P	13 23 03.5	+1.0
	comp=Z,13nm,0.9s,baz=55,slow=7.0,SNR=24						
KSRS				LR	LR	13 41 37.3	
	comp=Z,70nm,21.9s,baz=22,slow=34						
KS19	Wonju Array Si	48.23	279	P	P	13 23 01.8	-0.6
DAG	Danmarks Havn	48.32	10	*i* P	P	13 23 02.8	+0.2
	comp=Z,5.1nm,0.6s						
DAG	Danmarks Havn	48.32	10	*i* P	P	13 23 02.8	+0.2
DAG				IAmb	IAmb	13 23 04.4	
	comp=Z,5.1nm,0.6s						
SPA0	Spitsbergen Ar	48.72	360	P	P	13 23 05.9	+0.2
SPITS	Spitsbergen Ar	48.72	360	P	P	13 23 06.0	+0.3
	comp=Z,12nm,0.9s,baz=350,slow=16,SNR=2.2						
SUMG	Summit	48.91	19	*i* P	P	13 23 09.2	+1.6
	comp=Z,25nm,0.6s						
SUMG	Summit	48.91	19	P	P	13 23 07.6	0.0
SUMG	Summit	48.91	19	*i* P	P	13 23 09.3	+1.6
SUMG				IAmb	IAmb	13 23 10.4	
	comp=Z,25nm,0.6s						
P40A	Paris	49.62	75	P	P	13 23 14.0	+0.9
TX31	Lajitas Ar. Si	49.78	94	P	P	13 23 14.7	+0.2
TX32	Lajitas Array	49.78	94	P	P	13 23 14.8	+0.3
TX32				IAmb	IAmb	13 23 34.1	
	comp=Z,10.0nm,1.1s						
TXAR	Lajitas Array	49.78	94	P	P	13 23 15.6	+1.1
	comp=Z,1.7nm,0.7s,baz=303,slow=5.2,SNR=14						
TXAR				LR	LR	13 42 48.8	
	comp=Z,91nm,18.7s,baz=0.0,slow=34						
TXAR	Lajitas Array	49.78	94	P	P	13 23 14.6	+0.1
SFJD	Kangerlussuaq	50.13	28	P	P	13 23 17.7	+1.2
	comp=Z,10nm,0.9s,baz=317,slow=9.8,SNR=4.6						
SFJD	Kangerlussuaq	50.13	28	P	P	13 23 17.0	+0.4
R40A	Maddies Statio	50.32	77	P	P	13 23 18.8	+0.4
R40A				IAmb	IAmb	13 23 30.4	
	comp=Z,5.0nm,0.8s						
DBG	Daneborg	50.35	12	*i* P	P	13 23 17.8	-0.4
HDIL	Hopedale	50.53	73	P	P	13 23 20.1	+0.1
JCT	Junction City	51.26	90	P	P	13 23 24.6	-1.0
JCT				IAmb	IAmb	13 23 40.0	
	comp=Z,10.0nm,0.8s						
ICESG	Greenland Ices	51.36	22	*i* P	P	13 23 27.1	+0.9
ICESG				IAmb	IAmb	13 23 28.2	
	comp=Z,15nm,0.7s						
TLY	Talaya	52.13	308	LR	LR	13 48 11.2	
	comp=Z,145nm,18.4s,baz=55,slow=39						
TLY	Talaya	52.13	308	P	P	13 23 30.9	-0.9
ULN	Ulaanbaatar	52.97	303	P	P	13 23 36.6	-1.6
ULN				IAmb	IAmb	13 23 39.2	
	comp=Z,14nm,1.0s						
BJT	Baijiatuau	53.32	290	P	P	13 23 40.2	-0.5
BJT				IAmb	IAmb	13 23 49.1	
	comp=Z,7.6nm,1.4s						
SONM	Songino Array	53.32	303	P	P	13 23 41.1	+0.3
	comp=Z,9.6nm,1.0s,baz=52,slow=7.6,SNR=39						
SONM				PcP	PcP	13 24 49.2	+1.2
	comp=Z,1.4nm,0.8s,baz=33,slow=3.0,SNR=2.5						
SONM	Songino Array	53.32	303	P	P	13 23 40.2	-0.6
WVT	Waverly	54.38	76	P	P	13 23 48.7	+0.1
HHC	Hu-ho-hao-te	55.31	293	*e*P	P	13 23 56.8	+1.4
HHC				pmax	pmax		
	comp=Z,7.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,200nm,7.8s						
TIA	Tai'an	55.39	286	P	P	13 23 56.8	+0.9
TIA				pmax	pmax		
	comp=Z,9.0nm,0.8s						

KEV	Kevo	56.91	355	P	P	13 24 06.6	+0.5
ARCES	ARCESS Array B	57.19	356	P	P	13 24 07.9	-0.3
	comp=Z,9.2nm,0.9s,baz=339,slow=5.2,SNR=8.6						
ARCES	ARCESS Array B	57.19	356	P	P	13 24 08.1	-0.1
NJ2	Nanjing	57.34	281	*e*P	P	13 24 09.8	+0.1
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
LVZ	Lovozero	58.22	352	P	P	13 24 15.6	+0.1
ZAA0	Zalesovo Array	58.65	320	P	P	13 24 18.8	+0.1
ZAA0				IAmb	IAmb	13 24 19.9	
	comp=Z,3.7nm,0.8s						
ZALV	Zalesovo Beam	58.65	320	P	P	13 24 18.8	+0.1
	comp=Z,3.6nm,0.6s,baz=38,slow=7.5,SNR=16						
ZALV				PcP	PcP	13 25 09.4	+1.1
	comp=Z,0.5nm,0.5s,baz=22,slow=5.5,SNR=3.6						
ZALV				LR	LR	13 51 21.2	
	comp=Z,170nm,18.3s,baz=338,slow=38						
ZALV	Zalesovo Beam	58.65	320	P	P	13 24 18.5	-0.1
XAN	Xi'an	61.63	290	P	P	13 24 39.5	+0.1
XAN				pP	pP	13 24 48.3	-0.9
XAN				pmax	pmax		
	comp=Z,7.0nm,1.2s						
XAN				pmax	pmax		
	comp=Z,120nm,5.7s						
XAN	Xi'an	61.63	290	P	P	13 24 38.5	-0.9
XAN				IAmb	IAmb	13 24 40.7	
	comp=Z,12nm,1.4s						
GTA	Gaotai	62.64	300	*e*P	P	13 24 46.3	+0.1
GTA				pP	pP	13 24 54.3	-2.0
GTA				sP	pwP	13 24 57.3	-2.2
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,79nm,6.5s						
GTA				LR	LR		
	comp=Z,180nm,15.6s						
GTA				LR	LR		
	comp=Z,250nm,15.6s						
GTA				LR	LR		
	comp=Z,170nm,16.0s						
LZH	Lanzhou	62.95	295	*e*P	P	13 24 48.8	+0.5
LZH				pP	pP	13 24 57.9	-0.6
LZH				pmax	pmax		
	comp=Z,13nm,1.3s						
SEM	Semipalatinsk	63.18	320	*e*P	P	13 24 48.7	-1.0
	baz=320						
KURK	Kurchatov	63.56	321	P	P	13 24 51.5	-0.4
KURK				IAmb	IAmb	13 24 54.8	
	comp=Z,8.8nm,0.8s						
ZSN	Zaisan	63.63	315	*e*P	P	13 24 52.7	+0.2
	comp=Z,7.7nm,0.6s,baz=315						
ENH	Enshi	64.09	286	P	P	13 24 54.9	-0.9
KLMR	Klimovskoe	64.53	347	*e*P	P	13 24 56.8	-1.4
KLMR				AMP		13 25 09.8	
	comp=Z,17nm,1.3s						
BRVK	Borovoye	64.58	327	P	P	13 24 58.8	+0.2
BRVK				IAmb	IAmb	13 25 00.6	
	comp=Z,14nm,1.0s						
ARU	Arti	65.03	335	P	P	13 25 01.6	+0.1
WMQ	Urumqi	65.22	311	*e*P	P	13 25 05.5	+2.5
WMQ	Urumqi	65.22	311	P	P	13 25 03.0	0.0
WMQ				IAmb	IAmb	13 25 04.7	
	comp=Z,9.5nm,0.9s						
FINES	FINESS Array B	65.23	354	P	P	13 25 02.9	+0.2
	comp=Z,8.2nm,0.9s,baz=14,slow=9.8,SNR=8.7						
MK31	Makanchi Array	65.23	316	P	P	13 25 02.2	-0.8
MK31				IAmb	IAmb	13 25 03.5	
	comp=Z,4.6nm,0.8s						
MKAR	Makanchi Array	65.23	316	P	P	13 25 02.5	-0.5
	comp=Z,4.9nm,0.7s,baz=44,slow=5.7,SNR=75						
MKAR				LR	LR	13 54 57.1	
	comp=Z,239nm,18.4s,baz=218,slow=37						
MKAR	Makanchi Array	65.23	316	P	P	13 25 02.3	-0.7
MAKZ	Makanchi	65.35	316	P	P	13 25 02.9	-0.8
NC405	NORSAR Array S	65.83	2	P	P	13 25 07.0	+0.4
NB2	NORSAR Subarra	65.89	2	P	P	13 25 07.3	+0.3
	comp=Z,25nm,1.7s,baz=356,slow=6.5						
NOA	NORSAR Array B	65.89	2	P	P	13 25 07.7	+0.7
	comp=Z,2.0nm,0.8s,baz=358,slow=6.4,SNR=5.8						
NC602	NORSAR Array S	66.20	2	P	P	13 25 09.1	+0.1
BRZS	Berezniki	66.34	324	*e*P	P	13 25 09.8	-0.2
	comp=Z,1.8nm,0.5s,baz=324						
CD2	Chengdu	66.86	291	P	P	13 25 14.5	+0.8
CD2				pmax	pmax		
	comp=Z,20nm,0.8s						
TDK	Taldyqorghan	68.28	317	*e*P	P	13 25 22.7	+0.3
	comp=Z,16nm,1.0s,baz=317						
GYA	Guiyang	68.59	286	⇑P	P	13 25 25.5	+0.7
GYA				pmax	pmax		
	comp=Z,12nm,1.0s						
SHLS	Shalkode	69.35	315	*e*P	P	13 25 28.4	-0.9
	comp=Z,15nm,0.8s,baz=315						
KPKS	Kokpek	69.42	316	*e*P	P	13 25 30.0	+0.3
	comp=Z,11nm,0.7s,baz=316						
UZB	Uzynbulak	69.55	316	*e*P	P	13 25 30.6	+0.2
	comp=Z,4.4nm,0.7s,baz=316						
CHKK	Chushkaly	69.80	317	*e*P	P	13 25 31.4	-0.5
	baz=317						
SATY	Saty	69.87	316	*e*P	P	13 25 32.7	+0.2
	comp=Z,7.3nm,1.2s,baz=316						
BTLS	Baital	69.97	320	*e*P	P	13 25 33.2	+0.3
	comp=Z,9.6nm,0.7s,baz=320						
KUU	Kurty	70.03	318	*e*P	P	13 25 32.7	-0.6
	comp=Z,4.0nm,0.8s,baz=318						
MDOK	Medeo	70.35	317	*e*P	P	13 25 35.6	+0.2
	baz=317						
AAA	Alma-Ata	70.36	317	*e*P	P	13 25 36.2	+0.7
	baz=317						
TNSS	Tian-Shan	70.50	317	*e*P	P	13 25 36.5	-0.1
	baz=317						
SGDS	Sogindy	71.08	319	*e*P	P	13 25 40.5	+0.7
	comp=Z,3.9nm,0.7s,baz=319						
ABKAR	Akbulak array	71.09	331	P	P	13 25 39.6	0.0
ABKAR	Akbulak array	71.09	331	P	P	13 25 39.9	+0.3
ABKAR				IAmb	IAmb	13 25 41.4	
	comp=Z,12nm,0.8s						
TKM2	Tokmak 2	71.14	318	P	P	13 25 41.4	+1.0
	SNR=5.8						
BELG	Belogornoye	71.25	340	P	P	13 25 41.4	+0.8
	comp=Z,15nm,0.7s,baz=54,slow=23,SNR=4.6						
USP	Ospenovka	71.29	319	P	P	13 25 42.3	+1.3
	SNR=17						
CHMS	Chumysh	71.41	318	P	P	13 25 43.1	+1.4
	SNR=6.6						
KBK	Karagaybulak	71.62	318	P	P	13 25 44.5	+1.3
	SNR=13						
NACGM	Naroch	71.70	353	*i* P	P	13 25 44.3	+1.1
NACGM				*i* P	P	13 25 44.3	+1.1
NACGM				*i* P	P	13 25 44.3	+1.1
NACGM				*i* PP	PP	13 28 38.3	+17
NACGM				*i* PPP	PPP	13 30 11.6	
NACGM				*i* S	SKiKP	13 35 14.2	-4.0
NACGM				*i* PS		13 36 57.1	
NACGM				*i* SS	SS	13 39 39.0	+4.3
NACGM				*i* SSS	SSS	13 43 30.1	
NACGM				*i* LR	LR	13 53 31.1	
PPT	Papeete	71.80	165	LR	LR	13 51 44.3	
	comp=Z,42nm,21.2s,baz=2.5,slow=31						
PPT2	Papeete2	71.82	165	*e*LR	LR	13 47 09.7	
	comp=Z,130nm,31.0s						
AAK	Ala-Archa	71.82	318	P	P	13 25 45.5	+1.2
	SNR=15						
AAK	Ala-Archa	71.82	318	P	P	13 25 44.3	-0.1
MNK	Minsk	72.01	352	*i* P	P	13 25 40.7	-4.4
	comp=E,2.0nm,1.1s						
MNK				*i* P	P	13 25 40.7	-4.4
	comp=N,21nm,1.0s						
MNK				*i* P	P	13 25 40.7	-4.4
	comp=Z,7.0nm,0.7s						
MNK				*i* PP	PP	13 28 19.5	-5.0
MNK				*i* PPP	PPP	13 30 02.9	
MNK				*i* S	S	13 34 58.6	-5.1
MNK				*i* ScS	SKSac	13 35 44.6	-1.3
MNK				*i* SS	SS	13 39 36.1	-3.4
MNK				*i* SSS	SSS	13 42 55.5	
MNK				*i* LR	LR	13 57 43.1	
MNK				*i* LRM	MLR	13 59 41.6	
	comp=N,117nm,15.2s						
MNK				*i* LRM	MLR	13 59 45.3	
	comp=Z,63nm,10.8s						
MNK				*i* LRM	MLR	13 59 55.4	
	comp=E,9.0nm,8.7s						
EKS2	Erkin-Say	72.08	319	P	P	13 25 47.0	+1.1
	SNR=19						
UCH	Uchtor	72.16	318	P	P	13 25 48.1	+1.3
	SNR=6.2						
AML	Almayashu	72.56	319	P	P	13 25 50.8	+1.7
	SNR=19						
DZA	Taraz	72.84	321	*e*P	P	13 25 51.0	+0.8
	comp=E,4.3nm,0.6s,baz=320						
KK31	Karatay Array	72.97	321	P	P	13 25 51.0	0.0
KKAR	Karatay Array	72.97	321	P	P	13 25 51.0	0.0
KKAR	Karatay Array	72.97	321	P	P	13 25 51.2	+0.2
KKAR				IAmb	IAmb	13 25 52.6	
	comp=Z,16nm,0.8s						
KSH	Kashi	73.83	316	P	P	13 25 58.9	+2.6
KSH				sP	PcP	13 26 11.8	+0.1
KSH				PP	PP	13 28 43.8	+3.2
KSH				S	S	13 35 30.0	+4.9
KSH				pmax	pmax		
	comp=Z,16nm,0.7s						
KSH				pmax	pmax		
	comp=Z,500nm,9.1s						
KSH				LR	LR		
	comp=Z,2µm,13.5s						
KSH				LR	LR		
	comp=Z,830nm,8.7s						
KSH				LR	LR		
	comp=Z,790nm,9.9s						
IUG	Iuzhnay	73.97	321	*e*P	P	13 25 57.9	+0.9
	comp=Z,12nm,1.1s,baz=321						
SLVN	Son La	74.14	284	P	P	13 25 58.0	-0.3
SLVN				IAmb	IAmb	13 26 12.5	
	comp=Z,6.1nm,0.9s						
AKASG	Malin Array Be	75.67	351	P	P	13 26 06.5	0.0
	comp=Z,2.2nm,0.5s,baz=13,slow=5.7,SNR=7.2						
DPC	Dobruska-Polom	76.66	360	*e*P	P	13 26 12.5	+0.3
TBI	Tubuai	77.49	166	*e*LR	LR	13 49 55.7	
	comp=Z,90nm,33.0s						
KHC	Kasperske Hory	77.86	1	*e*P	P	13 26 20.1	+1.1
KHC				*e*x	x	13 26 32.5	
KOLS	Kolonicke sedl	77.92	355	*e*	P	13 26 25.4	+6.1
CRVS	Cervenica-Dubn	77.98	356	*e*P	P	13 26 18.4	-1.3
GERES	GERESS Array B	78.15	1	P	P	13 26 21.9	+1.2
	comp=Z,1.0nm,0.7s,baz=10,slow=6.2,SNR=5.6						
TAPN	Taplejung	78.33	300	*e*P	P	13 26 22.8	+0.5
VYHS	Vyhne	78.48	358	*e*P	P	13 26 23.5	+1.1
GUN	Gumba	78.81	302	*e*P	P	13 26 25.5	+0.5
	comp=Z,31nm,0.6s						
BURAR	Bucovina Array	79.06	353	P	P	13 26 25.5	-0.2
KKN	Kakani	79.21	302	*e*P	P	13 26 28.0	+1.0
	comp=Z,9.7nm,0.5s						
RAMN	Ramite	79.22	301	*e*P	P	13 26 27.5	+0.4
	comp=Z,25nm,0.8s						
DZM	Mont Dzumac	79.25	207	*e*LR	LR	13 51 11.1	
	comp=Z,72nm,22.7s						
CMAR	Chiang Mai Arr	79.27	286	P	P	13 26 27.9	+0.7
	comp=Z,3.1nm,0.5s,baz=16,slow=5.6,SNR=25						
CMAR	Chiang Mai Arr	79.27	286	P	P	13 26 25.9	-1.2
PKI	Pulchoki	79.33	302	*e*P	P	13 26 28.2	+0.4
	comp=Z,8.1nm,0.6s						
PKIN	Phulchoki	79.33	302	*e*P	P	13 26 28.0	+0.3
	comp=Z,9.9nm,0.6s						
GKN	Gorkha	79.36	303	*e*P	P	13 26 28.3	+0.5
	comp=Z,16nm,0.6s						
DMN	Daman	79.45	302	*e*P	P	13 26 29.0	+0.6
	comp=Z,12nm,0.6s						
DANN	Dangsing	79.52	304	*e*P	P	13 26 29.6	+0.8
	comp=Z,65nm,0.6s						
ARSA	Arzberg	79.76	0	*e*P	P	13 26 31.3	+1.9
	comp=Z,3.8nm,0.9s						
FETA	Feichten	79.90	3	*e*P	P	13 26 32.6	+2.2
	comp=Z,6.2nm,0.9s						
KBA	Koelnbreinsper	79.91	2	*e*P	P	13 26 32.7	+2.2
	comp=Z,5.8nm,0.8s						
NIL	Nilore	79.96	314	P	P	13 26 30.9	+0.1
ABTA	Abfaltersbach	80.23	2	*e*P	P	13 26 34.3	+2.2
	comp=Z,5.2nm,0.9s						
SOKA	Soboth	80.33	0	*e*P	P	13 26 34.3	+1.7
	comp=Z,3.4nm,0.8s						
KBZ	Khabaz	80.47	340	P	P	13 26 34.9	+1.6
	comp=Z,5.3nm,0.9s,baz=319,slow=1.7,SNR=8.6						
OBKA	Obir	80.50	1	*e*P	P	13 26 35.5	+1.9
	comp=Z,9.8nm,0.8s						
KBL	Kabul	80.94	318	P	P	13 26 35.4	-0.9
KBL				IAmb	IAmb	13 26 48.1	
	comp=Z,5.9nm,0.8s						
GEYT	Alibeck	81.90	327	P	P	13 26 42.8	+1.7
	comp=Z,6.2nm,0.8s,baz=338,slow=3.5,SNR=8.9						
GEYT	Alibeck	81.90	327	P	P	13 26 41.0	-0.1
BR131	Keskin Array S	85.97	346	P	P	13 27 01.8	-0.1
BRTR	Keskin Array B	85.97	346	P	P	13 27 03.4	+1.4
	comp=Z,8.2nm,0.9s,baz=25,slow=2.0,SNR=13						
BRTR	Keskin Array B	85.97	346	P	P	13 27 02.1	+0.2
FNA	Florina	86.09	356	P	P	13 27 02.5	+0.1
WRA	Warramunga Arr	90.01	236	P	P	13 27 22.5	+1.4
	comp=Z,0.5nm,1.0s,baz=38,slow=5.1,SNR=1.8						
HYB	Hyderabad	91.25	302	*i* P	P	13 27 27.0	-0.1
URZ	Urewera	92.65	194	LR	LR	14 00 23.4	
	comp=Z,49nm,21.8s,baz=213,slow=30						
ASAR	Alice Springs	93.37	234	P	P	13 27 36.4	-0.2
	comp=Z,1.0nm,1.0s,baz=46,slow=3.6,SNR=5.2						
RAYN	Ar Rayn	99.15	332		Pdif	13 28 02.5	-0.6
RAYN				IAmb	IAmb	13 28 04.2	
	comp=Z,3.6nm,1.2s						
H03N2	Juan Fernandez	113.56	115	T	T	15 37 00.8	
	baz=325						
H03N1	Juan Fernandez	113.57	115	T	T	15 37 02.2	
	baz=325						
H03N3	Juan Fernandez	113.58	115	T	T	15 37 02.5	
	baz=325						

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*HVO **17** 13:17:42.7±1.0, 19°69N±0°08×156°48W±0°02, h12^{km}±4^{km}, ML3.9/41, ML3.9/48(NEIC), Error ellipse: s-maj=11.4km s-min=1.8km az=186.0*

NEIC 17 13:17:39.6±0.6**, 19°66N**±0°10×**156°49W**±0°05**, h28**^{km}±4^{km}**, Error ellipse: s-maj=14.6km s-min=5.1km az=199.0, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KKH	Kailua Kona	0.45	91		Pn	13 17 51.0	+0.9
KHLU	Kahalu`u	0.57	97	Pg	Pn	13 17 52.2	+0.3
HUH	Hualalai	0.62	88		Pn	13 17 52.8	0.0
HUH				Sg	Sb	13 18 00.7	0.0
HUH				IAML		13 18 04.8	
	comp=E,12µm,0.2s						
MWH	Moku‘aweowe	0.86	102		Pb	13 17 56.3	0.0
MWH				Sg	Sb	13 18 07.1	-0.7
MWH				IAML		13 18 15.0	
	comp=E,6µm,0.3s						
MLOA	Mauna Loa Obse	0.87	98		Pb	13 17 56.6	+0.1
POHA	Pohakuloa	0.91	84	Pg	Pb	13 17 56.9	-0.1
POHA				Sg	Sb	13 18 07.1	-1.7
POHA				IAML		13 18 08.1	
	comp=E,4µm,0.3s						
POHA				IAML		13 18 08.4	
	comp=E,4µm,0.2s						
KHU	Kahuku	0.93	116	Pg	Pb	13 17 57.3	+0.1
HMH	Humu‘ula Sheep	0.95	93		Pb	13 17 57.9	+0.1
HMH				Sg	Sb	13 18 09.4	-0.8
HMH				IAML		13 18 10.7	
	comp=E,3µm,0.7s						
HMH				IAML		13 18 19.3	
	comp=N,4µm,0.6s						
AIN	Ainahou	1.02	106	Pg	Pn	13 17 58.4	+0.2
AIN				IAML		13 18 13.6	
	comp=E,3µm,0.2s						
AIN				IAML		13 18 21.8	
	comp=N,3µm,0.4s						
MLH	Mauna Loa	1.06	99		Pn	13 17 59.1	+0.3
MLH				Sg	Sn	13 18 11.3	-1.4
HLK	Haleakala	1.11	12		Pn	13 17 59.8	+0.2
WRMHI	West Rim	1.15	103		Pn	13 18 00.0	0.0
UWE	Uwekahuna	1.16	102		Pn	13 18 00.2	+0.1
RSD	Rainshed	1.16	100		Pn	13 18 00.2	0.0
SDHHI	Sand Hill	1.16	103		Pn	13 18 00.1	0.0
SDHHI				IAML		13 18 15.3	
	comp=N,5µm,0.4s						
OBL	Observatory Le	1.17	102		Pn	13 18 00.2	0.0
UWB	Uwekahuna B	1.17	101		Pn	13 18 00.2	0.0
HLP	Hilina Pali	1.18	108		Pn	13 18 00.4	+0.1
HLP				IAML		13 18 23.1	
	comp=N,3µm,0.6s						
HLP				IAML		13 18 30.0	
	comp=E,3µm,0.6s						
SBLHI	Steaming Bluff	1.18	101		Pn	13 18 00.2	-0.1
SBLHI				IAML		13 18 26.8	
	comp=N,3µm,0.4s						
RIM	Rim	1.18	103	Pn	Pn	13 18 00.2	-0.1
RIM				IAML		13 18 15.9	
	comp=N,3µm,0.4s						
RIM				IAML		13 18 21.7	
	comp=E,2µm,0.4s						
HATHI	Halema‘uma‘u T	1.19	101		Pn	13 18 00.3	-0.2
HATHI				IAML		13 18 26.6	
	comp=N,2µm,0.6s						
HATHI				IAML		13 18 37.0	
	comp=E,2µm,0.6s						
KKO	Keanakako`i	1.19	103		Pn	13 18 00.3	-0.2
KKO				IAML		13 18 17.7	
	comp=N,4µm,0.5s						
BYL	Byron's Ledge	1.19	102		Pn	13 18 00.3	-0.2
BYL				IAML		13 18 26.7	
	comp=E,2µm,0.4s						
PUH	Pauahi	1.24	103		Pn	13 18 00.8	-0.3
STCH	Steam Cracks	1.32	102	Pn	Pn	13 18 02.0	-0.3
NPOC	North of Pu‘u	1.33	101	Pn	Pn	13 18 02.1	-0.3
NPOC				IAML		13 18 18.1	
	comp=N,1µm,0.3s						
JCUZ	Jacuzzi	1.34	102	Pn	Pn	13 18 02.4	-0.2
JCUZ				IAML		13 18 18.6	
	comp=E,1µm,0.2s						
HON	Honolulu	2.17	320	Pn	Pn	13 18 14.3	+0.3
HON				IAML		13 18 39.5	
	comp=N,936nm,0.5s						
HON				IAML		13 18 39.9	
	comp=E,1µm,0.6s						
KIP	Kipapa	2.26	321		Pn	13 18 15.5	+0.4
KIP				IAML		13 18 42.8	
	comp=E,897nm,0.5s						
KIP				IAML		13 18 43.7	
	comp=E,688nm,0.5s						
OPA	Opana	2.46	325	Pn	Pn	13 18 17.8	-0.1
JOHN	Johnston Islan	12.72	259	Pn	Pn	13 20 37.3	-1.5

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*SJA **17** 13:40:27.9±0.6, 22°65S×66°22W, h266^{km}±4^{km}, ML4.4, MW4.1*

*NEIC **17** 13:40:27.7±1.6, 22°76S±0°08×66°06W±0°06, h237^{km}±9^{km}, mb4.2/5, Md4.2(SJA), Error ellipse: s-maj=13.8km s-min=4.2km az=151.0*

*IDC **17** 13:40:27.8±1.0, 22°70S×66°03W, h231^{km}±10^{km}, mb3.4/8, mb1 3.6/13, mb1mx3.5/30, mbtmp4.0/13, Error ellipse: s-maj=15.9km s-min=14.3km az=143.0*

*VAO **17** 13:40:29.9±0.9, 22°70S×66°54W, h305^{km}±9^{km}, mb4.2*

*GUC **17** 13:40:29.9±0.6, 22°71S×66°36W, h260^{km}±4^{km}, MW4.1*

ISC 17 13:40:28.7±0.6**, 22°72S**±0°04×**66°30W**±0°04**, h251**^{km}±6^{km}**, n126, σ1§23**/167**, mb3.7**/8**, 16C-1D, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
YJA	Yavi	0.91	53	*e*P	Pn	13 41 04.8	+0.8
YJA				*e*S	S	13 41 32.0	+0.5
AZAP	Zapla	1.87	143	*e*P	Pn	13 41 10.8	+0.4
AZAP				*e*S	S	13 41 43.7	+0.4
ASTB	Santa Barbara	2.09	126	*e*P	Pn	13 41 12.6	+0.4
ASTB				*e*P	Pn	13 41 12.7	+0.4
SLA	San Lorenzo	2.12	160	*e*P	Pn	13 41 14.0	+1.5
SLA				*i* S	S	13 41 48.1	+1.0
SLA	San Lorenzo	2.12	160	*e*P	Pn	13 41 14.2	+1.7
SLA				*e*S	S	13 41 48.4	+1.3
LVC	Limon Verde	2.42	272	P	Pn	13 41 17.1	+1.5
	37nm,0.3s,baz=90,slow=5.6,SNR=344						
LVC				S	S	13 41 53.2	+0.6
	37nm,0.3s,baz=221,slow=22,SNR=26						
LVC	Limon Verde	2.42	272	*e*P	Pn	13 41 17.0	+1.3
LVC				*i* S	S	13 41 53.1	+0.4
LVC	Limon Verde	2.42	272	Pn	Pn	13 41 16.8	+1.2
LVC	Limon Verde	2.42	272	*e*P	Pn	13 41 17.1	+1.5
LVC				*e*S	S	13 41 53.0	+0.4
PB09	IPOC Station P	2.88	288	⇑*i*P	Pn	13 41 21.9	+1.7
PB09				*i* S	S	13 42 00.8	-0.1
PB09	IPOC Station P	2.88	288		Pn	13 41 21.6	+1.4
PB09	IPOC Station P	2.88	288	*e*P	Pn	13 41 21.7	+1.5
PB09				*e*S	S	13 42 02.3	+1.4
PB09				IAML		13 42 04.3	
	comp=Z,402nm,0.6s						
PB15	IPOC Station P	2.96	260	⇑*i*P	Pn	13 41 22.4	+1.3
PB15				*i* S	S	13 42 02.9	+0.4
PB15	IPOC Station P	2.96	260		Pn	13 41 22.1	+1.0
PB15	IPOC Station P	2.96	260	*e*P	Pn	13 41 22.4	+1.3
PB15				*e*S	S	13 42 03.2	+0.7
PB06	IPOC Station P	3.02	270	⇑*i*P	Pn	13 41 22.9	+1.2
PB06				*i* S	S	13 42 03.1	-0.5
PB06	IPOC Station P	3.02	270		Pn	13 41 22.3	+0.6
PB06	IPOC Station P	3.02	270	*e*P	Pn	13 41 23.0	+1.3
PB06				*e*S	S	13 42 03.7	+0.1
PB06				IAML		13 42 10.1	
	comp=Z,357nm,0.6s						
PB03	IPOC Station P	3.27	281	⇑*i*P	Pn	13 41 25.3	+0.9
PB03				*i* S	S	13 42 07.5	-0.9
PB03	IPOC Station P	3.27	281	*e*P	Pn	13 41 25.3	+0.9
PB03				*e*S	S	13 42 08.1	-0.3
PB03				IAML		13 42 11.3	
	comp=Z,521nm,0.3s						
FSA	Cafayete	3.38	175	*e*P	Pn	13 41 27.4	+1.7
PB01	IPOC Station P	3.40	299	⇑*i*P	Pn	13 41 26.7	+0.8
PB01				*i* S	S	13 42 09.9	-1.2
PB01	IPOC Station P	3.40	299		Pn	13 41 26.4	+0.5
PB01	IPOC Station P	3.40	299	*e*P	Pn	13 41 26.7	+0.8
PB01				*e*S	S	13 42 10.3	-0.8
PB01				IAML		13 42 12.5	
	comp=Z,277nm,0.2s						
PB07	IPOC Station P	3.47	286	⇑*i*P	Pn	13 41 27.7	+1.0
PB07				*i* S	S	13 42 11.3	-1.3
PB07	IPOC Station P	3.47	286		Pn	13 41 27.4	+0.8
PB07	IPOC Station P	3.47	286	*e*P	Pn	13 41 27.5	+0.8
PB07				*e*S	S	13 42 11.6	-0.9
PB07				IAML		13 42 15.3	
	comp=Z,622nm,0.4s						
PB04	IPOC Station P	3.58	275	⇑*i*P	Pn	13 41 28.6	+0.7
PB04				*i* S	S	13 42 13.4	-1.4
PB04	IPOC Station P	3.58	275		Pn	13 41 28.7	+0.7
PB04	IPOC Station P	3.58	275	*e*P	Pn	13 41 29.1	+1.1
PB04				*e*S	S	13 42 14.1	-0.8
PB04				IAML		13 42 15.8	
	comp=Z,845nm,0.5s						
PB05	IPOC Station P	3.61	267	⇑*i*P	Pn	13 41 29.1	+1.0
PB05				*i* S	S	13 42 13.9	-1.4
PB05	IPOC Station P	3.61	267	*e*P	Pn	13 41 29.1	+1.0
PB05				*e*P	Pn	13 41 29.2	+1.0
PB05				*e*S	S	13 42 14.6	-0.7
PB05				IAML		13 42 15.5	
	comp=Z,321nm,0.6s						
PB02	IPOC Station P	3.62	292	⇑*i*P	Pn	13 41 29.0	+0.6
PB02				*e*S	S	13 42 13.9	-1.7
PB08	IPOC Station P	3.70	313	⇑*i*P	Pn	13 41 31.1	+1.5
PB08				*i* S	S	13 42 17.1	-0.6
PB08	IPOC Station P	3.70	313		Pn	13 41 30.8	+1.3
GO02	Mina Guanaco	3.87	230	⇑*i*P	Pn	13 41 32.6	+1.2
GO02				*i* S	S	13 42 21.6	+0.5
GO02	Mina Guanaco	3.87	230	Pn	Pn	13 41 32.4	+1.0
PB10	IPOC Station P	4.00	258	⇑*i*P	Pn	13 41 33.5	+1.0
PB10				*e*S	S	13 42 21.9	-1.3
PB10	IPOC Station P	4.00	258	Pn	Pn	13 41 33.2	+0.7
PB10	IPOC Station P	4.00	258	*e*P	Pn	13 41 33.7	+1.2
PB10				*e*S	S	13 42 22.7	-0.5
PB10				IAML		13 42 24.9	
	comp=Z,291nm,0.4s						
PATCX	Punta Patache	4.05	297	*e*P	Pn	13 41 33.6	+0.3
PATCX				*i* S	S	13 42 22.0	-2.6
PATCX	Punta Patache	4.05	297	Pn	Pn	13 41 33.6	+0.3
AHML	Horco Molle	4.14	168	*e*P	Pn	13 41 36.3	+2.1
HMBC	Humberstone	4.14	305	⇑*i*P	Pn	13 41 34.2	-0.1
HMBC				*i* S	S	13 42 23.6	-2.9
TA01	Diego Aracena	4.20	300	⇑*i*P	Pn	13 41 34.8	-0.2
TA01				*i* S	S	13 42 24.6	-3.0
TA01	Diego Aracena	4.20	300	Pn	Pn	13 41 34.6	-0.4
PB14	IPOC Station P	4.21	243	⇓*i*P	Pn	13 41 36.4	+1.0
PB14				*i* S	S	13 42 26.9	-1.5
PB14	IPOC Station P	4.21	243	Pn	Pn	13 41 36.0	+0.5
PB14	IPOC Station P	4.21	243	*e*P	Pn	13 41 36.4	+1.0
PB14				*e*S	S	13 42 27.4	-1.0
PB14				IAML		13 42 29.6	
	comp=Z,541nm,0.6s						
MNMC	Minye Minye	4.72	319	⇑*i*P	Pn	13 41 42.0	+0.5
MNMC				*i* S	S	13 42 37.4	-2.0
MNMC	Minye Minye	4.72	319	Pn	Pn	13 41 41.7	+0.2
PSGC	Pisagua	4.74	310	*e*P	Pn	13 41 40.5	-1.0
PSGCX	Pisagua	4.74	310	Pn	Pn	13 41 40.3	-1.2

AC02	Maricunga	4.83	212	Pn	Pn	13 41 43.7	+0.7
AC01	Pan de Azucar	5.20	228	Pn	Pn	13 41 46.7	-0.3
PB16	IPOC Station P	5.30	325	⇑*i*P	Pn	13 41 49.7	+0.8
PB16				*i* S	S	13 42 51.9	-0.9
PB16	IPOC Station P	5.30	325		Pn	13 41 49.5	+0.6
GO03	Copiap	6.02	216		Pn	13 41 56.8	-0.4
GO03	Copiap	6.02	216	*e*P	Pn	13 41 57.4	+0.2
GO03				*e*S	S	13 43 04.8	-3.1
VCA	Vinchina	6.23	196	*e*P	Pn	13 42 01.2	+1.3
VCA				*e*S	S	13 43 12.6	-0.2
LPAZ	La Paz	6.63	345	P	Pn	13 42 06.0	+0.5
	comp=Z,0.9nm,0.3s,baz=163,slow=10,SNR=16						
LPAZ				S	S	13 43 20.6	-2.3
	comp=Z,0.5nm,0.3s,baz=298,slow=19,SNR=9.6						
LPAZ	La Paz	6.63	345		Pn	13 42 05.7	+0.2
LPAZ	La Paz	6.63	345	*e*P	Pn	13 42 06.0	+0.5
ACLC	CERRO LA CRUZ	6.70	185	*e*P	Pn	13 42 05.7	0.0
ACLC				*e*S	S	13 43 20.1	-3.5
ACLC				IAML		13 43 23.6	
	comp=Z,32nm,0.5s						
AC04	Llanos de Chal	6.96	217		Pn	13 42 07.7	-1.2
AGUA	GUANDACOL	7.02	196	*e*P	Pn	13 42 10.0	+0.3
AGUA				*e*S	S	13 43 29.8	-0.9
AGUA				IAML		13 43 31.8	
	comp=Z,27nm,0.9s						
AC05	El Transito	7.06	210	Pn	Pn	13 42 09.9	-0.4
LCO	Las Campanas	7.41	211	Pn	Pn	13 42 14.0	-0.8
APLL	PUNTA DE LOS L	7.64	182	*e*P	Pn	13 42 16.8	-0.7
APLL				IAML		13 43 43.7	
	comp=Z,90nm,0.9s						
CO01	Juntas del Tor	7.99	204		Pn	13 42 23.0	+1.0
SIV	San Ignacio	8.32	37	P	Pn	13 42 24.5	-1.7
	comp=Z,4.3nm,0.3s,baz=252,slow=10,SNR=108						
GO04	Tololo Observa	8.44	208		Pn	13 42 26.8	-1.0
CO03	El Pedregal	8.98	205	Pn	Pn	13 42 34.3	-0.2
CO02	Combarbal	9.43	205	Pn	Pn	13 42 39.7	-0.4
VA03	San Esteban	10.69	200	Pn	Pn	13 42 57.4	+1.4
VILB	Vilhena	11.32	32	*e*P	P	13 43 05.2	-2.6
MT02	Curacav	11.33	201		Pn	13 43 03.2	-0.7
TRCB	Terra Rica	12.61	93	*e*P	P	13 43 23.4	+1.3
BO02	Sierra Bellavi	12.65	197		Pn	13 43 20.7	+0.4
PTGB	Pitanga	13.19	101	*e*P	P	13 43 29.9	+1.4
ITAB	Concordia	13.61	112	*e*P	P	13 43 33.6	+0.5
CPSB	Cacapava Do Su	13.81	126	*e*P	Pn	13 43 34.4	-0.1
PCMB	Pacaembu	13.98	88	*e*P	P	13 43 38.4	+1.2
PLTB	Pedras Altas	14.43	131	*e*P	P	13 43 43.0	+0.9
BI02	San Fabin de	14.54	196		Pn	13 43 43.6	+0.2
ITRB	Iturama	15.16	82	*e*P	Pn	13 43 50.1	-0.9
CNLB	Canela	15.35	119	*e*P	Pn	13 43 53.4	+0.3
ARAG	Araguaiana, MT	15.35	65	*e*P	Pn	13 43 52.7	-0.5
FRTB	Fartura	15.42	96	*e*P	Pn	13 43 53.5	-0.5
BB19B	Bebedouro	16.57	88	*e*P	P	13 44 06.2	+0.3
PET01	Itanhaem-SP	17.52	99	*e*P	P	13 44 16.2	+0.1
IPMB	Ipameri, GO	17.60	78	*e*P	P	13 44 17.1	0.0
VAO	Valinhos	17.82	95	*e*P	P	13 44 19.2	-0.3
SNDB	Serra Nova Dou	17.85	56	*e*P	P	13 44 19.4	-0.4
PLCA	Paso Flores	18.31	190	P	Pn	13 44 26.1	-1.7
	comp=Z,0.2nm,0.3s,baz=343,slow=10,SNR=8.2						
PLCA	Paso Flores	18.31	190	P	P	13 44 22.1	-2.6
PLCA				IAmb	IAmb	13 44 32.7	
	comp=Z,8.5nm,1.5s						
BDFB	Brasilia	18.64	71	P	P	13 44 27.2	-1.3
	comp=Z,1.0nm,0.3s,baz=245,slow=12,SNR=17						
BDFB	Brasilia	18.64	71	P	P	13 44 26.3	-2.1
BDFB				IAmb	IAmb	13 44 29.6	
	comp=Z,12nm,0.8s						
NPGB	Novo Progresso	18.82	36	*e*P	P	13 44 30.1	-0.1
PARB	Paraibuna	19.04	96	*e*P	P	13 44 32.8	+0.1
BSCB	Bom Sucesso	20.05	89	*e*P	P	13 44 43.9	+0.5
PEXB	Peixe	20.14	61	*e*P	P	13 44 43.2	-1.2
ITTB	Itaituba	20.92	31	*e*P	P	13 44 50.3	-2.3
JANB	Januaria	22.14	74	*e*P	P	13 45 03.1	-1.0
SMTB	Santa Maria do	22.63	55	*e*P	P	13 45 07.2	-1.5
SDBA	SAO DESIDERIO	22.80	67	*e*P	P	13 45 08.9	-1.3
BSFB	Barra de Sao F	24.10	85	*e*P	P	13 45 20.8	-1.1
RIB01	Linhares ES	24.41	87	*e*P	P	13 45 23.5	-1.1
NAN01	Guarapari, ES	25.01	84	*e*P	P	13 45 28.9	-1.2
GDU01	Guandu, BA	26.88	75	*e*P	P	13 45 44.9	-1.9
NBLI	Livramento-PB	32.10	66	*e*P	P	13 46 31.5	-1.4
TXAR	Lajitas Array	63.03	324	P	P	13 50 32.6	+3.1
	comp=Z,0.2nm,0.6s,baz=143,slow=6.8,SNR=1.9						
DBIC	Dimbokro	66.79	72	P	P	13 50 52.9	-1.0
	comp=Z,1.8nm,0.5s,baz=227,slow=8.6,SNR=4.6						
DBIC	Dimbokro	66.79	72	IAmb	IAmb	13 50 54.4	
	comp=Z,15nm,1.5s						
TORD	Torodi Ar. Bea	75.51	69	P	P	13 51 45.1	-1.0
	comp=Z,3.9nm,0.4s,baz=260,slow=5.4,SNR=26						
PDAR	Pinedale Array	76.39	329	P	P	13 51 54.1	+3.4
	comp=Z,0.2nm,0.5s,baz=131,slow=6.1,SNR=2.8						
ULM	Lac du Bonnet	77.23	341	P	P	13 51 55.6	+0.7
	comp=Z,0.9nm,0.5s,baz=160,slow=5.8,SNR=4.5						
ULM	Lac du Bonnet	77.23	341	IAmb	IAmb	13 51 56.7	
	comp=Z,2.7nm,1.4s						
NVAR	Mina Array Bea	77.96	321	P	P	13 52 01.2	+1.7
	comp=Z,0.2nm,0.6s,baz=147,slow=5.2,SNR=2.0						
BOSA	Boshof	80.73	117	P	P	13 52 14.3	-0.4
	comp=Z,1.0nm,0.4s,baz=239,slow=5.9,SNR=1.5						
YKA	Yellowknife Ar	93.16	340	P	P	13 53 15.0	+1.1
	comp=Z,0.3nm,0.5s,baz=125,slow=5.3,SNR=8.3						
ASAR	Alice Springs	129.88	204	PKP	PKiKP	13 59 10.3	+0.4
	comp=Z,0.4nm,0.7s,baz=132,slow=1.6,SNR=7.4						
WRA	Warramunga Arr	133.05	207	PKP	PKiKP	13 59 16.6	+0.2
	comp=Z,0.2nm,0.3s,baz=152,slow=1.9,SNR=9.6						
ZALV	Zalesovo Beam	141.97	28	PKP	PKiKP	13 59 31.6	-1.8
	comp=Z,0.8nm,0.5s,baz=232,slow=1.2,SNR=3.5						
MKAR	Makanchi Array	145.13	39	PKP	PKPab	13 59 37.5	+0.8
	comp=Z,3.1nm,0.6s,baz=356,slow=2.4,SNR=60						
SONM	Songino Array	154.27	11	PKPbc	PKiKP	14 00 00.4	+1.2
	comp=Z,0.3nm,0.4s,baz=337,slow=1.1,SNR=2.7						
SONM				PKPab	PKPab	14 00 15.2	+1.2
	comp=Z,0.3nm,0.5s,baz=347,slow=4.4,SNR=2.2						

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*SGS **17** 13:41:35.3, 30°.75N×57°.65E, h7^{km}, Ml4.6*
*IDC **17** 13:41:36.9±0.6, 30°.04N×57°.64E, h0^{km}, mb4.2/27, mb1 4.3/34, mb1mx4.2/51, mbtmp4.3/34, ML4.0/6, MS3.9/26, Ms1 3.9/26, ms1mx3.7/48, Error ellipse: s-maj=13.4km s-min=11.6km az=146.0*
*MOS **17** 13:41:36.6±1.0, 30°.00N×57°.72E, h11^{km}, mb4.6/24, Error ellipse: s-maj=7.6km s-min=4.9km az=69.6*
*TEH **17** 13:41:36.2, 29°.98N×57°.64E, h9^{km}, ML4.7*
*THR **17** 13:41:37.7±0.5, 30°.08N×57°.58E, h14^{km}±3^{km}, ML4.6*
*NEIC **17** 13:41:38.0±1.9, 30°.04N±0°.07×57°.66E±0°.07, h10^{km}±1^{km}, mb4.5/40, Error ellipse: s-maj=14.5km s-min=5.9km az=141.0*
*DSN **17** 13:41:39.4±1.5, 30°.07N×57°.32E, h10^{km}, ML5.0/13, Error ellipse: s-maj=19.0km s-min=11.5km az=71.0*
*OMAN **17** 13:41:40.5, 30°.00N×57°.48E, h10^{km}, mb5.9/8, ml4.7/6*
ISC 17 13:41:36.6±1.2**, 30°.01N**±0°.03×**57°.66E**±0°.03**, h0**^{km}±8^{km}**, n303,** σ1^{s}.**50**/322**, mb4.4**/74**, MS3.9**/25**, 3C-1D, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHMN	Cheshme madani	0.18	214	*e*Pg	Pg	13 41 39.8	-0.4
TVBK	TV Kerman	0.78	268	*e*Pg	Pg	13 41 51.6	0.0
TVBK				*e*		13 42 04.6	
	comp=Z,99nm,0.5s						
KRBR	Kerman	0.78	268	*e*Pg	Pg	13 41 51.7	+0.1
KRBR				*e*Sg	Sg	13 42 01.6	-0.2
KRBR				IAML		13 42 08.7	
	comp=N,26μm,0.9s						
KRBR	Kerman	0.78	268	*e*Pg	Pg	13 41 51.6	+0.1
KRBR				*e*Sg	Sg	13 42 01.9	+0.2
KRBR				IAML		13 42 08.7	
	comp=N,26μm,0.9s						
KRBR	Kerman	0.78	268	*e*Pn	Pg	13 41 51.6	+0.1
NGRK	Negar Kerman	0.89	246	*e*Pg	Pg	13 41 53.5	-0.1
NGRK				*e*Sg	Sg	13 42 03.9	-1.2
NGRK				*e*		13 42 09.0	
	comp=Z,99nm,0.3s						
KHGB	Koh Gabri	1.09	290	*e*Pg	Pg	13 41 56.6	-0.8
KHGB				*e*		13 42 17.4	
	comp=Z,99nm,0.4s						
KBAM	BAM	1.11	142	*e*Pg	Pg	13 41 56.9	-1.1
KBAM				*e*Sg	Sg	13 42 12.0	-0.4
KBAM				*e*		13 42 15.0	
	comp=Z,99nm,0.3s						
KHNJ	Kahnooj	2.06	179	*e*Pn	Pn	13 42 12.5	0.0
BSRN	Basiran	2.32	33	*e*Pn	Pn	13 42 17.4	+1.3
BSRN				*e*Sg	Sb	13 42 49.8	+1.2
BSRN	Basiran	2.32	33	*e*Pn	Pn	13 42 16.3	+0.1
BSRN				*e*Sg	Sb	13 42 48.6	-0.1
BSRN	Basiran	2.32	33	*e*Pn	Pn	13 42 16.3	+0.1
IBAF	Bafgh	2.39	312	*e*Pn	Pn	13 42 18.8	+1.6
IBAF				*e*		13 43 02.2	
	comp=Z,99nm,0.6s						
NHDN	Nehbandan	2.48	56	*e*Pn	Pn	13 42 19.1	+0.8
IKOO	Kooshah	2.67	25	*e*Pn	Pn	13 42 21.4	+0.3
IKOO				*e*		13 42 28.2	
	comp=Z,99nm,0.4s						
ZHSF	Zahedan	2.74	98	*e*Pn	Pn	13 42 24.2	+2.3
SZD1	Zahaedan-tmp	2.84	100	*e*Pn	Pn	13 42 23.8	+0.5
GENO	Geno	2.91	207	*e*Pn	Pn	13 42 26.2	+1.8
BNDS	Bandar-Abbas	2.91	207	*e*Pn	Pn	13 42 26.1	+1.7
BNDS				IAML		13 43 14.0	
	comp=N,2μm,0.5s						
BNDS	Bandar-Abbas	2.91	207	*e*Pn	Pn	13 42 26.6	+2.2
BNDS				IAML		13 43 14.0	
	comp=N,2μm,0.5s						
BNDS	Bandar-Abbas	2.91	207	*e*Pn	Pn	13 42 26.6	+2.2
IMEH	Mehriz	2.96	298	*e*Pn	Pn	13 42 26.1	+1.0
IMEH				*e*		13 43 13.1	
	comp=Z,99nm,0.4s						
ITEG	Tejag	3.02	18	*e*Pn	Pn	13 42 26.1	+0.2
ITEG				*e*		13 42 34.5	
	comp=Z,99nm,0.6s						
TPRV	Parvadeh(Tabas	3.12	345	*e*Pn	Pn	13 42 28.1	+1.0
IDAH	Dahanechah	3.31	34	*e*Pn	Pn	13 42 31.2	+1.3
IDAH				*e*		13 43 33.2	
	comp=Z,99nm,0.6s						
YZKH	Yazd	3.54	313	*e*Pn	Pn	13 42 32.6	-0.3
YZKH	Yazd	3.54	313	*e*Pn	Pn	13 42 32.6	-0.3
ICHK	Chekchek	3.57	309	*e*Pn	Pn	13 42 35.5	+2.1
ICHK				*e*		13 43 37.7	
	comp=Z,99nm,0.5s						
AFRZ	Afriz	3.59	18	*e*Pn	Pn	13 42 34.0	+0.3
IMON	Monand	3.60	28	*e*Pn	Pn	13 42 35.2	+1.3
IMON				*e*		13 42 47.9	
	comp=Z,99nm,0.5s						
TKDS	Koohdasht(Taba	3.62	353	*e*Pn	Pn	13 42 34.6	+0.6
TABS	Tabas	3.65	353	*e*Pn	Pn	13 42 35.0	+0.4
TABS				IAML		13 43 43.5	
	comp=N,1μm,0.6s						
TABS	Tabas	3.65	353	*e*Pn	Pn	13 42 34.2	-0.3
TABS				*e*Sg	Sb	13 43 28.1	+1.0
TABS	Tabas	3.65	353	*e*Pn	Pn	13 42 34.2	-0.3
LAR1	LAR	3.71	232	*e*Pn	Pn	13 42 35.5	+0.3
JHRM	Jahrom	3.87	248	*e*Pn	Pn	13 42 38.6	+1.1
ISAD	Sadrabad	3.90	300	*e*Pn	Pn	13 42 40.0	+1.9
ISAD				*e*		13 43 45.0	
	comp=Z,99nm,0.9s						
TNSJ	Nastanj	4.04	347	*e*Pn	Pn	13 42 40.6	+0.8
SHME	Shamm	4.17	199	*i* P	Pn	13 42 42.8	+1.4
	SNR=25						
SHME	Shamm	4.17	199	*e*Pn	Pn	13 42 42.9	+1.4
SHME	Shamm	4.17	199	P	Pn	13 42 43.4	+1.8
	SNR=24						
SHME				S	Sn	13 43 33.5	+2.5
BANOM	Banah	4.25	197	*i* P	Pn	13 42 43.8	+1.2
	SNR=32						
BANOM				S	Sn	13 43 34.7	+1.7
BANOM	Banah	4.25	197	*e*Pn	Pn	13 42 44.5	+1.9
BANOM	Banah	4.25	197	P	Pn	13 42 44.3	+1.7
	SNR=72						
BANOM				S	Sn	13 43 35.1	+2.2
QIR1	Qir	4.31	250	*e*Pn	Pn	13 42 43.2	-0.4
ANAR	Anarak	4.61	314	*e*Pn	Pn	13 42 48.8	+1.1
UMQ	Umm Al-Quwin	4.81	202	*e*Pn	Pn	13 42 52.5	+2.2
MASF	Masafi	4.81	196	P	Pn	13 42 52.8	+2.4
	SNR=37						
MASF				S	Sn	13 43 51.9	+5.0
MSFE	Esma-Masafi	4.82	196	*i* P	Pn	13 42 52.2	+1.7
	SNR=35						
MSFE	Esma-Masafi	4.82	196	*e*Pn	Pn	13 42 52.6	+2.1
MDH	Madha	4.85	195	*i* P	Pn	13 42 53.2	+2.4
	SNR=19						
MDH	Madha	4.85	195	*e*Pn	Pn	13 42 52.9	+2.0
MDH	Madha	4.85	195	P	Pn	13 42 52.7	+1.8
	SNR=19						
IRAM	Ramesheh	4.88	293	*e*Pn	Pn	13 42 52.9	+1.5
NASN	Na'in	4.99	305	*e*Pn	Pn	13 42 53.1	0.0
UOSS	Minazif	5.21	195	*i* P	Pn	13 42 57.6	+1.7
	SNR=6.8						
UOSS	Minazif	5.21	195	Pn	Pn	13 42 57.7	+1.9
UOSS	Minazif	5.21	195	*e*Pn	Pn	13 42 58.1	+2.2
UOSS	Minazif	5.21	195	P	Pn	13 42 58.0	+2.2
NAZ	Nazwa, Dubai	5.31	200	*i* P	Pn	13 42 58.9	+1.7
	SNR=58						
NAZ	Nazwa, Dubai	5.31	200	P	Pn	13 42 59.6	+2.4
	SNR=58						
NAZ				S	Sn	13 44 02.6	+3.5
KLNJ	Kolanjah	5.33	282	*e*Pn	Pn	13 42 58.8	+1.0
HATD	Hatta, Dubai	5.34	195	*i* P	Pn	13 43 00.2	+2.6
	SNR=18						
HATD	Hatta, Dubai	5.34	195	P	Pn	13 43 00.4	+2.8
	SNR=17						
HATD				S	Sn	13 44 00.8	+0.9
IGAR	Gharneh	5.37	298	*e*Pn	Pn	13 43 00.4	+2.2
IZEF	Zefreh	5.38	304	*e*Pn	Pn	13 43 00.2	+1.7
ASHO	Ashiyiah	5.50	195	*i* P	Pn	13 43 02.3	+2.5
	SNR=20						
ASHO	Ashiyiah	5.50	195	P	Pn	13 43 02.3	+2.5
	SNR=20						
ASHO				S	Sn	13 44 05.3	+1.6
FAQ	Al Faqa, Dubai	5.56	200	*i* P	Pn	13 43 02.5	+1.9
	SNR=129						
FAQ	Al Faqa, Dubai	5.56	200	P	Pn	13 43 02.2	+1.6
	SNR=32						
ASUD	Al Ashush, Dub	5.75	202	*i* P	Pn	13 43 04.9	+1.7
	SNR=53						
ASUD	Al Ashush, Dub	5.75	202	P	Pn	13 43 05.5	+2.3
	SNR=53						
HRA	Herat	5.84	41	Pn	Pn	13 43 05.5	+0.8
AJN	Ajban	5.93	204	*i* P	Pn	13 43 07.6	+1.9
	SNR=11						
AJN	Ajban	5.93	204	P	Pn	13 43 07.7	+2.0
	SNR=8.5						
AJN				S	Sn	13 44 13.7	-0.6
SOHO	SOHO	5.94	190	*i* P	Pn	13 43 08.0	+2.1
	SNR=43						
SOHO	SOHO	5.94	190	P	Pn	13 43 06.1	+0.3
KRSH	Karshahi	6.13	311	*e*Pn	Pn	13 43 09.9	+1.3
ALNE	Al Ain	6.17	196	*i* P	Pn	13 43 11.4	+2.3
	SNR=12						
ALNE	Al Ain	6.17	196	P	Pn	13 43 11.6	+2.5
	SNR=13						
IANJ	Anjilo	6.29	331	*e*Pn	Pn	13 43 12.2	+1.4
JRKH	Jarkhoshk	6.30	20	*e*Pn	Pn	13 43 12.2	+1.4
SBZV	Sabzevar	6.36	360	*e*Pn	Pn	13 43 12.7	+0.9
HOQ	Hoqain	6.41	183	P	Pn	13 43 13.1	+0.8
	SNR=31						
HOQ				S	Sn	13 44 29.7	+3.4
QAM	Ghamsar	6.47	307	*e*Pn	Pn	13 43 15.2	+1.8
IPAY	Payeh	6.52	10	*e*Pn	Pn	13 43 15.1	+1.1
JRN	Qarnain Island	6.62	221	P	Pn	13 43 16.7	+1.6
	SNR=12						
JRN				S	Sn	13 44 31.0	-0.2
IMYA	Miami	6.63	17	*e*Pn	Pn	13 43 16.9	+1.4
IAKL	Akhelmad	6.63	8	*e*Pn	Pn	13 43 16.9	+1.3
ILAS	Lasjerd	6.66	325	*e*Pn	Pn	13 43 16.3	+0.4
WSAR	Wadi Sarin	6.80	172	Pn	Pn	13 43 18.0	+0.3
	comp=Z,11nm,0.3s,baz=11,slow=9.2,SNR=51						
WSAR				Sn	Sn	13 44 35.1	-0.8
	comp=Z,6.3nm,0.3s,baz=278,slow=22,SNR=2.0						
ISHM	Shahmirzad	6.84	329	*e*Pn	Pn	13 43 20.9	+2.4
IKRD	Kardeh	6.92	12	*e*Pn	Pn	13 43 20.9	+3.3
ISFR	Sfrayin	7.03	2	*e*Pn	Pn	13 43 22.4	+1.4
IVRN	Varamin	7.05	316	*e*Pn	Pn	13 43 23.3	+2.1
IGLO	Ghaloghah	7.22	335	*e*Pn	Pn	13 43 25.0	+1.4
IQOM	Qom	7.36	313	*e*Pn	Pn	13 43 26.7	+1.1
IMND	Minoodasht	7.46	346	*e*Pn	Pn	13 43 27.1	+0.3
IHSB	Hasanabad	7.63	317	*e*Pn	Pn	13 43 30.8	+1.7
IPRN	Peran	7.65	326	*e*Pn	Pn	13 43 30.7	+1.3
GEYT	Alibeck	7.91	3	Pn	Pn	13 43 34.7	+1.9
	comp=Z,5.2nm,0.3s,baz=193,slow=19,SNR=28						
GEYT				Sn	Sn	13 45 03.5	+0.5
	comp=Z,1.0nm,0.3s,baz=187,slow=20,SNR=1.5						
GEYT				Lg	Lg	13 45 51.6	
	baz=200,slow=29,SNR=3.8						
GEYT				LR	LR	13 47 13.9	
	comp=Z,485nm,21.9s,baz=195,slow=43						
GEYT	Alibeck	7.91	3	Pn	Pn	13 43 33.6	+0.7
GYA0B	ALIBECK ARRAY	7.91	3	Pn	Pn	13 43 34.3	+1.4
SLWS		8.11	232	S	Sn	13 45 08.3	+0.1
SLWS		8.11	232	P	Pn	13 43 37.3	+1.6
IMHD	Mahdasht	8.16	316	*e*Pn	Pn	13 43 38.0	+1.6
IRAZ	Razeghan	8.44	312	*e*Pn	Pn	13 43 41.9	+1.5
QALM	Alamut, Qazvin	8.69	319	*e*Pn	Pn	13 43 45.3	+1.5
QABG	Abgarm-Qazvin	8.85	312	*e*Pn	Pn	13 43 47.3	+1.3
RDF	Al-Radifah	8.88	265	*e*P		13 43 45.9	
MIB	Mutribah	8.96	271	*e*P		13 43 46.9	
RST	Umm Al-Ruwaisa	9.28	269	*e*P		13 43 51.1	
SMAN	Sihmah	9.29	248	P	Pn	13 43 52.3	+0.4
NHRD	Haradh	9.32	238	P	Pn	13 43 53.1	+0.9
NHRD	Haradh	9.32	238	S	Sn	13 45 35.4	-2.4
QYSM	Um Kedad	9.69	260	P	Pn	13 43 56.1	-1.3
RQBS	RQBS	10.61	258	P	Pn	13 44 07.8	-2.2
ASYS		11.95	261	P	Pn	13 44 25.2	-3.1
SHAO	Shalim	12.08	189	*i* P	Pn	13 44 29.9	-0.2
	SNR=18						
RAYN	Ar Rayn	12.63	242	*i* P	Pn	13 44 35.2	-2.5
	SNR=24						
RAYN	Ar Rayn	12.63	242	P	Pn	13 44 33.5	-4.2
RAYN	Ar Rayn	12.63	242		Pn	13 44 33.5	-4.2
DWDS	Al Duwadimi	12.64	248	P	Pn	13 44 36.6	-1.2
AKT	Akhty	13.98	328	*i* P	Pn	13 44 54.8	-1.3
GNI	Garni	14.62	317	Pn	Pn	13 45 05.5	+0.6
	comp=Z,0.6nm,0.3s,baz=186,slow=19,SNR=1.2						
GNI				LR	LR	13 51 25.1	
	comp=Z,260nm,20.3s,baz=123,slow=40						
GNI	Garni	14.62	317	P	P	13 45 11.3	-0.2
GNI	Garni	14.62	317		P	13 45 11.3	-0.2
IUG	Iuzhnay	15.68	36	*e*P	Pn	13 45 18.6	-0.5
	baz=36						
IUG	Iuzhnay	15.68	36	*e*P	Pn	13 45 18.5	-0.5
MARD	Mardin	15.82	302	P	P	13 45 23.5	-1.2
GROC	Groznyy	16.22	327	*e*P	Pn	13 45 27.0	+1.1
GROC				S	Sn	13 48 29.7	+3.3
GROC				pmax	pmax		
	comp=Z,33nm,0.6s						
KK31	Karatay Array	16.62	35	P	Pn	13 45 30.9	-0.1
KK31				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KK31	Karatay Array	16.62	35	Pn	Pn	13 45 30.9	-0.1
KKAR	Karatay Array	16.62	35	P	Pn	13 45 29.2	-1.8
KKAR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KKAR	Karatay Array	16.62	35	Pn	Pn	13 45 29.2	-1.8
KKAR	Karatay Array	16.62	35	Pn	Pn	13 45 29.0	-2.0
ZEI	Tsey	16.86	323	*e*P	P	13 45 38.1	+1.7
ZEI				pmax	pmax		
	comp=Z,23nm,1.0s						
KSH	Kashi	17.76	53	P	Pn	13 45 39.6	-5.7
KSH				S	Sn	13 48 49.1	-15
KSH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KSH				pmax	pmax		
	comp=Z,240nm,5.4s						
KSH				LR	LR		
	comp=N,840nm,12.8s						
KSH				LR	LR		
	comp=E,480nm,11.8s						
KSH				LR	LR		
	comp=Z,920nm,10.3s						
KBZ	Khabaz	18.04	323	P	Pn	13 45 48.3	-0.4
	comp=Z,0.1nm,0.3s,baz=135,slow=5.7,SNR=2.0						
KBZ	Khabaz	18.04	323	*i* P	P	13 45 51.6	+2.4
KBZ				pmax	pmax		
	comp=Z,7.0nm,1.0s						
SOCY	Socotra	18.06	192	Pn	Pn	13 45 45.0	-4.2
SOCY				IAmb	IAmb	13 45 53.5	
	comp=Z,23nm,0.8s						
SHA1	Shidzhatmaz	18.17	323	*i* P	P	13 45 51.8	+0.9
KIV	Kislovodsk	18.31	324	*e*P	P	13 45 53.8	+1.5
KIV				pmax	pmax		
	comp=Z,72nm,1.1s						
KIV	Kislovodsk	18.31	324	P	Pn	13 45 49.2	-2.8
GAZ	Gaziantep	18.45	298	P	P	13 45 53.8	-0.1
GAZ				IAmb	IAmb	13 46 01.5	
	comp=Z,33nm,1.3s						
AAK	Ala-Archa	18.47	42	P	P	13 45 54.5	+0.4
	comp=Z,0.4nm,0.3s,baz=233,slow=9.4,SNR=16						
AAK				LR	LR	13 53 33.6	
	comp=Z,410nm,18.1s,baz=246,slow=39						
AAK	Ala-Archa	18.47	42		P	13 45 53.8	-0.4
GOF	Gofitskoye	18.93	327	⇑*e*P	Pn	13 46 03.8	+4.3
SGDS	Sogindy	19.05	41	*e*P	P	13 46 01.2	+0.8
	baz=41						
SGDS	Sogindy	19.05	41	*e*P	P	13 46 01.2	+0.8
MMAI	Mount Meron Ar	19.21	285	P	Pn	13 46 04.3	+1.2
	comp=Z,0.4nm,0.3s,baz=81,slow=13,SNR=2.9						
MMAI				LR	LR	13 55 05.4	
	comp=Z,439nm,18.7s,baz=85,slow=42						
ABKAR	Akbulak array	19.30	5	P	P	13 46 03.0	0.0
ABKAR	Akbulak array	19.30	5	P	P	13 46 02.9	0.0
ABKAR				IAmb	IAmb	13 46 04.7	
	comp=Z,26nm,0.9s						
DAMY	Dhamar	19.64	221	P	P	13 46 07.1	-0.1
DAMY				IAmb	IAmb	13 46 18.6	
	comp=Z,44nm,1.2s						
EIL	Elat	19.70	275	P	Pn	13 46 09.2	+0.3
	comp=Z,0.4nm,0.3s,baz=63,slow=4.6,SNR=8.2						
EIL				LR	LR	13 55 40.1	
	comp=Z,267nm,18.3s,baz=102,slow=43						
BTLS	Baital	19.79	36	*e*P	P	13 46 08.0	-0.4
	baz=36						
BTLS	Baital	19.79	36	*e*P	P	13 46 08.0	-0.4
AAA	Alma-Ata	20.25	44	*e*P	P	13 46 14.0	+0.5
	baz=44						
AAA	Alma-Ata	20.25	44	*e*P	P	13 46 13.9	+0.5
MDOK	Medeo	20.30	44	*e*P	P	13 46 14.2	0.0
	baz=45						
MDOK	Medeo	20.30	44	*e*P	P	13 46 14.1	0.0
KUU	Kurty	20.30	42	*e*P	P	13 46 14.2	+0.2
	comp=Z,4.5nm,0.8s,baz=42						
KUU	Kurty	20.30	42	*e*P	P	13 46 14.2	+0.2
KUU				pmax	pmax		
	comp=Z,4.0nm,0.8s						
AKTO	Aktyubinsk	20.40	1	P	P	13 46 15.6	+0.6
	comp=Z,16nm,0.7s,baz=178,slow=12,SNR=20						
AKTO				LR	LR	13 55 53.2	
	comp=Z,274nm,20.6s,baz=175,slow=42						
CHKK	Chushkaly	20.66	43	*e*P	P	13 46 18.5	+0.5
	baz=43						
CHKK	Chushkaly	20.66	43	*e*P	P	13 46 18.4	+0.5
SATY	Saty	21.08	46	*e*P	P	13 46 22.9	+0.3
	baz=46						
SATY	Saty	21.08	46	*e*P	P	13 46 22.9	+0.3
UZB	Uzynbulak	21.51	47	*e*P	P	13 46 27.2	-0.1
	baz=47						
UZB	Uzynbulak	21.51	47	*e*P	P	13 46 27.2	-0.1
SHLS	Shalkode	21.80	47	*e*P	P	13 46 33.6	+3.3
	comp=Z,5.3nm,1.0s,baz=48						
SHLS	Shalkode	21.80	47	*e*P	P	13 46 33.6	+3.3
SHLS				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BR131	Keskin Array S	21.91	303	*i* P	P	13 46 31.9	+0.4
BR131	Keskin Array S	21.91	303	P	P	13 46 31.1	-0.4
BR131				IAmb	IAmb	13 46 37.1	
	comp=Z,21nm,0.9s						
BRTR	Keskin Array B	21.91	303	P	P	13 46 31.7	+0.2
	comp=Z,13nm,1.1s,baz=116,slow=11,SNR=12						
BRTR				LR	LR	13 55 47.2	
	comp=Z,227nm,18.2s,baz=98,slow=39						
BRTR	Keskin Array B	21.91	303	*i* P	P	13 46 34.2	+2.7
BRTR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
BRTR	Keskin Array B	21.91	303	P	P	13 46 31.3	-0.2
TDK	Taldyqorghan	22.15	42	*e*P	P	13 46 34.0	0.0
	comp=Z,8.3nm,0.6s,baz=42						
TDK	Taldyqorghan	22.15	42	*e*P	P	13 46 33.9	0.0
TDK				pmax	pmax		
	comp=Z,8.0nm,0.6s						
HYB	Hyderabad	22.82	119	*i* P	P	13 46 41.0	-0.4
DANN	Dangsing	22.84	88	*e*P	P	13 46 43.1	+1.4
	comp=Z,38nm,0.7s						
BRZS	Berezniki	22.94	25	*e*P	P	13 46 42.5	+0.2
	baz=26						
BRZS	Berezniki	22.94	25	*e*P	P	13 46 42.5	+0.2
ATD	Arta Tunnel	22.98	220	P	P	13 46 44.8	+1.8
	comp=Z,4.1nm,0.4s,baz=311,slow=18,SNR=2.0						
ATD				LR	LR	13 55 39.4	
	comp=Z,181nm,21.0s,baz=40,slow=37						
BELG	Belogornoye	23.55	345	P	P	13 46 49.3	+0.9
	comp=Z,13nm,0.8s,baz=248,slow=3.8,SNR=3.7						
BELG				LR	LR	13 58 24.9	
	comp=Z,324nm,18.8s,baz=29,slow=43						
BELG	Belogornoye	23.55	345	*i* P	P	13 46 49.6	+1.1
BELG				pmax	pmax		

	comp=Z,5.0nm,1.0s						
ELL	Elmali	24.08	294	P	P	13 46 53.4	-0.5
ELL				pmax	pmax		
	comp=Z,85nm,1.2s						
ELL	Elmali	24.08	294	P	P	13 46 53.4	-0.5
DMN	Daman	24.15	89	eP	P	13 46 55.1	+0.3
	comp=Z,34nm,1.2s						
KKN	Kakani	24.26	88	eP	P	13 46 56.0	+0.2
PKIN	Phulchoki	24.41	89	eP	P	13 46 56.9	-0.3
	comp=Z,16nm,0.8s						
PKI	Pulchoki	24.42	89	eP	P	13 46 57.4	+0.1
	comp=Z,18nm,1.0s						
GUN	Gumba	24.76	88	eP	P	13 47 00.6	+0.2
	comp=Z,30nm,0.9s						
BVAR	Borovoye Array	24.81	18	P	P	13 47 00.6	+0.3
	comp=Z,12nm,0.8s,baz=193,slow=17,SNR=66						
BRVK	Borovoye	24.81	18	P	P	13 47 00.6	+0.3
BRVK				pmax	pmax		
	comp=Z,16nm,1.0s						
BRVK	Borovoye	24.81	18	P	P	13 47 00.6	+0.3
MAKZ	Makanchi	25.23	42	P	P	13 47 04.5	+0.4
MAKZ				pmax	pmax		
	comp=Z,29nm,1.2s						
MAKZ	Makanchi	25.23	42	P	P	13 47 04.5	+0.4
MK31	Makanchi Array	25.40	42	P	P	13 47 06.1	+0.4
MK31				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MK31	Makanchi Array	25.40	42	P	P	13 47 06.1	+0.4
MKAR	Makanchi Array	25.40	42	P	P	13 47 06.0	+0.3
	comp=Z,3.8nm,0.7s,baz=229,slow=8.5,SNR=52						
MKAR	Makanchi Array	25.40	42	P	P	13 47 06.0	+0.3
RAMN	Ramite	25.59	90	eP	P	13 47 07.5	-0.4
	comp=Z,24nm,0.8s						
KURBB	Kurchatov Arra	25.86	31	P	P	13 47 10.6	+0.9
	comp=Z,7.0nm,0.9s,baz=230,slow=9.1,SNR=54						
KURK	Kurchatov	25.96	31	P	P	13 47 11.1	+0.4
KURK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KURK	Kurchatov	25.96	31	P	P	13 47 11.1	+0.4
KURK				IAmb	IAmb	13 47 12.3	
	comp=Z,7.8nm,0.9s						
KARP	Karpathos	26.17	290	P	P	13 47 12.7	-0.1
ARU	Arti	26.41	1	P	P	13 47 15.4	+0.7
	comp=Z,0.5nm,0.4s,baz=299,slow=19,SNR=1.6						
ARU	Arti	26.41	1	P	P	13 47 15.0	+0.3
ARU						13 47 52.9	
ARU				S	S	13 51 49.4	+0.4
TAPN	Taplejung	26.46	88	eP	P	13 47 15.3	-0.5
SEM	Semipalatinsk	26.51	33	eP	P	13 47 15.8	-0.1
	comp=Z,3.9nm,1.1s,baz=34						
SEM	Semipalatinsk	26.51	33	eP	P	13 47 15.8	-0.1
SEM				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ZSN	Zaisan	27.25	43	eP	P	13 47 21.7	-0.7
	baz=43						
ZSN	Zaisan	27.25	43	eP	P	13 47 21.6	-0.8
WMQ	Urumqi	27.51	52	eP	P	13 47 28.5	+3.6
WMQ				pmax	pmax		
	comp=Z,5.0nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,150nm,7.1s						
WMQ				LR	LR		
	comp=N,730nm,23.3s						
WMQ				LR	LR		
	comp=E,330nm,29.0s						
WMQ				LR	LR		
	comp=Z,750nm,29.2s						
MLR	Muntele Rosu	29.22	311	P	P	13 47 41.6	+1.4
	comp=Z,3.7nm,0.8s,baz=218,slow=6.5,SNR=3.7						
MLR				LR	LR	14 00 48.9	
	comp=Z,254nm,18.7s,baz=60,slow=40						
MLR	Muntele Rosu	29.22	311	IAmb	IAmb	13 48 10.4	
	comp=Z,17nm,1.4s						
OBN	Obninsk	29.27	335	ceP	P	13 47 42.7	+2.4
OBN				e		13 48 33.6	
OBN				eSS	SS	13 54 25.2	-13
OBN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
AKASG	Malin Array Be	29.64	322	P	P	13 47 43.0	-0.6
	comp=Z,0.5nm,0.3s,baz=123,slow=8.7,SNR=2.2						
AKASG	Malin Array Be	29.64	322	i P	P	13 47 47.7	+4.1
DGZ	Jazzator, Alta	29.85	40	i P	P	13 47 45.8	+0.1
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ZAA0	Zalesovo Array	30.95	32	P	P	13 47 54.2	-0.9
ZALV	Zalesovo Beam	30.95	32	P	P	13 47 55.2	+0.1
	comp=Z,8.8nm,0.8s,baz=241,slow=9.3,SNR=39						
ZALV				LR	LR	14 01 21.7	
	comp=Z,174nm,20.2s,baz=256,slow=38						
ZALV	Zalesovo Beam	30.95	32	P	P	13 47 54.2	-0.9
MNK	Minsk	32.50	327	i P	P	13 48 06.1	-2.7
	comp=E,2.0nm,0.8s						
MNK				i P	P	13 48 06.1	-2.7
	comp=N,15nm,0.8s						
MNK				i P	P	13 48 06.1	-2.7
	comp=Z,8.0nm,0.7s						
MNK				i PP	PnPn	13 49 12.9	-2.7
MNK				i PPP	PPP	13 49 22.7	
MNK				i PcP	PcP	13 50 53.2	-2.4
MNK				i S	S	13 53 20.2	-4.4
MNK				i SS	SnSn	13 55 14.5	-2.8
MNK				i SSS	SSS	13 55 29.9	
MNK				i LR	LR	14 01 13.6	
MNK				i LRM	MLR	14 02 27.6	
	comp=E,33nm,17.3s						
MNK				i LRM	MLR	14 02 33.6	
	comp=Z,81nm,10.8s						
MNK				i LRM	MLR	14 02 40.3	
	comp=N,157nm,14.8s						
KOLS	Kolonicke sedl	32.81	315	eP	P	13 48 12.5	+0.9
KOLS				pmax	pmax		
	comp=Z,13nm,1.2s						
KOLS	Kolonicke sedl	32.81	315	eP	P	13 48 12.5	+0.9
GTA	Gaotai	35.63	63	⇑P	P	13 48 37.4	+1.1
GTA				pP		13 48 42.6	
GTA				sP		13 48 45.6	
GTA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,84nm,5.1s						
GTA				LR	LR		
	comp=N,270nm,15.3s						
GTA				LR	LR		
	comp=E,150nm,15.3s						
GTA				LR	LR		
	comp=Z,220nm,17.4s						
DPC	Dobruska-Polom	36.93	315	eP	P	13 48 47.6	+0.4
DPC	Dobruska-Polom	36.93	315	eP	P	13 48 47.6	+0.4
CHVC	Chvalec	37.17	316	eP	P	13 48 49.2	0.0
FIA1	FINESS Array S	37.67	336	P	P	13 48 52.1	-1.2
FINES	FINESS Array B	37.67	336	P	P	13 48 53.1	-0.1
	comp=Z,2.7nm,0.6s,baz=128,slow=9.0,SNR=13						
FINES				LR	LR	14 05 25.9	
	comp=Z,245nm,18.2s,baz=258,slow=38						
CKRC	Cesky Krumlov	37.78	312	eP	P	13 48 54.7	+0.3
KBA	Koelnbreinsper	38.05	309	eP	P	13 48 58.4	+1.5
	comp=Z,6.5nm,0.8s						
GEC2	GERESS Array S	38.18	312	P	P	13 48 56.2	-1.7
GEC2				IAmb	IAmb	13 49 02.7	
	comp=Z,7.6nm,1.0s						
GERES	GERESS Array B	38.18	312	P	P	13 48 57.4	-0.5
	comp=Z,3.1nm,0.7s,baz=106,slow=9.8,SNR=18						
GERES				LR	LR	14 06 50.8	
	comp=Z,121nm,19.9s,baz=28,slow=40						
GERES	GERESS Array B	38.18	312	P	P	13 48 56.1	-1.7
KHC	Kasperske Hory	38.32	313	P	P	13 48 57.6	-1.4
KHC				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KHC	Kasperske Hory	38.32	313	eP	P	13 48 57.5	-1.4
KHC	Kasperske Hory	38.32	313	P	P	13 48 57.6	-1.4
LZH	Lanzhou	38.90	69	eP	P	13 49 04.1	-0.1
LZH				pP		13 49 09.3	
LZH				sP		13 49 12.8	
LZH				pmax	pmax		
	comp=Z,17nm,1.2s						
CHTO	Chiang Mai	39.02	97	P	P	13 49 04.5	-0.7
CHTO				pmax	pmax		
	comp=Z,5.0nm,1.1s						
CHTO	Chiang Mai	39.02	97	P	P	13 49 04.5	-0.7
CMAR	Chiang Mai Arr	39.17	97	P	P	13 49 07.6	+1.2
	comp=Z,0.8nm,0.3s,baz=295,slow=11,SNR=7.7						
CMAR				LR	LR	14 09 45.4	
	comp=Z,142nm,18.0s,baz=352,slow=43						
CMAR	Chiang Mai Arr	39.17	97	i P	P	13 49 08.3	+1.9
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CLL	Collm	39.22	316	i P	P	13 49 06.8	+0.3
	comp=Z,9.0nm,1.1s						
CLL	Collm	39.22	316	i P	P	13 49 06.8	+0.3
CLL				pmax	pmax		
	comp=Z,9.0nm,1.1s						
WTTA	Wattenberg	39.23	309	eP	P	13 49 05.8	-1.0
	comp=Z,8.7nm,0.9s						
WATA	Walderalm	39.28	309	eP	P	13 49 06.7	-0.5
	comp=Z,5.2nm,0.8s						
SQTA	Sankt Quirin	39.51	309	eP	P	13 49 07.8	-1.3
	comp=Z,5.3nm,0.6s						
MOTA	Moosalm	39.60	309	eP	P	13 49 07.5	-2.4
	comp=Z,8.3nm,1.0s						
FETA	Feichten	39.81	309	eP	P	13 49 10.6	-1.1
	comp=Z,5.2nm,0.9s						
MBAR	Mbarara	39.81	225	P	P	13 49 11.3	-0.7
	comp=Z,2.3nm,0.2s,baz=41,slow=20,SNR=1.6						
KMI	Kunming	40.06	86	⇓P	P	13 49 14.3	+0.2
KMI				pP		13 49 16.1	
KMI				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KMI				pmax	pmax		
	comp=Z,120nm,6.2s						
TLY	Talaya	40.12	44	LR	LR	14 07 37.8	
	comp=Z,204nm,18.6s,baz=257,slow=39						
DAVA	Damuels	40.42	309	eP	P	13 49 15.1	-1.6
	comp=Z,12nm,1.0s						
KEST	Kesra	40.65	291	P	P	13 49 18.5	-0.2
KEST				IAmb	IAmb	13 49 27.3	
	comp=Z,10nm,1.1s						
TUE	Stuetta	40.68	308	P	P	13 49 18.1	-0.8
TUE				IAmb	IAmb	13 49 47.4	
	comp=Z,12nm,1.4s						
SONM	Songino Array	41.13	50	P	P	13 49 22.9	+0.4
	comp=Z,1.5nm,1.0s,baz=254,slow=8.7,SNR=7.3						
SONM				LR	LR	14 07 14.3	
	comp=Z,183nm,20.0s,baz=244,slow=37						
SONM	Songino Array	41.13	50	P	P	13 49 22.2	-0.4
ULN	Ulaanbaatar	41.58	50	i P	P	13 49 26.2	0.0
ULN				pmax	pmax		
	comp=Z,6.0nm,1.5s						
SENIN	Lac Senin/Sane	42.08	307	P	P	13 49 28.8	-1.6
ECH	Echery	42.36	310	P	P	13 49 30.6	-1.8
ECH				pmax	pmax		
	comp=Z,10.0nm,1.2s						
ECH	Echery	42.36	310	P	P	13 49 30.6	-1.8
ECH				IAmb	IAmb	13 49 38.7	
	comp=Z,10.0nm,1.2s						
BNI	Bardonecchia	42.43	305	P	P	13 49 31.2	-2.0
BNI				pmax	pmax		
	comp=Z,12nm,0.9s						
BNI	Bardonecchia	42.43	305	P	P	13 49 31.2	-2.0
BNI				IAmb	IAmb	13 49 36.8	
	comp=Z,12nm,0.9s						
NRIK	Noril'sk	42.93	15	P	P	13 49 36.3	-0.4
	comp=Z,3.6nm,0.7s,baz=193,slow=5.2,SNR=4.5						
NRIK				LR	LR	14 09 41.8	
	comp=Z,203nm,19.0s,baz=248,slow=39						
NRIK	Noril'sk	42.93	15	i P	P	13 49 37.5	+0.7
NRIK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
NRIK	Noril'sk	42.93	15	P	P	13 49 35.2	-1.6
NRIK				IAmb	IAmb	13 49 38.1	
	comp=Z,5.2nm,0.9s						
XAN	Xi'an	43.28	71	P	P	13 49 42.6	+2.5
XAN				pmax	pmax		
	comp=Z,6.0nm,1.2s						
XAN	Xi'an	43.28	71	P	P	13 49 39.1	-1.1
XAN				pmax	pmax		
	comp=Z,6.0nm,1.1s						
XAN	Xi'an	43.28	71	P	P	13 49 39.1	-1.1
XAN				IAmb	IAmb	13 49 44.7	
	comp=Z,6.1nm,1.1s						
NOA	NORSAR Array B	43.48	329	P	P	13 49 41.4	0.0
	comp=Z,1.1nm,0.8s,baz=116,slow=8.4,SNR=2.5						
NOA				LR	LR	14 09 32.1	
	comp=Z,134nm,19.8s,baz=305,slow=39						
ARCES	ARCESS Array B	43.60	344	LR	LR	14 10 02.6	
	comp=Z,210nm,18.0s,baz=255,slow=39						
HHC	Hu-ho-hao-te	44.61	61	eP	P	13 49 50.5	-0.3
HHC				pmax	pmax		
	comp=Z,2.0nm,1.2s						
HHC				pmax	pmax		
	comp=Z,130nm,7.1s						
PSI	Prapat	47.52	117	LR	LR	14 12 07.4	
	comp=Z,100nm,19.6s,baz=283,slow=38						
NJ2	Nanjing	51.85	71	eP	P	13 50 45.3	-1.4
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
TOA0	Torodi Ar. Sit	54.17	265	P	P	13 51 02.4	-1.7
TOA0				IAmb	IAmb	13 51 05.0	
	comp=Z,4.9nm,0.8s						
TORD	Torodi Ar. Bea	54.17	265	P	P	13 51 03.2	-0.8
	comp=Z,3.7nm,0.7s,baz=58,slow=7.1,SNR=14						
TORD				LR	LR	14 15 32.9	
	comp=Z,69nm,19.9s,baz=25,slow=38						
TORD	Torodi Ar. Bea	54.17	265	P	P	13 51 02.1	-2.0
ZEA	Zeya	54.55	43	eP	P	13 51 07.0	+0.7
YAK	Yakutsk	55.59	33	i P	P	13 51 14.2	+0.6
YAK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
TIXI	Tiksi	55.91	21	i P	P	13 51 16.6	+0.8
KSRS	Korea Array	57.69	62	P	P	13 51 30.6	+1.5
	comp=Z,2.4nm,1.0s,baz=278,slow=7.1,SNR=4.1						
KSRS				LR	LR	14 19 49.2	
	comp=Z,60nm,18.4s,baz=325,slow=40						
KLR	Kul'dur	57.88	48	P	P	13 51 29.1	-1.0
	baz=287,slow=10						
KLR	Kul'dur	57.88	48	i P	P	13 51 28.7	-1.5
KLR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
LEM	Lembang	60.31	119	LR	LR	14 19 54.8	
	comp=Z,93nm,18.7s,baz=354,slow=38						
LBTB	Lobatse	62.77	213	P	P	13 52 04.9	+1.0
LBTB				pmax	pmax		
	comp=Z,17nm,1.5s						
LBTB	Lobatse	62.77	213	P	P	13 52 04.9	+1.0
DBIC	Dimbokro	62.93	262	LR	LR	14 23 33.6	
	comp=Z,127nm,18.8s,baz=26,slow=40						
YSS	Yuzh-Sakhalins	65.58	49	eP	P	13 52 21.2	-0.9
YSS				MLR	MLR		
	comp=Z,200nm,19.0s						
SEY	Seymchan	65.80	30	P	P	13 52 23.2	0.0
	comp=Z,3.8nm,0.7s,baz=279,slow=6.1,SNR=24						
BOSA	Boshof	66.00	211	P	P	13 52 26.2	+1.1
	comp=Z,2.2nm,0.5s,baz=23,slow=7.4,SNR=5.5						
BOSA				LR	LR	14 22 19.1	
	comp=Z,64nm,18.5s,baz=12,slow=37						
BOSA	Boshof	66.00	211	P	P	13 52 25.2	+0.1
EUNU	Eureka	68.41	354	P	P	13 52 39.9	+0.2
EUNU				IAmb	IAmb	13 52 53.5	
	comp=Z,4.4nm,1.1s						
PETK	Petropavlovsk-	72.19	39	P	P	13 53 03.9	+0.7
	comp=Z,2.0nm,1.0s,baz=295,slow=9.1,SNR=1.2						
A21K	Barrow	76.10	11	P	P	13 53 25.6	-0.1
TOLK	Toolik Lake Re	79.60	10	P	P	13 53 44.9	-0.4
TOLK				IAmb	IAmb	13 53 46.4	
	comp=Z,6.7nm,0.8s						
COLD	Coldfoot	80.80	11	P	P	13 53 51.5	-0.2
COLD				IAmb	IAmb	13 53 53.4	
	comp=Z,3.9nm,0.8s						
INK	Inuvik	81.62	4	P	P	13 53 55.5	-0.6
INK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
INK	Inuvik	81.62	4	P	P	13 53 55.5	-0.6
INK				IAmb	IAmb	13 53 58.9	
	comp=Z,4.7nm,1.1s						
ILAR	Eielson Array	83.60	10	P	P	13 54 05.2	-1.2
	comp=Z,0.9nm,0.9s,baz=319,slow=4.3,SNR=9.0						
ILAR				LR	LR	14 36 08.5	
	comp=Z,54nm,18.9s,baz=356,slow=39						
YKA	Yellowknife Ar	87.61	356	P	P	13 54 26.1	-0.3
	comp=Z,1.8nm,0.8s,baz=4.7,slow=4.7,SNR=27						
WRA	Warramunga Arr	88.90	114	P	P	13 54 32.6	-0.7
	comp=Z,1.1nm,1.1s,baz=306,slow=5.1,SNR=2.4						
ASAR	Alice Springs	90.55	117	P	P	13 54 41.6	+0.7
	comp=Z,0.4nm,0.7s,baz=304,slow=4.9,SNR=5.7						

WEL 17 13:53:03.5±0.6**, 38°S**±5°×**18°0W**±°**, h33^{km}, M3.5**/55**, mB4.6**/1**, ML3.8**/52**, MLv3.5**/55**, Mw(mB)3.8**/1**, Error ellipse: s-maj=0.0km s-min=0.0km az=33.9, East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	1.29	259	P	Pn	13 53 25.4	+0.2
WMGZ				S	Sn	13 53 42.2	+0.9
MXZ	Matakaoa Point	1.36	271	P	Pn	13 53 25.0	-1.1
MXZ				S	Sn	13 53 41.9	-1.1
PUZ	Puketiti	1.47	250	P	Pn	13 53 27.9	+0.1
PKGZ	Pakihiroa	1.57	258	P	Pn	13 53 28.7	-0.3
CNGZ	Carnagh Statio	1.68	237	P	Pn	13 53 31.7	+1.1
TWGZ	Tauwhareparae	1.71	249	P	Pn	13 53 31.6	+0.5
HAZ	Te Kaha	1.78	264	P	Pn	13 53 31.7	-0.2
RUGZ	Raukumara Rang	1.89	258	P	Pn	13 53 33.3	-0.2
TKGZ	Te Karaka	1.91	243	P	Pn	13 53 34.4	+0.6
TKGZ				S	Sn	13 53 58.1	+1.4
RIGZ	Rimuhau	2.10	237	P	Pn	13 53 36.9	+0.6
RIGZ				S	Sn	13 54 02.0	+0.7
MWZ	Matawai	2.10	249	P	Pn	13 53 36.4	0.0
MWZ				S	Sn	13 54 01.6	+0.1
PRGZ	Paritu Road	2.14	231	P	Pn	13 53 37.8	+0.9
PRGZ				S	Sb	13 54 05.2	-2.6
RAGZ	Rawiri	2.24	245	P	Pn	13 53 39.1	+0.7
RAGZ				S	Sn	13 54 04.7	-0.3
MHGZ	Mahia Peninsul	2.28	226	P	Pn	13 53 39.5	+0.7
KNZ	Kokohu	2.33	231	P	Pn	13 53 39.7	+0.2
URZ	Urewera	2.39	253	P	Pn	13 53 40.9	+0.5
URZ				S	Sn	13 54 08.3	-0.3
SNGZ	Shannon Statio	2.42	240	P	Pn	13 53 41.5	+0.7
SNGZ				S	Sn	13 54 10.7	+1.4
WHRZ	Whale Island	2.43	263	P	Pn	13 53 41.9	+1.0
WHRZ				S	Sn	13 54 09.1	-0.3
RTZ	Ruatahuna	2.60	246	P	Pn	13 53 44.2	+0.9
RTZ				S	Sn	13 54 14.2	+0.3
WHHZ	Waihua	2.64	235	P	Pn	13 53 44.7	+0.9
RAHZ	Arahi	2.66	239	P	Pn	13 53 44.9	+0.8
RAHZ				S	Sn	13 54 15.4	+0.3
MUGZ	Murupara	2.71	250	P	Pn	13 53 45.1	+0.3
OPRZ	Ohinepanea	2.76	264	P	Pn	13 53 44.9	-0.5
MTHZ	Maungataniwha	2.80	242	P	Pn	13 53 46.5	+0.5
TARZ	Mount Tarawera	2.85	256	P	Pn	13 53 47.9	+1.2
RRRZ	Republican Roa	2.87	254	P	Pn	13 53 49.4	+2.5
ARHZ	Aropaoanui	2.90	234	P	Pn	13 53 48.2	+0.9
NMHZ	Naumai	2.94	238	P	Pn	13 53 48.5	+0.5
PRRZ	Plateau Road	3.00	251	P	Pn	13 53 48.8	+0.1
KARZ	Kaharoa	3.02	261	P	Pn	13 53 48.7	-0.3
ALRZ	Allen Road	3.06	250	P	Pn	13 53 49.7	+0.2
MRHZ	Matea Rd	3.10	245	P	Pn	13 53 50.3	+0.2
BKZ	Black Stump Fm	3.19	239	P	Pn	13 53 51.6	+0.3
MCHZ	McNeill Hill	3.19	234	P	Pn	13 53 52.0	+0.6
KAHZ	Kahuranaki	3.30	227	P	Pn	13 53 52.9	+0.1
KWHZ	Kaweka Forest	3.36	236	P	Pn	13 53 54.0	+0.2
KRHZ	Kereru	3.52	233	P	Pn	13 53 55.9	0.0
KUZ	Kuaotunu	3.53	283	P	Pn	13 53 54.6	-1.4
BHHZ	Black Hill Sta	3.63	237	P	Pn	13 53 57.5	+0.1
TMVZ	Te Maari	3.72	244	P	Pn	13 53 58.6	-0.1
ETVZ	East Tongariro	3.72	244	P	Pn	13 53 58.7	-0.1
WPHZ	Waipukurau	3.73	227	P	Pn	13 53 58.2	-0.5
PRHZ	Porangahau	3.75	224	P	Pn	13 53 58.0	-1.0
OTVZ	Oturere	3.76	244	P	Pn	13 53 59.2	-0.1
PNHZ	Pukenui	3.78	231	P	Pn	13 53 59.1	-0.4
TUVZ	Tukino	3.81	243	P	Pn	13 54 01.1	+1.0
GRZ	Great Barrier	3.89	289	P	Pn	13 53 59.8	-1.1
MKAZ	Moumakai	3.90	276	P	Pn	13 54 00.3	-0.8
ANWZ	Angora Road	3.98	223	P	Pn	13 54 01.7	-0.4
TSZ	Takapari Road	4.01	231	P	Pn	13 54 01.7	-1.0
DVHZ	Dannevirke	4.04	227	P	Pn	13 54 02.0	-1.1
ETAZ	East Tamaki Re	4.11	277	P	Pn	13 54 03.9	0.0
HIZ	Hauiti	4.18	256	P	Pn	13 54 05.4	+0.5
BFZ	Birch Farm	4.26	222	P	Pn	13 54 04.3	-1.7
ABAZ	Army Bay	4.26	282	P	Pn	13 54 05.9	-0.1
AWAZ	Awhitu Peninsu	4.32	275	P	Pn	13 54 07.1	+0.3
PRWZ	Pori Road	4.32	226	P	Pn	13 54 06.7	-0.2
POWZ	Post Office Ro	4.33	228	P	Pn	13 54 06.7	-0.3
VRZ	Vera Road	4.41	248	P	Pn	13 54 09.1	+1.1
RVAZ	Riverhead Bore	4.42	279	P	Pn	13 54 08.3	+0.1
WAZ	Wanganui	4.49	240	P	Pn	13 54 10.7	+1.4
TIWZ	Tintock	4.52	224	P	Pn	13 54 09.0	-0.6
MRZ	Mangatainoka R	4.62	227	P	Pn	13 54 09.4	-1.5
TMWZ	Te Maipa	4.75	221	P	Pn	13 54 10.8	-2.0
HOWZ	Holdsworth Sta	4.81	225	P	Pn	13 54 12.0	-1.5
WCZ	Waipu Caves	4.84	288	P	Pn	13 54 13.4	-0.7
NEZ	North Egmont	4.94	248	P	Pn	13 54 17.4	+1.9
MTW	Mount Morrison	4.99	223	P	Pn	13 54 14.2	-1.9
PKE	Pukeiti	5.00	249	P	Pn	13 54 18.4	+2.2
KHEZ	Kahui Hut	5.01	248	P	Pn	13 54 18.4	+2.0
CAW	Cannon Point	5.20	226	P	Pn	13 54 17.0	-1.9
OUZ	Omahuta	5.69	293	P	Pn	13 54 25.5	-0.2
CTZ	Chatham Island	6.65	158	P	Pn	13 54 42.6	+3.8
CTZ				S	Sn	13 55 51.4	-2.0
QRZ	Quartz Range	6.65	239	P	Pn	13 54 36.9	-2.0
THZ	Tophouse	6.89	231	P	Pn	13 54 40.4	-1.8

IDC 17 14:00:12.5±2.3**, 2°.37N**×**126°.42E, h0^{km}, mb3.1**/3**, mb1 3.3**/3**, mb1mx3.2**/42**, mbtmp3.1**/3**, Error ellipse: s-maj=194.1km s-min=27.5km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.50	161	P	P	14 05 23.9	-0.4
	0.6nm,0.9s,baz=340,slow=11,SNR=5.0						
ASAR	Alice Springs	26.89	165	P	P	14 05 56.2	+0.8
	0.4nm,1.0s,baz=348,slow=12,SNR=1.7						
MKAR	Makanchi Array	58.49	326	P	P	14 10 10.2	-0.4
	0.1nm,0.5s,baz=126,slow=8.1,SNR=4.5						

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*IDC **17** 14:05:01.6±1.4, 3°.12S×129°.57E, h0^{km}, mb3.9/2, mb1 4.2/5, mb1mx3.7/39, mbtmp4.0/5, ML3.7/3, MS2.8/1, Ms1 2.8/1, ms1mx2.4/39, Error ellipse: s-maj=44.4km s-min=22.9km az=85.0*

*DJA **17** 14:05:06.4±1.0, 3°S±4°×13°0E±°, h21^{km}±9^{km}, M4.0/9, mb4.4/2, MLv3.8/9*

*NEIC **17** 14:05:06.0±1.6, 3°.20S±0°.08×129°.90E±0°.09, h35^{km}±5^{km}, mb4.1/10, Error ellipse: s-maj=13.1km s-min=10.9km az=93.0*

ISC 17 14:05:04.6±0.7**, 3°.19S**±0°.05×**130°.04E**±0°.04**, h25^{km}, n25, σ2^{s}.18**/30**, mb4.1**/3**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	1.12	262	P	Pb	14 05 26.2	+0.9
MSAI				S	Sn	14 05 40.3	+1.0
BNDI	Bandanaira	1.33	186	P	Pb	14 05 32.9	+3.9
FAKI	Fak Fak	2.23	83		Pb	14 05 43.9	-0.3
FAKI	Fak Fak	2.23	83	P	Pb	14 05 44.2	0.0
FAKI				S	Sb	14 06 13.2	+1.9
SIJI	Sorong	2.61	28	Pn	Pn	14 05 45.8	+0.6
	14nm,0.3s,baz=233,slow=23,SNR=68						
SIJI				Sn	Sn	14 06 16.4	+0.2
	21nm,0.3s,baz=56,slow=23,SNR=15						
SWI	Sorong	2.61	28	P	Pn	14 05 46.0	+0.7
NLAI	Namlea	2.93	269	P	Pn	14 05 50.1	+0.4
NLAI				S	Sn	14 06 24.4	+0.3
SANI	Sanana	4.20	286	P	Pn	14 06 05.9	-1.2
GTOI	Gorontalo	7.98	298	P	Pn	14 07 00.1	+1.0
	0.0nm9.2nm,0.6s						
APSI	Ampana	8.68	285	P	Pn	14 07 08.0	-0.7
TOLI2	Tolitoli	10.19	295	Pn	Pn	14 07 28.3	-1.0
FITZ	Fitzroy Crossi	15.43	196	Pn	Pn	14 08 41.4	+0.6
	0.1nm,0.3s,baz=13,slow=9.3,SNR=2.3						
FITZ				Sn	Sn	14 11 23.4	-7.8
	0.0nm,0.3s,baz=131,slow=22,SNR=0.9						
JAGI	Jajag, Banyuwa	16.65	251	Pn	Pn	14 08 54.9	-1.6
WB0	Warramunga Arr	17.02	166	Pn	Pn	14 09 01.5	+0.4
WB0				IAmb	IAmb	14 09 07.0	
	comp=Z,13nm,1.2s						
WRAB	Tennant Creek	17.17	166	Pn	Pn	14 09 03.6	+0.7
WRA	Warramunga Arr	17.18	166	P	Pn	14 09 03.6	+0.6
	comp=Z,0.4nm,0.3s,baz=338,slow=12,SNR=17						
WRA				Sn	Sn	14 12 07.6	-5.9
	comp=Z,0.1nm,0.3s,baz=352,slow=22,SNR=1.7						
WRA				LR	LR	14 16 55.4	
	comp=Z,32nm,19.6s,baz=325,slow=41						
WB2	Warramunga Arr	17.18	166	Pn	Pn	14 09 03.6	+0.5
WB2				IAmb	IAmb	14 09 29.8	
	comp=Z,12nm,1.3s						
WR0	Warramunga Arr	17.24	166		P	14 09 04.7	-0.5
AS31	Alice Springs	20.70	170	P	P	14 09 43.3	+0.1
AS31				IAmb	IAmb	14 09 50.2	
	comp=Z,4.3nm,0.5s						

ASAR	Alice Springs	20.70	170	P	Pn	14 09 45.9	+0.3
	comp=Z,9.3nm,0.7s,baz=351,slow=11,SNR=93						
YULB	Yu-li	27.76	343	P	P	14 10 51.6	+0.1
YULB				IAmb	IAmb	14 11 18.3	
	comp=Z,13nm,0.9s						
BBOO	Buckleboo	30.01	170	P	P	14 11 13.1	+1.6
MK31	Makanchi Array	65.09	326	P	P	14 15 43.6	+0.4
MK31				IAmb	IAmb	14 15 54.7	
	comp=Z,2.1nm,1.4s						
MKAR	Makanchi Array	65.09	326	P	P	14 15 42.5	-0.6
	comp=Z,0.3nm,0.3s,baz=112,slow=8.1,SNR=15						
MKAR	Makanchi Array	65.09	326	P	P	14 15 43.6	+0.4

IDC 17 14:18:00.2±2.3, 6°.56S×129°.77E, h0^{km}, mb3.2/1, mb1 3.6/4, mb1mx3.4/33, mbtmp3.4/4, ML3.5/3, Error ellipse: s-maj=81.1km s-min=30.0km az=77.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	12.16	199	Pn	Pn	14 20 56.1	+1.2
	0.3nm,0.3s,baz=25,slow=8.7,SNR=21						
FITZ				Sn	Sn	14 23 00.3	-11
	0.6nm,0.3s,baz=134,slow=19,SNR=7.6						
WRA	Warramunga Arr	14.03	162	Pn	Pn	14 21 19.4	-1.0
	0.3nm,0.3s,baz=340,slow=14,SNR=18						
WRA				Sn	Sn	14 23 44.0	-13
	0.5nm,0.3s,baz=333,slow=21,SNR=9.3						
ASAR	Alice Springs	17.47	167	P	Pn	14 22 05.2	-0.3
	0.1nm,0.3s,baz=344,slow=8.5,SNR=11						
MKAR	Makanchi Array	67.73	327	P	P	14 28 59.6	0.0
	0.1nm,0.3s,baz=132,slow=6.5,SNR=1.3						

TAP 17 14:22:34.0, 24°.85N×122°.04E, h8^{km}, ML2.0, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.17	345	P	Pg	14 22 37.4	0.0
	baz=347						
TWB1				S	Sg	14 22 39.9	0.0
	baz=347						
NTC	Toucheng	0.19	273	P	Pg	14 22 37.8	0.0
	baz=272						
NTC				eS	Sg	14 22 40.6	+0.2
	baz=272						
TIPB	Shuangxi	0.23	303	P	Pg	14 22 38.5	0.0
	baz=303						
TIPB				S	Sg	14 22 41.9	+0.2
	baz=303						
WFSB	Wu-fen Shan	0.32	314	eS	Sg	14 22 45.0	+0.4
	baz=314						

JMA 17 14:23:14.5±0.1, 24°.10N×123°.29E, h25^{km}±3^{km}, M1.1, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.44	325	P	Pb	14 23 23.6	-0.2
YOJ				S	Sb	14 23 29.7	-0.3
IRIF	Iriomote-Funau	0.47	60	P	Pb	14 23 23.8	-0.3
IRIF				S	Sb	14 23 31.0	+0.3
HATJ	Hateruma jima	0.47	95	eS	Sb	14 23 30.7	-0.2
JKRS	Kuro-shima	0.67	78	P	Pb	14 23 27.4	-0.2
JKRS				eS	Sb	14 23 37.0	+0.5
JIJ	Ishigaki jima	0.82	71	P	Pb	14 23 29.6	-0.5
JIJ				S	Sb	14 23 40.6	-0.2
JISG	Ishigakijimahi	1.05	62	eS	Sb	14 23 47.4	+0.1

IDC 17 14:29:02.2±2.4, 1°.22N×126°.85E, h0^{km}, mb3.1/3, mb1 3.4/3, mb1mx3.2/28, mbtmp3.2/3, Error ellipse: s-maj=205.4km s-min=27.8km az=66.0

DJA 17 14:29:11.2±0.5, 1°N±4°×12°7E±°, h61^{km}±9^{km}, M3.4/7, MLv3.4/7

ISC 17 14:29:11.5±1.2, 1°.0N±0°.1×126°.94E±0°.07, h72^{km}, n7, σ1^{s}12/9, mb3.1/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	0.50	121	P	Pn	14 29 24.6	+0.1
TNTI				S	Sn	14 29 35.2	+1.1
KMSI	Cibinong	2.99	261	P	Pn	14 29 56.7	+0.1
KMSI				S	Sn	14 30 31.4	0.0
SANI	Sanana	3.20	197	P	Pn	14 29 58.8	-0.7
GTOI	Gorontalo	3.94	264	P	Pn	14 30 10.9	+1.3
WRA	Warramunga Arr	22.07	161	P	P	14 34 00.7	0.0
	0.2nm,0.3s,baz=340,slow=11,SNR=1.9						
ASAR	Alice Springs	25.46	165	P	P	14 34 34.4	+1.4
	0.2nm,0.3s,baz=346,slow=12,SNR=6.3						
MKAR	Makanchi Array	59.89	326	P	P	14 39 08.4	-1.5
	0.1nm,0.3s,baz=129,slow=7.5,SNR=4.1						

JMA 17 14:31:09.5±0.2, 24°.98N×123°.55E, h16^{km}, M1.7, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IRIF	Iriomote-Funau	0.66	166	P	Pg	14 31 22.1	-0.4
IRIF				eS	Sb	14 31 31.5	-0.2
YOJ	Yonaguni jima	0.71	224	P	Pg	14 31 22.9	-0.5
YOJ				S	Sg	14 31 32.2	-0.7
JISG	Ishigakijimahi	0.79	119	P	Pb	14 31 24.5	-0.4
JISG				eS	Sb	14 31 35.1	-0.3
JIJ	Ishigaki jima	0.82	139	P	Pb	14 31 24.4	-0.9
JIJ				S	Sb	14 31 35.6	-0.5
JKRS	Kuro-shima	0.85	150	S	Sb	14 31 36.1	-0.9
HATJ	Hateruma jima	0.95	166	P	Pb	14 31 27.2	-0.4
HATJ				S	Sb	14 31 39.0	-0.9
JTJ	Tarama	1.10	108	P	Pn	14 31 30.5	+0.3

TAP 17 14:31:39.0, 24°.87N×122°.00E, h12^{km}±1^{km}, ML1.3, 1C, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.14	356	P	Pb	14 31 43.0	-0.5
	baz=359						
TWB1				S	Sg	14 31 45.4	+0.7
	baz=359						
NTC	Toucheng	0.15	264	i P	Pb	14 31 43.4	-0.5
	baz=263						
NTC				S	Sg	14 31 46.3	+1.1
	baz=263						
TIPB	Shuangxi	0.19	303	⇑iP	Pb	14 31 44.2	-0.2
	baz=302						
TIPB				i S	Sg	14 31 47.5	+1.4
	baz=302						
NWF	Wu-fen Shan	0.28	315	eP	Pb	14 31 46.1	0.0
	baz=315						
WFSB	Wu-fen Shan	0.28	315	eP	Pb	14 31 46.1	+0.1
	baz=315						
TWC	Suao	0.29	208	eP	Pg	14 31 45.5	+0.5
	baz=205						
TWC				eS	Sb	14 31 51.0	0.0
	baz=205						
TWE	Neicheng	0.34	244	P	Pb	14 31 46.4	-0.6
	baz=241						
TWE				eS	Sg	14 31 50.9	+0.6
	baz=241						
NDS	Dongshan	0.35	227	eP	Pb	14 31 48.1	+1.0
	baz=227						
NDS				eS	Sb	14 31 53.4	+0.8
	baz=227						
ENTT	Nioudou	0.46	240	eP	Pb	14 31 48.7	-0.3
	baz=238						
NWLT	Wulai	0.46	258	eP	Pb	14 31 48.8	-0.3
	baz=258						
NWLT				eS	Sb	14 31 55.3	-0.6
	baz=258						
YHNB	Yeheng	0.60	251	eP	Pb	14 31 51.3	-0.2
	baz=250						

VAO 17 14:35:47.1±0.4, 32°.30S×70°.70W, h10^{km}, mb5.1

SJA 17 14:35:52.8±0.7, 32°.38S×71°.04W, h86^{km}±6^{km}, ML5.5, MW5.3

IDC 17 14:35:52.1±2.2, 32°.34S×70°.69W, h63^{km}±19^{km}, mb4.6/22, mb1 4.8/27, mb1mx4.7/35, mbtmp5.0/27, MS4.1/12, Ms1 4.1/12, ms1mx3.9/23, Error ellipse: s-maj=16.8km s-min=10.5km az=70.0

MOS 17 14:35:52.2±1.2, 32°.32S×70°.71W, h76^{km}, mb5.2/25, Error ellipse: s-maj=14.8km s-min=6.6km az=99.3

GUC 17 14:35:53.6±0.7, 32°.38S×70°.96W, h77^{km}±4^{km}, ML5.7

NEIC 17 14:35:54, 32°.38S×71°.01W, h95^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-0.44; $M_{\theta\theta}$-1.09; $M_{\phi\phi}$1.53; $M_{r\theta}$-0.06; $M_{\theta\phi}$0.78; $M_{\phi r}$-0.46; Fault plane solution: $M_0$1.64000×10^{17} NP1:ϕ_s241.12000°, δ78.66000°, λ4.69000°. NP2:ϕ_s150.19000°, δ85.40000°, λ168.62000°. Principal axes: T 1.8395, Plg11.0000°, Azm105.0000°; N -0.5234, Plg78.0000°, Azm308.0000°; P -1.3161, Plg5.0000°, Azm196.0000°;

NEIC 17 14:35:54.3±1.6, 32°.41S±0°.04×70°.94W±0°.07, h88^{km}±3^{km} Error ellipse: s-maj=8.8km s-min=5.8km az=93.0

GCMT 17 14:36:00.0±0.2, 32°.33S±0°.01×70°.86W±0°.01, h102^{km}±1^{km}, MW5.4/109, Moment Tensor Solution. s81,c103; s109,c170; Duration: 1^{s}2 Moment tensor: Scale 10^{17} Nm; M_{rr}0.04±.02; $M_{\theta\theta}$-0.97±.03; $M_{\phi\phi}$0.93±.03; $M_{r\theta}$0.15±.02; $M_{\theta\phi}$1.09±.02; $M_{\phi r}$0.33±.02; Best double couple: $M_0$1.49300×10^{17} NP1:ϕ_s339.00000°, δ80.00000°, λ170.00000°. NP2:ϕ_s70.00000°, δ80.00000°, λ10.00000°. Principal axes: T 1.5170, Plg14.0000°, Azm294.0000°; N -0.0470, Plg76.0000°, Azm114.0000°; P -1.4690, Plg0.0000°, Azm204.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

NEIC 17 14:36:01, 32°.38S×70°.42W, h60^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.27; $M_{\theta\theta}$-1.37; $M_{\phi\phi}$1.10; $M_{r\theta}$0.00; $M_{\theta\phi}$0.72; $M_{\phi r}$-0.26; Fault plane solution: $M_0$1.47000×10^{17} NP1:ϕ_s241.00000°, δ79.00000°, λ8.00000°. NP2:ϕ_s149.00000°, δ82.00000°, λ169.00000°. Principal axes: T 1.3506, Plg13.0000°, Azm105.0000°; N 0.2175, Plg77.0000°, Azm295.0000°; P -1.5681, Plg2.0000°, Azm195.0000°;

ISC 17 14:35:53.6±0.5, 32°.34S±0°.03×70°.94W±0°.04, h81^{km}±4^{km}, n757, σ1^{s}41/751, mb5.0/148, 19C-40D, Fault plane solution: NP1:ϕ_s231.18636°, δ53.57852°, λ9.04744°. NP2:ϕ_s135.78566°, δ82.73052°, λ143.23520°. Principal axes: T Plg30.6171°, Azm86.9504°; N Plg52.6232°, Azm306.1732°; P Plg19.2900°, Azm188.9046°; **Fault plane solution: NP1:**ϕ_s62.12859°, δ87.71549°, λ23.19005°. **NP2:**ϕ_s331.15027°, δ66.82946°, λ177.51492°. **Principal axes:** T Plg17.8431°, Azm289.0642°; N Plg66.7039°, Azm67.4446°; P Plg14.4798°, Azm194.2959°; **Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VA03	San Esteban	0.54	142	⇑eP	Pn	14 36 08.5	+0.6
VA03				eS	Sn	14 36 19.4	+0.9
VA03	San Esteban	0.54	142		Pn	14 36 08.6	+0.6
VA03				Sn	Sn	14 36 19.0	+0.5
ROCH	El Roble	0.64	185	⇓iP	Pn	14 36 09.5	+0.5
ROCH				i S	Sn	14 36 21.1	+0.7
ROC1	El Roble	0.64	186	eP	Pn	14 36 09.1	+0.1
PEL	Peldehue	0.83	165	eP	Pn	14 36 10.9	0.0
PEL				i S	Sn	14 36 24.1	+0.4
PEL				IAML		14 36 26.8	
	comp=N,385μm,0.4s						
PEL	Peldehue	0.83	165		Pn	14 36 11.4	+0.5
PEL				Sn	Sn	14 36 24.1	+0.4
PEL	Peldehue	0.83	165	eP	Pn	14 36 10.9	0.0
PEL				eS	Sn	14 36 25.0	+1.3
MT02	Curacav	0.94	190	⇓iP	Pn	14 36 12.4	+0.4
MT02				i S	Sn	14 36 26.1	+0.4
MT02				IAML		14 36 28.1	
	comp=E,354μm,0.5s						
MT02	Curacav	0.94	190		Pn	14 36 12.2	+0.2
MT02				Sn	Sn	14 36 25.4	-0.2
MT05	Renca	1.07	171	⇓iP	Pn	14 36 14.0	+0.4
MT05				i S	Sn	14 36 29.1	+0.6
MT05	Renca	1.07	171	Pn	Pn	14 36 13.8	+0.2
MT05				Sn	Sn	14 36 28.4	-0.2
CO02	Combarbal	1.13	357	⇓iP	Pn	14 36 16.1	+1.6
CO02				i S	Sn	14 36 32.7	+2.7
CO02	Combarbal	1.13	357	Pn	Pn	14 36 15.8	+1.3
FSR	Penalolen	1.19	163	eP	Pn	14 36 16.5	+1.4
FSR				i S	Sn	14 36 33.0	+1.8
MT03	Universidad Ad	1.21	163	⇓eP	Pn	14 36 15.7	+0.3
MT03				eS	Sn	14 36 33.1	+1.3
MT03				IAML		14 36 33.8	
	comp=E,230μm,0.4s						
AUSP	Uspallata	1.32	86	eP	Pn	14 36 18.5	+1.5
VA05	Santo Domingo	1.43	203	eP	Pn	14 36 18.1	0.0
MT09	Talagante	1.44	182	⇓iP	Pn	14 36 18.5	+0.2
MT09				eS	Sn	14 36 38.1	+1.2
MT09				IAML		14 36 43.3	
	comp=N,137μm,0.2s						
CO03	El Pedregal	1.51	8	⇓eP	Pn	14 36 21.1	+1.9
CO03				eS	Sn	14 36 41.7	+3.3
CO03				IAML		14 36 43.1	
	comp=E,231μm,0.5s						
CO03	El Pedregal	1.51	8		Pn	14 36 20.9	+1.6
LMEL	Las Melosas	1.63	158	⇓eP	Pn	14 36 21.8	+0.9
LMEL				eS	Sn	14 36 43.0	+1.5
LMEL				IAML		14 36 44.2	
	comp=E,202μm,0.3s						
ZON	Zonda	2.08	68	P	Pn	14 36 28.9	+2.2
ZON	Zonda	2.08	68	Pn	Pn	14 36 28.9	+2.2
ZON	Zonda	2.08	68	eP	Pn	14 36 28.9	+2.2
ZON				eS	Sn	14 36 55.2	+3.3
ZON				IAML		14 37 00.6	
	comp=Z,37μm,0.7s						
RTCV	Cerro Valdivia	2.09	78	eP	Pn	14 36 28.7	+1.9
GO04	Tololo Observa	2.16	3	⇓eP	Pn	14 36 29.3	+1.4
GO04				eS	Sn	14 36 57.0	+2.9
GO04	Tololo Observa	2.16	3		Pn	14 36 29.2	+1.2
GO04	Tololo Observa	2.16	3	eP	Pn	14 36 29.4	+1.4
GO04				eS	Sn	14 36 56.6	+2.5
BO03	Pichilemu	2.32	201	⇓eP	Pn	14 36 28.6	-1.1
BO03				IAML		14 37 07.3	
	comp=N,29μm,0.6s						
RTLL	Cerro Villicun	2.33	65	⇓eP	Pn	14 36 31.6	+1.6
RTLL	Cerro Villicun	2.33	65	eP	Pn	14 36 31.7	+1.6
RTLL				eS	Sn	14 37 00.8	+3.0
RTLL				IAML		14 37 05.6	
	comp=Z,14μm,0.5s						
ACCO	Cerro Coronel	2.37	43	eP	Pn	14 36 33.2	+2.4
BO02	Sierra Bellavi	2.45	177	⇓eP	Pn	14 36 31.9	+0.2
BO02				eS	Sn	14 37 01.3	+0.4
BO02				IAML		14 37 02.9	
	comp=N,51μm,0.3s						
BO02	Sierra Bellavi	2.45	177	Pn	Pn	14 36 32.1	+0.4
CO01	Juntas del Tor	2.46	17	⇓eP	Pn	14 36 34.3	+2.3
CO01				eS	Sn	14 37 04.7	+3.4
CO01	Juntas del Tor	2.46	17		Pn	14 36 34.1	+2.1
AROD	Rodeo	2.50	31	eP	Pn	14 36 35.2	+2.6
ACDV	Cuesta del Vie	2.66	36	eP	Pn	14 36 37.4	+2.8
LAMA	Las Malvinas	2.97	151	eP	Pn	14 36 40.0	+1.4
COIS	El Sosneado	2.98	158	eP	Pn	14 36 41.2	+2.4
RFA	San Rafael	3.19	140	eP	Pn	14 36 42.3	+0.7
LCO	Las Campanas	3.32	4	P	Pn	14 36 44.2	+0.6
LCO	Las Campanas	3.32	4	Pn	Pn	14 36 44.2	+0.6
AVFE	Valle Fertil	3.42	62	eP	Pn	14 36 45.4	+0.7
AVFE				eS	Sn	14 37 26.6	+2.4
AVFE				IAML		14 37 29.6	
	comp=Z,5μm,0.5s						
AC05	El Transito	3.54	10	⇓eP	Pn	14 36 47.9	+1.5
AC05	El Transito	3.54	10	Pn	Pn	14 36 47.8	+1.4
AGUA	GUANDACOL	3.54	37	eP	Pn	14 36 48.6	+2.2
AGUA				IAML		14 37 41.0	
	comp=Z,8μm,1.4s						
EDS3	Malargue	3.66	160	eP	Pn	14 36 49.0	+0.9
AC04	Llanos de Chal	4.12	358	⇓eP	Pn	14 36 55.0	+0.7
AC04	Llanos de Chal	4.12	358	Pn	Pn	14 36 54.8	+0.6
BI02	San Fabin de	4.33	184	⇓eP	Pn	14 36 57.1	0.0
BI02	San Fabin de	4.33	184	Pn	Pn	14 36 57.0	0.0
MRA	San Martin	4.42	92	eP	Pn	14 36 58.2	-0.2
MRA				IAML		14 38 15.5	
	comp=Z,3μm,1.5s						
ACLC	CERRO LA CRUZ	4.49	51	eP	Pn	14 36 59.4	-0.1
ACLC				IAML		14 37 57.0	
	comp=Z,5μm,1.0s						
GO03	Copiap	4.77	8	⇓eP	Pn	14 37 03.4	+0.2
GO03	Copiap	4.77	8		Pn	14 37 03.2	+0.1
GO03	Copiap	4.77	8	eP	Pn	14 37 04.0	+0.9
GO03				eS	Sn	14 37 57.2	+0.1
BI03	Tigo	4.81	200	⇓eP	Pn	14 37 01.3	-2.3
BI03	Tigo	4.81	200	Pn	Pn	14 37 01.1	-2.6
AC02	Maricunga	5.70	17		Pn	14 37 16.4	+0.1
AC01	Pan de Azucar	6.17	3		Pn	14 37 19.7	-2.5
LC01	Cunco	6.59	186		Pn	14 37 25.7	-2.2
H03N1	Juan Fernandez	6.79	259	T	T	14 44 19.0	
	baz=85,slow=73,SNR=577						
H03N3	Juan Fernandez	6.80	258	T	T	14 44 15.2	
	baz=85,slow=73,SNR=502						
H03N2	Juan Fernandez	6.81	259	T	T	14 44 19.8	
	baz=85,slow=73,SNR=479						
H03S1	Juan Fernandez	6.85	255	T	T	14 44 02.8	
	baz=83,slow=75,SNR=222						
H03S3	Juan Fernandez	6.85	255	T	T	14 44 04.2	
	baz=83,slow=75,SNR=267						
H03S2	Juan Fernandez	6.87	255	T	T	14 44 01.3	
	baz=83,slow=75,SNR=205						
GO02	Mina Guanaco	7.25	10		Pn	14 37 34.9	-2.2
AHML	Horco Molle	7.38	43	eP	Pn	14 37 36.2	-2.5
AHML				eS	Sn	14 39 00.0	-1.0
AHML				IAML		14 39 04.5	
	comp=Z,710nm,1.6s						
PB14	IPOC Station P	7.70	4		Pn	14 37 39.8	-3.5
PLCA	Paso Flores	8.39	178	P	Pn	14 37 51.0	-1.4
	comp=Z,18nm,0.3s,baz=353,slow=10,SNR=242						
PLCA				LR	LR	14 41 17.4	
	comp=Z,2μm,20.2s,baz=6.0,slow=39						
PLCA	Paso Flores	8.39	178		Pn	14 37 50.9	-1.6
PLCA	Paso Flores	8.39	178	eP	Pn	14 37 49.3	-3.1
PB10	IPOC Station P	8.80	2		Pn	14 37 53.4	-4.7
PB15	IPOC Station P	9.19	9		Pn	14 37 59.8	-3.7
PB06	IPOC Station P	9.67	8		Pn	14 38 06.0	-4.1
LVC	Limon Verde	9.86	11	P	Pn	14 38 09.0	-3.8
	comp=Z,22nm,0.3s,baz=195,slow=8.9,SNR=62						
LVC				S	Sn	14 39 55.4	-6.5
	comp=Z,5.5nm,0.3s,baz=349,slow=20,SNR=1.3						
LVC	Limon Verde	9.86	11	P	Pn	14 38 09.0	-3.8
LVC	Limon Verde	9.86	11		Pn	14 38 08.7	-4.1
LVC	Limon Verde	9.86	11	eP	Pn	14 38 08.0	-4.8
PB04	IPOC Station P	9.99	4		Pn	14 38 09.0	-5.5
LL01	San Ignacio de	10.09	186		Pn	14 38 11.8	-3.8
PB09	IPOC Station P	10.61	9		Pn	14 38 19.3	-3.7
PB07	IPOC Station P	10.61	5		Pn	14 38 17.8	-5.2
PB01	IPOC Station P	11.32	7		Pn	14 38 26.7	-5.9
PATCX	Punta Patache	11.49	4		Pn	14 38 29.7	-5.2
TA01	Diego Aracena	11.74	4		Pn	14 38 32.4	-5.8
PB08	IPOC Station P	12.25	8		Pn	14 38 40.3	-5.1
ITQB	Itaqui	12.57	82	eP	Pn	14 38 43.1	-6.2
PSGCX	Pisagua	12.71	4		Pn	14 38 44.6	-6.7
MNMC	Minye Minye	13.21	6		Pn	14 38 54.3	-3.9
CPUP	Villa Florida	13.29	67	P	Pn	14 38 54.4	-4.6
	comp=Z,1.3nm,0.3s,baz=240,slow=12,SNR=27						
CPUP				S	Sn	14 41 12.7	-12
	comp=Z,2.0nm,0.3s,baz=234,slow=13,SNR=1.8						
CPUP				LR	LR	14 44 07.5	
	comp=Z,1μm,18.3s,baz=242,slow=38						
CPUP	Villa Florida	13.29	67	P	Pn	14 38 54.7	-4.4
CPUP	Villa Florida	13.29	67		Pn	14 38 54.7	-4.4
PB16	IPOC Station P	14.00	6		Pn	14 39 09.4	+0.5
PLTB	Pedras Altas	14.72	92	eP	Pn	14 39 12.8	-4.8
CPSB	Cacapava Do Su	15.08	87	eP	Pn	14 39 17.0	-5.2
LPAZ	La Paz	16.18	10	P	Pn	14 39 36.0	-0.8
	comp=Z,4.7nm,0.3s,baz=177,slow=7.6,SNR=205						
LPAZ	La Paz	16.18	10	P	Pn	14 39 36.6	-0.2
LPAZ				pmax	pmax		
	comp=Z,239nm,1.1s						
LPAZ	La Paz	16.18	10		Pn	14 39 36.6	-0.2
LPAZ	La Paz	16.18	10	eP	Pn	14 39 34.1	-2.6
ITAB	Concordia	17.10	78	eP	Pn	14 39 44.6	-2.9
CNLB	Canela	17.52	85	eP	Pn	14 39 48.3	-4.4
AQDB	Aquidauana	18.03	53	eP	P	14 39 55.9	-2.4
PTGB	Pitanga	18.23	70	eP	P	14 39 58.6	-1.9
SIV	San Ignacio	18.58	31	P	P	14 40 03.6	-0.8
	comp=Z,9.2nm,0.3s,baz=225,slow=10,SNR=335						
SIV				LR	LR	14 47 46.3	
	comp=Z,891nm,21.9s,baz=213,slow=39						
TRCB	Terra Rica	18.79	64	eP	P	14 40 05.2	-1.5
GO09	Cerro Castillo	18.95	183	P	P	14 40 08.6	+0.4
PCMB	Pacaembu	20.51	63	eP	P	14 40 23.9	-1.4
PP1B	Ponte de Pedra	20.63	48	eP	P	14 40 25.0	-1.7
GO10	Punta Arenas	20.81	180	P	P	14 40 28.1	-0.2
FRTB	Fartura	20.89	70	eP	P	14 40 27.9	-1.6
NNA	Nana	20.97	344	P	P	14 40 31.9	+1.5
	comp=Z,9.0nm,0.3s,baz=183,slow=9.5,SNR=8.4						
NNA				LR	LR	14 47 22.7	
	comp=Z,396nm,18.7s,baz=180,slow=33						
NNA	Nana	20.97	344	ceP	Pn	14 40 33.3	-0.4
NNA				pmax	pmax		
	comp=Z,154nm,1.7s						
EFI	East Falkland	21.50	158	ceP	P	14 40 34.8	-0.9
EFI				pmax	pmax		
	comp=Z,143nm,1.0s						
EFI	East Falkland	21.50	158	P	P	14 40 34.5	-1.2
VILB	Vilhena	21.66	29	eP	P	14 40 37.5	-0.3
PET01	Itanhaem-SP	22.29	75	eP	P	14 40 42.4	-2.1
ITRB	Iturama	22.32	61	eP	P	14 40 42.9	-1.8
USHA	Ushuaia	22.56	176	P	P	14 40 47.2	+0.2
	comp=Z,248nm,0.9s,baz=11,slow=6.1,SNR=16						
ETMB	Extrema	22.83	12	eP	P	14 40 51.0	+0.9
BB19B	Bebedouro	22.91	66	eP	P	14 40 49.0	-1.9
VAO	Valinhos	23.14	72	eP	P	14 40 51.2	-2.0
ARAG	Araguaiana, MT	24.00	51	eP	P	14 41 00.1	-0.9
PARB	Paraibuna	24.07	75	eP	P	14 41 00.9	-0.7
SAML	Samuel	24.36	19	P	P	14 41 03.8	-0.4
SAML				pmax	pmax		
	comp=Z,267nm,1.2s						
SAML	Samuel	24.36	19	P	P	14 41 03.8	-0.4
SAML	Samuel	24.36	19	eP	P	14 41 04.3	+0.1
CZSB	Cruzeiro do Su	24.54	356	eP	P	14 41 06.9	+1.1
IPMB	Ipameri, GO	24.98	61	eP	P	14 41 08.2	-1.7
ESAR	Angra dos Reis	25.18	75	eP	P	14 41 11.0	-0.6
MAN01	Angra dos Reis	25.64	75	eP	P	14 41 15.5	-0.5
BSCB	Bom Sucesso	25.90	71	eP	P	14 41 16.8	-1.4
ATAH	Atahualpa	26.02	343	P	P	14 41 21.2	+1.5
	comp=Z,5.1nm,0.7s,baz=306,slow=6.9,SNR=3.1						
VAS01	Vassouras-RJ	26.34	75	eP	P	14 41 20.7	-1.5
BDFB	Brasilia	26.65	57	P	P	14 41 23.6	-1.5
	comp=Z,60nm,1.0s,baz=227,slow=8.1,SNR=50						
BDFB				LR	LR	14 52 48.2	
	comp=Z,694nm,19.4s,baz=227,slow=38						
BDFB	Brasilia	26.65	57	P	P	14 41 23.4	-1.7
SNDB	Serra Nova Dou	27.14	46	eP	P	14 41 28.5	-0.9
DIAM	Diamantina, MG	28.24	67	eP	P	14 41 38.5	-0.8
PEXB	Peixe	28.95	51	eP	P	14 41 45.0	-0.5
NPGB	Novo Progresso	29.05	33	eP	P	14 41 45.7	-0.7
JANB	Januaria	29.71	61	eP	P	14 41 51.0	-1.3
SJMB	Sao Joao De Ma	29.97	70	eP	P	14 41 53.7	-0.8
BSFB	Barra de Sao F	30.18	71	eP	P	14 41 55.1	-1.2
SDBA	SAO DESIDERIO	31.05	56	eP	P	14 42 03.3	-0.8
ITTB	Itaituba	31.26	30	eP	P	14 42 05.1	-0.8
NAN01	Guarapari, ES	31.28	70	eP	P	14 42 04.8	-1.4
SMTB	Santa Maria do	31.84	48	eP	P	14 42 10.4	-0.6
PRPB	Parauapebas	32.65	42	eP	P	14 42 17.4	-0.8
HOPE	Hope Point	32.81	142	P	P	14 42 17.8	-1.2
HOPE				pmax	pmax		
	comp=Z,71nm,0.6s						
HOPE	Hope Point	32.81	142	P	P	14 42 17.8	-1.2
PTGA	Pitinga	33.10	20	P	P	14 42 20.4	-1.6
PTGA	Pitinga	33.10	20	eP	P	14 42 21.9	-0.1
RPN	Rapa Nui	33.62	269	LR	LR	14 51 51.3	
	comp=Z,339nm,18.1s,baz=115,slow=28						
GDU01	Guandu, BA	34.12	64	eP	P	14 42 30.0	-0.9
MALB	Monte Alegre	34.15	31	eP	P	14 42 30.4	-0.7
BBAC	Balboa, Cauca	34.69	349	eP	P	14 42 22.7	-13
PCON	Cinco Dias	34.86	350	eP	P	14 42 30.4	-7.4
PRAC	Prado	36.05	353	eP	P	14 42 47.6	+0.2
ORTC	Ortega, Tolima	36.28	353	eP	P	14 42 51.6	+2.2
MCPB	Macapa, AP	36.46	33	eP	P	14 42 51.2	+0.3
YOTC	Yotoco, Valle	36.48	351	eP	P	14 42 46.7	-4.5
TMAB	Tom-Au,PA,Br	36.74	40	eP	P	14 42 53.6	+0.3
CHIC	Chingaza	36.86	355	eP	P	14 42 54.7	-0.1
ANIL	Santa Ana	36.87	353	eP	P	14 42 49.9	-4.8
TOLC	Tolima	36.95	353	eP	P	14 42 52.0	-3.5
RREF	El Recreo	37.27	353	eP	P	14 42 58.6	+0.1
PLMC	San Jos del P	37.38	351	eP	P	14 43 00.1	+1.3
GUY2C	Guyana, Caldas	37.59	353	eP	P	14 43 02.0	+1.0
NORC	Norcasia	37.87	354	eP	P	14 43 04.3	+1.4
RUSC	La Rusia	38.07	357	eP	P	14 43 04.6	-0.5
CBOC	Ciudad Bolivar	38.29	352	eP	P	14 43 07.7	+1.1
PTBC	PUERTO BERRIO,	38.80	354	eP	P	14 43 08.5	-2.2
NBPS	Pedro II - PI	39.18	51	eP	P	14 43 12.6	-1.4
DBBC	Dabeiba	39.45	352	eP	P	14 43 17.7	+1.5

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PAMC  Pamplona, Colo  39.49 357 eP     P      14 43 15.6 -1.3
UREC  San Jos de Ur   40.10 353 eP     P      14 43 18.9 -2.6
NBLI  Livramento-PB   40.19  59 eP     P      14 43 21.2 -1.1
SDV   Santo Domingo   40.99   0  P     P      14 43 28.4 -0.6
      comp=Z,5.4nm,0.4s,baz=197,slow=8.5,SNR=6.0
SDV   Santo Domingo   40.99   0  P     P      14 43 27.8 -1.2
SDV   Santo Domingo   40.99   0 eP     P      14 43 27.0 -2.0
SDV   Santo Domingo   40.99   0 eP     P      14 43 29.1 +0.1
SMLC  San Martn de    41.02 355 eP     P      14 43 26.6 -2.3
MOTC  Monteria, Cord  41.13 353 eP     P      14 43 27.9 -2.1
NBPA  Parau_RN        41.17  57 eP     P      14 43 29.9 -0.5
RCBR  Riachuelo       41.99  59  P     P      14 43 35.7 -1.4
      comp=Z,41nm,1.3s,baz=24,slow=7.6,SNR=3.5
RCBR  Riachuelo       41.99  59  P     P      14 43 36.8 -0.3
RCBR                             pmax  pmax
      comp=Z,37nm,1.2s
RCBR  Riachuelo       41.99  59  P     P      14 43 36.8 -0.3
RCBR                             IAmb  IAmb   14 43 37.9
      comp=Z,37nm,1.2s
RCBR  Riachuelo       41.99  59 eP     P      14 43 37.4 +0.3
NBPV  Pedro Velho     42.03  60 eP     P      14 43 36.6 -0.9
JTS   Las Juntas de   44.45 340  P     P      14 43 58.1 +1.3
      comp=Z,13nm,0.3s,baz=339,slow=15,SNR=5.3
JTS   Las Juntas de   44.45 340 iP     P      14 43 58.5 +1.7
JTS                              pmax  pmax
      comp=Z,5.0nm,0.9s
JTS   Las Juntas de   44.45 340  IAmb  IAmb   14 44 26.4
      comp=Z,16nm,1.1s
GRGR  Grenville       45.10  13  P     P      14 44 01.7 -0.3
SVB   Belmont         46.29  13  P     P      14 44 10.9 -0.4
FDF   Fort de France  47.73  13  P     P      14 44 20.5 -2.1
FDF                              pmax  pmax
      comp=Z,50nm,0.8s
FDF   Fort de France  47.73  13  P     P      14 44 20.5 -2.1
BELA  Belgrano 2      48.36 170  P     P      14 44 26.8 +0.1
PDPR  Patillas Dam,   50.29   6  P     P      14 44 41.5 -0.5
SJG   San Juan        50.37   6  P     P      14 44 41.6 -1.0
      comp=Z,7.4nm,0.3s,baz=214,slow=6.5,SNR=4.4
SJG   San Juan        50.37   6  IAmb  IAmb   14 44 43.0
      comp=Z,46nm,1.1s
VNA3  Neumayer Olymp  50.56 158  P     P      14 44 44.0 +0.5
VNA2  Neumayer--Watz  51.19 158  P     P      14 44 48.7 +0.4
      baz=287,slow=5.2
SNAA  Sanae           52.78 158  P     P      14 45 00.6 +0.4
SNAA  Sanae           52.78 158  P     P      14 45 00.5 +0.4
      comp=Z,36nm,0.9s,baz=276,slow=6.7,SNR=31
SNAA  Sanae           52.78 158  P     P      14 45 00.1  0.0
TEIG  Tepich          54.84 340  P     P      14 45 16.8 +1.3
      comp=Z,71nm,0.5s,baz=162,slow=2.4,SNR=25
TEIG  Tepich          54.84 340  P     P      14 45 15.7 +0.1
RKT   Rikitea         56.70 262 eS     S      14 53 14.0 -1.6
      comp=Z,186nm,39.5s
RKT                             eLQ    LQ     14 59 47.4
      comp=Z,756nm,32.2s
RKT                             eLR    LR     15 02 06.7
      comp=Z,189nm,32.8s
QSPA  South Pole Qui  57.90 180  P     P      14 45 37.5 +0.5
833A  Chaparral WMA,  66.11 333  P     P      14 46 34.3 +2.1
      baz=154
HKT   Hockley         66.29 336 iP     P      14 46 34.9 +1.6
HKT                              pmax  pmax
      comp=Z,5.0nm,0.8s
GOGA  Godfrey         66.45 349  P     P      14 46 34.7 +0.4
      baz=169
LRAL  Lakeview Retre  66.76 345  P     P      14 46 37.1 +0.8
      baz=165
Y52A  Lilburn         67.00 348  P     P      14 46 37.1 -0.7
Y52A                             IAmb  IAmb   14 46 39.0
      comp=Z,12nm,0.6s
SLBS  Sierra La Lagu  67.02 321  P     P      14 46 39.2 +0.9
SLBS                             IAmb  IAmb   14 46 41.3
      comp=Z,15nm,0.9s
SYO   Syowa Base      67.07 159⇑eP     P      14 46 22.7  -15
SYO   Syowa Base      67.07 159⇓eP     P      14 46 23.8  -14
Z47A  Carrollton      67.16 344  P     P      14 46 39.1 +0.3
BIRD  Birdtown, Kers  67.23 351  P     P      14 46 39.3 +0.2
BIRD                             IAmb  IAmb   14 47 02.4
      comp=Z,30nm,1.3s
Y49A  Blount Mountai  67.44 346  P     P      14 46 40.8 +0.3
Y49A                             IAmb  IAmb   14 47 00.8
      comp=Z,34nm,1.4s
W58A  Raeford         67.45 353  P     P      14 46 41.6 +1.0
      baz=172
143A  Socs Landing,   67.51 341  P     P      14 46 42.5 +1.5
NATX  Nacogdoches     67.58 338  P     P      14 46 43.5 +2.0
      baz=159
HPIG                  67.58 327  P     P      14 46 41.4 -0.5
HPIG                             IAmb  IAmb   14 46 45.1
      comp=Z,31nm,1.3s
W57A  Gilead          67.67 352  P     P      14 46 42.0  0.0
W57A                             IAmb  IAmb   14 47 09.3
      comp=Z,31nm,1.2s
X51A  Calhoun         67.82 348  P     P      14 46 43.3 +0.3
KMSC  Kings Mountain  67.83 351  P     P      14 46 43.3 +0.3
      baz=171
KMSC  Kings Mountain  67.83 351  P     P      14 46 42.6 -0.4
KMSC                             IAmb  IAmb   14 47 08.1
      comp=Z,27nm,1.4s
BG3   Lake Jocassee   67.92 349  P     P      14 46 43.5 -0.1
FPAL  Fort Paine      67.94 347  P     P      14 46 43.9 +0.2
X48A  Hartselle       68.14 346  P     P      14 46 45.5 +0.5
Y45A  Yeager Farm, C  68.14 343  P     P      14 46 46.0 +1.0
JCT   Junction City   68.20 333  P     P      14 46 47.2 +1.7
      baz=154
JCT   Junction City   68.20 333  P     P      14 46 45.0 -0.5
JCT                              pmax  pmax
      comp=Z,29nm,1.2s
JCT   Junction City   68.20 333  P     P      14 46 45.0 -0.5
JCT                              IAmb  IAmb   14 46 48.1
      comp=Z,29nm,1.1s
V58A  Windy Hill, Pi  68.21 353  P     P      14 46 45.5 +0.1
V58A                             IAmb  IAmb   14 46 50.4
      comp=Z,37nm,1.3s
V57A  Coltrane Farms  68.37 352  P     P      14 46 46.8 +0.5
      baz=172
V56A  Mocksville      68.38 352  P     P      14 46 47.6 +1.2
      baz=171
U61A  Possum Corner   68.50 355  P     P      14 46 47.5 +0.3
      baz=175
V55A  Taylorsville    68.51 351  P     P      14 46 47.4 +0.1
V55A                             IAmb  IAmb   14 46 54.0
      comp=Z,16nm,0.9s
W50A  Signal Mountai  68.52 347  P     P      14 46 47.5 +0.2
V53A  Saluda          68.56 350  P     P      14 46 47.8 +0.2
V53A                             IAmb  IAmb   14 46 48.8
      comp=Z,15nm,0.6s
TBI   Tubuai          68.61 255 eS     S      14 55 45.6 +0.7
      comp=Z,65nm,28.2s
TBI                             eLQ    LQ     15 04 23.7
      comp=Z,433nm,28.0s
TBI                             eLR    LR     15 07 32.9
      comp=Z,630nm,30.0s,baz=112
TBI   Tubuai          68.61 255 eT     T      16 00 54.4
      comp=Z,7.2nm,0.2s
SWET  Sewanee         68.66 347  P     P      14 46 48.6 +0.4
U60A  Pendleton       68.70 355  P     P      14 46 49.5 +1.1
      baz=174
TKL   Tuckaleechee C  68.70 349  P     P      14 46 48.6 +0.1
      comp=Z,10nm,0.5s,baz=164,slow=7.3,SNR=26
TKL   Tuckaleechee C  68.70 349  P     P      14 46 48.5 +0.1
TKL                              IAmb  IAmb   14 47 13.4
      comp=Z,20nm,1.1s
WHTX  Lake Whitney,   68.72 336  P     P      14 46 49.4 +0.8
      baz=156
WHTX  Lake Whitney,   68.72 336  P     P      14 46 49.9 +1.3
WHTX                             IAmb  IAmb   14 46 50.5
      comp=Z,17nm,0.7s
TXAR  Lajitas Array   68.75 330  P     P      14 46 50.6 +1.6
      comp=Z,3.9nm,0.6s,baz=155,slow=8.1,SNR=35
TXAR                             PcP   sP     14 47 18.2 -1.1
      comp=Z,2.0nm,0.5s,baz=159,slow=8.7,SNR=5.8
TXAR                             LR    LR     15 13 21.0
      comp=Z,131nm,18.2s,baz=0.0,slow=33
TXAR  Lajitas Array   68.75 330  P     P      14 46 50.2 +1.2
TX31  Lajitas Ar. Si  68.75 330  P     P      14 46 50.1 +1.1
TX31                             IAmb  IAmb   14 47 13.2
      comp=Z,22nm,0.9s
TX32  Lajitas Array   68.75 330  P     P      14 46 50.3 +1.2
V52A  Sevierville     68.85 349  P     P      14 46 49.2 -0.2
V52A                             IAmb  IAmb   14 47 13.7
      comp=Z,26nm,1.4s
U57A  Blanch          68.86 353  P     P      14 46 50.5 +1.1
      baz=172
PLAL  Pickwick Lake   68.87 345  P     P      14 46 49.3 -0.2
PLAL                             IAmb  IAmb   14 46 50.5
      comp=Z,13nm,0.6s
U56A  King            68.90 352  P     P      14 46 50.9 +1.3
      baz=172
U56A  King            68.90 352  P     P      14 46 50.1 +0.5
U56A                             IAmb  IAmb   14 46 52.1
      comp=Z,22nm,1.0s
V51A  Loudon          68.94 348  P     P      14 46 50.0 +0.1
V51A                             IAmb  IAmb   14 47 18.0
      comp=Z,25nm,1.4s
X43A  Marvell         69.09 342  P     P      14 46 52.0 +1.1
      baz=162
T59A  Double "B" Far  69.23 354  P     P      14 46 52.1 +0.5
U54A  Nelsons Funny   69.25 351  P     P      14 46 52.5 +0.6
      baz=170
U54A  Nelsons Funny   69.25 351  P     P      14 46 52.4 +0.4
T58A  Grand View Acr  69.29 354  P     P      14 46 52.1 +0.1
      baz=173
W45A  Hickory Valley  69.29 344  P     P      14 46 52.9 +0.8
V48A  Smith Brothers  69.34 346  P     P      14 46 52.8 +0.4
T57A  Hurt            69.41 353  P     P      14 46 53.3 +0.5
      baz=173
T57A  Hurt            69.41 353  P     P      14 46 53.1 +0.3
T57A                             IAmb  IAmb   14 47 14.2
      comp=Z,32nm,1.4s
T56A  Rocky Mt        69.53 352  P     P      14 46 54.8 +1.3
      baz=172
TZTN  Tazewell        69.53 349  P     P      14 46 53.9 +0.3
TZTN                             IAmb  IAmb   14 46 55.0
      comp=Z,31nm,1.2s
CLTN  Cedars of Leba  69.58 347  P     P      14 46 54.0 +0.2
CLTN                             IAmb  IAmb   14 46 55.5
      comp=Z,14nm,0.6s
X40A  Basin Creek Fa  69.59 341  P     P      14 46 54.9 +0.9
      baz=160
BLA   Blacksburg      69.75 352  P     P      14 46 55.5 +0.5
BLA                              pmax  pmax
      comp=Z,42nm,1.5s
BLA   Blacksburg      69.75 352  P     P      14 46 55.5 +0.5
BLA                              IAmb  IAmb   14 46 59.4
      comp=Z,42nm,1.4s
MIAR  Mount Ida       69.85 340  P     P      14 46 56.6 +1.0
      baz=160
MIAR  Mount Ida       69.85 340  P     P      14 46 55.7 +0.2
MIAR                             pmax  pmax
      comp=Z,26nm,1.4s
MIAR  Mount Ida       69.85 340  P     P      14 46 55.7 +0.2
MIAR                             IAmb  IAmb   14 47 20.2
      comp=Z,26nm,1.4s
Z35A  Perchaven, San  69.87 337  P     P      14 46 56.2 +0.5
U49A  Red Boiling Sp  69.89 347  P     P      14 46 55.9 +0.1
U49A                             IAmb  IAmb   14 47 23.8
      comp=Z,23nm,1.4s
S58A  Poland Farm, P  69.91 354  P     P      14 46 57.2 +1.4
      baz=174
S58A  Poland Farm, P  69.91 354  P     P      14 46 56.0 +0.2
WVT   Waverly         69.92 345  P     P      14 46 56.7 +0.7
      baz=165
WVT   Waverly         69.92 345  P     P      14 46 56.1 +0.1
WVT                              pmax  pmax
      comp=Z,45nm,0.7s
WVT   Waverly         69.92 345  P     P      14 46 56.1 +0.1
JSRW  J. Sargeant Re  69.97 354  P     P      14 46 57.1 +0.9
MEH   Mehetia         70.00 261 eT     T      16 02 39.8
      comp=Z,38nm,0.3s
ABTX  Abilene, Hawle  70.06 334  P     P      14 46 58.1 +1.1
      baz=155
ABTX  Abilene, Hawle  70.06 334  P     P      14 46 58.1 +1.1
ABTX                             IAmb  IAmb   14 46 58.9
      comp=Z,15nm,0.8s
W41B  Gary Mavity, V  70.07 342  P     P      14 46 58.2 +1.3
      baz=161
S56A  Natural Bridge  70.12 353  P     P      14 46 58.2 +1.0
      baz=172
S57A  Dark Hollow, R  70.14 353  P     P      14 46 58.5 +1.3
      baz=173
S57A  Dark Hollow, R  70.14 353  P     P      14 46 57.9 +0.7
S57A                             IAmb  IAmb   14 47 19.8
      comp=Z,33nm,1.2s
WHAR  Wooly Hollow    70.19 342  P     P      14 46 58.5 +0.9
WHAR                             IAmb  IAmb   14 46 59.5
      comp=Z,17nm,1.3s
T50A  Nancy           70.21 348  P     P      14 46 57.3 -0.5
R58B  Mineral         70.24 354  P     P      14 46 59.0 +1.2
R58B                             IAmb  IAmb   14 47 25.2
      comp=Z,36nm,1.4s
S54A  Dingess, Beckl  70.44 351  P     P      14 46 59.8 +0.6
      baz=171
S54A  Dingess, Beckl  70.44 351  P     P      14 46 59.4 +0.2
W39A  Magazine        70.52 340  P     P      14 47 01.0 +1.4
      baz=160,SNR=9.1
W39A  Magazine        70.52 340  P     P      14 47 00.1 +0.5
R58A  Rapidan         70.58 354  P     P      14 47 01.4 +1.4
      baz=174
T47A  Sharon Grove    70.60 346  P     P      14 47 00.1  0.0
T47A                             IAmb  IAmb   14 47 25.2
      comp=Z,22nm,1.1s
S51A  Beattyville     70.61 349  P     P      14 46 59.8 -0.3
S51A                             IAmb  IAmb   14 47 01.4
      comp=Z,17nm,0.8s
R57A  Stanardsville   70.63 354  P     P      14 47 01.5 +1.3
      baz=173
LCAR  Lake Charles    70.64 343  P     P      14 47 00.8 +0.5
FCAR  Ozark Folk Cen  70.72 342  P     P      14 47 01.2 +0.4
R54A  Victor          70.78 352  P     P      14 47 01.9 +0.7
      baz=171
PARMO Parma           70.86 344  P     P      14 47 02.4 +0.8
TVO   Taravao         71.03 261 eT     T      16 03 57.3
      comp=Z,1.3nm,0.2s
R53A  Hurricane       71.05 351  P     P      14 47 02.5 -0.3
R53A                             IAmb  IAmb   14 47 19.9
      comp=Z,44nm,1.4s
PBMO  Poplar Bluff    71.13 344  P     P      14 47 02.9 -0.4
PBMO                             IAmb  IAmb   14 47 04.5
      comp=Z,19nm,0.8s
TIAR  Tiarei          71.22 261 eT     T      16 04 11.4
      comp=Z,5.3nm,0.3s
Q57A  Strasburg       71.35 354  P     P      14 47 06.3 +1.8
      baz=173
U40A  Yellville       71.35 341  P     P      14 47 05.4 +0.8
      baz=161,SNR=9.7
U40A  Yellville       71.35 341  P     P      14 47 04.8 +0.1
U40A                             IAmb  IAmb   14 47 28.2
      comp=Z,18nm,1.0s
PPT2  Papeete2        71.40 261 eS     S      14 56 14.6 -3.2
      comp=Z,102nm,26.2s
PPT2  Papeete2        71.40 261 eLR    LR     15 08 39.5
      comp=Z,301nm,30.8s
Q56A  Snyder Ridge,   71.43 353  P     P      14 47 06.5 +1.4
      baz=173
R49A  Shelbyville     71.51 348  P     P      14 47 05.1 -0.4
R49A                             IAmb  IAmb   14 47 07.6
      comp=Z,10nm,0.8s
T42A  Van Buren       71.53 343  P     P      14 47 06.5 +0.8
T42A                             IAmb  IAmb   14 47 28.9
      comp=Z,22nm,1.5s
MNTX  Cornudas Mount  71.53 329  P     P      14 47 06.7 +0.8
      baz=150
MNTX  Cornudas Mount  71.53 329  P     P      14 47 06.0 +0.1
MNTX                             IAmb  IAmb   14 47 07.3
      comp=Z,13nm,0.8s
Q54A  Coxs Mills      71.55 352  P     P      14 47 05.2 -0.6
Q54A                             IAmb  IAmb   14 47 07.0
      comp=Z,11nm,0.7s
HHAR  Hobbs           71.58 341  P     P      14 47 06.4 +0.3
HHAR                             IAmb  IAmb   14 47 29.6
      comp=Z,22nm,1.0s
WCI   Wyandotte Cave  71.65 347  P     P      14 47 06.8 +0.4
      baz=166
WCI   Wyandotte Cave  71.65 347  P     P      14 47 06.5 +0.1
WCI                              pmax  pmax
      comp=Z,20nm,1.3s
WCI   Wyandotte Cave  71.65 347  P     P      14 47 06.5 +0.1
WCI                              IAmb  IAmb   14 47 29.4
      comp=Z,20nm,1.3s
WMOK  Wichita Mounta  71.67 336  P     P      14 47 07.5 +0.9
      baz=156
WMOK  Wichita Mounta  71.67 336  P     P      14 47 06.6  0.0
WMOK                             pmax  pmax
      comp=Z,12nm,1.3s
WMOK  Wichita Mounta  71.67 336  P     P      14 47 06.6  0.0
S44A  Carbondale      71.73 345  P     P      14 47 07.8 +0.9
S44A                             IAmb  IAmb   14 47 07.9
      comp=Z,14nm,0.8s
SIUC  Southern Illin  71.75 345  P     P      14 47 07.5 +0.5
SIUC                             IAmb  IAmb   14 47 08.3
      comp=Z,18nm,0.7s
P57A  Homestead Farm  71.76 354  P     P      14 47 08.4 +1.4
      baz=174
P59A  Jarrettsville   71.77 356  P     P      14 47 08.7 +1.7
      baz=175
TUL1  Leonard         71.78 339  P     P      14 47 08.0 +0.8
      baz=158,SNR=5.3
TUL1  Leonard         71.78 339  P     P      14 47 07.2  0.0
TUL1                             IAmb  IAmb   14 47 30.7
      comp=Z,21nm,0.9s
HSIG                  71.88 324  P     P      14 47 09.2 +1.1
HSIG                             IAmb  IAmb   14 47 11.2
      comp=Z,34nm,1.2s
Q51A  Peebles         71.93 350  P     P      14 47 08.2 +0.2
MGMO  Mountain Grove  71.95 342  P     P      14 47 08.4 +0.2
MGMO                             IAmb  IAmb   14 47 10.0
      comp=Z,18nm,1.1s
OK030 Cody Creek RV   72.10 338  P     P      14 47 09.1  0.0
OK030                            IAmb  IAmb   14 47 32.6
      comp=Z,19nm,0.9s
FVM   French Village  72.28 344  P     P      14 47 09.7 -0.5
FVM                              pmax  pmax
      comp=Z,47nm,1.2s
FVM   French Village  72.28 344  P     P      14 47 09.7 -0.5
O58A  Lewisberry      72.31 355  P     P      14 47 10.5 +0.2
      baz=175
P52A  Corning         72.36 351  P     P      14 47 10.8 +0.2
      baz=170
O60A  Telford         72.41 356  P     P      14 47 12.4 +1.6
      baz=176
MSTX  Muleshoe        72.44 333  P     P      14 47 12.3 +1.0
      baz=152
MSTX  Muleshoe        72.44 333  P     P      14 47 12.1 +0.7
MSTX                             IAmb  IAmb   14 47 13.5
      comp=Z,26nm,0.8s
O59A  Robesonia       72.45 356  P     P      14 47 12.1 +1.0
      baz=175
O57A  Amberson        72.45 355  P     P      14 47 12.0 +0.8
      baz=174
CCM   Cathedral Cave  72.54 343  P     P      14 47 12.7 +1.0
      baz=162
CCM   Cathedral Cave  72.54 343  P     P      14 47 12.2 +0.5
CCM                              pmax  pmax
      comp=Z,28nm,1.0s
CCM   Cathedral Cave  72.54 343  P     P      14 47 12.2 +0.5
CCM                              IAmb  IAmb   14 47 13.6
      comp=Z,28nm,1.0s
O56A  Blue Knob Stat  72.58 354  P     P      14 47 13.4 +1.4
      baz=173
O56A  Blue Knob Stat  72.58 354  P     P      14 47 12.7 +0.7
P49A  Miami Univ. Ec  72.64 349  P     P      14 47 12.5 +0.2
      baz=168
P49A  Miami Univ. Ec  72.64 349  P     P      14 47 12.3 +0.1
P49A                             IAmb  IAmb   14 47 19.6
      comp=Z,34nm,1.2s
P48A  Milroy          72.69 348  P     P      14 47 11.7 -0.9
S39A  Bolivar         72.73 342  P     P      14 47 13.4 +0.6
S39A                             IAmb  IAmb   14 47 36.6
      comp=Z,27nm,1.1s
AMTX  Amarillo        72.84 334  P     P      14 47 14.9 +1.3
      baz=153
O53A  New Philadelph  72.85 352  P     P      14 47 14.8 +1.3
      baz=171
N60A  Cedar Hill Far  72.94 357  P     P      14 47 15.5 +1.5
      baz=176
319A  Douglas         73.02 326  P     P      14 47 16.1 +1.2
319A                             IAmb  IAmb   14 47 18.3
      comp=Z,28nm,0.9s
R40A  Maddies Statio  73.02 343  P     P      14 47 15.0 +0.4
N59A  State Game Lan  73.03 356  P     P      14 47 16.1 +1.5
      baz=176
N59A  State Game Lan  73.03 356  P     P      14 47 14.6 +0.1
ACSO  Alum Creek Sta  73.06 350  P     P      14 47 16.5 +1.7
      baz=170
ACSO  Alum Creek Sta  73.06 350  P     P      14 47 14.9 +0.1
121A  Cookes Peak, D  73.30 328  P     P      14 47 18.3 +1.7
      baz=148
121A  Cookes Peak, D  73.30 328  P     P      14 47 17.3 +0.7
121A                             IAmb  IAmb   14 47 20.1
      comp=Z,29nm,1.0s
LIC   Lamto           73.37  71 ePKP1  P      14 47 18.7 +1.5
      comp=Z,14nm,0.5s
N54A  Moraine State   73.41 353  P     P      14 47 18.0 +1.2
      baz=172
N54A  Moraine State   73.41 353  P     P      14 47 17.2 +0.4
N54A                             IAmb  IAmb   14 47 41.6
      comp=Z,37nm,1.5s
TIC   Toumodi         73.63  71 ePKP1  P      14 47 18.0 -0.7
M59A  Waymart         73.63 356  P     P      14 47 19.2 +1.1
      baz=176
P43A  Skaggs, Pawnee  73.66 345  P     P      14 47 18.1 -0.2
KAN08 Anthony NE Sta  73.67 338  P     P      14 47 18.3 -0.1
KIC   Kosan Boka      73.68  71 ePKP1  P      14 47 18.9 -0.2
      comp=Z,18nm,0.6s
M56A  Emporium        73.76 354  P     P      14 47 19.8 +0.9
      baz=174
DBIC  Dimbokro        73.77  71  P     P      14 47 18.8 -0.8
      comp=Z,7.3nm,0.8s,baz=210,slow=6.7,SNR=16
DBIC                             LR    LR     15 15 55.1
      comp=Z,137nm,21.5s,baz=212,slow=33
DBIC  Dimbokro        73.77  71  P     P      14 47 18.9 -0.6
DBIC                             pmax  pmax
      comp=Z,14nm,1.0s
DBIC  Dimbokro        73.77  71  P     P      14 47 18.9 -0.6
DBIC                             IAmb  IAmb   14 47 47.7
      comp=Z,14nm,0.9s
M55A  Ridgway         73.79 354  P     P      14 47 19.1  0.0
M55A                             IAmb  IAmb   14 47 20.5
      comp=Z,9.9nm,0.6s
L63A  North Scituate  73.84 359  P     P      14 47 20.5 +1.3
      baz=180
N49A  Columbus Grove  73.91 350  P     P      14 47 19.7  0.0
N49A                             IAmb  IAmb   14 47 43.5
      comp=Z,25nm,1.1s
M54A  Oil Creek Stat  73.92 353  P     P      14 47 20.9 +1.2
      baz=172
M54A  Oil Creek Stat  73.92 353  P     P      14 47 19.8  0.0
M54A                             IAmb  IAmb   14 47 48.6
      comp=Z,30nm,1.5s
M53A  WI Miller and   73.96 352  P     P      14 47 20.5 +0.5
      baz=172
N47A  Urbana          74.12 348  P     P      14 47 20.3 -0.6
N47A                             IAmb  IAmb   14 47 21.3
      comp=Z,16nm,0.6s
M52A  Chesterland     74.14 352  P     P      14 47 21.1 +0.1
P40A  Paris           74.14 343  P     P      14 47 20.9 -0.2
L58A  Harry Jones Me  74.15 356  P     P      14 47 22.0 +0.9
      baz=176
BNM   Barren Site     74.17 330  P     P      14 47 20.3 -1.5
L57A  Andrews Acres   74.17 355  P     P      14 47 22.4 +1.2
      baz=175
L59A  Walton          74.26 357  P     P      14 47 23.1 +1.3
L59A                             IAmb  IAmb   14 47 48.6
      comp=Z,16nm,0.8s
BINY  Binghamton      74.31 356  P     P      14 47 23.4 +1.3
      baz=176
L56A  Greenwood       74.36 355  P     P      14 47 23.4 +1.0
      baz=174
L56A  Greenwood       74.36 355  P     P      14 47 23.2 +0.9
L56A                             IAmb  IAmb   14 47 51.6
      comp=Z,36nm,1.4s
L61B  Northampton     74.44 359  P     P      14 47 24.2 +1.5
      baz=178
HDIL  Hopedale        74.49 346  P     P      14 47 23.6 +0.5
      baz=164
HDIL  Hopedale        74.49 346  P     P      14 47 23.3 +0.3
TUC   Tucson          74.50 326  P     P      14 47 25.1 +1.6
      baz=146
TUC   Tucson          74.50 326  P     P      14 47 24.7 +1.2
TUC                              pmax  pmax
      comp=Z,12nm,1.3s
TUC   Tucson          74.50 326  P     P      14 47 24.7 +1.2
MAW   Mawson          74.51 163  P     P      14 47 22.7 -0.3
      comp=Z,8.0nm,0.6s,baz=225,slow=9.5,SNR=6.6
MAW                              LR    LR     15 20 34.0
      comp=Z,80nm,19.0s,baz=232,slow=36
MAW   Mawson          74.51 163  P     P      14 47 23.4 +0.4
MAW   Mawson          74.51 163  P     P      14 47 23.4 +0.4
P38A  Dawn            74.60 342  P     P      14 47 23.8 +0.1
P38A                             IAmb  IAmb   14 47 47.8
      comp=Z,26nm,1.1s
K62A  Royalston       74.64 359  P     P      14 47 25.6 +1.7
      baz=179
WVNY  West Valley, N  74.71 354  P     P      14 47 25.0 +0.7
WVNY                             IAmb  IAmb   14 47 50.8
      comp=Z,18nm,0.9s
ANMO  Albuquerque     74.78 330  P     P      14 47 26.1 +1.0
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      comp=Z,7.7nm,1.0s,baz=151,slow=7.6,SNR=12
ANMO  Albuquerque      74.78 330   P       P        14 47 27.1 +1.9
      baz=150
ANMO  Albuquerque      74.78 330ceP      P        14 47 27.1 +1.9
ANMO                               pmax    pmax
      comp=Z,13nm,1.3s
ANMO  Albuquerque      74.78 330   P       P        14 47 26.5 +1.3
SUR   Sutherland       74.82 119   P       P        14 47 26.7 +1.0
K59A  Cooperstown      74.83 357   P       P        14 47 26.4 +1.3
      baz=177
K58A  Earlville        74.86 356   P       P        14 47 26.2 +1.0
      baz=176
K58A  Earlville        74.86 356   P       P        14 47 25.9 +0.7
K56A  Middlesex        74.90 355   P       P        14 47 26.3 +0.8
      baz=174
L48A  N Adams          74.95 350   P       P        14 47 25.9 +0.1
L48A                               IAmb    IAmb     14 47 26.6
      comp=Z,12nm,0.7s
KSU1  Kansas State U   74.97 340   P       P        14 47 26.7 +0.8
      baz=158
N41A  Harden Midland   74.98 344   P       P        14 47 26.0 +0.1
M44A  Midewin, Midew   75.04 347   P       P        14 47 25.5  -0.7
M44A                               IAmb    IAmb     14 47 49.3
      comp=Z,21nm,0.9s
214A  Organ Pipe Nat   75.20 324   P       P        14 47 29.6 +2.2
      baz=144
J56A  Wolcott          75.44 356   P       P        14 47 28.8 +0.3
      baz=175
J56A  Wolcott          75.44 356   P       P        14 47 29.6 +1.1
J59A  Piesco           75.51 357   P       P        14 47 30.0 +1.1
J59A                               IAmb    IAmb     14 47 53.8
      comp=Z,21nm,1.4s
N38A  Joes South For   75.63 343   P       P        14 47 30.0 +0.4
CBKS  Cedar Bluff      75.68 337   P       P        14 47 31.7 +1.7
      baz=155
T25A  Trinidad         75.86 333   P       P        14 47 33.4 +2.1
      baz=151,SNR=13
I64A  Boothbay         75.90   1   P       P        14 47 32.7 +1.6
      baz=181
X18A  Snowflake        75.95 328   P       P        14 47 32.4 +0.5
PECO  Prince Edward    76.11 356   P       P        14 47 32.6 +0.4
PECO                               IAmb    IAmb     14 48 01.9
      comp=Z,21nm,1.3s
N35A  Tabor            76.33 341   P       P        14 47 33.8 +0.2
113A  Mohawk Valley,   76.33 324   P       P        14 47 34.9 +1.1
I51A  Listowel         76.33 353   P       P        14 47 34.5 +0.9
      baz=171
W18A  Petrified Fore   76.35 328   P       P        14 47 36.1 +2.0
      baz=147,SNR=8.6
W18A  Petrified Fore   76.35 328   P       P        14 47 35.7 +1.6
W18A                               IAmb    IAmb     14 47 37.4
      comp=Z,22nm,1.1s
L40A  Anamosa          76.35 345   P       P        14 47 33.8 +0.1
H58A  Gabriels         76.44 358   P       P        14 47 35.1 +0.8
      baz=177
H61A  Lyndonville      76.51 359   P       P        14 47 35.9 +1.3
      baz=179
H57A  Richville        76.54 357   P       P        14 47 35.3 +0.6
      baz=176
X16A  Lo Mia Camp, P   76.55 326   P       P        14 47 37.2 +2.0
X16A                               IAmb    IAmb     14 47 38.7
      comp=Z,19nm,1.0s
LONY  Lake Ozonia      76.66 357   P       P        14 47 35.7 +0.3
      baz=177
EMMW  East Machias     76.75   3   P       P        14 47 37.0 +1.2
SDCO  Great Sand Dun   76.81 332   P       P        14 47 38.4 +1.6
      baz=151,SNR=9.3
SDCO  Great Sand Dun   76.81 332   P       P        14 47 38.1 +1.3
ESJX  Sierra Juarez    76.83 322   P       P        14 47 38.8 +1.9
FRNY  Flat Rock        76.84 358   P       P        14 47 37.2 +0.8
H53A  Bobcaygeon       76.86 354   P       P        14 47 37.6 +1.1
      baz=173
JFWS  Jewell Farm      76.95 346   P       P        14 47 37.4 +0.3
JFWS                               pmax    pmax
      comp=Z,24nm,1.2s
JFWS  Jewell Farm      76.95 346   P       P        14 47 37.4 +0.3
JFWS                               IAmb    IAmb     14 48 00.6
      comp=Z,24nm,1.1s
GLA   Glamis           77.09 323   P       P        14 47 40.3 +2.1
      baz=143
GLA   Glamis           77.09 323   P       P        14 47 38.3 +0.1
GLA                                pmax    pmax
      comp=Z,30nm,1.5s
GLA   Glamis           77.09 323   P       P        14 47 38.3 +0.1
GLA                                IAmb    IAmb     14 47 41.6
      comp=Z,30nm,1.5s
SADO  Sadowa           77.10 354   LR      LR       15 25 01.8
      comp=Z,71nm,18.0s,baz=181,slow=38
SADO  Sadowa           77.10 354   P       P        14 47 38.1 +0.2
GGN   Saint George     77.18   3   P       P        14 47 39.6 +1.3
GGN                                IAmb    IAmb     14 47 42.5
      comp=Z,33nm,1.1s
G62A  West of Eustis   77.19   0   P       P        14 47 40.2 +1.8
      baz=180
G62A  West of Eustis   77.19   0   P       P        14 47 39.5 +1.1
G65A  Princeton        77.23   2   P       P        14 47 40.4 +1.8
G65A                               IAmb    IAmb     14 48 08.7
      comp=Z,30nm,1.4s
G61A  St-Isidore-de-   77.25 360   P       P        14 47 40.7 +2.0
      baz=180
S22A  4UR Ranch, Cre   77.34 332   P       P        14 47 41.6 +1.8
      baz=150,SNR=10
WUAZ  Wupatki          77.42 327   P       P        14 47 42.0 +1.9
      baz=146,SNR=7.3
WUAZ  Wupatki          77.42 327   P       P        14 47 41.5 +1.4
WUAZ                               IAmb    IAmb     14 47 43.6
      comp=Z,18nm,1.1s
IKP   In-Ko-Pah, Jac   77.43 322   P       P        14 47 42.4 +2.3
      baz=142
SWSC  Sam W. Stewart   77.50 323   P       P        14 47 42.3 +2.0
      baz=142
MVCO  Mesa Verde       77.57 330   P       P        14 47 42.7 +1.7
      baz=148,SNR=9.2
I42A  Draeger Farm,    77.62 347   P       P        14 47 40.9 +0.1
I42A                               IAmb    IAmb     14 48 04.3
      comp=Z,12nm,0.9s
G54A  Lake Saint Pet   77.64 355   P       P        14 47 42.5 +1.6
      baz=174
F63A  Nahmakanta, Br   77.69   1   P       P        14 47 42.3 +1.1
F63A                               IAmb    IAmb     14 47 44.9
      comp=Z,32nm,1.4s
Q24A  Divide           77.74 333   P       P        14 47 43.8 +1.9
      baz=151,SNR=10
BAR   Barrett          77.74 322   P       P        14 47 42.9 +1.1
BAR                                IAmb    IAmb     14 47 44.6
      comp=Z,17nm,1.1s
PDMCI Parker Dam,Lak   77.75 325   P       P        14 47 43.3 +1.6
      baz=144
MONP2 Monument Peak    77.78 322   P       P        14 47 44.2 +2.0
      baz=142,SNR=5.5
BC3   Big Chuckawall   77.88 323   P       P        14 47 44.6 +1.9
      baz=143,SNR=8.2
LMN   Caledonia Moun   78.02   4   P       P        14 47 44.0 +1.0
LMN                                IAmb    IAmb     14 48 12.9
      comp=Z,27nm,1.2s
IRM   Iron Mountain    78.13 324   P       P        14 47 46.2 +2.2
      baz=143,SNR=5.6
ALGO  Algonquin Park   78.19 355   P       P        14 47 44.5 +0.6
      baz=174
W13A  Hualapai Mount   78.26 325   P       P        14 47 47.0 +2.1
TPFO  Pinon Flats      78.36 323   P       P        14 47 47.2 +1.9
      baz=142,SNR=8.6
PFO   Pinyon Flats O   78.36 323   P       P        14 47 47.2 +1.9
      comp=Z,12nm,1.0s,baz=121,slow=4.7,SNR=11
PFO   Pinyon Flats O   78.36 323   P       P        14 47 47.3 +2.0
      baz=142,SNR=8.2
PFO   Pinyon Flats O   78.36 323   P       P        14 47 45.1  -0.2
PFO                                IAmb    IAmb     14 47 49.0
      comp=Z,21nm,1.1s
E61A  Lac Etchemin     78.40   0   P       P        14 47 47.6 +2.5
      baz=180
E63A  Oxbow            78.42   2   P       P        14 47 46.0 +0.9
E63A                               IAmb    IAmb     14 47 49.7
      comp=Z,28nm,1.4s
BELC  Belle Mtn. Jos   78.43 323   P       P        14 47 47.4 +1.7
      baz=142
PV15  Paradox Valley   78.52 331   P       P        14 47 46.2  -0.1
U15A  North Rim        78.59 327   P       P        14 47 47.9 +1.2
PV03  Paradox Valley   78.60 330   P       P        14 47 47.7 +1.0
PV18  Skein Mesa, Pa   78.62 330   P       P        14 47 48.0 +1.3
PV18                               IAmb    IAmb     14 47 49.5
      comp=Z,15nm,1.1s
SMCO  Snowmass         78.63 332   P       P        14 47 48.7 +1.7
SMCO                               IAmb    IAmb     14 47 50.3
      comp=Z,18nm,1.0s
ISCO  Idaho Springs    78.64 333   P       P        14 47 48.9 +1.9
      baz=151,SNR=5.6
ISCO  Idaho Springs    78.64 333   P       P        14 47 48.3 +1.4
ISCO                               pmax    pmax
      comp=Z,5.0nm,0.8s
ISCO  Idaho Springs    78.64 333   P       P        14 47 48.3 +1.4
PV11  David Mesa, Pa   78.65 330   P       P        14 47 48.2 +1.3
PV17  East Wray Mesa   78.67 330   P       P        14 47 48.2 +1.2
PV16  Nyswonger Mesa   78.68 330   P       P        14 47 48.1 +1.1
PV16                               IAmb    IAmb     14 47 49.7
      comp=Z,16nm,1.3s
MURC  Murrieta         78.73 322   P       P        14 47 49.0 +1.8
      baz=142
PV04  Paradox Valley   78.74 330   P       P        14 47 48.4 +1.0
TSUM  Tsumeb           78.78 106   P       P        14 47 47.6  -0.5
TSUM                               IAmb    IAmb     14 48 16.5
      comp=Z,20nm,1.4s
K31A  O'Neill          78.84 339   P       P        14 47 48.7 +1.1
GMRC  Granite Mounta   78.88 324   P       P        14 47 50.6 +2.4
      baz=143,SNR=9.7
D58A  Chemin du LacG   79.08 359   P       P        14 47 49.9 +1.1
      baz=178
D55A  Sainte-Anne-du   79.09 357   P       P        14 47 49.4 +0.5
      baz=176
KOWA  Kowa             79.11  65   P       P        14 47 48.4  -1.3
KOWA                               IAmb    IAmb     14 47 50.8
      comp=Z,24nm,1.4s
CIS   Catalina Islan   79.22 321   P       P        14 47 51.9 +1.9
      baz=141
HEC   Hector,Ludlow    79.26 323   P       P        14 47 52.5 +2.4
      baz=142,SNR=9.1
ECSD  EROS Data Cent   79.26 341   P       P        14 47 50.6 +0.8
      baz=158
ECSD  EROS Data Cent   79.26 341   P       P        14 47 49.2  -0.7
ECSD                               IAmb    IAmb     14 48 13.8
      comp=Z,20nm,0.9s
E46A  Sault Ste Mari   79.26 351   P       P        14 47 49.9 +0.1
E46A                               IAmb    IAmb     14 48 13.7
      comp=Z,28nm,1.1s
KNB   Kanab            79.32 327   P       P        14 47 52.4 +1.8
KNB                                pmax    pmax
      comp=Z,34nm,1.4s
KNB   Kanab            79.32 327   P       P        14 47 52.4 +1.8
KNB                                IAmb    IAmb     14 48 17.0
      comp=Z,34nm,1.4s
BFSC  Mount Baldy Ra   79.47 322   P       P        14 47 53.3 +1.9
      baz=141,SNR=8.1
LCMT  Little Creek M   79.51 327   P       P        14 47 52.7 +1.1
E43A  Lone Tree Farm   79.68 349   P       P        14 47 52.6 +0.6
E43A                               IAmb    IAmb     14 48 18.6
      comp=Z,18nm,1.3s
N23A  Red Feather La   79.72 334   P       P        14 47 55.1 +2.4
      baz=151
GSC   Goldstone, Bar   79.87 323   P       P        14 47 55.6 +2.2
      baz=142
MTPU  Mount Pierson    79.87 328   P       P        14 47 55.3 +1.6
SZCU  Shurtz Canyon    79.91 327   P       P        14 47 55.7 +1.8
O20A  White River Ci   79.95 332   P       P        14 47 55.9 +1.9
      baz=149
CCUT  Cedar City       80.00 327   P       P        14 47 56.3 +2.0
SHPR  Sheep Range      80.01 325   P       P        14 47 55.9 +1.6
SHPR                               IAmb    IAmb     14 47 57.8
      comp=Z,20nm,1.5s
BOSA  Boshof           80.02 117   P       P        14 47 54.9 +0.2
      comp=Z,5.5nm,0.6s,baz=233,slow=3.1,SNR=11
BOSA                               LR      LR       15 18 22.9
      comp=Z,104nm,21.4s,baz=232,slow=32
BOSA  Boshof           80.02 117   P       P        14 47 54.6  -0.2
BOSA                               IAmb    IAmb     14 48 11.1
      comp=Z,26nm,0.9s
SRU   San Rafael Swe   80.03 330   P       P        14 47 55.3 +0.9
SRU                                pmax    pmax
      comp=Z,14nm,1.0s
SRU   San Rafael Swe   80.03 330   P       P        14 47 55.3 +0.9
SRU                                IAmb    IAmb     14 47 56.8
      comp=Z,14nm,1.0s
EDW2  Edwards Air Fo   80.15 322   P       P        14 47 56.8 +1.8
      baz=141,SNR=9.2
MSU   Marysvale        80.25 328   P       P        14 47 57.3 +1.7
MSU   Marysvale        80.25 328   P       P        14 47 57.3 +1.7
MVU   Marysvale        80.26 328   P       P        14 47 57.2 +1.5
P17A  Butcher Ranch,   80.42 330   P       P        14 47 58.0 +1.5
P17A                               IAmb    IAmb     14 47 59.1
      comp=Z,15nm,1.2s
LRMC  Laurel Mtn Rad   80.45 323   P       P        14 47 58.7 +2.0
      baz=142,SNR=7.5
TMUT  Trail Mountain   80.48 329   P       P        14 47 58.3 +1.4
F36A  Milaca           80.48 344   P       P        14 47 56.4 +0.1
F36A                               IAmb    IAmb     14 48 19.7
      comp=Z,12nm,0.9s
D41A  Chassel          80.61 348   P       P        14 47 57.6 +0.5
D41A                               IAmb    IAmb     14 48 21.1
      comp=Z,21nm,0.8s
PRN   Pahroc Range     80.68 326   P       P        14 47 58.9 +1.1
PRN                                IAmb    IAmb     14 48 01.4
      comp=Z,17nm,1.0s
MPMC  Manual Prospec   80.80 323   P       P        14 48 00.3 +1.7
      baz=142,SNR=5.1
RWWY  Rawlins          80.88 333   P       P        14 47 59.0 +0.1
RWWY                               IAmb    IAmb     14 48 00.6
      comp=Z,14nm,1.0s
TPNV  Topopah Spring   80.89 325   P       P        14 48 01.1 +2.1
      baz=143,SNR=9.2
ISA   Isabella, Lake   81.00 323   P       P        14 48 01.9 +2.4
      baz=141
ISA   Isabella, Lake   81.00 323   P       P        14 48 01.5 +2.0
ISA                                pmax    pmax
      comp=Z,12nm,1.0s
ISA   Isabella, Lake   81.00 323   P       P        14 48 01.5 +2.0
PSUT  Pine Spring      81.03 327   P       P        14 48 01.2 +1.5
PKM   Mcpherson Peak   81.10 321   P       P        14 48 02.6 +2.4
      baz=140,SNR=8.3
MPU   Maple Canyon     81.26 330   P       P        14 48 02.0 +1.1
CWC   Cottonwood Cre   81.40 323   P       P        14 48 03.9 +2.2
      baz=141
VES   Vestal, Richgr   81.45 322   P       P        14 48 03.7 +1.9
      baz=141
K22A  Casper           81.45 334   P       P        14 48 03.3 +1.5
      baz=150
R11A  Troy Canyon, C   81.68 326   P       P        14 48 05.4 +2.2
      baz=143,SNR=12
R11A  Troy Canyon, C   81.68 326   P       P        14 48 04.3 +1.1
RSSD  Black Hills      81.87 337   P       P        14 48 05.3 +1.2
      baz=152
RSSD  Black Hills      81.87 337   P       P        14 48 04.8 +0.7
RSSD                               pmax    pmax
      comp=Z,11nm,1.0s
RSSD  Black Hills      81.87 337   P       P        14 48 04.8 +0.7
DUG   Dugway, Tooele   81.92 329   P       P        14 48 06.3 +2.0
      baz=145
DUG   Dugway, Tooele   81.92 329   P       P        14 48 05.3 +1.0
DUG                                pmax    pmax
      comp=Z,15nm,1.3s
DUG   Dugway, Tooele   81.92 329   P       P        14 48 05.3 +1.0
EYMN  Ely              82.02 346   P       P        14 48 06.2 +1.7
      baz=163
EYMN  Ely              82.02 346   P       P        14 48 04.9 +0.4
TCUT  Toone Canyon     82.08 330   P       P        14 48 05.4 +0.1
TCUT                               IAmb    IAmb     14 48 31.5
      comp=Z,13nm,1.1s
LBTB  Lobatse          82.16 115   P       P        14 48 06.1   0.0
LBTB                               pmax    pmax
      comp=Z,14nm,0.6s
LBTB  Lobatse          82.16 115   P       P        14 48 06.1   0.0
LBTB                               IAmb    IAmb     14 48 09.2
      comp=Z,14nm,0.6s
TPH   Tonopah          82.25 325   P       P        14 48 06.4 +0.2
TPH                                pmax    pmax
      comp=Z,68nm,1.1s
TPH   Tonopah          82.25 325   P       P        14 48 06.3 +0.2
MLAC  Mammoth, Mammo82.70 324      P       P        14 48 09.8 +1.2
      baz=141
BW06  Boulder Array    82.71 332   P       P        14 48 09.1 +0.6
      baz=148
BW06  Boulder Array    82.71 332   P       P        14 48 08.8 +0.3
PD31  Pinedale Array   82.71 332   P       P        14 48 08.5   0.0
PDAR  Pinedale Array   82.71 332   P       P        14 48 09.3 +0.8
      comp=Z,1.9nm,0.8s,baz=139,slow=4.9,SNR=13
PDAR                               LR      LR       15 21 28.9
      comp=Z,85nm,19.9s,baz=108,slow=33
PDAR  Pinedale Array   82.71 332   P       P        14 48 08.6   0.0
OMMB  Old Mammoth Mi   82.77 323   P       P        14 48 09.0  -0.1
TOA0  Torodi Ar. Sit   82.77  70   P       P        14 48 08.7  -0.5
TORD  Torodi Ar. Bea   82.77  70   P       P        14 48 08.2  -1.0
      comp=Z,4.3nm,0.8s,baz=247,slow=6.0,SNR=7.7
TORD  Torodi Ar. Bea   82.77  70   P       P        14 48 08.2  -1.0
LHV   Little Huntoon   83.02 324   P       P        14 48 11.8 +1.9
LHV                                IAmb    IAmb     14 48 36.4
      comp=Z,14nm,1.0s
NVAR  Mina Array Bea   83.06 324   P       P        14 48 11.3 +0.9
      comp=Z,5.4nm,0.8s,baz=158,slow=6.1,SNR=38
NVAR  Mina Array Bea   83.06 324   P       P        14 48 11.7 +1.3
HVU   Hansel Valley    83.20 330   P       P        14 48 11.0   0.0
HVU                                pmax    pmax
      comp=Z,5.0nm,0.8s
HVU   Hansel Valley    83.20 330   P       P        14 48 11.0   0.0
RYN   Ryan             83.32 324   P       P        14 48 13.0 +1.3
AHID  Auburn Hatcher   83.32 331   P       P        14 48 11.7 +0.1
ELK   Elko             83.44 328   P       P        14 48 12.5 +0.2
ELK                                pmax    pmax
      comp=Z,7.0nm,1.0s
ELK   Elko             83.44 328   P       P        14 48 12.5 +0.2
WAKR  Walker           83.68 324   P       P        14 48 13.7 +0.1
WAKR                               IAmb    IAmb     14 48 17.2
      comp=Z,15nm,1.2s
LOHW  Long Hollow      83.83 332   P       P        14 48 14.3 +0.1
LOHW                               IAmb    IAmb     14 48 39.6
      comp=Z,15nm,1.5s
MDND  Maddock          83.86 341   P       P        14 48 15.3 +1.2
      baz=156
YERR  Yerington        83.95 324   P       P        14 48 16.6 +1.7
YERR                               IAmb    IAmb     14 48 40.8
      comp=Z,10nm,0.9s
PNTR  Pine Nut         84.21 324   P       P        14 48 18.0 +1.7
PNTR                               IAmb    IAmb     14 48 19.5
      comp=Z,14nm,0.8s
FLWY  Flagg Ranch      84.26 332   P       P        14 48 17.5 +1.0
H17A  Grant Village    84.48 333   P       P        14 48 19.1 +1.6
      baz=147
PAHR  Pah Rah Range    84.58 325   P       P        14 48 18.9 +0.8
YMP   Mirror Lake Pl   84.61 333   P       P        14 48 19.0 +0.7
YNE   Yellowstone No   84.78 333   P       P        14 48 18.8  -0.3
LAO   LASA Array       84.86 336   P       P        14 48 20.6 +1.5
      baz=151
YMR   Madison River    84.86 333   P       P        14 48 19.9 +0.5
YMR                                IAmb    IAmb     14 48 22.3
      comp=Z,20nm,1.0s
YHH   Holmes Hill      84.91 333   P       P        14 48 21.0 +1.2
YHH                                IAmb    IAmb     14 48 46.2
      comp=Z,16nm,1.1s
ULM   Lac du Bonnet    85.14 344   P       P        14 48 19.8  -0.6
      comp=Z,4.5nm,0.8s,baz=199,slow=2.7,SNR=10
ULM   Lac du Bonnet    85.14 344   P       P        14 48 20.2  -0.2
ULM                                pmax    pmax
      comp=Z,18nm,1.3s
ULM   Lac du Bonnet    85.14 344   P       P        14 48 20.2  -0.2
ULM                                IAmb    IAmb     14 48 46.3
      comp=Z,18nm,1.3s
QLMT  Earthquake Lak   85.18 332   P       P        14 48 21.1 +0.1
BEKR  Beckworth        85.18 324   P       P        14 48 22.4 +1.3
HLID  Hailey           85.35 330   P       P        14 48 23.5 +1.7
      baz=144
HLID  Hailey           85.35 330   P       P        14 48 22.0 +0.1
ORV   Oroville         85.52 323   P       P        14 48 23.0 +0.4
ORV                                pmax    pmax
      comp=Z,23nm,1.5s
ORV   Oroville         85.52 323   P       P        14 48 23.0 +0.4
ORV                                IAmb    IAmb     14 48 25.8
      comp=Z,23nm,1.4s
BCYI  Bear Canyon      85.54 331   P       P        14 48 23.8 +0.9
MCMT  McKenzie Canyo   85.74 332   P       P        14 48 24.8 +1.0
DGMT  Dagmar           85.77 339   P       P        14 48 24.7 +1.1
      baz=152
MFID  Camas Ranch      85.84 329   P       P        14 48 24.7 +0.5
MFID                               IAmb    IAmb     14 48 26.8
      comp=Z,14nm,1.4s
BOZ   Bozeman (W)      85.89 333   P       P        14 48 25.8 +1.3
      baz=147
BOZ   Bozeman (W)      85.89 333   P       P        14 48 25.1 +0.6
BOZ   Bozeman (W)      85.89 333   P       P        14 48 25.1 +0.6
O03E  Paynes Creek     86.23 324   P       P        14 48 26.9 +0.7
      baz=139
O02D  Mt. Diablo Mer   86.64 323   P       P        14 48 29.3 +1.1
      baz=138
KCPM  Cahto Peak       86.69 322   P       P        14 48 28.6 +0.1
KCPM                               IAmb    IAmb     14 48 32.2
      comp=Z,18nm,1.0s
MOD   Modoc Plateau    86.71 325   P       P        14 48 28.6 +0.1
MOD                                IAmb    IAmb     14 48 30.7
      comp=Z,7.2nm,0.8s
KMRM  Mail Ridge       87.15 322   P       P        14 48 30.9 +0.2
N02D  Trinity Center   87.19 323   P       P        14 48 31.9 +1.0
      baz=138
EGMT  Eagleton         87.23 335   P       P        14 48 31.5 +0.6
      baz=148
M04C  Macdoel          87.37 324   P       P        14 48 33.1 +1.3
      baz=139
M02C  Callahan         87.58 324   P       P        14 48 34.0 +1.4
      baz=138
K05A  Summer Lake      87.62 326   P       P        14 48 34.3 +1.3
BMO   Blue Mountains   87.63 329   P       P        14 48 33.1 +0.2
BMO                                pmax    pmax
      comp=Z,5.0nm,1.1s
BMO   Blue Mountains   87.63 329   P       P        14 48 33.1 +0.2
KHMM  Horse Mountain   87.64 323   P       P        14 48 33.3 +0.2
KHMM                               IAmb    IAmb     14 48 36.3
      comp=Z,15nm,1.0s
YBH   Yreka Blue Hor   87.76 324   P       P        14 48 34.4 +0.9
      comp=Z,4.1nm,0.9s,baz=93,slow=6.2,SNR=10
YBH   Yreka Blue Hor   87.76 324   P       P        14 48 33.6   0.0
MSO   Missoula         87.82 332   P       P        14 48 35.6 +1.9
      baz=145
L04D  Klamath Falls    87.92 325   P       P        14 48 35.8 +1.4
      baz=139
I07A  Izee             88.01 327   P       P        14 48 35.6 +0.9
I07A                               IAmb    IAmb     14 48 37.6
      comp=Z,17nm,1.2s
KRMB  Red Mountain     88.21 323   P       P        14 48 36.1 +0.4
KRMB                               IAmb    IAmb     14 48 38.8
      comp=Z,17nm,1.2s
J05D  Fort Rock, OR    88.21 326   P       P        14 48 37.3 +1.6
      baz=140
PINE  Pine Mountain    88.45 326   P       P        14 48 38.5 +1.6
PINE                               IAmb    IAmb     14 48 40.0
      comp=Z,14nm,0.9s
L02E  Cave Junction    88.52 324   P       P        14 48 37.9 +0.9
      baz=138
K02D  Willamette Mer   88.95 324   P       P        14 48 40.2 +1.0
      baz=138
I05D  Terrebonne, OR   89.06 326   P       P        14 48 40.9 +1.4
      baz=139
WALA  Waterton Lakes   89.63 333   P       P        14 48 42.7 +0.5
G05D  Wamic, OR        89.73 327   P       P        14 48 44.2 +1.5
      baz=140
C09A  Chrisman Ranch   90.36 330   P       P        14 48 45.9 +0.3
C09A                               IAmb    IAmb     14 48 47.4
      comp=Z,8.6nm,0.8s
B05A  Bryant           92.36 329   P       P        14 48 55.5 +0.7
      baz=139
YKA   Yellowknife Ar  100.79 341   P       Pdif     14 49 32.5  -0.1
      comp=Z,0.3nm,0.5s,baz=138,slow=4.8,SNR=7.5
DZM   Mont Dzumac     102.97 233   eLR     LR       15 23 34.8
      comp=Z,301nm,28.1s
ZST   Bratislava      112.11  46   eP      Pdif     14 50 29.9 +6.7
ZST   Bratislava      112.11  46   ePDIFF  Pdif     14 50 29.9 +6.7
VYHS  Vyhne           113.28  46   eP      Pdif     14 50 36.9 +8.4
VYHS  Vyhne           113.28  46   ePDIFF  Pdif     14 50 36.9 +8.4
TOLK  Toolik Lake Re  115.73 337   P       PKPdf    14 54 26.2 +0.5
      baz=113
A21K  Barrow          118.91 338   P       PKPdf    14 54 32.2 +0.5
      baz=106
ASAR  Alice Springs   119.46 206   PKP     PKPdf    14 54 33.4  -1.1
      comp=Z,0.3nm,0.6s,baz=137,slow=1.6,SNR=7.5
ASAR                               PKKPbc  PKKPbc   15 04 45.8 +0.1
      comp=Z,0.2nm,0.5s,baz=332,slow=3.2,SNR=5.1
MNK   Minsk           120.54  42   i PKP   PKPdf    14 54 33.6  -1.7
      comp=E,3.0nm,1.4s
MNK                                i PKP   PKPdf    14 54 33.6  -1.7
      comp=N,19nm,1.2s
MNK                                i PKP   PKPdf    14 54 33.6  -1.7
      comp=Z,9.0nm,0.8s
MNK                                i pPKP  pPKPdf   14 55 01.1 +2.7
MNK                                i PP    PP       14 56 03.2  -0.8
MNK                                i PPP   PPP      14 58 33.0
MNK                                i SKS   SKSdf    15 01 36.3  -3.5
MNK                                i SS    SS       15 12 26.1  -1.2
MNK                                i SSS   SSS      15 16 54.5
MNK                                i LQ    LQ       15 39 46.5
MNK                                i LR    LR       15 43 05.5
FINES FINESS Array B  121.10  34   PKP     PKPdf    14 54 35.3  -0.9
      comp=Z,1.4nm,0.8s,baz=243,slow=0.4,SNR=1.0
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TNA	Tin City	121.80	331	P	PKPdf	14 54 37.3	-0.1
	baz=99						
ARCES	ARCESS Array B	122.12	24	PKP	PKPdf	14 54 37.2	-0.8
	comp=Z,4.9nm,1.0s,baz=264,slow=1.2,SNR=7.3						
WRA	Warramunga Arr	122.66	209	PKP	PKPdf	14 54 40.2	-0.4
	comp=Z,1.2nm,0.5s,baz=154,slow=1.9,SNR=20						
WRA	Warramunga Arr	122.66	209		PKPdf	14 54 39.8	-0.8
H11S2	WAKE ISLAND Hy	126.71	270	T	T	17 14 09.1	
	baz=118,slow=75,SNR=305						
H11S1	WAKE ISLAND Hy	126.72	270	T	T	17 14 10.6	
	baz=118,slow=75,SNR=146						
H11S3	WAKE ISLAND Hy	126.72	270	T	T	17 14 10.3	
	baz=118,slow=75,SNR=245						
H11N3	WAKE ISLAND Hy	127.08	271	T	T	17 14 38.4	
	baz=112,slow=78,SNR=89						
H11N1	WAKE ISLAND Hy	127.09	271	T	T	17 14 40.2	
	baz=112,slow=78,SNR=62						
H11N2	WAKE ISLAND Hy	127.09	271	T	T	17 14 39.4	
	baz=112,slow=78,SNR=239						
KLMR	Klimovskoe	127.52	35	*e*PKIKP	PKiKP	14 54 51.3	+2.3
KLMR				pmax	pmax		
	comp=Z,17nm,1.3s						
KLMR	Klimovskoe	127.52	35	*e*PKPdf	PKiKP	14 54 51.4	+2.4
KLMR				AMP		14 54 53.2	
	comp=Z,17nm,1.3s						
KIV	Kislovodsk	127.82	57	*e*PKIKP	PKPdf	14 54 49.2	-0.6
KIV				pmax	pmax		
	comp=Z,14nm,1.0s						
KBZ	Khabaz	127.93	57	*i* PKIKP	PKiKP	14 54 52.3	+1.9
KBZ				pmax	pmax		
	comp=Z,4.0nm,1.1s						
GNI	Garni	128.54	62	*i* PKIKP	PKPdf	14 54 49.6	-1.8
ARU	Arti	137.88	40	PKP	PKiKP	14 55 10.1	0.0
	comp=Z,0.8nm,0.5s,baz=331,slow=9.7,SNR=4.0						
ARU	Arti	137.88	40	*i* PKIKP	PKiKP	14 55 09.9	-0.3
ARU						14 57 55.8	
SEY	Seymchan	139.03	331	*i* PKIKP	PKPdf	14 55 09.6	-0.5
TIXI	Tiksi	139.22	351	PKIKP	PKPdf	14 55 10.8	+0.6
TIXI	Tiksi	139.22	351	PKPdf	PKPdf	14 55 10.8	+0.6
PETK	Petropavlovsk-	139.63	316	PKhKP	PKPpre	14 55 04.1	
	comp=Z,1.0nm,0.7s,baz=99,slow=4.9,SNR=7.5						
PETK	Petropavlovsk-	139.63	316	PKIKP	PKPdf	14 55 12.2	+0.7
PETK	Petropavlovsk-	139.63	316		PKPdf	14 55 12.2	+0.7
ABKAR	Akbulak array	139.92	50	PKPpre	PKPpre	14 55 03.0	
ABKAR				PKPdf	PKPdf	14 55 12.6	+0.5
BRVK	Borovoye	145.36	42	PKIKP	PKPab	14 55 22.4	+0.5
BRVK	Borovoye	145.36	42		PKPab	14 55 22.4	+0.5
BVAR	Borovoye Array	145.44	42	PKPbc	PKPdf	14 55 22.3	+0.5
	comp=Z,4.9nm,0.5s,baz=193,slow=12,SNR=35						
POO	Poona	145.53	105	*e*P	PKPab	14 55 24.0	+0.4
TOLI2	Tolitoli	147.03	202		PKPdf	14 55 26.8	+1.1
GSI	Gunungsitoli	147.29	158		PKPbc	14 55 28.7	+0.1
YAK	Yakutsk	147.46	342	*e*PKIKP	PKPdf	14 55 26.1	+1.2
YAK				*e*		14 55 51.1	
YAK				*e*		14 58 52.0	
YAK				*e*SS	SS	15 17 48.0	-2.1
YAK				pmax	pmax		
	comp=Z,51nm,1.1s						
YAK				pmax	pmax		
	comp=N,2.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,2.0nm,0.8s						
YAK				pmax	pmax		
	comp=Z,95nm,3.5s						
YAK				pmax	pmax		
	comp=E,73nm,4.1s						
YAK				pmax	pmax		
	comp=N,45nm,4.3s						
YAK	Yakutsk	147.46	342		PKPbc	14 55 27.2	-0.3
IUG	Iuzhnay	147.67	61	*e*PKiKP	PKiKP	14 55 31.4	+0.5
	baz=61						
IUG	Iuzhnay	147.67	61	*i* PKP2	PKiKP	14 55 31.3	+0.5
BRZS	Berezniki	147.84	46	*e*PKiKP	PKiKP	14 55 31.6	+0.7
	baz=46						
BRZS	Berezniki	147.84	46	*i* PKP2	PKiKP	14 55 31.5	+0.7
KK31	Karatay Array	147.93	59	PKP2	PKPbc	14 55 29.6	+0.2
KK31	Karatay Array	147.93	59		PKPbc	14 55 29.6	+0.2
KKAR	Karatay Array	147.93	59	PKIKP	PKPdf	14 55 27.5	+1.2
KKAR	Karatay Array	147.93	59	PKPdf	PKPdf	14 55 26.8	+0.5
KKAR	Karatay Array	147.93	59	PKPdf	PKPdf	14 55 27.5	+1.2
HYB	Hyderabad	148.73	111	*i* PKP	PKPbc	14 55 32.0	-0.3
NIL	Nilore	150.03	78	PKP2	PKPbc	14 55 34.9	-0.1
NIL	Nilore	150.03	78		PKPbc	14 55 34.9	-0.1
BTLS	Baital	150.11	55	*e*PKiKP	PKiKP	14 55 35.8	+0.2
	baz=55						
BTLS	Baital	150.11	55	*i* PKP2	PKiKP	14 55 35.8	+0.2
SBUM	Sibu	150.12	186		PKPbc	14 55 35.5	-0.4
EKS2	Erkin-Say	150.36	59	P	PKiKP	14 55 36.9	+0.4
	SNR=7.2						
YSS	Yuzh-Sakhalins	150.49	310	*e*PKIKP	PKPbc	14 55 36.0	+0.4
YSS				*e*		14 56 00.7	
YSS				pmax	pmax		
	comp=Z,30nm,0.8s						
YSS	Yuzh-Sakhalins	150.49	310		PKPbc	14 55 35.6	-0.1
USP	Ospenovka	150.79	58	P	PKPbc	14 55 37.2	+0.6
	SNR=6.5						
SGDS	Sogindy	150.85	58	*e*PKiKP	PKPbc	14 55 36.8	0.0
	baz=58						
SGDS	Sogindy	150.85	58	*i* PKIKP	PKPbc	14 55 36.7	0.0
AAK	Ala-Archa	150.89	59	PKPbc	PKiKP	14 55 37.8	+0.2
	comp=Z,12nm,0.7s,baz=200,slow=2.0,SNR=42						
AAK	Ala-Archa	150.89	59	P	PKiKP	14 55 38.1	+0.5
	SNR=13						
AAK	Ala-Archa	150.89	59		PKPbc	14 55 37.3	+0.3
UCH	Uchtor	150.97	60	P	PKiKP	14 55 38.9	+0.8
	SNR=14						
KURBB	Kurchatov Arra	151.03	42	PKP	PKPdf	14 55 31.8	+0.8
	comp=Z,5.2nm,0.4s,baz=301,slow=3.0,SNR=5.0						
KURBB				PKPbc	PKPbc	14 55 37.2	+0.4
	comp=Z,5.0nm,0.4s,baz=304,slow=2.8,SNR=55						
KURK	Kurchatov	151.03	42	PKIKP	PKPdf	14 55 31.8	+0.8
KURK	Kurchatov	151.03	42		PKPbc	14 55 37.0	+0.2
KURK	Kurchatov	151.03	42		PKPdf	14 55 31.8	+0.8
IPM	Ipoh	151.28	163		PKPbc	14 55 37.7	-0.8
JKA	Kamikawa-asahi	151.34	304		PKPbc	14 55 38.2	+0.5
ASAJ	Asahikawa	151.34	304	PKIKP	PKPbc	14 55 38.2	+0.4
TKM2	Tokmak 2	151.64	59	P	PKPbc	14 55 39.3	+0.5
	SNR=9.1						
KUU	Kurty	151.97	56	*e*PKiKP	PKPbc	14 55 39.6	+0.3
	baz=56						
KUU	Kurty	151.97	56	*i* PKIKP	PKPbc	14 55 39.5	+0.3
ZAA0	Zalesovo Array	152.33	32		PKPbc	14 55 39.8	+0.1
ZALV	Zalesovo Beam	152.33	32	PKP	PKPdf	14 55 33.4	+0.6
	comp=Z,0.9nm,0.6s,baz=339,slow=3.7,SNR=4.2						
ZALV				PKPbc	PKPbc	14 55 40.0	+0.3
	comp=Z,12nm,0.5s,baz=302,slow=3.1,SNR=50						
ZALV	Zalesovo Beam	152.33	32		PKPbc	14 55 39.7	0.0
KSH	Kashi	152.38	66	PKPbc	PKPdf	14 55 35.5	+1.9
KSH				sPKP		14 56 05.3	
KSH				PP	PP	14 59 25.4	+1.4
KSH				SKKS		15 06 04.3	
KSH				SS	SS	15 18 36.5	-11
KSH				AMB	AMB		
	comp=Z,440nm,8.0s						
KSH				LR	LR		
	comp=Z,370nm,8.1s						
KSH				LR	LR		
	comp=Z,600nm,5.8s						
KSH				LR	LR		
	comp=Z,390nm,15.3s						
CHKK	Chushkaly	152.43	56	*e*PKiKP	PKPbc	14 55 40.4	+0.1
	baz=56						
CHKK	Chushkaly	152.43	56	*i* PKIKP	PKPbc	14 55 40.4	+0.1
TNSS	Tian-Shan	152.59	58	*e*PKiKP	PKPbc	14 55 41.4	+0.2
	baz=58						
TNSS	Tian-Shan	152.59	58	*i* PKIKP	PKPbc	14 55 41.4	+0.2
MDOK	Medeo	152.63	58	*e*PKiKP	PKPbc	14 55 41.2	+0.3
	baz=58						
MDOK	Medeo	152.63	58	*i* PKIKP	PKPbc	14 55 41.2	+0.3
SATY	Saty	153.62	57	*e*PKiKP	PKPbc	14 55 43.2	0.0
	baz=57						
SATY	Saty	153.62	57	*i* PKIKP	PKPbc	14 55 43.1	0.0
KPKS	Kokpek	153.72	56	*e*PKiKP	PKPbc	14 55 43.4	+0.2
	baz=56						
KPKS	Kokpek	153.72	56	*i* PKIKP	PKPbc	14 55 43.4	+0.2
UZB	Uzynbulak	154.04	57	*e*PKiKP	PKPbc	14 55 44.0	-0.1
	baz=57						
UZB	Uzynbulak	154.04	57	*i* PKIKP	PKPbc	14 55 43.9	-0.1
SHLS	Shalkode	154.35	57	*e*PKiKP	PKiKP	14 55 46.4	+1.7
	baz=57						
SHLS	Shalkode	154.35	57	*i* PKIKP	PKiKP	14 55 46.3	+1.7
MAKZ	Makanchi	154.77	47	PKIKP	PKPdf	14 55 37.1	+0.5
MAKZ	Makanchi	154.77	47	PKPdf	PKPdf	14 55 37.1	+0.5
MK31	Makanchi Array	154.97	47	PKIKP	PKPbc	14 55 45.6	-0.1
MK31	Makanchi Array	154.97	47		PKPbc	14 55 45.6	-0.1
MKAR	Makanchi Array	154.97	47	PKP	PKPdf	14 55 35.8	-1.1
	comp=Z,0.5nm,0.8s,baz=36,slow=2.3,SNR=5.5						
MKAR				PKPab	pPKPdf	14 56 01.5	+1.5
	comp=Z,2.5nm,0.5s,baz=287,slow=2.9,SNR=21						
MKAR	Makanchi Array	154.97	47	PKPab	PKPab	14 56 01.2	-0.3
MJAR	Matsushiro Arr	155.64	288	PKPab	PKPab	14 56 05.8	+1.1
	comp=Z,5.2nm,0.9s,baz=119,slow=2.2,SNR=8.8						
WMQ	Urumqi	159.71	49	*e*PKP	PKPdf	14 55 44.1	+1.1
WMQ				LR	LR		
	comp=Z,630nm,28.8s						
WMQ				LR	LR		
	comp=Z,2μm,28.8s						
WMQ				LR	LR		
	comp=Z,170nm,28.1s						
CMAR	Chiang Mai Arr	163.45	144	PKP	PKPdf	14 55 47.5	0.0
	comp=Z,0.6nm,0.7s,baz=217,slow=1.8,SNR=4.6						
CMAR				PKPab	PKPab	14 56 36.1	-2.8
	comp=Z,1.1nm,0.9s,baz=222,slow=6.9,SNR=4.5						
CMAR	Chiang Mai Arr	163.45	144		PKPdf	14 55 47.7	+0.1
KSAR	Wonju Array Be	163.74	293	PKP2	PKPab	14 56 40.3	+0.4
KSAR	Wonju Array Be	163.74	293		PKPab	14 56 40.2	+0.4
CHTO	Chiang Mai	163.75	144	PKP2	PKPab	14 56 39.5	-0.7
CHTO	Chiang Mai	163.75	144	PKPab	PKPab	14 56 39.5	-0.7
SONM	Songino Array	164.39	7	PKPab	PKPab	14 56 42.7	+0.3
	comp=Z,0.3nm,0.3s,baz=352,slow=24,SNR=2.2						
GTA	Gaotai	169.71	44	⇓PKP	PKPdf	14 55 53.0	+1.1
GTA				pPKP	sPKPdf	14 56 21.0	-2.6
GTA				PKPab	PKPab	14 57 07.5	+1.2
GTA				LR	LR		
	comp=Z,83nm,17.4s						
GTA				LR	LR		
	comp=Z,170nm,18.2s						
GTA				LR	LR		
	comp=Z,120nm,17.1s						
KMI	Kunming	170.93	141	⇑P	PKPdf	14 55 43.8	-9.3
KMI				pmax	pmax		
	comp=Z,5.0nm,1.2s						
HHC	Hu-ho-hao-te	171.27	347	*e*PKP	PKPdf	14 55 50.5	-2.2
NJ2	Nanjing	171.69	271	*e*PKP	PKPdf	14 55 54.0	+1.0
LZH	Lanzhou	174.29	48	*e*PKP	PKPdf	14 55 53.3	-0.8
LZH				pPKP	pPKPdf	14 56 19.4	+2.1
LZH				sPKP		14 56 28.8	

IDC ***17*** *14:42:05.6±3.3, 14°.20N×93°.24W, h0^{km}, mb3.9/2, mb1 4.1/5, mb1mx3.8/43, mbtmp3.8/5, ML3.6/3, MS3.0/1, Ms1 3.0/1, ms1mx2.6/36 Error ellipse: s-maj=62.2km s-min=50.3km az=9.0*

MEX ***17*** *14:42:06.1±1.0, 13°.94N×93°.50W, h20^{km}±82^{km}, MD4.3*

ISC 17 14:42:07.1±1.4**, 14°.27N**±0°.08×**93°.36W**±0°.06**, h10^{km}, n12, σ1^{s}.02**/19**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		1.23	59	*i* P	Pn	14 42 29.2	-1.2
THIG				*i* S	Sg	14 42 46.8	0.0
PCIG		1.43	5	*e*P	Pn	14 42 33.1	0.0
PCIG				*i* S	Sg	14 42 53.4	+0.3
CCIG	Comitan	2.32	30	*e*P	Pb	14 42 48.3	-0.9
CCIG				*i* S	Sg	14 43 21.0	-0.7
TGIG		2.50	5	*i* P	Pb	14 42 50.8	-1.4
TGIG				*i* S	Sb	14 43 23.6	+0.5
HUIG	Huatulco	3.05	300	*e*P	Pn	14 42 54.5	-0.9
HUIG				*e*S	Sn	14 43 30.9	-1.1
CMIG	Matias Romero	3.17	333	Pn	Pn	14 42 57.0	-0.1
	1.3nm,0.3s,baz=146,slow=10,SNR=19						
CMIG				Sn	Sn	14 43 35.2	+0.3
	5.7nm,0.3s,baz=107,slow=13,SNR=8.0						
CMIG	Matias Romero	3.17	333	*e*P	Pn	14 42 56.0	-1.0
CMIG				*e*S	Sn	14 43 33.8	-1.1
TEIG	Tepich	7.66	39	Pn	Pn	14 43 59.1	+0.4
	6.4nm,0.3s,baz=258,slow=8.8,SNR=34						
TEIG				LR	LR	14 47 26.9	
	comp=Z,106nm,18.1s,baz=204,slow=42						
TXAR	Lajitas Array	17.77	329	P	P	14 46 18.0	+2.4
	0.0nm,0.3s,baz=141,slow=12,SNR=6.3						
YKA	Yellowknife Ar	50.47	347	P	P	14 51 05.5	+0.6
	1.9nm,0.7s,baz=148,slow=7.9,SNR=21						
INK	Inuvik	59.81	344	P	P	14 52 13.0	+0.7
	0.7nm,0.6s,baz=134,slow=7.9,SNR=2.0						
CMAR	Chiang Mai Arr	145.29	339	PKPbc	PKPab	15 01 45.3	-0.6
	1.1nm,0.9s,baz=342,slow=3.9,SNR=5.3						

IDC ***17*** *15:00:20.8±2.8, 10°.22S×111°.92E, h0^{km}, mb3.4/3, mb1 3.6/3, mb1mx3.3/33, mbtmp3.4/3, Error ellipse: s-maj=147.5km s-min=25.6km az=46.0*

DJA ***17*** *15:00:30.0±1.2, 10°S±9°×11°3E±°, h16^{km}±13^{km}, M3.9/8, mb4.4/1, MLv3.7/8*

ISC 17 15:00:25.1±1.4**, 9°.7S**±0°.1×**112°.57E**±0°.08**, h10^{km}, n9, σ1^{s}.26**/11**, mb3.5**/3**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAGI	Jajag, Banyuwa	1.96	53	P	Pn	15 00 59.2	+0.7
JAGI				S	Sn	15 01 21.9	-1.3
ABJI	Asem Bagus	2.48	42	P	Pn	15 01 07.3	+1.7
UGM	Wanagama	2.67	311	P	Pb	15 01 13.4	+0.3
UGM				S	Sb	15 01 46.3	+0.2
SRBI	Singaraja	3.05	59	P	Pn	15 01 13.7	+0.3
TWSI	Taliwang, Sumb	4.35	78	P	Pn	15 01 33.0	+1.6
PLAI	Plampang	5.21	81	P	Pn	15 01 44.8	+1.7
WRA	Warramunga Arr	23.36	118	P	P	15 05 33.2	-0.8
	0.6nm,0.9s,baz=287,slow=11,SNR=2.1						
ASAR	Alice Springs	24.67	127	P	P	15 05 45.7	-0.7
	0.8nm,0.7s,baz=305,slow=9.3,SNR=9.6						
MKAR	Makanchi Array	62.37	337	P	P	15 10 47.1	-0.9
	0.3nm,0.4s,baz=151,slow=7.2,SNR=11						

DJA ***17*** *15:31:15.2±0.9, 3°N±4°×12°8E±°, h150^{km}±5^{km}, M4.3/8, mB4.7/4, mb4.5/6, MLv4.4/8, Mw(mB)3.9/4*

IDC ***17*** *15:31:17.7±3.5, 2°.86N×128°.16E, h151^{km}±37^{km}, mb3.3/7, mb1 3.3/8, mb1mx3.2/33, mbtmp3.7/8, Error ellipse: s-maj=43.9km s-min=17.5km az=82.0*

ISC 17 15:31:17.8±0.7**, 2°.88N**±0°.07×**128°.20E**±0°.08**, h150^{km}, n22, σ0^{s}.74**/25**, mb3.9**/11**, 1C, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	2.26	202	P	Pn	15 31 55.9	-0.1
TNTI				S	Sn	15 32 26.9	+1.5
KMSI	Cibinong	4.80	242	P	Pn	15 32 28.3	-0.3
KMSI				S	Sn	15 33 25.1	+1.3
SIJI	Sorong	4.82	141	P	Pn	15 32 29.4	+0.5
	1.6nm,0.3s,baz=262,slow=23,SNR=5.3						
SIJI				S	Sn	15 33 24.9	+0.5
	2.3nm,0.3s,baz=21,slow=23,SNR=7.1						
KCP	Kidapawan	5.14	323	⇑*e*P	Pn	15 32 32.9	-0.2
SANI	Sanana	5.38	204	P	Pn	15 32 34.8	-1.4
	0.1nm20nm,0.6s						
GTOI	Gorontalo	5.65	247	P	Pn	15 32 40.1	+0.2
	0.2nm584nm56nm,0.7s						
MRSI	Marisa	6.70	249	P	Pn	15 32 53.4	-0.5
	0.2nm703nm56nm,1.1s						
APSI	Ampana	7.56	240	P	Pn	15 33 03.7	-1.6
	0.1nm343nm17nm,0.5s						
WRA	Warramunga Arr	23.47	165	P	P	15 36 13.2	-0.8
	0.9nm,0.8s,baz=345,slow=11,SNR=9.2						
ASAR	Alice Springs	26.97	168	P	P	15 36 45.6	+0.1
	0.3nm,0.8s,baz=193,slow=26,SNR=1.7						
KSRS	Korea Array	34.41	360	P	P	15 37 50.2	-0.5
	1.1nm,0.5s,baz=176,slow=9.5,SNR=6.2						
USRK	Ussuriysk Ar.	41.28	4	P	P	15 38 47.7	-0.5
	1.3nm,0.5s,baz=226,slow=43,SNR=3.4						
TAPN	Taplejung	45.70	306	*e*P	P	15 39 24.5	+0.1
ODAN	Odare	45.76	305	*e*P	P	15 39 25.2	+0.5
	7.9nm,0.7s						
RAMN	Ramite	46.44	305	*e*P	P	15 39 30.9	+0.8
	8.5nm,0.7s						
GUN	Gumba	47.41	306	*e*P	P	15 39 37.9	+0.2
	8.9nm,0.5s						
PKI	Pulchoki	47.66	305	*e*P	P	15 39 39.7	+0.1
PKIN	Phulchoki	47.67	305	*e*P	P	15 39 39.6	0.0
SONM	Songino Array	48.57	340	P	P	15 39 45.8	-0.3
	0.6nm,0.5s,baz=155,slow=7.2,SNR=4.5						
DANN	Dangsing	49.30	306	*e*P	P	15 39 52.6	+0.4
	17nm,0.5s						
PETK	Petropavlovsk-	55.67	21	P	P	15 40 38.6	+0.4
	1.9nm,0.8s,baz=183,slow=4.1,SNR=11						
MKAR	Makanchi Array	59.09	325	P	P	15 41 02.2	-0.1
	0.6nm,0.4s,baz=112,slow=8.2,SNR=17						

IDC ***17*** *15:32:33.2±1.8, 6°.48S×103°.89E, h0^{km}, mb3.8/8, mb1 4.0/9, mb1mx3.8/36, mbtmp3.8/9, ML3.7/1, MS2.8/1, Ms1 2.8/1, ms1mx2.4/45, Error ellipse: s-maj=57.9km s-min=17.3km az=48.0*

DJA ***17*** *15:32:35.1±0.5, 7°S±4°×10°4E±°, h10^{km}, M4.1/9, MLv4.1/9*

NEIC ***17*** *15:32:35.7±2.1, 6°.89S±0°.09×103°.7E±0°.1, h34^{km}±8^{km}, mb4.5/9, Error ellipse: s-maj=17.2km s-min=9.0km az=52.0*

ISC 17 15:32:37.2±1.0**, 6°.69S**±0°.10×**103°.8E**±0°.1**, h38^{km}**±3^{km}**, n38, σ1^{s}.06**/40**, mb3.9**/12**, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KASI	Kota Agung	1.34	30	P	Pn	15 32 58.3	-1.1
KASI				S	Sn	15 33 14.8	-1.1
LWLI	Liwa	1.68	8	P	Pn	15 33 04.1	-0.1
LWLI				S	Sn	15 33 25.1	+0.6
BLSI	Bandar Lampung	1.93	47	P	Pn	15 33 07.9	+0.4
BLSI				S	Sn	15 33 31.6	+1.1
KLSI		2.18	24	P	Pn	15 33 11.6	+0.6
KLSI				S	Sn	15 33 37.9	+1.1
MDSI	Maura Dua	2.22	9	P	Pn	15 33 11.6	+0.1
MDSI				S	Sn	15 33 39.2	+1.5
MNAI	Manna	2.47	339		Pn	15 33 15.5	+0.5
LHSI	Lahat	2.86	354	P	Pn	15 33 20.5	+0.1
DBJI	Dramaga	2.90	87	P	Pn	15 33 19.3	-1.6
KSI	Kapahiang	3.26	338	P	Pn	15 33 25.0	-0.9
LEM	Lembang	3.76	92	Pn	Pn	15 33 34.0	+1.1
	5.3nm,0.3s,baz=135,slow=21,SNR=1.7						
LEM				Sn	Sn	15 34 16.7	+0.6
	8.7nm,0.3s,baz=8.7,slow=22,SNR=2.3						
LEM				LR	LR	15 35 26.1	
	comp=Z,120nm,19.5s,baz=297,slow=46						
CISI	Cisompet, Garu	4.05	102	Pn	Pn	15 33 36.2	-0.6
CISI	Cisompet, Garu	4.05	102	P	Pn	15 33 36.5	-0.2
XMIS	Christmas Isla	4.17	155	Pn	Pn	15 33 34.9	-3.5
UGM	Wanagama	6.75	101	Pn	Pn	15 34 14.6	+0.7
JAGI	Jajag, Banyuwa	10.38	100	Pn	Pn	15 35 03.7	0.0
GIRL	Giralia	18.77	149	P	P	15 36 51.2	-1.9
SOEI	Soe	20.45	100	P	P	15 37 11.1	-0.8
SOEI				IAmb	IAmb	15 37 21.3	
	comp=Z,21nm,0.8s						
FITZ	Fitzroy Crossi	24.10	120	P	P	15 37 53.2	+3.7
	comp=Z,2.0nm,0.8s,baz=304,slow=16,SNR=2.4						
CMAR	Chiang Mai Arr	25.45	349	P	P	15 38 01.4	-0.4
	comp=Z,0.5nm,0.3s,baz=172,slow=12,SNR=5.2						
H01W3	Cape Leeuwin H	29.62	163	T	T	16 09 47.3	
	baz=341,slow=76,SNR=14						
H01W2	Cape Leeuwin H	29.63	163	T	T	16 09 45.9	
	baz=341,slow=76,SNR=16						
H01W1	Cape Leeuwin H	29.64	163	T	T	16 09 44.9	
	baz=341,slow=76,SNR=13						
WB0	Warramunga Arr	32.39	117	P	P	15 39 04.1	+0.4
WB0				IAmb	IAmb	15 39 22.2	
	comp=Z,9.1nm,1.3s						
WRA	Warramunga Arr	32.40	117	P	P	15 39 04.2	+0.4
	comp=Z,1.1nm,0.8s,baz=289,slow=9.2,SNR=6.3						
WRAB	Tennant Creek	32.41	117	P	P	15 39 04.5	+0.7
WRAB				IAmb	IAmb	15 39 21.8	
	comp=Z,13nm,1.5s						
WR0	Warramunga Arr	32.59	117	P	P	15 39 05.7	+0.3
ASAR	Alice Springs	33.45	124	P	P	15 39 14.1	+1.1
	comp=Z,1.0nm,0.9s,baz=295,slow=7.4,SNR=7.8						
SONM	Songino Array	54.34	2	P	P	15 42 00.2	+0.1
	comp=Z,0.7nm,0.6s,baz=16,slow=42,SNR=4.8						
MK31	Makanchi Array	56.59	342	P	P	15 42 15.9	-0.3
MKAR	Makanchi Array	56.59	342	P	P	15 42 16.2	+0.1
	comp=Z,0.6nm,0.6s,baz=151,slow=8.5,SNR=9.4						
MKAR	Makanchi Array	56.59	342	P	P	15 42 16.0	-0.2
USRK	Ussuriysk Ar.	56.67	24	P	P	15 42 15.9	-0.9
	comp=Z,1.6nm,0.6s,baz=232,slow=4.6,SNR=5.7						
KURK	Kurchatov	61.19	342	P	P	15 42 48.8	+0.8
KURK				IAmb	IAmb	15 43 13.5	
	comp=Z,5.8nm,1.5s						
ZALV	Zalesovo Beam	62.50	347	P	P	15 42 57.2	+0.5
	comp=Z,0.6nm,0.3s,baz=180,slow=4.2,SNR=4.9						
ZALV	Zalesovo Beam	62.50	347	P	P	15 42 55.9	-0.9
BRVK	Borovoye	65.96	339	P	P	15 43 19.3	-0.1
BRVK				IAmb	IAmb	15 43 31.5	
	comp=Z,1.8nm,1.2s						
ABKAR	Akbulak array	67.57	331	P	P	15 43 30.0	+0.2
TXAR	Lajitas Array	145.66	46	PKPbc	PKPab	15 52 14.8	+1.7
	comp=Z,0.3nm,0.5s,baz=247,slow=1.9,SNR=1.6						

IDC 17 15:45:08.2±3.0**, 1°.30S**×**99°.06E, h0^{km}, mb3.4**/3**, mb1 3.5**/5**, mb1mx3.3**/47**, mbtmp3.3**/5**, ML3.1**/1**, Error ellipse: s-maj=113.2km s-min=22.6km az=60.0, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	Prapat	4.08	358	Pn	Pn	15 46 12.6	+0.6
	1.3nm,0.3s,baz=180,slow=10,SNR=6.9						
CMAR	Chiang Mai Arr	19.64	360	P	P	15 49 37.3	-1.3
	baz=193,slow=11,SNR=4.2						
WRA	Warramunga Arr	39.15	121	P	P	15 52 37.5	-0.5
	0.4nm,0.8s,baz=299,slow=9.3,SNR=1.6						
ASAR	Alice Springs	40.42	126	P	P	15 52 48.9	+0.3
	0.2nm,0.7s,baz=300,slow=8.5,SNR=5.2						
MKAR	Makanchi Array	50.11	345	P	P	15 54 05.0	-0.2
	0.9nm,0.5s,baz=148,slow=8.1,SNR=12						

JMA ***17*** *15:59:45.5±0.2, 39°.61N×143°.40E, h20^{km}±3^{km}, M3.4*

IDC ***17*** *15:59:50.1±12.0, 39°.94N×142°.49E, h0^{km}, mb3.5/3, mb1 3.5/4, mb1mx3.1/58, mbtmp3.4/4, ML2.2/1, Error ellipse: s-maj=233.6km s-min=46.8km az=101.0*

ISC 17 15:59:46.8±3.0**, 39°.61N**±0°.06×**143°.27E**±0°.10**, h14^{km}**±15^{km}**, n19, σ0^{s}.67**/26**, mb3.4**/3**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIYJ	Miyakonagasawa	1.12	269	P	Pb	16 00 07.4	-0.5
MIYJ				*e*S	Sg	16 00 23.1	0.0
JTH	Tanohata	1.14	287	P	Pb	16 00 07.7	-0.4
JTH				*e*S	Sg	16 00 23.8	+0.3
JKEN	Kujiedanarisaw	1.34	297	P	Pn	16 00 10.3	-0.7
JKEN				*e*S	Sn	16 00 28.1	-0.5
OFUJ	Ofunato	1.35	247	P	Pn	16 00 10.8	-0.4
OFUJ				*e*S	Sn	16 00 28.9	0.0
JOM	Ohasama	1.54	266	P	Pn	16 00 14.1	+0.4
JANG	Nango	1.55	300	P	Pn	16 00 13.3	-0.6
JMK	Ichinoseki	1.72	248	P	Pn	16 00 16.4	+0.1
JIO	Ouri	1.89	233	P	Pn	16 00 18.0	-0.6
JIO				*e*S	Sn	16 00 41.2	-1.0
JRG	Rokugo	2.05	265	P	Pn	16 00 21.7	+0.9
JTM	Tenmabayashi	2.06	306	P	Pn	16 00 21.1	+0.2
JTM				*e*S	Sn	16 00 47.4	+1.1
JAH	Hinai	2.11	287	P	Pn	16 00 22.3	+0.7
JYK	Kaneyama	2.37	254	P	Pn	16 00 25.9	+0.8
JOU	Okura	2.38	239	P	Pn	16 00 25.7	+0.3
JOU				*e*S	Sn	16 00 55.1	+0.7
JEM	Erimo	2.41	358	P	Pn	16 00 25.7	+0.1
JNBK	Urakawa-nobuka	2.70	352	P	Pn	16 00 30.3	+0.7
MJAR	Matsushiro Arr	5.04	234	Pn	Pn	16 01 03.3	+1.4
	0.1nm,0.3s,baz=40,slow=12,SNR=8.6						
SONM	Songino Array	27.68	299	P	P	16 05 34.5	+0.2
	0.3nm,0.5s,baz=103,slow=9.0,SNR=2.7						
MKAR	Makanchi Array	44.04	300	P	P	16 07 53.5	-0.4
	0.3nm,0.5s,baz=84,slow=9.3,SNR=6.2						
KURBB	Kurchatov Arra	45.62	306	P	P	16 08 06.2	-0.1
	0.5nm,0.6s,baz=80,slow=9.0,SNR=6.1						

ANF 17 16:13:19.5±0.9**, 52°.33N**×**67°.18W, h0^{km}, ML3.9**/1**, Error ellipse: s-maj=27.5km s-min=5.8km az=96.0, Northern Quebec**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
D63A	Stockholm	5.34	187	P	Pn	16 14 40.3	-0.1
	baz=6.1,SNR=30						
D61A	St Aubert, Com	5.49	202	P	Pn	16 14 42.4	-0.1
	baz=20						
E64A	Bridgewater	5.94	184	P	Pn	16 14 48.7	+0.2
	baz=3.9,SNR=8.2						
E61A	Lac Etchemin	6.29	201	P	Pn	16 14 53.8	+0.4
	baz=19						
F64A	Sherman	6.52	187	P	Pn	16 14 56.6	0.0
	baz=6.3,SNR=21						
F63A	Nahmakanta, Br	6.76	192	P	Pn	16 15 00.1	+0.3
	baz=10,SNR=18						

G64A	Maxfield baz=7.8,SNR=13	7.16	189	P	Pn	16 15 05.0	-0.4
PKME	Peaks-Kenny Pk baz=10,SNR=14	7.21	192	P	Pn	16 15 06.0	0.0
PKME	baz=10			S	Sn	16 16 29.8	+1.2
G63A	Kingsbury baz=12	7.40	194	P	Pn	16 15 08.3	-0.4

IDC ***17*** *16:20:10.7±3.8, 6°.24S×148°.87E, h91km±41km, mb3.3/4, mb1 3.6/6, mb1mx3.2/35, mbtmp3.7/6, MS3.5/1, Ms1 3.5/1, ms1mx2.6/21, Error ellipse: s-maj=80.1km s-min=24.6km az=126.0*

ISC 17 16:20:11.1±1.6**, 6°.3S**±0°.3×**148°.9E**±0°.5**, h100km, n6, σ1s.38**/7**, mb3.5**/4**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby 9.1nm,0.3s,baz=13,slow=5.6,SNR=37	3.52	209	P	Pn	16 21 02.9	-1.0
PMG	9.8nm,0.3s,baz=18,slow=18,SNR=11			S	Sn	16 21 46.2	+1.6
WRA	Warramunga Arr 0.4nm,0.3s,baz=51,slow=11,SNR=21	19.57	225	P	Pn	16 24 32.0	-1.6
ASAR	Alice Springs 0.6nm,0.6s,baz=51,slow=8.9,SNR=15	22.48	218	P	P	16 25 03.4	+1.0
FITZ	Fitzroy Crossi 1.4nm,0.4s,baz=49,slow=10,SNR=13	25.51	241	P	P	16 25 30.7	+0.2
FITZ	comp=Z,108nm,19.3s,baz=334,slow=39			LR	LR	16 36 42.8	
PETK	Petropavlovsk- 0.5nm,0.6s,baz=186,slow=7.5,SNR=4.8	59.66	6	P	P	16 30 05.5	+0.7
ILAR	Eielson Array 0.2nm,0.6s,baz=243,slow=4.0,SNR=2.2	85.03	23	P	P	16 32 34.9	-0.4

NEIC ***17*** *16:24:37.0±1.0, 14°.58S±0°.09×167°.4E±0°.2, h158km±9km, mb4.3/9, Error ellipse: s-maj=29.1km s-min=9.2km az=109.0*

IDC ***17*** *16:24:42.0±4.7, 14°.77S×167°.31E, h202km±50km, mb3.4/10, mb1 3.5/11, mb1mx3.3/42, mbtmp3.9/11, Error ellipse: s-maj=44.2km s-min=23.5km az=153.0*

ISC 17 16:24:38.5±0.9**, 14°.62S**±0°.09×**167°.4E**±0°.2**, h170km, n21, σ1s.04**/22**, mb3.8**/13**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	Saraoutou	0.84	192		Pn	16 25 01.9	-2.2
DZM	Mont Dzumac 1.9nm,0.3s,baz=166,slow=17,SNR=16	7.47	187	P	Pn	16 26 26.9	+2.0
DZM	0.4nm,0.3s,baz=148,slow=22,SNR=1.1			S	Sn	16 27 48.5	-0.3
DZM	Mont Dzumac	7.47	187		Pn	16 26 24.1	-0.7
EIDS	Eidsvold	18.67	233	Pn	Pn	16 28 45.6	-0.4
EIDS	comp=Z,17nm,1.1s			IAmb	IAmb	16 29 04.4	
CTA	Charters Tower comp=Z,3.8nm,0.8s,baz=271,slow=22,SNR=1.8	20.88	252	P	P	16 29 08.2	+0.6
STKA	Stephens Creek comp=Z,1.3nm,0.5s,baz=44,slow=9.4,SNR=4.4	29.15	229	P	P	16 30 23.6	-0.1
WR0	Warramunga Arr	31.77	256	P	P	16 30 47.5	+0.5
WR0	comp=Z,8.2nm,1.2s			IAmb	IAmb	16 30 59.8	
WB0	Warramunga Arr	31.90	256	P	P	16 30 47.7	-0.4
WB0	comp=Z,8.3nm,1.2s			IAmb	IAmb	16 31 16.1	
WB2	Warramunga Arr	31.95	256	P	P	16 30 48.6	+0.1
WB2	comp=Z,7.6nm,1.2s			IAmb	IAmb	16 31 01.4	
WRA	Warramunga Arr comp=Z,0.3nm,0.4s,baz=86,slow=8.8,SNR=2.3	31.96	256	P	P	16 30 47.9	-0.8
AS31	Alice Springs	32.82	249	P	P	16 30 55.0	-1.1
AS31	comp=Z,0.8nm,1.1s			IAmb	IAmb	16 31 15.4	
ASAR	Alice Springs comp=Z,0.5nm,0.4s,baz=77,slow=9.3,SNR=18	32.82	249	P	P	16 30 55.2	-0.9
BBOO	Buckleboo	33.74	232	P	P	16 31 04.3	+0.4
FITZ	Fitzroy Crossi comp=Z,2.0nm,0.8s,baz=66,slow=7.0,SNR=1.9	40.15	259	P	P	16 31 56.3	-1.8
PETK	Petropavlovsk- comp=Z,1.2nm,0.8s,baz=158,slow=9.0,SNR=1.9	67.96	354	P	P	16 35 20.0	+1.2
SONM	Songino Array comp=Z,0.4nm,0.5s,baz=136,slow=4.8,SNR=5.4	82.47	324	P	P	16 36 43.0	+1.0
ILAR	Eielson Array comp=Z,0.5nm,0.8s,baz=248,slow=4.2,SNR=4.1	86.39	18	P	P	16 37 00.1	-1.1
MKAR	Makanchi Array comp=Z,0.4nm,0.7s,baz=93,slow=6.2,SNR=6.3	97.20	316	P	P	16 37 51.9	+0.1
ZALV	Zalesovo Beam comp=Z,0.4nm,0.4s,baz=19,slow=24,SNR=2.2	97.37	324	P	P	16 37 52.6	+0.3
ARCES	ARCESS Array B comp=Z,1.2nm,0.6s,baz=59,slow=1.5,SNR=10.0	120.17	345	PKP	PKiKP	16 43 09.4	+0.7
ARCES	ARCESS Array B	120.17	345		PKPdf	16 43 08.2	-0.4

TAP ***17*** *16:24:58.9, 23°.84N×121°.87E, h27km, ML2.6, C*

JMA ***17*** *16:24:58.2±0.1, 23°.82N×121°.93E, h24km±3km, M2.6*

ISC 17 16:24:58.9±0.9**, 23°.84N**±0°.02×**121°.90E**±0°.02**, h32km**±8km**, n91, σ0s.69**/151**, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HWA	Hwalien baz=298	0.30	298	*i* P	Pn	16 25 06.9	-0.2
HWA	baz=298			S	Sn	16 25 12.2	-0.3
TWD	Chiawan baz=313	0.37	312	*i* P	Pb	16 25 07.4	0.0
TWD	baz=313			*e*S	Sb	16 25 13.2	0.0
ESL	Shilin baz=265	0.42	267	*i* P	Pb	16 25 08.0	-0.2
ESL	baz=265			*e*S	Sb	16 25 14.8	+0.1
NACB	Ninganchiao baz=322	0.43	321	*i* P	Pb	16 25 08.2	-0.2
NACB	baz=322			S	Sb	16 25 15.0	+0.1
EGFH	Guangfu baz=246	0.46	249	P	Pb	16 25 08.7	-0.1
EGFH	baz=246			*e*S	Sn	16 25 16.0	-0.4
ETLH	Xiulin Townshi baz=315	0.53	315	*i* P	Pb	16 25 09.7	-0.3
ETLH	baz=315			S	Sb	16 25 17.6	+0.1
HGSD	Ruisui baz=229	0.55	232	P	Pb	16 25 10.0	-0.2
HGSD	baz=229			*e*S	Sn	16 25 18.6	0.0
ENA	Nanau baz=348	0.61	347	P	Pb	16 25 11.1	-0.1
ENA	baz=348			*e*S	Sn	16 25 20.0	-0.1
EWUT	Wuta baz=351	0.62	350	P	Pb	16 25 11.0	-0.3
EWUT	baz=351			S	Sn	16 25 20.2	-0.1
EHY	Hungye baz=235	0.62	238	P	Pb	16 25 11.2	-0.1
EHY	baz=235			S	Sn	16 25 20.4	0.0
WHF	Hehuan Shan baz=298	0.65	298	P	Pb	16 25 11.5	-0.7
WHF	baz=298			*e*S	Sb	16 25 21.2	-0.1
VWDT	VWDT baz=262	0.69	263	*i* P	Pn	16 25 12.6	0.0
VWDT	baz=262			S	Sn	16 25 22.3	+0.1
CHGB	Renai baz=288	0.70	289	*i* P	Pb	16 25 12.5	-0.3
CHGB	baz=288			S	Sb	16 25 22.4	+0.2
YULB	Yu-li baz=229	0.70	231	P	Pb	16 25 12.1	-0.7
YULB	baz=229			*e*S	Sb	16 25 22.1	-0.1
EYUL	Yuli baz=225	0.72	228	*e*P	Pb	16 25 12.7	-0.3
EYUL	baz=225			S	Sn	16 25 23.6	+0.7
FUSS	Fushou baz=304	0.72	305	P	Pb	16 25 13.0	-0.3
FUSS	baz=304			S	Sb	16 25 23.2	+0.1
TWF1	Yuli baz=226	0.73	229	P	Pb	16 25 12.6	-0.6
TWF1	baz=226			*e*S	Sn	16 25 23.3	+0.2
NNSB	Datong baz=322	0.75	322	P	Pb	16 25 13.4	-0.3
NNSB	baz=322			S	Sb	16 25 23.4	-0.3
NNSH	Datong baz=322	0.75	322	P	Pb	16 25 13.4	-0.3
NNSH	baz=322			S	Sb	16 25 23.4	-0.3
NNS	Nan Shan baz=322	0.77	322	P	Pb	16 25 13.7	-0.3
NNS	baz=322			S	Sb	16 25 24.1	-0.1
TWC	Suao baz=359	0.77	357	*e*P	Pn	16 25 14.3	+0.7
TWC	baz=359			S	Sn	16 25 24.9	+0.8
TWT	Tachien baz=301	0.78	302	P	Pn	16 25 14.3	+0.4
TWT	baz=301			S	Sn	16 25 24.9	+0.3
TDCB	Techi baz=301	0.79	302	P	Pb	16 25 14.1	-0.3
TDCB	baz=301			*e*S	Sb	16 25 24.6	-0.2
NDS	Dongshan baz=349	0.81	348	P	Pn	16 25 14.4	+0.2
NDS	baz=349			S	Sn	16 25 26.0	+0.9
FULB	Fuli baz=219	0.84	221	*e*P	Pn	16 25 15.3	+0.7
FULB	baz=219			S	Sn	16 25 26.8	+0.9
NDT	Datong Townshi baz=336	0.84	336	P	Pb	16 25 14.7	-0.4
NDT	baz=336			*e*S	Sn	16 25 26.1	+0.2
ENTT	Nioudou baz=340	0.86	340	P	Pn	16 25 15.1	+0.3
ENTT	baz=340			*e*S	Sn	16 25 26.6	+0.4
SSLB	Suanglung baz=266	0.86	267	P	Pb	16 25 15.0	-0.4
SSLB	baz=266			*e*S	Sn	16 25 26.8	+0.3
WPL	Puli Township baz=281	0.88	282	*e*P	Pn	16 25 15.4	+0.4
TWE	Neicheng baz=348	0.91	347	*e*P	Pn	16 25 16.0	+0.5
TWE	baz=348			*e*S	Sn	16 25 27.9	+0.5
DPDB	Guoxing baz=282	0.91	283	*e*P	Pn	16 25 16.0	+0.4
SMLT	Sun Moon Lake baz=272	0.91	273	P	Pn	16 25 16.0	+0.3
SMLT	baz=272			*e*S	Sb	16 25 27.9	-0.3
WCS	Beigang Elemen baz=283	0.93	284	P	Pb	16 25 16.2	-0.3
WCS	baz=283			*e*S	Sb	16 25 28.3	-0.2
YUS	Yu-Shan baz=247	0.93	248	P	Pn	16 25 16.5	+0.3
YUS	baz=247			*e*S	Sb	16 25 28.2	-0.9
TYC	Yuchr baz=273	0.95	274	*e*P	Pn	16 25 16.4	+0.3
TYC	baz=273			*e*S	Sn	16 25 29.0	+0.4
YHNB	Yeheng baz=331	0.96	330	P	Pn	16 25 16.4	+0.2
YHNB	baz=331			*e*S	Sb	16 25 28.6	-0.9
NSK	Sanguang baz=330	0.97	330	P	Pn	16 25 16.7	+0.3
NSK	baz=330			*e*S	Sn	16 25 29.6	+0.4
WHP	Taichung City baz=296	0.97	297	*e*P	Pb	16 25 17.1	-0.3
WHP	baz=296			*e*S	Sn	16 25 29.9	+0.6
NWLT	Wulai baz=339	1.00	339	*e*P	Pb	16 25 17.3	-0.6
NWLT	baz=339			*e*S	Sb	16 25 30.3	-0.5
EDH	Donghe baz=211	1.02	212	*e*P	Pb	16 25 17.6	-0.4
EDH	baz=211			*e*S	Sb	16 25 28.4	-2.6
ELDTW	Lidau baz=229	1.03	232	*e*P	Pn	16 25 17.0	-0.2
ELDTW	baz=229			*e*S	Sb	16 25 30.5	-1.0
ALS	Alishan baz=251	1.05	252	*e*P	Pb	16 25 18.5	-0.3
ALS	baz=251			*e*S	Sb	16 25 31.8	-0.5
WJS	Zhushan baz=268	1.07	270	*e*P	Pb	16 25 19.3	+0.4
WJS	baz=268			*e*S	Sb	16 25 33.5	+1.0
WNT	Mingjian baz=271	1.11	272	*e*S	Sb	16 25 34.5	+0.8
WWF	Wufeng baz=280	1.11	281	*e*S	Sb	16 25 35.1	+1.3
TIPB	Shuangxi baz=357	1.13	357	*e*P	Pb	16 25 19.9	-0.1
TIPB	baz=357			*e*S	Sb	16 25 34.2	-0.3
LIOB	Emei baz=315	1.14	315	*e*P	Pb	16 25 20.4	+0.3
LIOB	baz=315			*e*S	Sb	16 25 35.6	+1.0
NSTT	Nanjuang baz=314	1.14	314	*e*P	Pb	16 25 20.3	+0.3
NSTT	baz=314			*e*S	Sn	16 25 34.0	+0.8
JYNG	Yonagunijimaku	1.14	57	*e*S	Sn	16 25 31.1	-2.1
CHN5	Tsauling baz=257	1.14	258	*e*P	Pn	16 25 19.0	+0.2
CHN5	baz=257			*e*S	Sn	16 25 33.9	+0.5
TWQ1	Liyutan baz=296	1.15	297	*e*P	Pb	16 25 20.2	0.0
TWQ1	baz=296			*e*S	Sb	16 25 34.6	-0.2
TCU	Taichung baz=285	1.16	286	*e*P	Pb	16 25 20.1	-0.3
TCU	baz=285			*e*S	Sb	16 25 34.9	-0.1
LONT	Longtian baz=216	1.16	217	*e*P	Pb	16 25 20.3	-0.2
NJD	Zhudong baz=321	1.16	321	*e*S	Sb	16 25 35.8	+0.6
NHDH	Xindian Distri baz=344	1.17	343	*e*S	Sb	16 25 35.2	-0.3
TATO	Taipei baz=343	1.20	342	*e*S	Sb	16 25 35.6	-0.6
YOJ	Yonaguni jima baz=58	1.20	58	*e*S	Sn	16 25 35.1	+0.5
STYH	Taoyuan baz=236	1.22	237	*e*P	Pn	16 25 20.5	+0.7
STYH	baz=236			*e*S	Sn	16 25 36.1	+0.9
STYT	Tauyuan baz=236	1.24	238	*e*P	Pb	16 25 21.1	-0.7
STYT	baz=236			*e*S	Sn	16 25 36.5	+0.7
WCHH	Zhanghua baz=281	1.25	282	*e*S	Sb	16 25 38.1	+0.5
WDLH	Douliu baz=262	1.25	264	*e*S	Sb	16 25 39.2	+1.5
TWGBT	Beinan baz=215	1.26	217	*e*S	Sn	16 25 36.4	+0.2
TPUB	Ta-pu baz=244	1.28	246	*e*P	Pb	16 25 22.1	-0.3
TPUB	baz=244			*e*S	Sb	16 25 39.0	+0.5
CHN4	Tsaushan baz=247	1.29	248	*e*P	Pb	16 25 22.4	-0.1
CHN4	baz=247			*e*S	Sb	16 25 40.3	+1.5
WTP	Ta-pu baz=242	1.31	244	*e*P	Pb	16 25 22.6	-0.4
WTP	baz=242			*e*S	Sb	16 25 40.1	+0.5
TWS1	Kuangyinshan baz=341	1.33	341	*e*S	Sb	16 25 39.6	-0.4
YM01	YM01 baz=347	1.34	347	*e*S	Sn	16 25 38.3	0.0
YM10	YM10 baz=347	1.35	347	*e*S	Sn	16 25 39.2	+0.7
YM04	YM04 baz=346	1.35	346	*e*S	Sn	16 25 39.3	+0.7
YM05	YM05 baz=347	1.36	347	*e*S	Sn	16 25 39.4	+0.7
YM08	YM08 baz=349	1.38	348	*e*S	Sn	16 25 39.7	+0.6
WTK	Tuku baz=263	1.39	264	*e*S	Sb	16 25 40.8	-0.8
WRL	Guolierlin Hig baz=272	1.39	273	*e*S	Sb	16 25 41.0	-0.7
TWK	Hsinying baz=245	1.41	247	*e*P	Pb	16 25 24.2	-0.5
TWK	baz=245			*e*S	Sb	16 25 42.0	-0.3
SGST	Jiashian baz=237	1.42	238	*e*P	Pb	16 25 23.7	-1.1
SGST	baz=237			*e*S	Sn	16 25 41.3	+1.2
SLGT	Liugui baz=233	1.42	234	*e*P	Pb	16 25 24.0	-0.9
SLGT	baz=233			*e*S	Sb	16 25 41.9	-0.7
SSD	Sandimen baz=226	1.59	227	*e*S	Sn	16 25 45.1	+0.8
TSMG	Majia baz=224	1.61	226	*e*S	Sn	16 25 46.3	+1.5
MASBT	Mashibuluo baz=222	1.68	224	*e*P	Pn	16 25 27.6	+1.4
MASBT	baz=222			*e*S	Sb	16 25 49.6	-0.5
IRIF	Iriomote-Funau	1.75	73	P	Pn	16 25 27.6	+0.5
IRIF				S	Sn	16 25 49.1	+0.8
JKRS	Kuro-shima	1.97	78	P	Pn	16 25 31.2	+1.1
JKRS				*e*S	Sn	16 25 54.5	+0.7
JIJ	Ishigaki jima	2.12	75	P	Pn	16 25 32.5	+0.3
JIJ				*e*S	Sn	16 25 57.0	-0.4
PHUB	P'eng-hu baz=261	2.15	262	*e*S	Sn	16 25 58.5	+0.2
PNG	Penghu baz=262	2.16	263	*e*S	Sn	16 25 59.0	+0.5
JISG	Ishigakijimahi	2.33	71	P	Pn	16 25 35.4	+0.4
JISG				*e*S	Sn	16 26 01.8	-0.8
VWUC	VWUC baz=297	2.51	298	*e*S	Sn	16 26 05.4	-1.6
PTTC	Pingtan baz=310	2.55	311	*e*S	Sn	16 26 06.6	-1.3
PTMZ	Houxiangcun baz=295	2.80	296	*e*S	Sn	16 26 13.0	-1.2
KNMB	Chin-men Tao baz=280	3.26	282	*e*S	Sn	16 26 23.4	-2.3
MHZQ	Yeshan baz=311	3.44	312	*e*S	Sn	16 26 29.0	-1.1
AXDP	Jialang baz=286	3.73	287	*e*S	Sn	16 26 35.6	-1.6

BJI ***17*** *16:33:17.0±0.0, 39°.50N×143°.70E, h5km, mB5.5/75, mb5.4/83, Ms5.7/94, Ms7 5.6/87*

IDC ***17*** *16:33:20.2±0.5, 39°.58N×143°.64E, h0km, mb5.0/27, mb1 5.1/35, mb1mx5.1/41, mbtmp5.1/35, ML4.1/8, MS4.9/41, Ms1 4.9/41, ms1mx4.8/57, Error ellipse: s-maj=13.0km s-min=10.8km az=117.0*

NEIC ***17*** *16:33:21.3±1.2, 39°.57N±0°.05×143°.58E±0°.09, h10km±1km, mb5.3/328, Ms_20 5.1/143, Mwb5.5/42, Mww5.5, Mwc5.5(GCMT), Error ellipse: s-maj=12.0km s-min=8.5km az=109.0*

JMA ***17*** *16:33:21.8±0.2, 39°.67N×143°.72E, h34km, M5.6*

JMA Felt II J1.

NIED ***17*** *16:33:21.8, 39°.67N×143°.72E, h34km, MW5.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{17}Nm; M_{rr}0.95; $M_{\theta\theta}$0.23; $M_{\phi\phi}$-1.18; $M_{r\theta}$0.61; $M_{\theta\phi}$-0.40; $M_{\phi r}$0.64; Fault plane solution: $M_0$1.44000×10^{17} NP1:ϕ_s35.00000°, δ66.00000°, λ112.00000°. NP2:ϕ_s171.00000°, δ32.00000°, λ51.00000°.*

NEIC ***17*** *16:33:21.2, 39°.58N×143°.59E, h10km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.44; $M_{\theta\theta}$-0.01; $M_{\phi\phi}$-1.43; $M_{r\theta}$0.50; $M_{\theta\phi}$-0.26; $M_{\phi r}$1.38; Fault plane solution: $M_0$2.07000×10^{17} NP1:ϕ_s183.05000°, δ22.96000°, λ76.99000°. NP2:ϕ_s17.13000°, δ67.66000°, λ95.45000°. Principal axes: T 2.0614, Plg67.0000°, Azm297.0000°; N 0.0142, Plg5.0000°, Azm195.0000°; P -2.0756, Plg22.0000°, Azm103.0000°;*

MOS ***17*** *16:33:23.8±1.0, 39°.70N×143°.57E, h33km, mb5.6/54, MS5.1/34 Error ellipse: s-maj=5.2km s-min=3.5km az=105.5*

GCMT ***17*** *16:33:26.3±0.1, 39°.61N±0°.01×143°.70E±0°.01, h14km, MW5.4/154, Moment Tensor Solution. s113,c188; s154,c311; Duration: 1s.2 Moment tensor: Scale 10^{17} Nm; M_{rr}1.14±.02; $M_{\theta\theta}$-0.09±.01; $M_{\phi\phi}$-1.04±.02; $M_{r\theta}$0.45±.03; $M_{\theta\phi}$-0.28±.01; $M_{\phi r}$1.02±.04; Best double couple: $M_0$1.58500×10^{17} NP1:ϕ_s189.00000°, δ23.00000°, λ79.00000°. NP2:ϕ_s21.00000°, δ67.00000°, λ95.00000°. Principal axes: T 1.6040, Plg67.0000°, Azm299.0000°; N -0.0320, Plg4.0000°, Azm199.0000°; P -1.5660, Plg22.0000°, Azm108.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***17*** *16:33:27, 39°.59N×143°.76E, h13km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.01; $M_{\theta\theta}$-0.00; $M_{\phi\phi}$-1.01; $M_{r\theta}$0.68; $M_{\theta\phi}$-0.29; $M_{\phi r}$1.49; Fault plane solution: $M_0$1.95000×10^{17} NP1:ϕ_s186.00000°, δ17.00000°, λ74.00000°. NP2:ϕ_s23.00000°, δ74.00000°, λ95.00000°. Principal axes: T 1.9177, Plg61.0000°, Azm300.0000°; N 0.0555, Plg5.0000°, Azm202.0000°; P -1.9732, Plg29.0000°, Azm109.0000°;*

NEIC ***17*** *16:33:28, 39°.66N×143°.55E, h16km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.09; $M_{\theta\theta}$-0.07; $M_{\phi\phi}$-1.02; $M_{r\theta}$0.64; $M_{\theta\phi}$-0.23; $M_{\phi r}$1.67; Fault plane solution: $M_0$2.09000×10^{17} NP1:ϕ_s187.00000°, δ16.00000°, λ77.00000°. NP2:ϕ_s20.00000°, δ74.00000°, λ93.00000°. Principal axes: T 2.1116, Plg60.0000°, Azm295.0000°; N -0.0337, Plg3.0000°, Azm199.0000°; P -2.0779, Plg29.0000°, Azm107.0000°;*

BGR ***17*** *16:33:32.1±0.0, 40°.80N×143°.99E, h33km, mb5.4, Ms5.5*

ISC 17 16:33:21.3±0.5**, 39°.59N**±0°.03×**143°.65E**±0°.03**, h11km**±3km**, h11km:pP-P, n1263, σ1s.31**/1295**, mb5.3**/350**, MS5.1**/161**, 138C-13D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MIYJ	Miyakonagasawa	1.42	270	⇑P	Pn	16 33 46.8	-0.2
MIYJ				*e*S	Sn	16 34 05.2	-0.5
JTH	Tanohata	1.42	285	⇑P	Pn	16 33 46.5	-0.6
JTH				*e*S	Sn	16 34 04.8	-1.0
JKEN	Kujiedanarisaw	1.62	293	⇑P	Pn	16 33 48.8	-1.0
JKEN				*e*S	Sn	16 34 08.7	-1.9
OFUJ	Ofunato	1.62	252	⇑P	Pn	16 33 49.7	-0.1
JANG	Nango	1.82	296	⇑P	Pn	16 33 51.9	-0.7
JANG				S	Sn	16 34 12.9	-2.7
JOM	Ohasama	1.83	267	P	Pn	16 33 53.2	+0.5
JOM				*e*S	Sn	16 34 16.5	+0.7
JKZ	Kuzumaki	1.83	283	⇑P	Pn	16 33 53.0	+0.2
JKMT	Kesennumamotoy	1.86	246	⇑P	Pn	16 33 53.0	-0.1
JMK	Ichinoseki	1.99	252	⇑P	Pn	16 33 55.1	+0.2
JSZI	Iwateshizukuis	2.09	275	⇑P	Pn	16 33 57.2	+0.9
JIO	Ouri	2.12	238	⇑P	Pn	16 33 56.3	-0.4
JIKH	Ishinomakikobu	2.13	234	⇑P	Pn	16 33 56.2	-0.6
JARK	Aomorirokkasho	2.25	310	⇑P	Pn	16 33 58.3	-0.2
JTM	Tenmabayashi	2.31	302	⇑P	Pn	16 33 59.5	+0.2
JTM	Tenmabayashi	2.31	302	Pn	Pn	16 33 59.6	+0.2
JRG	Rokugo	2.34	266	⇑P	Pn	16 34 00.5	+0.7
JOFO	Osakifurukawao	2.35	246	P	Pn	16 34 00.6	+0.8
JAH	Hinai	2.40	285	⇑P	Pn	16 34 01.3	+0.8
ERM	Erimo	2.45	351	*ce*P	Pn	16 34 00.7	-0.6
ERM	comp=Z,601nm,1.3s			pmax	pmax		
ERM	Erimo	2.45	351	Pn	Pn	16 34 00.6	-0.7
JEM	Erimo	2.45	351	Pn	Sn	16 34 30.5	-0.7
JOU	Okura	2.63	243	⇑P	Pn	16 34 03.9	+0.2

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JYK   Kaneyama          2.64 256 ⇑P     Pn      16 34 04.7 +0.8
JYK                              eS     Sn      16 34 36.2 +0.3
JYW   Yuwa              2.66 270 ⇑P     Pn      16 34 05.2 +1.1
JOT   Ohata             2.67 313 ⇑P     Pn      16 34 04.1  -0.2
JOT                              eS     Sn      16 34 35.6  -1.1
JHHS  Hirosakihyakuz    2.74 294 ⇑P     Pn      16 34 06.5 +1.3
JNBK  Urakawa-nobuka    2.77 346  P     Pn      16 34 06.5 +0.8
JNBK                             eS     Sn      16 34 36.9  -2.3
JMM   Marumori          2.82 233  P     Pn      16 34 05.8  -0.5
JMM   Marumori          2.82 233        Pn      16 34 05.5  -0.8
JMST  Minamisoumatoc    2.85 230  P     Pn      16 34 06.2  -0.6
JSI2  Shiura 2          2.88 302 ⇑P     Pn      16 34 07.7 +0.6
JCH   Churui            3.03 356  P     Pn      16 34 08.7  -0.5
JCH                              eS     Sn      16 34 43.1  -2.4
JKB   Kayabe            3.04 320  P     Pn      16 34 10.4 +1.1
JYS   Shirataka         3.11 245 ⇑P     Pn      16 34 11.1 +0.7
JFT   Otama             3.32 233 ⇑P     Pn      16 34 13.4 +0.2
JBT2  Biratori 2        3.33 343  P     Pn      16 34 13.7 +0.3
ONAJ  Iwakimizuishiy    3.35 223 ⇑P     Pn      16 34 12.4  -1.2
JOMM  Oshimamatsumae    3.38 306  P     Pn      16 34 14.7 +0.7
JFFD  Fukushimafurud    3.48 225 ⇑P     Pn      16 34 14.7  -0.7
JAK   Akkeshi           3.49  13 ⇑P     Pn      16 34 14.8  -0.8
JAK                              eS     Sn      16 34 53.3  -3.6
JAW   Awa shima         3.61 253  P     Pn      16 34 18.5 +1.3
JEW   Eniwo             3.65 334 ⇑P     Pn      16 34 18.3 +0.6
JEW   Eniwo             3.65 334  Pn    Pn      16 34 18.3 +0.6
JFR   Furan             3.66 348  P     Pn      16 34 17.5  -0.4
JAR   Ashorobuto        3.71   1 ⇑P     Pn      16 34 17.3  -1.2
JAR                              eS     Sn      16 34 58.9  -3.3
JFY   Yanaizu           3.79 236  P     Pn      16 34 20.3 +0.7
NMR   Nemuro--Hokkai    4.09  22⇑iP     Pn      16 34 21.9  -1.8
NMR                              i S    Sn      16 35 07.3  -4.2
JYT   Yasato            4.33 220        Pn      16 34 25.4  -1.6
GLVR  Golovnino         4.38  18c iP    Pn      16 34 26.0  -1.7
GLVR                             i S    Sn      16 35 12.5  -6.1
GLVR                              pmax  pmax
      comp=Z,868nm,0.5s
GLVR                              pmax  pmax
      comp=E,54nm,0.3s
GLVR                              pmax  pmax
      comp=N,72nm,0.4s
GLVR                              smax  smax
      comp=E,27µm,1.6s
GLVR                              smax  smax
      comp=N,16µm,1.1s
GLVR                              smax  smax
      comp=N,8µm,0.3s
GLVR                              smax  smax
      comp=E,2µm,0.5s
JTKR  Abashiri--Toko    4.38   2 ⇑P     Pn      16 34 27.1  -0.7
JMP   Maruseppu         4.42 357 ⇑P     Pn      16 34 27.3  -1.0
JSD   Sado              4.49 251 ⇑P     Pn      16 34 29.9 +0.7
JSD   Sado              4.49 251  Pn    Pn      16 34 28.4  -0.8
JAG   Ashikaga          4.58 228 ⇑P     Pn      16 34 30.7 +0.2
JKA   Kamikawa-asahi    4.59 350  Pn    Pn      16 34 30.6  -0.1
ASAJ  Asahikawa         4.59 350  Pn    Pn      16 34 31.8 +1.1
      comp=E,14nm,0.3s,baz=206,slow=12,SNR=98
ASAJ                              Sn    Sn      16 35 23.6  -0.4
      comp=E,56nm,0.3s,baz=354,slow=20,SNR=2.7
GRPR  Tuman             4.68  19d iP    Pn      16 34 30.4  -1.4
GRPR                             i S    Sn      16 35 18.4  -7.7
GRPR                              pmax  pmax
      comp=E,359nm,0.5s
GRPR                              pmax  pmax
      comp=Z,1µm,0.5s
GRPR                              pmax  pmax
      comp=N,436nm,0.4s
GRPR                              smax  smax
      comp=E,6µm,0.7s
GRPR                              smax  smax
      comp=N,7µm,1.5s
GRPR                              smax  smax
      comp=N,4µm,0.5s
GRPR                              smax  smax
      comp=E,6µm,0.4s
YUK   Yuzh-Kuril'sk     4.74  20c iP    Pn      16 34 31.7  -1.0
YUK                              i S    Sn      16 35 20.9  -6.7
YUK                               pmax  pmax
      comp=Z,1µm,0.3s
YUK                               pmax  pmax
      comp=E,234nm,0.2s
YUK                               pmax  pmax
      comp=N,359nm,0.3s
YUK                               smax  smax
      comp=E,10µm,1.7s
YUK                               smax  smax
      comp=N,18µm,1.6s
YUK                               smax  smax
      comp=N,2µm,0.3s
YUK                               smax  smax
      comp=E,5µm,0.4s
YUK                               MLR   MLR
      comp=E,11µm,14.0s
YUK                               MLR   MLR
      comp=Z,10µm,14.0s
YUK                               MLR   MLR
      comp=N,8µm,10.0s
JGK   Kuni              4.98 234  P     Pn      16 34 37.8 +1.8
JJN   Nakama            4.98 242 ⇑P     Pn      16 34 37.6 +1.6
JRY   Ryogami san       5.18 228 ⇑P     Pn      16 34 38.9 +0.1
MJAR  Matsushiro Arr    5.26 236  Pn    Pn      16 34 40.9 +1.0
      comp=N,2.7nm,0.3s,baz=39,slow=12,SNR=637
MJAR                              LR    LR      16 36 34.9
      comp=N,6µm,21.1s,baz=55,slow=37
MJAR  Matsushiro Arr    5.26 236  Pn    Pn      16 34 40.6 +0.7
MAJO  Matsushiro        5.26 236c iP    Pn      16 34 41.5 +1.6
MAJO  Matsushiro        5.26 236  Pn    Pn      16 34 41.3 +1.3
MAT   Matsushiro        5.26 236  P     Pn      16 34 41.4 +1.5
MAT                              eS     Sn      16 35 40.4  -0.2
MAT   Matsushiro        5.26 236  P     Pn      16 34 41.4 +1.5
MJB9  Matsu-Tunnel      5.26 236        Pn      16 34 41.1 +1.1
JNG   Nsakai            5.41 236 ⇑P     Pn      16 34 43.5 +1.4
JNT   Takato            5.73 231  P     Pn      16 34 47.8 +1.4
JTT   Ttatey            5.80 241 ⇑P     Pn      16 34 49.4 +2.0
JGN   Niukaw            6.03 238  P     Pn      16 34 52.1 +1.6
JGF   Kuroka            6.39 233  P     Pn      16 34 56.4 +1.0
JGF   Kuroka            6.39 233        Pn      16 34 56.2 +0.8
KUR   Kuril'sk          6.45  28 eP     Pn      16 34 55.2  -0.9
KUR                              eS     Sn      16 36 05.4  -4.2
KUR                               pmax  pmax
      comp=Z,314nm,0.5s
KUR                               pmax  pmax
      comp=E,167nm,0.3s
KUR                               pmax  pmax
      comp=N,103nm,0.6s
KUR                               pmax  pmax
      comp=Z,3µm,6.4s
KUR                               smax  smax
      comp=N,874nm,0.3s
KUR                               smax  smax
      comp=E,767nm,0.4s
KUR                               smax  smax
      comp=N,6µm,3.6s
KUR                               smax  smax
      comp=E,3µm,2.0s
KUR                               MLR   MLR
      comp=Z,6µm,12.0s
KUR                               MLR   MLR
      comp=N,4µm,9.0s
JSG   Sagara            6.56 223        Pn      16 34 59.1 +1.3
INU   Inuyama           6.76 233        Pn      16 35 00.2  -0.3
JHJ2  Mitsune           7.17 207  Pn    Pn      16 35 05.0  -1.0
JHJ   Hachijo jima 2    7.17 207  Pn    Pn      16 35 06.7 +0.6
      comp=N,48nm,0.3s,baz=113,slow=21,SNR=6.0
JHJ                               Sn    Sn      16 36 21.6  -6.0
      comp=N,159nm,0.3s,baz=315,slow=23,SNR=7.0
YSS   Yuzh-Sakhalins    7.39 355c iP    Pn      16 35 09.4 +0.3
YSS                              eS     Sn      16 36 30.5  -2.4
YSS                               pmax  pmax
      comp=Z,1µm,8.3s
YSS                               pmax  pmax
      comp=Z,140nm,1.0s
YSS                               MLR   MLR
      comp=Z,22µm,15.0s
YSS                               MLR   MLR
      comp=N,15µm,14.0s
YSS   Yuzh-Sakhalins    7.39 355  Pn    Pn      16 35 09.0   0.0
TEY   Ternei            7.54 318⇑iP     Pn      16 35 13.8 +2.6
TEY                               pmax  pmax
      comp=N,70nm,1.8s
TEY                               pmax  pmax
      comp=E,80nm,1.8s
TEY                               pmax  pmax
      comp=Z,90nm,1.8s
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TEY                               MLR   MLR
      comp=E,500nm,14.0s
TEY                               MLR   MLR
      comp=N,700nm,13.0s
TEY                               MLR   MLR
      comp=Z,1µm,13.0s
JWT   Wachi             7.84 239  Pn    Pn      16 35 15.7 +0.3
UGL   Uglegorsk         9.55 354 eP     Pn      16 35 38.5  -0.2
UGL                              eS     Sn      16 37 24.5  -1.5
UGL                               pmax  pmax
      comp=Z,58nm,1.2s
UGL                               smax  smax
      comp=E,2µm,10.4s
UGL                               MLR   MLR
      comp=Z,15µm,14.0s
UGL                               MLR   MLR
      comp=N,18µm,12.0s
UGL                               MLR   MLR
      comp=E,11µm,15.0s
JHS   Saijyo            9.56 245        Pn      16 35 38.4  -0.5
JMN   Monobe            9.79 236        Pn      16 35 41.8  -0.2
USA0B Ussuriysk Arra    9.84 302c iP    Pn      16 35 44.3 +1.6
USA0B Ussuriysk Arra    9.84 302        Pn      16 35 43.8 +1.2
USRK  Ussuriysk Ar.     9.84 302  Pn    Pn      16 35 44.9 +2.3
      baz=105,slow=13,SNR=85
USRK  Ussuriysk Ar.     9.84 302        Pn      16 35 43.8 +1.2
MSHR  Mys Shultsa       9.89 292ceP     Pn      16 35 44.6 +1.2
MSHR                              pmax  pmax
      comp=Z,263nm,1.7s
TYV   Tymovskoe        11.30 357 eP     Pn      16 36 03.6 +1.0
TYV                              eS     Sn      16 38 12.0 +3.3
TYV                               pmax  pmax
      comp=Z,600nm,4.0s
TYV                               pmax  pmax
      comp=Z,39nm,1.1s
TYV                               smax  smax
      comp=E,22nm,1.4s
TYV                               smax  smax
      comp=E,900nm,2.7s
TYV                               MLR   MLR
      comp=E,18µm,15.0s
TYV                               MLR   MLR
      comp=Z,19µm,16.0s
MDJ   Mudanjiang       11.59 300  P     Pn      16 36 08.3 +1.7
MDJ                               pmax  pmax
      comp=Z,42nm,1.5s
MDJ                               pmax  pmax
      comp=Z,4µm,10.0s
MDJ                               LR    LR
      comp=Z,21µm,12.9s
MDJ                               LR    LR
      comp=Z,18µm,14.2s
MDJ                               LR    LR
      comp=Z,30µm,14.0s
MDJ   Mudanjiang       11.59 300  Pn    Pn      16 36 07.8 +1.2
JNU   Nakatsue         12.15 242  Pn    Pn      16 36 14.7 +0.3
      comp=Z,1.4nm,0.3s,baz=34,slow=7.0,SNR=19
JNU                               LR    LR      16 41 23.1
      comp=Z,15µm,18.4s,baz=50,slow=40
JNU   Nakatsue         12.15 242  Pn    Pn      16 36 14.4 +0.1
GRNR  Gornyy           12.28 338⇑iP     Pn      16 36 16.6 +0.5
GRNR                             eS     Sn      16 38 35.2 +2.3
GRNR                              pmax  pmax
      comp=E,10.0nm,0.8s
GRNR                              pmax  pmax
      comp=N,20nm,0.9s
GRNR                              pmax  pmax
      comp=Z,20nm,0.8s
GRNR                              smax  smax
      comp=N,4.0nm,1.0s
GRNR                              MLR   MLR
      comp=N,5µm,15.0s
GRNR                              MLR   MLR
      comp=E,6µm,15.0s
GRNR                              MLR   MLR
      comp=Z,7µm,15.0s
JTU   Tsushima         12.45 250  Pn    Pn      16 36 18.9 +0.4
KSRS  Korea Array      12.50 265  Pn    Pn      16 36 21.6 +2.5
      comp=Z,0.9nm,0.3s,baz=80,slow=14,SNR=60
KSRS                              LR    LR      16 40 41.1
      comp=Z,7µm,19.1s,baz=72,slow=35
JCJ   Chichijima       12.52 186  Pn    Pn      16 36 19.6 +0.2
      comp=Z,18nm,0.3s,baz=266,slow=22,SNR=5.7
JCJ                               Sn    Sn      16 38 22.2   -17
      comp=Z,7.5nm,0.3s,baz=281,slow=19,SNR=1.7
JCJ   Chichijima       12.52 186  Pn    Pn      16 36 16.4  -3.0
KSAR  Wonju Array Be   12.54 265  P     Pn      16 36 19.5  -0.1
KSAR  Wonju Array Be   12.54 265        Pn      16 36 19.5  -0.1
KLR   Kul'dur          12.84 323  Pn    Pn      16 36 23.6  -0.1
      comp=Z,0.7nm,0.3s,baz=134,slow=12,SNR=48
KLR                               LR    LR      16 41 30.8
      comp=Z,7µm,19.6s,baz=135,slow=38
TJN   Taejon           13.24 261ceP     Pn      16 36 30.9 +1.7
JSU   Suzuyama         13.42 237  Pn    Pn      16 36 30.3  -1.4
INCN  Inchon           13.49 266  P     Pn      16 36 31.3  -1.3
INCN  Inchon           13.49 266        Pn      16 36 31.3  -1.3
NKL   Nikolayevsk      13.72 352 eP     Pn      16 36 33.4  -2.2
NKL                              eS     Sn      16 39 03.2  -4.7
NKL                               pmax  pmax
      comp=E,41nm,1.1s
NKL                               pmax  pmax
      comp=N,9.0nm,0.7s
NKL                               pmax  pmax
      comp=Z,83nm,1.4s
NKL                               smax  smax
      comp=E,143nm,1.0s
NKL                               smax  smax
      comp=N,7.0nm,0.9s
NKL                               MLR   MLR
      comp=E,940nm,14.0s
NKL                               MLR   MLR
      comp=N,170nm,11.0s
NKL                               MLR   MLR
      comp=Z,7µm,14.0s
OKH   Okha             13.97 358c iP    Pn      16 36 37.8  -1.3
OKH                               pmax  pmax
      comp=Z,400nm,13.0s
OKH                               MLR   MLR
      comp=E,26µm,19.0s
OKH                               MLR   MLR
      comp=N,20µm,18.0s
OKH                               MLR   MLR
      comp=Z,14µm,18.0s
SNY   Shenyang         15.39 285 ⇓P     Pn      16 36 58.5 +0.2
SNY                               S     Sn      16 39 48.3  -0.4
SNY                               pmax  pmax
      comp=Z,37nm,1.1s
SNY                               pmax  pmax
      comp=Z,2µm,12.0s
SNY                               LR    LR
      comp=Z,7µm,13.5s
SNY                               LR    LR
      comp=Z,10µm,14.6s
SNY                               LR    LR
      comp=Z,13µm,13.4s
PEA0B Petropavlovsk-   16.60  31ceP     P       16 37 16.7 +0.4
PEA0B Petropavlovsk-   16.60  31  Pn    Pn      16 37 10.6  -3.2
PETK  Petropavlovsk-   16.60  31  Pn    Pn      16 37 12.5  -1.3
      comp=Z,0.4nm,0.3s,baz=198,slow=9.7,SNR=14
PETK                              LR    LR      16 44 45.3
      comp=Z,2µm,18.7s,baz=219,slow=41
PETK  Petropavlovsk-   16.60  31  Pn    Pn      16 37 10.9  -2.9
PET   Petropavlovsk    16.92  32 eP     P       16 37 21.4 +1.5
PET                              eS     Sn      16 40 25.6  -0.2
PET                               pmax  pmax
      comp=Z,500nm,10.1s
PET                               pmax  pmax
      comp=Z,177nm,1.2s
PET                               MLR   MLR
      comp=Z,6µm,16.0s
PET                               MLR   MLR
      comp=Z,6µm,15.0s
PET   Petropavlovsk    16.92  32  P     P       16 37 19.4  -0.4
PET                               IAmb  IAmb    16 37 30.4
      comp=Z,197nm,1.2s
DL2   Dalian           17.07 275  P     Pn      16 37 17.8  -2.1
DL2                               S     Sn      16 40 29.8 +0.2
DL2                               pmax  pmax
      comp=Z,220nm,0.7s
DL2                               pmax  pmax
      comp=Z,2µm,4.5s
DL2                               LR    LR
      comp=Z,8µm,14.4s
DL2                               LR    LR
      comp=Z,4µm,15.5s
DL2                               LR    LR
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      comp=Z,9µm,17.2s
ZEA   Zeya             18.02 327 eP     Pn      16 37 29.1  -2.4
ZEA                               pmax  pmax
      comp=N,300nm,2.6s
ZEA                               pmax  pmax
      comp=Z,600nm,2.4s
ZEA                               pmax  pmax
      comp=N,80nm,1.4s
ZEA                               pmax  pmax
      comp=E,60nm,1.3s
ZEA                               pmax  pmax
      comp=Z,120nm,1.3s
ZEA                               MLR   MLR
      comp=E,4µm,12.0s
ZEA                               MLR   MLR
      comp=N,7µm,15.0s
ZEA                               MLR   MLR
      comp=Z,7µm,14.0s
JOW   Kunigami         18.06 230  Pn    Pn      16 37 29.9  -2.3
HIA   Hailar           19.55 308  P     P       16 37 46.5  -2.4
HIA                               pmax  pmax
      comp=Z,90nm,0.7s
HIA   Hailar           19.55 308  P     P       16 37 46.5  -2.4
HIA                               IAmb  IAmb    16 37 50.6
      comp=Z,90nm,0.7s
SSE   Sheshan          20.15 252  P     P       16 37 56.3 +0.8
SSE                               S     S       16 41 37.8  -3.9
SSE                               pmax  pmax
      comp=Z,20nm,1.0s
SSE                               pmax  pmax
      comp=Z,490nm,3.5s
SSE                               LR    LR
      comp=Z,4µm,13.3s
SSE                               LR    LR
      comp=Z,3µm,13.5s
SSE   Sheshan          20.15 252  P     P       16 37 54.5  -1.1
SSE                               IAmb  IAmb    16 38 13.8
      comp=Z,124nm,1.0s
MA2   Magadan          20.51  10  P     P       16 38 00.1 +0.8
      comp=Z,114nm,0.8s,baz=193,slow=9.1,SNR=142
MA2   Magadan          20.51  10ceP     Pn      16 38 00.4  -1.0
MA2                               pmax  pmax
      comp=Z,158nm,1.0s
MA2   Magadan          20.51  10  P     P       16 37 59.3 +0.1
MA2                               IAmb  IAmb    16 38 02.8
      comp=Z,145nm,0.9s
BJI   Beijing          21.08 280  P     P       16 38 03.3  -2.3
BJI                               S     S       16 41 58.8  -1.3
BJI                               pmax  pmax
      comp=Z,52nm,1.3s
BJI                               pmax  pmax
      comp=Z,1.0nm,2.9s
BJI                               LR    LR
      comp=Z,7µm,13.7s
BJI                               LR    LR
      comp=Z,9µm,15.4s
BJI                               LR    LR
      comp=Z,5µm,17.1s
BJT   Baijiatuau       21.09 280  P     P       16 38 03.1  -2.6
BJT                               pmax  pmax
      comp=Z,58nm,0.8s
BJT                               MLR   MLR
      comp=Z,5µm,19.0s
BJT   Baijiatuau       21.09 280  P     P       16 38 03.1  -2.6
BJT   Baijiatuau       21.09 280  IAMs_20 IAMs_20 16 45 57.1
      comp=Z,5µm,19.0s
TIA   Tai'an           21.18 269  P     P       16 38 04.6  -2.0
TIA                               pP    pwP     16 38 15.3 +3.1
TIA                               S     S       16 41 54.0  -8.0
TIA                               pmax  pmax
      comp=Z,38nm,1.2s
TIA                               pmax  pmax
      comp=Z,830nm,3.5s
TIA                               LR    LR
      comp=Z,7µm,12.1s
TIA                               LR    LR
      comp=Z,10µm,14.2s
TIA                               LR    LR
      comp=Z,17µm,12.8s
NJ2   Nanjing          21.43 257 ⇑P     P       16 38 07.3  -2.0
NJ2                               pP    pP      16 38 09.4  -2.2
NJ2                               sP    sP      16 38 13.6 +1.1
NJ2                               S     S       16 42 06.4  -0.5
NJ2                               pmax  pmax
      comp=Z,25nm,0.9s
NJ2                               pmax  pmax
      comp=Z,1µm,10.8s
NJ2                               LR    LR
      comp=Z,7µm,16.6s
NJ2                               LR    LR
      comp=Z,5µm,16.6s
NJ2                               LR    LR
      comp=Z,7µm,15.2s
TATO  Taipei           23.65 239  P     P       16 38 30.0  -2.7
YHNB  Yeheng           23.93 238  P     P       16 38 32.9  -2.7
YHNB                              IAmb  IAmb    16 38 48.7
      comp=Z,67nm,0.9s
YHNB                              IAMs_20 IAMs_20 16 48 23.5
      comp=Z,4µm,18.0s
SEY   Seymchan         23.96  10  P     P       16 38 36.0 +0.7
      comp=Z,119nm,1.0s,baz=186,slow=8.3,SNR=194
SEY                               LR    LR      16 49 39.7
      comp=Z,5µm,18.9s,baz=191,slow=41
YAK   Yakutsk          24.04 344  P     P       16 38 35.2  -0.8
      comp=Z,43nm,0.6s,baz=148,slow=3.7,SNR=51
YAK                               LR    LR      16 48 22.0
      comp=Z,3µm,20.8s,baz=148,slow=38
YAK   Yakutsk          24.04 344c iP    P       16 38 34.6  -1.4
YAK                              e              16 42 18.4
YAK                              eS     S       16 42 49.5  -3.3
YAK                               pmax  pmax
      comp=Z,99nm,1.0s
YAK                               pmax  pmax
      comp=N,49nm,1.1s
YAK                               pmax  pmax
      comp=E,16nm,1.3s
YAK                               pmax  pmax
      comp=Z,181nm,1.1s
YAK                               pmax  pmax
      comp=E,63nm,1.2s
YAK                               pmax  pmax
      comp=N,65nm,1.1s
YAK                               smax  smax
      comp=N,1µm,3.1s
YAK                               smax  smax
      comp=E,451nm,3.5s
YAK                               MLR   MLR
      comp=Z,3µm,14.0s
YAK                               MLR   MLR
      comp=N,3µm,15.0s
YAK                               MLR   MLR
      comp=E,2µm,14.0s
YAK   Yakutsk          24.04 344  P     P       16 38 34.1  -1.9
NACB  Ninganchiao      24.14 237  P     P       16 38 34.1  -3.2
NACB                              IAmb  IAmb    16 38 44.8
      comp=Z,62nm,0.8s
CIT   Chita            24.20 311 eP     P       16 38 36.2  -1.5
CIT                              e              16 38 46.5
CIT                              e              16 39 10.1
CIT                              e              16 39 24.1
CIT                              eS     S       16 42 55.6  -0.1
CIT                               pmax  pmax
      comp=Z,505nm,2.1s
TIY   Taiyuan          24.39 276 eP     P       16 38 37.5  -2.2
TIY                               PP    PnPn    16 39 12.8 +2.9
TIY                               S     S       16 42 57.9  -1.3
TIY                               pmax  pmax
      comp=Z,51nm,0.7s
TIY                               pmax  pmax
      comp=Z,1µm,7.5s
TIY                               LR    LR
      comp=Z,6µm,13.0s
TIY                               LR    LR
      comp=Z,4µm,15.0s
TIY                               LR    LR
      comp=Z,6µm,17.1s
HHC   Hu-ho-hao-te     24.46 283 eP     P       16 38 39.9  -0.5
HHC                               S     S       16 42 56.3  -4.1
HHC                               pmax  pmax
      comp=Z,2µm,6.9s
HHC                               LR    LR
      comp=Z,6µm,13.0s
HHC                               LR    LR
      comp=Z,9µm,15.1s
HHC                               LR    LR
      comp=Z,12µm,16.3s
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SSLB	**Suanglung**	**24.82**	**237**	P	**P**	**16 38 41.8**	**-1.8**
SSLB				IAmb	IAmb	16 38 58.6	
	comp=Z,82nm,0.8s						
SSLB				IAMs_20	IAMs_20	16 49 04.0	
	comp=Z,5µm,19.0s						
YULB	**Yu-li**	**24.88**	**236**	P	**P**	**16 38 40.9**	**-3.2**
YULB				IAmb	IAmb	16 38 49.3	
	comp=Z,85nm,0.9s						
YULB				IAMs_20	IAMs_20	16 50 05.8	
	comp=Z,5µm,19.0s						
TPUB	**Ta-pu**	**25.38**	**237**	P	**P**	**16 38 46.7**	**-1.9**
TPUB				IAMs_20	IAMs_20	16 49 31.7	
	comp=Z,6µm,18.0s						
TWG	**Pinlang**	**25.43**	**236**	P	**P**	**16 38 47.0**	**-2.1**
WHN	**Wuhan**	**25.53**	**258**	⇑*i*P	**P**	**16 38 50.4**	**+0.4**
WHN				sP	**pwP**	**16 38 58.8**	**+2.3**
WHN				S	**S**	**16 43 16.5**	**-0.9**
WHN				LR	LR		
	comp=Z,21µm,16.4s						
WHN				LR	LR		
	comp=Z,8µm,14.0s						
WHN				LR	LR		
	comp=Z,14µm,17.8s						
QZH	**Quanzhou**	**25.62**	**243**	⇑*i*P	**P**	**16 38 50.4**	**-0.4**
QZH				S	**S**	**16 43 17.0**	**-1.9**
QZH				pmax	pmax		
	comp=Z,1µm,6.0s						
QZH				LR	LR		
	comp=Z,5µm,14.0s						
QZH				LR	LR		
	comp=Z,1µm,14.7s						
QZH				LR	LR		
	comp=Z,5µm,13.2s						
BTO	**Baotou**	**25.66**	**283**	*e*P	**P**	**16 38 50.5**	**-0.7**
GUMO	**Guam**	**25.92**	**177**	LR	LR	16 49 37.9	
	comp=Z,1µm,18.8s,baz=6.5,slow=38						
KNMB	**Chin-men Tao**	**26.08**	**242**	P	**P**	**16 38 53.8**	**-1.1**
KNMB				IAmb	IAmb	16 39 07.7	
	comp=Z,76nm,1.0s						
BOD	**Bodaibo**	**26.42**	**323**	⇓*i*P	**P**	**16 38 57.8**	**+0.1**
BOD				pmax	pmax		
	comp=Z,127nm,1.1s						
ULN	**Ulaanbaatar**	**27.50**	**300**	*ce*P	**P**	**16 39 08.5**	**+0.7**
ULN				pmax	pmax		
	comp=Z,124nm,1.3s						
ULN	**Ulaanbaatar**	**27.50**	**300**	P	**P**	**16 39 07.7**	**-0.1**
ULN				IAmb	IAmb	16 39 11.3	
	comp=Z,83nm,1.1s						
ULN	**Ulaanbaatar**	**27.50**	**300**	IAMs_20	IAMs_20	16 50 31.6	
	comp=Z,5µm,18.0s						
ULN	**Ulaanbaatar**	**27.50**	**300**	P	**P**	**16 39 08.9**	**+1.1**
ULN				P	**P**	**16 39 08.9**	**+1.1**
SONM	**Songino Array**	**27.94**	**299**	P	**P**	**16 39 12.6**	**+0.9**
	comp=Z,34nm,0.7s,baz=93,slow=8.3,SNR=163						
SONM				LR	LR	16 50 33.3	
	comp=Z,3µm,18.1s,baz=85,slow=37						
SONM	**Songino Array**	**27.94**	**299**	P	**P**	**16 39 11.4**	**-0.3**
XAN	**Xi'an**	**28.23**	**270**	P	**P**	**16 39 13.6**	**-0.8**
XAN				pP	sP	16 39 18.0	+0.1
XAN				sP	pwP	16 39 20.6	+0.2
XAN				PP	**PnPn**	**16 40 05.4**	**+3.0**
XAN				S	**S**	**16 43 58.3**	**-1.8**
XAN				sS	sS	16 44 05.8	+1.5
XAN				SS	**SnSn**	**16 45 23.3**	**+6.9**
XAN				ScS	**ScS**	**16 50 01.4**	**0.0**
XAN				pmax	pmax		
	comp=Z,99nm,0.9s						
XAN				pmax	pmax		
	comp=Z,1µm,6.0s						
XAN				LR	LR		
	comp=Z,7µm,14.1s						
XAN				LR	LR		
	comp=Z,9µm,15.5s						
XAN				LR	LR		
	comp=Z,9µm,14.4s						
XAN	**Xi'an**	**28.23**	**270**	P	**P**	**16 39 13.5**	**-0.8**
XAN				pmax	pmax		
	comp=Z,62nm,0.8s						
XAN				MLR	MLR		
	comp=Z,4µm,18.0s						
XAN	**Xi'an**	**28.23**	**270**	P	**P**	**16 39 13.5**	**-0.9**
XAN				IAmb	IAmb	16 39 17.1	
	comp=Z,62nm,0.8s						
XAN	**Xi'an**	**28.23**	**270**	IAMs_20	IAMs_20	16 50 53.1	
	comp=Z,4µm,18.0s						
ENH	**Enshi**	**29.37**	**262**	IAMs_20	IAMs_20	16 51 40.9	
	comp=Z,5µm,18.0s						
IRK	**Irkutsk**	**29.79**	**308**	*e*P	**P**	**16 39 27.8**	**-0.2**
IRK				pmax	pmax		
	comp=Z,171nm,2.0s						
TLY	**Talaya**	**30.09**	**307**	*c i*P	**P**	**16 39 31.4**	**+0.7**
TLY				*e*		16 40 38.7	
TLY				pmax	pmax		
	comp=Z,143nm,1.5s						
TLY				MLR	MLR		
	comp=Z,13µm,12.0s						
TLY	**Talaya**	**30.09**	**307**	P	**P**	**16 39 30.1**	**-0.5**
TLY				IAmb	IAmb	16 39 34.6	
	comp=Z,29nm,0.9s						
TLY	**Talaya**	**30.09**	**307**	P	**P**	**16 39 31.8**	**+1.1**
ZAK	**Zakamensk**	**30.17**	**304**	*e*P	**P**	**16 39 31.5**	**0.0**
ZAK				pmax	pmax		
	comp=Z,52nm,1.5s						
LZH	**Lanzhou**	**31.45**	**276**	*e*P	**P**	**16 39 43.3**	**+0.3**
LZH				pP	pP	16 39 45.5	0.0
LZH				sP	sP	16 39 47.3	+0.8
LZH				PP	**PnPn**	**16 40 42.3**	**-3.4**
LZH				S	**S**	**16 44 45.5**	**-5.4**
LZH				sS	sS	16 45 01.6	+6.5
LZH				pmax	pmax		
	comp=Z,61nm,1.0s						
LZH				pmax	pmax		
	comp=Z,800nm,5.4s						
LZH				LR	LR		
	comp=Z,4µm,12.2s						
LZH				LR	LR		
	comp=Z,10µm,14.1s						
LZH				LR	LR		
	comp=Z,8µm,16.0s						
MOY	**Mondy**	**31.73**	**307**	*e*P	**P**	**16 39 45.9**	**+0.7**
MOY				pmax	pmax		
	comp=Z,126nm,1.8s						
TIXI	**Tiksi**	**33.00**	**351**	*c i*P	**P**	**16 39 55.8**	**-0.1**
TIXI	**Tiksi**	**33.00**	**351**	P	**P**	**16 39 54.4**	**-1.4**
TIXI				IAMs_20	IAMs_20	16 54 27.4	
	comp=Z,3µm,19.0s						
GYA	**Guiyang**	**33.42**	**258**	⇑P	**P**	**16 40 00.1**	**-0.2**
GYA				sP	pwP	16 40 09.3	+2.5
GYA				S	**S**	**16 45 18.8**	**-2.8**
GYA				sS	sS	16 45 29.3	+3.7
GYA				pmax	pmax		
	comp=Z,66nm,0.8s						
GYA				pmax	pmax		
	comp=Z,680nm,7.9s						
GYA				LR	LR		
	comp=Z,4µm,14.0s						
GYA				LR	LR		
	comp=Z,2µm,14.9s						
GYA				LR	LR		
	comp=Z,2µm,15.4s						
CD2	**Chengdu**	**33.49**	**268**	⇑P	**P**	**16 40 00.5**	**-0.2**
CD2				PP	**PP**	**16 41 15.8**	**-0.6**
CD2				S	**S**	**16 45 22.6**	**+0.2**
CD2				pmax	pmax		
	comp=Z,110nm,0.9s						
CD2				pmax	pmax		
	comp=Z,920nm,8.5s						
CD2				LR	LR		
	comp=Z,13µm,13.5s						
CD2				LR	LR		
	comp=Z,8µm,14.1s						
CD2				LR	LR		
	comp=Z,12µm,13.8s						
GTA	**Gaotai**	**33.58**	**284**	⇑P	**P**	**16 40 02.3**	**+0.8**
GTA				pP	pwP	16 40 07.4	-0.2
GTA				sP	sP	16 40 11.3	+6.3
GTA				PcP	**PcP**	**16 42 44.3**	**+2.5**
GTA				S	**S**	**16 45 24.8**	**+1.0**
GTA				sS	sS	16 45 36.5	+8.5
GTA				ScS	**ScS**	**16 50 29.3**	**+1.7**
GTA				pmax	pmax		
	comp=Z,72nm,1.2s						
GTA				pmax	pmax		
	comp=Z,1µm,4.7s						
GTA				LR	LR		
	comp=Z,2µm,17.4s						
GTA				LR	LR		
	comp=Z,8µm,16.7s						
GTA				LR	LR		
	comp=Z,10µm,16.7s						
QIZ	**Qiongzhong**	**35.60**	**245**	P	**P**	**16 40 20.1**	**+1.1**
QIZ				S	**S**	**16 45 54.9**	**-0.1**
QIZ				pmax	pmax		
	comp=Z,450nm,8.3s						
QIZ				LR	LR		
	comp=Z,4µm,14.3s						
QIZ				LR	LR		
	comp=Z,3µm,14.9s						
QIZ				LR	LR		
	comp=Z,3µm,16.5s						
QIZ	**Qiongzhong**	**35.60**	**245**	IAMs_20	IAMs_20	16 55 55.4	
	comp=Z,4µm,18.0s						
DAV	**Davao City (W)**	**36.22**	**211**	IAMs_20	IAMs_20	16 52 05.4	
	comp=Z,2µm,22.0s						
KMI	**Kunming**	**37.12**	**260**	⇑P	**P**	**16 40 32.5**	**+0.2**
KMI				pP	pP	16 40 34.4	-0.2
KMI				sP	sP	16 40 36.4	+0.8
KMI				PP	**PnPn**	**16 42 00.3**	**+3.2**
KMI				S	**S**	**16 46 16.3**	**-2.4**
KMI				sS	sS	16 46 27.4	+4.7
KMI				ScP	**ScP**	**16 46 38.4**	**-1.1**
KMI				SS	**SnSn**	**16 48 49.8**	**-2.9**
KMI				ScS	**ScS**	**16 50 48.0**	**+0.6**
KMI				pmax	pmax		
	comp=Z,45nm,0.9s						
KMI				pmax	pmax		
	comp=Z,690nm,4.1s						
KMI				LR	LR		
	comp=Z,6µm,13.6s						
KMI				LR	LR		
	comp=Z,5µm,15.2s						
KMI				LR	LR		
	comp=Z,4µm,16.1s						
KMI	**Kunming**	**37.12**	**260**	P	**P**	**16 40 31.4**	**-0.9**
KMI				pmax	pmax		
	comp=Z,53nm,0.9s						
KMI				MLR	MLR		
	comp=Z,2µm,21.0s						
KMI	**Kunming**	**37.12**	**260**	P	**P**	**16 40 31.4**	**-0.9**
KMI				IAmb	IAmb	16 40 34.5	
	comp=Z,53nm,0.9s						
KMI	**Kunming**	**37.12**	**260**	IAMs_20	IAMs_20	16 56 36.5	
	comp=Z,2µm,21.0s						
TNA	**Tin City**	**37.77**	**31**	P	**P**	**16 40 39.0**	**+2.0**
	baz=251,SNR=9.4						
TNA	**Tin City**	**37.77**	**31**	P	**P**	**16 40 36.8**	**-0.1**
SLVN	**Son La**	**38.42**	**254**	P	**P**	**16 40 41.9**	**-1.1**
SLVN				IAMs_20	IAMs_20	16 58 08.1	
	comp=Z,2µm,18.0s						
CNBA	**Chernabura Isl**	**40.29**	**48**	P	**P**	**16 40 58.3**	**+0.1**
DGZ	**Jazzator, Alta**	**40.38**	**304**	*c i*P	**P**	**16 41 00.7**	**+1.4**
DGZ				pmax	pmax		
	comp=Z,48nm,0.5s						
RDOG	**Red Dog Mine**	**40.43**	**28**	P	**P**	**16 40 59.7**	**+0.5**
RDOG				IAMs_20	IAMs_20	16 59 19.3	
	comp=Z,2µm,18.0s						
MYLDM	**Lahad Datu**	**41.10**	**220**	P	**P**	**16 41 05.2**	**0.0**
MYLDM				IAmb	IAmb	16 41 29.2	
	comp=Z,96nm,1.3s						
UBPT	**Khong Chiam**	**41.20**	**245**	P	**P**	**16 41 07.5**	**+1.4**
	comp=Z,471nmcomp=Z,12nm,1.9s						
UBPT	**Khong Chiam**	**41.20**	**245**	P	**P**	**16 41 06.1**	**0.0**
UBPT				IAMs_20	IAMs_20	16 59 05.8	
	comp=Z,3µm,20.0s						
LKP	**Lekhapani**	**41.27**	**268**	⇑*i*P	**P**	**16 41 07.1**	**+0.4**
LKP				IAmb	IAmb	16 41 18.7	
	comp=Z,138nm,1.1s						
WMQ	**Urumqi**	**41.32**	**295**	*e*P	**P**	**16 41 08.3**	**+1.3**
WMQ				pP	pwP	16 41 13.3	+0.2
WMQ				PcP	**PcP**	**16 43 02.3**	**-3.0**
WMQ				S	**S**	**16 47 24.6**	**+3.5**
WMQ				pmax	pmax		
	comp=Z,86nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,910nm,3.7s						
WMQ				LR	LR		
	comp=Z,6µm,12.1s						
WMQ				LR	LR		
	comp=Z,3µm,14.5s						
WMQ				LR	LR		
	comp=Z,1µm,16.9s						
WMQ	**Urumqi**	**41.32**	**295**	P	**P**	**16 41 07.4**	**+0.5**
WMQ				pmax	pmax		
	comp=Z,89nm,0.8s						
WMQ				MLR	MLR		
	comp=Z,900nm,22.0s						
WMQ	**Urumqi**	**41.32**	**295**	P	**P**	**16 41 07.4**	**+0.5**
DLV	**T Lat**	**41.52**	**238**	P	**P**	**16 41 07.9**	**-1.1**
DLV				IAmb	IAmb	16 41 21.3	
	comp=Z,36nm,0.9s						
KKM	**Kota Kinabalu**	**41.54**	**224**	IAMs_20	IAMs_20	17 01 02.4	
	comp=Z,2µm,19.0s						
ZAA0	**Zalesovo Array**	**41.55**	**310**	P	**P**	**16 41 08.6**	**-0.1**
ZAA0				IAmb	IAmb	16 41 10.8	
	comp=Z,41nm,0.8s						
ZAA0				IAMs_20	IAMs_20	16 59 01.3	
	comp=Z,3µm,18.0s						
ZALV	**Zalesovo Beam**	**41.55**	**310**	P	**P**	**16 41 09.0**	**+0.4**
	comp=Z,32nm,0.6s,baz=89,slow=7.9,SNR=124						
ZALV				PcP	**PcP**	**16 43 05.6**	**-0.1**
	comp=Z,30nm,0.7s,baz=85,slow=3.7,SNR=7.1						
ZALV				LR	LR	16 59 12.4	
	comp=Z,3µm,18.2s,baz=77,slow=37						
ZALV	**Zalesovo Beam**	**41.55**	**310**	P	**P**	**16 41 08.2**	**-0.5**
NRIK	**Noril'sk**	**41.72**	**334**	P	**P**	**16 41 10.3**	**+0.4**
	comp=Z,17nm,0.9s,baz=108,slow=7.3,SNR=25						
NRIK				LR	LR	16 59 31.9	
	comp=Z,2µm,18.3s,baz=102,slow=38						
NRIK	**Noril'sk**	**41.72**	**334**	P	**P**	**16 41 09.5**	**-0.4**
KHON	**Khomkaen**	**42.37**	**249**	P	**P**	**16 41 16.7**	**+1.0**
	comp=Z,134nm,0.8s						
ZSN	**Zaisan**	**42.44**	**301**	⇑*i*P	**P**	**16 41 17.2**	**+1.2**
	comp=Z,153nm,2.2s,baz=300						
ZSN				*e*S	**S**	**16 47 39.0**	**+1.3**
	baz=300						
ZSN				LR	LR	16 59 31.3	
	comp=Z,1µm,12.3s,baz=300						
ZSN	**Zaisan**	**42.44**	**301**	*c i*P	**P**	**16 41 17.2**	**+1.2**
ZSN				*e*S	**S**	**16 47 38.9**	**+1.3**
ZSN				pmax	pmax		
	comp=Z,153nm,2.2s						
ZSN				MLR	MLR		
	comp=Z,1µm,12.0s						
ZIRO	**ZIRO**	**42.72**	**269**	*e*P	**P**	**16 41 19.7**	**+1.0**
KMSI	**Cibinong**	**42.78**	**210**	P	**P**	**16 41 20.7**	**+1.7**
	comp=Z,104nm,0.8s						
JORH	**JORHAT**	**42.80**	**268**	*e*P	**P**	**16 41 22.2**	**+3.1**
MOKO	**MOKOCHONG**	**42.80**	**267**	*e*P	**P**	**16 41 20.0**	**+0.6**
GTOI	**Gorontalo**	**43.11**	**211**	P	**P**	**16 41 21.8**	**+0.1**
	comp=Z,511nmcomp=Z,21nm,1.0s						
UTTA	**Uttaradit**	**43.11**	**252**	P	**P**	**16 41 22.6**	**+0.9**
	comp=Z,478nmcomp=Z,63nm,0.8s						
CHAI	**Chaiyaphum**	**43.26**	**249**	P	**P**	**16 41 23.4**	**+0.4**
	comp=Z,853nmcomp=Z,110nm,0.8s						
LAMP	**Lampang**	**43.31**	**254**	P	**P**	**16 41 24.6**	**+1.2**
	comp=Z,811nmcomp=Z,114nm,0.8s						
A21K	**Barrow**	**43.42**	**24**	P	**P**	**16 41 24.8**	**+1.2**
	baz=256,SNR=12						
A21K	**Barrow**	**43.42**	**24**	P	**P**	**16 41 23.7**	**+0.2**
A21K				IAmb	IAmb	16 41 26.4	
	comp=Z,45nm,1.1s						
KOHI	**KOHIMA**	**43.43**	**267**	*e*P	**P**	**16 41 24.3**	**-0.1**
KOHI				IAMs_20	IAMs_20	17 00 14.8	
	comp=Z,3µm,21.2s						
CM34	**Chiang Mai Arr**	**43.47**	**255**	P	**P**	**16 41 25.0**	**+0.4**
PHIT	**Phitsanulok**	**43.57**	**252**	P	**P**	**16 41 29.0**	**+3.6**
	comp=Z,129nm,0.9s						
FAKI	**Fak Fak**	**43.58**	**197**	P	**P**	**16 41 25.2**	**-0.3**
FAKI				IAMs_20	IAMs_20	16 59 22.1	
	comp=Z,3µm,18.0s						
TOLI2	**Tolitoli**	**43.61**	**214**	P	**P**	**16 41 24.8**	**-0.9**
CM33	**Chiang Mai Arr**	**43.64**	**255**	P	**P**	**16 41 26.0**	**0.0**
CMMT	**Chiang Mai**	**43.64**	**255**	P	**P**	**16 41 25.6**	**-0.4**
	comp=Z,409nmcomp=Z,29nm,0.8s						
CHTO	**Chiang Mai**	**43.64**	**255**	P	**P**	**16 41 26.4**	**+0.3**
CHTO				pmax	pmax		
	comp=Z,41nm,0.8s						
CHTO				MLR	MLR		
	comp=Z,3µm,19.0s						
CHTO	**Chiang Mai**	**43.64**	**255**	P	**P**	**16 41 26.4**	**+0.3**
CHTO				IAmb	IAmb	16 41 28.6	
	comp=Z,41nm,0.8s						
CHTO	**Chiang Mai**	**43.64**	**255**	IAMs_20	IAMs_20	17 01 29.3	
	comp=Z,3µm,19.0s						
CHTO	**Chiang Mai**	**43.64**	**255**	P	**P**	**16 41 26.6**	**+0.5**
MRSI	**Marisa**	**43.69**	**212**	P	**P**	**16 41 27.9**	**+1.6**
	comp=Z,954nmcomp=Z,49nm,1.0s						
OHAK	**Old Harbor**	**43.69**	**45**	P	**P**	**16 41 26.1**	**+0.1**
OHAK				IAmb	IAmb	16 41 33.3	
	comp=Z,41nm,1.0s						
CM36	**Chiang Mai Arr**	**43.71**	**254**	P	**P**	**16 41 27.2**	**+0.6**
LSA	**Lhasa**	**43.77**	**274**	P	**P**	**16 41 28.7**	**+1.2**
LSA	**Lhasa**	**43.77**	**274**	P	**P**	**16 41 27.7**	**+0.2**
LSA				pmax	pmax		
	comp=Z,33nm,0.8s						
LSA				MLR	MLR		
	comp=Z,3µm,19.0s						
LSA	**Lhasa**	**43.77**	**274**	P	**P**	**16 41 27.7**	**+0.2**
LSA				IAmb	IAmb	16 41 43.5	
	comp=Z,33nm,0.8s						
LSA				IAMs_20	IAMs_20	17 00 21.7	
	comp=Z,3µm,19.0s						
CM32	**Chiang Mai Arr**	**43.81**	**255**	P	**P**	**16 41 28.0**	**+0.6**
CM09	**Chiang Mai Arr**	**43.83**	**254**	P	**P**	**16 41 28.7**	**+1.1**
	comp=Z,266nmcomp=Z,33nm,0.8s						
CM31	**Chiang Mai Arr**	**43.86**	**255**	P	**P**	**16 41 28.0**	**+0.2**
	comp=Z,9µmcomp=Z,900nm,0.8s						
CM31	**Chiang Mai Arr**	**43.86**	**255**	P	**P**	**16 41 27.7**	**-0.1**
CM31				IAmb	IAmb	16 41 30.5	
	comp=Z,30nm,0.8s						
CMAR	**Chiang Mai Arr**	**43.86**	**255**	P	**P**	**16 41 28.6**	**+0.8**
	comp=Z,23nm,0.8s,baz=45,slow=7.1,SNR=184						
CMAR				LR	LR	16 59 17.4	
	comp=Z,929nm,18.1s,baz=96,slow=36						
CMAR	**Chiang Mai Arr**	**43.86**	**255**	P	**P**	**16 41 27.5**	**-0.3**
CM04	**Chiang Mai Arr**	**43.87**	**254**	P	**P**	**16 41 29.0**	**+1.1**
	comp=Z,340nmcomp=Z,46nm,0.8s						
CM01	**Chiang Mai Arr**	**43.87**	**254**	P	**P**	**16 41 28.9**	**+1.0**
	comp=Z,295nmcomp=Z,38nm,0.8s						
CM02	**Chiang Mai Arr**	**43.87**	**254**	P	**P**	**16 41 28.9**	**+1.0**
	comp=Z,287nmcomp=Z,43nm,0.8s						
CM15	**Chiang Mai Arr**	**43.88**	**255**	P	**P**	**16 41 28.8**	**+0.8**
	comp=Z,244nmcomp=Z,34nm,0.8s						
CM05	**Chiang Mai Arr**	**43.89**	**254**	P	**P**	**16 41 29.0**	**+0.9**
	comp=Z,252nmcomp=Z,32nm,0.8s						
CM13	**Chiang Mai Arr**	**43.91**	**255**	P	**P**	**16 41 29.0**	**+0.8**
	comp=Z,272nmcomp=Z,35nm,0.8s						
TEZP	**TEZPUR**	**43.98**	**269**	*e*P	**P**	**16 41 28.7**	**0.0**
KDAK	**Kodiak Island**	**44.03**	**44**	P	**P**	**16 41 29.7**	**+1.0**
	comp=Z,20nm,0.9s,baz=303,slow=8.7,SNR=7.4						
KDAK	**Kodiak Island**	**44.03**	**44**	*i* P	**P**	**16 41 30.6**	**+1.9**
KDAK				pmax	pmax		
	comp=Z,21nm,0.8s						
KDAK	**Kodiak Island**	**44.03**	**44**	P	**P**	**16 41 29.2**	**+0.5**
PPLA	**Purkeypile**	**44.07**	**36**	P	**P**	**16 41 29.5**	**+0.4**
PPLA				IAmb	IAmb	16 41 56.0	
	comp=Z,61nm,1.4s						
MK31	**Makanchi Array**	**44.30**	**300**	*ce*P	**P**	**16 41 31.4**	**+0.3**
MK31	**Makanchi Array**	**44.30**	**300**	P	**P**	**16 41 31.2**	**+0.1**
MK31				IAmb	IAmb	16 41 33.4	
	comp=Z,44nm,0.8s						
MKAR	**Makanchi Array**	**44.30**	**300**	P	**P**	**16 41 31.5**	**+0.4**
	comp=Z,44nm,0.7s,baz=83,slow=9.3,SNR=402						
MKAR				LR	LR	17 00 10.8	
	comp=Z,2µm,18.1s,baz=76,slow=36						
MKAR	**Makanchi Array**	**44.30**	**300**	P	**P**	**16 41 31.3**	**+0.2**
SRAK	**Srakaew**	**44.48**	**247**	P	**P**	**16 41 30.6**	**-2.1**
SANI	**Sanana**	**44.50**	**206**	P	**P**	**16 41 32.9**	**+0.1**
	comp=Z,1µmcomp=Z,47nm,1.2s						
MAKZ	**Makanchi**	**44.51**	**300**	P	**P**	**16 41 32.6**	**-0.1**
MAKZ				pmax	pmax		
	comp=Z,73nm,1.1s						
MAKZ				MLR	MLR		
	comp=Z,2µm,19.0s						
MAKZ	**Makanchi**	**44.51**	**300**	P	**P**	**16 41 32.6**	**-0.1**
MAKZ				IAMs_20	IAMs_20	17 02 39.4	
	comp=Z,2µm,19.0s						
BPAW	**Bear Paw Mtn.**	**44.62**	**35**	P	**P**	**16 41 34.1**	**+0.6**
KTH	**Kantishna Hill**	**44.65**	**35**	P	**P**	**16 41 34.2**	**+0.5**
KTH				IAmb	IAmb	16 41 57.7	
	comp=Z,60nm,1.2s						
LUWI	**Luwuk**	**44.73**	**210**	P	**P**	**16 41 34.5**	**-0.3**
LUWI				IAmb	IAmb	16 42 03.9	
	comp=Z,32nm,0.9s						
MLY	**Manley**	**44.75**	**33**	P	**P**	**16 41 35.5**	**+1.1**
	baz=268,SNR=13						
SUA	**Susitna One**	**44.76**	**38**	P	**P**	**16 41 36.0**	**+1.4**
BRLK	**Bradley Lake**	**44.78**	**41**	P	**P**	**16 41 35.7**	**+1.0**
MHMT	**Maesarieng**	**44.79**	**255**	P	**P**	**16 41 35.4**	**+0.2**
	comp=Z,993nmcomp=Z,79nm,0.8s						
SEM	**Semipalatinsk**	**44.83**	**306**	⇑*i*P	**P**	**16 41 35.3**	**-0.3**
	comp=Z,72nm,1.6s,baz=306						
SEM				LR	LR	17 00 29.2	
	comp=Z,571nm,12.4s,baz=306						
SEM	**Semipalatinsk**	**44.83**	**306**	*c i*P	**P**	**16 41 35.2**	**-0.3**
SEM				pmax	pmax		
	comp=Z,72nm,1.6s						
SEM				MLR	MLR		
	comp=Z,571nm,12.0s						
SILR	**SILCHAR**	**44.92**	**267**	*e*x	x	16 41 41.2	
TRF	**Thorofare Moun**	**44.93**	**36**	P	**P**	**16 41 36.1**	**0.0**
CUT	**Chulitna**	**44.96**	**37**	P	**P**	**16 41 37.2**	**+1.1**
	baz=272						
GUWA	**GUWAHATI**	**45.05**	**269**	*e*P	**P**	**16 41 37.3**	**+0.1**
APSI	**Ampana**	**45.06**	**212**	P	**P**	**16 41 38.0**	**+0.6**
	comp=Z,556nmcomp=Z,32nm,1.1s						
COLD	**Coldfoot**	**45.06**	**30**	P	**P**	**16 41 38.8**	**+1.9**
	baz=267,SNR=5.7						
COLD	**Coldfoot**	**45.06**	**30**	P	**P**	**16 41 37.4**	**+0.5**
SHL	**Shillong**	**45.22**	**268**	P	**P**	**16 41 37.8**	**-1.1**
SHL				pmax	pmax		
	comp=Z,47nm,0.9s						
SHL				MLR	MLR		
	comp=Z,3µm,18.0s						
SHL	**Shillong**	**45.22**	**268**	*e*P	**P**	**16 41 38.4**	**-0.4**
SHL	**Shillong**	**45.22**	**268**	P	**P**	**16 41 37.8**	**-1.1**
SHL				IAmb	IAmb	16 41 43.8	
	comp=Z,47nm,0.9s						
SHL				IAMs_20	IAMs_20	17 02 20.5	
	comp=Z,3µm,18.0s						
SHL	**Shillong**	**45.22**	**268**	P	**P**	**16 41 39.0**	**+0.1**
	SNR=21						
BWN	**Browne**	**45.29**	**35**	P	**P**	**16 41 39.6**	**+0.9**
UTHA	**Uthaitani**	**45.33**	**251**	P	**P**	**16 41 41.0**	**+1.5**
	comp=Z,354nmcomp=Z,33nm,0.8s						
UMPA	**Umpang Tak**	**45.34**	**252**	P	**P**	**16 41 42.2**	**+2.6**
	comp=Z,520nmcomp=Z,64nm,0.9s						
I23K	**Minto, Yukon-K**	**45.34**	**33**	P	**P**	**16 41 40.9**	**+1.9**
	baz=270,SNR=8.4						
I23K	**Minto, Yukon-K**	**45.34**	**33**	P	**P**	**16 41 38.9**	**-0.2**
I23K				IAmb	IAmb	16 42 02.5	
	comp=Z,34nm,1.4s						
TOLK	**Toolik Lake Re**	**45.39**	**28**	P	**P**	**16 41 41.8**	**+2.3**
	baz=266,SNR=12						
TOLK	**Toolik Lake Re**	**45.39**	**28**	P	**P**	**16 41 40.2**	**+0.7**
TOLK				IAMs_20	IAMs_20	17 01 22.5	
	comp=Z,1µm,20.0s						
NEA2	**Nenana**	**45.46**	**34**	P	**P**	**16 41 41.5**	**+1.5**
	baz=270,SNR=7.6						
PMR	**Palmer**	**45.53**	**38**	P	**P**	**16 41 40.4**	**-0.2**
PMR				pmax	pmax		
	comp=Z,23nm,1.2s						
PMR	**Palmer**	**45.53**	**38**	P	**P**	**16 41 40.4**	**-0.2**
MCK	**McKinley**	**45.53**	**35**	P	**P**	**16 41 42.1**	**+1.4**
	baz=271						
RND	**Reindeer**	**45.58**	**36**	P	**P**	**16 41 41.6**	**+0.5**
RND				pmax	pmax		
	comp=Z,29nm,1.2s						
RND				MLR	MLR		
	comp=Z,1µm,21.0s						
RND	**Reindeer**	**45.58**	**36**	P	**P**	**16 41 41.6**	**+0.5**
RND				IAmb	IAmb	16 42 08.4	
	comp=Z,29nm,1.2s						
GHO	**Glory Hole Cre**	**45.62**	**38**	P	**P**	**16 41 42.0**	**+0.6**
GHO				IAmb	IAmb	16 42 06.0	
	comp=Z,25nm,0.9s						
KURK	**Kurchatov**	**45.79**	**306**	*ce*P	**P**	**16 41 43.0**	**+0.2**
KURK				pmax	pmax		
	comp=Z,114nm,0.9s						
KURK	**Kurchatov**	**45.79**	**306**	P	**P**	**16 41 42.8**	**+0.1**
KURK	**Kurchatov**	**45.79**	**306**	P	**P**	**16 41 43.4**	**+0.6**
MDM	**Murphy Dome**	**45.82**	**33**	P	**P**	**16 41 43.9**	**+1.0**
MDM				IAmb	IAmb	16 42 06.3	
	comp=Z,26nm,1.0s						
KNK	**Knik Glacier**	**45.86**	**38**	P	**P**	**16 41 44.2**	**+1.0**
KNK				IAmb	IAmb	16 42 12.4	
	comp=Z,25nm,1.1s						

WRH	Wood River Hil	45.89	34	P	P	16 41 44.4	+1.0
SML	Sawmill	45.90	38	P	P	16 41 44.2	+0.6
SML				IAmb	IAmb	16 42 04.1	
	comp=Z,44nm,1.2s						
TCOL	CIGO, UAF Yank	45.98	34	P	P	16 41 43.6	-0.4
TCOL				IAmb	IAmb	16 41 59.3	
	comp=Z,25nm,0.9s						
COLA	College	45.98	34	i P	P	16 41 46.4	+2.3
COLA				pmax	pmax		
	comp=Z,32nm,1.1s						
COLA	College	45.98	34	P	P	16 41 43.4	-0.7
COLA				IAmb	IAmb	16 41 59.3	
	comp=Z,21nm,0.8s						
CCB	Clear Creek Bu	46.01	34	P	P	16 41 45.2	+0.9
SAIH	SAIHA	46.02	264	eP	P	16 41 45.0	-0.1
PATY	Pattaya	46.05	247	P	P	16 41 49.0	+3.7
	comp=Z,48nm,0.8s						
POKR	Poker Plat Res	46.15	33	P	P	16 41 46.9	+1.4
	baz=271,SNR=7.4						
POKR	Poker Plat Res	46.15	33	P	P	16 41 46.5	+1.0
POKR				IAmb	IAmb	16 42 06.5	
	comp=Z,33nm,0.9s						
SCM	Sheep Creek Mo	46.37	38	P	P	16 41 48.5	+1.1
SCM				pmax	pmax		
	comp=Z,48nm,1.1s						
SCM	Sheep Creek Mo	46.37	38	P	P	16 41 48.5	+1.1
SCM				IAmb	IAmb	16 42 13.4	
	comp=Z,48nm,1.1s						
HDA	Harding Lake	46.38	34	P	P	16 41 48.4	+1.1
	baz=272						
HDA	Harding Lake	46.38	34	P	P	16 41 48.0	+0.6
HDA				IAMs_20	IAMs_20	17 02 26.9	
	comp=Z,1µm,19.0s						
IL31		46.40	34	P	P	16 41 47.9	+0.6
IL31				IAmb	IAmb	16 42 02.7	
	comp=Z,22nm,0.9s						
ILAR	Eielson Array	46.40	34	P	P	16 41 48.1	+0.7
	comp=Z,6.6nm,0.8s,baz=261,slow=5.8,SNR=54						
ILAR	Eielson Array	46.40	34	P	P	16 41 47.3	-0.1
TARA	Tarawa	46.47	138	IAMs_20	IAMs_20	16 58 45.0	
	comp=Z,2µm,19.0s						
AGT	Agartala	46.60	267	⇑iP	P	16 41 50.5	+1.0
AGT				IAmb	IAmb	16 41 55.9	
	comp=Z,116nm,0.9s						
SBUM	Sibu	46.71	226	P	P	16 41 49.9	-0.5
SBUM				IAmb	IAmb	16 41 55.3	
	comp=Z,28nm,1.4s						
SBUM				IAMs_20	IAMs_20	17 03 10.3	
	comp=Z,1µm,19.0s						
SBUM	Sibu	46.71	226	P	P	16 41 52.0	+1.6
GTK	Tadong	46.87	272	eP	P	16 41 52.6	+0.8
GTK				IAmb	IAmb	16 41 55.3	
	comp=Z,17nm,0.6s						
M24K	Tolsona, Glenn	46.89	37	P	P	16 41 52.1	+0.7
	baz=275						
PHET	Kaeng Krachan	46.95	248	P	P	16 41 54.1	+1.8
FYU	Fort Yukon	47.02	31	P	P	16 41 53.4	+1.2
KLU	Klutina	47.07	38	P	P	16 41 53.8	+1.0
SHLS	Shalkode	47.25	296	i P	P	16 41 52.1	-2.4
	comp=Z,39nm,0.8s,baz=296						
SHLS	Shalkode	47.25	296	i P	P	16 41 52.1	-2.4
SHLS				pmax	pmax		
	comp=Z,39nm,0.8s						
TDK	Taldyqorghan	47.40	299	eP	P	16 41 55.7	+0.1
	comp=Z,233nm,1.7s,baz=299						
TDK				eS	S	16 48 49.8	+0.3
	baz=299						
TDK				LR	LR	17 01 48.2	
	comp=Z,2µm,12.4s,baz=299						
TDK	Taldyqorghan	47.40	299	eP	P	16 41 55.6	+0.1
TDK				eS	S	16 48 49.7	+0.3
TDK				pmax	pmax		
	comp=Z,233nm,1.7s						
TDK				MLR	MLR		
	comp=Z,2µm,12.0s						
BKB	Balikpapan	47.47	218	P	P	16 41 55.0	-1.3
BKB	Balikpapan	47.47	218	P	P	16 41 57.5	+1.2
	comp=Z,72nm,0.9s						
TAPN	Taplejung	47.55	273	eP	P	16 41 57.8	+0.6
	comp=Z,182nm,1.2s						
UZB	Uzynbulak	47.56	296	i P	P	16 41 57.3	+0.3
	comp=Z,89nm,2.2s,baz=296						
UZB	Uzynbulak	47.56	296	i P	P	16 41 57.2	+0.3
UZB				pmax	pmax		
	comp=Z,89nm,2.2s						
N25K	Chitina, Valde	47.69	38	P	P	16 41 59.1	+1.5
	baz=277						
KPKS	Kokpek	47.69	297	⇑iP	P	16 41 58.3	+0.4
	comp=Z,105nm,1.8s,baz=297						
KPKS				ePP	PP	16 43 50.0	+0.6
	baz=297						
KPKS	Kokpek	47.69	297	c iP	P	16 41 58.3	+0.4
KPKS				e		16 43 49.9	
KPKS				pmax	pmax		
	comp=Z,105nm,1.8s						
DOT	Dot Lake	47.71	35	P	P	16 41 58.0	+0.3
SCRK	Sand Creek	47.71	35	P	P	16 41 59.0	+1.2
	baz=276,SNR=12						
SATY	Saty	48.01	296	⇑iP	P	16 42 00.9	+0.4
	comp=Z,72nm,2.1s,baz=296						
SATY	Saty	48.01	296	c iP	P	16 42 00.9	+0.4
SATY				pmax	pmax		
	comp=Z,72nm,2.1s						
ODAN	Odare	48.04	272	eP	P	16 42 01.4	+0.4
	comp=Z,169nm,0.9s						
GLB	Gilahina Butte	48.08	38	P	P	16 42 01.2	+0.6
GLB				IAmb	IAmb	16 42 05.7	
	comp=Z,27nm,1.5s						
MTKI	Muara Teweh, K	48.16	220	P	P	16 42 02.5	+0.8
	comp=Z,2µmcomp=Z,42nm,1.1s						
VRDI	Verde Repeater	48.28	38	P	P	16 42 01.8	-0.6
KSM	Kuching	48.58	227	P	P	16 42 05.1	+0.2
KSM	Kuching	48.58	227	P	P	16 42 07.0	+2.0
RAMN	Ramite	48.60	273	eP	P	16 42 06.0	+0.6
	comp=Z,197nm,0.7s						
TGL	Tana Glacier	48.66	39	P	P	16 42 05.1	-0.1
TGL				IAmb	IAmb	16 42 32.6	
	comp=Z,63nm,1.5s						
GUN	Gumba	48.68	275	eP	P	16 42 06.9	+0.8
	comp=Z,315nm,0.7s						
CHKK	Chushkaly	48.73	298	⇑iP	P	16 42 06.0	+0.1
	baz=298						
CHKK	Chushkaly	48.73	298	⇑iP	P	16 42 05.9	+0.1
EGAK	Eagle	48.84	33	P	P	16 42 06.5	+0.1
EGAK				IAmb	IAmb	16 42 22.1	
	comp=Z,42nm,1.2s						
BALM	Baldy	48.84	38	P	P	16 42 06.9	+0.3
PMG	Port Moresby	48.85	175	P	P	16 42 07.3	+0.4
PMG				pmax	pmax		
	comp=Z,18nm,1.2s						
PMG	Port Moresby	48.85	175	P	P	16 42 07.3	+0.4
BNSI	Bone	48.85	212	P	P	16 42 07.4	+0.4
	comp=Z,826nmcomp=Z,53nm,1.1s						
MDOK	Medeo	48.91	297	i P	P	16 42 08.2	+0.8
	baz=297						
MDOK				ePP	PP	16 44 01.7	+1.1
	baz=297						
MDOK				eS	S	16 49 12.4	+1.2
	baz=297						
MDOK				LR	LR	17 02 51.2	
	comp=Z,2µm,14.5s,baz=297						
MDOK	Medeo	48.91	297	i P	P	16 42 08.2	+0.8
MDOK				e		16 44 01.6	
MDOK				eS	S	16 49 12.4	+1.2
MDOK				MLR	MLR		
	comp=Z,2µm,14.0s						
AAA	Alma-Ata	48.99	297	⇑iP	P	16 42 08.8	+0.9
	comp=Z,36nm,0.7s,baz=297						
AAA				ePP	PP	16 44 02.3	+1.1
	baz=297						
AAA	Alma-Ata	48.99	297	c iP	P	16 42 08.8	+0.9
AAA				e		16 44 02.2	
AAA				pmax	pmax		
	comp=Z,36nm,0.7s						
TNSS	Tian-Shan	49.03	297	⇑iP	P	16 42 09.7	+1.0
	baz=297						
TNSS	Tian-Shan	49.03	297	⇑iP	P	16 42 09.6	+1.0
KUU	Kurty	49.16	298	⇑iP	P	16 42 09.2	0.0
	comp=Z,286nm,2.2s,baz=298						
KUU	Kurty	49.16	298	c iP	P	16 42 09.1	0.0
KUU				pmax	pmax		
	comp=Z,286nm,2.2s						
BARN	Barnard Glacie	49.17	38	P	P	16 42 10.2	+1.0
BARN				IAmb	IAmb	16 42 34.9	
	comp=Z,22nm,1.0s						
KKN	Kakani	49.20	275	eP	P	16 42 10.6	+0.7
	comp=Z,298nm,0.7s						
PKI	Pulchoki	49.21	274	eP	P	16 42 10.3	+0.2
	comp=Z,221nm,1.2s						
PKIN	Phulchoki	49.22	274	eP	P	16 42 10.4	+0.3
	comp=Z,178nm,1.0s						
CTGM	Chitina Glacie	49.34	38	P	P	16 42 10.9	+0.5
CTGM				IAmb	IAmb	16 42 32.5	
	comp=Z,47nm,1.5s						
DMN	Daman	49.42	275	eP	P	16 42 12.4	+0.7
	comp=Z,108nm,0.7s						
TABL	Table Mountain	49.53	39	P	P	16 42 13.4	+1.5
TABL				IAmb	IAmb	16 42 29.4	
	comp=Z,48nm,1.4s						
KAPI	Kappang	49.56	212	P	P	16 42 12.3	0.0
GKN	Gorkha	49.59	275	eP	P	16 42 13.3	+0.5
	comp=Z,175nm,0.8s						
BRZS	Berezniki	49.66	307	⇑iP	P	16 42 13.1	+0.2
	comp=Z,17nm,0.8s,baz=307						
BRZS				eS	S	16 49 21.7	+0.5
	baz=307						
BRZS	Berezniki	49.66	307	c iP	P	16 42 13.0	+0.2
BRZS				eS	S	16 49 21.6	+0.5
BRZS				pmax	pmax		
	comp=Z,17nm,0.8s						
TKM2	Tokmak 2	50.00	297	P	P	16 42 16.9	+1.1
	SNR=113						
DANN	Dangsing	50.10	276	eP	P	16 42 17.9	+1.1
	comp=Z,658nm,0.7s						
BRVK	Borovoye	50.24	311	ceP	P	16 42 17.9	+0.7
BRVK				pmax	pmax		
	comp=Z,75nm,0.8s						
BRVK	Borovoye	50.24	311	P	P	16 42 17.6	+0.4
BRVK	Borovoye	50.24	311	IAMs_20	IAMs_20	17 04 28.1	
	comp=Z,2µm,20.0s						
BRVK	Borovoye	50.24	311	P	P	16 42 18.3	+1.1
BTLS	Baital	50.32	300	⇑iP	P	16 42 17.6	-0.3
	comp=Z,53nm,2.2s,baz=300						
BTLS	Baital	50.32	300	c iP	P	16 42 17.6	-0.3
BTLS				pmax	pmax		
	comp=Z,53nm,2.2s						
BBKI	Banjar Baru	50.37	219	P	P	16 42 18.7	+0.1
	comp=Z,45nm,1.0s						
TRTT	Trang	50.43	243	P	P	16 42 20.0	+1.0
SGDS	Sogindy	50.47	298	⇑iP	P	16 42 19.6	+0.4
	comp=Z,82nm,2.4s,baz=298						
SGDS				eS	S	16 49 33.5	+0.6
	baz=298						
SGDS	Sogindy	50.47	298	c iP	P	16 42 19.6	+0.4
SGDS				eS	S	16 49 33.4	+0.6
SGDS				pmax	pmax		
	comp=Z,82nm,2.4s						
KBK	Karagaybulak	50.54	297	P	P	16 42 20.8	+0.9
	SNR=72						
CHMS	Chumysh	50.55	298	P	P	16 42 20.4	+0.6
	SNR=12						
USP	Ospenovka	50.63	298	P	P	16 42 20.8	+0.5
	SNR=33						
AAK	Ala-Archa	50.86	297	P	P	16 42 22.7	+0.5
	SNR=18						
AAK	Ala-Archa	50.86	297	i P	P	16 42 22.2	0.0
	SNR=32						
AAK	Ala-Archa	50.86	297	ceP	P	16 42 22.5	+0.3
AAK				pmax	pmax		
	comp=Z,142nm,1.7s						
AAK	Ala-Archa	50.86	297	P	P	16 42 22.2	0.0
AAK				IAmb	IAmb	16 42 45.3	
	comp=Z,22nm,0.8s						
AAK	Ala-Archa	50.86	297	IAMs_20	IAMs_20	17 04 14.6	
	comp=Z,2µm,18.0s						
AAK	Ala-Archa	50.86	297	P	P	16 42 22.8	+0.5
UCH	Uchtor	50.99	297	P	P	16 42 24.6	+1.0
	SNR=10						
KSH	Kashi	51.00	293	P	P	16 42 27.5	+4.2
KSH				sP	pwP	16 42 33.0	+3.5
KSH				PP	PP	16 44 24.8	+5.2
KSH				S	S	16 49 43.1	+2.7
KSH				SS	SS	16 53 18.8	+3.8
KSH				pmax	pmax		
	comp=Z,19nm,1.0s						
KSH				pmax	pmax		
	comp=Z,990nm,4.4s						
KSH				LR	LR		
	comp=Z,2µm,11.2s						
KSH				LR	LR		
	comp=Z,3µm,12.5s						
KSH				LR	LR		
	comp=Z,2µm,15.3s						
HYT	Haines Junctio	51.20	38	P	P	16 42 25.8	+1.2
INK	Inuvik	51.31	28	P	P	16 42 26.4	+1.4
INK				pmax	pmax		
	comp=Z,25nm,1.1s						
INK	Inuvik	51.31	28	P	P	16 42 26.4	+1.4
EKS2	Erkin-Say	51.34	298	P	P	16 42 26.0	+0.2
	SNR=32						
AML	Almayashu	51.59	297	P	P	16 42 29.2	+1.2
	SNR=21						
DGPR	DIGLIPUR	51.66	254	eP	P	16 42 29.6	+1.2
IPM	Ipoh	51.97	239	P	P	16 42 30.4	-0.3
IPM				IAMs_20	IAMs_20	17 06 05.3	
	comp=Z,2µm,19.0s						
IPM	Ipoh	51.97	239	P	P	16 42 31.0	+0.3
MYKOM	Kota Tinggi	52.19	234	IAMs_20	IAMs_20	17 05 25.3	
	comp=Z,1µm,20.0s						
MYKOM	Kota Tinggi	52.19	234	P	P	16 42 33.0	+0.8
EDFI	Ende, Flores	52.23	208	P	P	16 42 30.2	-2.4
	comp=Z,15nm,0.8s						
SOEI	Soe	52.29	204	P	P	16 42 33.1	+0.1
SOEI				IAmb	IAmb	16 42 53.6	
	comp=Z,48nm,0.9s						
SOEI	Soe	52.29	204	P	P	16 42 33.5	+0.4
	comp=Z,67nm,1.1s						
BWNR	Bhubaneshwar	52.78	266	⇑iP	P	16 42 35.7	-0.9
BATI	Baumata	52.91	205	LR	LR	17 04 19.1	
	comp=Z,944nm,21.3s,baz=21,slow=35						
DZA	Taraz	52.92	299	⇑iP	P	16 42 38.0	+0.5
	comp=Z,25nm,0.9s,baz=298						
DZA	Taraz	52.92	299	c iP	P	16 42 37.9	+0.5
DZA				pmax	pmax		
	comp=Z,25nm,0.9s						
COEN	Coen	53.27	181	P	P	16 42 40.2	+0.1
KK31	Karatay Array	53.39	299	P	P	16 42 40.3	-0.6
KK31				pmax	pmax		
	comp=Z,28nm,0.8s						
KK31	Karatay Array	53.39	299	P	P	16 42 40.3	-0.6
KK31				IAmb	IAmb	16 42 53.0	
	comp=Z,28nm,0.8s						
KKAR	Karatay Array	53.39	299	P	P	16 42 40.3	-0.6
KKAR				pmax	pmax		
	comp=Z,28nm,0.8s						
KKAR	Karatay Array	53.39	299	P	P	16 42 40.2	-0.6
KKAR	Karatay Array	53.39	299	P	P	16 42 40.3	-0.6
KKAR				IAmb	IAmb	16 42 53.0	
	comp=Z,28nm,0.8s						
DDI	Dehra Dun	53.49	282	eP	P	16 42 42.1	+0.3
TPI	Tanjungpandan	53.55	227	P	P	16 42 43.6	+1.3
	comp=Z,47nm,0.9s						
SMLA	Simla	53.78	283	eP	P	16 42 43.4	-0.5
DHRM	DHARAMSHALA	53.90	285	eP	P	16 42 43.8	-1.3
DHRM				IAmb	IAmb	16 42 47.9	
	comp=Z,74nm,0.3s						
DHRM				i x	x	16 50 27.6	
DHRM				ex	x	16 50 27.6	
PPBI	Pangkal Pinang	53.93	229	P	P	16 42 46.0	+0.9
	comp=Z,3µmcomp=Z,56nm,1.2s						
IUG	Iuzhnay	54.10	298	⇑iP	P	16 42 46.6	+0.4
	comp=Z,19nm,1.3s,baz=298						
IUG	Iuzhnay	54.10	298	c iP	P	16 42 46.6	+0.4
IUG				pmax	pmax		
	comp=Z,19nm,1.3s						
SRBI	Singaraja	54.26	216	P	P	16 42 48.4	+1.0
	comp=Z,74nm,0.9s						
C36M	Paulatuk	54.37	26	P	P	16 42 49.1	+1.6
	baz=288,SNR=14						
C36M	Paulatuk	54.37	26	P	P	16 42 48.2	+0.6
C36M				IAmb	IAmb	16 42 50.8	
	comp=Z,23nm,1.0s						
SVE	Sverdlovsk	54.42	318	deP	P	16 42 49.4	+1.2
SVE				pmax	pmax		
	comp=Z,106nm,1.0s						
SVE				MLR	MLR		
	comp=Z,10µm,14.0s						
PSI	Prapat	54.61	240	LR	LR	17 09 14.7	
	comp=Z,788nm,18.7s,baz=89,slow=39						
RPSI	Rantau Prapat	54.69	239	IAMs_20	IAMs_20	17 09 57.6	
	comp=Z,1µm,18.0s						
JAGI	Jajag, Banyuwa	55.08	216	P	P	16 42 40.0	-13
BKNI	Bangkinang	55.09	236	P	P	16 42 53.5	-0.1
BKNI				IAMs_20	IAMs_20	17 07 58.2	
	comp=Z,1µm,18.0s						
BKNI	Bangkinang	55.09	236	P	P	16 42 55.6	+2.1
NIL	Nilore	55.51	288	P	P	16 42 56.8	+0.4
NIL				pmax	pmax		
	comp=Z,102nm,0.9s						
NIL				MLR	MLR		
	comp=Z,900nm,18.0s						
NIL	Nilore	55.51	288	P	P	16 42 56.8	+0.4
NIL	Nilore	55.51	288	IAMs_20	IAMs_20	17 10 46.6	
	comp=Z,935nm,18.0s						
NIL	Nilore	55.51	288	P	P	16 42 57.8	+1.3
ARU	Arti	55.63	318	ceP	P	16 42 57.6	+0.7
ARU				pmax	pmax		
	comp=Z,206nm,1.7s						
ARU	Arti	55.63	318	P	P	16 42 57.0	+0.1
ARU				IAMs_20	IAMs_20	17 08 36.6	
	comp=Z,2µm,19.0s						
UGM	Wanagama	56.34	221	P	P	16 43 01.5	-1.0
GSI	Gunungsitoli	56.62	240	P	P	16 43 04.3	-0.2
GSI				IAMs_20	IAMs_20	17 09 43.5	
	comp=Z,2µm,18.0s						
LEM	Lembang	56.94	224	LR	LR	17 08 37.1	
	comp=Z,584nm,19.7s,baz=30,slow=37						
EUNU	Eureka	57.40	9	P	P	16 43 09.7	+0.4
EUNU				IAmb	IAmb	16 43 21.1	
	comp=Z,25nm,0.9s						
NGP	Nagpur	57.52	272	⇑iP	P	16 43 10.5	-0.4
NGP				IAmb	IAmb	16 43 12.9	
	comp=Z,24nm,1.0s						
BHPL	Bhopal	57.62	275	⇑iP	P	16 43 10.4	-1.2
BHPL				IAmb	IAmb	16 43 12.7	
	comp=Z,63nm,1.4s						
ABKAR	Akbulak array	57.66	310	P	P	16 43 11.1	-0.3
ABKAR	Akbulak array	57.66	310	P	P	16 43 11.4	0.0
ABKAR				IAmb	IAmb	16 43 13.7	
	comp=Z,48nm,0.8s						
KBL	Kabul	58.16	290	P	P	16 43 14.8	-0.7
KBL				pmax	pmax		
	comp=Z,42nm,0.9s						
KBL				MLR	MLR		
	comp=Z,1µm,18.0s						
KBL	Kabul	58.16	290	P	P	16 43 14.8	-0.7
KBL				IAMs_20	IAMs_20	17 09 56.1	
	comp=Z,1µm,18.0s						
KBL	Kabul	58.16	290	P	P	16 43 15.5	+0.1
	SNR=24						
SPA0	Spitsbergen Ar	58.36	349	P	P	16 43 15.8	-0.2
SPA0				IAmb	IAmb	16 43 26.5	
	comp=Z,58nm,1.4s						
SANVU	Saraoutou	59.00	153	P	P	16 43 21.1	+0.1
KIRV	Kirov	59.28	323	c iP	P	16 43 23.2	+0.6
WB0	Warramunga Arr	59.68	190	P	P	16 43 25.1	-0.6
WB0				IAmb	IAmb	16 43 30.3	
	comp=Z,31nm,0.9s						
FITZ	Fitzroy Crossi	59.80	200	P	P	16 43 26.6	+0.1
WB3	Warramunga Arr	59.84	190	IAMs_20	IAMs_20	17 09 57.1	
	comp=Z,858nm,20.0s						
WR0	Warramunga Arr	59.85	190	P	P	16 43 25.8	-1.0
WR0				IAmb	IAmb	16 43 31.5	
	comp=Z,16nm,0.8s						
WRAB	Tennant Creek	59.85	190	P	P	16 43 26.1	-0.8
WRAB				pmax	pmax		
	comp=Z,22nm,1.0s						
WRAB	Tennant Creek	59.85	190	P	P	16 43 26.1	-0.8
WRAB				IAmb	IAmb	16 43 31.9	
	comp=Z,22nm,0.9s						
WB2	Warramunga Arr	59.85	190	P	P	16 43 26.1	-0.9
WB2				IAmb	IAmb	16 43 50.0	
	comp=Z,18nm,0.8s						
WRA	Warramunga Arr	59.86	190	P	P	16 43 26.3	-0.6
	comp=Z,18nm,0.9s,baz=9.3,slow=7.2,SNR=59						
WRA	Warramunga Arr	59.86	190	P	P	16 43 25.8	-1.2
HYB	Hyderabad	60.03	268	i P	P	16 43 28.0	-0.5
HYB	Hyderabad	60.03	268	eP	P	16 43 27.0	-1.5
LVZ	Lovozero	60.51	336	P	P	16 43 32.0	+1.0
LVZ				pmax	pmax		
	comp=Z,67nm,1.3s						
LVZ				MLR	MLR		
	comp=Z,4µm,18.0s						
LVZ	Lovozero	60.51	336	P	P	16 43 32.0	+1.0
YKA	Yellowknife Ar	60.72	31	P	P	16 43 32.6	+0.2
	comp=Z,6.7nm,0.8s,baz=299,slow=6.2,SNR=62						
YKA				LR	LR	17 11 43.1	
	comp=Z,386nm,18.3s,baz=0.0,slow=38						
YKA	Yellowknife Ar	60.72	31	i P	P	16 43 33.4	+1.0
YKA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
APA	Apatity	61.09	336	⇑iP	P	16 43 35.4	+0.6
APA				pmax	pmax		
	comp=Z,14nm,0.7s						
APA				MLR	MLR		
	comp=Z,3µm,23.0s						
MDRS	Chennai	61.33	263	eP	P	16 43 38.7	+1.5
TMCR	Tamitsa	61.35	331	eP	P	16 43 35.9	-0.8
TMCR				pmax	pmax		
	comp=Z,85nm,0.9s						
KEV	Kevo	61.68	339	P	P	16 43 39.4	+0.6
KEV				pmax	pmax		
	comp=Z,39nm,1.0s						
KEV	Kevo	61.68	339	P	P	16 43 39.4	+0.6
ARCES	ARCESS Array B	62.23	339	P	P	16 43 43.0	+0.5
	comp=Z,6.8nm,0.7s,baz=45,slow=5.7,SNR=9.9						
ARCES				LR	LR	17 13 34.0	
	comp=Z,2µm,21.2s,baz=35,slow=39						
ARCES	ARCESS Array B	62.23	339	P	P	16 43 43.0	+0.5
TULEG	Thule	62.33	8	P	P	16 43 43.7	+0.5
TULEG				IAmb	IAmb	16 44 01.7	
	comp=Z,19nm,0.9s						
TULEG	Thule	62.33	8	i P	P	16 43 43.9	+0.8
TULEG				IAmb	IAmb	16 43 44.7	
	comp=Z,9.6nm,0.8s						
KLMR	Klimovskoe	62.54	328	eP	P	16 43 43.4	-1.3
KLMR				e		16 45 59.3	
KLMR				pmax	pmax		
	comp=Z,93nm,1.5s						
KLMR	Klimovskoe	62.54	328	eP	P	16 43 43.5	-1.3
KLMR				AMP		16 43 47.6	
	comp=Z,93nm,1.5s						
KLMR				ePP	PP	16 45 59.4	-2.4
KLMR				LQ	LQ	17 06 17.0	
KLMR				LQ	LQ	17 06 17.0	
KLMR				LR	LR	17 11 27.8	
POO	Poona	63.02	272	⇑iP	P	16 43 48.3	-0.4
HRA	Herat	63.11	294	P	P	16 43 48.5	-0.7
HRA				IAmb	IAmb	16 43 51.9	
	comp=Z,22nm,1.0s						
HRA				IAMs_20	IAMs_20	17 12 52.1	
	comp=Z,2µm,20.0s						
BELG	Belogornoye	63.14	317	c iP	P	16 43 49.5	+0.7
BELG				pmax	pmax		
	comp=Z,25nm,0.8s						
DAG	Danmarks Havn	63.38	356	i P	P	16 43 50.4	+0.3
	comp=Z,42nm,1.0s						
DAG	Danmarks Havn	63.38	356	i P	P	16 43 50.4	+0.3
DAG				pmax	pmax		
	comp=Z,42nm,1.0s						
DAG	Danmarks Havn	63.38	356	i P	P	16 43 50.4	+0.3
DAG				IAmb	IAmb	16 43 52.3	
	comp=Z,42nm,1.0s						
AS31	Alice Springs	63.58	190	P	P	16 43 51.4	-0.7
ASAR	Alice Springs	63.58	190	P	P	16 43 52.0	0.0
	comp=Z,11nm,0.8s,baz=9.6,slow=5.7,SNR=61						
ASAR				LR	LR	17 12 16.3	
	comp=Z,219nm,20.1s,baz=1.0,slow=37						
ASAR	Alice Springs	63.58	190	P	P	16 43 51.3	-0.8
NLWA	Neilton Lookou	63.70	49	P	P	16 43 52.0	-0.8
NLWA				IAmb	IAmb	16 43 57.0	
	comp=Z,29nm,0.9s						
D03D	Eldon	64.09	49	P	P	16 43 56.6	+1.4
	baz=301						
GEYT	Alibeck	64.14	299	P	P	16 43 56.0	+0.2
	comp=Z,12nm,0.7s,baz=29,slow=3.4,SNR=21						
GEYT				LR	LR	17 14 01.9	
	comp=Z,1µm,19.1s,baz=30,slow=38						
GEYT	Alibeck	64.14	299	P	P	16 43 55.5	-0.4
GYA0B	ALIBECK ARRAY	64.14	299	P	P	16 43 55.0	-0.8
GYA0B				IAmb	IAmb	16 44 17.7	
	comp=Z,20nm,0.8s						
GYA0B				IAMs_20	IAMs_20	17 13 41.2	
	comp=Z,1µm,18.0s						
B05A	Bryant	64.28	48	P	P	16 43 57.8	+1.4
	baz=301						
MBWA	Marble Bar	64.43	205	P	P	16 43 59.3	+1.7

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PALK  Pallekele          64.63 258   IAMs_20 IAMs_20 17 12 53.6
      comp=Z,814nm,19.0s
PSAD1 Pilbara Seismi     64.68 205   IAMs_20 IAMs_20 17 06 10.1
      comp=Z,719nm,18.0s
PSA00 Pilbara Seismi     64.78 205   P       P       16 43 59.5 -0.4
PSA00                                IAmb    IAmb    16 44 01.0
      comp=Z,16nm,0.9s
PSAA1 Pilbara Seismi     64.79 205   IAMs_20 IAMs_20 17 04 44.1
      comp=Z,778nm,19.0s
GOA   Goa                64.82 270  eP       P       16 44 01.1 +0.6
E04D  Cinebar            64.90  49   P       P       16 44 01.7 +1.2
      baz=302,SNR=7.0
DZM   Mont Dzumac        64.93 157  eS       S       16 52 19.7  -23
      comp=Z,499nm,25.2s
DZM                                 eLQ      LQ      17 00 26.6
      comp=Z,2µm,31.1s
DZM                                 eLR      LR      17 02 54.7
      comp=Z,1µm,22.7s
LON   Longmire           65.24  49   P       P       16 44 03.4 +0.5
LON                                  pmax    pmax
      comp=Z,6.0nm,0.8s
LON   Longmire           65.24  49   P       P       16 44 03.4 +0.5
KULLO Kullorsuaq         65.27   6 i P       P       16 44 03.3 +0.8
      comp=Z,34nm,1.1s
KULLO Kullorsuaq         65.27   6 i P       P       16 44 03.3 +0.8
KULLO                                pmax    pmax
      comp=Z,34nm,1.1s
KULLO Kullorsuaq         65.27   6 i P       P       16 44 03.3 +0.8
KULLO                                IAmb    IAmb    16 44 04.3
      comp=Z,34nm,1.1s
I02D  Swisshome          65.42  52   P       P       16 44 05.0 +1.1
      baz=302
LTY   Liberty            65.63  48   P       P       16 44 06.1 +0.7
LTY                                  IAmb    IAmb    16 44 08.7
      comp=Z,12nm,0.7s
B08A  Colville Reser     65.80  47   P       P       16 44 07.2 +0.8
J01E  Myrtle Point       65.87  53   P       P       16 44 07.4 +0.5
      baz=302
H04D  Lebanon            65.88  51   P       P       16 44 07.5 +0.6
      baz=302
F05D  White Salmon       65.91  50   P       P       16 44 08.6 +1.5
      baz=303
I03D  Drain, OR          65.94  52   P       P       16 44 08.5 +1.2
      baz=302,SNR=5.6
H04A  Detroit Lake       66.12  51   P       P       16 44 09.4 +0.8
H04A                                 IAMs_20 IAMs_20 17 06 22.5
      comp=Z,781nm,19.0s
MOS   Moscow             66.25 324  eP       P       16 44 07.3 -1.8
MOS                                 e                16 44 26.1
MOS                                 e                16 46 32.6
MOS                                 eS       S       16 52 56.0 -1.9
MOS                                  pmax    pmax
      comp=Z,118nm,1.4s
MOS                                  MLR     MLR
      comp=Z,4µm,17.0s
K02D  Willamette Mer     66.29  54   P       P       16 44 10.5 +0.8
      baz=303,SNR=5.6
G05D  Wamic, OR          66.34  50   P       P       16 44 11.3 +1.4
      baz=303
I04A  Tendick Farm,      66.47  52   P       P       16 44 11.7 +0.9
      baz=303,SNR=7.2
E07A  Sunnyside          66.48  48   P       P       16 44 11.9 +1.1
E07A                                 IAmb    IAmb    16 44 16.2
      comp=Z,39nm,1.4s
L02E  Cave Junction      66.61  54   P       P       16 44 13.0 +1.3
      baz=303
C09A  Chrisman Ranch     66.70  47   P       P       16 44 12.8 +0.7
D08A  Wollman Farm,      66.74  48   P       P       16 44 13.4 +1.0
D08A                                 IAmb    IAmb    16 44 15.8
      comp=Z,19nm,0.8s
HAWA  Hanford            66.76  48   P       P       16 44 13.8 +1.2
HAWA                                 IAmb    IAmb    16 44 16.2
      comp=Z,19nm,1.2s
I05D  Terrebonne, OR     66.82  51   P       P       16 44 13.9 +0.9
      baz=303,SNR=6.6
VRH   Novokhopyorsk      66.87 318  eP       P       16 44 12.8 -0.3
VRH                                  pmax    pmax
      comp=Z,50nm,0.9s
VRH                                  MLR     MLR
      comp=Z,6µm,14.0s
J04D  Umpqua Nationa     66.95  52   P       P       16 44 15.3 +1.2
      baz=303,SNR=11
E08A  Dider Farm, El     66.97  48   P       P       16 44 15.2 +1.3
E08A                                 IAmb    IAmb    16 44 17.4
      comp=Z,17nm,0.7s
NEW   Newport            67.08  46   LR      LR      17 12 54.4
      comp=Z,245nm,20.5s,baz=322,slow=35
NEW   Newport            67.08  46   P       P       16 44 16.1 +1.4
      baz=304,SNR=10
NEW   Newport            67.08  46   P       P       16 44 14.8 +0.2
NEW                                  pmax    pmax
      comp=Z,19nm,1.0s
NEW   Newport            67.08  46   P       P       16 44 14.8 +0.2
NEW                                  IAmb    IAmb    16 44 17.9
      comp=Z,19nm,0.9s
UPNV  Upernavik          67.08   6 i P       P       16 44 15.6 +1.4
UPNV                                 IAmb    IAmb    16 44 17.2
      comp=Z,28nm,1.1s
OBN   Obninsk            67.10 323ceP        P       16 44 15.0 +0.5
OBN                                 e                16 44 44.2
OBN                                 e                16 46 46.9
OBN                                 eS       S       16 53 21.0  +13
OBN                                  pmax    pmax
      comp=Z,65nm,1.1s
OBN                                  MLR     MLR
      comp=Z,4µm,16.0s
OBN   Obninsk            67.10 323   P       P       16 44 13.8 -0.7
PINE  Pine Mountain      67.36  51   P       P       16 44 18.1 +1.4
FIA1  FINESS Array S     67.37 333   P       P       16 44 16.1  0.0
FINES FINESS Array B     67.37 333   P       P       16 44 16.9 +0.7
      comp=Z,34nm,0.7s,baz=46,slow=8.2,SNR=53
FINES                                LR      LR      17 16 52.8
      comp=Z,4µm,18.2s,baz=34,slow=39
L04D  Klamath Falls      67.39  53   P       P       16 44 18.0 +1.2
      baz=304,SNR=12
YBH   Yreka Blue Hor     67.41  54   LR      LR      17 07 40.1
      comp=Z,141nm,21.3s,baz=320,slow=31
YBH   Yreka Blue Hor     67.41  54   P       P       16 44 18.3 +1.4
YBH                                  pmax    pmax
      comp=Z,20nm,1.3s
YBH   Yreka Blue Hor     67.41  54   P       P       16 44 18.3 +1.4
YBH                                  IAmb    IAmb    16 44 20.5
      comp=Z,20nm,1.2s
J05D  Fort Rock, OR      67.46  52   P       P       16 44 18.7 +1.5
      baz=304,SNR=13
LPSR  Galich'ya Gora     67.47 320  eP       P       16 44 16.9  0.0
LPSR                                 pmax    pmax
      comp=Z,40nm,0.8s
LPSR                                 MLR     MLR
      comp=Z,6µm,14.0s
E09A  Wood Farm, Sta     67.49  48   P       P       16 44 18.7 +1.5
M02C  Callahan           67.50  54   P       P       16 44 18.8 +1.3
      baz=304,SNR=8.4
KMRM  Mail Ridge         67.60  56   P       P       16 44 19.0 +0.9
KMRM                                 IAmb    IAmb    16 44 23.6
      comp=Z,16nm,1.1s
G08A  Pilot Rock         67.70  49   P       P       16 44 18.8 +0.1
N02D  Trinity Center     67.83  55   P       P       16 44 21.0 +1.4
      baz=304,SNR=8.4
M04C  Macdoel            67.92  54   P       P       16 44 21.0 +0.9
      baz=304,SNR=14
K05A  Summer Lake        67.98  52   P       P       16 44 21.0 +0.4
KCPM  Cahto Peak         67.98  56   P       P       16 44 21.8 +1.3
KCPM                                 IAmb    IAmb    16 44 24.6
      comp=Z,14nm,0.9s
I07A  Izee               68.06  50   P       P       16 44 22.3 +1.3
SUMG  Summit             68.12   1 i P       P       16 44 22.4 +1.2
      comp=Z,114nm,0.9s
SUMG  Summit             68.12   1 i P       P       16 44 22.4 +1.2
SUMG                                 pmax    pmax
      comp=Z,110nm,0.9s
SUMG  Summit             68.12   1   P       P       16 44 21.9 +0.7
SUMG  Summit             68.12   1 i P       P       16 44 22.4 +1.2
SUMG                                 IAmb    IAmb    16 44 24.3
      comp=Z,115nm,0.9s
WDC   Whiskeytown Da     68.15  55   P       P       16 44 22.2 +0.8
WDC                                  pmax    pmax
      comp=Z,16nm,1.2s
WDC   Whiskeytown Da     68.15  55   P       P       16 44 22.2 +0.8
WDC                                  IAmb    IAmb    16 44 25.2
      comp=Z,16nm,1.1s
VSR   Storozhevoye       68.17 319  eP       P       16 44 20.6 -0.7
VSR                                  pmax    pmax
      comp=Z,50nm,1.1s
VSR                                  MLR     MLR
      comp=Z,2µm,14.0s
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O02D  Mt. Diablo Mer     68.22  55   P       P       16 44 23.4 +1.5
      baz=304,SNR=12
VORD  Divnogorie         68.25 319  eP       P       16 44 19.8 -2.1
VORD                                 pmax    pmax
      comp=Z,10.0nm,0.9s
MAK   Makhachkala        68.27 308  eP       P       16 44 22.9 +0.8
MAK                                 e                16 46 53.0
MAK                                 ePPP     PPP     16 48 31.6
MAK                                 eS       S       16 53 24.7 +2.1
MAK                                  pmax    pmax
      comp=Z,372nm,1.2s
MAK                                  MLR     MLR
      comp=Z,3µm,14.0s
F10A  Beach Ranch, E     68.32  48   P       P       16 44 23.5 +1.0
WALA  Waterton Lakes     68.37  44   P       P       16 44 23.4 +0.5
NUUG  Nuugaatsiaq        68.53   6 i P       P       16 44 24.4 +1.1
NUUG                                 IAmb    IAmb    16 44 25.8
      comp=Z,23nm,1.1s
O03E  Paynes Creek       68.78  55   P       P       16 44 26.2 +0.8
      baz=304,SNR=14
MOD   Modoc Plateau      68.80  53   P       P       16 44 25.3 -0.4
MOD                                  IAmb    IAmb    16 44 28.8
      comp=Z,33nm,1.5s
BMO   Blue Mountains     68.91  49   P       P       16 44 26.9 +0.6
BMO                                  pmax    pmax
      comp=Z,12nm,0.9s
BMO   Blue Mountains     68.91  49   P       P       16 44 26.9 +0.6
BMO                                  IAmb    IAmb    16 44 29.8
      comp=Z,12nm,0.8s
JTMT  Jette              68.94  45   P       P       16 44 26.7 +0.3
JTMT                                 IAmb    IAmb    16 44 30.0
      comp=Z,24nm,0.9s
GDXM  Geysers            68.98  57   P       P       16 44 27.3 +0.5
VSU   Vasula             69.14 330  eP       P       16 44 28.4 +1.1
VSU   Vasula             69.14 330 i P       P       16 44 28.5 +1.2
VSU                                  pmax    pmax
      comp=Z,100nm,0.9s
GROC  Groznyy            69.16 309  eP       P       16 44 27.4 -0.3
GROC                                e                16 44 50.4
GROC                                 pmax    pmax
      comp=Z,22nm,0.8s
ORV   Oroville           69.39  55   P       P       16 44 29.5 +0.3
ORV                                  pmax    pmax
      comp=Z,9.0nm,0.8s
ORV   Oroville           69.39  55   P       P       16 44 29.5 +0.3
WVOR  Wild Horse Val     69.52  52   P       P       16 44 30.8 +0.7
WVOR                                 pmax    pmax
      comp=Z,23nm,1.2s
WVOR  Wild Horse Val     69.52  52   P       P       16 44 30.8 +0.7
WVOR                                 IAmb    IAmb    16 44 33.9
      comp=Z,22nm,1.2s
MSO   Missoula           69.67  46   P       P       16 44 31.8 +0.9
      baz=306,SNR=9.5
MSO   Missoula           69.67  46   P       P       16 44 31.4 +0.4
MSO                                  IAmb    IAmb    16 44 34.1
      comp=Z,17nm,0.9s
GOF   Gofitskoye         69.70 312⥣eP        P       16 44 31.3 +0.3
GOF                                  pmax    pmax
      comp=Z,97nm,0.9s
SCO   Scoresbysund       69.74 355   P       P       16 44 31.7 +0.9
SCO                                  pmax    pmax
      comp=Z,32nm,1.3s
SCO   Scoresbysund       69.74 355   P       P       16 44 31.7 +0.9
SCO                                  IAmb    IAmb    16 44 34.1
      comp=Z,32nm,1.3s
BEKR  Beckworth          69.93  55   P       P       16 44 33.4 +0.7
BEKR                                 IAmb    IAmb    16 44 37.7
      comp=Z,19nm,0.9s
MTSE  Matsula            70.07 331  eP       P       16 44 29.4 -3.6
PYA1  Pyatigorsk         70.25 311 i P       P       16 44 35.6 +1.1
PYA1                                 pmax    pmax
      comp=Z,1.0nm,0.8s
AAL   Aland              70.39 334  eP       P       16 44 35.3 +0.4
RUBR  Rubicon Trail      70.53  55   P       P       16 44 37.0 +0.6
ZEI   Tsey               70.53 310  eP       P       16 44 35.7 -0.7
ZEI                                  pmax    pmax
      comp=Z,27nm,1.0s
KIV   Kislovodsk         70.56 311 ⥥P        P       16 44 38.0 +1.6
KIV   Kislovodsk         70.56 311 i P       P       16 44 37.8 +1.4
      SNR=36
KIV   Kislovodsk         70.56 311  eP       P       16 44 37.5 +1.1
KIV                                 eS       S       16 53 51.4 +1.6
KIV                                  pmax    pmax
      comp=Z,354nm,1.1s
KIV                                  pmax    pmax
      comp=Z,424nm,3.7s
KIV   Kislovodsk         70.56 311   P       P       16 44 36.9 +0.5
KIV   Kislovodsk         70.56 311   P       P       16 44 38.0 +1.6
KBZ   Khabaz             70.57 311   P       P       16 44 37.5 +1.2
      comp=Z,43nm,0.8s,baz=55,slow=3.7,SNR=54
KBZ                                  LR      LR      17 18 23.2
      comp=Z,1µm,18.1s,baz=20,slow=38
FFC   Flin Flon          70.61  34   P       P       16 44 36.7 +0.3
FFC                                  pmax    pmax
      comp=Z,29nm,1.0s
FFC   Flin Flon          70.61  34   P       P       16 44 36.7 +0.3
FFC                                  IAmb    IAmb    16 44 39.2
      comp=Z,30nm,0.9s
MFID  Camas Ranch        70.62  49   P       P       16 44 36.4 -0.5
PAHR  Pah Rah Range      70.63  54   P       P       16 44 36.4 -0.7
PAHR                                 IAmb    IAmb    16 44 40.5
      comp=Z,16nm,1.0s
SHA1  Shidzhatmaz        70.70 311c iP       P       16 44 38.7 +1.2
PNTR  Pine Nut           70.86  55   P       P       16 44 38.5  0.0
PNTR                                 IAmb    IAmb    16 44 55.3
      comp=Z,17nm,0.9s
HRY   Holter Researc     70.90  45   P       P       16 44 38.8 +0.3
FCC   Fort Churchill     70.93  28   P       P       16 44 38.3  0.0
FCC                                  pmax    pmax
      comp=Z,22nm,1.1s
FCC   Fort Churchill     70.93  28   P       P       16 44 38.2  0.0
FCC                                  IAmb    IAmb    16 44 40.7
      comp=Z,22nm,1.1s
NEY   Neytrino           70.96 311c iP       P       16 44 40.6 +1.6
NEY                                  pmax    pmax
      comp=Z,7.0nm,0.8s
CMB   Columbia Colle     70.97  56   P       P       16 44 39.4 +0.4
CMB                                  pmax    pmax
      comp=Z,13nm,0.9s
CMB   Columbia Colle     70.97  56   P       P       16 44 39.4 +0.4
SAO   San Andreas Ge     71.02  58   P       P       16 44 40.3 +1.0
SAO                                  pmax    pmax
      comp=Z,10.0nm,1.3s
SAO   San Andreas Ge     71.02  58   P       P       16 44 40.3 +1.0
LRM   Limekiln Ridge     71.10  46   P       P       16 44 40.7 +0.8
STKA  Stephens Creek     71.13 182   P       P       16 44 41.0 +1.3
      comp=Z,7.1nm,0.7s,baz=358,slow=5.7,SNR=18
STKA                                 LR      LR      17 15 24.3
      comp=Z,185nm,21.4s,baz=3.2,slow=36
STKA  Stephens Creek     71.13 182   P       P       16 44 41.0 +1.3
STKA  Stephens Creek     71.13 182   P       P       16 44 39.5 -0.1
YERR  Yerington          71.14  55   P       P       16 44 40.8 +0.6
YERR                                 IAmb    IAmb    16 44 43.9
      comp=Z,23nm,0.9s
EGMT  Eagleton           71.20  43   P       P       16 44 41.4 +1.1
      baz=309,SNR=14
EGMT  Eagleton           71.20  43   P       P       16 44 41.2 +0.9
EGMT                                 IAmb    IAmb    16 44 43.3
      comp=Z,33nm,1.1s
IDID  Didziasalis        71.28 327  eP       P       16 44 41.2 +0.7
DLMT  Dillon             71.30  46   P       P       16 44 41.5 +0.5
DLMT                                 IAmb    IAmb    16 44 44.9
      comp=Z,22nm,0.8s
WAKR  Walker             71.30  55   P       P       16 44 41.2 +0.1
HLID  Hailey             71.36  49   P       P       16 44 42.5 +1.1
      baz=307,SNR=15
HLID  Hailey             71.36  49   P       P       16 44 41.3 -0.1
MNK   Minsk              71.36 326⥣iP        P       16 44 43.0 +2.1
MNK                                  pmax    pmax
      comp=Z,230nm,1.0s
MNK   Minsk              71.36 326 i P       P       16 44 41.8 +0.9
      comp=E,8.0nm,1.1s
MNK                                i P       P       16 44 41.8 +0.9
      comp=N,27nm,0.8s
MNK                                i P       P       16 44 41.8 +0.9
      comp=Z,77nm,0.9s
MNK                                i PcP     PcP     16 45 01.0 +0.4
MNK                                i PP      PP      16 47 20.2 +1.5
MNK                                i PPP     PPP     16 49 08.4
MNK                                i S       S       16 53 59.5 +1.0
MNK                                i ScS     ScS     16 54 50.8 +5.4
MNK                                i SS      SS      16 58 37.0 +5.1
MNK                                i SSS     SSS     17 01 56.3
MNK                                i LQ      LQ      17 11 12.1
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MNK                                i LR      LR      17 15 33.7
MNK                                i LRM     MLR     17 19 03.6
      comp=E,220nm,15.4s
MNK                                i LRM     MLR     17 19 03.6
      comp=N,1µm,14.5s
MNK                                i LRM     MLR     17 19 06.3
      comp=Z,2µm,17.2s
ISAL  Salakas            71.36 328  eP       P       16 44 41.9 +0.9
UPP   Uppsala            71.42 334  eP       P       16 44 41.4 +0.2
IIGN  Ignalina           71.47 328  eP       P       16 44 42.2 +0.6
BCYI  Bear Canyon        71.48  48   P       P       16 44 42.0 -0.2
MCMT  McKenzie Canyo     71.48  47   P       P       16 44 41.7 -0.5
FORT  Forrest            71.50 194   P       P       16 44 42.0 +0.1
NACGM Naroch             71.55 327 i P       P       16 44 42.8 +0.7
NACGM                              i P       P       16 44 42.8 +0.7
NACGM                              i P       P       16 44 42.8 +0.7
NACGM                               ePcP     PcP     16 45 02.2 +0.8
NACGM                              i PP      PP      16 47 14.1 -6.2
NACGM                              i PPP     PPP     16 48 52.0
NACGM                               eS       S       16 54 05.2 +4.4
NACGM                               ePS      PnS     16 54 40.1  +11
NACGM                               ePS              16 54 51.9
NACGM                              i SS      SS      16 58 33.8 -1.0
NACGM                              i SSS     SSS     17 03 10.3
NACGM                              i LQ      LQ      17 12 01.5
NACGM                              i LR      LR      17 18 09.0
GNI   Garni              71.58 307   P       P       16 44 44.5 +1.7
GNI   Garni              71.58 307ceP        P       16 44 44.3 +1.5
GNI                                  pmax    pmax
      comp=Z,63nm,1.5s
GNI   Garni              71.58 307   P       P       16 44 42.4 -0.4
GNI   Garni              71.58 307   P       P       16 44 44.5 +1.7
AKH   Akhalkalaki        71.59 309 ⥣P        P       16 44 44.3 +1.5
CHVG  Ch'k'valeri        71.65 310 ⥣P        P       16 44 43.9 +0.9
BOZ   Bozeman (W)        71.69  46   P       P       16 44 44.5 +1.2
      baz=308,SNR=26
BOZ   Bozeman (W)        71.69  46   P       P       16 44 43.5 +0.2
BOZ                                  pmax    pmax
      comp=Z,23nm,0.9s
BOZ   Bozeman (W)        71.69  46   P       P       16 44 43.5 +0.2
BOZ                                  IAmb    IAmb    16 44 46.8
      comp=Z,23nm,0.8s
PMPB  Monarch Peak       71.76  58   P       P       16 44 43.7 -0.1
RYN   Ryan               71.81  55   P       P       16 44 44.5 +0.3
JLN   Jalan Bani Buh     71.95 284   P       P       16 44 45.8 +0.7
      SNR=8.0
WBK   Wadi Bani Khal     72.01 285   P       P       16 44 46.8 +1.3
      SNR=7.3
LHV   Little Huntoon     72.04  55   P       P       16 44 46.1 +0.7
LHV                                  IAmb    IAmb    16 44 59.7
      comp=Z,36nm,1.0s
MDPB  Devils Postpil     72.04  56   P       P       16 44 46.3 +0.6
BANOM Banah              72.05 289 i P       P       16 44 46.2 +0.5
      SNR=9.7
BANOM Banah              72.05 289   P       P       16 44 46.1 +0.5
      SNR=6.8
NVAR  Mina Array Bea     72.06  55   P       P       16 44 47.5 +1.8
      comp=Z,11nm,0.8s,baz=292,slow=5.5,SNR=66
NVAR                                 LR      LR      17 13 32.0
      comp=Z,201nm,18.6s,baz=310,slow=33
NVAR  Mina Array Bea     72.06  55   P       P       16 44 46.2 +0.4
SHME  Shamm              72.09 289 i P       P       16 44 46.1 +0.2
      SNR=7.4
SHME  Shamm              72.09 289   P       P       16 44 46.4 +0.5
      SNR=5.7
OMMB  Old Mammoth Mi     72.11  56   P       P       16 44 46.4 +0.3
BIDO  Bidbid             72.11 286   P       P       16 44 46.9 +0.9
      SNR=7.7
NV11  Mina Array Sit     72.16  55   P       P       16 44 47.2 +0.9
MLAC  Mammoth, Mammo72.20        56   P       P       16 44 48.0 +1.3
      baz=307
QLMT  Earthquake Lak     72.28  46   P       P       16 44 47.7 +0.7
PABE  Paberze            72.28 329  eP       P       16 44 47.4 +1.0
NC405 NORSAR Array S     72.30 338   P       P       16 44 47.2 +0.7
NC303 NORSAR Array S     72.31 338   P       P       16 44 46.9 +0.3
BBOO  Buckleboo          72.38 187   P       P       16 44 48.0 +0.8
BBOO                                 IAmb    IAmb    16 44 49.3
      comp=Z,23nm,1.0s
YHL   Hebgen Lake        72.40  46   P       P       16 44 48.8 +1.0
PAGB  Antelope Grade     72.41  58   P       P       16 44 47.3 -0.3
PAGB                                 IAmb    IAmb    16 45 14.7
      comp=Z,35nm,1.1s
MDH   Madha              72.42 288   P       P       16 44 47.5 -0.3
MDH   Madha              72.42 288   P       P       16 44 47.3 -0.5
SMDO  Samad              72.44 286   P       P       16 44 48.5 +0.4
      SNR=8.5
NC204 NORSAR Array S     72.44 338   P       P       16 44 48.2 +0.8
YHB   Horse Butte        72.46  46   P       P       16 44 47.8 -0.2
NB201 NORSAR Array S     72.47 338   P       P       16 44 47.9 +0.3
MASF  Masafi             72.48 289   P       P       16 44 48.9 +0.6
      SNR=6.4
MSFE  Esma-Masafi        72.48 289 i P       P       16 44 48.8 +0.5
      SNR=7.9
SOC   Sochi              72.49 312  eP       P       16 44 46.5 -1.5
SOC                                 e                16 47 24.3
SOC                                 eS       S       16 54 10.9 -1.1
SOC                                 eSS      SS      16 58 51.9 +2.1
SOC                                  pmax    pmax
      comp=Z,24nm,0.7s
NB2   NORSAR Subarra     72.50 338   P       P       16 44 47.9 +0.1
      comp=Z,13nm,0.8s,baz=38,slow=6.2
NB2   NORSAR Subarra     72.50 338   P       P       16 44 47.9 +0.1
      baz=38,slow=6.2
NOA   NORSAR Array B     72.50 338   P       P       16 44 48.2 +0.5
      comp=Z,18nm,0.8s,baz=38,slow=6.0,SNR=41
NOA                                  LR      LR      17 20 51.2
      comp=Z,2µm,18.5s,baz=25,slow=39
ELK   Elko               72.57  51   P       P       16 44 48.8  0.0
ELK                                  pmax    pmax
      comp=Z,16nm,1.4s
ELK   Elko               72.57  51   P       P       16 44 48.8  0.0
YHH   Holmes Hill        72.63  46   P       P       16 44 49.4 +0.2
NBO00 NORSAR Array S     72.63 338   P       P       16 44 48.4 -0.1
YMR   Madison River      72.64  46   P       P       16 44 49.6 +0.5
GCMT  Greycliff          72.64  45   P       P       16 44 49.7 +0.6
HOQ   Hoqain             72.68 286   P       P       16 44 49.9 +0.5
      SNR=14
UOSS  Minazif            72.69 288 i P       P       16 44 49.2 -0.3
      SNR=7.6
UOSS  Minazif            72.69 288   P       P       16 44 48.9 -0.6
UOSS                                 IAmb    IAmb    16 44 51.5
      comp=Z,29nm,0.8s
UOSS  Minazif            72.69 288   IAMs_20 IAMs_20 17 19 34.1
      comp=Z,801nm,18.0s
UOSS  Minazif            72.69 288   P       P       16 44 49.6 +0.2
NAO01 NORSAR Array S     72.75 338   P       P       16 44 50.0 +0.8
JMDO  Jabal Madar        72.80 285   P       P       16 44 50.8 +0.6
      SNR=7.2
HATD  Hatta, Dubai       72.82 288 i P       P       16 44 50.4 +0.2
      SNR=13
HATD  Hatta, Dubai       72.82 288   P       P       16 44 51.1 +0.9
      SNR=12
SOHO  SOHO               72.93 287 i P       P       16 44 50.9 +0.1
      SNR=12
TIN   Tinemaha, Big      72.93  56   P       P       16 44 52.4 +1.5
      baz=307
YNE   Yellowstone No     72.95  45   P       P       16 44 51.7 +0.7
ASHO  Ashiyiah           72.95 288   P       P       16 44 51.4 +0.4
TPH   Tonopah            72.96  55   P       P       16 44 52.0 +0.9
TPH                                  pmax    pmax
      comp=Z,94nm,1.0s
TPH   Tonopah            72.96  55   P       P       16 44 52.0 +0.9
MORW  Morawa             72.98 205   P       P       16 44 50.1 -0.8
MORW                                 IAmb    IAmb    16 44 52.8
      comp=Z,22nm,0.9s
ANN   Anapa              73.02 314  eP       P       16 44 50.0 -1.0
ANN                                  pmax    pmax
      comp=Z,75nm,1.0s
H17A  Grant Village      73.03  46   P       P       16 44 53.0 +1.5
      baz=309,SNR=21
NAZ   Nazwa, Dubai       73.07 289 i P       P       16 44 51.5 -0.1
      SNR=8.2
NAZ   Nazwa, Dubai       73.07 289   P       P       16 44 52.1 +0.4
      SNR=8.9
VES   Vestal, Richgr     73.10  57   P       P       16 44 53.5 +1.8
      baz=307
FLWY  Flagg Ranch        73.15  46   P       P       16 44 52.4 +0.2
SFJD  Kangerlussuaq      73.18   6 i P       P       16 44 52.5 +0.9
SFJD  Kangerlussuaq      73.18   6 i P       P       16 44 52.5 +0.9
SFJD  Kangerlussuaq      73.18   6   P       P       16 44 51.3 -0.3
SFJD                                 IAmb    IAmb    16 44 54.2
      comp=Z,30nm,0.9s
SFJD  Kangerlussuaq      73.18   6 i P       P       16 44 52.5 +0.9
PKM   Mcpherson Peak     73.19  59   P       P       16 44 53.9 +1.3
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	baz=307						
BSY	**Bisya**	73.25	286	P	P	16 44 53.5	+0.7
	SNR=13						
FAQ	**Al Faqa, Dubai**	73.26	288	*i* P	P	16 44 53.1	+0.2
	SNR=8.9						
FAQ	**Al Faqa, Dubai**	73.26	288	P	P	16 44 53.1	+0.2
	SNR=9.0						
RLMT	**Red Lodge**	73.29	45	P	P	16 44 53.9	+1.0
	baz=310,SNR=7.8						
RLMT	**Red Lodge**	73.29	45	P	P	16 44 54.2	+1.2
RLMT				IAmb	IAmb	16 45 08.4	
	comp=Z,26nm,1.4s						
AKASG	**Malin Array Be**	73.34	323	P	P	16 44 53.1	+0.3
	comp=Z,34nm,0.8s,baz=45,slow=6.1,SNR=65						
AKASG				LR	LR	17 20 29.7	
	comp=Z,1µm,20.0s,baz=45,slow=39						
CWC	**Cottonwood Cre**	73.40	56	P	P	16 44 54.8	+1.1
	baz=307						
HVU	**Hansel Valley**	73.40	49	P	P	16 44 54.8	+1.2
HVU				pmax	pmax		
	comp=Z,14nm,0.9s						
HVU	**Hansel Valley**	73.40	49	P	P	16 44 54.8	+1.2
ARQ	**Araqi**	73.41	287	P	P	16 44 54.4	+0.7
	SNR=7.6						
LOHW	**Long Hollow**	73.50	47	P	P	16 44 55.7	+1.4
GRAC	**Grapevine Rang**	73.52	56	P	P	16 44 55.6	+1.3
	baz=307						
REDW	**Red Top Meadow**	73.52	47	P	P	16 44 55.5	+1.2
REDW				IAmb	IAmb	16 45 10.1	
	comp=Z,34nm,1.5s						
ASUD	**Al Ashush, Dub**	73.52	288	*i* P	P	16 44 55.0	+0.6
	SNR=12						
ASUD	**Al Ashush, Dub**	73.52	288	P	P	16 44 55.0	+0.6
	SNR=8.1						
ALNE	**Al Ain**	73.55	288	*i* P	P	16 44 55.0	+0.4
	SNR=7.5						
ALNE				*i* P	pP	16 44 55.7	-1.5
	SNR=7.3						
ALNE	**Al Ain**	73.55	288	P	P	16 44 55.0	+0.4
	SNR=17						
ISA	**Isabella, Lake**	73.61	57	P	P	16 44 55.6	+0.8
	baz=307						
ISA	**Isabella, Lake**	73.61	57	P	P	16 44 55.3	+0.5
ISA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ISA	**Isabella, Lake**	73.61	57	P	P	16 44 55.3	+0.5
SUW	**Suwalki**	73.67	328	*e*P	P	16 44 55.0	+0.3
SUW	**Suwalki**	73.67	328	*e*P	P	16 44 55.0	+0.3
SUW	**Suwalki**	73.67	328	P	P	16 44 55.6	+0.8
SUW				pmax	pmax		
	comp=Z,68nm,1.1s						
SUW	**Suwalki**	73.67	328	P	P	16 44 55.5	+0.8
MHTO	**MHTO**	73.72	284	P	P	16 44 56.3	+0.7
	SNR=21						
GEVA	**Gevas**	73.73	306	P	P	16 44 54.7	-0.9
GEVA				IAmb	IAmb	16 44 58.7	
	comp=Z,31nm,1.3s						
DGMT	**Dagmar**	73.75	40	P	P	16 44 56.1	+0.7
	baz=312						
AHID	**Auburn Hatcher**	73.75	48	P	P	16 44 56.4	+0.7
BGU	**Big Grassy Mou**	73.78	50	P	P	16 44 56.7	+0.8
AJN	**Ajban**	73.81	289	*i* P	P	16 44 55.9	-0.1
	SNR=8.7						
AJN	**Ajban**	73.81	289	P	P	16 44 56.2	+0.1
	SNR=6.4						
R11A	**Troy Canyon, C**	73.82	54	P	P	16 44 57.1	+1.0
	baz=308,SNR=22						
R11A	**Troy Canyon, C**	73.82	54	P	P	16 44 56.8	+0.7
LAO	**LASA Array**	73.90	42	P	P	16 44 57.6	+1.3
	baz=311						
MPMC	**Manual Prospec**	74.01	56	P	P	16 44 57.9	+0.6
	baz=308,SNR=12						
OSI	**Osito Audit: C**	74.08	58	P	P	16 44 58.6	+1.0
	baz=307						
FURC	**Furnace Creek,**	74.16	56	P	P	16 44 59.0	+1.1
	baz=308						
LRMC	**Laurel Mtn Rad**	74.23	57	P	P	16 44 59.6	+1.1
	baz=308,SNR=5.4						
KOPT	**Kop Dagi**	74.25	309	P	P	16 44 59.1	+0.3
KOPT				IAmb	IAmb	16 45 03.3	
	comp=Z,35nm,1.2s						
TPNV	**Topopah Spring**	74.26	55	P	P	16 44 59.9	+1.2
	baz=308,SNR=27						
TPNV	**Topopah Spring**	74.26	55	P	P	16 44 59.8	+1.1
TPNV				pmax	pmax		
	comp=Z,27nm,1.0s						
TPNV				MLR	MLR		
	comp=Z,600nm,18.0s						
TPNV	**Topopah Spring**	74.26	55	P	P	16 44 59.8	+1.1
TPNV				IAmb	IAmb	16 45 04.0	
	comp=Z,26nm,1.0s						
TPNV				IAMs_20	IAMs_20	17 18 04.3	
	comp=Z,556nm,18.0s						
DUG	**Dugway, Tooele**	74.36	51	P	P	16 45 00.1	+0.8
	baz=309,SNR=14						
DUG	**Dugway, Tooele**	74.36	51	P	P	16 45 00.5	+1.2
DUG				pmax	pmax		
	comp=Z,20nm,1.0s						
DUG	**Dugway, Tooele**	74.36	51	P	P	16 45 00.5	+1.2
DUG				IAmb	IAmb	16 45 03.1	
	comp=Z,20nm,1.0s						
EDW2	**Edwards Air Fo**	74.39	58	P	P	16 45 00.5	+1.1
	baz=308,SNR=11						
TCUT	**Toone Canyon**	74.62	49	P	P	16 45 02.2	+1.3
BW06	**Boulder Array**	74.63	47	P	P	16 45 02.2	+1.3
	baz=310,SNR=14						
BW06	**Boulder Array**	74.63	47	P	P	16 45 01.5	+0.6
PD31	**Pinedale Array**	74.63	47	P	P	16 45 01.4	+0.6
PDAR	**Pinedale Array**	74.63	47	P	P	16 45 02.0	+1.1
	comp=Z,5.7nm,0.7s,baz=268,slow=2.1,SNR=48						
PDAR	**Pinedale Array**	74.63	47	P	P	16 45 01.1	+0.3
DQM	**DQM**	74.67	283	P	P	16 45 01.4	+0.3
	SNR=5.0						
MWC	**Mount Wilson**	74.75	58	P	P	16 45 02.0	+0.4
MWC				pmax	pmax		
	comp=Z,15nm,1.1s						
MWC	**Mount Wilson**	74.75	58	P	P	16 45 02.0	+0.4
PSUT	**Pine Spring**	74.77	53	P	P	16 45 01.8	+0.1
UMZA	**Um Al Zommool**	74.78	287	P	P	16 45 01.4	-0.3
FMP	**Fort Macarthur**	74.91	59	P	P	16 45 04.2	+1.9
	baz=308						
GSC	**Goldstone, Bar**	74.91	57	P	P	16 45 03.6	+1.1
	baz=308,SNR=5.4						
GSC	**Goldstone, Bar**	74.91	57	P	P	16 45 02.2	-0.2
GSC				pmax	pmax		
	comp=Z,9.0nm,1.1s						
GSC	**Goldstone, Bar**	74.91	57	P	P	16 45 02.2	-0.2
NLU	**North Lily Min**	74.96	50	P	P	16 45 02.8	0.0
BFSC	**Mount Baldy Ra**	75.00	58	P	P	16 45 04.2	+1.1
	baz=308						
CIS	**Catalina Islan**	75.02	59	P	P	16 45 04.4	+1.4
	baz=308						
MPU	**Maple Canyon**	75.18	50	P	P	16 45 04.2	+0.2
SHPR	**Sheep Range**	75.22	55	P	P	16 45 04.5	+0.3
HEC	**Hector,Ludlow**	75.50	57	P	P	16 45 07.2	+1.4
	baz=308						
SORM	**Soroca**	75.52	321	⇑P	P	16 45 06.5	+1.0
TCRU	**Three Creeks R**	75.58	52	P	P	16 45 05.8	-0.6
CCUT	**Cedar City**	75.69	53	P	P	16 45 08.8	+1.7
MURC	**Murrieta**	75.70	58	P	P	16 45 08.7	+1.7
	baz=308						
MARD	**Mardin**	75.77	307	P	P	16 45 08.4	+1.1
MVU	**Marysvale**	75.79	52	P	P	16 45 09.6	+1.9
MSU	**Marysvale**	75.81	52	P	P	16 45 09.2	+1.5
MSU	**Marysvale**	75.81	52	P	P	16 45 09.2	+1.5
SZCU	**Shurtz Canyon**	75.83	53	P	P	16 45 09.2	+1.3
TMUT	**Trail Mountain**	75.89	51	P	P	16 45 09.3	+1.0
GMRC	**Granite Mounta**	75.97	56	P	P	16 45 10.0	+1.4
	baz=309,SNR=6.9						
UMR	**Umm Al-Rimmam**	76.00	297	*e*P		16 45 07.0	
RDMU	**Red Mountain**	76.04	49	P	P	16 45 09.8	+0.8
P17A	**Butcher Ranch,**	76.06	50	P	P	16 45 09.9	+0.8
LCMT	**Little Creek M**	76.10	53	P	P	16 45 08.8	-0.5
MTPU	**Mount Pierson**	76.10	52	P	P	16 45 09.6	0.0
MIB	**Mutribah**	76.11	297	*e*P		16 45 07.9	
PFO	**Pinyon Flats O**	76.17	58	P	P	16 45 11.0	+1.3
	baz=308						
PFO	**Pinyon Flats O**	76.17	58	P	P	16 45 10.1	+0.3
PFO				pmax	pmax		
	comp=Z,10.0nm,1.1s						
PFO	**Pinyon Flats O**	76.17	58	P	P	16 45 10.1	+0.3
TPFO	**Pinon Flats**	76.18	58	P	P	16 45 10.8	+1.0
	baz=308						
NWAO	**Narrogin (SRO)**	76.19	203	P	P	16 45 09.3	-0.1
NWAO				pmax	pmax		
	comp=Z,20nm,0.9s						
NWAO	**Narrogin (SRO)**	76.19	203	P	P	16 45 09.3	-0.1
NWAO				IAmb	IAmb	16 45 11.5	
	comp=Z,20nm,0.8s						
BELC	**Belle Mtn. Jos**	76.23	57	P	P	16 45 11.1	+1.0
	baz=309						
BEL	**Belsk**	76.25	328	*e*P	P	16 45 11.0	+1.3
LVV	**L'vov**	76.34	325	*e*P	P	16 45 10.0	-0.2
LVV				*e*		16 48 05.2	
LVV				*e*S	S	16 54 54.1	-0.8
LVV				*e*PS	PnS	16 55 52.7	+21
LVV				pmax	pmax		
	comp=Z,140nm,1.8s						
LVV				MLR	MLR		
	comp=N,2µm,15.0s						
LVV				MLR	MLR		
	comp=E,3µm,15.0s						
LVV				MLR	MLR		
	comp=Z,3µm,15.0s						
KNB	**Kanab**	76.36	53	P	P	16 45 11.2	+0.4
KNB				pmax	pmax		
	comp=Z,20nm,0.9s						
KNB	**Kanab**	76.36	53	P	P	16 45 11.2	+0.4
K22A	**Casper**	76.40	46	P	P	16 45 12.0	+1.0
	baz=312						
ULM	**Lac du Bonnet**	76.40	35	P	P	16 45 11.1	+0.5
	comp=Z,10nm,0.8s,baz=305,slow=7.0,SNR=20						
ULM	**Lac du Bonnet**	76.40	35	P	P	16 45 10.8	+0.2
ULM				IAmb	IAmb	16 45 12.8	
	comp=Z,24nm,1.1s						
MDND	**Maddock**	76.41	38	P	P	16 45 12.4	+1.6
	baz=315						
SRU	**San Rafael Swe**	76.42	50	P	P	16 45 12.2	+1.1
SRU				pmax	pmax		
	comp=Z,29nm,0.9s						
SRU	**San Rafael Swe**	76.42	50	P	P	16 45 12.2	+1.1
RDF	**Al-Radifah**	76.50	296	*e*P		16 45 10.7	
RST	**Umm Al-Ruwaisa**	76.53	297	*e*P		16 45 10.2	
BAR	**Barrett**	76.61	59	P	P	16 45 12.8	+0.6
MONP2	**Monument Peak**	76.64	58	P	P	16 45 14.3	+1.8
	baz=309						
RWWY	**Rawlins**	76.66	47	P	P	16 45 12.6	+0.1
RWWY				IAmb	IAmb	16 45 14.4	
	comp=Z,19nm,0.9s						
IRM	**Iron Mountain**	76.69	57	P	P	16 45 13.8	+1.3
	baz=309						
RSSD	**Black Hills**	76.76	43	P	P	16 45 13.8	+0.8
	baz=313						
RSSD	**Black Hills**	76.76	43	P	P	16 45 12.8	-0.2
RSSD				pmax	pmax		
	comp=Z,15nm,0.8s						
RSSD	**Black Hills**	76.76	43	P	P	16 45 12.8	-0.2
RSSD				IAmb	IAmb	16 45 15.6	
	comp=Z,14nm,0.8s						
BC3	**Big Chuckawall**	76.80	57	P	P	16 45 14.6	+1.3
	baz=309						
TOO	**Toolangi**	76.80	178	P	P	16 45 13.2	+0.4
TOO				pmax	pmax		
	comp=Z,10.0nm,0.9s						
TOO	**Toolangi**	76.80	178	P	P	16 45 13.2	+0.4
CBX	**Cerro Bola**	76.84	59	P	P	16 45 13.6	0.0
MUD	**Monsted U'grnd**	76.86	336	*i* P	P	16 45 12.0	-1.0
MUD	**Monsted U'grnd**	76.86	336	*i* P	P	16 45 12.0	-1.0
MUD	**Monsted U'grnd**	76.86	336	*i* P	P	16 45 12.0	-1.0
IKP	**In-Ko-Pah, Jac**	77.00	58	P	P	16 45 15.1	+0.7
	baz=309						
SWSC	**Sam W. Stewart**	77.02	58	P	P	16 45 15.3	+0.9
	baz=309						
U15A	**North Rim**	77.06	53	P	P	16 45 15.9	+1.0
U15A				IAmb	IAmb	16 45 18.9	
	comp=Z,21nm,0.9s						
KWP	**Kalwaria Pacla**	77.06	325	*e*P	P	16 45 15.8	+1.4
KWP	**Kalwaria Pacla**	77.06	325	P	P	16 45 14.8	+0.4
KWP				pmax	pmax		
	comp=Z,122nm,1.2s						
KWP				MLR	MLR		
	comp=Z,1µm,21.0s						
KWP	**Kalwaria Pacla**	77.06	325	P	P	16 45 14.8	+0.4
KWP				IAMs_20	IAMs_20	17 20 47.3	
	comp=Z,1µm,21.0s						
O20A	**White River Ci**	77.09	48	P	P	16 45 16.1	+1.1
	baz=311,SNR=6.4						
O20A	**White River Ci**	77.09	48	P	P	16 45 15.2	+0.2
O20A				IAmb	IAmb	16 45 17.9	
	comp=Z,18nm,0.9s						
PDMCI	**Parker Dam,Lak**	77.24	56	P	P	16 45 17.0	+1.4
	baz=309						
TLCR		77.33	319	⇑P	P	16 45 17.2	+1.3
BUR08	**Bucovina Ar. S**	77.37	322	P	P	16 45 16.2	0.0
BUR08				IAmb	IAmb	16 45 19.0	
	comp=Z,20nm,0.8s						
BURAR	**Bucovina Array**	77.38	322	⇑P	P	16 45 17.4	+1.1
BURAR	**Bucovina Array**	77.38	322	P	P	16 45 16.0	-0.3
BIZ	**Bicaz**	77.44	322	⇑P	P	16 45 17.6	+1.1
TESR	**Tescani**	77.48	321	⇑P	P	16 45 17.6	+0.9
ILGA	**Ilgaz**	77.53	313	P	P	16 45 17.8	+0.4
GLA	**Glamis**	77.59	57	P	P	16 45 18.9	+1.2
	baz=309						
CFR	**Carcaliu**	77.69	319	⇑P	P	16 45 18.4	+0.6
PV23	**Carpenter Ridg**	77.74	50	P	P	16 45 19.2	+0.5
PV23				IAmb	IAmb	16 45 22.2	
	comp=Z,31nm,0.9s						
TPGR	**Topolog**	77.77	319	⇑P	P	16 45 19.1	+0.8
KOLS	**Kolonicke sedl**	77.77	325	*e*P	P	16 45 19.8	+1.5
KOLS				pmax	pmax		
	comp=Z,18nm,1.1s						
KOLS	**Kolonicke sedl**	77.77	325	*e*P	P	16 45 19.8	+1.5
PV10	**Paradox Valley**	77.78	50	P	P	16 45 19.6	+0.7
PV14	**Lion Creek, Pa**	77.79	50	P	P	16 45 19.4	+0.5
AGMN	**Agassiz Nation**	77.84	36	P	P	16 45 19.9	+1.2
	baz=317,SNR=6.3						
AGMN	**Agassiz Nation**	77.84	36	P	P	16 45 19.2	+0.5
PV04	**Paradox Valley**	77.84	50	P	P	16 45 20.2	+1.0
PV04				IAmb	IAmb	16 45 22.8	
	comp=Z,29nm,0.9s						
PV19	**Morning Glory**	77.85	50	P	P	16 45 20.1	+0.9
OJC	**Ojcow**	77.88	327	*e*P	P	16 45 20.0	+1.1
OJC	**Ojcow**	77.88	327	P	P	16 45 19.3	+0.4
OJC				pmax	pmax		
	comp=Z,63nm,1.0s						
OJC	**Ojcow**	77.88	327	P	P	16 45 19.2	+0.4
PV16	**Nyswonger Mesa**	77.89	50	P	P	16 45 20.8	+1.3
PV16				IAmb	IAmb	16 45 23.0	
	comp=Z,29nm,0.9s						
N23A	**Red Feather La**	77.89	47	P	P	16 45 21.0	+1.5
	baz=312,SNR=10						
VRI	**Vrincioaia**	77.90	320	⇑P	P	16 45 21.0	+1.8
PV11	**David Mesa, Pa**	77.93	50	P	P	16 45 21.3	+1.6
PV11				IAmb	IAmb	16 45 23.2	
	comp=Z,33nm,0.8s						
PV18	**Skein Mesa, Pa**	77.94	50	P	P	16 45 21.4	+1.7
PV18				IAmb	IAmb	16 45 23.2	
	comp=Z,25nm,0.8s						
PLOR	**Plostina**	77.95	320	⇑P	P	16 45 20.6	+1.2
PV03	**Paradox Valley**	77.97	50	P	P	16 45 20.8	+0.9
PV03				IAmb	IAmb	16 45 23.4	
	comp=Z,20nm,0.9s						
UZH	**Uzhgorod**	77.98	325	*e*P	P	16 45 20.2	+0.7
UZH				*i*		16 45 26.7	
UZH				*e*		16 45 31.0	
DOK	**Doka**	78.02	284	P	P	16 45 19.8	-0.3
	SNR=12						
GAZ	**Gaziantep**	78.04	308	P	P	16 45 21.4	+1.3
GAZ				IAmb	IAmb	16 45 23.7	
	comp=Z,34nm,1.0s						
GAZ				IAMs_20	IAMs_20	17 23 59.8	
	comp=Z,786nm,18.0s						
CRVS	**Cervenica-Dubn**	78.15	325	*e*P	P	16 45 21.8	+1.3
CRVS				pmax	pmax		
	comp=Z,71nm,1.5s						
CRVS	**Cervenica-Dubn**	78.15	325	*e*P	P	16 45 21.8	+1.3
ARCR	**ARCALIA**	78.17	322	⇑P	P	16 45 22.4	+1.8
OZUR		78.20	321	⇑P	P	16 45 22.8	+2.0
WUAZ	**Wupatki**	78.22	54	P	P	16 45 22.9	+1.7
	baz=310,SNR=14						
WUAZ	**Wupatki**	78.22	54	P	P	16 45 21.8	+0.5
WUAZ				IAmb	IAmb	16 45 25.0	
	comp=Z,26nm,1.1s						
NIE	**Niedzica**	78.27	326	*e*P	P	16 45 22.7	+1.6
BR131	**Keskin Array S**	78.46	312	P	P	16 45 22.5	0.0
BR131				pmax	pmax		
	comp=Z,20nm,1.0s						
BR131	**Keskin Array S**	78.46	312	P	P	16 45 22.5	0.0
BR131				IAmb	IAmb	16 45 26.0	
	comp=Z,20nm,0.9s						
BRTR	**Keskin Array B**	78.46	312	P	P	16 45 23.2	+0.7
	comp=Z,5.7nm,0.8s,baz=72,slow=4.0,SNR=14						
BRTR				LR	LR	17 24 48.7	
	comp=Z,1000nm,18.4s,baz=16,slow=39						
BRTR	**Keskin Array B**	78.46	312	P	P	16 45 22.1	-0.3
113A	**Mohawk Valley,**	78.46	57	P	P	16 45 22.6	+0.2
DOPR	**Dopca**	78.48	321	⇑P	P	16 45 24.1	+1.7
ISR	**Istrita**	78.53	320	⇑P	P	16 45 24.3	+1.7
BSEG	**Bad Segeberg**	78.56	334	*e*P	P	16 45 23.7	+1.2
	comp=Z,54nm,1.0s,baz=34,slow=5.4						
BSEG				*e*L	L	17 23 30.1	
	comp=Z,3µm,18.9s						
ICOR	**Ion Corvin**	78.60	319	⇑P	P	16 45 25.1	+2.1
WHFO	**Wadi Hawf**	78.72	284	P	P	16 45 22.4	-1.7
	SNR=6.6						
B35A	**Bob, Littlefor**	78.75	35	P	P	16 45 23.6	-0.1
B35A				IAmb	IAmb	16 45 25.9	
	comp=Z,19nm,0.8s						
ISCO	**Idaho Springs**	78.82	47	P	P	16 45 25.8	+1.1
	baz=313,SNR=5.5						
LANS	**Liptovska Anna**	78.83	326	*e*P	P	16 45 26.5	+2.3
LANS				pmax	pmax		
	comp=Z,21nm,1.4s						
LANS	**Liptovska Anna**	78.83	326	*e*P	P	16 45 26.5	+2.3
KSP	**Ksiaz**	78.84	329	*e*P	P	16 45 25.3	+1.2
OKC	**Ostrava-Krasne**	78.86	328	AMS	AMS	17 26 30.0	
	comp=Z,3µm,11.9s						
MVCO	**Mesa Verde**	78.87	51	P	P	16 45 26.0	+1.1
	baz=312,SNR=9.9						
MVCO	**Mesa Verde**	78.87	51	P	P	16 45 23.4	-1.5
MVCO				IAmb	IAmb	16 45 28.3	
	comp=Z,17nm,0.8s						
BR231	**Keskin MP Arra**	78.87	313	P	P	16 45 23.6	-1.1
BR231				IAmb	IAmb	16 45 27.6	
	comp=Z,28nm,0.9s						
VOIR		79.03	321	⇑P	P	16 45 27.4	+1.9
OSTC	**Ostas**	79.09	329	*e*P	P	16 45 28.2	+2.6
OSTC				AMS	AMS	17 27 00.0	
	comp=Z,3µm,11.6s						
CHVC	**Chvalec**	79.13	329	*e*P	P	16 45 26.7	+0.9
CHVC				AMS	AMS	17 25 50.0	
	comp=Z,3µm,17.7s						
SUSD	**Miller**	79.15	40	P	P	16 45 27.0	+1.0
	baz=316						
SUSD	**Miller**	79.15	40	P	P	16 45 26.4	+0.4
MORC	**Moravsky Berou**	79.16	328	⇑P	P	16 45 27.4	+1.4
MORC	**Moravsky Berou**	79.16	328	*e*P	P	16 45 27.2	+1.2
MORC	**Moravsky Berou**	79.16	328	P	P	16 45 26.0	0.0
MORC				pmax	pmax		
	comp=Z,28nm,0.9s						
MORC				MLR	MLR		
	comp=Z,2µm,20.0s						
MORC	**Moravsky Berou**	79.16	328	P	P	16 45 26.0	0.0
MORC				IAmb	IAmb	16 45 55.4	
	comp=Z,28nm,0.9s						
DPC	**Dobruska-Polom**	79.21	329	*e*P	P	16 45 27.4	+1.1
DPC				MLR	MLR		
	comp=Z,4µm,12.4s						
DPC	**Dobruska-Polom**	79.21	329	*e*P	P	16 45 27.4	+1.1
DPC				AMS	AMS	17 25 30.0	
	comp=Z,4µm,12.4s						
UPC	**Upice**	79.21	329	*e*P	P	16 45 28.2	+2.0
UPC				MLR	MLR		
	comp=Z,3µm,20.4s						
UPC	**Upice**	79.21	329	*e*P	P	16 45 28.2	+2.0
UPC				AMS	AMS	17 26 00.0	
	comp=Z,3µm,20.4s						
KRLC	**Kraliky**	79.24	328	*e*P	P	16 45 27.2	+0.7
KRLC				MLR	MLR		
	comp=Z,3µm,13.4s						
KRLC	**Kraliky**	79.24	328	*e*P	P	16 45 27.2	+0.7
KRLC				AMS	AMS	17 25 30.0	
	comp=Z,3µm,13.4s						
ARR	**Arges**	79.28	321	⇑P	P	16 45 28.6	+1.8
MDUB	**Mudurnu**	79.33	314	P	P	16 45 26.8	-0.4
ABTO	**Aybut**	79.42	284	P	P	16 45 27.7	-0.3
	SNR=10						
F33A	**5 Mile Ranch,**	79.44	38	P	P	16 45 27.5	-0.1
F33A				IAmb	IAmb	16 45 30.0	
	comp=Z,21nm,0.9s						
W18A	**Petrified Fore**	79.49	53	P	P	16 45 29.6	+1.3
	baz=311						
W18A	**Petrified Fore**	79.49	53	P	P	16 45 27.8	-0.5
S22A	**4UR Ranch, Cre**	79.50	49	P	P	16 45 29.6	+1.2
	baz=312,SNR=10						
FLTG	**Flechtingen**	79.55	333	*e*P	P	16 45 28.6	+0.6
	comp=Z,44nm,1.0s,baz=34,slow=5.4						
PSZ	**Piszkesteto**	79.58	325	⇑P	P	16 45 30.5	+2.1
PSZ	**Piszkesteto**	79.58	325	P	P	16 45 28.7	+0.3
PSZ				pmax	pmax		
	comp=Z,45nm,1.1s						
PSZ				MLR	MLR		
	comp=Z,5µm,18.0s						
PSZ	**Piszkesteto**	79.58	325	P	P	16 45 28.7	+0.3
PSZ				IAmb	IAmb	16 45 32.2	
	comp=Z,45nm,1.1s						
214A	**Organ Pipe Nat**	79.60	57	P	P	16 45 30.4	+1.7
	baz=310						
Q24A	**Divide**	79.65	48	P	P	16 45 30.4	+1.1
	baz=313						
HUMR	**Humele**	79.72	320	⇑P	P	16 45 29.7	+0.6
BRG	**Berggiesshubel**	79.73	330	*e*P	P	16 45 29.8	+0.7
BRG				Amp		16 45 32.4	
	comp=Z,37nm,1.3s						
BRG				*e*x	x	16 45 40.2	
BRG				Amp		16 45 41.0	
	comp=Z,13nm,0.9s						
BRG				*e*x	x	16 45 57.9	
BRG				Amp		16 46 00.7	
	comp=Z,14nm,1.0s						
BRG	**Berggiesshubel**	79.73	330	*e*P	P	16 45 29.9	+0.9
	comp=Z,37nm,1.3s,baz=34,slow=5.4						
CLL	**Collm**	79.74	331	*i* P	P	16 45 29.2	+0.1
	comp=Z,41nm,1.0s						
CLL				*i*		16 45 57.5	
CLL				*e*PP	PP	16 48 28.0	-1.4
CLL				*e*S	S	16 55 29.0	-2.4
CLL				*e*(SS)		17 01 24.0	
CLL				*e*		17 05 06.0	
CLL				LmH		17 19 00.0	
	comp=N,3µm,19.1s						
CLL				LmH		17 19 00.0	
	comp=E,4µm,20.5s						
CLL				LmV		17 26 00.0	
	comp=N,2µm,20.5s						
CLL				LmV		17 26 00.0	
	comp=E,700nm,18.5s						
CLL	**Collm**	79.74	331	*i* P	P	16 45 29.2	+0.1
CLL				*e*S	S	16 55 29.0	-2.4
CLL				pmax	pmax		
	comp=Z,41nm,1.0s						
CLL	**Collm**	79.74	331	P	P	16 45 28.4	-0.6
CLL				IAmb	IAmb	16 45 31.4	
	comp=Z,33nm,0.9s						
CLL	**Collm**	79.74	331	*e*P	P	16 45 29.6	+0.5
	comp=Z,41nm,0.9s,baz=34,slow=5.4						
CLL				*e*L	L	17 24 05.0	
	comp=Z,2µm,20.8s						
X18A	**Snowflake**	79.75	54	P	P	16 45 29.1	-0.6
PVCC	**Panska Ves**	79.76	330	*e*P	P	16 45 30.8	+1.6
PVCC				*e*		16 45 35.1	
PVCC				MLR	MLR		
	comp=Z,4µm,19.9s						
PVCC	**Panska Ves**	79.76	330	*e*P	P	16 45 30.8	+1.6
PVCC				*e*pP	pwP	16 45 35.1	-0.4
PVCC				AMS	AMS	17 24 00.0	
	comp=Z,4µm,19.9s						
JAVC	**Velka Javorina**	79.82	327	*e*P	P	16 45 31.7	+2.1
COPA	**Copaceanca**	79.89	320	⇓P	P	16 45 31.5	+1.5
VRAC	**Vranov**	79.92	328	⇑P	P	16 45 32.4	+2.3
VRAC	**Vranov**	79.92	328	*e*P	P	16 45 31.3	+1.2
FBE	**Freiberg**	79.92	331	*e*P	P	16 45 31.5	+1.4
	comp=Z,36nm,1.1s,baz=34,slow=5.4						
OGNE	**Ogallala**	80.02	45	P	P	16 45 32.0	+1.1
	baz=314						
OGNE	**Ogallala**	80.02	45	P	P	16 45 30.9	0.0
OGNE				IAmb	IAmb	16 45 34.4	
	comp=Z,47nm,0.9s						
EYMN	**Ely**	80.04	34	P	P	16 45 31.5	+0.7
	baz=320,SNR=6.9						
EYMN	**Ely**	80.04	34	P	P	16 45 30.6	-0.1
GZR	**Gura Zlata**	80.16	322	⇓P	P	16 45 32.2	+0.7
PRA	**Prague**	80.18	330	AMS	AMS	17 24 20.0	
	comp=Z,2µm,19.7s						
SMOL	**Smolenice**	80.19	327	*e*P	P	16 45 33.1	+1.5
SMOL				pmax	pmax		

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      comp=Z,17nm,1.1s
SMOL  Smolenice         80.19 327 eP       P        16 45 33.1 +1.5
KRUC  Moravsky          80.19 328 eP       P        16 45 32.5 +0.9
PRU   Pruhonice         80.20 329 eP       P        16 45 32.7 +1.1
PRU                               e                 16 45 41.0
PRU                                MLR     MLR
      comp=Z,3µm,19.6s
PRU   Pruhonice         80.20 329 eP       P        16 45 32.7 +1.1
PRU                               ex       x        16 45 41.0
PRU                                AMS     AMS      17 24 10.0
      comp=Z,3µm,19.6s
CLZ   Clausthal         80.26 333 eP       P        16 45 33.1 +1.2
      comp=Z,46nm,1.2s,baz=34,slow=5.4
NEUB  Neuenburg         80.27 332 eP       P        16 45 32.8 +0.9
      comp=Z,43nm,1.0s,baz=34,slow=5.4
SDCO  Great Sand Dun    80.28  49  P       P        16 45 33.8 +1.2
      baz=313,SNR=6.4
SRO   Srobarova         80.35 326 eP       P        16 45 34.8 +2.4
SRO   Srobarova         80.35 326 eP       P        16 45 34.8 +2.4
MODS  Modra-Piesok      80.36 327 eP       P        16 45 33.9 +1.4
MODS                               pmax    pmax
      comp=Z,49nm,1.3s
MODS  Modra-Piesok      80.36 327 eP       P        16 45 33.9 +1.4
TREC  Trest             80.38 329 eP       P        16 45 34.2 +1.6
TREC                               MLR     MLR
      comp=Z,4µm,14.7s
TREC  Trest             80.38 329 eP       P        16 45 34.2 +1.6
TREC                               AMS     AMS      17 26 10.0
      comp=Z,4µm,14.7s
BZS   Buzias            80.53 323 ⇑P       P        16 45 34.2 +0.7
K31A  O'Neill           80.56  42  P       P        16 45 34.5 +0.8
ZST   Bratislava        80.57 327 eP       P        16 45 35.5 +1.9
ZST                                pmax    pmax
      comp=Z,113nm,1.4s
ZST   Bratislava        80.57 327 eP       P        16 45 35.5 +1.9
GTTG  Gottingen         80.65 333 eP       P        16 45 35.1 +1.1
      comp=Z,53nm,1.4s,baz=34,slow=5.4
PBCC  Pribram           80.66 330 eP       P        16 45 35.7 +1.6
TANN  Tannenbergstha    80.66 331 eP       P        16 45 35.1 +0.9
      comp=Z,58nm,1.9s,baz=34,slow=5.4
TUC   Tucson            80.67  56  P       P        16 45 36.0 +1.4
      baz=311
TUC   Tucson            80.67  56  P       P        16 45 35.5 +0.9
TUC                                pmax    pmax
      comp=Z,8.0nm,1.1s
TUC   Tucson            80.67  56  P       P        16 45 35.5 +0.9
HERR  Herculane         80.71 322 ⇑P       P        16 45 34.8 +0.4
PLN   Plauen            80.72 331 eP       P        16 45 35.5 +1.1
      comp=Z,31nm,1.4s,baz=34,slow=5.4
PLVB  Pleven            80.73 320 ⇑P       P        16 45 35.0 +0.4
GUNZ  Gunzen            80.75 331 eP       P        16 45 35.6 +1.0
      comp=Z,35nm,1.3s,baz=34,slow=5.4
IBBN  Ibbenburen        80.78 334 eP       P        16 45 35.4 +0.8
      comp=Z,48nm,1.1s,baz=34,slow=5.4
WERN  Wernitzgruen      80.80 331 eP       P        16 45 35.7 +0.8
      comp=Z,29nm,1.0s,baz=34,slow=5.4
NKC   Novy Kostel       80.81 331 eP       P        16 45 35.5 +0.6
NKC                                MLR     MLR
      comp=Z,3µm,12.2s
NKC   Novy Kostel       80.81 331 eP       P        16 45 35.5 +0.6
NKC                                AMS     AMS      17 26 20.0
      comp=Z,3µm,12.2s
ECSD  EROS Data Cent    80.83  40  P       P        16 45 35.9 +0.7
      baz=317,SNR=18
ECSD  EROS Data Cent    80.83  40  P       P        16 45 35.1  0.0
ECSD                               IAmb    IAmb     16 45 37.5
      comp=Z,25nm,0.9s
E38A  The Farm, Brul    81.04  35  P       P        16 45 36.2  0.0
E38A                               IAmb    IAmb     16 45 38.1
      comp=Z,26nm,0.9s
KSCO  Kaye Shedlock'    81.04  46  P       P        16 45 37.6 +1.1
      baz=314
MDVR  Moldovita         81.11 322 ⇓P       P        16 45 37.1 +0.4
MANZ  Manzenberg        81.14 331 eP       P        16 45 37.8 +1.0
      comp=Z,22nm,1.0s,baz=34,slow=5.4
CKRC  Cesky Krumlov     81.22 329 eP       P        16 45 37.6 +0.5
UBBA  Unterbreizbach    81.24 332 eP       P        16 45 37.9 +0.9
      comp=Z,71nm,2.0s,baz=34,slow=5.4
KHC   Kasperske Hory    81.27 329 eP       P        16 45 37.9 +0.5
KHC                               e                 16 45 48.4
KHC                                MLR     MLR
      comp=Z,4µm,10.7s
KHC   Kasperske Hory    81.27 329 eP       P        16 45 37.9 +0.5
KHC                               ex       x        16 45 48.4
KHC                               ex       x        16 46 03.0
KHC                                AMS     AMS      17 26 00.0
      comp=Z,4µm,10.7s
KHC   Kasperske Hory    81.27 329  P       P        16 45 37.4 +0.1
KHC                                IAmb    IAmb     16 45 40.4
      comp=Z,28nm,1.0s
ROTZ  Rotzenmuhle       81.28 331 eP       P        16 45 38.6 +1.2
      comp=Z,48nm,1.4s,baz=34,slow=5.4
EKA   Eskdalemuir Ar    81.29 342  LR      LR       17 26 00.9
      comp=Z,705nm,18.3s,baz=55,slow=39
RAYN  Ar Rayn           81.29 293 i P      P        16 45 37.4 -0.5
      SNR=36
RAYN  Ar Rayn           81.29 293  P       P        16 45 37.2 -0.8
RAYN                               pmax    pmax
      comp=Z,24nm,0.9s
RAYN                               MLR     MLR
      comp=Z,500nm,21.0s
RAYN  Ar Rayn           81.29 293  P       P        16 45 37.2 -0.8
RAYN                               IAmb    IAmb     16 45 40.2
      comp=Z,24nm,0.8s
CONA  Conrad Observa    81.30 327 eP       P        16 45 38.9 +1.3
      comp=Z,31nm,1.2s,SNR=17
T25A  Trinidad          81.32  49  P       P        16 45 39.7 +1.5
      baz=314,SNR=16
MORH  Mrgy, Hungar      81.44 325 ⇑P       P        16 45 38.4 +0.1
GEC2  GERESS Array S    81.45 329  P       P        16 45 37.9 -0.5
GEC2  GERESS Array S    81.45 329 eP       P        16 45 39.2 +0.8
      comp=Z,20nm,1.2s,baz=34,slow=5.4
GEC2                              eL       L        17 25 18.9
      comp=Z,2µm,18.0s
GERES GERESS Array B    81.45 329  P       P        16 45 39.0 +0.6
      comp=Z,5.7nm,0.8s,baz=33,slow=5.1,SNR=32
GERES                              LR      LR       17 25 28.9
      comp=Z,2µm,18.2s,baz=18,slow=38
GERES GERESS Array B    81.45 329  P       P        16 45 39.0 +0.6
GERES GERESS Array B    81.45 329  P       P        16 45 38.2 -0.2
KASTN Kahler Asten      81.48 333 eP       P        16 45 39.4 +1.0
      comp=Z,21nm,1.2s,baz=34,slow=5.4
WET   Wettzell          81.53 330 eP       P        16 45 40.2 +1.4
      comp=Z,39nm,1.3s,baz=34,slow=5.4
WET                               eL       L        17 25 04.1
      comp=Z,3µm,20.2s
ISP   Isparta           81.53 313  IAMs_20 IAMs_20  17 26 51.9
      comp=Z,864nm,20.0s
ANMO  Albuquerque       81.61  51  P       P        16 45 40.9 +1.3
      baz=313
ANMO  Albuquerque       81.61  51  P       P        16 45 39.2 -0.5
ANMO                               pmax    pmax
      comp=Z,16nm,1.1s
ANMO  Albuquerque       81.61  51  P       P        16 45 39.2 -0.5
GRA1  Grafenberg Arr    81.72 331  P       P        16 45 39.2 -0.5
GRF   Grafenberg Arr    81.72 331  P       P        16 45 39.2 -0.5
GRF                                pmax    pmax
      comp=Z,48nm,1.0s
GRF   Grafenberg Arr    81.72 331 eP       P        16 45 41.1 +1.4
      comp=Z,72nm,1.1s,baz=34,slow=5.4
GRF                               eL       L        17 26 49.2
      comp=Z,2µm,18.2s
FRGS  Fruska Gora       81.72 324 ⇑P       P        16 45 40.7 +0.9
GRFO  Grafenberg        81.72 331  P       P        16 45 39.0 -0.7
GRFO                               pmax    pmax
      comp=Z,51nm,1.0s
GRFO  Grafenberg        81.72 331  P       P        16 45 39.0 -0.7
BGNE  Belgrade          81.75  42  P       P        16 45 41.1 +1.0
      baz=317
BGNE  Belgrade          81.75  42  P       P        16 45 39.6 -0.5
CSS   Mathiatis         81.86 309  IAMs_20 IAMs_20  17 27 05.7
      comp=Z,705nm,18.0s
ARSA  Arzberg           81.97 327 eP       P        16 45 42.4 +1.2
      comp=Z,16nm,1.4s
BOVS  Bovan             81.97 322 ⇑P       P        16 45 41.1  0.0
VTS   Vitosha           81.98 320 ⇑P       P        16 45 42.9 +1.4
VTS   Vitosha           81.98 320  P       P        16 45 41.7 +0.2
VTS                                pmax    pmax
      comp=Z,35nm,0.9s
VTS                                MLR     MLR
      comp=Z,1µm,18.0s
VTS   Vitosha           81.98 320  P       P        16 45 41.7 +0.2
VTS                                IAmb    IAmb     16 45 44.7
      comp=Z,35nm,0.9s
VTS                                IAMs_20 IAMs_20  17 28 24.7
      comp=Z,1µm,18.0s
MOA   Molln             82.02 328 eP       P        16 45 43.3 +1.9
      comp=Z,22nm,2.0s
BNM   Barren Site       82.04  52  P       P        16 45 41.3 -0.7
SOCY  Socotra           82.09 279  P       P        16 45 40.2 -2.1
SOCY                               IAMs_20 IAMs_20  17 23 49.0
      comp=Z,526nm,19.0s
SOCY  Socotra           82.09 279  P       P        16 45 40.8 -1.6
I37A  Lemond, Waseca    82.17  38  P       P        16 45 42.9 +0.7
319A  Douglas           82.25  56  P       P        16 45 43.8 +0.8
319A                               IAmb    IAmb     16 46 07.7
      comp=Z,43nm,1.4s
TNS   Taunus Mts        82.28 333 eL       L        17 25 36.3
      comp=Z,1µm,18.3s
121A  Cookes Peak, D    82.42  54  P       P        16 45 45.3 +1.3
      baz=312,SNR=6.8
121A  Cookes Peak, D    82.42  54  P       P        16 45 44.3 +0.3
121A                               IAmb    IAmb     16 45 57.6
      comp=Z,23nm,1.3s
DIVS  Divibare          82.44 323  P       P        16 45 43.5 -0.2
DIVS                               IAmb    IAmb     16 45 46.1
      comp=Z,17nm,1.0s
DIVS                               IAMs_20 IAMs_20  17 24 27.6
      comp=Z,1µm,19.0s
AHRW  Bad Neuenahr-A    82.49 334 eP       P        16 45 44.5 +0.8
      comp=Z,36nm,1.2s,baz=34,slow=5.4
PERS  Pernice           82.63 327 eP       P        16 45 45.3 +0.7
SOKA  Soboth            82.63 327 eP       P        16 45 45.6 +0.9
      comp=Z,39nm,1.1s,SNR=11
ELL   Elmali            82.63 312  P       P        16 45 45.6 +0.7
ELL                                pmax    pmax
      comp=Z,63nm,1.0s
ELL                                MLR     MLR
      comp=Z,3µm,22.0s
ELL   Elmali            82.63 312  P       P        16 45 45.6 +0.7
G40A  Rib Lake          82.67  35  P       P        16 45 45.5 +0.7
RJOB  Jochberg          82.70 329 eP       P        16 45 46.4 +1.4
      comp=Z,146nm,1.2s,baz=34,slow=5.4
CBKS  Cedar Bluff       82.77  45  P       P        16 45 46.4 +0.9
      baz=316
CBKS  Cedar Bluff       82.77  45  P       P        16 45 46.3 +0.8
CBKS                               pmax    pmax
      comp=Z,26nm,0.9s
CBKS                               MLR     MLR
      comp=Z,700nm,21.0s
CBKS  Cedar Bluff       82.77  45  P       P        16 45 46.3 +0.8
CBKS                               IAmb    IAmb     16 45 47.5
      comp=Z,26nm,0.8s
CBKS                               IAMs_20 IAMs_20  17 26 11.9
      comp=Z,744nm,21.0s
BTNL  Ternell           82.78 334 dP       P        16 45 47.0 +1.7
MEM   Membach           82.80 334 dP       P        16 45 46.5 +1.1
FUR   Furstenfeldbru    82.94 330 eP       P        16 45 47.5 +1.3
      comp=Z,61nm,1.3s,baz=34,slow=5.4
FUR                               eL       L        17 26 15.8
      comp=Z,3µm,18.7s
OBKA  Obir              82.97 327 eP       P        16 45 47.8 +1.4
      comp=Z,18nm,0.9s
KBA   Koelnbreinsper    83.01 328 eP       P        16 45 47.7 +0.9
      comp=Z,53nm,1.9s,SNR=10
STIP  Stip              83.19 320 i P      P        16 45 47.7 +0.2
STU   Stuttgart         83.23 332 eP       P        16 45 49.2 +1.6
      comp=Z,42nm,1.0s,baz=34,slow=5.4
MYKA  Terra Mystica     83.25 328 eP       P        16 45 48.0 +0.2
      comp=Z,24nm,1.2s
VAY   Valandovo         83.28 319 i P      P        16 45 49.5 +1.5
BGES  Gesves            83.30 335 dP       P        16 45 47.9  0.0
LJU   Ljubljana         83.35 327 eP       P        16 45 48.9 +0.6
SKO   Skopje            83.35 321 i P      P        16 45 50.3 +1.9
PRED  Cave del Predi    83.43 328  P       P        16 45 49.1 +0.3
PRED                               IAmb    IAmb     16 45 50.3
      comp=Z,14nm,0.9s
N35A  Tabor             83.43  41  P       P        16 45 49.6 +0.8
BMRD  Maredsous         83.47 335 dP       P        16 45 49.1 +0.3
WATA  Walderalm         83.51 329 eP       P        16 45 49.8 +0.5
      comp=Z,36nm,1.5s,SNR=6.8
WTTA  Wattenberg        83.54 329 eP       P        16 45 50.6 +1.1
      comp=Z,35nm,1.6s,SNR=6.1
ABTA  Abfaltersbach     83.61 329 eP       P        16 45 51.4 +1.6
      comp=Z,8.8nm,0.8s
MOTA  Moosalm           83.68 330 eP       P        16 45 51.5 +1.3
      comp=Z,32nm,1.0s,SNR=11
RETA  Reutte            83.70 330 eP       P        16 45 51.2 +1.1
      comp=Z,29nm,1.1s,SNR=9.2
SQTA  Sankt Quirin      83.74 330 eP       P        16 45 51.1 +0.7
      comp=Z,19nm,1.1s,SNR=7.2
UBR   Ueberruh          83.79 330 eP       P        16 45 51.5 +0.9
      comp=Z,127nm,2.1s,baz=34,slow=5.4
SCIA  State Center      83.85  39  P       P        16 45 52.8 +1.9
      baz=320
BFO   Black Forest      83.91 332  P       P        16 45 51.3 +0.1
BFO                                pmax    pmax
      comp=Z,29nm,1.3s
BFO   Black Forest      83.91 332  P       P        16 45 51.3 +0.1
BFO                                IAmb    IAmb     16 45 54.6
      comp=Z,29nm,1.3s
BFO   Black Forest      83.91 332 eP       P        16 45 51.8 +0.6
      comp=Z,71nm,1.7s,baz=34,slow=5.4
BFO                               eL       L        17 27 06.2
      comp=Z,2µm,20.4s
CIMO  Cimolais          84.00 328  P       P        16 45 51.7  0.0
CIMO                               IAmb    IAmb     16 45 53.4
      comp=Z,24nm,1.2s
PDG   Podgorica         84.06 322 ⇑P       P        16 45 52.1 +0.2
PDG   Podgorica         84.06 322  P       P        16 45 51.7 -0.3
PDG                                IAMs_20 IAMs_20  17 26 16.4
      comp=Z,1µm,20.0s
FETA  Feichten          84.09 330 eP       P        16 45 52.7 +0.4
      comp=Z,23nm,1.1s,SNR=7.4
DAVA  Damuels           84.20 330 eP       P        16 45 53.4 +0.5
      comp=Z,29nm,1.0s,SNR=11
PPT   Papeete           84.24 118  LR      LR       17 15 48.6
      comp=Z,611nm,21.7s,baz=292,slow=30
QRZ   Quartz Range      84.25 158  IAMs_20 IAMs_20  17 16 59.6
      comp=Z,734nm,20.0s
PPT2  Papeete2          84.26 118 eS       S        16 56 00.4  -18
      comp=Z,976nm,31.0s
PPT2  Papeete2          84.26 118 eLR      LR       17 12 07.0
      comp=Z,1µm,22.5s,baz=312
FNA   Florina           84.28 320  P       P        16 45 52.6 -0.6
FNA                                pmax    pmax
      comp=Z,21nm,1.0s
FNA   Florina           84.28 320  P       P        16 45 52.6 -0.6
FNA                                IAmb    IAmb     16 46 09.3
      comp=Z,21nm,1.0s
E46A  Sault Ste Mari    84.28  31  IAMs_20 IAMs_20  17 24 53.8
      comp=Z,800nm,21.0s
ECH   Echery            84.43 332  P       P        16 45 54.0 +0.2
ECH                                pmax    pmax
      comp=Z,26nm,1.1s
ECH   Echery            84.43 332  P       P        16 45 54.0 +0.2
ECH                                IAmb    IAmb     16 45 56.1
      comp=Z,26nm,1.1s
EIL   Elat              84.44 304  LR      LR       17 27 35.4
      comp=Z,561nm,20.6s,baz=27,slow=39
AMTX  Amarillo          84.48  49  P       P        16 45 55.5 +1.1
      baz=315
AMTX  Amarillo          84.48  49  P       P        16 45 54.2 -0.2
MNTX  Cornudas Mount    84.48  53  P       P        16 45 55.6 +1.2
      baz=314,SNR=12
MNTX  Cornudas Mount    84.48  53  P       P        16 45 54.5 +0.2
MSTX  Muleshoe          84.48  50  P       P        16 45 54.6 +0.2
MSTX                               IAmb    IAmb     16 45 57.8
      comp=Z,19nm,0.8s
JFWS  Jewell Farm       84.48  37  P       P        16 45 55.4 +1.2
      baz=321
CTI   Castel Tesino     84.53 329  P       P        16 45 53.5 -1.0
CTI                                pmax    pmax
      comp=Z,28nm,1.3s
CTI                                MLR     MLR
      comp=Z,2µm,18.0s
CTI   Castel Tesino     84.53 329  P       P        16 45 53.5 -1.0
CTI                                IAmb    IAmb     16 46 22.3
      comp=Z,28nm,1.3s
N38A  Joes South For    84.69  40  P       P        16 45 54.2 -1.1
L40A  Anamosa           84.69  38  P       P        16 45 55.5 +0.3
LSQQ  Lebel-sur-Quev    84.70  25  P       P        16 45 55.8 +0.7
      baz=330
GDL2  Guadalupe Moun    84.76  52  P       P        16 45 56.6 +0.7
TUE   Stuetta           85.08 330  P       P        16 45 57.5 +0.2
TUE                                IAmb    IAmb     16 45 59.9
      comp=Z,28nm,1.0s
TAOE  Nuku Hiva Isla    85.12 106 eLR      LR       17 12 31.0
      comp=Z,1µm,20.7s
BFZ   Birch Farm        85.24 156  IAMs_20 IAMs_20  17 30 45.8
      comp=Z,714nm,20.0s
VLDQ  Val d'Or          85.36  26  P       P        16 45 57.6 -0.8
SANT  Santorini         85.40 314  IAMs_20 IAMs_20  17 28 44.8
      comp=Z,1µm,20.0s
P38A  Dawn              85.43  41  P       P        16 45 59.3 +0.3
P38A                               IAmb    IAmb     16 46 01.5
      comp=Z,28nm,1.0s
L42A  Oliver, Polo      85.46  37  P       P        16 45 58.5 -0.6
L42A                               IAmb    IAmb     16 46 00.9
      comp=Z,20nm,0.9s
T35A  Sooner Cattle     85.90  44  IAMs_20 IAMs_20  17 31 51.7
      comp=Z,1µm,18.0s
SENIN Lac Senin/Sane    85.95 331  P       P        16 46 01.4 -0.3
SENIN                              IAmb    IAmb     16 46 03.9
      comp=Z,15nm,0.9s
WMOK  Wichita Mounta    86.24  47  P       P        16 46 03.0 -0.1
WMOK                               pmax    pmax
      comp=Z,16nm,1.0s
WMOK  Wichita Mounta    86.24  47  P       P        16 46 03.0 -0.1
WMOK                               IAmb    IAmb     16 46 05.7
      comp=Z,16nm,0.9s
LPIG  La Paz            86.41  62  LR      LR       17 24 02.1
      comp=Z,266nm,18.6s,baz=282,slow=35
OKCFA Oklahoma City     86.49  46  IAMs_20 IAMs_20  17 24 06.5
      comp=Z,726nm,20.0s
IDI   Anoyia            86.51 314  LR      LR       17 29 58.5
      comp=Z,410nm,18.0s,baz=40,slow=39
ITM   Ithomi            86.71 317  IAMs_20 IAMs_20  17 27 40.9
      comp=Z,841nm,20.0s
HDIL  Hopedale          86.77  38  P       P        16 46 06.3 +0.7
      baz=322
D55A  Sainte-Anne-du    86.98  26  P       P        16 46 06.4 -0.1
      baz=331
S39A  Bolivar           87.00  42  P       P        16 46 06.1 -0.6
S39A                               IAmb    IAmb     16 46 08.5
      comp=Z,13nm,0.9s
ALGO  Algonquin Park    87.00  28  P       P        16 46 07.4 +0.8
      baz=329
R40A  Maddies Statio    87.08  41  P       P        16 46 07.0 -0.1
R40A                               IAmb    IAmb     16 46 09.3
      comp=Z,18nm,0.9s
TX31  Lajitas Ar. Si    87.18  54  P       P        16 46 08.6 +0.7
TX32  Lajitas Array     87.18  54  P       P        16 46 08.6 +0.7
TXAR  Lajitas Array     87.18  54  P       P        16 46 09.2 +1.2
      comp=Z,4.3nm,0.8s,baz=297,slow=3.6,SNR=33
TXAR                               LR      LR       17 26 21.6
      comp=Z,234nm,18.1s,baz=0.0,slow=36
TXAR  Lajitas Array     87.18  54  P       P        16 46 08.1 +0.2
E55A  Montcerf-Lytto    87.27  26  P       P        16 46 08.7 +0.9
      baz=330
ABTX  Abilene, Hawle    87.28  49  P       P        16 46 09.0 +0.7
      baz=316
ABTX  Abilene, Hawle    87.28  49  P       P        16 46 08.7 +0.5
ABTX                               IAmb    IAmb     16 46 11.2
      comp=Z,22nm,1.2s
G54A  Lake Saint Pet    87.47  28  P       P        16 46 09.4 +0.5
      baz=329
E56A  St. Veronique     87.54  26  P       P        16 46 10.1 +0.9
      baz=331
HPIG                    87.57  57  IAMs_20 IAMs_20  17 22 26.1
      comp=Z,483nm,20.0s
SADO  Sadowa            87.62  29  LR      LR       17 30 05.7
      comp=Z,443nm,18.4s,baz=360,slow=39
I51A  Listowel          87.71  31  P       P        16 46 10.7 +0.7
      baz=327
D58A  Chemin du LacG    87.75  24  P       P        16 46 10.9 +0.7
      baz=333
CCM   Cathedral Cave    87.77  40  P       P        16 46 11.5 +1.0
      baz=321
CCM   Cathedral Cave    87.77  40  P       P        16 46 10.8 +0.3
CCM                                pmax    pmax
      comp=Z,30nm,0.9s
CCM   Cathedral Cave    87.77  40  P       P        16 46 10.8 +0.3
DAMY  Dhamar            87.80 287  IAMs_20 IAMs_20  17 30 37.5
      comp=Z,1µm,18.0s
L48A  N Adams           87.85  34  P       P        16 46 11.2 +0.5
SFIN  Lafayette         87.93  36  P       P        16 46 12.2 +1.1
      baz=323
E57A  Chemin Saint G    87.95  25  P       P        16 46 12.2 +1.0
      baz=332
MGMO  Mountain Grove    87.95  41  P       P        16 46 11.7 +0.3
H53A  Bobcaygeon        87.99  29  P       P        16 46 12.6 +1.2
      baz=329
Z35A  Perchaven, San    88.14  47  P       P        16 46 11.8 -0.5
D59A  Saint-Raymond     88.15  23  P       P        16 46 13.2 +1.1
      baz=334
U40A  Yellville         88.26  42  P       P        16 46 12.6 -0.3
E58A  La Victoria       88.27  25  P       P        16 46 13.8 +1.2
      baz=332
TBI   Tubuai            88.36 122 eS       S        16 56 37.9  -21
      comp=Z,484nm,26.0s
TBI   Tubuai            88.36 122 eLR      LR       17 13 38.7
      comp=Z,715nm,35.2s,baz=324
D61A  St Aubert, Com    88.47  22  P       P        16 46 14.8 +1.2
      baz=335
D60A  Saint Jean D'O    88.52  23  P       P        16 46 15.0 +1.2
      baz=334
JCT   Junction City     88.73  51  P       P        16 46 16.7 +1.5
      baz=316
G57A  Newington         88.82  26  P       P        16 46 16.1 +0.9
      baz=331
E60A  Ste Agathe de     88.84  23  P       P        16 46 16.2 +0.8
      baz=334
CEL   Celeste           88.92 322  IAMs_20 IAMs_20  17 24 43.0
      comp=Z,1µm,22.0s
FCAR  Ozark Folk Cen    89.00  42  P       P        16 46 16.7 +0.4
FCAR                               IAmb    IAmb     16 46 18.3
      comp=Z,19nm,1.0s
S44A  Carbondale        89.04  39  P       P        16 46 16.1 -0.3
SIUC  Southern Illin    89.04  39  P       P        16 46 16.7 +0.3
PBMO  Poplar Bluff      89.17  41  P       P        16 46 16.7 -0.4
PBMO                               IAmb    IAmb     16 46 20.3
      comp=Z,26nm,1.1s
H57A  Richville         89.24  27  P       P        16 46 17.7 +0.4
      baz=331
MIAR  Mount Ida         89.25  44  P       P        16 46 19.2 +1.7
      baz=320
MIAR  Mount Ida         89.25  44  P       P        16 46 17.9 +0.4
MIAR                               pmax    pmax
      comp=Z,16nm,1.1s
MIAR  Mount Ida         89.25  44  P       P        16 46 17.9 +0.4
MIAR                               IAmb    IAmb     16 46 19.9
      comp=Z,16nm,1.1s
F61A  St Evariste       89.34  23  P       P        16 46 18.6 +0.9
      baz=334
LCAR  Lake Charles      89.36  41  P       P        16 46 18.3 +0.4
LCAR                               IAmb    IAmb     16 46 20.3
      comp=Z,14nm,1.2s
WHAR  Wooly Hollow      89.37  43  P       P        16 46 18.0  0.0
WHAR                               IAmb    IAmb     16 46 20.4
      comp=Z,16nm,1.0s
LONY  Lake Ozonia       89.38  26  P       P        16 46 18.8 +0.8
      baz=332
W41B  Gary Mavity, V    89.48  43  P       P        16 46 20.2 +1.7
      baz=320
MOQ   Mont Orford       89.54  24  P       P        16 46 19.1 +0.4
ERPA  Erie              89.54  31  P       P        16 46 20.3 +1.5
      baz=328
BATG  Bathurst New B    89.55  20  P       P        16 46 19.6 +0.9
BATG                               IAmb    IAmb     16 46 21.4
      comp=Z,21nm,0.9s
H59A  Cadyville         89.66  26  P       P        16 46 20.5 +1.3
      baz=332
P49A  Miami Univ. Ec    89.69  35  P       P        16 46 20.5 +1.0
      baz=325
E63A  Oxbow             89.69  22  P       P        16 46 20.6 +1.3
      baz=336
H58A  Gabriels          89.69  26  P       P        16 46 21.0 +1.6
      baz=332
J56A  Wolcott           89.74  28  P       P        16 46 20.8 +1.2
      baz=330
G61A  St-Isidore-de-    89.79  24  P       P        16 46 20.9 +1.0
      baz=334
WVNY  West Valley, N    89.83  30  P       P        16 46 21.2 +1.0
M53A  WI Miller and     89.84  32  P       P        16 46 21.2 +1.1
      baz=328
E64A  Bridgewater       89.86  21  P       P        16 46 21.2 +1.1
      baz=336
ACSO  Alum Creek Sta    89.88  34  P       P        16 46 21.5 +1.1
      baz=326
WCI   Wyandotte Cave    90.03  37  P       P        16 46 22.4 +1.3
      baz=324
K56A  Middlesex         90.07  29  P       P        16 46 22.6 +1.4
      baz=330
G62A  West of Eustis    90.16  23  P       P        16 46 22.4 +0.8
      baz=334
M54A  Oil Creek Stat    90.18  31  P       P        16 46 22.4 +0.6
      baz=328
F64A  Sherman           90.22  22  P       P        16 46 22.9 +1.1
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	baz=336						
VAE	Valguarnera	90.25	322	LR	LR	17 30 22.1	
	comp=Z,1µm,18.4s,baz=176,slow=38						
H61A	Lyndonville	90.33	25	P	P	16 46 23.7	+1.2
	baz=333						
K57A	Scipio Center	90.34	28	P	P	16 46 23.4	+0.9
	baz=330						
J59A	Piesco	90.42	27	P	P	16 46 24.1	+1.2
	baz=332						
L56A	Greenwood	90.47	29	P	P	16 46 24.2	+1.1
	baz=330						
I60A	Shoreham	90.50	26	P	P	16 46 24.4	+1.3
	baz=332						
N54A	Moraine State	90.52	32	P	P	16 46 24.3	+1.0
	baz=328						
G63A	Kingsbury	90.53	23	P	P	16 46 24.7	+1.4
	baz=335						
H62A	Milan	90.54	24	P	P	16 46 24.1	+0.7
	baz=334						
H62A	Milan	90.54	24	P	P	16 46 23.9	+0.6
O53A	New Philadelph	90.61	33	P	P	16 46 25.0	+1.2
	baz=327						
K58A	Earlville	90.63	28	P	P	16 46 25.3	+1.5
	baz=331						
K58A	Earlville	90.63	28	P	P	16 46 24.9	+1.0
M56A	Emporium	90.79	30	P	P	16 46 25.6	+1.0
	baz=329						
H63A	New Sharon	90.81	23	P	P	16 46 25.9	+1.3
	baz=335						
L57A	Andrews Acres	90.85	29	P	P	16 46 26.2	+1.4
	baz=330						
K59A	Cooperstown	90.90	27	P	P	16 46 26.0	+0.9
	baz=331						
ATD	Arta Tunnel	90.91	286	IAMs_20	IAMs_20	17 35 27.9	
	comp=Z,509nm,18.0s						
WVT	Waverly	90.97	39	P	P	16 46 26.3	+0.8
	baz=323						
J60A	Lant Hill Farm	90.99	26	P	P	16 46 26.5	+1.0
	baz=332						
BINY	Binghamton	91.00	28	P	P	16 46 26.6	+1.0
	baz=331						
G65A	Princeton	91.05	21	P	P	16 46 26.0	+0.4
	baz=336						
H64A	Troy	91.08	23	P	P	16 46 26.4	+0.6
	baz=335						
I62A	Tamworth	91.11	25	P	P	16 46 26.4	+0.4
	baz=334						
L58A	Harry Jones Me	91.18	28	P	P	16 46 25.6	-0.8
	baz=331						
J61A	Chester	91.19	26	P	P	16 46 27.2	+0.8
	baz=333						
I63A	Otisfield	91.20	24	P	P	16 46 25.7	-0.7
	baz=334						
M57A	Sunshine Farm,	91.32	29	P	P	16 46 28.2	+1.2
	baz=330						
L59A	Walton	91.35	28	P	P	16 46 28.9	+1.7
	baz=331						
K60A	Five Rivers En	91.38	27	P	P	16 46 28.9	+1.6
	baz=332						
M58A	Price's Panora	91.54	29	P	P	16 46 28.9	+0.8
	baz=330						
J62A	Henniker	91.54	25	P	P	16 46 28.9	+0.9
	baz=334						
K61A	Williamstown	91.55	26	P	P	16 46 29.3	+1.2
	baz=332						
I64A	Boothbay	91.61	23	P	P	16 46 29.3	+1.1
	baz=335						
Q53A	Leroy	91.64	34	P	P	16 46 29.1	+0.5
	baz=327						
N57A	Milroy	91.66	30	P	P	16 46 28.9	+0.3
	baz=330						
J63A	Strafford	91.73	25	P	P	16 46 30.5	+1.6
	baz=334						
L60A	Shokan	91.82	27	P	P	16 46 30.3	+1.0
	baz=332						
L61A	Hillsdale 1, H	91.87	27	P	P	16 46 30.2	+0.7
	baz=332						
TKL	Tuckaleechee C	93.29	37	LR	LR	17 30 03.0	
	comp=Z,349nm,20.8s,baz=332,slow=36						
KEST	Kesra	94.02	324	LR	LR	17 34 10.5	
	comp=Z,2µm,18.3s,baz=338,slow=39						
FURI	Furi	95.72	286	IAMs_20	IAMs_20	17 34 36.4	
	comp=Z,369nm,18.0s						
ESDC	Sonseca Array	95.74	335	P	P	16 46 47.4	-0.1
	comp=Z,1.5nm,0.9s,baz=250,slow=39,SNR=4.6						
ESDC				LR	LR	17 35 30.2	
	comp=Z,996nm,18.1s,baz=0.0,slow=39						
W60A	Pink Hill	96.48	33	P	P	16 46 51.8	+1.0
	baz=329						
RKT	Rikitea	98.11	113	*e*SKSac	SKSac	16 57 21.3	-15
	comp=Z,365nm,27.2s						
RKT				*e*SP	SP	16 59 26.6	-23
	comp=Z,469nm,29.8s						
RKT	Rikitea	98.11	113	*e*LR	LR	17 18 34.6	
	comp=Z,688nm,22.0s						
TAM	Tamanrasset	106.65	320	IAMs_20	IAMs_20	17 44 38.7	
	comp=Z,796nm,19.0s						
MBAR	Mbarara	107.91	285	IAMs_20	IAMs_20	17 40 11.3	
	comp=Z,517nm,20.0s						
ESPN	Las Esperanzas	111.89	51	IAMs_20	IAMs_20	17 23 49.8	
	comp=Z,346nm,18.0s						
SDV	Santo Domingo	122.24	41		PKPdf	16 52 16.3	-0.8
SDV	Santo Domingo	122.24	41	IAMs_20	IAMs_20	17 52 36.1	
	comp=Z,525nm,20.0s						
SDV	Santo Domingo	122.24	41	*e*P	PKiKP	16 52 20.9	+3.7
SVB	Belmont	122.52	29	IAMs_20	IAMs_20	17 35 40.2	
	comp=Z,546nm,19.0s						
DBIC	Dimbokro	125.54	320	PKP	PKiKP	16 52 23.8	+0.2
	comp=Z,2.7nm,0.7s,baz=317,slow=1.7,SNR=3.7						
SYO	Syowa Base	131.28	208⇓	*e*Pdiff	Pdif	16 49 25.4	+0.8
ITTB	Itaituba	140.79	32	*e*P	PKiKP	16 52 55.5	+1.1
NPGB	Novo Progresso	143.37	33	*e*P	PKiKP	16 53 00.7	+1.1
SNAA	Sanae	143.70	197	PKPdf	PKPbc	16 52 52.9	+0.1
SNAA	Sanae	143.70	197	PKIKP	PKPab	16 52 52.0	0.0
SNAA	Sanae	143.70	197	PKPpre	PKPpre	16 52 52.0	
LPAZ	La Paz	143.88	59	PKP	PKPbc	16 52 55.9	+0.3
	comp=Z,2.8nm,0.8s,baz=304,slow=4.4,SNR=12						
LPAZ	La Paz	143.88	59	PKIKP	PKPbc	16 52 56.3	+0.7
LPAZ	La Paz	143.88	59	PKPdf	PKPbc	16 52 56.3	+0.8
LPAZ	La Paz	143.88	59	*e*P	PKiKP	16 53 01.0	-0.4
PRPB	Parauapebas	144.59	24	*e*P	PKiKP	16 53 01.9	-0.2
MNMC	Minye Minye	144.86	64	PKPdf	PKPdf	16 52 59.0	-0.2
VNA2	Neumayer--Watz	145.26	196	PKPdf	PKPdf	16 52 58.3	+0.4
TA01	Diego Aracena	145.40	67		PKPbc	16 52 59.0	-0.5
VNA3	Neumayer Olymp	145.48	195	PKPdf	PKPdf	16 52 58.2	-0.1
VNA1	Neumayer--Stat	145.66	196	PKPdf	PKPbc	16 52 58.9	+0.1
PB08	IPOC Station P	145.85	65		PKPbc	16 53 01.5	+0.1
VILB	Vilhena	146.13	45	*e*P	PKiKP	16 53 05.3	0.0
PB01	IPOC Station P	146.20	67		PKPab	16 53 02.9	+0.1
NBPA	Parau_RN	146.31	1	*e*P	PKPab	16 53 04.1	+0.9
PB07	IPOC Station P	146.35	68		PKPbc	16 53 02.7	0.0
PB04	IPOC Station P	146.55	69	PKPdf	PKPdf	16 53 00.8	-1.0
PB06	IPOC Station P	147.20	69		PKPdf	16 53 03.8	+1.0
PB15	IPOC Station P	147.58	70		PKPdf	16 53 04.6	+1.0
LVC	Limon Verde	147.61	68	*e*P	PKiKP	16 53 08.1	-0.5
LCO	Las Campanas	149.89	80	PKP2	PKPbc	16 53 11.3	-0.8
LCO	Las Campanas	149.89	80		PKPbc	16 53 11.2	-0.8
AC05	El Transito	150.12	79		PKPbc	16 53 11.7	-0.7
VA03	San Esteban	151.68	87		PKPbc	16 53 15.5	-0.4
BO02	Sierra Bellavi	152.26	91		PKiKP	16 53 17.6	+0.1
BI02	San Fabin de	152.47	95		PKiKP	16 53 17.9	+0.1
ZON	Zonda	152.62	83	PKIKP	PKPbc	16 53 18.0	0.0
ZON	Zonda	152.62	83		PKPbc	16 53 18.0	0.0
BDFB	Brasilia	154.05	26	PKPbc	PKiKP	16 53 22.6	+1.0
	comp=Z,4.8nm,0.8s,baz=356,slow=1.0,SNR=8.2						
CPUP	Villa Florida	158.05	59	PKPab	PKPab	16 53 52.1	+0.3
	comp=Z,2.5nm,0.8s,baz=325,slow=5.9,SNR=5.5						

IDC ***17*** *16:49:48.7±4.0, 19°.37N×109°.55W, h0^{km}, mb3.6/5, mb1 4.0/8, mb1mx3.8/37, mbtmp3.7/8, ML3.4/2, MS3.5/5, Ms1 3.5/5, ms1mx3.3/37, Error ellipse: s-maj=68.7km s-min=41.8km az=25.0*

MEX ***17*** *16:49:53.4±0.5, 19°.75N×109°.27W, h10^{km}, MD4.2*

NEIC ***17*** *16:49:53.4±2.2, 19°.61N±0°.08×109°.45W±0°.07, h10^{km}±1^{km}, mb4.0/72, Md4.6/9(MEX), Error ellipse: s-maj=14.9km s-min=8.9km az=147.0*

ISC 17 16:49:52.8±0.7**, 19°.59N**±0°.08×**109°.39W**±0°.06**, h10^{km}, n120,** σ1ˢ.06/118**, mb3.9**/9**, 1D, Revilla Gigedo Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H06E		1.65	241⇓	*i*P	Pn	16 50 22.0	+0.1
H06E				*i* S	Sn	16 50 44.1	+0.9
H06E		1.65	241		Pn	16 50 22.0	+0.1
H06E					Sn	16 50 44.1	+0.9
H06E1	SOCORRO T-PHAS	1.66	241	T	T	16 50 47.9	
	SNR=138						
H06N1	SOCORRO T-PHAS	1.67	245	T	T	16 50 44.7	
	SNR=5.5						
H06N	Isla Socorro	1.68	245	*i* P	Pn	16 50 21.7	-0.5
H06N				*e*S	Sn	16 50 43.5	-0.2
H06N	Isla Socorro	1.68	245		Pn	16 50 21.7	-0.5
H06N					Sn	16 50 43.5	-0.2
H06S1	SOCORRO T	1.71	241	T	T	16 50 45.8	
	SNR=86						
H06S		1.71	240	*e*P	Pn	16 50 21.6	-1.0
H06S				*i* S	Sn	16 50 43.4	-1.3
H06S		1.71	240		Pn	16 50 21.6	-1.0
H06S					Sn	16 50 43.4	-1.3
SLBS	Sierra La Lagu	4.11	353	Pn	Pn	16 50 53.6	-2.1
LPIG	La Paz	4.57	349	LR	LR	16 52 28.6	
	comp=Z,516nm,19.1s,baz=170,slow=34						
R15V		5.12	94	*i* P	Pn	16 51 06.2	-3.4
R15V		5.12	94		Pn	16 51 06.2	-3.4
ZAIG	Zacatecas	7.11	62	Pn	Pn	16 51 35.9	-1.3
HPIG		8.07	24	Pn	Pn	16 51 49.8	-0.6
SRIG	Santa Rosalia	8.13	342	Pn	Pn	16 51 50.9	-0.1
HSIG		9.50	352	Pn	Pn	16 52 10.5	+0.8
UNM	Universidad Na	9.64	90	Pn	Pn	16 52 13.8	+1.9
TLIG	Tlapa	10.46	99	Pn	Pn	16 52 24.9	+1.9
TX31	Lajitas Ar. Si	11.01	27	Pn	Pn	16 52 31.4	+0.9
TX32	Lajitas Array	11.01	27	Pn	Pn	16 52 31.4	+0.9
TXAR	Lajitas Array	11.01	27	Pn	Pn	16 52 31.8	+1.3
	baz=207,slow=13,SNR=4.8						
TXAR				LR	LR	16 56 14.7	
	comp=Z,249nm,18.4s,baz=0.0,slow=34						
TXAR	Lajitas Array	11.01	27	Pn	Pn	16 52 31.4	+0.9
319A	Douglas	11.74	0	Pn	Pn	16 52 42.0	+1.5
MNTX	Cornudas Mount	12.59	16		Pn	16 52 53.6	+1.6
214A	Organ Pipe Nat	12.70	347	Pn	Pn	16 52 55.1	+1.6
TUC	Tucson	12.73	355	Pn	Pn	16 52 55.5	+1.4
121A	Cookes Peak, D	12.97	6	Pn	Pn	16 52 58.9	+1.5
113A	Mohawk Valley,	13.70	344	Pn	Pn	16 53 07.5	+0.3
CMIG	Matias Romero	13.99	98	Pn	Pn	16 53 10.9	-0.4
	0.2nm,0.3s,baz=283,slow=13,SNR=4.4						
CMIG				LR	LR	16 58 16.6	
	comp=Z,169nm,19.7s,baz=262,slow=36						
CBX	Cerro Bola	14.26	334	Pn	Pn	16 53 16.2	+1.3
GLA	Glamis	14.27	341	Pn	Pn	16 53 16.6	+1.7
BNM	Barren Site	14.71	9	Pn	Pn	16 53 22.1	+0.8
X16A	Lo Mia Camp, P	14.89	353	Pn	Pn	16 53 23.9	+0.4
X18A	Snowflake	14.89	358		Pn	16 53 25.0	+1.4
PFO	Pinyon Flats O	15.32	337	LR	LR	16 59 03.7	
	comp=Z,202nm,18.8s,baz=154,slow=36						
PFO	Pinyon Flats O	15.32	337	Pn	Pn	16 53 30.0	+0.7
PFO				IAmb	IAmb	16 53 44.0	
	comp=Z,7.0nm,1.1s						
W18A	Petrified Fore	15.47	359	Pn	Pn	16 53 32.8	+1.4
W18A				IAmb	IAmb	16 53 36.6	
	comp=Z,7.4nm,0.8s						
MSTX	Muleshoe	15.49	21	Pn	Pn	16 53 33.4	+1.9
MSTX				IAmb	IAmb	16 53 36.3	
	comp=Z,5.7nm,0.7s						
ANMO	Albuquerque	15.52	9	Pn	Pn	16 53 32.9	+0.9
	comp=Z,0.1nm,0.3s,baz=215,slow=9.4,SNR=2.3						
ANMO				LR	LR	16 58 59.5	
	comp=Z,191nm,18.5s,baz=176,slow=35						
ANMO	Albuquerque	15.52	9	Pn	Pn	16 53 33.7	+1.7
W13A	Hualapai Mount	15.96	346	Pn	Pn	16 53 37.7	+0.1
WUAZ	Wupatki	15.97	354	Pn	Pn	16 53 38.6	+0.8
WHTX	Lake Whitney,	16.36	39	Pn	Pn	16 53 42.4	-0.2
WHTX				IAmb	IAmb	16 53 47.1	
	comp=Z,7.2nm,0.8s						
AMTX	Amarillo	16.70	23	Pn	Pn	16 53 45.7	-1.3
AMTX				IAmb	IAmb	16 53 52.3	
	comp=Z,11nm,1.3s						
CCIG	Comitan	16.74	99	Pn	Pn	16 53 48.9	+1.2
GSC	Goldstone, Bar	16.97	339		Pn	16 53 51.6	+1.1
U15A	North Rim	16.97	352		Pn	16 53 51.8	+1.2
U15A				IAmb	IAmb	16 53 54.8	
	comp=Z,10nm,1.3s						
MVCO	Mesa Verde	17.58	2	P	Pn	16 53 58.4	+0.2
MVCO				IAmb	IAmb	16 54 01.9	
	comp=Z,13nm,1.2s						
SHPR	Sheep Range	17.60	344		P	16 53 59.8	+0.4
KNB	Kanab	17.62	351	P	P	16 54 00.8	+1.2
LCMT	Little Creek M	17.69	350		P	16 54 00.8	+0.5
NATX	Nacogdoches	17.95	45	P	P	16 54 03.6	+0.4
PKCU	Pink Cliffs	17.98	352	P	P	16 54 04.8	+1.0
CCUT	Cedar City	18.23	350		P	16 54 07.5	+1.0
TPNV	Topopah Spring	18.31	342		P	16 54 08.4	+1.1
TPNV				IAmb	IAmb	16 54 09.8	
	comp=Z,16nm,1.5s						
SDCO	Great Sand Dun	18.41	10	P	P	16 54 09.2	+0.7
SDCO				IAmb	IAmb	16 54 12.3	
	comp=Z,12nm,1.4s						
PV17	East Wray Mesa	18.63	1	P	Pn	16 54 11.6	+0.5
PV17				IAmb	IAmb	16 54 14.4	
	comp=Z,17nm,1.3s						
PV11	David Mesa, Pa	18.65	1	P	P	16 54 11.4	+0.4
PV11				IAmb	IAmb	16 54 17.5	
	comp=Z,16nm,1.4s						
PV19	Morning Glory	18.66	1	P	P	16 54 11.1	-0.1
PV19				IAmb	IAmb	16 54 12.6	
	comp=Z,7.9nm,1.1s						
PV16	Nyswonger Mesa	18.66	1	P	P	16 54 11.4	+0.2
PV16				IAmb	IAmb	16 54 15.0	
	comp=Z,14nm,1.5s						
PAGB	Antelope Grade	18.72	331	P	Pn	16 54 12.2	+0.3
PAGB				IAmb	IAmb	16 54 17.9	
	comp=Z,15nm,1.3s						
PV14	Lion Creek, Pa	18.72	1	P	P	16 54 12.2	+0.3
PV10	Paradox Valley	18.73	1	P	P	16 54 11.8	-0.1
PV10				IAmb	IAmb	16 54 14.5	
	comp=Z,11nm,1.0s						
PV04	Paradox Valley	18.75	1	P	P	16 54 11.7	-0.3
PV04				IAmb	IAmb	16 54 15.9	
	comp=Z,20nm,1.4s						
MVU	Marysvale	19.01	353		Pn	16 54 16.3	+0.6
MSU	Marysvale	19.02	353	P	Pn	16 54 16.2	+0.5
TCRU	Three Creeks R	19.14	353	P	Pn	16 54 17.6	+0.3
OK029	Liberty Lake	19.27	31	P	Pn	16 54 18.7	0.0
OK029				IAmb	IAmb	16 54 38.8	
	comp=Z,7.0nm,0.8s						
PSUT	Pine Spring	19.27	349	P	Pn	16 54 18.9	+0.1
Q16A	Castle Valley	19.33	356	P	Pn	16 54 19.4	-0.1
R11A	Troy Canyon, C	19.46	345	P	P	16 54 20.1	+0.3
SRU	San Rafael Swe	19.48	357	P	Pn	16 54 21.3	0.0
SMCO	Snowmass	19.64	6	P	P	16 54 22.3	+0.3
TPH	Tonopah	19.64	341	P	P	16 54 21.4	-0.5
OMMB	Old Mammoth Mi	19.82	337	P	P	16 54 23.0	-1.0
P17A	Butcher Ranch,	19.85	357	P	P	16 54 23.0	-1.1
MDPB	Devils Postpil	19.87	337	P	Pn	16 54 25.9	-0.1
MDPB				IAmb	IAmb	16 54 29.9	
	comp=Z,7.5nm,1.2s						
LHV	Little Huntoon	20.22	339	P	P	16 54 28.2	+0.4
LHV				IAmb	IAmb	16 54 33.9	
	comp=Z,9.8nm,1.2s						
NV11	Mina Array Sit	20.26	340	P	P	16 54 29.5	+0.9
NV11				IAmb	IAmb	16 54 34.2	
	comp=Z,12nm,1.3s						
NVAR	Mina Array Bea	20.31	339	P	P	16 54 28.6	-0.6
	comp=Z,6.9nm,1.4s,baz=173,slow=3.7,SNR=20						
NVAR	Mina Array Bea	20.31	339	P	P	16 54 29.9	+0.8
ISCO	Idaho Springs	20.41	8	P	P	16 54 30.7	+0.4
O20A	White River Ci	20.50	3	P	P	16 54 30.6	-0.7
RYN	Ryan	20.56	339	P	P	16 54 30.0	-1.8
RYN				IAmb	IAmb	16 54 37.8	
	comp=Z,14nm,1.4s						
CMB	Columbia Colle	20.72	335	P	P	16 54 33.5	0.0
DUG	Dugway, Tooele	20.75	353	P	P	16 54 34.2	+0.4
WAKR	Walker	20.77	337	P	P	16 54 35.0	+0.8
WAKR				IAmb	IAmb	16 54 37.3	
	comp=Z,8.8nm,1.4s						
RDMU	Red Mountain	20.92	360	P	P	16 54 33.4	-2.3
YERR	Yerington	21.13	338	P	P	16 54 38.9	+0.8
YERR				IAmb	IAmb	16 54 40.3	
	comp=Z,14nm,1.4s						
PNTR	Pine Nut	21.35	338	P	P	16 54 41.3	+0.9
BGU	Big Grassy Mou	21.50	352	P	P	16 54 40.9	-1.0
TCUT	Toone Canyon	21.53	356	P	P	16 54 41.3	-1.1
ELK	Elko	21.68	348	P	P	16 54 44.1	+0.2
	comp=Z,1.5nm,0.9s,baz=146,slow=9.7,SNR=4.6						
ELK	Elko	21.68	348	P	P	16 54 43.9	0.0
ELK				IAmb	IAmb	16 54 45.9	
	comp=Z,6.0nm,1.2s						
PAHR	Pah Rah Range	21.82	339	P	P	16 54 43.8	-1.6
OGNE	Ogallala	22.20	15	P	P	16 54 49.1	-0.3
BEKR	Beckworth	22.31	337	P	P	16 54 49.5	-1.2
BEKR				IAmb	IAmb	16 54 59.0	
	comp=Z,4.7nm,1.2s						
HVU	Hansel Valley	22.31	353	P	P	16 54 50.0	-0.7
HOPS	Hopland Field	22.67	331	P	P	16 54 54.2	-0.1
HOPS				IAmb	IAmb	16 55 21.1	
	comp=Z,6.3nm,1.1s						
PD31	Pinedale Array	23.11	360	P	P	16 54 58.4	-0.7
PDAR	Pinedale Array	23.11	360	P	P	16 54 58.5	-0.6
	comp=Z,0.8nm,0.8s,baz=146,slow=11,SNR=5.8						
PDAR	Pinedale Array	23.11	360	P	P	16 54 57.8	-1.3
K22A	Casper	23.12	5	P	P	16 54 58.7	-0.5
AHID	Auburn Hatcher	23.15	357	P	P	16 54 58.6	-0.9
AHID				IAmb	IAmb	16 55 14.9	
	comp=Z,3.9nm,0.9s						
REDW	Red Top Meadow	23.74	357	P	P	16 55 04.8	-0.6
MOD	Modoc Plateau	24.10	340	P	P	16 55 09.2	+0.4
HLID	Hailey	24.27	351	P	P	16 55 10.3	-0.1
HLID				IAmb	IAmb	16 55 11.9	
	comp=Z,3.8nm,1.1s						
YNE	Yellowstone No	25.36	359	P	P	16 55 19.8	-0.5
MSO	Missoula	27.43	353	P	P	16 55 38.3	-0.5
E28A	Huff	27.85	13	P	P	16 55 43.9	+1.4
EMPR	Esperanza - Ma	40.45	84	P	P	16 57 32.7	+0.9
YKA	Yellowknife Ar	43.02	356	P	P	16 57 50.8	-1.5
	comp=Z,1.0nm,0.9s,baz=166,slow=8.2,SNR=12						
INK	Inuvik	51.01	349	P	P	16 58 54.0	-0.5
IL31		51.56	341	P	P	16 58 58.7	0.0
ILAR	Eielson Array	51.56	341	P	P	16 58 57.0	-1.8
	comp=Z,1.3nm,0.8s,baz=151,slow=7.1,SNR=13						
ILAR	Eielson Array	51.56	341	P	P	16 58 58.5	-0.3
H03N2	Juan Fernandez	60.21	151	T	T	18 05 38.1	
	baz=329,slow=77,SNR=7.9						
H03N1	Juan Fernandez	60.22	151	T	T	18 05 43.0	
	baz=329,slow=77,SNR=10						
H03N3	Juan Fernandez	60.23	151	T	T	18 05 25.3	
	baz=329,slow=77,SNR=10						

IDC 17 16:55:06.5±8.7**, 19°.32N**×**108°.74W, h0^{km}, mb3.3**/4**, mb1 3.7**/5**, mb1mx3.5**/36**, mbtmp3.3**/5**, ML3.3**/1**, MS4.1**/1**, Ms1 4.1**/1**, ms1mx3.0**/27**, Error ellipse: s-maj=146.9km s-min=72.2km az=153.0, Revilla Gigedo Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H06E1	SOCORRO T-PHAS	2.13	256	T	T	16 57 47.2	
	SNR=9.5						
H06S1	SOCORRO T	2.18	255	T	T	16 57 47.1	
	SNR=11						
TXAR	Lajitas Array	10.99	24	Pn	Pn	16 57 46.0	+0.8
	0.1nm,0.3s,baz=213,slow=13,SNR=1.7						
NVAR	Mina Array Bea	20.78	338	P	P	16 59 49.1	-0.3
	2.4nm,0.9s,baz=163,slow=13,SNR=16						
PDAR	Pinedale Array	23.39	358	P	P	17 00 18.0	+0.8
	0.5nm,0.8s,baz=145,slow=5.4,SNR=3.8						
BBB	Bella Bella	36.13	340	LR	LR	17 17 03.9	
	comp=Z,246nm,18.6s,baz=324,slow=36						
YKA	Yellowknife Ar	43.33	356	P	P	17 03 09.5	-0.5
	0.2nm,0.4s,baz=166,slow=8.3,SNR=5.1						
ILAR	Eielson Array	52.02	340	P	P	17 04 17.6	+0.1
	0.6nm,0.8s,baz=158,slow=6.3,SNR=5.6						
H03N2	Juan Fernandez	59.68	151	T	T	18 10 51.1	
	baz=329,slow=77,SNR=5.9						
H03N1	Juan Fernandez	59.69	151	T	T	18 10 46.0	
	baz=329,slow=77,SNR=11						
H03N3	Juan Fernandez	59.70	151	T	T	18 10 53.1	
	baz=329,slow=77,SNR=6.2						

DJA ***17*** *16:59:05.5±0.8, 2°N±3°×12°8E±°, h78^{km}±9^{km}, M4.1/6, MLv4.1/6*

IDC ***17*** *16:59:05.8±3.9, 1°.89N×127°.40E, h102^{km}±40^{km}, mb3.6/8, mb1 3.6/10, mb1mx3.4/41, mbtmp3.9/10, Error ellipse: s-maj=36.5km s-min=15.5km az=77.0*

NEIC ***17*** *16:59:06.2±1.3, 1°.90N±0°.10×127°.43E±0°.09, h110^{km}±10^{km}, mb4.3/18, Error ellipse: s-maj=15.7km s-min=11.5km az=219.0*

ISC 17 16:59:06.5±0.6**, 1°.95N**±0°.05×**127°.42E**±0°.08**, h112^{km}, n40,** σ1ˢ.15/41**, mb4.2**/16**, 1C, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.17	182		Pn	16 59 28.6	-1.1
TNTI	Ternate	1.17	182	P	Pn	16 59 29.0	-0.7
TNTI				S	Sn	16 59 46.8	-0.4
SGSI	Sangihe	2.55	312	P	Pn	16 59 44.2	-2.5
SGSI				S	Sn	17 00 14.1	-3.5
KMSI	Cibinong	3.70	248	P	Pn	17 00 03.0	+1.2
SANI	Sanana	4.22	200	P	Pn	17 00 08.0	-0.9
SIJI	Sorong	4.76	126	P	Pn	17 00 15.4	-0.8
	2.1nm,0.3s,baz=292,slow=23,SNR=17						
LUWI	Luwuk	5.51	237	Pn	Pn	17 00 26.6	+0.3
KCP	Kidapawan	5.53	335⇑	*e*P	Pn	17 00 25.5	-1.1
KCP				*i* S	Sn	17 01 31.3	+2.2
TOLI2	Tolitoli	6.68	263	Pn	Pn	17 00 41.6	-0.6
FAKI	Fak Fak	6.84	135	Pn	Pn	17 00 44.5	+0.2
MYLDM	Lahad Datu	9.46	290	Pn	Pn	17 01 21.8	+2.0
SBUM	Sibu	15.19	272	P	P	17 02 37.5	-0.1
FITZ	Fitzroy Crossi	20.00	185	P	P	17 03 29.4	-1.0
	0.4nm,0.3s,baz=5.9,slow=9.3,SNR=25						
YULB	Yu-li	22.12	345	P	P	17 03 52.9	-0.2
YULB				IAmb	IAmb	17 04 07.6	
	comp=Z,29nm,1.2s						
TPUB	Ta-pu	22.22	343	P	P	17 03 52.6	-1.5
SSLB	Suanglung	22.59	344	P	P	17 03 57.6	-0.2
SSLB				IAmb	IAmb	17 03 58.8	
	comp=Z,25nm,1.4s						
WB0	Warramunga Arr	22.64	163	P	P	17 03 57.8	-0.6
WRAB	Tennant Creek	22.79	163	P	P	17 03 59.3	-0.5
WRAB				IAmb	IAmb	17 04 17.6	
	comp=Z,24nm,1.1s						
WRA	Warramunga Arr	22.79	163	P	P	17 03 59.3	-0.6
	comp=Z,4.2nm,0.5s,baz=342,slow=11,SNR=55						
WRA	Warramunga Arr	22.79	163	P	P	17 03 58.0	-1.9
WB2	Warramunga Arr	22.80	163	P	P	17 03 59.0	-0.9
WB2				IAmb	IAmb	17 04 12.5	
	comp=Z,15nm,1.2s						
WR0	Warramunga Arr	22.87	163	P	P	17 03 59.7	-0.9
WR0				IAmb	IAmb	17 04 02.1	
	comp=Z,8.9nm,1.1s						
AS31	Alice Springs	26.23	166	P	P	17 04 30.6	-0.6
ASAR	Alice Springs	26.23	166	P	P	17 04 31.1	-0.1
	comp=Z,1.0nm,0.4s,baz=344,slow=6.8,SNR=34						
ASAR	Alice Springs	26.23	166	P	P	17 04 30.7	-0.5
CMAR	Chiang Mai Arr	32.38	302	P	P	17 05 26.1	+0.4
	comp=Z,0.3nm,0.6s,baz=130,slow=6.1,SNR=4.1						
FORT	Forrest	32.55	179	P	P	17 05 27.0	-0.1
BBOO	Buckleboo	35.53	167	P	P	17 05 52.3	-0.5
STKA	Stephens Creek	36.23	159	P	P	17 05 58.8	0.0
	comp=Z,0.6nm,0.4s,baz=234,slow=23,SNR=1.2						
BJT	Baijiatuau	39.24	346	P	P	17 06 24.4	+0.4
BJT				IAmb	IAmb	17 06 25.3	
	comp=Z,3.9nm,0.5s						
SONM	Songino Array	49.19	341	P	P	17 07 43.3	-0.1
	comp=Z,0.6nm,0.7s,baz=152,slow=7.1,SNR=4.4						
SONM	Songino Array	49.19	341	P	P	17 07 42.9	-0.4
WMQ	Urumqi	54.57	325	*e*P	P	17 08 35.3	+12
MK31	Makanchi Array	59.40	326	P	P	17 08 58.3	+1.0
MK31				IAmb	IAmb	17 08 58.8	
	comp=Z,1.4nm,0.6s						
MKAR	Makanchi Array	59.40	326	P	P	17 08 58.4	+1.1
	comp=Z,1.4nm,0.4s,baz=118,slow=8.2,SNR=30						
MKAR	Makanchi Array	59.40	326	P	P	17 08 57.9	+0.7
MAKZ	Makanchi	59.58	325	P	P	17 08 59.2	+0.7
MAKZ				IAmb	IAmb	17 09 00.3	
	comp=Z,1.7nm,0.6s						
YAK	Yakutsk	59.96	1	P	P	17 09 00.3	-0.4
	comp=Z,1.1nm,0.4s,baz=206,slow=4.8,SNR=4.9						
YAK	Yakutsk	59.96	1	IAmb	IAmb	17 09 02.0	
	comp=Z,5.2nm,0.7s						
SEY	Seymchan	63.60	12	P	P	17 09 26.6	+1.5
	comp=Z,0.6nm,0.5s,baz=300,slow=22,SNR=5.0						

IDC ***17*** *17:00:03.4±0.9, 39°.95N×143°.20E, h0^{km}, mb3.6/11, mb1 3.7/15, mb1mx3.6/53, mbtmp3.6/15, ML2.9/3, Error ellipse: s-maj=20.6km s-min=16.8km az=110.0*

JMA ***17*** *17:00:03.9±0.3, 39°.86N×143°.40E, h21^{km}±4^{km}, M3.6*

NEIC ***17*** *17:00:05.0±2.5, 39°.85N±0°.05×143°.07E±0°.07, h10^{km}±1^{km}, mb4.3/9, Error ellipse: s-maj=9.8km s-min=7.7km az=45.0*

ISC 17 17:00:02.9±2.2**, 39°.87N**±0°.05×**143°.24E**±0°.07**, h1**^{km}±12^{km}**, n63, σ1^{s}.06**/65**, mb3.8**/16**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	1.06	274	P	Pn	17 00 25.0	0.0
MIYJ	Miyakonagasawa	1.14	255	P	Pn	17 00 26.4	+0.4
MIYJ				*e*S	Sn	17 00 42.8	+0.5
JKEN	Kujiedanarisaw	1.22	286	P	Pg	17 00 27.3	+0.9
JANG	Nango	1.42	291	P	Pb	17 00 30.2	0.0
JOM	Ohasama	1.56	256	P	Pg	17 00 33.0	+0.2
JOM				*e*S	Sg	17 00 53.8	+0.8
JMK	Ichinoseki	1.82	240	P	Pb	17 00 35.8	-1.2
JMK				*e*S	Sb	17 00 58.6	-1.7
JTM	Tenmabayashi	1.90	299	P	Pb	17 00 37.9	-0.5
JTM	Tenmabayashi	1.90	299		Pn	17 00 37.1	+0.6
JAH	Hinai	2.03	280	P	Pb	17 00 40.0	-0.6
JIO	Ouri	2.04	227	P	Pn	17 00 38.1	-0.4
ERM	Erimo	2.14	358		Pn	17 00 41.1	+1.3
JEM	Erimo	2.14	358	P	Pn	17 00 41.0	+1.2
JEM				*e*S	Sn	17 01 07.1	0.0
JOT	Ohata	2.25	313	P	Pn	17 00 42.6	+1.3
JYK	Kaneyama	2.43	248	P	Pb	17 00 45.4	-2.0
JNBK	Urakawa-nobuka	2.43	351	P	Pn	17 00 45.1	+1.3
JNBK				*e*S	Sn	17 01 14.1	-0.2
JCH	Churui	2.74	2	P	Pn	17 00 48.3	+0.2
JCH				*e*S	Sn	17 01 20.1	-1.7
JMM	Marumori	2.77	224		Pn	17 00 47.6	-0.9
JEW	Eniwo	3.26	336	Pn	Pb	17 00 59.5	-2.1
JKA	Kamikawa-asahi	4.27	354	Pn	Pn	17 01 08.8	-0.3
ASAJ	Asahikawa	4.27	354	Pn	Pn	17 01 10.3	+1.2
	1.1nm,0.3s,baz=198,slow=14,SNR=17						
ASAJ				Sn	Sn	17 01 59.7	+0.2
	1.0nm,0.3s,baz=270,slow=26,SNR=4.1						
JSD	Sado	4.29	246		Pn	17 01 10.8	+1.4
JYT	Yasato	4.36	214	Pn	Pn	17 01 09.1	-1.3
MJAR	Matsushiro Arr	5.17	232	Pn	Pn	17 01 22.2	+0.6
	0.1nm,0.3s,baz=36,slow=12,SNR=16						
MJAR	Matsushiro Arr	5.17	232		Pn	17 01 22.6	+1.0
MAJO	Matsushiro	5.17	232		Pn	17 01 22.8	+1.3
MAT	Matsushiro	5.17	232	P	Pn	17 01 23.1	+1.5
MAT				*e*S	Sn	17 02 23.4	+1.5
JGF	Kuroka	6.32	229	Pn	Pn	17 01 37.6	+0.3
JWT	Wachi	7.73	236	Pn	Pn	17 01 55.3	-1.3
USRK	Ussuriysk Ar.	9.42	301	Pn	Pn	17 02 19.0	-0.8
	baz=100,slow=12,SNR=1.9						
KLR	Kul'dur	12.42	323	Pn	Pn	17 03 00.8	0.0
	0.1nm,0.3s,baz=150,slow=9.3,SNR=2.0						
YAK	Yakutsk	23.68	344	P	P	17 05 14.7	-1.1
	2.2nm,0.6s,baz=324,slow=4.4,SNR=5.6						
SEY	Seymchan	23.74	10	P	P	17 05 16.0	-0.3
	1.5nm,0.6s,baz=64,slow=23,SNR=11						
SONM	Songino Array	27.53	299	P	P	17 05 51.5	+0.3
	1.1nm,0.8s,baz=97,slow=8.5,SNR=8.5						
SONM	Songino Array	27.53	299	P	P	17 05 51.9	+0.7
H11N2	WAKE ISLAND Hy	28.56	128	T	T	17 35 49.7	
	baz=318,slow=76,SNR=12						
H11N1	WAKE ISLAND Hy	28.57	128	T	T	17 35 49.7	
	baz=318,slow=76,SNR=5.7						
H11N3	WAKE ISLAND Hy	28.58	128	T	T	17 35 49.7	
	baz=318,slow=76,SNR=5.2						
ENH	Enshi	29.09	261	P	P	17 06 04.6	-0.6
ENH				IAmb	IAmb	17 06 06.0	
	comp=Z,6.5nm,0.9s						
H11S1	WAKE ISLAND Hy	29.38	130	T	T	17 36 53.0	
	baz=316						
H11S3	WAKE ISLAND Hy	29.38	130	T	T	17 36 46.6	
	baz=316						
H11S2	WAKE ISLAND Hy	29.40	130	T	T	17 36 59.1	
	baz=316						
GTA	Gaotai	33.20	283	*e*P	P	17 06 40.6	-0.8
GTA				pP		17 06 46.3	
GTA				sP		17 06 49.3	
GTA				pmax	pmax		
	comp=Z,2.0nm,1.3s						
WMQ	Urumqi	40.91	294	*e*P	P	17 07 49.0	+2.2
ZALV	Zalesovo Beam	41.13	310	P	P	17 07 48.1	-0.3
	comp=Z,1.1nm,0.5s,baz=86,slow=8.9,SNR=6.7						
ZALV	Zalesovo Beam	41.13	310	P	P	17 07 47.6	-0.7
IMAR	Indian Mountai	43.48	32	P	P	17 08 09.8	+2.3
CMAR	Chiang Mai Arr	43.63	254	P	P	17 08 09.8	+0.6
	comp=Z,0.1nm,0.3s,baz=52,slow=26,SNR=2.7						
MK31	Makanchi Array	43.89	300	P	P	17 08 11.7	+0.7
MKAR	Makanchi Array	43.89	300	P	P	17 08 10.9	-0.1
	comp=Z,1.6nm,0.9s,baz=81,slow=8.4,SNR=12						
MKAR	Makanchi Array	43.89	300	P	P	17 08 10.8	-0.2
MAKZ	Makanchi	44.09	300	P	P	17 08 12.6	0.0
MAKZ				IAmb	IAmb	17 08 45.1	
	comp=Z,4.0nm,1.2s						
KURK	Kurchatov	45.37	306	P	P	17 08 22.5	-0.1
KURK				IAmb	IAmb	17 08 28.5	
	comp=Z,5.5nm,1.1s						
ILAR	Eielson Array	46.34	34	P	P	17 08 29.9	-0.2
	comp=Z,0.5nm,0.6s,baz=259,slow=6.1,SNR=9.4						
KK31	Karatay Array	52.98	299	P	P	17 09 20.7	-0.4
KK31				IAmb	IAmb	17 09 35.0	
	comp=Z,5.5nm,1.6s						
KKAR	Karatay Array	52.98	299	P	P	17 09 20.0	-1.1
ABKAR	Akbulak array	57.23	309	P	P	17 09 51.5	-0.2
ABKAR	Akbulak array	57.23	309	P	P	17 09 51.2	-0.5
ABKAR				IAmb	IAmb	17 10 23.3	
	comp=Z,2.1nm,1.1s						
WR0	Warramunga Arr	60.07	189	P	P	17 10 11.2	-0.6
WB2	Warramunga Arr	60.08	190	P	P	17 10 12.6	+0.9
WRA	Warramunga Arr	60.08	190	P	P	17 10 11.0	-0.8
	comp=Z,0.7nm,0.8s,baz=7.9,slow=6.8,SNR=3.9						
ASAR	Alice Springs	63.81	190	P	P	17 10 39.6	+2.8
	comp=Z,0.2nm,0.5s,baz=189,slow=13,SNR=2.9						
NVAR	Mina Array Bea	72.16	55	P	P	17 11 31.1	+1.4
	comp=Z,0.4nm,0.7s,baz=306,slow=5.1,SNR=4.1						
PDAR	Pinedale Array	74.67	47	P	P	17 11 44.1	-0.2
	comp=Z,0.2nm,0.5s,baz=336,slow=2.0,SNR=2.4						

MAN 17 17:08:40.8, 9°.89N×124°.12E, h5^{km}, mb4.3, ML3.1, MS2.8, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LLP	Lapu-Lapu	0.45	340	⇑*i*P	Pg	17 08 50.0	+0.5
LLP				*i* S	Sg	17 08 56.6	+1.3
MSLP	Maasin	0.77	72	*e*P	Pg	17 08 55.3	-0.2
MSLP				*e*S	Sb	17 09 06.6	-0.7
OCLP	Ormoc	1.25	23	*e*P	Pg	17 09 03.8	-1.0
OCLP				*e*S	Sn	17 09 22.5	+0.3
CNOP	Candoni, Negro	1.46	268	*e*P	Pn	17 09 06.9	-0.9
CNOP				*e*S	Sg	17 09 27.8	0.0
CGP	Cagayan de Oro	1.54	158	⇑*e*P	Pn	17 09 08.4	-0.4
CGP				*e*S	Sn	17 09 26.9	-2.3

IDC ***17*** *17:13:18.1±1.1, 36°.80N×98°.33W, h0^{km}, mb3.4/2, mb1 3.9/6, mb1mx3.5/62, mbtmp3.5/6, ML4.0/4, MS3.5/1, Ms1 3.5/1, ms1mx2.9/33, Error ellipse: s-maj=16.3km s-min=13.8km az=27.0*

TUL ***17*** *17:13:19.1±1.6, 36°.53N±0°.01×98°.21W±0°.05, h5^{km}±6^{km}, ML3.6, mb_Lg3.7/96(NEIC), Error ellipse: s-maj=5.3km s-min=2.0km az=84.0*

ANF ***17*** *17:13:19.7±0.7, 36°.52N×98°.22W, h5^{km}, ML4.2/8, Error ellipse: s-maj=10.3km s-min=7.3km az=65.0*

NEIC ***17*** *17:13:19.4±1.8, 36°.52N±0°.02×98°.21W±0°.05, h12^{km}±5^{km}, Error ellipse: s-maj=5.8km s-min=3.4km az=88.0*

ISC 17 17:13:19.4±0.9**, 36°.52N**±0°.02×**98°.20W**±0°.03**, h12**^{km}±7^{km}**, n138, σ1^{s}.18**/133**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CROK	Carrier	0.18	96	Pg	Pg	17 13 23.2	-0.2
CROK				Sg	Sg	17 13 26.2	-0.1
KAN14	Manchester OK	0.47	24		Pg	17 13 28.5	-0.3
KAN10	Anthony SW Sta	0.61	8		Pg	17 13 30.8	-0.4
KAN10				Sg	Sg	17 13 39.4	+0.1
KAN05	Bluff City Nor	0.64	24		Pg	17 13 31.6	-0.4
U32A	Winter Ranch,	0.66	258		Pg	17 13 31.8	-0.4
U32A				Sg	Sg	17 13 40.9	0.0
U32A	Winter Ranch,	0.66	258	P		17 13 31.8	
	baz=76						
U32A				S		17 13 41.1	
	baz=76						
KAN01	Argonia South	0.72	29		Pg	17 13 32.9	-0.5
KAN08	Anthony NE Sta	0.73	15		Pg	17 13 33.1	-0.4
KAN13	South Haven SW	0.76	50		Pg	17 13 33.7	-0.4
KAN12	Harper NE Stat	0.79	12		Pg	17 13 34.2	-0.5
OK029	Liberty Lake	0.94	140		Pg	17 13 37.0	-0.6
OK029				Sg	Sg	17 13 50.1	+0.1
BCOK	Bluff Creek, N	0.99	151		Pg	17 13 37.8	-0.6
BCOK					Sg	17 13 51.6	+0.2
OK025	Westminster Rd	1.17	143		Pg	17 13 41.0	-0.9
OK025				Sg	Sg	17 13 57.4	+0.2
OK031	S. Brethren Rd	1.24	117		Pg	17 13 42.5	-0.7
QUOK	Quay	1.26	106		Pg	17 13 42.8	-0.8
QUOK				Sn	Sg	17 13 59.9	0.0
OKCFA	Oklahoma City	1.26	151		Pg	17 13 42.6	-1.0
OKCSW	OKLAHOMA CITY	1.28	151		Pn	17 13 42.9	-0.1
OK030	Cody Creek RV	1.29	117		Pn	17 13 43.4	+0.1
T35A	Sooner Cattle	1.42	73	Pn	Pn	17 13 45.5	+0.6
T35B	Sooner Cattle	1.42	73	P		17 13 45.5	
	baz=255,SNR=348						
T35B				S		17 14 04.0	
	baz=255						
FNO	Franklin	1.42	152		Pn	17 13 45.7	+0.7
WMOK	Wichita Mounta	1.84	195	P	Pn	17 13 51.9	+1.1
	baz=14						
WMOK				S	Sb	17 14 16.4	+0.5
	baz=14						
WMOK	Wichita Mounta	1.84	195		Pn	17 13 51.9	+1.1
WMOK				IAmb_Lg		17 14 22.0	
	comp=Z,241nm,0.8s						
WMOK	Wichita Mounta	1.84	195	P		17 13 51.8	
	baz=14,SNR=1000						
WMOK				S		17 14 16.9	
	baz=14						
R32A	Long Quarter,	1.94	348		Pn	17 13 53.4	+1.3
R32A	Long Quarter,	1.94	348	P		17 13 53.1	
	baz=168,SNR=42						
R32A				S		17 14 19.7	
	baz=168						
TUL1	Leonard	2.04	107	P	Pn	17 13 54.4	+0.8
	baz=288						
TUL1				S	Sn	17 14 21.9	+2.9
	baz=288						
TUL1	Leonard	2.04	107		Pn	17 13 54.1	+0.6
TUL1	Leonard	2.04	107	P		17 13 55.0	
	baz=288,SNR=38						
TUL1				S		17 14 21.9	
	baz=288						
CBKS	Cedar Bluff	2.59	332	P	Pn	17 14 02.3	+1.2
	baz=152						
CBKS				S	Sn	17 14 34.9	+2.3
	baz=152						
CBKS	Cedar Bluff	2.59	332	Pn	Pn	17 14 02.4	+1.2
CBKS				IAmb_Lg		17 14 42.4	
	comp=Z,181nm,0.9s						
CBKS	Cedar Bluff	2.59	332	P		17 14 02.3	
	baz=152,SNR=16						
CBKS				S		17 14 34.7	
	baz=152						
KSU1	Kansas State U	2.87	26	P	Pn	17 14 05.6	+0.7
	baz=207						
KSU1	Kansas State U	2.87	26	Pn	Pn	17 14 05.6	+0.7
KSU1	Kansas State U	2.87	26	P		17 14 06.5	
	baz=207,SNR=15						
X37A	Clayton	3.01	129		Pn	17 14 07.9	+1.1
X37A				IAmb_Lg		17 15 01.1	
	comp=Z,158nm,0.9s						
X37A	Clayton	3.01	129	P		17 14 08.0	
	baz=311						
U38A	Gravette	3.08	90		Pn	17 14 08.6	+0.8
U38A				IAmb_Lg		17 15 05.4	
	comp=Z,141nm,0.8s						
U38A	Gravette	3.08	90	P		17 14 09.4	
	baz=273,SNR=60						
AMTX	Amarillo	3.27	241	P	Pn	17 14 11.9	+1.4
	baz=59						
AMTX	Amarillo	3.27	241		Pn	17 14 12.1	+1.6
AMTX	Amarillo	3.27	241	P		17 14 12.9	
	baz=59,SNR=27						
Z35A	Perchaven, San	3.28	166		Pn	17 14 11.8	+1.3
Z35A	Perchaven, San	3.28	166	P		17 14 11.7	
	baz=346,SNR=18						
HHAR	Hobbs	3.45	93		Pn	17 14 13.8	+0.9
W39A	Magazine	3.83	109	P	Pn	17 14 20.3	+2.3
	baz=292						
W39A	Magazine	3.83	109		Pn	17 14 19.2	+1.2
ABTX	Abilene, Hawle	4.07	197	P	Pn	17 14 22.6	+1.1
	baz=16						
ABTX				S	Sn	17 15 12.0	+3.1
	baz=16						
ABTX	Abilene, Hawle	4.07	197		Pn	17 14 22.7	+1.3
ABTX				IAmb_Lg		17 15 29.2	
	comp=Z,118nm,0.9s						
S39A	Bolivar	4.07	72		Pn	17 14 22.4	+0.9
S39A				IAmb_Lg		17 15 30.8	
	comp=Z,146nm,0.8s						
S39A	Bolivar	4.07	72	P		17 14 22.3	
	baz=255,SNR=24						
Z38A	Mt. Pleasant	4.19	140		Pn	17 14 23.4	+0.3
Z38A				IAmb_Lg		17 15 36.7	
	comp=Z,208nm,0.8s						
N33B	J Bar K, Exete	4.25	8	P		17 14 23.9	
	baz=188						
N33A	J Bar K, Exete	4.25	8		Pn	17 14 23.9	0.0
N33A				IAmb_Lg		17 15 39.3	
	comp=Z,103nm,0.8s						
MIAR	Mount Ida	4.26	116	P	Pn	17 14 25.3	+1.3
	baz=299						
MIAR				S	Sn	17 15 16.0	+2.4
	baz=299						
MIAR	Mount Ida	4.26	116		Pn	17 14 25.3	+1.3
MIAR				IAmb_Lg		17 15 38.2	
	comp=Z,104nm,0.9s						
MIAR	Mount Ida	4.26	116	P		17 14 25.4	
	baz=299,SNR=36						
KSCO	Kaye Shedlock'	4.30	307		Pn	17 14 25.2	+0.5
KSCO				IAmb_Lg		17 15 45.5	
	comp=Z,143nm,0.7s						
U40A	Yellville	4.32	91		Pn	17 14 25.8	+1.0
U40A				IAmb_Lg		17 15 35.8	
	comp=Z,128nm,0.7s						
U40A	Yellville	4.32	91	P		17 14 26.0	
	baz=274,SNR=27						
U40A				P		17 14 26.0	
	baz=274,SNR=27						
MSTX	Muleshoe	4.52	237		Pn	17 14 29.0	+1.3
MSTX				IAmb_Lg		17 15 46.0	
	comp=Z,103nm,0.8s						
WHTX	Lake Whitney,	4.56	172		Pn	17 14 29.0	+0.8
WHTX	Lake Whitney,	4.56	172	P		17 14 29.1	
	baz=352,SNR=10						
N35A	Tabor	4.77	24		Pn	17 14 32.1	+1.0
MGMO	Mountain Grove	4.80	81		Pn	17 14 32.7	+1.2
MGMO				IAmb_Lg		17 16 00.3	
	comp=Z,140nm,0.8s						
P38A	Dawn	4.81	49		Pn	17 14 32.1	+0.4
P38A				IAmb_Lg		17 16 03.4	
	comp=Z,132nm,0.7s						
P38A	Dawn	4.81	49	P		17 14 32.3	
	baz=232						
X40A	Basin Creek Fa	4.83	113		Pn	17 14 32.4	+0.6
X40A	Basin Creek Fa	4.83	113	P		17 14 32.5	
	baz=297,SNR=19						
X40A				P		17 14 32.5	
	baz=297,SNR=19						
BGNE	Belgrade	4.88	0		Pn	17 14 33.5	+0.9
BGNE				IAmb_Lg		17 15 58.2	
	comp=Z,190nm,0.8s						
BGNE	Belgrade	4.88	0	P		17 14 33.5	
	baz=181,SNR=12						
237A	Washetta, Mont	4.93	156		Pn	17 14 33.4	+0.2
237A				IAmb_Lg		17 16 06.6	
	comp=Z,92nm,1.0s						
FCAR	Ozark Folk Cen	4.96	96		Pn	17 14 33.7	+0.1
WHAR	Wooly Hollow	4.96	103		Pn	17 14 33.7	+0.1
WHAR				IAmb_Lg		17 16 09.5	
	comp=Z,113nm,1.1s						
WLAR	White Oak Lake	5.04	123	Pn	Pn	17 14 34.6	-0.1
R40A	Maddies Statio	5.04	68		Pn	17 14 35.5	+0.7
R40A				IAmb_Lg		17 16 06.7	
	comp=Z,87nm,0.7s						
R40A	Maddies Statio	5.04	68	P		17 14 35.6	
	baz=251,SNR=17						
OGNE	Ogallala	5.33	327	Pn	Pn	17 14 37.8	-1.1
ETX02	Prairie Street	5.57	145	Pn	Pn	17 14 39.9	-2.1
NATX	Nacogdoches	5.58	147	IAmb_Lg		17 16 31.8	
	comp=Z,72nm,0.8s						
L34A	Svendsen Farm,	5.62	14	Pn	Pn	17 14 43.1	+0.4
L34A				IAmb_Lg		17 16 25.6	
	comp=Z,144nm,0.8s						
LCAR	Lake Charles	5.71	92	Pn	Pn	17 14 44.0	0.0
P40A	Paris	5.71	56	Pn	Pn	17 14 44.6	+0.7
P40A				IAmb_Lg		17 16 28.1	
	comp=Z,169nm,0.8s						
T42A	Van Buren	5.73	83		Pn	17 14 45.4	+1.2
435B	Jarrell	5.75	175	Pn	Pn	17 14 43.3	-1.2
435B				IAmb_Lg		17 16 34.0	
	comp=Z,111nm,0.8s						
CCM	Cathedral Cave	5.75	73	Pn	Pn	17 14 44.9	+0.3
CCM				IAmb_Lg		17 16 22.5	
	comp=Z,120nm,0.8s						
N38A	Joes South For	5.77	41	Pn	Pn	17 14 43.9	-0.9
CPRX	Cap Rock	5.82	235	Pn	Pn	17 14 45.0	-0.6
SDCO	Great Sand Dun	5.96	284	Pn	Pn	17 14 49.4	+1.7
SDCO	Great Sand Dun	5.96	284	P		17 14 49.9	
	baz=100,SNR=10						
K31A	O'Neill	6.11	356	Pn	Pn	17 14 50.0	+0.5
K31A				IAmb_Lg		17 16 49.1	
	comp=Z,134nm,0.9s						
K31A	O'Neill	6.11	356	P		17 14 50.7	
	baz=176,SNR=5.5						
JCT	Junction City	6.17	193	Pn	Pn	17 14 50.3	0.0
HBAR	Harrisburg	6.19	97	IAmb_Lg		17 16 38.3	
	comp=Z,149nm,1.0s						
FVM	French Village	6.37	74	Pn	Pn	17 14 54.2	+1.2
FVM				IAmb_Lg		17 16 44.3	
	comp=Z,112nm,0.7s						
LPAR	Lepanto	6.47	96	IAmb_Lg		17 17 00.8	
	comp=Z,100nm,0.9s						
SCIA	State Center	6.62	34	IAmb_Lg		17 16 56.8	
	comp=Z,128nm,0.8s						
GNAR	Gosnell	6.64	92	IAmb_Lg		17 16 55.1	
	comp=Z,112nm,0.9s						
SLM	Saint Louis	6.67	69	IAmb_Lg		17 16 55.1	
	comp=Z,77nm,0.7s						
GDL2	Guadalupe Moun	6.67	232	Pn	Pn	17 14 57.3	0.0
ISCO	Idaho Springs	6.69	302		Pn	17 14 58.1	+0.4
PEBM	Pemiscott Bayo	6.75	91	IAmb_Lg		17 17 09.5	
	comp=Z,143nm,0.8s						
PARMO	Parma	6.80	86	Pn	Pn	17 14 58.9	0.0
ANMO	Albuquerque	6.89	259	Pn	Pn	17 15 01.3	+0.9
	comp=Z,0.5nm,0.3s,baz=67,slow=8.1,SNR=8.5						
ANMO				Lg	Lg	17 16 52.1	
	comp=Z,2.4nm,0.3s,baz=63,slow=12,SNR=5.1						
ANMO	Albuquerque	6.89	259		Pn	17 15 01.3	+0.9
ANMO	Albuquerque	6.89	259	P		17 15 01.6	
	baz=74,SNR=6.1						
HENM	Henderson Moun	7.03	86	Pn	Pn	17 15 01.5	-0.5
HENM				IAmb_Lg		17 17 07.6	
	comp=Z,117nm,0.8s						
N41A	Harden Midland	7.11	52	Pn	Pn	17 15 02.6	-0.6
GLAT	Glass	7.20	89	IAmb_Lg		17 17 17.3	
	comp=Z,122nm,0.8s						
S44A	Carbondale	7.25	78	Pn	Pn	17 15 06.2	+1.1
S44A				IAmb_Lg		17 17 17.1	
	comp=Z,95nm,0.8s						
SIUC	Southern Illin	7.28	78	Pn	Pn	17 15 06.4	+1.0
SIUC				IAmb_Lg		17 17 10.0	
	comp=Z,103nm,0.7s						
BNM	Barren Site	7.28	253	Pn	Pn	17 15 06.2	+0.5
ECSD	EROS Data Cent	7.30	9	Pn	Pn	17 15 05.4	-0.5
PHWY	Pilot Hill	7.40	312	IAmb_Lg		17 17 29.0	
	comp=Z,98nm,1.2s						
SMCO	Snowmass	7.43	294	Pg	Pb	17 15 31.4	+3.0
W45A	Hickory Valley	7.45	98	Pn	Pn	17 15 06.9	-0.9
W45A				IAmb_Lg		17 17 24.3	
	comp=Z,66nm,0.7s						
P43A	Skaggs, Pawnee	7.52	63	Pn	Pn	17 15 07.6	-1.2
MNTX	Cornudas Mount	7.65	233		Pn	17 15 11.6	+0.9
L40A	Anamosa	7.74	42	Pn	Pn	17 15 11.7	-0.1
SUSD	Miller	7.93	356	IAmb_Lg		17 17 33.0	
	comp=Z,63nm,0.8s						
HDIL	Hopedale	8.06	57	Pn	Pn	17 15 15.6	-0.5
I37A	Lemond, Waseca	8.33	25	IAmb_Lg		17 17 48.4	
	comp=Z,56nm,0.9s						
PLAL	Pickwick Lake	8.38	98	Pn	Pn	17 15 21.0	+0.4
WVT	Waverly	8.38	90	Pn	Pn	17 15 22.2	+1.6
O44A	Mansfield	8.46	62	IAmb_Lg		17 17 49.4	
	comp=Z,95nm,0.8s						
TX31	Lajitas Ar. Si	8.51	214	Pn	Pn	17 15 20.2	-2.4
TX32	Lajitas Array	8.51	214	Pn	Pn	17 15 20.2	-2.3
TXAR	Lajitas Array	8.51	214	Pn	Pn	17 15 23.4	+0.9
	comp=Z,0.6nm,0.3s,baz=32,slow=10,SNR=8.7						
TXAR				Pg	Pg	17 15 51.9	-10
	comp=Z,2.7nm,0.3s,baz=28,slow=14,SNR=7.2						
TXAR				Lg	Lg	17 17 43.6	
	comp=Z,1.8nm,0.3s,baz=57,slow=17,SNR=3.6						
TXAR	Lajitas Array	8.51	214	Pn	Pn	17 15 19.7	-2.9
USIN	University of	8.53	77	IAmb_Lg		17 17 58.0	
	comp=Z,76nm,0.8s						
L42A	Oliver, Polo	8.59	48	IAmb_Lg		17 18 04.0	
	comp=Z,85nm,0.8s						
RWWY	Rawlins	8.69	309	Pn	Pn	17 15 23.1	-2.0
RWWY				IAmb_Lg		17 18 16.7	
	comp=Z,62nm,1.2s						
RSSD	Black Hills	8.80	331		Pn	17 15 27.9	+1.4
RSSD				IAmb_Lg		17 18 08.5	
	comp=Z,75nm,1.2s						
JFWS	Jewell Farm	8.85	41	Pn	Pn	17 15 27.2	+0.2
121A	Cookes Peak, D	8.85	246	Pn	Pn	17 15 27.4	+0.1
121A				IAmb_Lg		17 18 07.0	
	comp=Z,42nm,1.2s						
K22A	Casper	8.87	316	Pn	Pn	17 15 26.3	-1.2
K22A				IAmb_Lg		17 18 17.4	
	comp=Z,79nm,1.1s						
T47A	Sharon Grove	8.92	84	Pn	Pn	17 15 27.5	-0.5
T47A				IAmb_Lg		17 18 21.2	
	comp=Z,66nm,1.0s						
F33A	5 Mile Ranch,	9.42	8	Pn	Pn	17 15 34.3	-0.5
CLTN	Cedars of Leba	9.59	89	Pn	Pn	17 15 38.7	+1.5
HQIL	Hanson Quary C	9.61	54	IAmb_Lg		17 18 26.7	
	comp=Z,52nm,0.8s						
WCI	Wyandotte Cave	9.63	76	IAmb_Lg		17 18 33.5	
	comp=Z,56nm,0.8s						
K43A	Burlington	9.80	48	Pn	Pn	17 15 39.9	-0.1
F36A	Milaca	9.97	19	Pn	Pn	17 15 41.9	-0.5
U49A	Red Boiling Sp	10.00	86	Pn	Pn	17 15 45.6	+2.7
SWET	Sewanee	10.04	94	Pn	Pn	17 15 45.9	+2.4
P48A	Milroy	10.50	70	Pn	Pn	17 15 48.6	-1.1
W50A	Signal Mountai	10.55	93	Pn	Pn	17 15 49.7	-0.7
G40A	Rib Lake	10.62	32	Pn	Pn	17 15 51.5	+0.2
BW06	Boulder Array	10.74	309	Pn	Pn	17 15 52.8	-0.4
PD31	Pinedale Array	10.74	309	Pn	Pn	17 15 51.7	-1.5
PDAR	Pinedale Array	10.74	309	Pn	Pn	17 15 51.5	-1.7
	comp=Z,0.3nm,0.3s,baz=126,slow=15,SNR=10.0						
PDAR				Pg		17 16 35.9	
	comp=Z,0.8nm,0.3s,baz=109,slow=17,SNR=5.6						
PDAR				Lg	Lg	17 18 48.0	
	comp=Z,0.6nm,0.3s,baz=93,slow=27,SNR=2.4						
PDAR	Pinedale Array	10.74	309	Pn	Pn	17 15 52.7	-0.5
TKL	Tuckaleechee C	11.71	90	Pn	Pn	17 16 07.2	+1.0
	comp=Z,0.4nm,0.3s,baz=316,slow=22,SNR=1.7						
TKL				Lg	Lg	17 19 24.1	
	comp=Z,0.4nm,0.3s,baz=6.9,slow=16,SNR=2.4						
S51A	Beattyville	11.72	80	Pn	Pn	17 16 07.1	+0.7
N49A	Columbus Grove	11.80	64	Pn	Pn	17 16 06.9	-0.5
V52A	Sevierville	11.83	89	Pn	Pn	17 16 08.8	+1.0
L48A	N Adams	11.97	59	Pn	Pn	17 16 10.2	+0.5
GOGA	Godfrey	12.48	100	Pn	Pn	17 16 18.3	+1.5
YKA	Yellowknife Ar	27.92	344	P	P	17 19 07.3	-1.7
	comp=Z,0.1nm,0.3s,baz=141,slow=9.3,SNR=4.5						
JTS	Las Juntas de	28.74	152	LR	LR	17 34 00.4	
	comp=Z,84nm,18.0s,baz=28,slow=43						
ILAR	Eielson Array	40.24	330	P	P	17 20 52.5	-3.1
	comp=Z,0.3nm,0.6s,baz=96,slow=8.3,SNR=2.3						

IPEC ***17*** *17:19:48.0±0.2, 51°.51N×16°.20E, h1^{km}, ML2.3/3, Error ellipse: s-maj=1.7km s-min=0.9km az=36.0*

VIE ***17*** *17:19:48.6±1.2, 51°.49N×16°.25E, h0^{km}, mb2.5/5, ml2.8/6, Error ellipse: s-maj=12.4km s-min=9.5km az=101.0 69 km NW of Wroclaw Suspected Mining induced.*

DNK ***17*** *17:19:49.3±6.0, 51°.40N×15°.34E, h15^{km}±287^{km}, ML2.1*

PRU ***17*** *17:19:49.6±0.0, 51°.46N×16°.15E, h0^{km}*

IDC ***17*** *17:19:49.5±0.9, 51°.50N×15°.95E, h0^{km}, mb1 3.5/6, mb1mx3.1/69, mbtmp3.3/6, ML2.9/6, Error ellipse: s-maj=15.9km s-min=8.2km az=118.0*

ISC 17 17:19:47.3±0.8**, 51°.55N**±0°.03×**16°.12E**±0°.03**, h0**^{km}**, n39, σ1^{s}.06**/80**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.72	171	*i* Pg	Pg	17 20 01.6	+0.5
KSP				*e*Sg	Sg	17 20 10.1	-0.2
CHVC	Chvalec	0.97	182	*e*PG	Pg	17 20 06.2	+0.4

CHVC				*e*SG	**Sg**	**17 20 18.1**	**-0.2**
	comp=Z,42nm,0.5s						
OSTC	**Ostas**	**1.00**	**176**	*e*PG	**Pg**	**17 20 06.9**	**+0.5**
OSTC				*e*SG	**Sg**	**17 20 19.1**	**-0.3**
	comp=Z,42nm,0.4s						
UPC	**Upice**	**1.05**	**184**	*e*PG	**Pg**	**17 20 07.5**	**+0.1**
UPC				*e*SG	**Sg**	**17 20 20.3**	**-0.6**
	comp=Z,79nm,0.4s						
DPC	**Dobruska-Polom**	**1.21**	**174**	*e*PG	**Pg**	**17 20 10.0**	**-0.5**
DPC				*e*SG	**Sg**	**17 20 25.0**	**-1.2**
	comp=Z,36nm,0.6s						
PVCC	**Panska Ves**	**1.42**	**224**	*e*PG	**Pn**	**17 20 14.7**	**+0.4**
PVCC				*e*SG	**Sg**	**17 20 33.1**	**+0.3**
	comp=Z,124nm,0.3s						
BRG	**Berggiesshubel**	**1.53**	**244**	Pn	**Pn**	**17 20 16.7**	**+0.8**
BRG				Pg	**Pb**	**17 20 17.4**	**+0.8**
BRG				Sg	**Sb**	**17 20 37.5**	**+1.1**
BRG				Amp		17 20 38.8	
	comp=Z,45nm,0.4s						
BRG				Amp		17 27 34.0	
	comp=Z,3.1nm,18.3s						
BRG				Amp		17 27 37.0	
	comp=E,1.5nm,11.8s						
BRG				Amp		17 27 39.0	
	comp=N,1.6nm,12.5s						
KRLC	**Kraliky**	**1.54**	**164**	*e*PG	**Pn**	**17 20 16.2**	**+0.2**
KRLC				*e*SG	**Sg**	**17 20 35.0**	**-1.7**
	comp=N,48nm,0.4s						
PRU	**Pruhonice**	**1.86**	**213**	*e*PG	**Pn**	**17 20 21.9**	**+1.5**
PRU				*e*SG	**Sb**	**17 20 45.9**	**0.0**
	comp=N,19nm,0.4s						
CLL	**Collm**	**1.97**	**264**	*e*Pn	**Pn**	**17 20 22.0**	**+0.1**
CLL				*e*Pg	**Pb**	**17 20 25.0**	**+1.0**
CLL				*i*		17 20 29.2	
CLL				*e*Sg	**Sb**	**17 20 51.0**	**+2.0**
	comp=Z,16nm,0.6s						
MORC	**Moravsky Berou**	**2.00**	**152**	*e*PN	**Pn**	**17 20 22.2**	**-0.1**
MORC				*e*SG	**Sn**	**17 20 48.6**	**+0.5**
MORC	**Moravsky Berou**	**2.00**	**152**	*e*Pn	**Pn**	**17 20 22.2**	**-0.1**
	baz=334						
MORC				*e*Sg	**Sn**	**17 20 48.5**	**+0.5**
	comp=Z,24nm,0.4s,baz=334						
OKC	**Ostrava-Krasne**	**2.15**	**142**	*e*PG	**Pb**	**17 20 26.6**	**-0.5**
OKC				*e*SG	**Sb**	**17 20 54.3**	**+0.1**
	comp=Z,37nm,0.5s						
VRAC	**Vranov**	**2.27**	**172**	Pn	**Pn**	**17 20 27.3**	**+1.3**
	comp=Z,2.0nm,0.3s,baz=343,slow=15,SNR=11						
VRAC				Lg	Lg	17 20 58.7	
	comp=Z,4.4nm,0.3s,baz=278,slow=22,SNR=9.8						
VRAC	**Vranov**	**2.27**	**172**	*e*PN	**Pn**	**17 20 26.3**	**+0.3**
VRAC				*e*SG	**Sb**	**17 20 57.1**	**-0.6**
VRAC	**Vranov**	**2.27**	**172**	*e*Pn	**Pn**	**17 20 26.3**	**+0.3**
	baz=354						
VRAC				*e*Sg	**Sb**	**17 20 57.0**	**-0.6**
	comp=Z,17nm,0.4s,baz=354						
TREC	**Trest**	**2.29**	**190**	*e*SG	**Sb**	**17 20 59.1**	**+0.6**
	comp=Z,21nm,0.4s						
PBCC	**Pribram**	**2.31**	**217**	*e*PG	**Pb**	**17 20 29.9**	**+0.1**
PBCC				*e*SG	**Sb**	**17 21 00.3**	**+1.5**
	comp=Z,9.1nm,0.5s						
KRUC	**Moravsky**	**2.50**	**176**	*e*PN	**Pn**	**17 20 29.7**	**+0.5**
KRUC				*e*PG	**Pb**	**17 20 32.9**	**-0.2**
KRUC				*e*SG	**Sb**	**17 21 05.3**	**+0.9**
KRUC	**Moravsky**	**2.50**	**176**	*e*Pn	**Pn**	**17 20 29.6**	**+0.4**
	baz=357						
KRUC	**Moravsky**	**2.50**	**176**	*e*Pg	**Pb**	**17 20 32.8**	**-0.3**
	baz=357						
KRUC				*e*Sg	**Sb**	**17 21 05.2**	**+0.9**
	comp=Z,14nm,0.4s,baz=357						
NKC	**Novy Kostel**	**2.67**	**242**	*e*PN	**Pn**	**17 20 32.7**	**+1.1**
NKC				*e*PG	**Pb**	**17 20 37.6**	**+1.5**
NKC				*e*SG	**Sg**	**17 21 14.2**	**+1.0**
	comp=Z,26nm,0.3s						
OJC	**Ojcow**	**2.69**	**118**	*e*Pn	**Pn**	**17 20 31.1**	**-0.7**
OJC				*e*Pg	**Pg**	**17 20 40.5**	**+1.8**
OJC				*e*Sg	**Sg**	**17 21 15.3**	**+1.8**
KHC	**Kasperske Hory**	**2.92**	**215**	*e*PN	**Pn**	**17 20 35.8**	**+0.8**
KHC				*e*PG	**Pb**	**17 20 41.2**	**+0.9**
KHC				*e*SN	**Sn**	**17 21 10.3**	**-0.5**
KHC				*e*SG	**Sg**	**17 21 21.0**	**-0.1**
	comp=Z,15nm,0.3s						
CKRC	**Cesky Krumlov**	**2.97**	**204**	*e*PN	**Pn**	**17 20 36.7**	**+1.0**
CKRC				*e*PG	**Pb**	**17 20 42.0**	**+0.9**
CKRC				*e*SG	**Sg**	**17 21 21.0**	**-1.7**
GERES	**GERESS Array B**	**3.12**	**211**	Pn	**Pn**	**17 20 38.3**	**+0.4**
	comp=Z,1.1nm,0.3s,baz=26,slow=12,SNR=27						
GERES				Pg	**Pb**	**17 20 44.7**	**+0.9**
	comp=Z,3.6nm,0.3s,baz=29,slow=17,SNR=27						
GERES				Lg	Lg	17 21 25.6	
	comp=Z,4.1nm,0.3s,baz=32,slow=26,SNR=9.3						
SMOL	**Smolenice**	**3.16**	**164**	*e*PG	**Pg**	**17 20 48.3**	**+0.5**
SMOL				*e*SG	**Sg**	**17 21 29.0**	**+0.3**
SMOL				*e*LG	Lg	17 21 33.3	
LANS	**Liptovska Anna**	**3.22**	**137**	*e*PG	**Pg**	**17 20 49.3**	**+0.3**
LANS				*e*SG	**Sg**	**17 21 31.9**	**+1.1**
LANS				*e*LG	Lg	17 21 36.9	
MODS	**Modra-Piesok**	**3.27**	**166**	*e*PG	**Pg**	**17 20 48.6**	**-1.3**
MODS				*e*SG	**Sg**	**17 21 32.3**	**0.0**
MODS				*e*LG	Lg	17 21 36.1	
VYHS	**Vyhne**	**3.53**	**149**	*e*PN	**Pn**	**17 20 43.6**	**+0.2**
VYHS				*e*PG	**Pg**	**17 20 56.6**	**+1.7**
VYHS				*e*SG	**Sg**	**17 21 44.1**	**+3.5**
CONA	**Conrad Observa**	**3.63**	**183**	*i* Pn	**Pn**	**17 20 45.7**	**+0.8**
	comp=Z,1.8nm,0.4s,SNR=5.0						
CONA				*e*Pg	**Pg**	**17 20 56.0**	**-0.9**
	comp=Z,2.8nm,0.2s						
CONA				Sg	**Sg**	**17 21 41.7**	**-2.2**
	comp=Z,8.1nm,0.4s						
BSD	**Bornholm Skovb**	**3.64**	**349**	*e*	**Pn**	**17 20 44.2**	**-0.7**
	baz=207,slow=14						
BSD				*i* P	Pb	17 20 45.8	-6.7
BSD				*e*S	**Sn**	**17 21 26.9**	**-1.6**
BSD				IAML		17 21 31.7	
	comp=Z,1.6nm,0.3s						
MOA	**Molln**	**3.90**	**199**	*e*Pn	**Pn**	**17 20 49.3**	**+0.9**
	comp=Z,0.9nm,0.2s,SNR=4.8						
MOA				Sg	**Sg**	**17 21 51.6**	**-0.8**
	comp=Z,7.1nm,0.4s						
ARSA	**Arzberg**	**4.32**	**185**	*e*Pn	**Pn**	**17 20 55.5**	**+1.2**
	comp=Z,1.0nm,0.2s						
ARSA				Sg	**Sg**	**17 22 07.6**	**+1.5**
	comp=Z,4.3nm,0.5s						
KBA	**Koelnbreinsper**	**4.83**	**203**	*e*Pn	**Pb**	**17 21 11.1**	**-1.8**
	comp=Z,2.6nm,0.3s						
DAVOX	**Davos/Dischmat**	**6.29**	**223**	Pn	**Pn**	**17 21 21.2**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=330,slow=14,SNR=1.7						
DAVOX				Lg	Lg	17 23 06.9	
	comp=Z,0.2nm,0.3s,baz=114,slow=23,SNR=1.9						
AKASG	**Malin Array Be**	**8.29**	**91**	Pn	**Pn**	**17 21 49.7**	**+1.0**
	comp=Z,0.7nm,0.3s,baz=279,slow=12,SNR=2.2						
FINES	**FINESS Array B**	**11.32**	**25**	Pn	**Pn**	**17 22 30.1**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=214,slow=9.2,SNR=3.9						
FINES				Sn	Sn	17 24 28.7	-8.6
	comp=Z,0.1nm,0.3s,baz=215,slow=24,SNR=1.9						
ARCES	**ARCESS Array B**	**18.58**	**10**	Pn	**P**	**17 24 02.9**	**-2.7**
	baz=197,slow=11,SNR=5.3						

IDC ***17*** *17:26:21.6±0.9, 6°.65S×127°.62E, h398^{km}±11^{km}, mb3.6/12, mb1 3.7/19, mb1mx3.5/44, mbtmp4.5/19, Error ellipse: s-maj=12.3km s-min=7.6km az=73.0*

NEIC ***17*** *17:26:22.0±2.0, 6°.63S±0°.05×127°.58E±0°.06, h402^{km}±8^{km}, mb4.3/44, Error ellipse: s-maj=10.6km s-min=1.4km az=52.0*

DJA ***17*** *17:26:23.4±0.6, 7°S±4°×12°8E±°, h383^{km}±7^{km}, M4.5/8, mB4.7/4, mb4.4/7, MLv4.7/8, Mw(mB)3.9/4*

ISC 17 17:26:22.3±0.4**, 6°.65S**±0°.05×**127°.60E**±0°.05**, h408**^{km}**, n106, σ1^{s}.44**/116**, mb4.2**/37**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NLAI	**Namlea**	**3.42**	**352**	P	**P**	**17 27 30.4**	**+0.8**
NLAI				S	**S**	**17 28 25.5**	**+1.2**
SAUI	**Saumlaki**	**3.90**	**110**	Pn	**P**	**17 27 34.6**	**+0.8**
SAUI				S	**S**	**17 28 29.5**	**-2.6**
SOEI	**Soe**	**4.52**	**227**		**P**	**17 27 39.7**	**-0.2**
SOEI				S	**S**	**17 28 38.9**	**-4.2**
SOEI	**Soe**	**4.52**	**227**	P	**P**	**17 27 40.1**	**+0.2**
SOEI				S	**S**	**17 28 40.7**	**-2.4**
SANI	**Sanana**	**4.84**	**341**	P	**P**	**17 27 43.1**	**+0.1**
BATI	**Baumata**	**5.26**	**228**	P	**P**	**17 27 48.0**	**+0.8**
	92nm,0.3s,baz=59,slow=2.3,SNR=199						
BATI				S	**S**	**17 28 54.3**	**-2.5**
	69nm,0.3s,baz=60,slow=3.9,SNR=44						
BATI	**Baumata**	**5.26**	**228**	P	**P**	**17 27 48.4**	**+1.2**
	1.7nm3µm175nm,0.5s						
MMRI	**Maumere**	**5.67**	**249**	Pn	**P**	**17 27 52.0**	**+0.4**
FAKI	**Fak Fak**	**5.93**	**52**		**P**	**17 27 54.2**	**0.0**
FAKI				S	**S**	**17 29 04.2**	**-5.4**
FAKI	**Fak Fak**	**5.93**	**52**	P	**P**	**17 27 54.7**	**+0.5**
	1.0nm2µm177nm,0.7s						
SIJI	**Sorong**	**6.80**	**33**	P	**P**	**17 28 04.2**	**-0.4**
	5.3nm,0.3s,baz=156,slow=19,SNR=50						
SIJI				S	**S**	**17 29 22.0**	**-5.1**
	4.4nm,0.3s,baz=89,slow=23,SNR=8.0						
LUWI	**Luwuk**	**7.37**	**319**		**P**	**17 28 09.2**	**-1.6**
TNTI	**Ternate**	**7.37**	**358**	P	**P**	**17 28 10.8**	**0.0**
BNSI	**Bone**	**7.79**	**286**	P	**P**	**17 28 15.1**	**-0.3**
	0.1nm33nm,0.8s						
KAPI	**Kappang**	**7.98**	**281**	P	**P**	**17 28 17.5**	**0.0**
	2.6nm,0.3s,baz=119,slow=6.1,SNR=12						
APSI	**Ampana**	**8.23**	**314**	P	**P**	**17 28 21.6**	**+1.4**
	19nm,0.8s						
GTOI	**Gorontalo**	**8.57**	**327**	P	P	17 28 28.8	+4.9
	0.1nm390nm21nm,0.9s						
MRSI	**Marisa**	**9.06**	**321**	P	**P**	**17 28 31.9**	**+2.5**
TOLI2	**Tolitoli**	**10.29**	**318**	P	**P**	**17 28 43.4**	**+0.4**
FITZ	**Fitzroy Crossi**	**11.54**	**189**	P	**P**	**17 28 56.8**	**+0.1**
	0.8nm,0.3s,baz=18,slow=9.6,SNR=19						
BKB	**Balikpapan**	**11.95**	**296**	P	**P**	**17 29 02.8**	**+1.5**
JAGI	**Jajag, Banyuwa**	**13.46**	**261**	P	**P**	**17 29 15.2**	**-2.7**
WB0	**Warramunga Arr**	**14.61**	**154**	P	**P**	**17 29 30.7**	**+0.3**
WRAB	**Tennant Creek**	**14.74**	**154**	P	**P**	**17 29 32.4**	**+0.6**
WRA	**Warramunga Arr**	**14.74**	**154**	P	**P**	**17 29 32.1**	**+0.3**
	2.8nm,0.3s,baz=337,slow=11,SNR=192						
WRA				S	**S**	**17 32 05.5**	**-3.2**
	2.1nm,0.3s,baz=332,slow=20,SNR=14						
WRA	**Warramunga Arr**	**14.74**	**154**	P	**P**	**17 29 31.0**	**-0.8**
WRA					**S**	**17 32 05.4**	**-3.2**
WB2	**Warramunga Arr**	**14.75**	**154**	P	**P**	**17 29 32.1**	**+0.2**
WB2					**S**	**17 32 06.0**	**-2.8**
WR0	**Warramunga Arr**	**14.85**	**154**	P	**P**	**17 29 33.1**	**+0.2**
WR0					**S**	**17 32 08.5**	**-2.2**
MYLDM	**Lahad Datu**	**14.85**	**322**	P	**P**	**17 29 34.9**	**+1.8**
PSA00	**Pilbara Seismi**	**16.63**	**206**	P	**P**	**17 29 51.3**	**-0.7**
PSA00				IAmb	IAmb	17 29 51.8	
	comp=Z,7.4nm,0.8s						
COEN	**Coen**	**16.95**	**117**	P	**P**	**17 29 56.1**	**+0.6**
COEN				IAmb	IAmb	17 29 57.6	
	comp=Z,24nm,1.2s						
KKM	**Kota Kinabalu**	**16.98**	**318**	P	**P**	**17 29 57.5**	**+1.5**
SBUM	**Sibu**	**17.82**	**300**	P	**P**	**17 30 04.6**	**-0.2**
SBUM				IAmb	IAmb	17 30 08.5	
	comp=Z,21nm,1.3s						
AS31	**Alice Springs**	**17.97**	**161**	P	**P**	**17 30 06.4**	**+0.1**
AS31				IAmb	IAmb	17 30 10.4	
	comp=Z,7.5nm,0.5s						
ASAR	**Alice Springs**	**17.97**	**161**	P	**P**	**17 30 06.2**	**-0.1**
	comp=Z,4.6nm,0.3s,baz=350,slow=13,SNR=284						
ASAR				S	**S**	**17 33 10.1**	**-1.4**
	comp=Z,1.1nm,0.3s,baz=335,slow=17,SNR=11						
ASAR	**Alice Springs**	**17.97**	**161**	P	**P**	**17 30 06.2**	**-0.1**
ASAR					**S**	**17 33 10.6**	**-0.8**
KSM	**Kuching**	**19.06**	**294**	P	**P**	**17 30 16.6**	**-1.0**
KSM				IAmb	IAmb	17 30 20.0	
	comp=Z,12nm,0.8s						
PMG	**Port Moresby**	**19.55**	**99**	P	**P**	**17 30 23.6**	**+1.3**
CISI	**Cisompet, Garu**	**19.66**	**266**	P	**P**	**17 30 20.9**	**-2.4**
LEM	**Lembang**	**19.85**	**268**	P	**P**	**17 30 26.3**	**+1.1**
	comp=Z,2.6nm,0.3s,baz=89,slow=12,SNR=4.7						
GIRL	**Giralia**	**20.47**	**218**	P	**P**	**17 30 31.9**	**+1.3**
CTA	**Charters Tower**	**22.50**	**128**	P	**P**	**17 30 50.6**	**+1.5**
	comp=Z,2.9nm,0.7s,baz=284,slow=8.3,SNR=1.2						
CTAO	**Charters Tower**	**22.50**	**128**	P	**P**	**17 30 50.2**	**+1.1**
CTAO				IAmb	IAmb	17 31 07.6	
	comp=Z,22nm,1.4s						
FORT	**Forrest**	**24.01**	**179**	P	**P**	**17 31 02.6**	**+0.1**
MORW	**Morawa**	**24.83**	**205**	P	**P**	**17 31 09.9**	**-0.1**
MORW				IAmb	IAmb	17 31 33.2	
	comp=Z,11nm,1.2s						
BBOO	**Buckleboo**	**27.19**	**164**	P	**P**	**17 31 31.2**	**+0.4**
BBOO				IAmb	IAmb	17 31 31.9	
	comp=Z,13nm,1.0s						
NWAO	**Narrogin (SRO)**	**27.87**	**199**	P	**P**	**17 31 36.4**	**-0.3**
	comp=Z,7.4nm,0.6s,baz=26,slow=6.8,SNR=7.6						
NWAO	**Narrogin (SRO)**	**27.87**	**199**	P	**P**	**17 31 36.5**	**-0.3**
NWAO				IAmb	IAmb	17 31 42.3	
	comp=Z,60nm,1.6s						
NWAO	**Narrogin (SRO)**	**27.87**	**199**	IAmb	IAmb	17 31 42.3	
	comp=Z,48nm,1.6s						
STKA	**Stephens Creek**	**28.30**	**154**	P	**P**	**17 31 40.9**	**+0.3**
	comp=Z,11nm,0.4s,baz=334,slow=8.8,SNR=73						
STKA	**Stephens Creek**	**28.30**	**154**	P	**P**	**17 31 41.1**	**+0.5**
IPM	**Ipoh**	**28.74**	**292**	P	**P**	**17 31 44.2**	**-0.6**
RPSI	**Rantau Prapat**	**30.10**	**287**	P	**P**	**17 31 56.9**	**+0.3**
PSI	**Prapat**	**30.13**	**287**	P	**P**	**17 31 56.9**	**-0.2**
	comp=Z,2.4nm,0.4s,baz=182,slow=4.9,SNR=4.9						
ARMA	**Armidale**	**32.68**	**139**	P	**P**	**17 32 20.6**	**+1.8**
ARMA				IAmb	IAmb	17 32 46.0	
	comp=Z,18nm,1.2s						
CAN	**Canberra**	**34.66**	**148**	P	**P**	**17 32 37.6**	**+2.0**
CAN				IAmb	IAmb	17 32 38.1	
	comp=Z,10nm,0.6s						
TOO	**Toolangi**	**34.82**	**155**	P	**P**	**17 32 38.8**	**+2.0**
TOO				IAmb	IAmb	17 32 40.3	
	comp=Z,16nm,1.2s						
SLVN	**Son La**	**36.25**	**321**	P	**P**	**17 32 49.4**	**+0.2**
CMAR	**Chiang Mai Arr**	**37.70**	**312**	P	**P**	**17 33 00.6**	**-0.6**
	comp=Z,1.7nm,0.5s,baz=141,slow=6.9,SNR=17						
CHTO	**Chiang Mai**	**37.93**	**312**	P	**P**	**17 33 02.2**	**-0.8**
SANVU	**Saraoutou**	**39.78**	**106**	P	**P**	**17 33 19.4**	**+1.2**
SANVU	**Saraoutou**	**39.78**	**106**	P	**P**	**17 33 20.2**	**+2.0**
OUENC	**Ouen Island, N**	**40.93**	**117**	P	**P**	**17 33 28.6**	**+1.2**
JHJ2	**Mitsune**	**41.21**	**16**	P	**P**	**17 33 30.5**	**+1.0**
PINNC	**Pines Island,**	**41.52**	**117**	P	**P**	**17 33 33.6**	**+1.5**
KSRS	**Korea Array**	**43.87**	**0**	P	**P**	**17 33 50.5**	**0.0**
	comp=Z,1.6nm,0.9s,baz=197,slow=38,SNR=3.8						
MJAR	**Matsushiro Arr**	**44.10**	**12**	P	**P**	**17 33 51.6**	**-0.7**
	comp=Z,1.7nm,0.6s,baz=195,slow=9.1,SNR=4.3						
MJAR	**Matsushiro Arr**	**44.10**	**12**	P	**P**	**17 33 51.3**	**-1.1**
XAN	**Xi'an**	**44.16**	**338**	P	**P**	**17 33 51.3**	**-1.7**
LSA	**Lhasa**	**50.32**	**318**	P	**P**	**17 34 39.9**	**-0.4**
ODAN	**Odare**	**51.25**	**312**	*e*P	**P**	**17 34 46.0**	**-0.9**
	comp=Z,11nm,0.5s						
TAPN	**Taplejung**	**51.29**	**313**	*e*P	**P**	**17 34 46.7**	**-0.6**
	comp=Z,8.4nm,0.3s						
RAMN	**Ramite**	**51.88**	**312**	*e*P	**P**	**17 34 51.3**	**-0.3**
	comp=Z,26nm,0.5s						
FOZ	**Fox Glacier**	**52.12**	**142**	P	**P**	**17 34 51.7**	**-1.0**
MLZ	**Mavora Lakes**	**52.12**	**145**	P	**P**	**17 34 51.9**	**-0.9**
MLZ				IAmb	IAmb	17 35 10.2	
	comp=Z,33nm,1.5s						
WHZ	**Wether Hill Ro**	**52.33**	**145**	P	**P**	**17 34 54.6**	**+0.4**
WHZ				IAmb	IAmb	17 35 28.0	
	comp=Z,28nm,1.3s						
QRZ	**Quartz Range**	**52.51**	**138**	P	**P**	**17 34 57.5**	**+1.8**
LBZ	**Lake Benmore**	**52.80**	**142**	P	**P**	**17 34 58.0**	**+0.4**
LBZ				IAmb	IAmb	17 35 04.4	
	comp=Z,21nm,1.3s						
GUN	**Gumba**	**52.95**	**312**	*e*P	**P**	**17 34 58.8**	**-0.6**
	comp=Z,17nm,0.4s						
RPZ	**Rata Peaks**	**52.98**	**141**	P	**P**	**17 34 60.0**	**+1.0**
	comp=Z,9.5nm,0.4s,baz=286,slow=2.6,SNR=11						
RPZ	**Rata Peaks**	**52.98**	**141**	P	**P**	**17 35 00.1**	**+1.0**
RPZ				IAmb	IAmb	17 35 00.7	
	comp=Z,12nm,0.7s						
PKI	**Pulchoki**	**53.10**	**312**	*e*P	**P**	**17 34 59.5**	**-1.0**
	comp=Z,9.7nm,0.4s						
PKIN	**Phulchoki**	**53.12**	**312**	*e*P	**P**	**17 34 59.5**	**-1.0**
	comp=Z,8.0nm,0.5s						
KKN	**Kakani**	**53.32**	**312**	*e*P	**P**	**17 35 01.4**	**-0.5**
	comp=Z,5.0nm,0.4s						
DMN	**Daman**	**53.35**	**312**	*e*P	**P**	**17 35 01.5**	**-0.7**
	comp=Z,10nm,0.4s						
TUWZ	**Tuamarina**	**53.73**	**138**	P	**P**	**17 35 05.0**	**+0.6**
GKN	**Gorkha**	**53.91**	**312**	*e*P	**P**	**17 35 05.5**	**-0.6**
	comp=Z,24nm,0.3s						
KHZ	**Kahutara**	**53.92**	**139**	P	**P**	**17 35 06.4**	**+0.7**
KHZ				IAmb	IAmb	17 35 11.7	
	comp=Z,23nm,1.2s						
BKZ	**Black Stump Fm**	**54.54**	**134**	P	**P**	**17 35 11.0**	**+0.7**
DANN	**Dangsing**	**54.75**	**312**	*e*P	**P**	**17 35 11.5**	**-0.7**
	comp=Z,11nm,0.5s						
BFZ	**Birch Farm**	**54.98**	**136**	P	**P**	**17 35 13.9**	**+0.6**
BFZ				IAmb	IAmb	17 35 29.1	
	comp=Z,26nm,1.2s						
SONM	**Songino Array**	**57.39**	**343**	P	**P**	**17 35 30.3**	**+0.3**
	comp=Z,1.3nm,0.8s,baz=172,slow=8.1,SNR=10						
SONM	**Songino Array**	**57.39**	**343**	IAmb	IAmb	17 35 32.2	
	comp=Z,1.2nm,0.8s						
PETK	**Petropavlovsk-**	**64.76**	**20**	P	**P**	**17 36 19.9**	**+1.3**
	comp=Z,0.8nm,0.5s,baz=152,slow=3.1,SNR=6.0						
NIL	**Nilore**	**65.20**	**312**	P	**P**	**17 36 21.2**	**-0.7**
NIL				IAmb	IAmb	17 36 22.0	
	comp=Z,3.7nm,0.6s						
MK31	**Makanchi Array**	**66.65**	**328**	P	**P**	**17 36 30.7**	**0.0**
MKAR	**Makanchi Array**	**66.65**	**328**	P	**P**	**17 36 31.0**	**+0.2**
	comp=Z,1.8nm,0.5s,baz=120,slow=8.0,SNR=73						
MKAR	**Makanchi Array**	**66.65**	**328**	P	**P**	**17 36 31.0**	**+0.2**
MAKZ	**Makanchi**	**66.82**	**328**	P	**P**	**17 36 32.0**	**+0.1**
ZAA0	**Zalesovo Array**	**70.23**	**335**	P	**P**	**17 36 51.5**	**-1.0**
ZAA0				IAmb	IAmb	17 36 53.2	
	comp=Z,5.9nm,1.4s						
ZALV	**Zalesovo Beam**	**70.23**	**335**	P	**P**	**17 36 52.2**	**-0.2**
	comp=Z,2.5nm,0.6s,baz=128,slow=5.6,SNR=11						
ZALV	**Zalesovo Beam**	**70.23**	**335**	P	**P**	**17 36 51.2**	**-1.3**
KURK	**Kurchatov**	**70.99**	**330**	P	**P**	**17 36 57.1**	**0.0**
KURK				IAmb	IAmb	17 36 58.2	
	comp=Z,5.3nm,0.8s						
VNDA	**Vanda**	**73.09**	**173**	P	**P**	**17 37 08.9**	**-0.1**
VNDA				IAmb	IAmb	17 37 20.0	
	comp=Z,18nm,1.5s						
SOCY	**Socotra**	**75.53**	**284**	P	**P**	**17 37 27.5**	**+3.4**
SOCY				IAmb	IAmb	17 37 53.8	
	comp=Z,8.9nm,1.1s						
YKA	**Yellowknife Ar**	**108.47**	**26**	PKiKP	**PKiKP**	**17 44 02.7**	**-0.2**
	comp=Z,0.3nm,0.8s,baz=302,slow=0.7,SNR=3.9						

IDC 17 17:36:09.8±12.0**, 8°.50N**×**102°.71W, h0**^{km}**, mb3.2**/4**, mb1 3.7**/4**, mb1mx3.5**/32**, mbtmp3.2**/4**, MS3.7**/2**, Ms1 3.7**/2**, ms1mx3.3**/15**, Error ellipse: s-maj=407.5km s-min=120.4km az=109.0, Northern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H06E1	**SOCORRO T-PHAS**	**12.96**	**323**	T	T	17 52 13.6	
	SNR=14						
TXAR	**Lajitas Array**	**20.75**	**358**	P	P	17 40 51.5	-0.8
	0.2nm,0.4s,baz=170,slow=10,SNR=2.2						
TXAR				LR	LR	17 48 01.1	
	comp=Z,216nm,20.4s,baz=0.0,slow=34						
ELK	**Elko**	**33.99**	**343**	LR	LR	17 54 53.9	
	comp=Z,134nm,18.1s,baz=342,slow=33						
PDAR	**Pinedale Array**	**34.66**	**351**	P	P	17 43 02.4	+1.0
	0.4nm,0.8s,baz=158,slow=7.5,SNR=3.3						
H03N2	**Juan Fernandez**	**47.44**	**153**	T	T	18 35 41.4	
	baz=329,slow=77,SNR=30						
H03N1	**Juan Fernandez**	**47.45**	**153**	T	T	18 35 42.6	
	baz=329,slow=77,SNR=36						
H03N3	**Juan Fernandez**	**47.46**	**153**	T	T	18 35 41.7	
	baz=329,slow=77,SNR=32						
YKA	**Yellowknife Ar**	**54.59**	**353**	P	P	17 45 39.8	0.0
	0.3nm,0.9s,baz=169,slow=7.6,SNR=5.7						
ILAR	**Eielson Array**	**64.11**	**341**	P	P	17 46 45.1	-0.5
	0.7nm,0.9s,baz=146,slow=5.0,SNR=4.1						

JMA ***17*** *18:03:56.4, 41°.38N×142°.15E, h44^{km}±2^{km}, M3.8*

JMA Felt I J1.

IDC ***17*** *18:03:58.1±2.2, 41°.36N×142°.23E, h57^{km}±22^{km}, mb3.4/4, mb1 3.6/7, mb1mx3.3/34, mbtmp3.6/7, ML3.3/3, Error ellipse: s-maj=32.6km s-min=13.7km az=108.0*

ISC 17 18:03:57.7±1.0**, 41°.35N**±0°.04×**142°.18E**±0°.04**, h44**^{km}±12^{km}**, n31, σ1^{s}.76**/43**, mb3.7**/4**, 2C-7D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAHD	**Aomorihigashid**	**0.64**	**262**	⇓P	**Pn**	**18 04 08.9**	**-1.4**
JAHD				*e*S	**Sn**	**18 04 17.9**	**-1.5**
JARK	**Aomorirokkasho**	**0.70**	**241**	⇓P	**Pn**	**18 04 09.8**	**-1.4**
JARK				S	**Sn**	**18 04 19.5**	**-1.4**
JOT	**Ohata**	**0.85**	**272**	⇓P	**Pn**	**18 04 11.6**	**-1.6**
JOT				*e*S	**Sn**	**18 04 22.7**	**-1.8**
JEM	**Erimo**	**0.99**	**48**	P	**Pn**	**18 04 13.9**	**-1.2**
JEM				*e*S	**Sn**	**18 04 27.2**	**-0.7**
JKB	**Kayabe**	**1.01**	**302**	⇓P	**Pn**	**18 04 13.6**	**-1.7**
JKB				*e*S	**Sn**	**18 04 26.2**	**-2.2**
JTM	**Tenmabayashi**	**1.01**	**236**	⇓P	**Pn**	**18 04 14.6**	**-0.8**
JTM				S	**Sn**	**18 04 27.8**	**-0.6**
JNBK	**Urakawa-nobuka**	**1.02**	**25**	P	**Pn**	**18 04 13.8**	**-1.7**
JNBK				*e*S	**Sn**	**18 04 27.4**	**-1.3**
JANG	**Nango**	**1.10**	**207**	⇓P	**Pn**	**18 04 15.2**	**-1.4**
JANG				*e*S	**Sn**	**18 04 28.7**	**-1.9**
JIAM	**Iburiatsuma**	**1.28**	**352**	⇑P	**Pn**	**18 04 18.7**	**-0.4**
JIAM				*e*S	**Sn**	**18 04 35.5**	**+0.4**
JSR	**Shiriuchi**	**1.33**	**278**	⇓P	**Pn**	**18 04 18.9**	**-0.9**
JSR				*e*S	**Sn**	**18 04 35.9**	**-0.4**
JNB	**Noboribetsu**	**1.40**	**323**	P	**Pn**	**18 04 19.0**	**-1.7**
JNB				S	**Sn**	**18 04 35.4**	**-2.6**
JBT2	**Biratori 2**	**1.43**	**6**	⇑P	**Pn**	**18 04 20.1**	**-1.0**
JBT2				*e*S	**Sn**	**18 04 38.0**	**-0.7**
JCH	**Churui**	**1.54**	**35**	P	**Pn**	**18 04 22.5**	**-0.1**
JCH				*e*S	**Sn**	**18 04 42.3**	**+0.9**
JYM2	**Yakumo 2**	**1.55**	**300**	P	**Pn**	**18 04 21.9**	**-0.9**
JEW	**Eniwo**	**1.58**	**340**	P	**Pn**	**18 04 22.5**	**-0.7**
JEW				*e*S	**Sn**	**18 04 42.1**	**-0.3**
JOMM	**Oshimamatsumae**	**1.64**	**277**	P	**Pn**	**18 04 22.9**	**-1.1**
JAH	**Hinai**	**1.65**	**226**	P	**Pn**	**18 04 23.5**	**-0.6**
JFR	**Furan**	**1.83**	**10**	P	**Pn**	**18 04 25.6**	**-1.1**
JFR				*e*S	**Sn**	**18 04 47.5**	**-1.2**
ASAJ	**Asahikawa**	**2.78**	**6**	P	**Pn**	**18 04 39.6**	**-0.1**
	7.6nm,0.3s,baz=216,slow=10,SNR=76						
ASAJ				S	**Sn**	**18 05 12.4**	**+0.5**
	7.2nm,0.3s,baz=93,slow=22,SNR=6.6						
MJAR	**Matsushiro Arr**	**5.71**	**214**	P	**Pn**	**18 05 21.6**	**+1.7**
	0.1nm,0.3s,baz=28,slow=13,SNR=7.7						
KSRS	**Korea Array**	**11.69**	**255**	P	**Pn**	**18 06 45.0**	**+3.2**
	0.2nm,0.3s,baz=65,slow=14,SNR=2.8						
KSRS				S	**Sn**	**18 08 57.7**	**+6.9**
	0.7nm,0.3s,baz=67,slow=24,SNR=12						
H11N2	**WAKE ISLAND Hy**	**30.11**	**128**	T	T	18 42 26.2	
	baz=321,slow=76,SNR=3.7						
H11N1	**WAKE ISLAND Hy**	**30.12**	**128**	T	T	18 42 26.8	
	baz=321,slow=76,SNR=4.6						
H11N3	**WAKE ISLAND Hy**	**30.13**	**128**	T	T	18 42 27.3	
	baz=321,slow=76,SNR=16						
H11S1	**WAKE ISLAND Hy**	**30.95**	**130**	T	T	18 43 28.2	
	baz=322,slow=76,SNR=17						
H11S3	**WAKE ISLAND Hy**	**30.95**	**130**	T	T	18 43 21.5	
	baz=322,slow=76,SNR=11						
H11S2	**WAKE ISLAND Hy**	**30.97**	**130**	T	T	18 43 34.8	
	baz=322,slow=76,SNR=12						
MKAR	**Makanchi Array**	**42.46**	**298**	P	**P**	**18 11 47.1**	**-1.0**
	0.1nm,0.4s,baz=81,slow=10,SNR=9.8						
MKAR				PcP	**PcP**	**18 13 39.4**	**-1.0**
	0.1nm,0.3s,baz=70,slow=4.6,SNR=2.1						
ILAR	**Eielson Array**	**45.57**	**35**	P	**P**	**18 12 12.9**	**+0.1**
	0.6nm,0.8s,baz=279,slow=8.1,SNR=7.4						
WRA	**Warramunga Arr**	**61.41**	**188**	P	**P**	**18 14 07.7**	**-1.7**
	0.8nm,0.4s,baz=5.7,slow=6.9,SNR=31						
ASAR	**Alice Springs**	**65.14**	**188**	P	**P**	**18 14 33.0**	**-1.0**
	0.5nm,0.4s,baz=360,slow=7.3,SNR=7.5						

IDC 17 18:23:02.5±555.0**, 53°.94N**×**1°.47E, h0**^{km}**, Error ellipse: s-maj=307.9km s-min=162.2km az=110.0, North Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I26DE	**FREYUNG INFRAS**	**9.19**	**119**	*i*		19 18 56.6	
	baz=309,slow=323,SNR=1.9						
I48TN	**KESRA INFRASON**	**18.94**	**160**	*i*		20 17 06.1	
	baz=349,slow=314,SNR=2.1						
I43RU	**DUBNA INFRASON**	**20.38**	**68**	*i*		20 30 00.0	
	baz=279,slow=316,SNR=1.1						
I31KZ	**AKTYUBINSK INF**	**34.09**	**72**	*i*		21 53 50.0	
	baz=300,slow=343,SNR=1.7						

IDC 17 18:35:03.4±5.0**, 8°.36N**×**104°.31W, h0**^{km}**, mb3.3**/3**, mb1 3.7**/3**, mb1mx3.5**/32**, mbtmp3.3**/3**, MS3.6**/12**, Ms1 3.6**/12**, ms1mx3.5**/23**, Error ellipse: s-maj=250.7km s-min=70.5km az=99.0, Northern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H06E1	**SOCORRO T-PHAS**	**12.19**	**329**	T	T	18 51 02.7	
	SNR=22						
CMIG	**Matias Romero**	**12.64**	**46**	LR	LR	18 41 21.1	
	comp=Z,553nm,21.4s,baz=190,slow=30						
LPIG	**La Paz**	**16.68**	**341**	LR	LR	18 43 51.1	
	comp=Z,172nm,21.1s,baz=204,slow=32						
JTS	**Las Juntas de**	**19.20**	**83**	LR	LR	18 44 30.9	

	comp=Z,132nm,18.1s,baz=212,slow=30						
TEIG	Tepich	19.49	51	LR	LR	18 45 22.2	
	comp=Z,319nm,19.6s,baz=226,slow=32						
TXAR	Lajitas Array	20.88	2	P	P	18 39 48.0	+0.7
	1.2nm,0.8s,baz=190,slow=9.7,SNR=4.5						
TXAR				LR	LR	18 47 18.7	
	comp=Z,222nm,18.3s,baz=0.0,slow=35						
ANMO	Albuquerque	26.54	356	LR	LR	18 49 46.5	
	comp=Z,145nm,18.0s,baz=150,slow=33						
PFO	Pinyon Flats O	27.52	338	LR	LR	18 48 48.3	
	comp=Z,19nm,19.1s,baz=138,slow=30						
YBH	Yreka Blue Hor	37.01	337	LR	LR	18 54 43.2	
	comp=Z,95nm,18.8s,baz=114,slow=32						
LPAZ	La Paz	43.38	124	LR	LR	18 58 09.7	
	comp=Z,87nm,20.2s,baz=329,slow=32						
H03N2	Juan Fernandez	48.06	151	T	T	19 34 36.6	
	baz=329,slow=77,SNR=20						
H03N1	Juan Fernandez	48.07	151	T	T	19 34 36.1	
	baz=329,slow=77,SNR=28						
H03N3	Juan Fernandez	48.07	151	T	T	19 34 34.9	
	baz=329,slow=77,SNR=26						
SIV	San Ignacio	49.17	119	LR	LR	19 02 06.6	
	comp=Z,64nm,20.1s,baz=244,slow=33						
PPT	Papeete	51.61	240	LR	LR	19 00 45.3	
	comp=Z,29nm,18.8s,baz=131,slow=30						
YKA	Yellowknife Ar	54.56	354	P	P	18 44 32.7	-0.4
	0.2nm,0.6s,baz=162,slow=7.2,SNR=5.8						
YKA				LR	LR	19 07 49.3	
	comp=Z,91nm,19.4s,baz=0.0,slow=36						
ILAR	Eielson Array	63.72	341	P	P	18 45 36.3	-0.3
	0.6nm,0.8s,baz=150,slow=4.8,SNR=4.9						
CMAR	Chiang Mai Arr	144.84	319	PKP	PKPdf	18 54 43.2	-0.2
	0.9nm,1.0s,baz=1.2,slow=2.4,SNR=5.2						

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*JMA **17** 18:35:17.3±0.2, 39°.81N×143°.31E, h25^{km}±4^{km}, M4.0*

*NEIC **17** 18:35:19.5±2.5, 39°.71N±0°.06×143°.2E±0°.1, h32^{km}±6^{km}, mb4.1/16, Error ellipse: s-maj=12.8km s-min=7.6km az=107.0*

*IDC **17** 18:35:21.0±2.6, 39°.75N×143°.40E, h46^{km}±23^{km}, mb3.6/10, mb1 3.7/14, mb1mx3.5/47, mbtmp3.8/14, ML3.2/4, MS2.9/3, Ms1 2.9/3, ms1mx2.7/35, Error ellipse: s-maj=27.9km s-min=17.0km az=99.0*

ISC 17 18:35:16.3±0.7, **39°.72N**±0°.05×**143°.35E**±0°.06, **h11**^{km}, **n93**, σ**1^s.18**/96, **mb4.2**/28, **1C-1D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	1.16	282	P	Pb	18 35 37.4	-1.0
JTH				*e*S	Sb	18 35 51.9	-1.6
MIYJ	Miyakonagasawa	1.19	264	P	Pb	18 35 38.2	-0.6
MIYJ				*e*S	Sb	18 35 52.8	-1.3
JKEN	Kujiedanarisaw	1.35	292	P	Pn	18 35 39.6	-1.4
JANG	Nango	1.55	296	P	Pn	18 35 42.7	-1.1
JOM	Ohasama	1.60	262	P	Pn	18 35 45.1	+0.5
JOM				*e*S	Sn	18 36 05.6	+0.3
JMK	Ichinoseki	1.82	246	P	Pn	18 35 47.9	+0.4
JIO	Ouri	2.00	232	P	Pn	18 35 50.0	0.0
JIO				*e*S	Sn	18 36 14.2	-0.8
JTM	Tenmabayashi	2.04	302	P	Pn	18 35 50.9	+0.3
JTM				*e*S	Sn	18 36 16.2	+0.1
JTM	Tenmabayashi	2.04	302	Pn	Pn	18 35 51.1	+0.5
JRG	Rokugo	2.12	262	P	Pn	18 35 52.4	+0.8
JAH	Hinai	2.14	284	P	Pn	18 35 52.4	+0.5
JAH				*e*S	Sn	18 36 18.5	+0.1
ERM	Erimo	2.30	356		Pn	18 35 54.4	+0.3
JOT	Ohata	2.42	314	P	Pn	18 35 55.8	+0.1
JOT				*e*S	Sn	18 36 25.1	-0.1
JYK	Kaneyama	2.45	252	P	Pn	18 35 57.1	+0.9
JNBK	Urakawa-nobuka	2.60	350	P	Pn	18 35 59.0	+0.7
JMM	Marumori	2.72	228		Pn	18 35 59.6	-0.3
JKB	Kayabe	2.79	322	*e*S	Sn	18 36 35.8	+1.3
JCH	Churui	2.90	0	P	Pn	18 36 02.5	+0.2
JCH				*e*S	Sn	18 36 35.8	-1.3
JEW	Eniwo	3.43	336		Pn	18 36 11.3	+1.6
JYT	Yasato	4.28	217	Pn	Pn	18 36 20.6	-0.7
JSD	Sado	4.31	249	Pn	Pn	18 36 22.4	+0.7
JKA	Kamikawa-asahi	4.43	353	Pn	Pn	18 36 23.6	+0.2
JKA	Kamikawa-asahi	4.43	353		Sn	18 37 13.9	-1.1
ASAJ	Asahikawa	4.43	353	P	Pn	18 36 24.3	+0.9
	1.4nm,0.3s,baz=208,slow=11,SNR=24						
ASAJ				S	Sn	18 37 13.9	-1.1
	2.4nm,0.3s,baz=219,slow=15,SNR=5.4						
ASAJ				LR	LR	18 38 06.3	
	comp=Z,92nm,18.8s,baz=147,slow=38						
MJAR	Matsushiro Arr	5.14	234	P	Pn	18 36 35.8	+2.6
	0.4nm,0.3s,baz=48,slow=9.3,SNR=19						
MJAR				LR	LR	18 38 12.8	
	comp=Z,30nm,21.8s,baz=0.0,slow=33						
MJAR	Matsushiro Arr	5.14	234		Pn	18 36 34.4	+1.2
MAJO	Matsushiro	5.14	234		Pn	18 36 33.5	+0.3
MAT	Matsushiro	5.14	234	P	Pn	18 36 35.1	+1.9
MAT				*e*S	Sn	18 37 31.7	-0.9
JGF	Kuroka	6.28	231	Pn	Pn	18 36 50.8	+2.0
INU	Inuyama	6.65	231	Pn	Pn	18 36 55.1	+1.2
YSS	Yuzh-Sakhalins	7.25	357	Pn	Pn	18 37 01.4	-0.7
JWT	Wachi	7.71	237	Pn	Pn	18 37 11.8	+3.3
JHS	Saijyo	9.40	243	Pn	Pn	18 37 34.1	+2.4
USA0B	Ussuriysk Arra	9.57	302		Pn	18 37 33.5	-0.4
USRK	Ussuriysk Ar.	9.57	302	P	Pn	18 37 35.9	+2.0
	baz=94,slow=14,SNR=11						
USRK	Ussuriysk Ar.	9.57	302	Pn	Pn	18 37 33.3	-0.6
JMN	Monobe	9.66	235	Pn	Pn	18 37 36.8	+1.5
KSRS	Korea Array	12.28	264	P	Pn	18 38 15.9	+4.9
	0.4nm,0.3s,baz=72,slow=14,SNR=7.3						
KS19	Wonju Array Si	12.31	265	Pn	Pn	18 38 13.5	+2.1
MA2	Magadan	20.43	11	P	P	18 39 54.4	+1.1
	2.0nm,0.5s,baz=210,slow=11,SNR=5.8						
MA2	Magadan	20.43	11	P	P	18 39 54.2	+0.9
BJT	Baijiatuau	20.84	280	P	P	18 39 55.7	-2.2
SEY	Seymchan	23.88	10	P	P	18 40 29.8	+0.3
	1.2nm,0.6s,baz=198,slow=12,SNR=9.7						
HHC	Hu-ho-hao-te	24.21	283	*e*P	P	18 40 32.9	-0.1
HHC				pmax	pmax		
	comp=Z,3.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,150nm,6.7s						
WHN	Wuhan	25.33	258	⇓P	P	18 40 43.3	+0.3
ULN	Ulaanbaatar	27.23	299	P	P	18 41 01.1	+0.7
ULN				IAmb	IAmb	18 41 01.5	
	comp=Z,4.8nm,1.3s						
SONM	Songino Array	27.67	299	P	P	18 41 04.7	+0.4
	comp=Z,0.9nm,0.6s,baz=98,slow=7.8,SNR=7.4						
SONM				LR	LR	18 52 40.0	
	comp=Z,134nm,18.7s,baz=342,slow=38						
SONM	Songino Array	27.67	299	P	P	18 41 04.0	-0.3
XAN	Xi'an	28.00	269	P	P	18 41 05.5	-1.7
XAN				IAmb	IAmb	18 41 05.8	
	comp=Z,3.2nm,1.1s						
H11N2	WAKE ISLAND Hy	28.40	128	T	T	19 10 57.3	
	baz=319,slow=74,SNR=73						
H11N1	WAKE ISLAND Hy	28.41	128	T	T	19 10 57.9	
	baz=319,slow=74,SNR=53						
H11N3	WAKE ISLAND Hy	28.42	128	T	T	19 10 57.9	
	baz=319,SNR=40						
ENH	Enshi	29.15	262	P	P	18 41 16.4	-1.1
ENH				IAmb	IAmb	18 41 17.7	
	comp=Z,4.7nm,0.8s						
H11S1	WAKE ISLAND Hy	29.22	130	T	T	19 11 57.8	
	baz=321,slow=76,SNR=14						
H11S3	WAKE ISLAND Hy	29.22	130	T	T	19 12 01.7	
	baz=321,slow=76,SNR=8.8						
H11S2	WAKE ISLAND Hy	29.23	130	T	T	19 12 01.5	
	baz=321,slow=76,SNR=9.5						
CD2	Chengdu	33.26	267	*e*P	P	18 41 52.8	-0.8
KMI	Kunming	36.91	259	⇑P	P	18 42 27.3	+1.9
KMI				pP	pP	18 42 29.0	+0.9
KMI				sP	pwP	18 42 31.0	0.0
KMI				pmax	pmax		
	comp=Z,4.0nm,1.2s						
KMI				pmax	pmax		
	comp=Z,110nm,4.5s						
WMQ	Urumqi	41.05	294	*e*P	P	18 43 00.3	+0.6
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,31nm,4.1s						
ZAA0	Zalesovo Array	41.29	310	P	P	18 43 01.3	-0.1
ZAA0				IAmb	IAmb	18 43 02.0	
	comp=Z,2.3nm,0.6s						
ZALV	Zalesovo Beam	41.29	310	P	P	18 43 01.6	+0.2
	comp=Z,2.3nm,0.5s,baz=92,slow=8.4,SNR=10						
ZALV	Zalesovo Beam	41.29	310	P	P	18 42 59.7	-1.7
IMAR	Indian Mountai	43.58	32	P	P	18 43 22.0	+2.1
CMAR	Chiang Mai Arr	43.67	254	P	P	18 43 21.7	+0.5
	comp=Z,0.4nm,0.7s,baz=39,slow=7.2,SNR=2.2						
MK31	Makanchi Array	44.03	300	P	P	18 43 22.4	-1.5
MKAR	Makanchi Array	44.03	300	P	P	18 43 23.9	+0.1
	comp=Z,1.1nm,0.7s,baz=85,slow=9.5,SNR=14						
MKAR	Makanchi Array	44.03	300	P	P	18 43 23.6	-0.3
KURK	Kurchatov	45.52	306	P	P	18 43 35.3	-0.3
KURK				IAmb	IAmb	18 43 36.2	
	comp=Z,7.5nm,1.3s						
KURBB	Kurchatov Arra	45.60	306	P	P	18 43 36.1	-0.1
	comp=Z,1.9nm,0.6s,baz=80,slow=8.7,SNR=21						
TAPN	Taplejung	47.30	273	*e*P	P	18 43 52.2	+1.9
	comp=Z,4.4nm,0.6s						
ODAN	Odare	47.80	272	*e*P	P	18 43 54.7	+0.7
	comp=Z,8.3nm,0.8s						
RAMN	Ramite	48.36	273	*e*P	P	18 43 58.7	+0.3
	comp=Z,12nm,0.6s						
GUN	Gumba	48.44	274	*e*P	P	18 43 59.3	+0.2
	comp=Z,14nm,0.6s						
BCAR	Beaver Creek A	48.83	36	P	P	18 44 01.2	-0.1
KKN	Kakani	48.96	275	*e*P	P	18 44 02.5	-0.5
	comp=Z,12nm,0.7s						
PKI	Pulchoki	48.97	274	*e*P	P	18 44 03.6	+0.4
PKIN	Phulchoki	48.97	274	*e*P	P	18 44 03.8	+0.6
PMG	Port Moresby	49.00	175	P	P	18 44 00.8	-2.2
DMN	Daman	49.18	274	*e*P	P	18 44 05.3	+0.6
GKN	Gorkha	49.35	275	*e*P	P	18 44 05.9	0.0
	comp=Z,3.9nm,0.5s						
DANN	Dangsing	49.85	276	*e*P	P	18 44 10.2	+0.3
	comp=Z,23nm,0.6s						
BRVK	Borovoye	49.98	311	P	P	18 44 09.6	-0.6
BRVK				IAmb	IAmb	18 44 18.2	
	comp=Z,5.2nm,1.4s						
AAK	Ala-Archa	50.59	297	P	P	18 44 14.8	-0.4
AAK				IAmb	IAmb	18 44 35.1	
	comp=Z,1.5nm,1.1s						
KSH	Kashi	50.74	293	P	P	18 44 20.8	+4.5
KSH				pmax	pmax		
	comp=Z,21nm,1.9s						
KSH				pmax	pmax		
	comp=Z,430nm,5.6s						
KKAR	Karatay Array	53.13	299	P	P	18 44 33.6	-0.2
ABKAR	Akbulak array	57.39	309	P	P	18 45 04.2	-0.3
ABKAR				IAmb	IAmb	18 45 14.8	
	comp=Z,1.8nm,0.7s						
ABKAR	Akbulak array	57.39	309	P	P	18 45 04.1	-0.5
WB0	Warramunga Arr	59.76	190	P	P	18 45 20.9	-0.3
WR0	Warramunga Arr	59.93	190	P	P	18 45 22.2	-0.2
WRA	Warramunga Arr	59.94	190	P	P	18 45 22.3	-0.2
	comp=Z,0.9nm,0.9s,baz=7.5,slow=7.1,SNR=6.2						
WRA	Warramunga Arr	59.94	190	P	P	18 45 22.3	-0.2
ASAR	Alice Springs	63.67	190	P	P	18 45 48.0	+0.4
	comp=Z,0.5nm,0.7s,baz=3.2,slow=6.4,SNR=3.3						
FINES	FINESS Array B	67.15	332	P	P	18 46 09.9	+0.2
	comp=Z,2.1nm,0.9s,baz=2.5,slow=9.7,SNR=1.2						

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*JMA **17** 18:47:38.7±0.2, 39°.80N×143°.28E, h27^{km}±4^{km}, M4.1*

*NIED **17** 18:47:38.8, 39°.80N×143°.28E, h27^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}1.08; $M_{\theta\theta}$-0.13; $M_{\phi\phi}$-0.95; $M_{r\theta}$1.95; $M_{\theta\phi}$-1.89; $M_{\phi r}$5.17; Fault plane solution: $M_0$5.86000×10^{14} NP1:ϕ_s19.00000°, δ82.00000°, λ78.00000°. NP2:ϕ_s256.00000°, δ14.00000°, λ146.00000°.*

*IDC **17** 18:47:41.6±2.8, 39°.76N×143°.46E, h45^{km}±22^{km}, mb3.5/7, mb1 3.6/11, mb1mx3.4/43, mbtmp3.7/11, ML3.1/4 Error ellipse: s-maj=33.8km s-min=15.6km az=102.0*

ISC 17 18:47:41.5±1.0, **39°.76N**±0°.06×**143°.27E**±0°.09, **h35**^{km}, **n39**, σ**1^s.19**/39, **mb4.3**/10, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	1.10	280	P	Pn	18 47 58.3	-2.0
MIYJ	Miyakonagasawa	1.13	261	P	Pn	18 47 59.2	-1.6
MIYJ				*e*S	Sn	18 48 14.2	-0.9
JKEN	Kujiedanarisaw	1.28	291	P	Pn	18 48 00.6	-2.2
JANG	Nango	1.48	295	P	Pn	18 48 03.7	-1.9
JOM	Ohasama	1.55	260	P	Pn	18 48 06.1	-0.5
JOM				*e*S	Sn	18 48 26.0	+0.5
JMK	Ichinoseki	1.78	244	P	Pn	18 48 08.9	-0.8
JMK				*e*S	Sn	18 48 31.2	+0.1
JTM	Tenmabayashi	1.97	302	P	Pn	18 48 11.9	-0.5
JIO	Ouri	1.98	230	P	Pn	18 48 11.1	-1.4
JIO				*e*S	Sn	18 48 35.2	-0.8
JRG	Rokugo	2.07	261	P	Pn	18 48 13.5	-0.2
JAH	Hinai	2.07	283	P	Pn	18 48 13.4	-0.3
JOT	Ohata	2.34	315	P	Pn	18 48 16.8	-0.7
JYK	Kaneyama	2.41	251	P	Pn	18 48 18.2	-0.1
JNBK	Urakawa-nobuka	2.55	351	P	Pn	18 48 20.2	-0.1
ASAJ	Asahikawa	4.38	354	P	Pn	18 48 45.3	-0.2
	1.1nm,0.3s,baz=229,slow=7.9,SNR=18						
ASAJ				S	Sn	18 49 36.5	+1.1
	1.9nm,0.3s,baz=193,slow=14,SNR=4.6						
MJAR	Matsushiro Arr	5.12	233	P	Pn	18 48 56.5	+0.8
	0.4nm,0.3s,baz=77,slow=16,SNR=20						
MAT	Matsushiro	5.12	233	P	Pn	18 48 56.3	+0.7
MAT				*e*S	Sn	18 49 55.9	+2.4
USRK	Ussuriysk Ar.	9.50	302	P	Pn	18 49 57.6	+2.0
	baz=94,slow=14,SNR=9.3						
KSRS	Korea Array	12.22	264	P	Pn	18 50 36.7	+3.7
	0.3nm,0.3s,baz=73,slow=14,SNR=5.2						
MA2	Magadan	20.40	11	P	P	18 52 14.2	-0.9
	0.9nm,0.4s,baz=169,slow=16,SNR=3.4						
SONM	Songino Array	27.60	299	P	P	18 53 25.6	+0.2
	1.0nm,0.8s,baz=96,slow=9.1,SNR=2.9						
H11N2	WAKE ISLAND Hy	28.47	128	T	T	19 23 26.4	
	baz=319,SNR=42						
H11N1	WAKE ISLAND Hy	28.48	128	T	T	19 23 25.9	
	baz=319,slow=74,SNR=32						
H11N3	WAKE ISLAND Hy	28.49	128	T	T	19 23 27.0	
	baz=319,slow=74,SNR=35						
H11S1	WAKE ISLAND Hy	29.29	130	T	T	19 24 28.2	
	baz=321,slow=76,SNR=5.9						
H11S3	WAKE ISLAND Hy	29.29	130	T	T	19 24 28.0	
	baz=321,slow=76,SNR=5.0						
H11S2	WAKE ISLAND Hy	29.31	130	T	T	19 24 30.3	
	baz=321,slow=76,SNR=5.1						
ZALV	Zalesovo Beam	41.22	310	P	P	18 55 22.5	-0.1
	1.7nm,0.4s,baz=97,slow=8.5,SNR=11						
CMAR	Chiang Mai Arr	43.62	254	P	P	18 55 42.5	0.0
	0.3nm,0.6s,baz=42,slow=8.4,SNR=4.1						
MKAR	Makanchi Array	43.96	300	P	P	18 55 44.6	-0.4
	0.7nm,0.6s,baz=85,slow=9.8,SNR=11						
ODAN	Odare	47.73	272	*e*P	P	18 56 14.1	-1.2
RAMN	Ramite	48.30	273	*e*P	P	18 56 18.5	-1.2
	9.8nm,0.7s						
GUN	Gumba	48.37	274	*e*P	P	18 56 20.5	+0.1
	7.5nm,0.5s						
KKN	Kakani	48.89	274	*e*P	P	18 56 24.4	+0.2
	7.6nm,0.6s						
PKI	Pulchoki	48.90	274	*e*P	P	18 56 24.3	-0.1
PKIN	Phulchoki	48.91	274	*e*P	P	18 56 24.2	-0.2
GKN	Gorkha	49.28	275	*e*P	P	18 56 26.9	-0.2
DANN	Dangsing	49.78	276	*e*P	P	18 56 31.5	+0.4
	18nm,0.6s						
WRA	Warramunga Arr	59.97	190	P	P	18 57 43.6	-0.8
	0.3nm,0.5s,baz=6.9,slow=7.1,SNR=3.0						
FINES	FINESS Array B	67.08	332	P	P	18 58 30.4	-0.4
	4.1nm,1.1s,baz=52,slow=9.0,SNR=3.2						

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*IDC **17** 18:51:55.2±0.8, 38°.05N×144°.77E, h0^{km}, mb3.7/11, mb1 3.8/15, mb1mx3.7/41, mbtmp3.7/15, ML3.6/3, MS3.2/6, Ms1 3.3/6, ms1mx3.0/49, Error ellipse: s-maj=21.0km s-min=16.5km az=102.0*

*NEIC **17** 18:51:59.9±2.5, 38°.18N±0°.07×144°.6E±0°.1, h26^{km}±5^{km}, mb4.2/12, Error ellipse: s-maj=15.2km s-min=9.6km az=109.0*

*NIED **17** 18:51:59.1, 38°.24N×144°.53E, h47^{km}, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-1.61; $M_{\theta\theta}$0.14; $M_{\phi\phi}$1.47; $M_{r\theta}$0.19; $M_{\theta\phi}$-0.33; $M_{\phi r}$1.15; Fault plane solution: $M_0$1.96000×10^{15} NP1: ϕ_s179.00000°, δ63.00000°, λ-79.00000°. NP2: ϕ_s336.00000°, δ29.00000°, λ-111.00000°.*

*JMA **17** 18:51:59.1±0.2, 38°.24N×144°.53E, h47^{km}, M4.4*

ISC 17 18:52:01.3±2.2, **38°.23N**±0°.03×**144°.58E**±0°.03, **h41**^{km}±16^{km}, **n68**, σ**1^s.93**/68, **mb3.8**/14, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	2.43	291	P	Pn	18 52 37.1	-1.5
OFUJ				*e*S	Sn	18 53 04.8	-2.3
JIKH	Ishinomakikobu	2.46	273	P	Pn	18 52 37.1	-1.8
JIKH				S	Sn	18 53 05.1	-2.5
JKMT	Kesennumamotoy	2.51	284	P	Pn	18 52 38.0	-1.6
JKMT				S	Sn	18 53 07.1	-1.8
MIYJ	Miyakonagasawa	2.54	303	P	Pn	18 52 38.5	-1.5
JIO	Ouri	2.55	276	P	Pn	18 52 38.8	-1.4
JIO				S	Sn	18 53 08.0	-2.0
JMK	Ichinoseki	2.73	286	P	Pn	18 52 41.5	-1.2
JMK				*e*S	Sn	18 53 13.1	-1.3
JOM	Ohasama	2.85	297	P	Pn	18 52 43.1	-1.2
JOM				*e*S	Sn	18 53 16.5	-0.9
JMM	Marumori	3.02	264		Pn	18 52 45.1	-1.5
JANG	Nango	3.20	313	P	Pn	18 52 47.8	-1.3
JANG				*e*S	Sn	18 53 23.2	-2.8
JYK	Kaneyama	3.38	283	P	Pn	18 52 51.0	-0.6
JYK				*e*S	Sn	18 53 29.9	-0.6
JFT	Otama	3.44	259	P	Pn	18 52 51.6	-0.8
JFT				S	Sn	18 53 30.6	-1.2
JTM	Tenmabayashi	3.73	314	Pn	Pn	18 52 55.2	-1.2
ERM	Erimo	3.93	344	Pn	Pn	18 52 57.7	-1.5
JYT	Yasato	4.03	242		Pn	18 52 58.2	-2.3
JOT	Ohata	4.16	320	P	Pn	18 53 00.5	-1.8
JOT				*e*S	Sn	18 53 46.1	-3.5
JCH	Churui	4.48	348	P	Pn	18 53 03.9	-2.7
JCH				*e*S	Sn	18 53 52.8	-4.6
JKB	Kayabe	4.56	324	*e*S	Sn	18 53 56.8	-2.5
BSO1	Boso 1	4.61	220	P	Pn	18 53 04.9	-3.0
BSO1				*e*S	Sn	18 53 57.3	-2.6
JSD	Sado	4.99	270	Pn	Pn	18 53 12.5	-1.1
JRY	Ryogami san	5.05	246	P	Pn	18 53 12.9	-1.7
JRY				*e*S	Sn	18 54 06.9	-4.8
JEW	Eniwo	5.18	334	Pn	Pn	18 53 16.5	+0.2
NEM2	Nemuro 2	5.20	9	P	Pn	18 53 12.0	-4.6
NEM2				*e*S	Sn	18 54 08.6	-6.7
JOD2	Odawara 2	5.32	238	P	Pn	18 53 16.3	-1.9
JOD2				S	Sn	18 54 13.0	-5.2
MJAR	Matsushiro Arr	5.35	254	Pn	Pn	18 53 18.2	-0.5
	1.4nm,0.3s,baz=90,slow=20,SNR=48						
MJAR				LR	LR	18 55 41.1	
	comp=Z,256nm,20.5s,baz=55,slow=42						
MJAR	Matsushiro Arr	5.35	254		Pn	18 53 17.5	-1.1
MAJO	Matsushiro	5.35	254	Pn	Pn	18 53 18.7	0.0
MAT	Matsushiro	5.35	254	P	Pn	18 53 18.4	-0.3
MAT				*e*S	Sn	18 54 19.1	+0.1
JTKR	Abashiri--Toko	5.76	355	P	Pn	18 53 21.4	-2.8
JTKR				*e*S	Sn	18 54 24.9	-4.0
JKA	Kamikawa-asahi	6.07	346	Pn	Pn	18 53 27.7	-0.7
JKA	Kamikawa-asahi	6.07	346		Sn	18 54 38.6	+2.1
ASAJ	Asahikawa	6.07	346	Pn	Pn	18 53 27.2	-1.3
	2.5nm,0.3s,baz=202,slow=14,SNR=19						
ASAJ				Sn	Sn	18 54 38.6	+2.1
	1.4nm,0.3s,baz=114,slow=20,SNR=3.0						
JGF	Kuroka	6.36	248	Pn	Pn	18 53 32.3	-0.2
JHJ2	Mitsune	6.41	219	Pn	Pn	18 53 32.5	-0.8
INU	Inuyama	6.72	247	Pn	Pn	18 53 35.4	-2.0
JWT	Wachi	7.94	251	Pn	Pn	18 53 54.4	+0.2
JMN	Monobe	9.77	246	Pn	Pn	18 54 18.0	-1.3
USRK	Ussuriysk Ar.	11.20	306	Pn	Pn	18 54 39.2	+0.4
	baz=106,slow=14,SNR=4.4						
JNU	Nakatsue	12.25	250	LR	LR	18 58 39.6	
	comp=Z,75nm,21.4s,baz=50,slow=33						
KSRS	Korea Array	13.20	272	Pn	Pn	18 55 06.3	+0.2
	0.1nm,0.3s,baz=82,slow=14,SNR=1.5						
KSRS				LR	LR	19 00 50.0	
	comp=Z,67nm,18.9s,baz=56,slow=40						
PETK	Petropavlovsk-	17.43	27	LR	LR	19 04 41.0	
	comp=Z,47nm,18.3s,baz=190,slow=44						
PETK	Petropavlovsk-	17.43	27	P	P	18 56 06.6	+4.5
MA2	Magadan	21.73	9	P	P	18 56 50.2	+1.4
	1.4nm,0.6s,baz=162,slow=13,SNR=3.2						
MA2	Magadan	21.73	9	IAmb	IAmb	18 56 59.3	
	comp=Z,5.6nm,1.0s						
SEY	Seymchan	25.18	8	P	P	18 57 24.0	+1.4
	comp=Z,2.0nm,0.7s,baz=172,slow=5.6,SNR=12						
TPUB	Ta-pu	25.30	241	P	P	18 57 25.6	+1.4
YAK	Yakutsk	25.54	344	P	P	18 57 26.8	+0.9
	comp=Z,2.1nm,0.4s,baz=354,slow=3.5,SNR=4.6						
YAK	Yakutsk	25.54	344	IAmb	IAmb	18 57 37.0	
	comp=Z,13nm,0.7s						
SONM	Songino Array	29.26	302	P	P	18 58 01.6	+2.0
	comp=Z,0.3nm,0.5s,baz=91,slow=12,SNR=2.5						
WMQ	Urumqi	42.56	296	*e*P	P	18 59 54.9	+1.8
ZALV	Zalesovo Beam	42.99	311	P	P	18 59 57.5	+1.1
	comp=Z,0.5nm,0.4s,baz=89,slow=11,SNR=3.5						
CMAR	Chiang Mai Arr	44.23	257	LR	LR	19 21 44.0	
	comp=Z,64nm,18.1s,baz=206,slow=40						
MK31	Makanchi Array	45.62	302	P	P	19 00 18.6	+1.0
MKAR	Makanchi Array	45.62	302	P	P	19 00 19.1	+1.4
	comp=Z,0.9nm,0.8s,baz=88,slow=8.3,SNR=11						
MKAR	Makanchi Array	45.62	302	P	P	19 00 17.9	+0.3
MAKZ	Makanchi	45.83	302	P	P	19 00 18.4	-0.8
MAKZ				IAmb	IAmb	19 00 23.7	
	comp=Z,4.0nm,1.6s						
HNR	Honiara	49.54	160	LR	LR	19 18 11.9	
	comp=Z,47nm,21.2s,baz=229,slow=32						
BRVK	Borovoye	51.69	312	P	P	19 01 05.5	+1.5
BRVK				IAmb	IAmb	19 01 18.9	
	comp=Z,4.9nm,1.4s						
WB0	Warramunga Arr	58.48	191	P	P	19 01 51.8	-1.5
WR0	Warramunga Arr	58.65	191	P	P	19 01 52.6	-1.8
WB2	Warramunga Arr	58.66	191	P	P	19 01 53.1	-1.4
WRA	Warramunga Arr	58.66	191	P	P	19 01 53.1	-1.5
	comp=Z,0.7nm,0.4s,baz=8.4,slow=7.1,SNR=18						
WRA	Warramunga Arr	58.66	191	P	P	19 01 51.4	-3.1
ABKAR	Akbulak array	59.09	311	P	P	19 01 58.0	+0.7
ABKAR	Akbulak array	59.09	311	P	P	19 01 56.4	-0.9
ABKAR				IAmb	IAmb	19 02 03.0	
	comp=Z,3.5nm,1.3s						
YKA	Yellowknife Ar	61.49	31	P	P	19 02 13.3	-0.3
	comp=Z,0.6nm,0.9s,baz=300,slow=6.4,SNR=4.6						
ASAR	Alice Springs	62.38	191	P	P	19 02 18.5	-1.4
	comp=Z,0.3nm,0.4s,baz=6.6,slow=6.3,SNR=8.0						
NVAR	Mina Array Bea	72.25	55	P	P	19 03 23.4	+0.8
	comp=Z,0.2nm,0.5s,baz=281,slow=6.6,SNR=3.5						
PDAR	Pinedale Array	75.02	47	P	P	19 03 38.7	-0.2
	comp=Z,0.3nm,0.6s,baz=290,slow=2.6,SNR=4.2						

IDC 17 18:59:49.7±999.0, **54°.41N**×**0°.71W**, **h0**^{km}, **Error ellipse: s-maj=566.6km s-min=193.0km az=103.0, United Kingdom**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I26DE	FREYUNG INFRAS	10.55	116	*i*		20 06 00.0	
	baz=307,slow=327,SNR=1.6						
I43RU	DUBNA INFRASON	21.39	68	*i*		21 09 50.0	
	baz=279,slow=321,SNR=1.3						
I31KZ	AKTYUBINSK INF	35.16	72	*i*		22 35 40.0	
	baz=301,slow=345,SNR=1.3						

IDC 17 19:09:17.5±1.7, **12°.01N**×**141°.40E**, **h0**^{km}, **mb3.3**/3, **mb1 3.7**/4, **mb1mx3.3**/35, **mbtmp3.5**/4, **ML3.5**/1, **Error ellipse: s-maj=35.6km s-min=33.3km az=134.0, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	3.73	65	Pn	Pn	19 10 16.4	+0.1
	3.5nm,0.3s,baz=57,slow=18,SNR=2.5						
GUMO				Sn	Sn	19 10 56.7	-4.2
	7.9nm,0.3s,baz=126,slow=21,SNR=5.7						
WRA	Warramunga Arr	32.50	192	P	P	19 15 50.1	-0.1
	0.2nm,0.6s,baz=15,slow=9.5,SNR=3.0						
ASAR	Alice Springs	36.21	192	P	P	19 16 22.2	0.0
	0.4nm,1.0s,baz=22,slow=11,SNR=4.3						
CMAR	Chiang Mai Arr	41.39	284	P	P	19 17 05.7	-0.2
	0.7nm,0.7s,baz=92,slow=6.9,SNR=6.9						

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*NOU **17** 19:16:18.1, 38°.25S×175°.97E, h220^{km}, MLv3.9, North Island, New Zealand*

WEL 17 19:16:25.7±0.6, **38°S**±4°×**17°6E**±°, **h148**^{km}±5^{km}, **M3.0**/53, **ML2.4**/9, **MLv3.0**/53, **Error ellipse: s-maj=0.0km s-min=0.0km az=157.9, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GRRZ	Galatos Road	0.12	75	P	Pn	19 16 46.8	+1.1
KUTZ	Kaahu Road	0.15	225	P	Pn	19 16 46.7	+1.1
WPRZ	Whakapapatarin	0.21	130	P	Pn	19 16 46.6	+0.8
HSRZ	Hossack Road	0.24	73	P	Pn	19 16 46.9	+1.0
HRRZ	Handcock Road	0.26	92	P	Pn	19 16 46.8	+0.9

WHTZ	Whakaora	0.28	180	P	Pn	19 16 47.1	+1.0
HLRZ	Highlands Stat	0.34	67	P	Pn	19 16 47.8	+1.6
ALRZ	Allen Road	0.35	121	P	Pn	19 16 47.0	+0.8
WATZ	Wairara	0.37	208	P	Pn	19 16 47.2	+0.9
KARZ	Kaharoa	0.43	32	P	Pn	19 16 47.4	+0.9
OMRZ	Omania	0.43	50	P	Pn	19 16 47.4	+0.8
RRRZ	Republican Roa	0.44	84	P	Pn	19 16 47.2	+0.6
TARZ	Mount Tarawera	0.46	71	P	Pn	19 16 47.5	+0.8
MKRZ	Makatiti	0.47	59	P	Pn	19 16 48.2	+1.4
RATZ	Rangitukua	0.50	197	P	Pn	19 16 47.4	+0.5
HATZ	Hinemaiaia	0.52	168	P	Pn	19 16 47.4	+0.4
KMRZ	Kaimai	0.54	359	P	Pn	19 16 48.0	+0.9
MRHZ	Matea Rd	0.58	142	P	Pn	19 16 47.6	+0.3
MRHZ				S	Sn	19 17 04.7	+0.9
RITZ	Rihia Road	0.60	187	P	Pn	19 16 48.2	+0.8
KATZ	Kakaramea	0.63	199	P	Pn	19 16 48.2	+0.5
MUGZ	Murupara	0.65	99	P	Pn	19 16 47.7	+0.1
MUGZ				S	Sn	19 17 05.1	+0.7
MARZ	Manawahe	0.69	55	P	Pn	19 16 49.0	+1.0
TGRZ	Tauranga	0.69	20	P	Pn	19 16 48.8	+0.8
TGRZ				S	Sn	19 17 07.8	+2.9
OPRZ	Ohinepanea	0.71	41	P	Pn	19 16 48.7	+0.6
OPRZ				S	Sn	19 17 06.7	+1.6
KRVZ	Karewarewa	0.75	199	P	Pn	19 16 48.8	+0.3
TMVZ	Te Maari	0.76	195	P	Pn	19 16 49.0	+0.4
ETVZ	East Tongariro	0.78	194	P	Pn	19 16 49.0	+0.3
WTVZ	West Tongariro	0.79	201	P	Pn	19 16 49.0	+0.2
TWVZ	Taurewa	0.80	210	P	Pn	19 16 49.1	+0.3
OTVZ	Oturere	0.81	196	P	Pn	19 16 48.8	-0.2
RTZ	Ruatahuna	0.83	106	P	Pn	19 16 49.3	+0.2
RTZ				S	Sn	19 17 07.3	+0.5
HIZ	Hauiti	0.88	261	P	Pn	19 16 49.9	+0.6
BKZ	Black Stump Fm	0.89	152	P	Pn	19 16 49.6	+0.2
BKZ				S	Sn	19 17 06.9	-0.6
URZ	Urewera	0.92	83	P	Pn	19 16 49.4	-0.1
URZ				S	Sn	19 17 07.7	0.0
NMHZ	Naumai	0.97	137	P	Pn	19 16 51.3	+1.1
NMHZ				S	Sn	19 17 10.9	+2.1
WNVZ	Wahianoa	0.98	196	P	Pn	19 16 50.5	+0.2
PKVZ	Pokaka	1.02	208	P	Pn	19 16 49.9	-0.7
PKVZ				S	Sn	19 17 10.5	+0.9
RAHZ	Arahi	1.03	121	P	Pn	19 16 51.3	+0.7
RAHZ				S	Sn	19 17 11.0	+1.4
KWHZ	Kaweka Forest	1.10	161	P	Pn	19 16 51.9	+0.6
RAGZ	Rawiri	1.15	96	P	Pn	19 16 52.0	+0.3
RAGZ				S	Sn	19 17 12.1	+0.6
SNGZ	Shannon Statio	1.15	111	P	Pn	19 16 52.2	+0.5
VRZ	Vera Road	1.20	231	P	Pn	19 16 52.3	+0.3
ARHZ	Aropaoanui	1.20	138	P	Pn	19 16 52.7	+0.6
ARHZ				S	Sn	19 17 12.8	+0.6
MCHZ	McNeill Hill	1.21	152	P	Pn	19 16 52.9	+0.8
MCHZ				S	Sn	19 17 13.5	+1.1
WHHZ	Waihua	1.22	125	P	Pn	19 16 52.8	+0.6
WHHZ				S	Sn	19 17 13.3	+0.8
MWZ	Matawai	1.23	88	P	Pn	19 16 52.4	-0.1
KRHZ	Kereru	1.30	166	P	Pn	19 16 53.1	0.0
RUGZ	Raukumara Rang	1.42	73	P	Pn	19 16 53.5	-0.9
MKAZ	Moumakai	1.42	333	P	Pn	19 16 55.0	+0.7
RIGZ	Rimuhau	1.45	103	P	Pn	19 16 54.8	+0.2
KNZ	Kokohu	1.49	116	P	Pn	19 16 54.9	0.0
TKGZ	Te Karaka	1.49	93	P	Pn	19 16 55.5	+0.6
PNHZ	Pukenui	1.54	173	P	Pn	19 16 54.9	-0.6
CKHZ	Cape Kidnapper	1.54	146	P	Pn	19 16 55.8	+0.3
WAZ	Wanganui	1.56	209	P	Pn	19 16 55.5	-0.3
HAZ	Te Kaha	1.57	67	P	Pn	19 16 55.0	-0.8
KAHZ	Kahuranaki	1.58	153	P	Pn	19 16 56.1	+0.1
PRGZ	Paritu Road	1.60	110	P	Pn	19 16 56.2	0.0
TWGZ	Tauwhareparae	1.60	83	P	Pn	19 16 56.5	+0.2
LREZ	Lake Rotokare	1.62	228	P	Pn	19 16 55.9	-0.4
TSZ	Takapari Road	1.67	180	P	Pn	19 16 56.3	-0.7
PREZ	Palmer Road	1.70	235	P	Pn	19 16 57.6	+0.3
NEZ	North Egmont	1.70	238	P	Pn	19 16 57.8	+0.4
MHGZ	Mahia Peninsul	1.71	117	P	Pn	19 16 57.5	+0.1
WIAZ	Waiheke Island	1.72	337	P	Pn	19 16 58.0	+0.5
WPHZ	Waipukurau	1.72	168	P	Pn	19 16 56.9	-0.6
PKE	Pukeiti	1.74	242	P	Pn	19 16 58.5	+0.7
PKGZ	Pakihiroa	1.74	74	P	Pn	19 16 57.6	-0.2
CNGZ	Carnagh Statio	1.77	94	P	Pn	19 16 58.4	+0.3
KHEZ	Kahui Hut	1.77	238	P	Pn	19 16 58.3	+0.1
PXZ	Pawanui	1.79	157	P	Pn	19 16 57.8	-0.5
DVHZ	Dannevirke	1.92	175	P	Pn	19 16 58.5	-1.3
PRHZ	Porangahau	1.95	165	P	Pn	19 16 59.3	-0.8
POWZ	Post Office Ro	2.01	184	P	Pn	19 16 59.4	-1.4
WMGZ	Waiomatatini S	2.02	75	P	Pn	19 17 00.4	-0.5
MXZ	Matakaoa Point	2.03	67	P	Pn	19 17 00.8	-0.3
ANWZ	Angora Road	2.11	169	P	Pn	19 17 01.0	-1.0
GRZ	Great Barrier	2.17	349	P	Pn	19 17 03.0	+0.3
PRWZ	Pori Road	2.17	180	P	Pn	19 17 01.5	-1.2
MRZ	Mangatainoka R	2.29	187	P	Pn	19 17 02.3	-1.9
BFZ	Birch Farm	2.31	175	P	Pn	19 17 02.6	-1.7
TIWZ	Tintock	2.39	181	P	Pn	19 17 03.5	-1.8
OGWZ	Otaki Gorge	2.51	194	P	Pn	19 17 04.7	-2.0
CPWZ	Castlepoint	2.53	176	P	Pn	19 17 05.8	-1.3
HOWZ	Holdsworth Sta	2.53	188	P	Pn	19 17 04.7	-2.4
KIW	Kapiti Island	2.60	198	P	Pn	19 17 05.4	-2.5
TMWZ	Te Maipa	2.72	181	P	Pn	19 17 07.0	-2.5
MTW	Mount Morrison	2.79	187	P	Pn	19 17 07.5	-2.8
CAW	Cannon Point	2.81	194	P	Pn	19 17 07.9	-2.6
DUWZ	D'Urville Isla	2.88	212	P	Pn	19 17 08.7	-2.7
TRWZ	Traveller	3.02	184	P	Pn	19 17 10.4	-2.8
PAWZ	Paruwai Farm	3.02	188	P	Pn	19 17 10.2	-3.0
WEL	Wellington	3.04	197	P	Pn	19 17 10.4	-3.0
MSWZ	Moikau Station	3.08	190	P	Pn	19 17 10.8	-3.1
TCW	Tory Channel	3.11	204	P	Pn	19 17 11.3	-3.0
BHW	Baring Head	3.13	195	P	Pn	19 17 11.4	-3.3
PLWZ	Palliser	3.23	189	P	Pn	19 17 10.9	-5.0
TUWZ	Tuamarina	3.42	206	P	Pn	19 17 15.3	-2.9
NNZ	Nelson	3.46	214	P	Pn	19 17 15.4	-3.3
QRZ	Quartz Range	3.60	226	P	Pn	19 17 16.7	-3.9
BSWZ	Blackbirch Sta	3.69	205	P	Pn	19 17 18.6	-3.2
THZ	Tophouse	4.11	214	P	Pn	19 17 23.4	-3.9
KHZ	Kahutara	4.43	204	P	Pn	19 17 27.4	-4.0
DSZ	Denniston Nort	4.63	222	P	Pn	19 17 29.6	-4.5
GVZ	Greta Valley S	5.09	205	P	Pn	19 17 35.3	-4.9
LTZ	Lake Taylor	5.21	211	P	Pn	19 17 36.6	-5.3
OKCZ	Okains Bay	5.77	201	P	Pn	19 17 44.2	-5.0
RPZ	Rata Peaks	6.49	213	P	Pn	19 17 53.8	-5.0
GCSZ	Gaunt Creek Bo	6.52	219	P	Pn	19 17 54.6	-4.6
ARCZ	Arundel	6.63	211	P	Pn	19 17 55.5	-5.2
TMZ	Timaru	7.06	210	P	Pn	19 18 01.1	-5.3
WKZ	Wanaka	8.27	217	P	Pn	19 18 16.9	-5.8

STR **17** 19:42:45.0±3.4, 44°N±14°×1°3E±2°6, h10^{km}, mb4.3/6, MLv4.1/7, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/alpes_taup-2.11 preliminary

BGR **17** 19:42:51.1±0.7, 43°.84N×11°.63E, h10^{km}, ML4.1, Error ellipse: s-maj=11.1km s-min=10.0km az=18.0

GEN **17** 19:42:53, 44°.17N×11°.41E, h7^{km}±18^{km}, Ml3.9

NEIC **17** 19:42:53.2±2.0, 44°.25N±0°.03×11°.51E±0°.06, h4^{km}±4^{km}, Error ellipse: s-maj=5.8km s-min=4.4km az=89.0

ROM **17** 19:42:53.7±0.1, 44°.177N±0°.005×11°.406E±0°.006, h8^{km}, ML3.8/88, Mw3.7, Error ellipse: s-maj=0.5km s-min=0.4km az=198.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-2.84; $M_{\theta\theta}$4.12; $M_{\phi\phi}$-1.28; $M_{r\theta}$-1.87; $M_{\theta\phi}$-1.30; $M_{\phi r}$2.37; Fault plane solution: $M_0$4.89512×10^{14} NP1:ϕ_s252.00000°, δ37.00000°, λ-142.00000°. NP2:ϕ_s130.00000°, δ68.00000°, λ-59.00000°.

NEIC **17** 19:42:53.6, 44°.17N×11°.41E, h14^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-7.82; $M_{\theta\theta}$4.65; $M_{\phi\phi}$3.18; $M_{r\theta}$-0.14; $M_{\theta\phi}$-3.56; $M_{\phi r}$1.93; Fault plane solution: $M_0$7.93000×10^{14} NP1:ϕ_s299.99000°, δ40.83000°, λ-104.34000°. NP2:ϕ_s138.66000°, δ50.69000°, λ-77.92000°. Principal axes: T 7.6603, Plg5.0000°, Azm220.0000°; N 0.5116, Plg9.0000°, Azm311.0000°; P -8.1719, Plg79.0000°, Azm102.0000°;

IDC **17** 19:42:53.8±0.8, 44°.30N×11°.60E, h0^{km}, mb3.8/9, mb1 4.0/16, mb1mx3.7/49, mbtmp3.8/16, ML3.7/7, MS3.4/5, Ms1 3.4/5, ms1mx2.9/60 Error ellipse: s-maj=19.2km s-min=12.5km az=113.0

LDG **17** 19:42:54.7±0.2, 44°.14N×11°.48E, h7^{km}, Md3.2/1, Ml3.9/28, Error ellipse: s-maj=4.2km s-min=3.3km az=90.0

PRU **17** 19:42:54.2±0.0, 44°.19N×11°.76E, h10^{km}, M4.4

ISC 17 19:42:54.2±0.6, **44°.21N**±0°.01×**11°.41E**±0°.01, **h11**^{km}±4^{km}, **n524**, σ1ˢ.92/614, **mb4.0**/14, **30C-30D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SEI	Scarperia	0.16	195	⇑iP	Pg	19 42 57.2	-0.5
SEI				S	Sg	19 43 00.2	0.0
SEI				AML	AML		
SEI				AML	AML		
MTRZ	Monterenzio	0.17	13	⇑P	Pg	19 42 56.8	-1.3
MTRZ				S	Sg	19 43 00.4	-0.4
MTRZ				AML	AML		
MTRZ				AML	AML		
MTRZ				AML	AML		
MTRZ				AML	AML		
MTRZ				AML	AML		
FNVD	Fontana Vidola	0.21	260	⇑P	Pg	19 42 58.3	-0.4
FNVD				S	Sg	19 43 02.2	+0.4
FNVD				AML	AML		
FNVD				AML	AML		
LMD	Lutirano	0.25	121	⇑eP	Pg	19 42 58.5	-0.8
LMD				S	Sg	19 43 03.4	+0.6
LMD				AML	AML		
	comp=E,40500µm,0.5s						
LMD				AML	AML		
	comp=N,41950µm,0.4s						
LMD				AML	AML		
	comp=N,41950µm,0.4s						
IMOL	Imola, Italy	0.28	57	⇑iP	Pg	19 43 00.5	+0.5
IMOL				S	Sb	19 43 07.5	+1.4
IMOL				AML	AML		
IMOL				AML	AML		
IMOL				AML	AML		
IMOL				AML	AML		
ZCCA	Zocca	0.34	295		Pg	19 43 01.5	+0.4
ZCCA	Zocca	0.34	295	⇑iP	Pg	19 43 01.8	+0.6
ZCCA				AML	AML		
	comp=E,13200µm,0.5s						
ZCCA				AML	AML		
	comp=N,15100µm,0.9s						
ZCCA				AML	AML		
	comp=N,13320µm,0.9s						
ZCCA				AML	AML		
	comp=N,13310µm,0.9s						
ZCCA				AML	AML		
	comp=N,15050µm,0.9s						
ZCCA				AML	AML		
	comp=E,12050µm,0.5s						
ZCCA				AML	AML		
	comp=N,15050µm,0.9s						
MTCR	Monte La Croce	0.35	239	⇑iP	Pg	19 43 00.6	-0.6
MTCR				S	Sg	19 43 06.3	+0.5
MTCR				AML	AML		
	comp=E,50100µm,1.0s						
MTCR				AML	AML		
	comp=N,35250µm,0.4s						
MTCR				AML	AML		
	comp=N,35300µm,0.4s						
MTCR				AML	AML		
	comp=N,35300µm,0.4s						
MTCR				AML	AML		
	comp=N,35300µm,0.4s						
MTCR				AML	AML		
	comp=E,50100µm,1.0s						
PTF	Prato	0.35	225	⇓iP	Pg	19 43 00.6	-0.6
RUFI	Rufina	0.37	169	⇑eP	Pg	19 43 00.8	-0.8
RUFI				S	Sg	19 43 07.0	+0.5
RUFI				AML	AML		
	comp=N,13825µm,0.6s						
RUFI				AML	AML		
	comp=E,14800µm,1.4s						
RUFI				AML	AML		
	comp=N,13840µm,0.6s						
RUFI				AML	AML		
	comp=E,14750µm,1.4s						
RUFI				AML	AML		
	comp=N,13835µm,0.6s						
FIU	Minerbio Fiu	0.44	7	P	Pb	19 43 04.0	+0.1
FIU				AML	AML		
	comp=E,85450µm,0.5s						
FIU				AML	AML		
	comp=E,85450µm,0.5s						
FIU				AML	AML		
	comp=N,73850µm,0.8s						
FIU				AML	AML		
	comp=E,85400µm,0.5s						
FIU				AML	AML		
	comp=N,73850µm,0.8s						
FIU				AML	AML		
	comp=E,85400µm,0.5s						
FIU				AML	AML		
	comp=N,73850µm,0.8s						
CMPO	Campotto Po	0.47	37	P	Pb	19 43 05.6	+1.1
ASQU	Asqua	0.49	146	⇑iP	Pg	19 43 02.8	-1.0
ASQU				S	Sg	19 43 10.7	+0.4
ASQU				AML	AML		
	comp=N,17300µm,0.5s						
ASQU				AML	AML		
	comp=N,17300µm,0.5s						
ASQU				AML	AML		
	comp=E,17500µm,0.4s						
POPM	Popiglio	0.50	251	P	Pg	19 43 03.1	-0.8
POPM	Popiglio	0.50	251	⇑iP	Pg	19 43 03.2	-0.8
POPM				S	Sg	19 43 11.5	+1.0
POPM				AML	AML		
	comp=E,12650µm,1.2s						
POPM				AML	AML		
	comp=N,15800µm,0.4s						
CRMI	Carmignano	0.52	218	⇑iP	Pg	19 43 03.5	-0.9
CRMI				S	Sg	19 43 11.9	+0.6
CRMI				AML	AML		
	comp=E,6655µm,1.0s						
CRMI				AML	AML		
	comp=N,7705µm,0.5s						
CRMI				AML	AML		
	comp=N,3150µm,0.5s						
CRMI				AML	AML		
	comp=E,2750µm,0.8s						
MODE	Modena	0.54	322	P	Pb	19 43 05.8	+0.1
RAVA	Ravarino	0.59	339	⇑iP	Pn	19 43 08.0	-0.6
RAVA				AML	AML		
	comp=N,31900µm,0.7s						
RAVA				AML	AML		
	comp=N,31900µm,0.7s						
RAVA				AML	AML		
	comp=E,28200µm,0.6s						
BDI	Bagni Di Lucca	0.60	257	⇑iP	Pg	19 43 04.8	-1.2
BDI				S	Sb	19 43 15.6	+0.1
BDI				AML	AML		
	comp=E,12550µm,0.5s						
BDI				AML	AML		
	comp=N,18700µm,0.5s						
BDI				AML	AML		
	comp=N,18700µm,0.5s						
BDI				AML	AML		
	comp=N,18050µm,0.5s						
BDI				AML	AML		
	comp=E,11550µm,0.5s						
OSSC	Osservatorio P	0.69	190		Pg	19 43 06.5	-1.1
OSSC				Sg	Sg	19 43 17.2	+0.5
OSSC	Osservatorio P	0.69	190	⇑eP	Pg	19 43 06.5	-1.1
OSSC				S	Sg	19 43 16.9	+0.3
OSSC				AML	AML		
	comp=E,6670µm,0.5s						
OSSC				AML	AML		
	comp=N,11650µm,0.8s						
OSSC				AML	AML		
	comp=N,6675µm,0.5s						
OSSC				AML	AML		
	comp=E,11500µm,1.5s						
OSSC				AML	AML		
	comp=N,11700µm,0.8s						
OSSC				AML	AML		
	comp=E,6665µm,0.5s						
OSSC				AML	AML		
	comp=N,6680µm,0.5s						
CARD	Cardoso	0.69	255	P	Pg	19 43 06.5	-1.1
CARD	Cardoso	0.69	255	P	Pg	19 43 06.1	-1.6
CARD				S	Sg	19 43 17.1	+0.4
CARD				AML	AML		
	comp=E,11050µm,0.5s						
CARD				AML	AML		
	comp=N,9425µm,0.5s						
CRE	Caprese Michel	0.70	146	P	Pg	19 43 07.0	-0.9
CRE				S	Sb	19 43 18.0	-0.3
CRE				AML	AML		
	comp=E,7630µm,1.1s						
CRE				AML	AML		
	comp=N,13600µm,0.3s						
FERS	Ferrara-Casagl	0.70	7	AML	AML		
	comp=N,23050µm,0.6s						
FERS				AML	AML		
	comp=E,18950µm,0.5s						
FERS				AML	AML		
	comp=N,23050µm,0.6s						
CAVE	Cavezzo	0.72	336	⇓iP	Pn	19 43 10.6	+0.2
CAVE				AML	AML		
	comp=E,21250µm,0.5s						
CAVE				AML	AML		
	comp=N,16300µm,0.7s						
CAVE				AML	AML		
	comp=N,16300µm,0.7s						
MAIM	Mastiano	0.72	247	P	Pg	19 43 07.1	-1.1
MAIM	Mastiano	0.72	247	P	Pg	19 43 07.3	-0.9
MAIM				AML	AML		
	comp=E,8260µm,0.8s						
MAIM				AML	AML		
	comp=N,7950µm,0.6s						
SARO	Sassorosso	0.73	269	P	Pg	19 43 07.4	-0.9
SARO	Sassorosso	0.73	269	⇓eP	Pg	19 43 07.6	-0.7
SARO				AML	AML		
	comp=N,5465µm,0.6s						
SARO				AML	AML		
	comp=E,4555µm,0.5s						
CSNT	Castellina Chi	0.74	187	⇑eP	Pg	19 43 07.3	-1.1
CSNT				S	Sb	19 43 19.1	-0.2
CSNT				AML	AML		
	comp=N,15750µm,0.3s						
CSNT				AML	AML		
	comp=E,14850µm,1.4s						
CSNT				AML	AML		
	comp=E,14850µm,1.4s						
VLC	Villacollemand	0.74	267		Pg	19 43 07.5	-1.0
VLC				Sg	Sg	19 43 19.1	+0.9
VLC	Villacollemand	0.74	267	⇓eP	Pg	19 43 07.9	-0.6
VLC				AML	AML		
	comp=N,8960µm,1.1s						
VLC				AML	AML		
	comp=N,8955µm,1.1s						
VLC				AML	AML		
	comp=E,5390µm,0.7s						
VLC				AML	AML		
	comp=N,8690µm,1.1s						
VLC				AML	AML		
	comp=E,5505µm,0.8s						
ERBM	Eremo	0.75	287	P	Pg	19 43 08.3	-0.4
ERBM				AML	AML		
	comp=E,2605µm,0.9s						
ERBM				AML	AML		
	comp=E,2790µm,0.9s						
ERBM				AML	AML		
	comp=N,3085µm,0.6s						
BLLA	Bellaria	0.76	94	⇑P	Pg	19 43 08.8	-0.1
BLLA				AML	AML		
	comp=E,7365µm,1.4s						
BLLA				AML	AML		
	comp=N,6815µm,0.5s						
BLLA				AML	AML		
	comp=N,6795µm,0.5s						
BLLA				AML	AML		
	comp=E,7390µm,1.4s						
CPGN	Carpegna, Ital	0.77	121	⇓eP	Pg	19 43 09.0	-0.1
CPGN				AML	AML		
	comp=E,8150µm,0.6s						
CPGN				AML	AML		
	comp=N,8495µm,0.8s						
CPGN				AML	AML		
	comp=E,8520µm,1.4s						
CPGN				AML	AML		
	comp=N,8545µm,1.1s						
CPGN				AML	AML		
	comp=E,8155µm,0.6s						
CPGN				AML	AML		
	comp=E,8475µm,1.4s						
CPGN				AML	AML		
	comp=N,8480µm,1.1s						
NOVE	Novellara	0.77	320	AML	AML		
	comp=N,29400µm,0.5s						
NOVE				AML	AML		
	comp=N,29400µm,0.5s						
NOVE				AML	AML		
	comp=E,17400µm,0.9s						
PII	Pisa	0.80	233	P	Pg	19 43 08.4	-1.3
PII				S	Sg	19 43 20.8	+0.7
PII				AML	AML		
	comp=N,9390µm,1.0s						
PII				AML	AML		
	comp=E,10570µm,0.9s						
SERM	Sermide	0.81	354	P	Pb	19 43 10.8	+0.5
SERM				AML	AML		
	comp=E,4980µm,0.6s						
SERM				AML	AML		
	comp=N,3590µm,0.4s						
SERM				AML	AML		
	comp=E,7975µm,0.6s						
SERM				AML	AML		
	comp=N,6930µm,0.7s						
SERM				AML	AML		
	comp=E,4975µm,0.6s						
SERM				AML	AML		
	comp=E,7990µm,0.6s						
SERM				AML	AML		
	comp=N,6900µm,0.7s						
PARC	Parchiule	0.82	133	⇓eP	Pg	19 43 09.1	-0.9
PARC				AML	AML		
	comp=E,4155µm,0.7s						
PARC				AML	AML		
	comp=N,5650µm,0.4s						
PARC				AML	AML		
	comp=E,4175µm,0.7s						
SSP9	Sansepolcro	0.82	140	⇓eP	Pg	19 43 09.1	-0.9
SSP9				AML	AML		
	comp=E,6200µm,0.5s						
SSP9				AML	AML		
	comp=N,5965µm,0.7s						
SSP9				AML	AML		
	comp=N,5890µm,0.7s						
SSP9				AML	AML		
	comp=E,6190µm,0.5s						
EQUI	Equi	0.91	268	P	Pg	19 43 10.7	-1.0
EQUI	Equi	0.91	268	P	Pg	19 43 10.6	-1.1
EQUI				AML	AML		
	comp=E,5260µm,0.7s						
EQUI				AML	AML		
	comp=N,3875µm,0.8s						
BADI	Badiali	0.92	139	⇑eP	Pg	19 43 10.1	-1.8
BADI				AML	AML		
	comp=E,7285µm,0.4s						
BADI				AML	AML		
	comp=N,5620µm,0.5s						
BADI				AML	AML		
	comp=E,7290µm,0.4s						
CAFI	Castiglion Fio	0.96	155	P	Pg	19 43 11.7	-1.1
CAFI				AML	AML		
	comp=N,3890µm,1.5s						
CAFI				AML	AML		
	comp=N,4836µm,1.5s						
CAFI				AML	AML		
	comp=E,3935µm,1.4s						
CAFI				AML	AML		
	comp=E,3930µm,1.4s						
PRMA	PARMA	0.96	306		Pn	19 43 14.6	+0.9
PRMA	PARMA	0.96	306	P	Pn	19 43 14.9	+1.2
APEC	Apecchio	0.97	131	i P	Pg	19 43 12.0	-1.0
APEC				AML	AML		
	comp=E,3065µm,0.7s						
APEC				AML	AML		
	comp=N,1605µm,0.8s						
APEC				AML	AML		
	comp=E,15100µm,0.7s						
APEC				AML	AML		
	comp=N,1605µm,0.8s						
APEC				AML	AML		
	comp=N,8195µm,0.7s						
APEC				AML	AML		
	comp=E,3060µm,0.7s						
GRAM	Graiana	1.01	287	P	Pg	19 43 13.3	-0.3
GRAM	Graiana	1.01	287	⇓iP	Pg	19 43 13.3	-0.3
GRAM				AML	AML		
	comp=E,10040µm,1.3s						
GRAM				AML	AML		
	comp=N,11100µm,0.5s						
FROS	Frosini	1.01	191	⇑iP	Pg	19 43 12.5	-1.2
FROS				AML	AML		

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       comp=N,5550µm,1.3s
FROS                                AML   AML
       comp=E,7315µm,0.5s
ATPI   Pietralunga -     1.04 136   P     Pg     19 43 13.2 -1.0
ATPI                                AML   AML
       comp=E,5975µm,0.8s
ATPI                                AML   AML
       comp=N,4590µm,1.0s
PESA   Pesaro            1.06 104 ⇓P     Pg     19 43 14.4 -0.2
PESA                                AML   AML
       comp=N,6595µm,0.6s
PESA                                AML   AML
       comp=E,8895µm,1.2s
ATVO   AVT- Monte Val    1.09 138⇓ eP    Pb     19 43 14.1 -1.1
ATVO                                AML   AML
       comp=E,8860µm,0.9s
ATVO                                AML   AML
       comp=N,5595µm,0.5s
FSSB   Fossombrone       1.11 117   P     Pb     19 43 14.3 -1.2
FSSB                                AML   AML
       comp=E,6860µm,0.6s
FSSB                                AML   AML
       comp=N,12050µm,1.4s
OPPE   Oppeano           1.12 351   P     Pb     19 43 15.6 +0.1
OPPE                                AML   AML
       comp=E,7330µm,1.3s
OPPE                                AML   AML
       comp=N,9630µm,1.6s
MPAG   Monte Paganucc    1.13 120   P     Pb     19 43 14.8 -1.1
MPAG                                AML   AML
       comp=E,4940µm,0.7s
MPAG                                AML   AML
       comp=N,7470µm,0.9s
MPAG                                AML   AML
       comp=N,7220µm,0.8s
MPAG                                AML   AML
       comp=E,5105µm,0.7s
PLMA   Palmaria, Port    1.14 263   P     Pb     19 43 14.8 -1.0
PLMA                                AML   AML
       comp=E,3570µm,0.5s
PLMA                                AML   AML
       comp=N,4065µm,1.1s
TRIF   Trifonti          1.15 199   P     Pb     19 43 14.5 -1.7
TRIF                                AML   AML
       comp=E,2640µm,0.7s
TRIF                                AML   AML
       comp=N,2830µm,0.5s
TEOL   Teolo             1.17   9         Pb     19 43 15.3 -1.2
TEOL                                Sg    Sb     19 43 31.5 -0.2
TEOL   Teolo             1.17   9   P     Pb     19 43 15.6 -0.9
TEOL                                AML   AML
       comp=E,22300µm,0.8s
TEOL                                AML   AML
       comp=E,22300µm,0.8s
TEOL                                AML   AML
       comp=N,13210µm,0.6s
ATFO   Monte Foce - G    1.19 135   P     Pb     19 43 16.4 -0.4
ATFO                                AML   AML
       comp=N,5005µm,0.5s
ATFO                                AML   AML
       comp=E,4615µm,0.6s
ATTE   AVT- Monte Tez    1.22 146⇑ eP    Pn     19 43 15.7 -1.6
MURB   Monte Urbino      1.24 139         Pn     19 43 16.6 -1.0
COR1   Corinaldo         1.28 116   P     Pg     19 43 18.5 -0.3
COR1                                AML   AML
       comp=E,4945µm,1.0s
COR1                                AML   AML
       comp=N,10895µm,0.6s
ARVD   Arcevia           1.31 122   P     Pn     19 43 17.9 -0.7
ARVD                                AML   AML
       comp=N,3220µm,0.7s
ARVD                                AML   AML
       comp=E,2730µm,0.9s
FOSV   Fossato di Vic    1.34 132⇑ iP    Pn     19 43 18.8 -0.1
FOSV                                AML   AML
       comp=N,2530µm,0.5s
FOSV                                AML   AML
       comp=E,2905µm,0.5s
GROG   Isola di Gorgo    1.35 235   P     Pn     19 43 17.2 -1.8
GROG                                AML   AML
       comp=E,2340µm,0.5s
GROG                                AML   AML
       comp=N,2470µm,0.8s
ARCI   Arcidosso         1.35 178   P     Pn     19 43 17.3 -1.9
ARCI                                AML   AML
       comp=E,1183µm,0.6s
ARCI                                AML   AML
       comp=N,1325µm,1.0s
ATCC   AVT- Casa Cast    1.35 138   P     Pn     19 43 18.8 -0.3
ATCC                                AML   AML
       comp=E,10685µm,0.6s
ATCC                                AML   AML
       comp=N,5125µm,1.0s
MSSA   Maissana          1.37 275         Pn     19 43 19.2 -0.1
MSSA   Maissana          1.37 275   P     Pn     19 43 19.2 -0.1
MSSA                                AML   AML
       comp=E,3090µm,1.2s
MSSA                                AML   AML
       comp=N,4915µm,0.9s
MGAB   Montegabbione     1.39 158   P     Pn     19 43 18.1 -1.5
MGAB                                AML   AML
       comp=N,4050µm,0.8s
MGAB                                AML   AML
       comp=E,4185µm,0.6s
MGAB                                AML   AML
       comp=E,4120µm,0.5s
MGAB                                AML   AML
       comp=N,4185µm,0.9s
SACS   San Casciano d    1.40 165   P     Pn     19 43 18.5 -1.3
SACS                                AML   AML
       comp=E,2395µm,0.7s
SACS                                AML   AML
       comp=N,2335µm,0.6s
SACS                                AML   AML
       comp=N,2360µm,0.6s
SACS                                AML   AML
       comp=E,2315µm,0.7s
MCIV   Monte Civitell    1.44 172   P     Pn     19 43 19.5 -0.8
MCIV                                AML   AML
       comp=E,680µm,0.8s
MCIV                                AML   AML
       comp=N,736µm,1.0s
MARN   Marana (Italy)    1.44 354  ePg    Pn     19 43 19.2 -1.1
SNTG   Esanatoglia       1.46 130   P     Pb     19 43 21.1 -0.3
ROVR   Rover Verones     1.46 351   P     Pn     19 43 19.7 -1.0
ROVR                                AML   AML
       comp=N,1670µm,0.4s
ROVR                                AML   AML
       comp=E,2560µm,0.8s
ROVR                                AML   AML
       comp=E,959µm,0.8s
ROVR                                AML   AML
       comp=N,4090µm,0.4s
CASP   Castiglione de    1.47 196         Pn     19 43 18.7 -2.0
CASP   Castiglione de    1.47 196⇑ iP    Pn     19 43 18.7 -2.0
CASP                                AML   AML
       comp=E,1130µm,0.8s
CASP                                AML   AML
       comp=N,1210µm,0.4s
ASSB   Assisi San Ben    1.47 142   P     Pn     19 43 18.7 -2.1
ASSB                                AML   AML
       comp=E,2585µm,0.7s
ASSB                                AML   AML
       comp=N,2415µm,0.6s
EL6    Elcito            1.50 125   AML   AML
       comp=N,4335µm,0.9s
EL6                                 AML   AML
       comp=E,4960µm,0.9s
BOB    Bobbio (Coli)     1.51 292   P     Pg     19 43 23.8 +0.5
BOB                                 AML   AML
       comp=E,3970µm,1.2s
BOB                                 AML   AML
       comp=E,3930µm,0.6s
BOB                                 AML   AML
       comp=N,5105µm,0.9s
BOB                                 AML   AML
       comp=N,4470µm,0.9s
BALD   Monte Baldo       1.54 344  ePg    Pn     19 43 21.0 -0.8
BALD                               eSg    Sn     19 43 41.8 -0.1
SALO   Salr              1.55 336         Pn     19 43 21.2 -0.5
SALO   Salr              1.55 336   P     Pn     19 43 21.7 -0.1
SALO                                AML   AML
       comp=E,9070µm,0.8s
SALO                                AML   AML
       comp=N,8370µm,1.0s
SALO                                AML   AML
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       comp=E,3610µm,0.8s
SALO                                AML   AML
       comp=N,3605µm,1.0s
LEOD   Capriano del C    1.55 324   AML   AML
       comp=E,4530µm,1.5s
LEOD                                AML   AML
       comp=N,4605µm,0.7s
GORR   Gorreto           1.57 286   P     Pg     19 43 24.5 +0.1
GORR   Gorreto           1.57 286   P     Pg     19 43 24.5 +0.1
GORR                                AML   AML
       comp=E,4110µm,1.3s
GORR                                AML   AML
       comp=N,4070µm,1.2s
LATE   Laterza           1.62 170         Pn     19 43 22.1 -0.7
MAGA   Magasa            1.67 341   P     Pn     19 43 22.7 -0.8
MAGA                                AML   AML
       comp=N,5105µm,1.3s
MAGA                                AML   AML
       comp=E,8030µm,0.6s
MTLO   Montello          1.68  17  ePn    Pn     19 43 22.9 -0.7
DOSS   Dosso del Somm    1.68 355  ePg    Pn     19 43 22.8 -1.0
DOSS                               eSg    Sn     19 43 45.6 +0.2
FDMO   Fiordimonte       1.69 133   P     Pn     19 43 24.1 +0.4
FDMO                                AML   AML
       comp=E,1950µm,0.9s
FDMO                                AML   AML
       comp=N,1655µm,0.8s
CGRP   Cima Grappa       1.70   9  ePn    Pn     19 43 22.9 -1.1
CGRP                               eSn    Sn     19 43 46.0 +0.2
CSP1   Cessapalombo      1.71 130   AML   AML
       comp=E,4455µm,0.6s
CSP1                                AML   AML
       comp=N,6290µm,0.6s
ED06   Collalto TV       1.75  19  ePn    Pn     19 43 23.6 -0.9
CESX   Cesi              1.81 152   P     Pn     19 43 24.9 -0.4
CESX                                AML   AML
       comp=N,3300µm,1.0s
CESX                                AML   AML
       comp=E,2400µm,0.9s
PANI   Panarotta         1.85 358  ePn    Pn     19 43 25.5 -0.6
PANI                               eSn    Sn     19 43 49.9 +0.4
NRCA   Norcia            1.85 137         Pn     19 43 25.6 -0.3
NRCA   Norcia            1.85 137   P     Pn     19 43 26.1 +0.1
NRCA                                AML   AML
       comp=E,1550µm,0.6s
NRCA                                AML   AML
       comp=N,1585µm,0.5s
CTI    Castel Tesino     1.85   5         Pn     19 43 24.9 -1.1
CTI    Castel Tesino     1.85   5   P     Pn     19 43 25.0 -1.1
CTI                                 AML   AML
       comp=N,2125µm,0.4s
CTI                                 AML   AML
       comp=E,2305µm,0.5s
GAGG   Gaggia            1.91 350  ePn    Pn     19 43 26.0 -0.8
CAE    Caneva            1.94  22  ePn    Pn     19 43 26.2 -1.1
CAE                                eSn    Sn     19 43 51.2 -0.5
MABI   Malga Bissina     1.96 341   P     Pn     19 43 27.3 -0.3
MABI                                AML   AML
       comp=E,630µm,0.6s
MABI                                AML   AML
       comp=N,438µm,0.8s
POLC   Polcenigo         1.98  23⇓ iP    Pn     19 43 26.9 -0.8
POLC                                AML   AML
       comp=E,3825µm,0.8s
POLC                                AML   AML
       comp=N,6715µm,0.6s
MDI    Monti di Nese     1.98 323   AML   AML
       comp=E,1080µm,0.7s
MDI                                 AML   AML
       comp=E,1008µm,0.7s
MDI                                 AML   AML
       comp=N,1065µm,0.6s
MDI                                 AML   AML
       comp=N,1065µm,0.6s
LNSS   Leonessa          1.99 143   P     Pn     19 43 27.7 -0.3
LNSS                                AML   AML
       comp=E,4205µm,0.9s
LNSS                                AML   AML
       comp=N,2775µm,0.8s
FAU    Forcella Aurin    2.06  11  ePn    Pn     19 43 27.9 -1.1
SMA1   SAN MARTINO       2.11 138   AML   AML
       comp=E,2975µm,0.5s
SMA1                                AML   AML
       comp=N,2605µm,0.6s
MLNI   Malnisio          2.12  23  ePn    Pn     19 43 28.7 -1.0
RM33   Pellescritta (    2.15 142   P     Pn     19 43 30.0  0.0
RM33                                AML   AML
       comp=N,1530µm,1.2s
RM33                                AML   AML
       comp=E,1345µm,0.8s
CSO    Casso             2.17  17  ePn    Pn     19 43 29.0 -1.3
QLNO   Quiliano          2.21 274   AML   AML
       comp=N,1038µm,0.9s
QLNO                                AML   AML
       comp=E,505µm,0.7s
OZOL   Ozolo             2.21 354  ePn    Pn     19 43 30.6 -0.4
FINB   Finale Ligure     2.22 270   AML   AML
       comp=E,426µm,0.4s
FINB                                AML   AML
       comp=N,682µm,0.4s
CIMO   Cimolais          2.23  19  ePn    Pn     19 43 29.9 -1.3
TRI    Trieste           2.25  47         Pn     19 43 29.7 -1.7
TERO   Teramo            2.25 134   AML   AML
       comp=N,843µm,0.6s
TERO                                AML   AML
       comp=E,724µm,0.8s
TERO                                AML   AML
       comp=E,1750µm,0.8s
TERO                                AML   AML
       comp=N,2065µm,0.6s
STAL   STALIGIAL         2.25  24         Pn     19 43 30.0 -1.4
APPI   Appiano           2.28 357⇓ iP    Pn     19 43 31.6 -0.3
APPI                                AML   AML
       comp=E,1260µm,0.4s
APPI                                AML   AML
       comp=N,1420µm,0.4s
CARE   Lago del Cares    2.28 347  ePn    Pn     19 43 32.1  0.0
FIAM   Fiamignano        2.30 147   P     Pn     19 43 32.2  0.0
FIAM                                AML   AML
       comp=E,1465µm,0.7s
FIAM                                AML   AML
       comp=N,1600µm,0.9s
MPRI   Monte Prat        2.32  28  ePn    Pn     19 43 31.6 -0.9
BUA    Buia              2.35  30  ePn    Pn     19 43 31.7 -1.1
AQU    L'Aquila          2.35 141  ePn    Pn     19 43 33.4 +0.5
AQU    L'Aquila          2.35 141         Pn     19 43 33.4 +0.5
SABO   M.te Sabotino     2.36  40  ePn    Pn     19 43 31.9 -1.0
SABO   M.te Sabotino     2.36  40⇓ iP    Pn     19 43 31.9 -1.0
SABO                                AML   AML
       comp=E,1910µm,1.6s
SABO                                AML   AML
       comp=N,2835µm,0.8s
COLI   Coloredo          2.38  35  ePn    Pn     19 43 32.0 -1.1
BAD    Bernadia          2.41  32  ePn    Pn     19 43 32.4 -1.3
PGF    Pioggiola         2.42 228  ePn    Pn     19 43 32.1 -1.7
PGF    Pioggiola         2.42 228  eP     Pn     19 43 35.4 +1.6
PGF                                eSn    Sn     19 44 01.1 -2.3
       comp=N,168nm,0.4s
BOO    Bordano           2.43  29  ePn    Pn     19 43 32.7 -1.2
VINO   Villanova         2.44  32⇓ iP    Pn     19 43 32.7 -1.3
VINO                                AML   AML
       comp=E,608µm,0.6s
VINO                                AML   AML
       comp=N,584µm,0.6s
RIY    Rijeka            2.46  62  ePn    Pn     19 43 33.0 -1.3
RIY                                 Sn    Sn     19 44 03.1 -1.2
RIY    Rijeka            2.46  62  ePn    Pn     19 43 32.9 -1.3
CSMI   Casera Mimoias    2.47  20  ePn    Pn     19 43 33.9 -0.6
FUSE   Fusea             2.48  26  ePn    Pn     19 43 33.9 -0.7
CLUD   Cludinico         2.48  24  ePn    Pn     19 43 33.8 -0.8
MOSI   Grossmontoni      2.49 346   P     Pn     19 43 35.5 +0.7
MOSI                                AML   AML
       comp=N,2140µm,0.5s
MOSI                                AML   AML
       comp=E,1475µm,0.9s
BRES   Bressanone        2.50   5   P     Pn     19 43 35.5 +0.4
BRES                                AML   AML
       comp=N,1170µm,0.6s
BRES                                AML   AML
       comp=E,896µm,0.5s
NVLJ   Novalja           2.51  81  i Pn   Pn     19 43 34.4 -0.5
ROBS   Robic             2.52  35  i Pn   Pn     19 43 33.8 -1.4
ROBS                               eSn    Sn     19 44 05.9  0.0
ROBS                                IAML         19 44 41.9
       comp=Z,712nm,1.3s
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DRE    Drenchia          2.52  38  ePn    Pn     19 43 34.0 -1.2
ABSI   Aberstueckl       2.52 359   P     Pn     19 43 35.2 -0.1
ABSI                                AML   AML
       comp=E,2600µm,0.5s
ABSI                                AML   AML
       comp=N,2180µm,0.8s
FVI    Forni Avoltri     2.58  21   P     Pn     19 43 35.5 -0.5
FVI                                 AML   AML
       comp=E,874µm,0.8s
FVI                                 AML   AML
       comp=N,1050µm,0.7s
PTCC   Patocco-Chiusa    2.59  31⇓ eP    Pn     19 43 34.7 -1.5
PTCC                                AML   AML
       comp=E,683µm,0.6s
PTCC                                AML   AML
       comp=N,727µm,0.5s
ZOU    Zoufplan          2.60  25   Pn    Pn     19 43 35.4 -1.0
CADS   Cadrg             2.61  38  i Pn   Pn     19 43 35.0 -1.4
CEY    Cerknica          2.63  53  ePn    Pn     19 43 34.9 -1.8
DUGI   Dugi Otok         2.63  93  ePn    Pn     19 43 36.3 -0.4
DUGI                                Sn    Sn     19 44 08.2 -0.5
PLRO   Paularo           2.64  27  ePn    Pn     19 43 36.4 -0.6
ABTA   Abfaltersbach     2.66  17  ePn    Pn     19 43 37.0 -0.1
       comp=N,22nm,0.3s,SNR=18
ABTA                                Sn    Sn     19 44 09.6 +0.2
       comp=N,131nm,0.5s
TUE    Stuetta           2.69 328         Pn     19 43 37.5 -0.2
TUE    Stuetta           2.69 328   P     Pn     19 43 38.1 +0.4
TUE                                 AML   AML
       comp=E,336µm,0.6s
TUE                                 AML   AML
       comp=N,389µm,0.7s
TUE                                 AML   AML
       comp=E,435µm,0.6s
TUE                                 AML   AML
       comp=N,504µm,0.7s
PRED   Cave del Predi    2.70  33  ePn    Pn     19 43 36.3 -1.4
LSR    Lussari           2.72  33  ePn    Pn     19 43 36.8 -1.2
ROSI   Rosskopf          2.72 360   AML   AML
       comp=E,1725µm,1.3s
ROSI                                AML   AML
       comp=N,1450µm,0.5s
CRNS   Crni Vrh          2.75  46  i Pn   Pn     19 43 37.2 -1.2
CRNS                               i Sn   Sn     19 44 11.6 -0.1
CRNS                                IAML         19 44 12.4
       comp=Z,686nm,0.6s
ACOM   Acomizza, Ital    2.77  32  ePn    Pn     19 43 37.8 -0.9
ACOM   Acomizza, Ital    2.77  32   P     Pn     19 43 37.9 -0.9
ACOM                                AML   AML
       comp=N,1460µm,0.5s
ACOM                                AML   AML
       comp=E,1100µm,0.9s
RISI   Rein              2.78   9   AML   AML
       comp=E,1910µm,0.4s
RISI                                AML   AML
       comp=N,1595µm,0.5s
SAOF   Saorge            2.79 267   P     Pn     19 43 38.3 -0.5
SAOF                                Pn    Pb     19 43 39.6 -4.4
SAOF                                Sn    Sn     19 44 14.4 +1.9
SAOF   Saorge            2.79 267   P     Pn     19 43 38.5 -0.3
SAOF   Saorge            2.79 267   P     Pn     19 43 38.5 -0.3
GORS   Gorjuse           2.79  40  i Pn   Pn     19 43 37.7 -1.2
DAVOX  Davos/Dischmat    2.79 338   Pn    Pn     19 43 40.6 +1.5
       comp=N,12nm,0.3s,baz=159,slow=12,SNR=62
DAVOX                               LR    LR     19 45 08.9
       comp=N,221nm,19.6s,baz=243,slow=49
VVLD   Villa Vallelon    2.84 144   AML   AML
       comp=E,220µm,1.1s
VVLD                                AML   AML
       comp=N,208µm,0.8s
INTR   Introdacqua       2.85 139         Pn     19 43 41.0 +1.2
FETA   Feichten          2.86 351  ePn    Pn     19 43 41.0 +1.1
       comp=N,15nm,0.6s,SNR=35
FETA                                Sn    Sg     19 44 27.4 +1.5
       comp=N,153nm,0.9s
LJU    Ljubljana         2.87  49  ePn    Pn     19 43 38.9 -1.1
LJU    Ljubljana         2.87  49⇓ iP    Pn     19 43 39.1 -0.8
LJU                                 AML   AML
       comp=N,4390µm,0.5s
LJU                                 AML   AML
       comp=E,4430µm,0.4s
SBF    Sospel            2.89 265  ePn    Pn     19 43 39.9 -0.3
SBF    Sospel            2.89 265  eP     Pn     19 43 42.4 +2.1
SBF                                eSn    Sn     19 44 13.3 -1.7
       comp=E,235nm,0.4s
MYKA   Terra Mystica     2.89  32  ePn    Pn     19 43 39.6 -0.7
       comp=E,12nm,0.3s
MYKA                                Sn    Sg     19 44 30.1 +3.1
       comp=E,200nm,0.6s
TURF   col de Turini     2.91 267   P     Pn     19 43 40.6 -0.1
TURF                                Pn    Pb     19 43 42.1 -4.1
TURF                                Sn    Sn     19 44 17.6 +2.0
TURF   col de Turini     2.91 267   P     Pn     19 43 40.5 -0.1
TURF   col de Turini     2.91 267   P     Pn     19 43 40.5 -0.1
TRAV   Traversella       2.92 298   AML   AML
       comp=N,448µm,0.9s
TRAV                                AML   AML
       comp=E,396µm,0.9s
ESCA   l'Escarene        2.94 264   P     Pn     19 43 40.3 -0.5
ESCA                                Pn    Pb     19 43 42.5 -4.1
ESCA   l'Escarene        2.94 264   P     Pn     19 43 43.5 +2.6
ESCA   l'Escarene        2.94 264   P     Pn     19 43 43.5 +2.6
AJAC   Base Areonaval    2.99 221  i P    Pn     19 43 41.1 -0.4
AJAC   Base Areonaval    2.99 221   AML   AML
       comp=E,342µm,0.5s
AJAC                                AML   AML
       comp=N,189µm,1.5s
SQTA   Sankt Quirin      3.02 357  i Pn   Pn     19 43 42.7 +0.6
       comp=N,30nm,0.2s,SNR=25
SQTA                               eSn    Sb     19 44 23.9 -1.1
       comp=N,49nm,0.2s
BOJS   Bojanci           3.02  63  ePn    Pn     19 43 41.4 -0.6
BOJS                               eSn    Sn     19 44 18.5 +0.3
BOJS                                IAML         19 44 35.7
       comp=Z,455nm,1.1s
BOJS   Bojanci           3.02  63⇓ eP    Pn     19 43 41.4 -0.6
BOJS                                AML   AML
       comp=E,781µm,0.8s
BOJS                                AML   AML
       comp=N,658µm,0.5s
WTTA   Wattenberg        3.06   3  i Pn   Pn     19 43 43.7 +1.0
       comp=N,30nm,0.3s,SNR=16
WTTA                               eSn    Sb     19 44 23.2 -3.1
       comp=N,108nm,0.4s
WTTA   Wattenberg        3.06   3  ePn    Pn     19 43 43.8 +1.0
       SNR=46
WTTA                               eSn    Sb     19 44 23.4 -2.9
       SNR=1.9
WTTA   Wattenberg        3.06   3  ePn    Pn     19 43 43.8 +1.0
       SNR=46
WTTA                               eSn    Sb     19 44 23.4 -2.9
       SNR=1.9
WTTA   Wattenberg        3.06   3   AML   AML
       comp=E,1043µm,0.7s
WTTA                                AML   AML
       comp=N,672µm,0.5s
PZZ    Stroppo           3.10 277   AML   AML
       comp=N,492µm,0.8s
PZZ                                 AML   AML
       comp=E,314µm,0.5s
ZIRJ   Zirje             3.11  99  ePn    Pn     19 43 42.5 -0.7
MORI   Morici            3.12  95  i Pn   Pn     19 43 44.0 +0.7
WATA   Walderalm         3.13   2  i Pn   Pn     19 43 45.1 +1.4
       comp=E,25nm,0.2s,SNR=34
WATA                               eSn    Sb     19 44 25.4 -2.8
       comp=E,92nm,0.5s
ISO    Isola             3.14 271   Pn    Pn     19 43 44.0 +0.3
ISO                                 Sn    Sn     19 44 24.1 +2.9
UDBI   Udbina            3.14  83  ePn    Pn     19 43 44.6 +0.9
MOTA   Moosalm           3.15 356  i Pn   Pn     19 43 45.1 +1.2
       comp=E,13nm,0.2s,SNR=13
MOTA                               eSn    Sn     19 44 25.0 +3.4
       comp=E,81nm,0.5s
KBA    Koelnbreinsper    3.18  25  i Pn   Pn     19 43 44.2 -0.1
       comp=E,23nm,0.3s,SNR=20
KBA    Koelnbreinsper    3.18  25  ePn    Pn     19 43 44.4 +0.1
       SNR=18
KBA    Koelnbreinsper    3.18  25  ePn    Pn     19 43 44.4 +0.1
       SNR=18
PLONS  Plons/SG          3.18 334  ePn    Pn     19 43 45.9 +1.6
       SNR=36
PLONS                              eSn    Sn     19 44 25.4 +3.1
       SNR=3.1
PLONS  Plons/SG          3.18 334  ePn    Pn     19 43 45.9 +1.6
       SNR=36
PLONS                              eSn    Sn     19 44 25.4 +3.1
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	SNR=3.1						
OBKA	**Obir**	**3.19**	**43**	*i* Pn	**Pn**	**19 43 43.6**	**-0.9**
	comp=E,17nm,0.3s,SNR=8.6						
OBKA	**Obir**	**3.19**	**43**	*e*Pn	**Pn**	**19 43 43.8**	**-0.7**
	SNR=38						
OBKA	**Obir**	**3.19**	**43**	*e*Pn	**Pn**	**19 43 43.8**	**-0.7**
	SNR=38						
OZLJ	**Ozalj**	**3.21**	**63**	*i* Pn	**Pn**	**19 43 44.3**	**-0.3**
EMBD	**Embd, Matterta**	**3.23**	**310**	P	**Pn**	**19 43 47.5**	**+2.5**
DAVA	**Damuels**	**3.26**	**341**	*i* Pn	**Pn**	**19 43 47.0**	**+1.5**
	comp=E,33nm,0.3s,SNR=31						
DAVA	**Damuels**	**3.26**	**341**	*e*Pn	**Pn**	**19 43 47.2**	**+1.7**
	SNR=38						
DAVA				*e*Sn	**Sn**	**19 44 28.1**	**+3.7**
	SNR=2.2						
DAVA	**Damuels**	**3.26**	**341**	*e*Pn	**Pn**	**19 43 47.2**	**+1.7**
	SNR=38						
DAVA				*e*Sn	**Sn**	**19 44 28.1**	**+3.7**
	SNR=2.2						
CALF	**Calern**	**3.27**	**264**	P	**Pn**	**19 43 45.1**	**-0.5**
CALF				Pn	Pb	19 43 47.0	-5.3
CALF				Sn	**Sn**	**19 44 26.4**	**+1.8**
CALF	**Calern**	**3.27**	**264**	P	**Pn**	**19 43 45.3**	**-0.3**
CALF	**Calern**	**3.27**	**264**	P	**Pn**	**19 43 45.3**	**-0.3**
LSD	**Lago del Serru**	**3.29**	**294**	AML	AML		
	comp=N,172µm,1.4s						
LSD				AML	AML		
	comp=E,148µm,1.3s						
CRES	**Cresnjev**	**3.29**	**59**	*e*Pn	**Pn**	**19 43 44.9**	**-0.9**
OBER	**Oberstdorf**	**3.30**	**347**	*e*Pn	**Pn**	**19 43 47.3**	**+1.5**
	SNR=12						
OBER	**Oberstdorf**	**3.30**	**347**	*e*Pn	**Pn**	**19 43 47.3**	**+1.5**
	SNR=12						
SURF	**Saint Ours**	**3.31**	**276**	P	**Pn**	**19 43 47.2**	**+1.1**
RETA	**Reutte**	**3.31**	**352**	*i* Pn	**Pn**	**19 43 46.5**	**+0.4**
	comp=E,37nm,0.4s,SNR=23						
RETA				*e*Sn	**Sn**	**19 44 29.4**	**+3.8**
	comp=E,30nm,0.3s						
MBDF	**Montbardon**	**3.36**	**281**	*e*Pn	**Pn**	**19 43 47.1**	**+0.2**
MBDF	**Montbardon**	**3.36**	**281**	*e*P	**Pn**	**19 43 49.8**	**+2.9**
MBDF				*e*Sn	**Sn**	**19 44 25.2**	**-1.7**
	comp=E,73nm,0.5s						
BNI	**Bardonecchia**	**3.48**	**286**		**Pn**	**19 43 47.8**	**-0.7**
OGAG	**Argentiere**	**3.50**	**276**	Pn	**Pb**	**19 43 53.7**	**-2.7**
OGAG				Sn	**Sn**	**19 44 34.4**	**+4.1**
FRF	**La Foret Royal**	**3.50**	**261**	*e*Pn	**Pn**	**19 43 47.7**	**-1.0**
FRF	**La Foret Royal**	**3.50**	**261**	*e*P	**Pn**	**19 43 51.2**	**+2.5**
FRF				*e*Sn	**Sn**	**19 44 27.6**	**-2.5**
	comp=E,184nm,0.5s						
SOKA	**Soboth**	**3.55**	**45**	*i* Pn	**Pn**	**19 43 48.7**	**-0.7**
	comp=E,6.8nm,0.4s						
SOKA				*e*Sn	**Sn**	**19 44 30.6**	**-0.8**
	comp=E,74nm,0.5s						
LPG	**La Plagne**	**3.56**	**293**	*e*Pn	**Pn**	**19 43 50.0**	**+0.3**
LPG	**La Plagne**	**3.56**	**293**	*e*P	**Pn**	**19 43 53.2**	**+3.5**
LPG				*e*Sn	**Sn**	**19 44 30.5**	**-1.3**
	comp=E,206nm,0.8s						
LPL	**La Plagne**	**3.58**	**293**	*e*Pn	**Pn**	**19 43 50.0**	**+0.1**
LPL	**La Plagne**	**3.58**	**293**	*e*P	**Pn**	**19 43 53.3**	**+3.5**
LPL				*e*Sn	**Sn**	**19 44 29.6**	**-2.6**
	comp=E,95nm,0.5s						
UBR	**Ueberruh**	**3.59**	**346**	*e*Pn	**Pn**	**19 43 50.7**	**+0.8**
	SNR=42						
UBR	**Ueberruh**	**3.59**	**346**	*e*Pn	**Pn**	**19 43 50.7**	**+0.8**
	SNR=42						
KIJV	**Kijevo**	**3.60**	**91**	Pn	**Pn**	**19 43 51.8**	**+1.8**
SENIN	**Lac Senin/Sane**	**3.62**	**308**	Pn	**Pn**	**19 43 52.2**	**+1.8**
ZAG	**Zagreb**	**3.63**	**62**	*e*Pn	**Pn**	**19 43 54.0**	**+3.7**
PTJ	**Puntijarka**	**3.65**	**61**	*e*Pn	**Pn**	**19 43 49.7**	**-1.1**
TREM	**Isole Tremiti**	**3.65**	**123**	AML	AML		
	comp=E,808µm,1.1s						
TREM				AML	AML		
	comp=N,900µm,0.6s						
WILA	**Wila**	**3.66**	**332**	*e*Pn	**Pn**	**19 43 51.4**	**+0.6**
	SNR=13						
WILA	**Wila**	**3.66**	**332**	*e*Pn	**Pn**	**19 43 51.4**	**+0.6**
	SNR=13						
LMR	**La Mourre**	**3.66**	**258**	*e*Pn	**Pn**	**19 43 49.8**	**-0.9**
LMR	**La Mourre**	**3.66**	**258**	*e*P	**Pn**	**19 43 53.3**	**+2.6**
LMR				*e*Sn	**Sn**	**19 44 32.2**	**-1.7**
	comp=N,84nm,0.4s						
RJOB	**Jochberg**	**3.66**	**15**	*e*Pn	**Pn**	**19 43 51.4**	**+0.6**
	SNR=25						
RJOB	**Jochberg**	**3.66**	**15**	*e*Pn	**Pn**	**19 43 51.4**	**+0.6**
	SNR=25						
OGDI	**Digne**	**3.68**	**270**	Pn	**Pn**	**19 43 54.5**	**+3.4**
MELA	**Melanico ??? S**	**3.70**	**131**	P	**Pn**	**19 43 52.2**	**+0.9**
MELA				AML	AML		
	comp=N,521µm,0.7s						
MELA				AML	AML		
	comp=E,608µm,0.8s						
MELA				AML	AML		
	comp=N,504µm,0.6s						
MELA				AML	AML		
	comp=E,662µm,1.4s						
RSL	**Roselend**	**3.71**	**295**	Pn	**Pn**	**19 43 54.0**	**+2.4**
RSL				Sn	**Sn**	**19 44 37.6**	**+2.2**
RSL	**Roselend**	**3.71**	**295**	P	**Pn**	**19 43 54.1**	**+2.5**
RSL	**Roselend**	**3.71**	**295**	P	**Pn**	**19 43 54.1**	**+2.5**
BE1	**Monatshausen**	**3.71**	**358**	*e*Pn	**Pn**	**19 43 52.3**	**+0.8**
	SNR=10						
BE1	**Monatshausen**	**3.71**	**358**	*e*Pn	**Pn**	**19 43 52.3**	**+0.8**
	SNR=10						
ZUR	**Degenried**	**3.73**	**329**	P	**Pn**	**19 43 54.7**	**+2.9**
HVAR	**Hvar**	**3.79**	**104**	*i* Pn	**Pn**	**19 43 52.9**	**+0.3**
BLAF	**les Blancs**	**3.88**	**268**	Pn	**Pn**	**19 43 56.0**	**+2.2**
GDM	**Grand'Maison**	**3.91**	**287**	Pn	**Pn**	**19 43 57.3**	**+3.0**
GDM				Sn	**Sn**	**19 44 44.3**	**+4.1**
GDM	**Grand'Maison**	**3.91**	**287**	P	**Pn**	**19 43 58.3**	**+4.0**
GDM	**Grand'Maison**	**3.91**	**287**	P	**Pn**	**19 43 58.3**	**+4.0**
PAOL	**Paolisi**	**3.94**	**143**	Pn	**Pn**	**19 43 54.4**	**-0.3**
SGRT	**San Giovanni R**	**4.01**	**126**	Pn	**Pn**	**19 43 55.6**	**-0.2**
SGRT	**San Giovanni R**	**4.01**	**126**	⇓*i*P	**Pn**	**19 43 55.7**	**0.0**
SGRT				AML	AML		
	comp=E,458µm,0.9s						
SGRT				AML	AML		
	comp=N,302µm,0.6s						
ORIF	**Oris-en-Rattie**	**4.02**	**282**	*e*Pn	**Pn**	**19 43 55.7**	**-0.1**
ORIF	**Oris-en-Rattie**	**4.02**	**282**	*e*P	**Pn**	**19 43 58.9**	**+3.1**
ORIF				*e*Sn	**Sn**	**19 44 39.7**	**-3.2**
	comp=N,37nm,0.4s						
ORIF	**Oris-en-Rattie**	**4.02**	**282**	Pn	**Pn**	**19 43 58.4**	**+2.6**
ORIF	**Oris-en-Rattie**	**4.02**	**282**	Sn	**Sn**	**19 44 46.9**	**+4.0**
ORIF	**Oris-en-Rattie**	**4.02**	**282**	AML	AML		
	comp=E,138µm,1.6s						
ORIF				AML	AML		
	comp=N,164µm,0.5s						
SULZ	**Cheisacher**	**4.04**	**326**	P	**Pn**	**19 43 56.4**	**+0.3**
MOSL	**Moslavina**	**4.05**	**68**	*i* Pn	**Pn**	**19 43 55.0**	**-1.1**
MOSL				Sn	**Sn**	**19 44 40.8**	**-2.8**
TORNY	**Torny/Romont**	**4.05**	**311**	P	**Pn**	**19 43 57.8**	**+1.6**
KALN	**Kalnik**	**4.05**	**60**	*e*Pn	**Pn**	**19 43 54.5**	**-1.7**
ASEAF	**Site Antares,**	**4.07**	**252**	P	**Pn**	**19 43 59.3**	**+3.2**
BALST	**Balsthal**	**4.07**	**322**	P	**Pn**	**19 43 57.5**	**+1.1**
BALST	**Balsthal**	**4.07**	**322**	*e*Pn	**Pn**	**19 43 57.6**	**+1.1**
	SNR=7.5						
BALST	**Balsthal**	**4.07**	**322**	*e*Pn	**Pn**	**19 43 57.6**	**+1.1**
	SNR=7.5						
MLYF	**Mely**	**4.07**	**269**	Pn	**Pn**	**19 43 59.9**	**+3.4**
MGRS	**Mrkonjic Grad**	**4.08**	**85**	*e*Pn	**Pn**	**19 43 56.9**	**+0.4**
SLE	**Schleitheim**	**4.10**	**331**	P	**Pn**	**19 43 56.7**	**-0.2**
SLE	**Schleitheim**	**4.10**	**331**	*e*Pn	**Pn**	**19 43 56.6**	**-0.2**
	SNR=18						
SLE	**Schleitheim**	**4.10**	**331**	*e*Pn	**Pn**	**19 43 56.6**	**-0.2**
	SNR=18						
MSAG	**Monte S. Angel**	**4.14**	**126**	P	**Pn**	**19 43 57.6**	**+0.2**
MSAG				AML	AML		
	comp=E,284µm,1.4s						
MSAG				AML	AML		
	comp=N,455µm,0.5s						
MOA	**Molln**	**4.15**	**28**	*i* Pn	**Pn**	**19 43 56.9**	**-0.7**
	comp=N,6.0nm,0.2s,SNR=10						
MOA				*e*Sn	**Sn**	**19 44 46.7**	**+0.6**
	comp=N,32nm,0.4s						
MOA	**Molln**	**4.15**	**28**	*e*Pn	**Pn**	**19 43 57.6**	**0.0**
	SNR=23						
MOA	**Molln**	**4.15**	**28**	*e*Pn	**Pn**	**19 43 57.6**	**0.0**
	SNR=23						
MAKA	**Makarska**	**4.17**	**101**	*e*Pn	**Pn**	**19 43 57.9**	**+0.2**
BLY	**Banja Luka**	**4.17**	**80**	*e*Pn	**Pn**	**19 43 57.3**	**-0.4**
ARSA	**Arzberg**	**4.19**	**42**	*i* Pn	**Pn**	**19 43 57.1**	**-1.0**
	comp=N,16nm,0.4s,SNR=8.7						
ARSA				*e*Sn	**Sn**	**19 44 44.9**	**-2.1**
	comp=N,34nm,0.6s						
ARSA	**Arzberg**	**4.19**	**42**	*e*Pn	**Pn**	**19 43 57.1**	**-1.0**
	SNR=16						
ARSA	**Arzberg**	**4.19**	**42**	*e*Pn	**Pn**	**19 43 57.1**	**-1.0**
	SNR=16						
ARSA	**Arzberg**	**4.19**	**42**	⇓*i*P	**Pn**	**19 43 57.1**	**-1.0**
ARSA				AML	AML		
	comp=N,120µm,0.8s						
ARSA				AML	AML		
	comp=E,133µm,1.3s						
RICI	**Ricice**	**4.20**	**98**	*e*Pn	**Pn**	**19 43 59.2**	**+1.0**
SMRF	**Simiane la Rot**	**4.21**	**269**	*e*Pn	**Pn**	**19 43 58.9**	**+0.5**
SMRF	**Simiane la Rot**	**4.21**	**269**	*e*P	**Pn**	**19 44 01.8**	**+3.4**
SMRF				*e*Sn	**Sn**	**19 44 48.3**	**+0.7**
LSTV	**Lastovo**	**4.24**	**108**	*i* Pn	**Pn**	**19 43 58.5**	**-0.2**
RUSF	**Rustrel**	**4.28**	**269**	P	**Pn**	**19 44 00.7**	**+1.3**
OGSM	**Saint Maurice**	**4.30**	**291**	Pn	**Pn**	**19 44 01.1**	**+1.5**
OGSM	**Saint Maurice**	**4.30**	**291**	P	**Pn**	**19 44 01.6**	**+2.1**
OGSM	**Saint Maurice**	**4.30**	**291**	P	**Pn**	**19 44 01.6**	**+2.1**
BOURR	**Bourrignon**	**4.33**	**319**	P	**Pn**	**19 44 00.2**	**+0.2**
BEHE	**Becsehely**	**4.41**	**57**	*e*Pn	**Pn**	**19 44 02.1**	**+1.0**
BRANT	**Les Verrieres**	**4.42**	**310**	P	**Pn**	**19 44 01.9**	**+0.6**
CABF	**La Chapelle**	**4.46**	**305**	*e*Pn	**Pn**	**19 44 02.4**	**+0.6**
CABF	**La Chapelle**	**4.46**	**305**	*e*P	**Pn**	**19 44 05.4**	**+3.6**
CABF				*e*Sn	**Sn**	**19 44 51.2**	**-2.5**
	comp=E,41nm,0.6s						
KIZ	**Kirchzarten**	**4.47**	**328**	Pn	**Pn**	**19 44 01.4**	**-0.5**
KIZ	**Kirchzarten**	**4.47**	**328**	Sn	**Sn**	**19 44 51.2**	**-2.7**
LOMF	**Lomont**	**4.49**	**316**	Pn	**Pn**	**19 44 03.0**	**+0.7**
LOMF	**Lomont**	**4.49**	**316**	Sn	**Sn**	**19 44 52.0**	**-2.6**
LOMF	**Lomont**	**4.49**	**316**	P	**Pn**	**19 44 03.9**	**+1.6**
LOMF	**Lomont**	**4.49**	**316**	P	**Pn**	**19 44 03.9**	**+1.6**
VULT	**Monte Vulture**	**4.49**	**135**	AML	AML		
	comp=N,306µm,1.1s						
VULT				AML	AML		
	comp=E,164µm,0.7s						
CHMF	**Charmoille**	**4.51**	**314**	Pn	**Pn**	**19 44 02.6**	**+0.1**
CHMF				Sn	**Sn**	**19 44 52.7**	**-2.4**
CHMF	**Charmoille**	**4.51**	**314**	P	**Pn**	**19 44 02.9**	**+0.3**
CHMF	**Charmoille**	**4.51**	**314**	P	**Pn**	**19 44 02.9**	**+0.3**
OG35	**Corcelles**	**4.52**	**296**	Pn	**Pn**	**19 44 04.0**	**+1.3**
OG35				Sn	**Sn**	**19 44 54.7**	**-0.7**
NORI	**Noerdlinger Ri**	**4.55**	**353**	*e*Sn	**Sn**	**19 44 54.8**	**-1.1**
	SNR=2.0						
NORI	**Noerdlinger Ri**	**4.55**	**353**	*e*Sn	**Sn**	**19 44 54.8**	**-1.1**
	SNR=2.0						
BFO	**Black Forest**	**4.65**	**334**		**Pn**	**19 44 04.1**	**-0.3**
BFO	**Black Forest**	**4.65**	**334**	*e*Pn	**Pn**	**19 44 04.2**	**-0.1**
	SNR=21						
BFO	**Black Forest**	**4.65**	**334**	*e*Pn	**Pn**	**19 44 04.2**	**-0.1**
	SNR=21						
MOF	**Molkenrain**	**4.71**	**322**	Pn	**Pn**	**19 44 05.7**	**+0.4**
STON	**Ston**	**4.76**	**104**	*e*Pn	**Pn**	**19 44 05.2**	**-0.7**
HINF	**Hinteralfeld**	**4.81**	**320**	*e*Pn	**Pn**	**19 44 06.0**	**-0.6**
HINF	**Hinteralfeld**	**4.81**	**320**	*e*P	**Pn**	**19 44 10.6**	**+4.0**
HINF				*e*Sn	**Sn**	**19 44 58.6**	**-3.7**
	comp=E,29nm,0.3s						
STU	**Stuttgart**	**4.82**	**342**	Pn	**Pn**	**19 44 06.6**	**-0.1**
OPP	**Oppenau**	**4.84**	**334**	Pn	**Pn**	**19 44 06.5**	**-0.5**
CONA	**Conrad Observa**	**4.84**	**38**	*i* Pn	**Pn**	**19 44 06.2**	**-0.9**
	comp=E,12nm,0.5s,SNR=9.5						
CONA				*e*Sn	**Sn**	**19 45 01.6**	**-1.6**
	comp=E,30nm,0.6s						
VIVF	**Saint-Julien-l**	**4.86**	**280**	*e*Pn	**Pn**	**19 44 07.1**	**-0.2**
VIVF	**Saint-Julien-l**	**4.86**	**280**	*e*P	**Pn**	**19 44 10.6**	**+3.3**
VIVF				*e*Sn	**Sn**	**19 45 00.3**	**-3.4**
	comp=E,18nm,0.5s						
GEC2	**GERESS Array S**	**4.90**	**18**	Pn	**Pn**	**19 44 06.6**	**-1.2**
GEC2	**GERESS Array S**	**4.90**	**18**	*e*Pn	**Pn**	**19 44 06.8**	**-1.2**
	SNR=17						
GEC2				*e*Sn	**Sn**	**19 45 02.6**	**-2.1**
	SNR=4.6						
GEC2	**GERESS Array S**	**4.90**	**18**	*e*Pn	**Pn**	**19 44 06.8**	**-1.2**
	SNR=17						
GEC2				*e*Sn	**Sn**	**19 45 02.6**	**-2.1**
	SNR=4.6						
GERES	**GERESS Array B**	**4.90**	**18**	Pn	**Pn**	**19 44 06.7**	**-1.2**
	comp=E,5.1nm,0.3s,baz=194,slow=13,SNR=162						
GERES				Sn	**Sn**	**19 45 02.4**	**-2.4**
	comp=E,8.1nm,0.3s,baz=202,slow=24,SNR=11						
GERES				LR	LR	19 46 26.7	
	comp=E,355nm,20.0s,baz=158,slow=45						
GERES	**GERESS Array B**	**4.90**	**18**	Pn	**Pn**	**19 44 06.6**	**-1.3**
VSL	**Villasalto**	**4.95**	**199**	Pn	**Pn**	**19 44 08.9**	**+0.4**
ECH	**Echery**	**4.98**	**325**	Pn	**Pn**	**19 44 09.1**	**+0.2**
ECH				Sn	**Sn**	**19 45 01.7**	**-4.8**
ECH	**Echery**	**4.98**	**325**	Pn	**Pn**	**19 44 08.6**	**-0.3**
SSB	**Saint Sauveur**	**5.01**	**285**	Pn	**Pn**	**19 44 09.6**	**+0.2**
CKRC	**Cesky Krumlov**	**5.03**	**22**	*e*PN	**Pn**	**19 44 08.7**	**-0.9**
CKRC				*e*SN	**Sn**	**19 45 03.7**	**-4.0**
WET	**Wettzell**	**5.04**	**11**	*e*Pn	**Pn**	**19 44 08.7**	**-1.1**
	SNR=8.3						
WET				*e*Sn	**Sn**	**19 45 05.4**	**-2.7**
	SNR=1.5						
WET	**Wettzell**	**5.04**	**11**	*e*Pn	**Pn**	**19 44 08.7**	**-1.1**
	SNR=8.3						
WET				*e*Sn	**Sn**	**19 45 05.4**	**-2.7**
	SNR=1.5						
WLS	**Welschbruch**	**5.06**	**328**	Pn	**Pn**	**19 44 09.8**	**-0.3**
CDF	**Champ du Feu**	**5.09**	**327**	*e*Pn	**Pn**	**19 44 09.9**	**-0.6**
CDF	**Champ du Feu**	**5.09**	**327**	*e*P	**Pn**	**19 44 14.8**	**+4.3**
CDF				*e*Sn	**Sn**	**19 45 06.4**	**-2.9**
	comp=E,35nm,0.4s						
DBRK	**Dubrovnik**	**5.14**	**105**	*e*Pn	**Pn**	**19 44 11.3**	**+0.2**
KHC	**Kasperske Hory**	**5.15**	**16**	*e*PN	**Pn**	**19 44 10.0**	**-1.3**
KHC				*e*SN	**Sn**	**19 45 08.0**	**-2.7**
KHC	**Kasperske Hory**	**5.15**	**16**		**Pn**	**19 44 10.1**	**-1.1**
HAU	**Haudompre**	**5.18**	**319**	*e*Pn	**Pn**	**19 44 11.2**	**-0.5**
HAU	**Haudompre**	**5.18**	**319**	*e*P	**Pn**	**19 44 15.8**	**+4.1**
HAU				*e*Sn	**Sn**	**19 45 07.9**	**-3.6**
	comp=E,105nm,0.6s						
TREB	**Trebinje**	**5.26**	**104**	*e*Pn	**Pn**	**19 44 13.1**	**+0.3**
MATE	**Matera**	**5.29**	**130**	⇑P	**Pn**	**19 44 13.8**	**+0.6**
MATE				⇑S	**Sn**	**19 45 12.2**	**-1.9**
BRY	**Bratogost**	**5.34**	**102**	*e*Pn	**Pn**	**19 44 15.3**	**+1.3**
HAPS	**Han Pijesak,BI**	**5.43**	**89**	*e*Pn	**Pn**	**19 44 14.2**	**-1.0**
LASF	**Ste Croix**	**5.44**	**271**	*e*Pn	**Pn**	**19 44 14.5**	**-0.8**
LASF	**Ste Croix**	**5.44**	**271**	*e*P	**Pn**	**19 44 18.9**	**+3.6**
LASF				*e*Sn	**Sn**	**19 45 14.3**	**-3.5**
	comp=E,7.5nm,0.5s						
HCY	**Herceg Novi**	**5.46**	**106**	*e*Pn	**Pn**	**19 44 17.2**	**+1.7**
GRFO	**Grafenberg**	**5.49**	**359**		**Pn**	**19 44 14.7**	**-1.2**
MORH	**Mrgy, Hungar**	**5.49**	**66**	*e*Pn	**Pn**	**19 44 13.9**	**-2.0**
GRA1	**Grafenberg Arr**	**5.49**	**359**	Pn	**Pn**	**19 44 15.1**	**-0.9**
UPM	**Unac-Piva**	**5.52**	**98**	*e*Pn	**Pn**	**19 44 17.0**	**+0.4**
ROTZ	**Rotzenmuhle**	**5.59**	**5**	*e*Pn	**Pn**	**19 44 16.1**	**-1.2**
	SNR=8.0						
ROTZ				*e*Sn	**Sn**	**19 45 17.9**	**-3.6**
	SNR=2.5						
ROTZ	**Rotzenmuhle**	**5.59**	**5**	*e*Pn	**Pn**	**19 44 16.1**	**-1.2**
	SNR=8.0						
ROTZ				*e*Sn	**Sn**	**19 45 17.9**	**-3.6**
	SNR=2.5						
ZST	**Bratislava**	**5.61**	**43**	*e*PN	**Pn**	**19 44 16.4**	**-1.2**
ZST				*e*SN	**Sn**	**19 45 18.1**	**-4.0**
PBCC	**Pribram**	**5.76**	**17**	*e*PN	**Pn**	**19 44 19.0**	**-0.6**
BBLS	**Lazići**	**5.77**	**91**	*e*Pn	**Pn**	**19 44 19.9**	**0.0**
MANZ	**Manzenberg**	**5.80**	**4**	*e*Pn	**Pn**	**19 44 19.0**	**-1.3**
	SNR=8.6						
MANZ	**Manzenberg**	**5.80**	**4**	*e*Pn	**Pn**	**19 44 19.0**	**-1.3**
	SNR=8.6						
TREC	**Trest**	**5.81**	**27**	*e*PN	**Pn**	**19 44 18.5**	**-1.8**
MODS	**Modra-Piesok**	**5.82**	**42**	*e*PN	**Pn**	**19 44 18.5**	**-2.0**
MODS				*e*SN	**Sn**	**19 45 22.2**	**-5.0**
SMF	**Signal de Mont**	**5.86**	**297**	*e*Pn	**Pn**	**19 44 21.7**	**+0.7**
SMF	**Signal de Mont**	**5.86**	**297**	*e*P	**Pn**	**19 44 25.0**	**+4.0**
SMF				*e*Sn	**Sn**	**19 45 24.6**	**-3.6**
	comp=E,45nm,0.5s						
PAGF	**Fort de Pagny**	**5.87**	**320**	*e*Pn	**Pn**	**19 44 21.4**	**+0.3**
	baz=132						
PAGF	**Fort de Pagny**	**5.87**	**320**	*e*P	**Pn**	**19 44 25.7**	**+4.6**
	baz=135						
PAGF				*e*Sn	**Sn**	**19 45 23.8**	**-4.5**
	comp=E,28nm,0.5s,baz=150						
KRUC	**Moravsky**	**5.95**	**33**	*e*PN	**Pn**	**19 44 20.1**	**-2.1**
KRUC				*e*SN	**Sn**	**19 45 27.4**	**-2.9**
SFTF	**Sexfontaines**	**5.96**	**314**	*e*Pn	**Pn**	**19 44 22.2**	**-0.2**
	baz=128						
SFTF	**Sexfontaines**	**5.96**	**314**	*e*P	**Pn**	**19 44 26.7**	**+4.3**
	baz=132						
SFTF				*e*Sn	**Sn**	**19 45 27.7**	**-3.0**
	comp=E,33nm,0.5s						
PDG	**Podgorica**	**5.99**	**105**	*e*Pn	**Pn**	**19 44 24.1**	**+1.3**
PDG	**Podgorica**	**5.99**	**105**		**Pn**	**19 44 20.7**	**-2.1**
SMOL	**Smolenice**	**5.99**	**42**	*e*PN	**Pn**	**19 44 21.6**	**-1.2**
SMOL				*e*SN	**Sn**	**19 45 28.0**	**-3.4**
DRME	**Dracevica, Mon**	**6.03**	**107**	*e*Pn	**Pn**	**19 44 24.0**	**+0.7**
FRGS	**Fruska Gora**	**6.06**	**78**	*e*Pn	**Pn**	**19 44 19.4**	**-4.4**
NKC	**Novy Kostel**	**6.07**	**6**	*e*PN	**Pn**	**19 44 22.8**	**-1.1**
NKC				*e*SN	**Sn**	**19 45 30.5**	**-2.9**
LOR	**Lormes**	**6.11**	**303**	*e*Pn	**Pn**	**19 44 24.6**	**+0.2**
	baz=122						
LOR	**Lormes**	**6.11**	**303**	*e*P	**Pn**	**19 44 28.6**	**+4.2**
LOR				*e*Sn	**Sn**	**19 45 30.3**	**-4.0**
	comp=E,66nm,0.4s,baz=115						
LOR	**Lormes**	**6.11**	**303**	Pn	**Pn**	**19 44 24.9**	**+0.5**
LOR	**Lormes**	**6.11**	**303**	Sn	**Sn**	**19 45 32.3**	**-2.0**
WERN	**Wernitzgruen**	**6.12**	**6**	*e*Pn	**Pn**	**19 44 23.3**	**-1.3**
	SNR=12						
WERN	**Wernitzgruen**	**6.12**	**6**	*e*Pn	**Pn**	**19 44 23.3**	**-1.3**
	SNR=12						
MEZF	**Maizieres J'vi**	**6.15**	**317**	*e*Pn	**Pn**	**19 44 25.7**	**+0.7**
	baz=128						
MEZF	**Maizieres J'vi**	**6.15**	**317**	*e*P	**Pn**	**19 44 29.4**	**+4.4**
	baz=136						
MEZF				*e*Sn	**Sn**	**19 45 30.8**	**-4.5**
	comp=E,14nm,0.3s						
PRU	**Pruhonice**	**6.17**	**19**	*e*PN	**Pn**	**19 44 23.9**	**-1.3**
PRU				*e*SN	**Sn**	**19 45 30.9**	**-4.8**
DIVS	**Divibare**	**6.17**	**88**	*e*Pn	**Pn**	**19 44 24.6**	**-0.8**
DIVS	**Divibare**	**6.17**	**88**	Pn	**Pn**	**19 44 24.1**	**-1.3**
SAVF	**Savonnieres en**	**6.19**	**318**	*e*Pn	**Pn**	**19 44 25.9**	**+0.4**
	baz=143						
SAVF	**Savonnieres en**	**6.19**	**318**	*e*P	**Pn**	**19 44 29.9**	**+4.4**
	baz=146						
SAVF				*e*Sn	**Sn**	**19 45 31.8**	**-4.5**
	comp=E,33nm,0.5s,baz=132						
GUNZ	**Gunzen**	**6.19**	**5**	*e*Pn	**Pn**	**19 44 24.3**	**-1.3**
	SNR=10						
GUNZ	**Gunzen**	**6.19**	**5**	*e*Pn	**Pn**	**19 44 24.3**	**-1.3**
	SNR=10						
PRA	**Prague**	**6.22**	**18**	*e*PN	**Pn**	**19 44 24.9**	**-1.0**
VRAC	**Vranov**	**6.22**	**33**	LR	LR	19 47 19.1	
	comp=E,377nm,21.2s,baz=294,slow=44						
VRAC	**Vranov**	**6.22**	**33**	*e*PN	**Pn**	**19 44 23.7**	**-2.3**
AVF	**Avril sur Loir**	**6.23**	**297**	*e*Pn	**Pn**	**19 44 25.7**	**-0.3**
AVF	**Avril sur Loir**	**6.23**	**297**	*e*P	**Pn**	**19 44 30.2**	**+4.2**
AVF				*e*Sn	**Sn**	**19 45 32.3**	**-4.9**
	comp=E,8.6nm,0.5s						
SSF	**Saint Saulge**	**6.24**	**300**	*e*Pn	**Pn**	**19 44 26.1**	**-0.1**
SSF	**Saint Saulge**	**6.24**	**300**	*e*P	**Pn**	**19 44 30.7**	**+4.5**
SSF				*e*Sn	**Sn**	**19 45 31.8**	**-5.6**
	comp=E,14nm,0.4s						
TANN	**Tannenbergstha**	**6.25**	**6**	*e*Pn	**Pn**	**19 44 25.2**	**-1.2**
	SNR=11						
TANN	**Tannenbergstha**	**6.25**	**6**	*e*Pn	**Pn**	**19 44 25.2**	**-1.2**
	SNR=11						
JAVC	**Velka Javorina**	**6.35**	**41**	*e*PN	**Pn**	**19 44 27.1**	**-0.6**
TIP	**Timpagrande**	**6.42**	**140**	Pn	**Pn**	**19 44 29.1**	**+0.3**
BGF	**Bois d'Agland**	**6.47**	**294**	*e*Pn	**Pn**	**19 44 28.6**	**-0.9**
BGF	**Bois d'Agland**	**6.47**	**294**	*e*P	**Pn**	**19 44 33.1**	**+3.6**
BGF				*e*Sn	**Sn**	**19 45 39.8**	**-3.5**
	comp=E,30nm,0.4s						
WLF	**Walferdange**	**6.54**	**328**	*d*Pn	**Pn**	**19 44 33.6**	**+3.3**
WLF	**Walferdange**	**6.54**	**328**	Pn	**Pn**	**19 44 31.9**	**+1.5**
SCTE	**Santa Cesarea**	**6.67**	**126**	Pn	**Pn**	**19 44 32.6**	**+0.5**
PVCC	**Panska Ves**	**6.68**	**18**	*e*PN	**Pn**	**19 44 30.7**	**-1.5**
PVCC				*e*SN	**Sn**	**19 45 43.2**	**-5.1**
VYHS	**Vyhne**	**6.69**	**48**	*e*PN	**Pn**	**19 44 31.0**	**-1.4**
VYHS				*e*SN	**Sn**	**19 45 42.7**	**-5.9**
MTLF	**Montolieu**	**6.71**	**266**	*e*Pn	**Pn**	**19 44 32.0**	**-0.7**
MTLF	**Montolieu**	**6.71**	**266**	*e*P	**Pn**	**19 44 36.4**	**+3.7**
MTLF				*e*Sn	**Sn**	**19 45 44.7**	**-4.5**
	comp=E,7.9nm,0.4s						
CAF	**Calviac**	**6.72**	**279**	*e*Pn	**Pn**	**19 44 32.8**	**0.0**
CAF	**Calviac**	**6.72**	**279**	*e*P	**Pn**	**19 44 36.5**	**+3.7**
TCF	**Toulx Ste Croi**	**6.82**	**291**	*e*Pn	**Pn**	**19 44 35.0**	**+0.8**
TCF	**Toulx Ste Croi**	**6.82**	**291**	*e*P	**Pn**	**19 44 38.9**	**+4.7**
TCF				*e*Sn	**Sn**	**19 45 48.3**	**-3.6**
	comp=E,19nm,0.6s						
TIR	**Tirane**	**6.84**	**112**	⇑P	**Pn**	**19 44 35.0**	**+0.5**
TIR	**Tirane**	**6.84**	**112**	Pn	**Pn**	**19 44 34.8**	**+0.3**
HYF	**Humbligny**	**6.86**	**300**	*e*Pn	**Pn**	**19 44 35.1**	**+0.4**
HYF				*e*Sn	**Sn**	**19 45 48.9**	**-3.9**
BRG	**Berggiesshubel**	**6.89**	**13**	Pn	**Pn**	**19 44 34.7**	**-0.4**
BRG				Amp		19 44 35.6	
	comp=Z,10nm,0.7s						
BRG				*e*x	x	19 45 04.8	
BRG				*e*x	x	19 45 48.1	
BRG				*e*x	x	19 46 21.4	
BRG				*e*x	x	19 46 34.3	
BRG				Amp		19 46 48.1	
	comp=Z,20nm,1.0s						
BRG	**Berggiesshubel**	**6.89**	**13**	*e*Pn	**Pn**	**19 44 34.1**	**-1.0**
	SNR=3.4						
BRG	**Berggiesshubel**	**6.89**	**13**	*e*Pn	**Pn**	**19 44 34.1**	**-1.0**
	SNR=3.4						
KRLC	**Kraliky**	**6.92**	**30**	*e*PN	**Pn**	**19 44 33.7**	**-1.9**
KRLC				*e*SN	**Sn**	**19 45 47.9**	**-6.4**
PSZ	**Piszkesteto**	**6.97**	**55**	⇑P	**Pn**	**19 44 36.2**	**-0.1**
PSZ	**Piszkesteto**	**6.97**	**55**	Pn	**Pn**	**19 44 35.0**	**-1.3**
MORC	**Moravsky Berou**	**6.97**	**35**	⇑P	**Pn**	**19 44 37.5**	**+1.2**
MORC	**Moravsky Berou**	**6.97**	**35**	*e*PN	**Pn**	**19 44 34.4**	**-1.9**
MORC	**Moravsky Berou**	**6.97**	**35**	Pn	**Pn**	**19 44 35.2**	**-1.1**
DPC	**Dobruska-Polom**	**7.00**	**27**	*e*PN	**Pn**	**19 44 34.2**	**-2.4**
DPC				*e*SN	**Sn**	**19 45 50.3**	**-5.8**
UPC	**Upice**	**7.04**	**25**	*e*PN	**Pn**	**19 44 35.8**	**-1.3**
UPC				*e*SN	**Sn**	**19 45 52.0**	**-5.1**
CHVC	**Chvalec**	**7.12**	**25**	*e*PN	**Pn**	**19 44 36.0**	**-2.3**
CHVC				*e*SN	**Sn**	**19 45 54.0**	**-5.2**
RJF	**Les Rejaudoux**	**7.13**	**282**	*e*Pn	**Pn**	**19 44 40.7**	**+2.2**
RJF	**Les Rejaudoux**	**7.13**	**282**	*e*P	**Pn**	**19 44 43.1**	**+4.6**
OSTC	**Ostas**	**7.14**	**25**	*e*PN	**Pn**	**19 44 37.2**	**-1.4**
CLL	**Collm**	**7.19**	**8**	*e*Pn	**Pn**	**19 44 38.0**	**-1.2**
CLL				*e*(Sn)	**Sn**	**19 45 57.0**	**-3.8**
CLL				*e*		19 46 11.0	
CLL				*e*Sg	**Sg**	**19 46 41.0**	**-3.7**
	comp=Z,58nm,1.0s						
CLL	**Collm**	**7.19**	**8**	Pn	**Pn**	**19 44 38.1**	**-1.1**
CLL	**Collm**	**7.19**	**8**	*e*Pn	**Pn**	**19 44 38.1**	**-1.1**
	SNR=7.0						
CLL	**Collm**	**7.19**	**8**	*e*Pn	**Pn**	**19 44 38.1**	**-1.1**
	SNR=7.0						
RAFF	**Raffo Rosso**	**7.33**	**161**	Pn	**Pn**	**19 44 38.1**	**-3.0**
MEM	**Membach**	**7.38**	**332**	*d*Pn	**Pn**	**19 44 43.3**	**+1.4**
MEM				*d*pPn	**pPn**	**19 44 45.5**	**+1.0**
MEM				*d*sPn	**sPn**	**19 44 46.3**	**+0.2**
MEM				*d*PnPn	**PnPn**	**19 44 50.3**	**+0.9**
MEM				*d*Pb	**Pb**	**19 45 01.5**	**-0.8**
BZS	**Buzias**	**7.38**	**75**	⇑P	**Pn**	**19 44 42.2**	**+0.4**
MDVR	**Moldovita**	**7.39**	**82**	⇓P	**Pn**	**19 44 41.6**	**-0.5**
GIVF	**Givet**	**7.41**	**325**	*e*Pn	**Pn**	**19 44 43.1**	**+0.8**
GIVF	**Givet**	**7.41**	**325**	*e*P	Pn	19 44 47.2	+4.9
CLF	**Chambon-Foret**	**7.42**	**304**	Pn	**Pn**	**19 44 43.0**	**+0.7**
LANS	**Liptovska Anna**	**7.42**	**45**	*e*PN	**Pn**	**19 44 41.9**	**-0.6**
LANS				*e*SN	**Sn**	**19 46 00.5**	**-6.2**
BCLA	**Clavier**	**7.47**	**328**	*d*Pn	**Pn**	**19 44 44.7**	**+1.6**
BCLA				*d*pPn	**pPn**	**19 44 47.3**	**+1.5**
BAIF	**Baives**	**7.64**	**323**	*e*Pn	**Pn**	**19 44 46.9**	**+1.5**
BAIF	**Baives**	**7.64**	**323**	*e*P	Pn	19 44 50.5	+5.1
LFF	**La Frestale**	**7.66**	**279**	*e*Pn	**Pn**	**19 44 47.2**	**+1.5**
LFF	**La Frestale**	**7.66**	**279**	*e*P	**Pn**	**19 44 50.3**	**+4.6**
HERR	**Herculane**	**7.89**	**81**	⇑P	**Pn**	**19 44 49.2**	**+0.3**
FNA	**Florina**	**8.12**	**111**	Pn	**Pn**	**19 44 49.8**	**-2.3**
EPF	**Esparros**	**8.12**	**266**	*e*Pn	**Pn**	**19 44 52.0**	**-0.1**
EPF	**Esparros**	**8.12**	**266**	*e*P	**Pn**	**19 44 56.6**	**+4.5**
GZR	**Gura Zlata**	**8.17**	**78**	⇑P	**Pn**	**19 44 53.1**	**+0.4**
DRGR		**8.35**	**68**	⇓P	**Pn**	**19 44 54.7**	**-0.5**
MFF	**Saint Martin d**	**8.48**	**290**	*e*Pn	**Pn**	**19 44 56.4**	**-0.5**
MFF	**Saint Martin d**	**8.48**	**290**	*e*P	**Pn**	**19 45 01.1**	**+4.2**
KEST	**Kesra**	**8.61**	**191**	Pn	**Pn**	**19 45 02.0**	**+3.2**
	comp=Z,0.7nm,0.3s,baz=261,slow=2.8,SNR=14						
KEST				Sn	**Sn**	**19 46 42.0**	**+5.9**
	comp=Z,0.1nm,0.3s,baz=180,slow=19,SNR=1.1						
KEST	**Kesra**	**8.61**	**191**	Pn	**Pn**	**19 45 00.6**	**+1.8**
VTS	**Vitosha**	**8.75**	**96**	⇓P	**Pn**	**19 45 01.1**	**+0.3**
VTS	**Vitosha**	**8.75**	**96**	Pn	**Pn**	**19 44 59.5**	**-1.4**
ETSF	**Etsaut**	**8.79**	**266**	*e*Pn	**Pn**	**19 45 03.1**	**+1.8**
ETSF	**Etsaut**	**8.79**	**266**	*e*P	**Pn**	**19 45 05.9**	**+4.6**
LDF	**La Druitiere**	**9.10**	**303**	*e*Pn	**Pn**	**19 45 06.0**	**+0.6**
LDF	**La Druitiere**	**9.10**	**303**	*e*P	Pn	19 45 10.7	+5.3
FLN	**La Foliniere**	**9.38**	**303**	*e*Pn	**Pn**	**19 45 10.0**	**+0.7**
	baz=122						
FLN	**La Foliniere**	**9.38**	**303**	*e*P	Pn	19 45 14.3	+5.0
	baz=124						
GRR	**Gorron**	**9.47**	**301**	*e*Pn	**Pn**	**19 45 09.6**	**-0.8**
GRR	**Gorron**	**9.47**	**301**	*e*P	Pn	19 45 15.6	+5.2
AGG	**Agios Georgios**	**9.68**	**119**	Pn	**Pn**	**19 45 12.4**	**-1.0**
VOIR		**9.77**	**78**	⇑P	**Pn**	**19 45 14.8**	**0.0**

BUR08	Bucovina Ar. S	10.20	65	Pn	Pn	19 45 18.2	-2.5
BURAR	Bucovina Array	10.21	66	Pn	Pn	19 45 18.5	-2.2
ITM	Ithomi	10.62	128	Pn	Pn	19 45 25.1	-1.3
ALN	Alexandroupoli	11.29	102	Pn	Pn	19 45 32.8	-2.6
ESDC	Sonseca Array	12.31	254	Pn	Pn	19 45 51.3	+1.8
	comp=Z,0.1nm,0.3s,baz=62,slow=14,SNR=5.3						
PAB	San Pablo	12.63	254	Pn	Pn	19 45 54.2	+0.3
AKASG	Malin Array Be	13.68	55	Pn	Pn	19 46 06.0	-1.9
	comp=Z,0.2nm,0.3s,baz=246,slow=11,SNR=1.8						
AKASG	Malin Array Be	13.68	55	Pn	Pn	19 46 05.0	-3.0
EKA	Eskdalemuir Ar	14.55	325	Pn	Pn	19 46 21.2	+1.4
	baz=136,slow=14,SNR=3.5						
HFS	Hagfors	16.01	4	Pn	Pn	19 46 40.7	+1.5
	comp=Z,0.3nm,0.3s,baz=182,slow=14,SNR=6.8						
NBO00	NORSAR Array S	16.86	359	P	P	19 46 51.4	-0.7
NB2	NORSAR Subarra	16.86	360	P	P	19 46 52.9	+0.7
	comp=Z,1.5nm,0.6s,baz=181,slow=12						
NOA	NORSAR Array B	16.86	360	Pn	P	19 46 52.5	+0.3
	comp=Z,0.0nm,0.3s,baz=181,slow=8.9,SNR=6.7						
NB201	NORSAR Array S	16.87	360	P	P	19 46 52.9	+0.6
NC405	NORSAR Array S	16.94	1	P	P	19 46 53.3	+0.4
NC405				IAmb	IAmb	19 47 28.1	
	comp=Z,61nm,1.4s						
CSS	Mathiatis	19.20	111	P	P	19 47 17.7	-0.4
FINES	FINESS Array B	19.32	22	P	P	19 47 18.9	-0.3
	comp=Z,0.2nm,0.3s,baz=211,slow=6.7,SNR=6.8						
FINES	FINESS Array B	19.32	22	P	P	19 47 19.1	0.0
KIV	Kislovodsk	22.40	80	P	P	19 47 51.5	-1.2
KIV				IAmb	IAmb	19 47 58.9	
	comp=Z,11nm,1.1s						
KBZ	Khabaz	22.60	80	P	P	19 47 55.5	+0.8
	comp=Z,3.0nm,0.9s,baz=255,slow=20,SNR=1.7						
KBZ				LR	LR	19 57 40.0	
	comp=Z,143nm,18.4s,baz=323,slow=40						
KIRV	Kirov	27.29	45	LR	LR	20 00 35.7	
	comp=Z,217nm,18.3s,baz=299,slow=39						
ARU	Arti	31.85	51	P	P	19 49 17.9	-1.0
	comp=Z,0.5nm,0.5s,baz=228,slow=16,SNR=3.2						
ARU	Arti	31.85	51	IAmb	IAmb	19 49 30.4	
	comp=Z,5.1nm,1.1s						
ABKAR	Akbulak array	33.18	64	P	P	19 49 29.2	-1.5
ABKAR	Akbulak array	33.18	64	P	P	19 49 28.8	-1.9
ABKAR				IAmb	IAmb	19 49 34.2	
	comp=Z,5.2nm,1.4s						
DBIC	Dimbokro	40.01	206	P	P	19 50 29.4	+0.3
	comp=Z,18nm,1.4s,baz=17,slow=11,SNR=1.4						
DBIC	Dimbokro	40.01	206	P	P	19 50 29.0	-0.1
KK31	Karatay Array	41.96	70	P	P	19 50 45.4	+0.3
KKAR	Karatay Array	41.96	70	P	P	19 50 45.1	0.0
KKAR	Karatay Array	41.96	70	P	P	19 50 44.4	-0.7
KKAR				IAmb	IAmb	19 50 46.2	
	comp=Z,1.5nm,0.8s						
KURK	Kurchatov	44.48	57	P	P	19 51 05.2	0.0
KURK				IAmb	IAmb	19 51 08.7	
	comp=Z,8.4nm,1.6s						
MK31	Makanchi Array	48.19	61	P	P	19 51 33.8	-0.7
MKAR	Makanchi Array	48.19	61	P	P	19 51 34.5	+0.1
	comp=Z,1.1nm,0.7s,baz=285,slow=6.8,SNR=12						
SONM	Songino Array	61.88	50	P	P	19 53 15.7	+2.1
	comp=Z,0.4nm,0.6s,baz=283,slow=8.7,SNR=5.0						
YKA	Yellowknife Ar	65.23	336	P	P	19 53 37.8	+2.6
	comp=Z,0.5nm,0.6s,baz=46,slow=6.5,SNR=10						
IMAR	Indian Mountai	69.55	354	P	P	19 54 03.7	+1.1
ILAR	Eielson Array	70.04	350	P	P	19 54 06.2	+0.5
	comp=Z,0.7nm,0.8s,baz=9.9,slow=6.0,SNR=7.3						
ILAR	Eielson Array	70.04	350	P	P	19 54 07.2	+1.6
BPAW	Bear Paw Mtn.	71.15	352	P	P	19 54 12.9	+0.5
BPAW				IAmb	IAmb	19 54 26.2	
	comp=Z,5.8nm,1.6s						
S44A	Carbondale	71.49	305	P	P	19 54 14.1	-0.8
ECSD	EROS Data Cent	71.50	313	P	P	19 54 14.5	-0.4
RND	Reindeer	71.59	351	P	P	19 54 14.7	-0.5
KTH	Kantishna Hill	71.67	352	P	P	19 54 15.6	-0.1
TTA	Tatalina	72.74	354	P	P	19 54 23.4	+1.3
TTA				IAmb	IAmb	19 54 29.5	
	comp=Z,6.5nm,1.3s						
SUA	Susitna One	73.70	351	P	P	19 54 28.7	+1.0
CMAR	Chiang Mai Arr	75.64	78	P	P	19 54 40.0	+0.5
	comp=Z,0.4nm,0.7s,baz=304,slow=7.9,SNR=5.1						
TXAR	Lajitas Array	85.84	308	P	P	19 55 35.1	+0.9
	comp=Z,0.4nm,0.8s,baz=52,slow=3.9,SNR=4.2						

NEIC **17** *19:48:56.7±1.4, 10°.6S±0°.1×166°.0E±0°.2, h153^{km}±7^{km}, mb4.6/31, Error ellipse: s-maj=21.9km s-min=15.7km az=92.0*

IDC **17** *19:48:57.7±5.3, 10°.59S×166°.03E, h161^{km}±49^{km}, mb3.6/11, mb1 3.8/12, mb1mx3.6/36, mbtmp4.1/12, Error ellipse: s-maj=26.9km s-min=21.0km az=154.0*

ISC 17 19:48:56.8±0.6**, 10°.63S**±0°.07×**166°.1E**±0°.1**, h155**^{km}**, n53,** σ**0^{s}78**/52**, mb4.5**/25**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	4.91	167		Pn	19 50 09.3	+0.1
SANVU				Sn	Sn	19 51 05.6	-0.1
DZM	Mont Dzumac	11.38	178	P	Pn	19 51 37.3	+2.3
	3.1nm,0.3s,baz=27,slow=11,SNR=21						
DZM				S	Sn	19 53 39.3	-1.8
	0.2nm,0.3s,baz=143,slow=20,SNR=2.7						
MSVF	Nonsavu	13.57	123		Pn	19 51 51.3	-12
EIDS	Eidsvold	20.43	222	P	P	19 53 23.1	+1.0
EIDS				IAmb	IAmb	19 53 33.3	
	comp=Z,62nm,1.8s						
MXZ	Matakaoa Point	28.98	160	P	P	19 54 41.8	-0.1
URZ	Urewera	29.23	162	P	P	19 54 43.4	-0.7
BKZ	Black Stump Fm	29.89	164	P	P	19 54 49.2	-0.8
BKZ				IAmb	IAmb	19 54 51.6	
	comp=Z,14nm,1.2s						
STKA	Stephens Creek	30.97	223	P	P	19 55 00.5	+0.9
	comp=Z,3.3nm,1.1s,baz=52,slow=13,SNR=3.6						
BFZ	Birch Farm	31.25	165	P	P	19 55 02.2	+0.3
BFZ				IAmb	IAmb	19 55 09.4	
	comp=Z,14nm,1.0s						
WB0	Warramunga Arr	31.86	250	P	P	19 55 07.6	+0.1
WB2	Warramunga Arr	31.93	249	P	P	19 55 08.0	-0.1
WB2				IAmb	IAmb	19 55 10.6	
	comp=Z,7.8nm,1.1s						
WRA	Warramunga Arr	31.94	249	P	P	19 55 07.7	-0.5
	comp=Z,0.7nm,0.5s,baz=82,slow=8.8,SNR=8.0						
WRA				PcP	PcP	19 57 55.1	+0.1
	comp=Z,0.9nm,0.7s,baz=77,slow=3.1,SNR=7.9						
WRA	Warramunga Arr	31.94	249	P	P	19 55 07.7	-0.5
RPZ	Rata Peaks	33.24	173	P	P	19 55 19.3	+0.1
	comp=Z,6.4nm,0.7s,baz=92,slow=1.8,SNR=4.5						
RPZ	Rata Peaks	33.24	173	IAmb	IAmb	19 55 57.0	
	comp=Z,19nm,1.4s						
ASAR	Alice Springs	33.28	243	P	P	19 55 18.6	-1.3
	comp=Z,0.5nm,0.9s,baz=68,slow=10,SNR=4.6						
ASAR				PcP	PcP	19 57 58.5	-0.1
	comp=Z,0.9nm,0.6s,baz=84,slow=2.5,SNR=12						
MQZ	McQueen's Vall	33.44	171	P	P	19 55 21.1	+0.2
MQZ				IAmb	IAmb	19 55 31.9	
	comp=Z,25nm,1.3s						
PSA00	Pilbara Seismi	45.59	250	P	P	19 57 01.3	-0.5
PSA00				IAmb	IAmb	19 57 10.9	
	comp=Z,45nm,1.8s						
NWAO	Narrogin (SRO)	49.97	236	P	P	19 57 35.3	0.0
NWAO	Narrogin (SRO)	49.97	236	P	P	19 57 35.2	-0.1
NWAO				IAmb	IAmb	19 57 36.3	
	comp=Z,23nm,1.2s						
JGF	Kuroka	53.40	331	P	P	19 58 00.8	+0.2
JMN	Monobe	53.71	327	P	P	19 58 03.6	+0.6
UGM	Wanagama	54.85	268	P	P	19 58 10.1	-1.5
IPM	Ipoh	66.48	280	P	P	19 59 29.6	-0.8
IPM				IAmb	IAmb	19 59 52.1	
	comp=Z,9.1nm,1.2s						
CMAR	Chiang Mai Arr	72.26	293	P	P	20 00 06.8	+1.1
	comp=Z,1.4nm,0.9s,baz=115,slow=4.2,SNR=7.6						
SONM	Songino Array	78.53	324	P	P	20 00 40.7	-0.4
	comp=Z,0.7nm,0.5s,baz=142,slow=5.2,SNR=8.9						
SONM	Songino Array	78.53	324	IAmb	IAmb	20 00 45.6	
	comp=Z,2.2nm,1.5s						
TTA	Tatalina	78.93	17	P	P	20 00 42.9	0.0
GTA	Gaotai	79.02	314	*e*P	P	20 00 45.1	+1.1
GTA				pP	PcP	20 00 48.6	-3.3
GTA				sP	pP	20 00 51.3	-30
GTA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
QSPA	South Pole Qui	79.37	180	P	P	20 00 45.3	-0.1
SUA	Susitna One	79.42	20	P	P	20 00 45.5	-0.1
SUA				IAmb	IAmb	20 01 00.8	
	comp=Z,15nm,1.5s						
N25K	Chitina, Valde	81.64	21	P	P	20 00 58.0	+0.6
VRDI	Verde Repeater	81.81	22	P	P	20 00 59.1	+0.7
VRDI				IAmb	IAmb	20 01 18.0	
	comp=Z,34nm,1.7s						
GLB	Gilahina Butte	81.82	22	P	P	20 00 59.0	+0.6
GLB				IAmb	IAmb	20 01 18.1	
	comp=Z,27nm,1.6s						
IMAR	Indian Mountai	81.94	15	P	P	20 00 59.5	+0.8
BALM	Baldy	82.11	23	P	P	20 01 00.9	+1.0
BALM				IAmb	IAmb	20 01 05.0	
	comp=Z,10nm,1.1s						
WRH	Wood River Hil	82.43	18	P	P	20 01 01.9	+0.5
WRH				IAmb	IAmb	20 01 32.3	
	comp=Z,13nm,1.6s						
MDM	Murphy Dome	82.73	18	P	P	20 01 03.5	+0.5
HDA	Harding Lake	82.74	19	P	P	20 01 03.5	+0.5
HDA				IAmb	IAmb	20 01 04.9	
	comp=Z,5.8nm,0.7s						
IL31		83.01	18	P	P	20 01 04.1	-0.2
ILAR	Eielson Array	83.01	18	P	P	20 01 04.5	+0.2
	comp=Z,1.2nm,0.6s,baz=233,slow=4.9,SNR=18						
BCAR	Beaver Creek A	83.59	21	P	P	20 01 08.5	+1.1
NVAR	Mina Array Bea	85.50	50	P	P	20 01 18.5	+0.7
	comp=Z,1.0nm,0.8s,baz=239,slow=7.3,SNR=7.3						
NVAR	Mina Array Bea	85.50	50	P	P	20 01 17.0	-0.8
WMQ	Urumqi	89.04	315	*e*P	P	20 01 35.4	+0.9
ZALV	Zalesovo Beam	93.42	324	P	P	20 01 53.7	-0.7
	comp=Z,0.4nm,0.5s,baz=116,slow=6.8,SNR=3.9						
MK31	Makanchi Array	93.45	317	P	P	20 01 54.5	-0.3
MKAR	Makanchi Array	93.45	317	P	P	20 01 54.5	-0.4
	comp=Z,1.4nm,0.6s,baz=92,slow=6.1,SNR=15						
YKA	Yellowknife Ar	94.45	27	P	P	20 01 57.8	-1.2
	comp=Z,0.4nm,0.7s,baz=254,slow=3.9,SNR=5.6						
VNA3	Neumayer Olymp	98.27	181	P	P	20 02 04.6	-12
VNA2	Neumayer--Watz	98.51	182	P	P	20 02 07.4	-10
	baz=316,slow=13						
ARCES	ARCESS Array B	116.02	346	PKP	PKPdf	20 07 20.2	-0.6
	comp=Z,3.3nm,0.8s,baz=67,slow=2.0,SNR=16						
FINES	FINESS Array B	121.51	339	PKP	PKiKP	20 07 32.2	+0.6
	comp=Z,2.5nm,0.9s,baz=101,slow=4.4,SNR=1.6						

NEIC **17** *19:55:05.8±1.3, 1°.78S±0°.08×131°.57E±0°.09, h10^{km}±5^{km}, mb4.4/15, Error ellipse: s-maj=17.0km s-min=5.8km az=50.0*

IDC **17** *19:55:06.4±1.4, 1°.91S×130°.98E, h0^{km}, mb3.7/2, mb1 3.9/4, mb1mx3.6/30, mbtmp3.7/4, ML3.8/2, Error ellipse: s-maj=50.3km s-min=11.5km az=102.0*

ISC 17 19:55:06.4±0.7**, 1°.79S**±0°.07×**131°.6E**±0°.1**, h10**^{km}**, n27,** σ**1^{s}11**/27**, mb4.3**/8**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	0.96	342	Pg	Pn	19 55 26.6	+0.6
	360nm,0.3s,baz=131,slow=5.1,SNR=754						
SIJI				Lg	Lg	19 55 42.1	
	156nm,0.3s,baz=270,slow=22,SNR=20						
FAKI	Fak Fak	1.31	149	Pn	Pn	19 55 29.9	-1.0
TNTI	Ternate	4.91	301	Pn	Pn	19 56 19.5	-0.9
SAUI	Saumlaki	6.16	182	Pn	Pn	19 56 37.5	-0.1
SOEI	Soe	10.74	222	Pn	Pn	19 57 39.5	-1.1
MMRI	Maumere	11.52	233	Pn	Pn	19 57 50.4	-0.7
FITZ	Fitzroy Crossi	17.23	199	Pn	Pn	19 59 06.3	-1.0
	0.2nm,0.3s,baz=16,slow=8.7,SNR=8.5						
FITZ	Fitzroy Crossi	17.23	199		Pn	19 59 06.8	-0.5
WB0	Warramunga Arr	18.08	171	P	Pn	19 59 17.2	-0.7
WRA	Warramunga Arr	18.25	172	P	Pn	19 59 19.6	-0.4
	0.3nm,0.3s,baz=352,slow=11,SNR=13						
WB2	Warramunga Arr	18.25	172	P	Pn	19 59 19.0	-1.0
WB2				IAmb	IAmb	20 00 00.7	
	comp=Z,23nm,1.6s						
WR0	Warramunga Arr	18.30	171	P	Pn	19 59 20.1	-0.4
WR0				IAmb	IAmb	19 59 42.6	
	comp=Z,16nm,1.4s						
AS31	Alice Springs	21.87	174	P	P	20 00 00.1	+0.5
ASAR	Alice Springs	21.87	174	P	P	20 00 00.6	+1.0
	comp=Z,2.4nm,0.6s,baz=354,slow=10.0,SNR=25						
ASAR	Alice Springs	21.87	174	P	P	19 59 59.2	-0.4
PSA00	Pilbara Seismi	22.74	209	P	P	20 00 12.5	+3.6
PSA00				IAmb	IAmb	20 00 40.9	
	comp=Z,27nm,1.4s						
FORT	Forrest	29.03	186	P	P	20 01 08.0	+1.3
EIDS	Eidsvold	30.06	143	P	P	20 01 17.6	+1.6
BBOO	Buckleboo	31.15	173	P	P	20 01 25.6	0.0
BBOO				IAmb	IAmb	20 01 44.6	
	comp=Z,27nm,1.6s						
USA0B	Ussuriysk Arra	45.78	0	P	P	20 03 27.3	-1.0
USA0B				IAmb	IAmb	20 03 48.8	
	comp=Z,8.2nm,0.8s						
USRK	Ussuriysk Ar.	45.78	0	P	P	20 03 27.2	-1.1
MK31	Makanchi Array	64.82	325	P	P	20 05 44.5	-1.1
MK31				IAmb	IAmb	20 05 53.5	
	comp=Z,2.0nm,1.4s						
MKAR	Makanchi Array	64.82	325	P	P	20 05 45.7	+0.1
	comp=Z,0.5nm,0.8s,baz=118,slow=7.1,SNR=4.8						
MKAR	Makanchi Array	64.82	325	P	P	20 05 44.7	-0.9
SMY	Shemya	64.95	27	P	P	20 05 46.2	-0.1
MAKZ	Makanchi	65.00	325	P	P	20 05 46.8	0.0
MAKZ				IAmb	IAmb	20 06 01.8	
	comp=Z,1.7nm,1.1s						
KURK	Kurchatov	68.96	327	P	P	20 06 11.5	-0.3
KURK				IAmb	IAmb	20 06 19.4	
	comp=Z,4.7nm,1.3s						

TAP **17** *20:05:35.5, 24°.45N×121°.90E, h18^{km}, ML2.8, B*

JMA **17** *20:05:35.2, 24°.40N×121°.91E, h22^{km}±4^{km}, M2.0*

ISC 17 20:05:35.1±0.8**, 24°.43N**±0°.02×**121°.95E**±0°.02**, h15**^{km}±5^{km}**, n99,** σ**0^{s}57**/158**, 7C-4D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EWUT	Wuta	0.15	277	P	Pg	20 05 39.1	+0.1
	baz=267						
EWUT				S	Sg	20 05 41.7	0.0
	baz=267						
ENA	Nanau	0.19	271	⇓*i*P	Pg	20 05 39.8	+0.2
	baz=260						
ENA				S	Sg	20 05 42.5	0.0
	baz=260						
TWC	Suao	0.20	334	⇑*i*P	Pg	20 05 40.1	+0.3
	baz=346						
TWC				*i* S	Sg	20 05 42.7	-0.3
	baz=346						
NDS	Dongshan	0.29	315	⇑P	Pg	20 05 41.5	+0.1
	baz=317						
NDS				S	Sg	20 05 45.1	-0.4
	baz=317						
ILA	Ilan	0.38	332	⇑*i*P	Pg	20 05 43.3	+0.4
	baz=333						
ILA				*i* S	Sg	20 05 48.4	+0.2
	baz=333						
TWE	Neicheng	0.39	319	⇑*i*P	Pg	20 05 43.0	0.0
	baz=323						
TWE				S	Sg	20 05 47.8	-0.5
	baz=323						
ENTT	Nioudou	0.41	302	*i* P	Pg	20 05 43.4	+0.1
	baz=302						
ENTT				*i* S	Sg	20 05 48.3	-0.6
	baz=302						
NACB	Ninganchiao	0.41	232	⇓P	Pg	20 05 43.1	-0.2
	baz=226						
NACB				S	Sg	20 05 48.8	-0.1
	baz=226						
NDT	Datong Townshi	0.43	294	⇑*i*P	Pg	20 05 43.9	+0.1
	baz=293						
NDT				S	Sg	20 05 49.2	-0.5
	baz=293						
NTC	Toucheng	0.44	346	*e*P	Pg	20 05 44.0	0.0
	baz=351						
NTC				S	Sg	20 05 50.0	+0.1
	baz=351						
TWD	Chiawan	0.47	223	P	Pg	20 05 44.4	0.0
	baz=216						
ETLH	Xiulin Townshi	0.48	243	P	Pg	20 05 44.3	-0.3
	baz=237						
ETLH				*e*S	Sg	20 05 50.6	-0.4
	baz=237						
NNSB	Datong	0.51	270	⇓P	Pg	20 05 45.2	-0.2
	baz=266						
NNSB				S	Sg	20 05 51.4	-0.8
	baz=266						
NNSH	Datong	0.51	270	P	Pg	20 05 45.1	-0.2
	baz=267						
NNSH				S	Sg	20 05 51.5	-0.7
	baz=267						
NNS	Nan Shan	0.52	272	⇓*i*P	Pg	20 05 45.3	-0.2
	baz=268						
NNS				S	Sg	20 05 51.6	-0.9
	baz=268						
NWLT	Wulai	0.53	311	P	Pg	20 05 45.6	-0.1
	baz=306						
NWLT				S	Sg	20 05 52.1	-0.7
	baz=306						
HWA	Hwalien	0.54	215	P	Pb	20 05 47.4	+1.1
	baz=214						
TIPB	Shuangxi	0.56	349	*e*P	Pg	20 05 46.1	0.0
	baz=360						
TIPB				*i* S	Sg	20 05 52.8	-0.7
	baz=360						
YHNB	Yeheng	0.57	295	⇑P	Pg	20 05 46.3	-0.2
	baz=294						
YHNB				S	Sg	20 05 53.1	-1.0
	baz=294						
TWB1	Santiao Chiao	0.58	4	*e*P	Pg	20 05 46.7	+0.1
TWB1				S	Sg	20 05 53.7	-0.6
NSK	Sanguang	0.59	295	⇑*i*P	Pg	20 05 46.4	-0.3
	baz=294						
NSK				S	Sg	20 05 53.5	-1.2
	baz=294						
TWA	Mucha	0.64	329	*e*P	Pg	20 05 47.9	+0.1
	baz=320						
TWA				S	Sg	20 05 56.0	-0.3
	baz=320						
NHDH	Xindian Distri	0.66	325	*e*P	Pg	20 05 48.1	+0.1
	baz=321						
NWF	Wu-fen Shan	0.66	347	P	Pb	20 05 49.2	+0.8
	baz=341						
NWF				S	Sg	20 05 56.8	-0.1
	baz=341						
WFSB	Wu-fen Shan	0.66	347	*e*P	Pb	20 05 48.8	+0.5
	baz=343						
WFSB				S	Sg	20 05 56.9	+0.1
	baz=343						
FUSS	Fushou	0.66	255	P	Pg	20 05 48.0	-0.2
	baz=251						
FUSS				S	Sg	20 05 56.5	-0.5
	baz=251						
WHF	Hehuan Shan	0.68	246	P	Pg	20 05 48.0	-0.5
	baz=242						
WHF				S	Sg	20 05 57.1	-0.5
	baz=242						
TATO	Taipei	0.69	323	P	Pg	20 05 48.5	-0.1
	baz=315						
TATO				S	Sg	20 05 57.4	-0.3
	baz=315						
TWT	Tachien	0.72	256	P	Pg	20 05 49.4	+0.1
	baz=247						
TWT				*e*S	Sg	20 05 58.7	-0.2
	baz=247						
TAP	Taipei	0.73	327	*e*P	Pb	20 05 50.3	+0.8
	baz=318						
BACT	New Taipei Cit	0.73	321	*e*P	Pb	20 05 50.2	+0.6
	baz=322						
TNOU	National Taiwa	0.74	348	P	Pb	20 05 50.0	+0.3
	baz=344						
TNOU				S	Sg	20 05 58.9	-0.3
	baz=344						
TDCB	Techi	0.74	257	P	Pg	20 05 49.2	-0.4
	baz=249						
TDCB				S	Sg	20 05 58.3	-1.0
	baz=249						
ESL	Shilin	0.77	218	*e*P	Pg	20 05 49.7	-0.3
	baz=221						
CHGB	Renai	0.79	243	P	Pg	20 05 50.2	-0.4
	baz=247						
CHGB				*e*S	Sg	20 06 01.1	+0.1
	baz=247						
YM01	YM01	0.80	335	P	Pg	20 05 50.1	-0.5
	baz=336						
YM01				*e*S	Sg	20 06 00.5	-0.6
	baz=336						
YM10	YM10	0.81	334	P	Pb	20 05 51.2	+0.3
	baz=336						
YM10				S	Sb	20 06 01.9	+0.2
	baz=336						
YM11	YM11	0.81	335	P	Pb	20 05 51.5	+0.5
	baz=337						
YM11				S	Sb	20 06 02.1	+0.3
	baz=337						
YM05	YM05	0.81	335	P	Pb	20 05 51.3	+0.3
	baz=336						
YM05				S	Sb	20 06 02.3	+0.4
	baz=336						
YM04	YM04	0.81	333	*e*P	Pg	20 05 51.1	+0.1
	baz=334						
YM04				*e*S	Sb	20 06 02.0	+0.2
	baz=334						
NTY	Taoyuan	0.82	314	P	Pb	20 05 51.5	+0.4
	baz=321						
NTY				*e*S	Sb	20 06 02.6	+0.6
	baz=321						
YM08	YM08	0.82	337	P	Pg	20 05 51.0	-0.1
	baz=338						
YM08				S	Sg	20 06 01.6	-0.4
	baz=338						
TWS1	Kuangyinshan	0.83	325	P	Pb	20 05 51.6	+0.4
	baz=318						
TWS1				S	Sb	20 06 02.9	+0.8
	baz=318						
YM03	YM03	0.84	334	P	Pg	20 05 51.3	-0.1
	baz=335						
YM03				S	Sb	20 06 02.9	+0.4
	baz=335						
NJD	Zhudong	0.84	292	*e*P	Pb	20 05 51.8	+0.4
	baz=291						
ANP	Anpu	0.85	333	P	Pg	20 05 51.7	+0.1
	baz=335						
ANP				*e*S	Sb	20 06 03.2	+0.3
	baz=335						
NTST	Danshui	0.86	329	*e*P	Pg	20 05 52.2	+0.4
	baz=330						
NTST				*e*S	Sb	20 06 03.6	+0.4
	baz=330						
LIOB	Emei	0.88	285	*e*P	Pg	20 05 52.6	+0.5
	baz=283						
NCU	National Centr	0.88	308	*e*P	Pg	20 05 52.6	+0.4
	baz=308						
NCUH	Zhongli	0.88	308	P	Pg	20 05 52.6	+0.4
	baz=316						
NCUH				S	Sb	20 06 04.3	+0.7
	baz=316						
NSTT	Nanjuang	0.89	284	*e*P	Pn	20 05 52.9	-0.1
	baz=275						
NSTT				*e*S	Sb	20 06 03.0	-0.8
	baz=275						
EGFH	Guangfu	0.89	212	*e*P	Pb	20 05 52.1	-0.2
	baz=224						
TWY	Chenhua	0.90	340	P	Pn	20 05 53.1	-0.2
	baz=341						
TWY				S	Sb	20 06 04.5	+0.1
	baz=341						
JYNG	Yonagunijimaku	0.91	88	P	Pb	20 05 52.8	+0.2
JYNG				*e*S	Sg	20 06 05.3	+0.6
HSN1	Hsinchu	0.92	293	*e*P	Pn	20 05 53.4	-0.1
	baz=286						
HSN1				*e*S	Sn	20 06 05.8	-0.6
	baz=286						
WHP	Taichung City	0.92	261	P	Pg	20 05 53.2	+0.2
	baz=258						
WHP				S	Sb	20 06 04.7	-0.3
	baz=258						
SBCB	Hsinchu	0.95	293	*e*P	Pg	20 05 53.7	+0.3
	baz=287						
SBCB				*e*S	Sn	20 06 07.5	+0.3
	baz=287						
HSN	Hsinchu	0.96	293	*e*P	Pg	20 05 54.1	+0.3
	baz=283						
HSN				*e*S	Sg	20 06 06.5	+0.1
	baz=283						
YOJ	Yonaguni jima	0.97	88	*e*P	Pb	20 05 53.7	0.0
	baz=78						
YOJ				*e*S	Sg	20 06 07.4	+0.8
	baz=78						
YOJ	Yonaguni jima	0.97	88	P	Pb	20 05 53.5	-0.2
YOJ				*e*S	Sg	20 06 07.5	+0.8
VWDT	VWDT	0.99	228	*e*P	Pb	20 05 54.0	0.0
	baz=225						
VWDT				*e*S	Sg	20 06 08.0	+0.7
	baz=225						
DPDB	Guoxing	1.01	247	*e*P	Pb	20 05 54.1	-0.2
	baz=245						
WCS	Beigang Elemen	1.01	249	*e*P	Pb	20 05 54.3	-0.1
	baz=246						

HGSD	**Ruisui**	**1.04**	**207**	P	**Pg**	**20 05 55.6**	**+0.3**
	baz=194						
NMLH	**Miaoli**	**1.06**	**276**	*e*P	**Pg**	**20 05 56.9**	**+1.3**
	baz=274						
TWQ1	**Liyutan**	**1.07**	**266**	*e*P	**Pg**	**20 05 56.6**	**+0.7**
	baz=264						
TWQ1				S	**Sg**	**20 06 10.0**	**+0.1**
	baz=264						
EHY	**Hungye**	**1.08**	**212**	*e*P	**Pb**	**20 05 55.3**	**-0.2**
	baz=210						
SMLT	**Sun Moon Lake**	**1.10**	**241**	P	**Pn**	**20 05 56.3**	**+0.2**
	baz=238						
SSLB	**Suanglung**	**1.11**	**235**	P	**Pb**	**20 05 55.8**	**-0.2**
	baz=233						
TYC	**Yuchr**	**1.12**	**243**	*e*P	**Pb**	**20 05 56.2**	**-0.1**
	baz=240						
YULB	**Yu-li**	**1.19**	**210**	*e*P	**Pn**	**20 05 56.5**	**-0.8**
	baz=209						
TWF1	**Yuli**	**1.22**	**209**	*e*P	**Pn**	**20 05 57.2**	**-0.5**
	baz=220						
WHYT	**Xinyi Township**	**1.23**	**234**	*e*P	**Pg**	**20 05 58.9**	**0.0**
	baz=232						
WJS	**Zhushan**	**1.27**	**242**	*e*P	**Pg**	**20 05 59.9**	**+0.4**
	baz=231						
WNT	**Mingjian**	**1.27**	**245**	*e*P	**Pg**	**20 06 00.2**	**+0.5**
	baz=238						
FULB	**Fuli**	**1.36**	**206**	*e*P	**Pb**	**20 06 00.3**	**0.0**
	baz=220						
ALS	**Alishan**	**1.39**	**229**	*e*P	**Pb**	**20 06 01.3**	**+0.4**
	baz=215						
CHN5	**Tsauling**	**1.42**	**235**	*e*P	**Pg**	**20 06 02.4**	**-0.1**
	baz=233						
ELDTW	**Lidau**	**1.50**	**215**	*e*P	**Pn**	**20 06 01.5**	**-0.1**
	baz=201						
IRIF	**Iriomote-Funau**	**1.63**	**93**	P	**Pn**	**20 06 02.8**	**-0.5**
IRIF				*e*S	**Sn**	**20 06 23.1**	**-0.9**
CHN4	**Tsaushan**	**1.64**	**229**	P	**Pb**	**20 06 05.8**	**+0.8**
	baz=218						
CHN4				*e*S	**Sg**	**20 06 28.0**	**+0.2**
	baz=218						
TPUB	**Ta-pu**	**1.65**	**227**	P	**Pb**	**20 06 05.5**	**+0.3**
	baz=217						
TPUB				*e*S	**Sg**	**20 06 29.1**	**+1.0**
	baz=217						
STYH	**Taoyuan**	**1.65**	**221**	*e*P	**Pb**	**20 06 05.1**	**0.0**
	baz=220						
STYT	**Tauyuan**	**1.66**	**221**	*e*P	**Pb**	**20 06 05.7**	**+0.2**
	baz=220						
WTP	**Ta-pu**	**1.69**	**226**	P	**Pb**	**20 06 06.2**	**+0.2**
	baz=226						
WTP				*e*S	**Sg**	**20 06 30.8**	**+1.1**
	baz=226						
TWK	**Hsinying**	**1.76**	**229**	*e*P	**Pb**	**20 06 07.3**	**+0.1**
	baz=229						
TWK				*e*S	**Sg**	**20 06 32.0**	**+0.1**
	baz=229						
TWG	**Pinlang**	**1.79**	**207**	*e*P	**Pn**	**20 06 05.7**	**+0.2**
	baz=192						
CHN1	**Nanshi**	**1.79**	**227**	*e*P	**Pb**	**20 06 08.3**	**+0.6**
	baz=225						
SGST	**Jiashian**	**1.83**	**223**	*e*P	**Pn**	**20 06 07.2**	**+1.1**
	baz=223						
JKRS	**Kuro-shima**	**1.89**	**95**	P	**Pn**	**20 06 07.0**	**+0.1**
JKRS				*e*S	**Sn**	**20 06 30.4**	**-0.1**
JIJ	**Ishigaki jima**	**2.00**	**91**	S	**Sn**	**20 06 32.1**	**-1.2**
SSD	**Sandimen**	**2.06**	**216**	*e*P	**Pb**	**20 06 11.4**	**-0.9**
	baz=216						
JISG	**Ishigakijimahi**	**2.16**	**85**	P	**Pn**	**20 06 09.8**	**-0.8**
JISG				*e*S	**Sn**	**20 06 36.4**	**-0.7**
MASBT	**Mashibuluo**	**2.17**	**214**	*e*P	**Pb**	**20 06 12.8**	**-1.3**
	baz=214						
EAST	**Anshuo**	**2.27**	**207**	*e*P	**Pn**	**20 06 13.6**	**+1.4**
	baz=196						
MATB	**Ma-tsu**	**2.50**	**314**	*e*P	**Pb**	**20 06 17.9**	**-1.7**
	baz=313						
LYJJ	**Jianjiangzhen**	**2.89**	**317**	*e*P	**Pn**	**20 06 23.0**	**+2.3**
	baz=317						
XPSS	**Dashiqiu**	**2.96**	**328**	*e*P	**Pn**	**20 06 20.5**	**-1.0**
	baz=327						
AXDP	**Jialang**	**3.65**	**278**	*e*P	**Pn**	**20 06 32.3**	**+1.2**
	baz=277						

IDC 17 20:12:38.4±4.9**, 8°.12N×104°.34W, h0^{km}, mb3.3**/4**, mb1 3.8**/4**, mb1mx3.6**/32**, mbtmp3.4**/4**, MS3.5**/5**, Ms1 3.5**/5**, ms1mx3.3**/14**, Error ellipse: s-maj=181.5km s-min=60.8km az=101.0, Northern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H06E1	**SOCORRO T-PHAS**	**12.38**	**330**	T	T	20 28 37.0	
	SNR=18						
CMIG	**Matias Romero**	**12.83**	**45**	LR	LR	20 18 54.6	
	comp=Z,262nm,20.2s,baz=194,slow=29						
LPIG	**La Paz**	**16.89**	**341**	LR	LR	20 21 36.3	
	comp=Z,153nm,20.5s,baz=218,slow=32						
TXAR	**Lajitas Array**	**21.12**	**2**	P	P	20 17 26.1	+1.1
	0.8nm,0.8s,baz=177,slow=10.0,SNR=5.3						
TXAR				LR	LR	20 24 52.1	
	comp=Z,90nm,18.2s,baz=0.0,slow=35						
NVAR	**Mina Array Bea**	**32.71**	**339**	P	P	20 19 13.8	+0.8
	0.3nm,0.6s,baz=161,slow=8.4,SNR=2.4						
PDAR	**Pinedale Array**	**34.82**	**353**	P	P	20 19 30.9	-0.4
	0.6nm,0.8s,baz=169,slow=9.8,SNR=2.9						
LPAZ	**La Paz**	**43.27**	**124**	LR	LR	20 35 54.1	
	comp=Z,60nm,18.6s,baz=334,slow=32						
H03N2	**Juan Fernandez**	**47.86**	**151**	T	T	21 12 13.7	
	baz=329,slow=78,SNR=13						
H03N1	**Juan Fernandez**	**47.87**	**151**	T	T	21 12 14.6	
	baz=329,slow=78,SNR=16						
H03N3	**Juan Fernandez**	**47.88**	**151**	T	T	21 12 14.2	
	baz=329,slow=78,SNR=17						
PPT	**Papeete**	**51.46**	**240**	LR	LR	20 38 37.0	
	comp=Z,55nm,18.2s,baz=4.0,slow=30						
ILAR	**Eielson Array**	**63.94**	**341**	P	P	20 23 11.3	-1.8
	0.4nm,0.7s,baz=160,slow=4.6,SNR=4.8						
CMAR	**Chiang Mai Arr**	**145.00**	**319**	PKPbc	PKPdf	20 32 18.4	-0.4
	0.3nm,0.7s,baz=45,slow=2.7,SNR=3.2						

*NIED **17** 20:27:33.4, 39°.65N×143°.61E, h23^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}3.58; $M_{\theta\theta}$0.13; $M_{\phi\phi}$-3.71; $M_{r\theta}$2.37; $M_{\theta\phi}$-1.47; $M_{\phi r}$2.18; Fault plane solution: $M_0$5.08000×10^{14} NP1:ϕ_s37.00000°, δ66.00000°, λ108.00000°. NP2:ϕ_s179.00000°, δ30.00000°, λ56.00000°.*

*JMA **17** 20:27:33.3±0.2, 39°.65N×143°.61E, h23^{km}, M4.0*

*IDC **17** 20:27:37.0±1.5, 40°.02N×142°.92E, h0^{km}, mb3.7/7, mb1 3.8/9, mb1mx3.6/42, mbtmp3.7/9, ML3.1/2, MS3.4/3, Ms1 3.4/3, ms1mx2.7/56, Error ellipse: s-maj=34.8km s-min=18.4km az=105.0*

*NEIC **17** 20:27:41.8±1.5, 39°.82N±0°.07×142°.9E±0°.1, h40^{km}±10^{km}, mb4.0/12, Error ellipse: s-maj=14.6km s-min=8.8km az=113.0*

ISC 17 20:27:37.1±0.8**, 39°.81N**±0°.04×**143°.14E**±0°.08**, h12^{km}, n65, σ1^s.40**/65**, mb3.8**/13**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	**0.99**	**278**	P	**Pn**	**20 27 57.3**	**+0.5**
MIYJ	**Miyakonagasawa**	**1.04**	**258**	P	**Pn**	**20 27 57.7**	**+0.2**
JKEN	**Kujiedanarisaw**	**1.17**	**290**	P	**Pn**	**20 28 00.0**	**+0.8**
OFUJ	**Ofunato**	**1.35**	**238**	P	**Pn**	**20 28 00.9**	**-0.8**
JANG	**Nango**	**1.36**	**295**	P	**Pg**	**20 28 02.8**	**-0.5**
JOM	**Ohasama**	**1.46**	**257**	P	**Pg**	**20 28 04.2**	**-1.0**
JMK	**Ichinoseki**	**1.71**	**241**	P	**Pn**	**20 28 06.3**	**-0.5**
JTM	**Tenmabayashi**	**1.86**	**302**	P	**Pb**	**20 28 10.6**	**-0.4**
JTM	**Tenmabayashi**	**1.86**	**302**		**Pb**	**20 28 10.5**	**-0.5**
JIO	**Ouri**	**1.94**	**226**	P	**Pn**	**20 28 08.1**	**-1.7**
JIO				*e*S	**Sn**	**20 28 32.6**	**-1.5**
ERM	**Erimo**	**2.20**	**0**	Pn	**Pn**	**20 28 14.3**	**+0.8**
JOT	**Ohata**	**2.23**	**315**	P	**Pb**	**20 28 15.8**	**-1.6**
JYK	**Kaneyama**	**2.33**	**248**	P	**Pn**	**20 28 15.8**	**+0.6**
JNBK	**Urakawa-nobuka**	**2.49**	**353**	P	**Pn**	**20 28 18.3**	**+0.9**
JNBK				*e*S	**Sb**	**20 28 50.3**	**-1.9**
JMM	**Marumori**	**2.67**	**224**		**Pn**	**20 28 17.7**	**-2.1**
JCH	**Churui**	**2.81**	**3**	P	**Pn**	**20 28 21.0**	**-0.8**
JCH				*e*S	**Sn**	**20 28 55.8**	**+0.2**
JOMM	**Oshimamatsumae**	**2.93**	**307**	P	**Pb**	**20 28 27.1**	**-2.2**
JFT	**Otama**	**3.17**	**225**	P	**Pn**	**20 28 25.3**	**-1.5**
JFT				S	**Sn**	**20 29 03.1**	**-1.4**
JEW	**Eniwo**	**3.28**	**338**	Pn	**Pb**	**20 28 32.6**	**-2.7**
JSD	**Sado**	**4.19**	**247**		**Pn**	**20 28 41.2**	**+0.3**
JYT	**Yasato**	**4.26**	**214**	Pn	**Pn**	**20 28 38.1**	**-3.7**
ASAJ	**Asahikawa**	**4.32**	**355**	Pn	**Pn**	**20 28 42.8**	**+0.2**
	1.3nm,0.3s,baz=222,slow=13,SNR=10.0						
ASAJ				Sn	**Sn**	**20 29 32.1**	**-0.9**
	0.2nm,0.3s,baz=191,slow=16,SNR=2.9						
JKA	**Kamikawa-asahi**	**4.32**	**355**		**Pn**	**20 28 42.8**	**+0.2**
MJAR	**Matsushiro Arr**	**5.07**	**232**	Pn	**Pn**	**20 28 53.4**	**+0.4**
	0.4nm,0.3s,baz=37,slow=12,SNR=24						
MJAR	**Matsushiro Arr**	**5.07**	**232**		**Pn**	**20 28 52.9**	**0.0**
MAJO	**Matsushiro**	**5.07**	**232**		**Pn**	**20 28 53.6**	**+0.7**
MAT	**Matsushiro**	**5.07**	**232**	P	**Pn**	**20 28 53.0**	**+0.1**
MAT				*e*S	**Sn**	**20 29 53.5**	**+2.1**
JGF	**Kuroka**	**6.21**	**229**		**Pn**	**20 29 09.7**	**+1.0**
JSG	**Sagara**	**6.47**	**219**	Pn	**Pn**	**20 29 13.2**	**+1.1**
INU	**Inuyama**	**6.59**	**229**	Pn	**Pn**	**20 29 14.6**	**+0.8**
JWT	**Wachi**	**7.62**	**236**	Pn	**Pn**	**20 29 29.8**	**+1.8**
JHS	**Saijyo**	**9.30**	**242**	Pn	**Pn**	**20 29 52.0**	**+0.9**
KSRS	**Korea Array**	**12.13**	**264**	LR	LR	20 34 58.7	
	comp=Z,62nm,19.6s,baz=325,slow=37						
MA2	**Magadan**	**20.37**	**11**	P	**P**	**20 32 12.9**	**-0.4**
	4.2nm,0.8s,baz=188,slow=10,SNR=6.2						
MA2	**Magadan**	**20.37**	**11**	P	**P**	**20 32 12.6**	**-0.7**
MA2				IAmb	IAmb	20 32 14.2	
	comp=Z,4.3nm,0.8s						
SEY	**Seymchan**	**23.82**	**10**	P	**P**	**20 32 47.9**	**-1.7**
	comp=Z,2.4nm,0.7s,baz=197,slow=7.9,SNR=12						
ULN	**Ulaanbaatar**	**27.05**	**299**	P	**P**	**20 33 19.6**	**+0.3**
SONM	**Songino Array**	**27.49**	**299**	P	**P**	**20 33 22.9**	**-0.4**
	comp=Z,1.2nm,0.7s,baz=94,slow=8.4,SNR=7.4						
SONM	**Songino Array**	**27.49**	**299**	P	**P**	**20 33 22.7**	**-0.5**
XAN	**Xi'an**	**27.84**	**269**	P	**P**	**20 33 25.6**	**-0.9**
XAN				IAmb	IAmb	20 34 14.8	
	comp=Z,7.0nm,1.5s						
H11N2	**WAKE ISLAND Hy**	**28.58**	**128**	T	T	21 04 27.4	
	baz=318,slow=75,SNR=18						
H11N1	**WAKE ISLAND Hy**	**28.59**	**128**	T	T	21 04 28.2	
	baz=318,slow=75,SNR=2.4						
H11N3	**WAKE ISLAND Hy**	**28.60**	**128**	T	T	21 04 28.5	
	baz=318,slow=75,SNR=9.5						
ENH	**Enshi**	**29.00**	**261**	P	**P**	**20 33 35.8**	**-1.0**
ENH				IAmb	IAmb	20 33 39.2	
	comp=Z,2.8nm,0.7s						
LZH	**Lanzhou**	**31.04**	**276**	*e*P	**P**	**20 33 55.9**	**+1.0**
LZH				pP	sP	20 34 04.6	+5.3
LZH				sP	pP	20 34 09.8	+12
LZH				pmax	pmax		
	comp=Z,16nm,1.2s						
GTA	**Gaotai**	**33.14**	**284**	*e*P	**P**	**20 34 13.9**	**+0.6**
GTA				pP	sP	20 34 20.8	+3.1
GTA				sP	pP	20 34 23.5	+7.0
GTA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
WMQ	**Urumqi**	**40.86**	**294**	*e*P	**P**	**20 35 20.8**	**+2.0**
ZAA0	**Zalesovo Array**	**41.11**	**310**	P	**P**	**20 35 20.2**	**-0.4**
ZAA0				IAmb	IAmb	20 35 21.3	
	comp=Z,1.6nm,0.8s						
ZALV	**Zalesovo Beam**	**41.11**	**310**	P	**P**	**20 35 20.9**	**+0.3**
	comp=Z,1.0nm,0.6s,baz=79,slow=7.7,SNR=5.2						
ZALV	**Zalesovo Beam**	**41.11**	**310**	P	**P**	**20 35 20.0**	**-0.6**
CMAR	**Chiang Mai Arr**	**43.54**	**254**	P	**P**	**20 35 40.3**	**-0.5**
	comp=Z,0.3nm,0.7s,baz=48,slow=6.2,SNR=5.1						
CMAR	**Chiang Mai Arr**	**43.54**	**254**	P	**P**	**20 35 39.9**	**-1.0**
IMAR	**Indian Mountai**	**43.58**	**32**	P	**P**	**20 35 44.3**	**+3.7**
MK31	**Makanchi Array**	**43.85**	**300**	P	**P**	**20 35 43.0**	**-0.1**
MKAR	**Makanchi Array**	**43.85**	**300**	P	**P**	**20 35 42.8**	**-0.2**
	comp=Z,1.1nm,0.8s,baz=83,slow=9.3,SNR=14						
MAKZ	**Makanchi**	**44.05**	**300**	P	**P**	**20 35 44.3**	**-0.4**
MAKZ				IAmb	IAmb	20 36 01.2	
	comp=Z,2.2nm,1.1s						
KURK	**Kurchatov**	**45.34**	**306**	P	**P**	**20 35 53.4**	**-1.4**
BRVK	**Borovoye**	**49.80**	**311**	P	**P**	**20 36 29.6**	**+0.1**
BRVK				IAmb	IAmb	20 36 30.2	
	comp=Z,1.9nm,0.9s						
KKAR	**Karatay Array**	**52.94**	**299**	P	**P**	**20 36 51.1**	**-2.1**
ARU	**Arti**	**55.20**	**318**	LR	LR	21 02 39.0	
	comp=Z,133nm,20.6s,baz=256,slow=38						
ABKAR	**Akbulak array**	**57.21**	**309**	P	**P**	**20 37 23.7**	**-0.2**
ABKAR	**Akbulak array**	**57.21**	**309**	P	**P**	**20 37 23.7**	**-0.2**
WRA	**Warramunga Arr**	**60.01**	**190**	P	**P**	**20 37 47.5**	**+3.9**
	comp=Z,0.3nm,0.6s,baz=5.8,slow=7.5,SNR=3.3						
WRA	**Warramunga Arr**	**60.01**	**190**	P	**P**	**20 37 46.6**	**+3.0**
MSVF	**Nonsavu**	**65.86**	**143**	LR	LR	21 06 02.4	
	comp=Z,17nm,18.7s,baz=168,slow=35						

*IDC **17** 20:49:25.0±1.9, 58°.08S×25°.59W, h0^{km}, mb4.3/1, mb1 4.3/1, mb1mx3.7/21, mbtmp4.3/1, Error ellipse: s-maj=102.4km s-min=75.1km az=134.0*

ISC 17 20:49:32.3±1.9**, 58°.0S**±0°.2×**25°.7W**±0°.6**, h49^{km}, n7, σ0^s.34**/7**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**14.66**	**157**	P	**Pn**	**20 52 56.7**	**+0.4**
VNA3	**Neumayer Olymp**	**14.86**	**160**	P	**Pn**	**20 52 58.7**	**-0.3**
VNA2	**Neumayer--Watz**	**15.06**	**157**	P	**Pn**	**20 53 01.7**	**+0.1**
	baz=323,slow=12						
SNAA	**Sanae**	**16.61**	**155**	P	**P**	**20 53 23.2**	**0.0**
TORD	**Torodi Ar. Bea**	**74.39**	**28**	P	**P**	**21 01 04.7**	**0.0**
	1.1nm,0.4s,baz=199,slow=6.3,SNR=5.9						
SONM	**Songino Array**	**149.99**	**89**	PKPbc	**PKPbc**	**21 09 15.9**	**-0.4**
	0.4nm,0.3s,baz=214,slow=3.2,SNR=4.0						
ILAR	**Eielson Array**	**152.01**	**309**	PKPbc	**PKPbc**	**21 09 20.6**	**+0.2**
	0.8nm,0.7s,baz=131,slow=3.3,SNR=8.2						

*IDC **17** 21:15:46.0±2.1, 24°.72N×122°.02E, h0^{km}, mb3.5/4, mb1 3.7/4, mb1mx3.3/46, mbtmp3.5/4, MS3.6/2, Ms1 3.6/2, ms1mx2.7/43, Error ellipse: s-maj=149.8km s-min=27.1km az=65.0*

*TAP **17** 21:15:46.5, 24°.84N×122°.03E, h13^{km}, ML3.4, B*

*JMA **17** 21:15:47.1, 24°.84N×121°.97E, h37^{km}, M3.0*

ISC 17 21:15:46.8±0.8**, 24°.83N**±0°.02×**122°.03E**±0°.02**, h11**^{km}±5^{km}**, n132, σ0^s.75**/152**, mb3.5**/4**, 30C-2D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.18**	**348**	⇑*i*P	**Pg**	**21 15 50.9**	**+0.1**
	baz=339						
TWB1				*i* S	**Sg**	**21 15 53.3**	**-0.2**
	baz=339						
NTC	**Toucheng**	**0.18**	**277**	⇑*i*P	**Pb**	**21 15 51.2**	**-0.9**
	baz=274						
NTC				S	**Sb**	**21 15 54.2**	**+0.6**
	baz=274						
TIPB	**Shuangxi**	**0.23**	**307**	⇑*i*P	**Pb**	**21 15 52.0**	**-0.9**
	baz=297						
TIPB				*i* S	**Sg**	**21 15 55.3**	**+0.3**
	baz=297						
ILA	**Ilan**	**0.26**	**255**	⇑*i*P	**Pb**	**21 15 52.7**	**-0.8**
	baz=254						
ILA				S	**Sb**	**21 15 56.7**	**-1.4**
	baz=254						
TWC	**Suao**	**0.28**	**216**	⇑*i*P	**Pg**	**21 15 52.5**	**+0.1**
	baz=221						
TWC				*e*S	**Sg**	**21 15 55.6**	**-0.6**
	baz=221						
NWF	**Wu-fen Shan**	**0.33**	**317**	⇑*i*P	**Pb**	**21 15 54.1**	**-0.6**
	baz=308						
NWF				*i* S	**Sb**	**21 15 58.8**	**-1.2**
	baz=308						
WFSB	**Wu-fen Shan**	**0.33**	**317**	⇑P	**Pb**	**21 15 54.0**	**-0.6**
	baz=308						
WFSB				S	**Sb**	**21 15 58.9**	**-1.0**
	baz=308						
NDS	**Dongshan**	**0.35**	**235**	*e*P	**Pg**	**21 15 53.9**	**+0.2**
	baz=235						
TWE	**Neicheng**	**0.35**	**251**	⇑*i*P	**Pb**	**21 15 53.9**	**-1.0**
	baz=241						
TNOU	**National Taiwa**	**0.39**	**324**	⇑P	**Pb**	**21 15 55.2**	**-0.5**
	baz=319						
TNOU				S	**Sb**	**21 16 00.6**	**-1.2**
	baz=319						
TWA	**Mucha**	**0.43**	**290**	⇑*i*P	**Pb**	**21 15 55.8**	**-0.6**
	baz=279						
TWA				*e*S	**Sg**	**21 16 00.4**	**-0.6**
	baz=279						
EWUT	**Wuta**	**0.45**	**211**	*e*P	**Pg**	**21 15 55.5**	**-0.1**
	baz=218						
ENTT	**Nioudou**	**0.46**	**246**	⇑*i*P	**Pb**	**21 15 56.2**	**-0.8**
	baz=246						
ENTT				S	**Sg**	**21 16 02.3**	**+0.3**
	baz=246						
NHDH	**Xindian Distri**	**0.48**	**286**	P	**Pb**	**21 15 56.8**	**-0.4**
	baz=284						
ENA	**Nanau**	**0.48**	**213**	P	**Pg**	**21 15 56.1**	**-0.1**
	baz=220						
NWLT	**Wulai**	**0.48**	**264**	*e*P	**Pg**	**21 15 56.2**	**0.0**
	baz=263						
TAP1	**Taipei**	**0.50**	**294**	*e*P	**Pb**	**21 15 57.8**	**+0.1**
	baz=291						
TATO	**Taipei**	**0.51**	**286**	⇑P	**Pb**	**21 15 57.4**	**-0.3**
	baz=276						
TAP	**Taipei**	**0.52**	**294**	⇑*i*P	**Pb**	**21 15 57.8**	**0.0**
	baz=291						
YM01	**YM01**	**0.52**	**307**	⇑P	**Pb**	**21 15 57.0**	**-1.0**
	baz=303						
NDT	**Datong Townshi**	**0.52**	**244**	P	**Pb**	**21 15 57.3**	**-0.6**
	baz=239						
YM11	**YM11**	**0.53**	**309**	⇑P	**Pb**	**21 15 58.2**	**+0.1**
	baz=298						
YM08	**YM08**	**0.53**	**312**	⇑P	**Pb**	**21 15 57.9**	**-0.3**
	baz=303						
YM10	**YM10**	**0.53**	**307**	⇑P	**Pb**	**21 15 58.1**	**-0.1**
	baz=296						
YM05	**YM05**	**0.54**	**308**	⇑P	**Pb**	**21 15 58.2**	**0.0**
	baz=297						
YM04	**YM04**	**0.55**	**306**	⇑P	**Pb**	**21 15 58.3**	**-0.1**
	baz=302						
BACT	**New Taipei Cit**	**0.56**	**287**	*e*P	**Pb**	**21 15 58.3**	**-0.2**
	baz=276						
YM03	**YM03**	**0.56**	**308**	⇑P	**Pb**	**21 15 58.4**	**-0.2**
	baz=297						
ANP	**Anpu**	**0.58**	**307**	P	**Pb**	**21 15 58.5**	**-0.5**
	baz=295						
TWY	**Chenhua**	**0.59**	**319**	⇑*i*P	**Pb**	**21 15 59.2**	**+0.1**
	baz=316						
TWS1	**Kuangyinshan**	**0.62**	**296**	⇑*i*P	**Pn**	**21 16 00.1**	**-1.3**
	baz=294						
YHNB	**Yeheng**	**0.62**	**255**	⇑P	**Pb**	**21 15 58.8**	**-0.8**
	baz=263						
NTST	**Danshui**	**0.62**	**302**	⇑P	**Pn**	**21 16 00.1**	**-1.4**
	baz=301						
NSK	**Sanguang**	**0.63**	**256**	⇑*i*P	**Pg**	**21 15 58.9**	**-0.2**
	baz=262						
NTY	**Taoyuan**	**0.69**	**284**	*e*P	**Pn**	**21 16 01.3**	**-1.1**
	baz=274						
NNSB	**Datong**	**0.71**	**236**	*e*P	**Pb**	**21 16 00.7**	**-0.6**
	baz=250						
NNSH	**Datong**	**0.71**	**236**	*e*P	**Pb**	**21 16 00.8**	**-0.4**
	baz=233						
NNS	**Nan Shan**	**0.71**	**237**	*e*P	**Pb**	**21 16 00.8**	**-0.5**
	baz=241						
NACB	**Ninganchiao**	**0.77**	**211**	P	**Pg**	**21 16 01.4**	**-0.2**
	baz=224						
NACB				S	**Sb**	**21 16 11.8**	**-0.7**
	baz=224						
NCU	**National Centr**	**0.78**	**280**	⇑*i*P	**Pn**	**21 16 03.3**	**-0.3**
	baz=279						
NCU				S	**Sn**	**21 16 14.0**	**-1.3**
	baz=279						
NCUH	**Zhongli**	**0.78**	**280**	*e*P	**Pn**	**21 16 03.3**	**-0.4**
	baz=279						
PCYT	**Pengchaiyu**	**0.79**	**3**	⇑*i*P	**Pn**	**21 16 03.0**	**-0.9**
	baz=6.0						
ETLH	**Xiulin Townshi**	**0.80**	**219**	*e*P	**Pb**	**21 16 02.2**	**-0.5**
	baz=222						
ETLH				S	**Sn**	**21 16 14.4**	**-1.6**
	baz=222						
TWD	**Chiawan**	**0.85**	**208**	P	**Pb**	**21 16 03.0**	**-0.4**
	baz=211						
TWD				*e*S	**Sg**	**21 16 14.0**	**-0.2**
	baz=211						
NJD	**Zhudong**	**0.86**	**264**	*e*P	**Pn**	**21 16 04.5**	**-0.3**
	baz=256						
JYNG	**Yonagunijimaku**	**0.92**	**114**	P	**Pg**	**21 16 04.6**	**+0.1**
JYNG				S	**Sb**	**21 16 16.9**	**+0.1**
HSN1	**Hsinchu**	**0.92**	**267**	*e*P	**Pn**	**21 16 06.2**	**+0.6**
	baz=284						
FUSS	**Fushou**	**0.92**	**231**	*e*P	**Pb**	**21 16 04.8**	**-0.1**
	baz=221						
HWA	**Hwalien**	**0.94**	**204**	*e*P	**Pn**	**21 16 06.1**	**+0.3**
	baz=211						
LIOB	**Emei**	**0.94**	**259**	*e*P	**Pn**	**21 16 05.6**	**-0.3**
	baz=252						
SBCB	**Hsinchu**	**0.95**	**268**	*e*P	**Pn**	**21 16 06.2**	**+0.2**
	baz=284						
NSTT	**Nanjuang**	**0.96**	**258**	*e*P	**Pn**	**21 16 06.6**	**+0.5**
	baz=251						
HSN	**Hsinchu**	**0.96**	**268**	P	**Pn**	**21 16 05.8**	**-0.3**
	baz=285						
YOJ	**Yonaguni jima**	**0.97**	**112**	⇑P	**Pb**	**21 16 05.2**	**-0.3**
	baz=115						
YOJ				S	**Sg**	**21 16 18.2**	**+0.2**
	baz=115						
YOJ	**Yonaguni jima**	**0.97**	**112**	P	**Pb**	**21 16 05.2**	**-0.3**
YOJ				*e*S	**Sg**	**21 16 18.5**	**+0.5**
TWT	**Tachien**	**0.97**	**234**	*e*P	**Pn**	**21 16 06.3**	**-0.1**
	baz=232						
WHF	**Hehuan Shan**	**0.98**	**226**	*e*P	**Pg**	**21 16 05.3**	**-0.4**
	baz=227						
TDCB	**Techi**	**0.98**	**234**	*e*P	**Pn**	**21 16 05.9**	**-0.7**
	baz=232						
CHGB	**Renai**	**1.09**	**226**	*e*P	**Pg**	**21 16 07.6**	**-0.3**
	baz=227						
WHP	**Taichung City**	**1.13**	**241**	*e*P	**Pg**	**21 16 09.2**	**+0.7**
	baz=233						
ESL	**Shilin**	**1.15**	**208**	*e*P	**Pb**	**21 16 08.2**	**-0.5**
	baz=219						
NMLH	**Miaoli**	**1.16**	**256**	*e*P	**Pg**	**21 16 10.8**	**+1.6**
	baz=273						
NSY	**Sanyi**	**1.23**	**250**	*e*P	**Pg**	**21 16 11.1**	**+0.7**
	baz=268						
TWQ1	**Liyutan**	**1.24**	**247**	*e*P	**Pg**	**21 16 12.0**	**+1.4**
	baz=266						
WCS	**Beigang Elemen**	**1.28**	**233**	*e*P	**Pg**	**21 16 12.0**	**+0.7**
	baz=226						
DPDB	**Guoxing**	**1.28**	**232**	*e*P	**Pg**	**21 16 11.6**	**+0.2**
	baz=224						
EGFH	**Guangfu**	**1.28**	**205**	*e*P	**Pb**	**21 16 10.8**	**-0.1**
	baz=222						
VWDT	**VWDT**	**1.34**	**217**	⇑P	**Pg**	**21 16 12.1**	**-0.5**
	baz=220						
WDJ	**Dajia District**	**1.35**	**249**	*e*P	**Pg**	**21 16 13.4**	**+0.6**
	baz=268						
SMLT	**Sun Moon Lake**	**1.40**	**228**	*e*P	**Pg**	**21 16 13.2**	**-0.5**
	baz=229						
TCU	**Taichung**	**1.41**	**241**	*e*P	**Pg**	**21 16 14.0**	**+0.2**
	baz=262						
TYC	**Yuchr**	**1.41**	**229**	*e*P	**Pg**	**21 16 13.8**	**-0.1**
	baz=223						
SSLB	**Suanglung**	**1.43**	**224**	*e*P	**Pb**	**21 16 13.2**	**-0.2**
	baz=225						
HGSD	**Ruisui**	**1.44**	**203**	*e*P	**Pg**	**21 16 14.2**	**-0.3**
	baz=221						
EHY	**Hungye**	**1.47**	**206**	*e*P	**Pb**	**21 16 13.9**	**-0.2**
	baz=209						
WNT	**Mingjian**	**1.55**	**233**	*e*P	**Pg**	**21 16 17.1**	**+0.6**
	baz=234						
WJS	**Zhushan**	**1.56**	**230**	*e*P	**Pg**	**21 16 17.7**	**+1.0**
	baz=224						
WHYT	**Xinyi Township**	**1.56**	**224**	*e*P	**Pg**	**21 16 16.3**	**-0.4**
	baz=226						
YULB	**Yu-li**	**1.58**	**205**	*e*P	**Pb**	**21 16 15.1**	**-0.9**
	baz=207						
TWF1	**Yuli**	**1.62**	**205**	*e*P	**Pb**	**21 16 15.8**	**-0.8**
	baz=219						
IRIF	**Iriomote-Funau**	**1.63**	**107**	P	**Pn**	**21 16 14.5**	**-0.8**
IRIF				*e*S	**Sn**	**21 16 35.0**	**-1.2**
YUS	**Yu-Shan**	**1.66**	**217**	*e*P	**Pb**	**21 16 17.4**	**-0.2**
	baz=227						
ALS	**Alishan**	**1.73**	**221**	⇓P	**Pg**	**21 16 19.2**	**-0.7**
	baz=208						
CHN5	**Tsauling**	**1.74**	**225**	⇓*e*P	**Pg**	**21 16 20.6**	**+0.4**
	baz=227						
WGK	**Gukeng**	**1.76**	**230**	*e*P	**Pg**	**21 16 20.7**	**+0.1**
	baz=232						
FULB	**Fuli**	**1.76**	**203**	*e*P	**Pb**	**21 16 19.0**	**-0.1**
	baz=217						
WDLH	**Douliu**	**1.77**	**230**	*e*P	**Pg**	**21 16 20.5**	**-0.3**
	baz=232						
HATJ	**Hateruma jima**	**1.79**	**115**	P	**Pn**	**21 16 17.3**	**-0.3**
ELDTW	**Lidau**	**1.88**	**210**	*e*P	**Pb**	**21 16 21.1**	**-0.1**
	baz=198						
JKRS	**Kuro-shima**	**1.90**	**108**	P	**Pn**	**21 16 18.8**	**-0.3**
JKRS				*e*S	**Sn**	**21 16 42.1**	**-0.8**
EDH	**Donghe**	**1.97**	**200**	*e*P	**Pn**	**21 16 20.2**	**+0.2**
	baz=184						
CHN4	**Tsaushan**	**1.97**	**222**	*e*P	**Pg**	**21 16 23.5**	**-1.2**
	baz=230						
CHN4				*e*S	**Sg**	**21 16 51.3**	**+1.0**
	baz=230						
JIJ	**Ishigaki jima**	**1.98**	**103**	P	**Pn**	**21 16 19.5**	**-0.7**
JIJ				*e*S	**Sn**	**21 16 44.4**	**-0.6**

TPUB	Ta-pu baz=213	1.99	220	*e*P	Pg	21 16 23.9	-1.1
TPUB	 baz=213			*e*S	Sg	21 16 51.3	+0.5
STYH	Taoyuan baz=218	2.01	215	*e*P	Pb	21 16 23.8	+0.4
STYT	Tauyuan baz=218	2.03	215	*e*P	Pb	21 16 24.3	+0.6
WTP	Ta-pu baz=222	2.04	220	⇑P	Pg	21 16 24.8	-1.2
JISG	Ishigakijimahi	2.09	96	P	Pn	21 16 21.3	-0.4
TWK	Hsinying baz=225	2.10	222	*e*P	Pb	21 16 25.1	+0.2
CHN1	Nanshi baz=223	2.14	220	*e*P	Pg	21 16 26.4	-1.4
PTTC	Pingtan baz=288	2.15	288	*e*P	Pn	21 16 22.0	-0.5
TWG	Pinlang baz=191	2.19	204	*e*P	Pn	21 16 23.9	+0.9
TWGBT	Beinan baz=191	2.19	204	*e*P	Pn	21 16 23.7	+0.6
SGST	Jiashian baz=220	2.19	217	*e*P	Pb	21 16 25.3	-1.0
SLGT	Liugui baz=218	2.23	215	*e*P	Pb	21 16 26.8	-0.2
MATB	Ma-tsu baz=302	2.30	305	*e*P	Pn	21 16 24.4	-0.1
MSUT	Lienchiang baz=302	2.32	305	*e*P	Pn	21 16 24.9	0.0
VWUC	VWUC baz=275	2.35	274	*e*P	Pn	21 16 25.3	+0.1
ECL	Taimali baz=194	2.43	204	*e*P	Pb	21 16 29.3	-1.2
JTJ	Tarama	2.44	94	P	Pn	21 16 26.6	+0.1
SSD	Sandimen baz=215	2.44	212	*e*P	Pb	21 16 30.2	-0.4
TSMG	Majia baz=214	2.47	211	*e*P	Pb	21 16 30.2	-0.9
TWM1	Shoushan baz=219	2.48	217	*e*P	Pb	21 16 31.0	-0.4
MASBT	Mashibuluo baz=213	2.55	210	P	Pb	21 16 31.5	-1.1
PHUB	P'eng-hu baz=241	2.60	240	*e*P	Pn	21 16 29.4	+0.7
PTMZ	Houxiangcun baz=275	2.65	275	*e*P	Pn	21 16 30.3	+0.9
XPSS	Dashiqiu baz=317	2.67	322	*e*P	Pn	21 16 29.1	-0.5
EAST	Anshuo baz=196	2.67	204	*e*P	Pb	21 16 32.0	-2.5
LYJJ	Jianjiangzhen baz=306	2.67	310	*e*P	Pn	21 16 28.6	-1.0
SSPT	Xinbi baz=198	2.69	210	*e*P	Pb	21 16 34.7	-0.3
SCZT	Fangliau baz=197	2.77	208	*e*P	Pb	21 16 35.0	-1.3
MHZQ	Yeshan baz=295	2.99	296	*e*P	Pn	21 16 33.8	-0.3
KNM	Kinmen baz=266	3.30	264	*e*P	Pn	21 16 40.8	+2.4
KNMB	Chin-men Tao baz=266	3.33	264	*e*P	Pn	21 16 39.1	+0.3
AXDP	Jialang baz=274	3.69	272	*e*P	Pn	21 16 44.1	+0.4
ZZJH	Jiuhuzhen baz=268	4.02	266	*e*P	Pn	21 16 48.7	+0.5
SONM	Songino Array 0.9nm,0.7s,baz=146,slow=9.2,SNR=10	26.08	336	P	P	21 21 22.2	+1.7
JAY	Jayapura comp=Z,178nm,20.6s,baz=175,slow=33	32.67	144	LR	LR	21 33 47.5	
YAK	Yakutsk comp=Z,60nm,18.6s,baz=268,slow=42	37.55	6	LR	LR	21 41 46.9	
MKAR	Makanchi Array 0.1nm,0.5s,baz=96,slow=8.8,SNR=3.8	38.42	315	P	P	21 23 09.9	+1.7
ZALV	Zalesovo Beam 0.4nm,0.4s,baz=126,slow=7.3,SNR=2.0	40.13	326	P	P	21 23 23.7	+1.3
WRA	Warramunga Arr 0.9nm,0.8s,baz=345,slow=9.2,SNR=3.6	46.09	164	P	P	21 24 11.1	+0.1

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*IDC **17** 21:47:26.6±2.4, 10°.43S×160°.55E, h0^{km}, mb3.9/6, mb1 4.1/7, mb1mx3.8/44, mbtmp3.9/7, ML4.1/1, MS3.3/5, Ms1 3.3/5, ms1mx3.1/31, Error ellipse: s-maj=54.8km s-min=19.3km az=91.0*

*NEIC **17** 21:47:30.6±1.7, 10°.29S±0°.05×160°.03E±0°.06, h10^{km}±2^{km}, mb4.2/11, Error ellipse: s-maj=10.3km s-min=7.9km az=118.0*

ISC 17 21:47:30.2±1.2**, 10°.39S**±0°.07×**160°.1E**±0°.2**, h10^{km}, n26, σ1^{s}.58**/24**, mb4.0**/10**, MS3.3**/3**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara 151nm,0.3s,baz=154,slow=5.4,SNR=21	0.97	348	Pn	Pn	21 47 49.6	-0.2
HNR	 646nm,0.3s,baz=166,slow=19,SNR=9.8			Sn	Sn	21 48 09.1	+5.4
HNR	 comp=Z,139nm,19.8s,baz=232,slow=42			LR	LR	21 48 15.1	
HNR	Honiara	0.97	348		Pn	21 47 49.5	-0.4
HNR				Sg	Sg	21 47 58.0	-3.5
PMG	Port Moresby comp=Z,209nm,19.0s,baz=92,slow=36	12.83	273	LR	LR	21 55 22.7	
DZM	Mont Dzumac comp=Z,54nm,19.5s,baz=282,slow=30	13.10	153	LR	LR	21 53 56.1	
DZM	Mont Dzumac comp=Z,72nm,24.1s	13.10	153	*e*LR	LR	21 52 41.4	
CTA	Charters Tower 0.5nm,0.3s,baz=54,slow=14,SNR=1.7	16.50	233	Pn	P	21 51 24.8	+0.2
CTAO	Charters Tower	16.50	233		P	21 51 24.7	0.0
CTAO	 comp=Z,12nm,1.0s			IAmb	IAmb	21 51 29.9	
COEN	Coen	16.96	256		P	21 51 29.2	-0.6
EIDS	Eidsvold	17.21	209		P	21 51 33.0	+0.6
EIDS	 comp=Z,19nm,1.3s			IAmb	IAmb	21 51 33.0	
KWAJ	Kwajalein Atol	20.46	22	P	P	21 52 07.4	-0.8
WR0	Warramunga Arr	26.45	246	P	P	21 53 08.2	+0.5
WR0	 comp=Z,13nm,1.5s			IAmb	IAmb	21 53 24.1	
WB2	Warramunga Arr	26.61	246	P	P	21 53 09.5	+0.4
WB2	 comp=Z,16nm,1.4s			IAmb	IAmb	21 53 16.1	
WRA	Warramunga Arr comp=Z,2.1nm,0.9s,baz=76,slow=9.9,SNR=5.1	26.62	246	P	P	21 53 09.7	+0.4
STKA	Stephens Creek comp=Z,1.8nm,0.5s,baz=31,slow=12,SNR=5.9	27.42	216	P	P	21 53 17.3	+1.0
STKA	 comp=Z,70nm,18.5s,baz=26,slow=35			LR	LR	22 03 25.7	
STKA	Stephens Creek	27.42	216	P	P	21 53 17.2	+0.9
ASAR	Alice Springs comp=Z,0.6nm,0.8s,baz=64,slow=9.7,SNR=5.0	28.29	239	P	P	21 53 23.7	-0.5
ASAR	 comp=Z,88nm,18.5s,baz=88,slow=37			LR	LR	22 04 59.9	
BBOO	Buckleboo	31.47	221	P	P	21 53 51.1	-1.1
FITZ	Fitzroy Crossi	34.27	253	P	P	21 54 16.9	+0.1
FITZ	 comp=Z,8.1nm,1.5s			IAmb	IAmb	21 54 32.2	
PPT	Papeete comp=Z,32nm,19.4s,baz=190,slow=31	49.20	104	LR	LR	22 12 29.7	
PETK	Petropavlovsk-	63.27	358	P	P	21 57 59.8	+0.8
CMAR	Chiang Mai Arr comp=Z,0.4nm,0.6s,baz=142,slow=4.6,SNR=1.7	66.83	295	P	P	21 58 24.0	+1.2
SONM	Songino Array comp=Z,1.3nm,0.7s,baz=146,slow=5.5,SNR=8.3	74.95	326	P	P	21 59 11.5	-0.3
SONM	Songino Array	74.95	326	P	P	21 59 11.3	-0.4
MK31	Makanchi Array	89.31	318	P	P	22 00 26.0	-0.9
MK31	 comp=Z,0.8nm,1.1s			IAmb	IAmb	22 00 34.1	
MKAR	Makanchi Array comp=Z,0.4nm,0.7s,baz=90,slow=6.9,SNR=6.4	89.31	318	P	P	22 00 25.8	-1.1
MKAR	Makanchi Array	89.31	318	P	P	22 00 26.0	-0.9

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*IDC **17** 22:19:48.0±1.7, 50°.03N×91°.78E, h0^{km}, mb1 3.2/4, mb1mx3.0/45, mbtmp3.2/4, ML2.9/4, Error ellipse: s-maj=25.2km s-min=16.3km az=14.0*

*NNC **17** 22:19:48.0±2.5, 50°.06N×91°.81E, h0^{km}, mb3.6, mpv3.3, Error ellipse: s-maj=24.2km s-min=12.9km az=100.0*

*ASRS **17** 22:19:50.8±0.3, 50°N±1°×9°2E±°, h10^{km}, MLh4.0/14, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/tab confirmed*

ISC 17 22:19:49.0±0.9**, 50°.09N**±0°.04×**91°.70E**±0°.03**, h10^{km}, n39, σ1^{s}.84**/65**, 9C-4D, Tuva-Buryatia-Mongolia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CUR	Chagan-Uzun	2.15	272	Pg	Pb	22 20 27.8	-0.3
CUR				Sg	Sg	22 20 57.9	-0.3
KZLR	Kyzyl	2.38	46	Pg	Pg	22 20 32.7	-1.9
KZLR				Sg	Sg	22 21 05.1	-0.4
ULGR	Ulagan, Altay	2.45	284	Pg	Pg	22 20 35.5	-0.5
ULGR				Sg	Sg	22 21 08.0	+0.3
CHBI	Chibit, Altay	2.70	276	Pg	Pb	22 20 38.7	+1.2
CHBI				Sg	Sg	22 21 15.2	-0.5
DJO	Djoy, Khakassi	2.72	354	Pg	Pg	22 20 40.3	-0.7
DJO				Sg	Sg	22 21 16.1	-0.1
DJOS	Djoyskaya Sosn	2.72	356	Pg	Pg	22 20 40.8	-0.3
DJOS				Sg	Sg	22 21 16.3	0.0
ARDR	Aradan	2.72	23	Pg	Pg	22 20 39.5	-1.6
ARDR				Sg	Sg	22 21 14.3	-2.1
CERR	Cheremushki	2.78	356	Pg	Pg	22 20 40.7	-1.5
CERR				Sg	Sg	22 21 18.2	+0.1
DGZ	Jazzator, Alta	2.78	264	Pg	Pb	22 20 39.8	+0.9
DGZ				Sg	Sg	22 21 17.4	-1.0
TBTR	Tabat	2.91	348	Pg	Pg	22 20 43.1	-1.6
TBTR				Sg	Sg	22 21 22.1	-0.4
BLRR	Bol'shaya Rech	2.99	9	Pg	Pg	22 20 45.2	-1.0
BLRR				Sg	Sg	22 21 23.8	-1.2
ARTR	Artybash	3.28	303	Pg	Pg	22 20 50.2	-1.5
ARTR				Sg	Sg	22 21 33.4	-0.7
TASR	Tashtagol	3.59	320	Pg	Pg	22 20 55.5	-2.2
TASR				Sg	Sg	22 21 44.6	+0.5
ABNR	Abakan	3.65	358	Pg	Pg	22 20 57.6	-1.2
ABNR				Sg	Sg	22 21 45.0	-1.1
KNGR	Kungurtug, Tuv	3.77	80	Pn	Pn	22 20 49.8	+2.6
KNGR				Pg	Pb	22 20 56.2	+0.6
KNGR				Sg	Sg	22 21 48.1	-1.7
LUZB	Luzhba, Kemero	3.98	335	Pg	Pg	22 21 02.6	-2.5
LUZB				Sg	Sg	22 21 56.3	-0.3
GALT	Gorno-Altaysk,	4.08	300	Pg	Pg	22 21 04.7	-2.4
GALT				Sg	Sg	22 21 59.8	-0.2
UKR	Ust'-Kan	4.50	284	Pg	Pg	22 21 11.7	-3.4
UKR				Sg	Sg	22 22 12.5	-0.8
SHRR	Shira	4.51	349	Pg	Pg	22 21 13.0	-2.4
SHRR				Sg	Sg	22 22 13.0	-0.8
KTRR	Kuturchin	5.10	17	Pg	Pg	22 21 23.6	-2.9
KTRR				Sg	Sg	22 22 31.1	-1.4
BJR3	Bachatsky-3 (S	5.37	323	Sg	Sg	22 22 42.9	+1.8
BJR4	Bachatsky-4, K	5.38	324	Sg	Sg	22 22 43.3	+1.8
BJR2	Bachatsky-2, K	5.42	323	Sg	Sg	22 22 44.7	+1.9
BJR1	Bachatsky 1, K	5.42	322	Sg	Sg	22 22 42.5	-0.4
SALR	Pechorkino, Sa	5.69	322	Pg	Pg	22 21 33.7	-4.1
SALR				Sg	Sg	22 22 51.7	+0.3
ZAA0	Zalesovo Array 0.1nm,0.3s	5.74	315	⇑Pn	Pn	22 21 15.6	+1.5
ZAA0	 0.9nm,0.8s			⇑Pg	Pb	22 21 32.7	+3.5
ZAA0	 5.4nm,0.8s			⇓Lg	Lg	22 22 54.8	
ZALV	Zalesovo Beam 0.6nm,0.3s,baz=134,slow=13,SNR=9.7	5.74	315	Pn	Pn	22 21 16.5	+2.3
ZALV	 1.0nm,0.3s,baz=134,slow=16,SNR=9.6			Pg	Pb	22 21 32.4	+3.2
ZALV	 1.8nm,0.3s,baz=128,slow=26,SNR=14			Lg	Lg	22 22 52.7	
BRCR	Berchikul'	5.93	341	Pg	Pg	22 21 37.8	-4.5
BRCR				Sg	Sg	22 22 55.3	-3.8
NVS	Novosibirsk	7.03	316	Pg	Pg	22 21 58.5	-4.9
NVS				Sg	Sg	22 23 32.2	-2.1
NVSII	Novosibirsk	7.03	316	Pg	Pg	22 21 58.5	-4.9
NVSII				Sg	Sg	22 23 31.9	-2.3
MK31	Makanchi Array 0.3nm,0.2s,baz=78,slow=13,SNR=74	7.07	246	⇑Pn	Pn	22 21 33.5	+1.0
MK31	 3.1nm,0.5s,baz=67,slow=18,SNR=9.9			⇑Pg	Pg	22 21 59.0	-5.2
MK31	 5.8nm,0.5s,baz=65,slow=31,SNR=4.7			⇑Lg	Lg	22 23 36.4	
MKAR	Makanchi Array 0.6nm,0.3s,baz=60,slow=13,SNR=18	7.07	246	Pn	Pn	22 21 34.0	+1.5
MKAR	 1.0nm,0.3s,baz=72,slow=29,SNR=2.9			Lg	Lg	22 23 29.6	
BSTK	Bystrovka, Nov	7.13	312	Pg	Pg	22 22 02.0	-3.4
BSTK				Sg	Sg	22 23 38.6	+1.1
MAKZ	Makanchi 0.9nm,0.5s	7.25	247	⇓Pn	Pn	22 21 36.0	+1.1
MAKZ	 3.2nm,0.5s			⇓Pg	Pg	22 22 02.1	-5.6
MAKZ	 5.7nm,0.8s			⇑Lg	Lg	22 23 35.3	
TLY	Talaya 0.0nm,0.3s,baz=67,slow=2.4,SNR=3.9	7.73	74	Lg	Lg	22 23 52.0	
KURK	Kurchatov 1.3nm,0.7s	8.38	279	⇑Pn	Pn	22 21 52.4	+2.0
KURK	 20nm,0.9s			⇑Lg	Lg	22 24 16.1	
KURBB	Kurchatov Arra 0.2nm,0.3s,baz=91,slow=14,SNR=15	8.44	279	Pn	Pn	22 21 52.2	+1.1
KURBB	 0.1nm,0.3s,baz=91,slow=14,SNR=2.7			Pg	Pb	22 22 14.9	-0.1
KURBB	 0.2nm,0.3s,baz=85,slow=33,SNR=7.7			Lg	Lg	22 24 18.6	
KURBB	Kurchatov Arra 2.2nm,0.5s	8.44	279	⇑Pn	Pn	22 21 51.5	+0.3
KURBB	 50nm,0.7s			⇓Lg	Lg	22 24 18.3	
SONM	Songino Array 0.1nm,0.3s,baz=279,slow=15,SNR=3.2	9.93	97	Pn	Pn	22 22 11.7	-0.1
SONM	 0.2nm,0.3s,baz=287,slow=15,SNR=3.6			Pg		22 22 47.5	
SONM	 0.5nm,0.3s,baz=287,slow=28,SNR=6.7			Lg	Lg	22 25 01.1	

IDC 17 22:29:36.8±23.0**, 7°.34N**×**102°.30W, h0^{km}, mb3.3**/3**, mb1 3.8**/3**, mb1mx3.5**/28**, mbtmp3.4**/3**, MS3.4**/1**, Ms1 3.4**/1**, ms1mx2.9**/12**, Error ellipse: s-maj=416.2km s-min=148.4km az=138.0, Northern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TXAR	Lajitas Array 0.5nm,0.8s,baz=184,slow=11,SNR=4.7	21.92	357	P	P	22 34 32.1	+0.1
ANMO	Albuquerque comp=Z,75nm,18.2s,baz=104,slow=35	27.74	353	LR	LR	22 45 55.3	
NVAR	Mina Array Bea 0.1nm,0.3s,baz=158,slow=9.7,SNR=2.2	34.17	337	P	P	22 36 24.4	+0.3
PDAR	Pinedale Array 1.2nm,1.0s,baz=171,slow=10,SNR=5.6	35.87	351	P	P	22 36 38.1	-0.6
H03N2	Juan Fernandez baz=329,slow=77,SNR=13	46.23	153	T	T	23 29 22.3	
H03N1	Juan Fernandez baz=329,slow=77,SNR=17	46.23	153	T	T	23 29 24.8	
H03N3	Juan Fernandez baz=329,slow=77,SNR=15	46.24	153	T	T	23 29 20.6	

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*JMA **17** 22:34:33.2±0.4, 39°.92N×143°.28E, h13^{km}±4^{km}, M3.3*

*IDC **17** 22:34:40.1±3.0, 40°.17N×142°.01E, h0^{km}, mb3.5/4, mb1 3.5/5, mb1mx3.3/43, mbtmp3.4/5, ML1.9/1, Error ellipse: s-maj=78.5km s-min=26.7km az=69.0*

ISC 17 22:34:32.6±1.7**, 39°.95N**±0°.07×**143°.3E**±0°.1**, h10^{km}, n18, σ0^{s}.87**/18**, mb3.4**/4**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	1.13	270	P	Pb	22 34 53.1	-1.1
MIYJ	Miyakonagasawa	1.23	253	P	Pb	22 34 55.1	-0.8
JKEN	Kujiedanarisaw	1.27	282	P	Pn	22 34 55.6	-0.8
JANG	Nango	1.46	287	P	Pn	22 34 58.9	-0.1
JOM	Ohasama	1.65	254	P	Pn	22 35 01.8	+0.2
JMK	Ichinoseki	1.92	239	P	Pn	22 35 04.9	-0.4
JTM	Tenmabayashi	1.92	296	P	Pb	22 35 06.7	-1.0
JTM				*e*S	Sb	22 35 31.6	-0.2
JAH	Hinai	2.08	277	P	Pn	22 35 08.7	+1.1
JIO	Ouri	2.15	227	P	Pn	22 35 07.4	-1.1
JRG	Rokugo	2.16	256	P	Pn	22 35 09.5	+0.9
JOT	Ohata	2.25	310	P	Pb	22 35 12.3	-1.0
JNBK	Urakawa-nobuka	2.37	349	P	Pb	22 35 14.2	-1.1
JYK	Kaneyama	2.53	247	P	Pn	22 35 14.0	+0.3
MJAR	Matsushiro Arr 0.1nm,0.3s,baz=37,slow=12,SNR=4.8	5.28	231	Pn	Pn	22 35 52.0	+0.4
SONM	Songino Array 0.2nm,0.4s,baz=106,slow=11,SNR=3.2	27.55	299	P	P	22 40 20.3	+0.6
ZALV	Zalesovo Beam 0.6nm,0.4s,baz=90,slow=8.1,SNR=4.4	41.13	310	P	P	22 42 17.5	+0.9
MKAR	Makanchi Array 0.3nm,0.8s,baz=81,slow=9.3,SNR=2.9	43.91	300	P	P	22 42 40.1	+0.8
WRA	Warramunga Arr 0.6nm,0.9s,baz=7.3,slow=7.4,SNR=3.4	60.17	190	P	P	22 44 50.1	+10

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*IDC **17** 22:37:06.5±2.1, 24°.99N×123°.29E, h0^{km}, mb3.5/5, mb1 3.7/5, mb1mx3.4/38, mbtmp3.5/5, MS2.5/1, Ms1 2.5/1, ms1mx2.2/34, Error ellipse: s-maj=168.6km s-min=19.9km az=65.0*

*JMA **17** 22:37:07.5±0.2, 25°.02N×123°.44E, h30^{km}±4^{km}, M2.9*

ISC 17 22:37:09.9±1.0**, 24°.89N**±0°.08×**123°.42E**±0°.05**, h32^{km}, n13, σ1^{s}.32**/17**, mb3.5**/5**, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.57	222	P	Pb	22 37 20.5	-0.9
YOJ				*e*S	Sb	22 37 29.2	-0.2
JYNG	Yonagunijimaku	0.61	225	P	Pn	22 37 21.1	-1.2
JYNG				S	Sb	22 37 31.0	+0.3
IRIF	Iriomote-Funau	0.62	153	P	Pn	22 37 21.3	-1.1
IRIF				*e*S	Sb	22 37 31.0	+0.2
JIJ	Ishigaki jima	0.84	128	P	Pn	22 37 24.0	-1.4
JIJ				*e*S	Sn	22 37 35.9	-0.7
JKRS	Kuro-shima	0.84	140	P	Pn	22 37 24.6	-0.8
JKRS				S	Sn	22 37 36.8	+0.1
JISG	Ishigakijimahi	0.86	110	*e*S	Sn	22 37 36.1	-1.1
HATJ	Hateruma jima	0.90	157	P	Pn	22 37 25.8	-0.4
KSRS	Korea Array comp=Z,18nm,19.1s,baz=160,slow=40	13.10	16	LR	LR	22 45 54.1	
SONM	Songino Array 0.7nm,0.8s,baz=142,slow=8.4,SNR=5.4	26.58	334	P	P	22 42 46.3	+1.2
MKAR	Makanchi Array 0.7nm,0.8s,baz=102,slow=11,SNR=6.8	39.28	314	P	P	22 44 35.6	0.0
ZALV	Zalesovo Beam 0.7nm,0.6s,baz=108,slow=9.3,SNR=4.3	40.79	326	P	P	22 44 46.6	-1.4
WRA	Warramunga Arr 0.9nm,0.9s,baz=349,slow=8.8,SNR=3.6	45.81	166	P	P	22 45 30.2	+1.3
ASAR	Alice Springs 0.2nm,0.5s,baz=356,slow=7.4,SNR=3.2	49.32	167	P	P	22 45 59.5	+3.3

NNC 17 22:45:25.4±4.3**, 37°.94N**×**69°.40E, h0^{km}, mb3.8, mpv3.6, 2C-2D, Error ellipse: s-maj=30.0km s-min=28.6km az=49.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRLS	Borolday 22nm,0.4s	5.10	4	Pg	Pb	22 46 55.1	-0.4
BRLS	 15nm,0.5s			Lg	Lg	22 48 01.2	
KK31	Karatay Array 1.1nm,0.6s,baz=191,slow=18,SNR=5.1	5.23	9	⇓Pg	Pb	22 46 59.1	+1.4
KK31	 14nm,0.8s,baz=194,slow=27,SNR=11			⇓Lg	Lg	22 48 09.3	
MRKS	Merke 8.4nm,0.5s	5.62	30	Pg	Pb	22 47 08.4	+3.9
MRKS	 5.5nm,0.6s			Lg	Lg	22 48 24.7	
AAK	Ala-Archa 2.3nm,0.8s	6.10	38	⇑Pg	Pb	22 47 16.6	+4.0
AAK	 8.1nm,1.2s			⇑Lg	Lg	22 48 39.3	

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*WEL **17** 22:53:02.1±0.6, 32°S±11°×18°0W±2°6, h330^{km}±9^{km}, M4.3/21, mB4.8/21, ML4.9/6, MLv4.9/15, Mw(mB)4.1/21, Error ellipse: s-maj=0.0km s-min=0.0km az=111.5*

*IDC **17** 22:53:05.7±4.0, 32°.43S×179°.97E, h377^{km}±40^{km}, mb3.5/3, mb1 3.6/5, mb1mx3.4/31, mbtmp4.3/5, Error ellipse: s-maj=45.8km s-min=27.8km az=8.0*

ISC 17 22:53:02.4±0.8**, 32°.16S**±0°.08×**180°.0E**±0°.2**, h350^{km}, n49, σ1^{s}.30**/60**, mb3.6**/3**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.40	33	P	Pn	22 54 03.3	-2.3
GLKZ				S	S	22 54 47.5	-8.9
HAZ	Te Kaha	5.87	197	P	Pn	22 54 33.2	+1.6
HAZ				S	S	22 55 44.4	+0.5
PKGZ	Pakihiroa	5.93	195	P	Pn	22 54 33.4	+1.0
PKGZ				S	S	22 55 43.7	-1.6
MYRZ	Mayor Island	5.97	210	P	Pn	22 54 38.8	+6.1
PUZ	Puketiti	6.07	193	P	Pn	22 54 38.9	+5.1
RUGZ	Raukumara Rang	6.10	197	P	Pn	22 54 35.1	+0.8
RUGZ				S	S	22 55 47.6	-1.2
TWGZ	Tauwhareparae	6.23	195	P	Pn	22 54 37.8	+2.1
TWGZ				S	S	22 55 52.7	+1.3
MKAZ	Moumakai	6.34	217	P	Pn	22 54 43.0	+6.1
CNGZ	Carnagh Statio	6.48	192	P	Pn	22 54 40.6	+2.1
MWZ	Matawai	6.48	197	P	Pn	22 54 39.7	+1.0
MWZ				S	S	22 55 58.2	+1.3
TKGZ	Te Karaka	6.51	195	P	Pn	22 54 39.6	+0.7
TKGZ				S	S	22 55 57.0	-0.3
URZ	Urewera 9.0nm,0.3s,baz=268,slow=3.2,SNR=33	6.53	200	P	Pn	22 54 39.8	+0.7
URZ	 14nm,0.3s,baz=261,slow=23,SNR=16			S	S	22 55 57.9	+0.2
URZ	Urewera	6.53	200	P	Pn	22 54 39.4	+0.3
URZ				S	S	22 55 57.7	0.0
RIGZ	Rimuhau	6.78	195	P	Pn	22 54 42.5	+0.3
RIGZ				S	S	22 56 03.6	+0.4
HSRZ	Hossack Road	6.86	205	P	Pn	22 54 48.1	+5.1
RTZ	Ruatahuna	6.89	200	P	Pn	22 54 43.5	0.0
RTZ				S	S	22 56 05.1	-0.6
SNGZ	Shannon Statio	6.95	197	P	Pn	22 54 44.9	+0.8
SNGZ				S	S	22 56 08.3	+1.4
PRGZ	Paritu Road	6.96	194	P	Pn	22 54 45.0	+0.8
PRGZ				S	S	22 56 05.5	-1.6
ALRZ	Allen Road	7.05	204	P	Pn	22 54 47.2	+2.0
BHHZ	Black Hill Sta	7.98	202	P	Pn	22 54 55.3	-0.9
BHHZ				S	S	22 56 27.3	-1.8
PNHZ	Pukenui	8.32	201	P	Pn	22 54 59.1	-1.2
PNHZ				S	S	22 56 34.1	-2.4
TSZ	Takapari Road	8.53	201	P	Pn	22 55 01.6	-1.1
TSZ				S	S	22 56 38.2	-2.8
BFZ	Birch Farm	9.02	198	P	Pn	22 55 08.2	-0.3
MRZ	Mangatainoka R	9.20	201	P	Pn	22 55 09.2	-1.4
HOWZ	Holdsworth Sta	9.43	201	P	Pn	22 55 12.2	-1.3
OGWZ	Otaki Gorge	9.47	203	P	Pn	22 55 13.2	-0.6
TMWZ	Te Maipa	9.52	199	P	Pn	22 55 13.0	-1.5
KIW	Kapiti Island	9.60	204	P	Pn	22 55 15.5	+0.1
MTW	Mount Morrison	9.68	201	P	Pn	22 55 16.6	+0.3
CAW	Cannon Point	9.77	202	P	Pn	22 55 17.7	+0.3
TRWZ	Traveller	9.84	199	P	Pn	22 55 18.7	+0.3
PAWZ	Paruwai Farm	9.90	200	P	P	22 55 20.9	+0.3
DUWZ	D'Urville Isla	9.91	208	P	Pn	22 55 17.8	-1.3
MSWZ	Moikau Station	9.99	201	P	Pn	22 55 20.1	+0.1
BHW	Baring Head	10.10	202	P	Pn	22 55 21.5	+0.1
PLWZ	Palliser	10.13	201	P	Pn	22 55 21.9	+0.2
TUWZ	Tuamarina	10.44	206	P	Pn	22 55 25.6	+0.1
RPZ	Rata Peaks 1.8nm,0.3s,baz=297,slow=2.0,SNR=11	13.51	209	P	Pn	22 56 01.8	+0.1
RPZ	 0.9nm,0.3s,baz=296,slow=23,SNR=6.9			S	S	22 58 23.2	-4.9
STKA	Stephens Creek 0.8nm,0.4s,baz=80,slow=6.1,SNR=3.6	32.44	260	P	P	22 59 02.8	+1.7
ASAR	Alice Springs 2.3nm,0.6s,baz=107,slow=7.5,SNR=28	41.33	270	P	P	23 00 16.3	+0.9
WRA	Warramunga Arr 3.4nm,0.3s,baz=112,slow=8.0,SNR=102	42.48	275	P	P	23 00 25.1	+0.4
MKAR	Makanchi Array 0.5nm,0.7s,baz=223,slow=1.3,SNR=6.4	117.57	310	PKP	PKPdf	23 11 06.5	-0.2
ZALV	Zalesovo Beam 0.2nm,0.3s,baz=116,slow=3.4,SNR=2.0	118.19	318	PKP	PKPdf	23 11 07.2	-0.4
ARCES	ARCESS Array B 5.3nm,1.0s,baz=29,slow=2.1,SNR=5.6	139.91	346	PKhKP	PKPpre	23 11 42.9	
FINES	FINESS Array B 8.5nm,0.5s,baz=43,slow=4.3,SNR=76	146.15	338	PKPbc	PKPbc	23 12 01.8	+0.7
NB2	NORSAR Subarra comp=Z,4.0nm,1.0s,baz=17,slow=2.6	150.18	349	PKP	PKPbc	23 12 12.0	+0.4
NOA	NORSAR Array B comp=Z,1.6nm,0.8s,baz=17,slow=4.3,SNR=2.7	150.18	349	PKPbc	PKiKP	23 12 12.5	+0.3
AKASG	Malin Array Be comp=Z,1.1nm,0.5s,baz=53,slow=2.5,SNR=6.1	151.57	319	PKPbc	PKPbc	23 12 15.5	+0.5
BRTR	Keskin Array B comp=Z,1.0nm,0.6s,baz=169,slow=3.5,SNR=2.6	151.84	295	PKPbc	PKPbc	23 12 16.1	-0.1

KRSC 17 23:03:54.3±3.0**, 48°.17N**×**156°.66E, h9^{km}**±54^{km}**, ML3.9, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	2.54	352	S	Sn	23 05 07.9	+1.4

PAU	Pauzhetka	3.30	2	S	Sb	23 05 29.4	-3.7
KDTR	Khodutka, Kamc	3.75	14	P	Pn	23 04 55.6	+3.3
KDTR				S	Sb	23 05 42.8	-3.4
MTVR	Mutnovka	4.42	12	eP	Pn	23 05 05.1	+3.4
MTVR				eS	Sb	23 06 00.2	-5.4
RUS	Russkaya	4.43	15	eP	Pn	23 05 05.2	+3.7
RUS				S	Sn	23 05 58.3	+5.2
GRL	Gorelyy	4.48	11	eP	Pn	23 05 06.1	+3.7
GRL				eS	Sb	23 06 02.0	-5.1
UGLR	Uglovaya	5.23	14	P	Pn	23 05 18.4	+5.8
AVH	Avacha	5.27	14	P	Pn	23 05 18.4	+5.2
KOK	Koryaka	5.28	13	eP	Pn	23 05 18.4	+5.1
SDLR	Sedlovina	5.30	15	P	Pn	23 05 17.1	+3.4
KRX	Arik	5.34	13	P	Pn	23 05 20.1	+5.8

WEL 17 23:18:39.9±0.7**, 38˚S**±5˚×**18˚0W**±˚**, h33^{km}, M3.7**/48**, mB4.8**/3**, ML3.8**/48**, MLv3.6**/48**, Mw(mB)4.1**/3**, Error ellipse: s-maj=0.0km s-min=0.0km az=24.3, East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	1.29	262	P	Pn	23 19 01.7	+0.1
WMGZ				S	Sn	23 19 18.8	+1.0
MXZ	Matakaoa Point	1.37	273	P	Pn	23 19 01.9	-0.8
MXZ				S	Sn	23 19 18.3	-1.4
PKGZ	Pakihiroa	1.56	261	P	Pn	23 19 05.1	-0.3
PKGZ				S	Sn	23 19 24.0	-0.6
CNGZ	Carnagh Statio	1.66	240	P	Pn	23 19 08.2	+1.6
TWGZ	Tauwhareparae	1.70	252	P	Pn	23 19 08.2	+0.9
TWGZ				S	Sn	23 19 29.1	+1.2
HAZ	Te Kaha	1.78	266	P	Pn	23 19 08.4	0.0
RUGZ	Raukumara Rang	1.89	260	P	Pn	23 19 10.0	+0.1
TKGZ	Te Karaka	1.89	245	P	Pn	23 19 10.7	+0.8
RIGZ	Rimuhau	2.07	239	P	Pn	23 19 13.4	+1.0
MWZ	Matawai	2.09	250	P	Pn	23 19 12.9	+0.2
MWZ				S	Sn	23 19 38.1	+0.5
PRGZ	Paritu Road	2.11	233	P	Pn	23 19 14.0	+1.1
RAGZ	Rawiri	2.23	247	P	Pn	23 19 15.5	+0.9
RAGZ				S	Sn	23 19 41.3	+0.4
MHGZ	Mahia Peninsul	2.24	228	P	Pn	23 19 15.9	+1.2
KNZ	Kokohu	2.30	233	P	Pn	23 19 16.0	+0.5
URZ	Urewera	2.38	255	P	Pn	23 19 17.5	+0.8
URZ				S	Sn	23 19 44.7	-0.1
WHRZ	Whale Island	2.43	264	P	Pn	23 19 18.3	+1.0
WHRZ				S	Sn	23 19 45.7	-0.1
RTZ	Ruatahuna	2.59	247	P	Pn	23 19 20.6	+1.0
RTZ				S	Sn	23 19 49.6	-0.3
RAHZ	Arahi	2.63	241	P	Pn	23 19 21.4	+1.3
RAHZ				S	Sn	23 19 52.9	+1.9
MUGZ	Murupara	2.70	251	P	Pn	23 19 21.8	+0.8
MTHZ	Maungataniwha	2.78	244	P	Pn	23 19 22.9	+0.7
MTHZ				S	Sn	23 19 54.8	+0.2
TARZ	Mount Tarawera	2.84	257	P	Pn	23 19 24.4	+1.4
ARHZ	Aropaoanui	2.87	235	P	Pn	23 19 24.7	+1.3
ARHZ				S	Sn	23 19 60.0	+3.3
NMHZ	Naumai	2.91	239	P	Pn	23 19 25.2	+1.2
NMHZ				S	Sn	23 19 56.9	-1.0
CKHZ	Cape Kidnapper	3.05	228	P	Pn	23 19 26.5	+0.6
CKHZ				S	Sn	23 20 02.9	+1.6
MRHZ	Matea Rd	3.08	246	P	Pn	23 19 26.8	+0.6
BKZ	Black Stump Fm	3.16	240	P	Pn	23 19 28.1	+0.7
MCHZ	McNeill Hill	3.16	235	P	Pn	23 19 28.5	+1.2
KAHZ	Kahuranaki	3.26	228	P	Pn	23 19 29.3	+0.5
KWHZ	Kaweka Forest	3.33	237	P	Pn	23 19 30.3	+0.5
PXZ	Pawanui	3.42	225	P	Pn	23 19 30.7	-0.3
KRHZ	Kereru	3.48	234	P	Pn	23 19 32.3	+0.5
BHHZ	Black Hill Sta	3.60	238	P	Pn	23 19 33.9	+0.4
TLZ	Tolley Road	3.61	258	P	Pn	23 19 34.8	+1.2
KATZ	Kakaramea	3.65	248	P	Pn	23 19 34.4	+0.2
TMVZ	Te Maari	3.70	245	P	Pn	23 19 35.3	+0.4
ETVZ	East Tongariro	3.70	245	P	Pn	23 19 35.4	+0.5
PRHZ	Porangahau	3.71	224	P	Pn	23 19 34.4	-0.5
KRVZ	Karewarewa	3.73	246	P	Pn	23 19 35.0	-0.3
OTVZ	Oturere	3.74	245	P	Pn	23 19 35.4	-0.1
PNHZ	Pukenui	3.74	232	P	Pn	23 19 35.5	+0.1
WTVZ	West Tongariro	3.78	246	P	Pn	23 19 35.2	-0.8
MOVZ	Moawhango	3.78	241	P	Pn	23 19 36.5	+0.6
NGZ	Ngauruhoe	3.79	245	P	Pn	23 19 35.4	-0.8
WHVZ	Whangaehu Hut	3.84	244	P	Pn	23 19 36.2	-0.8
WNVZ	Wahianoa	3.85	243	P	Pn	23 19 36.4	-0.6
TWVZ	Taurewa	3.87	247	P	Pn	23 19 35.1	-2.2
MKAZ	Moumakai	3.92	277	P	Pn	23 19 37.3	-0.4
ANWZ	Angora Road	3.93	224	P	Pn	23 19 38.7	+0.7
MTVZ	Mangateitei	3.97	243	P	Pn	23 19 36.9	-1.6
TSZ	Takapari Road	3.98	232	P	Pn	23 19 38.1	-0.5
DVHZ	Dannevirke	4.00	228	P	Pn	23 19 38.3	-0.7
BFZ	Birch Farm	4.21	223	P	Pn	23 19 40.6	-1.3
PRWZ	Pori Road	4.28	226	P	Pn	23 19 42.7	0.0
MRZ	Mangatainoka R	4.58	228	P	Pn	23 19 45.8	-1.0
TMWZ	Te Maipa	4.70	222	P	Pn	23 19 47.3	-1.3
HOWZ	Holdsworth Sta	4.77	226	P	Pn	23 19 48.5	-0.9
WCZ	Waipu Caves	4.87	289	P	Pn	23 19 50.8	-0.1
OGWZ	Otaki Gorge	4.92	229	P	Pn	23 19 50.6	-0.9
MTW	Mount Morrison	4.95	224	P	Pn	23 19 50.1	-1.9
TRWZ	Traveller	5.02	221	P	Pn	23 19 51.2	-1.8
CAW	Cannon Point	5.16	227	P	Pn	23 19 53.5	-1.3
BHW	Baring Head	5.47	225	P	Pn	23 19 57.3	-1.8
OUZ	Omahuta	5.73	293	P	Pn	23 20 02.6	0.0
CTZ	Chatham Island	6.58	158	P	Pn	23 20 18.9	+4.6
CTZ				S	Sn	23 21 28.6	+0.4

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*TEH **17** 23:41:27.5, 32°.23N×47°.56E, h15^{km}, ML3.0*
*ISN **17** 23:41:27.7±1.3, 32°.23N×47°.52E, h15^{km}±10^{km}, ML2.7*
ISC 17 23:41:27.9±1.1**, 32°.20N**±0°.05×**47°.55E**±0°.04**, h10^{km}, n21, σ0^s.65**/23**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DHL1	Dehloran	0.53	335	ePg	Pg	23 41 37.5	-0.7
AHWZ	Ahwaz	1.27	133	ePg	Pn	23 41 52.0	+0.3
IKFM	Kafar-mosalman	1.34	11	ePg	Pn	23 41 52.3	-0.4
IKFM				e		23 42 15.6	
	comp=Z,99nm,0.5s						
IKMR	Kamar-syah	1.49	28	ePg	Pn	23 41 55.0	+0.3
IKMR				e		23 42 19.2	
	comp=Z,99nm,0.8s						
IBDR	Badra	1.64	304	ePg	Pn	23 41 57.0	+0.3
IBDR				eSg	Sn	23 42 18.0	+0.1
IBDR				AML	AML	23 42 23.1	
	comp=N,104nm,0.5s						
IBDR				AML	AML	23 42 23.8	
	comp=E,89nm,0.6s						
IDOB	Doab	1.67	18	ePg	Pb	23 41 58.3	-0.5
NSR	Nassriya	1.69	226	ePn	Pn	23 41 58.0	+0.6
NSR				eSn	Sn	23 42 19.0	-0.1
NSR				AML	AML	23 42 24.0	
	comp=E,133nm,0.7s						
KCHF	Cheshme Sefid,	2.11	348	e	Sb	23 42 50.8	+18
	comp=Z,99nm,0.5s						
HSAM	Samen	2.19	23	e		23 42 49.6	
	comp=Z,99nm,0.7s						
HSAM				ePn	Pn	23 42 05.5	+0.9
KER	Kermanshah	2.21	351	ePn	Pn	23 42 05.5	+0.8
IDHR	Dehrash	2.67	339	ePn	Pn	23 42 11.7	+0.5
IDHR				e		23 42 57.2	
	comp=Z,99nm,0.6s						
SHK1	Shahrekord	2.83	87	ePn	Pn	23 42 13.4	+0.1
SHK1				e		23 43 12.2	
	comp=Z,99nm,0.7s						
IPIR	Pirpir	2.87	79	ePn	Pn	23 42 15.0	+1.1
IPIR				e		23 43 10.9	
	comp=Z,99nm,1.0s						
BHD	Baghdad	2.88	293	ePn	Pn	23 42 14.0	+0.3
BHD				eSn	Sn	23 42 49.5	+1.1
HAGD	Aghdareh	2.93	27	ePn	Pn	23 42 15.6	+0.8
HAGD				e		23 43 02.3	
	comp=Z,99nm,0.5s						
IKLH	Kolahrood	3.57	71	ePn	Pn	23 42 24.6	+1.0
IKLH				e		23 43 28.6	
	comp=Z,99nm,0.4s						
IRAZ	Razeghan	3.76	31	ePn	Pn	23 42 26.7	+0.6
IGAR	Gharneh	3.81	86	ePn	Pn	23 42 26.5	-0.3
IZEF	Zefreh	4.10	79	ePn	Pn	23 42 31.3	+0.5
IRAM	Ramesheh	4.12	94	ePn	Pn	23 42 31.4	+0.3
KRSH	Karshahi	4.23	64	ePn	Pn	23 42 33.3	+0.7

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*ISN **17** 23:46:21.8±1.3, 32°.21N×47°.56E, h21^{km}±8^{km}, ML3.0*
*TEH **17** 23:46:21.6, 32°.20N×47°.60E, h18^{km}, ML3.2*
ISC 17 23:46:24.9±1.3**, 32°.22N**±0°.05×**47°.54E**±0°.04**, h35^{km}, n26, σ1^s.21**/30**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DHL1	Dehloran	0.51	335	ePg	Pn	23 46 31.7	-4.0
DHL1				eSg	Sn	23 46 41.6	-1.6
AHWZ	Ahwaz	1.29	133	ePg	Pn	23 46 45.4	-1.0
IKFM	Kafar-mosalman	1.33	11	ePg	Pn	23 46 46.6	-0.3
IKFM				e		23 47 11.3	
	comp=Z,99nm,0.6s						
IKMR	Kamar-syah	1.48	28	ePg	Pn	23 46 49.1	+0.1
IKMR				e		23 47 14.2	
	comp=Z,99nm,0.7s						
IBDR	Badra	1.62	304	ePg	Pn	23 46 51.0	0.0
IBDR				eSg	Sn	23 47 13.0	+2.3
IBDR				AML	AML	23 47 16.9	
	comp=N,239nm,0.4s						
IBDR				AML	AML	23 47 21.3	
	comp=E,127nm,0.5s						
IDOB	Doab	1.65	19	ePg	Pn	23 46 52.0	+0.4
NSR	Nassriya	1.70	225	ePg	Pn	23 46 52.0	0.0
NSR				eSg	Sn	23 47 12.0	-0.4
NSR				AML	AML	23 47 17.8	
	comp=E,182nm,0.6s						
KCHF	Cheshme Sefid,	2.09	349	ePn	Pn	23 46 57.7	+0.1
KCHF				e		23 47 33.3	
	comp=Z,99nm,0.8s						
HSAM	Samen	2.18	24	ePn	Pn	23 46 59.4	+0.5
HSAM				e		23 47 04.0	
	comp=Z,99nm,0.4s						
KER	Kermanshah	2.19	351	ePn	Pn	23 46 59.3	+0.4
IGHG	Ghaleghazi	2.26	339	ePn	Pn	23 47 00.9	+1.0
IGHG				e		23 47 57.3	
	comp=Z,99nm,1.2s						
IDHR	Dehrash	2.66	339	ePn	Pn	23 47 05.4	0.0
IDHR				e		23 47 51.4	
	comp=Z,99nm,0.6s						
IALM	Almabolaq	2.69	11	ePn	Pn	23 47 05.0	-0.9
ILIN	Lien	2.74	350	e		23 47 19.9	
	comp=Z,99nm,0.4s						
ILIN				ePn	Pn	23 47 05.2	-1.3
SHK1	Shahrekord	2.83	87	ePn	Pn	23 47 07.5	-0.4
SHK1				e		23 48 06.0	
	comp=Z,99nm,0.6s						
BHD	Baghdad	2.86	292	ePn	Pn	23 47 08.0	0.0
BHD				Sn	Sn	23 47 43.0	+1.8
BHD				AML	AML	23 48 11.4	
	comp=E,116nm,0.2s						
IPIR	Pirpir	2.87	80	ePn	Pn	23 47 08.8	+0.4
IPIR				e		23 48 04.7	
	comp=Z,99nm,0.9s						
HAGD	Aghdareh	2.92	27	e		23 47 15.6	
	comp=Z,99nm,0.2s						
HAGD				ePn	Pn	23 47 09.6	+0.5
IKLH	Kolahrood	3.58	71	ePn	Pn	23 47 18.2	+0.1
QAM	Ghamsar	3.62	64	ePn	Pn	23 47 19.9	+1.3
IRAZ	Razeghan	3.75	31	ePn	Pn	23 47 21.7	+1.3
QABG	Abgarm-Qazvin	3.87	25	ePn	Pn	23 47 21.3	-0.8
IZEF	Zefreh	4.10	79	ePn	Pn	23 47 24.7	-0.6
IRAM	Ramesheh	4.13	94	ePn	Pn	23 47 24.5	-1.2
KRSH	Karshahi	4.23	64	ePn	Pn	23 47 26.7	-0.4
QALM	Alamut, Qazvin	4.93	31	ePn	Pn	23 47 35.9	-0.7

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*JMA **17** 23:55:16.6±0.2, 39°.60N×143°.36E, h22^{km}±3^{km}, M3.7*
*NIED **17** 23:55:16.6, 39°.60N×143°.36E, h22^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}2.19; $M_{\theta\theta}$-0.29; $M_{\phi\phi}$-1.90; $M_{r\theta}$2.12; $M_{\theta\phi}$-1.44; $M_{\phi r}$2.93; Fault plane solution: $M_0$4.38000×10^{14} NP1:ϕ_s35.00000°, δ73.00000°, λ94.00000°. NP2:ϕ_s203.00000°, δ17.00000°, λ78.00000°.*
*IDC **17** 23:55:23.8±2.3, 40°.06N×141°.99E, h0^{km}, mb3.7/4, mb1 3.7/6, mb1mx3.5/34, mbtmp3.6/6, ML3.2/2, MS2.8/1, Ms1 2.8/1, ms1mx2.4/40 Error ellipse: s-maj=47.3km s-min=26.9km az=141.0*
ISC 17 23:55:16.9±2.5**, 39°.64N**±0°.07×**143°.23E**±0°.09**, h7^{km}**±14^{km}**, n28, σ0^s.72**/28**, mb3.6**/4**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MIYJ	Miyakonagasawa	1.09	267	P	Pg	23 55 37.7	-0.1
MIYJ				eS	Sb	23 55 52.7	+0.1
JTH	Tanohata	1.09	286	P	Pb	23 55 38.3	+0.1
JKEN	Kujiedanarisaw	1.30	296	P	Pn	23 55 40.9	-0.6
JKEN				eS	Sn	23 55 59.1	-0.1
OFUJ	Ofunato	1.33	246	P	Pn	23 55 41.3	-0.6
OFUJ				eS	Sb	23 55 59.5	0.0
JOM	Ohasama	1.51	264	P	Pn	23 55 44.7	+0.3
JANG	Nango	1.51	300	P	Pn	23 55 44.2	-0.2
JMK	Ichinoseki	1.70	247	P	Pn	23 55 46.8	-0.2
JMK				eS	Sn	23 56 08.6	-0.5
JTM	Tenmabayashi	2.02	305	P	Pn	23 55 51.8	+0.4
JRG	Rokugo	2.02	264	P	Pn	23 55 52.2	+0.7
JRG				eS	Sn	23 56 18.2	+1.2
JAH	Hinai	2.07	286	P	Pn	23 55 52.6	+0.5
JYK	Kaneyama	2.34	253	P	Pn	23 55 56.3	+0.5
JYK				eS	Sn	23 56 26.0	+1.1
JOU	Okura	2.37	238	P	Pn	23 55 56.2	0.0
JEM	Erimo	2.38	359	P	Pn	23 55 56.6	+0.3
JEM				eS	Sn	23 56 25.8	0.0
JNBK	Urakawa-nobuka	2.67	352	P	Pn	23 56 01.2	+0.9
JNBK				eS	Sn	23 56 33.7	+0.8
ASAJ	Asahikawa	4.50	354	Pn	Pn	23 56 25.8	+0.3
	2.0nm,0.3s,baz=230,slow=7.2,SNR=5.1						
MJAR	Matsushiro Arr	5.02	234	Pn	Pn	23 56 34.1	+1.3
	0.3nm,0.3s,baz=39,slow=12,SNR=13						
MAT	Matsushiro	5.02	234	P	Pn	23 56 33.6	+0.9
KSRS	Korea Array	12.18	265	LR	LR	00 02 06.7	
	comp=Z,50nm,20.4s,baz=2.0,slow=36						
SONM	Songino Array	27.63	299	P	P	00 01 04.9	-0.3
	1.0nm,0.7s,baz=89,slow=8.6,SNR=7.2						
H11N2	WAKE ISLAND Hy	28.42	127	T	T	00 30 52.8	
	baz=319,slow=74,SNR=17						
H11N1	WAKE ISLAND Hy	28.43	127	T	T	00 30 54.8	
	baz=319,slow=74,SNR=9.5						
H11N3	WAKE ISLAND Hy	28.44	127	T	T	00 30 55.4	
	baz=319,slow=74,SNR=9.4						
H11S1	WAKE ISLAND Hy	29.24	129	T	T	00 31 51.0	
	baz=321						
H11S3	WAKE ISLAND Hy	29.24	129	T	T	00 31 58.3	
	baz=321						
H11S2	WAKE ISLAND Hy	29.25	129	T	T	00 31 51.0	
	baz=321						
ZALV	Zalesovo Beam	41.27	310	P	P	00 03 02.6	0.0
	0.6nm,0.5s,baz=79,slow=8.2,SNR=3.6						
MKAR	Makanchi Array	44.00	300	P	P	00 03 23.2	-1.7
	0.9nm,0.5s,baz=85,slow=8.3,SNR=20						
ILAR	Eielson Array	46.54	34	P	P	00 03 54.3	+10
	0.5nm,0.8s,baz=261,slow=5.8,SNR=3.6						

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*NEIC **18** 00:09:40.9±2.1, 43°.67N±0°.05×105°.22W±0°.08, h0^{km}±2^{km}, ML3.5/44, Error ellipse: s-maj=10.4km s-min=8.0km az=290.0*
*IDC **18** 00:09:42.1±1.0, 44°.57N×106°.28W, h0^{km}, mb1 3.3/5, mb1mx3.2/37, mbtmp3.0/5, ML2.7/4, Error ellipse: s-maj=39.9km s-min=7.2km az=141.0*
ISC 18 00:09:39.7±1.0**, 43°.71N**±0°.05×**105°.19W**±0°.06**, h0^{km}, n61, σ1^s.22**/62**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	0.93	63	Pg	Pb	00 09 59.6	+0.8
RSSD					Sn	00 10 14.8	+0.3
K22A	Casper	1.44	223		Pn	00 10 05.1	-2.1
K22A				IAML		00 10 27.4	
	comp=N,409nm,0.5s						
K22A				IAML		00 10 28.3	
	comp=E,402nm,0.8s						
PHWY	Pilot Hill	2.41	185		Pn	00 10 21.9	+1.3
RWWY	Rawlins	2.51	217		Pn	00 10 22.1	+0.2
RWWY				IAML		00 10 56.6	
	comp=E,264nm,0.9s						
LAO	LASA Array	3.07	347	Pn	Pn	00 10 32.5	+3.0
LAO				IAML		00 11 26.9	
	comp=E,180nm,0.9s						
RLMT	Red Lodge	3.24	297		Pn	00 10 32.1	+0.1
BW06	Boulder Array	3.33	255	Pn	Pn	00 10 33.2	0.0
BW06				IAML		00 11 27.0	
	comp=E,67nm,0.8s						
PD31	Pinedale Array	3.33	255		Pn	00 10 33.4	+0.2
PDAR	Pinedale Array	3.33	255	Pn	Pn	00 10 33.1	-0.1
	comp=E,3.4nm,0.3s,baz=66,slow=8.4,SNR=34						
PDAR				Lg	Lg	00 11 16.3	
	comp=E,8.4nm,0.3s,baz=59,slow=30,SNR=5.0						
PDAR	Pinedale Array	3.33	255	Pn	Pn	00 10 33.7	+0.5
OGNE	Ogallala	3.62	139		Pg	00 10 48.1	-0.9
OGNE				IAML		00 11 55.8	
	comp=E,110nm,1.4s						
YNE	Yellowstone No	3.69	292		Pn	00 10 38.1	-0.1
YMP	Mirror Lake Pl	3.71	288	Pn	Pn	00 10 38.6	0.0
GCMT	Greycliff	3.81	305		Pn	00 10 40.5	+0.8
LKWY	Lake	3.84	285	Pn	Pn	00 10 42.5	+2.2
LKWY				IAML		00 11 55.2	
	comp=E,70nm,1.0s						
ISCO	Idaho Springs	3.92	185	Pn	Pn	00 10 42.7	+1.3
LOHW	Long Hollow	3.93	270	Pn	Pn	00 10 43.3	+1.8
LOHW				IAML		00 11 40.0	
	comp=E,38nm,0.8s						
LOHW				IAML		00 11 44.8	
	comp=E,45nm,0.8s						
H17A	Grant Village	3.94	282	Pn	Pn	00 10 42.8	+1.2
H17A				IAML		00 11 46.9	
	comp=N,63nm,1.3s						
H17A				IAML		00 11 47.0	
	comp=E,40nm,0.8s						
FLWY	Flagg Ranch	4.00	277	Pn	Pn	00 10 44.0	+1.6
REDW	Red Top Meadow	4.13	267	Pn	Pn	00 10 44.7	+0.4
REDW				IAML		00 11 54.5	
	comp=E,76nm,0.9s						
REDW				IAML		00 11 56.9	
	comp=E,90nm,1.0s						
YHH	Holmes Hill	4.21	287	Pn	Pn	00 10 45.3	0.0
O20A	White River Ci	4.23	214		Pn	00 10 46.0	+0.4
O20A				IAML		00 12 03.3	
	comp=E,68nm,0.8s						
O20A				IAML		00 12 07.9	
	comp=N,77nm,1.1s						
E28A	Huff	4.28	46	Pn	Pn	00 10 48.6	+2.4
E28A				IAML		00 12 38.3	
	comp=E,85nm,1.4s						
YHL	Hebgen Lake	4.45	287	Pn	Pn	00 10 48.1	-0.6
RDMU	Red Mountain	4.52	228	Pn	Pn	00 10 50.0	+0.5
TCUT	Toone Canyon	5.28	243	Pn	Pn	00 11 01.1	+1.1
EGMT	Eagleton	5.37	325		Pn	00 11 01.7	+0.6
LRM	Limekiln Ridge	5.58	295	Pn	Pn	00 11 05.0	+0.8
JLU	Jordanelle	5.59	238	Pn	Pn	00 11 04.8	+0.5
MCMT	McKenzie Canyo	5.61	284	Pn	Pn	00 11 06.9	+2.3
PV22	Blue Mesa, Par	5.84	209	Pn	Pn	00 11 08.5	+0.9
SPUT	South Promonto	5.87	248	Pn	Pn	00 11 08.8	+0.7
PV07	Paradox Valley	5.88	208		Pn	00 11 09.8	+1.6
PV15	Paradox Valley	5.91	206	Pn	Pn	00 11 09.9	+1.2
SDCO	Great Sand Dun	5.96	182		Pn	00 11 10.9	+1.5
PV23	Carpenter Ridg	5.99	210	Pn	Pn	00 11 10.6	+0.8
PV04	Paradox Valley	6.00	209		Pn	00 11 11.2	+1.3
PV10	Paradox Valley	6.07	210	Pn	Pn	00 11 13.9	+3.1
PV11	David Mesa, Pa	6.08	208	Pn	Pn	00 11 10.8	-0.1
PV16	Nyswonger Mesa	6.08	209	Pn	Pn	00 11 11.7	+0.7
SRU	San Rafael Swe	6.09	223	Pn	Pn	00 11 10.8	-0.3
PV19	Morning Glory	6.11	209	Pn	Pn	00 11 11.9	+0.6
PV18	Skein Mesa, Pa	6.14	209		Pn	00 11 13.2	+1.5
PV13	Radium Mtn., P	6.18	208	Pn	Pn	00 11 12.9	+0.4
ECSD	EROS Data Cent	6.22	87	Pn	Pn	00 11 13.8	+1.1
TMUT	Trail Mountain	6.31	228	Pn	Pn	00 11 14.4	+0.2
PV05	Paradox Valley	6.35	209		Pn	00 11 14.6	-0.2
Q16A	Castle Valley	6.57	225	Pn	Pn	00 11 17.8	+0.1
DUG	Dugway, Tooele	6.68	241		Pn	00 11 19.6	+0.4
MSO	Missoula	6.92	300	Pn	Pn	00 11 22.8	+0.4
MSU	Marysvale	7.40	228	Pn	Pn	00 11 29.6	+0.5
JTMT	Jette	7.53	306	Pn	Pn	00 11 32.0	+1.2
ELK	Elko	8.02	252	Pn	Pn	00 11 37.9	+0.3
	comp=E,0.1nm,0.3s,baz=54,slow=19,SNR=3.6						
ELK				Lg	Lg	00 13 40.0	
	comp=E,0.0nm,0.3s,baz=59,slow=16,SNR=1.6						
PSUT	Pine Spring	8.33	235	Pn	Pn	00 11 43.0	+1.1
CCUT	Cedar City	8.74	228	Pn	Pn	00 11 48.2	+0.7
U15A	North Rim	9.08	219	Pn	Pn	00 11 53.9	+1.7
ULM	Lac du Bonnet	9.13	41	Pn	Pn	00 11 51.9	-0.6
	comp=E,0.8nm,0.3s,baz=234,slow=12,SNR=10.0						
ULM				Sn	Sn	00 13 32.4	-3.5
	comp=E,0.2nm,0.3s,baz=335,slow=14,SNR=5.0						
ULM				Lg	Lg	00 14 21.9	
	comp=E,0.0nm,0.3s,baz=143,slow=20,SNR=1.5						
ULM	Lac du Bonnet	9.13	41	Pn	Pn	00 11 52.3	-0.2
B35A	Bob, Littlefor	9.23	56	Pn	Pn	00 11 54.3	+0.3
NVAR	Mina Array Bea	11.21	246	Pn	Pn	00 12 21.4	0.0
	comp=E,0.1nm,0.3s,baz=67,slow=14,SNR=3.1						
YKA	Yellowknife Ar	19.61	347	P	P	00 13 58.6	-11
	comp=E,0.1nm,0.3s,baz=152,slow=10,SNR=2.5						

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*INET **18** 00:31:34.5, 10°.53N×84°.12W, h15^{km}, MW3.1*
UCR 18 00:31:34.1±1.2**, 10°.30N×84°.31W, h102^{km}**±3^{km}**, MW3.6, 8C-5D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRA1	San Ramn	0.27	218	eP	Pn	00 31 48.8	-0.2
SRA1				eS	Sn	00 32 00.4	+0.3
HDC	Heredia	0.35	147	⇑eP	Pn	00 31 49.4	0.0
HDC3	Heredia 3	0.35	146	eP	Pn	00 31 49.4	-0.1
CEDE	Laguna Cedeo	0.43	296	i P	Pn	00 31 50.1	+0.4
CEDE				i S	Sn	00 32 02.3	+0.8
COVE	Coope Vega, Sa	0.43	348	eP	Pn	00 31 49.6	-0.1
COVE				eS	Sn	00 32 00.9	-0.5
ARE1	Arenal 1	0.43	292	⇓iP	Pn	00 31 50.2	+0.4
ARE1				eS	Sn	00 32 02.7	+1.2
CASO	Castillo	0.44	288	i P	Pn	00 31 50.1	+0.3
CASO				i S	Sn	00 32 02.2	+0.7
VTUC	Crater, Volcan	0.61	117	⇑iP	Pn	00 31 51.5	+0.1
JTS	Las Juntas de	0.63	269	eP	Pn	00 31 51.1	-0.1
JTS				eS	Sn	00 32 03.6	-0.3
LCR2	La Lucha 2	0.63	151	⇑eP	Pn	00 31 51.3	-0.2
LCR2				eS	Sn	00 32 05.3	+0.9
RIMA	Rio Macho	0.69	140	⇑iP	Pn	00 31 52.0	+0.1
RIMA				eS	Sn	00 32 06.3	+1.1
JACO	JACO, Garabito	0.72	208	⇑iP	Pn	00 31 52.6	+0.7
JACO				eS	Sn	00 32 06.7	+1.4
CUI	Cuipilapa	0.91	293	⇓iP	Pn	00 31 54.0	+0.2
CDM	Cerro de Muert	0.92	144	⇑eP	Pn	00 31 54.4	+0.1
CDM				eS	Sn	00 32 09.8	+0.3
BATAN	Batan	0.94	102	⇑eP	Pn	00 31 54.5	+0.4
BATAN				eS	Sn	00 32 10.9	+1.7
HORNC	Hornillas	0.95	296	i P	Pn	00 31 54.4	+0.1
LIM1	Limonal	1.01	293	i P	Pn	00 31 55.2	+0.3
PLVR	Palo Verde	1.02	273	⇓eP	Pn	00 31 54.3	-0.8
PLVR				eS	Sn	00 32 11.2	+0.2
GPS2	Hotel Rincn d	1.12	294	i P	Pn	00 31 56.4	+0.4
BUAI	Buenos Aires	1.16	300	i P	Pn	00 31 56.5	0.0
BUEV	Buena Vista	1.19	295	⇓iP	Pn	00 31 57.2	+0.4
GB1A	Borinquen Arri	1.19	296	i P	Pn	00 31 57.4	+0.5
LAPC	Finca la Perla	1.20	293	i P	Pn	00 31 57.1	+0.2
GBS3	Finca Las Img	1.22	293	⇓iP	Pn	00 31 57.3	+0.1
EDLM	Las Mercedes	1.24	145	eP	Pn	00 31 58.5	+1.1
EDLM				eS	Sn	00 32 16.3	+1.2
GRZA	Playa Garza	1.36	254	⇑eP	Pn	00 31 58.1	-0.7
GRZA				eS	Sn	00 32 16.7	-0.8
DRK0	Durika	1.47	134	eP	Pn	00 32 00.2	-0.1
DRK0				eS	Sn	00 32 20.8	+0.6
RIOS	Rincon, Osa	1.77	154	eP	Pn	00 32 05.4	+1.5
PIRO	Carate, Puerto	2.11	153	eP	Pn	00 32 10.4	+2.1

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*IDC **18** 00:32:09.3±2.0, 22°.91S×171°.28E, h0^{km}, mb4.0/5, mb1 4.3/6, mb1mx3.9/38, mbtmp4.0/6, ML3.8/1, MS3.0/2, Ms1 3.0/2, ms1mx2.7/33, Error ellipse: s-maj=94.4km s-min=26.6km az=168.0*
*NEIC **18** 00:32:10.3±1.2, 22°.9S±0°.1×171°.34E±0°.08, h9^{km}±5^{km}, mb4.3/8, Error ellipse: s-maj=17.6km s-min=10.9km az=187.0*
*NOU **18** 00:33:09.5, 22°.23S×167°.00E, h0^{km}, MLv1.7, New Caledonia*
ISC 18 00:32:13.9±0.8**, 22°.9S**±0°.1×**171°.2E**±0°.1**, h31^{km}, n49, σ0^s.81**/49**, mb4.1**/9**, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OUENC	Ouen Island, N	4.08	277	P	Pn	00 33 14.2	0.0
YATNC	Mamie plateau,	4.10	282	P	Pn	00 33 13.3	-1.2
ONTNC	Ouen Toro	4.45	277	P	Pn	00 33 19.1	-0.2
DZM	Mont Dzumac	4.50	280	Pn	Pn	00 33 20.2	0.0
	5.0nm,0.3s,baz=113,slow=12,SNR=75						

DZM				Sn	Sn	00 34 11.9	+0.4
	1.4nm,0.3s,baz=346,slow=19,SNR=8.0						
DZM				LR	LR	00 34 45.3	
	comp=Z,88nm,21.7s,baz=81,slow=34						
DZM	Mont Dzumac	4.50	280		Pn	00 33 20.1	0.0
DZM	Mont Dzumac	4.50	280	P	Pn	00 33 20.1	0.0
MSVF	Nonsavu	8.24	52	Pn	Pn	00 34 07.9	-3.6
PLWZ	Palliser	18.88	171	P	P	00 36 31.3	-0.5
LTZ	Lake Taylor	19.80	178		P	00 36 42.1	+0.3
COEN	Coen	28.02	284	P	P	00 38 01.9	-0.6
COEN				IAmb	IAmb	00 38 19.0	
	comp=Z,8.2nm,1.1s						
WR0	Warramunga Arr	34.21	268	P	P	00 38 53.8	-3.3
WR0				IAmb	IAmb	00 39 04.7	
	comp=Z,5.0nm,1.1s						
ASAR	Alice Springs	34.22	261	P	P	00 38 57.7	+0.6
	comp=Z,2.1nm,1.0s,baz=88,slow=7.9,SNR=9.5						
ASAR	Alice Springs	34.22	261	P	P	00 38 58.0	+0.9
WB0	Warramunga Arr	34.39	268	P	P	00 38 58.2	-0.3
WB0				IAmb	IAmb	00 39 00.3	
	comp=Z,2.2nm,0.9s						
WB2	Warramunga Arr	34.39	268		P	00 38 58.3	-0.3
WB2				IAmb	IAmb	00 39 13.7	
	comp=Z,3.8nm,1.1s						
WRA	Warramunga Arr	34.40	268	P	P	00 38 58.2	-0.5
	comp=Z,0.4nm,0.4s,baz=97,slow=8.5,SNR=12						
WRA				LR	LR	00 52 25.6	
	comp=Z,52nm,18.7s,baz=35,slow=35						
WRA	Warramunga Arr	34.40	268	P	P	00 38 57.6	-1.1
FITZ	Fitzroy Crossi	42.83	268	P	P	00 40 10.8	+1.4
QSPA	South Pole Qui	67.13	180	P	P	00 43 05.0	+0.4
KSAR	Wonju Array Be	72.60	325	P	P	00 43 38.4	+0.1
CMAR	Chiang Mai Arr	81.70	294	P	P	00 44 31.4	+1.6
	comp=Z,1.5nm,0.3s,baz=135,slow=4.3,SNR=9.5						
CMAR	Chiang Mai Arr	81.70	294	P	P	00 44 31.7	+1.8
NVAR	Mina Array Bea	89.88	48	P	P	00 45 09.8	-0.4
	comp=Z,0.8nm,0.9s,baz=219,slow=7.5,SNR=4.9						
SONM	Songino Array	91.28	322	P	P	00 45 16.3	-0.1
	comp=Z,0.9nm,0.9s,baz=140,slow=4.8,SNR=4.1						
SONM	Songino Array	91.28	322	P	P	00 45 16.3	-0.1
MORC	Moravsky Berou	146.18	329	*e*PKP	PKPbc	00 51 51.0	-0.1
OSTC	Ostas	146.25	331	*e*PKP	PKPbc	00 51 51.6	+0.4
CHVC	Chvalec	146.30	331	*e*PKP	PKPbc	00 51 51.8	+0.4
DPC	Dobruska-Polom	146.35	331	*e*PKP	PKPbc	00 51 51.9	+0.3
JAVC	Velka Javorina	146.73	328	*e*PKP	PKPbc	00 51 53.6	+0.9
VRAC	Vranov	146.95	329	*e*PKP	PKPbc	00 51 53.5	+0.2
CLL	Collm	147.04	335	*e*PKPbc	PKPbc	00 51 53.0	-0.4
	comp=Z,5.0nm,0.9s						
KRUC	Moravsky	147.21	329	*e*PKP	PKPbc	00 51 53.9	-0.1
PRU	Pruhonice	147.40	332	*e*PKP	PKPbc	00 51 54.7	+0.2
NKC	Novy Kostel	148.10	334	*e*PKP	PKPbc	00 51 56.5	+0.1
CONA	Conrad Observa	148.25	328	*e*P	PKPbc	00 51 57.1	+0.2
	comp=Z,5.4nm,1.0s						
CKRC	Cesky Krumlov	148.36	330	*e*PKP	PKPbc	00 51 57.2	+0.1
KHC	Kasperske Hory	148.46	331	*e*PKP	PKPbc	00 51 57.2	-0.2
GERES	GERESS Array B	148.61	331	PKPbc	PKPbc	00 51 57.8	-0.1
	comp=Z,2.5nm,0.9s,baz=40,slow=2.3,SNR=15						
GERES	GERESS Array B	148.61	331		PKPbc	00 51 57.5	-0.4
SOKA	Soboth	149.52	327	*e*P	PKPbc	00 51 59.8	-0.5
	comp=Z,1.7nm,0.6s						
KBA	Koelnbreinsper	150.06	329	*e*P	PKPbc	00 52 00.7	-1.0
	comp=Z,1.9nm,0.6s						
WATA	Walderalm	150.69	331	*e*P	PKPbc	00 52 02.3	-0.8
	comp=Z,2.0nm,0.6s						
ABTA	Abfaltersbach	150.70	329	*i* P	PKPbc	00 52 01.9	-1.1
	comp=Z,2.5nm,0.8s						
WTTA	Wattenberg	150.72	331	*i* P	PKPbc	00 52 02.8	-0.4
	comp=Z,9.5nm,1.2s						
MOTA	Moosalm	150.89	332	*e*P	PKPbc	00 52 03.0	-0.6
	comp=Z,1.1nm,0.3s						
RETA	Reutte	150.93	332	*e*P	PKPbc	00 52 02.7	-0.9
	comp=Z,3.8nm,1.3s						
SQTA	Sankt Quirin	150.94	331	*i* P	PKPbc	00 52 03.3	-0.3
	comp=Z,3.3nm,0.7s						
FETA	Feichten	151.30	332	*e*P	PKPbc	00 52 04.1	-0.4
	comp=Z,2.0nm,0.7s						

GII ***18*** *00:38:57.9±0.0, 33°.19N×35°.60E, h1^{km}, MD1.9/4, Mm1.8/4*
GRAL ***18*** *00:38:57.5±0.3, 33°.21N×35°.65E, h0^{km}±206^{km}, MD2.5*
ISC 18 00:38:57.2±1.0**, 33°.28N**±0°.03×**35°.60E**±0°.08**, h12**^{km}±9^{km}**,**
n13, σ0^s.55/23**, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GEM	Giv'at Ha'Em	0.09	145	Pg	Pg	00 38 59.7	-0.3
QRWL	Qaraoun	0.27	15	*e*P	Pb	00 39 03.5	-0.7
QRWL				*e*S	Sb	00 39 08.1	-0.7
RCY	Rachaya	0.29	43	*e*P	Pg	00 39 03.3	+0.1
RCY				*e*S	Sg	00 39 07.7	+0.4
MMA0B	Mount Meron ar	0.32	212	Pg	Pb	00 39 04.0	-0.9
MMA0B				Sg	Sb	00 39 09.0	-1.0
HNTI	Hanita	0.41	241	Pg	Pb	00 39 05.9	-0.6
HNTI				Sg	Sb	00 39 13.2	+0.5
DQRL	Deir Qamar	0.42	357	*e*P	Pb	00 39 06.5	-0.2
DQRL				*e*S	Sb	00 39 13.1	0.0
BHL	Bhannes	0.62	4	*e*P	Pb	00 39 10.0	-0.1
BLGI	Bet Lehem HaGe	0.65	212	Pg	Pg	00 39 09.8	-0.1
BLGI				Sg	Sb	00 39 19.5	0.0
OFRI	\`Ofer	0.84	218	Pg	Pb	00 39 13.4	-0.4
OFRI				Sg	Sb	00 39 25.5	+0.4
MMLI	Mount Malkishu	0.86	190	Pg	Pg	00 39 13.4	-0.4
MMLI				Sg	Sb	00 39 25.7	+0.1
HMDT	Nahal Hemdat	1.03	184	Pg	Pb	00 39 16.7	-0.3
HMDT				Sg	Sg	00 39 31.5	+1.0
SLTI	Sal'it	1.14	205	Pg	Pb	00 39 18.5	-0.5
SLTI				Sg	Sn	00 39 34.8	+0.1
DSI	Dead Sea	1.72	186	Pn	Pn	00 39 27.5	+0.5

NEIC ***18*** *00:47:24, 35°.11S×70°.90W, h100^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.91; M$_{\theta\theta}$-0.45; M$_{\phi\phi}$1.36; M$_{r\theta}$-0.78; M$_{\theta\phi}$0.17; M$_{\phi r}$-0.39; Fault plane solution: M$_0$1.49000×10^{16} NP1:φ$_s$155.00000°, δ44.00000°, λ-142.00000°. NP2:φ$_s$36.00000°, δ65.00000°, λ-52.00000°. Principal axes: T 1.4737, Plg12.0000°, Azm100.0000°; N 0.0348, Plg33.0000°, Azm198.0000°; P -1.5085, Plg54.0000°, Azm353.0000°;*
SJA ***18*** *00:47:24.0±0.7, 35°.07S×71°.00W, h118^{km}±8^{km}, ML4.3, MW4.2*
NEIC ***18*** *00:47:24.5±1.7, 35°.11S±0°.01×70°.9W±0°.1, h98^{km}±5^{km}, mb4.9/137, Mwr4.8/24, Mww4.7, ML4.7(GUC), Error ellipse: s-maj=13.4km s-min=2.1km az=92.0*
IDC ***18*** *00:47:24.3±1.8, 35°.09S×70°.85W, h96^{km}±16^{km}, mb4.3/18, mb1 4.4/22, mb1mx4.3/38, mbtmp4.6/22, MS3.5/2, Ms1 3.5/2, ms1mx3.1/26, Error ellipse: s-maj=15.6km s-min=11.6km az=76.0*
NEIC ***18*** *00:47:24.5, 35°.11S×70°.90W, h99^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.25; M$_{\theta\theta}$-0.45; M$_{\phi\phi}$1.70; M$_{r\theta}$-0.75; M$_{\theta\phi}$0.26; M$_{\phi r}$-1.13; Fault plane solution: M$_0$2.06000×10^{16} NP1:φ$_s$27.10000°, δ67.78000°, λ-69.14000°. NP2:φ$_s$161.87000°, δ30.11000°, λ-131.08000°. Principal axes: T 2.1794, Plg20.0000°, Azm102.0000°; N -0.2657, Plg19.0000°, Azm199.0000°; P -1.9137, Plg62.0000°, Azm329.0000°;*
GUC ***18*** *00:47:25.2±0.7, 35°.08S×71°.14W, h107^{km}±4^{km}, ML4.7*
VAO ***18*** *00:47:26.1±1.0, 35°.26S×70°.94W, h129^{km}±14^{km}, mb4.6*
ISC 18 00:47:24.6±0.6**, 35°.09S**±0°.03×**71°.00W**±0°.04**, h103**^{km}±5^{km}**, n218, σ0^s.98**/196**, mb4.9**/77**, 11C-11D, Fault plane solution: NP1:**φ$_s$53.02980°**,** δ57.91645°**,** λ-68.98782°. **NP2:**φ$_s$197.15701°**,** δ37.72709°**,** λ-119.76820°. **Principal axes:** T Plg10.5849°**,** Azm128.0823°**;** N Plg17.6862°**,** Azm221.4985°**;** P Plg69.2053°**,** Azm8.6050°**; Central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BO02	Sierra Bellavi	0.34	32	*e*P	Pn	00 47 40.1	+0.1
BO02				*i* S	Sn	00 47 52.2	+0.9
BO02	Sierra Bellavi	0.34	32		Pn	00 47 40.1	+0.1
BO02				Sn	Sn	00 47 51.9	+0.5
BO03	Pichilemu	0.98	306	*e*P	Pn	00 47 45.5	+0.4
BO03				*i* S	Sn	00 48 01.3	+0.8
BO03				IAML		00 48 02.7	
	comp=N,12µm,0.2s						
COIS	El Sosneado	1.16	92	*e*P	Pn	00 47 48.7	+1.7
MT09	Talagante	1.31	1	*e*P	Pn	00 47 49.3	+0.4
MT09				*i* S	Sn	00 48 07.4	+0.1
MT09				IAML		00 48 09.0	
	comp=N,25µm,0.6s						
LMEL	Las Melosas	1.40	28	*e*P	Pn	00 47 51.4	+1.4
LMEL				*i* S	Sn	00 48 11.0	+1.8
LMEL				IAML		00 48 15.9	
	comp=N,9µm,0.3s						
LAMA	Las Malvinas	1.48	85	*e*P	Pn	00 47 51.9	+1.1
LAMA				*e*S	Sn	00 48 12.4	+1.8
VA05	Santo Domingo	1.51	340	*e*P	Pn	00 47 51.3	+0.1
VA05				*i* S	Sn	00 48 10.9	-0.5
VA05				IAML		00 48 16.2	
	comp=E,23µm,0.4s						
BI02	San Fabin de	1.59	188	*e*P	Pn	00 47 52.3	+0.1
BI02				*i* S	Sn	00 48 13.5	+0.3
BI02	San Fabin de	1.59	188	Pn	Pn	00 47 52.4	+0.1
BI02				Sn	Sn	00 48 12.8	-0.5
MT05	Renca	1.70	7	*e*P	Pn	00 47 54.7	+1.0
MT05				*i* S	Sn	00 48 16.7	+1.0
MT05				IAML		00 48 20.0	
	comp=E,11µm,0.4s						
MT05	Renca	1.70	7	Pn	Pn	00 47 54.2	+0.5
MT05				Sn	Sn	00 48 16.2	+0.5
MT02	Curacav	1.82	356	*e*P	Pn	00 47 55.5	+0.3
MT02				*i* S	Sn	00 48 18.4	0.0
MT02				IAML		00 48 21.4	
	comp=E,5µm,0.5s						
MT02	Curacav	1.82	356	Pn	Pn	00 47 55.4	+0.3
MT02				Sn	Sn	00 48 18.3	0.0
PEL	Peldehue	1.95	8	*e*P	Pn	00 47 57.5	+0.7
PEL				*i* S	Sn	00 48 22.3	+0.9
PEL				IAML		00 48 24.6	
	comp=E,6µm,0.5s						
PEL	Peldehue	1.95	8	Pn	Pn	00 47 57.6	+0.7
PEL				Sn	Sn	00 48 22.5	+1.2
PEL	Peldehue	1.95	8	*e*P	Pn	00 47 57.6	+0.7
PEL				*e*S	Sn	00 48 22.8	+1.4
ROC1	El Roble	2.10	360	Pn	Pn	00 47 59.5	+0.5
ROC1	El Roble	2.10	360	*e*P	Pn	00 47 59.5	+0.5
ROC1				*e*S	Sn	00 48 25.2	+0.1
RFA	San Rafael	2.11	82	*e*P	Pn	00 47 59.2	+0.5
RFA				*e*S	Sn	00 48 26.0	+1.1
VA03	San Esteban	2.35	9	*e*P	Pn	00 48 02.6	+0.6
VA03				*i* S	Sn	00 48 31.5	+1.0
VA03	San Esteban	2.35	9	Pn	Pn	00 48 02.4	+0.5
BI03	Tigo	2.40	222	Pn	Pn	00 48 02.0	-0.5
AUSP	Uspallata	3.16	26	*e*P	Pn	00 48 14.1	+1.3
LC01	Cunco	3.87	190	Pn	Pn	00 48 20.9	-1.2
CO02	Combarbal	3.87	0	Pn	Pn	00 48 21.9	-0.4
ZON	Zonda	4.03	30		Pn	00 48 24.7	+0.4
ZON	Zonda	4.03	30	*e*P	Pn	00 48 25.2	+0.8
ZON				*e*S	Sn	00 49 12.0	+1.4
ZON				IAML		00 49 17.8	
	comp=Z,197nm,0.4s						
CO03	El Pedregal	4.24	4		Pn	00 48 27.3	+0.1
RTLL	Cerro Villicun	4.30	30	*e*P	Pn	00 48 28.8	+0.8
RTLL				*e*S	Sn	00 49 18.2	+1.0
RTLL				IAML		00 49 22.2	
	comp=Z,319nm,0.6s						
ACCO	Cerro Coronel	4.77	21	*e*P	Pn	00 48 34.6	0.0
ACCO				IAML		00 49 37.8	
	comp=Z,388nm,0.5s						
GO04	Tololo Observa	4.90	2	Pn	Pn	00 48 35.9	-0.4
MRA	San Martin	5.14	60	*e*P	Pn	00 48 40.2	+0.8
MRA				IAML		00 50 28.9	
	comp=Z,77nm,0.7s						
CO01	Juntas del Tor	5.15	9	Pn	Pn	00 48 39.6	-0.1
PLCA	Paso Flores	5.65	177	P	Pn	00 48 45.3	-0.9
	comp=Z,3.1nm,0.3s,baz=342,slow=11,SNR=59						
PLCA	Paso Flores	5.65	177	Pn	Pn	00 48 45.6	-0.6
PLCA	Paso Flores	5.65	177	*e*P	Pn	00 48 45.3	-0.9
APLL	PUNTA DE LOS L	6.01	40	*e*P	Pn	00 48 49.8	-1.3
LCO	Las Campanas	6.06	3	Pn	Pn	00 48 50.6	-1.4
AC05	El Transito	6.26	6	Pn	Pn	00 48 53.4	-1.2
VA04	Juan Fernndez	6.63	280	Pn	Pn	00 48 59.9	+0.4
H03S1	Juan Fernandez	6.64	278	P	Pn	00 48 59.3	-0.1
	baz=92,slow=76,SNR=29						
H03S1				T	T	00 55 07.9	
	baz=99,slow=75,SNR=97						
H03S3	Juan Fernandez	6.65	279	P	Pn	00 48 59.9	+0.4
	baz=92,slow=76,SNR=35						
H03S3				T	T	00 55 07.0	
	baz=99,slow=75,SNR=118						
H03S2	Juan Fernandez	6.66	279	P	Pn	00 48 59.7	+0.1
	baz=92,slow=76,SNR=66						
H03S2				T	T	00 54 55.4	
	baz=99,slow=75,SNR=116						
H03N1	Juan Fernandez	6.75	282	P	Pn	00 49 01.9	+1.0
	baz=132,slow=24,SNR=71						
H03N1				T	T	00 55 00.9	
	baz=102,slow=80,SNR=5.4						
H03N3	Juan Fernandez	6.76	282	P	Pn	00 49 02.4	+1.4
	baz=132,slow=24,SNR=56						
H03N3				T	T	00 55 02.7	
	baz=102,slow=80,SNR=4.6						
VCA	Vinchina	6.76	21	*e*P	Pn	00 49 02.0	+0.6
VCA				*e*S	Sn	00 50 15.7	-1.4
VCA				IAML		00 50 18.7	
	comp=Z,190nm,0.5s						
H03N2	Juan Fernandez	6.77	282	P	Pn	00 49 02.3	+1.2
	baz=132,slow=24,SNR=58						
H03N2				T	T	00 55 18.3	
	baz=102,slow=80,SNR=6.4						
AC04	Llanos de Chal	6.86	359	Pn	Pn	00 49 01.4	-1.2
GO03	Copiap	7.50	5	Pn	Pn	00 49 10.2	-1.1
GO03	Copiap	7.50	5	*e*P	Pn	00 49 11.3	-0.1
GO03				*e*S	Sn	00 50 31.3	-3.5
AC02	Maricunga	8.38	12	Pn	Pn	00 49 22.1	-1.6
FSA	Cafayete	9.93	27	*e*P	Pn	00 49 41.5	-3.1
GO02	Mina Guanaco	9.96	7		Pn	00 49 43.6	-1.6
PB15	IPOC Station P	11.91	7	Pn	Pn	00 50 11.5	+0.2
LVC	Limon Verde	12.56	9	P	Pn	00 50 19.9	-0.1
	comp=Z,2.0nm,0.3s,baz=195,slow=9.0,SNR=16						
LVC				S	Sn	00 52 39.4	+1.0
	comp=Z,0.4nm,0.3s,baz=350,slow=16,SNR=1.3						
LVC	Limon Verde	12.56	9	Pn	Pn	00 50 19.5	-0.6
ITQB	Itaqui	13.29	70	*e*P	Pn	00 50 29.4	+0.2
PB09	IPOC Station P	13.33	7	Pn	Pn	00 50 30.2	+0.2
PB07	IPOC Station P	13.35	5	Pn	Pn	00 50 28.5	-1.6
PB01	IPOC Station P	14.05	6	Pn	Pn	00 50 38.0	-1.3
PATCX	Punta Patache	14.23	3	P	P	00 50 46.7	+1.0
TA01	Diego Aracena	14.48	3	P	P	00 50 49.2	+0.8
CPUP	Villa Florida	14.63	57	P	Pn	00 50 45.0	-1.5
	comp=Z,0.2nm,0.3s,baz=222,slow=18,SNR=1.9						
CPUP				LR	LR	00 57 35.7	
	comp=Z,105nm,19.4s,baz=230,slow=42						
PLTB	Pedras Altas	14.90	82	*e*P	P	00 50 50.6	-2.4
PB08	IPOC Station P	14.98	7	Pn	Pn	00 50 50.9	-0.4
PSGCX	Pisagua	15.45	3	Pn	Pn	00 50 55.8	-1.2
CPSB	Cacapava Do Su	15.49	77	*e*P	P	00 50 57.9	-1.7
MNMC	Minye Minye	15.94	5		P	00 51 04.1	-0.8
MNMC				IAmb	IAmb	00 51 08.0	
	comp=Z,53nm,1.0s						
GO09	Cerro Castillo	16.21	183	P	P	00 51 08.5	+1.2
GO09				IAmb	IAmb	00 51 10.0	
	comp=Z,96nm,1.1s						
PB16	IPOC Station P	16.74	5	P	P	00 51 14.7	+0.7
ITAB	Concordia	17.93	69	*e*P	Pn	00 51 26.0	-1.3
CNLB	Canela	17.99	77	*e*P	P	00 51 26.6	-0.6
EFI	East Falkland	19.01	155	P	P	00 51 36.2	-1.9
PTGB	Pitanga	19.37	63	*e*P	P	00 51 41.9	-0.4
USHA	Ushuaia	19.83	176	P	Pn	00 51 47.8	-1.6
	comp=Z,3.6nm,0.3s,baz=358,slow=7.0,SNR=11						
TRCB	Terra Rica	20.17	58	*e*P	P	00 51 50.2	-0.7
SIV	San Ignacio	20.99	28	P	P	00 51 59.3	-0.5
	comp=Z,7.6nm,0.9s,baz=206,slow=8.7,SNR=25						
PP1B	Ponte de Pedra	22.57	44	*e*P	P	00 52 16.6	+0.1
PET01	Itanhaem-SP	23.20	69	*e*P	P	00 52 21.9	-0.6
NNA	Nana	23.60	346	P	P	00 52 27.5	+1.3
	comp=Z,3.5nm,0.3s,baz=221,slow=9.3,SNR=2.1						
ITRB	Iturama	23.82	55	*e*P	P	00 52 26.7	-1.5
VILB	Vilhena	24.11	27	*e*P	P	00 52 31.2	+0.4
BB19B	Bebedouro	24.18	61	*e*P	P	00 52 30.8	-0.7
ETMB	Extrema	25.53	11	*e*P	P	00 52 44.4	+0.7
BSCB	Bom Sucesso	26.97	66	*e*P	P	00 52 55.9	-0.9
SAML	Samuel	26.98	17	P	P	00 52 56.2	-0.6
SAML	Samuel	26.98	17	*e*P	P	00 52 56.8	0.0
CZSB	Cruzeiro do Su	27.27	356	*e*P	P	00 53 00.1	+0.7
BDFB	Brasilia	28.27	53	P	P	00 53 08.2	-0.2
	comp=Z,7.6nm,1.0s,baz=230,slow=8.9,SNR=7.7						
BDFB	Brasilia	28.27	53	P	P	00 53 08.8	+0.4
SNDB	Serra Nova Dou	29.14	43	*e*P	P	00 53 16.3	+0.3
PMSA	Palmer Station	30.02	174	LR	LR	01 05 12.8	
	comp=Z,131nm,18.3s,baz=5.0,slow=36						
HOPE	Hope Point	30.71	139	P	P	00 53 29.2	-0.3
SJMB	Sao Joao De Ma	31.04	66	*e*P	P	00 53 32.0	-0.7
JANB	Januaria	31.17	57	*e*P	P	00 53 33.1	-1.0
GDU01	Guandu, BA	35.42	61	*e*P	P	00 54 10.2	-0.6
PTGA	Pitinga	35.70	19	P	P	00 54 12.7	-0.4
	comp=Z,8.2nm,0.5s,baz=327,slow=22,SNR=33						
PTGA	Pitinga	35.70	19	P	P	00 54 12.8	-0.4
PTGA				IAmb	IAmb	00 54 13.2	
	comp=Z,9.6nm,0.6s						
PTGA	Pitinga	35.70	19	*e*P	P	00 54 13.7	+0.5
PCRV	Puerto La Cruz	45.42	9	P	P	00 55 33.0	-0.2
	comp=Z,22nm,1.1s,baz=172,slow=7.1,SNR=2.9						
VNA3	Neumayer Olymp	48.03	158	P	P	00 55 53.8	+0.9
VNA1	Neumayer--Stat	48.34	157	P	P	00 55 55.1	-0.2
VNA2	Neumayer--Watz	48.68	157	P	P	00 55 58.0	+0.1
	baz=286,slow=8.8						
SNAA	Sanae	50.26	158	P	P	00 56 10.3	+0.3
	comp=Z,10nm,0.9s,baz=301,slow=8.2,SNR=36						
SNAA	Sanae	50.26	158	P	P	00 56 09.9	-0.1
SNAA				IAmb	IAmb	00 56 35.6	
	comp=Z,28nm,1.3s						
SJG	San Juan	53.10	6	P	P	00 56 32.3	+0.8
GTBY	Guantanamo Bay	54.85	355	P	P	00 56 44.2	0.0
QSPA	South Pole Qui	55.16	180	P	P	00 56 46.3	+0.2
QSPA				IAmb	IAmb	00 56 48.1	
	comp=Z,11nm,0.9s						
CMIG	Matias Romero	56.63	332	P	P	00 56 58.1	+1.1
	comp=Z,1.8nm,0.5s,baz=54,slow=2.9,SNR=5.3						
TEIG	Tepich	57.40	341	P	P	00 57 02.6	+0.3
	comp=Z,18nm,0.6s,baz=172,slow=1.3,SNR=26						
TEIG	Tepich	57.40	341	P	P	00 57 02.8	+0.4
553A	Crawfordville	66.15	347	P	P	00 58 01.5	+0.6
346A	Big Creek Wild	68.36	343	P	P	00 58 15.8	+0.9
GOGA	Godfrey	69.13	349	P	P	00 58 19.3	-0.3
SLBS	Sierra La Lagu	69.13	322	P	P	00 58 21.5	+1.6
SLBS				IAmb	IAmb	00 59 18.3	
	comp=Z,30nm,1.9s						
Y52A	Lilburn	69.67	348	P	P	00 58 23.4	+0.5
Z47A	Carrollton	69.79	345	P	P	00 58 24.5	+0.9
JCT	Junction City	70.63	334	P	P	00 58 30.7	+1.8
JCT				IAmb	IAmb	00 58 30.9	
	comp=Z,56nm,1.5s						
TX32	Lajitas Array	71.10	330	IAmb	IAmb	00 58 34.3	
	comp=Z,47nm,1.6s						
TXAR	Lajitas Array	71.10	330	P	P	00 58 32.9	+1.1
	comp=Z,5.9nm,0.5s,baz=156,slow=9.0,SNR=67						
TXAR	Lajitas Array	71.10	330	P	P	00 58 33.0	+1.2
V55A	Taylorsville	71.21	351	P	P	00 58 32.4	+0.1
PLAL	Pickwick Lake	71.51	345	IAmb	IAmb	00 58 34.5	
	comp=Z,13nm,0.7s						
V52A	Sevierville	71.53	349	P	P	00 58 33.8	-0.4
U54A	Nelsons Funny	71.95	351	P	P	00 58 36.7	-0.1
Z35A	Perchaven, San	72.37	337	P	P	00 58 40.2	+1.0
ABTX	Abilene, Hawle	72.52	335	IAmb	IAmb	00 58 41.4	
	comp=Z,16nm,0.7s						
WVT	Waverly	72.57	346	P	P	00 58 40.6	+0.3
S57A	Dark Hollow, R	72.85	353	P	P	00 58 42.4	+0.5
W39A	Magazine	73.08	341	IAmb	IAmb	00 58 46.0	
	comp=Z,27nm,1.1s						
LCAR	Lake Charles	73.24	343	IAmb	IAmb	00 58 45.1	
	comp=Z,40nm,1.3s						
FCAR	Ozark Folk Cen	73.31	342	P	P	00 58 44.9	+0.2
PBMO	Poplar Bluff	73.75	344	IAmb	IAmb	00 58 47.7	
	comp=Z,16nm,0.5s						
MNTX	Cornudas Mount	73.88	330	P	P	00 58 48.2	0.0
U40A	Yellville	73.94	342	IAmb	IAmb	00 58 49.3	
	comp=Z,42nm,1.4s						
HHAR	Hobbs	74.15	341	IAmb	IAmb	00 58 50.8	
	comp=Z,27nm,1.4s						
TUL1	Leonard	74.32	339	P	P	00 58 50.8	+0.2
TUL1				IAmb	IAmb	00 58 51.8	
	comp=Z,38nm,1.4s						
OK029	Liberty Lake	74.71	338	IAmb	IAmb	00 58 54.8	
	comp=Z,26nm,1.1s						
DBIC	Dimbokro	74.73	70	P	P	00 58 53.8	+0.3
	comp=Z,4.8nm,0.8s,baz=177,slow=6.7,SNR=5.7						
DBIC	Dimbokro	74.73	70	P	P	00 58 53.8	+0.3
DBIC				IAmb	IAmb	00 58 57.6	
	comp=Z,16nm,1.1s						
MSTX	Muleshoe	74.86	333	IAmb	IAmb	00 58 55.0	
	comp=Z,11nm,0.8s						
FVM	French Village	74.90	344	IAmb	IAmb	00 58 55.1	
	comp=Z,30nm,1.4s						
CCM	Cathedral Cave	75.16	344	P	P	00 58 55.7	+0.3
CCM				IAmb	IAmb	00 58 56.7	
	comp=Z,56nm,1.6s						
S39A	Bolivar	75.32	342	IAmb	IAmb	00 58 57.7	
	comp=Z,14nm,1.1s						
R40A	Maddies Statio	75.62	343	IAmb	IAmb	00 58 58.6	
	comp=Z,16nm,0.7s						
ANMO	Albuquerque	77.14	331	P	P	00 59 08.1	+1.1
	comp=Z,6.4nm,1.1s,baz=159,slow=7.5,SNR=6.8						
ANMO	Albuquerque	77.14	331	P	P	00 59 08.5	+1.5
ANMO				IAmb	IAmb	00 59 09.7	
	comp=Z,17nm,1.4s						
P38A	Dawn	77.20	342	IAmb	IAmb	00 59 07.9	
	comp=Z,26nm,1.3s						
R32A	Long Quarter,	77.52	338	IAmb	IAmb	00 59 10.7	
	comp=Z,22nm,1.1s						
W18A	Petrified Fore	78.65	328	IAmb	IAmb	00 59 18.2	
	comp=Z,24nm,1.4s						
X16A	Lo Mia Camp, P	78.81	327	P	P	00 59 18.4	+2.2
BOSA	Boshof	78.81	117	P	P	00 59 16.1	-0.5
	comp=Z,8.2nm,0.6s,baz=254,slow=2.9,SNR=13						
BOSA	Boshof	78.81	117	P	P	00 59 15.9	-0.6
BOSA				IAmb	IAmb	00 59 20.7	
	comp=Z,13nm,1.0s						
N35A	Tabor	78.90	341	IAmb	IAmb	00 59 16.8	
	comp=Z,24nm,0.7s						
WUAZ	Wupatki	79.70	328	P	P	00 59 23.0	+2.0
WUAZ				IAmb	IAmb	00 59 24.1	
	comp=Z,24nm,1.6s						
PFO	Pinyon Flats O	80.52	323	P	P	00 59 26.6	+1.3
	comp=Z,12nm,1.2s,baz=142,slow=5.5,SNR=6.4						
PV01	Paradox Valley	80.75	331	P	P	00 59 28.1	+1.4
U15A	North Rim	80.87	327	IAmb	IAmb	00 59 30.5	
	comp=Z,26nm,1.6s						
SMCO	Snowmass	81.03	332	IAmb	IAmb	00 59 31.2	
	comp=Z,20nm,1.4s						
LBTB	Lobatse	81.08	114	P	P	00 59 28.6	-0.2
PV04	Paradox Valley	81.11	331	IAmb	IAmb	00 59 31.8	
	comp=Z,35nm,1.7s						
PV14	Lion Creek, Pa	81.14	331	IAmb	IAmb	00 59 31.1	
	comp=Z,16nm,1.3s						
ECSD	EROS Data Cent	81.84	342	P	P	00 59 32.3	+0.3
ECSD				IAmb	IAmb	00 59 33.4	
	comp=Z,31nm,1.4s						
CCUT	Cedar City	82.28	327	IAmb	IAmb	00 59 38.1	
	comp=Z,21nm,1.4s						
SRU	San Rafael Swe	82.38	330	IAmb	IAmb	00 59 37.2	
	comp=Z,25nm,1.7s						
MSU	Marysvale	82.56	329	P	P	00 59 37.5	+1.4
MVU	Marysvale	82.57	329	IAmb	IAmb	00 59 38.5	
	comp=Z,25nm,1.0s						
P17A	Butcher Ranch,	82.77	330	IAmb	IAmb	00 59 39.4	
	comp=Z,14nm,1.2s						
TMUT	Trail Mountain	82.81	330	IAmb	IAmb	00 59 40.0	
	comp=Z,20nm,1.5s						
PRN	Pahroc Range	82.92	326	IAmb	IAmb	00 59 41.3	
	comp=Z,24nm,1.3s						
TPNV	Topopah Spring	83.10	325	P	P	00 59 40.0	+1.0
TPNV				IAmb	IAmb	00 59 42.1	
	comp=Z,19nm,1.6s						
RDMU	Red Mountain	83.24	331	IAmb	IAmb	00 59 41.7	
	comp=Z,19nm,1.3s						
RPZ	Rata Peaks	83.37	220	P	P	00 59 41.5	+1.2
	comp=Z,5.6nm,0.9s,baz=344,slow=12,SNR=3.6						
MPU	Maple Canyon	83.60	330	IAmb	IAmb	00 59 44.3	
	comp=Z,23nm,1.5s						
TOA0	Torodi Ar. Sit	83.78	69	P	P	00 59 42.5	-0.2
TORD	Torodi Ar. Bea	83.78	69	P	P	00 59 42.7	0.0
	comp=Z,2.0nm,0.7s,baz=245,slow=4.1,SNR=7.8						
TORD	Torodi Ar. Bea	83.78	69	P	P	00 59 42.4	-0.3
R11A	Troy Canyon, C	83.93	326	IAmb	IAmb	00 59 46.1	
	comp=Z,15nm,1.4s						
JLU	Jordanelle	84.02	330	IAmb	IAmb	00 59 46.0	
	comp=Z,19nm,1.6s						
DUG	Dugway, Tooele	84.24	329	P	P	00 59 45.7	+1.1
TCUT	Toone Canyon	84.44	331	IAmb	IAmb	00 59 48.8	
	comp=Z,33nm,1.5s						
OMMB	Old Mammoth Mi	84.95	324	P	P	00 59 49.6	+1.2
OMMB				IAmb	IAmb	00 59 51.1	
	comp=Z,15nm,1.4s						
SPUT	South Promonto	85.02	330	IAmb	IAmb	00 59 51.3	
	comp=Z,22nm,1.3s						
PDAR	Pinedale Array	85.12	333	P	P	00 59 49.6	+0.5
	comp=Z,2.4nm,0.6s,baz=146,slow=6.4,SNR=16						

PDAR	Pinedale Array	85.12	333	P	P	00 59 49.8	+0.7
NVAR	Mina Array Bea	85.26	325	P	P	00 59 51.5	+1.6
	comp=Z,3.7nm,0.9s,baz=150,slow=5.8,SNR=12						
NVAR	Mina Array Bea	85.26	325	P	P	00 59 51.3	+1.4
B35A	Bob, Littlefor	85.52	345	IAmb	IAmb	00 59 51.7	
	comp=Z,30nm,1.8s						
HVU	Hansel Valley	85.55	330	IAmb	IAmb	00 59 52.9	
	comp=Z,15nm,1.1s						
ELK	Elko	85.73	328	P	P	00 59 52.2	0.0
ELK				IAmb	IAmb	00 59 54.3	
	comp=Z,12nm,1.4s						
WAKR	Walker	85.86	324	IAmb	IAmb	00 59 56.2	
	comp=Z,21nm,1.5s						
REDW	Red Top Meadow	86.12	332	P	P	00 59 54.7	+0.7
REDW				IAmb	IAmb	01 00 37.5	
	comp=Z,36nm,1.9s						
YERR	Yerington	86.15	324	IAmb	IAmb	00 59 57.2	
	comp=Z,12nm,1.3s						
LOHW	Long Hollow	86.23	332	IAmb	IAmb	01 00 01.5	
	comp=Z,14nm,1.6s						
PNTR	Pine Nut	86.40	324	IAmb	IAmb	00 59 58.5	
	comp=Z,13nm,1.1s						
FLWY	Flagg Ranch	86.67	333	P	P	00 59 57.5	+0.8
FLWY				IAmb	IAmb	00 59 58.8	
	comp=Z,29nm,1.5s						
PAHR	Pah Rah Range	86.78	325	IAmb	IAmb	01 00 00.1	
	comp=Z,17nm,1.6s						
RLMT	Red Lodge	87.03	334	IAmb	IAmb	01 00 00.3	
	comp=Z,28nm,1.5s						
YHH	Holmes Hill	87.33	333	IAmb	IAmb	01 00 02.1	
	comp=Z,19nm,1.4s						
LAO	LASA Array	87.35	337	IAmb	IAmb	01 00 01.2	
	comp=Z,30nm,1.4s						
BEKR	Beckworth	87.38	324	IAmb	IAmb	01 00 02.8	
	comp=Z,15nm,1.5s						
ORV	Oroville	87.69	323	P	P	01 00 03.0	+1.5
ORV				IAmb	IAmb	01 00 04.3	
	comp=Z,14nm,1.2s						
ULM	Lac du Bonnet	87.77	344	P	P	01 00 01.4	-0.1
	comp=Z,4.4nm,0.7s,baz=184,slow=3.5,SNR=7.2						
BCYI	Bear Canyon	87.91	331	P	P	01 00 03.9	+1.2
MOD	Modoc Plateau	88.94	326	IAmb	IAmb	01 00 10.0	
	comp=Z,17nm,1.4s						
I07A	Izee	90.29	327	IAmb	IAmb	01 00 32.5	
	comp=Z,15nm,1.7s						
PINE	Pine Mountain	90.71	326	P	P	01 00 17.1	+1.3
PINE				IAmb	IAmb	01 00 18.5	
	comp=Z,18nm,1.4s						
YKA	Yellowknife Ar	103.36	341	Pdiff	Pdif	01 01 12.2	0.0
	comp=Z,0.1nm,0.5s,baz=139,slow=4.4,SNR=1.9						
WB2	Warramunga Arr	120.21	208	PKPdf	PKPdf	01 06 03.1	-0.9
WRA	Warramunga Arr	120.22	208	PKP	PKPdf	01 06 03.1	-0.9
	comp=Z,0.6nm,0.8s,baz=162,slow=1.7,SNR=8.3						
WRA	Warramunga Arr	120.22	208	PKPdf	PKPdf	01 06 03.3	-0.8
BRVK	Borovoye	147.40	44	PKPbc	PKiKP	01 06 56.4	-1.5
NIL	Nilore	150.55	82	PKPbc	PKiKP	01 07 04.5	-0.6
AAK	Ala-Archa	152.24	64	PKPbc	PKiKP	01 07 09.0	+0.5
KSH	Kashi	153.45	71	PKPbc	PKiKP	01 07 10.4	-0.6
KSH				PKS	PP	01 10 48.3	-10
KSH				PP	PP	01 10 55.3	-3.2
KSH				SKS	SKSdf	01 13 58.4	-2.4
KSH				AMB	AMB		
	comp=Z,230nm,9.0s						
KSH				LR	LR		
	comp=N,340nm,10.7s						
KSH				LR	LR		
	comp=E,490nm,8.9s						
KSH				LR	LR		
	comp=Z,2µm,24.2s						
SONM	Songino Array	167.11	8	PKPab	PKPab	01 08 22.9	+0.2
	comp=Z,2.1nm,1.2s,baz=300,slow=1.1,SNR=4.3						
SONM	Songino Array	167.11	8		PKPab	01 08 23.1	+0.5

IDC ***18*** *00:48:27.0±0.6, 8°.44N×103°.15W, h0^{km}, mb4.4/21, mb1 4.6/25, mb1mx4.5/44, mbtmp4.4/25, ML4.2/4, MS5.2/23, Ms1 5.2/23, ms1mx5.0/27 Error ellipse: s-maj=24.3km s-min=11.3km az=58.0*

NEIC ***18*** *00:48:28.9±2.6, 8°.32N±0°.09×103°.2W±0°.1, h5^{km}±1^{km}, mb5.2/318, Ms_20 5.2/689, Mwb5.5/31, Mwc5.6(GCMT), Error ellipse: s-maj=19.2km s-min=15.0km az=242.0*

MOS ***18*** *00:48:28.6±1.5, 8°.45N×103°.32W, h10^{km}, mb5.3/34, MS5.3/14, Error ellipse: s-maj=12.5km s-min=6.7km az=100.2*

NEIC ***18*** *00:48:30.2, 8°.38N×103°.13W, h5^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-0.06; $M_{\theta\theta}$0.86; $M_{\phi\phi}$-0.80; $M_{r\theta}$0.38; $M_{\theta\phi}$-1.79; $M_{\phi r}$0.67; Fault plane solution: $M_0$2.12000×10^{17} NP1:ϕ_s259.30000°, δ75.30000°, λ-166.55000°. NP2:ϕ_s165.83000°, δ77.00000°, λ-15.09000°. Principal axes: T 2.0010, Plg1.0000°, Azm213.0000°; N 0.2167, Plg70.0000°, Azm306.0000°; P -2.2176, Plg20.0000°, Azm122.0000°;*

GCMT ***18*** *00:48:32.9±0.1, 8°.53N±0°.01×103°.20W±0°.01, h12^{km}, MW5.6/154, Moment Tensor Solution. s136,c244; s154,c314; Duration: $1^{s}.5$ Moment tensor: Scale 10^{17} Nm; M_{rr}-0.26±.03; $M_{\theta\theta}$1.04±.03; $M_{\phi\phi}$-0.78±.03; $M_{r\theta}$-0.05±.07; $M_{\theta\phi}$-2.90±.02; $M_{\phi r}$-0.01±.08; Best double couple: $M_0$3.04000×10^{17} NP1:ϕ_s351.00000°, δ89.00000°, λ0.00000°. NP2:ϕ_s81.00000°, δ90.00000°, λ-179.00000°. Principal axes: T 3.1700, Plg1.0000°, Azm216.0000°; N -0.2600, Plg89.0000°, Azm90.0000°; P -2.9100, Plg1.0000°, Azm306.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***18*** *00:48:33, 8°.52N×103°.21W, h12^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-0.22; $M_{\theta\theta}$1.16; $M_{\phi\phi}$-0.94; $M_{r\theta}$-0.95; $M_{\theta\phi}$-2.97; $M_{\phi r}$0.10; Fault plane solution: $M_0$3.30000×10^{17} NP1:ϕ_s351.00000°, δ74.00000°, λ2.00000°. NP2:ϕ_s260.00000°, δ88.00000°, λ164.00000°. Principal axes: T 3.4519, Plg13.0000°, Azm214.0000°; N -0.3351, Plg74.0000°, Azm72.0000°; P -3.1169, Plg10.0000°, Azm307.0000°;*

ISC 18 00:48:31.0±0.3, **8°.43N**±0°.05×**103°.13W**±0°.06, **h19**^{km}, **n872**, σ**1^{s}.37**/499, **mb5.1**/170, **MS5.2**/374, **3C-2D, Northern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOIG	Morelia	11.34	9	Pn	Pn	00 51 16.3	+4.0
CMIG	Matias Romero	11.77	42	Pn	Pn	00 51 14.6	-3.4
	1.2nm,0.3s,baz=208,slow=10,SNR=11						
CMIG				LR	LR	00 54 48.1	
	comp=Z,31µm,21.4s,baz=176,slow=32						
H06S1	SOCORRO T	12.76	324	T	T	01 04 34.5	
	SNR=48						
H06E1	SOCORRO T-PHAS	12.78	324	T	T	01 04 30.9	
	SNR=319						
CCIG	Comitan	13.27	53	Pn	Pn	00 51 37.2	-1.4
HUEH	Huehuetenango	13.27	58	Pn	Pn	00 51 37.7	-1.0
ZAIG	Zacatecas	14.27	2	P	P	00 51 57.0	-2.7
MTO3	Montecristo	14.73	65	Pn	Pn	00 51 57.8	-1.0
ESQI	Esquipulas	14.81	64	P	P	00 52 05.8	+0.3
PETF	Flores	15.43	56	Pn	Pn	00 52 05.8	-2.1
PETF				IAmb	IAmb	00 52 18.5	
	comp=Z,57nm,0.6s						
PAYG	Puerto Ayora	15.67	125	P	P	00 52 14.2	-0.8
PAYG				IAmb	IAmb	00 52 24.3	
	comp=Z,267nm,1.3s						
SLBS	Sierra La Lagu	16.52	337	P	P	00 52 27.4	+3.0
TGUH	Tegucigalpa,Un	16.52	69	P	P	00 52 26.4	+1.9
LPIG	La Paz	17.03	337	P	Pn	00 52 26.3	-2.0
	comp=Z,4.9nm,0.3s,baz=185,slow=16,SNR=1.2						
LPIG				LR	LR	00 57 28.2	
	comp=Z,14µm,19.4s,baz=161,slow=32						
ACON	Acoyapa	18.01	77	P	P	00 52 41.7	+0.8
JTS	Las Juntas de	18.03	83	P	P	00 52 40.4	-0.7
	comp=Z,0.3nm,0.3s,baz=357,slow=19,SNR=1.7						
JTS				LR	LR	00 57 48.8	
	comp=Z,3µm,21.7s,baz=322,slow=31						
JTS	Las Juntas de	18.03	83	*i*P	P	00 52 45.5	+4.4
JTS				pmax	pmax		
	comp=Z,165nm,3.4s						
JTS	Las Juntas de	18.03	83	P	P	00 52 43.8	+2.7
TEIG	Tepich	18.54	49	P	P	00 52 45.1	-1.5
	comp=Z,0.4nm,0.3s,baz=237,slow=16,SNR=5.1						
TEIG				LR	LR	00 59 01.8	
	comp=Z,13µm,21.3s,baz=247,slow=34						
TEIG	Tepich	18.54	49	P	Pn	00 52 47.9	+1.0
TEIG				IAmb	IAmb	00 52 52.1	
	comp=Z,137nm,1.2s						
HPIG		18.56	353	P	Pn	00 52 51.8	+4.4
HPIG				IAmb	IAmb	00 53 04.2	
	comp=Z,300nm,1.9s						
HDC	Heredia	18.83	84	P	Pn	00 52 53.5	+2.9
ESPN	Las Esperanzas	18.89	77	P	Pn	00 52 55.3	+4.1
833A	Chaparral WMA,	20.10	10	P	Pn	00 53 05.4	-0.1
	baz=191,SNR=9.3						
SRIG	Santa Rosalia	20.68	336	P	P	00 53 10.9	+1.0
SRIG				IAmb	IAmb	00 53 20.6	
	comp=Z,118nm,1.3s						
SRIG				IAMs_20	IAMs_20	00 59 19.4	
	comp=Z,11µm,18.0s						
TX31	Lajitas Ar. Si	20.80	359	P	Pn	00 53 13.5	-0.4
TX32	Lajitas Array	20.80	359	P	Pn	00 53 13.5	-0.4
TX32				IAmb	IAmb	00 53 26.5	
	comp=Z,151nm,1.6s						
TXAR	Lajitas Array	20.80	359	P	P	00 53 11.5	0.0
	comp=Z,3.5nm,0.7s,baz=182,slow=11,SNR=45						
TXAR				LR	LR	01 00 45.6	
	comp=Z,13µm,18.4s,baz=0.0,slow=36						
TXAR	Lajitas Array	20.80	359	P	Pn	00 53 13.5	-0.4
TXAR	Lajitas Array	20.80	359	P	Pn	00 53 13.5	-0.4
735A	Kenedy	20.93	13	P	Pn	00 53 15.6	+0.4
735A				IAmb	IAmb	00 53 24.7	
	comp=Z,265nm,1.6s						
HSIG		21.77	341	P	P	00 53 24.2	+2.5
HSIG				IAMs_20	IAMs_20	00 59 44.4	
	comp=Z,7µm,20.0s						
JCT	Junction City	22.16	8	P	P	00 53 27.1	+1.2
	baz=189,SNR=10						
JCT	Junction City	22.16	8	P	P	00 53 27.1	+1.2
JCT				pmax	pmax		
	comp=Z,72nm,1.2s						
JCT				MLR	MLR		
	comp=Z,17µm,18.0s						
JCT	Junction City	22.16	8	P	P	00 53 27.1	+1.2
JCT				IAmb	IAmb	00 53 38.9	
	comp=Z,72nm,1.2s						
HKT	Hockley	22.48	17	P	P	00 53 31.8	+2.6
HKT				pmax	pmax		
	comp=Z,222nm,1.8s						
HKT				MLR	MLR		
	comp=Z,8µm,18.0s						
HKT	Hockley	22.48	17	P	P	00 53 31.8	+2.6
HKT				IAmb	IAmb	00 53 53.9	
	comp=Z,222nm,1.8s						
HKT	Hockley	22.48	17	IAMs_20	IAMs_20	01 03 18.6	
	comp=Z,8µm,18.0s						
435B	Jarrell	22.84	12	P	P	00 53 34.0	+0.9
	baz=194						
435B	Jarrell	22.84	12	P	P	00 53 34.8	+1.7
MNTX	Cornudas Mount	23.25	355	P	P	00 53 38.3	+1.0
	baz=174,SNR=24						
MNTX	Cornudas Mount	23.25	355	P	P	00 53 38.1	+0.7
MNTX				IAMs_20	IAMs_20	01 02 11.8	
	comp=Z,8µm,18.0s						
319A	Douglas	23.54	347	P	P	00 53 40.9	+0.5
GDL2	Guadalupe Moun	23.68	357	P	P	00 53 42.4	+0.6
WHTX	Lake Whitney,	24.03	12	P	P	00 53 45.7	+0.7
	baz=194						
WHTX	Lake Whitney,	24.03	12	P	P	00 53 45.6	+0.7
WHTX				IAmb	IAmb	00 53 55.9	
	comp=Z,90nm,1.4s						
ABTX	Abilene, Hawle	24.29	7	P	P	00 53 47.1	-0.3
	baz=188,SNR=24						
ABTX	Abilene, Hawle	24.29	7	P	P	00 53 47.1	-0.3
ABTX				IAmb	IAmb	00 53 53.4	
	comp=Z,48nm,0.9s						
121A	Cookes Peak, D	24.37	350	P	P	00 53 49.2	+0.9
	baz=169,SNR=13						
121A	Cookes Peak, D	24.37	350	IAmb	IAmb	00 54 01.6	
	comp=Z,105nm,1.2s						
237A	Washetta, Mont	24.42	15	P	P	00 53 50.3	+1.7
NATX	Nacogdoches	24.52	18	P	P	00 53 49.1	-0.2
	baz=200						
NATX	Nacogdoches	24.52	18	P	P	00 53 50.3	+0.9
NATX				IAmb	IAmb	00 53 56.7	
	comp=Z,67nm,1.1s						
NATX				IAMs_20	IAMs_20	01 04 22.3	
	comp=Z,5µm,19.0s						
545A	Edgard	24.55	27	IAMs_20	IAMs_20	01 04 07.1	
	comp=Z,7µm,20.0s						
TUC	Tucson	24.80	344	P	P	00 53 52.9	+0.9
	baz=162						
TUC	Tucson	24.80	344	P	P	00 53 54.1	+2.0
TUC				pmax	pmax		
	comp=Z,233nm,2.0s						
TUC	Tucson	24.80	344	P	P	00 53 54.1	+2.0
LCCY	Blossom Villag	24.95	61	P	P	00 53 55.4	+1.9
214A	Organ Pipe Nat	25.08	340	P	P	00 53 55.1	+0.5
	baz=157,SNR=14						
214A	Organ Pipe Nat	25.08	340	P	P	00 53 55.1	+0.5
214A				IAmb	IAmb	00 54 05.8	
	comp=Z,68nm,1.4s						
214A				IAMs_20	IAMs_20	01 01 35.2	
	comp=Z,7µm,19.0s						
SPX	San Pedro Mart	25.27	335	IAmb	IAmb	00 54 12.8	
	comp=Z,38nm,1.2s						
Z35A	Perchaven, San	25.37	12	IAmb	IAmb	00 54 05.8	
	comp=Z,39nm,1.1s						
MSTX	Muleshoe	25.42	1	P	P	00 53 58.9	+1.2
	baz=181						
MSTX	Muleshoe	25.42	1	IAmb	IAmb	00 54 06.8	
	comp=Z,70nm,1.4s						
Y22D	IRIS PASSCAL I	25.76	353	P	P	00 54 01.7	+0.9
	baz=172						
Y22D	IRIS PASSCAL I	25.76	353	IAMs_20	IAMs_20	01 05 01.3	
	comp=Z,6µm,19.0s						
Z38A	Mt. Pleasant	25.83	16	IAMs_20	IAMs_20	01 04 37.2	
	comp=Z,5µm,18.0s						
OTAV	Otavalo	25.89	107	*ce*P	P	00 54 04.6	+2.0
OTAV				pmax	pmax		
	comp=Z,35nm,1.0s						
OTAV	Otavalo	25.89	107	P	P	00 54 04.1	+1.5
OTAV	Otavalo	25.89	107	IAMs_20	IAMs_20	01 01 28.0	
	comp=Z,7µm,22.0s						
OTAV	Otavalo	25.89	107	*e*P	P	00 54 02.5	-0.1
OTAV	Otavalo	25.89	107	*e*P	P	00 54 01.2	-1.4
113A	Mohawk Valley,	26.15	339	IAmb	IAmb	00 54 14.3	
	comp=Z,96nm,1.4s						
113A				IAMs_20	IAMs_20	01 02 04.4	
	comp=Z,5µm,19.0s						
AMTX	Amarillo	26.36	3	P	P	00 54 06.5	+0.3
	baz=183						
VBMS	Vicksburg	26.41	25	P	P	00 54 07.4	+0.9
	baz=209						
VBMS	Vicksburg	26.41	25	P	P	00 54 07.6	+1.1
VBMS				IAmb	IAmb	00 54 12.4	
	comp=Z,46nm,1.0s						
CPBX	Cerro Prieto	26.41	336	IAMs_20	IAMs_20	01 02 12.6	
	comp=Z,6µm,20.0s						
WMOK	Wichita Mounta	26.49	8	P	P	00 54 08.1	+0.8
	baz=190						
WMOK	Wichita Mounta	26.49	8	IAMs_20	IAMs_20	01 04 07.5	
	comp=Z,9µm,19.0s						
Z41A	Richland Creek	26.49	20	P	P	00 54 08.2	+1.0
	baz=203						
BBAC	Balboa, Cauca	26.53	102	*e*P	P	00 54 07.7	-0.4
ANMO	Albuquerque	26.57	354	P	P	00 54 07.3	-0.9
	comp=Z,2.2nm,1.0s,baz=176,slow=7.4,SNR=6.4						
ANMO	Albuquerque	26.57	354	P	P	00 54 09.8	+1.6
	baz=173						
ANMO	Albuquerque	26.57	354	P	P	00 54 09.2	+1.0
ANMO				pmax	pmax		
	comp=Z,54nm,2.0s						
ANMO				MLR	MLR		
	comp=Z,4µm,20.0s						
ANMO	Albuquerque	26.57	354	P	P	00 54 09.2	+1.0
GCUF	Volcan Galeras	26.65	104	*e*P	P	00 54 10.3	+0.8
UABX	UABC, Campus M	26.65	336	IAMs_20	IAMs_20	01 02 37.8	
	comp=Z,8µm,18.0s						
X18A	Snowflake	26.72	347	IAmb	IAmb	00 54 23.9	
	comp=Z,72nm,1.6s						
WLAR	White Oak Lake	26.78	19	IAmb	IAmb	00 54 46.6	
	comp=Z,91nm,1.3s						
WLAR				IAMs_20	IAMs_20	01 05 54.3	
	comp=Z,6µm,20.0s						
GLA	Glamis	26.79	338	P	P	00 54 10.8	+0.8
	baz=154						
GLA	Glamis	26.79	338	IAMs_20	IAMs_20	01 02 13.3	
	comp=Z,7µm,22.0s						
IKP	In-Ko-Pah, Jac	26.94	335	P	P	00 54 12.2	+0.7
	baz=151						
POPC	Popayan, Colom	26.96	101	*e*P	P	00 54 12.8	+0.9
X16A	Lo Mia Camp, P	26.97	345	IAmb	IAmb	00 54 28.5	
	comp=Z,70nm,1.4s						
YOTC	Yotoco, Valle	26.98	98	*e*P	P	00 54 07.7	-4.4
X37A	Clayton	26.99	14	IAMs_20	IAMs_20	01 04 50.0	
	comp=Z,5µm,19.0s						
CBOC	Ciudad Bolivar	27.02	94	*e*P	P	00 54 10.3	-2.2
SWSC	Sam W. Stewart	27.07	336	P	P	00 54 13.1	+0.6
	baz=152						
SOTA	Rioblanco	27.12	102	*e*P	P	00 54 20.6	+6.9
BRAL	Brewton	27.14	31	P	P	00 54 13.6	+0.5
	baz=217						
BAR	Barrett	27.20	334	P	P	00 54 14.1	+0.3
BAR				IAmb	IAmb	00 54 30.0	
	comp=Z,64nm,1.5s						
W18A	Petrified Fore	27.25	348	P	P	00 54 15.6	+1.3
	baz=166						
W18A	Petrified Fore	27.25	348	IAmb	IAmb	00 54 32.3	
	comp=Z,65nm,1.5s						
MONP2	Monument Peak	27.28	335	P	P	00 54 15.0	+0.3
	baz=150						
061Z	Ochoppi	27.33	48	IAMs_20	IAMs_20	01 04 20.6	
	comp=Z,8µm,21.0s						
OKCFA	Oklahoma City	27.36	10	IAMs_20	IAMs_20	01 04 37.6	
	comp=Z,5µm,21.0s						
451A	Vernon	27.41	34	IAMs_20	IAMs_20	01 06 08.8	
	comp=Z,6µm,20.0s						
MIAR	Mount Ida	27.43	17	P	P	00 54 16.4	+0.7
	baz=201,SNR=17						
MIAR	Mount Ida	27.43	17	IAmb	IAmb	00 54 21.6	
	comp=Z,54nm,1.1s						
MIAR				IAMs_20	IAMs_20	01 05 39.6	
	comp=Z,5µm,21.0s						
OK025	Westminster Rd	27.54	10	IAMs_20	IAMs_20	01 04 44.4	
	comp=Z,5µm,21.0s						
BC3	Big Chuckawall	27.56	337	P	P	00 54 17.3	+0.3
	baz=153						
BCOK	Bluff Creek, N	27.57	10	P	P	00 54 18.5	+1.5
109C	Camp Elliot, M	27.57	334	P	P	00 54 17.5	+0.6
	baz=149						
MARP	Paez Belalcaza	27.59	100	*e*P	P	00 54 15.4	-2.3
X40A	Basin Creek Fa	27.61	19	P	P	00 54 18.3	+1.0
	baz=202						
X40A	Basin Creek Fa	27.61	19	IAMs_20	IAMs_20	01 06 18.2	
	comp=Z,6µm,20.0s						
PDMCI	Parker Dam,Lak	27.68	340	P	P	00 54 18.2	+0.3
	baz=156,SNR=8.3						
OK029	Liberty Lake	27.73	10	IAMs_20	IAMs_20	01 04 48.4	
	comp=Z,5µm,21.0s						
GUY2C	Guyana, Caldas	27.74	95	*e*P	P	00 54 15.4	-3.8
RREF	El Recreo	27.81	95	*e*P	P	00 54 20.6	+0.6
ANIL	Santa Ana	27.82	96	*e*P	P	00 54 23.2	+3.4
TOLC	Tolima	27.88	96	*e*P	P	00 54 25.8	+5.4
IRM	Iron Mountain	27.90	338	P	P	00 54 20.0	+0.1
	baz=154,SNR=14						
TPFO	Pinon Flats	27.91	336	P	P	00 54 20.6	+0.4
	baz=151,SNR=6.3						
XPFO	Pion Flat	27.92	336	IAMs_20	IAMs_20	01 03 10.2	
	comp=Z,5µm,20.0s						
PFO	Pinyon Flats O	27.92	336	P	P	00 54 19.3	-0.9
	comp=Z,11nm,1.2s,baz=141,slow=7.9,SNR=9.4						
PFO				LR	LR	01 03 30.9	
	comp=Z,5µm,19.2s,baz=143,slow=32						
PFO	Pinyon Flats O	27.92	336	P	P	00 54 20.5	+0.2
	baz=151						
PFO	Pinyon Flats O	27.92	336	P	P	00 54 21.5	+1.2
PFO				pmax	pmax		
	comp=Z,63nm,1.6s						
PFO	Pinyon Flats O	27.92	336	P	P	00 54 21.4	+1.2
PFO				IAmb	IAmb	00 54 36.1	
	comp=Z,63nm,1.6s						
PFO	Pinyon Flats O	27.92	336	IAMs_20	IAMs_20	01 03 07.6	
	comp=Z,5µm,21.0s						
OK030	Cody Creek RV	27.98	11	IAMs_20	IAMs_20	01 05 08.0	
	comp=Z,5µm,20.0s						
W39A	Magazine	27.98	16	P	P	00 54 21.2	+0.6
	baz=200						
W39A	Magazine	27.98	16	IAmb	IAmb	00 54 27.6	
	comp=Z,80nm,1.4s						
WUAZ	Wupatki	28.00	346	P	P	00 54 21.2	+0.2
	baz=163,SNR=14						
WUAZ	Wupatki	28.00	346	IAmb	IAmb	00 54 32.7	
	comp=Z,62nm,1.4s						
ORTC	Ortega, Tolima	28.07	98	*e*P	P	00 54 15.4	-6.3
BELC	Belle Mtn. Jos	28.08	337	P	P	00 54 21.5	-0.2
	baz=152						
BETC	Betania	28.13	100	*e*P	P	00 54 20.6	-1.7
TUL1	Leonard	28.16	13	P	P	00 54 23.1	+0.8
	baz=196						
TUL1	Leonard	28.16	13	IAmb	IAmb	00 54 35.5	
	comp=Z,90nm,1.7s						
FLOC	Florencia	28.18	102	*e*P	P	00 54 20.6	-2.1
MURC	Murrieta	28.22	335	P	P	00 54 23.7	+0.9
	baz=150						
Z47A	Carrollton	28.31	27	P	P	00 54 24.6	+1.1
Z47A				IAmb	IAmb	00 54 28.7	
	comp=Z,33nm,0.9s						
W13A	Hualapai Mount	28.32	341	IAMs_20	IAMs_20	01 03 34.9	
	comp=Z,4µm,20.0s						
DWPF	Disney Wildern	28.32	43	P	P	00 54 24.3	+0.6
	baz=230						
CROK	Carrier	28.34	9	IAMs_20	IAMs_20	01 05 16.5	
	comp=Z,8µm,20.0s						
656A	Willston	28.42	40	IAMs_20	IAMs_20	01 05 16.6	
	comp=Z,5µm,21.0s						
W41B	Gary Mavity, V	28.43	19	P	P	00 54 25.3	+0.8
	baz=203						
352A	Blakely	28.52	34	IAMs_20	IAMs_20	01 06 53.2	
	comp=Z,5µm,20.0s						
WHAR	Wooly Hollow	28.52	19	IAmb	IAmb	00 54 30.6	
	comp=Z,39nm,1.2s						
CIS	Catalina Islan	28.59	333	P	P	00 54 26.5	+0.4
	baz=147						
T25A	Trinidad	28.60	358	P	P	00 54 27.8	+1.4
	baz=177						
GMRC	Granite Mounta	28.64	338	P	P	00 54 27.6	+0.9
	baz=154,SNR=11						
LRAL	Lakeview Retre	28.68	29	P	P	00 54 27.8	+1.0
	baz=215						
SMLC	San Martn de	28.73	87	*e*P	P	00 54 28.4	+0.8
ROSC	El Rosal	28.83	95	P	P	00 54 30.7	+1.8
	comp=Z,5.4nm,0.4s,baz=88,slow=22,SNR=3.7						
ROSC				LR	LR	01 03 28.3	
	comp=Z,2µm,20.8s,baz=292,slow=31						
ROSC	El Rosal	28.83	95	P	P	00 54 31.5	+2.6
ROSC				pmax	pmax		
	comp=Z,31nm,1.2s						
ROSC	El Rosal	28.83	95	P	P	00 54 31.5	+2.6
ROSC				IAmb	IAmb	00 54 48.0	
	comp=Z,31nm,1.2s						
ROSC				IAMs_20	IAMs_20	01 03 07.1	
	comp=Z,4µm,19.0s						
OXF	Oxford	28.86	24	P	P	00 54 28.9	+0.4
	baz=209						
HEC	Hector,Ludlow	28.94	337	P	P	00 54 30.5	+1.3
	baz=152						
BFSC	Mount Baldy Ra	28.96	335	P	P	00 54 30.4	+0.8
	baz=149						
SPBC	San Pablo de B	28.96	94	*e*P	P	00 54 33.5	+3.8
SNCC	San Nicolas Is	28.98	331	IAMs_20	IAMs_20	01 03 08.2	
	comp=Z,5µm,18.0s						
T35A	Sooner Cattle	28.99	11	IAmb	IAmb	00 54 39.3	
	comp=Z,88nm,1.7s						
T35A				IAMs_20	IAMs_20	01 05 39.8	
	comp=Z,5µm,22.0s						
KAN01	Argonia South	29.01	9	P	P	00 54 30.7	+1.0
MVCO	Mesa Verde	29.06	351	P	P	00 54 31.3	+0.8
	baz=169,SNR=11						
U15A	North Rim	29.09	345	IAmb	IAmb	00 54 44.5	
	comp=Z,71nm,1.6s						
ATAH	Atahualpa	29.10	121	P	P	00 54 31.4	+0.1
	comp=Z,3.2nm,0.6s,baz=92,slow=5.2,SNR=2.2						
ATAH				LR	LR	01 03 48.8	
	comp=Z,14µm,20.3s,baz=290,slow=32						
MWC	Mount Wilson	29.12	334	IAmb	IAmb	00 54 47.1	
	comp=Z,55nm,1.4s						
KS21	Milan North St	29.15	9	IAMs_20	IAMs_20	01 05 32.1	
	comp=Z,5µm,21.0s						
BRRC	Barranca, Sant	29.17	91	*e*P	P	00 54 30.9	-0.5
SDCO	Great Sand Dun	29.27	356	P	P	00 54 33.4	+1.1
	baz=175						
SDCO	Great Sand Dun	29.27	356	IAmb	IAmb	00 54 48.0	
	comp=Z,46nm,1.6s						
SDCO				IAMs_20	IAMs_20	01 05 40.1	
	comp=Z,7µm,22.0s						
U40A	Yellville	29.33	17	P	P	00 54 33.6	+0.9
	baz=201						
U40A	Yellville	29.33	17	P	P	00 54 32.5	-0.1
U40A				IAMs_20	IAMs_20	01 06 38.9	
	comp=Z,5µm,20.0s						

S22A	**4UR Ranch, Cre**	**29.38**	**354**	P	**P**	**00 54 34.7**	**+1.3**
	baz=173,SNR=9.4						
LPAR	**Lepanto**	**29.48**	**22**	IAMs_20	IAMs_20	01 08 03.8	
	comp=Z,4µm,19.0s						
GSC	**Goldstone, Bar**	**29.54**	**337**	P	**P**	**00 54 35.5**	**+0.9**
	baz=152,SNR=6.1						
GSC	**Goldstone, Bar**	**29.54**	**337**	IAmb	IAmb	00 54 47.9	
	comp=Z,40nm,1.5s						
GSC				IAMs_20	IAMs_20	01 03 59.1	
	comp=Z,8µm,20.0s						
152A	**Waverly Hall**	**29.54**	**33**	IAMs_20	IAMs_20	01 07 38.3	
	comp=Z,4µm,20.0s						
LCAR	**Lake Charles**	**29.60**	**20**	IAmb	IAmb	00 54 49.3	
	comp=Z,69nm,1.9s						
EDW2	**Edwards Air Fo**	**29.65**	**335**	P	**P**	**00 54 36.6**	**+1.0**
	baz=149						
456A	**Hilliard**	**29.68**	**39**	IAMs_20	IAMs_20	01 07 04.8	
	comp=Z,5µm,19.0s						
KNB	**Kanab**	**29.79**	**344**	P	**P**	**00 54 37.8**	**+0.9**
KNB				pmax	pmax		
	comp=Z,114nm,1.7s						
KNB	**Kanab**	**29.79**	**344**	P	**P**	**00 54 37.8**	**+0.9**
GNAR	**Gosnell**	**29.91**	**22**	IAMs_20	IAMs_20	01 08 16.1	
	comp=Z,4µm,19.0s						
RUSC	**La Rusia**	**29.91**	**93**	*e*P	P	00 54 30.9	-7.6
PV01	**Paradox Valley**	**29.98**	**351**	IAMs_20	IAMs_20	01 07 02.0	
	comp=Z,5µm,20.0s						
SHPR	**Sheep Range**	**30.02**	**340**	IAmb	IAmb	00 54 50.6	
	comp=Z,42nm,1.7s						
LRMC	**Laurel Mtn Rad**	**30.04**	**336**	P	**P**	**00 54 39.3**	**+0.2**
	baz=150,SNR=7.5						
SBC	**Santa Barbara**	**30.05**	**332**	P	**P**	**00 54 40.2**	**+1.3**
	baz=146						
PKCU	**Pink Cliffs**	**30.06**	**345**	P	**P**	**00 54 42.2**	**+2.7**
PV02	**Paradox Valley**	**30.08**	**351**	IAmb	IAmb	00 54 46.1	
	comp=Z,39nm,1.4s						
PV02				IAMs_20	IAMs_20	01 07 45.5	
	comp=Z,4µm,20.0s						
R32A	**Long Quarter,**	**30.13**	**7**	P	**P**	**00 54 40.8**	**+1.1**
R32A				IAmb	IAmb	00 54 49.5	
	comp=Z,55nm,1.4s						
PV03	**Paradox Valley**	**30.14**	**351**	IAmb	IAmb	00 54 49.4	
	comp=Z,74nm,1.7s						
PV03				IAMs_20	IAMs_20	01 06 59.2	
	comp=Z,3µm,18.0s						
PV18	**Skein Mesa, Pa**	**30.14**	**351**	IAmb	IAmb	00 54 49.4	
	comp=Z,51nm,1.5s						
PV18				IAMs_20	IAMs_20	01 06 59.2	
	comp=Z,4µm,19.0s						
PAMC	**Pamplona, Colo**	**30.15**	**90**	*e*P	**P**	**00 54 43.9**	**+3.1**
PV11	**David Mesa, Pa**	**30.19**	**351**	IAMs_20	IAMs_20	01 07 43.4	
	comp=Z,4µm,21.0s						
PV12	**Saucer Basin,**	**30.20**	**351**	IAMs_20	IAMs_20	01 07 44.6	
	comp=Z,5µm,21.0s						
PV19	**Morning Glory**	**30.22**	**351**	IAMs_20	IAMs_20	01 07 01.2	
	comp=Z,4µm,18.0s						
ARVC	**Arvin**	**30.22**	**334**	P	**P**	**00 54 41.4**	**+0.9**
	baz=148						
PV20	**West Nyswonger**	**30.24**	**351**	IAmb	IAmb	00 54 51.0	
	comp=Z,39nm,1.4s						
MGMO	**Mountain Grove**	**30.25**	**17**	P	**P**	**00 54 41.4**	**+0.6**
MGMO				IAmb	IAmb	00 54 48.8	
	comp=Z,71nm,1.9s						
MGMO				IAMs_20	IAMs_20	01 07 16.1	
	comp=Z,6µm,21.0s						
PV14	**Lion Creek, Pa**	**30.28**	**351**	IAmb	IAmb	00 54 51.5	
	comp=Z,62nm,1.4s						
PV14				IAMs_20	IAMs_20	01 07 04.0	
	comp=Z,5µm,18.0s						
PV04	**Paradox Valley**	**30.29**	**351**	IAMs_20	IAMs_20	01 07 47.0	
	comp=Z,4µm,20.0s						
PV07	**Paradox Valley**	**30.29**	**351**	P	**P**	**00 54 42.5**	**+1.1**
PV07				IAmb	IAmb	00 54 52.9	
	comp=Z,59nm,1.7s						
PV07				IAMs_20	IAMs_20	01 07 12.2	
	comp=Z,5µm,21.0s						
PV23	**Carpenter Ridg**	**30.36**	**351**	IAmb	IAmb	00 54 56.1	
	comp=Z,80nm,1.7s						
PV23				IAMs_20	IAMs_20	01 07 06.0	
	comp=Z,5µm,21.0s						
PV22	**Blue Mesa, Par**	**30.41**	**351**	IAmb	IAmb	00 54 51.8	
	comp=Z,56nm,1.8s						
KSCO	**Kaye Shedlock'**	**30.45**	**1**	P	**P**	**00 54 44.0**	**+1.3**
	baz=181						
S39A	**Bolivar**	**30.45**	**15**	IAMs_20	IAMs_20	01 06 58.6	
	comp=Z,4µm,19.0s						
Q24A	**Divide**	**30.46**	**357**	P	**P**	**00 54 44.9**	**+2.0**
	baz=176						
PKM	**Mcpherson Peak**	**30.46**	**332**	P	**P**	**00 54 43.2**	**+0.3**
	baz=146						
MPMC	**Manual Prospec**	**30.47**	**337**	P	**P**	**00 54 43.4**	**+0.5**
	baz=151,SNR=14						
T42A	**Van Buren**	**30.50**	**19**	IAmb	IAmb	00 55 40.6	
	comp=Z,82nm,1.9s						
T42A				IAMs_20	IAMs_20	01 07 56.7	
	comp=Z,4µm,20.0s						
ISA	**Isabella, Lake**	**30.52**	**335**	P	**P**	**00 54 44.5**	**+1.2**
	baz=149						
ISA	**Isabella, Lake**	**30.52**	**335**	IAmb	IAmb	00 54 56.6	
	comp=Z,59nm,1.8s						
ISA				IAMs_20	IAMs_20	01 05 06.2	
	comp=Z,4µm,20.0s						
FURC	**Furnace Creek,**	**30.59**	**338**	P	**P**	**00 54 44.4**	**+0.7**
	baz=153						
GOGA	**Godfrey**	**30.79**	**33**	P	**P**	**00 54 45.5**	**0.0**
	baz=220						
TPNV	**Topopah Spring**	**30.79**	**339**	P	**P**	**00 54 46.3**	**+0.6**
	baz=154,SNR=11						
TPNV	**Topopah Spring**	**30.79**	**339**	IAmb	IAmb	00 54 57.1	
	comp=Z,30nm,1.3s						
TPNV				IAMs_20	IAMs_20	01 05 24.4	
	comp=Z,4µm,18.0s						
PRN	**Pahroc Range**	**30.81**	**341**	IAmb	IAmb	00 55 02.0	
	comp=Z,31nm,1.3s						
PRN				IAMs_20	IAMs_20	01 09 27.7	
	comp=Z,3µm,18.0s						
SMCO	**Snowmass**	**30.81**	**354**	IAmb	IAmb	00 54 53.8	
	comp=Z,30nm,1.3s						
WVT	**Waverly**	**30.90**	**25**	P	**P**	**00 54 47.0**	**+0.4**
	baz=210						
WVT	**Waverly**	**30.90**	**25**	P	**P**	**00 54 46.9**	**+0.4**
WVT				pmax	pmax		
	comp=Z,23nm,1.2s						
WVT				MLR	MLR		
	comp=Z,3µm,19.0s						
WVT	**Waverly**	**30.90**	**25**	P	**P**	**00 54 46.9**	**+0.4**
CWC	**Cottonwood Cre**	**31.03**	**336**	P	**P**	**00 54 48.5**	**+0.6**
	baz=151						
MSU	**Marysvale**	**31.04**	**346**	P	**P**	**00 54 50.0**	**+2.0**
MSU	**Marysvale**	**31.04**	**346**	P	**P**	**00 54 50.0**	**+2.0**
KSU1	**Kansas State U**	**31.10**	**10**	IAMs_20	IAMs_20	01 07 03.6	
	comp=Z,4µm,19.0s						
257A	**Skidaway Islan**	**31.15**	**38**	IAMs_20	IAMs_20	01 07 24.0	
	comp=Z,4µm,20.0s						
GRAC	**Grapevine Rang**	**31.24**	**338**	P	**P**	**00 54 51.4**	**+1.8**
	baz=152						
SRU	**San Rafael Swe**	**31.26**	**349**	P	**P**	**00 54 51.7**	**+1.8**
SRU				pmax	pmax		
	comp=Z,38nm,1.3s						
SRU	**San Rafael Swe**	**31.26**	**349**	P	**P**	**00 54 51.7**	**+1.8**
R40A	**Maddies Statio**	**31.30**	**17**	IAmb	IAmb	00 54 55.6	
	comp=Z,24nm,1.1s						
R40A				IAMs_20	IAMs_20	01 07 37.0	
	comp=Z,5µm,21.0s						
ISCO	**Idaho Springs**	**31.32**	**356**	P	**P**	**00 54 51.8**	**+1.3**
	baz=175						
ISCO	**Idaho Springs**	**31.32**	**356**	P	**P**	**00 54 52.5**	**+2.0**
ISCO				pmax	pmax		
	comp=Z,23nm,1.7s						
ISCO				MLR	MLR		
	comp=Z,13µm,18.0s						
ISCO	**Idaho Springs**	**31.32**	**356**	P	**P**	**00 54 52.5**	**+2.0**
PAGB	**Antelope Grade**	**31.36**	**333**	P	**P**	**00 54 51.8**	**+1.2**
PAGB				IAmb	IAmb	00 55 03.7	
	comp=Z,87nm,1.9s						
CCM	**Cathedral Cave**	**31.39**	**18**	P	**P**	**00 54 51.6**	**+0.8**
	baz=203						
CCM	**Cathedral Cave**	**31.39**	**18**	P	**P**	**00 54 50.4**	**-0.4**
CCM				pmax	pmax		
	comp=Z,53nm,1.9s						
CCM				MLR	MLR		
	comp=Z,5µm,20.0s						
CCM	**Cathedral Cave**	**31.39**	**18**	P	**P**	**00 54 50.4**	**-0.4**
CCM				IAmb	IAmb	00 55 13.9	
	comp=Z,53nm,1.9s						
CCM	**Cathedral Cave**	**31.39**	**18**	IAMs_20	IAMs_20	01 08 11.3	
	comp=Z,5µm,20.0s						
TMUT	**Trail Mountain**	**31.58**	**348**	P	**P**	**00 54 54.2**	**+1.3**
FVM	**French Village**	**31.58**	**19**	IAmb	IAmb	00 54 58.1	
	comp=Z,26nm,1.3s						
FVM				IAMs_20	IAMs_20	01 08 38.4	
	comp=Z,4µm,21.0s						
S44A	**Carbondale**	**31.72**	**21**	P	**P**	**00 54 54.2**	**+0.5**
SIUC	**Southern Illin**	**31.76**	**21**	IAmb	IAmb	00 54 58.6	
	comp=Z,32nm,1.2s						
CPCT	**Cooper Cave**	**31.83**	**30**	IAmb	IAmb	00 54 59.4	
	comp=Z,20nm,1.0s						
R11A	**Troy Canyon, C**	**31.84**	**341**	P	**P**	**00 54 55.4**	**+0.5**
	baz=156,SNR=8.9						
O20A	**White River Ci**	**31.90**	**353**	P	**P**	**00 54 56.7**	**+1.1**
	baz=170						
O20A	**White River Ci**	**31.90**	**353**	P	**P**	**00 54 57.4**	**+1.9**
T47A	**Sharon Grove**	**31.94**	**25**	IAmb	IAmb	00 54 58.9	
	comp=Z,47nm,1.4s						
PMPB	**Monarch Peak**	**32.01**	**332**	IAMs_20	IAMs_20	01 05 11.5	
	comp=Z,4µm,19.0s						
SDV	**Santo Domingo**	**32.12**	**87**	P	**P**	**00 54 58.8**	**+1.1**
SDV				IAmb	IAmb	00 55 15.9	
	comp=Z,30nm,1.0s						
SDV	**Santo Domingo**	**32.12**	**87**	*e*P	**P**	**00 54 54.2**	**-3.6**
SDV	**Santo Domingo**	**32.12**	**87**	*e*P	**P**	**00 54 59.8**	**+2.0**
SLM	**Saint Louis**	**32.24**	**19**	IAMs_20	IAMs_20	01 08 58.8	
	comp=Z,5µm,18.0s						
TKL	**Tuckaleechee C**	**32.36**	**30**	IAMs_20	IAMs_20	01 08 43.0	
	comp=Z,4µm,22.0s						
NLU	**North Lily Min**	**32.40**	**347**	P	**P**	**00 55 01.9**	**+2.0**
OGNE	**Ogallala**	**32.40**	**2**	P	**P**	**00 55 01.0**	**+1.2**
	baz=182						
OMMB	**Old Mammoth Mi**	**32.41**	**336**	IAmb	IAmb	00 55 16.9	
	comp=Z,52nm,1.5s						
N23A	**Red Feather La**	**32.43**	**356**	P	**P**	**00 55 01.5**	**+1.3**
	baz=175						
NHSC	**New Hope**	**32.45**	**38**	IAMs_20	IAMs_20	01 08 25.4	
	comp=Z,4µm,20.0s						
MDPB	**Devils Postpil**	**32.46**	**336**	IAMs_20	IAMs_20	01 05 44.5	
	comp=Z,5µm,21.0s						
RDMU	**Red Mountain**	**32.52**	**351**	P	**P**	**00 55 01.8**	**+0.8**
P40A	**Paris**	**32.52**	**16**	IAMs_20	IAMs_20	01 08 13.3	
	comp=Z,4µm,21.0s						
USIN	**University of**	**32.55**	**23**	IAmb	IAmb	00 55 05.7	
	comp=Z,31nm,0.8s						
SDDR	**Presa de Saban**	**32.60**	**68**	IAMs_20	IAMs_20	01 06 32.9	
	comp=Z,5µm,21.0s						
PAULI	**Pauline**	**32.74**	**34**	IAMs_20	IAMs_20	01 09 23.2	
	comp=Z,3µm,20.0s						
LHV	**Little Huntoon**	**32.77**	**337**	IAmb	IAmb	00 55 20.4	
	comp=Z,47nm,1.5s						
DUG	**Dugway, Tooele**	**32.79**	**346**	P	**P**	**00 55 04.0**	**+0.7**
	baz=162,SNR=18						
DUG	**Dugway, Tooele**	**32.79**	**346**	IAMs_20	IAMs_20	01 09 30.4	
	comp=Z,3µm,18.0s						
NV11	**Mina Array Sit**	**32.80**	**338**	IAmb	IAmb	00 55 19.6	
	comp=Z,40nm,1.6s						
NV11				IAMs_20	IAMs_20	01 05 53.5	
	comp=Z,4µm,22.0s						
PHWY	**Pilot Hill**	**32.80**	**357**	P	**P**	**00 55 04.7**	**+1.2**
PHWY				IAmb	IAmb	00 55 17.6	
	comp=Z,81nm,1.9s						
NVAR	**Mina Array Bea**	**32.85**	**338**	P	**P**	**00 55 04.3**	**+0.3**
	comp=Z,3.3nm,0.9s,baz=164,slow=8.5,SNR=15						
NVAR				LR	LR	01 06 16.9	
	comp=Z,4µm,21.9s,baz=146,slow=33						
NVAR	**Mina Array Bea**	**32.85**	**338**	P	**P**	**00 55 03.8**	**-0.1**
Y57A	**Sumter**	**32.97**	**36**	IAMs_20	IAMs_20	01 09 12.9	
	comp=Z,4µm,19.0s						
N35A	**Tabor**	**32.98**	**10**	IAMs_20	IAMs_20	01 08 13.3	
	comp=Z,4µm,19.0s						
NNA	**Nana**	**33.08**	**127**	*i* P	P	00 55 10.7	+4.7
NNA				pmax	pmax		
	comp=Z,24nm,1.1s						
NNA	**Nana**	**33.08**	**127**	IAMs_20	IAMs_20	01 05 22.8	
	comp=Z,4µm,20.0s						
RYN	**Ryan**	**33.11**	**338**	P	**P**	**00 55 06.8**	**+0.6**
BGNE	**Belgrade**	**33.14**	**7**	P	**P**	**00 55 08.6**	**+2.5**
SC01	**Santiago de lo**	**33.23**	**67**	IAMs_20	IAMs_20	01 06 43.4	
	comp=Z,5µm,21.0s						
KMSC	**Kings Mountain**	**33.25**	**34**	P	**P**	**00 55 08.7**	**+1.5**
	baz=222						
KMSC	**Kings Mountain**	**33.25**	**34**	IAMs_20	IAMs_20	01 09 27.4	
	comp=Z,3µm,20.0s						
Y58A	**Scranton**	**33.31**	**37**	IAMs_20	IAMs_20	01 09 02.2	
	comp=Z,4µm,20.0s						
WCI	**Wyandotte Cave**	**33.33**	**25**	P	**P**	**00 55 08.7**	**+0.9**
	baz=211						
WCI	**Wyandotte Cave**	**33.33**	**25**	P	**P**	**00 55 08.1**	**+0.3**
WCI				pmax	pmax		
	comp=Z,24nm,0.9s						
WCI	**Wyandotte Cave**	**33.33**	**25**	P	**P**	**00 55 08.1**	**+0.3**
WCI				IAmb	IAmb	00 55 12.9	
	comp=Z,24nm,0.9s						
WAKR	**Walker**	**33.36**	**336**	IAMs_20	IAMs_20	01 06 14.2	
	comp=Z,6µm,22.0s						
BIRD	**Birdtown, Kers**	**33.37**	**35**	IAMs_20	IAMs_20	01 10 30.8	
	comp=Z,3µm,18.0s						
TCUT	**Toone Canyon**	**33.38**	**349**	P	**P**	**00 55 09.4**	**+1.0**
P43A	**Skaggs, Pawnee**	**33.38**	**19**	IAMs_20	IAMs_20	01 09 33.0	
	comp=Z,4µm,18.0s						
GRTK	**Grand Turk**	**33.44**	**64**	IAMs_20	IAMs_20	01 09 32.3	
	comp=Z,3µm,19.0s						
W56A	**Indian Trail**	**33.66**	**35**	P	**P**	**00 55 11.1**	**+0.3**
	baz=223						
YERR	**Yerington**	**33.70**	**337**	IAmb	IAmb	00 55 28.3	
	comp=Z,33nm,1.6s						
YERR				IAMs_20	IAMs_20	01 06 37.1	
	comp=Z,6µm,20.0s						
SPUT	**South Promonto**	**33.77**	**347**	P	**P**	**00 55 13.6**	**+1.8**
Y59A	**Loris**	**33.85**	**38**	IAMs_20	IAMs_20	01 09 17.3	
	comp=Z,3µm,20.0s						
PNTR	**Pine Nut**	**33.92**	**337**	IAMs_20	IAMs_20	01 06 43.2	
	comp=Z,6µm,22.0s						
L34A	**Svendsen Farm,**	**33.93**	**9**	IAMs_20	IAMs_20	01 08 31.6	
	comp=Z,5µm,21.0s						
ELK	**Elko**	**33.94**	**343**	IAmb	IAmb	00 55 27.9	
	comp=Z,46nm,1.5s						
ELK				IAMs_20	IAMs_20	01 10 54.7	
	comp=Z,4µm,18.0s						
N41A	**Harden Midland**	**33.95**	**17**	IAmb	IAmb	00 55 17.9	
	comp=Z,34nm,1.0s						
N41A				IAMs_20	IAMs_20	01 09 54.1	
	comp=Z,4µm,21.0s						
S51A	**Beattyville**	**34.03**	**28**	IAmb	IAmb	00 55 18.7	
	comp=Z,30nm,0.9s						
RUBR	**Rubicon Trail**	**34.11**	**336**	IAMs_20	IAMs_20	01 07 00.2	
	comp=Z,5µm,19.0s						
VCNR	**Virginia City**	**34.12**	**337**	P	**P**	**00 55 15.9**	**+0.9**
VCNR				IAmb	IAmb	00 55 32.0	
	comp=Z,36nm,1.3s						
VCNR				IAMs_20	IAMs_20	01 06 50.5	
	comp=Z,5µm,22.0s						
O44A	**Mansfield**	**34.19**	**20**	IAMs_20	IAMs_20	01 10 11.6	
	comp=Z,4µm,19.0s						
V56A	**Mocksville**	**34.20**	**34**	P	**P**	**00 55 16.3**	**+0.8**
	baz=222						
K22A	**Casper**	**34.22**	**356**	P	**P**	**00 55 16.4**	**+0.7**
	baz=174						
K22A	**Casper**	**34.22**	**356**	IAmb	IAmb	00 55 30.7	
	comp=Z,33nm,1.6s						
Y60A	**Bolivia**	**34.26**	**38**	IAMs_20	IAMs_20	01 09 27.2	
	comp=Z,3µm,20.0s						
HDIL	**Hopedale**	**34.28**	**19**	P	**P**	**00 55 16.4**	**+0.3**
	baz=205,SNR=9.7						
HDIL	**Hopedale**	**34.28**	**19**	IAMs_20	IAMs_20	01 09 50.9	
	comp=Z,3µm,19.0s						
CZSB	**Cruzeiro do Su**	**34.31**	**117**	*e*P	**P**	**00 55 15.6**	**-1.0**
W58A	**Raeford**	**34.35**	**36**	P	**P**	**00 55 17.4**	**+0.7**
	baz=225						
AFDM	**Forest Hills D**	**34.36**	**335**	P	**P**	**00 55 18.8**	**+1.9**
PAHR	**Pah Rah Range**	**34.38**	**338**	IAmb	IAmb	00 55 34.2	
	comp=Z,33nm,1.3s						
PAHR				IAMs_20	IAMs_20	01 07 10.3	
	comp=Z,3µm,20.0s						
SCIA	**State Center**	**34.47**	**13**	IAMs_20	IAMs_20	01 09 13.0	
	comp=Z,3µm,21.0s						
MCCM	**Marconi Confer**	**34.54**	**332**	IAMs_20	IAMs_20	01 06 22.5	
	comp=Z,4µm,19.0s						
V57A	**Coltrane Farms**	**34.66**	**34**	P	**P**	**00 55 20.1**	**+0.7**
	baz=223						
U56A	**King**	**34.66**	**33**	P	**P**	**00 55 19.6**	**+0.1**
	baz=222						
U56A	**King**	**34.66**	**33**	IAMs_20	IAMs_20	01 10 21.8	
	comp=Z,3µm,20.0s						
BW06	**Boulder Array**	**34.67**	**352**	P	**P**	**00 55 20.4**	**+0.7**
	baz=169,SNR=26						
BW06	**Boulder Array**	**34.67**	**352**	IAmb	IAmb	00 55 29.1	
	comp=Z,82nm,1.6s						
PD31	**Pinedale Array**	**34.67**	**352**	P	**P**	**00 55 20.4**	**+0.7**
PD31				IAmb	IAmb	00 55 29.0	
	comp=Z,75nm,1.6s						
PDAR	**Pinedale Array**	**34.67**	**352**	P	**P**	**00 55 19.0**	**-0.7**
	comp=Z,7.7nm,0.9s,baz=163,slow=7.6,SNR=50						
PDAR	**Pinedale Array**	**34.67**	**352**	P	**P**	**00 55 20.6**	**+1.0**
P48A	**Milroy**	**34.73**	**24**	IAMs_20	IAMs_20	01 10 02.8	
	comp=Z,3µm,22.0s						
SFIN	**Lafayette**	**34.88**	**22**	P	**P**	**00 55 21.8**	**+0.6**
	baz=208						
SFIN	**Lafayette**	**34.88**	**22**	IAMs_20	IAMs_20	01 10 39.7	
	comp=Z,3µm,18.0s						
BEKR	**Beckworth**	**34.89**	**337**	IAmb	IAmb	00 55 38.5	
	comp=Z,35nm,1.4s						
GDXM	**Geysers**	**35.04**	**333**	IAMs_20	IAMs_20	01 06 52.7	
	comp=Z,5µm,19.0s						
P49A	**Miami Univ. Ec**	**35.09**	**25**	P	**P**	**00 55 23.4**	**+0.3**
	baz=213						
P49A	**Miami Univ. Ec**	**35.09**	**25**	IAMs_20	IAMs_20	01 11 18.2	
	comp=Z,3µm,20.0s						
ORV	**Oroville**	**35.09**	**335**	P	**P**	**00 55 23.5**	**+0.4**
ORV				pmax	pmax		
	comp=Z,64nm,1.4s						
ORV	**Oroville**	**35.09**	**335**	P	**P**	**00 55 23.4**	**+0.4**
ORV				IAmb	IAmb	00 55 40.1	
	comp=Z,64nm,1.4s						
L40A	**Anamosa**	**35.11**	**15**	IAmb	IAmb	00 55 37.9	
	comp=Z,28nm,1.1s						
L40A				IAMs_20	IAMs_20	01 09 53.8	
	comp=Z,3µm,21.0s						
Q51A	**Peebles**	**35.27**	**27**	P	**P**	**00 55 24.2**	**-0.4**
Q51A				IAmb	IAmb	00 55 29.4	
	comp=Z,28nm,1.0s						
S54A	**Dingess, Beckl**	**35.27**	**31**	P	**P**	**00 55 25.3**	**+0.6**
	baz=219						
K38A	**Parkersburg**	**35.28**	**13**	IAMs_20	IAMs_20	01 09 47.1	
	comp=Z,4µm,20.0s						
BLA	**Blacksburg**	**35.28**	**32**	P	**P**	**00 55 25.1**	**+0.3**
	baz=221						
BLA	**Blacksburg**	**35.28**	**32**	IAMs_20	IAMs_20	01 11 05.3	
	comp=Z,3µm,20.0s						
CNNC	**Cliffs of the**	**35.29**	**37**	IAMs_20	IAMs_20	01 10 10.6	
	comp=Z,4µm,21.0s						
U57A	**Blanch**	**35.30**	**34**	P	**P**	**00 55 25.7**	**+0.8**
	baz=224						
HOPS	**Hopland Field**	**35.32**	**333**	P	**P**	**00 55 25.9**	**+0.9**
HOPS				IAmb	IAmb	00 55 38.8	
	comp=Z,68nm,1.4s						
HOPS				IAMs_20	IAMs_20	01 06 59.0	
	comp=Z,5µm,19.0s						
T56A	**Rocky Mt**	**35.35**	**33**	P	**P**	**00 55 26.0**	**+0.6**
	baz=222						
R53A	**Hurricane**	**35.36**	**29**	IAMs_20	IAMs_20	01 10 25.5	
	comp=Z,4µm,22.0s						
M44A	**Midewin, Midew**	**35.44**	**20**	IAMs_20	IAMs_20	01 10 48.6	
	comp=Z,3µm,18.0s						
V59A	**Middlesex**	**35.45**	**36**	P	**P**	**00 55 26.7**	**+0.5**
	baz=226						
REDW	**Red Top Meadow**	**35.45**	**350**	IAmb	IAmb	00 55 33.6	
	comp=Z,46nm,1.3s						
L42A	**Oliver, Polo**	**35.49**	**17**	IAmb	IAmb	00 55 32.2	
	comp=Z,28nm,1.1s						
L42A				IAMs_20	IAMs_20	01 10 14.9	
	comp=Z,4µm,22.0s						
SNOW	**Snow King Moun**	**35.53**	**350**	IAmb	IAmb	00 55 33.8	
	comp=Z,74nm,1.4s						
RSSD	**Black Hills**	**35.56**	**359**	P	**P**	**00 55 28.5**	**+1.1**
	baz=178						
RSSD	**Black Hills**	**35.56**	**359**	P	**P**	**00 55 29.4**	**+2.0**
RSSD				pmax	pmax		
	comp=Z,46nm,1.6s						
RSSD				MLR	MLR		
	comp=Z,12µm,18.0s						
RSSD	**Black Hills**	**35.56**	**359**	P	**P**	**00 55 29.4**	**+2.0**
RSSD				IAmb	IAmb	00 55 37.7	
	comp=Z,46nm,1.6s						
ECSD	**EROS Data Cent**	**35.63**	**8**	P	**P**	**00 55 28.5**	**+0.9**
	baz=191						
ECSD	**EROS Data Cent**	**35.63**	**8**	IAmb	IAmb	00 55 40.6	
	comp=Z,92nm,1.9s						
ECSD	**EROS Data Cent**	**35.63**	**8**	IAMs_20	IAMs_20	01 09 47.4	
	comp=Z,5µm,22.0s						
U58A	**Oxford**	**35.71**	**35**	P	**P**	**00 55 28.7**	**+0.2**
	baz=225						
R54A	**Victor**	**35.72**	**31**	P	**P**	**00 55 29.0**	**+0.4**
	baz=220						
T57A	**Hurt**	**35.75**	**34**	P	**P**	**00 55 29.4**	**+0.6**
	baz=223						
T57A	**Hurt**	**35.75**	**34**	IAMs_20	IAMs_20	01 10 41.7	
	comp=Z,3µm,20.0s						
P51A	**Williamsport**	**35.77**	**27**	IAmb	IAmb	00 55 33.6	
	comp=Z,29nm,0.9s						
P51A				IAMs_20	IAMs_20	01 12 08.2	
	comp=Z,3µm,18.0s						
O49A	**Covington**	**35.80**	**25**	IAMs_20	IAMs_20	01 10 34.9	
	comp=Z,3µm,22.0s						
O03E	**Paynes Creek**	**35.84**	**335**	P	**P**	**00 55 30.5**	**+0.8**
	baz=148						
HQIL	**Hanson Quary C**	**35.87**	**20**	IAMs_20	IAMs_20	01 10 59.0	
	comp=Z,4µm,19.0s						
Q53A	**Leroy**	**35.98**	**29**	P	**P**	**00 55 31.2**	**+0.5**
	baz=218						
V60A	**Jim Taylor Roa**	**36.02**	**37**	IAMs_20	IAMs_20	01 10 42.0	
	comp=Z,4µm,21.0s						
S56A	**Natural Bridge**	**36.08**	**33**	P	**P**	**00 55 32.0**	**+0.3**
	baz=222						
KCPM	**Cahto Peak**	**36.11**	**333**	IAMs_20	IAMs_20	01 07 11.0	
	comp=Z,4µm,21.0s						
T58A	**Grand View Acr**	**36.11**	**34**	P	**P**	**00 55 33.1**	**+1.2**
	baz=224						
U59A	**Littleton**	**36.12**	**36**	IAMs_20	IAMs_20	01 11 07.4	
	comp=Z,3µm,19.0s						
FLWY	**Flagg Ranch**	**36.13**	**351**	P	**P**	**00 55 32.9**	**+0.7**
FLWY				IAmb	IAmb	00 55 42.4	
	comp=Z,52nm,1.2s						
FLWY				IAMs_20	IAMs_20	01 10 51.6	
	comp=Z,3µm,19.0s						
JFWS	**Jewell Farm**	**36.16**	**16**	P	**P**	**00 55 33.2**	**+0.9**
	baz=202						
JFWS	**Jewell Farm**	**36.16**	**16**	IAMs_20	IAMs_20	01 10 23.7	
	comp=Z,4µm,22.0s						
L44A	**Lake County Fo**	**36.19**	**19**	P	**P**	**00 55 33.5**	**+1.0**
	baz=206						
L44A	**Lake County Fo**	**36.19**	**19**	IAMs_20	IAMs_20	01 11 11.5	
	comp=Z,4µm,20.0s						
P52A	**Corning**	**36.31**	**28**	P	**P**	**00 55 33.8**	**+0.3**
	baz=217						
P52A	**Corning**	**36.31**	**28**	IAmb	IAmb	00 55 38.1	
	comp=Z,23nm,0.8s						
HLID	**Hailey**	**36.36**	**346**	P	**P**	**00 55 36.1**	**+1.9**
	baz=161,SNR=19						
HLID	**Hailey**	**36.36**	**346**	P	**P**	**00 55 35.7**	**+1.5**
HLID				IAmb	IAmb	00 55 50.2	
	comp=Z,39nm,1.4s						
HLID				IAMs_20	IAMs_20	01 11 31.9	
	comp=Z,3µm,19.0s						
WDC	**Whiskeytown Da**	**36.39**	**335**	P	**P**	**00 55 33.4**	**-0.8**
WDC				pmax	pmax		
	comp=Z,20nm,1.3s						
WDC	**Whiskeytown Da**	**36.39**	**335**	P	**P**	**00 55 33.4**	**-0.8**
ACSO	**Alum Creek Sta**	**36.41**	**26**	P	**P**	**00 55 34.7**	**+0.3**
	baz=215						
ACSO	**Alum Creek Sta**	**36.41**	**26**	IAmb	IAmb	00 55 38.5	
	comp=Z,39nm,1.2s						
H17A	**Grant Village**	**36.41**	**351**	P	**P**	**00 55 35.7**	**+1.0**
	baz=168,SNR=8.2						
H17A	**Grant Village**	**36.41**	**351**	P	**P**	**00 55 38.4**	**+3.7**
H17A				IAmb	IAmb	00 55 47.3	
	comp=Z,71nm,1.8s						
I37A	**Lemond, Waseca**	**36.45**	**12**	IAMs_20	IAMs_20	01 10 24.3	
	comp=Z,3µm,20.0s						
V61A	**Roper**	**36.45**	**38**	IAMs_20	IAMs_20	01 09 29.3	
	comp=Z,3µm,20.0s						
S57A	**Dark Hollow, R**	**36.47**	**33**	P	**P**	**00 55 35.3**	**+0.3**
	baz=223						
S57A	**Dark Hollow, R**	**36.47**	**33**	IAMs_20	IAMs_20	01 11 05.8	
	comp=Z,4µm,21.0s						
N49A	**Columbus Grove**	**36.48**	**24**	P	**P**	**00 55 34.5**	**-0.5**
N49A				IAMs_20	IAMs_20	01 11 16.9	
	comp=Z,3µm,21.0s						
WVOR	**Wild Horse Val**	**36.52**	**341**	IAmb	IAmb	00 55 45.9	
	comp=Z,41nm,1.3s						
WVOR				IAMs_20	IAMs_20	01 12 53.0	
	comp=Z,3µm,18.0s						
K43A	**Burlington**	**36.53**	**18**	IAMs_20	IAMs_20	01 11 45.6	
	comp=Z,3µm,22.0s						
P53A	**Whipple**	**36.54**	**29**	IAMs_20	IAMs_20	01 11 13.7	

	comp=Z,3µm,21.0s						
LKWY	Lake	36.55	351	IAmb	IAmb	00 55 51.9	
	comp=Z,84nm,1.9s						
LKWY				IAMs_20	IAMs_20	01 09 01.9	
	comp=Z,5µm,18.0s						
U60A	Pendleton	36.57	36	P	P	00 55 36.7	+1.0
	baz=226						
MFID	Camas Ranch	36.58	344	IAMs_20	IAMs_20	01 09 39.6	
	comp=Z,3µm,18.0s						
L46A	Eue Claire	36.60	21	IAMs_20	IAMs_20	01 11 13.3	
	comp=Z,3µm,20.0s						
MOD	Modoc Plateau	36.63	338	P	P	00 55 37.1	+0.7
MOD				IAmb	IAmb	00 55 53.3	
	comp=Z,72nm,1.5s						
YMR	Madison River	36.74	351	P	P	00 55 39.7	+2.3
N02D	Trinity Center	36.78	335	P	P	00 55 38.4	+0.7
	baz=147						
O52A	Adamsville	36.83	28	P	P	00 55 37.5	-0.5
O52A				IAMs_20	IAMs_20	01 11 59.4	
	comp=Z,3µm,20.0s						
YHB	Horse Butte	36.86	350	P	P	00 55 39.9	+1.5
YNE	Yellowstone No	36.93	352	P	P	00 55 39.2	+0.1
RLMT	Red Lodge	36.94	353	P	P	00 55 39.7	+0.6
	baz=170						
QLMT	Earthquake Lak	36.97	350	P	P	00 55 40.6	+1.2
I40A	Norwalk	36.98	15	IAMs_20	IAMs_20	01 11 28.3	
	comp=Z,4µm,19.0s						
R57A	Stanardsville	37.09	33	P	P	00 55 40.4	+0.1
	baz=223						
M04C	Macdoel	37.11	337	P	P	00 55 40.8	+0.2
	baz=148,SNR=10						
KHMM	Horse Mountain	37.14	334	IAmb	IAmb	00 55 56.0	
	comp=Z,73nm,1.6s						
KHMM				IAMs_20	IAMs_20	01 08 51.3	
	comp=Z,4µm,18.0s						
M02C	Callahan	37.19	335	P	P	00 55 41.5	+0.4
	baz=147						
JCC	Jacoby Creek,	37.23	333	IAMs_20	IAMs_20	01 07 55.5	
	comp=Z,3µm,20.0s						
O53A	New Philadelph	37.23	28	P	P	00 55 41.8	+0.4
	baz=218						
O53A	New Philadelph	37.23	28	IAMs_20	IAMs_20	01 11 46.8	
	comp=Z,3µm,21.0s						
MCMT	McKenzie Canyo	37.23	349	P	P	00 55 43.8	+2.1
L48A	N Adams	37.24	23	P	P	00 55 40.9	-0.6
L48A				IAmb	IAmb	00 55 55.3	
	comp=Z,111nm,1.6s						
T60A	Surry	37.27	36	IAMs_20	IAMs_20	01 11 53.0	
	comp=Z,4µm,20.0s						
Q56A	Snyder Ridge,	37.29	31	P	P	00 55 43.3	+1.3
	baz=221						
Q56A	Snyder Ridge,	37.29	31	IAMs_20	IAMs_20	01 12 18.6	
	comp=Z,3µm,20.0s						
M50A	Fremont	37.35	25	IAMs_20	IAMs_20	01 13 20.1	
	comp=Z,3µm,19.0s						
R58A	Rapidan	37.38	33	P	P	00 55 42.7	0.0
	baz=224						
YBH	Yreka Blue Hor	37.42	336	P	P	00 55 42.0	-1.0
	comp=Z,7.1nm,1.0s,baz=134,slow=1.8,SNR=8.7						
YBH				LR	LR	01 08 45.8	
	comp=Z,3µm,20.8s,baz=152,slow=33						
YBH	Yreka Blue Hor	37.42	336	IAMs_20	IAMs_20	01 08 34.7	
	comp=Z,3µm,20.0s						
MCWV	Mont Chateau	37.43	30	P	P	00 55 43.7	+0.6
	baz=220						
I42A	Draeger Farm,	37.44	17	IAMs_20	IAMs_20	01 12 11.6	
	comp=Z,4µm,21.0s						
K05A	Summer Lake	37.56	338	IAMs_20	IAMs_20	01 09 36.5	
	comp=Z,3µm,18.0s						
O54A	Avella	37.57	29	P	P	00 55 45.2	+0.9
CBN	Corbin Frederi	37.66	34	IAMs_20	IAMs_20	01 12 35.1	
	comp=Z,2µm,18.0s						
L04D	Klamath Falls	37.66	336	P	P	00 55 45.3	+0.1
	baz=148,SNR=6.2						
DLMT	Dillon	37.70	349	P	P	00 55 46.7	+1.3
DLMT				IAmb	IAmb	00 55 56.0	
	comp=Z,64nm,1.4s						
SPMN	Marine on St.	37.73	12	P	P	00 55 46.3	+0.8
	baz=197						
F33A	5 Mile Ranch,	37.74	8	IAMs_20	IAMs_20	01 11 01.3	
	comp=Z,5µm,21.0s						
KRMB	Red Mountain	37.75	334	IAmb	IAmb	00 56 01.9	
	comp=Z,68nm,1.6s						
BOZ	Bozeman (W)	37.75	350	P	P	00 55 46.8	+0.9
	baz=166,SNR=11						
BOZ	Bozeman (W)	37.75	350	IAmb	IAmb	00 55 56.5	
	comp=Z,78nm,1.8s						
BOZ				IAMs_20	IAMs_20	01 11 56.6	
	comp=Z,3µm,18.0s						
K04D	Chiloquin, OR	37.80	337	P	P	00 55 47.2	+0.9
	baz=149						
N53A	Lisbon	37.84	28	IAMs_20	IAMs_20	01 12 07.1	
	comp=Z,3µm,20.0s						
Q58A	Fox Den Farm,	38.01	33	P	P	00 55 48.6	+0.6
	baz=224						
L02E	Cave Junction	38.14	335	P	P	00 55 49.8	+0.7
	baz=146						
J05D	Fort Rock, OR	38.17	338	P	P	00 55 50.3	+0.8
	baz=150,SNR=14						
M52A	Chesterland	38.19	27	IAMs_20	IAMs_20	01 13 21.4	
	comp=Z,2µm,19.0s						
J47A	Sunmer	38.20	22	P	P	00 55 49.6	0.0
J47A				IAMs_20	IAMs_20	01 12 30.6	
	comp=Z,3µm,19.0s						
F36A	Milaca	38.20	11	IAMs_20	IAMs_20	01 11 26.6	
	comp=Z,4µm,19.0s						
LAO	LASA Array	38.22	357	P	P	00 55 50.0	+0.3
	baz=175						
LAO	LASA Array	38.22	357	IAmb	IAmb	00 56 04.0	
	comp=Z,58nm,1.5s						
P57A	Homestead Farm	38.23	32	IAMs_20	IAMs_20	01 12 21.4	
	comp=Z,3µm,19.0s						
HUMO	Hull Mountain	38.25	336	IAMs_20	IAMs_20	01 09 00.7	
	comp=Z,3µm,22.0s						
I07A	Izee	38.28	341	P	P	00 55 51.4	+1.0
I07A				IAMs_20	IAMs_20	01 09 37.5	
	comp=Z,3µm,20.0s						
H43A	Windswept, Lux	38.31	18	IAMs_20	IAMs_20	01 12 59.4	
	comp=Z,3µm,18.0s						
N54A	Moraine State	38.36	29	P	P	00 55 51.2	+0.2
	baz=219						
N54A	Moraine State	38.36	29	P	P	00 55 51.9	+0.9
N54A				IAmb	IAmb	00 55 56.1	
	comp=Z,48nm,1.2s						
I45A	Fountain	38.41	20	IAMs_20	IAMs_20	01 12 27.0	
	comp=Z,3µm,18.0s						
M53A	WI Miller and	38.42	28	P	P	00 55 50.5	-0.9
	baz=217						
M53A	WI Miller and	38.42	28	IAMs_20	IAMs_20	01 13 39.4	
	comp=Z,3µm,20.0s						
KBO	Bosley Butte	38.45	335	IAMs_20	IAMs_20	01 09 19.9	
	comp=Z,3µm,18.0s						
J04D	Umpqua Nationa	38.46	338	P	P	00 55 52.1	+0.2
	baz=149						
PINE	Pine Mountain	38.51	339	P	P	00 55 52.8	+0.4
PINE				IAmb	IAmb	00 56 03.2	
	comp=Z,56nm,1.1s						
PINE				IAMs_20	IAMs_20	01 14 33.6	
	comp=Z,3µm,19.0s						
O56A	Blue Knob Stat	38.53	31	P	P	00 55 52.5	+0.1
	baz=221						
O56A	Blue Knob Stat	38.53	31	IAMs_20	IAMs_20	01 13 18.3	
	comp=Z,3µm,18.0s						
K02D	Willamette Mer	38.61	336	P	P	00 55 52.9	-0.2
	baz=146,SNR=6.6						
ALLY	Alegheny Colle	38.83	28	IAMs_20	IAMs_20	01 12 49.2	
	comp=Z,3µm,20.0s						
M54A	Oil Creek Stat	38.94	28	P	P	00 55 55.8	0.0
	baz=219						
M54A	Oil Creek Stat	38.94	28	IAmb	IAmb	00 56 10.1	
	comp=Z,54nm,1.4s						
M54A				IAMs_20	IAMs_20	01 12 28.2	
	comp=Z,3µm,22.0s						
KEBM	Edson Butte	39.03	335	IAMs_20	IAMs_20	01 09 49.5	
	comp=Z,3µm,19.0s						
I04A	Tendick Farm,	39.05	338	P	P	00 55 57.0	+0.3
	baz=149						
J01E	Myrtle Point	39.11	336	P	P	00 55 57.5	+0.3
	baz=146						
I05D	Terrebonne, OR	39.12	339	P	P	00 55 58.3	+0.9
	baz=151						
N56A	West Decatur	39.15	30	P	P	00 55 58.2	+0.6
	baz=221						
G08A	Pilot Rock	39.19	342	IAMs_20	IAMs_20	01 11 03.7	
	comp=Z,3µm,19.0s						
ERPA	Erie	39.27	28	IAMs_20	IAMs_20	01 14 03.9	
	comp=Z,3µm,18.0s						
E38A	The Farm, Brul	39.31	13	IAMs_20	IAMs_20	01 12 15.0	
	comp=Z,4µm,19.0s						
I03D	Drain, OR	39.32	337	P	P	00 55 60.0	+1.1
	baz=148						
F10A	Beach Ranch, E	39.33	344	P	P	00 55 59.7	+0.6
MSO	Missoula	39.37	348	P	P	00 56 00.3	+0.9
	baz=163						
N57A	Milroy	39.41	31	P	P	00 56 00.1	+0.4
	baz=222						
COWI	Conover	39.41	15	IAMs_20	IAMs_20	01 13 13.7	
	comp=Z,3µm,20.0s						
G45A	Suttons Bay	39.49	20	P	P	00 55 59.9	-0.4
G45A				IAmb	IAmb	00 56 04.5	
	comp=Z,60nm,1.4s						
G45A				IAMs_20	IAMs_20	01 12 28.6	
	comp=Z,3µm,19.0s						
M56A	Emporium	39.64	30	P	P	00 56 02.3	+0.6
	baz=221						
M56A	Emporium	39.64	30	IAMs_20	IAMs_20	01 13 47.6	
	comp=Z,3µm,20.0s						
GLMI	Grayling	39.65	21	P	P	00 56 01.6	-0.1
	baz=209						
H04A	Detroit Lake	39.73	339	IAmb	IAmb	00 56 22.9	
	comp=Z,61nm,1.3s						
H04A				IAMs_20	IAMs_20	01 10 14.8	
	comp=Z,3µm,22.0s						
SABA	Saba	39.84	73	IAMs_20	IAMs_20	01 12 17.6	
	comp=Z,5µm,20.0s						
EGMT	Eagleton	39.86	353	P	P	00 56 03.9	+0.4
	baz=170,SNR=11						
EGMT	Eagleton	39.86	353	P	P	00 56 03.5	+0.1
EGMT				IAmb	IAmb	00 56 13.2	
	comp=Z,71nm,1.6s						
EGMT				IAMs_20	IAMs_20	01 12 26.4	
	comp=Z,4µm,18.0s						
I02D	Swisshome	39.86	337	P	P	00 56 04.6	+1.2
	baz=147						
N58A	Sunbury	39.90	32	P	P	00 56 04.4	+0.6
	baz=223						
N58A	Sunbury	39.90	32	IAMs_20	IAMs_20	01 14 21.6	
	comp=Z,2µm,19.0s						
G05D	Wamic, OR	39.91	340	P	P	00 56 04.7	+0.8
	baz=151						
DGMT	Dagmar	39.92	359	P	P	00 56 04.3	+0.4
	baz=178,SNR=13						
DGMT	Dagmar	39.92	359	IAmb	IAmb	00 56 10.5	
	comp=Z,47nm,1.0s						
PSUB	Penn St. - Bra	39.93	34	IAMs_20	IAMs_20	01 14 48.3	
	comp=Z,2µm,18.0s						
F07A	Phinny Hill Vi	40.03	342	P	P	00 56 05.6	+0.8
F07A				IAmb	IAmb	00 56 19.1	
	comp=Z,52nm,1.1s						
F07A				IAMs_20	IAMs_20	01 10 44.0	
	comp=Z,2µm,19.0s						
M57A	Sunshine Farm,	40.05	31	P	P	00 56 05.0	-0.1
	baz=222						
M57A	Sunshine Farm,	40.05	31	IAMs_20	IAMs_20	01 15 16.6	
	comp=Z,3µm,21.0s						
COR	Corvallis	40.05	337	IAMs_20	IAMs_20	01 10 34.5	
	comp=Z,4µm,20.0s						
SEUS	St. Eustatius	40.07	73	IAMs_20	IAMs_20	01 10 43.7	
	comp=Z,4µm,19.0s						
WVNY	West Valley, N	40.14	28	IAMs_20	IAMs_20	01 14 39.9	
	comp=Z,2µm,19.0s						
I51A	Listowel	40.17	25	P	P	00 56 06.0	0.0
	baz=215						
AGMN	Agassiz Nation	40.21	8	IAMs_20	IAMs_20	01 11 37.8	
	comp=Z,4µm,21.0s						
E43A	Lone Tree Farm	40.26	17	IAMs_20	IAMs_20	01 13 10.2	
	comp=Z,3µm,18.0s						
SKI	Saint Kitts	40.28	73	IAMs_20	IAMs_20	01 10 43.2	
	comp=Z,5µm,22.0s						
E08A	Dider Farm, El	40.31	343	P	P	00 56 08.5	+1.4
E08A				IAMs_20	IAMs_20	01 12 23.3	
	comp=Z,3µm,18.0s						
JTMT	Jette	40.31	348	P	P	00 56 08.3	+1.0
JTMT				IAMs_20	IAMs_20	01 11 43.4	
	comp=Z,3µm,18.0s						
HAWA	Hanford	40.36	342	P	P	00 56 09.2	+1.6
HAWA				IAmb	IAmb	00 56 15.9	
	comp=Z,72nm,1.8s						
HAWA				IAMs_20	IAMs_20	01 11 50.6	
	comp=Z,2µm,19.0s						
M58A	Price's Panora	40.42	31	P	P	00 56 08.5	+0.3
	baz=223						
L56A	Greenwood	40.44	30	P	P	00 56 07.7	-0.6
	baz=221						
L56A	Greenwood	40.44	30	IAMs_20	IAMs_20	01 14 01.7	
	comp=Z,3µm,20.0s						
LUPA	Lehigh Univers	40.44	33	IAMs_20	IAMs_20	01 14 45.9	
	comp=Z,3µm,18.0s						
D41A	Chassel	40.45	15	IAMs_20	IAMs_20	01 12 57.2	
	comp=Z,3µm,21.0s						
EYMN	Ely	40.60	12	P	P	00 56 09.4	-0.2
	baz=198						
EYMN	Ely	40.60	12	P	P	00 56 10.5	+1.0
EYMN	Ely	40.60	12	IAMs_20	IAMs_20	01 12 42.0	
	comp=Z,4µm,21.0s						
E07A	Sunnyside	40.61	342	P	P	00 56 10.7	+1.0
E07A				IAmb	IAmb	00 56 23.8	
	comp=Z,41nm,1.0s						
E07A				IAMs_20	IAMs_20	01 11 14.1	
	comp=Z,3µm,20.0s						
TAOE	Nuku Hiva Isla	40.68	246	*e*S	S	01 02 23.0	+2.6
	comp=Z,343nm,26.8s						
TAOE				*e*LQ	LQ	01 05 31.3	
	comp=Z,9µm,25.6s						
TAOE				*e*LR	LR	01 07 02.7	
	comp=Z,6µm,25.3s,baz=64						
TAOE	Nuku Hiva Isla	40.68	246	*e*T	T	01 39 03.0	
	comp=Z,135nm,0.2s						
TAOE	Nuku Hiva Isla	40.68	246	IAMs_20	IAMs_20	01 07 34.3	
	comp=Z,5µm,21.0s						
MMNY	Mt. Morris Dam	40.72	29	IAmb	IAmb	00 56 24.7	
	comp=Z,137nm,2.0s						
MMNY				IAMs_20	IAMs_20	01 14 26.2	
	comp=Z,3µm,19.0s						
J54A	Appleton	40.79	28	IAMs_20	IAMs_20	01 15 21.2	
	comp=Z,3µm,20.0s						
KSPA	Keystone Colle	40.91	32	IAMs_20	IAMs_20	01 16 18.4	
	comp=Z,2µm,18.0s						
BRNJ	Basking Ridge	40.94	34	IAMs_20	IAMs_20	01 16 07.1	
	comp=Z,3µm,18.0s						
ETMB	Extrema	40.98	116	*e*P	P	00 56 12.1	-1.0
E46A	Sault Ste Mari	41.10	20	IAMs_20	IAMs_20	01 13 37.4	
	comp=Z,3µm,20.0s						
J55A	Hilton	41.17	28	IAMs_20	IAMs_20	01 15 12.1	
	comp=Z,4µm,19.0s						
L58A	Harry Jones Me	41.22	31	P	P	00 56 15.3	+0.5
	baz=223						
ANWB	Willy Bob	41.23	73	IAMs_20	IAMs_20	01 13 25.2	
	comp=Z,3µm,20.0s						
BINY	Binghamton	41.27	31	P	P	00 56 15.4	+0.3
	baz=223						
C09A	Chrisman Ranch	41.29	345	P	P	00 56 15.0	-0.2
C09A				IAmb	IAmb	00 56 30.4	
	comp=Z,92nm,1.8s						
C09A				IAMs_20	IAMs_20	01 12 24.2	
	comp=Z,3µm,19.0s						
LON	Longmire	41.40	341	IAmb	IAmb	00 56 29.5	
	comp=Z,41nm,1.2s						
LON				IAMs_20	IAMs_20	01 11 44.0	
	comp=Z,4µm,20.0s						
NEW	Newport	41.43	346	LR	LR	01 12 28.0	
	comp=Z,2µm,18.5s,baz=163,slow=35						
NEW	Newport	41.43	346	P	P	00 56 17.6	+1.2
	baz=159,SNR=11						
NEW	Newport	41.43	346	P	P	00 56 17.3	+0.9
NEW				pmax	pmax		
	comp=Z,34nm,1.2s						
NEW				MLR	MLR		
	comp=Z,3µm,20.0s						
NEW	Newport	41.43	346	P	P	00 56 17.3	+0.9
NEW	Newport	41.43	346	IAMs_20	IAMs_20	01 15 20.9	
	comp=Z,3µm,20.0s						
E04D	Cinebar	41.48	340	P	P	00 56 17.0	+0.2
	baz=150,SNR=11						
WALA	Waterton Lakes	41.50	349	IAmb	IAmb	00 56 47.6	
	comp=Z,48nm,1.4s						
WALA				IAMs_20	IAMs_20	01 12 07.8	
	comp=Z,3µm,20.0s						
PAL	Palisades	41.52	34	IAMs_20	IAMs_20	01 14 44.5	
	comp=Z,3µm,20.0s						
J56A	Wolcott	41.63	29	P	P	00 56 18.0	-0.1
	baz=221						
J56A	Wolcott	41.63	29	P	P	00 56 18.2	+0.1
J56A				IAmb	IAmb	00 56 26.7	
	comp=Z,74nm,1.4s						
J56A				IAMs_20	IAMs_20	01 15 00.4	
	comp=Z,3µm,19.0s						
L59A	Walton	41.74	32	IAMs_20	IAMs_20	01 16 20.4	
	comp=Z,3µm,18.0s						
SADO	Sadowa	41.75	26	IAMs_20	IAMs_20	01 14 28.5	
	comp=Z,3µm,21.0s						
E03A	Lebam	41.82	339	P	P	00 56 20.6	+1.1
H53A	Bobcaygeon	41.84	26	P	P	00 56 19.3	-0.5
	baz=218						
D05A	Enumclaw	41.84	341	P	P	00 56 20.9	+1.2
D05A				IAMs_20	IAMs_20	01 12 16.7	
	comp=Z,4µm,19.0s						
K58A	Earlville	41.85	31	P	P	00 56 20.0	+0.1
	baz=223						
K58A	Earlville	41.85	31	P	P	00 56 20.0	+0.1
AP01	Chacalluta	41.90	130	IAMs_20	IAMs_20	01 09 55.6	
	comp=Z,3µm,21.0s						
L60A	Shokan	42.03	33	P	P	00 56 21.9	+0.5
	baz=225						
B08A	Colville Reser	42.09	344	P	P	00 56 22.4	+0.6
ULM	Lac du Bonnet	42.12	7	P	P	00 56 19.8	-2.2
	comp=Z,4.6nm,0.8s,baz=194,slow=7.4,SNR=5.6						
ULM				LR	LR	01 13 46.7	
	comp=Z,2µm,19.6s,baz=196,slow=36						
ULM	Lac du Bonnet	42.12	7	*i* P	P	00 56 22.4	+0.4
ULM	Lac du Bonnet	42.12	7	IAMs_20	IAMs_20	01 13 36.4	
	comp=Z,3µm,20.0s						
DELO	Deloro Mine	42.22	27	P	P	00 56 21.6	-1.3
DELO				IAMs_20	IAMs_20	01 16 05.1	
	comp=Z,3µm,18.0s						
KSCT	Kent School, K	42.25	33	IAMs_20	IAMs_20	01 14 56.7	
	comp=Z,3µm,21.0s						
D03D	Eldon	42.51	340	P	P	00 56 25.6	+0.4
	baz=150						
PB16	IPOC Station P	42.52	129	IAMs_20	IAMs_20	01 10 18.5	
	comp=Z,3µm,21.0s						
NLWA	Neilton Lookou	42.65	339	P	P	00 56 27.7	+1.3
NLWA				IAmb	IAmb	00 56 40.2	
	comp=Z,56nm,1.2s						
NLWA				IAMs_20	IAMs_20	01 12 41.2	
	comp=Z,3µm,20.0s						
G54A	Lake Saint Pet	42.70	26	P	P	00 56 26.7	-0.1
	baz=218						
PSGCX	Pisagua	42.80	131	IAMs_20	IAMs_20	01 10 28.4	
	comp=Z,2µm,20.0s						
B05A	Bryant	42.82	341	P	P	00 56 27.8	+0.1
	baz=152						
BBSR	BB Station	42.83	51	IAMs_20	IAMs_20	01 11 29.9	
	comp=Z,4µm,22.0s						
M63A	Gales Ferry	42.83	35	IAMs_20	IAMs_20	01 15 03.1	
	comp=Z,3µm,18.0s						
TRY	Troy	42.85	32	IAMs_20	IAMs_20	01 17 06.6	
	comp=Z,3µm,18.0s						
B06A	Marblemount	42.85	342	P	P	00 56 28.5	+0.6
B06A				IAMs_20	IAMs_20	01 12 35.6	
	comp=Z,3µm,20.0s						
I58A	Old Forge	42.86	30	P	P	00 56 28.7	+0.5
	baz=223						
L62A	Suffield	42.91	34	IAMs_20	IAMs_20	01 16 06.2	
	comp=Z,3µm,19.0s						
J59A	Piesco	42.93	31	IAMs_20	IAMs_20	01 15 11.9	
	comp=Z,2µm,20.0s						
UCCT	U. Connecticut	42.99	34	IAMs_20	IAMs_20	01 17 03.3	
	comp=Z,2µm,18.0s						
BBGH	Gun Hill	43.01	80	IAMs_20	IAMs_20	01 14 33.4	
	comp=Z,4µm,19.0s						
K61A	Williamstown	43.02	33	P	P	00 56 29.9	+0.5
	baz=226						
ALGO	Algonquin Park	43.16	26	P	P	00 56 30.7	+0.3
	baz=218,SNR=5.7						
H57A	Richville	43.22	29	P	P	00 56 30.9	-0.1
	baz=222						
QUA2	Belchertown	43.24	34	IAMs_20	IAMs_20	01 17 32.1	
	comp=Z,3µm,18.0s						
TA01	Diego Aracena	43.35	132	IAMs_20	IAMs_20	01 10 10.9	
	comp=Z,3µm,21.0s						
SAML	Samuel	43.37	113	P	P	00 56 30.6	-2.0
SAML				pmax	pmax		
	comp=Z,23nm,1.1s						
SAML	Samuel	43.37	113	P	P	00 56 30.6	-2.0
SAML	Samuel	43.37	113	*e*P	P	00 56 31.7	-0.9
L63A	North Scituate	43.38	35	IAMs_20	IAMs_20	01 16 24.6	
	comp=Z,3µm,20.0s						
M64A	Tiverton	43.40	35	IAMs_20	IAMs_20	01 16 53.2	
	comp=Z,4µm,19.0s						
A04D	Lummi Island	43.41	341	P	P	00 56 34.3	+1.9
	baz=151						
NCB	Newcomb	43.44	30	IAMs_20	IAMs_20	01 16 42.3	
	comp=Z,2µm,19.0s						
BRYW	Bryant College	43.46	35	IAMs_20	IAMs_20	01 16 26.7	
	comp=Z,3µm,20.0s						
PATCX	Punta Patache	43.53	132	IAMs_20	IAMs_20	01 10 16.7	
	comp=Z,3µm,20.0s						
K62A	Royalston	43.57	33	IAMs_20	IAMs_20	01 16 27.7	
	comp=Z,3µm,20.0s						
PGC	Sidney	43.60	340	P	P	00 56 35.6	+1.7
PGC				IAmb	IAmb	00 56 49.0	
	comp=Z,74nm,1.6s						
LONY	Lake Ozonia	43.73	30	P	P	00 56 34.5	-0.6
	baz=223						
LONY	Lake Ozonia	43.73	30	IAMs_20	IAMs_20	01 14 38.9	
	comp=Z,2µm,22.0s						
M65A	Busby, Falmout	43.73	36	IAMs_20	IAMs_20	01 12 48.0	
	comp=Z,3µm,21.0s						
H58A	Gabriels	43.78	30	P	P	00 56 35.2	-0.3
	baz=224						
HRV	Adam Dziewonsk	43.83	34	IAMs_20	IAMs_20	01 17 37.6	
	comp=Z,3µm,18.0s						
PB08	IPOC Station P	43.86	131	P	P	00 56 36.1	-0.7
L64A	Middleborough	43.86	35	P	P	00 56 36.1	-0.1
	baz=230						
L64A	Middleborough	43.86	35	IAMs_20	IAMs_20	01 17 07.4	
	comp=Z,3µm,19.0s						
WES	Weston	43.88	34	IAMs_20	IAMs_20	01 16 59.0	
	comp=Z,3µm,19.0s						
PTGA	Pitinga	43.96	100	P	P	00 56 36.1	-1.3
	comp=Z,2.8nm,0.8s,baz=322,slow=23,SNR=2.5						
PTGA	Pitinga	43.96	100	IAMs_20	IAMs_20	01 12 41.2	
	comp=Z,4µm,20.0s						
K63A	Dunstable	43.97	34	IAMs_20	IAMs_20	01 17 18.3	
	comp=Z,2µm,20.0s						
PB01	IPOC Station P	44.16	132	IAMs_20	IAMs_20	01 10 18.2	
	comp=Z,3µm,21.0s						
RKT	Rikitea	44.21	224	*e*S	S	01 03 15.2	+3.3
	comp=Z,686nm,29.0s						
RKT				*e*LR	LR	01 08 56.6	
	comp=Z,7µm,27.0s						
HNH	Hanover	44.25	32	IAMs_20	IAMs_20	01 16 29.7	
	comp=Z,3µm,21.0s						
E55A	Montcerf-Lytto	44.41	27	P	P	00 56 40.6	0.0
	baz=220						
FFD	Franklin Falls	44.43	33	IAMs_20	IAMs_20	01 18 05.3	
	comp=Z,3µm,18.0s						
VT1	Waterbury	44.44	31	IAMs_20	IAMs_20	01 18 07.6	
	comp=Z,3µm,18.0s						
PB09	IPOC Station P	44.80	133	P	P	00 56 44.9	+0.7
PB09				IAmb	IAmb	00 56 57.5	
	comp=Z,26nm,1.1s						
PB09				IAMs_20	IAMs_20	01 10 34.8	
	comp=Z,4µm,21.0s						
LBNH	Lisbon	44.81	32	IAMs_20	IAMs_20	01 17 53.4	
	comp=Z,3µm,18.0s						
I62A	Tamworth	44.87	33	IAMs_20	IAMs_20	01 15 57.1	
	comp=Z,2µm,22.0s						
E56A	St. Veronique	44.94	27	P	P	00 56 44.6	-0.2
	baz=221						
D55A	Sainte-Anne-du	45.11	27	P	P	00 56 45.9	-0.2
	baz=220						
VLDQ	Val d'Or	45.12	24	IAMs_20	IAMs_20	01 16 09.0	
	comp=Z,3µm,22.0s						
E57A	Chemin Saint G	45.25	28	P	P	00 56 47.2	-0.1
	baz=222						
H62A	Milan	45.44	32	IAMs_20	IAMs_20	01 12 40.1	
	comp=Z,2µm,21.0s						
LVC	Limon Verde	45.55	133	P	P	00 56 49.9	-0.4
	comp=Z,5.2nm,0.8s,baz=126,slow=15,SNR=3.2						
LVC				LR	LR	01 11 17.6	
	comp=Z,4µm,21.2s,baz=298,slow=30						
LVC	Limon Verde	45.55	133	*ce*P	P	00 56 52.9	+2.6
LVC				pmax	pmax		
	comp=Z,21nm,1.7s						
LVC	Limon Verde	45.55	133	*e*P	P	00 56 47.8	-2.5
G61A	St-Isidore-de-	45.73	31	P	P	00 56 51.3	+0.3
	baz=226						
F60A	Warwick	45.99	30	P	P	00 56 53.0	-0.1
	baz=225						
LSQQ	Lebel-sur-Quev	46.06	24	P	P	00 56 53.5	-0.1
	baz=217						
FFC	Flin Flon	46.18	1	P	P	00 56 54.4	0.0

FFC				pmax	pmax		
	comp=Z,53nm,1.6s						
FFC				MLR	MLR		
	comp=Z,8µm,19.0s						
FFC	**Flin Flon**	**46.18**	**1**	P	**P**	**00 56 54.4**	**0.0**
FFC				IAmb	IAmb	00 57 03.3	
	comp=Z,53nm,1.6s						
G62A	**West of Eustis**	**46.20**	**32**	P	**P**	**00 56 54.8**	**0.0**
	baz=228						
G62A	**West of Eustis**	**46.20**	**32**	IAMs_20	IAMs_20	01 18 21.3	
	comp=Z,2µm,20.0s						
D58A	**Chemin du LacG**	**46.35**	**28**	P	**P**	**00 56 55.9**	**0.0**
	baz=223						
MATQ	**Matagami**	**46.37**	**23**	P	**P**	**00 56 56.0**	**0.0**
	baz=216						
LATQ	**La Tuque**	**46.60**	**28**	P	**P**	**00 56 58.0**	**+0.1**
	baz=223						
LATQ	**La Tuque**	**46.60**	**28**	IAmb	IAmb	00 57 11.8	
	comp=Z,35nm,1.8s						
G63A	**Kingsbury**	**46.61**	**33**	P	**P**	**00 56 57.8**	**-0.2**
	baz=229						
GO02	**Mina Guanaco**	**46.71**	**137**	P	**P**	**00 56 59.5**	**+0.1**
GO02				IAmb	IAmb	00 57 05.3	
	comp=Z,13nm,0.8s						
D59A	**Saint-Raymond**	**46.78**	**29**	P	**P**	**00 56 59.4**	**+0.1**
	baz=225						
E61A	**Lac Etchemin**	**47.05**	**31**	P	**P**	**00 57 01.7**	**+0.2**
	baz=227						
G64A	**Maxfield**	**47.16**	**33**	P	**P**	**00 57 02.2**	**-0.1**
	baz=230						
F63A	**Nahmakanta, Br**	**47.27**	**32**	IAMs_20	IAMs_20	01 19 37.7	
	comp=Z,3µm,19.0s						
H03N2	**Juan Fernandez**	**47.57**	**152**	T	T	01 48 01.2	
	baz=329,slow=77,SNR=386						
H03N1	**Juan Fernandez**	**47.58**	**152**	T	T	01 48 05.0	
	baz=329,slow=77,SNR=376						
H03N3	**Juan Fernandez**	**47.58**	**152**	T	T	01 48 01.3	
	baz=329,slow=77,SNR=311						
VILB	**Vilhena**	**47.64**	**116**	*e*P	**P**	**00 57 05.4**	**-1.1**
D61A	**St Aubert, Com**	**47.73**	**30**	P	**P**	**00 57 06.5**	**-0.1**
	baz=226						
F64A	**Sherman**	**47.78**	**33**	P	**P**	**00 57 07.0**	**-0.1**
	baz=230						
F64A	**Sherman**	**47.78**	**33**	IAmb	IAmb	00 57 12.0	
	comp=Z,20nm,0.8s						
E63A	**Oxbow**	**48.10**	**32**	P	**P**	**00 57 09.7**	**+0.2**
	baz=229						
AC02	**Maricunga**	**48.12**	**138**	P	**P**	**00 57 10.1**	**-0.5**
AC02				IAmb	IAmb	00 57 16.9	
	comp=Z,12nm,0.8s						
BBB	**Bella Bella**	**48.17**	**340**	IAMs_20	IAMs_20	01 15 30.3	
	comp=Z,2µm,22.0s						
SIV	**San Ignacio**	**48.19**	**120**	P	**P**	**00 57 09.4**	**-1.3**
	comp=Z,5.3nm,1.0s,baz=306,slow=8.3,SNR=9.3						
E64A	**Bridgewater**	**48.41**	**32**	P	**P**	**00 57 12.2**	**+0.2**
	baz=230						
PQI	**Presque Isle**	**48.48**	**32**	IAMs_20	IAMs_20	01 20 48.5	
	comp=Z,2µm,18.0s						
LCO	**Las Campanas**	**48.61**	**141**	P	**P**	**00 57 15.0**	**+1.0**
LCO				pmax	pmax		
	comp=Z,46nm,1.5s						
LCO	**Las Campanas**	**48.61**	**141**	P	**P**	**00 57 15.0**	**+1.0**
LCO				IAmb	IAmb	00 57 41.1	
	comp=Z,46nm,1.4s						
D63A	**Stockholm**	**48.67**	**32**	P	**P**	**00 57 14.0**	**+0.1**
	baz=229						
AC05	**El Transito**	**48.75**	**141**	P	**P**	**00 57 15.1**	**+0.1**
AC05				IAmb	IAmb	00 57 21.0	
	comp=Z,32nm,0.9s						
ITTB	**Itaituba**	**48.94**	**103**	*e*P	**P**	**00 57 15.4**	**-1.2**
GO04	**Tololo Observa**	**49.37**	**142**	IAMs_20	IAMs_20	01 13 15.0	
	comp=Z,3µm,20.0s						
CO01	**Juntas del Tor**	**49.66**	**142**	P	**P**	**00 57 23.6**	**+1.6**
CO01				IAmb	IAmb	00 57 47.6	
	comp=Z,60nm,2.0s						
CO03	**El Pedregal**	**49.91**	**143**	IAmb	IAmb	00 57 29.5	
	comp=Z,40nm,1.1s						
CO03				IAMs_20	IAMs_20	01 12 59.4	
	comp=Z,4µm,22.0s						
VAH	**Vaihoa**	**49.98**	**242**	*e*T	T	01 50 39.9	
	comp=Z,12nm,0.4s						
CO02	**Combarbal**	**49.99**	**143**	IAMs_20	IAMs_20	01 13 02.4	
	comp=Z,3µm,22.0s						
NPGB	**Novo Progresso**	**50.04**	**107**	*e*P	**P**	**00 57 24.1**	**-0.9**
FCC	**Fort Churchill**	**50.69**	**6**	P	**P**	**00 57 28.9**	**-0.2**
FCC				pmax	pmax		
	comp=Z,83nm,1.9s						
FCC				MLR	MLR		
	comp=Z,5µm,20.0s						
FCC	**Fort Churchill**	**50.69**	**6**	P	**P**	**00 57 28.9**	**-0.2**
FCC				IAmb	IAmb	00 57 37.4	
	comp=Z,82nm,1.9s						
MEH	**Mehetia**	**51.50**	**239**	*e*T	T	01 52 34.7	
	comp=Z,10nm,0.3s						
PEL	**Peldehue**	**51.59**	**145**	IAMs_20	IAMs_20	01 14 37.8	
	comp=Z,3µm,20.0s						
ZON	**Zonda**	**51.63**	**142**	IAMs_20	IAMs_20	01 14 08.7	
	comp=Z,3µm,22.0s						
MT05	**Renca**	**51.74**	**145**	IAMs_20	IAMs_20	01 14 41.7	
	comp=Z,3µm,19.0s						
PPT	**Papeete**	**52.66**	**240**	LR	LR	01 14 02.1	
	comp=Z,3µm,19.9s,baz=60,slow=29						
PPT2	**Papeete2**	**52.67**	**240**	*e*S	**S**	**01 05 13.2**	**+1.4**
	comp=Z,1µm,26.2s						
PPT2				*e*LQ	LQ	01 10 36.1	
	comp=Z,3µm,24.8s						
PPT2				*e*LR	LR	01 12 39.9	
	comp=Z,7µm,24.8s,baz=56						
BO02	**Sierra Bellavi**	**52.76**	**146**	IAMs_20	IAMs_20	01 14 43.5	
	comp=Z,3µm,20.0s						
WRAK	**Wrangell Islan**	**53.07**	**340**	IAMs_20	IAMs_20	01 22 21.7	
	comp=Z,2µm,18.0s						
BI03	**Tigo**	**53.15**	**150**	IAMs_20	IAMs_20	01 14 53.9	
	comp=Z,3µm,19.0s						
BI02	**San Fabin de**	**53.90**	**148**	P	**P**	**00 57 52.6**	**-0.8**
BI02				IAMs_20	IAMs_20	01 15 27.8	
	comp=Z,2µm,20.0s						
DLBC	**Dease Lake**	**53.99**	**343**	P	**P**	**00 57 52.5**	**-1.2**
	comp=Z,2.5nm,0.8s,baz=95,slow=20,SNR=2.4						
PP1B	**Ponte de Pedra**	**54.22**	**119**	*e*P	**P**	**00 57 55.8**	**-0.3**
YKA	**Yellowknife Ar**	**54.61**	**353**	P	**P**	**00 57 56.6**	**-1.5**
	comp=Z,7.5nm,1.0s,baz=159,slow=7.6,SNR=26						
YKA				PcP	**PcP**	**00 59 00.2**	**-0.7**
	comp=Z,0.8nm,0.8s,baz=155,slow=4.4,SNR=1.8						
YKA				LR	LR	01 21 48.9	
	comp=Z,4µm,18.4s,baz=0.0,slow=37						
YKA	**Yellowknife Ar**	**54.61**	**353**	*e*P	**P**	**00 57 58.0**	**-0.1**
YKA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
PRPB	**Parauapebas**	**55.10**	**104**	*e*P	**P**	**00 58 04.0**	**+1.6**
TBI	**Tubuai**	**55.22**	**234**	*e*S	**S**	**01 05 48.0**	**+2.0**
	comp=Z,1µm,27.8s						
TBI				*e*LR	LR	01 14 02.2	
	comp=Z,5µm,26.8s,baz=58						
TBI	**Tubuai**	**55.22**	**234**	*e*T	T	01 57 14.3	
	comp=Z,12nm,0.3s						
LC01	**Cunco**	**55.32**	**151**	P	**P**	**00 58 03.8**	**+0.2**
LC01				IAMs_20	IAMs_20	01 16 12.3	
	comp=Z,2µm,19.0s						
SNDB	**Serra Nova Dou**	**55.37**	**111**	*e*P	**P**	**00 58 04.7**	**+0.3**
ARAG	**Araguaiana, MT**	**56.19**	**115**	*e*P	**P**	**00 58 09.9**	**-0.3**
CPUP	**Villa Florida**	**56.30**	**129**	P	**P**	**00 58 10.2**	**-0.7**
	comp=Z,7.6nm,0.9s,baz=303,slow=4.8,SNR=4.7						
SKAG	**Skagway**	**56.45**	**341**	IAMs_20	IAMs_20	01 24 08.1	
	comp=Z,2µm,20.0s						
PLCA	**Paso Flores**	**57.39**	**151**	P	**P**	**00 58 17.7**	**-0.7**
	comp=Z,11nm,1.0s,baz=320,slow=8.2,SNR=7.1						
PLCA	**Paso Flores**	**57.39**	**151**	*e*P	**P**	**00 58 21.5**	**+3.1**
PLCA				pmax	pmax		
	comp=Z,11nm,1.0s						
PLCA	**Paso Flores**	**57.39**	**151**	*e*P	**P**	**00 58 17.2**	**-1.2**
SMTB	**Santa Maria do**	**57.93**	**106**	*e*P	**P**	**00 58 21.4**	**-1.2**
PEXB	**Peixe**	**58.19**	**110**	*e*P	**P**	**00 58 24.5**	**+0.1**
BDFB	**Brasilia**	**59.59**	**114**	P	**P**	**00 58 34.0**	**-0.3**
	comp=Z,4.6nm,0.8s,baz=238,slow=7.4,SNR=6.7						
BDFB				LR	LR	01 23 02.9	
	comp=Z,1µm,18.8s,baz=292,slow=35						
BDFB	**Brasilia**	**59.59**	**114**	P	**P**	**00 58 33.9**	**-0.3**
BDFB				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BDFB	**Brasilia**	**59.59**	**114**	P	**P**	**00 58 33.9**	**-0.3**
TGL	**Tana Glacier**	**59.96**	**339**	IAMs_20	IAMs_20	01 26 31.9	
	comp=Z,2µm,21.0s						
BALM	**Baldy**	**59.98**	**339**	IAMs_20	IAMs_20	01 26 30.5	
	comp=Z,1µm,20.0s						
CRQM	**Cirque**	**60.07**	**339**	IAMs_20	IAMs_20	01 26 12.4	
	comp=Z,2µm,20.0s						
MCARA	**McCarthy VSAT**	**60.46**	**339**	IAMs_20	IAMs_20	01 26 36.1	
	comp=Z,2µm,20.0s						
FRB	**Frobisher Bay**	**60.48**	**17**	P	**P**	**00 58 38.5**	**-0.9**
	comp=Z,4.3nm,0.9s,baz=214,slow=7.5,SNR=8.5						
VRDI	**Verde Repeater**	**60.51**	**339**	IAMs_20	IAMs_20	01 26 48.3	
	comp=Z,2µm,21.0s						
GLB	**Gilahina Butte**	**60.78**	**339**	IAmb	IAmb	00 58 56.5	
	comp=Z,45nm,1.6s						
GLB				IAMs_20	IAMs_20	01 26 47.6	
	comp=Z,2µm,19.0s						
N25K	**Chitina, Valde**	**61.17**	**339**	P	**P**	**00 58 44.9**	**+0.7**
	baz=132						
N25K	**Chitina, Valde**	**61.17**	**339**	IAmb	IAmb	00 58 57.2	
	comp=Z,27nm,1.1s						
N25K				IAMs_20	IAMs_20	01 26 59.9	
	comp=Z,2µm,20.0s						
BCAR	**Beaver Creek A**	**61.22**	**341**	P	**P**	**00 58 44.0**	**-0.6**
KLU	**Klutina**	**61.57**	**338**	IAMs_20	IAMs_20	01 19 28.6	
	comp=Z,1µm,18.0s						
MENT	**Mentasta**	**61.76**	**340**	IAmb	IAmb	00 59 00.3	
	comp=Z,26nm,1.4s						
EGAK	**Eagle**	**62.26**	**343**	IAMs_20	IAMs_20	01 24 14.7	
	comp=Z,1µm,20.0s						
EPYK	**Eagle Plains**	**62.26**	**345**	P	**P**	**00 58 51.8**	**+0.3**
	baz=142,SNR=7.7						
EPYK	**Eagle Plains**	**62.26**	**345**	P	**P**	**00 58 51.2**	**-0.3**
EPYK				IAMs_20	IAMs_20	01 26 42.9	
	comp=Z,2µm,21.0s						
SCM	**Sheep Creek Mo**	**62.31**	**338**	IAMs_20	IAMs_20	01 25 19.3	
	comp=Z,1µm,20.0s						
C36M	**Paulatuk**	**62.36**	**352**	P	**P**	**00 58 51.7**	**-0.3**
	baz=156						
DOT	**Dot Lake**	**62.36**	**341**	IAmb	IAmb	00 59 04.1	
	comp=Z,22nm,1.2s						
DOT				IAMs_20	IAMs_20	01 26 48.5	
	comp=Z,1µm,20.0s						
PAX	**Paxson**	**62.38**	**340**	IAMs_20	IAMs_20	01 27 55.9	
	comp=Z,1µm,18.0s						
O22K	**Cooper Landing**	**62.41**	**336**	IAMs_20	IAMs_20	01 22 23.7	
	comp=Z,2µm,18.0s						
SCRK	**Sand Creek**	**62.56**	**341**	P	**P**	**00 58 53.7**	**0.0**
	baz=133						
JANB	**Januaria**	**62.78**	**112**	*e*P	**P**	**00 58 56.2**	**+0.4**
INK	**Inuvik**	**63.10**	**348**	P	**P**	**00 58 55.8**	**-1.1**
	comp=Z,8.9nm,1.2s,baz=145,slow=7.8,SNR=7.4						
INK	**Inuvik**	**63.10**	**348**	P	**P**	**00 58 56.8**	**-0.2**
INK				pmax	pmax		
	comp=Z,37nm,1.2s						
INK	**Inuvik**	**63.10**	**348**	P	**P**	**00 58 56.8**	**-0.2**
CUT	**Chulitna**	**63.75**	**338**	P	**P**	**00 59 01.4**	**0.0**
	baz=126						
HDA	**Harding Lake**	**63.82**	**340**	P	**P**	**00 59 01.7**	**-0.2**
	baz=130						
HDA	**Harding Lake**	**63.82**	**340**	IAmb	IAmb	00 59 13.8	
	comp=Z,24nm,1.3s						
HDA				IAMs_20	IAMs_20	01 29 41.2	
	comp=Z,1µm,18.0s						
RND	**Reindeer**	**63.84**	**339**	IAMs_20	IAMs_20	01 28 42.6	
	comp=Z,2µm,20.0s						
SKT	**Skwentna**	**63.99**	**337**	IAmb	IAmb	00 59 17.9	
	comp=Z,20nm,1.0s						
SKT				IAMs_20	IAMs_20	01 24 24.5	
	comp=Z,1µm,18.0s						
IL31		**64.04**	**341**	IAmb	IAmb	00 59 15.1	
	comp=Z,24nm,1.1s						
ILAR	**Eielson Array**	**64.04**	**341**	P	**P**	**00 59 01.7**	**-1.6**
	comp=Z,6.6nm,1.0s,baz=151,slow=4.6,SNR=30						
ILAR				LR	LR	01 24 11.5	
	comp=Z,783nm,20.5s,baz=140,slow=34						
MCK	**McKinley**	**64.07**	**339**	P	**P**	**00 59 03.3**	**-0.2**
	baz=128						
PRP	**Porcupine Dome**	**64.10**	**342**	IAMs_20	IAMs_20	01 25 57.8	
	comp=Z,1µm,19.0s						
WRH	**Wood River Hil**	**64.24**	**340**	IAmb	IAmb	00 59 14.1	
	comp=Z,20nm,1.4s						
WRH				IAMs_20	IAMs_20	01 30 06.1	
	comp=Z,1µm,19.0s						
CCB	**Clear Creek Bu**	**64.26**	**340**	IAmb	IAmb	00 59 16.9	
	comp=Z,24nm,1.4s						
CCB				IAMs_20	IAMs_20	01 27 57.8	
	comp=Z,1µm,19.0s						
TRF	**Thorofare Moun**	**64.38**	**339**	IAMs_20	IAMs_20	01 29 01.8	
	comp=Z,2µm,22.0s						
COLA	**College**	**64.42**	**341**	IAMs_20	IAMs_20	01 27 04.9	
	comp=Z,1µm,19.0s						
TCOL	**CIGO, UAF Yank**	**64.42**	**341**	IAMs_20	IAMs_20	01 27 04.9	
	comp=Z,1µm,19.0s						
POKR	**Poker Plat Res**	**64.44**	**341**	IAMs_20	IAMs_20	01 27 03.3	
	comp=Z,2µm,18.0s						
BWN	**Browne**	**64.53**	**339**	IAMs_20	IAMs_20	01 29 11.1	
	comp=Z,2µm,18.0s						
MDM	**Murphy Dome**	**64.60**	**341**	P	**P**	**00 59 07.9**	**+1.0**
MDM				IAmb	IAmb	00 59 19.2	
	comp=Z,17nm,1.2s						
NEA2	**Nenana**	**64.65**	**340**	P	**P**	**00 59 06.7**	**-0.6**
	baz=128,SNR=15						
KTH	**Kantishna Hill**	**64.67**	**338**	IAMs_20	IAMs_20	01 27 30.5	
	comp=Z,2µm,22.0s						
FYU	**Fort Yukon**	**64.72**	**343**	IAMs_20	IAMs_20	01 28 08.8	
	comp=Z,1µm,19.0s						
PPLA	**Purkeypile**	**64.76**	**338**	IAMs_20	IAMs_20	01 29 21.9	
	comp=Z,2µm,21.0s						
BPAW	**Bear Paw Mtn.**	**65.02**	**339**	P	**P**	**00 59 08.8**	**-0.9**
BPAW				IAmb	IAmb	00 59 17.1	
	comp=Z,18nm,1.4s						
BPAW				IAMs_20	IAMs_20	01 29 30.6	
	comp=Z,2µm,20.0s						
I23K	**Minto, Yukon-K**	**65.09**	**340**	P	**P**	**00 59 09.8**	**-0.4**
	baz=128,SNR=9.8						
I23K	**Minto, Yukon-K**	**65.09**	**340**	P	**P**	**00 59 09.7**	**-0.4**
I23K				IAMs_20	IAMs_20	01 27 26.6	
	comp=Z,1µm,18.0s						
BMAR	**Burnt Mountain**	**65.13**	**344**	P	**P**	**00 59 10.1**	**-0.3**
MLY	**Manley**	**65.48**	**340**	P	**P**	**00 59 12.5**	**-0.3**
	baz=127						
TTA	**Tatalina**	**66.26**	**337**	IAmb	IAmb	00 59 48.3	
	comp=Z,13nm,1.2s						
RES	**Resolute Bay**	**66.38**	**2**	P	**P**	**00 59 17.0**	**-1.3**
	comp=Z,5.0nm,1.1s,baz=188,slow=10,SNR=6.5						
COLD	**Coldfoot**	**66.64**	**342**	P	**P**	**00 59 20.1**	**0.0**
	baz=128						
COLD	**Coldfoot**	**66.64**	**342**	IAMs_20	IAMs_20	01 31 29.6	
	comp=Z,2µm,19.0s						
IMAR	**Indian Mountai**	**67.06**	**340**	P	**P**	**00 59 21.4**	**-1.4**
TOLK	**Toolik Lake Re**	**67.34**	**343**	P	**P**	**00 59 24.1**	**-0.5**
	baz=129						
TOLK	**Toolik Lake Re**	**67.34**	**343**	IAmb	IAmb	00 59 37.1	
	comp=Z,24nm,1.1s						
A21K	**Barrow**	**70.88**	**344**	IAMs_20	IAMs_20	01 31 59.6	
	comp=Z,941nm,20.0s						
RDOG	**Red Dog Mine**	**71.21**	**340**	IAMs_20	IAMs_20	01 31 55.3	
	comp=Z,2µm,21.0s						
EFI	**East Falkland**	**71.27**	**152**	*i* P	**P**	**00 59 51.9**	**+2.9**
EFI				pmax	pmax		
	comp=Z,63nm,1.0s						
TNA	**Tin City**	**72.08**	**337**	P	**P**	**00 59 54.0**	**+0.3**
	baz=110						
TNA	**Tin City**	**72.08**	**337**	P	**P**	**00 59 53.7**	**0.0**
TNA				IAMs_20	IAMs_20	01 34 20.4	
	comp=Z,1µm,18.0s						
GAMB	**Gambell**	**73.08**	**334**	IAMs_20	IAMs_20	01 37 02.2	
	comp=Z,1µm,18.0s						
SUMG	**Summit**	**74.55**	**16**	*i* P	**P**	**01 00 08.6**	**-0.1**
SUMG	**Summit**	**74.55**	**16**	P	**P**	**01 00 09.0**	**+0.3**
SUMG				pmax	pmax		
	comp=Z,47nm,1.5s						
SUMG				MLR	MLR		
	comp=Z,2µm,18.0s						
SUMG	**Summit**	**74.55**	**16**	P	**P**	**01 00 09.0**	**+0.3**
SUMG				IAmb	IAmb	01 00 17.3	
	comp=Z,47nm,1.5s						
SUMG	**Summit**	**74.55**	**16**	*i* P	**P**	**01 00 08.6**	**-0.1**
DAG	**Danmarks Havn**	**80.58**	**13**	*i* P	**P**	**01 00 42.0**	**+0.2**
	comp=Z,43nm,1.6s						
DAG	**Danmarks Havn**	**80.58**	**13**	*i* P	**P**	**01 00 42.0**	**+0.2**
DAG				pmax	pmax		
	comp=Z,43nm,1.6s						
DAG	**Danmarks Havn**	**80.58**	**13**	*i* P	**P**	**01 00 42.0**	**+0.2**
DAG				IAmb	IAmb	01 00 50.3	
	comp=Z,43nm,1.6s						
WAKE	**Wake Island**	**87.47**	**289**	P	**P**	**01 01 16.8**	**-1.3**
H11S2	**WAKE ISLAND Hy**	**87.53**	**288**	T	T	02 38 05.8	
	baz=84,slow=75,SNR=4.9						
H11S1	**WAKE ISLAND Hy**	**87.53**	**288**	T	T	02 38 04.4	
	baz=84,slow=75,SNR=5.0						
H11S3	**WAKE ISLAND Hy**	**87.55**	**288**	T	T	02 38 12.8	
	baz=84,slow=75,SNR=4.0						
BKZ	**Black Stump Fm**	**87.89**	**230**	P	**P**	**01 01 20.9**	**+1.1**
PET	**Petropavlovsk**	**88.25**	**323**	*e*P	P	01 01 15.6	-5.5
PET				*e*S	S	01 11 56.0	-8.9
PET	**Petropavlovsk**	**88.25**	**323**	IAMs_20	IAMs_20	01 33 01.6	
	comp=Z,782nm,19.0s						
PEA0B	**Petropavlovsk-**	**88.79**	**323**	IAMs_20	IAMs_20	01 34 17.6	
	comp=Z,684nm,20.0s						
PETK	**Petropavlovsk-**	**88.79**	**323**	P	**P**	**01 01 22.9**	**-0.8**
	comp=Z,1.6nm,0.4s,baz=72,slow=6.4,SNR=4.6						
PETK				LR	LR	01 34 40.9	
	comp=Z,430nm,21.1s,baz=83,slow=31						
PETK	**Petropavlovsk-**	**88.79**	**323**	P	**P**	**01 01 23.1**	**-0.6**
PETK	**Petropavlovsk-**	**88.79**	**323**	P	**P**	**01 01 23.1**	**-0.6**
SEY	**Seymchan**	**89.07**	**334**	*i* P	**P**	**01 01 25.0**	**+0.2**
MA2	**Magadan**	**90.82**	**331**	IAMs_20	IAMs_20	01 40 56.2	
	comp=Z,764nm,20.0s						
TIXI	**Tiksi**	**93.14**	**346**	*e*P	**P**	**01 01 42.9**	**-0.6**
TIXI	**Tiksi**	**93.14**	**346**	P	**P**	**01 01 42.2**	**-1.3**
TIXI				IAmb	IAmb	01 01 55.0	
	comp=Z,14nm,1.1s						
TIXI				IAMs_20	IAMs_20	01 48 58.2	
	comp=Z,711nm,18.0s						
DZM	**Mont Dzumac**	**93.52**	**248**	*e*S	**S**	**01 12 55.3**	**+0.9**
	comp=Z,110nm,29.4s						
DZM	**Mont Dzumac**	**93.52**	**248**	*e*LR	LR	01 31 47.4	
	comp=Z,1µm,22.1s						
NOA	**NORSAR Array B**	**94.08**	**26**	LR	LR	01 42 18.5	
	comp=Z,1µm,21.8s,baz=285,slow=34						
ARCES	**ARCESS Array B**	**94.64**	**16**	LR	LR	01 44 41.5	
	comp=Z,2µm,21.6s,baz=305,slow=36						
KOWA	**Kowa**	**96.63**	**74**	IAMs_20	IAMs_20	01 45 56.1	
	comp=Z,1µm,21.0s						
DBIC	**Dimbokro**	**97.15**	**82**	LR	LR	01 42 58.9	
	comp=Z,462nm,20.1s,baz=262,slow=34						
APA	**Apatity**	**98.11**	**15**⇓	*i*P	Pdif	01 02 09.8	+3.5
APA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
APA				MLR	MLR		
	comp=Z,3µm,22.0s						
NKL	**Nikolayevsk**	**98.44**	**327**	*e*P	**P**	**01 02 05.9**	**-2.1**
NKL				pmax	pmax		
	comp=E,52nm,0.9s						
NKL				pmax	pmax		
	comp=N,12nm,0.7s						
NKL				pmax	pmax		
	comp=Z,4.0nm,1.1s						
YAK	**Yakutsk**	**98.83**	**338**	*i* P	Pdif	01 02 10.9	+1.3
YAK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
YAK	**Yakutsk**	**98.83**	**338**	IAMs_20	IAMs_20	01 52 04.7	
	comp=Z,916nm,20.0s						
CLL	**Collm**	**99.21**	**35**	*e*Pdif	**Pdif**	**01 02 11.0**	**-0.5**
	comp=Z,17nm,1.7s						
CLL				*e*PP	**PP**	**01 06 17.0**	**+3.2**
CLL				*e*PS	**PS**	**01 15 15.0**	**+4.3**
CLL				*e*PPS	PPS	01 15 42.0	
CLL				*e*SS	SS	01 20 36.0	+5.8
CLL				LmV		01 44 00.0	
	comp=Z,1µm,21.3s						
CLL				LV		02 12 00.0	
	comp=Z,600nm,20.4s						
CLL	**Collm**	**99.21**	**35**	*e*P	**Pdif**	**01 02 11.0**	**-0.5**
CLL				*e*		01 06 17.0	
CLL				pmax	pmax		
	comp=Z,17nm,1.7s						
CLL				MLR	MLR		
	comp=Z,1µm,21.3s						
VNDA	**Vanda**	**99.26**	**193**	LR	LR	01 38 17.1	
	comp=Z,692nm,20.1s,baz=96,slow=30						
YSS	**Yuzh-Sakhalins**	**99.84**	**321**	IAMs_20	IAMs_20	01 40 55.1	
	comp=Z,788nm,20.0s						
FINES	**FINESS Array B**	**99.95**	**22**	LR	LR	01 48 49.0	
	comp=Z,689nm,18.6s,baz=302,slow=36						
TEOL	**Teolo**	**100.91**	**41**	IAMs_20	IAMs_20	01 38 21.8	
	comp=Z,807nm,18.0s						
JKA	**Kamikawa-asahi**	**101.07**	**318**	IAMs_20	IAMs_20	01 37 10.7	
	comp=Z,955nm,20.0s						
LATE	**Laterza**	**102.10**	**43**	IAMs_20	IAMs_20	01 41 39.4	
	comp=Z,517nm,20.0s						
MURB	**Monte Urbino**	**102.32**	**42**	IAMs_20	IAMs_20	01 40 02.2	
	comp=Z,941nm,22.0s						
KEST	**Kesra**	**102.89**	**50**	IAMs_20	IAMs_20	01 45 20.7	
	comp=Z,906nm,19.0s						
TAM	**Tamanrasset**	**103.64**	**64**	IAMs_20	IAMs_20	01 48 27.8	
	comp=Z,753nm,19.0s						
PAOL	**Paolisi**	**104.63**	**44**	IAMs_20	IAMs_20	01 44 21.5	
	comp=Z,804nm,21.0s						
CEL	**Celeste**	**106.74**	**46**	IAMs_20	IAMs_20	01 43 43.4	
	comp=Z,602nm,19.0s						
TIP	**Timpagrande**	**106.95**	**45**	IAMs_20	IAMs_20	01 49 04.8	
	comp=Z,656nm,19.0s						
EIDS	**Eidsvold**	**107.80**	**246**	IAMs_20	IAMs_20	01 46 32.5	
	comp=Z,630nm,19.0s						
USA0B	**Ussuriysk Arra**	**107.81**	**322**	IAMs_20	IAMs_20	01 49 57.8	
	comp=Z,626nm,22.0s						
INU	**Inuyama**	**108.59**	**312**	IAMs_20	IAMs_20	01 40 59.0	
	comp=Z,614nm,19.0s						
MDJ	**Mudanjiang**	**109.03**	**323**	IAMs_20	IAMs_20	01 44 60.0	
	comp=Z,623nm,20.0s						
CN2	**Changchun**	**111.93**	**324**	*e*PKP	**PKiKP**	**01 07 03.8**	**-1.4**
ARU	**Arti**	**113.62**	**11**	*i* PKIKP	**PKiKP**	**01 07 11.1**	**+3.0**
ARU				pmax	pmax		
	comp=Z,3.0nm,1.0s						
TLY	**Talaya**	**115.85**	**342**	IAMs_20	IAMs_20	02 03 47.1	
	comp=Z,745nm,20.0s						
ISP	**Isparta**	**116.86**	**40**	IAMs_20	IAMs_20	01 56 45.2	
	comp=Z,769nm,22.0s						
ZALV	**Zalesovo Beam**	**117.50**	**355**	PKP	**PKPdf**	**01 07 12.7**	**-2.9**
	comp=Z,0.8nm,0.5s,baz=344,slow=4.7,SNR=4.1						
ZALV				PP	**PP**	**01 08 28.5**	**+2.1**
	comp=Z,1.4nm,0.9s,baz=352,slow=7.3,SNR=3.9						
ZALV	**Zalesovo Beam**	**117.50**	**355**	*e*PKIKP	**PKPdf**	**01 07 12.5**	**-3.1**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ZALV	**Zalesovo Beam**	**117.50**	**355**		**PKPdf**	**01 07 12.4**	**-3.1**
SONM	**Songino Array**	**118.19**	**338**	PKP	**PKPdf**	**01 07 16.7**	**-0.6**
	comp=Z,0.1nm,0.4s,baz=8.5,slow=2.9,SNR=1.4						
SOC	**Sochi**	**118.22**	**30**	*i* PKIKP	**PKPdf**	**01 07 10.8**	**-6.5**
SOC				*e*PPP	PPP	01 11 00.6	
SOC				*e*PS	**PS**	**01 18 23.2**	**+4.5**
SOC				*e*SSS	SSS	01 29 14.7	
SOC				MLR	MLR		
	comp=Z,844nm,21.0s						
TOKA	**Tokat**	**118.83**	**34**	IAMs_20	IAMs_20	01 59 39.4	
	comp=Z,812nm,22.0s						
KIV	**Kislovodsk**	**119.36**	**28**	*i* PKIKP	**PKPdf**	**01 07 16.9**	**-2.7**
KIV				pmax	pmax		
	comp=Z,13nm,1.0s						
KIV	**Kislovodsk**	**119.36**	**28**	IAMs_20	IAMs_20	01 56 05.9	
	comp=Z,783nm,21.0s						
BJT	**Baijiatuau**	**119.65**	**326**	IAMs_20	IAMs_20	01 51 46.9	
	comp=Z,734nm,20.0s						
CSS	**Mathiatis**	**120.39**	**41**	IAMs_20	IAMs_20	02 01 28.4	
	comp=Z,472nm,22.0s						
KOPT	**Kop Dagi**	**121.23**	**32**	IAMs_20	IAMs_20	01 54 26.7	
	comp=Z,528nm,22.0s						
GAZ	**Gaziantep**	**121.38**	**37**	IAMs_20	IAMs_20	02 00 50.1	
	comp=Z,559nm,21.0s						
HHC	**Hu-ho-hao-te**	**121.48**	**330**	*e*P	**PKPdf**	**01 07 21.8**	**-2.0**
HHC	**Hu-ho-hao-te**	**121.48**	**330**	*e*PKP	**PKiKP**	**01 07 25.6**	**+1.6**
NJ2	**Nanjing**	**123.20**	**317**	*e*P	**PKPdf**	**01 07 22.3**	**-4.9**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
NJ2	**Nanjing**	**123.20**	**317**	*e*PKP	**PKPdf**	**01 07 26.8**	**-0.4**
MARD	**Mardin**	**123.33**	**34**	IAMs_20	IAMs_20	01 55 07.5	
	comp=Z,546nm,22.0s						
WRAB	**Tennant Creek**	**123.35**	**252***c*	*i*PKIKP	**PKiKP**	**01 07 28.5**	**+0.5**
WRAB				pmax	pmax		
	comp=Z,19nm,1.7s						
WRA	**Warramunga Arr**	**123.36**	**252**	PKP	**PKPdf**	**01 07 25.7**	**-2.2**
	comp=Z,3.1nm,0.8s,baz=92,slow=2.1,SNR=16						
WRA	**Warramunga Arr**	**123.36**	**252**	*e*PKIKP	**PKiKP**	**01 07 29.6**	**+1.5**
WRA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ASAR	**Alice Springs**	**123.49**	**247**	PKP	**PKPdf**	**01 07 27.1**	**-1.0**
	comp=Z,2.2nm,0.8s,baz=96,slow=2.2,SNR=11						
ASAR	**Alice Springs**	**123.49**	**247**	PKIKP	**PKPdf**	**01 07 26.2**	**-1.8**
ASAR	**Alice Springs**	**123.49**	**247**	PKPdf	**PKPdf**	**01 07 26.2**	**-1.8**
MK31	**Makanchi Array**	**124.81**	**355**	PKIKP	**PKPdf**	**01 07 28.4**	**-1.6**
MK31	**Makanchi Array**	**124.81**	**355**	PKPdf	**PKPdf**	**01 07 28.4**	**-1.6**
MKAR	**Makanchi Array**	**124.81**	**355**	PKP	**PKPdf**	**01 07 28.7**	**-1.2**
	comp=Z,0.8nm,0.7s,baz=5.4,slow=1.5,SNR=7.0						
MKAR	**Makanchi Array**	**124.81**	**355**	*e*PKIKP	**PKPdf**	**01 07 29.5**	**-0.4**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MKAR	**Makanchi Array**	**124.81**	**355**	PKPdf	**PKPdf**	**01 07 29.1**	**-0.9**

TWG	Pinlang	126.75	307	IAMs_20	IAMs_20	01 51 53.4	
	comp=Z,513nm,20.0s						
WMQ	Urumqi	127.08	350	*e*PKP	PKiKP	01 07 34.8	-0.1
WMQ				LR	LR		
	comp=Z,2µm,21.3s						
WMQ				LR	LR		
	comp=Z,650nm,13.9s						
WMQ				LR	LR		
	comp=Z,1µm,21.3s						
TNTI	Ternate	128.86	278	IAMs_20	IAMs_20	01 52 53.1	
	comp=Z,494nm,22.0s						
LZH	Lanzhou	128.96	332	*e*PKP	PKiKP	01 07 38.9	-0.1
LZH				SS	SS	01 27 11.0	+8.6
LZH				LR	LR		
	comp=Z,620nm,16.3s						
LZH				LR	LR		
	comp=Z,840nm,15.7s						
LZH				LR	LR		
	comp=Z,660nm,19.0s						
CD2	Chengdu	133.16	328	*e*PKP	PKPdf	01 07 46.1	-0.2
CD2				LR	LR		
	comp=Z,550nm,15.7s						
CD2				LR	LR		
	comp=Z,730nm,17.7s						
CD2				LR	LR		
	comp=Z,840nm,19.1s						
LUWI	Luwuk	133.71	277	IAMs_20	IAMs_20	02 01 51.8	
	comp=Z,389nm,20.0s						
HRA	Herat	135.22	17	IAMs_20	IAMs_20	02 14 55.8	
	comp=Z,612nm,20.0s						
TOLI2	Tolitoli	135.22	280	IAMs_20	IAMs_20	01 55 41.8	
	comp=Z,571nm,22.0s						
RAYN	Ar Rayn	135.85	43	IAMs_20	IAMs_20	02 06 53.0	
	comp=Z,414nm,21.0s						
QIZ	Qiongzhong	137.56	310	PKP	PKPdf	01 07 53.4	-1.3
QIZ				PP	PP	01 10 39.6	-0.6
QIZ				SS	SS	01 28 49.5	+1.6
QIZ				LR	LR		
	comp=Z,280nm,15.0s						
QIZ				LR	LR		
	comp=Z,300nm,20.2s						
QIZ				LR	LR		
	comp=Z,490nm,20.0s						
KMI	Kunming	138.20	324	⇓P	PKPdf	01 07 43.5	-13
KMI				pP	PKiKP	01 07 57.1	-1.0
KMI				pmax	pmax		
	comp=Z,5.0nm,1.2s						
KMI				pmax	pmax		
	comp=Z,96nm,4.9s						
KMI				LR	LR		
	comp=N,390nm,22.8s						
KMI				LR	LR		
	comp=E,670nm,22.1s						
KMI				LR	LR		
	comp=Z,880nm,21.8s						
FURI	Furi	138.24	67	IAMs_20	IAMs_20	02 19 52.4	
	comp=Z,506nm,21.0s						
SLVN	Son La	140.26	318	IAMs_20	IAMs_20	02 11 17.4	
	comp=Z,457nm,22.0s						
DAMY	Dhamar	140.50	55	IAMs_20	IAMs_20	02 17 39.4	
	comp=Z,461nm,20.0s						
ATD	Arta Tunnel	140.78	60	IAMs_20	IAMs_20	02 16 24.3	
	comp=Z,468nm,19.0s						
UOSS	Minazif	141.19	31	IAMs_20	IAMs_20	02 19 24.1	
	comp=Z,307nm,19.0s						
DLV	T Lat	142.62	302	IAMs_20	IAMs_20	02 04 29.4	
	comp=Z,465nm,22.0s						
SBUM	Sibu	143.14	286	IAMs_20	IAMs_20	02 00 16.5	
	comp=Z,604nm,22.0s						
UTTA	Uttaradit	145.02	318	P	PKiKP	01 08 10.6	-1.3
	comp=Z,19nm,1.0s						
LAMP	Lampang	145.05	320	P	PKiKP	01 08 12.5	+0.5
CM34	Chiang Mai Arr	145.11	321	P	PKPab	01 08 08.0	+0.3
CM35	Chiang Mai Arr	145.24	321	P	PKPdf	01 08 09.0	+0.5
KSM	Kuching	145.25	285		PKPbc	01 08 06.7	-1.7
CMMT	Chiang Mai	145.26	321	P	PKPbc	01 08 07.0	-1.2
	comp=Z,261nmcomp=Z,8.0nm,0.9s						
CHTO	Chiang Mai	145.26	321	PKP2	PKPbc	01 08 06.6	-1.6
CHTO	Chiang Mai	145.26	321		PKPbc	01 08 06.6	-1.6
CHTO	Chiang Mai	145.26	321	IAMs_20	IAMs_20	02 27 29.6	
	comp=Z,450nm,19.0s						
CM36	Chiang Mai Arr	145.39	321	P	PKPbc	01 08 08.0	-0.6
PHIT	Phitsanulok	145.51	318	P	PKiKP	01 08 12.7	-0.3
CM09	Chiang Mai Arr	145.51	321	P	PKPab	01 08 10.3	+1.1
	comp=Z,3µmcomp=Z,22nm,1.0s						
CM31	Chiang Mai Arr	145.53	321	P	PKiKP	01 08 12.0	-1.0
	comp=Z,614nm,0.8s						
CMAR	Chiang Mai Arr	145.53	321	PKPbc	PKPdf	01 08 08.2	-0.8
	comp=Z,9.0nm,0.8s,baz=22,slow=2.7,SNR=22						
CM02	Chiang Mai Arr	145.55	321	P	PKPab	01 08 11.0	+1.6
	comp=Z,166nmcomp=Z,19nm,1.0s						
CM15	Chiang Mai Arr	145.55	321	P	PKiKP	01 08 12.0	-1.1
	comp=Z,14nm,0.5s						
CM01	Chiang Mai Arr	145.55	321	P	PKPab	01 08 11.1	+1.7
	comp=Z,178nmcomp=Z,18nm,1.4s						
CM04	Chiang Mai Arr	145.55	321	P	PKiKP	01 08 14.6	+1.5
	comp=Z,178nmcomp=Z,19nm,1.1s						
CM13	Chiang Mai Arr	145.58	321	P	PKPab	01 08 10.4	+0.9
	comp=Z,180nmcomp=Z,19nm,1.5s						
CISI	Cisompet, Garu	149.35	269	IAMs_20	IAMs_20	02 24 29.4	
	comp=Z,498nm,19.0s						
ABPO	Ambohimpanom	149.39	113	PKP2	PKPab	01 08 25.0	+0.3
ABPO	Ambohimpanom	149.39	113		PKPab	01 08 24.9	+0.3
MYKOM	Kota Tinggi	151.25	289	IAMs_20	IAMs_20	02 06 31.4	
	comp=Z,426nm,22.0s						

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*IDC **18** 00:57:56.9±1.0, 8°.36N×103°.19W, h0^{km}, mb4.1/15, mb1 4.3/17, mb1mx4.2/46, mbtmp4.1/17, ML3.6/2, MS4.6/9, Ms1 4.6/9, ms1mx4.3/27, Error ellipse: s-maj=33.1km s-min=16.9km az=53.0*

*GCMT **18** 00:58:00.5±0.3, 8°.40N±0°.02×103°.28W±0°.02, h12^{km}, MW5.2/119, Moment Tensor Solution. s16,c18; s119,c179; Duration: 1^{s}0 Moment tensor: Scale 10^{16} Nm; M_{rr}-0.09±.20; $M_{\theta\theta}$1.79±.17; $M_{\phi\phi}$-1.70±.20; $M_{r\theta}$-5.86±.51; $M_{\theta\phi}$-5.41±.14; $M_{\phi r}$3.28±.54; Best double couple: $M_0$8.02800×10^{16} NP1:ϕ_s0.00000°, δ50.00000°, λ10.00000°. NP2:ϕ_s264.00000°, δ82.00000°, λ140.00000°. Principal axes: T 10.1070, Plg33.0000°, Azm214.0000°; N -4.1580, Plg49.0000°, Azm75.0000°; P -5.9500, Plg21.0000°, Azm319.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **18** 00:58:00.5±2.1, 8°.4N±0°.1×103°.0W±0°.1, h10^{km}±1^{km}, mb4.6/123 Error ellipse: s-maj=23.6km s-min=16.8km az=237.0*

ISC 18 00:58:01.0±0.8**, 8°.33N**±0°.10×**103°.1W**±0°.1**, h19^{km}, n140, σ1^{s}58**/104**, mb4.6**/61**, MS4.7**/10**, Northern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOIG	Morelia	11.43	9	Pn	Pn	01 00 45.4	+1.8
CMIG	Matias Romero	11.82	42	Pn	Pn	01 00 45.4	-3.3
	0.4nm,0.3s,baz=48,slow=6.7,SNR=1.9						
H06S1	SOCORRO T	12.86	324	T	T	01 13 59.8	
	SNR=34						
H06E1	SOCORRO T-PHAS	12.88	325	T	T	01 14 00.2	
	SNR=120						
HUEH	Huehuetenango	13.29	57	Pn	Pn	01 01 05.4	-3.7
CCIG	Comitan	13.30	52	Pn	Pn	01 01 07.9	-1.2
MTO3	Montecristo	14.74	65	Pn	Pn	01 01 27.0	-1.9
PAYG	Puerto Ayora	15.58	124		P	01 01 47.9	+3.8
TGUH	Tegucigalpa,Un	16.52	68	P	Pn	01 01 53.5	+1.5
LPIG	La Paz	17.14	337	LR	LR	01 05 54.3	
	comp=Z,471nm,20.4s,baz=163,slow=28						
JTS	Las Juntas de	18.00	82	LR	LR	01 07 22.0	
	comp=Z,917nm,18.6s,baz=300,slow=31						
TEIG	Tepich	18.58	49	P	P	01 02 16.0	-1.1
	0.2nm,0.3s,baz=230,slow=18,SNR=2.4						
TEIG				LR	LR	01 08 49.0	
	comp=Z,2µm,18.1s,baz=262,slow=35						
TEIG	Tepich	18.58	49	P	P	01 02 16.5	-0.6
TEIG				IAmb	IAmb	01 02 19.6	
	comp=Z,57nm,1.5s						
HPIG		18.67	353	P	Pn	01 02 22.1	+3.4
HDC	Heredia	18.81	83	P	Pn	01 02 20.6	+0.2
SRIG	Santa Rosalia	20.78	336	P	P	01 02 41.4	+0.3
TXAR	Lajitas Array	20.90	359	P	P	01 02 41.9	-0.6
	comp=Z,5.2nm,1.1s,baz=181,slow=11,SNR=18						
TXAR				LR	LR	01 10 14.3	
	comp=Z,3µm,18.2s,baz=0.0,slow=35						
TXAR	Lajitas Array	20.90	359	P	P	01 02 43.6	+1.0
TX31	Lajitas Ar. Si	20.90	359	P	P	01 02 43.1	+0.6
TX32	Lajitas Array	20.90	359	P	P	01 02 43.1	+0.6
JCT	Junction City	22.25	8	P	P	01 02 59.6	+2.6
JCT				IAmb	IAmb	01 03 03.3	
	comp=Z,29nm,1.2s						
HKT	Hockley	22.56	17	P	P	01 03 00.2	+0.1
HKT				IAmb	IAmb	01 03 21.9	
	comp=Z,38nm,1.4s						
435B	Jarrell	22.93	12	P	P	01 03 04.9	+0.9
435B				IAmb	IAmb	01 03 05.8	
	comp=Z,37nm,1.4s						
MNTX	Cornudas Mount	23.35	355	P	P	01 03 08.1	-0.4
319A	Douglas	23.65	347	P	P	01 03 11.7	+0.3
319A				IAmb	IAmb	01 03 35.8	
	comp=Z,38nm,1.4s						
GDL2	Guadalupe Moun	23.78	357	P	P	01 03 13.6	+0.9
WHTX	Lake Whitney,	24.12	12	P	P	01 03 16.9	+1.1
WHTX				IAmb	IAmb	01 03 21.1	
	comp=Z,25nm,1.1s						
ABTX	Abilene, Hawle	24.39	7	P	P	01 03 18.4	+0.1
121A	Cookes Peak, D	24.48	350	P	P	01 03 20.2	+1.0
121A				IAmb	IAmb	01 03 27.9	
	comp=Z,14nm,1.1s						
TUC	Tucson	24.91	344	P	P	01 03 23.9	+0.8
TUC				IAmb	IAmb	01 03 31.4	
	comp=Z,25nm,1.4s						
342A	Flagon Creek P	25.03	22	P	P	01 03 25.8	+1.7
PIX	Pinacate	25.05	339	P	P	01 03 25.4	+1.1
PIX				IAmb	IAmb	01 03 32.5	
	comp=Z,16nm,1.4s						
SFX	San Felipe	25.12	336	P	P	01 03 25.9	+1.0
SFX				IAmb	IAmb	01 03 27.4	
	comp=Z,20nm,1.1s						
214A	Organ Pipe Nat	25.19	340	P	P	01 03 26.4	+0.9
214A				IAmb	IAmb	01 03 33.8	
	comp=Z,25nm,1.4s						
SPX	San Pedro Mart	25.38	335	P	P	01 03 28.9	+1.3
SPX				IAmb	IAmb	01 03 35.8	
	comp=Z,16nm,1.4s						
OTAV	Otavalo	25.83	107	P	P	01 03 33.0	+1.0
113A	Mohawk Valley,	26.26	339	P	P	01 03 35.4	+0.2
113A				IAmb	IAmb	01 03 47.4	
	comp=Z,15nm,1.2s						
ESJX	Sierra Juarez	26.42	335	P	P	01 03 39.4	+2.5
ANMO	Albuquerque	26.67	354	P	P	01 03 36.3	-2.9
	comp=Z,0.5nm,0.4s,baz=105,slow=8.5,SNR=3.1						
ANMO				LR	LR	01 12 43.0	
	comp=Z,767nm,18.5s,baz=157,slow=33						
GLA	Glamis	26.89	338	P	P	01 03 41.3	+0.3
X16A	Lo Mia Camp, P	27.08	345	P	P	01 03 42.6	-0.1
W18A	Petrified Fore	27.35	348	P	P	01 03 46.9	+1.7
MIAR	Mount Ida	27.52	17	P	P	01 03 47.3	+0.8
PFO	Pinyon Flats O	28.03	336	P	P	01 03 50.2	-1.0
	comp=Z,3.3nm,0.9s,baz=89,slow=2.6,SNR=3.5						
PFO				LR	LR	01 12 37.2	
	comp=Z,1µm,20.1s,baz=136,slow=32						
PFO	Pinyon Flats O	28.03	336	P	P	01 03 52.3	+1.1
PFO				IAmb	IAmb	01 04 07.0	
	comp=Z,13nm,1.4s						
WUAZ	Wupatki	28.10	346	P	P	01 03 52.7	+0.7
WUAZ				IAmb	IAmb	01 04 00.6	
	comp=Z,16nm,1.2s						
W13A	Hualapai Mount	28.43	341	P	P	01 03 56.4	+1.5
W13A				IAmb	IAmb	01 04 08.1	
	comp=Z,12nm,1.4s						
ROSC	El Rosal	28.78	95	P	P	01 03 58.6	+0.1
	comp=Z,2.2nm,0.4s,baz=245,slow=11,SNR=2.0						
ROSC				LR	LR	01 12 44.8	
	comp=Z,2µm,19.2s,baz=294,slow=31						
ATAH	Atahualpa	29.02	121	P	P	01 04 01.0	+0.5
	comp=Z,1.6nm,0.7s,baz=311,slow=13,SNR=1.3						
MVCO	Mesa Verde	29.17	351	P	P	01 04 02.0	+0.5
MVCO				IAmb	IAmb	01 04 09.7	
	comp=Z,16nm,1.2s						
U15A	North Rim	29.20	345	P	P	01 04 02.9	+1.0
U15A				IAmb	IAmb	01 04 15.6	
	comp=Z,12nm,1.4s						
SDCO	Great Sand Dun	29.37	356	P	P	01 04 04.7	+1.4
U40A	Yellville	29.42	17	IAmb	IAmb	01 04 13.6	
	comp=Z,23nm,1.5s						
SHPR	Sheep Range	30.13	340	P	P	01 04 13.4	+3.6
PV03	Paradox Valley	30.24	351	IAmb	IAmb	01 04 29.4	
	comp=Z,14nm,1.3s						
PV17	East Wray Mesa	30.29	351	P	P	01 04 12.0	+0.6
PV17				IAmb	IAmb	01 04 29.6	
	comp=Z,21nm,1.5s						
PV12	Saucer Basin,	30.30	351	IAmb	IAmb	01 04 23.1	
	comp=Z,18nm,1.4s						
PV14	Lion Creek, Pa	30.39	351	IAmb	IAmb	01 04 24.4	
	comp=Z,14nm,1.2s						
PRN	Pahroc Range	30.91	341	IAmb	IAmb	01 04 32.5	
	comp=Z,12nm,1.3s						
SMCO	Snowmass	30.91	354	P	P	01 04 21.0	+3.9
SMCO				IAmb	IAmb	01 04 26.6	
	comp=Z,9.7nm,1.2s						
MSU	Marysvale	31.15	346	P	P	01 04 20.6	+1.7
MVU	Marysvale	31.15	346	P	P	01 04 19.5	+0.5
SRU	San Rafael Swe	31.37	349	P	P	01 04 22.9	+2.1
P17A	Butcher Ranch,	31.76	349	P	P	01 04 26.6	+2.3
SDV	Santo Domingo	32.09	87	P	P	01 04 27.6	+0.1
MPU	Maple Canyon	32.47	348	P	P	01 04 31.5	+1.0
OMMB	Old Mammoth Mi	32.52	336	IAmb	IAmb	01 04 39.0	
	comp=Z,12nm,1.3s						
MDPB	Devils Postpil	32.57	336	IAmb	IAmb	01 04 39.1	
	comp=Z,10nm,1.5s						
LHV	Little Huntoon	32.88	337	P	P	01 04 35.2	+1.3
LHV				IAmb	IAmb	01 04 42.6	
	comp=Z,9.0nm,1.3s						
DUG	Dugway, Tooele	32.90	346	IAmb	IAmb	01 04 42.6	
	comp=Z,15nm,1.3s						
NV11	Mina Array Sit	32.91	338	IAmb	IAmb	01 04 42.5	
	comp=Z,8.0nm,1.3s						
NVAR	Mina Array Bea	32.96	338	P	P	01 04 34.3	-0.6
	comp=Z,1.9nm,0.9s,baz=165,slow=8.3,SNR=9.3						
NVAR	Mina Array Bea	32.96	338	P	P	01 04 34.9	0.0
WAKR	Walker	33.46	336	IAmb	IAmb	01 05 05.4	
	comp=Z,9.8nm,1.4s						
TCUT	Toone Canyon	33.48	349	P	P	01 04 41.2	+1.7
PNTR	Pine Nut	34.03	337	P	P	01 04 45.1	+0.9
PNTR				IAmb	IAmb	01 04 53.0	
	comp=Z,5.9nm,0.9s						
ELK	Elko	34.05	343	IAmb	IAmb	01 04 51.6	
	comp=Z,10.0nm,1.5s						
VCNR	Virginia City	34.23	337	IAmb	IAmb	01 04 54.6	
	comp=Z,17nm,1.4s						
PAHR	Pah Rah Range	34.48	338	IAmb	IAmb	01 04 56.2	
	comp=Z,12nm,1.3s						
BW06	Boulder Array	34.77	352	IAmb	IAmb	01 05 09.0	
	comp=Z,13nm,1.3s						
PD31	Pinedale Array	34.77	352	IAmb	IAmb	01 05 09.0	
	comp=Z,12nm,1.3s						
PDAR	Pinedale Array	34.77	352	P	P	01 04 49.0	-1.6
	comp=Z,4.1nm,1.0s,baz=164,slow=7.7,SNR=16						
PDAR	Pinedale Array	34.77	352	P	P	01 04 51.5	+0.9
BEKR	Beckworth	35.00	337	IAmb	IAmb	01 05 00.6	
	comp=Z,8.8nm,1.2s						
ORV	Oroville	35.20	335	P	P	01 04 54.9	+0.9
ORV				IAmb	IAmb	01 05 02.8	
	comp=Z,10nm,1.1s						
REDW	Red Top Meadow	35.55	350	IAmb	IAmb	01 05 04.6	
	comp=Z,16nm,1.4s						
SNOW	Snow King Moun	35.63	350	P	P	01 05 00.1	+2.0
HLID	Hailey	36.47	346	P	P	01 05 05.7	+0.6
I37A	Lemond, Waseca	36.54	12	P	P	01 05 07.5	+2.0
WVOR	Wild Horse Val	36.63	341	IAmb	IAmb	01 05 14.0	
	comp=Z,12nm,1.2s						
MOD	Modoc Plateau	36.74	338	IAmb	IAmb	01 05 15.3	
	comp=Z,17nm,1.2s						
BCYI	Bear Canyon	36.95	348	P	P	01 05 11.0	+1.7
YNE	Yellowstone No	37.03	352	P	P	01 05 11.7	+1.7
MCMT	McKenzie Canyo	37.34	349	P	P	01 05 13.9	+1.4
YBH	Yreka Blue Hor	37.52	336	P	P	01 05 12.5	-1.5
	comp=Z,2.9nm,1.0s,baz=149,slow=8.1,SNR=3.6						
DLMT	Dillon	37.80	349	IAmb	IAmb	01 05 35.4	
	comp=Z,16nm,1.3s						
LRM	Limekiln Ridge	38.22	349	P	P	01 05 18.9	-1.1
BMO	Blue Mountains	38.42	344	P	P	01 05 24.3	+2.8
G08A	Pilot Rock	39.30	342	P	P	01 05 30.4	+1.5
MSO	Missoula	39.47	348	P	P	01 05 31.5	+1.1
H04A	Detroit Lake	39.83	339	IAmb	IAmb	01 05 40.8	
	comp=Z,11nm,0.9s						
DGMT	Dagmar	40.02	359	IAmb	IAmb	01 05 42.0	
	comp=Z,13nm,0.9s						
F07A	Phinny Hill Vi	40.14	342	IAmb	IAmb	01 05 44.3	
	comp=Z,17nm,1.1s						
HAWA	Hanford	40.47	342	P	P	01 05 39.0	+0.5
TAOE	Nuku Hiva Isla	40.68	246	*e*LR	LR	01 16 32.0	
	comp=Z,655nm,27.2s						
EYMN	Ely	40.69	12	P	P	01 05 41.4	+1.2
EYMN				IAmb	IAmb	01 05 47.4	
	comp=Z,12nm,1.2s						
C09A	Chrisman Ranch	41.40	345	P	P	01 05 46.3	+0.2
NEW	Newport	41.53	346	P	P	01 05 46.8	-0.5
	comp=Z,5.4nm,1.0s,baz=151,slow=9.7,SNR=4.5						
NEW	Newport	41.53	346	P	P	01 05 47.3	0.0
NEW				IAmb	IAmb	01 06 05.3	
	comp=Z,16nm,1.3s						
LTY	Liberty	41.59	342	P	P	01 05 49.1	+1.3
B08A	Colville Reser	42.19	344	P	P	01 05 51.6	-1.1
SAML	Samuel	43.30	112	P	P	01 06 00.8	-1.2
SAML				IAmb	IAmb	01 06 13.4	
	comp=Z,16nm,1.4s						
PTGA	Pitinga	43.91	100	LR	LR	01 22 17.4	
	comp=Z,1µm,18.3s,baz=313,slow=33						
RKT	Rikitea	44.16	224	*e*LR	LR	01 18 19.7	
	comp=Z,1µm,26.8s						
LVC	Limon Verde	45.45	133	LR	LR	01 21 06.5	
	comp=Z,790nm,19.4s,baz=304,slow=30						
H03N2	Juan Fernandez	47.46	152	T	T	01 57 34.4	
	baz=329,slow=78,SNR=39						
H03N1	Juan Fernandez	47.47	152	T	T	01 57 35.7	
	baz=329,slow=78,SNR=75						
H03N3	Juan Fernandez	47.48	152	T	T	01 57 31.1	
	baz=329,slow=78,SNR=51						
PPT2	Papeete2	52.65	240	*e*LR	LR	01 22 09.2	
	comp=Z,988nm,25.0s,baz=56						
DLBC	Dease Lake	54.10	343	P	P	01 07 23.4	-1.1
	comp=Z,1.9nm,0.8s,baz=190,slow=22,SNR=2.5						
YKA	Yellowknife Ar	54.71	353	P	P	01 07 27.1	-1.8
	comp=Z,2.0nm,1.0s,baz=161,slow=7.6,SNR=17						
YKA				PcP	PcP	01 08 29.7	-1.6
	comp=Z,0.5nm,1.0s,baz=150,slow=3.9,SNR=1.8						
TBI	Tubuai	55.19	234	*e*LR	LR	01 23 24.2	
	comp=Z,811nm,26.8s,baz=58						
CPUP	Villa Florida	56.21	129	P	P	01 07 40.4	+0.2
	comp=Z,2.7nm,0.9s,baz=291,slow=6.5,SNR=3.7						
CPUP	Villa Florida	56.21	129	P	P	01 07 41.1	+0.8
CPUP				IAmb	IAmb	01 07 48.6	
	comp=Z,12nm,1.4s						
FRB	Frobisher Bay	60.57	17	P	P	01 08 08.9	-1.1
	comp=Z,2.0nm,0.9s,baz=192,slow=11,SNR=3.1						
PAX	Paxson	62.48	340	P	P	01 08 25.3	+2.1
INK	Inuvik	63.20	348	P	P	01 08 25.8	-1.8
	comp=Z,6.6nm,1.1s,baz=150,slow=6.4,SNR=6.9						
INK	Inuvik	63.20	348	P	P	01 08 27.4	-0.3
RND	Reindeer	63.95	339	P	P	01 08 33.4	+0.6
ILAR	Eielson Array	64.14	341	P	P	01 08 31.3	-2.6
	comp=Z,2.2nm,0.9s,baz=153,slow=5.1,SNR=12						
ILAR	Eielson Array	64.14	341	P	P	01 08 32.4	-1.6
PRP	Porcupine Dome	64.20	342	IAmb	IAmb	01 08 41.3	
	comp=Z,5.1nm,0.9s						
BMAR	Burnt Mountain	65.24	344	P	P	01 08 41.2	+0.1
RES	Resolute Bay	66.48	2	P	P	01 08 47.1	-1.8
	baz=190,slow=4.9,SNR=1.0						
COLD	Coldfoot	66.75	342	P	P	01 08 51.7	+0.9
TOLK	Toolik Lake Re	67.45	343	IAmb	IAmb	01 09 02.7	
	comp=Z,5.7nm,1.1s						
RDOG	Red Dog Mine	71.32	340	P	P	01 09 19.5	+0.3
WRA	Warramunga Arr	123.37	252	PKP	PKPdf	01 16 55.7	-2.1
	comp=Z,0.8nm,0.8s,baz=85,slow=1.9,SNR=3.2						
MKAR	Makanchi Array	124.92	355	PKP	PKPdf	01 16 57.4	-2.8
	comp=Z,0.3nm,0.8s,baz=359,slow=2.8,SNR=2.9						
MKAR				PP	PP	01 18 49.7	+2.6
	comp=Z,0.4nm,0.9s,baz=21,slow=4.4,SNR=3.6						
CMAR	Chiang Mai Arr	145.63	321	PKPbc	PKPdf	01 17 37.8	-1.4
	comp=Z,1.5nm,0.6s,baz=8.5,slow=3.7,SNR=6.1						

IDC 18 00:59:45.6±12.0**, 8°.60N**×**105°.15W, h0^{km}, mb3.2**/4**, mb1 3.8**/4**, mb1mx3.5**/44**, mbtmp3.3**/4**, Error ellipse: s-maj=281.4km s-min=113.8km az=128.0, Northern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TXAR	Lajitas Array	20.68	4	P	P	01 04 27.7	+0.3
	0.5nm,0.8s,baz=192,slow=12,SNR=1.7						
NVAR	Mina Array Bea	31.98	340	P	P	01 06 14.3	+0.5
	0.1nm,0.3s,baz=162,slow=10,SNR=1.5						
PDAR	Pinedale Array	34.25	354	P	P	01 06 32.8	-0.9
	0.6nm,0.9s,baz=169,slow=10,SNR=2.2						
ILAR	Eielson Array	63.23	341	P	P	01 10 15.7	0.0
	0.3nm,0.8s,baz=153,slow=6.1,SNR=1.3						

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*IDC **18** 00:59:58.4±3.4, 8°.25N×102°.91W, h0^{km}, mb3.8/5, mb1 4.2/5, mb1mx3.8/42, mbtmp3.8/5, MS4.3/1, Ms1 4.3/1, ms1mx3.5/27, Error ellipse: s-maj=154.9km s-min=57.4km az=93.0*

ISC 18 00:59:58.6±3.5**, 8°.1N**±0°.4×**102°.8W**±0°.8**, h10^{km}, n12, σ0^{s}63**/8**, mb3.9**/5**, Northern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H06E1	SOCORRO T-PHAS	13.25	324	T	T	01 15 57.2	
TXAR	Lajitas Array	21.14	358	P	P	01 04 44.1	+0.2
	2.6nm,1.0s,baz=182,slow=12,SNR=4.7						
TXAR	Lajitas Array	21.14	358		P	01 04 44.1	+0.2
NVAR	Mina Array Bea	33.29	337	P	P	01 06 37.1	+0.4
	0.5nm,0.7s,baz=159,slow=11,SNR=3.7						
PDAR	Pinedale Array	35.05	351	P	P	01 06 51.6	-0.3
	2.0nm,0.9s,baz=167,slow=9.1,SNR=5.6						
PCRV	Puerto La Cruz	37.69	84	LR	LR	01 24 06.3	
	comp=Z,401nm,18.1s,slow=38						
H03N2	Juan Fernandez	47.11	153	T	T	01 59 34.2	
	baz=322						
H03N1	Juan Fernandez	47.12	153	T	T	01 59 36.1	
	baz=322						
H03N3	Juan Fernandez	47.13	153	T	T	01 59 34.8	
	baz=322						
YKA	Yellowknife Ar	54.98	353	P	P	01 09 30.2	+0.5
	1.1nm,1.0s,baz=161,slow=8.0,SNR=5.3						
YKA				PcP	PcP	01 10 31.8	+0.3
	0.1nm,0.4s,baz=155,slow=3.4,SNR=1.6						
ILAR	Eielson Array	64.47	341	P	P	01 10 34.0	-1.1
	1.4nm,1.0s,baz=155,slow=4.5,SNR=4.9						
CMAR	Chiang Mai Arr	146.01	321	PKPbc	PKPab	01 19 40.5	+0.3
	4.1nm,1.0s,baz=7.3,slow=2.9,SNR=8.3						

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*NEIC **18** 01:08:17.9±1.4, 21°.1S±0°.1×179°.2W±0°.1, h632^{km}±10^{km}, mb4.3/18, Error ellipse: s-maj=19.7km s-min=9.7km az=222.0*

*IDC **18** 01:08:18.6±1.5, 21°.01S×179°.29W, h639^{km}±17^{km}, mb3.0/10, mb1 3.3/11, mb1mx3.1/37, mbtmp4.0/11, Error ellipse: s-maj=19.6km s-min=15.4km az=141.0*

ISC 18 01:08:19.2±0.6**, 21°.09S**±0°.10×**179°.2W**±0°.1**, h650^{km}, n33, σ1^{s}46**/35**, mb3.9**/18**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	4.21	322	P	P	01 09 47.4	-2.5
	53nm,0.3s,baz=155,slow=4.4,SNR=247						
MSVF	Nonsavu	4.21	322	P	P	01 09 47.5	-2.3
OUZ	Omahuta	15.42	203	P	P	01 11 30.1	+1.1
OUZ				IAmb	IAmb	01 11 34.9	
	comp=Z,29nm,1.5s						
URZ	Urewera	17.40	190	P	P	01 11 43.0	-4.0
	comp=Z,1.8nm,0.3s,baz=211,slow=3.4,SNR=3.3						
BFZ	Birch Farm	19.90	190	P	P	01 12 07.6	-2.1
KHZ	Kahutara	22.11	194	P	P	01 12 26.3	-3.0
KHZ				IAmb	IAmb	01 12 39.4	
	comp=Z,9.4nm,0.9s						
FOZ	Fox Glacier	24.17	200	P	P	01 12 46.3	-1.2
FOZ				IAmb	IAmb	01 13 01.3	
	comp=Z,10nm,1.2s						
WHZ	Wether Hill Ro	26.88	200	P	P	01 13 11.2	0.0
WHZ				IAmb	IAmb	01 13 30.2	
	comp=Z,9.5nm,1.1s						
COEN	Coen	36.47	275	P	P	01 14 33.8	+1.3
STKA	Stephens Creek	36.49	245	P	P	01 14 32.7	+0.2
	comp=Z,1.1nm,0.6s,baz=76,slow=9.4,SNR=2.9						
STKA	Stephens Creek	36.49	245	P	P	01 14 33.0	+0.5
BBOO	Buckleboo	41.25	244	P	P	01 15 10.2	-0.3
WR0	Warramunga Arr	43.18	263	P	P	01 15 26.0	+0.3
ASAR	Alice Springs	43.26	257	P	P	01 15 26.8	+0.5
	comp=Z,0.3nm,0.5s,baz=92,slow=7.9,SNR=2.4						
ASAR				ScP	ScP	01 19 53.0	+2.2
	comp=Z,0.2nm,0.7s,baz=108,slow=4.7,SNR=4.5						
ASAR				S	S	01 21 08.7	-0.1

```
      comp=Z,1.0nm,0.7s,baz=93,slow=17,SNR=6.5
WC3   Warramunga Arr   43.34 263              P          01 15 26.6 -0.3
WC3                              IAmb         IAmb       01 15 34.6
      comp=Z,15nm,1.4s
WB0   Warramunga Arr   43.35 263 P            P          01 15 27.0  0.0
WB0                              IAmb         IAmb       01 15 38.3
      comp=Z,15nm,1.3s
WB2   Warramunga Arr   43.36 263 P            P          01 15 27.0 -0.1
WB2                              IAmb         IAmb       01 15 28.6
      comp=Z,8.6nm,1.2s
WRA   Warramunga Arr   43.37 263 P            P          01 15 27.1 -0.1
      comp=Z,0.3nm,0.3s,baz=97,slow=7.5,SNR=33
WRA   Warramunga Arr   43.37 263 P            P          01 15 26.7 -0.4
VNDA  Vanda            57.22 185 P            P          01 17 07.2 +0.8
      comp=Z,1.2nm,0.5s,baz=23,slow=7.4,SNR=11
VNDA  Vanda            57.22 185 P            P          01 17 07.1 +0.8
QSPA  South Pole Qui   68.98 180 P            P          01 18 21.8 +0.4
QSPA                             IAmb         IAmb       01 18 22.5
      comp=Z,8.1nm,1.0s
MJAR  Matsushiro Arr   70.01 325 P            P          01 18 28.0 +0.2
      comp=Z,1.7nm,0.5s,baz=166,slow=4.7,SNR=3.0
ADK   Adak             72.69   2 P            P          01 18 43.3 +0.4
ATKA  Atka Island      73.11   3 P            P          01 18 45.0 -0.3
PETK  Petropavlovsk-   76.55 346 P            P          01 19 05.0 +0.6
      comp=Z,2.9nm,0.6s,baz=158,slow=12,SNR=3.9
NVAR  Mina Array Bea   82.25  44 P            P          01 19 35.6 +0.8
      comp=Z,0.5nm,0.9s,baz=233,slow=9.2,SNR=3.6
KLR   Kul'dur          82.45 330 P            P          01 19 35.8 +0.5
      comp=Z,1.8nm,1.0s,baz=226,slow=3.1,SNR=3.7
K05A  Summer Lake      83.15  39 P            P          01 19 40.9 +1.8
K05A                             IAmb         IAmb       01 19 41.5
      comp=Z,8.0nm,1.2s
ILAR  Eielson Array    89.15  13 P            P          01 20 06.3 -0.6
      comp=Z,0.6nm,0.5s,baz=214,slow=5.2,SNR=13
PLCA  Paso Flores      89.70 134 P            P          01 20 11.0 +0.7
      comp=Z,0.9nm,0.8s,baz=270,slow=4.8,SNR=3.4
AKASG Malin Array Be  142.95 330 PKP          PKPdf      01 26 37.9 -2.5
      comp=Z,0.8nm,0.5s,baz=44,slow=4.4,SNR=18
AKASG Malin Array Be  142.95 330              PKPdf      01 26 38.6 -1.8
```

IDC ***18*** *01:16:14.3±0.7, 8°.17N×103°.25W, h0^{km}, mb4.4/16, mb1 4.5/18, mb1mx4.5/27, mbtmp4.4/18, ML3.9/2, MS5.0/19, Ms1 5.0/19, ms1mx4.8/24, Error ellipse: s-maj=25.3km s-min=12.5km az=55.0*

NEIC ***18*** *01:16:17.6±2.6, 8°.29N±0°.10×103°.1W±0°.1, h10^{km}±1^{km}, mb5.0/277, Ms_20 4.9/421, Mwc5.5(GCMT), Error ellipse: s-maj=21.4km s-min=15.4km az=243.0*

MOS ***18*** *01:16:17.1±1.7, 8°.43N×103°.19W, h10^{km}, mb5.2/22, MS5.0/10, Error ellipse: s-maj=11.8km s-min=6.6km az=97.0*

GCMT ***18*** *01:16:20.6±0.1, 8°.48N±0°.01×103°.21W±0°.01, h12^{km}, MW5.5/143, Moment Tensor Solution. s100,c158; s143,c283; Duration: 1^{s}3 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.13±.03; $M_{\theta\theta}$0.78±.03; $M_{\phi\phi}$-0.64±.03; $M_{r\theta}$-0.83±.06; $M_{\theta\phi}$-1.65±.02; $M_{\phi r}$0.11±.07; Best double couple: $M_0$1.96800×10^{17} NP1:ϕ_s350.00000°, δ67.00000°, λ4.00000°. NP2:ϕ_s258.00000°, δ86.00000°, λ157.00000°. Principal axes: T 2.1180, Plg19.0000°, Azm212.0000°; N -0.3020, Plg67.0000°, Azm70.0000°; P -1.8180, Plg13.0000°, Azm306.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***18*** *01:16:20, 8°.50N×103°.22W, h12^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-0.14; $M_{\theta\theta}$0.88; $M_{\phi\phi}$-0.74; $M_{r\theta}$-1.22; $M_{\theta\phi}$-1.70; $M_{\phi r}$0.09; Fault plane solution: $M_0$2.25000×10^{17} NP1:ϕ_s349.00000°, δ59.00000°, λ3.00000°. NP2:ϕ_s258.00000°, δ88.00000°, λ149.00000°. Principal axes: T 2.4250, Plg23.0000°, Azm209.0000°; N -0.4066, Plg58.0000°, Azm74.0000°; P -2.0184, Plg20.0000°, Azm308.0000°;*

ISC 18 01:16:19.6±0.4**, 8°.41N**±0°.06×**103°.04W**±0°.06**, h19**^{km}**, n681,** σ**1^{s}18**/422**, mb5.0**/143**, MS4.9**/233**, 1D, Northern East Pacific Rise**

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Code  Station Name      Δ°    AZ°    Phase ID                Time     Res
                                 Op           ISC         h  m  s    ISC
TLIG  Tlapa            10.09  25              Pn         01 18 41.8 -1.9
MOIG  Morelia          11.35   9              Pn         01 19 03.8 +2.7
UNM   Universidad Na   11.48  19 P            Pn         01 19 07.3 +4.4
UNM   Universidad Na   11.48  19 Pn           Pn         01 19 07.3 +4.4
CMIG  Matias Romero    11.73  42 Pn           Pn         01 19 02.2 -3.9
      0.8nm,0.3s,baz=208,slow=8.2,SNR=10
CMIG                             LR           LR         01 22 34.8
      comp=Z,18µm,21.3s,baz=180,slow=32
RTAL  Retalhuleu       12.67  60 Pn           Pn         01 19 21.8 +2.9
H06S1 SOCORRO T        12.82 324 T            T          01 32 19.1
      SNR=62
H06E1 SOCORRO T-PHAS12.84 324    T            T          01 32 20.3
      SNR=198
CCIG  Comitan          13.21  53 Pn           Pn         01 19 27.6 +1.1
HUEH  Huehuetenango    13.21  58 Pn           Pn         01 19 25.4 -1.1
ZAIG  Zacatecas        14.29   2 Pn           Pn         01 19 43.1 +1.8
MTO3  Montecristo      14.67  65 Pn           Pn         01 19 45.5 -1.0
ESQI  Esquipulas       14.74  64 Pn           Pn         01 19 49.6 +2.2
PETF  Flores           15.38  55 Pn           Pn         01 19 53.0 -2.6
PETF                             IAmb         IAmb       01 20 02.6
      comp=Z,80nm,0.7s
PAYG  Puerto Ayora     15.59 125 P            P          01 20 03.4 +0.7
TGUH  Tegucigalpa,Un   16.45  69 P            P          01 20 12.2 -0.1
TGUH                             IAmb         IAmb       01 20 19.2
      comp=Z,188nm,1.4s
LPIG  La Paz           17.09 337 LR           LR         01 25 17.1
      comp=Z,7µm,19.5s,baz=161,slow=32
ACON  Acoyapa          17.93  77 P            Pn         01 20 28.7 +0.6
ACON                             IAmb         IAmb       01 20 47.5
      comp=Z,228nm,2.0s
JTS   Las Juntas de    17.94  83 P            Pn         01 20 27.7 -0.6
      comp=Z,0.3nm,0.3s,baz=328,slow=7.7,SNR=1.8
JTS                              LR           LR         01 25 32.5
      comp=Z,3µm,22.0s,baz=324,slow=31
JTS   Las Juntas de    17.94  83 i P          P          01 20 33.6 +4.8
JTS                              pmax         pmax
      comp=Z,50nm,1.2s
JTS   Las Juntas de    17.94  83 P            P          01 20 31.4 +2.6
TEIG  Tepich           18.49  49 P            Pn         01 20 35.6 +0.7
      comp=Z,0.5nm,0.3s,baz=262,slow=10,SNR=19
TEIG                             LR           LR         01 26 48.4
      comp=Z,8µm,21.1s,baz=242,slow=34
TEIG  Tepich           18.49  49 P            Pn         01 20 35.5 +0.6
HPIG                   18.59 353 P            Pn         01 20 38.1 +1.8
ESPN  Las Esperanzas   18.81  77 P            Pn         01 20 41.2 +2.3
833A  Chaparral WMA,   20.11   9 P            Pn         01 20 53.6 -0.6
      baz=190,SNR=15
SRIG  Santa Rosalia    20.73 336 P            P          01 20 59.6 +0.5
TX31  Lajitas Ar. Si   20.82 358 P            P          01 21 00.3 +0.1
TX32  Lajitas Array    20.82 358 P            P          01 21 00.6 +0.4
TXAR  Lajitas Array    20.82 358 P            P          01 21 00.8 +0.5
      comp=Z,3.9nm,0.7s,baz=181,slow=11,SNR=36
TXAR                             PcP          PcP        01 25 07.4 -1.5
      comp=Z,0.3nm,0.8s,baz=191,slow=3.7,SNR=2.1
TXAR                             LR           LR         01 28 32.9
      comp=Z,8µm,18.8s,baz=0.0,slow=35
TXAR  Lajitas Array    20.82 358 P            P          01 21 00.5 +0.2
TXAR  Lajitas Array    20.82 358 P            P          01 21 00.5 +0.2
735A  Kenedy           20.93  13 P            P          01 21 01.8 +0.5
735A                             IAMs_20      IAMs_20    01 28 54.3
      comp=Z,4µm,20.0s
HSIG                   21.81 341 P            P          01 21 13.3 +2.5
HSIG                             IAMs_20      IAMs_20    01 27 32.4
      comp=Z,3µm,18.0s
JCT   Junction City    22.17   7 P            P          01 21 15.3 +0.7
      baz=188,SNR=15
JCT   Junction City    22.17   7 P            P          01 21 15.3 +0.7
JCT                              pmax         pmax
      comp=Z,48nm,1.0s
JCT                              MLR          MLR
      comp=Z,8µm,20.0s
JCT   Junction City    22.17   7 P            P          01 21 15.3 +0.7
JCT                              IAmb         IAmb       01 21 25.4
      comp=Z,48nm,1.0s
HKT   Hockley          22.47  17 i P          P          01 21 19.6 +1.8
HKT                              pmax         pmax
      comp=Z,175nm,1.7s
HKT   Hockley          22.47  17 P            P          01 21 18.7 +0.9
HKT   Hockley          22.47  17 IAMs_20      IAMs_20    01 31 05.4
      comp=Z,5µm,18.0s
435B  Jarrell          22.84  12 P            P          01 21 22.5 +0.8
      baz=194
435B  Jarrell          22.84  12 IAmb         IAmb       01 21 24.9
      comp=Z,66nm,1.1s
435B                             IAMs_20      IAMs_20    01 29 42.9
      comp=Z,4µm,21.0s
MNTX  Cornudas Mount   23.28 355 P            P          01 21 26.1 -0.2
      baz=174,SNR=19
MNTX  Cornudas Mount   23.28 355 P            P          01 21 25.3 -0.9
MNTX                             IAmb         IAmb       01 21 37.8
      comp=Z,108nm,1.9s
EPT   El Paso          23.47 353 IAMs_20      IAMs_20    01 31 41.5
      comp=Z,3µm,19.0s
319A  Douglas          23.58 347 IAmb         IAmb       01 21 35.8
      comp=Z,87nm,1.5s
WBCY  West Bay, Gran   23.64  60 P            P          01 21 31.8 +1.9
GDL2  Guadalupe Moun   23.70 357 P            P          01 21 30.4 -0.2
FSCY  Frank Sound, G   23.79  61 P            P          01 21 30.1 -1.3
WHTX  Lake Whitney,    24.03  12 P            P          01 21 33.3 -0.2
      baz=194,SNR=7.8
WHTX  Lake Whitney,    24.03  12 IAmb         IAmb       01 21 41.4
      comp=Z,46nm,1.1s
ABTX  Abilene, Hawle   24.30   7 P            P          01 21 35.4 -0.6
      baz=188,SNR=17
ABTX  Abilene, Hawle   24.30   7 IAmb         IAmb       01 21 37.8
      comp=Z,49nm,1.1s
121A  Cookes Peak, D   24.41 350 P            P          01 21 37.6 +0.5
      baz=169,SNR=8.7
121A  Cookes Peak, D   24.41 350 P            P          01 21 37.7 +0.5
121A                             IAmb         IAmb       01 21 43.5
      comp=Z,44nm,1.2s
NATX  Nacogdoches      24.51  17 P            P          01 21 38.1 +0.1
      baz=200,SNR=5.7
NATX  Nacogdoches      24.51  17 P            P          01 21 38.0 +0.1
NATX                             IAmb         IAmb       01 21 39.4
      comp=Z,58nm,1.1s
545A  Edgard           24.53  27 IAMs_20      IAMs_20    01 31 44.5
      comp=Z,4µm,20.0s
TUC   Tucson           24.85 344 P            P          01 21 41.7 +0.6
      baz=162
TUC   Tucson           24.85 344 P            P          01 21 41.7 +0.6
TUC                              pmax         pmax
      comp=Z,88nm,1.9s
TUC                              MLR          MLR
      comp=Z,2µm,20.0s
TUC   Tucson           24.85 344 P            P          01 21 41.7 +0.6
TUC                              IAmb         IAmb       01 22 09.0
      comp=Z,88nm,1.9s
LCCY  Blossom Villag   24.89  61 P            P          01 21 42.9 +1.4
214A  Organ Pipe Nat   25.13 340 P            P          01 21 43.3 -0.2
      baz=157,SNR=6.1
214A  Organ Pipe Nat   25.13 340 IAmb         IAmb       01 22 11.4
      comp=Z,43nm,1.6s
214A                             IAMs_20      IAMs_20    01 29 23.3
      comp=Z,4µm,18.0s
SPX   San Pedro Mart   25.32 334 IAMs_20      IAMs_20    01 30 07.5
      comp=Z,4µm,18.0s
Z35A  Perchaven, San   25.37  11 IAmb         IAmb       01 21 57.4
      comp=Z,36nm,1.1s
Z35A                             IAMs_20      IAMs_20    01 31 12.0
      comp=Z,3µm,20.0s
MSTX  Muleshoe         25.44   1 P            P          01 21 46.2 -0.3
      baz=181
MSTX  Muleshoe         25.44   1 P            P          01 21 45.1 -1.4
MSTX                             IAmb         IAmb       01 22 23.3
      comp=Z,57nm,1.4s
Y22D  IRIS PASSCAL I   25.79 353 IAMs_20      IAMs_20    01 32 48.0
      comp=Z,4µm,19.0s
OTAV  Otavalo          25.81 107 P            P          01 21 51.4 +1.0
OTAV                             pmax         pmax
      comp=Z,257nm,1.9s
OTAV  Otavalo          25.81 107 P            P          01 21 51.4 +1.0
OTAV  Otavalo          25.81 107 eP           P          01 21 44.0 -6.4
OTAV  Otavalo          25.81 107 eP           P          01 21 51.9 +1.5
Z38A  Mt. Pleasant     25.83  16 IAmb         IAmb       01 21 58.8
      comp=Z,37nm,1.0s
Z38A                             IAMs_20      IAMs_20    01 32 24.0
      comp=Z,3µm,18.0s
BNM   Barren Site      25.83 353 P            P          01 21 50.7 +0.6
LENM  Lemitar          25.89 353 P            P          01 21 50.7  0.0
113A  Mohawk Valley,   26.20 339 P            P          01 21 53.3 +0.1
ESJX  Sierra Juarez    26.37 335 P            P          01 21 56.2 +1.2
AMTX  Amarillo         26.38   3 P            P          01 21 55.0 +0.1
      baz=183
AMTX  Amarillo         26.38   3 IAmb         IAmb       01 22 32.5
      comp=Z,35nm,1.2s
BBAC  Balboa, Cauca    26.44 102 eP           P          01 21 51.8 -4.2
CPBX  Cerro Prieto     26.46 336 IAMs_20      IAMs_20    01 30 04.5
      comp=Z,3µm,22.0s
Z41A  Richland Creek   26.48  20 P            P          01 21 55.4 -0.3
      baz=203
WMOK  Wichita Mounta   26.50   8 P            P          01 21 56.1 +0.2
      baz=189
WMOK  Wichita Mounta   26.50   8 IAmb         IAmb       01 22 00.8
      comp=Z,63nm,2.0s
GCUF  Volcan Galeras   26.56 104 eP           P          01 22 07.3 +10
ANMO  Albuquerque      26.60 354 P            P          01 21 56.7 -0.3
      comp=Z,1.7nm,1.0s,baz=162,slow=8.0,SNR=4.3
ANMO                             LR           LR         01 31 02.9
      comp=Z,3µm,20.6s,baz=177,slow=33
ANMO  Albuquerque      26.60 354 P            P          01 21 56.9 -0.1
      baz=172
ANMO  Albuquerque      26.60 354 i P          P          01 21 57.5 +0.5
ANMO                             pmax         pmax
      comp=Z,14nm,1.8s
ANMO  Albuquerque      26.60 354 P            P          01 21 56.9 -0.1
ANMO  Albuquerque      26.60 354 IAMs_20      IAMs_20    01 30 52.4
      comp=Z,3µm,21.0s
WLAR  White Oak Lake   26.77  19 IAMs_20      IAMs_20    01 33 52.1
      comp=Z,4µm,20.0s
GLA   Glamis           26.84 338 P            P          01 21 58.7 -0.4
      baz=154
GLA   Glamis           26.84 338 IAMs_20      IAMs_20    01 30 13.5
      comp=Z,4µm,22.0s
POPC  Popayan, Colom   26.87 101 eP           P          01 22 02.1 +2.3
X37A  Clayton          26.99  14 IAMs_20      IAMs_20    01 32 37.9
      comp=Z,4µm,21.0s
IKP   In-Ko-Pah, Jac   26.99 335 P            P          01 22 00.1 -0.4
      baz=151
X16A  Lo Mia Camp, P   27.01 345 P            P          01 22 01.3 +0.5
SOTA  Rioblanco        27.03 102 eP           P          01 22 07.3 +5.7
SWSC  Sam W. Stewart   27.12 336 P            P          01 22 01.2 -0.4
      baz=152
BAR   Barrett          27.26 334 P            P          01 22 03.2 +0.4
W18A  Petrified Fore   27.28 348 P            P          01 22 03.1 -0.1
      baz=166
W18A  Petrified Fore   27.28 348 IAmb         IAmb       01 22 13.6
      comp=Z,48nm,1.8s
MONP2 Monument Peak    27.33 335 P            P          01 22 04.0 +0.3
      baz=150,SNR=5.0
OKCFA Oklahoma City    27.36  10 IAMs_20      IAMs_20    01 32 22.7
      comp=Z,4µm,19.0s
451A  Vernon           27.38  34 IAMs_20      IAMs_20    01 33 55.8
      comp=Z,3µm,20.0s
MIAR  Mount Ida        27.43  17 P            P          01 22 04.0 -0.3
      baz=200,SNR=17
MIAR  Mount Ida        27.43  17 P            P          01 22 03.7 -0.6
MIAR                             pmax         pmax
      comp=Z,34nm,1.0s
MIAR                             MLR          MLR
      comp=Z,3µm,19.0s
MIAR  Mount Ida        27.43  17 P            P          01 22 03.7 -0.6
MIAR                             IAmb         IAmb       01 22 13.0
      comp=Z,34nm,1.0s
MIAR                             IAMs_20      IAMs_20    01 33 36.4
      comp=Z,3µm,19.0s
OK025 Westminster Rd   27.54  10 IAMs_20      IAMs_20    01 32 31.5
      comp=Z,3µm,20.0s
X40A  Basin Creek Fa   27.60  18 P            P          01 22 05.7 -0.1
      baz=202
X40A  Basin Creek Fa   27.60  18 IAMs_20      IAMs_20    01 34 05.9
      comp=Z,4µm,19.0s
RREF  El Recreo        27.72  95 eP           P          01 22 09.8 +2.0
PDMCI Parker Dam,Lak   27.72 340 P            P          01 22 07.1 +0.2
      baz=156
OK029 Liberty Lake     27.73  10 IAMs_20      IAMs_20    01 32 35.6
      comp=Z,4µm,21.0s
TOLC  Tolima           27.79  96 eP           P          01 22 02.1 -6.1
IRM   Iron Mountain    27.95 338 P            P          01 22 08.9  0.0
      baz=154
TPFO  Pinon Flats      27.97 336 P            P          01 22 09.0 -0.2
      baz=151
XPFO  Pion Flat        27.97 336 IAMs_20      IAMs_20    01 30 48.4
      comp=Z,4µm,22.0s
PFO   Pinyon Flats O   27.97 336 P            P          01 22 08.3 -1.0
      comp=Z,3.0nm,0.8s,baz=122,slow=6.3,SNR=4.0
PFO                              LR           LR         01 31 09.2
      comp=Z,4µm,21.2s,baz=137,slow=32
PFO   Pinyon Flats O   27.97 336 P            P          01 22 09.4 +0.1
      baz=151
PFO   Pinyon Flats O   27.97 336 P            P          01 22 09.6 +0.2
PFO                              pmax         pmax
      comp=Z,22nm,1.5s
PFO   Pinyon Flats O   27.97 336 P            P          01 22 09.6 +0.2
PFO   Pinyon Flats O   27.97 336 IAMs_20      IAMs_20    01 30 57.4
      comp=Z,4µm,21.0s
W39A  Magazine         27.98  16 P            P          01 22 09.5 +0.3
      baz=200,SNR=6.1
W39A  Magazine         27.98  16 P            P          01 22 09.1 -0.1
W39A                             IAMs_20      IAMs_20    01 33 44.0
      comp=Z,3µm,20.0s
OK030 Cody Creek RV    27.98  11 IAMs_20      IAMs_20    01 32 56.1
      comp=Z,3µm,21.0s
ORTC  Ortega, Tolima   27.98  97 eP           P          01 22 09.8 +0.3
OK031 S. Brethren Rd   28.00  11 IAMs_20      IAMs_20    01 32 56.5
      comp=Z,3µm,21.0s
BETC  Betania          28.04 100 eP           P          01 22 04.7 -5.4
BETC                             eP           pP         01 22 12.4 -2.5
WUAZ  Wupatki          28.04 345 P            P          01 22 10.2 +0.2
      baz=162,SNR=7.4
WUAZ  Wupatki          28.04 345 IAmb         IAmb       01 22 22.6
      comp=Z,80nm,2.0s
FLOC  Florencia        28.09 102 eP           P          01 22 09.8 -0.7
NORC  Norcasia         28.10  94 eP           P          01 22 17.6 +7.0
BELC  Belle Mtn. Jos   28.13 337 P            P          01 22 10.8  0.0
      baz=152
TUL1  Leonard          28.16  13 P            P          01 22 10.4 -0.5
      baz=195
TUL1  Leonard          28.16  13 IAmb         IAmb       01 22 11.6
      comp=Z,24nm,1.2s
TUL1                             IAMs_20      IAMs_20    01 32 58.9
      comp=Z,3µm,20.0s
X43A  Marvell          28.29  22 P            P          01 22 12.4 +0.4
      baz=206
060A  Indiantown       28.36  46 IAMs_20      IAMs_20    01 33 59.6
      comp=Z,2µm,18.0s
W13A  Hualapai Mount   28.36 341 P            P          01 22 14.4 +1.4
PRAC  Prado            28.37  98 eP           P          01 22 12.4 -0.6
656A  Willston         28.38  40 IAMs_20      IAMs_20    01 33 02.3
      comp=Z,3µm,21.0s
PTBC  PUERTO BERRIO,   28.40  92 eP           P          01 22 09.8 -3.4
W41B  Gary Mavity, V   28.42  19 P            P          01 22 13.8 +0.7
      baz=203
352A  Blakely          28.49  34 IAMs_20      IAMs_20    01 34 20.2
      comp=Z,2µm,20.0s
WHAR  Wooly Hollow     28.51  19 IAMs_20      IAMs_20    01 34 33.1
      comp=Z,3µm,18.0s
T25A  Trinidad         28.63 358 P            P          01 22 15.5 +0.3
      baz=177
SMLC  San Martn de     28.64  87 eP           P          01 22 12.4 -2.9
CIS   Catalina Islan   28.64 332 P            P          01 22 14.9 -0.3
      baz=147
LRAL  Lakeview Retre   28.65  29 P            P          01 22 15.4 +0.1
      baz=214
GMRC  Granite Mounta   28.70 338 P            P          01 22 15.6 -0.2
      baz=154
ROSC  El Rosal         28.74  95 P            P          01 22 16.3 -0.4
      comp=Z,4.6nm,0.4s,baz=321,slow=22,SNR=1.3
ROSC                             LR           LR         01 31 15.2
      comp=Z,2µm,20.3s,baz=285,slow=31
ROSC  El Rosal         28.74  95 P            P          01 22 19.3 +2.6
ROSC                             pmax         pmax
      comp=Z,21nm,1.0s
ROSC  El Rosal         28.74  95 P            P          01 22 19.3 +2.6
ROSC                             IAmb         IAmb       01 22 23.4
      comp=Z,21nm,0.9s
ROSC                             IAMs_20      IAMs_20    01 30 54.3
      comp=Z,3µm,18.0s
HHAR  Hobbs            28.96  15 P            P          01 22 17.2 -0.7
HHAR                             IAmb         IAmb       01 22 31.5
      comp=Z,58nm,1.9s
HHAR                             IAMs_20      IAMs_20    01 33 58.0
      comp=Z,2µm,19.0s
HEC   Hector,Ludlow    28.99 337 P            P          01 22 18.4 +0.1
      baz=152
T35A  Sooner Cattle    28.99  11 IAmb         IAmb       01 22 23.2
      comp=Z,37nm,1.2s
T35A                             IAMs_20      IAMs_20    01 33 26.8
      comp=Z,3µm,22.0s
BFSC  Mount Baldy Ra   29.02 334 P            P          01 22 18.8 +0.2
      baz=149
ATAH  Atahualpa        29.02 121 P            P          01 22 19.1 -0.1
      comp=Z,4.4nm,0.6s,baz=52,slow=22,SNR=3.2
ATAH                             LR           LR         01 31 35.8
      comp=Z,8µm,20.2s,baz=309,slow=32
SNCC  San Nicolas Is   29.04 331 IAMs_20      IAMs_20    01 31 13.5
      comp=Z,3µm,18.0s
MVCO  Mesa Verde       29.10 351 P            P          01 22 20.0 +0.6
      baz=169
MVCO  Mesa Verde       29.10 351 P            P          01 22 19.2 -0.2
MVCO                             IAmb         IAmb       01 22 30.6
      comp=Z,25nm,1.3s
MVCO                             IAMs_20      IAMs_20    01 34 11.5
      comp=Z,2µm,18.0s
FCAR  Ozark Folk Cen   29.11  18 IAMs_20      IAMs_20    01 34 40.0
      comp=Z,2µm,20.0s
U15A  North Rim        29.14 345 IAmb         IAmb       01 22 32.6
      comp=Z,26nm,1.4s
MWC   Mount Wilson     29.18 334 IAMs_20      IAMs_20    01 32 00.2
      comp=Z,2µm,18.0s
PASC  Pasadena Art C   29.19 334 IAMs_20      IAMs_20    01 31 08.5
      comp=Z,2µm,18.0s
TIGA  Tifton           29.21  36 IAMs_20      IAMs_20    01 31 34.3
      comp=Z,3µm,21.0s
SDCO  Great Sand Dun   29.29 356 P            P          01 22 21.8 +0.7
      baz=175
SDCO  Great Sand Dun   29.29 356 P            P          01 22 21.9 +0.7
SDCO                             IAmb         IAmb       01 23 10.7
      comp=Z,34nm,1.5s
U40A  Yellville        29.33  17 P            P          01 22 20.8 -0.4
      baz=201,SNR=7.5
U40A  Yellville        29.33  17 IAMs_20      IAMs_20    01 34 35.7
      comp=Z,3µm,21.0s
GTBY  Guantanamo Bay   29.34  64 IAMs_20      IAMs_20    01 35 44.0
      comp=Z,2µm,19.0s
S22A  4UR Ranch, Cre   29.41 354 P            P          01 22 22.5 +0.3
      baz=172
LPAR  Lepanto          29.47  21 IAMs_20      IAMs_20    01 35 51.4
      comp=Z,2µm,18.0s
W45A  Hickory Valley   29.50  23 IAMs_20      IAMs_20    01 36 23.1
      comp=Z,2µm,18.0s
152A  Waverly Hall     29.51  33 IAMs_20      IAMs_20    01 35 14.4
      comp=Z,3µm,21.0s
GSC   Goldstone, Bar   29.59 337 P            P          01 22 24.2 +0.5
      baz=152
GSC   Goldstone, Bar   29.59 337 IAmb         IAmb       01 23 05.9
      comp=Z,51nm,1.8s
456A  Hilliard         29.64  39 IAMs_20      IAMs_20    01 34 25.6
      comp=Z,3µm,20.0s
EDW2  Edwards Air Fo   29.71 335 P            P          01 22 25.2 +0.5
      baz=149
PLAL  Pickwick Lake    29.80  25 IAmb         IAmb       01 22 33.6
      comp=Z,24nm,1.1s
OSI   Osito Audit: C   29.80 333 IAMs_20      IAMs_20    01 31 12.7
      comp=Z,2µm,21.0s
RUSC  La Rusia         29.82  93 eP           P          01 22 27.9 +1.5
KNB   Kanab            29.83 344 P            P          01 22 26.8 +0.9
KNB                              pmax         pmax
      comp=Z,30nm,1.4s
KNB   Kanab            29.83 344 P            P          01 22 26.8 +0.9
GNAR  Gosnell          29.89  22 IAMs_20      IAMs_20    01 36 35.7
      comp=Z,3µm,19.0s
PV01  Paradox Valley   30.01 351 IAMs_20      IAMs_20    01 35 31.8
      comp=Z,2µm,20.0s
PAMC  Pamplona, Colo   30.07  90 eP           P          01 22 22.8 -5.8
PEBM  Pemiscott Bayo   30.08  22 IAMs_20      IAMs_20    01 36 17.7
      comp=Z,2µm,18.0s
LRMC  Laurel Mtn Rad   30.09 336 P            P          01 22 28.5 +0.3
      baz=150
PKCU  Pink Cliffs      30.10 345 P            P          01 22 32.1 +3.7
PV02  Paradox Valley   30.11 351 IAmb         IAmb       01 22 40.6
      comp=Z,29nm,1.4s
PV03  Paradox Valley   30.17 351 IAmb         IAmb       01 22 40.2
      comp=Z,35nm,1.6s
PV18  Skein Mesa, Pa   30.18 351 P            P          01 22 28.9  0.0
PV18                             IAmb         IAmb       01 22 40.3
      comp=Z,61nm,1.7s
PV18                             IAMs_20      IAMs_20    01 34 46.0
      comp=Z,2µm,18.0s
PV17  East Wray Mesa   30.22 351 IAmb         IAmb       01 22 41.4
      comp=Z,42nm,1.4s
PV12  Saucer Basin,    30.23 351 IAmb         IAmb       01 22 44.1
      comp=Z,36nm,1.3s
MGMO  Mountain Grove   30.24  17 IAMs_20      IAMs_20    01 35 02.8
      comp=Z,3µm,19.0s
PV16  Nyswonger Mesa   30.24 351 IAMs_20      IAMs_20    01 35 31.8
      comp=Z,2µm,20.0s
PV20  West Nyswonger   30.28 351 IAmb         IAmb       01 22 46.3
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	comp=Z,69nm,2.0s						
PV07	Paradox Valley	30.32	351	P	P	01 22 30.7	+0.5
PV07				IAmb	IAmb	01 22 34.9	
	comp=Z,64nm,2.0s						
PV07				IAMs_20	IAMs_20	01 35 07.1	
	comp=Z,3µm,19.0s						
PV10	Paradox Valley	30.32	351	P	P	01 22 30.4	+0.1
PV23	Carpenter Ridg	30.39	351	P	P	01 22 30.3	-0.6
PVMO	Portageville	30.41	22	IAMs_20	IAMs_20	01 36 27.3	
	comp=Z,2µm,20.0s						
CBKS	Cedar Bluff	30.42	5	P	P	01 22 31.4	+0.5
	baz=186						
PV22	Blue Mesa, Par	30.44	351	IAmb	IAmb	01 22 43.4	
	comp=Z,24nm,1.5s						
PV22				IAMs_20	IAMs_20	01 35 03.0	
	comp=Z,3µm,20.0s						
S39A	Bolivar	30.45	15	IAmb	IAmb	01 22 35.9	
	comp=Z,42nm,1.8s						
S39A				IAMs_20	IAMs_20	01 34 45.4	
	comp=Z,2µm,19.0s						
PBMO	Poplar Bluff	30.48	20	P	P	01 22 30.8	-0.5
PBMO				IAmb	IAmb	01 22 40.0	
	comp=Z,14nm,0.9s						
CCUT	Cedar City	30.48	344	P	P	01 22 33.3	+1.6
Q24A	Divide	30.48	357	P	P	01 22 32.7	+1.0
	baz=176						
T42A	Van Buren	30.49	19	IAMs_20	IAMs_20	01 35 43.4	
	comp=Z,2µm,19.0s						
MPMC	Manual Prospec	30.52	337	P	P	01 22 32.3	+0.3
	baz=151						
ISA	Isabella, Lake	30.58	335	P	P	01 22 32.9	+0.5
	baz=149						
PARMO	Parma	30.61	21	IAMs_20	IAMs_20	01 36 53.7	
	comp=Z,2µm,19.0s						
GOGA	Godfrey	30.75	33	P	P	01 22 33.8	-0.1
	baz=220						
Y52A	Lilburn	30.78	32	IAMs_20	IAMs_20	01 36 13.1	
	comp=Z,2µm,21.0s						
SMCO	Snowmass	30.84	354	IAmb	IAmb	01 22 47.7	
	comp=Z,31nm,1.4s						
SMCO				IAMs_20	IAMs_20	01 34 20.7	
	comp=Z,2µm,19.0s						
TPNV	Topopah Spring	30.84	339	P	P	01 22 35.3	+0.5
	baz=154						
TPNV	Topopah Spring	30.84	339	IAmb	IAmb	01 22 42.2	
	comp=Z,22nm,1.4s						
WVT	Waverly	30.88	24	P	P	01 22 34.4	-0.5
	baz=210						
WVT	Waverly	30.88	24	P	P	01 22 34.0	-1.0
WVT				pmax	pmax		
	comp=Z,16nm,1.0s						
WVT				MLR	MLR		
	comp=Z,2µm,20.0s						
WVT	Waverly	30.88	24	P	P	01 22 34.0	-1.0
WVT				IAmb	IAmb	01 22 42.8	
	comp=Z,16nm,1.0s						
MSU	Marysvale	31.08	346	P	P	01 22 37.9	+0.9
MSU	Marysvale	31.08	346	P	P	01 22 37.9	+0.9
MVU	Marysvale	31.08	346	P	P	01 22 38.1	+1.1
CWC	Cottonwood Cre	31.08	336	P	P	01 22 36.2	-0.7
	baz=150						
KSU1	Kansas State U	31.10	10	P	P	01 22 37.1	+0.2
	baz=192						
KSU1	Kansas State U	31.10	10	IAMs_20	IAMs_20	01 34 49.7	
	comp=Z,3µm,19.0s						
257A	Skidaway Islan	31.12	38	IAMs_20	IAMs_20	01 33 53.7	
	comp=Z,2µm,21.0s						
R40A	Maddies Statio	31.30	16	IAmb	IAmb	01 22 46.6	
	comp=Z,24nm,1.1s						
R40A				IAMs_20	IAMs_20	01 35 22.9	
	comp=Z,3µm,22.0s						
CCM	Cathedral Cave	31.38	18	P	P	01 22 39.4	0.0
	baz=203						
CCM	Cathedral Cave	31.38	18	P	P	01 22 39.1	-0.2
CCM				pmax	pmax		
	comp=Z,15nm,1.0s						
CCM				MLR	MLR		
	comp=Z,4µm,20.0s						
CCM	Cathedral Cave	31.38	18	P	P	01 22 39.1	-0.2
CCM				IAmb	IAmb	01 22 48.8	
	comp=Z,15nm,1.0s						
PSUT	Pine Spring	31.54	344	P	P	01 22 41.5	+0.5
FVM	French Village	31.57	19	IAmb	IAmb	01 22 41.8	
	comp=Z,35nm,1.5s						
FVM				IAMs_20	IAMs_20	01 36 26.1	
	comp=Z,3µm,21.0s						
S44A	Carbondale	31.71	21	P	P	01 22 41.1	-1.1
S44A				IAmb	IAmb	01 22 49.3	
	comp=Z,19nm,0.9s						
W52A	Murphy	31.81	31	IAMs_20	IAMs_20	01 37 02.4	
	comp=Z,2µm,20.0s						
Z56A	Williston	31.87	36	IAMs_20	IAMs_20	01 37 13.7	
	comp=Z,2µm,19.0s						
R11A	Troy Canyon, C	31.88	341	P	P	01 22 45.8	+1.8
T47A	Sharon Grove	31.92	25	IAmb	IAmb	01 22 44.8	
	comp=Z,23nm,1.1s						
O20A	White River Ci	31.93	352	P	P	01 22 44.2	-0.2
	baz=170,SNR=8.5						
O20A	White River Ci	31.93	352	IAmb	IAmb	01 23 03.5	
	comp=Z,31nm,1.2s						
HODGE	Hodges	32.03	34	IAMs_20	IAMs_20	01 36 49.1	
	comp=Z,2µm,18.0s						
SDV	Santo Domingo	32.03	87	P	P	01 22 47.5	+1.9
SDV	Santo Domingo	32.03	87	IAMs_20	IAMs_20	01 33 38.2	
	comp=Z,2µm,22.0s						
SDV	Santo Domingo	32.03	87	*e*P	P	01 22 46.0	+0.4
V51A	Loudon	32.17	29	IAMs_20	IAMs_20	01 37 20.8	
	comp=Z,2µm,20.0s						
TPH	Tonopah	32.19	339	P	P	01 22 48.8	+2.0
TPH				pmax	pmax		
	comp=Z,96nm,1.5s						
TPH	Tonopah	32.19	339	P	P	01 22 48.8	+2.0
SLM	Saint Louis	32.23	19	IAMs_20	IAMs_20	01 36 45.5	
	comp=Z,3µm,21.0s						
TKL	Tuckaleechee C	32.34	30	IAMs_20	IAMs_20	01 36 40.2	
	comp=Z,2µm,20.0s						
N23A	Red Feather La	32.45	356	P	P	01 22 49.1	+0.1
	baz=175						
OMMB	Old Mammoth Mi	32.47	336	IAmb	IAmb	01 23 06.2	
	comp=Z,28nm,1.6s						
MDPB	Devils Postpil	32.52	336	IAmb	IAmb	01 23 15.9	
	comp=Z,38nm,1.9s						
MDPB				IAMs_20	IAMs_20	01 33 32.7	
	comp=Z,3µm,20.0s						
P40A	Paris	32.52	16	IAMs_20	IAMs_20	01 36 00.1	
	comp=Z,2µm,18.0s						
SDDR	Presa de Saban	32.53	68	IAMs_20	IAMs_20	01 34 09.2	
	comp=Z,3µm,22.0s						
USIN	University of	32.54	23	P	P	01 22 49.8	+0.3
V52A	Sevierville	32.57	30	IAMs_20	IAMs_20	01 36 35.4	
	comp=Z,2µm,20.0s						
PAULI	Pauline	32.72	33	IAMs_20	IAMs_20	01 37 10.2	
	comp=Z,2µm,18.0s						
LHV	Little Huntoon	32.83	337	IAMs_20	IAMs_20	01 34 06.9	
	comp=Z,2µm,21.0s						
DUG	Dugway, Tooele	32.83	346	P	P	01 22 52.3	+0.1
	baz=162,SNR=11						
DUG	Dugway, Tooele	32.83	346	IAmb	IAmb	01 23 05.3	
	comp=Z,50nm,1.6s						
DUG				IAMs_20	IAMs_20	01 37 18.3	
	comp=Z,2µm,21.0s						
Q44A	Meyer Farm, Va	32.88	20	IAMs_20	IAMs_20	01 37 20.6	
	comp=Z,2µm,18.0s						
NVAR	Mina Array Bea	32.90	338	P	P	01 22 53.5	+0.5
	comp=Z,2.1nm,0.7s,baz=155,slow=7.3,SNR=20						
NVAR				LR	LR	01 34 16.6	
	comp=Z,2µm,20.5s,baz=146,slow=33						
NVAR	Mina Array Bea	32.90	338	P	P	01 22 53.7	+0.7
Y57A	Sumter	32.93	36	IAMs_20	IAMs_20	01 36 58.8	
	comp=Z,2µm,19.0s						
N35A	Tabor	32.98	10	IAMs_20	IAMs_20	01 36 00.4	
	comp=Z,3µm,19.0s						
NNA	Nana	33.00	128	*i* P	P	01 22 59.3	+5.4
NNA				pmax	pmax		
	comp=Z,34nm,1.2s						
NNA	Nana	33.00	128	IAMs_20	IAMs_20	01 33 09.5	
	comp=Z,2µm,19.0s						
TZTN	Tazewell	33.15	29	P	P	01 22 55.4	+0.5
	baz=217						
RYN	Ryan	33.16	338	IAmb	IAmb	01 23 22.9	
	comp=Z,40nm,1.9s						
RYN				IAMs_20	IAMs_20	01 34 04.8	
	comp=Z,2µm,19.0s						
KMSC	Kings Mountain	33.22	34	P	P	01 22 55.6	+0.1
	baz=222						
KMSC	Kings Mountain	33.22	34	IAMs_20	IAMs_20	01 37 24.5	
	comp=Z,2µm,20.0s						
Y58A	Scranton	33.28	37	IAMs_20	IAMs_20	01 36 48.0	
	comp=Z,3µm,21.0s						
WCI	Wyandotte Cave	33.31	24	P	P	01 22 56.6	+0.3
	baz=211						
WCI	Wyandotte Cave	33.31	24	P	P	01 22 55.9	-0.4
WCI				pmax	pmax		
	comp=Z,20nm,0.9s						
WCI				MLR	MLR		
	comp=Z,2µm,22.0s						
WCI	Wyandotte Cave	33.31	24	P	P	01 22 55.9	-0.4
WCI				IAmb	IAmb	01 23 05.2	
	comp=Z,20nm,0.9s						
WCI				IAMs_20	IAMs_20	01 37 20.1	
	comp=Z,2µm,22.0s						
BIRD	Birdtown, Kers	33.34	35	IAMs_20	IAMs_20	01 38 00.7	
	comp=Z,2µm,18.0s						
P43A	Skaggs, Pawnee	33.37	19	IAMs_20	IAMs_20	01 39 09.8	
	comp=Z,2µm,18.0s						
N38A	Joes South For	33.41	14	IAmb	IAmb	01 22 57.8	
	comp=Z,38nm,1.3s						
N38A				IAMs_20	IAMs_20	01 35 37.8	
	comp=Z,2µm,18.0s						
WAKR	Walker	33.41	336	IAMs_20	IAMs_20	01 34 02.4	
	comp=Z,3µm,22.0s						
TCUT	Toone Canyon	33.41	348	P	P	01 22 58.1	+0.7
W56A	Indian Trail	33.63	34	P	P	01 22 59.2	+0.2
	baz=223						
YERR	Yerington	33.75	337	P	P	01 23 01.4	+1.1
V55A	Taylorsville	33.81	33	IAMs_20	IAMs_20	01 38 05.2	
	comp=Z,2µm,20.0s						
Y59A	Loris	33.81	38	IAMs_20	IAMs_20	01 36 34.1	
	comp=Z,2µm,20.0s						
R49A	Shelbyville	33.84	26	IAMs_20	IAMs_20	01 38 51.0	
	comp=Z,2µm,19.0s						
N41A	Harden Midland	33.94	17	IAMs_20	IAMs_20	01 37 03.9	
	comp=Z,3µm,22.0s						
W57A	Gilead	33.97	35	IAMs_20	IAMs_20	01 38 44.4	
	comp=Z,2µm,19.0s						
PNTR	Pine Nut	33.98	337	IAmb	IAmb	01 23 18.9	
	comp=Z,47nm,1.9s						
PNTR				IAMs_20	IAMs_20	01 34 32.4	
	comp=Z,3µm,21.0s						
ELK	Elko	33.98	343	P	P	01 23 04.9	+2.5
ELK				pmax	pmax		
	comp=Z,36nm,1.8s						
ELK				MLR	MLR		
	comp=Z,2µm,19.0s						
ELK	Elko	33.98	343	P	P	01 23 04.9	+2.5
ELK				IAmb	IAmb	01 23 15.3	
	comp=Z,36nm,1.8s						
ELK				IAMs_20	IAMs_20	01 38 33.7	
	comp=Z,2µm,19.0s						
U54A	Nelsons Funny	34.00	31	P	P	01 23 02.3	-0.1
	baz=220						
S51A	Beattyville	34.01	28	IAmb	IAmb	01 23 10.5	
	comp=Z,22nm,0.8s						
BLO	Bloomington	34.03	23	IAMs_20	IAMs_20	01 36 26.1	
	comp=Z,2µm,18.0s						
RUBR	Rubicon Trail	34.16	336	IAMs_20	IAMs_20	01 34 47.4	
	comp=Z,2µm,19.0s						
V56A	Mocksville	34.17	34	P	P	01 23 03.8	+0.1
	baz=222						
VCNR	Virginia City	34.17	337	IAMs_20	IAMs_20	01 34 49.7	
	comp=Z,3µm,21.0s						
O44A	Mansfield	34.18	20	IAmb	IAmb	01 23 11.9	
	comp=Z,22nm,0.8s						
O44A				IAMs_20	IAMs_20	01 34 40.2	
	comp=Z,2µm,19.0s						
CZSB	Cruzeiro do Su	34.22	117	*e*P	P	01 23 05.7	+1.2
Y60A	Bolivia	34.22	38	IAMs_20	IAMs_20	01 37 15.0	
	comp=Z,2µm,19.0s						
HDIL	Hopedale	34.27	19	P	P	01 23 04.4	-0.2
	baz=204,SNR=6.5						
HDIL	Hopedale	34.27	19	P	P	01 23 03.8	-0.8
HDIL				IAMs_20	IAMs_20	01 37 47.7	
	comp=Z,2µm,18.0s						
W58A	Raeford	34.31	36	P	P	01 23 05.0	0.0
	baz=225						
SCIA	State Center	34.47	13	IAMs_20	IAMs_20	01 36 60.0	
	comp=Z,2µm,21.0s						
MCCM	Marconi Confer	34.60	332	IAMs_20	IAMs_20	01 34 10.8	
	comp=Z,3µm,18.0s						
V57A	Coltrane Farms	34.62	34	P	P	01 23 07.9	+0.1
	baz=223						
U56A	King	34.63	33	P	P	01 23 07.8	0.0
	baz=222						
U56A	King	34.63	33	IAMs_20	IAMs_20	01 37 36.8	
	comp=Z,2µm,20.0s						
BW06	Boulder Array	34.70	352	P	P	01 23 08.1	-0.4
	baz=169,SNR=12						
PD31	Pinedale Array	34.70	352	IAmb	IAmb	01 23 20.8	
	comp=Z,59nm,1.8s						
PDAR	Pinedale Array	34.70	352	P	P	01 23 08.3	-0.2
	comp=Z,4.8nm,0.9s,baz=166,slow=7.5,SNR=32						
P48A	Milroy	34.72	24	IAMs_20	IAMs_20	01 37 51.3	
	comp=Z,2µm,20.0s						
SFIN	Lafayette	34.87	22	P	P	01 23 10.1	+0.3
	baz=208						
SFIN	Lafayette	34.87	22	P	P	01 23 10.0	+0.3
SFIN				IAMs_20	IAMs_20	01 38 36.3	
	comp=Z,2µm,19.0s						
AHID	Auburn Hatcher	34.95	350	IAMs_20	IAMs_20	01 35 31.3	
	comp=Z,2µm,18.0s						
P49A	Miami Univ. Ec	35.07	25	P	P	01 23 11.3	-0.2
	baz=213						
P49A	Miami Univ. Ec	35.07	25	IAmb	IAmb	01 23 19.5	
	comp=Z,34nm,1.1s						
P49A				IAMs_20	IAMs_20	01 38 00.6	
	comp=Z,2µm,21.0s						
GDXM	Geysers	35.10	333	IAMs_20	IAMs_20	01 34 40.0	
	comp=Z,3µm,19.0s						
L40A	Anamosa	35.10	15	P	P	01 23 10.9	-0.8
L40A				IAmb	IAmb	01 23 20.0	
	comp=Z,22nm,1.0s						
L40A				IAMs_20	IAMs_20	01 37 16.7	
	comp=Z,2µm,21.0s						
ORV	Oroville	35.15	335	IAmb	IAmb	01 23 39.0	
	comp=Z,48nm,1.9s						
S54A	Dingess, Beckl	35.24	31	P	P	01 23 13.4	+0.3
	baz=219						
Q51A	Peebles	35.24	27	P	P	01 23 12.3	-0.7
Q51A				IAmb	IAmb	01 23 21.9	
	comp=Z,24nm,0.9s						
Q51A				IAMs_20	IAMs_20	01 39 41.3	
	comp=Z,2µm,20.0s						
BLA	Blacksburg	35.25	32	P	P	01 23 13.5	+0.4
	baz=221						
BLA	Blacksburg	35.25	32	IAMs_20	IAMs_20	01 38 40.4	
	comp=Z,2µm,20.0s						
CNNC	Cliffs of the	35.26	37	P	P	01 23 13.6	+0.4
	baz=226						
CNNC	Cliffs of the	35.26	37	IAMs_20	IAMs_20	01 37 58.4	
	comp=Z,3µm,21.0s						
U57A	Blanch	35.26	34	P	P	01 23 12.7	-0.5
	baz=223						
K38A	Parkersburg	35.28	13	IAMs_20	IAMs_20	01 37 35.3	
	comp=Z,2µm,20.0s						
T56A	Rocky Mt	35.32	33	P	P	01 23 12.9	-0.9
	baz=222						
R53A	Hurricane	35.34	29	IAMs_20	IAMs_20	01 38 54.7	
	comp=Z,3µm,18.0s						
HOPS	Hopland Field	35.37	333	P	P	01 23 16.5	+2.3
HOPS				IAmb	IAmb	01 23 33.3	
	comp=Z,37nm,1.7s						
V59A	Middlesex	35.41	36	P	P	01 23 14.7	+0.2
	baz=226						
M44A	Midewin, Midew	35.43	20	IAMs_20	IAMs_20	01 38 34.3	
	comp=Z,2µm,18.0s						
L42A	Oliver, Polo	35.48	17	IAmb	IAmb	01 23 19.6	
	comp=Z,42nm,1.2s						
L42A				IAMs_20	IAMs_20	01 38 01.6	
	comp=Z,3µm,22.0s						
REDW	Red Top Meadow	35.48	350	IAmb	IAmb	01 23 27.4	
	comp=Z,38nm,1.4s						
RSSD	Black Hills	35.59	359	P	P	01 23 16.6	+0.5
	baz=178						
RSSD	Black Hills	35.59	359	P	P	01 23 15.8	-0.3
RSSD				pmax	pmax		
	comp=Z,16nm,1.3s						
RSSD				MLR	MLR		
	comp=Z,7µm,18.0s						
RSSD	Black Hills	35.59	359	P	P	01 23 15.8	-0.3
ECSD	EROS Data Cent	35.63	8	P	P	01 23 16.7	+0.4
	baz=191						
ECSD	EROS Data Cent	35.63	8	IAmb	IAmb	01 23 21.1	
	comp=Z,35nm,1.7s						
ECSD	EROS Data Cent	35.63	8	IAMs_20	IAMs_20	01 37 33.6	
	comp=Z,3µm,21.0s						
U58A	Oxford	35.68	35	P	P	01 23 16.9	+0.1
	baz=224						
LOHW	Long Hollow	35.69	351	IAmb	IAmb	01 23 29.1	
	comp=Z,49nm,1.9s						
LOHW				IAMs_20	IAMs_20	01 38 12.9	
	comp=Z,2µm,20.0s						
Q52A	Bidwell	35.69	28	IAMs_20	IAMs_20	01 39 19.0	
	comp=Z,1µm,19.0s						
R54A	Victor	35.70	30	P	P	01 23 17.3	+0.4
	baz=219						
T57A	Hurt	35.72	34	P	P	01 23 17.3	+0.1
	baz=223						
T57A	Hurt	35.72	34	IAMs_20	IAMs_20	01 38 18.7	
	comp=Z,2µm,22.0s						
P51A	Williamsport	35.74	27	P	P	01 23 16.8	-0.5
P51A				IAmb	IAmb	01 23 17.9	
	comp=Z,33nm,1.1s						
O49A	Covington	35.78	25	IAMs_20	IAMs_20	01 38 11.4	
	comp=Z,2µm,19.0s						
N47A	Urbana	35.82	23	IAmb	IAmb	01 23 24.8	
	comp=Z,22nm,1.1s						
HQIL	Hanson Quary C	35.86	20	IAMs_20	IAMs_20	01 37 52.7	
	comp=Z,2µm,22.0s						
O03E	Paynes Creek	35.89	335	P	P	01 23 19.0	+0.3
	baz=147						
Q53A	Leroy	35.96	29	P	P	01 23 19.8	+0.6
	baz=218						
V60A	Jim Taylor Roa	35.99	37	IAMs_20	IAMs_20	01 38 29.8	
	comp=Z,2µm,19.0s						
T58A	Grand View Acr	36.08	34	P	P	01 23 20.6	+0.4
	baz=224						
U59A	Littleton	36.08	36	IAMs_20	IAMs_20	01 38 44.3	
	comp=Z,2µm,18.0s						
FLWY	Flagg Ranch	36.16	351	IAMs_20	IAMs_20	01 38 38.4	
	comp=Z,2µm,19.0s						
JFWS	Jewell Farm	36.16	16	IAMs_20	IAMs_20	01 38 22.5	
	comp=Z,2µm,21.0s						
KCPM	Cahto Peak	36.16	333	IAMs_20	IAMs_20	01 35 11.3	
	comp=Z,2µm,21.0s						
L44A	Lake County Fo	36.18	19	P	P	01 23 21.1	+0.1
	baz=206						
L44A	Lake County Fo	36.18	19	IAMs_20	IAMs_20	01 38 47.2	
	comp=Z,2µm,20.0s						
P52A	Corning	36.29	28	P	P	01 23 21.7	-0.3
	baz=216						
P52A	Corning	36.29	28	IAmb	IAmb	01 23 30.0	
	comp=Z,38nm,1.1s						
P52A				IAMs_20	IAMs_20	01 39 58.9	
	comp=Z,2µm,19.0s						
Q54A	Coxs Mills	36.39	30	P	P	01 23 22.9	0.0
HLID	Hailey	36.40	346	P	P	01 23 23.5	+0.4
	baz=161						
HLID	Hailey	36.40	346	IAMs_20	IAMs_20	01 39 18.8	
	comp=Z,2µm,18.0s						
S57A	Dark Hollow, R	36.44	33	P	P	01 23 23.5	+0.2
	baz=223						
S57A	Dark Hollow, R	36.44	33	IAmb	IAmb	01 23 30.8	
	comp=Z,46nm,1.3s						
S57A				IAMs_20	IAMs_20	01 38 52.8	
	comp=Z,2µm,20.0s						
WDC	Whiskeytown Da	36.44	335	P	P	01 23 23.5	+0.2
WDC				pmax	pmax		
	comp=Z,9.0nm,1.2s						
WDC	Whiskeytown Da	36.44	335	P	P	01 23 23.5	+0.2
H17A	Grant Village	36.44	351	P	P	01 23 24.1	+0.5
	baz=168						
H17A	Grant Village	36.44	351	IAMs_20	IAMs_20	01 38 40.0	
	comp=Z,3µm,20.0s						
I37A	Lemond, Waseca	36.45	12	P	P	01 23 22.8	-0.5
I37A				IAmb	IAmb	01 23 31.7	
	comp=Z,41nm,1.1s						
I37A				IAMs_20	IAMs_20	01 38 11.3	
	comp=Z,2µm,19.0s						
N49A	Columbus Grove	36.46	24	IAmb	IAmb	01 23 30.8	
	comp=Z,30nm,0.9s						
N49A				IAMs_20	IAMs_20	01 39 04.4	
	comp=Z,2µm,20.0s						
P53A	Whipple	36.52	29	IAMs_20	IAMs_20	01 38 05.0	
	comp=Z,2µm,22.0s						
U60A	Pendleton	36.53	36	P	P	01 23 24.5	+0.4
	baz=226						
WVOR	Wild Horse Val	36.57	340	IAmb	IAmb	01 23 31.0	
	comp=Z,43nm,1.6s						
WVOR				IAMs_20	IAMs_20	01 40 40.1	
	comp=Z,2µm,20.0s						
LKWY	Lake	36.58	351	IAmb	IAmb	01 23 38.0	
	comp=Z,50nm,1.9s						
L46A	Eue Claire	36.59	21	IAMs_20	IAMs_20	01 39 33.9	
	comp=Z,2µm,21.0s						
MFID	Camas Ranch	36.62	344	P	P	01 23 24.9	-0.1
MFID				IAmb	IAmb	01 23 30.8	
	comp=Z,40nm,1.9s						
MOD	Modoc Plateau	36.68	338	IAmb	IAmb	01 23 52.0	
	comp=Z,34nm,1.4s						
O52A	Adamsville	36.81	28	IAmb	IAmb	01 23 30.3	
	comp=Z,48nm,1.4s						
O52A				IAMs_20	IAMs_20	01 39 25.7	
	comp=Z,2µm,18.0s						
N02D	Trinity Center	36.84	335	P	P	01 23 27.1	+0.4
	baz=146						
YHH	Holmes Hill	36.87	351	P	P	01 23 27.6	+0.4
I40A	Norwalk	36.97	15	P	P	01 23 27.2	-0.5
I40A				IAmb	IAmb	01 23 35.8	
	comp=Z,32nm,1.1s						
RLMT	Red Lodge	36.97	353	P	P	01 23 27.7	-0.3
	baz=170						
YHL	Hebgen Lake	36.99	350	P	P	01 23 28.4	+0.2
QLMT	Earthquake Lak	37.01	350	P	P	01 23 29.1	+0.8
KHMM	Horse Mountain	37.20	334	IAMs_20	IAMs_20	01 36 28.6	
	comp=Z,2µm,20.0s						
O53A	New Philadelph	37.20	28	P	P	01 23 29.5	-0.3
	baz=217						
O53A	New Philadelph	37.20	28	IAMs_20	IAMs_20	01 40 25.1	
	comp=Z,2µm,19.0s						
N51A	Ashland	37.22	26	IAMs_20	IAMs_20	01 38 27.5	
	comp=Z,2µm,21.0s						
L48A	N Adams	37.22	23	IAmb	IAmb	01 23 37.4	
	comp=Z,32nm,0.9s						
T60A	Surry	37.24	36	P	P	01 23 29.8	-0.3
	baz=226						
Q56A	Snyder Ridge,	37.27	31	IAMs_20	IAMs_20	01 40 14.7	
	comp=Z,2µm,21.0s						
M50A	Fremont	37.33	25	IAMs_20	IAMs_20	01 39 30.5	
	comp=Z,2µm,22.0s						
R58A	Rapidan	37.35	33	P	P	01 23 30.8	-0.2
	baz=223						
MCWV	Mont Chateau	37.40	30	P	P	01 23 31.8	+0.3
	baz=220						
MCWV	Mont Chateau	37.40	30	IAmb	IAmb	01 23 46.2	
	comp=Z,63nm,1.8s						
I42A	Draeger Farm,	37.43	17	P	P	01 23 31.6	-0.1
I42A				IAmb	IAmb	01 23 40.8	
	comp=Z,18nm,0.9s						
I42A				IAMs_20	IAMs_20	01 39 48.3	
	comp=Z,2µm,20.0s						
YBH	Yreka Blue Hor	37.47	336	IAMs_20	IAMs_20	01 36 34.9	
	comp=Z,1µm,18.0s						
K05A	Summer Lake	37.61	338	IAmb	IAmb	01 23 46.4	
	comp=Z,26nm,1.1s						
GCMT	Greycliff	37.68	352	P	P	01 23 34.0	+0.1
L04D	Klamath Falls	37.72	336	P	P	01 23 34.7	+0.5
	baz=148						
DLMT	Dillon	37.73	349	IAmb	IAmb	01 23 46.9	
	comp=Z,25nm,1.2s						
DLMT				IAMs_20	IAMs_20	01 37 20.0	
	comp=Z,2µm,22.0s						
SPMN	Marine on St.	37.73	12	IAmb	IAmb	01 23 41.5	
	comp=Z,28nm,1.1s						
SPMN				IAMs_20	IAMs_20	01 38 50.2	
	comp=Z,2µm,21.0s						
R59A	King George, V	37.76	34	P	P	01 23 35.2	+0.7
	baz=225						
BOZ	Bozeman (W)	37.79	350	P	P	01 23 35.3	+0.5
	baz=166						
BOZ	Bozeman (W)	37.79	350	IAmb	IAmb	01 23 47.3	
	comp=Z,47nm,1.6s						
BOZ				IAMs_20	IAMs_20	01 39 44.5	
	comp=Z,2µm,18.0s						
KRMB	Red Mountain	37.80	334	IAMs_20	IAMs_20	01 36 59.6	
	comp=Z,2µm,18.0s						
N53A	Lisbon	37.82	28	IAMs_20	IAMs_20	01 39 42.4	
	comp=Z,2µm,20.0s						
PCRV	Puerto La Cruz	37.92	84	P	P	01 23 37.1	+0.9
	comp=Z,22nm,1.1s,baz=34,slow=13,SNR=3.5						
LRM	Limekiln Ridge	38.15	349	P	P	01 23 37.6	-0.4
M52A	Chesterland	38.17	27	P	P	01 23 36.5	-1.4
M52A				IAmb	IAmb	01 23 38.2	
	comp=Z,40nm,1.2s						

J47A	Sunmer	38.19	22	IAmb	IAmb	01 23 46.1	
	comp=Z,46nm,1.1s						
L02E	Cave Junction	38.19	335	P	P	01 23 38.5	+0.4
	baz=146						
P57A	Homestead Farm	38.20	32	IAMs_20	IAMs_20	01 40 08.5	
	comp=Z,2µm,21.0s						
J05D	Fort Rock, OR	38.22	338	P	P	01 23 39.3	+0.8
	baz=150,SNR=11						
H43A	Windswept, Lux	38.30	18	IAMs_20	IAMs_20	01 40 00.1	
	comp=Z,2µm,21.0s						
HUMO	Hull Mountain	38.30	336	IAMs_20	IAMs_20	01 37 01.9	
	comp=Z,2µm,21.0s						
I07A	Izee	38.33	341	IAMs_20	IAMs_20	01 37 35.6	
	comp=Z,2µm,18.0s						
N54A	Moraine State	38.34	29	P	P	01 23 39.3	-0.1
	baz=218						
BMO	Blue Mountains	38.36	344	IAMs_20	IAMs_20	01 38 20.5	
	comp=Z,1µm,19.0s						
G40A	Rib Lake	38.37	15	IAMs_20	IAMs_20	01 40 18.9	
	comp=Z,2µm,18.0s						
I45A	Fountain	38.40	20	IAMs_20	IAMs_20	01 40 22.7	
	comp=Z,1µm,19.0s						
M53A	WI Miller and	38.40	27	IAMs_20	IAMs_20	01 41 25.7	
	comp=Z,2µm,21.0s						
O56A	Blue Knob Stat	38.50	31	IAMs_20	IAMs_20	01 41 13.5	
	comp=Z,2µm,18.0s						
J04D	Umpqua Nationa	38.51	337	P	P	01 23 41.3	+0.3
	baz=149						
PINE	Pine Mountain	38.56	339	P	P	01 23 42.1	+0.8
PINE				IAMs_20	IAMs_20	01 41 59.7	
	comp=Z,2µm,18.0s						
K50A	Casco	38.65	24	IAMs_20	IAMs_20	01 39 26.3	
	comp=Z,2µm,19.0s						
ALLY	Alegheny Colle	38.81	28	IAMs_20	IAMs_20	01 40 24.5	
	comp=Z,2µm,21.0s						
M54A	Oil Creek Stat	38.92	28	P	P	01 23 44.1	-0.1
	baz=218						
M54A	Oil Creek Stat	38.92	28	IAmb	IAmb	01 23 44.5	
	comp=Z,61nm,1.4s						
M54A				IAMs_20	IAMs_20	01 39 50.5	
	comp=Z,2µm,21.0s						
D32A	Dogwood Acres,	38.93	7	IAMs_20	IAMs_20	01 39 27.9	
	comp=Z,2µm,18.0s						
L53A	Girard	38.99	27	P	P	01 23 45.0	+0.2
	baz=217						
I04A	Tendick Farm,	39.10	338	P	P	01 23 46.4	+0.6
	baz=149						
N56A	West Decatur	39.13	30	P	P	01 23 46.5	+0.5
	baz=221						
J01E	Myrtle Point	39.16	336	P	P	01 23 47.1	+0.9
	baz=146						
O58A	Lewisberry	39.24	32	P	P	01 23 47.1	+0.1
	baz=223						
ERPA	Erie	39.25	27	IAMs_20	IAMs_20	01 40 36.2	
	comp=Z,2µm,21.0s						
M55A	Ridgway	39.32	29	IAmb	IAmb	01 23 53.5	
	comp=Z,62nm,1.5s						
I03D	Drain, OR	39.37	337	P	P	01 23 48.5	+0.6
	baz=147						
N57A	Milroy	39.38	31	P	P	01 23 48.3	+0.2
	baz=222						
MSO	Missoula	39.40	348	P	P	01 23 48.8	+0.5
	baz=163						
MSO	Missoula	39.40	348	P	P	01 23 48.4	0.0
COWI	Conover	39.41	15	IAmb	IAmb	01 23 52.9	
	comp=Z,49nm,1.6s						
PAGS	Pennsylvania G	39.43	32	IAMs_20	IAMs_20	01 40 45.9	
	comp=Z,2µm,18.0s						
G45A	Suttons Bay	39.48	19	IAMs_20	IAMs_20	01 41 23.3	
	comp=Z,2µm,21.0s						
M56A	Emporium	39.61	30	P	P	01 23 50.4	+0.4
	baz=220						
M56A	Emporium	39.61	30	IAmb	IAmb	01 23 53.6	
	comp=Z,59nm,1.4s						
GLMI	Grayling	39.64	21	IAMs_20	IAMs_20	01 38 32.6	
	comp=Z,1µm,18.0s						
H04A	Detroit Lake	39.78	339	IAmb	IAmb	01 24 07.2	
	comp=Z,74nm,1.8s						
H04A				IAMs_20	IAMs_20	01 38 04.9	
	comp=Z,2µm,22.0s						
N58A	Sunbury	39.87	32	IAMs_20	IAMs_20	01 38 40.7	
	comp=Z,2µm,19.0s						
EGMT	Eagleton	39.89	353	P	P	01 23 52.5	+0.2
	baz=170						
EGMT	Eagleton	39.89	353	IAmb	IAmb	01 24 03.9	
	comp=Z,66nm,1.6s						
EGMT				IAMs_20	IAMs_20	01 40 04.1	
	comp=Z,2µm,21.0s						
DGMT	Dagmar	39.94	359	P	P	01 23 52.2	-0.5
	baz=178,SNR=6.4						
DGMT	Dagmar	39.94	359	IAmb	IAmb	01 24 03.7	
	comp=Z,30nm,1.0s						
F07A	Phinny Hill Vi	40.08	342	P	P	01 23 54.9	+1.1
F07A				IAMs_20	IAMs_20	01 38 32.0	
	comp=Z,1µm,18.0s						
COR	Corvallis	40.11	337	IAMs_20	IAMs_20	01 38 31.7	
	comp=Z,2µm,19.0s						
WVNY	West Valley, N	40.11	28	P	P	01 23 53.6	-0.6
WVNY				IAMs_20	IAMs_20	01 42 07.1	
	comp=Z,2µm,21.0s						
E09A	Wood Farm, Sta	40.12	344	IAMs_20	IAMs_20	01 39 25.0	
	comp=Z,1µm,19.0s						
I51A	Listowel	40.15	25	P	P	01 23 54.1	-0.4
	baz=215						
O60A	Telford	40.20	33	P	P	01 23 55.1	+0.2
	baz=225						
M58A	Price's Panora	40.39	31	P	P	01 23 56.4	-0.1
	baz=223						
HAWA	Hanford	40.41	342	P	P	01 23 57.2	+0.7
HAWA				IAMs_20	IAMs_20	01 38 55.7	
	comp=Z,1µm,18.0s						
L56A	Greenwood	40.41	30	P	P	01 23 57.0	+0.4
	baz=221						
L56A	Greenwood	40.41	30	IAmb	IAmb	01 24 00.5	
	comp=Z,32nm,1.2s						
LUPA	Lehigh Univers	40.41	33	IAMs_20	IAMs_20	01 40 36.9	
	comp=Z,2µm,22.0s						
D41A	Chassel	40.45	15	IAmb	IAmb	01 24 05.2	
	comp=Z,50nm,1.1s						
O61A	Allentown	40.51	34	P	P	01 23 58.0	+0.5
	baz=226						
B35A	Bob, Littlefor	40.59	10	P	P	01 23 56.9	-1.1
B35A				IAmb	IAmb	01 23 58.0	
	comp=Z,42nm,1.7s						
EYMN	Ely	40.60	12	P	P	01 23 56.7	-1.4
	baz=198,SNR=7.4						
EYMN	Ely	40.60	12	P	P	01 23 55.9	-2.2
EYMN				IAmb	IAmb	01 24 08.8	
	comp=Z,84nm,1.9s						
E07A	Sunnyside	40.65	342	P	P	01 23 59.5	+0.9
L57A	Andrews Acres	40.66	30	P	P	01 23 58.9	+0.1
	baz=222						
N60A	Cedar Hill Far	40.75	33	P	P	01 23 59.3	-0.1
	baz=225						
TAOE	Nuku Hiva Isla	40.75	246	*e*S	S	01 30 11.9	+1.9
	comp=Z,186nm,24.7s						
TAOE				*e*LQ	LQ	01 33 29.7	
	comp=Z,6µm,28.7s						
TAOE				*e*LR	LR	01 34 51.7	
	comp=Z,2µm,25.3s						
TAOE	Nuku Hiva Isla	40.75	246	*e*T	T	02 07 01.9	
	comp=Z,177nm,0.3s						
J54A	Appleton	40.77	28	IAMs_20	IAMs_20	01 42 36.5	
	comp=Z,2µm,19.0s						
D08A	Wollman Farm,	40.83	343	P	P	01 24 01.4	+1.4
ETMB	Extrema	40.89	116	*e*P	P	01 23 59.8	-1.2
K56A	Middlesex	40.95	29	P	P	01 24 01.5	+0.4
	baz=221						
E46A	Sault Ste Mari	41.09	20	IAMs_20	IAMs_20	01 42 51.1	
	comp=Z,1µm,18.0s						
N61A	South Mountain	41.10	34	P	P	01 24 02.1	-0.3
	baz=226						
ODNJ	Ogdensburg	41.17	33	IAMs_20	IAMs_20	01 44 12.9	
	comp=Z,2µm,19.0s						
L58A	Harry Jones Me	41.20	31	P	P	01 24 02.8	-0.3
	baz=223						
BINY	Binghamton	41.24	31	P	P	01 24 03.0	-0.5
	baz=223						
C09A	Chrisman Ranch	41.33	344	P	P	01 24 05.6	+1.4
C09A				IAmb	IAmb	01 24 15.2	
	comp=Z,44nm,1.9s						
C09A				IAMs_20	IAMs_20	01 40 13.2	
	comp=Z,2µm,20.0s						
K57A	Scipio Center	41.37	30	P	P	01 24 04.7	+0.1
	baz=222						
TRNY	Table Rock, Ra	41.42	33	IAMs_20	IAMs_20	01 43 52.5	
	comp=Z,2µm,18.0s						
LON	Longmire	41.44	340	IAMs_20	IAMs_20	01 39 32.1	
	comp=Z,2µm,20.0s						
NEW	Newport	41.47	346	P	P	01 24 05.5	+0.2
	baz=159						
NEW	Newport	41.47	346	IAMs_20	IAMs_20	01 43 07.9	
	comp=Z,2µm,21.0s						
PAL	Palisades	41.49	34	P	P	01 24 05.3	-0.2
	baz=226						
E04D	Cinebar	41.53	340	P	P	01 24 06.2	+0.4
	baz=150						
WALA	Waterton Lakes	41.53	349	IAmb	IAmb	01 24 17.1	
	comp=Z,50nm,1.8s						
J56A	Wolcott	41.61	29	P	P	01 24 06.8	+0.3
	baz=221						
J56A	Wolcott	41.61	29	IAmb	IAmb	01 24 14.8	
	comp=Z,30nm,1.0s						
J56A				IAMs_20	IAMs_20	01 42 38.6	
	comp=Z,2µm,20.0s						
SADO	Sadowa	41.73	26	IAmb	IAmb	01 24 10.8	
	comp=Z,45nm,1.5s						
M61A	Granite Spring	41.78	34	P	P	01 24 08.1	+0.2
	baz=226						
H53A	Bobcaygeon	41.82	26	P	P	01 24 08.0	-0.2
	baz=218						
K58A	Earlville	41.82	31	P	P	01 24 08.3	0.0
	baz=223						
AP01	Chacalluta	41.82	130	IAMs_20	IAMs_20	01 37 41.2	
	comp=Z,2µm,21.0s						
L60A	Shokan	42.01	32	P	P	01 24 09.8	+0.1
	baz=225						
B08A	Colville Reser	42.13	344	IAMs_20	IAMs_20	01 43 00.3	
	comp=Z,1µm,19.0s						
ULM	Lac du Bonnet	42.13	7	P	P	01 24 09.7	-1.0
	comp=Z,5.9nm,1.0s,baz=190,slow=8.5,SNR=12						
ULM				LR	LR	01 41 33.8	
	comp=Z,1µm,18.6s,baz=198,slow=36						
ULM	Lac du Bonnet	42.13	7	*i* P	P	01 24 11.4	+0.8
ULM	Lac du Bonnet	42.13	7	IAMs_20	IAMs_20	01 41 23.6	
	comp=Z,2µm,19.0s						
DELO	Deloro Mine	42.20	27	IAmb	IAmb	01 24 23.1	
	comp=Z,32nm,1.3s						
PB16	IPOC Station P	42.44	129	IAMs_20	IAMs_20	01 38 04.6	
	comp=Z,2µm,20.0s						
G54A	Lake Saint Pet	42.68	26	P	P	01 24 15.2	0.0
	baz=218						
NLWA	Neilton Lookou	42.70	339	P	P	01 24 17.1	+1.7
NLWA				IAmb	IAmb	01 24 41.5	
	comp=Z,30nm,1.3s						
NLWA				IAMs_20	IAMs_20	01 40 40.4	
	comp=Z,2µm,20.0s						
PSGCX	Pisagua	42.73	131	IAMs_20	IAMs_20	01 38 24.1	
	comp=Z,1µm,19.0s						
TRY	Troy	42.82	32	IAMs_20	IAMs_20	01 37 49.6	
	comp=Z,1µm,20.0s						
I58A	Old Forge	42.84	30	P	P	01 24 16.6	+0.1
	baz=223						
MNMC	Minye Minye	42.84	130	P	P	01 24 16.9	-0.2
MNMC				IAmb	IAmb	01 24 29.4	
	comp=Z,38nm,1.7s						
MNMC				IAMs_20	IAMs_20	01 37 50.2	
	comp=Z,2µm,22.0s						
B05A	Bryant	42.87	341	P	P	01 24 17.6	+1.0
	baz=152						
B06A	Marblemount	42.90	342	IAMs_20	IAMs_20	01 40 01.7	
	comp=Z,1µm,20.0s						
K61A	Williamstown	42.99	32	P	P	01 24 18.2	+0.5
	baz=226						
ALGO	Algonquin Park	43.14	26	P	P	01 24 18.6	-0.3
	baz=218						
H57A	Richville	43.20	29	P	P	01 24 19.1	-0.3
	baz=222						
ACCN	Adirondack Com	43.28	31	IAMs_20	IAMs_20	01 43 10.8	
	comp=Z,2µm,22.0s						
TA01	Diego Aracena	43.28	132	IAMs_20	IAMs_20	01 37 56.6	
	comp=Z,2µm,21.0s						
SAML	Samuel	43.28	113	P	P	01 24 19.5	-1.0
SAML				pmax	pmax		
	comp=Z,25nm,1.0s						
SAML	Samuel	43.28	113	P	P	01 24 19.5	-1.0
SAML				IAmb	IAmb	01 24 26.0	
	comp=Z,25nm,0.9s						
PATCX	Punta Patache	43.45	132	IAMs_20	IAMs_20	01 38 04.3	
	comp=Z,2µm,21.0s						
LONY	Lake Ozonia	43.71	30	IAMs_20	IAMs_20	01 42 25.1	
	comp=Z,1µm,21.0s						
HRV	Adam Dziewonsk	43.80	34	IAMs_20	IAMs_20	01 43 33.6	
	comp=Z,2µm,19.0s						
PTGA	Pitinga	43.88	100	P	P	01 24 23.5	-1.8
	comp=Z,1.2nm,0.4s,baz=321,slow=22,SNR=2.2						
PTGA	Pitinga	43.88	100	P	P	01 24 24.8	-0.6
PTGA				IAmb	IAmb	01 24 31.0	
	comp=Z,70nm,2.0s						
PB01	IPOC Station P	44.08	132	IAMs_20	IAMs_20	01 38 05.9	
	comp=Z,2µm,21.0s						
H59A	Cadyville	44.16	30	P	P	01 24 27.2	0.0
	baz=224						
RKT	Rikitea	44.25	224	*e*S	S	01 31 03.2	+2.1
	comp=Z,430nm,27.2s						
RKT				*e*LR	LR	01 36 52.5	
	comp=Z,4µm,27.2s						
E56A	St. Veronique	44.92	27	P	P	01 24 32.8	-0.4
	baz=221						
H61A	Lyndonville	44.98	32	P	P	01 24 33.6	-0.1
	baz=226						
D55A	Sainte-Anne-du	45.09	27	P	P	01 24 34.5	0.0
	baz=220						
E57A	Chemin Saint G	45.23	28	P	P	01 24 35.6	-0.1
	baz=222						
I63A	Otisfield	45.36	33	P	P	01 24 36.5	-0.2
	baz=228						
D56A	ZEC Mazanza, M	45.43	27	P	P	01 24 36.7	-0.5
	baz=221						
LVC	Limon Verde	45.47	133	P	P	01 24 36.3	-2.1
	comp=Z,4.7nm,0.8s,baz=7.1,slow=8.1,SNR=1.8						
LVC	Limon Verde	45.47	133	P	P	01 24 38.7	+0.3
LVC				pmax	pmax		
	comp=Z,10.0nm,1.0s						
LVC	Limon Verde	45.47	133	P	P	01 24 38.6	+0.3
LVC	Limon Verde	45.47	133	*e*P	P	01 24 40.0	+1.7
F59A	Saint Guilaume	45.47	30	P	P	01 24 37.8	+0.3
	baz=224						
E58A	La Victoria	45.61	29	P	P	01 24 38.8	+0.1
	baz=223						
F60A	Warwick	45.97	30	P	P	01 24 41.3	-0.2
	baz=225						
LSQQ	Lebel-sur-Quev	46.05	24	P	P	01 24 42.1	0.0
	baz=217						
G62A	West of Eustis	46.17	32	P	P	01 24 43.2	0.0
	baz=227						
FFC	Flin Flon	46.20	1	P	P	01 24 41.6	-1.6
FFC				pmax	pmax		
	comp=Z,20nm,1.4s						
FFC				MLR	MLR		
	comp=Z,5µm,20.0s						
FFC	Flin Flon	46.20	1	P	P	01 24 41.6	-1.6
FFC				IAmb	IAmb	01 24 53.9	
	comp=Z,20nm,1.4s						
D58A	Chemin du LacG	46.32	28	P	P	01 24 43.9	-0.5
	baz=223						
MATQ	Matagami	46.35	23	P	P	01 24 44.0	-0.5
	baz=216						
E60A	Ste Agathe de	46.50	30	P	P	01 24 45.1	-0.5
	baz=225						
LATQ	La Tuque	46.58	28	P	P	01 24 45.5	-0.8
	baz=223						
LATQ	La Tuque	46.58	28	IAmb	IAmb	01 24 55.5	
	comp=Z,19nm,1.4s						
GO02	Mina Guanaco	46.63	137	IAmb	IAmb	01 24 51.2	
	comp=Z,19nm,1.2s						
D59A	Saint-Raymond	46.76	29	P	P	01 24 48.3	+0.6
	baz=225						
H65A	Eastbrook	47.05	34	P	P	01 24 50.8	+0.8
	baz=230						
D60A	Saint Jean D'O	47.14	30	P	P	01 24 50.7	+0.1
	baz=226						
F63A	Nahmakanta, Br	47.24	32	P	P	01 24 52.1	+0.6
	baz=229						
H03N2	Juan Fernandez	47.51	152	T	T	02 15 48.8	
	baz=329,slow=77,SNR=303						
H03N1	Juan Fernandez	47.52	152	T	T	02 15 50.0	
	baz=329,slow=77,SNR=365						
H03N3	Juan Fernandez	47.53	152	T	T	02 15 48.5	
	baz=329,slow=77,SNR=299						
VILB	Vilhena	47.55	116	*e*P	P	01 24 53.7	-0.7
D61A	St Aubert, Com	47.70	30	P	P	01 24 55.1	+0.1
	baz=226						
F64A	Sherman	47.75	32	P	P	01 24 54.5	-0.9
	baz=229						
AC02	Maricunga	48.05	138	IAmb	IAmb	01 25 02.8	
	comp=Z,11nm,1.0s						
E63A	Oxbow	48.07	32	P	P	01 24 57.9	0.0
	baz=229						
ITTB	Itaituba	48.85	103	*e*P	P	01 25 03.6	-0.9
CO03	El Pedregal	49.85	143	P	P	01 25 10.8	-1.0
CO03				IAmb	IAmb	01 25 23.7	
	comp=Z,22nm,1.1s						
NPGB	Novo Progresso	49.95	107	*e*P	P	01 25 11.4	-1.5
VAH	Vaihoa	50.04	242	*e*T	T	02 18 37.6	
	comp=Z,6.8nm,0.3s						
VA03	San Esteban	51.32	145	IAMs_20	IAMs_20	01 41 48.1	
	comp=Z,1µm,19.0s						
MEH	Mehetia	51.57	239	*e*T	T	02 20 31.9	
	comp=Z,11nm,0.2s						
PPT	Papeete	52.73	240	LR	LR	01 41 51.1	
	comp=Z,1µm,18.9s,baz=56,slow=29						
PPT2	Papeete2	52.73	240	*e*S	S	01 33 00.7	-0.5
	comp=Z,952nm,27.5s						
PPT2				*e*LQ	LQ	01 38 25.0	
	comp=Z,2µm,24.8s						
PPT2				*e*LR	LR	01 40 28.1	
	comp=Z,3µm,25.0s,baz=57						
BI02	San Fabin de	53.84	148	IAmb	IAmb	01 25 53.0	
	comp=Z,28nm,1.1s						
YKA	Yellowknife Ar	54.64	353	P	P	01 25 45.2	-1.6
	comp=Z,2.6nm,0.8s,baz=161,slow=7.8,SNR=20						
YKA				PcP	PcP	01 26 47.0	-2.6
	comp=Z,0.1nm,0.3s,baz=45,slow=27,SNR=3.8						
YKA				LR	LR	01 49 36.1	
	comp=Z,3µm,19.1s,baz=0.0,slow=36						
LC01	Cunco	55.26	151	IAmb	IAmb	01 26 02.7	
	comp=Z,18nm,1.1s						
TBI	Tubuai	55.28	234	*e*S	S	01 33 35.9	+0.5
	comp=Z,521nm,29.8s						
TBI				*e*LR	LR	01 41 52.3	
	comp=Z,3µm,27.2s,baz=58						
TBI	Tubuai	55.28	234	*e*T	T	02 25 10.3	
	comp=Z,12nm,0.3s						
SNDB	Serra Nova Dou	55.28	111	*e*P	P	01 25 52.9	+0.5
ARAG	Araguaiana, MT	56.10	115	*e*P	P	01 25 58.4	+0.2
CPUP	Villa Florida	56.23	129	P	P	01 25 56.0	-2.9
	comp=Z,5.3nm,0.9s,baz=325,slow=6.4,SNR=9.4						
CPUP	Villa Florida	56.23	129	P	P	01 25 58.0	-0.9
CPUP				pmax	pmax		
	comp=Z,28nm,1.5s						
CPUP	Villa Florida	56.23	129	P	P	01 25 58.0	-0.9
CPUP				IAmb	IAmb	01 26 07.7	
	comp=Z,28nm,1.4s						
PLCA	Paso Flores	57.33	151	P	P	01 26 04.2	-2.4
	comp=Z,8.0nm,1.1s,baz=326,slow=7.9,SNR=5.6						
PLCA				LR	LR	01 45 24.1	
	comp=Z,1µm,19.1s,baz=320,slow=31						
PLCA	Paso Flores	57.33	151	*e*P	P	01 26 07.9	+1.3
PLCA				pmax	pmax		
	comp=Z,8.0nm,1.1s						
PLCA	Paso Flores	57.33	151	IAmb	IAmb	01 26 10.5	
	comp=Z,15nm,1.2s						
PLCA	Paso Flores	57.33	151	*e*P	P	01 26 08.5	+1.9
PEXB	Peixe	58.10	110	*e*P	P	01 26 11.9	-0.5
BDFB	Brasilia	59.50	114	P	P	01 26 20.0	-2.3
	comp=Z,3.6nm,0.7s,baz=253,slow=7.1,SNR=5.4						
BDFB				LR	LR	01 50 49.9	
	comp=Z,736nm,18.0s,baz=293,slow=35						
IPMB	Ipameri, GO	60.14	116	*e*P	P	01 26 26.7	+0.1
BCAR	Beaver Creek A	61.27	341	P	P	01 26 35.3	+1.8
EPYK	Eagle Plains	62.30	345	P	P	01 26 40.9	+0.5
	baz=142						
C36M	Paulatuk	62.39	352	P	P	01 26 40.9	+0.1
	baz=156						
SCRK	Sand Creek	62.61	341	P	P	01 26 43.5	+0.9
	baz=133						
INK	Inuvik	63.14	348	P	P	01 26 44.8	-1.0
INK				pmax	pmax		
	comp=Z,28nm,1.5s						
INK				MLR	MLR		
	comp=Z,2µm,18.0s						
INK	Inuvik	63.14	348	P	P	01 26 44.8	-1.0
HDA	Harding Lake	63.87	340	P	P	01 26 50.8	+0.1
	baz=130						
HDA	Harding Lake	63.87	340	IAmb	IAmb	01 27 00.5	
	comp=Z,22nm,1.3s						
RND	Reindeer	63.89	339	P	P	01 26 50.6	-0.4
RND				pmax	pmax		
	comp=Z,45nm,1.4s						
RND	Reindeer	63.89	339	P	P	01 26 50.6	-0.4
ILAR	Eielson Array	64.08	341	P	P	01 26 50.5	-1.7
	comp=Z,3.8nm,0.8s,baz=152,slow=4.3,SNR=28						
ILAR	Eielson Array	64.08	341	*e*P	P	01 26 51.6	-0.6
ILAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ILAR	Eielson Array	64.08	341	P	P	01 26 51.2	-0.9
MCK	McKinley	64.12	339	P	P	01 26 52.2	-0.3
	baz=128						
WRH	Wood River Hil	64.29	340	P	P	01 26 55.3	+1.8
WRH				IAmb	IAmb	01 27 08.5	
	comp=Z,13nm,1.2s						
CCB	Clear Creek Bu	64.31	340	IAmb	IAmb	01 27 04.3	
	comp=Z,11nm,1.2s						
COLA	College	64.47	341	*i* P	P	01 26 56.7	+2.1
COLA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
POKR	Poker Plat Res	64.48	341	P	P	01 26 55.8	+1.0
	baz=130						
NEA2	Nenana	64.70	340	P	P	01 26 56.2	0.0
	baz=128						
KTH	Kantishna Hill	64.72	338	P	P	01 26 59.2	+2.7
I23K	Minto, Yukon-K	65.14	340	P	P	01 26 58.8	-0.2
	baz=128						
I23K	Minto, Yukon-K	65.14	340	P	P	01 26 58.1	-0.9
BMAR	Burnt Mountain	65.17	344	P	P	01 26 58.7	-0.5
MLY	Manley	65.53	340	P	P	01 27 01.3	-0.3
	baz=127						
COLD	Coldfoot	66.69	342	P	P	01 27 09.1	+0.1
	baz=128						
COLD	Coldfoot	66.69	342	P	P	01 27 08.9	-0.1
IMAR	Indian Mountai	67.11	340	P	P	01 27 13.1	+1.4
TOLK	Toolik Lake Re	67.39	343	P	P	01 27 12.3	-1.2
	baz=129,SNR=6.6						
RDOG	Red Dog Mine	71.26	340	P	P	01 27 36.5	-0.9
RDOG				IAmb	IAmb	01 27 52.1	
	comp=Z,29nm,1.4s						
EUNU	Eureka	72.07	3	P	P	01 27 42.2	+0.1
TNA	Tin City	72.13	337	P	P	01 27 42.8	+0.1
	baz=110						
TNA	Tin City	72.13	337	P	P	01 27 43.2	+0.5
TNA				IAmb	IAmb	01 27 53.5	
	comp=Z,10nm,1.1s						
ICESG	Greenland Ices	72.86	20	*e*P	P	01 27 47.0	-0.3
GAMB	Gambell	73.14	334	IAMs_20	IAMs_20	02 01 08.1	
	comp=Z,758nm,20.0s						
SUMG	Summit	74.55	16	*i* P	P	01 27 56.0	-1.3
	comp=Z,26nm,1.1s						
SUMG	Summit	74.55	16	*i* P	P	01 27 56.0	-1.3
SUMG				pmax	pmax		
	comp=Z,26nm,1.1s						
SUMG	Summit	74.55	16	P	P	01 27 54.9	-2.4
SUMG				IAmb	IAmb	01 28 09.8	
	comp=Z,20nm,1.2s						
SUMG	Summit	74.55	16	*i* P	P	01 27 56.0	-1.3
SUMG				IAmb	IAmb	01 27 57.8	
	comp=Z,26nm,1.1s						
DAG	Danmarks Havn	80.58	13	*i* P	P	01 28 30.0	-0.4
	comp=Z,29nm,1.4s						
DAG	Danmarks Havn	80.58	13	*i* P	P	01 28 30.0	-0.4
DAG				pmax	pmax		
	comp=Z,29nm,1.4s						
DAG	Danmarks Havn	80.58	13	*i* P	P	01 28 30.0	-0.4
DAG				IAmb	IAmb	01 28 33.7	
	comp=Z,29nm,1.4s						
PEA0B	Petropavlovsk-	88.86	323	*i* P	P	01 29 12.4	-0.2
PETK	Petropavlovsk-	88.86	323	LR	LR	02 02 30.4	
	comp=Z,173nm,20.7s,baz=70,slow=31						
SEY	Seymchan	89.13	334	*i* P	P	01 29 13.9	+0.3
TIXI	Tiksi	93.18	346	*i* P	P	01 29 33.6	+1.3
TIXI	Tiksi	93.18	346	P	P	01 29 32.1	-0.2
DZM	Mont Dzumac	93.59	248	*e*LR	LR	01 59 35.2	
	comp=Z,404nm,22.7s						
NOA	NORSAR Array B	94.06	26	LR	LR	02 09 54.3	
	comp=Z,656nm,21.9s,baz=305,slow=34						
ARCES	ARCESS Array B	94.64	16	LR	LR	02 12 06.1	
	comp=Z,1µm,21.8s,baz=275,slow=35						
LVZ	Lovozero	98.19	15	*i* P	Pdif	01 29 57.1	+1.8
LVZ				pmax	pmax		
	comp=Z,20nm,1.3s						
YAK	Yakutsk	98.88	338	*i* P	P	01 29 58.6	+0.2
YAK				pmax	pmax		

	comp=Z,10.0nm,0.5s						
CLL	Collm	99.18	35	eP	Pdif	01 30 02.0	+2.0
CLL				MLR	MLR		
	comp=Z,600nm,20.4s						
VNDA	Vanda	99.26	193	LR	LR	02 05 45.6	
	comp=Z,271nm,19.4s,baz=96,slow=30						
BELG	Belogornoye	114.44	19	i PKIKP	PKPdf	01 34 59.9	+1.6
BELG				pmax	pmax		
	comp=Z,1.0nm,1.0s						
SYO	Syowa Base	114.76	166	⇓ePdiff	Pdif	01 31 04.4	-4.4
COEN	Coen	114.98	259	IAMs_20	IAMs_20	02 08 27.7	
	comp=Z,283nm,22.0s						
KIV	Kislovodsk	119.34	28	i PKIKP	PKiKP	01 35 10.8	+2.6
KIV				pmax	pmax		
	comp=Z,13nm,1.0s						
HHC	Hu-ho-hao-te	121.54	330	ePKP	PKPdf	01 35 12.1	-0.4
NJ2	Nanjing	123.28	317	ePKP	PKPdf	01 35 13.4	-2.5
WRA	Warramunga Arr	123.44	252	PKP	PKPdf	01 35 13.2	-3.4
	comp=Z,1.9nm,0.7s,baz=90,slow=2.0,SNR=14						
WRA	Warramunga Arr	123.44	252	PKIKP	PKPdf	01 35 15.6	-1.0
WRA	Warramunga Arr	123.44	252		PKPdf	01 35 15.6	-1.0
ASAR	Alice Springs	123.56	247	PKP	PKPdf	01 35 13.8	-3.0
	comp=Z,0.9nm,0.6s,baz=103,slow=1.9,SNR=9.6						
ASAR	Alice Springs	123.56	247	PKIKP	PKPdf	01 35 16.4	-0.4
ASAR	Alice Springs	123.56	247		PKPdf	01 35 16.4	-0.4
MKAR	Makanchi Array	124.84	356	PKP	PKPdf	01 35 15.6	-3.0
	comp=Z,0.2nm,0.6s,baz=32,slow=1.0,SNR=2.6						
MKAR				PP	PP	01 37 03.7	-1.5
	comp=Z,0.9nm,1.1s,baz=7.1,slow=4.9,SNR=4.4						
MKAR	Makanchi Array	124.84	356	ePKIKP	PKiKP	01 35 23.0	+4.1
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
WMQ	Urumqi	127.11	350	ePKP	PKPdf	01 35 23.0	-0.1
WMQ				LR	LR		
	comp=Z,560nm,23.5s						
WMQ				LR	LR		
	comp=Z,940nm,28.9s						
WMQ				LR	LR		
	comp=Z,620nm,29.3s						
GEYT	Alibeck	130.66	20	PKP	PKPdf	01 35 28.4	-1.5
	comp=Z,0.6nm,0.4s,baz=330,slow=2.3,SNR=1.3						
KKM	Kota Kinabalu	138.31	289	IAMs_20	IAMs_20	02 50 08.1	
	comp=Z,271nm,20.0s						
CM34	Chiang Mai Arr	145.18	321	P	PKiKP	01 36 04.0	+3.1
CM35	Chiang Mai Arr	145.31	321	P	PKiKP	01 36 01.0	-0.1
CM33	Chiang Mai Arr	145.33	321	P	PKPdf	01 35 58.0	+0.7
CMMT	Chiang Mai	145.33	321	P	PKiKP	01 36 02.7	+1.5
	comp=Z,267nmcomp=Z,5.4nm,1.0s						
CHTO	Chiang Mai	145.33	321	PKP2	PKPbc	01 35 55.4	-1.6
CHTO	Chiang Mai	145.33	321		PKPbc	01 35 55.4	-1.6
CHAI	Chaiyaphum	145.39	314	P	PKiKP	01 36 02.0	+0.6
	comp=Z,20nm,0.8s						
CM36	Chiang Mai Arr	145.46	321	P	PKPbc	01 35 57.0	-0.4
PHIT	Phitsanulok	145.58	318	P	PKiKP	01 36 07.5	+5.8
	comp=Z,64nm,0.9s						
CM09	Chiang Mai Arr	145.58	321	P	PKiKP	01 36 02.0	+0.3
	comp=Z,138nmcomp=Z,8.7nm,0.7s						
CMAR	Chiang Mai Arr	145.60	321	PKPbc	PKPbc	01 35 56.3	-1.6
	comp=Z,3.1nm,0.6s,baz=7.3,slow=2.8,SNR=14						
CMAR	Chiang Mai Arr	145.60	321	ePKIKP	PKPbc	01 35 57.1	-0.8
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
CM02	Chiang Mai Arr	145.62	321	P	PKiKP	01 36 02.4	+0.6
	comp=Z,7.4nm,0.9s						
CM15	Chiang Mai Arr	145.62	321	P	PKiKP	01 36 02.2	+0.5
	comp=Z,8.2nm,0.7s						
CM01	Chiang Mai Arr	145.62	321	P	PKiKP	01 36 00.9	-0.8
	comp=Z,157nmcomp=Z,8.5nm,0.9s						
CM04	Chiang Mai Arr	145.62	321	P	PKPab	01 35 59.6	+1.4
	comp=Z,113nmcomp=Z,7.2nm,0.9s						
CM05	Chiang Mai Arr	145.64	321	P	PKiKP	01 36 01.0	-0.8
	comp=Z,100nmcomp=Z,7.3nm,1.1s						
CM13	Chiang Mai Arr	145.65	321	P	PKPab	01 35 59.0	+0.7
	comp=Z,8.5nm,0.9s						

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*IDC **18** 01:41:09.0±0.7, 8°.34N×103°.18W, h0^{km}, mb4.6/13, mb1 4.8/15, mb1mx4.6/27, mbtmp4.6/15, ML4.0/2, MS4.7/16, Ms1 4.7/16, ms1mx4.5/31, Error ellipse: s-maj=27.9km s-min=13.3km az=57.0*

*MOS **18** 01:41:10.1±1.4, 8°.37N×103°.03W, h10^{km}, mb5.1/23, Error ellipse: s-maj=13.6km s-min=7.6km az=94.9*

*BJI **18** 01:41:12.0±0.0, 8°.60N×102°.90W, h10^{km}, Ms5.1/1, Ms7 5.0/2*

*NEIC **18** 01:41:12.5±2.5, 8°.38N±0°.09×103°.0W±0°.1, h10^{km}±1^{km}, mb5.0/324, Error ellipse: s-maj=19.7km s-min=15.0km az=252.0*

*GCMT **18** 01:41:14.5±0.2, 8°.50N±0°.01×103°.02W±0°.01, h12^{km}, MW5.2/124, Moment Tensor Solution. s63,c79; s124,c206; Duration: 1^{s}0 Moment tensor: Scale 10^{16} Nm; M_{rr}-2.08±.15; $M_{\theta\theta}$3.89±.14; $M_{\phi\phi}$-1.81±.15; $M_{r\theta}$-3.22±.40; $M_{\theta\phi}$-7.28±.12; $M_{\phi r}$1.27±.43; Best double couple: $M_0$8.36900×10^{16} NP1:ϕ_s351.00000°, δ71.00000°, λ4.00000°. NP2:ϕ_s259.00000°, δ86.00000°, λ161.00000°. Principal axes: T 9.8180, Plg16.0000°, Azm214.0000°; N -2.8980, Plg71.0000°, Azm69.0000°; P -6.9200, Plg11.0000°, Azm307.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 18 01:41:11.6±0.5**, 8°.37N**±0°.07×**103°.07W**±0°.08**, h10^{km}, n529, σ1^{s}41**/416**, mb5.0**/159**, MS4.8**/17**, 1C, Northern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TLIG	Tlapa	10.13	25		Pn	01 43 35.1	-2.3
MOIG	Morelia	11.39	9		Pn	01 43 57.8	+3.1
UNM	Universidad Na	11.53	19	P	Pn	01 43 58.8	+2.2
UNM	Universidad Na	11.53	19	Pn	Pn	01 43 58.8	+2.2
CMIG	Matias Romero	11.78	42	Pn	Pn	01 43 53.8	-6.0
	0.6nm,0.3s,baz=249,slow=10.0,SNR=6.6						
CMIG				LR	LR	01 47 34.7	
	comp=Z,8µm,18.3s,baz=182,slow=32						
RTAL	Retalhuleu	12.71	60	Pn	Pn	01 44 10.4	-2.2
H06S1	SOCORRO T	12.84	324	T	T	01 57 21.0	
	SNR=24						
H06E1	SOCORRO T-PHAS	12.86	324	T	T	01 57 17.6	
	SNR=120						
HUEH	Huehuetenango	13.25	58	Pn	Pn	01 44 17.4	-2.8
CCIG	Comitan	13.26	53	Pn	Pn	01 44 21.2	+1.0
ZAIG	Zacatecas	14.32	2	Pn	Pn	01 44 36.7	+1.8
MTO3	Montecristo	14.71	65	Pn	Pn	01 44 38.4	-1.7
ESQI	Esquipulas	14.79	64	Pn	Pn	01 44 41.7	+0.7
PETF	Flores	15.42	55	Pn	Pn	01 44 46.5	-2.9
PETF				IAmb	IAmb	01 44 57.0	
	comp=Z,144nm,1.4s						
PAYG	Puerto Ayora	15.59	125		P	01 44 58.7	+2.7
PAYG				IAmb	IAmb	01 45 00.7	
	comp=Z,126nm,1.1s						
TGUH	Tegucigalpa,Un	16.49	69	P	P	01 45 04.8	-1.2
LPIG	La Paz	17.11	337	LR	LR	01 50 11.6	
	comp=Z,3µm,19.1s,baz=160,slow=32						
ACON	Acoyapa	17.97	77	P	P	01 45 23.0	+0.7
JTS	Las Juntas de	17.98	82	P	Pn	01 45 20.7	-1.2
	comp=Z,0.4nm,0.3s,baz=37,slow=20,SNR=1.4						
JTS				LR	LR	01 50 26.4	
	comp=Z,1µm,20.1s,baz=324,slow=31						
JTS	Las Juntas de	17.98	82	P	P	01 45 24.3	+1.9
JTS				pmax	pmax		
	comp=Z,36nm,1.4s						
JTS	Las Juntas de	17.98	82	P	P	01 45 24.3	+1.9
TEIG	Tepich	18.54	49	P	Pn	01 45 27.1	-1.5
	comp=Z,0.6nm,0.3s,baz=235,slow=11,SNR=8.1						
TEIG				LR	LR	01 51 38.8	
	comp=Z,4µm,21.1s,baz=243,slow=34						
TEIG	Tepich	18.54	49	P	P	01 45 28.2	-0.2
TEIG				IAmb	IAmb	01 45 30.5	
	comp=Z,175nm,1.5s						
HPIG		18.63	353	P	Pn	01 45 33.0	+3.0
HDC	Heredia	18.78	84	P	Pn	01 45 34.2	+2.4
HDC				IAmb	IAmb	01 45 41.7	
	comp=Z,149nm,1.2s						
ESPN	Las Esperanzas	18.85	77	P	Pn	01 45 33.7	+1.2
833A	Chaparral WMA,	20.15	9	P	Pn	01 45 47.5	-0.4
	baz=190,SNR=18						
SRIG	Santa Rosalia	20.75	336	P	P	01 45 54.2	+1.6
SRIG				IAmb	IAmb	01 45 56.0	
	comp=Z,61nm,1.3s						
TX32	Lajitas Array	20.86	359	P	P	01 45 54.4	+0.4
TXAR	Lajitas Array	20.86	359	P	P	01 45 54.6	+0.7
	comp=Z,11nm,0.9s,baz=181,slow=10,SNR=73						
TXAR				PcP	PcP	01 50 01.8	-0.7
	comp=Z,0.6nm,0.9s,baz=215,slow=1.1,SNR=4.1						
TXAR				LR	LR	01 53 25.8	
	comp=Z,3µm,19.1s,baz=0.0,slow=35						
TX31	Lajitas Ar. Si	20.86	359	P	P	01 45 54.5	+0.6
TX31				IAmb	IAmb	01 46 06.7	
	comp=Z,82nm,1.1s						
735A	Kenedy	20.97	13	P	P	01 45 57.3	+2.3
HSIG		21.84	341	P	P	01 46 07.2	+2.8
JCT	Junction City	22.21	7	P	P	01 46 09.5	+1.2
	baz=188,SNR=25						
JCT	Junction City	22.21	7	P	P	01 46 08.6	+0.2
JCT				pmax	pmax		
	comp=Z,83nm,1.0s						
JCT	Junction City	22.21	7	P	P	01 46 08.6	+0.2
JCT				IAmb	IAmb	01 46 11.8	
	comp=Z,82nm,1.0s						
HKT	Hockley	22.51	17	P	P	01 46 12.7	+1.2
HKT				pmax	pmax		
	comp=Z,262nm,1.5s						
HKT	Hockley	22.51	17	P	P	01 46 12.7	+1.2
435B	Jarrell	22.88	12	P	P	01 46 16.3	+0.9
	baz=194,SNR=8.1						
435B	Jarrell	22.88	12	P	P	01 46 16.3	+0.9
MNTX	Cornudas Mount	23.31	355	P	P	01 46 19.9	0.0
	baz=174,SNR=34						
MNTX	Cornudas Mount	23.31	355	P	P	01 46 20.7	+0.8
MNTX				IAmb	IAmb	01 46 22.9	
	comp=Z,41nm,1.2s						
319A	Douglas	23.61	347	P	P	01 46 23.9	+0.9
GDL2	Guadalupe Moun	23.74	357	P	P	01 46 24.4	+0.1
CLNB	Carlsbad	23.79	358	P	P	01 46 26.4	+1.8
WHTX	Lake Whitney,	24.07	12	P	P	01 46 27.2	-0.1
	baz=193,SNR=24						
WHTX	Lake Whitney,	24.07	12	P	P	01 46 27.9	+0.6
ABTX	Abilene, Hawle	24.34	7	P	P	01 46 28.6	-1.1
	baz=188,SNR=42						
ABTX	Abilene, Hawle	24.34	7	P	P	01 46 28.5	-1.3
121A	Cookes Peak, D	24.44	350	P	P	01 46 30.9	+0.1
	baz=168,SNR=22						
121A	Cookes Peak, D	24.44	350	IAmb	IAmb	01 46 34.8	
	comp=Z,43nm,1.1s						
NATX	Nacogdoches	24.55	17	P	P	01 46 31.9	+0.2
	baz=200,SNR=7.0						
NATX	Nacogdoches	24.55	17	P	P	01 46 31.2	-0.5
TUC	Tucson	24.88	344	P	P	01 46 35.6	+0.9
	baz=161						
TUC	Tucson	24.88	344	P	P	01 46 35.7	+1.0
TUC				pmax	pmax		
	comp=Z,34nm,1.2s						
TUC	Tucson	24.88	344	P	P	01 46 35.7	+1.0
TUC				IAmb	IAmb	01 46 38.6	
	comp=Z,34nm,1.1s						
LCCY	Blossom Villag	24.93	61	P	P	01 46 35.1	-0.1
PIX	Pinacate	25.02	339	P	P	01 46 37.6	+1.7
PIX				IAmb	IAmb	01 46 40.3	
	comp=Z,34nm,1.3s						
214A	Organ Pipe Nat	25.16	340	P	P	01 46 37.7	+0.5
	baz=157,SNR=14						
214A	Organ Pipe Nat	25.16	340	P	P	01 46 37.4	+0.2
214A				IAmb	IAmb	01 46 41.1	
	comp=Z,30nm,1.1s						
Z35A	Perchaven, San	25.41	11	P	P	01 46 38.7	-0.7
Z35A				IAmb	IAmb	01 46 41.5	
	comp=Z,44nm,1.1s						
MSTX	Muleshoe	25.48	1	P	P	01 46 40.3	+0.1
	baz=180,SNR=11						
MSTX	Muleshoe	25.48	1	IAmb	IAmb	01 46 44.5	
	comp=Z,20nm,0.8s						
OTAV	Otavalo	25.82	107	P	P	01 46 44.4	+0.5
OTAV				pmax	pmax		
	comp=Z,27nm,1.0s						
OTAV	Otavalo	25.82	107	P	P	01 46 44.4	+0.5
OTAV				IAmb	IAmb	01 46 49.6	
	comp=Z,27nm,1.0s						
Y22D	IRIS PASSCAL I	25.82	353	P	P	01 46 44.1	+0.8
	baz=171						
113A	Mohawk Valley,	26.22	339	IAmb	IAmb	01 46 49.7	
	comp=Z,21nm,1.1s						
ESJX	Sierra Juarez	26.39	335	P	P	01 46 50.1	+1.5
AMTX	Amarillo	26.42	3	P	P	01 46 49.9	+1.2
	baz=183						
AMTX	Amarillo	26.42	3	IAmb	IAmb	01 47 25.7	
	comp=Z,26nm,1.1s						
VBMS	Vicksburg	26.44	24	P	P	01 46 49.2	+0.5
	baz=208						
VBMS	Vicksburg	26.44	24	P	P	01 46 49.9	+1.2
143A	Socs Landing,	26.52	22	P	P	01 46 50.5	+1.1
Z41A	Richland Creek	26.52	20	P	P	01 46 50.2	+0.7
	baz=203						
WMOK	Wichita Mounta	26.54	8	P	P	01 46 50.3	+0.6
	baz=189						
WMOK	Wichita Mounta	26.54	8	IAmb	IAmb	01 46 54.5	
	comp=Z,46nm,1.8s						
GCUF	Volcan Galeras	26.58	104	eP	P	01 46 50.5	-0.3
ANMO	Albuquerque	26.63	354	P	P	01 46 50.3	-0.4
	comp=Z,6.4nm,1.2s,baz=156,slow=16,SNR=7.1						
ANMO				LR	LR	01 56 58.1	
	comp=Z,982nm,20.3s,baz=179,slow=36						
ANMO	Albuquerque	26.63	354	P	P	01 46 51.6	+0.9
	baz=172						
ANMO	Albuquerque	26.63	354	P	P	01 46 51.6	+0.9
ANMO				pmax	pmax		
	comp=Z,9.0nm,1.2s						
ANMO	Albuquerque	26.63	354	P	P	01 46 51.6	+0.9
WLAR	White Oak Lake	26.82	19	P	P	01 46 52.0	-0.1
WLAR				IAmb	IAmb	01 46 57.8	
	comp=Z,54nm,1.1s						
PLMC	San Jos del P	26.82	96	eP	P	01 46 50.8	-1.7
GLA	Glamis	26.86	338	P	P	01 46 53.6	+1.0
	baz=153,SNR=17						
GLA	Glamis	26.86	338	IAmb	IAmb	01 46 58.1	
	comp=Z,62nm,1.3s						
YOTC	Yotoco, Valle	26.91	98	eP	P	01 46 52.5	-1.0
CBOC	Ciudad Bolivar	26.96	94	eP	P	01 46 54.6	+0.7
IKP	In-Ko-Pah, Jac	27.02	335	P	P	01 46 55.4	+1.3
	baz=150						
X37A	Clayton	27.04	14	IAmb	IAmb	01 47 34.7	
	comp=Z,50nm,1.4s						
SWSC	Sam W. Stewart	27.15	336	P	P	01 46 56.3	+1.2
	baz=151						
FNO	Franklin	27.26	10	P	P	01 46 57.5	+1.3
W18A	Petrified Fore	27.31	348	P	P	01 46 57.3	+0.4
	baz=165,SNR=7.2						
W18A	Petrified Fore	27.31	348	P	P	01 46 57.7	+0.8
W18A				IAmb	IAmb	01 47 00.2	
	comp=Z,20nm,1.1s						
MONP2	Monument Peak	27.36	335	P	P	01 46 58.3	+1.0
	baz=150,SNR=7.8						
MIAR	Mount Ida	27.47	17	P	P	01 46 57.8	-0.2
	baz=200,SNR=20						
BCOK	Bluff Creek, N	27.61	10	P	P	01 46 59.8	+0.5
BC3	Big Chuckawall	27.64	337	P	P	01 47 00.1	+0.5
	baz=153,SNR=6.8						
X40A	Basin Creek Fa	27.64	18	P	P	01 46 59.8	+0.2
	baz=202						
GUY2C	Guyana, Caldas	27.68	95	eP	P	01 47 01.4	+0.7
RREF	El Recreo	27.74	95	eP	P	01 47 03.0	+1.5
PDMCI	Parker Dam,Lak	27.75	340	P	P	01 47 01.8	+1.3
	baz=156,SNR=14						
OK029	Liberty Lake	27.78	10	P	P	01 47 01.4	+0.6
OK029				IAmb	IAmb	01 47 38.2	
	comp=Z,36nm,1.3s						
IRM	Iron Mountain	27.97	338	P	P	01 47 03.5	+0.9
	baz=154,SNR=18						
TPFO	Pinon Flats	27.99	336	P	P	01 47 03.6	+0.8
	baz=151						
PFO	Pinyon Flats O	28.00	336	P	P	01 47 02.5	-0.4
	comp=Z,8.7nm,1.0s,baz=140,slow=8.0,SNR=7.0						
PFO				LR	LR	01 56 03.5	
	comp=Z,2µm,20.3s,baz=143,slow=32						
PFO	Pinyon Flats O	28.00	336	P	P	01 47 03.6	+0.7
	baz=151,SNR=5.4						
PFO	Pinyon Flats O	28.00	336	P	P	01 47 04.3	+1.4
PFO				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PFO	Pinyon Flats O	28.00	336	P	P	01 47 04.3	+1.4
W39A	Magazine	28.02	16	P	P	01 47 03.3	+0.4
	baz=200,SNR=11						
W39A	Magazine	28.02	16	P	P	01 47 04.1	+1.1
OK030	Cody Creek RV	28.02	11	P	P	01 47 04.3	+1.3
OK030				IAmb	IAmb	01 47 05.0	
	comp=Z,33nm,1.0s						
WUAZ	Wupatki	28.07	345	P	P	01 47 04.3	+0.7
	baz=162,SNR=11						
WUAZ	Wupatki	28.07	345	IAmb	IAmb	01 47 07.1	
	comp=Z,29nm,1.1s						
FLOC	Florencia	28.11	102	eP	P	01 47 03.8	-0.3
BELC	Belle Mtn. Jos	28.15	337	P	P	01 47 05.7	+1.3
	baz=152,SNR=14						
TUL1	Leonard	28.21	13	P	P	01 47 05.1	+0.5
	baz=195						
TUL1	Leonard	28.21	13	IAmb	IAmb	01 47 06.6	
	comp=Z,53nm,1.5s						
Y45A	Yeager Farm, C	28.27	24	P	P	01 47 06.5	+1.3
QUOK	Quay	28.27	11	IAmb	IAmb	01 47 07.7	
	comp=Z,43nm,1.3s						
DWPF	Disney Wildern	28.32	43	P	P	01 47 05.7	-0.1
	baz=230						
X43A	Marvell	28.33	22	P	P	01 47 06.1	+0.4
	baz=206						
Z47A	Carrollton	28.33	27	IAmb	IAmb	01 47 11.8	
	comp=Z,23nm,0.9s						
PRAC	Prado	28.39	98	eP	P	01 47 06.0	-0.6
W41B	Gary Mavity, V	28.46	19	P	P	01 47 07.3	+0.4
	baz=203						
WHAR	Wooly Hollow	28.55	19	P	P	01 47 08.3	+0.6
T25A	Trinidad	28.66	358	P	P	01 47 10.5	+1.6
	baz=177,SNR=8.3						
LRAL	Lakeview Retre	28.70	29	P	P	01 47 08.8	-0.2
	baz=214						
GMRC	Granite Mounta	28.72	338	P	P	01 47 10.5	+1.1
	baz=153,SNR=11						
ROSC	El Rosal	28.77	95	P	P	01 47 11.4	+1.1
	comp=Z,4.7nm,0.4s,baz=108,slow=9.4,SNR=5.0						
ROSC	El Rosal	28.77	95	IAmb	IAmb	01 47 16.0	
	comp=Z,24nm,1.2s						
SPBC	San Pablo de B	28.90	93	eP	P	01 47 12.8	+1.7
HHAR	Hobbs	29.00	15	P	P	01 47 11.6	-0.1
ATAH	Atahualpa	29.02	121	P	P	01 47 13.0	+0.4
	comp=Z,6.4nm,0.9s,baz=346,slow=8.3,SNR=2.6						
ATAH				LR	LR	01 56 27.0	
	comp=Z,3µm,20.6s,baz=312,slow=32						
BFSC	Mount Baldy Ra	29.04	335	P	P	01 47 13.7	+1.5
	baz=149,SNR=5.3						
U38A	Gravette	29.04	15	IAmb	IAmb	01 47 13.2	
	comp=Z,26nm,1.4s						
MVCO	Mesa Verde	29.13	351	P	P	01 47 14.5	+1.4
	baz=169,SNR=14						
MVCO	Mesa Verde	29.13	351	IAmb	IAmb	01 47 15.7	
	comp=Z,29nm,1.1s						
U15A	North Rim	29.16	345	P	P	01 47 15.0	+1.5
U15A				IAmb	IAmb	01 47 17.0	
	comp=Z,32nm,1.6s						
SDCO	Great Sand Dun	29.33	356	P	P	01 47 14.4	-0.5
SDCO				IAmb	IAmb	01 48 04.7	
	comp=Z,20nm,1.2s						
U40A	Yellville	29.37	17	P	P	01 47 15.3	+0.4
	baz=201,SNR=12						
U40A	Yellville	29.37	17	IAmb	IAmb	01 47 17.1	
	comp=Z,28nm,1.1s						
S22A	4UR Ranch, Cre	29.44	354	P	P	01 47 17.1	+1.2
	baz=172,SNR=13						
GSC	Goldstone, Bar	29.61	337	P	P	01 47 18.9	+1.6
	baz=152,SNR=8.0						
GSC	Goldstone, Bar	29.61	337	P	P	01 47 18.8	+1.6
GSC				pmax	pmax		
	comp=Z,11nm,1.1s						
GSC	Goldstone, Bar	29.61	337	P	P	01 47 18.8	+1.6
EDW2	Edwards Air Fo	29.73	335	P	P	01 47 19.6	+1.3
	baz=149,SNR=6.6						
PLAL	Pickwick Lake	29.84	25	IAmb	IAmb	01 47 20.8	
	comp=Z,22nm,1.0s						
RUSC	La Rusia	29.85	93	eP	P	01 47 16.5	-3.5
KNB	Kanab	29.86	344	P	P	01 47 21.7	+2.2
KNB				pmax	pmax		
	comp=Z,39nm,1.4s						
KNB	Kanab	29.86	344	P	P	01 47 21.7	+2.2
SHOC	Shoshone, Teco	29.94	338	P	P	01 47 21.1	+1.0
	baz=153						
PV01	Paradox Valley	30.05	351	P	P	01 47 22.5	+1.3
SHPR	Sheep Range	30.09	340	IAmb	IAmb	01 47 25.0	
	comp=Z,27nm,1.8s						
PAMC	Pamplona, Colo	30.10	90	eP	P	01 47 15.3	-6.9
LRMC	Laurel Mtn Rad	30.11	336	P	P	01 47 22.9	+1.1
	baz=150,SNR=7.3						
R32A	Long Quarter,	30.18	7	IAmb	IAmb	01 47 24.3	
	comp=Z,25nm,1.1s						
PV03	Paradox Valley	30.20	351	IAmb	IAmb	01 47 25.2	
	comp=Z,28nm,1.4s						
PV18	Skein Mesa, Pa	30.21	351	IAmb	IAmb	01 47 25.3	
	comp=Z,26nm,1.4s						
PV17	East Wray Mesa	30.25	351	P	P	01 47 22.9	-0.1
PV17				IAmb	IAmb	01 47 25.6	
	comp=Z,47nm,1.5s						
PV11	David Mesa, Pa	30.25	351	IAmb	IAmb	01 47 25.8	
	comp=Z,52nm,1.7s						
PV12	Saucer Basin,	30.26	351	IAmb	IAmb	01 47 25.9	
	comp=Z,20nm,1.0s						
PV16	Nyswonger Mesa	30.27	351	IAmb	IAmb	01 47 25.9	
	comp=Z,37nm,1.6s						
PV19	Morning Glory	30.28	351	P	P	01 47 24.8	+1.5
PV19				IAmb	IAmb	01 47 25.9	
	comp=Z,38nm,1.6s						
PV20	West Nyswonger	30.31	351	IAmb	IAmb	01 47 35.5	
	comp=Z,18nm,1.3s						
PV14	Lion Creek, Pa	30.35	351	IAmb	IAmb	01 47 25.9	
	comp=Z,18nm,1.0s						
PV04	Paradox Valley	30.35	351	IAmb	IAmb	01 47 26.1	
	comp=Z,22nm,1.1s						
PV07	Paradox Valley	30.36	351	IAmb	IAmb	01 47 26.1	
	comp=Z,13nm,0.9s						
PV10	Paradox Valley	30.36	351	IAmb	IAmb	01 47 25.9	
	comp=Z,35nm,1.4s						
PV23	Carpenter Ridg	30.42	351	IAmb	IAmb	01 47 27.3	
	comp=Z,31nm,1.3s						
CBKS	Cedar Bluff	30.46	5	P	P	01 47 25.0	+0.4
	baz=186						
CBKS	Cedar Bluff	30.46	5	IAmb	IAmb	01 47 27.1	
	comp=Z,47nm,1.6s						
S39A	Bolivar	30.49	15	P	P	01 47 24.2	-0.6
KSCO	Kaye Shedlock’	30.51	1	P	P	01 47 25.7	+0.5
	baz=181						
KSCO	Kaye Shedlock’	30.51	1	P	P	01 47 27.0	+1.8
KSCO				IAmb	IAmb	01 47 28.0	
	comp=Z,30nm,1.1s						
Q24A	Divide	30.52	357	P	P	01 47 26.0	+0.6
	baz=176						
T42A	Van Buren	30.53	19	IAmb	IAmb	01 47 27.3	
	comp=Z,35nm,1.4s						
MPMC	Manual Prospec	30.54	337	P	P	01 47 27.1	+1.5
	baz=151,SNR=16						
PKM	Mcpherson Peak	30.54	332	P	P	01 47 26.2	+0.6
	baz=146						
ISA	Isabella, Lake	30.60	335	P	P	01 47 27.3	+1.3
	baz=149						
FURC	Furnace Creek,	30.66	338	P	P	01 47 27.6	+1.2
	baz=152						
TPNV	Topopah Spring	30.87	339	P	P	01 47 30.0	+1.6
	baz=154,SNR=8.7						
SMCO	Snowmass	30.87	354	IAmb	IAmb	01 47 34.9	
	comp=Z,31nm,1.4s						
PRN	Pahroc Range	30.88	341	P	P	01 47 30.5	+2.0
WVT	Waverly	30.93	24	P	P	01 47 28.6	-0.2
	baz=210						
WVT	Waverly	30.93	24	P	P	01 47 27.9	-0.8
WVT				pmax	pmax		
	comp=Z,13nm,1.0s						
WVT	Waverly	30.93	24	P	P	01 47 27.9	-0.8
WVT				IAmb	IAmb	01 47 29.5	
	comp=Z,13nm,0.9s						
SMMC	Simmler	30.98	332	P	P	01 47 30.6	+1.4
	baz=146						
VES	Vestal, Richgr	31.01	334	P	P	01 47 31.6	+2.1
	baz=148						
CWC	Cottonwood Cre	31.11	336	P	P	01 47 32.2	+1.7
	baz=150						
MSU	Marysvale	31.11	346	P	P	01 47 31.9	+1.3
MSU	Marysvale	31.11	346	P	P	01 47 31.9	+1.3
KSU1	Kansas State U	31.14	10	P	P	01 47 31.1	+0.5
	baz=192						
KSU1	Kansas State U	31.14	10	IAmb	IAmb	01 47 32.8	
	comp=Z,15nm,0.9s						
GRAC	Grapevine Rang	31.32	338	P	P	01 47 33.3	+1.1
	baz=152						
R40A	Maddies Statio	31.34	16	IAmb	IAmb	01 47 33.7	
	comp=Z,35nm,1.1s						
ISCO	Idaho Springs	31.38	356	P	P	01 47 34.2	+1.2
	baz=175						
CCM	Cathedral Cave	31.42	18	P	P	01 47 33.2	+0.1
	baz=203						
CCM	Cathedral Cave	31.42	18	P	P	01 47 33.0	-0.1
CCM				pmax	pmax		
	comp=Z,15nm,1.1s						

CCM	Cathedral Cave	31.42	18	P	P	01 47 33.0	-0.1
CCM				IAmb	IAmb	01 47 34.2	
	comp=Z,15nm,1.1s						
FVM	French Village	31.62	19	IAmb	IAmb	01 47 36.8	
	comp=Z,34nm,1.4s						
TMUT	Trail Mountain	31.65	348	P	P	01 47 36.6	+1.2
TIN	Tinemaha, Big	31.70	337	P	P	01 47 37.3	+1.6
	baz=150						
S44A	Carbondale	31.76	21	P	P	01 47 36.9	+0.8
S44A				IAmb	IAmb	01 47 37.4	
	comp=Z,33nm,1.1s						
R11A	Troy Canyon, C	31.91	341	P	P	01 47 38.9	+1.3
	baz=156						
T47A	Sharon Grove	31.96	25	IAmb	IAmb	01 47 39.0	
	comp=Z,26nm,0.9s						
O20A	White River Ci	31.96	352	P	P	01 47 39.1	+1.0
	baz=170,SNR=11						
SDV	Santo Domingo	32.07	87	P	P	01 47 39.3	0.0
SDV				IAmb	IAmb	01 47 49.3	
	comp=Z,18nm,1.0s						
PMPB	Monarch Peak	32.09	332	P	P	01 47 43.0	+4.0
PMPB				IAmb	IAmb	01 47 51.9	
	comp=Z,15nm,1.2s						
U49A	Red Boiling Sp	32.13	27	IAmb	IAmb	01 47 41.0	
	comp=Z,19nm,1.1s						
TPH	Tonopah	32.22	339	P	P	01 47 42.5	+2.2
TPH				pmax	pmax		
	comp=Z,46nm,1.0s						
TPH	Tonopah	32.22	339	P	P	01 47 42.5	+2.2
P38A	Dawn	32.27	14	IAmb	IAmb	01 47 41.6	
	comp=Z,15nm,1.0s						
MLAC	Mammoth, Mammo	32.44	336	P	P	01 47 43.7	+1.3
	baz=150						
OGNE	Ogallala	32.45	1	P	P	01 47 43.1	+0.9
	baz=182						
NHSC	New Hope	32.46	37	P	P	01 47 42.8	+0.5
	baz=226						
N23A	Red Feather La	32.49	356	P	P	01 47 43.8	+1.1
	baz=174						
MDPB	Devils Postpil	32.54	336	P	P	01 47 44.8	+1.6
DUG	Dugway, Tooele	32.86	346	P	P	01 47 47.2	+1.3
	baz=162,SNR=19						
DUG	Dugway, Tooele	32.86	346	IAmb	IAmb	01 47 49.8	
	comp=Z,43nm,1.4s						
Q44A	Meyer Farm, Va	32.92	20	P	P	01 47 47.1	+0.9
NVAR	Mina Array Bea	32.93	338	P	P	01 47 47.4	+0.8
	comp=Z,4.4nm,0.9s,baz=168,slow=8.8,SNR=29						
NVAR				LR	LR	01 59 00.3	
	comp=Z,781nm,19.9s,baz=150,slow=33						
NVAR	Mina Array Bea	32.93	338	P	P	01 47 48.7	+2.1
T50A	Nancy	32.98	27	IAmb	IAmb	01 47 47.8	
	comp=Z,17nm,1.1s						
CTU	Camp Tracy	33.10	348	P	P	01 47 49.9	+1.9
BGNE	Belgrade	33.19	7	P	P	01 47 49.4	+0.8
	baz=189						
TZTN	Tazewell	33.20	29	P	P	01 47 49.1	+0.4
	baz=217						
KMSC	Kings Mountain	33.26	34	P	P	01 47 49.7	+0.4
	baz=222						
WCI	Wyandotte Cave	33.36	24	P	P	01 47 50.7	+0.6
	baz=211						
WCI	Wyandotte Cave	33.36	24	P	P	01 47 50.8	+0.8
WCI				pmax	pmax		
	comp=Z,25nm,1.0s						
WCI	Wyandotte Cave	33.36	24	P	P	01 47 50.8	+0.8
WCI				IAmb	IAmb	01 47 51.4	
	comp=Z,25nm,1.0s						
SPUT	South Promonto	33.84	347	P	P	01 47 54.7	+0.3
PNTR	Pine Nut	34.00	337	IAmb	IAmb	01 47 59.7	
	comp=Z,13nm,1.0s						
U54A	Nelsons Funny	34.05	31	P	P	01 47 56.6	+0.5
	baz=220						
S51A	Beattyville	34.05	28	IAmb	IAmb	01 47 57.5	
	comp=Z,23nm,1.0s						
RUBR	Rubicon Trail	34.19	336	P	P	01 47 58.6	+1.1
RUBR				IAmb	IAmb	01 48 01.4	
	comp=Z,15nm,1.0s						
VCNR	Virginia City	34.20	337	IAmb	IAmb	01 48 01.4	
	comp=Z,16nm,1.1s						
V56A	Mocksville	34.22	34	P	P	01 47 57.9	+0.4
	baz=222						
K22A	Casper	34.28	355	P	P	01 47 59.5	+1.3
	baz=174						
HDIL	Hopedale	34.32	19	P	P	01 47 59.2	+0.8
	baz=204,SNR=12						
W58A	Raeford	34.36	36	P	P	01 47 58.9	+0.1
	baz=225						
X59A	McDuffie Farm,	34.42	37	P	P	01 47 59.3	-0.1
	baz=226						
PAHR	Pah Rah Range	34.45	337	P	P	01 48 01.6	+1.9
PAHR				IAmb	IAmb	01 48 03.5	
	comp=Z,14nm,1.1s						
SCIA	State Center	34.52	13	P	P	01 48 00.8	+0.7
	baz=197						
V57A	Coltrane Farms	34.67	34	P	P	01 48 01.6	+0.1
	baz=223						
BW06	Boulder Array	34.73	352	P	P	01 48 02.4	+0.1
	baz=168,SNR=21						
BW06	Boulder Array	34.73	352	IAmb	IAmb	01 48 04.9	
	comp=Z,24nm,1.1s						
PD31	Pinedale Array	34.73	352	IAmb	IAmb	01 48 04.9	
	comp=Z,22nm,1.1s						
PDAR	Pinedale Array	34.73	352	P	P	01 48 01.7	-0.5
	comp=Z,14nm,0.9s,baz=160,slow=6.9,SNR=69						
PDAR				PcP	PcP	01 50 34.4	-1.5
	comp=Z,0.7nm,0.8s,baz=160,slow=2.9,SNR=3.6						
PDAR	Pinedale Array	34.73	352	P	P	01 48 02.5	+0.2
P48A	Milroy	34.76	24	IAmb	IAmb	01 48 02.9	
	comp=Z,31nm,1.2s						
SFIN	Lafayette	34.91	22	P	P	01 48 04.0	+0.5
	baz=208						
P49A	Miami Univ. Ec	35.12	25	P	P	01 48 05.3	0.0
	baz=212,SNR=5.8						
L40A	Anamosa	35.15	15	IAmb	IAmb	01 48 06.2	
	comp=Z,16nm,0.9s						
ORV	Oroville	35.17	335	P	P	01 48 08.2	+2.4
ORV				pmax	pmax		
	comp=Z,13nm,1.0s						
ORV	Oroville	35.17	335	P	P	01 48 08.2	+2.4
ORV				IAmb	IAmb	01 48 09.5	
	comp=Z,13nm,1.0s						
S54A	Dingess, Beckl	35.29	31	P	P	01 48 06.8	0.0
	baz=219						
Q51A	Peebles	35.29	27	IAmb	IAmb	01 48 08.5	
	comp=Z,31nm,1.1s						
U57A	Blanch	35.31	34	P	P	01 48 07.7	+0.7
	baz=223						
T56A	Rocky Mt	35.37	33	P	P	01 48 07.8	+0.3
	baz=222						
HOPS	Hopland Field	35.39	333	P	P	01 48 09.2	+1.5
HOPS				IAmb	IAmb	01 48 13.3	
	comp=Z,27nm,1.6s						
V59A	Middlesex	35.46	36	P	P	01 48 08.7	+0.4
	baz=226						
REDW	Red Top Meadow	35.52	350	IAmb	IAmb	01 48 17.9	
	comp=Z,17nm,1.1s						
SNOW	Snow King Moun	35.60	350	IAmb	IAmb	01 48 12.6	
	comp=Z,18nm,1.0s						
RSSD	Black Hills	35.62	359	P	P	01 48 10.8	+1.0
	baz=178						
RSSD	Black Hills	35.62	359	P	P	01 48 09.8	-0.1
RSSD				pmax	pmax		
	comp=Z,16nm,1.2s						
RSSD	Black Hills	35.62	359	P	P	01 48 09.8	-0.1
RSSD				IAmb	IAmb	01 48 12.6	
	comp=Z,16nm,1.1s						
ECSD	EROS Data Cent	35.67	8	P	P	01 48 11.0	+0.9
	baz=191						
LOHW	Long Hollow	35.72	351	IAmb	IAmb	01 48 13.3	
	comp=Z,13nm,0.9s						
U58A	Oxford	35.73	35	P	P	01 48 10.9	+0.3
	baz=224						
R54A	Victor	35.74	30	P	P	01 48 11.4	+0.6
	baz=219						
T57A	Hurt	35.77	34	P	P	01 48 11.2	+0.2
	baz=223						
P51A	Williamsport	35.79	27	IAmb	IAmb	01 48 12.2	
	comp=Z,26nm,0.9s						
N47A	Urbana	35.87	23	IAmb	IAmb	01 48 12.4	
	comp=Z,25nm,0.8s						
O03E	Paynes Creek	35.91	335	P	P	01 48 13.5	+1.3
	baz=147						
Q53A	Leroy	36.01	29	P	P	01 48 13.1	+0.2
	baz=218						
S56A	Natural Bridge	36.10	32	P	P	01 48 13.9	+0.1
	baz=222						
T58A	Grand View Acr	36.13	34	P	P	01 48 14.1	+0.1
	baz=224						
FLWY	Flagg Ranch	36.19	351	IAmb	IAmb	01 48 17.0	
	comp=Z,15nm,0.9s						
JFWS	Jewell Farm	36.20	16	P	P	01 48 15.0	+0.4
	baz=202						
L44A	Lake County Fo	36.23	19	P	P	01 48 15.2	+0.4
	baz=206						
P52A	Corning	36.34	28	P	P	01 48 16.0	+0.2
	baz=216						
P52A	Corning	36.34	28	IAmb	IAmb	01 48 19.6	
	comp=Z,26nm,1.1s						
HLID	Hailey	36.43	346	P	P	01 48 17.4	+0.7
	baz=161,SNR=13						
ACSO	Alum Creek Sta	36.44	26	P	P	01 48 16.7	+0.1
	baz=215						
ACSO	Alum Creek Sta	36.44	26	IAmb	IAmb	01 48 18.1	
	comp=Z,37nm,1.1s						
Q54A	Coxs Mills	36.44	30	P	P	01 48 16.6	0.0
Q54A				IAmb	IAmb	01 48 18.4	
	comp=Z,34nm,1.0s						
S57A	Dark Hollow, R	36.49	33	P	P	01 48 17.3	+0.3
	baz=223						
I37A	Lemond, Waseca	36.49	12	IAmb	IAmb	01 48 17.9	
	comp=Z,28nm,0.8s						
N49A	Columbus Grove	36.50	24	IAmb	IAmb	01 48 18.4	
	comp=Z,22nm,1.1s						
U60A	Pendleton	36.58	36	P	P	01 48 18.0	+0.2
	baz=226						
WVOR	Wild Horse Val	36.59	341	P	P	01 48 19.4	+1.3
WVOR				pmax	pmax		
	comp=Z,18nm,1.1s						
WVOR	Wild Horse Val	36.59	341	P	P	01 48 19.4	+1.3
WVOR				IAmb	IAmb	01 48 21.2	
	comp=Z,18nm,1.1s						
MOD	Modoc Plateau	36.70	338	IAmb	IAmb	01 48 22.6	
	comp=Z,17nm,1.0s						
N02D	Trinity Center	36.86	335	P	P	01 48 21.0	+0.7
	baz=146						
RLMT	Red Lodge	37.01	353	P	P	01 48 22.0	+0.4
	baz=170,SNR=6.7						
RLMT	Red Lodge	37.01	353	P	P	01 48 22.4	+0.7
I40A	Norwalk	37.02	15	IAmb	IAmb	01 48 22.6	
	comp=Z,31nm,0.9s						
M04C	Macdoel	37.19	337	P	P	01 48 23.9	+0.7
	baz=148,SNR=15						
M02C	Callahan	37.27	335	P	P	01 48 24.9	+1.1
	baz=146						
MCMT	McKenzie Canyo	37.30	348	P	P	01 48 26.1	+1.9
R58A	Rapidan	37.39	33	P	P	01 48 24.9	+0.1
	baz=223						
MCWV	Mont Chateau	37.45	30	P	P	01 48 25.7	+0.5
	baz=220						
MCWV	Mont Chateau	37.45	30	IAmb	IAmb	01 48 26.9	
	comp=Z,40nm,1.4s						
K05A	Summer Lake	37.64	338	IAmb	IAmb	01 48 30.7	
	comp=Z,40nm,1.2s						
L04D	Klamath Falls	37.74	336	P	P	01 48 28.8	+0.9
	baz=148,SNR=10						
DLMT	Dillon	37.76	349	IAmb	IAmb	01 48 31.3	
	comp=Z,28nm,1.2s						
SPMN	Marine on St.	37.77	12	P	P	01 48 28.0	+0.1
	baz=196,SNR=7.2						
SPMN	Marine on St.	37.77	12	IAmb	IAmb	01 48 28.8	
	comp=Z,19nm,0.8s						
R59A	King George, V	37.81	34	P	P	01 48 28.5	+0.2
	baz=225						
BOZ	Bozeman (W)	37.82	350	P	P	01 48 29.7	+1.3
	baz=166,SNR=6.9						
BOZ	Bozeman (W)	37.82	350	IAmb	IAmb	01 48 31.5	
	comp=Z,32nm,1.8s						
KRMB	Red Mountain	37.82	334	IAmb	IAmb	01 48 31.9	
	comp=Z,20nm,1.1s						
P56A	Dayton Farm, R	37.84	31	P	P	01 48 28.5	0.0
	baz=221						
N53A	Lisbon	37.87	28	IAmb	IAmb	01 48 29.7	
	comp=Z,50nm,1.2s						
K04D	Chiloquin, OR	37.87	337	P	P	01 48 30.2	+1.3
	baz=149						
AAM	Ann Arbor	37.88	24	P	P	01 48 28.9	0.0
	baz=212						
L02E	Cave Junction	38.22	335	P	P	01 48 33.5	+1.8
	baz=146						
M52A	Chesterland	38.22	27	P	P	01 48 31.4	-0.4
J47A	Sunmer	38.23	22	IAmb	IAmb	01 48 32.8	
	comp=Z,41nm,1.1s						
J05D	Fort Rock, OR	38.25	338	P	P	01 48 33.7	+1.6
	baz=150,SNR=17						
F36A	Milaca	38.25	11	IAmb	IAmb	01 48 32.8	
	comp=Z,18nm,0.8s						
I07A	Izee	38.35	341	P	P	01 48 34.4	+1.4
N54A	Moraine State	38.39	29	P	P	01 48 33.3	+0.2
	baz=218						
N54A	Moraine State	38.39	29	IAmb	IAmb	01 48 34.6	
	comp=Z,52nm,1.2s						
G40A	Rib Lake	38.41	15	IAmb	IAmb	01 48 39.6	
	comp=Z,52nm,1.9s						
I45A	Fountain	38.44	20	P	P	01 48 34.9	+1.4
M53A	WI Miller and	38.44	27	P	P	01 48 33.7	+0.1
	baz=217						
M53A	WI Miller and	38.44	27	P	P	01 48 33.0	-0.7
J04D	Umpqua Nationa	38.53	337	P	P	01 48 35.9	+1.3
	baz=149,SNR=11						
PINE	Pine Mountain	38.58	339	IAmb	IAmb	01 48 38.5	
	comp=Z,34nm,1.0s						
K02D	Willamette Mer	38.69	335	P	P	01 48 37.2	+1.5
	baz=146,SNR=7.5						
M54A	Oil Creek Stat	38.97	28	P	P	01 48 38.4	+0.4
	baz=218						
M54A	Oil Creek Stat	38.97	28	IAmb	IAmb	01 48 39.2	
	comp=Z,50nm,1.4s						
O57A	Amberson	38.98	32	P	P	01 48 38.8	+0.6
	baz=222						
L53A	Girard	39.04	27	P	P	01 48 38.8	+0.1
	baz=217						
I04A	Tendick Farm,	39.12	338	P	P	01 48 40.4	+1.0
	baz=149						
I05D	Terrebonne, OR	39.20	339	P	P	01 48 41.5	+1.5
	baz=150,SNR=6.0						
E38A	The Farm, Brul	39.35	13	IAmb	IAmb	01 48 46.1	
	comp=Z,75nm,2.0s						
I03D	Drain, OR	39.40	337	P	P	01 48 43.4	+1.8
	baz=147						
N57A	Milroy	39.43	31	P	P	01 48 42.6	+0.7
	baz=222						
MSO	Missoula	39.43	348	P	P	01 48 42.7	+0.7
	baz=163,SNR=8.0						
MSO	Missoula	39.43	348	P	P	01 48 41.4	-0.6
MDND	Maddock	39.45	4	P	P	01 48 42.8	+0.8
	baz=185						
MDND	Maddock	39.45	4	IAmb	IAmb	01 48 43.8	
	comp=Z,81nm,1.6s						
COWI	Conover	39.45	15	P	P	01 48 40.9	-1.1
COWI				IAmb	IAmb	01 48 43.6	
	comp=Z,30nm,1.4s						
M56A	Emporium	39.66	30	P	P	01 48 44.2	+0.3
	baz=220						
H04A	Detroit Lake	39.80	339	IAmb	IAmb	01 48 47.5	
	comp=Z,29nm,1.0s						
EGMT	Eagleton	39.92	353	P	P	01 48 46.3	+0.3
	baz=170,SNR=11						
EGMT	Eagleton	39.92	353	IAmb	IAmb	01 48 48.2	
	comp=Z,22nm,1.0s						
I02D	Swisshome	39.94	337	P	P	01 48 46.8	+0.8
	baz=147						
DGMT	Dagmar	39.97	359	P	P	01 48 46.5	+0.2
	baz=178,SNR=5.6						
DGMT	Dagmar	39.97	359	IAmb	IAmb	01 48 48.5	
	comp=Z,28nm,0.8s						
G05D	Wamic, OR	39.98	340	P	P	01 48 47.6	+1.2
	baz=151						
M57A	Sunshine Farm,	40.07	31	P	P	01 48 47.6	+0.3
	baz=222						
F07A	Phinny Hill Vi	40.11	342	P	P	01 48 48.3	+0.9
F07A				IAmb	IAmb	01 48 50.9	
	comp=Z,31nm,1.1s						
I51A	Listowel	40.20	25	P	P	01 48 48.1	-0.2
	baz=215						
HAWA	Hanford	40.43	342	P	P	01 48 50.8	+0.7
M58A	Price's Panora	40.44	31	P	P	01 48 50.5	+0.1
	baz=223						
L56A	Greenwood	40.46	30	P	P	01 48 50.8	+0.3
	baz=221						
N59A	State Game Lan	40.47	32	P	P	01 48 51.1	+0.5
	baz=224						
F05D	White Salmon	40.59	340	P	P	01 48 52.9	+1.4
	baz=151						
B35A	Bob, Littlefor	40.63	10	IAmb	IAmb	01 48 53.0	
	comp=Z,75nm,1.7s						
EYMN	Ely	40.64	12	P	P	01 48 51.9	0.0
	baz=198,SNR=13						
EYMN	Ely	40.64	12	P	P	01 48 50.6	-1.3
E07A	Sunnyside	40.68	342	P	P	01 48 53.0	+0.8
E07A				IAmb	IAmb	01 48 55.5	
	comp=Z,26nm,1.0s						
L57A	Andrews Acres	40.70	30	P	P	01 48 53.0	+0.5
	baz=222						
TAOE	Nuku Hiva Isla	40.71	246	*e*T	T	02 31 55.6	
	comp=Z,102nm,0.3s						
MMNY	Mt. Morris Dam	40.74	29	IAmb	IAmb	01 48 54.4	
	comp=Z,58nm,1.4s						
N60A	Cedar Hill Far	40.80	33	P	P	01 48 53.7	+0.5
	baz=225						
K56A	Middlesex	40.99	29	P	P	01 48 55.7	+0.8
	baz=221						
L58A	Harry Jones Me	41.24	31	P	P	01 48 57.2	+0.3
	baz=223						
BINY	Binghamton	41.29	31	P	P	01 48 57.8	+0.5
	baz=223						
K57A	Scipio Center	41.41	30	P	P	01 48 58.5	+0.2
	baz=222						
NEW	Newport	41.50	346	P	P	01 48 59.9	+0.9
	baz=159,SNR=15						
NEW	Newport	41.50	346	IAmb	IAmb	01 49 01.1	
	comp=Z,17nm,0.9s						
E04D	Cinebar	41.55	340	P	P	01 49 00.7	+1.3
	baz=150,SNR=11						
WALA	Waterton Lakes	41.57	349	P	P	01 49 00.7	+1.0
J56A	Wolcott	41.65	29	P	P	01 49 00.7	+0.4
	baz=221						
M61A	Granite Spring	41.83	34	P	P	01 49 01.6	-0.1
	baz=226						
H53A	Bobcaygeon	41.86	26	P	P	01 49 01.7	-0.2
	baz=218						
K58A	Earlville	41.87	31	P	P	01 49 01.9	-0.2
	baz=223						
E03A	Lebam	41.90	339	IAmb	IAmb	01 49 05.5	
	comp=Z,44nm,1.2s						
D05A	Enumclaw	41.91	341	IAmb	IAmb	01 49 05.1	
	comp=Z,18nm,0.9s						
B08A	Colville Reser	42.16	344	P	P	01 49 04.3	-0.1
ULM	Lac du Bonnet	42.17	7	P	P	01 49 02.2	-2.2
	comp=Z,12nm,1.1s,baz=196,slow=9.5,SNR=10.0						
ULM				PcP	PcP	01 50 56.2	-2.4
	comp=Z,2.7nm,0.8s,baz=166,slow=4.0,SNR=4.9						
ULM				LR	LR	02 06 25.5	
	comp=Z,620nm,20.6s,baz=198,slow=36						
ULM	Lac du Bonnet	42.17	7	P	P	01 49 03.2	-1.2
ULM				pmax	pmax		
	comp=Z,16nm,1.2s						
ULM	Lac du Bonnet	42.17	7	P	P	01 49 03.2	-1.2
DELO	Deloro Mine	42.25	27	IAmb	IAmb	01 49 19.9	
	comp=Z,44nm,1.6s						
K59A	Cooperstown	42.28	31	P	P	01 49 05.2	-0.2
	baz=224						
D03D	Eldon	42.58	340	P	P	01 49 08.7	+1.0
	baz=150,SNR=5.2						
G54A	Lake Saint Pet	42.73	26	P	P	01 49 08.8	-0.2
	baz=218						
NLWA	Neilton Lookou	42.73	339	IAmb	IAmb	01 49 12.1	
	comp=Z,27nm,1.0s						
I58A	Old Forge	42.88	30	P	P	01 49 10.0	-0.3
	baz=223						
B05A	Bryant	42.89	341	P	P	01 49 11.1	+0.9
	baz=152						
PLVO	Plevna	42.90	27	IAmb	IAmb	01 49 29.1	
	comp=Z,47nm,1.7s						
J59A	Piesco	42.95	31	P	P	01 49 10.6	-0.3
	baz=224						
ALGO	Algonquin Park	43.18	26	P	P	01 49 13.0	+0.3
	baz=218,SNR=5.7						
H57A	Richville	43.25	29	P	P	01 49 13.5	+0.3
	baz=222						
SAML	Samuel	43.30	113	P	P	01 49 12.9	-1.2
SAML				pmax	pmax		
	comp=Z,26nm,1.2s						
SAML	Samuel	43.30	113	P	P	01 49 12.8	-1.2
SAML				IAmb	IAmb	01 49 20.4	
	comp=Z,26nm,1.1s						
A04D	Lummi Island	43.49	341	P	P	01 49 16.8	+1.8
	baz=151						
LONY	Lake Ozonia	43.75	30	P	P	01 49 17.5	+0.2
	baz=223						
H58A	Gabriels	43.80	30	P	P	01 49 17.8	+0.1
	baz=223						
I60A	Shoreham	43.84	31	P	P	01 49 18.3	+0.3
	baz=225						
G57A	Newington	43.91	29	P	P	01 49 19.1	+0.5
	baz=222						
RKT	Rikitea	44.20	224	*e*LR	LR	02 01 35.0	
	comp=Z,2µm,27.0s						
H59A	Cadyville	44.21	30	P	P	01 49 21.5	+0.5
	baz=224						
G58A	Ormstown	44.40	29	P	P	01 49 22.2	-0.2
	baz=223						
FRNY	Flat Rock	44.40	30	IAmb	IAmb	01 49 23.6	
	comp=Z,35nm,1.4s						
H60A	Morristown	44.65	31	P	P	01 49 24.5	0.0
	baz=225						
LBNH	Lisbon	44.82	32	P	P	01 49 25.8	-0.1
	baz=226						
I62A	Tamworth	44.89	33	P	P	01 49 26.2	-0.2
	baz=227						
TRQ	Mont Tremblant	44.95	28	P	P	01 49 27.6	+0.7
E56A	St. Veronique	44.97	27	P	P	01 49 27.4	+0.4
	baz=221						
D55A	Sainte-Anne-du	45.13	27	P	P	01 49 27.9	-0.3
	baz=220,SNR=6.4						
E57A	Chemin Saint G	45.28	28	P	P	01 49 29.2	-0.3
	baz=222,SNR=5.7						
I63A	Otisfield	45.41	33	P	P	01 49 31.0	+0.5
	baz=228						
H62A	Milan	45.45	32	P	P	01 49 31.2	+0.2
	baz=227						
D56A	ZEC Mazanza, M	45.47	27	P	P	01 49 31.6	+0.5
	baz=221						
E58A	La Victoria	45.66	29	P	P	01 49 32.5	0.0
	baz=223						
LSQQ	Lebel-sur-Quev	46.09	24	P	P	01 49 36.2	+0.3
	baz=217						
FFC	Flin Flon	46.23	1	P	P	01 49 36.2	-0.7
FFC				pmax	pmax		
	comp=Z,23nm,1.5s						
FFC	Flin Flon	46.23	1	P	P	01 49 36.2	-0.7
FFC				IAmb	IAmb	01 49 43.6	
	comp=Z,23nm,1.5s						
D58A	Chemin du LacG	46.37	28	P	P	01 49 38.7	+0.6
	baz=223						
MATQ	Matagami	46.40	23	P	P	01 49 38.6	+0.4
	baz=216,SNR=5.5						
H64A	Troy	46.53	33	P	P	01 49 40.1	+0.7
	baz=229						
E60A	Ste Agathe de	46.54	30	P	P	01 49 39.6	+0.1
	baz=225						
LATQ	La Tuque	46.63	28	P	P	01 49 40.5	+0.4
	baz=223						
LATQ	La Tuque	46.63	28	IAmb	IAmb	01 49 41.9	
	comp=Z,27nm,1.6s						
PKME	Peaks-Kenny Pk	46.90	33	P	P	01 49 42.4	+0.1
	baz=229						
F63A	Nahmakanta, Br	47.29	32	P	P	01 49 45.7	+0.3
	baz=229						
H03N2	Juan Fernandez	47.49	152	T	T	02 40 37.3	
	baz=329,slow=77,SNR=40						
H03N1	Juan Fernandez	47.50	152	T	T	02 40 39.5	
	baz=329,slow=77,SNR=58						
H03N3	Juan Fernandez	47.51	152	T	T	02 40 38.3	
	baz=329,slow=77,SNR=58						
D61A	St Aubert, Com	47.75	30	P	P	01 49 49.4	+0.6
	baz=226						
F64A	Sherman	47.79	32	P	P	01 49 48.9	-0.3
	baz=229						
AC02	Maricunga	48.04	138	IAmb	IAmb	01 49 54.8	
	comp=Z,8.5nm,1.1s						
E63A	Oxbow	48.12	32	P	P	01 49 51.8	0.0
	baz=229						
VAH	Vaihoa	50.00	242	*e*T	T	02 43 34.9	
	comp=Z,5.8nm,0.3s						
FCC	Fort Churchill	50.74	6	IAmb	IAmb	01 50 12.9	
	comp=Z,34nm,1.4s						
PPT	Papeete	52.68	240	LR	LR	02 06 17.3	
	comp=Z,714nm,18.7s,baz=46,slow=29						
PPT2	Papeete2	52.69	240	*e*S	S	01 57 48.7	-6.3
	comp=Z,612nm,28.8s						
PPT2				*e*LR	LR	02 05 26.4	
	comp=Z,2µm,24.5s,baz=56						
BI02	San Fabin de	53.83	148	P	P	01 50 35.9	+1.0

BI02				IAmb	IAmb	01 50 37.2	
	comp=Z,16nm,1.0s						
YKA	Yellowknife Ar	54.67	353	P	P	01 50 38.9	-1.6
	comp=Z,7.7nm,1.0s,baz=161,slow=7.7,SNR=52						
YKA				PcP	PcP	01 51 42.5	-0.8
	comp=Z,3.5nm,0.9s,baz=152,slow=3.9,SNR=11						
YKA				LR	LR	02 14 28.6	
	comp=Z,1µm,19.0s,baz=0.0,slow=37						
TBI	Tubuai	55.23	234	*e*S	S	01 58 23.8	-5.3
	comp=Z,208nm,30.0s						
TBI				*e*LR	LR	02 06 38.8	
	comp=Z,1µm,26.8s,baz=58						
TBI	Tubuai	55.23	234	*e*T	T	02 50 07.8	
	comp=Z,8.1nm,0.3s						
LC01	Cunco	55.25	151	P	P	01 50 45.9	+0.8
LC01				IAmb	IAmb	01 50 47.4	
	comp=Z,10nm,0.9s						
CPUP	Villa Florida	56.22	129	P	P	01 50 52.4	+0.1
	comp=Z,5.6nm,0.9s,baz=314,slow=7.7,SNR=10.0						
CPUP	Villa Florida	56.22	129	P	P	01 50 53.5	+1.2
CPUP				pmax	pmax		
	comp=Z,11nm,1.1s						
CPUP	Villa Florida	56.22	129	P	P	01 50 53.5	+1.2
CPUP				IAmb	IAmb	01 50 54.0	
	comp=Z,11nm,1.1s						
PLCA	Paso Flores	57.31	151	P	P	01 50 59.5	-0.4
	comp=Z,5.5nm,1.0s,baz=343,slow=10,SNR=6.2						
PLCA				LR	LR	02 10 26.5	
	comp=Z,466nm,18.0s,baz=328,slow=31						
PLCA	Paso Flores	57.31	151	*e*P	P	01 51 01.0	+1.1
PLCA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BDFB	Brasilia	59.52	114	P	P	01 51 15.0	-0.8
	comp=Z,7.2nm,0.9s,baz=294,slow=10,SNR=8.4						
BDFB	Brasilia	59.52	114	P	P	01 51 14.2	-1.6
BDFB				pmax	pmax		
	comp=Z,15nm,1.2s						
BDFB	Brasilia	59.52	114	P	P	01 51 14.2	-1.6
BDFB				IAmb	IAmb	01 51 19.3	
	comp=Z,15nm,1.2s						
BCAR	Beaver Creek A	61.29	341	P	P	01 51 27.9	+0.9
KDAK	Kodiak Island	62.21	333	*i* P	P	01 51 36.6	+3.4
KDAK				pmax	pmax		
	comp=Z,16nm,1.0s						
EPYK	Eagle Plains	62.33	345	P	P	01 51 34.2	+0.2
	baz=142,SNR=8.0						
EPYK	Eagle Plains	62.33	345	IAmb	IAmb	01 51 35.2	
	comp=Z,13nm,0.8s						
EGAK	Eagle	62.33	343	P	P	01 51 33.7	-0.2
EGAK				IAmb	IAmb	01 51 35.3	
	comp=Z,11nm,0.9s						
C36M	Paulatuk	62.42	352	P	P	01 51 34.3	-0.1
	baz=156						
DOT	Dot Lake	62.44	341	P	P	01 51 35.3	+0.6
DOT				IAmb	IAmb	01 51 36.5	
	comp=Z,9.6nm,0.8s						
SCRK	Sand Creek	62.64	341	P	P	01 51 36.3	+0.1
	baz=133,SNR=8.5						
SUA	Susitna One	63.46	337	IAmb	IAmb	01 51 44.1	
	comp=Z,10nm,0.9s						
HDA	Harding Lake	63.89	340	P	P	01 51 44.5	+0.1
	baz=130						
ILAR	Eielson Array	64.11	341	P	P	01 51 44.5	-1.3
	comp=Z,13nm,0.8s,baz=149,slow=5.1,SNR=84						
MCK	McKinley	64.14	339	P	P	01 51 46.4	+0.3
	baz=128						
WRH	Wood River Hil	64.32	340	IAmb	IAmb	01 51 48.7	
	comp=Z,8.6nm,1.0s						
COLA	College	64.49	341	*i* P	P	01 51 47.8	-0.4
COLA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
NEA2	Nenana	64.72	340	P	P	01 51 49.4	-0.4
	baz=128,SNR=14						
KTH	Kantishna Hill	64.75	338	IAmb	IAmb	01 52 01.9	
	comp=Z,12nm,1.0s						
FYU	Fort Yukon	64.79	343	IAmb	IAmb	01 51 51.8	
	comp=Z,12nm,0.8s						
PPLA	Purkeypile	64.84	338	P	P	01 51 51.1	+0.3
BPAW	Bear Paw Mtn.	65.09	339	IAmb	IAmb	01 52 23.9	
	comp=Z,28nm,1.8s						
I23K	Minto, Yukon-K	65.16	340	P	P	01 51 53.0	+0.4
	baz=128,SNR=15						
BMAR	Burnt Mountain	65.20	344	P	P	01 51 53.0	+0.1
MLY	Manley	65.56	340	P	P	01 51 55.4	+0.1
	baz=126,SNR=7.6						
TTA	Tatalina	66.33	337	IAmb	IAmb	01 52 00.8	
	comp=Z,5.9nm,0.9s						
COLD	Coldfoot	66.72	342	P	P	01 52 03.0	+0.4
	baz=128,SNR=8.7						
COLD	Coldfoot	66.72	342	IAmb	IAmb	01 52 15.4	
	comp=Z,12nm,1.1s						
IMAR	Indian Mountai	67.13	340	P	P	01 52 04.0	-1.3
TOLK	Toolik Lake Re	67.41	343	P	P	01 52 07.0	-0.1
	baz=129,SNR=15						
TOLK	Toolik Lake Re	67.41	343	IAmb	IAmb	01 52 09.1	
	comp=Z,14nm,0.8s						
RDOG	Red Dog Mine	71.28	340	IAmb	IAmb	01 52 32.8	
	comp=Z,12nm,0.9s						
TNA	Tin City	72.16	337	P	P	01 52 35.8	-0.5
	baz=110,SNR=6.9						
TNA	Tin City	72.16	337	P	P	01 52 36.2	0.0
TNA				IAmb	IAmb	01 52 38.1	
	comp=Z,8.1nm,0.9s						
ICESG	Greenland Ices	72.91	20	*i* P	P	01 52 41.0	-0.1
ICESG				IAmb	IAmb	01 52 41.6	
	comp=Z,14nm,0.9s						
SUMG	Summit	74.59	16	*i* P	P	01 52 51.0	0.0
	comp=Z,36nm,0.9s						
SUMG	Summit	74.59	16	*i* P	P	01 52 51.0	0.0
SUMG				pmax	pmax		
	comp=Z,36nm,0.9s						
SUMG	Summit	74.59	16	P	P	01 52 50.9	0.0
SUMG				IAmb	IAmb	01 52 54.2	
	comp=Z,26nm,1.2s						
SUMG	Summit	74.59	16	*i* P	P	01 52 51.0	0.0
SUMG				IAmb	IAmb	01 52 52.3	
	comp=Z,36nm,0.9s						
DAG	Danmarks Havn	80.62	13	*i* P	P	01 53 22.9	-1.2
DAG	Danmarks Havn	80.62	13	*i* P	P	01 53 22.9	-1.2
DAG	Danmarks Havn	80.62	13	*i* P	P	01 53 22.9	-1.2
BKZ	Black Stump Fm	87.89	230	P	P	01 54 03.7	+1.9
PETK	Petropavlovsk-	88.87	323	LR	LR	02 26 35.2	
	comp=Z,93nm,20.1s,baz=49,slow=31						
SEY	Seymchan	89.15	334	*i* P	P	01 54 06.8	-0.4
TIXI	Tiksi	93.21	346	*i* P	P	01 54 25.6	-0.3
TIXI	Tiksi	93.21	346	P	P	01 54 24.3	-1.6
DZM	Mont Dzumac	93.55	248	*e*LR	LR	02 24 21.4	
	comp=Z,388nm,25.6s						
NOA	NORSAR Array B	94.11	26	LR	LR	02 34 44.9	
	comp=Z,325nm,21.9s,baz=290,slow=34						
ARCES	ARCESS Array B	94.68	16	LR	LR	02 37 08.8	
	comp=Z,563nm,21.2s,baz=315,slow=36						
LVZ	Lovozero	98.23	15	*i* P	P	01 54 46.1	-2.8
LVZ				pmax	pmax		
	comp=Z,15nm,1.0s						
YAK	Yakutsk	98.91	338	*i* P	P	01 54 49.7	-2.3
YAK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
SYO	Syowa Base	114.73	166	⇑*e*P	Pdif	01 56 17.4	+15
KIV	Kislovodsk	119.39	28	*e*PKIKP	PKPdf	01 59 58.1	-3.7
KIV				pmax	pmax		
	comp=Z,9.0nm,0.9s						
HHC	Hu-ho-hao-te	121.56	330	*e*PKP	PKPdf	02 00 07.6	+1.5
NJ2	Nanjing	123.28	317	*e*PKP	PKPdf	02 00 09.0	-0.5
WRA	Warramunga Arr	123.40	252	PKP	PKPdf	02 00 09.1	-1.0
	comp=Z,1.0nm,0.9s,baz=90,slow=1.7,SNR=5.7						
WRA	Warramunga Arr	123.40	252	*e*PKIKP	PKPdf	02 00 10.4	+0.4
WRA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ASAR	Alice Springs	123.52	247	PKP	PKPdf	02 00 07.6	-2.7
	comp=Z,0.9nm,0.9s,baz=98,slow=1.9,SNR=6.8						
ASAR	Alice Springs	123.52	247	PKIKP	PKPdf	02 00 09.1	-1.1
ASAR	Alice Springs	123.52	247		PKPdf	02 00 09.1	-1.1
MKAR	Makanchi Array	124.88	356	PKP	PKPdf	02 00 09.8	-2.5
	comp=Z,0.8nm,0.7s,baz=339,slow=2.0,SNR=8.3						
MKAR				PP	PP	02 01 57.1	-1.7
	comp=Z,1.2nm,1.0s,baz=1.4,slow=4.9,SNR=6.0						
WMQ	Urumqi	127.14	350	*e*PKP	PKPdf	02 00 17.8	+1.1
WMQ				LR	LR		
	comp=Z,230nm,20.3s						
KSH	Kashi	132.35	1	PKP	PKPdf	02 00 28.3	+1.5
KSH				PP	PP	02 02 54.3	+6.3
KSH				PKS	PKSdf	02 03 59.5	-3.9
LAMP	Lampang	145.13	320	P	PKPdf	02 00 52.0	+1.5
CM35	Chiang Mai Arr	145.32	321	P	PKPbc	02 00 51.0	+0.5
CM33	Chiang Mai Arr	145.34	321	P	PKPbc	02 00 50.0	-0.6
CMMT	Chiang Mai	145.34	321	P	PKPbc	02 00 49.8	-0.8
CM36	Chiang Mai Arr	145.47	321	P	PKPdf	02 00 50.0	-1.1
CM32	Chiang Mai Arr	145.53	321	P	PKPdf	02 00 51.7	+0.6
CM09	Chiang Mai Arr	145.59	321	P	PKPdf	02 00 52.0	+0.7
CMAR	Chiang Mai Arr	145.61	321	PKPbc	PKPdf	02 00 49.3	-2.0
	comp=Z,4.6nm,0.6s,baz=356,slow=2.0,SNR=20						
CMAR	Chiang Mai Arr	145.61	321	*e*PKIKP	PKPdf	02 00 52.0	+0.7
CMAR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
CMAR	Chiang Mai Arr	145.61	321		PKPdf	02 00 50.6	-0.7
CM02	Chiang Mai Arr	145.63	321	P	PKPdf	02 00 52.6	+1.3
CM05	Chiang Mai Arr	145.65	321	P	PKPdf	02 00 52.6	+1.3
CM13	Chiang Mai Arr	145.66	321	P	PKPdf	02 00 52.5	+1.2

DJA ***18*** *01:48:16.5±0.8, 3°S±9°×12°9E±°, h13^{km}±10^{km}, M3.3/6, MLv3.3/6*

IDC ***18*** *01:48:23.1±2.6, 4°.02S×129°.76E, h0^{km}, mb3.3/1, mb1 3.4/3, mb1mx3.2/22, mbtmp3.2/3, ML3.2/2, MS4.1/1, Ms1 4.1/1, ms1mx3.6/10, Error ellipse: s-maj=166.7km s-min=31.8km az=70.0*

ISC 18 01:48:11.7±1.1**, 2°.89S**±0°.09×**129°.53E**±0°.07**, h10^{km}, n8, σ0^{s}.61**/7**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	Masohi	0.75	233	P	Pb	01 48 27.7	+0.8
MSAI				S	Sg	01 48 35.4	-0.7
SWI	Sorong	2.65	41	P	Pg	01 49 02.5	-0.1
FAKI	Fak Fak	2.72	91	P	Pg	01 49 03.9	+0.1
SANI	Sanana	3.63	283	P	Pn	01 49 07.9	-0.1
WRA	Warramunga Arr	17.59	165	Pn	Pn	01 52 16.5	-0.6
	0.1nm,0.3s,baz=348,slow=12,SNR=1.1						
ASAR	Alice Springs	21.09	169	P	P	01 52 56.4	0.0
	0.1nm,0.3s,baz=348,slow=11,SNR=6.5						
KSRS	Korea Array	40.16	358	LR	LR	02 13 04.5	
	comp=Z,259nm,21.2s,baz=38,slow=36						
MKAR	Makanchi Array	64.56	326	P	P	01 59 09.1	+20
	0.2nm,0.7s,baz=143,slow=6.3,SNR=2.9						

IDC ***18*** *02:01:20.4±3.7, 13°.29N×124°.26E, h0^{km}, mb3.4/3, mb1 3.6/3, mb1mx3.3/27, mbtmp3.4/3, Error ellipse: s-maj=302.9km s-min=29.4km az=64.0*

MAN ***18*** *02:01:24.9, 12°.79N×123°.08E, h20^{km}, MS3.4*

ISC 18 02:01:26.3±1.2**, 12°.84N**±0°.04×**123°.03E**±0°.04**, h26**^{km}±13^{km}**, n18, σ1^{s}.41**/23**, mb3.4**/3**, 1C-1D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCSP	San Jose Seism	0.94	30	*e*P	Pn	02 01 42.6	-1.1
SCSP				*e*S	Sb	02 01 56.2	+0.3
GQP	Guinayangan	1.20	332	⇓*i*P	Pn	02 01 47.2	-0.1
GQP				*i* S	Sb	02 02 04.9	+1.3
BOAC	Boac	1.31	298	*e*P	Pn	02 01 47.5	-1.4
BOAC				*e*S	Sb	02 02 06.3	-0.4
JCNP	Jose Panganiba	1.48	347	*e*P	Pn	02 01 51.0	-0.1
JCNP				*e*S	Sb	02 02 11.5	0.0
CNP	Catarman	1.62	101	*e*P	Pb	02 01 54.5	-1.1
CNP				*e*S	Sb	02 02 18.8	+3.2
SJMP	San Jose	1.91	259	*e*P	Pn	02 01 57.2	+0.1
LQP	Lukban	1.93	311	⇑*e*P	Pn	02 01 57.9	+0.3
LQP				*i* S	Sb	02 02 27.4	+2.8
GUIM	Jordan	2.24	191	*e*P	Pb	02 02 04.9	-1.3
MACP	Maragondon, Ca	2.66	302	*e*P	Pn	02 02 08.3	+0.9
LLP	Lapu-Lapu	2.67	160	*e*P	Pn	02 02 07.1	-0.5
LLP				*e*S	Sn	02 02 40.9	+1.8
CNOP	Candoni, Negro	3.02	187	*e*P	Pn	02 02 11.7	-0.7
MSLP	Maasin	3.23	146	*e*P	Pn	02 02 15.0	-0.3
MSLP				*e*S	Sb	02 03 03.4	+1.5
WRA	Warramunga Arr	34.42	161	P	P	02 08 10.2	-1.6
	0.3nm,0.6s,baz=343,slow=9.1,SNR=1.5						
ASAR	Alice Springs	37.81	164	P	P	02 08 39.8	-0.9
	0.4nm,0.6s,baz=346,slow=7.1,SNR=4.4						
H11N1	WAKE ISLAND Hy	42.56	75	T	T	02 53 50.5	
	baz=267						
H11N2	WAKE ISLAND Hy	42.56	75	T	T	02 53 45.9	
	baz=267						
H11N3	WAKE ISLAND Hy	42.58	75	T	T	02 53 40.9	
	baz=267						
MKAR	Makanchi Array	48.08	323	P	P	02 10 04.6	+1.0
	0.3nm,0.7s,baz=123,slow=7.9,SNR=4.0						

NNC ***18*** *02:08:13.3±0.3, 43°.23N×78°.70E, h0^{km}, mb2.5, mpv2.0, Error ellipse: s-maj=5.7km s-min=1.9km az=172.0*

SOME ***18*** *02:08:13.2, 43°.23N×78°.70E, h0^{km}*

ISC 18 02:08:13.6±1.2**, 43°.24N**±0°.04×**78°.69E**±0°.03**, h3**^{km}±16^{km}**, n8, σ0^{s}.21**/15**, 4C-2D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KPKS	Kokpek	0.22	359	*e*P	Pg	02 08 17.7	-0.2
	5.6nm,0.1s						
KPKS				*e*S	Sg	02 08 21.0	+0.2
	4.1nm,0.2s						
UZB	Uzynbulak	0.26	112	*e*P	Pg	02 08 18.4	-0.2
	0.8nm,0.1s						
UZB				*e*S	Sg	02 08 22.1	+0.2
	2.9nm,0.1s						
UZB	Uzynbulak	0.26	112	P	Pg	02 08 18.4	-0.2
	0.7nm,0.1s						
UZB				S	Sg	02 08 22.2	+0.2
	4.1nm,0.2s						
SATY	Saty	0.28	229	*e*P	Pg	02 08 18.8	-0.2
	1.0nm,0.1s						
SATY				*e*S	Sg	02 08 22.8	+0.2
	12nm,0.2s						
SATY	Saty	0.28	229	P	Pg	02 08 18.8	-0.2
	0.8nm,0.1s						
SATY				S	Sg	02 08 22.8	+0.2
	11nm,0.2s						
PDGK	Podgornoye	0.59	81	⇑P	Pg	02 08 24.7	-0.2
	0.4nm,0.5s						
PDGK				⇑S	Sg	02 08 32.9	+0.4
	1.8nm,1.1s						
MDOK	Medeo	1.21	267	⇓P	Pg	02 08 36.6	-0.1
	5.1nm,1.2s						
MDOK				⇓S	Sb	02 08 53.3	+0.1
	13nm,1.5s						
TKM2	Tokmak 2	2.29	263	⇑Pg	Pn	02 08 52.5	-0.1
	4.3nm,1.3s						
TKM2				⇑Lg	Lg	02 09 26.8	
	4.9nm,1.2s						

SJA ***18*** *02:16:16.3±0.6, 18°.98S×67°.60W, h290^{km}±5^{km}, ML4.4, MW4.0*

IDC ***18*** *02:16:17.2±1.1, 18°.93S×67°.34W, h216^{km}±12^{km}, mb3.6/7, mb1 3.7/14, mb1mx3.6/41, mbtmp4.2/14, Error ellipse: s-maj=14.7km s-min=12.4km az=112.0*

VAO ***18*** *02:16:18.5±0.4, 18°.93S×67°.41W, h241^{km}±6^{km}, mb4.1*

NEIC ***18*** *02:16:19.4±2.5, 19°.09S±0°.08×67°.34W±0°.09, h236^{km}±2^{km}, mb4.2/35, Error ellipse: s-maj=13.0km s-min=11.2km az=70.0*

SCB ***18*** *02:16:19.3±2.4, 19°.08S×67°.35W, h244^{km}±19^{km}, ML4.2/4, Error ellipse: s-maj=9.1km s-min=5.8km az=1.0*

ISC 18 02:16:18.4±0.6**, 19°.05S**±0°.04×**67°.41W**±0°.04**, h234**^{km}±6^{km}**, n178, σ1^{s}.87**/213**, mb4.1**/21**, Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB08	IPOC Station P	1.97	236		Pn	02 17 01.4	+1.6
PB08				S	S	02 17 34.3	+2.2
PB08	IPOC Station P	1.97	236	P	Pn	02 17 01.5	+1.8
PB08	IPOC Station P	1.97	236	*e*P	Pn	02 17 01.4	+1.6
MNMC	Minye Minye	2.07	267		Pn	02 17 01.8	+1.2
MNMC				S	S	02 17 35.4	+1.9
MNMC	Minye Minye	2.07	267	P	Pn	02 17 02.0	+1.4
MNMC				S	S	02 17 35.1	+1.6
MNMC				IAML		02 17 35.9	
	400nm,0.8s						
MNMCX	Minye Minye	2.07	267	*e*P	Pn	02 17 01.7	+1.1
MNMCX				*e*S	S	02 17 35.6	+2.1
PB16	IPOC Station P	2.12	289	Pn	Pn	02 17 02.7	+1.4
PB16				S	S	02 17 38.0	+3.2
PB16	IPOC Station P	2.12	289	*e*P	Pn	02 17 02.8	+1.5
PB16				*e*S	S	02 17 38.5	+3.7
BBOE	La Paz, Chanca	2.29	346	P	Pn	02 17 04.5	+1.4
PSGC	Pisagua	2.62	258	P	Pn	02 17 06.8	+0.9
PSGCX	Pisagua	2.62	258	Pn	Pn	02 17 06.3	+0.4
PSGCX	Pisagua	2.62	258	*e*P	Pn	02 17 06.1	+0.2
PSGCX				*e*S	S	02 17 43.3	+0.1
BBOD	La Paz, Gloria	2.66	334	P	Pn	02 17 08.2	+1.4
MOCB	Mochara	2.75	143	P	Pn	02 17 09.0	+1.4
MOCB				S	S	02 17 45.5	-0.8
MOCB				IAML		02 17 51.3	
	466nm,0.5s						
PB01	IPOC Station P	2.79	224	Pn	Pn	02 17 08.6	+1.0
PB01				S	S	02 17 46.8	+0.4
PB01	IPOC Station P	2.79	224	P	Pn	02 17 09.0	+1.3
PB01	IPOC Station P	2.79	224	*e*P	Pn	02 17 08.7	+1.0
PB01				*e*S	S	02 17 48.0	+1.6
PB01				IAML		02 17 52.1	
	comp=Z,425nm,0.1s						
AP01	Chacalluta	2.86	283	Pn	Pn	02 17 09.1	+0.7
BBOB	La Paz, Bander	2.98	346	P	Pn	02 17 10.6	+0.3
TA01	Diego Aracena	3.02	240	Pn	Pn	02 17 10.9	+0.8
PATCX	Punta Patache	3.13	235	Pn	Pn	02 17 12.8	+1.3
PB09	IPOC Station P	3.23	212		Pn	02 17 14.7	+2.0
PB09	IPOC Station P	3.23	212	P	Pn	02 17 14.6	+2.0
PB09	IPOC Station P	3.23	212	*e*P	Pn	02 17 14.6	+2.0
PB09				*e*S	S	02 17 57.8	+2.4
PB07	IPOC Station P	3.54	221	Pn	Pn	02 17 17.1	+0.9
PB07	IPOC Station P	3.54	221	*e*P	Pn	02 17 17.6	+1.4
PB07				*e*S	S	02 17 54.5	-7.3
PB07				IAML		02 18 04.0	
	comp=Z,185nm,0.3s						
YJA	Yavi	3.58	151	P	Pn	02 17 18.1	+1.1
YJA	Yavi	3.58	151	*e*P	Pn	02 17 18.1	+1.1
YJA				*e*S	S	02 18 05.3	+2.2
LVC	Limon Verde	3.81	201	P	Pn	02 17 20.7	+1.1
	comp=Z,9.7nm,0.3s,baz=26,slow=13,SNR=107						
LVC				S	S	02 18 07.4	-0.5
	comp=Z,16nm,0.3s,baz=264,slow=21,SNR=17						
LVC	Limon Verde	3.81	201	Pn	Pn	02 17 20.9	+1.3
LVC	Limon Verde	3.81	201	*e*P	Pn	02 17 21.0	+1.4
LVC				*e*S	S	02 18 07.1	-0.8
LVC	Limon Verde	3.81	201	*e*P	Pn	02 17 21.4	+1.7
PB04	IPOC Station P	4.16	218	Pn	Pn	02 17 25.0	+1.5
PB04	IPOC Station P	4.16	218	P	Pn	02 17 25.2	+1.6
PB04				S	S	02 18 13.6	-1.4
PB04				IAML		02 18 18.4	
	comp=Z,232nm,0.9s						
PB04	IPOC Station P	4.16	218	*e*P	Pn	02 17 25.2	+1.6
PB04				IAML		02 18 21.3	
	comp=Z,214nm,0.3s						
PB06	IPOC Station P	4.16	209	Pn	Pn	02 17 24.9	+1.2
PB06	IPOC Station P	4.16	209	P	Pn	02 17 25.0	+1.4
PB06				S	S	02 18 13.8	-1.4
PB06				IAML		02 18 14.7	
	comp=Z,197nm,0.7s						
PB06	IPOC Station P	4.16	209	*e*P	Pn	02 17 24.8	+1.2
PB06				*e*S	S	02 18 15.0	-0.2
PB06				IAML		02 18 21.0	
	comp=Z,336nm,0.1s						
PB15	IPOC Station P	4.56	205	Pn	Pn	02 17 30.0	+1.4
PB15	IPOC Station P	4.56	205	*e*P	Pn	02 17 29.9	+1.4
PB15				*e*S	S	02 18 24.5	+0.4
PB05	IPOC Station P	4.60	214	*e*P	Pn	02 17 29.8	+1.0
PB05				*e*S	S	02 18 22.3	-2.4
PB05				IAML		02 18 26.4	
	comp=Z,198nm,0.9s						
PB10	IPOC Station P	5.32	213	Pn	Pn	02 17 38.0	+0.3
PB10	IPOC Station P	5.32	213	P	Pn	02 17 38.2	+0.5
PB10	IPOC Station P	5.32	213	*e*P	Pn	02 17 37.9	+0.2
PB10				*e*S	S	02 18 37.1	-3.7
AZAP	Zapla	5.59	158	*e*P	Pn	02 17 41.4	+0.1
AZAP				*e*S	S	02 18 47.4	+0.2
AZAP				IAML		02 18 49.0	
	comp=Z,87nm,0.4s						
ASTB	Santa Barbara	5.59	151	*e*P	Pn	02 17 41.4	+0.1
ASTB				*e*S	S	02 18 45.2	-2.0
SLA	San Lorenzo	5.91	163	P	Pn	02 17 46.3	+1.0
SLA	San Lorenzo	5.91	163	*e*P	Pn	02 17 46.6	+1.3
SLA				*e*S	S	02 18 53.9	-0.6
PB14	IPOC Station P	6.21	206	Pn	Pn	02 17 49.8	+0.6
PB14	IPOC Station P	6.21	206	*e*P	Pn	02 17 49.4	+0.2
PB14				*e*S	S	02 18 58.2	-3.3
PB14				IAML		02 19 01.3	
	comp=Z,128nm,0.4s						
GO02	Mina Guanaco	6.41	198	Pn	Pn	02 17 52.0	+0.2
SIV	San Ignacio	6.76	64	P	Pn	02 17 53.2	-2.8
	comp=Z,12nm,0.3s,baz=268,slow=9.4,SNR=270						
SIV				S	S	02 19 09.8	-4.2
	baz=354,slow=20,SNR=1.4						
SIV	San Ignacio	6.76	64	P	Pn	02 17 53.8	-2.2
FSA	Cafayete	7.15	170	*e*P	Pn	02 18 02.6	+1.6
AC01	Pan de Azucar	7.65	202	Pn	Pn	02 18 06.4	-0.9
AC02	Maricunga	7.91	191	Pn	Pn	02 18 11.2	+0.2
AHML	Horco Molle	7.93	166	P	Pn	02 18 11.5	+0.7
AHML	Horco Molle	7.93	166	*e*P	Pn	02 18 11.5	+0.7
GO03	Copiap	8.89	196	Pn	Pn	02 18 21.8	-1.3
GO03	Copiap	8.89	196	*e*P	Pn	02 18 22.1	-1.0
GO03				*e*S	S	02 19 59.6	-4.0
VILB	Vilhena	9.21	50	*e*P	Pn	02 18 25.5	-1.7
ETMB	Extrema	9.25	7	*e*P	Pn	02 18 26.3	-1.5
VCA	Vinchina	9.67	184	*e*P	Pn	02 18 34.4	+1.3
VCA				IAML		02 20 30.1	
	comp=Z,12nm,1.8s						
AC04	Llanos de Chal	9.71	200	Pn	Pn	02 18 31.7	-1.8
AC05	El Transito	10.09	195	Pn	Pn	02 18 37.6	-0.8
LCO	Las Campanas	10.36	196	Pn	Pn	02 18 40.6	-1.4
AGUA	GUANDACOL	10.44	185	*e*P	Pn	02 18 43.7	+0.9
AGUA				*e*S	S	02 20 41.3	+1.4
AGUA				IAML		02 20 42.6	
	comp=Z,22nm,0.8s						
SAML	Samuel	10.84	23	*e*P	Pn	02 18 46.7	-1.3
AQDB	Aquidauana	11.11	99	*e*P	Pn	02 18 51.7	+0.4
CO01	Juntas del Tor	11.15	192	Pn	Pn	02 18 52.9	+0.9
AROD	Rodeo	11.23	189	*e*P	Pn	02 18 54.4	+1.4
AROD				*e*S	S	02 20 55.4	-2.3
NNA	Nana	11.49	306	P	Pn	02 18 56.6	+0.4
	comp=Z,5.7nm,0.3s,baz=113,slow=11,SNR=7.4						
NNA				S	S	02 20 57.2	-6.5
	comp=Z,4.0nm,0.3s,baz=218,slow=23,SNR=3.3						
NNA	Nana	11.49	306	Pn	Pn	02 18 57.0	+0.8
GO04	Tololo Observa	11.49	195	Pn	Pn	02 18 55.1	-1.2
GO04	Tololo Observa	11.49	195	*e*P	Pn	02 18 55.9	-0.4
GO04				*e*S	S	02 20 58.5	-5.4
AVFE	Valle Fertil	11.56	180	*e*P	Pn	02 18 56.3	-0.6
AVFE				*e*S	S	02 21 01.7	-3.5
ACCO	Cerro Coronel	11.59	187	*e*P	Pn	02 18 58.2	+0.7
CPUP	Villa Florida	11.79	130	P	Pn	02 19 00.3	+0.6
	comp=Z,0.1nm,0.3s,baz=318,slow=11,SNR=5.1						
CPUP				S	S	02 21 23.9	+13
	comp=Z,0.2nm,0.3s,baz=35,slow=8.8,SNR=1.2						
CPUP	Villa Florida	11.79	130		Pn	02 18 59.7	-0.1
CPUP	Villa Florida	11.79	130	*e*P	Pn	02 19 00.3	+0.6
PP1B	Ponte de Pedra	11.98	85	*e*P	Pn	02 19 02.6	+0.3
CO03	El Pedregal	12.11	194	Pn	Pn	02 19 03.6	-0.3
RTLL	Cerro Villicun	12.26	184	*e*P	Pn	02 19 06.4	+0.7
RTLL				*e*S	S	02 21 14.3	-7.4
CZSB	Cruzeiro do Su	12.38	335	*e*P	Pn	02 19 05.5	-1.7
TCA	Tanti	12.49	169	*e*P	Pn	02 19 07.2	-1.4
ZON	Zonda	12.49	185	P	P	02 19 10.7	-0.8
ZON	Zonda	12.49	185	*e*P	P	02 19 11.3	-0.2
CO02	Combarbal	12.53	194		Pn	02 19 10.1	+1.0
RTCV	Cerro Valdivia	12.80	184	*e*P	Pn	02 19 13.3	+0.9
RTCV				*e*S	S	02 21 29.2	-5.0
AUSP	Uspallata	13.24	187	*e*P	Pn	02 19 18.2	+0.2
MRA	San Martin	13.40	174	*e*P	Pn	02 19 18.9	-0.9
MRA				*e*S	S	02 21 40.7	-7.5
VA03	San Esteban	13.95	191	P	P	02 19 27.6	0.0
ROC1	El Roble	14.24	192	P	P	02 19 32.1	+1.1
TRCB	Terra Rica	14.29	108	*e*P	Pn	02 19 30.6	-0.2
ITQB	Itaqui	14.42	139	*e*P	Pn	02 19 32.6	+0.3
MT02	Curacav	14.54	193	P	P	02 19 35.0	+0.9
ARAG	Araguaiana, MT	15.25	80	*e*P	P	02 19 41.6	-0.5
PTGB	Pitanga	15.31	114	*e*P	P	02 19 43.7	+1.0
RFA	San Rafael	15.69	183	*e*P	Pn	02 19 49.5	+2.0
ATAH	Atahualpa	15.95	317	P	P	02 19 49.2	-1.1
	comp=Z,0.0nm,0.3s,baz=28,slow=18,SNR=1.7						
BO02	Sierra Bellavi	15.96	190	P	Pn	02 19 53.0	+2.1
ITAB	Concordia	16.23	123	*e*P	P	02 19 53.6	+0.9
CPSB	Cacapava Do Su	16.97	134	*e*P	P	02 20 02.0	+1.1
SNDB	Serra Nova Dou	17.04	68	*e*P	P	02 20 01.1	-0.7
FRTB	Fartura	17.18	108	*e*P	P	02 20 04.3	+1.1
PLTB	Pedras Altas	17.74	138	*e*P	P	02 20 10.0	+0.7
BI02	San Fabin de	17.87	190	P	Pn	02 20 13.9	+0.7
CNLB	Canela	18.21	127	*e*P	P	02 20 13.4	-1.1
IPMB	Ipameri, GO	18.23	90	*e*P	P	02 20 14.5	-0.3
ITTB	Itaituba	18.52	39	*e*P	P	02 20 16.8	-1.0

BDFB	**Brasilia**	18.82	83	P	**P**	**02 20 21.4**	**+0.3**
	comp=Z,0.3nm,0.3s,baz=246,slow=9.6,SNR=4.1						
BDFB	**Brasilia**	18.82	83	P	**P**	**02 20 22.9**	**+1.7**
PET01	**Itanhaem-SP**	19.41	109	*e*P	**P**	**02 20 27.1**	**-0.2**
PTGA	**Pitinga**	19.61	23	P	**P**	**02 20 27.5**	**-2.0**
	comp=Z,0.4nm,0.3s,baz=219,slow=14,SNR=2.4						
PTGA	**Pitinga**	19.61	23	P	**P**	**02 20 27.7**	**-1.8**
PTGA				IAmb	IAmb	02 20 40.2	
	comp=Z,11nm,1.4s						
PTGA	**Pitinga**	19.61	23	*e*P	**P**	**02 20 28.0**	**-1.6**
PEXB	**Peixe**	19.65	72	*e*P	**P**	**02 20 29.2**	**-0.7**
PARB	**Paraibuna**	20.75	106	*e*P	**P**	**02 20 40.1**	**-1.6**
PRPB	**Parauapebas**	21.38	56	*e*P	**P**	**02 20 46.9**	**-1.2**
PLCA	**Paso Flores**	21.78	186	P	**P**	**02 20 53.4**	**+1.7**
	comp=Z,2.9nm,0.8s,baz=359,slow=10.0,SNR=16						
PLCA	**Paso Flores**	21.78	186	P	**P**	**02 20 53.7**	**+2.0**
PLCA				IAmb	IAmb	02 21 08.2	
	comp=Z,7.6nm,1.2s						
PLCA	**Paso Flores**	21.78	186	*e*P	**P**	**02 20 51.9**	**+0.2**
MAN01	**Angra dos Reis**	22.21	104	*e*P	**P**	**02 20 56.1**	**+0.2**
JANB	**Januaria**	22.43	83	*e*P	**P**	**02 20 57.3**	**-0.7**
SDBA	**SAO DESIDERIO**	22.63	76	*e*P	**P**	**02 20 58.9**	**-0.9**
MTO3	**Montecristo**	39.65	325	P	**P**	**02 23 30.3**	**+2.0**
WVT	**Waverly**	58.19	341	P	**P**	**02 25 47.4**	**-0.7**
WVT				IAmb	IAmb	02 26 03.3	
	comp=Z,5.2nm,1.1s						
LCAR	**Lake Charles**	59.25	338	P	**P**	**02 25 55.8**	**+0.4**
LCAR				IAmb	IAmb	02 26 06.8	
	comp=Z,10nm,1.5s						
TX32	**Lajitas Array**	59.48	323	P	**P**	**02 25 58.6**	**+1.4**
TXAR	**Lajitas Array**	59.48	323	P	**P**	**02 25 57.7**	**+0.4**
	comp=Z,0.5nm,0.5s,baz=154,slow=7.9,SNR=15						
TXAR	**Lajitas Array**	59.48	323	P	**P**	**02 25 58.4**	**+1.2**
TX31	**Lajitas Ar. Si**	59.48	323	P	**P**	**02 25 58.6**	**+1.3**
X37A	**Clayton**	59.61	333	P	**P**	**02 25 59.9**	**+2.0**
FVM	**French Village**	60.72	339	P	**P**	**02 26 05.3**	**-0.1**
FVM				IAmb	IAmb	02 26 05.9	
	comp=Z,5.6nm,0.8s						
CCM	**Cathedral Cave**	61.06	339	P	**P**	**02 26 07.4**	**-0.3**
WMOK	**Wichita Mounta**	61.25	331	P	**P**	**02 26 10.7**	**+1.7**
S39A	**Bolivar**	61.48	337	P	**P**	**02 26 10.4**	**-0.1**
S39A				IAmb	IAmb	02 26 15.5	
	comp=Z,9.0nm,1.2s						
R40A	**Maddies Statio**	61.63	338		**P**	**02 26 11.2**	**-0.2**
R40A				IAmb	IAmb	02 26 11.7	
	comp=Z,4.7nm,0.8s						
VNA3	**Neumayer Olymp**	61.94	162	P	**P**	**02 26 14.8**	**+1.7**
VNA2	**Neumayer--Watz**	62.49	161	P	**P**	**02 26 18.3**	**+1.5**
	baz=308,slow=5.7						
SNAA	**Sanae**	64.13	161	P	**P**	**02 26 29.1**	**+1.5**
F64A	**Sherman**	64.61	359	P	**P**	**02 26 31.2**	**+0.4**
N35A	**Tabor**	65.13	337	P	**P**	**02 26 34.6**	**+0.3**
SDCO	**Great Sand Dun**	66.90	328	P	**P**	**02 26 47.9**	**+1.9**
SDCO				IAmb	IAmb	02 26 48.5	
	comp=Z,3.7nm,0.8s						
SMCO	**Snowmass**	68.74	328	P	**P**	**02 26 59.5**	**+1.9**
PV01	**Paradox Valley**	68.78	326	P	**P**	**02 26 59.6**	**+2.0**
PV01				IAmb	IAmb	02 27 00.3	
	comp=Z,4.7nm,1.0s						
U15A	**North Rim**	69.59	323	P	**P**	**02 27 05.7**	**+3.0**
U15A				IAmb	IAmb	02 27 06.2	
	comp=Z,3.6nm,0.9s						
W13A	**Hualapai Mount**	69.61	321	P	**P**	**02 27 05.5**	**+2.7**
KNB	**Kanab**	70.31	323	P	**P**	**02 27 10.2**	**+3.3**
MTPU	**Mount Pierson**	70.67	324	P	**P**	**02 27 11.7**	**+2.4**
CCUT	**Cedar City**	70.99	323	P	**P**	**02 27 14.3**	**+3.2**
RDMU	**Red Mountain**	71.10	327	P	**P**	**02 27 13.3**	**+1.6**
TPNV	**Topopah Spring**	72.27	321	P	**P**	**02 27 21.7**	**+3.1**
TPNV				IAmb	IAmb	02 27 22.2	
	comp=Z,3.6nm,0.8s						
PDAR	**Pinedale Array**	72.73	329	P	**P**	**02 27 22.1**	**+0.8**
	comp=Z,0.3nm,0.4s,baz=122,slow=8.9,SNR=6.8						
PDAR	**Pinedale Array**	72.73	329	P	**P**	**02 27 22.7**	**+1.4**
ULM	**Lac du Bonnet**	73.44	341	P	**P**	**02 27 23.6**	**-1.3**
	comp=Z,2.6nm,0.6s,baz=147,slow=4.8,SNR=7.7						
ULM	**Lac du Bonnet**	73.44	341	P	**P**	**02 27 24.9**	**0.0**
ULM				IAmb	IAmb	02 27 25.4	
	comp=Z,4.0nm,0.8s						
OMMB	**Old Mammoth Mi**	74.37	320	P	**P**	**02 27 33.5**	**+2.5**
OMMB				IAmb	IAmb	02 27 34.0	
	comp=Z,3.4nm,0.8s						
NVAR	**Mina Array Bea**	74.47	321	P	**P**	**02 27 31.9**	**+0.4**
	comp=Z,1.2nm,0.8s,baz=168,slow=7.5,SNR=8.0						
NVAR	**Mina Array Bea**	74.47	321	P	**P**	**02 27 33.3**	**+1.8**
LHV	**Little Huntoon**	74.48	321	P	**P**	**02 27 34.3**	**+3.1**
LHV				IAmb	IAmb	02 27 43.9	
	comp=Z,5.4nm,1.4s						
YNE	**Yellowstone No**	74.62	330	P	**P**	**02 27 33.7**	**+1.5**
TORD	**Torodi Ar. Bea**	75.20	70	P	**P**	**02 27 34.5**	**-1.4**
	comp=Z,2.0nm,0.7s,baz=250,slow=5.6,SNR=5.1						
PAHR	**Pah Rah Range**	75.94	321	P	**P**	**02 27 42.5**	**+2.8**
PAHR				IAmb	IAmb	02 27 43.1	
	comp=Z,4.9nm,0.8s						
PPT	**Papeete**	77.28	256	P	**P**	**02 27 47.9**	**+0.4**
	comp=Z,20nm,0.7s,baz=70,slow=18,SNR=2.3						
K05A	**Summer Lake**	78.73	323	P	**P**	**02 27 58.1**	**+2.9**
PINE	**Pine Mountain**	79.43	324	P	**P**	**02 28 01.9**	**+3.0**
PINE				IAmb	IAmb	02 28 02.4	
	comp=Z,3.5nm,0.8s						
YKA	**Yellowknife Ar**	89.37	340	P	**P**	**02 28 48.8**	**+0.8**
	comp=Z,3.1nm,0.8s,baz=128,slow=5.0,SNR=39						
ASAR	**Alice Springs**	132.72	207	PKP	**PKPdf**	**02 35 07.1**	**+0.8**
	comp=Z,0.2nm,0.6s,baz=132,slow=1.4,SNR=1.6						
WRA	**Warramunga Arr**	135.77	210	PKP	**PKPdf**	**02 35 12.9**	**+0.9**
	comp=Z,0.6nm,0.9s,baz=144,slow=1.8,SNR=5.3						
KURBB	**Kurchatov Arra**	138.53	33	PKP	**PKPdf**	**02 35 16.4**	**+0.3**
	comp=Z,0.1nm,0.4s,baz=315,slow=2.8,SNR=4.4						
KURBB				PP	**PP**	**02 38 06.1**	**-2.8**
	comp=Z,0.4nm,0.9s,baz=278,slow=7.7,SNR=5.1						
ZALV	**Zalesovo Beam**	139.15	25	PKP	**PKPdf**	**02 35 18.3**	**+1.1**
	comp=Z,0.7nm,0.6s,baz=354,slow=4.5,SNR=3.7						
ZALV	**Zalesovo Beam**	139.15	25		**PKPdf**	**02 35 17.7**	**+0.6**
KSH	**Kashi**	142.46	49	PKP	**PKiKP**	**02 35 26.1**	**-0.8**
MKAR	**Makanchi Array**	142.83	35	PKhKP	PKPpre	02 35 20.9	
	comp=Z,0.3nm,0.7s,baz=306,slow=3.2,SNR=1.8						
MKAR				PKP	**PKPdf**	**02 35 24.6**	**+0.6**
	comp=Z,0.3nm,0.7s,baz=306,slow=2.1,SNR=3.6						
USRK	**Ussuriysk Ar.**	150.13	331	PKPbc	**PKiKP**	**02 35 42.6**	**+0.3**
	comp=Z,2.8nm,0.8s,baz=32,slow=6.8,SNR=6.1						
SONM	**Songino Array**	150.85	9	PKPbc	**PKPbc**	**02 35 44.3**	**+1.0**
	comp=Z,1.9nm,0.6s,baz=315,slow=1.6,SNR=14						
SONM	**Songino Array**	150.85	9		**PKPbc**	**02 35 44.0**	**+0.6**

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*IDC **18** 02:17:35.4±1.0, 36°.23N×137°.37E, h267^{km}±15^{km}, mb3.1/2, mb1 3.3/5, mb1mx2.8/42, mbtmp3.8/5, Error ellipse: s-maj=60.9km s-min=20.9km az=80.0*

*JMA **18** 02:17:35.5±0.2, 36°.08N×137°.27E, h259^{km}±2^{km}, M2.6*

ISC 18 02:17:35.3±1.0**, 36°.2N**±0°.1×**137°.22E**±0°.09**, h250**^{km}**, n15, σ1^{s}38**/18**, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYTA	**Yamagatataniai**	0.73	212	P	**Pn**	**02 18 09.8**	**+0.8**
JYTA				S	**S**	**02 18 36.2**	**+0.7**
MAT	**Matsushiro**	0.86	67	P	**Pn**	**02 18 11.0**	**+1.4**
MAT				S	**S**	**02 18 38.5**	**+1.9**
MAT	**Matsushiro**	0.86	67	P	**Pn**	**02 18 11.3**	**+1.7**
MJAR	**Matsushiro Arr**	0.86	67	P	**Pn**	**02 18 11.4**	**+1.8**
	0.8nm,0.3s,baz=235,slow=6.4,SNR=23						
JHU	**Hanno**	1.71	102	S	**S**	**02 18 48.4**	**+1.7**
JWT	**Wachi**	1.74	238	P	**Pn**	**02 18 16.1**	**+0.5**
JSD	**Sado**	2.00	24	P	**Pn**	**02 18 19.4**	**+1.7**
JNS	**Sasagawa**	2.32	46	P	**Pn**	**02 18 22.2**	**+1.5**
JHO	**Hitachi**	2.73	81	P	**Pn**	**02 18 25.3**	**+0.4**
JFK	**Kawauchi**	3.15	68	P	**Pn**	**02 18 30.4**	**+1.0**
JFK				S	**S**	**02 19 11.9**	**-0.4**
ASAJ	**Asahikawa**	8.90	26	P	**Pn**	**02 19 39.4**	**-0.5**
	2.4nm,0.3s,baz=219,slow=13,SNR=6.2						
USRK	**Ussuriysk Ar.**	8.92	335	P	**Pn**	**02 19 40.6**	**+0.6**
	baz=158,slow=11,SNR=4.6						
KLR	**Kul'dur**	13.61	345	P	**Pn**	**02 20 37.1**	**-1.4**
	0.3nm,0.3s,baz=150,slow=11,SNR=13						
WRA	**Warramunga Arr**	55.92	183	P	**P**	**02 26 45.8**	**-1.7**
	0.4nm,0.3s,baz=360,slow=7.7,SNR=9.6						
ASAR	**Alice Springs**	59.64	184	P	**P**	**02 27 12.3**	**-1.0**
	0.3nm,0.7s,baz=16,slow=13,SNR=4.7						

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*BGR **18** 02:20:35.3±0.0, 7°.35S×13°.51W, h10^{km}, mb5.3, Ms4.6*

*IDC **18** 02:20:35.6±0.5, 7°.60S×13°.40W, h0^{km}, mb4.5/28, mb1 4.5/29, mb1mx4.4/41, mbtmp4.4/29, ML3.2/1, MS4.6/25, Ms1 4.6/25, ms1mx4.5/30, Error ellipse: s-maj=15.4km s-min=11.9km az=156.0*

*MOS **18** 02:20:36.0±1.3, 7°.69S×13°.41W, h10^{km}, mb5.2/41, Error ellipse: s-maj=10.8km s-min=6.1km az=62.7*

*BJI **18** 02:20:36.6±0.0, 8°.27S×12°.88W, h8^{km}, mB5.7/1, mb5.2/2, Ms5.4/4, Ms7 5.1/2*

*NEIC **18** 02:20:37.6±1.5, 7°.71S±0°.09×13°.46W±0°.05, h10^{km}±1^{km}, mb5.4/135, Error ellipse: s-maj=15.1km s-min=7.8km az=169.0*

*GCMT **18** 02:20:39.7±0.1, 7°.58S±0°.01×13°.50W±0°.01, h12^{km}, MW5.2/151, Moment Tensor Solution. s72,c97; s151,c269; Duration: 1^{s}0 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.80±.01; $M_{\theta\theta}$0.02±.01; $M_{\phi\phi}$0.78±.01; $M_{r\theta}$-0.07±.05; $M_{\theta\phi}$-0.19±.01; $M_{\phi r}$-0.16±.04; Best double couple: $M_0$0.83000×10^{17} NP1:ϕ_s159.00000°, δ41.00000°, λ-101.00000°. NP2:ϕ_s354.00000°, δ50.00000°, λ-80.00000°. Principal axes: T 0.8380, Plg5.0000°, Azm77.0000°; N -0.0160, Plg7.0000°, Azm168.0000°; P -0.8220, Plg81.0000°, Azm314.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 18 02:20:37.5±0.3**, 7°.67S**±0°.06×**13°.45W**±0°.05**, h10**^{km}**, n521, σ1^{s}26**/464**, mb5.3**/147**, MS4.7**/31**, 26C-17D, Ascension Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASCN	**Ascension**	0.95	254		**Pg**	**02 20 51.5**	**-4.2**
I50GB	**ASCENSION ISLA**	0.96	254	Pn	**Pg**	**02 20 55.8**	**-0.2**
	baz=66,slow=33,SNR=2.0						
H10S2	**ASCENSION HYDR**	1.75	223	T	T	02 22 51.0	
	baz=176,slow=74,SNR=1343						
H10S3	**ASCENSION HYDR**	1.76	223	T	T	02 23 02.4	
	baz=44,slow=74,SNR=1544						
SHEL	**Horse Pasture**	11.16	138	P	**Pn**	**02 23 16.3**	**-1.0**
SHEL	**Horse Pasture**	11.16	138	Pn	**Pn**	**02 23 16.3**	**-1.0**
LIC	**Lamto**	16.15	32	*e*P	**P**	**02 24 28.5**	**+0.5**
	88nm,1.3s						
KIC	**Kosan Boka**	16.42	32	*e*P	**P**	**02 24 30.1**	**-0.8**
	112nm,1.6s						
TIC	**Toumodi**	16.51	31	*e*P	**P**	**02 24 30.8**	**-1.2**
DBIC	**Dimbokro**	16.62	31	Pn	**Pn**	**02 24 28.2**	**-2.4**
	0.1nm,0.3s,baz=200,slow=15,SNR=4.1						
DBIC				LR	LR	02 29 31.4	
	comp=Z,2µm,19.8s,baz=196,slow=32						
DBIC	**Dimbokro**	16.62	31	P	**Pn**	**02 24 29.2**	**-1.5**
DBIC				pmax	pmax		
	comp=Z,31nm,1.3s						
DBIC	**Dimbokro**	16.62	31	Pn	**Pn**	**02 24 29.2**	**-1.5**
MBO	**M'Bour**	22.19	351	P	**P**	**02 25 34.5**	**+0.5**
MBO				IAmb	IAmb	02 25 37.0	
	comp=Z,181nm,1.5s						
RCBR	**Riachuelo**	22.38	273	P	**P**	**02 25 36.5**	**+0.3**
	comp=Z,12nm,1.0s,baz=54,slow=19,SNR=2.5						
RCBR				LR	LR	02 31 56.7	
	comp=Z,3µm,20.7s,baz=138,slow=30						
RCBR	**Riachuelo**	22.38	273	P	**P**	**02 25 37.9**	**+1.7**
RCBR				pmax	pmax		
	comp=Z,22nm,1.1s						
RCBR	**Riachuelo**	22.38	273	P	**P**	**02 25 37.9**	**+1.7**
RCBR	**Riachuelo**	22.38	273	*e*P	**P**	**02 25 38.4**	**+2.2**
NBLI	**Livramento-PB**	23.30	269	*e*P	**P**	**02 25 47.3**	**+1.4**
NBPA	**Parau_RN**	23.58	273	*e*P	**P**	**02 25 50.1**	**+1.5**
KOWA	**Kowa**	23.92	23	P	**P**	**02 25 50.2**	**-1.6**
	comp=Z,9.8nm,0.7s,baz=209,slow=11,SNR=22						
KOWA				LR	LR	02 34 06.9	
	comp=Z,2µm,19.2s,baz=198,slow=34						
KOWA	**Kowa**	23.92	23	P	**P**	**02 25 51.0**	**-0.8**
TOA0	**Torodi Ar. Sit**	25.57	36	P	**P**	**02 26 05.1**	**-1.8**
TORD	**Torodi Ar. Bea**	25.57	36	P	**P**	**02 26 05.4**	**-1.4**
	comp=Z,13nm,0.8s,baz=223,slow=9.1,SNR=28						
TORD				LR	LR	02 34 42.4	
	comp=Z,2µm,20.9s,baz=190,slow=33						
GDU01	**Guandu, BA**	26.36	255	*e*P	**P**	**02 26 14.4**	**+0.3**
NBMO	**Morrinhos-CE**	26.82	278	*e*P	**P**	**02 26 18.4**	**+0.2**
NAN01	**Guarapari, ES**	27.88	246	*e*P	**P**	**02 26 27.4**	**-0.3**
H09N1	**TRISTAN DA CUN**	29.29	178	T	T	02 57 28.6	
	SNR=14						
JANB	**Januaria**	31.11	254	*e*P	**P**	**02 26 56.0**	**-0.5**
TSUM	**Tsumeb**	32.22	114	P	**P**	**02 27 07.0**	**+0.6**
PEXB	**Peixe**	34.60	260	*e*P	**P**	**02 27 26.1**	**-0.9**
BDFB	**Brasilia**	34.73	254	P	**P**	**02 27 29.6**	**+1.4**
	comp=Z,5.1nm,0.9s,baz=65,slow=5.7,SNR=4.9						
BDFB				LR	LR	02 38 57.8	
	comp=Z,2µm,21.1s,baz=99,slow=32						
TMAB	**Tom-Au,PA,Br**	34.90	277	*e*P	**P**	**02 27 29.8**	**+0.1**
TAM	**Tamanrasset**	35.51	31	P	**P**	**02 27 35.5**	**+0.6**
TAM				pmax	pmax		
	comp=Z,11nm,1.5s						
TAM	**Tamanrasset**	35.51	31	P	**P**	**02 27 35.5**	**+0.6**
BB19B	**Bebedouro**	36.40	245	*e*P	**P**	**02 27 42.7**	**+0.3**
ITRB	**Iturama**	37.72	248	*e*P	**P**	**02 27 54.8**	**+1.2**
FRTB	**Fartura**	37.99	242	*e*P	**P**	**02 27 55.3**	**-0.6**
ARAG	**Araguaiana, MT**	38.36	254	*e*P	**P**	**02 27 59.5**	**+0.4**
PCMB	**Pacaembu**	39.00	245	*e*P	**P**	**02 28 04.5**	**0.0**
MCPB	**Macapa, AP**	39.17	279	*e*P	**P**	**02 28 06.2**	**+0.3**
SUR	**Sutherland**	40.20	132	P	**P**	**02 28 13.6**	**-0.9**
	comp=Z,6.9nm,0.8s,baz=301,slow=12,SNR=2.7						
SUR	**Sutherland**	40.20	132	P	**P**	**02 28 13.7**	**-0.8**
SUR				IAmb	IAmb	02 28 23.0	
	comp=Z,129nm,1.8s						
TRCB	**Terra Rica**	40.54	244	*e*P	**P**	**02 28 16.9**	**-0.4**
PTGB	**Pitanga**	40.59	241	*e*P	**P**	**02 28 17.0**	**-0.7**
LBTB	**Lobatse**	41.05	120	P	**P**	**02 28 20.9**	**-0.6**
	comp=Z,7.4nm,1.0s,baz=274,slow=12,SNR=5.5						
LBTB	**Lobatse**	41.05	120	P	**P**	**02 28 22.5**	**+1.0**
LBTB				pmax	pmax		
	comp=Z,25nm,1.3s						
LBTB	**Lobatse**	41.05	120	P	**P**	**02 28 22.5**	**+1.0**
MALB	**Monte Alegre**	41.07	276	*e*P	**P**	**02 28 22.3**	**+0.6**
LSZ	**Lusaka**	41.44	104	P	**P**	**02 28 25.1**	**+0.3**
	comp=Z,3.2nm,0.8s,baz=268,slow=5.2,SNR=6.3						
PP1B	**Ponte de Pedra**	41.53	252	*e*P	**P**	**02 28 24.9**	**-0.6**
NPGB	**Novo Progresso**	41.56	268	*e*P	**P**	**02 28 26.4**	**+0.6**
BOSA	**Boshof**	41.99	125	P	**P**	**02 28 28.9**	**-0.4**
	comp=Z,8.7nm,0.9s,baz=300,slow=9.1,SNR=11						
BOSA				LR	LR	02 42 49.9	
	comp=Z,1µm,21.1s,baz=306,slow=32						
BOSA	**Boshof**	41.99	125	P	**P**	**02 28 29.1**	**-0.2**
BOSA				pmax	pmax		
	comp=Z,39nm,1.4s						
BOSA	**Boshof**	41.99	125	P	**P**	**02 28 29.1**	**-0.2**
ITTB	**Itaituba**	42.17	272	*e*P	**P**	**02 28 30.3**	**-0.5**
AQDB	**Aquidauana**	42.78	248	*e*P	**P**	**02 28 35.7**	**0.0**
CPSB	**Cacapava Do Su**	43.72	233	*e*P	**P**	**02 28 41.5**	**-1.6**
PLTB	**Pedras Altas**	44.38	232	*e*P	**P**	**02 28 49.3**	**+0.9**
MBAR	**Mbarara**	44.59	83	*i* P	**P**	**02 28 52.1**	**+1.6**
MBAR				pmax	pmax		
	comp=Z,37nm,1.5s						
MBAR	**Mbarara**	44.59	83	P	**P**	**02 28 51.7**	**+1.2**
MBAR				IAmb	IAmb	02 29 00.3	
	comp=Z,60nm,1.4s						
CPUP	**Villa Florida**	45.61	241	P	**P**	**02 28 58.0**	**-0.2**
	comp=Z,3.2nm,1.0s,baz=182,slow=9.8,SNR=3.4						
CPUP				LR	LR	02 46 23.4	
	comp=Z,1µm,18.5s,baz=76,slow=34						
CPUP	**Villa Florida**	45.61	241	*e*P	**P**	**02 28 58.3**	**+0.1**
ITQB	**Itaqui**	46.03	236	*e*P	**P**	**02 29 01.2**	**-0.3**
VILB	**Vilhena**	46.25	259	*e*P	**P**	**02 29 03.6**	**+0.2**
PTGA	**Pitinga**	46.87	276	P	**P**	**02 29 08.8**	**+0.4**
	comp=Z,1.4nm,0.4s,baz=95,slow=11,SNR=1.9						
PTGA				PcP	**PcP**	**02 30 40.6**	**-0.7**
	comp=Z,1.9nm,0.2s,baz=327,slow=22,SNR=9.7						
SIV	**San Ignacio**	47.25	255	P	**P**	**02 29 11.3**	**-0.1**
	comp=Z,1.2nm,0.7s,baz=105,slow=11,SNR=4.5						
SIV				PcP	**PcP**	**02 30 41.3**	**-1.4**
	comp=Z,1.0nm,0.9s,baz=0.0,slow=1.0,SNR=2.2						
KEST	**Kesra**	48.21	25	P	**P**	**02 29 18.0**	**-0.4**
	comp=Z,11nm,1.0s,baz=226,slow=2.9,SNR=5.3						
KEST				LR	LR	02 49 30.5	
	comp=Z,998nm,19.6s,baz=169,slow=36						
KEST	**Kesra**	48.21	25	P	**P**	**02 29 19.4**	**+0.9**
KEST				IAmb	IAmb	02 29 26.8	
	comp=Z,26nm,1.1s						
SAML	**Samuel**	49.20	265	P	**P**	**02 29 26.2**	**-0.2**
SAML				pmax	pmax		
	comp=Z,46nm,1.5s						
SAML	**Samuel**	49.20	265	P	**P**	**02 29 26.2**	**-0.2**
SAML				IAmb	IAmb	02 29 34.9	
	comp=Z,46nm,1.4s						
KMBO	**Kilima Mbogo**	50.93	85	P	**P**	**02 29 39.7**	**-0.2**
	comp=Z,2.8nm,1.1s,baz=267,slow=9.8,SNR=4.6						
KMBO				LR	LR	02 49 27.7	
	comp=Z,1µm,20.2s,baz=243,slow=34						
H05S1	**Guadeloupe/Mar**	51.88	295	T	T	03 25 37.8	
	SNR=16						
ETMB	**Extrema**	52.16	264	*e*P	**P**	**02 29 48.4**	**-0.3**
LVC	**Limon Verde**	55.26	248	LR	LR	02 53 30.1	
	comp=Z,961nm,18.4s,baz=96,slow=36						
BNI	**Bardonecchia**	55.51	17	P	**P**	**02 30 12.9**	**0.0**
BNI				pmax	pmax		
	comp=Z,20nm,1.1s						
BNI	**Bardonecchia**	55.51	17	P	**P**	**02 30 12.9**	**0.0**
PB01	**IPOC Station P**	55.63	250	P	**P**	**02 30 14.0**	**-0.2**
AC02	**Maricunga**	56.03	243	P	**P**	**02 30 15.4**	**-2.0**
GO02	**Mina Guanaco**	56.19	245	P	**P**	**02 30 17.6**	**-0.8**
PB14	**IPOC Station P**	56.86	246	P	**P**	**02 30 23.6**	**+0.4**
EFI	**East Falkland**	57.11	211	*i* P	**P**	**02 30 23.6**	**-0.5**
EFI				pmax	pmax		
	comp=Z,60nm,1.1s						
CLF	**Chambon-Foret**	57.16	12	P	**P**	**02 30 25.4**	**+1.0**
CLF				IAmb	IAmb	02 30 32.7	
	comp=Z,77nm,1.4s						
CO01	**Juntas del Tor**	57.41	239	P	**P**	**02 30 27.7**	**+0.8**
CO01				IAmb	IAmb	02 30 35.8	
	comp=Z,67nm,1.6s						
DAVA	**Damuels**	58.49	18	*e*P	**P**	**02 30 32.6**	**-1.4**
	comp=Z,7.0nm,0.8s,SNR=9.2						
FETA	**Feichten**	58.53	19	*e*P	**P**	**02 30 32.6**	**-1.7**
	comp=Z,6.9nm,0.8s,SNR=8.5						
ECH	**Echery**	58.53	16	P	**P**	**02 30 34.0**	**-0.1**
ECH				pmax	pmax		
	comp=Z,15nm,1.2s						
ECH	**Echery**	58.53	16	P	**P**	**02 30 34.0**	**-0.1**
SQTA	**Sankt Quirin**	58.86	19	*e*P	**P**	**02 30 35.5**	**-1.0**
	comp=Z,13nm,0.8s,SNR=11						
ZOU	**Zoufplan**	58.89	21	IAmb	IAmb	02 30 44.8	
	comp=Z,41nm,1.2s						
ABTA	**Abfaltersbach**	58.89	21	*e*P	**P**	**02 30 36.7**	**0.0**
	comp=Z,3.5nm,0.7s						
UBR	**Ueberruh**	58.91	18	*e*P	**P**	**02 30 36.3**	**-0.5**
	comp=Z,80nm,1.4s,baz=207,slow=7.1						
UBR				*e*L	L	02 57 02.1	
	comp=Z,485nm,20.7s						
MOTA	**Moosalm**	58.94	19	*e*P	**P**	**02 30 35.8**	**-1.3**
	comp=Z,5.6nm,0.7s,SNR=9.1						
RETA	**Reutte**	58.95	19	*e*P	**P**	**02 30 35.8**	**-1.3**
	comp=Z,3.7nm,0.6s						
BFO	**Black Forest**	58.96	17	P	**P**	**02 30 36.1**	**-1.0**
BFO				pmax	pmax		
	comp=Z,34nm,1.4s						
BFO	**Black Forest**	58.96	17	P	**P**	**02 30 36.1**	**-1.0**
BFO				IAmb	IAmb	02 30 39.6	
	comp=Z,34nm,1.4s						
BFO	**Black Forest**	58.96	17	*e*P	**P**	**02 30 36.3**	**-0.8**
	comp=Z,35nm,1.4s,baz=207,slow=7.1						
BFO				*e*L	L	02 51 26.8	
	comp=Z,341nm,22.0s						
WTTA	**Wattenberg**	59.04	20	*e*P	**P**	**02 30 37.3**	**-0.6**
	comp=Z,12nm,0.8s,SNR=12						
WATA	**Walderalm**	59.09	20	*e*P	**P**	**02 30 37.5**	**-0.6**
	comp=Z,11nm,1.1s,SNR=7.2						
SDV	**Santo Domingo**	59.31	285	P	**P**	**02 30 40.4**	**0.0**
	comp=Z,4.1nm,0.2s,baz=208,slow=5.3,SNR=4.3						
KBA	**Koelnbreinsper**	59.47	21	*i* P	**P**	**02 30 42.6**	**+1.8**
	comp=Z,11nm,1.4s						
DOU	**Dourbes**	59.63	13	*d*P	**P**	**02 30 43.1**	**+1.5**
	comp=Z,35nm,0.0s						
FUR	**Furstenfeldbru**	59.71	19	*e*L	L	02 56 57.3	
	comp=Z,578nm,19.8s						
DIVS	**Divibare**	59.73	27	P	**P**	**02 30 43.3**	**+0.7**
DIVS				IAmb	IAmb	02 30 45.6	
	comp=Z,29nm,1.5s						
SOKA	**Soboth**	59.75	22	*e*P	**P**	**02 30 43.2**	**+0.5**
	comp=Z,1.8nm,0.7s						
TAMC	**Tame, Arauca**	59.86	282	*e*P	**P**	**02 30 43.5**	**-0.5**
BMRD	**Maredsous**	59.86	13	*d*P	**P**	**02 30 43.9**	**+0.7**
BGES	**Gesves**	60.01	14	*d*P	**P**	**02 30 44.7**	**+0.5**
BGES				*d*PcP	**PcP**	**02 31 29.7**	**-0.6**
BCLA	**Clavier**	60.09	14	*d*P	**P**	**02 30 45.2**	**+0.4**
VTS	**Vitosha**	60.17	31	⇓P	**P**	**02 30 46.3**	**+0.6**
VTS	**Vitosha**	60.17	31	P	**P**	**02 30 46.5**	**+0.8**
VTS				pmax	pmax		
	comp=Z,8.0nm,1.0s						
VTS	**Vitosha**	60.17	31	P	**P**	**02 30 46.5**	**+0.8**
UCC	**Uccle**	60.23	13	κP	**P**	**02 30 47.0**	**+1.3**
UCC	**Uccle**	60.23	13	P	**P**	**02 30 47.3**	**+1.6**
UCC				pmax	pmax		
	comp=Z,46nm,1.4s						
UCC	**Uccle**	60.23	13	P	**P**	**02 30 47.3**	**+1.6**
UCC				IAmb	IAmb	02 30 53.4	
	comp=Z,46nm,1.4s						
PLCA	**Paso Flores**	60.32	227	LR	LR	02 53 17.4	
	comp=Z,413nm,20.5s,baz=91,slow=32						
ARSA	**Arzberg**	60.41	22	*e*P	**P**	**02 30 48.8**	**+1.7**
	comp=Z,14nm,1.6s						
MEM	**Membach**	60.44	14	*d*P	**P**	**02 30 48.8**	**+1.6**
BTNL	**Ternell**	60.45	14	*d*P	**P**	**02 30 47.7**	**+0.5**
	comp=Z,25nm,2.3s						
MOA	**Molln**	60.45	21	*e*P	**P**	**02 30 46.4**	**-1.0**
	comp=Z,7.5nm,0.9s						
FRGS	**Fruska Gora**	60.47	26	⇑P	**P**	**02 30 48.0**	**+0.5**
AHRW	**Bad Neuenahr-A**	60.64	15	*e*P	**P**	**02 30 50.1**	**+1.6**
	comp=Z,55nm,1.5s,baz=207,slow=7.1						
TNS	**Taunus Mts**	60.71	16	*e*L	L	02 51 03.6	
	comp=Z,372nm,22.0s						
LC01	**Cunco**	60.81	230	P	**P**	**02 30 49.5**	**-0.6**
LC01				IAmb	IAmb	02 30 56.9	
	comp=Z,60nm,1.5s						
MORH	**Mrgy, Hungar**	60.81	25	⇓P	**P**	**02 30 50.0**	**+0.3**
PAMC	**Pamplona, Colo**	60.94	283	*e*P	**P**	**02 30 51.2**	**-0.7**
GRA1	**Grafenberg Arr**	61.04	18	IAmb	IAmb	02 30 58.5	
	comp=Z,36nm,1.3s						
GRF	**Grafenberg Arr**	61.04	18	*e*P	**P**	**02 30 48.9**	**-2.4**
	comp=Z,318nm,3.2s,baz=207,slow=7.1						
GRF				*e*L	L	02 57 11.0	
	comp=Z,372nm,19.6s						
WET	**Wettzell**	61.09	19	*e*P	**P**	**02 30 51.3**	**-0.4**
	comp=Z,38nm,1.4s,baz=207,slow=7.1						
WET				*e*L	L	02 57 32.3	
	comp=Z,579nm,18.1s						
CONA	**Conrad Observa**	61.10	22	*e*P	**P**	**02 30 52.1**	**+0.2**
	comp=Z,14nm,1.2s,SNR=5.5						
GEC2	**GERESS Array S**	61.11	20	IAmb	IAmb	02 30 53.8	
	comp=Z,22nm,1.2s						
GEC2	**GERESS Array S**	61.11	20	*e*P	**P**	**02 30 51.5**	**-0.3**
	comp=Z,43nm,1.6s,baz=207,slow=7.1						
GEC2				*e*L	L	02 57 41.6	
	comp=Z,524nm,18.1s						
GERES	**GERESS Array B**	61.11	20	P	**P**	**02 30 50.6**	**-1.3**
	comp=Z,4.0nm,0.8s,baz=197,slow=4.2,SNR=26						
GERES				PP	**PP**	**02 33 08.9**	**+2.3**
	comp=Z,1.5nm,0.9s,baz=222,slow=9.0,SNR=3.5						
GERES				LR	LR	02 58 11.2	
	comp=Z,475nm,18.9s,baz=210,slow=37						
CKRC	**Cesky Krumlov**	61.30	21	*e*P	**P**	**02 30 52.6**	**-0.5**
CKRC				*e*x	x	02 30 58.5	
KHC	**Kasperske Hory**	61.31	20	*e*P	**P**	**02 30 53.1**	**-0.1**
KHC				*e*		02 30 59.3	
KHC	**Kasperske Hory**	61.31	20	*e*P	**P**	**02 30 53.1**	**-0.1**
KHC				*e*pP	**pwP**	**02 30 59.3**	**-0.4**
KHC	**Kasperske Hory**	61.31	20	P	**P**	**02 30 54.0**	**+0.8**
ROTZ	**Rotzenmuhle**	61.41	19	*e*P	**P**	**02 30 53.8**	**-0.1**
	comp=Z,34nm,1.5s,baz=207,slow=7.1						
HERR	**Herculane**	61.45	28	⇓P	**P**	**02 30 54.9**	**+0.8**
MANZ	**Manzenberg**	61.57	18	*e*P	**P**	**02 30 54.6**	**-0.3**
	comp=Z,41nm,1.5s,baz=207,slow=7.1						
BZS	**Buzias**	61.64	27	⇑P	**P**	**02 30 56.6**	**+1.2**
PTLC	**Puerto Leguiza**	61.65	274	*e*P	P	02 30 51.2	-5.0
UBBA	**Unterbreizbach**	61.68	17	*e*P	**P**	**02 30 56.6**	**+1.2**
	comp=Z,37nm,1.5s,baz=207,slow=7.1						
NKC	**Novy Kostel**	61.90	19	*e*P	**P**	**02 30 57.8**	**+0.7**
NKC	**Novy Kostel**	61.90	19	*e*P	**P**	**02 30 57.8**	**+0.7**
WERN	**Wernitzgruen**	61.92	18	*e*P	**P**	**02 30 57.9**	**+0.6**
	comp=Z,35nm,1.4s,baz=207,slow=7.1						
PBCC	**Pribram**	61.93	20	*e*P	**P**	**02 30 58.1**	**+0.8**
GUNZ	**Gunzen**	61.97	18	*e*P	**P**	**02 30 58.0**	**+0.3**
	comp=Z,34nm,1.2s,baz=207,slow=7.1						
ROSC	**El Rosal**	61.99	280	P	**P**	**02 30 59.0**	**0.0**
	comp=Z,5.8nm,0.5s,baz=143,slow=2.9,SNR=8.5						
ROSC				LR	LR	02 55 43.7	
	comp=Z,2µm,20.1s,baz=135,slow=34						
ROSC	**El Rosal**	61.99	280	P	**P**	**02 30 59.3**	**+0.4**
ROSC				pmax	pmax		
	comp=Z,83nm,1.2s						
ROSC	**El Rosal**	61.99	280	P	**P**	**02 30 59.3**	**+0.4**
ROSC	**El Rosal**	61.99	280	*e*P	P	02 30 51.2	-7.7
GZR	**Gura Zlata**	62.00	28	⇑P	**P**	**02 30 58.0**	**0.0**
MODS	**Modra-Piesok**	62.01	23	*e*P	**P**	**02 30 58.2**	**+0.3**

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MODS                              pmax    pmax
       comp=Z,20nm,1.5s
MODS   Modra-Piesok     62.01  23 eP      P        02 30 58.2 +0.3
PLN    Plauen           62.02  18 eP      P        02 30 58.0  0.0
       comp=Z,35nm,1.6s,baz=207,slow=7.1
TANN   Tannenbergstha   62.06  18 eP      P        02 30 57.9 -0.4
       comp=Z,32nm,1.3s,baz=207,slow=7.1
SIRR   Siria            62.15  27 ⇓P      P        02 30 59.6 +0.6
SMOL   Smolenice        62.18  23 eP      P        02 31 00.7 +1.7
SMOL                              pmax    pmax
       comp=Z,13nm,1.7s
SMOL   Smolenice        62.18  23 eP      P        02 31 00.7 +1.7
KRUC   Moravsky         62.24  22 eP      P        02 30 58.6 -0.8
GTTG   Gottingen        62.32  16 eP      P        02 31 01.0 +1.1
       comp=Z,54nm,1.7s,baz=207,slow=7.1
PRAC   Prado            62.33 278 eP      P        02 31 01.5 +0.7
PRU    Pruhonice        62.37  20 eP      P        02 31 00.4 +0.2
PRU    Pruhonice        62.37  20 eP      P        02 31 00.4 +0.2
PTBC   PUERTO BERRIO,   62.47 281 eP      P        02 30 56.3 -5.3
NNA    Nana             62.51 260  LR     LR       02 57 58.1
       comp=Z,999nm,18.3s,baz=90,slow=36
LOT    Lotru            62.51  29 ⇓P      P        02 31 02.6 +1.2
VRAC   Vranov           62.52  22 ⇑P      P        02 31 01.4  0.0
VRAC   Vranov           62.52  22 eP      P        02 31 01.3  0.0
JAVC   Velka Javorina   62.55  23 eP      P        02 31 03.1 +1.5
GARC   Garzon, Huila    62.66 276 eP      P        02 30 58.9 -4.3
NORC   Norcasia         62.67 280 eP      P        02 30 58.9 -4.1
PSZ    Piszkesteto      62.68  25 ⇑P      P        02 31 02.4  0.0
PSZ    Piszkesteto      62.68  25  P      P        02 31 01.9 -0.6
PSZ                               pmax    pmax
       comp=Z,29nm,1.4s
PSZ    Piszkesteto      62.68  25  P      P        02 31 01.9 -0.6
PSZ                               IAmb    IAmb     02 31 05.1
       comp=Z,29nm,1.4s
VYHS   Vyhne            62.71  24 eP      P        02 31 03.4 +0.8
VYHS                              pmax    pmax
       comp=Z,58nm,1.9s
VYHS   Vyhne            62.71  24 eP      P        02 31 03.4 +0.8
FLOC   Florencia        62.72 276 eP      P        02 30 56.3 -7.0
ORTC   Ortega, Tolima   62.72 278 eP      P        02 31 01.5 -1.9
PVCC   Panska Ves       62.84  20 eP      P        02 31 02.6 -0.8
PVCC   Panska Ves       62.84  20 eP      P        02 31 02.6 -0.8
ARR    Arges            62.87  29 ⇓P      P        02 31 03.8  0.0
BRG    Berggiesshubel   62.93  19 eP      P        02 31 04.4 +0.5
BRG                               Amp              02 31 06.7
       comp=Z,8.2nm,0.6s
VNA1   Neumayer--Stat   63.00 178  P      P        02 31 04.4 +0.2
CLL    Collm            63.01  18 i P     P        02 31 05.2 +0.8
       comp=Z,25nm,1.8s
CLL                               i                02 31 09.3
CLL                               LmV              02 59 00.0
       comp=Z,500nm,19.8s
CLL    Collm            63.01  18 i P     P        02 31 05.2 +0.8
CLL                               i                02 31 09.3
CLL                               pmax    pmax
       comp=Z,25nm,1.8s
CLL                               MLR     MLR
       comp=Z,500nm,19.8s
CLL    Collm            63.01  18 eL      L        02 59 07.2
       comp=Z,518nm,19.8s
RREF   El Recreo        63.01 279 eP      P        02 30 58.9 -7.1
DRGR                    63.02  27 ⇑P      P        02 31 04.6 -0.2
VOIR                    63.12  29 ⇑P      P        02 31 06.6 +1.1
KRLC   Kraliky          63.23  21 eP      P        02 31 05.6 -0.4
KRLC                              e                02 31 12.6
KRLC   Kraliky          63.23  21 eP      P        02 31 05.6 -0.4
KRLC                              epP     pwP      02 31 12.6 +0.1
MORC   Moravsky Berou   63.26  22 ⇑P      P        02 31 05.9 -0.3
MORC   Moravsky Berou   63.26  22 eP      P        02 31 06.8 +0.6
MORC   Moravsky Berou   63.26  22  IAmb   IAmb     02 31 14.0
       comp=Z,22nm,1.3s
DPC    Dobruska-Polom   63.29  21 eP      P        02 31 07.3 +0.9
DPC                               e                02 31 12.1
DPC    Dobruska-Polom   63.29  21 eP      P        02 31 07.3 +0.9
DPC                               epP     pwP      02 31 12.1 -0.8
VNA2   Neumayer--Watz   63.31 178  P      P        02 31 06.4 +0.2
       baz=354,slow=7.0
UPC    Upice            63.31  21 eP      P        02 31 07.4 +0.9
UPC    Upice            63.31  21 eP      P        02 31 07.4 +0.9
KECS   Kecovo           63.37  25 eP      P        02 31 08.5 +1.6
KECS   Kecovo           63.37  25 eP      P        02 31 08.5 +1.6
OSTC   Ostas            63.43  21 eP      P        02 31 08.0 +0.7
LANS   Liptovska Anna   63.49  23 eP      P        02 31 10.1 +2.3
LANS   Liptovska Anna   63.49  23 eP      P        02 31 10.1 +2.3
VNA3   Neumayer Olymp   63.56 179  P      P        02 31 07.7 -0.2
MLR    Muntele Rosu     63.60  30 ⇓P      P        02 31 08.6 -0.1
MLR    Muntele Rosu     63.60  30  IAmb   IAmb     02 31 10.7
       comp=Z,28nm,1.2s
KSP    Ksiaz            63.69  21 eP      P        02 31 10.2 +1.2
SOTA   Rioblanco        63.75 276 eP      P        02 31 16.9 +6.1
POPC   Popayan, Colom   63.89 277 eP      P        02 31 09.2 -2.1
PLMC   San Jos del P    63.92 279 eP      P        02 31 11.8 +0.4
OZUR                    63.95  29 ⇑P      P        02 31 11.3 +0.3
ARCR   ARCALIA          63.99  28 ⇑P      P        02 31 11.9 +0.8
EFOR   EFORIE           64.00  33 ⇑P      P        02 31 10.7 -0.5
NIE    Niedzica         64.03  24 eP      P        02 31 13.5 +2.2
BMR    Baia Mare        64.04  27 ⇑P      P        02 31 11.5 +0.1
CRVS   Cervenica-Dubn   64.10  25 eP      P        02 31 12.7 +0.9
CRVS                              pmax    pmax
       comp=Z,91nm,1.7s
CRVS   Cervenica-Dubn   64.10  25 eP      P        02 31 12.7 +0.9
BR131  Keskin Array S   64.14  39 i P     P        02 31 14.4 +2.0
BRTR   Keskin Array B   64.14  39  P      P        02 31 12.3 -0.1
       comp=Z,4.4nm,1.0s,baz=224,slow=8.6,SNR=9.6
BRTR                              LR      LR       03 01 58.7
       comp=Z,183nm,18.2s,baz=241,slow=39
BRTR   Keskin Array B   64.14  39ceP      P        02 31 14.5 +2.0
BRTR                              pmax    pmax
       comp=Z,4.0nm,0.9s
BRTR   Keskin Array B   64.14  39  P      P        02 31 13.0 +0.6
UZH    Uzhgorod         64.24  25 eP      P        02 31 11.6 -1.1
UZH                               e                02 31 13.4
UZH                               i                02 31 19.5
VRI    Vrincioaia       64.25  30 ⇓P      P        02 31 13.8 +1.0
SNAA   Sanae            64.28 176  P      P        02 31 12.7  0.0
SNAA   Sanae            64.28 176  P      P        02 31 12.6 -0.2
       comp=Z,7.8nm,0.9s,baz=328,slow=7.4,SNR=7.4
SNAA   Sanae            64.28 176ceP      P        02 31 12.8  0.0
SNAA                              pmax    pmax
       comp=Z,32nm,1.3s
SNAA   Sanae            64.28 176  P      P        02 31 12.6 -0.2
SNAA                              IAmb    IAmb     02 31 20.9
       comp=Z,27nm,1.1s
ATAH   Atahualpa        64.35 266  LR     LR       02 58 26.3
       comp=Z,2µm,20.2s,baz=122,slow=35
KOLS   Kolonicke sedl   64.46  25 eP      P        02 31 15.9 +1.7
KOLS                              pmax    pmax
       comp=Z,15nm,1.6s
KOLS   Kolonicke sedl   64.46  25 eP      P        02 31 15.9 +1.7
OJC    Ojcow            64.47  23 eP      P        02 31 15.5 +1.4
OJC    Ojcow            64.47  23  IAmb   IAmb     02 31 21.9
       comp=Z,35nm,1.5s
GAZ    Gaziantep        65.03  43  P      P        02 31 19.5 +1.3
GAZ                               IAmb    IAmb     02 31 20.9
       comp=Z,29nm,1.4s
NVL    N'lazarevskaya   65.04 171 eP      P        02 31 23.6 +6.0
NVL                               eS      S        02 40 03.5 +4.0
NVL                               pmax    pmax
       comp=Z,9.0nm,0.9s
OTAV   Otavalo          65.28 274  P      P        02 31 20.7  0.0
OTAV                              pmax    pmax
       comp=Z,19nm,1.4s
OTAV   Otavalo          65.28 274  P      P        02 31 20.7  0.0
OTAV   Otavalo          65.28 274 eP      P        02 31 21.2 +0.5
RAYN   Ar Rayn          65.37  60  P      P        02 31 21.4 +0.8
RAYN                              pmax    pmax
       comp=Z,9.0nm,1.3s
RAYN   Ar Rayn          65.37  60  P      P        02 31 21.4 +0.8
LVV    L'vov            65.89  26 eP      P        02 31 21.8 -1.6
GKP    Gorka Klasztor   66.04  20 eP      P        02 31 25.9 +1.7
SUW    Suwalki          68.75  22 eP      P        02 31 41.9 +0.5
AKASG  Malin Array Be   68.83  28  P      P        02 31 40.1 -1.9
       comp=Z,8.0nm,0.8s,baz=227,slow=6.3,SNR=27
AKASG                             LR      LR       03 03 49.0
       comp=Z,224nm,18.7s,baz=230,slow=38
AKASG  Malin Array Be   68.83  28ceP      P        02 31 46.2 +4.2
AKASG                             pmax    pmax
       comp=Z,17nm,1.1s
AKASG  Malin Array Be   68.83  28  P      P        02 31 40.0 -1.9
AKBB   Malin Array Si   68.83  28 i P     P        02 31 41.5 -0.5
AKBB   Malin Array Si   68.83  28  IAmb   IAmb     02 31 48.6
       comp=Z,30nm,1.1s
ANN    Anapa            69.38  36 eP      P        02 31 42.9 -2.6
ANN                               eS      S        02 40 54.9 +2.4
ANN                               pmax    pmax
       comp=Z,59nm,1.0s
GEVA   Gevas            69.60  44  P      P        02 31 47.9 +0.6
SYO    Syowa Base       70.22 162⇑ePcP    PcP      02 32 10.0 -2.1
NACGM  Naroch           70.80  23 i P     P        02 31 50.6 -3.4
NACGM                             i P     P        02 31 50.6 -3.4
NACGM                             i P     P        02 31 50.6 -3.4
NACGM                             i PP    PP       02 34 26.5 -4.5
NACGM                             i PP    PP       02 34 26.5 -4.5
NACGM                             i PPP   PPP      02 36 11.9
NACGM                             i S     S        02 41 09.7 +0.9
NACGM                             i SS    SS       02 46 28.6  +47
NACGM                             i SSS   SSS      02 49 02.5
NACGM                             i LQ    LQ       02 57 51.1
NACGM                             i LR    LR       03 03 13.6
BELA   Belgrano 2       71.04 185  P      P        02 31 57.5 +2.3
NB2    NORSAR Subarra   71.18  12  P      P        02 31 57.4 +1.1
       comp=Z,20nm,1.2s,baz=204,slow=6.5
NOA    NORSAR Array B   71.18  12  P      P        02 31 56.0 -0.3
       comp=Z,4.7nm,1.0s,baz=206,slow=6.2,SNR=6.8
NOA                               LR      LR       03 05 21.9
       comp=Z,176nm,18.6s,baz=215,slow=38
NOA    NORSAR Array B   71.18  12  P      P        02 31 56.0 -0.3
GNI    Garni            71.61  43ceP      P        02 32 00.1 +0.6
GNI                               pmax    pmax
       comp=Z,30nm,1.5s
GNI    Garni            71.61  43  P      P        02 32 01.1 +1.6
GNI                               IAmb    IAmb     02 32 27.2
       comp=Z,25nm,1.2s
SHA1   Shidzhatmaz      71.98  39 i P     P        02 32 03.3 +1.6
KIV    Kislovodsk       72.10  39  P      P        02 32 02.9 +0.6
KIV                               pmax    pmax
       comp=Z,28nm,1.3s
KIV    Kislovodsk       72.10  39  P      P        02 32 02.9 +0.6
KIV                               IAmb    IAmb     02 32 11.0
       comp=Z,28nm,1.3s
KBZ    Khabaz           72.12  39  P      P        02 32 02.3 +0.1
       comp=Z,4.1nm,1.0s,baz=269,slow=4.9,SNR=4.0
KBZ    Khabaz           72.12  39ceP      P        02 32 03.8 +1.6
KBZ                               pmax    pmax
       comp=Z,8.0nm,1.1s
E64A   Bridgewater      72.32 324  P      P        02 32 04.7 +1.3
       baz=122
F64A   Sherman          72.34 323  P      P        02 32 04.7 +1.2
       baz=122
F64A   Sherman          72.34 323  IAmb   IAmb     02 32 11.8
       comp=Z,55nm,1.2s
PYA1   Pyatigorsk       72.41  39 i P     P        02 32 06.2 +2.1
HRV    Adam Dziewonsk   72.67 319  P      P        02 32 06.1 +0.6
       baz=118
E63A   Oxbow            72.67 324  P      P        02 32 06.7 +1.2
       baz=122
F63A   Nahmakanta, Br   72.70 323  P      P        02 32 06.7 +0.9
       baz=121
F63A   Nahmakanta, Br   72.70 323  P      P        02 32 07.9 +2.2
F63A                              IAmb    IAmb     02 32 08.5
       comp=Z,40nm,1.3s
J63A   Strafford        72.72 320  P      P        02 32 06.5 +0.6
       baz=119
D63A   Stockholm        72.81 324  P      P        02 32 08.1 +1.8
       baz=122
GOF    Gofitskoye       72.88  38⇑eP      P        02 32 08.1 +1.3
GOF                               pmax    pmax
       comp=Z,24nm,0.9s
I62A   Tamworth         73.17 320  P      P        02 32 10.4 +1.8
       baz=119
G62A   West of Eustis   73.33 322  P      P        02 32 10.6 +1.1
       baz=120
D62A   Allapoint, All   73.39 324  P      P        02 32 10.2 +0.5
       baz=122
H62A   Milan            73.40 321  P      P        02 32 11.0 +1.1
       baz=119
VSU    Vasula           73.42  21 i P     P        02 32 11.9 +2.3
VSU                               pmax    pmax
       comp=Z,84nm,1.1s
U61A   Possum Corner    73.43 311  P      P        02 32 10.7 +0.5
       baz=113
PAL    Palisades        73.55 317  P      P        02 32 11.8 +1.0
       baz=116
M61A   Granite Spring   73.59 317  P      P        02 32 11.2 +0.2
       baz=116
O61A   Allentown        73.60 316  P      P        02 32 12.3 +1.2
       baz=115
N61A   South Mountain   73.70 316  P      P        02 32 11.9 +0.2
       baz=116
L61A   Hillsdale 1, H   73.83 318  P      P        02 32 14.2 +1.7
       baz=117
K61A   Williamstown     73.86 318  P      P        02 32 13.6 +1.0
       baz=117
H61A   Lyndonville      73.86 321  P      P        02 32 14.0 +1.4
       baz=118
X60A   Albert Glenn T   73.93 309  P      P        02 32 13.8 +0.7
       baz=112
ACON   Acoyapa          73.93 285  IAmb   IAmb     02 32 21.2
       comp=Z,57nm,1.2s
G61A   St-Isidore-de-   73.97 321  P      P        02 32 14.3 +1.1
       baz=119
VSR    Storozhevoye     74.01  31 eP      P        02 32 12.7 -0.5
VSR                               pmax    pmax
       comp=Z,20nm,0.9s
U60A   Pendleton        74.02 311  P      P        02 32 14.4 +0.7
       baz=112
D61A   St Aubert, Com   74.11 324  P      P        02 32 15.5 +1.5
       baz=121
M60A   Port Jervis      74.17 317  P      P        02 32 15.4 +0.9
       baz=116
J60A   Lant Hill Farm   74.22 319  P      P        02 32 16.0 +1.3
       baz=117
O60A   Telford          74.28 315  P      P        02 32 15.8 +0.7
       baz=115
R60A   Leonardtown, M   74.29 313  P      P        02 32 15.7 +0.6
       baz=113
H60A   Morristown       74.36 320  P      P        02 32 16.2 +0.7
       baz=118
G60A   Masonville       74.38 321  P      P        02 32 16.3 +0.6
       baz=118
D60A   Saint Jean D'O   74.41 323  P      P        02 32 16.9 +1.2
       baz=120
E60A   Ste Agathe de    74.45 322  P      P        02 32 16.4 +0.4
       baz=119
V59A   Middlesex        74.56 310  P      P        02 32 17.0 +0.2
       baz=112
F60A   Warwick          74.56 322  P      P        02 32 17.3 +0.7
       baz=119
S59A   Mechanicsville   74.61 312  P      P        02 32 16.9 -0.1
       baz=113
LPSR   Galich'ya Gora   74.69  30 eP      P        02 32 15.8 -1.4
LPSR                              pmax    pmax
       comp=Z,10.0nm,0.9s
P59A   Jarrettsville    74.72 314  P      P        02 32 17.5 -0.2
       baz=114
M59A   Waymart          74.82 317  P      P        02 32 19.6 +1.4
       baz=115
O59A   Robesonia        74.83 315  P      P        02 32 19.2 +0.9
       baz=114
L59A   Walton           74.83 317  P      P        02 32 19.0 +0.7
       baz=116
K59A   Cooperstown      74.95 318  P      P        02 32 19.4 +0.4
       baz=116
J59A   Piesco           75.03 319  P      P        02 32 21.0 +1.5
       baz=116,SNR=5.4
U58A   Oxford           75.03 311  P      P        02 32 19.5 -0.1
       baz=112
H59A   Cadyville        75.03 320  P      P        02 32 20.2 +0.8
       baz=117
OBN    Obninsk          75.08  27 i P     P        02 32 19.7 +0.3
OBN                               i                02 32 34.7
OBN                               pmax    pmax
       comp=Z,10.0nm,1.1s
UOSS   Minazif          75.09  62  P      P        02 32 19.7 -0.5
UOSS                              IAmb    IAmb     02 32 27.9
       comp=Z,43nm,1.4s
H58A   Gabriels         75.24 320  P      P        02 32 21.4 +0.8
       baz=117
O58A   Lewisberry       75.27 315  P      P        02 32 20.9 +0.1
       baz=114
L58A   Harry Jones Me   75.31 317  P      P        02 32 21.0 -0.1
       baz=115
R58A   Rapidan          75.33 313  P      P        02 32 21.2  0.0
       baz=112,SNR=5.3
VRH    Novokhopyorsk    75.33  32 eP      P        02 32 20.0 -0.9
VRH                               pmax    pmax
       comp=Z,10.0nm,1.0s
I58A   Old Forge        75.43 319  P      P        02 32 22.0 +0.3
       baz=116
M58A   Price's Panora   75.45 316  P      P        02 32 22.0 +0.1
       baz=114
FINES  FINESS Array B   75.45  18  P      P        02 32 21.1 -0.3
       comp=Z,21nm,1.1s,baz=219,slow=3.4,SNR=21
FINES                             LR      LR       03 04 25.5
       comp=Z,283nm,21.6s,baz=236,slow=35
FINES  FINESS Array B   75.45  18  P      P        02 32 22.2 +0.8
FINES  FINESS Array B   75.45  18  P      P        02 32 22.2 +0.8
BINY   Binghamton       75.47 317  P      P        02 32 23.1 +1.1
       baz=115
K58A   Earlville        75.48 318  P      P        02 32 22.9 +0.9
       baz=115
G58A   Ormstown         75.49 320  P      P        02 32 22.3 +0.3
       baz=117,SNR=5.4
E58A   La Victoria      75.56 322  P      P        02 32 22.8 +0.4
       baz=118
LONY   Lake Ozonia      75.59 320  P      P        02 32 22.6  0.0
       baz=116
U57A   Blanch           75.63 311  P      P        02 32 23.7 +0.7
       baz=111
D58A   Chemin du LacG   75.67 323  P      P        02 32 23.1 +0.1
       baz=118
LATQ   La Tuque         75.74 323  P      P        02 32 24.3 +0.9
       baz=118
T57A   Hurt             75.77 311  P      P        02 32 24.0 +0.2
       baz=111
V57A   Coltrane Farms   75.77 310  P      P        02 32 23.2 -0.6
       baz=111
P57A   Homestead Farm   75.79 314  P      P        02 32 24.5 +0.7
       baz=113,SNR=5.2
O57A   Amberson         75.80 315  P      P        02 32 25.5 +1.6
       baz=113
S57A   Dark Hollow, R   75.83 312  P      P        02 32 24.8 +0.7
       baz=112
M57A   Sunshine Farm,   75.89 316  P      P        02 32 24.7 +0.3
       baz=114
Q57A   Strasburg        75.90 313  P      P        02 32 24.0 -0.5
       baz=112
N57A   Milroy           75.96 315  P      P        02 32 26.1 +1.3
       baz=113,SNR=5.3
L57A   Andrews Acres    75.97 317  P      P        02 32 25.7 +0.9
       baz=114
H57A   Richville        76.04 319  P      P        02 32 25.4 +0.3
       baz=116
K57A   Scipio Center    76.05 317  P      P        02 32 25.9 +0.7
       baz=114
G57A   Newington        76.06 320  P      P        02 32 26.8 +1.6
       baz=116
E57A   Chemin Saint G   76.12 322  P      P        02 32 26.9 +1.3
       baz=117
W56A   Indian Trail     76.13 309  P      P        02 32 26.3 +0.4
       baz=110
S56A   Natural Bridge   76.25 312  P      P        02 32 26.5 -0.1
       baz=111
TRQ    Mont Tremblant   76.28 321  P      P        02 32 27.2 +0.6
T56A   Rocky Mt         76.36 311  P      P        02 32 26.9 -0.4
       baz=111
P56A   Dayton Farm, R   76.39 314  P      P        02 32 27.8 +0.5
       baz=112
U56A   King             76.39 310  P      P        02 32 27.7 +0.4
       baz=110
Q56A   Snyder Ridge,    76.47 313  P      P        02 32 29.1 +1.3
       baz=112,SNR=5.3
J56A   Wolcott          76.50 318  P      P        02 32 29.2 +1.4
       baz=114,SNR=5.1
L56A   Greenwood        76.51 317  P      P        02 32 29.0 +1.1
       baz=114
N56A   West Decatur     76.54 315  P      P        02 32 29.2 +1.0
       baz=113
K56A   Middlesex        76.58 317  P      P        02 32 29.0 +0.7
       baz=114
M56A   Emporium         76.68 316  P      P        02 32 30.2 +1.3
       baz=113
M56A   Emporium         76.68 316  IAmb   IAmb     02 32 36.4
       comp=Z,30nm,1.1s
KMSC   Kings Mountain   76.71 309  P      P        02 32 29.6 +0.4
       baz=110
BLA    Blacksburg       76.72 311  P      P        02 32 29.4 +0.1
       baz=110
E56A   St. Veronique    76.72 321  P      P        02 32 30.1 +1.1
       baz=116
D56A   ZEC Mazanza, M   76.78 322  P      P        02 32 30.4 +1.1
       baz=117
D55A   Sainte-Anne-du   77.21 322  P      P        02 32 33.3 +1.6
       baz=116
R54A   Victor           77.48 312  P      P        02 32 34.5 +1.0
       baz=110
U54A   Nelsons Funny    77.54 310  P      P        02 32 34.0 +0.1
       baz=110
S54A   Dingess, Beckl   77.59 311  P      P        02 32 34.2 +0.1
       baz=110
M54A   Oil Creek Stat   77.72 315  P      P        02 32 35.8 +1.0
       baz=112
M54A   Oil Creek Stat   77.72 315  IAmb   IAmb     02 32 42.6
       comp=Z,42nm,1.2s
N54A   Moraine State    77.75 315  P      P        02 32 34.7 -0.2
       baz=112
MAW    Mawson           77.75 158  LR     LR       02 59 03.5
       comp=Z,169nm,20.4s,baz=330,slow=30
GOGA   Godfrey          77.84 306  P      P        02 32 35.3 -0.3
       baz=108
Q53A   Leroy            78.11 312  P      P        02 32 37.4 +0.4
       baz=110
G54A   Lake Saint Pet   78.17 319  P      P        02 32 38.1 +0.9
       baz=114
ERPA   Erie             78.17 316  P      P        02 32 38.3 +1.1
       baz=112
N53A   Lisbon           78.29 314  IAmb   IAmb     02 32 46.0
       comp=Z,40nm,1.1s
L53A   Girard           78.30 316  P      P        02 32 38.9 +0.9
       baz=112,SNR=6.6
O53A   New Philadelph   78.36 314  P      P        02 32 39.4 +1.1
       baz=111,SNR=7.0
ALGO   Algonquin Park   78.37 320  P      P        02 32 39.0 +0.8
       baz=114
M53A   WI Miller and    78.40 315  P      P        02 32 39.5 +1.0
       baz=111,SNR=6.6
SADO   Sadowa           78.61 319  P      P        02 32 39.8 +0.2
SADO                              IAmb    IAmb     02 32 46.5
       comp=Z,51nm,1.4s
P52A   Corning          78.81 313  P      P        02 32 42.0 +1.2
       baz=110,SNR=5.8
LSQQ   Lebel-sur-Quev   79.00 323  P      P        02 32 42.2 +0.5
       baz=115
BELG   Belogornoye      79.10  33 i P     P        02 32 42.1 +0.1
BELG                              pmax    pmax
       comp=Z,7.0nm,1.0s
S51A   Beattyville      79.24 311  IAmb   IAmb     02 32 51.0
       comp=Z,50nm,1.1s
V51A   Loudon           79.26 309  IAmb   IAmb     02 32 50.9
       comp=Z,51nm,1.1s
P51A   Williamsport     79.44 312  P      P        02 32 45.8 +1.6
I51A   Listowel         79.49 317  P      P        02 32 44.6 +0.2
       baz=111
Q51A   Peebles          79.50 312  IAmb   IAmb     02 32 52.4
       comp=Z,36nm,0.9s
ACSO   Alum Creek Sta   79.63 313  P      P        02 32 45.5 +0.2
       baz=109
MATQ   Matagami         79.69 324  P      P        02 32 46.0 +0.6
       baz=115
KLMR   Klimovskoe       79.82  23 eP      P        02 32 44.5 -1.3
KLMR                              pmax    pmax
       comp=Z,31nm,1.2s
KLMR   Klimovskoe       79.82  23 eP      P        02 32 44.5 -1.3
KLMR                              AMP              02 32 47.3
       comp=Z,31nm,1.2s
T50A   Nancy            80.00 310  P      P        02 32 48.4 +1.1
M50A   Fremont          80.06 314  IAmb   IAmb     02 32 55.1
       comp=Z,47nm,0.9s
BRAL   Brewton          80.12 303  P      P        02 32 49.2 +1.1
       baz=105
GEYT   Alibeck          80.40  50  P      P        02 32 50.0 +0.5
       comp=Z,5.0nm,0.9s,baz=247,slow=3.1,SNR=7.6
GEYT                              LR      LR       03 09 10.0
       comp=Z,161nm,19.8s,baz=175,slow=36
GEYT   Alibeck          80.40  50  P      P        02 32 50.4 +0.8
GYA0B  ALIBECK ARRAY    80.40  50  P      P        02 32 50.2 +0.7
LRAL   Lakeview Retre   80.57 305  P      P        02 32 50.4 -0.1
       baz=106
U49A   Red Boiling Sp   80.57 309  IAmb   IAmb     02 32 58.1
       comp=Z,47nm,1.4s
O49A   Covington        80.59 313  IAmb   IAmb     02 32 58.0
       comp=Z,70nm,1.2s
P49A   Miami Univ. Ec   80.67 312  P      P        02 32 51.5 +0.6
       baz=108
N49A   Columbus Grove   80.72 314  IAmb   IAmb     02 32 58.5
       comp=Z,38nm,1.2s
X48A   Hartselle        80.99 307  IAmb   IAmb     02 32 59.7
       comp=Z,26nm,1.1s
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V48A	Smith Brothers	81.16	308	IAmb	IAmb	02 33 00.5	
	comp=Z,24nm,1.0s						
CCIG	Comitan	81.39	288	IAmb	IAmb	02 33 03.2	
	comp=Z,59nm,1.2s						
WCI	Wyandotte Cave	81.46	310	P	P	02 32 55.7	+0.5
	baz=107						
ARCES	ARCESS Array B	81.54	13	P	P	02 32 54.6	-0.3
	comp=Z,4.4nm,0.8s,baz=8.7,slow=1.6,SNR=14						
SUMG	Summit	81.70	353	*i* P	P	02 32 58.8	+2.6
	comp=Z,43nm,1.1s						
SUMG	Summit	81.70	353	*i* P	P	02 32 58.8	+2.6
SUMG				pmax	pmax		
	comp=Z,43nm,1.1s						
SUMG	Summit	81.70	353	*i* P	P	02 32 58.8	+2.6
SUMG				IAmb	IAmb	02 33 04.7	
	comp=Z,43nm,1.1s						
WVT	Waverly	82.06	308	P	P	02 32 58.3	0.0
	baz=106						
WVT	Waverly	82.06	308	P	P	02 32 59.3	+1.0
WVT				pmax	pmax		
	comp=Z,40nm,1.2s						
WVT	Waverly	82.06	308	P	P	02 32 59.3	+1.0
WVT				IAmb	IAmb	02 33 05.4	
	comp=Z,40nm,1.1s						
QSPA	South Pole Qui	82.45	180	P	P	02 33 00.5	+0.5
QSPA				IAmb	IAmb	02 33 07.9	
	comp=Z,32nm,1.1s						
HRA	Herat	82.64	54	P	P	02 33 02.6	+0.9
LVZ	Lovozero	82.65	16	*ce*P	P	02 33 02.4	+1.6
LVZ				pmax	pmax		
	comp=Z,99nm,2.5s						
SFIN	Lafayette	82.67	312	P	P	02 33 01.7	+0.3
	baz=107						
KIRV	Kirov	82.88	28	*ce*P	P	02 33 03.3	+1.2
X43A	Marvell	84.07	306	P	P	02 33 09.0	+0.2
	baz=104						
HDIL	Hopedale	84.33	312	P	P	02 33 09.8	-0.2
	baz=105						
HDIL	Hopedale	84.33	312	IAmb	IAmb	02 33 16.4	
	comp=Z,39nm,1.1s						
DAG	Danmarks Havn	84.35	359	*i* P	P	02 33 09.6	+0.3
	comp=Z,25nm,1.6s						
DAG	Danmarks Havn	84.35	359	*i* P	P	02 33 09.6	+0.3
DAG				pmax	pmax		
	comp=Z,25nm,1.6s						
DAG	Danmarks Havn	84.35	359	*i* P	P	02 33 09.6	+0.3
DAG				IAmb	IAmb	02 33 12.9	
	comp=Z,25nm,1.6s						
FVM	French Village	84.54	309	P	P	02 33 10.4	-0.7
FVM				pmax	pmax		
	comp=Z,31nm,0.9s						
FVM	French Village	84.54	309	P	P	02 33 10.4	-0.7
FVM				IAmb	IAmb	02 33 17.6	
	comp=Z,31nm,0.9s						
LCAR	Lake Charles	84.65	307	IAmb	IAmb	02 33 18.1	
	comp=Z,39nm,1.3s						
T42A	Van Buren	84.82	308	IAmb	IAmb	02 33 18.6	
	comp=Z,34nm,1.3s						
ABKAR	Akbulak array	85.09	39	P	P	02 33 13.9	+0.3
ABKAR	Akbulak array	85.09	39	IAmb	IAmb	02 33 21.3	
	comp=Z,11nm,1.3s						
CCM	Cathedral Cave	85.18	309	P	P	02 33 13.7	-0.6
	baz=104						
CCM	Cathedral Cave	85.18	309	P	P	02 33 14.2	-0.1
CCM				pmax	pmax		
	comp=Z,79nm,1.3s						
CCM	Cathedral Cave	85.18	309	P	P	02 33 14.2	-0.1
W41B	Gary Mavity, V	85.31	306	P	P	02 33 14.4	-0.7
	baz=103						
Z41A	Richland Creek	85.35	304	P	P	02 33 15.3	0.0
	baz=102						
JFWS	Jewell Farm	85.62	314	P	P	02 33 16.7	+0.3
	baz=105						
JFWS	Jewell Farm	85.62	314	IAmb	IAmb	02 33 22.8	
	comp=Z,34nm,1.1s						
X40A	Basin Creek Fa	85.64	305	P	P	02 33 17.2	+0.5
	baz=102						
X40A	Basin Creek Fa	85.64	305	IAmb	IAmb	02 33 24.1	
	comp=Z,30nm,1.3s						
MGMO	Mountain Grove	85.77	308	IAmb	IAmb	02 33 25.0	
	comp=Z,29nm,1.1s						
R40A	Maddies Statio	86.02	309	IAmb	IAmb	02 33 25.9	
	comp=Z,38nm,1.1s						
U40A	Yellville	86.05	307	P	P	02 33 18.7	0.0
	baz=102						
U40A	Yellville	86.05	307	P	P	02 33 19.2	+0.5
MIAR	Mount Ida	86.25	305	P	P	02 33 19.7	0.0
	baz=102						
W39A	Magazine	86.55	306	P	P	02 33 20.9	-0.2
	baz=102						
W39A	Magazine	86.55	306	IAmb	IAmb	02 33 28.4	
	comp=Z,44nm,1.1s						
ARU	Arti	86.56	32	*c i*P	P	02 33 22.1	+1.3
ARU						02 36 38.4	
ARU				S	S	02 43 47.7	-10
ARU				pmax	pmax		
	comp=Z,12nm,1.2s						
S39A	Bolivar	86.70	309	IAmb	IAmb	02 33 28.7	
	comp=Z,22nm,1.1s						
HHAR	Hobbs	86.89	307	IAmb	IAmb	02 33 30.0	
	comp=Z,49nm,1.4s						
P38A	Dawn	87.27	310	IAmb	IAmb	02 33 31.8	
	comp=Z,26nm,1.0s						
U38A	Gravette	87.28	307	P	P	02 33 24.0	-0.8
U38A				IAmb	IAmb	02 33 31.2	
	comp=Z,25nm,1.1s						
E38A	The Farm, Brul	87.43	318	IAmb	IAmb	02 33 31.1	
	comp=Z,18nm,1.1s						
SCIA	State Center	87.52	313	P	P	02 33 26.2	+0.4
	baz=103						
EYMN	Ely	87.71	319	P	P	02 33 25.7	-0.9
	baz=104						
SPMN	Marine on St.	87.96	316	P	P	02 33 27.8	0.0
	baz=103						
TUL1	Leonard	88.29	306	P	P	02 33 29.2	-0.4
	baz=101						
435B	Jarrell	88.88	301	P	P	02 33 32.1	-0.3
	baz=100						
435B	Jarrell	88.88	301	P	P	02 33 32.5	0.0
435B				IAmb	IAmb	02 33 40.3	
	comp=Z,33nm,1.1s						
OK031	S. Brethren Rd	89.14	306	P	P	02 33 34.5	+0.9
B35A	Bob, Littlefor	89.26	319	IAmb	IAmb	02 33 40.3	
	comp=Z,29nm,1.2s						
OK025	Westminster Rd	89.47	306	IAmb	IAmb	02 33 41.9	
	comp=Z,15nm,0.9s						
KSU1	Kansas State U	89.51	309	P	P	02 33 34.5	-0.7
	baz=100						
KSU1	Kansas State U	89.51	309	IAmb	IAmb	02 33 41.8	
	comp=Z,26nm,1.1s						
ECSD	EROS Data Cent	90.33	314	P	P	02 33 38.7	-0.3
	baz=100						
ECSD	EROS Data Cent	90.33	314	P	P	02 33 39.2	+0.2
ECSD				IAmb	IAmb	02 33 45.8	
	comp=Z,34nm,1.2s						
WMOK	Wichita Mounta	90.50	305	P	P	02 33 39.6	-0.4
	baz=99						
JCT	Junction City	90.72	301	P	P	02 33 41.3	+0.1
	baz=98						
JCT	Junction City	90.72	301	IAmb	IAmb	02 33 48.8	
	comp=Z,27nm,1.1s						
KKAR	Karatay Array	90.79	47	P	P	02 33 41.9	+0.7
KKAR	Karatay Array	90.79	47	P	P	02 33 41.9	+0.7
KKAR	Karatay Array	90.79	47	IAmb	IAmb	02 33 48.8	
	comp=Z,4.9nm,1.0s						
ABTX	Abilene, Hawle	90.90	303	P	P	02 33 41.5	-0.5
	baz=98						
ABTX	Abilene, Hawle	90.90	303	IAmb	IAmb	02 33 50.0	
	comp=Z,40nm,1.4s						
ULM	Lac du Bonnet	91.02	320	P	P	02 33 41.8	-0.3
	comp=Z,1.8nm,1.0s,baz=6.5,slow=0.5,SNR=4.5						
ULM				LR	LR	03 07 33.3	
	comp=Z,321nm,21.0s,baz=107,slow=31						
FCC	Fort Churchill	91.67	329	P	P	02 33 46.3	+1.5
FCC				pmax	pmax		
	comp=Z,32nm,1.4s						
FCC	Fort Churchill	91.67	329	P	P	02 33 46.3	+1.5
FCC				IAmb	IAmb	02 33 52.5	
	comp=Z,32nm,1.4s						
BRVK	Borovoye	92.31	37	*ce*P	P	02 33 48.5	+0.6
BRVK				pmax	pmax		
	comp=Z,10.0nm,2.5s						
BRVK	Borovoye	92.31	37	P	P	02 33 48.3	+0.4
BVAR	Borovoye Array	92.37	37	P	P	02 33 46.9	-1.3
	comp=Z,0.6nm,0.7s,baz=224,slow=12,SNR=5.4						
AAK	Ala-Archa	93.62	48	*ce*P	P	02 33 55.9	+1.4
AAK				pmax	pmax		
	comp=Z,24nm,1.7s						
MSTX	Muleshoe	93.67	304	P	P	02 33 55.4	+0.6
	baz=97						
TXAR	Lajitas Array	93.90	299	P	P	02 33 55.5	-0.4
	comp=Z,1.1nm,0.9s,baz=112,slow=6.1,SNR=11						
TXAR				LR	LR	03 19 41.9	
	comp=Z,38nm,18.1s,baz=0.0,slow=38						
TXAR	Lajitas Array	93.90	299	P	P	02 33 55.8	-0.1
TXAR	Lajitas Array	93.90	299	P	P	02 33 55.8	-0.1
KSH	Kashi	94.37	51	P	P	02 33 57.4	-0.5
KSH				sP	pwP	02 34 08.3	+3.8
KSH				PP	PP	02 37 46.8	+1.5
KSH				S	S	02 45 03.1	-7.2
KSH				SS	SS	02 51 28.4	-3.8
KSH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KSH				LR	LR		
	comp=Z,380nm,7.6s						
KSH				LR	LR		
	comp=Z,870nm,6.7s						
KSH				LR	LR		
	comp=Z,1µm,18.9s						
EUNU	Eureka	94.59	350	P	P	02 33 59.7	+1.7
EUNU				IAmb	IAmb	02 34 06.8	
	comp=Z,20nm,1.3s						
VNDA	Vanda	94.91	179	LR	LR	03 10 29.0	
	comp=Z,327nm,21.9s,baz=224,slow=32						
T25A	Trinidad	95.34	307	P	P	02 34 03.3	+0.7
	baz=96						
RSSD	Black Hills	95.70	314	P	P	02 34 04.7	+0.7
	baz=95						
Q24A	Divide	96.08	308	P	P	02 34 06.7	+0.6
	baz=95						
SDCO	Great Sand Dun	96.26	307	P	P	02 34 06.9	+0.1
	baz=95						
SDCO	Great Sand Dun	96.26	307	IAmb	IAmb	02 34 15.6	
	comp=Z,12nm,1.2s						
KURK	Kurchatov	97.18	40	*i* P	Pdif	02 34 11.7	+1.3
KURK				pmax	pmax		
	comp=Z,5.0nm,1.8s						
S22A	4UR Ranch, Cre	97.31	307	P	Pdif	02 34 11.9	+0.2
	baz=94						
MKAR	Makanchi Array	99.46	44	P	Pdif	02 34 20.2	-0.5
	comp=Z,0.2nm,0.5s,baz=268,slow=2.5,SNR=4.3						
MKAR	Makanchi Array	99.46	44	*ce*P	Pdif	02 34 22.2	+1.5
PDAR	Pinedale Array	99.64	312	LR	LR	03 15 08.5	
	comp=Z,219nm,18.4s,baz=108,slow=33						
NRIK	Noril'sk	101.01	21	*i* P	Pdif	02 34 28.9	+1.9
NRIK				pmax	pmax		
	comp=Z,12nm,3.2s						
WMQ	Urumqi	103.30	47	*e*P	Pdif	02 34 39.9	+2.0
WMQ				pmax	pmax		
	comp=Z,9.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,570nm,11.8s						
WMQ				LR	LR		
	comp=N,930nm,29.3s						
WMQ				LR	LR		
	comp=E,1µm,28.8s						
WMQ				LR	LR		
	comp=Z,270nm,27.3s						
RKT	Rikitea	115.18	240	*e*LR	LR	03 14 00.1	
	comp=Z,390nm,24.0s						
SONM	Songino Array	115.48	40	PP	PP	02 40 20.9	-0.5
	comp=Z,0.2nm,0.3s,baz=274,slow=4.0,SNR=3.7						
KMI	Kunming	116.90	66	PKP	PKPdf	02 39 22.5	-1.0
CD2	Chengdu	117.20	59	*e*PKP	PKPdf	02 39 22.3	-1.4
HHC	Hu-ho-hao-te	121.18	47	*e*P	Pdif	02 35 50.0	-7.5
HHC	Hu-ho-hao-te	121.18	47	*e*PKP	PKiKP	02 39 32.0	+0.7
TAOE	Nuku Hiva Isla	124.42	254	*e*SS	SS	02 58 11.7	-5.6
	comp=Z,172nm,24.8s						
TAOE	Nuku Hiva Isla	124.42	254	*e*LR	LR	03 18 15.7	
	comp=Z,369nm,23.4s						
BJI	Beijing	124.76	46	PKP	PKPdf	02 39 37.8	-0.1
TBI	Tubuai	127.10	233	*e*SS	SS	02 58 50.0	+0.4
	comp=Z,246nm,33.5s						
TBI	Tubuai	127.10	233	*e*LR	LR	03 19 31.8	
	comp=Z,365nm,29.0s						
KLR	Kul'dur	129.31	29	*c i*PKIKP	PKiKP	02 39 48.4	+1.3
NJ2	Nanjing	129.53	55	*e*PKP	PKPdf	02 39 47.5	+0.3
PPT2	Papeete2	129.93	240	*e*SS	SS	02 59 23.0	-2.2
	comp=Z,258nm,25.5s						
PPT2	Papeete2	129.93	240	*e*LR	LR	03 20 44.3	
	comp=Z,482nm,30.8s						
TOLI2	Tolitoli	133.93	96		PKPdf	02 39 56.1	0.0
ASAR	Alice Springs	135.42	135	PKhKP	PKPpre	02 39 53.3	
	comp=Z,0.4nm,0.8s,baz=222,slow=2.5,SNR=2.8						
WRAB	Tennant Creek	138.09	131	PKIKP	PKPdf	02 40 01.1	-2.6
WRAB	Tennant Creek	138.09	131		PKPdf	02 40 01.1	-2.6

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*ISN **18** 02:35:17.2±1.0, 32°.21N×47°.57E, h14^{km}±6^{km}, ML3.4*
*TEH **18** 02:35:18.7, 32°.22N×47°.54E, h18^{km}, ML3.4*
*KISR **18** 02:35:21.3±0.5, 31°.18N×47°.71E, h213^{km}±14^{km}, ML3.7, Hypocentre not reviewed by the ISC*
ISC 18 02:35:18.6±1.2**, 32°.13N**±0°.05×**47°.51E**±0°.05**, h10^{km}, n29, σ0^{s}.62**/32**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DHL1	Dehloran	0.58	340	*e*Pg	Pg	02 35 29.0	-0.8
IKFM	Kafar-mosalman	1.42	11	*e*Pg	Pn	02 35 43.9	-0.5
IKFM				*e*		02 36 09.2	
	comp=Z,99nm,0.5s						
IKMR	Kamar-syah	1.56	28	*e*Pg	Pn	02 35 46.3	-0.1
IKMR				*e*		02 36 11.6	
	comp=Z,99nm,0.8s						
NSR	Nassriya	1.62	227	*e*Pg	Pn	02 35 47.0	-0.2
NSR				*e*Sg	Sn	02 36 09.0	+0.9
NSR				AML	AML	02 36 12.9	
	comp=E,484nm,0.4s						
IBDR	Badra	1.65	307	*e*Pg	Pn	02 35 47.0	-0.6
IBDR				*e*Sg	Sn	02 36 09.0	+0.1
IBDR				AML	AML	02 36 14.4	
	comp=N,548nm,0.8s						
IBDR				AML	AML	02 36 18.6	
	comp=E,513nm,0.6s						
IDOB	Doab	1.74	19	*e*Pn	Pn	02 35 49.4	+0.3
KCHF	Cheshme Sefid,	2.17	350	*e*Pn	Pn	02 35 54.3	-0.7
KCHF				*e*		02 36 42.3	
	comp=Z,99nm,0.5s						
HSAM	Samen	2.27	24	*e*Pn	Pn	02 35 56.6	+0.2
HSAM				*e*		02 36 44.0	
	comp=Z,99nm,1.2s						
KER	Kermanshah	2.27	352	*e*Pn	Pn	02 35 56.5	+0.2
IGHG	Ghaleghazi	2.33	340	*e*Pn	Pn	02 35 57.6	+0.4
IGHG				*e*		02 36 54.2	
	comp=Z,99nm,1.0s						
MIB	Mutribah	2.33	184	*e*P		02 35 57.8	
IBZA	Bozab	2.35	7	*e*Pn	Pn	02 35 58.1	+0.6
RST	Umm Al-Ruwaisa	2.66	190	*e*P		02 36 00.9	
RST				*e*S		02 36 30.8	
RST				IAML		02 36 43.2	
	comp=Z,300nm,0.8s						
IDHR	Dehrash	2.73	340	*e*Pn	Pn	02 36 02.7	+0.1
IDHR				*e*		02 37 02.1	
	comp=Z,99nm,1.0s						
IALM	Almabolaq	2.77	11	*e*Pn	Pn	02 36 04.0	+0.6
ILIN	Lien	2.81	351	*e*Pn	Pn	02 36 03.8	-0.1
ILIN				*e*		02 36 58.4	
	comp=Z,99nm,0.7s						
SHK1	Shahrekord	2.87	85	*e*Pn	Pn	02 36 04.6	0.0
SHK1				*e*		02 37 03.4	
	comp=Z,99nm,0.5s						
BHD	Baghdad	2.87	294	*e*Pn	Pn	02 36 05.0	+0.6
BHD				Sn	Sn	02 36 40.0	+1.0
BHD				AML	AML	02 36 44.0	
	comp=E,178nm,0.5s						
IPIR	Pirpir	2.91	78	*e*Pn	Pn	02 36 05.9	+0.6
IPIR				*e*		02 37 01.0	
	comp=Z,99nm,0.9s						
HAGD	Aghdareh	3.01	26	*e*		02 36 14.4	
	comp=Z,99nm,0.3s						
HAGD				*e*Pn	Pn	02 36 06.8	+0.3
RDF	Al-Radifah	3.20	179	*e*P		02 36 06.0	
IKLH	Kolahrood	3.63	70	*e*Pn	Pn	02 36 15.7	+0.6
IKLH				*e*		02 36 31.9	
	comp=Z,99nm,0.4s						
IRAZ	Razeghan	3.83	31	*e*Pn	Pn	02 36 19.2	+1.3
QABG	Abgarm-Qazvin	3.96	25	*e*Pn	Pn	02 36 18.5	-1.1
IZEF	Zefreh	4.14	78	*e*Pn	Pn	02 36 22.3	+0.2
IRAM	Ramesheh	4.15	93	*e*Pn	Pn	02 36 21.3	-1.0
KRSH	Karshahi	4.29	64	*e*Pn	Pn	02 36 24.3	+0.1
MAHB	Mahabad	4.86	343	*e*Pn	Pn	02 36 31.7	-0.1
QALM	Alamut, Qazvin	5.01	30	*e*Pn	Pn	02 36 33.8	-0.3
ANAR	Anarak	5.35	77	*e*Pn	Pn	02 36 38.8	+0.2
ISHM	Shahmirzad	6.04	51	*e*Pn	Pn	02 36 48.3	0.0
IHRS	Heris	6.18	357	*e*Pn	Pn	02 36 51.1	+1.0

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*JMA **18** 02:50:38.6±0.3, 39°.65N×143°.30E, h22^{km}±4^{km}, M3.6*
*IDC **18** 02:50:41.4±2.4, 39°.98N×142°.61E, h0^{km}, mb3.6/4, mb1 3.7/6, mb1mx3.4/46, mbtmp3.6/6, ML2.8/2, Error ellipse: s-maj=56.5km s-min=27.6km az=85.0*
ISC 18 02:50:38.2±1.6**, 39°.64N**±0°.07×**143°.3E**±0°.1**, h11^{km}, n27, σ0^{s}.89**/23**, mb3.5**/4**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	1.15	285	P	Pn	02 50 59.3	-0.9
MIYJ	Miyakonagasawa	1.15	267	P	Pn	02 50 59.1	-1.1
JKEN	Kujiedanarisaw	1.35	295	P	Pn	02 51 02.0	-0.9
JANG	Nango	1.56	299	P	Pn	02 51 04.9	-0.9
JOM	Ohasama	1.56	264	P	Pn	02 51 06.0	+0.1
JOM				*e*S	Sn	02 51 26.2	+0.1
JMK	Ichinoseki	1.76	248	P	Pn	02 51 08.5	0.0
JIO	Ouri	1.93	233	P	Pn	02 51 10.5	-0.4
JTM	Tenmabayashi	2.06	304	P	Pn	02 51 12.7	0.0
JRG	Rokugo	2.08	264	P	Pn	02 51 13.9	+0.9
JAH	Hinai	2.12	286	P	Pn	02 51 14.2	+0.6
JAH				*e*S	Sn	02 51 41.9	+2.0
JEM	Erimo	2.37	357	P	Pn	02 51 17.4	+0.4
JYK	Kaneyama	2.40	253	P	Pn	02 51 18.1	+0.8
JOT	Ohata	2.44	316	P	Pn	02 51 18.2	+0.2
JNBK	Urakawa-nobuka	2.67	351	P	Pn	02 51 22.2	+1.1
ASAJ	Asahikawa	4.50	354	Pn	Pn	02 51 46.0	-0.3
	0.7nm,0.3s,baz=186,slow=16,SNR=1.8						
ASAJ				Sn	Sn	02 52 38.6	0.0
	0.6nm,0.3s,baz=250,slow=34,SNR=1.4						
MJAR	Matsushiro Arr	5.07	234	Pn	Pn	02 51 55.9	+1.7
	0.2nm,0.3s,baz=42,slow=11,SNR=7.4						
MAT	Matsushiro	5.07	234	P	Pn	02 51 53.2	-0.9
SONM	Songino Array	27.68	299	P	P	02 56 26.2	0.0
	0.7nm,0.8s,baz=103,slow=7.8,SNR=3.8						
H11N2	WAKE ISLAND Hy	28.38	128	T	T	03 26 19.4	
	baz=320,slow=74,SNR=8.9						
H11N1	WAKE ISLAND Hy	28.39	128	T	T	03 26 20.4	
	baz=320,slow=74,SNR=8.8						
H11N3	WAKE ISLAND Hy	28.40	128	T	T	03 26 25.2	
	baz=320,slow=74,SNR=8.2						
H11S1	WAKE ISLAND Hy	29.20	129	T	T	03 27 30.1	
	baz=327,slow=74						
H11S3	WAKE ISLAND Hy	29.20	129	T	T	03 27 28.5	
	baz=327						
H11S2	WAKE ISLAND Hy	29.21	129	T	T	03 27 24.1	
	baz=327,slow=74						
ZALV	Zalesovo Beam	41.31	310	P	P	02 58 22.6	-0.9
	0.5nm,0.4s,baz=98,slow=8.0,SNR=2.7						
MKAR	Makanchi Array	44.04	300	P	P	02 58 45.4	-0.4
	0.4nm,0.7s,baz=80,slow=7.0,SNR=5.4						
WRA	Warramunga Arr	59.86	190	P	P	03 00 50.6	+6.7
	1.4nm,1.2s,baz=7.2,slow=7.1,SNR=2.1						

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*IDC **18** 02:51:04.5±5.3, 34°.47S×69°.94W, h0^{km}, mb3.8/2, mb1 4.1/3, mb1mx3.7/19, mbtmp3.6/3, ML3.6/1, Error ellipse: s-maj=300.4km s-min=28.6km az=86.0*
*NEIC **18** 02:51:17.1±0.6, 35°.12S±0°.05×71°.0W±0°.2, h103^{km}±4^{km}, Error ellipse: s-maj=17.9km s-min=6.4km az=99.0*
*GUC **18** 02:51:17.2±0.7, 35°.11S×71°.00W, h107^{km}±3^{km}, ML3.9*
ISC 18 02:51:17.0±1.0**, 35°.09S**±0°.04×**71°.07W**±0°.08**, h109^{km}**±7^{km}**, n39, σ0^{s}.91**/52**, 6C-2D, Central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BO02	Sierra Bellavi	0.38	39	⇓*i*P	Pn	02 51 32.5	-0.6
BO02				*i* S	Sn	02 51 44.5	-0.7
BO02				IAML		02 51 45.8	
	comp=N,16µm,0.2s						
BO02	Sierra Bellavi	0.38	39	Pn	Pn	02 51 32.8	-0.4
BO02				Sn	Sn	02 51 44.5	-0.7
BO03	Pichilemu	0.94	309	⇑*i*P	Pn	02 51 38.0	+0.5
BO03				*i* S	Sn	02 51 53.9	+1.0
MT09	Talagante	1.31	3	⇑*i*P	Pn	02 51 41.9	+0.1
MT09				*i* S	Sn	02 52 00.2	-0.2
MT09				IAML		02 52 02.6	
	comp=N,3µm,0.2s						
LMEL	Las Melosas	1.43	30	⇑*i*P	Pn	02 51 43.9	+0.7
LMEL				*i* S	Sn	02 52 04.7	+1.7
LMEL				IAML		02 52 09.0	
	comp=N,1µm,0.2s						
VA05	Santo Domingo	1.50	342	*e*P	Pn	02 51 43.8	+0.1
VA05				*i* S	Sn	02 52 03.8	-0.2
VA05				IAML		02 52 08.3	
	comp=E,3µm,0.2s						
BI02	San Fabin de	1.58	186	⇓*i*P	Pn	02 51 44.6	-0.2
BI02				*i* S	Sn	02 52 05.3	-0.6
BI02	San Fabin de	1.58	186	Pn	Pn	02 51 44.3	-0.5
BI02				Sn	Sn	02 52 05.1	-0.7
MT03	Universidad Ad	1.66	16	⇑*i*P	Pn	02 51 46.0	+0.2
MT03				*i* S	Sn	02 52 07.8	+0.1
MT03				IAML		02 52 12.6	
	comp=N,1µm,0.1s						
MT05	Renca	1.72	9	*e*P	Pn	02 51 46.9	+0.3
MT05				*i* S	Sn	02 52 08.7	-0.2
MT05				IAML		02 52 14.9	
	comp=E,1µm,0.2s						
MT05	Renca	1.72	9	Pn	Pn	02 51 46.8	+0.3
MT05				Sn	Sn	02 52 08.9	0.0
MT02	Curacav	1.83	358	*e*P	Pn	02 51 47.5	-0.3
MT02				*e*S	Sn	02 52 10.5	-0.8
MT02				IAML		02 52 11.4	
	comp=N,470nm,0.2s						
MT02	Curacav	1.83	358		Pn	02 51 47.9	+0.1
PEL	Peldehue	1.97	10	*e*P	Pn	02 51 49.8	+0.1
PEL				*e*S	Sn	02 52 14.4	-0.1
PEL				IAML		02 52 16.1	
	comp=E,609nm,0.3s						
PEL	Peldehue	1.97	10	Pn	Pn	02 51 49.8	+0.1
ROC1	El Roble	2.11	1	Pn	Pn	02 51 51.8	+0.1
ROCH	El Roble	2.11	1	⇑*i*P	Pn	02 51 51.8	+0.2
ROCH				*i* S	Sn	02 52 18.0	-0.1
ROCH				IAML		02 52 20.9	
	comp=E,614nm,0.5s						
BI03	Tigo	2.36	222	IAML		02 52 38.4	
	comp=E,1µm,0.3s						
BI03	Tigo	2.36	222	Pn	Pn	02 51 54.6	+0.1
VA03	San Esteban	2.36	11	*e*P	Pn	02 51 55.2	+0.4
VA03				IAML		02 52 28.0	
	comp=E,715nm,0.1s						
VA03	San Esteban	2.36	11	Pn	Pn	02 51 54.8	0.0
LC01	Cunco	3.85	189	Pn	Pn	02 52 14.5	+0.1
CO02	Combarbal	3.88	1	*e*P	Pn	02 52 14.5	-0.3
CO02				*i* S	Sn	02 52 58.5	-1.1
CO02	Combarbal	3.88	1	Pn	Pn	02 52 14.7	-0.1
ZON	Zonda	4.06	30	Pn	Pn	02 52 17.4	+0.1
CO03	El Pedregal	4.25	4	⇑*i*P	Pn	02 52 19.9	0.0
CO03				*i* S	Sn	02 53 06.8	-1.8
CO03	El Pedregal	4.25	4	Pn	Pn	02 52 19.3	-0.6
GO04	Tololo Observa	4.91	3	*e*P	Pn	02 52 27.6	-1.3
GO04				*i* S	Sn	02 53 20.4	-4.3
GO04	Tololo Observa	4.91	3	Pn	Pn	02 52 28.1	-0.8
CO01	Juntas del Tor	5.17	9	Pn	Pn	02 52 32.6	+0.3
PLCA	Paso Flores	5.65	176	Pn	Pn	02 52 38.1	-0.5
	comp=E,0.3nm,0.3s,baz=4.4,slow=15,SNR=12						
PLCA				Sn	Sn	02 53 52.7	+10
	comp=E,0.1nm,0.3s,baz=359,slow=16,SNR=1.0						
LCO	Las Campanas	6.07	3	Pn	Pn	02 52 43.3	-1.3
AC05	El Transito	6.27	6	Pn	Pn	02 52 46.2	-1.0
H03S1	Juan Fernandez	6.59	279	T	T	02 59 01.6	
	baz=97,slow=75,SNR=15						
H03S3	Juan Fernandez	6.59	279	T	T	02 59 03.4	
	baz=97,slow=75,SNR=15						
H03S2	Juan Fernandez	6.61	279	T	T	02 59 00.6	
	baz=97,slow=75,SNR=10.0						
AC04	Llanos de Chal	6.87	0	Pn	Pn	02 52 54.8	-0.4
TXAR	Lajitas Array	71.07	330	P	P	03 02 24.8	+1.3
	comp=E,0.5nm,0.5s,baz=157,slow=9.3,SNR=14						
PDAR	Pinedale Array	85.09	333	P	P	03 03 40.9	+0.1
	comp=E,0.8nm,1.0s,baz=146,slow=6.6,SNR=4.5						

IDC 18 02:53:51.9±3.0**, 8°.47S**×**118°.64E, h162^{km}**±26^{km}**, mb2.9**/2**, mb1 3.2**/5**, mb1mx2.9**/42**, mbtmp3.6**/5**, Error ellipse: s-maj=55.0km s-min=17.8km az=44.0, Sumbawa region**

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

BATI	Baumata	5.25	110	P	Pn	02 55 08.8	-0.1
	4.6nm,0.3s,baz=286,slow=20,SNR=1.5						
BATI				S	Sn	02 56 09.5	+0.4
	5.4nm,0.3s,baz=79,slow=18,SNR=1.6						
FITZ	Fitzroy Crossi	11.74	145	P	Pn	02 56 32.8	-1.8
	0.1nm,0.3s,baz=338,slow=11,SNR=6.4						
FITZ				S	Sn	02 58 35.2	-10
	0.5nm,0.3s,baz=187,slow=20,SNR=14						
WRA	Warramunga Arr	19.00	129	P	P	02 58 01.5	+0.1
	0.2nm,0.3s,baz=302,slow=12,SNR=11						
WRA				S	S	03 01 28.6	+0.1
	0.1nm,0.3s,baz=305,slow=24,SNR=1.6						
ASAR	Alice Springs	21.02	138	P	P	02 58 24.5	+1.4
	0.8nm,0.4s,baz=310,slow=9.0,SNR=18						
MKAR	Makanchi Array	63.83	333	P	P	03 04 06.6	-0.4
	0.1nm,0.6s,baz=132,slow=8.0,SNR=2.2						

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*NEIC **18** 02:55:56.6±0.9, 51°.73N±0°.04×178°.5E±0°.1, h97^{km}±4^{km}, mb4.2/10, ML3.1/30(AEIC), Error ellipse: s-maj=10.4km s-min=4.1km az=66.0*

*AEIC **18** 02:55:57±1.6, 51°.75N±0°.07×178°.57E±0°.10, h92^{km}±4^{km}, Error ellipse: s-maj=10.5km s-min=7.7km az=215.0*

*IDC **18** 02:55:60.0±7.3, 52°.04N×178°.67E, h131^{km}±74^{km}, mb2.8/5, mb1 3.2/6, mb1mx2.9/49, mbtmp3.2/6, Error ellipse: s-maj=84.0km s-min=26.4km az=6.0*

ISC 18 02:55:56.4±0.9, 51°.7N±0°.1×178°.58E±0°.06, h98^{km}±6^{km}, n45, σ0^{s}.89/52, mb3.4/8, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSSE	Little Sitkin	0.24	359		Pn	02 56 10.6	+0.1
LSSA	Little Sitkin	0.26	351		Pn	02 56 10.6	-0.1
LSPA	Little Sitkin	0.26	360		Pn	02 56 10.7	+0.1
LSPA					Sn	02 56 21.1	-0.1
LSNW	Little Sitkin	0.28	352		Pn	02 56 10.4	-0.3
LSNW					Sn	02 56 20.9	-0.4
AMKA	Amchitka	0.56	125		Pn	02 56 13.1	+0.7
AMKA					Sn	02 56 25.0	+0.7
CETU	Semis' Tuman	0.63	64		Pn	02 56 13.8	+0.8
CESW	Semis' Southwe	0.65	71		Pn	02 56 13.0	-0.1
CESW					Sn	02 56 25.6	0.0
CEAP	Semis' Anvil P	0.69	63		Pn	02 56 13.7	+0.1
CEAP					Sn	02 56 26.0	-0.5
CERAA	Semis' Rag'd T	0.72	73		Pn	02 56 13.8	0.0
CERAA					Sn	02 56 27.2	+0.3
GALAA	Gareloi Lava P	1.65	87		Pn	02 56 25.7	+1.3
TANO	Tanaga North	2.06	83		Pn	02 56 30.2	+0.5
TASE	Tanaga Southea	2.11	85		Pn	02 56 30.7	+0.4
TAFP	Tanaga Falls P	2.15	83		Pn	02 56 31.0	+0.2
TAFP					Sn	02 56 58.2	+1.1
KIMD	Kanaga Island	2.61	87		Pn	02 56 37.0	+0.2
KIKV	Kanaga Island	2.65	84		Pn	02 56 37.8	+0.4
KIRH	Kanaga Island	2.70	84		Pn	02 56 38.5	+0.5
ADK	Adak	2.95	85	Pn	Pn	02 56 41.3	-0.1
ADK				Sn	Sn	02 57 16.9	+0.9
GSTD	Great Sitkin T	3.29	82		Pn	02 56 46.0	0.0
GSMY	Great Sitkin M	3.35	82		Pn	02 56 47.1	+0.4
GSTR	Great Sitkin T	3.35	81	Pn	Pn	02 56 46.4	-0.4
ATKA	Atka Island	4.50	81	Pn	Pn	02 57 02.6	+0.3
NIKH	Nikolski High	7.81	76	Pn	Pn	02 57 47.6	+0.4
SPIA	Saint Paul Isl	8.51	45	Pn	Pn	02 57 59.0	+2.4
PETK	Petropavlovsk-	12.82	285	P	Pn	02 58 57.1	+2.3
	0.1nm,0.3s,baz=98,slow=19,SNR=0.9						
OHAK	Old Harbor	17.19	60	P	Pn	02 59 48.5	-1.6
KDAK	Kodiak Island	17.64	59	P	P	02 59 53.9	-1.2
KDAK				IAmb	IAmb	02 59 54.1	
	comp=Z,39nm,1.5s						
CNPM	China Poot	18.63	53	P	P	03 00 06.3	+0.3
BRLK	Bradley Lake	18.85	53	P	P	03 00 07.8	-0.6
BRLK				IAmb	IAmb	03 00 23.2	
	comp=Z,21nm,1.4s						
SUA	Susitna One	19.33	48	P	P	03 00 14.5	+0.7
SUA				IAmb	IAmb	03 00 21.6	
	comp=Z,15nm,1.4s						
IMAR	Indian Mountai	19.99	34	P	Pn	03 00 24.6	+1.3
TRF	Thorofare Moun	20.18	42	P	Pn	03 00 25.8	+0.1
MDM	Murphy Dome	21.57	39	P	P	03 00 37.5	-0.2
GLB	Gilahina Butte	22.58	50	P	P	03 00 48.2	-0.2
GLB				IAmb	IAmb	03 01 04.6	
	comp=Z,9.9nm,1.5s						
CTGM	Chitina Glacie	23.72	51	P	P	03 00 59.4	+0.2
CTGM				IAmb	IAmb	03 01 07.4	
	comp=Z,19nm,1.4s						
BCAR	Beaver Creek A	23.78	46	P	P	03 01 00.6	+0.9
EGAK	Eagle	24.40	42	P	P	03 01 04.8	-0.3
EGAK				IAmb	IAmb	03 01 05.3	
	comp=Z,12nm,1.5s						
YKA	Yellowknife Ar	36.20	46	P	P	03 02 47.3	-1.8
	comp=Z,0.1nm,0.3s,baz=279,slow=11,SNR=4.4						
NVAR	Mina Array Bea	45.13	81	P	P	03 04 02.5	-0.6
	comp=Z,0.4nm,0.6s,baz=304,slow=7.1,SNR=5.1						
NVAR	Mina Array Bea	45.13	81	P	P	03 04 04.4	+1.3
PDAR	Pinedale Array	47.76	71	P	P	03 04 21.7	-2.0
	comp=Z,0.2nm,0.5s,baz=303,slow=3.8,SNR=2.3						
PDAR	Pinedale Array	47.76	71	P	P	03 04 22.9	-0.7
MKAR	Makanchi Array	58.54	307	P	P	03 05 41.2	-1.1
	comp=Z,0.1nm,0.5s,baz=34,slow=6.2,SNR=2.0						
MKAR	Makanchi Array	58.54	307	P	P	03 05 41.8	-0.5
TXAR	Lajitas Array	60.22	79	P	P	03 05 53.8	-0.4
	comp=Z,0.3nm,0.9s,baz=316,slow=5.0,SNR=2.4						
TXAR	Lajitas Array	60.22	79	P	P	03 05 54.9	+0.7

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*IDC **18** 03:07:24.6±1.6, 52°.16N×160°.74E, h0^{km}, mb3.8/6, mb1 4.0/7, mb1mx3.6/40, mbtmp3.8/7, ML2.8/1, MS2.8/1, Ms1 2.8/1, ms1mx2.6/44, Error ellipse: s-maj=38.1km s-min=26.1km az=2.0*

*KRSC **18** 03:07:25.9±1.6, 52°.07N×160°.78E, h56^{km}±23^{km}, ML4.4*

*MOS **18** 03:07:28.7±0.5, 52°.12N×160°.69E, h40^{km}, mb4.0/1, Error ellipse: s-maj=10.9km s-min=4.9km az=106.4*

ISC 18 03:07:29.3±0.9, 52°.11N±0°.05×160°.76E±0°.05, h35^{km}, n69, σ1^{s}.22/95, mb3.9/6, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	Mys Shipunski	1.09	336	PN	Pn	03 07 46.3	-1.8
SPN				S	Sn	03 07 59.4	-2.5
SPN	Mys Shipunski	1.09	336	*e*P	Pn	03 07 46.3	-1.8
SPN				*e*S	Sn	03 07 59.4	-2.5
NLC	Nalytchevo	1.37	322	PN	Pn	03 07 50.6	-1.3
NLC	Nalytchevo	1.37	322	*e*P	Pn	03 07 50.6	-1.3
RUS	Russkaya	1.42	284	PN	Pn	03 07 51.3	-1.3
RUS				S	Sn	03 08 08.5	-1.5
RUS	Russkaya	1.42	284	*e*P	Pn	03 07 51.3	-1.3
RUS				*e*S	Sn	03 08 08.5	-1.5
DALK	Dalny	1.54	308	PN	Pn	03 07 52.9	-1.3
DALK				S	Sn	03 08 11.6	-1.3
DALK	Dalny	1.54	308	*e*P	Pn	03 07 52.9	-1.3
DALK				*e*S	Sn	03 08 11.6	-1.3
PET	Petropavlovsk	1.58	306	*e*PN	Pn	03 07 53.5	-1.3
PET				*e*S	Sn	03 08 12.1	-1.9
PET				pmax	pmax		
	comp=Z,394nm,0.6s						
PET				smax	smax		
	comp=E,1µm,0.5s						
PET				smax	smax		
	comp=N,2µm,0.5s						
PET	Petropavlovsk	1.58	306	*e*P	Pn	03 07 53.9	-0.9
PET				*e*S	Sn	03 08 13.5	-0.5
UGLR	Uglovaya	1.61	314	PN	Pn	03 07 55.0	-0.4
UGLR				S	Sn	03 08 14.8	-0.2
UGLR	Uglovaya	1.61	314	*e*P	Pn	03 07 55.0	-0.4
UGLR				*e*S	Sn	03 08 14.8	-0.2
MTVR	Mutnovka	1.63	284	PN	Pn	03 07 54.8	-0.8
MTVR				S	Sn	03 08 14.8	-0.6
MTVR	Mutnovka	1.63	284	*e*P	Pn	03 07 54.8	-0.8
MTVR				*e*S	Sn	03 08 14.8	-0.6
SDLR	Sedlovina	1.64	316	PN	Pn	03 07 54.7	-1.0
SDLR	Sedlovina	1.64	316	*e*P	Pn	03 07 54.7	-1.0
SMAR	Somma	1.66	315	PN	Pn	03 07 55.7	-0.4
SMAR	Somma	1.66	315	*e*P	Pn	03 07 55.7	-0.4
KDTR	Khodutka, Kamc	1.69	261	PN	Pn	03 07 55.6	-0.7
KDTR				S	Sn	03 08 15.3	-1.3
KDTR	Khodutka, Kamc	1.69	261	*e*P	Pn	03 07 55.6	-0.7
KDTR				*e*S	Sn	03 08 15.3	-1.3
AVH	Avacha	1.69	314	PN	Pn	03 07 56.1	-0.3
AVH	Avacha	1.69	314	*e*P	Pn	03 07 56.1	-0.3
GRL	Gorelyy	1.71	286	PN	Pn	03 07 56.7	0.0
GRL				S	Sn	03 08 19.3	+1.9
GRL	Gorelyy	1.71	286	*e*P	Pn	03 07 56.7	0.0
GRL				*e*S	Sn	03 08 19.3	+1.9
KRER	Koryakskii	1.71	315	PN	Pn	03 07 56.5	-0.3
KRER	Koryakskii	1.71	315	*e*P	Pn	03 07 56.5	-0.3
KOK	Koryaka	1.75	313	PN	Pn	03 07 57.0	-0.3
KOK	Koryaka	1.75	313	*e*P	Pn	03 07 57.0	-0.3
KRX	Arik	1.79	315	PN	Pn	03 07 57.2	-0.7
KRX	Arik	1.79	315	*e*P	Pn	03 07 57.2	-0.7
KII	Karymskiy	2.09	338	PN	Pn	03 08 01.7	-0.2
KII	Karymskiy	2.09	338	*e*P	Pn	03 08 01.7	-0.2
PETK	Petropavlovsk-	2.12	299	Pn	Pn	03 08 01.8	-0.5
	comp=N,15nm,0.3s,baz=112,slow=18,SNR=202						
PETK				Sn	Sn	03 08 28.0	+0.7
	comp=N,35nm,0.3s,baz=113,slow=15,SNR=6.5						
PETK				LR	LR	03 08 58.1	
	comp=N,216nm,20.9s,baz=1.6,slow=45						
GNL	Ganaly	2.33	314	PN	Pn	03 08 05.4	+0.1
GNL				S	Sn	03 08 34.8	+2.1
GNL	Ganaly	2.33	314	*e*P	Pn	03 08 05.4	+0.1
GNL				*e*S	Sn	03 08 34.8	+2.1
APC	Apacha	2.35	292	PN	Pn	03 08 05.7	+0.3
APC				S	Sn	03 08 34.5	+1.6
APC	Apacha	2.35	292	*e*P	Pn	03 08 05.7	+0.3
APC				*e*S	Sn	03 08 34.5	+1.6
MKZ	Mys Kozlova	2.52	13	PN	Pn	03 08 07.6	-0.1
MKZ				S	Sn	03 08 36.4	-0.7
MKZ	Mys Kozlova	2.52	13	*e*P	Pn	03 08 07.6	-0.1
MKZ				*e*S	Sn	03 08 36.4	-0.7
PAU	Pauzhetka	2.54	257	PN	Pn	03 08 08.0	+0.1
PAU	Pauzhetka	2.54	257	*e*P	Pn	03 08 08.0	+0.1
KZV	Kizimen	3.02	355	PN	Pn	03 08 15.3	+0.5
KZV	Kizimen	3.02	355	*e*P	Pn	03 08 15.3	+0.5
TUMD	Tumrok D	3.11	356	*e*P	Pn	03 08 15.8	0.0
TUMD				*e*S	Sn	03 08 51.8	+0.1
TUMR	Tumrok	3.20	354	PN	Pn	03 08 15.8	-1.4
TUMR				S	Sn	03 08 51.8	-2.4
TUMR	Tumrok	3.20	354	*e*P	Pn	03 08 18.2	+1.0
SKR	Severo-Kuril's	3.24	246	*e*PN	Pn	03 08 17.6	0.0
SKR				pmax	pmax		
	comp=Z,67nm,0.6s						
SKR				MLR	MLR		
	comp=Z,800nm,16.0s						
SKR	Severo-Kuril's	3.24	246	*e*P	Pn	03 08 17.8	+0.2
SKR				*e*S	Sn	03 08 53.7	-1.2
KMNR	Kamenistaya	3.67	355	PN	Pn	03 08 24.1	+0.5
KMNR	Kamenistaya	3.67	355	*e*P	Pn	03 08 24.1	+0.5
KOZ	Kozyrevsk	3.99	353	PN	Pn	03 08 30.9	+2.9
KOZ	Kozyrevsk	3.99	353	*e*P	Pn	03 08 30.9	+2.9
ESO	Esso	4.01	343	PN	Pn	03 08 29.0	+0.8
ESO	Esso	4.01	343	*e*P	Pn	03 08 29.0	+0.8
SRDR	Sredinnyy	4.26	352	PN	Pn	03 08 32.6	+0.9
SRDR	Sredinnyy	4.26	352	*e*P	Pn	03 08 32.6	+0.9
KBTR	Krutoberegovo	4.28	16	PN	Pn	03 08 33.1	+1.2
KBTR	Krutoberegovo	4.28	16	*e*P	Pn	03 08 33.1	+1.2
BKI	Bering	4.38	43	*e*S	Sn	03 09 20.2	-2.9
BDR	Baidarnaya	4.48	3	PN	Pn	03 08 36.3	+1.6
BDR	Baidarnaya	4.48	3	*e*P	Pn	03 08 36.3	+1.6
SRKR	Sorokina	4.56	3	PN	Pn	03 08 38.0	+2.2
SRKR	Sorokina	4.56	3	*e*P	Pn	03 08 38.0	+2.2
MJAR	Matsushiro Arr	22.28	235	P	P	03 12 24.2	+0.9
	comp=Z,0.8nm,0.4s,baz=17,slow=13,SNR=2.7						
MKAR	Makanchi Array	48.96	297	P	P	03 16 10.4	-1.5
	comp=Z,0.5nm,0.6s,baz=56,slow=6.5,SNR=9.9						
ARCES	ARCESS Array B	54.35	342	P	P	03 16 52.1	+0.3
	comp=Z,2.6nm,0.8s,baz=23,slow=9.8,SNR=1.4						
FINES	FINESS Array B	61.19	337	P	P	03 17 40.9	+1.0
	comp=Z,2.2nm,0.5s,baz=48,slow=5.1,SNR=11						
AKASG	Malin Array Be	69.67	329	P	P	03 18 34.7	-0.1
	comp=Z,0.9nm,0.4s,baz=28,slow=6.7,SNR=5.4						
TXAR	Lajitas Array	70.65	67	P	P	03 18 41.9	+0.5
	comp=Z,0.3nm,0.9s,baz=320,slow=8.2,SNR=2.2						

IDC 18 03:08:03.3±10.0, 31°.67S×179°.65W, h208^{km}±110^{km}, mb3.4/2, mb1 3.6/3, mb1mx3.2/29, mbtmp3.9/3, Error ellipse: s-maj=102.5km s-min=41.9km az=3.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	7.09	201	P	Pn	03 09 46.0	+1.4
	0.6nm,0.3s,baz=166,slow=22,SNR=2.4						
URZ				S	S	03 11 03.8	-1.4
	0.5nm,0.3s,baz=143,slow=21,SNR=2.0						
ASAR	Alice Springs	41.65	269	P	P	03 15 31.6	0.0
	0.8nm,0.5s,baz=103,slow=7.5,SNR=14						
WRA	Warramunga Arr	42.75	274	P	P	03 15 40.2	-0.2
	1.5nm,0.5s,baz=113,slow=7.9,SNR=21						
FINES	FINESS Array B	145.82	338	PKPbc	PKPdf	03 27 16.1	-0.1
	4.1nm,0.8s,baz=64,slow=3.2,SNR=8.3						

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*IDC **18** 03:13:49.5±2.6, 38°.31N×142°.38E, h49^{km}±24^{km}, mb3.5/5, mb1 3.6/9, mb1mx3.3/36, mbtmp3.7/9, ML3.0/4, MS3.9/1, Ms1 3.9/1, ms1mx2.8/37, Error ellipse: s-maj=32.5km s-min=17.5km az=93.0*

*JMA **18** 03:13:52.3, 38°.31N×141°.92E, h62^{km}±1^{km}, M3.8*

JMA Felt I J1.

ISC 18 03:13:50.8±1.6, 38°.27N±0°.06×142°.1E±0°.1, h54^{km}±12^{km}, n30, σ1^{s}.08/37, mb3.7/5, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.53	274	P	Pn	03 14 03.1	+0.4
JIKH				S	Sn	03 14 10.7	-0.5
JIO	Ouri	0.65	286	P	Pn	03 14 04.2	+0.2
JIO				S	Sn	03 14 12.7	-1.0
JKMT	Kesennumamotoy	0.75	316	P	Pn	03 14 05.8	+0.5
JKMT				S	Sn	03 14 15.4	-0.5
OFUJ	Ofunato	0.89	335	P	Pn	03 14 07.9	+0.8
OFUJ				S	Sn	03 14 19.2	+0.1
JMK	Ichinoseki	0.99	313	P	Pn	03 14 08.8	+0.3
JMK				S	Sn	03 14 20.6	-0.9
JMM	Marumori	1.14	249	P	Pn	03 14 09.9	-0.6
JMM				S	Sn	03 14 23.0	-2.1
JOU	Okura	1.17	275	P	Pn	03 14 10.4	-0.4
JOU				S	Sn	03 14 23.8	-2.0
JFK	Kawauchi	1.35	228	P	Pn	03 14 13.4	0.0
JFK				S	Sn	03 14 29.0	-1.3
JOM	Ohasama	1.37	331	P	Pn	03 14 14.1	+0.5
JOM				*e*S	Sn	03 14 30.0	-0.6
JYK	Kaneyama	1.54	295	P	Pn	03 14 15.5	-0.4
JFT	Otama	1.61	243	P	Pn	03 14 17.1	+0.2
JFT				S	Sn	03 14 35.3	-1.3
JRG	Rokugo	1.62	314	P	Pn	03 14 17.2	+0.1
JYS	Shirataka	1.64	269	P	Pn	03 14 16.9	-0.3
JYS				S	Sn	03 14 35.6	-1.5
JYA	Atsumi	1.93	280	P	Pn	03 14 20.8	-0.4
MJAR	Matsushiro Arr	3.58	242	P	Pn	03 14 44.9	+1.1
	0.5nm,0.3s,baz=58,slow=9.2,SNR=18						
MAT	Matsushiro	3.58	242	P	Pn	03 14 45.1	+1.3
MAT				*e*S	Sn	03 15 27.7	+2.9
ASAJ	Asahikawa	5.85	3	P	Pn	03 15 14.1	-0.7
	0.8nm,0.3s,baz=159,slow=9.1,SNR=2.1						
ASAJ				S	Sn	03 16 18.2	-2.3
	0.6nm,0.3s,baz=327,slow=18,SNR=1.4						
USRK	Ussuriysk Ar.	9.67	311	P	Pn	03 16 07.9	+0.8
	baz=117,slow=14,SNR=6.3						
KSRS	Korea Array	11.27	270	P	Pn	03 16 29.9	+0.8
	0.1nm,0.3s,baz=87,slow=14,SNR=1.8						
SONM	Songino Array	27.60	302	P	P	03 19 33.6	+0.7
	0.5nm,0.5s,baz=103,slow=7.9,SNR=4.0						
SONM				LR	LR	03 30 59.7	
	comp=Z,221nm,18.7s,baz=274,slow=37						
H11N2	WAKE ISLAND Hy	28.32	124	T	T	03 49 59.2	
	baz=316,slow=75,SNR=51						
H11N1	WAKE ISLAND Hy	28.33	124	T	T	03 49 59.7	
	baz=316,slow=75,SNR=35						
H11N3	WAKE ISLAND Hy	28.34	124	T	T	03 50 00.5	
	baz=316,slow=75,SNR=30						
H11S1	WAKE ISLAND Hy	29.08	126	T	T	03 50 56.8	
	baz=318,slow=76,SNR=12						
H11S3	WAKE ISLAND Hy	29.08	126	T	T	03 50 59.1	
	baz=318,slow=76,SNR=26						
H11S2	WAKE ISLAND Hy	29.10	126	T	T	03 51 00.2	
	baz=318,slow=76,SNR=13						
ZALV	Zalesovo Beam	41.52	311	P	P	03 21 33.0	+0.5
	0.9nm,0.3s,baz=81,slow=7.5,SNR=5.1						
MKAR	Makanchi Array	43.96	301	P	P	03 21 52.4	-0.1
	0.9nm,0.7s,baz=85,slow=10,SNR=15						
WRA	Warramunga Arr	58.37	189	P	P	03 23 40.1	-0.4
	0.7nm,0.4s,baz=6.5,slow=7.4,SNR=16						
ASAR	Alice Springs	62.10	189	P	P	03 24 05.5	-0.5
	0.4nm,0.7s,baz=16,slow=3.2,SNR=4.6						

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*IDC **18** 03:27:39.5±3.5, 36°.72N×71°.35E, h82^{km}±30^{km}, mb3.6/5, mb1 3.7/11, mb1mx3.2/59, mbtmp3.8/11, Error ellipse: s-maj=30.9km s-min=24.3km az=36.0*

*NNC **18** 03:27:44.1±4.1, 37°.49N×70°.99E, h0^{km}, mb4.2, mpv4.0, Error ellipse: s-maj=32.3km s-min=22.6km az=170.0*

ISC 18 03:27:40.7±0.7, 36°.95N±0°.06×71°.18E±0°.06, h88^{km}, n29, σ2^{s}.26/38, mb3.7/5, 3C-5D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THW	Thamme Wali	4.17	173	P	Pn	03 28 44.7	+2.6
SARP	Sargodha	5.17	166	P	Pn	03 28 57.2	+1.6
AML	Almayashu	5.53	20	P	Pn	03 29 02.8	+2.0
	SNR=36						
UCH	Uchtor	5.86	25	P	Pn	03 29 07.1	+1.7
	SNR=11						
EKS2	Erkin-Say	6.04	19	P	Pn	03 29 10.2	+2.6
	SNR=9.6						
KK31	Karatay Array	6.16	355	⇓P	Pn	03 29 11.1	+2.0
	8.8nm,0.3s,baz=179,slow=12,SNR=138						
KK31				⇓S	Sn	03 30 16.5	-1.7
	5.1nm,0.3s,baz=188,slow=26,SNR=4.9						
AAK	Ala-Archa	6.22	23	P	Pn	03 29 12.4	+2.3
	4.3nm,0.3s,baz=170,slow=6.2,SNR=57						
AAK				S	Sn	03 30 19.8	-0.1
	2.7nm,0.3s,baz=329,slow=22,SNR=11						
AAK	Ala-Archa	6.22	23	P	Pn	03 29 12.4	+2.3
	SNR=14						
AAK	Ala-Archa	6.22	23	⇓P	Pn	03 29 12.0	+1.9
	5.2nm,0.4s						
AAK				S	Sn	03 30 19.4	-0.5
	16nm,0.6s						
DHRM	DHARAMSHALA	6.31	137	*e*P	Pn	03 29 11.5	+0.1
DHRM				*e*S	Sn	03 30 17.7	-4.5
DHRM				IAML		03 30 21.1	
	comp=N,277nm,0.6s						
DHRM				IAML		03 30 21.2	
	comp=E,331nm,0.3s						
ULHL	Ulahol	6.58	35	P	Pn	03 29 17.3	+2.4
	SNR=7.6						
CHMS	Chumysh	6.63	23	P	Pn	03 29 17.5	+2.0
	SNR=14						
USP	Ospenovka	6.80	21	P	Pn	03 29 19.4	+1.6
	SNR=7.2						
TKM2	Tokmak 2	6.86	28	P	Pn	03 29 20.8	+2.0
	SNR=6.2						
TKM2	Tokmak 2	6.86	28	⇓P	Pn	03 29 20.6	+1.8
	comp=E,4.0nm,0.5s						
TKM2				⇑S	Sn	03 30 35.6	+0.2
	comp=E,12nm,0.8s						
SMLA	Simla	7.64	138	*e*P	Pn	03 29 29.2	-0.2
SMLA				*e*S	Sn	03 30 48.7	-5.7
SMLA				IAML		03 30 51.6	
	comp=E,92nm,0.2s						
SMLA				IAML		03 30 52.1	
	comp=N,108nm,0.2s						
GEYT	Alibeck	10.43	279	P	Pn	03 30 08.0	+0.6
	comp=N,0.4nm,0.3s,baz=257,slow=14,SNR=2.2						
GEYT				S	Sn	03 32 01.0	-1.3
	comp=N,1.1nm,0.3s,baz=310,slow=36,SNR=2.3						
MKAR	Makanchi Array	12.84	37	P	Pn	03 30 40.5	+0.6
	comp=N,0.1nm,0.3s,baz=228,slow=14,SNR=12						
KURBB	Kurchatov Arra	14.65	19	P	P	03 31 08.3	+1.1
	comp=N,0.1nm,0.3s,baz=205,slow=10,SNR=11						
AB31	Akbulak array	14.76	330	P	Pn	03 31 04.1	-0.6
	comp=N,1.3nm,0.4s,baz=137,slow=12,SNR=77						
AB31				⇑S	Sn	03 33 44.2	-3.0
	comp=N,0.9nm,0.5s,baz=149,slow=25,SNR=4.0						
BVAR	Borovoye Array	16.08	358	P	Pn	03 31 21.9	+0.5
	comp=N,0.2nm,0.3s,baz=171,slow=27,SNR=3.4						
AKTO	Aktyubinsk	16.46	329	P	P	03 31 27.6	+0.3
	comp=N,0.4nm,0.3s,baz=153,slow=6.4,SNR=8.3						
AKTO				S	Sn	03 34 20.3	-8.0
	comp=N,0.1nm,0.3s,baz=298,slow=15,SNR=2.5						
AKTO	Aktyubinsk	16.46	329	⇑P	P	03 31 27.4	+0.1
	comp=N,1.4nm,0.6s						
AKTO				⇓S	Sn	03 34 26.7	-1.6
	comp=N,6.2nm,1.5s						
ZALV	Zalesovo Beam	19.45	25	P	P	03 32 00.1	+0.1
	comp=N,0.6nm,0.3s,baz=216,slow=8.9,SNR=7.4						
FINES	FINESS Array B	37.19	326	P	P	03 34 45.0	+2.1
	comp=N,2.2nm,0.9s,baz=111,slow=8.4,SNR=3.6						
ARCES	ARCESS Array B	40.78	337	P	P	03 35 15.2	+2.4
	comp=N,5.4nm,1.0s,baz=108,slow=8.6,SNR=4.0						
YKA	Yellowknife Ar	80.79	3	P	P	03 39 44.4	+0.3
	comp=N,0.2nm,0.4s,baz=353,slow=5.2,SNR=5.3						
WRA	Warramunga Arr	82.11	122	P	P	03 39 49.7	-2.1
	comp=N,0.8nm,0.9s,baz=324,slow=5.0,SNR=7.1						
ASAR	Alice Springs	84.40	125	P	P	03 40 02.1	-1.3
	comp=N,0.6nm,0.7s,baz=303,slow=4.6,SNR=6.2						

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*NEIC **18** 03:32:21.5±1.0, 7°.61S±0°.09×13°.59W±0°.05, h10^{km}±1^{km}, mb4.9/14, Error ellipse: s-maj=16.5km s-min=7.0km az=340.0*

*IDC **18** 03:32:22.5±0.8, 7°.49S×13°.33W, h0^{km}, mb4.1/12, mb1 4.2/12, mb1mx3.9/39, mbtmp4.1/12, MS4.1/21, Ms1 4.1/21, ms1mx4.0/31, Error ellipse: s-maj=21.4km s-min=19.7km az=68.0*

*GCMT **18** 03:32:26.5±0.3, 7°.39S±0°.04×13°.53W±0°.02, h18^{km}±1^{km}, MW4.9/100, Moment Tensor Solution. s21,c23; s100,c141; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.96±.23; $M_{\theta\theta}$0.33±.12; $M_{\phi\phi}$2.63±.14; $M_{r\theta}$1.33±.45; $M_{\theta\phi}$-0.69±.08; $M_{\phi r}$0.22±.28; Best double couple: $M_0$3.14400×10^{16} NP1:ϕ_s183.00000°, δ47.00000°, λ-62.00000°. NP2:ϕ_s325.00000°, δ50.00000°, λ-117.00000°. Principal axes: T 2.8260, Plg2.0000°, Azm74.0000°; N 0.6390, Plg20.0000°, Azm343.0000°; P -3.4620, Plg70.0000°, Azm168.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 18 03:32:22.3±0.5, 7°.64S±0°.09×13°.53W±0°.06, h10^{km}, n52, σ1^{s}.43/38, mb4.5/20, MS4.1/20, 1C, Ascension Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASCN	Ascension	0.88	251		Pg	03 32 37.8	-1.4
ASCN					Sg	03 32 48.1	-2.6
SHEL	Horse Pasture	11.24	138	Pn	Pn	03 35 03.1	0.0
DBIC	Dimbokro	16.64	32	LR	LR	03 41 16.6	
	comp=Z,571nm,20.1s,baz=196,slow=32						
KOWA	Kowa	23.93	23	P	P	03 37 37.2	+0.5
	2.4nm,0.6s,baz=209,slow=8.9,SNR=8.4						
KOWA	Kowa	23.93	23	P	P	03 37 37.0	+0.2
KOWA				IAmb	IAmb	03 37 39.0	
	comp=Z,42nm,1.9s						
TOA0	Torodi Ar. Sit	25.59	36	P	P	03 37 51.6	-0.3
TOA0				IAmb	IAmb	03 37 55.0	
	comp=Z,34nm,1.7s						
TORD	Torodi Ar. Bea	25.59	36	P	P	03 37 51.5	-0.4
	comp=Z,3.9nm,0.7s,baz=221,slow=10,SNR=17						
TORD				LR	LR	03 46 27.5	
	comp=Z,531nm,21.2s,baz=230,slow=33						
TORD	Torodi Ar. Bea	25.59	36	P	P	03 37 51.2	-0.7
TSUM	Tsumeb	32.30	114	P	P	03 38 51.0	-0.9
BDFB	Brasilia	34.66	254	P	P	03 39 15.9	+3.5
	comp=Z,1.7nm,0.7s,baz=31,slow=4.7,SNR=2.5						
BDFB				LR	LR	03 50 33.0	
	comp=Z,618nm,21.9s,baz=101,slow=31						
BDFB	Brasilia	34.66	254	P	P	03 39 10.9	-1.6
BDFB				IAmb	IAmb	03 39 19.0	
	comp=Z,33nm,1.7s						
MACI	Morro de la Ar	35.80	355	P	P	03 39 20.8	-1.3
SUR	Sutherland	40.27	132	P	P	03 40 01.4	+1.5
	comp=Z,3.8nm,0.7s,baz=277,slow=11,SNR=1.6						
SUR	Sutherland	40.27	132	P	P	03 40 00.8	+0.8
SUR				IAmb	IAmb	03 40 13.9	
	comp=Z,59nm,1.6s						
LBTB	Lobatse	41.13	119	P	P	03 40 07.9	+0.9
	comp=Z,2.1nm,0.7s,baz=254,slow=12,SNR=2.4						
LBTB	Lobatse	41.13	119	P	P	03 40 06.7	-0.4
LBTB				IAmb	IAmb	03 40 15.0	
	comp=Z,35nm,1.8s						
BOSA	Boshof	42.07	125	P	P	03 40 15.3	+0.6
	comp=Z,2.5nm,0.5s,baz=303,slow=9.0,SNR=14						
BOSA				LR	LR	03 54 55.4	
	comp=Z,217nm,18.8s,baz=294,slow=32						

BOSA	Boshof	42.07	125	P	P	03 40 13.9	-0.9
BOSA				IAmb	IAmb	03 40 19.9	
	comp=Z,43nm,1.8s						
MATP	Matopo	42.57	112	P	P	03 40 19.9	+1.0
	comp=Z,2.0nm,0.6s,baz=278,slow=8.0,SNR=7.1						
MBAR	Mbarara	44.67	83	P	P	03 40 33.8	-2.2
PVAQ	Vaqueiros	45.13	7	P	P	03 40 37.7	-1.3
CPUP	Villa Florida	45.55	240	LR	LR	03 57 51.1	
	comp=Z,367nm,18.1s,baz=68,slow=33						
PESTR	Estremoz	46.60	6	P	P	03 40 50.4	-0.2
SIV	San Ignacio	47.18	255	P	P	03 40 59.8	+4.2
	comp=Z,0.5nm,0.7s,baz=10.0,slow=2.0,SNR=2.1						
SIV				LR	LR	03 58 26.2	
	comp=Z,372nm,21.0s,baz=44,slow=33						
KEST	Kesra	48.22	25	LR	LR	04 01 04.7	
	comp=Z,207nm,21.0s,baz=193,slow=36						
KMBO	Kilima Mbogo	51.01	85	LR	LR	04 01 23.5	
	comp=Z,277nm,19.5s,baz=248,slow=34						
DAVA	Damuels	58.49	18	eP	P	03 42 19.5	+0.6
	comp=Z,3.8nm,0.7s						
SQTA	Sankt Quirin	58.87	19	eP	P	03 42 21.9	+0.5
	comp=Z,4.7nm,0.6s						
ABTA	Abfaltersbach	58.90	21	eP	P	03 42 23.3	+1.7
	comp=Z,3.1nm,0.6s						
RETA	Reutte	58.95	19	eP	P	03 42 22.1	+0.2
	comp=Z,2.4nm,0.6s						
WTTA	Wattenberg	59.05	20	i P	P	03 42 23.9	+1.2
	comp=Z,5.6nm,0.7s						
SOKA	Soboth	59.76	22	eP	P	03 42 29.4	+1.9
	comp=Z,1.1nm,0.6s						
OPO	Ambohidratompo	59.88	107	LR	LR	04 03 07.6	
	comp=Z,144nm,21.4s,baz=86,slow=31						
PLCA	Paso Flores	60.28	227	LR	LR	04 06 19.3	
	comp=Z,126nm,18.2s,baz=121,slow=34						
MOA	Molln	60.46	21	eP	P	03 42 33.0	+0.8
	comp=Z,2.6nm,0.7s						
GERES	GERESS Array B	61.11	20	P	P	03 42 37.3	+0.6
	comp=Z,1.3nm,0.6s,baz=194,slow=8.6,SNR=12						
GERES				LR	LR	04 08 40.0	
	comp=Z,140nm,18.9s,baz=227,slow=36						
GERES	GERESS Array B	61.11	20	P	P	03 42 36.0	-0.7
ROSC	El Rosal	61.91	280	LR	LR	04 07 29.8	
	comp=Z,416nm,20.4s,baz=128,slow=34						
BRTR	Keskin Array B	64.17	39	LR	LR	04 11 02.2	
	comp=Z,143nm,20.2s,baz=254,slow=36						
SNAA	Sanae	64.31	176	LR	LR	04 04 03.8	
	comp=Z,96nm,19.9s,baz=19,slow=30						
AKASG	Malin Array Be	68.84	28	P	P	03 43 26.8	-0.1
	comp=Z,1.0nm,0.5s,baz=223,slow=6.7,SNR=7.4						
AKASG				LR	LR	04 14 51.3	
	comp=Z,76nm,19.4s,baz=290,slow=37						
AKASG	Malin Array Be	68.84	28	P	P	03 43 26.1	-0.8
SYO	Syowa Base	70.27	162	⇑eX	P	03 43 31.0	-4.4
NOA	NORSAR Array B	71.17	12	LR	LR	04 16 46.9	
	comp=Z,68nm,18.4s,baz=275,slow=38						
FINES	FINESS Array B	75.45	18	P	P	03 44 06.8	+0.6
	comp=Z,5.5nm,1.1s,baz=197,slow=3.2,SNR=4.7						
FINES				LR	LR	04 19 10.1	
	comp=Z,200nm,18.1s,baz=263,slow=37						
FINES	FINESS Array B	75.45	18	P	P	03 44 05.3	-0.9
GEYT	Alibeck	80.44	50	LR	LR	04 20 13.9	
	comp=Z,93nm,20.1s,baz=55,slow=36						
QSPA	South Pole Qui	82.48	180	P	P	03 44 44.9	-0.1
ULM	Lac du Bonnet	90.95	320	LR	LR	04 18 41.0	
	comp=Z,85nm,20.4s,baz=97,slow=30						
TXAR	Lajitas Array	93.81	299	P	P	03 45 42.1	+1.7
	comp=Z,0.3nm,0.9s,baz=64,slow=2.1,SNR=2.0						
MKAR	Makanchi Array	99.50	44	LR	LR	04 36 02.6	
	comp=Z,91nm,18.6s,baz=310,slow=38						
PDAR	Pinedale Array	99.56	312	LR	LR	04 25 57.5	
	comp=Z,52nm,18.3s,baz=92,slow=32						

WEL 18 04:03:39.5±0.9,**35°S**±12°×**18°0W**±1°5,**h259**^{km}±11^{km}, **M3.4**/20,**mB4.0**/6,**MLv3.6**/20,**Mw(mB)3.1**/6,**Error ellipse: s-maj=0.0km s-min=0.0km az=125.0,East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	2.75	219	P	Pn	04 04 29.3	-0.5
MXZ				S	S	04 05 08.9	-0.8
PKGZ	Pakihiroa	3.11	218	P	Pn	04 04 33.5	-0.2
PKGZ				S	S	04 05 15.5	-1.3
HAZ	Te Kaha	3.17	223	P	Pn	04 04 33.7	-0.6
HAZ				S	S	04 05 15.8	-1.9
PUZ	Puketiti	3.17	214	P	Pn	04 04 35.9	+1.5
PUZ				S	S	04 05 19.6	+1.7
RUGZ	Raukumara Rang	3.38	221	P	Pn	04 04 36.3	-0.4
RUGZ				S	S	04 05 20.9	-1.3
CNGZ	Carnagh Statio	3.54	210	P	Pn	04 04 41.4	+3.0
MWZ	Matawai	3.73	219	S	S	04 05 30.0	+0.9
URZ	Urewera	3.90	223	P	Pn	04 04 41.1	-1.4
URZ				S	S	04 05 28.7	-3.9
RIGZ	Rimuhau	3.91	213	P	Pn	04 04 44.2	+1.5
RIGZ				S	S	04 05 36.2	+3.2
SNGZ	Shannon Statio	4.17	216	P	Pn	04 04 46.5	+0.9
SNGZ				S	S	04 05 39.8	+1.5
MHGZ	Mahia Peninsul	4.23	208	P	Pn	04 04 49.5	+3.2
MTHZ	Maungataniwha	4.47	219	P	Pn	04 04 49.6	+0.3
MTHZ				S	S	04 05 45.3	+0.4
WIAZ	Waiheke Island	4.53	251	P	Pn	04 04 56.5	+6.6
MRHZ	Matea Rd	4.69	223	P	Pn	04 04 50.5	-1.3
ARHZ	Aropaoanui	4.71	215	P	Pn	04 04 52.1	0.0
BKZ	Black Stump Fm	4.89	219	P	Pn	04 04 53.8	-0.4
BKZ				S	S	04 05 54.7	+0.9
TLZ	Tolley Road	4.90	233	P	Pn	04 04 47.7	-6.6
KWHZ	Kaweka Forest	5.12	218	P	Pn	04 04 56.4	-0.6
KWHZ				S	S	04 05 59.3	+0.4
KAHZ	Kahuranaki	5.20	212	P	Pn	04 04 58.2	+0.2
OTVZ	Oturere	5.34	225	P	Pn	04 04 58.2	-1.6
OTVZ				S	S	04 06 11.2	+7.2
BHHZ	Black Hill Sta	5.35	220	P	Pn	04 04 58.6	-1.2
HIZ	Hauiti	5.45	234	P	Pn	04 04 59.9	-1.1
PRHZ	Porangahau	5.69	211	P	Pn	04 05 05.1	+1.1
MRZ	Mangatainoka R	6.49	215	P	Pn	04 05 12.5	-1.3
MRZ				S	S	04 06 27.0	-2.5
HOWZ	Holdsworth Sta	6.70	214	P	Pn	04 05 15.5	-1.0
TMWZ	Te Maipa	6.71	211	P	Pn	04 05 16.6	+0.1
OGWZ	Otaki Gorge	6.80	216	P	Pn	04 05 16.1	-1.6
KIW	Kapiti Island	6.96	217	P	Pn	04 05 17.2	-2.5

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*KRNET **18** 04:06:35.1±0.1,40°.60N×80°.49E,mb2.8*
*SOME **18** 04:06:43.4,40°.90N×79°.35E,h0^{km}*
*NNC **18** 04:06:46.1±2.1,40°.89N×79°.28E,h0^{km},mb3.7,mpv3.3, Error ellipse: s-maj=14.7km s-min=12.4km az=179.0*
ISC 18 04:06:41.9±2.8,**40°.6N**±0°.1×**79°.43E**±0°.06,**h10**^{km}**,n33,** σ**1^{s}.42**/52,**8C-2D,Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRZ	Przheval'sk	2.02	338	⇓iP	Pn	04 07 15.5	-0.8
	baz=21						
PRZ				⇓iS	Sb	04 07 45.1	+0.8
	baz=21						
KDJ	Kajisay	2.27	313	⇑iP	Pb	04 07 22.0	-1.2
	baz=3.0						
KDJ				⇑iS	Sg	04 07 55.8	+0.8
	baz=3.0						
ANVS	Anan'yevo	2.54	329	⇑iP	Pn	04 07 23.8	+0.4
	baz=17						
ANVS				⇑iS	Sb	04 07 59.0	-0.1
	baz=17						
SHLS	Shalkode	2.54	1	eP	Pb	04 07 27.9	+0.1
	22nm,0.3s						
SHLS				eS	Sb	04 07 59.8	+0.7
	60nm,0.4s						
SHLS	Shalkode	2.54	1	Pg	Pb	04 07 27.9	+0.1
	22nm,0.3s						
SHLS				Lg	Lg	04 07 59.8	
	60nm,0.4s						
UZB	Uzynbulak	2.55	353	eP	Pb	04 07 27.2	-0.7
	7.3nm,0.3s						
UZB				eS	Sb	04 07 58.9	-0.5
	21nm,0.4s						
UZB	Uzynbulak	2.55	353	Pg	Pb	04 07 27.2	-0.7
	7.3nm,0.3s						
UZB				Lg	Lg	04 07 58.9	
	21nm,0.4s						
SATY	Saty	2.56	343	eP	Pb	04 07 27.4	-0.6
	12nm,0.5s						
SATY				eS	Sb	04 07 59.3	-0.4
	30nm,0.6s						
SATY	Saty	2.56	343	Pg	Pb	04 07 27.4	-0.6
	12nm,0.5s						
SATY				Lg	Lg	04 07 59.3	
	30nm,0.6s						
PDGK	Podgornoye	2.72	1	Pg	Pb	04 07 29.6	-1.0
	5.5nm,0.3s						
PDGK				Lg	Lg	04 08 02.5	
	14nm,0.3s						
PDGK	Podgornoye	2.72	1	⇑Pn	Pb	04 07 29.4	-1.3
	5.0nm,0.4s						
PDGK				⇑Lg	Lg	04 08 02.3	
KPKS	Kokpek	2.91	349	eP	Pb	04 07 33.3	-0.6
	16nm,0.3s						
KPKS				eS	Sb	04 08 09.3	-0.2
	40nm,0.3s						
KTMS	Ketmen	2.92	13	eP	Pb	04 07 32.8	-1.3
	1.7nm,0.2s						
KTMS				eS	Sb	04 08 07.7	-2.2
	12nm,0.3s						
TNSS	Tian-Shan	3.05	323	eP	Pb	04 07 35.5	-1.1
	6.8nm,0.3s						
TNSS				eS	Sb	04 08 13.0	-1.0
	9.4nm,0.3s						
TNSS	Tian-Shan	3.05	323	Pg	Pb	04 07 35.5	-1.1
	6.8nm,0.3s						
TNSS				Lg	Lg	04 08 13.0	
	9.4nm,0.3s						
MDOK	Medeo	3.11	326	eP	Pb	04 07 36.8	-0.6
	2.7nm,0.3s						
MDOK				eS	Sb	04 08 16.0	+0.6
	13nm,0.5s						
MDOK	Medeo	3.11	326	Pg	Pb	04 07 36.8	-0.6
	2.7nm,0.3s						
MDOK				Lg	Lg	04 08 15.0	
	13nm,0.5s						
KOTS	Kotyrbulak	3.14	327	eP	Pb	04 07 37.6	-0.3
	6.4nm,0.2s						
KOTS				eS	Sb	04 08 17.2	+0.9
	16nm,0.4s						
KOTS	Kotyrbulak	3.14	327	Pg	Pb	04 07 37.6	-0.3
	6.4nm,0.2s						
KOTS				Lg	Lg	04 08 17.2	
	16nm,0.4s						
MNBS	Baschi	3.55	348	eP	Pb	04 07 44.8	-0.1
	3.8nm,0.3s						
MNBS				eS	Sb	04 08 28.6	+0.6
	12nm,0.3s						
MNBS	Baschi	3.55	348	Pg	Pb	04 07 44.8	-0.1
	3.8nm,0.3s						
MNBS				Lg	Lg	04 08 28.6	
	12nm,0.3s						
KST	Kastek	3.55	314	eP	Pb	04 07 45.8	+0.8
	3.9nm,0.4s						
KST				eS	Sb	04 08 30.9	+2.7
	6.8nm,0.5s						
KST	Kastek	3.55	314	Pg	Pb	04 07 45.8	+0.8
	3.9nm,0.4s						
KST				Lg	Lg	04 08 30.9	
	6.8nm,0.5s						
KTBS	Karatobe	3.71	328	eP	Pb	04 07 47.3	-0.3
	1.3nm,0.2s						
KTBS				eS	Sb	04 08 33.1	+0.4
	9.4nm,0.5s						
KTBS	Karatobe	3.71	328	Pg	Pb	04 07 47.3	-0.3
	1.3nm,0.2s						
KTBS				Lg	Lg	04 08 33.1	
	9.4nm,0.5s						
DJR	Jarkent	3.73	4	eP	Pb	04 07 48.0	+0.1
	1.3nm,0.2s						
DJR				eS	Sb	04 08 34.5	+1.3
	4.6nm,0.3s						
DJR	Jarkent	3.73	4	Pg	Pb	04 07 48.0	+0.1
	1.3nm,0.2s						
DJR				Lg	Lg	04 08 34.5	
	4.6nm,0.3s						
DGS	Degeres	3.79	315	eP	Pb	04 07 49.6	+0.6
	1.9nm,0.4s						
DGS				eS	Sb	04 08 36.5	+1.6
	4.7nm,0.8s						
ARXS	Arharly	3.79	342	eP	Pb	04 07 49.4	+0.4
	3.6nm,0.3s						
ARXS				eS	Sb	04 08 36.8	+1.8
	5.9nm,0.3s						
ARXS	Arharly	3.79	342	Pg	Pb	04 07 49.4	+0.4
	3.6nm,0.3s						
ARXS				Lg	Lg	04 08 36.8	
	5.9nm,0.3s						
KAPS	Kapalarasan	4.67	359	eP	Pb	04 08 06.5	+2.5
	1.7nm,0.4s						
KAPS				eS	Sb	04 09 06.3	+6.0
	4.9nm,0.6s						
KAPS	Kapalarasan	4.67	359	Pg	Pg	04 08 08.4	-2.9
	1.7nm,0.4s						
KAPS				Lg	Lg	04 09 09.5	
	4.9nm,0.6s						
MK31	Makanchi Array	6.52	18	⇑Pn	Pn	04 08 20.9	+3.0
	0.2nm,0.3s,baz=202,slow=14,SNR=4.8						
MK31				⇑Sn	Sn	04 09 31.9	-0.3
	2.8nm,1.4s,baz=194,slow=26,SNR=4.1						

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*NDI **18** 04:07:48.9±2.3,24°.13N×93°.80E,h77^{km}±23^{km},ML3.5*
*IDC **18** 04:07:49.8±3.8,24°.00N×93°.95E,h84^{km}±36^{km},mb3.6/8, mb1 3.7/9,mb1mx3.3/56,mbtmp3.9/9,Error ellipse: s-maj=55.4km s-min=14.8km az=70.0*
ISC 18 04:07:48.3±0.9,**24°.10N**±0°.04×**93°.77E**±0°.06,**h75**^{km}±10^{km}**, n26,**σ**1^{s}.13**/40,**mb3.9**/8,**Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IMP	Imphal	0.74	13	eP	Pn	04 08 04.6	+0.4
IMP				eS	Sn	04 08 16.0	0.0
IMP				IAML		04 08 16.4	
	comp=N,1μm,0.2s						
IMP				IAML		04 08 17.4	
	comp=E,550nm,0.3s						
KOHI	KOHIMA	1.64	11	eP	Pn	04 08 16.1	+0.6
KOHI				eS	Sn	04 08 36.4	+0.5
KOHI				eS	Sn	04 08 36.5	+0.5
KOHI				IAML		04 08 37.3	
	comp=N,1μm,0.3s						
KOHI				IAML		04 08 38.0	
	comp=E,882nm,0.7s						
SAIH	SAIHA	1.76	204	eP	Pn	04 08 17.2	+0.2
SAIH				eS	Sn	04 08 40.3	+1.5
SAIH				ex	Sn	04 08 40.3	+1.5
SAIH				IAML		04 08 43.6	
	comp=N,354nm,0.6s						
SAIH				IAML		04 08 43.7	
	comp=E,726nm,0.3s						
SHL	Shillong	2.25	311	eP	Pn	04 08 24.2	+0.6
SHL				i x	x	04 08 26.2	
SHL				eS	Sn	04 08 50.7	+0.1
MOKO	MOKOCHONG	2.31	17	eP	Pn	04 08 24.9	+0.5
MOKO				eS	Sn	04 08 52.5	+0.5
GUWA	GUWAHATI	2.81	318	eP	Pn	04 08 30.7	-0.3
GUWA				eS	Sn	04 09 02.0	-1.8
GUWA				IAML		04 09 05.1	
	comp=E,267nm,0.2s						
GTK	Tadong	5.65	306	eP	Pn	04 09 11.2	+1.3
TAPN	Taplejung	6.35	302	ePn	Pn	04 09 21.2	+1.6
TAPN				eSn	Sn	04 10 31.0	+0.2
	comp=E,54nm,0.2s						
ODAN	Odare	6.38	297	ePn	Pn	04 09 21.2	+1.2
ODAN				eSn	Sn	04 10 31.2	-0.4
	comp=E,125nm,0.4s						
RAMN	Ramite	7.07	295	ePn	Pn	04 09 30.2	+0.9
CMAR	Chiang Mai Arr	7.40	138	P	Pn	04 09 32.4	-1.3
	comp=E,1.1nm,0.3s,baz=316,slow=15,SNR=6.0						
GUN	Gumba	8.05	300	ePn	Pn	04 09 43.4	+0.6
GUN				eSn	Sn	04 11 11.6	-0.8
	comp=E,55nm,0.4s						
PKI	Pulchoki	8.28	296	ePn	Pn	04 09 46.2	+0.2
PKIN	Phulchoki	8.30	296	ePn	Pn	04 09 46.8	+0.7
KKN	Kakani	8.48	297	ePn	Pn	04 09 49.1	+0.6
KKN				eSn	Sn	04 11 21.8	-0.9
	comp=E,27nm,0.3s						
DMN	Daman	8.55	296	ePn	Pn	04 09 50.3	+0.7
GKN	Gorkha	9.08	297	ePn	Pn	04 09 56.6	-0.2
GKN				eSn	Sn	04 11 36.0	-1.5
	comp=E,46nm,0.5s						
DANN	Dangsing	9.93	297	ePn	Pn	04 10 07.7	-0.8
DANN				eSn	Sn	04 11 55.7	-2.7
PSI	Prapat	21.76	166	P	P	04 12 34.0	+0.1
	comp=E,4.5nm,0.6s,baz=360,slow=5.4,SNR=3.9						
MKAR	Makanchi Array	24.44	341	P	P	04 13 02.9	+3.0
	comp=E,0.4nm,0.5s,baz=139,slow=13,SNR=6.1						
SONM	Songino Array	25.72	20	P	P	04 13 13.0	+1.3
	comp=E,2.1nm,0.8s,baz=200,slow=10.0,SNR=13						
KURBB	Kurchatov Arra	28.99	340	P	P	04 13 42.1	+1.3
	comp=E,0.3nm,0.5s,baz=148,slow=7.7,SNR=3.3						
FITZ	Fitzroy Crossi	52.21	141	P	P	04 16 50.4	-1.4
	comp=E,5.2nm,1.1s,baz=347,slow=12,SNR=3.0						
WRA	Warramunga Arr	58.98	134	P	P	04 17 39.6	-0.7
	comp=E,2.4nm,0.6s,baz=323,slow=7.4,SNR=28						
ASAR	Alice Springs	61.41	138	P	P	04 17 56.5	-0.4
	comp=E,1.3nm,0.5s,baz=321,slow=6.9,SNR=18						
ILAR	Eielson Array	79.92	22	P	P	04 19 48.6	-0.1
	comp=E,0.3nm,1.0s,baz=290,slow=4.4,SNR=4.3						

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*IDC **18** 04:24:44.6±1.2,27°.93N×51°.87E,h0^{km},mb3.9/17, mb1 4.0/20,mb1mx3.8/51,mbtmp3.9/20,ML3.8/3,Error ellipse: s-maj=26.0km s-min=18.1km az=165.0*
*TEH **18** 04:24:46.0,27°.97N×51°.82E,h17^{km},ML3.9*
*OMAN **18** 04:24:52.6,27°.77N×52°.13E,h17^{km},mb4.4/1,ml3.5/7*
ISC 18 04:24:48.7±0.6,**27°.95N**±0°.06×**51°.91E**±0°.05,**h26**^{km}**,n69,** σ**0^{s}.94**/78,**mb4.0**/17,**Persian Gulf**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
QIR1	Qir	1.13	62	eSg	Sb	04 25 25.8	+1.8
QIR1				ePg	Pn	04 25 08.7	-0.3
QIR1				e		04 25 35.7	
	comp=Z,99nm,0.6s						
LMD1	Lamerd	1.27	118	ePg	Pn	04 25 11.2	+0.4
LMD1				e		04 25 39.0	
	comp=Z,99nm,0.5s						
JHRM	Jahrom	1.57	69	ePg	Pb	04 25 17.0	-0.2
JHRM				e		04 25 41.3	
	comp=Z,99nm,0.4s						
KAZ1	Kazerun	1.68	352	ePg	Pn	04 25 17.3	+0.7
KAZ1				e		04 25 55.0	
	comp=Z,99nm,0.8s						
SHI	Shiraz	1.77	17	ePg	Pn	04 25 18.5	+0.7
SHI				e		04 25 54.6	
	comp=Z,99nm,0.8s						
LAR1	LAR	2.20	97	ePn	Pn	04 25 24.3	+0.6
LAR1				e		04 26 08.8	
	comp=Z,99nm,0.6s						
KLNJ	Kolanjah	3.06	355	ePn	Pn	04 25 35.7	0.0
IRAM	Ramesheh	3.87	6	ePn	Pn	04 25 46.1	-0.6
SLWR	Sila	3.87	183	P	Pn	04 25 48.4	+1.8
SLWR				S	Sn	04 26 33.5	+2.3
RDF	Al-Radifah	3.96	285	eP		04 25 49.0	
IMEH	Mehriz	4.16	34	ePn	Pn	04 25 52.6	+1.9
SHME	Shamm	4.23	116	ePn	Pn	04 25 51.0	-0.5
SHME	Shamm	4.23	116	P	Pn	04 25 51.7	+0.3
	SNR=5.1						
SHME				S	Sn	04 26 39.8	-0.2
MIB	Mutribah	4.41	296	eP		04 25 54.4	
BANOM	Banah	4.41	116	ePn	Pn	04 25 54.7	+0.7
BANOM	Banah	4.41	116	P	Pn	04 25 54.4	+0.4
BANOM				S	Sn	04 26 45.4	+0.8
IGAR	Gharneh	4.44	1	ePn	Pn	04 25 55.2	+0.6
NAZ	Nazwa, Dubai	4.48	130	ePn	Pn	04 25 56.5	+1.6
NAZ	Nazwa, Dubai	4.48	130	P	Pn	04 25 56.9	+1.9
	SNR=6.6						
ASUD	Al Ashush, Dub	4.52	136	P	Pn	04 25 57.2	+1.7
	SNR=8.5						
RST	Umm Al-Ruwaisa	4.58	291	eP		04 25 57.6	
MASF	Masafi	4.59	123	P	Pn	04 25 57.1	+0.6
MASF				S	Sn	04 26 48.2	-0.9
MSFE	Esma-Masafi	4.60	123	ePn	Pn	04 25 56.8	+0.2
KHGB	Koh Gabri	4.67	58	ePn	Pn	04 25 58.7	+0.9
KHGB				e		04 26 16.5	
	comp=Z,99nm,1.0s						
TVBK	TV Kerman	4.71	63	ePn	Pn	04 25 59.6	+1.1
MDH	Madha	4.74	123	ePn	Pn	04 25 58.8	+0.3
MDH	Madha	4.74	123	P	Pn	04 25 59.2	+0.7
MDH				S	Sn	04 26 52.4	-0.2
IPIR	Pirpir	4.80	350	ePn	Pn	04 26 00.0	+0.4
IBAF	Bafgh	4.82	40	ePn	Pn	04 26 00.7	+0.9
UOSS	Minazif	4.88	127	ePn	Pn	04 26 00.8	+0.3
HATD	Hatta, Dubai	4.90	128	ePn	Pn	04 26 02.0	+1.2
IZEF	Zefreh	4.94	4	ePn	Pn	04 26 01.9	+0.4
ASHO	Ashiyiah	4.95	130	ePn	Pn	04 26 02.5	+1.1
KHNJ	Kahnooj	5.13	89	ePn	Pn	04 26 05.0	+1.1
CHMN	Cheshme madani	5.29	68	e		04 26 09.8	
	comp=Z,99nm,0.4s						
CHMN				ePn	Pn	04 26 07.0	+0.6
IKLH	Kolahrood	5.36	357	ePn	Pn	04 26 07.6	+0.4
SOHO	SOHO	5.64	131	ePn	Pn	04 26 11.6	+0.8
SOHO	SOHO	5.64	131	P	Pn	04 26 11.4	+0.6
SOHO				S	Sn	04 27 15.4	+0.7
KBAM	BAM	5.88	77	ePn	Pn	04 26 15.4	+1.1
KBAM				e		04 26 20.5	
	comp=Z,99nm,0.5s						
KRSH	Karshahi	6.00	2	ePn	Pn	04 26 15.4	-0.6
ARQ	Araqi	6.20	137	P	Pn	04 26 19.2	+0.5
TPRV	Parvadeh(Tabas	6.53	38	ePn	Pn	04 26 23.3	+0.1
HOQ	Hoqain	6.53	131	P	Pn	04 26 24.4	+1.2
HOQ				S	Sn	04 27 35.7	-1.2
IDOB	Doab	6.64	332	ePn	Pn	04 26 24.2	-0.6
HSAM	Samen	6.85	336	ePn	Pn	04 26 28.0	+0.2
TKDS	Koohdasht(Taba	7.21	37	ePn	Pn	04 26 32.4	-0.1
TNSJ	Nastanj	7.22	33	ePn	Pn	04 26 33.2	+0.4
WSAR	Wadi Sarin	7.67	126	Pn	Pn	04 26 38.2	-0.6
	comp=Z,1.2nm,0.3s,baz=312,slow=12,SNR=12						
WSAR				Sn	Sn	04 28 01.9	-3.1
	comp=Z,0.4nm,0.3s,baz=222,slow=22,SNR=1.6						
IGHG	Ghaleghazi	7.83	326	ePn	Pn	04 26 40.9	-0.3
ILIN	Lien	8.13	330	ePn	Pn	04 26 44.9	-0.4
IDHR	Dehrash	8.22	326	ePn	Pn	04 26 45.4	-1.0
GEYT	Alibeck	11.23	26	Pn	Pn	04 27 29.0	+1.4
	comp=Z,0.7nm,0.3s,baz=215,slow=15,SNR=3.6						
KBZ	Khabaz	17.34	338	P	P	04 28 51.7	+1.7
	comp=Z,0.1nm,0.3s,baz=207,slow=20,SNR=2.4						
BRTR	Keskin Array B	19.15	313	P	Pn	04 29 10.4	-0.7
	comp=Z,0.2nm,0.3s,baz=137,slow=14,SNR=2.8						
AKTO	Aktyubinsk	22.93	10	P	P	04 29 51.5	+0.8
	comp=Z,0.6nm,0.4s,baz=208,slow=12,SNR=4.5						
AAK	Ala-Archa	23.45	45	P	P	04 29 56.5	+0.3
	comp=Z,1.1nm,0.9s,baz=260,slow=12,SNR=1.9						
BELG	Belogornoye	24.62	354	P	P	04 30 06.1	-0.7
	comp=Z,11nm,0.8s,baz=282,slow=15,SNR=2.4						
KURBB	Kurchatov Arra	30.32	34	P	P	04 30 57.8	-0.1
	comp=Z,0.3nm,0.3s,baz=234,slow=8.2,SNR=2.3						
MKAR	Makanchi Array	30.33	43	P	P	04 30 58.4	+0.2
	comp=Z,0.7nm,0.7s,baz=230,slow=8.5,SNR=7.1						
KIRV	Kirov	30.67	357	P	P	04 31 00.2	-0.6
	comp=Z,6.5nm,0.5s,baz=191,slow=21,SNR=2.9						
ZALV	Zalesovo Beam	35.41	34	P	P	04 31 41.5	-0.8
	comp=Z,1.0nm,0.4s,baz=253,slow=9.0,SNR=4.9						
GERES	GERESS Array B	35.98	316	P	P	04 31 47.0	-0.4
	comp=Z,0.3nm,0.4s,baz=134,slow=7.0,SNR=2.1						
FINES	FINESS Array B	37.67	340	P	P	04 32 00.8	-0.7
	comp=Z,3.4nm,0.7s,baz=152,slow=9.7,SNR=9.0						
NB2	NORSAR Subarra	42.80	332	P	P	04 32 43.1	-0.9
	comp=Z,1.8nm,0.5s,baz=122,slow=8.6						
NOA	NORSAR Array B	42.80	332	P	P	04 32 43.3	-0.8
	comp=Z,0.7nm,0.4s,baz=128,slow=9.4,SNR=5.2						
ARCES	ARCESS Array B	44.34	347	P	P	04 32 56.8	+0.5
	comp=Z,7.1nm,1.1s,baz=134,slow=6.4,SNR=2.4						
SONM	Songino Array	46.31	49	P	P	04 33 12.3	-0.1
	comp=Z,0.4nm,0.8s,baz=281,slow=9.8,SNR=2.5						
TORD	Torodi Ar. Bea	48.94	263	P	P	04 33 32.3	-0.7
	comp=Z,1.1nm,0.7s,baz=62,slow=7.7,SNR=5.2						
DBIC	Dimbokro	57.63	260	P	P	04 34 36.9	0.0
	comp=Z,2.5nm,0.9s,baz=86,slow=20,SNR=1.3						
SEY	Seymchan	70.06	29	P	P	04 35 58.1	0.0
	comp=Z,0.4nm,0.3s,baz=329,slow=1.4,SNR=5.0						
ILAR	Eielson Array	86.42	8	P	P	04 37 28.3	-0.3
	comp=Z,0.2nm,0.8s,baz=328,slow=3.2,SNR=1.9						
YKA	Yellowknife Ar	89.22	354	P	P	04 37 42.4	+0.4
	comp=Z,0.8nm,0.8s,baz=15,slow=4.9,SNR=9.1						

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*IDC **18** 04:28:20.5±9.0,21°.87N×144°.15E,h147^{km}±85^{km}, mb3.3/12,mb1 3.5/12,mb1mx3.3/39,mbtmp3.8/12,Error ellipse: s-maj=32.6km s-min=14.1km az=90.0*
ISC 18 04:28:16.0±0.8,**21°.9N**±0°.1×**144°.1E**±0°.2,**h105**^{km}**,n15,** σ**0^{s}.81**/11,**mb3.7**/11,**Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSRS	Korea Array	20.92	322	P	Pn	04 32 53.3	-0.4
	0.7nm,0.5s,baz=148,slow=8.4,SNR=5.6						
H11S3	WAKE ISLAND Hy	21.43	95	T	T	04 55 50.5	
	baz=286						
H11S1	WAKE ISLAND Hy	21.44	95	T	T	04 55 53.1	

	baz=286						
H11S2	WAKE ISLAND Hy	21.45	95	T	T	04 55 49.6	
	baz=286						
KLR	Kul'dur	29.02	343	P	P	04 34 06.3	+0.4
	1.9nm,0.6s,baz=174,slow=7.8,SNR=8.8						
WRA	Warramunga Arr	42.65	194	P	P	04 36 02.5	+0.2
	0.7nm,0.5s,baz=18,slow=9.1,SNR=17						
ASAR	Alice Springs	46.35	193	P	P	04 36 31.2	-0.5
	0.3nm,0.4s,baz=9.6,slow=6.7,SNR=2.3						
STKA	Stephens Creek	53.50	183	P	P	04 37 25.6	0.0
	0.8nm,0.4s,baz=326,slow=12,SNR=3.5						
ZALV	Zalesovo Beam	54.62	321	P	P	04 37 33.0	-0.6
	0.4nm,0.4s,baz=80,slow=10,SNR=2.0						
MKAR	Makanchi Array	55.23	312	P	P	04 37 37.5	-0.7
	0.2nm,0.4s,baz=94,slow=8.7,SNR=8.1						
ILAR	Eielson Array	61.48	27	P	P	04 38 20.1	-1.2
	0.5nm,0.7s,baz=251,slow=4.8,SNR=7.0						
INK	Inuvik	67.05	24	P	P	04 38 57.4	-0.1
	0.7nm,0.6s,baz=8.4,slow=26,SNR=2.7						
YKA	Yellowknife Ar	75.89	28	P	P	04 39 50.2	-0.5
	0.4nm,0.7s,baz=294,slow=5.1,SNR=6.4						
NVAR	Mina Array Bea	82.34	52	P	P	04 40 27.5	+0.8
	0.7nm,0.6s,baz=273,slow=5.4,SNR=8.0						
FINES	FINESS Array B	83.40	335	P	P	04 40 32.6	+1.3
	1.6nm,0.8s,baz=93,slow=4.7,SNR=1.4						

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*IDC **18** 04:41:13.7±1.4, 31°.47S×178°.35W, h0^{km}, mb4.1/3, mb1 4.3/4, mb1mx4.0/37, mbtmp4.1/4, ML4.3/1, MS3.6/2, Ms1 3.6/2, ms1mx2.9/34, Error ellipse: s-maj=46.8km s-min=31.1km az=145.0*

*NEIC **18** 04:41:19.0±1.0, 31°.83S±0°.07×178°.2W±0°.2, h48^{km}±11^{km}, mb4.4/6, Error ellipse: s-maj=26.7km s-min=10.3km az=94.0*

ISC 18 04:41:18.0±0.9**, 31°.72S**±0°.08×**178°.3W**±0°.2**, h35^{km}, n47,** σ**2^{s}68**/46**, mb4.3**/7**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	2.48	8	Pn	Pn	04 41 58.0	+2.1
RAO				Sn	Sn	04 42 26.4	+1.4
MXZ	Matakaoa Point	6.46	205	P	Pn	04 42 52.4	+1.8
WMGZ	Waiomatatini S	6.66	203	P	Pn	04 42 54.7	+1.4
HAZ	Te Kaha	6.83	207	P	Pn	04 42 56.5	+0.8
PKGZ	Pakihiroa	6.83	205	P	Pn	04 42 55.9	+0.1
PUZ	Puketiti	6.94	203	P	Pn	04 42 57.7	+0.5
RUGZ	Raukumara Rang	7.05	207	P	Pn	04 43 00.4	+1.5
TWGZ	Tauwhareparae	7.13	204	P	Pn	04 43 02.3	+2.5
CNGZ	Carnagh Statio	7.33	202	P	Pn	04 43 02.9	+0.4
OPRZ	Ohinepanea	7.43	213	P	Pn	04 43 07.5	+3.6
MWZ	Matawai	7.43	206	P	Pn	04 43 05.4	+1.4
URZ	Urewera	7.53	209	Pn	Pn	04 43 07.6	+2.3
	4.2nm,0.3s,baz=253,slow=2.8,SNR=30						
URZ				Sn	Sn	04 44 30.4	+1.0
	4.7nm,0.3s,baz=222,slow=22,SNR=9.0						
URZ	Urewera	7.53	209	P	Pn	04 43 05.6	+0.3
RAGZ	Rawiri	7.62	206	P	Pn	04 43 08.1	+1.6
RIGZ	Rimuhau	7.68	204	P	Pn	04 43 09.2	+1.8
PRGZ	Paritu Road	7.83	202	P	Pn	04 43 11.9	+2.4
RAHZ	Arahi	8.11	206	P	Pn	04 43 15.5	+2.3
BKZ	Black Stump Fm	8.55	208	Pn	Pn	04 43 20.3	+0.9
BFZ	Birch Farm	9.97	205	Pn	Pn	04 43 38.9	+0.2
QRZ	Quartz Range	11.71	217	Pn	Pn	04 44 03.3	+0.8
BSWZ	Blackbirch Sta	11.78	210	Pn	Pn	04 44 03.6	+0.1
ARMA	Armidale	25.75	265	P	P	04 46 45.6	+0.1
ARMA				IAmb	IAmb	04 46 50.7	
	comp=Z,7.9nm,1.1s						
STKA	Stephens Creek	33.94	259	P	P	04 47 59.5	+1.5
	comp=Z,1.1nm,0.4s,baz=91,slow=9.4,SNR=3.9						
STKA	Stephens Creek	33.94	259	P	P	04 47 58.6	+0.5
BBOO	Buckleboo	38.37	256	P	P	04 48 35.9	0.0
BBOO				IAmb	IAmb	04 48 48.5	
	comp=Z,7.0nm,1.0s						
AS31	Alice Springs	42.79	268	P	P	04 49 12.1	-0.5
AS31				IAmb	IAmb	04 49 22.9	
	comp=Z,6.6nm,0.6s						
ASAR	Alice Springs	42.79	268	P	P	04 49 12.6	0.0
	comp=Z,3.6nm,0.5s,baz=105,slow=7.5,SNR=57						
MORW	Morawa	55.91	254	P	P	04 50 52.8	+0.1
RPN	Rapa Nui	59.35	105	LR	LR	05 14 56.2	
	comp=Z,20nm,18.0s,baz=72,slow=34						
SNAA	Sanae	76.85	179	P	P	04 53 04.7	-1.3
SNAA				IAmb	IAmb	04 53 06.3	
	comp=Z,3.8nm,1.1s						
NVAR	Mina Array Bea	89.38	43	P	P	04 54 12.0	+0.7
	comp=Z,0.4nm,0.7s,baz=226,slow=9.9,SNR=3.8						
NVAR	Mina Array Bea	89.38	43	P	P	04 54 10.8	-0.4
PDAR	Pinedale Array	97.27	44	LR	LR	05 40 15.9	
	comp=Z,44nm,18.1s,baz=334,slow=36						
TAPN	Taplejung	106.96	292	*e*P	Pdif	04 55 24.2	-6.9
	comp=Z,53nm,1.2s						
ODAN	Odare	106.99	291	*e*P	Pdif	04 55 25.2	-5.9
	comp=Z,50nm,0.8s						
RAMN	Ramite	107.66	291	*e*P	Pdif	04 55 28.8	-5.3
	comp=Z,12nm,0.8s						
GUN	Gumba	108.66	292	*e*P	Pdif	04 55 33.9	-4.8
	comp=Z,61nm,1.2s						
PKI	Pulchoki	108.88	291	*e*P	Pdif	04 55 35.4	-4.3
	comp=Z,30nm,0.9s						
PKIN	Phulchoki	108.89	291	*e*P	Pdif	04 55 35.5	-4.1
KKN	Kakani	109.08	291	*e*P	Pdif	04 55 36.0	-4.4
DMN	Daman	109.14	291	*e*P	Pdif	04 55 37.0	-3.7
	comp=Z,106nm,1.2s						
GKN	Gorkha	109.69	291	*e*P	Pdif	04 55 39.3	-3.7
	comp=Z,69nm,1.1s						
KOLN	Koldanda	110.41	291	*e*P	Pdif	04 55 42.8	-3.5
	comp=Z,46nm,1.2s						
DANN	Dangsing	110.53	291	*e*P	Pdif	04 55 43.4	-3.5
	comp=Z,40nm,1.2s						
ARCES	ARCESS Array B	139.81	347	PKhKP	PKPpre	05 00 37.2	
	comp=Z,3.3nm,0.9s,baz=64,slow=2.1,SNR=5.4						
FINES	FINESS Array B	146.28	339	PKPbc	PKPbc	05 00 53.8	-0.4
	comp=Z,2.9nm,0.7s,baz=42,slow=3.9,SNR=12						
TORD	Torodi Ar. Bea	161.52	180	PKPab	PKPab	05 02 01.7	+1.5
	comp=Z,0.7nm,0.8s,baz=174,slow=2.8,SNR=4.6						

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*BJI **18** 04:43:38.8±0.0, 8°.52S×159°.35E, h130^{km}, mB5.3/47, mb5.3/75*

*NEIC **18** 04:43:39.2±1.1, 8°.89S±0°.08×159°.32E±0°.07, h135^{km}±3^{km}, mb5.3/327, Mwb5.5/38, Mww5.4, Mwc5.5(GCMT), Error ellipse: s-maj=12.4km s-min=8.4km az=216.0*

*MOS **18** 04:43:39.0±0.9, 8°.79S×159°.30E, h140^{km}, mb5.2/44, Error ellipse: s-maj=7.0km s-min=5.3km az=102.6*

*NEIC **18** 04:43:40.2, 8°.89S×159°.34E, h127^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.50; M$_{θθ}$-1.21; M$_{φφ}$0.71; M$_{rθ}$-1.25; M$_{θφ}$0.18; M$_{φr}$-0.97; Fault plane solution: M$_0$1.91000×10^{17} NP1:φ$_s$237.59000°, δ81.25000°, λ60.04000°. NP2:φ$_s$132.80000°, δ31.10000°, λ162.87000°. Principal axes: T 1.9157, Plg45.0000°, Azm117.0000°; N -0.0083, Plg30.0000°, Azm243.0000°; P -1.9074, Plg30.0000°, Azm352.0000°;*

*IDC **18** 04:43:40.0±0.2, 8°.87S×159°.33E, h133^{km}±2^{km}, mb4.9/33, mb1 5.0/35, mb1mx5.0/40, mbtmp5.4/35, MS4.1/14, Ms1 4.1/14, ms1mx4.0/28 Error ellipse: s-maj=9.3km s-min=6.0km az=55.0*

*NEIC **18** 04:43:41, 8°.68S×159°.24E, h120^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.43; M$_{θθ}$-0.85; M$_{φφ}$0.42; M$_{rθ}$-1.11; M$_{θφ}$0.55; M$_{φr}$-0.55; Fault plane solution: M$_0$1.55000×10^{17} NP1:φ$_s$147.00000°, δ34.00000°, λ163.00000°. NP2:φ$_s$252.00000°, δ80.00000°, λ57.00000°. Principal axes: T 1.5745, Plg45.0000°, Azm129.0000°; N -0.0584, Plg32.0000°, Azm258.0000°; P -1.5161, Plg28.0000°, Azm7.0000°;*

*NEIC **18** 04:43:42, 8°.87S×159°.37E, h141^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.43; M$_{θθ}$-1.30; M$_{φφ}$0.87; M$_{rθ}$-1.26; M$_{θφ}$0.47; M$_{φr}$-0.81; Fault plane solution: M$_0$1.95000×10^{17} NP1:φ$_s$142.00000°, δ38.00000°, λ167.00000°. NP2:φ$_s$242.00000°, δ82.00000°, λ53.00000°. Principal axes: T 1.9293, Plg41.0000°, Azm118.0000°; N 0.0347, Plg36.0000°, Azm248.0000°; P -1.9640, Plg27.0000°, Azm1.0000°;*

*GCMT **18** 04:43:42.2±0.1, 8°.89S±0°.01×159°.36E±0°.01, h140^{km}, MW5.5/154, Moment Tensor Solution. s126,c201; s154,c277; Duration: 1^{s}3 Moment tensor: Scale 10^{17} Nm; M$_{rr}$0.42±.02; M$_{θθ}$-1.23±.03; M$_{φφ}$0.80±.03; M$_{rθ}$-1.23±.02; M$_{θφ}$0.51±.03; M$_{φr}$-0.79±.02; Best double couple: M$_0$1.88800×10^{17} NP1:φ$_s$143.00000°, δ37.00000°, λ167.00000°. NP2:φ$_s$244.00000°, δ82.00000°, λ53.00000°. Principal axes: T 1.8870, Plg41.0000°, Azm119.0000°; N -0.0040, Plg36.0000°, Azm250.0000°; P -1.8880, Plg27.0000°, Azm2.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 18 04:43:39.9±0.2**, 8°.83S**±0°.04×**159°.32E**±0°.04**, h139^{km}**±1^{km}**, h139^{km}:pP-P, n987,** σ**1^{s}15**/1040**, mb5.2**/277**, 35C-43D, Fault plane solution: NP1:**φ$_s$62.31683°**,** δ89.06455°**,** λ-62.18197°. **NP2:**φ$_s$154.08907°**,** δ27.83250°**,** λ-177.99611°. **Principal axes:** T Plg37.8620°**,** Azm127.6105°**;** N Plg27.8140°**,** Azm241.8233°**;** P Plg39.5573°**,** Azm357.6575°**; Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	0.86	134	P	Pn	04 44 02.2	-0.2
	4μm,0.3s,baz=206,slow=2.2,SNR=430						
HNR				S	Sn	04 44 18.8	-0.7
	6μm,0.3s,baz=6.1,slow=15,SNR=17						
HNR	Honiara	0.86	134		Pn	04 44 01.5	-0.9
HNR				Sn	Sn	04 44 17.7	-1.9
RABL	Rabaul	8.47	303	Pn	Pn	04 45 40.1	+0.4
RABL				Sn	Sn	04 47 14.7	+0.9
RABL	Rabaul	8.47	303	P	Pn	04 45 45.6	+5.9
SANVU	Saraoutou	10.13	131	Pn	Pn	04 46 01.5	-0.4
SANVU	Saraoutou	10.13	131	P	Pn	04 46 03.1	+1.2
SANVU	Saraoutou	10.13	131	P	Pn	04 46 02.0	+0.1
PMG	Port Moresby	12.02	266	P	Pn	04 46 29.6	+2.7
	0.6nm,0.3s,baz=89,slow=11,SNR=9.5						
PMG	Port Moresby	12.02	266	c*e*P	P	04 46 30.8	-3.1
PMG				pmax	pmax		
	comp=Z,176nm,1.7s						
PMG	Port Moresby	12.02	266	Pn	Pn	04 46 26.7	-0.1
PMG	Port Moresby	12.02	266	P	P	04 46 32.5	-1.4
KOUNC	Koumac, New Ca	12.60	158	P	Pn	04 46 36.8	+2.4
LIFNC	LIFOU	14.13	148	P	P	04 46 56.2	-1.0
DZM	Mont Dzumac	14.84	153	P	Pn	04 47 04.2	+1.2
	comp=Z,2.3nm,0.3s,baz=4.3,slow=14,SNR=51						
DZM	Mont Dzumac	14.84	153	*e*P	Pn	04 47 04.5	+1.5
	comp=Z,1μm,1.4s						
DZM				*e*LR	LR	04 50 29.7	
	comp=Z,4μm,28.2s						
DZM	Mont Dzumac	14.84	153	Pn	Pn	04 47 02.5	-0.6
DZM	Mont Dzumac	14.84	153	P	Pn	04 47 04.5	+1.5
YATNC	Mamie plateau,	15.04	152	P	P	04 47 07.7	+0.4
ONTNC	Ouen Toro	15.05	154	P	P	04 47 07.6	+0.1
OUENC	Ouen Island, N	15.32	153	P	P	04 47 10.9	+0.4
PINNC	Pines Island,	15.77	151	P	P	04 47 17.0	+1.5
COEN	Coen	16.62	251		Pn	04 47 25.7	+0.8
CTA	Charters Tower	16.87	227	P	Pn	04 47 30.7	+2.7
	comp=Z,2.6nm,0.3s,baz=49,slow=13,SNR=26						
CTAO	Charters Tower	16.87	227	P	Pn	04 47 29.9	+1.9
CTAO				pmax	pmax		
	comp=Z,47nm,0.8s						
CTAO	Charters Tower	16.87	227	P	Pn	04 47 29.9	+1.9
TARA	Tarawa	16.92	54	P	P	04 47 28.9	+0.7
TARA				IAmb	IAmb	04 47 43.6	
	comp=Z,227nm,1.1s						
MTSU	Mount Surprise	17.26	236	P	Pn	04 47 34.9	+2.3
	baz=17,SNR=40						
EIDS	Eidsvold	18.22	204	P	Pn	04 47 45.7	+1.6
	baz=18,SNR=66						
EIDS	Eidsvold	18.22	204	P	P	04 47 42.3	-0.1
EIDS				IAmb	IAmb	04 47 47.3	
	comp=Z,207nm,0.8s						
KWAJ	Kwajalein Atol	19.37	25	P	P	04 47 55.3	+0.3
KWAJ				pmax	pmax		
	comp=Z,2μm,0.9s						
KWAJ	Kwajalein Atol	19.37	25	P	P	04 47 55.3	+0.3
KWAJ	Kwajalein Atol	19.37	25	P	Pn	04 47 57.2	-0.3
	comp=Z,2μm,0.9s						
JAY	Jayapura	19.55	288	P	P	04 47 57.7	+0.7
	comp=Z,15nm,0.3s,baz=107,slow=3.9,SNR=32						
JAY	Jayapura	19.55	288	P	P	04 47 57.8	+0.8
	comp=Z,3μmcomp=Z,366nm,0.8s						
FUNA	Funafuti	19.66	91	P	P	04 47 58.1	-0.1
GENI	Genyem	20.03	287	P	P	04 48 03.2	+1.0
	comp=Z,5μmcomp=Z,207nm,1.0s						
RMQ	Roma	20.21	208	P	Pn	04 48 07.2	-0.2
	baz=20,SNR=102						
MSVF	Nonsavu	20.25	118	P	P	04 48 06.3	+1.8
	comp=Z,25nm,0.7s,baz=284,slow=6.8,SNR=27						
MSVF	Nonsavu	20.25	118	P	P	04 48 04.3	-0.3
MSVF				IAmb	IAmb	04 48 18.2	
	comp=Z,77nm,0.9s						
MSVF	Nonsavu	20.25	118	P	P	04 48 06.4	+1.8
SMPI	Sarmi	21.60	287	P	P	04 48 19.2	+0.2
	comp=Z,3μmcomp=Z,301nm,1.0s						
QIS	Mount Isa	22.32	236	P	P	04 48 27.8	+1.5
	baz=22,SNR=22						
LHI	Lord Howe Isla	22.58	181	P	P	04 48 30.7	+2.0
	baz=23,SNR=7.5						
LHI	Lord Howe Isla	22.58	181	P	P	04 48 28.6	-0.1
LHI	Lord Howe Isla	22.58	181	P	P	04 48 30.4	+1.7
	comp=Z,480nm,1.0s						
ARMA	Armidale	22.65	197	P	P	04 48 31.0	+1.4
	baz=23,SNR=84						
ARMA	Armidale	22.65	197	P	P	04 48 29.4	-0.1
QLP	Quilpie	22.72	217	P	P	04 48 31.3	+1.2
	baz=23,SNR=50						
MGCD	Mangrove Creek	25.42	196	P	P	04 48 57.0	+2.3
	baz=26,SNR=29						
RIV	Riverview	25.99	196	P	P	04 49 02.1	+2.4
	baz=26,SNR=8.2						
WR0	Warramunga Arr	26.38	243	P	P	04 49 03.4	-0.1
WR0				IAmb	IAmb	04 49 06.3	
	comp=Z,86nm,1.1s						
WB0	Warramunga Arr	26.44	243	P	P	04 49 04.1	0.0
WB0				IAmb	IAmb	04 49 07.4	
	comp=Z,44nm,0.8s						
GUMO	Guam	26.49	327	P	P	04 49 06.5	+2.0
	comp=Z,128nm,0.7s,baz=202,slow=8.3,SNR=5.5						
GUMO				pP	pP	04 49 33.7	+0.4
	comp=Z,418nm,1.1s,baz=200,slow=19,SNR=2.8						
GUMO	Guam	26.49	327	P	P	04 49 05.1	+0.6
WRAB	Tennant Creek	26.54	243	c*e*P	P	04 49 05.8	+0.8
WRAB				pmax	pmax		
	comp=Z,137nm,1.7s						
WRAB	Tennant Creek	26.54	243	P	P	04 49 05.3	+0.3
WRAB				IAmb	IAmb	04 49 07.7	
	comp=Z,72nm,1.1s						
WB2	Warramunga Arr	26.54	243	P	P	04 49 05.0	0.0
WB2				IAmb	IAmb	04 49 08.4	
	comp=Z,48nm,0.8s						
WRA	Warramunga Arr	26.55	243	P	P	04 49 06.0	+0.9
	comp=Z,34nm,0.8s,baz=70,slow=9.5,SNR=78						
WRA				pP	pP	04 49 34.5	+0.9
	comp=Z,52nm,1.0s,baz=70,slow=9.8,SNR=6.1						
WRA				ScP	ScP	04 55 54.0	+0.5
	comp=Z,6.0nm,0.8s,baz=74,slow=3.6,SNR=8.6						
WRA				LR	LR	04 59 01.4	
	comp=Z,1μm,21.6s,baz=70,slow=35						
WRA	Warramunga Arr	26.55	243	P	P	04 49 05.2	0.0
KDU	Kakadu	26.64	259	P	P	04 49 07.9	+2.0
	baz=27,SNR=4.7						
YNG	Young	27.26	200	P	P	04 49 13.3	+2.0
	baz=27,SNR=11						
FAKI	Fak Fak	27.55	281	P	P	04 49 14.1	0.0
CNB	Canberra Magne	27.89	198	P	P	04 49 18.9	+2.1
	baz=28,SNR=42						
CAN	Canberra	28.01	198	P	P	04 49 18.1	+0.2
CAN				pmax	pmax		
	comp=Z,93nm,0.8s						
CAN	Canberra	28.01	198	P	P	04 49 18.1	+0.2
CAN				IAmb	IAmb	04 49 20.5	
	comp=Z,93nm,0.8s						
STKA	Stephens Creek	28.23	213	P	P	04 49 20.8	+0.9
	baz=28,SNR=65						
STKA	Stephens Creek	28.23	213	P	P	04 49 20.8	+0.9
	comp=Z,29nm,0.5s,baz=21,slow=8.0,SNR=68						
STKA				pP	pP	04 49 49.3	+1.2
	comp=Z,46nm,0.8s,baz=32,slow=14,SNR=6.4						
STKA				ScP	ScP	04 55 58.7	+0.3
	comp=Z,9.8nm,0.8s,baz=29,slow=2.4,SNR=7.6						
STKA				LR	LR	04 59 28.2	
	comp=Z,609nm,19.6s,baz=37,slow=34						
STKA	Stephens Creek	28.23	213	P	P	04 49 20.0	+0.1
ASAR	Alice Springs	28.43	236	P	P	04 49 21.9	+0.1
	comp=Z,22nm,0.8s,baz=65,slow=9.4,SNR=88						
ASAR				pP	pP	04 49 52.7	+2.3
	comp=Z,23nm,1.0s,baz=65,slow=9.6,SNR=4.8						
ASAR				ScP	ScP	04 56 00.0	+0.8
	comp=Z,8.5nm,0.8s,baz=54,slow=3.4,SNR=13						
ASAR				LR	LR	04 59 42.4	
	comp=Z,631nm,20.3s,baz=64,slow=34						
ASAR	Alice Springs	28.43	236	P	P	04 49 21.8	0.0
AFI	Afiamalu	28.77	103	P	P	04 49 24.6	-0.3
AFI				pmax	pmax		
	comp=Z,599nm,0.8s						
AFI	Afiamalu	28.77	103	P	P	04 49 24.6	-0.3
AFI	Afiamalu	28.77	103	P	P	04 49 25.9	+1.0
SIJI	Sorong	29.02	284	P	P	04 49 26.9	-0.3
	comp=Z,21nm,0.8s,baz=56,slow=5.0,SNR=4.1						
OUZ	Omahuta	29.34	156	P	P	04 49 29.4	-0.2
OUZ				IAmb	IAmb	04 49 31.7	
	comp=Z,65nm,1.0s						
KNTN	Kanton	29.42	80	P	P	04 49 30.7	0.0
KNTN	Kanton	29.42	80	P	P	04 49 31.8	+1.1
	comp=Z,154nm,1.2s						
HTT	Hallett	30.88	215	P	P	04 49 44.2	+0.9
	baz=31,SNR=21						
TOO	Toolangi	31.23	201	P	P	04 49 48.2	+1.9
	baz=31,SNR=24						
TOO	Toolangi	31.23	201	P	P	04 49 46.2	-0.1
TOO				pmax	pmax		
	comp=Z,80nm,0.9s						
TOO	Toolangi	31.23	201	P	P	04 49 46.2	-0.1
TOO				IAmb	IAmb	04 49 49.2	
	comp=Z,80nm,0.9s						
ARPS	Mount Arapiles	32.02	207	P	P	04 49 54.6	+1.3
	baz=32,SNR=33						
BBOO	Buckleboo	32.13	219	P	P	04 49 55.0	+0.7
	baz=32,SNR=78						
BBOO	Buckleboo	32.13	219	P	P	04 49 54.2	0.0
NLAI	Namlea	32.50	278	P	P	04 49 58.5	+0.8
	comp=Z,13nm,0.8s						
HIZ	Hauiti	32.70	157	P	P	04 49 58.9	-0.2
HIZ	Hauiti	32.70	157	P	P	04 50 00.6	+1.5
OMRZ	Omania	32.96	155	P	P	04 50 02.0	+0.5
HAZ	Te Kaha	33.28	153	P	P	04 50 04.9	+0.8
URZ	Urewera	33.40	154	P	P	04 50 05.8	+0.6
	comp=Z,27nm,0.9s,baz=342,slow=3.7,SNR=22						
RUGZ	Raukumara Rang	33.41	153	P	P	04 50 05.6	+0.2
WTVZ	West Tongariro	33.50	157	P	P	04 50 08.4	+2.1
PKGZ	Pakihiroa	33.52	153	P	P	04 50 06.8	+0.4
OTVZ	Oturere	33.57	157	P	P	04 50 08.6	+1.6
WMGZ	Waiomatatini S	33.62	152	P	P	04 50 07.4	+0.3
WRKA	Warakurna	33.65	238	P	P	04 50 07.8	+0.2
	baz=34,SNR=27						
SANI	Sanana	33.83	280	P	P	04 50 12.4	+3.1
	comp=Z,2μmcomp=Z,65nm,1.2s						
SANI	Sanana	33.83	280	P	P	04 50 10.5	+1.2
	comp=Z,2μmcomp=Z,32nm,1.3s						
BKZ	Black Stump Fm	33.91	156	P	P	04 50 10.2	+0.5
FITZ	Fitzroy Crossi	33.97	251	P	P	04 50 10.2	-0.3
	baz=34,SNR=24						
FITZ	Fitzroy Crossi	33.97	251	P	P	04 50 10.5	0.0
RIGZ	Rimuhau	34.05	154	P	P	04 50 12.0	+1.1
SOEI	Soe	34.59	266	P	P	04 50 16.1	+0.1
THZ	Tophouse	34.93	162	P	P	04 50 18.3	-0.2
BHW	Baring Head	35.25	160	P	P	04 50 20.8	-0.3
TAU	Tasmania Unive	35.54	195	P	P	04 50 23.7	+0.1
TAU				pmax	pmax		
	comp=Z,60nm,1.1s						
TAU	Tasmania Unive	35.54	195	P	P	04 50 23.7	+0.1
TAU				IAmb	IAmb	04 50 26.7	
	comp=Z,60nm,1.1s						
RPZ	Rata Peaks	36.23	166	P	P	04 50 29.6	+0.2
	comp=Z,126nm,0.8s,baz=332,slow=1.2,SNR=77						
RPZ	Rata Peaks	36.23	166	P	P	04 50 29.5	0.0
FORT	Forrest	36.41	229	P	P	04 50 32.0	+0.8
	baz=36,SNR=7.1						
FORT	Forrest	36.41	229	P	P	04 50 31.1	-0.1
KMSI	Cibinong	36.42	283	P	P	04 50 30.7	-0.8
MMRI	Maumere	36.64	267	P	P	04 50 33.3	0.0
MMRI	Maumere	36.64	267	P	P	04 50 35.3	+1.9
	comp=Z,169nm,0.9s						
MMRI	Maumere	36.64	267	P	P	04 50 32.4	-1.0
	comp=Z,164nm,1.1s						
WKZ	Wanaka	36.83	168	P	P	04 50 34.6	0.0
DCZ	Deep Cove	37.12	171	P	P	04 50 36.9	0.0
EDFI	Ende, Flores	37.17	267	P	P	04 50 37.6	-0.4
	comp=Z,945nmcomp=Z,39nm,1.1s						
EDFI	Ende, Flores	37.17	267	P	P	04 50 36.3	-1.7
	comp=Z,944nmcomp=Z,39nm,1.1s						
EDFI				pP	pP	04 51 06.0	-2.0
	comp=Z,944nmcomp=Z,39nm,1.1s						
MLZ	Mavora Lakes	37.19	170	P	P	04 50 37.7	+0.1
LUWI	Luwuk	37.19	280	P	P	04 50 38.1	0.0
LUWI				IAmb	IAmb	04 50 45.1	
	comp=Z,59nm,1.0s						
LUWI	Luwuk	37.19	280	P	P	04 50 37.7	-0.3
	comp=Z,75nm,1.4s						
ODZ	Otahua Downs	37.39	167	P	P	04 50 39.2	0.0
ODZ				IAmb	IAmb	04 50 45.9	
	comp=Z,39nm,0.9s						
WHZ	Wether Hill Ro	37.67	170	P	P	04 50 41.5	-0.1
WHZ				IAmb	IAmb	04 50 44.7	
	comp=Z,41nm,1.0s						
APSI	Ampana	38.31	280	P	P	04 50 49.0	+1.5
	comp=Z,3μmcomp=Z,44nm,1.3s						
APSI	Ampana	38.31	280	P	P	04 50 46.9	-0.6
	comp=Z,3μmcomp=Z,43nm,1.3s						
APSI				pP	pP	04 51 17.2	-0.5
	comp=Z,3μmcomp=Z,43nm,1.3s						
MRSI	Marisa	38.36	282	P	P	04 51 02.0	+14
BSSI	Bau Bau, Buton	38.58	271	P	P	04 50 50.4	+0.7
	comp=Z,2μmcomp=Z,129nm,0.9s						
BKSI	Bulukumba	39.04	272	P	P	04 50 53.5	0.0
	comp=Z,902nmcomp=Z,47nm,1.0s						
BKSI	Bulukumba	39.04	272	P	P	04 50 53.0	-0.5
	comp=Z,902nmcomp=Z,47nm,1.0s						
BNSI	Bone	39.18	274	P	P	04 50 55.5	+0.8
	comp=Z,2μmcomp=Z,143nm,1.0s						
BNSI	Bone	39.18	274	P	P	04 50 55.1	+0.4
	comp=Z,2μmcomp=Z,143nm,1.0s						
KAPI	Kappang	39.44	273	P	P	04 50 56.9	0.0
KAPI				IAmb	IAmb	04 50 58.5	
	comp=Z,91nm,0.9s						
KAPI				pP	pP	04 51 27.0	-0.2
SPSI	Sidrap Palu	39.58	274	P	P	04 50 57.8	-0.2
	comp=Z,1μmcomp=Z,56nm,1.1s						
SPSI	Sidrap Palu	39.58	274	P	P	04 50 57.3	-0.7
	comp=Z,1μmcomp=Z,56nm,1.1s						
TOLI2	Tolitoli	39.65	283	P	P	04 50 58.1	-0.4
TOLI2				pP	pP	04 51 26.7	-2.0
TTSI	Tana Toraja	39.68	276	P	P	04 51 00.5	+1.7
	comp=Z,1μmcomp=Z,32nm,1.0s						
TTSI	Tana Toraja	39.68	276	P	P	04 50 58.8	0.0
	comp=Z,1μmcomp=Z,32nm,1.0s						
PSA00	Pilbara Seismi	40.02	247	P	P	04 51 01.3	-0.2
PSA00				IAmb	IAmb	04 51 02.8	
	comp=Z,49nm,0.8s						
PSA00	Pilbara Seismi	40.02	247	P	P	04 51 01.1	-0.5
PSA00				IAmb	IAmb	04 51 01.9	
	comp=Z,34nm,0.8s						
PLAI	Plampang	41.03	267	P	P	04 51 09.5	-0.5
	comp=Z,3μmcomp=Z,180nm,0.9s						
RAR	Rarotonga	41.26	112	P	P	04 51 12.2	+0.5
	comp=Z,39nm,1.1s,baz=215,slow=9.3,SNR=4.8						
RAR	Rarotonga	41.26	112	P	P	04 51 11.7	0.0
RAR				IAmb	IAmb	04 51 14.1	
	comp=Z,45nm,1.1s						
RAR	Rarotonga	41.26	112	P	P	04 51 12.9	+1.2
KMBL	Kambalda	41.39	232	P	P	04 51 13.6	+1.0
	baz=41,SNR=11						
TWSI	Taliwang, Sumb	41.92	267	P	P	04 51 17.0	-0.2
	comp=Z,935nmcomp=Z,25nm,1.0s						
TWSI	Taliwang, Sumb	41.92	267	P	P	04 51 16.0	-1.2
	comp=Z,929nmcomp=Z,25nm,1.0s						
MEEK	Meekatharra	42.39	240	P	P	04 51 22.0	+1.2
	baz=42,SNR=25						
BKB	Balikpapan	42.88	278	P	P	04 51 23.9	-1.1
BKB				IAmb	IAmb	04 51 32.9	
	comp=Z,45nm,0.5s						
BKB				pP	pP	04 51 54.3	-1.3
KBKI	Kotabaru	43.23	275	P	P	04 51 27.4	-0.4
	comp=Z,28nm,0.9s						
SRBI	Singaraja	43.61	268	P	P	04 51 38.5	+7.7
SRBI	Singaraja	43.61	268	P	P	04 51 30.1	-0.7
	comp=Z,1μmcomp=Z,27nm,1.0s						
BBKI	Banjar Baru	44.51	274	P	P	04 51 39.1	+1.0
	comp=Z,54nm,0.8s						
ABJI	Asem Bagus	44.60	268	P	P	04 51 46.5	+7.8
JAGI	Jajag, Banyuwa	44.63	267	P	P	04 51 38.0	-1.0
JAGI				pP	pP	04 52 07.1	-2.7
JAGI	Jajag, Banyuwa	44.63	267	P	P	04 51 37.7	-1.3
	comp=Z,3μmcomp=Z,207nm,0.8s						

JAGI	**Jajag, Banyuwa**	44.63	267	P	P	04 51 37.1	-1.9
	comp=Z,3µmcomp=Z,207nm,0.8s						
KLBR	**Kellerberrin**	44.72	234	P	P	04 51 40.0	+0.6
	baz=45,SNR=8.7						
KMMI	**Kalianget**	44.93	269	P	P	04 51 41.4	+0.1
	comp=Z,3µmcomp=Z,32nm,1.7s						
BLDU	**Ballidu**	45.22	235	P	P	04 51 44.1	+0.7
	baz=45,SNR=12						
MORW	**Morawa**	45.28	238	P	P	04 51 44.6	+0.7
	baz=45,SNR=16						
MORW	**Morawa**	45.28	238	P	P	04 51 43.2	-0.7
KKM	**Kota Kinabalu**	45.44	287	P	P	04 51 45.0	-0.5
KKM				IAmb	IAmb	04 51 46.8	
	comp=Z,48nm,1.1s						
KKM				pP	pP	04 52 14.4	-1.9
NWAO	**Narrogin (SRO)**	45.62	232	P	P	04 51 47.4	+0.8
	baz=46,SNR=6.1						
NWAO	**Narrogin (SRO)**	45.62	232	P	P	04 51 46.4	-0.1
NWAO				pmax	pmax		
	comp=Z,59nm,1.1s						
NWAO	**Narrogin (SRO)**	45.62	232	P	P	04 51 46.1	-0.4
NWAO				IAmb	IAmb	04 51 48.5	
	comp=Z,67nm,1.1s						
NWAO	**Narrogin (SRO)**	45.62	232	P	P	04 51 46.4	-0.1
NWAO				IAmb	IAmb	04 51 48.5	
	comp=Z,59nm,1.1s						
MUN	**Mundaring**	46.09	234	P	P	04 51 51.4	+1.1
	baz=46,SNR=6.5						
JOW	**Kunigami**	46.52	321	P	P	04 51 53.6	0.0
JOW					pP	04 52 23.5	-0.9
JSG	**Sagara**	47.67	336	P	P	04 52 02.6	+0.2
SBUM	**Sibu**	48.26	281	P	P	04 52 07.5	+0.2
JYT	**Yasato**	48.30	339	P	P	04 52 07.4	+0.3
SMRI	**Semarang**	48.41	268	P	P	04 52 07.8	-0.8
SMRI				IAmb	IAmb	04 52 10.0	
	comp=Z,84nm,1.0s						
SMRI	**Semarang**	48.41	268	P	P	04 52 10.7	+2.2
	comp=Z,95nm,1.7s						
SMRI	**Semarang**	48.41	268	P	P	04 52 09.0	+0.5
YOJ	**Yonaguni jima**	48.47	314	P	P	04 52 08.4	-0.3
YOJ				pmax	pmax		
	comp=Z,228nm,1.0s						
YOJ	**Yonaguni jima**	48.47	314	P	P	04 52 08.4	-0.3
JSU	**Suzuyama**	48.70	327	P	P	04 52 09.9	-0.5
INU	**Inuyama**	48.73	336	P	P	04 52 10.6	+0.2
INU				IAmb	IAmb	04 52 12.1	
	comp=Z,66nm,0.9s						
JMN	**Monobe**	48.74	332	P	P	04 52 10.6	0.0
JMN				pP	pP	04 52 40.8	-1.2
JGF	**Kuroka**	48.81	336	P	P	04 52 10.9	-0.3
JGF				IAmb	IAmb	04 52 12.5	
	comp=Z,53nm,0.8s						
YULB	**Yu-li**	49.07	311	P	P	04 52 13.2	-0.1
YULB				IAmb	IAmb	04 52 16.9	
	comp=Z,50nm,0.7s						
MJAR	**Matsushiro Arr**	49.30	338	P	P	04 52 14.7	-0.2
	comp=Z,35nm,0.7s,baz=170,slow=8.8,SNR=58						
MJAR				pP	pP	04 52 46.8	+0.4
	comp=Z,25nm,0.9s,baz=168,slow=8.8,SNR=3.5						
MJAR	**Matsushiro Arr**	49.30	338	P	P	04 52 14.5	-0.4
MAJO	**Matsushiro**	49.30	338	*d i*P	P	04 52 14.9	0.0
MAJO				pmax	pmax		
	comp=Z,56nm,0.8s						
MAJO	**Matsushiro**	49.30	338	P	P	04 52 14.5	-0.3
MAJO				IAmb	IAmb	04 52 15.9	
	comp=Z,55nm,0.8s						
MAT	**Matsushiro**	49.30	338	P	P	04 52 14.6	-0.3
MAT				S	S	04 59 09.0	-1.7
NACB	**Ninganchiao**	49.32	313	P	P	04 52 15.4	+0.2
JWT	**Wachi**	49.35	334	P	P	04 52 15.0	-0.2
TPUB	**Ta-pu**	49.51	311	P	P	04 52 15.6	-1.1
TPUB				IAmb	IAmb	04 52 19.6	
	comp=Z,67nm,0.8s						
SSLB	**Suanglung**	49.56	312	P	P	04 52 15.6	-1.4
SSLB				IAmb	IAmb	04 52 19.6	
	comp=Z,81nm,0.8s						
JMM	**Marumori**	49.58	341	P	P	04 52 17.4	+0.6
JMM				IAmb	IAmb	04 52 18.9	
	comp=Z,89nm,0.8s						
JNU	**Nakatsue**	49.73	328	P	P	04 52 18.4	+0.1
YHNB	**Yeheng**	49.77	313	P	P	04 52 18.8	+0.1
TATO	**Taipei**	49.88	313	P	P	04 52 19.3	-0.1
KSM	**Kuching**	49.90	279	P	P	04 52 19.3	-0.5
KSM	**Kuching**	49.90	279	P	P	04 52 21.0	+1.2
PPT	**Papeete**	50.38	105	P	P	04 52 24.5	+1.1
	comp=Z,87nm,0.8s,baz=325,slow=12,SNR=9.7						
PPT				LR	LR	05 09 40.0	
	comp=Z,52nm,18.8s,baz=269,slow=31						
PAE	**Paea**	50.38	106	*e*P	P	04 52 24.0	+0.7
	comp=Z,33nm,1.1s						
PPT2	**Papeete2**	50.38	105	*e*P	P	04 52 24.5	+1.0
	comp=Z,113nm,1.1s						
PPT2				*e*S	S	04 59 29.3	+2.9
	comp=Z,412nm,25.8s						
PPT2				*e*LQ	LQ	05 05 04.6	
	comp=Z,376nm,29.2s						
PPT2				*e*LR	LR	05 07 14.5	
	comp=Z,455nm,27.8s						
PPTF	**Pamatai, Papee**	50.39	105	P	P	04 52 22.9	-0.6
TIAR	**Tiarei**	50.60	105	*e*P	P	04 52 26.2	+1.2
	comp=Z,44nm,1.0s						
JSD	**Sado**	50.60	338	P	P	04 52 25.0	+0.4
JSD				IAmb	IAmb	04 52 26.1	
	comp=Z,81nm,0.8s						
JCJI	**Jatiwangi**	50.62	269	P	P	04 52 25.5	+0.3
TVO	**Taravao**	50.70	106	*e*P	P	04 52 27.0	+1.2
	comp=Z,46nm,0.9s						
CISI	**Cisompet, Garu**	50.96	267	P	P	04 52 27.3	-0.5
CISI				IAmb	IAmb	04 52 27.7	
	comp=Z,67nm,0.9s						
CISI	**Cisompet, Garu**	50.96	267	P	P	04 52 27.4	-0.5
	comp=Z,84nm,1.0s						
CISI	**Cisompet, Garu**	50.96	267	P	P	04 52 26.5	-1.3
	comp=Z,84nm,1.0s						
TBI	**Tubuai**	51.02	113	*e*P	P	04 52 28.8	+0.7
	comp=Z,261nm,1.3s						
TBI				*e*S	S	04 59 37.3	+2.3
	comp=Z,188nm,24.8s						
TBI				*e*LQ	LQ	05 05 18.4	
	comp=Z,799nm,30.0s						
TBI				*e*LR	LR	05 07 29.8	
	comp=Z,967nm,32.2s						
OPA	**Opana**	51.70	53	P	P	04 52 33.3	+0.2
OPA				pmax	pmax		
	comp=Z,126nm,0.8s						
OPA	**Opana**	51.70	53	P	P	04 52 33.3	+0.2
TPI	**Tanjungpandan**	51.71	273	P	P	04 52 33.7	+0.3
	comp=Z,20nm,1.2s						
MEH	**Mehetia**	51.83	106	*e*P	P	04 52 35.0	+0.8
	comp=Z,52nm,1.2s						
QZH	**Quanzhou**	51.98	311	P	P	04 52 36.8	+1.7
QZH				pP	pwP	04 53 10.3	+1.3
QZH				S	S	04 59 49.8	+1.9
CBJI	**Citeko**	52.02	269	P	P	04 52 33.8	-1.9
	comp=Z,109nm,0.5s						
VAH	**Vaihoa**	52.18	102	*e*P	P	04 52 37.9	+1.1
	comp=Z,251nm,1.0s						
KHU	**Kahuku**	52.45	58	P	P	04 52 38.7	-0.3
KHU				pmax	pmax		
	comp=Z,201nm,0.8s						
KHU	**Kahuku**	52.45	58	P	P	04 52 38.7	-0.3
HUH	**Hualalai**	52.47	57	P	P	04 52 38.5	-0.6
AIN	**Ainahou**	52.64	57	P	P	04 52 39.1	-1.2
ERM	**Erimo**	52.72	345	P	P	04 52 40.5	+0.3
ERM				pmax	pmax		
	comp=Z,48nm,0.9s						
ERM	**Erimo**	52.72	345	P	P	04 52 40.5	+0.3
ERM				IAmb	IAmb	04 52 45.3	
	comp=Z,48nm,0.9s						
HMH	**Humu‘ula Sheep**	52.72	57	P	P	04 52 40.6	-0.4
MLH	**Mauna Loa**	52.75	57	P	P	04 52 40.4	-0.9
POHA	**Pohakuloa**	52.76	57	P	P	04 52 39.8	-1.4
XMIS	**Christmas Isla**	52.88	264	P	P	04 52 39.6	-2.4
XMIS				IAmb	IAmb	04 52 40.5	
	comp=Z,47nm,0.9s						
JEW	**Eniwo**	53.95	344	P	P	04 52 49.5	+0.3
SSE	**Sheshan**	53.95	319	P	P	04 52 49.0	-0.4
SSE					pP	04 53 19.2	-2.0
TJN	**Taejon**	54.08	328	*de*P	P	04 52 51.5	+1.2
KASI	**Kota Agung**	54.45	270	P	P	04 52 52.7	-0.8
	comp=Z,998nmcomp=Z,53nm,1.1s						
KASI	**Kota Agung**	54.45	270	P	P	04 52 49.8	-3.7
KSRS	**Korea Array**	54.62	329	P	P	04 52 55.5	+1.3
	comp=Z,88nm,1.0s,baz=145,slow=7.5,SNR=109						
KSRS				pP	pP	04 53 27.4	+1.4
	comp=Z,16nm,1.0s,baz=150,slow=6.8,SNR=2.3						
KSAR	**Wonju Array Be**	54.63	329	P	P	04 52 54.2	-0.1
KSAR	**Wonju Array Be**	54.63	329	P	P	04 52 54.2	-0.1
KS19	**Wonju Array Si**	54.68	329	P	P	04 52 54.5	-0.2
JKA	**Kamikawa-asahi**	54.83	345	P	P	04 52 55.5	-0.1
JKA				IAmb	IAmb	04 52 58.0	
	comp=Z,50nm,0.8s						
ASAJ	**Asahikawa**	54.83	345	P	P	04 52 57.4	+1.8
	comp=Z,30nm,0.6s,baz=218,slow=9.6,SNR=29						
MDSI	**Maura Dua**	54.90	271	P	P	04 52 56.0	-0.7
	comp=Z,30nm,1.3s						
MDSI	**Maura Dua**	54.90	271	P	P	04 52 53.9	-2.8
INCN	**Inchon**	55.30	328	P	P	04 52 58.7	-0.4
INCN				pmax	pmax		
	comp=Z,250nm,0.9s						
INCN	**Inchon**	55.30	328	P	P	04 52 58.7	-0.4
QIZ	**Qiongzhong**	56.08	300	S	S	05 00 46.8	+3.5
QIZ	**Qiongzhong**	56.08	300	P	P	04 53 04.3	-0.7
QIZ	**Qiongzhong**	56.08	300	LR	LR		
	comp=E,200nm,15.0s						
QIZ	**Qiongzhong**	56.08	300	LR	LR		
	comp=Z,220nm,38.6s						
QIZ	**Qiongzhong**	56.08	300	LR	LR		
	comp=N,270nm,19.8s						
NJ2	**Nanjing**	56.08	318	⇓ *i*P	P	04 53 06.4	+1.6
NJ2				pP	pwP	04 53 41.8	+2.6
NJ2				sP	sP	04 53 51.4	-0.4
NJ2				PcP	PcP	04 54 02.5	+1.2
NJ2				S	S	05 00 44.3	+1.3
NJ2				pmax	pmax		
	comp=N,110nm,0.9s						
NJ2				pmax	pmax		
	comp=N,280nm,3.5s						
MSHR	**Mys Shultsa**	57.27	336	*i* P	P	04 53 14.1	+1.2
MSHR				pmax	pmax		
	comp=Z,8.0nm,0.5s						
TEY	**Ternei**	57.40	341	⇓ *i*P	P	04 53 14.2	+0.4
TEY				pmax	pmax		
	comp=E,40nm,0.7s						
TEY				pmax	pmax		
	comp=N,70nm,0.6s						
TEY				pmax	pmax		
	comp=Z,160nm,0.6s						
YSS	**Yuzh-Sakhalins**	57.46	347	κ *i*P	P	04 53 15.6	+1.4
YSS				*e*		04 53 51.3	
YSS				*e*S	S	05 01 01.4	+0.9
YSS				pmax	pmax		
	comp=Z,120nm,0.9s						
YSS				pmax	pmax		
	comp=Z,300nm,2.5s						
YSS				MLR	MLR		
	comp=Z,200nm,17.0s						
YSS	**Yuzh-Sakhalins**	57.46	347	P	P	04 53 14.1	-0.1
SDSI	**Sungai Dareh**	58.15	274	P	P	04 53 19.9	+0.2
	comp=Z,70nm,0.9s						
SDSI	**Sungai Dareh**	58.15	274	P	P	04 53 18.1	-1.6
	comp=Z,70nm,0.9s						
WHN	**Wuhan**	58.26	314	⇓P	P	04 53 21.0	+0.9
WHN				pP	pwP	04 53 57.0	+2.3
WHN				S	S	05 01 10.4	-1.1
WHN				pmax	pmax		
	comp=Z,120nm,1.0s						
WHN				LR	LR		
	comp=Z,370nm,4.7s						
WHN				LR	LR		
	comp=Z,580nm,4.4s						
USA0B	**Ussuriysk Arra**	58.30	337	*d i*P	P	04 53 21.5	+1.4
USRK	**Ussuriysk Ar.**	58.30	337	P	P	04 53 21.6	+1.5
	comp=Z,114nm,0.8s,baz=163,slow=4.7,SNR=81						
USRK				pP	pP	04 53 52.5	+0.1
	comp=Z,17nm,0.8s,baz=127,slow=6.5,SNR=2.1						
USRK				LR	LR	05 18 19.0	
	comp=Z,99nm,19.6s,baz=125,slow=36						
USRK	**Ussuriysk Ar.**	58.30	337	P	P	04 53 20.3	+0.2
UBPT	**Khong Chiam**	58.48	294	P	P	04 53 21.6	-0.3
UBPT				pP	pP	04 53 51.7	-2.5
DL2	**Dalian**	59.02	326	P	P	04 53 26.1	+0.9
DL2				pP	pP	04 53 58.8	+1.3
DL2				S	S	05 01 22.0	+1.0
DL2				pmax	pmax		
	comp=Z,150nm,0.9s						
MDJ	**Mudanjiang**	59.59	336	P	P	04 53 30.3	+1.3
MDJ				pP	pP	04 54 00.9	-0.6
MDJ				sP	sP	04 54 17.3	+0.8
MDJ				ScP	ScP	04 58 02.6	-0.2
MDJ				S	S	05 01 33.4	+5.2
MDJ				pmax	pmax		
	comp=Z,140nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,490nm,2.6s						
MDJ	**Mudanjiang**	59.59	336	P	P	04 53 29.0	0.0
IPM	**Ipoh**	59.60	280	P	P	04 53 28.5	-1.2
IPM				pP	pP	04 53 59.6	-2.5
IPM	**Ipoh**	59.60	280	P	P	04 53 30.0	+0.3
TAOE	**Nuku Hiva Isla**	59.75	95	*e*T	T	05 56 53.1	
	comp=Z,30nm,0.2s						
TAOE	**Nuku Hiva Isla**	59.75	95	P	P	04 53 30.1	-0.8
TAOE	**Nuku Hiva Isla**	59.75	95	P	P	04 53 32.0	+1.1
	comp=Z,303nm,1.0s						
TIA	**Tai'an**	59.84	321	P	P	04 53 31.3	+0.4
TIA				pmax	pmax		
	comp=Z,51nm,0.9s						
MNSI	**Mandailing Nat**	60.27	276	P	P	04 53 33.5	-0.8
	comp=Z,74nm,1.0s						
MNSI	**Mandailing Nat**	60.27	276	P	P	04 53 32.2	-2.1
	comp=Z,74nm,1.0s						
CN2	**Changchun**	60.73	332	*e*P	P	04 53 37.8	+1.0
CN2				S	S	05 01 39.9	-2.9
CN2				pmax	pmax		
	comp=Z,330nm,1.0s						
CN2				LR	LR		
	comp=Z,240nm,17.0s						
CN2				LR	LR		
	comp=Z,220nm,17.0s						
CN2				LR	LR		
	comp=Z,300nm,16.0s						
TYV	**Tymovskoe**	61.18	348	*e*P	P	04 53 41.6	+1.9
TYV				pmax	pmax		
	comp=Z,400nm,2.2s						
TYV				pmax	pmax		
	comp=Z,72nm,1.2s						
RPSI	**Rantau Prapat**	61.27	278	P	P	04 53 40.2	-0.9
PSI	**Prapat**	61.30	278	P	P	04 53 40.2	-1.2
PSI				pmax	pmax		
	comp=Z,9.0nm,0.9s						
PET	**Petropavlovsk**	61.61	360	*e*P	P	04 53 43.1	+0.6
PET				*e*		04 54 22.8	
PET				*e*S	S	05 01 52.9	-0.7
PET				pmax	pmax		
	comp=Z,131nm,0.8s						
PET	**Petropavlovsk**	61.61	360	P	P	04 53 43.0	+0.5
PET					pP	04 54 13.9	-1.9
ENH	**Enshi**	61.64	311	P	P	04 53 43.0	-0.3
ENH				IAmb	IAmb	04 53 44.2	
	comp=Z,28nm,0.9s						
PEA0B	**Petropavlovsk-**	61.71	359	*de*P	P	04 53 44.2	+1.0
PEA0B	**Petropavlovsk-**	61.71	359	P	P	04 53 43.3	+0.1
PETK	**Petropavlovsk-**	61.71	359	P	P	04 53 44.3	+1.0
	comp=Z,77nm,0.8s,baz=155,slow=7.7,SNR=90						
PETK				LR	LR	05 17 09.1	
	comp=Z,191nm,21.8s,baz=172,slow=32						
PETK	**Petropavlovsk-**	61.71	359	P	P	04 53 43.6	+0.3
GYA	**Guiyang**	61.97	306	⇓P	P	04 53 46.6	+0.9
GYA				pP	pP	04 54 19.3	+1.0
GYA				PcP	PcP	04 54 26.0	+0.9
GYA				PP	PP	04 56 01.3	-2.6
GYA				S	S	05 02 00.3	+0.9
GYA				pmax	pmax		
	comp=Z,19nm,1.0s						
SLVN	**Son La**	62.10	300	P	P	04 53 46.0	-0.6
GSI	**Gunungsitoli**	62.33	276	P	P	04 53 47.3	-0.9
GSI				IAmb	IAmb	04 53 49.2	
	comp=Z,57nm,1.0s						
GSI	**Gunungsitoli**	62.33	276	P	P	04 53 48.5	+0.3
	comp=Z,61nm,1.0s						
AMKA	**Amchitka**	62.40	14	P	P	04 53 47.9	+0.1
GRNR	**Gornyy**	62.59	344	⇓ *i*P	P	04 53 50.7	+1.5
GRNR				*e*S	S	05 02 10.1	+4.0
GRNR				pmax	pmax		
	comp=E,20nm,1.0s						
GRNR				pmax	pmax		
	comp=N,40nm,1.1s						
GRNR				pmax	pmax		
	comp=Z,80nm,1.0s						
GRNR				smax	smax		
	comp=N,2.0nm,0.7s						
KLR	**Kul'dur**	62.67	340	P	P	04 53 51.0	+1.3
	comp=N,89nm,0.9s,baz=156,slow=3.6,SNR=216						
BJT	**Baijiatuau**	62.87	324	P	P	04 53 51.2	0.0
BJT				pmax	pmax		
	comp=Z,23nm,0.8s						
BJT	**Baijiatuau**	62.87	324	P	P	04 53 51.2	0.0
BJT				IAmb	IAmb	04 53 52.5	
	comp=Z,23nm,0.8s						
BJI	**Beijing**	62.88	324	P	P	04 53 51.6	+0.4
BJI				pP	pP	04 54 24.8	+0.9
BJI				PcP	pwP	04 54 29.6	+3.4
BJI				sP	sP	04 54 39.6	+0.8
BJI				S	S	05 02 13.1	+3.1
BJI				pmax	pmax		
	comp=Z,32nm,1.3s						
BJI				LR	LR		
	comp=Z,260nm,14.8s						
BJI				LR	LR		
	comp=Z,89nm,5.3s						
PHET	**Kaeng Krachan**	63.09	289	P	PcP	04 54 29.2	-0.5
	comp=Z,603nmcomp=Z,57nm,1.1s						
PHIT	**Phitsanulok**	63.69	294	P	PcP	04 54 34.7	+2.6
TIY	**Taiyuan**	63.72	320	*e*P	P	04 53 57.9	+1.0
TIY				pP	PcP	04 54 29.8	-2.1
TIY				pmax	pmax		
	comp=Z,37nm,1.0s						
TIY				pmax	pmax		
	comp=Z,160nm,5.3s						
UTTA	**Uttaradit**	63.75	295	P	PcP	04 54 34.0	+1.7
	comp=Z,36nm,1.1s						
ADK	**Adak**	63.90	16	P	P	04 53 58.2	+0.5
ADK				pmax	pmax		
	comp=Z,68nm,0.8s						
ADK	**Adak**	63.90	16	P	P	04 53 58.2	+0.5
SRDT	**SRDT**	63.99	291	P	PcP	04 54 13.0	-20
	comp=Z,17µmcomp=Z,34nm,1.2s						
XAN	**Xi'an**	64.01	315	P	P	04 53 59.3	+0.4
XAN				pP	PcP	04 54 30.6	-2.5
XAN				sP	sP	04 54 47.3	+0.8
XAN				PP	PP	04 56 19.0	-2.6
XAN				S	S	05 02 21.6	-2.8
XAN				sS	sS	05 03 20.4	-0.8
XAN				ScS	SKSac	05 03 33.8	-5.9
XAN				SS	SS	05 06 34.8	-1.2
XAN				pmax	pmax		
	comp=Z,45nm,1.3s						
XAN				pmax	pmax		
	comp=Z,310nm,4.3s						
XAN				LR	LR		
	comp=Z,260nm,18.4s						
XAN				LR	LR		
	comp=Z,250nm,18.7s						
XAN				LR	LR		
	comp=Z,200nm,18.4s						
XAN	**Xi'an**	64.01	315	P	P	04 53 58.8	-0.1
XAN				pmax	pmax		
	comp=Z,27nm,1.0s						
XAN	**Xi'an**	64.01	315	P	P	04 53 58.8	-0.1
XAN				IAmb	IAmb	04 54 00.0	
	comp=Z,27nm,1.0s						
UTHA	**Uthaitani**	64.06	292	P	PcP	04 54 35.2	+1.6
RKT	**Rikitea**	64.29	111	*e*S	S	05 02 30.7	+2.5
	comp=Z,273nm,32.5s						
RKT	**Rikitea**	64.29	111	*e*LR	LR	05 13 36.3	
	comp=Z,515nm,32.8s						
KMI	**Kunming**	64.59	303	⇓P	P	04 54 04.1	+1.0
KMI				pP	pwP	04 54 39.4	+1.1
KMI				S	S	05 02 34.1	+1.9
KMI				sS	sS	05 03 29.3	-0.1
KMI				pmax	pmax		
	comp=Z,31nm,1.1s						
KMI				pmax	pmax		
	comp=Z,190nm,4.1s						
KMI				LR	LR		
	comp=Z,200nm,14.4s						
KMI				LR	LR		
	comp=Z,170nm,11.5s						
KMI				LR	LR		
	comp=Z,200nm,18.0s						
KMI	**Kunming**	64.59	303	P	P	04 54 02.5	-0.6
KMI				pmax	pmax		
	comp=Z,39nm,1.1s						
KMI	**Kunming**	64.59	303	P	P	04 54 02.5	-0.6
KMI				IAmb	IAmb	04 54 05.8	
	comp=Z,39nm,1.1s						
ATKA	**Atka Island**	64.90	18	P	P	04 54 04.6	+0.4
CM35	**Chiang Mai Arr**	65.32	295	P	P	04 54 08.0	+0.4
CM36	**Chiang Mai Arr**	65.32	295	P	P	04 54 08.0	+0.4
CM34	**Chiang Mai Arr**	65.38	295	P	P	04 54 09.0	+1.0
CM04	**Chiang Mai Arr**	65.38	295	P	P	04 54 09.4	+1.4
	comp=Z,256nmcomp=Z,18nm,1.0s						
CM09	**Chiang Mai Arr**	65.39	295	P	P	04 54 09.0	+0.9
	comp=Z,251nmcomp=Z,20nm,0.9s						
CM01	**Chiang Mai Arr**	65.41	295	P	P	04 54 10.2	+1.9
	comp=Z,298nmcomp=Z,16nm,1.0s						
CM05	**Chiang Mai Arr**	65.41	295	P	P	04 54 09.0	+0.7
	comp=Z,211nmcomp=Z,11nm,1.2s						
CM02	**Chiang Mai Arr**	65.42	295	P	P	04 54 10.2	+1.8
	comp=Z,252nmcomp=Z,16nm,1.0s						
CM31	**Chiang Mai Arr**	65.43	295	P	P	04 54 10.0	+1.6
	comp=Z,283nm,0.5s						
CMAR	**Chiang Mai Arr**	65.43	295	P	P	04 54 09.4	+1.0
	comp=Z,1.2nm,0.4s,baz=177,slow=30,SNR=5.2						
CMAR				pP	pP	04 54 42.6	+1.3
	comp=Z,18nm,0.9s,baz=119,slow=4.6,SNR=6.0						
CMAR				PKP2bc		05 22 49.3	
	comp=Z,1.4nm,0.3s,baz=302,slow=5.2,SNR=4.4						
CMAR	**Chiang Mai Arr**	65.43	295	P	P	04 54 07.7	-0.7
CM15	**Chiang Mai Arr**	65.45	295	P	P	04 54 10.0	+1.5
	comp=Z,18nm,0.9s						
CM13	**Chiang Mai Arr**	65.45	295	P	P	04 54 09.8	+1.3
	comp=Z,214nmcomp=Z,15nm,1.0s						
CMMT	**Chiang Mai**	65.55	295	P	P	04 54 09.0	-0.1
	comp=Z,280nmcomp=Z,9.9nm,1.2s						
CM33	**Chiang Mai Arr**	65.55	295	P	P	04 54 09.0	-0.1
CHTO	**Chiang Mai**	65.55	295	P	P	04 54 08.8	-0.3
CHTO				pmax	pmax		
	comp=Z,17nm,1.0s						
CHTO	**Chiang Mai**	65.55	295	P	P	04 54 08.8	-0.3
CM32	**Chiang Mai Arr**	65.58	295	P	P	04 54 11.0	+1.7
HHC	**Hu-ho-hao-te**	66.13	322	*e*P	P	04 54 14.0	+1.5
HHC				pP	pP	04 54 46.8	+1.3
HHC				sP	sP	04 55 01.5	+1.2
HHC				S	S	05 02 53.8	+3.6
HHC				ScS	ScS	05 03 56.3	+0.4
HHC				pmax	pmax		
	comp=Z,55nm,1.3s						
HHC				pmax	pmax		
	comp=Z,150nm,4.6s						
CD2	**Chengdu**	66.27	309	P	P	04 54 14.3	+0.7
CD2				pP	pP	04 54 46.0	-0.5
CD2				PP	PP	04 56 39.6	-1.8
CD2				S	S	05 02 52.4	+0.3
CD2				sS	sS	05 03 51.9	+1.9
CD2				pmax	pmax		
	comp=Z,50nm,1.0s						
CD2				pmax	pmax		
	comp=Z,160nm,7.1s						
BTO	**Baotou**	66.93	321	*e*P	P	04 54 16.8	-0.8
NIKH	**Nikolski High**	67.27	20	P	P	04 54 19.8	+0.5
HIA	**Hailar**	67.43	333	*d i*P	P	04 54 21.6	+1.1
HIA				pmax	pmax		
	comp=Z,119nm,0.9s						
HIA	**Hailar**	67.43	333	P	P	04 54 20.8	+0.3
HIA					pP	04 54 52.5	-1.2
ZEA	**Zeya**	67.98	340	*d i*P	P	04 54 25.5	+1.7
ZEA				*e**PP	pP	04 54 58.9	+1.5
ZEA				*e*S	S	05 03 16.3	+4.6
ZEA				pmax	pmax		
	comp=E,30nm,0.9s						
ZEA				pmax	pmax		
	comp=N,80nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,140nm,1.0s						
ZEA				smax	smax		
	comp=E,100nm,6.4s						
MA2	**Magadan**	68.52	355	P	P	04 54 27.4	+0.4
	comp=E,86nm,0.8s,baz=153,slow=6.3,SNR=12						
MA2				LR	LR	05 20 44.1	
	comp=E,82nm,21.6s,baz=178,slow=32						
MA2	**Magadan**	68.52	355	P	P	04 54 27.5	+0.4
MA2				pmax	pmax		
	comp=Z,123nm,1.0s						
MA2	**Magadan**	68.52	355	P	P	04 54 27.5	+0.4

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LZH   Lanzhou           68.64 314 eP       P       04 54 30.5 +2.0
LZH                                pP      pP      04 55 01.5 -0.2
LZH                                sP      sP      04 55 17.3 +0.9
LZH                                S       S       05 03 19.1 -1.4
LZH                                pmax    pmax
      comp=Z,55nm,1.1s
LZH                                pmax    pmax
      comp=Z,410nm,4.6s
VNDA  Vanda             68.68 179  P       P       04 54 29.0 +1.2
      comp=Z,29nm,1.0s,baz=349,slow=6.9,SNR=36
VNDA                               pP      pP      04 55 01.4 +0.4
      comp=Z,12nm,0.9s,baz=325,slow=5.9,SNR=3.7
VNDA                               LR      LR      05 20 04.7
      comp=Z,208nm,20.2s,baz=1.5,slow=32
VNDA  Vanda             68.68 179  P       P       04 54 28.1 +0.3
VNDA                               IAmb    IAmb    04 54 32.1
      comp=Z,33nm,1.1s
SBA   Scott Base        69.11 178  P       P       04 54 30.6 +0.1
SBA                                pmax    pmax
      comp=Z,18nm,1.0s
SBA   Scott Base        69.11 178  P       P       04 54 30.6 +0.1
SEY   Seymchan          71.75 357  P       P       04 54 47.7 +1.1
      comp=Z,40nm,0.9s,baz=159,slow=5.8,SNR=91
SEY                                pP      pP      04 55 20.6 -0.1
      comp=Z,22nm,1.0s,baz=196,slow=6.8,SNR=2.8
IMP   Imphal            71.91 300 eP       P       04 54 48.3 -0.2
IMP                                IAmb    IAmb    04 54 51.0
      comp=Z,46nm,1.3s
IMP                               i sP     pP      04 55 22.0 +0.1
MOKO  MOKOCHONG         71.92 301 eP       P       04 54 48.6  0.0
MOKO                               IAmb    IAmb    04 54 51.4
      comp=Z,19nm,0.7s
MOKO                              i sP     pP      04 55 23.1 +1.0
SAIH  SAIHA             72.00 297 eP       P       04 54 49.8 +0.6
SAIH                               IAmb    IAmb    04 54 53.6
      comp=Z,155nm,1.8s
SAIH                              i sP     pP      04 55 25.2 +2.6
KOHI  KOHIMA            72.06 301 eP       P       04 54 49.5  0.0
KOHI                               IAmb    IAmb    04 54 51.4
      comp=Z,31nm,0.9s
KOHI                              i sP     pP      04 55 23.4 +0.4
CIT   Chita             72.17 332 eP       P       04 54 51.3 +1.8
CIT                               e                04 55 06.0
CIT                               e                04 55 22.5
CIT                               e                04 55 38.6
CIT                                pmax    pmax
      comp=Z,202nm,1.3s
ULN   Ulaanbaatar       72.87 326deP       P       04 54 55.6 +1.7
ULN                                pmax    pmax
      comp=Z,115nm,1.0s
ULN   Ulaanbaatar       72.87 326  P       P       04 54 53.8 -0.1
ULN                                IAmb    IAmb    04 54 57.0
      comp=Z,128nm,1.1s
GTA   Gaotai            73.01 316 ⇓P       P       04 54 56.6 +1.7
GTA                                pmax    pmax
      comp=Z,24nm,1.4s
SONM  Songino Array     73.22 326  P       P       04 54 57.5 +1.7
      comp=Z,51nm,0.9s,baz=136,slow=5.7,SNR=253
SONM                               pP      pP      04 55 29.3 -0.1
      comp=Z,93nm,0.9s,baz=144,slow=3.9,SNR=5.5
SONM                               LR      LR      05 25 43.5
      comp=Z,108nm,20.6s,baz=153,slow=34
SONM  Songino Array     73.22 326  P       P       04 54 55.6 -0.3
TEZP  TEZPUR            73.47 301 eP       P       04 54 57.5 -0.1
TEZP                               IAmb    IAmb    04 55 00.8
      comp=Z,27nm,1.1s
TEZP                              i sP     pP      04 55 31.7 +0.6
SHL   Shillong          73.91 300  P       P       04 54 59.8 -0.7
SHL                                pmax    pmax
      comp=Z,22nm,0.9s
SHL   Shillong          73.91 300 eP       P       04 55 00.7 +0.2
SHL                                IAmb    IAmb    04 55 02.7
      comp=Z,11nm,0.7s
SHL                               i pP     pP      04 55 35.3 +1.2
SHL   Shillong          73.91 300  P       P       04 54 59.8 -0.7
YAK   Yakutsk           74.31 346d iP      P       04 55 02.6 +0.9
YAK                               e                04 55 12.5
YAK                               e*PP     pP      04 55 35.1 -0.5
YAK                               eS       S       05 04 25.0 +0.8
YAK                               e                05 04 56.4
YAK                               e*SS     sS      05 05 23.1 +0.9
YAK                                pmax    pmax
      comp=Z,214nm,1.0s
YAK                                pmax    pmax
      comp=N,41nm,1.3s
YAK                                pmax    pmax
      comp=E,21nm,1.4s
YAK                                pmax    pmax
      comp=Z,94nm,2.5s
YAK                                pmax    pmax
      comp=N,48nm,2.5s
YAK                                pmax    pmax
      comp=E,70nm,3.1s
YAK                                smax    smax
      comp=N,173nm,2.2s
YAK                                smax    smax
      comp=E,45nm,1.9s
YAK   Yakutsk           74.31 346  P       P       04 55 02.0 +0.3
LSA   Lhasa             75.84 304  P       P       04 55 10.9 -1.0
LSA                                pmax    pmax
      comp=Z,10.0nm,1.0s
LSA   Lhasa             75.84 304  P       P       04 55 10.8 -1.0
BOD   Bodaibo           75.93 337 eP       P       04 55 11.4 +0.3
BOD                                pmax    pmax
      comp=Z,60nm,1.3s
ZAK   Zakamensk         76.33 327 eP       P       04 55 14.2 +0.5
ZAK                               e                04 55 46.2
ZAK                                pmax    pmax
      comp=Z,48nm,1.1s
ZAK                                pmax    pmax
      comp=Z,43nm,1.0s
IRK   Irkutsk           76.83 329 eP       P       04 55 15.8 -0.5
IRK                                pmax    pmax
      comp=Z,77nm,2.0s
TLY   Talaya            76.84 328  LR      LR      05 26 38.0
      comp=Z,82nm,21.4s,baz=111,slow=34
TLY   Talaya            76.84 328d iP      P       04 55 17.5 +1.1
TLY                                pmax    pmax
      comp=Z,61nm,1.0s
TLY   Talaya            76.84 328  P       P       04 55 16.3 -0.1
TLY                                IAmb    IAmb    04 55 18.9
      comp=Z,49nm,0.9s
TLY                                        pP      04 55 49.1 -1.2
KDAK  Kodiak Island     77.01  24  P       P       04 55 17.9 +0.7
      comp=Z,9.6nm,0.6s,baz=174,slow=7.6,SNR=12
KDAK  Kodiak Island     77.01  24 i P      P       04 55 18.6 +1.4
KDAK                               pmax    pmax
      comp=Z,47nm,1.1s
GTK   Tadong            77.25 301 eP       P       04 55 20.7 +1.3
GTK                                IAmb    IAmb    04 55 22.2
      comp=Z,12nm,0.7s
GTK                               i sP     pwP     04 55 58.2 +2.5
ANM   Nome              77.83  15  P       P       04 55 21.9 +0.3
ANM                                pmax    pmax
      comp=Z,18nm,0.8s
ANM   Nome              77.83  15  P       P       04 55 21.9 +0.3
TNA   Tin City          78.05  13  P       P       04 55 23.5 +0.8
      baz=213
TNA   Tin City          78.05  13  P       P       04 55 23.2 +0.4
TNA                                IAmb    IAmb    04 55 25.2
      comp=Z,38nm,1.1s
SVW2  Sparrevohn        78.14  21  P       P       04 55 23.7 +0.3
SVW2                               IAmb    IAmb    04 55 26.5
      comp=Z,51nm,1.0s
MOY   Mondy             78.23 327 eP       P       04 55 25.4 +1.1
MOY                               e                04 55 57.5
MOY                                pmax    pmax
      comp=Z,56nm,1.7s
HOM   Homer             78.61  23  P       P       04 55 26.8 +0.8
      baz=230
CNPM  China Poot        78.68  23  P       P       04 55 26.5  0.0
CNPM                               IAmb    IAmb    04 55 36.3
      comp=Z,47nm,1.0s
RSO   Redoubt South     78.72  22  P       P       04 55 26.8  0.0
TTA   Tatalina          79.28  19  P       P       04 55 29.8  0.0
TTA                                pmax    pmax
      comp=Z,24nm,0.9s
TTA   Tatalina          79.28  19  P       P       04 55 29.8  0.0
CAPN  Captain Cook N    79.52  22  P       P       04 55 31.4 +0.5
      baz=230
SEW   Seward            79.75  23  P       P       04 55 32.3 +0.1
O22K  Cooper Landing    79.88  23  P       P       04 55 33.4 +0.6
      baz=231
O22K  Cooper Landing    79.88  23  P       P       04 55 33.1 +0.3
O22K                               IAmb    IAmb    04 55 45.4
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      comp=Z,72nm,0.7s
SUA   Susitna One       80.11  22  P       P       04 55 34.2 -0.1
RC01  Rabbit Creek A    80.25  23  P       P       04 55 35.5 +0.6
      baz=231
PPLA  Purkeypile        80.54  20  P       P       04 55 36.6  0.0
Q23K  Middleton Isla    80.59  25  P       P       04 55 37.5 +0.8
      baz=234
PMR   Palmer            80.80  22  P       P       04 55 38.3 +0.5
PMR                                pmax    pmax
      comp=Z,23nm,0.8s
PMR   Palmer            80.80  22  P       P       04 55 38.2 +0.5
KNK   Knik Glacier      80.94  23  P       P       04 55 38.9 +0.3
GHO   Glory Hole Cre    80.99  22  P       P       04 55 39.1 +0.2
GHO                                IAmb    IAmb    04 55 47.9
      comp=Z,32nm,0.8s
QSPA  South Pole Qui    81.16 180  P       P       04 55 40.2 +0.4
      comp=Z,36nm,0.8s,baz=351,slow=1.6,SNR=120
QSPA  South Pole Qui    81.16 180  P       P       04 55 39.1 -0.8
QSPA                               IAmb    IAmb    04 55 41.4
      comp=Z,42nm,0.8s
SML   Sawmill           81.23  22  P       P       04 55 40.5 +0.3
SML                                IAmb    IAmb    04 55 49.5
      comp=Z,43nm,0.9s
RDOG  Red Dog Mine      81.24  13  P       P       04 55 40.4 +0.4
RDOG                               IAmb    IAmb    04 55 43.6
      comp=Z,38nm,1.0s
KTH   Kantishna Hill    81.40  20  P       P       04 55 41.2 +0.2
TRF   Thorofare Moun    81.55  20  P       P       04 55 42.0  0.0
SCM   Sheep Creek Mo    81.62  23  P       P       04 55 42.4 +0.1
SCM                                pmax    pmax
      comp=Z,22nm,0.8s
SCM   Sheep Creek Mo    81.62  23  P       P       04 55 42.4 +0.1
BPAW  Bear Paw Mtn.     81.73  20  P       P       04 55 43.0 +0.2
KLU   Klutina           81.97  23  P       P       04 55 44.3 +0.2
RND   Reindeer          82.03  21  P       P       04 55 44.4  0.0
RND                                pmax    pmax
      comp=Z,21nm,1.0s
RND   Reindeer          82.03  21  P       P       04 55 44.4  0.0
IMAR  Indian Mountai    82.12  18  P       P       04 55 45.0 +0.3
MCK   McKinley          82.20  21  P       P       04 55 45.3 +0.2
      baz=232,SNR=23
M24K  Tolsona, Glenn    82.23  23  P       P       04 55 45.8 +0.4
      baz=234,SNR=9.7
M24K  Tolsona, Glenn    82.23  23  P       P       04 55 45.7 +0.3
M24K                               IAmb    IAmb    04 55 55.3
      comp=Z,72nm,0.9s
BWN   Browne            82.30  20  P       P       04 55 46.2 +0.6
BWN                                IAmb    IAmb    04 55 59.5
      comp=Z,50nm,0.8s
MLY   Manley            82.42  19  P       P       04 55 47.0 +0.7
      baz=230,SNR=17
N25K  Chitina, Valde    82.55  24  P       P       04 55 47.7 +0.6
      baz=236,SNR=7.0
N25K  Chitina, Valde    82.55  24  P       P       04 55 47.4 +0.2
CRQM  Cirque            82.67  25  P       P       04 55 47.7 -0.2
CRQM                               IAmb    IAmb    04 55 58.2
      comp=Z,30nm,1.0s
NEA2  Nenana            82.69  20  P       P       04 55 47.6  0.0
      baz=231,SNR=12
GLB   Gilahina Butte    82.77  24  P       P       04 55 48.5 +0.3
GLB                                IAmb    IAmb    04 55 57.5
      comp=Z,25nm,0.9s
VRDI  Verde Repeater    82.80  24  P       P       04 55 48.4 -0.2
TIXI  Tiksi             82.81 351d iP      P       04 55 48.4 +0.3
TIXI  Tiksi             82.81 351  P       P       04 55 48.4 +0.3
TIXI                               IAmb    IAmb    04 55 50.1
      comp=Z,29nm,1.1s
I23K  Minto, Yukon-K    82.95  19  P       P       04 55 49.3 +0.3
      baz=231,SNR=11
I23K  Minto, Yukon-K    82.95  19  P       P       04 55 49.2 +0.3
WRH   Wood River Hil    82.95  20  P       P       04 55 48.9 -0.1
WRH                                IAmb    IAmb    04 55 57.3
      comp=Z,23nm,0.9s
PAX   Paxson            83.00  22  P       P       04 55 49.0 -0.4
PAX                                pmax    pmax
      comp=Z,9.0nm,1.0s
PAX   Paxson            83.00  22  P       P       04 55 49.0 -0.4
MCARA McCarthy VSAT     83.06  24  P       P       04 55 49.8 +0.2
WMQ   Urumqi            83.09 316 eP       P       04 55 51.3 +1.0
WMQ                                pP      pP      04 56 24.1 -0.5
WMQ                                pmax    pmax
      comp=Z,25nm,2.3s
WMQ                                pmax    pmax
      comp=Z,390nm,5.3s
WMQ                                LR      LR
      comp=Z,490nm,29.2s
WMQ                                LR      LR
      comp=Z,1µm,28.9s
WMQ                                LR      LR
      comp=Z,250nm,20.1s
WMQ   Urumqi            83.09 316  P       P       04 55 49.8 -0.5
WMQ                                pmax    pmax
      comp=Z,16nm,1.1s
WMQ   Urumqi            83.09 316  P       P       04 55 49.8 -0.5
BALM  Baldy             83.15  25  P       P       04 55 50.5 +0.2
CCB   Clear Creek Bu    83.16  20  P       P       04 55 50.3 +0.3
CCB                                IAmb    IAmb    04 55 58.2
      comp=Z,19nm,0.8s
MDM   Murphy Dome       83.20  20  P       P       04 55 50.7 +0.4
MDM                                IAmb    IAmb    04 55 58.7
      comp=Z,30nm,1.0s
TCOL  CIGO, UAF Yank    83.28  20  P       P       04 55 50.7 +0.1
      baz=232,SNR=13
TCOL  CIGO, UAF Yank    83.28  20  P       P       04 55 51.0 +0.3
TCOL                               IAmb    IAmb    04 55 58.9
      comp=Z,55nm,0.9s
COLA  College           83.28  20  P       P       04 55 51.0 +0.4
COLA                               pmax    pmax
      comp=Z,55nm,0.9s
COLA  College           83.28  20  P       P       04 55 51.0 +0.4
COLA                               IAmb    IAmb    04 55 58.9
      comp=Z,55nm,0.9s
HDA   Harding Lake      83.31  21  P       P       04 55 51.5 +0.6
      baz=233
HDA   Harding Lake      83.31  21  P       P       04 55 51.1 +0.2
HDA                                IAmb    IAmb    04 56 00.9
      comp=Z,28nm,1.0s
TABL  Table Mountain    83.34  25  P       P       04 55 51.3  0.0
TABL                               IAmb    IAmb    04 55 54.4
      comp=Z,38nm,0.9s
BARN  Barnard Glacie    83.44  25  P       P       04 55 51.9  0.0
BARN                               IAmb    IAmb    04 55 55.4
      comp=Z,25nm,0.9s
CTGM  Chitina Glacie    83.53  25  P       P       04 55 52.3  0.0
CTGM                               IAmb    IAmb    04 55 55.8
      comp=Z,36nm,0.9s
IL31                    83.55  20  P       P       04 55 52.2 +0.3
ILAR  Eielson Array     83.55  20  P       P       04 55 52.0  0.0
      comp=Z,8.9nm,0.9s,baz=244,slow=4.8,SNR=67
ILAR                               pP      pP      04 56 27.5 +0.6
      comp=Z,20nm,1.1s,baz=239,slow=5.4,SNR=4.1
ILAR                               PKKPbc  PKKPbc  05 14 08.2 -4.7
      comp=Z,0.4nm,0.6s,baz=341,slow=2.2,SNR=6.6
ILAR                               LR      LR      05 26 46.5
      comp=Z,74nm,21.4s,baz=236,slow=31
ILAR  Eielson Array     83.55  20  P       P       04 55 52.2 +0.1
ILAR                               *PP     pP      04 56 25.6 -1.3
ILAR  Eielson Array     83.55  20  P       P       04 55 52.2 +0.1
ILAR                               pP      pP      04 56 25.6 -1.3
POKR  Poker Plat Res    83.57  20  P       P       04 55 52.2 +0.1
      baz=233
POKR  Poker Plat Res    83.57  20  P       P       04 55 52.3 +0.1
MENT  Mentasta          83.64  23  P       P       04 55 52.8 +0.2
DOT   Dot Lake          83.91  22  P       P       04 55 54.2 +0.2
DOT                                IAmb    IAmb    04 56 03.7
      comp=Z,34nm,0.9s
HYB   Hyderabad         83.91 289 i P      P       04 55 54.0 -1.0
HYB                               epP      pP      04 56 30.0 +0.6
HYB   Hyderabad         83.91 289 eP       P       04 55 53.2 -1.8
HYB                                IAmb    IAmb    04 56 05.9
      comp=Z,7.1nm,0.8s
HYB                               i sP     pP      04 56 28.9 -0.5
COLD  Coldfoot          84.01  18  P       P       04 55 55.2 +0.9
      baz=230,SNR=11
COLD  Coldfoot          84.01  18  P       P       04 55 54.7 +0.3
SCRK  Sand Creek        84.12  22  P       P       04 55 56.0 +0.8
      baz=236,SNR=13
PRP   Porcupine Dome    84.45  20  P       P       04 55 57.0 +0.1
HYT   Haines Junctio    85.09  26  P       P       04 56 00.1 -0.1
HYT                                IAmb    IAmb    04 56 03.7
      comp=Z,54nm,1.0s
TOLK  Toolik Lake Re    85.10  17  P       P       04 56 00.9 +1.0
      baz=230,SNR=20
TOLK  Toolik Lake Re    85.10  17  P       P       04 56 00.2 +0.3
A21K  Barrow            85.16  13  P       P       04 56 00.6 +0.6
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      baz=224,SNR=22
A21K  Barrow            85.16  13  P       P       04 56 00.2 +0.3
A21K                               IAmb    IAmb    04 56 02.5
      comp=Z,58nm,1.1s
FYU   Fort Yukon        85.16  19  P       P       04 56 00.3 +0.2
DGZ   Jazzator, Alta    85.21 322d iP      P       04 56 01.3 +0.3
DGZ                                pmax    pmax
      comp=Z,25nm,1.3s
SKAG  Skagway           85.45  28  P       P       04 56 01.7  0.0
SKAG                               IAmb    IAmb    04 56 15.1
      comp=Z,24nm,1.0s
EGAK  Eagle             85.59  22  P       P       04 56 02.3  0.0
JCC   Jacoby Creek,     85.77  48  P       P       04 56 03.4 -0.3
JCC                                IAmb    IAmb    04 56 06.7
      comp=Z,35nm,1.1s
KCPM  Cahto Peak        85.80  49  P       P       04 56 03.5 -0.6
KCPM                               IAmb    IAmb    04 56 07.4
      comp=Z,72nm,1.0s
BMAR  Burnt Mountain    85.87  19  P       P       04 56 03.8 +0.1
MCCM  Marconi Confer    85.94  51  P       P       04 56 04.5 -0.1
KBO   Bosley Butte      86.00  46  P       P       04 56 04.2 -0.7
KBO                                IAmb    IAmb    04 56 08.6
      comp=Z,62nm,1.1s
KHMM  Horse Mountain    86.00  48  P       P       04 56 04.4 -0.7
KHMM                               IAmb    IAmb    04 56 08.8
      comp=Z,58nm,1.0s
HOPS  Hopland Field     86.00  50  P       P       04 56 04.6 -0.4
HOPS                               IAmb    IAmb    04 56 08.1
      comp=Z,49nm,1.0s
KRMB  Red Mountain      86.04  47  P       P       04 56 04.5 -0.7
KRMB                               IAmb    IAmb    04 56 08.8
      comp=Z,44nm,1.0s
BHPL  Bhopal            86.08 294 eP       P       04 56 04.9 -0.8
BHPL                              i sP     pP      04 56 37.8 -2.5
ZSN   Zaisan            86.11 319 eP       P       04 56 05.2 -0.1
      baz=319
ZSN   Zaisan            86.11 319 eP       P       04 56 05.2 -0.1
GDXM  Geysers           86.17  50  P       P       04 56 05.3 -0.6
GDXM                               IAmb    IAmb    04 56 09.8
      comp=Z,44nm,1.0s
L02E  Cave Junction     86.43  47  P       P       04 56 07.9 +0.9
      baz=255,SNR=5.4
J01E  Myrtle Point      86.46  46  P       P       04 56 08.5 +1.4
      baz=254,SNR=5.2
O02D  Mt. Diablo Mer    86.52  49  P       P       04 56 08.3 +0.7
      baz=255,SNR=42
K02D  Willamette Mer    86.52  46  P       P       04 56 08.9 +1.4
      baz=255,SNR=16
SAO   San Andreas Ge    86.71  52  P       P       04 56 07.9 -0.6
SAO                                pmax    pmax
      comp=Z,34nm,1.1s
SAO   San Andreas Ge    86.71  52  P       P       04 56 07.9 -0.6
SAO                                IAmb    IAmb    04 56 11.6
      comp=Z,34nm,1.1s
I02D  Swisshome         86.77  45  P       P       04 56 09.8 +1.2
      baz=254
M02C  Callahan          86.77  47  P       P       04 56 10.2 +1.4
      baz=255,SNR=22
N02D  Trinity Center    86.78  48  P       P       04 56 10.3 +1.5
      baz=255,SNR=20
WDC   Whiskeytown Da    86.80  48  P       P       04 56 08.6 -0.2
WDC                                pmax    pmax
      comp=Z,14nm,0.9s
WDC   Whiskeytown Da    86.80  48  P       P       04 56 08.6 -0.2
YBH   Yreka Blue Hor    86.96  47  P       P       04 56 11.3 +1.6
      comp=Z,22nm,1.1s,baz=349,slow=0.9,SNR=30
YBH   Yreka Blue Hor    86.96  47  P       P       04 56 09.1 -0.6
YBH                                IAmb    IAmb    04 56 13.1
      comp=Z,34nm,1.1s
HUMO  Hull Mountain     87.01  46  P       P       04 56 09.2 -0.6
HUMO                               IAmb    IAmb    04 56 13.8
      comp=Z,48nm,1.1s
I03D  Drain, OR         87.01  45  P       P       04 56 11.9 +2.2
      baz=255,SNR=5.2
PMPB  Monarch Peak      87.09  53  P       P       04 56 09.7 -0.8
PMPB                               IAmb    IAmb    04 56 18.6
      comp=Z,39nm,1.0s
O03E  Paynes Creek      87.28  49  P       P       04 56 12.7 +1.5
      baz=256,SNR=31
ORV   Oroville          87.33  49  P       P       04 56 10.8 -0.6
ORV                                pmax    pmax
      comp=Z,29nm,1.1s
ORV   Oroville          87.33  49  P       P       04 56 10.8 -0.6
ORV                                IAmb    IAmb    04 56 14.1
      comp=Z,29nm,1.1s
L04D  Klamath Falls     87.38  47  P       P       04 56 13.8 +2.0
      baz=256,SNR=13
PAGB  Antelope Grade    87.42  53  P       P       04 56 11.5 -0.4
PAGB                               IAmb    IAmb    04 56 15.5
      comp=Z,44nm,1.0s
G03D  McMinnville, O    87.46  44  P       P       04 56 12.3 +0.4
      baz=255
SNCC  San Nicolas Is    87.47  56  P       P       04 56 12.5 +0.3
      baz=258
SNCC  San Nicolas Is    87.47  56  P       P       04 56 11.5 -0.7
SMMC  Simmler           87.53  54  P       P       04 56 13.6 +1.1
      baz=257
SCZ2  Santa Cruz Isl    87.54  55  P       P       04 56 13.7 +1.1
      baz=258
SBC   Santa Barbara     87.57  55  P       P       04 56 13.8 +1.2
      baz=258
AFDM  Forest Hills D    87.58  50  P       P       04 56 11.7 -1.0
AFDM                               IAmb    IAmb    04 56 15.6
      comp=Z,38nm,1.1s
PKM   Mcpherson Peak    87.59  54  P       P       04 56 15.0 +2.1
      baz=258
M04C  Macdoel           87.61  47  P       P       04 56 14.2 +1.3
      baz=256,SNR=23
MK31  Makanchi Array    87.61 318ceP       P       04 56 12.9 +0.3
MK31  Makanchi Array    87.61 318  P       P       04 56 12.4 -0.2
MKAR  Makanchi Array    87.61 318  P       P       04 56 13.0 +0.4
      comp=Z,5.1nm,0.6s,baz=99,slow=6.2,SNR=32
MKAR                               pP      pP      04 56 45.8 -1.4
      comp=Z,4.4nm,0.7s,baz=97,slow=5.7,SNR=3.0
MKAR  Makanchi Array    87.61 318  P       P       04 56 12.5 -0.1
H04D  Lebanon           87.65  44  P       P       04 56 14.5 +1.7
      baz=255
I04A  Tendick Farm,     87.69  45  P       P       04 56 14.1 +1.1
      baz=256
J04D  Umpqua Nationa    87.77  46  P       P       04 56 15.2 +1.5
      baz=256,SNR=12
CMB   Columbia Colle    87.83  51  P       P       04 56 13.4 -0.4
CMB                                pmax    pmax
      comp=Z,11nm,1.1s
CMB   Columbia Colle    87.83  51  P       P       04 56 13.4 -0.4
MAKZ  Makanchi          87.83 318  P       P       04 56 13.4 -0.2
MAKZ                               pmax    pmax
      comp=Z,11nm,0.9s
MAKZ  Makanchi          87.83 318  P       P       04 56 13.4 -0.2
SMLA  Simla             87.86 302 eP       P       04 56 13.6 -0.5
SMLA                               IAmb    IAmb    04 56 23.9
      comp=Z,8.5nm,0.5s
SMLA                              i sP     pP      04 56 50.0 +1.3
K04D  Chiloquin, OR     87.87  46  P       P       04 56 15.7 +1.6
      baz=256,SNR=8.9
EPYK  Eagle Plains      87.98  21  P       P       04 56 15.6 +1.7
      baz=243
EPYK  Eagle Plains      87.98  21  P       P       04 56 14.0 +0.1
EPYK                               IAmb    IAmb    04 56 21.9
      comp=Z,22nm,0.8s
EPYK                                       pP      04 56 47.8 -1.4
H04A  Detroit Lake      88.07  44  P       P       04 56 14.3 -0.5
ZAA0  Zalesovo Array    88.10 325  P       P       04 56 14.3 -0.4
ZAA0                               pP      pP      04 56 47.6 -1.8
ZALV  Zalesovo Beam     88.10 325  P       P       04 56 14.2 -0.4
      comp=Z,3.5nm,0.9s,baz=113,slow=3.9,SNR=10
ZALV                               pP      pP      04 56 47.8 -1.6
      comp=Z,3.6nm,0.7s,baz=104,slow=4.7,SNR=3.4
ZALV  Zalesovo Beam     88.10 325  P       P       04 56 14.3 -0.4
ZALV                               pP      pP      04 56 47.5 -1.9
D03D  Eldon             88.18  41  P       P       04 56 16.6 +1.4
      baz=255
SCI2  San Clemente I    88.22  56  P       P       04 56 17.1 +1.3
      baz=258
RUBR  Rubicon Trail     88.23  50  P       P       04 56 15.3 -0.7
RUBR                               IAmb    IAmb    04 56 20.1
      comp=Z,37nm,1.0s
VOG   Valley Oaks Go    88.24  53  P       P       04 56 17.3 +1.6
      baz=258
PGC   Sidney            88.24  40  P       P       04 56 15.5  0.0
BEKR  Beckworth         88.25  49  P       P       04 56 15.1 -0.9
BEKR                               IAmb    IAmb    04 56 18.9
      comp=Z,25nm,0.8s
E04D  Cinebar           88.28  42  P       P       04 56 17.2 +1.5
      baz=255
VES   Vestal, Richgr    88.37  54  P       P       04 56 17.7 +1.3
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	baz=258,SNR=21						
J05D	**Fort Rock, OR**	**88.40**	**46**	P	**P**	**04 56 18.7**	**+2.1**
	baz=256,SNR=24						
OSI	**Osito Audit: C**	**88.41**	**55**	P	**P**	**04 56 18.0**	**+1.3**
	baz=258						
OSI	**Osito Audit: C**	**88.41**	**55**	P	**P**	**04 56 15.9**	**-0.8**
OSI				IAmb	IAmb	04 56 20.2	
	comp=Z,45nm,0.9s						
CIS	**Catalina Islan**	**88.42**	**56**	P	**P**	**04 56 18.4**	**+1.7**
	baz=258,SNR=21						
ARVC	**Arvin**	**88.43**	**54**	P	**P**	**04 56 18.7**	**+2.1**
	baz=258,SNR=17						
K05A	**Summer Lake**	**88.51**	**47**	P	**P**	**04 56 16.4**	**-0.7**
K05A				IAmb	IAmb	04 56 20.6	
	comp=Z,55nm,1.1s						
I05D	**Terrebonne, OR**	**88.57**	**45**	P	**P**	**04 56 18.6**	**+1.4**
	baz=256						
FMP	**Fort Macarthur**	**88.58**	**56**	P	**P**	**04 56 18.5**	**+1.1**
	baz=258						
DECC	**Green Verdugo**	**88.65**	**55**	P	**P**	**04 56 19.3**	**+1.5**
	baz=258						
SHLS	**Shalkode**	**88.66**	**314**	*e*P	**P**	**04 56 15.7**	**-2.0**
	baz=314						
SHLS	**Shalkode**	**88.66**	**314**	*e*P	**P**	**04 56 15.7**	**-2.0**
WAKR	**Walker**	**88.66**	**51**	P	**P**	**04 56 17.2**	**-0.7**
WAKR				IAmb	IAmb	04 56 23.0	
	comp=Z,22nm,1.2s						
PNTR	**Pine Nut**	**88.66**	**50**	P	**P**	**04 56 17.1**	**-0.8**
PNTR				IAmb	IAmb	04 56 21.3	
	comp=Z,41nm,0.9s						
VCNR	**Virginia City**	**88.66**	**50**	P	**P**	**04 56 17.2**	**-0.7**
VCNR				IAmb	IAmb	04 56 21.2	
	comp=Z,28nm,1.0s						
PINE	**Pine Mountain**	**88.72**	**45**	P	**P**	**04 56 17.4**	**-0.7**
PINE				IAmb	IAmb	04 56 21.2	
	comp=Z,16nm,0.8s						
A04D	**Lummi Island**	**88.74**	**40**	P	**P**	**04 56 19.6**	**+1.8**
	baz=255						
MDPB	**Devils Postpil**	**88.75**	**52**	P	**P**	**04 56 17.5**	**-1.0**
MDPB				IAmb	IAmb	04 56 22.2	
	comp=Z,39nm,1.0s						
MOD	**Modoc Plateau**	**88.75**	**47**	P	**P**	**04 56 17.8**	**-0.5**
MOD				IAmb	IAmb	04 56 21.4	
	comp=Z,27nm,0.9s						
PASC	**Pasadena Art C**	**88.76**	**55**	P	**P**	**04 56 17.6**	**-0.6**
G05D	**Wamic, OR**	**88.80**	**44**	P	**P**	**04 56 19.6**	**+1.3**
	baz=256						
OMMB	**Old Mammoth Mi**	**88.81**	**52**	P	**P**	**04 56 18.0**	**-0.8**
OMMB				IAmb	IAmb	04 56 21.3	
	comp=Z,18nm,1.2s						
DHRM	**DHARAMSHALA**	**88.81**	**303**	*e*P	**P**	**04 56 17.7**	**-1.1**
DHRM				IAmb	IAmb	04 56 27.3	
	comp=Z,15nm,0.7s						
DHRM				*i* sP	**pP**	**04 56 50.9**	**-2.7**
D05A	**Enumclaw**	**88.82**	**42**	P	**P**	**04 56 17.9**	**-0.3**
D05A				IAmb	IAmb	04 56 25.1	
	comp=Z,23nm,1.1s						
ISA	**Isabella, Lake**	**88.82**	**54**	P	**P**	**04 56 20.4**	**+1.7**
	baz=258,SNR=31						
ISA	**Isabella, Lake**	**88.82**	**54**	P	**P**	**04 56 18.0**	**-0.6**
ISA				pmax	pmax		
	comp=Z,43nm,1.1s						
ISA	**Isabella, Lake**	**88.82**	**54**	P	**P**	**04 56 18.0**	**-0.6**
ISA				IAmb	IAmb	04 56 21.7	
	comp=Z,43nm,1.1s						
LON	**Longmire**	**88.83**	**42**	P	**P**	**04 56 18.1**	**-0.3**
LON				pmax	pmax		
	comp=Z,7.0nm,1.2s						
LON	**Longmire**	**88.83**	**42**	P	**P**	**04 56 18.1**	**-0.3**
F05D	**White Salmon**	**88.86**	**43**	P	**P**	**04 56 19.9**	**+1.4**
	baz=256						
MWC	**Mount Wilson**	**88.87**	**55**	P	**P**	**04 56 18.1**	**-0.9**
MWC				pmax	pmax		
	comp=Z,161nm,1.1s						
MWC	**Mount Wilson**	**88.87**	**55**	P	**P**	**04 56 18.1**	**-0.9**
YERR	**Yerington**	**88.91**	**50**	P	**P**	**04 56 18.7**	**-0.4**
YERR				IAmb	IAmb	04 56 21.6	
	comp=Z,23nm,1.1s						
MLAC	**Mammoth, Mammo**	**88.94**	**52**	P	**P**	**04 56 21.4**	**+2.0**
	baz=258,SNR=5.6						
PAHR	**Pah Rah Range**	**88.95**	**50**	P	**P**	**04 56 18.9**	**-0.3**
PAHR				IAmb	IAmb	04 56 21.9	
	comp=Z,28nm,1.0s						
B05A	**Bryant**	**89.01**	**41**	P	**P**	**04 56 20.4**	**+1.3**
	baz=256						
EDW2	**Edwards Air Fo**	**89.05**	**55**	P	**P**	**04 56 21.8**	**+2.1**
	baz=258,SNR=64						
BFSC	**Mount Baldy Ra**	**89.20**	**55**	P	**P**	**04 56 22.2**	**+1.7**
	baz=259,SNR=40						
KPKS	**Kokpek**	**89.28**	**314**	*e*P	**P**	**04 56 20.5**	**-0.1**
	comp=Z,4.2nm,1.4s,baz=314						
KPKS	**Kokpek**	**89.28**	**314**	*e*P	**P**	**04 56 20.5**	**-0.1**
KPKS				pmax	pmax		
	comp=Z,4.0nm,1.4s						
CWC	**Cottonwood Cre**	**89.29**	**53**	P	**P**	**04 56 22.7**	**+1.7**
	baz=258						
TIN	**Tinemaha, Big**	**89.29**	**52**	P	**P**	**04 56 23.0**	**+2.2**
	baz=258,SNR=20						
LHV	**Little Huntoon**	**89.32**	**51**	P	**P**	**04 56 20.6**	**-0.1**
RYN	**Ryan**	**89.38**	**51**	P	**P**	**04 56 20.5**	**-0.8**
RYN				IAmb	IAmb	04 56 24.6	
	comp=Z,57nm,1.1s						
SATY	**Saty**	**89.39**	**314**	*e*P	**P**	**04 56 20.9**	**-0.4**
	baz=314						
SATY	**Saty**	**89.39**	**314**	*e*P	**P**	**04 56 20.8**	**-0.4**
109C	**Camp Elliot, M**	**89.39**	**57**	P	**P**	**04 56 23.3**	**+2.1**
	baz=259,SNR=12						
109C	**Camp Elliot, M**	**89.39**	**57**	P	**P**	**04 56 20.7**	**-0.5**
LRMC	**Laurel Mtn Rad**	**89.42**	**54**	P	**P**	**04 56 23.6**	**+2.1**
	baz=259,SNR=45						
MURC	**Murrieta**	**89.45**	**56**	P	**P**	**04 56 23.2**	**+1.6**
	baz=259,SNR=13						
NVAR	**Mina Array Bea**	**89.51**	**51**	P	**P**	**04 56 23.9**	**+2.0**
	comp=Z,54nm,1.0s,baz=241,slow=5.7,SNR=198						
NVAR				LR	LR	05 29 11.7	
	comp=Z,89nm,20.9s,baz=341,slow=30						
NVAR	**Mina Array Bea**	**89.51**	**51**	P	**P**	**04 56 21.4**	**-0.6**
CCX	**Cicese**	**89.57**	**58**	P	**P**	**04 56 21.6**	**-0.5**
CBX	**Cerro Bola**	**89.65**	**57**	IAmb	IAmb	04 56 25.6	
	comp=Z,15nm,0.8s						
MPMC	**Manual Prospec**	**89.68**	**54**	P	**P**	**04 56 24.7**	**+1.9**
	baz=259,SNR=66						
I07A	**Izee**	**89.80**	**45**	IAmb	IAmb	04 56 26.0	
	comp=Z,24nm,0.9s						
BBRC	**Big Bear Solar**	**89.80**	**55**	P	**P**	**04 56 25.0**	**+1.6**
	baz=259,SNR=13						
RRX	**Edison Barstow**	**89.85**	**55**	P	**P**	**04 56 24.9**	**+1.5**
	baz=259						
F07A	**Phinny Hill Vi**	**89.90**	**44**	IAmb	IAmb	04 56 26.0	
	comp=Z,16nm,1.0s						
INK	**Inuvik**	**89.94**	**20**	P	**P**	**04 56 24.3**	**+1.4**
	comp=Z,8.6nm,1.2s,baz=292,slow=6.2,SNR=9.2						
INK				pP	**pP**	**04 56 57.9**	**-0.1**
	comp=Z,1.9nm,0.7s,baz=270,slow=6.1,SNR=1.6						
INK				PKKPbc	**PKKPdf**	**05 13 53.4**	**+0.7**
	comp=Z,1.8nm,1.0s,baz=27,slow=6.8,SNR=4.0						
INK	**Inuvik**	**89.94**	**20**	P	**P**	**04 56 23.1**	**+0.1**
INK					**P**	**04 56 24.3**	**+1.4**
INK					**pP**	**04 56 56.8**	**-1.2**
MONP2	**Monument Peak**	**89.96**	**57**	P	**P**	**04 56 26.3**	**+2.1**
	baz=259,SNR=58						
GRAC	**Grapevine Rang**	**89.96**	**53**	P	**P**	**04 56 25.8**	**+1.9**
	baz=259,SNR=23						
PFO	**Pinyon Flats O**	**90.06**	**56**	P	**P**	**04 56 26.3**	**+1.8**
	baz=259,SNR=30						
PFO	**Pinyon Flats O**	**90.06**	**56**	P	**P**	**04 56 23.2**	**-1.3**
PFO				pmax	pmax		
	comp=Z,50nm,1.1s						
PFO	**Pinyon Flats O**	**90.06**	**56**	P	**P**	**04 56 23.2**	**-1.3**
PFO				IAmb	IAmb	04 56 27.5	
	comp=Z,50nm,1.1s						
TPFO	**Pinon Flats**	**90.06**	**56**	P	**P**	**04 56 26.3**	**+1.8**
	baz=259,SNR=33						
WVOR	**Wild Horse Val**	**90.07**	**47**	IAmb	IAmb	04 56 33.6	
	comp=Z,19nm,1.1s						
GSC	**Goldstone, Bar**	**90.09**	**54**	P	**P**	**04 56 26.4**	**+1.8**
	baz=259,SNR=37						
GSC	**Goldstone, Bar**	**90.09**	**54**	IAmb	IAmb	04 56 27.6	
	comp=Z,47nm,0.9s						
E07A	**Sunnyside**	**90.10**	**43**	IAmb	IAmb	04 56 26.8	
	comp=Z,18nm,0.9s						
IKP	**In-Ko-Pah, Jac**	**90.17**	**57**	P	**P**	**04 56 26.7**	**+1.7**
	baz=260,SNR=26						
FURC	**Furnace Creek,**	**90.26**	**53**	P	**P**	**04 56 27.1**	**+1.9**
	baz=259,SNR=84						
HAWA	**Hanford**	**90.28**	**43**	IAmb	IAmb	04 56 27.6	
	comp=Z,21nm,1.1s						
HEC	**Hector,Ludlow**	**90.38**	**55**	P	**P**	**04 56 27.7**	**+1.8**
	baz=260,SNR=34						
SPX	**San Pedro Mart**	**90.43**	**59**	IAmb	IAmb	04 56 30.1	
	comp=Z,41nm,1.0s						
G08A	**Pilot Rock**	**90.44**	**44**	IAmb	IAmb	04 56 29.2	
	comp=Z,34nm,1.1s						
KSH	**Kashi**	**90.46**	**310**	P	**P**	**04 56 28.1**	**+1.8**
KSH				pP	pP	04 57 04.3	+3.2
KSH				PP	**PP**	**05 00 08.1**	**+5.2**
KSH				S	**S**	**05 07 07.5**	**-2.3**
KSH				sS	sS	05 08 12.5	+2.3
KSH				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KSH				pmax	pmax		
	comp=Z,260nm,5.4s						
KSH				LR	LR		
	comp=Z,310nm,7.2s						
KSH				LR	LR		
	comp=Z,420nm,7.0s						
KSH				LR	LR		
	comp=Z,250nm,14.0s						
SWSC	**Sam W. Stewart**	**90.48**	**57**	P	**P**	**04 56 28.5**	**+2.2**
	baz=260,SNR=25						
BELC	**Belle Mtn. Jos**	**90.51**	**56**	P	**P**	**04 56 28.6**	**+2.0**
	baz=260,SNR=67						
E08A	**Dider Farm, El**	**90.62**	**43**	IAmb	IAmb	04 56 29.3	
	comp=Z,20nm,1.0s						
SHOC	**Shoshone, Teco**	**90.62**	**54**	P	**P**	**04 56 28.8**	**+1.9**
	baz=260,SNR=42						
CPBX	**Cerro Prieto**	**90.80**	**57**	IAmb	IAmb	04 56 47.2	
	comp=Z,26nm,1.0s						
TPNV	**Topopah Spring**	**90.83**	**53**	P	**P**	**04 56 29.9**	**+1.8**
	baz=260,SNR=67						
B08A	**Colville Reser**	**90.83**	**41**	P	**P**	**04 56 26.9**	**-0.8**
B08A				IAmb	IAmb	04 56 29.3	
	comp=Z,14nm,0.9s						
BC3	**Big Chuckawall**	**90.89**	**56**	P	**P**	**04 56 30.5**	**+2.1**
	baz=260,SNR=43						
GMRC	**Granite Mounta**	**90.92**	**55**	P	**P**	**04 56 30.3**	**+1.8**
	baz=260,SNR=67						
KURK	**Kurchatov**	**90.93**	**321**	*ce*P	**P**	**04 56 28.1**	**+0.1**
KURK				pmax	pmax		
	comp=Z,17nm,1.6s						
KURK	**Kurchatov**	**90.93**	**321**	P	**P**	**04 56 27.2**	**-0.8**
KUU	**Kurty**	**91.03**	**314**	*e*P	**P**	**04 56 28.1**	**-0.7**
	comp=Z,4.0nm,0.8s,baz=314						
KUU	**Kurty**	**91.03**	**314**	*e*P	**P**	**04 56 28.0**	**-0.7**
KUU				pmax	pmax		
	comp=Z,4.0nm,0.8s						
IRM	**Iron Mountain**	**91.23**	**56**	P	**P**	**04 56 32.1**	**+2.2**
	baz=260,SNR=83						
GLA	**Glamis**	**91.31**	**57**	P	**P**	**04 56 32.4**	**+2.2**
	baz=260,SNR=13						
C09A	**Chrisman Ranch**	**91.41**	**42**	IAmb	IAmb	04 56 32.1	
	comp=Z,11nm,0.8s						
BMO	**Blue Mountains**	**91.50**	**45**	IAmb	IAmb	04 56 33.4	
	comp=Z,31nm,0.8s						
R11A	**Troy Canyon, C**	**91.59**	**52**	P	**P**	**04 56 33.4**	**+1.7**
	baz=260,SNR=26						
R11A	**Troy Canyon, C**	**91.59**	**52**	IAmb	IAmb	04 56 34.8	
	comp=Z,37nm,1.1s						
NEE2	**Needles Airpor**	**91.76**	**55**	P	**P**	**04 56 34.2**	**+2.0**
	baz=260,SNR=9.4						
NRIK	**Noril'sk**	**91.88**	**340**	P	**P**	**04 56 31.6**	**-0.3**
	comp=Z,8.4nm,1.0s,baz=114,slow=5.1,SNR=10						
NRIK				LR	LR	05 36 55.3	
	comp=Z,186nm,21.3s,baz=113,slow=35						
PDMCI	**Parker Dam,Lak**	**92.08**	**56**	P	**P**	**04 56 35.3**	**+1.6**
	baz=261,SNR=30						
AAK	**Ala-Archa**	**92.13**	**313**	*i* P	**P**	**04 56 34.7**	**+0.7**
AAK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
113A	**Mohawk Valley,**	**92.14**	**57**	IAmb	IAmb	04 56 37.3	
	comp=Z,15nm,0.8s						
NEW	**Newport**	**92.26**	**42**	P	**P**	**04 56 35.0**	**+0.7**
	baz=259						
NEW	**Newport**	**92.26**	**42**	IAmb	IAmb	04 56 36.0	
	comp=Z,12nm,0.8s						
ELK	**Elko**	**92.27**	**49**	IAmb	IAmb	04 56 38.0	
	comp=Z,44nm,1.1s						
W13A	**Hualapai Mount**	**92.41**	**55**	IAmb	IAmb	04 56 38.8	
	comp=Z,28nm,0.9s						
214A	**Organ Pipe Nat**	**92.82**	**58**	P	**P**	**04 56 39.0**	**+1.8**
	baz=261						
BTLS	**Baital**	**92.85**	**315**	*e*P	**P**	**04 56 36.4**	**-0.7**
	baz=315						
BTLS	**Baital**	**92.85**	**315**	*e*P	**P**	**04 56 36.3**	**-0.7**
HLID	**Hailey**	**93.32**	**47**	P	**P**	**04 56 41.7**	**+2.2**
	baz=261						
HLID	**Hailey**	**93.32**	**47**	IAmb	IAmb	04 56 43.4	
	comp=Z,40nm,1.1s						
C36M	**Paulatuk**	**93.52**	**20**	P	**P**	**04 56 41.3**	**+1.8**
	baz=254						
C36M	**Paulatuk**	**93.52**	**20**	IAmb	IAmb	04 56 41.9	
	comp=Z,25nm,1.1s						
U15A	**North Rim**	**93.89**	**54**	IAmb	IAmb	04 56 47.2	
	comp=Z,21nm,0.9s						
HSIG		**93.99**	**61**	IAmb	IAmb	04 56 46.8	
	comp=Z,18nm,1.0s						
DUG	**Dugway, Tooele**	**94.01**	**50**	P	**P**	**04 56 44.2**	**+1.5**
	baz=262						
MSO	**Missoula**	**94.15**	**43**	P	**P**	**04 56 44.4**	**+1.3**
	baz=262						
SLBS	**Sierra La Lagu**	**94.16**	**67**	P	**P**	**04 56 42.4**	**-1.2**
WALA	**Waterton Lakes**	**94.49**	**41**	IAmb	IAmb	04 56 47.0	
	comp=Z,7.7nm,0.8s						
WUAZ	**Wupatki**	**94.50**	**55**	P	**P**	**04 56 46.4**	**+1.3**
	baz=262						
WUAZ	**Wupatki**	**94.50**	**55**	IAmb	IAmb	04 56 50.0	
	comp=Z,11nm,0.9s						
BRZS	**Berezniki**	**94.53**	**320**	*e*P	**P**	**04 56 44.1**	**-0.6**
	baz=320						
BRZS	**Berezniki**	**94.53**	**320**	*e*P	**P**	**04 56 44.0**	**-0.6**
TUC	**Tucson**	**94.57**	**58**	P	**P**	**04 56 46.6**	**+1.2**
	baz=262						
TUC	**Tucson**	**94.57**	**58**	P	**P**	**04 56 44.2**	**-1.1**
TUC				pmax	pmax		
	comp=Z,11nm,0.9s						
TUC	**Tucson**	**94.57**	**58**	P	**P**	**04 56 44.2**	**-1.1**
TUC				IAmb	IAmb	04 56 49.3	
	comp=Z,11nm,0.9s						
DLMT	**Dillon**	**94.87**	**45**	IAmb	IAmb	04 56 50.9	
	comp=Z,20nm,1.1s						
KKAR	**Karatay Array**	**95.09**	**313**	P	**P**	**04 56 46.8**	**-0.6**
KKAR	**Karatay Array**	**95.09**	**313**	P	**P**	**04 56 46.8**	**-0.6**
X18A	**Snowflake**	**95.54**	**56**	IAmb	IAmb	04 56 53.9	
	comp=Z,15nm,0.9s						
BOZ	**Bozeman (W)**	**95.57**	**45**	P	**P**	**04 56 51.3**	**+1.6**
	baz=263						
BOZ	**Bozeman (W)**	**95.57**	**45**	IAmb	IAmb	04 56 52.2	
	comp=Z,11nm,0.8s						
AHID	**Auburn Hatcher**	**95.62**	**48**	IAmb	IAmb	04 56 53.3	
	comp=Z,12nm,1.1s						
W18A	**Petrified Fore**	**95.78**	**55**	P	**P**	**04 56 52.4**	**+1.5**
	baz=263						
W18A	**Petrified Fore**	**95.78**	**55**	IAmb	IAmb	04 56 55.5	
	comp=Z,14nm,0.9s						
REDW	**Red Top Meadow**	**95.87**	**47**	IAmb	IAmb	04 57 01.0	
	comp=Z,6.4nm,0.9s						
SNOW	**Snow King Moun**	**95.95**	**47**	IAmb	IAmb	04 56 54.5	
	comp=Z,9.1nm,0.9s						
YKA	**Yellowknife Ar**	**95.95**	**28**	P	**P**	**04 56 51.4**	**+0.6**
	comp=Z,8.3nm,0.8s,baz=255,slow=4.0,SNR=87						
YKA				pP	**pP**	**04 57 25.9**	**-0.3**
	comp=Z,3.4nm,0.9s,baz=260,slow=3.8,SNR=2.2						
YKA				PP	**PP**	**05 00 41.2**	**-3.7**
	comp=Z,1.2nm,1.0s,baz=260,slow=6.2,SNR=4.2						
YKA				PKKPbc	**PKKPbc**	**05 13 38.5**	**-2.9**
	comp=Z,0.2nm,0.6s,baz=86,slow=3.3,SNR=7.1						
YKA				LR	LR	05 33 29.1	
	comp=Z,111nm,21.9s,baz=0.0,slow=31						
FLWY	**Flagg Ranch**	**96.06**	**46**	IAmb	IAmb	04 56 57.2	
	comp=Z,7.4nm,0.8s						
BRVK	**Borovoye**	**96.40**	**323**	*ce*P	**P**	**04 56 52.8**	**-0.3**
BRVK				pmax	pmax		
	comp=Z,11nm,1.5s						
BRVK	**Borovoye**	**96.40**	**323**	P	**P**	**04 56 52.8**	**-0.3**
BRVK				IAmb	IAmb	04 56 55.7	
	comp=Z,5.9nm,0.9s						
PV23	**Carpenter Ridg**	**96.72**	**52**	IAmb	IAmb	04 57 06.4	
	comp=Z,7.3nm,0.9s						
BW06	**Boulder Array**	**96.75**	**48**	P	**P**	**04 56 56.2**	**+1.0**
	baz=264						
BW06	**Boulder Array**	**96.75**	**48**	IAmb	IAmb	04 56 57.2	
	comp=Z,12nm,0.9s						
PD31	**Pinedale Array**	**96.75**	**48**	IAmb	IAmb	04 56 57.2	
	comp=Z,10nm,0.9s						
PDAR	**Pinedale Array**	**96.75**	**48**	P	**P**	**04 56 56.2**	**+1.0**
	comp=Z,11nm,0.9s,baz=234,slow=2.4,SNR=66						
PDAR	**Pinedale Array**	**96.75**	**48**	P	**P**	**04 56 54.3**	**-0.9**
PV17	**East Wray Mesa**	**96.75**	**52**	IAmb	IAmb	04 57 10.6	
	comp=Z,6.6nm,1.0s						
PV04	**Paradox Valley**	**96.80**	**52**	IAmb	IAmb	04 56 59.5	
	comp=Z,7.0nm,0.9s						
PV12	**Saucer Basin,**	**96.87**	**52**	IAmb	IAmb	04 57 00.3	
	comp=Z,11nm,0.9s						
PV22	**Blue Mesa, Par**	**96.91**	**52**	IAmb	IAmb	04 56 58.8	
	comp=Z,8.9nm,1.2s						
MVCO	**Mesa Verde**	**97.00**	**53**	P	Pdif	04 56 57.4	+0.9
	baz=264						
EGMT	**Eagleton**	**97.11**	**43**	P	Pdif	04 56 57.3	+0.7
	baz=265						
EGMT	**Eagleton**	**97.11**	**43**	IAmb	IAmb	04 57 04.8	
	comp=Z,7.3nm,0.9s						
121A	**Cookes Peak, D**	**97.11**	**58**	P	Pdif	04 56 59.0	+1.9
	baz=264						
121A	**Cookes Peak, D**	**97.11**	**58**	IAmb	IAmb	04 57 01.1	
	comp=Z,14nm,0.8s						
RLMT	**Red Lodge**	**97.18**	**46**	P	Pdif	04 56 58.6	+1.5
	baz=265						
RLMT	**Red Lodge**	**97.18**	**46**	IAmb	IAmb	04 57 04.7	
	comp=Z,8.5nm,1.1s						
O20A	**White River Ci**	**97.48**	**51**	P	Pdif	04 56 59.6	+1.0
	baz=265						
NVL	**N'lazarevskaya**	**97.60**	**190**	*e*P	Pdif	04 56 58.4	+0.2
NVL				pmax	pmax		
	comp=Z,6.0nm,0.7s						
S22A	**4UR Ranch, Cre**	**98.37**	**53**	P	Pdif	04 57 03.2	+0.4
	baz=265						
ANMO	**Albuquerque**	**98.44**	**56**	P	Pdif	04 57 04.0	+1.1
	baz=265						
ANMO	**Albuquerque**	**98.44**	**56**	*i* P	Pdif	04 57 04.2	+1.2
ANMO				pmax	pmax		
	comp=Z,15nm,3.0s						
ANMO	**Albuquerque**	**98.44**	**56**	P	**P**	**04 57 01.8**	**-1.2**
SNAA	**Sanae**	**98.80**	**186**	Pdiff	**P**	**04 57 02.2**	**-1.5**
SNAA	**Sanae**	**98.80**	**186**	P	Pdif	04 57 04.5	+0.8
	comp=Z,3.1nm,0.9s,baz=187,slow=16,SNR=2.1						
SNAA	**Sanae**	**98.80**	**186**	P	**P**	**04 57 03.2**	**-0.4**
K22A	**Casper**	**98.97**	**48**	P	Pdif	04 57 06.2	+1.1
	baz=266						
K22A	**Casper**	**98.97**	**48**	IAmb	IAmb	04 57 07.5	
	comp=Z,17nm,1.1s						
MNTX	**Cornudas Mount**	**99.07**	**59**	P	**Pdif**	**04 57 06.8**	**+1.2**
	baz=265						
MNTX	**Cornudas Mount**	**99.07**	**59**	IAmb	IAmb	04 57 09.2	
	comp=Z,5.3nm,0.9s						
N23A	**Red Feather La**	**99.29**	**50**	P	**Pdif**	**04 57 08.0**	**+1.4**
	baz=266						
LAO	**LASA Array**	**99.41**	**44**	P	**Pdif**	**04 57 09.0**	**+2.1**
	baz=267						
VNA3	**Neumayer Olymp**	**99.76**	**184**	Pdiff	**Pdif**	**04 57 08.9**	**+1.0**
VNA2	**Neumayer--Watz**	**99.92**	**184**	Pdiff	**Pdif**	**04 57 09.2**	**+0.6**
VNA1	**Neumayer--Stat**	**100.25**	**184**	Pdiff	**Pdif**	**04 57 07.8**	**-2.2**
T25A	**Trinidad**	**100.25**	**54**	P	**Pdif**	**04 57 12.9**	**+1.9**
	baz=267						
TXAR	**Lajitas Array**	**100.36**	**62**	P	**Pdif**	**04 57 12.7**	**+1.2**
	comp=Z,2.1nm,0.8s,baz=249,slow=3.4,SNR=17						
TXAR				PKKPbc	**PKKPbc**	**05 13 28.0**	**0.0**
	comp=Z,0.4nm,0.7s,baz=92,slow=4.5,SNR=5.5						
TXAR	**Lajitas Array**	**100.36**	**62**	Pdif	**Pdif**	**04 57 10.6**	**-0.9**
DGMT	**Dagmar**	**100.84**	**42**	P	**Pdif**	**04 57 14.4**	**+1.3**
	baz=269						
RSSD	**Black Hills**	**100.85**	**47**	P	**Pdif**	**04 57 14.9**	**+1.4**
	baz=268						
RSSD	**Black Hills**	**100.85**	**47**	P	**Pdif**	**04 57 14.9**	**+1.4**
RSSD				pmax	pmax		
	comp=Z,4.0nm,0.9s						
RSSD	**Black Hills**	**100.85**	**47**		**Pdif**	**04 57 14.8**	**+1.4**
MSTX	**Muleshoe**	**101.41**	**57**	P	**Pdif**	**04 57 16.4**	**+0.3**
	baz=267						
AMTX	**Amarillo**	**102.36**	**56**	P	**Pdif**	**04 57 21.9**	**+1.7**
	baz=268						
JCT	**Junction City**	**103.77**	**61**	P	**Pdif**	**04 57 27.8**	**+1.3**
	baz=268						
ABTX	**Abilene, Hawle**	**103.98**	**59**	P	**Pdif**	**04 57 28.8**	**+1.3**
	baz=268						
ECSD	**EROS Data Cent**	**106.21**	**47**	P	**PKiKP**	**05 01 48.1**	**0.0**
	baz=273						
EYMN	**Ely**	**109.35**	**42**	P	**PKiKP**	**05 01 53.3**	**-0.6**
	baz=278						
U40A	**Yellville**	**109.53**	**55**	P	**PKiKP**	**05 01 54.0**	**-0.5**
	baz=273						
JFWS	**Jewell Farm**	**110.91**	**47**	P	**PKiKP**	**05 01 56.4**	**-0.5**
	baz=278						
HDIL	**Hopedale**	**111.93**	**50**	P	**PKiKP**	**05 01 58.9**	**0.0**
	baz=277						
ARCES	**ARCESS Array B**	**112.54**	**344**	PKiKP	**PKiKP**	**05 01 58.4**	**-0.8**
	comp=Z,3.7nm,0.9s,baz=270,slow=1.6,SNR=5.0						
SFIN	**Lafayette**	**113.61**	**50**	P	**PKiKP**	**05 02 01.3**	**-0.8**
	baz=279						
WCI	**Wyandotte Cave**	**114.54**	**52**	P	PKPdf	05 02 03.5	-0.5
	baz=278						
GLMI	**Grayling**	**114.59**	**45**	P	**PKiKP**	**05 02 04.0**	**+0.1**
	baz=282						
LRAL	**Lakeview Retre**	**114.60**	**58**	P	PKPdf	05 02 03.8	-0.4
	baz=276						
KIV	**Kislovodsk**	**115.18**	**314**	*e*PKIKP	**PKPdf**	**05 02 06.7**	**+1.6**
KIV				*e*		05 03 09.0	
KIV				pmax	pmax		
	comp=Z,14nm,1.0s						
SHA1	**Shidzhatmaz**	**115.25**	**314**	*i* PKIKP	**PKPdf**	**05 02 05.6**	**+0.1**
P49A	**Miami Univ. Ec**	**115.55**	**50**	P	**PKPdf**	**05 02 05.3**	**-0.6**
	baz=280						
OBN	**Obninsk**	**115.59**	**328**	*i* PKIKP	**PKPdf**	**05 02 05.1**	**-0.3**
OBN				*i*		05 03 06.5	
OBN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
AAM	**Ann Arbor**	**115.81**	**47**	P	**PKiKP**	**05 02 06.1**	**-0.2**
	baz=282						
ACSO	**Alum Creek Sta**	**116.73**	**49**	P	**PKiKP**	**05 02 08.0**	**-0.2**
	baz=282						
TZTN	**Tazewell**	**116.96**	**54**	P	**PKiKP**	**05 02 08.5**	**-0.2**
	baz=279						
FINES	**FINESS Array B**	**117.33**	**337**	pPKP	pPKPdf	05 02 45.2	+0.2
	comp=Z,2.6nm,0.9s,baz=96,slow=4.2,SNR=1.4						
FINES	**FINESS Array B**	**117.33**	**337**	PKIKP	**PKiKP**	**05 02 08.4**	**-0.2**
FINES	**FINESS Array B**	**117.33**	**337**	PKPdf	**PKiKP**	**05 02 08.4**	**-0.2**
I51A	**Listowel**	**117.34**	**45**	P	**PKiKP**	**05 02 09.1**	**-0.1**
	baz=285						
GOGA	**Godfrey**	**117.49**	**57**	P	**PKPdf**	**05 02 09.3**	**-0.5**
	baz=278						
P52A	**Corning**	**117.49**	**50**	P	**PKPdf**	**05 02 09.2**	**-0.4**
	baz=282						
TIGA	**Tifton**	**117.64**	**59**	P	**PKiKP**	**05 02 09.8**	**-0.3**
	baz=277						
MATQ	**Matagami**	**117.75**	**38**	P	**PKPdf**	**05 02 09.0**	**-0.8**
	baz=291						
O53A	**New Philadelph**	**118.05**	**49**	P	**PKPdf**	**05 02 09.9**	**-0.8**
	baz=283						
Q53A	**Leroy**	**118.11**	**51**	P	**PKPdf**	**05 02 10.4**	**-0.5**
	baz=282						
M53A	**WI Miller and**	**118.18**	**48**	P	**PKiKP**	**05 02 10.5**	**-0.4**
	baz=284						
L53A	**Girard**	**118.35**	**47**	P	**PKPdf**	**05 02 10.3**	**-0.9**
	baz=284						
LSQQ	**Lebel-sur-Quev**	**118.40**	**38**	P	**PKPdf**	**05 02 10.5**	**-0.6**
	baz=291						
S54A	**Dingess, Beckl**	**118.49**	**52**	P	**PKPdf**	**05 02 11.1**	**-0.6**
	baz=282						
ERPA	**Erie**	**118.50**	**47**	P	**PKiKP**	**05 02 11.1**	**-0.4**
	baz=285						
R54A	**Victor**	**118.67**	**51**	P	**PKPdf**	**05 02 11.3**	**-0.6**
	baz=282						
ALGO	**Algonquin Park**	**118.75**	**42**	P	**PKiKP**	**05 02 11.6**	**-0.3**
	baz=288						
VSU	**Vasula**	**118.77**	**334**	*i* PKIKP	**PKiKP**	**05 02 11.8**	**+0.3**
N54A	**Moraine State**	**118.79**	**48**	P	**PKPdf**	**05 02 11.7**	**-0.4**
	baz=284						
H53A	**Bobcaygeon**	**118.82**	**44**	P	**PKiKP**	**05 02 11.7**	**-0.3**
	baz=287						
M54A	**Oil Creek Stat**	**118.89**	**47**	P	**PKiKP**	**05 02 12.0**	**-0.4**
	baz=285						
G54A	**Lake Saint Pet**	**118.90**	**43**	P	**PKiKP**	**05 02 11.9**	**-0.3**
	baz=288						
KMSC	**Kings Mountain**	**118.97**	**55**	P	**PKiKP**	**05 02 12.5**	**-0.2**
	baz=280						
BLA	**Blacksburg**	**119.31**	**52**	P	**PKiKP**	**05 02 13.1**	**-0.2**
	baz=282						
U56A	**King**	**119.51**	**53**	P	**PKiKP**	**05 02 13.5**	**-0.2**
	baz=281						
V56A	**Mocksville**	**119.52**	**54**	P	**PKiKP**	**05 02 13.3**	**-0.4**
	baz=281						
W56A	**Indian Trail**	**119.58**	**55**	P	**PKiKP**	**05 02 13.5**	**-0.3**

	baz=280						
T56A	**Rocky Mt**	**119.65**	**52**	P	**PKPdf**	**05 02 13.4**	**-0.4**
	baz=282						
S56A	**Natural Bridge**	**119.87**	**52**	P	**PKPdf**	**05 02 13.6**	**-0.7**
	baz=283						
E55A	**Montcerf-Lytto**	**119.90**	**41**	P	**PKPdf**	**05 02 13.3**	**-0.7**
	baz=290						
M56A	**Emporium**	**119.97**	**47**	P	**PKPdf**	**05 02 13.8**	**-0.6**
	baz=286						
P56A	**Dayton Farm, R**	**120.00**	**49**	P	**PKiKP**	**05 02 14.2**	**-0.3**
	baz=284						
O56A	**Blue Knob Stat**	**120.02**	**48**	P	**PKiKP**	**05 02 14.2**	**-0.4**
	baz=285						
N56A	**West Decatur**	**120.05**	**48**	P	**PKiKP**	**05 02 14.4**	**-0.2**
	baz=285						
D55A	**Sainte-Anne-du**	**120.07**	**40**	P	**PKPdf**	**05 02 13.7**	**-0.7**
	baz=291						
V57A	**Coltrane Farms**	**120.08**	**54**	P	**PKPdf**	**05 02 13.8**	**-0.9**
	baz=282						
X57A	**Johnson Farm,**	**120.10**	**55**	P	**PKiKP**	**05 02 14.5**	**-0.3**
	baz=280						
L56A	**Greenwood**	**120.24**	**46**	P	**PKPdf**	**05 02 14.4**	**-0.5**
	baz=287						
K56A	**Middlesex**	**120.24**	**45**	P	**PKPdf**	**05 02 14.3**	**-0.5**
	baz=287						
T57A	**Hurt**	**120.26**	**52**	P	**PKPdf**	**05 02 14.4**	**-0.6**
	baz=282						
NHSC	**New Hope**	**120.26**	**57**	P	**PKPdf**	**05 02 14.5**	**-0.6**
	baz=280						
ATAH	**Atahualpa**	**120.34**	**104**	PKP	**PKiKP**	**05 02 16.8**	**+0.4**
	comp=Z,4.0nm,0.9s,baz=182,slow=5.0,SNR=4.3						
J56A	**Wolcott**	**120.40**	**45**	P	**PKPdf**	**05 02 14.4**	**-0.7**
	baz=288						
Q57A	**Strasburg**	**120.44**	**50**	P	**PKPdf**	**05 02 14.7**	**-0.6**
	baz=284						
E56A	**St. Veronique**	**120.53**	**41**	P	**PKPdf**	**05 02 14.5**	**-0.7**
	baz=291						
R57A	**Stanardsville**	**120.53**	**51**	P	**PKiKP**	**05 02 15.3**	**-0.3**
	baz=284						
P57A	**Homestead Farm**	**120.63**	**49**	P	**PKiKP**	**05 02 15.5**	**-0.2**
	baz=285						
N57A	**Milroy**	**120.63**	**48**	P	**PKiKP**	**05 02 15.5**	**-0.2**
	baz=286						
W58A	**Raeford**	**120.69**	**55**	P	**PKiKP**	**05 02 16.1**	**+0.1**
	baz=281						
O57A	**Amberson**	**120.72**	**48**	P	**PKiKP**	**05 02 15.7**	**-0.2**
	baz=286						
M57A	**Sunshine Farm,**	**120.78**	**47**	P	**PKiKP**	**05 02 16.0**	**0.0**
	baz=286						
L57A	**Andrews Acres**	**120.79**	**46**	P	**PKiKP**	**05 02 15.8**	**-0.2**
	baz=287						
K57A	**Scipio Center**	**120.80**	**45**	P	**PKPdf**	**05 02 15.5**	**-0.4**
	baz=288						
T58A	**Grand View Acr**	**120.84**	**52**	P	**PKiKP**	**05 02 15.8**	**-0.4**
	baz=283						
R58A	**Rapidan**	**120.93**	**51**	P	**PKPdf**	**05 02 15.8**	**-0.5**
	baz=284						
U58A	**Oxford**	**120.95**	**53**	P	**PKiKP**	**05 02 16.1**	**-0.3**
	baz=283						
Q58A	**Fox Den Farm,**	**121.01**	**50**	P	**PKiKP**	**05 02 16.3**	**-0.3**
	baz=285						
H57A	**Richville**	**121.02**	**43**	P	**PKiKP**	**05 02 16.1**	**-0.2**
	baz=290						
S58A	**Poland Farm, P**	**121.06**	**51**	P	**PKiKP**	**05 02 16.3**	**-0.3**
	baz=284						
G57A	**Newington**	**121.07**	**42**	P	**PKiKP**	**05 02 16.1**	**-0.3**
	baz=290						
R58B	**Mineral**	**121.11**	**51**	P	**PKiKP**	**05 02 16.3**	**-0.4**
	baz=284						
E57A	**Chemin Saint G**	**121.14**	**41**	P	**PKiKP**	**05 02 16.4**	**-0.2**
	baz=292						
N58A	**Sunbury**	**121.22**	**47**	P	**PKiKP**	**05 02 16.4**	**-0.5**
	baz=287						
M58A	**Price's Panora**	**121.25**	**47**	P	**PKPdf**	**05 02 16.5**	**-0.4**
	baz=287						
O58A	**Lewisberry**	**121.27**	**48**	P	**PKiKP**	**05 02 16.9**	**-0.2**
	baz=286						
W59A	**Clinton**	**121.29**	**54**	P	**PKiKP**	**05 02 17.0**	**-0.1**
	baz=282						
V59A	**Middlesex**	**121.33**	**53**	P	**PKPdf**	**05 02 16.6**	**-0.4**
	baz=282						
BINY	**Binghamton**	**121.34**	**46**	P	**PKPdf**	**05 02 16.5**	**-0.4**
	baz=288						
K58A	**Earlville**	**121.40**	**45**	P	**PKPdf**	**05 02 16.6**	**-0.4**
	baz=289						
CBN	**Corbin Frederi**	**121.43**	**51**	P	**PKiKP**	**05 02 16.9**	**-0.4**
	baz=284						
KMBO	**Kilima Mbogo**	**121.44**	**263**	PKP	**PKiKP**	**05 02 18.6**	**+0.2**
	comp=Z,0.7nm,0.4s,baz=36,slow=14,SNR=3.5						
KMBO	**Kilima Mbogo**	**121.44**	**263**	*i* PKIKP	**PKiKP**	**05 02 20.1**	**+1.7**
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.4s						
L58A	**Harry Jones Me**	**121.48**	**46**	P	**PKiKP**	**05 02 17.1**	**-0.2**
	baz=288						
AKASG	**Malin Array Be**	**121.50**	**325**	PKP	**PKPdf**	**05 02 16.5**	**-0.5**
	comp=Z,0.7nm,0.4s,baz=70,slow=2.7,SNR=7.2						
AKASG				pPKP	**pPKPdf**	**05 02 53.2**	**-0.2**
	comp=Z,6.7nm,0.8s,baz=63,slow=2.1,SNR=5.2						
AKASG	**Malin Array Be**	**121.50**	**325**	PKPdf	**PKiKP**	**05 02 16.6**	**-0.5**
AKBB	**Malin Array Si**	**121.50**	**325*c***	*i* PKIKP	**PKiKP**	**05 02 17.6**	**+0.5**
LONY	**Lake Ozonia**	**121.51**	**43**	P	**PKiKP**	**05 02 17.1**	**-0.3**
	baz=290						
I58A	**Old Forge**	**121.56**	**44**	P	**PKPdf**	**05 02 16.9**	**-0.4**
	baz=290						
S59A	**Mechanicsville**	**121.61**	**51**	P	**PKPdf**	**05 02 17.0**	**-0.5**
	baz=284						
LATQ	**La Tuque**	**121.63**	**39**	P	**PKPdf**	**05 02 17.0**	**-0.3**
	baz=294						
G58A	**Ormstown**	**121.67**	**42**	P	**PKPdf**	**05 02 17.0**	**-0.4**
	baz=291						
D58A	**Chemin du LacG**	**121.68**	**39**	P	**PKPdf**	**05 02 16.6**	**-0.9**
	baz=293						
E58A	**La Victoria**	**121.72**	**40**	P	**PKPdf**	**05 02 16.7**	**-0.8**
	baz=293						
CNNC	**Cliffs of the**	**121.72**	**54**	P	**PKiKP**	**05 02 17.9**	**-0.1**
	baz=282						
O59A	**Robesonia**	**121.76**	**48**	P	**PKiKP**	**05 02 17.8**	**-0.2**
	baz=287						
X60A	**Albert Glenn T**	**121.79**	**55**	P	**PKPdf**	**05 02 17.6**	**-0.4**
	baz=282						
Q59A	**Harwood**	**121.81**	**50**	P	**PKiKP**	**05 02 17.8**	**-0.3**
	baz=286						
H58A	**Gabriels**	**121.85**	**43**	P	**PKiKP**	**05 02 17.8**	**-0.2**
	baz=291						
N59A	**State Game Lan**	**121.88**	**47**	P	**PKiKP**	**05 02 18.1**	**-0.1**
	baz=287						
W60A	**Pink Hill**	**121.90**	**54**	P	**PKPdf**	**05 02 17.8**	**-0.4**
	baz=282						
M59A	**Waymart**	**121.94**	**46**	P	**PKiKP**	**05 02 18.1**	**-0.2**
	baz=288						
K59A	**Cooperstown**	**121.95**	**45**	P	**PKPdf**	**05 02 17.8**	**-0.3**
	baz=289						
J59A	**Piesco**	**121.96**	**44**	P	**PKiKP**	**05 02 17.8**	**-0.5**
	baz=290						
J59A	**Piesco**	**121.96**	**44**		**PKPdf**	**05 02 17.3**	**-0.8**
L59A	**Walton**	**122.01**	**45**	P	**PKPdf**	**05 02 17.9**	**-0.4**
	baz=289						
U60A	**Pendleton**	**122.02**	**52**	P	**PKiKP**	**05 02 18.2**	**-0.4**
	baz=284						
FRNY	**Flat Rock**	**122.09**	**42**		**PKPdf**	**05 02 17.8**	**-0.5**
H59A	**Cadyville**	**122.09**	**42**	P	**PKiKP**	**05 02 18.3**	**-0.2**
	baz=291						
V60A	**Jim Taylor Roa**	**122.10**	**53**	P	**PKiKP**	**05 02 18.7**	**-0.1**
	baz=283						
S60A	**Water View**	**122.11**	**51**	P	**PKiKP**	**05 02 18.5**	**-0.2**
	baz=285						
BOSA	**Boshof**	**122.11**	**228**	PKP	**PKiKP**	**05 02 19.0**	**-0.3**
	comp=Z,4.8nm,0.8s,baz=118,slow=4.6,SNR=8.0						
BOSA				pPKP	**pPKPdf**	**05 02 55.5**	**-0.5**
	comp=Z,3.0nm,0.9s,baz=113,slow=5.8,SNR=2.2						
BOSA				PKKPbc	**PKKPab**	**05 12 17.1**	**-0.6**
	comp=Z,4.2nm,0.9s,baz=273,slow=2.2,SNR=7.3						
T60A	**Surry**	**122.19**	**52**	P	**PKiKP**	**05 02 18.5**	**-0.4**
	baz=284						
P60A	**Greenville**	**122.30**	**48**	P	**PKiKP**	**05 02 18.7**	**-0.3**
	baz=287						
O60A	**Telford**	**122.33**	**48**	P	**PKiKP**	**05 02 18.9**	**-0.2**
	baz=287						
D59A	**Saint-Raymond**	**122.37**	**39**	P	**PKiKP**	**05 02 18.8**	**-0.1**
	baz=294						
N60A	**Cedar Hill Far**	**122.38**	**47**	P	**PKiKP**	**05 02 18.9**	**-0.3**
	baz=288						
W61A	**Ground Anchor**	**122.45**	**54**	P	**PKiKP**	**05 02 19.5**	**0.0**
	baz=283						
M60A	**Port Jervis**	**122.58**	**46**	P	**PKiKP**	**05 02 19.6**	**0.0**
	baz=288						
U61A	**Possum Corner**	**122.61**	**52**	P	**PKiKP**	**05 02 19.4**	**-0.3**
	baz=284						
L60A	**Shokan**	**122.65**	**45**	P	**PKiKP**	**05 02 19.4**	**-0.3**
	baz=289						
I60A	**Shoreham**	**122.65**	**43**	P	**PKiKP**	**05 02 19.8**	**+0.2**
	baz=291						
F60A	**Warwick**	**122.72**	**40**	P	**PKiKP**	**05 02 19.4**	**-0.3**
	baz=294						
J60A	**Lant Hill Farm**	**122.78**	**44**	P	**PKiKP**	**05 02 19.4**	**-0.5**
	baz=291						
H60A	**Morristown**	**122.78**	**42**	P	**PKiKP**	**05 02 19.4**	**-0.5**
	baz=292						
NB2	**NORSAR Subarra**	**122.79**	**342**	PKPdf	**PKiKP**	**05 02 19.1**	**-0.4**
	comp=Z,1.0nm,0.6s,baz=40,slow=1.9						
NOA	**NORSAR Array B**	**122.79**	**342**	PKP	**PKiKP**	**05 02 19.0**	**-0.4**
	comp=Z,2.8nm,0.9s,baz=43,slow=1.9,SNR=4.4						
G60A	**Masonville**	**122.82**	**41**	P	**PKiKP**	**05 02 19.4**	**-0.5**
	baz=293						
E60A	**Ste Agathe de**	**122.88**	**40**	P	**PKPdf**	**05 02 19.2**	**-0.5**
	baz=294						
D60A	**Saint Jean D'O**	**122.98**	**39**	P	**PKPdf**	**05 02 19.5**	**-0.4**
	baz=295						
N61A	**South Mountain**	**123.00**	**47**	P	**PKiKP**	**05 02 20.4**	**0.0**
	baz=288						
O61A	**Allentown**	**123.02**	**48**	P	**PKiKP**	**05 02 20.4**	**0.0**
	baz=288						
K61A	**Williamstown**	**123.08**	**44**	P	**PKiKP**	**05 02 20.4**	**-0.1**
	baz=290						
GCUF	**Volcan Galeras**	**123.11**	**94**	*e*P	**PKiKP**	**05 02 22.8**	**+0.8**
PAL	**Palisades**	**123.19**	**46**	P	**PKiKP**	**05 02 20.4**	**-0.3**
	baz=289						
M61A	**Granite Spring**	**123.19**	**46**	P	**PKiKP**	**05 02 20.5**	**-0.2**
	baz=289						
G61A	**St-Isidore-de-**	**123.27**	**41**	P	**PKiKP**	**05 02 20.5**	**-0.3**
	baz=294						
H61A	**Lyndonville**	**123.30**	**42**	P	**PKiKP**	**05 02 20.9**	**0.0**
	baz=293						
D61A	**St Aubert, Com**	**123.31**	**38**	P	**PKiKP**	**05 02 20.7**	**-0.1**
	baz=296						
J61A	**Chester**	**123.33**	**43**	P	**PKiKP**	**05 02 21.0**	**0.0**
	baz=292						
LVC	**Limon Verde**	**123.37**	**124**	PKP	**PKiKP**	**05 02 22.1**	**0.0**
	comp=Z,3.9nm,0.8s,baz=114,slow=12,SNR=4.8						
LBNH	**Lisbon**	**123.42**	**42**	P	**PKiKP**	**05 02 21.2**	**0.0**
	baz=293						
E61A	**Lac Etchemin**	**123.46**	**39**	P	**PKiKP**	**05 02 21.0**	**-0.2**
	baz=295						
N62A	**Caumsett State**	**123.53**	**46**	P	**PKiKP**	**05 02 21.2**	**-0.2**
	baz=289						
L61B	**Northampton**	**123.57**	**44**	P	**PKiKP**	**05 02 21.7**	**+0.2**
	baz=291						
MATP	**Matopo**	**123.57**	**238**	PKP	**PKiKP**	**05 02 21.7**	**-0.6**
	comp=Z,5.9nm,0.9s,baz=134,slow=4.6,SNR=9.1						
LBTB	**Lobatse**	**123.75**	**232**	PKP	**PKiKP**	**05 02 22.2**	**-0.3**
	comp=Z,3.5nm,0.8s,baz=300,slow=0.8,SNR=5.4						
H62A	**Milan**	**123.79**	**42**	P	**PKiKP**	**05 02 21.8**	**-0.1**
	baz=294						
K62A	**Royalston**	**123.80**	**44**	P	**PKiKP**	**05 02 21.8**	**-0.1**
	baz=291						
J62A	**Henniker**	**123.88**	**43**	P	**PKiKP**	**05 02 22.1**	**+0.1**
	baz=292						
G62A	**West of Eustis**	**123.94**	**41**	P	**PKiKP**	**05 02 22.3**	**+0.1**
	baz=294						
I62A	**Tamworth**	**123.95**	**42**	P	**PKiKP**	**05 02 22.1**	**-0.1**
	baz=293						
POPC	**Popayan, Colom**	**123.98**	**93**	*e*P	**PKPdf**	**05 02 21.2**	**-2.0**
N63A	**Mattituck**	**124.19**	**46**	P	**PKPdf**	**05 02 22.0**	**-0.4**
	baz=290						
K63A	**Dunstable**	**124.27**	**44**	P	**PKiKP**	**05 02 23.1**	**+0.3**
	baz=292						
HRV	**Adam Dziewonsk**	**124.32**	**44**	P	**PKiKP**	**05 02 23.1**	**+0.2**
	baz=292						
J63A	**Strafford**	**124.35**	**43**	P	**PKiKP**	**05 02 23.3**	**+0.3**
	baz=293						
MNMC	**Minye Minye**	**124.36**	**120**	PKPdf	**PKPdf**	**05 02 22.1**	**-1.7**
M63A	**Gales Ferry**	**124.38**	**45**	P	**PKiKP**	**05 02 22.9**	**-0.2**
	baz=291						
I63A	**Otisfield**	**124.38**	**42**	P	**PKiKP**	**05 02 22.9**	**-0.1**
	baz=294						
H63A	**New Sharon**	**124.49**	**41**	P	**PKiKP**	**05 02 23.5**	**+0.3**
	baz=295						
L63A	**North Scituate**	**124.52**	**45**	P	**PKiKP**	**05 02 23.1**	**-0.2**
	baz=291						
G63A	**Kingsbury**	**124.57**	**40**	P	**PKPdf**	**05 02 22.8**	**-0.3**
	baz=295						
F63A	**Nahmakanta, Br**	**124.64**	**40**	P	**PKiKP**	**05 02 23.0**	**-0.5**
	baz=296						
D63A	**Stockholm**	**124.65**	**38**	P	**PKiKP**	**05 02 23.3**	**-0.2**
	baz=298						
PLMC	**San Jos del P**	**124.70**	**90**	*e*P	**PKPdf**	**05 02 23.6**	**-0.7**
PKME	**Peaks-Kenny Pk**	**124.71**	**40**	P	**PKiKP**	**05 02 23.6**	**0.0**
	baz=296						
PB16	**IPOC Station P**	**124.78**	**119**		**PKPdf**	**05 02 22.6**	**-2.3**
FLOC	**Florencia**	**124.84**	**94**	*e*P	**PKPdf**	**05 02 24.1**	**-0.5**
M64A	**Tiverton**	**124.91**	**45**	P	**PKiKP**	**05 02 24.0**	**-0.1**
	baz=292						
H64A	**Troy**	**125.03**	**41**	P	**PKiKP**	**05 02 24.0**	**-0.3**
	baz=295						
L64A	**Middleborough**	**125.03**	**44**	P	**PKiKP**	**05 02 24.0**	**-0.3**
	baz=292						
F64A	**Sherman**	**125.04**	**39**	P	**PKiKP**	**05 02 23.8**	**-0.5**
	baz=297						
G64A	**Maxfield**	**125.06**	**40**	P	**PKiKP**	**05 02 24.2**	**-0.2**
	baz=296						
I64A	**Boothbay**	**125.06**	**42**	P	**PKiKP**	**05 02 24.0**	**-0.3**
	baz=294						
E64A	**Bridgewater**	**125.11**	**38**	P	**PKiKP**	**05 02 23.9**	**-0.5**
	baz=298						
ORTC	**Ortega, Tolima**	**125.59**	**92**	*e*P	**PKPdf**	**05 02 25.6**	**-0.4**
H65A	**Eastbrook**	**125.63**	**40**	P	**PKiKP**	**05 02 25.2**	**-0.2**
	baz=296						
GUY2C	**Guyana, Caldas**	**125.65**	**90**	*e*P	**PKPdf**	**05 02 23.4**	**-3.2**
G65A	**Princeton**	**125.84**	**40**	P	**PKiKP**	**05 02 25.6**	**-0.2**
	baz=297						
PRAC	**Prado**	**125.92**	**92**	*e*P	**PKiKP**	**05 02 26.8**	**-0.3**
LSZ	**Lusaka**	**125.98**	**244**	PKP	**PKPdf**	**05 02 26.1**	**-0.6**
	comp=Z,4.5nm,0.8s,baz=152,slow=2.2,SNR=6.5						
LSZ				pPKP	**pPKPdf**	**05 03 03.6**	**+0.4**
	comp=Z,1.3nm,0.4s,baz=177,slow=5.6,SNR=2.6						
LSZ	**Lusaka**	**125.98**	**244**		**PKPdf**	**05 02 25.2**	**-1.5**
H66A	**Whiting**	**126.18**	**40**	P	**PKiKP**	**05 02 26.2**	**-0.4**
	baz=297						
KOLS	**Kolonicke sedl**	**126.27**	**326**	*e*PKIKP	**PKiKP**	**05 02 27.5**	**+0.8**
KOLS	**Kolonicke sedl**	**126.27**	**326**	*e*PKP	**PKiKP**	**05 02 27.5**	**+0.8**
UZH	**Uzhgorod**	**126.43**	**326**	*e*PKIKP	**PKPdf**	**05 02 24.0**	**-2.5**
ROSC	**El Rosal**	**126.63**	**91**	PKP	**PKiKP**	**05 02 28.6**	**-0.3**
	comp=Z,30nm,0.5s,baz=18,slow=3.0,SNR=26						
CRVS	**Cervenica-Dubn**	**126.73**	**326**	*e*PKIKP	**PKiKP**	**05 02 28.4**	**+0.8**
CRVS				*e*		05 03 06.5	
CRVS	**Cervenica-Dubn**	**126.73**	**326**	*e*PKP	**PKiKP**	**05 02 28.4**	**+0.8**
CRVS				*e*		05 03 06.5	
OCAC	**Ocana**	**127.98**	**86**	*e*P	**PKPdf**	**05 02 29.6**	**-1.1**
MORC	**Moravsky Berou**	**128.28**	**329**	*e*PKP	**PKiKP**	**05 02 30.0**	**-0.7**
MORC				*e*		05 03 06.7	
KRLC	**Kraliky**	**128.47**	**330**	*e*PKIKP	**PKiKP**	**05 02 31.5**	**+0.4**
KRLC				*e*		05 03 09.4	
KRLC	**Kraliky**	**128.47**	**330**	*e*PKPDF	**PKiKP**	**05 02 31.5**	**+0.4**
KRLC				*e*pPKP	**pPKPdf**	**05 03 09.4**	**+2.6**
CHVC	**Chvalec**	**128.49**	**331**	*e*PKPDF	**PKiKP**	**05 02 33.6**	**+2.5**
CHVC				*e*x	x	05 03 08.8	
PAMC	**Pamplona, Colo**	**128.51**	**88**	*e*P	**PKPdf**	**05 02 31.6**	**-0.5**
JAVC	**Velka Javorina**	**128.78**	**328**	*e*PKP	**PKiKP**	**05 02 33.3**	**+1.6**
JAVC				*e*		05 03 09.9	
VRAC	**Vranov**	**129.05**	**329**	*e*PKP	**PKiKP**	**05 02 32.5**	**+0.3**
VRAC				*e*		05 03 10.5	
MODS	**Modra-Piesok**	**129.29**	**328**	*e*PKIKP	**PKiKP**	**05 02 32.6**	**-0.1**
MODS				*e*		05 03 11.3	
MODS	**Modra-Piesok**	**129.29**	**328**	*e*PKP	**PKiKP**	**05 02 32.6**	**-0.1**
MODS				*e*		05 03 11.3	
BRG	**Berggiesshubel**	**129.29**	**332**	*e*PKP	**PKiKP**	**05 02 32.7**	**+0.1**
BRG				Amp		05 02 35.1	
	comp=Z,10.0nm,1.2s						
BRG				pPKP	**pPKPdf**	**05 03 10.2**	**+1.9**
BRG				Amp		05 03 13.2	
	comp=Z,17nm,1.3s						
KRUC	**Moravsky**	**129.31**	**329**	*e*PKP	**PKiKP**	**05 02 33.1**	**+0.4**
KRUC				*e*		05 03 09.9	
CLL	**Collm**	**129.41**	**333**	*i* PKPdf	**PKiKP**	**05 02 32.5**	**-0.3**
	comp=Z,10.0nm,1.2s						
CLL				*e*pPKPdf	**pPKPdf**	**05 03 05.0**	**-3.5**
CLL				*e*sPKPdf	**sPKPdf**	**05 03 19.0**	**-3.5**
CLL				*e*PP	**PP**	**05 04 43.0**	**+0.4**
CLL				*e*pPP		05 05 13.0	
CLL				*i* SKPdf	**SKPdf**	**05 05 49.6**	**-5.0**
	comp=Z,11nm,1.1s						
CLL				*e*PKSdf	**PKSdf**	**05 06 06.0**	**-2.4**
CLL				*e*PPP	PPP	05 07 27.0	
CLL	**Collm**	**129.41**	**333**	*i* PKIKP	**PKiKP**	**05 02 32.5**	**-0.3**
CLL				*e*		05 03 05.0	
CLL				pmax	pmax		
	comp=Z,10.0nm,1.2s						
CPUP	**Villa Florida**	**130.12**	**136**	SKPbc	**SKPbc**	**05 05 43.1**	**-1.4**
	comp=Z,6.0nm,0.9s,baz=225,slow=4.3,SNR=8.9						
KHC	**Kasperske Hory**	**130.66**	**331**	*e*PKIKP	**PKiKP**	**05 02 35.1**	**-0.4**
KHC				*e*		05 03 11.3	
KHC	**Kasperske Hory**	**130.66**	**331**	*e*PKPDF	**PKiKP**	**05 02 35.1**	**-0.4**
KHC				*e*x	x	05 02 43.3	
KHC				*e*pPKP	**pPKPdf**	**05 03 11.3**	**+0.3**
KHC	**Kasperske Hory**	**130.66**	**331**	PKPdf	**PKPdf**	**05 02 34.0**	**-0.6**
SDV	**Santo Domingo**	**130.68**	**86**	PKPdf	**PKPdf**	**05 02 33.9**	**-1.9**
GERES	**GERESS Array B**	**130.79**	**330**	PKP	**PKiKP**	**05 02 35.4**	**-0.5**
	comp=Z,1.4nm,0.7s,baz=50,slow=2.1,SNR=12						
GERES				pPKP	**pPKPdf**	**05 03 11.0**	**-0.4**
	comp=Z,2.7nm,1.0s,baz=48,slow=2.0,SNR=3.7						
GERES	**GERESS Array B**	**130.79**	**330**	PKPdf	**PKPdf**	**05 02 33.9**	**-1.0**
GRA4	**Grafenberg Arr**	**131.36**	**333**	*e*PP	PP	05 04 55.5	+0.3
GRF	**Grafenberg Arr**	**131.36**	**333**	*e*L	L	05 50 50.8	
	comp=Z,208nm,19.2s						
GRB4	**Grafenberg Arr**	**131.37**	**332**	*e*SKPab	**SKPab**	**05 05 48.8**	**-0.1**
SOKA	**Soboth**	**131.54**	**328**	*e*S	**SKPab**	**05 05 50.0**	**+0.3**
	comp=Z,15nm,1.5s						
OBKA	**Obir**	**131.90**	**328**	*e*S	**SKPab**	**05 05 50.6**	**-0.7**
	comp=Z,12nm,1.4s						
KBA	**Koelnbreinsper**	**132.15**	**329**	*e*S	**SKPab**	**05 05 52.9**	**+0.4**
	comp=Z,14nm,1.6s						
MYKA	**Terra Mystica**	**132.30**	**328**	*e*S	**SKPab**	**05 05 53.1**	**+0.1**
	comp=Z,16nm,1.3s						
ABTA	**Abfaltersbach**	**132.80**	**329**	*e*S	**SKPab**	**05 05 54.3**	**-0.9**
	comp=Z,31nm,1.4s						
WATA	**Walderalm**	**132.86**	**330**	*e*S	**SKPab**	**05 05 56.0**	**+0.5**
	comp=Z,13nm,1.0s						
WTTA	**Wattenberg**	**132.88**	**330**	*e*S	**SKPab**	**05 05 56.3**	**+0.7**
	comp=Z,32nm,1.4s						
SIV	**San Ignacio**	**133.02**	**122**	PKP	**PKPdf**	**05 02 39.6**	**-0.4**
	comp=Z,8.6nm,1.2s,baz=245,slow=3.1,SNR=9.5						
SIV				SKPbc	**SKPbc**	**05 05 54.4**	**-0.8**
	comp=Z,8.7nm,1.1s,baz=271,slow=4.9,SNR=9.6						
MOTA	**Moosalm**	**133.09**	**331**	*e*S	**SKPab**	**05 05 56.8**	**+0.3**
	comp=Z,27nm,1.3s						
TSUM	**Tsumeb**	**133.11**	**233**	PKP	**PKiKP**	**05 02 40.5**	**-1.0**
	comp=Z,3.4nm,0.9s,baz=168,slow=4.5,SNR=5.7						
SQTA	**Sankt Quirin**	**133.12**	**330**	*e*S	**SKPab**	**05 05 56.4**	**-0.2**
	comp=Z,28nm,1.2s						
RETA	**Reutte**	**133.15**	**331**	*e*S	**SKPab**	**05 05 57.1**	**+0.5**
	comp=Z,23nm,1.4s						
FETA	**Feichten**	**133.50**	**331**	*e*S	**SKPab**	**05 05 57.7**	**-0.6**
	comp=Z,25nm,1.2s						
BMRD	**Maredsous**	**133.57**	**338**	*d*PKiKP	**PKiKP**	**05 02 41.3**	**0.0**
DAVA	**Damuels**	**133.71**	**331**	*e*S	**SKPab**	**05 05 58.2**	**-1.0**
	comp=Z,22nm,1.4s						
SAML	**Samuel**	**134.13**	**112**	PKIKP	**PKPdf**	**05 02 40.4**	**-1.7**
SAML	**Samuel**	**134.13**	**112**		**PKPdf**	**05 02 40.4**	**-1.7**
SJG	**San Juan**	**134.94**	**73**	PKIKP	**PKPdf**	**05 02 41.8**	**-1.6**
SJG	**San Juan**	**134.94**	**73**		**PKPdf**	**05 02 41.8**	**-1.6**
PTGA	**Pitinga**	**139.73**	**102**	PKhKP	PKPpre	05 02 43.8	
	comp=Z,10nm,0.9s,baz=324,slow=22,SNR=5.1						
PTGA				PKP	**PKPdf**	**05 02 52.2**	**-0.2**
	comp=Z,12nm,0.9s,baz=130,slow=4.2,SNR=10						
PTGA				SKPbc	**SKiKP**	**05 06 16.4**	**-2.0**
	comp=Z,2.4nm,0.5s,baz=251,slow=4.1,SNR=7.0						
PTGA	**Pitinga**	**139.73**	**102**	PKPdf	**PKPdf**	**05 02 50.4**	**-2.1**
KEST	**Kesra**	**141.71**	**319**	PKP	**PKiKP**	**05 02 57.9**	**-0.5**
	comp=Z,6.9nm,1.0s,baz=298,slow=12,SNR=3.3						
PBRG	**Braganca**	**144.93**	**342**	*e*PKP	**PKPdf**	**05 03 01.2**	**+0.2**
PBRG				*e*pPKP	**pPKPdf**	**05 03 35.2**	**-2.3**
PGAV	**Gavieira, Arco**	**145.23**	**344**	*e*PKP	**PKPab**	**05 03 02.3**	**+0.6**
PGAV				*e*pPKP	pPKPab	05 03 36.8	-0.3
MVO	**Moncorvo**	**145.60**	**342**	*e*PKP	**PKPab**	**05 03 03.8**	**+0.8**
MVO				*e*pPKP	pPKPab	05 03 37.9	-0.6
POLO	**Lamas de Olo**	**145.64**	**343**	*e*PKP	**PKPab**	**05 03 03.9**	**+0.7**
POLO				*e*pPKP	pPKPbc	05 03 38.2	-0.5
PTO	**Porto**	**146.09**	**344**	*e*PKP	**PKPab**	**05 03 04.4**	**-0.4**
PTO				*e*pPKP	**pPKPdf**	**05 03 39.1**	**-0.3**
PVIS	**Viseu**	**146.27**	**342**	*e*PKP	**PKPab**	**05 03 05.5**	**-0.1**
PVIS				*e*pPKP	**pPKPdf**	**05 03 40.1**	**+0.3**
MTE	**Manteigas**	**146.46**	**342**	*e*PKP	**PKPab**	**05 03 06.0**	**-0.3**
MTE				*e*pPKP	**pPKPdf**	**05 03 40.7**	**+0.5**
COI	**Coimbra**	**146.89**	**343**	*e*PKP	**PKPab**	**05 03 07.5**	**-0.4**
COI				*e*pPKP	**pPKPdf**	**05 03 41.8**	**+1.0**
PCBR	**Castelo Branco**	**146.94**	**341**	*e*PKP	**PKPab**	**05 03 07.6**	**-0.5**
PCBR				*e*pPKP	**pPKPdf**	**05 03 41.9**	**+1.0**
PCAS	**Casmilo, Conde**	**147.06**	**343**	*e*PKP	**PKPab**	**05 03 07.6**	**-1.0**
PMRV	**Marv??o**	**147.29**	**341**	*e*PKP	**PKPab**	**05 03 08.7**	**-0.9**
PMRV				*e*pPKP	**pPKPdf**	**05 03 43.4**	**+1.9**
PSBE	**So Bento**	**147.65**	**343**	*e*PKP	**PKPbc**	**05 03 08.8**	**+0.3**
PSBE				*e*pPKP	**pPKPbc**	**05 03 46.6**	**+2.0**
PESTR	**Estremoz**	**147.86**	**341**	*e*pPKP	pPKPdf	05 03 46.6	+4.1
PMTG	**Montargil**	**147.88**	**342**	*e*PKP	**PKPbc**	**05 03 09.1**	**0.0**
PMTG				*e*pPKP	**pPKPdf**	**05 03 45.0**	**+2.5**
MDP	**Montagnes des**	**148.07**	**95**	PKPbc	**PKPbc**	**05 03 10.3**	**0.0**
	comp=Z,111nm,0.9s,baz=248,slow=3.6,SNR=24						
PBAR	**Barrancos**	**148.30**	**339**	*e*pPKP	pPKPdf	05 03 47.6	+4.4
PBEJ	**Beja**	**148.72**	**340**	*e*PKP	**PKiKP**	**05 03 12.1**	**-0.6**
PBEJ				*e*pPKP	**pPKPdf**	**05 03 47.3**	**+3.4**
PNCL	**Nicolau / Gran**	**148.85**	**341**	*e*PKP	**PKiKP**	**05 03 12.1**	**-0.8**
PNCL				*e*pPKP	**pPKPbc**	**05 03 48.9**	**+1.1**
MESJ	**Messejana**	**149.00**	**341**	*e*pPKP	pPKPdf	05 03 48.2	+3.9
PCVE	**Castro Verde**	**149.13**	**340**	*e*PKP	**PKiKP**	**05 03 13.7**	**+0.2**
PCVE				*e*pPKP	**pPKPbc**	**05 03 50.5**	**+2.0**
PVAQ	**Vaqueiros**	**149.23**	**340**	*e*pPKP	pPKPdf	05 03 51.2	+6.5
PTEO	**Sao Teotonio**	**149.43**	**341**	*e*pPKP	pPKPdf	05 03 51.8	+6.8
PBDV	**Barranco-do-Ve**	**149.44**	**340**	*e*pPKP	pPKPdf	05 03 52.8	+7.7
MORF	**Marmelete**	**149.63**	**341**	*e*pPKP	pPKPdf	05 03 54.4	+8.9
PFVI	**Vila Bisbo**	**149.84**	**341**	*e*pPKP	pPKPdf	05 03 55.1	+9.4
TAM	**Tamanrasset**	**151.29**	**302**	PKIKP	**PKPbc**	**05 03 17.0**	**-1.2**
TAM	**Tamanrasset**	**151.29**	**302**		**PKPbc**	**05 03 17.0**	**-1.2**
TORD	**Torodi Ar. Bea**	**157.62**	**283**	PKP	**PKPdf**	**05 03 20.2**	**-0.6**
	comp=Z,2.3nm,0.8s,baz=357,slow=1.9,SNR=5.8						
TORD				PKPab	**PKPab**	**05 03 55.0**	**+1.3**
	comp=Z,2.2nm,0.5s,baz=143,slow=3.7,SNR=6.3						
TORD	**Torodi Ar. Bea**	**157.62**	**283**		**PKPdf**	**05 03 18.8**	**-2.0**

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*JMA **18** 04:44:52.8±0.4, 31°.36N×140°.45E, h110^{km}±3^{km}, M4.3*
*IDC **18** 04:44:53.1±1.6, 31°.32N×140°.08E, h110^{km}±10^{km}, mb3.8/14, mb1 3.9/17, mb1mx3.8/42, mbtmp4.1/17, Error ellipse: s-maj=20.0km s-min=14.7km az=74.0*
*NEIC **18** 04:44:53.4±1.5, 31°.29N±0°.06×140°.3E±0°.1, h117^{km}±2^{km}, mb4.4/16, Error ellipse: s-maj=15.1km s-min=7.7km az=74.0*
ISC 18 04:44:52.0±0.5**, 31°.37N**±0°.05×**140°.38E**±0°.07**, h100^{km}, n76, σ1.^{s}96**/86**, mb4.2**/17**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
JAOM	**Aogashimamukai**	**1.21**	**334**	P	**Pn**	**04 45 16.8**	**+1.9**
JHCJ	**Hachijojimakas**	**1.77**	**344**	P	**Pn**	**04 45 23.7**	**+2.0**
JHCJ				S	**Sn**	**04 45 46.1**	**+1.9**
JHJ2	**Mitsune**	**1.80**	**345**	P	**Pn**	**04 45 24.2**	**+2.1**
JHJ2	**Mitsune**	**1.80**	**345**		**Pn**	**04 45 24.3**	**+2.3**
JHJ2				Sn	**Sn**	**04 45 49.0**	**+4.1**
JHJ	**Hachijo jima 2**	**1.82**	**344**	P	**Pn**	**04 45 24.2**	**+2.0**
	311nm,0.3s,baz=75,slow=23,SNR=52						
JHJ				S	**Sn**	**04 45 47.0**	**+1.7**
	381nm,0.3s,baz=74,slow=17,SNR=14						
JMKN	**Mikurajimanish**	**2.60**	**345**	P	**Pn**	**04 45 34.8**	**+2.3**
JKO	**Kozu shima**	**3.00**	**340**	P	**Pn**	**04 45 40.9**	**+3.2**
BSO1	**Boso 1**	**3.31**	**9**	P	**Pn**	**04 45 42.4**	**+1.0**
TK02	**Tokai 2**	**3.39**	**320**	P	**Pn**	**04 45 45.7**	**+2.9**
BSO3	**Boso 3**	**3.42**	**2**	P	**Pn**	**04 45 44.3**	**+1.1**
BSO4	**Boso 4**	**3.61**	**359**	P	**Pn**	**04 45 47.6**	**+1.8**
TTO1	**TONANKAI O.B.S**	**3.78**	**307**	P	**Pn**	**04 45 50.2**	**+2.3**
JOD2	**Odawara 2**	**4.03**	**345**	P	**Pn**	**04 45 53.3**	**+1.7**
HMMJ	**Hamamatsu 2**	**4.13**	**328**	P	**Pn**	**04 45 55.0**	**+2.0**
JIE	**Ise**	**4.32**	**315**	P	**Pn**	**04 45 57.6**	**+2.1**
JNY	**Yasuok**	**4.50**	**333**	P	**Pn**	**04 46 01.6**	**+3.5**
CBIJ	**Chichi jima**	**4.54**	**159**	*e*S	**Sn**	**04 46 50.2**	**0.0**
JCJ	**Chichijima**	**4.54**	**159**	P	**Pn**	**04 46 00.7**	**+2.2**
	64nm,0.3s,baz=211,slow=2.0,SNR=8.0						
JCJ				S	**Sn**	**04 46 50.5**	**+0.3**
	64nm,0.3s,baz=280,slow=22,SNR=2.6						
JCJ	**Chichijima**	**4.54**	**159**		**Pn**	**04 45 59.1**	**+0.6**
JCJ				Sn	**Sn**	**04 46 49.9**	**-0.3**
JHU	**Hanno**	**4.56**	**349**	P	**Pn**	**04 46 00.2**	**+1.4**
JHU				*e*S	**Sn**	**04 46 49.3**	**-1.4**
JTNC	**Tanabenakahech**	**4.71**	**302**	P	**Pn**	**04 46 02.6**	**+1.8**
JTNC				S	**Sn**	**04 46 55.0**	**+0.7**
JRY	**Ryogami san**	**4.80**	**345**	P	**Pn**	**04 46 03.6**	**+1.6**
JRY				*e*S	**Sn**	**04 46 58.3**	**+1.9**
JYT	**Yasato**	**4.85**	**358**	Pn	**Pn**	**04 46 04.6**	**+1.9**

INU	Inuyama	4.87	326		Pn	04 46 04.7	+1.8
JGF	Kuroka	4.92	330		Pn	04 46 05.9	+2.2
MJAR	Matsushiro Arr	5.47	341	P	Pn	04 46 12.5	+1.4
	0.5nm,0.3s,baz=164,slow=11,SNR=11						
MJAR	Matsushiro Arr	5.47	341		Pn	04 46 13.2	+2.1
MAJO	Matsushiro	5.47	341		Pn	04 46 13.5	+2.4
MAT	Matsushiro	5.47	341	P	Pn	04 46 12.6	+1.5
MAT				S	Sn	04 47 11.8	-0.9
JWT	Wachi	5.71	314		Pn	04 46 15.8	+1.5
JMN	Monobe	5.97	295	Pn	Pn	04 46 19.2	+1.3
JFK	Kawauchi	6.00	4	P	Pn	04 46 16.9	-1.4
JFK				*e*S	Sn	04 47 19.2	-6.3
JHS	Saijyo	7.08	303	Pn	Pn	04 46 34.6	+1.5
JMK	Ichinoseki	7.60	5	P	Pn	04 46 39.4	-0.5
JMK				*e*S	Sn	04 47 58.3	-6.1
JOI	OKI	7.70	312	P	Pn	04 46 44.3	+2.9
JNU	Nakatsue	8.24	285	P	Pn	04 46 50.8	+2.0
	0.9nm,0.3s,baz=54,slow=14,SNR=2.6						
KSRS	Korea Array	11.94	304	P	Pn	04 47 42.0	+3.2
	0.2nm,0.3s,baz=117,slow=13,SNR=9.2						
ASAJ	Asahikawa	12.85	7	P	Pn	04 47 47.6	-3.1
	0.8nm,0.3s,baz=181,slow=24,SNR=2.3						
USRK	Ussuriysk Ar.	14.41	335	P	Pn	04 48 14.0	+2.9
	baz=141,slow=42,SNR=2.4						
MDJ	Mudanjiang	15.70	330	Pn	Pn	04 48 26.4	-1.1
KLR	Kul'dur	18.99	342	P	P	04 49 04.5	-1.0
	0.2nm,0.3s,baz=153,slow=9.5,SNR=4.4						
PETK	Petropavlovsk-	25.10	25	P	P	04 50 08.4	+1.2
	4.0nm,1.0s,baz=240,slow=44,SNR=3.0						
ULN	Ulaanbaatar	30.21	313	P	P	04 50 51.8	-1.3
SONM	Songino Array	30.61	312	P	P	04 50 55.4	-1.3
	0.7nm,0.7s,baz=102,slow=7.8,SNR=6.1						
SONM	Songino Array	30.61	312	P	P	04 50 56.1	-0.5
LUWI	Luwuk	36.31	211	P	P	04 51 44.6	-1.6
ATKA	Atka Island	38.94	44	P	P	04 52 09.1	+1.1
SBUM	Sibu	39.16	228	P	P	04 52 09.0	-1.2
NIKH	Nikolski High	42.29	44	P	P	04 52 36.6	+1.1
MK31	Makanchi Array	46.61	307	P	P	04 53 08.5	-1.5
MKAR	Makanchi Array	46.61	307	P	P	04 53 08.1	-1.9
	0.6nm,0.6s,baz=91,slow=9.0,SNR=8.9						
MKAR	Makanchi Array	46.61	307	P	P	04 53 08.2	-1.8
NRIK	Noril'sk	48.11	338	P	P	04 53 21.2	0.0
	2.5nm,0.3s,baz=110,slow=7.6,SNR=5.2						
NRIK	Noril'sk	48.11	338	P	P	04 53 21.8	+0.6
NRIK				IAmb	IAmb	04 53 22.3	
	comp=Z,7.3nm,0.9s						
WRA	Warramunga Arr	51.35	187	P	P	04 53 44.9	-1.5
	comp=Z,2.3nm,0.7s,baz=6.3,slow=8.4,SNR=1.6						
KDAK	Kodiak Island	51.96	39	P	P	04 53 51.8	+1.3
	comp=Z,2.3nm,0.3s,baz=316,slow=1.6,SNR=20						
KDAK	Kodiak Island	51.96	39	P	P	04 53 51.9	+1.3
KDAK				IAmb	IAmb	04 54 03.5	
	comp=Z,5.5nm,0.9s						
ILAR	Eielson Array	54.77	30	P	P	04 54 11.8	+0.8
	comp=Z,0.6nm,0.5s,baz=259,slow=5.9,SNR=11						
ILAR	Eielson Array	54.77	30	P	P	04 54 11.9	+0.9
INK	Inuvik	59.83	25	P	P	04 54 47.8	+1.2
	comp=Z,0.9nm,0.4s,baz=305,slow=6.1,SNR=4.8						
INK	Inuvik	59.83	25	P	P	04 54 47.7	+1.2
INK				IAmb	IAmb	04 55 03.7	
	comp=Z,1.4nm,0.9s						
ARCES	ARCESS Array B	69.00	340	P	P	04 55 46.8	+0.5
	comp=Z,2.2nm,0.6s,baz=62,slow=6.6,SNR=18						
ARCES	ARCESS Array B	69.00	340	P	P	04 55 46.8	+0.5
YKA	Yellowknife Ar	69.15	29	P	P	04 55 48.1	+0.8
	comp=Z,0.5nm,0.7s,baz=298,slow=5.8,SNR=8.3						
FINES	FINESS Array B	73.44	333	P	P	04 56 12.7	-0.3
	comp=Z,1.6nm,0.3s,baz=71,slow=4.2,SNR=23						
FINES	FINESS Array B	73.44	333	P	P	04 56 13.0	-0.1
D08A	Wollman Farm,	74.37	44	P	P	04 56 19.7	+0.9
D08A				IAmb	IAmb	04 56 29.9	
	comp=Z,16nm,1.1s						
AKASG	Malin Array Be	78.26	323	P	P	04 56 39.8	-1.0
	comp=Z,0.5nm,0.3s,baz=54,slow=4.9,SNR=4.1						
AKASG	Malin Array Be	78.26	323	P	P	04 56 39.7	-1.1
NB2	NORSAR Subarra	79.07	337	P	P	04 56 44.6	-0.5
	comp=Z,0.5nm,0.4s,baz=42,slow=5.1						
NOA	NORSAR Array B	79.07	337	P	P	04 56 44.6	-0.5
	comp=Z,0.5nm,0.7s,baz=50,slow=5.4,SNR=5.2						
BCYI	Bear Canyon	79.10	45	P	P	04 56 45.6	-0.1
H17A	Grant Village	80.73	43	P	P	04 56 53.0	-1.6
H17A				IAmb	IAmb	04 56 56.6	
	comp=Z,7.5nm,0.8s						
RSSD	Black Hills	84.64	41	IAmb	IAmb	04 57 17.2	
	comp=Z,4.4nm,0.8s						
TXAR	Lajitas Array	94.27	52	P	P	04 58 02.1	+1.6
	comp=Z,1.7nm,0.7s,baz=303,slow=2.1,SNR=7.5						
TXAR	Lajitas Array	94.27	52	P	P	04 58 00.1	-0.3

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*GCMT **18** 04:58:03.0±0.3, 9°.45S±0°.02×66°.84E±0°.02, h20^{km}±1^{km}, MW4.9/95, Moment Tensor Solution. s15,c15; s95,c126; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.42±.18; M$_{\theta\theta}$-2.74±.13; M$_{\phi\phi}$3.16±.14; M$_{r\theta}$-0.53±.27; M$_{\theta\phi}$0.62±.12; M$_{\phi r}$-0.12±.25; Best double couple: M$_{0}$3.07100×10^{16} NP1:φ$_{s}$141.00000°,δ80.00000°,λ-174.00000°. NP2: φ$_{s}$50.00000°,δ84.00000°,λ-10.00000°. Principal axes: T 3.2330, Plg3.0000°, Azm96.0000°; N -0.3220, Plg78.0000°, Azm199.0000°; P -2.9100, Plg12.0000°, Azm6.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

*IDC **18** 04:58:09.9±2.9, 8°.06S×69°.69E, h0^{km}, mb3.5/5, mb1 3.7/5, mb1mx3.4/59, mbtmp3.5/5, MS3.9/7, Ms1 3.9/7, ms1mx3.5/32 Error ellipse: s-maj=104.9km s-min=33.2km az=59.0*

ISC 18 04:58:03.9±3.0, **8°.9S**±0°.4×**68°.2E**±0°.6, **h10^{km}, n15, σ0^{s}.74**/7, **mb3.7**/5, **MS4.0**/7, **Chagos Archipelago region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GEYT	Alibeck	47.48	349	LR	LR	05 23 30.4	
	comp=Z,91nm,21.6s,baz=0.0,slow=32						
H01W3	Cape Leeuwin H	49.32	129	T	T	06 00 35.0	
	baz=289,slow=75,SNR=36						
H01W2	Cape Leeuwin H	49.32	129	T	T	06 00 39.6	
	baz=289,slow=75,SNR=40						
H01W1	Cape Leeuwin H	49.34	129	T	T	06 00 36.3	
	baz=289,slow=75,SNR=31						
MKAR	Makanchi Array	56.82	12	P	P	05 07 48.1	-0.4
	0.3nm,0.7s,baz=203,slow=8.5,SNR=2.0						
MKAR				LR	LR	05 30 22.4	
	comp=Z,119nm,21.5s,baz=99,slow=35						
KURBB	Kurchatov Arra	59.92	8	P	P	05 08 09.2	-0.7
	0.4nm,0.7s,baz=201,slow=6.6,SNR=1.7						
ASAR	Alice Springs	64.31	112	P	P	05 08 39.8	-0.3
	0.5nm,0.7s,baz=262,slow=6.5,SNR=3.1						
WRA	Warramunga Arr	64.69	108	P	P	05 08 42.8	+0.1
	0.9nm,1.0s,baz=274,slow=6.3,SNR=2.6						
WRA				LR	LR	05 33 34.7	
	comp=Z,94nm,21.4s,baz=275,slow=34						
SONM	Songino Array	65.79	27	P	P	05 08 49.7	+0.4
	0.3nm,0.7s,baz=217,slow=7.0,SNR=2.5						
TORD	Torodi Ar. Bea	69.54	288	LR	LR	05 36 53.6	
	comp=Z,94nm,21.4s,baz=75,slow=33						
STKA	Stephens Creek	71.32	121	LR	LR	05 36 42.5	
	comp=Z,59nm,20.1s,baz=211,slow=33						
KSRS	Korea Array	72.33	46	LR	LR	05 41 09.2	
	comp=Z,62nm,18.2s,baz=330,slow=36						
ARCES	ARCESS Array B	83.55	346	LR	LR	05 50 00.3	
	comp=Z,192nm,18.3s,baz=235,slow=37						
PDAR	Pinedale Array	146.17	357	PKPbc	PKiKP	05 17 48.1	-0.2
	0.2nm,0.5s,baz=359,slow=3.6,SNR=2.0						
NVAR	Mina Array Bea	149.99	10	PKPbc	PKPab	05 18 02.0	+1.1
	1.0nm,0.9s,baz=282,slow=1.8,SNR=5.8						

INET 18 05:00:45.5, 12°.46N×86°.58W, h4^{km}, MW3.9, Nicaragua

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*IDC **18** 05:07:56.1±8.9, 21°.90N×144°.06E, h182^{km}±86^{km}, mb3.1/10, mb1 3.3/10, mb1mx3.2/43, mbtmp3.6/10, Error ellipse: s-maj=33.4km s-min=15.3km az=89.0*

ISC 18 05:07:52.9±1.0, **21°.9N**±0°.1×**144°.1E**±0°.2, **h150^{km}, n13, σ1^{s}.00**/10, **mb3.3**/9, **Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSRS	Korea Array	20.90	322	P	P	05 12 24.9	+1.5
	1.3nm,0.5s,baz=146,slow=7.9,SNR=6.9						
H11S3	WAKE ISLAND Hy	21.45	95	T	T	05 35 22.1	
	baz=286						
H11S1	WAKE ISLAND Hy	21.45	95	T	T	05 35 25.8	
	baz=286						
H11S2	WAKE ISLAND Hy	21.46	95	T	T	05 35 26.7	
	baz=286						
KLR	Kul'dur	29.01	343	P	P	05 13 38.3	-0.1
	1.0nm,0.5s,baz=148,slow=9.7,SNR=6.5						
SONM	Songino Array	39.76	320	P	P	05 15 11.1	0.0
	0.2nm,0.5s,baz=133,slow=9.6,SNR=2.3						
WRA	Warramunga Arr	42.65	194	P	P	05 15 34.8	+0.1
	0.6nm,0.4s,baz=17,slow=9.0,SNR=12						
ASAR	Alice Springs	46.35	193	P	P	05 16 03.9	-0.2
	0.2nm,0.3s,baz=6.0,slow=6.3,SNR=2.0						
MKAR	Makanchi Array	55.22	312	P	P	05 17 09.6	-0.6
	0.2nm,0.4s,baz=91,slow=9.7,SNR=6.0						
KURBB	Kurchatov Arra	57.99	317	P	P	05 17 28.9	-0.8
	0.4nm,0.4s,baz=89,slow=7.9,SNR=4.3						
ILAR	Eielson Array	61.48	27	P	P	05 17 52.0	-1.3
	0.2nm,0.8s,baz=256,slow=6.1,SNR=5.0						
YKA	Yellowknife Ar	75.89	28	P	P	05 19 22.5	0.0
	0.3nm,0.6s,baz=297,slow=5.1,SNR=6.4						
NVAR	Mina Array Bea	82.35	52	P	P	05 19 59.9	+1.4
	0.4nm,0.6s,baz=283,slow=5.7,SNR=3.8						

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*IDC **18** 05:23:22.6±1.4, 7°.15S×155°.44E, h0^{km}, mb3.8/8, mb1 4.0/8, mb1mx3.8/35, mbtmp3.8/8, MS2.7/1, Ms1 2.7/1, ms1mx2.4/37, Error ellipse: s-maj=49.6km s-min=23.8km az=119.0*

ISC 18 05:23:29.6±1.3, **7°.2S**±0°.2×**155°.4E**±0°.3, **h50^{km}, n9, σ1^{s}.10**/8, **mb3.6**/8, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	8.45	254	LR	LR	05 28 50.5	
	comp=Z,52nm,19.7s,baz=77,slow=39						
WRA	Warramunga Arr	24.04	236	P	P	05 28 39.8	-0.5
	1.6nm,0.9s,baz=60,slow=9.8,SNR=4.7						
ASAR	Alice Springs	26.35	229	P	P	05 28 59.7	-1.5
	0.2nm,0.3s,baz=54,slow=10,SNR=1.4						
STKA	Stephens Creek	27.73	206	P	P	05 29 14.4	+0.9
	2.2nm,0.7s,baz=50,slow=8.6,SNR=4.0						
CMAR	Chiang Mai Arr	61.23	296	P	P	05 33 41.2	+1.2
	1.2nm,0.3s,baz=110,slow=5.0,SNR=6.3						
SONM	Songino Array	69.72	327	P	P	05 34 33.8	-0.6
	0.3nm,0.5s,baz=108,slow=4.7,SNR=3.5						
ILAR	Eielson Array	83.41	21	P	P	05 35 50.6	-0.6
	0.4nm,0.5s,baz=241,slow=4.6,SNR=5.8						
MKAR	Makanchi Array	83.82	319	P	P	05 35 53.6	-0.2
	0.2nm,0.7s,baz=102,slow=6.3,SNR=2.1						
YKA	Yellowknife Ar	96.32	28	P	P	05 36 53.2	+0.7
	0.6nm,0.9s,baz=263,slow=4.1,SNR=7.0						

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*IDC **18** 05:47:18.8±1.5, 39°.60N×143°.53E, h0^{km}, mb3.6/8, mb1 3.7/10, mb1mx3.5/49, mbtmp3.6/10, ML3.2/2, MS2.7/1, Ms1 2.7/1, ms1mx2.3/40, Error ellipse: s-maj=32.3km s-min=27.0km az=115.0*

*JMA **18** 05:47:22.4±0.2, 39°.83N×143°.63E, h27^{km}, M3.6*

*NIED **18** 05:47:22.5, 39°.83N×143°.64E, h27^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$2.72; M$_{\theta\theta}$1.17; M$_{\phi\phi}$-3.89; M$_{r\theta}$1.15; M$_{\theta\phi}$-1.24; M$_{\phi r}$1.03; Fault plane solution: M$_{0}$3.88000×10^{14} NP1:φ$_{s}$34.00000°, δ59.00000°,λ118.00000°. NP2:φ$_{s}$168.00000°,δ41.00000°, λ51.00000°.*

ISC 18 05:47:24.1±0.9, **39°.81N**±0°.06×**143°.68E**±0°.08, **h35^{km}, n26, σ1^{s}.56**/34, **mb3.6**/8, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTH	Tanohata	1.40	276	P	Pn	05 47 46.1	-1.0
MIYJ	Miyakonagasawa	1.45	261	P	Pn	05 47 47.2	-0.7
MIYJ				*e*S	Sn	05 48 04.2	-1.5
JKEN	Kujiedanarisaw	1.56	285	P	Pn	05 47 48.2	-1.1
JANG	Nango	1.75	289	P	Pn	05 47 51.0	-1.0
JOM	Ohasama	1.87	260	P	Pn	05 47 53.6	0.0
JMK	Ichinoseki	2.09	246	P	Pn	05 47 56.2	-0.4
JMK				*e*S	Sn	05 48 20.9	-0.5
JNBK	Urakawa-nobuka	2.56	344	P	Pn	05 48 04.4	+1.3
JNBK				*e*S	Sn	05 48 35.2	+2.1
JYK	Kaneyama	2.72	252	P	Pn	05 48 05.7	+0.4
JCH	Churui	2.81	355	P	Pn	05 48 06.0	-0.5
JCH				*e*S	Sn	05 48 37.9	-1.2
JKB	Kayabe	2.88	317	*e*S	Sn	05 48 41.6	+0.6
JAK	Akkeshi	3.27	13	P	Pn	05 48 11.2	-1.7
JAK				*e*S	Sn	05 48 48.7	-1.8
JFR	Furan	3.45	347	*e*S	Sn	05 48 54.5	-0.4
JFT	Otama	3.48	230	P	Pn	05 48 16.6	+0.9
JAR	Ashorobuto	3.48	1	P	Pn	05 48 14.1	-1.7
JAR				*e*S	Sn	05 48 52.9	-2.8
ASAJ	Asahikawa	4.38	350	Pn	Pn	05 48 28.3	+0.3
	1.4nm,0.3s,baz=177,slow=27,SNR=2.5						
ASAJ				Sn	Sn	05 49 20.0	+2.2
	1.3nm,0.3s,baz=82,slow=34,SNR=1.7						
MAT	Matsushiro	5.41	235	P	Pn	05 48 42.9	+0.7
MAT				*e*S	Sn	05 49 42.7	-0.5
MJAR	Matsushiro Arr	5.41	235	Pn	Pn	05 48 43.4	+1.1
	0.2nm,0.3s,baz=42,slow=12,SNR=7.4						
KSRS	Korea Array	12.54	264	Pn	Pn	05 50 16.0	-4.0
	0.1nm,0.3s,baz=113,slow=21,SNR=2.5						
KSRS				LR	LR	05 54 33.4	
	comp=Z,32nm,19.7s,baz=10.0,slow=35						
SEY	Seymchan	23.74	10	P	P	05 52 34.6	+1.9
	0.8nm,0.3s,baz=245,slow=8.9,SNR=4.8						
SONM	Songino Array	27.85	299	P	P	05 53 08.9	-1.4
	0.2nm,0.5s,baz=184,slow=19,SNR=1.8						
ZALV	Zalesovo Beam	41.42	310	P	P	05 55 06.0	-0.9
	0.4nm,0.3s,baz=23,slow=39,SNR=2.4						
MKAR	Makanchi Array	44.21	300	P	P	05 55 30.4	+0.8
	0.4nm,0.8s,baz=91,slow=8.5,SNR=4.1						
KURBB	Kurchatov Arra	45.75	306	P	P	05 55 42.3	+0.5
	0.6nm,0.5s,baz=81,slow=8.5,SNR=6.2						
WRA	Warramunga Arr	60.08	190	P	P	05 57 26.1	-1.6
	0.5nm,0.6s,baz=9.5,slow=7.4,SNR=2.1						
YKA	Yellowknife Ar	60.52	31	P	P	05 57 31.1	+0.8
	0.1nm,0.6s,baz=304,slow=5.9,SNR=2.2						
FINES	FINESS Array B	67.18	332	P	P	05 58 17.0	+2.9
	1.9nm,0.5s,baz=229,slow=34,SNR=1.3						

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*IDC **18** 05:50:04.3±3.4, 15°.83N×96°.22W, h0^{km}, mb3.3/3, mb1 3.8/5, mb1mx3.5/36, mbtmp3.4/5, ML3.8/2, Error ellipse: s-maj=59.5km s-min=16.9km az=156.0*

*NEIC **18** 05:50:08.9±1.5, 16°.05N±0°.03×96°.46W±0°.03, h27^{km}±11^{km}, Error ellipse: s-maj=5.3km s-min=4.2km az=209.0*

*MEX **18** 05:50:10.2±1.0, 15°.97N×96°.45W, h48^{km}±12^{km}, MD4.1*

ISC 18 05:50:07.5±3.0, **15°.99N**±0°.03×**96°.46W**±0°.03, **h15^{km}**±20^{km}, **n43, σ1^{s}.45**/67, **mb3.4**/3, **Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PANG	Puerto Angel	0.32	183	*e*P	Pn	05 50 17.4	-0.3
PANG				*i* S	Sn	05 50 23.3	-0.8
PANG	Puerto Angel	0.32	183		Pn	05 50 17.4	-0.3
PANG					Sn	05 50 23.3	-0.8
HUIG	Huatulco	0.40	123	*e*P	Pn	05 50 18.5	-0.3
HUIG				*i* S	Sn	05 50 25.4	-0.6
HUIG	Huatulco	0.40	123		Pn	05 50 18.5	-0.3
HUIG					Sn	05 50 25.4	-0.6
PEIG	Puerto Escondi	0.66	271	*e*P	Pb	05 50 21.5	+0.7
PEIG				*e*S	Sb	05 50 31.1	+1.2
OXBJ	Oaxaca	1.10	347	*i* P	Pb	05 50 28.0	-0.4
OXBJ				*i* S	Sb	05 50 41.5	-1.1
OXBJ	Oaxaca	1.10	347		Pb	05 50 28.0	-0.4
OXBJ					Sb	05 50 41.5	-1.1
VHO	Vista Hermosa	1.11	346	*i* P	Pb	05 50 28.1	-0.4
VHO				*e*S	Sb	05 50 41.7	-1.1
YOIG	Yosondua	1.35	310	*e*P	Pn	05 50 32.5	+0.3
YOIG				*e*S	Sn	05 50 49.0	-1.0
PNIG	Pinotepa	1.65	284	*e*P	Pn	05 50 35.3	-0.7
PNIG				*e*S	Sn	05 50 55.6	-1.4
PNIG	Pinotepa	1.65	284		Pn	05 50 35.3	-0.7
PNIG					Sn	05 50 55.6	-1.4
TXIG	Tlaxiaco	1.78	315	*e*P	Pn	05 50 38.3	+0.3
TXIG				*i* S	Sn	05 50 59.4	-1.0
CMIG	Matias Romero	1.86	54	Pg	Pn	05 50 38.0	-0.9
	85nm,0.3s,baz=230,slow=11,SNR=370						
CMIG				Lg	Lg	05 51 00.8	
	87nm,0.3s,baz=216,slow=21,SNR=7.0						
CMIG				LR	LR	05 51 03.4	
	comp=Z,37nm,21.8s,baz=196,slow=33						
CMIG	Matias Romero	1.86	54	*e*P	Pn	05 50 38.0	-0.9
CMIG				*i* S	Sn	05 51 00.1	-2.1
TOIG	Toxpalan	2.17	345	*e*P	Pn	05 50 43.0	-0.2
TOIG				*i* S	Sn	05 51 08.5	-1.5
HLIG	Huajuapan de L	2.24	325	*e*P	Pn	05 50 44.5	+0.2
HLIG				*e*S	Sn	05 51 09.9	-1.8
FTIG	Fresnillo de T	2.49	320	*e*P	Pn	05 50 48.8	+1.1
FTIG				*e*S	Sn	05 51 19.2	+1.3
TLIG	Tlapa	2.56	308	*e*P	Pn	05 50 50.1	+1.6
TLIG				*e*S	Sn	05 51 18.1	-1.3
TLIG	Tlapa	2.56	308		Pn	05 50 50.1	+1.6
TLIG					Sn	05 51 18.1	-1.3
TPIG	Tehuac#an	2.57	340	*e*P	Pb	05 50 55.0	+1.6
TPIG				*e*S	Sb	05 51 24.0	-0.8
TPIG	Tehuac#an	2.57	340		Pb	05 50 55.0	+1.6
TPIG					Sb	05 51 24.0	-0.8
PCIG		3.13	95	*e*P	Pn	05 50 56.4	0.0
PCIG				*e*S	Sn	05 51 30.2	-3.2
PCIG		3.13	95		Pn	05 50 56.4	0.0
PCIG					Sn	05 51 30.2	-3.2
TGIG		3.30	76	*e*P	Pn	05 50 59.4	+0.7
TGIG		3.30	76		Pn	05 50 59.4	+0.7
PPM	Popocatepetl	3.69	326	*e*P	Pn	05 51 08.1	+3.6
PPM				*i* S	Sn	05 51 48.9	+0.8
PLIG	Platanillo	3.77	310	*e*P	Pb	05 51 10.8	-3.0
PLIG				*i* S	Sn	05 51 47.9	-1.4
PLIG	Platanillo	3.77	310		Pb	05 51 10.8	-3.0
PLIG					Sb	05 51 57.9	-1.4
MAVM	Malinalco, Edo	4.14	316	*i* P	Pn	05 51 11.5	+1.1
MAVM	Malinalco, Edo	4.14	316		Pn	05 51 11.5	+1.1
CCIG	Comitan	4.16	85	*e*P	Pn	05 51 11.4	+0.7
CCIG				*i* S	Sn	05 52 00.2	+1.0
CCIG	Comitan	4.16	85		Pn	05 51 11.4	+0.7
CCIG					Sn	05 52 00.2	+1.0
HUEH	Huehuetenango	4.82	97		Pn	05 51 22.9	+3.1
PETF	Flores	6.39	81		Pn	05 51 41.3	+0.1
TEIG	Tepich	8.85	60	Pn	Pn	05 52 11.9	-3.0
	4.0nm,0.3s,baz=284,slow=2.0,SNR=29						
TEIG				Sn	Sn	05 53 45.4	-8.9
	1.7nm,0.3s,baz=46,slow=20,SNR=1.7						
TEIG	Tepich	8.85	60		Pn	05 52 14.7	-0.1
TXAR	Lajitas Array	14.85	335	Pn	P	05 53 43.3	+0.4
	0.0nm,0.3s,baz=153,slow=14,SNR=3.0						
NVAR	Mina Array Bea	29.47	324	P	P	05 56 13.3	+2.1
	0.6nm,0.8s,baz=144,slow=7.7,SNR=4.5						
YKA	Yellowknife Ar	48.18	349	P	P	05 58 46.4	-0.6
	0.2nm,0.6s,baz=146,slow=7.9,SNR=3.2						
H03N2	Juan Fernandez	51.92	161	T	T	06 55 06.9	
	baz=328						
H03N1	Juan Fernandez	51.93	161	T	T	06 55 07.8	
	baz=328						
H03N3	Juan Fernandez	51.94	161	T	T	06 55 06.0	
	baz=328						
ILAR	Eielson Array	59.34	337	P	P	06 00 09.3	+0.6
	0.2nm,0.5s,baz=120,slow=5.3,SNR=4.3						

IDC 18 06:24:36.7±1.8, **2°.97N**×**126°.28E, h0^{km}, mb3.6**/4, **mb1 3.8**/4, **mb1mx3.5**/41, **mbtmp3.6**/4, **1D, Error ellipse: s-maj=185.7km s-min=21.1km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KCP	Kidapawan	4.19	344	⇓*e*P	Pb	06 25 47.4	-4.0
WRA	Warramunga Arr	24.10	161	P	P	06 29 54.1	-0.2
	0.8nm,0.5s,baz=340,slow=11,SNR=13						
ASAR	Alice Springs	27.50	165	P	P	06 30 26.1	+1.0
	0.2nm,0.4s,baz=342,slow=6.9,SNR=1.8						
MKAR	Makanchi Array	57.93	326	P	P	06 34 31.1	+0.3
	0.3nm,0.4s,baz=118,slow=7.7,SNR=14						
KURBB	Kurchatov Arra	62.14	328	P	P	06 34 59.0	-0.7
	1.4nm,0.7s,baz=125,slow=6.2,SNR=15						

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*IDC **18** 06:27:23.8±2.1, 23°.93N×141°.68E, h87^{km}±18^{km}, mb3.7/16, mb1 3.9/19, mb1mx3.7/47, mbtmp4.0/19, MS4.1/2, Ms1 4.1/2, ms1mx2.8/42, Error ellipse: s-maj=19.4km s-min=12.7km az=105.0*

*NEIC **18** 06:27:24.3±1.4, 23°.9N±0°.1×141°.7E±0°.2, h94^{km}±8^{km}, mb4.4/16, Error ellipse: s-maj=21.2km s-min=14.5km az=96.0*

*JMA **18** 06:27:27.3±0.1, 24°.38N×142°.70E, h178^{km}, M4.8*

ISC 18 06:27:33.9±1.0, **24°.6N**±0°.1×**141°.7E**±0°.1, **h150^{km}, n65, σ1^{s}.36**/49, **mb4.1**/30, **Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHH2	Haha-jima-NKT2	2.07	11	P	Pn	06 28 07.7	-2.2
JHH2				S	Sn	06 28 38.7	+1.0
JCJ	Chichijima	2.53	9	P	Pn	06 28 13.6	-1.8
	128nm,0.3s,baz=285,slow=24,SNR=22						
JCJ				S	Sn	06 28 48.9	+1.4
	86nm,0.3s,baz=125,slow=22,SNR=8.6						
JCJ	Chichijima	2.53	9	Pn	Pn	06 28 13.2	-2.2
CBIJ	Chichi jima	2.53	9	P	Pn	06 28 13.1	-2.3
CBIJ				S	Sn	06 28 48.6	+1.1
BSO3	Boso 3	10.23	354	P	Pn	06 29 54.5	-2.2
BSO4	Boso 4	10.44	354	P	Pn	06 29 57.9	-1.6
JSG	Sagara	10.51	344	Pn	Pn	06 30 01.6	+0.9
JOD2	Odawara 2	10.88	348	P	Pn	06 30 04.7	-0.9
GUMO	Guam	11.34	164	LR	LR	06 33 12.7	
	comp=Z,782nm,20.1s,baz=94,slow=33						
JGF	Kuroka	11.61	342	Pn	Pn	06 30 15.2	+0.1
JAG	Ashikaga	11.96	351	P	Pn	06 30 16.5	-3.1
JHO	Hitachi	12.03	355	P	Pn	06 30 18.3	-2.2
MJAR	Matsushiro Arr	12.29	347	P	Pn	06 30 22.8	-1.2
	0.1nm,0.3s,baz=162,slow=9.7,SNR=1.9						
JMM	Marumori	13.26	357	Pn	Pn	06 30 35.0	-1.4
JSD	Sado	13.73	348	Pn	Pn	06 30 40.4	-2.0
KSRS	Korea Array	17.43	321	P	P	06 31 25.5	-1.3
	0.1nm,0.3s,baz=135,slow=12,SNR=2.5						
H11N1	WAKE ISLAND Hy	23.78	97	T	T	06 57 12.3	
	baz=283,slow=74,SNR=3.9						
H11N2	WAKE ISLAND Hy	23.78	97	T	T	06 57 05.6	
	baz=283,slow=74,SNR=3.3						
H11N3	WAKE ISLAND Hy	23.80	97	T	T	06 57 24.3	
	baz=283,slow=74,SNR=4.2						
H11S3	WAKE ISLAND Hy	23.97	100	T	T	06 57 25.0	
	baz=303,slow=74,SNR=16						
H11S1	WAKE ISLAND Hy	23.98	100	T	T	06 57 27.0	
	baz=142,slow=74,SNR=16						
H11S2	WAKE ISLAND Hy	23.99	100	T	T	06 57 24.2	
	SNR=12						
KLR	Kul'dur	25.81	345	P	P	06 32 52.1	+1.1
	0.5nm,0.4s,baz=187,slow=8.1,SNR=2.6						
SEY	Seymchan	38.99	8	P	P	06 34 47.8	+2.5
	1.3nm,0.6s,baz=178,slow=3.8,SNR=4.9						
CMAR	Chiang Mai Arr	40.15	270	P	P	06 34 51.3	-4.3
	1.2nm,0.4s,baz=130,slow=13,SNR=6.6						
WB0	Warramunga Arr	44.66	190	P	P	06 35 22.6	-9.3
WR0	Warramunga Arr	44.83	190	P	P	06 35 24.2	-8.9
WR0				IAmb	IAmb	06 35 48.1	
	comp=Z,7.2nm,1.1s						
WB2	Warramunga Arr	44.84	190	P	P	06 35 24.4	-8.9
WRA	Warramunga Arr	44.84	190	P	P	06 35 24.5	-8.8
	comp=Z,2.9nm,0.4s,baz=8.5,slow=8.6,SNR=51						
WRA	Warramunga Arr	44.84	190	P	P	06 35 23.6	-10
FITZ	Fitzroy Crossi	45.24	202	P	P	06 35 27.7	-8.7
FITZ				IAmb	IAmb	06 35 31.5	
	comp=Z,11nm,1.4s						
TAPN	Taplejung	48.34	286	*e*P	P	06 36 02.1	+1.2
	comp=Z,9.6nm,0.5s						
AS31	Alice Springs	48.56	190	P	P	06 35 52.9	-9.4
ASAR	Alice Springs	48.57	190	P	P	06 35 53.2	-9.0
	comp=Z,0.8nm,0.6s,baz=15,slow=11,SNR=18						
ODAN	Odare	48.70	285	*e*P	P	06 36 04.3	+0.7
	comp=Z,16nm,0.5s						
RAMN	Ramite	49.38	285	*e*P	P	06 36 09.5	+0.7
	comp=Z,9.5nm,0.5s						
GUN	Gumba	49.84	287	*e*P	P	06 36 13.6	+1.2
	comp=Z,10nm,0.4s						
PKI	Pulchoki	50.31	286	*e*P	P	06 36 16.2	+0.3
	comp=Z,6.7nm,0.4s						
DANN	Dangsing	51.61	288	*e*P	P	06 36 26.7	+1.1
	comp=Z,66nm,0.6s						
MK31	Makanchi Array	51.78	311	P	P	06 36 25.3	-1.0
MKAR	Makanchi Array	51.78	311	P	P	06 36 26.8	+0.6
	comp=Z,0.5nm,0.4s,baz=87,slow=8.4,SNR=11						
KURK	Kurchatov	54.47	316	P	P	06 36 45.0	-0.7
KURK	Kurchatov	54.47	316	IAmb	IAmb	06 36 54.7	
	comp=Z,2.0nm,1.1s						
KURBB	Kurchatov Arra	54.52	316	P	P	06 36 45.0	-1.1
	comp=Z,1.2nm,0.8s,baz=92,slow=7.5,SNR=9.3						
STKA	Stephens Creek	56.15	180	P	P	06 36 48.4	-10
	comp=Z,1.0nm,0.5s,baz=22,slow=9.8,SNR=3.0						
IMAR	Indian Mountai	57.46	26	P	P	06 37 08.8	+2.0

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A21K  Barrow              57.92  20  P      P      06 37 11.1 +1.2
A21K                                 IAmb   IAmb   06 37 12.6
      comp=Z,3.2nm,0.7s
SUA   Susitna One         57.98  32  P      P      06 37 11.8 +1.2
SUA                                  IAmb   IAmb   06 37 25.8
      comp=Z,5.4nm,1.3s
I23K  Minto, Yukon-K      59.10  27  P      P      06 37 18.7 +0.5
I23K                                 IAmb   IAmb   06 37 20.7
      comp=Z,2.7nm,1.1s
BVAR  Borovoye Array      59.62 318  P      P      06 37 21.2 -0.8
      comp=Z,0.6nm,0.3s,baz=98,slow=7.9,SNR=5.2
IL31                      60.10  28  P      P      06 37 25.0  0.0
IL31                                 IAmb   IAmb   06 37 26.2
      comp=Z,3.8nm,1.0s
ILAR  Eielson Array       60.10  28  P      P      06 37 25.2 +0.1
      comp=Z,1.5nm,0.8s,baz=259,slow=5.6,SNR=14
KKAR  Karatay Array       60.24 307  P      P      06 37 26.2 -0.2
CTGM  Chitina Glacie      62.51  32  P      P      06 37 42.6 +1.1
EGAK  Eagle               62.55  28  P      P      06 37 42.3 +0.8
EGAK                                 IAmb   IAmb   06 37 57.0
      comp=Z,5.7nm,1.4s
INK   Inuvik              65.47  24  P      P      06 38 01.3 +0.8
      comp=Z,1.5nm,0.5s,baz=271,slow=6.1,SNR=7.7
INK   Inuvik              65.47  24  P      P      06 38 00.8 +0.3
INK                                  IAmb   IAmb   06 38 01.9
      comp=Z,1.5nm,0.6s
ABKAR Akbulak array       66.56 315  P      P      06 38 06.5 -1.3
YKA   Yellowknife Ar      74.53  28  P      P      06 38 56.3 +0.5
      comp=Z,1.1nm,0.5s,baz=294,slow=4.9,SNR=22
ARCES ARCESS Array B      75.77 341  LR     LR     07 16 23.6
      comp=Z,152nm,18.1s,baz=250,slow=38
FINES FINESS Array B      80.01 334  P      P      06 39 26.1 -0.3
      comp=Z,5.7nm,1.1s,baz=48,slow=2.8,SNR=5.7
NVAR  Mina Array Bea      82.39  51  P      P      06 39 39.5 -0.2
      comp=Z,1.0nm,0.8s,baz=266,slow=6.0,SNR=10
NVAR  Mina Array Bea      82.39  51  P      P      06 39 38.6 -1.1
PDAR  Pinedale Array      86.28  44  P      P      06 39 58.7 -0.5
      comp=Z,0.3nm,0.5s,baz=219,slow=0.9,SNR=4.0
TXAR  Lajitas Array       97.42  53  P      P      06 40 50.6 -0.4
      comp=Z,0.3nm,0.6s,baz=324,slow=5.0,SNR=5.1
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*NSSP **18** 06:35:26.9, 42°00N×46°58E, h20^{km}, Ms3.0*
*MOS **18** 06:35:27.9±0.0, 42°04N×46°58E, h24^{km}, MPVA4.1*
*NORS **18** 06:35:29.0±0.0, 42°10N×46°70E, h35^{km}, MPVA4.0*
*DRS **18** 06:35:30.1±0.0, 42°03N×46°46E, h18^{km}, ML3.2/10*
*AZER **18** 06:35:30.4±0.1, 41°91N×46°59E, h31^{km}±1^{km}, ml3.1/21, Error ellipse: s-maj=2.4km s-min=1.2km az=341.0*
ISC 18 06:35:29.5±1.0, **42°03N**±0°02×**46°58E**±0°01, **h19**^{km}±3^{km}, **n98, σ1^{s}21**/173, **12C-26D, Eastern Caucasus**

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Code  Station Name        Δ°   AZ°    Phase ID          Time      Res
                                     Op     ISC       h  m  s    ISC
LGD   Lagodekhi           0.32 233   P      Pn     06 35 38.9 -0.3
LGD                                  S      Sn     06 35 46.6 +1.3
LGD   Lagodekhi           0.32 233   PG     Pn     06 35 38.9 -0.3
LGD                                  S      Sn     06 35 46.6 +1.3
ZKTA  Zakatala            0.39 176   P      Pn     06 35 40.2  0.0
      SNR=221
ZKTA                                 S      Sn     06 35 47.1  0.0
GNBR  Gunib               0.46  38⇓iPG     Pb     06 35 39.8 +0.7
GNBR                                e              06 35 47.6
GNBR                                 pmax   pmax
      comp=Z,2μm,0.2s
GNBR                                 smax   smax
      comp=N,2μm,0.2s
GNBR  Gunib               0.46  38⇓iPg     Pb     06 35 39.9 +0.7
      comp=N,2μm,0.2s
GNBR                              ⇑eSg     Sn     06 35 47.6 -1.4
      comp=N,2μm,0.1s
XNZR  Khunzakh            0.52  10⇑iPG     Pb     06 35 40.6 +0.3
XNZR                                eS     Sn     06 35 49.5 -1.2
XNZR  Khunzakh            0.52  10  ePg    Pb     06 35 40.5 +0.3
XNZR                                eSg    Sn     06 35 49.1 -1.6
ARKR  Arakani             0.65  28⇓iPG     Pb     06 35 42.0 -0.3
ARKR                                e              06 35 51.7
ARKR                                 pmax   pmax
      comp=Z,255nm,0.4s
ARKR                                 smax   smax
      comp=N,1μm,0.6s
ARKR  Arakani             0.65  28⇓iPg     Pb     06 35 42.0 -0.3
      comp=N,256nm,0.4s
ARKR                              ⇓eSg     Sg     06 35 51.8 +0.5
      comp=N,1μm,0.6s
DDFL  Dedoflistskaro      0.68 211   P      Pn     06 35 45.0 +0.8
DDFL                                 S      Sn     06 36 00.5 +6.3
DDFL  Dedoflistskaro      0.68 211   PG     Pn     06 35 45.0 +0.8
DDFL                                 S      Sn     06 36 00.5 +6.3
BTLR  Botlikh             0.69 337  ePG    Pb     06 35 42.7 -0.3
BTLR                                eS     Sg     06 35 53.2 +0.7
BTLR  Botlikh             0.69 337⇓ePg     Pb     06 35 42.7 -0.3
      comp=N,130nm,0.5s
BTLR                              ⇓eSg     Sg     06 35 52.9 +0.4
      comp=N,462nm,0.8s
URKR  Urkarakh            0.80  80⇓ePG     Pg     06 35 45.1  0.0
URKR                                e              06 35 57.3
URKR                                 pmax   pmax
      comp=Z,460nm,0.5s
URKR                                 smax   smax
      comp=N,273nm,0.2s
URKR  Urkarakh            0.80  80⇓ePg     Pg     06 35 45.2  0.0
      comp=N,460nm,0.5s
URKR                              ⇓eSg     Sn     06 35 57.4 +0.1
      comp=N,273nm,0.2s
KRNR  Karanay             0.84  17⇓ePG     Pb     06 35 44.3 -1.2
KRNR                                e              06 35 55.9
KRNR                                 pmax   pmax
      comp=Z,52nm,0.2s
KRNR                                 smax   smax
      comp=E,442nm,0.6s
KRNR  Karanay             0.84  17⇓ePg     Pb     06 35 44.3 -1.2
      comp=E,52nm,0.2s
KRNR                              ⇓eSg     Sb     06 35 55.9 -0.5
      comp=E,442nm,0.6s
BUJR  Buynaksk            0.89  26⇓iPG     Pb     06 35 45.6 -0.8
BUJR                                e              06 35 58.3
BUJR                                 pmax   pmax
      comp=Z,206nm,0.3s
BUJR                                 smax   smax
      comp=N,1μm,0.7s
BUJR  Buynaksk            0.89  26⇓iPg     Pb     06 35 45.7 -0.8
      comp=N,206nm,0.3s
BUJR                              ⇓eSg     Sg     06 35 58.3 -0.3
      comp=N,1μm,0.7s
SGKR  Sergokala           0.91  61⇓ePG     Pb     06 35 46.5 -0.2
SGKR                                e              06 36 00.0
SGKR                                 pmax   pmax
      comp=Z,224nm,0.5s
SGKR                                 smax   smax
      comp=N,674nm,0.6s
SGKR  Sergokala           0.91  61⇓ePg     Pb     06 35 46.5 -0.2
      comp=N,224nm,0.5s
SGKR                              ⇓eSg     Sn     06 36 00.0  0.0
      comp=N,674nm,0.6s
SEKA  Sheki               0.94 150   P      Pb     06 35 47.5 +0.3
      SNR=59
SEKA                                 S      Sn     06 36 01.4 +0.7
DVE   Vedeno              0.99 340⇓iPG     Pb     06 35 47.4 -0.7
DVE                                 eS     Sb     06 36 01.2 +0.4
DVE   Vedeno              0.99 340  ePg    Pb     06 35 47.3 -0.8
DVE                                 eSg    Sb     06 36 00.9 +0.1
DBC   Dubki               1.01  10  ePG    Pb     06 35 47.3 -1.2
DBC                                 eS     Sb     06 36 01.5  0.0
DBC   Dubki               1.01  10⇑ePg     Pb     06 35 47.1 -1.4
      comp=N,68nm,0.4s
DBC                               ⇑eSg     Sb     06 36 01.2 -0.2
      comp=N,337nm,0.4s
AKT   Akhty               1.02 122  ePG    Pb     06 35 48.7  0.0
AKT                                 eS     Sg     06 36 03.7 +1.0
AKT   Akhty               1.02 122⇓ePg     Pb     06 35 48.6  0.0
      comp=N,238nm,0.2s
AKT                               ⇓eSg     Sg     06 36 02.8  0.0
      comp=N,416nm,0.6s
DLMR  Dylym               1.04   2⇑ePG     Pb     06 35 48.2 -0.8
DLMR                                e              06 36 02.4
DLMR                                 pmax   pmax
      comp=Z,184nm,0.4s
DLMR                                 smax   smax
      comp=N,1μm,0.5s
DLMR  Dylym               1.04   2⇓ePg     Pb     06 35 48.2 -0.8
      comp=N,184nm,0.4s
DLMR                              ⇑eSg     Sb     06 36 02.5 +0.1
      comp=N,1μm,0.5s
MAK   Makhachkala         1.16  36  ePG    Pb     06 35 50.8 -0.1
MAK                                 e              06 36 07.0
MAK                                  pmax   pmax
      comp=Z,136nm,0.3s
MAK                                  smax   smax
      comp=N,2μm,0.6s
MAK                                  smax   smax
      comp=N,2μm,0.6s
MAK   Makhachkala         1.16  36  ePg    Pb     06 35 51.0  0.0
MAK                                 eSg    Sg     06 36 07.7 +0.6
MNGR  Mingechevir, A      1.31 163   P      Pn     06 35 52.4 -0.4
MNGR                                 S      Sn     06 36 08.6 -1.2
GROC  Groznyy             1.31 334⇑iPG     Pn     06 35 52.9  0.0
GROC                                eS     Sb     06 36 10.9 +0.9
GROC  Groznyy             1.31 334  ePg    Pn     06 35 52.9  0.0
GROC                                eSg    Sb     06 36 10.6 +0.6
QZX   Qazax, Azerbai      1.33 224   P      Pn     06 35 52.2 -0.9
      SNR=14
QZX                                  S      Sn     06 36 10.8 +0.5
KANR  Karaman             1.35  29  ePg    Pn     06 35 53.3  0.0
KANR                                eSg    Sb     06 36 10.7 -0.3
SEAG  Tbilisi Sea         1.35 259   P      Pg     06 35 55.4 -0.3
SEAG                                 S      Sb     06 36 12.3 +1.0
SEAG  Tbilisi Sea         1.35 259   PG     Pg     06 35 55.4 -0.3
SEAG                                 S      Sb     06 36 12.3 +1.0
QSAR  Qusar               1.36 112   P      Pb     06 35 54.1 -0.3
      SNR=166
QSAR                                 S      Sb     06 36 12.2 +0.8
GANJ  Ganja               1.39 188   P      Pn     06 35 53.1 -0.9
      SNR=16
GANJ                                 S      Sn     06 36 11.6 -0.3
QBL   Gabala              1.43 138   P      Pn     06 35 54.7 +0.1
      SNR=5.0
QBL                                  S      Sb     06 36 14.1 +0.5
GDB   GEDABAY             1.45 206   P      Pn     06 35 53.5 -1.3
      SNR=43
GDB                                  S      Sn     06 36 12.6 -0.8
XNQ   Khinaliq            1.45 126   P      Pn     06 35 55.4 +0.5
      SNR=93
XNQ                                  S      Sb     06 36 15.1 +1.0
QUBA  Quba, Azerbaij      1.58 114   P      Pn     06 35 57.2 +0.6
      SNR=3.7
QUBA                                 S      Sb     06 36 18.0 +0.2
GUDG  Gudauri             1.62 286   P      Pn     06 35 58.1 +0.7
GUDG                                 S      Sg     06 36 23.6 +1.6
GUDG  Gudauri             1.62 286   PN     Pn     06 35 58.1 +0.7
GUDG                                 S      Sg     06 36 23.6 +1.6
KMGR  Komgaron            1.63 310  ePG    Pb     06 35 58.8 -0.3
KMGR                                eS     Sb     06 36 20.9 +1.5
KMGR  Komgaron            1.63 310  ePg    Pb     06 35 58.8 -0.3
KMGR                                eSg    Sb     06 36 20.9 +1.5
IML   Ismayilli           1.72 135   P      Pn     06 35 59.4 +0.8
      SNR=6.8
IML                                  S      Sb     06 36 21.0 -0.9
VLKR  Vladikavkaz         1.74 307  ePN    Pb     06 36 00.1 -0.8
VLKR                                eS     Sg     06 36 24.5 -1.1
VLKR  Vladikavkaz         1.74 307  ePg    Pb     06 36 00.1 -0.8
VLKR                                eSg    Sb     06 36 22.8 +0.4
BRDA  Brd                 1.82 165   P      Pn     06 36 00.1 +0.3
BRDA                                 S      Sn     06 36 22.0 -0.3
LACR  Lac                 1.87 296  ePN    Pn     06 36 00.8 +0.1
LACR  Lac                 1.87 296  ePg    Pn     06 36 00.8 +0.1
LACR                                eSg    Sn     06 36 25.3 +1.4
ZRD   Zardab              1.93 154   P      Pn     06 36 01.6 +0.2
ZRD                                  S      Sn     06 36 23.8 -1.4
STE   Stepanavan          1.95 239  i P    Pn     06 36 01.2 -0.6
STE                                  S      Sb     06 36 27.8 -0.8
PQL   Pirkuli             1.95 129   P      Pn     06 36 01.8  0.0
      SNR=5.1
PQL                                  S      Sn     06 36 25.4 -0.5
AGDM  Agdam               1.96 168   P      Pn     06 36 01.6 -0.1
      SNR=3.5
AGDM                                 S      Sn     06 36 24.6 -1.2
SIZA  Siyzn               1.98 118   P      Pn     06 36 02.2  0.0
      SNR=4.5
SIZA                                 S      Sn     06 36 26.5  0.0
BTKR  Batakoyurt          2.02 313  ePg    Pb     06 36 06.0 +0.3
BTKR                                eSg    Sb     06 36 29.5 -0.9
ATGJ  Altiaghaj           2.12 123   P      Pn     06 36 04.4 +0.3
ATGJ                                 S      Sn     06 36 30.3 +0.4
ZEI   Tsey                2.13 292  ePN    Pb     06 36 06.5 -1.1
ZEI                                 eS     Sb     06 36 34.3 +0.6
ZEI   Tsey                2.13 292  ePg    Pb     06 36 06.5 -1.1
ZEI                                 eSg    Sb     06 36 34.3 +0.6
TRKR  Terskaya            2.17 322  ePg    Pb     06 36 07.2 -1.1
TRKR                                eSg    Sn     06 36 30.9 -0.2
KAPZ  Kaputan             2.22 220  i P    Pn     06 36 05.2 -0.3
KAPZ                                i S    Sn     06 36 34.1 +1.7
STDR  Stavd-Durt          2.29 307  ePn    Pb     06 36 08.6 -1.7
STDR                                eSn    Sn     06 36 35.7 +1.7
GNI   Garni               2.33 217  i P    Pn     06 36 07.5 +0.4
GNI                                 i S    Sb     06 36 39.0 -0.6
GNI   Garni               2.33 217dePN     Pn     06 36 07.9 +0.8
GNI   Garni               2.33 217  ePn    Pn     06 36 07.6 +0.6
BGD   Bogdanovka          2.36 252   P      Pb     06 36 10.2 -1.4
BGD                                  S      Sb     06 36 39.4 -1.0
BGD   Bogdanovka          2.36 252   PN     Pb     06 36 10.2 -1.4
BGD                                  S      Sb     06 36 39.4 -1.0
DIGR  Digorskoe uzhe      2.39 292  ePN    Pn     06 36 09.8 +2.0
DIGR                                eS     Sb     06 36 40.0 -1.2
DIGR  Digorskoe uzhe      2.39 292  ePn    Pn     06 36 06.6 -1.2
DIGR                                eSn    Sb     06 36 40.0 -1.2
LSNR  Lesken              2.39 303  ePn    Pb     06 36 12.9 +1.0
LSNR                                eSn    Sn     06 36 36.4  0.0
ONI   Oni                 2.39 285   P      Pn     06 36 09.4 +1.7
ONI                                  S      Sg     06 36 45.4 -1.0
ONI   Oni                 2.39 285   PN     Pn     06 36 09.4 +1.7
ONI                                  S      Sg     06 36 45.4 -1.0
ONI   Oni                 2.39 285  ePn    Pb     06 36 10.4 -1.6
ONI                                 eSn    Sb     06 36 39.8 -1.3
NRKZ  NAREK               2.49 216  i P    Pn     06 36 10.3 +1.1
NRKZ                                i S    Sb     06 36 43.3 -0.8
VNNZ  Vanand              2.83 228  i P    Pb     06 36 17.3 -2.3
VNNZ                                i S    Sb     06 36 55.4 +1.4
NEY   Neytrino            3.10 295  ePn    Pn     06 36 19.2 +1.6
NEY                                 eSn    Sn     06 36 57.3 +3.1
GLBA  Clilabad            3.10 153   P      Pn     06 36 17.6 +0.1
GLBA                                 S      Sn     06 36 51.5 -2.5
KBZ   Khabaz              3.20 303⇑ePN     Pn     06 36 18.4 -0.4
KBZ   Khabaz              3.20 303  ePn    Pn     06 36 18.2 -0.5
KBZ                                 eSn    Sn     06 36 55.6 -0.7
PYA1  Pyatigorsk          3.27 310⇑ePN     Pn     06 36 21.2 +1.4
PYA1  Pyatigorsk          3.27 310  ePn    Pn     06 36 18.4 -1.4
SHA1  Shidzhatmaz         3.35 302⇑ePN     Pn     06 36 21.7 +0.5
SHA1  Shidzhatmaz         3.35 302  ePn    Pn     06 36 20.4 -0.7
SHA1                                eSn    Sn     06 36 59.5 -1.1
YRD   Yardimli            3.35 157   P      Pn     06 36 21.0 -0.2
      SNR=21
YRD                                  S      Sn     06 36 57.6 -3.0
CHVG  Ch'k'valeri         3.40 283   P      Pg     06 36 32.8 -2.0
CHVG  Ch'k'valeri         3.40 283   PN     Pg     06 36 32.8 -2.0
KIV   Kislovodsk          3.45 305  ePn    Pn     06 36 23.7 +1.3
LRK   Lerik               3.64 158   P      Pn     06 36 25.0  0.0
      SNR=11
LRK                                  S      Sn     06 37 05.5 -2.0
ASTR  Astara              3.85 153   P      Pn     06 36 27.0 -0.8
      SNR=5.7
ASTR                                 S      Sn     06 37 10.3 -2.2
GOF   Gofitskoye          3.98 321⇑ePN     Pn     06 36 29.0 -0.5
GOF                                  pmax   pmax
      comp=Z,12nm,0.5s
BRVK  Borovoye           19.34  47⇑eP      Pn     06 39 56.1 +1.3
BRVK                                 pmax   pmax
      comp=Z,1.0nm,1.1s
AAK   Ala-Archa          20.61  79⇓eP      Pn     06 40 09.2 -0.9
AAK                                  pmax   pmax
      comp=Z,6.0nm,1.1s
KURK  Kurchatov          23.60  57⇓eP      P      06 40 40.7 +1.7
KURK                                 pmax   pmax
      comp=Z,1.0nm,1.1s
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*IDC **18** 06:58:08.2±1.0, 24°28N×125°09E, h0^{km}, mb3.9/6, mb1 4.0/6, mb1mx3.6/45, mbtmp3.9/6, MS3.1/5, Ms1 3.2/5, ms1mx2.9/42, Error ellipse: s-maj=60.0km s-min=20.8km az=68.0*
*JMA **18** 06:58:13.2±0.2, 24°32N×125°16E, h38^{km}±5^{km}, M3.4*
*NEIC **18** 06:58:16.8±1.9, 24°1N±0°1×124°94E±0°09, h71^{km}±5^{km}, mb4.4/8, Error ellipse: s-maj=15.5km s-min=10.6km az=160.0*
ISC 18 06:58:13.4±1.1, **24°30N**±0°07×**125°21E**±0°06, **h37**^{km}±2^{km}, **n41, σ0^{s}99**/42, **mb4.0**/11, **MS3.2**/4, **Southwestern Ryukyu Islands**

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Code  Station Name        Δ°   AZ°    Phase ID          Time      Res
                                     Op     ISC       h  m  s    ISC
JMJ2  Miyako jima3        0.45  13   P      Pn     06 58 22.9 -0.3
JMJ2                                 S      Sn     06 58 30.2  0.0
JOGS  Gusukube            0.49  21   P      Pn     06 58 23.8  0.0
JOGS                                 S      Sn     06 58 31.4 +0.3
JIRB  Irabujima           0.53 356   P      Pn     06 58 23.5 -0.9
JIRB                                 S      Sn     06 58 31.6 -0.5
JTJ   Tarama              0.58 306   P      Pn     06 58 24.1 -1.1
JTJ                                  S      Sn     06 58 31.8 -1.6
JIKM  Ikemajima           0.62   3   P      Pn     06 58 25.2 -0.6
JIKM                                 S      Sn     06 58 34.5  0.0
JISG  Ishigakijimahi      0.87 289   P      Pn     06 58 28.1 -1.0
JIJ   Ishigaki jima       0.98 274   P      Pn     06 58 30.2 -0.4
JIJ                                 eS     Sn     06 58 44.0 +0.8
JKRS  Kuro-shima          1.10 267   P      Pn     06 58 32.7 +0.4
HATJ  Hateruma jima       1.31 260   P      Pn     06 58 35.1  0.0
HATJ                                eS     Sn     06 58 50.9 -0.5
IRIF  Iriomote-Funau      1.35 272   P      Pn     06 58 35.8 +0.1
YOJ   Yonaguni jima       2.02 275          Pn     06 58 46.6 +1.8
NACB  Ninganchiao         3.31 269   Pn     Pn     06 59 02.1 -0.5
TATO  Taipei              3.46 282   Pn     Pn     06 59 05.7 +1.0
YHNB  Yeheng              3.52 277          Pn     06 59 07.2 +1.7
YULB  Yu-li               3.70 257   Pn     Pn     06 59 06.4 -1.6
JOW   Kunigami            3.74  47   Pn     Pn     06 59 16.6 +8.0
SSLB  Suanglung           3.93 263   Pn     Pn     06 59 10.4 -0.8
TWG   Pinlang             4.08 250   Pn     Pn     06 59 11.3 -2.0
TPUB  Ta-pu               4.32 258   Pn     Pn     06 59 17.3 +0.8
KSRS  Korea Array        13.31   9   LR     LR     07 06 24.7
      comp=Z,38nm,18.1s,baz=190,slow=37
ASAJ  Asahikawa          24.35  31   LR     LR     07 13 31.8
      comp=Z,54nm,18.3s,baz=322,slow=38
CMAR  Chiang Mai Arr     25.12 262   LR     LR     07 14 48.9
      comp=Z,22nm,18.2s,baz=355,slow=40
SONM  Songino Array      27.83 332   LR     LR     07 16 41.8
      comp=Z,103nm,19.2s,baz=50,slow=40
MK31  Makanchi Array     40.85 314   P      P      07 05 51.3 -0.3
MKAR  Makanchi Array     40.85 314   P      P      07 05 51.5 -0.1
      1.4nm,0.4s,baz=101,slow=10,SNR=15
MKAR  Makanchi Array     40.85 314   P      P      07 05 51.4 -0.3
MAKZ  Makanchi           41.06 314   P      P      07 05 53.2 -0.1
MAKZ                                 IAmb   IAmb   07 05 54.5
      comp=Z,2.7nm,1.0s
ZALV  Zalesovo Beam      42.20 325   P      P      07 06 01.6 -0.9
      comp=Z,0.8nm,0.4s,baz=103,slow=9.4,SNR=4.2
KURK  Kurchatov          44.40 319   P      P      07 06 19.9 -0.4
KURK                                 IAmb   IAmb   07 06 21.8
      comp=Z,4.1nm,1.2s
WB0   Warramunga Arr     44.71 168   P      P      07 06 21.7 -1.3
WB0                                  IAmb   IAmb   07 06 26.6
      comp=Z,9.0nm,1.2s
WRAB  Tennant Creek      44.86 168   P      P      07 06 21.9 -2.4
WRA   Warramunga Arr     44.87 168   P      P      07 06 23.8 -0.6
      comp=Z,0.9nm,0.6s,baz=348,slow=9.0,SNR=7.8
WRA   Warramunga Arr     44.87 168   P      P      07 06 23.0 -1.4
WB2   Warramunga Arr     44.87 168   P      P      07 06 23.4 -0.9
WB2                                  IAmb   IAmb   07 06 28.5
      comp=Z,17nm,1.4s
WR0   Warramunga Arr     44.92 168   P      P      07 06 24.7 -0.1
WR0                                  IAmb   IAmb   07 06 29.2
      comp=Z,15nm,1.4s
ASAR  Alice Springs      48.42 169   P      P      07 06 52.9 +0.7
      comp=Z,0.3nm,0.6s,baz=355,slow=14,SNR=5.0
ASAR  Alice Springs      48.42 169   P      P      07 06 52.8 +0.6
ABKAR Akbulak array      55.99 314   P      P      07 07 48.7 +0.5
FINES FINESS Array B     73.18 330   P      P      07 09 40.2 +0.1
      comp=Z,5.6nm,0.9s,baz=57,slow=7.0,SNR=7.8
YKA   Yellowknife Ar     81.40  24   P      P      07 10 27.2 +1.1
      comp=Z,0.2nm,0.5s,baz=310,slow=4.5,SNR=5.9
PPT   Papeete            92.87 108   LR     LR     07 48 32.0
      comp=Z,13nm,18.9s,baz=113,slow=32
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*DDA **18** 08:26:53.4, 38°89N×26°18E, h7^{km}±3^{km}, ML3.2*
*ATH **18** 08:26:53.9, 38°95N×26°26E, h32^{km}±3^{km}, ML3.0/6, Error ellipse: s-maj=3.9km s-min=1.2km az=64.0*
*ISK **18** 08:26:53.8, 38°92N×26°24E, h6^{km}, ML3.3/25*
*THE **18** 08:26:54.8, 38°92N×26°23E, h17^{km}±1^{km}, ML2.8/6, Error ellipse: s-maj=1.4km s-min=0.4km az=277.0*
ISC 18 08:26:53.9±0.9, **38°92N**±0°02×**26°26E**±0°02, **h17**^{km}±8^{km}, **n65, σ0^{s}67**/97, **Aegean Sea**

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Code  Station Name        Δ°   AZ°    Phase ID          Time      Res
                                     Op     ISC       h  m  s    ISC
PRK   Paraskevi           0.33   2   P      Pb     08 27 01.9 +0.5
PRK                                  S      Sb     08 27 07.2 +0.8
      4μm,0.3s
PRK   Paraskevi           0.33   2   P      Pb     08 27 01.9 +0.5
PRK                                  S      Sb     08 27 06.2 -0.2
PRK                                  AML    AML    08 27 07.7
      comp=E,6162μm,0.4s
PRK                                  AML    AML    08 27 12.4
      comp=N,7846μm,0.2s
FOCM  Foa                 0.42 118   PG     Pg     08 27 02.8 +0.3
SIGR  SIGRI               0.43 313   P      Pb     08 27 03.1  0.0
SIGR                                 S      Sb     08 27 09.2 -0.1
      comp=N,2μm,0.6s
SIGR  SIGRI               0.43 313   PG     Pb     08 27 02.9 -0.2
SIGR                                 SG     Sb     08 27 09.3 -0.1
SIGR  SIGRI               0.43 313   P      Pb     08 27 03.1  0.0
SIGR                                 S      Sb     08 27 09.2 -0.1
SIGR                                 AML    AML    08 27 13.1
      comp=N,2311μm,0.6s
SIGR                                 AML    AML    08 27 18.0
      comp=E,3530μm,0.7s
AYVA  Ayvalik             0.52  41  i P    Pg     08 27 04.1 -0.2
AYVA                                i S    Sg     08 27 11.4 +0.2
AYVA                                 IAML          08 27 12.0
      comp=N,2μm,0.3s
DKL   Dikili              0.53  73   PG     Pg     08 27 04.8 +0.3
CHOS  Chios island        0.55 197   P      Pb     08 27 05.5 +0.3
CHOS                                 S      Sn     08 27 14.7 -1.2
      comp=N,1μm,0.4s
CHOS  Chios island        0.55 197   PG     Pg     08 27 04.8 -0.1
CHOS  Chios island        0.55 197   P      Pb     08 27 05.5 +0.3
CHOS                                 S      Sb     08 27 14.1 +1.3
CHOS                                 AML    AML    08 27 17.1
      comp=N,2333μm,0.2s
CHOS                                 AML    AML    08 27 17.9
      comp=E,3462μm,0.2s
KOCA  Canakkale, Ayv      0.59 351  i P    Pg     08 27 05.5 -0.1
KOCA                                i S    Sn     08 27 15.8 -1.1
URLA  Izmir               0.61 154   PG     Pg     08 27 05.4 -0.7
URLA  Izmir               0.61 154  i P    Pg     08 27 05.1 -1.0
URLA                                i S    Sg     08 27 14.4 +0.2
URLA                                 IAML          08 27 18.0
      comp=E,582nm,0.6s
ZEDA  zmir-Bergama        0.64  85  i P    Pg     08 27 06.8 +0.2
ZEDA                                i S    Sn     08 27 17.8 -0.2
ZEDA                                 IAML          08 27 19.0
      comp=N,1μm,0.3s
PSRA  Psara               0.66 236   P      Pn     08 27 07.5 -1.0
PSRA                                 AML    AML    08 27 19.5
      comp=N,3743μm,0.3s
PSRA                                 AML    AML    08 27 22.0
      comp=E,3111μm,0.3s
ZEYE  Izmir, Urla-Ze      0.70 164  i P    Pg     08 27 07.5 -0.2
ZEYE                                i S    Sn     08 27 20.1 +0.6
ZEYE                                 IAML          08 27 21.0
      comp=N,2μm,0.2s
BLCB  Balcova             0.81 130   P      Pg     08 27 09.9 +0.2
BLCB                                 S      Sn     08 27 22.0 -0.2
BLCB  Balcova             0.81 130   PG     Pn     08 27 10.4 -0.2
BLCB                                 SG     Sn     08 27 22.2  0.0
BAYC  CANAKKALE_Bayr      0.85  15  i P    Pb     08 27 10.4  0.0
BAYC                                i S    Sn     08 27 22.8 -0.6
BAYC                                 IAML          08 27 25.0
      comp=N,701nm,0.3s
BUHA  Balikesir, Bur      0.86  47  i P    Pb     08 27 10.6 +0.1
BUHA                                i S    Sn     08 27 24.2 +0.6
BUHA                                 IAML          08 27 27.0
      comp=N,595nm,0.4s
EZN   Ezine               0.91   3   P      Pb     08 27 11.3  0.0
EZN                                  S      Sn     08 27 25.1 +0.4
      comp=N,2μm,0.4s
EZN   Ezine               0.91   3   PG     Pg     08 27 11.5 -0.1
EZN                                  SG     Sn     08 27 24.6 -0.1
BOZC  Bozcaada            0.94 350   PG     Pg     08 27 11.9 -0.3
BOZC                                 SG     Sn     08 27 25.3 -0.1
BOZC  Bozcaada            0.94 350  i P    Pn     08 27 12.2 -0.1
BOZC                                i S    Sn     08 27 25.5 +0.1
BOZC                                 IAML          08 27 27.0
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	comp=N,786nm,0.3s						
DGB	zmir	0.99	150	iP	Pb	08 27 12.8	+0.1
DGB				iS	Sn	08 27 27.0	+0.4
DGB				IAML		08 27 30.0	
	comp=N,288nm,0.3s						
ECEA	Canakkale, Ece	1.13	357	iP	Pg	08 27 15.8	0.0
ECEA				iS	Sg	08 27 31.7	+1.1
ECEA				IAML		08 27 34.0	
	comp=N,607nm,0.2s						
STEP	BALIKESIR_Sava	1.23	67	iP	Pg	08 27 17.4	-0.2
STEP				iS	Sg	08 27 33.7	0.0
STEP				IAML		08 27 37.0	
	comp=N,675nm,0.5s						
LIA	Limnos Island	1.29	320	P	Pb	08 27 17.7	0.0
LIA				S	Sb	08 27 33.4	-0.6
LIA	Limnos Island	1.29	320	P	Pb	08 27 17.7	0.0
LIA				S	Sb	08 27 33.3	-0.6
SMG	Samos	1.29	159	P	Pb	08 27 17.7	0.0
SMG				S	Sg	08 27 35.0	-0.6
SMG	Samos	1.29	159	P	Pn	08 27 17.5	+0.4
SMG				S	Sn	08 27 34.3	+0.3
SMG				AML	AML	08 27 39.5	
	comp=E,3836µm,0.4s						
SMG				AML	AML	08 27 41.1	
	comp=N,3804µm,0.4s						
GOKA	anakkale-Gk	1.30	348	iP	Pg	08 27 18.4	-0.6
GOKA				iS	Sg	08 27 36.3	+0.2
GOKA				IAML		08 27 37.0	
	comp=E,863nm,0.5s						
GADA	Gvkgeada	1.30	348	P	Pb	08 27 18.2	+0.2
GADA				S	Sn	08 27 34.9	+0.5
	comp=E,275nm,0.4s						
GADA	Gvkgeada	1.30	348	PN	Pg	08 27 18.5	-0.6
GOMA	Golmarmara-Man	1.31	99	PN	Pg	08 27 19.6	+0.4
BALY	Balya	1.34	52	iP	Pn	08 27 17.5	-0.4
BALY				iS	Sb	08 27 36.3	+0.8
BALY				IAML		08 27 40.0	
	comp=N,579nm,0.5s						
GCAM	G?zelcaml?	1.44	147	PN	Pb	08 27 20.9	+0.7
GELI	Tayfur-Gelibol	1.49	6	PN	Pb	08 27 21.2	+0.1
LPK	Lapseki	1.51	15	PN	Pb	08 27 21.3	-0.1
AYDB	Zeytinkoy-Aydi	1.61	127	PN	Pb	08 27 22.7	-0.5
AYDB				SN	Sg	08 27 45.8	0.0
SMTH	Samothraki Isl	1.65	340	P	Pb	08 27 23.1	-0.8
SMTH	Samothraki Isl	1.65	340	P	Pb	08 27 23.5	-0.4
KARY	Karystos	1.68	239	P	Pn	08 27 23.1	+0.6
KYMI	Kymi, Euboea I	1.71	261	P	Pb	08 27 24.1	-0.8
ERIK	Erikli-Kesan	1.76	6	PN	Pb	08 27 25.4	-0.4
ENEZ	Enez	1.82	358	PN	Pb	08 27 26.1	-0.7
EDC	Edincik	1.89	40	PN	Pb	08 27 27.5	-0.5
RKY	Sarkoy-Tekirda	1.91	22	PN	Pb	08 27 27.7	-0.6
KULA	Kula-Manisa	1.92	101	PN	Pb	08 27 28.3	-0.3
DST	Dursunbey	1.96	69	PN	Pb	08 27 29.0	-0.2
MAR2	Marsite Statio	1.98	24	PN	Pb	08 27 28.6	-0.8
MRMT	Marmara Adasi	1.98	31	PN	Pb	08 27 28.9	-0.6
ALN	Alexandroupoli	1.99	355	P	Pn	08 27 27.4	+0.7
ALN				S	Sb	08 27 52.6	-1.5
	comp=N,105nm,0.3s						
ALN	Alexandroupoli	1.99	355	PN	Pb	08 27 28.3	-1.3
ALN	Alexandroupoli	1.99	355	P	Pn	08 27 28.0	+1.3
ALN				AML	AML	08 27 58.9	
	comp=E,206µm,0.3s						
ALN				AML	AML	08 28 01.1	
	comp=N,209µm,0.3s						
MAR3	Marsite Statio	1.99	23	PN	Pb	08 27 29.0	-0.7
THAS	Thassos island	2.06	325	P	Pn	08 27 28.8	+1.0
KCTX	Karacabey (Bur	2.11	50	PN	Pb	08 27 30.8	-0.9
SIMA	Simav-Kutahya	2.13	85	PN	Pb	08 27 31.4	-0.7
OUR	Ouranopolis	2.26	310	P	Pn	08 27 31.8	+1.4
RDO	Rodhopi	2.30	346	P	Pn	08 27 32.3	+1.3
RDO	Rodhopi	2.30	346	P	Pn	08 27 32.7	+1.7
TVSB	Tavsanli	2.55	77	PN	Pb	08 27 37.7	-1.5
ARMT	Armutlu	2.60	50	PN	Pb	08 27 38.0	-2.0

NNC 18 08:38:09.7±4.4**,55°.21N×88°.15E,h0^{km},mb3.5,mpv3.2, 7C-4D,Error ellipse: s-maj=47.4km s-min=29.6km az=155.0,Suspected Mining explosion.,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	2.31	238	⇓Pg	Pn	08 38 50.0	+1.0
	0.6nm,0.4s						
ZAA0				⇑Lg	Lg	08 39 23.1	
	18nm,1.1s						
KURK	Kurchatov	7.30	236	⇑Pn	Pn	08 40 00.2	+2.7
	2.5nm,0.8s						
KURK				⇑Sn	Sn	08 41 25.0	+4.0
	2.8nm,0.9s						
KURK				⇑Lg	Lg	08 41 59.9	
	16nm,1.2s						
KURBB	Kurchatov Arra	7.41	236	⇓Pn	Pn	08 39 59.7	+0.8
	4.4nm,0.7s						
KURBB				⇑Sn	Sn	08 41 25.7	+2.2
	5.5nm,0.8s						
KURBB				⇓Lg	Lg	08 42 01.8	
	21nm,1.0s						
MK31	Makanchi Array	9.19	206	⇑Pn	Pn	08 40 23.3	-0.1
	0.8nm,0.8s,baz=26,slow=14,SNR=16						
MK31				⇑Sn	Sn	08 42 08.3	+0.7
	1.4nm,0.7s						
MK31				⇓Lg	Lg	08 43 02.4	
	5.1nm,0.9s,baz=21,slow=29,SNR=4.8						

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*IDC **18** 08:47:19.7±1.8, 61°.63N×150°.63W, h52^{km}±36^{km}, mb3.1/3, mb1 3.5/7, mb1mx3.1/61, mbtmp3.3/7, ML3.1/4, Error ellipse: s-maj=64.1km s-min=9.8km az=111.0*

*AEIC **18** 08:47:22±1.0, 61°.55N±0°.02×149°.73W±0°.05, h45^{km}±5^{km}, ML3.3, ML3.5/87(NEIC), Error ellipse: s-maj=4.0km s-min=2.9km az=115.0*

*ANF **18** 08:47:22.2±0.1, 61°.57N×149°.78W, h44^{km}, ML3.8/15, Error ellipse: s-maj=2.8km s-min=1.5km az=98.0*

*NEIC **18** 08:47:22.2±1.0, 61°.56N±0°.03×149°.77W±0°.06, h46^{km}±8^{km}, Error ellipse: s-maj=4.4km s-min=3.8km az=160.0*

ISC 18 08:47:21.6±1.1**,61°.57N**±0°.02×**149°.79W**±0°.02**, h34^{km}**±10^{km}**,n153,σ0^{s}.88**/153**,mb3.2**/3**,Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMR	Palmer	0.32	85		Pn	08 47 30.5	+0.7
PMR					Sn	08 47 37.4	+2.8
PMR	Palmer	0.32	85	IAML		08 47 37.8	
	comp=N,4µm,0.3s						
PMR				IAML		08 47 38.0	
	comp=E,4µm,0.3s						
GHO	Glory Hole Cre	0.46	63		Pn	08 47 32.3	+0.3
GHO					Sn	08 47 40.8	+1.7
GHO	Glory Hole Cre	0.46	63	IAML		08 47 41.1	
	comp=E,6µm,0.4s						
GHO				IAML		08 47 41.3	
	comp=N,4µm,0.4s						
SUA	Susitna One	0.47	258		Pn	08 47 32.6	+0.5
SUA					Sn	08 47 40.9	+1.6
SUA	Susitna One	0.47	258	IAML		08 47 42.0	
	comp=N,4µm,0.8s						
FIS	Fire Island	0.47	206		Pn	08 47 33.1	+1.2
RC01	Rabbit Creek A	0.48	177	P	Pn	08 47 32.5	+0.5
	baz=0.4,SNR=979						
RC01				S	Sn	08 47 40.9	+1.7
	baz=0.4						
RC01	Rabbit Creek A	0.48	177		Pn	08 47 32.6	+0.5
RC01					Sn	08 47 41.3	+2.0
KNK	Knik Glacier	0.66	103		Pn	08 47 35.0	+0.5
KNK	Knik Glacier	0.66	103	IAML		08 47 46.7	
	comp=E,3µm,0.5s						
SML	Sawmill	0.74	70		Pb	08 47 35.7	-0.4
SML					Sn	08 47 46.7	+1.0
SML	Sawmill	0.74	70	IAML		08 47 47.7	
	comp=N,2µm,0.4s						
SML				IAML		08 47 48.0	
	comp=E,2µm,0.7s						
CUT	Chulitna	0.87	345	P	Pb	08 47 37.8	-0.5
	baz=163,SNR=5.7						
CUT				S	Sn	08 47 50.0	+1.0
	baz=163						
CUT	Chulitna	0.87	345		Pb	08 47 37.9	-0.5
CUT					Sn	08 47 50.3	+1.3
SKT	Skwentna	0.93	297		Pb	08 47 38.5	-0.8
SKT					Sn	08 47 51.3	+1.0
STLK	Strandline Lak	0.98	267		Pb	08 47 39.6	-0.6
PWL	Port Wells	1.00	135		Pn	08 47 39.5	+0.3
CAPN	Captain Cook N	1.04	220	P	Pb	08 47 41.6	+0.5
	baz=40,SNR=24						
CAPN	Captain Cook N	1.04	220		Pb	08 47 41.5	+0.5
SLKM	Skilak Lake	1.08	191		Pn	08 47 40.7	+0.3
O22K	Cooper Landing	1.09	178	P	Pn	08 47 40.8	+0.4
	baz=360,SNR=116						
O22K				S	Sb	08 47 55.9	+0.2
	baz=360						
O22K	Cooper Landing	1.09	178		Pn	08 47 40.4	0.0
O22K					Sb	08 47 56.3	+0.5
SPCG	Spurr Capps Gl	1.11	257		Pb	08 47 41.6	-0.7
SPCG					Sb	08 47 57.1	+0.6
SPCP	Crater Peak Br	1.18	256		Pb	08 47 42.6	-0.9
SPCN	Chakachatna No	1.20	255		Pb	08 47 43.1	-0.8
SCM	Sheep Creek Mo	1.20	76		Pn	08 47 42.7	+0.6
SCM	Sheep Creek Mo	1.20	76	IAML		08 48 01.4	
	comp=N,1µm,0.8s						
SPCR	Spurr Chakacha	1.22	254		Pb	08 47 43.1	-1.1
SPCR					Sb	08 47 59.6	0.0
WAT1	Susitna Watana	1.40	24		Pn	08 47 45.2	+0.5
WAT6	Susitna Watana	1.40	43		Pn	08 47 45.4	+0.4
HUR	Hurricane	1.42	3		Pn	08 47 46.0	+1.0
SEW	Seward	1.48	173		Pn	08 47 45.8	+0.1
WAT2	Susitna Watana	1.51	21		Pn	08 47 47.0	+0.6
DFR	Drift River	1.71	237		Pn	08 47 49.5	+0.4
PPLA	Purkeypile	1.75	321		Pn	08 47 50.0	+0.4
M24K	Tolsona, Glenn	1.80	71	P	Pn	08 47 51.5	+1.2
	baz=253,SNR=49						
M24K	Tolsona, Glenn	1.80	71		Pn	08 47 51.7	+1.4
M24K	Tolsona, Glenn	1.80	71	IAML		08 48 17.6	
	comp=N,624nm,1.0s						
RSO	Redoubt South	1.82	234		Pn	08 47 51.0	+0.3
NCT	North Crescent	1.83	238		Pn	08 47 51.3	+0.6
RED	Redoubt Volcan	1.85	233		Pn	08 47 51.4	+0.4
KLU	Klutina	1.85	91		Pn	08 47 51.3	+0.2
KLU	Klutina	1.85	91	IAML		08 48 20.0	
	comp=N,323nm,0.4s						
KLU				IAML		08 48 22.3	
	comp=E,301nm,0.5s						
BRLK	Bradley Lake	1.89	197		Pn	08 47 51.6	+0.1
BRLK	Bradley Lake	1.89	197	IAML		08 48 20.3	
	comp=E,320nm,0.7s						
BRSE	Bradley Lake S	1.89	195		Pn	08 47 52.5	+1.1
RND	Reindeer	1.90	13		Pn	08 47 52.5	+0.8
RND	Reindeer	1.90	13	IAML		08 48 27.5	
	comp=E,289nm,1.1s						
TRF	Thorofare Moun	1.91	353		Pn	08 47 52.5	+0.7
TRF	Thorofare Moun	1.91	353	IAML		08 48 28.7	
	comp=E,404nm,0.9s						
DIV	Divide	1.99	101		Pn	08 47 52.8	-0.1
HIN	Hinchinbrook I	1.99	125		Pn	08 47 53.1	+0.3
HIN	Hinchinbrook I	1.99	125	IAML		08 48 28.4	
	comp=E,568nm,0.7s						
HIN				IAML		08 48 29.2	
	comp=N,488nm,0.5s						
KTH	Kantishna Hill	2.06	346		Pn	08 47 54.8	+0.9
KTH	Kantishna Hill	2.06	346	IAML		08 48 22.8	
	comp=E,455nm,0.7s						
KTH				IAML		08 48 34.2	
	comp=N,354nm,0.9s						
PS11	TAPS Pump St11	2.11	74		Pn	08 47 56.0	+1.5
HOM	Homer	2.12	206	P	Pn	08 47 55.2	+0.6
	baz=26						
HOM				S	Sn	08 48 20.4	+0.7
	baz=26						
HOM	Homer	2.12	206		Pn	08 47 55.2	+0.6
CNPM	China Poot	2.17	200		Pn	08 47 55.3	0.0
CNPM	China Poot	2.17	200	IAML		08 48 26.3	
	comp=N,228nm,0.6s						
CNPM				IAML		08 48 27.3	
	comp=E,230nm,0.6s						
MCK	McKinley	2.21	10	P	Pn	08 47 56.7	+0.8
	baz=190,SNR=102						
MCK				S	Sn	08 48 23.1	+1.1
	baz=190						
MCK	McKinley	2.21	10		Pn	08 47 57.2	+1.4
EYAK	Cordova Ski Ar	2.21	116		Pn	08 47 55.6	-0.3
IVE	Iliamna Volcan	2.22	227		Pn	08 47 56.6	+0.6
PS12	TAPS Pump St12	2.23	90		Pn	08 47 56.5	+0.4
PAX	Paxson	2.46	53		Pn	08 48 01.2	+1.8
N25K	Chitina, Valde	2.48	87	P	Pn	08 47 59.9	+0.2
	baz=271						
N25K				S	Sn	08 48 29.7	+0.9
	baz=271						
N25K	Chitina, Valde	2.48	87		Pn	08 47 59.8	+0.2
N25K	Chitina, Valde	2.48	87	IAML		08 48 37.6	
	comp=N,162nm,0.3s						
OPT	Oil Point	2.56	223		Pn	08 48 01.0	+0.2
BMRM	Bremner River	2.58	101		Pn	08 48 00.5	-0.4
CHUM	Lake Minchumin	2.60	335		Pn	08 48 01.7	+0.5
BPAW	Bear Paw Mtn.	2.60	348		Pn	08 48 01.5	+0.2
GOAT	Goat Mountain	2.65	110		Pn	08 48 01.7	-0.3
RAGM	Ragged Mountai	2.76	113		Pn	08 48 03.1	-0.4
SVW2	Sparrevohn	2.83	263		Pn	08 48 04.9	+0.5
GLB	Gilahina Butte	2.87	90		Pn	08 48 04.9	-0.1
HMT	Hamilton	2.97	112		Pn	08 48 05.6	-0.7
WRH	Wood River Hil	3.02	14		Pn	08 48 07.5	+0.6
WRH	Wood River Hil	3.02	14	IAML		08 49 02.0	
	comp=E,105nm,0.8s						
NEA2	Nenana	3.06	6	P	Pn	08 48 07.6	+0.1
	baz=186,SNR=51						
NEA2				S	Sn	08 48 44.1	+1.2
	baz=186						
NEA2	Nenana	3.06	6		Pn	08 48 08.2	+0.7
VRDI	Verde Repeater	3.07	94		Pn	08 48 07.5	-0.3
HDA	Harding Lake	3.13	23	P	Pn	08 48 09.1	+0.5
	baz=205						
HDA	Harding Lake	3.13	23		Pn	08 48 09.2	+0.5
HDA	Harding Lake	3.13	23	IAML		08 49 01.7	
	comp=N,143nm,0.9s						
HDA				IAML		08 49 01.8	
	comp=E,167nm,1.3s						
NICHA	Nichawak Mount	3.14	113		Pn	08 48 07.9	-0.8
MENT	Mentasta	3.16	61	Pn	Pn	08 48 10.2	+1.3
TT01	Tatalina	3.21	298		Pn	08 48 09.5	-0.1
TTA	Tatalina	3.22	298		Pn	08 48 09.8	+0.1
CCB	Clear Creek Bu	3.22	15		Pn	08 48 09.8	+0.1
CCB	Clear Creek Bu	3.22	15	IAML		08 49 03.7	
	comp=E,112nm,0.7s						
MCARA	McCarthy VSAT	3.25	90		Pn	08 48 11.7	+1.5
MCARA				IAML		08 49 03.1	
	comp=E,198nm,0.7s						
MCARA				IAML		08 49 10.4	
	comp=N,150nm,0.4s						
PS08	TAPS Pump Stn8	3.28	23		Pn	08 48 11.2	+0.6
CRQM	Cirque	3.32	101		Pn	08 48 11.8	+0.4
CRQM				IAML		08 49 04.4	
	comp=N,138nm,0.8s						
CRQM				IAML		08 49 06.7	
	comp=E,170nm,0.7s						
DOT	Dot Lake	3.37	49	Pn	Pn	08 48 13.6	+1.7
TCOL	CIGO, UAF Yank	3.43	14	P	Pn	08 48 13.2	+0.5
	baz=195,SNR=24						
TCOL				S	Sn	08 48 51.5	-0.6
	baz=195						
TCOL	CIGO, UAF Yank	3.43	14		Pn	08 48 13.4	+0.8
COLA	College	3.44	14		Pn	08 48 13.5	+0.8
TGL	Tana Glacier	3.47	100		Pn	08 48 13.2	0.0
TGL	Tana Glacier	3.47	100	IAML		08 49 08.8	
	comp=E,118nm,0.5s						
TGL				IAML		08 49 12.9	
	comp=N,104nm,0.6s						
IL31		3.48	21		Pn	08 48 13.5	+0.3
ILAR	Eielson Array	3.48	21	P	Pn	08 48 13.3	+0.1
	comp=N,2.2nm,0.3s,baz=205,slow=14,SNR=74						
ILAR				S	Sn	08 48 53.4	+0.2
	comp=N,3.6nm,0.3s,baz=220,slow=15,SNR=8.5						
ILAR	Eielson Array	3.48	21	Pn	Pn	08 48 13.5	+0.3
MDM	Murphy Dome	3.48	11		Pn	08 48 13.6	+0.3
MDM	Murphy Dome	3.48	11	IAML		08 49 12.2	
	comp=E,113nm,0.8s						
MLY	Manley	3.50	353	P	Pn	08 48 14.0	+0.3
	baz=172,SNR=37						
MLY				S	Sn	08 48 54.1	+0.2
	baz=172						
MLY	Manley	3.50	353		Pn	08 48 14.0	+0.3
PTPK	Patty Peak	3.55	93		Pn	08 48 14.5	+0.1
I23K	Minto, Yukon-K	3.60	3	P	Pn	08 48 15.6	+0.6
	baz=183,SNR=158						
I23K				S	Sn	08 48 56.7	+0.5
	baz=183						
I23K	Minto, Yukon-K	3.60	3		Pn	08 48 15.5	+0.6
I23K	Minto, Yukon-K	3.60	3	IAML		08 49 14.4	
	comp=N,94nm,0.8s						
I23K				IAML		08 49 17.1	
	comp=E,72nm,0.7s						
SCRK	Sand Creek	3.60	45	P	Pn	08 48 15.4	+0.3
	baz=230,SNR=20						
SCRK	Sand Creek	3.60	45		Pn	08 48 15.8	+0.7
BALM	Baldy	3.63	95		Pn	08 48 15.0	-0.5
BALM	Baldy	3.63	95	IAML		08 49 19.5	
	comp=N,66nm,0.9s						
KIAG	Kiagna River	3.65	97		Pn	08 48 15.5	-0.3
KULT	Kultieth River	3.70	108		Pn	08 48 15.9	-0.4
POKR	Poker Plat Res	3.72	16	P	Pn	08 48 17.2	+0.6
	baz=197,SNR=10						
POKR	Poker Plat Res	3.72	16		Pn	08 48 17.6	+1.0
BARN	Barnard Glacie	3.95	94		Pn	08 48 20.5	+0.5
GRNC	Granite Creek	3.98	99		Pn	08 48 20.1	-0.4
BC03		4.03	65		Pn	08 48 21.8	+1.0
BCAR	Beaver Creek A	4.03	65		Pn	08 48 21.5	+0.6
KDAK	Kodiak Island	4.05	202	P	Pn	08 48 18.9	-2.2
	comp=N,1.4nm,0.3s,baz=66,slow=9.8,SNR=28						
KDAK				S	Sn	08 49 03.7	-3.6
	comp=N,2.5nm,0.3s,baz=140,slow=7.6,SNR=4.1						
KDAK	Kodiak Island	4.05	202		Pn	08 48 20.6	-0.5
KDAK	Kodiak Island	4.05	202	IAML		08 49 42.0	
	comp=N,47nm,3.4s						
KDAK				IAML		08 50 10.7	
	comp=N,52nm,3.7s						
CTGM	Chitina Glacie	4.13	95		Pn	08 48 22.4	+0.1
PS06	TAPS Pump Stn6	4.31	0		Pn	08 48 25.8	+1.2
LOGN	Logan Glacier	4.32	96		Pn	08 48 24.7	-0.2
PRP	Porcupine Dome	4.40	24		Pn	08 48 26.9	+0.8
PRP	Porcupine Dome	4.40	24	IAML		08 49 25.7	
	comp=E,66nm,0.7s						
PRP				IAML		08 49 26.1	
	comp=N,54nm,0.8s						
YUK3	Moose Creek	4.45	83		Pn	08 48 27.2	+0.3
IM03		4.77	340		Pn	08 48 31.6	+0.7
IMAR	Indian Mountai	4.77	340		Pn	08 48 31.0	0.0
EGAK	Eagle	5.07	47	Pn	Pn	08 48 35.7	+0.7
EGAK				IAML		08 50 08.1	
	comp=N,44nm,1.0s						
EGAK				IAML		08 50 13.1	
	comp=N,45nm,0.7s						
DAWY	Dawson	5.39	58		Pn	08 48 39.3	-0.2
COLD	Coldfoot	5.69	358	P	Pn	08 48 44.1	+0.6
	baz=178,SNR=14						
COLD				S	Sn	08 49 47.4	-0.2
	baz=178						
COLD	Coldfoot	5.69	358		Pn	08 48 44.3	+0.7
BM03	Burnt Mountain	6.29	19		Pn	08 48 51.9	0.0
BMAR	Burnt Mountain	6.30	19		Pn	08 48 52.5	+0.5
TOLK	Toolik Lake Re	7.11	1	P	Pn	08 49 04.2	+1.2
	baz=181,SNR=11						
TOLK				S	Sn	08 50 23.3	+0.8
	baz=181						
TOLK	Toolik Lake Re	7.11	1		Pn	08 49 04.7	+1.6
ANM	Nome	7.68	300		Pn	08 49 12.2	+1.2
TNA	Tin City	9.01	304	P	Pn	08 49 29.5	+0.4
	baz=108,SNR=5.4						
TNA	Tin City	9.01	304		Pn	08 49 30.2	+1.2
INK	Inuvik	9.63	38	P	Pn	08 49 40.0	+2.4
	comp=N,0.2nm,0.3s,baz=241,slow=18,SNR=6.7						
A21K	Barrow	10.16	347	S	Sn	08 51 35.7	-1.6
	baz=161						
YKA	Yellowknife Ar	16.41	71	P	P	08 51 11.6	+0.1
	comp=N,0.1nm,0.3s,baz=277,slow=9.0,SNR=5.1						
NVAR	Mina Array Bea	30.23	125	P	P	08 53 28.3	-0.7
	comp=N,0.3nm,0.6s,baz=322,slow=9.1,SNR=4.1						
PDAR	Pinedale Array	30.33	110	P	P	08 53 29.6	-0.4
	comp=N,0.2nm,0.5s,baz=351,slow=3.8,SNR=4.0						
TXAR	Lajitas Array	44.14	115	P	P	08 55 26.2	-0.6
	comp=N,0.2nm,0.7s,baz=16,slow=7.5,SNR=2.5						

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*UPP **18** 08:54:11.9±1.3, 59°.77N×22°.18E, h0^{km}, ML2.2, Suspected explosion*

*HEL **18** 08:54:11.5±0.1, 59°.68N×22°.22E, h0^{km}, ML1.8, ML2.2(UPP), Explosion*

*IDC **18** 08:54:13.4±1.9, 59°.78N×22°.42E, h0^{km}, mb1 3.2/4, mb1mx3.0/56, mbtmp3.1/4, ML2.0/4, Error ellipse: s-maj=25.4km s-min=8.7km az=161.0*

ISC 18 08:54:10.3±0.8**,59°.77N**±0°.04×**22°.35E**±0°.03**,h0^{km},n35, σ1^{s}.42**/49**,Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MEF	Metsahovi	1.12	66	eP	Pb	08 54 33.0	+0.5
MEF				eS	Sn	08 54 49.0	-0.4
AAL	Aland	1.25	290	P	Pg	08 54 33.5	-0.8
AAL				S	Sg	08 54 50.6	+0.1
AAL	Aland	1.25	290	eP	Pg	08 54 33.3	-1.0
AAL				eS	Sg	08 54 48.9	-1.6
RAF	Rauma	1.29	347	eP	Pb	08 54 35.9	+0.5
RAF				eS	Sb	08 54 53.4	+0.9
RAF				MSG		08 54 58.7	
	comp=Z,6.5nm,0.1s						
MTSE	Matsula	1.30	144	eP	Pg	08 54 34.0	-1.2
MTSE				eS	Sg	08 54 51.0	-1.0
NUR	Nurmijrvi	1.37	56	eP	Pg	08 54 36.9	+0.3
NUR				eS	Sn	08 54 57.2	+1.7
ARBE	Arbavere	1.88	99	eP	Pb	08 54 45.4	-0.1
ARBE				eS	Sb	08 55 10.4	+1.0
NRTU	Norrtaelje	1.89	269	P	Pn	08 54 43.5	-0.3
NRTU	Norrtaelje	1.89	269	eP	Pn	08 54 43.5	-0.3
PVF	Pernaja	1.92	65	eP	Pb	08 54 46.8	+0.6
PVF				eS	Sg	08 55 12.3	+0.3
GRAU	Graesoe	1.99	288	P	Pn	08 54 45.4	+0.2
GRAU	Graesoe	1.99	288	eP	Pn	08 54 45.4	+0.2
FORU	Forsmark	2.18	288	P	Pn	08 54 48.9	+1.2
FORU	Forsmark	2.18	288	eP	Pn	08 54 48.9	+1.2
FLYU	Flymyra	2.27	281	P	Pn	08 54 49.5	+0.4
FLYU	Flymyra	2.27	281	eP	Pn	08 54 49.5	+0.4
NYNU	Nynaeshamn	2.35	253	P	Pn	08 54 50.9	+0.8
NYNU	Nynaeshamn	2.35	253	eP	Pn	08 54 50.9	+0.8
FIA0	FINESS Array S	2.49	46	ePB	Pb	08 54 56.5	+0.6
FIA0				eSB	Sg	08 55 29.8	-0.4
FIA0				MSG		08 55 33.2	
	comp=Z,3.2nm,0.1s						
FINES	FINESS Array B	2.49	46	Pn	Pb	08 54 55.7	-0.2
	comp=Z,0.5nm,0.3s,baz=231,slow=14,SNR=19						
FINES				Sn	Sb	08 55 28.3	+1.2
	comp=Z,3.0nm,0.3s,baz=234,slow=25,SNR=19						
FIBU	Brunna	2.52	275	P	Pn	08 54 54.3	+1.7
VSU	Vasula	2.62	118	eSB	Sb	08 55 31.3	+0.6
BACU	Backbrunna	2.65	274	P	Pn	08 54 55.8	+1.5
BACU	Backbrunna	2.65	274	eP	Pn	08 54 55.8	+1.5
OSTU	Oestervaala	2.66	282	P	Pn	08 54 55.1	+0.8
OSTU	Oestervaala	2.66	282	eP	Pn	08 54 55.1	+0.8
KEF	Keuruu	2.70	26	ePB	Pb	08 54 59.6	+0.2
KEF				eSB	Sg	08 55 35.6	-1.4
KEF				MSG		08 55 40.8	
	comp=Z,4.1nm,0.1s						
KAF	Kangasniemi	3.04	38	MSG		08 55 50.1	
	comp=Z,1.8nm,0.1s						
ARNU	Arnoeviken	3.11	310	eP	Pn	08 55 02.0	+1.4
ARNU				eSB	Sb	08 55 44.8	0.0
FALU	Falun	3.34	285	P	Pn	08 55 04.7	+0.9
FALU	Falun	3.34	285	eP	Pn	08 55 04.7	+0.9
HEMU	Hemsoen	3.58	326	eP	Pn	08 55 09.1	+2.0
HFS	Hagfors	4.37	279	Pn	Pn	08 55 19.8	+2.0
	comp=Z,0.1nm,0.3s,baz=83,slow=12,SNR=6.4						
HFS				Sn	Sn	08 56 12.8	+3.4
	comp=Z,0.3nm,0.3s,baz=86,slow=22,SNR=1.2						
NOA	NORSAR Array B	5.66	288	Pn	Pn	08 55 36.7	+1.0
	comp=Z,0.0nm,0.3s,baz=196,slow=13,SNR=5.8						
NOA				Sn	Sn	08 56 41.8	+0.4
	comp=Z,0.0nm,0.3s,baz=62,slow=6.6,SNR=1.9						
ARCES	ARCESS Array B	9.90	6	Pn	Pn	08 56 34.0	+0.4
	baz=184,slow=13,SNR=8.4						
ARCES				Sn	Sn	08 58 19.1	-6.1
	baz=45,slow=14,SNR=2.3						

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*UPP **18** 08:59:10.8±1.3, 59°.77N×22°.28E, h0^{km}, ML2.8, Suspected explosion*

*HEL **18** 08:59:11.4±0.1, 59°.69N×22°.24E, h0^{km}, ML2.2, ML2.8(UPP), Explosion*

*IDC **18** 08:59:13.3±1.7, 59°.83N×22°.24E, h0^{km}, mb1 3.2/4, mb1mx3.0/58, mbtmp3.1/4, ML2.3/4, Error ellipse: s-maj=24.1km s-min=8.2km az=159.0*

ISC 18 08:59:09.6±0.8**,59°.77N**±0°.04×**22°.37E**±0°.02**,h0^{km},n32, σ1^{s}.40**/47**,Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MEF	Metsahovi	1.11	65	eP	Pn	08 59 32.9	+0.5
MEF				eS	Sn	08 59 48.5	+0.1
AAL	Aland	1.27	290	P	Pg	08 59 33.2	-0.7
AAL				S	Sg	08 59 50.1	-0.2
AAL	Aland	1.27	290	eS	Sg	08 59 50.0	-0.2
MTSE	Matsula	1.29	144	eP	Pg	08 59 34.4	+0.1
RAF	Rauma	1.30	347	eP	Pb	08 59 35.7	+0.8
RAF				eS	Sn	08 59 53.6	+0.6
NUR	Nurmijrvi	1.36	56	eP	Pb	08 59 37.3	+1.4
NUR				eS	Sn	08 59 56.5	+1.9
PVF	Pernaja	1.91	64	eP	Pg	08 59 46.9	+0.7
PVF				eS	Sg	09 00 11.6	+0.6
PVF				MSG		09 00 14.9	
	comp=Z,18nm,0.1s						
GRAU	Graesoe	2.00	288	P	Pn	08 59 45.0	+0.4
GRAU				S	Sn	09 00 11.4	+1.0
GRAU	Graesoe	2.00	288	eP	Pn	08 59 45.0	+0.4
GRAU				eS	Sn	09 00 11.4	+1.0
FORU	Forsmark	2.19	288	P	Pn	08 59 48.2	+1.0
FORU	Forsmark	2.19	288	eP	Pn	08 59 48.2	+1.0
FLYU	Flymyra	2.29	281	P	Pn	08 59 49.4	+0.9
FLYU	Flymyra	2.29	281	eP	Pn	08 59 49.4	+0.9
NYNU	Nynaeshamn	2.36	253	P	Pn	08 59 50.6	+1.0
NYNU				S	Sn	09 00 20.0	+0.8
NYNU	Nynaeshamn	2.36	253	eP	Pn	08 59 50.6	+1.0
NYNU				eS	Sn	09 00 20.0	+0.8
FIA0	FINESS Array S	2.48	46	eSB	Sg	09 00 28.3	-1.1
FIA0				MSG		09 00 31.7	
	comp=Z,9.8nm,0.1s						
FINES	FINESS Array B	2.48	46	Pn	Pb	08 59 55.3	+0.3
	comp=Z,1.7nm,0.3s,baz=230,slow=14,SNR=43						
FINES				Sn	Sg	09 00 29.1	-0.3
	comp=Z,7.4nm,0.3s,baz=236,slow=24,SNR=40						
FIBU	Brunna	2.54	275	P	Pn	08 59 53.5	+1.5
VSU	Vasula	2.60	118	ePB	Pb	08 59 56.6	-0.5
BACU	Backbrunna	2.66	274	P	Pn	08 59 55.0	+1.4
BACU	Backbrunna	2.66	274	eP	Pn	08 59 55.0	+1.4
KEF	Keuruu	2.70	26	ePB	Pb	08 59 59.3	+0.6
KEF				eSB	Sg	09 00 35.0	-1.2
KEF				MSG		09 00 38.2	
	comp=Z,8.5nm,0.1s						
VJF	Virojoki	2.71	71	eSB	Sg	09 00 35.6	-0.8
VJF				MSG		09 00 38.6	
	comp=Z,5.5nm,0.1s						
GOTU	Gotland	2.88	225	P	Pn	08 59 56.8	+0.1
GOTU	Gotland	2.88	225	eP	Pn	08 59 56.8	+0.1
ARNU	Arnoeviken	3.12	310	eP	Pn	09 00 01.6	+1.6
ARNU				eSB	Sb	09 00 44.1	-0.4
VIKU	Vikbolandet	3.19	249	P	Pn	09 00 01.1	+0.2
VIKU	Vikbolandet	3.19	249	eP	Pn	09 00 01.1	+0.2
HEMU	Hemsoen	3.59	326	eP	Pn	09 00 09.2	+2.8
HFS	Hagfors	4.38	279	Pn	Pn	09 00 19.1	+1.9
	comp=Z,0.1nm,0.3s,baz=113,slow=9.4,SNR=16						
HFS				Pg	Pb	09 00 28.5	+1.2
	comp=Z,0.4nm,0.3s,baz=91,slow=16,SNR=8.6						
HFS				Lg	Lg	09 01 22.5	
	comp=Z,1.8nm,0.3s,baz=87,slow=30,SNR=11						
NOA	NORSAR Array B	5.68	288	Pn	Pn	09 00 35.5	+0.3
	comp=Z,0.0nm,0.3s,baz=107,slow=12,SNR=12						
NOA				Sn	Sn	09 01 38.3	-2.6
	comp=Z,0.0nm,0.3s,baz=57,slow=23,SNR=3.8						
NOA				Lg	Lg	09 01 59.9	
	comp=Z,0.1nm,0.3s,baz=281,slow=17,SNR=1.3						
ARCES	ARCESS Array B	9.90	6	Pn	Pn	09 01 33.6	+0.7
	baz=187,slow=13,SNR=22						
ARCES				Sn	Sn	09 03 18.6	-6.0
	baz=194,slow=22,SNR=1.3						

IDC 18 09:00:10.0±3.6**,52°.42N×35°.04E,h0^{km},mb1 4.0**/2**,**
mb1mx3.1/51**,mbtmp3.9**/2**,ML3.1**/2**,Error ellipse:**
s-maj=39.4km s-min=13.3km az=116.0,Baltic
States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OBN	Obninsk	2.84	18	Lg	Lg	09 01 33.5	
	2.9nm,0.3s,baz=347,slow=23,SNR=6.3						
AKASG	Malin Array Be	4.02	247	Pn	Pn	09 01 12.1	-0.6
	0.5nm,0.3s,baz=41,slow=17,SNR=1.5						
AKASG				Pg	Pb	09 01 20.2	-1.4
	1.3nm,0.3s,baz=58,slow=14,SNR=3.2						
AKASG				Sn	Sn	09 01 57.2	-3.3
	1.7nm,0.3s,baz=61,slow=19,SNR=2.2						
AKASG				Lg	Lg	09 02 17.9	
	3.5nm,0.3s,baz=64,slow=30,SNR=5.9						
FINES	FINESS Array B	10.27	335	Pn	Pn	09 02 33.5	-4.9
	baz=151,slow=13,SNR=1.8						
FINES				Sn	Sn	09 04 25.2	-8.9
	0.2nm,0.3s,baz=153,slow=22,SNR=1.5						
I31KZ	AKTYUBINSK INF	14.48	89	*i*		10 29 05.0	
	baz=286,slow=313,SNR=5.5						
ARCES	ARCESS Array B	17.74	349	P	Pn	09 04 16.3	-1.8
	baz=165,slow=11,SNR=6.1						

*IDC **18** 09:04:09.7±0.6,47°.31N×120°.81W,h0^{km},mb3.8/8, mb1 4.0/14,mb1mx3.8/62,mbtmp3.8/14,ML3.0/5,MS3.0/6, Ms1 3.0/6,ms1mx2.8/56,Error ellipse: s-maj=9.2km s-min=7.3km az=117.0*

*IASPEI **18** 09:04:10.8±0.8,47°.28N±0°.02×120°.73W±0°.02,h10^{km}±5^{km}, mb4.1/18,Error ellipse: s-maj=3.4km s-min=2.5km az=21.8,GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*NEIC **18** 09:04:11.2±1.9,47°.22N±0°.01×120°.76W±0°.02,h7^{km}±4^{km}, Error ellipse: s-maj=2.1km s-min=1.7km az=200.0*

*NEIC **18** 09:04:11.5,47°.25N×120°.72W,h8^{km},Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}5.88; $M_{\theta\theta}$-7.53; $M_{\phi\phi}$1.65; $M_{r\theta}$-0.62; $M_{\theta\phi}$-2.69; $M_{\phi r}$-2.91; Fault plane solution: $M_0$7.94000×10^{14} NP1:ϕ_s230.23000°, δ56.41000°,λ56.41000°. NP2:ϕ_s100.43000°,δ46.06000°, λ129.79000°. Principal axes: T 7.3962, Plg62.0000°, Azm84.0000°; N 0.9999, Plg27.0000°, Azm250.0000°; P -8.3962, Plg6.0000°, Azm343.0000°;*

*SEA **18** 09:04:11.5,47°.25N×120°.72W,h5^{km},ML4.4,ML4.0/20, Washington*

*ANF **18** 09:04:11.4±0.4,47°.30N×120°.71W,h12^{km}±3^{km},ML4.3/20, Error ellipse: s-maj=1.9km s-min=1.7km az=171.0*

*PNSN **18** 09:04:11.6,47°.25N×120°.75W,h4^{km},MD4.0,Fault plane solution: NP1:ϕ_s90.00000°,δ40.00000°,λ110.00000°.*

ISC 18 09:04:11.2±0.8**,47°.31N**±0°.02×**120°.74W**±0°.01**,h6^{km}**±5^{km}**,**
n356,σ1^{s}.**36**/382**,mb4.1**/18**,Washington**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LTY	Liberty	0.07	137	P	Pg	09 04 12.9	0.0
LTY				S	Sg	09 04 14.0	-0.1
LTY	Liberty	0.07	137		Pg	09 04 12.9	0.0
LTY				Sg	Sg	09 04 13.9	-0.1
LTY				IAML		09 04 14.3	
	comp=N,158µm,0.4s						
TBM	Table Mountain	0.17	145		Pg	09 04 14.3	-0.2
TWW	Teanaway	0.19	208		Pg	09 04 14.8	-0.2
ETW	Entiat	0.41	43		Pb	09 04 20.2	-0.7
EBG	Ellensburg	0.41	164		Pg	09 04 18.6	-0.6
SLFW	Sugar Loaf	0.47	17		Pb	09 04 21.5	-0.6
WRW	Wenatchee Ridg	0.56	350		Pb	09 04 22.9	-0.6
NAC	Naches	0.57	186		Pg	09 04 21.4	-0.8
VT2	Vantage 2	0.61	124		Pg	09 04 22.4	-0.4
C06D	Leavenworth	0.63	350	P	Pb	09 04 24.0	-0.6
	baz=172,SNR=556						
C06D				S	Sb	09 04 33.1	-0.6
	baz=172						
C06D	Leavenworth	0.63	350		Pb	09 04 24.0	-0.6
WTV	Waterville	0.66	53		Pb	09 04 24.7	-0.5
CBSW	Chelan Butte S	0.69	43		Pb	09 04 25.2	-0.4
CDMR	Cedar Moraine	0.70	280		Pg	09 04 24.5	-0.2
CDMR					Sg	09 04 34.3	+0.4
GSM	Grass Mountain	0.73	262		Pg	09 04 24.9	-0.3
RATT	Rattlesnake La	0.73	280		Pg	09 04 25.0	-0.3
RATT					Sg	09 04 35.2	+0.3
FMW	Mount Fremont	0.74	240	P	Pg	09 04 24.4	-1.0
FMW	Mount Fremont	0.74	240		Pg	09 04 24.4	-1.0
C05A	Tolt Reservoir	0.75	301	P	Pb	09 04 25.6	-1.1
C05A				S	Sb	09 04 36.2	-1.0
C05A	Tolt Reservoir	0.75	301		Pb	09 04 25.6	-1.1
TTW	Tolt Reservoir	0.75	301		Pb	09 04 25.8	-0.9
PANH	Panhandle Gap,	0.76	234		Pg	09 04 24.6	-1.2
BVW	Beverly	0.77	130		Pg	09 04 25.2	-0.7
EPH	Ephrata	0.78	86		Pb	09 04 25.9	-1.2
MXC	Moxie City	0.79	157		Pg	09 04 25.3	-1.0
YA2	Yakima	0.79	170		Pg	09 04 25.4	-1.0
ELW	Echo Lake	0.79	284		Pb	09 04 26.4	-1.0
RCS	Mount Rainier-	0.81	238		Pg	09 04 25.6	-1.0
RAW	Raver	0.81	273		Pb	09 04 26.7	-1.0
NLW	Nelson Butte	0.82	19		Pn	09 04 27.6	-1.8
WPW	White Pass	0.82	223		Pg	09 04 25.7	-1.3
RCM	Mount Rainier-	0.83	236		Pg	09 04 25.9	-1.2
OBSR	Observation Ro	0.84	241		Pg	09 04 26.4	-1.0
GPW	Glacier Peak	0.86	342	P	Pb	09 04 28.2	-0.5
GPW	Glacier Peak	0.86	342		Pb	09 04 28.2	-0.5
D05A	Enumclaw	0.86	263	P	Pg	09 04 27.3	-0.4
D05A				S	Sg	09 04 38.9	0.0
D05A	Enumclaw	0.86	263		Pg	09 04 27.2	-0.4
D05A				Sg	Sg	09 04 38.8	0.0
REMR	Mount Rainier-	0.90	238		Pg	09 04 27.1	-1.3
FHE	Frenchman Hill	0.92	112		Pb	09 04 28.3	-1.2
LON	Longmire	0.92	233	P	Pn	09 04 30.1	-0.6
LON				S	Sg	09 04 38.5	-2.3
LON	Longmire	0.92	233		Pg	09 04 27.2	-1.7
LON				Sg	Sg	09 04 38.7	-2.1
LON	Longmire	0.92	233		Pg	09 04 27.2	-1.7
DHW2	Dyer Hill 2	0.94	44		Pn	09 04 29.8	-1.2
GLK	Glacier Lake	0.95	219		Pg	09 04 28.1	-1.3
E07A	Sunnyside	0.96	141		Pg	09 04 28.2	-1.4
E07A				Sg	Sg	09 04 41.1	-0.9
E07A				IAML		09 04 47.3	
	comp=N,14µm,0.5s						
MDW	Midway	0.96	136		Pg	09 04 28.4	-1.2
BRVW	Black Rock Val	0.97	148		Pg	09 04 28.5	-1.2
WAH2	Wahluke Slope	0.97	124		Pg	09 04 29.1	-0.7
SAW	Saint Andrews	0.99	66		Pn	09 04 30.2	-1.4
BLH	Bald Hill	1.02	302		Pb	09 04 30.9	-0.4
GBB	Gable Butte	1.03	132		Pg	09 04 29.8	-1.1
CRF	Corfu	1.04	117		Pg	09 04 30.3	-0.8
BENWA	Benson Ranch	1.05	138		Pg	09 04 30.1	-1.3
SP2	Seward Park 2	1.06	284		Pb	09 04 31.5	-0.3
B941	Kapowsin	1.06	253		Pg	09 04 30.1	-1.4
B941					Sg	09 04 44.2	-1.0
LOCW	Locke Island	1.07	123		Pg	09 04 30.8	-0.9
GHW	Garrison Hill	1.08	256		Pg	09 04 30.3	-1.6
PAYL	Puyallup Schoo	1.08	265		Sb	09 04 46.9	+0.3
SNIWA	Snively Ranch	1.12	138		Pg	09 04 31.3	-1.4
GBL	Gable Mountain	1.12	129		Pg	09 04 31.6	-1.1
GBL					Sg	09 04 46.7	-0.6
JCW	Jim Creek	1.20	318	P	Pb	09 04 33.6	-0.8
JCW	Jim Creek	1.20	318		Pb	09 04 33.5	-0.8
RSW	Rattlesnake Hi	1.20	139		Pg	09 04 32.7	-1.6
MJ2	May Junction 2	1.21	128		Pg	09 04 33.1	-1.1
HAWA	Hanford	1.23	137		Pg	09 04 33.3	-1.5
HAWA				Sg	Sg	09 04 49.7	-1.0
RPW	Rockport	1.26	336	P	Pn	09 04 34.9	-0.5
RPW	Rockport	1.26	336		Pn	09 04 34.9	-0.5
D08A	Wollman Farm,	1.26	101		Pg	09 04 33.7	-1.6
D08A				IAML		09 04 52.5	
	comp=E,4µm,0.3s						
D08A				IAML		09 04 52.6	
	comp=N,4µm,0.2s						
H2OWA	Water	1.28	135		Pg	09 04 34.0	-1.7
ASR	Mount Adams--S	1.30	207		Pg	09 04 34.3	-1.8
B06A	Marblemount	1.31	338		Pn	09 04 36.0	-0.1
B06A				IAML		09 04 59.5	
	comp=E,4µm,0.6s						
B06A				IAML		09 05 00.2	
	comp=N,4µm,0.5s						
B05A	Bryant	1.33	317	P	Pb	09 04 35.7	-0.8
	baz=138,SNR=781						
B05A				S	Sn	09 04 54.7	+0.5
	baz=138						
B05A	Bryant	1.33	317		Pb	09 04 35.7	-0.8
WIW	Wooded Island	1.33	131		Pg	09 04 35.2	-1.4
WIW	Wooded Island	1.33	131		Pg	09 04 35.0	-1.6
REDWA	Red Mountain	1.35	138		Pg	09 04 35.0	-2.0
D04E	Lakebay	1.39	265	P	Pn	09 04 36.6	-0.5
	baz=86,SNR=118						
D04E				S	Sn	09 04 56.8	+1.0
	baz=86						
TDL	Tradedollar La	1.40	227		Pn	09 04 35.6	-1.7
E08A	Dider Farm, El	1.41	125		Pn	09 04 36.1	-1.3
E08A				IAML		09 04 55.4	
	comp=N,6µm,0.4s						
E08A				IAML		09 04 55.9	
	comp=E,7µm,0.4s						
GMW	Gold Mountain	1.41	281		Pn	09 04 36.5	-0.9
B08A	Colville Reser	1.42	41		Pb	09 04 37.0	-1.0
B08A				IAML		09 04 58.8	
	comp=E,7µm,0.6s						
B08A				IAML		09 04 59.3	
	comp=N,6µm,0.5s						
B202	Windy Ridge, M	1.43	223		Pn	09 04 36.0	-1.8
SOSW	Source of Smit	1.43	223		Pn	09 04 36.4	-1.5
GNW	Green Mountain	1.44	281	P	Pn	09 04 37.0	-0.9
GNW	Green Mountain	1.44	281		Pn	09 04 36.9	-0.9
JRO	Jston Ridge Ob	1.45	225		Pn	09 04 36.4	-1.6
B201	Coldwater, Mou	1.45	227		Pn	09 04 36.5	-1.5
CMW	Cultus Mountai	1.46	321	P	Pb	09 04 38.8	0.0
CMW	Cultus Mountai	1.46	321		Pb	09 04 38.7	0.0
E04D	Cinebar	1.46	240	P	Pn	09 04 37.1	-1.0
	baz=60,SNR=190						
E04D				S	Sb	09 04 57.0	-0.5
	baz=60						
E04D	Cinebar	1.46	240		Pn	09 04 37.1	-1.0
ESD	East Dome	1.48	222		Pn	09 04 37.1	-1.3
STD	Studebaker Rid	1.48	224		Pn	09 04 37.1	-1.3
VALT	Mount Saint He	1.48	223		Pn	09 04 37.2	-1.4
LCW	Lucas Creek	1.49	245		Pn	09 04 37.3	-1.2
ERK	Elk Rock	1.49	228		Pn	09 04 37.3	-1.3
CDFW	Cedar Flats	1.49	218		Pn	09 04 37.4	-1.2
F05D	White Salmon	1.51	200	P	Pn	09 04 37.5	-1.3
	baz=19,SNR=153						
F05D				S	Sn	09 04 58.5	-0.2
	baz=19						
F05D	White Salmon	1.51	200		Pn	09 04 37.9	-0.9
HSR	South Ridge	1.51	222		Pn	09 04 37.7	-1.2
JLK	June Lake	1.52	221		Pn	09 04 37.7	-1.2
F07A	Phinny Hill Vi	1.52	158	Pn	Pn	09 04 37.8	-1.1
SHW	Mount Saint He	1.52	223		Pn	09 04 37.9	-1.1
SWF2	Southwest Flan	1.52	223		Pn	09 04 37.8	-1.2
C04A	Brinnon	1.57	286		Pn	09 04 39.2	-0.3
FL2	Flat Top 2	1.57	226		Pn	09 04 38.7	-1.0
PAT2	Paterson 2	1.57	154		Pn	09 04 38.7	-1.0
B203	Quarry, Mount	1.58	225		Pn	09 04 38.7	-1.1
HDW	Hoodsport	1.61	283	P	Pn	09 04 39.7	-0.5
HDW	Hoodsport	1.61	283		Pn	09 04 39.8	-0.5
D03D	Eldon	1.61	279	P	Pn	09 04 39.6	-0.5
	baz=99,SNR=784						
D03D				S	Sn	09 05 01.5	+0.2
	baz=99						
D03D	Eldon	1.61	279		Pn	09 04 39.7	-0.5
MTMW	Mount Mitchell	1.64	219		Pn	09 04 39.7	-0.9
BLN	Blyn Mountain	1.67	296	P	Pn	09 04 40.9	0.0
BLN	Blyn Mountain	1.67	296		Pn	09 04 39.2	-1.8
CPW	Capitol Peak	1.67	259		Pn	09 04 40.9	-0.1
SHUK	Shuksan-Mt. Ba	1.67	338		Pg	09 04 41.8	-1.4
MBW	Mount Baker	1.67	333	P	Pg	09 04 41.9	-1.3
MBW	Mount Baker	1.67	333		Pg	09 04 41.9	-1.3
LVP	Lakeview Peak	1.69	224		Pn	09 04 40.8	-0.6
APM	Augspurger Mou	1.70	203		Pn	09 04 41.0	-0.4
C09A	Chrisman Ranch	1.74	73	P	Pn	09 04 41.3	-0.6
C09A	Chrisman Ranch	1.74	73		Pn	09 04 41.4	-0.5
SQM	Sequim	1.74	297		Pb	09 04 42.7	-0.8
YPT	Yellepit	1.75	135		Pn	09 04 40.6	-1.5
SMW	South Mountain	1.77	271		Pb	09 04 43.5	-0.6
VGB	Gordon Butte	1.79	181		Pn	09 04 41.6	-1.1
RVW	Rose Valley	1.80	231		Pn	09 04 42.7	-0.1
BMW	Boistfort Moun	1.90	245		Pn	09 04 44.1	-0.1
A04D	Lummi Island	1.94	318	P	Pb	09 04 46.0	-0.8
	baz=138,SNR=124						
A04D	Lummi Island	1.94	318		Pb	09 04 46.2	-0.7
E09A	Wood Farm, Sta	1.94	113		Pn	09 04 42.9	-1.8
E09A				IAML		09 05 18.7	
	comp=N,2µm,0.4s						
E09A				IAML		09 05 23.3	
	comp=E,2µm,0.4s						
VLL	Laurance Lake	1.96	200		Pn	09 04 42.5	-2.5
MCW	Mount Constitu	1.97	315	P	Pb	09 04 46.4	-1.0
MCW	Mount Constitu	1.97	315		Pb	09 04 46.5	-1.0
F04D	Rainier, OR	1.99	233	P	Pn	09 04 45.0	-0.3
	baz=52,SNR=47						
F04D				S	Sn	09 05 11.2	+0.7
	baz=52						
F04D	Rainier, OR	1.99	233		Pn	09 04 45.9	+0.6
B023	Clatskanie	2.01	234		Pn	09 04 45.9	+0.4
HIYU	Hiyu Mountain	2.01	202		Pn	09 04 45.3	-0.5
B04A	Port Angeles	2.02	293		Pn	09 04 46.3	+0.6
B04A	Port Angeles	2.02	293		Pb	09 04 46.4	-1.8
VFP	Flag Point	2.05	195		Pn	09 04 45.9	-0.5
PALME	Palmer Lift, M	2.06	199		Pn	09 04 46.1	-0.5
VGZ	Gonzales	2.06	303	P	Pn	09 04 47.0	+0.6
WISH	Wishkah	2.08	266	P	Pb	09 04 47.9	-1.3
WISH	Wishkah	2.08	266		Pb	09 04 48.2	-1.0
E03A	Lebam	2.08	250	P	Pn	09 04 47.1	+0.5
E03A	Lebam	2.08	250		Pn	09 04 47.1	+0.5
E03A				IAML		09 05 23.0	
	comp=E,1µm,0.5s						
HOOD	Mount Hood Mea	2.08	198		Pn	09 04 46.5	-0.3
TIMB	Timberline	2.08	199		Pn	09 04 47.2	+0.3
OLQ	Olympics--Lake	2.10	277		Pb	09 04 47.8	-1.7
B019	Raymond	2.10	253		Pn	09 04 48.0	+1.2
G05D	Wamic, OR	2.10	191	P	Pn	09 04 46.7	-0.3
	baz=11,SNR=673						
G05D				S	Sn	09 05 13.7	+0.2
	baz=11						
G05D	Wamic, OR	2.10	191		Pn	09 04 46.7	-0.3
VTHM	Trough	2.13	177		Pn	09 04 46.0	-1.3
HOPB	Hope	2.13	348	P	Pb	09 04 49.6	-0.6
NLWA	Neilton Lookou	2.13	273		Pn	09 04 48.4	+1.1
NLWA				IAML		09 05 20.9	
	comp=E,2µm,0.5s						
NLWA				IAML		09 05 23.7	
	comp=E,1µm,0.6s						
TDH	Tom, Dick, Har	2.15	200		Pn	09 04 47.1	-0.6
PNT	Penticton	2.15	20	P	Pb	09 04 48.3	-2.2
STW	Striped Peak	2.15	294	P	Pb	09 04 48.8	-1.7
STW	Striped Peak	2.15	294		Pb	09 04 49.2	-1.4
PGO	Gresham	2.19	213		Pn	09 04 48.4	+0.3
SNB	Saturna Island	2.20	313	P	Pb	09 04 49.3	-2.1
LNOR	Lincton Mounta	2.22	129		Pn	09 04 47.6	-0.9
NLO	Nicolai Mounta	2.23	238		Pn	09 04 50.1	+1.4
B011	North Saanich	2.26	307	P	Pb	09 04 50.3	-2.1
B011	North Saanich	2.26	307		Pb	09 04 50.4	-2.0
PGC	Sidney	2.27	307	P	Pb	09 04 50.4	-2.1
PGC	Sidney	2.27	307		Pb	09 04 50.6	-1.9
PGC				IAML		09 05 22.0	
	comp=N,3µm,0.6s						
PGC				IAML		09 05 22.8	
	comp=E,1µm,0.5s						
RADR	Rader Ridge	2.28	248		Pn	09 04 50.7	+1.3
VBEM	Beaver Butte	2.32	195		Pn	09 04 50.0	0.0
CROR	Criterion Ridg	2.33	184		Pn	09 04 49.2	-0.9
G08A	Pilot Rock	2.36	148		Pn	09 04 49.9	-0.7
G08A				IAML		09 05 30.2	
	comp=N,3µm,0.6s						
G08A				IAML		09 05 36.9	
	comp=E,2µm,0.8s						
OBC	Olympics--Boni	2.37	289		Pb	09 04 53.1	-1.2
P403	Sandy Floe Qua	2.42	289		Pb	09 04 53.4	-1.8
G04A	Mulino	2.42	211		Pn	09 04 51.2	-0.1
GOBB	Galiano Island	2.48	313	P	Pb	09 04 53.9	-2.2
KMOR	Kings Mountain	2.53	230		Pn	09 04 54.6	+1.7
OTR	Olympics--Tyee	2.56	289		Pg	09 04 58.8	-1.4
NEW	Newport	2.62	67	Pn	Pn	09 04 53.4	-0.6
	comp=E,104nm,0.3s,baz=237,slow=12,SNR=1358						
NEW				LR	LR	09 05 25.8	
	comp=E,27nm,18.2s,baz=229,slow=29						
NEW				Lg	Lg	09 05 33.6	
	comp=E,344nm,0.3s,baz=55,slow=8.0,SNR=18						
NEW	Newport	2.62	67	P	Pn	09 04 53.5	-0.5
	baz=249						
NEW				S	Sn	09 05 26.3	+0.1
	baz=249						
NEW	Newport	2.62	67		Pn	09 04 53.5	-0.5
NEW				IAML		09 05 38.9	
	comp=E,925nm,0.5s						
NEW				IAML		09 05 42.3	
	comp=E,925nm,0.6s						
C03A	Quillayute Air	2.67	285		Pg	09 05 01.4	-0.9
BIB	Bowen Island	2.71	322	P	Pb	09 04 57.2	-2.8
G03D	McMinnville, O	2.73	221	P	Pn	09 04 55.2	-0.4
	baz=40,SNR=112						
G03D	McMinnville, O	2.73	221		Pb	09 04 58.2	-2.2
B926	Mesachie Lake	2.73	305	P	Pn	09 04 57.2	+1.6
B926	Mesachie Lake	2.73	305		Pn	09 04 55.1	-0.4
B926					Pb	09 04 58.1	-2.4
F10A	Beach Ranch, E	2.76	118		Pn	09 04 55.5	-0.5
PFB	Port Renfrew	2.79	298	P	Pb	09 04 58.7	-2.8
VIPM	Ingram Point	2.80	178		Pn	09 04 55.7	-1.0
OCP	Olym-Cheeka Pk	2.80	292	P	Pb	09 04 58.8	-2.9
OCP	Olym-Cheeka Pk	2.80	292		Pb	09 05 00.2	-1.5
H04A	Detroit Lake	2.81	202		Pn	09 04 56.8	+0.1
H04A				IAML		09 05 45.2	
	comp=E,799nm,0.4s						
H04A				IAML		09 05 46.0	
	comp=N,759nm,0.6s						
WPB	Watts Point	2.87	326	P	Pn	09 04 59.2	+1.7
I05D	Terrebonne, OR	3.00	188	P	Pn	09 04 58.8	-0.4
	baz=7.8,SNR=242						
I05D	Terrebonne, OR	3.00	188		Pn	09 04 59.3	0.0
GHNB	Nanoose	3.08	312	P	Pn	09 05 02.4	+2.2
SHB	Sechelt	3.10	319	P	Pn	09 05 02.6	+1.8
H04D	Lebanon	3.11	207	P	Pn	09 05 00.6	-0.2
	baz=26,SNR=16						
H04D				Sb	Sb	09 05 45.6	+0.4
	baz=26						
H04D	Lebanon	3.11	207		Pn	09 05 02.1	+1.3
TCBUT	Trout Creek Bu	3.13	192		Pb	09 05 05.9	-1.5
MGB	Mount Grey	3.14	304	P	Pn	09 05 03.7	+2.3
WSLR	Whistler	3.17	334	P	Pb	09 05 04.3	-3.6
PRLK	Prince Lake	3.21	196		Pn	09 05 02.5	+0.2
COR	Corvallis	3.26	214	Pn	Pn	09 05 04.6	+1.9
COR				IAML		09 06 01.5	
	comp=N,414nm,0.8s						
BEND	Bend	3.27	187		Pn	09 05 02.9	-0.1
BROR	Big Rock Looko	3.27	202		Pn	09 05 03.4	+0.4
B927	Port Alberni	3.33	307		Pb	09 05 07.2	-3.4
I07A	Izee	3.34	165		Pn	09 05 03.7	-0.3
I07A				IAML		09 05 58.8	
	comp=N,804nm,0.8s						
I07A				IAML		09 06 01.5	
	comp=E,719nm,0.8s						
LLLB	Lillooet	3.39	348	P	Pn	09 05 06.4	+1.7
BMO	Blue Mountains	3.42	135		Pn	09 05 04.2	-0.9
BMO				IAML		09 06 04.1	
	comp=E,368nm,0.7s						
TXB	Texada	3.43	316	P	Pb	09 05 08.1	-4.2
ASBU	Astronaut Butt	3.51	187		Pn	09 05 06.0	-0.5
PINE	Pine Mountain	3.52	182		Pn	09 05 05.9	-0.7
PINE				IAML		09 06 01.6	
	comp=E,1µm,0.8s						
PINE				IAML		09 06 08.1	
	comp=N,960nm,0.7s						
KWBU	Kawak Butte, N	3.58	187		Pn	09 05 07.8	+0.5
OZB	Mount Ozzard	3.59	299	P	Pb	09 05 10.8	-4.2
SVIC	Surveyors Ice	3.68	186		Pn	09 05 09.2	+0.4
I04A	Tendick Farm,	3.70	199	P	Pn	09 05 09.0	0.0
	baz=18,SNR=22						
I04A				Sb	Sb	09 06 03.8	+1.6
	baz=18						
I04A	Tendick Farm,	3.70	199		Pn	09 05 04.1	-4.8
I04A					Pb	09 05 09.6	-7.4
TMBU	Tom Butte, New	3.72	185		Pn	09 05 10.1	+0.8
BTB	Buttle Lake	3.85	306	P	Pn	09 05 13.9	+2.7
I02D	Swisshome	3.87	215	P	Pn	09 05 11.4	+0.1
	baz=33,SNR=108						
BHMT	Big Hole Peak	3.88	84	P	Pn	09 05 10.4	-1.1
J05D	Fort Rock, OR	4.04	185	P	Pn	09 05 13.6	0.0
	baz=4.7,SNR=32						
J05D				Sb	Sb	09 06 13.7	+1.8
	baz=4.7						
J05D	Fort Rock, OR	4.04	185		Pb	09 05 22.1	-0.7
I03D	Drain, OR	4.05	208	P	Pn	09 05 13.9	+0.3
	baz=26,SNR=90						
I03D				Sb	Sb	09 06 14.3	+2.2
	baz=26						
BSMT	Bassoo Peak	4.06	80	P	Pn	09 05 12.3	-1.7
BSMT	Bassoo Peak	4.06	80		Pn	09 05 12.6	-1.5
CBB	Campbell River	4.11	313	P	Pn	09 05 17.9	+3.5
SLEB	Sale Mountain	4.22	23	P	Pn	09 05 17.8	+1.5
GDR	Gold River	4.30	307	P	Pn	09 05 19.8	+2.7
BLMT	Blacktail Moun	4.36	78		Pn	09 05 17.6	-0.6

JTMT	Jette	4.39	82		Pn	09 05 17.1	-1.4
K05A	Summer Lake	4.58	181		Pn	09 05 19.7	-1.4
MSO	Missoula	4.67	93	P	Pn	09 05 21.0	-1.3
	baz=278						
MSO				S	Sn	09 06 15.2	-1.6
	baz=278						
MSO	Missoula	4.67	93	Pn	Pn	09 05 21.0	-1.3
NCRB	Newcastle Ridg	4.68	313	P	Pn	09 05 26.4	+4.0
WOSB	Woss	4.80	309	P	Pn	09 05 26.9	+2.8
WALA	Waterton Lakes	4.89	66	P	Pn	09 05 25.5	+0.2
WALA	Waterton Lakes	4.89	66		Pn	09 05 25.9	+0.5
WALA				IAML		09 06 52.1	
	comp=E,306nm,0.8s						
HUMO	Hull Mountain	4.96	199	Pn	Pn	09 05 27.3	+1.1
K02D	Willamette Mer	5.06	205	P	Pn	09 05 28.0	+0.4
	baz=23,SNR=14						
WVOR	Wild Horse Val	5.09	162		Pn	09 05 28.8	+0.6
WVOR				IAML		09 07 14.7	
	comp=E,104nm,1.2s						
KEBM	Edson Butte	5.11	211	Pn	Pn	09 05 29.8	+1.4
KEBM				IAML		09 07 12.0	
	comp=E,130nm,1.8s						
MNB	Mounoet Dainar	5.13	16	P	Pn	09 05 30.6	+1.8
MFID	Camas Ranch	5.21	137	Pn	Pn	09 05 29.4	-0.3
MFID				IAML		09 07 05.3	
	comp=E,204nm,0.9s						
MFID				IAML		09 07 10.7	
	comp=E,165nm,1.0s						
L04D	Klamath Falls	5.21	193	P	Pn	09 05 30.0	+0.3
	baz=12,SNR=19						
MOD	Modoc Plateau	5.41	177	Pn	Pn	09 05 32.1	-0.5
L02E	Cave Junction	5.54	203	P	Pn	09 05 34.8	+0.7
	baz=21						
PHC	Port Hardy	5.57	310	P	Pn	09 05 37.8	+3.3
M04C	Macdoel	5.58	189	P	Pn	09 05 35.3	+0.5
	baz=7.7,SNR=17						
YBH	Yreka Blue Hor	5.75	195	Pn	Pn	09 05 38.7	+1.6
	comp=E,1.2nm,0.3s,baz=16,slow=12,SNR=27						
YBH				Lg	Lg	09 07 08.5	
	comp=E,0.7nm,0.3s,baz=255,slow=22,SNR=3.8						
YBH				LR	LR	09 07 59.5	
	comp=E,202nm,18.9s,baz=12,slow=40						
YBH	Yreka Blue Hor	5.75	195	Pn	Pn	09 05 39.1	+2.0
HLID	Hailey	5.81	128	P	Pn	09 05 37.6	-0.5
	baz=312						
HLID	Hailey	5.81	128	Pn	Pn	09 05 37.4	-0.7
HOLB	Holberg	5.90	307	P	Pn	09 05 42.8	+3.7
LRM	Limekiln Ridge	5.90	102		Pn	09 05 38.5	-0.9
BCYI	Bear Canyon	5.94	118		Pn	09 05 39.3	-0.5
DLMT	Dillon	5.96	106		Pn	09 05 39.5	-0.6
MCMT	McKenzie Canyo	6.02	111		Pn	09 05 40.5	-0.5
M02C	Callahan	6.11	195	P	Pn	09 05 42.2	+0.2
	baz=14						
HRY	Holter Researc	6.12	92		Pn	09 05 41.0	-1.2
KRMB	Red Mountain	6.21	203	Pn	Pn	09 05 42.6	-0.9
N02D	Trinity Center	6.49	193	P	Pn	09 05 48.1	+0.9
	baz=12,SNR=15						
BOZ	Bozeman (W)	6.52	102	P	Pn	09 05 47.0	-0.8
	baz=288						
BOZ	Bozeman (W)	6.52	102		Pn	09 05 47.0	-0.8
KHMM	Horse Mountain	6.78	200	Pn	Pn	09 05 53.1	+1.7
BBB	Bella Bella	6.83	318	Pn	Pn	09 05 54.9	+3.1
	comp=E,0.3nm,0.3s,baz=80,slow=6.6,SNR=11						
BBB				Lg	Lg	09 07 38.2	
	comp=E,0.9nm,0.3s,baz=44,slow=4.8,SNR=3.1						
BBB	Bella Bella	6.83	318		Pn	09 05 52.7	+0.9
WDC	Whiskeytown Da	6.85	192	Pn	Pn	09 05 56.7	+4.6
JCC	Jacoby Creek,	6.91	201	Pn	Pn	09 05 53.5	+0.7
QLMT	Earthquake Lak	6.93	108		Pn	09 05 53.5	0.0
O03E	Paynes Creek	7.05	187	P	Pn	09 05 56.7	+1.7
	baz=5.9,SNR=26						
YHL	Hebgen Lake	7.08	107		Pn	09 05 55.7	+0.1
YHB	Horse Butte	7.12	108		Pn	09 05 56.3	+0.3
O02D	Mt. Diablo Mer	7.28	193	P	Pn	09 05 58.5	+0.4
	baz=11,SNR=5.6						
YMR	Madison River	7.30	108		Pn	09 05 58.7	+0.2
YHH	Holmes Hill	7.33	106		Pn	09 05 58.9	0.0
EGMT	Eagleton	7.45	80	P	Pn	09 05 59.9	-0.5
	baz=268						
EGMT	Eagleton	7.45	80		Pn	09 05 59.5	-1.0
YPP	Pitchstone Pla	7.58	110		Pn	09 06 03.3	+0.9
ELK	Elko	7.66	147	Pn	Pn	09 06 06.5	+3.0
	comp=E,0.2nm,0.3s,baz=344,slow=12,SNR=6.5						
ELK				Lg	Lg	09 08 09.2	
	comp=E,0.7nm,0.3s,baz=78,slow=23,SNR=7.4						
ELK				LR	LR	09 09 05.7	
	comp=E,117nm,21.8s,baz=337,slow=38						
H17A	Grant Village	7.67	109	P	Pn	09 06 04.7	+1.1
	baz=296						
H17A	Grant Village	7.67	109	Pn	Pn	09 06 05.4	+1.8
LKWY	Lake	7.71	107	Pn	Pn	09 06 05.7	+1.5
FLWY	Flagg Ranch	7.73	111	Pn	Pn	09 06 05.2	+0.8
GCMT	Greycliff	7.78	97		Pn	09 06 05.4	+0.4
YNE	Yellowstone No	7.80	103		Pn	09 06 05.7	+0.3
YMP	Mirror Lake Pl	7.80	105		Pn	09 06 05.7	+0.3
ECR	Eagle Creek	7.86	119	Pn	Pn	09 06 08.9	+2.6
HVU	Hansel Valley	7.93	131	Pn	Pn	09 06 09.8	+2.8
REDW	Red Top Meadow	8.00	116	Pn	Pn	09 06 09.3	+1.1
SNOW	Snow King Moun	8.01	115	Pn	Pn	09 06 09.7	+1.4
LOHW	Long Hollow	8.02	114		Pn	09 06 08.9	+0.5
RLMT	Red Lodge	8.25	101	P	Pn	09 06 11.9	+0.3
	baz=289						
RLMT	Red Lodge	8.25	101		Pn	09 06 12.3	+0.8
NVAR	Mina Array Bea	9.05	168	Pn	Pn	09 06 25.7	+3.2
	comp=E,1.2nm,0.3s,baz=349,slow=14,SNR=41						
NVAR				LR	LR	09 10 31.1	
	comp=E,113nm,18.1s,baz=4.5,slow=42						
NVAR	Mina Array Bea	9.05	168	Pn	Pn	09 06 26.3	+3.8
BW06	Boulder Array	9.12	116	P	Pn	09 06 24.2	+0.7
	baz=303						
PD31	Pinedale Array	9.12	116	Pn	Pn	09 06 27.4	+3.9
PDAR	Pinedale Array	9.12	116	Pn	Pn	09 06 25.2	+1.7
	comp=E,0.6nm,0.3s,baz=312,slow=10,SNR=42						
PDAR				Lg	Lg	09 09 00.9	
	comp=E,0.2nm,0.3s,baz=344,slow=20,SNR=3.7						
PDAR	Pinedale Array	9.12	116	Pn	Pn	09 06 25.8	+2.2
DUG	Dugway, Tooele	9.13	138	P	Pn	09 06 24.4	+0.9
	baz=324						
DUG	Dugway, Tooele	9.13	138	Pn	Pn	09 06 25.8	+2.3
LAO	LASA Array	9.94	88	P	Pn	09 06 34.2	-0.3
	baz=278						
LAO	LASA Array	9.94	88	Pn	Pn	09 06 34.5	-0.1
DGMT	Dagmar	11.17	78	P	Pn	09 06 50.3	-1.1
	baz=270						
DGMT	Dagmar	11.17	78	Pn	Pn	09 06 50.1	-1.3
DLBC	Dease Lake	12.47	337	Pn	Pn	09 07 10.9	+1.8
	comp=E,0.1nm,0.3s,baz=227,slow=19,SNR=1.4						
DLBC				LR	LR	09 12 23.8	
	comp=E,164nm,18.0s,baz=98,slow=40						
E28A	Huff	13.71	86		Pn	09 07 26.0	-0.1
FFC	Flin Flon	13.92	51	Pn	Pn	09 07 26.4	-2.4
PFO	Pinyon Flats O	14.06	165	Pn	Pn	09 07 33.6	+2.7
	comp=E,0.0nm,0.3s,baz=303,slow=3.0,SNR=1.6						
YKA	Yellowknife Ar	15.61	11	Pn	Pn	09 07 52.0	+0.4
	comp=E,0.5nm,0.3s,baz=193,slow=11,SNR=31						
YKA				Lg	Lg	09 12 17.8	
	comp=E,0.1nm,0.3s,baz=190,slow=28,SNR=6.8						
ULM	Lac du Bonnet	16.63	71	Pn	Pn	09 08 01.7	-3.0
	comp=E,0.2nm,0.3s,baz=274,slow=11,SNR=7.4						
ULM				Lg	Lg	09 12 49.2	
	comp=E,0.3nm,0.3s,baz=182,slow=15,SNR=5.1						
ULM	Lac du Bonnet	16.63	71	Pn	Pn	09 08 02.3	-2.3
F33A	5 Mile Ranch,	16.86	86		Pn	09 08 05.8	-1.8
ECSD	EROS Data Cent	17.26	93		Pn	09 08 11.3	-1.4
B35A	Bob, Littlefor	18.14	77	P	P	09 08 23.1	-0.8
F36A	Milaca	18.73	84	P	P	09 08 29.6	-0.8
FCC	Fort Churchill	19.55	44	P	Pn	09 08 40.0	-0.6
FCC				IAmb	IAmb	09 08 41.2	
	comp=Z,16nm,1.0s						
EYMN	Ely	19.67	77	P	P	09 08 39.8	-0.9
EPYK	Eagle Plains	20.89	342	P	Pn	09 08 56.4	0.0
EPYK				IAmb	IAmb	09 08 59.0	
	comp=Z,7.8nm,0.9s						
P38A	Dawn	21.11	101	P	P	09 08 56.3	-0.1
P38A				IAmb	IAmb	09 08 59.8	
	comp=Z,5.8nm,0.8s						
G40A	Rib Lake	21.14	84	P	P	09 08 56.3	-0.3
G40A				IAmb	IAmb	09 09 06.1	
	comp=Z,20nm,1.5s						
L40A	Anamosa	21.56	93	P	P	09 09 01.3	+0.1
L40A				IAmb	IAmb	09 09 01.4	
	comp=Z,12nm,0.8s						
COWI	Conover	21.63	81	P	P	09 09 01.1	-0.9
COWI				IAmb	IAmb	09 09 24.1	
	comp=Z,14nm,1.4s						
JFWS	Jewell Farm	21.89	90	P	P	09 09 04.7	0.0
INK	Inuvik	22.04	347	P	P	09 09 05.8	-0.2
	comp=Z,1.2nm,0.5s,baz=134,slow=7.4,SNR=7.2						
INK				LR	LR	09 18 16.6	
	comp=Z,58nm,20.4s,baz=259,slow=38						
INK	Inuvik	22.04	347	P	P	09 09 06.5	+0.4
INK				IAmb	IAmb	09 09 11.8	
	comp=Z,6.8nm,1.2s						
S39A	Bolivar	22.28	106	P	P	09 09 10.4	+1.4
TXAR	Lajitas Array	22.30	138	P	P	09 09 08.9	-0.4
	comp=Z,0.5nm,0.6s,baz=328,slow=8.4,SNR=9.6						
TXAR	Lajitas Array	22.30	138	P	P	09 09 09.4	0.0
I42A	Draeger Farm,	22.44	87	P	P	09 09 10.0	-0.7
I42A				IAmb	IAmb	09 09 12.4	
	comp=Z,10nm,0.8s						
IL31		22.51	330	P	P	09 09 12.4	+1.3
IL31				IAmb	IAmb	09 09 17.1	
	comp=Z,7.9nm,1.1s						
ILAR	Eielson Array	22.51	330	P	P	09 09 11.9	+0.7
	comp=Z,4.1nm,1.0s,baz=127,slow=10.0,SNR=19						
ILAR	Eielson Array	22.51	330	P	P	09 09 11.7	+0.5
R40A	Maddies Statio	22.64	103	P	P	09 09 13.2	+0.4
R40A				IAmb	IAmb	09 09 14.7	
	comp=Z,11nm,1.2s						
E43A	Lone Tree Farm	23.00	80	P	P	09 09 15.7	-0.8
E43A				IAmb	IAmb	09 09 44.1	
	comp=Z,17nm,1.4s						
BMAR	Burnt Mountain	23.62	337	P	P	09 09 24.6	+1.9
G45A	Suttons Bay	24.28	82	P	P	09 09 29.2	+0.2
LCAR	Lake Charles	24.63	106	P	P	09 09 32.5	+0.2
IMAR	Indian Mountai	25.57	329	P	P	09 09 42.8	+2.3
PLAL	Pickwick Lake	27.30	105	P	P	09 09 56.4	0.0
PLAL				IAmb	IAmb	09 09 57.5	
	comp=Z,4.0nm,0.8s						
RES	Resolute Bay	29.64	14	P	P	09 10 16.2	-0.7
	comp=Z,0.8nm,0.8s,baz=195,slow=12,SNR=4.0						
K58A	Earlville	31.84	81	P	P	09 10 36.1	-0.6
F64A	Sherman	35.47	73	P	P	09 11 08.6	+0.4
FINES	FINESS Array B	68.35	16	P	P	09 15 12.4	-0.4
	comp=Z,3.3nm,0.6s,baz=343,slow=5.0,SNR=12						
BVAR	Borovoye Array	79.60	353	P	P	09 16 18.2	-0.6
	comp=Z,0.6nm,0.6s,baz=262,slow=1.0,SNR=5.3						
HHC	Hu-ho-hao-te	80.69	323	*e*P	P	09 16 27.3	+2.2
HHC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,130nm,6.1s						
KURBB	Kurchatov Arra	81.05	348	P	P	09 16 26.1	-0.6
	comp=Z,0.8nm,0.6s,baz=12,slow=4.9,SNR=7.6						
MKAR	Makanchi Array	84.14	344	P	P	09 16 42.1	-0.8
	comp=Z,0.5nm,0.6s,baz=0.7,slow=4.1,SNR=7.5						
WMQ	Urumqi	85.85	340	*e*P	P	09 16 54.0	+2.4
ASAR	Alice Springs	117.24	264	PKP	PKPdf	09 22 56.2	-1.1
	comp=Z,0.3nm,0.8s,baz=76,slow=1.4,SNR=4.1						
BOSA	Boshof	147.68	67	PKPbc	PKPbc	09 23 55.7	-0.9
	comp=Z,2.2nm,0.5s,baz=253,slow=1.1,SNR=6.0						

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*IDC **18** 09:11:07.1±1.2, 4°.19S×129°.39E, h0^{km}, mb4.1/4, mb1 4.0/7, mb1mx3.6/52, mbtmp3.9/7, ML3.4/3, MS2.6/1, Ms1 2.6/1, ms1mx2.3/40, Error ellipse: s-maj=50.3km s-min=24.6km az=75.0*

*NEIC **18** 09:11:12.9±1.8, 4°.15S±0°.09×129°.6E±0°.1, h35^{km}±2^{km}, mb4.1/9, Error ellipse: s-maj=18.1km s-min=14.9km az=68.0*

ISC 18 09:11:12.5±0.7, **4°.13S**±0°.07×**129°.6E**±0°.1, **h36**^{km}, **n24**, σ**1ˢ.12**/21, **mb4.2**/8, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	Fak Fak	2.88	65	Pn	Pn	09 11 57.5	+1.7
SIJI	Sorong	3.62	27	Pn	Pn	09 12 06.5	+0.4
	5.4nm,0.3s,baz=213,slow=22,SNR=32						
SIJI				Sn	Sn	09 12 46.3	-1.4
	3.4nm,0.3s,baz=243,slow=7.2,SNR=3.6						
SIJI				LR	LR	09 13 57.9	
	comp=Z,86nm,20.4s,baz=282,slow=45						
FITZ	Fitzroy Crossi	14.43	195	Pn	Pn	09 14 35.5	+1.3
WB0	Warramunga Arr	16.23	164	Pn	Pn	09 14 56.0	-1.9
WB0				IAmb	IAmb	09 15 03.6	
	comp=Z,18nm,1.4s						
WRAB	Tennant Creek	16.37	164	Pn	Pn	09 14 57.9	-1.8
WRA	Warramunga Arr	16.38	164	Pn	Pn	09 14 58.2	-1.6
	comp=Z,0.1nm,0.3s,baz=346,slow=13,SNR=1.8						
PSA00	Pilbara Seismi	19.77	208		Pn	09 15 41.0	-0.3
PSA00				IAmb	IAmb	09 15 42.0	
	comp=Z,7.5nm,0.8s						
AS31	Alice Springs	19.86	168	P	P	09 15 41.0	+0.3
ASAR	Alice Springs	19.86	168	P	P	09 15 40.2	-0.5
	comp=Z,0.2nm,0.3s,baz=347,slow=10,SNR=21						
ASAR	Alice Springs	19.86	168	P	Pn	09 15 41.9	-0.6
KSM	Kuching	20.09	286	P	Pn	09 15 44.6	-0.7
CM04	Chiang Mai Arr	37.60	307	P	P	09 18 30.1	+6.0
	comp=Z,0.1nmcomp=Z,112nmcomp=Z,12nm,0.8s						
CM05	Chiang Mai Arr	37.62	307	P	P	09 18 29.4	+5.2
	comp=Z,0.0nmcomp=Z,100nmcomp=Z,8.2nm,0.8s						
CHTO	Chiang Mai	37.85	308	P	P	09 18 27.0	+0.9
CM33	Chiang Mai Arr	37.85	308	P	P	09 18 31.0	+4.8
MK31	Makanchi Array	65.64	326	P	P	09 21 53.8	+0.7
MK31				IAmb	IAmb	09 21 54.4	
	comp=Z,1.0nm,0.8s						
MKAR	Makanchi Array	65.64	326	P	P	09 21 53.6	+0.5
	comp=Z,1.2nm,0.6s,baz=122,slow=8.7,SNR=16						
MKAR	Makanchi Array	65.64	326	P	P	09 21 53.5	+0.4
YAK	Yakutsk	65.97	0	P	P	09 21 54.9	+0.1
KURBB	Kurchatov Arra	69.89	328	P	P	09 22 19.8	0.0
	comp=Z,1.7nm,0.7s,baz=131,slow=5.6,SNR=15						
KURK	Kurchatov	69.89	328	P	P	09 22 20.1	+0.4
KURK				IAmb	IAmb	09 22 21.5	
	comp=Z,5.1nm,1.2s						
BVAR	Borovoye Array	75.45	328	P	P	09 22 52.7	-0.1
	comp=Z,0.8nm,0.9s,baz=113,slow=3.9,SNR=5.3						
ABKAR	Akbulak array	80.05	321	P	P	09 23 18.4	0.0
AKTO	Aktyubinsk	81.59	322	P	P	09 23 24.6	-2.0
	comp=Z,0.8nm,0.3s,baz=101,slow=8.3,SNR=9.5						

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*IDC **18** 09:16:32.9±0.8, 13°.94N×93°.09E, h0^{km}, mb3.9/10, mb1 4.0/11, mb1mx3.7/66, mbtmp3.8/11, ML3.9/1, MS2.9/1, Ms1 3.1/1, ms1mx2.6/56, Error ellipse: s-maj=31.8km s-min=16.3km az=64.0*

ISC 18 09:16:36.9±1.0, **14°.58N**±0°.08×**94°.14E**±0°.08, **h10**^{km}, **n28**, σ**1ˢ.56**/27, **mb3.8**/10, **Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRDT	SRDT	4.83	92	P	Pb	09 18 03.3	+1.6
UMPA	Umpang Tak	4.84	70	P	Pb	09 18 02.6	+0.9
UMPA				S	Sb	09 19 03.3	+3.2
MHMT	Maesarieng	5.11	45	P	Pg	09 18 19.3	+4.5
	0.2nm18nm,0.7s						
PHET	Kaeng Krachan	5.59	107	P	Pb	09 18 13.2	-1.4
CM05	Chiang Mai Arr	5.98	50	P	Pn	09 18 06.0	+0.5
CM01	Chiang Mai Arr	6.00	50	P	Pg	09 18 32.1	+0.3
	0.0nm9.7nm,0.8s						
CM02	Chiang Mai Arr	6.00	50	P	Pg	09 18 32.1	+0.2
	0.0nm11nm,0.8s						
CMAR	Chiang Mai Arr	6.01	49	Pn	Pb	09 18 20.4	-1.4
	0.5nm,0.3s,baz=239,slow=15,SNR=7.2						
CMAR				Sn	Sb	09 19 33.4	-0.5
	0.8nm,0.3s,baz=353,slow=25,SNR=1.3						
CMAR				LR	LR	09 21 50.3	
	comp=Z,81nm,18.8s,baz=306,slow=44						
SUKH	Sukhothai	6.02	61	P	Pg	09 18 29.1	-3.1
CM09	Chiang Mai Arr	6.04	50	P	Pg	09 18 32.8	+0.2
	0.1nm10.0nm,0.9s						
CM32	Chiang Mai Arr	6.07	47	P	Pg	09 18 33.0	-0.2
CM36	Chiang Mai Arr	6.16	50	P	Pg	09 18 32.0	-3.0
CMMT	Chiang Mai	6.25	47	P	Pn	09 18 14.6	+5.4
CMMT	Chiang Mai	6.25	47	P	Pg	09 18 34.6	-2.0
	0.0nm5.3nm,0.8s						
CM35	Chiang Mai Arr	6.31	49	P	Pg	09 18 36.0	-1.7
CM34	Chiang Mai Arr	6.42	48	P	Pg	09 18 37.0	-2.8
MKAR	Makanchi Array	33.62	345	P	P	09 23 17.7	+0.2
	0.9nm,0.9s,baz=164,slow=9.7,SNR=4.9						
SONM	Songino Array	34.69	15	P	P	09 23 32.6	+5.7
	0.4nm,0.3s,baz=193,slow=10,SNR=4.2						
KURBB	Kurchatov Arra	38.12	344	P	P	09 23 56.3	+0.4
	1.3nm,0.9s,baz=160,slow=7.8,SNR=7.9						
ZALV	Zalesovo Beam	39.96	351	P	P	09 24 12.4	+1.0
	1.1nm,0.7s,baz=172,slow=8.0,SNR=3.6						
FITZ	Fitzroy Crossi	44.93	135	P	P	09 24 51.6	-0.7
	2.0nm,0.9s,baz=308,slow=7.6,SNR=6.6						
WRA	Warramunga Arr	52.34	130	P	P	09 25 49.4	+0.1
	1.3nm,0.9s,baz=316,slow=8.2,SNR=7.1						
WRA				PcP	PcP	09 26 59.1	-1.3
	0.8nm,0.5s,baz=316,slow=3.0,SNR=15						
ASAR	Alice Springs	54.37	134	P	P	09 26 04.2	0.0
	1.1nm,0.6s,baz=306,slow=6.6,SNR=22						
ASAR				PcP	PcP	09 27 06.9	-1.2
	0.5nm,0.6s,baz=315,slow=3.8,SNR=4.9						
GERES	GERESS Array B	72.90	317	P	P	09 28 02.0	-4.4
	0.7nm,0.9s,baz=98,slow=2.8,SNR=3.7						
BOSA	Boshof	79.19	237	P	P	09 28 34.5	-8.0
	1.8nm,0.7s,baz=342,slow=4.1,SNR=3.2						
ILAR	Eielson Array	88.57	22	P	P	09 29 30.9	+1.2
	0.5nm,0.9s,baz=302,slow=4.6,SNR=5.0						
NVAR	Mina Array Bea	119.14	29	PKP	PKiKP	09 35 27.4	+0.5
	0.3nm,0.6s,baz=280,slow=1.1,SNR=4.1						
TEIG	Tepich	145.34	4	PKPbc	PKPbc	09 36 16.1	+0.4
	3.9nm,0.5s,baz=339,slow=20,SNR=1.6						

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*IDC **18** 09:32:25.5±4.4, 17°.60N×101°.45W, h0^{km}, mb3.4/4, mb1 3.7/6, mb1mx3.5/34, mbtmp3.3/6, ML3.0/2, MS2.9/1, Ms1 2.9/1, ms1mx2.5/27, Error ellipse: s-maj=95.0km s-min=23.7km az=21.0*

*MEX **18** 09:32:26.2±0.7, 17°.30N×101°.68W, h5^{km}, MD4.1*

ISC 18 09:32:25.6±1.6, **17°.29N**±0°.06×**101°.67W**±0°.05, **h17**^{km}±9^{km}, **n18**, σ**1ˢ.44**/28, **mb3.4**/4, **Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZIIG	Zihuatanejo	0.37	32	*e*P	Pg	09 32 33.0	-0.4
ZIIG				*i* S	Sg	09 32 38.6	0.0
CAIG	El Cayaco	1.37	100	*e*P	Pn	09 32 47.8	-2.0
CAIG				*i* S	Sn	09 33 06.4	-1.2
ARIG	Puente Sto Nin	1.60	52	*e*P	Pn	09 32 52.3	-0.8
ARIG				*i* S	Sn	09 33 12.0	-1.4
ACP2	Acapulco	1.76	103	*i* P	Pb	09 32 57.7	+0.4
ACP2				*i* S	Sb	09 33 20.2	+1.0
MMIG	Aquila	1.88	302	*e*P	Pn	09 32 55.0	-1.9
MMIG				*i* S	Sn	09 33 19.2	-1.0
MEIG	Mezcala	2.06	72	*e*P	Pn	09 32 57.8	-1.7
MEIG				*i* S	Sn	09 33 23.0	-1.8
URUA	Uruapan	2.15	350	*i* P	Pb	09 33 03.3	-1.0
URUA				*i* S	Sb	09 33 31.8	+1.0
PLIG	Platanillo	2.34	62	*e*P	Pn	09 33 02.4	-1.0
PLIG				*i* S	Sn	09 33 31.0	-0.8
MOIG	Morelia	2.42	11	*e*P	Pn	09 33 04.0	-0.6
MOIG				*e*S	Sn	09 33 33.3	-0.6
CRIG	Cruz Grande	2.50	102	*i* P	Pn	09 33 04.6	-0.8
TLIG	Tlapa	2.98	84	*e*P	Pn	09 33 12.5	+0.3
TLIG				*e*S	Sn	09 33 47.4	-0.2
CMIG	Matias Romero	6.49	91	Pn	Pn	09 34 01.6	+1.2
	0.2nm,0.3s,baz=273,slow=12,SNR=2.0						
CMIG				Sn	Sn	09 35 10.1	-4.0
	0.5nm,0.3s,baz=310,slow=18,SNR=3.6						
CMIG				Lg	Lg	09 35 44.4	
	1.5nm,0.3s,baz=355,slow=22,SNR=3.0						
TXAR	Lajitas Array	12.13	352	Pn	Pn	09 35 19.5	+1.8
	0.0nm,0.3s,baz=176,slow=17,SNR=1.8						
JTS	Las Juntas de	17.66	111	LR	LR	09 42 17.6	
	comp=Z,36nm,18.8s,baz=72,slow=34						
NVAR	Mina Array Bea	25.60	329	P	P	09 37 56.2	+2.0
	0.5nm,0.6s,baz=155,slow=13,SNR=7.2						
PDAR	Pinedale Array	26.27	347	P	P	09 38 00.8	+0.5
	0.2nm,0.4s,baz=163,slow=11,SNR=3.9						
YKA	Yellowknife Ar	46.06	352	P	P	09 40 47.7	-0.4
	0.4nm,0.8s,baz=156,slow=7.5,SNR=6.7						
ILAR	Eielson Array	56.27	339	P	P	09 42 05.3	+0.5
	0.5nm,0.8s,baz=144,slow=6.3,SNR=6.7						

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*BJI **18** 09:32:24.0±0.0, 10°.70S×164°.20E, h5^{km}, mB6.1/75, mb5.6/84, Ms6.2/95, Ms7 5.9/90*

*MOS **18** 09:32:26.8±1.0, 10°.64S×164°.04E, h14^{km}, mb6.0/71, MS5.8/44, Error ellipse: s-maj=6.7km s-min=5.3km az=121.8*

*NEIC **18** 09:32:26.8±1.4, 10°.76S±0°.07×164°.12E±0°.07, h10^{km}±1^{km}, mb5.9/388, Ms_20 6.0/838, Mwb6.0/41, Mww6.1, Mwc6.1(GCMT), Error ellipse: s-maj=12.6km s-min=10.4km az=212.0*

*NEIC **18** 09:32:27, 10°.72S×164°.15E, h20^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-0.10; $M_{\theta\theta}$0.58; $M_{\phi\phi}$-0.49; $M_{r\theta}$0.28; $M_{\theta\phi}$1.34; $M_{\phi r}$-0.10; Fault plane solution: $M_0$1.48000×10^{18} NP1:ϕ_s280.53000°, δ87.29000°, λ-11.65000°. NP2:ϕ_s11.09000°, δ78.36000°, λ-177.24000°. Principal axes: T 1.5131, Plg6.0000°, Azm326.0000°; N -0.0752, Plg78.0000°, Azm88.0000°; P -1.4379, Plg10.0000°, Azm235.0000°;*

*NEIC **18** 09:32:29, 10°.53S×163°.95E, h14^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-0.02; $M_{\theta\theta}$0.19; $M_{\phi\phi}$-0.17; $M_{r\theta}$0.06; $M_{\theta\phi}$1.57; $M_{\phi r}$-0.14; Fault plane solution: $M_0$1.59000×10^{18} NP1:ϕ_s273.00000°, δ85.00000°, λ-2.00000°. NP2:ϕ_s3.00000°, δ88.00000°, λ-175.00000°. Principal axes: T 1.5902, Plg2.0000°, Azm138.0000°; N -0.0075, Plg85.0000°, Azm30.0000°; P -1.5828, Plg5.0000°, Azm228.0000°;*

*NEIC **18** 09:32:30, 10°.70S×164°.14E, h16^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}0.06; $M_{\theta\theta}$0.26; $M_{\phi\phi}$-0.32; $M_{r\theta}$-0.16; $M_{\theta\phi}$1.67; $M_{\phi r}$-0.02; Fault plane solution: $M_0$1.70000×10^{18} NP1:ϕ_s185.00000°, δ85.00000°, λ179.00000°. NP2:ϕ_s275.00000°, δ89.00000°, λ5.00000°. Principal axes: T 1.6750, Plg5.0000°, Azm140.0000°; N 0.0547, Plg84.0000°, Azm290.0000°; P -1.7297, Plg3.0000°, Azm50.0000°;*

*GCMT **18** 09:32:31.8±0.0, 10°.65S×164°.08E, h16^{km}, MW6.1/170, Moment Tensor Solution. s169,c386; s170,c626; Duration: 2ˢ.7 Moment tensor: Scale 10^{18}Nm; M_{rr}0.09±.01; $M_{\theta\theta}$0.22±.01; $M_{\phi\phi}$-0.30±.01; $M_{r\theta}$0.02±.02; $M_{\theta\phi}$1.60±.01; $M_{\phi r}$-0.10±.02; Best double couple: $M_0$1.62500×10^{18} NP1:ϕ_s275.00000°, δ87.00000°, λ-1.00000°. NP2:ϕ_s5.00000°, δ89.00000°, λ-177.00000°. Principal axes: T 1.5800, Plg2.0000°, Azm140.0000°; N 0.0900, Plg86.0000°, Azm14.0000°; P -1.6700, Plg3.0000°, Azm230.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*IDC **18** 09:32:33.2±1.6, 10°.77S×163°.99E, h55^{km}±14^{km}, mb5.4/29, mb1 5.5/32, mb1mx5.5/33, mbtmp5.6/32, MS5.7/36, Ms1 5.7/36, ms1mx5.7/40 Error ellipse: s-maj=10.0km s-min=8.7km az=1.0*

ISC 18 09:32:30.0±0.2, **10°.80S**±0°.03×**164°.14E**±0°.03, **h29**^{km}, **n1470**, σ**1ˢ.48**/1167, **mb5.9**/299, **MS6.0**/508, **101C-103D, Fault plane solution: NP1:**ϕ_s89.29716°, δ69.65394°, λ0.57825°. **NP2:**ϕ_s359.09610°, δ89.45783°, λ159.65299°. **Principal axes:** T Plg14.6281°, Azm312.3472°; N Plg69.6461°, Azm177.6344°; P Plg13.8371°, Azm46.0332°; **Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.34	288	P	Pn	09 33 34.0	-0.1
	1μm,0.3s,baz=145,slow=5.4,SNR=211						
HNR				S	Sn	09 34 23.6	-0.2
	200nm,0.3s,baz=201,slow=21,SNR=1.2						
HNR	Honiara	4.34	288		Pn	09 33 33.8	-0.3
HNR	Honiara	4.34	288	P	Pn	09 33 34.4	+0.3
SANVU	Saraoutou	5.50	147	Pn	Pn	09 33 49.6	-0.4
SANVU	Saraoutou	5.50	147	P	Pn	09 33 50.4	+0.4
DVP	Devils Point	7.93	151	P	Pn	09 34 24.4	+1.1
	389μm,1.0s						
KOUNC	Koumac, New Ca	9.70	179	P	Pn	09 34 49.7	+2.0
LIFNC	LIFOU	10.36	164	P	Pn	09 34 57.0	+0.3
DZM	Mont Dzumac	11.43	169	P	Pn	09 35 12.5	+1.1
	36nm,0.3s,baz=310,slow=10,SNR=152						
DZM				S	Sn	09 37 17.7	-0.5
	6.7nm,0.3s,baz=135,slow=22,SNR=2.1						
DZM	Mont Dzumac	11.43	169	*e*Pn	Pn	09 35 12.1	+0.7
	1μm,1.1s						
DZM				*e*LQ	LQ	09 37 24.4	
	148μm,24.4s						
DZM				*e*LR	LR	09 37 53.0	
	comp=Z,70μm,25.4s						
DZM	Mont Dzumac	11.43	169	Pn	Pn	09 35 10.6	-0.8
DZM	Mont Dzumac	11.43	169	P	Pn	09 35 12.2	+0.8
YATNC	Mamie plateau,	11.51	167	P	Pn	09 35 12.3	-0.1
ONTNC	Ouen Toro	11.66	169	P	Pn	09 35 16.6	+2.1
OUENC	Ouen Island, N	11.85	168	P	Pn	09 35 18.1	+1.1
PINNC	Pines Island,	12.17	165	P	Pn	09 35 23.1	+1.6

RABL	**Rabaul**	**13.56**	**298**	Pn	**Pn**	**09 35 38.7**	**-1.8**
RABL	**Rabaul**	**13.56**	**298**	P	**Pn**	**09 35 40.3**	**-0.2**
TARA	**Tarawa**	**14.90**	**36**		**Pn**	**09 35 56.3**	**-2.5**
TARA	**Tarawa**	**14.90**	**36**	P	**Pn**	**09 35 59.5**	**+0.7**
FUNA	**Funafuti**	**15.02**	**83**	Pn	**Pn**	**09 35 59.1**	**-1.2**
MSVF	**Nonsavu**	**15.14**	**119**	P	**Pn**	**09 36 03.2**	**+1.2**
	0.9nm,0.3s,baz=290,slow=7.5,SNR=52						
MSVF				LR	LR	09 40 46.9	
	comp=Z,78µm,20.4s,baz=295,slow=32						
MSVF	**Nonsavu**	**15.14**	**119**	*c i*P	**Pn**	**09 36 03.1**	**+1.1**
MSVF				pmax	pmax		
	comp=Z,279nm,1.2s						
MSVF				MLR	MLR		
	comp=Z,61µm,17.0s						
MSVF	**Nonsavu**	**15.14**	**119**		**Pn**	**09 36 03.0**	**+1.1**
MSVF				IAmb	IAmb	09 36 15.2	
	comp=Z,428nm,1.1s						
MSVF	**Nonsavu**	**15.14**	**119**	P	**Pn**	**09 36 04.1**	**+2.1**
PMG	**Port Moresby**	**16.77**	**273**	P	**P**	**09 36 25.0**	**0.0**
	comp=Z,1.7nm,0.3s,baz=67,slow=6.9,SNR=28						
PMG				LR	LR	09 42 11.4	
	comp=Z,41µm,18.6s,baz=110,slow=35						
PMG	**Port Moresby**	**16.77**	**273**	*de*P	**P**	**09 36 26.7**	**+1.7**
PMG				pmax	pmax		
	comp=Z,243nm,1.3s						
PMG	**Port Moresby**	**16.77**	**273**	P	**Pn**	**09 36 23.9**	**+0.9**
PMG	**Port Moresby**	**16.77**	**273**	P	**Pn**	**09 36 23.6**	**+0.6**
NFK	**Norfolk Island**	**18.50**	**169**	P	**Pn**	**09 36 45.7**	**+1.5**
	baz=19,SNR=3.3						
MANU	**Manus Island**	**18.78**	**296**	P	**P**	**09 36 45.9**	**-1.2**
MANU				IAmb	IAmb	09 36 51.6	
	comp=Z,1µm,1.0s						
EIDS	**Eidsvold**	**19.06**	**219**	P	**Pn**	**09 36 52.8**	**+1.8**
	baz=19,SNR=62						
EIDS	**Eidsvold**	**19.06**	**219**		**Pn**	**09 36 52.5**	**+1.5**
EIDS				IAmb	IAmb	09 36 56.5	
	comp=Z,715nm,1.2s						
CTA	**Charters Tower**	**19.54**	**240**	P	**Pn**	**09 36 57.0**	**+0.2**
	comp=Z,13nm,0.3s,baz=65,slow=13,SNR=165						
CTA				LR	LR	09 43 37.4	
	comp=Z,37µm,19.6s,baz=58,slow=34						
CTAO	**Charters Tower**	**19.54**	**240**	P	**Pn**	**09 36 57.1**	**+0.2**
CTAO				pmax	pmax		
	comp=Z,1µm,1.1s						
CTAO	**Charters Tower**	**19.54**	**240**		**Pn**	**09 36 57.1**	**+0.2**
KWAJ	**Kwajalein Atol**	**19.77**	**10**	P	**P**	**09 36 58.3**	**+0.3**
KWAJ				pmax	pmax		
	comp=Z,1µm,0.7s						
KWAJ	**Kwajalein Atol**	**19.77**	**10**		**P**	**09 36 58.2**	**+0.3**
KWAJ	**Kwajalein Atol**	**19.77**	**10**	P	**Pn**	**09 37 01.4**	**+1.8**
MTSU	**Mount Surprise**	**20.52**	**247**	P	**P**	**09 37 07.1**	**+0.9**
	baz=20,SNR=366						
COEN	**Coen**	**20.71**	**259**	P	**P**	**09 37 08.1**	**-0.2**
LHI	**Lord Howe Isla**	**21.15**	**192**	P	**P**	**09 37 11.8**	**-0.9**
LHI				IAmb	IAmb	09 37 20.4	
	comp=Z,400nm,1.1s						
RMQ	**Roma**	**21.32**	**221**	P	**P**	**09 37 16.7**	**+2.0**
	baz=21,SNR=334						
ARMA	**Armidale**	**22.73**	**209**	P	**P**	**09 37 31.3**	**+1.5**
	baz=23,SNR=133						
ARMA	**Armidale**	**22.73**	**209**	P	**P**	**09 37 30.5**	**+0.7**
ARMA				IAmb	IAmb	09 37 34.7	
	comp=Z,668nm,1.1s						
ARMA				IAMs_20	IAMs_20	09 44 34.8	
	comp=Z,45µm,19.0s						
AFI	**Afiamalu**	**23.73**	**100**	P	**P**	**09 37 39.5**	**-0.4**
AFI				pmax	pmax		
	comp=Z,311nm,1.1s						
AFI	**Afiamalu**	**23.73**	**100**	P	**P**	**09 37 39.5**	**-0.4**
AFI				IAmb	IAmb	09 37 43.6	
	comp=Z,311nm,1.1s						
AFI	**Afiamalu**	**23.73**	**100**	P	**P**	**09 37 41.6**	**+1.7**
QLP	**Quilpie**	**24.48**	**227**	P	**P**	**09 37 47.5**	**+0.8**
	baz=24,SNR=39						
JAY	**Jayapura**	**24.67**	**288**	P	**P**	**09 37 46.7**	**-1.9**
	comp=Z,149nm,0.9s,baz=165,slow=1.2,SNR=18						
JAY				LR	LR	09 48 23.2	
	comp=Z,42µm,19.8s,baz=84,slow=39						
RAO	**Raoul Island**	**24.86**	**140**	P	**P**	**09 37 51.8**	**+1.6**
	comp=Z,339nm,0.5s,baz=103,slow=20,SNR=3.8						
RAO				LR	LR	09 46 12.6	
	comp=Z,9µm,18.8s,baz=297,slow=33						
RAO	**Raoul Island**	**24.86**	**140**	P	**P**	**09 37 50.0**	**-0.2**
KNTN	**Kanton**	**25.24**	**73**	P	**P**	**09 37 52.1**	**-1.7**
KNTN				IAmb	IAmb	09 38 39.9	
	comp=Z,330nm,1.4s						
MGCD	**Mangrove Creek**	**25.32**	**206**	P	**P**	**09 37 56.7**	**+2.4**
	baz=25,SNR=62						
QIS	**Mount Isa**	**25.50**	**245**	P	**P**	**09 37 54.9**	**-1.2**
	baz=26,SNR=141						
OUZ	**Omahuta**	**25.79**	**162**	P	**P**	**09 37 58.3**	**-0.2**
OUZ				IAmb	IAmb	09 38 11.9	
	comp=Z,230nm,1.2s						
RIV	**Riverview**	**25.83**	**205**	P	**P**	**09 38 00.1**	**+1.3**
	baz=26,SNR=16						
NIUE	**Niue**	**26.35**	**111**	P	**P**	**09 38 06.2**	**+2.5**
	baz=26,SNR=13						
NIUE	**Niue**	**26.35**	**111**	P	**P**	**09 38 02.4**	**-1.3**
YNG	**Young**	**27.47**	**209**	P	**P**	**09 38 15.3**	**+1.6**
	baz=28,SNR=36						
CNB	**Canberra Magne**	**27.87**	**207**	P	**P**	**09 38 19.4**	**+2.1**
	baz=28,SNR=40						
CAN	**Canberra**	**28.03**	**207**	IAmb	IAmb	09 38 29.0	
	comp=Z,378nm,1.3s						
H11S2	**WAKE ISLAND Hy**	**29.21**	**5**	T	T	10 08 57.6	
	baz=215,slow=78,SNR=260						
H11S3	**WAKE ISLAND Hy**	**29.21**	**5**	T	T	10 08 56.2	
	baz=215,slow=78,SNR=151						
H11S1	**WAKE ISLAND Hy**	**29.23**	**5**	T	T	10 09 07.6	
	baz=215,slow=78,SNR=172						
OMRZ	**Omania**	**29.32**	**160**	P	**P**	**09 38 34.9**	**+4.7**
STKA	**Stephens Creek**	**29.56**	**221**	P	**P**	**09 38 33.5**	**+1.1**
	baz=30,SNR=129						
STKA	**Stephens Creek**	**29.56**	**221**	P	**P**	**09 38 33.1**	**+0.7**
	comp=Z,103nm,0.8s,baz=36,slow=9.8,SNR=122						
STKA				LR	LR	09 49 11.8	
	comp=Z,26µm,20.5s,baz=37,slow=34						
PRRZ	**Plateau Road**	**29.69**	**160**	P	**P**	**09 38 36.6**	**+3.2**
URZ	**Urewera**	**29.72**	**159**	P	**P**	**09 38 35.4**	**+1.8**
	comp=Z,21nm,1.0s,baz=0.2,slow=5.0,SNR=10						
URZ				LR	LR	09 48 45.5	
	comp=Z,18µm,19.4s,baz=342,slow=33						
PKGZ	**Pakihiroa**	**29.74**	**157**	P	**P**	**09 38 34.0**	**+0.1**
WMGZ	**Waiomatatini S**	**29.81**	**157**	P	**P**	**09 38 37.0**	**+2.6**
WR0	**Warramunga Arr**	**29.91**	**249**	P	**P**	**09 38 33.9**	**-1.7**
WR0				IAmb	IAmb	09 38 39.4	
	comp=Z,155nm,0.9s						
WR0				IAMs_20	IAMs_20	09 49 06.2	
	comp=Z,33µm,20.0s						
MWZ	**Matawai**	**29.93**	**159**	P	**P**	**09 38 39.5**	**+4.0**
WR9	**Warramunga Arr**	**29.94**	**249**	IAMs_20	IAMs_20	09 49 16.8	
	comp=Z,34µm,19.0s						
WR8	**Warramunga Arr**	**29.95**	**249**	IAMs_20	IAMs_20	09 49 17.2	
	comp=Z,35µm,20.0s						
TWGZ	**Tauwhareparae**	**29.96**	**158**	P	**P**	**09 38 40.5**	**+4.7**
WR7	**Warramunga Arr**	**29.97**	**249**	IAMs_20	IAMs_20	09 49 17.8	
	comp=Z,34µm,19.0s						
RTZ	**Ruatahuna**	**29.99**	**160**	P	**P**	**09 38 40.6**	**+4.5**
WR6	**Warramunga Arr**	**29.99**	**249**	IAMs_20	IAMs_20	09 49 18.3	
	comp=Z,33µm,19.0s						
MRHZ	**Matea Rd**	**30.00**	**161**	P	**P**	**09 38 40.8**	**+4.6**
WB0	**Warramunga Arr**	**30.00**	**249**	P	**P**	**09 38 34.7**	**-1.8**
WB0				IAMs_20	IAMs_20	09 49 18.7	
	comp=Z,37µm,20.0s						
WB8	**Warramunga Arr**	**30.03**	**249**	IAMs_20	IAMs_20	09 49 19.2	
	comp=Z,36µm,20.0s						
RAGZ	**Rawiri**	**30.03**	**159**	P	**P**	**09 38 40.7**	**+4.2**
WB7	**Warramunga Arr**	**30.03**	**249**	IAMs_20	IAMs_20	09 49 19.8	
	comp=Z,31µm,20.0s						
WR4	**Warramunga Arr**	**30.03**	**249**	IAMs_20	IAMs_20	09 49 19.4	
	comp=Z,33µm,20.0s						
WB6	**Warramunga Arr**	**30.05**	**249**	IAMs_20	IAMs_20	09 49 20.8	
	comp=Z,37µm,20.0s						
WR3	**Warramunga Arr**	**30.05**	**249**	IAMs_20	IAMs_20	09 49 20.9	
	comp=Z,33µm,19.0s						
WB5	**Warramunga Arr**	**30.05**	**249**	IAMs_20	IAMs_20	09 49 20.0	
	comp=Z,29µm,20.0s						
OTVZ	**Oturere**	**30.06**	**162**	P	P	09 38 42.2	+5.3
WC2	**Warramunga Arr**	**30.07**	**249**	IAMs_20	IAMs_20	09 49 20.3	
	comp=Z,36µm,20.0s						
WB4	**Warramunga Arr**	**30.07**	**249**	IAMs_20	IAMs_20	09 49 20.3	
	comp=Z,37µm,20.0s						
WC3	**Warramunga Arr**	**30.07**	**249**	IAMs_20	IAMs_20	09 49 20.3	
	comp=Z,34µm,20.0s						
WR2	**Warramunga Arr**	**30.07**	**249**	IAMs_20	IAMs_20	09 49 10.5	
	comp=Z,33µm,22.0s						
WB3	**Warramunga Arr**	**30.07**	**249**	IAMs_20	IAMs_20	09 49 20.5	
	comp=Z,36µm,20.0s						
WRAB	**Tennant Creek**	**30.08**	**249**	P	**P**	**09 38 35.6**	**-1.5**
WRAB				pmax	pmax		
	comp=Z,372nm,1.3s						
WRAB				MLR	MLR		
	comp=Z,34µm,19.0s						
WRAB	**Tennant Creek**	**30.08**	**249**	P	**P**	**09 38 35.6**	**-1.5**
WRAB				IAmb	IAmb	09 38 43.6	
	comp=Z,372nm,1.2s						
WRAB	**Tennant Creek**	**30.08**	**249**	IAMs_20	IAMs_20	09 49 21.4	
	comp=Z,34µm,19.0s						
WB2	**Warramunga Arr**	**30.08**	**249**	P	**P**	**09 38 35.5**	**-1.6**
WB2				IAmb	IAmb	09 38 40.8	
	comp=Z,362nm,1.2s						
WB2				IAMs_20	IAMs_20	09 49 21.7	
	comp=Z,35µm,20.0s						
WC1	**Warramunga Arr**	**30.09**	**249**	IAMs_20	IAMs_20	09 49 21.9	
	comp=Z,34µm,20.0s						
WB1	**Warramunga Ar.**	**30.09**	**249**	IAMs_20	IAMs_20	09 49 21.9	
	comp=Z,35µm,20.0s						
WR1	**Warramunga Arr**	**30.09**	**249**	IAMs_20	IAMs_20	09 49 22.0	
	comp=Z,29µm,20.0s						
WRA	**Warramunga Arr**	**30.09**	**249**	P	**P**	**09 38 35.6**	**-1.6**
	comp=Z,118nm,0.6s,baz=81,slow=9.3,SNR=551						
WRA				S	**S**	**09 43 30.9**	**-3.4**
	comp=Z,75nm,1.2s,baz=78,slow=15,SNR=8.1						
WRA				LR	LR	09 49 32.9	
	comp=Z,34µm,20.4s,baz=75,slow=34						
WRA	**Warramunga Arr**	**30.09**	**249**	P	**P**	**09 38 35.0**	**-2.3**
WC4	**Warramunga Arr**	**30.10**	**249**	IAMs_20	IAMs_20	09 49 22.1	
	comp=Z,37µm,19.0s						
TKGZ	**Te Karaka**	**30.14**	**158**	P	**P**	**09 38 41.9**	**+4.5**
SNGZ	**Shannon Statio**	**30.26**	**159**	P	**P**	**09 38 41.2**	**+2.7**
CNGZ	**Carnagh Statio**	**30.31**	**158**	P	**P**	**09 38 42.8**	**+4.0**
MOVZ	**Moawhango**	**30.31**	**162**	P	P	09 38 46.5	+7.5
BKZ	**Black Stump Fm**	**30.32**	**161**	P	**P**	**09 38 39.3**	**+0.2**
RIGZ	**Rimuhau**	**30.34**	**159**	P	**P**	**09 38 41.8**	**+2.6**
NMHZ	**Naumai**	**30.36**	**160**	P	**P**	**09 38 43.0**	**+3.6**
H11N1	**WAKE ISLAND Hy**	**30.44**	**5**	T	T	10 10 37.2	
	baz=184,slow=76,SNR=210						
H11N3	**WAKE ISLAND Hy**	**30.44**	**5**	T	T	10 10 37.6	
	baz=184,slow=76,SNR=214						
H11N2	**WAKE ISLAND Hy**	**30.45**	**5**	T	T	10 10 38.0	
	baz=184,slow=76,SNR=257						
BHHZ	**Black Hill Sta**	**30.48**	**162**	P	**P**	**09 38 41.8**	**+1.4**
KWHZ	**Kaweka Forest**	**30.54**	**161**	P	**P**	**09 38 41.5**	**+0.6**
MCHZ	**McNeill Hill**	**30.64**	**161**	P	**P**	**09 38 44.4**	**+2.6**
KRHZ	**Kereru**	**30.72**	**161**	P	**P**	**09 38 43.1**	**+0.6**
MHGZ	**Mahia Peninsul**	**30.79**	**159**	P	**P**	**09 38 45.3**	**+2.1**
QRZ	**Quartz Range**	**30.82**	**168**	P	**P**	**09 38 42.5**	**-0.8**
QRZ				IAmb	IAmb	09 38 49.7	
	comp=Z,131nm,1.0s						
GUMO	**Guam**	**30.86**	**321**	LR	LR	09 49 52.3	
	comp=Z,21µm,21.3s,baz=134,slow=34						
GUMO	**Guam**	**30.86**	**321**	IAMs_20	IAMs_20	09 49 30.6	
	comp=Z,26µm,21.0s						
PNHZ	**Pukenui**	**30.91**	**162**	P	**P**	**09 38 44.7**	**+0.4**
KAHZ	**Kahuranaki**	**31.02**	**161**	P	**P**	**09 38 47.7**	**+2.5**
KDU	**Kakadu**	**31.05**	**263**	P	**P**	**09 38 43.2**	**-2.5**
	baz=31,SNR=51						
PXZ	**Pawanui**	**31.23**	**161**	P	**P**	**09 38 46.6**	**-0.3**
DVHZ	**Dannevirke**	**31.26**	**162**	P	**P**	**09 38 49.0**	**+1.7**
NNZ	**Nelson**	**31.38**	**167**	P	**P**	**09 38 47.9**	**-0.3**
NNZ				IAmb	IAmb	09 39 07.1	
	comp=Z,146nm,1.2s						
TOO	**Toolangi**	**31.49**	**209**	P	**P**	**09 38 51.2**	**+1.8**
	baz=32,SNR=125						
TOO	**Toolangi**	**31.49**	**209**	IAMs_20	IAMs_20	09 49 34.7	
	comp=Z,25µm,20.0s						
ANWZ	**Angora Road**	**31.50**	**162**	P	**P**	**09 38 50.8**	**+1.5**
AS31	**Alice Springs**	**31.50**	**242**	P	**P**	**09 38 47.5**	**-2.1**
ASAR	**Alice Springs**	**31.50**	**242**	P	**P**	**09 38 47.6**	**-2.0**
	comp=Z,55nm,0.8s,baz=63,slow=10,SNR=651						
ASAR				S	**S**	**09 43 51.6**	**-4.8**
	comp=Z,4.6nm,0.9s,baz=189,slow=36,SNR=2.6						
ASAR				LR	LR	09 51 20.2	
	comp=Z,27µm,18.5s,baz=66,slow=36						
ASAR	**Alice Springs**	**31.50**	**242**	P	**P**	**09 38 47.1**	**-2.5**
BFZ	**Birch Farm**	**31.63**	**162**	P	**P**	**09 38 50.8**	**+0.3**
BFZ				IAmb	IAmb	09 39 02.2	
	comp=Z,130nm,1.0s						
BFZ	**Birch Farm**	**31.63**	**162**	P	**P**	**09 38 50.2**	**-0.3**
THZ	**Tophouse**	**31.79**	**168**	IAMs_20	IAMs_20	09 50 21.1	
	comp=Z,21µm,18.0s						
BSWZ	**Blackbirch Sta**	**31.97**	**166**	P	**P**	**09 38 52.7**	**-0.7**
PLWZ	**Palliser**	**32.17**	**164**	P	**P**	**09 38 54.3**	**-1.0**
HTT	**Hallett**	**32.29**	**222**	P	**P**	**09 38 57.4**	**+1.0**
	baz=32,SNR=83						
SAUI	**Saumlaki**	**32.51**	**272**	IAMs_20	IAMs_20	09 53 03.0	
	comp=Z,33µm,18.0s						
ANA2	**Anatahan**	**32.55**	**326**	P	**P**	**09 38 57.4**	**-1.4**
KHZ	**Kahutara**	**32.56**	**167**	P	**P**	**09 38 58.4**	**-0.2**
KHZ				IAmb	IAmb	09 39 03.9	
	comp=Z,128nm,1.0s						
KHZ				IAMs_20	IAMs_20	09 50 57.2	
	comp=Z,26µm,19.0s						
FAKI	**Fak Fak**	**32.59**	**282**	IAMs_20	IAMs_20	09 53 33.7	
	comp=Z,26µm,20.0s						
LTZ	**Lake Taylor**	**32.65**	**169**	P	**P**	**09 38 59.7**	**+0.3**
LTZ				IAmb	IAmb	09 39 18.6	
	comp=Z,110nm,0.9s						
ARPS	**Mount Arapiles**	**32.77**	**214**	P	**P**	**09 39 02.2**	**+1.7**
	baz=33,SNR=32						
FOZ	**Fox Glacier**	**32.99**	**172**	P	**P**	**09 39 02.4**	**+0.1**
FOZ				IAmb	IAmb	09 39 07.9	
	comp=Z,273nm,1.3s						
RPZ	**Rata Peaks**	**33.34**	**171**	P	**P**	**09 39 06.6**	**+1.1**
	comp=Z,159nm,0.9s,baz=343,slow=1.5,SNR=38						
RPZ				LR	LR	09 51 30.9	
	comp=Z,20µm,18.5s,baz=344,slow=34						
RPZ	**Rata Peaks**	**33.34**	**171**	IAmb	IAmb	09 39 11.3	
	comp=Z,203nm,0.9s						
MQZ	**McQueen’s Vall**	**33.61**	**169**	P	**P**	**09 39 07.3**	**-0.5**
MQZ				IAmb	IAmb	09 39 12.6	
	comp=Z,159nm,1.0s						
BBOO	**Buckleboo**	**33.86**	**225**	P	**P**	**09 39 10.2**	**0.0**
	baz=34,SNR=52						
BBOO	**Buckleboo**	**33.86**	**225**	P	**P**	**09 39 10.2**	**0.0**
BBOO				IAMs_20	IAMs_20	09 51 35.2	
	comp=Z,33µm,21.0s						
LBZ	**Lake Benmore**	**33.87**	**172**	P	**P**	**09 39 11.1**	**+1.0**
SIJI	**Sorong**	**34.11**	**285**	LR	LR	09 54 46.9	
	comp=Z,20µm,18.0s,baz=118,slow=39						
WKZ	**Wanaka**	**34.17**	**174**	P	**P**	**09 39 12.4**	**-0.3**
WKZ				IAmb	IAmb	09 39 40.6	
	comp=Z,265nm,1.5s						
ODZ	**Otahua Downs**	**34.58**	**172**	P	**P**	**09 39 15.3**	**-0.9**
MLZ	**Mavora Lakes**	**34.62**	**175**	P	**P**	**09 39 15.5**	**-1.1**
KNRA	**Kununurra**	**34.75**	**258**	P	**P**	**09 39 15.7**	**-2.4**
KNRA				IAmb	IAmb	09 39 24.9	
	comp=Z,96nm,0.7s						
WHZ	**Wether Hill Ro**	**35.13**	**175**	P	**P**	**09 39 21.0**	**+0.1**
TAU	**Tasmania Unive**	**35.19**	**202**	P	**P**	**09 39 21.7**	**+0.2**
TAU				pmax	pmax		
	comp=Z,156nm,1.2s						
TAU				MLR	MLR		
	comp=Z,7µm,20.0s						
TAU	**Tasmania Unive**	**35.19**	**202**	P	**P**	**09 39 21.7**	**+0.2**
TAU				IAmb	IAmb	09 39 29.3	
	comp=Z,156nm,1.1s						
PYZ	**Puysegur Point**	**35.32**	**177**	IAMs_20	IAMs_20	09 51 32.0	
	comp=Z,20µm,20.0s						
RAR	**Rarotonga**	**36.12**	**111**	P	**P**	**09 39 30.6**	**+0.9**
	comp=Z,15nm,0.9s,baz=353,slow=19,SNR=2.5						
RAR				LR	LR	09 51 23.0	
	comp=Z,3µm,20.9s,baz=284,slow=31						
RAR	**Rarotonga**	**36.12**	**111**	P	**P**	**09 39 29.7**	**-0.1**
WRKA	**Warakurna**	**36.79**	**242**	P	**P**	**09 39 33.5**	**-2.0**
	baz=37,SNR=294						
JOHN	**Johnston Islan**	**37.77**	**44**	P	**P**	**09 39 42.1**	**-1.6**
FITZ	**Fitzroy Crossi**	**37.92**	**254**	P	**P**	**09 39 43.0**	**-2.1**
	baz=38,SNR=119						
FITZ	**Fitzroy Crossi**	**37.92**	**254**	P	**P**	**09 39 43.2**	**-1.9**
	comp=Z,153nm,0.7s,baz=98,slow=7.2						
FITZ				LR	LR	09 54 41.8	
	comp=Z,23µm,19.7s,baz=80,slow=35						
FITZ	**Fitzroy Crossi**	**37.92**	**254**	P	**P**	**09 39 43.4**	**-1.8**
FITZ				IAmb	IAmb	09 40 02.7	
	comp=Z,262nm,1.1s						
TNTI	**Ternate**	**38.33**	**285**	P	**P**	**09 39 47.4**	**-1.2**
TNTI				IAmb	IAmb	09 39 59.3	
	comp=Z,305nm,1.4s						
FORT	**Forrest**	**38.91**	**234**	P	**P**	**09 39 52.7**	**-0.6**
	baz=39,SNR=39						
FORT	**Forrest**	**38.91**	**234**	P	**P**	**09 39 52.5**	**-0.8**
FORT				IAmb	IAmb	09 40 01.3	
	comp=Z,283nm,0.7s						
FORT				IAMs_20	IAMs_20	09 55 37.6	
	comp=Z,25µm,18.0s						
SOEI	**Soe**	**39.23**	**268**	P	**P**	**09 39 55.3**	**-1.0**
SOEI				IAMs_20	IAMs_20	09 57 01.8	
	comp=Z,21µm,20.0s						
BATI	**Baumata**	**39.78**	**267**	P	**P**	**09 39 59.8**	**-1.1**
	comp=Z,188nm,0.6s						
BATI				LR	LR	09 56 18.6	
	comp=Z,20µm,21.3s,baz=112,slow=36						
MMRI	**Maumere**	**41.33**	**269**	P	**P**	**09 40 11.3**	**-2.3**
MMRI				IAmb	IAmb	09 40 16.3	
	comp=Z,325nm,1.0s						
LUWI	**Luwuk**	**42.22**	**280**	P	**P**	**09 40 19.5**	**-1.3**
JCJ	**Chichijima**	**43.27**	**331**	P	**P**	**09 40 27.5**	**-1.7**
	comp=Z,260nm,0.8s,baz=192,slow=4.9,SNR=4.1						
PSAD2	**Pilbara Seismi**	**43.62**	**250**	IAMs_20	IAMs_20	09 58 39.5	
	comp=Z,20µm,20.0s						
PSAC2	**Pilbara Seismi**	**43.68**	**250**	IAMs_20	IAMs_20	09 58 41.8	
	comp=Z,21µm,20.0s						
PSAB2	**Pilbara Seismi**	**43.71**	**250**	IAMs_20	IAMs_20	09 58 41.8	
	comp=Z,21µm,19.0s						
PSAA3	**Pilbara Seismi**	**43.72**	**250**	IAMs_20	IAMs_20	09 58 42.0	
	comp=Z,21µm,19.0s						
PSAB3	**Pilbara Seismi**	**43.72**	**250**	IAMs_20	IAMs_20	09 58 42.0	
	comp=Z,21µm,19.0s						
PSAA2	**Pilbara Seismi**	**43.73**	**250**	IAMs_20	IAMs_20	09 57 05.1	
	comp=Z,20µm,20.0s						
PSA00	**Pilbara Seismi**	**43.73**	**250**	P	**P**	**09 40 30.9**	**-2.1**
PSA00	**Pilbara Seismi**	**43.73**	**250**	IAmb	IAmb	09 40 37.2	
	comp=Z,160nm,1.0s						
PSA00				IAMs_20	IAMs_20	09 58 42.2	
	comp=Z,20µm,19.0s						
PSAD1	**Pilbara Seismi**	**43.73**	**250**	IAMs_20	IAMs_20	09 58 42.2	
	comp=Z,22µm,19.0s						
PSAA1	**Pilbara Seismi**	**43.74**	**250**	IAMs_20	IAMs_20	09 58 43.5	
	comp=Z,23µm,21.0s						
PSAB1	**Pilbara Seismi**	**43.75**	**250**	IAMs_20	IAMs_20	09 58 43.8	
	comp=Z,21µm,19.0s						
PSAC3	**Pilbara Seismi**	**43.75**	**250**	IAMs_20	IAMs_20	09 59 54.8	
	comp=Z,20µm,18.0s						
PSAC1	**Pilbara Seismi**	**43.76**	**250**	IAMs_20	IAMs_20	09 58 43.0	
	comp=Z,24µm,20.0s						
MBWA	**Marble Bar**	**43.79**	**251**	IAMs_20	IAMs_20	09 58 42.7	
	comp=Z,20µm,18.0s						
MCQ	**Macquarie Isla**	**43.79**	**184**	IAMs_20	IAMs_20	09 57 53.0	
	comp=Z,12µm,18.0s						
PSAD3	**Pilbara Seismi**	**43.80**	**250**	IAMs_20	IAMs_20	09 58 44.0	
	comp=Z,21µm,20.0s						
KMBL	**Kambalda**	**44.07**	**236**	P	**P**	**09 40 34.6**	**-1.1**
	baz=44,SNR=11						
KAPI	**Kappang**	**44.30**	**274**	LR	LR	10 00 02.1	
	comp=Z,3µm,19.6s,baz=102,slow=37						
KAPI	**Kappang**	**44.30**	**274**	P	**P**	**09 40 36.5**	**-1.2**
KAPI				pmax	pmax		
	comp=Z,215nm,1.2s						
KAPI				MLR	MLR		
	comp=Z,4µm,18.0s						
KAPI	**Kappang**	**44.30**	**274**	P	**P**	**09 40 36.5**	**-1.2**
KAPI				IAmb	IAmb	09 40 44.3	
	comp=Z,215nm,1.1s						
TOLI2	**Tolitoli**	**44.71**	**283**	P	**P**	**09 40 38.5**	**-2.4**
PAE	**Paea**	**45.29**	**104**	*e*P	**P**	**09 40 45.4**	**-0.1**
	comp=Z,102nm,1.3s						
PPT	**Papeete**	**45.29**	**104**	P	**P**	**09 40 46.5**	**+1.0**
	comp=Z,283nm,1.0s,baz=51,slow=1.8,SNR=15						
PPT				LR	LR	09 55 16.5	
	comp=Z,8µm,20.3s,baz=276,slow=30						
PPT2	**Papeete2**	**45.29**	**104**	*e*P	**P**	**09 40 45.8**	**+0.2**
	comp=Z,326nm,1.1s						
PPT2				*e*S	**S**	**09 47 25.3**	**+0.7**
	comp=Z,2µm,27.5s						
PPT2				*e*LQ	LQ	09 51 29.6	
	comp=Z,49µm,28.2s						
PPT2				*e*LR	LR	09 53 25.2	
	comp=Z,18µm,23.5s,baz=272						
PPTF	**Pamatai, Papee**	**45.30**	**104**	P	**P**	**09 40 46.4**	**+0.8**
TIAR	**Tiarei**	**45.51**	**104**	*e*P	**P**	**09 40 47.5**	**+0.2**
	comp=Z,123nm,1.3s						
TVO	**Taravao**	**45.60**	**104**	*e*P	**P**	**09 40 48.4**	**+0.3**
	comp=Z,165nm,1.0s						
MEEK	**Meekatharra**	**45.64**	**243**	P	**P**	**09 40 47.4**	**-0.9**
	baz=46,SNR=82						
TBI	**Tubuai**	**45.89**	**112**	*e*P	**P**	**09 40 50.9**	**+0.7**
	comp=Z,353nm,0.9s						
TBI				*e*S	**S**	**09 47 34.2**	**+1.2**
	comp=Z,5µm,27.0s						
TBI				*e*LQ	LQ	09 51 49.5	
	comp=Z,62µm,30.0s						
TBI				*e*LR	LR	09 53 40.0	
	comp=Z,24µm,29.2s,baz=278						
MEH	**Mehetia**	**46.74**	**104**	*e*P	**P**	**09 40 57.0**	**0.0**
	comp=Z,254nm,1.2s						
VAH	**Vaihoa**	**47.13**	**101**	*e*P	**P**	**09 40 59.8**	**-0.2**
	comp=Z,505nm,1.2s						
KLBR	**Kellerberrin**	**47.52**	**237**	P	**P**	**09 41 01.4**	**-1.4**
	baz=48,SNR=8.4						
BKB	**Balikpapan**	**47.86**	**278**	IAMs_20	IAMs_20	09 57 12.3	
	comp=Z,15µm,20.0s						
MYLDM	**Lahad Datu**	**48.12**	**287**	P	**P**	**09 41 08.0**	**+0.2**
BLDU	**Ballidu**	**48.14**	**238**	P	**P**	**09 41 06.4**	**-1.3**
	baz=48,SNR=16						
NWAO	**Narrogin (SRO)**	**48.30**	**235**	P	**P**	**09 41 10.0**	**+1.1**
	baz=48,SNR=9.0						
NWAO	**Narrogin (SRO)**	**48.30**	**235**	LR	LR	10 01 16.2	
	comp=Z,27µm,20.1s,baz=82,slow=36						
NWAO	**Narrogin (SRO)**	**48.30**	**235**	P	**P**	**09 41 08.4**	**-0.5**
NWAO				pmax	pmax		
	comp=Z,64nm,1.1s						
NWAO				MLR	MLR		
	comp=Z,36µm,18.0s						
NWAO	**Narrogin (SRO)**	**48.30**	**235**	P	**P**	**09 41 08.0**	**-0.9**
NWAO	**Narrogin (SRO)**	**48.30**	**235**	P	**P**	**09 41 08.4**	**-0.5**
MORW	**Morawa**	**48.36**	**241**	P	**P**	**09 41 08.1**	**-1.3**
	baz=48,SNR=15						
MORW	**Morawa**	**48.36**	**241**	P	**P**	**09 41 08.2**	**-1.3**
MORW				IAmb	IAmb	09 41 28.5	
	comp=Z,86nm,1.0s						
MUN	**Mundaring**	**48.89**	**237**	P	**P**	**09 41 12.6**	**-0.8**
	baz=49,SNR=4.7						
HON	**Honolulu**	**49.01**	**49**	P	**P**	**09 41 13.8**	**-0.6**
HON				pmax	pmax		
	comp=Z,147nm,1.0s						
HON	**Honolulu**	**49.01**	**49**	P	**P**	**09 41 13.8**	**-0.6**
HON				IAmb	IAmb	09 41 23.4	
	comp=Z,147nm,1.0s						
HON				IAMs_20	IAMs_20	09 56 42.6	
	comp=Z,13µm,22.0s						
GIRL	**Giralia**	**49.02**	**249**	P	**P**	**09 41 14.7**	**+0.2**
	baz=49,SNR=7.2						
GIRL	**Giralia**	**49.02**	**249**	P	**P**	**09 41 13.7**	**-0.9**
GIRL				IAmb	IAmb	09 41 24.6	
	comp=Z,220nm,1.1s						
GIRL				IAMs_20	IAMs_20	09 59 54.3	
	comp=Z,19µm,21.0s						
KIP	**Kipapa**	**49.06**	**49**	⇑*e*P	**P**	**09 41 14.8**	**0.0**
KIP				pmax	pmax		
	comp=Z,253nm,1.1s						
KIP				MLR	MLR		
	comp=Z,6µm,17.0s						
KIP	**Kipapa**	**49.06**	**49**	P	**P**	**09 41 13.7**	**-1.1**
OPA	**Opana**	**49.22**	**49**	P	**P**	**09 41 16.0**	**0.0**
OPA				pmax	pmax		
	comp=Z,651nm,0.9s						
OPA	**Opana**	**49.22**	**49**	P	**P**	**09 41 16.0**	**0.0**
OPA				IAMs_20	IAMs_20	09 57 57.3	
	comp=Z,12µm,20.0s						
JAGI	**Jajag, Banyuwa**	**49.30**	**268**	P	**P**	**09 41 14.4**	**-2.4**
TGY	**Tagaytay City**	**49.47**	**299**	LR	LR	10 00 00.0	
	comp=Z,9µm,21.3s,baz=136,slow=33						
KHLU	**Kahalu`u**	**49.62**	**53**	P	**P**	**09 41 18.6**	**-0.6**
KHLU				IAmb	IAmb	09 41 21.5	
	comp=Z,219nm,1.1s						
KHU	**Kahuku**	**49.64**	**53**	P	**P**	**09 41 18.7**	**-0.9**
KHU				pmax	pmax		
	comp=Z,460nm,1.1s						
KHU	**Kahuku**	**49.64**	**53**	P	**P**	**09 41 18.7**	**-0.9**
HUH	**Hualalai**	**49.71**	**53**	P	**P**	**09 41 19.5**	**-0.6**
MWH	**Moku‘aweowe**	**49.79**	**53**	P	**P**	**09 41 19.7**	**-1.3**
MLOA	**Mauna Loa Obse**	**49.83**	**53**	P	**P**	**09 41 20.0**	**-1.2**
MLOA				IAmb	IAmb	09 41 23.3	
	comp=Z,209nm,1.0s						
AIN	**Ainahou**	**49.83**	**53**	P	**P**	**09 41 20.1**	**-0.9**
SPMM	**Sapulut**	**49.89**	**286**	P	**P**	**09 41 21.0**	**-0.4**
HLP	**Hilina Pali**	**49.91**	**53**	P	**P**	**09 41 20.2**	**-1.2**
HMH	**Humu‘ula Sheep**	**49.94**	**53**	P	**P**	**09 41 21.4**	**-0.5**

MLH	**Mauna Loa**	**49.96**	**53**	P	**P**	**09 41 21.4**	**-0.6**
MLH				IAmb	IAmb	09 41 24.3	
	comp=Z,234nm,1.1s						
POHA	**Pohakuloa**	**49.99**	**53**	P	**P**	**09 41 21.8**	**-0.4**
HLK	**Haleakala**	**50.00**	**51**	IAMs_20	IAMs_20	10 00 24.1	
	comp=Z,10μm,18.0s						
PUH	**Pauahi**	**50.03**	**53**	P	**P**	**09 41 21.9**	**-0.4**
PUH				IAmb	IAmb	09 41 37.9	
	comp=Z,148nm,1.0s						
JOW	**Kunigami**	**51.10**	**318**	P	**P**	**09 41 29.1**	**-1.1**
JOW				IAMs_20	IAMs_20	09 58 31.1	
	comp=Z,14μm,22.0s						
SZP	**Santa**	**51.53**	**303**	IAMs_20	IAMs_20	09 59 55.0	
	comp=Z,11μm,20.0s						
JYT	**Yasato**	**51.93**	**335**	P	**P**	**09 41 35.7**	**-0.5**
JYT				IAmb	IAmb	09 41 41.5	
	comp=Z,335nm,1.3s						
JGF	**Kuroka**	**52.63**	**332**	P	**P**	**09 41 40.5**	**-1.0**
UGM	**Wanagama**	**52.93**	**268**	P	**P**	**09 41 42.7**	**-1.4**
JSU	**Suzuyama**	**53.02**	**324**	P	**P**	**09 41 44.0**	**-0.5**
JSU				IAmb	IAmb	09 41 45.7	
	comp=Z,176nm,0.9s						
JSU				IAMs_20	IAMs_20	10 00 10.8	
	comp=Z,12μm,22.0s						
MJAR	**Matsushiro Arr**	**53.04**	**334**	P	**P**	**09 41 43.5**	**-1.0**
	comp=Z,52nm,0.8s,baz=167,slow=8.4,SNR=79						
MJAR				LR	LR	10 03 00.7	
	comp=Z,7μm,21.4s,baz=160,slow=34						
MJAR	**Matsushiro Arr**	**53.04**	**334**	P	**P**	**09 41 43.3**	**-1.2**
MAJO	**Matsushiro**	**53.04**	**334**	P	**P**	**09 41 43.8**	**-0.7**
MAJO				pmax	pmax		
	comp=Z,172nm,1.1s						
MAJO	**Matsushiro**	**53.04**	**334**	P	**P**	**09 41 43.8**	**-0.7**
MAJO				IAmb	IAmb	09 41 48.7	
	comp=Z,172nm,1.1s						
MAJO	**Matsushiro**	**53.04**	**334**	IAMs_20	IAMs_20	09 58 47.0	
	comp=Z,11μm,20.0s						
MAT	**Matsushiro**	**53.04**	**334**	P	**P**	**09 41 43.7**	**-0.8**
MAT				S	**S**	**09 49 07.2**	**-5.5**
JMM	**Marumori**	**53.12**	**337**	IAmb	IAmb	09 41 46.2	
	comp=Z,149nm,0.8s						
JMM				IAMs_20	IAMs_20	10 02 58.0	
	comp=Z,13μm,19.0s						
JWT	**Wachi**	**53.28**	**331**	P	**P**	**09 41 45.9**	**-0.4**
JWT				IAMs_20	IAMs_20	09 59 31.6	
	comp=Z,12μm,22.0s						
YOJ	**Yonaguni jima**	**53.29**	**312**	P	**P**	**09 41 44.7**	**-1.8**
YOJ				pmax	pmax		
	comp=Z,203nm,0.9s						
YOJ	**Yonaguni jima**	**53.29**	**312**	P	**P**	**09 41 44.7**	**-1.8**
YOJ				IAmb	IAmb	09 41 56.3	
	comp=Z,203nm,0.9s						
YOJ				IAMs_20	IAMs_20	10 02 12.3	
	comp=Z,10μm,20.0s						
SBUM	**Sibu**	**53.30**	**281**	P	**P**	**09 41 45.0**	**-1.9**
YULB	**Yu-li**	**53.95**	**309**	IAmb	IAmb	09 42 18.6	
	comp=Z,150nm,1.0s						
YULB				IAMs_20	IAMs_20	10 01 23.9	
	comp=Z,9μm,20.0s						
JNU	**Nakatsue**	**53.97**	**325**	P	**P**	**09 41 50.7**	**-0.7**
NACB	**Ninganchiao**	**54.17**	**310**	P	**P**	**09 41 52.1**	**-0.9**
JHS	**Saijyo**	**54.20**	**329**	P	**P**	**09 41 51.9**	**-1.1**
JSD	**Sado**	**54.28**	**335**	IAmb	IAmb	09 41 56.5	
	comp=Z,159nm,0.9s						
TPUB	**Ta-pu**	**54.41**	**309**	IAmb	IAmb	09 41 59.3	
	comp=Z,174nm,0.9s						
TPUB				IAMs_20	IAMs_20	10 02 58.0	
	comp=Z,11μm,21.0s						
SSLB	**Suanglung**	**54.43**	**310**	P	**P**	**09 41 54.1**	**-0.9**
SSLB				IAMs_20	IAMs_20	10 01 40.6	
	comp=Z,9μm,20.0s						
YHNB	**Yeheng**	**54.62**	**311**	P	**P**	**09 41 55.1**	**-1.2**
YHNB				IAmb	IAmb	09 41 59.8	
	comp=Z,192nm,1.1s						
TATO	**Taipei**	**54.71**	**311**	P	**P**	**09 41 56.7**	**-0.2**
TATO	**Taipei**	**54.71**	**311**	IAMs_20	IAMs_20	10 03 16.7	
	comp=Z,13μm,19.0s						
TAOE	**Nuku Hiva Isla**	**54.87**	**93**	*e*P	**P**	**09 41 58.5**	**+0.1**
	comp=Z,472nm,1.2s						
TAOE				*e*S	**S**	**09 49 36.8**	**-1.6**
	comp=Z,3μm,26.6s						
TAOE				*e*LQ	LQ	09 55 29.3	
	comp=Z,10μm,23.8s						
TAOE				*e*LR	LR	09 57 52.2	
	comp=Z,8μm,25.2s						
TAOE	**Nuku Hiva Isla**	**54.87**	**93**	P	**P**	**09 41 57.8**	**-0.6**
TAOE				IAmb	IAmb	09 42 00.1	
	comp=Z,197nm,1.0s						
KSM	**Kuching**	**54.91**	**279**	P	**P**	**09 41 57.0**	**-1.6**
JTM	**Tenmabayashi**	**55.58**	**339**	IAmb	IAmb	09 42 07.7	
	comp=Z,158nm,0.8s						
CISI	**Cisompet, Garu**	**55.63**	**268**	P	**P**	**09 42 01.6**	**-2.3**
CISI				IAmb	IAmb	09 42 26.0	
	comp=Z,92nm,0.7s						
LEM	**Lembang**	**55.93**	**269**	LR	LR	10 08 02.3	
	comp=Z,5μm,19.9s,baz=96,slow=38						
ERM	**Erimo**	**55.98**	**341**	*ce*P	**P**	**09 42 07.8**	**+2.1**
ERM				pmax	pmax		
	comp=Z,40nm,0.9s						
ERM	**Erimo**	**55.98**	**341**	IAMs_20	IAMs_20	10 04 26.5	
	comp=Z,13μm,20.0s						
JEM	**Erimo**	**55.98**	**341**	IAMs_20	IAMs_20	10 04 08.5	
	comp=Z,13μm,22.0s						
QZH	**Quanzhou**	**56.87**	**309**	P	**P**	**09 42 12.6**	**+0.2**
QZH				S	**S**	**09 50 04.4**	**0.0**
QZH				pmax	pmax		
	comp=Z,140nm,1.9s						
QZH				pmax	pmax		
	comp=Z,2μm,3.8s						
QZH				LR	LR		
	comp=Z,4μm,17.4s						
QZH				LR	LR		
	comp=Z,4μm,19.7s						
QZH				LR	LR		
	comp=Z,6μm,20.1s						
YUK	**Yuzh-Kuril'sk**	**57.04**	**344**	*d i*P	**P**	**09 42 12.5**	**-0.7**
YUK				*e*		09 43 08.1	
YUK				*i* S	**S**	**09 50 03.2**	**-2.8**
YUK				*e*		09 52 01.3	
YUK				*e*SS	**SS**	**09 53 54.6**	**-0.7**
YUK				pmax	pmax		
	comp=Z,419nm,3.2s						
YUK				pmax	pmax		
	comp=Z,253nm,0.8s						
KUR	**Kuril'sk**	**57.67**	**346**	*c i*P	**P**	**09 42 18.0**	**+0.4**
KUR				*i* S	**S**	**09 50 14.3**	**+0.1**
KUR				*e*		09 52 00.4	
KUR				*e*SSS	SSS	09 56 24.0	
KUR				pmax	pmax		
	comp=E,28nm,1.4s						
KUR				pmax	pmax		
	comp=Z,252nm,1.4s						
KUR				pmax	pmax		
	comp=N,59nm,1.1s						
KUR				pmax	pmax		
	comp=Z,2μm,4.4s						
JKA	**Kamikawa-asahi**	**58.05**	**342**	IAmb	IAmb	09 42 31.0	
	comp=Z,169nm,0.9s						
JKA				IAMs_20	IAMs_20	10 03 08.5	
	comp=Z,9μm,19.0s						
TJN	**Taejon**	**58.31**	**325**	*ce*P	**P**	**09 42 22.1**	**-0.2**
SSE	**Sheshan**	**58.58**	**317**	P	**P**	**09 42 23.8**	**-0.5**
SSE				S	**S**	**09 50 27.8**	**+1.1**
SSE				pmax	pmax		
	comp=Z,64nm,1.1s						
SSE				pmax	pmax		
	comp=Z,650nm,4.8s						
SSE				LR	LR		
	comp=Z,2μm,16.1s						
SSE				LR	LR		
	comp=Z,2μm,16.5s						
SSE	**Sheshan**	**58.58**	**317**	P	**P**	**09 42 23.6**	**-0.7**
SSE				IAmb	IAmb	09 42 25.6	
	comp=Z,120nm,0.9s						
KSRS	**Korea Array**	**58.79**	**327**	P	**P**	**09 42 25.8**	**+0.1**
	comp=Z,53nm,1.1s,baz=142,slow=7.1,SNR=62						
KSRS				LR	LR	10 06 19.9	
	comp=Z,5μm,19.7s,baz=137,slow=34						
KSAR	**Wonju Array Be**	**58.80**	**327**	P	**P**	**09 42 25.1**	**-0.6**
KSAR	**Wonju Array Be**	**58.80**	**327**	P	**P**	**09 42 25.1**	**-0.6**
KS19	**Wonju Array Si**	**58.86**	**327**	P	**P**	**09 42 25.8**	**-0.3**
KS19				IAmb	IAmb	09 42 49.1	
	comp=Z,91nm,1.1s						
RKT	**Rikitea**	**59.15**	**110**	*e*S	**S**	**09 50 36.5**	**+2.0**
	comp=Z,4μm,30.0s						
RKT				*e*LQ	LQ	09 57 22.3	
	comp=Z,19μm,30.5s						
RKT				*e*LR	LR	09 59 52.5	
	comp=Z,11μm,28.2s						
INCN	**Inchon**	**59.52**	**326**	P	**P**	**09 42 31.0**	**+0.3**
INCN				pmax	pmax		
	comp=Z,224nm,1.2s						
INCN	**Inchon**	**59.52**	**326**	P	**P**	**09 42 31.0**	**+0.3**
GZH	**Guangzhou**	**60.04**	**305**	P	**P**	**09 42 35.5**	**+0.9**
GZH				S	**S**	**09 50 51.1**	**+5.3**
GZH				pmax	pmax		
	comp=Z,2μm,3.9s						
GZH				LR	LR		
	comp=Z,3μm,15.3s						
GZH				LR	LR		
	comp=Z,4μm,18.4s						
YSS	**Yuzh-Sakhalins**	**60.58**	**343**	α *i*P	**P**	**09 42 38.4**	**+0.6**
YSS				*e*S	**S**	**09 50 49.8**	**-2.1**
YSS				*e*SS	**SS**	**09 54 54.0**	**+3.1**
YSS				pmax	pmax		
	comp=Z,90nm,1.2s						
YSS				pmax	pmax		
	comp=Z,2μm,4.6s						
YSS				MLR	MLR		
	comp=Z,7μm,17.0s						
YSS				MLR	MLR		
	comp=N,5μm,16.0s						
YSS				MLR	MLR		
	comp=E,6μm,15.0s						
YSS	**Yuzh-Sakhalins**	**60.58**	**343**	P	**P**	**09 42 38.3**	**+0.6**
YSS				IAmb	IAmb	09 42 47.5	
	comp=Z,85nm,0.9s						
YSS				IAMs_20	IAMs_20	10 07 31.4	
	comp=Z,9μm,20.0s						
NJ2	**Nanjing**	**60.74**	**316**	⇑*i*P	**P**	**09 42 39.3**	**+0.1**
NJ2				sP	**pP**	**09 42 47.9**	**+0.5**
NJ2				S	**S**	**09 50 58.3**	**+3.8**
NJ2				SS	**SS**	**09 54 54.6**	**+0.7**
NJ2				pmax	pmax		
	comp=Z,83nm,1.2s						
NJ2				pmax	pmax		
	comp=Z,2μm,4.0s						
NJ2				LR	LR		
	comp=Z,5μm,19.9s						
NJ2				LR	LR		
	comp=Z,6μm,18.0s						
NJ2				LR	LR		
	comp=Z,8μm,20.8s						
TEY	**Ternei**	**60.89**	**338**	⇑*e*P	**P**	**09 42 39.9**	**0.0**
TEY				pmax	pmax		
	comp=E,20nm,0.9s						
TEY				pmax	pmax		
	comp=N,30nm,1.0s						
TEY				pmax	pmax		
	comp=Z,60nm,1.0s						
TEY				pmax	pmax		
	comp=Z,300nm,4.0s						
MSHR	**Mys Shultsa**	**61.10**	**333**	⇑*e*P	**P**	**09 42 41.7**	**+0.3**
MSHR				pmax	pmax		
	comp=Z,278nm,1.7s						
QIZ	**Qiongzhong**	**61.17**	**299**	P	**P**	**09 42 43.3**	**+0.9**
QIZ				PcP	**PcP**	**09 43 23.9**	**-1.2**
QIZ				S	**S**	**09 51 05.3**	**+4.8**
QIZ				pmax	pmax		
	comp=Z,74nm,1.0s						
QIZ				pmax	pmax		
	comp=Z,1μm,4.1s						
QIZ				LR	LR		
	comp=Z,3μm,19.4s						
QIZ				LR	LR		
	comp=Z,5μm,19.6s						
QIZ				LR	LR		
	comp=Z,7μm,22.9s						
QIZ	**Qiongzhong**	**61.17**	**299**	P	**P**	**09 42 43.2**	**+0.9**
QIZ				IAMs_20	IAMs_20	10 05 29.8	
	comp=Z,8μm,21.0s						
MYKOM	**Kota Tinggi**	**61.25**	**278**	P	**P**	**09 42 41.8**	**-1.2**
MYKOM				IAmb	IAmb	09 42 57.9	
	comp=Z,124nm,1.7s						
MYKOM	**Kota Tinggi**	**61.25**	**278**	P	**P**	**09 42 42.0**	**-1.0**
SKR	**Severo-Kuril's**	**61.62**	**354**	*e*P	P	09 42 50.4	+5.7
SKR				*e*S	S	09 51 17.2	+12
SKR				pmax	pmax		
	comp=Z,210nm,1.1s						
SKR				pmax	pmax		
	comp=Z,700nm,8.0s						
SKR				pmax	pmax		
	comp=Z,2μm,6.0s						
SKR				MLR	MLR		
	comp=Z,4μm,17.0s						
SKR				MLR	MLR		
	comp=Z,4μm,18.0s						
USA0B	**Ussuriysk Arra**	**62.03**	**334**	*c i*P	**P**	**09 42 48.2**	**+0.6**
USRK	**Ussuriysk Ar.**	**62.03**	**334**	P	**P**	**09 42 48.2**	**+0.6**
	comp=Z,84nm,1.0s,baz=142,slow=6.0,SNR=56						
USRK				LR	LR	10 08 01.9	
	comp=Z,4μm,20.7s,baz=134,slow=34						
USRK	**Ussuriysk Ar.**	**62.03**	**334**	P	**P**	**09 42 47.5**	**-0.1**
WHN	**Wuhan**	**63.05**	**312**	⇑P	**P**	**09 42 54.3**	**-0.5**
WHN				S	**S**	**09 51 28.4**	**+4.6**
WHN				pmax	pmax		
	comp=Z,100nm,1.0s						
WHN				pmax	pmax		
	comp=Z,2μm,4.4s						
WHN				LR	LR		
	comp=Z,12μm,15.4s						
WHN				LR	LR		
	comp=Z,7μm,13.5s						
WHN				LR	LR		
	comp=Z,17μm,21.1s						
AMKA	**Amchitka**	**63.30**	**11**	P	**P**	**09 42 55.8**	**-0.2**
DL2	**Dalian**	**63.34**	**324**	P	**P**	**09 42 54.5**	**-2.0**
DL2				S	**S**	**09 51 29.9**	**+2.8**
DL2				SS	**SS**	**09 55 32.4**	**-1.9**
DL2				pmax	pmax		
	comp=Z,63nm,1.2s						
DL2				pmax	pmax		
	comp=Z,570nm,5.5s						
DL2				LR	LR		
	comp=Z,6μm,16.1s						
DL2				LR	LR		
	comp=Z,4μm,15.7s						
DL2				LR	LR		
	comp=Z,10μm,24.8s						
MDJ	**Mudanjiang**	**63.40**	**333**	P	**P**	**09 42 57.1**	**+0.3**
MDJ				S	**S**	**09 51 32.5**	**+4.8**
MDJ				pmax	pmax		
	comp=Z,60nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,2μm,3.7s						
MDJ				LR	LR		
	comp=Z,11μm,18.9s						
MDJ				LR	LR		
	comp=Z,10μm,18.4s						
MDJ				LR	LR		
	comp=Z,8μm,22.9s						
UBPT	**Khong Chiam**	**63.62**	**293**	P	**P**	**09 42 59.4**	**+0.6**
UBPT				IAmb	IAmb	09 43 09.7	
	comp=Z,131nm,1.5s						
PET	**Petropavlovsk**	**63.74**	**356**	*e*P	**P**	**09 42 58.5**	**-0.3**
PET				*e*S	**S**	**09 51 31.6**	**+0.2**
PET				pmax	pmax		
	comp=Z,109nm,1.4s						
PET				MLR	MLR		
	comp=Z,6μm,18.0s						
PET				MLR	MLR		
	comp=Z,5μm,19.0s						
PET	**Petropavlovsk**	**63.74**	**356**	P	**P**	**09 42 58.5**	**-0.3**
PET				IAmb	IAmb	09 43 05.0	
	comp=Z,155nm,1.4s						
PEA0B	**Petropavlovsk-**	**63.89**	**356**	*de*P	**P**	**09 43 00.4**	**+0.6**
PEA0B	**Petropavlovsk-**	**63.89**	**356**	P	**P**	**09 42 58.9**	**-0.9**
PEA0B				IAmb	IAmb	09 43 10.9	
	comp=Z,170nm,1.2s						
PEA0B				IAMs_20	IAMs_20	10 08 05.6	
	comp=Z,8μm,18.0s						
PETK	**Petropavlovsk-**	**63.89**	**356**	P	**P**	**09 43 00.0**	**+0.2**
	comp=Z,23nm,0.9s,baz=126,slow=7.5,SNR=15						
PETK	**Petropavlovsk-**	**63.89**	**356**	P	**P**	**09 42 59.6**	**-0.2**
TYV	**Tymovskoe**	**64.19**	**345**	*e*P	**P**	**09 43 02.4**	**+0.6**
TYV				*e*		09 51 43.8	
TYV				pmax	pmax		
	comp=Z,20nm,1.0s						
TYV				pmax	pmax		
	comp=Z,400nm,2.1s						
SNY	**Shenyang**	**64.26**	**327**	⇑P	**P**	**09 43 02.0**	**-0.5**
SNY				S	**S**	**09 51 42.8**	**+4.4**
SNY				pmax	pmax		
	comp=Z,58nm,1.8s						
SNY				pmax	pmax		
	comp=Z,1μm,3.9s						
SNY				LR	LR		
	comp=Z,8μm,15.7s						
SNY				LR	LR		
	comp=Z,4μm,16.5s						
SNY				LR	LR		
	comp=Z,6μm,21.1s						
TIA	**Tai'an**	**64.39**	**319**	P	**P**	**09 43 02.8**	**-0.7**
TIA				S	**S**	**09 51 42.3**	**+2.1**
TIA				pmax	pmax		
	comp=Z,26nm,1.1s						
TIA				pmax	pmax		
	comp=Z,1μm,3.7s						
TIA				LR	LR		
	comp=Z,6μm,16.7s						
TIA				LR	LR		
	comp=Z,4μm,16.3s						
TIA				LR	LR		
	comp=Z,5μm,22.4s						
ADK	**Adak**	**64.58**	**13**	P	**P**	**09 43 04.0**	**-0.4**
ADK				pmax	pmax		
	comp=Z,181nm,1.3s						
ADK	**Adak**	**64.58**	**13**	P	**P**	**09 43 04.0**	**-0.4**
CN2	**Changchun**	**64.73**	**330**	*e*P	**P**	**09 43 05.1**	**-0.4**
CN2				pP	pP	09 43 08.3	-5.3
CN2				sP	sP	09 43 13.1	-3.6
CN2				S	**S**	**09 51 35.4**	**-8.7**
CN2				pmax	pmax		
	comp=Z,50nm,1.1s						
CN2				pmax	pmax		
	comp=Z,1μm,3.4s						
CN2				LR	LR		
	comp=Z,12μm,20.0s						
CN2				LR	LR		
	comp=Z,7μm,20.0s						
CN2				LR	LR		
	comp=Z,7μm,21.0s						
GSTR	**Great Sitkin T**	**64.92**	**13**	P	**P**	**09 43 06.3**	**-0.3**
ATKA	**Atka Island**	**65.46**	**14**	P	**P**	**09 43 10.4**	**+0.3**
ATKA				IAMs_20	IAMs_20	10 04 14.3	
	comp=Z,10μm,22.0s						
GRNR	**Gornyy**	**65.89**	**341**	⇓*i*P	**P**	**09 43 14.1**	**+1.2**
GRNR				*e*S	**S**	**09 52 05.8**	**+7.7**
GRNR				pmax	pmax		
	comp=N,10.0nm,1.1s						
GRNR				pmax	pmax		
	comp=Z,30nm,1.1s						
GRNR				smax	smax		
	comp=N,2.0nm,0.6s						
GRNR				MLR	MLR		
	comp=E,2μm,15.0s						
GRNR				MLR	MLR		
	comp=N,2μm,16.0s						
GRNR				MLR	MLR		
	comp=Z,3μm,16.0s						
CASY	**Casey**	**66.04**	**201**	P	**P**	**09 43 14.5**	**+0.8**
CASY	**Casey**	**66.04**	**201**	IAMs_20	IAMs_20	10 08 59.4	
	comp=Z,7μm,18.0s						
KLR	**Kul'dur**	**66.21**	**337**	*c i*P	**P**	**09 43 15.4**	**+0.4**
RPSI	**Rantau Prapat**	**66.25**	**278**	P	**P**	**09 43 14.9**	**-1.1**
RPSI				IAmb	IAmb	09 43 34.5	
	comp=Z,68nm,1.1s						
PSI	**Prapat**	**66.27**	**278**	P	**P**	**09 43 14.9**	**-1.4**
PSI				pmax	pmax		
	comp=Z,68nm,1.1s						
SRAK	**Srakaew**	**66.33**	**291**	P	**P**	**09 43 13.6**	**-2.8**
	comp=Z,6μmcomp=Z,372nm,1.2s						
VNDA	**Vanda**	**66.72**	**181**	P	**P**	**09 43 19.6**	**+1.6**
	comp=Z,111nm,1.1s,baz=1.4,slow=5.9,SNR=70						
VNDA				LR	LR	10 08 27.5	
	comp=Z,5μm,20.0s,baz=354,slow=32						
VNDA	**Vanda**	**66.72**	**181**	P	**P**	**09 43 19.3**	**+1.4**
NKL	**Nikolayevsk**	**66.78**	**345**	*e*P	**P**	**09 43 16.9**	**-1.6**
NKL				*e*S	**S**	**09 52 09.3**	**+0.6**
NKL				pmax	pmax		
	comp=E,52nm,0.9s						
NKL				pmax	pmax		
	comp=N,13nm,1.1s						
NKL				pmax	pmax		
	comp=Z,80nm,1.2s						
NKL				smax	smax		
	comp=N,20nm,5.2s						
NKL				smax	smax		
	comp=E,119nm,5.2s						
NKL				MLR	MLR		
	comp=E,1μm,13.0s						
NKL				MLR	MLR		
	comp=N,130nm,11.0s						
NKL				MLR	MLR		
	comp=Z,3μm,17.0s						
GYA	**Guiyang**	**66.98**	**305**	⇑P	**P**	**09 43 20.4**	**-0.2**
GYA				S	**S**	**09 52 13.0**	**+0.5**
GYA				pmax	pmax		
	comp=Z,43nm,1.0s						
GYA				LR	LR		
	comp=Z,3μm,21.9s						
GYA				LR	LR		
	comp=Z,3μm,20.7s						
GYA				LR	LR		
	comp=Z,3μm,19.8s						
CHAI	**Chaiyaphum**	**66.99**	**292**	P	**P**	**09 43 21.2**	**+0.6**
SBA	**Scott Base**	**67.06**	**179**	P	**P**	**09 43 22.3**	**+2.2**
SBA				pmax	pmax		
	comp=Z,290nm,1.2s						
SBA	**Scott Base**	**67.06**	**179**	P	**P**	**09 43 22.3**	**+2.2**
SBA	**Scott Base**	**67.06**	**179**	IAMs_20	IAMs_20	10 07 05.0	
	comp=Z,7μm,21.0s						
PATY	**Pattaya**	**67.08**	**289**	P	**P**	**09 43 22.1**	**+0.9**
	comp=Z,14μmcomp=Z,138nm,0.8s						
SLVN	**Son La**	**67.20**	**299**	IAmb	IAmb	09 43 33.3	
	comp=Z,158nm,1.2s						
GSI	**Gunungsitoli**	**67.26**	**276**	P	**P**	**09 43 21.5**	**-1.0**
GSI				IAmb	IAmb	09 43 23.1	
	comp=Z,102nm,0.8s						
BJT	**Baijiatuau**	**67.29**	**322**	P	**P**	**09 43 21.9**	**-0.2**
BJT	**Baijiatuau**	**67.29**	**322**		**P**	**09 43 22.1**	**0.0**
BJT				IAMs_20	IAMs_20	10 09 32.6	
	comp=Z,7μm,21.0s						
BJI	**Beijing**	**67.30**	**322**	P	**P**	**09 43 22.0**	**-0.2**
BJI				PP	**PP**	**09 45 50.0**	**-0.9**
BJI				S	**S**	**09 52 16.3**	**+0.7**
BJI				SS	**SS**	**09 56 38.3**	**+2.3**
BJI				pmax	pmax		
	comp=Z,17nm,1.2s						
BJI				pmax	pmax		
	comp=Z,1μm,4.3s						
BJI				LR	LR		
	comp=Z,6μm,19.8s						
BJI				LR	LR		
	comp=Z,5μm,20.9s						
BJI				LR	LR		
	comp=Z,10μm,24.6s						
NIKH	**Nikolski High**	**67.59**	**17**	P	**P**	**09 43 23.6**	**-0.1**
NIKH				IAMs_20	IAMs_20	10 05 00.7	
	comp=Z,10μm,22.0s						
TIY	**Taiyuan**	**68.31**	**318**	*e*P	**P**	**09 43 29.1**	**+0.4**
TIY				pP	**sP**	**09 43 38.6**	**-1.5**
TIY				S	**S**	**09 52 27.8**	**-0.2**
TIY				ScS	**ScS**	**09 53 28.8**	**+2.4**
TIY				SS	**SS**	**09 56 49.3**	**-2.6**
TIY				pmax	pmax		
	comp=Z,140nm,1.6s						
TIY				pmax	pmax		
	comp=Z,1μm,7.3s						
TIY				LR	LR		
	comp=Z,3μm,13.9s						
TIY				LR	LR		
	comp=Z,2μm,14.6s						
TIY				LR	LR		
	comp=Z,6μm,15.2s						
XAN	**Xi'an**	**68.79**	**313**	P	**P**	**09 43 31.3**	**-0.4**
XAN				pP	pP	09 43 35.0	-5.1
XAN				sP	sP	09 43 37.5	-5.7
XAN				PP	**PP**	**09 46 05.5**	**+1.5**
XAN				S	**S**	**09 52 34.6**	**+0.8**
XAN				sS	pS	09 52 43.3	-1.0
XAN				ScS	**SKSac**	**09 53 28.3**	**-1.2**
XAN				pmax	pmax		
	comp=Z,46nm,1.0s						
XAN				pmax	pmax		
	comp=Z,1μm,5.2s						
XAN				LR	LR		
	comp=Z,7μm,17.3s						

XAN				LR	LR		
	comp=Z,5µm,19.5s						
XAN				LR	LR		
	comp=Z,10µm,22.0s						
XAN	**Xi'an**	**68.79**	**313**	IAmb	IAmb	09 43 41.5	
	comp=Z,127nm,1.1s						
XAN	**Xi'an**	**68.79**	**313**	IAMs_20	IAMs_20	10 11 36.5	
	comp=Z,7µm,21.0s						
UNV	**Unalaska Valle**	**69.05**	**18**	P	**P**	**09 43 32.4**	**-0.4**
UNV				IAmb	IAmb	09 43 46.1	
	comp=Z,89nm,1.0s						
UNV				IAMs_20	IAMs_20	10 07 24.3	
	comp=Z,8µm,18.0s						
UTHA	**Uthaitani**	**69.19**	**291**	P	**P**	**09 43 35.0**	**+0.5**
	comp=Z,1µmcomp=Z,65nm,0.9s						
SUKH	**Sukhothai**	**69.63**	**293**	P	**P**	**09 43 38.0**	**+0.8**
KMI	**Kunming**	**69.65**	**302**	⇑P	**P**	**09 43 38.4**	**+1.0**
KMI				pP	pP	09 43 43.6	-2.2
KMI				sP	sP	09 43 47.0	-1.0
KMI				PP	**PP**	**09 46 11.0**	**-0.8**
KMI				S	**S**	**09 52 45.4**	**+0.8**
KMI				sS	pS	09 52 50.9	-3.8
KMI				pmax	pmax		
	comp=Z,98nm,1.2s						
KMI				pmax	pmax		
	comp=Z,1µm,3.7s						
KMI				LR	LR		
	comp=Z,4µm,18.1s						
KMI				LR	LR		
	comp=Z,4µm,21.3s						
KMI				LR	LR		
	comp=Z,6µm,21.8s						
KMI	**Kunming**	**69.65**	**302**	P	**P**	**09 43 38.1**	**+0.7**
KMI				pmax	pmax		
	comp=Z,800nm,1.7s						
KMI	**Kunming**	**69.65**	**302**	P	**P**	**09 43 38.1**	**+0.7**
KMI	**Kunming**	**69.65**	**302**	IAMs_20	IAMs_20	10 11 34.9	
	comp=Z,7µm,22.0s						
UMPA	**Umpang Tak**	**69.93**	**292**	P	**P**	**09 43 39.8**	**+0.7**
	comp=Z,56nm,1.4s						
CM35	**Chiang Mai Arr**	**70.45**	**294**	P	**P**	**09 43 42.0**	**-0.2**
CM35	**Chiang Mai Arr**	**70.45**	**294**	P	**P**	**09 43 42.0**	**-0.2**
CM34	**Chiang Mai Arr**	**70.51**	**294**	P	**P**	**09 43 43.0**	**+0.4**
CM04	**Chiang Mai Arr**	**70.52**	**294**	P	**P**	**09 43 43.5**	**+0.9**
	comp=Z,776nmcomp=Z,62nm,1.7s						
CM04	**Chiang Mai Arr**	**70.52**	**294**	P	**P**	**09 43 43.5**	**+0.9**
CM09	**Chiang Mai Arr**	**70.52**	**294**	P	**P**	**09 43 43.7**	**+1.0**
	comp=Z,939nmcomp=Z,75nm,1.6s						
CM09	**Chiang Mai Arr**	**70.52**	**294**	P	**P**	**09 43 43.7**	**+1.0**
CM01	**Chiang Mai Arr**	**70.54**	**294**	P	**P**	**09 43 43.7**	**+0.9**
	comp=Z,963nmcomp=Z,74nm,1.0s						
CM01	**Chiang Mai Arr**	**70.54**	**294**	P	**P**	**09 43 43.7**	**+0.9**
CM05	**Chiang Mai Arr**	**70.55**	**294**	P	**P**	**09 43 43.6**	**+0.8**
	comp=Z,629nmcomp=Z,54nm,1.0s						
CM05	**Chiang Mai Arr**	**70.55**	**294**	P	**P**	**09 43 43.6**	**+0.8**
CM02	**Chiang Mai Arr**	**70.56**	**294**	P	**P**	**09 43 43.0**	**+0.1**
	comp=Z,89nmcomp=Z,717nmcomp=Z,75nm,1.0s						
CM02	**Chiang Mai Arr**	**70.56**	**294**	P	**P**	**09 43 43.0**	**+0.1**
CM31	**Chiang Mai Arr**	**70.57**	**294**	P	**P**	**09 43 44.0**	**+1.1**
	comp=Z,26µmcomp=Z,2µm,1.3s						
CM31	**Chiang Mai Arr**	**70.57**	**294**	P	**P**	**09 43 44.0**	**+1.1**
CM31	**Chiang Mai Arr**	**70.57**	**294**	P	**P**	**09 43 43.4**	**+0.4**
CM31				IAmb	IAmb	09 43 54.3	
	comp=Z,133nm,1.1s						
CMAR	**Chiang Mai Arr**	**70.57**	**294**	P	**P**	**09 43 42.8**	**-0.1**
	comp=Z,30nm,0.9s,baz=116,slow=4.4,SNR=90						
CMAR				PKPPKP		10 11 45.9	
	comp=Z,0.9nm,0.3s,baz=268,slow=4.8,SNR=5.5						
CMAR				LR	LR	10 15 11.0	
	comp=Z,2µm,19.5s,baz=144,slow=36						
CMAR	**Chiang Mai Arr**	**70.57**	**294**	ceP	**P**	**09 43 43.5**	**+0.6**
CMAR				pmax	pmax		
	comp=Z,30nm,0.9s						
CMAR	**Chiang Mai Arr**	**70.57**	**294**	P	**P**	**09 43 42.6**	**-0.4**
CM15	**Chiang Mai Arr**	**70.58**	**294**	P	**P**	**09 43 43.0**	**0.0**
	comp=Z,714nmcomp=Z,67nm,0.8s						
CM15	**Chiang Mai Arr**	**70.58**	**294**	P	**P**	**09 43 43.0**	**0.0**
CM13	**Chiang Mai Arr**	**70.59**	**294**	P	**P**	**09 43 43.9**	**+0.8**
	comp=Z,701nmcomp=Z,59nm,1.0s						
CM13	**Chiang Mai Arr**	**70.59**	**294**	P	**P**	**09 43 43.9**	**+0.8**
HHC	**Hu-ho-hao-te**	**70.63**	**320**	eP	**P**	**09 43 43.5**	**+0.5**
HHC				sP	sP	09 43 52.8	-1.4
HHC				S	**S**	**09 52 59.8**	**+4.6**
HHC				sS	sS	09 53 07.4	-1.6
HHC				SS	**SS**	**09 57 29.6**	**+2.0**
HHC				pmax	pmax		
	comp=Z,65nm,1.9s						
HHC				pmax	pmax		
	comp=Z,2µm,5.3s						
HHC				LR	LR		
	comp=Z,6µm,19.0s						
HHC				LR	LR		
	comp=Z,5µm,18.6s						
HHC				LR	LR		
	comp=Z,10µm,17.6s						
CMMT	**Chiang Mai**	**70.68**	**294**	P	**P**	**09 43 42.9**	**-0.7**
	comp=Z,1µmcomp=Z,65nm,2.0s						
CMMT	**Chiang Mai**	**70.68**	**294**	P	**P**	**09 43 42.9**	**-0.7**
CM33	**Chiang Mai Arr**	**70.68**	**294**	P	**P**	**09 43 43.7**	**+0.1**
CHTO	**Chiang Mai**	**70.68**	**294**	P	**P**	**09 43 43.8**	**+0.2**
CHTO				pmax	pmax		
	comp=Z,183nm,1.3s						
CHTO				MLR	MLR		
	comp=Z,3µm,20.0s						
CHTO	**Chiang Mai**	**70.68**	**294**	P	**P**	**09 43 43.8**	**+0.2**
CHTO				IAmb	IAmb	09 43 54.6	
	comp=Z,183nm,1.3s						
CM32	**Chiang Mai Arr**	**70.72**	**294**	P	**P**	**09 43 44.0**	**+0.2**
CM32	**Chiang Mai Arr**	**70.72**	**294**	P	**P**	**09 43 44.0**	**+0.2**
MA2	**Magadan**	**70.95**	**353**	d iP	**P**	**09 43 43.8**	**-0.6**
MA2				pmax	pmax		
	comp=Z,50nm,1.7s						
MA2				MLR	MLR		
	comp=Z,4µm,19.0s						
MA2	**Magadan**	**70.95**	**353**	P	**P**	**09 43 43.6**	**-0.9**
MA2				IAMs_20	IAMs_20	10 14 47.5	
	comp=Z,6µm,19.0s						
CD2	**Chengdu**	**71.20**	**308**	⇑P	**P**	**09 43 46.6**	**0.0**
CD2				PP	**PP**	**09 46 21.6**	**-3.3**
CD2				S	**S**	**09 53 04.9**	**+2.7**
CD2				SKS	**SKSac**	**09 53 46.9**	**-1.0**
CD2				SS	**SS**	**09 57 39.6**	**+2.9**
CD2				pmax	pmax		
	comp=Z,130nm,0.9s						
CD2				pmax	pmax		
	comp=Z,2µm,6.4s						
CD2				LR	LR		
	comp=Z,5µm,16.3s						
CD2				LR	LR		
	comp=Z,6µm,19.4s						
CD2				LR	LR		
	comp=Z,5µm,19.2s						
HIA	**Hailar**	**71.38**	**331**	P	**P**	**09 43 47.2**	**-0.1**
HIA				IAmb	IAmb	09 43 58.3	
	comp=Z,206nm,1.4s						
HIA	**Hailar**	**71.38**	**331**		**P**	**09 43 47.4**	**+0.1**
HIA				IAMs_20	IAMs_20	10 11 21.3	
	comp=Z,5µm,21.0s						
MHMT	**Maesarieng**	**71.39**	**293**	P	**P**	**09 43 47.7**	**-0.2**
BTO	**Baotou**	**71.47**	**319**	eP	**P**	**09 43 48.8**	**+0.7**
BTO				S	**S**	**09 52 58.5**	**-6.5**
ZEA	**Zeya**	**71.51**	**338**	eP	**P**	**09 43 48.6**	**+0.7**
ZEA				eS	**S**	**09 53 10.0**	**+5.3**
ZEA				pmax	pmax		
	comp=E,30nm,1.1s						
ZEA				pmax	pmax		
	comp=Z,110nm,1.2s						
ZEA				pmax	pmax		
	comp=E,300nm,5.5s						
ZEA				pmax	pmax		
	comp=Z,600nm,7.0s						
ZEA				smax	smax		
	comp=E,600nm,13.2s						
ZEA				smax	smax		
	comp=N,1µm,18.6s						
ZEA				MLR	MLR		
	comp=N,4µm,17.0s						
ZEA				MLR	MLR		
	comp=Z,4µm,18.0s						
CNBA	**Chernabura Isl**	**72.14**	**21**	IAMs_20	IAMs_20	10 07 23.3	
	comp=Z,10µm,22.0s						
SDPT	**Sand Point**	**72.25**	**20**	IAMs_20	IAMs_20	10 08 38.1	
	comp=Z,7µm,20.0s						
LZH	**Lanzhou**	**73.43**	**313**	eP	**P**	**09 44 01.0**	**+1.1**
LZH				pP	pP	09 44 07.0	-1.3
LZH				sP	sP	09 44 10.3	-1.2
LZH				S	**SKiKP**	**09 53 32.6**	**+3.4**
LZH				sS	sS	09 53 41.9	+0.4
LZH				pmax	pmax		
	comp=Z,110nm,1.1s						
LZH				pmax	pmax		
	comp=Z,1µm,4.3s						
LZH				LR	LR		
	comp=Z,5µm,16.5s						
LZH				LR	LR		
	comp=Z,6µm,14.9s						
LZH				LR	LR		
	comp=Z,5µm,19.2s						
CHGN	**Chignik**	**73.72**	**21**	IAMs_20	IAMs_20	10 09 08.9	
	comp=Z,8µm,21.0s						
SEY	**Seymchan**	**74.06**	**354**	⇑eP	**P**	**09 44 02.3**	**-0.5**
DGPR	**DIGLIPUR**	**74.57**	**287**	eP	**P**	**09 44 08.9**	**+2.1**
DGPR				IAmb	IAmb	09 44 16.9	
	comp=Z,91nm,1.1s						
SII	**Sitkinak Islan**	**75.44**	**22**	IAMs_20	IAMs_20	10 09 41.5	
	comp=Z,8µm,20.0s						
CIT	**Chita**	**76.16**	**331**	eP	**P**	**09 44 15.7**	**+0.4**
CIT				e		09 44 24.8	
CIT				e		09 44 30.6	
CIT				e		09 47 04.3	
LKP	**Lekhapani**	**76.21**	**302**	eP	**P**	**09 44 16.2**	**+0.1**
LKP				IAmb	IAmb	09 44 18.2	
	comp=Z,129nm,1.2s						
OHAK	**Old Harbor**	**76.27**	**22**	P	**P**	**09 44 15.7**	**+0.1**
OHAK				IAmb	IAmb	09 44 22.1	
	comp=Z,241nm,1.6s						
GAMB	**Gambell**	**76.61**	**11**	P	**P**	**09 44 17.9**	**+0.5**
GAMB				IAmb	IAmb	09 44 30.2	
	comp=Z,91nm,1.2s						
KDAK	**Kodiak Island**	**76.94**	**22**	⇓eP	**P**	**09 44 21.4**	**+2.0**
KDAK				pmax	pmax		
	comp=Z,63nm,1.0s						
KDAK				MLR	MLR		
	comp=Z,7µm,18.0s						
KDAK	**Kodiak Island**	**76.94**	**22**	P	**P**	**09 44 19.8**	**+0.4**
KDAK				IAmb	IAmb	09 44 31.1	
	comp=Z,90nm,1.1s						
KDAK	**Kodiak Island**	**76.94**	**22**	IAMs_20	IAMs_20	10 18 44.9	
	comp=Z,5µm,18.0s						
MOKO	**MOKOCHONG**	**77.00**	**300**	eP	**P**	**09 44 19.6**	**-1.1**
DIBR	**DIBRUGARH**	**77.04**	**302**	eP	**P**	**09 44 21.4**	**+0.7**
SAIH	**SAIHA**	**77.13**	**296**	eP	**P**	**09 44 21.6**	**+0.1**
KOHI	**KOHIMA**	**77.15**	**300**	eP	**P**	**09 44 18.0**	**-3.6**
ULN	**Ulaanbaatar**	**77.18**	**325**	c iP	**P**	**09 44 21.8**	**+0.6**
ULN				pmax	pmax		
	comp=Z,94nm,1.0s						
ULN				MLR	MLR		
	comp=Z,5µm,17.0s						
ULN	**Ulaanbaatar**	**77.18**	**325**	P	**P**	**09 44 21.4**	**+0.2**
ULN					**P**	**09 44 21.8**	**+0.6**
JORH	**JORHAT**	**77.36**	**301**	eP	**P**	**09 44 23.8**	**+1.3**
YAK	**Yakutsk**	**77.42**	**344**	eP	**P**	**09 44 21.5**	**-0.5**
YAK				e*PP	**pP**	**09 44 30.6**	**+0.3**
YAK				e		09 44 34.6	
YAK				eS	**S**	**09 54 09.5**	**-1.0**
YAK				e*SS	**ScS**	**09 54 37.8**	**0.0**
YAK				pmax	pmax		
	comp=Z,259nm,0.9s						
YAK				pmax	pmax		
	comp=N,46nm,1.1s						
YAK				pmax	pmax		
	comp=E,24nm,1.3s						
YAK				pmax	pmax		
	comp=Z,677nm,5.9s						
YAK				pmax	pmax		
	comp=N,238nm,5.3s						
YAK				pmax	pmax		
	comp=E,284nm,6.4s						
YAK				smax	smax		
	comp=N,918nm,9.1s						
YAK				smax	smax		
	comp=E,904nm,9.1s						
YAK				MLR	MLR		
	comp=E,3µm,23.0s						
YAK	**Yakutsk**	**77.42**	**344**	P	**P**	**09 44 21.9**	**-0.1**
SONM	**Songino Array**	**77.54**	**324**	P	**P**	**09 44 23.7**	**+0.4**
	comp=E,39nm,1.0s,baz=135,slow=5.7,SNR=59						
SONM				LR	LR	10 17 14.8	
	comp=E,5µm,20.8s,baz=116,slow=35						
SONM	**Songino Array**	**77.54**	**324**	P	**P**	**09 44 22.9**	**-0.3**
GTA	**Gaotai**	**77.75**	**314**	⇑P	**P**	**09 44 25.4**	**+0.8**
GTA				pP	pP	09 44 32.6	-0.5
GTA				sP	sP	09 44 36.1	+0.1
GTA				S	**S**	**09 54 19.9**	**+4.5**
GTA				pmax	pmax		
	comp=E,54nm,1.1s						
GTA				pmax	pmax		
	comp=E,1µm,9.6s						
GTA				LR	LR		
	comp=E,3µm,16.7s						
GTA				LR	LR		
	comp=E,4µm,18.3s						
GTA				LR	LR		
	comp=E,5µm,19.9s						
ZIRO	**ZIRO**	**77.95**	**301**	eP	**P**	**09 44 26.8**	**+0.8**
ZIRO				IAmb	IAmb	09 44 40.5	
	comp=Z,96nm,2.1s						
SVW2	**Sparrevohn**	**78.38**	**19**	P	**P**	**09 44 27.2**	**-0.2**
SVW2				IAmb	IAmb	09 44 42.6	
	comp=Z,206nm,1.2s						
TEZP	**TEZPUR**	**78.55**	**300**	eP	**P**	**09 44 29.3**	**+0.1**
TEZP				IAmb	IAmb	09 44 40.0	
	comp=Z,80nm,0.8s						
HOM	**Homer**	**78.63**	**21**	P	**P**	**09 44 28.6**	**-0.2**
	baz=224						
CNPM	**China Poot**	**78.68**	**21**	IAmb	IAmb	09 44 44.0	
	comp=Z,159nm,1.0s						
CNPM				IAMs_20	IAMs_20	10 11 44.0	
	comp=Z,8µm,22.0s						
BELO	**BELONIA**	**78.71**	**296**	eP	**P**	**09 44 30.6**	**+0.6**
RSO	**Redoubt South**	**78.83**	**20**	P	**P**	**09 44 29.0**	**-1.1**
TNA	**Tin City**	**78.94**	**11**	P	**P**	**09 44 30.6**	**+0.2**
	baz=208						
TNA	**Tin City**	**78.94**	**11**	P	**P**	**09 44 29.9**	**-0.5**
BRLK	**Bradley Lake**	**78.97**	**21**	P	**P**	**09 44 30.3**	**-0.5**
BRLK				IAmb	IAmb	09 44 41.4	
	comp=Z,117nm,0.8s						
BRLK				IAMs_20	IAMs_20	10 11 41.4	
	comp=Z,8µm,22.0s						
SHL	**Shillong**	**79.01**	**299**	P	**P**	**09 44 31.6**	**-0.4**
SHL				pmax	pmax		
	comp=Z,576nm,2.0s						
SHL	**Shillong**	**79.01**	**299**	eP	**P**	**09 44 32.1**	**+0.2**
SHL				IAmb	IAmb	09 44 43.4	
	comp=Z,113nm,2.6s						
SHL	**Shillong**	**79.01**	**299**	P	**P**	**09 44 31.6**	**-0.4**
AGT	**Agartala**	**79.06**	**297**	eP	**P**	**09 44 34.7**	**+2.7**
QSPA	**South Pole Qui**	**79.21**	**180**	P	**P**	**09 44 33.0**	**+0.8**
GUWA	**GUWAHATI**	**79.36**	**299**	eP	**P**	**09 44 32.8**	**-0.8**
CAPN	**Captain Cook N**	**79.59**	**21**	P	**P**	**09 44 34.0**	**-0.1**
	baz=225,SNR=16						
BOD	**Bodaibo**	**79.64**	**335**	eP	**P**	**09 44 34.1**	**-0.3**
BOD				pmax	pmax		
	comp=Z,115nm,2.1s						
TTA	**Tatalina**	**79.65**	**17**	P	**P**	**09 44 34.5**	**0.0**
TTA				pmax	pmax		
	comp=Z,116nm,1.1s						
TTA	**Tatalina**	**79.65**	**17**	P	**P**	**09 44 34.5**	**0.0**
TTA				IAmb	IAmb	09 44 41.7	
	comp=Z,116nm,1.1s						
TTA				IAMs_20	IAMs_20	10 13 24.6	
	comp=Z,5µm,21.0s						
SEW	**Seward**	**79.73**	**22**	P	**P**	**09 44 34.0**	**-0.8**
SEW				IAmb	IAmb	09 44 50.5	
	comp=Z,156nm,1.3s						
O22K	**Cooper Landing**	**79.89**	**21**	P	**P**	**09 44 35.5**	**-0.2**
	baz=226,SNR=9.9						
O22K	**Cooper Landing**	**79.89**	**21**	P	**P**	**09 44 35.2**	**-0.5**
O22K				IAMs_20	IAMs_20	10 21 30.1	
	comp=Z,5µm,19.0s						
SUA	**Susitna One**	**80.23**	**20**	IAmb	IAmb	09 44 48.8	
	comp=Z,109nm,1.1s						
SUA				IAMs_20	IAMs_20	10 13 30.9	
	comp=Z,6µm,21.0s						
RC01	**Rabbit Creek A**	**80.31**	**21**	P	**P**	**09 44 37.6**	**-0.4**
	baz=226,SNR=6.8						
SKT	**Skwentna**	**80.33**	**20**	IAMs_20	IAMs_20	10 13 10.7	
	comp=Z,7µm,22.0s						
Q23K	**Middleton Isla**	**80.44**	**23**	P	**P**	**09 44 37.8**	**-0.8**
	baz=229						
Q23K	**Middleton Isla**	**80.44**	**23**	IAMs_20	IAMs_20	10 11 17.5	
	comp=Z,6µm,20.0s						
MID	**Middleton Isla**	**80.44**	**23**	IAMs_20	IAMs_20	10 11 17.6	
	comp=Z,6µm,20.0s						
ZAK	**Zakamensk**	**80.60**	**325**	eP	**P**	**09 44 39.9**	**0.0**
ZAK				e		09 47 44.0	
ZAK				pmax	pmax		
	comp=Z,75nm,1.1s						
ZAK				pmax	pmax		
	comp=Z,16nm,1.4s						
DHUB	**DHUBRI**	**80.77**	**299**	eP	**P**	**09 44 40.8**	**-0.4**
AIS	**Amsterdam Isla**	**80.78**	**233**	IAMs_20	IAMs_20	10 16 16.4	
	comp=Z,8µm,19.0s						
PPLA	**Purkeypile**	**80.79**	**19**	P	**P**	**09 44 40.2**	**-0.4**
PPLA				IAmb	IAmb	09 45 18.2	
	comp=Z,168nm,1.7s						
PPLA				IAMs_20	IAMs_20	10 13 47.7	
	comp=Z,6µm,20.0s						
PMR	**Palmer**	**80.87**	**21**	IAmb	IAmb	09 44 55.5	
	comp=Z,165nm,1.3s						
PMR				IAMs_20	IAMs_20	10 13 18.0	
	comp=Z,8µm,22.0s						
LSA	**Lhasa**	**80.89**	**303**	P	**P**	**09 44 42.8**	**+0.4**
LSA				pmax	pmax		
	comp=Z,52nm,1.0s						
LSA	**Lhasa**	**80.89**	**303**	P	**P**	**09 44 42.8**	**+0.4**
KNK	**Knik Glacier**	**80.98**	**21**	IAMs_20	IAMs_20	10 12 56.9	
	comp=Z,7µm,22.0s						
IRK	**Irkutsk**	**80.99**	**327**	eP	**P**	**09 44 40.4**	**-1.5**
IRK				e		09 47 43.6	
IRK				e		09 54 53.1	
IRK				pmax	pmax		
	comp=Z,134nm,2.6s						
HIN	**Hinchinbrook I**	**81.01**	**22**	P	**P**	**09 44 41.2**	**-0.6**
TLY	**Talaya**	**81.05**	**327**	c iP	**P**	**09 44 41.9**	**-0.3**
TLY				e		09 44 50.9	
TLY				eS	**S**	**09 54 51.9**	**+2.3**
TLY				pmax	pmax		
	comp=Z,90nm,1.1s						
TLY				MLR	MLR		
	comp=Z,6µm,15.0s						
TLY	**Talaya**	**81.05**	**327**	P	**P**	**09 44 42.1**	**0.0**
TLY				IAMs_20	IAMs_20	10 17 05.3	
	comp=Z,6µm,20.0s						
CUT	**Chulitna**	**81.06**	**20**	P	**P**	**09 44 41.2**	**-0.7**
	baz=225,SNR=13						
GHO	**Glory Hole Cre**	**81.07**	**21**	IAMs_20	IAMs_20	10 13 13.1	
	comp=Z,9µm,22.0s						
SML	**Sawmill**	**81.30**	**21**	IAMs_20	IAMs_20	10 13 31.2	
	comp=Z,8µm,22.0s						
EYAK	**Cordova Ski Ar**	**81.39**	**23**	P	**P**	**09 44 43.8**	**0.0**
EYAK				IAmb	IAmb	09 45 00.6	
	comp=Z,97nm,1.1s						
KAIM	**Kayak Island**	**81.51**	**23**	P	**P**	**09 44 43.8**	**-0.6**
KAIM				IAMs_20	IAMs_20	10 13 26.8	
	comp=Z,5µm,19.0s						
KTH	**Kantishna Hill**	**81.66**	**19**	IAMs_20	IAMs_20	10 15 19.7	
	comp=Z,6µm,20.0s						
SCM	**Sheep Creek Mo**	**81.67**	**21**	IAMs_20	IAMs_20	10 13 18.0	
	comp=Z,7µm,22.0s						
RAGM	**Ragged Mountai**	**81.70**	**23**	IAMs_20	IAMs_20	10 15 23.9	
	comp=Z,6µm,20.0s						
TRF	**Thorofare Moun**	**81.79**	**19**	IAmb	IAmb	09 44 58.6	
	comp=Z,176nm,1.6s						
TRF				IAMs_20	IAMs_20	10 13 34.1	
	comp=Z,8µm,22.0s						
HMT	**Hamilton**	**81.83**	**23**	IAMs_20	IAMs_20	10 14 35.3	
	comp=Z,6µm,18.0s						
SUCK	**Suckling Hills**	**81.85**	**24**	IAMs_20	IAMs_20	10 16 55.9	
	comp=Z,5µm,20.0s						
KLU	**Klutina**	**81.95**	**22**	P	**P**	**09 44 47.2**	**+0.4**
KLU				IAMs_20	IAMs_20	10 16 17.4	
	comp=Z,5µm,18.0s						
BPAW	**Bear Paw Mtn.**	**82.03**	**18**	P	**P**	**09 44 46.3**	**-0.8**
BPAW				IAMs_20	IAMs_20	10 18 35.5	
	comp=Z,5µm,19.0s						
RDOG	**Red Dog Mine**	**82.10**	**12**	P	**P**	**09 44 47.9**	**+0.5**
RDOG				IAmb	IAmb	09 44 53.8	
	comp=Z,87nm,1.0s						
RPN	**Rapa Nui**	**82.10**	**116**	LR	LR	10 13 08.0	
	comp=Z,5µm,21.8s,baz=270,slow=30						
RPN	**Rapa Nui**	**82.10**	**116**	IAMs_20	IAMs_20	10 12 46.4	
	comp=Z,6µm,22.0s						
RND	**Reindeer**	**82.22**	**19**	P	**P**	**09 44 48.1**	**-0.1**
RND				pmax	pmax		
	comp=Z,176nm,1.4s						
RND				MLR	MLR		
	comp=Z,4µm,20.0s						
RND	**Reindeer**	**82.22**	**19**	P	**P**	**09 44 48.1**	**-0.1**
RND				IAmb	IAmb	09 45 03.3	
	comp=Z,176nm,1.4s						
M24K	**Tolsona, Glenn**	**82.26**	**21**	P	**P**	**09 44 48.3**	**-0.1**
	baz=229,SNR=26						
M24K	**Tolsona, Glenn**	**82.26**	**21**	P	**P**	**09 44 48.7**	**+0.3**
M24K				IAmb	IAmb	09 44 59.8	
	comp=Z,132nm,0.8s						
GTK	**Tadong**	**82.33**	**300**	eP	**P**	**09 44 50.1**	**+0.4**
MCK	**McKinley**	**82.42**	**19**	P	**P**	**09 44 48.7**	**-0.4**
	baz=226,SNR=48						
MOY	**Mondy**	**82.48**	**326**	eP	**P**	**09 44 49.2**	**-0.7**
MOY				pmax	pmax		
	comp=Z,227nm,3.6s						
N25K	**Chitina, Valde**	**82.50**	**22**	P	**P**	**09 44 49.2**	**-0.5**
	baz=231,SNR=22						
N25K	**Chitina, Valde**	**82.50**	**22**	P	**P**	**09 44 49.6**	**-0.1**
N25K				IAmb	IAmb	09 45 01.9	
	comp=Z,140nm,1.2s						
CRQM	**Cirque**	**82.53**	**23**	P	**P**	**09 44 50.2**	**+0.2**
CRQM				IAmb	IAmb	09 45 01.9	
	comp=Z,142nm,1.0s						
CRQM				IAMs_20	IAMs_20	10 12 33.1	
	comp=Z,5µm,21.0s						
BWN	**Browne**	**82.56**	**19**	IAMs_20	IAMs_20	10 16 30.8	
	comp=Z,6µm,20.0s						
IMAR	**Indian Mountai**	**82.61**	**16**	P	**P**	**09 44 50.3**	**+0.2**
TGL	**Tana Glacier**	**82.64**	**23**	P	**P**	**09 44 50.3**	**-0.1**
TGL				IAmb	IAmb	09 45 01.1	
	comp=Z,128nm,1.0s						
GLB	**Gilahina Butte**	**82.69**	**22**	IAmb	IAmb	09 45 02.5	
	comp=Z,109nm,0.9s						
VRDI	**Verde Repeater**	**82.70**	**23**	P	**P**	**09 44 50.3**	**-0.5**
VRDI				IAmb	IAmb	09 45 02.6	
	comp=Z,85nm,1.0s						
VRDI				IAMs_20	IAMs_20	10 16 07.2	
	comp=Z,5µm,20.0s						
MLY	**Manley**	**82.77**	**18**	P	**P**	**09 44 50.6**	**-0.3**
	baz=225						
BWNR	**Bhubaneshwar**	**82.97**	**292**	eP	**P**	**09 44 50.8**	**-2.1**
BWNR				IAmb	IAmb	09 44 55.2	
	comp=Z,169nm,1.3s						
NEA2	**Nenana**	**82.97**	**18**	P	**P**	**09 44 51.7**	**-0.3**
	baz=226,SNR=10						
BALM	**Baldy**	**83.00**	**23**	IAmb	IAmb	09 45 06.5	
	comp=Z,109nm,1.1s						
PAX	**Paxson**	**83.07**	**21**	P	**P**	**09 44 52.5**	**-0.1**
PAX				pmax	pmax		
	comp=Z,73nm,1.2s						
PAX	**Paxson**	**83.07**	**21**	P	**P**	**09 44 52.5**	**-0.1**
PAX				IAMs_20	IAMs_20	10 15 11.0	
	comp=Z,5µm,21.0s						
TAPN	**Taplejung**	**83.11**	**299**	eP	**P**	**09 44 53.8**	**-0.1**
	comp=Z,285nm,1.3s						
TABL	**Table Mountain**	**83.12**	**24**	IAMs_20	IAMs_20	10 16 28.2	
	comp=Z,4µm,19.0s						
WRH	**Wood River Hil**	**83.20**	**19**	P	**P**	**09 44 52.8**	**-0.4**
WRH				IAmb	IAmb	09 45 02.6	
	comp=Z,68nm,0.8s						
WRH				IAMs_20	IAMs_20	10 19 13.4	
	comp=Z,5µm,19.0s						
ODAN	**Odare**	**83.25**	**299**	eP	**P**	**09 44 54.7**	**+0.2**
	comp=Z,655nm,1.4s						
I23K	**Minto, Yukon-K**	**83.27**	**18**	P	**P**	**09 44 53.4**	**0.0**
	baz=226						
I23K	**Minto, Yukon-K**	**83.27**	**18**	IAMs_20	IAMs_20	10 15 59.3	
	comp=Z,5µm,20.0s						
H02N1	**VAN INLET T-PH**	**83.32**	**33**	T	T	11 16 49.2	
	SNR=11						
DIB	**Dawson Inlet,**	**83.33**	**33**	P	**P**	**09 44 54.6**	**+0.6**
DIB				IAmb	IAmb	09 45 08.3	
	comp=Z,189nm,1.4s						
H02S1	**DAWSON INLET T**	**83.33**	**33**	T	T	11 16 47.4	
	SNR=73						
CCB	**Clear Creek Bu**	**83.41**	**19**	IAMs_20	IAMs_20	10 18 30.9	
	comp=Z,6µm,19.0s						
MDM	**Murphy Dome**	**83.49**	**18**	P	**P**	**09 44 53.7**	**-0.9**
MDM				IAmb	IAmb	09 45 05.7	

	comp=Z,77nm,0.9s						
HDA	**Harding Lake**	83.52	19	P	**P**	**09 44 53.9**	**-0.9**
	baz=228						
HDA	**Harding Lake**	83.52	19	IAmb	IAmb	09 45 09.2	
	comp=Z,122nm,0.9s						
HDA				IAMs_20	IAMs_20	10 15 46.0	
	comp=Z,6µm,20.0s						
TCOL	**CIGO, UAF Yank**	83.54	19	P	**P**	**09 44 53.9**	**-1.0**
	baz=227,SNR=24						
TCOL	**CIGO, UAF Yank**	83.54	19	IAMs_20	IAMs_20	10 19 23.5	
	comp=Z,6µm,20.0s						
KCPM	**Cahto Peak**	83.55	48	IAmb	IAmb	09 44 58.7	
	comp=Z,114nm,1.0s						
KCPM				IAMs_20	IAMs_20	10 12 48.1	
	comp=Z,6µm,22.0s						
COLA	**College**	83.55	19	P	**P**	**09 44 54.5**	**-0.4**
COLA				pmax	pmax		
	comp=Z,116nm,0.9s						
COLA	**College**	83.55	19	P	**P**	**09 44 54.5**	**-0.4**
COLA				IAmb	IAmb	09 45 06.0	
	comp=Z,116nm,0.8s						
COLA	**College**	83.55	19	IAMs_20	IAMs_20	10 19 23.5	
	comp=Z,6µm,19.0s						
MCCM	**Marconi Confer**	83.55	49	IAMs_20	IAMs_20	10 12 04.4	
	comp=Z,5µm,22.0s						
JCC	**Jacoby Creek,**	83.61	47	IAMs_20	IAMs_20	10 18 37.7	
	comp=Z,5µm,19.0s						
MENT	**Mentasta**	83.67	21	IAmb	IAmb	09 45 12.2	
	comp=Z,89nm,1.0s						
MENT				IAMs_20	IAMs_20	10 16 44.9	
	comp=Z,6µm,19.0s						
HOPS	**Hopland Field**	83.69	48	IAmb	IAmb	09 44 59.1	
	comp=Z,123nm,1.2s						
HOPS				IAMs_20	IAMs_20	10 23 23.0	
	comp=Z,5µm,18.0s						
IL31		83.78	19	IAmb	IAmb	09 45 06.7	
	comp=Z,57nm,0.8s						
ILAR	**Eielson Array**	83.78	19	P	**P**	**09 44 55.8**	**-0.4**
	comp=Z,17nm,0.9s,baz=225,slow=4.1,SNR=74						
ILAR				LR	LR	10 19 32.1	
	comp=Z,4µm,18.5s,baz=244,slow=34						
GDXM	**Geysers**	83.83	49	IAmb	IAmb	09 45 00.7	
	comp=Z,56nm,0.9s						
GDXM				IAMs_20	IAMs_20	10 16 56.8	
	comp=Z,6µm,19.0s						
KHMM	**Horse Mountain**	83.84	47	IAmb	IAmb	09 45 01.1	
	comp=Z,150nm,1.2s						
KHMM				IAMs_20	IAMs_20	10 18 36.8	
	comp=Z,6µm,18.0s						
POKR	**Poker Plat Res**	83.84	19	P	**P**	**09 44 55.4**	**-1.0**
	baz=228,SNR=13						
POKR	**Poker Plat Res**	83.84	19	IAmb	IAmb	09 45 06.7	
	comp=Z,77nm,0.8s						
POKR				IAMs_20	IAMs_20	10 19 42.4	
	comp=Z,5µm,20.0s						
KBO	**Bosley Butte**	83.95	45	P	**P**	**09 44 58.2**	**+0.6**
KBO				IAMs_20	IAMs_20	10 15 27.7	
	comp=Z,5µm,19.0s						
RAMN	**Ramite**	83.95	299	*e*P	**P**	**09 44 58.1**	**-0.1**
	comp=Z,142nm,1.0s						
DOT	**Dot Lake**	83.99	21	IAmb	IAmb	09 45 09.2	
	comp=Z,111nm,1.0s						
CRAG	**Craig**	84.07	31	IAMs_20	IAMs_20	10 15 17.0	
	comp=Z,5µm,19.0s						
KEBM	**Edson Butte**	84.10	45	IAMs_20	IAMs_20	10 14 13.7	
	comp=Z,6µm,21.0s						
SAO	**San Andreas Ge**	84.20	51	IAmb	IAmb	09 45 02.3	
	comp=Z,65nm,1.1s						
SCRK	**Sand Creek**	84.23	20	P	**P**	**09 44 58.6**	**0.0**
	baz=231						
O02D	**Mt. Diablo Mer**	84.28	47	P	**P**	**09 44 59.0**	**-0.3**
	baz=251,SNR=80						
MAW	**Mawson**	84.36	202	P	**P**	**09 44 57.5**	**-1.6**
	baz=84,SNR=5.6						
MAW	**Mawson**	84.36	202	P	**P**	**09 45 00.3**	**+1.2**
	comp=Z,38nm,1.0s,baz=80,slow=6.1,SNR=2.1						
MAW				LR	LR	10 17 41.2	
	comp=Z,3µm,20.8s,baz=89,slow=32						
L02E	**Cave Junction**	84.37	45	P	**P**	**09 44 59.7**	**+0.1**
	baz=250,SNR=11						
BCAR	**Beaver Creek A**	84.44	22	P	**P**	**09 45 00.4**	**+0.8**
PAF	**Port-aux-Franc**	84.44	221	IAMs_20	IAMs_20	10 18 49.7	
	comp=Z,5µm,20.0s						
J01E	**Myrtle Point**	84.48	44	P	**P**	**09 44 59.8**	**-0.3**
	baz=250,SNR=7.5						
COLD	**Coldfoot**	84.50	16	P	**P**	**09 45 01.0**	**+1.3**
	baz=225						
COLD	**Coldfoot**	84.50	16	P	**P**	**09 45 00.4**	**+0.6**
COLD				IAmb	IAmb	09 45 11.7	
	comp=Z,75nm,1.0s						
COLD				IAMs_20	IAMs_20	10 16 04.6	
	comp=Z,7µm,21.0s						
K02D	**Willamette Mer**	84.50	45	P	**P**	**09 45 00.2**	**-0.3**
	baz=250,SNR=16						
PMPB	**Monarch Peak**	84.53	52	P	**P**	**09 45 00.9**	**+0.3**
PMPB				IAmb	IAmb	09 45 15.3	
	comp=Z,128nm,1.2s						
WDC	**Whiskeytown Da**	84.59	47	P	**P**	**09 45 00.7**	**-0.1**
WDC				pmax	pmax		
	comp=Z,78nm,1.2s						
WDC	**Whiskeytown Da**	84.59	47	P	**P**	**09 45 00.7**	**-0.1**
WDC				IAmb	IAmb	09 45 05.7	
	comp=Z,78nm,1.1s						
WDC				IAMs_20	IAMs_20	10 13 09.8	
	comp=Z,7µm,22.0s						
N02D	**Trinity Center**	84.61	47	P	**P**	**09 45 01.3**	**+0.4**
	baz=251,SNR=32						
M02C	**Callahan**	84.64	46	P	**P**	**09 45 01.6**	**+0.5**
	baz=251,SNR=42						
SNCC	**San Nicolas Is**	84.67	55	P	**P**	**09 45 01.5**	**+0.1**
	baz=254						
SNCC	**San Nicolas Is**	84.67	55	IAMs_20	IAMs_20	10 13 15.3	
	comp=Z,5µm,21.0s						
PRP	**Porcupine Dome**	84.71	19	P	**P**	**09 45 00.9**	**-0.1**
PRP				IAMs_20	IAMs_20	10 19 57.2	
	comp=Z,5µm,20.0s						
SCZ2	**Santa Cruz Isl**	84.79	54	P	**P**	**09 45 02.0**	**0.0**
	baz=253						
PAGB	**Antelope Grade**	84.81	52	P	**P**	**09 45 02.0**	**-0.1**
PAGB				IAmb	IAmb	09 45 16.8	
	comp=Z,100nm,1.4s						
HYT	**Haines Junctio**	84.82	25	P	**P**	**09 45 02.0**	**+0.4**
HYT				IAMs_20	IAMs_20	10 14 31.3	
	comp=Z,6µm,22.0s						
GUN	**Gumba**	84.82	300	*e*P	**P**	**09 45 02.6**	**-0.1**
	comp=Z,331nm,1.1s						
JIS	**Juneau Island**	84.84	28	P	**P**	**09 45 01.6**	**0.0**
YBH	**Yreka Blue Hor**	84.85	46	P	**P**	**09 45 02.1**	**-0.1**
YBH				pmax	pmax		
	comp=Z,93nm,1.2s						
YBH	**Yreka Blue Hor**	84.85	46	P	**P**	**09 45 02.1**	**-0.1**
YBH				IAmb	IAmb	09 45 05.9	
	comp=Z,93nm,1.1s						
YBH				IAMs_20	IAMs_20	10 14 04.6	
	comp=Z,5µm,21.0s						
SBC	**Santa Barbara**	84.86	54	P	**P**	**09 45 02.3**	**+0.1**
	baz=253						
I02D	**Swisshome**	84.87	43	P	**P**	**09 45 01.5**	**-0.5**
	baz=250						
SMMC	**Simmler**	84.89	53	P	**P**	**09 45 02.9**	**+0.5**
	baz=253						
PKM	**Mcpherson Peak**	84.91	53	P	**P**	**09 45 03.0**	**+0.3**
	baz=253						
WRAK	**Wrangell Islan**	84.91	30	P	**P**	**09 45 01.9**	**0.0**
WRAK	**Wrangell Islan**	84.91	30	IAMs_20	IAMs_20	10 15 25.0	
	comp=Z,6µm,20.0s						
PALK	**Pallekele**	84.95	278	P	**P**	**09 45 03.3**	**+0.1**
PALK				pmax	pmax		
	comp=Z,71nm,0.9s						
PALK				MLR	MLR		
	comp=Z,4µm,21.0s						
PALK	**Pallekele**	84.95	278	P	**P**	**09 45 03.3**	**+0.1**
PALK				IAmb	IAmb	09 45 05.1	
	comp=Z,71nm,0.8s						
HUMO	**Hull Mountain**	84.97	45	IAmb	IAmb	09 45 06.4	
	comp=Z,90nm,1.1s						
HUMO				IAMs_20	IAMs_20	10 13 46.7	
	comp=Z,7µm,21.0s						
O03E	**Paynes Creek**	85.04	48	P	**P**	**09 45 02.9**	**-0.2**
	baz=252,SNR=97						
I03D	**Drain, OR**	85.06	44	P	**P**	**09 45 02.4**	**-0.7**
	baz=250,SNR=8.3						
PKI	**Pulchoki**	85.14	299	*e*P	**P**	**09 45 04.1**	**-0.2**
	comp=Z,279nm,1.1s						
PKIN	**Phulchoki**	85.15	299	*e*P	**P**	**09 45 04.0**	**-0.2**
	comp=Z,204nm,1.0s						
AFDM	**Forest Hills D**	85.23	49	IAmb	IAmb	09 45 06.6	
	comp=Z,87nm,1.2s						
BBB	**Bella Bella**	85.27	35	P	**P**	**09 45 04.2**	**+0.3**
BBB				IAmb	IAmb	09 45 18.8	
	comp=Z,112nm,1.4s						
BBB				IAMs_20	IAMs_20	10 28 38.0	
	comp=Z,4µm,18.0s						
L04D	**Klamath Falls**	85.30	46	P	**P**	**09 45 04.2**	**-0.3**
	baz=251,SNR=31						
SCI2	**San Clemente I**	85.38	55	P	**P**	**09 45 04.5**	**-0.5**
	baz=254						
CMB	**Columbia Colle**	85.39	50	IAMs_20	IAMs_20	10 14 11.2	
	comp=Z,7µm,22.0s						
COR	**Corvallis**	85.40	43	P	**P**	**09 45 06.5**	**+1.8**
COR				pmax	pmax		
	comp=Z,257nm,1.7s						
COR	**Corvallis**	85.40	43	P	**P**	**09 45 06.5**	**+1.8**
DMN	**Daman**	85.41	299	*e*P	**P**	**09 45 05.5**	**0.0**
	comp=Z,387nm,1.1s						
M04C	**Macdoel**	85.48	46	P	**P**	**09 45 05.3**	**-0.1**
	baz=251,SNR=40						
FYU	**Fort Yukon**	85.48	18	P	**P**	**09 45 05.3**	**+0.7**
FYU				IAmb	IAmb	09 45 21.0	
	comp=Z,124nm,1.6s						
FYU				IAMs_20	IAMs_20	10 16 33.6	
	comp=Z,6µm,19.0s						
TIXI	**Tiksi**	85.55	349	P	**P**	**09 45 04.5**	**-0.4**
TIXI				pmax	pmax		
	comp=Z,66nm,1.1s						
TIXI				MLR	MLR		
	comp=Z,4µm,18.0s						
TIXI	**Tiksi**	85.55	349	P	**P**	**09 45 04.5**	**-0.4**
TIXI				IAmb	IAmb	09 45 11.0	
	comp=Z,66nm,1.1s						
TIXI				IAMs_20	IAMs_20	10 24 24.7	
	comp=Z,4µm,18.0s						
CIS	**Catalina Islan**	85.60	55	P	**P**	**09 45 05.8**	**-0.3**
	baz=254						
G03D	**McMinnville, O**	85.64	43	P	**P**	**09 45 05.4**	**-0.5**
	baz=250,SNR=8.9						
VOG	**Valley Oaks Go**	85.65	52	P	**P**	**09 45 06.1**	**-0.1**
	baz=253						
TOLK	**Toolik Lake Re**	85.67	15	P	**P**	**09 45 05.9**	**+0.3**
	baz=225						
TOLK	**Toolik Lake Re**	85.67	15	P	**P**	**09 45 05.8**	**+0.2**
TOLK				IAmb	IAmb	09 45 16.0	
	comp=Z,105nm,1.5s						
OSI	**Osito Audit: C**	85.69	54	P	**P**	**09 45 06.2**	**-0.3**
	baz=254						
OSI	**Osito Audit: C**	85.69	54	P	**P**	**09 45 06.5**	**0.0**
OSI				IAmb	IAmb	09 45 20.1	
	comp=Z,113nm,1.4s						
OSI				IAMs_20	IAMs_20	10 14 42.4	
	comp=Z,7µm,20.0s						
EGAK	**Eagle**	85.69	21	IAMs_20	IAMs_20	10 16 43.2	
	comp=Z,6µm,21.0s						
I04A	**Tendick Farm,**	85.74	44	P	**P**	**09 45 06.2**	**-0.3**
	baz=251,SNR=12						
ARVC	**Arvin**	85.75	53	P	**P**	**09 45 06.6**	**-0.1**
	baz=254,SNR=8.4						
VES	**Vestal, Richgr**	85.75	52	P	**P**	**09 45 05.7**	**-0.9**
	baz=254,SNR=25						
H04D	**Lebanon**	85.76	43	P	**P**	**09 45 06.4**	**-0.1**
	baz=250,SNR=11						
J04D	**Umpqua Nationa**	85.76	45	P	**P**	**09 45 05.9**	**-1.0**
	baz=251,SNR=19						
FMP	**Fort Macarthur**	85.78	55	P	**P**	**09 45 06.8**	**-0.1**
	baz=254						
K04D	**Chiloquin, OR**	85.81	45	P	**P**	**09 45 07.3**	**+0.2**
	baz=251,SNR=15						
RUBR	**Rubicon Trail**	85.86	49	IAMs_20	IAMs_20	10 13 14.7	
	comp=Z,5µm,22.0s						
E03A	**Lebam**	85.90	41	P	**P**	**09 45 07.5**	**+0.3**
E03A				IAMs_20	IAMs_20	10 18 25.0	
	comp=Z,5µm,19.0s						
DECC	**Green Verdugo**	85.90	54	P	**P**	**09 45 07.2**	**-0.4**
	baz=254						
GKN	**Gorkha**	85.91	299	*e*P	**P**	**09 45 07.0**	**-0.9**
	comp=Z,283nm,1.1s						
BEKR	**Beckworth**	85.96	48	IAmb	IAmb	09 45 22.0	
	comp=Z,165nm,1.7s						
BEKR				IAMs_20	IAMs_20	10 13 54.1	
	comp=Z,5µm,22.0s						
NLWA	**Neilton Lookou**	86.00	40	IAmb	IAmb	09 45 22.4	
	comp=Z,227nm,1.8s						
NLWA				IAMs_20	IAMs_20	10 15 48.5	
	comp=Z,6µm,20.0s						
PASC	**Pasadena Art C**	86.00	54	IAmb	IAmb	09 45 21.1	
	comp=Z,146nm,1.6s						
PASC	**Pasadena Art C**	86.00	54	IAMs_20	IAMs_20	10 14 18.5	
	comp=Z,7µm,22.0s						
A21K	**Barrow**	86.04	12	P	**P**	**09 45 09.6**	**+2.3**
	baz=218						
A21K	**Barrow**	86.04	12	IAmb	IAmb	09 45 20.0	
	comp=Z,117nm,1.4s						
F04D	**Rainier, OR**	86.10	42	P	**P**	**09 45 08.4**	**+0.2**
	baz=250						
MWC	**Mount Wilson**	86.11	54	IAmb	IAmb	09 45 11.3	
	comp=Z,129nm,1.2s						
MWC				IAMs_20	IAMs_20	10 14 33.6	
	comp=Z,6µm,21.0s						
ISA	**Isabella, Lake**	86.18	53	P	**P**	**09 45 08.6**	**-0.3**
	baz=254,SNR=50						
H04A	**Detroit Lake**	86.18	43	IAmb	IAmb	09 45 22.6	
	comp=Z,241nm,1.7s						
BMAR	**Burnt Mountain**	86.24	18	P	**P**	**09 45 08.5**	**0.0**
WAKR	**Walker**	86.24	50	IAmb	IAmb	09 45 12.4	
	comp=Z,88nm,1.2s						
MDPB	**Devils Postpil**	86.26	51	IAmb	IAmb	09 45 12.2	
	comp=Z,87nm,1.2s						
PNTR	**Pine Nut**	86.29	49	IAmb	IAmb	09 45 12.4	
	comp=Z,64nm,1.0s						
PNTR				IAMs_20	IAMs_20	10 23 05.9	
	comp=Z,4µm,18.0s						
VCNR	**Virginia City**	86.31	49	P	**P**	**09 45 09.1**	**-0.5**
OMMB	**Old Mammoth Mi**	86.31	51	IAmb	IAmb	09 45 23.2	
	comp=Z,130nm,1.6s						
EDW2	**Edwards Air Fo**	86.34	54	P	**P**	**09 45 09.7**	**-0.1**
	baz=254,SNR=62						
J05D	**Fort Rock, OR**	86.38	45	P	**P**	**09 45 09.7**	**-0.2**
	baz=252,SNR=54						
BFSC	**Mount Baldy Ra**	86.43	54	P	**P**	**09 45 09.9**	**-0.4**
	baz=254,SNR=43						
MLAC	**Mammoth, Mammo**	86.44	51	P	**P**	**09 45 10.1**	**-0.3**
	baz=254						
K05A	**Summer Lake**	86.45	45	IAmb	IAmb	09 45 13.3	
	comp=Z,119nm,1.2s						
K05A				IAMs_20	IAMs_20	10 14 46.9	
	comp=Z,5µm,20.0s						
TJX	**Tijuana**	86.47	56	IAMs_20	IAMs_20	10 15 03.2	
	comp=Z,6µm,21.0s						
109C	**Camp Elliot, M**	86.53	56	P	**P**	**09 45 10.6**	**0.0**
	baz=255,SNR=11						
109C	**Camp Elliot, M**	86.53	56	P	**P**	**09 45 10.2**	**-0.4**
109C				IAmb	IAmb	09 45 21.3	
	comp=Z,98nm,1.4s						
109C				IAMs_20	IAMs_20	10 14 08.7	
	comp=Z,6µm,22.0s						
YERR	**Yerington**	86.53	49	IAmb	IAmb	09 45 23.2	
	comp=Z,86nm,1.4s						
YERR				IAMs_20	IAMs_20	10 23 23.2	
	comp=Z,4µm,18.0s						
D03D	**Eldon**	86.54	40	P	**P**	**09 45 10.8**	**+0.4**
	baz=250,SNR=18						
E04D	**Cinebar**	86.55	41	P	**P**	**09 45 10.8**	**+0.4**
	baz=250,SNR=15						
MDRS	**Chennai**	86.56	284	*e*P	**P**	**09 45 10.2**	**-0.9**
MDRS				IAmb	IAmb	09 45 16.4	
	comp=Z,36nm,0.4s						
MOD	**Modoc Plateau**	86.61	46	IAmb	IAmb	09 45 16.3	
	comp=Z,92nm,1.3s						
MOD				IAMs_20	IAMs_20	10 14 40.3	
	comp=Z,5µm,22.0s						
CCX	**Cicese**	86.62	57	P	**P**	**09 45 10.7**	**-0.4**
D04E	**Lakebay**	86.62	41	P	**P**	**09 45 10.5**	**-0.2**
	baz=250						
PAHR	**Pah Rah Range**	86.63	49	IAmb	IAmb	09 45 23.6	
	comp=Z,140nm,1.4s						
MURC	**Murrieta**	86.64	55	P	**P**	**09 45 10.9**	**-0.3**
	baz=255,SNR=14						
I05D	**Terrebonne, OR**	86.64	44	P	**P**	**09 45 11.0**	**0.0**
	baz=252,SNR=20						
CWC	**Cottonwood Cre**	86.70	52	P	**P**	**09 45 11.2**	**-0.4**
	baz=254						
PGC	**Sidney**	86.70	39	IAmb	IAmb	09 45 25.2	
	comp=Z,105nm,1.3s						
CBX	**Cerro Bola**	86.74	56	P	**P**	**09 45 11.1**	**-0.7**
DANN	**Dangsing**	86.74	299	*e*P	**P**	**09 45 10.9**	**-1.3**
	comp=Z,152nm,1.1s						
PINE	**Pine Mountain**	86.75	44	P	**P**	**09 45 11.7**	**0.0**
PINE				IAmb	IAmb	09 45 14.7	
	comp=Z,54nm,0.9s						
LRMC	**Laurel Mtn Rad**	86.75	53	P	**P**	**09 45 11.5**	**-0.3**
	baz=254,SNR=43						
TIN	**Tinemaha, Big**	86.75	52	P	**P**	**09 45 11.7**	**-0.1**
	baz=254,SNR=5.3						
BAR	**Barrett**	86.82	56	IAMs_20	IAMs_20	10 14 17.6	
	comp=Z,5µm,22.0s						
TKX	**Tecate**	86.85	56	IAMs_20	IAMs_20	10 15 02.2	
	comp=Z,5µm,22.0s						
LHV	**Little Huntoon**	86.87	50	IAmb	IAmb	09 45 21.1	
	comp=Z,96nm,1.2s						
LHV				IAMs_20	IAMs_20	10 14 47.4	
	comp=Z,8µm,22.0s						
G05D	**Wamic, OR**	86.94	43	P	**P**	**09 45 12.7**	**+0.3**
	baz=252,SNR=11						
RYN	**Ryan**	86.96	50	IAMs_20	IAMs_20	10 14 48.8	
	comp=Z,7µm,22.0s						
BBRC	**Big Bear Solar**	87.03	54	P	**P**	**09 45 13.0**	**-0.3**
	baz=255,SNR=13						
MPMC	**Manual Prospec**	87.05	53	P	**P**	**09 45 13.4**	**0.0**
	baz=254,SNR=37						
F05D	**White Salmon**	87.06	42	P	**P**	**09 45 13.1**	**+0.2**
	baz=251,SNR=13						
NVAR	**Mina Array Bea**	87.07	50	P	**P**	**09 45 13.5**	**0.0**
	comp=Z,53nm,1.1s,baz=236,slow=6.3,SNR=136						
NVAR				PKKPbc	**PKKPbc**	**10 03 10.9**	**+3.9**
	comp=Z,0.7nm,0.8s,baz=124,slow=2.1,SNR=4.9						
NVAR				PKPPKP	P'P'df	10 11 26.5	+14
	comp=Z,0.3nm,0.7s,baz=130,slow=4.6,SNR=3.7						
NVAR				LR	LR	10 15 42.3	
	comp=Z,7µm,21.8s,baz=261,slow=30						
NVAR	**Mina Array Bea**	87.07	50	P	**P**	**09 45 13.2**	**-0.3**
MONP2	**Monument Peak**	87.08	56	P	**P**	**09 45 13.8**	**+0.2**
	baz=255,SNR=56						
LON	**Longmire**	87.10	41	IAMs_20	IAMs_20	10 14 54.0	
	comp=Z,4µm,21.0s						
RRX	**Edison Barstow**	87.13	54	P	**P**	**09 45 13.7**	**+0.2**
	baz=255						
D05A	**Enumclaw**	87.13	41	P	**P**	**09 45 13.8**	**+0.6**
A04D	**Lummi Island**	87.18	39	P	**P**	**09 45 13.8**	**+0.4**
	baz=250,SNR=42						
NV11	**Mina Array Sit**	87.19	50	IAmb	IAmb	09 45 17.5	
	comp=Z,100nm,1.2s						
NV11				IAMs_20	IAMs_20	10 15 18.7	
	comp=Z,8µm,22.0s						
PFO	**Pinyon Flats O**	87.23	55	P	**P**	**09 45 14.2**	**0.0**
	comp=Z,29nm,1.1s,baz=256,slow=3.8,SNR=21						
PFO	**Pinyon Flats O**	87.23	55	P	**P**	**09 45 14.2**	**0.0**
	baz=255,SNR=25						
PFO	**Pinyon Flats O**	87.23	55	P	**P**	**09 45 14.2**	**0.0**
PFO	**Pinyon Flats O**	87.23	55	IAMs_20	IAMs_20	10 14 30.5	
	comp=Z,5µm,22.0s						
TPFO	**Pinon Flats**	87.24	55	P	**P**	**09 45 14.2**	**0.0**
	baz=255,SNR=29						
XPFO	**Pion Flat**	87.24	55	P	**P**	**09 45 14.0**	**-0.3**
XPFO	**Pion Flat**	87.24	55	IAMs_20	IAMs_20	10 14 30.5	
	comp=Z,5µm,22.0s						
ESJX	**Sierra Juarez**	87.25	57	P	**P**	**09 45 14.3**	**-0.1**
ESJX				IAmb	IAmb	09 45 28.4	
	comp=Z,149nm,1.9s						
ESJX				IAMs_20	IAMs_20	10 14 51.8	
	comp=Z,5µm,21.0s						
IKP	**In-Ko-Pah, Jac**	87.28	56	P	**P**	**09 45 14.6**	**+0.3**
	baz=255,SNR=17						
RMX	**La Rumorosa**	87.29	56	P	**P**	**09 45 14.4**	**-0.2**
RMX				IAmb	IAmb	09 45 17.6	
	comp=Z,58nm,1.1s						
RMX				IAMs_20	IAMs_20	10 15 15.7	
	comp=Z,7µm,22.0s						
GSC	**Goldstone, Bar**	87.39	54	P	**P**	**09 45 14.7**	**-0.2**
	baz=255,SNR=24						
GSC	**Goldstone, Bar**	87.39	54	P	**P**	**09 45 14.2**	**-0.7**
GSC				pmax	pmax		
	comp=Z,147nm,2.0s						
GSC	**Goldstone, Bar**	87.39	54	P	**P**	**09 45 14.2**	**-0.7**
GSC				IAmb	IAmb	09 45 29.5	
	comp=Z,147nm,1.9s						
GRAC	**Grapevine Rang**	87.40	52	P	**P**	**09 45 14.9**	**+0.1**
	baz=254,SNR=19						
SPX	**San Pedro Mart**	87.41	58	P	**P**	**09 45 14.5**	**-0.8**
SPX				IAMs_20	IAMs_20	10 14 55.2	
	comp=Z,7µm,22.0s						
B05A	**Bryant**	87.42	40	P	**P**	**09 45 14.9**	**+0.3**
	baz=251,SNR=21						
SWSC	**Sam W. Stewart**	87.60	56	P	**P**	**09 45 15.9**	**+0.1**
	baz=256,SNR=35						
HEC	**Hector,Ludlow**	87.64	54	P	**P**	**09 45 16.1**	**0.0**
	baz=255,SNR=9.5						
FURC	**Furnace Creek,**	87.65	52	P	**P**	**09 45 16.0**	**+0.1**
	baz=255,SNR=31						
A05A	**Maple Falls**	87.66	39	P	**P**	**09 45 16.0**	**+0.2**
BELC	**Belle Mtn. Jos**	87.70	55	P	**P**	**09 45 16.5**	**0.0**
	baz=255,SNR=73						
TPH	**Tonopah**	87.80	51	P	**P**	**09 45 16.6**	**-0.3**
TPH				pmax	pmax		
	comp=Z,415nm,1.6s						
TPH	**Tonopah**	87.80	51	P	**P**	**09 45 16.6**	**-0.3**
WMQ	**Urumqi**	87.80	315	*e*P	**P**	**09 45 16.3**	**-0.4**
WMQ				sP	pP	09 45 24.9	-0.2
WMQ				PP	**PP**	**09 48 40.3**	**-2.5**
WMQ				S	**S**	**09 55 57.8**	**+0.3**
WMQ				SS	**SS**	**10 01 50.9**	**+5.8**
WMQ				pmax	pmax		
	comp=Z,52nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,860nm,4.5s						
WMQ				LR	LR		
	comp=Z,5µm,20.3s						
WMQ				LR	LR		
	comp=Z,4µm,23.5s						
WMQ				LR	LR		
	comp=Z,5µm,26.5s						
WMQ	**Urumqi**	87.80	315	P	**P**	**09 45 16.7**	**0.0**
WMQ				pmax	pmax		
	comp=Z,71nm,0.9s						
WMQ	**Urumqi**	87.80	315	P	**P**	**09 45 16.7**	**0.0**
WMQ				IAmb	IAmb	09 45 26.1	
	comp=Z,71nm,0.9s						
WMQ	**Urumqi**	87.80	315	IAMs_20	IAMs_20	10 22 09.6	
	comp=Z,7µm,22.0s						
UABX	**UABC, Campus M**	87.82	56	IAMs_20	IAMs_20	10 15 28.8	
	comp=Z,5µm,22.0s						
I07A	**Izee**	87.82	44	P	**P**	**09 45 16.3**	**-0.5**
I07A				IAmb	IAmb	09 45 29.4	
	comp=Z,107nm,1.4s						
CPBX	**Cerro Prieto**	87.88	57	P	**P**	**09 45 17.7**	**+0.6**
B06A	**Marblemount**	87.88	40	P	**P**	**09 45 16.5**	**-0.3**
B06A				IAmb	IAmb	09 45 28.8	
	comp=Z,67nm,1.4s						
B06A				IAMs_20	IAMs_20	10 18 56.5	
	comp=Z,5µm,19.0s						
SFX	**San Felipe**	87.92	58	P	**P**	**09 45 16.6**	**-0.8**
SFX				IAMs_20	IAMs_20	10 15 21.7	
	comp=Z,7µm,22.0s						
WVOR	**Wild Horse Val**	87.95	46	IAMs_20	IAMs_20	10 16 04.8	
	comp=Z,5µm,21.0s						
SHOC	**Shoshone, Teco**	87.96	53	P	**P**	**09 45 17.3**	**-0.3**
	baz=255,SNR=26						
LTY	**Liberty**	88.00	41	IAmb	IAmb	09 45 29.6	
	comp=Z,58nm,1.2s						
BC3	**Big Chuckawall**	88.06	55	P	**P**	**09 45 18.4**	**+0.2**
	baz=256,SNR=44						
C06D	**Leavenworth**	88.07	41	P	**P**	**09 45 17.6**	**-0.1**
	baz=252						
F07A	**Phinny Hill Vi**	88.08	43	P	**P**	**09 45 17.9**	**+0.2**
F07A				IAmb	IAmb	09 45 21.1	
	comp=Z,51nm,1.1s						
EPYK	**Eagle Plains**	88.12	20	P	**P**	**09 45 17.8**	**+0.3**
	baz=238						
EPYK	**Eagle Plains**	88.12	20	IAMs_20	IAMs_20	10 18 28.2	
	comp=Z,6µm,21.0s						
GMRC	**Granite Mounta**	88.17	54	P	**P**	**09 45 18.5**	**-0.2**
	baz=256,SNR=48						
TPNV	**Topopah Spring**	88.25	52	P	**P**	**09 45 19.3**	**+0.2**
	baz=255,SNR=28						
TPNV	**Topopah Spring**	88.25	52	IAmb	IAmb	09 45 36.5	
	comp=Z,119nm,1.6s						
TPNV				IAMs_20	IAMs_20	10 16 37.1	
	comp=Z,7µm,20.0s						
E07A	**Sunnyside**	88.32	42	IAmb	IAmb	09 45 24.4	
	comp=Z,50nm,1.1s						
GLA	**Glamis**	88.42	56	P	**P**	**09 45 20.5**	**+0.7**
	baz=256,SNR=21						
GLA	**Glamis**	88.42	56	IAmb	IAmb	09 45 23.2	
	comp=Z,115nm,1.1s						
GLA				IAMs_20	IAMs_20	10 15 05.8	

	comp=Z,5µm,22.0s						
IRM	Iron Mountain	88.43	55	P	P	09 45 20.4	+0.6
	baz=256,SNR=93						
HAWA	Hanford	88.49	42	P	P	09 45 19.9	+0.1
HAWA				IAmb	IAmb	09 45 32.3	
	comp=Z,83nm,1.4s						
G08A	Pilot Rock	88.55	43	IAmb	IAmb	09 45 36.7	
	comp=Z,57nm,1.0s						
G08A				IAMs_20	IAMs_20	10 27 03.3	
	comp=Z,4µm,18.0s						
H06E1	SOCORRO T-PHAS	88.70	71	T	T	11 23 37.9	
	SNR=4.0						
SHPR	Sheep Range	88.99	53	IAmb	IAmb	09 45 39.4	
	comp=Z,95nm,1.4s						
NEE2	Needles Airpor	89.00	54	P	P	09 45 22.9	+0.5
	baz=256,SNR=13						
HYB	Hyderabad	89.03	288	*i* P	P	09 45 22.0	-1.0
HYB				*e*PP	PP	09 48 54.0	+0.8
HYB	Hyderabad	89.03	288	*e*P	P	09 45 20.7	-2.3
HYB				IAmb	IAmb	09 45 32.7	
	comp=Z,160nm,2.0s						
D08A	Wollman Farm,	89.08	42	P	P	09 45 22.0	-0.5
D08A				IAmb	IAmb	09 45 32.2	
	comp=Z,141nm,1.8s						
R11A	Troy Canyon, C	89.11	51	P	P	09 45 23.1	0.0
	baz=256,SNR=73						
R11A	Troy Canyon, C	89.11	51	IAmb	IAmb	09 45 35.6	
	comp=Z,90nm,1.5s						
B08A	Colville Reser	89.20	40	IAmb	IAmb	09 45 37.0	
	comp=Z,224nm,1.9s						
B08A				IAMs_20	IAMs_20	10 18 30.3	
	comp=Z,5µm,20.0s						
PIX	Pinacate	89.20	58	P	P	09 45 23.4	0.0
113A	Mohawk Valley,	89.22	57	P	P	09 45 23.7	+0.2
113A				IAmb	IAmb	09 45 40.6	
	comp=Z,165nm,1.8s						
113A				IAMs_20	IAMs_20	10 16 34.1	
	comp=Z,6µm,21.0s						
PDMCI	Parker Dam,Lak	89.27	55	P	P	09 45 24.3	+0.6
	baz=256,SNR=59						
PRN	Pahroc Range	89.29	52	IAmb	IAmb	09 45 27.7	
	comp=Z,113nm,1.1s						
PRN				IAMs_20	IAMs_20	10 16 27.6	
	comp=Z,8µm,21.0s						
SRIG	Santa Rosalia	89.30	62	P	P	09 45 23.7	-0.3
SRIG				IAMs_20	IAMs_20	10 16 03.6	
	comp=Z,5µm,21.0s						
BMO	Blue Mountains	89.55	44	P	P	09 45 24.6	-0.3
BMO				pmax	pmax		
	comp=Z,202nm,1.8s						
BMO	Blue Mountains	89.55	44	P	P	09 45 24.6	-0.3
BMO				IAmb	IAmb	09 45 39.2	
	comp=Z,202nm,1.8s						
BMO				IAMs_20	IAMs_20	10 17 06.9	
	comp=Z,6µm,22.0s						
W13A	Hualapai Mount	89.66	54	P	P	09 45 25.2	-0.6
W13A				IAMs_20	IAMs_20	10 20 12.6	
	comp=Z,5µm,19.0s						
DGZ	Jazzator, Alta	89.70	321	*ce*P	P	09 45 25.0	-0.6
DGZ				pmax	pmax		
	comp=Z,28nm,1.0s						
C09A	Chrisman Ranch	89.72	41	P	P	09 45 25.0	-0.5
214A	Organ Pipe Nat	89.83	58	P	P	09 45 27.2	+0.8
	baz=257						
214A	Organ Pipe Nat	89.83	58	IAmb	IAmb	09 45 40.7	
	comp=Z,193nm,1.8s						
214A				IAMs_20	IAMs_20	10 17 22.2	
	comp=Z,6µm,20.0s						
ELK	Elko	89.96	49	P	P	09 45 27.1	0.0
	comp=Z,23nm,1.1s,baz=263,slow=4.3,SNR=37						
MFID	Camas Ranch	90.20	46	IAMs_20	IAMs_20	10 17 09.3	
	comp=Z,4µm,20.0s						
DGAR	Diego Garcia	90.28	262	IAMs_20	IAMs_20	10 27 50.7	
	comp=Z,5µm,20.0s						
SLBS	Sierra La Lagu	90.58	66	P	P	09 45 29.1	-1.1
SLBS				IAmb	IAmb	09 45 48.1	
	comp=Z,202nm,1.9s						
SLBS	Sierra La Lagu	90.58	66	IAMs_20	IAMs_20	10 19 46.8	
	comp=Z,4µm,18.0s						
NEW	Newport	90.59	41	P	P	09 45 29.4	-0.2
	baz=254						
NEW	Newport	90.59	41	IAmb	IAmb	09 45 43.7	
	comp=Z,164nm,1.8s						
LCMT	Little Creek M	90.60	53	P	P	09 45 30.0	-0.1
ZSN	Zaisan	90.72	318	*e*P	P	09 45 29.2	-1.0
	baz=318						
ZSN	Zaisan	90.72	318	*e*P	P	09 45 29.1	-1.1
HSIG		90.77	61	IAmb	IAmb	09 45 44.5	
	comp=Z,119nm,1.6s						
HSIG				IAMs_20	IAMs_20	10 17 10.5	
	comp=Z,5µm,21.0s						
SZCU	Shurtz Canyon	90.85	52	P	P	09 45 31.1	-0.2
KNB	Kanab	90.93	53	P	P	09 45 32.1	+0.4
KNB				pmax	pmax		
	comp=Z,254nm,1.6s						
KNB	Kanab	90.93	53	P	P	09 45 32.0	+0.4
BHPL	Bhopal	91.22	293	*e*P	P	09 45 30.6	-2.5
U15A	North Rim	91.22	53	P	P	09 45 33.4	+0.3
U15A				IAmb	IAmb	09 45 37.0	
	comp=Z,61nm,1.1s						
U15A				IAMs_20	IAMs_20	10 17 25.8	
	comp=Z,6µm,22.0s						
HLID	Hailey	91.24	46	P	P	09 45 33.3	+0.4
	baz=256,SNR=96						
HLID	Hailey	91.24	46	IAmb	IAmb	09 45 36.1	
	comp=Z,54nm,1.1s						
HLID				IAMs_20	IAMs_20	10 17 28.6	
	comp=Z,6µm,22.0s						
X16A	Lo Mia Camp, P	91.47	55	IAMs_20	IAMs_20	10 17 14.7	
	comp=Z,5µm,22.0s						
SYO	Syowa Base	91.56	197⇑	*e*P	P	09 45 32.0	-1.7
SYO	Syowa Base	91.56	197⇑	*i*sP	P	09 45 38.0	+4.3
TUC	Tucson	91.58	58	P	P	09 45 35.4	+0.7
	baz=258						
TUC	Tucson	91.58	58	P	P	09 45 35.5	+0.9
TUC				pmax	pmax		
	comp=Z,65nm,2.0s						
TUC	Tucson	91.58	58	P	P	09 45 35.5	+0.9
TUC	Tucson	91.58	58	IAMs_20	IAMs_20	10 19 44.7	
	comp=Z,6µm,20.0s						
DUG	Dugway, Tooele	91.64	50	P	P	09 45 35.2	+0.4
	baz=257						
DUG	Dugway, Tooele	91.64	50	IAmb	IAmb	09 45 49.3	
	comp=Z,143nm,1.8s						
WUAZ	Wupatki	91.75	54	P	P	09 45 36.0	+0.5
	baz=258						
WUAZ	Wupatki	91.75	54	IAmb	IAmb	09 45 49.4	
	comp=Z,62nm,1.4s						
WUAZ				IAMs_20	IAMs_20	10 17 28.0	
	comp=Z,5µm,22.0s						
DDI	Dehra Dun	92.03	300	*e*P	P	09 45 36.1	-0.6
DDI				IAmb	IAmb	09 45 39.7	
	comp=Z,64nm,0.3s						
MK31	Makanchi Array	92.26	317	P	P	09 45 37.6	+0.2
MK31				pmax	pmax		
	comp=Z,85nm,1.0s						
MK31	Makanchi Array	92.26	317	P	P	09 45 37.6	+0.2
MK31				IAmb	IAmb	09 45 48.1	
	comp=Z,85nm,1.0s						
MKAR	Makanchi Array	92.26	317	P	P	09 45 37.1	-0.3
	comp=Z,31nm,0.8s,baz=98,slow=6.0,SNR=239						
MKAR				PKKPbc	PKKPbc	10 02 56.5	+2.3
	comp=Z,1.3nm,0.9s,baz=274,slow=3.5,SNR=6.9						
MKAR				LR	LR	10 25 53.6	
	comp=Z,2µm,22.0s,baz=89,slow=35						
MSO	Missoula	92.32	43	P	P	09 45 38.6	+0.8
	baz=257						
MSO	Missoula	92.32	43	P	P	09 45 37.3	-0.4
ZAA0	Zalesovo Array	92.43	324	P	P	09 45 36.6	-1.3
ZAA0				IAmb	IAmb	09 45 47.6	
	comp=Z,56nm,1.0s						
ZALV	Zalesovo Beam	92.43	324	P	P	09 45 37.1	-0.8
	comp=Z,23nm,0.9s,baz=106,slow=4.8,SNR=50						
ZALV				LR	LR	10 28 59.5	
	comp=Z,1µm,19.0s,baz=103,slow=37						
ZALV	Zalesovo Beam	92.43	324	P	P	09 45 37.0	-0.9
MAKZ	Makanchi	92.48	317	P	P	09 45 38.0	-0.4
MAKZ				pmax	pmax		
	comp=Z,97nm,1.0s						
MAKZ				MLR	MLR		
	comp=Z,5µm,21.0s						
MAKZ	Makanchi	92.48	317	P	P	09 45 38.0	-0.4
MAKZ				IAMs_20	IAMs_20	10 25 15.4	
	comp=Z,5µm,21.0s						
MPU	Maple Canyon	92.48	50	P	P	09 45 38.9	+0.2
CTU	Camp Tracy	92.53	49	P	P	09 45 38.8	-0.2
TMUT	Trail Mountain	92.66	51	P	P	09 45 40.4	+0.7
WALA	Waterton Lakes	92.85	41	IAMs_20	IAMs_20	10 19 54.8	
	comp=Z,4µm,20.0s						
DLMT	Dillon	92.91	45	IAMs_20	IAMs_20	10 19 47.8	
	comp=Z,6µm,22.0s						
SMLA	Simla	92.94	301	*e*P	P	09 45 39.9	-0.9
W18A	Petrified Fore	92.99	55	P	P	09 45 41.3	+0.1
	baz=259						
P17A	Butcher Ranch,	93.05	51	P	P	09 45 41.8	+0.5
SRU	San Rafael Swe	93.14	51	P	P	09 45 41.6	-0.2
SRU				pmax	pmax		
	comp=Z,88nm,1.9s						
SRU	San Rafael Swe	93.14	51	P	P	09 45 41.6	-0.2
AHID	Auburn Hatcher	93.43	47	P	P	09 45 42.9	-0.2
SHLS	Shalkode	93.45	313	*e*P	P	09 45 40.6	-2.5
	comp=Z,36nm,1.3s,baz=313						
SHLS				*e*S	SKSac	09 56 14.2	-1.6
	baz=313						
SHLS	Shalkode	93.45	313	*e*P	P	09 45 40.5	-2.5
SHLS				*e*S	SKSac	09 56 14.1	-1.6
SHLS				pmax	pmax		
	comp=Z,36nm,1.3s						
BOZ	Bozeman (W)	93.62	44	P	P	09 45 44.2	+0.4
	baz=258						
BOZ	Bozeman (W)	93.62	44	IAMs_20	IAMs_20	10 20 07.7	
	comp=Z,5µm,21.0s						
REDW	Red Top Meadow	93.72	47	IAmb	IAmb	09 45 57.9	
	comp=Z,135nm,1.9s						
REDW				IAMs_20	IAMs_20	10 24 13.6	
	comp=Z,4µm,20.0s						
C36M	Paulatuk	93.73	20	IAmb	IAmb	09 45 57.6	
	comp=Z,95nm,1.4s						
C36M				IAMs_20	IAMs_20	10 25 37.8	
	comp=Z,5µm,20.0s						
YHB	Horse Butte	93.75	45	P	P	09 45 45.1	+0.5
UZB	Uzynbulak	93.76	313	*e*P	P	09 45 43.2	-1.3
	comp=Z,35nm,1.3s,baz=313						
UZB	Uzynbulak	93.76	313	*e*P	P	09 45 43.1	-1.4
UZB				pmax	pmax		
	comp=Z,35nm,1.3s						
DHRM	DHARAMSHALA	93.87	302	*e*P	P	09 45 43.0	-2.4
DHRM				IAmb	IAmb	09 45 47.5	
	comp=Z,50nm,0.7s						
DHRM				*i* PP	PP	09 49 29.8	-1.6
LOHW	Long Hollow	93.95	47	IAMs_20	IAMs_20	10 19 19.5	
	comp=Z,4µm,21.0s						
FLWY	Flagg Ranch	93.97	46	P	P	09 45 45.7	+0.1
FLWY				IAmb	IAmb	09 46 00.5	
	comp=Z,92nm,1.6s						
FLWY				IAMs_20	IAMs_20	10 19 21.1	
	comp=Z,7µm,22.0s						
KPKS	Kokpek	94.06	313	*e*P	P	09 45 44.7	-1.1
	comp=Z,37nm,1.2s,baz=313						
KPKS	Kokpek	94.06	313	*e*P	P	09 45 44.7	-1.1
KPKS				pmax	pmax		
	comp=Z,37nm,1.2s						
YNR	Norris Junctio	94.11	45	P	P	09 45 46.7	+0.5
121A	Cookes Peak, D	94.11	58	P	P	09 45 46.6	+0.2
	baz=260						
121A	Cookes Peak, D	94.11	58	P	P	09 45 46.5	0.0
121A				IAMs_20	IAMs_20	10 21 33.7	
	comp=Z,7µm,20.0s						
H17A	Grant Village	94.12	46	P	P	09 45 46.1	-0.2
	baz=259,SNR=13						
H17A	Grant Village	94.12	46	P	P	09 45 46.8	+0.4
PV10	Paradox Valley	94.14	52	P	P	09 45 45.4	-1.1
PV14	Lion Creek, Pa	94.16	52	P	P	09 45 46.9	+0.3
PV19	Morning Glory	94.17	52	P	P	09 45 47.2	+0.5
PV23	Carpenter Ridg	94.18	52	P	P	09 45 46.8	0.0
SATY	Saty	94.19	313	*e*P	P	09 45 45.0	-1.5
	comp=Z,16nm,1.2s,baz=313						
SATY				*e*S	SKSac	09 56 19.5	-0.3
	baz=313						
SATY	Saty	94.19	313	*e*P	P	09 45 44.9	-1.5
SATY				*e*S	SKSac	09 56 19.4	-0.3
SATY				pmax	pmax		
	comp=Z,16nm,1.2s						
PV17	East Wray Mesa	94.19	52	P	P	09 45 47.2	+0.5
PV18	Skein Mesa, Pa	94.22	52	P	P	09 45 47.0	+0.1
PV16	Nyswonger Mesa	94.23	52	IAmb	IAmb	09 46 04.5	
	comp=Z,83nm,1.9s						
PV04	Paradox Valley	94.25	52	P	P	09 45 47.5	+0.6
PV11	David Mesa, Pa	94.26	52	P	P	09 45 47.4	+0.4
PV11				IAmb	IAmb	09 46 03.6	
	comp=Z,71nm,1.7s						
PV03	Paradox Valley	94.27	52	P	P	09 45 46.4	-0.7
PV12	Saucer Basin,	94.31	52	P	P	09 45 47.4	+0.1
MVCO	Mesa Verde	94.36	53	P	P	09 45 46.9	-0.7
	baz=260						
MVCO	Mesa Verde	94.36	53	P	P	09 45 47.3	-0.2
MVCO				IAMs_20	IAMs_20	10 19 48.8	
	comp=Z,6µm,22.0s						
SEM	Semipalatinsk	94.36	320	*e*P	P	09 45 44.8	-2.5
	baz=320						
SEM				*e*S	SKSac	09 56 19.5	-1.1
	baz=320						
SEM				LR	LR	10 23 02.0	
	comp=Z,2µm,20.9s,baz=320						
SEM	Semipalatinsk	94.36	320	*e*P	P	09 45 44.7	-2.5
SEM				*e*S	SKSac	09 56 19.4	-1.1
SEM				MLR	MLR		
	comp=Z,2µm,21.0s						
PV22	Blue Mesa, Par	94.37	52	P	P	09 45 47.5	0.0
PV07	Paradox Valley	94.46	52	P	P	09 45 48.3	+0.4
BW06	Boulder Array	94.55	47	P	P	09 45 47.7	-0.5
	baz=260						
PDAR	Pinedale Array	94.55	47	P	P	09 45 48.1	-0.1
	comp=Z,23nm,1.1s,baz=251,slow=2.7,SNR=49						
PDAR				PKKPbc	PKKPdf	10 02 47.3	-0.8
	comp=Z,0.5nm,0.8s,baz=73,slow=5.0,SNR=3.8						
PDAR				LR	LR	10 22 48.7	
	comp=Z,3µm,20.1s,baz=270,slow=32						
TDK	Taldyqorghan	94.55	315	*e*P	P	09 45 47.2	-0.8
	baz=315						
TDK				*e*S	SKSac	09 56 22.1	+0.8
	baz=315						
TDK				LR	LR	10 25 25.7	
	comp=Z,3µm,19.1s,baz=315						
TDK	Taldyqorghan	94.55	315	*e*P	P	09 45 47.1	-0.8
TDK				*e*S	SKSac	09 56 22.1	+0.8
TDK				MLR	MLR		
	comp=Z,3µm,19.0s						
PV15	Paradox Valley	94.57	52	P	P	09 45 48.8	+0.3
O20A	White River Ci	95.06	50	P	P	09 45 50.7	+0.1
	baz=260						
O20A	White River Ci	95.06	50	P	P	09 45 50.4	-0.3
O20A				IAmb	IAmb	09 46 07.1	
	comp=Z,68nm,1.8s						
O20A				IAMs_20	IAMs_20	10 20 04.2	
	comp=Z,5µm,22.0s						
Y22D	IRIS PASSCAL I	95.09	56	P	P	09 45 50.6	-0.2
	baz=260						
Y22D	IRIS PASSCAL I	95.09	56	IAMs_20	IAMs_20	10 19 28.5	
	comp=Z,6µm,22.0s						
RLMT	Red Lodge	95.17	45	P	P	09 45 51.6	+0.6
	baz=260,SNR=13						
RLMT	Red Lodge	95.17	45	P	P	09 45 50.9	-0.2
RLMT				IAMs_20	IAMs_20	10 22 22.7	
	comp=Z,5µm,20.0s						
MDOK	Medeo	95.18	313	*e*P	P	09 45 50.0	-1.1
	baz=313						
MDOK				*e*S	SKSac	09 56 25.5	+0.3
	baz=313						
MDOK				LR	LR	10 26 49.0	
	comp=Z,1µm,16.6s,baz=313						
MDOK	Medeo	95.18	313	*e*P	P	09 45 50.0	-1.1
MDOK				*e*S	SKSac	09 56 25.4	+0.3
MDOK				MLR	MLR		
	comp=Z,1µm,17.0s						
AAA	Alma-Ata	95.29	313	*e*P	P	09 45 50.3	-1.2
	baz=313						
AAA				LR	LR	10 26 49.0	
	comp=Z,1µm,18.5s,baz=313						
AAA	Alma-Ata	95.29	313	*e*P	P	09 45 50.2	-1.2
AAA				MLR	MLR		
	comp=Z,1µm,19.0s						
NRIK	Noril'sk	95.34	340	P	P	09 45 50.2	-0.8
	comp=Z,14nm,0.9s,baz=96,slow=3.7,SNR=11						
NRIK				PP	PP	09 49 43.1	+1.6
	comp=Z,4.4nm,0.8s,baz=83,slow=12,SNR=4.9						
NRIK				LR	LR	10 27 15.1	
	comp=Z,3µm,21.9s,baz=111,slow=34						
NRIK	Noril'sk	95.34	340	IAmb	IAmb	09 46 00.8	
	comp=Z,48nm,1.3s						
NRIK				IAMs_20	IAMs_20	10 32 03.2	
	comp=Z,4µm,19.0s						
BNM	Barren Site	95.34	56	P	P	09 45 51.3	-0.8
CHKK	Chushkaly	95.34	313	*e*P	P	09 45 50.7	-1.0
	baz=314						
CHKK	Chushkaly	95.34	313	*e*P	P	09 45 50.6	-1.0
EGMT	Eagleton	95.34	42	P	P	09 45 51.8	+0.2
	baz=260						
EGMT	Eagleton	95.34	42	P	P	09 45 50.6	-1.0
EGMT				IAmb	IAmb	09 46 07.8	
	comp=Z,37nm,0.9s						
KSH	Kashi	95.37	309	P	P	09 45 53.9	+1.9
KSH				sP	pP	09 45 59.8	+0.1
KSH				PP	PP	09 49 45.5	+2.7
KSH				SKS	SKSac	09 56 31.1	+4.8
KSH				S	ScS	09 57 08.3	+1.0
KSH				SS	SS	10 03 39.9	+5.5
KSH				pmax	pmax		
	comp=Z,18nm,0.9s						
KSH				pmax	pmax		
	comp=Z,310nm,3.8s						
KSH				LR	LR		
	comp=Z,3µm,15.3s						
KSH				LR	LR		
	comp=Z,4µm,18.2s						
KSH				LR	LR		
	comp=Z,8µm,26.9s						
KURK	Kurchatov	95.44	320⇑	*e*P	P	09 45 51.5	-0.3
KURK				pmax	pmax		
	comp=Z,12nm,1.1s						
YKA	Yellowknife Ar	95.48	27	P	P	09 45 50.7	-1.0
	comp=Z,10nm,0.8s,baz=250,slow=4.1,SNR=94						
YKA				PKKPbc	PKKPdf	10 02 46.8	+0.1
	comp=Z,0.2nm,0.3s,baz=79,slow=2.8,SNR=4.1						
YKA				LR	LR	10 21 47.5	
	comp=Z,5µm,21.7s,baz=0.0,slow=31						
KURBB	Kurchatov Arra	95.48	320	PKKPbc	PKKPbc	10 02 45.7	0.0
	comp=Z,0.4nm,0.7s,baz=274,slow=3.3,SNR=4.4						
ANMO	Albuquerque	95.61	56	P	P	09 45 52.5	-0.7
	comp=Z,12nm,1.1s,baz=238,slow=5.5,SNR=21						
ANMO	Albuquerque	95.61	56	P	P	09 45 53.1	-0.2
	baz=261						
ANMO	Albuquerque	95.61	56	P	P	09 45 53.3	0.0
ANMO				pmax	pmax		
	comp=Z,12nm,1.1s						
ANMO				MLR	MLR		
	comp=Z,3µm,19.0s						
ANMO	Albuquerque	95.61	56	P	P	09 45 53.3	0.0
S22A	4UR Ranch, Cre	95.75	53	P	P	09 45 54.2	+0.2
	baz=261						
KUU	Kurty	95.81	313	*e*P	P	09 45 51.9	-1.9
	comp=Z,37nm,1.0s,baz=314						
KUU				*e*S	SKSac	09 56 27.8	-0.4
	baz=314						
KUU	Kurty	95.81	313	*e*P	P	09 45 51.8	-1.9
KUU				*e*S	SKSac	09 56 27.7	-0.4
KUU				pmax	pmax		
	comp=Z,37nm,1.0s						
SMCO	Snowmass	95.87	51	P	P	09 45 54.2	-0.4
MNTX	Cornudas Mount	95.99	59	P	P	09 45 54.3	-0.5
	baz=261						
MNTX	Cornudas Mount	95.99	59	P	P	09 45 54.1	-0.7
MNTX				IAMs_20	IAMs_20	10 19 27.5	
	comp=Z,6µm,22.0s						
NVL	N'lazarevskaya	96.47	189	*e*P	P	09 45 57.3	+1.1
NVL				*e*S	SKSac	09 56 36.0	+5.3
NVL				pmax	pmax		
	comp=Z,19nm,0.8s						
NVL				MLR	MLR		
	comp=Z,3µm,14.0s						
NIL	Nilore	96.62	303	P	P	09 45 56.5	-1.2
NIL				pmax	pmax		
	comp=Z,26nm,1.1s						
NIL				MLR	MLR		
	comp=Z,2µm,20.0s						
NIL	Nilore	96.62	303	P	P	09 45 56.5	-1.2
K22A	Casper	96.73	48	P	P	09 45 57.7	-0.4
	baz=262						
K22A	Casper	96.73	48	P	P	09 45 57.6	-0.6
SDCO	Great Sand Dun	96.80	53	P	P	09 45 57.3	-1.4
	baz=262						
SDCO	Great Sand Dun	96.80	53	P	P	09 45 57.8	-1.0
SDCO				IAMs_20	IAMs_20	10 27 12.4	
	comp=Z,5µm,18.0s						
N23A	Red Feather La	96.91	50	P	P	09 45 58.8	-0.3
	baz=262						
AAK	Ala-Archa	96.95	312	P	P	09 45 59.0	-0.1
AAK				pmax	pmax		
	comp=Z,69nm,2.0s						
AAK	Ala-Archa	96.95	312	P	P	09 45 59.0	-0.1
AAK				IAmb	IAmb	09 46 12.9	
	comp=Z,69nm,1.9s						
CRZF	Crozet Islands	97.08	220	IAMs_20	IAMs_20	10 19 28.8	
	comp=Z,4µm,20.0s						
TX31	Lajitas Ar. Si	97.10	62	P	P	09 45 60.0	-0.1
TX31				IAmb	IAmb	09 46 17.3	
	comp=Z,69nm,1.5s						
TX32	Lajitas Array	97.10	62	P	Pdif	09 46 00.5	+0.4
TXAR	Lajitas Array	97.10	62	P	P	09 46 00.0	0.0
	comp=Z,0.6nm,0.7s,baz=214,slow=4.2,SNR=7.2						
TXAR				PKKPbc	PKKPbc	10 02 40.5	-0.1
	comp=Z,0.3nm,0.6s,baz=84,slow=3.5,SNR=5.8						
TXAR				LR	LR	10 23 59.7	
	comp=Z,4µm,19.2s,baz=0.0,slow=32						
TXAR	Lajitas Array	97.10	62	P	P	09 45 59.2	-0.9
SNAA	Sanae	97.26	184	P	Pdif	09 46 00.3	+0.3
SNAA	Sanae	97.26	184	*ce*P	Pdif	09 46 02.2	+2.3
SNAA				pmax	pmax		
	comp=Z,33nm,1.4s						
SNAA				MLR	MLR		
	comp=Z,6µm,17.0s						
SNAA	Sanae	97.26	184	P	Pdif	09 46 00.3	+0.3
SNAA				IAmb	IAmb	09 46 13.1	
	comp=Z,37nm,1.1s						
LAO	LASA Array	97.51	44	P	Pdif	09 46 01.7	+0.1
	baz=262,SNR=11						
LAO	LASA Array	97.51	44	P	P	09 46 01.1	-0.4
LAO				IAmb	IAmb	09 46 22.4	
	comp=Z,40nm,1.1s						
T25A	Trinidad	97.57	54	P	P	09 46 01.2	-0.9
	baz=262						
BTLS	Baital	97.61	314	*e*P	P	09 45 59.8	-2.0
	baz=314						
BTLS				*e*S	SKSac	09 56 37.1	-0.3
	baz=314						
BTLS	Baital	97.61	314	*e*P	P	09 45 59.8	-2.0
BTLS				*e*S	SKSac	09 56 37.0	-0.3
VNA3	Neumayer Olymp	98.04	182	P	P	09 46 02.8	-0.6
BHUJ	Bhuj	98.26	292	*e*P	P	09 46 03.9	-1.3
BHUJ				IAmb	IAmb	09 46 09.9	
	comp=Z,64nm,1.2s						
VNA2	Neumayer--Watz	98.27	183	P	P	09 46 04.0	-0.3
	baz=161,slow=4.3						
MSTX	Muleshoe	98.48	57	P	P	09 46 05.4	-0.8
	baz=263						
MSTX	Muleshoe	98.48	57	P	P	09 46 05.2	-0.9
MSTX				IAMs_20	IAMs_20	10 21 45.4	
	comp=Z,6µm,22.0s						
VNA1	Neumayer--Stat	98.58	183	P	P	09 46 05.5	-0.2
RSSD	Black Hills	98.72	47	P	P	09 46 06.9	-0.2
	baz=264						
RSSD	Black Hills	98.72	47	P	P	09 46 06.7	-0.5
RSSD				pmax	pmax		
	comp=Z,59nm,2.0s						
RSSD	Black Hills	98.72	47		P	09 46 06.7	-0.5
RSSD				IAmb	IAmb	09 46 24.1	
	comp=Z,59nm,2.0s						
RSSD	Black Hills	98.72	47	IAMs_20	IAMs_20	10 21 51.8	
	comp=Z,4µm,22.0s						
DGMT	Dagmar	99.08	42	P	Pdif	09 46 08.0	-0.5
	baz=264,SNR=8.9						
DGMT	Dagmar	99.08	42		Pdif	09 46 08.3	-0.1
DGMT				IAmb	IAmb	09 46 11.2	
	comp=Z,33nm,0.9s						
DGMT	Dagmar	99.08	42	IAMs_20	IAMs_20	10 25 39.0	
	comp=Z,4µm,20.0s						
BRZS	Berezniki	99.11	319	*e*P	Pdif	09 46 07.3	-1.1
	baz=319						
BRZS	Berezniki	99.11	319	*e*P	Pdif	09 46 07.3	-1.1
KSCO	Kaye Shedlock’	99.20	52	P	Pdif	09 46 08.4	-0.8
	baz=264						
AMTX	Amarillo	99.49	56	P	Pdif	09 46 10.1	-0.6
	baz=264						
AMTX	Amarillo	99.49	56		Pdif	09 46 09.8	-0.8
AMTX				IAMs_20	IAMs_20	10 24 59.9	
	comp=Z,3µm,20.0s						
OGNE	Ogallala	99.86	50	IAMs_20	IAMs_20	10 22 53.1	
	comp=Z,4µm,22.0s						

TLIG	Tlapa	100.07	74	IAMs_20	IAMs_20	10 23 57.5	
	comp=Z,4µm,19.0s						
IUG	Iuzhnay	100.18	311	*e*P	Pdif	09 46 11.9	-1.7
	baz=311						
IUG				*e*S	SKSac	09 56 50.7	0.0
	baz=311						
IUG	Iuzhnay	100.18	311	*e*P	Pdif	09 46 11.8	-1.7
IUG				*e*S	SKSac	09 56 50.6	-0.1
JCT	Junction City	100.57	61	P	Pdif	09 46 14.7	-0.7
	baz=264						
JCT	Junction City	100.57	61	IAMs_20	IAMs_20	10 25 34.0	
	comp=Z,5µm,20.0s						
833A	Chaparral WMA,	100.68	63	P	Pdif	09 46 15.5	-0.5
	baz=264						
BRVK	Borovoye	100.85	322	*de*P	Pdif	09 46 15.3	-0.8
BRVK				pmax	pmax		
	comp=Z,12nm,0.9s						
BRVK				MLR	MLR		
	comp=Z,6µm,18.0s						
FFC	Flin Flon	100.96	36	IAMs_20	IAMs_20	10 24 37.1	
	comp=Z,6µm,20.0s						
CBKS	Cedar Bluff	101.42	52	P	Pdif	09 46 18.2	-0.9
	baz=265						
CBKS	Cedar Bluff	101.42	52	IAMs_20	IAMs_20	10 25 34.8	
	comp=Z,4µm,20.0s						
U32A	Winter Ranch,	101.81	55	IAMs_20	IAMs_20	10 31 57.2	
	comp=Z,4µm,18.0s						
WMOK	Wichita Mounta	101.85	57	IAMs_20	IAMs_20	10 24 56.4	
	comp=Z,5µm,20.0s						
735A	Kenedy	102.13	63	IAMs_20	IAMs_20	10 29 13.3	
	comp=Z,4µm,20.0s						
R32A	Long Quarter,	102.19	53	IAMs_20	IAMs_20	10 31 52.3	
	comp=Z,3µm,19.0s						
435B	Jarrell	102.50	61	IAMs_20	IAMs_20	10 27 02.6	
	comp=Z,5µm,20.0s						
CROK	Carrier	102.63	55	IAMs_20	IAMs_20	10 24 04.1	
	comp=Z,6µm,22.0s						
WHTX	Lake Whitney,	102.72	60	IAMs_20	IAMs_20	10 23 06.7	
	comp=Z,5µm,22.0s						
BGNE	Belgrade	102.81	50	IAMs_20	IAMs_20	10 30 09.4	
	comp=Z,3µm,19.0s						
RER	Riviere de l'E	102.86	245	IAMs_20	IAMs_20	10 27 21.6	
	comp=Z,4µm,20.0s						
OKCFA	Oklahoma City	102.99	56	IAMs_20	IAMs_20	10 25 05.5	
	comp=Z,5µm,21.0s						
OK029	Liberty Lake	103.01	56	IAMs_20	IAMs_20	10 25 57.1	
	comp=Z,4µm,20.0s						
OK025	Westminster Rd	103.09	56	IAMs_20	IAMs_20	10 25 08.3	
	comp=Z,5µm,21.0s						
OK031	S. Brethren Rd	103.52	56	IAMs_20	IAMs_20	10 28 27.6	
	comp=Z,4µm,20.0s						
OK030	Cody Creek RV	103.56	56	IAMs_20	IAMs_20	10 26 04.3	
	comp=Z,3µm,20.0s						
T35A	Sooner Cattle	103.84	55	IAMs_20	IAMs_20	10 33 22.0	
	comp=Z,3µm,19.0s						
HKT	Hockley	103.94	62	IAMs_20	IAMs_20	10 25 06.2	
	comp=Z,5µm,21.0s						
ECSD	EROS Data Cent	104.04	48	P	Pdif	09 46 30.1	-0.5
	baz=268						
ECSD	EROS Data Cent	104.04	48	IAMs_20	IAMs_20	10 30 50.7	
	comp=Z,4µm,19.0s						
237A	Washetta, Mont	104.11	60	IAMs_20	IAMs_20	10 27 17.7	
	comp=Z,4µm,20.0s						
L34A	Svendsen Farm,	104.17	49	IAMs_20	IAMs_20	10 29 49.1	
	comp=Z,4µm,20.0s						
F33A	5 Mile Ranch,	104.31	45	IAMs_20	IAMs_20	10 28 38.6	
	comp=Z,5µm,20.0s						
TUL1	Leonard	104.37	56	IAMs_20	IAMs_20	10 29 13.0	
	comp=Z,5µm,20.0s						
ULM	Lac du Bonnet	104.60	41	Pdiff	Pdif	09 46 32.3	-0.5
	comp=Z,4.7nm,0.9s,baz=266,slow=5.6,SNR=8.0						
ULM	Lac du Bonnet	104.60	41	IAMs_20	IAMs_20	10 29 14.7	
	comp=Z,4µm,19.0s						
Z38A	Mt. Pleasant	104.89	58	IAMs_20	IAMs_20	10 29 11.1	
	comp=Z,4µm,20.0s						
NATX	Nacogdoches	105.07	60	IAMs_20	IAMs_20	10 25 14.1	
	comp=Z,5µm,22.0s						
FCC	Fort Churchill	105.27	32	P	Pdif	09 46 34.8	-0.8
FCC	Fort Churchill	105.27	32	Pdif	Pdif	09 46 34.8	-0.8
FCC				IAMs_20	IAMs_20	10 30 15.5	
	comp=Z,5µm,19.0s						
U38A	Gravette	105.53	55	IAMs_20	IAMs_20	10 34 05.2	
	comp=Z,3µm,19.0s						
HHAR	Hobbs	105.88	55	IAMs_20	IAMs_20	10 28 57.1	
	comp=Z,4µm,20.0s						
W39A	Magazine	105.97	56	IAMs_20	IAMs_20	10 26 58.6	
	comp=Z,5µm,22.0s						
B35A	Bob, Littlefor	106.05	43	IAMs_20	IAMs_20	10 27 49.2	
	comp=Z,4µm,21.0s						
RTAL	Retalhuleu	106.22	78	IAMs_20	IAMs_20	10 29 27.6	
	comp=Z,4µm,19.0s						
F36A	Milaca	106.25	45	IAMs_20	IAMs_20	10 31 21.8	
	comp=Z,5µm,19.0s						
I37A	Lemond, Waseca	106.37	47	IAMs_20	IAMs_20	10 41 23.2	
	comp=Z,4µm,18.0s						
S39A	Bolivar	106.41	54	IAMs_20	IAMs_20	10 33 06.0	
	comp=Z,4µm,19.0s						
WLAR	White Oak Lake	106.47	58	IAMs_20	IAMs_20	10 27 08.0	
	comp=Z,5µm,22.0s						
SCIA	State Center	106.52	49	IAMs_20	IAMs_20	10 27 13.5	
	comp=Z,4µm,22.0s						
X40A	Basin Creek Fa	106.73	57	P	PKiKP	09 50 52.5	-0.6
	baz=268						
X40A	Basin Creek Fa	106.73	57	IAMs_20	IAMs_20	10 28 17.7	
	comp=Z,4µm,20.0s						
U40A	Yellville	106.76	55	IAMs_20	IAMs_20	10 26 28.3	
	comp=Z,5µm,22.0s						
SPMN	Marine on St.	106.77	46	IAMs_20	IAMs_20	10 27 32.7	
	comp=Z,5µm,20.0s						
K38A	Parkersburg	106.85	49	IAMs_20	IAMs_20	10 28 10.0	
	comp=Z,4µm,22.0s						
342A	Flagon Creek P	107.04	60	IAMs_20	IAMs_20	10 29 37.4	
	comp=Z,4µm,20.0s						
W41B	Gary Mavity, V	107.23	56	P	PKiKP	09 50 53.5	-0.4
	baz=269						
MGMO	Mountain Grove	107.24	54	IAMs_20	IAMs_20	10 28 53.0	
	comp=Z,4µm,20.0s						
R40A	Maddies Statio	107.25	53	IAMs_20	IAMs_20	10 30 45.1	
	comp=Z,5µm,20.0s						
FCAR	Ozark Folk Cen	107.34	56	IAMs_20	IAMs_20	10 31 10.8	
	comp=Z,4µm,19.0s						
ARU	Arti	107.54	326	P	Pdif	09 46 52.3	+6.6
EYMN	Ely	107.56	43	IAMs_20	IAMs_20	10 42 50.2	
	comp=Z,3µm,18.0s						
CCM	Cathedral Cave	108.06	53	IAMs_20	IAMs_20	10 31 09.5	
	comp=Z,3µm,20.0s						
PLCA	Paso Flores	108.10	139	PKKPbc	PKKPbc	10 02 08.9	+0.3
	comp=Z,3.1nm,1.1s,baz=118,slow=12,SNR=2.6						
LCAR	Lake Charles	108.13	56	IAMs_20	IAMs_20	10 32 57.7	
	comp=Z,3µm,18.0s						
T42A	Van Buren	108.18	55	IAMs_20	IAMs_20	10 27 37.9	
	comp=Z,5µm,22.0s						
LC01	Cunco	108.19	137	IAMs_20	IAMs_20	10 25 17.1	
	comp=Z,4µm,22.0s						
I40A	Norwalk	108.38	47	IAMs_20	IAMs_20	10 33 18.5	
	comp=Z,3µm,20.0s						
344A	Westbrook Farm	108.41	60	IAMs_20	IAMs_20	10 30 50.5	
	comp=Z,4µm,20.0s						
ESQI	Esquipulas	108.48	78	IAMs_20	IAMs_20	10 25 54.4	
	comp=Z,3µm,20.0s						
SNET	Serv Nac Est T	108.48	79	IAMs_20	IAMs_20	10 24 35.5	
	comp=Z,4µm,22.0s						
AKTO	Aktyubinsk	108.51	320	PKKPbc	PKKPbc	10 02 07.8	+0.3
	comp=Z,0.9nm,0.5s,baz=87,slow=14,SNR=1.5						
VBMS	Vicksburg	108.61	60	IAMs_20	IAMs_20	10 27 01.7	
	comp=Z,5µm,22.0s						
JFWS	Jewell Farm	108.69	48	IAMs_20	IAMs_20	10 30 23.9	
	comp=Z,4µm,20.0s						
FVM	French Village	108.70	54	IAMs_20	IAMs_20	10 31 47.6	
	comp=Z,4µm,20.0s						
PBMO	Poplar Bluff	108.71	55	IAMs_20	IAMs_20	10 29 34.0	
	comp=Z,5µm,21.0s						
SLM	Saint Louis	108.84	53	IAMs_20	IAMs_20	10 34 21.2	
	comp=Z,3µm,20.0s						
GNAR	Gosnell	109.05	56	IAMs_20	IAMs_20	10 27 49.1	
	comp=Z,5µm,22.0s						
GEYT	Alibeck	109.17	306	PKiKP	PKiKP	09 50 58.4	+0.8
	comp=Z,1.5nm,0.6s,baz=140,slow=1.1,SNR=1.6						
PEBM	Pemiscott Bayo	109.18	55	IAMs_20	IAMs_20	10 28 16.4	
	comp=Z,4µm,22.0s						
PARMO	Parma	109.26	55	IAMs_20	IAMs_20	10 32 40.5	
	comp=Z,4µm,19.0s						
COWI	Conover	109.29	45	IAMs_20	IAMs_20	10 31 19.3	
	comp=Z,4µm,21.0s						
PVMO	Portageville	109.31	55	IAMs_20	IAMs_20	10 32 21.7	
	comp=Z,4µm,19.0s						
PENMO	Penman	109.36	55	IAMs_20	IAMs_20	10 32 23.2	
	comp=Z,4µm,19.0s						
Y45A	Yeager Farm, C	109.45	58	IAMs_20	IAMs_20	10 30 10.7	
	comp=Z,4µm,20.0s						
LNXT	Lenox	109.48	56	IAMs_20	IAMs_20	10 28 36.3	
	comp=Z,4µm,21.0s						
HENM	Henderson Moun	109.48	55	IAMs_20	IAMs_20	10 33 33.4	
	comp=Z,5µm,19.0s						
346A	Big Creek Wild	109.49	60	IAMs_20	IAMs_20	10 28 58.1	
	comp=Z,4µm,22.0s						
OXF	Oxford	109.56	57	IAMs_20	IAMs_20	10 28 55.6	
	comp=Z,5µm,22.0s						
HALT	Halls	109.60	56	IAMs_20	IAMs_20	10 28 38.6	
	comp=Z,4µm,21.0s						
I42A	Draeger Farm,	109.61	47	IAMs_20	IAMs_20	10 28 49.0	
	comp=Z,3µm,20.0s						
GLAT	Glass	109.64	55	IAMs_20	IAMs_20	10 36 46.6	
	comp=Z,4µm,19.0s						
HICK	Hickman	109.68	55	IAMs_20	IAMs_20	10 33 01.7	
	comp=Z,4µm,19.0s						
W45A	Hickory Valley	109.74	57	IAMs_20	IAMs_20	10 29 00.3	
	comp=Z,6µm,22.0s						
Q44A	Meyer Farm, Va	109.79	53	IAMs_20	IAMs_20	10 30 45.2	
	comp=Z,3µm,20.0s						
146A	Union	109.85	59	IAMs_20	IAMs_20	10 30 41.5	
	comp=Z,4µm,20.0s						
F42A	Maple Grove Fa	110.02	45	IAMs_20	IAMs_20	10 29 31.5	
	comp=Z,5µm,22.0s						
K43A	Burlington	110.11	48	IAMs_20	IAMs_20	10 29 26.4	
	comp=Z,3µm,21.0s						
T45A	Paducah	110.14	55	IAMs_20	IAMs_20	10 32 40.8	
	comp=Z,4µm,19.0s						
H43A	Windswept, Lux	110.39	47	IAMs_20	IAMs_20	10 28 59.5	
	comp=Z,4µm,21.0s						
TGUH	Tegucigalpa,Un	110.42	79	IAMs_20	IAMs_20	10 27 56.7	
	comp=Z,3µm,20.0s						
L44A	Lake County Fo	110.46	49	IAMs_20	IAMs_20	10 32 33.7	
	comp=Z,5µm,20.0s						
CRIN	San Cristobal	110.48	80	IAMs_20	IAMs_20	10 24 26.4	
	comp=Z,3µm,22.0s						
OLIL	Olney	110.51	53	IAMs_20	IAMs_20	10 29 24.4	
	comp=Z,4µm,22.0s						
E43A	Lone Tree Farm	110.75	44	IAMs_20	IAMs_20	10 36 13.8	
	comp=Z,3µm,21.0s						
WVT	Waverly	110.82	55	IAMs_20	IAMs_20	10 31 56.9	
	comp=Z,4µm,20.0s						
ABPO	Ambohimpanom	111.13	245	IAMs_20	IAMs_20	10 32 25.5	
	comp=Z,4µm,20.0s						
X48A	Hartselle	111.51	57	IAMs_20	IAMs_20	10 29 53.3	
	comp=Z,5µm,22.0s						
I45A	Fountain	111.53	47	IAMs_20	IAMs_20	10 30 17.6	
	comp=Z,3µm,21.0s						
V48A	Smith Brothers	111.65	56	IAMs_20	IAMs_20	10 32 10.9	
	comp=Z,4µm,20.0s						
SOCY	Socotra	111.71	279	IAMs_20	IAMs_20	10 37 57.9	
	comp=Z,3µm,20.0s						
BLO	Bloomington	111.72	52	IAMs_20	IAMs_20	10 32 16.2	
	comp=Z,4µm,20.0s						
CLTN	Cedars of Leba	112.03	55	IAMs_20	IAMs_20	10 33 01.0	
	comp=Z,5µm,20.0s						
Y49A	Blount Mountai	112.05	58	IAMs_20	IAMs_20	10 30 10.7	
	comp=Z,4µm,21.0s						
JTS	Las Juntas de	112.22	83	IAMs_20	IAMs_20	10 27 54.6	
	comp=Z,4µm,20.0s						
SWET	Sewanee	112.40	56	IAMs_20	IAMs_20	10 30 32.8	
	comp=Z,4µm,21.0s						
U49A	Red Boiling Sp	112.46	55	IAMs_20	IAMs_20	10 29 46.2	
	comp=Z,5µm,22.0s						
E46A	Sault Ste Mari	112.59	44	IAMs_20	IAMs_20	10 30 41.6	
	comp=Z,3µm,21.0s						
J47A	Sunmer	112.63	48	IAMs_20	IAMs_20	10 32 19.0	
	comp=Z,5µm,21.0s						
CO02	Combarbal	112.66	130	IAMs_20	IAMs_20	10 28 24.0	
	comp=Z,3µm,20.0s						
FPAL	Fort Paine	112.69	57	IAMs_20	IAMs_20	10 30 52.6	
	comp=Z,5µm,22.0s						
W50A	Signal Mountai	112.91	56	IAMs_20	IAMs_20	10 34 04.2	
	comp=Z,4µm,20.0s						
L48A	N Adams	113.06	49	IAMs_20	IAMs_20	10 36 46.5	
	comp=Z,4µm,19.0s						
Z51A	Franklin	113.10	58	IAMs_20	IAMs_20	10 33 04.6	
	comp=Z,4µm,20.0s						
X51A	Calhoun	113.31	57	IAMs_20	IAMs_20	10 31 23.0	
	comp=Z,5µm,21.0s						
352A	Blakely	113.37	60	IAMs_20	IAMs_20	10 32 30.8	
	comp=Z,3µm,20.0s						
CPCT	Cooper Cave	113.54	56	IAMs_20	IAMs_20	10 33 38.9	
	comp=Z,5µm,20.0s						
AAM	Ann Arbor	113.59	49	IAMs_20	IAMs_20	10 34 49.5	
	comp=Z,4µm,20.0s						
LCO	Las Campanas	113.94	128	IAMs_20	IAMs_20	10 35 28.1	
	comp=Z,3µm,18.0s						
DAG	Danmarks Havn	114.02	1	*i* P	PKiKP	09 51 09.0	+3.4
DAG	Danmarks Havn	114.02	1	*e*PKIKP	PKiKP	09 51 09.0	+3.4
DAG	Danmarks Havn	114.02	1	*e*P	PKiKP	09 51 09.1	+3.4
W52A	Murphy	114.05	56	IAMs_20	IAMs_20	10 31 00.3	
	comp=Z,5µm,22.0s						
S51A	Beattyville	114.12	54	IAMs_20	IAMs_20	10 33 17.2	
	comp=Z,5µm,22.0s						
ZON	Zonda	114.21	132	IAMs_20	IAMs_20	10 37 15.8	
	comp=Z,2µm,18.0s						
TZTN	Tazewell	114.25	55	IAMs_20	IAMs_20	10 37 49.6	
	comp=Z,4µm,19.0s						
K50A	Casco	114.29	48	IAMs_20	IAMs_20	10 34 27.9	
	comp=Z,4µm,20.0s						
ACSO	Alum Creek Sta	114.34	51	P	PKPdf	09 51 07.1	-0.1
	baz=277						
GOGA	Godfrey	114.53	58	IAMs_20	IAMs_20	10 31 37.2	
	comp=Z,5µm,22.0s						
BELG	Belogornoye	114.57	323	*c i*PKIKP	PKPdf	09 51 06.5	-0.8
APA	Apatity	114.70	341	⇓*i*PKIKP	PKiKP	09 51 06.8	-0.3
APA				pmax	pmax		
	comp=Z,13nm,0.9s						
BG3	Lake Jocassee	114.87	56	IAMs_20	IAMs_20	10 31 50.1	
	comp=Z,4µm,22.0s						
R53A	Hurricane	115.35	53	IAMs_20	IAMs_20	10 32 16.4	
	comp=Z,5µm,22.0s						
255A	Hazlehurst	115.44	60	IAMs_20	IAMs_20	10 33 47.6	
	comp=Z,4µm,22.0s						
656A	Willston	115.49	63	IAMs_20	IAMs_20	10 36 21.3	
	comp=Z,3µm,20.0s						
FRB	Frobisher Bay	115.57	23	PKP	PKiKP	09 51 08.0	-0.8
	comp=Z,3.0nm,0.9s,baz=336,slow=7.6,SNR=4.7						
FRB	Frobisher Bay	115.57	23	PKIKP	PKiKP	09 51 08.0	-0.8
Q53A	Leroy	115.62	52	P	PKPdf	09 51 09.2	-0.5
	baz=277						
ARCES	ARCESS Array B	115.69	345	PKP	PKiKP	09 51 08.4	-0.6
	comp=Z,5.0nm,0.7s,baz=56,slow=1.0,SNR=14						
ARCES	ARCESS Array B	115.69	345	PKIKP	PKiKP	09 51 08.9	-0.1
ARCES	ARCESS Array B	115.69	345		PKiKP	09 51 08.9	-0.1
PAULI	Pauline	115.80	57	IAMs_20	IAMs_20	10 32 17.7	
	comp=Z,5µm,22.0s						
KLMR	Klimovskoe	115.82	333	*e*PKIKP	PKiKP	09 51 07.4	-2.0
KLMR				*e*		10 01 44.4	
KLMR				pmax	pmax		
	comp=Z,32nm,1.4s						
KLMR	Klimovskoe	115.82	333	*e*PKPdf	PKiKP	09 51 07.4	-2.0
KLMR				AMP		09 51 20.1	
	comp=Z,32nm,1.4s						
KLMR				*e*PKKPab	PKKPbc	10 01 44.4	+1.0
KLMR				LQ	LQ	10 27 34.7	
KLMR				LQ	LQ	10 27 34.7	
KLMR				LR	LR	10 36 58.7	
KLMR				AMP		10 46 04.8	
	comp=Z,3µm,16.6s						
S54A	Dingess, Beckl	115.91	53	P	PKPdf	09 51 09.6	-0.8
	baz=277						
S54A	Dingess, Beckl	115.91	53	IAMs_20	IAMs_20	10 32 50.4	
	comp=Z,4µm,21.0s						
MATQ	Matagami	116.30	40	P	PKPdf	09 51 09.1	-1.6
	baz=285						
JSC	Jenkinsville	116.30	57	IAMs_20	IAMs_20	10 34 06.0	
	comp=Z,3µm,20.0s						
ERPA	Erie	116.32	48	IAMs_20	IAMs_20	10 37 36.6	
	comp=Z,3µm,20.0s						
SADO	Sadowa	116.44	45	IAMs_20	IAMs_20	10 32 41.5	
	comp=Z,4µm,22.0s						
DBG	Daneborg	116.47	1	*e*P	PKiKP	09 51 12.7	+2.3
N54A	Moraine State	116.50	50	P	PKPdf	09 51 10.4	-1.0
	baz=279						
M54A	Oil Creek Stat	116.66	49	P	PKPdf	09 51 11.2	-0.5
	baz=280						
257A	Skidaway Islan	116.67	60	IAMs_20	IAMs_20	10 33 20.1	
	comp=Z,4µm,22.0s						
BLA	Blacksburg	116.68	54	P	PKPdf	09 51 11.3	-0.6
	baz=277						
BLA	Blacksburg	116.68	54	IAMs_20	IAMs_20	10 35 35.9	
	comp=Z,4µm,20.0s						
SUMG	Summit	116.79	7	*i* P	PKiKP	09 51 12.0	+0.5
SUMG	Summit	116.79	7	*e*PKIKP	PKiKP	09 51 12.0	+0.5
SUMG	Summit	116.79	7	*e*P	PKiKP	09 51 12.0	+0.5
MCWV	Mont Chateau	116.81	51	P	PKPdf	09 51 11.8	-0.2
	baz=278						
MCWV	Mont Chateau	116.81	51	IAMs_20	IAMs_20	10 34 43.8	
	comp=Z,4µm,20.0s						
U56A	King	116.81	55	IAMs_20	IAMs_20	10 33 58.4	
	comp=Z,4µm,21.0s						
VLDQ	Val d'Or	116.83	41	IAMs_20	IAMs_20	10 35 59.7	
	comp=Z,4µm,19.0s						
H53A	Bobcaygeon	116.87	45	P	PKPdf	09 51 11.7	-0.3
	baz=282						
LSQQ	Lebel-sur-Quev	116.89	40	P	PKPdf	09 51 11.7	-0.1
	baz=285						
T56A	Rocky Mt	117.01	54	P	PKPdf	09 51 12.0	-0.5
	baz=277						
G54A	Lake Saint Pet	117.04	44	P	PKPdf	09 51 11.9	-0.4
	baz=283						
J54A	Appleton	117.09	47	IAMs_20	IAMs_20	10 33 28.9	
	comp=Z,5µm,22.0s						
Q56A	Snyder Ridge,	117.40	52	P	PKPdf	09 51 12.8	-0.5
	baz=279						
ILULI	Ilulissat	117.41	13	*i* P	PKiKP	09 51 16.3	+4.0
ILULI	Ilulissat	117.41	13	*e*PKIKP	PKiKP	09 51 16.3	+4.0
ILULI	Ilulissat	117.41	13	*e*P	PKiKP	09 51 16.3	+4.0
U57A	Blanch	117.64	55	P	PKPdf	09 51 13.1	-0.6
	baz=277						
J55A	Hilton	117.68	47	IAMs_20	IAMs_20	10 38 14.5	
	comp=Z,4µm,19.0s						
O56A	Blue Knob Stat	117.68	50	P	PKPdf	09 51 13.3	-0.5
	baz=280						
PB06	IPOC Station P	117.75	123	IAMs_20	IAMs_20	10 29 24.3	
	comp=Z,3µm,22.0s						
M56A	Emporium	117.76	49	P	PKPdf	09 51 13.1	-0.7
	baz=281						
N56A	West Decatur	117.77	49	P	PKPdf	09 51 12.5	-1.4
	baz=280						
PLVO	Plevna	117.82	45	IAMs_20	IAMs_20	10 35 24.5	
	comp=Z,5µm,21.0s						
PB07	IPOC Station P	117.92	122	IAMs_20	IAMs_20	10 29 27.9	
	comp=Z,3µm,22.0s						
PATCX	Punta Patache	118.08	121	IAMs_20	IAMs_20	10 30 14.3	
	comp=Z,3µm,22.0s						
K56A	Middlesex	118.15	47	P	PKPdf	09 51 12.6	-1.9
	baz=282						
E55A	Montcerf-Lytto	118.17	43	P	PKPdf	09 51 13.5	-0.9
	baz=285						
T58A	Grand View Acr	118.21	54	P	PKPdf	09 51 13.4	-1.4
	baz=278						
U58A	Oxford	118.27	54	P	PKPdf	09 51 13.8	-1.1
	baz=278						
J56A	Wolcott	118.36	47	IAMs_20	IAMs_20	10 38 33.5	
	comp=Z,4µm,19.0s						
D55A	Sainte-Anne-du	118.41	42	P	PKPdf	09 51 13.7	-1.2
	baz=286						
PB09	IPOC Station P	118.42	122	IAMs_20	IAMs_20	10 29 44.3	
	comp=Z,3µm,22.0s						
VRH	Novokhopyorsk	118.42	323	*i* PKIKP	PKPdf	09 51 13.8	-0.9
VRH				pmax	pmax		
	comp=Z,30nm,0.8s						
VRH				MLR	MLR		
	comp=Z,3µm,23.0s						
PB01	IPOC Station P	118.55	121	IAMs_20	IAMs_20	10 29 44.6	
	comp=Z,3µm,22.0s						
O58A	Lewisberry	118.95	50	P	PKPdf	09 51 15.2	-0.9
	baz=281						
MOS	Moscow	118.95	329	*i* PKIKP	PKiKP	09 51 19.2	+3.5
MOS				*e*		09 52 37.3	
MOS				pmax	pmax		
	comp=Z,53nm,0.8s						
CNNC	Cliffs of the	118.95	56	IAMs_20	IAMs_20	10 36 47.2	
	comp=Z,4µm,20.0s						
N58A	Sunbury	118.97	49	P	PKPdf	09 51 15.3	-0.8
	baz=281						
H57A	Richville	119.12	45	P	PKPdf	09 51 15.7	-0.6
	baz=284						
SDMD	Soldier's Deli	119.14	51	IAMs_20	IAMs_20	10 35 13.6	
	comp=Z,3µm,21.0s						
BINY	Binghamton	119.22	48	P	PKPdf	09 51 16.5	-0.2
	baz=283						
SFJD	Kangerlussuaq	119.23	15	PKP	PKiKP	09 51 16.6	+0.8
	comp=Z,16nm,0.9s,baz=127,slow=4.6,SNR=4.3						
SFJD	Kangerlussuaq	119.23	15	*i* P	PKPdf	09 51 15.4	-0.4
SFJD	Kangerlussuaq	119.23	15		PKPdf	09 51 14.8	-1.0
SFJD	Kangerlussuaq	119.23	15	*e*P	PKPdf	09 51 15.4	-0.4
GNI	Garni	119.29	310	⇓*i*PKIKP	PKiKP	09 51 17.2	+0.1
ZEI	Tsey	119.35	313	*i* PKIKP	PKPdf	09 51 16.5	-0.6
ZEI				pmax	pmax		
	comp=Z,10.0nm,0.9s						
L58A	Harry Jones Me	119.35	48	P	PKPdf	09 51 16.5	-0.4
	baz=283						
GOF	Gofitskoye	119.40	316	⇑*e*PKIKP	PKiKP	09 51 18.0	+1.1
KSPA	Keystone Colle	119.52	48	IAMs_20	IAMs_20	10 36 35.3	
	comp=Z,4µm,20.0s						
LPSR	Galich'ya Gora	119.54	325	*i* PKIKP	PKPdf	09 51 15.5	-1.3
LPSR				pmax	pmax		
	comp=Z,20nm,0.9s						
LPSR				MLR	MLR		
	comp=Z,3µm,18.0s						
I58A	Old Forge	119.60	46	P	PKPdf	09 51 17.0	-0.3
	baz=284						
LONY	Lake Ozonia	119.64	45	IAMs_20	IAMs_20	10 37 37.1	
	comp=Z,4µm,20.0s						
ICESG	Greenland Ices	119.77	10	*e*P	PKPdf	09 51 16.2	-1.1
OBN	Obninsk	119.77	328	*i* PKIKP	PKiKP	09 51 17.3	+0.1
OBN				*i*		09 51 21.9	
OBN				*i*		09 52 39.9	
OBN				*i* SS	SS	10 09 12.9	+10
OBN				pmax	pmax		
	comp=Z,17nm,1.2s						
OBN	Obninsk	119.77	328	IAMs_20	IAMs_20	10 42 27.0	
	comp=Z,4µm,20.0s						
M59A	Waymart	119.77	48	P	PKPdf	09 51 17.2	-0.5
	baz=283						
KBZ	Khabaz	119.84	314	PKP	PKiKP	09 51 17.9	+0.2
	comp=Z,5.4nm,1.1s,baz=126,slow=4.0,SNR=6.9						
KBZ	Khabaz	119.84	314	⇓*i*PKIKP	PKiKP	09 51 18.9	+1.1
KBZ				MLR	MLR		
	comp=Z,3µm,20.0s						
MARP	Paez Belalcaza	119.90	93	*e*P	PKiKP	09 51 21.6	+2.5
K59A	Cooperstown	119.91	47	P	PKPdf	09 51 16.9	-1.0
	baz=284						
VSR	Storozhevoye	119.92	324	*i* PKIKP	PKPdf	09 51 16.4	-1.2
VSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
VSR				MLR	MLR		
	comp=Z,2µm,21.0s						
KIV	Kislovodsk	119.93	315	*i* PKIKP	PKiKP	09 51 18.5	+0.4
KIV				*e*		09 52 42.0	
KIV				*e*PS	PS	10 02 31.5	-1.0
KIV				*e*SS	SS	10 09 08.8	+2.4
KIV				pmax	pmax		
	comp=Z,28nm,1.1s						
KIV				MLR	MLR		
	comp=Z,5µm,22.0s						
AKH	Akhalkalaki	119.96	312	⇑P	PKiKP	09 51 19.5	+1.1
J59A	Piesco	119.99	46	P	PKPdf	09 51 16.7	-1.3
	baz=284						
E58A	La Victoria	120.04	42	P	PKPdf	09 51 17.4	-0.6
	baz=287						
O60A	Telford	120.05	50	P	PKPdf	09 51 16.9	-1.3
	baz=282						
NCB	Newcomb	120.06	45	IAMs_20	IAMs_20	10 37 31.2	
	comp=Z,3µm,19.0s						
D58A	Chemin du LacG	120.08	41	P	PKPdf	09 51 17.0	-1.1
	baz=288						
N60A	Cedar Hill Far	120.16	49	P	PKPdf	09 51 17.4	-1.1
	baz=282						
FRNY	Flat Rock	120.27	44	IAMs_20	IAMs_20	10 39 52.6	
	comp=Z,3µm,19.0s						
RAYN	Ar Rayn	120.40	291	PKIKP	PKPdf	09 51 18.8	-0.7
RAYN	Ar Rayn	120.40	291	PKPdf	PKPdf	09 51 18.8	-0.7
V62A	Hyde County Ai	120.47	55	P	PKPdf	09 51 18.0	-1.2
	baz=279						
PTLC	Puerto Leguiza	120.50	96	*e*P	PKPdf	09 51 13.9	-6.0
F59A	Saint Guilaume	120.52	43	P	PKPdf	09 51 17.4	-1.5
	baz=287						
BRNJ	Basking Ridge	120.59	49	IAMs_20	IAMs_20	10 40 40.9	
	comp=Z,4µm,20.0s						
ACCN	Adirondack Com	120.60	46	IAMs_20	IAMs_20	10 38 29.6	
	comp=Z,4µm,21.0s						
TRY	Troy	120.77	47	IAMs_20	IAMs_20	10 34 46.1	
	comp=Z,4µm,22.0s						
N61A	South Mountain	120.78	49	P	PKPdf	09 51 18.2	-1.4
	baz=283						
ORTC	Ortega, Tolima	120.79	92	*e*P	PKPdf	09 51 13.9	-6.6
GUY2C	Guyana, Caldas	120.89	90	*e*P	PKPdf	09 51 16.5	-4.7

GEVA	Gevas	120.92	308	PKPdf	PKPdf	09 51 19.1	-1.1
FINES	FINESS Array B	120.96	338	PKP	PKPdf	09 51 18.0	-1.3
	comp=Z,14nm,0.9s,baz=96,slow=7.7,SNR=9.5						
FINES	FINESS Array B	120.96	338	PKIKP	PKPdf	09 51 18.8	-0.5
FINES	FINESS Array B	120.96	338		PKPdf	09 51 18.8	-0.5
VT1	Waterbury	120.98	45	IAMs_20	IAMs_20	10 40 13.6	
	comp=Z,4µm,20.0s						
F60A	Warwick	121.04	42	P	PKPdf	09 51 18.7	-1.2
	baz=288						
NUUK	Nuuk	121.06	17	*i* P	PKPdf	09 51 18.9	-0.5
PRAC	Prado	121.11	92	*e*P	PKPdf	09 51 19.1	-2.0
DAMY	Dhamar	121.23	281	IAMs_20	IAMs_20	10 44 36.0	
	comp=Z,3µm,20.0s						
E60A	Ste Agathe de	121.25	42	P	PKPdf	09 51 18.8	-1.5
	baz=289						
J61A	Chester	121.39	46	P	PKPdf	09 51 20.0	-0.7
	baz=286						
WSPT	Westport, CT	121.39	48	IAMs_20	IAMs_20	10 41 29.0	
	comp=Z,4µm,20.0s						
D60A	Saint Jean D'O	121.41	41	P	PKPdf	09 51 19.4	-1.2
	baz=289						
G61A	St-Isidore-de-	121.53	43	P	PKPdf	09 51 18.8	-2.2
	baz=288						
L61B	Northampton	121.54	47	P	PKPdf	09 51 18.8	-2.2
	baz=285						
LBNH	Lisbon	121.58	44	P	PKPdf	09 51 18.8	-2.2
	baz=287						
YLE	Yale	121.65	48	IAMs_20	IAMs_20	10 41 37.6	
	comp=Z,4µm,19.0s						
F61A	St Evariste	121.67	42	P	PKPdf	09 51 19.7	-1.5
	baz=289						
LPAZ	La Paz	121.71	117	PKP	PKPdf	09 51 22.8	-0.1
	comp=Z,1.3nm,0.5s,baz=238,slow=3.4,SNR=4.5						
LPAZ				PKKPbc	PKKPbc	10 01 20.2	-1.5
	comp=Z,1.4nm,0.8s,baz=74,slow=3.7,SNR=4.0						
D61A	St Aubert, Com	121.79	41	P	PKPdf	09 51 20.1	-1.2
	baz=290						
K62A	Royalston	121.80	46	P	PKPdf	09 51 19.6	-1.9
	baz=286						
K62A	Royalston	121.80	46	IAMs_20	IAMs_20	10 43 05.5	
	comp=Z,4µm,20.0s						
E61A	Lac Etchemin	121.86	42	P	PKPdf	09 51 20.3	-1.3
	baz=290						
J62A	Henniker	121.94	46	P	PKPdf	09 51 20.9	-0.8
	baz=286						
PTBC	PUERTO BERRIO,	121.99	89	*e*P	PKiKP	09 51 26.8	+3.9
SOC	Sochi	122.10	315	*i* PKIKP	PKPdf	09 51 19.6	-2.5
SOC				*e*		09 52 52.8	
SOC				*e*PPP	PPP	09 55 27.6	
SOC				*e*		09 58 15.2	
SOC				*e*SS	SS	10 09 29.0	-4.9
SOC				*e*SSS	SSS	10 14 07.4	
SOC				MLR	MLR		
	comp=Z,3µm,20.0s						
G62A	West of Eustis	122.22	43	IAMs_20	IAMs_20	10 36 02.2	
	comp=Z,4µm,21.0s						
K63A	Dunstable	122.30	46	IAMs_20	IAMs_20	10 51 16.5	
	comp=Z,3µm,19.0s						
HRV	Adam Dziewonsk	122.33	46	P	PKPdf	09 51 21.0	-1.5
	baz=286						
HRV	Adam Dziewonsk	122.33	46	IAMs_20	IAMs_20	10 38 09.4	
	comp=Z,3µm,20.0s						
ATD	Arta Tunnel	122.49	277	IAMs_20	IAMs_20	10 42 52.4	
	comp=Z,3µm,20.0s						
I63A	Otisfield	122.56	44	P	PKPdf	09 51 21.3	-1.6
	baz=288						
I63A	Otisfield	122.56	44	IAMs_20	IAMs_20	10 44 57.2	
	comp=Z,4µm,20.0s						
D62A	Allapoint, All	122.56	40	P	PKPdf	09 51 22.2	-0.6
	baz=291						
D62A	Allapoint, All	122.56	40		PKPdf	09 51 22.3	-0.5
VSU	Vasula	122.58	335	*e*P	PKPdf	09 51 22.1	-0.3
VSU	Vasula	122.58	335	⇓*i*PKIKP	PKPdf	09 51 22.3	-0.2
VSU				MLR	MLR		
	comp=Z,7µm,21.0s						
BCX	Boston College	122.65	46	IAMs_20	IAMs_20	10 38 16.9	
	comp=Z,4µm,20.0s						
G63A	Kingsbury	122.87	43	P	PKiKP	09 51 23.7	0.0
	baz=290						
MARD	Mardin	122.89	308		PKiKP	09 51 24.3	+0.1
L64A	Middleborough	123.00	47	P	PKPdf	09 51 23.4	-0.5
	baz=286						
F63A	Nahmakanta, Br	123.01	42	P	PKPdf	09 51 22.8	-0.9
	baz=290						
PKME	Peaks-Kenny Pk	123.04	43	IAMs_20	IAMs_20	10 34 56.3	
	comp=Z,3µm,21.0s						
E63A	Oxbow	123.20	41	P	PKPdf	09 51 23.7	-0.4
	baz=291						
I64A	Boothbay	123.25	44	P	PKPdf	09 51 23.9	-0.4
	baz=289						
H64A	Troy	123.29	43	P	PKPdf	09 51 23.8	-0.5
	baz=290						
OCAC	Ocana	123.34	87	*e*P	PKiKP	09 51 29.4	+3.6
G64A	Maxfield	123.39	42	P	PKPdf	09 51 23.8	-0.7
	baz=290						
F64A	Sherman	123.45	42	P	PKPdf	09 51 23.6	-1.0
	baz=291						
E64A	Bridgewater	123.58	41	P	PKPdf	09 51 23.8	-1.0
	baz=292						
MTSE	Matsula	123.60	336	*e*P	PKPdf	09 51 23.8	-0.7
PAMC	Pamplona, Colo	123.83	88	*e*P	PKPdf	09 51 21.6	-5.2
AAL	Aland	124.00	339	*e*P	PKiKP	09 51 25.4	-0.1
BOSA	Boshof	124.20	224	PKP	PKPdf	09 51 26.4	-0.4
	comp=Z,3.7nm,0.8s,baz=213,slow=1.8,SNR=5.4						
BATG	Bathurst New B	124.37	39		PKPdf	09 51 26.1	-0.3
MNK	Minsk	124.41	331	*e*PKIKP	PKPdf	09 51 26.0	-0.1
MNK	Minsk	124.41	331	*i* PKP	PKPdf	09 51 25.9	-0.3
	comp=E,2.0nm,0.8s						
MNK				*i* PKP	PKPdf	09 51 25.9	-0.3
	comp=N,18nm,0.8s						
MNK				*i* PKP	PKPdf	09 51 25.9	-0.3
	comp=Z,25nm,0.8s						
MNK				*i* PP	PP	09 53 11.5	-0.3
MNK				*i* SKP	SKPdf	09 55 01.2	+1.5
MNK				*i* PKS		09 55 02.5	
MNK				*i* PPP	PPP	09 55 50.3	
MNK				*i* SKS	SKSdf	09 58 37.8	+1.8
MNK				*i* PS	PS	10 03 10.3	-1.1
MNK				*i* SS	SS	10 10 08.9	+6.8
MNK				*i* SSS	SSS	10 14 40.4	
MNK				*i* LQ	LQ	10 31 12.7	
MNK				*i* LR	LR	10 38 31.9	
MNK				*i* LRM	MLR	10 45 40.0	
	comp=Z,1µm,18.1s						
MNK				*i* LRM	MLR	10 46 20.5	
	comp=N,1µm,19.5s						
MNK				*i* LRM	MLR	10 47 47.8	
	comp=E,178nm,19.6s						
EMMW	East Machias	124.45	43	IAMs_20	IAMs_20	10 40 31.1	
	comp=Z,3µm,20.0s						
IDID	Didziasalis	124.48	332	*e*P	PKPdf	09 51 25.2	-1.0
ISAL	Salakas	124.61	333	*e*P	PKPdf	09 51 26.1	-0.4
IIGN	Ignalina	124.70	332	*e*P	PKPdf	09 51 25.9	-0.8
NACGM	Naroch	124.70	332	*i* PKP	PKiKP	09 51 27.2	+0.2
NACGM				*i* PKP	PKiKP	09 51 27.2	+0.2
NACGM				*i* PKP	PKiKP	09 51 27.2	+0.2
NACGM				*i* PP	PP	09 53 24.4	+11
NACGM				*i* PPP	PPP	09 56 14.5	
NACGM				*i* SKS	SKSdf	09 58 28.7	-7.8
NACGM				*i* SKKS	SKKSac	10 00 09.3	-1.2
NACGM				*i* PS	PS	10 03 23.8	+10
NACGM				*i* SS	SS	10 10 46.0	+40
NACGM				*i* SSS	SSS	10 14 27.8	
NACGM				*i* LQ	LQ	10 30 32.0	
NACGM				*i* LR	LR	10 36 57.6	
UPP	Uppsala	125.04	340	*e*P	PKPdf	09 51 26.1	-1.1
CPUP	Villa Florida	125.35	133	PKP	PKiKP	09 51 29.2	-0.1
	comp=Z,3.6nm,0.7s,baz=288,slow=1.1,SNR=4.7						
PABE	Paberze	125.61	333	*e*P	PKiKP	09 51 28.8	0.0
GAZ	Gaziantep	125.69	308	PKPdf	PKPdf	09 51 29.4	+0.1
AKASG	Malin Array Be	125.78	326	PKP	PKPdf	09 51 28.7	-0.2
	comp=Z,8.5nm,0.7s,baz=57,slow=2.3,SNR=32						
AKASG				PP	PP	09 53 23.4	+2.2
	comp=Z,3.7nm,0.8s,baz=51,slow=6.6,SNR=6.4						
AKASG	Malin Array Be	125.78	326		PKPdf	09 51 28.6	-0.3
AKBB	Malin Array Si	125.78	326	⇓*i*PKIKP	PKPdf	09 51 28.5	-0.4
AKBB	Malin Array Si	125.78	326	IAMs_20	IAMs_20	10 43 50.3	
	comp=Z,4µm,22.0s						
NC303	NORSAR Array S	125.84	344		PKPdf	09 51 27.3	-1.4
KMBO	Kilima Mbogo	125.87	261	PKP	PKPdf	09 51 29.9	-0.5
	comp=Z,1.0nm,0.3s,baz=59,slow=5.9,SNR=1.6						
KMBO	Kilima Mbogo	125.87	261	PKIKP	PKPdf	09 51 30.0	-0.5
SDDR	Presa de Saban	126.00	74	IAMs_20	IAMs_20	10 39 09.6	
	comp=Z,3µm,19.0s						
NB2	NORSAR Subarra	126.04	344	PKPdf	PKPdf	09 51 28.5	-0.7
	comp=Z,3.7nm,0.8s,baz=31,slow=1.9						
NOA	NORSAR Array B	126.04	344	PKP	PKPdf	09 51 28.9	-0.3
	comp=Z,1.9nm,0.9s,baz=210,slow=14,SNR=10.0						
SDV	Santo Domingo	126.06	87	PKP	PKPdf	09 51 30.8	+0.1
	comp=Z,8.0nm,0.8s,baz=33,slow=1.6,SNR=8.3						
HFS	Hagfors	126.08	342	PKP	PKPdf	09 51 28.3	-0.8
	comp=Z,12nm,0.9s						
PBUR	Paburge	126.15	335	*e*P	PKiKP	09 51 32.7	+2.9
FURI	Furi	126.29	273	IAMs_20	IAMs_20	10 43 13.2	
	comp=Z,3µm,20.0s						
SUW	Suwalki	126.91	332	*e*PKP	PKPdf	09 51 29.2	-1.7
SUW	Suwalki	126.91	332	*e*P	PKPdf	09 51 29.5	-1.4
SUW	Suwalki	126.91	332	PKIKP	PKPdf	09 51 29.5	-1.4
SUW	Suwalki	126.91	332		PKPdf	09 51 29.5	-1.4
ILGA	Ilgaz	127.13	314	PKPdf	PKiKP	09 51 32.8	+0.2
ILGA				IAMs_20	IAMs_20	10 47 55.4	
	comp=Z,2µm,22.0s						
SORM	Soroca	127.58	324	⇑P	PKPdf	09 51 32.5	+0.1
SORM	Soroca	127.58	324	⇑PKIKP	PKPdf	09 51 32.5	+0.1
BR131	Keskin Array S	127.63	312	PKIKP	PKPdf	09 51 32.9	-0.1
BR131	Keskin Array S	127.63	312	PKPdf	PKPdf	09 51 32.9	-0.1
BRTR	Keskin Array B	127.63	312	PKP	PKPdf	09 51 32.3	-0.7
	comp=Z,8.8nm,1.1s,baz=132,slow=1.8,SNR=10						
BRTR				PP	PP	09 53 33.2	-0.9
	comp=Z,8.3nm,1.1s,baz=114,slow=6.0,SNR=4.9						
BRTR	Keskin Array B	127.63	312	PKPdf	PKPdf	09 51 32.1	-0.9
ANTO	Ankara	128.19	313	PKIKP	PKPdf	09 51 33.0	-1.0
ANTO				MLR	MLR		
	comp=Z,2µm,21.0s						
ANTO	Ankara	128.19	313		PKPdf	09 51 33.0	-1.0
SAML	Samuel	129.00	111	PKIKP	PKPdf	09 51 36.2	+0.1
SAML	Samuel	129.00	111		PKPdf	09 51 36.2	+0.1
LVV	L'vov	129.06	328	*e*PKIKP	PKiKP	09 51 38.7	+2.8
MDUB	Mudurnu	129.12	314	PKPdf	PKPdf	09 51 35.5	-0.3
TPGR	Topolog	129.13	320	⇑P	PKiKP	09 51 36.6	+0.4
CFR	Carcaliu	129.16	321	⇑P	PKiKP	09 51 36.4	+0.2
BEL	Belsk	129.42	331	*e*PKP	PKiKP	09 51 37.6	+1.1
BIZ	Bicaz	129.50	324	⇑P	PKiKP	09 51 37.8	+0.9
BUR08	Bucovina Ar. S	129.65	325	PKPdf	PKiKP	09 51 37.2	-0.1
BURAR	Bucovina Array	129.65	325	⇑P	PKiKP	09 51 38.4	+1.1
BURAR	Bucovina Array	129.65	325	⇑PKIKP	PKiKP	09 51 38.4	+1.1
BURAR	Bucovina Array	129.65	325	PKPdf	PKiKP	09 51 38.0	+0.7
KWP	Kalwaria Pacla	129.86	328	*e*PKP	PKiKP	09 51 38.1	+0.6
GKP	Gorka Klasztor	130.03	335	*e*PKP	PKiKP	09 51 42.3	+4.6
BBSR	BB Station	130.27	57	IAMs_20	IAMs_20	10 40 21.0	
	comp=Z,4µm,21.0s						
MLR	Muntele Rosu	130.35	322	⇓P	PKPdf	09 51 36.4	-1.6
MLR	Muntele Rosu	130.35	322	⇓PKIKP	PKPdf	09 51 36.4	-1.6
MLR	Muntele Rosu	130.35	322	IAMs_20	IAMs_20	10 54 29.6	
	comp=Z,3µm,19.0s						
DOPR	Dopca	130.43	323	⇑P	PKiKP	09 51 39.4	+0.6
KOLS	Kolonicke sedl	130.50	328	*e*PKIKP	PKiKP	09 51 39.1	+0.2
KOLS				MLR	MLR		
	comp=Z,2µm,26.1s						
KOLS	Kolonicke sedl	130.50	328	*e*PKP	PKiKP	09 51 39.0	+0.2
UZH	Uzhgorod	130.68	327	*e*PKHKP	PKPpre	09 51 20.0	
VOIR		130.91	322	⇑P	PKiKP	09 51 39.8	-0.1
VOIR		130.91	322	⇑PKIKP	PKiKP	09 51 39.8	-0.1
CRVS	Cervenica-Dubn	130.95	328	*e*PKIKP	PKiKP	09 51 40.4	+0.6
CRVS				*e*SS	SS	10 11 24.6	+1.1
CRVS	Cervenica-Dubn	130.95	328	*e*PKP	PKiKP	09 51 40.4	+0.6
CRVS				*e*SS	SS	10 11 24.5	+1.0
CRVS				*e*L	L	10 44 33.5	
OJC	Ojcow	130.95	330	*e*PKP	PKPdf	09 51 39.0	+0.2
OJC	Ojcow	130.95	330	PKIKP	PKPdf	09 51 39.0	+0.2
OJC	Ojcow	130.95	330	PKPdf	PKPdf	09 51 39.0	+0.2
NIE	Niedzica	131.22	329	*e*PKP	PKPdf	09 51 39.6	+0.2
DRGR		131.53	325	⇑P	PKPdf	09 51 40.6	+0.5
DRGR		131.53	325	⇑PKIKP	PKPdf	09 51 40.6	+0.5
LANS	Liptovska Anna	131.81	329	*e*PKIKP	PKiKP	09 51 42.5	+1.0
LANS	Liptovska Anna	131.81	329	*e*PKP	PKiKP	09 51 42.5	+1.0
OKC	Ostrava-Krasne	132.00	331	AMS	AMS	10 55 30.0	
	comp=Z,4µm,15.8s						
KSP	Ksiaz	132.17	333	*e*PKP	PKiKP	09 51 41.8	-0.3
BSEG	Bad Segeberg	132.18	339	*e*L	L	10 54 00.5	
	comp=Z,4µm,20.9s						
GZR	Gura Zlata	132.28	324	⇑P	PKPdf	09 51 41.9	+0.3
GZR	Gura Zlata	132.28	324	⇑PKIKP	PKPdf	09 51 41.9	+0.3
MORC	Moravsky Berou	132.33	331	*e*PKP	PKPdf	09 51 41.7	+0.2
MORC				*e*		09 54 07.9	
MORC	Moravsky Berou	132.33	331	IAMs_20	IAMs_20	10 47 40.0	
	comp=Z,3µm,21.0s						
PSZ	Piszkesteto	132.38	328	IAMs_20	IAMs_20	10 56 22.6	
	comp=Z,3µm,19.0s						
OSTC	Ostas	132.40	333	*e*PKPDF	PKiKP	09 51 43.0	+0.4
OSTC				AMS	AMS	10 54 50.0	
	comp=Z,4µm,18.7s						
SIRR	Siria	132.43	325	⇑P	PKiKP	09 51 46.2	+3.4
CHVC	Chvalec	132.45	333	*e*PKPDF	PKiKP	09 51 42.9	+0.1
CHVC				*e*x	x	09 51 49.9	
CHVC				AMS	AMS	10 54 50.0	
	comp=Z,4µm,17.6s						
KRLC	Kraliky	132.48	332	*e*PKIKP	PKiKP	09 51 42.9	0.0
KRLC				*e*		09 51 49.8	
KRLC				MLR	MLR		
	comp=Z,3µm,21.2s						
KRLC	Kraliky	132.48	332	*e*PKPDF	PKiKP	09 51 42.9	0.0
KRLC				*e*x	x	09 51 49.8	
KRLC				AMS	AMS	10 53 50.0	
	comp=Z,3µm,21.2s						
DPC	Dobruska-Polom	132.50	332	*e*PKIKP	PKiKP	09 51 42.5	-0.4
DPC				*e*		09 51 50.4	
DPC				MLR	MLR		
	comp=Z,4µm,19.4s						
DPC	Dobruska-Polom	132.50	332	*e*PKPDF	PKiKP	09 51 42.5	-0.4
DPC				*e*x	x	09 51 50.4	
DPC				AMS	AMS	10 49 10.0	
	comp=Z,4µm,19.4s						
UPC	Upice	132.53	333	*e*PKIKP	PKiKP	09 51 42.9	0.0
UPC				MLR	MLR		
	comp=Z,4µm,18.0s						
UPC	Upice	132.53	333	*e*PKPDF	PKiKP	09 51 42.9	0.0
UPC				AMS	AMS	10 55 00.0	
	comp=Z,4µm,18.0s						
VYHS	Vyhne	132.55	329	*e*PKIKP	PKiKP	09 51 43.1	+0.1
VYHS				*e*SS	SS	10 12 08.0	+25
VYHS	Vyhne	132.55	329	*e*PKP	PKiKP	09 51 43.1	+0.1
VYHS				*e*SS	SS	10 12 08.0	+25
HERR	Herculane	132.78	323	⇑P	PKiKP	09 51 43.0	-0.5
BZS	Buzias	132.83	324	⇑P	PKPdf	09 51 43.0	+0.5
BZS	Buzias	132.83	324	⇑PKIKP	PKPdf	09 51 43.0	+0.5
JAVC	Velka Javorina	132.89	330	*e*PKP	PKiKP	09 51 43.4	-0.3
JAVC				*e*		09 54 12.4	
VRAC	Vranov	133.10	331	⇑P	PKiKP	09 51 43.8	-0.3
VRAC	Vranov	133.10	331	*e*PKP	PKPdf	09 51 43.0	+0.1
VRAC				*e*		09 54 11.8	
VRAC	Vranov	133.10	331	⇑PKIKP	PKiKP	09 51 43.8	-0.3
PVCC	Panska Ves	133.15	334	AMS	AMS	10 58 00.0	
	comp=Z,4µm,21.1s						
BRG	Berggiesshubel	133.17	334	*e*PKP	PKPdf	09 51 43.4	+0.4
BRG				Amp		09 51 47.9	
	comp=Z,18nm,1.2s						
BRG				*e*x	x	09 51 51.6	
BRG				Amp		09 51 53.4	
	comp=Z,30nm,0.9s						
BRG				PP	PP	09 54 12.2	+3.2
BRG				Amp		09 54 19.2	
	comp=Z,18nm,1.5s						
BRG	Berggiesshubel	133.17	334	SS	SS	10 11 39.0	-11
CLL	Collm	133.23	335	*e*PKPdf	PKiKP	09 51 44.0	-0.2
	comp=Z,11nm,0.9s						
CLL				*i*		09 51 51.4	
	comp=Z,29nm,0.8s						
CLL				*e*PP	PP	09 54 12.0	+2.6
CLL				*e*PKSbc	PKSbc	09 55 12.0	-0.2
CLL				*e*PSKS		10 04 12.0	
CLL				*e*PPS	PPS	10 06 12.0	
CLL				*e*		10 07 12.0	
CLL				*e*SS	SS	10 11 48.0	-2.8
CLL				*e*SSS	SSS	10 16 42.0	
CLL	Collm	133.23	335	*e*PKIKP	PKiKP	09 51 44.0	-0.2
CLL				*i*		09 51 51.4	
CLL				pmax	pmax		
	comp=Z,11nm,0.9s						
CLL	Collm	133.23	335	*e*L	L	10 51 04.4	
	comp=Z,4µm,21.4s						
KRUC	Moravsky	133.37	331	*e*PKP	PKPdf	09 51 43.5	+0.1
KRUC				*e*		09 54 13.9	
MODS	Modra-Piesok	133.41	330	*e*PKIKP	PKPdf	09 51 43.8	+0.3
MODS	Modra-Piesok	133.41	330	*e*PKP	PKPdf	09 51 43.8	+0.3
MODS				*e*SS	SS	10 12 01.6	+8.2
MODS				*e*L	L	10 44 30.6	
VTS	Vitosha	133.50	320	PKIKP	PKPdf	09 51 44.0	0.0
VTS	Vitosha	133.50	320	PKPdf	PKPdf	09 51 44.0	0.0
VTS				IAMs_20	IAMs_20	10 58 01.4	
	comp=Z,3µm,18.0s						
PRA	Prague	133.55	333	AMS	AMS	10 57 00.0	
	comp=Z,2µm,19.9s						
PRU	Pruhonice	133.56	333	*e*PKIKP	PKiKP	09 51 44.6	-0.4
PRU				MLR	MLR		
	comp=Z,4µm,18.3s						
PRU	Pruhonice	133.56	333	*e*PKPDF	PKiKP	09 51 44.6	-0.4
PRU				AMS	AMS	10 57 00.0	
	comp=Z,4µm,18.3s						
ZST	Bratislava	133.62	330	*e*PKIKP	PKiKP	09 51 45.7	+0.6
ZST				*e*SS	SS	10 11 54.1	-1.7
ZST	Bratislava	133.62	330	*e*PKP	PKiKP	09 51 45.7	+0.6
ZST				*e*SS	SS	10 11 54.1	-1.7
TREC	Trest	133.63	332	AMS	AMS	10 50 20.0	
	comp=Z,4µm,18.2s						
SABA	Saba	133.67	76	IAMs_20	IAMs_20	10 42 58.6	
	comp=Z,3µm,20.0s						
BOVS	Bovan	133.90	322	⇑P	PKiKP	09 51 45.4	-0.5
PBCC	Pribram	134.02	333	*e*PKPDF	PKiKP	09 51 46.0	+0.1
MORH	Mrgy, Hungar	134.12	327	⇑P	PKPdf	09 51 45.5	+0.6
FRGS	Fruska Gora	134.13	325	⇑P	PKPdf	09 51 45.6	+0.7
NKC	Novy Kostel	134.28	335	*e*PKIKP	PKiKP	09 51 47.0	+0.5
NKC				*e*		09 51 54.2	
NKC				MLR	MLR		
	comp=Z,4µm,19.8s						
NKC	Novy Kostel	134.28	335	*e*PKPDF	PKiKP	09 51 47.0	+0.5
NKC				*e*x	x	09 51 54.2	
NKC				AMS	AMS	10 50 00.0	
	comp=Z,4µm,19.8s						
CONA	Conrad Observa	134.41	330	*e*P	PKiKP	09 51 46.6	-0.3
	comp=Z,10nm,0.7s						
EKA	Eskdalemuir Ar	134.46	350	PKP	PKPdf	09 51 43.5	-1.8
	comp=Z,3.1nm,0.8s,baz=49,slow=1.7,SNR=3.4						
CKRC	Cesky Krumlov	134.51	332	AMS	AMS	10 55 00.0	
	comp=Z,3µm,19.1s						
KHC	Kasperske Hory	134.62	333	*e*PKIKP	PKPdf	09 51 46.0	+0.2
KHC				*e*		09 51 53.0	
KHC				MLR	MLR		
	comp=Z,4µm,21.7s						
KHC	Kasperske Hory	134.62	333	*e*PKPDF	PKPdf	09 51 46.0	+0.2
KHC				*e*x	x	09 51 53.0	
KHC				AMS	AMS	10 50 10.0	
	comp=Z,4µm,21.7s						
KHC	Kasperske Hory	134.62	333	PKPdf	PKPdf	09 51 45.3	-0.5
DIVS	Divibare	134.65	324	IAMs_20	IAMs_20	10 57 26.3	
	comp=Z,3µm,19.0s						
GEC2	GERESS Array S	134.77	333	PKPdf	PKPdf	09 51 46.1	0.0
GEC2	GERESS Array S	134.77	333	*e*L	L	10 50 59.6	
	comp=Z,4µm,21.5s						
GERES	GERESS Array B	134.77	333	PKP	PKPdf	09 51 44.3	-1.9
	comp=Z,6.2nm,0.8s,baz=48,slow=2.0,SNR=10						
GERES	GERESS Array B	134.77	333	PKIKP	PKPdf	09 51 46.2	0.0
GERES	GERESS Array B	134.77	333		PKPdf	09 51 46.1	0.0
WET	Wettzell	134.91	334	*e*L	L	10 52 03.6	
	comp=Z,3µm,20.9s						
GRA1	Grafenberg Arr	135.20	335	IAMs_20	IAMs_20	10 54 54.5	
	comp=Z,4µm,21.0s						
GRF	Grafenberg Arr	135.20	335	*e*PKPdf	PKiKP	09 51 48.5	+0.2
	baz=39,slow=1.3						
GRF				*e*L	L	10 55 05.3	
	comp=Z,3µm,20.7s						
MOA	Molln	135.23	331	*e*P	PKiKP	09 51 47.9	-0.6
	comp=Z,8.5nm,0.8s						
TSUM	Tsumeb	135.56	228	PKPdf	PKPdf	09 51 48.0	-0.6
FNA	Florina	135.65	319	PKIKP	PKPdf	09 51 47.5	-0.5
FNA	Florina	135.65	319	PKPdf	PKPdf	09 51 47.5	-0.5
SOKA	Soboth	135.68	330	*e*P	PKiKP	09 51 49.3	-0.2
	comp=Z,15nm,1.1s						
TNS	Taunus Mts	135.87	338	*e*L	L	10 55 59.8	
	comp=Z,3µm,21.2s						
PDG	Podgorica	136.06	322	⇑P	PKPdf	09 51 48.1	-0.6
PDG	Podgorica	136.06	322	IAMs_20	IAMs_20	10 59 11.7	
	comp=Z,2µm,20.0s						
KBA	Koelnbreinsper	136.22	331	*e*P	PKiKP	09 51 50.1	-0.6
	comp=Z,11nm,0.8s						
TIR	Tirane	136.30	320	IAMs_20	IAMs_20	10 54 55.5	
	comp=Z,3µm,20.0s						
FUR	Furstenfeldbru	136.35	334	*e*L	L	10 50 14.7	
	comp=Z,3µm,21.5s						
LJU	Ljubljana	136.37	329	*e*PKPdf	PKPdf	09 51 49.6	+0.5
BTNL	Ternell	136.40	340	*d*pPKP	PKiKP	09 51 51.1	+0.4
BTNL				*d*x	x	09 51 58.5	
MYKA	Terra Mystica	136.40	331	*i* P	PKiKP	09 51 50.5	-0.4
	comp=Z,7.5nm,0.9s						
MEM	Membach	136.42	340	*d*PKPdf	PKPdf	09 51 47.3	-1.8
MEM				*d*pPKP	PKiKP	09 51 51.1	+0.4
MEM				*d*x	x	09 51 58.4	
STU	Stuttgart	136.75	336	IAMs_20	IAMs_20	10 58 30.3	
	comp=Z,3µm,18.0s						
ZOU	Zoufplan	136.77	331	IAMs_20	IAMs_20	11 00 56.4	
	comp=Z,2µm,19.0s						
UCC	Uccle	136.79	341	IAMs_20	IAMs_20	10 52 48.8	
	comp=Z,3µm,20.0s						
WATA	Walderalm	136.85	333	*e*P	PKiKP	09 51 51.8	-0.1
	comp=Z,11nm,0.8s						
ABTA	Abfaltersbach	136.85	331	*e*P	PKPdf	09 51 50.1	0.0
	comp=Z,8.0nm,0.7s						
WTTA	Wattenberg	136.87	333	*i* P	PKPdf	09 51 50.9	+0.6
	comp=Z,13nm,1.0s						
BGES	Gesves	136.92	340	*d*pPKP	PKiKP	09 51 51.7	-0.1
BGES				*d*x	x	09 51 58.7	
TRI	Trieste	136.99	329	IAMs_20	IAMs_20	10 52 56.4	
	comp=Z,3µm,20.0s						
MOTA	Moosalm	137.05	333	*e*P	PKPdf	09 51 50.9	+0.3
	comp=Z,12nm,1.0s						
SNF	Seneffe	137.07	341	*d*PKP	PKPdf	09 51 50.6	+0.4
SNF				*d*x	x	09 51 59.9	
BMRD	Maredsous	137.09	341	*d*pPKP	PKiKP	09 51 52.2	+0.1
BMRD				*d*x	x	09 51 59.3	
SQTA	Sankt Quirin	137.10	333	*e*P	PKPdf	09 51 50.4	-0.2
	comp=Z,12nm,0.9s						
STAL	STALIGIAL	137.11	331		PKPdf	09 51 50.5	0.0
WLF	Walferdange	137.17	339	*d*PKiKP	PKPdf	09 51 50.7	+0.3
DOU	Dourbes	137.33	341	*d*pPKP	PKiKP	09 51 53.6	+1.0
DOU				*d*x	x	09 52 00.2	
BFO	Black Forest	137.45	336	IAMs_20	IAMs_20	10 58 59.8	
	comp=Z,3µm,19.0s						
BFO	Black Forest	137.45	336	*e*L	L	10 59 10.9	
	comp=Z,3µm,20.5s						
FETA	Feichten	137.46	333	*i* P	PKiKP	09 51 53.5	+0.3
	comp=Z,7.8nm,0.9s						
DAVA	Damuels	137.63	334	*e*P	PKPdf	09 51 52.2	+0.6
	comp=Z,7.7nm,0.8s						
ECH	Echery	138.00	337	IAMs_20	IAMs_20	10 59 57.2	
	comp=Z,3µm,19.0s						
DAVOX	Davos/Dischmat	138.02	333	PKhKP	PKPpre	09 51 45.4	
	comp=Z,2.1nm,0.5s,baz=76,slow=6.6,SNR=5.2						
DAVOX				PKP	PKPdf	09 51 51.0	-1.3
	comp=Z,11nm,0.9s,baz=28,slow=2.1,SNR=12						
TEOL	Teolo	138.27	331	IAMs_20	IAMs_20	10 51 39.9	
	comp=Z,3µm,22.0s						
TUE	Stuetta	138.49	334	PKPdf	PKPdf	09 51 51.8	-1.5
BDFB	Brasilia	138.73	129	PKP	PKPdf	09 51 53.8	-0.8
	comp=Z,7.6nm,0.9s,baz=154,slow=1.2,SNR=6.6						
BDFB	Brasilia	138.73	129	PKPdf	PKPdf	09 51 53.6	-0.8
BDFB				IAMs_20	IAMs_20	10 44 16.5	
	comp=Z,3µm,22.0s						
NRCA	Norcia	139.32	327		PKPdf	09 51 54.6	-0.2
INTR	Introdacqua	139.44	325	PKPdf	PKPdf	09 51 54.9	-0.1
AQU	L'Aquila	139.49	326	IAMs_20	IAMs_20	10 51 02.9	
	comp=Z,3µm,21.0s						
TIP	Timpagrande	139.49	320	IAMs_20	IAMs_20	10 57 25.9	
	comp=Z,3µm,20.0s						
VLC	Villacollemand	139.77	330	IAMs_20	IAMs_20	10 58 59.8	
	comp=Z,3µm,20.0s						
CEL	Celeste	140.57	319	IAMs_20	IAMs_20	10 58 07.6	
	comp=Z,2µm,19.0s						
BNI	Bardonecchia	140.76	335	PKIKP	PKPdf	09 51 57.2	-0.2
BNI	Bardonecchia	140.76	335	PKPdf	PKPdf	09 51 57.2	-0.2
SSB	Saint Sauveur	141.44	337	PKIKP	PKPdf	09 51 58.0	-0.5
SSB	Saint Sauveur	141.44	337	PKPdf	PKPdf	09 51 58.0	-0.5
SSB	Saint Sauveur	141.44	337	IAMs_20	IAMs_20	11 01 49.3	
	comp=Z,3µm,18.0s						
VSL	Villasalto	143.66	326	IAMs_20	IAMs_20	11 02 51.4	
	comp=Z,3µm,20.0s						
MAHO	Mahon	145.96	332	PKP	PKiKP	09 52 15.4	+4.8
KEST	Kesra	146.25	321	PKPbc	PKPab	09 52 08.8	-0.2
	comp=Z,106nm,1.0s,baz=312,slow=2.0,SNR=43						
KEST	Kesra	146.25	321		PKPab	09 52 09.6	+0.5
KEST				IAMs_20	IAMs_20	11 00 44.6	
	comp=Z,3µm,21.0s						
CMAH	Djebel Manchou	146.78	325	P	PKPbc	09 52 10.0	+0.2
CAEH	'Ain El Ouahch	146.99	325	P	PKiKP	09 52 16.3	+3.4

CKFL	Kef-Lekhel	147.34	325	P	PKPbc	09 52 11.4	-0.1
CASM	Ain Smara	147.57	325	P	PKPbc	09 52 12.3	+0.3
DFRA	Djebel Bou Aff	147.70	326	P	PKiKP	09 52 13.5	-1.0
CTEI	Djebel Teioual	147.76	325	P	PKPbc	09 52 13.0	+0.4
PBRG	Braganca	148.09	347	ePKPbc	PKPbc	09 52 13.2	0.0
PGAV	Gavieira, Arco	148.24	349	eLR	LR	10 46 16.9	
	comp=Z,2µm,17.1s						
PGAV				eLR	LR	10 50 43.1	
	comp=Z,2µm,17.1s						
UCM	Universidad Co	148.55	341	PKP	PKPdf	09 52 04.0	-6.9
POLO	Lamas de Olo	148.72	348	ePKPbc	PKPbc	09 52 14.8	-0.2
MVO	Moncorvo	148.76	347	ePKPbc	PKPbc	09 52 15.1	+0.1
MVO	Moncorvo	148.76	347	eLR	LR	10 51 51.2	
	comp=Z,2µm,20.0s						
PVRL	Vila Real	148.80	348	ePKPbc	PKPbc	09 52 15.7	+0.6
ESDC	Sonseca Array	149.35	342	PKPbc	PKPbc	09 52 15.9	-0.7
PVIS	Viseu	149.38	348	ePKPbc	PKPbc	09 52 16.9	+0.3
PAB	San Pablo	149.59	342	PKP2	PKiKP	09 52 18.0	-0.3
PAB	San Pablo	149.59	342		PKiKP	09 52 17.9	-0.3
MTE	Manteigas	149.61	347		PKiKP	09 52 18.4	+0.2
MTE	Manteigas	149.61	347	ePKPbc	PKiKP	09 52 17.8	-0.4
MTE	Manteigas	149.61	347	ePKPab	PKPab	09 52 24.6	+2.4
MTE	Manteigas	149.61	347	eLR	LR	10 51 11.4	
	comp=Z,2µm,22.0s						
COI	Coimbra	149.97	349	ePKPab	PKPab	09 52 25.9	+2.4
PCBR	Castelo Branco	150.13	347	ePKPbc	PKPbc	09 52 18.7	+0.3
PCBR	Castelo Branco	150.13	347	ePKPab	PKPab	09 52 25.9	+1.7
CART	Cartagena	150.16	336	IAMs_20	IAMs_20	11 03 14.3	
	comp=Z,2µm,21.0s						
PMRV	Marv??o	150.50	347	ePKPbc	PKiKP	09 52 19.8	-0.2
PMRV	Marv??o	150.50	347	ePKPab	PKPab	09 52 27.3	+1.5
PMRV	Marv??o	150.50	347	eLR	LR	10 52 36.6	
	comp=Z,2µm,20.0s						
PSBE	So Bento	150.72	349	ePKPbc	PKiKP	09 52 20.2	-0.3
PSBE	So Bento	150.72	349	ePKPab	PKPab	09 52 27.9	+1.2
PMTG	Montargil	151.03	348	ePKPbc	PKPbc	09 52 20.7	+0.2
PMTG	Montargil	151.03	348	ePKPab	PKPab	09 52 28.3	+0.3
PESTR	Estremoz	151.09	347	PKPbc	PKPbc	09 52 20.7	0.0
PMAFR	Mafra	151.35	349	ePKPbc	PKiKP	09 52 21.9	+0.1
PMAFR	Mafra	151.35	349	ePKPab	PKPab	09 52 29.5	+0.2
EVO	Evora	151.50	347	ePKPbc	PKiKP	09 52 21.9	-0.2
EVO	Evora	151.50	347	ePKPab	PKPab	09 52 29.6	-0.3
PBAR	Barrancos	151.61	345	ePKPbc	PKiKP	09 52 22.2	-0.1
PBAR	Barrancos	151.61	345	ePKPab	PKPab	09 52 29.9	-0.5
PBEJ	Beja	151.95	346	ePKPbc	PKiKP	09 52 23.4	+0.3
PBEJ	Beja	151.95	346	ePKPab	PKPab	09 52 30.6	-1.2
PNCL	Nicolau / Gran	152.01	348	ePKPbc	PKiKP	09 52 23.1	-0.1
PNCL	Nicolau / Gran	152.01	348	ePKPab	PKPab	09 52 31.0	-1.1
MESJ	Messejana	152.21	347	ePKPbc	PKiKP	09 52 23.8	+0.2
MESJ	Messejana	152.21	347	ePKPab	PKPab	09 52 31.1	-1.8
PCVE	Castro Verde	152.37	347	ePKPbc	PKiKP	09 52 24.0	+0.1
PCVE	Castro Verde	152.37	347	ePKPab	PKPab	09 52 31.9	-1.7
PVAQ	Vaqueiros	152.51	346		PKiKP	09 52 24.9	+0.7
PVAQ				PKPab	pPKPbc	09 52 32.5	+0.4
PVAQ				IAMs_20	IAMs_20	11 00 25.4	
	comp=Z,3µm,22.0s						
PVAQ	Vaqueiros	152.51	346	ePKPbc	PKiKP	09 52 24.3	+0.1
PVAQ	Vaqueiros	152.51	346	ePKPab	PKPab	09 52 31.8	-2.4
PVAQ	Vaqueiros	152.51	346	eLR	LR	10 51 34.2	
	comp=Z,2µm,22.0s						
PTEO	Sao Teotonio	152.60	348	ePKPbc	PKiKP	09 52 25.3	+0.9
PTEO	Sao Teotonio	152.60	348	ePKPab	PKPab	09 52 32.5	-2.0
PBDV	Barranco-do-Ve	152.71	346	ePKPbc	PKiKP	09 52 25.8	+1.1
PBDV	Barranco-do-Ve	152.71	346	ePKPab	PKPab	09 52 33.5	-1.6
SFS	San Fernando	152.99	343	PKP	PKPdf	09 52 04.8	-13
SFS	San Fernando	152.99	343	IAMs_20	IAMs_20	11 02 50.4	
	comp=Z,2µm,21.0s						
PFVI	Vila Bisbo	153.02	348	ePKPab	PKPab	09 52 33.9	-2.4
RCBR	Riachuelo	154.10	129	IAMs_20	IAMs_20	11 00 44.2	
	comp=Z,2µm,20.0s						
IFR	Ifrane	155.33	338	PKP	PKPdf	09 52 13.2	-8.3
MDT	Midelt	155.76	336	PKPbc	PKPdf	09 52 30.4	+8.5
	comp=Z,8.6nm,0.8s,baz=52,slow=3.3,SNR=7.6						
MDT				PKPab	PKPab	09 52 48.6	+0.4
	comp=Z,19nm,1.0s,baz=50,slow=2.9,SNR=5.6						
AVE	Averroes	156.30	342	PKP	PKPdf	09 52 36.0	+14
TAM	Tamanrasset	156.34	303	IAMs_20	IAMs_20	11 07 41.6	
	comp=Z,3µm,22.0s						
PMOZ	Porto Moniz, M	158.04	3	eLR	LR	10 52 02.5	
	comp=Z,2µm,25.1s						
TOA0	Torodi Ar. Sit	162.67	280		PKPdf	09 52 30.0	-0.3
TOA0				PKPab	PKPab	09 53 18.0	-0.8
TORD	Torodi Ar. Bea	162.67	280	PKP	PKPdf	09 52 28.6	-1.7
	comp=Z,3.7nm,0.5s,baz=37,slow=1.8,SNR=9.0						
TORD				PKPab	PKPab	09 53 18.5	-0.3
	comp=Z,20nm,1.1s,baz=72,slow=4.6,SNR=6.3						
TORD				PP	PP	09 57 07.0	+3.3
	comp=Z,2.0nm,0.7s,baz=56,slow=5.6,SNR=3.8						
KOWA	Kowa	167.87	289	PKP	PKPdf	09 52 34.3	-0.3
	comp=Z,1.2nm,0.3s,baz=265,slow=4.7,SNR=3.5						
KOWA				PKPab	PKPab	09 53 41.4	-0.3
	comp=Z,25nm,0.9s,baz=55,slow=7.4,SNR=11						
KOWA				PP	PP	09 57 34.9	+4.4
	comp=Z,6.3nm,1.0s,baz=106,slow=5.6,SNR=4.4						
KOWA	Kowa	167.87	289		PKPdf	09 52 33.5	-1.1
KOWA				PKPab	PKPab	09 53 41.3	-0.4
KIC	Kosan Boka	168.16	249	ePKP1	PKPdf	09 52 38.7	+3.8
	comp=Z,34nm,1.4s						
LIC	Lamto	168.37	248	ePKP1	PKPdf	09 52 39.5	+4.5
	comp=Z,68nm,1.1s						
DBIC	Dimbokro	168.38	250	PKP	PKPdf	09 52 35.0	0.0
	comp=Z,4.7nm,0.9s,baz=62,slow=9.0,SNR=3.8						
DBIC				PP	PP	09 57 41.5	+8.5
	comp=Z,3.3nm,1.0s,baz=151,slow=16,SNR=1.3						
DBIC	Dimbokro	168.38	250		PKPdf	09 52 34.2	-0.8
TIC	Toumodi	168.52	250	ePKP1	PKPdf	09 52 39.8	+4.6

IDC 18 09:44:28.4±625.0, 53°.06N×49°.88E, h0km Error ellipse: s-maj=332.9km s-min=123.2km az=110.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I31KZ	AKTYUBINSK INF	5.72	114	i		10 20 40.0	
	baz=301,slow=322,SNR=1.1						
I46RU	ZALESOVO INFRA	20.68	73	i		11 51 14.0	
	baz=281,slow=343,SNR=1.4						
I34MN	SONGINO INFRAS	35.58	75	i		13 23 00.0	
	baz=298,slow=327,SNR=0.6						

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*HEL **18** 10:01:18.9±0.1, 64°.65N×30°.75E, h0km, ML2.1, Explosion*
*KOLA **18** 10:01:20.5, 64°.83N×30°.02E, h0km, ML2.4, Karelia,Finland, Oulu area*
*IDC **18** 10:01:21.4±2.0, 64°.67N×30°.74E, h0km, mb1 3.0/3, mb1mx2.9/43, mbtmp3.1/3, ML2.3/4, Error ellipse: s-maj=26.8km s-min=7.7km az=101.0*
ISC 18 10:01:20.0±1.0, **64°.76N**±0°.03×**30°.45E**±0°.05, **h0km, n25, σ1s.76**/42, **Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KU6	Riekki	1.29	350	PG	Pg	10 01 44.5	-0.2
	baz=167						
KU6				MSG		10 02 01.7	
	comp=Z,6.7nm,0.2s						
KU6				SN	Sn	10 02 04.4	+1.1
MSF	Maaselka	1.30	334	PG	Pb	10 01 44.9	-0.4
	baz=148						
MSF				SG	Sn	10 02 04.9	+1.5
JOF	Joensuu	1.89	168	PG	Pn	10 01 50.4	-3.1
JOF				SG	Sn	10 02 15.6	-2.4
OUL	Oulu	1.97	282	PG	Pb	10 01 57.0	+0.4
	baz=99						
OUL				SG	Sg	10 02 23.4	+0.3
OUF	Merijarvi	2.50	263	PB	Pb	10 02 04.3	-1.4
	baz=81						
OUF				MSG		10 02 36.1	
	comp=Z,13nm,0.2s						
OUF				SG	Sb	10 02 38.5	+1.5
RNF	Rovaniemi	2.61	317	PG	Pb	10 02 08.4	+0.8
	baz=135						
RNF				SG	Sg	10 02 43.5	-0.3
OBF0	Syolatti, Pyha	2.69	267	PG	Pb	10 02 08.3	-0.6
OBF0				SG	Sg	10 02 44.9	-1.3
SUF	Sumiainen	2.80	225	PG	Pn	10 02 08.2	+2.2
	baz=40						
SUF				MSG		10 02 42.1	
	comp=Z,9.4nm,0.2s						
SUF				SG	Sb	10 02 46.5	+0.8
TOF	Tornio	2.88	300	PG	Pg	10 02 14.8	-0.4
TOF				MSG		10 02 48.3	
	comp=Z,6.5nm,0.2s						
TOF				SG	Sg	10 02 51.5	-1.0
APA0	Apatity Array	3.04	19	P	Pn	10 02 09.2	-0.1
APA0				S	Sn	10 02 45.6	-0.7
APA	Apatity	3.07	22	S	Sn	10 02 46.5	-0.5
SGF	Sodankyl	3.13	331	PG	Pg	10 02 18.7	-1.3
	baz=144						
SGF				SB	Sb	10 02 57.0	+1.8
KALU	Kalix	3.17	294	PG	Pg	10 02 19.7	-1.1
	baz=111						
KAF	Kangasniemi	3.24	217	PB	Pn	10 02 14.8	+2.7
KAF				SG	Sb	10 02 58.4	0.0
KEF	Keuruu	3.61	226	PB	Pn	10 02 19.0	+1.8
PAJU	Pajala	3.77	310	PG	Pg	10 02 31.1	-1.1
	baz=122						
VAF	Ylistaro	3.84	247	PG	Pb	10 02 30.4	+1.8
FIA0	FINESS Array S	3.88	213	PG	Pb	10 02 30.0	+0.8
	baz=28						
FIA0				SG	Sb	10 03 19.5	+2.9
FINES	FINESS Array B	3.88	213	Pn	Pn	10 02 20.4	-0.3
	comp=Z,0.2nm,0.3s,baz=32,slow=14,SNR=4.1						
FINES				Pg	Pb	10 02 29.9	+0.8
	comp=Z,0.4nm,0.3s,baz=31,slow=14,SNR=8.3						
FINES				Sn	Sn	10 03 07.0	+0.1
	comp=Z,0.4nm,0.3s,baz=34,slow=20,SNR=5.2						
FINES				Lg	Lg	10 03 20.4	
	comp=Z,1.5nm,0.3s,baz=34,slow=28,SNR=13						
BURU	Burvik	3.90	271	PG	Pg	10 02 33.5	-1.2
VJF	Virojoki	4.44	199	SG	Sb	10 03 34.5	+1.6
PVF	Pernaja	4.73	209	SG	Sb	10 03 45.6	+4.6
ARCES	ARCESS Array B	5.17	340	Pn	Pn	10 02 39.1	+0.6
	baz=155,slow=14,SNR=13						
ARCES				Sn	Sn	10 03 39.6	+0.9
	baz=159,slow=23,SNR=1.6						
ARCES				Lg	Lg	10 04 04.0	
	baz=151,slow=31,SNR=8.4						
HFS	Hagfors	9.03	247	Pn	Pn	10 03 31.3	-0.2
	comp=Z,0.3nm,0.3s,baz=58,slow=14,SNR=7.3						
HFS				Sn	Sn	10 05 08.2	-5.5
	comp=Z,0.1nm,0.3s,baz=46,slow=4.3,SNR=1.5						
HFS				Lg	Lg	10 06 01.3	
	comp=Z,0.3nm,0.3s,baz=59,slow=29,SNR=2.2						
NOA	NORSAR Array B	9.52	256	Pn	Pn	10 03 38.3	0.0
	comp=Z,0.0nm,0.3s,baz=63,slow=12,SNR=2.4						

IDC 18 10:03:08.8±999.0, **53°.61N×47°.90E, h0km, Error ellipse: s-maj=611.5km s-min=139.9km az=108.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I31KZ	AKTYUBINSK INF	7.03	113	i		10 48 50.0	
	baz=301,slow=331,SNR=1.1						
I46RU	ZALESOVO INFRA	21.67	74	i		12 14 17.7	
	baz=283,slow=344						
I34MN	SONGINO INFRAS	36.59	75	i		13 47 40.0	
	baz=303,slow=322,SNR=0.7						

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*HEL **18** 10:16:37.7±0.1, 59°.70N×22°.29E, h0km, ML2.3, ML2.4(UPP), Explosion*
*UPP **18** 10:16:38.0±1.3, 59°.87N×22°.28E, h0km, ML2.4, Suspected explosion*
*IDC **18** 10:16:38.9±1.6, 59°.84N×22°.25E, h0km, mb1 3.3/3, mb1mx3.0/42, mbtmp3.3/3, ML2.2/4, Error ellipse: s-maj=21.4km s-min=6.2km az=161.0*
*NAO **18** 10:16:38.2±1.9, 59°.81N×22°.29E, ML2.4*
*BER **18** 10:16:41.0±4.0, 59°.98N×22°.13E, h0km, ML2.4(NAO), Suspected explosion*
ISC 18 10:16:34.6±0.7, **59°.67N**±0°.04×**22°.25E**±0°.02, **h0km, n46, σ1s.76**/66, **Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MEF	Metsahovi	1.22	62	eP	Pn	10 16 58.8	0.0
MEF				eS	Sb	10 17 14.2	-0.4
AAL	Aland	1.25	295	P	Pn	10 16 59.9	+0.7
AAL				S	Sb	10 17 16.5	+1.0
AAL	Aland	1.25	295	eP	Pn	10 16 59.8	+0.6
AAL				eS	Sb	10 17 16.3	+0.9
MTSE	Matsula	1.25	139	eP	Pn	10 17 00.6	+1.4
MTSE				eS	Sn	10 17 16.3	-0.4
RAF	Rauma	1.38	350	eP	Pb	10 17 02.0	+0.8
RAF				eS	Sb	10 17 19.9	+0.5
NUR	Nurmijrvi	1.47	54	eP	Pb	10 17 03.3	+0.6
NUR				eS	Sb	10 17 22.0	+0.1
ARBE	Arbavere	1.92	95	eP	Pg	10 17 11.1	-0.2
ARBE				eS	Sg	10 17 35.7	-0.4
GRAU	Graesoe	1.98	291	P	Pb	10 17 11.7	+0.3
GRAU	Graesoe	1.98	291	eP	Pb	10 17 11.7	+0.3
PVF	Pernaja	2.01	62	ePB	Pb	10 17 12.5	+0.6
PVF				eS	Sb	10 17 37.6	+0.1
PVF				MSG		10 17 40.3	
	comp=Z,20nm,0.2s						
FORU	Forsmark	2.17	291	P	Pb	10 17 15.1	+0.5
FORU	Forsmark	2.17	291	eP	Pb	10 17 15.1	+0.5
FLYU	Flymyra	2.25	284	P	Pb	10 17 16.0	0.0
FLYU	Flymyra	2.25	284	eP	Pb	10 17 16.0	0.0
NYNU	Nynaeshamn	2.27	255	P	Pb	10 17 17.3	+0.9
NYNU	Nynaeshamn	2.27	255	eP	Pb	10 17 17.3	+0.9
UPP	Uppsala	2.35	277	P	Pg	10 17 19.3	-0.1
UPP	Uppsala	2.35	277	eP	Pg	10 17 19.3	-0.1
FIBU	Brunna	2.49	278	P	Pb	10 17 20.1	0.0
FIA0	FINESS Array S	2.60	45	Pn	Pb	10 17 21.4	-0.6
	baz=227,slow=14						
FIA0				Lg	Lg	10 17 54.6	
	baz=224,slow=28						
FIA0	FINESS Array S	2.60	45	Pn	Pb	10 17 21.4	-0.6
	baz=227,slow=14						
FIA0				Sg	Sb	10 17 54.6	+0.2
	baz=224,slow=28						
FIA0	FINESS Array S	2.60	45	ePB	Pb	10 17 21.9	0.0
FIA0				eSB	Sb	10 17 55.0	+0.5
FIA0				MSG		10 17 57.2	
	comp=Z,17nm,0.1s						
FINES	FINESS Array B	2.60	45	Pn	Pb	10 17 21.4	-0.6
	comp=Z,1.4nm,0.3s,baz=236,slow=13,SNR=96						
FINES				Lg	Lg	10 17 55.5	
	comp=Z,6.0nm,0.3s,baz=229,slow=24,SNR=37						
BACU	Backbrunna	2.61	276	P	Pb	10 17 21.7	-0.4
BACU	Backbrunna	2.61	276	eP	Pb	10 17 21.7	-0.4
VSU	Vasula	2.61	116	ePB	Pb	10 17 22.6	+0.4
VSU				eSB	Sb	10 17 55.4	+0.6
OSTU	Oestervaala	2.63	285	P	Pb	10 17 21.5	-1.1
OSTU	Oestervaala	2.63	285	eP	Pb	10 17 21.5	-1.1
VJF	Virojoki	2.80	70	eP	Pb	10 17 23.5	-1.9
VJF				eS	Sn	10 17 57.2	+2.3
VJF				MSG		10 18 03.4	
	comp=Z,7.7nm,0.1s						
KEF	Keuruu	2.82	26	MSG		10 18 03.8	
	comp=Z,7.4nm,0.1s						
ARNU	Arnoeviken	3.14	312	eP	Pn	10 17 28.2	+3.0
HFS	Hagfors	4.33	280	Pn	Pn	10 17 44.7	+3.1
	comp=Z,0.2nm,0.3s,baz=84,slow=13,SNR=21						
HFS				Sn	Sn	10 18 35.6	+2.8
	comp=Z,0.3nm,0.3s,baz=91,slow=27,SNR=1.3						
HFS				Lg	Lg	10 18 50.8	
	comp=Z,1.1nm,0.3s,baz=93,slow=33,SNR=8.4						
HFS	Hagfors	4.33	280	Pn	Pn	10 17 45.0	+3.4
	baz=98,slow=12						
HFS				Lg	Lg	10 18 51.4	
	baz=94,slow=37						
HFS	Hagfors	4.33	280	Pn	Pn	10 17 45.0	+3.4
	baz=98,slow=12						
HFS				Sg	Sg	10 18 51.4	-2.2
	baz=94,slow=37						
NRA0	NORESS Array S	5.45	286	Pn	Pn	10 17 59.5	+2.6
	baz=81,slow=12						
NRA0				Sn	Sn	10 19 00.5	+0.3
	baz=103,slow=28						
NRA0				Lg	Lg	10 19 25.4	
	baz=95,slow=37						
NRA0	NORESS Array S	5.45	286	Pn	Pn	10 17 59.5	+2.6
	baz=81,slow=12						
NRA0				Sn	Sn	10 19 00.5	+0.3
	baz=103,slow=28						
NRA0				Sg	Sg	10 19 25.4	-3.9
	baz=95,slow=37						
NB2	NORSAR Subarra	5.65	289	Pn	Pn	10 18 02.1	+2.4
	baz=96,slow=14						
NB2	NORSAR Subarra	5.65	289	Pn	Pn	10 18 02.1	+2.4
	baz=96,slow=14						
NOA	NORSAR Array B	5.65	289	Pn	Pn	10 18 01.6	+1.9
	comp=Z,0.0nm,0.3s,baz=111,slow=15,SNR=12						
NOA				Sn	Sn	10 19 05.3	+0.1
	comp=Z,0.0nm,0.3s,baz=109,slow=2.7,SNR=1.1						
NOA				Lg	Lg	10 19 31.8	
	comp=Z,0.1nm,0.3s,baz=102,slow=1.8,SNR=3.9						
BSD	Bornholm Skovb	6.04	224	i P	Pn	10 18 05.9	+0.8
BSD				i S	Sn	10 19 13.7	-1.1
BSD	Bornholm Skovb	6.04	224	eP	Pn	10 18 05.9	+0.8
BSD				i S	Sn	10 19 13.7	-1.1
APA0	Apatity Array	9.28	26	Pn	Pn	10 18 52.9	+3.5
	baz=236,slow=10						
APA0	Apatity Array	9.28	26	Pn	Pn	10 18 52.9	+3.5
	baz=236,slow=10						
ARA0	ARCESS Array S	10.01	7	Pn	Pn	10 18 59.5	+0.1
	baz=185,slow=14						
ARA0	ARCESS Array S	10.01	7	Pn	Pn	10 18 59.5	+0.1
	baz=185,slow=14						
ARCES	ARCESS Array B	10.01	7	Pn	Pn	10 18 59.6	+0.3
	baz=186,slow=13,SNR=13						
ARCES				Sn	Sn	10 20 45.4	-6.8
	baz=188,slow=24,SNR=2.0						

JMA 18 10:20:36.7, 33°.60N×135°.29E, h43km, M3.5, 2C-7D Broadband fault plane solution: P waves. NP1: ϕs220.00000°, δ12.00000°, λ-15.00000°. **NP2:** ϕs326.00000°, δ87.00000°, λ-101.00000°. **Principal axes:** T Plg41.0000°, Azm66.0000°; N Plg11.0000°, Azm326.0000°; P Plg47.0000°, Azm224.0000°; **Near south coast of western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JWM	Minabe	0.25	12	⇓P	Pn	10 20 44.6	-0.2
JWM				S	Sn	10 20 50.0	-0.4
JTNC	Tanabenakahech	0.34	51	⇓P	Pn	10 20 45.6	-0.1
JTNC				S	Sn	10 20 51.8	-0.3
JWKM	Wakayamakushim	0.42	111	⇓P	Pn	10 20 46.4	-0.1
JWY	Kouya	0.67	22	⇓P	Pn	10 20 49.7	-0.1
JWY				S	Sn	10 20 58.8	-0.5
JAI	Aioi	0.72	286	⇑P	Pn	10 20 50.4	-0.1
JAI				S	Sn	10 20 59.9	-0.6
JAWN	Awajishima-nag	0.94	340	⇓P	Pn	10 20 53.6	+0.1
JAWN				S	Sn	10 21 05.7	-0.1
JKN2	Miekihoku	1.04	52	⇓P	Pn	10 20 54.8	0.0
JHE	Heguri	1.10	17	⇓P	Pn	10 20 55.7	0.0
JHE				S	Sn	10 21 09.5	-0.2
JMN	Monobe	1.18	277	⇑P	Pn	10 20 56.6	-0.2
MAT	Matsushiro	3.79	38	P	Pn	10 21 33.8	+1.2
MAT				eS	Sn	10 22 17.8	+1.9

IDC 18 10:52:28.9±19.0, **65°.26S×178°.37E, h0km, mb3.5**/2, **mb1 3.8**/3, **mb1mx3.6**/31, **mbtmp3.5**/3, **ML3.2**/1, **MS3.9**/1, **Ms1 3.9**/1, **ms1mx3.5**/14 **Error ellipse: s-maj=506.1km s-min=45.8km az=82.0, Balleny Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	Vanda	13.30	196	Pn	Pn	10 55 38.5	-0.1
	0.1nm,0.3s,baz=44,slow=18,SNR=9.4						
VNDA				LR	LR	11 00 00.3	
	comp=Z,455nm,18.8s,baz=274,slow=34						
H01W1	Cape Leeuwin H	48.16	277	T	T	11 53 41.5	
	baz=149,slow=76,SNR=9.2						
H01W2	Cape Leeuwin H	48.16	277	T	T	11 53 43.1	
	baz=149,slow=76,SNR=11						
H01W3	Cape Leeuwin H	48.17	277	T	T	11 53 42.8	
	baz=149,slow=76,SNR=8.7						
ASAR	Alice Springs	50.40	304	P	P	11 01 27.9	+0.2
	0.4nm,0.6s,baz=155,slow=7.2,SNR=11						
WRA	Warramunga Arr	53.69	306	P	P	11 01 51.8	-0.4
	0.5nm,0.8s,baz=160,slow=7.0,SNR=4.9						
H03S2	Juan Fernandez	64.80	116	T	T	12 13 47.5	
	baz=205,slow=74,SNR=12						
H03S1	Juan Fernandez	64.80	116	T	T	12 13 48.1	
	baz=205,slow=74,SNR=14						
H03S3	Juan Fernandez	64.82	116	T	T	12 13 48.9	
	baz=205,slow=74,SNR=15						
H03N3	Juan Fernandez	65.14	116	T	T	12 14 10.9	
	baz=211,slow=74,SNR=6.6						
H03N2	Juan Fernandez	65.15	116	T	T	12 14 22.1	
	baz=211,slow=74,SNR=16						
H03N1	Juan Fernandez	65.16	116	T	T	12 14 23.0	
	baz=211						

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*IDC **18** 10:54:31.7±3.4, 18°.32S×178°.06W, h471km±31km, mb3.0/6, mb1 3.3/6, mb1mx2.9/35, mbtmp3.9/6, Error ellipse: s-maj=106.8km s-min=21.4km az=152.0*
ISC 18 10:54:34.6±1.5, **17°.8S**±0°.6×**178°.4W**±0°.3, **h500km, n7, σ1s.45**/7, **mb3.5**/6, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.34	270	P	P	10 55 46.1	-1.9
	0.2nm,0.3s,baz=194,slow=19,SNR=1.5						
CTA	Charters Tower	33.44	260	P	P	11 00 33.1	+1.5
	3.6nm,0.9s,baz=94,slow=15,SNR=1.9						
STKA	Stephens Creek	38.67	241	P	P	11 01 14.0	-0.8
	1.0nm,0.3s,baz=58,slow=9.5,SNR=6.1						
WRA	Warramunga Arr	44.62	259	P	P	11 02 02.8	+0.6
	0.5nm,0.6s,baz=95,slow=7.3,SNR=8.5						
ASAR	Alice Springs	44.80	254	P	P	11 02 04.5	+1.0
	4.0nm,0.5s,baz=90,slow=8.8,SNR=113						
NVAR	Mina Array Bea	79.34	44	P	P	11 05 48.9	+0.5
	0.2nm,0.6s,baz=218,slow=6.6,SNR=2.2						
TXAR	Lajitas Array	85.95	58	P	P	11 06 21.5	-0.3
	0.2nm,0.7s,baz=208,slow=6.3,SNR=3.5						

IDC 18 11:51:21.0±3.5, **9°.53S×112°.72E, h0km, mb3.3**/4, **mb1 3.5**/5, **mb1mx3.4**/37, **mbtmp3.4**/5, **ML3.1**/1, **Error ellipse: s-maj=169.2km s-min=23.8km az=50.0, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	15.16	126	Pn	Pn	11 54 56.1	-0.5
	0.1nm,0.3s,baz=297,slow=11,SNR=1.4						
FITZ				Sn	Sn	11 57 30.2	-15
	0.1nm,0.3s,baz=309,slow=13,SNR=1.7						
WRA	Warramunga Arr	23.30	119	P	P	11 56 31.5	+0.7
	0.4nm,0.7s,baz=297,slow=12,SNR=2.0						
ASAR	Alice Springs	24.64	127	P	P	11 56 43.2	-0.3
	0.5nm,0.7s,baz=305,slow=8.4,SNR=7.1						
SONM	Songino Array	57.38	355	P	P	12 01 11.4	+0.1
	0.6nm,0.9s,baz=162,slow=6.1,SNR=3.1						
MKAR	Makanchi Array	62.30	337	P	P	12 01 44.8	-0.2
	0.1nm,0.4s,baz=149,slow=6.7,SNR=4.4						

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*JMA **18** 12:07:16.9±0.2, 39°.48N×143°.53E, h27km±5km, M3.6*
*IDC **18** 12:07:18.6±2.4, 39°.69N×143°.01E, h0km, mb3.6/4, mb1 3.6/6, mb1mx3.4/36, mbtmp3.5/6, ML2.9/2, Error ellipse: s-maj=54.4km s-min=19.5km az=92.0*
ISC 18 12:07:18.8±1.2, **39°.56N**±0°.06×**143°.30E**±0°.08, **h11km, n22, σ0s.96**/25, **mb3.5**/4, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MIYJ	Miyakonagasawa	1.15	271	P	Pb	12 07 40.1	-0.5
MIYJ				eS	Sn	12 07 56.8	+0.4
JTH	Tanohata	1.17	289	P	Pb	12 07 40.6	-0.4
JTH				eS	Sn	12 07 58.4	+1.3
OFUJ	Ofunato	1.36	250	P	Pn	12 07 42.6	-1.0
JOM	Ohasama	1.56	267	P	Pn	12 07 46.4	0.0
JOM				eS	Sb	12 08 07.3	0.0
JANG	Nango	1.59	301	P	Pn	12 07 46.3	-0.6
JMK	Ichinoseki	1.73	250	P	Pn	12 07 48.2	-0.5
JIO	Ouri	1.88	235	P	Pn	12 07 49.5	-1.4
JRG	Rokugo	2.07	266	P	Pn	12 07 53.9	+0.4
JYK	Kaneyama	2.38	255	P	Pn	12 07 57.8	+0.1
JNBK	Urakawa-nobuka	2.75	351	P	Pn	12 08 03.2	+0.5
JNBK				S	Sn	12 08 37.0	+1.1
JCH	Churui	3.05	1	P	Pn	12 08 06.5	-0.4
JCH				eS	Sn	12 08 41.3	-2.1
JFT	Otama	3.10	230	P	Pn	12 08 06.7	-0.9
ASAJ	Asahikawa	4.58	354	Pn	Pn	12 08 27.9	-0.1
	0.7nm,0.3s,baz=192,slow=17,SNR=9.7						
ASAJ				Sn	Sn	12 09 22.2	+1.0
	0.5nm,0.3s,baz=234,slow=19,SNR=1.6						
ASAJ				Lg	Lg	12 09 38.9	
	baz=217,slow=20,SNR=1.9						
MAT	Matsushiro	5.03	235	P	Pn	12 08 34.8	+0.7

MJAR	Matsushiro Arr	5.03	235	Pn	Pn	12 08 34.5	+0.4
	0.2nm,0.3s,baz=43,slow=12,SNR=17						
SONM	Songino Array	27.72	300	P	P	12 13 05.9	-1.3
	0.3nm,0.6s,baz=75,slow=8.5,SNR=3.7						
H11N2	WAKE ISLAND Hy	28.33	127	T	T	12 42 41.3	
	baz=319,slow=75,SNR=7.8						
H11N1	WAKE ISLAND Hy	28.34	127	T	T	12 42 41.3	
	baz=319,slow=75,SNR=4.5						
H11N3	WAKE ISLAND Hy	28.35	127	T	T	12 42 40.6	
	baz=319,slow=75,SNR=7.7						
ZALV	Zalesovo Beam	41.36	310	P	P	12 15 04.5	0.0
	0.5nm,0.4s,baz=100,slow=7.5,SNR=2.5						
MKAR	Makanchi Array	44.08	300	P	P	12 15 26.1	-0.7
	0.5nm,0.6s,baz=86,slow=9.2,SNR=6.8						
WRA	Warramunga Arr	59.78	190	P	P	12 17 25.8	+1.9
	0.4nm,0.8s,baz=6.7,slow=7.2,SNR=2.1						

IDC 18 12:14:55.2±12.0**, 25°.76S**×**177°.02W, h364**^{km}±141^{km}**,**
mb2.6/3**, mb1 3.0**/4**, mb1mx2.9**/20**, mbtmp3.5**/4**, Error ellipse: s-maj=59.2km s-min=37.8km az=175.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	13.42	200	P	P	12 17 51.7	+0.1
	0.5nm,0.3s,baz=326,slow=18,SNR=7.6						
URZ				S	S	12 20 17.3	-0.6
	0.4nm,0.3s,baz=81,slow=9.3,SNR=1.3						
ASAR	Alice Springs	44.43	262	P	P	12 22 31.9	+0.2
	0.2nm,0.4s,baz=95,slow=7.2,SNR=14						
WRA	Warramunga Arr	45.00	267	P	P	12 22 35.5	-0.6
	0.2nm,0.5s,baz=104,slow=8.2,SNR=6.0						
NVAR	Mina Array Bea	84.25	42	P	P	12 26 47.0	0.0
	0.2nm,0.6s,baz=215,slow=7.6,SNR=2.3						

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*IDC **18** 12:35:44.3±1.6, 30°.40S×177°.44W, h0^{km}, mb4.2/5, mb1 4.3/7, mb1mx4.0/29, mbtmp4.1/7, ML3.5/2, Error ellipse: s-maj=41.2km s-min=22.6km az=111.0*

*NEIC **18** 12:35:47.8±0.8, 30°.33S±0°.06×177°.6W±0°.3, h20^{km}±11^{km}, mb4.2/10, Error ellipse: s-maj=32.5km s-min=9.3km az=91.0*

ISC 18 12:35:49.2±1.4**, 30°.36S**±0°.07×**177°.5W**±0°.2**, h33**^{km}**, n32,**
σ**1**^{s}**52**/27**, mb4.4**/6**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.15	343	Pn	Pn	12 36 08.5	-0.5
	304nm,0.3s,baz=108,slow=20,SNR=22						
RAO				Sn	Sn	12 36 20.7	-2.9
	2µm,0.3s,baz=134,slow=20,SNR=22						
RAO	Raoul Island	1.15	343		Pn	12 36 08.3	-0.7
RAO				Sn	Sn	12 36 21.4	-2.2
URZ	Urewera	9.04	208	Pn	Pn	12 37 54.5	-2.8
	0.3nm,0.3s,baz=297,slow=14,SNR=9.5						
URZ				Sn	Sn	12 39 34.7	-3.2
	2.6nm,0.3s,baz=243,slow=18,SNR=11						
URZ	Urewera	9.04	208	Pn	Pn	12 37 57.1	-0.3
RPZ	Rata Peaks	16.13	211	Pn	Pn	12 39 32.8	-0.5
	0.3nm,0.3s,baz=10,slow=13,SNR=2.1						
RPZ				Sn	Sn	12 42 14.1	-17
	0.2nm,0.3s,baz=108,slow=20,SNR=1.7						
CTAO	Charters Tower	34.19	279	P	P	12 42 34.3	+2.5
STKA	Stephens Creek	34.88	257	P	P	12 42 39.9	+2.3
	2.6nm,0.7s,baz=127,slow=7.4,SNR=7.5						
STKA	Stephens Creek	34.88	257	P	P	12 42 40.1	+2.5
STKA				IAmb	IAmb	12 42 41.5	
	comp=Z,0.9nm,0.9s						
BBOO	Buckleboo	39.37	254	P	P	12 43 16.9	+1.2
AS31	Alice Springs	43.52	267	P	P	12 43 50.2	+0.3
ASAR	Alice Springs	43.52	267	P	P	12 43 49.9	0.0
	comp=Z,0.7nm,0.4s,baz=106,slow=7.4,SNR=33						
ASAR				PcP	PcP	12 45 37.7	+0.3
	comp=Z,0.3nm,0.7s,baz=122,slow=4.0,SNR=2.4						
WR0	Warramunga Arr	44.32	272	P	P	12 43 56.4	0.0
WB2	Warramunga Arr	44.49	272	P	P	12 43 57.6	-0.1
WB2				IAmb	IAmb	12 43 59.1	
	comp=Z,7.0nm,0.9s						
WRAB	Tennant Creek	44.50	272	P	P	12 43 57.5	-0.2
WRA	Warramunga Arr	44.50	272	P	P	12 43 57.5	-0.2
	comp=Z,2.0nm,0.2s,baz=110,slow=8.0,SNR=83						
WRA	Warramunga Arr	44.50	272	P	P	12 43 57.5	-0.2
WB0	Warramunga Arr	44.52	272	P	P	12 43 57.8	-0.1
FITZ	Fitzroy Crossi	52.77	270	P	P	12 45 01.6	+0.3
	comp=Z,2.2nm,0.8s,baz=138,slow=11,SNR=6.2						
FITZ	Fitzroy Crossi	52.77	270	P	P	12 45 03.0	+1.7
FITZ				IAmb	IAmb	12 45 20.0	
	comp=Z,6.1nm,1.1s						
H03S2	Juan Fernandez	80.15	123	T	T	14 17 09.5	
	baz=238,slow=74,SNR=9.4						
H03S1	Juan Fernandez	80.16	123	T	T	14 17 11.0	
	baz=238,slow=74,SNR=7.7						
H03S3	Juan Fernandez	80.17	123	T	T	14 17 09.6	
	baz=238,slow=74,SNR=8.7						
H03N3	Juan Fernandez	80.34	123	T	T	14 17 24.5	
	baz=242,slow=72,SNR=4.8						
H03N2	Juan Fernandez	80.34	123	T	T	14 17 25.5	
	baz=242,slow=72,SNR=5.5						
H03N1	Juan Fernandez	80.36	123	T	T	14 17 25.9	
	baz=242,slow=72,SNR=7.3						
PETK	Petropavlovsk-	85.87	345	P	P	12 48 25.0	-0.1
	comp=Z,2.5nm,1.0s,baz=134,slow=6.2,SNR=2.0						
MKAR	Makanchi Array	118.06	310	PKP	PKiKP	12 54 32.7	+0.3
	comp=Z,0.1nm,0.5s,baz=90,slow=1.4,SNR=3.8						
H10N3	ASCENSION HYDR	138.67	154	T	T	15 30 50.0	
	baz=203						
H10N1	ASCENSION HYDR	138.68	154	T	T	15 30 53.9	
	baz=203,slow=74						
H10N2	ASCENSION HYDR	138.69	154	T	T	15 30 53.4	
	baz=203,slow=74						
FINES	FINESS Array B	145.24	340	PKPbc	PKPdf	12 55 23.1	+0.4
	comp=Z,3.2nm,0.4s,baz=48,slow=3.9,SNR=23						
AKASG	Malin Array Be	151.51	323	PKPbc	PKiKP	12 55 40.0	+0.1
	comp=Z,1.0nm,0.5s,baz=46,slow=2.8,SNR=4.1						

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*DDA **18** 12:39:13.8, 36°.89N×34°.75E, h31^{km}, MW3.6*

*ISK **18** 12:39:13.3, 36°.88N×34°.77E, h22^{km}, ML3.6/34*

*NIC **18** 12:39:13.1±0.0, 36°.92N×34°.91E, h16^{km}±2^{km}, Ml3.5/4*

*GRAL **18** 12:39:16.8±0.4, 36°.62N×34°.78E, h19^{km}±999^{km}, MD3.6*

ISC 18 12:39:13.6±0.9**, 36°.84N**±0°.02×**34°.83E**±0°.02**, h24**^{km}**, n64,**
σ**1**^{s}**10**/86**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DED	Mersin	0.13	349	iP	Pb	12 39 19.5	+1.1
DED				iS	Sb	12 39 23.3	+1.7
KARA	Karaisali	0.46	23	PG	Pb	12 39 23.1	0.0
KARA				SG	Sb	12 39 30.2	+0.6
KRTS	Karatas	0.51	121	PG	Pb	12 39 25.6	+1.7
KRTD	Karatas-Adana	0.53	117	PG	Pb	12 39 26.0	+1.8
KIZK	Mersin	0.66	237	PG	Pb	12 39 26.8	+0.4
KIZK				SG	Sb	12 39 36.3	+1.2
KIZK	Mersin	0.66	237	iP	Pb	12 39 26.8	+0.4
KIZK				iS	Sn	12 39 37.0	+0.1
CEYT	Ceyhan	0.76	77	PG	Pb	12 39 27.9	-0.1
KERG	Konya-Eregli	0.81	316	iP	Pb	12 39 28.5	-0.6
KERG				iS	Sb	12 39 39.0	-0.6
CMRD	Camardi-Nigde	0.83	9	PG	Pb	12 39 28.8	-0.7
SLFK	Silifke-Mersin	0.84	238	PG	Pb	12 39 29.2	-0.2
SILI	Silifke-Mersin	0.87	238	PG	Pb	12 39 30.3	+0.4
SILI				SG	Sn	12 39 42.5	+0.4
KEBE	Keben-Mersin	0.98	247	PG	Pb	12 39 32.1	+0.2
KEBE				SG	Sn	12 39 45.3	+0.3
KOZT	Kozan	1.02	51	PG	Pn	12 39 32.6	+0.2
IKL	Isikli	1.10	237	PN	Pn	12 39 33.1	-0.3
IKL				SN	Sn	12 39 48.6	+0.8
KARG	Kargicak-Mersi	1.10	235	PN	Pn	12 39 33.7	+0.2
TISA	Tisan-Mersin	1.15	234	PN	Pn	12 39 34.2	+0.1
YESI	Yesilovacik-Me	1.15	237	PN	Pn	12 39 34.1	-0.1
NIDE	Nigde/Merkez-G	1.16	358	iP	Pn	12 39 34.3	-0.2
NIDE				iS	Sn	12 39 49.5	-0.2
TEVE	Tevekalti-Mers	1.19	251	PN	Pn	12 39 35.0	+0.3
TEPK	Tepekoy-MERSIN	1.20	240	PN	Pn	12 39 35.3	+0.4
GULN	MERSIN_Gulnar	1.23	238	iP	Pn	12 39 33.8	-1.4
GULN				iS	Sn	12 39 50.6	-0.4
AKKU	Akkuyu-Mersin	1.23	237	PN	Pn	12 39 35.8	+0.5
AKK2	Akkuyu-Mersin	1.25	236	PN	Pn	12 39 35.4	-0.1
AKK1	Akkuyu-Mersin	1.25	237	PN	Pn	12 39 35.8	+0.3
NIG	Nigde	1.28	352	PN	Pn	12 39 36.2	0.0
YAHY	KAYSERI_Yahyal	1.32	18	iP	Pn	12 39 36.7	0.0
YAHY				iS	Sb	12 39 54.6	+0.2
YORU	Yoruktepe-Mers	1.34	240	PN	Pn	12 39 36.9	+0.2
BERE	Bereket-Mersin	1.38	250	PN	Pn	12 39 37.9	+0.4
EREN	Erenkoy	1.41	202	PN	Pn	12 39 38.7	+1.0
EREN	Erenkoy	1.41	202	iP	Pn	12 39 36.8	-0.9
TEKE	Tekeli-Mersin	1.55	244	PN	Pn	12 39 39.9	+0.3
ERMK	Ermenek	1.55	263	iP	Pb	12 39 41.8	0.0
ERMK				iS	Sb	12 40 01.1	0.0
KKBE	Karaman, Kazim	1.56	285	iP	Pn	12 39 40.1	+0.2
KKBE				iS	Sb	12 40 02.2	+1.0
KUZU	Kuzuini	1.80	91	iP	Pn	12 39 42.9	-0.3
KUZU				iS	Sn	12 40 04.6	-0.8
GAZ	Gaziantep	1.94	79	PN	Pn	12 39 46.3	+1.3
GAZ	Gaziantep	1.94	79	P	Pn	12 39 44.4	-0.7
GAZ				S	Sn	12 40 08.4	-0.2
AVNS	Nevsehir-Avano	1.97	0	iP	Pb	12 39 46.9	-1.8
AVNS				iS	Sb	12 40 15.5	+2.7
AKSY	AKSARAY - Alti	2.00	335	iP	Pn	12 39 45.7	-0.2
SARI	SarD1z-Kayseri	2.01	38	PN	Pn	12 39 46.9	+0.7
MVOU	Mavrovouni	2.06	209	P	Pn	12 39 48.4	+1.7
MVOU				AML	AML	12 40 10.9	
	0.5nm,0.3s						
MVOU				AML	AML	12 40 11.8	
	0.6nm,0.2s						
GAZI	Gazipasa	2.11	254	PN	Pn	12 39 48.4	+1.0
GAZI	Gazipasa	2.11	254	iP	Pn	12 39 48.2	+0.8
GAZI				iS	Sb	12 40 14.9	-2.0
ALIN	Konya, Altinte	2.13	314	iP	Pn	12 39 48.4	+0.6
BNN	Bunyan	2.17	21	PN	Pn	12 39 48.9	+0.6
CSS	Mathiatis	2.23	214	PN	Pn	12 39 50.4	+1.4
CSS	Mathiatis	2.23	214	P	Pn	12 39 50.5	+1.4
GZT	Gaziantep	2.25	76	iP	Pn	12 39 49.2	-0.2
YAYX	Yaylak	2.25	339	PN	Pn	12 39 49.7	+0.3
KONT	Konya--Tatoy	2.26	300	PN	Pn	12 39 50.3	+0.9
SERE	Sereflikochisa	2.33	335	PN	Pn	12 39 50.9	+0.4
LADK	Ladik-KONYA	2.39	306	PN	Pn	12 39 51.9	+0.6
KIRS	Kırehir-Merke	2.40	343	iP	Pn	12 39 51.4	-0.1
ASGA	Asgata	2.42	213	P	Pn	12 39 53.5	+1.9
ASGA				S	Sb	12 40 25.1	-0.6
ASGA				AML	AML	12 40 28.5	
	0.6nm,0.5s						
ASGA				AML	AML	12 40 28.5	
	0.6nm,0.5s						
ASGA				AML	AML	12 40 28.7	
	0.4nm,0.5s						
ASGA				AML	AML	12 40 28.7	
	0.4nm,0.5s						
SEDI	Konya, Seydise	2.53	285	iP	Pn	12 39 52.7	-0.6
SZAC	Souni	2.61	218	P	Pn	12 39 56.0	+1.7
SZAC				S	Sb	12 40 29.8	-1.6
SZAC				AML	AML	12 40 32.4	
	1.1nm,0.5s						
SZAC				AML	AML	12 40 32.4	
	1.1nm,0.5s						
SZAC				AML	AML	12 40 34.9	
	1.3nm,0.9s						
SZAC				AML	AML	12 40 34.9	
	1.3nm,0.9s						
KAMT	Kaman	2.68	341	PN	Pn	12 39 55.7	+0.4
HWQ	Hawqa	2.71	160	eP	Pn	12 39 55.9	+0.1
HWQ				eS	Sn	12 40 24.9	-3.0
AKMS	Akamas	2.72	229	P	Pn	12 39 57.8	+2.1
AKMS				S	Sb	12 40 32.2	-2.2
AKMS				AML	AML	12 40 32.6	
	0.9nm,0.7s						
AKMS				AML	AML	12 40 32.6	
	0.9nm,0.7s						
AKMS				AML	AML	12 40 33.9	
	1.0nm,0.5s						
AKMS				AML	AML	12 40 33.9	
	1.0nm,0.5s						
NATA	Nata	2.76	222	P	Pn	12 39 58.6	+2.3
DOGA	KONYA_Doganhis	2.82	298	iP	Pn	12 39 58.7	+1.5
BHL	Bhannes	3.00	167	eP	Pn	12 39 59.9	+0.1
DQRL	Deir Qamar	3.18	169	eP	Pn	12 40 02.0	-0.2
DQRL				eS	Sn	12 40 35.8	-3.6
RCY	Rachaya	3.43	166	eP	Pn	12 40 05.9	+0.2
OSC2	CSNet OBS 4	4.30	210	P	Pn	12 40 19.1	+1.6

DJA 18 13:03:11.3±0.8**, 8°S**±4°×**10°7E**±°**, h10**^{km}**, M4.2**/7**, MLv4.2**/7**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CISI	Cisompet, Garu	0.72	31	P	Pb	13 03 25.8	-0.2
CISI				S	Sg	13 03 35.4	+0.6
LEM	Lembang	1.36	7	P	Pn	13 03 35.9	-0.6
LEM				S	Sn	13 03 54.8	+0.2
DBJI	Dramaga	1.75	337	P	Pn	13 03 41.3	-0.5
JCJI	Jatiwangi	1.87	26	P	Pn	13 03 40.5	-2.9
JCJI				S	Sn	13 04 02.4	-4.7
SMRI	Semarang	3.18	70	P	Pn	13 04 02.3	+0.9
ABJI	Asem Bagus	6.74	87	P	Pn	13 04 58.8	+8.4

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*UCR **18** 13:12:24.4±2.0, 10°.19N×85°.43W, h55^{km}±5^{km}, ML4.2, MW4.8, mb4.5(NEIC), Fault plane solution: NP1: ϕ_s136.88000°, δ48.36000°, λ-18.88000°.*

*IDC **18** 13:12:25.3±0.4, 10°.55N×85°.00W, h45^{km}±4^{km}, mb3.9/14, mb1 4.2/17, mb1mx3.9/45, mbtmp4.2/17, ML3.3/3, MS3.4/4, Ms1 3.4/4, ms1mx3.1/26, Error ellipse: s-maj=25.8km s-min=6.5km az=67.0*

*NEIC **18** 13:12:25.9±1.8, 10°.31N±0°.07×85°.22W±0°.06, h53^{km}±2^{km}, mb4.5/215, Md4.8(UCR), Error ellipse: s-maj=11.8km s-min=6.4km az=220.0*

*INET **18** 13:12:26.3, 10°.13N×85°.34W, h33^{km}, MW4.7*

*SNET **18** 13:12:32.9±0.8, 10°.68N×85°.53W, h35^{km}±837^{km}, ML4.5*

ISC 18 13:12:24.9±0.4**, 10°.23N**±0°.03×**85°.33W**±0°.03**, h48**^{km}±3^{km}**,**
h48^{km}**:pP-P, n516,** σ**1**^{s}**23**/567**, mb4.5**/109**, 22C-27D, Fault plane solution: NP1:**ϕ_s134.64618°**,** δ59.67664°**,** λ-3.90329°. **NP2:**ϕ_s226.61914°**,** δ86.63139°**,** λ-149.61862°. **Principal axes:** T Plg18.3883°, Azm356.6222°**;** N Plg59.4502°, Azm232.3427°**;** P Plg23.4878°, Azm94.9281°**; Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLVR	Palo Verde	0.12	350	⇓eP	Pn	13 12 32.2	-0.7
PLVR				iS	Sn	13 12 37.9	-0.6
ORTG	Ortega, Santa	0.19	317	⇓iP	Pn	13 12 33.7	+0.6
ORTG				iS	Sn	13 12 39.9	+1.0
JTS	Las Juntas de	0.38	80	P	Pn	13 12 35.2	+0.5
	1µm,0.3s,baz=344,slow=3.9,SNR=1736						
JTS				S	Sn	13 12 42.1	+0.5
	4µm,0.3s,baz=336,slow=21,SNR=34						
JTS	Las Juntas de	0.38	80	⇓iP	Pn	13 12 35.0	+0.4
JTS	Las Juntas de	0.38	80		Pn	13 12 34.9	+0.2
JTS				Sn	Sn	13 12 41.4	-0.2
GRZA	Playa Garza	0.43	225	⇑eP	Pn	13 12 34.8	-0.5
GRZA				iS	Sn	13 12 42.4	-0.2
COLC	Colonia	0.45	16	⇑iP	Pn	13 12 36.7	+1.1
CUI	Cuipilapa	0.46	21	⇑iP	Pn	13 12 35.9	+0.2
CUI				iS	Sn	13 12 44.3	+1.0
LIM1	Limonal	0.48	9	⇑iP	Pn	13 12 36.8	+0.9
GUAB	Guayabo de Bag	0.49	12	⇑iP	Pn	13 12 37.0	+1.0
HORNC	Hornillas	0.51	17	⇑iP	Pn	13 12 37.3	+1.0
HORNC				iS	Sn	13 12 45.9	+1.6
GPS2	Hotel Rincn d	0.53	357	⇑eP	Pn	13 12 37.6	+1.1
GPS3	Bodega del ICE	0.53	356	⇑iP	Pn	13 12 37.6	+1.1
HZTE	Horizontes, Gu	0.55	332	⇑iP	Pn	13 12 38.3	+1.6
GBS3	Finca Las Img	0.57	347	⇑iP	Pn	13 12 38.1	+1.1
BUEV	Buena Vista	0.57	352	⇑iP	Pn	13 12 38.2	+1.1
BUEV				iS	Sn	13 12 47.5	+1.7
LAFE	Finca La Fe, P	0.58	135	⇑iP	Pn	13 12 36.7	-0.4
GB1A	Borinquen Arri	0.59	353	⇑iP	Pn	13 12 38.5	+1.2
PACM	Arenal	0.61	65	⇑iP	Pn	13 12 37.6	+0.1
CASO	Castillo	0.62	70	⇓iP	Pn	13 12 38.7	+1.0
ARE1	Arenal 1	0.64	69	⇓eP	Pn	13 12 39.5	+1.6
BUAI	Buenos Aires	0.65	360	iP	Pn	13 12 38.3	+0.3
CEDE	Laguna Cedeo	0.67	67	⇓iP	Pn	13 12 38.8	+0.5
FORC	Fortuna	0.69	70	⇓iP	Pn	13 12 39.8	+1.3
SRA1	San Ramn	0.85	99	⇓eP	Pn	13 12 41.5	+0.8
JACO	JACO, Garabito	0.86	130	⇓iP	Pn	13 12 40.7	0.0
COVE	Coope Vega, Sa	1.03	62	⇑eP	Pn	13 12 44.2	+1.1
HDC	Heredia	1.22	100	⇓iP	Pn	13 12 47.1	+1.4
HDC	Heredia	1.22	100		Pn	13 12 46.9	+1.3
HDC3	Heredia 3	1.22	100	⇓iP	Pn	13 12 47.0	+1.3
SJS	Escuela Geolog	1.29	103	⇓eP	Pn	13 12 47.8	+1.2
LCR2	La Lucha 2	1.39	110	⇓iP	Pn	13 12 48.9	+0.7
RIMA	Rio Macho	1.51	107	⇓eP	Pn	13 12 50.6	+0.9
VTUC	Crater, Volcan	1.56	97	⇓iP	Pn	13 12 52.2	+1.6
CVTR	Volcan Turrial	1.56	97	⇓iP	Pn	13 12 52.2	+1.6
CDM	Cerro de Muert	1.68	113	⇓iP	Pn	13 12 52.9	+0.6
EDDO	Dominical	1.74	124	⇑eP	Pn	13 12 53.0	+0.3
ACON	Acoyapa	1.74	5	⇑iP	Pn	13 12 54.4	+1.7
ACON	Acoyapa	1.74	5		Pn	13 12 54.2	+1.5
PEZE	Perez Zeledon,	1.83	117	⇓iP	Pn	13 12 54.7	+0.7
EDLM	Las Mercedes	1.96	119	eP	Pn	13 12 57.0	+1.2
ESPN	Las Esperanzas	2.20	27	⇑iP	Pn	13 13 00.8	+1.7
ESPN	Las Esperanzas	2.20	27		Pn	13 13 00.7	+1.7
EDPN	Palmar Norte	2.23	124	eP	Pn	13 12 59.9	+0.5
DRK0	Durika	2.27	115	⇓eP	Pn	13 13 00.8	+0.7
EDBA	Buenos Aires	2.28	117	eP	Pn	13 13 00.3	+0.1
RIOS	Rincon, Osa	2.34	130	eP	Pn	13 13 00.7	-0.3
POTG	Potrero Grande	2.47	118	⇓eP	Pn	13 13 03.3	+0.5
LPLA	Las Palmas La	2.58	117	eP	Pn	13 13 04.5	+0.2
LPLA				eS	Sn	13 13 34.2	-0.4
PIRO	Carate, Puerto	2.67	132	eP	Pn	13 13 07.2	+1.7
CCOL	Caracol de Cor	2.94	128	eP	Pn	13 13 11.6	+2.4
BRU2	Volcan	2.96	118	eP	Pn	13 13 10.2	+0.6
CRIN	San Cristobal	2.98	326	eP	Pn	13 13 11.8	+2.0
CRIN	San Cristobal	2.98	326		Pn	13 13 11.6	+1.8
LCND	La Caada	3.96	321	eP	Pn	13 13 24.6	+1.4
LCND				eS	Sn	13 14 05.8	-2.6
LCND				IAML		13 14 12.0	
	comp=Z,1µm,0.4s						
LCND	La Caada	3.96	321	eP	Pn	13 13 24.6	+1.4
LCND				eS	Sn	13 14 05.8	-2.6
LCND				IAML		13 14 12.0	
	comp=Z,1µm,0.4s						
JUCU	Jucuar¡n	4.15	317	eP	Pn	13 13 27.5	+1.6
JUCU				eS	Sn	13 14 11.0	-2.2
JUCU				IAML		13 14 15.3	
	comp=Z,751nm,0.3s						
JUCU	Jucuar¡n	4.15	317	eP	Pn	13 13 27.5	+1.6
JUCU				eS	Sn	13 14 11.0	-2.2
JUCU				IAML		13 14 15.3	
	comp=Z,751nm,0.3s						
TGUH	Tegucigalpa,Un	4.26	334		Pn	13 13 28.7	+1.3
RANC	El Ranchito	4.31	318	eP	Pn	13 13 30.3	+2.2
RANC				IAML		13 14 25.6	
	comp=Z,739nm,0.3s						
RANC	El Ranchito	4.31	318	eP	Pn	13 13 30.3	+2.2
RANC				IAML		13 14 25.6	
	comp=Z,739nm,0.3s						
TECA	Tecapa	4.50	317	eP	Pn	13 13 33.6	+2.9
TECA				eS	Sn	13 14 20.8	-1.1
TECA	Tecapa	4.50	317	eP	Pn	13 13 33.6	+2.9
TECA				eS	Sn	13 14 20.8	-1.1
PQSS	Presa 15 de Se	4.63	317	eP	Pn	13 13 34.8	+2.5
PQSS				eS	Sn	13 14 22.6	-2.2
COEG	Centro de Oper	4.84	314	eP	Pn	13 13 37.7	+2.3
COEG				eS	Sn	13 14 27.9	-2.3
COEG				IAML		13 14 40.3	
	comp=Z,459nm,0.3s						
COEG	Centro de Oper	4.84	314	eP	Pn	13 13 37.7	+2.3
COEG				eS	Sn	13 14 27.9	-2.3
COEG				IAML		13 14 40.3	
	comp=Z,459nm,0.3s						
LFRS	El Faro	4.97	313	eP	Pn	13 13 40.4	+3.2
LFRS				eS	Sn	13 14 32.5	-1.1
LFRS	El Faro	4.97	313	eP	Pn	13 13 40.4	+3.2
LFRS				eS	Sn	13 14 32.5	-1.1
PRVC	Isla de Provid	4.99	51	eP	Pn	13 13 37.5	+0.2
LBRS	Las Brisas	5.04	314	eP	Pn	13 13 40.5	+2.4
LBRS				eS	Sn	13 14 33.7	-1.4
LBRS	Las Brisas	5.04	314	eP	Pn	13 13 40.5	+2.4
LBRS				eS	Sn	13 14 33.7	-1.4
PMON	Piamonte	5.22	312	eP	Pn	13 13 43.0	+2.4
PMON	Piamonte	5.22	312	eP	Pn	13 13 43.0	+2.4
JAYA	Jayaque - finc	5.28	311	eP	Pn	13 13 44.1	+2.6
JAYA				eS	Sn	13 14 38.8	-2.3
JAYA	Jayaque - finc	5.28	311	eP	Pn	13 13 44.1	+2.6
JAYA				eS	Sn	13 14 38.8	-2.3
BCIP	Isla Barro Col	5.51	101	⇓iP	Pn	13 13 45.4	+0.9
BCIP	Isla Barro Col	5.51	101	Pn	Pn	13 13 45.4	+0.9
BCIP	Isla Barro Col	5.51	101	eP	Pn	13 13 43.2	-1.3
ZANG	Zanguenga, Cho	5.53	103	⇑iP	Pn	13 13 46.0	+1.3
ESQI	Esquipulas	5.82	318		Pn	13 13 51.8	+2.9
RTAL	Retalhuleu	7.54	305	Pn	Pn	13 14 15.6	+3.2
DBBC	Dabeiba	9.56	109	eP	Pn	13 14 39.6	-0.5
UREC	San Jos de Ur	9.98	103	eP	Pn	13 14 46.0	+0.1
TEIG	Tepich	10.34	344	P	Pn	13 14 48.0	-2.6
	comp=Z,0.2nm,0.3s,baz=82,slow=2.5,SNR=3.3						
TEIG				LR	LR	13 19 03.5	
	comp=Z,171nm,19.3s,baz=136,slow=39						
PLMC	San Jos del P	10.41	120	eP	Pn	13 14 52.4	+0.7
YOTC	Yotoco, Valle	10.86	124	eP	Pn	13 14 57.0	-0.9
GUY2C	Guyana, Caldas	11.05	116	eP	Pn	13 15 03.0	+2.1
SMLC	San Martn de	11.19	96	eP	Pn	13 15 03.1	+0.7
RREF	El Recreo	11.22	117	eP	Pn	13 15 06.7	+3.4
NORC	Norcasia	11.35	113	eP	Pn	13 15 07.6	+3.1
PTBC	PUERTO BERRIO,	11.36	108	eP	Pn	13 15 06.0	+1.3
TOLC	Tolima	11.39	119	eP	Pn	13 15 08.9	+3.5
BBAC	Balboa, Cauca	11.44	135	eP	Pn	13 15 05.3	-0.6
POPC	Popayan, Colom	11.49	131	eP	Pn	13 15 08.6	+1.8
CMIG	Matias Romero	11.52	307	P	Pn	13 15 09.2	+2.3
	comp=Z,1.6nm,0.3s,baz=127,slow=9.6,SNR=18						
CMIG				S	Sn	13 17 13.9	-0.3
	comp=Z,0.8nm,0.3s,baz=283,slow=21,SNR=5.8						
CMIG				LR	LR	13 20 05.4	
	comp=Z,179nm,19.6s,baz=120,slow=40						
ORTC	Ortega, Tolima	11.81	121	eP	Pn	13 15 12.1	+1.3
SOTA	Rioblanco	11.82	132	eP	Pn	13 15 15.3	+3.9
PCON	Cinco Dias	11.84	131	eP	Pn	13 15 14.9	+3.1
MARP	Paez Belalcaza	11.85	128	eP	Pn	13 15 14.5	+2.9
OTAV	Otavalo	12.05	145	eP	Pn	13 15 17.9	+3.4
OTAV	Otavalo	12.05	145	eP	Pn	13 15 17.7	+3.1
ROSC	El Rosal	12.15	115	P	Pn	13 15 15.3	-0.5
	comp=Z,1.3nm,0.3s,baz=208,slow=23,SNR=1.4						
ROSC				LR	LR	13 21 06.5	
	comp=Z,173nm,18.6s,baz=318,slow=43						
BARC	Barichara	12.54	106	eP	Pn	13 15 21.7	+0.6
GARC	Garzon, Huila	12.62	129	eP	Pn	13 15 21.5	-0.6
CHIC	Chingaza	12.77	115	eP	Pn	13 15 21.7	-2.6
PAMC	Pamplona, Colo	12.81	102	eP	Pn	13 15 25.4	+0.6
RUSC	La Rusia	12.86	109	eP	Pn	13 15 21.4	-4.3
MACC	Macarena, Meta	13.95	124	eP	Pn	13 15 39.7	-0.3
SDV	Santo Domingo	14.55	94		P	13 15 52.0	-1.8
SDV	Santo Domingo	14.55	94	eP	Pn	13 15 49.9	+1.7
TLIG	Tlapa	14.77	301	Pn	P	13 15 54.8	-1.3
061Z	Ochoppi	16.11	14	P	Pn	13 16 08.8	+0.6
656A	Willston	19.23	7	Pn	Pn	13 16 47.0	+0.5
553A	Crawfordville	19.88	2	Pn	Pn	13 16 53.6	-0.5
MTP	Monte Pirata	20.70	66	P	P	13 16 59.5	-1.7
MTP				IAmb	IAmb	13 17 18.2	
	comp=Z,53nm,1.4s						
TIGA	Tifton	21.17	4	P	P	13 17 06.8	+0.6
	baz=184						
344A	Westbrook Farm	21.71	347	P	P	13 17 13.4	+1.4
CZSB	Cruzeiro do Su	21.82	144	eP	P	13 17 16.5	+3.2
833A	Chaparral WMA,	22.33	326	P	P	13 17 19.8	+1.1
	baz=141						
152A	Waverly Hall	22.34	1	P	P	13 17 20.4	+1.6
LRAL	Lakeview Retre	22.75	356	P	P	13 17 23.9	+0.8
	baz=176,SNR=7.7						
LRAL	Lakeview Retre	22.75	356	P	P	13 17 23.7	+0.6
LRAL				IAmb	IAmb	13 17 25.5	
	comp=Z,16nm,0.8s						
Z47A	Carrollton	23.00	354	P	P	13 17 27.1	+1.5
GOGA	Godfrey	23.14	4	P	P	13 17 27.4	+0.4
	baz=184						
GOGA	Godfrey	23.14	4	P	P	13 17 27.8	+0.7
GOGA				IAmb	IAmb	13 17 48.3	
	comp=Z,36nm,1.5s						
435B	Jarrell	23.42	333	P	P	13 17 29.8	+0.1
	baz=148,SNR=5.1						
435B	Jarrell	23.42	333	P	P	13 17 30.2	+0.4
Y49A	Blount Mountai	23.54	358	P	P	13 17 30.7	-0.2
Y49A				IAmb	IAmb	13 17 32.5	
	comp=Z,24nm,1.1s						
Y52A	Lilburn	23.56	3	P	P	13 17 31.2	+0.2
Y52A				IAmb	IAmb	13 17 34.3	
	comp=Z,18nm,0.8s						
Z41A	Richland Creek	23.93	344	P	P	13 17 34.5	-0.1
	baz=161						
HODGE	Hodges	24.06	6	P	P	13 17 36.5	+0.8
HODGE				IAmb	IAmb	13 17 38.6	
	comp=Z,21nm,1.0s						
Y58A	Scranton	24.14	12	P	P	13 17 35.8	-0.6
X48A	Hartselle	24.16	357	P	P	13 17 36.9	+0.3
X48A				IAmb	IAmb	13 17 39.0	
	comp=Z,14nm,0.9s						

FPAL	Fort Paine	24.20	359	P	P	13 17 37.4	+0.3
FPAL				IAmb	IAmb	13 17 58.1	
	comp=Z,13nm,1.1s						
JSC	Jenkinsville	24.23	8	P	P	13 17 38.0	+0.7
JCT	Junction City	24.24	328	P	P	13 17 37.9	+0.3
	baz=143						
JCT	Junction City	24.24	328	P	P	13 17 37.8	+0.3
JCT				IAmb	IAmb	13 17 40.1	
	comp=Z,9.7nm,0.6s						
WHTX	Lake Whitney,	24.39	334	P	P	13 17 39.5	+0.6
	baz=150,SNR=8.4						
WHTX	Lake Whitney,	24.39	334	P	P	13 17 39.4	+0.6
OXF	Oxford	24.46	352	P	P	13 17 39.6	+0.2
	baz=170						
OXF	Oxford	24.46	352	P	P	13 17 39.7	+0.3
Z38A	Mt. Pleasant	24.59	340	P	P	13 17 41.3	+0.8
BIRD	Birdtown, Kers	24.71	10	P	P	13 17 41.8	+0.1
BIRD				IAmb	IAmb	13 17 44.7	
	comp=Z,11nm,0.7s						
BG3	Lake Jocassee	24.75	5	P	P	13 17 43.1	+1.1
BG3				IAmb	IAmb	13 17 57.2	
	comp=Z,9.3nm,0.8s						
PLAL	Pickwick Lake	24.77	355	P	P	13 17 42.6	+0.5
PLAL				IAmb	IAmb	13 17 44.7	
	comp=Z,9.1nm,0.7s						
W52A	Murphy	24.79	3	P	P	13 17 42.9	+0.5
W52A				IAmb	IAmb	13 17 45.6	
	comp=Z,13nm,0.9s						
W50A	Signal Mountai	24.86	0	P	P	13 17 43.2	+0.1
W50A				IAmb	IAmb	13 17 46.1	
	comp=Z,12nm,0.8s						
SWET	Sewanee	24.88	359	P	P	13 17 43.3	0.0
SWET				IAmb	IAmb	13 18 02.2	
	comp=Z,17nm,1.2s						
W45A	Hickory Valley	25.07	353	P	P	13 17 44.0	-0.9
KMSC	Kings Mountain	25.07	8	P	P	13 17 44.9	0.0
	baz=189						
X40A	Basin Creek Fa	25.11	345	P	P	13 17 45.8	+0.5
	baz=162						
CPCT	Cooper Cave	25.12	2	P	P	13 17 45.4	+0.1
W57A	Gilead	25.29	10	P	P	13 17 47.3	+0.4
W57A				IAmb	IAmb	13 17 49.4	
	comp=Z,31nm,1.4s						
W58A	Raeford	25.30	12	P	P	13 17 46.2	-0.8
	baz=194						
MIAR	Mount Ida	25.36	344	P	P	13 17 47.8	+0.3
	baz=160,SNR=10						
MIAR	Mount Ida	25.36	344	P	P	13 17 47.8	+0.3
MIAR				IAmb	IAmb	13 17 50.3	
	comp=Z,17nm,0.8s						
TKL	Tuckaleechee C	25.36	3	P	P	13 17 46.1	-1.5
	comp=Z,6.8nm,0.7s,baz=152,slow=17,SNR=2.0						
TKL	Tuckaleechee C	25.36	3	P	P	13 17 48.5	+1.0
TKL				IAmb	IAmb	13 17 51.3	
	comp=Z,13nm,0.8s						
HPIG		25.39	314	P	P	13 17 50.3	+2.2
V53A	Saluda	25.43	5	P	P	13 17 47.8	-0.5
V53A				IAmb	IAmb	13 18 11.8	
	comp=Z,12nm,0.8s						
V48A	Smith Brothers	25.44	357	P	P	13 17 48.2	0.0
V48A				IAmb	IAmb	13 17 52.8	
	comp=Z,11nm,0.6s						
V51A	Loudon	25.48	2	P	P	13 17 49.0	+0.4
V52A	Sevierville	25.55	3	P	P	13 17 49.7	+0.5
V52A				IAmb	IAmb	13 17 57.1	
	comp=Z,22nm,1.4s						
TXAR	Lajitas Array	25.60	321	P	P	13 17 50.6	+0.6
	comp=Z,4.9nm,0.5s,baz=143,slow=8.2,SNR=32						
TXAR				pP	pP	13 18 03.8	+1.4
	comp=Z,8.4nm,0.7s,baz=140,slow=10,SNR=12						
TXAR				PcP	PcP	13 21 21.9	+1.8
	comp=Z,1.3nm,0.8s,baz=141,slow=5.8,SNR=5.7						
TXAR				ScP	ScP	13 24 59.1	+3.4
	comp=Z,3.4nm,1.0s,baz=126,slow=6.4,SNR=15						
TXAR	Lajitas Array	25.60	321	P	P	13 17 49.9	-0.1
TX31	Lajitas Ar. Si	25.61	321	P	P	13 17 49.9	-0.1
TX32	Lajitas Array	25.61	321	P	P	13 17 50.0	+0.1
TX32				IAmb	IAmb	13 18 06.5	
	comp=Z,9.7nm,0.7s						
W41B	Gary Mavity, V	25.62	347	P	P	13 17 50.1	+0.2
	baz=164						
WHAR	Wooly Hollow	25.75	347	P	P	13 17 51.1	+0.1
CLTN	Cedars of Leba	25.77	358	P	P	13 17 51.3	+0.1
CLTN				IAmb	IAmb	13 17 55.6	
	comp=Z,8.7nm,0.7s						
V56A	Mocksville	25.85	9	P	P	13 17 51.4	-0.5
	baz=191						
WVT	Waverly	25.89	355	P	P	13 17 51.9	-0.4
	baz=174						
ABTX	Abilene, Hawle	25.91	331	P	P	13 17 53.0	+0.4
ABTX				pP	pP	13 18 06.5	+1.4
ABTX				IAmb	IAmb	13 18 07.6	
	comp=Z,19nm,0.9s						
X37A	Clayton	25.93	341	P	P	13 17 52.7	0.0
X37A				IAmb	IAmb	13 17 55.6	
	comp=Z,11nm,0.6s						
W39A	Magazine	26.03	344	P	P	13 17 54.3	+0.8
	baz=160						
W39A	Magazine	26.03	344	P	P	13 17 54.1	+0.5
W39A				IAmb	IAmb	13 17 56.4	
	comp=Z,9.3nm,0.8s						
V58A	Windy Hill, Pi	26.07	12	P	P	13 17 54.3	+0.3
V58A				IAmb	IAmb	13 17 55.5	
	comp=Z,12nm,0.7s						
H06E1	SOCORRO T-PHAS	26.17	292	T	T	13 45 00.6	
	SNR=16						
U49A	Red Boiling Sp	26.17	359	P	P	13 17 54.2	-0.7
V59A	Middlesex	26.23	13	P	P	13 17 55.5	+0.1
	baz=196						
TZTN	Tazewell	26.25	3	P	P	13 17 55.2	-0.4
TZTN				IAmb	IAmb	13 18 06.7	
	comp=Z,20nm,1.2s						
LCAR	Lake Charles	26.27	349	P	P	13 17 55.3	-0.4
LCAR				IAmb	IAmb	13 17 56.4	
	comp=Z,7.1nm,0.6s						
FCAR	Ozark Folk Cen	26.29	347	P	P	13 17 55.0	-0.9
U54A	Nelsons Funny	26.37	6	P	P	13 17 57.2	+0.5
	baz=188						
U54A	Nelsons Funny	26.37	6	P	P	13 17 55.7	-1.1
V60A	Jim Taylor Roa	26.46	15	P	P	13 17 58.0	+0.5
	baz=198						
U57A	Blanch	26.65	11	P	P	13 17 59.1	-0.1
	baz=193						
T50A	Nancy	26.68	1	P	P	13 17 58.9	-0.6
T47A	Sharon Grove	26.69	357	P	P	13 17 59.3	-0.2
T47A				IAmb	IAmb	13 18 23.0	
	comp=Z,10nm,0.8s						
U58A	Oxford	26.77	12	P	P	13 18 00.3	+0.1
	baz=195						
U40A	Yellville	26.89	346	P	P	13 18 01.9	+0.5
	baz=163						
T42A	Van Buren	27.19	350	P	P	13 18 03.3	-0.7
T57A	Hurt	27.21	11	P	P	13 18 04.9	+0.6
	baz=193						
WMOK	Wichita Mounta	27.32	335	P	P	13 18 05.0	-0.3
	baz=150,SNR=5.6						
WMOK	Wichita Mounta	27.32	335	P	P	13 18 04.6	-0.7
WMOK				IAmb	IAmb	13 18 09.8	
	comp=Z,8.7nm,0.8s						
S51A	Beattyville	27.34	3	P	P	13 18 04.6	-0.8
S51A				IAmb	IAmb	13 18 11.5	
	comp=Z,13nm,0.9s						
PTGA	Pitinga	27.48	112	P	P	13 18 05.9	-1.0
	comp=Z,7.2nm,0.8s,baz=312,slow=22,SNR=4.0						
PTGA	Pitinga	27.48	112	*e*P	P	13 18 08.7	+1.7
ETMB	Extrema	27.53	136	*e*P	P	13 18 08.4	+1.0
MGMO	Mountain Grove	27.53	348	P	P	13 18 06.8	-0.3
MGMO				IAmb	IAmb	13 18 08.9	
	comp=Z,17nm,1.4s						
S44A	Carbondale	27.58	353	P	P	13 18 06.4	-1.1
S44A				IAmb	IAmb	13 18 25.3	
	comp=Z,6.7nm,0.8s						
WCI	Wyandotte Cave	27.90	358	P	P	13 18 10.4	0.0
WCI				IAmb	IAmb	13 18 24.1	
	comp=Z,14nm,1.1s						
MACA	Manacapuru-AM	27.91	117	*e*P	P	13 18 12.0	+1.2
R49A	Shelbyville	27.95	0	P	P	13 18 10.7	-0.1
R49A				IAmb	IAmb	13 18 11.7	
	comp=Z,27nm,1.5s						
S57A	Dark Hollow, R	28.01	11	P	P	13 18 11.2	-0.2
	baz=193						
S58A	Poland Farm, P	28.05	12	P	P	13 18 11.5	-0.2
	baz=195						
GDL2	Guadalupe Moun	28.07	324	P	P	13 18 11.9	-0.2
R54A	Victor	28.11	7	P	P	13 18 12.4	+0.2
	baz=189						
JSRW	J. Sargeant Re	28.16	13	P	P	13 18 12.4	-0.3
CCM	Cathedral Cave	28.22	350	P	P	13 18 13.5	+0.3
	baz=167						
CCM	Cathedral Cave	28.22	350	P	P	13 18 12.7	-0.5
CCM				IAmb	IAmb	13 18 13.9	
	comp=Z,7.3nm,0.8s						
S39A	Bolivar	28.28	347	P	P	13 18 13.1	-0.7
MNTX	Cornudas Mount	28.31	322	P	P	13 18 14.6	+0.4
	baz=134						
MNTX	Cornudas Mount	28.31	322	P	P	13 18 14.2	0.0
MSTX	Muleshoe	28.54	329	P	P	13 18 16.7	+0.4
	baz=142						
R40A	Maddies Statio	28.63	349	P	P	13 18 16.1	-0.7
AMTX	Amarillo	28.73	331	P	P	13 18 17.8	-0.1
	baz=145						
AMTX	Amarillo	28.73	331	P	P	13 18 17.4	-0.6
Q51A	Peebles	28.73	3	P	P	13 18 17.6	-0.2
Q51A				IAmb	IAmb	13 18 37.8	
	comp=Z,20nm,1.0s						
Q44A	Meyer Farm, Va	28.75	354	P	P	13 18 17.4	-0.5
Q44A				IAmb	IAmb	13 18 30.6	
	comp=Z,12nm,0.9s						
CBN	Corbin Frederi	28.76	13	P	P	13 18 16.8	-1.2
	baz=196						
P48A	Milroy	29.11	360	P	P	13 18 20.3	-0.8
P48A				IAmb	IAmb	13 18 41.2	
	comp=Z,26nm,1.5s						
BBSR	BB Station	29.13	38	P	P	13 18 20.5	-0.9
SAML	Samuel	29.13	130	P	P	13 18 21.4	-0.2
SAML	Samuel	29.13	130	*e*P	P	13 18 21.9	+0.3
P49A	Miami Univ. Ec	29.19	1	P	P	13 18 21.3	-0.5
	baz=181						
P49A	Miami Univ. Ec	29.19	1	P	P	13 18 21.0	-0.9
P49A				IAmb	IAmb	13 18 41.9	
	comp=Z,9.2nm,1.1s						
Q57A	Strasburg	29.35	11	P	P	13 18 23.2	-0.1
	baz=194						
P53A	Whipple	29.35	6	P	P	13 18 23.0	-0.3
P52A	Corning	29.43	5	P	P	13 18 24.0	+0.1
	baz=186						
P52A	Corning	29.43	5	P	P	13 18 23.1	-0.8
P52A				IAmb	IAmb	13 18 25.5	
	comp=Z,11nm,0.8s						
P57A	Homestead Farm	29.86	11	P	P	13 18 27.7	-0.1
	baz=194						
ACSO	Alum Creek Sta	29.96	4	P	P	13 18 28.2	-0.5
	baz=184						
SFIN	Lafayette	30.07	357	P	P	13 18 29.5	-0.1
	baz=176						
SFIN	Lafayette	30.07	357	P	P	13 18 29.6	0.0
SFIN				IAmb	IAmb	13 18 49.0	
	comp=Z,10nm,0.8s						
O53A	New Philadelph	30.12	6	P	P	13 18 30.4	+0.3
	baz=188						
O53A	New Philadelph	30.12	6	P	P	13 18 30.1	0.0
319A	Douglas	30.59	317	P	P	13 18 34.1	-0.5
319A				IAmb	IAmb	13 18 37.9	
	comp=Z,7.6nm,0.9s						
BNM	Barren Site	30.78	324	P	P	13 18 37.1	+0.8
ANMO	Albuquerque	31.26	325	P	P	13 18 41.6	+1.1
	baz=137						
ANMO	Albuquerque	31.26	325	P	P	13 18 40.9	+0.5
M53A	WI Miller and	31.36	7	P	P	13 18 41.4	+0.4
	baz=189						
M53A	WI Miller and	31.36	7	P	P	13 18 40.4	-0.6
LPAZ	La Paz	31.36	147	P	P	13 18 43.9	+1.9
	comp=Z,0.7nm,0.5s,baz=15,slow=2.3,SNR=2.4						
LPAZ	La Paz	31.36	147	*e*P	P	13 18 43.9	+1.9
M54A	Oil Creek Stat	31.56	8	P	P	13 18 42.5	-0.2
	baz=190						
ALLY	Alegheny Colle	31.63	7	P	P	13 18 42.3	-1.1
M55A	Ridgway	31.65	9	P	P	13 18 44.0	+0.3
M55A				IAmb	IAmb	13 18 59.6	
	comp=Z,11nm,0.9s						
N59A	State Game Lan	31.72	14	P	P	13 18 44.7	+0.5
	baz=198						
M56A	Emporium	31.77	10	P	P	13 18 45.3	+0.7
	baz=193						
M56A	Emporium	31.77	10	P	P	13 18 44.6	+0.1
T25A	Trinidad	31.85	330	P	P	13 18 46.5	+0.9
	baz=142						
L42A	Oliver, Polo	31.88	354	P	P	13 18 44.2	-1.4
L42A				IAmb	IAmb	13 19 04.7	
	comp=Z,11nm,0.8s						
L53A	Girard	31.92	7	P	P	13 18 45.9	0.0
	baz=189						
PB16	IPOC Station P	32.39	151	P	P	13 18 51.3	+0.4
WVNY	West Valley, N	32.59	9	P	P	13 18 52.4	+0.6
L58A	Harry Jones Me	32.77	13	P	P	13 18 52.7	-0.7
	baz=197						
ITTB	Itaituba	32.85	115	*e*P	P	13 18 55.5	+1.1
JFWS	Jewell Farm	32.85	353	P	P	13 18 53.4	-0.7
	baz=171						
JFWS	Jewell Farm	32.85	353	P	P	13 18 52.9	-1.1
JFWS				IAmb	IAmb	13 19 12.4	
	comp=Z,15nm,1.2s						
SDCO	Great Sand Dun	32.87	330	P	P	13 18 55.3	+0.6
	baz=141,SNR=6.0						
SDCO	Great Sand Dun	32.87	330	P	P	13 18 55.0	+0.3
MNMC	Minye Minye	33.04	152	P	P	13 18 57.9	+1.6
MNMC				IAmb	IAmb	13 19 11.6	
	comp=Z,9.1nm,1.0s						
X18A	Snowflake	33.04	321	P	P	13 18 57.1	+1.1
X18A				IAmb	IAmb	13 18 59.5	
	comp=Z,8.9nm,1.0s						
MALB	Monte Alegre	33.17	109	*e*P	P	13 18 58.3	+1.1
W18A	Petrified Fore	33.30	322	P	P	13 18 59.7	+1.4
	baz=132						
W18A	Petrified Fore	33.30	322	P	P	13 18 59.8	+1.4
214A	Organ Pipe Nat	33.36	314	P	P	13 19 00.4	+1.6
	baz=124						
K58A	Earlville	33.50	13	P	P	13 18 58.9	-0.9
I51A	Listowel	33.66	6	P	P	13 19 00.1	-1.0
	baz=187						
I42A	Draeger Farm,	33.69	355	P	P	13 18 59.9	-1.4
J56A	Wolcott	33.74	11	P	P	13 19 02.7	+0.9
	baz=195						
J56A	Wolcott	33.74	11	P	P	13 19 01.3	-0.5
X16A	Lo Mia Camp, P	33.91	319	P	P	13 19 04.2	+0.5
X16A				IAmb	IAmb	13 19 06.6	
	comp=Z,5.6nm,0.8s						
VILB	Vilhena	33.95	132	*e*P	P	13 19 05.3	+1.3
MVCO	Mesa Verde	34.04	326	P	P	13 19 05.8	+1.0
	baz=136						
MVCO	Mesa Verde	34.04	326	P	P	13 19 05.0	+0.2
H43A	Windswept, Lux	34.19	357	P	P	13 19 04.3	-1.4
I37A	Lemond, Waseca	34.38	350	P	P	13 19 07.7	+0.3
NPGB	Novo Progresso	34.43	119	*e*P	P	13 19 08.2	0.0
WUAZ	Wupatki	34.57	321	P	P	13 19 10.5	+1.1
	baz=130,SNR=6.5						
WUAZ	Wupatki	34.57	321	P	P	13 19 09.9	+0.6
WUAZ				IAmb	IAmb	13 19 12.9	
	comp=Z,10nm,1.1s						
SMCO	Snowmass	34.70	330	P	P	13 19 10.4	-0.3
H53A	Bobcaygeon	34.72	8	P	P	13 19 10.1	-0.1
	baz=192						
ECSD	EROS Data Cent	34.79	346	P	P	13 19 10.5	-0.4
	baz=160						
ECSD	EROS Data Cent	34.79	346	P	P	13 19 10.2	-0.7
SADO	Sadowa	34.83	8	P	P	13 19 09.9	-1.4
SADO				IAmb	IAmb	13 19 25.4	
	comp=Z,8.6nm,0.9s						
PV15	Paradox Valley	34.85	327	P	P	13 19 12.4	+0.6
PV15				IAmb	IAmb	13 19 15.3	
	comp=Z,6.3nm,1.1s						
PV03	Paradox Valley	34.98	327	P	P	13 19 13.5	+0.6
PV03				IAmb	IAmb	13 19 14.6	
	comp=Z,5.2nm,0.6s						
PV12	Saucer Basin,	35.01	327	P	P	13 19 13.7	+0.5
PV07	Paradox Valley	35.01	327	P	P	13 19 13.4	+0.2
PV07				IAmb	IAmb	13 19 41.0	
	comp=Z,7.5nm,1.3s						
PV18	Skein Mesa, Pa	35.01	327	P	P	13 19 13.8	+0.6
PV11	David Mesa, Pa	35.03	327	P	P	13 19 13.9	+0.6
PV16	Nyswonger Mesa	35.06	327	P	P	13 19 13.7	0.0
PV16				IAmb	IAmb	13 19 15.2	
	comp=Z,5.8nm,0.6s						
PV17	East Wray Mesa	35.06	327	P	P	13 19 13.9	+0.3
PV19	Morning Glory	35.10	327	P	P	13 19 14.1	+0.2
PV19				IAmb	IAmb	13 19 15.4	
	comp=Z,6.1nm,0.6s						
PV04	Paradox Valley	35.12	327	P	P	13 19 14.6	+0.6
PV04				IAmb	IAmb	13 19 16.4	
	comp=Z,8.8nm,1.2s						
PV22	Blue Mesa, Par	35.16	327	P	P	13 19 14.9	+0.5
PV22				IAmb	IAmb	13 19 28.7	
	comp=Z,5.4nm,1.1s						
PV14	Lion Creek, Pa	35.16	327	P	P	13 19 14.7	+0.2
PV14				IAmb	IAmb	13 19 16.0	
	comp=Z,3.9nm,0.7s						
PV10	Paradox Valley	35.18	327	P	P	13 19 14.6	0.0
SIV	San Ignacio	35.43	137	P	P	13 19 17.6	+0.8
	comp=Z,2.2nm,0.7s,baz=324,slow=11,SNR=7.7						
SIV				PcP	PcP	13 21 47.7	+1.8
	comp=Z,0.7nm,0.6s,baz=333,slow=2.3,SNR=2.3						
LONY	Lake Ozonia	35.50	13	P	P	13 19 16.5	-0.5
	baz=198						
LONY	Lake Ozonia	35.50	13	P	P	13 19 15.8	-1.2
LONY				IAmb	IAmb	13 19 18.7	
	comp=Z,12nm,1.4s						
PDMCI	Parker Dam,Lak	35.62	317	P	P	13 19 20.4	+2.2
	baz=125						
U15A	North Rim	35.72	321	P	P	13 19 20.1	+0.7
U15A				IAmb	IAmb	13 19 22.4	
	comp=Z,4.1nm,0.9s						
E43A	Lone Tree Farm	36.05	358	P	P	13 19 20.0	-1.7
E43A				IAmb	IAmb	13 19 37.9	
	comp=Z,7.4nm,0.8s						
O20A	White River Ci	36.07	330	P	P	13 19 23.1	+0.9
	baz=139						
O20A	White River Ci	36.07	330	P	P	13 19 23.0	+0.9
O20A				IAmb	IAmb	13 19 43.1	
	comp=Z,3.7nm,0.8s						
ALGO	Algonquin Park	36.15	9	P	P	13 19 21.6	-0.9
	baz=192						
BC3	Big Chuckawall	36.16	315	P	P	13 19 24.4	+1.5
	baz=123						
F36A	Milaca	36.20	350	P	P	13 19 21.0	-2.0
F36A				IAmb	IAmb	13 19 38.7	
	comp=Z,9.9nm,1.3s						
IRM	Iron Mountain	36.22	316	P	P	13 19 24.9	+1.6
	baz=124						
H62A	Milan	36.35	17	P	P	13 19 25.5	+1.2
	baz=204						
PKCU	Pink Cliffs	36.40	323	P	P	13 19 26.6	+1.4
KNB	Kanab	36.43	322	P	P	13 19 26.6	+1.3
SRU	San Rafael Swe	36.51	326	P	P	13 19 26.6	+0.6
LCMT	Little Creek M	36.69	321	P	P	13 19 28.9	+1.5
MTPU	Mount Pierson	36.72	323	P	P	13 19 29.1	+1.1
BELC	Belle Mtn. Jos	36.72	315	P	P	13 19 29.5	+1.7
	baz=123,SNR=6.0						
TPFO	Pinon Flats	36.83	314	P	P	13 19 31.1	+2.3
	baz=122,SNR=6.6						
PFO	Pinyon Flats O	36.84	314	P	P	13 19 30.8	+2.0
	baz=122,SNR=6.7						
PFO	Pinyon Flats O	36.84	314	P	P	13 19 29.8	+1.0
PFO				IAmb	IAmb	13 19 33.0	
	comp=Z,3.9nm,0.7s						
P17A	Butcher Ranch,	36.88	326	P	P	13 19 29.1	0.0
GMRC	Granite Mounta	36.92	316	P	P	13 19 30.9	+1.4
	baz=124						
SZCU	Shurtz Canyon	36.96	322	P	P	13 19 31.3	+1.4
MSU	Marysvale	37.03	324	P	P	13 19 31.5	+1.1
TRQ	Mont Tremblant	37.03	12	P	P	13 19 29.3	-0.8
MVU	Marysvale	37.04	324	P	P	13 19 31.8	+1.2
CCUT	Cedar City	37.10	322	P	P	13 19 32.5	+1.5
CCUT				pP	pP	13 19 45.2	+1.3
G62A	West of Eustis	37.12	17	P	P	13 19 30.5	-0.3
	baz=204						
G62A	West of Eustis	37.12	17	P	P	13 19 30.9	+0.1
MURC	Murrieta	37.36	313	P	P	13 19 34.9	+1.9
	baz=121						
HEC	Hector,Ludlow	37.41	316	P	P	13 19 35.1	+1.6
	baz=123						
RSSD	Black Hills	37.46	338	P	P	13 19 34.1	+0.1
	baz=149						
E58A	La Victoria	37.46	14	P	P	13 19 33.7	+0.1
	baz=200						
D55A	Sainte-Anne-du	37.61	11	P	P	13 19 34.2	-0.8
	baz=196						
MPU	Maple Canyon	37.76	326	P	P	13 19 37.5	+0.9
D56A	ZEC Mazanza, M	37.78	12	P	P	13 19 35.5	-0.9
	baz=197						
E60A	Ste Agathe de	37.91	16	P	P	13 19 37.2	-0.3
	baz=202						
EYMN	Ely	37.95	353	P	P	13 19 36.3	-1.6
EYMN				IAmb	IAmb	13 19 50.2	
	comp=Z,9.2nm,1.5s						
SHOC	Shoshone, Teco	37.97	317	P	P	13 19 40.0	+1.8
	baz=124						
GSC	Goldstone, Bar	37.99	316	P	P	13 19 40.3	+1.8
	baz=123						
PSUT	Pine Spring	38.03	323	P	P	13 19 40.2	+1.3
G65A	Princeton	38.05	20	P	P	13 19 39.8	+1.1
	baz=209						
JLU	Jordanelle	38.07	327	P	P	13 19 39.4	+0.2
CIS	Catalina Islan	38.14	312	P	P	13 19 41.6	+2.0
	baz=119						
D58A	Chemin du LacG	38.23	14	P	P	13 19 39.9	-0.3
	baz=200						
E61A	Lac Etchemin	38.23	17	P	P	13 19 41.2	+1.0
	baz=204						
VLDQ	Val d'Or	38.34	9	P	P	13 19 39.4	-1.7
VLDQ				IAmb	IAmb	13 20 06.8	
	comp=Z,6.2nm,1.1s						
F64A	Sherman	38.37	19	P	P	13 19 42.0	+0.7
DUG	Dugway, Tooele	38.53	325	P	P	13 19 44.2	+1.1
	baz=133						
TPNV	Topopah Spring	38.55	319	P	P	13 19 45.7	+2.4
	baz=126,SNR=14						
TPNV	Topopah Spring	38.55	319	P	P	13 19 45.9	+2.7
TPNV				IAmb	IAmb	13 19 47.3	
	comp=Z,9.5nm,0.9s						
EDW2	Edwards Air Fo	38.59	315	P	P	13 19 44.6	+1.1
	baz=122						
FURC	Furnace Creek,	38.68	318	P	P	13 19 46.6	+2.5
	baz=124,SNR=5.6						
LRMC	Laurel Mtn Rad	38.69	316	P	P	13 19 45.9	+1.5
	baz=122,SNR=5.9						
BW06	Boulder Array	38.71	331	P	P	13 19 44.6	0.0
	baz=140						
BW06	Boulder Array	38.71	331	P	P	13 19 44.4	-0.1
BW06				IAmb	IAmb	13 19 48.7	
	comp=Z,8.6nm,1.5s						
PD31	Pinedale Array	38.71	331	P	P	13 19 44.6	0.0
PD31				IAmb	IAmb	13 19 48.7	
	comp=Z,7.8nm,1.5s						
PDAR	Pinedale Array	38.71	331	P	P	13 19 43.9	-0.7
	comp=Z,1.1nm,0.5s,baz=133,slow=10.0,SNR=14						
PDAR				pP	pP	13 19 57.4	-0.1
	comp=Z,0.7nm,0.5s,baz=122,slow=11,SNR=4.2						
PDAR				PcP	PcP	13 21 56.2	+0.5
	comp=Z,0.5nm,0.5s,baz=132,slow=4.8,SNR=5.7						
PDAR				ScP	ScP	13 25 41.8	+1.7
	comp=Z,0.1nm,0.4s,baz=140,slow=5.9,SNR=2.5						
PDAR	Pinedale Array	38.71	331	P	P	13 19 44.3	-0.3
E63A	Oxbow	38.84	19	P	P	13 19 45.1	-0.3
E63A				IAmb	IAmb	13 20 04.3	
	comp=Z,11nm,1.2s						
MPMC	Manual Prospec	38.87	317	P	P	13 19 47.1	+1.1
	baz=123,SNR=7.7						
R11A	Troy Canyon, C	38.97	321	P	P	13 19 48.4	+1.6
	baz=128,SNR=6.6						
R11A	Troy Canyon, C	38.97	321	P	P	13 19 48.5	+1.8
D61A	St Aubert, Com	39.02	16	P	P	13 19 47.0	+0.2
	baz=204						
SPUT	South Promonto	39.10	327	P	P	13 19 48.3	+0.5
BGU	Big Grassy Mou	39.15	326	P	P	13 19 48.9	+0.7
ARVC	Arvin	39.30	314	P	P	13 19 51.7	+2.3
	baz=121						
ISA	Isabella, Lake	39.33	315	P	P	13 19 52.2	+2.5
	baz=122						
AHID	Auburn Hatcher	39.46	330	P	P	13 19 51.1	+0.3
CWC	Cottonwood Cre	39.48	317	P	P	13 19 52.4	+1.4
	baz=123						
D63A	Stockholm	39.49	19	P	P	13 19 50.7	0.0
	baz=207						
HVU	Hansel Valley	39.61	327	P	P	13 19 52.5	+0.5
REDW	Red Top Meadow	39.78	331	P	P	13 19 53.5	0.0
REDW				IAmb	IAmb	13 20 07.3	
	comp=Z,5.3nm,0.7s						
ECR	Eagle Creek	39.81	330	P	P	13 19 53.9	+0.2
SNOW	Snow King Moun	39.81	331	P	P	13 19 52.9	-0.8
SNOW				IAmb	IAmb	13 19 55.5	
	comp=Z,14nm,1.4s						
TPH	Tonopah	39.84	319	P	P	13 19 55.1	+1.1
VES	Vestal, Richgr	39.85	315	P	P	13 19 55.2	+1.3
	baz=121						
LOHW	Long Hollow	39.85	331	P	P	13 19 54.2	+0.1
PKM	Mcpherson Peak	39.88	313	P	P	13 19 55.1	+0.7
	baz=120						

MATQ	Matagami	39.93	8	P	P	13 19 52.7	-1.6
	baz=192,SNR=6.4						
FLWY	Flagg Ranch	40.25	331	P	P	13 19 57.2	-0.2
ELK	Elko	40.28	324	P	P	13 19 57.9	+0.3
ELK					pP	13 20 10.9	+0.4
ELK				IAmb	IAmb	13 20 12.3	
	comp=Z,5.9nm,0.8s						
BATG	Bathurst New B	40.37	20	P	P	13 19 57.5	-0.6
RLMT	Red Lodge	40.41	334	P	P	13 19 58.3	-0.3
	baz=142						
RLMT	Red Lodge	40.41	334	P	P	13 19 58.4	-0.3
RLMT				pP	pP	13 20 11.2	-0.4
NV11	Mina Array Sit	40.64	319	P	P	13 20 03.1	+2.5
YNE	Yellowstone No	40.64	333	P	P	13 20 01.4	+0.8
OMMB	Old Mammoth Mi	40.74	318	P	P	13 20 02.8	+1.2
NVAR	Mina Array Bea	40.74	319	P	P	13 20 00.7	-0.7
	comp=Z,14nm,0.7s,baz=129,slow=7.1,SNR=110						
NVAR				pP	pP	13 20 15.9	+1.5
	comp=Z,8.2nm,0.8s,baz=127,slow=7.7,SNR=14						
NVAR				PcP	PcP	13 22 04.1	+1.8
	comp=Z,1.4nm,0.7s,baz=134,slow=4.4,SNR=4.2						
NVAR				ScP	ScP	13 25 48.7	+0.7
	comp=Z,1.0nm,0.8s,baz=149,slow=5.3,SNR=7.5						
NVAR				LR	LR	13 41 03.8	
	comp=Z,74nm,20.3s,baz=244,slow=42						
NVAR	Mina Array Bea	40.74	319	P	P	13 20 02.3	+0.8
LHV	Little Huntoon	40.77	319	P	P	13 20 03.8	+2.4
MDPB	Devils Postpil	40.80	318	P	P	13 20 04.0	+1.9
MDPB				IAmb	IAmb	13 20 17.6	
	comp=Z,6.7nm,1.0s						
ULM	Lac du Bonnet	40.85	350	P	P	13 19 59.0	-2.9
	comp=Z,1.7nm,0.5s,baz=173,slow=9.3,SNR=5.1						
ULM				ScP	ScP	13 25 46.5	-1.4
	comp=Z,1.1nm,0.5s,baz=117,slow=2.3,SNR=3.4						
ULM	Lac du Bonnet	40.85	350	P	P	13 19 59.3	-2.6
ULM				IAmb	IAmb	13 20 19.1	
	comp=Z,9.8nm,1.4s						
RYN	Ryan	40.99	319	P	P	13 20 04.7	+1.2
RYN				IAmb	IAmb	13 20 06.3	
	comp=Z,6.6nm,0.7s						
YHL	Hebgen Lake	41.06	332	P	P	13 20 04.7	+0.6
PMPB	Monarch Peak	41.24	315	P	P	13 20 06.8	+1.4
PMPB				IAmb	IAmb	13 20 12.6	
	comp=Z,8.7nm,0.9s						
WAKR	Walker	41.51	318	P	P	13 20 10.0	+2.1
WAKR				IAmb	IAmb	13 20 11.6	
	comp=Z,10nm,1.0s						
YERR	Yerington	41.66	319	P	P	13 20 10.6	+1.6
YERR				IAmb	IAmb	13 20 11.8	
	comp=Z,8.1nm,0.6s						
HLID	Hailey	41.72	328	P	P	13 20 09.9	+0.5
	baz=134,SNR=6.4						
HLID	Hailey	41.72	328	P	P	13 20 10.1	+0.7
BCYI	Bear Canyon	41.73	329	P	P	13 20 10.3	+0.7
BOZ	Bozeman (W)	41.83	332	P	P	13 20 10.6	+0.3
	baz=139						
BOZ	Bozeman (W)	41.83	332	P	P	13 20 10.8	+0.5
MCMT	McKenzie Canyo	41.83	330	P	P	13 20 10.8	+0.4
CMB	Columbia Colle	41.89	317	P	P	13 20 11.6	+0.8
PNTR	Pine Nut	41.95	319	P	P	13 20 12.5	+1.2
PNTR				IAmb	IAmb	13 20 14.7	
	comp=Z,8.3nm,0.8s						
ARAG	Araguaiana, MT	42.02	127	*e*P	P	13 20 12.4	+0.5
SMTB	Santa Maria do	42.08	115	*e*P	P	13 20 12.4	-0.1
PAHR	Pah Rah Range	42.16	320	P	P	13 20 13.9	+0.9
PAHR					pP	13 20 26.7	+0.7
AQDB	Aquidauana	42.19	136	*e*P	P	13 20 14.7	+1.3
RUBR	Rubicon Trail	42.28	319	P	P	13 20 15.1	+1.0
RUBR				IAmb	IAmb	13 20 32.0	
	comp=Z,12nm,1.2s						
LRM	Limekiln Ridge	42.38	332	P	P	13 20 14.7	-0.2
BEKR	Beckworth	42.87	320	P	P	13 20 20.4	+1.6
BEKR				pP	pP	13 20 32.5	+0.8
PEXB	Peixe	42.96	120	*e*P	P	13 20 20.3	+0.6
ROSB	Rosrio	43.05	105	*e*P	P	13 20 20.6	+0.2
WVOR	Wild Horse Val	43.32	324	P	P	13 20 22.9	+0.5
WVOR				pP	pP	13 20 35.0	-0.4
WVOR				IAmb	IAmb	13 20 36.1	
	comp=Z,9.9nm,0.8s						
ORV	Oroville	43.43	318	P	P	13 20 25.0	+1.8
ORV				pP	pP	13 20 37.4	+1.2
ORV				IAmb	IAmb	13 20 38.8	
	comp=Z,7.7nm,1.1s						
MOD	Modoc Plateau	43.99	322	P	P	13 20 27.5	-0.3
MOD					pP	13 20 40.5	-0.3
O03E	Paynes Creek	44.03	319	P	P	13 20 28.6	+0.6
	baz=123						
BMO	Blue Mountains	44.12	327	P	P	13 20 28.0	-0.7
O02D	Mt. Diablo Mer	44.60	318	P	P	13 20 32.6	-0.1
	baz=121						
WDC	Whiskeytown Da	44.66	319	P	P	13 20 32.1	-0.8
K05A	Summer Lake	44.83	323	P	P	13 20 34.6	+0.1
K05A				IAmb	IAmb	13 20 43.0	
	comp=Z,8.0nm,1.3s						
F10A	Beach Ranch, E	44.83	328	P	P	13 20 34.1	-0.3
I07A	Izee	44.83	325	P	P	13 20 34.1	-0.4
M04C	Macdoel	44.87	321	P	P	13 20 35.3	+0.6
	baz=124,SNR=7.6						
KCPM	Cahto Peak	44.88	317	P	P	13 20 36.4	+1.5
KCPM				IAmb	IAmb	13 20 57.9	
	comp=Z,6.4nm,0.9s						
BDFB	Brasilia	45.01	124	P	P	13 20 37.5	+1.3
	comp=Z,6.3nm,0.7s,baz=281,slow=8.7,SNR=7.5						
BDFB	Brasilia	45.01	124	P	P	13 20 37.0	+0.8
K04D	Chiloquin, OR	45.29	322	P	P	13 20 38.9	+0.8
	baz=125						
J05D	Fort Rock, OR	45.36	323	P	P	13 20 38.8	+0.1
	baz=126						
YBH	Yreka Blue Hor	45.38	320	P	P	13 20 38.1	-0.7
L04D	Klamath Falls	45.40	321	P	P	13 20 39.6	+0.7
	baz=124						
CPUP	Villa Florida	45.40	144	*e*P	P	13 20 39.1	+0.1
PINE	Pine Mountain	45.48	324	P	P	13 20 39.6	-0.1
PINE				pP	pP	13 20 52.9	+0.1
PINE				IAmb	IAmb	13 20 53.9	
	comp=Z,9.1nm,0.8s						
ITRB	Iturama	45.51	131	*e*P	P	13 20 40.7	+0.8
KHMM	Horse Mountain	45.58	319	P	P	13 20 40.6	+0.1
KHMM				IAmb	IAmb	13 20 44.1	
	comp=Z,7.2nm,0.8s						
KHMM				pP	pP	13 20 54.2	+0.6
JCC	Jacoby Creek,	45.74	319	P	P	13 20 42.9	+1.3
J04D	Umpqua Nationa	45.85	322	P	P	13 20 43.3	+0.7
	baz=125						
HUMO	Hull Mountain	46.01	321	P	P	13 20 43.3	-0.4
SDBA	SAO DESIDERIO	46.02	118	*e*P	P	13 20 44.4	+0.2
KRMB	Red Mountain	46.03	319	P	P	13 20 44.5	+0.5
PCMB	Pacaembu	46.03	134	*e*P	P	13 20 44.0	-0.1
I05D	Terrebonne, OR	46.04	324	P	P	13 20 44.7	+0.8
	baz=126						
IPMB	Ipameri, GO	46.14	127	*e*P	P	13 20 45.7	+0.7
L02E	Cave Junction	46.17	320	P	P	13 20 45.4	+0.4
	baz=122						
HAWA	Hanford	46.31	327	P	P	13 20 46.1	+0.1
HAWA				IAmb	IAmb	13 20 59.3	
	comp=Z,4.1nm,0.9s						
I04A	Tendick Farm,	46.35	323	P	P	13 20 46.8	+0.4
	baz=125						
K02D	Willamette Mer	46.50	321	P	P	13 20 47.9	+0.2
	baz=123						
G05D	Wamic, OR	46.57	325	P	P	13 20 48.6	+0.6
	baz=127						
KBO	Bosley Butte	46.59	320	P	P	13 20 49.3	+0.9
H04A	Detroit Lake	46.73	324	P	P	13 20 49.5	+0.2
I03D	Drain, OR	46.85	322	P	P	13 20 50.7	+0.5
	baz=124						
J01E	Myrtle Point	46.91	321	P	P	13 20 51.3	+0.6
	baz=123						
KEBM	Edson Butte	47.01	321	P	P	13 20 52.8	+1.2
F05D	White Salmon	47.04	326	P	P	13 20 52.6	+0.9
	baz=127						
NBMO	Morrinhos-CE	47.06	104	*e*P	P	13 20 50.7	-1.6
LTY	Liberty	47.47	328	P	P	13 20 55.0	-0.1
PTGB	Pitanga	47.53	137	*e*P	P	13 20 56.2	+0.3
G03D	McMinnville, O	47.66	324	P	P	13 20 57.8	+1.3
	baz=125						
BB19B	Bebedouro	47.69	131	*e*P	P	13 20 56.0	-1.1
LON	Longmire	47.76	326	P	P	13 20 57.6	+0.3
LON				IAmb	IAmb	13 21 11.9	
	comp=Z,5.2nm,1.2s						
JANB	Januaria	47.78	121	*e*P	P	13 20 58.1	+0.2
FRTB	Fartura	48.35	134	*e*P	P	13 21 03.1	+1.0
ITQB	Itaqui	48.35	146	*e*P	P	13 21 02.0	0.0
FCC	Fort Churchill	48.89	354	P	P	13 21 03.9	-1.8
NBPA	Parau_RN	50.58	106	*e*P	P	13 21 19.0	-0.2
CPSB	Cacapava Do Su	50.71	144	*e*P	P	13 21 20.5	+0.5
CNLB	Canela	51.48	141	*e*P	P	13 21 26.6	+0.7
SJMB	Sao Joao De Ma	52.17	123	*e*P	P	13 21 31.4	+0.3
PLCA	Paso Flores	52.51	166	*e*P	P	13 21 31.6	-1.7
BSFB	Barra de Sao F	52.51	123	*e*P	P	13 21 34.2	+0.5
NAN01	Guarapari, ES	52.63	122	*e*P	P	13 21 34.7	+0.1
DUB01	Friburgo-RJ	52.97	128	*e*P	P	13 21 36.3	-0.7
RIB01	Linhares ES	53.12	124	*e*P	P	13 21 38.7	+0.5
YKA	Yellowknife Ar	56.30	344	P	P	13 21 58.0	-2.4
	comp=Z,0.7nm,0.5s,baz=138,slow=7.5,SNR=13						
YKA				pP	pP	13 22 11.9	-2.0
	comp=Z,0.3nm,0.3s,baz=140,slow=7.3,SNR=4.6						
YKA				PcP	PcP	13 22 57.3	0.0
	comp=Z,0.2nm,0.6s,baz=133,slow=5.2,SNR=2.4						
DLBC	Dease Lake	58.80	334	P	P	13 22 16.7	-1.6
	comp=Z,1.0nm,0.7s,baz=138,slow=4.0,SNR=5.3						
RES	Resolute Bay	64.66	357	P	P	13 22 55.1	-2.2
	comp=Z,0.5nm,0.5s,baz=280,slow=22,SNR=2.2						
INK	Inuvik	65.94	342	P	P	13 23 03.9	-1.8
	comp=Z,1.0nm,0.8s,baz=114,slow=6.3,SNR=3.9						
INK	Inuvik	65.94	342	P	P	13 23 04.5	-1.2
RAGM	Ragged Mountai	66.28	332	P	P	13 23 08.3	+0.2
MENT	Mentasta	66.87	335	P	P	13 23 10.7	-1.1
DOT	Dot Lake	67.31	336	P	P	13 23 14.2	-0.3
DOT				IAmb	IAmb	13 23 39.2	
	comp=Z,7.6nm,1.4s						
SCRK	Sand Creek	67.41	336	P	P	13 23 15.0	-0.3
	baz=114						
M24K	Tolsona, Glenn	67.59	334	P	P	13 23 16.2	-0.3
PAX	Paxson	67.62	335	P	P	13 23 15.3	-1.3
SML	Sawmill	68.44	333	P	P	13 23 21.6	-0.2
SML				IAmb	IAmb	13 23 31.6	
	comp=Z,12nm,1.5s						
GHO	Glory Hole Cre	68.70	333	P	P	13 23 22.9	-0.5
GHO				IAmb	IAmb	13 23 26.0	
	comp=Z,12nm,1.3s						
PMR	Palmer	68.73	333	P	P	13 23 22.0	-1.4
HDA	Harding Lake	68.77	336	P	P	13 23 22.6	-1.1
RC01	Rabbit Creek A	68.85	332	P	P	13 23 24.2	0.0
	baz=108						
IL31		68.88	336	P	P	13 23 23.6	-0.7
ILAR	Eielson Array	68.88	336	P	P	13 23 23.4	-1.0
	comp=Z,0.5nm,0.6s,baz=129,slow=4.4,SNR=14						
ILAR				pP	pP	13 23 36.6	-1.5
	comp=Z,0.6nm,0.7s,baz=132,slow=4.2,SNR=5.5						
ILAR	Eielson Array	68.88	336	P	P	13 23 23.1	-1.3
RND	Reindeer	69.21	334	P	P	13 23 25.9	-0.6
RND				IAmb	IAmb	13 23 42.2	
	comp=Z,5.0nm,1.0s						
POKR	Poker Plat Res	69.23	336	P	P	13 23 25.5	-1.0
	baz=111						
SUA	Susitna One	69.43	332	P	P	13 23 27.1	-0.9
MDM	Murphy Dome	69.49	336	P	P	13 23 27.6	-0.5
TRF	Thorofare Moun	69.83	334	P	P	13 23 30.2	-0.3
TRF				IAmb	IAmb	13 23 35.4	
	comp=Z,6.6nm,1.4s						
SKT	Skwentna	69.94	333	P	P	13 23 30.1	-0.9
SKT				IAmb	IAmb	13 23 42.4	
	comp=Z,5.6nm,1.3s						
I23K	Minto, Yukon-K	70.00	336	P	P	13 23 29.9	-1.3
	baz=110						
I23K	Minto, Yukon-K	70.00	336	P	P	13 23 29.6	-1.7
RSO	Redoubt South	70.10	331	P	P	13 23 29.8	-2.4
KTH	Kantishna Hill	70.13	334	P	P	13 23 31.4	-0.8
KTH				IAmb	IAmb	13 23 43.1	
	comp=Z,10nm,1.5s						
BPAW	Bear Paw Mtn.	70.33	335	P	P	13 23 32.3	-1.0
PPLA	Purkeypile	70.49	333	P	P	13 23 33.0	-1.5
PPLA				IAmb	IAmb	13 23 52.5	
	comp=Z,5.9nm,1.2s						
MLY	Manley	70.52	336	P	P	13 23 33.5	-1.0
	baz=108						
UNV	Unalaska Valle	76.61	323	P	P	13 24 11.0	+0.6
KSRS	Korea Array	123.25	329	PKP	PKiKP	13 31 17.9	+0.8
	comp=Z,0.7nm,0.5s,baz=360,slow=2.2,SNR=4.6						
KSH	Kashi	127.55	18	PKP	PKPdf	13 31 24.9	-0.4
ASAR	Alice Springs	140.31	245	PKP	PKPdf	13 31 49.4	0.0
	comp=Z,0.4nm,0.5s,baz=103,slow=1.8,SNR=7.6						
ASAR				pPKP	pPKPdf	13 32 03.9	-0.4
	comp=Z,0.5nm,0.6s,baz=106,slow=2.0,SNR=3.8						
WRA	Warramunga Arr	140.59	251	PKP	PKPdf	13 31 51.2	+1.2
	comp=Z,0.4nm,0.5s,baz=94,slow=2.5,SNR=8.5						
WRA				pPKP	pPKPdf	13 32 05.5	+0.7
	comp=Z,0.8nm,0.9s,baz=91,slow=2.8,SNR=2.4						
CMAR	Chiang Mai Arr	151.19	352	PKPbc	PKPbc	13 32 13.6	-0.3
	comp=Z,0.3nm,0.5s,baz=350,slow=2.1,SNR=2.4						

IDC 18 13:22:53.5±10.0**,7°.40S**×**155°.45E,h0^{km},mb3.4**/3**, mb1 3.6**/3**,mb1mx3.3**/27**,mbtmp3.4**/3**,MS3.3**/4**,Ms1 3.3**/4**, ms1mx2.9**/26 **Error ellipse: s-maj=172.6km s-min=105.5km az=26.0,Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	8.44	256	LR	LR	13 28 23.1	
	comp=Z,171nm,20.0s,baz=104,slow=39						
DZM	Mont Dzumac	18.03	145	LR	LR	13 33 21.3	
	comp=Z,127nm,19.4s,baz=226,slow=35						
WRA	Warramunga Arr	23.96	237	P	P	13 28 11.6	+1.8
	0.5nm,0.8s,baz=60,slow=9.7,SNR=2.1						
ASAR	Alice Springs	26.25	230	P	P	13 28 29.1	-1.6
	0.3nm,0.8s,baz=52,slow=11,SNR=2.2						
STKA	Stephens Creek	27.57	206	P	P	13 28 42.3	-0.1
	1.2nm,0.6s,baz=39,slow=14,SNR=3.7						
RPZ	Rata Peaks	38.67	162	LR	LR	13 42 58.1	
	comp=Z,48nm,21.5s,baz=350,slow=31						
PPT	Papeete	54.45	106	LR	LR	13 52 56.9	
	comp=Z,27nm,18.2s,baz=183,slow=33						

NIED ***18*** *13:41:32.2,39°.50N×143°.80E,h33^{km},MW3.6,Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}2.91; $M_{\theta\theta}$-0.07; $M_{\phi\phi}$-2.84; $M_{r\theta}$0.93; $M_{\theta\phi}$-1.21; $M_{\phi r}$0.80; Fault plane solution: $M_0$3.34000×10^{14} NP1:ϕ_s32.00000°, δ56.00000°,λ104.00000°. NP2:ϕ_s189.00000°,δ37.00000°, λ71.00000°.*

JMA ***18*** *13:41:32.1±0.2,39°.50N×143°.80E,h33^{km},M3.8*

IDC ***18*** *13:41:38.2±3.5,39°.57N×143°.51E,h39^{km}±29^{km},mb3.4/9, mb1 3.5/13,mb1mx3.3/54,mbtmp3.6/13,ML2.9/4,MS2.8/1, Ms1 2.8/1,ms1mx2.3/38,Error ellipse: s-maj=27.6km s-min=18.7km az=98.0*

ISC 18 13:41:37.4±0.9**,39°.55N**±0°.06×**143°.58E**±0°.07**,h35^{km},n29,** σ**1^{s}.27**/35**,mb3.5**/10**,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MIYJ	Miyakonagasawa	1.36	272	P	Pn	13 41 58.1	-1.7
MIYJ				*e*S	Sn	13 42 16.1	-0.5
JTH	Tanohata	1.38	287	P	Pn	13 41 58.3	-1.8
JTH				*e*S	Sn	13 42 18.4	+1.3
OFUJ	Ofunato	1.55	253	P	Pn	13 42 00.7	-1.8
JKEN	Kujiedanarisaw	1.58	295	P	Pn	13 42 01.1	-1.8
JOM	Ohasama	1.77	268	P	Pn	13 42 04.4	-1.1
JOM				*e*S	Sn	13 42 28.0	+1.2
JANG	Nango	1.79	298	P	Pn	13 42 04.0	-1.7
JMK	Ichinoseki	1.93	253	P	Pn	13 42 06.1	-1.5
JIO	Ouri	2.05	239	P	Pn	13 42 07.1	-2.2
JYK	Kaneyama	2.58	257	P	Pn	13 42 15.7	-0.9
JOT	Ohata	2.66	314	P	Pn	13 42 16.7	-1.0
JNBK	Urakawa-nobuka	2.80	347	P	Pn	13 42 19.4	-0.3
JCH	Churui	3.07	357	P	Pn	13 42 21.9	-1.4
JCH				*e*S	Sn	13 42 57.6	-1.2
JFT	Otama	3.25	232	P	Pn	13 42 24.1	-1.8
JFT				*e*S	Sn	13 43 02.7	-0.6
JAK	Akkeshi	3.55	13	P	Pn	13 42 27.8	-2.1
ASAJ	Asahikawa	4.62	351	Pn	Pn	13 42 44.6	-0.2
	1.1nm,0.3s,baz=192,slow=14,SNR=24						
ASAJ				Sn	Sn	13 43 37.4	+0.3
	0.7nm,0.3s,baz=20,slow=33,SNR=1.7						
MAT	Matsushiro	5.19	236	P	Pn	13 42 52.2	-0.4
MJAR	Matsushiro Arr	5.19	236	Pn	Pn	13 42 52.5	-0.1
	0.3nm,0.3s,baz=35,slow=14,SNR=20						
USRK	Ussuriysk Ar.	9.81	302	Pn	Pn	13 43 56.3	+0.4
	baz=105,slow=17,SNR=3.8						
USRK				LR	LR	13 47 51.4	
	comp=Z,52nm,18.4s,baz=345,slow=38						
KLR	Kul'dur	12.84	323	Pn	Pn	13 44 38.0	+0.8
	0.1nm,0.3s,baz=157,slow=15,SNR=1.8						
SEY	Seymchan	24.01	10	P	P	13 46 49.0	+0.5
	0.3nm,0.4s,baz=193,slow=6.0,SNR=4.1						
SONM	Songino Array	27.91	300	P	P	13 47 24.8	+0.6
	0.3nm,0.5s,baz=109,slow=8.6,SNR=1.3						
ZALV	Zalesovo Beam	41.53	310	P	P	13 49 21.4	+0.3
	1.0nm,0.5s,baz=85,slow=8.1,SNR=5.1						
CMAR	Chiang Mai Arr	43.80	254	P	P	13 49 40.1	+0.2
	0.3nm,0.3s,baz=37,slow=8.1,SNR=1.6						
MKAR	Makanchi Array	44.27	300	P	P	13 49 43.7	+0.2
	0.7nm,0.7s,baz=85,slow=9.7,SNR=9.4						
KURBB	Kurchatov Arra	45.84	306	P	P	13 49 54.0	-1.8
	1.3nm,0.4s,baz=80,slow=8.2,SNR=9.5						
BVAR	Borovoye Array	50.17	311	P	P	13 50 29.1	-0.2
	0.4nm,0.5s,baz=113,slow=11,SNR=5.0						
INK	Inuvik	51.37	28	P	P	13 50 38.3	+0.3
	0.3nm,0.6s,baz=290,slow=3.5,SNR=3.9						
WRA	Warramunga Arr	59.80	190	P	P	13 51 37.9	-1.2
	0.3nm,0.8s,baz=6.2,slow=7.2,SNR=1.7						
STKA	Stephens Creek	71.09	182	P	P	13 52 53.8	+2.0
	2.0nm,0.8s,baz=355,slow=7.7,SNR=3.7						

NNC ***18*** *13:49:27.2±2.9,37°.57N×71°.26E,h0^{km},mb4.8,mpv4.6, Error ellipse: s-maj=27.3km s-min=15.1km az=157.0*

IDC ***18*** *13:49:30.0±1.9,37°.22N×71°.95E,h130^{km}±17^{km},mb3.7/24, mb1 3.8/29,mb1mx3.6/50,mbtmp4.1/29,MS3.6/3, Ms1 3.6/3,ms1mx2.8/51,Error ellipse: s-maj=11.6km s-min=9.0km az=118.0*

NEIC ***18*** *13:49:29.7±1.6,37°.25N±0°.02×71°.69E±0°.08,h126^{km}±5^{km}, mb4.3/41,Error ellipse: s-maj=9.7km s-min=2.7km az=103.0*

BJI ***18*** *13:49:30.6±0.0,37°.41N×72°.06E,h120^{km},mB4.6/14, mb4.4/22*

ISC 18 13:49:27.5±0.3**,37°.24N**±0°.04×**71°.74E**±0°.04**,h106^{km},n151,** σ**2^{s}.18**/167**,mb4.2**/46**,8C-6D,Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEP	Cherat	3.41	178	P	Pn	13 50 22.7	+3.6
CEP				S	Sn	13 51 02.0	+3.1
KBL	Kabul	3.47	220	Pn	Pn	13 50 23.1	+3.2
KBL	Kabul	3.47	220	P	Pn	13 50 23.4	+3.5
	SNR=89						
KBL				S	Sn	13 51 04.0	+3.7
NIL	Nilore	3.79	161	Pn	Pn	13 50 27.5	+3.4
NIL	Nilore	3.79	161	P	Pn	13 50 27.9	+3.8
NIL				S	Sn	13 51 05.8	-2.0
THW	Thamme Wali	4.44	180	P	Pn	13 50 35.4	+2.6
AML	Almayashu	5.11	17	P	Pn	13 50 45.0	+2.8
	SNR=112						
UCH	Uchtor	5.42	22	P	Pn	13 50 49.0	+2.7
	SNR=89						
EKS2	Erkin-Say	5.64	16	P	Pn	13 50 52.0	+3.0
	SNR=38						
AAK	Ala-Archa	5.79	21	P	Pn	13 50 54.2	+3.1
	25nm,0.3s,baz=169,slow=6.1,SNR=310						
AAK				S	Sn	13 51 57.5	+1.2
	7.6nm,0.3s,baz=216,slow=17,SNR=5.5						
AAK				LR	LR	13 53 12.0	
	comp=Z,82nm,18.1s,baz=162,slow=39						
AAK	Ala-Archa	5.79	21	P	Pn	13 50 54.1	+3.0
	SNR=69						
AAK	Ala-Archa	5.79	21	⇑P	Pn	13 50 54.1	+3.0
	20nm,0.3s						
AAK				⇑S	Sn	13 51 57.1	+0.9
	210nm,1.1s						
AAK	Ala-Archa	5.79	21	Pn	Pn	13 50 54.0	+2.8
AAK	Ala-Archa	5.79	21	P	Pn	13 50 54.2	+3.1
AAK				S	Sn	13 51 57.4	+1.1
THN	Thein Dam	5.81	145	*e*P	Pn	13 50 53.5	+2.3
THN				*e*S	Sn	13 51 54.0	-2.5
KK07	Karatay Array	5.92	351	Pn	Pn	13 50 54.9	+2.2
KK06	Karatay Array	5.92	351	Pn	Pn	13 50 54.9	+2.2
KK31	Karatay Array	5.93	351	⇑P	Pn	13 50 54.2	+1.4
	26nm,0.3s,baz=164,slow=8.6,SNR=579						
KK31				⇓S	Sn	13 51 58.3	-1.1
	55nm,0.5s,baz=188,slow=24,SNR=15						
KK31	Karatay Array	5.93	351	Pn	Pn	13 50 55.1	+2.3
KKAR	Karatay Array	5.93	351	Pn	Pn	13 50 55.0	+2.2
KKAR	Karatay Array	5.93	351	Pn	Pn	13 50 54.8	+1.9
KBK	Karagaybulak	5.94	24	P	Pn	13 50 56.3	+3.1
	SNR=14						
ULHL	Ulahol	6.08	33	P	Pn	13 50 57.4	+2.3
	SNR=5.9						
CHMS	Chumysh	6.20	21	P	Pn	13 50 59.3	+2.8
	SNR=58						
DHRM	DHARAMSHALA	6.24	142	*e*P	Pn	13 50 57.5	+0.2
DHRM				*e*S	Sn	13 52 02.9	-4.4
DHRM				IAML		13 52 05.4	
	comp=E,815nm,0.8s						
DHRM				IAML		13 52 08.6	
	comp=N,840nm,0.5s						
USP	Ospenovka	6.38	18	P	Pn	13 51 01.0	+2.0
	SNR=25						
TKM2	Tokmak 2	6.40	26	P	Pn	13 51 02.1	+2.7
	SNR=61						
TKM2	Tokmak 2	6.40	26	⇑P	Pn	13 51 01.9	+2.5
	comp=N,36nm,0.6s						
TKM2				⇓S	Sn	13 52 13.5	+2.4
	comp=N,28nm,0.6s						
BHK	Bhakra	6.98	145	*e*x	Pn	13 51 03.0	-4.2
MDOK	Medeo	7.17	33	⇑P	Pn	13 51 12.8	+2.9
	comp=N,19nm,0.6s						
SMLA	Simla	7.58	142	*e*P	Pn	13 51 15.9	+0.7
SMLA				*e*S	Sn	13 52 32.9	-6.6
SMLA				IAML		13 52 38.5	
	comp=E,319nm,0.3s						
SMLA				IAML		13 52 38.9	
	comp=N,285nm,0.2s						
HRA	Herat	8.22	253	Pn	Pn	13 51 25.3	+1.1
PDGK	Podgornoye	8.49	42	⇓P	Pn	13 51 29.1	+1.4
	comp=N,11nm,0.5s						
PDGK				⇑S	Sn	13 53 11.4	+10
	comp=N,34nm,0.9s						
DDI	Dehra Dun	8.68	141	*e*P	Pn	13 51 30.2	-0.1
DDI				*e*S	Sn	13 52 56.3	-10
NDI	New Delhi	9.70	150	*e*S	Sn	13 53 26.0	-5.1
GYB1	ALIBECK ARRAY	10.82	278	Pn	Pn	13 51 57.1	-2.2
GYA2	ALIBECK ARRAY	10.83	278	Pn	Pn	13 51 57.2	-2.2
GEYT	Alibeck	10.83	278	P	Pn	13 51 57.5	-1.9
	comp=N,10nm,0.3s,baz=116,slow=9.9,SNR=70						
GEYT				S	Sn	13 53 52.8	-5.8
	comp=N,9.0nm,0.3s,baz=70,slow=11,SNR=9.9						
GEYT	Alibeck	10.83	278	Pn	Pn	13 51 56.4	-3.1
GYA0	ALIBECK ARRAY	10.83	278	Pn	Pn	13 51 56.7	-2.7
GYA0B	ALIBECK ARRAY	10.83	278	⇑P	Pn	13 51 57.5	-1.9
GYA0B				⇑S	Sn	13 53 53.3	-5.3
GYA0B	ALIBECK ARRAY	10.83	278	Pn	Pn	13 51 56.6	-2.9
GYA1	ALIBECK ARRAY	10.83	278	Pn	Pn	13 51 57.0	-2.4
MAKZ	Makanchi	12.21	35	Pn	Pn	13 52 17.3	-0.4
MK31	Makanchi Array	12.35	36	Pn	Pn	13 52 18.7	-0.8
MKAR	Makanchi Array	12.35	36	P	Pn	13 52 19.7	+0.2
	comp=N,0.4nm,0.3s,baz=221,slow=13,SNR=32						
MKAR	Makanchi Array	12.35	36	Pn	Pn	13 52 18.7	-0.8
DANN	Dangsing	13.44	128	*e*P	Pn	13 52 31.6	-2.7
	comp=N,60nm,0.3s						
WMQ	Urumqi	13.79	57	*e*P	Pn	13 52 38.3	-0.2
WMQ				pmax	pmax		
	comp=N,17nm,0.9s						
WMQ				pmax	pmax		
	comp=N,180nm,6.1s						
WMQ				LR	LR		
	comp=N,610nm,29.2s						
WMQ				LR	LR		
	comp=N,1μm,29.1s						
WMQ				LR	LR		
	comp=N,130nm,29.2s						
KURBB	Kurchatov Arra	14.23	18	P	Pn	13 52 41.8	-2.3
	comp=N,0.0nm,0.3s,baz=207,slow=11,SNR=1.8						
GKN	Gorkha	14.24	127	*e*P	Pn	13 52 41.5	-2.9
	comp=N,64nm,0.4s						
KURK	Kurchatov	14.34	18		P	13 52 49.5	+0.2
AB07	Akbulak array	14.72	328	Pn	Pn	13 52 50.1	-0.2
AB31	Akbulak array	14.74	328	P	Pn	13 52 50.5	0.0
	comp=N,2.7nm,0.3s,baz=134,slow=14,SNR=238						
AB31				⇓S	Sn	13 55 27.5	-5.6
	comp=N,12nm,0.5s,baz=141,slow=24,SNR=8.0						
ABKAR	Akbulak array	14.74	328	Pn	Pn	13 52 50.3	-0.2
KKN	Kakani	14.80	126	*e*P	Pn	13 52 49.0	-2.6
	comp=N,46nm,0.5s						
DMN	Daman	14.81	127	*e*P	Pn	13 52 49.8	-2.0
	comp=N,30nm,0.4s						
PKIN	Phulchoki	15.02	126	*e*P	Pn	13 52 51.6	-2.9
	comp=N,60nm,0.5s						
PKI	Pulchoki	15.03	126	*e*P	Pn	13 52 51.7	-3.0

	comp=N,74nm,0.7s						
GUN	**Gumba**	**15.11**	**124**	*e*P	**Pn**	**13 52 52.3**	**-3.4**
	comp=N,34nm,0.3s						
BRVK	**Borovoye**	**15.85**	**357**	Pn	**P**	**13 53 05.4**	**-0.7**
BRVK				P	**Pn**	**13 53 05.6**	**+1.2**
RAMN	**Ramite**	**16.23**	**125**	*e*P	**Pn**	**13 53 06.7**	**-2.9**
	comp=N,62nm,0.5s						
AKTO	**Aktyubinsk**	**16.45**	**328**	P	**P**	**13 53 13.7**	**+1.0**
	comp=N,1.2nm,0.3s,baz=129,slow=9.7,SNR=17						
AKTO				S	**Sn**	**13 56 07.6**	**-6.6**
	comp=N,0.8nm,0.3s,baz=155,slow=22,SNR=6.2						
AKTO	**Aktyubinsk**	**16.45**	**328**	⇓P	**P**	**13 53 13.9**	**+1.2**
	comp=N,7.9nm,0.8s						
AKTO				⇓S	**Sn**	**13 56 08.6**	**-5.7**
	comp=N,10nm,0.7s						
TAPN	**Taplejung**	**16.70**	**122**	*e*P	**Pn**	**13 53 12.2**	**-3.3**
	comp=N,17nm,0.3s						
ODAN	**Odare**	**16.81**	**124**	*e*P	**Pn**	**13 53 14.7**	**-2.0**
	comp=N,30nm,0.6s						
BANOM	**Banah**	**17.30**	**234**	P	**Pn**	**13 53 22.1**	**-0.4**
LSA	**Lhasa**	**17.84**	**109**	P	**Pn**	**13 53 28.9**	**-0.5**
LSA				pmax	pmax		
	comp=N,48nm,0.9s						
LSA	**Lhasa**	**17.84**	**109**	P	**Pn**	**13 53 28.5**	**-0.9**
LSA				IAmb	IAmb	13 53 31.2	
	comp=Z,15nm,0.9s						
WSAR	**Wadi Sarin**	**17.94**	**223**	P	**Pn**	**13 53 32.3**	**+2.1**
	comp=Z,0.4nm,0.3s,baz=7.8,slow=2.5,SNR=5.2						
UOSS	**Minazif**	**18.06**	**232**	P	**Pn**	**13 53 30.4**	**-1.2**
UOSS				IAmb	IAmb	13 53 32.6	
	comp=Z,9.2nm,0.8s						
ASHO	**Ashiyiah**	**18.34**	**231**	P	**Pn**	**13 53 35.1**	**+0.2**
	SNR=9.9						
JLN	**Jalan Bani Buh**	**18.43**	**219**	P	**Pn**	**13 53 36.9**	**+0.8**
ALNE	**Al Ain**	**18.99**	**231**	P	**Pn**	**13 53 42.2**	**-0.4**
	SNR=5.8						
ZAA0	**Zalesovo Array**	**19.00**	**24**	P	**P**	**13 53 40.9**	**+0.3**
ZALV	**Zalesovo Beam**	**19.00**	**24**	P	**P**	**13 53 40.2**	**-0.4**
	comp=Z,1.9nm,0.3s,baz=214,slow=10,SNR=28						
ZALV				S	**S**	**13 57 08.1**	**-2.4**
	comp=Z,0.1nm,0.3s,baz=234,slow=19,SNR=2.1						
ZALV	**Zalesovo Beam**	**19.00**	**24**	P	**P**	**13 53 40.6**	**0.0**
HYB	**Hyderabad**	**20.64**	**161**	*i* P	**P**	**13 53 59.0**	**+0.2**
HYB				*e*S	Sn	13 57 54.0	-1.3
SHL	**Shillong**	**20.72**	**118**	P	Pn	13 54 02.6	-0.4
	SNR=5.8						
ARU	**Arti**	**21.14**	**339**	P	**P**	**13 54 05.0**	**+1.3**
	comp=Z,0.4nm,0.3s,baz=152,slow=16,SNR=3.6						
ARU				S	**S**	**13 57 56.3**	**+3.7**
	comp=Z,0.4nm,0.3s,baz=128,slow=22,SNR=1.6						
ARU	**Arti**	**21.14**	**339**	P	**P**	**13 54 04.0**	**+0.3**
GNI	**Garni**	**21.24**	**286**	P	**P**	**13 54 08.2**	**+3.1**
	comp=Z,3.0nm,0.4s,baz=211,slow=20,SNR=1.5						
BELG	**Belogornoye**	**22.70**	**320**	P	**P**	**13 54 22.3**	**+2.3**
	comp=Z,6.5nm,0.6s,baz=301,slow=21,SNR=3.5						
KBZ	**Khabaz**	**22.80**	**296**	P	**P**	**13 54 23.2**	**+2.0**
	comp=Z,1.5nm,0.7s,baz=109,slow=12,SNR=4.3						
DOK	**Doka**	**24.14**	**225**	P	**P**	**13 54 34.2**	**+0.5**
LZH	**Lanzhou**	**25.72**	**83**	*e*P	**P**	**13 54 47.3**	**-0.8**
LZH				pP	pP	13 55 11.8	-1.0
LZH				sP	sP	13 55 26.8	+1.1
LZH				pmax	pmax		
	comp=Z,11nm,1.1s						
KIRV	**Kirov**	**25.84**	**333**	P	**P**	**13 54 49.9**	**+1.2**
	comp=Z,7.4nm,0.5s,baz=181,slow=4.2,SNR=2.4						
KIRV				LR	LR	14 06 26.7	
	comp=Z,89nm,18.3s,baz=13,slow=39						
RAYN	**Ar Rayn**	**26.34**	**246**	P	**P**	**13 54 54.0**	**+0.3**
RAYN				IAmb	IAmb	13 54 56.2	
	comp=Z,6.5nm,1.1s						
SONM	**Songino Array**	**27.43**	**56**	P	**P**	**13 55 03.5**	**+0.1**
	comp=Z,0.5nm,0.5s,baz=264,slow=8.3,SNR=5.3						
SONM	**Songino Array**	**27.43**	**56**	P	**P**	**13 55 04.8**	**+1.5**
ULN	**Ulaanbaatar**	**27.87**	**56**	P	**P**	**13 55 08.5**	**+1.2**
BRTR	**Keskin Array B**	**29.78**	**287**	P	**P**	**13 55 26.3**	**+2.0**
	comp=Z,1.5nm,0.6s,baz=112,slow=8.6,SNR=5.6						
BRTR	**Keskin Array B**	**29.78**	**287**	P	**P**	**13 55 25.9**	**+1.6**
XAN	**Xi'an**	**30.26**	**85**	P	**P**	**13 55 28.4**	**-0.1**
XAN				IAmb	IAmb	13 55 30.3	
	comp=Z,2.9nm,0.5s						
CMAR	**Chiang Mai Arr**	**30.31**	**121**	P	**P**	**13 55 29.3**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=308,slow=7.9,SNR=1.5						
ANTO	**Ankara**	**30.41**	**287**	P	**P**	**13 55 29.8**	**+0.1**
HHC	**Hu-ho-hao-te**	**30.96**	**71**	*e*P	**P**	**13 55 36.8**	**+2.2**
HHC				pmax	pmax		
	comp=Z,4.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,100nm,6.0s						
AKASG	**Malin Array Be**	**32.95**	**308**	P	**P**	**13 55 52.7**	**+0.9**
	comp=Z,1.8nm,0.5s,baz=80,slow=6.8,SNR=5.5						
AKASG	**Malin Array Be**	**32.95**	**308**	IAmb	IAmb	13 55 57.6	
	comp=Z,1.1nm,0.7s						
ATD	**Arta Tunnel**	**36.44**	**233**	P	**P**	**13 56 24.6**	**+2.3**
	comp=Z,8.0nm,0.6s,baz=18,slow=13,SNR=4.1						
ATD	**Arta Tunnel**	**36.44**	**233**	P	**P**	**13 56 22.3**	**+0.1**
FIA1	**FINESS Array S**	**37.20**	**325**	P	**P**	**13 56 29.2**	**+1.1**
FINES	**FINESS Array B**	**37.20**	**325**	P	**P**	**13 56 29.2**	**+1.1**
	comp=Z,2.8nm,0.5s,baz=119,slow=9.5,SNR=19						
ARCES	**ARCESS Array B**	**40.69**	**337**	P	**P**	**13 56 58.3**	**+1.2**
	comp=Z,10nm,1.1s,baz=112,slow=7.8,SNR=17						
ARCES	**ARCESS Array B**	**40.69**	**337**	P	**P**	**13 56 58.0**	**+0.9**
GSI	**Gunungsitoli**	**42.97**	**140**	P	**P**	**13 57 17.4**	**+1.1**
GEC2	**GERESS Array S**	**42.99**	**305**	P	**P**	**13 57 16.2**	**0.0**
GERES	**GERESS Array B**	**42.99**	**305**	P	**P**	**13 57 16.7**	**+0.5**
	comp=Z,0.5nm,0.6s,baz=192,slow=37,SNR=2.3						
CLL	**Collm**	**43.19**	**308**	*e*P	**P**	**13 57 19.0**	**+1.3**
KSAR	**Wonju Array Be**	**44.06**	**72**	P	**P**	**13 57 26.2**	**+1.4**
NC303	**NORSAR Array S**	**44.09**	**323**	P	**P**	**13 57 25.5**	**+0.8**
NB201	**NORSAR Array S**	**44.11**	**323**	P	**P**	**13 57 25.5**	**+0.5**
NB2	**NORSAR Subarra**	**44.15**	**323**	P	**P**	**13 57 25.4**	**+0.1**
	comp=Z,7.3nm,1.0s,baz=95,slow=7.9						
NOA	**NORSAR Array B**	**44.15**	**323**	P	**P**	**13 57 25.8**	**+0.5**
	comp=Z,3.4nm,0.8s,baz=94,slow=7.8,SNR=8.6						
KLR	**Kul'dur**	**44.23**	**54**	P	**P**	**13 57 25.1**	**-1.0**
	comp=Z,0.6nm,0.4s,baz=221,slow=6.7,SNR=2.8						
NC204	**NORSAR Array S**	**44.38**	**323**	P	**P**	**13 57 27.3**	**+0.1**
NC204				IAmb	IAmb	13 57 33.3	
	comp=Z,7.0nm,0.8s						
TIXI	**Tiksi**	**44.87**	**22**	P	**P**	**13 57 31.0**	**+0.3**
JHS	**Saijyo**	**48.86**	**73**	P	**P**	**13 58 03.1**	**+0.6**
KEST	**Kesra**	**49.36**	**288**	P	**P**	**13 58 07.4**	**+1.1**
	comp=Z,4.4nm,0.7s,baz=73,slow=4.4,SNR=2.2						
KMBO	**Kilima Mbogo**	**49.77**	**228**	P	**P**	**13 58 10.6**	**+0.9**
	comp=Z,1.7nm,0.3s,baz=40,slow=12,SNR=6.8						
MBAR	**Mbarara**	**53.42**	**235**	P	**P**	**13 58 36.6**	**-0.3**
	comp=Z,6.8nm,0.6s,baz=19,slow=9.9,SNR=8.2						
OPO	**Ambohidratompo**	**60.14**	**207**	P	**P**	**13 59 24.2**	**0.0**
	comp=Z,1.5nm,0.4s,baz=95,slow=20,SNR=2.3						
PVAQ	**Vaqueiros**	**61.26**	**297**	P	**P**	**13 59 31.9**	**+0.4**
TORD	**Torodi Ar. Bea**	**66.32**	**269**	P	**P**	**14 00 05.1**	**+0.1**
	comp=Z,0.5nm,0.4s,baz=46,slow=5.3,SNR=4.5						
LSZ	**Lusaka**	**66.39**	**227**	P	**P**	**14 00 05.3**	**-0.1**
	comp=Z,0.9nm,0.3s,baz=33,slow=3.0,SNR=4.4						
TOLK	**Toolik Lake Re**	**70.06**	**15**	P	**P**	**14 00 27.3**	**-0.3**
TOLK				IAmb	IAmb	14 00 36.0	
	comp=Z,2.2nm,0.9s						
KOWA	**Kowa**	**70.11**	**273**	P	**P**	**14 00 27.9**	**-0.8**
KOWA				IAmb	IAmb	14 00 52.9	
	comp=Z,11nm,1.4s						
COLD	**Coldfoot**	**71.10**	**16**	P	**P**	**14 00 34.0**	**+0.1**
INK	**Inuvik**	**73.08**	**10**	P	**P**	**14 00 45.4**	**-0.2**
	comp=Z,1.3nm,0.5s,baz=341,slow=6.3,SNR=17						
INK	**Inuvik**	**73.08**	**10**	P	**P**	**14 00 45.8**	**+0.2**
MDM	**Murphy Dome**	**73.44**	**17**	P	**P**	**14 00 47.3**	**-0.6**
MDM				IAmb	IAmb	14 01 05.5	
	comp=Z,6.6nm,1.5s						
BPAW	**Bear Paw Mtn.**	**73.51**	**18**	P	**P**	**14 00 47.7**	**-0.5**
BPAW				IAmb	IAmb	14 00 49.0	
	comp=Z,5.6nm,1.5s						
PRP	**Porcupine Dome**	**73.56**	**15**	P	**P**	**14 00 48.8**	**+0.1**
PRP				IAmb	IAmb	14 01 06.1	
	comp=Z,4.5nm,1.5s						
IL31		**73.90**	**16**	P	**P**	**14 00 51.2**	**+0.8**
IL31				IAmb	IAmb	14 01 00.6	
	comp=Z,5.4nm,1.4s						
ILAR	**Eielson Array**	**73.90**	**16**	P	**P**	**14 00 49.8**	**-0.8**
	comp=Z,0.4nm,0.8s,baz=329,slow=5.0,SNR=6.8						
KTH	**Kantishna Hill**	**73.98**	**18**	P	**P**	**14 00 49.9**	**-1.2**
KTH				IAmb	IAmb	14 00 58.2	
	comp=Z,7.8nm,1.4s						
PPLA	**Purkeypile**	**74.19**	**19**	P	**P**	**14 00 51.8**	**-0.6**
PPLA				IAmb	IAmb	14 01 14.9	
	comp=Z,9.6nm,1.4s						
TRF	**Thorofare Moun**	**74.22**	**18**	P	**P**	**14 00 53.1**	**+0.5**
TRF				IAmb	IAmb	14 00 59.1	
	comp=Z,4.9nm,1.3s						
SKT	**Skwentna**	**75.12**	**20**	P	**P**	**14 00 56.8**	**-0.9**
SKT				IAmb	IAmb	14 01 14.7	
	comp=Z,10nm,1.4s						
LBTB	**Lobatse**	**75.62**	**222**	P	**P**	**14 01 00.1**	**-0.9**
LBTB				IAmb	IAmb	14 01 00.8	
	comp=Z,14nm,1.4s						
SUA	**Susitna One**	**75.76**	**20**	P	**P**	**14 01 00.5**	**-1.0**
SUA				IAmb	IAmb	14 01 02.0	
	comp=Z,3.2nm,1.1s						
PAX	**Paxson**	**75.78**	**17**	P	**P**	**14 01 00.9**	**-0.6**
PAX				IAmb	IAmb	14 01 21.7	
	comp=Z,6.4nm,1.4s						
SML	**Sawmill**	**76.10**	**18**	P	**P**	**14 01 02.7**	**-0.6**
SML				IAmb	IAmb	14 01 28.8	
	comp=Z,15nm,1.4s						
UNV	**Unalaska Valle**	**76.32**	**31**	P	**P**	**14 01 04.1**	**-0.5**
SCM	**Sheep Creek Mo**	**76.32**	**18**	P	**P**	**14 01 04.3**	**-0.3**
SCM				IAmb	IAmb	14 01 05.3	
	comp=Z,11nm,1.2s						
M24K	**Tolsona, Glenn**	**76.37**	**17**	P	**P**	**14 01 05.0**	**+0.2**
CNPM	**China Poot**	**77.24**	**21**	P	**P**	**14 01 09.2**	**-0.5**
YKA	**Yellowknife Ar**	**80.48**	**3**	P	**P**	**14 01 27.2**	**-0.1**
	comp=Z,1.6nm,0.6s,baz=359,slow=5.3,SNR=45						
WRA	**Warramunga Arr**	**81.89**	**122**	P	**P**	**14 01 33.5**	**-1.9**
	comp=Z,0.7nm,1.0s,baz=327,slow=5.2,SNR=4.6						
ASAR	**Alice Springs**	**84.20**	**125**	P	**P**	**14 01 46.7**	**-0.5**
	comp=Z,0.3nm,0.7s,baz=302,slow=7.0,SNR=4.3						
STKA	**Stephens Creek**	**94.76**	**127**	LR	LR	14 51 38.6	
	comp=Z,195nm,18.1s,baz=358,slow=39						

RSNC ***18*** *13:56:35.0±1.1, 1°.46N×79°.44W, h18^{km}±4^{km}, ML3.3, Mw4.2*

IDC ***18*** *13:56:37.3±1.1, 2°.06N×79°.62W, h0^{km}, mb3.5/5, mb1 3.9/6, mb1mx3.6/28, mbtmp3.6/6, ML2.6/1, MS3.6/11, Ms1 3.6/11, ms1mx3.3/35, Error ellipse: s-maj=45.6km s-min=22.5km az=66.0*

ISC 18 13:56:33.3±3.6, **1°.47N**±0°.05×**79°.43W**±0°.06, **h0**^{km}±22^{km}, **n47,** σ**2**^{s}**34**/57, **mb3.5**/4, **MS3.6**/7, **2C, Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TUMC	**Tumaco**	**0.78**	**63**	*e*P	**Pb**	**13 56 49.2**	**-0.5**
TUMC				*e*S	**Sb**	**13 56 59.9**	**-1.0**
TUMC				*i*		13 57 12.4	
	comp=Z,3μm,0.5s						
OTAV	**Otavalo**	**1.57**	**141**	*e*P	**Pn**	**13 57 02.2**	**-0.5**
OTAV				*e*S	**Sn**	**13 57 21.1**	**-2.9**
CMBC	**Cumbal**	**1.69**	**108**	*e*P	**Pn**	**13 57 02.8**	**-1.6**
CMBC				*e*S	**Sn**	**13 57 25.4**	**-1.6**
GR1C	**Gorgona, Isla**	**1.97**	**40**	⇑*e*P	**Pn**	**13 57 05.5**	**-2.5**
GR1C				*e*S	**Sn**	**13 57 32.2**	**-1.2**
CCUFI	**Cufio, Nario**	**2.09**	**97**	*e*P	**Pn**	**13 57 09.4**	**-0.7**
CCUFI				*e*S	**Sn**	**13 57 35.6**	**-1.4**
GCUF	**Volcan Galeras**	**2.10**	**97**	*e*P	**Pn**	**13 57 10.1**	**0.0**
GCUF				*e*S	**Sn**	**13 57 35.7**	**-1.4**
GCUF				*i*		13 57 43.5	
	comp=Z,194nm,0.3s						
CPAS1	**Pasto**	**2.12**	**98**	*e*P	**Pn**	**13 57 09.1**	**-1.3**
CPAS1				*e*S	**Sn**	**13 57 36.8**	**-0.9**
CPAS2	**Pasto**	**2.19**	**97**	*e*S	**Sn**	**13 57 37.4**	**-1.8**
BBAC	**Balboa, Cauca**	**2.25**	**76**	*e*P	**Pn**	**13 57 11.1**	**-0.8**
BBAC				*e*S	**Sn**	**13 57 38.7**	**-1.8**
BBAC				*i*		13 57 47.7	
	comp=Z,323nm,0.3s						
SOTA	**Rioblanco**	**2.89**	**77**	*e*P	**Pn**	**13 57 22.1**	**+1.0**
SOTA				*e*S	**Sn**	**13 57 55.0**	**-1.8**
POPC	**Popayan, Colom**	**2.95**	**69**	⇑*e*P	**Pn**	**13 57 21.2**	**-0.4**
POPC				*e*S	**Sn**	**13 57 55.9**	**-1.9**
POPC				*i*		13 58 14.8	
	comp=Z,45nm,0.7s						
PCON	**Cinco Dias**	**3.15**	**74**	*e*P	**Pn**	**13 57 25.3**	**+0.7**
PCON				*e*S	**Sn**	**13 58 01.7**	**-1.4**
PCON				*i*		13 58 10.0	
	comp=Z,166nm,0.5s						
MARP	**Paez Belalcaza**	**3.73**	**69**	*e*P	**Pn**	**13 57 32.0**	**-0.4**
MARP				*e*S	**Sn**	**13 58 15.0**	**-2.1**
FLOC	**Florencia**	**3.77**	**88**	*e*P	**Pn**	**13 57 34.0**	**+1.2**
FLOC				*e*S	**Sn**	**13 58 15.6**	**-2.3**
FLOC				*i*		13 58 49.5	
	comp=Z,52nm,0.7s						
YOTC	**Yotoco, Valle**	**3.96**	**51**	*e*P	**Pn**	**13 57 34.3**	**-1.1**
YOTC				*e*S	**Sn**	**13 58 20.5**	**-2.3**
YOTC				*i*		13 58 31.0	
	comp=Z,45nm,0.6s						
GARC	**Garzon, Huila**	**4.00**	**80**	*e*P	**Pn**	**13 57 36.6**	**+0.6**
GARC				*i*		13 58 36.4	
	comp=Z,32nm,0.6s						
PLMC	**San Jos del P**	**4.63**	**43**	*e*P	**Pn**	**13 57 43.8**	**-0.9**
PTLC	**Puerto Leguiza**	**4.81**	**106**	*e*P	Pn	13 57 51.6	+4.7
PTLC				*e*S	**Sb**	**13 59 00.5**	**+3.7**
ORTC	**Ortega, Tolima**	**4.83**	**60**	*e*P	**Pn**	**13 57 49.8**	**+2.6**
ORTC				*e*S	**Sn**	**13 58 41.7**	**-2.2**
ORTC				*i*		13 59 04.7	
	comp=Z,32nm,0.6s						
ANIL	**Santa Ana**	**5.01**	**53**	*e*P	**Pn**	**13 57 50.7**	**+0.7**
ANIL				*e*S	**Sn**	**13 58 51.6**	**+2.7**
PRAC	**Prado**	**5.05**	**64**	*e*P	**Pn**	**13 57 47.8**	**-2.6**
TOLC	**Tolima**	**5.14**	**53**	*e*P	**Pn**	**13 57 51.5**	**-0.2**
TOLC				*e*S	**Sn**	**13 58 52.9**	**+1.0**
TOLC				*i*		13 59 11.2	
	comp=Z,23nm,0.6s						
RREF	**El Recreo**	**5.31**	**50**	*e*P	**Pn**	**13 57 52.9**	**-1.5**
RREF				*e*S	**Sn**	**13 58 59.4**	**+2.7**
RREF				*i*		13 59 08.9	
	comp=Z,12nm,0.6s						
GUY2C	**Guyana, Caldas**	**5.51**	**47**	*e*P	**Pn**	**13 57 54.2**	**-2.8**
GUY2C				*e*S	**Sn**	**13 59 01.1**	**-0.2**
GUY2C				*i*		13 59 23.3	
	comp=Z,25nm,0.6s						
MACC	**Macarena, Meta**	**5.62**	**83**	*e*P	**Pn**	**13 58 00.1**	**+2.0**
ROSC	**El Rosal**	**6.10**	**57**	Pn	**Pn**	**13 58 09.2**	**+4.1**
	comp=Z,3.0nm,0.3s,baz=234,slow=19,SNR=2.1						
ROSC				Sn	**Sn**	**13 59 21.6**	**+5.8**
	comp=Z,1.3nm,0.3s,baz=207,slow=22,SNR=1.3						
ROSC				LR	LR	14 00 53.5	
	comp=Z,749nm,19.3s,baz=236,slow=43						
NORC	**Norcasia**	**6.10**	**48**	*e*P	**Pn**	**13 58 04.5**	**-0.3**
NORC				*e*S	**Sn**	**13 59 12.9**	**-2.5**
CHIC	**Chingaza**	**6.49**	**61**	*e*P	**Pn**	**13 58 11.3**	**+0.8**
CHIC				*e*S	**Sn**	**13 59 17.5**	**-8.1**
CHIC				*i*		13 59 47.6	
	comp=Z,11nm,0.6s						
SPBC	**San Pablo de B**	**6.77**	**52**	*e*P	**Pn**	**13 58 16.5**	**+2.5**
PTBC	**PUERTO BERRIO,**	**7.07**	**44**	*e*P	**Pn**	**13 58 14.4**	**-3.6**
PTBC				*e*S	**Sn**	**13 59 42.6**	**+3.5**
ATAH	**Atahualpa**	**8.61**	**173**	Pn	Pn	13 58 47.3	+7.6
	comp=Z,0.3nm,0.3s,baz=357,slow=17,SNR=2.1						
ATAH				Sn	Sn	14 00 36.4	+19
	comp=Z,0.3nm,0.3s,baz=231,slow=22,SNR=2.1						
ATAH				LR	LR	14 02 08.2	
	comp=Z,448nm,18.3s,baz=345,slow=36						
SMLC	**San Martn de**	**9.02**	**36**	*e*P	Pn	13 58 39.8	-5.1
SDV	**Santo Domingo**	**11.44**	**50**	LR	LR	14 04 07.0	
	comp=Z,126nm,21.7s,baz=232,slow=40						
PTGA	**Pitinga**	**19.58**	**96**	LR	LR	14 08 37.2	
	comp=Z,225nm,21.6s,baz=82,slow=36						
LPAZ	**La Paz**	**20.88**	**148**	P	Pn	14 01 27.1	+6.9
	comp=Z,1.4nm,0.7s,baz=333,slow=14,SNR=5.7						
SIV	**San Ignacio**	**25.10**	**134**	LR	LR	14 12 11.5	
	comp=Z,185nm,19.2s,baz=224,slow=36						
LVC	**Limon Verde**	**26.04**	**157**	LR	LR	14 13 53.2	
	comp=Z,135nm,19.8s,baz=340,slow=39						
MDP	**Montagnes des**	**26.98**	**82**	LR	LR	14 14 24.9	
	comp=Z,122nm,19.8s,baz=288,slow=39						
CPUP	**Villa Florida**	**34.92**	**144**	LR	LR	14 19 21.4	
	comp=Z,106nm,21.3s,baz=310,slow=38						
BDFB	**Brasilia**	**35.40**	**120**	LR	LR	14 17 47.5	
	comp=Z,85nm,20.1s,baz=45,slow=35						
RPN	**Rapa Nui**	**40.47**	**223**	LR	LR	14 16 32.8	
	comp=Z,102nm,21.6s,baz=24,slow=29						
PLCA	**Paso Flores**	**42.78**	**170**	P	P	14 04 42.1	+9.4
	comp=Z,2.0nm,0.9s,baz=344,slow=8.4,SNR=5.5						
RCBR	**Riachuelo**	**44.06**	**100**	LR	LR	14 25 33.2	
	comp=Z,72nm,18.3s,baz=318,slow=39						
NVAR	**Mina Array Bea**	**51.17**	**321**	P	**P**	**14 05 39.6**	**+1.0**
	comp=Z,0.5nm,0.8s,baz=108,slow=5.8,SNR=4.8						
YKA	**Yellowknife Ar**	**66.30**	**343**	P	**P**	**14 07 21.5**	**-1.7**
	comp=Z,0.2nm,0.7s,baz=135,slow=6.6,SNR=5.1						
ILAR	**Eielson Array**	**79.21**	**336**	P	**P**	**14 08 40.9**	**+1.0**
	comp=Z,0.2nm,0.9s,baz=104,slow=3.8,SNR=2.4						
WRA	**Warramunga Arr**	**142.23**	**239**	PKP	**PKiKP**	**14 16 13.8**	**+2.1**
	comp=Z,0.5nm,0.7s,baz=110,slow=2.2,SNR=5.4						

BJI ***18*** *14:31:51.0±0.0, 2°.80N×128°.70E, h240^{km}, mB5.1/59, mb5.3/80*

GCMT ***18*** *14:31:52.9±0.1, 2°.85N±0°.01×128°.47E±0°.01, h220^{km}±1^{km}, MW5.3/123, Moment Tensor Solution. s95,c140; s123,c191; Duration: 1^{s}1 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.14±.02; $M_{\theta\theta}$0.16±.02; $M_{\phi\phi}$-0.02±.02; $M_{r\theta}$-0.95±.01; $M_{\theta\phi}$0.12±.02; $M_{\phi r}$-0.32±.02; Best double couple: $M_0$1.02200×10^{17} NP1:ϕ_s228.00000°, δ5.00000°, λ-113.00000°. NP2:ϕ_s71.00000°, δ85.00000°, λ-88.00000°. Principal axes: T 1.0620, Plg40.0000°, Azm159.0000°; N -0.0800, Plg2.0000°, Azm251.0000°; P -0.9820, Plg50.0000°, Azm344.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

MOS ***18*** *14:31:52.0±0.9, 2°.78N×128°.53E, h233^{km}, mb5.2/71 Error ellipse: s-maj=7.5km s-min=4.0km az=111.2*

IDC ***18*** *14:31:53.4±0.4, 2°.76N×128°.55E, h230^{km}±4^{km}, mb4.8/49, mb1 4.8/54, mb1mx4.7/59, mbtmp5.3/54, Error ellipse: s-maj=8.1km s-min=4.7km az=79.0*

NEIC ***18*** *14:31:53.9±1.4, 2°.73N±0°.08×128°.55E±0°.07, h239^{km}±5^{km}, mb5.2/206, Error ellipse: s-maj=11.5km s-min=10.2km az=212.0*

KLM ***18*** *14:31:54, 2°.87N×128°.69E, h235^{km}, mb5.3*

DJA ***18*** *14:31:54.1±0.2, 3°N±2°×12°9E±°, h224^{km}±2^{km}, M5.0/89, mb5.3/89, mB5.5/63, MLv5.7/19, Mw(mB)5.0/63, MwMwp4.8/7, Mwp5.1/7*

ISC 18 14:31:53.3±0.3, **2°.79N**±0°.03×**128°.56E**±0°.04, **h230**^{km}±2^{km}, **h230**^{km}**:pP-P, n824,** σ**1**^{s}**21**/903, **mb5.2**/266, **96C-68D, Fault plane solution: NP1:**ϕ_s237.52365°, δ33.80933°, λ-121.13048°. **NP2:**ϕ_s93.53650°, δ61.55594°, λ-70.90334°. **Principal axes:** T Plg14.5210°, Azm169.7106°**;** N Plg16.7184°, Azm264.1725°**;** P Plg67.5669°, Azm40.8538°**; Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**2.33**	**211**	Pn	**Pn**	**14 32 38.1**	**+0.7**
TNTI	**Ternate**	**2.33**	**211**	P	**Pn**	**14 32 38.1**	**+0.7**
TNTI				S	**S**	**14 33 12.6**	**+0.6**
SGSI	**Sangihe**	**3.16**	**286**	P	**Pn**	**14 32 46.7**	**+0.3**
SGSI				S	**S**	**14 33 28.0**	**0.0**
DDMP	**Don Marcelino,**	**4.35**	**319**	*e*P	**Pn**	**14 32 59.2**	**-1.3**
SWI	**Sorong**	**4.52**	**143**	P	**Pn**	**14 33 04.1**	**+1.5**
SIJI	**Sorong**	**4.53**	**143**	P	**Pn**	**14 33 04.2**	**+1.5**
	59nm,0.3s,baz=335,slow=16,SNR=195						
SIJI				S	**S**	**14 33 56.6**	**-0.9**
	baz=276,slow=23,SNR=0.9						
MATI	**Mati**	**4.73**	**331**	*e*P	**Pn**	**14 33 03.2**	**-1.9**
MATI				*e*S	**S**	**14 33 58.8**	**-3.2**
KMSI	**Cibinong**	**5.08**	**244**	P	**Pn**	**14 33 10.2**	**+0.7**
	43nm641nm61μm6μm,0.7s						
DAV	**Davao City (W)**	**5.19**	**325**	⇑*e*P	Pn	14 33 06.1	-4.8
KCP	**Kidapawan**	**5.44**	**321**	⇓*i*P	**Pn**	**14 33 15.5**	**+1.4**
SANI	**Sanana**	**5.45**	**208**	P	**Pn**	**14 33 12.9**	**-1.3**
	19nm13μm57μm6μm,0.7s						
SKMP	**Bagumbayan, Su**	**5.46**	**313**	*e*P	**Pn**	**14 33 13.8**	**-0.4**
GTOI	**Gorontalo**	**5.95**	**249**	P	**Pn**	**14 33 21.8**	**+1.4**
	4.0nm6μm723nm,0.7s						
MSAI	**Masohi**	**6.10**	**177**	P	**Pn**	**14 33 22.7**	**+0.3**
	1.2nm98nm,0.6s						
BUKP	**Musuan**	**6.14**	**326**	*e*P	**Pn**	**14 33 22.5**	**-0.4**
BUKP				*e*S	**S**	**14 34 33.8**	**-0.6**
NLAI	**Namlea**	**6.16**	**194**	P	**Pn**	**14 33 23.9**	**+0.7**
	5.8nm8μm453nm,0.9s						
FAKI	**Fak Fak**	**6.76**	**147**	Pn	**Pn**	**14 33 31.8**	**+1.0**
FAKI	**Fak Fak**	**6.76**	**147**	P	**Pn**	**14 33 32.2**	**+1.4**
	1.7nm4μm433nm,1.1s						
BUTP	**Butuan**	**6.80**	**335**	*e*P	**Pn**	**14 33 31.4**	**+0.1**
BUTP				*e*S	**S**	**14 34 47.2**	**-2.3**
CGP	**Cagayan de Oro**	**6.82**	**326**	⇓*e*P	**Pn**	**14 33 31.8**	**+0.2**
LUWI	**Luwuk**	**6.93**	**237**	Pn	**Pn**	**14 33 31.6**	**-1.4**
LUWI	**Luwuk**	**6.93**	**237**	P	**Pn**	**14 33 32.5**	**-0.4**
	14nm9μm1μm,0.8s						
MRSI	**Marisa**	**7.01**	**251**	P	**Pn**	**14 33 35.3**	**+1.4**
	2.2nm4μm5μm512nm,0.8s						
PAGZ	**Pagadian**	**7.20**	**314**	*e*P	**Pn**	**14 33 36.0**	**-0.4**
GLSP	**General Luna,**	**7.36**	**341**	*e*P	**Pn**	**14 33 36.3**	**-2.1**
GLSP				*e*S	S	14 34 53.0	-10
BNDI	**Bandanaira**	**7.38**	**170**	P	**Pn**	**14 33 39.0**	**+0.3**
	3.5nm960nm,1.3s						
ZCP	**Zamboanga City**	**7.66**	**303**	⇑*e*P	**Pn**	**14 33 43.2**	**+0.9**
APSI	**Ampana**	**7.83**	**242**	P	**Pn**	**14 33 44.4**	**0.0**
	4.4nm2μm5μm634nm,0.8s						
TOLI2	**Tolitoli**	**7.95**	**258**	Pn	**Pn**	**14 33 45.9**	**-0.1**
MSLP	**Maasin**	**8.17**	**333**	*e*P	**Pn**	**14 33 48.4**	**-0.4**
BAKI	**Biak**	**8.51**	**118**	P	**Pn**	**14 33 54.9**	**+1.7**
	30μm8μm714nm,1.0s						
LLP	**Lapu-Lapu**	**8.76**	**329**	*e*P	**Pn**	**14 33 57.1**	**+0.7**
KDI	**Kendari**	**8.95**	**222**	P	Pn	14 34 05.7	+6.8
SRPI	**Serui, Papua**	**8.96**	**121**	P	**Pn**	**14 34 02.8**	**+3.8**
CNOP	**Candoni, Negro**	**9.14**	**320**	*e*P	**Pn**	**14 34 00.6**	**-0.6**
GUIM	**Jordan**	**9.79**	**323**	*e*P	**Pn**	**14 34 08.7**	**-0.8**
TTSI	**Tana Toraja**	**10.49**	**237**	P	**Pn**	**14 34 19.0**	**+0.6**
	2μm192nm,0.6s						
SAUI	**Saumlaki**	**11.04**	**166**	Pn	**Pn**	**14 34 24.1**	**-1.3**
SAUI	**Saumlaki**	**11.04**	**166**	P	**Pn**	**14 34 25.6**	**+0.2**
	616nm,1.1s						
SPSI	**Sidrap Palu**	**11.05**	**233**	P	**Pn**	**14 34 27.8**	**+2.2**
	2μm277nm,0.8s						
BNSI	**Bone**	**11.06**	**230**	P	**Pn**	**14 34 26.6**	**+0.9**
	4μm398nm,0.8s						
SMPI	**Sarmi**	**11.20**	**115**	P	**Pn**	**14 34 28.8**	**+1.4**
	69nm,1.0s						
KAPI	**Kappang**	**11.73**	**229**	P	**Pn**	**14 34 32.2**	**-1.9**
	2.6nm,0.3s,baz=169,slow=18,SNR=4.5						
KAPI				S	**S**	**14 36 43.5**	**-0.5**
	7.8nm,0.3s,baz=170,slow=20,SNR=4.6						
KAPI	**Kappang**	**11.73**	**229**	Pn	**Pn**	**14 34 32.4**	**-1.8**
KAPI	**Kappang**	**11.73**	**229**	P	**Pn**	**14 34 32.7**	**-1.4**
KAPI				S	**S**	**14 36 44.7**	**+0.6**
BSSI	**Bau Bau, Buton**	**11.99**	**222**	P	**Pn**	**14 34 37.6**	**+0.3**
	2μm230nm,1.0s						
SPMM	**Sapulut**	**12.22**	**279**	P	**Pn**	**14 34 42.0**	**+1.7**
BKB	**Balikpapan**	**12.34**	**251**	Pn	**Pn**	**14 34 40.5**	**-1.3**
BOAC	**Boac**	**12.51**	**328**	*e*P	**P**	**14 34 45.5**	**-1.3**
KKM	**Kota Kinabalu**	**12.73**	**285**		**Pn**	**14 34 46.9**	**+0.2**
GENI	**Genyem**	**12.77**	**115**	P	**Pn**	**14 34 48.5**	**+1.3**
	4μm11μm947nm,1.5s						
MMRI	**Maumere**	**12.98**	**209**	Pn	**Pn**	**14 34 49.5**	**-0.3**
MMRI	**Maumere**	**12.98**	**209**	P	**P**	**14 34 52.3**	**+0.2**
	2μm8μm791nm,1.4s						
SOEI	**Soe**	**13.17**	**199**		**Pn**	**14 34 52.4**	**+0.2**
SOEI	**Soe**	**13.17**	**199**	P	**P**	**14 34 53.9**	**-0.5**
	6μm663nm,0.8s						
LQP	**Lukban**	**13.22**	**329**	*e*P	**Pn**	**14 34 53.0**	**+0.1**
EDFI	**Ende, Flores**	**13.35**	**211**	P	**Pn**	**14 34 55.2**	**+0.8**
	4μm392nm,1.5s						
TGY	**Tagaytay City**	**13.53**	**327**	P	**P**	**14 34 58.0**	**-0.2**
	115nm,0.3s,baz=60,slow=2.6,SNR=4.5						
TGY				S	**S**	**14 37 27.2**	**+0.8**
	99nm,0.3s,baz=202,slow=12,SNR=1.7						
LUBP	**Lubang**	**13.63**	**323**	*e*P	**P**	**14 34 59.3**	**0.0**
MACP	**Maragondon, Ca**	**13.78**	**326**	*e*P	**Pn**	**14 34 59.6**	**0.0**
KBKI	**Kotabaru**	**13.79**	**244**	P	**Pn**	**14 35 00.3**	**+0.6**
	812nm89nm,0.7s						
BATI	**Baumata**	**13.80**	**201**	P	**Pn**	**14 35 00.3**	**+0.5**
	82nm,0.3s,baz=347,slow=1.7,SNR=65						
BATI	**Baumata**	**13.80**	**201**	P	**Pn**	**14 35 00.0**	**+0.2**
	3μm286nm,0.9s						
MTKI	**Muara Teweh, K**	**14.16**	**255**	P	**P**	**14 35 07.3**	**+2.1**
WSI	**Waingapu**	**14.86**	**214**	P	**P**	**14 35 17.1**	**+4.1**
BBKI	**Banjar Baru**	**15.05**	**246**	P	**Pn**	**14 35 16.9**	**+1.8**
BASI	**Baing, Sumba**	**15.17**	**212**	P	**P**	**14 35 15.7**	**-0.7**
	4μm268nm,0.6s						
SMPP	**San Manuel, Pa**	**15.38**	**330**	*e*P	**P**	**14 35 18.7**	**0.0**
CAUP	**Cauayan**	**15.55**	**335**	*e*P	**Pn**	**14 35 23.1**	**+2.1**
PLAI	**Plampang**	**15.77**	**223**	P	**Pn**	**14 35 23.7**	**0.0**
	2μm9μm832nm,0.7s						
KDU	**Kakadu**	**15.86**	**166**	P	**P**	**14 35 23.6**	**-0.2**
	baz=16,SNR=184						
BOLP	**Bolinao**	**15.96**	**328**	*e*P	**Pn**	**14 35 26.2**	**+0.2**
MMPI	**Merauke**	**16.25**	**134**	P	**Pn**	**14 35 30.0**	**+0.7**
	857nm,1.1s						
SBUM	**Sibu**	**16.33**	**269**	Pn	**Pn**	**14 35 31.8**	**+1.4**
TWSI	**Taliwang, Sumb**	**16.33**	**225**	P	**Pn**	**14 35 31.4**	**+1.0**
	1μm160nm,0.9s						
APYP	**Conner**	**16.61**	**335**	*e*P	**Pn**	**14 35 33.4**	**-0.3**
SZP	**Santa**	**16.69**	**332**		**Pn**	**14 35 34.4**	**-0.2**
SRBI	**Singaraja**	**17.14**	**231**	P	**Pn**	**14 35 40.3**	**+0.3**

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           4µm421nm,1.0s
STKI  Sintang          17.29 261   P       Pn      14 35 42.9 +1.2
DNP   Denpasar         17.52 229   P       P       14 35 43.2 +1.1
           26µm1µm,0.7s
KMMI  Kalianget        17.54 236   P       Pn      14 35 43.9  -0.7
           4µm534nm,0.8s
ABJI  Asem Bagus       17.74 234   P       P       14 35 45.6 +1.0
           3µm446nm,0.7s
PBKI  Pangkalan Bun    17.75 252   P       P       14 35 45.8 +1.2
           5µm337nm,0.6s
JAGI  Jajag, Banyuwa   18.21 232   P       P       14 35 50.5 +0.9
JAGI  Jajag, Banyuwa   18.21 232   P       P       14 35 50.7 +1.1
           3µm225nm,0.7s
KSM   Kuching          18.29 266   P       Pn      14 35 52.2  -1.2
KSM   Kuching          18.29 266   P       Pn      14 35 53.0  -0.4
KNRA  Kununurra        18.35 179   P       P       14 35 51.8 +0.7
           baz=18,SNR=14
KNRA  Kununurra        18.35 179   P       P       14 35 50.5  -0.6
GUMO  Guam             19.36  55   P       P       14 36 01.6  -0.4
           12nm,0.3s,baz=200,slow=9.8,SNR=4.8
GUMO  Guam             19.36  55   P       P       14 36 01.0  -1.0
MANU  Manus Island     19.40 104   P       P       14 36 01.4  -1.1
SMRI  Semarang         20.56 242   P       Pn      14 36 19.4  -1.1
UGM   Wanagama         20.90 239   P       P       14 36 18.7 +0.2
UGM   Wanagama         20.90 239   P       P       14 36 20.2 +1.7
           439nm,1.0s
FITZ  Fitzroy Crossi   20.95 188   P       P       14 36 17.9  -1.0
           baz=21,SNR=126
FITZ  Fitzroy Crossi   20.95 188   P       P       14 36 18.3  -0.6
           58nm,0.6s,baz=353,slow=6.0,SNR=176
FITZ                               S       S       14 39 58.8 +0.6
           21nm,1.1s,baz=194,slow=19,SNR=3.9
FITZ  Fitzroy Crossi   20.95 188   P       P       14 36 18.0  -0.9
TWG   Pinlang          21.20 341   P       P       14 36 19.1  -2.3
ANA2  Anatahan         21.59  50   P       P       14 36 26.5 +1.2
TPI   Tanjungpandan    21.61 255   P       P       14 36 26.0 +0.4
           818nm52nm,0.9s
YULB  Yu-li            21.66 342   P       P       14 36 23.3  -2.6
YULB                               IAmb    IAmb    14 36 31.3
           comp=Z,67nm,0.7s
TPUB  Ta-pu            21.79 340   P       P       14 36 25.5  -1.7
DLV   T  Lat           21.87 296   P       P       14 36 28.7 +0.5
DLV                                IAmb    IAmb    14 36 31.0
           comp=Z,114nm,0.8s
COEN  Coen             22.06 139   P       P       14 36 28.8  -1.0
SSLB  Suanglung        22.14 341   P       P       14 36 29.2  -1.2
PMG   Port Moresby     22.14 123   P       P       14 36 29.2  -1.3
           comp=Z,21nm,1.1s,baz=85,slow=0.9,SNR=6.9
PMG   Port Moresby     22.14 123   P       P       14 36 29.1  -1.4
PMG   Port Moresby     22.14 123   P       P       14 36 30.6 +0.1
YOJ   Yonaguni jima    22.20 347   P       P       14 36 30.2  -0.8
YOJ                                pmax    pmax
           comp=Z,245nm,0.8s
YOJ   Yonaguni jima    22.20 347   P       P       14 36 30.2  -0.8
NACB  Ninganchiao      22.30 343   P       P       14 36 31.1  -0.8
NACB                               IAmb    IAmb    14 36 34.4
           comp=Z,81nm,0.9s
YHNB  Yeheng           22.83 343   P       P       14 36 36.4  -0.4
PPBI  Pangkal Pinang   22.95 258   P       P       14 36 39.9 +2.0
           comp=Z,16µmcomp=Z,95nm,1.1s
LEM   Lembang          22.99 245   P       P       14 36 38.3  -0.1
           comp=Z,2µm,1.3s,baz=30,slow=10,SNR=56
LEM   Lembang          22.99 245   P       P       14 36 40.2 +1.8
           comp=Z,2µmcomp=Z,302nm,1.0s
JMZ   Minamidaito 2    23.04   6   P       P       14 36 38.5  -0.1
TATO  Taipei           23.09 343   P       P       14 36 38.2  -0.8
TATO  Taipei           23.09 343   P       P       14 36 38.6  -0.4
CISI  Cisompet, Garu   23.11 243   P       P       14 36 38.5  -0.9
CISI  Cisompet, Garu   23.11 243   P       P       14 36 39.4   0.0
           comp=Z,4µmcomp=Z,515nm,0.7s
WB0   Warramunga Arr   23.13 166   P       P       14 36 38.3  -1.2
WB0                                IAmb    IAmb    14 36 41.8
           comp=Z,109nm,0.7s
WRAB  Tennant Creek    23.28 166deP    P       14 36 40.9 +0.1
WRAB                               pmax    pmax
           comp=Z,47nm,0.4s
WRAB  Tennant Creek    23.28 166   P       P       14 36 39.8  -1.0
WRAB                               IAmb    IAmb    14 36 44.1
           comp=Z,84nm,0.8s
WRA   Warramunga Arr   23.29 166   P       P       14 36 40.0  -0.9
           comp=Z,77nm,0.9s,baz=343,slow=10,SNR=216
WRA                                pP      pP      14 37 22.8 +1.0
           comp=Z,30nm,0.7s,baz=344,slow=11,SNR=2.3
WRA                                S       S       14 40 34.9  -1.1
           comp=Z,2.4nm,0.6s,baz=325,slow=16,SNR=2.4
WRA                                ScP     ScP     14 43 36.7  -0.9
           comp=Z,2.8nm,0.6s,baz=344,slow=2.9,SNR=4.9
WRA   Warramunga Arr   23.29 166   P       P       14 36 39.2  -1.7
WB2   Warramunga Arr   23.29 166   P       P       14 36 39.8  -1.1
WB2                                IAmb    IAmb    14 36 44.2
           comp=Z,85nm,0.8s
WR0   Warramunga Arr   23.36 166   P       P       14 36 40.3  -1.1
CBJI  Citeko           23.53 247   P       P       14 36 45.5 +2.4
           comp=Z,7µmcomp=Z,358nm,0.7s
DBJI  Dramaga          23.67 247   P       P       14 36 46.4 +1.9
           comp=Z,5µmcomp=Z,90nm,0.7s
KNMB  Chin-men Tao     23.68 336   P       P       14 36 45.2 +0.8
JOW   Kunigami         23.91 359   P       P       14 36 47.0 +0.5
QZH   Quanzhou         24.03 337⇑iP    P       14 36 49.3 +1.7
QZH                                S       S       14 40 50.3 +2.6
QZH                                pmax    pmax
           comp=Z,190nm,1.2s
QZH                                pmax    pmax
           comp=Z,620nm,3.5s
QIZ   Qiongzhong       24.41 313   P       P       14 36 52.0 +0.9
QIZ                                sP      sP      14 38 03.6 +0.8
QIZ                                S       S       14 40 55.6 +1.7
QIZ                                pmax    pmax
           comp=Z,73nm,1.6s
QIZ                                pmax    pmax
           comp=Z,430nm,8.4s
QIZ   Qiongzhong       24.41 313   P       P       14 36 50.6  -0.5
QIZ                                IAmb    IAmb    14 36 54.4
           comp=Z,97nm,1.1s
PMBI  Palembang        24.45 257   P       P       14 36 54.2 +2.7
           comp=Z,13µmcomp=Z,337nm,0.6s
RABL  Rabaul           24.58 106   P       P       14 36 51.9  -0.9
RABL                               IAmb    IAmb    14 36 56.2
           comp=Z,50nm,0.7s
RABL  Rabaul           24.58 106   P       P       14 36 53.6 +0.8
BLSI  Bandar Lampung   24.66 251   P       P       14 36 55.3 +1.9
           comp=Z,2µmcomp=Z,242nm,0.8s
MYKOM Kota Tinggi      24.71 268   P       P       14 36 54.5 +0.6
MYKOM                              IAmb    IAmb    14 36 58.3
           comp=Z,47nm,0.7s
MYKOM Kota Tinggi      24.71 268   P       P       14 36 55.0 +1.1
KLSI                   24.94 253   P       P       14 36 57.3 +1.3
           comp=Z,21nm,0.9s
JMBI  JAMBI            25.30 260   P       P       14 37 00.6 +1.4
           comp=Z,156nm,1.4s
MBWA  Marble Bar       25.32 200   P       P       14 36 58.9  -0.4
KASI  Kota Agung       25.42 251   P       P       14 37 01.6 +1.4
           comp=Z,90nm,0.5s
QIS   Mount Isa        25.60 155   P       P       14 37 01.4  -0.4
           baz=26,SNR=32
PSA00 Pilbara Seismi   25.67 199   P       P       14 37 01.7  -0.7
PSA00                              IAmb    IAmb    14 37 03.6
           comp=Z,85nm,0.8s
PSA00 Pilbara Seismi   25.67 199   P       P       14 37 00.8  -1.6
PSA00                              IAmb    IAmb    14 37 03.2
           comp=Z,34nm,0.7s
LWLI  Liwa             25.68 252   P       P       14 37 07.5 +4.8
MTSU  Mount Surprise   25.95 144   P       P       14 37 05.0   0.0
           baz=26,SNR=22
XMIS  Christmas Isla   26.34 240   P       P       14 37 07.5  -1.0
XMIS  Christmas Isla   26.34 240   P       P       14 37 08.9 +0.3
           comp=Z,167nm,0.8s
RGRI  Rengat           26.40 264   P       P       14 37 09.8 +0.7
           comp=Z,15µmcomp=Z,129nm,0.5s
MNAI  Manna            26.55 255   P       P       14 37 11.1 +0.6
AS31  Alice Springs    26.80 169   P       P       14 37 11.8  -0.7
ASAR  Alice Springs    26.80 169   P       P       14 37 12.1  -0.5
           comp=Z,18nm,0.3s,baz=352,slow=6.9,SNR=899
ASAR                               PcP     PcP     14 40 29.6 +0.3
           comp=Z,1.3nm,0.3s,baz=356,slow=1.8,SNR=1.7
ASAR                               S       S       14 41 29.5  -2.1
           comp=Z,5.2nm,0.7s,baz=356,slow=23,SNR=4.8
ASAR                               ScP     ScP     14 43 46.6  -0.9
           comp=Z,3.8nm,0.6s,baz=346,slow=2.5,SNR=7.2
ASAR  Alice Springs    26.80 169   P       P       14 37 11.9  -0.7
MASI  Maura Aman, Be   26.96 258   P       P       14 37 15.5 +1.4
           comp=Z,445nm,0.5s
JCJ   Chichijima       27.47  27   P       P       14 37 17.9  -0.5
           comp=Z,182nm,0.6s,baz=125,slow=18,SNR=3.9
BKNI  Bangkinang       27.62 265   P       P       14 37 24.2 +4.3
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WRKA  Warakurna        27.66 181   P       P       14 37 19.4  -0.7
           baz=28,SNR=136
PDSI  Padang           28.33 263   P       P       14 37 27.6 +1.3
           comp=Z,854nmcomp=Z,31nm,0.7s
SRAK  Srakaew          28.47 295   P       P       14 37 24.3  -3.1
           comp=Z,3µmcomp=Z,340nm,0.9s
CTA   Charters Tower   28.61 143   P       P       14 37 29.4 +0.8
           comp=Z,8.2nm,0.7s,baz=331,slow=14,SNR=6.3
CTAO  Charters Tower   28.61 143   P       P       14 37 27.5  -1.1
CTAO                               pmax    pmax
           comp=Z,20nm,1.1s
CTAO  Charters Tower   28.61 143   P       P       14 37 27.5  -1.1
JSU   Suzuyama         28.62   3   P       P       14 37 26.8  -1.8
JSU                                IAmb    IAmb    14 37 30.2
           comp=Z,146nm,1.2s
KHON  Khomkaen         28.68 300   P       P       14 37 31.1 +1.9
           comp=Z,4µmcomp=Z,218nm,0.7s
GIRL  Giralia          28.89 208   P       P       14 37 32.2 +1.2
           baz=29,SNR=14
GIRL  Giralia          28.89 208   P       P       14 37 31.5 +0.5
SSE   Sheshan          29.01 347   P       P       14 37 32.3 +0.4
SSE                                IAmb    IAmb    14 37 34.1
           comp=Z,43nm,0.9s
MNSI  Mandailing Nat   29.04 267   P       P       14 37 33.9 +1.4
TRTT  Trang            29.17 281   P       P       14 37 35.3 +1.6
           comp=Z,52nm,1.2s
NONG  Nongkai          29.18 303   P       P       14 37 34.7 +1.0
           comp=Z,145nm,1.2s
CHAI  Chaiyaphum       29.23 298   P       P       14 37 35.0 +0.9
           comp=Z,1µmcomp=Z,184nm,0.8s
PSI   Prapat           29.60 271   P       P       14 37 38.2 +0.6
           comp=Z,42nm,1.0s,baz=5.8,slow=0.4,SNR=14
RPSI  Rantau Prapat    29.61 271   P       P       14 37 36.4  -1.1
RPSI                               IAmb    IAmb    14 37 39.8
           comp=Z,93nm,1.2s
SURT  Suratani         30.22 283   P       P       14 37 46.0 +3.1
           comp=Z,0.9nm,1.0s
JNU   Nakatsue         30.25   4   P       P       14 37 42.6  -0.4
           comp=Z,108nm,0.9s,baz=184,slow=3.3,SNR=28
JNU   Nakatsue         30.25   4   P       P       14 37 42.2  -0.8
SLVN  Son La           30.26 309   P       P       14 37 43.8 +0.6
SLVN                               IAmb    IAmb    14 37 46.6
           comp=Z,46nm,0.9s
PHET  Kaeng Krachan    30.34 291   P       P       14 37 45.8 +1.9
           comp=Z,603nmcomp=Z,78nm,0.7s
NJ2   Nanjing          30.51 344⇑iP    P       14 37 46.8 +1.6
NJ2                                pmax    pmax
           comp=Z,28nm,1.1s
PKDT  Phuket           30.51 281   P       P       14 37 46.0 +0.6
           comp=Z,100nm,1.3s
WHN   Wuhan            30.71 335 ⇑P    P       14 37 48.3 +1.4
WHN                                S       S       14 42 38.3 +5.7
WHN                                pmax    pmax
           comp=Z,170nm,0.8s
WHN                                LR      LR
           comp=Z,560nm,13.3s
WHN                                LR      LR
           comp=Z,840nm,10.8s
WHN                                LR      LR
           comp=Z,1µm,19.3s
MEEK  Meekatharra      30.79 198   P       P       14 37 47.2  -0.6
           baz=31,SNR=42
GSI   Gunungsitoli     31.00 268   P       P       14 37 49.6  -0.2
GSI   Gunungsitoli     31.00 268   P       P       14 37 50.7 +0.9
           comp=Z,180nm,0.5s
PHIT  Phitsanulok      31.12 299   P       P       14 37 53.4 +2.6
           comp=Z,4µmcomp=Z,529nm,0.9s
JMN   Monobe           31.18   9   P       P       14 37 51.2 +0.1
UTTA  Uttaradit        31.23 300   P       P       14 37 53.5 +1.8
           comp=Z,853nmcomp=Z,91nm,0.8s
SRDT  SRDT             31.25 293   P       P       14 37 54.0 +2.1
           comp=Z,48nm,1.8s
TPTI                   31.34 272   P       P       14 37 53.5 +0.7
           comp=Z,32nm,0.6s
UTHA  Uthaitani        31.36 296   P       P       14 37 54.0 +1.1
           comp=Z,1µmcomp=Z,145nm,0.7s
GYA   Guiyang          31.55 320 ⇓P    P       14 37 55.8 +1.3
GYA                                pP      pP      14 38 41.8 +1.9
GYA                                PcP     PcP     14 40 43.3 +1.8
GYA                                S       S       14 42 46.0   0.0
GYA                                ScP     ScP     14 44 02.6  -0.2
GYA                                ScS     ScS     14 48 00.8  -0.6
GYA                                pmax    pmax
           comp=Z,45nm,1.5s
GYA                                pmax    pmax
           comp=Z,260nm,6.8s
GYA                                LR      LR
           comp=Z,250nm,14.3s
NANT  Nan              31.57 302   P       P       14 37 57.6 +2.9
           comp=Z,24µmcomp=Z,636nm,1.0s
JTU   Tsushima         31.59   1   P       P       14 37 54.9 +0.3
JTU                                IAmb    IAmb    14 37 56.3
           comp=Z,74nm,1.0s
LHMI  Lhok Sumawe      31.63 275   P       P       14 37 55.4 +0.1
LHMI  Lhok Sumawe      31.63 275   P       P       14 37 56.7 +1.4
           comp=Z,156nm,0.7s
SUKH  Sukhothai        31.93 299   P       P       14 37 59.8 +2.0
           comp=Z,82nm,0.5s
JHJ   Hachijo jima 2   31.95  18   P       P       14 37 56.9  -0.9
           comp=Z,271nm,0.9s,baz=22,slow=9.4,SNR=2.3
UMPA  Umpang Tak       32.12 296   P       P       14 38 00.0 +0.5
           comp=Z,832nmcomp=Z,76nm,1.1s
JHS   Saijyo           32.33   7   P       P       14 38 01.4 +0.3
ENH   Enshi            32.77 329   P       P       14 38 05.5 +0.5
CM36  Chiang Mai Arr   32.82 301   P       P       14 38 07.0 +1.4
CM35  Chiang Mai Arr   32.84 301   P       P       14 38 07.0 +1.3
CM04  Chiang Mai Arr   32.87 300   P       P       14 38 07.0 +1.0
           comp=Z,521nmcomp=Z,58nm,1.1s
CM09  Chiang Mai Arr   32.88 300   P       P       14 38 08.0 +1.9
           comp=Z,734nmcomp=Z,80nm,0.8s
CM01  Chiang Mai Arr   32.90 300   P       P       14 38 08.2 +2.0
           comp=Z,594nmcomp=Z,70nm,1.3s
CM05  Chiang Mai Arr   32.90 300   P       P       14 38 08.0 +1.7
           comp=Z,369nmcomp=Z,44nm,1.0s
CM02  Chiang Mai Arr   32.91 300   P       P       14 38 08.1 +1.7
           comp=Z,582nmcomp=Z,69nm,1.1s
CM34  Chiang Mai Arr   32.91 301   P       P       14 38 07.0 +0.6
CM31  Chiang Mai Arr   32.92 300   P       P       14 38 03.0  -3.5
CMAR  Chiang Mai Arr   32.92 300   P       P       14 38 07.1 +0.6
           comp=Z,37nm,0.8s,baz=124,slow=6.9,SNR=58
CMAR                               pP      pP      14 38 53.3 +1.0
           comp=Z,3.9nm,0.7s,baz=125,slow=6.4,SNR=1.7
CMAR                               PcP     PcP     14 40 47.7 +2.4
           comp=Z,0.3nm,0.4s,baz=87,slow=2.3,SNR=3.2
CMAR                               ScP     ScP     14 44 08.0 +0.4
           comp=Z,4.5nm,0.8s,baz=135,slow=2.2,SNR=16
CM15  Chiang Mai Arr   32.94 300   P       P       14 38 08.0 +1.4
           comp=Z,700nmcomp=Z,82nm,1.0s
CM13  Chiang Mai Arr   32.94 300   P       P       14 38 08.3 +1.7
           comp=Z,470nmcomp=Z,62nm,1.1s
JWT   Wachi            32.95  10   P       P       14 38 06.6 +0.2
JSG   Sagara           32.97  15   P       P       14 38 06.9 +0.3
CMMT  Chiang Mai       33.07 301   P       P       14 38 08.0 +0.3
           comp=Z,776nmcomp=Z,68nm,1.1s
CM33  Chiang Mai Arr   33.07 301   P       P       14 38 08.0 +0.2
CHTO  Chiang Mai       33.07 301   P       P       14 38 08.9 +1.1
CHTO                               pmax    pmax
           comp=Z,87nm,0.9s
CHTO  Chiang Mai       33.07 301   P       P       14 38 08.8 +1.1
CHTO                               IAmb    IAmb    14 38 10.8
           comp=Z,87nm,0.8s
CHTO  Chiang Mai       33.07 301   P       P       14 38 09.3 +1.5
CM32  Chiang Mai Arr   33.09 301   P       P       14 38 09.0 +1.1
INU   Inuyama          33.34  13   P       P       14 38 09.3  -0.4
KMI   Kunming          33.34 314 ⇓P    P       14 38 12.3 +2.0
KMI                                PcP     PcP     14 40 43.9  -2.7
KMI                                S       S       14 43 18.4 +4.4
KMI                                ScP     ScP     14 44 10.4 +1.2
KMI                                pmax    pmax
           comp=Z,96nm,1.3s
KMI                                pmax    pmax
           comp=Z,170nm,5.5s
KMI                                LR      LR
           comp=Z,240nm,7.4s
KMI                                LR      LR
           comp=Z,190nm,14.7s
KMI                                LR      LR
           comp=Z,340nm,11.8s
KMI   Kunming          33.34 314   P       P       14 38 09.5  -0.7
KMI                                pmax    pmax
           comp=Z,142nm,1.2s
KMI   Kunming          33.34 314   P       P       14 38 09.5  -0.7
KMI                                IAmb    IAmb    14 38 13.8
           comp=Z,142nm,1.2s
FORT  Forrest          33.38 181   P       P       14 38 09.9  -0.3
           baz=34,SNR=65
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FORT  Forrest          33.38 181   P       P       14 38 09.5  -0.7
TJN   Taejon           33.44 358⇑eP    P       14 38 11.2 +0.5
HNR   Honiara          33.54 112   P       P       14 38 10.9  -1.0
HNR                                pmax    pmax
           comp=Z,70nm,0.9s
HNR   Honiara          33.54 112   P       P       14 38 10.8  -1.0
HNR                                IAmb    IAmb    14 38 16.6
           comp=Z,70nm,0.9s
JGF   Kuroka           33.65  13   P       P       14 38 11.9  -0.7
JGF                                IAmb    IAmb    14 38 14.8
           comp=Z,56nm,1.0s
MHMT  Maesarieng       33.69 299   P       P       14 38 13.9 +0.8
MORW  Morawa           33.88 200   P       P       14 38 14.1  -0.4
           baz=34,SNR=14
MORW  Morawa           33.88 200   P       P       14 38 13.5  -1.0
MORW                               IAmb    IAmb    14 38 15.6
           comp=Z,94nm,1.1s
KSRS  Korea Array      34.51 359   P       P       14 38 20.2 +0.5
           comp=Z,58nm,0.8s,baz=175,slow=9.3,SNR=142
KSRS                               PcP     PcP     14 40 51.8 +2.4
           comp=Z,0.9nm,0.8s,baz=182,slow=3.7,SNR=3.6
KSRS                               ScP     ScP     14 44 12.8 +0.1
           comp=Z,1.9nm,0.6s,baz=181,slow=3.8,SNR=8.8
KS19  Wonju Array Si   34.55 359   P       P       14 38 20.0  -0.3
KS19                               IAmb    IAmb    14 38 21.8
           comp=Z,88nm,0.8s
KMBL  Kambalda         34.55 190   P       P       14 38 20.1  -0.3
           baz=35,SNR=36
INCN  Inchon           34.57 357   P       P       14 38 20.0  -0.4
INCN                               pmax    pmax
           comp=Z,66nm,1.0s
INCN  Inchon           34.57 357   P       P       14 38 20.0  -0.4
INCN                               IAmb    IAmb    14 38 22.3
           comp=Z,66nm,0.9s
MJAR  Matsushiro Arr   34.75  14   P       P       14 38 20.6  -1.3
           comp=Z,125nm,0.8s,baz=186,slow=9.5,SNR=139
MJAR                               PcP     PcP     14 40 51.3 +1.1
           comp=Z,0.9nm,0.5s,baz=201,slow=5.3,SNR=4.4
MJAR                               ScP     ScP     14 44 14.0 +0.3
           comp=Z,1.0nm,0.7s,baz=295,slow=41,SNR=3.0
MAJO  Matsushiro       34.75  14   P       P       14 38 20.8  -1.1
MAJO                               pmax    pmax
           comp=Z,205nm,0.9s
MAJO  Matsushiro       34.75  14   P       P       14 38 20.8  -1.1
MAT   Matsushiro       34.75  14   P       P       14 38 20.5  -1.4
TIA   Tai'an           34.90 344   P       P       14 38 24.0 +0.8
TIA                                pmax    pmax
           comp=Z,33nm,1.0s
JYT   Yasato           34.97  17   P       P       14 38 20.9  -2.8
JYT                                IAmb    IAmb    14 38 24.4
           comp=Z,79nm,1.0s
RMQ   Roma             35.04 147   P       P       14 38 24.7 +0.1
           baz=35,SNR=6.1
BLDU  Ballidu          35.09 198   P       P       14 38 24.5  -0.4
           baz=35,SNR=68
EIDS  Eidsvold         35.50 143   P       P       14 38 27.7  -0.8
           baz=36,SNR=7.4
EIDS  Eidsvold         35.50 143   P       P       14 38 26.9  -1.6
KLBR  Kellerberrin     35.70 196   P       P       14 38 29.9  -0.2
           baz=36,SNR=60
XAN   Xi'an            36.09 332   P       P       14 38 33.8 +0.4
XAN                                pP      pP      14 39 20.4 +0.6
XAN                                sP      sP      14 39 46.6 +0.7
XAN                                PP      PP      14 39 58.3  -2.5
XAN                                S       S       14 43 55.9 +0.4
XAN                                sS      sS      14 45 18.1  -0.9
XAN                                pmax    pmax
           comp=Z,160nm,1.1s
XAN                                pmax    pmax
           comp=Z,500nm,3.8s
XAN   Xi'an            36.09 332   P       P       14 38 33.4   0.0
XAN                                pmax    pmax
           comp=Z,127nm,1.0s
XAN   Xi'an            36.09 332   P       P       14 38 33.4   0.0
XAN                                IAmb    IAmb    14 38 35.2
           comp=Z,127nm,1.0s
BBOO  Buckleboo        36.11 169   P       P       14 38 33.3  -0.3
           baz=36,SNR=99
BBOO  Buckleboo        36.11 169   P       P       14 38 33.1  -0.4
BBOO                               IAmb    IAmb    14 38 34.9
           comp=Z,154nm,1.0s
JSD   Sado             36.19  13   P       P       14 38 33.2  -1.0
JSD                                IAmb    IAmb    14 38 34.8
           comp=Z,84nm,0.9s
CD2   Chengdu          36.49 323 ⇓P    P       14 38 37.6 +0.8
CD2                                S       S       14 44 02.9 +1.2
CD2                                pmax    pmax
           comp=Z,190nm,0.8s
CD2                                pmax    pmax
           comp=Z,180nm,5.8s
DL2   Dalian           36.50 351   P       P       14 38 37.8 +1.1
DL2                                pP      pwP     14 39 28.3  -2.2
DL2                                S       S       14 44 05.5 +4.0
DL2                                pmax    pmax
           comp=Z,160nm,0.8s
DL2                                pmax    pmax
           comp=Z,630nm,5.2s
MUN   Mundaring        36.51 198   P       P       14 38 36.6  -0.3
           baz=37,SNR=30
STKA  Stephens Creek   36.63 161   P       P       14 38 37.5  -0.5
           baz=37,SNR=157
STKA  Stephens Creek   36.63 161   P       P       14 38 37.6  -0.3
           comp=Z,38nm,0.6s,baz=340,slow=7.6,SNR=160
STKA                               pP      pP      14 39 25.8 +1.4
           comp=Z,21nm,0.7s,baz=342,slow=5.7,SNR=3.6
STKA                               ScP     ScP     14 44 20.6   0.0
           comp=Z,5.4nm,0.9s,baz=351,slow=0.9,SNR=3.4
STKA  Stephens Creek   36.63 161   P       P       14 38 37.4  -0.5
JMM   Marumori         36.67  16   P       P       14 38 38.0  -0.2
NWAO  Narrogin (SRO)   37.10 196   P       P       14 38 42.0 +0.1
           baz=37,SNR=30
NWAO  Narrogin (SRO)   37.10 196   P       P       14 38 42.0 +0.1
           comp=Z,93nm,0.7s,baz=26,slow=9.1,SNR=40
NWAO  Narrogin (SRO)   37.10 196   P       P       14 38 42.0 +0.1
NWAO  Narrogin (SRO)   37.10 196   P       P       14 38 41.3  -0.6
NWAO                               IAmb    IAmb    14 38 43.5
           comp=Z,120nm,0.8s
NWAO  Narrogin (SRO)   37.10 196   P       P       14 38 41.4  -0.6
NWAO  Narrogin (SRO)   37.10 196   P       P       14 38 39.5  -2.4
HTT   Hallett          37.33 166   P       P       14 38 43.8  -0.1
           baz=38,SNR=21
TIY   Taiyuan          37.78 339  eP    P       14 38 48.1 +0.5
TIY                                pmax    pmax
           comp=Z,99nm,0.8s
TIY                                pmax    pmax
           comp=Z,280nm,8.6s
BJT   Baijiatuau       38.73 345   P       P       14 38 55.5 +0.1
BJT                                pmax    pmax
           comp=Z,124nm,0.8s
BJT   Baijiatuau       38.73 345   P       P       14 38 55.5 +0.1
BJI   Beijing          38.75 345   P       P       14 38 55.8 +0.3
BJI                                pP      pwP     14 39 45.9  -1.2
BJI                                PcP     PcP     14 41 04.0 +1.8
BJI                                ScP     ScP     14 44 28.1  -0.3
BJI                                S       S       14 44 36.8 +1.6
BJI                                pmax    pmax
           comp=Z,32nm,0.7s
BJI                                pmax    pmax
           comp=Z,400nm,3.4s
BJI                                LR      LR
           comp=Z,260nm,8.3s
BJI                                LR      LR
           comp=Z,100nm,6.0s
BJI                                LR      LR
           comp=Z,120nm,19.9s
SNY   Shenyang         39.12 354 ⇓P    P       14 38 58.8 +0.2
SNY                                pmax    pmax
           comp=Z,69nm,0.9s
JTM   Tenmabayashi     39.48  15   P       P       14 39 01.8 +0.3
SAIH  SAIHA            39.67 303  eP    P       14 39 04.4 +0.8
SAIH                               IAmb    IAmb    14 39 09.0
           comp=Z,120nm,0.7s
MSHR  Mys Shultsa      39.69   3deP    P       14 39 04.1 +0.9
MSHR                               pmax    pmax
           comp=Z,158nm,1.1s
ARMA  Armidale         39.69 148   P       P       14 39 04.6 +1.0
           baz=40,SNR=9.7
ARMA  Armidale         39.69 148   P       P       14 39 03.3  -0.3
MOKO  MOKOCHONG        40.17 309  eP    P       14 39 07.9 +0.2
MOKO                               IAmb    IAmb    14 39 12.8
LZH   Lanzhou          40.25 328⇓iP    P       14 39 09.9 +1.7
LZH                                sP      sP      14 40 26.3 +4.4
LZH                                S       S       14 44 56.5  -1.6
LZH                                sS      sS      14 46 24.5 +1.7
LZH                                pmax    pmax
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Code	Station	Dist	Az	Phase	ISC phase	Time	Res
	comp=Z,320nm,1.0s						
LZH				pmax	pmax		
	comp=Z,850nm,4.6s						
H11S3	WAKE ISLAND Hy	40.46	65	T	T	15 23 34.6	
	baz=197,slow=74,SNR=30						
H11S2	WAKE ISLAND Hy	40.47	65	T	T	15 23 01.4	
	SNR=22						
H11S1	WAKE ISLAND Hy	40.47	65	T	T	15 23 32.5	
	baz=249,slow=74,SNR=21						
JORH	JORHAT	40.59	309	eP	P	14 39 11.6	+0.7
HHC	Hu-ho-hao-te	40.88	340	eP	P	14 39 13.8	+0.6
HHC				pmax	pmax		
	comp=Z,120nm,0.9s						
HHC				pmax	pmax		
	comp=Z,280nm,5.0s						
CN2	Changchun	40.93	357	eP	P	14 39 13.6	+0.2
CN2				eS	S	14 45 10.9	+3.3
CN2				pmax	pmax		
	comp=Z,330nm,2.5s						
CN2				LR	LR		
	comp=Z,250nm,16.0s						
CN2				LR	LR		
	comp=Z,210nm,16.0s						
CN2				LR	LR		
	comp=Z,210nm,16.0s						
H11N1	WAKE ISLAND Hy	41.03	63	T	T	15 23 46.6	
	baz=250,slow=75,SNR=78						
H11N2	WAKE ISLAND Hy	41.04	63	T	T	15 23 47.8	
	baz=250,slow=75,SNR=52						
H11N3	WAKE ISLAND Hy	41.05	63	T	T	15 23 47.8	
	baz=250,slow=75,SNR=58						
ERM	Erimo	41.19	17	P	P	14 39 16.2	+0.7
ERM				pmax	pmax		
	comp=Z,47nm,0.9s						
ERM	Erimo	41.19	17	P	P	14 39 16.2	+0.7
BTO	Baotou	41.21	338	eP	P	14 39 09.3	-6.6
ARPS	Mount Arapiles	41.25	164	P	P	14 39 16.6	+0.5
	baz=41,SNR=27						
ZIRO	ZIRO	41.29	310	eP	P	14 39 17.9	+1.0
ZIRO				IAmb	IAmb	14 39 20.0	
	comp=Z,234nm,0.7s						
YNG	Young	41.34	155	P	P	14 39 17.8	+0.8
	baz=42,SNR=7.2						
USA0B	Ussuriysk Arra	41.35	4	P	P	14 39 17.0	+0.2
USA0B				pmax	pmax		
	comp=Z,92nm,0.9s						
USA0B	Ussuriysk Arra	41.35	4	P	P	14 39 17.0	+0.2
USA0B				IAmb	IAmb	14 39 18.9	
	comp=Z,92nm,0.8s						
USRK	Ussuriysk Ar.	41.35	4	P	P	14 39 17.3	+0.5
	comp=Z,66nm,0.8s,baz=184,slow=6.4,SNR=105						
USRK				pP	pP	14 40 05.7	+2.6
	comp=Z,2.0nm,0.5s,baz=194,slow=8.0,SNR=0.9						
JEW	Eniwo	41.51	14	P	P	14 39 18.6	+0.5
TEZP	TEZPUR	41.66	308	eP	P	14 39 19.6	0.0
MDJ	Mudanjiang	41.66	1	P	P	14 39 20.9	+1.5
MDJ				pP	pP	14 40 04.6	-1.1
MDJ				sP	sP	14 40 33.5	+2.4
MDJ				ScP	ScP	14 44 39.6	-0.2
MDJ				S	S	14 45 19.3	+0.9
MDJ				sS	sS	14 46 46.0	+2.5
MDJ				ScS	ScS	14 48 56.6	-0.5
MDJ				pmax	pmax		
	comp=Z,110nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,320nm,3.7s						
MDJ	Mudanjiang	41.66	1	P	P	14 39 19.8	+0.5
MDJ				IAmb	IAmb	14 39 22.3	
	comp=Z,134nm,1.1s						
SHL	Shillong	41.91	306	P	P	14 39 22.1	+0.2
SHL				pmax	pmax		
	comp=Z,280nm,0.8s						
SHL	Shillong	41.91	306	eP	P	14 39 22.4	+0.6
SHL				IAmb	IAmb	14 39 25.0	
	comp=Z,103nm,0.6s						
SHL	Shillong	41.91	306	P	P	14 39 22.1	+0.2
SHL	Shillong	41.91	306	P	P	14 39 22.9	+1.0
	SNR=70						
GUWA	GUWAHATI	42.34	307	eP	P	14 39 25.5	+0.4
CAN	Canberra	42.47	155	P	P	14 39 26.2	+0.1
CAN				pmax	pmax		
	comp=Z,35nm,1.5s						
CAN	Canberra	42.47	155	P	P	14 39 26.2	+0.1
CNB	Canberra Magne	42.62	155	P	P	14 39 28.4	+1.1
	baz=43,SNR=8.7						
TEY	Ternei	42.67	8	⇑iP	P	14 39 28.2	+0.8
TEY				pmax	pmax		
	comp=N,70nm,0.9s						
TEY				pmax	pmax		
	comp=Z,100nm,1.0s						
ASAJ	Asahikawa	42.99	15	P	P	14 39 30.9	+0.9
	comp=Z,44nm,0.8s,baz=221,slow=8.8,SNR=44						
JKA	Kamikawa-asahi	42.99	15	P	P	14 39 28.6	-1.4
JKA				IAmb	IAmb	14 39 32.5	
	comp=Z,86nm,1.0s						
TOO	Toolangi	43.12	160	P	P	14 39 33.0	+1.8
	baz=43,SNR=6.1						
TOO	Toolangi	43.12	160	P	P	14 39 31.9	+0.7
TOO				pmax	pmax		
	comp=Z,84nm,1.5s						
TOO	Toolangi	43.12	160	P	P	14 39 31.9	+0.7
DHUB	DHUBRI	43.63	306	eP	P	14 39 35.8	+0.4
LSA	Lhasa	44.43	311	i P	P	14 39 44.2	+1.8
	SNR=58						
LSA	Lhasa	44.43	311	P	P	14 39 44.4	+2.0
LSA				pmax	pmax		
	comp=Z,103nm,1.0s						
LSA	Lhasa	44.43	311	P	P	14 39 44.4	+2.0
LSA				IAmb	IAmb	14 39 45.8	
	comp=Z,103nm,1.0s						
DZM	Mont Dzumac	44.50	126	P	P	14 39 42.9	+0.4
	comp=Z,13nm,0.6s,baz=266,slow=9.4,SNR=37						
DZM	Mont Dzumac	44.50	126	P	P	14 39 42.4	-0.1
DZM	Mont Dzumac	44.50	126	P	P	14 39 44.0	+1.5
YATNC	Mamie plateau,	44.86	125	P	P	14 39 46.5	+1.3
KUR	Kuril'sk	45.55	19	deP	P	14 39 50.7	+0.5
KUR				pmax	pmax		
	comp=Z,239nm,1.1s						
YSS	Yuzh-Sakhalins	45.69	14	⇓eP	P	14 39 51.5	+0.2
YSS				e		14 40 44.7	
YSS				eS	S	14 46 18.3	+1.8
YSS				pmax	pmax		
	comp=Z,60nm,0.9s						
YSS				MLR	MLR		
	comp=Z,100nm,16.0s						
YSS				MLR	MLR		
	comp=E,100nm,17.0s						
YSS	Yuzh-Sakhalins	45.69	14	P	P	14 39 51.0	-0.3
TAPN	Taplejung	46.05	306	eP	P	14 39 55.8	+1.0
	comp=E,262nm,0.9s						
ODAN	Odare	46.10	305	eP	P	14 39 56.2	+1.0
	comp=E,280nm,0.7s						
KLR	Kul'dur	46.35	3	P	P	14 39 56.6	+0.2
	comp=E,35nm,1.0s,baz=208,slow=4.3,SNR=58						
RAMN	Ramite	46.78	305	eP	P	14 40 01.7	+1.2
	comp=E,383nm,0.6s						
HIA	Hailar	46.92	352	P	P	14 40 00.4	-0.5
HIA				pmax	pmax		
	comp=Z,27nm,1.2s						
HIA	Hailar	46.92	352	P	P	14 40 00.4	-0.5
GUN	Gumba	47.76	306	eP	P	14 40 08.8	+0.7
	comp=Z,346nm,0.7s						
PKI	Pulchoki	48.00	305	eP	P	14 40 10.2	+0.2
	comp=Z,166nm,1.0s						
PKIN	Phulchoki	48.02	305	eP	P	14 40 10.3	+0.3
	comp=Z,63nm,0.4s						
KKN	Kakani	48.20	305	eP	P	14 40 11.8	+0.5
	comp=Z,155nm,0.8s						
DMN	Daman	48.27	305	eP	P	14 40 12.5	+0.6
	comp=Z,147nm,0.8s						
GRNR	Gornyy	48.27	7	⇓iP	P	14 40 11.9	+0.7
GRNR				eS	S	14 46 55.4	+2.4
GRNR				pmax	pmax		
	comp=N,10.0nm,0.9s						
GRNR				pmax	pmax		
	comp=Z,30nm,0.8s						
GRNR				MLR	MLR		
	comp=E,80nm,17.0s						
GRNR				MLR	MLR		
	comp=N,110nm,18.0s						
GRNR				MLR	MLR		
	comp=Z,150nm,19.0s						
TAU	Tasmania Unive	48.54	162	P	P	14 40 13.5	+0.1
TAU				pmax	pmax		
	comp=Z,46nm,1.1s						
TAU	Tasmania Unive	48.54	162	P	P	14 40 13.4	+0.1
ULN	Ulaanbaatar	48.59	341	d iP	P	14 40 14.4	+0.5
ULN				pmax	pmax		
	comp=Z,208nm,1.7s						
ULN	Ulaanbaatar	48.59	341	IAmb	IAmb	14 40 16.2	
	comp=Z,93nm,0.9s						
ULN	Ulaanbaatar	48.59	341	P	P	14 40 14.2	+0.3
ULN	Ulaanbaatar	48.59	341	P	P	14 40 14.6	+0.7
SONM	Songino Array	48.78	340	P	P	14 40 15.8	+0.5
	comp=Z,32nm,0.8s,baz=151,slow=8.0,SNR=146						
SONM				pP	pP	14 41 03.3	-1.3
	comp=Z,5.3nm,0.8s,baz=156,slow=9.6,SNR=2.0						
SONM				ScP	ScP	14 45 09.4	-0.1
	comp=Z,1.9nm,0.8s,baz=149,slow=5.2,SNR=4.2						
SONM	Songino Array	48.78	340	P	P	14 40 14.9	-0.4
GKN	Gorkha	48.80	305	eP	P	14 40 16.1	+0.2
	comp=Z,160nm,0.9s						
MDRS	Chennai	48.84	285	eP	P	14 40 17.2	+1.1
TYV	Tymovskoe	49.36	12	eP	P	14 40 20.6	+1.2
TYV				pmax	pmax		
	comp=Z,300nm,2.2s						
TYV				pmax	pmax		
	comp=Z,49nm,1.0s						
DANN	Dangsing	49.65	305	eP	P	14 40 23.0	+0.6
	comp=Z,398nm,0.6s						
ZEA	Zeya	50.80	359	eP	P	14 40 29.7	-0.5
ZEA				pmax	pmax		
	comp=N,20nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,40nm,1.1s						
HYB	Hyderabad	51.16	290	i P	P	14 40 34.0	+0.5
HYB				epP	pwP	14 41 25.0	-0.9
HYB				eS	S	14 47 33.0	-1.0
HYB	Hyderabad	51.16	290	eP	P	14 40 32.9	-0.7
HYB				IAmb	IAmb	14 40 35.0	
	comp=Z,51nm,0.9s						
HYB				i x	x	14 41 28.7	
ZAK	Zakamensk	52.02	340	eP	P	14 40 38.8	-0.7
ZAK				e		14 41 48.8	
ZAK				pmax	pmax		
	comp=Z,16nm,1.5s						
ZAK				pmax	pmax		
	comp=Z,12nm,1.1s						
MSVF	Nonsavu	52.86	115	P	P	14 40 47.4	+1.3
	comp=Z,15nm,0.9s,baz=275,slow=22,SNR=15						
MSVF				pP	pP	14 41 36.1	+0.9
	comp=Z,3.8nm,0.9s,baz=250,slow=20,SNR=1.1						
MSVF	Nonsavu	52.86	115	P	P	14 40 46.9	+0.8
MSVF	Nonsavu	52.86	115	P	P	14 40 47.7	+1.6
TLY	Talaya	53.00	341	deP	P	14 40 47.4	+0.9
TLY				pmax	pmax		
	comp=Z,53nm,1.7s						
TLY	Talaya	53.00	341	P	P	14 40 46.2	-0.3
TLY	Talaya	53.00	341	P	P	14 40 47.1	+0.6
IRK	Irkutsk	53.28	342	eP	P	14 40 48.3	-0.2
IRK				pmax	pmax		
	comp=Z,120nm,2.2s						
BHPL	Bhopal	53.46	297	eP	P	14 40 49.4	-1.0
MOY	Mondy	53.90	339	eP	P	14 40 53.7	+0.6
MOY				pmax	pmax		
	comp=Z,136nm,1.8s						
WMQ	Urumqi	54.55	324	eP	P	14 40 59.4	+1.5
WMQ				pP	pP	14 41 45.6	-2.9
WMQ				ScP	ScP	14 45 34.3	-0.1
WMQ				PcS	PcS	14 45 53.4	-4.6
WMQ				pmax	pmax		
	comp=Z,120nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,630nm,5.5s						
WMQ				LR	LR		
	comp=Z,350nm,28.9s						
WMQ				LR	LR		
	comp=Z,640nm,29.1s						
WMQ				LR	LR		
	comp=Z,190nm,26.3s						
WMQ	Urumqi	54.55	324	P	P	14 40 58.4	+0.5
WMQ				pmax	pmax		
	comp=Z,101nm,1.0s						
WMQ	Urumqi	54.55	324	P	P	14 40 58.4	+0.5
WMQ				IAmb	IAmb	14 41 00.9	
	comp=Z,101nm,1.0s						
DDI	Dehra Dun	55.00	305	eP	P	14 41 01.2	-0.2
PEA0B	Petropavlovsk-	55.63	21	deP	P	14 41 06.5	+1.1
PEA0B	Petropavlovsk-	55.63	21	P	P	14 41 06.0	+0.6
PEA0B				IAmb	IAmb	14 41 07.7	
	comp=Z,85nm,1.0s						
PETK	Petropavlovsk-	55.63	21	P	P	14 41 06.0	+0.7
	comp=Z,49nm,0.8s,baz=190,slow=3.2,SNR=51						
PETK				pP	pP	14 41 53.6	-1.3
	comp=Z,8.0nm,0.7s,baz=194,slow=4.4,SNR=2.5						
PETK				PcP	PcP	14 42 02.6	+0.6
	comp=Z,7.5nm,0.6s,baz=197,slow=2.7,SNR=6.5						
PETK	Petropavlovsk-	55.63	21	P	P	14 41 05.7	+0.3
PET	Petropavlovsk	55.91	21	deP	P	14 41 05.9	-1.4
PET				pmax	pmax		
	comp=Z,308nm,1.2s						
PET	Petropavlovsk	55.91	21	P	P	14 41 07.5	+0.2
PET				IAmb	IAmb	14 41 09.6	
	comp=Z,123nm,1.2s						
SMLA	Simla	55.99	306	eP	P	14 41 08.4	+0.1
SMLA				i pP	PcP	14 42 04.3	+0.4
BOD	Bodaibo	56.07	351	eP	P	14 41 08.3	-0.1
BOD				pmax	pmax		
	comp=Z,83nm,1.4s						
OUZ	Omahuta	56.62	136	P	P	14 41 13.9	+1.3
DHRM	DHARAMSHALA	57.07	307	eP	P	14 41 14.9	-1.2
ZSN	Zaisan	58.29	327	eP	P	14 41 23.1	-1.1
	comp=Z,16nm,1.3s,baz=327						
ZSN	Zaisan	58.29	327	eP	P	14 41 23.0	-1.1
ZSN				pmax	pmax		
	comp=Z,16nm,1.3s						
DGZ	Jazzator, Alta	58.32	330	d iP	P	14 41 24.5	+0.1
DGZ				pmax	pmax		
	comp=Z,34nm,1.0s						
QRZ	Quartz Range	59.06	142	P	P	14 41 29.8	+0.3
QRZ				IAmb	IAmb	14 41 31.9	
	comp=Z,49nm,0.9s						
YAK	Yakutsk	59.11	1	P	P	14 41 29.6	+0.2
	comp=Z,141nm,0.7s,baz=279,slow=0.1,SNR=109						
YAK	Yakutsk	59.11	1	eP	P	14 41 29.2	-0.2
YAK				e*PP	PcP	14 42 15.5	0.0
YAK				e		14 43 42.3	
YAK				eS	S	14 49 16.7	-1.2
YAK				e		14 50 50.3	
YAK				pmax	pmax		
	comp=Z,354nm,1.1s						
YAK				pmax	pmax		
	comp=N,55nm,1.1s						
YAK				pmax	pmax		
	comp=E,16nm,0.9s						
YAK				pmax	pmax		
	comp=Z,122nm,4.6s						
YAK				pmax	pmax		
	comp=N,179nm,5.9s						
YAK				pmax	pmax		
	comp=E,103nm,5.6s						
YAK				smax	smax		
	comp=E,120nm,2.3s						
YAK				smax	smax		
	comp=N,76nm,1.7s						
YAK	Yakutsk	59.11	1	P	P	14 41 29.3	-0.2
FOZ	Fox Glacier	59.14	146	P	P	14 41 30.0	+0.1
MA2	Magadan	59.19	13	P	P	14 41 30.3	+0.3
	comp=N,63nm,0.8s,baz=199,slow=6.6,SNR=115						
MA2	Magadan	59.19	13	d iP	P	14 41 30.7	+0.7
MA2				pmax	pmax		
	comp=Z,101nm,1.0s						
MA2	Magadan	59.19	13	P	P	14 41 30.3	+0.3
MA2				IAmb	IAmb	14 41 32.5	
	comp=Z,89nm,0.9s						
HIZ	Hauiti	59.24	139	P	P	14 41 31.8	+1.0
HIZ				IAmb	IAmb	14 41 33.9	
	comp=Z,74nm,1.2s						
HIZ	Hauiti	59.24	139	P	P	14 41 32.7	+2.0
SHLS	Shalkode	59.24	320	eP	P	14 41 27.1	-3.8
	comp=Z,44nm,1.0s,baz=320						
SHLS	Shalkode	59.24	320	eP	P	14 41 27.9	-3.0
SHLS				pmax	pmax		
	comp=Z,44nm,1.0s						
MK31	Makanchi Array	59.37	325	d iP	P	14 41 31.7	+0.1
MK31	Makanchi Array	59.37	325	P	P	14 41 31.6	0.0
MK31				IAmb	IAmb	14 41 33.4	
	comp=Z,36nm,0.8s						
MKAR	Makanchi Array	59.37	325	P	P	14 41 31.9	+0.3
	comp=Z,28nm,0.6s,baz=120,slow=8.4,SNR=317						
MKAR				PcP	PcP	14 42 17.9	+1.0
	comp=Z,9.8nm,0.7s,baz=127,slow=4.1,SNR=7.7						
MKAR				ScP	ScP	14 45 55.3	-0.3
	comp=Z,3.5nm,0.8s,baz=128,slow=4.5,SNR=4.5						
MKAR	Makanchi Array	59.37	325	P	P	14 41 31.3	-0.3
MLZ	Mavora Lakes	59.43	149	P	P	14 41 31.5	-0.5
VRZ	Vera Road	59.51	139	P	P	14 41 34.1	+1.5
UZB	Uzynbulak	59.52	320	eP	P	14 41 31.9	-1.0
	comp=Z,30nm,0.9s,baz=320						
UZB	Uzynbulak	59.52	320	eP	P	14 41 31.8	-1.0
UZB				pmax	pmax		
	comp=Z,29nm,0.9s						
WKZ	Wanaka	59.54	148	P	P	14 41 32.8	0.0
WKZ				IAmb	IAmb	14 41 34.6	
	comp=Z,43nm,1.1s						
MAKZ	Makanchi	59.56	325	P	P	14 41 32.7	-0.2
MAKZ				pmax	pmax		
	comp=Z,59nm,0.9s						
MAKZ	Makanchi	59.56	325	P	P	14 41 32.7	-0.2
MAKZ				IAmb	IAmb	14 41 34.6	
	comp=Z,59nm,0.8s						
WHZ	Wether Hill Ro	59.69	149	P	P	14 41 33.2	-0.5
WHZ				IAmb	IAmb	14 41 35.0	
	comp=Z,38nm,0.9s						
NNZ	Nelson	59.81	142	P	P	14 41 33.8	-0.8
THZ	Tophouse	59.84	143	P	P	14 41 34.6	-0.3
THZ				IAmb	IAmb	14 41 36.5	
	comp=Z,41nm,0.7s						
SATY	Saty	59.88	319	eP	P	14 41 34.4	-0.8
	comp=Z,40nm,1.0s,baz=319						
SATY	Saty	59.88	319	eP	P	14 41 34.4	-0.8
SATY				pmax	pmax		
	comp=Z,40nm,1.0s						
KPKS	Kokpek	59.88	320	eP	P	14 41 34.1	-1.1
	comp=Z,42nm,0.8s,baz=320						
KPKS	Kokpek	59.88	320	eP	P	14 41 34.1	-1.1
KPKS				pmax	pmax		
	comp=Z,42nm,0.8s						
LBZ	Lake Benmore	59.89	147	P	P	14 41 35.3	+0.2
LBZ				IAmb	IAmb	14 41 37.0	
	comp=Z,76nm,0.8s						
WATZ	Wairara	59.92	138	P	P	14 41 37.2	+1.7
NIL	Nilore	59.95	308	P	P	14 41 35.5	-0.3
NIL				pmax	pmax		
	comp=Z,56nm,1.1s						
NIL	Nilore	59.95	308	P	P	14 41 35.5	-0.3
NIL				IAmb	IAmb	14 41 37.5	
	comp=Z,56nm,1.1s						
RPZ	Rata Peaks	59.95	146	P	P	14 41 35.5	0.0
RPZ				IAmb	IAmb	14 41 37.6	
	comp=Z,78nm,1.1s						
KNTN	Kanton	59.95	95	P	P	14 41 36.5	+0.4
KNTN				IAmb	IAmb	14 41 38.4	
	comp=Z,64nm,0.8s						
KSH	Kashi	60.00	315	P	P	14 41 37.5	+1.4
KSH				PcP	PcP	14 42 22.8	+3.0
KSH				S	S	14 49 24.4	-6.0
KSH				pmax	pmax		
	comp=Z,230nm,1.4s						
KSH				pmax	pmax		
	comp=Z,710nm,5.9s						
OPRZ	Ohinepanea	60.02	137	P	P	14 41 37.8	+1.7
WTVZ	West Tongariro	60.05	139	P	P	14 41 38.2	+1.8
LTZ	Lake Taylor	60.07	144	P	P	14 41 35.6	-0.8
LTZ				IAmb	IAmb	14 41 37.9	
	comp=Z,52nm,1.2s						
NGZ	Ngauruhoe	60.09	139	P	P	14 41 37.7	+1.0
OTVZ	Oturere	60.12	139	P	P	14 41 38.4	+1.5
TMVZ	Te Maari	60.12	139	P	P	14 41 38.7	+1.8
ETVZ	East Tongariro	60.13	139	P	P	14 41 38.4	+1.4
HATZ	Hinemaiaia	60.26	138	P	P	14 41 39.2	+1.5
OXZ	Oxford	60.27	145	P	P	14 41 37.0	-0.7
OXZ				IAmb	IAmb	14 41 38.6	
	comp=Z,26nm,0.7s						
TUWZ	Tuamarina	60.28	142	P	P	14 41 37.1	-0.7
MOVZ	Moawhango	60.31	139	P	P	14 41 38.4	+0.3
BSWZ	Blackbirch Sta	60.41	142	P	P	14 41 38.4	-0.3
MRHZ	Matea Rd	60.44	138	P	P	14 41 39.3	+0.3
BHHZ	Black Hill Sta	60.55	139	P	P	14 41 39.9	+0.1
KHZ	Kahutara	60.61	143	P	P	14 41 39.0	-0.9
URZ	Urewera	60.61	137	P	P	14 41 39.4	-0.7
URZ	Urewera	60.61	137	P	P	14 41 39.9	-0.2
BKZ	Black Stump Fm	60.67	139	P	P	14 41 40.3	-0.2
BKZ				IAmb	IAmb	14 41 42.0	
	comp=Z,44nm,0.8s						
BKZ	Black Stump Fm	60.67	139	P	P	14 41 40.6	+0.1
SNZO	South Karori	60.69	141	P	P	14 41 39.9	-0.6
SNZO				IAmb	IAmb	14 41 40.8	
	comp=Z,51nm,1.0s						
OGWZ	Otaki Gorge	60.70	141	P	P	14 41 40.8	+0.1
RTZ	Ruatahuna	60.70	138	P	P	14 41 41.4	+0.5
MTHZ	Maungataniwha	60.73	138	P	P	14 41 41.2	+0.3
KWHZ	Kaweka Forest	60.76	139	P	P	14 41 41.7	+0.6
TDK	Taldyqorghan	60.79	321	eP	P	14 41 40.4	-0.8
	comp=Z,46nm,0.7s,baz=321						
TDK	Taldyqorghan	60.79	321	eP	P	14 41 40.4	-0.8
TDK				pmax	pmax		
	comp=Z,46nm,0.7s						
MDOK	Medeo	60.81	319	eP	P	14 41 41.0	-0.5
	baz=319						
MDOK	Medeo	60.81	319	eP	P	14 41 41.0	-0.5
TNSS	Tian-Shan	60.82	319	eP	P	14 41 42.6	+0.6
	baz=319						
TNSS	Tian-Shan	60.82	319	eP	P	14 41 42.5	+0.6
KRHZ	Kereru	60.84	139	P	P	14 41 41.8	+0.1
BHW	Baring Head	60.84	141	P	P	14 41 40.5	-1.1
POWZ	Post Office Ro	60.85	140	P	P	14 41 41.0	-0.6
MQZ	McQueen's Vall	60.86	145	P	P	14 41 41.7	+0.1
MQZ				IAmb	IAmb	14 41 44.2	
	comp=Z,46nm,1.0s						
PNHZ	Pukenui	60.87	139	P	P	14 41 41.7	-0.1
MRZ	Mangatainoka R	60.88	140	P	P	14 41 41.3	-0.5
AAA	Alma-Ata	60.92	319	eP	P	14 41 41.9	-0.3
	comp=Z,32nm,1.2s,baz=319						
AAA	Alma-Ata	60.92	319	eP	P	14 41 41.9	-0.3
AAA				pmax	pmax		
	comp=Z,32nm,1.2s						
MWZ	Matawai	60.93	137	P	P	14 41 42.1	-0.2
RAHZ	Arahi	60.93	138	P	P	14 41 43.0	+0.7
RAGZ	Rawiri	60.94	137	P	P	14 41 42.6	+0.3
HOWZ	Holdsworth Sta	60.97	141	P	P	14 41 41.7	-0.8
MXZ	Matakaoa Point	61.08	136	P	P	14 41 43.2	-0.1
MXZ				IAmb	IAmb	14 41 50.9	
	comp=Z,31nm,0.8s						
MSWZ	Moikau Station	61.09	141	P	P	14 41 42.7	-0.5
CHKK	Chushkaly	61.16	320	eP	P	14 41 42.9	-0.9
	baz=320						
CHKK	Chushkaly	61.16	320	eP	P	14 41 42.8	-0.9
PLWZ	Palliser	61.17	141	P	P	14 41 43.1	-0.8
RIGZ	Rimuhau	61.28	138	P	P	14 41 45.5	+0.9
BFZ	Birch Farm	61.31	140	P	P	14 41 43.1	-1.7
BFZ				IAmb	IAmb	14 41 55.8	
	comp=Z,62nm,1.3s						
BFZ	Birch Farm	61.31	140	P	P	14 41 44.9	+0.2
TMWZ	Te Maipa	61.32	141	P	P	14 41 44.8	-0.1
PRHZ	Porangahau	61.34	140	P	P	14 41 45.4	+0.5
TRWZ	Traveller	61.35	141	P	P	14 41 45.4	+0.4
AFI	Afiamalu	61.42	107	P	P	14 41 45.3	-0.7
AFI				pmax	pmax		
	comp=Z,70nm,1.3s						
AFI	Afiamalu	61.42	107	P	P	14 41 45.3	-0.7
AFI				IAmb	IAmb	14 42 07.0	
	comp=Z,70nm,1.2s						
CNGZ	Carnagh Statio	61.47	137	P	P	14 41 46.2	+0.4
KUU	Kurty	61.59	319	eP	P	14 41 45.5	-1.1
	comp=Z,141nm,1.5s,baz=320						
KUU	Kurty	61.59	319	eP	P	14 41 45.5	-1.1
KUU				pmax	pmax		
	comp=Z,141nm,1.5s						
MHGZ	Mahia Peninsul	61.60	138	P	P	14 41 46.8	+0.1
TKM2	Tokmak 2	61.66	318	P	P	14 41 47.9	+0.5
	SNR=19						
KBK	Karagaybulak	61.98	318	P	P	14 41 50.2	+0.7
	SNR=9.3						
UCH	Uchtor	62.10	317	P	P	14 41 51.4	+0.8
	SNR=43						
CHMS	Chumysh	62.26	318	P	P	14 41 51.0	-0.1
	SNR=15						
ZAA0	Zalesovo Array	62.26	332	P	P	14 41 49.7	-1.1
ZAA0				IAmb	IAmb	14 41 51.6	
	comp=Z,48nm,0.9s						
ZALV	Zalesovo Beam	62.26	332	P	P	14 41 50.0	-0.8
	comp=Z,30nm,0.8s,baz=112,slow=5.8,SNR=108						
ZALV				PcP	PcP	14 42 27.9	-0.5
	comp=Z,6.1nm,0.8s,baz=174,slow=2.8,SNR=4.1						

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ZALV                                pP     pP      14 42 40.7 -2.0
      comp=Z,4.5nm,0.6s,baz=120,slow=8.8,SNR=2.7
ZALV  Zalesovo Beam      62.26 332   P     P       14 41 49.3 -1.5
AAK   Ala-Archa          62.28 318   P     P       14 41 52.6 +1.2
      SNR=8.8
AAK   Ala-Archa          62.28 318 i P     P       14 41 51.8 +0.4
      SNR=6.8
AAK   Ala-Archa          62.28 318deP      P       14 41 52.0 +0.6
AAK                                i *PP   pP      14 42 45.3 +2.3
AAK                                  pmax  pmax
      comp=Z,117nm,1.7s
AAK   Ala-Archa          62.28 318   P     P       14 41 51.4  0.0
AAK   Ala-Archa          62.28 318   P     P       14 41 51.6 +0.2
JOHN  Johnston Islan     62.32  73   P     P       14 41 52.1 +0.2
JOHN                                 IAmb  IAmb    14 42 06.3
      comp=Z,58nm,0.9s
MCQ   Macquarie Isla     62.40 161   P     P       14 41 51.4 -0.2
MCQ                                  pmax  pmax
      comp=Z,98nm,1.2s
MCQ   Macquarie Isla     62.40 161   P     P       14 41 51.4 -0.2
MCQ                                  IAmb  IAmb    14 42 09.2
      comp=Z,98nm,1.1s
SEM   Semipalatinsk      62.47 327  eP     P       14 41 50.9 -1.8
      baz=327
SEM   Semipalatinsk      62.47 327  eP     P       14 41 50.8 -1.8
SGDS  Sogindy            62.53 318  eP     P       14 41 51.9 -1.0
      comp=Z,20nm,1.4s,baz=318
SGDS  Sogindy            62.53 318  eP     P       14 41 51.9 -1.0
SGDS                                 pmax  pmax
      comp=Z,20nm,1.4s
USP   Ospenovka          62.54 318   P     P       14 41 53.3 +0.4
      SNR=34
SEY   Seymchan           62.55  12   P     P       14 41 53.1 +0.6
      comp=Z,28nm,0.8s,baz=218,slow=5.5,SNR=121
SEY   Seymchan           62.55  12⇓eP      P       14 41 53.8 +1.2
SEY                                i *PP   pwP     14 42 49.6 -1.2
AML   Almayashu          62.62 317   P     P       14 41 54.8 +0.8
      SNR=37
EKS2  Erkin-Say          62.78 317   P     P       14 41 55.3 +0.7
      SNR=29
KURK  Kurchatov          63.52 327d iP     P       14 41 59.0 -0.1
KURK                               i *PP   pP      14 42 51.2 -0.1
KURK                                 pmax  pmax
      comp=Z,194nm,1.3s
KURK  Kurchatov          63.52 327   P     P       14 41 58.7 -0.5
KURK  Kurchatov          63.52 327   P     P       14 41 59.1 -0.1
KBL   Kabul              63.55 307   P     P       14 41 58.9 -1.1
KBL                                  pmax  pmax
      comp=Z,32nm,1.0s
KBL   Kabul              63.55 307   P     P       14 41 58.9 -1.1
KBL                                  IAmb  IAmb    14 42 01.2
      comp=Z,32nm,0.9s
KBL   Kabul              63.55 307   P     P       14 41 60.0  0.0
      SNR=21
BTLS  Baital             63.57 320  eP     P       14 41 58.5 -1.2
      comp=Z,38nm,1.7s,baz=320
BTLS  Baital             63.57 320  eP     P       14 41 58.4 -1.2
BTLS                                 pmax  pmax
      comp=Z,38nm,1.7s
AMKA  Amchitka           64.29  33   P     P       14 42 04.3 +0.1
DZA   Taraz              64.53 317  eP     P       14 42 05.5 -0.5
      comp=Z,24nm,0.9s,baz=317
DZA   Taraz              64.53 317  eP     P       14 42 05.4 -0.5
DZA                                  pmax  pmax
      comp=Z,24nm,0.9s
IUG   Iuzhnay            65.16 316  eP     P       14 42 09.4 -0.7
      comp=Z,25nm,1.0s,baz=316
IUG   Iuzhnay            65.16 316  eP     P       14 42 09.4 -0.7
IUG                                  pmax  pmax
      comp=Z,25nm,1.0s
KK31  Karatay Array      65.17 317   P     P       14 42 09.7 -0.3
KK31                                 pmax  pmax
      comp=Z,45nm,1.0s
KK31  Karatay Array      65.17 317   P     P       14 42 09.7 -0.3
KK31                                 IAmb  IAmb    14 42 11.5
      comp=Z,45nm,1.0s
KKAR  Karatay Array      65.17 317   P     P       14 42 09.6 -0.5
KKAR                                 pmax  pmax
      comp=Z,45nm,1.0s
KKAR  Karatay Array      65.17 317   P     P       14 42 09.6 -0.5
KKAR                                 IAmb  IAmb    14 42 11.5
      comp=Z,45nm,1.0s
BRLS  Borolday           65.60 317  eP     P       14 42 12.5 -0.4
      comp=Z,25nm,0.8s,baz=316
BRLS  Borolday           65.60 317  eP     P       14 42 12.4 -0.4
BRLS                                 pmax  pmax
      comp=Z,25nm,0.8s
BRZS  Berezniki          66.51 324  eP     P       14 42 17.3 -1.2
      comp=Z,28nm,0.9s,baz=324
BRZS  Berezniki          66.51 324  eP     P       14 42 17.2 -1.2
BRZS                                 pmax  pmax
      comp=Z,28nm,0.9s
ADK   Adak               66.72  33   P     P       14 42 19.7  0.0
ADK                                  pmax  pmax
      comp=Z,64nm,1.0s
ADK   Adak               66.72  33   P     P       14 42 19.7  0.0
ADK                                  IAmb  IAmb    14 42 21.6
      comp=Z,64nm,1.0s
ATKA  Atka Island        68.24  34   P     P       14 42 29.3 +0.1
TIXI  Tiksi              68.77   0d iP     P       14 42 31.7 -0.4
TIXI                               i *PP   pP      14 43 26.2 +2.6
TIXI                                 pmax  pmax
      comp=Z,279nm,1.3s
TIXI  Tiksi              68.77   0   P     P       14 42 31.4 -0.7
TIXI                                 IAmb  IAmb    14 42 33.8
      comp=Z,58nm,1.1s
HRA   Herat              68.97 306   P     P       14 42 33.2 -1.1
BRVK  Borovoye           69.18 327d iP     P       14 42 34.7 -0.3
BRVK                                 pmax  pmax
      comp=Z,121nm,1.3s
BRVK  Borovoye           69.18 327   P     P       14 42 34.6 -0.4
BRVK                                 IAmb  IAmb    14 42 36.4
      comp=Z,65nm,0.8s
BRVK  Borovoye           69.18 327   P     P       14 42 34.5 -0.4
JLN   Jalan Bani Buh     69.66 292   P     P       14 42 37.6 -0.9
MHTO  MHTO               70.89 291   P     P       14 42 45.4 -0.6
      SNR=13
BIDO  Bidbid             70.96 294   P     P       14 42 45.9 -0.5
      SNR=6.4
NIKH  Nikolski High      71.54  34   P     P       14 42 49.1 -0.2
NIKH                                 IAmb  IAmb    14 42 51.3
      comp=Z,72nm,0.9s
HOQ   Hoqain             71.72 294   P     P       14 42 51.8 +0.9
      SNR=6.8
BSY   Bisya              71.75 293   P     P       14 42 50.6 -0.6
      SNR=5.3
NRIK  Noril'sk           71.78 346   P     P       14 42 50.4  0.0
      comp=Z,38nm,0.8s,baz=132,slow=5.9,SNR=52
NRIK  Noril'sk           71.78 346   P     P       14 42 50.0 -0.4
NRIK                                 IAmb  IAmb    14 42 51.9
      comp=Z,55nm,0.9s
ARQ   Araqi              72.42 293   P     P       14 42 54.8 -0.3
      SNR=5.1
SOHO  SOHO               72.47 294 i P     P       14 42 54.9 -0.5
      SNR=8.0
MDH   Madha              72.79 295   P     P       14 42 55.8 -1.4
UOSS  Minazif            72.84 295 i P     P       14 42 57.1 -0.5
      SNR=5.8
UOSS  Minazif            72.84 295   P     P       14 42 56.4 -1.2
BANOM Banah              72.84 296 i P     P       14 42 57.5 -0.1
      SNR=7.3
BANOM Banah              72.84 296   P     P       14 42 57.8 +0.3
HATD  Hatta, Dubai       72.89 295 i P     P       14 42 59.0 +1.1
      SNR=7.7
HATD  Hatta, Dubai       72.89 295   P     P       14 42 58.3 +0.4
GEYT  Alibeck            72.91 309   P     P       14 42 58.5 +0.7
      comp=Z,13nm,0.7s,baz=160,slow=4.7,SNR=23
GEYT                                 pP    pP      14 43 51.5 +0.5
      comp=Z,5.9nm,0.9s,baz=183,slow=12,SNR=3.7
GEYT  Alibeck            72.91 309   P     P       14 42 57.6 -0.1
GYA0B ALIBECK ARRAY      72.91 309   P     P       14 42 58.1 +0.3
GYA0B                                IAmb  IAmb    14 42 59.8
      comp=Z,28nm,0.9s
MASF  Masafi             72.92 296   P     P       14 42 58.7 +0.7
      SNR=7.2
SHAO  Shalim             72.92 288   P     P       14 42 56.2 -2.0
ASHO  Ashiyiah           72.95 295 i P     P       14 42 58.0 -0.2
      SNR=8.6
SHME  Shamm              73.00 296   P     P       14 42 58.1 -0.4
SHME  Shamm              73.00 296   P     P       14 42 59.3 +0.9
UNV   Unalaska Valle     73.16  34   P     P       14 42 59.1 +0.3
UNV                                  IAmb  IAmb    14 43 06.7
      comp=Z,41nm,1.0s
ALNE  Al Ain             73.18 294 i P     P       14 42 59.5  0.0
      SNR=11
ALNE  Al Ain             73.18 294   P     P       14 42 60.0 +0.4
      SNR=25
FAQ   Al Faqa, Dubai     73.38 295 i P     P       14 43 00.1 -0.6
      SNR=11
FAQ   Al Faqa, Dubai     73.38 295   P     P       14 43 00.5 -0.2
      SNR=5.6
ASUD  Al Ashush, Dub     73.61 295 i P     P       14 43 02.2 +0.2
      SNR=5.1
ASUD  Al Ashush, Dub     73.61 295   P     P       14 43 02.6 +0.6
ASUD                                 P     PcP     14 43 04.0  -13
      SNR=5.2
AKUT  Akutan             73.67  34   P     P       14 43 01.5 -0.2
AJN   Ajban              73.91 295 i P     P       14 43 03.0 -0.7
      SNR=5.1
AB31  Akbulak array      74.03 321 ⇑P      P       14 43 03.5 -0.5
AB31                                 pmax  pmax
      comp=Z,22nm,0.7s
ABKAR Akbulak array      74.03 321   P     P       14 43 03.2 -0.8
SOCY  Socotra            74.34 282   P     P       14 43 04.8 -1.7
DOK   Doka               74.36 288   P     P       14 43 05.9 -0.6
      SNR=5.4
GAMB  Gambell            74.52  23   P     P       14 43 06.5 +0.1
GAMB                                 IAmb  IAmb    14 43 09.1
      comp=Z,45nm,0.9s
WHFO  Wadi Hawf          74.68 288   P     P       14 43 07.7 -0.7
FALS  False Pass         75.19  34   P     P       14 43 10.7 +0.3
AKTO  Aktyubinsk         75.53 321   P     P       14 43 13.1 +0.6
      baz=90,slow=8.2
SVE   Sverdlovsk         75.72 328d iP     P       14 43 14.0 +0.6
SVE                                  pmax  pmax
      comp=Z,67nm,1.0s
AIN   Ainahou            75.85  71   P     P       14 43 15.9 +0.7
AIN                                  IAmb  IAmb    14 43 28.6
      comp=Z,92nm,1.2s
MLH   Mauna Loa          75.93  71   P     P       14 43 17.2 +1.5
ARU   Arti               76.71 328   P     P       14 43 18.4 -0.6
      comp=Z,9.0nm,0.8s,baz=110,slow=2.2,SNR=13
ARU   Arti               76.71 328c iP     P       14 43 18.5 -0.6
ARU                                  *PP   pP      14 44 10.4 -2.7
ARU                                  S     S       14 52 45.2 -1.2
ARU                                  SS    SS      14 57 41.6 -5.8
ARU                                  pmax  pmax
      comp=Z,44nm,0.9s
ARU   Arti               76.71 328   P     P       14 43 18.0 -1.0
ARU                                  IAmb  IAmb    14 43 19.7
      comp=Z,32nm,0.8s
TNA   Tin City           76.75  22   P     P       14 43 18.2 -0.9
      baz=247
TNA   Tin City           76.75  22   P     P       14 43 19.5 +0.5
SDPT  Sand Point         76.95  34   P     P       14 43 20.1 -0.2
CHGN  Chignik            78.31  33   P     P       14 43 27.9 +0.1
CHGN                                 IAmb  IAmb    14 43 29.6
      comp=Z,58nm,1.0s
RDOG  Red Dog Mine       79.50  21   P     P       14 43 34.6 +0.5
RDOG                                 IAmb  IAmb    14 43 37.0
      comp=Z,58nm,1.2s
SII   Sitkinak Islan     80.66  33   P     P       14 43 41.4 +0.9
SVW2  Sparrevohn         80.75  29   P     P       14 43 41.8 +0.8
RDF   Al-Radifah         80.79 299  eP             14 43 40.2
TTA   Tatalina           80.91  27   P     P       14 43 42.7 +0.9
TTA                                  pmax  pmax
      comp=Z,24nm,0.8s
TTA   Tatalina           80.91  27   P     P       14 43 42.7 +0.9
MIB   Mutribah           81.01 300  eP             14 43 41.4
OHAK  Old Harbor         81.25  33   P     P       14 43 44.4 +0.8
OHAK                                 IAmb  IAmb    14 43 46.1
      comp=Z,70nm,0.8s
RST   Umm Al-Ruwaisa     81.29 299  eP             14 43 43.0
KDAK  Kodiak Island      81.71  32   P     P       14 43 46.9 +0.9
      comp=Z,64nm,0.7s,baz=272,slow=4.6,SNR=74
KDAK  Kodiak Island      81.71  32   P     P       14 43 47.0 +1.0
KDAK                                 pmax  pmax
      comp=Z,63nm,0.8s
KDAK  Kodiak Island      81.71  32   P     P       14 43 47.0 +1.0
KDAK                                 IAmb  IAmb    14 43 48.4
      comp=Z,63nm,0.8s
KIRV  Kirov              81.97 329   P     P       14 43 48.1 +0.7
      comp=Z,71nm,0.9s,baz=308,slow=1.5,SNR=21
RSO   Redoubt South      82.00  29   P     P       14 43 47.5 -0.3
BELG  Belogornoye        82.27 322   P     P       14 43 49.0  0.0
      comp=Z,109nm,0.9s,baz=81,slow=0.5,SNR=20
VNDA  Vanda              82.27 173   P     P       14 43 48.6 +0.1
      comp=Z,6.8nm,0.8s,baz=317,slow=6.3,SNR=19
VNDA  Vanda              82.27 173   P     P       14 43 48.3 -0.3
HOM   Homer              82.45  30   P     P       14 43 49.2 -0.6
      baz=262
A21K  Barrow             82.53  18   P     P       14 43 51.1 +1.1
      baz=256,SNR=53
A21K  Barrow             82.53  18   P     P       14 43 50.5 +0.5
A21K                                 IAmb  IAmb    14 43 53.0
      comp=Z,106nm,1.1s
RAYN  Ar Rayn            82.53 293 i P     P       14 43 51.1  0.0
      SNR=12
RAYN  Ar Rayn            82.53 293   P     P       14 43 50.8 -0.3
RAYN                                 pmax  pmax
      comp=Z,11nm,0.8s
RAYN  Ar Rayn            82.53 293   P     P       14 43 50.8 -0.3
PPLA  Purkeypile         82.63  27   P     P       14 43 51.5 +0.6
PPLA                                 IAmb  IAmb    14 43 54.2
      comp=Z,30nm,0.9s
CNPM  China Poot         82.63  30   P     P       14 43 51.0 +0.2
CNPM                                 IAmb  IAmb    14 43 52.6
      comp=Z,50nm,0.8s
SKT   Skwentna           82.81  28   P     P       14 43 51.2 -0.5
SKT                                  IAmb  IAmb    14 43 53.6
      comp=Z,62nm,1.0s
CAPN  Captain Cook N     82.83  29   P     P       14 43 51.6 -0.1
      baz=263
BRLK  Bradley Lake       82.84  30   P     P       14 43 51.4 -0.5
BRLK                                 IAmb  IAmb    14 43 52.9
      comp=Z,34nm,0.7s
SUA   Susitna One        83.11  29   P     P       14 43 53.3  0.0
SUA                                  IAmb  IAmb    14 43 55.0
      comp=Z,88nm,0.9s
KTH   Kantishna Hill     83.29  26   P     P       14 43 54.0 -0.1
KTH                                  IAmb  IAmb    14 43 56.8
      comp=Z,60nm,1.1s
BPAW  Bear Paw Mtn.      83.33  26   P     P       14 43 54.5 +0.3
BPAW                                 IAmb  IAmb    14 43 56.7
      comp=Z,40nm,1.2s
CUT   Chulitna           83.44  28   P     P       14 43 54.7 -0.2
      baz=263
GNI   Garni              83.49 310⇑eP      P       14 43 57.2 +1.4
GNI                                  pmax  pmax
      comp=Z,39nm,1.7s
MAW   Mawson             83.52 201   P     P       14 43 54.6 -0.4
      comp=Z,14nm,0.9s,baz=132,slow=12,SNR=1.8
RC01  Rabbit Creek A     83.55  29   P     P       14 43 54.8 -0.6
      baz=264,SNR=26
MLY   Manley             83.55  25   P     P       14 43 56.1 +0.6
      baz=263,SNR=28
TRF   Thorofare Moun     83.56  27   P     P       14 43 55.8 +0.1
TRF                                  IAmb  IAmb    14 43 57.4
      comp=Z,51nm,1.0s
SEW   Seward             83.59  30   P     P       14 43 55.8 +0.2
SEW                                  IAmb  IAmb    14 43 57.7
      comp=Z,59nm,0.9s
PMR   Palmer             83.89  28   P     P       14 43 57.0 -0.1
PMR                                  pmax  pmax
      comp=Z,74nm,0.9s
PMR   Palmer             83.89  28   P     P       14 43 57.0 -0.1
PMR                                  IAmb  IAmb    14 43 58.9
      comp=Z,74nm,0.9s
BWN   Browne             84.00  26   P     P       14 43 58.1 +0.4
BWN                                  IAmb  IAmb    14 44 00.6
      comp=Z,45nm,0.9s
GHO   Glory Hole Cre     84.01  28   P     P       14 43 57.6 -0.2
GHO                                  IAmb  IAmb    14 43 59.8
      comp=Z,33nm,0.9s
COLD  Coldfoot           84.05  23   P     P       14 43 58.1 +0.3
      baz=263,SNR=47
COLD  Coldfoot           84.05  23   P     P       14 43 58.7 +0.9
COLD                                 IAmb  IAmb    14 44 00.9
      comp=Z,33nm,1.0s
I23K  Minto, Yukon-K     84.15  25   P     P       14 43 59.4 +1.1
      baz=264,SNR=28
I23K  Minto, Yukon-K     84.15  25   P     P       14 43 58.8 +0.4
I23K                                 IAmb  IAmb    14 44 01.7
      comp=Z,68nm,1.4s
MCK   McKinley           84.19  26   P     P       14 43 58.1 -0.5
      baz=264,SNR=33
RND   Reindeer           84.19  27   P     P       14 43 58.3 -0.5
RND                                  pmax  pmax
      comp=Z,38nm,0.8s
RND   Reindeer           84.19  27   P     P       14 43 58.3 -0.5
RND                                  IAmb  IAmb    14 44 00.2
      comp=Z,38nm,0.8s
ZEI   Tsey               84.20 313  eP     P       14 43 57.8 -1.6
ZEI                                  pmax  pmax
      comp=Z,24nm,1.4s
KNK   Knik Glacier       84.20  29   P     P       14 43 59.0 +0.3
NEA2  Nenana             84.21  25   P     P       14 43 59.2 +0.4
      baz=264,SNR=14
SML   Sawmill            84.29  28   P     P       14 43 59.5 +0.3
NCK   Nalchik            84.44 313⇑eP      P       14 44 00.4  0.0
NCK                                  pmax  pmax
      comp=Z,17nm,1.2s
TOLK  Toolik Lake Re     84.45  21   P     P       14 44 00.8 +0.9
      baz=263,SNR=32
TOLK  Toolik Lake Re     84.45  21   P     P       14 44 00.5 +0.6
TOLK                                 IAmb  IAmb    14 44 03.6
      comp=Z,36nm,1.0s
AKH   Akhalkalaki        84.47 311 ⇑P      P       14 44 02.2 +1.4
MDM   Murphy Dome        84.61  25   P     P       14 44 01.4 +0.7
WRH   Wood River Hil     84.62  26   P     P       14 44 00.4 -0.4
GEVA  Gevas              84.75 308   P     P       14 44 02.4 +0.2
GEVA                                 IAmb  IAmb    14 44 05.3
      comp=Z,28nm,0.9s
TCOL  CIGO, UAF Yank     84.76  25   P     P       14 44 01.6 +0.2
      baz=265
COLA  College            84.76  25⇓eP      P       14 44 02.1 +0.7
COLA                                 pmax  pmax
      comp=Z,5.0nm,0.8s
CCB   Clear Creek Bu     84.76  25   P     P       14 44 00.8 -0.6
SCM   Sheep Creek Mo     84.77  28   P     P       14 44 01.9 +0.2
SCM                                  pmax  pmax
      comp=Z,102nm,1.0s
SCM   Sheep Creek Mo     84.77  28   P     P       14 44 01.9 +0.2
PYA1  Pyatigorsk         84.81 314⇑eP      P       14 44 02.1 -0.1
PYA1                                 pmax  pmax
      comp=Z,2.0nm,1.0s
KBZ   Khabaz             84.95 313   P     P       14 44 02.5 -0.3
      comp=Z,7.1nm,0.7s,baz=57,slow=3.1,SNR=14
KBZ   Khabaz             84.95 313deP      P       14 44 02.9 +0.1
POKR  Poker Plat Res     84.96  25   P     P       14 44 02.4  0.0
      baz=266
NEY   Neytrino           85.07 313ceP      P       14 44 04.8 +1.1
NEY                                  pmax  pmax
      comp=Z,6.0nm,0.9s
HIN   Hinchinbrook I     85.08  30   P     P       14 44 03.7 +0.5
HIN                                  IAmb  IAmb    14 44 05.7
      comp=Z,70nm,0.9s
KIV   Kislovodsk         85.11 314  eP     P       14 44 04.0 +0.2
KIV                                  pmax  pmax
      comp=Z,27nm,1.1s
HDA   Harding Lake       85.11  26   P     P       14 44 03.0 -0.3
      baz=266
HDA   Harding Lake       85.11  26   P     P       14 44 02.6 -0.6
IL31                     85.16  25   P     P       14 44 02.6 -0.8
ILAR  Eielson Array      85.16  25   P     P       14 44 02.2 -1.3
      comp=Z,2.3nm,0.7s,baz=252,slow=4.8,SNR=29
ILAR                                 PP    PP      14 47 20.9 -3.2
      comp=Z,1.7nm,1.1s,baz=268,slow=6.2,SNR=5.3
ILAR  Eielson Array      85.16  25   P     P       14 44 02.4 -1.1
ILAR  Eielson Array      85.16  25   P     P       14 44 02.4 -1.1
M24K  Tolsona, Glenn     85.33  28   P     P       14 44 05.5 +1.1
      baz=267,SNR=11
M24K  Tolsona, Glenn     85.33  28   P     P       14 44 04.4  0.0
KLU   Klutina            85.42  29   P     P       14 44 05.8 +0.9
KLU                                  IAmb  IAmb    14 44 07.5
      comp=Z,36nm,1.0s
CHVG  Ch'k'valeri        85.53 312 ⇑P      P       14 44 07.1 +1.3
CHVG  Ch'k'valeri        85.53 312 ⇑P      P       14 44 07.1 +1.3
PAX   Paxson             85.69  27   P     P       14 44 06.3 +0.1
PAX                                  pmax  pmax
      comp=Z,18nm,0.9s
PAX   Paxson             85.69  27   P     P       14 44 06.3 +0.1
PRP   Porcupine Dome     85.78  25   P     P       14 44 05.4 -1.3
VRH   Novokhopyorsk      85.86 321  eP     P       14 44 06.3 -0.8
VRH                                  pmax  pmax
      comp=Z,120nm,1.8s
FYU   Fort Yukon         85.94  24   P     P       14 44 07.7 +0.4
N25K  Chitina, Valde     86.06  29   P     P       14 44 08.8 +0.8
      baz=268,SNR=7.7
N25K  Chitina, Valde     86.06  29   P     P       14 44 07.7 -0.3
N25K                                 IAmb  IAmb    14 44 10.9
      comp=Z,21nm,0.9s
DOT   Dot Lake           86.35  27   P     P       14 44 08.9 -0.5
SCRK  Sand Creek         86.39  26   P     P       14 44 09.8 +0.2
      baz=269
GLB   Gilahina Butte     86.43  29   P     P       14 44 09.4 -0.5
GLB                                  IAmb  IAmb    14 44 13.1
      comp=Z,43nm,1.2s
MENT  Mentasta           86.49  27   P     P       14 44 09.5 -0.5
MARD  Mardin             86.56 307   P     P       14 44 10.5 -0.6
MARD                                 IAmb  IAmb    14 44 12.8
      comp=Z,21nm,0.8s
VRDI  Verde Repeater     86.60  29   P     P       14 44 10.9 +0.1
KLMR  Klimovskoe         87.12 331  eP     P       14 44 09.6 -3.4
KLMR                                e*PP   pP      14 45 06.5 -1.6
KLMR                                 pmax  pmax
      comp=Z,42nm,0.8s
KLMR  Klimovskoe         87.12 331  eP     P       14 44 09.6 -3.4
KLMR                                 AMP           14 44 13.2
      comp=Z,42nm,0.8s
KLMR                                epP    pP      14 45 06.5 -1.6
VSR   Storozhevoye       87.47 321  eP     P       14 44 13.1 -1.8
VSR                                  pmax  pmax
      comp=Z,10.0nm,0.8s
BARN  Barnard Glacie     87.47  29   P     P       14 44 13.9 -1.1
LPSR  Galich'ya Gora     87.58 322  eP     P       14 44 14.9 -0.5
LPSR                                 pmax  pmax
      comp=Z,60nm,1.0s
EGAK  Eagle              87.62  25   P     P       14 44 14.9 -0.4
CTGM  Chitina Glacie     87.63  29   P     P       14 44 16.6 +0.9
TMCR  Tamitsa            87.74 334  eP     P       14 44 11.3 -4.6
TMCR                                 pmax  pmax
      comp=Z,49nm,1.1s
MOS   Moscow             88.25 326  eP     P       14 44 14.6 -3.9
MOS                                 e              14 45 31.5
OBN   Obninsk            88.88 325   P     P       14 44 21.2 -0.3
      comp=Z,7.3nm,0.8s,baz=94,slow=4.6,SNR=8.7
OBN   Obninsk            88.88 325 i P     P       14 44 20.5 -0.9
OBN                                i *PP   pP      14 45 16.2 -0.6
OBN                                i               14 47 57.6
OBN                                  pmax  pmax
      comp=Z,34nm,0.9s
EPYK  Eagle Plains       89.36  24   P     P       14 44 23.9 +0.3
      baz=275
EPYK  Eagle Plains       89.36  24   P     P       14 44 23.1 -0.4
APA   Apatity            89.42 338⇓iP      P       14 44 22.9 -0.8
APA                                  pmax  pmax
      comp=Z,17nm,0.9s
APA                                  MLR   MLR
      comp=Z,1µm,18.0s
INK   Inuvik             90.36  22   P     P       14 44 27.5 -0.6
      comp=Z,7.4nm,0.9s,baz=266,slow=4.5,SNR=21
INK   Inuvik             90.36  22   P     P       14 44 27.5 -0.6
SPITS Spitsbergen Ar     91.75 349   P     P       14 44 33.5 -0.9
      comp=Z,12nm,0.9s,baz=150,slow=10,SNR=4.2
ARCES ARCESS Array B     91.96 340   P     P       14 44 34.2 -1.3
      comp=Z,34nm,0.9s,baz=76,slow=5.3,SNR=32
ARCES ARCESS Array B     91.96 340   P     P       14 44 34.3 -1.3
ARCES                                pmax  pmax
      comp=Z,32nm,1.0s
ARCES ARCESS Array B     91.96 340   P     P       14 44 34.3 -1.2
BR131 Keskin Array S     92.03 310⇑eP      P       14 44 35.8 -0.9
BRTR  Keskin Array B     92.03 310   P     P       14 44 36.0 -0.7
      comp=Z,2.6nm,0.8s,baz=104,slow=5.2,SNR=7.7
BRTR                                 PP    PP      14 48 17.8 -1.8
      comp=Z,0.4nm,0.5s,baz=206,slow=31,SNR=2.7
BRTR  Keskin Array B     92.03 310   P     P       14 44 36.0 -0.7
SYO   Syowa Base         92.21 201⇓eP      P       14 44 36.0 -0.6
SYO   Syowa Base         92.21 201⇓ePP     PP      14 48 19.7 -0.4
QSPA  South Pole Qui     92.70 180   P     P       14 44 38.3 -0.8
      comp=Z,8.0nm,0.8s,baz=163,slow=1.1,SNR=51
QSPA  South Pole Qui     92.70 180   P     P       14 44 38.7 -0.4
QSPA                                 IAmb  IAmb    14 44 41.0
      comp=Z,16nm,1.0s
FINES FINESS Array B     93.52 332   P     P       14 44 41.7 -1.1
      comp=Z,8.4nm,0.9s,baz=65,slow=4.4,SNR=8.8
DLBC  Dease Lake         93.60  31   P     P       14 44 43.3 -0.1
      comp=Z,8.2nm,0.9s,baz=298,slow=3.7,SNR=14
AKASG Malin Array Be     93.77 321   P     P       14 44 42.6 -1.6
      comp=Z,5.0nm,0.8s,baz=69,slow=4.3,SNR=18
AKASG                                PP    PP      14 48 32.7  0.0
      comp=Z,0.5nm,0.3s,baz=74,slow=6.1,SNR=4.3
AKBB  Malin Array Si     93.77 321   P     P       14 44 42.9 -1.3
AKBB                                 pmax  pmax
      comp=Z,9.0nm,1.0s
```

AKBB	Malin Array Si	93.77	321	P	P	14 44 42.9	-1.3
MNK	Minsk	93.94	325	*i* P	P	14 44 42.9	-2.0
	comp=E,3.0nm,0.8s						
MNK				*i* P	P	14 44 42.9	-2.0
	comp=N,11nm,0.8s						
MNK				*i* P	P	14 44 42.9	-2.0
	comp=Z,16nm,0.8s						
MNK				*i* pP	pP	14 45 39.1	-1.1
MNK				*i* sP	sP	14 46 03.4	-0.6
MNK				*i* PP	PP	14 48 30.3	-3.6
MNK				*i* PPP	PPP	14 50 34.1	
MNK				*i* ScS	S	14 55 58.6	+24
MNK				*i* sS	pS	14 56 25.5	-21
MNK				*i* SP	SP	14 57 07.0	+17
MNK				*i* PS	PS	14 57 24.9	+5.0
MNK				*i* SS	SS	15 02 09.2	+10
MNK				*i* SSS	SSS	15 04 37.4	
MNK				*i* LRM	MLR	15 28 14.2	
	comp=E,15nm,17.6s						
MNK				*i* LRM	MLR	15 28 57.7	
	comp=N,189nm,17.9s						
MNK				*i* LRM	MLR	15 29 03.4	
	comp=Z,75nm,17.6s						
HARR	Harsova	95.60	315	⇑P	P	14 44 41.9	-11
TESR	Tescani	96.17	317	⇑P	P	14 44 54.7	-0.6
VRI	Vrincioaia	96.23	317	⇑P	P	14 44 56.1	+0.5
VRI	Vrincioaia	96.23	317	⇑P	P	14 44 56.1	+0.5
PLOR	Plostina	96.29	317	⇑P	P	14 44 56.2	+0.3
PLOR	Plostina	96.29	317	⇑P	P	14 44 56.2	+0.3
MLR	Muntele Rosu	96.84	316	P	P	14 44 58.3	-0.3
	comp=Z,5.2nm,0.7s,baz=295,slow=4.1,SNR=3.1						
MLR	Muntele Rosu	96.84	316	⇑P	P	14 44 58.8	+0.3
MLR	Muntele Rosu	96.84	316	⇑P	P	14 44 58.8	+0.3
BURAR	Bucovina Array	96.92	318	⇑P	P	14 44 59.0	+0.2
BURAR	Bucovina Array	96.92	318	⇑P	P	14 44 59.0	+0.2
BURAR	Bucovina Array	96.92	318	P	P	14 44 58.0	-0.8
BUR08	Bucovina Ar. S	96.92	318	P	P	14 44 58.0	-0.8
ARR	Arges	97.77	316	⇑P	P	14 45 02.4	-0.2
RES	Resolute Bay	98.40	11	P	P	14 45 04.2	-0.5
	comp=Z,11nm,0.8s,baz=312,slow=5.3,SNR=38						
RES				PP	PP	14 49 08.6	+1.1
	comp=Z,1.1nm,0.8s,baz=318,slow=14,SNR=3.2						
DAG	Danmarks Havn	98.42	353	*i* P	P	14 45 03.0	-1.7
	comp=Z,9.0nm,0.9s						
DAG	Danmarks Havn	98.42	353	*i* P	P	14 45 03.0	-1.7
DAG				pmax	pmax		
	comp=Z,9.0nm,0.9s						
DAG	Danmarks Havn	98.42	353	*i* P	P	14 45 03.0	-1.7
DAG				IAmb	IAmb	14 45 05.1	
	comp=Z,9.0nm,0.9s						
UZH	Uzhgorod	98.60	320	*e*P	P	14 45 10.0	+3.9
DRGR		98.76	318	⇑P	Pdif	14 45 06.5	-0.5
DRGR		98.76	318	⇑P	Pdif	14 45 06.5	-0.5
CRVS	Cervenica-Dubn	99.06	320	*e*P	Pdif	14 45 08.9	+0.7
CRVS	Cervenica-Dubn	99.06	320	*e*PDIFF	Pdif	14 45 08.9	+0.7
YKA	Yellowknife Ar	99.59	25	P	Pdif	14 45 10.4	+0.2
	comp=Z,2.2nm,0.8s,baz=302,slow=4.1,SNR=34						
YKA				pP	pP	14 46 07.4	+2.6
	comp=Z,1.6nm,0.9s,baz=303,slow=3.7,SNR=4.4						
YKA				PP	PP	14 49 15.4	-1.4
	comp=Z,0.5nm,0.8s,baz=304,slow=7.3,SNR=5.0						
HFS	Hagfors	99.70	333	P	Pdif	14 45 09.2	-1.6
	comp=Z,11nm,0.9s,baz=91,slow=5.9,SNR=12						
HFS				pP	pP	14 46 07.4	+0.8
	comp=Z,4.5nm,0.9s,baz=64,slow=6.6,SNR=2.2						
NB2	NORSAR Subarra	100.44	334	P	Pdif	14 45 12.3	-1.8
	comp=Z,12nm,1.2s,baz=68,slow=4.4						
NB2	NORSAR Subarra	100.44	334	P	Pdif	14 45 12.3	-1.8
	baz=68,slow=4.4						
NOA	NORSAR Array B	100.44	334	P	Pdif	14 45 12.1	-2.0
	comp=Z,22nm,0.5s,baz=66,slow=4.5,SNR=6.9						
DBG	Daneborg	100.72	352	*i* P	Pdif	14 45 14.7	-0.3
DBG				IAmb	IAmb	14 45 15.9	
	comp=Z,6.8nm,1.1s						
CLL	Collm	103.47	324	*e*Pdif	Pdif	14 45 28.0	+0.3
GERES	GERESS Array B	103.95	322	Pdiff	Pdif	14 45 30.7	+0.6
	comp=Z,1.4nm,0.9s,baz=74,slow=4.7,SNR=6.0						
NVAR	Mina Array Bea	106.16	49	Pdiff	Pdif	14 45 41.2	+0.9
	comp=Z,0.6nm,0.8s,baz=277,slow=7.0,SNR=4.3						
NVAR				PP	PP	14 50 05.9	-0.9
	comp=Z,1.0nm,0.8s,baz=277,slow=8.7,SNR=5.3						
EGMT	Eagleton	108.44	37	P	PKiKP	14 49 54.7	-0.1
	baz=296						
PDAR	Pinedale Array	110.84	42	PP	PP	14 50 38.4	-2.1
	comp=Z,1.1nm,1.1s,baz=270,slow=7.4,SNR=4.8						
O20A	White River Ci	112.84	44	P	PKiKP	14 50 03.5	0.0
	baz=295						
N23A	Red Feather La	114.09	43	P	PKPdf	14 50 05.8	-0.1
	baz=297						
ANMO	Albuquerque	116.29	49	P	PKiKP	14 50 10.6	+0.4
	baz=294						
ANMO	Albuquerque	116.29	49	⇑*i*PKIKP	PKiKP	14 50 11.1	+0.9
MNTX	Cornudas Mount	118.41	52	P	PKiKP	14 50 14.4	+0.1
	baz=293						
ECSD	EROS Data Cent	118.50	36	P	PKPdf	14 50 13.5	-0.5
	baz=306						
TXAR	Lajitas Array	120.71	53	PKP	PKiKP	14 50 19.8	+0.9
	comp=Z,0.9nm,0.6s,baz=222,slow=2.2,SNR=7.2						
TXAR	Lajitas Array	120.71	53		PKPdf	14 50 17.4	-1.4
E46A	Sault Ste Mari	123.10	27	PKPdf	PKPdf	14 50 22.3	-0.5
JCT	Junction City	123.27	51	P	PKiKP	14 50 24.1	+0.3
	baz=297						
JCT	Junction City	123.27	51	PKIKP	PKPdf	14 50 23.2	-0.4
JCT	Junction City	123.27	51	PKPdf	PKPdf	14 50 23.2	-0.4
LSQQ	Lebel-sur-Quev	123.81	20	P	PKPdf	14 50 23.9	-0.1
	baz=329						
S39A	Bolivar	124.09	40	PKPdf	PKPdf	14 50 24.5	-0.4
U38A	Gravette	124.12	42		PKPdf	14 50 24.4	-0.6
R40A	Maddies Statio	124.39	39	PKPdf	PKPdf	14 50 24.8	-0.7
TORD	Torodi Ar. Bea	124.95	288	PKP	PKPdf	14 50 26.6	-0.5
	comp=Z,1.9nm,0.4s,baz=50,slow=2.1,SNR=10						
TORD				pPKP	pPKPdf	14 51 25.6	+0.4
	comp=Z,1.8nm,0.9s,baz=60,slow=1.8,SNR=2.4						
CCM	Cathedral Cave	125.17	38	P	PKPdf	14 50 26.9	0.0
	baz=309						
U40A	Yellville	125.18	41	P	PKPdf	14 50 27.1	+0.1
	baz=306						
U40A	Yellville	125.18	41	PKPdf	PKPdf	14 50 26.3	-0.8
W39A	Magazine	125.23	42	P	PKPdf	14 50 26.9	-0.3
	baz=305						
MIAR	Mount Ida	125.74	43	P	PKiKP	14 50 29.4	+0.9
	baz=304						
D55A	Sainte-Anne-du	126.08	20	P	PKPdf	14 50 28.7	+0.3
	baz=330						
D56A	ZEC Mazanza, M	126.30	20	P	PKPdf	14 50 28.5	-0.3
	baz=331						
G54A	Lake Saint Pet	126.49	23	P	PKPdf	14 50 29.1	-0.1
	baz=326						
I51A	Listowel	126.55	26	P	PKPdf	14 50 29.7	+0.3
	baz=322						
SADO	Sadowa	126.58	24	PKP	PKPdf	14 50 29.5	0.0
	comp=Z,4.1nm,0.7s,baz=355,slow=3.4,SNR=3.7						
E56A	St. Veronique	126.64	20	P	PKPdf	14 50 29.1	-0.4
	baz=330						
D58A	Chemin du LacG	126.86	18	P	PKPdf	14 50 30.2	+0.2
	baz=333						
H53A	Bobcaygeon	126.97	24	P	PKPdf	14 50 30.1	-0.1
	baz=325						
E57A	Chemin Saint G	127.06	20	P	PKPdf	14 50 30.4	+0.1
	baz=331						
D61A	St Aubert, Com	127.56	16	P	PKiKP	14 50 31.6	-0.2
	baz=336						
G57A	Newington	127.91	21	P	PKiKP	14 50 32.6	+0.1
	baz=330						
F60A	Warwick	128.16	18	P	PKPdf	14 50 32.5	+0.1
	baz=334						
E61A	Lac Etchemin	128.18	17	P	PKiKP	14 50 32.9	-0.2
	baz=336						
G58A	Ormstown	128.19	20	P	PKiKP	14 50 33.0	-0.1
	baz=331						
D63A	Stockholm	128.26	14	P	PKPdf	14 50 32.9	+0.4
	baz=339						
H57A	Richville	128.31	22	P	PKiKP	14 50 33.3	-0.1
	baz=329						
L53A	Girard	128.36	27	P	PKiKP	14 50 33.5	-0.1
	baz=322						
ACSO	Alum Creek Sta	128.36	31	P	PKiKP	14 50 33.6	0.0
	baz=318						
J56A	Wolcott	128.75	24	P	PKPdf	14 50 33.4	-0.2
	baz=327						
E63A	Oxbow	128.75	15	P	PKPdf	14 50 33.6	+0.1
	baz=338						
H58A	Gabriels	128.79	21	P	PKPdf	14 50 33.9	+0.2
	baz=330						
M54A	Oil Creek Stat	128.98	27	P	PKiKP	14 50 34.8	-0.1
	baz=323						
I58A	Old Forge	129.13	22	P	PKiKP	14 50 35.0	-0.1
	baz=329						
F63A	Nahmakanta, Br	129.23	16	P	PKiKP	14 50 35.0	-0.2
	baz=337						
K57A	Scipio Center	129.34	24	P	PKPdf	14 50 34.9	+0.1
	baz=327						
L56A	Greenwood	129.40	25	P	PKPdf	14 50 35.1	+0.1
	baz=325						
H61A	Lyndonville	129.45	19	P	PKPdf	14 50 35.3	+0.3
	baz=333						
J59A	Piesco	129.49	22	P	PKPdf	14 50 35.5	+0.4
	baz=330						
I60A	Shoreham	129.60	20	P	PKiKP	14 50 36.4	+0.4
	baz=331						
G63A	Kingsbury	129.63	17	P	PKPdf	14 50 35.4	+0.1
	baz=336						
K58A	Earlville	129.66	23	P	PKPdf	14 50 35.8	+0.4
	baz=328						
G64A	Maxfield	129.74	16	P	PKPdf	14 50 35.5	+0.1
	baz=337						
L57A	Andrews Acres	129.81	25	P	PKPdf	14 50 35.5	-0.2
	baz=326						
M57A	Sunshine Farm,	130.24	25	P	PKPdf	14 50 36.7	+0.2
	baz=326						
N58A	Sunbury	130.83	25	P	PKiKP	14 50 38.5	-0.1
	baz=326						
TKL	Tuckaleechee C	131.24	35	PKP	PKiKP	14 50 39.4	-0.2
	comp=Z,4.7nm,0.8s,baz=86,slow=3.7,SNR=4.4						
O58A	Lewisberry	131.33	26	P	PKiKP	14 50 39.2	-0.4
	baz=325						
Q58A	Fox Den Farm,	131.94	28	P	PKPdf	14 50 39.6	-0.2
	baz=324						
DBIC	Dimbokro	132.56	282	SKPbc	SKPbc	14 53 47.4	+0.2
	comp=Z,5.0nm,0.7s,baz=37,slow=2.8,SNR=6.7						
PLCA	Paso Flores	138.47	158	PKP	PKiKP	14 50 53.6	-0.6
	comp=Z,1.3nm,0.8s,baz=85,slow=4.0,SNR=3.2						
PLCA				pPKP	pPKPdf	14 51 50.8	0.0
	comp=Z,2.7nm,0.8s,baz=213,slow=8.4,SNR=2.8						
BO02	Sierra Bellavi	143.43	153	PKPdf	PKPbc	14 50 59.4	+0.4
ESPN	Las Esperanzas	144.11	65		PKPbc	14 51 01.9	+0.6
JTS	Las Juntas de	144.19	68	PKP	PKPdf	14 51 02.9	0.0
	comp=Z,27nm,0.8s,baz=356,slow=5.2,SNR=19						
JTS	Las Juntas de	144.19	68	PKPdf	PKPbc	14 51 01.9	+0.2
CBCY	The Bluff, Cay	144.29	50		PKPdf	14 51 02.5	-0.4
SOTA	Rioblanco	154.37	79	*e*P	PKiKP	14 51 30.0	+1.9
GUY2C	Guyana, Caldas	154.81	72	*e*P	PKPbc	14 51 28.0	-1.0
RREF	El Recreo	154.92	72	*e*P	PKiKP	14 51 30.6	+1.2
TOLC	Tolima	155.04	73	*e*P	PKPdf	14 51 28.4	+8.0
ORTC	Ortega, Tolima	155.29	74	*e*P	PKPdf	14 51 18.1	-2.3
PRAC	Prado	155.69	75	*e*P	PKPdf	14 51 30.5	+10
CPUP	Villa Florida	155.92	167	PKPab	PKPab	14 51 48.6	-0.1
	comp=Z,3.8nm,0.9s,baz=214,slow=7.6,SNR=4.8						
PAMC	Pamplona, Colo	156.52	65	*e*P	PKPab	14 51 52.3	-0.1
LPAZ	La Paz	158.79	130	PKP	PKPdf	14 51 25.7	+0.3
	comp=Z,0.6nm,0.4s,baz=256,slow=4.2,SNR=2.7						
LPAZ				PKPab	PKPab	14 52 03.4	+1.2
	comp=Z,1.4nm,0.6s,baz=249,slow=2.3,SNR=5.5						

JMA 18 15:05:14.8±0.1, 38°.19N×144°.50E, h44km, M3.6, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	2.39	293	P	Pn	15 05 52.8	+1.4
OFUJ				*e*S	Sn	15 06 21.0	+1.5
JIKH	Ishinomakikobu	2.39	274	P	Pn	15 05 52.6	+1.1
JIKH				S	Sn	15 06 20.8	+1.3
JKMT	Kesennumamotoy	2.45	286	P	Pn	15 05 53.6	+1.3
JKMT				*e*S	Sn	15 06 22.3	+1.2
JIO	Ouri	2.49	277	P	Pn	15 05 54.3	+1.5
JIO				S	Sn	15 06 23.2	+1.2
MIYJ	Miyakonagasawa	2.51	304	P	Pn	15 05 54.2	+1.1
MIYJ				*e*S	Sn	15 06 23.6	+1.2
JMK	Ichinoseki	2.68	287	P	Pn	15 05 57.1	+1.7
JMK				*e*S	Sn	15 06 28.3	+1.7
JOM	Ohasama	2.81	298	P	Pn	15 05 58.6	+1.3
JOM				*e*S	Sn	15 06 32.2	+2.3
JANG	Nango	3.18	314	P	Pn	15 06 03.8	+1.5
JYK	Kaneyama	3.33	284	P	Pn	15 06 06.7	+2.4
JYK				*e*S	Sn	15 06 45.7	+3.1
JFT	Otama	3.36	260	P	Pn	15 06 06.9	+2.1
JFT				*e*S	Sn	15 06 45.6	+2.1
JOT	Ohata	4.15	321	P	Pn	15 06 17.3	+1.7
JOT				*e*S	Sn	15 07 03.1	+0.3
JCH	Churui	4.50	349	P	Pn	15 06 20.2	-0.2
JCH				*e*S	Sn	15 07 09.2	-2.3
JRY	Ryogami san	4.97	246	P	Pn	15 06 28.1	+1.2
JRY				*e*S	Sn	15 07 21.9	-1.3
NEM2	Nemuro 2	5.25	10	P	Pn	15 06 28.1	-2.6
NEM2				*e*S	Sn	15 07 24.0	-6.0
JTKR	Abashiri--Toko	5.79	356	P	Pn	15 06 37.4	-0.7
JTKR				*e*S	Sn	15 07 39.8	-3.4
JHR	Hokuryu	5.93	340	*e*S	Sn	15 07 47.3	+0.6

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*IDC **18** 15:11:01.9±1.2, 40°.92N×72°.04E, h0km, mb3.6/6, mb1 3.7/13, mb1mx3.5/62, mbtmp3.5/13, ML2.9/7, Error ellipse: s-maj=23.2km s-min=13.0km az=158.0*

*SOME **18** 15:11:07.0, 41°.23N×72°.15E, h10km, MS3.6*

*KRNET **18** 15:11:07.6±0.1, 41°.17N×72°.12E, h20km, mb4.3*

*ISU **18** 15:11:08, 41°.17N×72°.10E, h15km, Hypocentre not reviewed by the ISC*

*NNC **18** 15:11:09.6±0.6, 41°.35N×72°.18E, h0km, mb4.6, mpv4.3, Error ellipse: s-maj=5.4km s-min=2.5km az=3.0*

ISC 18 15:11:06.4±0.5, 41°.17N±0°.03×71°.95E±0°.02, h10km, n101, σ2ˢ52/151, mb3.4/6, 38C-23D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANR	Andizhan	0.52	142	*e*P		15 11 18.0	
ANR				*e*S		15 11 26.0	
ARSB	Arslanbob	0.80	78	⇑*i*P	Pg	15 11 20.5	-1.3
	baz=76						
ARSB				⇑*i*S	Sg	15 11 30.0	-2.2
	baz=76						
ARSB	Arslanbob	0.80	78	*e*P		15 11 20.0	
ARSB				*e*S		15 11 31.0	
OHH	Osh	0.90	135	⇑*i*P	Pg	15 11 23.3	-0.5
	baz=42						
OHH				⇑*i*S	Sg	15 11 33.9	-1.6
	baz=42						
OHH	Osh	0.90	135	*e*P		15 11 23.0	
OHH				*e*S		15 11 34.0	
SHAK	Shakhimardan	1.22	187	*e*P		15 11 31.0	
SHAK				*e*S		15 11 47.0	
MNAS	Manas	1.39	17	⇑*i*P	Pn	15 11 32.3	+0.4
	baz=12						
MNAS				⇑*i*S	Sb	15 11 50.9	+0.6
	baz=12						
BTK	Batken	1.40	218	⇓*i*P	Pg	15 11 34.7	+1.5
	baz=22						
BTK				⇓*i*S	Sg	15 11 54.7	+3.3
	baz=22						
BTK	Batken	1.40	218	*i* P		15 11 34.0	
BTK				*e*S		15 11 54.0	
BTK				*e*S		15 11 54.0	
CHMG	Chimgan	1.51	285	P		15 11 38.0	
CHMG				S		15 11 59.0	
CHRV	Charvak	1.57	288	P		15 11 38.0	
CHRV				S		15 12 01.0	
AML	Almayashu	1.63	53	⇑*i*P	Pn	15 11 35.3	-0.2
	baz=50						
AML				⇑*i*S	Sn	15 11 55.5	-1.2
	baz=50						
AML	Almayashu	1.63	53	P	Pn	15 11 35.4	0.0
	SNR=448						
DRK	Karamyk	1.69	184	⇑*i*P	Pg	15 11 38.9	+0.2
	baz=88						
DRK				⇑*i*S	Sg	15 12 01.5	+0.9
	baz=88						
IUG	Iuzhnay	1.74	305	*e*P	Pg	15 11 41.6	+2.0
	208nm,0.2s						
IUG				*e*S	Sg	15 12 05.7	+3.4
	7µm,0.4s						
DZA	Taraz	1.79	345	*e*P	Pg	15 11 39.9	-0.7
	836nm,0.3s						
DZA				*e*S	Sg	15 12 04.1	+0.4
	4µm,0.3s						
MRKS	Merke	1.84	31	*e*P	Pn	15 11 39.7	+1.5
	1µm,0.4s						
MRKS				*e*S	Sb	15 12 03.7	+0.3
	4µm,0.4s						
ARLS	Aral	1.92	68	⇑*i*P	Pn	15 11 39.6	+0.4
	baz=67						
ARLS				⇑*i*S	Sn	15 12 03.9	+0.4
	baz=67						
TAS	Tashkent	2.00	275	P		15 11 47.0	
TAS				S		15 12 15.0	
EKS2	Erkin-Say	2.03	42	⇓*i*P	Pn	15 11 42.0	+1.3
	baz=39						
EKS2				⇓*i*S	Sn	15 12 07.7	+1.6
	baz=39						
EKS2	Erkin-Say	2.03	42	P	Pn	15 11 42.1	+1.3
	SNR=176						
CHM	Chimkent	2.10	304	*e*P	Pg	15 11 48.1	+1.6
	7.4nm,0.4s						
CHM				*e*S	Sg	15 12 18.1	+4.4
	9µm,0.4s						
UCH	Uchtor	2.20	60	⇑*i*P	Pn	15 11 43.9	+0.5
	baz=59						
UCH				⇑*i*S	Sn	15 12 11.2	+0.4
	baz=59						
UCH	Uchtor	2.20	60	P	Pn	15 11 43.9	+0.5
	SNR=131						
KK31	Karatay Array	2.21	332	⇑Pg	Pg	15 11 48.8	+0.1
	29nm,0.3s,baz=142,slow=16,SNR=1932						
KK31				Lg	Lg	15 12 18.1	
	298nm,0.5s,baz=149,slow=31,SNR=13						
AAK	Ala-Archa	2.41	51	Pn	Pn	15 11 47.1	+1.1
	22nm,0.3s,baz=215,slow=8.9,SNR=158						
AAK				Sn	Sn	15 12 16.9	+1.3
	43nm,0.3s,baz=207,slow=16,SNR=5.9						
AAK	Ala-Archa	2.41	51	⇑*e*P	Pn	15 11 47.0	+1.1
	baz=50						
AAK				⇑*i*S	Sn	15 12 16.5	+1.0
	baz=50						
AAK	Ala-Archa	2.41	51	P	Pn	15 11 47.1	+1.1
	SNR=46						
AAK	Ala-Archa	2.41	51	⇑Pn	Pn	15 11 47.1	+1.1
	77nm,0.3s						
AAK				Lg	Lg	15 12 16.9	
	424nm,0.7s						
BRLS	Borolday	2.44	321	*e*P	Pg	15 11 51.2	-1.8
	201nm,0.3s						
BRLS				*e*S	Sg	15 12 22.9	-1.7
	1µm,0.3s						
FRU1	Bishkek	2.59	50	⇑*i*P	Pn	15 11 49.8	+1.4
	baz=47						
FRU1				⇑*i*S	Sn	15 12 20.4	+0.4
	baz=47						
KBK	Karagaybulak	2.69	55	⇓*i*P	Pn	15 11 51.0	+1.1
	baz=54						
KBK				⇓*i*S	Sn	15 12 22.9	+0.3
	baz=54						
KBK	Karagaybulak	2.69	55	P	Pn	15 11 51.6	+1.8
	SNR=50						
CHMS	Chumysh	2.78	48	⇓*i*P	Pn	15 11 52.2	+1.2
	baz=46						
CHMS				⇓*i*S	Sn	15 12 25.2	+0.6
	baz=46						
CHMS	Chumysh	2.78	48	P	Pn	15 11 52.0	+1.0
	SNR=28						
USP	Ospenovka	2.83	41	⇓*e*P	Pn	15 11 52.8	+1.1
	baz=39						
USP				⇓*i*S	Sn	15 12 26.9	+1.0
	baz=39						
USP	Ospenovka	2.83	41	P	Pn	15 11 52.6	+0.9
	SNR=16						
SGDS	Sogindy	3.03	40	Pg	Pb	15 12 00.6	+0.2
	83nm,0.4s						
SGDS				Lg	Lg	15 12 39.0	
	298nm,0.3s						
TKM2	Tokmak 2	3.24	56	⇑*i*P	Pn	15 11 58.3	+0.9
	baz=55						
TKM2				⇑*i*S	Sn	15 12 36.3	+0.2
	baz=55						
TKM2	Tokmak 2	3.24	56	P	Pn	15 11 58.3	+0.9
	SNR=23						
TKM2	Tokmak 2	3.24	56	⇑Pn	Pn	15 11 58.2	+0.8
	5.1nm,0.2s						
TKM2				⇑Pg	Pb	15 12 05.6	+1.6
	35nm,0.3s						
TKM2				⇓Lg	Lg	15 12 44.9	
	158nm,0.6s						
BOOM	Boomskoye usch	3.27	65	⇑*i*P	Pn	15 11 58.5	+0.7
	baz=64						
BOOM				⇑*i*S	Sn	15 12 36.6	-0.2
	baz=64						
ULHL	Ulahol	3.39	70	⇓*e*P	Pn	15 12 00.6	+1.0
	baz=69						
ULHL				⇓*i*S	Sn	15 12 39.3	-0.7
	baz=69						
DGS	Degeres	3.52	53	*e*P	Pb	15 12 08.8	0.0
	112nm,0.5s						
DGS				*e*S	Sb	15 12 53.4	+1.8
	202nm,0.6s						
DGS	Degeres	3.52	53	Pg	Pb	15 12 08.8	0.0
	112nm,0.5s						
DGS				Lg	Lg	15 12 53.4	
	202nm,0.6s						
KST	Kastek	3.53	57	*e*P	Pb	15 12 09.7	+0.8
	64nm,0.3s						
KST				*e*S	Sb	15 12 54.4	+2.4
	218nm,1.0s						
KST	Kastek	3.53	57	Pg	Pb	15 12 09.7	+0.8
	64nm,0.3s						
KST				Lg	Lg	15 12 54.4	
	218nm,1.0s						
IZV	Izvestkoviy	3.94	60	*e*P	Pb	15 12 15.9	-0.2
	30nm,0.5s						
IZV				*e*S	Sb	15 13 05.2	+1.3
	187nm,0.7s						
IZV	Izvestkoviy	3.94	60	Pg	Pb	15 12 15.9	-0.2
	30nm,0.5s						
IZV				Lg	Lg	15 13 05.2	
	187nm,0.7s						
KDJ	Kajisay	4.04	74	⇑*e*P	Pn	15 12 09.3	+0.9
	baz=74						
KDJ				⇑*i*S	Sn	15 12 54.7	-1.2
	baz=74						
TNSS	Tian-Shan	4.17	62	*e*P	Pb	15 12 21.3	+1.3
	50nm,0.5s						
TNSS				*e*S	Sb	15 13 14.6	+4.2
	123nm,0.7s						
TNSS	Tian-Shan	4.17	62	Pg	Pb	15 12 21.3	+1.3
	50nm,0.5s						
TNSS				Lg	Lg	15 13 14.6	
	123nm,0.7s						
BTLS	Baital	4.17	21	*e*P	Pb	15 12 20.9	+1.1
	58nm,0.4s						
BTLS				*e*S	Sb	15 13 14.4	+4.2
	159nm,0.5s						
BTLS	Baital	4.17	21	Pg	Pb	15 12 20.9	+1.1
	58nm,0.4s						
BTLS				Lg	Lg	15 13 14.4	
	159nm,0.5s						
AAA	Alma-Ata	4.22	59	*e*P	Pb	15 12 22.1	+1.4
	47nm,0.3s						
AAA				*e*S	Sb	15 13 16.8	+5.0
	120nm,0.4s						
AAA	Alma-Ata	4.22	59	Pg	Pb	15 12 22.1	+1.4
	47nm,0.3s						
AAA				Lg	Lg	15 13 16.8	
	120nm,0.4s						
KUU	Kurty	4.24	49	*e*P	Pb	15 12 21.6	+0.6
	18nm,0.2s						
KUU				*e*S	Sb	15 13 15.2	+3.0
	161nm,0.5s						
KUU	Kurty	4.24	49	Pg	Pb	15 12 21.6	+0.6
	18nm,0.2s						
KUU				Lg	Lg	15 13 15.2	
	161nm,0.5s						
KNDC	Almaty	4.26	60	⇓Pn	Pn	15 12 12.0	+0.7
	30nm,0.4s						
KNDC				⇓Pg	Pb	15 12 23.7	+2.3
	91nm,0.5s						
KNDC				⇓Lg	Lg	15 13 17.4	
	1µm,1.3s						
MDOK	Medeo	4.29	61	*e*P	Pb	15 12 23.7	+1.8
	103nm,0.6s						
MDOK				*e*S	Sb	15 13 18.1	+4.4
	146nm,0.9s						
MDOK	Medeo	4.29	61	⇑Pn	Pn	15 12 12.8	+1.0
	16nm,0.4s						
MDOK				⇑Pg	Pb	15 12 24.3	+2.4
	104nm,0.6s						
MDOK				⇓Lg	Lg	15 13 18.4	
	102nm,0.6s						
MDOK	Medeo	4.29	61	Pg	Pb	15 12 23.7	+1.8
	103nm,0.6s						
MDOK				Lg	Lg	15 13 18.1	

	114nm,0.5s						
KTBS	Karatobe	4.33	52	eP	Pb	15 12 24.0	+1.4
	30nm,0.5s						
KTBS				eS	Sb	15 13 19.0	+4.1
	278nm,0.7s						
KTBS	Karatobe	4.33	52	Pg	Pb	15 12 24.0	+1.4
	30nm,0.5s						
KTBS				Lg	Lg	15 13 19.0	
	278nm,0.7s						
KOTS	Kotyrbulak	4.36	60	eP	Pb	15 12 25.1	+2.0
	123nm,0.4s						
KOTS				eS	Sb	15 13 21.2	+5.4
	455nm,0.8s						
KOTS	Kotyrbulak	4.36	60	Pg	Pb	15 12 25.1	+2.0
	123nm,0.4s						
KOTS				Lg	Lg	15 13 21.2	
	455nm,0.8s						
CHKK	Chushkaly	4.59	53	eP	Pb	15 12 28.6	+1.5
	14nm,0.3s						
CHKK				eS	Sb	15 13 27.4	+4.9
	198nm,0.7s						
CHKK	Chushkaly	4.59	53	Pg	Pb	15 12 28.6	+1.5
	14nm,0.3s						
CHKK				Lg	Lg	15 13 27.4	
	198nm,0.7s						
KURS	Kuram	5.17	61	eP	Pb	15 12 39.0	+2.2
	16nm,0.5s						
KURS				eS	Sb	15 13 45.4	+6.4
	73nm,1.1s						
KURS	Kuram	5.17	61	Pg	Pb	15 12 39.0	+2.2
	16nm,0.5s						
KURS				Lg	Lg	15 13 45.3	
	73nm,1.1s						
SATY	Saty	5.17	66	eP	Pb	15 12 38.6	+1.8
	15nm,0.6s						
SATY				eS	Sb	15 13 45.0	+6.0
	75nm,0.8s						
SATY	Saty	5.17	66	Pg	Pb	15 12 38.6	+1.8
	15nm,0.6s						
SATY				Lg	Lg	15 13 45.0	
	75nm,0.8s						
ZHN	Zhinishke	5.22	65	eP	Pb	15 12 40.3	+2.5
	219nm,0.4s						
ZHN				eS	Sb	15 13 47.4	+6.8
	25nm,0.7s						
ZHN	Zhinishke	5.22	65	Pg	Pb	15 12 40.3	+2.5
	219nm,0.4s						
ZHN				Lg	Lg	15 13 47.4	
	17nm,0.2s						
ARXS	Arharly	5.30	53	eP	Pb	15 12 40.8	+1.7
	47nm,0.4s						
ARXS				eS	Sb	15 13 48.5	+5.8
	168nm,0.7s						
ARXS	Arharly	5.30	53	Pg	Pb	15 12 40.8	+1.7
	47nm,0.4s						
ARXS				Lg	Lg	15 13 48.5	
	168nm,0.7s						
KPKS	Kokpek	5.50	63	eP	Pb	15 12 44.9	+2.3
	31nm,0.5s						
KPKS				eS	Sb	15 13 54.8	+6.3
	504nm,7.5s						
MNBS	Baschi	5.58	56	eP	Pb	15 12 47.7	+3.8
	10nm,0.5s						
MNBS				eS	Sb	15 13 59.9	+8.9
	78nm,0.5s						
MNBS	Baschi	5.58	56	Pg	Pb	15 12 47.7	+3.8
	10nm,0.5s						
MNBS				Lg	Lg	15 13 59.9	
	78nm,0.5s						
UZB	Uzynbulak	5.62	67	eP	Pb	15 12 46.7	+2.1
	23nm,0.6s						
UZB				eS	Sb	15 13 58.5	+6.4
	43nm,0.5s						
UZB	Uzynbulak	5.62	67	Pg	Pb	15 12 46.7	+2.1
	23nm,0.6s						
UZB				Lg	Lg	15 13 58.5	
	43nm,0.5s						
SHLS	Shalkode	5.93	68	Pg	Pg	15 12 58.9	-1.0
	18nm,0.4s						
SHLS				Lg	Lg	15 14 19.0	
	63nm,0.8s						
PDGK	Podgornoye	6.00	66	Pg	Pb	15 12 53.3	+2.2
	3.5nm,0.5s						
PDGK				Lg	Lg	15 14 09.3	
	32nm,0.8s						
PDGK	Podgornoye	6.00	66	⇑Pg	Pb	15 12 55.2	+4.1
	14nm,0.8s						
PDGK				⇓Lg	Lg	15 14 12.6	
	62nm,0.8s						
TDK	Taldyqorghan	6.09	49	Pg	Pb	15 12 55.3	+2.8
	24nm,0.4s						
TDK				Lg	Lg	15 14 13.5	
	254nm,0.7s						
DJR	Jarkent	6.58	59	Pg	Pb	15 13 04.1	+3.1
	7.0nm,0.5s						
DJR				Lg	Lg	15 14 28.2	
	50nm,1.0s						
KAPS	Kapalarasan	6.80	50	Pg	Pb	15 13 08.5	+3.8
	4.8nm,0.3s						
KAPS				Lg	Lg	15 14 35.8	
	23nm,0.5s						
THW	Thamme Wali	8.36	181	P	Pn	15 13 08.9	+1.3
MAKZ	Makanchi	9.17	49	⇓Pn	Pn	15 13 17.9	-0.8
	2.8nm,0.8s						
MAKZ				⇓Lg	Lg	15 15 50.8	
	16nm,0.9s						
MK31	Makanchi Array	9.34	50	Pn	Pn	15 13 21.1	+0.1
	4.9nm,0.7s,baz=233,slow=13,SNR=26						
MK31				⇓Lg	Lg	15 15 58.8	
	6.7nm,0.6s,baz=233,slow=26,SNR=4.0						
MKAR	Makanchi Array	9.34	50	Pn	Pn	15 13 21.2	+0.3
	0.3nm,0.3s,baz=233,slow=14,SNR=18						
MKAR				Sn	Sn	15 15 04.2	-1.8
	baz=247,slow=18,SNR=1.4						
MKAR				Lg	Lg	15 16 01.7	
	1.0nm,0.3s,baz=242,slow=23,SNR=6.5						
KURBB	Kurchatov Arra	10.51	24	Pn	Pn	15 13 34.2	-2.7
	0.0nm,0.3s,baz=215,slow=13,SNR=4.5						
KURBB				Sn	Sn	15 15 30.8	-3.9
	0.1nm,0.3s,baz=204,slow=27,SNR=4.4						
KURBB				Lg	Lg	15 16 38.7	
	0.5nm,0.3s,baz=213,slow=29,SNR=7.2						
KURBB	Kurchatov Arra	10.51	24	⇑Pn	Pn	15 13 39.4	+2.5
	2.4nm,0.5s						
KURBB				⇑Lg	Lg	15 16 38.1	
	52nm,0.8s						
KURK	Kurchatov	10.62	24	⇑Lg	Lg	15 16 39.9	
	36nm,0.8s						
GEYT	Alibeck	11.15	258	Pn	Pn	15 13 43.3	-2.6
	0.3nm,0.3s,baz=79,slow=7.5,SNR=2.8						
GEYT				Sn	Sn	15 15 44.5	-6.2
	0.3nm,0.3s,baz=82,slow=39,SNR=1.7						
AB31	Akbulak array	11.70	318	⇑Pn	Pn	15 13 55.6	+2.4
	0.8nm,0.6s,baz=126,slow=13,SNR=17						
BVAR	Borovoye Array	11.91	355	Pn	Pn	15 13 57.8	+1.6
	0.7nm,0.3s,baz=170,slow=18,SNR=4.4						
BVAR				Sn	Sn	15 16 08.5	-0.5
	0.4nm,0.3s,baz=187,slow=22,SNR=1.7						
BVAR				Lg	Lg	15 17 25.4	
	0.9nm,0.3s,baz=160,slow=34,SNR=3.4						
BRVK	Borovoye	11.95	355	⇑Pn	Pn	15 13 58.8	+2.1
	2.6nm,0.6s						
BRVK				⇑Lg	Lg	15 17 22.3	
	29nm,1.0s						
AKTO	Aktyubinsk	13.41	318	Pn	Pn	15 14 15.8	-0.8
	0.1nm,0.3s,baz=139,slow=17,SNR=2.8						
AKTO				Sn	Sn	15 16 39.9	-5.7
	0.2nm,0.3s,baz=158,slow=19,SNR=1.2						
AKTO	Aktyubinsk	13.41	318	⇑Pn	Pn	15 14 18.3	+1.7
	3.1nm,0.8s						
AKTO				⇓Sn	Sn	15 16 49.8	+4.2
	6.1nm,1.0s						
AKTO				⇓Lg	Lg	15 18 15.9	
	16nm,1.4s						
ZALV	Zalesovo Beam	15.43	30	Pn	Pn	15 14 42.7	-1.2
	0.2nm,0.3s,baz=228,slow=13,SNR=2.3						
ZALV				Sn	Sn	15 17 35.7	+1.0
	baz=356,slow=18,SNR=2.5						
ZALV				Lg	Lg	15 19 19.0	
	0.2nm,0.3s,baz=230,slow=22,SNR=1.8						
ARU	Arti	17.58	335	P	P	15 15 12.4	0.0
	0.0nm,0.3s,baz=144,slow=19,SNR=1.5						
ARU				Lg	Lg	15 20 27.2	
	0.0nm,0.3s,baz=354,slow=16,SNR=3.8						
BELG	Belogornoye	19.98	312	P	Pn	15 15 40.7	+0.3
	5.4nm,0.6s,baz=101,slow=5.2,SNR=3.1						
SONM	Songino Array	25.31	63	P	P	15 16 31.6	-1.5
	0.3nm,0.6s,baz=257,slow=10,SNR=2.3						
CMAR	Chiang Mai Arr	32.34	126	P	P	15 17 30.0	-5.9
	0.1nm,0.3s,baz=334,slow=12,SNR=1.8						
ARCES	ARCESS Array B	37.17	335	P	P	15 18 15.2	-1.9
	6.7nm,1.0s,baz=108,slow=8.6,SNR=2.2						
TORD	Torodi Ar. Bea	66.63	267	P	P	15 21 55.4	-1.9
	0.7nm,0.8s,baz=12,slow=7.4,SNR=2.6						
ILAR	Eielson Array	70.10	17	P	P	15 22 16.1	-2.1
	0.2nm,0.9s,baz=330,slow=3.1,SNR=2.1						
YKA	Yellowknife Ar	76.56	3	P	P	15 22 54.6	-1.7
	0.3nm,0.5s,baz=358,slow=5.8,SNR=9.8						

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*IDC **18** 15:14:13.8±1.0, 2°.41S×139°.04E, h0km, mb3.7/8, mb1 4.1/11, mb1mx3.8/41, mbtmp3.9/11, ML4.1/3, MS3.3/6, Ms1 3.3/6, ms1mx3.0/31, Error ellipse: s-maj=30.1km s-min=19.0km az=86.0*

*DJA **18** 15:14:17.0±0.4, 2°S±5°×13°9E±°, h18km±4km, M4.5/7, mB5.8/1, mb4.8/7, MLv4.3/6, Mw(mB)5.4/1*

*NEIC **18** 15:14:20.4±2.7, 2°.5S±0°.1×138°.82E±0°.10, h40km±7km, mb4.1/14, Error ellipse: s-maj=17.7km s-min=10.2km az=224.0*

ISC 18 15:14:19.2±0.6, **2°.38S**±0°.06×**138°.86E**±0°.05, **h37km, n46,** σ**2s.01**/48, **mb4.1**/9, **MS3.4**/4, **Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.41	339	P	Pn	15 14 24.9	-3.6
SMPI				S	Sn	15 14 30.5	-4.8
GENI	Genyem	1.33	99	P	Pn	15 14 40.7	-0.5
GENI				S	Sn	15 14 57.6	0.0
SRPI	Serui, Papua	2.66	281	P	Pn	15 14 59.5	-0.1
SRPI				S	Sn	15 15 31.7	+1.0
BAKI	Biak	2.99	293	P	Pn	15 15 03.3	-0.8
MMPI	Merauke	6.24	166	P	Pn	15 15 51.7	+3.0
	2.8nm724nm,1.1s						
FAKI	Fak Fak	6.62	265	Pn	Pn	15 15 55.0	+0.9
FAKI	Fak Fak	6.62	265	P	Pn	15 15 54.5	+0.4
	0.2nm42nm,1.1s						
SIJI	Sorong	7.74	281	Pn	Pn	15 16 10.6	+1.2
	1.4nm,0.3s,baz=69,slow=13,SNR=6.4						
SIJI				Sn	Sn	15 17 31.9	-3.9
	0.1nm,0.3s,baz=292,slow=23,SNR=0.9						
SIJI				LR	LR	15 20 09.3	
	comp=Z,204nm,19.9s,baz=132,slow=45						
PMG	Port Moresby	10.81	131	Pn	Pn	15 16 52.1	+0.6
	0.3nm,0.3s,baz=4.1,slow=14,SNR=2.3						
COEN	Coen	12.27	160	Pn	Pn	15 17 12.1	+0.6
SOEI	Soe	16.25	243	P	P	15 18 10.2	+2.6
SOEI	Soe	16.25	243	P	Pn	15 18 05.2	+0.3
	42nm,1.0s						
BATI	Baumata	16.98	242	Pn	P	15 18 15.9	+0.2
	3.4nm,0.3s,baz=111,slow=2.5,SNR=6.8						
WB0	Warramunga Arr	17.82	194	Pn	Pn	15 18 22.6	-1.9
WR0	Warramunga Arr	17.98	193	Pn	Pn	15 18 23.8	-2.5
WR0				IAmb	IAmb	15 18 42.1	
	comp=Z,9.0nm,1.1s						
WRAB	Tennant Creek	17.99	194	Pn	Pn	15 18 24.3	-2.3
WRAB				IAmb	IAmb	15 18 33.8	
	comp=Z,6.4nm,0.7s						
WB2	Warramunga Arr	18.00	194	Pn	Pn	15 18 24.8	-1.9
WB2				IAmb	IAmb	15 18 33.9	
	comp=Z,6.8nm,0.7s						
WRA	Warramunga Arr	18.00	194	P	Pn	15 18 24.5	-2.2
	comp=Z,0.3nm,0.3s,baz=8.3,slow=12,SNR=14						
WRA				S	Sn	15 21 36.3	-10
	comp=Z,0.1nm,0.3s,baz=7.8,slow=23,SNR=5.0						
WRA	Warramunga Arr	18.00	194	P	Pn	15 18 26.8	0.0
CTA	Charters Tower	19.03	158	P	Pn	15 18 41.3	+2.1
	comp=Z,0.1nm,0.3s,baz=346,slow=17,SNR=1.8						
KAPI	Kappang	19.24	262	LR	LR	15 26 20.7	
	comp=Z,43nm,21.6s,baz=66,slow=37						
FITZ	Fitzroy Crossi	20.30	219	P	P	15 18 53.4	+1.4
	comp=Z,1.5nm,0.7s,baz=37,slow=10.0,SNR=1.5						
FITZ				S	S	15 22 30.5	-7.3
	comp=Z,2.6nm,0.8s,baz=191,slow=16,SNR=2.1						
FITZ				LR	LR	15 26 47.0	
	comp=Z,89nm,20.3s,baz=41,slow=37						
FITZ	Fitzroy Crossi	20.30	219	P	P	15 18 53.2	+1.1
AS31	Alice Springs	21.70	192	P	P	15 19 06.2	-0.9
ASAR	Alice Springs	21.70	192	P	P	15 19 05.6	-1.6
	comp=Z,3.1nm,0.7s,baz=17,slow=11,SNR=14						
ASAR				S	S	15 23 05.8	+0.4
	comp=Z,1.6nm,0.9s,baz=13,slow=27,SNR=4.2						
ASAR				LR	LR	15 28 09.3	
	comp=Z,184nm,18.2s,baz=14,slow=38						
ASAR	Alice Springs	21.70	192	P	P	15 19 06.4	-0.8
MTKI	Muara Teweh, K	23.99	273	P	P	15 19 12.4	-18
EIDS	Eidsvold	25.71	154	P	P	15 19 44.8	-1.4
PSA00	Pilbara Seismi	26.57	223	P	P	15 19 55.6	+1.5
STKA	Stephens Creek	29.45	175	LR	LR	15 33 28.2	
	comp=Z,107nm,21.5s,baz=16,slow=39						
CMAR	Chiang Mai Arr	44.40	299	P	P	15 22 27.0	+0.3
	comp=Z,0.8nm,0.7s,baz=121,slow=6.4,SNR=8.3						
CMAR	Chiang Mai Arr	44.40	299	P	P	15 22 26.6	0.0
SONM	Songino Array	57.49	335	P	P	15 24 06.0	+1.2
	comp=Z,0.2nm,0.3s,baz=156,slow=4.4,SNR=2.0						
PETK	Petropavlovsk-	57.51	13	LR	LR	15 46 05.3	
	comp=Z,28nm,21.5s,baz=305,slow=33						
MK31	Makanchi Array	69.62	322	P	P	15 25 27.2	+2.3
MK31				IAmb	IAmb	15 25 32.7	
	comp=Z,4.9nm,1.4s						
MKAR	Makanchi Array	69.62	322	P	P	15 25 26.4	+1.5
	comp=Z,1.4nm,0.8s,baz=100,slow=8.4,SNR=13						
MKAR	Makanchi Array	69.62	322	P	P	15 25 26.2	+1.4
ZALV	Zalesovo Beam	71.73	330	P	P	15 25 37.6	+0.2
	comp=Z,0.5nm,0.3s,baz=126,slow=7.3,SNR=2.2						
KURK	Kurchatov	73.53	325	P	P	15 25 49.9	+1.6
KURK				IAmb	IAmb	15 25 55.5	
	comp=Z,2.0nm,0.8s						
VNDA	Vanda	76.09	175	P	P	15 26 03.4	+0.8
	comp=Z,1.8nm,0.7s,baz=342,slow=3.9,SNR=5.4						
VNDA	Vanda	76.09	175	P	P	15 26 03.0	+0.4
VNDA				IAmb	IAmb	15 26 04.8	
	comp=Z,5.3nm,1.3s						
BRVK	Borovoye	79.20	325	P	P	15 26 21.7	+1.3
ABKAR	Akbulak array	84.56	320	P	P	15 26 49.5	+0.8
ILAR	Eielson Array	85.47	24	P	P	15 26 52.6	-0.3
	comp=Z,1.0nm,0.8s,baz=255,slow=4.7,SNR=7.7						
ILAR	Eielson Array	85.47	24	P	P	15 26 53.2	+0.3
LPAZ	La Paz	147.52	126	PKPbc	PKPbc	15 34 00.8	-0.4
	comp=Z,0.4nm,0.3s,baz=252,slow=9.6,SNR=2.0						

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*IDC **18** 16:12:47.5±2.3, 25°.39N×141°.23E, h110km±21km, mb3.3/5, mb1 3.5/5, mb1mx3.0/37, mbtmp3.7/5, Error ellipse: s-maj=74.0km s-min=16.7km az=102.0*

ISC 18 16:12:46.4±1.0, **25°.4N**±0°.2×**141°.1E**±0°.4, **h100km, n7,** σ**0s.55**/8, **mb3.7**/6, **Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	1.99	30	P	Pn	16 13 19.4	+0.5
	61nm,0.3s,baz=290,slow=22,SNR=7.3						
JCJ				S	Sn	16 13 43.9	+0.2
	72nm,0.3s,baz=230,slow=22,SNR=9.7						
WRA	Warramunga Arr	45.51	189	P	P	16 20 56.1	+0.1
	13nm,0.4s,baz=8.4,slow=8.7,SNR=296						
ASAR	Alice Springs	49.23	189	P	P	16 21 25.5	+0.6
	0.4nm,0.3s,baz=3.9,slow=5.4,SNR=23						
STKA	Stephens Creek	56.92	179	P	P	16 22 21.0	-0.2
	1.5nm,0.6s,baz=355,slow=12,SNR=4.9						
ILAR	Eielson Array	59.70	28	P	P	16 22 39.9	-0.3
	0.4nm,0.8s,baz=264,slow=6.4,SNR=4.8						
YKA	Yellowknife Ar	74.13	28	P	P	16 24 10.7	-0.8
	0.1nm,0.4s,baz=298,slow=5.0,SNR=2.8						
FINES	FINESS Array B	79.05	334	P	P	16 24 39.5	+0.2
	0.8nm,0.8s,baz=70,slow=6.1,SNR=1.1						

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*IDC **18** 16:25:44.0±4.4, 16°.44S×15°.86W, h0km, mb4.2/4, mb1 4.1/4, mb1mx3.8/30, mbtmp4.2/4, MS3.4/4, Ms1 3.3/4, ms1mx3.1/27, Error ellipse: s-maj=375.2km s-min=42.8km az=109.0*

ISC 18 16:25:45.6±4.0, **16°.5S**±0°.7×**1°6W**±°, **h10km, n17,** σ**0s.82**/9, **mb4.4**/6, **MS3.4**/4, **Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10S2	ASCENSION HYDR	7.60	8	T	T	16 35 44.2	
	baz=178,slow=74,SNR=44						
H10S3	ASCENSION HYDR	7.61	8	T	T	16 35 46.9	
	baz=42,slow=74,SNR=60						
H10N1	ASCENSION HYDR	8.72	8	T	T	16 37 12.1	
	baz=189,slow=77,SNR=17						
H10N3	ASCENSION HYDR	8.72	8	T	T	16 37 08.1	
	baz=189,slow=77,SNR=27						
H10N2	ASCENSION HYDR	8.74	8	T	T	16 37 10.1	
	baz=189,slow=77,SNR=12						
LIC	Lamto	24.97	26	eP	P	16 31 10.5	+1.0
	42nm,1.4s						
KIC	Kosan Boka	25.21	26	eP	P	16 31 12.3	+0.5
	11nm,0.8s						
TIC	Toumodi	25.35	26	eP	P	16 31 13.0	0.0
DBIC	Dimbokro	25.44	26	P	P	16 31 13.6	-0.2
	7.1nm,0.9s,baz=174,slow=12,SNR=5.2						
DBIC				LR	LR	16 38 36.5	
	comp=Z,60nm,21.1s,baz=168,slow=30						
BDFB	Brasilia	31.03	267	LR	LR	16 42 47.3	
	comp=Z,80nm,21.1s,baz=115,slow=33						
TORD	Torodi Ar. Bea	34.15	31	P	P	16 32 30.0	-1.2
	3.8nm,0.7s,baz=214,slow=9.8,SNR=11						
BOSA	Boshof	39.51	115	LR	LR	16 46 21.9	
	comp=Z,59nm,19.3s,baz=336,slow=31						
CPUP	Villa Florida	39.79	249	LR	LR	16 49 21.5	
	comp=Z,52nm,18.3s,baz=55,slow=36						
BRTR	Keskin Array B	72.44	38	P	P	16 37 13.6	+1.1
	1.6nm,0.9s,baz=223,slow=7.9,SNR=3.0						
AKASG	Malin Array Be	77.68	27	P	P	16 37 42.2	-0.1
	0.7nm,0.5s,baz=221,slow=5.8,SNR=2.3						
ASAR	Alice Springs	130.22	143	PKP	PKPdf	16 44 56.8	-0.2
	0.5nm,1.0s,baz=197,slow=2.5,SNR=2.2						
WRA	Warramunga Arr	133.31	140	PKP	PKPdf	16 45 02.6	-0.3
	1.0nm,1.0s,baz=235,slow=2.1,SNR=1.4						

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*IDC **18** 16:27:21.8±0.6, 10°.69S×163°.81E, h0km, mb4.8/17, mb1 4.9/18, mb1mx4.8/24, mbtmp4.7/18, ML4.7/1, MS4.9/29, Ms1 4.9/29, ms1mx4.9/29, Error ellipse: s-maj=22.4km s-min=14.4km az=98.0*

*MOS **18** 16:27:22.2±1.1, 10°.69S×163°.93E, h11km, mb5.2/22, MS4.8/9, Error ellipse: s-maj=9.8km s-min=7.2km az=124.2*

*NEIC **18** 16:27:23.0±2.9, 10°.75S±0°.09×164°.14E±0°.09, h10km±1km, mb5.1/136, Error ellipse: s-maj=17.0km s-min=11.8km az=44.0*

*GCMT **18** 16:27:26.0±0.1, 10°.64S±0°.01×164°.10E±0°.01, h12km, MW5.3/144, Moment Tensor Solution. s110,c189; s144,c270; Duration: 1s.1 Moment tensor: Scale 10^{17} Nm; M_{rr}0.24±.01; $M_{\theta\theta}$0.56±.01; $M_{\phi\phi}$-0.79±.01; $M_{r\theta}$-0.07±.04; $M_{\theta\phi}$0.97±.01; $M_{\phi r}$-0.10±.04; Best double couple: $M_0$1.19500×10^{17} NP1:ϕ_s288.00000°, δ83.00000°, λ4.00000°. NP2:ϕ_s197.00000°, δ86.00000°, λ173.00000°. Principal axes: T 1.0810, Plg7.0000°, Azm152.0000°; N 0.2280, Plg82.0000°, Azm348.0000°; P -1.3080, Plg2.0000°, Azm242.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BJI **18** 16:27:27.6±0.0, 10°.24S×164°.34E, h47km, mB5.3/55, mb4.8/57, Ms5.3/59, Ms7 5.0/57*

ISC 18 16:27:25.7±0.3, **10°.74S**±0°.04×**164°.01E**±0°.04, **h25km, n389,** σ**1s.50**/360, **mb5.1**/151, **MS4.9**/58, **13C-7D, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.21	288	Pn	Pn	16 28 28.4	+0.2
	42nm,0.3s,baz=142,slow=6.7,SNR=26						
HNR				Sn	Sn	16 29 17.4	+0.8
	65nm,0.3s,baz=245,slow=17,SNR=1.8						
HNR	Honiara	4.21	288	P	Pn	16 28 28.7	+0.5
HNR	Honiara	4.21	288		Pn	16 28 28.7	+0.5
HNR	Honiara	4.21	288	P	Pn	16 28 28.4	+0.2
SANVU	Saraoutou	5.62	147		Pn	16 28 44.2	-3.5
DVP	Devils Point	8.04	150	P	Pn	16 29 19.0	-1.9
KOUNC	Koumac, New Ca	9.76	178	P	Pn	16 29 44.0	-0.6
LIFNC	LIFOU	10.46	163	P	Pn	16 29 52.6	-1.5
DZM	Mont Dzumac	11.51	169	Pn	Pn	16 30 07.0	-1.7
	4.9nm,0.3s,baz=318,slow=10.0,SNR=51						
DZM				Sn	Sn	16 32 10.9	-5.6
	0.3nm,0.3s,baz=124,slow=20,SNR=1.6						
DZM				LR	LR	16 34 13.8	
	comp=Z,10µm,18.1s,baz=356,slow=36						
DZM	Mont Dzumac	11.51	169	ePn	Pn	16 30 05.5	-3.1
	269nm,1.4s						
DZM				eS	Sn	16 32 18.0	+1.5
	7µm,24.2s						
DZM				eLR	LR	16 32 46.7	
	comp=Z,17µm,23.9s						
DZM	Mont Dzumac	11.51	169	Pn	Pn	16 30 06.6	-2.0
DZM	Mont Dzumac	11.51	169	P	Pn	16 30 06.9	-1.7
YATNC	Mamie plateau,	11.59	167	P	Pn	16 30 08.7	-1.0
ONTNC	Ouen Toro	11.74	169	P	Pn	16 30 12.0	+0.3
OUENC	Ouen Island, N	11.93	167	P	Pn	16 30 13.2	-1.0
PINNC	Pines Island,	12.26	165	P	Pn	16 30 17.8	-0.9
RABL	Rabaul	13.42	298	Pn	Pn	16 30 36.6	+1.9
TARA	Tarawa	14.93	37		P	16 30 58.5	-2.1
MSVF	Nonsavu	15.28	119	Pn	Pn	16 30 58.9	-1.0
	0.0nm,0.3s,baz=280,slow=12,SNR=2.2						
MSVF				LR	LR	16 35 40.5	
	comp=Z,9µm,18.2s,baz=295,slow=32						
MSVF	Nonsavu	15.28	119	P	Pn	16 31 00.2	+0.3
MSVF				pmax	pmax		
	comp=Z,61nm,1.2s						
MSVF	Nonsavu	15.28	119	P	Pn	16 31 00.2	+0.3
PMG	Port Moresby	16.64	273	Pn	P	16 31 21.7	+2.0
	comp=Z,0.2nm,0.3s,baz=75,slow=9.9,SNR=3.0						
PMG				LR	LR	16 37 10.0	
	comp=Z,8µm,21.9s,baz=105,slow=36						
PMG	Port Moresby	16.64	273	P	P	16 31 19.1	-0.6
PMG				pmax	pmax		
	comp=Z,80nm,1.3s						
PMG	Port Moresby	16.64	273	P	P	16 31 19.1	-0.6
MANU	Manus Island	18.64	296	P	P	16 31 41.4	-0.5
EIDS	Eidsvold	19.03	218	P	P	16 31 45.5	-0.4
	baz=19,SNR=6.5						
EIDS	Eidsvold	19.03	218	P	Pn	16 31 48.2	+1.4
CTA	Charters Tower	19.46	239	P	Pn	16 31 51.4	-0.7
	comp=Z,1.3nm,0.3s,baz=63,slow=13,SNR=16						
CTA				LR	LR	16 38 32.6	
	comp=Z,5µm,19.6s,baz=53,slow=35						
CTAO	Charters Tower	19.46	239	P	Pn	16 31 51.9	-0.1
CTAO				pmax	pmax		
	comp=Z,191nm,1.2s						
CTAO	Charters Tower	19.46	239	P	Pn	16 31 51.9	-0.1
CTAO				IAmb	IAmb	16 32 08.3	
	comp=Z,190nm,1.1s						
KWAJ	Kwajalein Atol	19.74	11	P	Pn	16 31 57.5	+2.2
KWAJ				pmax	pmax		
	comp=Z,214nm,1.1s						
KWAJ	Kwajalein Atol	19.74	11	P	Pn	16 31 57.5	+2.2
MTSU	Mount Surprise	20.43	247	P	P	16 32 00.7	-0.6
	baz=20,SNR=15						
COEN	Coen	20.60	259	P	P	16 32 04.3	+1.1
RMQ	Roma	21.28	221	P	P	16 32 11.1	+0.7
	baz=21,SNR=20						
ARMA	Armidale	22.72	209	P	P	16 32 27.3	+1.4
	baz=23,SNR=5.0						
ARMA	Armidale	22.72	209	P	P	16 32 27.6	+1.7
ARMA				IAmb	IAmb	16 32 32.9	
	comp=Z,74nm,1.1s						
QLP	Quilpie	24.43	227	P	P	16 32 43.1	+0.6
	baz=24,SNR=9.1						
RAO	Raoul Island	24.99	140	LR	LR	16 40 58.8	
	comp=Z,2µm,20.2s,baz=290,slow=32						
MGCD	Mangrove Creek	25.32	206	P	P	16 32 53.5	+3.0
	baz=25,SNR=9.9						
QIS	Mount Isa	25.41	244	P	P	16 32 51.9	+0.3
	baz=25,SNR=9.1						
SMPI	Sarmi	26.58	287	P	P	16 33 03.5	+1.4
	comp=Z,893nmcomp=Z,44nm,1.1s						
YNG	Young	27.46	209	P	P	16 33 12.6	+2.8
	baz=27,SNR=7.6						
CNB	Canberra Magne	27.86	206	P	P	16 33 16.0	+2.5
	baz=28,SNR=7.8						
CAN	Canberra	28.03	207	P	P	16 33 14.7	-0.3
CAN				pmax	pmax		
	comp=Z,35nm,1.3s						
CAN	Canberra	28.03	207	P	P	16 33 14.7	-0.3
STKA	Stephens Creek	29.52	221	P	P	16 33 29.1	+0.8
	baz=29,SNR=8.2						
STKA	Stephens Creek	29.52	221	P	P	16 33 27.9	-0.3
	comp=Z,14nm,0.9s,baz=39,slow=8.9,SNR=16						
STKA				LR	LR	16 44 16.0	
	comp=Z,3µm,18.2s,baz=38,slow=34						
STKA	Stephens Creek	29.52	221	P	P	16 33 28.8	+0.6
STKA				pmax	pmax		

	comp=Z,13nm,1.1s						
STKA	**Stephens Creek**	**29.52**	**221**	P	**P**	**16 33 28.8**	**+0.6**
URZ	**Urewera**	**29.82**	**159**	P	**P**	**16 33 34.4**	**+3.7**
	comp=Z,4.2nm,0.7s,baz=284,slow=6.6,SNR=2.8						
URZ				LR	LR	16 44 22.8	
	comp=Z,3µm,18.0s,baz=30,slow=34						
WR0	**Warramunga Arr**	**29.82**	**249**	P	**P**	**16 33 28.8**	**-2.2**
WB0	**Warramunga Arr**	**29.91**	**249**	P	**P**	**16 33 29.7**	**-2.1**
WB0				IAmb	IAmb	16 33 45.2	
	comp=Z,31nm,0.8s						
WRAB	**Tennant Creek**	**29.99**	**249**	*i* P	**P**	**16 33 31.5**	**-1.0**
WRAB	**Tennant Creek**	**29.99**	**249**	P	**P**	**16 33 30.3**	**-2.2**
WRAB				IAmb	IAmb	16 33 44.0	
	comp=Z,39nm,1.1s						
WB2	**Warramunga Arr**	**29.99**	**249**	P	**P**	**16 33 30.4**	**-2.1**
WB2				IAmb	IAmb	16 33 45.9	
	comp=Z,32nm,1.0s						
WRA	**Warramunga Arr**	**30.00**	**249**	P	**P**	**16 33 30.7**	**-1.9**
	comp=Z,12nm,0.8s,baz=80,slow=9.0,SNR=38						
WRA				S	**S**	**16 38 27.0**	**-2.4**
	comp=Z,5.6nm,1.2s,baz=77,slow=15,SNR=5.3						
WRA				LR	LR	16 45 22.5	
	comp=Z,5µm,19.7s,baz=75,slow=36						
WRA	**Warramunga Arr**	**30.00**	**249**	P	**P**	**16 33 31.2**	**-1.4**
WRA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
WRA	**Warramunga Arr**	**30.00**	**249**	P	**P**	**16 33 31.2**	**-1.4**
H11N1	**WAKE ISLAND Hy**	**30.39**	**5**	T	T	17 05 20.7	
	baz=184,slow=76,SNR=69						
H11N3	**WAKE ISLAND Hy**	**30.39**	**5**	T	T	17 05 21.1	
	baz=184,slow=76,SNR=92						
H11N2	**WAKE ISLAND Hy**	**30.41**	**5**	T	T	17 05 22.0	
	baz=184,slow=76,SNR=64						
BKZ	**Black Stump Fm**	**30.42**	**161**	P	**P**	**16 33 35.7**	**-0.4**
KDU	**Kakadu**	**30.93**	**263**	P	**P**	**16 33 39.7**	**-1.2**
	baz=31,SNR=7.0						
AS31	**Alice Springs**	**31.42**	**242**	P	**P**	**16 33 42.9**	**-2.3**
ASAR	**Alice Springs**	**31.42**	**242**	P	**P**	**16 33 42.7**	**-2.5**
	comp=Z,2.8nm,0.6s,baz=63,slow=10.0,SNR=49						
ASAR				LR	LR	16 45 27.9	
	comp=Z,4µm,20.7s,baz=69,slow=35						
ASAR	**Alice Springs**	**31.42**	**242**	P	**P**	**16 33 43.1**	**-2.1**
ASAR	**Alice Springs**	**31.42**	**242**	P	**P**	**16 33 43.1**	**-2.1**
TOO	**Toolangi**	**31.48**	**209**	P	**P**	**16 33 46.7**	**+1.2**
	baz=31,SNR=11						
TOO	**Toolangi**	**31.48**	**209**	P	**P**	**16 33 46.5**	**+1.0**
TOO				pmax	pmax		
	comp=Z,41nm,1.0s						
TOO	**Toolangi**	**31.48**	**209**	P	**P**	**16 33 46.5**	**+1.0**
THZ	**Tophouse**	**31.88**	**167**	P	**P**	**16 33 48.7**	**-0.3**
THZ				IAmb	IAmb	16 33 55.6	
	comp=Z,24nm,1.0s						
HTT	**Hallett**	**32.25**	**222**	P	**P**	**16 33 53.6**	**+1.3**
	baz=32,SNR=9.2						
OXZ	**Oxford**	**33.21**	**169**	P	**P**	**16 33 59.0**	**-1.5**
OXZ				IAmb	IAmb	16 34 06.2	
	comp=Z,38nm,1.0s						
RPZ	**Rata Peaks**	**33.42**	**171**	P	**P**	**16 34 02.4**	**0.0**
	comp=Z,16nm,0.8s,baz=3.3,slow=8.5,SNR=10						
RPZ				LR	LR	16 45 43.7	
	comp=Z,4µm,22.0s,baz=342,slow=33						
RPZ	**Rata Peaks**	**33.42**	**171**	P	**P**	**16 34 01.2**	**-1.2**
RPZ				IAmb	IAmb	16 34 08.4	
	comp=Z,24nm,0.9s						
BBOO	**Buckleboo**	**33.81**	**225**	P	**P**	**16 34 06.9**	**+0.9**
	baz=34,SNR=4.6						
BBOO	**Buckleboo**	**33.81**	**225**	P	**P**	**16 34 06.8**	**+0.8**
RAR	**Rarotonga**	**36.26**	**111**	LR	LR	16 47 55.1	
	comp=Z,385nm,18.3s,baz=280,slow=34						
WRKA	**Warakurna**	**36.71**	**242**	P	**P**	**16 34 30.7**	**-0.3**
	baz=36,SNR=9.1						
FITZ	**Fitzroy Crossi**	**37.82**	**254**	P	**P**	**16 34 40.0**	**-0.4**
	baz=38,SNR=21						
FITZ	**Fitzroy Crossi**	**37.82**	**254**	P	**P**	**16 34 39.8**	**-0.7**
FITZ				IAmb	IAmb	16 34 53.5	
	comp=Z,45nm,1.2s						
EDFI	**Ende, Flores**	**41.73**	**269**	P	**P**	**16 35 14.1**	**+0.9**
	comp=Z,288nmcomp=Z,8.6nm,1.1s						
APSI	**Ampana**	**43.20**	**280**	P	**P**	**16 35 27.2**	**+2.2**
	comp=Z,435nmcomp=Z,24nm,1.2s						
PSA00	**Pilbara Seismi**	**43.63**	**250**	P	**P**	**16 35 27.9**	**-0.6**
BNSI	**Bone**	**43.94**	**275**	P	**P**	**16 35 32.2**	**+1.2**
	comp=Z,31nm,1.1s						
KAPI	**Kappang**	**44.17**	**274**	P	**P**	**16 35 32.4**	**-0.5**
KAPI				pmax	pmax		
	comp=Z,26nm,1.2s						
KAPI	**Kappang**	**44.17**	**274**	P	**P**	**16 35 32.4**	**-0.5**
PPT	**Papeete**	**45.42**	**104**	LR	LR	16 50 08.9	
	comp=Z,1µm,20.8s,baz=271,slow=30						
PPT2	**Papeete2**	**45.42**	**104**	*e*S	**S**	**16 42 25.2**	**+2.0**
	comp=Z,535nm,25.2s						
PPT2				*e*LQ	LQ	16 46 37.9	
	comp=Z,3µm,30.2s						
PPT2				*e*LR	LR	16 48 33.6	
	comp=Z,3µm,23.5s,baz=274						
MEEK	**Meekatharra**	**45.56**	**243**	P	**P**	**16 35 43.3**	**-0.5**
	baz=45,SNR=9.2						
PLAI	**Plampang**	**45.57**	**268**	P	**P**	**16 35 45.2**	**+1.2**
	comp=Z,26nm,1.6s						
TIAR	**Tiarei**	**45.64**	**104**	*e*P	**P**	**16 35 46.4**	**+1.8**
	comp=Z,13nm,0.9s						
TBI	**Tubuai**	**46.03**	**112**	*e*S	**S**	**16 42 31.2**	**-0.4**
	comp=Z,161nm,26.0s						
TBI				*e*LQ	LQ	16 46 53.6	
	comp=Z,5µm,29.8s						
TBI				*e*LR	LR	16 48 49.0	
	comp=Z,1µm,24.5s,baz=290						
JMN	**Monobe**	**52.70**	**328**	P	**P**	**16 36 40.1**	**+1.8**
MJAR	**Matsushiro Arr**	**52.93**	**334**	P	**P**	**16 36 38.0**	**-2.0**
	comp=Z,8.0nm,1.0s,baz=160,slow=6.7,SNR=11						
MJAR				LR	LR	16 58 22.3	
	comp=Z,466nm,20.1s,baz=150,slow=35						
MJAR	**Matsushiro Arr**	**52.93**	**334**	P	**P**	**16 36 38.3**	**-1.6**
MJAR				pmax	pmax		
	comp=Z,7.0nm,1.1s						
MJAR	**Matsushiro Arr**	**52.93**	**334**	P	**P**	**16 36 38.3**	**-1.6**
MAJO	**Matsushiro**	**52.93**	**334**	⇓*e*P	**P**	**16 36 39.0**	**-0.9**
MAJO				pmax	pmax		
	comp=Z,19nm,1.1s						
MAJO	**Matsushiro**	**52.93**	**334**	P	**P**	**16 36 38.6**	**-1.3**
MAJO				IAmb	IAmb	16 36 49.8	
	comp=Z,27nm,1.1s						
MAT	**Matsushiro**	**52.93**	**334**	P	**P**	**16 36 39.3**	**-0.6**
MAT				S	**S**	**16 44 04.6**	**-3.2**
JNU	**Nakatsue**	**53.85**	**325**	P	**P**	**16 36 45.8**	**-1.0**
TAOE	**Nuku Hiva Isla**	**55.00**	**93**	*e*S	**S**	**16 44 37.8**	**+1.0**
TAOE				*e*LR	LR	16 52 53.9	
	comp=Z,1µm,25.8s						
JKA	**Kamikawa-asahi**	**57.95**	**342**	IAmb	IAmb	16 37 25.4	
	comp=Z,28nm,1.0s						
KSRS	**Korea Array**	**58.67**	**327**	P	**P**	**16 37 20.8**	**-0.2**
	comp=Z,7.1nm,1.0s,baz=151,slow=7.1,SNR=8.8						
KSRS				LR	LR	17 01 31.9	
	comp=Z,442nm,20.1s,baz=144,slow=35						
KSAR	**Wonju Array Be**	**58.68**	**327**	P	**P**	**16 37 20.9**	**-0.2**
KSAR	**Wonju Array Be**	**58.68**	**327**	P	**P**	**16 37 20.9**	**-0.2**
RKT	**Rikitea**	**59.29**	**111**	*e*S	**S**	**16 45 31.6**	**-1.3**
	comp=Z,452nm,29.2s						
RKT				*e*LQ	LQ	16 52 29.2	
	comp=Z,2µm,31.5s						
RKT				*e*LR	LR	16 54 57.0	
	comp=Z,2µm,23.5s						
YSS	**Yuzh-Sakhalins**	**60.49**	**343**	*e*P	**P**	**16 37 33.4**	**0.0**
YSS				*e*S	**S**	**16 45 45.5**	**-1.8**
YSS				pmax	pmax		
	comp=Z,20nm,1.5s						
YSS				MLR	MLR		
	comp=Z,1µm,20.0s						
YSS	**Yuzh-Sakhalins**	**60.49**	**343**	P	**P**	**16 37 32.3**	**-1.1**
NJ2	**Nanjing**	**60.61**	**316**	*e*P	**P**	**16 37 35.3**	**+0.7**
NJ2				sP	pwP	16 37 54.3	+8.9
NJ2				S	**S**	**16 45 51.3**	**+1.8**
NJ2				sS	sS	16 46 11.5	+10
NJ2				pmax	pmax		
	comp=Z,14nm,1.1s						
NJ2				pmax	pmax		
	comp=Z,410nm,5.5s						
NJ2				LR	LR		
	comp=Z,500nm,15.2s						
NJ2				LR	LR		
	comp=Z,680nm,15.6s						
NJ2				LR	LR		
	comp=Z,900nm,19.1s						
QIZ	**Qiongzhong**	**61.03**	**299**	P	**P**	**16 37 36.5**	**-1.2**
QIZ				S	**S**	**16 45 52.0**	**-3.4**
QIZ				LR	LR		
	comp=Z,310nm,20.6s						
QIZ				LR	LR		
	comp=Z,300nm,17.3s						
QIZ				LR	LR		
	comp=Z,440nm,19.6s						
SKR	**Severo-Kuril’s**	**61.55**	**354**	*e*P	P	16 37 46.5	+6.0
SKR				*e*S	S	16 46 10.3	+10
SKR				pmax	pmax		
	comp=Z,300nm,8.8s						
SKR				pmax	pmax		
	comp=Z,200nm,4.4s						
SKR				MLR	MLR		
	comp=Z,200nm,17.0s						
USA0B	**Ussuriysk Arra**	**61.92**	**334**	⇑*e*P	**P**	**16 37 43.3**	**+0.1**
USRK	**Ussuriysk Ar.**	**61.92**	**334**	P	**P**	**16 37 41.8**	**-1.4**
	comp=Z,18nm,1.1s,baz=145,slow=7.0,SNR=13						
USRK				LR	LR	17 02 53.0	
	comp=Z,493nm,20.6s,baz=136,slow=34						
USRK	**Ussuriysk Ar.**	**61.92**	**334**	P	**P**	**16 37 42.5**	**-0.7**
USRK	**Ussuriysk Ar.**	**61.92**	**334**	P	**P**	**16 37 42.5**	**-0.7**
WHN	**Wuhan**	**62.92**	**312**	⇑P	**P**	**16 37 51.1**	**+1.0**
WHN				S	**S**	**16 46 22.4**	**+3.6**
WHN				pmax	pmax		
	comp=Z,68nm,1.5s						
WHN				LR	LR		
	comp=Z,3µm,21.0s						
WHN				LR	LR		
	comp=Z,400nm,7.7s						
WHN				LR	LR		
	comp=Z,2µm,23.3s						
DL2	**Dalian**	**63.22**	**324**	*e*P	P	16 37 57.0	+5.1
DL2				sP	pwP	16 38 14.5	+12
DL2				pmax	pmax		
	comp=Z,35nm,1.5s						
DL2				pmax	pmax		
	comp=Z,520nm,4.9s						
DL2				LR	LR		
	comp=Z,520nm,20.0s						
DL2				LR	LR		
	comp=Z,1µm,22.4s						
DL2				LR	LR		
	comp=Z,1µm,21.9s						
MDJ	**Mudanjiang**	**63.29**	**333**	P	**P**	**16 37 52.4**	**+0.1**
MDJ				pP	sP	16 38 04.5	+2.0
MDJ				sP	pwP	16 38 09.3	+7.4
MDJ				S	**S**	**16 46 24.6**	**+1.7**
MDJ				pmax	pmax		
	comp=Z,15nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,330nm,3.3s						
MDJ				LR	LR		
	comp=Z,830nm,15.1s						
MDJ				LR	LR		
	comp=Z,850nm,16.5s						
MDJ				LR	LR		
	comp=Z,1µm,21.9s						
UBPT	**Khong Chiam**	**63.48**	**293**	P	P	16 38 07.0	+13
	comp=Z,4.8nm,2.1s						
PET	**Petropavlovsk**	**63.67**	**356**	*e*P	P	16 38 02.3	+7.7
PET				*e*S	S	16 46 36.2	+9.0
PETK	**Petropavlovsk-**	**63.82**	**356**	P	**P**	**16 37 55.9**	**+0.3**
	comp=Z,7.6nm,1.0s,baz=126,slow=7.7,SNR=6.8						
PETK				LR	LR	17 00 42.2	
	comp=Z,863nm,21.3s,baz=174,slow=31						
PETK	**Petropavlovsk-**	**63.82**	**356**	P	**P**	**16 37 56.0**	**+0.3**
TYV	**Tymovskoe**	**64.10**	**345**	*e*P	**P**	**16 37 57.9**	**+0.4**
TYV				pmax	pmax		
	comp=Z,6.0nm,1.5s						
TYV				pmax	pmax		
	comp=Z,200nm,4.5s						
TYV				MLR	MLR		
	comp=Z,800nm,21.0s						
TIA	**Tai'an**	**64.26**	**319**	P	**P**	**16 37 58.9**	**0.0**
TIA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
TIA				pmax	pmax		
	comp=Z,310nm,6.5s						
TIA				LR	LR		
	comp=Z,570nm,24.3s						
TIA				LR	LR		
	comp=Z,520nm,23.9s						
TIA				LR	LR		
	comp=Z,740nm,22.8s						
CN2	**Changchun**	**64.61**	**330**	*e*P	**P**	**16 38 01.1**	**+0.1**
CN2				pmax	pmax		
	comp=Z,20nm,1.4s						
CN2				pmax	pmax		
	comp=Z,320nm,6.4s						
CN2				LR	LR		
	comp=Z,590nm,21.0s						
CN2				LR	LR		
	comp=Z,600nm,21.0s						
CN2				LR	LR		
	comp=Z,630nm,24.0s						
GRNR	**Gornyy**	**65.79**	**341**	⇑*i*P	**P**	**16 38 08.8**	**+0.3**
GRNR				pmax	pmax		
	comp=Z,5.0nm,1.1s						
GRNR				MLR	MLR		
	comp=E,280nm,14.0s						
KLR	**Kul'dur**	**66.11**	**337**	⇑*e*P	**P**	**16 38 10.7**	**+0.1**
NONG	**Nongkai**	**66.54**	**295**	P	**P**	**16 38 16.1**	**+2.1**
	comp=E,41nm,1.1s						
VNDA	**Vanda**	**66.78**	**181**	P	**P**	**16 38 15.9**	**+1.4**
	comp=E,21nm,1.0s,baz=347,slow=6.1,SNR=13						
VNDA				LR	LR	17 03 20.5	
	comp=E,694nm,20.6s,baz=356,slow=32						
VNDA	**Vanda**	**66.78**	**181**	P	**P**	**16 38 14.8**	**+0.2**
GYA	**Guiyang**	**66.84**	**305**	⇓P	**P**	**16 38 17.1**	**+1.2**
GYA				pP	pwP	16 38 32.9	+6.2
GYA				S	**S**	**16 47 07.3**	**-0.2**
GYA				pmax	pmax		
	comp=E,200nm,6.5s						
GYA				LR	LR		
	comp=E,200nm,14.7s						
GYA				LR	LR		
	comp=E,270nm,17.9s						
GYA				LR	LR		
	comp=E,440nm,16.5s						
CHAI	**Chaiyaphum**	**66.85**	**292**	P	P	16 38 25.0	+9.0
	comp=E,10.0nm,1.1s						
SLVN	**Son La**	**67.06**	**299**	IAmb	IAmb	16 38 36.9	
	comp=Z,27nm,1.3s						
BJT	**Baijiatuau**	**67.17**	**322**	IAmb	IAmb	16 38 35.9	
	comp=Z,19nm,1.4s						
BJI	**Beijing**	**67.18**	**322**	P	**P**	**16 38 18.0**	**+0.4**
BJI				S	**S**	**16 47 10.1**	**-0.7**
BJI				LR	LR		
	comp=Z,920nm,21.4s						
BJI				LR	LR		
	comp=Z,600nm,25.7s						
BJI				LR	LR		
	comp=Z,2µm,24.6s						
TIY	**Taiyuan**	**68.18**	**318**	*e*P	**P**	**16 38 25.1**	**+0.9**
TIY				pmax	pmax		
	comp=Z,16nm,1.4s						
TIY				pmax	pmax		
	comp=Z,220nm,5.0s						
TIY				LR	LR		
	comp=Z,220nm,7.7s						
TIY				LR	LR		
	comp=Z,550nm,15.7s						
TIY				LR	LR		
	comp=Z,970nm,16.4s						
XAN	**Xi'an**	**68.66**	**313**	P	**P**	**16 38 27.6**	**+0.4**
XAN				pP	pwP	16 38 40.3	+2.3
XAN				sP	PcP	16 38 45.8	-6.2
XAN				S	**S**	**16 47 29.5**	**+0.6**
XAN				sS	sS	16 47 52.4	+12
XAN				ScS	**SKSac**	**16 48 22.0**	**-3.2**
XAN				pmax	pmax		
	comp=Z,10.0nm,1.2s						
XAN				pmax	pmax		
	comp=Z,270nm,6.2s						
XAN				LR	LR		
	comp=Z,830nm,17.1s						
XAN				LR	LR		
	comp=Z,850nm,19.8s						
XAN				LR	LR		
	comp=Z,2µm,20.6s						
XAN	**Xi'an**	**68.66**	**313**	IAmb	IAmb	16 38 34.6	
	comp=Z,12nm,1.0s						
UTTA	**Uttaradit**	**68.75**	**294**	P	**P**	**16 38 31.5**	**+3.6**
	comp=Z,208nmcomp=Z,12nm,0.9s						
UTHA	**Uthaitani**	**69.06**	**291**	P	**P**	**16 38 34.0**	**+4.1**
SUKH	**Sukhothai**	**69.49**	**293**	P	**P**	**16 38 36.0**	**+3.4**
	comp=Z,13nm,0.8s						
KMI	**Kunming**	**69.51**	**302**	⇑P	**P**	**16 38 34.0**	**+1.1**
KMI				pP	pwP	16 38 43.3	-0.3
KMI				sP	PcP	16 38 51.3	-4.7
KMI				PP	**PP**	**16 41 07.0**	**+0.2**
KMI				S	**S**	**16 47 36.3**	**-3.3**
KMI				pmax	pmax		
	comp=Z,17nm,1.5s						
KMI				pmax	pmax		
	comp=Z,240nm,4.7s						
KMI				LR	LR		
	comp=Z,280nm,15.8s						
KMI				LR	LR		
	comp=Z,480nm,22.5s						
KMI				LR	LR		
	comp=Z,570nm,21.7s						
CM35	**Chiang Mai Arr**	**70.31**	**294**	P	**P**	**16 38 39.0**	**+1.4**
CM36	**Chiang Mai Arr**	**70.31**	**294**	P	**P**	**16 38 39.0**	**+1.4**
CM34	**Chiang Mai Arr**	**70.37**	**294**	P	**P**	**16 38 40.7**	**+2.7**
CM04	**Chiang Mai Arr**	**70.38**	**294**	P	**P**	**16 38 40.6**	**+2.6**
	comp=Z,104nmcomp=Z,9.1nm,1.1s						
CM09	**Chiang Mai Arr**	**70.38**	**294**	P	**P**	**16 38 41.0**	**+2.9**
	comp=Z,113nmcomp=Z,11nm,1.2s						
CM01	**Chiang Mai Arr**	**70.40**	**294**	P	**P**	**16 38 41.1**	**+3.0**
	comp=Z,91nmcomp=Z,9.6nm,1.3s						
CM05	**Chiang Mai Arr**	**70.41**	**294**	P	**P**	**16 38 41.0**	**+2.8**
	comp=Z,83nmcomp=Z,7.8nm,1.2s						
CM02	**Chiang Mai Arr**	**70.42**	**294**	P	**P**	**16 38 41.1**	**+2.9**
	comp=Z,83nmcomp=Z,10.0nm,1.2s						
CM31	**Chiang Mai Arr**	**70.43**	**294**	P	**P**	**16 38 41.6**	**+3.3**
	comp=Z,3µmcomp=Z,275nm,1.0s						
CM31	**Chiang Mai Arr**	**70.43**	**294**	P	**P**	**16 38 38.8**	**+0.5**
CM31				IAmb	IAmb	16 38 49.6	
	comp=Z,16nm,1.1s						
CMAR	**Chiang Mai Arr**	**70.43**	**294**	P	**P**	**16 38 40.4**	**+2.0**
	comp=Z,13nm,1.2s,baz=116,slow=4.1,SNR=33						
CMAR				LR	LR	17 09 44.6	
	comp=Z,215nm,20.1s,baz=146,slow=36						
CMAR	**Chiang Mai Arr**	**70.43**	**294**	P	**P**	**16 38 39.4**	**+1.0**
CMAR	**Chiang Mai Arr**	**70.43**	**294**	P	**P**	**16 38 39.4**	**+1.0**
CM15	**Chiang Mai Arr**	**70.44**	**294**	P	**P**	**16 38 41.2**	**+2.8**
	comp=Z,87nmcomp=Z,11nm,1.1s						
CM13	**Chiang Mai Arr**	**70.45**	**294**	P	**P**	**16 38 41.2**	**+2.7**
	comp=Z,84nmcomp=Z,9.7nm,1.1s						
HHC	**Hu-ho-hao-te**	**70.50**	**320**	*e*P	**P**	**16 38 39.8**	**+1.3**
HHC				S	**S**	**16 47 52.5**	**+2.1**
HHC				pmax	pmax		
	comp=Z,9.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,370nm,6.1s						
HHC				LR	LR		
	comp=Z,730nm,17.8s						
HHC				LR	LR		
	comp=Z,580nm,17.7s						
HHC				LR	LR		
	comp=Z,1µm,16.4s						
CMMT	**Chiang Mai**	**70.54**	**294**	P	**P**	**16 38 40.2**	**+1.1**
	comp=Z,273nmcomp=Z,8.1nm,1.7s						
CM33	**Chiang Mai Arr**	**70.54**	**294**	P	**P**	**16 38 40.0**	**+0.9**
CHTO	**Chiang Mai**	**70.54**	**294**	P	**P**	**16 38 38.8**	**-0.2**
CHTO				pmax	pmax		
	comp=Z,31nm,1.5s						
CHTO	**Chiang Mai**	**70.54**	**294**	P	**P**	**16 38 38.8**	**-0.2**
CHTO				IAmb	IAmb	16 38 58.2	
	comp=Z,32nm,1.4s						
CM32	**Chiang Mai Arr**	**70.58**	**294**	P	**P**	**16 38 42.0**	**+2.7**
MA2	**Magadan**	**70.88**	**353**	⇑*e*P	**P**	**16 38 39.5**	**-0.7**
MA2				pmax	pmax		
	comp=Z,3.0nm,1.0s						
CD2	**Chengdu**	**71.06**	**308**	P	**P**	**16 38 42.8**	**+0.7**
CD2				sP	PcP	16 38 59.8	-2.4
CD2				S	**S**	**16 47 59.8**	**+2.6**
CD2				SS	**SS**	**16 52 25.0**	**-6.1**
CD2				pmax	pmax		
	comp=Z,20nm,1.3s						
CD2				pmax	pmax		
	comp=Z,210nm,6.5s						
CD2				LR	LR		
	comp=Z,520nm,11.0s						
CD2				LR	LR		
	comp=Z,570nm,19.8s						
CD2				LR	LR		
	comp=Z,680nm,14.2s						
MHMT	**Maesarieng**	**71.25**	**293**	P	**P**	**16 38 47.9**	**+4.5**
BTO	**Baotou**	**71.34**	**319**	*e*P	P	16 38 35.5	-8.1
BTO				S	S	16 47 37.8	-22
ZEA	**Zeya**	**71.41**	**338**	*e*P	**P**	**16 38 44.6**	**+1.1**
ZEA				pmax	pmax		
	comp=N,20nm,1.1s						
ZEA				pmax	pmax		
	comp=Z,20nm,1.2s						
ZEA				pmax	pmax		
	comp=N,100nm,6.6s						
ZEA				pmax	pmax		
	comp=Z,300nm,4.9s						
ZEA				MLR	MLR		
	comp=N,300nm,19.0s						
ZEA				MLR	MLR		
	comp=Z,300nm,18.0s						
LZH	**Lanzhou**	**73.29**	**313**	*e*P	**P**	**16 38 56.9**	**+1.5**
LZH				pP	PcP	16 39 10.3	-1.5
LZH				sP	pwP	16 39 13.1	+6.8
LZH				S	**SKiKP**	**16 48 27.9**	**+2.2**
LZH				sS	sS	16 48 38.6	+3.7
LZH				pmax	pmax		
	comp=Z,10.0nm,1.1s						
LZH				pmax	pmax		
	comp=Z,310nm,4.1s						
LZH				LR	LR		
	comp=Z,410nm,14.1s						
LZH				LR	LR		
	comp=Z,570nm,14.6s						
LZH				LR	LR		
	comp=Z,650nm,15.4s						
SEY	**Seymchan**	**73.99**	**354**	⇓*e*P	**P**	**16 38 58.5**	**-0.2**
CIT	**Chita**	**76.05**	**331**	*e*P	**P**	**16 39 11.4**	**+0.5**
CIT				*e*		16 39 16.5	
CIT				*e*		16 39 22.2	
CIT				pmax	pmax		
	comp=Z,43nm,2.0s						
ULN	**Ulaanbaatar**	**77.06**	**325**	*de*P	**P**	**16 39 17.6**	**+0.8**
ULN				pmax	pmax		
	comp=Z,14nm,1.3s						
ULN	**Ulaanbaatar**	**77.06**	**325**	P	**P**	**16 39 16.9**	**0.0**
ULN				IAmb	IAmb	16 39 25.0	
	comp=Z,19nm,1.0s						
YAK	**Yakutsk**	**77.33**	**344**	*e*P	**P**	**16 39 16.6**	**-1.2**
YAK				*e**PP	**pwP**	**16 39 32.1**	**+3.2**
YAK				*e*S	**S**	**16 49 02.4**	**-3.8**
YAK				*e**SS	**ScS**	**16 49 32.0**	**-1.7**
YAK				pmax	pmax		
	comp=Z,25nm,1.1s						
YAK				pmax	pmax		
	comp=N,11nm,1.5s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.4s						
YAK				pmax	pmax		
	comp=Z,199nm,4.7s						
YAK				pmax	pmax		
	comp=N,120nm,4.7s						
YAK				pmax	pmax		
	comp=E,160nm,5.3s						
YAK				smax	smax		
	comp=N,168nm,5.6s						
YAK				smax	smax		
	comp=E,175nm,6.3s						
YAK	**Yakutsk**	**77.33**	**344**	P	**P**	**16 39 16.8**	**-1.0**
SONM	**Songino Array**	**77.42**	**324**	P	**P**	**16 39 18.9**	**+0.1**
	comp=E,4.8nm,0.8s,baz=138,slow=5.5,SNR=18						
SONM				LR	LR	17 15 14.2	
	comp=E,562nm,18.0s,baz=120,slow=37						
GTA	**Gaotai**	**77.62**	**314**	⇓P	**P**	**16 39 21.6**	**+1.4**
GTA				pmax	pmax		
	comp=E,8.0nm,1.3s						
GTA				pmax	pmax		
	comp=E,190nm,8.0s						
GTA				LR	LR		
	comp=E,190nm,15.5s						
GTA				LR	LR		
	comp=E,620nm,17.1s						
GTA				LR	LR		
	comp=E,760nm,17.5s						
SVW2	**Sparrevohn**	**78.36**	**19**	IAmb	IAmb	16 39 33.8	
	comp=Z,28nm,1.2s						
TNA	**Tin City**	**78.90**	**12**	P	**P**	**16 39 26.8**	**+0.4**
	baz=208						
QSPA	**South Pole Qui**	**79.27**	**180**	P	**P**	**16 39 29.3**	**+0.5**

BOD	Bodaibo	79.53	335	eP	P	16 39 30.1	0.0
BOD				pmax	pmax		
	comp=Z,22nm,1.6s						
TTA	Tatalina	79.63	17	P	P	16 39 31.2	+0.6
TTA				pmax	pmax		
	comp=Z,26nm,1.3s						
TTA	Tatalina	79.63	17	P	P	16 39 31.2	+0.6
TTA				IAmb	IAmb	16 39 56.2	
	comp=Z,26nm,1.3s						
O22K	Cooper Landing	79.88	21	P	P	16 39 33.8	+1.9
	baz=226						
RC01	Rabbit Creek A	80.30	21	P	P	16 39 35.0	+0.8
	baz=226						
ZAK	Zakamensk	80.48	326	eP	P	16 39 35.7	+0.2
ZAK				pmax	pmax		
	comp=Z,14nm,1.4s						
IRK	Irkutsk	80.88	327	eP	P	16 39 37.7	+0.2
IRK				pmax	pmax		
	comp=Z,43nm,4.2s						
TLY	Talaya	80.93	327	eP	P	16 39 38.5	+0.7
TLY				eS	S	16 49 55.7	+11
TLY				pmax	pmax		
	comp=Z,48nm,1.5s						
TLY				MLR	MLR		
	comp=Z,1µm,17.0s						
RDOG	Red Dog Mine	82.07	12	IAmb	IAmb	16 39 50.2	
	comp=Z,19nm,1.2s						
RND	Reindeer	82.21	19	IAmb	IAmb	16 40 07.6	
	comp=Z,20nm,1.2s						
RPN	Rapa Nui	82.24	116	LR	LR	17 08 30.9	
	comp=Z,660nm,18.7s,baz=274,slow=30						
M24K	Tolsona, Glenn	82.25	21	P	P	16 39 45.6	+1.0
	baz=229						
MCK	McKinley	82.41	19	P	P	16 39 45.9	+0.6
	baz=226						
N25K	Chitina, Valde	82.50	22	P	P	16 39 46.5	+0.5
	baz=231						
IMAR	Indian Mountai	82.59	16	P	P	16 39 46.3	+0.1
GLB	Gilahina Butte	82.69	23	P	P	16 39 47.5	+0.5
GLB				IAmb	IAmb	16 40 01.4	
	comp=Z,23nm,1.1s						
MLY	Manley	82.76	18	P	P	16 39 46.5	-0.7
	baz=225						
NEA2	Nenana	82.96	19	P	P	16 39 47.2	-0.9
	baz=226						
TAPN	Taplejung	82.97	299	eP	P	16 39 49.3	-0.1
	comp=Z,58nm,1.5s						
ODAN	Odare	83.11	299	eP	P	16 39 51.4	+1.3
	comp=Z,69nm,1.2s						
WRH	Wood River Hil	83.18	19	IAmb	IAmb	16 40 10.0	
	comp=Z,20nm,1.2s						
HDA	Harding Lake	83.51	19	P	P	16 39 51.5	+0.5
	baz=228						
COLA	College	83.53	19⇑	eP	P	16 39 49.9	-1.2
COLA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
IL31		83.77	19	IAmb	IAmb	16 40 13.1	
	comp=Z,14nm,1.1s						
ILAR	Eielson Array	83.77	19	P	P	16 39 52.5	+0.1
	comp=Z,2.5nm,0.8s,baz=252,slow=5.5,SNR=19						
ILAR				LR	LR	17 15 38.5	
	comp=Z,306nm,18.0s,baz=242,slow=35						
ILAR	Eielson Array	83.77	19	P	P	16 39 51.1	-1.2
RAMN	Ramite	83.81	299	eP	P	16 39 54.5	+0.8
	comp=Z,26nm,1.2s						
KHMM	Horse Mountain	83.89	47	IAmb	IAmb	16 40 21.6	
	comp=Z,17nm,1.1s						
DOT	Dot Lake	83.98	21	IAmb	IAmb	16 40 15.4	
	comp=Z,16nm,1.0s						
SCRK	Sand Creek	84.22	20	P	P	16 39 54.5	-0.3
	baz=231						
O02D	Mt. Diablo Mer	84.34	47	P	P	16 39 56.6	+0.7
	baz=251						
MAW	Mawson	84.36	202	LR	LR	17 14 51.6	
	comp=Z,260nm,18.4s,baz=70,slow=34						
L02E	Cave Junction	84.41	45	P	P	16 39 57.0	+0.8
	baz=250						
BCAR	Beaver Creek A	84.43	22	P	P	16 39 56.4	+0.6
COLD	Coldfoot	84.47	16	P	P	16 39 57.3	+1.4
	baz=225						
K02D	Willamette Mer	84.55	45	P	P	16 39 55.6	-1.3
	baz=250						
WDC	Whiskeytown Da	84.65	47	IAmb	IAmb	16 40 03.1	
	comp=Z,19nm,1.4s						
GUN	Gumba	84.68	300	eP	P	16 39 59.2	+0.9
	comp=Z,244nm,1.9s						
M02C	Callahan	84.69	46	P	P	16 39 56.9	-0.7
	baz=251						
PALK	Pallekele	84.82	278	P	P	16 40 00.4	+1.5
PALK				pmax	pmax		
	comp=Z,26nm,1.3s						
PALK	Pallekele	84.82	278	P	P	16 40 00.3	+1.5
YBH	Yreka Blue Hor	84.90	46	IAmb	IAmb	16 40 04.5	
	comp=Z,19nm,1.3s						
PKI	Pulchoki	85.00	299	eP	P	16 40 00.2	+0.4
	comp=Z,44nm,1.1s						
PKIN	Phulchoki	85.01	299	eP	P	16 40 00.2	+0.4
	comp=Z,68nm,1.4s						
HUMO	Hull Mountain	85.02	45	IAmb	IAmb	16 40 10.2	
	comp=Z,17nm,1.2s						
ORV	Oroville	85.08	48	IAmb	IAmb	16 40 05.4	
	comp=Z,16nm,1.4s						
O03E	Paynes Creek	85.09	48	P	P	16 39 59.3	-0.4
	baz=252						
KKN	Kakani	85.16	299	eP	P	16 40 01.3	+0.8
	comp=Z,72nm,1.5s						
DMN	Daman	85.27	299	eP	P	16 40 02.2	+1.1
	comp=Z,94nm,1.3s						
L04D	Klamath Falls	85.34	46	P	P	16 39 59.5	-1.6
	baz=251						
TIXI	Tiksi	85.47	349	P	P	16 40 00.3	-0.5
TIXI				pmax	pmax		
	comp=Z,18nm,1.2s						
TIXI	Tiksi	85.47	349	P	P	16 40 00.3	-0.5
TIXI				IAmb	IAmb	16 40 13.7	
	comp=Z,18nm,1.2s						
M04C	Macdoel	85.53	46	P	P	16 40 01.9	0.0
	baz=251						
TOLK	Toolik Lake Re	85.64	15	P	P	16 40 02.3	+0.6
	baz=225						
GKN	Gorkha	85.77	299	eP	P	16 40 04.0	+0.5
	comp=Z,96nm,1.5s						
I04A	Tendick Farm,	85.78	44	P	P	16 40 03.1	0.0
	baz=251						
J04D	Umpqua Nationa	85.81	45	P	P	16 40 01.8	-1.6
	baz=251						
RUBR	Rubicon Trail	85.92	49	IAmb	IAmb	16 40 10.2	
	comp=Z,27nm,1.3s						
BEKR	Beckworth	86.01	48	P	P	16 40 04.4	0.0
BEKR				IAmb	IAmb	16 40 09.5	
	comp=Z,21nm,1.5s						
MWC	Mount Wilson	86.18	54	IAmb	IAmb	16 40 19.0	
	comp=Z,26nm,1.2s						
BMAR	Burnt Mountain	86.22	18	P	P	16 40 05.6	+1.0
ISA	Isabella, Lake	86.24	53	P	P	16 40 05.4	-0.1
	baz=254						
ISA	Isabella, Lake	86.24	53	IAmb	IAmb	16 40 18.6	
	comp=Z,17nm,1.4s						
WAKR	Walker	86.30	50	IAmb	IAmb	16 40 09.4	
	comp=Z,19nm,1.3s						
PNTR	Pine Nut	86.34	49	IAmb	IAmb	16 40 12.4	
	comp=Z,18nm,1.3s						
OMMB	Old Mammoth Mi	86.38	51	IAmb	IAmb	16 40 20.3	
	comp=Z,18nm,1.4s						
EDW2	Edwards Air Fo	86.41	54	P	P	16 40 05.9	-0.5
	baz=254						
J05D	Fort Rock, OR	86.43	45	P	P	16 40 06.5	+0.1
	baz=252						
E04D	Cinebar	86.59	41	P	P	16 40 05.5	-1.3
	baz=250						
DANN	Dangsing	86.60	300	eP	P	16 40 07.5	-0.3
	comp=Z,38nm,1.2s						
PAHR	Pah Rah Range	86.68	49	IAmb	IAmb	16 40 10.1	
	comp=Z,20nm,1.4s						
CWC	Cottonwood Cre	86.76	52	P	P	16 40 08.4	+0.2
	baz=254						
PINE	Pine Mountain	86.79	44	IAmb	IAmb	16 40 14.6	
	comp=Z,14nm,1.1s						
LRMC	Laurel Mtn Rad	86.81	53	P	P	16 40 08.2	-0.2
	baz=254						
LHV	Little Huntoon	86.93	50	IAmb	IAmb	16 40 19.1	
	comp=Z,15nm,1.1s						
G05D	Wamic, OR	86.99	43	P	P	16 40 09.8	+0.9
	baz=252						
F05D	White Salmon	87.10	42	P	P	16 40 10.3	+0.9
	baz=251						
MPMC	Manual Prospec	87.12	53	P	P	16 40 09.8	-0.1
	baz=254						
NVAR	Mina Array Bea	87.13	50	P	P	16 40 10.8	+0.8
	comp=Z,7.5nm,1.1s,baz=234,slow=6.1,SNR=23						
NVAR				LR	LR	17 14 00.6	
	comp=Z,1µm,18.5s,baz=270,slow=32						
NVAR	Mina Array Bea	87.13	50	P	P	16 40 09.9	-0.1
MONP2	Monument Peak	87.15	56	P	P	16 40 11.3	+1.0
	baz=255						
A04D	Lummi Island	87.22	39	P	P	16 40 11.2	+1.4
	baz=250						
NV11	Mina Array Sit	87.24	50	IAmb	IAmb	16 40 16.5	
	comp=Z,18nm,1.2s						
PFO	Pinyon Flats O	87.30	55	P	P	16 40 10.8	0.0
	baz=255						
TPFO	Pinon Flats	87.31	55	P	P	16 40 10.6	-0.3
	baz=255						
B05A	Bryant	87.45	40	P	P	16 40 12.8	+1.8
	baz=251						
GSC	Goldstone, Bar	87.46	54	P	P	16 40 12.6	+1.1
	baz=255						
GSC	Goldstone, Bar	87.46	54	IAmb	IAmb	16 40 16.8	
	comp=Z,16nm,1.4s						
GRAC	Grapevine Rang	87.46	52	P	P	16 40 13.6	+2.2
	baz=254						
SWSC	Sam W. Stewart	87.67	56	P	P	16 40 13.9	+1.4
	baz=256						
WMQ	Urumqi	87.67	315	eP	P	16 40 12.8	+0.5
WMQ				pP	pwP	16 40 24.1	+0.8
WMQ				sP	sP	16 40 30.1	+8.0
WMQ				pmax	pmax		
	comp=Z,14nm,2.2s						
WMQ				pmax	pmax		
	comp=Z,160nm,6.9s						
WMQ				LR	LR		
	comp=Z,490nm,16.3s						
WMQ				LR	LR		
	comp=Z,640nm,16.3s						
WMQ				LR	LR		
	comp=Z,740nm,22.5s						
HEC	Hector,Ludlow	87.71	54	P	P	16 40 13.6	+0.9
	baz=255						
BELC	Belle Mtn. Jos	87.77	55	P	P	16 40 13.3	+0.2
	baz=255						
I07A	Izee	87.87	45	IAmb	IAmb	16 40 15.8	
	comp=Z,23nm,1.5s						
WVOR	Wild Horse Val	88.00	46	IAmb	IAmb	16 40 29.8	
	comp=Z,17nm,1.2s						
SHOC	Shoshone, Teco	88.03	53	P	P	16 40 15.6	+1.5
	baz=255						
EPYK	Eagle Plains	88.11	20	P	P	16 40 14.7	+0.8
	baz=238						
BC3	Big Chuckawall	88.13	55	P	P	16 40 15.0	+0.2
	baz=256						
GMRC	Granite Mounta	88.24	54	P	P	16 40 15.0	-0.3
	baz=256						
TPNV	Topopah Spring	88.31	52	IAmb	IAmb	16 40 33.4	
	comp=Z,12nm,1.4s						
GLA	Glamis	88.49	56	P	P	16 40 17.6	+1.2
	baz=256						
IRM	Iron Mountain	88.50	55	P	P	16 40 16.5	+0.1
	baz=256						
G08A	Pilot Rock	88.59	43	P	P	16 40 17.6	+0.9
G08A				IAmb	IAmb	16 40 24.9	
	comp=Z,14nm,1.1s						
R11A	Troy Canyon, C	89.17	51	P	P	16 40 19.6	-0.1
	baz=256						
B08A	Colville Reser	89.23	40	P	P	16 40 19.7	+0.2
B08A				IAmb	IAmb	16 40 24.8	
	comp=Z,20nm,1.4s						
PDMCI	Parker Dam,Lak	89.34	55	P	P	16 40 20.3	0.0
	baz=256						
DGZ	Jazzator, Alta	89.58	321⇑	eP	P	16 40 21.5	+0.2
DGZ				pmax	pmax		
	comp=Z,9.0nm,1.3s						
W13A	Hualapai Mount	89.73	54	IAmb	IAmb	16 40 35.8	
	comp=Z,17nm,1.4s						
214A	Organ Pipe Nat	89.90	58	P	P	16 40 22.5	-0.6
	baz=257						
F10A	Beach Ranch, E	89.95	43	IAmb	IAmb	16 40 43.6	
	comp=Z,20nm,1.4s						
INK	Inuvik	90.17	19	P	P	16 40 25.1	+1.8
INK				pmax	pmax		
	comp=Z,19nm,1.5s						
INK	Inuvik	90.17	19	P	P	16 40 25.1	+1.8
INK				IAmb	IAmb	16 40 30.8	
	comp=Z,19nm,1.5s						
MFID	Camas Ranch	90.25	46	IAmb	IAmb	16 40 37.9	
	comp=Z,12nm,1.1s						
ZSN	Zaisan	90.59	318	eP	P	16 40 26.6	+0.7
	baz=318						
ZSN	Zaisan	90.59	318	eP	P	16 40 26.5	+0.7
LCMT	Little Creek M	90.67	53	IAmb	IAmb	16 40 37.5	
	comp=Z,13nm,1.2s						
SLBS	Sierra La Lagu	90.68	66	P	P	16 40 27.3	+0.4
CCUT	Cedar City	90.69	52	IAmb	IAmb	16 40 47.4	
	comp=Z,13nm,1.2s						
SZCU	Shurtz Canyon	90.92	52	IAmb	IAmb	16 40 42.3	
	comp=Z,13nm,1.2s						
U15A	North Rim	91.28	53	IAmb	IAmb	16 40 46.4	
	comp=Z,18nm,1.4s						
HLID	Hailey	91.29	46	P	P	16 40 30.2	+0.7
HLID				IAmb	IAmb	16 40 35.4	
	comp=Z,18nm,1.3s						
SYO	Syowa Base	91.58	197⇓	eP	P	16 40 29.2	-0.8
BGU	Big Grassy Mou	91.69	49	IAmb	IAmb	16 40 44.7	
	comp=Z,12nm,1.2s						
DUG	Dugway, Tooele	91.69	50	P	P	16 40 32.0	+0.7
DUG				pmax	pmax		
	comp=Z,9.0nm,1.3s						
DUG	Dugway, Tooele	91.69	50	P	P	16 40 32.0	+0.7
MTPU	Mount Pierson	91.71	52	IAmb	IAmb	16 40 55.5	
	comp=Z,12nm,1.2s						
WUAZ	Wupatki	91.82	54	IAmb	IAmb	16 40 52.5	
	comp=Z,11nm,1.3s						
MK31	Makanchi Array	92.13	317⇓	eP	P	16 40 33.0	-0.1
MK31	Makanchi Array	92.13	317	IAmb	IAmb	16 40 39.6	
	comp=Z,15nm,1.4s						
MKAR	Makanchi Array	92.13	317	P	P	16 40 32.6	-0.5
	comp=Z,5.1nm,0.9s,baz=98,slow=5.4,SNR=29						
MKAR				LR	LR	17 23 40.3	
	comp=Z,366nm,18.9s,baz=92,slow=37						
MKAR	Makanchi Array	92.13	317	i P	P	16 40 33.0	-0.1
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
NLU	North Lily Min	92.19	50	IAmb	IAmb	16 40 49.5	
	comp=Z,10nm,1.2s						
ZAA0	Zalesovo Array	92.31	324	P	P	16 40 32.4	-1.2
ZALV	Zalesovo Beam	92.31	324	P	P	16 40 33.0	-0.7
	comp=Z,5.4nm,1.1s,baz=106,slow=4.8,SNR=15						
ZALV				LR	LR	17 20 41.5	
	comp=Z,334nm,21.4s,baz=108,slow=35						
ZALV	Zalesovo Beam	92.31	324	i P	P	16 40 34.0	+0.4
ZALV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ZALV	Zalesovo Beam	92.31	324	P	P	16 40 33.2	-0.5
MAKZ	Makanchi	92.35	317	P	P	16 40 34.4	+0.4
MAKZ				pmax	pmax		
	comp=Z,18nm,1.2s						
MAKZ	Makanchi	92.35	317	P	P	16 40 34.4	+0.4
SHLS	Shalkode	93.31	313	eP	P	16 40 38.1	-0.6
	comp=Z,5.9nm,1.1s,baz=313						
SHLS	Shalkode	93.31	313	eP	P	16 40 38.1	-0.6
SHLS				pmax	pmax		
	comp=Z,6.0nm,1.1s						
UZB	Uzynbulak	93.63	313	eP	P	16 40 40.9	+0.6
	comp=Z,5.9nm,1.1s,baz=313						
UZB	Uzynbulak	93.63	313	eP	P	16 40 40.8	+0.6
UZB				pmax	pmax		
	comp=Z,6.0nm,1.1s						
BOZ	Bozeman (W)	93.67	44	P	P	16 40 40.4	0.0
BOZ				pmax	pmax		
	comp=Z,10.0nm,1.2s						
BOZ	Bozeman (W)	93.67	44	P	P	16 40 40.4	0.0
BOZ				IAmb	IAmb	16 41 00.5	
	comp=Z,10nm,1.2s						
C36M	Paulatuk	93.72	20	P	P	16 40 39.9	+0.1
	baz=249						
C36M	Paulatuk	93.72	20	IAmb	IAmb	16 40 47.9	
	comp=Z,16nm,1.5s						
YHL	Hebgen Lake	93.83	45	IAmb	IAmb	16 40 56.1	
	comp=Z,14nm,1.3s						
KPKS	Kokpek	93.93	313	eP	P	16 40 41.9	+0.4
	comp=Z,10nm,1.5s,baz=313						
KPKS	Kokpek	93.93	313	eP	P	16 40 41.9	+0.4
KPKS				pmax	pmax		
	comp=Z,10.0nm,1.5s						
SEM	Semipalatinsk	94.24	320	eP	P	16 40 41.8	-1.2
	baz=320						
SEM				LR	LR	17 18 29.7	
	comp=Z,188nm,21.0s						
SEM	Semipalatinsk	94.24	320	eP	P	16 40 41.7	-1.2
SEM				MLR	MLR		
	comp=Z,188nm,21.0s						
TDK	Taldyqorghan	94.42	315	eP	P	16 40 44.2	+0.5
	comp=Z,5.8nm,1.0s,baz=315						
TDK				LR	LR	17 20 38.5	
	comp=Z,448nm,20.8s						
TDK	Taldyqorghan	94.42	315	eP	P	16 40 44.1	+0.5
TDK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
TDK				MLR	MLR		
	comp=Z,448nm,21.0s						
BW06	Boulder Array	94.60	48	IAmb	IAmb	16 40 50.2	
	comp=Z,10nm,1.4s						
PD31	Pinedale Array	94.60	48	IAmb	IAmb	16 40 50.2	
	comp=Z,9.2nm,1.4s						
PDAR	Pinedale Array	94.60	48	P	P	16 40 45.3	+0.5
	comp=Z,2.8nm,1.1s,baz=247,slow=3.1,SNR=8.7						
PDAR				LR	LR	17 17 10.7	
	comp=Z,449nm,19.9s,baz=257,slow=32						
MDOK	Medeo	95.05	313	eP	P	16 40 46.7	-0.1
	baz=313						
MDOK				LR	LR	17 20 57.4	
	comp=Z,258nm,22.1s						
MDOK	Medeo	95.05	313	eP	P	16 40 46.6	-0.1
MDOK				MLR	MLR		
	comp=Z,258nm,22.0s						
CHKK	Chushkaly	95.21	313	eP	P	16 40 48.0	+0.7
	baz=314						
CHKK	Chushkaly	95.21	313	eP	P	16 40 48.0	+0.7
KSH	Kashi	95.23	309	P	P	16 40 52.3	+4.7
KSH				pmax	pmax		
	comp=Z,5.0nm,1.3s						
KSH				pmax	pmax		
	comp=Z,150nm,5.7s						
NRIK	Noril'sk	95.24	340	P	P	16 40 46.6	-0.2
	comp=Z,1.1nm,0.5s,baz=114,slow=6.9,SNR=2.8						
NRIK				LR	LR	17 21 12.1	
	comp=Z,545nm,22.0s,baz=115,slow=34						
NRIK	Noril'sk	95.24	340⇑	eP	P	16 40 47.6	+0.8
NRIK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
NRIK	Noril'sk	95.24	340	P	P	16 40 47.0	+0.2
KURK	Kurchatov	95.31	320⇑	eP	P	16 40 47.7	+0.2
KURK				pmax	pmax		
	comp=Z,8.0nm,1.3s						
KURK	Kurchatov	95.31	320	P	P	16 40 46.5	-1.0
KURK				IAmb	IAmb	16 41 08.1	
	comp=Z,9.0nm,1.2s						
YKA	Yellowknife Ar	95.48	27	P	P	16 40 47.7	-0.3
	comp=Z,2.8nm,0.9s,baz=252,slow=4.0,SNR=16						
YKA				LR	LR	17 21 40.8	
	comp=Z,431nm,18.0s,baz=0.0,slow=34						
KUU	Kurty	95.68	313	eP	P	16 40 49.4	-0.1
	comp=Z,6.4nm,1.3s,baz=313						
KUU	Kurty	95.68	313	eP	P	16 40 49.3	-0.1
KUU				pmax	pmax		
	comp=Z,6.0nm,1.3s						
AAK	Ala-Archa	96.82	312⇑	eP	P	16 40 53.4	-1.4
AAK				pmax	pmax		
	comp=Z,10.0nm,1.2s						
TXAR	Lajitas Array	97.18	62	LR	LR	17 18 52.0	
	comp=Z,715nm,19.1s,baz=0.0,slow=32						
BTLS	Baital	97.47	314	eP	Pdif	16 40 57.6	0.0
	baz=314						
BTLS	Baital	97.47	314	eP	P	16 40 57.5	0.0
BRLS	Borolday	100.27	312	eP	Pdif	16 41 11.4	+1.3
	baz=312						
BRLS	Borolday	100.27	312	eP	Pdif	16 41 11.4	+1.3
BRVK	Borovoye	100.73	322⇑	eP	Pdif	16 41 10.0	-1.8
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
FFC	Flin Flon	100.99	36	i P	Pdif	16 41 09.0	-4.0
ARCES	ARCESS Array B	115.60	345	PKP	PKPdf	16 46 06.1	+1.0
	comp=Z,8.0nm,1.0s,baz=17,slow=9.5,SNR=2.3						
ARCES	ARCESS Array B	115.60	345	PKIKP	PKPdf	16 46 06.4	+1.2
ARCES	ARCESS Array B	115.60	345		PKPdf	16 46 06.4	+1.2
KIV	Kislovodsk	119.80	315	i PKIKP	PKPdf	16 46 11.0	-3.1
KIV				pmax	pmax		
	comp=Z,17nm,1.1s						
KIV				MLR	MLR		
	comp=Z,717nm,22.0s						
MNK	Minsk	124.30	331	i PKP	PKPdf	16 46 21.1	-1.2
	comp=E,1.0nm,0.9s						
MNK				i PKP	PKPdf	16 46 21.1	-1.2
	comp=N,14nm,0.9s						
MNK				i PKP	PKPdf	16 46 21.1	-1.2
	comp=Z,5.0nm,0.9s						
MNK				i PP	PP	16 48 07.5	+0.2
MNK				i PPP	PPP	16 50 46.8	
MNK				i PS	PS	16 58 06.8	+0.1
MNK				i SKKS		17 03 53.6	
MNK				i SS	SS	17 04 49.7	-7.6
MNK				i SSS	SSS	17 10 40.9	
MNK				i LQ	LQ	17 33 12.6	
MNK				i LR	LR	17 39 28.4	
MNK				i LRM	MLR	17 44 17.9	
	comp=E,35nm,20.0s						
MNK				i LRM	MLR	17 44 25.2	
	comp=N,301nm,20.0s						
MNK				i LRM	MLR	17 44 32.7	
	comp=Z,263nm,20.0s						
NACGM	Naroch	124.59	332	i PKP	PKiKP	16 46 23.6	+0.5
NACGM				i PKP	PKiKP	16 46 23.6	+0.5
NACGM				i PKP	PKiKP	16 46 23.6	+0.5
NACGM				i PP	PP	16 48 05.8	-3.4
NACGM				i PPP	PPP	16 50 36.8	
NACGM				i SKS	SKSdf	16 53 58.7	+26
NACGM				i SS	SS	17 06 17.5	+77
NACGM				i SSS	SSS	17 12 20.8	
NACGM				i LR	LR	17 36 53.2	
AKASG	Malin Array Be	125.67	326	PKP	PKPdf	16 46 24.1	-0.9
	comp=Z,1.4nm,0.7s,baz=61,slow=2.0,SNR=6.1						
AKASG	Malin Array Be	125.67	326	PKIKP	PKPdf	16 46 24.2	-0.8
AKASG	Malin Array Be	125.67	326	PKPdf	PKPdf	16 46 24.2	-0.8
AKBB	Malin Array Si	125.67	326⇑	iPKIKP	PKPdf	16 46 24.6	-0.4
BRTR	Keskin Array B	127.50	312	PKP	PKPdf	16 46 29.1	0.0
	comp=Z,3.1nm,1.2s,baz=87,slow=3.0,SNR=2.4						
KOLS	Kolonicke sedl	130.39	328	ePKIKP	PKiKP	16 46 36.0	+1.1
KOLS	Kolonicke sedl	130.39	328	ePKP	PKiKP	16 46 36.0	+1.1
ELL	Elmali	131.27	310	PKIKP	PKPdf	16 46 36.6	+0.3
ELL	Elmali	131.27	310	PKPdf	PKPdf	16 46 36.6	+0.3
CLL	Collm	133.13	335	ePKPdf	PKiKP	16 46 40.0	-0.3
CLL				e(PP)		16 49 12.0	
CLL				eSS	SS	17 07 00.0	+14
CLL				eSSS	SSS	17 11 42.0	
CLL				Lm	MLR	17 51 00.0	
	comp=N,400nm,18.4s						
CLL				Lm	MLR	17 51 00.0	
	comp=E,200nm,22.0s						
CLL				LmV		18 34 00.0	
	comp=Z,200nm,19.9s						
CLL	Collm	133.13	335	ePKIKP	PKiKP	16 46 40.0	-0.3
CKRC	Cesky Krumlov	134.40	332	ePKP	PKiKP	16 46 43.2	+0.1
KHC	Kasperske Hory	134.50	333	ePKIKP	PKiKP	16 46 43.3	0.0
KHC				e		16 46 47.9	
KHC	Kasperske Hory	134.50	333	ePKP	PKiKP	16 46 43.3	0.0
KHC				epPKP	pPKPdf	16 46 47.9	-1.6
KHC	Kasperske Hory	134.50	333	PKPdf	PKiKP	16 46 42.9	-0.4
DIVS	Divibare	134.53	324		PKPdf	16 46 42.3	+0.1
GERES	GERESS Array B	134.66	333	PKP	PKPdf	16 46 41.9	-0.4
	comp=Z,2.3nm,1.1s,baz=98,slow=2.7,SNR=7.6						
GERES	GERESS Array B	134.66	333		PKPdf	16 46 41.2	-1.0
MOTA	Moosalm	136.94	333	eP	PKiKP	16 46 57.7	+9.2
	comp=Z,1.9nm,0.4s						
FETA	Feichten	137.35	333	eP	PKPdf	16 46 46.9	-0.6
	comp=Z,0.8nm,0.7s						
KEST	Kesra	146.12	321	PKPbc	PKPdf	16 47 02.1	-1.2
	comp=Z,13nm,1.0s,baz=318,slow=8.7,SNR=5.2						
KEST	Kesra	146.12	321	PKPdf	PKPdf	16 47 03.0	-0.3
ESDC	Sonseca Array	149.26	342	PKPbc	PKPbc	16 47 12.7	+0.1
	baz=32,slow=2.2						
TORD	Torodi Ar. Bea	162.53	280	PKP	PKPdf	16 47 26.7	+0.3
	comp=Z,2.6nm,1.1s,baz=119,slow=1.8,SNR=1.8						
TORD				PKPab	PKPab	16 48 14.3	-0.2
	comp=Z,2.6nm,1.1s,baz=74,slow=2.7,SNR=2.4						

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*IDC **18** 16:36:55.6±1.0, 10.°84S×163.°95E, h0km, mb3.7/8, mb1 4.0/10, mb1mx3.8/27, mbtmp3.7/10, ML3.8/2, Error ellipse: s-maj=31.7km s-min=22.3km az=152.0*

*NEIC **18** 16:37:00.6±1.5, 10°.9S±0°.1×163°.91E±0°.10, h32km±3km, mb4.4/10, Error ellipse: s-maj=16.3km s-min=12.0km az=213.0*

ISC 18 16:37:00.2±0.7**, 10°.8S**±0°.1×**164°.02E**±0°.09**, h29**km**, n31, σ1s.29**/27**, mb3.8**/12**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.24	289	Pn	Pn	16 38 02.8	-0.1
	9.2nm,0.3s,baz=114,slow=12,SNR=2.9						
HNR				Sn	Sn	16 38 52.8	+1.3
	4.5nm,0.3s,baz=26,slow=19,SNR=1.1						
HNR	Honiara	4.24	289		Pn	16 38 01.7	-1.3
SANVU	Saraoutou	5.54	146	Pn	Pn	16 38 19.8	-1.0
DZM	Mont Dzumac	11.42	169	Pn	Pn	16 39 42.3	+0.8
	0.5nm,0.3s,baz=298,slow=18,SNR=9.3						
DZM	Mont Dzumac	11.42	169	Pn	Pn	16 39 41.9	+0.3
CTA	Charters Tower	19.43	240	P	Pn	16 41 26.3	+0.6
	0.2nm,0.3s,baz=88,slow=10,SNR=2.6						
CTAO	Charters Tower	19.43	240	Pn	Pn	16 41 26.5	+0.7
COEN	Coen	20.59	259	Pn	Pn	16 41 38.7	-0.8
COEN				IAmb	IAmb	16 41 48.5	
	comp=Z,20nm,1.4s						
WR0	Warramunga Arr	29.79	249	P	P	16 43 03.6	-1.2
WR0				IAmb	IAmb	16 43 19.2	
	comp=Z,6.8nm,1.4s						
WB0	Warramunga Arr	29.89	249	P	P	16 43 04.7	-0.9
WB0				IAmb	IAmb	16 43 11.3	
	comp=Z,11nm,1.3s						
WRAB	Tennant Creek	29.96	249	P	P	16 43 04.5	-1.8
WB2	Warramunga Arr	29.96	249	P	P	16 43 05.7	-0.7
WB2				IAmb	IAmb	16 43 07.0	
	comp=Z,15nm,1.5s						
WRA	Warramunga Arr	29.97	249	P	P	16 43 05.2	-1.3
	comp=Z,0.9nm,0.5s,baz=78,slow=8.9,SNR=13						
WRA	Warramunga Arr	29.97	249	P	P	16 43 04.7	-1.7
H11N1	WAKE ISLAND Hy	30.48	5	T	T	17 14 54.5	
	baz=184,slow=76,SNR=19						
H11N3	WAKE ISLAND Hy	30.48	5	T	T	17 15 04.4	
	baz=184,slow=76,SNR=18						
H11N2	WAKE ISLAND Hy	30.50	5	T	T	17 14 56.3	
	baz=184,slow=76,SNR=19						
AS31	Alice Springs	31.39	242	P	P	16 43 17.2	-1.7
ASAR	Alice Springs	31.39	242	P	P	16 43 17.2	-1.7
	comp=Z,0.4nm,0.6s,baz=62,slow=10,SNR=18						
ASAR	Alice Springs	31.39	242	P	P	16 43 16.3	-2.6
FITZ	Fitzroy Crossi	37.80	254	P	P	16 44 12.9	-1.5
SONM	Songino Array	77.50	324	P	P	16 48 54.1	+0.8
	comp=Z,0.7nm,0.9s,baz=132,slow=6.4,SNR=3.1						
QSPA	South Pole Qui	79.18	180	P	P	16 49 03.8	+1.5
QSPA				IAmb	IAmb	16 49 05.8	
	comp=Z,4.5nm,1.3s						
IMAR	Indian Mountai	82.68	16	P	P	16 49 21.5	+0.8
H02S1	DAWSON INLET T	83.42	33	T	T	18 21 11.9	
ILAR	Eielson Array	83.85	19	P	P	16 49 26.1	-0.6
	comp=Z,0.2nm,0.7s,baz=203,slow=5.9,SNR=1.9						
NVAR	Mina Array Bea	87.18	50	P	P	16 49 45.1	+0.8
	comp=Z,0.1nm,0.4s,baz=243,slow=10.0,SNR=2.9						
MKAR	Makanchi Array	92.21	317	P	P	16 50 07.1	-0.3
	comp=Z,0.4nm,0.5s,baz=98,slow=5.8,SNR=8.6						
MKAR	Makanchi Array	92.21	317	P	P	16 50 07.3	0.0
PDAR	Pinedale Array	94.65	48	P	P	16 50 20.3	+1.3
	comp=Z,0.3nm,0.7s,baz=227,slow=2.0,SNR=2.5						
YKA	Yellowknife Ar	95.56	27	P	P	16 50 20.9	-1.5
	comp=Z,0.1nm,0.3s,baz=256,slow=3.9,SNR=2.3						

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*IDC **18** 16:59:32.2±1.0, 9°.01N×82°.75W, h0km, mb3.9/9, mb1 4.3/12, mb1mx4.1/29, mbtmp4.0/12, ML3.9/3, MS3.6/6, Ms1 3.6/6, ms1mx3.3/40, Error ellipse: s-maj=32.1km s-min=16.5km az=42.0*

*UPA **18** 16:59:35.0±1.4, 8°.92N×82°.85W, h14km±3km, MW4.6*

*UCR **18** 16:59:35.5±1.4, 8°.94N×82°.85W, h13km±4km, MD3.3, MW4.8, mb4.8(NEIC)*

*INET **18** 16:59:35.5, 8°.88N×82°.92W, h15km, MW3.9*

*NEIC **18** 16:59:38.3±2.1, 9°.0N±0°.1×82°.84W±0°.07, h34km±7km, mb4.5/27, Mwr4.8(UCR), Error ellipse: s-maj=17.1km s-min=7.7km az=208.0*

ISC 18 16:59:35.2±0.8**, 8°.93N**±0°.02×**82°.85W**±0°.02**, h16**km±6km**, n126, σ1s.16**/146**, mb4.5**/22**, 12C-5D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MLIR3	Monte Lirio, C	0.14	169	⇑iP	Pb	16 59 40.2	+0.7
EDSV	San Vito	0.16	227	eP	Pb	16 59 40.6	+0.6
EDSV				eS	Sb	16 59 45.1	+2.0
LPLA	Las Palmas La	0.18	302	i P	Pg	16 59 40.0	+0.1
LPLA				i S	Sb	16 59 43.6	-0.1
BRU2	Volcan	0.21	131	⇑iP	Pb	16 59 40.9	+0.2
BRU2				eS	Sb	16 59 44.8	+0.3
BRU2	Volcan	0.21	131	eP	Pb	16 59 41.0	+0.2
BRU2				eS	Sb	16 59 45.3	+0.9
POTG	Potrero Grande	0.29	294	eP	Pb	16 59 41.9	-0.2
POTG				eS	Sb	16 59 46.6	-0.1
CDITO	Canoas	0.36	183	⇑iP	Pg	16 59 42.8	+0.1
CDITO				eS	Sg	16 59 47.5	-0.2
BCO2	Palmira	0.38	124	⇑iP	Pg	16 59 43.5	+0.4
BCO2				eS	Sb	16 59 49.2	-0.2
LNBQ3	Los Naranjos,	0.43	109	⇑iP	Pg	16 59 43.7	-0.3
LNBQ3				eS	Sg	16 59 49.9	0.0
EDBA	Buenos Aires	0.48	299	eP	Pb	16 59 45.7	+0.4
EDBA				eS	Sb	16 59 53.0	+1.0
DRK0	Durika	0.51	310	⇑iP	Pg	16 59 45.1	-0.3
DRK0				eS	Sg	16 59 52.5	+0.1
DRK0	Durika	0.51	310	eP	Pg	16 59 45.2	-0.3
LESP3	La Esperanza,	0.53	173	⇓iP	Pg	16 59 45.4	-0.3
CCOL	Caracol de Cor	0.54	193	eP	Pg	16 59 45.8	-0.1
BAGA3	Bagala, Chiriq	0.56	145	⇑iP	Pg	16 59 46.4	0.0
BAGA3				eS	Sg	16 59 54.0	0.0
PSOM3	Paja de Sombre	0.58	115	⇑iP	Pg	16 59 46.2	-0.5
EDPN	Palmar Norte	0.60	273	eP	Pg	16 59 46.9	-0.2
EDPN				eS	Sg	16 59 55.2	+0.1
CNI2	El Empalme, Bo	0.62	37	⇓iP	Pg	16 59 46.9	-0.5
CNI2				eS	Sb	16 59 56.3	+0.3
LOCO3	Loma Colorada,	0.67	140	⇓iP	Pg	16 59 48.2	-0.2
LOMA3	Las Lomas, Chi	0.67	138	eS	Sb	16 59 57.9	+0.2
RGM0	Gandoca	0.70	20	⇓iP	Pb	16 59 49.7	+0.7
RGM0				eS	Sb	16 59 59.4	+1.1
RGM0	Gandoca	0.70	20	eP	Pn	16 59 49.9	-0.5
CHGR2	Aguacate	0.70	89	⇑iP	Pg	16 59 48.5	-0.5
CHGR2				eS	Sg	16 59 58.0	-0.2
PIRO	Carate, Puerto	0.71	222	⇓iP	Pg	16 59 47.8	-1.4
PIRO	Carate, Puerto	0.71	222	eP	Pg	16 59 47.8	-1.4
EDLM	Las Mercedes	0.81	295	eP	Pb	16 59 50.3	-0.6
EDLM				eS	Sg	17 00 01.7	0.0
PEZE	Perez Zeledon,	0.93	299	eP	Pb	16 59 51.8	-1.2
PEZE				eS	Sb	17 00 04.9	-0.3
EDDO	Dominical	1.05	288	eP	Pb	16 59 54.2	-0.8
EDDO				eS	Sb	17 00 08.0	-0.5
CDM	Cerro de Muert	1.09	304	eP	Pb	16 59 54.7	-1.3
CDM				eS	Sb	17 00 09.9	-0.2
RIMA	Rio Macho	1.30	310	eP	Pn	16 59 58.0	-0.9
NANC3	Nancito, Chiri	1.30	122	eS	Sn	17 00 14.1	-1.7
LCR2	La Lucha 2	1.39	305	eP	Pn	16 59 59.4	-0.7
CVTR	Volcan Turrial	1.40	320	eP	Pn	17 00 00.7	+0.2
VTUC	Crater, Volcan	1.41	320	eP	Pn	17 00 00.6	0.0
SJS	Escuela Geolog	1.55	310	eP	Pn	17 00 02.2	-0.1
HDC3	Heredia 3	1.64	311	eP	Pn	17 00 03.5	0.0
HDC	Heredia	1.64	311	⇑iP	Pn	17 00 03.4	-0.1
HDC				eS	Sb	17 00 25.6	+0.1
HDC	Heredia	1.64	311	eP	Pn	17 00 03.4	-0.1
HDC	Heredia	1.64	311		Pn	17 00 03.7	+0.2
HDC				Sn	Sb	17 00 26.0	+0.4
JACO	JACO, Garabito	1.93	292	eP	Pn	17 00 06.8	-0.5
SRA1	San Ramn	1.97	306	eP	Pn	17 00 07.6	-0.5
GMAL	Guarumal, Vera	1.98	126	⇑iP	Pn	17 00 07.4	-0.6
GMAL				eS	Sn	17 00 30.9	-1.6
GMAL	Guarumal, Vera	1.98	126	eP	Pn	17 00 07.4	-0.6
LAFE	Finca La Fe, P	2.21	293	eP	Pn	17 00 11.8	+0.6
COVE	Coope Vega, Sa	2.34	319	eP	Pn	17 00 13.6	+0.6
FORC	Fortuna	2.35	311	i P	Pn	17 00 14.0	+0.8
ARE1	Arenal 1	2.39	310	eP	Pn	17 00 14.4	+0.7
CEDE	Laguna Cedeo	2.39	310	eP	Pn	17 00 13.7	-0.1
CEDE				i S	Sn	17 00 45.0	+2.2
JTS	Las Juntas de	2.47	303	Pn	Pn	17 00 15.3	+0.4
	156nm,0.3s,baz=162,slow=9.1,SNR=141						
JTS				Sn	Sn	17 00 46.6	+1.9
	166nm,0.3s,baz=3.6,slow=21,SNR=3.8						
JTS	Las Juntas de	2.47	303	eP	Pn	17 00 15.3	+0.4
JTS	Las Juntas de	2.47	303		Pn	17 00 15.7	+0.8
CACAO	El Cacao, Vera	2.52	129	⇑iP	Pn	17 00 16.4	+0.9
CACAO				eS	Sb	17 00 49.0	-2.0
AZU	Azuero	2.79	114	eP	Pn	17 00 21.5	+2.3
AZU				eS	Sn	17 00 54.9	+2.3
CUI	Cuipilapa	2.85	307	eP	Pn	17 00 20.2	+0.1
GRZA	Playa Garza	2.92	290	eP	Pn	17 00 21.0	0.0
GUAB	Guayabo de Bag	2.93	307	i P	Pn	17 00 22.4	+1.1
BCIP	Isla Barro Col	2.99	85	Pn	Pn	17 00 23.6	+1.7
BCIP	Isla Barro Col	2.99	85	eP	Pn	17 00 20.2	-1.7
GPS2	Hotel Rincn d	3.06	306	eP	Pn	17 00 23.7	+0.8
BUEV	Buena Vista	3.13	307	i P	Pn	17 00 24.8	+0.9
GB1A	Borinquen Arri	3.13	307	i P	Pn	17 00 25.0	+1.0
ESPN	Las Esperanzas	3.54	336	eP	Pn	17 00 29.9	+0.3
ESPN	Las Esperanzas	3.54	336		Pn	17 00 29.9	+0.3
ACON	Acoyapa	3.78	323	eP	Pn	17 00 33.5	+0.6
ACON	Acoyapa	3.78	323	Pn	Pn	17 00 33.5	+0.6
PRVC	Isla de Provid	4.65	18	eP	Pn	17 00 42.8	-2.1
CRIN	San Cristobal	5.57	313	Pn	Pn	17 00 59.0	+1.5
TGUH	Tegucigalpa,Un	6.69	320	Pn	Pn	17 01 15.8	+2.9
DBBC	Dabeiba	6.85	106	eP	Pn	17 01 17.6	+2.5
MOTC	Monteria, Cord	7.10	91	eP	Pn	17 01 21.9	+3.4
PLMC	San Jos del P	7.65	121	eP	Pn	17 01 26.0	-0.1
GUY2C	Guyana, Caldas	8.29	116	eP	Pn	17 01 36.0	+0.7
TOLC	Tolima	8.63	120	eP	Pn	17 01 43.9	+4.1
ORTC	Ortega, Tolima	9.05	123	eP	Pn	17 01 44.7	-0.7
MARP	Paez Belalcaza	9.14	131	eP	Pn	17 01 46.6	-0.2
PRAC	Prado	9.46	123	eP	Pn	17 01 50.3	-0.6
PAMC	Pamplona, Colo	10.17	98	eP	Pn	17 01 59.1	-2.0
MTDJ	Mount Denham	10.58	29	Pn	Pn	17 02 11.8	+5.4
SDV	Santo Domingo	12.07	89	Pn	Pn	17 02 22.9	-4.0
	1.1nm,0.3s,baz=247,slow=13,SNR=2.3						
SDV				Sn	Sn	17 04 41.0	-0.3
	0.3nm,0.3s,baz=225,slow=18,SNR=1.5						
SDV				LR	LR	17 08 38.3	
	comp=Z,113nm,21.1s,baz=204,slow=46						
TEIG	Tepich	12.39	336	LR	LR	17 07 27.2	
	comp=Z,383nm,19.2s,baz=100,slow=38						
CMIG	Matias Romero	14.25	306	Pn	Pn	17 02 55.9	-0.5
	0.5nm,0.3s,baz=225,slow=21,SNR=4.1						
ATAH	Atahualpa	16.57	164	LR	LR	17 09 11.7	
	comp=Z,262nm,20.5s,baz=343,slow=35						
NNA	Nana	21.62	164	LR	LR	17 12 19.4	
	comp=Z,55nm,21.3s,baz=356,slow=35						
152A	Waverly Hall	23.68	356	P	P	17 04 47.8	+1.6
152A				IAmb	IAmb	17 04 48.1	
	comp=Z,19nm,0.8s						
LRAL	Lakeview Retre	24.29	352	P	P	17 04 53.3	+1.4
LRAL				IAmb	IAmb	17 04 54.0	
	comp=Z,17nm,0.8s						
GOGA	Godfrey	24.37	359	P	P	17 04 53.8	+1.2
PTGA	Pitinga	24.74	112	P	P	17 04 56.6	+0.4
	comp=Z,1.5nm,0.4s,baz=320,slow=20,SNR=1.5						
Y52A	Lilburn	24.84	358	P	P	17 04 59.0	+2.2
Y49A	Blount Mountai	25.02	353	P	P	17 05 00.1	+1.5
Y49A				IAmb	IAmb	17 05 00.4	
	comp=Z,12nm,0.8s						
JSC	Jenkinsville	25.27	3	P	P	17 05 02.1	+1.4
JSC				IAmb	IAmb	17 05 14.2	
	comp=Z,16nm,0.9s						
W50A	Signal Mountai	26.24	355	P	P	17 05 10.7	+1.1
W50A				IAmb	IAmb	17 05 13.7	
	comp=Z,11nm,0.8s						
SWET	Sewanee	26.31	354	P	P	17 05 13.9	+3.6
CPCT	Cooper Cave	26.44	357	P	P	17 05 11.9	+0.6
CPCT				IAmb	IAmb	17 05 19.7	
	comp=Z,20nm,1.1s						
TKL	Tuckaleechee C	26.62	358	P	P	17 05 12.8	-0.2
	comp=Z,5.1nm,0.9s,baz=191,slow=16,SNR=2.6						
V48A	Smith Brothers	26.93	353	P	P	17 05 16.3	+0.5
V48A				IAmb	IAmb	17 05 24.1	
	comp=Z,10nm,0.9s						
U49A	Red Boiling Sp	27.59	355	P	P	17 05 22.7	+1.0
U49A				IAmb	IAmb	17 05 22.9	
	comp=Z,9.8nm,0.8s						
TXAR	Lajitas Array	28.16	319	P	P	17 05 27.0	-0.1
	comp=Z,0.1nm,0.4s,baz=126,slow=4.6,SNR=2.4						
R49A	Shelbyville	29.31	356	P	P	17 05 38.0	+1.0
PB16	IPOC Station P	30.13	154	P	P	17 05 46.5	+1.4
SFIN	Lafayette	31.54	354	P	P	17 05 56.6	-0.1
SDCO	Great Sand Dun	35.23	328	P	P	17 06 29.7	+0.5
PV12	Saucer Basin,	37.43	326	P	P	17 06 49.3	+1.2
PDAR	Pinedale Array	41.03	330	P	P	17 07 16.8	-1.3
	comp=Z,0.4nm,0.7s,baz=129,slow=5.9,SNR=4.2						
PDAR	Pinedale Array	41.03	330	P	P	17 07 17.0	-1.1
ULM	Lac du Bonnet	42.59	348	P	P	17 07 28.5	-1.8
	comp=Z,11nm,0.8s,baz=150,slow=8.0,SNR=28						
ULM	Lac du Bonnet	42.59	348	P	P	17 07 28.2	-2.2
RLMT	Red Lodge	42.66	332	P	P	17 07 32.1	+0.8
NVAR	Mina Array Bea	43.31	318	P	P	17 07 37.1	+0.4
	comp=Z,0.4nm,0.7s,baz=138,slow=6.0,SNR=4.3						
NVAR	Mina Array Bea	43.31	318	P	P	17 07 36.1	-0.6
BCYI	Bear Canyon	44.09	328	P	P	17 07 43.9	+0.9
BOZ	Bozeman (W)	44.12	331	P	P	17 07 45.0	+2.0
PINE	Pine Mountain	47.97	323	P	P	17 08 13.6	+0.1
PINE				IAmb	IAmb	17 08 30.5	
	comp=Z,6.4nm,1.5s						
FFC	Flin Flon	48.15	345	P	P	17 08 14.3	-0.1
FFC				IAmb	IAmb	17 08 14.6	
	comp=Z,4.2nm,0.9s						
RCBR	Riachuelo	49.04	106	LR	LR	17 31 00.1	
	comp=Z,69nm,21.0s,baz=318,slow=39						
H04A	Detroit Lake	49.21	323	P	P	17 08 23.0	+0.1
PLCA	Paso Flores	50.70	168	P	P	17 08 33.5	-0.6
	comp=Z,3.8nm,0.6s,baz=348,slow=7.9,SNR=7.2						
PLCA	Paso Flores	50.70	168	P	P	17 08 34.9	+0.7
PLCA				IAmb	IAmb	17 08 53.0	
	comp=Z,8.1nm,1.4s						
YKA	Yellowknife Ar	58.22	343	P	P	17 09 27.5	-0.9
	comp=Z,1.7nm,0.7s,baz=134,slow=7.6,SNR=32						
INK	Inuvik	67.92	342	P	P	17 10 32.4	-0.3
INK				IAmb	IAmb	17 10 40.5	
	comp=Z,5.1nm,1.1s						
DOT	Dot Lake	69.49	335	P	P	17 10 43.0	+0.2
DOT				IAmb	IAmb	17 10 54.1	
	comp=Z,3.4nm,0.9s						
BORG	Borgarnes	70.04	24	LR	LR	17 42 20.2	
	comp=Z,159nm,18.2s,baz=261,slow=37						
ILAR	Eielson Array	71.05	336	P	P	17 10 51.6	-0.6
	comp=Z,1.1nm,0.8s,baz=120,slow=4.3,SNR=12						
SUA	Susitna One	71.71	332	P	P	17 10 56.5	+0.1
SUA				IAmb	IAmb	17 11 07.2	
	comp=Z,5.2nm,1.3s						
LZH	Lanzhou	134.78	352	ePKP	PKPdf	17 18 53.8	-0.2
LZH				sPKP		17 19 03.5	
ASAR	Alice Springs	141.94	243	PKhKP	PKPpre	17 19 01.7	
	comp=Z,1.1nm,0.9s,baz=97,slow=2.9,SNR=2.8						
WRA	Warramunga Arr	142.45	249	PKP	PKPdf	17 19 07.5	-0.7
	comp=Z,1.6nm,0.9s,baz=87,slow=2.2,SNR=3.0						

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*BJI **18** 17:09:39.3±0.0, 10°.49S×164°.41E, h10km, mB5.5/49, mb5.0/78, Ms5.1/46, Ms7 4.8/48*

*IDC **18** 17:09:40.0±0.6, 10°.69S×164°.12E, h0km, mb4.8/21, mb1 4.9/22, mb1mx4.9/28, mbtmp4.7/22, ML4.9/1, MS4.6/24, Ms1 4.6/24, ms1mx4.6/28, Error ellipse: s-maj=20.0km s-min=14.0km az=130.0*

*NEIC **18** 17:09:41.3±1.7, 10°.68S±0°.08×164°.07E±0°.08, h13km±3km, mb5.4/258, Error ellipse: s-maj=13.1km s-min=9.9km az=221.0*

*MOS **18** 17:09:43.2±0.9, 10°.68S×164°.03E, h33km, mb5.2/27, MS4.6/4, Error ellipse: s-maj=6.6km s-min=6.1km az=112.1*

*GCMT **18** 17:09:44.3±0.1, 10°.56S±0°.01×164°.09E±0°.01, h12km, MW5.2/128, Moment Tensor Solution. s73,c115; s128,c212; Duration: 1s.0 Moment tensor: Scale 10^{16} Nm; M_{rr}3.85±.12; $M_{\theta\theta}$1.94±.12; $M_{\phi\phi}$-5.79±.11; $M_{r\theta}$-1.71±.30; $M_{\theta\phi}$5.57±.09; $M_{\phi r}$-1.31±.29; Best double couple: $M_0$7.62600×10^{16} NP1:ϕ_s294.00000°, δ63.00000°, λ28.00000°. NP2:ϕ_s190.00000°, δ65.00000°, λ150.00000°. Principal axes: T 6.5370, Plg38.0000°, Azm151.0000°; N 2.1790, Plg52.0000°, Azm335.0000°; P -8.7160, Plg2.0000°, Azm243.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 18 17:09:43.5±0.5**, 10°.71S**±0°.05×**164°.20E**±0°.05**, h23**km±3km**, h23km:pP-P, n666, σ1s.69**/672**, mb5.4**/217**, MS4.8**/46**, 11C-16D, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.37	287	P	Pn	17 10 46.4	-2.1
HNR	Honiara	4.37	287		Pn	17 10 46.4	-2.1
HNR	Honiara	4.37	287	P	Pn	17 10 49.5	+1.0
SANVU	Saraoutou	5.55	148	Pn	Pn	17 11 04.0	-0.6
DVP	Devils Point	7.97	151	P	Pn	17 11 41.3	+3.3
	256µm,0.8s						
KOUNC	Koumac, New Ca	9.79	180	P	Pn	17 12 05.2	+2.3
LIFNC	LIFOU	10.43	164	P	Pn	17 12 14.5	+2.8
DZM	Mont Dzumac	11.50	169	ePn	Pn	17 12 27.6	+1.1
	430nm,1.5s						
DZM				eLQ	LQ	17 14 37.9	
	4µm,24.2s						
DZM				eLR	LR	17 15 09.0	
	comp=Z,6µm,23.8s						
DZM	Mont Dzumac	11.50	169	Pn	Pn	17 12 26.4	-0.1
DZM	Mont Dzumac	11.50	169	P	Pn	17 12 28.0	+1.5
YATNC	Mamie plateau,	11.58	167	P	Pn	17 12 31.5	+4.1
	54nm,1.2s						
ONTNC	Ouen Toro	11.73	170	P	Pn	17 12 32.9	+3.3
OUENC	Ouen Island, N	11.91	168	P	Pn	17 12 34.8	+2.8
PINNC	Pines Island,	12.24	166	P	Pn	17 12 38.8	+2.4
RABL	Rabaul	13.57	298	Pn	Pn	17 12 51.3	-3.4
RABL	Rabaul	13.57	298	P	Pn	17 12 56.3	+1.6
TARA	Tarawa	14.80	36	P	P	17 13 14.4	-2.8
MSVF	Nonsavu	15.13	119	⇓eP	Pn	17 13 17.7	+1.7
MSVF				pmax	pmax		
	comp=Z,24nm,1.3s						
MSVF	Nonsavu	15.13	119	Pn	Pn	17 13 16.5	+0.5
MSVF	Nonsavu	15.13	119	P	P	17 13 19.2	-1.8
PMG	Port Moresby	16.83	273	Pn	P	17 13 42.7	+2.9
	comp=Z,0.3nm,0.3s,baz=61,slow=11,SNR=4.9						
PMG				LR	LR	17 19 40.3	
	comp=Z,5µm,21.0s,baz=104,slow=36						
PMG	Port Moresby	16.83	273	⇑eP	Pn	17 13 34.5	-3.3
PMG				pmax	pmax		
	comp=Z,51nm,1.4s						
PMG	Port Moresby	16.83	273	P	Pn	17 13 31.6	-6.2
PMG	Port Moresby	16.83	273	P	P	17 13 39.4	-0.3
MANU	Manus Island	18.80	296	P	P	17 13 58.3	-3.2
EIDS	Eidsvold	19.16	219	P	Pn	17 14 06.3	-0.1
	baz=19,SNR=7.6						
EIDS	Eidsvold	19.16	219		P	17 14 01.0	-4.5
CTA	Charters Tower	19.63	240	P	Pn	17 14 11.8	-0.4
	comp=Z,2.2nm,0.3s,baz=69,slow=12,SNR=52						
CTA				LR	LR	17 20 43.2	
	comp=Z,3µm,20.4s,baz=56,slow=34						
CTAO	Charters Tower	19.63	240	P	P	17 14 09.9	-0.8
CTAO				pmax	pmax		
	comp=Z,195nm,1.1s						
CTAO	Charters Tower	19.63	240	P	P	17 14 09.9	-0.8
CTAO				IAmb	IAmb	17 14 20.6	
	comp=Z,195nm,1.1s						
KWAJ	Kwajalein Atol	19.68	10	P	P	17 14 09.2	-1.9
KWAJ				pmax	pmax		
	comp=Z,211nm,0.8s						
KWAJ	Kwajalein Atol	19.68	10	P	P	17 14 09.2	-1.9
KWAJ				IAmb	IAmb	17 14 27.0	
	comp=Z,211nm,0.8s						
MTSU	Mount Surprise	20.61	247	P	P	17 14 21.7	+0.4
	baz=20,SNR=15						
COEN	Coen	20.79	259	P	P	17 14 18.9	-4.3
RMQ	Roma	21.42	221	P	P	17 14 31.6	+1.6
	baz=21,SNR=41						
ARMA	Armidale	22.83	209	P	P	17 14 46.6	+1.5
	baz=23,SNR=19						
ARMA	Armidale	22.83	209	P	P	17 14 46.2	+1.1
QLP	Quilpie	24.58	227	P	P	17 15 03.6	+1.7
	baz=24,SNR=4.6						
KNTN	Kanton	25.17	73	P	P	17 15 11.4	+4.0
KNTN				IAmb	IAmb	17 15 14.4	
	comp=Z,121nm,1.2s						
KNTN	Kanton	25.17	73	P	P	17 15 10.9	+3.6
MGCD	Mangrove Creek	25.42	206	P	P	17 15 10.7	+1.2
	baz=25,SNR=12						
QIS	Mount Isa	25.59	245	P	P	17 15 09.8	-1.4
	baz=25,SNR=6.8						
RIV	Riverview	25.93	205	P	P	17 15 15.8	+1.7
	baz=26,SNR=6.6						
NIUE	Niue	26.33	111	P	P	17 15 19.9	+2.1
SMPI	Sarmi	26.75	287	P	P	17 15 22.5	+0.8
	comp=Z,62nm,0.9s						
YNG	Young	27.57	209	P	P	17 15 31.2	+2.3
	baz=28,SNR=16						
CNB	Canberra Magne	27.97	207	P	P	17 15 34.1	+1.6
	baz=28,SNR=14						
CAN	Canberra	28.13	207	P	P	17 15 35.0	+1.0
CAN				pmax	pmax		
	comp=Z,147nm,1.5s						
CAN	Canberra	28.13	207	P	P	17 15 35.0	+1.0
CAN				IAmb	IAmb	17 15 42.3	
	comp=Z,147nm,1.5s						
H11S2	WAKE ISLAND Hy	29.12	5	T	T	17 46 02.6	
	baz=193,slow=77						
H11S3	WAKE ISLAND Hy	29.12	5	T	T	17 46 02.7	
	baz=193,slow=77						
H11S1	WAKE ISLAND Hy	29.14	5	T	T	17 46 05.5	
	baz=193,slow=77						
BAKI	Biak	29.46	287	P	P	17 15 49.0	+3.0
	comp=Z,111nm,1.0s						
STKA	Stephens Creek	29.66	221	P	P	17 15 48.0	+0.5
	baz=30,SNR=14						
STKA	Stephens Creek	29.66	221	P	P	17 15 48.2	+0.6
	comp=Z,11nm,0.8s,baz=36,slow=7.7,SNR=16						
STKA				LR	LR	17 26 36.6	
	comp=Z,2µm,19.0s,baz=38,slow=34						
STKA	Stephens Creek	29.66	221	P	P	17 15 47.7	+0.1
URZ	Urewera	29.77	159	P	P	17 15 47.7	-0.7
WR0	Warramunga Arr	30.00	249	P	P	17 15 48.8	-1.9
WB0	Warramunga Arr	30.09	249	P	P	17 15 47.3	-4.2
WB0				IAmb	IAmb	17 16 08.1	
	comp=Z,72nm,1.2s						
WRAB	Tennant Creek	30.16	249	P	P	17 15 49.8	-2.4
WRAB				pmax	pmax		
	comp=Z,54nm,1.2s						
WRAB	Tennant Creek	30.16	249	P	P	17 15 49.8	-2.4
WB2	Warramunga Arr	30.17	249	P	P	17 15 50.0	-2.1
WB2				IAmb	IAmb	17 16 08.9	
	comp=Z,54nm,1.1s						
WRA	Warramunga Arr	30.18	249	P	P	17 15 49.8	-2.5
	comp=Z,8.1nm,0.9s,baz=80,slow=9.1,SNR=15						
WRA				LR	LR	17 27 42.2	
	comp=Z,4µm,19.9s,baz=70,slow=36						
WRA	Warramunga Arr	30.18	249	ceP	P	17 15 50.2	-2.1
WRA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
WRA	Warramunga Arr	30.18	249	P	P	17 15 49.5	-2.8
H11N1	WAKE ISLAND Hy	30.35	5	T	T	17 47 34.2	
	baz=184,slow=76,SNR=74						
H11N3	WAKE ISLAND Hy	30.35	5	T	T	17 47 27.1	
	baz=184,slow=76,SNR=71						
H11N2	WAKE ISLAND Hy	30.37	5	T	T	17 47 39.4	
	baz=184,slow=76,SNR=72						
BKZ	Black Stump Fm	30.39	161	P	P	17 15 53.6	-0.3
GUMO	Guam	30.83	321	LR	LR	17 27 03.5	
	comp=Z,2µm,21.5s,baz=118,slow=34						
AS31	Alice Springs	31.59	242	P	P	17 16 02.0	-2.8
ASAR	Alice Springs	31.59	242	P	P	17 16 02.2	-2.5
	comp=Z,1.9nm,0.7s,baz=63,slow=10,SNR=32						
ASAR				LR	LR	17 27 48.2	
	comp=Z,2µm,21.0s,baz=68,slow=34						
ASAR	Alice Springs	31.59	242	P	P	17 16 01.8	-3.0
TOO	Toolangi	31.59	209	P	P	17 16 06.6	+2.0
	baz=32,SNR=9.8						
TOO	Toolangi	31.59	209	P	P	17 16 05.0	+0.4
TOO				pmax	pmax		
	comp=Z,74nm,1.2s						
TOO	Toolangi	31.59	209	P	P	17 16 05.0	+0.4
TOO				IAmb	IAmb	17 16 13.0	
	comp=Z,74nm,1.2s						
TUWZ	Tuamarina	31.78	166	P	P	17 16 06.8	+0.8
THZ	Tophouse	31.86	168	P	P	17 16 07.5	+0.6
THZ				IAmb	IAmb	17 16 15.8	
	comp=Z,42nm,1.0s						
HTT	Hallett	32.39	222	P	P	17 16 12.4	+0.8
	baz=32,SNR=8.4						
SAUI	Saumlaki	32.56	272	P	P	17 16 15.2	+1.9
	comp=Z,250nm,1.3s						
FAKI	Fak Fak	32.62	281	P	P	17 16 17.3	+3.4
	comp=Z,28nm,1.0s						
KHZ	Kahutara	32.62	167	P	P	17 16 13.8	+0.4
KHZ				IAmb	IAmb	17 16 15.6	
	comp=Z,68nm,1.4s						
LTZ	Lake Taylor	32.72	169	P	P	17 16 14.6	+0.2
LTZ				IAmb	IAmb	17 16 22.0	
	comp=Z,75nm,1.2s						
FOZ	Fox Glacier	33.06	172	P	P	17 16 18.5	+1.2

FOZ				IAmb	IAmb	17 16 25.1	
	comp=Z,45nm,1.1s						
OXZ	Oxford	33.20	170	P	P	17 16 18.7	+0.1
RPZ	Rata Peaks	33.42	171	LR	LR	17 28 55.2	
	comp=Z,2µm,18.2s,baz=330,slow=34						
RPZ	Rata Peaks	33.42	171	P	P	17 16 20.2	-0.2
RPZ				IAmb	IAmb	17 16 28.1	
	comp=Z,40nm,0.8s						
MQZ	McQueen's Vall	33.68	169	P	P	17 16 22.6	-0.1
LBZ	Lake Benmore	33.95	172	P	P	17 16 25.1	0.0
BBOO	Buckleboo	33.96	225	P	P	17 16 26.9	+1.5
	baz=34,SNR=7.2						
BBOO	Buckleboo	33.96	225	P	P	17 16 24.5	-0.8
BBOO				IAmb	IAmb	17 16 32.7	
	comp=Z,64nm,1.2s						
WKZ	Wanaka	34.25	174	P	P	17 16 26.7	-0.9
ODZ	Otahua Downs	34.66	172	P	P	17 16 31.0	-0.1
WRKA	Warakurna	36.88	242	P	P	17 16 48.5	-2.1
	baz=37,SNR=19						
NLAI	Namlea	37.53	279	P	P	17 17 02.5	+6.3
	comp=Z,2µmcomp=Z,57nm,1.6s						
FITZ	Fitzroy Crossi	38.00	254	P	P	17 16 58.3	-1.7
	baz=38,SNR=18						
FITZ	Fitzroy Crossi	38.00	254	P	P	17 16 58.4	-1.7
	comp=Z,11nm,0.7s,baz=107,slow=6.7,SNR=22						
FITZ	Fitzroy Crossi	38.00	254	P	P	17 16 57.0	-3.1
SANI	Sanana	38.89	280	P	P	17 17 11.5	+3.8
	comp=Z,42nm,1.4s						
SOEI	Soe	39.29	268	P	P	17 17 15.2	+4.1
	comp=Z,41nm,1.1s						
BATI	Baumata	39.84	267	P	P	17 17 20.1	+4.5
	comp=Z,36nm,1.3s						
MMRI	Maumere	41.39	269	P	P	17 17 24.5	-3.9
MMRI				IAmb	IAmb	17 17 42.4	
	comp=Z,131nm,1.3s						
MMRI	Maumere	41.39	269	P	P	17 17 34.5	+6.1
	comp=Z,72nm,1.1s						
EDFI	Ende, Flores	41.92	269	P	P	17 17 40.6	+7.8
LUWI	Luwuk	42.26	280	P	P	17 17 33.6	-1.9
LUWI				IAmb	IAmb	17 17 41.1	
	comp=Z,94nm,1.3s						
LUWI	Luwuk	42.26	280	P	P	17 17 38.3	+2.8
	comp=Z,2µmcomp=Z,58nm,1.0s						
BASI	Baing, Sumba	42.87	266	P	P	17 17 43.8	+3.3
	comp=Z,46nm,1.0s						
APSI	Ampana	43.37	280	P	P	17 17 48.1	+3.5
	comp=Z,489nmcomp=Z,44nm,1.4s						
BSSI	Bau Bau, Buton	43.44	272	P	P	17 17 49.0	+3.9
	comp=Z,45nm,1.3s						
MRSI	Marisa	43.46	282	P	P	17 17 49.3	+4.1
	comp=Z,14nm,1.2s						
PSA00	Pilbara Seismi	43.81	250	P	P	17 17 44.2	-3.7
PSA00	Pilbara Seismi	43.81	250	P	P	17 17 44.8	-3.2
PSA00				IAmb	IAmb	17 17 55.3	
	comp=Z,22nm,1.1s						
BNSI	Bone	44.12	275	P	P	17 17 53.6	+3.1
	comp=Z,670nmcomp=Z,46nm,1.5s						
KAPI	Kappang	44.35	274	P	P	17 17 51.8	-0.7
	comp=Z,11nm,0.9s,baz=291,slow=3.3,SNR=4.2						
KAPI	Kappang	44.35	274	P	P	17 17 47.9	-4.5
KAPI				IAmb	IAmb	17 18 15.5	
	comp=Z,86nm,1.5s						
SPSI	Sidrap Palu	44.53	275	P	P	17 17 58.8	+5.0
	comp=Z,26nm,1.4s						
TTSI	Tana Toraja	44.66	277	P	P	17 17 59.4	+4.5
	comp=Z,460nmcomp=Z,13nm,1.2s						
PPT	Papeete	45.25	104	P	P	17 18 04.8	+5.2
	comp=Z,44nm,0.9s,baz=56,slow=3.7,SNR=4.3						
PPT				LR	LR	17 33 16.5	
	comp=Z,939nm,18.4s,baz=268,slow=31						
PPT2	Papeete2	45.25	104	*e*S	S	17 24 48.5	+10
	comp=Z,205nm,25.2s						
PPT2				*e*LR	LR	17 30 44.6	
	comp=Z,2µm,22.2s						
TIAR	Tiarei	45.47	104	*e*P	P	17 18 07.6	+6.3
	comp=Z,12nm,0.9s						
TVO	Taravao	45.57	104	*e*P	P	17 18 08.7	+6.5
	comp=Z,19nm,1.0s						
MEEK	Meekatharra	45.73	243	P	P	17 18 02.0	-1.3
	baz=46,SNR=4.2						
PLAI	Plampang	45.75	268	P	P	17 18 07.4	+3.8
	comp=Z,50nm,1.5s						
TBI	Tubuai	45.87	112	*e*P	P	17 18 10.9	+6.6
	comp=Z,162nm,1.1s						
TBI	Tubuai	45.87	112	*e*LQ	LQ	17 29 10.2	
	comp=Z,3µm,29.0s						
TBI				*e*LR	LR	17 31 06.9	
	comp=Z,1µm,26.0s						
TWSI	Taliwang, Sumb	46.64	268	P	P	17 18 12.9	+2.3
	comp=Z,26nm,1.4s						
VAH	Vaihoa	47.09	101	*e*P	P	17 18 20.3	+6.3
	comp=Z,81nm,1.1s						
MYLDM	Lahad Datu	48.15	287	P	P	17 18 21.7	-0.6
SRBI	Singaraja	48.36	269	P	P	17 18 26.7	+2.8
	comp=Z,20nm,1.0s						
NWAO	Narrogin (SRO)	48.39	235	P	P	17 18 21.7	-2.2
NWAO				pmax	pmax		
	comp=Z,23nm,1.2s						
NWAO	Narrogin (SRO)	48.39	235	P	P	17 18 21.9	-2.1
NWAO	Narrogin (SRO)	48.39	235	P	P	17 18 21.7	-2.2
NWAO				IAmb	IAmb	17 18 34.8	
	comp=Z,23nm,1.1s						
OPA	Opana	49.12	49	P	P	17 18 29.1	-0.5
OPA				pmax	pmax		
	comp=Z,109nm,1.1s						
OPA	Opana	49.12	49	P	P	17 18 29.1	-0.5
JAGI	Jajag, Banyuwa	49.35	268	P	P	17 18 29.0	-2.5
JAGI				IAmb	IAmb	17 18 40.2	
	comp=Z,54nm,1.3s						
JAGI	Jajag, Banyuwa	49.35	268	P	P	17 18 34.3	+2.7
	comp=Z,36nm,1.3s						
KHLU	Kahalu`u	49.52	53	P	P	17 18 31.9	-0.9
KHLU				IAmb	IAmb	17 18 59.5	
	comp=Z,86nm,1.3s						
KHU	Kahuku	49.55	53	P	P	17 18 31.3	-1.9
KHU				pmax	pmax		
	comp=Z,204nm,1.4s						
KHU	Kahuku	49.55	53	P	P	17 18 31.3	-1.9
HMH	Humu'ula Sheep	49.85	53	P	P	17 18 33.8	-1.8
POHA	Pohakuloa	49.89	53	P	P	17 18 33.1	-2.7
KKM	Kota Kinabalu	50.58	287	P	P	17 18 38.0	-3.1
KKM				IAmb	IAmb	17 18 47.5	
	comp=Z,95nm,1.3s						
INU	Inuyama	52.53	332	P	P	17 18 53.4	-1.6
JMN	Monobe	52.77	328	P	P	17 18 55.9	-1.1
MJAR	Matsushiro Arr	52.99	334	P	P	17 18 57.8	-0.6
	comp=Z,14nm,1.1s,baz=158,slow=6.8,SNR=9.6						
MJAR				LR	LR	17 40 40.6	
	comp=Z,174nm,20.1s,baz=155,slow=35						
MJAR	Matsushiro Arr	52.99	334	P	P	17 18 58.3	-0.2
MJAR				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MJAR	Matsushiro Arr	52.99	334	P	P	17 18 58.3	-0.2
MAJO	Matsushiro	52.99	334	⇑*e*P	P	17 18 58.5	0.0
MAJO				pmax	pmax		
	comp=Z,18nm,1.2s						
MAJO	Matsushiro	52.99	334	P	P	17 18 56.4	-2.0
MAT	Matsushiro	52.99	334	P	P	17 18 57.2	-1.3
MAT				*e*S	S	17 26 18.0	-8.9
SBUM	Sibu	53.34	281	P	P	17 19 06.0	+4.5
TWG	Pinlang	53.80	309	P	P	17 19 00.5	-4.2
TWG				IAmb	IAmb	17 19 17.0	
	comp=Z,66nm,1.3s						
JNU	Nakatsue	53.93	325	P	P	17 19 04.9	-0.6
JNU				IAmb	IAmb	17 19 12.2	
	comp=Z,56nm,1.0s						
YULB	Yu-li	53.94	309	P	P	17 19 03.9	-1.8
YULB				IAmb	IAmb	17 19 12.8	
	comp=Z,37nm,0.8s						
NACB	Ninganchiao	54.16	310	P	P	17 19 05.9	-1.3
NACB				IAmb	IAmb	17 19 20.0	
	comp=Z,29nm,0.9s						
TPUB	Ta-pu	54.40	309	P	P	17 19 05.3	-3.8
YHNB	Yeheng	54.60	311	P	P	17 19 10.2	-0.4
TAOE	Nuku Hiva Isla	54.82	93	*e*LR	LR	17 35 11.8	
	comp=Z,1µm,24.2s						
KSM	Kuching	54.95	279	P	P	17 19 17.0	+3.8
LEM	Lembang	55.99	269	P	P	17 19 22.3	+1.4
	comp=Z,12nm,1.0s,baz=288,slow=20,SNR=1.6						
QZH	Quanzhou	56.85	309	P	P	17 19 28.5	+1.9
QZH				S	S	17 27 19.3	+0.2
QZH				LR	LR		
	comp=Z,520nm,17.9s						
JKA	Kamikawa-asahi	57.99	342	P	P	17 19 32.6	-1.7
JKA				IAmb	IAmb	17 19 41.7	
	comp=Z,46nm,1.0s						
ASAJ	Asahikawa	57.99	342	P	P	17 19 32.6	-1.7
ASAJ				pmax	pmax		
	comp=Z,46nm,1.0s						
SSE	Sheshan	58.56	317	P	P	17 19 37.9	-0.6
SSE				IAmb	IAmb	17 19 44.9	
	comp=Z,30nm,0.9s						
KSRS	Korea Array	58.75	327	P	P	17 19 39.8	+0.1
	comp=Z,3.1nm,0.9s,baz=130,slow=7.2,SNR=7.4						
KSRS				LR	LR	17 44 10.7	
	comp=Z,206nm,19.5s,baz=146,slow=35						
KSAR	Wonju Array Be	58.76	327	P	P	17 19 38.2	-1.6
KSAR	Wonju Array Be	58.76	327	P	P	17 19 38.2	-1.6
RKT	Rikitea	59.13	111	*e*LQ	LQ	17 34 45.0	
	comp=Z,901nm,32.5s						
RKT				*e*LR	LR	17 37 15.2	
	comp=Z,1µm,24.5s						
INCN	Inchon	59.48	326	P	P	17 19 43.4	-1.4
INCN				pmax	pmax		
	comp=Z,128nm,1.5s						
INCN	Inchon	59.48	326	P	P	17 19 43.4	-1.4
YSS	Yuzh-Sakhalins	60.52	343	*d i*P	P	17 19 52.6	+0.9
YSS				pmax	pmax		
	comp=Z,37nm,1.7s						
YSS	Yuzh-Sakhalins	60.52	343	P	P	17 19 51.6	-0.1
YSS				IAmb	IAmb	17 20 13.0	
	comp=Z,38nm,1.2s						
NJ2	Nanjing	60.72	316	⇓*i*P	P	17 19 53.9	+0.5
NJ2				pP	pP	17 19 59.8	0.0
NJ2				sP	sP	17 20 02.3	-0.1
NJ2				S	S	17 28 11.0	+1.9
NJ2				SS	SS	17 32 12.0	+3.6
NJ2				pmax	pmax		
	comp=Z,18nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,320nm,4.4s						
NJ2				LR	LR		
	comp=Z,730nm,18.9s						
NJ2				LR	LR		
	comp=Z,430nm,15.2s						
NJ2				LR	LR		
	comp=Z,620nm,18.9s						
QIZ	Qiongzhong	61.18	299	P	P	17 19 57.9	+1.1
QIZ				S	S	17 28 22.9	+7.4
QIZ				pmax	pmax		
	comp=Z,29nm,1.6s						
QIZ				LR	LR		
	comp=Z,310nm,24.0s						
QIZ				LR	LR		
	comp=Z,450nm,23.3s						
QIZ	Qiongzhong	61.18	299	P	P	17 19 54.1	-2.7
QIZ				IAmb	IAmb	17 20 18.3	
	comp=Z,70nm,1.4s						
MYKOM	Kota Tinggi	61.30	278	P	P	17 19 54.2	-3.5
MYKOM				IAmb	IAmb	17 19 59.3	
	comp=Z,44nm,1.4s						
MYKOM	Kota Tinggi	61.30	278	P	P	17 19 59.0	+1.3
USA0B	Ussuriysk Arra	61.98	334	*de*P	P	17 20 02.5	+0.8
USA0B	Ussuriysk Arra	61.98	334	P	P	17 20 01.1	-0.6
USRK	Ussuriysk Ar.	61.98	334	P	P	17 20 01.6	-0.1
	comp=Z,10nm,1.0s,baz=140,slow=7.4,SNR=17						
USRK				LR	LR	17 45 41.9	
	comp=Z,149nm,20.0s,baz=137,slow=35						
USRK	Ussuriysk Ar.	61.98	334	P	P	17 20 01.1	-0.6
WHN	Wuhan	63.04	312	⇑P	P	17 20 09.3	+0.3
WHN				pP	pP	17 20 14.8	-0.7
WHN				S	S	17 28 38.3	-0.2
WHN				pmax	pmax		
	comp=Z,48nm,1.0s						
WHN				LR	LR		
	comp=Z,1µm,18.1s						
DL2	Dalian	63.30	324	P	P	17 20 12.3	+1.7
DL2				S	S	17 28 47.3	+5.8
DL2				pmax	pmax		
	comp=Z,46nm,1.2s						
DL2				LR	LR		
	comp=Z,550nm,19.8s						
DL2				LR	LR		
	comp=Z,440nm,16.7s						
DL2				LR	LR		
	comp=Z,700nm,21.8s						
MDJ	Mudanjiang	63.35	333	P	P	17 20 11.3	+0.5
MDJ				S	S	17 28 48.6	+6.6
MDJ				ScS	SKSac	17 30 02.0	-0.6
MDJ				pmax	pmax		
	comp=Z,23nm,1.7s						
MDJ				pmax	pmax		
	comp=Z,500nm,3.4s						
MDJ				LR	LR		
	comp=Z,440nm,14.5s						
MDJ				LR	LR		
	comp=Z,540nm,16.2s						
MDJ				LR	LR		
	comp=Z,390nm,7.1s						
MDJ	Mudanjiang	63.35	333	P	P	17 20 10.8	0.0
UBPT	Khong Chiam	63.64	293	P	P	17 20 13.4	+0.2
PET	Petropavlovsk	63.66	356	⇓*e*P	P	17 20 11.7	-0.9
PET				pmax	pmax		
	comp=Z,196nm,1.4s						
PEA0B	Petropavlovsk-	63.81	356	P	P	17 20 13.3	-0.4
PEA0B				pmax	pmax		
	comp=Z,35nm,1.0s						
PEA0B	Petropavlovsk-	63.81	356	P	P	17 20 13.3	-0.4
PEA0B				IAmb	IAmb	17 20 20.6	
	comp=Z,35nm,0.9s						
PETK	Petropavlovsk-	63.81	356	P	P	17 20 13.9	+0.3
	comp=Z,6.3nm,0.8s,baz=126,slow=7.5,SNR=8.3						
PETK				LR	LR	17 43 01.0	
	comp=Z,336nm,20.8s,baz=171,slow=31						
PETK	Petropavlovsk-	63.81	356	P	P	17 20 14.0	+0.3
PETK	Petropavlovsk-	63.81	356	P	P	17 20 13.0	-0.7
TYV	Tymovskoe	64.12	345	*e*P	P	17 20 16.4	+0.7
TYV				*e*		17 29 28.2	
TYV				pmax	pmax		
	comp=Z,12nm,1.8s						
TIA	Tai'an	64.36	319	P	P	17 20 18.1	+0.4
TIA				pmax	pmax		
	comp=Z,15nm,1.3s						
CN2	Changchun	64.68	330	*e*P	P	17 20 19.5	-0.1
CN2				pP	pP	17 20 24.3	-1.8
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
CN2				pmax	pmax		
	comp=Z,260nm,3.3s						
CN2				LR	LR		
	comp=Z,510nm,18.0s						
CN2				LR	LR		
	comp=Z,480nm,18.0s						
CN2				LR	LR		
	comp=Z,480nm,22.0s						
MNSI	Mandailing Nat	65.25	276	P	P	17 20 29.7	+5.8
GRNR	Gornyy	65.82	341	⇓*i*P	P	17 20 28.0	+1.1
GRNR				pmax	pmax		
	comp=N,4.0nm,0.9s						
GRNR				pmax	pmax		
	comp=Z,8.0nm,1.0s						
GRNR				MLR	MLR		
	comp=E,110nm,16.0s						
GRNR				MLR	MLR		
	comp=N,80nm,15.0s						
GRNR				MLR	MLR		
	comp=Z,180nm,13.0s						
KLR	Kul'dur	66.16	337	*ce*P	P	17 20 29.3	+0.3
ENH	Enshi	66.51	310	P	P	17 20 30.2	-1.5
VNDA	Vanda	66.81	181	P	P	17 20 34.0	+1.2
	comp=Z,29nm,1.2s,baz=351,slow=7.4,SNR=20						
VNDA				LR	LR	17 45 41.7	
	comp=Z,384nm,20.2s,baz=352,slow=32						
VNDA	Vanda	66.81	181	P	P	17 20 33.9	+1.0
GYA	Guiyang	66.97	305	⇓P	P	17 20 35.4	+0.5
GYA				S	S	17 29 28.1	+0.7
GYA				pmax	pmax		
	comp=Z,28nm,1.4s						
GYA				pmax	pmax		
	comp=Z,270nm,7.3s						
GYA				LR	LR		
	comp=Z,290nm,19.5s						
SBA	Scott Base	67.14	179	P	P	17 20 34.1	-0.9
SBA				pmax	pmax		
	comp=Z,72nm,1.2s						
SBA	Scott Base	67.14	179	P	P	17 20 34.0	-0.9
SLVN	Son La	67.21	299	P	P	17 20 36.4	0.0
SLVN				IAmb	IAmb	17 20 44.3	
	comp=Z,60nm,1.5s						
BJT	Baijiatuau	67.26	322	P	P	17 20 34.9	-1.4
BJT				pmax	pmax		
	comp=Z,29nm,1.4s						
BJT	Baijiatuau	67.26	322	P	P	17 20 34.9	-1.4
BJI	Beijing	67.27	322	P	P	17 20 36.6	+0.3
BJI				PP	PP	17 23 06.4	+1.5
BJI				S	S	17 29 30.1	-0.1
BJI				SS	SS	17 33 54.8	+4.4
BJI				pmax	pmax		
	comp=Z,11nm,1.6s						
BJI				pmax	pmax		
	comp=Z,260nm,6.1s						
BJI				LR	LR		
	comp=Z,380nm,22.7s						
BJI				LR	LR		
	comp=Z,380nm,21.9s						
BJI				LR	LR		
	comp=Z,600nm,26.5s						
GSI	Gunungsitoli	67.31	276	P	P	17 20 41.7	+4.5
	comp=Z,40nm,0.9s						
TIY	Taiyuan	68.29	318	*e*P	P	17 20 43.3	+0.4
TIY				pmax	pmax		
	comp=Z,49nm,1.6s						
XAN	Xi'an	68.78	313	P	P	17 20 45.4	-0.6
XAN				pP	pP	17 20 51.6	-0.9
XAN				sP	sP	17 20 54.4	-0.7
XAN				PP	PP	17 23 16.3	-1.9
XAN				S	S	17 29 48.9	+0.4
XAN				sS	pS	17 29 58.5	+1.7
XAN				ScS	SKiKP	17 30 38.3	+1.0
XAN				SS	SS	17 34 18.8	+4.8
XAN				pmax	pmax		
	comp=Z,31nm,1.2s						
XAN				pmax	pmax		
	comp=Z,190nm,5.2s						
XAN				LR	LR		
	comp=Z,480nm,16.8s						
XAN				LR	LR		
	comp=Z,430nm,18.2s						
XAN				LR	LR		
	comp=Z,790nm,19.0s						
XAN	Xi'an	68.78	313	P	P	17 20 45.1	-0.9
XAN				pmax	pmax		
	comp=Z,26nm,0.9s						
XAN	Xi'an	68.78	313	P	P	17 20 45.1	-0.9
XAN				IAmb	IAmb	17 20 52.1	
	comp=Z,26nm,0.9s						
LHMI	Lhok Sumawe	68.79	280	P	P	17 20 52.1	+5.7
	comp=Z,39nm,2.4s						
KMI	Kunming	69.65	302	⇑P	P	17 20 52.5	+0.6
KMI				pP	pP	17 20 59.1	+0.7
KMI				PP	PP	17 23 26.3	+0.1
KMI				S	S	17 29 56.6	-3.0
KMI				sS	pS	17 30 06.6	-1.2
KMI				pmax	pmax		
	comp=Z,38nm,1.6s						
KMI				pmax	pmax		
	comp=Z,360nm,5.0s						
KMI				LR	LR		
	comp=Z,290nm,15.2s						
KMI				LR	LR		
	comp=Z,310nm,19.6s						
KMI				LR	LR		
	comp=Z,340nm,19.7s						
KMI	Kunming	69.65	302	P	P	17 20 52.4	+0.6
KMI				pmax	pmax		
	comp=Z,95nm,1.3s						
KMI	Kunming	69.65	302	P	P	17 20 52.4	+0.6
LAMP	Lampang	69.99	294	P	P	17 20 55.0	+1.3
CM35	Chiang Mai Arr	70.47	294	P	P	17 20 57.0	+0.3
CM36	Chiang Mai Arr	70.47	294	P	P	17 20 57.0	+0.3
CM34	Chiang Mai Arr	70.53	294	P	P	17 20 57.0	-0.1
CM04	Chiang Mai Arr	70.53	294	P	P	17 20 58.0	+0.9
CM09	Chiang Mai Arr	70.54	294	P	P	17 20 58.0	+0.9
CM01	Chiang Mai Arr	70.56	294	P	P	17 20 59.2	+1.9
CM05	Chiang Mai Arr	70.56	294	P	P	17 20 58.6	+1.3
CM02	Chiang Mai Arr	70.57	294	P	P	17 20 59.0	+1.6
CM31	Chiang Mai Arr	70.58	294	P	P	17 21 00.2	+2.8
CM31	Chiang Mai Arr	70.58	294	P	P	17 20 56.5	-0.9
CM31				IAmb	IAmb	17 21 05.1	
	comp=Z,40nm,1.2s						
CMAR	Chiang Mai Arr	70.58	294	P	P	17 20 58.1	+0.7
	comp=Z,8.1nm,0.9s,baz=120,slow=4.4,SNR=44						
CMAR				LR	LR	17 52 24.6	
	comp=Z,135nm,20.2s,baz=154,slow=36						
CMAR	Chiang Mai Arr	70.58	294	P	P	17 20 56.7	-0.7
HHC	Hu-ho-hao-te	70.60	320	*e*P	P	17 20 58.0	+0.8
HHC				sP	pP	17 21 04.8	+1.1
HHC				S	S	17 30 11.3	+1.5
HHC				sS	pS	17 30 18.8	+1.1
HHC				pmax	pmax		
	comp=Z,23nm,1.1s						
HHC				pmax	pmax		
	comp=Z,200nm,6.3s						
HHC				LR	LR		
	comp=Z,340nm,17.3s						
HHC				LR	LR		
	comp=Z,360nm,17.5s						
HHC				LR	LR		
	comp=Z,640nm,18.6s						
CM15	Chiang Mai Arr	70.60	294	P	P	17 21 00.3	+2.8
CM13	Chiang Mai Arr	70.61	294	P	P	17 20 59.4	+1.9
CMMT	Chiang Mai	70.69	294	P	P	17 20 57.0	-1.1
CM33	Chiang Mai Arr	70.70	294	P	P	17 20 58.0	-0.1
CHTO	Chiang Mai	70.70	294	P	P	17 20 56.2	-1.9
CHTO				pmax	pmax		
	comp=Z,69nm,1.5s						
CHTO	Chiang Mai	70.70	294	P	P	17 20 56.2	-1.9
CHTO				IAmb	IAmb	17 21 05.5	
	comp=Z,69nm,1.5s						
CM32	Chiang Mai Arr	70.73	294	P	P	17 21 01.0	+2.7
MA2	Magadan	70.88	353	⇓*e*P	P	17 20 57.8	-0.5
MA2				pmax	pmax		
	comp=Z,25nm,1.7s						
MA2	Magadan	70.88	353	P	P	17 20 57.0	-1.3
CD2	Chengdu	71.19	308	P	P	17 21 00.9	0.0
CD2				pP	pP	17 21 05.8	-1.7
CD2				S	S	17 30 15.4	-1.6
CD2				pmax	pmax		
	comp=Z,70nm,0.9s						
CD2				pmax	pmax		
	comp=Z,330nm,4.7s						
CD2				LR	LR		
	comp=Z,430nm,13.8s						
CD2				LR	LR		
	comp=Z,390nm,15.3s						
CD2				LR	LR		
	comp=Z,480nm,14.8s						
HIA	Hailar	71.33	331	P	P	17 21 01.2	-0.2
HIA				pmax	pmax		
	comp=Z,49nm,1.1s						
HIA	Hailar	71.33	331	P	P	17 21 01.1	-0.2
HIA				IAmb	IAmb	17 21 08.6	
	comp=Z,49nm,1.1s						
BTO	Baotou	71.44	319	*e*P	P	17 21 02.8	+0.5
ZEA	Zeya	71.45	338	*e*P	P	17 21 03.0	+1.1
ZEA				pmax	pmax		
	comp=E,10.0nm,1.5s						
ZEA				pmax	pmax		
	comp=N,20nm,1.1s						
ZEA				pmax	pmax		
	comp=Z,30nm,1.3s						
ZEA				MLR	MLR		
	comp=Z,300nm,22.0s						
SDPT	Sand Point	72.16	20	P	P	17 21 06.0	-0.1
SDPT				IAmb	IAmb	17 21 11.7	
	comp=Z,42nm,0.8s						
LZH	Lanzhou	73.41	313	*e*P	P	17 21 15.6	+1.4
LZH				pP	pP	17 21 20.3	-0.5
LZH				sP	sP	17 21 23.0	-0.3
LZH				pmax	pmax		
	comp=Z,23nm,1.0s						
LZH				LR	LR		
	comp=Z,380nm,15.2s						
LZH				LR	LR		
	comp=Z,370nm,14.4s						
LZH				LR	LR		
	comp=Z,420nm,14.4s						
SEY	Seymchan	73.98	354	⇓*e*P	P	17 21 16.7	-0.1
CIT	Chita	76.12	331	*e*P	P	17 21 29.8	+0.4
CIT				pmax	pmax		
	comp=Z,125nm,2.0s						
OHAK	Old Harbor	76.17	22	P	P	17 21 28.8	-0.6
GAMB	Gambell	76.52	11	P	P	17 21 31.9	+0.6
GAMB				IAmb	IAmb	17 21 38.6	
	comp=Z,25nm,0.9s						
KDAK	Kodiak Island	76.83	22	⇑*e*P	P	17 21 33.2	0.0

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KDAK                                pmax   pmax
      comp=Z,19nm,1.0s
KDAK  Kodiak Island      76.83  22  P      P      17 21 32.1 -1.2
ULN   Ulaanbaatar        77.14 325ceP      P      17 21 36.0 +0.6
ULN                                 pmax   pmax
      comp=Z,63nm,1.7s
ULN   Ulaanbaatar        77.14 325  P      P      17 21 34.8 -0.7
ULN                                 IAmb   IAmb   17 21 43.1
      comp=Z,58nm,1.1s
YAK   Yakutsk            77.35 344 eP      P      17 21 35.3 -0.7
YAK                                e*PP    pP     17 21 41.4 -1.2
YAK                                e              17 21 49.5
YAK                                eS      S      17 31 24.4 -0.3
YAK                                e*SS    sS     17 31 41.4 +5.8
YAK                                e              17 31 56.1
YAK                                 pmax   pmax
      comp=Z,41nm,1.1s
YAK                                 pmax   pmax
      comp=N,9.0nm,1.5s
YAK                                 pmax   pmax
      comp=E,6.0nm,1.5s
YAK                                 pmax   pmax
      comp=Z,231nm,6.9s
YAK                                 pmax   pmax
      comp=N,151nm,6.7s
YAK                                 pmax   pmax
      comp=E,206nm,6.9s
YAK                                 smax   smax
      comp=N,149nm,4.8s
YAK                                 smax   smax
      comp=E,47nm,3.8s
YAK                                 MLR    MLR
      comp=Z,261nm,14.0s
YAK                                 MLR    MLR
      comp=N,219nm,20.0s
YAK                                 MLR    MLR
      comp=E,131nm,22.0s
YAK   Yakutsk            77.35 344  P      P      17 21 35.5 -0.5
SONM  Songino Array      77.50 324  P      P      17 21 37.8 +0.4
      comp=E,10nm,0.8s,baz=142,slow=5.4,SNR=61
SONM                                LR     LR     17 57 51.0
      comp=E,311nm,18.0s,baz=129,slow=37
SONM  Songino Array      77.50 324  P      P      17 21 36.3 -1.1
GTA   Gaotai             77.73 314  P      P      17 21 40.0 +1.1
GTA                                 pmax   pmax
      comp=E,15nm,1.2s
GTA                                 pmax   pmax
      comp=E,320nm,8.4s
GTA                                 LR     LR
      comp=E,220nm,13.1s
GTA                                 LR     LR
      comp=E,310nm,12.3s
GTA                                 LR     LR
      comp=E,500nm,18.7s
SVW2  Sparrevohn         78.28  19  P      P      17 21 41.7 +0.4
ANM   Nome               78.50  13  P      P      17 21 42.7 +0.3
ANM                                 pmax   pmax
      comp=Z,16nm,1.0s
ANM   Nome               78.50  13  P      P      17 21 42.7 +0.3
HOM   Homer              78.53  21  P      P      17 21 42.9 +0.3
      baz=224
CNPM  China Poot         78.58  21  P      P      17 21 43.7 +0.7
CNPM                                IAmb   IAmb   17 21 57.2
      comp=Z,60nm,1.2s
RSO   Redoubt South      78.73  20  P      P      17 21 43.7 -0.3
TNA   Tin City           78.84  11  P      P      17 21 44.3  0.0
      baz=208,SNR=5.7
TNA   Tin City           78.84  11  P      P      17 21 44.3  0.0
BRLK  Bradley Lake       78.87  21  P      P      17 21 44.0 -0.6
BRLK                                IAmb   IAmb   17 21 51.5
      comp=Z,35nm,0.8s
SHL   Shillong           79.02 299  P      P      17 21 45.1 -1.3
SHL                                 pmax   pmax
      comp=Z,115nm,1.5s
SHL   Shillong           79.02 299  P      P      17 21 45.1 -1.3
QSPA  South Pole Qui     79.29 180  P      P      17 21 46.9 -0.2
CAPN  Captain Cook N     79.50  21  P      P      17 21 48.6 +0.7
      baz=225
TTA   Tatalina           79.55  17  P      P      17 21 48.3 -0.1
TTA                                 pmax   pmax
      comp=Z,33nm,0.9s
TTA   Tatalina           79.55  17  P      P      17 21 48.2 -0.1
TTA                                 IAmb   IAmb   17 21 55.9
      comp=Z,33nm,0.9s
BOD   Bodaibo            79.59 335 eP      P      17 21 47.0 -1.5
BOD                                 pmax   pmax
      comp=Z,22nm,1.8s
SEW   Seward             79.63  22  P      P      17 21 49.6 +1.0
O22K  Cooper Landing     79.79  21  P      P      17 21 49.0 -0.6
SUA   Susitna One        80.13  20  P      P      17 21 51.1 -0.4
SUA                                 IAmb   IAmb   17 22 02.3
      comp=Z,30nm,0.9s
RC01  Rabbit Creek A     80.21  21  P      P      17 21 52.4 +0.5
      baz=226
SKT   Skwentna           80.24  20  P      P      17 21 49.3 -2.7
Q23K  Middleton Isla     80.34  23  P      P      17 21 53.1 +0.6
      baz=229
ZAK   Zakamensk          80.56 325 eP      P      17 21 53.7 -0.4
ZAK                                 pmax   pmax
      comp=Z,25nm,1.1s
PMR   Palmer             80.77  21  P      P      17 21 54.9 +0.1
PMR                                 pmax   pmax
      comp=Z,32nm,1.0s
PMR   Palmer             80.77  21  P      P      17 21 54.9 +0.1
KNK   Knik Glacier       80.89  21  P      P      17 21 53.9 -1.6
LSA   Lhasa              80.89 303  P      P      17 21 56.8  0.0
LSA                                 pmax   pmax
      comp=Z,28nm,1.7s
LSA   Lhasa              80.89 303  P      P      17 21 57.2 +0.4
LSA                                 pmax   pmax
      comp=Z,9.0nm,0.9s
LSA   Lhasa              80.89 303  P      P      17 21 57.2 +0.4
IRK   Irkutsk            80.95 327 eP      P      17 21 53.8 -2.2
IRK                                 pmax   pmax
      comp=Z,34nm,2.7s
CUT   Chulitna           80.96  20  P      P      17 21 56.2 +0.4
      baz=225
GHO   Glory Hole Cre     80.97  21  P      P      17 21 54.5 -1.5
TLY   Talaya             81.00 327d iP     P      17 21 56.6 +0.3
TLY                                 pmax   pmax
      comp=Z,7.0nm,0.8s
TLY   Talaya             81.00 327  P      P      17 21 55.2 -1.1
SML   Sawmill            81.20  21  P      P      17 21 58.0 +0.8
SML                                 IAmb   IAmb   17 22 12.7
      comp=Z,56nm,1.3s
KTH   Kantishna Hill     81.56  19  P      P      17 21 57.4 -1.7
SCM   Sheep Creek Mo     81.57  21  P      P      17 21 59.5 +0.3
SCM                                 pmax   pmax
      comp=Z,66nm,1.5s
SCM   Sheep Creek Mo     81.57  21  P      P      17 21 59.5 +0.3
SCM                                 IAmb   IAmb   17 22 24.2
      comp=Z,66nm,1.5s
TRF   Thorofare Moun     81.69  19  P      P      17 21 59.2 -0.7
BPAW  Bear Paw Mtn.      81.93  18  P      P      17 21 59.8 -1.2
RDOG  Red Dog Mine       82.00  12  P      P      17 22 01.1 -0.1
RDOG                                IAmb   IAmb   17 22 08.7
      comp=Z,36nm,0.8s
RND   Reindeer           82.12  19  P      P      17 22 01.2 -0.8
RND                                 pmax   pmax
      comp=Z,25nm,1.0s
RND   Reindeer           82.12  19  P      P      17 22 01.2 -0.8
M24K  Tolsona, Glenn     82.16  21  P      P      17 22 02.5 +0.3
      baz=229
M24K  Tolsona, Glenn     82.16  21  P      P      17 22 01.9 -0.3
MCK   McKinley           82.32  19  P      P      17 22 03.3 +0.3
      baz=226
N25K  Chitina, Valde     82.41  22  P      P      17 22 03.9 +0.3
      baz=231
N25K  Chitina, Valde     82.41  22  P      P      17 22 02.3 -1.3
N25K                                IAmb   IAmb   17 22 19.3
      comp=Z,29nm,1.0s
MOY   Mondy              82.44 326 eP      P      17 22 03.9 -0.1
MOY                                 pmax   pmax
      comp=Z,41nm,3.4s
BWN   Browne             82.46  19  P      P      17 22 03.5 -0.2
TGL   Tana Glacier       82.54  23  P      P      17 22 03.7 -0.6
TGL                                 IAmb   IAmb   17 22 22.5
      comp=Z,32nm,1.0s
GLB   Gilahina Butte     82.60  22  P      P      17 22 04.7 +0.1
GLB                                 IAmb   IAmb   17 22 11.7
      comp=Z,30nm,0.8s
VRDI  Verde Repeater     82.60  23  P      P      17 22 04.2 -0.5
VRDI                                IAmb   IAmb   17 22 11.8
      comp=Z,19nm,0.8s
MLY   Manley             82.68  18  P      P      17 22 05.1 +0.2
      baz=225,SNR=18
MCARA McCarthy VSAT      82.86  23  P      P      17 22 05.8  0.0
MCARA                               IAmb   IAmb   17 22 32.8
      comp=Z,29nm,0.9s
NEA2  Nenana             82.88  18  P      P      17 22 06.1 +0.2
      baz=226
BALM  Baldy              82.90  23  P      P      17 22 06.3 +0.1
BALM                                IAmb   IAmb   17 22 13.4
      comp=Z,28nm,0.7s
PAX   Paxson             82.97  21  P      P      17 22 05.7 -0.8
PAX                                 pmax   pmax
      comp=Z,10.0nm,1.0s
PAX   Paxson             82.97  21  P      P      17 22 05.7 -0.8
TABL  Table Mountain     83.02  24  P      P      17 22 07.4 +0.4
WRH   Wood River Hil     83.10  19  P      P      17 22 05.8 -1.2
WRH                                 IAmb   IAmb   17 22 21.0
      comp=Z,34nm,1.1s
I23K  Minto, Yukon-K     83.17  18  P      P      17 22 07.6 +0.2
      baz=226
I23K  Minto, Yukon-K     83.17  18  P      P      17 22 06.4 -0.9
BARN  Barnard Glacie     83.18  23  P      P      17 22 07.5 -0.3
BARN                                IAmb   IAmb   17 22 20.9
      comp=Z,38nm,1.0s
H02S1 DAWSON INLET T     83.23  33  T      T      18 53 49.7
      SNR=32
CTGM  Chitina Glacie     83.26  24  P      P      17 22 08.3 +0.2
CTGM                                IAmb   IAmb   17 22 15.6
      comp=Z,30nm,0.8s
CCB   Clear Creek Bu     83.31  19  P      P      17 22 06.9 -1.2
CCB                                 IAmb   IAmb   17 22 20.8
      comp=Z,25nm,1.2s
MDM   Murphy Dome        83.39  18  P      P      17 22 06.9 -1.7
MDM                                 IAmb   IAmb   17 22 15.9
      comp=Z,22nm,0.8s
HDA   Harding Lake       83.42  19  P      P      17 22 08.9 +0.2
      baz=228
HDA   Harding Lake       83.42  19  P      P      17 22 07.3 -1.4
TCOL  CIGO, UAF Yank     83.45  19  P      P      17 22 09.1 +0.3
      baz=227
KCPM  Cahto Peak         83.45  48  P      P      17 22 10.1 +0.6
COLA  College            83.45  19deP      P      17 22 08.5 -0.3
COLA                                pmax   pmax
      comp=Z,21nm,1.0s
JCC   Jacoby Creek,      83.51  47  P      P      17 22 07.8 -1.8
KMRM  Mail Ridge         83.54  47  P      P      17 22 10.1 +0.1
MENT  Mentasta           83.57  21  P      P      17 22 09.0 -0.5
MENT                                IAmb   IAmb   17 22 21.6
      comp=Z,26nm,0.7s
HOPS  Hopland Field      83.59  48  P      P      17 22 10.5 +0.4
IL31                     83.69  19  P      P      17 22 08.4 -1.6
IL31                                IAmb   IAmb   17 22 16.9
      comp=Z,25nm,0.8s
ILAR  Eielson Array      83.69  19  P      P      17 22 09.9 -0.1
      comp=Z,12nm,0.9s,baz=230,slow=4.7,SNR=63
ILAR                                LR     LR     17 57 47.8
      comp=Z,213nm,18.4s,baz=254,slow=34
ILAR  Eielson Array      83.69  19  P      P      17 22 07.2 -2.8
GDXM  Geysers            83.73  49  P      P      17 22 10.9 -0.1
GDXM                                IAmb   IAmb   17 22 26.0
      comp=Z,41nm,1.4s
KHMM  Horse Mountain     83.74  47  P      P      17 22 10.2 -0.9
KHMM                                IAmb   IAmb   17 22 19.9
      comp=Z,36nm,1.2s
POKR  Poker Plat Res     83.75  19  P      P      17 22 09.8 -0.5
      baz=228,SNR=12
POKR  Poker Plat Res     83.75  19  P      P      17 22 09.4 -1.0
POKR                                IAmb   IAmb   17 22 16.9
      comp=Z,24nm,0.8s
KRMB  Red Mountain       83.84  46  P      P      17 22 11.0 -0.5
KRMB                                IAmb   IAmb   17 22 19.6
      comp=Z,41nm,1.4s
DOT   Dot Lake           83.89  21  P      P      17 22 10.6 -0.6
SAO   San Andreas Ge     84.10  51  P      P      17 22 12.5 -0.3
SAO                                 pmax   pmax
      comp=Z,23nm,1.2s
SAO   San Andreas Ge     84.10  51  P      P      17 22 12.5 -0.3
SAO                                 IAmb   IAmb   17 22 24.6
      comp=Z,23nm,1.2s
SCRK  Sand Creek         84.13  20  P      P      17 22 12.6 +0.1
      baz=231
O02D  Mt. Diablo Mer     84.19  47  P      P      17 22 14.0 +0.7
      baz=251,SNR=13
L02E  Cave Junction      84.27  45  P      P      17 22 13.9 +0.4
      baz=250
J01E  Myrtle Point       84.38  44  P      P      17 22 14.4 +0.4
      baz=250
COLD  Coldfoot           84.40  16  P      P      17 22 14.1 +0.5
      baz=225
COLD  Coldfoot           84.40  16  P      P      17 22 13.3 -0.3
COLD                                IAmb   IAmb   17 22 22.4
      comp=Z,21nm,0.9s
K02D  Willamette Mer     84.41  45  P      P      17 22 14.5 +0.2
      baz=250
PMPB  Monarch Peak       84.43  52  P      P      17 22 13.2 -1.3
MAW   Mawson             84.46 202  LR     LR     17 53 55.4
      comp=Z,188nm,21.9s,baz=64,slow=31
WDC   Whiskeytown Da     84.50  47  P      P      17 22 13.7 -1.0
WDC                                 pmax   pmax
      comp=Z,63nm,1.5s
WDC   Whiskeytown Da     84.50  47  P      P      17 22 13.7 -1.0
N02D  Trinity Center     84.51  47  P      P      17 22 15.6 +0.7
      baz=251
M02C  Callahan           84.54  46  P      P      17 22 15.5 +0.5
      baz=251,SNR=6.5
PRP   Porcupine Dome     84.61  19  P      P      17 22 14.2 -0.7
BESE  Bessie Mountai     84.68  27  P      P      17 22 15.9 +0.6
BESE                                IAmb   IAmb   17 22 23.0
      comp=Z,42nm,1.2s
PAGB  Antelope Grade     84.71  52  P      P      17 22 14.9 -1.1
PAGB                                IAmb   IAmb   17 22 31.9
      comp=Z,37nm,1.4s
HYT   Haines Junctio     84.72  25  P      P      17 22 14.4 -1.1
HYT                                 IAmb   IAmb   17 22 29.2
      comp=Z,36nm,1.2s
YBH   Yreka Blue Hor     84.75  46  P      P      17 22 15.9 -0.2
YBH                                 pmax   pmax
      comp=Z,62nm,1.5s
YBH   Yreka Blue Hor     84.75  46  P      P      17 22 15.9 -0.2
I02D  Swisshome          84.77  43  P      P      17 22 16.3 +0.4
      baz=250
PKM   Mcpherson Peak     84.81  53  P      P      17 22 16.7  0.0
      baz=253
HUMO  Hull Mountain      84.87  45  P      P      17 22 16.0 -0.6
HUMO                                IAmb   IAmb   17 22 35.2
      comp=Z,34nm,1.2s
ORV   Oroville           84.93  48  P      P      17 22 17.0 +0.1
ORV                                 pmax   pmax
      comp=Z,35nm,1.4s
ORV   Oroville           84.93  48  P      P      17 22 17.0 +0.1
ORV                                 IAmb   IAmb   17 22 31.3
      comp=Z,35nm,1.4s
O03E  Paynes Creek       84.94  48  P      P      17 22 17.1  0.0
      baz=252,SNR=12
I03D  Drain, OR          84.96  44  P      P      17 22 17.7 +0.7
      baz=250
AFDM  Forest Hills D     85.13  49  P      P      17 22 17.4 -0.6
AFDM                                IAmb   IAmb   17 22 25.2
      comp=Z,33nm,1.2s
L04D  Klamath Falls      85.20  46  P      P      17 22 18.9 +0.5
      baz=251
CMB   Columbia Colle     85.29  50  P      P      17 22 17.8 -1.1
CMB                                 pmax   pmax
      comp=Z,29nm,1.5s
CMB   Columbia Colle     85.29  50  P      P      17 22 17.8 -1.1
CMB                                 IAmb   IAmb   17 22 29.5
      comp=Z,29nm,1.4s
M04C  Macdoel            85.38  46  P      P      17 22 19.7 +0.4
      baz=251,SNR=10
TIXI  Tiksi              85.48 349⇓eP      P      17 22 18.6 -0.3
TIXI                                pmax   pmax
      comp=Z,142nm,1.7s
TIXI  Tiksi              85.48 349  P      P      17 22 17.6 -1.3
TIXI                                IAmb   IAmb   17 22 25.5
      comp=Z,37nm,1.1s
G03D  McMinnville, O     85.54  43  P      P      17 22 20.5 +0.7
      baz=250
TOLK  Toolik Lake Re     85.57  15  P      P      17 22 20.2 +0.7
      baz=226,SNR=5.5
TOLK  Toolik Lake Re     85.57  15  P      P      17 22 19.4 -0.1
EGAK  Eagle              85.59  21  P      P      17 22 19.6  0.0
I04A  Tendick Farm,      85.64  44  P      P      17 22 20.4  0.0
      baz=251
VES   Vestal, Richgr     85.65  52  P      P      17 22 21.0 +0.4
      baz=254
H04D  Lebanon            85.66  43  P      P      17 22 21.5 +1.1
      baz=251
J04D  Umpqua Nationa     85.66  45  P      P      17 22 21.2 +0.5
      baz=251,SNR=7.2
RUBR  Rubicon Trail      85.77  49  P      P      17 22 21.0 -0.4
RUBR                                IAmb   IAmb   17 22 35.5
      comp=Z,49nm,1.2s
E03A  Lebam              85.80  41  P      P      17 22 21.7 +0.7
BEKR  Beckworth          85.86  48  P      P      17 22 21.7 -0.1
BEKR                                IAmb   IAmb   17 22 36.4
      comp=Z,48nm,1.4s
A21K  Barrow             85.95  12  P      P      17 22 22.4 +1.1
      baz=219
MWC   Mount Wilson       86.02  54  P      P      17 22 22.8 +0.1
MWC                                 pmax   pmax
      comp=Z,104nm,1.5s
MWC   Mount Wilson       86.02  54  P      P      17 22 22.8 +0.1
ISA   Isabella, Lake     86.08  53  P      P      17 22 23.2 +0.3
      baz=254
ISA   Isabella, Lake     86.08  53  P      P      17 22 22.4 -0.5
ISA                                 pmax   pmax
      comp=Z,34nm,1.5s
ISA   Isabella, Lake     86.08  53  P      P      17 22 22.4 -0.5
ISA                                 IAmb   IAmb   17 22 36.6
      comp=Z,34nm,1.5s
H04A  Detroit Lake       86.08  43  P      P      17 22 22.5 -0.1
H04A                                IAmb   IAmb   17 22 29.7
      comp=Z,49nm,1.5s
WAKR  Walker             86.14  50  P      P      17 22 23.6 +0.3
MDPB  Devils Postpil     86.16  51  P      P      17 22 23.4  0.0
MDPB                                IAmb   IAmb   17 22 37.2
      comp=Z,50nm,1.4s
PNTR  Pine Nut           86.19  49  P      P      17 22 23.1 -0.4
PNTR                                IAmb   IAmb   17 22 35.4
      comp=Z,52nm,1.4s
OMMB  Old Mammoth Mi     86.22  51  P      P      17 22 22.8 -1.0
OMMB                                IAmb   IAmb   17 22 31.9
      comp=Z,39nm,1.4s
EDW2  Edwards Air Fo     86.25  54  P      P      17 22 23.9 +0.2
      baz=254,SNR=9.6
J05D  Fort Rock, OR      86.28  45  P      P      17 22 24.2 +0.4
      baz=252,SNR=16
BFSC  Mount Baldy Ra     86.34  54  P      P      17 22 24.2  0.0
      baz=255
K05A  Summer Lake        86.35  45  P      P      17 22 22.0 -2.2
MLAC  Mammoth, Mammo86.35  51  P      P      17 22 24.7 +0.4
      baz=254
YERR  Yerington          86.43  49  P      P      17 22 22.7 -2.0
YERR                                IAmb   IAmb   17 22 38.5
      comp=Z,40nm,1.5s
D03D  Eldon              86.44  40  P      P      17 22 24.9 +0.7
      baz=250
E04D  Cinebar            86.45  41  P      P      17 22 24.7 +0.4
      baz=251
MOD   Modoc Plateau      86.51  46  P      P      17 22 24.6 -0.3
MOD                                 IAmb   IAmb   17 22 39.4
      comp=Z,54nm,1.5s
PAHR  Pah Rah Range      86.53  49  P      P      17 22 24.5 -0.5
MURC  Murrieta           86.54  55  P      P      17 22 25.0 -0.1
      baz=255
I05D  Terrebonne, OR     86.54  44  P      P      17 22 25.4 +0.5
      baz=252
PGC   Sidney             86.60  39  P      P      17 22 24.7 -0.2
PGC                                 IAmb   IAmb   17 22 40.4
      comp=Z,56nm,1.4s
CWC   Cottonwood Cre     86.60  52  P      P      17 22 25.8 +0.3
      baz=254
PINE  Pine Mountain      86.64  44  P      P      17 22 23.7 -1.9
LRMC  Laurel Mtn Rad     86.65  53  P      P      17 22 26.1 +0.3
      baz=254,SNR=11
BAR   Barrett            86.73  56  P      P      17 22 25.8 -0.2
LHV   Little Huntoon     86.77  50  P      P      17 22 26.2 +0.1
LHV                                 IAmb   IAmb   17 22 38.1
      comp=Z,41nm,1.2s
G05D  Wamic, OR          86.84  43  P      P      17 22 27.0 +0.7
      baz=252
RYN   Ryan               86.86  50  P      P      17 22 26.6 -0.1
RYN                                 IAmb   IAmb   17 22 37.7
      comp=Z,31nm,1.3s
F05D  White Salmon       86.95  42  P      P      17 22 27.1 +0.2
      baz=251
MPMC  Manual Prospec     86.96  53  P      P      17 22 27.6 +0.2
      baz=255,SNR=6.9
NVAR  Mina Array Bea     86.97  50  P      P      17 22 28.0 +0.6
      comp=Z,7.5nm,1.0s,baz=236,slow=7.5,SNR=39
NVAR                                LR     LR     17 52 52.6
      comp=Z,851nm,21.6s,baz=262,slow=30
NVAR  Mina Array Bea     86.97  50  P      P      17 22 27.2 -0.2
MONP2 Monument Peak      86.99  56  P      P      17 22 27.6 +0.1
      baz=255
D05A  Enumclaw           87.03  41  P      P      17 22 26.4 -0.7
RRX   Edison Barstow     87.03  54  P      P      17 22 28.3 +0.8
      baz=255
NV11  Mina Array Sit     87.09  50  P      P      17 22 26.4 -1.5
NV11                                IAmb   IAmb   17 22 39.5
      comp=Z,45nm,1.3s
PFO   Pinyon Flats O     87.14  55  P      P      17 22 28.1 -0.1
      baz=255
PFO   Pinyon Flats O     87.14  55  P      P      17 22 28.5 +0.3
PFO                                 pmax   pmax
      comp=Z,26nm,1.4s
PFO   Pinyon Flats O     87.14  55  P      P      17 22 28.5 +0.3
PFO                                 IAmb   IAmb   17 22 42.7
      comp=Z,26nm,1.4s
TPFO  Pinon Flats        87.14  55  P      P      17 22 28.4 +0.3
      baz=255
ESJX  Sierra Juarez      87.15  57  P      P      17 22 29.0 +0.7
IKP   In-Ko-Pah, Jac     87.18  56  P      P      17 22 28.5 +0.2
      baz=256
RMX   La Rumorosa        87.19  56  P      P      17 22 27.8 -0.7
RMX                                 IAmb   IAmb   17 22 42.9
      comp=Z,31nm,1.4s
GSC   Goldstone, Bar     87.30  53  P      P      17 22 29.4 +0.6
      baz=255
GSC   Goldstone, Bar     87.30  53  P      P      17 22 28.5 -0.3
GSC                                 pmax   pmax
      comp=Z,27nm,1.5s
GSC   Goldstone, Bar     87.30  53  P      P      17 22 28.5 -0.3
GSC                                 IAmb   IAmb   17 22 39.7
      comp=Z,27nm,1.5s
GRAC  Grapevine Rang     87.30  52  P      P      17 22 29.3 +0.6
      baz=255
B05A  Bryant             87.31  40  P      P      17 22 29.6 +1.1
      baz=251
SWSC  Sam W. Stewart     87.51  56  P      P      17 22 30.3 +0.5
      baz=256
HEC   Hector,Ludlow      87.55  54  P      P      17 22 30.3 +0.2
      baz=255,SNR=7.2
FURC  Furnace Creek,     87.55  52  P      P      17 22 30.1 +0.2
      baz=255
BELC  Belle Mtn. Jos     87.61  55  P      P      17 22 30.6 +0.1
      baz=256,SNR=10
TPH   Tonopah            87.70  51  P      P      17 22 30.0 -0.9
TPH                                 pmax   pmax
      comp=Z,101nm,1.5s
TPH   Tonopah            87.70  51  P      P      17 22 30.0 -0.9
I07A  Izee               87.72  44  P      P      17 22 30.7  0.0
I07A                                IAmb   IAmb   17 22 38.4
      comp=Z,28nm,1.2s
WMQ   Urumqi             87.78 315 eP      P      17 22 30.8 -0.2
WMQ                                 pP     pP     17 22 35.5 -2.2
WMQ                                 S      S      17 33 19.6 +7.3
WMQ                                 pmax   pmax
      comp=Z,18nm,0.9s
WMQ                                 pmax   pmax
      comp=Z,400nm,3.7s
WMQ                                 LR     LR
      comp=Z,310nm,28.9s
WMQ                                 LR     LR
      comp=Z,880nm,29.1s
WMQ                                 LR     LR
      comp=Z,330nm,25.1s
WMQ   Urumqi             87.78 315  P      P      17 22 31.1 +0.2
WMQ                                 pmax   pmax
      comp=Z,62nm,1.3s
WMQ   Urumqi             87.78 315  P      P      17 22 31.1 +0.2
WVOR  Wild Horse Val     87.85  46  P      P      17 22 31.6 +0.2
WVOR                                pmax   pmax
      comp=Z,61nm,1.4s
WVOR  Wild Horse Val     87.85  46  P      P      17 22 31.6 +0.2
LTY   Liberty            87.90  41  P      P      17 22 31.3 -0.2
LTY                                 IAmb   IAmb   17 22 45.8
      comp=Z,31nm,1.4s
BC3   Big Chuckawall     87.96  55  P      P      17 22 32.3 +0.2
      baz=256,SNR=9.2
F07A  Phinny Hill Vi     87.97  43  P      P      17 22 31.8 +0.1
F07A                                IAmb   IAmb   17 22 39.2
      comp=Z,25nm,1.1s
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GMRC	Granite Mounta	88.07	54	P	P	17 22 32.7	+0.1
	baz=256,SNR=8.5						
TPNV	Topopah Spring	88.15	52	P	P	17 22 33.2	+0.2
	baz=255,SNR=8.1						
TPNV	Topopah Spring	88.15	52	P	P	17 22 32.8	-0.2
TPNV				pmax	pmax		
	comp=Z,26nm,1.5s						
TPNV	Topopah Spring	88.15	52	P	P	17 22 32.8	-0.2
TPNV				IAmb	IAmb	17 22 44.2	
	comp=Z,26nm,1.4s						
GLA	Glamis	88.33	56	P	P	17 22 34.0	+0.3
	baz=256,SNR=5.2						
GLA	Glamis	88.33	56	P	P	17 22 34.2	+0.4
GLA				pmax	pmax		
	comp=Z,99nm,1.5s						
GLA	Glamis	88.33	56	P	P	17 22 34.1	+0.4
IRM	Iron Mountain	88.33	55	P	P	17 22 34.2	+0.4
	baz=256,SNR=13						
HAWA	Hanford	88.39	42	P	P	17 22 33.1	-0.6
HAWA				IAmb	IAmb	17 22 48.6	
	comp=Z,34nm,1.4s						
G08A	Pilot Rock	88.45	43	P	P	17 22 33.6	-0.5
G08A				IAmb	IAmb	17 22 41.5	
	comp=Z,23nm,1.2s						
E08A	Dider Farm, El	88.73	42	P	P	17 22 35.4	+0.1
E08A				IAmb	IAmb	17 22 43.0	
	comp=Z,48nm,1.5s						
SHPR	Sheep Range	88.89	53	P	P	17 22 37.3	+0.8
SHPR				IAmb	IAmb	17 22 51.6	
	comp=Z,43nm,1.4s						
NEE2	Needles Airpor	88.90	54	P	P	17 22 36.7	+0.4
	baz=256						
D08A	Wollman Farm,	88.98	42	P	P	17 22 35.4	-1.0
D08A				IAmb	IAmb	17 22 44.1	
	comp=Z,26nm,1.4s						
R11A	Troy Canyon, C	89.02	51	P	P	17 22 36.6	-0.4
	baz=256,SNR=13						
R11A	Troy Canyon, C	89.02	51	P	P	17 22 36.6	-0.4
R11A				IAmb	IAmb	17 22 51.7	
	comp=Z,35nm,1.4s						
B08A	Colville Reser	89.10	40	P	P	17 22 36.0	-1.1
113A	Mohawk Valley,	89.13	57	P	P	17 22 37.0	-0.4
113A				IAmb	IAmb	17 22 45.3	
	comp=Z,30nm,1.4s						
PDMCI	Parker Dam,Lak	89.17	55	P	P	17 22 37.7	0.0
	baz=257,SNR=9.8						
PRN	Pahroc Range	89.19	52	P	P	17 22 37.5	-0.4
E09A	Wood Farm, Sta	89.34	42	P	P	17 22 38.7	+0.6
E09A				IAmb	IAmb	17 22 52.0	
	comp=Z,26nm,1.5s						
BMO	Blue Mountains	89.45	44	P	P	17 22 38.4	-0.5
BMO				pmax	pmax		
	comp=Z,16nm,1.2s						
BMO	Blue Mountains	89.45	44	P	P	17 22 38.4	-0.5
W13A	Hualapai Mount	89.56	54	P	P	17 22 39.7	0.0
W13A				IAmb	IAmb	17 22 54.8	
	comp=Z,42nm,1.5s						
DGZ	Jazzator, Alta	89.67	321⇓	eP	P	17 22 39.2	-0.6
DGZ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
214A	Organ Pipe Nat	89.73	58	P	P	17 22 41.2	+0.8
	baz=257						
214A	Organ Pipe Nat	89.73	58	P	P	17 22 38.5	-1.9
214A				IAmb	IAmb	17 22 48.5	
	comp=Z,31nm,1.3s						
F10A	Beach Ranch, E	89.80	43	P	P	17 22 39.5	-0.9
F10A				IAmb	IAmb	17 22 59.4	
	comp=Z,46nm,1.5s						
ELK	Elko	89.86	49	P	P	17 22 40.4	-0.7
ELK				pmax	pmax		
	comp=Z,36nm,1.4s						
ELK	Elko	89.86	49	P	P	17 22 40.4	-0.7
ELK				IAmb	IAmb	17 22 56.8	
	comp=Z,36nm,1.4s						
INK	Inuvik	90.08	19	P	P	17 22 40.9	-0.2
INK				pmax	pmax		
	comp=Z,30nm,1.4s						
INK	Inuvik	90.08	19	P	P	17 22 40.9	-0.2
INK				IAmb	IAmb	17 22 55.6	
	comp=Z,30nm,1.4s						
MFID	Camas Ranch	90.10	46	P	P	17 22 42.1	+0.2
MFID				IAmb	IAmb	17 22 56.8	
	comp=Z,51nm,1.4s						
PSUT	Pine Spring	90.38	51	P	P	17 22 43.2	-0.2
NEW	Newport	90.49	41	P	P	17 22 44.2	+0.6
	baz=255						
NEW	Newport	90.49	41	P	P	17 22 42.5	-1.0
NEW				pmax	pmax		
	comp=Z,18nm,1.3s						
NEW	Newport	90.49	41	P	P	17 22 42.5	-1.0
LCMT	Little Creek M	90.50	53	P	P	17 22 43.2	-0.8
CCUT	Cedar City	90.53	52	P	P	17 22 43.7	-0.5
HSIG		90.68	61	P	P	17 22 44.3	-0.5
ZSN	Zaisan	90.69	318	eP	P	17 22 43.2	-1.3
	comp=Z,3.0nm,1.0s,baz=318						
ZSN	Zaisan	90.69	318	eP	P	17 22 43.1	-1.3
ZSN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
SZCU	Shurtz Canyon	90.76	52	P	P	17 22 45.9	+0.7
KNB	Kanab	90.83	53	P	P	17 22 46.1	+0.5
KNB				pmax	pmax		
	comp=Z,79nm,1.5s						
KNB	Kanab	90.83	53	P	P	17 22 46.1	+0.5
BELA	Belgrano 2	90.93	176	P	P	17 22 43.6	-1.4
U15A	North Rim	91.12	53	P	P	17 22 47.6	+0.5
U15A				IAmb	IAmb	17 23 06.1	
	comp=Z,33nm,1.2s						
HLID	Hailey	91.14	46	P	P	17 22 47.7	+0.8
	baz=256						
HLID	Hailey	91.14	46	P	P	17 22 46.9	+0.1
HLID				IAmb	IAmb	17 22 54.8	
	comp=Z,33nm,1.4s						
PKCU	Pink Cliffs	91.33	52	P	P	17 22 47.2	-0.8
X16A	Lo Mia Camp, P	91.38	55	P	P	17 22 49.0	+0.8
TCRU	Three Creeks R	91.47	51	P	P	17 22 47.9	-0.8
TUC	Tucson	91.49	58	P	P	17 22 49.4	+0.8
	baz=258						
BGU	Big Grassy Mou	91.54	49	P	P	17 22 48.1	-0.6
DUG	Dugway, Tooele	91.54	50	P	P	17 22 49.3	+0.6
	baz=257						
DUG	Dugway, Tooele	91.54	50	P	P	17 22 48.6	-0.1
DUG				pmax	pmax		
	comp=Z,28nm,1.4s						
DUG	Dugway, Tooele	91.54	50	P	P	17 22 48.6	-0.1
DUG				IAmb	IAmb	17 23 03.6	
	comp=Z,28nm,1.4s						
MTPU	Mount Pierson	91.55	52	P	P	17 22 49.1	0.0
MVU	Marysvale	91.63	51	P	P	17 22 49.7	+0.4
MSU	Marysvale	91.66	51	P	P	17 22 49.6	+0.2
MSU	Marysvale	91.66	51	P	P	17 22 49.6	+0.2
WUAZ	Wupatki	91.66	54	P	P	17 22 50.0	+0.6
	baz=258						
WUAZ	Wupatki	91.66	54	P	P	17 22 49.0	-0.4
WUAZ				IAmb	IAmb	17 22 58.0	
	comp=Z,18nm,1.1s						
HVU	Hansel Valley	91.91	48	P	P	17 22 49.6	-0.8
HVU				pmax	pmax		
	comp=Z,74nm,1.4s						
HVU	Hansel Valley	91.91	48	P	P	17 22 49.6	-0.8
BCYI	Bear Canyon	92.02	45	P	P	17 22 49.4	-1.6
NLU	North Lily Min	92.04	50	P	P	17 22 50.0	-1.1
SPUT	South Promonto	92.05	48	P	P	17 22 50.5	-0.6
JTMT	Jette	92.20	42	P	P	17 22 50.9	-0.7
JTMT				IAmb	IAmb	17 23 05.3	
	comp=Z,20nm,1.4s						
MSO	Missoula	92.22	43	P	P	17 22 52.0	+0.4
	baz=257						
MSO	Missoula	92.22	43	P	P	17 22 51.4	-0.3
MK31	Makanchi Array	92.24	317c	iP	P	17 22 50.9	-0.8
MKAR	Makanchi Array	92.24	317	P	P	17 22 51.3	-0.4
	comp=Z,11nm,0.8s,baz=94,slow=5.9,SNR=5.6						
MKAR				PP	PP	17 26 30.9	-1.4
	comp=Z,0.9nm,1.0s,baz=128,slow=2.0,SNR=3.3						
MKAR				LR	LR	18 05 59.0	
	comp=Z,210nm,18.9s,baz=92,slow=37						
MKAR	Makanchi Array	92.24	317	P	P	17 22 49.9	-1.7
MPU	Maple Canyon	92.38	50	P	P	17 22 52.7	0.0
ZAA0	Zalesovo Array	92.40	324	P	P	17 22 50.3	-1.8
ZAA0				IAmb	IAmb	17 22 57.9	
	comp=Z,20nm,1.1s						
ZALV	Zalesovo Beam	92.40	324	P	P	17 22 51.1	-1.0
	comp=Z,5.4nm,0.9s,baz=106,slow=5.3,SNR=17						
ZALV				LR	LR	18 06 00.7	
	comp=Z,134nm,18.7s,baz=107,slow=37						
ZALV	Zalesovo Beam	92.40	324	P	P	17 22 49.4	-2.7
CTU	Camp Tracy	92.44	49	P	P	17 22 52.7	-0.2
MAKZ	Makanchi	92.45	317	P	P	17 22 50.7	-2.0
MAKZ				pmax	pmax		
	comp=Z,46nm,1.2s						
MAKZ	Makanchi	92.45	317	P	P	17 22 50.7	-2.0
Q16A	Castle Valley	92.51	51	P	P	17 22 54.7	+1.4
MCMT	McKenzie Canyo	92.52	45	P	P	17 22 53.3	0.0
TMUT	Trail Mountain	92.56	51	P	P	17 22 54.5	+0.8
JLU	Jordanelle	92.64	49	P	P	17 22 54.1	+0.2
WALA	Waterton Lakes	92.75	41	P	P	17 22 53.6	-0.5
TCUT	Toone Canyon	92.78	49	P	P	17 22 53.9	-0.7
DLMT	Dillon	92.81	44	P	P	17 22 54.9	+0.4
W18A	Petrified Fore	92.89	55	P	P	17 22 55.4	+0.3
	baz=259						
P17A	Butcher Ranch,	92.95	51	P	P	17 22 55.6	+0.3
LRM	Limekiln Ridge	93.01	44	P	P	17 22 52.6	-3.0
SRU	San Rafael Swe	93.04	51	P	P	17 22 55.6	-0.2
SRU				pmax	pmax		
	comp=Z,18nm,1.5s						
SRU	San Rafael Swe	93.04	51	P	P	17 22 55.6	-0.2
SHLS	Shalkode	93.43	313	eP	P	17 22 54.4	-3.0
	comp=Z,13nm,1.3s,baz=313						
SHLS	Shalkode	93.43	313	eP	P	17 22 54.4	-3.0
SHLS				pmax	pmax		
	comp=Z,13nm,1.3s						
QLMT	Earthquake Lak	93.51	45	P	P	17 22 58.1	+0.3
BOZ	Bozeman (W)	93.52	44	P	P	17 22 58.6	+0.8
	baz=258						
BOZ	Bozeman (W)	93.52	44	P	P	17 22 57.7	-0.1
BOZ				pmax	pmax		
	comp=Z,43nm,1.4s						
BOZ	Bozeman (W)	93.52	44	P	P	17 22 57.7	-0.1
HRY	Holter Researc	93.61	43	P	P	17 22 57.8	-0.3
REDW	Red Top Meadow	93.63	47	P	P	17 22 58.9	+0.5
YHB	Horse Butte	93.66	45	P	P	17 22 59.7	+1.2
YHL	Hebgen Lake	93.68	45	P	P	17 22 58.9	+0.2
UZB	Uzynbulak	93.74	313	eP	P	17 22 57.6	-1.2
	comp=Z,10.0nm,1.4s,baz=313						
UZB	Uzynbulak	93.74	313	eP	P	17 22 57.6	-1.2
UZB				pmax	pmax		
	comp=Z,10.0nm,1.4s						
YMR	Madison River	93.80	45	P	P	17 23 00.1	+0.9
LOHW	Long Hollow	93.85	47	P	P	17 22 58.8	-0.7
FLWY	Flagg Ranch	93.87	46	P	P	17 22 59.3	-0.2
YHH	Holmes Hill	93.90	45	P	P	17 23 01.1	+1.3
YNR	Norris Junctio	94.01	45	P	P	17 23 01.8	+1.6
121A	Cookes Peak, D	94.02	58	P	P	17 23 00.7	+0.3
	baz=260						
H17A	Grant Village	94.02	46	P	P	17 23 01.3	+1.1
	baz=259						
H17A	Grant Village	94.02	46	P	P	17 23 00.7	+0.4
RDMU	Red Mountain	94.04	50	P	P	17 23 00.1	-0.2
KPKS	Kokpek	94.05	313	eP	P	17 22 58.6	-1.6
	comp=Z,13nm,1.9s,baz=313						
KPKS	Kokpek	94.05	313	eP	P	17 22 58.5	-1.6
KPKS				pmax	pmax		
	comp=Z,13nm,1.9s						
MVCO	Mesa Verde	94.26	53	P	P	17 23 01.3	-0.2
	baz=260						
SEM	Semipalatinsk	94.33	320	eP	P	17 22 59.1	-2.4
	comp=Z,4.7nm,1.4s,baz=320						
SEM	Semipalatinsk	94.33	320	eP	P	17 22 59.0	-2.4
SEM				pmax	pmax		
	comp=Z,5.0nm,1.4s						
BW06	Boulder Array	94.45	47	P	P	17 23 02.7	+0.5
	baz=260						
BW06	Boulder Array	94.45	47	P	P	17 23 01.3	-0.9
PD31	Pinedale Array	94.45	47	P	P	17 23 02.0	-0.2
PDAR	Pinedale Array	94.45	47	P	P	17 23 02.0	-0.2
	comp=Z,2.5nm,1.0s,baz=236,slow=1.6,SNR=13						
PDAR				LR	LR	17 59 28.3	
	comp=Z,324nm,20.0s,baz=263,slow=32						
TDK	Taldyqorghan	94.53	315	eP	P	17 23 00.9	-1.4
	baz=315						
TDK	Taldyqorghan	94.53	315	eP	P	17 23 00.8	-1.4
YNE	Yellowstone No	94.53	45	P	P	17 23 03.2	+0.7
RLMT	Red Lodge	95.07	45	P	P	17 23 05.2	+0.2
	baz=260						
EGMT	Eagleton	95.24	42	P	P	17 23 05.8	+0.3
	baz=260						
EGMT	Eagleton	95.24	42	P	P	17 23 05.5	0.0
EGMT				IAmb	IAmb	17 23 20.1	
	comp=Z,16nm,1.1s						
NRIK	Noril'sk	95.28	340	P	P	17 23 04.2	-0.8
	comp=Z,5.1nm,1.0s,baz=80,slow=6.2,SNR=7.2						
NRIK				LR	LR	18 03 42.3	
	comp=Z,201nm,21.9s,baz=114,slow=34						
NRIK	Noril'sk	95.28	340	P	P	17 23 03.4	-1.7
CHKK	Chushkaly	95.33	313	eP	P	17 23 04.0	-1.9
	baz=314						
CHKK	Chushkaly	95.33	313	eP	P	17 23 04.0	-1.9
KSH	Kashi	95.36	309	P	P	17 23 06.8	+0.5
KSH				pmax	pmax		
	comp=Z,12nm,1.2s						
YKA	Yellowknife Ar	95.38	27	P	P	17 23 05.1	-0.6
	comp=Z,2.3nm,0.9s,baz=251,slow=4.0,SNR=23						
YKA				PP	PP	17 26 53.7	-2.6
	comp=Z,1.0nm,1.1s,baz=250,slow=6.9,SNR=4.9						
YKA				LR	LR	17 59 08.2	
	comp=Z,457nm,21.1s,baz=0.0,slow=31						
KURK	Kurchatov	95.41	320⇓	eP	P	17 23 05.2	-0.9
KURK				pmax	pmax		
	comp=Z,15nm,1.7s						
KURK	Kurchatov	95.41	320	P	P	17 23 03.9	-2.2
KURK				IAmb	IAmb	17 23 12.0	
	comp=Z,18nm,1.3s						
ANMO	Albuquerque	95.51	56	P	P	17 23 07.2	0.0
	baz=261						
ANMO	Albuquerque	95.51	56⇓	eP	P	17 23 07.4	+0.2
ANMO				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ANMO	Albuquerque	95.51	56	P	P	17 23 06.7	-0.5
S22A	4UR Ranch, Cre	95.66	53	P	P	17 23 08.8	+0.8
	baz=261						
KUU	Kurty	95.80	313	eP	P	17 23 05.8	-2.3
	comp=Z,14nm,1.4s,baz=314						
KUU	Kurty	95.80	313	eP	P	17 23 05.8	-2.3
KUU				pmax	pmax		
	comp=Z,14nm,1.4s						
MNTX	Cornudas Mount	95.90	59	P	P	17 23 09.1	+0.3
	baz=261						
N23A	Red Feather La	96.81	50	P	P	17 23 13.1	+0.1
	baz=262						
AAK	Ala-Archa	96.94	312⇓	eP	P	17 23 12.5	-1.0
AAK				pmax	pmax		
	comp=Z,8.0nm,1.5s						
TXAR	Lajitas Array	97.01	62	LR	LR	17 57 41.1	
	comp=Z,543nm,22.0s,baz=0.0,slow=30						
TXAR				P	P	17 23 15.2	+1.1
	comp=Z,0.2nm,0.4s,baz=205,slow=4.0,SNR=1.2						
LAO	LASA Array	97.41	44	P	Pdif	17 23 16.1	+0.6
	baz=262						
LAO	LASA Array	97.41	44	P	Pdif	17 23 15.4	-0.1
BTLS	Baital	97.59	314	eP	P	17 23 14.2	-1.9
	comp=Z,3.8nm,1.7s,baz=314						
BTLS	Baital	97.59	314	eP	P	17 23 14.2	-1.9
BTLS				pmax	pmax		
	comp=Z,4.0nm,1.7s						
BRZS	Berezniki	99.08	319	eP	Pdif	17 23 21.4	-1.3
	baz=319						
BRZS	Berezniki	99.08	319	eP	Pdif	17 23 21.4	-1.3
BRVK	Borovoye	100.82	322⇑	eP	Pdif	17 23 30.0	-0.4
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ARCES	ARCESS Array B	115.62	345	PKP	PKiKP	17 28 23.0	-0.3
	comp=Z,2.1nm,0.7s,baz=357,slow=4.9,SNR=5.3						
KBZ	Khabaz	119.82	314	PKP	PKiKP	17 28 33.4	+1.2
	comp=Z,0.7nm,0.6s,baz=149,slow=5.9,SNR=1.6						
KIV	Kislovodsk	119.91	315	i PKIKP	PKiKP	17 28 39.4	+6.9
KIV				pmax	pmax		
	comp=Z,15nm,1.0s						
KIV				MLR	MLR		
	comp=Z,506nm,22.0s						
FINES	FINESS Array B	120.90	338	PKP	PKPdf	17 28 32.8	-0.9
	comp=Z,2.8nm,1.0s,baz=113,slow=3.6,SNR=1.2						
NACGM	Naroch	124.66	332	i PKP	PKiKP	17 28 41.8	+0.4
NACGM				i PKP	PKiKP	17 28 41.8	+0.4
NACGM				i PKP	PKiKP	17 28 41.8	+0.4
NACGM				i PP	PP	17 30 12.9	-15
NACGM				i PPP	PPP	17 31 45.5	
NACGM				i SS	SS	17 47 03.7	-16
NACGM				i SSS	SSS	17 51 41.6	
NACGM				i LR	LR	18 20 22.8	
CPUP	Villa Florida	125.37	133	PKP	PKPdf	17 28 42.4	-1.0
	comp=Z,2.5nm,0.9s,baz=14,slow=4.2,SNR=2.9						
AKASG	Malin Array Be	125.75	326	PKP	PKPdf	17 28 43.0	-0.3
	comp=Z,1.9nm,0.8s,baz=58,slow=2.8,SNR=9.1						
AKASG	Malin Array Be	125.75	326	PKIKP	PKPdf	17 28 43.0	-0.3
AKASG	Malin Array Be	125.75	326	PKPdf	PKPdf	17 28 41.1	-2.1
NB2	NORSAR Subarra	125.97	344	PKPdf	PKPdf	17 28 43.1	-0.4
	comp=Z,1.7nm,1.0s,baz=39,slow=1.9						
NOA	NORSAR Array B	125.97	344	PKP	PKPdf	17 28 42.5	-1.0
	comp=Z,21nm,0.5s,baz=33,slow=2.0,SNR=4.1						
SDV	Santo Domingo	126.00	87	PKP	PKiKP	17 28 45.7	+0.2
	comp=Z,1.7nm,0.3s,baz=236,slow=18,SNR=1.5						
BRTR	Keskin Array B	127.62	312	PKP	PKPdf	17 28 47.4	0.0
	comp=Z,1.2nm,0.8s,baz=242,slow=2.7,SNR=5.0						
BURAR	Bucovina Array	129.62	325	PKPdf	PKPdf	17 28 51.0	+0.1
KOLS	Kolonicke sedl	130.46	328	ePKIKP	PKiKP	17 28 53.4	+0.2
KOLS	Kolonicke sedl	130.46	328	ePKP	PKiKP	17 28 53.4	+0.2
UZH	Uzhgorod	130.64	327	ePKHKP	PKPpre	17 28 35.4	
UZH				e		17 28 50.0	
CRVS	Cervenica-Dubn	130.91	328	ePKIKP	PKiKP	17 29 00.8	+6.7
CRVS	Cervenica-Dubn	130.91	328	e	PKiKP	17 29 00.8	+6.7
DPC	Dobruska-Polom	132.45	333	ePKIKP	PKiKP	17 29 02.2	+5.0
DPC	Dobruska-Polom	132.45	333	epPKP	PKiKP	17 29 02.2	+5.0
VYHS	Vyhne	132.51	329	ePKIKP	PKiKP	17 28 58.7	+1.4
VYHS	Vyhne	132.51	329	ePKP	PKiKP	17 28 58.7	+1.4
BRG	Berggiesshubel	133.12	334	ePKP	PKiKP	17 28 59.2	+0.7
BRG				Amp		17 29 06.4	
	comp=Z,6.2nm,1.2s						
MODS	Modra-Piesok	133.37	330	ePKIKP	PKiKP	17 28 59.0	-0.1
MODS	Modra-Piesok	133.37	330	ePKP	PKiKP	17 28 59.0	-0.1
CKRC	Cesky Krumlov	134.46	332	ePKPDF	PKPdf	17 29 00.0	+0.1
CKRC				ex	x	17 29 05.4	
KHC	Kasperske Hory	134.57	333c	iPKIKP	PKiKP	17 29 01.2	-0.3
KHC				pmax	pmax		
	comp=Z,17nm,1.7s						
KHC	Kasperske Hory	134.57	333	ePKPDF	PKiKP	17 29 01.0	-0.5
GERES	GERESS Array B	134.72	333	PKP	PKPdf	17 29 00.4	-0.1
	comp=Z,1.0nm,0.7s,baz=90,slow=1.7,SNR=5.8						
GERES	GERESS Array B	134.72	333	PKIKP	PKPdf	17 29 00.9	+0.4
GERES	GERESS Array B	134.72	333	PKPdf	PKPdf	17 29 00.9	+0.4
ABTA	Abfaltersbach	136.80	332	eP	PKiKP	17 29 06.1	-0.2
	comp=Z,3.3nm,0.9s						
WTTA	Wattenberg	136.82	333	eP	PKiKP	17 29 11.9	+5.5
	comp=Z,3.6nm,0.8s						
MOTA	Moosalm	137.00	333	eP	PKiKP	17 29 11.8	+5.1
FETA	Feichten	137.41	333	eP	PKiKP	17 29 08.5	+1.0
	comp=Z,16nm,1.8s						
KEST	Kesra	146.22	322	PKPbc	PKPbc	17 29 22.7	+0.1
	comp=Z,14nm,1.0s,baz=277,slow=11,SNR=5.9						
PBRG	Braganca	148.02	347	ePKPab	PKPab	17 29 33.5	+3.4
POLO	Lamas de Olo	148.65	348	ePKPbc	PKiKP	17 29 30.6	-0.1
POLO	Lamas de Olo	148.65	348	ePKPab	PKPab	17 29 35.0	+2.3
MVO	Moncorvo	148.69	347	ePKPab	PKPab	17 29 35.5	+2.6
ESDC	Sonseca Array	149.29	342	PKPbc	PKPbc	17 29 30.4	-0.5
PVIS	Viseu	149.31	348	ePKPbc	PKiKP	17 29 32.2	+0.2
PAB	San Pablo	149.53	342	PKP2	PKPbc	17 29 31.0	-0.5
PAB	San Pablo	149.53	342		PKPbc	17 29 31.0	-0.5
MTE	Manteigas	149.54	348	ePKPab	PKPab	17 29 38.0	+1.7
PCBR	Castelo Branco	150.06	347	ePKPab	PKPab	17 29 38.8	+0.5
PMRV	Marv??o	150.44	347	ePKPbc	PKiKP	17 29 34.4	+0.1
PMRV	Marv??o	150.44	347	ePKPab	PKPab	17 29 39.5	-0.4
PMTG	Montargil	150.96	348	ePKPbc	PKiKP	17 29 35.7	+0.3
MDT	Midelt	155.71	337	PKPab	PKPab	17 30 03.3	+0.9
	comp=Z,12nm,0.9s,baz=56,slow=5.4,SNR=5.7						
TORD	Torodi Ar. Bea	162.71	280	PKP	PKPdf	17 29 44.8	0.0
	comp=Z,2.6nm,1.1s,baz=29,slow=3.3,SNR=6.9						
TORD				PKPab	PKPab	17 30 32.5	-0.9
	comp=Z,1.2nm,0.8s,baz=35,slow=3.5,SNR=1.4						
KOWA	Kowa	167.90	289	PKP	PKPdf	17 29 48.7	-0.3
	comp=Z,0.7nm,0.4s,baz=18,slow=3.5,SNR=4.4						
KOWA				PKPab	PKPab	17 30 55.5	-0.7
	comp=Z,1.9nm,0.8s,baz=77,slow=5.7,SNR=2.1						
KOWA	Kowa	167.90	289		PKPdf	17 29 47.0	-2.1

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*TRN **18** 17:15:13.1, 10°.46N×62°.64W, h1^{km}, MD3.6*

*FUNV **18** 17:15:13.5, 10°.44N×62°.62W, h1^{km}, MW3.1*

ISC 18 17:15:13.1±1.2, **10°.44N**±0°.04×**62°.67W**±0°.03, **h8**^{km}±10^{km}, **n22,** σ**1^s.09**/36, **Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRUV	Carupano	0.60	293	eP	Pg	17 15 24.8	0.0
CRUV				eS	Sg	17 15 33.1	+0.5
TPP	Pointe-a-Pierr	1.21	96	eP	Pb	17 15 36.0	-0.1
TPP				eS	Sn	17 15 53.8	+0.9
TRN	Trinidad (W)	1.26	80	eP	Pg	17 15 36.2	-1.1
TRN				eS	Sb	17 15 53.9	+0.3
TRN	Trinidad (W)	1.26	80	eP	Pg	17 15 36.1	-1.2
ORIV	Oritupano	1.54	208	i P	Pn	17 15 42.7	+1.8
ORIV				eS	Sg	17 16 04.0	+1.2
ORIV	Oritupano	1.54	208	eP	Pn	17 15 41.9	+1.0
ORIV				eS	Sn	17 16 03.2	+2.0
TBH	Brigand Hill	1.58	88	eP	Pn	17 15 41.8	+0.3
PCRV	Puerto La Cruz	1.95	262	eP	Pn	17 15 47.2	+0.6
PCRV				eS	Sn	17 16 12.1	+0.8
GRGR	Grenville	1.96	31	eP	Pn	17 15 47.8	+1.2
GRGR				eS	Sb	17 16 13.1	-0.5
GCMP	Grenada, Carri	2.37	31	eP	Pn	17 15 52.8	+0.4
GCMP				eS	Sn	17 16 21.9	+0.2
RIOV	Rio Grande	2.50	160	eP	Pn	17 15 54.5	+0.3
SVB	Belmont	3.14	26	eP	Pn	17 16 04.1	+1.2
SVB				eS	Sn	17 16 41.4	+0.7
BIRV	Birongo	3.54	271	eP	Pn	17 16 09.5	+1.0
BIRV				eS	Sn	17 16 49.4	-1.2
MCLT	Moule a Chique	3.66	27	eP	Pn	17 16 11.2	+1.1
MCLT				eS	Sn	17 16 53.2	-0.4
SLBI	Saint Lucia, B	3.93	25	eP	Pn	17 16 15.4	+1.6
SLBI				eS	Sn	17 16 59.9	-0.2
TACV	Tcata	4.30	266	eP	Pn	17 16 19.6	+0.7
TACV				eS	Sn	17 17 08.3	-1.0
LUEV	Luepa	4.72	165	eP	Pn	17 16 24.0	-0.8
BAUV	El Baul	5.50	255	eP	Pn	17 16 35.0	-0.4
BAUV				eS	Sn	17 17 35.8	-3.2
MAPV	Macapo	5.73	264	eP	Pn	17 16 38.8	+0.2
SANV	Sanarito	6.83	263	eP	Pn	17 16 53.5	-0.2
PAYV	Puerto Ayacuch	7.02	225	eP	Pn	17 16 55.6	-0.7
MONV	Montecano	7.32	283	eP	Pn	17 16 59.9	-0.6

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*IDC **18** 17:18:28.9±3.5, 29°.09N×86°.16E, h0^{km}, mb3.5/3, mb1 3.7/4, mb1mx3.4/38, mbtmp3.5/4, ML3.1/1, MS3.9/1, Ms1 3.9/1, ms1mx3.2/36, Error ellipse: s-maj=115.1km s-min=29.9km az=80.0*

ISC 18 17:18:34.2±2.0, **29°.3N**±0°.2×**86°.3E**±0°.2, **h35**^{km}, **n7,** σ**1^s.67**/6, **mb3.5**/3, **Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSA	Lhasa	4.26	83	P	Pn	17 19 36.8	-0.2
LSA				LR	LR		
	comp=N,770nm,9.3s						
LSA				LR	LR		
	comp=E,760nm,9.6s						
LSA				LR	LR		
	comp=Z,840nm,7.1s						
WMQ	Urumqi	14.56	4	eP	P	17 22 02.3	-1.4
WMQ				smax	smax		
	comp=N,9.0nm,1.1s						
WMQ				smax	smax		
	comp=E,8.0nm,1.1s						
MKAR	Makanchi Array	17.76	351	P	P	17 22 39.8	+0.6
	comp=E,0.1nm,0.3s,baz=174,slow=12,SNR=8.9						
SONM	Songino Array	24.18	34	P	P	17 23 49.1	+1.8
	comp=E,0.7nm,0.5s,baz=228,slow=10,SNR=5.0						
GUMO	Guam	56.19	93	LR	LR	17 52 27.6	
	comp=E,100nm,18.8s,baz=272,slow=36						
WRA	Warramunga Arr	67.39	131	P	P	17 29 27.3	+1.0
	comp=E,0.5nm,0.7s,baz=325,slow=6.3,SNR=5.1						
ASAR	Alice Springs	69.77	134	P	P	17 29 39.8	-1.3
	comp=E,0.3nm,0.7s,baz=314,slow=5.8,SNR=7.0						

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*IDC **18** 17:25:12.1±1.2, 11°.11S×164°.46E, h0^{km}, mb4.1/13, mb1 4.2/14, mb1mx4.1/30, mbtmp4.0/14, ML4.2/1, MS3.9/7, Ms1 3.9/7, ms1mx3.6/29, Error ellipse: s-maj=39.6km s-min=18.9km az=133.0*

*NEIC **18** 17:25:14.8±1.2, 10°.87S±0°.07×164°.13E±0°.10, h16^{km}±4^{km}, mb4.7/16, Error ellipse: s-maj=14.5km s-min=9.4km az=64.0*

*BJI **18** 17:25:17.0±0.0, 10°.80S×164°.20E, h22^{km}, mB5.1/5, mb4.4/8, Ms7 4.4/1*

ISC 18 17:25:17.4±0.5, **10°.91S**±0°.07×**164°.15E**±0°.08, **h29**^{km}, **n56,**

σ1ˢ.41/51, mb4.3/23, MS4.0/5, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.39	289	Pn	Pn	17 26 21.3	-0.9
	13nm,0.3s,baz=166,slow=4.2,SNR=13						
HNR				Sn	Sn	17 27 12.4	-0.1
	11nm,0.3s,baz=208,slow=22,SNR=1.1						
HNR				LR	LR	17 27 38.3	
	comp=Z,369nm,20.0s,baz=146,slow=31						
HNR	Honiara	4.39	289		Pn	17 26 20.2	-2.0
HNR	Honiara	4.39	289	P	Pn	17 26 21.6	-0.6
SANVU	Saraoutou	5.40	147	Pn	Pn	17 26 35.4	-0.6
DZM	Mont Dzumac	11.31	169	Pn	Pn	17 27 59.8	+2.5
	1.0nm,0.3s,baz=357,slow=24,SNR=18						
DZM				Sn	Sn	17 30 02.4	-0.4
	0.1nm,0.3s,baz=82,slow=20,SNR=1.7						
DZM				LR	LR	17 31 23.4	
	comp=Z,714nm,19.2s,baz=356,slow=34						
DZM	Mont Dzumac	11.31	169	Pn	Pn	17 27 56.1	-1.1
DZM	Mont Dzumac	11.31	169	P	Pn	17 27 59.7	+2.5
MANU	Manus Island	18.85	297	P	P	17 29 32.2	-3.1
CTA	Charters Tower	19.50	240	P	Pn	17 29 44.8	+1.0
	0.4nm,0.3s,baz=64,slow=11,SNR=8.5						
CTAO	Charters Tower	19.50	240		Pn	17 29 44.0	+0.2
STKA	Stephens Creek	29.48	222	P	P	17 31 20.2	+1.1
	7.8nm,0.9s,baz=31,slow=10,SNR=9.6						
STKA	Stephens Creek	29.48	222	P	P	17 31 18.0	-1.1
WRA	Warramunga Arr	30.07	249	P	P	17 31 23.4	-1.0
	1.6nm,0.7s,baz=77,slow=8.9,SNR=7.7						
WRA				LR	LR	17 43 33.8	
	comp=Z,302nm,18.7s,baz=15,slow=36						
H11N1	WAKE ISLAND Hy	30.55	5	T	T	18 03 08.3	
	baz=184,slow=76,SNR=25						
H11N3	WAKE ISLAND Hy	30.56	5	T	T	18 03 08.5	
	baz=184,slow=76,SNR=19						
H11N2	WAKE ISLAND Hy	30.57	5	T	T	18 03 18.8	
	baz=184,slow=76,SNR=18						
ASAR	Alice Springs	31.46	242	P	P	17 31 35.2	-1.5
	0.6nm,0.5s,baz=64,slow=10.0,SNR=16						
ASAR				LR	LR	17 43 20.1	
	comp=Z,274nm,20.1s,baz=6.0,slow=34						
ASAR	Alice Springs	31.46	242	P	P	17 31 35.1	-1.6
RPZ	Rata Peaks	33.23	171	P	P	17 31 53.9	+2.0
	5.8nm,0.8s,baz=118,slow=10,SNR=4.0						
RPZ	Rata Peaks	33.23	171	P	P	17 31 51.7	-0.2
RPZ				IAmb	IAmb	17 31 56.7	
	comp=Z,14nm,1.2s						
FITZ	Fitzroy Crossi	37.91	255	P	P	17 32 31.2	-1.2
JCJ	Chichijima	43.38	331	P	P	17 33 19.1	+1.6
	comp=Z,195nm,0.9s,baz=263,slow=18,SNR=2.3						
PPT	Papeete	45.25	104	LR	LR	17 50 17.5	
	comp=Z,214nm,19.5s,baz=330,slow=34						
JNU	Nakatsue	54.07	325	LR	LR	17 53 19.0	
	comp=Z,118nm,20.5s,baz=116,slow=31						
ASAJ	Asahikawa	58.16	342	LR	LR	17 54 44.5	
	comp=Z,213nm,21.6s,baz=198,slow=30						
USRK	Ussuriysk Ar.	62.14	334	P	P	17 35 37.5	+1.7
	comp=Z,1.9nm,0.8s,baz=151,slow=3.3,SNR=3.0						
ENH	Enshi	66.60	310	P	P	17 36 08.0	+2.6
SLVN	Son La	67.27	299	P	P	17 36 09.7	-0.1
SLVN				IAmb	IAmb	17 36 25.1	
	comp=Z,5.2nm,1.1s						
CMAR	Chiang Mai Arr	70.63	294	P	P	17 36 33.6	+2.9
	comp=Z,1.2nm,0.8s,baz=114,slow=5.1,SNR=8.8						
CMAR	Chiang Mai Arr	70.63	294	P	P	17 36 31.2	+0.5
LZH	Lanzhou	73.51	313	*e*P	P	17 36 54.1	+6.2
LZH				pP	pwP	17 36 58.6	-4.8
LZH				sP	PcP	17 37 01.9	-1.9
LZH				pmax	pmax		
	comp=Z,12nm,1.1s						
SONM	Songino Array	77.64	324	P	P	17 37 12.9	+1.7
	comp=Z,1.0nm,0.8s,baz=148,slow=8.5,SNR=3.5						
QSPA	South Pole Qui	79.09	180	P	P	17 37 19.8	+0.8
QSPA				IAmb	IAmb	17 37 37.3	
	comp=Z,7.9nm,1.2s						
IMAR	Indian Mountai	82.72	16	P	P	17 37 37.5	-0.6
HDA	Harding Lake	83.63	19	P	P	17 37 42.3	-0.5
HDA				IAmb	IAmb	17 37 49.8	
	comp=Z,5.6nm,0.9s						
ILAR	Eielson Array	83.89	19	P	P	17 37 43.6	-0.4
	comp=Z,1.0nm,1.0s,baz=267,slow=5.9,SNR=6.0						
ILAR	Eielson Array	83.89	19	P	P	17 37 43.2	-0.9
BCAR	Beaver Creek A	84.54	22	P	P	17 37 47.0	-0.5
EGAK	Eagle	85.79	21	P	P	17 37 53.7	0.0
BMAR	Burnt Mountain	86.34	18	P	P	17 37 56.8	+0.4
LHV	Little Huntoon	86.93	50	P	P	17 38 01.1	+1.3
LHV				IAmb	IAmb	17 38 16.2	
	comp=Z,10.0nm,1.5s						
NVAR	Mina Array Bea	87.14	50	P	P	17 38 00.5	-0.7
	comp=Z,1.2nm,1.0s,baz=221,slow=5.4,SNR=3.7						
NVAR	Mina Array Bea	87.14	50	P	P	17 37 58.9	-2.2
NV11	Mina Array Sit	87.25	50	P	P	17 38 01.0	-0.6
NV11				IAmb	IAmb	17 38 05.6	
	comp=Z,7.2nm,1.4s						
I07A	Izee	87.89	44	P	P	17 38 03.5	-1.0
WMQ	Urumqi	87.90	315	*e*P	P	17 38 05.3	+0.8
PRN	Pahroc Range	89.35	52	P	P	17 38 11.4	-0.2
PRN				IAmb	IAmb	17 38 15.1	
	comp=Z,7.2nm,1.4s						
BELA	Belgrano 2	90.73	176	P	P	17 38 14.9	-2.3
MK31	Makanchi Array	92.36	317	P	P	17 38 24.7	-0.5
MK31				IAmb	IAmb	17 38 35.6	
	comp=Z,3.3nm,1.2s						
MKAR	Makanchi Array	92.36	317	P	P	17 38 25.2	0.0
	comp=Z,0.9nm,0.7s,baz=96,slow=5.7,SNR=7.8						
MKAR	Makanchi Array	92.36	317	P	P	17 38 24.4	-0.9
ZALV	Zalesovo Beam	92.53	324	P	P	17 38 25.2	-0.6
	comp=Z,0.4nm,0.5s,baz=77,slow=6.2,SNR=1.8						
PDAR	Pinedale Array	94.61	47	P	P	17 38 35.1	-0.9
	comp=Z,0.3nm,0.9s,baz=227,slow=3.6,SNR=1.9						
PDAR	Pinedale Array	94.61	47	P	P	17 38 34.8	-1.2
YKA	Yellowknife Ar	95.57	27	P	P	17 38 37.6	-2.0
	comp=Z,0.4nm,0.9s,baz=245,slow=4.0,SNR=3.1						
KURBB	Kurchatov Arra	95.58	320	P	P	17 38 41.6	+1.7
	comp=Z,0.2nm,0.2s,baz=79,slow=5.0,SNR=1.6						

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*IDC **18** 17:28:52.6±1.1, 27°.33N×56°.18E, h0km, mb4.0/16, mb1 4.0/19, mb1mx3.9/44, mbtmp3.9/19, ML3.5/3, Error ellipse: s-maj=24.4km s-min=18.1km az=12.0*
*THR **18** 17:28:53.7±0.3, 27°.38N×56°.20E, h14km±6km, ML3.9*
*OMAN **18** 17:28:53.1, 27°.58N×56°.44E, h5km, ml3.8/14*
*TEH **18** 17:28:53.4, 27°.43N×56°.26E, h7km, ML4.0*
*DSN **18** 17:28:55.1±1.7, 27°.48N×56°.41E, h10km, ML4.0/11, Error ellipse: s-maj=39.2km s-min=14.8km az=87.0*
*NEIC **18** 17:28:56.3±2.3, 27°.48N±0°.05×56°.3E±0°.1, h28km±7km, Error ellipse: s-maj=18.9km s-min=6.1km az=103.0*
ISC 18 17:28:53.0±1.2, **27°.48N**±0°.02×**56°.21E**±0°.04, **h0**km±9km, **n133**, σ1ˢ.**88**/140, **mb4.0**/28, **Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GENO	Geno	0.09	206	*e*Pg	Pg	17 28 55.7	+1.0
KHNJ	Kahnooj	1.40	70	*e*Pg	Pb	17 29 19.7	-0.5
SHME	Shamm	1.42	183	*e*P	Pn	17 29 19.8	-0.3
	SNR=20						
SHME	Shamm	1.42	183	*e*Pn	Pb	17 29 20.4	0.0
SHME	Shamm	1.42	183	P	Pn	17 29 20.1	-0.1
	SNR=19						
SHME				S	Sn	17 29 43.0	+3.4
BANOM	Banah	1.55	177	*e*P	Pn	17 29 22.3	+0.4
	SNR=88						
BANOM				S	Sg	17 29 44.2	+1.3
BANOM	Banah	1.55	177	*e*Pn	Pn	17 29 22.3	+0.4
BANOM	Banah	1.55	177	P	Pn	17 29 22.3	+0.4
	SNR=52						
BANOM				S	Sg	17 29 44.7	+1.9
LAR1	LAR	1.64	277	*e*Pg	Pg	17 29 25.3	+0.7
LAR1				*e*		17 30 13.7	
	comp=Z,99nm,0.5s						
UMQ	Umm Al-Quwin	2.00	194	*e*Pn	Pg	17 29 31.6	+0.1
UMQ	Umm Al-Quwin	2.00	194	P	Pg	17 29 32.2	+0.7
MASF	Masafi	2.10	181	P	Pb	17 29 30.9	-1.1
	SNR=62						
MASF				S	Sb	17 29 58.4	-0.2
MSFE	Esma-Masafi	2.11	181	*e*P	Pn	17 29 30.7	+1.1
	SNR=63						
MSFE	Esma-Masafi	2.11	181	*e*Pn	Pn	17 29 30.6	+1.0
MDH	Madha	2.17	178	*e*P	Pn	17 29 31.7	+1.3
	SNR=16						
MDH	Madha	2.17	178	*e*Pn	Pn	17 29 31.2	+0.8
MDH	Madha	2.17	178	P	Pn	17 29 31.6	+1.1
	SNR=14						
MDH				S	Sb	17 29 59.3	-1.4
	SNR=30						
NGRK	Negar Kerman	2.21	12	*e*Pn	Pb	17 29 33.3	-0.8
NGRK				*e*		17 30 11.4	
	comp=Z,99nm,0.6s						
UOSS	Minazif	2.52	180	*e*P	Pn	17 29 35.7	+0.5
	SNR=20						
UOSS	Minazif	2.52	180	Pn	Pn	17 29 34.5	-0.8
UOSS	Minazif	2.52	180	P	Pn	17 29 36.0	+0.7
NAZ	Nazwa, Dubai	2.53	191	*e*P	Pb	17 29 38.4	-0.9
	SNR=5.4						
NAZ	Nazwa, Dubai	2.53	191	*e*Pn	Pb	17 29 37.9	-1.4
NAZ	Nazwa, Dubai	2.53	191	P	Pb	17 29 38.4	-0.9
	SNR=5.7						
KRBR	Kerman	2.54	11	*e*Pn	Pb	17 29 38.2	-1.5
KRBR				*e*Sg	Sg	17 30 16.6	+1.8
KRBR				IAML		17 30 20.4	
	comp=N,686nm,0.6s						
KRBR				IAML		17 30 20.8	
	comp=Z,302nm,0.5s						
KRBR	Kerman	2.54	11	*e*Pn	Pb	17 29 38.2	-1.5
TVBK	TV Kerman	2.55	11	*e*Pn	Pb	17 29 39.2	-0.6
TVBK				*e*		17 30 19.6	
	comp=Z,99nm,0.6s						
JHRM	Jahrom	2.55	294	*e*Pn	Pn	17 29 37.5	+1.8
JHRM				*e*		17 30 50.2	
	comp=Z,99nm,0.7s						
HATD	Hatta, Dubai	2.64	182	P	Pb	17 29 39.2	-2.1
HATD	Hatta, Dubai	2.64	182	*e*Pn	Pn	17 29 37.8	+0.9
HATD	Hatta, Dubai	2.64	182	P	Pb	17 29 39.4	-1.8
	SNR=23						
HATD				S	Sg	17 30 19.9	+2.0
	SNR=13						
CHMN	Cheshme madani	2.65	26	*e*Pn	Pb	17 29 39.7	-1.8
CHMN				*e*		17 30 25.2	
	comp=Z,99nm,0.5s						
FAQ	Al Faqa, Dubai	2.78	192	*e*P	Pb	17 29 41.6	-2.0
	SNR=8.8						
FAQ	Al Faqa, Dubai	2.78	192	*e*Pn	Pn	17 29 41.2	+2.4
FAQ	Al Faqa, Dubai	2.78	192	P	Pb	17 29 41.6	-2.0
	SNR=8.8						
ASHO	Ashiyiah	2.78	183	*e*P	Pn	17 29 40.1	+1.2
	SNR=13						
ASHO	Ashiyiah	2.78	183	*e*Pn	Pn	17 29 40.3	+1.3
ASHO	Ashiyiah	2.78	183	P	Pn	17 29 40.2	+1.3
KHGB	Koh Gabri	2.90	4	*e*Pn	Pn	17 29 42.9	+2.2
KHGB				*e*		17 30 35.0	
	comp=Z,99nm,0.9s						
ASUD	Al Ashush, Dub	2.95	196	*i* P	Pn	17 29 43.3	+2.2
	SNR=7.1						
ASUD	Al Ashush, Dub	2.95	196	*e*Pn	Pn	17 29 43.8	+2.7
ASUD	Al Ashush, Dub	2.95	196	P	Pn	17 29 43.5	+2.4
	SNR=7.4						
AJN	Ajban	3.10	201	*e*Pn	Pn	17 29 46.2	+2.9
SOHO	SOHO	3.34	175	P	Pn	17 29 47.8	+1.3
SOHO	SOHO	3.34	175	*e*Pn	Pn	17 29 46.2	-0.3
SOHO	SOHO	3.34	175	P	Pn	17 29 49.4	+2.9
ALNE	Al Ain	3.43	187	*e*Pn	Pn	17 29 49.6	+1.8
JRN	Qarnain Island	3.94	231	*e*Pn	Pn	17 29 56.7	+2.0
HOQ	Hoqain	4.00	165	P	Pn	17 29 56.2	+0.5
	SNR=8.5						
ARQ	Araqi	4.13	176	P	Pn	17 29 59.2	+1.8
IBAF	Bafgh	4.14	352	*e*Pn	Pn	17 29 59.2	+1.5
IMEH	Mehriz	4.14	341	*e*Pn	Pn	17 30 00.4	+2.6
CHBR	Chabahar	4.26	115	*e*Pn	Pn	17 29 59.8	+0.6
CHBR	Chabahar	4.26	115	*e*Pn	Pn	17 29 59.8	+0.6
BIDO	Bidbid	4.30	156	*e*Pn	Pn	17 29 59.1	-0.7
BIDO	Bidbid	4.30	156	P	Pn	17 30 00.3	+0.6
ZHSF	Zahedan	4.54	61	*e*Pn	Pn	17 30 05.2	+2.1
ZHSF	Zahedan	4.54	61	*e*Pn	Pn	17 30 05.3	+2.1
UMZA	Um Al Zommool	4.84	192	*e*Pn	Pn	17 30 08.6	+1.5
YZKH	Yazd	5.09	344	*e*Pn	Pn	17 30 13.2	+2.4
YZKH				*e*Sg	Sg	17 31 34.4	-2.4
YZKH	Yazd	5.09	344	*e*Pn	Pn	17 30 13.2	+2.4
BSRN	Basiran	5.14	29	*e*Pn	Pn	17 30 13.8	+2.4
BSRN	Basiran	5.14	29	*e*Pn	Pn	17 30 13.8	+2.4
NHDN	Nehbandan	5.14	40	*e*Pn	Pn	17 30 13.7	+2.3
KLNJ	Kolanjah	5.36	312	*e*Pn	Pn	17 30 16.1	+1.5
IRAM	Ramesheh	5.46	323	*e*Pn	Pn	17 30 17.9	+2.1
IKOO	Kooshah	5.49	25	*e*Pn	Pn	17 30 18.5	+2.1
TPRV	Parvadeh(Tabas	5.55	4	*e*Pn	Pn	17 30 19.3	+2.3
ITEG	Tejag	5.83	21	*e*Pn	Pn	17 30 22.8	+1.9
ANAR	Anarak	6.09	340	*e*Pn	Pn	17 30 26.4	+2.0
IGAR	Gharneh	6.10	325	*e*Pn	Pn	17 30 26.4	+1.7
IDAH	Dahanechah	6.12	30	*e*Pn	Pn	17 30 28.9	+3.8
TKDS	Koohdasht(Taba	6.17	7	*e*Pn	Pn	17 30 28.0	+2.5
IZEF	Zefreh	6.36	329	*e*Pn	Pn	17 30 30.7	+2.4
AFRZ	Afriz	6.40	21	*e*Pn	Pn	17 30 31.4	+2.6
TNSJ	Nastanj	6.47	3	*e*Pn	Pn	17 30 33.1	+3.4
IPIR	Pirpir	6.94	320	*e*Pn	Pn	17 30 38.2	+1.9
IKLH	Kolahrood	7.07	327	*e*Pn	Pn	17 30 39.3	+1.3
KRSH	Karshahi	7.36	333	*e*Pn	Pn	17 30 44.2	+2.2
UMR	Umm Al-Rimmam	7.76	287	*e*P		17 30 45.2	
MIB	Mutribah	8.14	289	*e*P		17 30 51.6	
RST	Umm Al-Ruwaisa	8.36	286	*e*P		17 30 54.1	
HRA	Herat	8.62	35	Pn	Pn	17 30 58.1	-1.1
IPAY	Payeh	9.25	14	*e*Pn	Pn	17 31 11.0	+3.0
IPRN	Peran	9.34	340	*e*Pn	Pn	17 31 12.6	+3.5
RAYN	Ar Rayn	10.44	250	Pn	Pn	17 31 20.8	-3.4
GEYT	Alibeck	10.55	8	Pn	Pn	17 31 29.2	+3.7
	comp=Z,0.3nm,0.3s,baz=225,slow=14,SNR=1.8						
IDHR	Dehrash	11.08	313	*e*Pn	Pn	17 31 32.9	0.0
SOCY	Socotra	15.35	188	Pn	Pn	17 32 26.5	-4.7
NIL	Nilore	15.91	63		Pn	17 32 36.2	-2.1
NIL				IAmb	IAmb	17 32 48.3	
	comp=Z,6.3nm,0.8s						
MARD	Mardin	16.30	311		Pn	17 32 37.9	-5.5
MMAI	Mount Meron Ar	18.80	292	P	Pn	17 33 15.7	+1.1
	comp=Z,0.5nm,0.3s,baz=93,slow=18,SNR=2.1						
KK31	Karatay Array	19.43	33	P	P	17 33 18.3	-2.7
KKAR	Karatay Array	19.43	33	P	P	17 33 19.3	-1.7
KKAR	Karatay Array	19.43	33	P	P	17 33 17.6	-3.3
KKAR				IAmb	IAmb	17 33 30.7	
	comp=Z,3.3nm,0.9s						
KBZ	Khabaz	19.46	330	P	Pn	17 33 23.9	+1.6
	comp=Z,0.1nm,0.3s,baz=221,slow=20,SNR=1.6						
AAK	Ala-Archa	21.21	40	P	P	17 33 40.4	-0.1
AAK				IAmb	IAmb	17 33 54.0	
	comp=Z,11nm,1.5s						
ABKAR	Akbulak array	21.94	7	P	P	17 33 47.3	-0.7
ABKAR				IAmb	IAmb	17 33 54.3	
	comp=Z,8.3nm,0.8s						
ABKAR	Akbulak array	21.94	7	P	P	17 33 47.1	-0.9
BRTR	Keskin Array B	22.35	309	P	P	17 33 54.0	+1.2
	comp=Z,2.2nm,0.7s,baz=129,slow=13,SNR=5.8						
BRTR	Keskin Array B	22.35	309	P	P	17 33 52.9	+0.1
AKTO	Aktyubinsk	22.97	3	P	P	17 33 59.7	+0.7
	comp=Z,3.5nm,0.7s,baz=180,slow=11,SNR=9.6						
DANN	Dangsing	24.34	81	*e*P	P	17 34 14.3	+1.3
	comp=Z,21nm,0.8s						
KKN	Kakani	25.73	82	*e*P	P	17 34 27.7	+2.2
	comp=Z,7.6nm,0.6s						
PKIN	Phulchoki	25.86	83	*e*P	P	17 34 28.8	+2.1
	comp=Z,7.8nm,0.7s						
PKI	Pulchoki	25.87	83	*e*P	P	17 34 28.8	+1.9
	comp=Z,20nm,1.2s						
MAKZ	Makanchi	27.97	40	P	P	17 34 44.4	-1.0
MAKZ				IAmb	IAmb	17 34 53.9	
	comp=Z,6.1nm,1.5s						
MK31	Makanchi Array	28.14	40	P	P	17 34 46.9	+0.1
MKAR	Makanchi Array	28.14	40	P	P	17 34 47.4	+0.6
	comp=Z,0.4nm,0.4s,baz=226,slow=11,SNR=18						
MKAR	Makanchi Array	28.14	40	P	P	17 34 46.8	-0.1
AKASG	Malin Array Be	30.95	326	P	P	17 35 10.9	-0.7
	comp=Z,0.6nm,0.4s,baz=134,slow=8.2,SNR=2.7						
ZAA0	Zalesovo Array	33.77	31	P	P	17 35 33.9	-2.4
ZALV	Zalesovo Beam	33.77	31	P	P	17 35 36.9	+0.5
	comp=Z,2.4nm,0.5s,baz=242,slow=9.4,SNR=9.8						
ZALV	Zalesovo Beam	33.77	31	P	P	17 35 31.3	-5.0
GERES	GERESS Array B	39.00	315	P	P	17 36 20.1	-1.1
	comp=Z,0.3nm,0.4s,baz=115,slow=5.0,SNR=5.7						
KHC	Kasperske Hory	39.16	315	*e*P	P	17 36 21.9	-0.6
FINES	FINESS Array B	39.49	338	P	P	17 36 25.0	0.0
	comp=Z,1.4nm,0.6s,baz=153,slow=9.4,SNR=9.6						
FINES	FINESS Array B	39.49	338	P	P	17 36 24.3	-0.7
SQTA	Sankt Quirin	40.18	312	*e*P	P	17 36 34.3	+3.1
	comp=Z,4.8nm,0.6s						
MOTA	Moosalm	40.28	312	*e*P	P	17 36 35.0	+3.1
	comp=Z,2.5nm,0.5s						
FETA	Feichten	40.46	311	*e*P	P	17 36 36.8	+3.4
	comp=Z,2.2nm,0.6s						
DAVA	Damuels	41.08	311	*e*P	P	17 36 41.4	+2.8
	comp=Z,7.6nm,0.5s						
HFS	Hagfors	43.52	331	P	P	17 36 58.8	+0.7
	comp=Z,1.8nm,0.6s,baz=127,slow=9.8,SNR=8.0						
SONM	Songino Array	43.74	48	P	P	17 37 00.4	+0.1
	comp=Z,1.0nm,0.9s,baz=271,slow=8.3,SNR=7.2						
SONM	Songino Array	43.74	48	P	P	17 36 59.5	-0.8
SONM				IAmb	IAmb	17 37 21.2	
	comp=Z,5.5nm,1.4s						
ULN	Ulaanbaatar	44.18	49	P	P	17 37 02.9	-0.9
NB2	NORSAR Subarra	45.03	331	P	P	17 37 09.1	-1.2
	comp=Z,1.1nm,0.7s,baz=114,slow=7.9						
NOA	NORSAR Array B	45.03	331	P	P	17 37 09.4	-0.9
	comp=Z,16nm,0.4s,baz=130,slow=5.2,SNR=4.0						
ARCES	ARCESS Array B	45.71	345	P	P	17 37 15.0	-0.5
	comp=Z,1.8nm,0.8s,baz=142,slow=8.9,SNR=1.2						
TORD	Torodi Ar. Bea	52.69	266	P	P	17 38 08.6	-1.1
	comp=Z,0.9nm,0.4s,baz=64,slow=8.1,SNR=7.0						
TORD	Torodi Ar. Bea	52.69	266	P	P	17 38 08.4	-1.3
TORD				IAmb	IAmb	17 38 24.6	
	comp=Z,1.6nm,0.8s						
SPITS	Spitsbergen Ar	53.86	351	P	P	17 38 19.8	+2.4
	comp=Z,14nm,1.1s,baz=150,slow=15,SNR=1.0						
ILAR	Eielson Array	86.31	10	P	P	17 41 36.3	-0.3
	comp=Z,0.4nm,0.8s,baz=335,slow=4.0,SNR=3.5						
WRA	Warramunga Arr	89.06	113	P	P	17 41 50.5	0.0
	comp=Z,0.6nm,0.8s,baz=317,slow=4.7,SNR=2.5						
YKA	Yellowknife Ar	90.04	356	P	P	17 41 55.1	+0.7
	comp=Z,0.5nm,0.9s,baz=13,slow=5.1,SNR=4.9						
ASAR	Alice Springs	90.55	116	P	P	17 41 56.8	-0.6
	comp=Z,0.5nm,0.7s,baz=307,slow=4.4,SNR=9.7						

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*IDC **18** 17:44:55.9±3.3, 17°.64S×178°.59W, h572km±20km, mb2.7/4, mb1 3.0/6, mb1mx2.8/36, mbtmp3.6/6, Error ellipse: s-maj=128.8km s-min=24.1km az=147.0*
ISC 18 17:44:52.2±2.2, **18°.3S**±0°.6×**178°.0W**±0°.4, **h550**km, **n7**, σ1ˢ.**43**/8, **mb3.2**/4, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.77	279	P	P	17 46 14.2	+1.7
	1.9nm,0.3s,baz=94,slow=7.4,SNR=15						
DZM	Mont Dzumac	15.04	253	P	P	17 48 01.8	-0.4
	0.2nm,0.3s,baz=115,slow=19,SNR=1.1						
WRA	Warramunga Arr	44.91	260	P	P	17 52 17.2	-1.2
	0.2nm,0.3s,baz=96,slow=7.1,SNR=5.9						
ASAR	Alice Springs	45.02	255	P	P	17 52 19.1	-0.2
	1.0nm,0.4s,baz=89,slow=7.9,SNR=58						
ASAR				PcP	PcP	17 53 49.2	+0.6
	0.4nm,0.9s,baz=109,slow=4.2,SNR=4.5						
ILAR	Eielson Array	86.22	13	P	P	17 56 34.1	-1.1
	0.2nm,0.4s,baz=218,slow=4.7,SNR=4.5						
PDAR	Pinedale Array	87.42	43	P	P	17 56 42.8	+1.2
	0.2nm,0.5s,baz=243,slow=7.9,SNR=2.0						
GERES	GERESS Array B	148.12	345	PKPbc	PKPbc	18 03 34.7	-1.6
	0.3nm,0.4s,baz=27,slow=2.4,SNR=3.9						

IDC 18 17:45:23.3±4.0, **2°.82S**×**134°.22E**, **h0**km, **mb2.9**/1, **mb1 3.4**/2, **mb1mx3.1**/46, **mbtmp3.2**/2, **ML2.9**/1, **Error ellipse: s-maj=281.6km s-min=44.9km az=98.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	17.02	180	P	Pn	17 49 21.8	-1.1
	0.1nm,0.3s,baz=355,slow=11,SNR=1.9						
ASAR	Alice Springs	20.73	181	P	P	17 50 06.2	+0.6
	0.5nm,0.8s,baz=9.1,slow=12,SNR=2.8						
YKA	Yellowknife Ar	102.17	26	P	Pdif	17 59 19.5	-0.4
	0.1nm,0.3s,baz=272,slow=4.3,SNR=3.8						

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*IDC **18** 17:49:59.0±1.6, 24°.14N×141°.42E, h174km±16km, mb3.1/5, mb1 3.4/6, mb1mx2.9/49, mbtmp3.7/6, Error ellipse: s-maj=35.4km s-min=15.3km az=99.0*
ISC 18 17:49:56.9±1.1, **24°.0N**±0°.1×**141°.3E**±0°.3, **h151**km, **n6**, σ1ˢ.**91**/7, **mb3.1**/5, **Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	3.21	14	P	Pn	17 50 49.7	+2.7
	28nm,0.3s,baz=287,slow=19,SNR=2.3						
JCJ				S	Sn	17 51 25.5	-0.3
	64nm,0.3s,baz=301,slow=24,SNR=6.1						
WRA	Warramunga Arr	44.17	189	P	P	17 57 52.1	+1.2
	2.3nm,0.5s,baz=7.5,slow=8.7,SNR=21						
ASAR	Alice Springs	47.90	189	P	P	17 58 20.5	+0.5
	0.2nm,0.5s,baz=23,slow=11,SNR=13						
MKAR	Makanchi Array	51.88	312	P	P	17 58 49.3	-0.6
	0.1nm,0.4s,baz=88,slow=9.7,SNR=8.9						
ILAR	Eielson Array	60.83	28	P	P	17 59 51.0	-1.8
	0.9nm,0.7s,baz=263,slow=5.5,SNR=10						
YKA	Yellowknife Ar	75.26	28	P	P	18 01 21.6	-1.3
	0.1nm,0.4s,baz=300,slow=5.4,SNR=2.9						

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*MOS **18** 17:53:24.6±1.0, 44°.80N×146°.84E, h172km, mb4.6/4, Error ellipse: s-maj=8.8km s-min=5.7km az=81.7*
*SKHL **18** 17:53:25.2±0.2, 44°.80N×146°.90E, h156km±5km, mb4.9/19, msha5.3/11*
*NEIC **18** 17:53:26.6±1.6, 44°.88N±0°.09×146°.8E±0°.1, h169km±8km, mb4.4/82, Error ellipse: s-maj=14.4km s-min=11.4km az=122.0*
*JMA **18** 17:53:26.5±0.2, 44°.57N×146°.88E, h169km±3km, M4.3*
*IDC **18** 17:53:26.4±1.7, 44°.89N×146°.73E, h170km±15km, mb3.7/21, mb1 3.8/28, mb1mx3.7/43, mbtmp4.2/28, Error ellipse: s-maj=13.2km s-min=10.3km az=147.0*
ISC 18 17:53:25.2±0.6, **44°.74N**±0°.04×**146°.91E**±0°.05, **h166**km±5km, **n244**, σ1ˢ.**15**/270, **mb4.3**/65, **7C-9D**, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	0.84	54*d*	*i*PN	Pn	17 53 51.3	+1.0
KUR				*i* S	Sn	17 54 10.8	+1.2
KUR				pmax	pmax		
	comp=Z,173nm,0.4s						
KUR				pmax	pmax		
	comp=N,35nm,0.5s						
KUR				pmax	pmax		
	comp=E,35nm,0.5s						
KUR				smax	smax		
	comp=N,89nm,0.4s						
KUR				smax	smax		
	comp=E,174nm,0.4s						
KUR	Kuril'sk	0.84	54	*i* P	Pn	17 53 51.3	+1.0
KUR				AMB	AMB	17 53 54.3	
	comp=E,40nm,0.4s						
KUR				AMB	AMB	17 53 54.3	
	comp=E,40nm,0.4s						
KUR				AMB	AMB	17 53 54.3	
	comp=E,170nm,0.4s						
KUR				*i* S	Sn	17 54 10.9	+1.3
KUR				A	A	17 54 13.9	
	comp=E,340nm,0.4s						
KUR				A	A	17 54 13.9	
	comp=E,340nm,0.4s						
YUK	Yuzh-Kuril'sk	1.03	227*c*	*i*PN	Pn	17 53 52.3	+0.6
YUK				*i* S	Sn	17 54 12.8	+0.7
YUK				pmax	pmax		
	comp=Z,2µm,0.1s						
YUK				pmax	pmax		
	comp=N,174nm,0.2s						
YUK				smax	smax		
	comp=N,810nm,0.2s						
YUK				smax	smax		
	comp=E,2µm,0.4s						
YUK	Yuzh-Kuril'sk	1.03	227	*i* P	Pn	17 53 52.5	+0.8
YUK				AMB	AMB	17 53 53.0	
	comp=E,860nm,0.3s						
YUK				*i* S	Sn	17 54 12.8	+0.7
YUK				A	A	17 54 16.0	
	comp=E,810nm,0.4s						
YUK				A	A	17 54 16.0	
	comp=E,2µm,0.4s						
GRPR	Tuman	1.11	228⇑	*i*PN	Pn	17 53 53.0	+0.6
GRPR				*e*S	Sn	17 54 13.6	+0.4
GRPR				pmax	pmax		
	comp=Z,603nm,0.3s						
GRPR				pmax	pmax		
	comp=N,569nm,0.2s						
GRPR				pmax	pmax		
	comp=E,414nm,0.2s						
GRPR				smax	smax		
	comp=N,2µm,0.5s						
GRPR				smax	smax		
	comp=E,936nm,0.5s						
GRPR	Tuman	1.11	228	*i* P	Pn	17 53 53.0	+0.6

GRPR				AMB	AMB	17 53 54.0	
	comp=E,600nm,0.3s						
GRPR				eS	Sn	17 54 13.8	+0.6
GRPR				A	A	17 54 15.0	
	comp=E,2µm,0.5s						
GRPR				A	A	17 54 15.0	
	comp=E,940nm,0.5s						
GLVR	Golovnino	1.41	225	⇑iPN	Pn	17 53 56.0	+0.9
GLVR				i S	Sn	17 54 19.2	+1.1
GLVR				pmax	pmax		
	comp=Z,510nm,0.1s						
GLVR				pmax	pmax		
	comp=E,336nm,0.2s						
GLVR				smax	smax		
	comp=E,418nm,0.2s						
GLVR				smax	smax		
	comp=N,2µm,0.3s						
GLVR	Golovnino	1.41	225	i P	Pn	17 53 56.0	+0.9
GLVR				AMB	AMB	17 53 57.0	
	comp=N,510nm,0.3s						
GLVR				i S	Sn	17 54 19.0	+0.9
GLVR				A	A	17 54 21.0	
	comp=N,2µm,0.3s						
GLVR				A	A	17 54 21.0	
	comp=N,420nm,0.3s						
JRA	Rausu	1.51	238	P	Pn	17 53 56.7	+0.6
JRA				eS	Sn	17 54 20.1	+0.3
NEM2	Nemuro 2	1.61	212	P	Pn	17 53 56.9	-0.2
NEM2				eS	Sn	17 54 19.9	-1.8
NMR	Nemuro--Hokkai	1.61	212	⇑iPN	Pn	17 53 56.9	-0.2
NMR				eS	Sn	17 54 19.2	-2.5
NMR	Nemuro--Hokkai	1.61	212	i P	Pn	17 53 57.0	-0.1
NMR				eS	Sn	17 54 20.9	-0.8
JNSB	Nemuroshibetsu	1.67	235	P	Pn	17 53 58.6	+0.9
JNK	Nakash	1.95	234	P	Pn	17 54 01.4	+0.6
JKHN	Kushirohamanak	2.08	218	P	Pn	17 54 02.2	0.0
JKHN				eS	Sn	17 54 29.6	-1.2
JTKR	Abashiri--Toko	2.28	251	P	Pn	17 54 05.2	+0.7
JTKR				eS	Sn	17 54 35.1	+0.2
JAK	Akkeshi	2.37	223	P	Pn	17 54 05.6	+0.1
JAK				eS	Sn	17 54 35.2	-1.5
JMP	Maruseppu	2.65	255	P	Pn	17 54 09.5	+0.6
JMP				eS	Sn	17 54 43.1	+0.4
JAR	Ashorobuto	2.68	239	P	Pn	17 54 10.1	+0.8
JOB	Onbets	2.88	231	P	Pn	17 54 12.5	+0.8
JOB				eS	Sn	17 54 46.7	-1.1
JSE	Soyaes	3.08	276	P	Pn	17 54 15.1	+1.0
JSE				eS	Sn	17 54 52.8	+0.6
JKK2	Kamakawa 2	3.11	255	P	Pn	17 54 15.7	+1.2
JKK2				eS	Sn	17 54 54.2	+1.3
JKA	Kamikawa-asahi	3.15	260		Pn	17 54 16.5	+1.5
ASAJ	Asahikawa	3.15	260	P	Pn	17 54 16.5	+1.5
	comp=N,20nm,0.3s,baz=83,slow=14,SNR=328						
ASAJ				S	Sn	17 54 55.2	+1.5
	comp=N,4.6nm,0.3s,baz=1.0,slow=33,SNR=18						
JCH	Churui	3.34	232	P	Pn	17 54 17.5	+0.1
JCH				eS	Sn	17 54 55.6	-2.4
JFR	Furan	3.49	245	P	Pn	17 54 20.3	+0.9
JFR				eS	Sn	17 55 01.5	0.0
JWK2	Keihoku	3.60	281	P	Pn	17 54 22.8	+2.2
MYR	Moyori	3.60	228	eP	Pn	17 54 20.5	-0.2
MYR				eS	Sn	17 55 03.2	-0.7
YSS	Yuzh-Sakhalins	3.65	309	κePN	Pn	17 54 21.9	+0.7
YSS				eS	Sn	17 55 06.6	+1.6
YSS				pmax	pmax		
	comp=Z,160nm,1.1s						
YSS				smax	smax		
	comp=E,30nm,1.1s						
YSS	Yuzh-Sakhalins	3.65	309		Pn	17 54 21.5	+0.3
YSS	Yuzh-Sakhalins	3.65	309	i P	Pn	17 54 21.9	+0.7
YSS				AMB	AMB	17 54 22.2	
	comp=E,160nm,1.0s						
YSS				eS	Sn	17 55 04.5	-0.5
YSS				A	A	17 55 07.7	
	comp=E,70nm,0.4s						
YSS				A	A	17 55 07.7	
	comp=E,30nm,0.4s						
JHR	Hokuryu	3.85	257	P	Pn	17 54 26.0	+2.0
ERM	Erimo	3.86	226	PN	Pn	17 54 24.6	+0.5
ERM	Erimo	3.86	226	Pn	Pn	17 54 24.6	+0.5
ERM	Erimo	3.86	226	eP	Pn	17 54 24.5	+0.5
ERM				eS	Sn	17 55 08.8	-1.1
JNBK	Urakawa-nobuka	3.90	232	P	Pn	17 54 23.7	-0.8
JRBN	Rebuntou	4.19	281	P	Pn	17 54 29.3	+1.0
JEW	Eniwo	4.38	246	P	Pn	17 54 32.2	+1.4
JEW	Eniwo	4.38	246	Pn	Pn	17 54 32.2	+1.4
UGL	Uglegorsk	5.46	324	ePN	Pn	17 54 43.2	-1.5
UGL				pmax	pmax		
	comp=Z,35nm,0.7s						
UGL	Uglegorsk	5.46	324	eP	Pn	17 54 44.2	-0.5
UGL				AMB	AMB	17 54 48.0	
	comp=Z,40nm,0.7s						
UGL				eS	Sn	17 55 46.0	-1.2
JTM	Tenmabayashi	5.84	229	Pn	Pn	17 54 47.6	-2.2
TYV	Tymovskoe	6.76	336	ePN	Pn	17 55 02.3	+0.3
TYV				pmax	pmax		
	comp=Z,7.0nm,1.0s						
TYV	Tymovskoe	6.76	336	eP	Pn	17 55 02.2	+0.3
TYV				AMB	AMB	17 55 03.9	
	comp=Z,20nm,0.8s						
TEY	Ternei	7.32	276	eP	Pn	17 55 10.5	+1.0
TEY				AMB	AMB	17 55 10.9	
	comp=Z,10.0nm,0.6s						
JMM	Marumori	8.27	216	Pn	Pn	17 55 19.1	-2.9
SKR	Severo-Kuril's	8.59	43	ePN	Pn	17 55 26.2	0.0
SKR				eS	Sn	17 56 56.8	-5.1
SKR				pmax	pmax		
	comp=Z,122nm,0.8s						
SKR				pmax	pmax		
	comp=Z,900nm,3.5s						
SKR				smax	smax		
	comp=N,91nm,0.5s						
SKR				smax	smax		
	comp=E,70nm,0.5s						
SKR				MLR	MLR		
	comp=Z,1µm,18.0s						
SKR	Severo-Kuril's	8.59	43	eP	Pn	17 55 27.2	+1.0
SKR				AMB	AMB	17 55 30.3	
	comp=Z,120nm,0.8s						
SKR				AMB	AMB	17 55 37.5	
	comp=Z,900nm,3.5s						
SKR				eS	Sn	17 57 00.9	-1.0
SKR				A	A	17 57 01.8	
	comp=Z,130nm,0.8s						
SKR				A	A	17 57 01.8	
	comp=Z,30nm,0.8s						
OKH	Okha	9.19	345	eP	Pn	17 55 37.4	+3.4
OKH				AMB	AMB	17 55 37.6	
	comp=Z,30nm,0.6s						
GRNR	Gornyy	9.28	314	⇓iPN	Pn	17 55 35.7	+0.4
GRNR				pmax	pmax		
	comp=N,3.0nm,0.9s						
GRNR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GRNR				MLR	MLR		
	comp=E,100nm,17.0s						
GRNR				MLR	MLR		
	comp=N,70nm,16.0s						
GRNR				MLR	MLR		
	comp=Z,280nm,18.0s						
GRNR	Gornyy	9.28	314	i P	Pn	17 55 35.7	+0.4
GRNR				AMB	AMB	17 55 36.3	
	comp=Z,3.0nm,0.8s						
GRNR				AMB	AMB	17 55 36.3	
	comp=Z,10.0nm,0.8s						
JSD	Sado	9.33	227	Pn	Pn	17 55 34.2	-1.8
NKL	Nikolayevsk	9.35	336	eP	Pn	17 55 38.1	+1.9
NKL				AMB	AMB	17 55 38.6	
	comp=Z,20nm,0.5s						
PAU	Pauzhetka	9.44	41	eP	Pn	17 55 36.6	-0.7
PAU				AMB	AMB	17 55 36.9	
	comp=Z,30nm,0.8s						
MAJO	Matsushiro	10.52	222	PN	Pn	17 55 50.6	-1.1
MAJO	Matsushiro	10.52	222	Pn	Pn	17 55 50.6	-1.1
MJAR	Matsushiro Arr	10.52	222	P	Pn	17 55 50.9	-0.9
	comp=Z,0.2nm,0.3s,baz=28,slow=13,SNR=7.5						
USRK	Ussuriysk Ar.	10.68	272	P	Pn	17 55 52.5	-1.2
	baz=102,slow=12,SNR=8.2						
USRK	Ussuriysk Ar.	10.68	272	PN	Pn	17 55 53.2	-0.5
USRK	Ussuriysk Ar.	10.68	272		Pn	17 55 53.2	-0.5
PEA0B	Petropavlovsk-	10.97	36	⇑ePN	Pn	17 55 56.5	-0.9
PEA0B	Petropavlovsk-	10.97	36	Pn	Pn	17 55 56.0	-1.4
PETK	Petropavlovsk-	10.97	36	P	Pn	17 55 56.4	-1.0
	comp=Z,0.8nm,0.3s,baz=203,slow=9.0,SNR=27						
PETK	Petropavlovsk-	10.97	36	PN	Pn	17 55 56.5	-0.9
PETK	Petropavlovsk-	10.97	36	Pn	Pn	17 55 56.5	-0.9
KLR	Kul'dur	11.28	299	P	Pn	17 56 01.6	+0.1
	comp=Z,0.3nm,0.3s,baz=104,slow=15,SNR=10.0						
KLR	Kul'dur	11.28	299	eP	Pn	17 56 03.0	+1.5
EKMR	Ekimchan	12.38	317	eP	Pn	17 56 16.6	+0.9
MA2	Magadan	15.04	8	P	Pn	17 56 48.9	-0.2
	comp=Z,0.9nm,0.3s,baz=193,slow=6.2,SNR=16						
MA2	Magadan	15.04	8		Pn	17 56 47.8	-1.2
MA2	Magadan	15.04	8	eP	Pn	17 56 48.9	-0.2
BMKR	Bomnak	15.31	317	eP	Pn	17 56 52.0	-0.5
BMKR				AMB	AMB	17 56 54.8	
	comp=Z,10.0nm,0.6s						
KSRS	Korea Array	16.04	250	P	P	17 57 02.2	+0.6
	comp=Z,0.1nm,0.3s,baz=59,slow=9.9,SNR=1.3						
KSRS	Korea Array	16.04	250	eP	P	17 57 02.2	+0.6
KROS	Kirovskiy	16.10	314	eP	Pn	17 57 01.6	-0.6
SEY	Seymchan	18.50	8	P	P	17 57 27.5	-0.9
	comp=Z,2.0nm,0.3s,baz=202,slow=6.5,SNR=59						
SEY	Seymchan	18.50	8	⇓eP	P	17 57 27.2	-1.1
SEY	Seymchan	18.50	8	eP	P	17 57 27.2	-1.1
YAK	Yakutsk	20.02	336	P	P	17 57 42.9	-1.9
	comp=Z,0.1nm,0.3s,baz=144,slow=4.7,SNR=12						
YAK	Yakutsk	20.02	336	eP	P	17 57 42.6	-2.2
YAK				eS	S	18 01 17.4	-3.0
YAK				pmax	pmax		
	comp=Z,13nm,0.9s						
YAK				pmax	pmax		
	comp=N,1.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,3.0nm,0.8s						
YAK				smax	smax		
	comp=N,148nm,6.5s						
YAK				smax	smax		
	comp=E,211nm,5.4s						
YAK	Yakutsk	20.02	336	P	P	17 57 42.8	-1.9
YAK				IAmb	IAmb	17 57 44.4	
	comp=Z,16nm,0.7s						
YAK	Yakutsk	20.02	336	eP	P	17 57 42.6	-2.2
SONM	Songino Array	27.94	291	P	P	17 58 59.5	-0.4
	comp=Z,0.4nm,0.5s,baz=76,slow=8.3,SNR=5.1						
SONM	Songino Array	27.94	291	P	P	17 58 59.1	-0.8
TIXI	Tiksi	28.35	348	⇓eP	P	17 59 03.9	+0.8
TIXI	Tiksi	28.35	348	eP	P	17 59 03.9	+0.8
H11N2	WAKE ISLAND Hy	29.97	140	T	T	18 30 34.1	
	baz=329,slow=75,SNR=134						
H11N1	WAKE ISLAND Hy	29.98	140	T	T	18 30 38.3	
	baz=329,slow=75,SNR=103						
H11N3	WAKE ISLAND Hy	29.99	140	T	T	18 30 37.8	
	baz=329,slow=75,SNR=92						
H11S1	WAKE ISLAND Hy	30.95	141	T	T	18 31 48.3	
	baz=322,slow=80,SNR=157						
H11S3	WAKE ISLAND Hy	30.95	141	T	T	18 31 49.5	
	baz=322,slow=80,SNR=115						
H11S2	WAKE ISLAND Hy	30.97	141	T	T	18 31 48.3	
	baz=322,slow=80,SNR=105						
TNA	Tin City	32.12	34	P	P	17 59 36.3	0.0
TNA				IAmb	IAmb	17 59 37.1	
	comp=Z,6.4nm,0.8s						
TTA	Tatalina	36.78	40	P	P	18 00 17.5	+1.0
TTA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
TTA	Tatalina	36.78	40	P	P	18 00 17.5	+1.0
TTA				IAmb	IAmb	18 00 18.4	
	comp=Z,5.6nm,0.8s						
SVW2	Sparrevohn	36.95	43	P	P	18 00 19.4	+1.5
SVW2				IAmb	IAmb	18 00 20.7	
	comp=Z,14nm,1.2s						
IMAR	Indian Mountai	37.93	35	P	P	18 00 26.0	0.0
OHAK	Old Harbor	38.41	49	P	P	18 00 31.6	+1.5
PPLA	Purkeypile	38.52	40	P	P	18 00 33.0	+1.8
KDAK	Kodiak Island	38.71	48	P	P	18 00 33.4	+0.8
KDAK				pmax	pmax		
	comp=Z,10.0nm,1.3s						
KDAK	Kodiak Island	38.71	48	P	P	18 00 33.4	+0.8
KDAK				IAmb	IAmb	18 00 34.1	
	comp=Z,9.9nm,1.3s						
SKT	Skwentna	38.86	41	P	P	18 00 34.5	+0.6
SKT				IAmb	IAmb	18 00 36.8	
	comp=Z,10.0nm,1.3s						
BPAW	Bear Paw Mtn.	39.04	38	P	P	18 00 36.3	+1.0
KTH	Kantishna Hill	39.08	39	P	P	18 00 37.3	+1.5
CNPM	China Poot	39.20	45	P	P	18 00 37.7	+0.9
SUA	Susitna One	39.27	42	P	P	18 00 37.7	+0.3
SUA				IAmb	IAmb	18 00 40.8	
	comp=Z,5.3nm,0.7s						
BRLK	Bradley Lake	39.36	45	P	P	18 00 38.8	+0.8
BRLK				IAmb	IAmb	18 00 40.8	
	comp=Z,11nm,0.9s						
TRF	Thorofare Moun	39.37	39	P	P	18 00 39.0	+0.8
TRF				IAmb	IAmb	18 00 44.3	
	comp=Z,8.7nm,1.3s						
COLD	Coldfoot	39.41	33	P	P	18 00 37.8	-0.5
COLD				IAmb	IAmb	18 00 39.0	
	comp=Z,3.8nm,0.5s						
BWN	Browne	39.71	38	P	P	18 00 42.8	+1.9
TOLK	Toolik Lake Re	39.72	31	P	P	18 00 41.1	+0.2
TOLK				IAmb	IAmb	18 00 41.6	
	comp=Z,4.4nm,0.8s						
I23K	Minto, Yukon-K	39.73	36	P	P	18 00 42.1	+1.1
O22K	Cooper Landing	39.86	44	P	P	18 00 42.5	+0.4
RND	Reindeer	40.02	39	P	P	18 00 43.9	+0.4
RND				pmax	pmax		
	comp=Z,7.0nm,0.6s						
RND	Reindeer	40.02	39		P	18 00 43.9	+0.4
RND				IAmb	IAmb	18 00 45.1	
	comp=Z,6.6nm,0.6s						
GHO	Glory Hole Cre	40.11	42	P	P	18 00 45.1	+0.8
GHO				IAmb	IAmb	18 00 46.0	
	comp=Z,12nm,0.8s						
MDM	Murphy Dome	40.21	37	P	P	18 00 45.7	+0.7
MDM				IAmb	IAmb	18 00 47.2	
	comp=Z,5.6nm,0.8s						
ZALV	Zalesovo Beam	40.27	306	P	P	18 00 44.2	-1.4
	comp=Z,0.4nm,0.3s,baz=98,slow=5.9,SNR=2.4						
ZALV	Zalesovo Beam	40.27	306	P	P	18 00 43.9	-1.6
WRH	Wood River Hil	40.29	37	P	P	18 00 46.4	+0.8
WRH				IAmb	IAmb	18 00 49.9	
	comp=Z,5.4nm,0.7s						
KNK	Knik Glacier	40.37	42	P	P	18 00 46.8	+0.5
KNK				IAmb	IAmb	18 00 47.1	
	comp=Z,14nm,1.2s						
COLA	College	40.38	37	deP	P	18 00 47.4	+1.1
COLA				pmax	pmax		
	comp=Z,12nm,0.9s						
SML	Sawmill	40.39	42	P	P	18 00 47.5	+1.0
CCB	Clear Creek Bu	40.41	37	P	P	18 00 46.9	+0.3
POKR	Poker Plat Res	40.54	36	P	P	18 00 48.8	+1.1
POKR				IAmb	IAmb	18 00 50.4	
	comp=Z,7.1nm,0.8s						
HDA	Harding Lake	40.79	37	P	P	18 00 49.7	-0.1
IL31		40.80	37	P	P	18 00 50.2	+0.5
IL31				IAmb	IAmb	18 00 51.5	
	comp=Z,8.6nm,0.9s						
ILAR	Eielson Array	40.80	37	P	P	18 00 50.2	+0.4
	comp=Z,5.5nm,0.8s,baz=263,slow=5.7,SNR=51						
ILAR	Eielson Array	40.80	37		P	18 00 49.7	-0.1
SCM	Sheep Creek Mo	40.86	41	P	P	18 00 51.0	+0.6
SCM				pmax	pmax		
	comp=Z,19nm,1.3s						
SCM	Sheep Creek Mo	40.86	41	P	P	18 00 51.0	+0.6
SCM				IAmb	IAmb	18 00 59.4	
	comp=Z,19nm,1.3s						
PRP	Porcupine Dome	41.32	36	P	P	18 00 55.1	+0.9
PRP				IAmb	IAmb	18 00 56.5	
	comp=Z,7.2nm,0.8s						
M24K	Tolsona, Glenn	41.37	41	P	P	18 00 55.9	+1.3
FYU	Fort Yukon	41.38	34	P	P	18 00 55.0	+0.6
KLU	Klutina	41.57	42	P	P	18 00 57.6	+1.4
WMQ	Urumqi	41.57	290	eP	P	18 00 58.6	+2.1
BMAR	Burnt Mountain	41.59	33	P	P	18 00 56.9	+0.6
DOT	Dot Lake	42.13	38	P	P	18 01 00.6	-0.1
DOT				IAmb	IAmb	18 01 01.4	
	comp=Z,5.5nm,0.6s						
N25K	Chitina, Valde	42.18	41	P	P	18 01 03.0	+1.9
MENT	Mentasta	42.38	39	P	P	18 01 04.2	+1.5
GLB	Gilahina Butte	42.58	42	P	P	18 01 04.8	+0.5
GLB				IAmb	IAmb	18 01 13.4	
	comp=Z,8.9nm,1.2s						
VRDI	Verde Repeater	42.78	42	P	P	18 01 07.1	+0.9
VRDI				IAmb	IAmb	18 01 08.9	
	comp=Z,20nm,1.5s						
MCARA	McCarthy VSAT	42.96	42	P	P	18 01 08.9	+1.6
MCARA				IAmb	IAmb	18 01 24.7	
	comp=Z,21nm,1.3s						
CRQM	Cirque	43.02	43	P	P	18 01 07.4	-0.7
TGL	Tana Glacier	43.17	42	P	P	18 01 10.5	+1.3
TGL				IAmb	IAmb	18 01 14.1	
	comp=Z,15nm,1.2s						
BCAR	Beaver Creek A	43.23	39	P	P	18 01 10.9	+1.3
EGAK	Eagle	43.23	36	P	P	18 01 09.9	+0.5
EGAK				IAmb	IAmb	18 01 10.7	
	comp=Z,8.2nm,0.8s						
BALM	Baldy	43.35	42	P	P	18 01 12.2	+1.5
BARN	Barnard Glacie	43.67	42	P	P	18 01 14.8	+1.5
BARN				IAmb	IAmb	18 01 25.1	
	comp=Z,16nm,1.3s						
CTGM	Chitina Glacie	43.85	42	P	P	18 01 16.2	+1.6
CTGM				IAmb	IAmb	18 01 16.9	
	comp=Z,7.4nm,0.6s						
MK31	Makanchi Array	43.98	297	⇓eP	P	18 01 16.0	+0.3
MK31	Makanchi Array	43.98	297	P	P	18 01 15.8	+0.1
MKAR	Makanchi Array	43.98	297	P	P	18 01 15.9	+0.2
	comp=Z,0.8nm,0.6s,baz=78,slow=8.0,SNR=9.1						
MKAR				PcP	PcP	18 02 58.7	+0.3
	comp=Z,0.2nm,0.3s,baz=69,slow=5.5,SNR=6.5						
MKAR	Makanchi Array	43.98	297	eP	P	18 01 15.9	+0.2
MAKZ	Makanchi	44.17	297	P	P	18 01 17.1	-0.1
MAKZ				pmax	pmax		
	comp=Z,3.0nm,1.3s						
MAKZ	Makanchi	44.17	297	P	P	18 01 17.1	-0.1
EPYK	Eagle Plains	44.79	34	P	P	18 01 22.5	+0.6
KURK	Kurchatov	44.83	303	P	P	18 01 22.7	+0.3
KURK	Kurchatov	44.83	303	P	P	18 01 21.9	-0.4
KURK	Kurchatov	44.83	303	eP	P	18 01 22.7	+0.3
KURBB	Kurchatov Arra	44.92	303	P	P	18 01 22.6	-0.4
	comp=Z,0.9nm,0.4s,baz=70,slow=8.1,SNR=5.5						
INK	Inuvik	45.64	31	P	P	18 01 28.4	0.0
	comp=Z,7.6nm,0.3s,baz=293,slow=9.1,SNR=81						
INK	Inuvik	45.64	31	P	P	18 01 28.5	+0.1
INK				pmax	pmax		
	comp=Z,7.0nm,0.6s						
INK	Inuvik	45.64	31		P	18 01 28.5	+0.1
INK				IAmb	IAmb	18 01 29.0	
	comp=Z,6.8nm,0.6s						
HYT	Haines Junctio	45.70	42	P	P	18 01 31.3	+2.1
C36M	Paulatuk	48.68	28	P	P	18 01 51.9	-0.1
C36M				IAmb	IAmb	18 01 53.0	
	comp=Z,5.7nm,0.8s						
KK31	Karatay Array	53.10	297	P	P	18 02 25.2	-0.2
KK31				pmax	pmax		
	comp=Z,3.0nm,1.3s						
KK31	Karatay Array	53.10	297	P	P	18 02 25.2	-0.2
KKAR	Karatay Array	53.10	297	P	P	18 02 25.3	-0.1
KKAR				pmax	pmax		
	comp=Z,3.0nm,1.3s						
KKAR	Karatay Array	53.10	297	P	P	18 02 25.3	-0.1
KKAR	Karatay Array	53.10	297	P	P	18 02 25.3	-0.1
KKAR				IAmb	IAmb	18 02 26.9	
	comp=Z,3.1nm,1.3s						
ARU	Arti	53.50	316	P	P	18 02 27.3	-0.8
	comp=Z,0.5nm,0.3s,baz=23,slow=14,SNR=3.5						
ARU	Arti	53.50	316	c iP	P	18 02 26.8	-1.3
ARU				S	S	18 09 45.8	-1.8
ARU				pmax	pmax		
	comp=Z,8.0nm,1.2s						
ARU	Arti	53.50	316	P	P	18 02 27.1	-0.9
ARU	Arti	53.50	316	i P	P	18 02 26.8	-1.3
YKA	Yellowknife Ar	55.08	34	P	P	18 02 40.0	+0.7
	comp=Z,6.6nm,0.7s,baz=303,slow=6.4,SNR=94						
ABKAR	Akbulak array	56.31	308	P	P	18 02 48.4	+0.1
ABKAR	Akbulak array	56.31	308	P	P	18 02 48.3	0.0
ARCES	ARCESS Array B	58.26	339	P	P	18 03 00.1	-1.5
	comp=Z,8.5nm,1.0s,baz=52,slow=6.3,SNR=6.8						
ARCES	ARCESS Array B	58.26	339	P	P	18 03 00.2	-1.5
ARCES				pmax	pmax		
	comp=Z,17nm,1.2s						
ARCES	ARCESS Array B	58.26	339	P	P	18 03 00.1	-1.5
BELG	Belogornoye	61.06	316	P	P	18 03 20.4	-0.6
	comp=Z,7.0nm,1.0s,baz=307,slow=19,SNR=2.9						
PINE	Pine Mountain	62.33	55	P	P	18 03 31.7	+1.8
PINE				IAmb	IAmb	18 03 33.3	
	comp=Z,9.3nm,1.2s						
SUMG	Summit	62.92	2	P	P	18 03 33.2	-0.4
SUMG	Summit	62.92	2	P	P	18 03 33.2	-0.4
FIA1	FINESS Array S	63.91	333	P	P	18 03 38.1	-1.7
FINES	FINESS Array B	63.91	333	P	P	18 03 38.2	-1.6
	comp=Z,3.0nm,0.5s,baz=43,slow=7.6,SNR=20						
FFC	Flin Flon	65.01	37	P	P	18 03 48.3	+1.3
FFC				pmax	pmax		
	comp=Z,2.0nm,0.8s						
FFC	Flin Flon	65.01	37	P	P	18 03 48.3	+1.3
WB0	Warramunga Arr	65.21	193	P	P	18 03 49.8	+1.1
WB0				IAmb	IAmb	18 04 08.4	
	comp=Z,7.5nm,1.5s						
FCC	Fort Churchill	65.25	30	P	P	18 03 48.6	+0.1
FCC				pmax	pmax		
	comp=Z,4.0nm,0.7s						
FCC	Fort Churchill	65.25	30	P	P	18 03 48.6	+0.1
FCC				IAmb	IAmb	18 03 49.8	
	comp=Z,4.1nm,0.7s						
WR0	Warramunga Arr	65.37	193	P	P	18 03 50.8	+1.1
WR0				IAmb	IAmb	18 04 13.0	
	comp=Z,13nm,1.5s						
WRAB	Tennant Creek	65.38	193	P	P	18 03 50.6	+0.9
WRAB				pmax	pmax		
	comp=Z,14nm,1.4s						
WRAB	Tennant Creek	65.38	193	P	P	18 03 50.6	+0.9
WB2	Warramunga Arr	65.39	193	P	P	18 03 50.3	+0.5
WRA	Warramunga Arr	65.39	193	P	P	18 03 50.1	+0.3
	comp=Z,0.9nm,0.5s,baz=8.8,slow=6.8,SNR=11						
WRA	Warramunga Arr	65.39	193	P	P	18 03 50.4	+0.6
WRA	Warramunga Arr	65.39	193	P	P	18 03 50.4	+0.6
HRY	Holter Researc	65.59	48	P	P	18 03 52.6	+1.5
EGMT	Eagleton	65.82	46	P	P	18 03 53.6	+1.1
EGMT				IAmb	IAmb	18 03 58.2	
	comp=Z,8.0nm,1.4s						
LRM	Limekiln Ridge	65.83	49	P	P	18 03 54.0	+1.2
DLMT	Dillon	66.05	49	P	P	18 03 56.7	+2.6
BOZ	Bozeman (W)	66.42	49	P	P	18 03 57.4	+1.0
BOZ				pmax	pmax		
	comp=Z,5.0nm,0.7s						
BOZ	Bozeman (W)	66.42	49	P	P	18 03 57.4	+1.0
BOZ				IAmb	IAmb	18 03 58.8	
	comp=Z,4.6nm,0.7s						
NVAR	Mina Array Bea	67.20	58	P	P	18 04 03.4	+1.8
	comp=Z,1.3nm,0.8s,baz=292,slow=6.1,SNR=9.7						
NVAR	Mina Array Bea	67.20	58	P	P	18 04 03.5	+1.9
YHH	Holmes Hill	67.36	49	P	P	18 04 03.9	+1.3
YNE	Yellowstone No	67.67	48	P	P	18 04 05.3	+0.9
RLMT	Red Lodge	67.98	48	P	P	18 04 06.5	+0.2
NC405	NORSAR Array S	68.42	338	P	P	18 04 07.5	-1.0
NC204	NORSAR Array S	68.53	339	P	P	18 04 08.2	-1.0
NB201	NORSAR Array S	68.58	339	P	P	18 04 08.4	-1.1
NB2	NORSAR Subarra	68.61	339	P	P	18 04 08.6	-1.2
	comp=Z,6.2nm,0.8s,baz=30,slow=6.2						
NOA	NORSAR Array B	68.61	339	P	P	18 04 08.6	-1.2
	comp=Z,18nm,0.4s,baz=39,slow=4.0,SNR=16						
R11A	Troy Canyon, C	68.89	57	P	P	18 04 13.4	+1.3
KIV	Kislovodsk	68.97	311	eP	P	18 04 13.3	+0.9
KIV				pmax	pmax		
	comp=Z,20nm,1.1s						
KIV	Kislovodsk	68.97	311	eP	P	18 04 13.3	+0.9
KBZ	Khabaz	69.01	311	P	P	18 04 13.7	+1.3
	comp=Z,2.7nm,0.8s,baz=52,slow=5.4,SNR=7.2						
KBZ	Khabaz	69.01	311	eP	P	18 04 13.7	+1.3
ASAR	Alice Springs	69.11	193	P	P	18 04 14.7	+1.5
	comp=Z,0.3nm,0.5s,baz=10.0,slow=6.4,SNR=14						
ASAR	Alice Springs	69.11	193	P	P	18 04 14.8	+1.6
ASAR	Alice Springs	69.11	193	P	P	18 04 14.8	+1.6
BW06	Boulder Array	69.40	50	P	P	18 04 16.1	+0.9
PD31	Pinedale Array	69.40	50	P	P	18 04 16.3	+1.0
PDAR	Pinedale Array	69.40	50	P	P	18 04 16.7	+1.5
	comp=Z,2.0nm,0.5s,baz=308,slow=0.9,SNR=27						
PDAR	Pinedale Array	69.40	50	P	P	18 04 16.5	+1.3
AKASG	Malin Array Be	70.68	323	P	P	18 04 21.6	-0.9
	comp=Z,0.3nm,0.3s,baz=37,slow=6.0,SNR=4.3						
AKASG	Malin Array Be	70.68	323	ceP	P	18 04 23.5	+1.0
ULM	Lac du Bonnet	70.81	37	P	P	18 04 23.6	+0.3
	comp=Z,1.2nm,0.5s,baz=316,slow=8.0,SNR=2.7						
RDMU	Red Mountain	70.88	52	P	P	18 04 25.7	+1.5
PV17	East Wray Mesa	72.79	53	P	P	18 04 37.1	+1.5
PV17				IAmb	IAmb	18 04 38.0	
	comp=Z,3.3nm,0.6s						
BUR08	Bucovina Ar. S	74.72	323	P	P	18 04 46.6	0.0
DPC	Dobruska-Polom	76.01	330	eP	P	18 04 55.5	+1.7
DPC	Dobruska-Polom	76.01	330	eP	P	18 04 55.5	+1.7
KRLC	Kraliky	76.08	329	eP	P	18 04 54.7	+0.5
KRLC	Kraliky	76.08	329	eP	P	18 04 54.7	+0.5

BRTR	Keskin Array B	76.73	313	P	P	18 04 59.8	+1.6
	comp=Z,0.8nm,0.7s,baz=103,slow=3.1,SNR=2.7						
KHC	Kasperske Hory	78.01	331⇓	eP	P	18 05 05.8	+0.9
KHC				pmax	pmax		
	comp=Z,19nm,2.5s						
KHC	Kasperske Hory	78.01	331	eP	P	18 05 05.3	+0.4
KHC	Kasperske Hory	78.01	331	P	P	18 05 05.3	+0.4
KHC				IAmb	IAmb	18 05 06.3	
	comp=Z,4.2nm,0.8s						
CKRC	Cesky Krumlov	78.01	330	eP	P	18 05 05.4	+0.4
GERES	GERESS Array B	78.21	331	P	P	18 05 06.1	0.0
	comp=Z,0.9nm,0.4s,baz=37,slow=6.1,SNR=8.6						
TXAR	Lajitas Array	82.24	56	P	P	18 05 29.7	+1.6
	comp=Z,0.4nm,0.5s,baz=288,slow=3.8,SNR=5.3						

*ISN **18** 17:54:49.8±0.8, 31.°80N×46.°95E, h25^{km}, ML3.1*
*TEH **18** 17:54:49.6, 31.°82N×46.°91E, h12^{km}, ML3.5*
*THR **18** 17:55:00.3±0.4, 32.°31N×47.°61E, h18^{km}±6^{km}, ML3.4*
ISC 18 17:54:49.3±0.9**, 31.°75N**±0.°05×**46.°93E**±0.°04**, h10^{km}, n25, σ1^{s}.81**/30**, Iraq**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DHL1	Dehloran	0.98	18	ePg	Pg	17 55 08.1	-0.1
NSR	Nassriya	1.00	223	ePg	Pg	17 55 08.0	-0.5
NSR				eSg	Sg	17 55 21.0	-0.5
NSR				AML	AML	17 55 25.7	
	comp=E,289nm,0.3s						
IBDR	Badra	1.60	328	ePn	Pn	17 55 18.0	+0.3
IBDR				eSn	Sn	17 55 38.0	-0.5
IBDR				AML	AML	17 55 53.9	
	comp=N,318nm,0.3s						
IBDR				AML	AML	17 55 54.6	
	comp=E,169nm,0.5s						
SHGR	Shooshtar-Gavs	1.63	77	ePg	Pg	17 55 19.8	-0.8
SHGR				eSg	Sn	17 55 33.6	-5.6
SHGR				IAML		17 55 38.2	
	comp=N,1μm,0.3s						
SHGR	Shooshtar-Gavs	1.63	77	ePg	Pg	17 55 19.8	-0.8
IKFM	Kafar-mosalman	1.94	23	ePg	Pb	17 55 24.7	0.0
IKFM				e		17 55 48.1	
	comp=Z,99nm,0.5s						
IKMR	Kamar-syah	2.15	34	e	Sn	17 55 51.0	-0.9
	comp=Z,99nm,0.8s						
BHD	Baghdad	2.64	306	ePn	Pn	17 55 33.0	+1.1
BHD				AML	AML	17 55 39.5	
	comp=E,283nm,0.5s						
BHD				eSn	Sn	17 56 04.0	0.0
IBZA	Bozab	2.83	16	ePn	Pn	17 55 36.5	+1.7
IBZA				e		17 55 42.2	
	comp=Z,99nm,0.7s						
HSAM	Samen	2.83	29	ePn	Pn	17 55 36.3	+1.4
HSAM				e		17 55 40.5	
	comp=Z,99nm,0.5s						
IDHR	Dehrash	2.98	351	ePn	Pn	17 55 37.0	+0.1
IDHR				e		17 56 27.9	
	comp=Z,99nm,0.6s						
KHMZ	Khomeyn	3.23	51	ePn	Pn	17 55 41.5	+1.1
KHMZ	Khomeyn	3.23	51	ePn	Pn	17 55 41.5	+1.1
HAGD	Aghdareh	3.58	31	ePn	Pn	17 55 47.2	+2.0
ASAO	Ashtian	3.81	42	ePn	Pn	17 55 49.3	+0.9
ASAO				eSg	Sn	17 56 34.7	+1.3
ASAO	Ashtian	3.81	42	ePn	Pn	17 55 49.3	+0.9
KLNJ	Kolanjah	4.05	99	ePn	Pn	17 55 54.2	+2.4
IKLH	Kolahrood	4.23	67	ePn	Pn	17 55 54.9	+0.8
IKLH				e		17 55 57.2	
	comp=Z,99nm,0.1s						
QAM	Ghamsar	4.30	61	ePn	Pn	17 55 57.4	+2.4
IRAZ	Razeghan	4.42	34	ePn	Pn	17 55 58.7	+1.9
QABG	Abgarm-Qazvin	4.53	28	ePn	Pn	17 55 58.2	0.0
IQOM	Qom	4.64	47	ePn	Pn	17 56 00.0	+0.2
IZEF	Zefreh	4.71	74	ePn	Pn	17 56 02.2	+1.4
NASN	Na'in	5.09	77	ePn	Pn	17 56 09.1	+3.1
NASN	Na'in	5.09	77	ePn	Pn	17 56 09.1	+3.1

ISN 18 17:55:01.8±0.4**, 32.°29N**×**47.°59E, h24^{km}**±2^{km}**, ML3.1, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IBDR	Badra	1.62	301	ePg	Pb	17 55 31.0	0.0
IBDR				eSg	Sb	17 55 52.0	+1.0
NSR	Nassriya	1.77	224	ePn	Pn	17 55 32.0	+1.1
NSR				eSn	Sn	17 55 54.0	+1.3
NSR				AML	AML	17 55 57.0	
	comp=E,268nm,0.6s						
BHD	Baghdad	2.87	291	ePn	Pn	17 55 48.0	+2.0
BHD				eSn	Sn	17 56 22.0	+2.2

JMA 18 18:04:47.3, 36.°80N×**140.°59E, h5^{km}**±1^{km}**, M2.5, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHO	Hitachi	0.19	185	P	Pg	18 04 51.1	+0.1
JHO				S	Sg	18 04 53.8	+0.3
JFFD	Fukushimafurud	0.29	355	P	Pg	18 04 53.2	+0.2
JFFD				S	Sg	18 04 57.5	+0.7
ONAJ	Iwakimizuishiy	0.34	29	P	Pg	18 04 54.1	+0.1
ONAJ				eS	Sg	18 04 58.9	+0.3
JFK	Kawauchi	0.61	22	P	Pg	18 04 58.9	-0.1
JFK				S	Sg	18 05 07.4	+0.4
JFT	Otama	0.74	344	P	Pg	18 05 01.7	+0.1
JFT				S	Sg	18 05 12.0	+0.7
MAT	Matsushiro	1.93	263	P	Pn	18 05 21.7	+0.9
MAT				S	Sb	18 05 46.9	-0.6

*IDC **18** 18:16:40.2±17.0, 37.°88N×20.°22E, h0^{km}, mb3.8/3, mb1 3.7/4, mb1mx3.4/41, mbtmp3.6/4, ML3.4/1, Error ellipse: s-maj=339.6km s-min=35.3km az=37.0*
*ATH **18** 18:16:44.9, 38.°20N×20.°39E, h12^{km}, ML3.0/12, Error ellipse: s-maj=1.5km s-min=0.8km az=248.0*
*THE **18** 18:16:45.4, 38.°21N×20.°41E, h9^{km}, ML3.3/9, Error ellipse: s-maj=0.9km s-min=0.4km az=262.0*
ISC 18 18:16:44.6±0.8**, 38.°22N**±0.°03×**20.°39E**±0.°04**, h14^{km}**±3^{km}**, n71, σ0^{s}.96**/93**, mb3.8**/3**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DMLN	Damoulianata-K	0.02	318	P	Pg	18 16 47.3	0.0
DMLN				S	Sg	18 16 48.5	-0.5
	250μm,0.4s						
DMLN	Damoulianata-K	0.02	318	P	Pg	18 16 47.3	0.0
DMLN				S	Sg	18 16 48.5	-0.5
KEF3	Kipouria, Keph	0.04	244	P	Pg	18 16 47.1	-0.2
KEF3				S	Sg	18 16 48.3	-0.7
	505μm,0.2s						
KEF3	Kipouria, Keph	0.04	244	P	Pg	18 16 47.1	-0.2
KEF3				S	Sg	18 16 48.3	-0.7
LXRA	Lixouri, Kepha	0.04	121	P	Pg	18 16 47.2	0.0
LXRA				S	Sg	18 16 48.7	-0.3
KEF4	Livadi, Kephal	0.04	33	P	Pg	18 16 47.5	+0.2
KEF4				S	Sg	18 16 49.1	0.0
	588μm,0.2s						
KEF4	Livadi, Kephal	0.04	33	P	Pg	18 16 47.5	+0.2
KEF4				S	Sg	18 16 49.1	0.0
ARGA	Argostoli. Kep	0.08	123	P	Pg	18 16 47.4	-0.1
ARGA				S	Sg	18 16 48.9	-0.6
KEF5	Kardakata, Kep	0.08	46	P	Pg	18 16 47.9	+0.3
KEF5				S	Sg	18 16 49.5	-0.2
KEF5	Kardakata, Kep	0.08	46	P	Pg	18 16 47.9	+0.3
KEF5				S	Sg	18 16 49.5	-0.2
PSDA	Pessada-Kefalo	0.18	125	P	Pg	18 16 49.1	+0.2
PSDA				S	Sg	18 16 51.8	0.0
	3μm,0.3s						
PSDA	Pessada-Kefalo	0.18	125	P	Pg	18 16 49.1	+0.2
PSDA				S	Sg	18 16 51.8	0.0
VLMS	Volimes, Zakyn	0.40	148	P	Pg	18 16 52.7	0.0
VLMS				S	Sg	18 16 58.5	+0.2
	5μm,0.4s						
VLMS	Volimes, Zakyn	0.40	148	P	Pg	18 16 52.7	0.0
VLMS				S	Sg	18 16 58.4	+0.2
VLMS				AML	AML	18 17 00.1	
	comp=N,11857μm,0.4s						
VLMS				AML	AML	18 17 03.1	
	comp=E,10601μm,0.3s						
EVGI	Lefkada island	0.45	27	P	Pb	18 16 54.3	0.0
EVGI				S	Sb	18 17 01.1	+0.2
	comp=E,1μm,0.1s						
EVGI	Lefkada island	0.45	27	P	Pb	18 16 54.3	0.0
EVGI				S	Sb	18 17 01.0	+0.2
NYDR	Nydri-Lefkada	0.55	26	P	Pg	18 16 55.4	0.0
NYDR				S	Sb	18 17 04.1	+0.4
	comp=E,1μm,0.4s						
NYDR	Nydri-Lefkada	0.55	26	P	Pg	18 16 55.4	0.0
NYDR				S	Sb	18 17 04.1	+0.4
LKD2	Lefkada island	0.60	20	P	Pb	18 16 56.8	-0.2
LKD2				S	Sb	18 17 05.5	+0.1
	comp=E,1μm,0.6s						
LKD2	Lefkada island	0.60	20	P	Pb	18 16 56.8	-0.2
LTHK	Lithakia	0.62	145	P	Pg	18 16 56.3	-0.4
LTHK				S	Sg	18 17 06.0	+1.0
	comp=E,2μm,0.5s						
LTHK	Lithakia	0.62	145	P	Pg	18 16 56.3	-0.4
TSLK	Tsoukalades, L	0.64	19	P	Pb	18 16 57.5	0.0
TSLK	Tsoukalades, L	0.64	19	P	Pb	18 16 57.5	0.0
TSLK				AML	AML	18 17 13.4	
	comp=E,2394μm,0.5s						
TSLK				AML	AML	18 17 20.2	
	comp=N,2388μm,0.6s						
PDO	Prodromos	0.73	58	P	Pb	18 16 59.0	-0.1
PDO	Prodromos	0.73	58	P	Pb	18 16 59.0	-0.1
RLS	Riolos of Patr	0.86	101	P	Pg	18 17 01.1	-0.2
RLS	Riolos of Patr	0.86	101	P	Pg	18 17 00.8	-0.5
RLS				AML	AML	18 17 20.3	
	comp=N,1606μm,0.4s						
RLS				AML	AML	18 17 24.2	
	comp=E,1417μm,0.6s						
EFP	Efpalio	1.21	80	P	Pb	18 17 07.0	-0.2
EFP	Efpalio	1.21	80	P	Pb	18 17 07.0	-0.2
EFP				AML	AML	18 17 34.4	
	comp=E,2052μm,0.8s						
EFP				AML	AML	18 17 37.0	
	comp=N,1889μm,0.5s						
LAKA	Lakka	1.25	89	P	Pn	18 17 07.7	+0.1
LAKA	Lakka	1.25	89	P	Pn	18 17 07.7	+0.1
EVR	Evrytania	1.31	58	P	Pn	18 17 08.8	+0.2
EVR	Evrytania	1.31	58	P	Pn	18 17 08.7	+0.2
EVR				AML	AML	18 17 36.5	
	comp=N,868μm,0.5s						
EVR				AML	AML	18 17 50.8	
	comp=E,596μm,1.3s						
IGT	Igoumenitsa	1.31	358	P	Pb	18 17 09.5	+0.5
IGT	Igoumenitsa	1.31	358	P	Pb	18 17 09.5	+0.5
IGT				AML	AML	18 17 34.6	
	comp=N,578μm,0.4s						
IGT				AML	AML	18 17 35.8	
	comp=E,596μm,0.9s						
TRIZ	Trizonia	1.33	83	P	Pn	18 17 08.9	+0.2
TRIZ	Trizonia	1.33	83	P	Pn	18 17 08.9	+0.2
KALE	Kalithea	1.38	82	P	Pn	18 17 09.8	+0.3
KALE	Kalithea	1.38	82	P	Pn	18 17 09.8	+0.3
KALE				AML	AML	18 17 38.7	
	comp=N,1272μm,0.4s						
KALE				AML	AML	18 17 40.2	
	comp=E,871μm,0.6s						
KEK	Kerkira	1.56	343	P	Pn	18 17 13.3	+1.4
KEK	Kerkira	1.56	343	P	Pn	18 17 13.3	+1.4
MAKR	Makrakomi, Fth	1.57	59	P	Pb	18 17 14.1	+0.6
MAKR				AML	AML	18 17 47.7	
	comp=N,1570μm,0.9s						
MAKR				AML	AML	18 17 48.8	
	comp=E,1977μm,0.7s						
ITM	Ithomi	1.60	130	P	Pn	18 17 13.4	+0.9
ITM	Ithomi	1.60	130	P	Pn	18 17 13.4	+0.9
ITM				AML	AML	18 17 46.6	
	comp=N,545μm,0.6s						
ITM				AML	AML	18 17 54.2	
	comp=E,494μm,0.7s						
PYL	PYLOS	1.70	141	P	Pn	18 17 15.1	+1.2
PYL	PYLOS	1.70	141	P	Pn	18 17 15.1	+1.2
AGG	Agios Georgios	1.71	62	P	Pb	18 17 16.0	+0.1
AGG				AML	AML	18 17 49.5	
	comp=N,672μm,0.5s						
AGG				AML	AML	18 17 51.8	
	comp=E,638μm,0.9s						
LTK	Loutraki	2.04	95	P	Pb	18 17 21.0	-0.4
ATAL	Atalanti	2.12	76	P	Pb	18 17 22.6	-0.1
ATAL				AML	AML	18 18 09.6	
	comp=N,355μm,1.1s						
ATAL				AML	AML	18 18 10.8	
	comp=E,378μm,1.0s						
VIL2	Platees	2.26	89	P	Pb	18 17 24.9	-0.3
VIL2				AML	AML	18 18 09.5	
	comp=N,342μm,1.0s						
VIL2				AML	AML	18 18 16.1	
	comp=E,756μm,0.8s						
OHR	Ohrid	2.90	6	i Pn	Pb	18 17 36.9	+0.7
DBRK	Dubrovnik	4.76	340	ePn	Pn	18 17 56.0	+0.1
DBRK				Sn	Sn	18 18 49.2	-1.7
STON	Ston	5.08	337	i Pn	Pn	18 17 59.9	-0.3
STON				Sn	Sn	18 18 54.9	-3.8
LSTV	Lastovo	5.27	331	i Pn	Pn	18 18 03.3	+0.4
MAKA	Makarska	5.67	334	i Pn	Pn	18 18 09.7	+1.3
HVAR	Hvar	5.79	330	ePn	Pn	18 18 10.5	+0.5
RICI	Ricice	5.82	336	ePn	Pn	18 18 11.2	+0.8
ZIRJ	Zirje	6.51	328	ePn	Pn	18 18 20.0	+0.1
KIJV	Kijevo	6.51	334	i Pn	Pn	18 18 21.0	+1.0
MORI	Morici	6.66	329	ePn	Pn	18 18 23.2	+1.2
UDBI	Udbina	7.20	333	i Pn	Pn	18 18 31.9	+2.5
NVLJ	Novalja	7.57	329	ePn	Pn	18 18 35.7	+1.2
SOKA	Soboth	9.33	337	i Pn	Pn	18 18 59.4	+0.7
	comp=E,2.6nm,0.4s						
SOKA	Soboth	9.33	337	eSn	Sn	18 20 39.0	-4.5
	comp=E,0.5nm,0.3s						
OBKA	Obir	9.34	334	i Pn	Pn	18 19 01.7	+2.8
	comp=E,1.1nm,0.3s						
OBKA	Obir	9.34	334	eSn	Sn	18 20 42.5	-1.2
	comp=E,2.1nm,0.3s						
GERES	GERESS Array B	11.67	338	Pn	Pn	18 19 32.7	+2.0
	comp=E,0.1nm,0.3s,baz=159,slow=15,SNR=1.8						
FINES	FINESS Array B	23.52	7	P	P	18 21 55.4	+1.5
	comp=E,3.6nm,1.1s,baz=177,slow=9.5,SNR=4.4						
MKAR	Makanchi Array	45.36	58	P	P	18 25 02.5	+0.2
	comp=E,0.3nm,0.4s,baz=278,slow=7.5,SNR=16						
ZALV	Zalesovo Beam	45.74	48	P	P	18 25 05.0	-0.1
	comp=E,0.8nm,0.4s,baz=284,slow=7.6,SNR=4.3						

NNC 18 18:20:12.1±3.5**, 38.°55N**×**70.°05E, h0^{km}, mb3.8, mpv3.4, 6C-3D, Error ellipse: s-maj=25.1km s-min=19.3km az=10.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	Karatay Array	4.56	4	⇓Pn	Pn	18 21 22.3	-0.1
	1.1nm,0.3s,baz=177,slow=12,SNR=29						
KK31				⇑Sn	Sn	18 22 17.2	+1.0
	3.8nm,0.6s						
KK31				⇓Lg	Lg	18 22 34.1	
	4.6nm,0.6s,baz=183,slow=27,SNR=8.5						
AAK	Ala-Archa	5.30	38	⇑Pn	Pn	18 21 32.9	+0.2
	2.1nm,0.5s						
AAK				⇓Sn	Sn	18 22 37.7	+3.1
	7.6nm,1.0s						
AAK				⇑Lg	Lg	18 22 59.1	
	6.5nm,0.8s						
TKM2	Tokmak 2	6.07	42	⇑Pn	Pn	18 21 42.1	-1.2
	7.6nm,1.1s						
TKM2				⇑Sn	Sn	18 22 54.0	+0.5
	2.8nm,0.6s						
TKM2				⇑Lg	Lg	18 23 23.1	
	7.2nm,1.1s						

*IDC **18** 18:21:42.0±1.4, 10.°69S×164.°05E, h0^{km}, mb3.7/8, mb1 3.9/11, mb1mx3.8/37, mbtmp3.8/11, ML3.6/3, MS3.2/4, Ms1 3.2/4, ms1mx2.8/35, Error ellipse: s-maj=32.5km s-min=24.5km az=123.0*
ISC 18 18:21:45.8±1.0**, 10.°7S**±0.°1×**164.°1E**±0.°1**, h25^{km}, n15, σ0^{s}.80**/12**, mb3.7**/8**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	4.25	287	Pn	Pn	18 22 48.7	-0.3
	7.5nm,0.3s,baz=108,slow=18,SNR=2.2						
HNR				Sn	Sn	18 23 37.6	-0.3
	4.2nm,0.3s,baz=302,slow=2.2,SNR=1.7						
HNR				LR	LR	18 24 41.5	
	comp=Z,220nm,20.6s,baz=236,slow=42						
DZM	Mont Dzumac	11.49	169	Pn	Pn	18 24 27.9	-0.6
	0.3nm,0.3s,baz=314,slow=18,SNR=1.4						
DZM				LR	LR	18 28 02.9	
	comp=Z,137nm,19.1s,baz=320,slow=33						
CTA	Charters Tower	19.50	239	P	P	18 26 11.4	+0.1
	0.1nm,0.3s,baz=68,slow=17,SNR=1.7						
STKA	Stephens Creek	29.55	221	P	P	18 27 49.1	+0.6
	1.6nm,0.8s,baz=79,slow=10,SNR=2.1						
WRA	Warramunga Arr	30.04	249	P	P	18 27 52.7	-0.4
	0.6nm,0.7s,baz=80,slow=9.4,SNR=1.8						
H11N1	WAKE ISLAND Hy	30.39	5	T	T	18 59 32.6	
	baz=184,slow=76,SNR=10						
H11N3	WAKE ISLAND Hy	30.40	5	T	T	18 59 32.6	
	baz=184,slow=76,SNR=8.2						
H11N2	WAKE ISLAND Hy	30.41	5	T	T	18 59 33.6	
	baz=184,slow=76,SNR=9.4						
GUMO	Guam	30.77	321	LR	LR	18 39 37.6	
	comp=Z,28nm,21.7s,baz=142,slow=35						
ASAR	Alice Springs	31.46	242	P	P	18 28 06.7	+1.1
	0.3nm,0.6s,baz=63,slow=10,SNR=6.9						
FITZ	Fitzroy Crossi	37.86	254	P	P	18 28 59.8	-1.1
	2.3nm,0.7s,baz=74,slow=7.4,SNR=2.4						
FITZ				LR	LR	18 44 56.0	
	comp=Z,38nm,18.1s,baz=322,slow=37						
CMAR	Chiang Mai Arr	70.47	294	P	P	18 32 59.9	+1.1
	0.3nm,0.6s,baz=122,slow=6.8,SNR=2.3						
SONM	Songino Array	77.45	324	P	P	18 33 39.0	-0.2
	0.4nm,0.7s,baz=141,slow=6.7,SNR=3.1						
ILAR	Eielson Array	83.76	19	P	P	18 34 12.8	+0.4
	0.6nm,0.8s,baz=228,slow=5.8,SNR=5.7						
MKAR	Makanchi Array	92.17	317	P	P	18 34 52.4	-1.0
	0.3nm,0.6s,baz=91,slow=3.7,SNR=3.9						

IDC 18 18:23:15.0±2.4**, 1.°33N**×**126.°77E, h0^{km}, mb3.3**/3**, mb1 3.5**/3**, mb1mx3.3**/33**, mbtmp3.3**/3**, Error ellipse: s-maj=214.2km s-min=27.1km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	22.40	161	P	P	18 28 16.1	+0.8
	0.5nm,0.6s,baz=340,slow=11,SNR=5.7						
ASAR	Alice Springs	25.79	165	P	P	18 28 47.1	-0.8
	0.4nm,0.8s,baz=341,slow=9.4,SNR=2.2						
MKAR	Makanchi Array	59.55	326	P	P	18 33 20.4	0.0
	0.6nm,0.9s,baz=114,slow=7.1,SNR=5.2						

IDC 18 18:26:24.0±7.5**, 3.°39N**×**129.°04E, h0^{km}, mb3.4**/4**, mb1 3.6**/4**, mb1mx3.3**/33**, mbtmp3.5**/4**, Error ellipse: s-maj=121.4km s-min=97.8km az=139.0, North of Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	21.61	189	P	P	18 31 17.5	+1.7
	1.5nm,0.8s,baz=7.1,slow=8.1,SNR=1.4						
WRA	Warramunga Arr	23.76	168	P	P	18 31 38.7	+0.4
	0.1nm,0.3s,baz=346,slow=11,SNR=7.2						
ASAR	Alice Springs	27.31	170	P	P	18 32 09.8	-0.8
	0.1nm,0.3s,baz=352,slow=6.9,SNR=6.7						
STKA	Stephens Creek	37.05	162	P	P	18 33 35.2	-0.7
	1.3nm,1.0s,baz=329,slow=19,SNR=1.4						

*IDC **18** 18:35:09.0±2.0, 11.°51S×118.°26E, h0^{km}, mb3.3/1, mb1 3.6/6, mb1mx3.3/45, mbtmp3.5/6, ML3.5/5, Error ellipse: s-maj=51.6km s-min=23.5km az=50.0*
ISC 18 18:35:17.9±1.5**, 11.°10S**±0.°07×**119.°6E**±0.°1**, h10^{km}, n6, σ1^{s}.53**/10**, South of Sumba**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	Baumata	4.11	78	Pn	Pb	18 36 31.3	+0.9
	4.6nm,0.3s,baz=270,slow=18,SNR=8.7						
BATI				Sn	Sg	18 37 29.9	-0.1
	1.6nm,0.3s,baz=225,slow=24,SNR=1.5						
KAPI	Kappang	6.04	2	Pn	Pn	18 36 47.8	+0.5
	0.6nm,0.3s,baz=221,slow=9.3,SNR=1.3						
KAPI				Sn	Sn	18 37 55.0	-1.7
	0.5nm,0.3s,baz=75,slow=20,SNR=1.3						
FITZ	Fitzroy Crossi	9.10	141	Pn	Pn	18 37 30.0	+0.6
	0.4nm,0.3s,baz=322,slow=12,SNR=27						
FITZ				Sn	Sn	18 39 11.9	-0.1
	0.3nm,0.3s,baz=34,slow=17,SNR=1.9						
WRA	Warramunga Arr	16.71	124	P	P	18 39 14.3	-0.3
	0.1nm,0.3s,baz=282,slow=13,SNR=1.6						
WRA				S	Sn	18 42 18.4	+0.2
	0.0nm,0.3s,baz=292,slow=24,SNR=2.2						
ASAR	Alice Springs	18.50	134	P	Pn	18 39 35.2	+0.6
	0.2nm,0.3s,baz=312,slow=12,SNR=12						
ASAR				S	Sn	18 42 58.1	-3.4
	0.0nm,0.3s,baz=304,slow=23,SNR=1.6						
MKAR	Makanchi Array	66.57	333	P	P	18 45 59.6	-8.6
	0.2nm,0.6s,baz=146,slow=6.5,SNR=6.7						

*BJI **18** 18:50:42.0±0.0, 10.°78S×164.°54E, h10^{km}, mB5.3/28, mb4.5/41, Ms5.1/7, Ms7 4.6/4*
*IDC **18** 18:50:44.6±0.6, 10.°77S×164.°03E, h0^{km}, mb4.4/18, mb1 4.6/22, mb1mx4.5/31, mbtmp4.4/22, ML4.7/3, MS4.1/30, Ms1 4.1/30, ms1mx4.0/40, Error ellipse: s-maj=18.4km s-min=14.6km az=103.0*
*NEIC **18** 18:50:46.1±2.2, 10.°75S±0.°07×164.°03E±0.°05, h13^{km}±4^{km}, mb4.9/61, Error ellipse: s-maj=10.9km s-min=6.2km az=156.0*
*GCMT **18** 18:50:48.1±0.3, 10.°59S±0.°02×164.°11E±0.°02, h12^{km}, MW4.9/71, Moment Tensor Solution. s15,c17; s71,c101; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.61±.09; $M_{\theta\theta}$-0.01±.10; $M_{\phi\phi}$-1.59±.08; $M_{r\theta}$-0.40±.29; $M_{\theta\phi}$1.76±.06; $M_{\phi r}$1.32±.28; Best double couple: $M_0$2.61300×10^{16} NP1:ϕ_s123.00000°,δ34.00000°,λ54.00000°. NP2: ϕ_s344.00000°,δ63.00000°,λ111.00000°. Principal axes: T 2.1180, Plg65.0000°, Azm291.0000°; N 0.9930, Plg19.0000°, Azm154.0000°; P -3.1070, Plg16.0000°, Azm59.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 18 18:50:48.7±0.4**, 10.°77S**±0.°06×**164.°10E**±0.°07**, h29^{km}, n169, σ1^{s}.32**/145**, mb4.8**/52**, MS4.2**/32**, 2D, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	4.30	288	Pn	Pn	18 51 51.8	-0.5
	54nm,0.3s,baz=140,slow=6.1,SNR=20						
HNR				Sn	Sn	18 52 42.8	+1.3
	41nm,0.3s,baz=244,slow=16,SNR=1.1						
HNR	Honiara	4.30	288		Pn	18 51 50.1	-2.2
HNR	Honiara	4.30	288	P	Pn	18 51 52.4	+0.2
SANVU	Saraoutou	5.55	147	Pn	Pn	18 52 08.2	-1.1
DVP	Devils Point	7.97	151	P	Pn	18 52 43.8	+1.2
KOUNC	Koumac, New Ca	9.73	179	P	Pn	18 53 08.5	+1.7
LIFNC	LIFOU	10.40	164	P	Pn	18 53 15.1	-0.9
DZM	Mont Dzumac	11.46	169	Pn	Pn	18 53 30.9	+0.3
	5.7nm,0.3s,baz=352,slow=10,SNR=48						
DZM				Sn	Sn	18 55 36.2	-1.6
	0.2nm,0.3s,baz=265,slow=14,SNR=1.4						
DZM				LR	LR	18 57 03.4	
	comp=Z,470nm,19.0s,baz=8.0,slow=33						
DZM	Mont Dzumac	11.46	169	ePn	Pn	18 53 31.9	+1.3
	184nm,1.6s						
DZM				eLQ	LQ	18 55 42.0	
	1μm,23.8s						
DZM				eLR	LR	18 56 09.8	
	comp=Z,522nm,22.6s						
DZM	Mont Dzumac	11.46	169		Pn	18 53 30.4	-0.2
DZM	Mont Dzumac	11.46	169	P	Pn	18 53 31.0	+0.3
ONTNC	Ouen Toro	11.70	169	P	Pn	18 53 36.2	+2.5
OUENC	Ouen Island, N	11.88	168	P	Pn	18 53 37.7	+1.5
RABL	Rabaul	13.51	298	Pn	Pn	18 53 56.5	-2.2
PMG	Port Moresby	16.74	273	Pn	P	18 54 42.0	-1.3
	0.2nm,0.3s,baz=85,slow=18,SNR=1.4						
PMG				LR	LR	19 00 31.9	
	comp=Z,2μm,21.5s,baz=108,slow=35						
PMG	Port Moresby	16.74	273	P	P	18 54 43.6	+0.3
EIDS	Eidsvold	19.06	219	P	Pn	18 55 10.0	+0.2
	baz=19,SNR=4.5						
EIDS	Eidsvold	19.06	219	P	P	18 55 07.0	-1.8
CTA	Charters Tower	19.52	240	P	Pn	18 55 15.1	-0.3
	1.5nm,0.3s,baz=68,slow=12,SNR=30						
CTA				LR	LR	19 01 54.6	
	comp=Z,894nm,18.9s,baz=56,slow=34						
CTAO	Charters Tower	19.52	240		P	18 55 13.9	-0.1
CTAO				IAmb	IAmb	18 55 21.5	
	comp=Z,89nm,1.1s						

MTSU	Mount Surprise	20.50	247	P	Pn	18 55 25.6	-1.3
	baz=20,SNR=8.6						
RMQ	Roma	21.31	221	P	P	18 55 35.4	+2.0
	baz=21,SNR=15						
ARMA	Armidale	22.74	209	P	P	18 55 50.3	+1.6
	baz=23,SNR=6.5						
ARMA	Armidale	22.74	209	P	P	18 55 49.4	+0.7
GENI	Genyem	25.10	287	P	P	18 56 11.5	+0.3
	comp=Z,35nm,1.4s						
QIS	Mount Isa	25.48	245	P	P	18 56 13.6	-1.1
	baz=26,SNR=6.3						
CNB	Canberra Magne	27.87	206	P	P	18 56 37.0	+0.9
	baz=28,SNR=4.9						
CAN	Canberra	28.04	207	P	P	18 56 38.2	+0.6
CAN				IAmb	IAmb	18 56 46.0	
	comp=Z,33nm,1.3s						
H11S2	WAKE ISLAND Hy	29.18	5	T	T	19 27 11.0	
	baz=186,slow=76,SNR=30						
H11S3	WAKE ISLAND Hy	29.19	5	T	T	19 27 07.4	
	baz=186,slow=76,SNR=29						
H11S1	WAKE ISLAND Hy	29.20	5	T	T	19 27 10.3	
	baz=186,slow=76,SNR=32						
STKA	Stephens Creek	29.56	221	P	P	18 56 52.6	+1.6
	baz=30,SNR=13						
STKA	Stephens Creek	29.56	221	P	P	18 56 49.4	-1.6
	comp=Z,8.0nm,0.9s,baz=66,slow=10,SNR=9.2						
STKA				LR	LR	19 07 29.2	
	comp=Z,694nm,20.5s,baz=37,slow=34						
STKA	Stephens Creek	29.56	221	P	P	18 56 51.0	-0.1
URZ	Urewera	29.75	159	LR	LR	19 06 52.4	
	comp=Z,158nm,19.9s,baz=31,slow=32						
URZ	Urewera	29.75	159		P	18 56 50.9	-1.8
URZ				IAmb	IAmb	18 56 55.8	
	comp=Z,22nm,1.3s						
WR0	Warramunga Arr	29.89	249	P	P	18 56 52.3	-1.9
WR0				IAmb	IAmb	18 57 00.0	
	comp=Z,16nm,1.2s						
WB0	Warramunga Arr	29.98	249	P	P	18 56 53.1	-1.9
WRAB	Tennant Creek	30.06	249	P	P	18 56 52.0	-3.7
WRAB				IAmb	IAmb	18 57 00.2	
	comp=Z,28nm,1.2s						
WB2	Warramunga Arr	30.06	249	P	P	18 56 54.7	-0.9
WB2				IAmb	IAmb	18 57 00.3	
	comp=Z,25nm,1.2s						
WRA	Warramunga Arr	30.07	249	P	P	18 56 54.3	-1.5
	comp=Z,6.1nm,0.5s,baz=78,slow=8.9,SNR=48						
WRA				PcP	PcP	18 59 57.3	0.0
	comp=Z,0.3nm,0.7s,baz=88,slow=2.3,SNR=1.4						
WRA				LR	LR	19 08 02.8	
	comp=Z,972nm,21.6s,baz=75,slow=35						
WRA	Warramunga Arr	30.07	249	P	P	18 56 53.3	-2.4
H11N1	WAKE ISLAND Hy	30.41	5	T	T	19 28 39.6	
	baz=184,slow=76,SNR=42						
H11N3	WAKE ISLAND Hy	30.42	5	T	T	19 28 43.9	
	baz=184,slow=76,SNR=41						
H11N2	WAKE ISLAND Hy	30.43	5	T	T	19 28 45.0	
	baz=184,slow=76,SNR=35						
KDU	Kakadu	31.02	263	P	P	18 57 02.5	-1.7
	baz=31,SNR=4.8						
AS31	Alice Springs	31.48	242	P	P	18 57 05.7	-2.6
ASAR	Alice Springs	31.48	242	P	P	18 57 06.4	-1.9
	comp=Z,1.9nm,0.4s,baz=63,slow=10.0,SNR=43						
ASAR				PcP	PcP	19 00 00.4	-0.7
	comp=Z,0.2nm,0.4s,baz=71,slow=3.1,SNR=1.9						
ASAR				LR	LR	19 09 29.5	
	comp=Z,674nm,19.3s,baz=67,slow=36						
ASAR	Alice Springs	31.48	242	P	P	18 57 06.2	-2.0
TOO	Toolangi	31.50	209	P	P	18 57 09.9	+1.7
	baz=32,SNR=4.5						
TOO	Toolangi	31.50	209	P	P	18 57 09.8	+1.7
TOO				IAmb	IAmb	18 57 12.6	
	comp=Z,21nm,1.0s						
HTT	Hallett	32.28	222	P	P	18 57 16.4	+1.2
	baz=32,SNR=5.4						
OXZ	Oxford	33.16	169	P	P	18 57 22.4	-0.2
RPZ	Rata Peaks	33.38	171	P	P	18 57 25.2	+0.7
	comp=Z,9.4nm,0.7s,baz=288,slow=1.5,SNR=7.1						
RPZ	Rata Peaks	33.38	171	P	P	18 57 25.1	+0.6
RPZ				IAmb	IAmb	18 57 25.9	
	comp=Z,15nm,0.9s						
MQZ	McQueen's Vall	33.65	169	P	P	18 57 26.8	0.0
BBOO	Buckleboo	33.86	225	P	P	18 57 29.3	+0.4
BNDI	Bandanaira	34.43	278	P	P	18 57 35.6	+1.5
	comp=Z,346nm,1.4s						
WRKA	Warakurna	36.77	242	P	P	18 57 52.3	-1.8
	baz=37,SNR=19						
FITZ	Fitzroy Crossi	37.90	254	P	P	18 58 02.1	-1.5
	baz=38,SNR=14						
FITZ	Fitzroy Crossi	37.90	254	P	P	18 58 01.8	-1.8
PPT	Papeete	45.33	104	LR	LR	19 13 51.9	
	comp=Z,245nm,19.5s,baz=236,slow=31						
PPT2	Papeete2	45.33	104	eLR	LR	19 11 52.5	
	comp=Z,488nm,23.5s						
MEEK	Meekatharra	45.62	243	P	P	18 59 06.2	-0.7
	baz=46,SNR=5.3						
TBI	Tubuai	45.93	112	eLQ	LQ	19 10 15.5	
	comp=Z,752nm,28.0s						
TBI				eLR	LR	19 12 08.0	
	comp=Z,291nm,24.2s						
MJAR	Matsushiro Arr	53.00	334	P	P	19 00 03.5	+0.6
	comp=Z,6.9nm,1.1s,baz=164,slow=6.3,SNR=6.6						
MJAR				LR	LR	19 21 36.8	
	comp=Z,31nm,20.2s,baz=50,slow=35						
MJAR	Matsushiro Arr	53.00	334	P	P	19 00 02.8	-0.1
MAT	Matsushiro	53.00	334	P	P	19 00 01.7	-1.2
JNU	Nakatsue	53.92	325	LR	LR	19 21 58.3	
	comp=Z,90nm,18.4s,baz=74,slow=35						
TAOE	Nuku Hiva Isla	54.91	93	eLR	LR	19 16 19.4	
	comp=Z,404nm,26.0s						
JKA	Kamikawa-asahi	58.01	342	P	P	19 00 38.1	-0.7
ASAJ	Asahikawa	58.01	342	LR	LR	19 23 38.3	
	comp=Z,62nm,19.8s,baz=161,slow=34						
KSRS	Korea Array	58.75	327	P	P	19 00 44.0	-0.1
	comp=Z,4.4nm,1.1s,baz=138,slow=7.9,SNR=5.0						
KSAR	Wonju Array Be	58.76	327	P	P	19 00 44.6	+0.4
RKT	Rikitea	59.20	110	eLR	LR	19 18 20.2	
	comp=Z,322nm,24.5s						
NJ2	Nanjing	60.70	316	eP	P	19 00 58.8	+1.2
NJ2				pmax	pmax		
	comp=Z,8.0nm,1.0s						
USRK	Ussuriysk Ar.	61.99	334	P	P	19 01 07.2	+1.0
	comp=Z,8.4nm,1.0s,baz=139,slow=7.0,SNR=6.3						
USRK	Ussuriysk Ar.	61.99	334	P	P	19 01 05.6	-0.5
WHN	Wuhan	63.01	312	⇓P	P	19 01 15.1	+1.9
MDJ	Mudanjiang	63.36	333	P	P	19 01 16.6	+1.3
MDJ				pmax	pmax		
	comp=Z,8.0nm,1.7s						
PETK	Petropavlovsk-	63.86	356	P	P	19 01 18.4	+0.1
	comp=Z,1.9nm,0.8s,baz=117,slow=12,SNR=2.9						
PETK	Petropavlovsk-	63.86	356	P	P	19 01 19.2	+0.8
KLR	Kul'dur	66.17	337	LR	LR	19 29 29.3	
	comp=Z,70nm,19.4s,baz=140,slow=35						
ENH	Enshi	66.47	310	P	P	19 01 34.5	-1.4
ENH				IAmb	IAmb	19 01 38.5	
	comp=Z,11nm,1.0s						
VNDA	Vanda	66.75	181	P	P	19 01 38.2	+1.4
	comp=Z,19nm,1.2s,baz=349,slow=7.6,SNR=8.9						
VNDA				LR	LR	19 26 46.0	
	comp=Z,105nm,19.5s,baz=308,slow=32						
VNDA	Vanda	66.75	181	P	P	19 01 37.8	+0.9
GYA	Guiyang	66.93	305	eP	P	19 01 39.3	+0.3
SLVN	Son La	67.16	299	P	P	19 01 40.3	-0.1
GSI	Gunungsitoli	67.22	276	P	P	19 01 42.1	+1.1
	comp=Z,39nm,1.2s						
BJT	Baijiatuau	67.25	322	P	P	19 01 40.8	+0.3
BJT				IAmb	IAmb	19 01 43.2	
	comp=Z,8.1nm,1.4s						
XAN	Xi'an	68.75	313	P	P	19 01 49.5	-0.7
XAN				pP	pP	19 01 55.9	-2.6
XAN				pmax	pmax		
	comp=Z,6.0nm,1.4s						
XAN				pmax	pmax		
	comp=Z,110nm,5.2s						
XAN	Xi'an	68.75	313	P	P	19 01 49.2	-1.0
XAN				IAmb	IAmb	19 02 08.3	
	comp=Z,7.4nm,1.2s						
KMI	Kunming	69.60	302	⇓P	P	19 01 57.1	+1.2
KMI				pP	pP	19 02 02.6	-1.6
KMI				sP	sP	19 02 05.9	-1.4
KMI				pmax	pmax		
	comp=Z,8.0nm,1.4s						
KMI				pmax	pmax		
	comp=Z,100nm,3.7s						
KMI	Kunming	69.60	302	P	P	19 01 56.4	+0.5
CM35	Chiang Mai Arr	70.41	294	P	P	19 02 03.0	+2.3
CM36	Chiang Mai Arr	70.41	294	P	P	19 02 03.0	+2.3
CM01	Chiang Mai Arr	70.50	294	P	P	19 02 05.6	+4.3
CM05	Chiang Mai Arr	70.50	294	P	P	19 02 05.0	+3.7
CM02	Chiang Mai Arr	70.51	294	P	P	19 02 05.2	+3.9
CMAR	Chiang Mai Arr	70.52	294	P	P	19 02 02.6	+1.2
	comp=Z,2.7nm,1.1s,baz=119,slow=4.2,SNR=14						
CMAR	Chiang Mai Arr	70.52	294	P	P	19 02 01.0	-0.4
CM15	Chiang Mai Arr	70.54	294	P	P	19 02 05.7	+4.2
CM13	Chiang Mai Arr	70.54	294	P	P	19 02 05.2	+3.7
HHC	Hu-ho-hao-te	70.58	320	eP	P	19 02 03.0	+1.5
HHC				pmax	pmax		
	comp=Z,7.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,200nm,5.7s						
CMMT	Chiang Mai	70.63	294	P	P	19 02 04.2	+2.1
CM33	Chiang Mai Arr	70.64	294	P	P	19 02 04.0	+1.9
CD2	Chengdu	71.16	308	P	P	19 02 04.9	-0.2
CD2				S	S	19 11 21.3	+0.9
CD2				pmax	pmax		
	comp=Z,10.0nm,1.1s						
CD2				pmax	pmax		
	comp=Z,240nm,7.5s						
HIA	Hailar	71.34	331	P	P	19 02 05.4	-0.3
HIA				IAmb	IAmb	19 02 12.7	
	comp=Z,13nm,1.1s						
LZH	Lanzhou	73.38	313	eP	P	19 02 20.5	+2.1
LZH				pP	pP	19 02 25.5	-1.3
LZH				sP	sP	19 02 28.5	-1.4
LZH				pmax	pmax		
	comp=Z,13nm,1.3s						
ULN	Ulaanbaatar	77.13	325	P	P	19 02 40.0	+0.2
YAK	Yakutsk	77.38	344	LR	LR	19 33 42.3	
	comp=Z,52nm,20.1s,baz=122,slow=33						
YAK	Yakutsk	77.38	344	P	P	19 02 39.8	-0.8
SONM	Songino Array	77.49	324	P	P	19 02 42.2	+0.5
	comp=Z,1.7nm,0.6s,baz=146,slow=6.6,SNR=14						
SONM				LR	LR	19 38 37.9	
	comp=Z,72nm,18.0s,baz=148,slow=37						
SONM	Songino Array	77.49	324	P	P	19 02 41.5	-0.3
GTA	Gaotai	77.71	314	eP	P	19 02 44.0	+0.9
GTA				pP	pP	19 02 48.3	-3.2
GTA				sP	PcP	19 02 51.8	-1.3
SHL	Shillong	78.97	299	P	P	19 02 49.0	-1.4
SHL				IAmb	IAmb	19 03 02.7	
	comp=Z,11nm,1.2s						
QSPA	South Pole Qui	79.23	180	P	P	19 02 51.5	+0.4
QSPA				IAmb	IAmb	19 03 03.3	
	comp=Z,10nm,1.1s						
TLY	Talaya	81.00	327	P	P	19 03 00.2	-0.5
	comp=Z,0.7nm,0.3s,baz=78,slow=3.2,SNR=3.7						
TLY				LR	LR	19 37 46.5	
	comp=Z,66nm,20.0s,baz=122,slow=35						
IL31		83.77	19	P	P	19 03 14.0	-0.8
IL31				IAmb	IAmb	19 03 36.1	
	comp=Z,12nm,1.2s						
ILAR	Eielson Array	83.77	19	P	P	19 03 14.6	-0.2
	comp=Z,2.3nm,1.1s,baz=243,slow=5.1,SNR=12						
ILAR	Eielson Array	83.77	19	P	P	19 03 12.9	-1.9
MAW	Mawson	84.37	202	LR	LR	19 33 57.4	
	comp=Z,111nm,20.5s,baz=61,slow=31						
YBH	Yreka Blue Hor	84.86	46	LR	LR	19 33 14.4	
	comp=Z,180nm,20.1s,baz=204,slow=30						
BBB	Bella Bella	85.27	35	LR	LR	19 38 45.4	
	comp=Z,113nm,18.0s,baz=234,slow=34						
TIXI	Tiksi	85.52	349	P	P	19 03 23.8	+0.3
TIXI				IAmb	IAmb	19 03 29.6	
	comp=Z,13nm,1.4s						
EGAK	Eagle	85.68	21	P	P	19 03 25.6	+1.1
BEKR	Beckworth	85.97	48	P	P	19 03 26.0	-0.7
BEKR				IAmb	IAmb	19 03 33.4	
	comp=Z,9.9nm,1.5s						
WAKR	Walker	86.25	50	P	P	19 03 29.0	+0.8
WAKR				IAmb	IAmb	19 03 36.0	
	comp=Z,14nm,1.5s						
MDPB	Devils Postpil	86.27	51	P	P	19 03 27.8	-0.5
MDPB				IAmb	IAmb	19 03 35.8	
	comp=Z,8.3nm,1.3s						
MOD	Modoc Plateau	86.62	46	P	P	19 03 29.1	-0.7
MOD				IAmb	IAmb	19 03 36.5	
	comp=Z,10nm,1.4s						
PINE	Pine Mountain	86.75	44	P	P	19 03 31.4	+0.9
LHV	Little Huntoon	86.88	50	P	P	19 03 30.6	-0.4
LHV				IAmb	IAmb	19 03 38.1	
	comp=Z,11nm,1.4s						
DLBC	Dease Lake	86.94	29	LR	LR	19 35 18.6	
	comp=Z,257nm,20.2s,baz=285,slow=31						
RYN	Ryan	86.97	50	P	P	19 03 31.4	-0.2
NVAR	Mina Array Bea	87.08	50	P	P	19 03 33.6	+1.4
	comp=Z,2.6nm,1.0s,baz=235,slow=6.7,SNR=11						
NVAR				LR	LR	19 35 00.2	
	comp=Z,293nm,20.8s,baz=286,slow=30						
NVAR	Mina Array Bea	87.08	50	P	P	19 03 31.8	-0.4
NV11	Mina Array Sit	87.19	50	P	P	19 03 32.6	-0.1
PFO	Pinyon Flats O	87.25	55	LR	LR	19 35 13.6	
	comp=Z,118nm,21.5s,baz=240,slow=31						
WMQ	Urumqi	87.76	315	eP	P	19 03 35.5	+0.3
WMQ				sP	sP	19 03 45.6	-1.2
WMQ				pmax	pmax		
	comp=Z,11nm,2.3s						
WMQ				pmax	pmax		
	comp=Z,210nm,3.9s						
WMQ				LR	LR		
	comp=Z,420nm,29.1s						
WMQ				LR	LR		
	comp=Z,730nm,29.2s						
I07A	Izee	87.83	45	P	P	19 03 36.4	+0.8
WVOR	Wild Horse Val	87.96	46	P	P	19 03 35.2	-1.1
WVOR				IAmb	IAmb	19 03 45.9	
	comp=Z,9.1nm,1.5s						
G08A	Pilot Rock	88.55	43	P	P	19 03 38.7	-0.3
PRN	Pahroc Range	89.30	52	P	P	19 03 42.9	+0.2
BMO	Blue Mountains	89.56	44	P	P	19 03 43.5	-0.1
ELK	Elko	89.97	49	LR	LR	19 35 46.3	
	comp=Z,100nm,21.1s,baz=230,slow=30						
ELK	Elko	89.97	49	P	P	19 03 44.6	-1.3
LPIG	La Paz	90.36	66	LR	LR	19 37 31.8	
	comp=Z,105nm,18.3s,baz=190,slow=31						
PSUT	Pine Spring	90.49	51	P	P	19 03 46.1	-2.2
NEW	Newport	90.59	41	LR	LR	19 36 00.5	
	comp=Z,100nm,21.2s,baz=354,slow=30						
LCMT	Little Creek M	90.61	53	P	P	19 03 49.3	+0.4
CCUT	Cedar City	90.64	52	P	P	19 03 49.1	+0.1
KNB	Kanab	90.94	53	P	P	19 03 51.4	+0.9
U15A	North Rim	91.23	53	P	P	19 03 52.0	+0.1
U15A				IAmb	IAmb	19 04 16.3	
	comp=Z,9.0nm,1.4s						
HLID	Hailey	91.24	46	P	P	19 03 52.8	+1.1
MTPU	Mount Pierson	91.66	52	P	P	19 03 55.6	+1.6
MVU	Marysvale	91.74	51	P	P	19 03 55.4	+1.2
HVU	Hansel Valley	92.02	48	P	P	19 03 54.8	-0.5
MK31	Makanchi Array	92.22	317	P	P	19 03 55.2	-0.7
MK31				IAmb	IAmb	19 04 02.4	
	comp=Z,6.9nm,1.2s						
MKAR	Makanchi Array	92.22	317	P	P	19 03 55.6	-0.3
	comp=Z,1.2nm,0.6s,baz=92,slow=5.2,SNR=26						
MKAR	Makanchi Array	92.22	317	P	P	19 03 54.8	-1.2
ZAA0	Zalesovo Array	92.39	324	P	P	19 03 56.0	-0.4
ZAA0				IAmb	IAmb	19 04 01.8	
	comp=Z,5.8nm,1.3s						
ZALV	Zalesovo Beam	92.39	324	P	P	19 03 56.6	+0.1
	comp=Z,0.6nm,0.6s,baz=90,slow=2.9,SNR=2.8						
ZALV				LR	LR	19 44 13.9	
	comp=Z,48nm,20.7s,baz=112,slow=35						
MAKZ	Makanchi	92.43	317	P	P	19 03 55.5	-1.4
DLMT	Dillon	92.91	45	P	P	19 04 00.1	+0.8
DLMT				IAmb	IAmb	19 04 07.2	
	comp=Z,4.7nm,1.0s						
PDAR	Pinedale Array	94.55	47	P	P	19 04 08.4	+1.3
	comp=Z,0.9nm,1.0s,baz=242,slow=3.2,SNR=5.8						
PDAR				LR	LR	19 41 04.3	
	comp=Z,98nm,18.8s,baz=351,slow=32						
NRIK	Noril'sk	95.30	340	LR	LR	19 49 25.0	
	comp=Z,44nm,18.3s,baz=352,slow=37						
YKA	Yellowknife Ar	95.47	27	P	P	19 04 10.4	0.0
	comp=Z,1.1nm,0.9s,baz=252,slow=4.0,SNR=10.0						
YKA				LR	LR	19 40 14.5	
	comp=Z,153nm,21.1s,baz=0.0,slow=31						
TXAR	Lajitas Array	97.12	62	LR	LR	19 38 58.3	
	comp=Z,154nm,21.7s,baz=0.0,slow=30						
AKASG	Malin Array Be	125.74	326	PKP	PKiKP	19 09 48.0	0.0
	comp=Z,0.2nm,0.3s,baz=64,slow=1.2,SNR=2.1						

IDC 18 18:59:27.5±3.1, 10°82S×163°86E, h0^{km}, mb3.5/3, mb1 3.8/4, mb1mx3.5/27, mbtmp3.6/4, ML3.8/1, Error ellipse: s-maj=65.2km s-min=44.2km az=73.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.46	168	Pn	Pn	19 02 12.7	+0.1
	0.7nm,0.3s,baz=320,slow=17,SNR=9.9						
WRA	Warramunga Arr	29.83	249	P	P	19 05 36.7	0.0
	0.4nm,0.4s,baz=81,slow=9.3,SNR=3.3						
ASAR	Alice Springs	31.25	242	P	P	19 05 49.3	0.0
	0.2nm,0.4s,baz=63,slow=9.9,SNR=4.3						
MKAR	Makanchi Array	92.10	317	P	P	19 12 38.7	-0.2
	0.2nm,0.7s,baz=114,slow=4.3,SNR=2.4						

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*SJA **18** 19:06:31.6±0.7, 24°06S×66°70W, h214^{km}±6^{km}, ML4.3, MW4.0*

*NEIC **18** 19:06:31.2±1.4, 24°12S±0°08×66°7W±0°1, h195^{km}±7^{km}, Error ellipse: s-maj=14.7km s-min=11.2km az=94.0*

*IDC **18** 19:06:32.0±1.2, 23°99S×66°59W, h198^{km}±11^{km}, mb3.7/2, mb1 3.6/8, mb1mx3.4/26, mbtmp4.0/8, Error ellipse: s-maj=20.4km s-min=16.0km az=9.0*

*GUC **18** 19:06:33.2±0.5, 24°02S×67°07W, h246^{km}±10^{km}, ML4.6*

ISC 18 19:06:32.2±0.7, 24°03S±0°04×66°72W±0°05, h206^{km}±7^{km}, n67, σ1^{s}06/88, 8C-1D, Salta Province

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLA	San Lorenzo	1.31	122	eP	Pn	19 07 05.7	+0.7
SLA				eS	S	19 07 30.6	+0.2
AZAP	Zapla	1.53	97	eP	Pn	19 07 07.7	+0.7
ASTB	Santa Barbara	2.08	88	eP	Pn	19 07 12.4	+0.2
YJA	Yavi	2.16	31	eP	Pn	19 07 14.3	+1.0
FSA	Cafayete	2.18	162	eP	Pn	19 07 13.2	0.0
FSA				eS	S	19 07 44.0	-0.8
LVC	Limon Verde	2.46	305	P	Pn	19 07 17.5	+1.0
	58nm,0.3s,baz=153,slow=5.2,SNR=405						
LVC				S	S	19 07 51.4	+1.0
	69nm,0.3s,baz=255,slow=21,SNR=11						
LVC	Limon Verde	2.46	305	⇓iP	Pn	19 07 17.4	+1.0
LVC				iS	S	19 07 50.8	+0.5
LVC	Limon Verde	2.46	305	Pn	Pn	19 07 17.4	+0.9
PB15	IPOC Station P	2.65	287	⇑iP	Pn	19 07 19.3	+0.8
PB15				iS	S	19 07 53.8	0.0
PB15	IPOC Station P	2.65	287		Pn	19 07 19.2	+0.8
PB15	IPOC Station P	2.65	287	eP	Pn	19 07 19.2	+0.8
PB15				eS	S	19 07 54.6	+0.7
GO02	Mina Guanaco	2.84	246	⇑iP	Pn	19 07 21.2	+0.6
GO02				iS	S	19 07 58.5	+0.5
GO02				IAML		19 07 59.8	
	comp=N,614nm,0.3s						
GO02	Mina Guanaco	2.84	246	Pn	Pn	19 07 21.0	+0.4
PB06	IPOC Station P	2.93	296	⇑iP	Pn	19 07 22.4	+0.8
PB06				iS	S	19 07 59.3	-0.2
PB06				IAML		19 08 01.0	
	comp=N,1µm,0.2s						
PB06	IPOC Station P	2.93	296		Pn	19 07 22.3	+0.8
PB06	IPOC Station P	2.93	296	eP	Pn	19 07 22.3	+0.8
PB06				eS	S	19 07 59.6	0.0
PB06				IAML		19 08 03.9	
	comp=Z,701nm,0.2s						
AHML	Horco Molle	3.01	156	eP	Pn	19 07 23.8	+1.4
AHML				eS	S	19 08 00.1	-1.2
PB09	IPOC Station P	3.22	313	⇑iP	Pn	19 07 26.2	+1.2
PB09				iS	S	19 08 06.2	+0.6
PB09				IAML		19 08 08.8	
	comp=N,468nm,0.3s						
PB09	IPOC Station P	3.22	313		Pn	19 07 26.1	+1.2
PB09	IPOC Station P	3.22	313	eP	Pn	19 07 26.1	+1.2
PB09				eS	S	19 08 06.9	+1.3
PB09				IAML		19 08 08.4	
	comp=Z,534nm,0.2s						
PB14	IPOC Station P	3.41	259	Pn	Pn	19 07 27.3	-0.1
PB14	IPOC Station P	3.41	259	eP	Pn	19 07 28.0	+0.7
PB03	IPOC Station P	3.42	305	⇑iP	Pn	19 07 27.7	+0.4
PB03				iS	S	19 08 08.6	-1.4
PB03				IAML		19 08 09.8	
	comp=E,1µm,0.2s						
PB03	IPOC Station P	3.42	305	eP	Pn	19 07 27.8	+0.4
PB03				eS	S	19 08 08.9	-1.1
AC02	Maricunga	3.54	217	Pn	Pn	19 07 27.1	-1.9
PB10	IPOC Station P	3.55	278	eP	Pn	19 07 28.1	-0.6
PB10				iS	S	19 08 10.4	-2.0
PB10				IAML		19 08 13.7	
	comp=E,308nm,0.5s						
PB10	IPOC Station P	3.55	278	Pn	Pn	19 07 28.0	-0.6
PB10	IPOC Station P	3.55	278	eP	Pn	19 07 29.1	+0.4
PB10				eS	S	19 08 12.3	-0.1
PB10				IAML		19 08 15.2	
	comp=Z,245nm,0.3s						
PB04	IPOC Station P	3.58	298	eP	Pn	19 07 29.5	+0.3
PB04				iS	S	19 08 11.4	-2.0
PB04				IAML		19 08 17.1	
	comp=N,788nm,0.3s						
PB04	IPOC Station P	3.58	298		Pn	19 07 29.0	-0.2
PB04	IPOC Station P	3.58	298	eP	Pn	19 07 30.0	+0.8
PB04				eS	S	19 08 12.6	-0.8
PB04				IAML		19 08 14.5	
	comp=Z,466nm,0.4s						
PB07	IPOC Station P	3.71	308	⇑iP	Pn	19 07 31.1	+0.2
PB07				iS	S	19 08 14.5	-1.9
PB07	IPOC Station P	3.71	308		Pn	19 07 30.4	-0.5
PB01	IPOC Station P	3.92	319	⇑iP	Pn	19 07 33.4	0.0
PB01				iS	S	19 08 19.8	-1.2
PB01	IPOC Station P	3.92	319		Pn	19 07 33.3	0.0
PB02	IPOC Station P	3.98	312	⇑iP	Pn	19 07 34.0	-0.2
PB02				iS	S	19 08 20.1	-2.2
AC01	Pan de Azucar	4.09	238	Pn	Pn	19 07 34.3	-1.1
PB08	IPOC Station P	4.48	329		Pn	19 07 41.2	+0.6
PATCX	Punta Patache	4.50	315	Pn	Pn	19 07 39.8	-0.9
TA01	Diego Aracena	4.71	316	Pn	Pn	19 07 42.1	-1.0
GO03	Copiap	4.75	221		Pn	19 07 41.9	-1.8
VCA	Vinchina	4.87	196	eP	Pn	19 07 46.1	+0.9
VCA				eS	S	19 08 43.9	+1.4
PSGCX	Pisagua	5.43	324	Pn	Pn	19 07 50.5	-1.9
MNMC	Minye Minye	5.56	331	Pn	Pn	19 07 53.9	-0.3
AC04	Llanos de Chal	5.70	222	Pn	Pn	19 07 54.0	-1.7
AC05	El Transito	5.75	213	Pn	Pn	19 07 55.1	-1.2
LCO	Las Campanas	6.10	215	Pn	Pn	19 07 59.5	-1.6
PB16	IPOC Station P	6.24	335		Pn	19 08 02.9	-0.3
GO04	Tololo Observa	7.11	210	Pn	Pn	19 08 12.2	-1.9
LPAZ	La Paz	7.82	350	P	Pn	19 08 24.1	+0.4
	comp=Z,0.6nm,0.3s,baz=150,slow=5.4,SNR=12						
LPAZ				S	S	19 09 50.7	-1.8
	comp=Z,0.2nm,0.3s,baz=144,slow=25,SNR=5.1						
LPAZ	La Paz	7.82	350		Pn	19 08 23.5	-0.2
CPUP	Villa Florida	8.81	107	P	Pn	19 08 34.0	-2.0
	comp=Z,0.2nm,0.3s,baz=286,slow=10,SNR=9.1						
SIV	San Ignacio	9.60	35	P	Pn	19 08 44.6	-1.8
	comp=Z,1.0nm,0.3s,baz=222,slow=13,SNR=5.0						
PLCA	Paso Flores	16.96	190	P	Pn	19 10 16.9	-0.7
	comp=Z,0.1nm,0.3s,baz=17,slow=13,SNR=4.3						
PLCA	Paso Flores	16.96	190	P	P	19 10 14.8	-1.4
PLCA				IAmb	IAmb	19 10 24.3	
	comp=Z,8.0nm,1.1s						
BDFB	Brasilia	19.46	68	P	P	19 10 43.7	0.0
	comp=Z,0.9nm,0.3s,baz=242,slow=9.6,SNR=5.0						
BDFB	Brasilia	19.46	68	IAmb	IAmb	19 10 44.2	
	comp=Z,7.4nm,1.1s						
QSPA	South Pole Qui	66.17	180	P	P	19 16 59.2	+1.8
KAN10	Anthony SW Sta	67.63	333	P	P	19 17 08.4	+1.6
TORD	Torodi Ar. Bea	76.34	69	P	P	19 17 58.2	-0.8
	comp=Z,1.4nm,0.5s,baz=248,slow=6.1,SNR=5.3						
YKA	Yellowknife Ar	94.24	340	P	P	19 19 28.2	+0.9
	comp=Z,0.1nm,0.5s,baz=130,slow=5.2,SNR=8.9						
ASAR	Alice Springs	128.53	204	PKP	PKiKP	19 25 16.0	+0.1
	comp=Z,0.6nm,0.7s,baz=161,slow=1.5,SNR=4.1						
WRA	Warramunga Arr	131.71	207	PKP	PKiKP	19 25 22.1	-0.2
	comp=Z,0.3nm,0.4s,baz=161,slow=1.8,SNR=7.2						
ZALV	Zalesovo Beam	143.30	28	PKP	PKPbc	19 25 39.3	+0.2
	comp=Z,0.7nm,0.6s,baz=325,slow=2.3,SNR=2.8						
MKAR	Makanchi Array	146.39	40	PKPbc	PKPbc	19 25 48.6	-0.1
	comp=Z,1.4nm,0.7s,baz=335,slow=2.5,SNR=21						
MKAR	Makanchi Array	146.39	40		PKPbc	19 25 48.1	-0.6
KLR	Kul'dur	150.96	335	PKPbc	PKiKP	19 26 00.9	+0.1
	comp=Z,0.3nm,0.2s,baz=331,slow=3.1,SNR=4.2						

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*TUL **18** 19:10:17.5±1.6, 36°56N±0°02×98°16W±0°04, h6^{km}±7^{km}, ML3.4, mb_Lg3.3/58(NEIC), Error ellipse: s-maj=5.1km s-min=2.7km az=84.0*

*NEIC **18** 19:10:17.3±0.6, 36°52N±0°02×98°14W±0°04, h5^{km}±2^{km},* *Error ellipse: s-maj=5.5km s-min=3.1km az=262.0*

*ANF **18** 19:10:17.6±0.7, 36.°56N×98.°15W, h5^{km}, ML4.0/8, Error ellipse: s-maj=9.2km s-min=7.2km az=32.0*

ISC 18 19:10:17.9±1.0, **36.°54N**±0.°03×**98.°14W**±0.°03, **h8**^{km}±8^{km}, **n69**, σ**0.ˢ64**/64, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CROK	Carrier	0.13	104	Pg	Pg	19 10 21.0	+0.2
CROK				Sg	Sg	19 10 23.5	+0.8
KAN14	Manchester OK	0.44	19		Pg	19 10 26.2	-0.3
KAN14				Sg	Sg	19 10 32.1	-0.2
KAN10	Anthony SW Sta	0.59	3	Pg	Pg	19 10 28.8	-0.4
KAN10				Sg	Sg	19 10 36.8	-0.1
KAN05	Bluff City Nor	0.61	20		Pg	19 10 29.2	-0.4
KAN05				Sg	Sg	19 10 37.4	-0.3
KAN01	Argonia South	0.69	26	Pg	Pg	19 10 30.5	-0.6
KAN01				Sg	Sg	19 10 39.9	-0.2
KAN08	Anthony NE Sta	0.70	11	Pg	Pg	19 10 31.1	-0.3
KAN08				Sg	Sg	19 10 40.3	-0.3
KAN13	South Haven SW	0.71	48	Pg	Pg	19 10 31.2	-0.4
U32A	Winter Ranch,	0.71	258		Pg	19 10 31.1	-0.5
KAN12	Harper NE Stat	0.77	8	Pg	Pg	19 10 32.3	-0.4
OK029	Liberty Lake	0.92	143	Pg	Pg	19 10 35.0	-0.5
BCOK	Bluff Creek, N	0.98	154	Pg	Pg	19 10 36.0	-0.6
OK025	Westminster Rd	1.15	146		Pg	19 10 39.2	-0.8
OK031	S. Brethren Rd	1.20	119		Pg	19 10 40.0	-0.9
QUOK	Quay	1.21	107	Pg	Pg	19 10 40.3	-0.8
OKCFA	Oklahoma City	1.25	153		Pg	19 10 40.9	-1.0
OK030	Cody Creek RV	1.25	119		Pg	19 10 41.0	-0.9
OKCSW	OKLAHOMA CITY	1.26	153		Pn	19 10 41.1	-0.7
FNO	Franklin	1.41	155		Pn	19 10 43.6	-0.2
WMOK	Wichita Mounta	1.87	196	P	Pn	19 10 50.7	+0.5
	baz=15						
WMOK				S	Sb	19 11 15.7	0.0
	baz=15						
WMOK	Wichita Mounta	1.87	196		Pn	19 10 50.6	+0.5
X34A	Smith Ranch, M	1.95	173	Pn	Pn	19 10 51.5	+0.3
X34A				IAmb_Lg		19 11 20.8	
	comp=Z,105nm,0.7s						
TUL1	Leonard	2.00	108	P	Pn	19 10 52.2	+0.3
	baz=289						
TUL1				S	Sn	19 11 18.3	+1.2
	baz=289						
TUL1	Leonard	2.00	108		Pn	19 10 51.9	0.0
CBKS	Cedar Bluff	2.60	331	P	Pn	19 11 00.0	-0.3
	baz=150						
CBKS				S	Sn	19 11 32.3	+0.2
	baz=150						
CBKS	Cedar Bluff	2.60	331		Pn	19 11 00.4	+0.1
KSU1	Kansas State U	2.83	25	P	Pn	19 11 04.1	+0.7
	baz=206						
KSU1	Kansas State U	2.83	25	Pn	Pn	19 11 03.4	+0.1
X37A	Clayton	2.98	130		Pn	19 11 05.2	-0.2
AMTX	Amarillo	3.32	241	P	Pn	19 11 11.2	+1.1
	baz=59						
AMTX				S	Sn	19 11 50.4	+0.6
	baz=59						
AMTX	Amarillo	3.32	241		Pn	19 11 10.4	+0.3
HHAR	Hobbs	3.40	93		Pn	19 11 11.6	+0.5
HHAR				IAmb_Lg		19 12 08.3	
	comp=Z,78nm,0.8s						
W39A	Magazine	3.78	109	P	Pn	19 11 17.7	+1.3
	baz=292						
W39A				S	Sn	19 12 01.9	+0.9
	baz=292						
W39A	Magazine	3.78	109		Pn	19 11 16.4	0.0
W39A				IAmb_Lg		19 12 28.4	
	comp=Z,112nm,0.7s						
ABTX	Abilene, Hawle	4.10	198	P	Pn	19 11 21.8	+1.0
	baz=17						
ABTX	Abilene, Hawle	4.10	198	IAmb_Lg		19 12 29.1	
	comp=Z,68nm,0.8s						
MIAR	Mount Ida	4.22	117	P	Pn	19 11 22.9	+0.5
	baz=300						
MIAR				S	Sn	19 12 13.2	+1.4
	baz=300						
MIAR	Mount Ida	4.22	117		Pn	19 11 21.6	-0.7
MIAR				IAmb_Lg		19 12 34.7	
	comp=Z,82nm,0.9s						
U40A	Yellville	4.26	91	Pn	Pn	19 11 22.7	-0.4
KSCO	Kaye Shedlock’	4.33	306	Pn	Pn	19 11 23.4	-0.7
WHTX	Lake Whitney,	4.57	173		Pn	19 11 27.5	+0.2
MSTX	Muleshoe	4.58	237		Pn	19 11 27.0	-0.5
MGMO	Mountain Grove	4.75	81		Pn	19 11 29.4	-0.3
MGMO				IAmb_Lg		19 12 54.2	
	comp=Z,61nm,0.8s						
X40A	Basin Creek Fa	4.79	114		Pn	19 11 31.0	+0.8
X40A				IAmb_Lg		19 12 57.4	
	comp=Z,57nm,0.9s						
BGNE	Belgrade	4.87	360	Pn	Pn	19 11 31.4	0.0
FCAR	Ozark Folk Cen	4.91	96	IAmb_Lg		19 12 57.2	
	comp=Z,57nm,0.7s						
WHAR	Wooly Hollow	4.91	103		Pn	19 11 30.5	-1.4
WHAR				IAmb_Lg		19 13 06.3	
	comp=Z,66nm,0.8s						
WLAR	White Oak Lake	5.00	123	IAmb_Lg		19 13 10.6	
	comp=Z,56nm,0.9s						
OGNE	Ogallala	5.35	327	Pn	Pn	19 11 37.4	-0.7
OGNE				IAmb_Lg		19 13 19.0	
	comp=Z,46nm,0.7s						
LCAR	Lake Charles	5.66	93	IAmb_Lg		19 13 24.6	
	comp=Z,37nm,0.7s						
CCM	Cathedral Cave	5.70	73		Pn	19 11 42.2	-0.6
CCM				IAmb_Lg		19 13 21.6	
	comp=Z,45nm,0.8s						
CCAR	Cane Creek	5.83	115	IAmb_Lg		19 13 32.1	
	comp=Z,62nm,0.8s						
SDCO	Great Sand Dun	6.00	284	Pn	Pn	19 11 47.8	+0.6
SDCO				IAmb_Lg		19 13 33.2	
	comp=Z,33nm,1.0s						
PBMO	Poplar Bluff	6.20	85	IAmb_Lg		19 13 35.2	
	comp=Z,59nm,0.7s						
FVM	French Village	6.32	74	IAmb_Lg		19 13 37.1	
	comp=Z,40nm,0.7s						
SCIA	State Center	6.58	34	IAmb_Lg		19 13 59.5	
	comp=Z,45nm,0.8s						
SLM	Saint Louis	6.62	69	IAmb_Lg		19 13 47.9	
	comp=Z,42nm,0.8s						
SIUC	Southern Illin	7.22	78	IAmb_Lg		19 14 12.1	
	comp=Z,57nm,0.8s						
ECSD	EROS Data Cent	7.28	9	IAmb_Lg		19 14 14.1	
	comp=Z,38nm,1.2s						
BNM	Barren Site	7.33	254	Pn	Pn	19 12 05.2	-0.2
OXF	Oxford	7.40	103	IAmb_Lg		19 14 14.0	
	comp=Z,42nm,0.8s						
MNTX	Cornudas Mount	7.70	233		Pn	19 12 10.1	-0.2
SUSD	Miller	7.92	356	IAmb_Lg		19 14 35.6	
	comp=Z,36nm,0.7s						
USIN	University of	8.47	77	IAmb_Lg		19 15 05.8	
	comp=Z,29nm,0.8s						
TX31	Lajitas Ar. Si	8.55	214	Pn	Pn	19 12 21.3	-0.8
TX32	Lajitas Array	8.55	214	Pn	Pn	19 12 21.4	-0.6
TXAR	Lajitas Array	8.55	214	Pn	Pn	19 12 21.1	-1.0
JFWS	Jewell Farm	8.80	41	IAmb_Lg		19 14 56.6	
	comp=Z,30nm,0.7s						
CLTN	Cedars of Leba	9.54	89	IAmb_Lg		19 15 32.0	
	comp=Z,16nm,1.0s						
WCI	Wyandotte Cave	9.58	76	IAmb_Lg		19 15 18.1	
	comp=Z,20nm,0.7s						

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*KRSC **18** 19:13:00.8±3.0, 48.°71N×156.°67E, h8^{km}±43^{km}, ML4.1*

*IDC **18** 19:13:02.4±3.1, 48.°66N×154.°73E, h77^{km}±28^{km}, mb3.2/8, mb1 3.5/11, mb1mx3.3/30, mbtmp3.6/11, MS3.8/3, Ms1 3.8/3, ms1mx3.0/28, Error ellipse: s-maj=34.4km s-min=15.9km az=140.0*

ISC 18 19:12:57.9±0.8, **48.°4N**±0.°1×**155.°2E**±0.°1, **h35**^{km}, **n41**, σ**2.ˢ15**/36, **mb3.5**/8, **MS3.6**/3, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril’s	2.35	15	*e*P	Pn	19 13 34.0	+0.1
SKR				*e*S	Sn	19 13 59.5	-2.0
PAU	Pauzhetka	3.23	18	*e*P	Pn	19 13 49.7	+3.7
PAU				S	Sn	19 14 22.6	-0.6
KDTR	Khodutka, Kamc	3.87	28	*e*P	Pn	19 13 55.3	+0.5
MTVR	Mutnovka	4.50	24	*e*P	Pn	19 14 05.0	+1.4
MTVR				S	Sn	19 14 52.9	-1.8
GRL	Gorelyy	4.53	23	*e*P	Pn	19 14 05.9	+1.9
RUS	Russkaya	4.55	27	*e*P	Pn	19 14 04.4	+0.3
RUS				S	Sn	19 14 53.9	-1.8
KRMR	Karymshinskiy	4.80	22	P	Pn	19 14 11.2	+3.6
PETK	Petropavlovsk-	4.96	18	P	Pn	19 14 11.9	+2.1
	0.8nm,0.3s,baz=181,slow=10,SNR=20						
DALK	Dalny	5.14	25	P	Pn	19 14 13.8	+1.5
DALK				S	Sn	19 15 08.9	-1.5
UGLR	Uglovaya	5.32	24	*e*P	Pn	19 14 17.9	+3.0
KOK	Koryaka	5.35	23	*e*P	Pn	19 14 17.8	+2.6
AVH	Avacha	5.35	24	*e*P	Pn	19 14 18.6	+3.4
KRER	Koryakskii	5.39	23	*e*P	Pn	19 14 18.5	+2.6
SDLR	Sedlovina	5.40	24	*e*P	Pn	19 14 17.1	+1.1
KRX	Arik	5.41	23	*e*P	Pn	19 14 18.2	+2.1
GNL	Ganaly	5.56	17	P	Pn	19 14 21.4	+3.2
SPN	Mys Shipunski	5.60	31	P	Pn	19 14 18.8	+0.2
MKZ	Mys Kozlova	7.38	31	P	Pn	19 14 43.0	+0.1
KZV	Kizimen	7.41	23	P	Pn	19 14 47.5	+3.9
ASAJ	Asahikawa	9.72	248	P	Pn	19 15 17.9	+2.7
	1.0nm,0.3s,baz=74,slow=15,SNR=23						
SEY	Seymchan	14.63	355	P	Pn	19 16 22.3	+0.2
	0.1nm,0.3s,baz=150,slow=18,SNR=1.9						
KSRS	Korea Array	22.65	251	P	P	19 17 54.1	-1.7
	0.4nm,0.6s,baz=50,slow=10,SNR=4.1						
H11N2	WAKE ISLAND Hy	30.14	158	T	T	19 50 53.1	
	baz=345,slow=76,SNR=11						
H11N1	WAKE ISLAND Hy	30.16	158	T	T	19 50 52.7	
	baz=345,slow=76,SNR=14						
H11N3	WAKE ISLAND Hy	30.16	158	T	T	19 50 53.7	
	baz=345,slow=76,SNR=7.2						
H11S1	WAKE ISLAND Hy	31.27	159	T	T	19 52 14.4	
	baz=344,slow=76,SNR=71						
H11S3	WAKE ISLAND Hy	31.28	159	T	T	19 52 15.1	
	baz=344,slow=76,SNR=85						
H11S2	WAKE ISLAND Hy	31.29	159	T	T	19 52 20.7	
	baz=344,slow=76,SNR=44						
KDAK	Kodiak Island	31.97	53	LR	LR	19 30 29.3	
	comp=Z,141nm,20.5s,baz=224,slow=33						
INK	Inuvik	39.49	34	LR	LR	19 37 35.9	
	comp=Z,218nm,19.7s,baz=231,slow=37						
ZALV	Zalesovo Beam	42.79	305	PcP	PcP	19 22 40.3	-2.1
	0.3nm,0.4s,baz=73,slow=4.8,SNR=2.8						
MKAR	Makanchi Array	47.43	297	P	P	19 21 25.3	-3.4
	0.3nm,0.7s,baz=72,slow=7.9,SNR=4.3						
MKAR				PcP	PcP	19 22 56.5	-2.3
	0.3nm,0.8s,baz=72,slow=4.7,SNR=2.2						
MKAR				LR	LR	19 40 56.8	
	comp=Z,57nm,21.3s,baz=78,slow=36						
YKA	Yellowknife Ar	48.74	38	P	P	19 21 39.0	+0.4
	0.6nm,0.9s,baz=296,slow=7.1,SNR=5.3						
CMAR	Chiang Mai Arr	54.12	257	P	P	19 22 18.8	-0.6
	1.3nm,0.7s,baz=33,slow=7.2,SNR=5.4						
PDAR	Pinedale Array	62.64	56	P	P	19 23 19.9	+1.1
	0.3nm,0.6s,baz=356,slow=2.7,SNR=1.2						
WRA	Warramunga Arr	70.56	201	P	P	19 24 09.1	-0.1
	0.6nm,0.8s,baz=12,slow=6.8,SNR=2.4						
ASAR	Alice Springs	74.25	200	P	P	19 24 31.9	+0.8
	0.5nm,0.9s,baz=14,slow=5.0,SNR=6.9						
TXAR	Lajitas Array	75.46	62	P	P	19 24 38.9	+0.4
	0.3nm,0.5s,baz=282,slow=3.2,SNR=4.5						
H03N2	Juan Fernandez	137.35	90	T	T	22 05 25.9	
	baz=310,slow=77,SNR=9.0						
H03N1	Juan Fernandez	137.37	90	T	T	22 05 27.3	
	baz=310,slow=77,SNR=6.6						
H03N3	Juan Fernandez	137.37	90	T	T	22 05 26.1	
	baz=310,slow=77,SNR=5.9						

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*KRSC **18** 19:26:00.2±0.9, 53.°68N×161.°11E, h42^{km}±16^{km}, ML4.2*

*IDC **18** 19:26:05.3±6.5, 53.°91N×160.°66E, h71^{km}±49^{km}, mb3.5/5, mb1 3.6/6, mb1mx3.2/51, mbtmp3.8/6, ML3.1/1, Error ellipse: s-maj=56.4km s-min=27.9km az=91.0*

ISC 18 19:26:01.8±1.1, **53.°70N**±0.°04×**161.°07E**±0.°05, **h47**^{km}±12^{km}, **n48**, σ**1.ˢ60**/59, **mb3.6**/5, **Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	Mys Shipunski	0.86	227	*e*P	Pn	19 26 17.2	-0.4
SPN				*e*S	Sn	19 26 28.3	-0.8
MKZ	Mys Kozlova	0.95	24	*e*P	Pn	19 26 18.5	-0.2
MKZ				*e*S	Sn	19 26 30.7	-0.4
KII	Karymskiy	1.02	290	*e*P	Pn	19 26 19.4	-0.3
KII				*e*S	Sn	19 26 31.6	-1.3
NLC	Nalytchevo	1.16	244	*e*P	Pn	19 26 21.4	-0.1
NLC				*e*S	Sn	19 26 35.7	-0.4
SDLR	Sedlovina	1.37	253	*e*P	Pn	19 26 24.8	+0.3
SMAR	Somma	1.42	253	*e*P	Pn	19 26 25.6	+0.3
UGLR	Uglovaya	1.43	251	*e*P	Pn	19 26 25.8	+0.5
KRER	Koryakskii	1.44	255	*e*P	Pn	19 26 26.2	+0.6
KRER				*e*S	Sn	19 26 44.5	+1.1
AVH	Avacha	1.46	254	*e*P	Pn	19 26 26.3	+0.6
KRX	Arik	1.48	258	*e*P	Pn	19 26 26.4	+0.3
KZV	Kizimen	1.49	343	*e*P	Pn	19 26 26.8	+0.6
KZV				*e*S	Sn	19 26 45.2	+0.6
KOK	Koryaka	1.51	255	*e*P	Pn	19 26 26.9	+0.5
DALK	Dalny	1.54	245	*e*P	Pn	19 26 26.9	+0.2
DALK				*e*S	Sn	19 26 45.4	-0.1
TUMD	Tumrok D	1.56	346	*e*P	Pn	19 26 27.3	+0.2
TUMD				*e*S	Sn	19 26 46.2	+0.1
PET	Petropavlovsk	1.59	246	*e*P	Pn	19 26 27.8	+0.3
PET				*e*S	Sn	19 26 46.7	-0.2
TUMR	Tumrok	1.68	342	*e*P	Pn	19 26 29.9	+1.1
TUMR				*e*S	Sn	19 26 49.6	+0.5
GNL	Ganaly	1.86	271	*e*P	Pn	19 26 32.3	+1.1
KRMR	Karymshinskiy	1.96	245	*e*P	Pn	19 26 34.4	+1.8
KRMR				*e*S	Sn	19 26 58.8	+2.8
RUS	Russkaya	1.99	232	*e*P	Pn	19 26 33.0	+0.1
RUS				*e*S	Sn	19 26 57.3	+0.6
PETK	Petropavlovsk-	2.10	255	P	Pn	19 26 35.4	+1.0
	25nm,0.3s,baz=81,slow=19,SNR=539						
PETK				S	Sn	19 27 00.3	+1.0
	14nm,0.3s,baz=70,slow=22,SNR=4.6						
KMNR	Kamenistaya	2.12	347	*e*P	Pn	19 26 36.9	+2.1
MTVR	Mutnovka	2.12	236	*e*P	Pn	19 26 37.0	+2.1
MTVR				*e*S	Sn	19 27 03.3	+3.3
GRL	Gorelyy	2.14	239	*e*P	Pn	19 26 36.1	+1.1
KOZ	Kozyrevsk	2.46	344	*e*P	Pn	19 26 42.1	+2.6
KOZ				*e*S	Sn	19 27 11.3	+3.0
APC	Apacha	2.47	253	*e*P	Pn	19 26 41.4	+1.9
ESO	Esso	2.62	329	*e*P	Pn	19 26 43.1	+1.5
KDTR	Khodutka, Kamc	2.62	225	*e*P	Pn	19 26 43.5	+1.9
KDTR				*e*S	Sn	19 27 14.3	+2.2
KLY	Klyuchi	2.63	355	*e*P	Pn	19 26 43.4	+1.7
KBTR	Krutoberegovo	2.71	21	*e*P	Pn	19 26 44.7	+1.9
KBG	Krutoberegovo	2.73	20	*e*P	Pn	19 26 46.1	+3.0
SRDR	Sredinnyy	2.74	344	*e*P	Pn	19 26 44.3	+1.1
BDR	Baidarnaya	2.88	2	*e*P	Pn	19 26 48.4	+3.2
SRKR	Sorokina	2.96	1	*e*P	Pn	19 26 48.2	+1.9
BKI	Bering	3.24	60	*e*P	Pn	19 26 51.1	+1.1
BKI				*e*S	Sn	19 27 26.1	-1.2
PAU	Pauzhetka	3.42	231	*e*P	Pn	19 26 55.7	+3.1
SKR	Severo-Kuril’s	4.29	227	*e*P	Pn	19 27 06.6	+2.2
ASAJ	Asahikawa	15.43	239	P	P	19 29 37.3	-2.6
	0.1nm,0.3s,baz=117,slow=19,SNR=2.0						
H11N2	WAKE ISLAND Hy	34.20	170	T	T	20 09 21.4	
	baz=354,slow=76,SNR=44						
H11N3	WAKE ISLAND Hy	34.22	170	T	T	20 09 20.3	
	baz=354,slow=76,SNR=39						
H11N1	WAKE ISLAND Hy	34.22	170	T	T	20 09 25.4	
	baz=354,slow=76,SNR=38						
H11S1	WAKE ISLAND Hy	35.39	171	T	T	20 10 35.5	
	baz=350						
H11S3	WAKE ISLAND Hy	35.40	171	T	T	20 10 38.6	
	baz=350						
H11S2	WAKE ISLAND Hy	35.41	171	T	T	20 10 35.7	
	baz=350						
MKAR	Makanchi Array	48.42	296	P	P	19 34 36.5	-2.5
	0.1nm,0.5s,baz=54,slow=6.8,SNR=2.5						
FINES	FINESS Array B	59.80	337	P	P	19 36 01.3	-0.2
	6.2nm,1.2s,baz=38,slow=9.6,SNR=3.5						
AKASG	Malin Array Be	68.39	329	P	P	19 36 56.8	-1.2
	0.3nm,0.4s,baz=30,slow=6.3,SNR=2.9						
WRA	Warramunga Arr	76.88	206	P	P	19 37 49.4	+0.8
	0.8nm,1.1s,baz=21,slow=6.2,SNR=2.1						
ASAR	Alice Springs	80.55	205	P	P	19 38 10.7	+1.9
	0.5nm,0.9s,baz=25,slow=5.5,SNR=5.7						

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*TUL **18** 19:29:13.7±1.3, 36.°56N±0.°02×98.°16W±0.°05, h6^{km}±7^{km}, ML3.2, mb_Lg3.3/55(NEIC), Error ellipse: s-maj=5.1km s-min=2.7km az=87.0*

*NEIC **18** 19:29:13.6±0.9, 36.°53N±0.°02×98.°14W±0.°02, h5^{km}±2^{km}, Error ellipse: s-maj=3.2km s-min=3.0km az=353.0*

*ANF **18** 19:29:14.0±0.6, 36.°55N×98.°17W, h5^{km}, ML3.9/7, Error ellipse: s-maj=7.5km s-min=6.6km az=70.0*

ISC 18 19:29:13.7±1.2, **36.°54N**±0.°02×**98.°16W**±0.°03, **h4**^{km}±10^{km}, **n62**, σ**0.ˢ65**/56, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CROK	Carrier	0.14	103		Pg	19 29 17.2	+0.6
CROK				Sg	Sg	19 29 19.5	+1.1
KAN14	Manchester OK	0.45	20		Pg	19 29 22.3	0.0
KAN14				Sg	Sg	19 29 27.6	-0.5
KAN10	Anthony SW Sta	0.59	5		Pg	19 29 24.6	-0.4
KAN05	Bluff City Nor	0.61	22	Pg	Pg	19 29 25.3	-0.1
KAN01	Argonia South	0.69	27		Pg	19 29 26.6	-0.4
KAN01				Sg	Sg	19 29 35.4	-0.6
U32A	Winter Ranch,	0.70	257		Pg	19 29 27.1	0.0
KAN08	Anthony NE Sta	0.70	12		Pg	19 29 27.2	0.0
KAN08				Sg	Sg	19 29 36.5	+0.2
KAN13	South Haven SW	0.72	49		Pg	19 29 27.4	-0.1
KAN12	Harper NE Stat	0.77	10	Pg	Pg	19 29 28.4	0.0
OK029	Liberty Lake	0.93	142		Pg	19 29 31.3	-0.3
BCOK	Bluff Creek, N	0.98	153		Pg	19 29 32.4	-0.2
OK025	Westminster Rd	1.16	145		Pg	19 29 35.6	-0.4
OK031	S. Brethren Rd	1.22	118		Pg	19 29 36.4	-0.6
QUOK	Quay	1.23	107	Pg	Pg	19 29 36.7	-0.5
OKCFA	Oklahoma City	1.26	153		Pg	19 29 37.0	-0.8
OK030	Cody Creek RV	1.27	118		Pg	19 29 37.3	-0.7
OKCSW	OKLAHOMA CITY	1.27	152		Pg	19 29 37.4	-0.7
FNO	Franklin	1.42	154		Pn	19 29 40.2	-0.1
WMOK	Wichita Mounta	1.87	196	P	Pn	19 29 46.8	+0.3
	baz=15						
WMOK				S	Sb	19 30 11.9	-0.2
	baz=15						
WMOK	Wichita Mounta	1.87	196		Pn	19 29 46.8	+0.3
X34A	Smith Ranch, M	1.95	172	IAmb_Lg		19 30 18.8	
	comp=Z,125nm,0.7s						
TUL1	Leonard	2.01	107	P	Pn	19 29 48.7	+0.3
	baz=289						
TUL1				S	Sn	19 30 14.6	+0.6
	baz=289						
TUL1	Leonard	2.01	107		Pn	19 29 48.4	-0.1
TUL1				IAmb_Lg		19 30 21.4	
	comp=Z,145nm,0.8s						
CBKS	Cedar Bluff	2.59	332	P	Pn	19 29 56.8	+0.3
	baz=150						
CBKS				S	Sn	19 30 28.8	+0.3
	baz=150						
CBKS	Cedar Bluff	2.59	332	Pn	Pn	19 29 56.6	+0.1
KSU1	Kansas State U	2.84	25	P	Pn	19 30 00.0	+0.2
	baz=206						
KSU1				S	Sn	19 30 35.1	+0.7
	baz=206						
KSU1	Kansas State U	2.84	25		Pn	19 29 59.3	-0.5
X37A	Clayton	2.99	130	Pn	Pn	19 30 02.2	+0.3
X37A				IAmb_Lg		19 30 54.5	
	comp=Z,109nm,1.2s						
AMTX	Amarillo	3.31	241	P	Pn	19 30 06.4	0.0
	baz=59						
AMTX				S	Sn	19 30 46.6	+0.4
	baz=59						
AMTX	Amarillo	3.31	241	Pn	Pn	19 30 06.9	+0.5
AMTX				IAmb_Lg		19 30 58.8	
	comp=Z,58nm,1.0s						
HHAR	Hobbs	3.41	93		Pn	19 30 06.7	-1.0
W39A	Magazine	3.80	109	P	Pn	19 30 13.7	+0.7
	baz=292						
W39A				S	Sn	19 30 59.1	+1.0
	baz=292						
W39A	Magazine	3.80	109	Pn	Pn	19 30 12.9	0.0
W39A				IAmb_Lg		19 31 16.8	
	comp=Z,104nm,0.8s						
S39A	Bolivar	4.03	72	Pn	Pn	19 30 15.9	-0.4
S39A				IAmb_Lg		19 31 22.1	
	comp=Z,61nm,0.8s						
ABTX	Abilene, Hawle	4.09	198	IAmb_Lg		19 31 25.4	
	comp=Z,55nm,0.8s						
MIAR	Mount Ida	4.23	117	P	Pn	19 30 19.4	+0.4
	baz=300						
MIAR				S	Sn	19 31 09.8	+1.0
	baz=300						
MIAR	Mount Ida	4.23	117		Pn	19 30 17.8	-1.2
U40A	Yellville	4.28	91		Pn	19 30 19.7	+0.1
U40A				IAmb_Lg		19 31 29.7	
	comp=Z,68nm,0.7s						
KSCO	Kaye Shedlock’	4.32	306	Pn	Pn	19 30 19.8	-0.4
WHTX	Lake Whitney,	4.57	173		Pn	19 30 23.3	-0.3
MGMO	Mountain Grove	4.76	81	Pn	Pn	19 30 25.9	-0.4
MGMO				IAmb_Lg		19 31 50.9	
	comp=Z,56nm,0.8s						
X40A	Basin Creek Fa	4.80	114		Pn	19 30 26.1	-0.7
X40A				IAmb_Lg		19 31 53.8	
	comp=Z,45nm,0.9s						
FCAR	Ozark Folk Cen	4.92	96	Pn	Pn	19 30 25.8	-2.6
FCAR				IAmb_Lg		19 31 58.8	
	comp=Z,55nm,0.8s						
WHAR	Wooly Hollow	4.92	103	Pn	Pn	19 30 27.6	-0.8
WHAR				IAmb_Lg		19 32 02.6	
	comp=Z,62nm,0.8s						
OGNE	Ogallala	5.34	327	IAmb_Lg		19 32 16.5	
	comp=Z,38nm,0.8s						
LCAR	Lake Charles	5.67	93	IAmb_Lg		19 32 16.4	
	comp=Z,33nm,0.8s						
T42A	Van Buren	5.69	83		Pn	19 30 39.1	+0.1
T42A				IAmb_Lg		19 32 25.5	
	comp=Z,32nm,0.8s						
CCM	Cathedral Cave	5.71	73	Pn	Pn	19 30 39.1	-0.2
435B	Jarrell	5.76	175	IAmb_Lg		19 32 33.3	
	comp=Z,32nm,0.7s						
CCAR	Cane Creek	5.84	115	IAmb_Lg		19 32 28.1	
	comp=Z,66nm,0.7s						
SDCO	Great Sand Dun	5.99	284	Pn	Pn	19 30 42.2	-1.1
PBMO	Poplar Bluff	6.22	85	IAmb_Lg		19 32 29.5	
	comp=Z,28nm,0.8s						
SCIA	State Center	6.59	34	IAmb_Lg		19 32 44.2	
	comp=Z,52nm,0.9s						
SLM	Saint Louis	6.63	69	IAmb_Lg		19 32 42.5	
	comp=Z,32nm,0.9s						
SIUC	Southern Illin	7.24	78	IAmb_Lg		19 33 10.5	
	comp=Z,48nm,0.8s						
ECSD	EROS Data Cent	7.28	9	IAmb_Lg		19 33 09.7	
	comp=Z,22nm,1.1s						
OXF	Oxford	7.41	103	IAmb_Lg		19 33 11.5	
	comp=Z,41nm,0.9s						
SUSD	Miller	7.92	356	IAmb_Lg		19 33 32.2	
	comp=Z,35nm,1.0s						
HDIL	Hopedale	8.02	57	IAmb_Lg		19 33 32.1	
	comp=Z,45nm,0.8s						
OLIL	Olney	8.28	72	IAmb_Lg		19 33 51.9	
	comp=Z,29nm,0.7s						
JFWS	Jewell Farm	8.81	41	IAmb_Lg		19 34 08.8	
	comp=Z,28nm,0.9s						
K22A	Casper	8.88	316	IAmb_Lg		19 34 17.6	
	comp=Z,19nm,1.1s						

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*IDC **18** 19:42:26.3±2.2, 4.°81N×123.°35E, h588^{km}±29^{km}, mb2.9/8, mb1 3.1/8, mb1mx2.8/33, mbtmp4.0/8, Error ellipse: s-maj=61.7km s-min=11.7km az=62.0*

ISC 18 19:42:22.8±0.9, **4.°9N**±0.°2×**123.°5E**±0.°4, **h545**^{km}, **n8**, σ**2.ˢ09**/9, **mb3.6**/8, **Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	26.89	157	P	P	19 47 21.4	+0.8
	1.8nm,0.5s,baz=336,slow=9.9,SNR=23						
CMAR	Chiang Mai Arr	27.53	301	P	P	19 47 26.7	+0.4
	0.6nm,0.8s,baz=111,slow=6.3,SNR=5.4						
ASAR	Alice Springs	30.16	161	P	P	19 47 50.0	+1.1
	1.0nm,0.4s,baz=339,slow=6.9,SNR=41						
ASAR				ScP	ScP	19 53 19.9	-4.2
	0.5nm,0.5s,baz=341,slow=3.2,SNR=9.7						
STKA	Stephens Creek	40.43	156	P	P	19 49 14.5	+0.4
	0.8nm,0.4s,baz=333,slow=11,SNR=3.1						
SONM	Songino Array	45.22	344	P	P	19 49 53.1	+1.6
	0.5nm,0.6s,baz=159,slow=8.9,SNR=4.9						
MKAR	Makanchi Array	54.79	326	P	P	19 51 01.9	+0.4
	1.1nm,0.4s,baz=120,slow=7.6,SNR=40						
ZALV	Zalesovo Beam	58.12	334	P	P	19 51 24.0	-0.1
	0.3nm,0.3s,baz=138,slow=8.1,SNR=3.6						
FINES	FINESS Array B	89.28	332	P	P	19 54 18.9	-1.9
	1.8nm,0.8s,baz=90,slow=1.4,SNR=1.5						

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*IDC **18** 19:53:07.7±4.5, 4.°69N×126.°27E, h64^{km}±44^{km}, mb3.5/9, mb1 3.6/10, mb1mx3.5/34, mbtmp3.8/10, ML4.0/1, Error ellipse: s-maj=50.3km s-min=15.3km az=78.0*

*NEIC **18** 19:53:09.3±1.4, 4.°72N±0.°08×126.°3E±0.°1, h86^{km}±9^{km}, mb4.2/17, Error ellipse: s-maj=18.4km s-min=8.9km*

az=63.0

*MAN **18** 19:53:10.1, 4°.87N×126°.38E, h11^{km}, MS3.2*

ISC 18 19:53:09.5±0.5**, 4°.65N**±0°.05×**126°.32E**±0°.08**, h85^{km}, n41, σ1^s.53**/49**, mb4.0**/15**, 1C-2D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	1.57	337	eP	Pn	19 53 34.5	-1.4
DDMP				eS	Sn	19 53 53.9	-2.1
MATI	Mati	2.28	358	eP	Pn	19 53 44.8	-0.6
MATI				eS	Sn	19 54 18.6	+5.8
SKMP	Bagumbayan, Su	2.57	316	eP	Pn	19 53 50.6	+1.5
SKMP				eS	Sn	19 54 20.9	+1.3
KCP	Kidapawan	2.65	332	⇓eP	Pn	19 53 52.7	+2.4
KCP				i S	Sn	19 54 31.6	+10
BUKP	Musuan	3.45	339	eP	Pn	19 54 01.8	+0.7
BUKP				eS	Sn	19 54 42.4	+1.6
TNTI	Ternate	3.99	165	Pn	Pn	19 54 09.3	+0.9
CGP	Cagayan de Oro	4.11	337	⇑eP	Pn	19 54 13.5	+3.4
CGP				eS	Sn	19 55 00.4	+3.3
ZCP	Zamboanga City	4.80	298	⇓eP	Pn	19 54 19.9	+0.5
TOLI2	Tolitoli	6.55	238	Pn	Pn	19 54 44.6	+1.2
LUWI	Luwuk	6.67	212	Pn	Pn	19 54 45.5	+0.5
SIJI	Sorong	7.38	138	P	Pn	19 54 54.3	-0.3
	2.2nm,0.3s,baz=156,slow=23,SNR=13						
SIJI				S	Sn	19 56 15.7	-1.1
	0.5nm,0.3s,baz=306,slow=20,SNR=1.9						
MYLDM	Lahad Datu	7.81	274	Pn	Pn	19 55 00.6	+0.1
FAKI	Fak Fak	9.57	142	Pn	Pn	19 55 25.0	+0.5
JAGI	Jajag, Banyuwa	17.81	223		P	19 57 11.3	-0.2
JAGI				IAmb	IAmb	19 57 19.7	
	comp=Z,20nm,1.3s						
YULB	Yu-li	19.26	346	Pn	Pn	19 57 28.1	-1.1
YULB				IAmb	IAmb	19 57 57.2	
	comp=Z,24nm,1.2s						
TPUB	Ta-pu	19.34	344	P	P	19 57 26.3	-2.0
FITZ	Fitzroy Crossi	22.61	182	P	P	19 58 03.8	+0.4
	comp=Z,3.1nm,0.9s,baz=6.8,slow=8.0,SNR=11						
FITZ	Fitzroy Crossi	22.61	182	IAmb	IAmb	19 58 19.9	
	comp=Z,11nm,1.4s						
UBPT	Khong Chiam	23.07	299	P	P	19 58 07.3	-0.8
UBPT				IAmb	IAmb	19 58 27.5	
	comp=Z,9.0nm,1.4s						
WB0	Warramunga Arr	25.53	162	P	P	19 58 31.4	+1.0
WRAB	Tennant Creek	25.67	162	P	P	19 58 29.9	-1.7
WRAB				IAmb	IAmb	19 58 53.3	
	comp=Z,13nm,1.3s						
WRA	Warramunga Arr	25.68	162	P	P	19 58 33.1	+1.4
	comp=Z,0.6nm,0.4s,baz=343,slow=9.9,SNR=10						
WRA	Warramunga Arr	25.68	162	P	P	19 58 31.4	-0.3
WB2	Warramunga Arr	25.68	162	P	P	19 58 32.0	+0.2
WB2				IAmb	IAmb	19 58 40.2	
	comp=Z,20nm,1.4s						
WR0	Warramunga Arr	25.75	162	P	P	19 58 34.1	+1.7
WR0				IAmb	IAmb	19 58 38.2	
	comp=Z,5.6nm,1.1s						
PSA00	Pilbara Seismi	26.82	193	P	P	19 58 41.9	-0.1
AS31	Alice Springs	29.10	166	P	P	19 59 02.6	+0.3
ASAR	Alice Springs	29.10	166	P	P	19 59 03.3	+1.0
	comp=Z,0.4nm,0.5s,baz=341,slow=7.0,SNR=10						
ASAR				PcP	PcP	20 02 09.5	+1.0
	comp=Z,0.2nm,0.8s,baz=346,slow=2.7,SNR=1.5						
ASAR	Alice Springs	29.10	166	P	P	19 59 02.5	+0.2
KSRS	Korea Array	32.68	2	P	P	19 59 35.1	+1.4
	comp=Z,0.6nm,0.6s,baz=189,slow=9.7,SNR=1.6						
XAN	Xi'an	33.42	333	P	P	19 59 39.1	-1.1
XAN				IAmb	IAmb	19 59 48.5	
	comp=Z,6.3nm,1.5s						
BJT	Baijiatuau	36.39	347	P	P	20 00 03.5	-2.1
BJT				IAmb	IAmb	20 00 05.8	
	comp=Z,2.7nm,0.6s						
STKA	Stephens Creek	39.13	159	P	P	20 00 29.1	+0.3
	comp=Z,1.6nm,0.8s,baz=342,slow=9.6,SNR=3.8						
USRK	Ussuriysk Ar.	39.70	6	P	P	20 00 32.9	-0.6
	comp=Z,2.2nm,0.8s,baz=187,slow=8.5,SNR=2.5						
SONM	Songino Array	46.30	341	P	P	20 01 26.7	-0.2
	comp=Z,0.2nm,0.4s,baz=158,slow=7.8,SNR=3.0						
SONM				PcP	PcP	20 03 00.8	-0.1
	comp=Z,0.3nm,0.6s,baz=142,slow=3.0,SNR=3.0						
SONM	Songino Array	46.30	341	P	P	20 01 27.4	+0.5
MK31	Makanchi Array	56.58	325	P	P	20 02 43.5	+0.1
MKAR	Makanchi Array	56.58	325	P	P	20 02 43.0	-0.5
	comp=Z,0.4nm,0.4s,baz=118,slow=7.8,SNR=24						
MKAR				PcP	PcP	20 03 39.2	+0.2
	comp=Z,1.0nm,0.6s,baz=118,slow=3.8,SNR=8.3						
MKAR	Makanchi Array	56.58	325	P	P	20 02 42.8	-0.6
FINES	FINESS Array B	90.84	332	P	P	20 06 02.6	-0.7
	comp=Z,1.9nm,0.8s,baz=61,slow=6.5,SNR=2.0						
FINES	FINESS Array B	90.84	332	P	P	20 06 02.2	-1.1

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*NEIC **18** 19:58:17.2±2.1, 19°.60N±0°.03×70°.68W±0°.04, h25^{km}±4^{km}, mb4.6/65, Mwr4.5/13, Error ellipse: s-maj=4.9km s-min=4.5km az=62.0*

*OSPL **18** 19:58:17.0±2.4, 19°.66N×70°.56W, h0^{km}±12^{km}, ML4.3, Fault plane solution: NP1:ϕ_s139.70000°, δ52.40000°, λ-178.10000°.*

*NEIC **18** 19:58:17.7, 19°.61N×70°.66W, h24^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}2.63; $M_{\theta\theta}$-3.67; $M_{\phi\phi}$1.04; $M_{r\theta}$-5.71; $M_{\theta\phi}$2.72; $M_{\phi r}$4.26; Fault plane solution: $M_0$8.30000×10^{15} NP1:ϕ_s308.30000°, δ76.91000°, λ101.16000°. NP2:ϕ_s87.26000°, δ17.14000°, λ50.24000°. Principal axes: T 7.1239, Plg57.0000°, Azm233.0000°; N 1.9878, Plg11.0000°, Azm126.0000°; P -9.1117, Plg31.0000°, Azm29.0000°;*

*IDC **18** 19:58:21.9±2.1, 19°.42N×70°.67W, h65^{km}±19^{km}, mb3.9/21, mb1 4.1/26, mb1mx4.1/39, mbtmp4.3/26, MS3.9/20, Ms1 3.9/20, ms1mx3.7/37 Error ellipse: s-maj=15.3km s-min=9.6km az=68.0*

ISC 18 19:58:17.4±0.6**, 19°.58N**±0°.03×**70°.62W**±0°.03**, h27^{km}**±4^{km}**, n253, σ1^s.61**/266**, mb4.6**/45**, MS3.9**/15**, 5D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SC01	Santiago de lo	0.18	213		Pb	19 58 22.5	-0.6
SC01	Santiago de lo	0.18	213	⇓iP	Pb	19 58 22.4	-0.7
SC01				eS	Sb	19 58 27.7	+0.7
SC01				IAML		19 58 34.9	
	comp=Z,46μm,1.1s						
SDDR	Presa de Saban	0.87	227		Pn	19 58 32.5	-1.3
SDDR				Sn	Sn	19 58 46.3	+0.6
SDDR	Presa de Saban	0.87	227	i P	Pn	19 58 32.6	-1.3
SDDR				eS	Sb	19 58 44.0	-1.1
SDDR	Presa de Saban	0.87	227	⇓iP	Pn	19 58 32.4	-1.5
SDDR				eS	Sn	19 58 45.9	+0.3
SJM1	San Juan de la	0.96	216	i P	Pn	19 58 35.4	+0.3
BANI	BANI	1.21	168		Pb	19 58 39.5	-0.2
BANI	BANI	1.21	168	⇓iP	Pb	19 58 39.4	-0.2
LOSC1	San Cristbal	1.26	157	i P	Pb	19 58 40.8	+0.2
LOSC1				eS	Sb	19 58 58.2	+1.8
LOSC1				IAML		19 59 04.3	
	comp=Z,13μm,1.0s						
SDD	Santo Domingo	1.30	149	Sn	Sb	19 58 59.4	+1.8
SDD	Santo Domingo	1.30	149	⇓iP	Pn	19 58 40.0	+0.2
SDD				eS	Sb	19 58 59.1	+1.5
DR12	Loma Pena Alta	1.41	124	Pn	Pb	19 58 42.5	-0.6
GRTK	Grand Turk	1.98	346		Pn	19 58 48.3	-0.8
GRTK				Sn	Sn	19 59 14.3	+1.2
GRTK	Grand Turk	1.98	346	⇓iP	Pn	19 58 48.3	-0.8
GRTK				eS	Sn	19 59 13.8	+0.7
GRTK				IAML		19 59 33.3	
	comp=Z,5μm,1.1s						
LGNH	Logne	2.16	241	Pn	Pn	19 58 52.6	+1.0
LGNH	Logne	2.16	241	i P	Pn	19 58 53.7	+2.1
LGNH				eS	Sb	19 59 20.9	-1.3
LGNH				IAML		19 59 46.9	
	comp=Z,907nm,2.1s						
JAKH	Jacmel	2.24	234		Pn	19 58 52.1	-0.6
JAKH	Jacmel	2.24	234	i P	Pn	19 58 54.6	+1.9
JAKH				IAML		19 59 44.1	
	comp=Z,1μm,1.0s						
AGPR	Aguadilla, PR	3.50	108		Pn	19 59 11.9	+1.8
MPR	Mayaguez	3.57	112		Pn	19 59 13.5	+2.6
MLPR	Magueyes Islan	3.75	115	Pn	Pn	19 59 15.0	+1.5
AOPR	Arecibo Observ	3.86	108		Pn	19 59 16.6	+1.5
EMPR	Esperanza - Ma	4.02	105		Pn	19 59 19.0	+1.7
OBIP	Obispado Ponce	4.10	111	Pn	Pn	19 59 19.7	+1.4
ICMP	Isla Caja de M	4.23	113	Pn	Pn	19 59 22.3	+2.2
GCPR	Guaynabo City	4.48	106		Pn	19 59 23.9	+0.4
SJG	San Juan	4.48	108	P	Pn	19 59 23.9	+0.4
	comp=Z,23nm,0.3s,baz=318,slow=12,SNR=16						
SJG				S	Sn	20 00 14.1	-0.6
	comp=Z,194nm,0.3s,baz=316,slow=13,SNR=3.5						
SJG				LR	LR	20 01 21.7	
	comp=Z,1μm,20.9s,baz=277,slow=40						
SJG	San Juan	4.48	108	eP	Pn	19 59 25.1	+1.6
SJG				eS	Sn	20 00 14.0	-0.8
PDPR	Patillas Dam,	4.63	109	Pn	Pn	19 59 25.4	-0.1
CBYP	Canovanas	4.70	105		Pn	19 59 26.7	+0.2
HUMP	Col San Antoni	4.74	107	Pn	Pn	19 59 27.7	+0.5
MTP	Monte Pirata	5.02	106	Pn	Pn	19 59 31.3	+0.3
CUPR	Culebra, Puert	5.21	103	Pn	Pn	19 59 33.0	-0.6
CDVI	St. Croix	5.84	107	Pn	Pn	19 59 43.3	+1.0
MTDJ	Mount Denham	6.68	259	Pn	Pn	19 59 53.8	-0.1
MTDJ	Mount Denham	6.68	259	eP	Pn	19 59 54.9	+1.0
MTDJ				eS	Sn	20 01 16.1	+6.9
SABA	Saba	7.26	104	eP	Pn	20 00 04.3	+2.4
SABA	Saba	7.26	104	eS	Sn	20 01 22.3	-1.2
SKI	Saint Kitts	7.81	105	eP	Pn	20 00 10.4	+1.1
SKI	Saint Kitts	7.81	105	eS	Sn	20 01 36.8	0.0
SKI	Saint Kitts	7.81	105		Pn	20 00 10.2	+0.9
URIC	Uribia, Colomb	7.94	190	eP	Pn	20 00 13.4	+2.2
URIC				eS	Sn	20 01 37.1	-3.1
MLYT	Lee's Yard	8.50	108	eP	Pn	20 00 11.5	-7.3
ANWB	Willy Bob	8.59	101	eP	Pn	20 00 18.9	-1.1
ANWB	Willy Bob	8.59	101	eS	Sn	20 01 52.5	-3.6
ANWB	Willy Bob	8.59	101	Pn	Pn	20 00 18.9	-1.1
DABV	Dabajuro	8.61	180	eP	Pn	20 00 24.1	+3.8
CBCY	The Bluff, Cay	8.61	273	Pn	Pn	20 00 19.4	-0.9
ANBD	Bethesda, Anti	8.78	105	eP	Pn	20 00 21.3	-1.3
ANBD	Bethesda, Anti	8.78	105	eS	Sn	20 01 57.5	-3.3
CRJC	Cerrejon, Guaj	8.79	195	eP	Pn	20 00 26.1	+3.2
CRJC				eS	Sn	20 01 59.1	-1.9
LCCY	Blossom Villag	8.92	272	Pn	Pn	20 00 23.6	-0.9
SMRC	Santa Marta, M	9.06	203	eP	Pn	20 00 26.1	-0.4
MAGL	Barre de l'ile	9.60	111	eP	Pn	20 00 35.0	+1.1
MAGL	Barre de l'ile	9.60	111	eS	Sn	20 02 23.8	+2.9
DSLB	Salisbury	9.70	114	eP	Pn	20 00 33.2	-2.0
DSLB	Salisbury	9.70	114	eS	Sn	20 02 26.0	+2.7
FSCY	Frank Sound, G	9.97	270	Pn	Pn	20 00 37.2	-1.7
WBCY	West Bay, Gran	10.17	271	Pn	Pn	20 00 39.0	-2.6
FDF	Fort de France	10.25	117	Pn	Pn	20 00 42.6	-0.3
BIM	Bigot	10.43	117	eP	Pn	20 00 45.4	+0.1
BIM	Bigot	10.43	117	eS	Sn	20 02 38.5	-2.8
SDV	Santo Domingo	10.63	180	P	Pn	20 00 51.2	+3.0
	comp=Z,3.4nm,0.3s,baz=8.4,slow=8.5,SNR=10						
SDV				S	Sn	20 02 44.2	-2.3
	comp=Z,2.5nm,0.3s,baz=316,slow=21,SNR=6.1						
SDV				LR	LR	20 05 19.4	
	comp=Z,614nm,19.1s,baz=5.0,slow=40						
SDV	Santo Domingo	10.63	180		Pn	20 00 49.4	+1.2
SDV	Santo Domingo	10.63	180	eP	Pn	20 00 49.9	+1.7
SDV	Santo Domingo	10.63	180	eP	Pn	20 00 51.6	+3.4
MPOM	Morne Pois Mar	10.64	117	eP	Pn	20 00 52.0	+3.8
MPOM	Morne Pois Mar	10.64	117	eS	Sn	20 02 53.4	+6.9
SVB	Belmont	10.96	124	Pn	Pn	20 00 53.3	+0.8
PCRV	Puerto La Cruz	10.99	147	P	Pn	20 00 56.2	+3.2
	comp=Z,6.9nm,0.3s,baz=293,slow=4.4,SNR=16						
PCRV				S	Sn	20 02 51.1	-4.1
	comp=Z,11nm,0.3s,baz=337,slow=17,SNR=10						
SMLC	San Martn de	11.22	198	eP	Pn	20 00 59.5	+3.3
SOCV	Socops	11.23	181	eP	Pn	20 00 59.5	+3.2
GRGR	Grenville	11.37	129	Pn	Pn	20 00 57.4	-0.7
PAMC	Pamplona, Colo	12.33	190	eP	Pn	20 01 15.6	+3.8
ELOV	Elorza	12.55	175	eP	Pn	20 01 17.9	+3.5
UREC	San Jos de Ur	12.69	203	eP	Pn	20 01 21.4	+5.2
BARC	Barichara	13.15	191	eP	Pn	20 01 23.5	+0.8
PTBC	PUERTO BERRIO,	13.49	197	eP	Pn	20 01 29.0	+1.9
DBBC	Dabeiba	13.62	204	eP	P	20 01 35.0	-2.5
BCIP	Isla Barro Col	13.66	222	Pn	Pn	20 01 29.8	+0.4
BCIP	Isla Barro Col	13.66	222	eP	Pn	20 01 29.2	-0.3
BBSR	BB Station	13.80	21	Pn	Pn	20 01 29.1	-2.2
RUSC	La Rusia	13.81	190	eP	Pn	20 01 35.7	+3.7
SPBC	San Pablo de B	14.25	194	eP	P	20 01 41.4	-3.2
NORC	Norcasia	14.53	197	eP	P	20 01 45.0	-2.8
CBOC	Ciudad Bolivar	14.61	202	eP	P	20 01 47.3	-1.4
GUY2C	Guyana, Caldas	15.00	199	eP	Pn	20 01 50.0	+1.8
ROSC	El Rosal	15.09	194	P	Pn	20 01 51.5	+2.2
	comp=Z,2.8nm,0.3s,baz=133,slow=22,SNR=2.7						
ROSC	El Rosal	15.09	194		Pn	20 01 47.3	-1.9
ROSC				IAmb	IAmb	20 02 33.0	
	comp=Z,37nm,0.8s						
ROSC	El Rosal	15.09	194	eP	P	20 01 52.9	-1.4
CHIC	Chingaza	15.17	192	eP	P	20 01 53.6	-1.6
RREF	El Recreo	15.30	198	eP	P	20 01 56.7	-0.2
TOLC	Tolima	15.59	198	eP	P	20 01 59.5	-0.3
PLMC	San Jos del P	15.60	201	eP	Pn	20 01 56.8	+1.2
ANIL	Santa Ana	15.71	198	eP	Pn	20 01 57.6	+0.4
ORTC	Ortega, Tolima	16.22	197	eP	P	20 02 06.2	-0.2
PRAC	Prado	16.31	195	eP	P	20 02 08.1	+0.7
YOTC	Yotoco, Valle	16.48	201	eP	P	20 02 10.1	+0.6
TEIG	Tepich	16.62	275	P	P	20 02 10.6	-0.2
	comp=Z,0.5nm,0.3s,baz=56,slow=17,SNR=3.9						
TEIG				LR	LR	20 09 07.0	
	comp=Z,590nm,18.7s,baz=108,slow=39						
JTS	Las Juntas de	16.63	238	LR	LR	20 08 35.6	
	comp=Z,227nm,19.2s,baz=168,slow=37						
JTS	Las Juntas de	16.63	238	P	P	20 02 12.4	+1.4
JTS				IAmb	IAmb	20 02 23.1	
	comp=Z,77nm,1.4s						
JTS	Las Juntas de	16.63	238	eP	P	20 02 13.8	+2.7
MALC	Bahia Malaga	16.80	204	eP	P	20 02 16.6	+3.8
TGUH	Tegucigalpa,Un	16.86	254	P	Pn	20 02 12.5	+0.8
TGUH				IAmb	IAmb	20 02 23.8	
	comp=Z,67nm,1.3s						
BETC	Betania	17.44	196	eP	P	20 02 21.6	+1.6
MACC	Macarena, Meta	17.61	191	eP	P	20 02 22.5	+0.6
POPC	Popayan, Colom	17.94	200	eP	P	20 02 28.2	+2.5
PCON	Cinco Dias	18.05	199	eP	P	20 02 28.2	+0.9
FLOC	Florencia	18.55	196	eP	Pn	20 02 34.3	+1.7
BBAC	Balboa, Cauca	18.61	201	eP	Pn	20 02 34.5	+1.0
MTO3	Montecristo	18.64	257	P	Pn	20 02 34.4	+0.5
JSRW	J. Sargeant Re	19.13	342	P	P	20 02 38.1	-0.3
CBN	Corbin Frederi	19.46	344	P	P	20 02 39.7	-2.3
CBN				IAmb	IAmb	20 03 26.1	
	comp=Z,72nm,1.4s						
BLA	Blacksburg	19.54	336	P	P	20 02 42.1	-0.9
TKL	Tuckaleechee C	19.77	327	P	Pn	20 02 49.7	+2.6
	comp=Z,0.3nm,0.3s,baz=144,slow=6.5,SNR=3.9						
TKL				S	S	20 06 10.8	-16
	comp=Z,0.2nm,0.3s,baz=5.9,slow=14,SNR=2.3						
TKL				LR	LR	20 09 48.4	
	comp=Z,309nm,18.6s,baz=142,slow=34						
TKL	Tuckaleechee C	19.77	327	P	Pn	20 02 47.3	+0.2
TKL				IAmb	IAmb	20 03 32.4	
	comp=Z,47nm,1.6s						
LRAL	Lakeview Retre	19.84	316		Pn	20 02 48.7	+0.8
SDMD	Soldier's Deli	20.48	346	P	P	20 02 53.5	+0.4
OTAV	Otavalo	20.70	203	P	P	20 02 56.7	+0.6
OTAV	Otavalo	20.70	203	eP	Pn	20 02 57.8	-0.8
OTAV	Otavalo	20.70	203	eP	Pn	20 02 58.9	+0.3
CCIG	Comitan	20.73	264	P	P	20 02 56.6	+0.4
CCIG				IAmb	IAmb	20 03 02.7	
	comp=Z,52nm,1.1s						
MVL	Millersville	20.94	348	P	P	20 02 58.5	+0.4
ODNJ	Ogdensburg	21.70	352	P	P	20 03 06.2	0.0
ODNJ				IAmb	IAmb	20 03 20.7	
	comp=Z,22nm,0.8s						
TRNY	Table Rock, Ra	21.71	353	P	P	20 03 06.5	+0.1
TRNY				IAmb	IAmb	20 03 07.3	
	comp=Z,29nm,1.2s						
N59A	State Game Lan	21.72	349	P	P	20 03 07.1	+0.6
N59A				IAmb	IAmb	20 03 27.5	
	comp=Z,22nm,1.1s						
PTGA	Pitinga	22.73	151	P	P	20 03 17.1	-0.4
	comp=Z,14nm,0.9s,baz=345,slow=12,SNR=16						
PTGA				LR	LR	20 12 36.3	
	comp=Z,146nm,18.2s,baz=291,slow=38						
PTGA	Pitinga	22.73	151	P	P	20 03 16.6	-0.9
PTGA				IAmb	IAmb	20 03 19.8	
	comp=Z,17nm,1.0s						
PTGA	Pitinga	22.73	151	eP	P	20 03 17.3	-0.2
X40A	Basin Creek Fa	24.66	312	P	P	20 03 35.4	-0.6
X40A				IAmb	IAmb	20 04 16.3	
	comp=Z,23nm,1.4s						
G62A	West of Eustis	25.57	0	P	P	20 03 44.0	-0.1
CCM	Cathedral Cave	25.69	320	P	P	20 03 44.4	-0.9
SADO	Sadowa	26.10	346	P	P	20 03 50.6	+1.7
	comp=Z,1.2nm,0.4s,baz=211,slow=12,SNR=3.4						
SADO				LR	LR	20 13 17.6	
	comp=Z,235nm,19.1s,baz=174,slow=34						
CZSB	Cruzeiro do Su	27.21	185	eP	P	20 04 00.5	+1.4
ATAH	Atahualpa	27.63	197	LR	LR	20 16 37.3	
	comp=Z,111nm,19.0s,baz=347,slow=40						
ITTB	Itaituba	27.94	147	eP	P	20 04 05.3	-0.4
JCT	Junction City	28.50	298	P	P	20 04 08.2	-2.5
SAML	Samuel	29.28	165	P	P	20 04 16.7	-0.9
SAML				IAmb	IAmb	20 04 19.5	
	comp=Z,7.2nm,0.7s						
SAML	Samuel	29.28	165	eP	P	20 04 19.8	+2.2
ETMB	Extrema	29.53	171	eP	P	20 04 19.4	-0.4
NPGB	Novo Progresso	30.43	149	eP	P	20 04 27.0	-0.8
TXAR	Lajitas Array	31.52	294	P	P	20 04 37.5	0.0
	comp=Z,2.3nm,0.9s,baz=111,slow=11,SNR=14						
TXAR				PcP	PcP	20 07 29.8	-0.2
	comp=Z,1.0nm,0.8s,baz=119,slow=3.2,SNR=3.2						
TXAR				ScP	ScP	20 11 08.6	-2.9
	comp=Z,0.1nm,0.5s,baz=97,slow=2.1,SNR=1.7						
TXAR				LR	LR	20 20 20.5	
	comp=Z,143nm,20.9s,baz=0.0,slow=42						
TXAR	Lajitas Array	31.52	294	P	P	20 04 37.0	-0.4
TX31	Lajitas Ar. Si	31.52	294	P	P	20 04 37.4	0.0
TX32	Lajitas Array	31.52	294	P	P	20 04 37.0	-0.4
MNTX	Cornudas Mount	33.44	298	P	P	20 04 54.7	+0.5
VILB	Vilhena	33.92	162	eP	P	20 04 58.4	0.0
BNM	Barren Site	35.05	302	P	P	20 05 09.2	+0.8
ANMO	Albuquerque	35.12	303	P	P	20 05 09.4	+0.5
ANMO				IAmb	IAmb	20 05 18.0	
	comp=Z,14nm,1.7s						
SDCO	Great Sand Dun	35.29	308	P	P	20 05 11.4	+1.0
SDCO				IAmb	IAmb	20 05 48.0	
	comp=Z,12nm,1.8s						
121A	Cookes Peak, D	35.61	299	P	P	20 05 12.8	-0.4
LPAZ	La Paz	35.73	176	P	P	20 05 14.0	-0.7
	comp=Z,4.3nm,0.6s,baz=346,slow=4.5						
LPAZ	La Paz	35.73	176	P	P	20 05 13.1	-1.6
LPAZ				IAmb	IAmb	20 05 18.8	
	comp=Z,4.9nm,0.7s						
LPAZ	La Paz	35.73	176	eP	P	20 05 14.2	-0.5
SMTB	Santa Maria do	36.24	139	eP	P	20 05 18.5	0.0
SIV	San Ignacio	36.58	164	P	P	20 05 20.1	-1.2
	comp=Z,2.0nm,0.6s,baz=23,slow=5.9,SNR=10						
ULM	Lac du Bonnet	36.59	333	P	P	20 05 24.3	+3.2
	comp=Z,2.8nm,0.8s,baz=130,slow=5.9,SNR=4.7						
ULM				LR	LR	20 19 59.4	
	comp=Z,98nm,20.3s,baz=114,slow=35						
ULM	Lac du Bonnet	36.59	333	P	P	20 05 21.9	+0.8
SNDB	Serra Nova Dou	36.68	147	eP	P	20 05 22.4	+0.2
SLBS	Sierra La Lagu	36.70	284	P	P	20 05 22.3	-0.2
SLBS				IAmb	IAmb	20 05 26.0	
	comp=Z,17nm,1.1s						
PB16	IPOC Station P	37.70	178	P	P	20 05 29.5	-1.9
PB16				IAmb	IAmb	20 05 30.9	
	comp=Z,14nm,0.8s						
PEXB	Peixe	38.40	143	eP	P	20 05 36.8	0.0
PB08	IPOC Station P	39.50	178	P	P	20 05 44.7	-1.6
PB08				IAmb	IAmb	20 05 46.4	
	comp=Z,9.2nm,0.8s						
ARAG	Araguaiana, MT	39.65	151	eP	P	20 05 46.4	-0.7
PDAR	Pinedale Array	40.05	314	P	P	20 05 51.1	+0.5
	comp=Z,0.2nm,0.4s,baz=111,slow=8.4,SNR=3.7						
PDAR				LR	LR	20 22 49.7	
	comp=Z,108nm,18.1s,baz=120,slow=37						
PB01	IPOC Station P	40.39	178	P	P	20 05 51.4	-1.9
PB01				IAmb	IAmb	20 05 52.5	
	comp=Z,13nm,0.8s						
MPU	Maple Canyon	40.56	309	P	P	20 05 54.8	0.0
MPU				IAmb	IAmb	20 05 56.5	
	comp=Z,16nm,1.5s						
SDBA	SAO DESIDERIO	40.65	139	eP	P	20 05 54.5	-1.1
NLU	North Lily Min	40.86	309	P	P	20 05 56.9	-0.4
NLU				IAmb	IAmb	20 06 00.0	
	comp=Z,15nm,1.5s						
LOHW	Long Hollow	41.09	315	P	P	20 05 58.2	-0.9
W13A	Hualapai Mount	41.09	301	P	P	20 05 58.8	-0.4
BDFB	Brasilia	41.47	146	P	P	20 06 01.9	-0.4
	comp=Z,15nm,0.8s,baz=324,slow=12,SNR=21						
BDFB	Brasilia	41.47	146	P	P	20 06 01.2	-1.1
BDFB				IAmb	IAmb	20 06 03.2	
	comp=Z,16nm,0.8s						
PSUT	Pine Spring	41.80	306	P	P	20 06 05.9	+0.9
LVC	Limon Verde	41.97	178	P	P	20 06 04.8	-1.8
	comp=Z,9.3nm,0.8s,baz=345,slow=4.8,SNR=8.5						
LVC	Limon Verde	41.97	178	P	P	20 06 04.8	-1.8
LVC				IAmb	IAmb	20 06 06.1	
	comp=Z,10nm,0.8s						
JANB	Januaria	43.07	141	eP	P	20 06 14.6	-0.7
R11A	Troy Canyon, C	43.08	306	P	P	20 06 13.5	-2.0
TPNV	Topopah Spring	43.31	303	P	P	20 06 16.3	-1.0
ELK	Elko	43.40	309	P	P	20 06 17.2	-0.9
GSC	Goldstone, Bar	43.48	301	P	P	20 06 18.5	-0.1
ITRB	Iturama	43.80	152	eP	P	20 06 20.4	-0.8
FRB	Frobisher Bay	44.16	1	P	P	20 06 23.1	-0.3
	comp=Z,4.0nm,0.7s,baz=183,slow=10,SNR=6.7						
TPH	Tonopah	44.29	305	P	P	20 06 26.0	+0.8
GDU01	Guandu, BA	45.05	135	eP	P	20 06 30.6	-0.6
NV11	Mina Array Sit	45.08	305	P	P	20 06 32.9	+1.5
NV11				IAmb	IAmb	20 06 34.6	
	comp=Z,15nm,1.2s						
PCMB	Pacaembu	45.10	154	eP	P	20 06 30.6	-0.9
KVN	Kaiserville	45.15	306	P	P	20 06 31.6	-0.4
KVN				IAmb	IAmb	20 06 34.0	
	comp=Z,7.5nm,1.1s						
NVAR	Mina Array Bea	45.19	305	P	P	20 06 33.3	+0.9
	comp=Z,5.2nm,1.0s,baz=100,slow=6.9,SNR=31						
NVAR	Mina Array Bea	45.19	305	P	P	20 06 33.0	+0.6
LHV	Little Huntoon	45.31	305	P	P	20 06 34.1	+1.1
LHV				IAmb	IAmb	20 06 50.8	
	comp=Z,17nm,1.7s						
RYN	Ryan	45.40	305	P	P	20 06 34.4	+0.4
OMMB	Old Mammoth Mi	45.59	304	P	P	20 06 35.9	+0.2
OMMB				IAmb	IAmb	20 06 38.4	
	comp=Z,7.2nm,1.0s						
TRCB	Terra Rica	45.63	157	eP	P	20 06 35.0	-0.7
MDPB	Devils Postpil	45.65	304	P	P	20 06 36.8	+0.7
MDPB				IAmb	IAmb	20 06 38.9	
	comp=Z,8.0nm,1.0s						
BB19B	Bebedouro	45.82	151	eP	P	20 06 36.2	-1.0
DIAM	Diamantina, MG	46.01	143	eP	P	20 06 37.9	-1.0
YERR	Yerington	46.01	306	P	P	20 06 39.7	+0.8
WAKR	Walker	46.08	305	P	P	20 06 39.8	+0.4
WAKR				IAmb	IAmb	20 06 43.0	
	comp=Z,13nm,1.5s						
NEW	Newport	47.04	319	P	P	20 06 46.3	-0.3
NEW				IAmb	IAmb	20 07 10.8	
	comp=Z,8.0nm,1.1s						
CPUP	Villa Florida	47.43	164	P	P	20 06 48.0	-1.7
	comp=Z,3.7nm,1.0s,baz=339,slow=6.9,SNR=4.1						
CPUP				PcP	PcP	20 08 18.2	-1.8
	comp=Z,4.3nm,0.8s,baz=329,slow=4.1,SNR=5.5						
CPUP				LR	LR	20 28 01.3	
	comp=Z,130nm,18.3s,baz=7.5,slow=38						
CPUP	Villa Florida	47.43	164	P	P	20 06 48.3	-1.3
CPUP	Villa Florida	47.43	164	eP	P	20 06 48.4	-1.3
PTGB	Pitanga	47.59	157	eP	P	20 06 50.0	-1.1
BSCB	Bom Sucesso	47.61	147	eP	P	20 06 50.3	-1.0
NAN01	Guarapari, ES	47.75	139	eP	P	20 06 51.8	-0.5
SJMB	Sao Joao De Ma	47.77	141	eP	P	20 06 51.7	-0.8
BSFB	Barra de Sao F	48.07	141	eP	P	20 06 54.4	-0.4
AC05	El Transito	48.13	180	P	P	20 06 54.8	-0.5
LCO	Las Campanas	48.31	180	P	P	20 06 56.6	-0.2
RIB01	Linhares ES	48.71	141	eP	P	20 06 59.4	-0.3
PARB	Paraibuna	49.14	149	eP	P	20 07 02.8	-0.2
CO01	Juntas del Tor	49.27	179	P	P	20 07 04.3	+0.2
ZON	Zonda	50.87	178	P	P	20 07 15.6	-0.4
YKA	Yellowknife Ar	52.41	336	P	P	20 07 27.2	+0.1
	comp=Z,2.7nm,1.0s,baz=117,slow=7.8,SNR=9.4						
YKA				LR	LR	20 29 52.4	
	comp=Z,191nm,18.9s,baz=0.0,slow=36						
SUMG	Summit	56.08	11	i P	P	20 08 01.3	+7.1
SUMG	Summit	56.08	11	i P	P	20 08 01.4	+7.2
LC01	Cunco	58.18	181	P	P	20 08 07.9	-1.1
ESDC	Sonseca Array	59.99	55	P	P	20 08 22.9	+1.1
	baz=278,slow=7.4						
PLCA	Paso Flores	60.00	180	P	P	20 08 20.7	-0.9
	comp=Z,3.4nm,0.7s,baz=350,slow=9.5,SNR=5.9						
PLCA				LR	LR	20 35 00.5	
	comp=Z,71nm,18.2s,baz=18,slow=37						
PLCA	Paso Flores	60.00	180	P	P	20 08 20.8	-0.9
PLCA	Paso Flores	60.00	180	eP	P	20 08 21.5	-0.1
DAG	Danmarks Havn	62.74	12	i P	P	20 08 45.2	+5.5
DAG	Danmarks Havn	62.74	12	i P	P	20 08 45.2	+5.6
DBIC	Dimbokro	64.98	92	P	P	20 08 56.2	+0.7
	comp=Z,1.6nm,0.7s,baz=169,slow=5.2,SNR=1.8						
PRP	Porcupine Dome	66.10	334	P	P	20 09 01.6	-0.4
PRP				IAmb	IAmb	20 09 32.1	

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,5.6nm,0.9s						
ILAR	Eielson Array	66.61	333	P	P	20 09 05.0	-0.2
	comp=Z,0.6nm,0.6s,baz=110,slow=4.9,SNR=6.9						
ILAR				LR	LR	20 38 49.2	
	comp=Z,131nm,19.8s,baz=96,slow=36						
RND	Reindeer	67.42	331	P	P	20 09 10.5	+0.2
KTH	Kantishna Hill	68.35	332	P	P	20 09 15.7	-0.5
KTH				IAmb	IAmb	20 09 26.3	
	comp=Z,8.4nm,1.0s						
BPAW	Bear Paw Mtn.	68.37	332	P	P	20 09 14.9	-1.4
BPAW				IAmb	IAmb	20 09 25.9	
	comp=Z,3.9nm,0.7s						
NB2	NORSAR Subarra	69.14	31	P	P	20 09 22.1	+1.0
	comp=Z,4.4nm,1.0s,baz=275,slow=6.5						
NOA	NORSAR Array B	69.14	31	P	P	20 09 22.4	+1.3
	comp=Z,18nm,0.4s,baz=273,slow=6.2,SNR=1.4						
TORD	Torodi Ar. Bea	69.25	83	P	P	20 09 22.5	-0.1
	comp=Z,1.2nm,0.4s,baz=290,slow=8.0,SNR=3.1						
IMAR	Indian Mountai	69.50	334	P	P	20 09 23.3	0.0
KEST	Kesra	70.89	58	LR	LR	20 36 10.4	
	comp=Z,94nm,20.7s,baz=228,slow=32						
KHC	Kasperske Hory	71.71	43	eP	P	20 09 39.5	+2.4
KHC				epP	pP	20 09 44.7	-1.1
GERES	GERESS Array B	71.84	44	P	P	20 09 39.7	+1.8
	comp=Z,0.4nm,0.7s,baz=253,slow=4.1,SNR=5.7						
GERES				LR	LR	20 36 32.4	
	comp=Z,92nm,20.3s,baz=280,slow=32						
GERES	GERESS Array B	71.84	44	P	P	20 09 39.4	+1.4
DPC	Dobruska-Polom	73.26	42	epP	pP	20 09 53.7	-1.3
DPC				ePCP	PcP	20 10 01.4	-1.3
ARCES	ARCESS Array B	73.95	21	P	P	20 09 52.1	+2.2
	comp=Z,7.7nm,1.0s,baz=332,slow=5.4,SNR=2.9						
VYHS	Vyhne	75.25	43	eP	P	20 09 58.3	+0.4
FINES	FINESS Array B	76.16	29	P	P	20 10 03.6	+0.8
	comp=Z,1.5nm,0.6s,baz=262,slow=3.9,SNR=11						
FINES				LR	LR	20 41 02.1	
	comp=Z,54nm,19.6s,baz=301,slow=34						
FINES	FINESS Array B	76.16	29	P	P	20 10 03.4	+0.7
NACGM	Naroch	78.36	36	iP	P	20 10 23.4	+8.2
NACGM				iP	P	20 10 23.4	+8.2
NACGM				iP	P	20 10 23.4	+8.2
NACGM				iPcP	sP	20 10 35.4	+8.1
NACGM				iPP	PP	20 13 13.7	+1.6
NACGM				iPPP	PPP	20 15 00.3	
NACGM				iS	S	20 20 04.5	-4.5
NACGM				iSS	SS	20 24 45.1	-26
NACGM				iSSS	SSS	20 28 30.6	
NACGM				iLR	LR	20 45 19.0	
AKASG	Malin Array Be	81.11	39	P	P	20 10 31.0	+0.7
	comp=Z,0.2nm,0.4s,baz=276,slow=4.4,SNR=1.7						
AKASG				LR	LR	20 46 02.1	
	comp=Z,85nm,18.4s,baz=315,slow=35						
PPT	Papeete	85.85	250	LR	LR	20 43 20.1	
	comp=Z,64nm,18.7s,baz=242,slow=32						
CMAR	Chiang Mai Arr	140.84	16	PKP	PKPdf	20 17 45.7	0.0
	comp=Z,0.7nm,0.8s,baz=322,slow=2.2,SNR=6.4						
CMAR	Chiang Mai Arr	140.84	16		PKPdf	20 17 44.6	-1.2
STKA	Stephens Creek	148.62	241	PKPbc	PKPdf	20 17 59.2	+0.5
	comp=Z,5.7nm,1.0s,baz=121,slow=8.4,SNR=2.9						
STKA	Stephens Creek	148.62	241		PKPbc	20 18 02.6	+0.1
WRA	Warramunga Arr	156.51	265	PKP	PKPdf	20 18 10.6	-0.1
	comp=Z,1.4nm,0.9s,baz=274,slow=31,SNR=5.8						
WRA				PKPab	PKPab	20 18 38.6	-0.9
	comp=Z,1.6nm,0.8s,baz=86,slow=3.7,SNR=6.8						
WRA	Warramunga Arr	156.51	265		PKPdf	20 18 10.2	-0.5
ASAR	Alice Springs	156.85	255	PKP	PKPdf	20 18 10.7	-0.3
	comp=Z,0.7nm,0.9s,baz=132,slow=1.1,SNR=5.8						
ASAR				PKPbc	pPKPdf	20 18 19.6	-0.7
	comp=Z,0.8nm,0.7s,baz=88,slow=2.2,SNR=6.3						
ASAR				PKPab	PKPab	20 18 41.0	0.0
	comp=Z,3.6nm,0.8s,baz=108,slow=4.1,SNR=16						

IDC 18 20:12:03.0±1.9**,55°.04S×28°.85W,h0^{km},mb4.0**/2**, mb1 4.1**/2**,mb1mx3.8**/14**,mbtmp4.0**/2**,Error ellipse: s-maj=91.1km s-min=43.6km az=15.0,South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	La Paz	49.02	306	P	P	20 20 52.3	+0.1
	1.0nm,0.7s,baz=162,slow=6.4,SNR=2.9						
TORD	Torodi Ar. Bea	72.66	31	P	P	20 23 32.3	0.0
	0.8nm,0.4s,baz=199,slow=7.2,SNR=2.4						
ILAR	Eielson Array	148.74	313	PKPbc	PKPbc	20 31 50.0	-0.8
	0.8nm,0.6s,baz=121,slow=1.6,SNR=12						
SONM	Songino Array	151.60	86	PKPbc	PKPbc	20 31 58.0	-0.3
	0.4nm,0.6s,baz=227,slow=3.2,SNR=3.2						
SONM				PKPab	PKPab	20 32 07.0	-0.1
	0.3nm,0.8s,baz=229,slow=3.7,SNR=4.4						

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*NEIC **18** 20:20:12.2±2.4, 1°.20N±0°.07×127°.90E±0°.05, h6^{km}±5^{km}, mb4.5/25, Error ellipse: s-maj=10.3km s-min=6.7km az=154.0*

*IDC **18** 20:20:12.9±0.7, 1°.16N×127°.92E, h0^{km}, mb4.0/12, mb1 4.2/16, mb1mx4.0/36, mbtmp4.1/16, ML3.9/4, MS3.6/12, Ms1 3.5/12, ms1mx3.3/44, Error ellipse: s-maj=27.0km s-min=13.0km az=79.0*

ISC 18 20:20:15.3±0.4**,1°.09N**±0°.06×**127°.89E**±0°.06**,h23^{km},n70, σ1^{s}61**/63**,mb4.5**/32**,MS3.5**/9**,1C,Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	0.61	239		Pb	20 20 25.5	-1.8
SIJI	Sorong	3.90	120	Pn	Pn	20 21 13.9	0.0
	15nm,0.3s,baz=130,slow=23,SNR=41						
SIJI				Sn	Sn	20 21 59.0	0.0
	10.0nm,0.3s,baz=144,slow=21,SNR=7.3						
SIJI				LR	LR	20 22 52.7	
	comp=Z,969nm,18.3s,baz=122,slow=41						
LUWI	Luwuk	5.54	248	Pn	Pn	20 21 37.2	+0.8
FAKI	Fak Fak	5.91	132	Pn	Pn	20 21 41.5	0.0
TOLI2	Tolitoli	7.10	270	Pn	Pn	20 21 58.1	+0.2
KAPI	Kappang	10.14	233	Pn	Pn	20 22 42.4	+2.8
	2.8nm,0.3s,baz=86,slow=4.5,SNR=5.4						
KAPI				Sn	Sn	20 24 31.0	-1.6
	1.1nm,0.3s,baz=66,slow=22,SNR=1.5						
KAPI				LR	LR	20 26 41.4	
	comp=Z,201nm,18.8s,baz=55,slow=38						
KAPI	Kappang	10.14	233		Pn	20 22 40.1	+0.5
SOEI	Soe	11.36	198	Pn	Pn	20 22 54.8	-1.6
BATI	Baumata	11.98	200	Pn	Pn	20 23 07.0	+2.1
	0.6nm,0.3s,baz=281,slow=15,SNR=3.0						
JAGI	Jajag, Banyuwa	16.66	235	P	P	20 24 09.8	0.0
FITZ	Fitzroy Crossi	19.20	187	P	P	20 24 37.6	0.0
	0.1nm,0.3s,baz=344,slow=11,SNR=2.2						
FITZ				LR	LR	20 34 04.3	
	comp=Z,58nm,18.0s,baz=350,slow=43						
WB0	Warramunga Arr	21.69	163		P	20 25 03.9	-0.8
WB0				IAmb	IAmb	20 25 10.8	
	comp=Z,29nm,1.1s						
WRAB	Tennant Creek	21.84	163	P	P	20 25 06.5	+0.2
WRAB				IAmb	IAmb	20 25 10.1	
	comp=Z,32nm,1.0s						
WRA	Warramunga Arr	21.84	163	P	P	20 25 07.2	+0.8
	comp=Z,15nm,0.8s,baz=342,slow=11,SNR=42						
WRA	Warramunga Arr	21.84	163	P	P	20 25 06.0	-0.4
WB2	Warramunga Arr	21.84	163	P	P	20 25 06.8	+0.4
WB2				IAmb	IAmb	20 25 10.2	
	comp=Z,31nm,0.9s						
PMG	Port Moresby	21.84	119	LR	LR	20 36 24.6	
	comp=Z,142nm,20.5s,baz=242,slow=44						
WR0	Warramunga Arr	21.91	163	P	P	20 25 07.8	+0.7
WR0				IAmb	IAmb	20 25 11.0	
	comp=Z,21nm,1.0s						
AS31	Alice Springs	25.29	167	P	P	20 25 40.5	+0.3
ASAR	Alice Springs	25.30	167	P	P	20 25 42.0	+1.7
	comp=Z,5.0nm,0.6s,baz=354,slow=15,SNR=42						
ASAR				PcP	PcP	20 29 15.6	+2.4
	comp=Z,0.4nm,0.8s,baz=321,slow=1.3,SNR=2.3						
ASAR	Alice Springs	25.30	167	P	P	20 25 41.9	+1.6
JCJ	Chichijima	29.27	27	LR	LR	20 37 23.4	
	comp=Z,87nm,19.3s,baz=106,slow=35						
WHN	Wuhan	31.99	338	⇑P	P	20 26 45.4	+5.6
MORW	Morawa	32.06	200	P	P	20 26 40.8	+0.3
JMN	Monobe	32.95	9	P	P	20 26 47.6	-0.7
CMAR	Chiang Mai Arr	33.23	303	P	P	20 26 52.6	+1.7
	comp=Z,0.2nm,0.4s,baz=122,slow=32,SNR=1.8						
HNR	Honiara	33.60	109	LR	LR	20 40 51.7	
	comp=Z,135nm,18.4s,baz=236,slow=37						
BBOO	Buckleboo	34.59	168	P	P	20 27 02.9	+0.3
STKA	Stephens Creek	35.27	160	P	P	20 27 09.7	+1.2
	comp=Z,7.3nm,0.9s,baz=313,slow=10.0,SNR=11						
STKA				LR	LR	20 42 50.4	
	comp=Z,94nm,19.8s,baz=6.2,slow=38						
STKA	Stephens Creek	35.27	160	P	P	20 27 09.6	+1.2
KSRS	Korea Array	36.19	0	P	P	20 27 16.9	+0.7
	comp=Z,1.2nm,0.7s,baz=174,slow=9.5,SNR=5.0						
KSRS				LR	LR	20 47 21.2	
	comp=Z,45nm,18.0s,baz=176,slow=45						
MJAR	Matsushiro Arr	36.55	14	P	P	20 27 18.3	-1.0
	comp=Z,1.4nm,0.8s,baz=194,slow=11,SNR=1.7						
MJAR				LR	LR	20 40 12.3	
	comp=Z,84nm,21.7s,baz=200,slow=33						
XAN	Xi'an	37.28	334	P	P	20 27 27.8	+2.2
XAN				pP	pP	20 27 32.5	-0.1
XAN				pmax	pmax		
	comp=Z,6.0nm,1.2s						
XAN	Xi'an	37.28	334	P	P	20 27 24.9	-0.7
XAN				IAmb	IAmb	20 27 39.6	
	comp=Z,7.0nm,0.9s						
CD2	Chengdu	37.45	325	eP	P	20 27 35.3	+8.2
BJT	Baijiatuau	40.19	346	P	P	20 27 48.3	-1.6
BJT				IAmb	IAmb	20 27 59.0	
	comp=Z,7.6nm,0.7s						
BJI	Beijing	40.21	346	P	P	20 27 50.3	+0.3
BJI				pmax	pmax		
	comp=Z,4.0nm,1.0s						
LZH	Lanzhou	41.35	330	eP	P	20 28 02.3	+2.5
LZH				pP	pP	20 28 05.3	-1.5
LZH				sP	sP	20 28 07.9	-1.7
LZH				pmax	pmax		
	comp=Z,15nm,1.2s						
USRK	Ussuriysk Ar.	43.08	4	P	P	20 28 14.0	+0.5
	comp=Z,1.0nm,0.7s,baz=170,slow=9.6,SNR=1.8						
LSA	Lhasa	45.05	313	P	P	20 28 28.2	-2.0
GTA	Gaotai	45.94	330	eP	P	20 28 38.3	+1.6
GTA				pP	pP	20 28 42.9	-0.9
GTA				sP	sP	20 28 46.0	-0.6
GTA				pmax	pmax		
	comp=Z,2.0nm,1.4s						
ODAN	Odare	46.55	307	eP	P	20 28 43.6	+1.8
	comp=Z,16nm,0.9s						
RAMN	Ramite	47.22	307	eP	P	20 28 50.3	+3.2
	comp=Z,11nm,0.7s						
GUN	Gumba	48.22	307	eP	P	20 28 57.7	+2.8
	comp=Z,19nm,0.7s						
PKIN	Phulchoki	48.46	307	eP	P	20 29 01.8	+5.1
	comp=Z,5.5nm,0.6s						
KKN	Kakani	48.64	307	eP	P	20 29 02.7	+4.7
	comp=Z,9.4nm,0.8s						
GKN	Gorkha	49.25	307	eP	P	20 29 09.0	+6.4
ULN	Ulaanbaatar	49.97	342	P	P	20 29 06.7	-1.1
ULN				IAmb	IAmb	20 29 16.3	
	comp=Z,3.4nm,0.7s						
SONM	Songino Array	50.15	341	P	P	20 29 09.9	+0.8
	comp=Z,1.4nm,1.1s,baz=149,slow=7.9,SNR=6.7						
SONM	Songino Array	50.15	341	P	P	20 29 09.0	-0.1
WMQ	Urumqi	55.54	325	eP	P	20 29 50.1	+1.2
PETK	Petropavlovsk-	57.45	21	P	P	20 30 03.7	+1.5
	comp=Z,1.7nm,0.9s,baz=338,slow=3.5,SNR=1.6						
MK31	Makanchi Array	60.37	326	P	P	20 30 23.2	+0.5
MK31				IAmb	IAmb	20 30 31.1	
	comp=Z,3.0nm,0.9s						
MKAR	Makanchi Array	60.37	326	P	P	20 30 23.1	+0.4
	comp=Z,1.4nm,0.3s,baz=114,slow=7.7,SNR=53						
MKAR	Makanchi Array	60.37	326		P	20 30 21.9	-0.8
MAKZ	Makanchi	60.55	325		P	20 30 21.4	-2.5
MAKZ				IAmb	IAmb	20 30 32.3	
	comp=Z,5.4nm,1.1s						
ZAA0	Zalesovo Array	63.45	333	P	P	20 30 42.3	-0.9
ZAA0				IAmb	IAmb	20 30 59.7	
	comp=Z,5.5nm,1.4s						
ZALV	Zalesovo Beam	63.45	333	P	P	20 30 42.6	-0.6
	comp=Z,0.7nm,0.5s,baz=77,slow=6.4,SNR=3.6						
ZALV				LR	LR	21 01 52.1	
	comp=Z,36nm,21.1s,baz=43,slow=39						
ZALV	Zalesovo Beam	63.45	333	P	P	20 30 42.4	-0.8
KBL	Kabul	64.04	308	P	P	20 30 46.0	-1.8
KBL				IAmb	IAmb	20 30 52.8	
	comp=Z,2.5nm,0.8s						
KURK	Kurchatov	64.57	328	P	P	20 30 50.0	-0.7
KKAR	Karatay Array	65.94	318	P	P	20 30 57.8	-2.0
BRVK	Borovoye	70.22	327	P	P	20 31 24.0	-2.3
BRVK				IAmb	IAmb	20 31 34.3	
	comp=Z,4.5nm,1.1s						
GEYT	Alibeck	73.44	309	LR	LR	21 07 41.5	
	comp=Z,50nm,19.2s,baz=35,slow=39						
ABKAR	Akbulak array	74.91	321	P	P	20 31 52.9	-1.5
ABKAR	Akbulak array	74.91	321	P	P	20 31 51.1	-3.2
ABKAR				IAmb	IAmb	20 32 06.5	
	comp=Z,3.8nm,1.4s						
AKTO	Aktyubinsk	76.43	322	LR	LR	21 08 34.9	
	comp=Z,57nm,18.5s,baz=71,slow=38						
KHU	Kahuku	76.89	71	P	P	20 32 02.9	-3.8
ILAR	Eielson Array	86.98	25	P	P	20 33 01.3	+2.8
	comp=Z,0.4nm,0.8s,baz=274,slow=5.3,SNR=2.4						
ILAR	Eielson Array	86.98	25	P	P	20 32 56.0	-2.4

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*NEIC **18** 20:36:14.2±2.4, 11°.05S±0°.03×163°.9E±0°.1, h43^{km}±12^{km}, mb4.1/3, Error ellipse: s-maj=16.3km s-min=4.0km az=84.0*

*IDC **18** 20:36:15.8±3.9, 11°.05S×163°.76E, h50^{km}±33^{km}, mb3.4/5, mb1 3.7/7, mb1mx3.5/28, mbtmp3.8/7, ML3.9/2, MS3.4/1, Ms1 3.4/1, ms1mx2.7/15, Error ellipse: s-maj=33.8km s-min=22.8km az=50.0*

ISC 18 20:36:12.7±0.9**,11°.0S**±0°.1×**163°.9E**±0°.1**,h29^{km},n22, σ1^{s}26**/16**,mb3.6**/7**,Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	4.21	291	P	Pn	20 37 15.7	+0.8
	17nm,0.3s,baz=192,slow=7.5,SNR=2.4						
HNR				S	Sn	20 38 02.9	-0.2
	7.3nm,0.3s,baz=198,slow=19,SNR=1.0						
SANVU	Saraoutou	5.45	144	Pn	Pn	20 37 30.9	-1.2
DZM	Mont Dzumac	11.27	168	P	Pn	20 38 53.2	+1.3
	0.3nm,0.3s,baz=345,slow=16,SNR=1.6						
DZM	Mont Dzumac	11.27	168	Pn	Pn	20 38 53.1	+1.2
PMG	Port Moresby	16.57	274	LR	LR	20 45 56.8	
	comp=Z,123nm,18.1s,baz=132,slow=35						
STKA	Stephens Creek	29.26	221	P	P	20 42 11.8	-0.6
STKA				IAmb	IAmb	20 42 15.6	
	comp=Z,1.2nm,1.3s						
H11S2	WAKE ISLAND Hy	29.44	5	T	T	21 12 35.1	
	baz=189,slow=76,SNR=4.5						
H11S3	WAKE ISLAND Hy	29.44	5	T	T	21 12 32.2	
	baz=189,slow=76,SNR=2.8						
H11S1	WAKE ISLAND Hy	29.45	5	T	T	21 12 35.1	
	baz=189,slow=76,SNR=2.9						
WB2	Warramunga Arr	29.80	249	P	P	20 42 16.7	-0.7
WB2				IAmb	IAmb	20 42 30.9	
	comp=Z,22nm,1.4s						
WRA	Warramunga Arr	29.81	249	P	P	20 42 16.3	-1.2
	comp=Z,0.5nm,0.5s,baz=79,slow=9.0,SNR=5.2						
WRA	Warramunga Arr	29.81	249	P	P	20 42 16.1	-1.4
H11N1	WAKE ISLAND Hy	30.66	6	T	T	21 13 59.6	
	baz=184,slow=76						
H11N3	WAKE ISLAND Hy	30.67	6	T	T	21 14 04.8	
	baz=184,slow=76						
H11N2	WAKE ISLAND Hy	30.68	6	T	T	21 14 04.8	
	baz=184,slow=76						
ASAR	Alice Springs	31.21	242	P	P	20 42 30.4	+0.6
	comp=Z,0.3nm,0.5s,baz=62,slow=10,SNR=4.5						
ASAR	Alice Springs	31.21	242	P	P	20 42 29.9	0.0
SONM	Songino Array	77.58	324	P	P	20 48 06.1	-0.1
	comp=Z,0.4nm,0.7s,baz=116,slow=6.6,SNR=2.6						
ILAR	Eielson Array	84.05	19	P	P	20 48 42.1	+1.9
	comp=Z,0.6nm,0.8s,baz=241,slow=4.3,SNR=4.8						
ILAR	Eielson Array	84.05	19	P	P	20 48 41.9	+1.7
MKAR	Makanchi Array	92.27	317	P	P	20 49 18.7	-1.4
	comp=Z,0.3nm,0.7s,baz=103,slow=4.7,SNR=3.8						
MKAR	Makanchi Array	92.27	317	P	P	20 49 18.4	-1.7

IDC 18 20:54:50.1±50.0**,14°.81S×173°.11W,h0^{km},mb4.4**/3**, mb1 4.6**/3**,mb1mx3.8**/31**,mbtmp4.4**/3**,Error ellipse: s-maj=962.8km s-min=184.8km az=78.0,Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	44.57	239	P	P	21 03 03.6	-0.5
	0.9nm,0.6s,baz=53,slow=10,SNR=2.8						
WRA	Warramunga Arr	50.25	256	P	P	21 03 48.7	+0.2
	2.9nm,0.6s,baz=92,slow=7.0,SNR=32						
ASAR	Alice Springs	50.56	251	P	P	21 03 50.7	-0.2
	6.8nm,0.4s,baz=85,slow=8.2,SNR=186						

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*OSPL **18** 21:03:29.1±2.8, 17°.97N×70°.38W, h18^{km}±10^{km}, ML3.1*

ISC 18 21:03:25.6±1.3**,17°.89N**±0°.04×**70°.35W**±0°.05**,h30^{km}**±12^{km}**, n12,**σ1^{s}**97**/24**,1D,Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BANI	BANI	0.50	359	iP	Pn	21 03 37.5	+0.7
BANI				eS	Sb	21 03 43.0	-0.3
LOSC1	San Cristbal	0.56	24	iP	Pn	21 03 38.8	+1.3
LOSC1				eS	Sn	21 03 46.5	+0.6
LOSC1				IAML		21 03 47.0	
	comp=Z,1µm,1.8s						
SDD	Santo Domingo	0.70	36	iP	Pn	21 03 40.3	+0.9
SDD				eS	Sn	21 03 49.9	+0.6
SDD				IAML		21 03 57.1	
	comp=Z,142nm,0.2s						
LOBA1	Barahona	0.72	287	iP	Pb	21 03 40.9	+1.2
LOBA1				IAML		21 03 50.2	
	comp=Z,2µm,1.2s						
LOBA1				eS	Sn	21 03 50.5	+0.7
SJM1	San Juan de la	1.23	318	iP	Pn	21 03 47.8	+1.0
SJM1				eS	Sn	21 04 02.0	-0.3
SDDR	Presa de Saban	1.41	321	⇓iP	Pn	21 03 49.9	+0.7
SDDR				eP	Pb	21 03 50.1	-1.2
SDDR				eS	Sn	21 04 05.5	-1.2
SDDR	Presa de Saban	1.41	321	iP	Pn	21 03 49.9	+0.7
SDDR				eS	Sn	21 04 06.5	-0.3
SC01	Santiago de lo	1.57	347	iP	Pb	21 03 53.1	-0.9
SC01				eS	Sb	21 04 12.4	-1.2
SC01				IAML		21 04 13.3	
	comp=Z,714nm,0.3s						
LGNH	Logne	2.23	286	eP	Pn	21 04 03.1	+2.6
LGNH				eS	Sb	21 04 31.1	-1.4
LGNH				IAML		21 04 41.3	
	comp=Z,49nm,1.1s						
URIC	Uribia, Colomb	6.35	195	eP	Pn	21 04 58.0	+0.8
URIC				eP	Pb	21 04 59.0	-16
URIC				eS	Sn	21 06 04.5	-4.2
DABV	Dabajuro	6.93	182	eP	Pn	21 05 08.5	+3.4
CRJC	Cerrejon, Guaj	7.25	200	eP	Pn	21 05 12.9	+3.2
CRJC				eS	Sn	21 06 27.2	-4.0

KRSC 18 21:13:02.6±1.1**,54°.85N×165°.60E,h26^{km}**±12^{km}**,ML3.5, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BKI	Bering	0.42	30	eP	Pb	21 13 11.6	+0.1
BKI				eS	Sb	21 13 16.7	-0.9
KBTR	Krutoberegovo	2.09	312	P	Pn	21 13 37.3	+1.3
MKZ	Mys Kozlova	2.27	264	eP	Pb	21 13 41.8	-1.0
MKZ				eS	Sb	21 14 08.2	-2.1
TUMD	Tumrok D	3.02	279	eP	Pb	21 13 52.7	-2.9
TUMD				eS	Sn	21 14 27.9	+3.9
KZV	Kizimen	3.07	277	eP	Pb	21 13 53.4	-3.2
KZV				eS	Sn	21 14 28.9	+3.4
TUMR	Tumrok	3.17	280	eP	Pb	21 13 55.3	-3.0
SPN	Mys Shipunski	3.73	244	eP	Pn	21 14 01.8	+3.3
SPN				S	Sn	21 14 44.1	+2.6
SDLR	Sedlovina	4.26	251	eP	Pn	21 14 10.3	+4.4
SDLR				S	Sn	21 14 58.6	+3.9
SMAR	Somma	4.31	251	eP	Pn	21 14 11.8	+5.2
UGLR	Uglovaya	4.32	250	eP	Pn	21 14 11.3	+4.6
KRER	Koryakskii	4.32	252	eP	Pn	21 14 11.6	+4.8
AVH	Avacha	4.34	251	eP	Pn	21 14 12.0	+5.0
KRX	Arik	4.36	253	eP	Pn	21 14 11.9	+4.7
KOK	Koryaka	4.39	252	eP	Pn	21 14 12.3	+4.7
GNL	Ganaly	4.64	259	eP	Pn	21 14 16.5	+5.5
RUS	Russkaya	4.86	243	eP	Pn	21 14 18.1	+4.1
KRMR	Karymshinskiy	4.86	249	eS	Sn	21 15 14.8	+5.4
MTVR	Mutnovka	5.01	245	eP	Pn	21 14 20.9	+4.8
MTVR				eS	Sn	21 15 16.1	+2.9
GRL	Gorelyy	5.03	246	eP	Pn	21 14 21.8	+5.4

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*IDC **18** 21:18:43.1±7.0, 0°.10N×123°.46E, h140^{km}±69^{km}, mb3.1/5, mb1 3.4/7, mb1mx3.2/39, mbtmp3.7/7, Error ellipse: s-maj=76.1km s-min=16.7km az=58.0*

ISC 18 21:18:44.8±1.0**,0°.03S**±0°.09×**123°.3E**±0°.2**,h157^{km},n7, σ1^{s}20**/9**,mb3.2**/5**,Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAPI	Kappang	6.10	216	P	Pn	21 20 13.3	+0.4
	1.4nm,0.3s,baz=104,slow=3.1,SNR=6.3						
KAPI				S	Sn	21 21 21.0	-1.0
	0.4nm,0.3s,baz=112,slow=19,SNR=1.5						
FITZ	Fitzroy Crossi	18.10	173	P	P	21 22 44.8	0.0
	0.8nm,0.3s,baz=360,slow=8.8,SNR=19						
WRA	Warramunga Arr	22.55	152	P	P	21 23 31.7	-0.3
	2.0nm,0.5s,baz=331,slow=10,SNR=40						
ASAR	Alice Springs	25.65	157	P	P	21 24 01.5	+1.3
	0.3nm,0.4s,baz=343,slow=15,SNR=7.0						
CMAR	Chiang Mai Arr	30.18	309	P	P	21 24 42.2	+1.7
	0.3nm,0.6s,baz=142,slow=7.5,SNR=2.1						
SONM	Songino Array	49.89	345	P	P	21 27 22.3	-0.1
	0.7nm,0.8s,baz=164,slow=8.9,SNR=6.4						
MKAR	Makanchi Array	58.80	328	P	P	21 28 25.3	-1.4
	0.1nm,0.3s,baz=131,slow=8.7,SNR=7.5						
MKAR				PcP	PcP	21 29 13.7	-0.9
	0.3nm,0.7s,baz=143,slow=5.2,SNR=3.7						

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*MAN **18** 21:26:42.5, 5°.72N×127°.17E, h94^{km}, MS2.8*

*IDC **18** 21:26:49.0±17.0, 5°.82N×127°.01E, h147^{km}±167^{km}, mb3.1/8, mb1 3.2/8, mb1mx3.0/51, mbtmp3.5/8, Error ellipse: s-maj=81.6km s-min=23.5km az=60.0*

ISC 18 21:26:43.9±1.1**,5°.83N**±0°.09×**127°.2E**±0°.1**,h100^{km},n14, σ1^{s}12**/18**,mb3.4**/8**,1C,Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATI	Mati	1.42	321	eP	Pn	21 27 10.0	+0.8
MATI				eS	Sn	21 27 29.1	+0.6
DDMP	Don Marcelino,	1.46	281	eP	Pn	21 27 09.2	-0.4
DDMP				eS	Sn	21 27 28.7	-0.5
KCP	Kidapawan	2.36	300	⇑eP	Pn	21 27 22.5	+1.2
BUKP	Musuan	2.91	315	eP	Pn	21 27 29.3	+0.8
BUKP				eS	Sn	21 28 04.9	+2.1
GLSP	General Luna,	4.06	346	eP	Pn	21 27 44.8	+0.9
GLSP				eS	Sn	21 28 28.0	-2.5
PAGZ	Pagadian	4.25	298	eP	Pn	21 27 46.3	-0.1
WRA	Warramunga Arr	26.57	165	P	P	21 32 14.3	+1.5
	0.7nm,0.9s,baz=346,slow=10,SNR=2.2						
ASAR	Alice Springs	30.05	168	P	P	21 32 44.0	+0.3
	0.1nm,0.3s,baz=340,slow=6.8,SNR=4.3						
CMAR	Chiang Mai Arr	30.24	297	P	P	21 32 44.9	-0.5
	0.2nm,0.5s,baz=100,slow=7.8,SNR=1.8						
SONM	Songino Array	45.46	340	P	P	21 34 53.5	+0.4
	0.1nm,0.6s,baz=158,slow=9.1,SNR=1.8						
MKAR	Makanchi Array	56.09	324	P	P	21 36 12.2	-0.7
	0.3nm,0.5s,baz=113,slow=7.5,SNR=10						
KURBB	Kurchatov Arra	60.22	327	P	P	21 36 41.0	-0.5
	0.4nm,0.5s,baz=128,slow=7.0,SNR=11						
BVAR	Borovoye Array	65.81	326	P	P	21 37 17.8	-0.6
	0.6nm,0.6s,baz=160,slow=17,SNR=5.9						
AKTO	Aktyubinsk	72.29	321	P	P	21 37 58.1	-0.5
	0.9nm,0.5s,baz=85,slow=10,SNR=5.5						

IDC 18 21:28:03.7±7.5**,18°.77S×176°.86W,h0^{km},mb3.6**/2**, mb1 3.9**/2**,mb1mx3.4**/43**,mbtmp3.6**/2**,Error ellipse: s-maj=302.5km s-min=121.0km az=152.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	45.93	260	P	P	21 36 28.7	+0.1
	0.3nm,0.5s,baz=96,slow=7.6,SNR=10						
ASAR	Alice Springs	45.98	255	P	P	21 36 28.6	-0.4
	0.6nm,0.6s,baz=91,slow=8.2,SNR=7.4						
AKASG	Malin Array Be	142.00	333	PKP	PKPdf	21 47 36.9	-0.7
	0.5nm,0.5s,baz=45,slow=3.7,SNR=4.6						

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*GUC **18** 21:35:32.8±0.7, 22°.07S×67°.60W, h216^{km}±8^{km}, ML3.8*

*SCB **18** 21:35:33.8±1.6, 22°.14S×67°.34W, h175^{km}±12^{km}, ML3.5/4, Error ellipse: s-maj=7.9km s-min=4.9km az=0.0*

ISC 18 21:35:30.8±1.8**,22°.09S**±0°.04×**67°.36W**±0°.05, **h193^{km}**±14^{km}**,n33,**σ1^{s}**21**/58**,8C-3D,Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	1.52	250	*e*P	Pn	21 36 05.4	+0.9
LVC				*i* S	Sn	21 36 30.3	-0.2
YJA	**Yavi**	1.72	93	P	Pn	21 36 06.5	+0.1
PB09	**IPOC Station P**	1.77	279	⇑*i*P	Pn	21 36 07.9	+1.3
PB09				*i* S	Sn	21 36 35.4	+1.0
PB09				IAML		21 36 39.2	
	comp=N,119nm,0.3s						
PB09	**IPOC Station P**	1.77	279	P	Pn	21 36 08.0	+1.3
PB09				S	Sn	21 36 33.7	-0.7
MOCB	**Mochara**	1.81	63	P	Pn	21 36 07.5	+0.2
MOCB				S	Sn	21 36 33.3	-2.3
MOCB				IAML		21 36 35.1	
	comp=N,206nm,0.4s						
PB06	**IPOC Station P**	2.13	253	*e*P	Pn	21 36 11.1	+0.8
PB06				*e*S	Sn	21 36 41.6	+0.5
PB06				IAML		21 36 42.8	
	comp=E,274nm,0.2s						
PB06	**IPOC Station P**	2.13	253	P	Pn	21 36 09.7	-0.6
PB03	**IPOC Station P**	2.22	271	*e*P	Pn	21 36 11.9	+0.7
PB03				*i* S	Sn	21 36 41.8	-0.9
PB03				IAML		21 36 42.6	
	comp=N,321nm,0.2s						
PB01	**IPOC Station P**	2.23	297	⇓*i*P	Pn	21 36 12.4	+1.0
PB01				*e*S	Sn	21 36 42.3	-0.7
PB01				IAML		21 36 43.4	
	comp=N,244nm,0.4s						
PB01	**IPOC Station P**	2.23	297	P	Pn	21 36 12.2	+0.8
PB01				S	Sn	21 36 42.0	-1.0
PB01				IAML		21 36 44.7	
	comp=N,123nm,0.4s						
PB15	**IPOC Station P**	2.24	240	*e*P	Pn	21 36 12.4	+0.9
PB15				*i* S	Sn	21 36 43.8	+0.5
PB15				IAML		21 36 45.8	
	comp=E,883nm,0.4s						
PB07	**IPOC Station P**	2.37	278	⇓*i*P	Pn	21 36 13.4	+0.5
PB07				*i* S	Sn	21 36 44.6	-1.2
PB07				IAML		21 36 45.5	
	comp=N,288nm,0.5s						
PB02	**IPOC Station P**	2.48	288	⇑*e*P	Pn	21 36 14.5	+0.4
PB02				*i* S	Sn	21 36 46.4	-1.4
PB02				IAML		21 36 47.6	
	comp=E,490nm,0.4s						
PB02	**IPOC Station P**	2.48	288	P	Pn	21 36 14.6	+0.5
PB02				S	Sn	21 36 46.7	-1.1
PB02				IAML		21 36 47.3	
	comp=E,376nm,0.3s						
PB08	**IPOC Station P**	2.56	319	⇑*i*P	Pn	21 36 17.1	+1.7
PB08				*e*S	Sn	21 36 51.0	+0.9
PB08	**IPOC Station P**	2.56	319	P	Pn	21 36 16.9	+1.5
PB08				S	Sn	21 36 50.4	+0.4
PB04	**IPOC Station P**	2.59	264	*e*P	Pn	21 36 16.1	+0.6
PB04				*i* S	Sn	21 36 49.0	-1.3
PB04				IAML		21 36 50.2	
	comp=N,243nm,0.1s						
PB04	**IPOC Station P**	2.59	264	P	Pn	21 36 16.4	+0.9
PB05	**IPOC Station P**	2.73	253	*e*P	Pn	21 36 17.4	+0.4
PB05				*i* S	Sn	21 36 51.4	-1.7
PB05				IAML		21 36 52.4	
	comp=N,102nm,0.3s						
PATCX	**Punta Patache**	2.89	295	*e*P	Pn	21 36 18.9	+0.1
PATCX				*i* S	Sn	21 36 54.4	-2.0
PATCX				IAML		21 36 55.6	
	comp=N,344nm,0.3s						
HMBC	**Humberstone**	2.97	307	⇑*i*P	Pn	21 36 19.9	+0.1
HMBC				*e*S	Sn	21 36 56.1	-1.9
HMBC				IAML		21 36 58.8	
	comp=N,192nm,0.5s						
TA01	**Diego Aracena**	3.03	300	*e*P	Pn	21 36 20.3	-0.1
TA01				*i* S	Sn	21 36 57.0	-2.3
TA01				IAML		21 36 58.5	
	comp=E,329nm,0.2s						
TA02	**Huaiquique**	3.15	305	IAML		21 37 02.6	
	comp=N,298nm,0.1s						
PB10	**IPOC Station P**	3.27	244	⇑*i*P	Pn	21 36 23.6	+0.4
PB10				*i* S	Sn	21 37 02.4	-2.0
PB10				IAML		21 37 05.1	
	comp=E,56nm,0.3s						
PSGC	**Pisagua**	3.58	313	⇑*i*P	Pn	21 36 26.6	-0.6
PSGC				*i* S	Sn	21 37 08.8	-2.6
PSGC	**Pisagua**	3.58	313	P	Pn	21 36 27.8	+0.6
MNMC	**Minye Minye**	3.61	324	⇑*i*P	Pn	21 36 28.8	+0.9
MNMC				*e*S	Sn	21 37 12.3	-0.1
MNMC	**Minye Minye**	3.61	324	P	Pn	21 36 28.7	+0.9
MNMC				S	Sn	21 37 10.9	-1.5
MNMC				IAML		21 37 14.5	
	comp=E,41nm,0.3s						
GO02	**Mina Guanaco**	3.68	213	⇓*i*P	Pn	21 36 29.5	+0.9
GO02				*i* S	Sn	21 37 13.1	-0.8
PB16	**IPOC Station P**	4.24	331	⇑*i*P	Pn	21 36 37.3	+1.3
PB16				*i* S	Sn	21 37 27.1	0.0
AC02	**Maricunga**	4.99	198	*e*P	Pn	21 36 46.5	+1.2
AC02				*i* S	Sn	21 37 44.8	+0.7
BBOD	**La Paz, Gloria**	5.55	348	P	Pn	21 36 55.2	+2.5
BBOB	**La Paz, Bander**	5.96	353	P	Pn	21 37 00.0	+2.0

*TUL **18** 21:36:47.4±1.2, 36°.60N±0°.01×97°.63W±0°.01, h5^{km}±5^{km}, ML3.1, mb_Lg3.1/60(NEIC), Error ellipse: s-maj=2.0km s-min=1.4km az=197.0*

*ANF **18** 21:36:47.8±0.5, 36°.59N×97°.61W, h5^{km}, ML3.6/8, Error ellipse: s-maj=6.3km s-min=5.0km az=153.0*

*NEIC **18** 21:36:47.5±0.9, 36°.59N±0°.01×97°.624W±0°.008, h5^{km}±7^{km}, Error ellipse: s-maj=2.1km s-min=0.8km az=195.0*

ISC 18 21:36:47.2±1.1**, 36°.59N**±0°.02×**97°.62W**±0°.02**, h1**^{km}±10^{km}**, n63, σ0ˢ.54**/54**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CROK	**Carrier**	0.31	255	Pg	Pg	21 36 53.5	+0.3
CROK				Sg	Sg	21 36 57.8	+0.7
KAN13	**South Haven SW**	0.44	15	Pg	Pg	21 36 56.1	+0.4
KAN14	**Manchester OK**	0.46	323	Pg	Pg	21 36 56.4	+0.3
KAN05	**Bluff City Nor**	0.56	339	Pg	Pg	21 36 58.2	+0.2
KAN01	**Argonia South**	0.58	349	Pg	Pg	21 36 58.5	+0.2
KAN10	**Anthony SW Sta**	0.66	325	Pg	Pg	21 37 00.0	+0.1
KAN10				Sg	Sg	21 37 08.3	-0.1
KAN08	**Anthony NE Sta**	0.70	336	Pg	Pg	21 37 00.7	+0.1
KAN12	**Harper NE Stat**	0.77	337	Pg	Pg	21 37 02.5	+0.5
OK029	**Liberty Lake**	0.80	170		Pg	21 37 02.9	+0.4
OK029				Sg	Sg	21 37 13.7	+0.8
QUOK	**Quay**	0.84	119		Pg	21 37 03.7	+0.3
QUOK				Sg	Sg	21 37 14.7	+0.4
OK031	**S. Brethren Rd**	0.89	135	Pg	Pg	21 37 04.6	+0.3
BCOK	**Bluff Creek, N**	0.93	180	Pg	Pg	21 37 05.1	+0.1
BCOK				Sg	Sg	21 37 17.8	+0.7
OK030	**Cody Creek RV**	0.94	134		Pg	21 37 05.5	+0.2
T35A	**Sooner Cattle**	0.95	69	Pg	Pg	21 37 05.3	-0.1
T35A					Pb	21 37 05.6	-0.9
T35A				Sg	Sg	21 37 17.8	+0.1
OK025	**Westminster Rd**	1.03	167		Pg	21 37 07.0	0.0
U32A	**Winter Ranch,**	1.14	260	Pn	Pg	21 37 08.4	-0.6
OKCFA	**Oklahoma City**	1.18	173	Pg	Pg	21 37 09.8	0.0
OKCSW	**OKLAHOMA CITY**	1.19	173	Pg	Pg	21 37 10.0	0.0
FNO	**Franklin**	1.34	172		Pn	21 37 12.6	-0.4
TUL1	**Leonard**	1.62	114	P	Pb	21 37 17.0	-1.0
	baz=296						
TUL1				S	Sg	21 37 38.9	-0.5
	baz=296						
TUL1	**Leonard**	1.62	114		Pn	21 37 16.9	-0.1
TUL1				IAmb_Lg		21 37 42.0	
	comp=Z,84nm,0.9s						
X34A	**Smith Ranch, M**	1.99	185	IAmb_Lg		21 37 54.0	
	comp=Z,143nm,0.9s						
R32A	**Long Quarter,**	2.03	335	Pn	Pb	21 37 23.5	-1.4
WMOK	**Wichita Mounta**	2.07	208	P	Pn	21 37 23.5	+0.3
	baz=26						
WMOK				S	Sn	21 37 50.5	+0.8
	baz=26						
WMOK	**Wichita Mounta**	2.07	208	Pn	Pn	21 37 23.3	+0.1
WMOK				IAmb_Lg		21 37 53.9	
	comp=Z,81nm,0.8s						
U38A	**Gravette**	2.61	92		Pn	21 37 31.2	+0.7
KSU1	**Kansas State U**	2.63	17	P	Pn	21 37 31.8	+0.9
	baz=198						
KSU1				S	Sn	21 38 03.8	+0.3
	baz=198						
X37A	**Clayton**	2.71	137	Pn	Pn	21 37 31.8	-0.1
CBKS	**Cedar Bluff**	2.79	324	P	Pn	21 37 32.9	-0.1
	baz=142						
W39A	**Magazine**	3.41	113	P	Pn	21 37 41.0	-0.5
	baz=295						
W39A				S	Sn	21 38 23.2	+0.7
	baz=295						
W39A	**Magazine**	3.41	113	IAmb_Lg		21 38 44.1	
	comp=Z,64nm,0.9s						
S39A	**Bolivar**	3.60	71	IAmb_Lg		21 38 46.3	
	comp=Z,33nm,0.7s						
AMTX	**Amarillo**	3.72	244	P	Pn	21 37 45.7	-0.2
	baz=61						
AMTX				S	Sn	21 38 30.5	+0.2
	baz=61						
AMTX	**Amarillo**	3.72	244	Pn	Pn	21 37 46.2	+0.3
AMTX				IAmb_Lg		21 38 49.3	
	comp=Z,37nm,0.7s						
U40A	**Yellville**	3.85	92	P	Pn	21 37 47.6	+0.1
	baz=275						
U40A				S	Sn	21 38 32.8	-0.6
	baz=275						
U40A	**Yellville**	3.85	92		Pn	21 37 47.6	+0.1
U40A				IAmb_Lg		21 38 51.0	
	comp=Z,55nm,0.7s						
MIAR	**Mount Ida**	3.87	121	P	Pn	21 37 48.5	+0.6
	baz=303						
MIAR				S	Sn	21 38 34.0	0.0
	baz=303						
MIAR	**Mount Ida**	3.87	121	IAmb_Lg		21 38 53.0	
	comp=Z,30nm,0.9s						
Z38A	**Mt. Pleasant**	3.96	146	IAmb_Lg		21 39 01.3	
	comp=Z,51nm,0.8s						
N33A	**J Bar K, Exete**	4.15	2	IAmb_Lg		21 39 07.6	
	comp=Z,29nm,0.7s						
MGMO	**Mountain Grove**	4.33	81	IAmb_Lg		21 39 06.3	
	comp=Z,50nm,0.8s						
X40A	**Basin Creek Fa**	4.43	117	Pn	Pn	21 37 55.5	0.0
FCAR	**Ozark Folk Cen**	4.49	97	IAmb_Lg		21 39 11.1	
	comp=Z,27nm,0.7s						
WHAR	**Wooly Hollow**	4.51	105		Pn	21 37 57.6	+0.9
WHAR				IAmb_Lg		21 39 21.8	
	comp=Z,30nm,0.8s						
R40A	**Maddies Statio**	4.58	67	Pn	Pn	21 37 58.2	+0.5
KSCO	**Kaye Shedlock’**	4.65	303	IAmb_Lg		21 39 23.9	
	comp=Z,22nm,0.7s						
BGNE	**Belgrade**	4.83	355	IAmb_Lg		21 39 34.3	
	comp=Z,56nm,0.9s						
LCAR	**Lake Charles**	5.24	94	IAmb_Lg		21 39 36.4	
	comp=Z,33nm,0.7s						
T42A	**Van Buren**	5.25	83	IAmb_Lg		21 39 40.3	
	comp=Z,25nm,0.8s						
CCM	**Cathedral Cave**	5.29	72		Pn	21 38 08.2	+0.9
CCM				IAmb_Lg		21 39 41.5	
	comp=Z,41nm,0.8s						
P40A	**Paris**	5.29	55		Pn	21 38 07.7	+0.4
P40A				IAmb_Lg		21 39 38.3	
	comp=Z,28nm,0.7s						
N38A	**Joes South For**	5.42	38	IAmb_Lg		21 39 53.7	
	comp=Z,36nm,0.8s						
OGNE	**Ogallala**	5.55	323	IAmb_Lg		21 39 54.5	
	comp=Z,44nm,1.0s						
PBMO	**Poplar Bluff**	5.78	86	IAmb_Lg		21 39 59.8	
	comp=Z,29nm,0.9s						
435B	**Jarrell**	5.79	180	IAmb_Lg		21 39 55.3	
	comp=Z,27nm,0.8s						
FVM	**French Village**	5.90	74	IAmb_Lg		21 39 54.2	
	comp=Z,39nm,0.7s						
SLM	**Saint Louis**	6.21	69	IAmb_Lg		21 40 03.1	
	comp=Z,29nm,0.8s						
JCT	**Junction City**	6.36	197	IAmb_Lg		21 40 14.4	
	comp=Z,38nm,1.1s						
N41A	**Harden Midland**	6.70	50	IAmb_Lg		21 40 21.8	
	comp=Z,25nm,0.8s						
W45A	**Hickory Valley**	6.99	99	IAmb_Lg		21 40 48.4	
	comp=Z,28nm,0.8s						
ISCO	**Idaho Springs**	7.07	299	Pn	Pn	21 38 33.2	+1.1
L42A	**Oliver, Polo**	8.20	46	IAmb_Lg		21 41 06.8	
	comp=Z,20nm,0.8s						
V48A	**Smith Brothers**	8.77	92	IAmb_Lg		21 41 37.8	
	comp=Z,10nm,0.8s						

IDC 18 22:07:27.0±4.3**, 2°.49N**×**97°.24E, h0**^{km}**, mb3.5**/4**, mb1 3.6**/4**, mb1mx3.4**/32**, mbtmp3.5**/4**, Error ellipse: s-maj=171.6km s-min=31.7km az=57.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	42.69	123	P	P	22 15 25.8	-0.2
	0.3nm,0.5s,baz=303,slow=9.0,SNR=2.6						
SONM	**Songino Array**	45.86	9	P	P	22 15 51.5	+0.3
	0.3nm,0.7s,baz=183,slow=8.9,SNR=2.6						
MKAR	**Makanchi Array**	46.01	346	P	P	22 15 51.9	-0.3
	0.5nm,0.6s,baz=160,slow=7.6,SNR=6.8						
ZALV	**Zalesovo Beam**	52.30	351	P	P	22 16 40.1	-0.2
	0.5nm,0.4s,baz=178,slow=5.5,SNR=4.9						

*IDC **18** 22:08:39.9±1.6, 43°.72N×105°.51W, h0^{km}, mb3.6/2, mb1 3.7/6, mb1mx3.5/44, mbtmp3.5/6, ML3.4/4, MS3.7/1, Ms1 3.7/1, ms1mx2.5/49, Error ellipse: s-maj=49.8km s-min=8.8km az=150.0*

*NEIC **18** 22:08:40.9±0.9, 43°.75N±0°.01×105°.30W±0°.06, h0^{km}±2^{km}, ML3.1/48, Error ellipse: s-maj=7.4km s-min=3.1km az=75.0*

ISC 18 22:08:40.1±0.9**, 43°.76N**±0°.05×**105°.35W**±0°.05**, h0**^{km}**, n34, σ1ˢ.21**/33**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	1.02	69		Pg	22 08 59.7	+0.1
K22A	**Casper**	1.40	218		Pg	22 09 06.0	-0.9
K22A				IAML		22 09 29.0	
	comp=E,353nm,0.3s						
PHWY	**Pilot Hill**	2.46	182	Pn	Pn	22 09 22.5	+0.8
RWWY	**Rawlins**	2.48	214		Pn	22 09 22.9	+0.9
RWWY				IAML		22 09 58.8	
	comp=E,108nm,0.4s						
LAO	**LASA Array**	2.99	348		Pn	22 09 29.4	+0.6
RLMT	**Red Lodge**	3.12	297		Pn	22 09 31.5	+0.8
RLMT				IAML		22 10 21.1	
	comp=E,43nm,0.4s						
RLMT				IAML		22 10 29.1	
	comp=E,53nm,0.6s						
BW06	**Boulder Array**	3.23	254		Pn	22 09 33.1	+0.9
BW06				IAML		22 10 25.3	
	comp=E,39nm,0.6s						
PD31	**Pinedale Array**	3.23	254		Pn	22 09 33.1	+0.9
PDAR	**Pinedale Array**	3.23	254	Pn	Pn	22 09 33.2	+1.0
	comp=E,4.2nm,0.3s,baz=79,slow=17,SNR=32						
PDAR				Lg	Lg	22 10 17.2	
	comp=E,8.4nm,0.3s,baz=74,slow=33,SNR=5.6						
YNE	**Yellowstone No**	3.56	292		Pn	22 09 37.7	+0.9
YMP	**Mirror Lake Pl**	3.59	288		Pn	22 09 38.5	+1.2
LKWY	**Lake**	3.72	284		Pn	22 09 41.0	+2.0
LKWY				IAML		22 10 07.2	
	comp=E,39nm,0.5s						
LKWY				IAML		22 11 49.2	
	comp=E,25nm,5.0s						
OGNE	**Ogallala**	3.74	138		Pn	22 09 40.6	+1.5
LOHW	**Long Hollow**	3.81	270		Pn	22 09 41.9	+1.6
H17A	**Grant Village**	3.82	281		Pn	22 09 42.2	+1.9
H17A				IAML		22 10 46.5	
	comp=N,24nm,1.2s						
FLWY	**Flagg Ranch**	3.88	277		Pn	22 09 42.6	+1.5
FLWY				IAML		22 10 51.9	
	comp=N,32nm,2.9s						
FLWY				IAML		22 11 46.0	
	comp=N,24nm,4.8s						
SNOW	**Snow King Moun**	3.93	268		Pn	22 09 43.4	+1.5
SNOW				IAML		22 10 45.2	
	comp=N,33nm,0.6s						
SNOW				IAML		22 10 59.4	
	comp=N,31nm,0.7s						
ISCO	**Idaho Springs**	3.96	183		Pn	22 09 43.3	+1.0
YPP	**Pitchstone Pla**	3.96	279		Pn	22 09 44.0	+1.6
REDW	**Red Top Meadow**	4.02	266		Pn	22 09 44.5	+1.5
REDW				IAML		22 11 09.0	
	comp=N,30nm,0.7s						
O20A	**White River Ci**	4.21	212		Pn	22 09 46.3	+0.6
O20A				IAML		22 10 40.9	
	comp=N,30nm,4.7s						
E28A	**Huff**	4.33	48		Pn	22 09 48.3	+1.1
RDMU	**Red Mountain**	4.47	226		Pn	22 09 50.6	+1.4
DGMT	**Dagmar**	4.78	9		Pn	22 09 53.6	+0.2
BOZ	**Bozeman (W)**	4.84	294		Pn	22 09 55.4	+1.2
BOZ				IAML		22 11 17.4	
	comp=N,14nm,1.7s						
BOZ				IAML		22 11 18.5	
	comp=N,16nm,0.7s						
EGMT	**Eagleton**	5.25	326		Pn	22 10 00.3	+0.4
HRY	**Holter Researc**	5.44	305		Pn	22 10 03.5	+1.0
SPUT	**South Promonto**	5.79	247		Pn	22 10 09.0	+1.7
ELK	**Elko**	7.93	251	Pn	Pn	22 10 37.7	+1.0
	comp=N,0.3nm,0.3s,baz=45,slow=13,SNR=3.7						
ULM	**Lac du Bonnet**	9.16	42	Pn	Pn	22 10 52.7	-0.8
	comp=N,1.5nm,0.3s,baz=227,slow=12,SNR=15						
ULM				Lg	Lg	22 13 23.4	
	comp=N,0.6nm,0.3s,baz=139,slow=20,SNR=1.9						
NVAR	**Mina Array Bea**	11.12	246	Pn	Pn	22 11 21.9	+1.3
	comp=N,0.1nm,0.3s,baz=59,slow=8.7,SNR=5.9						
RES	**Resolute Bay**	31.37	5	LR	LR	22 28 28.0	
	comp=N,129nm,18.3s,baz=274,slow=38						
SONM	**Songino Array**	84.60	339	P	P	22 21 14.7	-0.5
	comp=N,0.1nm,0.4s,baz=34,slow=2.8,SNR=4.2						
MKAR	**Makanchi Array**	89.58	355	P	P	22 21 38.5	-0.8
	comp=N,0.3nm,0.7s,baz=9.0,slow=4.3,SNR=4.6						

*IDC **18** 22:15:06.6±0.6, 58°.41N×137°.04W, h0^{km}, mb3.9/14, mb1 4.1/22, mb1mx4.0/47, mbtmp4.0/22, ML3.9/8, MS3.6/23, Ms1 3.6/23, ms1mx3.5/44, Error ellipse: s-maj=12.0km s-min=7.4km az=37.0*

*AEIC **18** 22:15:07±1.8, 58°.34N±0°.04×137°.03W±0°.05, h3^{km}±4^{km}, Error ellipse: s-maj=6.1km s-min=4.2km az=190.0*

*NEIC **18** 22:15:07.7±2.1, 58°.38N±0°.04×136°.92W±0°.06, h10^{km}±1^{km}, Error ellipse: s-maj=7.5km s-min=4.4km az=203.0*

*NEIC **18** 22:15:07.5, 58°.37N×136°.90W, h9^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-0.14; $M_{\theta\theta}$-0.39; $M_{\phi\phi}$0.59; $M_{r\theta}$-0.35; $M_{\theta\phi}$-0.13; $M_{\phi r}$-0.17; Fault plane solution: $M_0$6.50000×10^{15} NP1:ϕ_s33.00000°, δ74.00000°, λ-34.00000°. NP2:ϕ_s134.00000°, δ57.00000°, λ-161.00000°. Principal axes: T 0.6105, Plg11.0000°, Azm86.0000°; N 0.0765, Plg52.0000°, Azm191.0000°; P -0.6870, Plg36.0000°, Azm349.0000°;*

*NEIC **18** 22:15:07.5, 58°.34N×136°.90W, h19^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}1.00; $M_{\theta\theta}$-3.81; $M_{\phi\phi}$2.82; $M_{r\theta}$-1.14; $M_{\theta\phi}$-0.62; $M_{\phi r}$0.89; Fault plane solution: $M_0$3.77000×10^{15} NP1:ϕ_s40.91000°, δ63.93000°, λ9.36000°. NP2:ϕ_s306.77000°, δ81.60000°, λ153.63000°. Principal axes: T 3.3265, Plg24.0000°, Azm261.0000°; N 0.7652, Plg62.0000°, Azm110.0000°; P -4.0917, Plg12.0000°, Azm356.0000°;*

*PGC **18** 22:15:07.7, 58°.37N×136°.90W, h10^{km}, ML4.2/10, Mw4.5, 127km Wsw of Haines, Ak Southeastern Alaska*

ISC 18 22:15:07.3±0.4**, 58°.33N**±0°.03×**136°.93W**±0°.03**, h10**^{km}**, n336, σ1ˢ.50**/345**, mb4.2**/36**, MS3.6**/16**, Southeastern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESE	**Bessie Mountai**	1.12	76	Pn	Pb	22 15 27.7	-1.1
BESE				S	Sb	22 15 43.0	-0.5
BESE	**Bessie Mountai**	1.12	76		Pb	22 15 28.0	-0.8
BESE				Sg	Sb	22 15 43.0	-0.5
PLBC	**Pleasant Camp**	1.17	14	Pn	Pb	22 15 27.6	-2.0
PLBC				S	Sb	22 15 42.7	-2.2
PLBC	**Pleasant Camp**	1.17	14		Pb	22 15 27.7	-2.0
PLBC					Sb	22 15 42.8	-2.0
JIS	**Juneau Island**	1.35	91		Pn	22 15 31.4	-0.7
JIS				Sn	Sb	22 15 49.5	-0.3
JIS				IAML		22 15 51.7	
	comp=N,13µm,0.4s						
JIS				IAML		22 15 56.0	
	comp=E,10µm,0.8s						
SKAG	**Skagway**	1.41	36	Pn	Pn	22 15 32.4	-0.6
SKAG	**Skagway**	1.41	36		Sn	22 15 50.8	-0.8
YKU2	**Yakutat**	1.85	311		Sn	22 16 02.0	-0.4
YKU2	**Yakutat**	1.85	311	Pn	Pn	22 15 39.3	+0.3
YUK7	**Dusty Glacier**	2.30	345	Pn	Pn	22 15 44.4	-1.0
YUK7				Sg	Sb	22 16 18.0	+0.6
YUK7	**Dusty Glacier**	2.30	345		Pn	22 15 45.5	+0.1
HYT	**Haines Junctio**	2.52	354	Pn	Pn	22 15 47.0	-1.4
HYT				Sg	Sb	22 16 24.3	+0.4
HYT	**Haines Junctio**	2.52	354		Pn	22 15 47.7	-0.8
WHY	**Whitehorse**	2.56	23	Pn	Pn	22 15 48.6	-0.3
WHY				Sg	Sb	22 16 26.1	+1.1
WHY	**Whitehorse**	2.56	23		Pn	22 15 48.8	-0.1
YUK6	**Outpost Mounta**	2.72	345	Pn	Pn	22 15 50.3	-0.9
YUK6				Sg	Sb	22 16 31.3	+1.6
YUK6	**Outpost Mounta**	2.72	345		Pn	22 15 50.4	-0.9
YUK5	**Granite Creek**	2.85	351	Pn	Pn	22 15 52.4	-0.6
YUK5				Sg	Sg	22 16 36.3	-2.6
YUK5	**Granite Creek**	2.85	351		Pn	22 15 52.7	-0.3
TABL	**Table Mountain**	3.02	316	Pn	Pn	22 15 54.9	-0.5
TABL	**Table Mountain**	3.02	316	Pn	Pn	22 15 55.1	-0.3
TABL				IAML		22 16 51.5	
	comp=N,2µm,0.8s						
TABL				IAML		22 16 52.5	
	comp=E,2µm,0.6s						
WRAK	**Wrangell Islan**	3.13	126		Pn	22 15 56.1	-0.6
WRAK				IAML		22 16 51.9	
	comp=E,2µm,0.9s						
YUK4	**Talbot Arm**	3.15	345	Pn	Pn	22 15 57.6	+0.5
YUK4				Sg	Sg	22 16 47.6	-0.8
YUK4	**Talbot Arm**	3.15	345		Pn	22 15 57.8	+0.7
LOGN	**Logan Glacier**	3.25	322	Pn	Pn	22 15 57.8	-0.7
LOGN	**Logan Glacier**	3.25	322		Pn	22 15 57.9	-0.5
GRNC	**Granite Creek**	3.44	317	Pn	Pn	22 16 00.2	-0.9
GRNC	**Granite Creek**	3.44	317		Pn	22 16 00.5	-0.6
CTGM	**Chitina Glacie**	3.46	322	Pn	Pn	22 16 01.1	-0.3
CTGM	**Chitina Glacie**	3.46	322		Pn	22 16 01.5	+0.1
CTGM	**Chitina Glacie**	3.46	322	IAML		22 16 58.8	
	comp=N,811nm,0.7s						
CTGM				IAML		22 17 04.1	
	comp=E,923nm,1.1s						
KULT	**Kultieth River**	3.54	305		Pn	22 16 01.5	-0.8
CRAG	**Craig**	3.55	142	Pn	Pn	22 16 01.7	-0.6
CRAG				IAML		22 17 08.7	
	comp=E,1µm,0.9s						
CRAG				IAML		22 17 14.4	
	comp=N,1µm,1.2s						
DLBC	**Dease Lake**	3.64	85	Pn	Pn	22 16 04.1	+0.4
	comp=N,11nm,0.3s,baz=243,slow=8.8,SNR=80						
DLBC				Lg	Lg	22 17 00.1	
	comp=N,291nm,0.3s,baz=114,slow=6.0,SNR=13						
DLBC				LR	LR	22 17 43.8	
	comp=N,1µm,19.6s,baz=302,slow=43						
DLBC	**Dease Lake**	3.64	85	Pn	Pn	22 16 03.8	+0.1
DLBC				Sg	Sb	22 17 00.8	+5.0
DLBC	**Dease Lake**	3.64	85		Pn	22 16 03.9	+0.2
DLBC					Sn	22 16 46.2	-0.5
BARN	**Barnard Glacie**	3.64	321	Pn	Pn	22 16 03.9	+0.1
BARN				IAML		22 17 02.1	
	comp=E,774nm,0.7s						
BGLC	**Bering Glacier**	3.73	302		Pn	22 16 03.2	-1.6
BGLC					Sn	22 16 49.1	+0.4
KIAG	**Kiagna River**	3.79	316	Pn	Pn	22 16 05.0	-0.9
KIAG	**Kiagna River**	3.79	316		Pn	22 16 05.5	-0.4
GRIN	**Grindle Hills**	3.82	304		Pn	22 16 06.2	+0.1
BALM	**Baldy**	3.86	317	Pn	Pn	22 16 05.7	-1.1
BALM	**Baldy**	3.86	317		Pn	22 16 06.6	-0.2
BALM				IAML		22 17 13.4	
	comp=E,680nm,0.9s						
BALM				IAML		22 17 13.6	
	comp=N,727nm,0.8s						
KHIT	**Khitrov Hills**	3.87	306		Pn	22 16 05.5	-1.3
TGL	**Tana Glacier**	3.87	312		Pn	22 16 06.5	-0.3
TGL				IAML		22 17 27.6	
	comp=N,899nm,0.9s						
TGL				IAML		22 17 33.1	
	comp=E,814nm,0.9s						
YUK3	**Moose Creek**	3.89	334	Pn	Pn	22 16 07.3	+0.1
YUK3	**Moose Creek**	3.89	334		Pn	22 16 07.6	+0.4
SUCK	**Suckling Hills**	3.93	299		Pn	22 16 07.4	-0.2
SUCK				IAML		22 17 37.9	
	comp=E,700nm,0.7s						
SUCK				IAML		22 17 42.3	
	comp=N,628nm,2.3s						
YUK2	**White River**	3.99	332	Pn	Pn	22 16 08.5	0.0
YUK2				Sg	Sg	22 17 10.3	-4.8
YUK2	**White River**	3.99	332		Pn	22 16 08.4	0.0
CRQM	**Cirque**	3.99	310		Pn	22 16 08.1	-0.5
CRQM				IAML		22 17 31.4	
	comp=E,1µm,1.1s						
PTPK	**Patty Peak**	4.01	318	Pn	Pn	22 16 09.3	+0.4
PTPK	**Patty Peak**	4.01	318		Pn	22 16 09.2	+0.4

BERG	Berg Lake	4.04	304		Pn	22 16 09.5	+0.4
NICHA	Nichawak Mount	4.08	301		Pn	22 16 09.5	-0.3
KAIM	Kayak Island	4.18	296	Pn	Pn	22 16 10.4	-0.7
KAIM				IAML		22 17 26.5	
	comp=E,833nm,0.9s						
KAIM				IAML		22 17 30.7	
	comp=N,841nm,0.9s						
HMT	Hamilton	4.26	301		Pn	22 16 11.7	-0.5
MCARA	McCarthy VSAT	4.34	318	Pn	Pn	22 16 13.5	+0.3
MCARA				IAML		22 17 28.8	
	comp=N,799nm,0.9s						
VRDI	Verde Repeater	4.40	314		Pn	22 16 13.8	-0.3
RAGM	Ragged Mountai	4.47	301		Pn	22 16 14.4	-0.7
BVCY	Beaver Creek	4.54	336	Pn	Pn	22 16 15.4	-0.6
BVCY				Sg	Sg	22 17 29.1	-3.8
BVCY	Beaver Creek	4.54	336		Pn	22 16 15.1	-0.9
GOAT	Goat Mountain	4.57	303		Pn	22 16 15.8	-0.7
LIB	Langara Island	4.62	150	Pn	Pn	22 16 16.6	-0.4
GLB	Gilahina Butte	4.66	315		Pn	22 16 17.2	-0.5
BMRM	Bremner River	4.71	307		Pn	22 16 18.6	+0.2
EYAK	Cordova Ski Ar	5.02	300		Pn	22 16 21.5	-1.1
N25K	Chitina, Valde	5.06	314	P	Pn	22 16 23.2	0.0
	baz=127,SNR=18						
N25K	Chitina, Valde	5.06	314		Pn	22 16 23.3	0.0
DIV	Divide	5.28	306	Pn	Pn	22 16 25.7	-0.5
DIV	Divide	5.28	306		Pn	22 16 25.7	-0.5
HIN	Hinchinbrook I	5.32	297		Pn	22 16 26.3	-0.4
HIN	Hinchinbrook I	5.32	297	IAML		22 18 01.9	
	comp=E,392nm,0.8s						
HIN				IAML		22 18 09.4	
	comp=N,339nm,0.8s						
BC03		5.32	335		Pn	22 16 26.7	+0.1
BCAR	Beaver Creek A	5.32	335		Pn	22 16 25.9	-0.8
RUBB	Prince Rupert	5.47	134	Pn	Pn	22 16 29.8	+1.1
RUBB				Sg	Sg	22 17 56.5	-6.1
RUBB	Prince Rupert	5.47	134		Pn	22 16 29.5	+0.8
KLU	Klutina	5.53	309		Pn	22 16 29.6	0.0
VIB	Van Inlet	5.66	152	Pn	Pn	22 16 30.9	-0.5
VIB				Sn	Sn	22 17 34.2	-2.2
VIB	Van Inlet	5.66	152		Pn	22 16 31.2	-0.2
PS11	TAPS Pump St11	5.68	315		Pn	22 16 32.3	+0.6
MENT	Mentasta	5.70	327	Pn	Pn	22 16 32.9	+0.9
DIB	Dawson Inlet,	5.72	152	Pn	Pn	22 16 31.2	-0.9
DIB				Sn	Sn	22 17 34.2	-3.5
DIB	Dawson Inlet,	5.72	152		Pn	22 16 31.3	-0.9
DAWY	Dawson	5.88	349	Pn	Pn	22 16 34.2	-0.2
DAWY	Dawson	5.88	349		Pn	22 16 34.5	0.0
MOBC	Moresby Island	5.90	150	Pn	Pn	22 16 35.5	+0.7
MOBC				Sn	Sn	22 17 39.6	-2.8
GRNB	Grenville Isla	5.95	136	Pn	Pn	22 16 36.1	+0.8
GRNB				Sg	Sg	22 18 12.9	-5.2
M24K	Tolsona, Glenn	5.96	313	P	Pn	22 16 36.0	+0.5
	baz=125,SNR=37						
M24K	Tolsona, Glenn	5.96	313		Pn	22 16 36.2	+0.6
BNAB	Bonilla	6.00	141	Pn	Pn	22 16 35.8	-0.2
BNAB				Sg	Sg	22 18 14.2	-5.4
BNAB	Bonilla	6.00	141		Pn	22 16 35.8	-0.2
PAX	Paxson	6.27	322	Pn	Pn	22 16 40.7	+0.9
PAX	Paxson	6.27	322		Pn	22 16 40.7	+0.9
SCM	Sheep Creek Mo	6.28	308		Pn	22 16 40.0	+0.1
KITB	Kitimat	6.29	129	Pn	Pn	22 16 41.6	+1.6
KITB				Sg	Sg	22 18 26.2	-2.7
PWL	Port Wells	6.32	299		Pn	22 16 38.8	-1.6
DOT	Dot Lake	6.36	330	Pn	Pn	22 16 41.2	+0.1
DOT	Dot Lake	6.36	330		Pn	22 16 41.2	+0.1
BNB	Barry Inlet	6.47	151	Pn	Pn	22 16 43.0	+0.5
KNK	Knik Glacier	6.58	303		Pn	22 16 43.5	-0.4
SCRK	Sand Creek	6.61	332	P	Pn	22 16 44.3	-0.2
	baz=146,SNR=36						
SCRK	Sand Creek	6.61	332		Pn	22 16 44.5	0.0
SEW	Seward	6.67	291	Pn	Pn	22 16 44.2	-1.0
SML	Sawmill	6.69	306		Pn	22 16 45.5	0.0
EGAK	Eagle	6.78	344		Pn	22 16 46.9	+0.2
WAT6	Susitna Watana	6.83	313		Pn	22 16 47.6	0.0
O22K	Cooper Landing	6.88	294	P	Pn	22 16 47.2	-0.8
	baz=103						
O22K	Cooper Landing	6.88	294		Pn	22 16 47.9	-0.1
NBC1	NorthernBC 1	6.91	73	Sg	Sg	22 18 44.5	-4.1
GHO	Glory Hole Cre	6.92	305		Pn	22 16 48.7	-0.1
PMR	Palmer	6.94	303	Pn	Pn	22 16 49.0	+0.1
RC01	Rabbit Creek A	7.04	299	P	Pn	22 16 49.2	-1.1
	baz=108,SNR=19						
RC01	Rabbit Creek A	7.04	299		Pn	22 16 48.5	-1.8
SLKM	Skilak Lake	7.12	293		Pn	22 16 49.5	-1.9
BRSE	Bradley Lake S	7.26	287		Pn	22 16 51.9	-1.5
WAT1	Susitna Watana	7.28	313		Pn	22 16 53.4	-0.3
FNBB	Fort Nelson	7.30	80	Pn	Pn	22 16 54.5	+0.7
FNBB				Sg	Sg	22 18 55.6	-5.6
FNBB	Fort Nelson	7.30	80		Pn	22 16 53.7	-0.2
BRLK	Bradley Lake	7.34	287		Pn	22 16 53.4	-1.1
WAT2	Susitna Watana	7.37	314		Pn	22 16 54.8	-0.1
CNPM	China Poot	7.50	285		Pn	22 16 54.3	-2.3
NBC2	NorthernBC 2	7.59	73	Pn	Pn	22 16 59.1	+1.3
SUA	Susitna One	7.62	300		Pn	22 16 58.2	-0.2
CAPN	Captain Cook N	7.63	295	P	Pn	22 16 57.6	-0.6
	baz=102						
NBC5	NorthernBC 5	7.63	90	Pn	Pn	22 16 59.9	+1.4
NBC5				Sg	Sb	22 19 00.7	+10
HOM	Homer	7.71	286		Pn	22 16 58.7	-0.8
RND	Reindeer	7.72	316		Pn	22 17 00.4	+0.7
HDA	Harding Lake	7.76	326	P	Pn	22 17 00.8	+0.6
	baz=137						
HDA	Harding Lake	7.76	326		Pn	22 17 00.7	+0.5
CUT	Chulitna	7.77	307	P	Pn	22 17 00.9	+0.7
	baz=116						
CUT	Chulitna	7.77	307		Pn	22 16 59.3	-0.9
HUR	Hurricane	7.78	312		Pn	22 17 01.4	+0.9
PS08	TAPS Pump Stn8	7.82	327		Pn	22 17 00.3	-0.7
BBB	Bella Bella	7.95	137	Pn	Pn	22 17 03.9	+1.1
	comp=N,0.9nm,0.3s,baz=348,slow=8.5,SNR=6.9						
BBB				Sn	Sn	22 18 34.2	+1.6
	comp=N,1.0nm,0.3s,baz=9.5,slow=6.1,SNR=1.6						
BBB				Lg	Lg	22 19 18.9	
	comp=N,1.8nm,0.3s,baz=224,slow=13,SNR=5.3						
BBB	Bella Bella	7.95	137	Pn	Pn	22 17 05.1	+2.3
MCK	McKinley	7.95	318	P	Pn	22 17 03.7	+0.9
	baz=128,SNR=18						
MCK	McKinley	7.95	318		Pn	22 17 03.5	+0.7
IL31		8.02	328		Pn	22 17 02.7	-0.9
ILAR	Eielson Array	8.02	328	Pn	Pn	22 17 01.7	-2.0
	comp=N,0.4nm,0.3s,baz=147,slow=13,SNR=34						
ILAR				Lg	Lg	22 19 10.9	
	comp=N,0.6nm,0.3s,baz=122,slow=25,SNR=1.5						
ILAR				LR	LR	22 20 30.7	
	comp=N,164nm,21.5s,baz=145,slow=41						
ILAR	Eielson Array	8.02	328		Pn	22 17 02.6	-1.1
EPYK	Eagle Plains	8.07	1	P	Pn	22 17 04.9	+0.4
	baz=181,SNR=21						
EPYK	Eagle Plains	8.07	1		Pn	22 17 05.0	+0.5
STLK	Strandline Lak	8.13	299		Pn	22 17 04.7	-0.7
SKT	Skwentna	8.15	303		Pn	22 17 05.0	-0.4
WRH	Wood River Hil	8.15	324		Pn	22 17 05.6	+0.1
SPCG	Spurr Capps Gl	8.16	298		Pn	22 17 04.7	-1.1
NBC6	NorthernBC 6	8.19	82	Pn	Pn	22 17 06.8	+0.8
CCB	Clear Creek Bu	8.19	325		Pn	22 17 05.6	-0.4
SPCP	Crater Peak Br	8.22	297		Pn	22 17 05.8	-0.8
SPCN	Chakachatna No	8.22	297		Pn	22 17 05.6	-0.9
PRP	Porcupine Dome	8.27	334	Pn	Pn	22 17 07.6	+0.3
TRF	Thorofare Moun	8.29	314		Pn	22 17 08.2	+0.7
KDAK	Kodiak Island	8.32	273	Pn	Pn	22 17 05.6	-2.2
	comp=N,12nm,0.3s,baz=81,slow=8.2,SNR=122						
KDAK				Sn	Sn	22 18 35.1	-6.6
	comp=N,2.2nm,0.3s,baz=300,slow=20,SNR=1.1						
KDAK				LR	LR	22 20 08.3	
	comp=N,484nm,20.0s,baz=96,slow=36						
DFR	Drift River	8.34	292		Pn	22 17 05.6	-2.5
RSO	Redoubt South	8.35	292		Pn	22 17 07.3	-1.2
RED	Redoubt Volcan	8.35	291		Pn	22 17 07.0	-1.3
COLA	College	8.37	326		Pn	22 17 06.5	-1.9
BWN	Browne	8.41	319		Pn	22 17 08.7	-0.3
POKR	Poker Plat Res	8.43	328	P	Pn	22 17 09.1	-0.3
	baz=139						
POKR	Poker Plat Res	8.43	328		Pn	22 17 07.7	-1.7
IVE	Iliamna Volcan	8.43	288		Pn	22 17 08.2	-1.2
NCT	North Crescent	8.45	292		Pn	22 17 08.6	-1.1
OPT	Oil Point	8.52	286		Pn	22 17 09.9	-0.7
MDM	Murphy Dome	8.54	326		Pn	22 17 10.4	-0.5
NEA2	Nenana	8.55	322	P	Pn	22 17 11.0	+0.1
	baz=132,SNR=29						
NEA2	Nenana	8.55	322		Pn	22 17 10.7	-0.3
KTH	Kantishna Hill	8.58	313		Pn	22 17 12.0	+0.5
AUW	Augustine West	8.64	284		Pn	22 17 11.8	-0.3
PPLA	Purkeypile	8.78	308		Pn	22 17 14.0	-0.3
OHAK	Old Harbor	8.81	270		Pn	22 17 12.4	-2.1
BPAW	Bear Paw Mtn.	8.90	316		Pn	22 17 15.2	-0.6
I23K	Minto, Yukon-K	9.02	325	P	Pn	22 17 18.4	+1.0
	baz=134,SNR=9.8						
I23K	Minto, Yukon-K	9.02	325		Pn	22 17 16.4	-0.9
FYU	Fort Yukon	9.11	339		Pn	22 17 19.9	+1.3
CHUM	Lake Minchumin	9.28	313		Pn	22 17 20.7	-0.3
KARR	Katmai Rainbow	9.33	279		Pn	22 17 21.8	+0.1
MLY	Manley	9.38	322	P	Pn	22 17 22.6	+0.2
	baz=130,SNR=18						
MLY	Manley	9.38	322		Pn	22 17 22.3	-0.1
SII	Sitkinak Islan	9.47	267		Pn	22 17 22.1	-1.5
KAHC	Katmai Hardscr	9.47	280		Pn	22 17 22.7	-1.0
KBM	Katmai Bkd Mtn	9.62	277		Pn	22 17 24.6	-1.1
KVTA	Katmai Vly 10	9.65	278		Pn	22 17 24.8	-1.3
BM03	Burnt Mountain	9.77	342		Pn	22 17 27.4	-0.2
BMAR	Burnt Mountain	9.77	342		Pn	22 17 28.0	+0.3
SVW2	Sparrevohn	9.81	294		Pn	22 17 26.2	-2.1
INK	Inuvik	10.13	7	Pn	Pn	22 17 32.1	-0.5
	comp=N,0.5nm,0.3s,baz=193,slow=9.6,SNR=18						
INK				Lg	Lg	22 20 22.5	
	comp=N,0.6nm,0.3s,baz=68,slow=31,SNR=4.8						
INK				LR	LR	22 21 40.2	
	comp=N,274nm,18.1s,baz=169,slow=39						
INK	Inuvik	10.13	7	Pn	Pn	22 17 32.2	-0.3
INK				Sg	Sn	22 20 24.1	+58
INK	Inuvik	10.13	7	Pn	Pn	22 17 32.5	-0.1
TTA	Tatalina	10.43	304	Pn	Pn	22 17 35.2	-1.5
COLD	Coldfoot	10.77	331	Pn	Pn	22 17 42.8	+1.4
COLD	Coldfoot	10.77	331	P	Pn	22 17 42.3	+0.9
	baz=140,SNR=5.5						
COLD	Coldfoot	10.77	331		Pn	22 17 42.3	+0.9
IMAR	Indian Mountai	10.95	321		Pn	22 17 44.1	+0.3
TOLK	Toolik Lake Re	11.76	337	P	Pn	22 17 55.9	+1.0
	baz=146,SNR=8.8						
TOLK	Toolik Lake Re	11.76	337		Pn	22 17 56.8	+1.9
YKA	Yellowknife Ar	11.77	60	Pn	Pn	22 17 54.2	-0.8
	comp=N,1.0nm,0.3s,baz=256,slow=12,SNR=31						
YKA				Sn	Sn	22 20 01.0	-5.3
	comp=N,0.4nm,0.3s,baz=264,slow=18,SNR=4.2						
YKA				Lg	Lg	22 21 15.1	
	comp=N,0.4nm,0.3s,baz=254,slow=30,SNR=4.8						
YKA				LR	LR	22 23 04.7	
	comp=N,160nm,19.8s,baz=0.0,slow=41						
CHGN	Chignik	11.78	269		Pn	22 17 54.0	-1.1
DHRN	Dharma Camp	11.79	35	Pn	Pn	22 17 55.8	+0.5
C36M	Paulatuk	12.39	22	P	Pn	22 18 03.8	+0.4
	baz=213						
SDPT	Sand Point	13.21	267		Pn	22 18 14.9	+0.3
B08A	Colville Reser	14.45	126		Pn	22 18 34.1	+2.4
LTY	Liberty	14.77	132		Pn	22 18 39.4	+3.2
RDOG	Red Dog Mine	15.10	321		Pn	22 18 41.3	+1.0
RDOG				IAmb	IAmb	22 18 50.5	
	comp=Z,8.3nm,0.9s						
NEW	Newport	15.49	122	Pn	Pn	22 18 46.6	+1.0
	comp=Z,0.2nm,0.3s,baz=62,slow=21,SNR=2.3						
NEW				LR	LR	22 25 03.2	
	comp=Z,175nm,18.6s,baz=314,slow=38						
NEW	Newport	15.49	122	P	Pn	22 18 45.4	-0.2
	baz=318						
NEW	Newport	15.49	122		Pn	22 18 46.6	+1.0
NEW				IAmb	IAmb	22 18 54.8	
	comp=Z,9.7nm,0.9s						
TNA	Tin City	16.13	310	P	Pn	22 18 53.8	+0.1
	baz=102,SNR=5.7						
TNA	Tin City	16.13	310		Pn	22 18 54.1	+0.4
JTMT	Jette	17.16	118	P	P	22 19 08.6	-0.1
GAMB	Gambell	17.52	303	P	P	22 19 12.6	+0.1
GAMB				IAmb	IAmb	22 19 14.8	
	comp=Z,9.1nm,0.8s						
I07A	Izee	17.88	135	P	Pn	22 19 16.3	+0.3
J05D	Fort Rock, OR	17.96	140	P	Pn	22 19 16.1	-0.9
	baz=332						
MSO	Missoula	18.00	120	P	P	22 19 18.2	+0.3
	baz=318						
MSO	Missoula	18.00	120		P	22 19 19.0	+1.1
MSO				IAmb	IAmb	22 19 34.0	
	comp=Z,13nm,1.2s						
BMO	Blue Mountains	18.09	130	P	P	22 19 20.4	+1.5
YBH	Yreka Blue Hor	18.89	145	P	Pn	22 19 31.3	+3.0
	comp=Z,0.1nm,0.3s,baz=358,slow=11,SNR=2.4						
YBH				LR	LR	22 25 24.0	
	comp=Z,145nm,20.1s,baz=333,slow=32						
HRY	Holter Researc	19.06	117	P	Pn	22 19 31.8	+1.4
EGMT	Eagleton	19.14	111	P	P	22 19 31.0	+0.5
	baz=313						
EGMT	Eagleton	19.14	111	P	Pn	22 19 31.8	+0.4
EGMT				IAmb	IAmb	22 19 40.3	
	comp=Z,20nm,1.3s						
LRM	Limekiln Ridge	19.43	119	P	Pn	22 19 35.7	+0.7
FFC	Flin Flon	19.47	86	P	P	22 19 34.4	+0.4
FFC				IAmb	IAmb	22 19 37.4	
	comp=Z,22nm,1.4s						
N02D	Trinity Center	19.59	146	P	P	22 19 35.4	0.0
	baz=337						
DLMT	Dillon	19.72	121	P	Pn	22 19 38.7	+0.4
DLMT				IAmb	IAmb	22 19 47.7	
	comp=Z,9.0nm,0.9s						
MFID	Camas Ranch	19.87	129	P	Pn	22 19 40.9	+0.8
BOZ	Bozeman (W)	19.98	119	P	P	22 19 40.3	+0.6
	baz=319						
BOZ	Bozeman (W)	19.98	119	P	Pn	22 19 41.2	-0.2
BOZ				IAmb	IAmb	22 19 45.9	
	comp=Z,6.9nm,0.9s						
WDC	Whiskeytown Da	20.00	146	P	Pn	22 19 42.3	+0.8
MCMT	McKenzie Canyo	20.01	122	P	Pn	22 19 42.3	+0.3
BCYI	Bear Canyon	20.17	124	P	P	22 19 43.2	+1.3
HLID	Hailey	20.34	127	P	P	22 19 44.8	+1.1
	baz=325,SNR=8.8						
HLID	Hailey	20.34	127	P	P	22 19 44.8	+1.1
O03E	Paynes Creek	20.48	145	P	P	22 19 46.3	+1.2
	baz=337						
QLMT	Earthquake Lak	20.66	120	P	Pn	22 19 49.3	-0.1
YNR	Norris Junctio	21.09	119	P	P	22 19 53.5	+1.6
YNR				IAmb	IAmb	22 19 59.7	
	comp=Z,8.7nm,0.9s						
H17A	Grant Village	21.38	119	P	P	22 19 57.4	+2.4
	baz=320						
RLMT	Red Lodge	21.44	116	P	P	22 19 58.0	+2.3
	baz=318,SNR=11						
RLMT	Red Lodge	21.44	116	P	P	22 19 58.2	+2.5
RLMT				IAmb	IAmb	22 20 02.6	
	comp=Z,11nm,0.9s						
DGMT	Dagmar	21.66	103	P	P	22 20 00.0	+2.3
PAHR	Pah Rah Range	21.78	141	P	P	22 20 00.4	+1.2
ATKA	Atka Island	21.88	270	P	P	22 20 00.1	+0.2
AFDM	Forest Hills D	21.97	145	P	P	22 20 03.2	+2.2
SNOW	Snow King Moun	22.02	121	P	P	22 20 03.8	+1.9
SNOW				IAmb	IAmb	22 20 07.6	
	comp=Z,10nm,0.9s						
FCC	Fort Churchill	22.09	70	P	P	22 20 03.4	+1.2
FCC				IAmb	IAmb	22 20 06.9	
	comp=Z,12nm,1.1s						
ELK	Elko	22.36	132	P	P	22 20 07.8	+2.2
	comp=Z,5.5nm,1.1s,baz=333,slow=11,SNR=9.6						
ELK				LR	LR	22 29 31.9	
	comp=Z,138nm,21.4s,baz=330,slow=38						
ELK	Elko	22.36	132	P	P	22 20 07.2	+1.7
ELK				IAmb	IAmb	22 20 11.9	
	comp=Z,7.3nm,1.1s						
HVU	Hansel Valley	22.49	127	P	P	22 20 08.2	+1.3
HVU				IAmb	IAmb	22 20 17.7	
	comp=Z,7.9nm,1.4s						
RES	Resolute Bay	22.62	28	P	P	22 20 09.9	+2.2
	comp=Z,1.8nm,0.7s,baz=224,slow=11,SNR=9.1						
BGU	Big Grassy Mou	23.10	128	P	P	22 20 14.9	+1.7
BGU				IAmb	IAmb	22 20 23.2	
	comp=Z,5.2nm,1.3s						
BW06	Boulder Array	23.11	120	P	P	22 20 13.2	-0.2
	baz=322						
BW06	Boulder Array	23.11	120	P	P	22 20 14.5	+1.1
PD31	Pinedale Array	23.11	120	P	P	22 20 14.1	+0.7
PDAR	Pinedale Array	23.11	120	P	P	22 20 15.1	+1.7
	comp=Z,0.7nm,0.8s,baz=322,slow=5.5,SNR=6.8						
PDAR				LR	LR	22 29 28.5	
	comp=Z,159nm,22.0s,baz=334,slow=37						
PDAR	Pinedale Array	23.11	120	P	P	22 20 13.3	-0.1
NVAR	Mina Array Bea	23.29	141	P	P	22 20 18.3	+3.0
	comp=Z,2.6nm,0.9s,baz=327,slow=8.9,SNR=12						
NVAR				LR	LR	22 28 29.7	
	comp=Z,125nm,20.5s,baz=272,slow=34						
NVAR	Mina Array Bea	23.29	141	P	P	22 20 16.9	+1.7
NV11	Mina Array Sit	23.34	140	P	P	22 20 17.0	+1.4
NV11				IAmb	IAmb	22 20 23.7	
	comp=Z,7.5nm,1.1s						
MDPB	Devils Postpil	23.76	143	P	P	22 20 21.9	+1.9
MDPB				IAmb	IAmb	22 20 25.5	
	comp=Z,5.5nm,1.1s						
DUG	Dugway, Tooele	23.80	129	P	P	22 20 22.1	+1.9
	baz=328,SNR=8.6						
R11A	Troy Canyon, C	24.32	136	P	P	22 20 26.0	+0.9
	baz=332,SNR=15						
R11A	Troy Canyon, C	24.32	136	P	P	22 20 27.6	+2.5
R11A				IAmb	IAmb	22 20 30.6	
	comp=Z,6.8nm,0.9s						
PSUT	Pine Spring	24.81	133	P	P	22 20 31.1	+1.6
PSUT				IAmb	IAmb	22 20 34.7	
	comp=Z,7.8nm,1.1s						
ULM	Lac du Bonnet	24.94	91	P	P	22 20 31.1	+0.7
	comp=Z,3.6nm,0.7s,baz=304,slow=8.5,SNR=6.9						
ULM				LR	LR	22 30 28.5	
	comp=Z,223nm,19.8s,baz=294,slow=37						
ULM	Lac du Bonnet	24.94	91	P	P	22 20 31.4	+1.0
CWC	Cottonwood Cre	25.17	142	P	P	22 20 34.7	+1.9
	baz=336						
TPNV	Topopah Spring	25.33	139	P	P	22 20 36.0	+1.8
	baz=334,SNR=5.4						
TPNV	Topopah Spring	25.33	139	P	P	22 20 35.8	+1.6
PRN	Pahroc Range	25.35	136	P	P	22 20 37.3	+3.0
PRN				IAmb	IAmb	22 21 01.2	
	comp=Z,5.2nm,1.2s						
MVU	Marysvale	25.48	130	P	P	22 20 37.7	+2.0
MPMC	Manual Prospec	25.71	142	P	P	22 20 38.8	+1.1
	baz=336						
AGMN	Agassiz Nation	26.11	95	P	P	22 20 41.3	+0.3
	baz=308						
AGMN	Agassiz Nation	26.11	95	P	P	22 20 41.9	+0.9
AGMN				IAmb	IAmb	22 20 43.2	
	comp=Z,7.2nm,1.1s						
PV13	Radium Mtn., P	27.19	126	P	P	22 20 52.7	+1.6
PV13				IAmb	IAmb	22 20 55.5	
	comp=Z,6.6nm,1.2s						
HEC	Hector,Ludlow	27.22	141	P	P	22 20 51.3	+0.1
	baz=336						
U15A	North Rim	27.25	133	P	P	22 20 54.0	+2.3
WUAZ	Wupatki	28.40	132	P	P	22 21 02.4	+0.5
	baz=332						
WUAZ	Wupatki	28.40	132	P	P	22 21 03.8	+1.9
WUAZ				IAmb	IAmb	22 21 08.6	
	comp=Z,4.8nm,0.9s						
PDMCI	Parker Dam,Lak	28.45	138	P	P	22 21 03.7	+1.6
	baz=335						
EYMN	Ely	28.63	91	P	P	22 21 04.0	+0.4
	baz=308						
EYMN	Ely	28.63	91	P	P	22 21 04.7	+1.1
ECSD	EROS Data Cent	28.74	103	P	P	22 21 05.4	+0.8
	baz=315						
X16A	Lo Mia Camp, P	29.35	133	P	P	22 21 12.2	+1.9
X16A				IAmb	IAmb	22 21 16.4	
	comp=Z,3.0nm,0.8s						
X18A	Snowflake	29.83	131	P	P	22 21 16.8	+2.2
TUC	Tucson	31.47	134	P	P	22 21 30.5	+1.6
	baz=334						
FRB	Frobisher Bay	32.08	51	P	P	22 21 37.3	+3.4
	comp=Z,1.0nm,0.5s,baz=285,slow=8.4,SNR=5.0						
121A	Cookes Peak, D	32.45	130	P	P	22 21 36.9	-0.7
	baz=332						
121A	Cookes Peak, D	32.45	130	P	P	22 21 39.9	+2.3
AMTX	Amarillo	33.09	120	P	P	22 21 41.9	-1.2
	baz=326						
MSTX	Muleshoe	33.35	122	P	P	22 21 47.7	+2.2
	baz=328						
SEY	Seymchan	33.36	308	P	P	22 21 44.8	-0.4
	comp=Z,1.0nm,0.4s,baz=71,slow=12,SNR=5.5						
MNTX	Cornudas Mount	34.16	127	P	P	22 21 54.7	+2.3
	baz=331,SNR=5.2						
GLMI	Grayling	34.28	90	P	P	22 21 54.7	+1.4
	baz=312						
WMOK	Wichita Mounta	34.56	116	P	P	22 21 55.9	+0.1
	baz=325,SNR=6.2						
PETK	Petropavlovsk-	35.87	291	P	P	22 22 06.8	-0.2
	comp=Z,1.2nm,0.7s,baz=128,slow=13,SNR=1.8						
PETK				LR	LR	22 37 19.4	
	comp=Z,102nm,18.7s,baz=66,slow=37						
W39A	Magazine	36.61	110	P	P	22 22 12.7	-0.7
	baz=323						
TX31	Lajitas Ar. Si	36.94	127	P	P	22 22 17.3	+0.9
TXAR	Lajitas Array	36.94	127	P	P	22 22 19.2	+2.8
	comp=Z,1.2nm,0.7s,baz=328,slow=4.9,SNR=13						
TXAR				LR	LR	22 38 02.1	
	comp=Z,120nm,21.9s,baz=0.0,slow=37						
TXAR	Lajitas Array	36.94	127	P	P	22 22 17.6	+1.2
MIAR	Mount Ida	37.23	111	P	P	22 22 18.0	-0.7
	baz=323,SNR=6.8						
OXF	Oxford	39.35	106	P	P	22 22 35.0	-1.4
	baz=322						
OXF	Oxford	39.35	106	P	P	22 22 37.5	+1.0
Q53A	Leroy	40.12	94	P	P	22 22 41.4	-1.5
	baz=318						
H59A	Cadyville	40.14	81	P	P	22 22 40.9	-2.1
	baz=313						
TZTN	Tazewell	40.80	98	P	P	22 22 47.1	-1.5
	baz=320						
E63A	Oxbow	41.66	76	P	P	22 22 54.1	-1.4
	baz=312						
LRAL	Lakeview Retre	41.74	105	P	P	22 22 53.8	-2.5
	baz=323						
R58B	Mineral	42.71	92	P	P	22 23 00.8	-3.3
	baz=318						
YAK	Yakutsk	42.74	316	LR	LR	22 42 52.6	
	comp=Z,82nm,18.1s,baz=86,slow=39						
S60A	Water View	43.55	91	P	P	22 23 08.9	-2.0
	baz=318						
V60A	Jim Taylor Roa	44.69	93	P	P	22 23 17.6	-2.4
	baz=320						
NRIK	Noril'sk	48.66	341	LR	LR	22 46 56.9	
	comp=Z,46nm,18.3s,baz=48,slow=39						
USRK	Ussuriysk Ar.	54.34	298	LR	LR	22 50 55.2	
	comp=Z,119nm,18.1s,baz=39,slow=40						
H11N2	WAKE ISLAND Hy	55.82	251	T	T	23 24 30.2	
	baz=32,slow=76						
H11N3	WAKE ISLAND Hy	55.82	251	T	T	23 24 28.9	
	baz=32,slow=76						
H11N1	WAKE ISLAND Hy	55.84	251	T	T	23 24 21.8	
	baz=32,slow=76						
H11S1	WAKE ISLAND Hy	56.95	250	T	T	23 26 27.5	
	baz=32,slow=76						
H11S2	WAKE ISLAND Hy	56.96	250	T	T	23 26 26.5	
	baz=32,slow=76						
H11S3	WAKE ISLAND Hy	56.97	250	T	T	23 26 27.9	
	baz=32,slow=76						
MJAR	Matsushiro Arr	57.20	287	LR	LR	22 49 40.8	
	comp=Z,42nm,21.5s,baz=20,slow=36						
FINES	FINESS Array B	59.83	9	P	P	22 25 12.5	+0.3
	comp=Z,1.9nm,0.9s,baz=349,slow=14,SNR=1.9						
KSRS	Korea Array	61.53	296	P	P	22 25 24.8	+0.7
	comp=Z,1.5nm,0.8s,baz=32,slow=7.2,SNR=3.3						
KSRS				LR	LR	22 54 02.6	
	comp=Z,40nm,18.6s,baz=43,slow=38						
SONM	Songino Array	62.09	317	P	P	22 25 29.3	+1.4
	comp=Z,1.1nm,0.8s,baz=36,slow=9.1,SNR=11						
SONM				LR	LR	22 54 41.8	
	comp=Z,90nm,20.0s,baz=59,slow=38						
ZALV	Zalesovo Beam	63.10	334	P	P	22 25 34.6	+0.2
	comp=Z,1.7nm,0.6s,baz=22,slow=6.5,SNR=7.4						
ZALV				LR	LR	22 55 25.6	
	comp=Z,38nm,20.6s,baz=36,slow=38						
HHC	Hu-ho-hao-te	66.00	309	*e*P	P	22 25 55.0	+1.3
HHC				pmax	pmax		
	comp=Z,3.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,110nm,6.4s						
BRVK	Borovoye	66.79	343	P	P	22 25 59.5	+1.0
BRVK				IAmb	IAmb	22 26 03.5	
	comp=Z,1.6nm,0.9s						
KURK	Kurchatov	67.49	336	P	P	22 26 03.5	+0.6
MK31	Makanchi Array	70.34	333	P	P	22 26 20.8	0.0
MK31				IAmb	IAmb	22 26 24.4	
	comp=Z,0.8nm,0.8s						
MKAR	Makanchi Array	70.34	333	P	P	22 26 20.7	0.0
	comp=Z,1.0nm,0.7s,baz=39,slow=5.9,SNR=11						
MKAR				LR	LR	23 02 39.9	
	comp=Z,45nm,18.2s,baz=5.0,slow=41						
MKAR	Makanchi Array	70.34	333	P	P	22 26 20.9	+0.1
MAKZ	Makanchi	70.41	333	P	P	22 26 21.7	+0.5
AKASG	Malin Array Be	70.74	9	P	P	22 26 23.3	+0.2
	comp=Z,1.1nm,0.5s,baz=355,slow=6.3,SNR=7.3						
WMQ	Urumqi	71.68	328	*e*P	P	22 26 32.1	+3.1
LZH	Lanzhou	73.17	312	*e*P	P	22 26 38.4	+0.3
LZH				pP	pP	22 26 40.8	-0.6
LZH				sP	sP	22 26 43.3	+0.6

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LZH				pmax	pmax		
	comp=Z,12nm,1.0s						
KSH	**Kashi**	**78.72**	**335**	P	P	22 27 16.3	+6.7
KSH				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KSH				pmax	pmax		
	comp=Z,210nm,4.9s						
HNR	**Honiara**	**84.43**	**242**	LR	LR	22 57 21.3	
	comp=Z,51nm,20.8s,baz=345,slow=30						
CMAR	**Chiang Mai Arr**	**90.78**	**308**	P	**P**	**22 28 11.1**	**+0.5**
	comp=Z,1.0nm,0.3s,baz=14,slow=4.1,SNR=7.5						
CMAR				LR	LR	23 13 29.3	
	comp=Z,29nm,19.2s,baz=58,slow=39						

NOU ***18*** *22:36:46.4, 37°.47S×177°.30E, h247km, MLv3.9, Off E. Coast of N. Island, N.Z.*

WEL ***18*** *22:37:01.2, 38°S±2°×17°7E±°, h138km±2km, M3.0/51, MLv3.0/51, Error ellipse: s-maj=0.0km s-min=0.0km az=139.7*

ISC 18 22:36:57.1±1.6**, 38°.01S**±0°.05×**176°.66E**±0°.05**, h164**km±8km**, n117,** σ**1ˢ.86**/133**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARZ	**Manawahe**	**0.03**	**18**	P	**Pn**	**22 37 20.0**	**+1.0**
MARZ				S	**Sn**	**22 37 34.4**	**-1.2**
OPRZ	**Ohinepanea**	**0.19**	**333**	P	**Pn**	**22 37 19.7**	**+0.6**
OPRZ				S	**Sn**	**22 37 33.9**	**-1.9**
MKRZ	**Makatiti**	**0.20**	**231**	P	**Pn**	**22 37 21.3**	**+2.1**
OMRZ	**Omania**	**0.25**	**248**	P	**Pn**	**22 37 20.4**	**+1.1**
TARZ	**Mount Tarawera**	**0.26**	**209**	P	**Pn**	**22 37 20.7**	**+1.3**
KARZ	**Kaharoa**	**0.33**	**268**	P	**Pn**	**22 37 19.9**	**+0.5**
RRRZ	**Republican Roa**	**0.35**	**200**	P	**Pn**	**22 37 20.8**	**+1.3**
RRRZ				S	**Sn**	**22 37 35.2**	**-1.5**
TGRZ	**Tauranga**	**0.43**	**311**	P	**Pn**	**22 37 20.7**	**+0.9**
URZ	**Urewera**	**0.43**	**125**	P	**Pn**	**22 37 20.4**	**+0.7**
URZ				S	**Sn**	**22 37 34.8**	**-2.2**
MUGZ	**Murupara**	**0.47**	**170**	P	**Pn**	**22 37 20.9**	**+1.0**
MUGZ				S	**Sn**	**22 37 34.7**	**-2.9**
HRRZ	**Handcock Road**	**0.48**	**218**	P	**Pn**	**22 37 21.5**	**+1.5**
PRRZ	**Plateau Road**	**0.53**	**204**	P	**Pn**	**22 37 21.6**	**+1.4**
KMRZ	**Kaimai**	**0.59**	**286**	P	**Pn**	**22 37 21.9**	**+1.3**
ALRZ	**Allen Road**	**0.60**	**205**	P	**Pn**	**22 37 22.0**	**+1.4**
RTZ	**Ruatahuna**	**0.65**	**158**	P	**Pn**	**22 37 22.2**	**+1.3**
MWZ	**Matawai**	**0.75**	**116**	P	**Pn**	**22 37 22.5**	**+1.1**
MWZ				S	**Sn**	**22 37 37.6**	**-2.5**
RAGZ	**Rawiri**	**0.76**	**129**	P	**Pn**	**22 37 23.1**	**+1.5**
RAGZ				S	**Sn**	**22 37 39.4**	**-1.1**
RUGZ	**Raukumara Rang**	**0.80**	**87**	P	**Pn**	**22 37 22.1**	**+0.2**
RUGZ				S	**Sn**	**22 37 37.2**	**-3.6**
MYRZ	**Mayor Island**	**0.80**	**335**	P	**Pn**	**22 37 23.2**	**+1.4**
KUTZ	**Kaahu Road**	**0.82**	**234**	P	**Pn**	**22 37 23.9**	**+2.1**
MRHZ	**Matea Rd**	**0.84**	**193**	P	**Pn**	**22 37 23.7**	**+1.6**
MRHZ				S	**Sn**	**22 37 40.6**	**-0.8**
MTHZ	**Maungataniwha**	**0.85**	**171**	P	**Pn**	**22 37 23.8**	**+1.6**
MTHZ				S	**Sn**	**22 37 40.5**	**-1.0**
HAZ	**Te Kaha**	**0.92**	**74**	P	**Pn**	**22 37 23.3**	**+0.7**
HAZ				S	**Sn**	**22 37 39.5**	**-2.6**
SNGZ	**Shannon Statio**	**0.94**	**146**	P	**Pn**	**22 37 24.7**	**+2.0**
SNGZ				S	**Sn**	**22 37 42.8**	**+0.3**
TLZ	**Tolley Road**	**0.94**	**250**	P	**Pn**	**22 37 25.0**	**+2.2**
RAHZ	**Arahi**	**0.96**	**160**	P	**Pn**	**22 37 25.1**	**+2.2**
HATZ	**Hinemaiaia**	**0.99**	**207**	P	**Pn**	**22 37 25.1**	**+1.9**
HATZ				S	**Sn**	**22 37 42.2**	**-1.0**
WATZ	**Wairara**	**1.01**	**226**	P	**Pn**	**22 37 25.5**	**+2.2**
TKGZ	**Te Karaka**	**1.03**	**115**	P	**Pn**	**22 37 25.4**	**+2.0**
TKGZ				S	**Sn**	**22 37 42.5**	**-1.1**
TWGZ	**Tauwhareparae**	**1.05**	**99**	P	**Pn**	**22 37 25.7**	**+2.0**
TWGZ				S	**Sn**	**22 37 44.0**	**-0.1**
NMHZ	**Naumai**	**1.09**	**174**	P	**Pn**	**22 37 26.7**	**+2.7**
RATZ	**Rangitukua**	**1.10**	**219**	P	**Pn**	**22 37 26.3**	**+2.2**
RIGZ	**Rimuhau**	**1.11**	**129**	P	**Pn**	**22 37 26.3**	**+2.2**
RIGZ				S	**Sn**	**22 37 44.6**	**-0.3**
PKGZ	**Pakihiroa**	**1.12**	**84**	P	**Pn**	**22 37 26.0**	**+1.7**
RITZ	**Rihia Road**	**1.15**	**213**	P	**Pn**	**22 37 27.0**	**+2.5**
WHHZ	**Waihua**	**1.15**	**157**	P	**Pn**	**22 37 26.8**	**+2.3**
BKZ	**Black Stump Fm**	**1.16**	**187**	P	**Pn**	**22 37 26.4**	**+1.8**
KATZ	**Kakaramea**	**1.23**	**218**	P	**Pn**	**22 37 27.5**	**+2.2**
PUZ	**Puketiti**	**1.26**	**93**	S	**Sn**	**22 37 46.1**	**-1.1**
ARHZ	**Aropaoanui**	**1.28**	**168**	P	**Pn**	**22 37 28.0**	**+2.5**
KNZ	**Kokohu**	**1.28**	**142**	P	**Pn**	**22 37 27.7**	**+2.1**
CNGZ	**Carnagh Statio**	**1.30**	**112**	P	**Pn**	**22 37 28.4**	**+2.6**
PRGZ	**Paritu Road**	**1.32**	**134**	P	**Pn**	**22 37 28.1**	**+2.1**
TMVZ	**Te Maari**	**1.33**	**214**	P	**Pn**	**22 37 28.5**	**+2.3**
KRVZ	**Karewarewa**	**1.35**	**216**	P	**Pn**	**22 37 28.8**	**+2.4**
ETVZ	**East Tongariro**	**1.35**	**213**	P	**Pn**	**22 37 28.8**	**+2.4**
MXZ	**Matakaoa Point**	**1.38**	**72**	P	**Pn**	**22 37 28.4**	**+1.9**
WTVZ	**West Tongariro**	**1.39**	**217**	P	**Pn**	**22 37 29.1**	**+2.3**
OTVZ	**Oturere**	**1.39**	**214**	P	**Pn**	**22 37 29.3**	**+2.5**
WMGZ	**Waiomatatini S**	**1.40**	**83**	P	**Pn**	**22 37 28.6**	**+1.9**
KWHZ	**Kaweka Forest**	**1.42**	**188**	P	**Pn**	**22 37 29.4**	**+2.3**
TWVZ	**Taurewa**	**1.43**	**222**	P	**Pn**	**22 37 29.6**	**+2.5**
NGZ	**Ngauruhoe**	**1.43**	**215**	P	**Pn**	**22 37 29.7**	**+2.5**
MCHZ	**McNeill Hill**	**1.43**	**179**	P	**Pn**	**22 37 29.7**	**+2.6**
TUVZ	**Tukino**	**1.48**	**212**	P	**Pn**	**22 37 30.2**	**+2.5**
MHGZ	**Mahia Peninsul**	**1.50**	**140**	P	**Pn**	**22 37 30.3**	**+2.6**
MKAZ	**Moumakai**	**1.50**	**307**	P	**Pn**	**22 37 30.1**	**+2.4**
HIZ	**Hauiti**	**1.51**	**250**	P	**Pn**	**22 37 30.7**	**+2.9**
FWVZ	**Far West T-bar**	**1.52**	**215**	P	**Pn**	**22 37 30.7**	**+2.5**
WHVZ	**Whangaehu Hut**	**1.52**	**213**	P	**Pn**	**22 37 30.6**	**+2.4**
BHHZ	**Black Hill Sta**	**1.55**	**197**	P	**Pn**	**22 37 30.3**	**+2.0**
TRVZ	**Turoa**	**1.55**	**214**	P	**Pn**	**22 37 31.0**	**+2.4**
WNVZ	**Wahianoa**	**1.56**	**212**	P	**Pn**	**22 37 30.8**	**+2.3**
MOVZ	**Moawhango**	**1.56**	**207**	P	**Pn**	**22 37 30.4**	**+1.9**
PKVZ	**Pokaka**	**1.64**	**219**	P	**Pn**	**22 37 31.8**	**+2.6**
KRHZ	**Kereru**	**1.65**	**188**	P	**Pn**	**22 37 31.2**	**+2.0**
MTVZ	**Mangateitei**	**1.66**	**214**	P	**Pn**	**22 37 32.0**	**+2.6**
CKHZ	**Cape Kidnapper**	**1.68**	**169**	P	**Pn**	**22 37 32.1**	**+2.6**
WIAZ	**Waiheke Island**	**1.72**	**314**	P	**Pn**	**22 37 32.6**	**+2.6**
ETAZ	**East Tamaki Re**	**1.74**	**307**	P	**Pn**	**22 37 33.1**	**+2.9**
KAHZ	**Kahuranaki**	**1.79**	**175**	P	**Pn**	**22 37 33.2**	**+2.5**
AWAZ	**Awhitu Peninsu**	**1.86**	**300**	P	**Pn**	**22 37 34.3**	**+2.8**
MBAZ	**Motutapu North**	**1.88**	**311**	P	**Pn**	**22 37 34.6**	**+2.9**
PNHZ	**Pukenui**	**1.93**	**191**	P	**Pn**	**22 37 34.1**	**+1.8**
WTAZ	**Waiatarua**	**1.98**	**302**	P	**Pn**	**22 37 34.3**	**+1.4**
PXZ	**Pawanui**	**2.02**	**176**	P	**Pn**	**22 37 35.5**	**+2.3**
WPHZ	**Waipukurau**	**2.06**	**185**	P	**Pn**	**22 37 35.8**	**+2.1**
TSZ	**Takapari Road**	**2.12**	**195**	P	**Pn**	**22 37 36.2**	**+1.7**
WAZ	**Wanganui**	**2.18**	**216**	P	**Pn**	**22 37 37.8**	**+2.7**
PRHZ	**Porangahau**	**2.25**	**181**	P	**Pn**	**22 37 38.0**	**+2.1**
DVHZ	**Dannevirke**	**2.32**	**189**	P	**Pn**	**22 37 38.2**	**+1.5**
ANWZ	**Angora Road**	**2.45**	**183**	P	**Pn**	**22 37 40.4**	**+2.1**
POWZ	**Post Office Ro**	**2.48**	**196**	P	**Pn**	**22 37 40.4**	**+1.8**
PRWZ	**Pori Road**	**2.60**	**192**	P	**Pn**	**22 37 41.8**	**+1.8**
BFZ	**Birch Farm**	**2.69**	**187**	P	**Pn**	**22 37 42.7**	**+1.6**
MRZ	**Mangatainoka R**	**2.78**	**197**	P	**Pn**	**22 37 43.6**	**+1.3**
WCZ	**Waipu Caves**	**2.78**	**317**	P	**Pn**	**22 37 41.7**	**-0.7**
TIWZ	**Tintock**	**2.83**	**192**	P	**Pn**	**22 37 44.6**	**+1.8**
CPWZ	**Castlepoint**	**2.92**	**187**	P	**Pn**	**22 37 46.2**	**+2.3**
HOWZ	**Holdsworth Sta**	**3.02**	**197**	P	**Pn**	**22 37 46.3**	**+1.1**
OGWZ	**Otaki Gorge**	**3.03**	**202**	P	**Pn**	**22 37 46.6**	**+1.3**
TMWZ	**Te Maipa**	**3.15**	**191**	P	**Pn**	**22 37 48.2**	**+1.3**
KIW	**Kapiti Island**	**3.15**	**205**	P	**Pn**	**22 37 47.8**	**+0.9**
MTW	**Mount Morrison**	**3.27**	**196**	P	**Pn**	**22 37 49.1**	**+0.8**
TRWZ	**Traveller**	**3.46**	**192**	P	**Pn**	**22 37 51.8**	**+1.0**
PAWZ	**Paruwai Farm**	**3.50**	**195**	P	**Pn**	**22 37 52.0**	**+0.7**
DUWZ	**D'Urville Isla**	**3.50**	**216**	P	**Pn**	**22 37 52.3**	**+0.9**
MSWZ	**Moikau Station**	**3.57**	**197**	P	**Pn**	**22 37 52.7**	**+0.5**
BHW	**Baring Head**	**3.66**	**202**	P	**Pn**	**22 37 53.7**	**+0.4**
TCW	**Tory Channel**	**3.69**	**209**	P	**Pn**	**22 37 54.1**	**+0.5**
PLWZ	**Palliser**	**3.71**	**197**	P	**Pn**	**22 37 54.4**	**+0.4**
OUZ	**Omahuta**	**3.72**	**318**	P	**Pn**	**22 37 57.7**	**+3.6**
TUWZ	**Tuamarina**	**4.01**	**211**	P	**Pn**	**22 37 58.1**	**+0.4**
NNZ	**Nelson**	**4.08**	**217**	P	**Pn**	**22 37 59.6**	**+0.9**
QRZ	**Quartz Range**	**4.26**	**227**	P	**Pn**	**22 38 01.9**	**+0.9**
BSWZ	**Blackbirch Sta**	**4.28**	**209**	P	**Pn**	**22 38 02.3**	**+1.1**
THZ	**Tophouse**	**4.73**	**216**	P	**Pn**	**22 38 07.8**	**+0.6**
KHZ	**Kahutara**	**5.01**	**208**	P	**Pn**	**22 38 10.8**	**0.0**
GVZ	**Greta Valley S**	**5.67**	**208**	P	**Pn**	**22 38 19.5**	**-0.1**
LTZ	**Lake Taylor**	**5.83**	**214**	P	**Pn**	**22 38 21.1**	**-0.5**
INZ	**Inchbonnie**	**6.17**	**219**	P	**Pn**	**22 38 27.1**	**+1.0**
OKCZ	**Okains Bay**	**6.33**	**204**	P	**Pn**	**22 38 27.9**	**-0.3**
MQZ	**McQueen's Vall**	**6.45**	**207**	P	**Pn**	**22 38 28.5**	**-1.3**
RPZ	**Rata Peaks**	**7.11**	**215**	P	**Pn**	**22 38 38.9**	**+0.4**
ARCZ	**Arundel**	**7.24**	**213**	P	**Pn**	**22 38 40.6**	**+0.3**
TMZ	**Timaru**	**7.66**	**212**	P	**Pn**	**22 38 45.8**	**-0.1**
ODZ	**Otahua Downs**	**8.35**	**211**	P	**Pn**	**22 38 54.6**	**-0.4**

IDC ***18*** *22:47:03.7±0.5, 56°.62S×25°.70W, h0km, mb4.6/15, mb1 4.6/16, mb1mx4.5/23, mbtmp4.6/16, ML4.6/1, MS4.3/16, Ms1 4.2/16, ms1mx4.2/19, Error ellipse: s-maj=16.9km s-min=15.5km az=7.0*

NEIC ***18*** *22:47:05.4±1.5, 56°.68S±0°.08×25°.8W±0°.2, h10km±1km, mb5.2/50, Error ellipse: s-maj=17.1km s-min=11.1km az=234.0*

BJI ***18*** *22:47:07.0±0.0, 56°.80S×25°.70W, h10km, mB5.6/2, Ms5.5/2, Ms7 5.3/2*

MOS ***18*** *22:47:07.3±1.2, 56°.70S×25°.97W, h32km, mb5.3/15, Error ellipse: s-maj=22.0km s-min=11.3km az=111.3*

GCMT ***18*** *22:47:10.4±0.3, 56°.75S±0°.02×25°.49W±0°.03, h24km±1km, MW4.9/86, Moment Tensor Solution. s25,c29; s86,c112; Duration: 0 Moment tensor: Scale 10¹⁶Nm; M_{rr}1.69±.21; $M_{\theta\theta}$-2.02±.17; $M_{\phi\phi}$0.32±.13; $M_{r\theta}$0.38±.20; $M_{\theta\phi}$-2.59±.11; $M_{\phi r}$1.13±.19; Best double couple: $M_0$3.25500×10¹⁶ NP1:ϕ_s276.00000°, δ54.00000°, λ154.00000°. NP2: ϕ_s22.00000°, δ70.00000°, λ39.00000°. Principal axes: T 2.6620, Plg41.0000°, Azm245.0000°; N 1.1830, Plg47.0000°, Azm45.0000°; P -3.8480, Plg10.0000°, Azm146.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 18 22:47:09.1±0.3**, 56°.80S**±0°.06×**25°.83W**±0°.07**, h35**km**, n235,** σ**1ˢ.37**/230**, mb5.0**/38**, MS4.3**/15**, 1C-2D, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**6.56**	**288**	P	**Pn**	**22 48 42.7**	**-0.2**
HOPE	**Hope Point**	**6.56**	**288**	Pn	**Pn**	**22 48 42.7**	**-0.2**
VNA1	**Neumayer--Stat**	**15.81**	**158**	P	**Pn**	**22 50 50.6**	**+1.8**
VNA1	**Neumayer--Stat**	**15.81**	**158**	PcS	PcS	22 59 19.2	-1.7
VNA3	**Neumayer Olymp**	**16.03**	**161**	P	**Pn**	**22 50 53.0**	**+1.4**
VNA3	**Neumayer Olymp**	**16.03**	**161**	PcS	PcS	22 59 19.4	-2.0
VNA2	**Neumayer--Watz**	**16.21**	**158**	P	**Pn**	**22 50 54.8**	**+1.0**
	baz=316,slow=15						
VNA2	**Neumayer--Watz**	**16.21**	**158**	PcS	PcS	22 59 19.9	-1.8
SNAA	**Sanae**	**17.75**	**156**	P	**P**	**22 51 15.5**	**+1.9**
SNAA	**Sanae**	**17.75**	**156**	PcS	PcS	22 59 22.8	-2.2
SNAA	**Sanae**	**17.75**	**156**	P	**P**	**22 51 14.3**	**+0.6**
	1.8nm,0.3s,baz=44,slow=8.0,SNR=57						
SNAA				S	**Sn**	**22 54 20.3**	**-9.2**
	0.3nm,0.3s,baz=319,slow=18,SNR=1.5						
SNAA				LR	LR	22 57 01.3	
	comp=Z,749nm,20.1s,baz=301,slow=33						
SNAA				ScP	**ScP**	**22 59 24.4**	**+3.2**
	0.3nm,0.3s,baz=252,slow=5.3,SNR=3.2						
SNAA	**Sanae**	**17.75**	**156**	P	**P**	**22 51 14.7**	**+1.1**
EFI	**East Falkland**	**19.41**	**272**	P	**P**	**22 51 31.0**	**-0.9**
EFI				pmax	pmax		
	comp=Z,214nm,1.4s						
EFI	**East Falkland**	**19.41**	**272**	P	**P**	**22 51 31.0**	**-0.9**
EFI				IAmb	IAmb	22 51 36.9	
	comp=Z,214nm,1.4s						
PMSA	**Palmer Station**	**20.00**	**231**	P	**Pn**	**22 51 40.6**	**+0.6**
	comp=Z,36nm,0.6s,baz=58,slow=7.3,SNR=8.7						
PMSA				LR	LR	22 58 25.7	
	comp=Z,833nm,18.2s,baz=86,slow=34						
PMSA	**Palmer Station**	**20.00**	**231**	P	**Pn**	**22 51 39.2**	**-0.9**
PMSA				IAmb	IAmb	22 51 46.9	
	comp=Z,168nm,1.3s						
NVL	**N'lazarevskaya**	**21.22**	**146**	*e*P	**P**	**22 51 52.0**	**+0.6**
NVL				*e*S	**S**	**22 55 43.6**	**-1.3**
NVL				pmax	pmax		
	comp=Z,25nm,0.8s						
BELA	**Belgrano 2**	**21.39**	**185**	P	**P**	**22 51 52.8**	**-0.4**
USHA	**Ushuaia**	**23.74**	**257**	P	**P**	**22 52 17.9**	**+0.2**
	comp=Z,17nm,0.5s,baz=40,slow=5.5,SNR=1.8						
GO09	**Cerro Castillo**	**27.43**	**262**	P	**P**	**22 52 50.0**	**-1.3**
SYO	**Syowa Base**	**30.52**	**140**⇑	*e*P	**P**	**22 53 16.1**	**-2.4**
SYO	**Syowa Base**	**30.52**	**140**⇓	*e*sP	**P**	**22 53 20.2**	**+1.7**
PLTB	**Pedras Altas**	**31.56**	**311**	*e*P	**P**	**22 53 28.0**	**-0.1**
CNLB	**Canela**	**32.64**	**317**	*e*P	**P**	**22 53 38.9**	**+1.4**
PLCA	**Paso Flores**	**32.88**	**280**	P	**P**	**22 53 37.8**	**-1.8**
	comp=Z,2.2nm,0.8s,baz=127,slow=3.9,SNR=4.6						
PLCA				LR	LR	23 06 21.7	
	comp=Z,675nm,20.9s,baz=128,slow=35						
PLCA	**Paso Flores**	**32.88**	**280**	P	**P**	**22 53 37.9**	**-1.7**
PLCA				pmax	pmax		
	comp=Z,17nm,1.4s						
PLCA	**Paso Flores**	**32.88**	**280**	P	**P**	**22 53 37.9**	**-1.8**
QSPA	**South Pole Qui**	**33.45**	**180**	P	**P**	**22 53 45.0**	**+0.6**
ITAB	**Concordia**	**34.99**	**317**	*e*P	**P**	**22 53 58.7**	**+0.8**
BI02	**San Fabin de**	**36.21**	**284**	P	**P**	**22 54 07.3**	**-1.2**
PTGB	**Pitanga**	**37.25**	**318**	*e*P	**P**	**22 54 17.6**	**+0.3**
CPUP	**Villa Florida**	**37.88**	**310**	P	**P**	**22 54 21.5**	**-1.0**
	comp=Z,15nm,0.8s,baz=146,slow=8.3,SNR=28						
CPUP				LR	LR	23 10 05.3	
	comp=Z,257nm,19.2s,baz=152,slow=36						
CPUP	**Villa Florida**	**37.88**	**310**	P	**P**	**22 54 21.5**	**-1.0**
BSCB	**Bom Sucesso**	**38.40**	**331**	*e*P	**P**	**22 54 28.2**	**+1.1**
MT02	**Curacav**	**38.74**	**288**	P	**P**	**22 54 27.3**	**-2.5**
MT02				IAmb	IAmb	22 54 30.1	
	comp=Z,76nm,1.5s						
ZON	**Zonda**	**38.82**	**292**	P	**P**	**22 54 28.5**	**-2.0**
ZON				pmax	pmax		
	comp=Z,8.0nm,0.6s						
ZON	**Zonda**	**38.82**	**292**	P	**P**	**22 54 28.5**	**-2.0**
ROC1	**El Roble**	**38.90**	**288**	P	**P**	**22 54 30.6**	**-0.8**
MAW	**Mawson**	**39.09**	**143**	P	**P**	**22 54 33.1**	**+0.8**
	comp=Z,17nm,0.9s,baz=212,slow=12,SNR=1.1						
MAW				LR	LR	23 08 26.4	
	comp=Z,440nm,21.3s,baz=244,slow=33						
MAW	**Mawson**	**39.09**	**143**	P	**P**	**22 54 33.4**	**+1.1**
MAW				pmax	pmax		
	comp=Z,18nm,1.2s						
MAW	**Mawson**	**39.09**	**143**	P	**P**	**22 54 33.4**	**+1.1**
TRCB	**Terra Rica**	**39.21**	**319**	*e*P	**P**	**22 54 34.0**	**+0.2**
BB19B	**Bebedouro**	**39.43**	**325**	*e*P	**P**	**22 54 37.1**	**+1.4**
SJMB	**Sao Joao De Ma**	**39.74**	**337**	*e*P	**P**	**22 54 39.5**	**+1.3**
PCMB	**Pacaembu**	**39.82**	**321**	*e*P	**P**	**22 54 40.4**	**+1.5**
SUR	**Sutherland**	**40.12**	**73**	P	**P**	**22 54 40.6**	**-1.0**
	comp=Z,7.4nm,0.9s,baz=213,slow=3.7,SNR=3.1						
SUR				LR	LR	23 06 56.6	
	comp=Z,892nm,21.5s,baz=210,slow=30						
SUR	**Sutherland**	**40.12**	**73**	P	**P**	**22 54 41.7**	**+0.2**
SUR				IAmb	IAmb	22 55 56.6	
	comp=Z,67nm,1.6s						
CO02	**Combarbal**	**40.29**	**290**	P	**P**	**22 54 41.8**	**-1.1**
CO02				IAmb	IAmb	22 56 12.0	
	comp=Z,139nm,1.9s						
CO03	**El Pedregal**	**40.42**	**291**	P	**P**	**22 54 42.8**	**-1.0**
DIAM	**Diamantina, MG**	**40.70**	**333**	*e*P	**P**	**22 54 48.2**	**+1.8**
CO01	**Juntas del Tor**	**40.80**	**292**	P	**P**	**22 54 45.6**	**-1.6**
ITRB	**Iturama**	**41.29**	**324**	*e*P	**P**	**22 54 52.0**	**+0.9**
IPMB	**Ipameri, GO**	**42.24**	**327**	*e*P	**P**	**22 55 00.2**	**+1.3**
AQDB	**Aquidauana**	**42.47**	**316**	*e*P	**P**	**22 55 00.0**	**-0.6**
AC02	**Maricunga**	**42.89**	**296**	P	**P**	**22 55 03.7**	**-0.9**
JANB	**Januaria**	**43.98**	**334**	*e*P	**P**	**22 55 15.0**	**+2.1**
GDU01	**Guandu, BA**	**44.27**	**341**	*e*P	**P**	**22 55 17.7**	**+2.5**
BDFB	**Brasilia**	**44.40**	**329**	P	**P**	**22 55 16.8**	**+0.4**
	comp=Z,4.6nm,0.6s,baz=19,slow=12,SNR=6.7						
BDFB				LR	LR	23 11 23.0	
	comp=Z,388nm,20.7s,baz=128,slow=33						
BDFB	**Brasilia**	**44.40**	**329**	P	**P**	**22 55 15.9**	**-0.4**
GO02	**Mina Guanaco**	**44.51**	**297**	P	**P**	**22 55 15.5**	**-1.9**
GO02				IAmb	IAmb	22 55 53.2	
	comp=Z,56nm,1.6s						
PP1B	**Ponte de Pedra**	**44.79**	**319**	*e*P	**P**	**22 55 19.7**	**+0.4**
SBA	**Scott Base**	**45.38**	**184**	P	**P**	**22 55 25.1**	**+1.8**
SBA				pmax	pmax		
	comp=Z,20nm,1.1s						
SBA	**Scott Base**	**45.38**	**184**	P	**P**	**22 55 25.1**	**+1.8**
SBA				IAmb	IAmb	22 55 46.8	
	comp=Z,20nm,1.1s						
BOSA	**Boshof**	**45.44**	**74**	P	**P**	**22 55 23.1**	**-1.4**
	comp=Z,3.1nm,1.0s,baz=262,slow=15,SNR=2.1						
BOSA				LR	LR	23 10 33.3	
	comp=Z,673nm,19.8s,baz=211,slow=31						
BOSA	**Boshof**	**45.44**	**74**	P	**P**	**22 55 24.2**	**-0.3**
BOSA				pmax	pmax		
	comp=Z,46nm,2.0s						
BOSA	**Boshof**	**45.44**	**74**	P	**P**	**22 55 24.2**	**-0.3**
BOSA				IAmb	IAmb	22 56 06.7	
	comp=Z,46nm,2.0s						
ARAG	**Araguaiana, MT**	**45.50**	**324**	*e*P	**P**	**22 55 26.1**	**+1.1**
VNDA	**Vanda**	**45.85**	**182**	P	**P**	**22 55 28.0**	**+0.8**
	comp=Z,10nm,0.6s,baz=183,slow=7.7,SNR=46						
VNDA				ScP	**ScP**	**23 00 56.8**	**+3.1**
	comp=Z,6.7nm,0.9s,baz=201,slow=2.8,SNR=10						
VNDA				LR	LR	23 15 39.7	
	comp=Z,153nm,18.1s,baz=188,slow=37						
VNDA	**Vanda**	**45.85**	**182**	P	**P**	**22 55 27.9**	**+0.8**
VNDA				IAmb	IAmb	22 55 31.7	
	comp=Z,12nm,0.7s						
PB15	**IPOC Station P**	**46.09**	**298**	P	**P**	**22 55 29.0**	**-0.9**
PB15				IAmb	IAmb	22 55 43.3	
	comp=Z,21nm,0.9s						
LVC	**Limon Verde**	**46.33**	**299**	P	**P**	**22 55 30.8**	**-1.1**
LVC				pmax	pmax		
	comp=Z,32nm,0.6s						
LVC	**Limon Verde**	**46.33**	**299**	P	**P**	**22 55 30.8**	**-1.1**
LVC	**Limon Verde**	**46.33**	**299**	*e*P	**P**	**22 55 29.6**	**-2.3**
SDBA	**SAO DESIDERIO**	**46.67**	**334**	*e*P	**P**	**22 55 36.7**	**+2.5**
PB04	**IPOC Station P**	**47.16**	**298**	P	**P**	**22 55 36.6**	**-1.6**
PEXB	**Peixe**	**47.84**	**330**	*e*P	**P**	**22 55 45.8**	**+2.4**
PATCX	**Punta Patache**	**48.45**	**299**	P	**P**	**22 55 47.3**	**-0.8**
LBTB	**Lobatse**	**48.52**	**71**	P	**P**	**22 55 46.8**	**-1.8**
	comp=Z,1.8nm,0.6s,baz=210,slow=11,SNR=4.3						
LBTB	**Lobatse**	**48.52**	**71**	P	**P**	**22 55 48.2**	**-0.4**
LBTB				pmax	pmax		
	comp=Z,41nm,1.8s						
LBTB	**Lobatse**	**48.52**	**71**	P	**P**	**22 55 48.2**	**-0.4**
LBTB				IAmb	IAmb	22 56 22.2	
	comp=Z,41nm,1.8s						
SNDB	**Serra Nova Dou**	**48.84**	**326**	*e*P	**P**	**22 55 51.9**	**+0.9**
TSUM	**Tsumeb**	**49.41**	**59**	P	**P**	**22 55 53.8**	**-1.7**
	comp=Z,2.2nm,0.7s,baz=234,slow=4.6,SNR=5.5						
TSUM	**Tsumeb**	**49.41**	**59**	P	**P**	**22 55 54.7**	**-0.8**
MNMC	**Minye Minye**	**49.64**	**301**	P	**P**	**22 55 56.2**	**-1.2**
PB16	**IPOC Station P**	**50.28**	**301**	P	**P**	**22 56 01.3**	**-1.4**
PB16				IAmb	IAmb	22 56 03.9	
	comp=Z,14nm,0.5s						
SMTB	**Santa Maria do**	**50.75**	**332**	*e*P	**P**	**22 56 07.9**	**+2.4**
VILB	**Vilhena**	**51.05**	**315**	*e*P	**P**	**22 56 07.5**	**-0.3**
PRPB	**Parauapebas**	**53.92**	**330**	*e*P	**P**	**22 56 30.4**	**+1.4**
NPGB	**Novo Progresso**	**54.77**	**323**	*e*P	**P**	**22 56 36.2**	**+1.0**
SAML	**Samuel**	**55.87**	**314**	P	**P**	**22 56 41.6**	**-1.5**
SAML				pmax	pmax		
	comp=Z,33nm,1.2s						
SAML	**Samuel**	**55.87**	**314**	P	**P**	**22 56 41.6**	**-1.5**
SAML				IAmb	IAmb	22 56 43.9	
	comp=Z,33nm,1.2s						
SAML	**Samuel**	**55.87**	**314**	*e*P	**P**	**22 56 41.2**	**-2.0**
ETMB	**Extrema**	**56.33**	**310**	*e*P	**P**	**22 56 46.2**	**-0.2**
TMAB	**Tom-Au,PA,Br**	**57.11**	**333**	*e*P	**P**	**22 56 55.1**	**+3.2**
ITTB	**Itaituba**	**57.41**	**324**	*e*P	**P**	**22 56 54.3**	**+0.3**
LSZ	**Lusaka**	**57.95**	**67**	P	**P**	**22 56 57.7**	**-0.4**
LSZ				pmax	pmax		
	comp=Z,8.0nm,1.1s						
LSZ	**Lusaka**	**57.95**	**67**	P	**P**	**22 56 57.7**	**-0.4**
MALB	**Monte Alegre**	**59.32**	**326**	*e*P	**P**	**22 57 08.2**	**+0.9**
MCPB	**Macapa, AP**	**60.09**	**329**	*e*P	**P**	**22 57 14.0**	**+1.4**
MACA	**Manacapuru-AM**	**60.23**	**319**	*e*P	**P**	**22 57 14.0**	**+0.4**
CZSB	**Cruzeiro do Su**	**61.04**	**304**	*e*P	**P**	**22 57 18.2**	**-0.9**
PTGA	**Pitinga**	**62.23**	**321**	P	**P**	**22 57 27.1**	**-0.2**
PTGA				IAmb	IAmb	22 58 08.7	
	comp=Z,34nm,1.8s						
PTGA	**Pitinga**	**62.23**	**321**	*e*P	**P**	**22 57 27.0**	**-0.2**
LIC	**Lamto**	**65.08**	**23**	*e*P	**P**	**22 57 46.7**	**+0.8**
	comp=Z,72nm,1.6s						
KIC	**Kosan Boka**	**65.28**	**23**	*e*P	**P**	**22 57 46.5**	**-0.7**
	comp=Z,15nm,1.1s						
TIC	**Toumodi**	**65.49**	**23**	*e*P	**P**	**22 57 48.7**	**+0.1**
DBIC	**Dimbokro**	**65.55**	**23**	P	**P**	**22 57 47.9**	**-1.1**
	comp=Z,4.0nm,0.9s,baz=178,slow=7.8,SNR=6.8						
DBIC				LR	LR	23 20 28.5	
	comp=Z,242nm,18.5s,baz=188,slow=31						
DBIC	**Dimbokro**	**65.55**	**23**	P	**P**	**22 57 48.0**	**-0.9**
DBIC				pmax	pmax		
	comp=Z,36nm,1.6s						
DBIC	**Dimbokro**	**65.55**	**23**	P	**P**	**22 57 48.0**	**-0.9**
DBIC				IAmb	IAmb	22 57 59.5	
	comp=Z,36nm,1.6s						
PTLC	**Puerto Leguiza**	**68.98**	**306**	*e*P	**P**	**22 58 07.8**	**-3.0**
MACC	**Macarena, Meta**	**70.33**	**308**	*e*P	**P**	**22 58 19.4**	**+0.3**
FLOC	**Florencia**	**70.62**	**306**	*e*P	**P**	**22 58 20.4**	**-0.5**
OTAV	**Otavalo**	**70.70**	**303**	P	**P**	**22 58 21.2**	**-0.7**
OTAV				pmax	pmax		
	comp=Z,110nm,1.6s						
OTAV	**Otavalo**	**70.70**	**303**	P	**P**	**22 58 21.2**	**-0.7**
OTAV	**Otavalo**	**70.70**	**303**	*e*P	**P**	**22 58 21.2**	**-0.7**
OTAV	**Otavalo**	**70.70**	**303**	*e*P	**P**	**22 58 21.5**	**-0.4**
GARC	**Garzon, Huila**	**71.09**	**306**	*e*P	**P**	**22 58 22.0**	**-2.0**
BETC	**Betania**	**71.50**	**307**	*e*P	**P**	**22 58 26.8**	**+0.6**
PCON	**Cinco Dias**	**71.61**	**306**	*e*P	**P**	**22 58 28.6**	**+1.1**
BBAC	**Balboa, Cauca**	**71.72**	**305**	*e*P	**P**	**22 58 26.8**	**-1.0**
MARP	**Paez Belalcaza**	**71.88**	**306**	*e*P	**P**	**22 58 28.3**	**-0.4**
POPC	**Popayan, Colom**	**71.93**	**305**	*e*P	**P**	**22 58 28.5**	**-0.6**
PRAC	**Prado**	**72.18**	**308**	*e*P	**P**	**22 58 28.7**	**-1.7**
CHIC	**Chingaza**	**72.50**	**309**	*e*P	**P**	**22 58 31.6**	**-1.0**
ORTC	**Ortega, Tolima**	**72.51**	**307**	*e*P	**P**	**22 58 30.6**	**-1.7**
ELOV	**Elorza**	**72.91**	**314**	*e*P	**P**	**22 58 34.2**	**-0.4**
ROSC	**El Rosal**	**72.94**	**309**	P	**P**	**22 58 34.8**	**-0.5**
	comp=Z,7.6nm,0.4s,baz=293,slow=23,SNR=4.8						
ROSC				LR	LR	23 34 11.2	
	comp=Z,101nm,18.4s,baz=201,slow=39						
ROSC	**El Rosal**	**72.94**	**309**	P	**P**	**22 58 35.1**	**-0.1**
ROSC				pmax	pmax		
	comp=Z,60nm,1.6s						
ROSC	**El Rosal**	**72.94**	**309**	P	**P**	**22 58 35.1**	**-0.1**
YOTC	**Yotoco, Valle**	**73.06**	**306**	*e*P	**P**	**22 58 34.5**	**-1.1**
ANIL	**Santa Ana**	**73.10**	**308**	*e*P	**P**	**22 58 35.8**	**-0.2**
TOLC	**Tolima**	**73.15**	**308**	*e*P	**P**	**22 58 35.0**	**-1.4**
KOWA	**Kowa**	**73.32**	**22**	P	**P**	**22 58 36.8**	**-0.1**
KOWA				IAmb	IAmb	22 59 54.7	
	comp=Z,30nm,1.6s						
TOA0	**Torodi Ar. Sit**	**73.35**	**28**	P	**P**	**22 58 35.9**	**-1.2**
TOA0				IAmb	IAmb	22 58 55.4	
	comp=Z,13nm,1.0s						
TORD	**Torodi Ar. Bea**	**73.35**	**28**	P	**P**	**22 58 35.0**	**-2.1**
	comp=Z,3.5nm,0.5s,baz=199,slow=6.5,SNR=12						
TORD				LR	LR	23 24 47.6	
	comp=Z,104nm,20.6s,baz=335,slow=31						
TORD	**Torodi Ar. Bea**	**73.35**	**28**	P	**P**	**22 58 35.4**	**-1.7**
RUSC	**La Rusia**	**73.37**	**310**	*e*P	**P**	**22 58 37.4**	**-0.4**
RREF	**El Recreo**	**73.44**	**308**	*e*P	**P**	**22 58 39.1**	**+0.6**
SPBC	**San Pablo de B**	**73.57**	**309**	*e*P	**P**	**22 58 37.2**	**-1.4**
GUY2C	**Guyana, Caldas**	**73.74**	**308**	*e*P	**P**	**22 58 38.3**	**-1.8**
NORC	**Norcasia**	**73.83**	**308**	*e*P	**P**	**22 58 38.8**	**-1.3**
PLMC	**San Jos del P**	**73.86**	**307**	*e*P	**P**	**22 58 39.4**	**-0.9**
PAMC	**Pamplona, Colo**	**74.51**	**311**	*e*P	**P**	**22 58 43.0**	**-1.5**
PTBC	**PUERTO BERRIO,**	**74.53**	**309**	*e*P	**P**	**22 58 40.1**	**-3.9**
CBOC	**Ciudad Bolivar**	**74.59**	**308**	*e*P	**P**	**22 58 43.2**	**-1.5**
KMBO	**Kilima Mbogo**	**74.61**	**68**	LR	LR	23 30 09.0	
	comp=Z,187nm,18.2s,baz=108,slow=35						
SOCV	**Socops**	**74.62**	**313**	*e*P	**P**	**22 58 44.1**	**-0.5**
SDV	**Santo Domingo**	**75.08**	**314**	P	**P**	**22 58 47.2**	**-0.3**
SDV				IAmb	IAmb	22 58 52.6	
	comp=Z,20nm,0.9s						
SDV	**Santo Domingo**	**75.08**	**314**	*e*P	**P**	**22 58 47.2**	**-0.3**
SDV	**Santo Domingo**	**75.08**	**314**	*e*P	**P**	**22 58 47.9**	**+0.4**
ZARC	**Zaragoza, Cauc**	**75.55**	**309**	*e*P	**P**	**22 58 47.3**	**-2.7**
SMLC	**San Martn de**	**76.40**	**311**	*e*P	**P**	**22 58 52.1**	**-2.6**
WHZ	**Wether Hill Ro**	**77.03**	**190**	P	**P**	**22 58 59.3**	**+1.3**
MLZ	**Mavora Lakes**	**77.53**	**190**	P	**P**	**22 59 02.1**	**+1.2**
MLZ				IAmb	IAmb	22 59 08.0	
	comp=Z,40nm,1.3s						
ODZ	**Otahua Downs**	**77.59**	**192**	P	**P**	**22 59 02.9**	**+1.7**
ODZ				IAmb	IAmb	23 00 58.9	
	comp=Z,44nm,1.7s						
CRJC	**Cerrejon, Guaj**	**77.91**	**313**	*e*P	**P**	**22 59 01.8**	**-1.6**
RPZ	**Rata Peaks**	**78.85**	**192**	P	**P**	**22 59 09.6**	**+1.4**
RPZ				IAmb	IAmb	22 59 12.2	
	comp=Z,18nm,0.9s						
TAU	**Tasmania Unive**	**80.49**	**175**	P	**P**	**22 59 18.1**	**+1.0**
TAU				pmax	pmax		
	comp=Z,107nm,1.8s						
TAU	**Tasmania Unive**	**80.49**	**175**	P	**P**	**22 59 18.1**	**+1.0**
THZ	**Tophouse**	**80.54**	**194**	P	**P**	**22 59 18.7**	**+1.2**
THZ				IAmb	IAmb	22 59 36.0	
	comp=Z,17nm,0.7s						
BKZ	**Black Stump Fm**	**82.55**	**197**	P	**P**	**22 59 29.1**	**+1.0**
BKZ				IAmb	IAmb	22 59 41.5	
	comp=Z,10.0nm,0.8s						
JTS	**Las Juntas de**	**82.55**	**302**	P	**P**	**22 59 28.6**	**+0.3**
JTS				pmax	pmax		
	comp=Z,38nm,1.5s						
JTS	**Las Juntas de**	**82.55**	**302**	P	**P**	**22 59 28.6**	**+0.3**
JTS				IAmb	IAmb	22 59 30.2	
	comp=Z,38nm,1.4s						
MTO3	**Montecristo**	**88.21**	**300**	P	**P**	**22 59 56.5**	**-0.1**
BBOO	**Buckleboo**	**89.42**	**165**	P	**P**	**23 00 02.5**	**+0.4**

STKA	Stephens Creek	91.03	169	LR	LR	23 42 02.3	
	comp=Z,91nm,18.4s,baz=205,slow=36						
PPT	Papeete	92.35	233	LR	LR	23 34 56.6	
	comp=Z,106nm,18.6s,baz=183,slow=31						
ASAR	Alice Springs	98.04	161	P	P	23 00 42.0	+0.2
	comp=Z,0.9nm,0.9s,baz=182,slow=3.6,SNR=4.1						
ASAR				LR	LR	23 42 35.8	
	comp=Z,102nm,20.0s,baz=180,slow=34						
ASAR	Alice Springs	98.04	161	P	P	23 00 41.3	-0.5
WRA	Warramunga Arr	101.75	161	P	Pdif	23 00 59.2	+0.8
	comp=Z,0.2nm,0.6s,baz=193,slow=4.1,SNR=1.2						
PHWY	Pilot Hill	118.33	303		PKPdf	23 05 51.6	-0.6
NVAR	Mina Array Bea	122.38	292	PKP	PKiKP	23 06 00.3	+0.1
	comp=Z,0.2nm,0.3s,baz=82,slow=3.7,SNR=2.9						
NVAR	Mina Array Bea	122.38	292		PKiKP	23 06 00.9	+0.7
LOHW	Long Hollow	122.52	301		PKiKP	23 06 00.5	+0.2
CMAR	Chiang Mai Arr	124.09	110	PKP	PKPdf	23 06 03.8	+0.1
	comp=Z,0.8nm,0.4s,baz=225,slow=3.7,SNR=5.2						
CMAR	Chiang Mai Arr	124.09	110	PKIKP	PKiKP	23 06 04.2	+0.3
CMAR	Chiang Mai Arr	124.09	110		PKiKP	23 06 04.2	+0.3
FINES	FINESS Array B	124.70	27	PKP	PKPdf	23 06 02.9	-0.5
	comp=Z,1.8nm,0.6s,baz=179,slow=1.9,SNR=18						
FINES	FINESS Array B	124.70	27	PKIKP	PKPdf	23 06 03.3	-0.1
FINES	FINESS Array B	124.70	27		PKPdf	23 06 03.3	-0.1
MSO	Missoula	126.49	301	PKPdf	PKPdf	23 06 06.1	-1.4
BMO	Blue Mountains	126.66	298	PKIKP	PKPdf	23 06 07.6	-0.2
BMO	Blue Mountains	126.66	298	PKPdf	PKPdf	23 06 07.6	-0.2
ABKAR	Akbulak array	127.18	55	PKPdf	PKPdf	23 06 07.8	-0.7
G08A	Pilot Rock	127.79	297		PKiKP	23 06 10.5	-0.1
ARCES	ARCESS Array B	131.36	21	PKP	PKPdf	23 06 14.9	-1.0
	comp=Z,3.9nm,0.9s,baz=219,slow=0.8,SNR=11						
MKAR	Makanchi Array	136.41	71	PKP	PKPdf	23 06 25.0	-1.1
	comp=Z,0.2nm,0.7s,baz=187,slow=2.9,SNR=4.3						
MKAR	Makanchi Array	136.41	71	PKIKP	PKiKP	23 06 27.1	-0.7
MKAR	Makanchi Array	136.41	71	PKPdf	PKiKP	23 06 27.1	-0.7
YKA	Yellowknife Ar	137.24	317	PKP	PKPdf	23 06 26.7	-0.3
	comp=Z,1.3nm,0.5s,baz=121,slow=2.7,SNR=11						
WMQ	Urumqi	137.32	78	*e*PKP	PKiKP	23 06 30.3	+0.5
WMQ				LR	LR		
	comp=Z,670nm,29.1s						
WMQ				LR	LR		
	comp=Z,730nm,28.8s						
GTA	Gaotai	140.93	93	*e*PKP	PKPdf	23 06 33.1	-1.7
GTA				sPKP		23 06 40.4	
XAN	Xi'an	141.90	107	PKP	PKPdf	23 06 36.4	-0.2
ZALV	Zalesovo Beam	142.02	64	PKP	PKPdf	23 06 36.4	+0.3
	comp=Z,3.4nm,0.7s,baz=226,slow=4.2,SNR=4.3						
ZALV	Zalesovo Beam	142.02	64	PKIKP	PKPdf	23 06 37.4	+1.4
ZALV	Zalesovo Beam	142.02	64		PKPdf	23 06 37.4	+1.4
NJ2	Nanjing	145.31	120	⇓PKPbc	PKPab	23 06 43.9	+1.4
HYT	Haines Junctio	145.85	306	PKPdf	PKPab	23 06 43.8	-0.1
TIY	Taiyuan	146.53	107	*e*PKPbc	PKiKP	23 06 54.4	+5.5
INK	Inuvik	146.87	320	PKPbc	PKPbc	23 06 46.3	+0.3
	comp=Z,8.7nm,0.6s,baz=92,slow=3.8,SNR=35						
INK	Inuvik	146.87	320	PKPdf	PKPbc	23 06 45.5	-0.4
BTO	Baotou	147.34	101	*e*P	PKPdf	23 06 36.8	-9.1
EPYK	Eagle Plains	147.49	316		PKPbc	23 06 48.1	+0.3
TIA	Tai'an	147.81	114	PKPbc	PKPbc	23 06 49.3	-0.3
HHC	Hu-ho-hao-te	148.35	102	*e*PKPbc	PKPbc	23 06 50.1	-0.9
BCAR	Beaver Creek A	148.55	308		PKPbc	23 06 51.1	+0.4
NRIK	Noril'sk	149.12	39	PKPbc	PKPbc	23 06 51.5	-0.5
	comp=Z,1.5nm,0.4s,baz=297,slow=2.3,SNR=2.8						
NRIK	Noril'sk	149.12	39		PKPbc	23 06 50.7	-1.2
DOT	Dot Lake	149.71	309		PKiKP	23 06 54.4	-0.2
ZAK	Zakamensk	149.73	80	*e*PKHKP	PKPpre	23 06 53.1	
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.4s						
SONM	Songino Array	150.02	87	PKPbc	PKPbc	23 06 55.1	+0.1
	comp=Z,3.7nm,0.7s,baz=218,slow=3.5,SNR=26						
PAX	Paxson	150.13	307	PKP2	PKiKP	23 06 55.3	-0.2
PAX	Paxson	150.13	307		PKiKP	23 06 55.3	-0.2
ULN	Ulaanbaatar	150.40	87	PKIKP	PKPbc	23 06 56.2	+0.3
ULN	Ulaanbaatar	150.40	87		PKPbc	23 06 56.1	+0.3
TLY	Talaya	150.60	78	PKPbc	PKPbc	23 06 56.4	+0.3
	comp=Z,1.8nm,0.6s,baz=265,slow=5.0,SNR=4.5						
TLY	Talaya	150.60	78	PKIKP	PKiKP	23 06 56.7	-0.1
TLY	Talaya	150.60	78		PKiKP	23 06 56.7	-0.1
SCM	Sheep Creek Mo	150.63	304	PKIKP	PKiKP	23 06 56.6	0.0
SCM	Sheep Creek Mo	150.63	304		PKiKP	23 06 56.6	0.0
PRP	Porcupine Dome	150.77	312		PKPbc	23 06 56.1	-0.1
FYU	Fort Yukon	150.86	314		PKPbc	23 06 56.0	-0.2
SML	Sawmill	151.08	304		PKiKP	23 06 57.2	-0.3
HDA	Harding Lake	151.13	310		PKiKP	23 06 57.2	-0.2
IL31		151.18	310		PKPbc	23 06 57.0	+0.1
ILAR	Eielson Array	151.18	310	PKPbc	PKPbc	23 06 56.5	-0.5
	comp=Z,7.3nm,0.9s,baz=304,slow=0.4,SNR=52						
ILAR	Eielson Array	151.18	310		PKPbc	23 06 56.4	-0.6
JNU	Nakatsue	151.42	136	PKPbc	PKPbc	23 06 58.8	+0.2
	comp=Z,5.1nm,0.6s,baz=29,slow=0.7,SNR=4.2						
JNU	Nakatsue	151.42	136	PKPbc	PKPbc	23 06 59.0	+0.3
BRLK	Bradley Lake	151.66	299		PKiKP	23 06 58.5	-0.2
MDM	Murphy Dome	151.78	311		PKPbc	23 06 57.7	-0.8
KDAK	Kodiak Island	151.82	295	PKIKP	PKiKP	23 06 59.3	+0.2
KDAK	Kodiak Island	151.82	295		PKiKP	23 06 59.3	+0.2
KTH	Kantishna Hill	152.66	307		PKPbc	23 07 00.2	-0.4
IMAR	Indian Mountai	154.20	312		PKiKP	23 07 03.9	+0.2

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*IDC **18** 23:02:09.5±0.9, 43°.16N×140°.58E, h182^{km}±9^{km}, mb3.2/11, mb1 3.4/13, mb1mx3.3/41, mbtmp3.7/13, Error ellipse: s-maj=17.5km s-min=12.7km az=116.0*

*JMA **18** 23:02:09.2±0.1, 43°.19N×140°.43E, h174^{km}±1^{km}, M3.0*

ISC 18 23:02:09.1±0.7, **43°.17N**±0°.05×**140°.48E**±0°.07, **h177**^{km}±6^{km}, **n31**, σ**0^{s}.63**/42, **mb3.5**/10, **Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSK	Shakotan	0.18	360	P	Pn	23 02 32.4	-0.1
JSK				*e*S	Sn	23 02 49.9	-0.8
JSH	Shimam	0.62	211	P	Pn	23 02 34.0	-0.1
JSH				*e*S	Sn	23 02 52.4	-0.8
JISS	Ishikarishitsu	0.69	81	P	Pn	23 02 34.7	+0.3
JISS				*e*S	Sn	23 02 54.3	+0.4
JEW	Eniwo	0.79	115	P	Pn	23 02 35.5	+0.5
JEW				*e*S	Sn	23 02 55.6	+0.7
JNB	Noboribetsu	0.81	149	*e*S	Sn	23 02 55.6	+0.3
JYM2	Yakumo 2	1.06	184	P	Pn	23 02 36.6	-0.4
JYM2				*e*S	Sn	23 02 58.4	0.0
JHR	Hokuryu	1.07	57	P	Pn	23 02 37.4	+0.4
JHR				*e*S	Sn	23 02 59.0	+0.4
JOSM	Okushiri--Mats	1.32	215	P	Pn	23 02 39.1	0.0
JKB	Kayabe	1.35	162	P	Pn	23 02 39.2	-0.2
JFR	Furan	1.55	90	*e*S	Sn	23 03 05.9	-0.2
JOMM	Oshimamatsumae	1.68	192	P	Pn	23 02 42.8	+0.2
JOMM				*e*S	Sn	23 03 08.8	+0.3
JKK2	Kamakawa 2	1.79	66	P	Pn	23 02 44.0	+0.3
JKK2				*e*S	Sn	23 03 10.8	+0.2
ASAJ	Asahikawa	1.81	58	P	Pn	23 02 43.7	-0.2
	12nm,0.3s,baz=253,slow=9.2,SNR=88						
ASAJ				S	Sn	23 03 11.2	+0.4
	1.6nm,0.3s,baz=38,slow=29,SNR=12						
JOT	Ohata	1.84	166	P	Pn	23 02 43.9	-0.3
JRBN	Rebuntou	2.29	10	P	Pn	23 02 49.1	0.0
JRBN				*e*S	Sn	23 03 19.3	-1.0
JSE	Soyaes	2.34	40	P	Pn	23 02 50.2	+0.5
JSE				*e*S	Sn	23 03 22.4	+1.0
JWK2	Keihoku	2.37	25	P	Pn	23 02 50.8	+0.7
JAR	Ashorobuto	2.41	86	*e*S	Sn	23 03 21.6	-1.1
MJAR	Matsushiro Arr	6.85	196	P	Pn	23 03 47.0	-0.3
	0.2nm,0.3s,baz=24,slow=10,SNR=6.8						
KLR	Kul'dur	8.56	318	P	Pn	23 04 09.9	+0.2
	0.1nm,0.3s,baz=124,slow=14,SNR=7.5						
SEY	Seymchan	20.98	15	P	P	23 06 36.6	-1.5
	0.8nm,0.3s,baz=221,slow=9.2,SNR=7.7						
ZALV	Zalesovo Beam	37.45	307	P	P	23 09 05.5	+0.4
	1.6nm,0.5s,baz=85,slow=9.5,SNR=5.8						
MKAR	Makanchi Array	40.51	296	P	P	23 09 32.3	+1.7
	0.2nm,0.7s,baz=76,slow=12,SNR=2.0						
CMAR	Chiang Mai Arr	42.75	248	P	P	23 09 50.0	+1.0
	0.8nm,0.3s,baz=32,slow=8.6,SNR=1.5						
ILAR	Eielson Array	44.80	35	P	P	23 10 04.4	-0.5
	0.3nm,0.6s,baz=261,slow=6.2,SNR=4.8						
INK	Inuvik	49.32	29	P	P	23 10 39.2	-0.4
	1.1nm,0.7s,baz=294,slow=4.0,SNR=2.0						
YKA	Yellowknife Ar	58.91	32	P	P	23 11 49.1	0.0
	0.1nm,0.4s,baz=310,slow=7.5,SNR=1.5						
WRA	Warramunga Arr	63.05	186	P	P	23 12 16.8	-0.6
	0.6nm,0.5s,baz=4.6,slow=7.2,SNR=9.4						
FINES	FINESS Array B	63.09	331	P	P	23 12 16.9	-0.3
	3.0nm,0.9s,baz=44,slow=5.8,SNR=5.7						
ASAR	Alice Springs	66.78	187	P	P	23 12 41.6	+0.2
	0.7nm,0.9s,baz=0.9,slow=5.2,SNR=4.7						
PDAR	Pinedale Array	73.90	46	P	P	23 13 24.6	-0.2
	0.3nm,0.5s,baz=8.1,slow=3.2,SNR=3.7						

IDC 18 23:10:13.6±15.0, **39°.93N**×**139°.21E**, **h0**^{km}, **mb3.3**/3, **mb1 3.2**/4, **mb1mx3.2**/34, **mbtmp3.2**/4, **ML2.0**/1, **MS3.9**/1, **Ms1 3.9**/1, **ms1mx3.0**/14, **Error ellipse: s-maj=361.4km s-min=34.9km az=78.0**, **Near west coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAT	Matsushiro	3.48	193	P	Pn	23 11 09.9	+0.9
MJAR	Matsushiro Arr	3.48	193	Pn	Pn	23 11 09.1	+0.2
	0.1nm,0.3s,baz=40,slow=12,SNR=9.8						
SONM	Songino Array	24.79	299	P	P	23 15 37.2	0.0
	0.2nm,0.8s,baz=90,slow=7.2,SNR=1.9						
ZALV	Zalesovo Beam	38.71	310	P	P	23 17 38.9	-0.1
	0.5nm,0.5s,baz=86,slow=9.3,SNR=2.2						
MKAR	Makanchi Array	41.16	299	P	P	23 17 59.5	-0.1
	0.5nm,0.8s,baz=81,slow=8.6,SNR=6.4						
WRA	Warramunga Arr	59.73	185	LR	LR	23 44 51.3	
	comp=Z,106nm,20.6s,baz=205,slow=35						

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*DNK **18** 23:51:07.8±2.7, 69°.43N×53°.13W, h12^{km}±23^{km}, ML3.2*

*OTT **18** 23:51:09.2±0.1, 69°.44N×53°.00W, h18^{km}, MN3.4/4, Western Greenland. 498km northeast from Qikiqtarjuaq, Nu Eastern Arctic Background Seismic Zone.*

ISC 18 23:51:05.0±0.8, **69°.45N**±0°.04×**53°.25W**±0°.06, **h10**^{km}, **n22**, σ**2^{s}.82**/35, **Western Kalaallit Nunaat**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILULI	Ilulissat	0.80	107	*e*	Pn	23 51 21.6	-0.7
	baz=300,slow=16						
ILULI				*i* P	Pb	23 51 22.3	+1.4
ILULI				*i* S	Sb	23 51 32.4	+0.7
ILULI				IAML		23 51 39.2	
	comp=Z,705nm,0.3s						
NUUG	Nuugaatsiaq	2.10	0	*e*P	Pb	23 51 42.3	-0.7
NUUG				*i* S	Sb	23 52 09.5	+0.4
NUUG				IAML		23 52 13.5	
	comp=Z,188nm,0.4s						
SFJD	Kangerlussuaq	2.65	157	*i* P	Pn	23 51 49.7	+2.0
SFJD	Kangerlussuaq	2.65	157	PN	Pn	23 51 49.7	+2.0
SFJD				SN	Sn	23 52 20.9	+1.0
SFJD				Trac		23 52 26.9	
	comp=Z,15nm,0.2s						
SFJD				LG	Lg	23 52 31.1	
SFJD	Kangerlussuaq	2.65	157	*i* P	Pn	23 51 49.8	+2.0
SFJD				*i* S	Sb	23 52 24.0	-1.1
SFJD				IAML		23 52 32.3	
	comp=Z,12nm,0.3s						
UPNV	Upernavik	3.48	346	*i* P	Pn	23 52 03.3	+4.3
UPNV				*i* S	Sn	23 52 44.4	+4.2
UPNV				IAML		23 52 44.6	
	comp=Z,49nm,0.4s						
KULLO	Kullorsuaq	5.30	348	*i* P	Pn	23 52 27.4	+3.4
KULLO	Kullorsuaq	5.30	348	PN	Pn	23 52 27.7	+3.7
KULLO				SN	Sn	23 53 25.4	+0.4
KULLO				Trac		23 53 51.5	
	comp=Z,469nm,1.8s						
KULLO				LG	Lg	23 53 56.1	
KULLO	Kullorsuaq	5.30	348	*i* P	Pn	23 52 27.5	+3.4
KULLO				IAML		23 53 58.8	
	comp=Z,16nm,0.4s						
NUUK	Nuuk	5.33	173	*i* P	Pn	23 52 25.9	+1.4
NUUK				IAML		23 53 51.3	
	comp=Z,35nm,0.4s						
SUMG	Summit	5.75	50	*i* P	Pn	23 52 31.5	+1.0
SUMG	Summit	5.75	50	*i* P	Pn	23 52 31.6	+1.0
SUMG				IAML		23 54 07.6	
	comp=Z,50nm,0.4s						
ANGG	Ammassalik, Gr	7.10	115	*i* P	Pn	23 52 49.9	+1.2
ANGG				*i* S	Sn	23 54 05.0	-4.3
ANGG				IAML		23 54 08.0	
	comp=Z,29nm,0.3s						
FRB	Frobisher Bay	8.34	234	PN	Pn	23 53 08.3	+2.6
FRB				SN	Sn	23 54 38.3	-1.4
FRB				Trac		23 54 54.2	
	comp=Z,21nm,0.8s						
TULEG	Thule	8.41	335	PN	Pn	23 53 09.6	+2.9
TULEG				SN	Sn	23 54 39.1	-2.5
TULEG				Trac		23 54 47.6	
	comp=Z,226nm,1.2s						
TULEG	Thule	8.41	335	*i* P	Pn	23 53 09.9	+3.2
TULEG				*i* S	Sn	23 54 34.9	-6.6
TULEG				IAML		23 54 43.9	
	comp=Z,3.5nm,0.4s						
NRS	Narsarsuaq	8.94	155	*i* P	Pn	23 53 13.4	-0.5
NRS	Narsarsuaq	8.94	155	*i* P	Pn	23 53 13.5	-0.5
NRS				IAML		23 55 12.2	
	comp=Z,7.4nm,0.4s						
SCO	Scoresbysund	10.71	70	*i* P	Pn	23 53 37.4	-0.8
SCO	Scoresbysund	10.71	70	*i* P	Pn	23 53 37.0	-1.2
SCO				*i* P	Pn	23 53 37.4	-0.8
SCO				IAML		23 55 42.1	
	comp=Z,2.6nm,0.3s						
DAG	Danmarks Havn	12.21	38	*i* P	Pn	23 53 58.0	-0.6
DAG				IAML		23 56 16.0	
	comp=Z,1.7nm,0.4s						
EUNU	Eureka	13.41	336	PN	Pn	23 54 17.7	+2.7
EUNU				SN	Sn	23 56 36.6	-7.3

OTT 18 23:58:59.2±0.5, **50°.94N**×**50°.97W**, **h18**^{km}, **ML4.1**/5, **Offshore Newfoundland. 271km northeast from Musgrave Harbour, Nl Eastern Background Seismic Zone.**, **North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJNN	Saint John's	3.53	199	PN	Pn	23 59 52.5	-0.5
SJNN				SN	Sn	00 00 32.1	-2.0
SJNN				Trac		00 00 48.1	
	comp=Z,76nm,0.6s						
DRLN	Deer Lake	4.53	251	PN	Pn	00 00 06.0	-0.8
DRLN				SN	Sn	00 00 55.5	-3.4
DRLN				Trac		00 00 59.6	
	comp=Z,44nm,0.6s						
MKVL	Makkovik	6.47	313	PN	Pn	00 00 32.2	-1.1
MKVL				SN	Sn	00 01 41.3	-5.3
MKVL				Trac		00 02 33.3	
	comp=Z,409nm,2.5s						
NATG	Natashquan Que	7.56	270	PN	Pn	00 00 47.5	-0.9
NATG				SN	Sn	00 02 08.4	-5.2
NATG				Trac		00 02 39.0	
	comp=Z,31nm,0.6s						
GBN	Guysborough	8.95	236	PN	Pn	00 01 07.2	-0.3
GBN				SN	Sn	00 02 41.2	-6.6
GBN				Trac		00 02 46.4	
	comp=Z,9.3nm,0.4s						
LMN	Caledonia Moun	10.51	246	PN	Pn	00 01 30.0	+1.3
LMN				SN	Sn	00 03 17.0	-9.0
LMN				Trac		00 03 19.3	
	comp=Z,19nm,0.9s						
ELNB	Elgin, New Bru	10.71	247	PN	Pn	00 01 28.2	-3.2
ELNB				SN	Sn	00 03 21.9	-8.9
HKNB	Havelock Quarr	10.77	248	PN	Pn	00 01 28.0	-4.4
HKNB				SN	Sn	00 03 24.2	-8.2

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*IDC **19** 00:00:50.6±2.0, 5°.10N×126°.93E, h0^{km}, mb3.5/4, mb1 3.7/4, mb1mx3.4/51, mbtmp3.5/4, Error ellipse: s-maj=112.2km s-min=24.9km az=69.0*

ISC 19 00:00:54.3±2.2, **4°.9N**±0°.3×**127°.1E**±0°.3, **h10**^{km}, **n7**, σ**0^{s}.38**/9, **mb3.5**/4, **1C**, **Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	1.85	311	*e*P	Pn	00 01 25.5	-0.6
DDMP				*e*S	Sn	00 01 49.7	+0.1
KCP	Kidapawan	2.92	317	⇑*i*P	Pb	00 01 46.7	+0.1
KCP				*i* S	Sb	00 02 22.4	+0.1
SKMP	Bagumbayan, Su	3.03	303	*e*P	Pn	00 01 42.7	+0.3
SKMP				*e*S	Sn	00 02 18.5	-0.3
FITZ	Fitzroy Crossi	22.88	184	P	P	00 05 57.8	-0.4
	1.8nm,0.8s,baz=354,slow=10,SNR=1.5						
WRA	Warramunga Arr	25.67	164	P	P	00 06 24.7	+0.1
	0.7nm,0.6s,baz=344,slow=10,SNR=9.8						
ASAR	Alice Springs	29.14	167	P	P	00 06 56.0	+0.3
	0.3nm,0.5s,baz=359,slow=9.0,SNR=7.1						
MKAR	Makanchi Array	56.84	325	P	P	00 10 34.9	-4.3
	0.2nm,0.5s,baz=121,slow=8.1,SNR=6.2						

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*IDC **19** 00:05:53.6±1.1, 43°.54N×105°.31W, h0^{km}, mb1 3.4/5, mb1mx3.2/52, mbtmp3.1/5, ML3.2/5, Error ellipse: s-maj=21.6km s-min=8.9km az=151.0*

*NEIC **19** 00:05:54.8±1.8, 43°.71N±0°.04×105°.21W±0°.07, h0^{km}±2^{km}, ML3.1/44, Error ellipse: s-maj=9.3km s-min=5.7km az=285.0*

ISC 19 00:05:53.9±0.9, **43°.68N**±0°.05×**105°.29W**±0°.05, **h0**^{km}, **n32**, σ**1^{s}.48**/31, **Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	Black Hills	1.01	63	Pg	Pg	00 06 13.3	+0.1
K22A	Casper	1.37	222		Pg	00 06 19.0	-1.1
K22A				IAML		00 06 42.3	
	comp=E,353nm,0.3s						
K22A				IAML		00 06 43.1	
	comp=N,371nm,0.3s						
PHWY	Pilot Hill	2.38	183		Pn	00 06 35.8	+1.4
RWWY	Rawlins	2.44	216		Pn	00 06 36.0	+0.8
RWWY				IAML		00 07 11.4	
	comp=N,135nm,1.1s						
LAO	LASA Array	3.08	348	Pn	Pn	00 06 45.1	+1.2
LAO				IAML		00 07 31.1	
	comp=N,68nm,0.8s						
RLMT	Red Lodge	3.20	298	Pn	Pn	00 06 46.3	+0.7
RLMT				IAML		00 07 43.2	
	comp=N,33nm,0.7s						
RLMT				IAML		00 07 43.3	
	comp=N,32nm,1.1s						
BW06	Boulder Array	3.25	255		Pn	00 06 47.9	+1.5
BW06				IAML		00 07 37.4	
	comp=N,38nm,0.4s						
BW06				IAML		00 07 38.2	
	comp=N,30nm,0.6s						
PD31	Pinedale Array	3.25	255		Pn	00 06 46.7	+0.3
PDAR	Pinedale Array	3.25	255	Pn	Pn	00 06 48.5	+2.1
	comp=N,2.4nm,0.3s,baz=81,slow=12,SNR=34						
PDAR				Lg	Lg	00 07 33.0	
	comp=N,15nm,0.3s,baz=80,slow=33,SNR=13						
PDAR	Pinedale Array	3.25	255	Pn	Pn	00 06 48.2	+1.8
YNE	Yellowstone No	3.64	293		Pn	00 06 52.1	+0.4
OGNE	Ogallala	3.64	137	Pn	Pn	00 06 53.1	+1.4
YMP	Mirror Lake Pl	3.66	289		Pn	00 06 53.7	+1.7
GCMT	Greycliff	3.77	306		Pn	00 06 55.2	+1.8
LOHW	Long Hollow	3.86	271		Pn	00 06 57.3	+2.5
H17A	Grant Village	3.88	282		Pn	00 06 56.1	+1.1
H17A				IAML		00 08 01.6	
	comp=N,21nm,1.3s						
H17A				IAML		00 08 11.8	
	comp=E,20nm,5.0s						
ISCO	Idaho Springs	3.88	184	Pn	Pn	00 06 56.7	+1.6
FLWY	Flagg Ranch	3.93	278		Pn	00 06 56.3	+0.6
FLWY				IAML		00 08 09.0	
	comp=E,33nm,1.2s						
YPP	Pitchstone Pla	4.03	280		Pn	00 06 58.3	+1.2
REDW	Red Top Meadow	4.06	267		Pn	00 06 58.4	+0.9
REDW				IAML		00 08 12.2	
	comp=E,33nm,0.9s						
REDW				IAML		00 08 14.1	
	comp=E,32nm,1.1s						
YHH	Holmes Hill	4.15	287	Pn	Pn	00 06 59.3	+0.5
O20A	White River Ci	4.17	213	Pn	Pn	00 06 60.0	+1.0
O20A				IAML		00 08 19.4	
	comp=N,28nm,0.9s						
YHL	Hebgen Lake	4.39	288		Pn	00 07 03.6	+1.5
RDMU	Red Mountain	4.45	227		Pn	00 07 05.1	+2.3
DGMT	Dagmar	4.85	9	Pn	Pn	00 07 06.6	-1.6
EGMT	Eagleton	5.35	326		Pn	00 07 16.5	+1.4
PV22	Blue Mesa, Par	5.78	208	Pn	Pn	00 07 22.9	+1.8
I10CA	LAC DU BONNET	9.09	41	*i*		01 07 20.0	
	baz=219,slow=330,SNR=5.1						
ULM	Lac du Bonnet	9.19	41	Pn	Pn	00 08 06.3	-1.4
	comp=N,0.8nm,0.3s,baz=231,slow=12,SNR=9.1						
ULM				Lg	Lg	00 10 40.8	
	comp=N,0.2nm,0.3s,baz=131,slow=20,SNR=2.3						
NVAR	Mina Array Bea	11.14	246	Pn	Pn	00 08 36.9	+2.3
	comp=N,0.1nm,0.3s,baz=33,slow=15,SNR=2.2						
TXAR	Lajitas Array	14.37	174	Pn	Pn	00 09 17.8	-1.0
	comp=N,0.1nm,0.3s,baz=17,slow=13,SNR=2.3						
YKA	Yellowknife Ar	19.62	347	P	Pn	00 10 24.7	-0.2
	comp=N,0.1nm,0.3s,baz=166,slow=10,SNR=1.8						

TAP 19 00:20:46.7, **22°.84N**×**120°.92E**, **h8**^{km}±1^{km}, **ML1.4**, **1C**, **C**, **Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWG	Pinlang	0.15	98	⇑P	Pg	00 20 50.7	+0.8
	baz=99						
TWG				S	Sg	00 20 53.0	+1.0
	baz=99						
TWGBT	Beinan	0.15	99	*e*P	Pg	00 20 50.7	+0.7
	baz=99						
TWGBT				*e*S	Sg	00 20 53.0	+0.8
	baz=99						
LONT	Longtian	0.21	72	P	Pg	00 20 51.6	+0.6
	baz=71						
LONT				*e*S	Sg	00 20 54.5	+0.7
	baz=71						
ECL	Taimali	0.25	172	P	Pg	00 20 52.3	+0.7
	baz=172						
ECL				S	Sg	00 20 55.4	+0.5
	baz=172						
SSD	Sandimen	0.28	250	P	Pg	00 20 52.5	+0.3
	baz=246						
SSD				S	Sg	00 20 55.9	0.0
	baz=246						
TSMG	Majia	0.28	242	*e*P	Pg	00 20 52.7	+0.3
	baz=237						
TSMG				*e*S	Sg	00 20 56.2	+0.1
	baz=237						
SLGT	Liugui	0.29	302	*e*P	Pg	00 20 52.5	0.0
	baz=301						
SLGT				*e*S	Sg	00 20 56.7	+0.3
	baz=301						
MASBT	Mashibuluo	0.35	229	*e*P	Pg	00 20 53.9	+0.4
	baz=230						
MASBT				*e*S	Sg	00 20 58.5	+0.4
	baz=230						
STYH	Taoyuan	0.35	339	*e*P	Pg	00 20 54.4	+0.8
	baz=338						
STYH				*e*S	Sg	00 20 59.0	+0.7
	baz=338						
ELDTW	Lidau	0.36	15	P	Pg	00 20 54.0	+0.2
	baz=23						
ELDTW				*e*S	Sg	00 20 59.1	+0.5
	baz=23						
EDH	Donghe	0.38	70	*e*S	Sb	00 21 01.4	-0.4
	baz=62						
SGST	Jiashian	0.39	308	*e*S	Sb	00 21 01.9	-0.2
	baz=308						
SSPT	Xinbi	0.48	222	*e*P	Pb	00 20 57.2	-0.1
	baz=215						
SSPT				*e*S	Sb	00 21 04.3	-0.3
	baz=215						
WTP	Ta-pu	0.49	326	*e*P	Pb	00 20 57.6	0.0
	baz=325						
WTP				*e*S	Sb	00 21 05.0	0.0
	baz=325						
CHN1	Nanshi	0.49	314	*e*S	Sb	00 21 05.9	+0.8
	baz=316						
FULB	Fuli	0.50	44	*e*P	Pb	00 20 57.5	-0.2
	baz=35						
FULB				*e*S	Sb	00 21 05.1	-0.1
	baz=35						
SCZT	Fangliau	0.54	210	P	Pb	00 20 58.0	-0.4
	baz=211						
SCZT				*e*S	Sb	00 21 05.5	-0.9
	baz=211						
SNJT	Kaohsiung City	0.54	261	*e*P	Pb	00 20 58.6	+0.2
	baz=267						
TWK	Hsinying	0.58	317	*e*S	Sb	00 21 08.7	+1.2
	baz=319						
CHN4	Tsaushan	0.59	330	*e*S	Sb	00 21 08.1	+0.3
	baz=334						
TWF1	Yuli	0.62	35	P	Pg	00 20 58.7	0.0
	baz=34						
EYUL	Yuli	0.63	36	*e*P	Pg	00 20 58.9	+0.1
	baz=28						
EYUL				*e*S	Sg	00 21 06.4	-0.6
	baz=28						
SLIU	Shizi	0.63	190	*e*P	Pg	00 20 59.3	+0.4
	baz=184						
SLIU				*e*S	Sb	00 21 09.0	0.0

	baz=184						
YULB	**Yu-li**	0.65	33	eP	Pg	00 20 59.2	-0.1
	baz=39						
YULB				eS	Sg	00 21 07.0	-0.8
	baz=39						
EHY	**Hungye**	0.76	29	eP	Pg	00 21 01.5	+0.1
	baz=29						
CHN5	**Tsauling**	0.78	344	eP	Pb	00 21 02.7	0.0
	baz=351						
CHN5				eS	Sb	00 21 13.4	0.0
	baz=351						
HGSD	**Ruisui**	0.80	36	eP	Pb	00 21 03.0	+0.2
	baz=28						
VWDT	**VWDT**	0.93	13	eP	Pg	00 21 04.8	+0.1
	baz=15						
VWDT				eS	Sb	00 21 17.9	+0.3
	baz=15						
SSLB	**Suanglung**	0.94	2	eS	Sn	00 21 20.0	0.0
	baz=1.0						

TAP 19 00:20:54.1, 22°.84N×120°.91E, h8^{km}, ML1.4, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWG	**Pinlang**	0.15	96	P	Pg	00 20 58.1	+0.8
	baz=97						
TWG				S	Sg	00 21 00.4	+1.0
	baz=97						
TWGBT	**Beinan**	0.15	97	eP	Pg	00 20 58.1	+0.7
	baz=97						
TWGBT				eS	Sg	00 21 00.4	+0.8
	baz=97						
LONT	**Longtian**	0.21	71	eP	Pg	00 20 59.0	+0.6
	baz=71						
LONT				eS	Sg	00 21 02.0	+0.7
	baz=71						
ECL	**Taimali**	0.24	171	eP	Pg	00 20 59.8	+0.8
	baz=171						
ECL				S	Sg	00 21 02.8	+0.6
	baz=171						
SSD	**Sandimen**	0.28	251	eP	Pg	00 20 60.0	+0.4
	baz=247						
SSD				S	Sg	00 21 03.3	0.0
	baz=247						
TSMG	**Majia**	0.28	242	eP	Pg	00 21 00.1	+0.5
	baz=238						
TSMG				eS	Sg	00 21 03.6	+0.2
	baz=238						
SLGT	**Liugui**	0.29	302	eS	Sg	00 21 04.7	+0.9
	baz=302						
MASBT	**Mashibuluo**	0.34	229	eP	Pg	00 21 01.4	+0.5
	baz=226						
MASBT				eS	Sg	00 21 05.9	+0.5
	baz=226						
STYH	**Taoyuan**	0.35	339	eS	Sg	00 21 06.6	+0.8
	baz=338						
ELDTW	**Lidau**	0.36	15	eP	Pg	00 21 01.7	+0.4
	baz=26						
ELDTW				eS	Sg	00 21 06.1	-0.1
	baz=26						
EDH	**Donghe**	0.38	69	eS	Sb	00 21 08.8	-0.6
	baz=62						
SSPT	**Xinbi**	0.47	222	eS	Sb	00 21 11.3	-0.6
	baz=215						
WTP	**Ta-pu**	0.49	326	eS	Sb	00 21 12.9	+0.4
	baz=325						
FULB	**Fuli**	0.50	44	eS	Sg	00 21 11.6	+1.1
	baz=34						
TPUB	**Ta-pu**	0.53	330	eS	Sb	00 21 13.6	0.0
	baz=329						
SCZT	**Fangliau**	0.54	210	eS	Sg	00 21 12.6	+1.1
	baz=211						
TWK	**Hsinying**	0.58	318	eS	Sb	00 21 16.5	+1.5
	baz=320						
CHN4	**Tsaushan**	0.59	330	eS	Sb	00 21 16.7	+1.4
	baz=344						
TWF1	**Yuli**	0.62	34	eP	Pg	00 21 06.2	0.0
	baz=34						
TWF1				eS	Sg	00 21 14.4	+0.1
	baz=34						
TWF1	**Yuli**	0.62	34	eS	Pg	00 21 06.2	0.0
	baz=34						
SLIU	**Shizi**	0.63	190	eP	Pb	00 21 06.8	-0.5
	baz=183						
SLIU				eS	Sb	00 21 16.6	+0.3
	baz=183						
YULB	**Yu-li**	0.66	32	eS	Sg	00 21 16.0	+0.7
	baz=32						
EHY	**Hungye**	0.76	29	eP	Pg	00 21 08.9	0.0
	baz=29						
EHY				eS	Sg	00 21 19.1	+0.2
	baz=29						
CHN5	**Tsauling**	0.79	344	eP	Pn	00 21 10.9	-0.7
	baz=355						
HGSD	**Ruisui**	0.80	36	eP	Pb	00 21 10.5	+0.2
	baz=29						
HGSD				eS	Sb	00 21 21.6	+0.2
	baz=29						
VWDT	**VWDT**	0.94	13	eP	Pb	00 21 12.8	+0.2
	baz=15						
VWDT				eS	Sb	00 21 25.7	+0.5
	baz=15						
SSLB	**Suanglung**	0.95	2	eS	Sn	00 21 27.1	-0.5
	baz=356						

*IDC **19** 00:27:48.1±3.0, 55°.95N×156°.86W, h0^{km}, mb3.0/2, mb1 3.2/4, mb1mx3.1/37, mbtmp3.1/4, ML3.0/2, Error ellipse: s-maj=56.0km s-min=27.0km az=149.0*

*AEIC **19** 00:27:53±1.4, 56°.30N±0°.05×156°.56W±0°.07, h38^{km}±10^{km}, ML3.2, ML3.3/16(NEIC), Error ellipse: s-maj=7.9km s-min=5.4km az=165.0*

*NEIC **19** 00:27:54±1.5, 56°.25N±0°.06×156°.54W±0°.08, h49^{km}±29^{km}, Error ellipse: s-maj=9.7km s-min=5.7km az=162.0*

ISC 19 00:27:55.7±1.2**, 56°.30N**±0°.08×**156°.69W**±0°.05**, h64^{km}, n43, σ2^{s}21**/47**, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHGN	**Chignik**	0.96	271		Pn	00 28 11.5	-1.8
CHGN					Sn	00 28 25.6	-0.7
CHGN	**Chignik**	0.96	271	IAML		00 28 27.5	
	comp=N,1μm,0.4s						
CHGN				IAML		00 28 28.2	
	comp=E,1μm,0.3s						
PLBL	**Peulik Blue Cr**	1.40	357		Pn	00 28 17.8	-1.3
PLBL					Sn	00 28 35.4	-1.4
PLK3	**Peulik 3**	1.41	9		Pn	00 28 17.9	-1.3
PLK3					Sn	00 28 36.0	-0.9
SII	**Sitkinak Islan**	1.42	79		Pn	00 28 16.5	-2.8
SII					Sn	00 28 34.0	-3.2
PLK2	**Peulik 2**	1.48	8		Pn	00 28 19.0	-1.1
PLK1	**Peulik 1**	1.50	2		Pn	00 28 18.9	-1.6
CAHL	**Cahill**	1.91	23		Pn	00 28 24.1	-1.9
OHAK	**Old Harbor**	2.09	62		Pn	00 28 25.1	-3.3
OHAK	**Old Harbor**	2.09	62	IAML		00 29 06.7	
	comp=E,135nm,1.2s						
OHAK				IAML		00 29 09.2	
	comp=N,162nm,0.9s						
KBM	**Katmai Bkd Mtn**	2.14	22		Pn	00 28 28.0	-1.0
KVTA	**Katmai Vly 10**	2.22	19		Pn	00 28 28.6	-1.5
KVTA					Sn	00 28 55.9	-0.5
SDPT	**Sand Point**	2.34	247	Pn	Pn	00 28 31.1	-0.7
KDAK	**Kodiak Island**	2.69	55	Pn	Pn	00 28 33.7	-2.8
	comp=N,4.2nm,0.3s,baz=235,slow=7.5,SNR=34						
KDAK				Sn	Sn	00 29 15.5	+7.6
	comp=N,6.2nm,0.3s,baz=350,slow=18,SNR=7.7						
KDAK	**Kodiak Island**	2.69	55		Pn	00 28 33.2	-3.3
DT1	**Dutton Round H**	3.38	252		Pn	00 28 45.6	-0.4
AUCH	**Augustine Cone**	3.52	28		Pn	00 28 46.6	-1.4
FALS	**False Pass**	4.08	252	Pn	Pn	00 28 55.5	0.0
CNPM	**China Poot**	4.35	40	Pn	Pn	00 28 57.3	-1.9
CNPM				IAML		00 29 56.4	
	comp=N,36nm,2.6s						
CNPM				IAML		00 30 00.5	
	comp=E,50nm,0.8s						
BRLK	**Bradley Lake**	4.64	39	Pn	Pn	00 29 00.4	-2.8
BRLK				IAML		00 29 39.5	
	comp=N,24nm,3.4s						
BRLK				IAML		00 30 08.6	
	comp=E,26nm,0.8s						
RSO	**Redoubt South**	4.66	25		Pn	00 29 03.0	-0.6
SVW2	**Sparrevohn**	4.84	6	Pn	Pn	00 29 03.9	-2.0
SEW	**Seward**	5.40	42	Pn	Pn	00 29 12.2	-1.3
SUA	**Susitna One**	6.02	28	Pn	Pn	00 29 20.5	-1.6
UNV	**Unalaska Valle**	6.15	250	Pn	Pn	00 29 23.4	-0.4
SKT	**Skwentna**	6.28	23	Pn	Pn	00 29 23.8	-1.8
TTA	**Tatalina**	6.66	3	Pn	Pn	00 29 29.2	-1.6
KNK	**Knik Glacier**	6.67	36	Pn	Pn	00 29 29.6	-1.3
HIN	**Hinchinbrook I**	6.75	48	Pn	Pn	00 29 29.2	-2.8
GHO	**Glory Hole Cre**	6.79	33	Pn	Pn	00 29 31.4	-1.2
SPIA	**Saint Paul Isl**	7.51	282	Pn	Pn	00 29 43.0	+0.7
KLU	**Klutina**	7.62	43	Pn	Pn	00 29 42.5	-1.5
TRF	**Thorofare Moun**	7.86	22	Pn	Pn	00 29 44.9	-2.3
RND	**Reindeer**	8.14	26	Pn	Pn	00 29 49.3	-1.7
BALM	**Baldy**	8.85	52	Pn	Pn	00 29 58.4	-2.3
ANM	**Nome**	9.32	336	Pn	Pn	00 30 06.7	-0.4
IL31		9.76	26	Pn	Pn	00 30 10.3	-2.7
ILAR	**Eielson Array**	9.76	26	Pn	Pn	00 30 08.1	-5.0
	comp=E,0.1nm,0.3s,baz=218,slow=13,SNR=2.1						
ILAR				Sn	Sn	00 31 59.6	-1.2
	comp=E,0.1nm,0.3s,baz=106,slow=26,SNR=2.1						
IMAR	**Indian Mountai**	9.81	7	Pn	Pn	00 30 12.1	-1.7
PRP	**Porcupine Dome**	10.70	26	Pn	Pn	00 30 23.1	-2.9
TNA	**Tin City**	10.75	334	Pn	Pn	00 30 26.3	-0.2
YKA	**Yellowknife Ar**	21.97	56	P	P	00 32 46.8	+3.0
	comp=E,0.1nm,0.6s,baz=272,slow=9.6,SNR=2.5						
SONM	**Songino Array**	55.37	306	P	P	00 37 24.7	+1.8
	comp=E,0.4nm,0.7s,baz=57,slow=5.3,SNR=4.4						

*BER **19** 00:38:27.9±1.9, 67°.89N×20°.02E, h0^{km}, ML0.9, Suspected explosion*

UPP 19 00:38:25.4±0.0**, 67°.82N×20°.19E, h0^{km}, ML2.7, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	**Kurravaara**	0.15	22	P	Pg	00 38 28.4	+0.2
KUA				S	Sg	00 38 30.5	+0.4
RATU	**Laukkuluspa**	0.23	271	P	Pg	00 38 30.0	+0.2
KOVU	**Salmi**	0.41	359	P	Pg	00 38 33.1	0.0
KOVU				S	Sg	00 38 38.5	+0.1
NIKU	**Nikkaluokta**	0.44	277	P	Pg	00 38 33.9	+0.1
DUNU	**Dundret**	0.72	168	P	Pg	00 38 38.7	-0.4
LANU	**Lannavaara**	0.72	70	P	Pg	00 38 39.1	0.0
MASU	**Masugnsbyn**	0.78	117	P	Pg	00 38 40.2	-0.1
KIF	**Kilpisjarvi**	1.21	11	eP	Pg	00 38 48.2	-0.3
KIF				eS	Sb	00 39 05.4	+0.1
PAJU	**Pajala**	1.38	124	P	Pg	00 38 50.5	-1.3
KTK1	**Kautokeino**	1.65	42	eP	Pn	00 38 54.9	-0.7
KTK1				IAML		00 39 36.8	
	comp=Z,2.5nm,1.1s						
HARU	**Harads**	1.69	169	P	Pn	00 38 55.7	-0.4
JETT	**Jettan, Norway**	1.75	3	eP	Pn	00 38 57.5	+0.5
TRO	**Tromso**	1.88	346	eP	Pn	00 38 58.0	-0.7
ARA0	**ARCESS Array S**	2.60	46	eP	Pn	00 39 10.4	+1.8

*HEL **19** 00:39:05.9, 67°.87N×20°.06E, h0^{km}, ML1.9, Explosion*

UPP 19 00:39:06.7±0.1**, 67°.86N×20°.19E, h0^{km}, ML2.6, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	**Kurravaara**	0.11	28	P	Pg	00 39 09.1	+0.2
KUA				S	Sg	00 39 10.7	+0.4
KUA	**Kurravaara**	0.11	28	i P	Pg	00 39 09.1	+0.2
KUA				i S	Sg	00 39 10.7	+0.4
RATU	**Laukkuluspa**	0.23	262	P	Pg	00 39 11.2	+0.1
RATU	**Laukkuluspa**	0.23	262	i P	Pg	00 39 11.2	+0.1
KOVU	**Salmi**	0.37	358	P	Pg	00 39 13.9	+0.1
KOVU	**Salmi**	0.37	358	i P	Pg	00 39 13.9	+0.1
NIKU	**Nikkaluokta**	0.44	272	P	Pg	00 39 15.2	+0.1
NIKU	**Nikkaluokta**	0.44	272	i P	Pg	00 39 15.2	+0.1
LANU	**Lannavaara**	0.70	73	eP	Pg	00 39 19.8	-0.3
	baz=260						
LANU				eS	Sg	00 39 29.2	-0.1
DUNU	**Dundret**	0.75	169	P	Pg	00 39 20.9	-0.1
DUNU	**Dundret**	0.75	169	i P	Pg	00 39 20.9	-0.1
KIF	**Kilpisjarvi**	1.18	11	eP	Pb	00 39 29.7	-0.1
KIF	**Kilpisjarvi**	1.18	11	ePB	Pb	00 39 29.8	0.0
	baz=189						
KIF				MSG		00 39 42.5	
	comp=Z,13nm,0.2s						
KIF				eSB	Sg	00 39 44.9	+0.5
PAJU	**Pajala**	1.40	125	P	Pn	00 39 32.1	-1.4
PAJU	**Pajala**	1.40	125	eP	Pn	00 39 32.2	-1.3
PAJU				eSB	Sg	00 39 50.9	-0.7
KALU	**Kalix**	2.36	147	ePB	Pn	00 39 47.6	+1.0
	baz=324						
KALU				eSB	Sn	00 40 17.9	+1.7
TOF	**Tornio**	2.41	136	ePB	Pb	00 39 49.2	-1.7
TOF				MSG		00 40 18.7	
	comp=Z,5.0nm,0.2s						
TOF				eSG	Sb	00 40 20.6	-0.5
SGF	**Sodankyl**	2.46	97	ePB	Pb	00 39 50.2	-1.5
SGF				eSB	Sn	00 40 20.1	+1.5
ARA0	**ARCESS Array S**	2.57	47	eP	Pb	00 39 52.2	-1.5
ARA0	**ARCESS Array S**	2.57	47	ePG	Pb	00 39 52.5	-1.1
ARA0				eSB	Sb	00 40 24.1	-1.6
RNF	**Rovaniemi**	2.59	116	ePB	Pb	00 39 51.8	-2.0
RNF				eSB	Sb	00 40 25.0	-1.1
VRF	**Varrio**	3.58	87	ePG	Pb	00 40 12.0	+1.3
OUL	**Oulu**	3.60	138	ePG	Pb	00 40 13.2	+2.1
	baz=324						
MSF	**Maaselka**	4.00	115	ePG	Pb	00 40 19.1	+1.2
	baz=300						
KU6	**Riekki**	4.23	111	ePG	Pb	00 40 22.2	+0.3
	baz=297						

*ECX **19** 00:40:11.5±0.6, 31°.50N×115°.66W, h9^{km}±4^{km}, MD2.0, ML2.3*

*MEX **19** 00:40:12.2±0.3, 31°.41N×115°.78W, h3^{km}±10^{km}, MD3.5*

ISC 19 00:40:09.9±1.1**, 31°.55N**±0°.03×**115°.65W**±0°.04**, h9^{km}**±14^{km}**, n12, σ0^{s}61**/21**, 1C-2D, Baja California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ECBX	**El Chinero**	0.52	98	eP	Pg	00 40 19.9	-0.1
ECBX				eS	Sg	00 40 26.9	+0.1
SPIG	**San Pedro Mart**	0.53	162	⇓eP	Pg	00 40 20.6	+0.3
	baz=323,slow=12						
SPIG				eS	Sg	00 40 27.1	-0.1
SPIG	**San Pedro Mart**	0.53	162	eP	Pg	00 40 20.2	0.0
SPIG				eS	Sg	00 40 27.4	+0.1
SPX	**San Pedro Mart**	0.54	163	⇓iP	Pg	00 40 20.6	+0.2
SPX				eS	Sg	00 40 27.1	-0.4
SPX				⇑e		00 40 27.8	
SPX				IAML		00 40 27.8	
	comp=N,194nm,0.1s						
SVX	**San Vicente**	0.56	247	eP	Pg	00 40 21.0	+0.3
SVX				eS	Sb	00 40 28.2	-1.7
SFX	**San Felipe**	0.86	126	eP	Pg	00 40 26.0	-0.4
SFX				eS	Sg	00 40 37.5	0.0
RMX	**La Rumorosa**	1.11	341	eP	Pg	00 40 30.8	-0.4
RMX				eS	Sg	00 40 44.8	-0.9
CBX	**Cerro Bola**	1.15	312	eP	Pg	00 40 32.0	0.0
CBX				eS	Sg	00 40 47.5	+0.6
CBX				IAML		00 40 48.3	
	comp=N,100nm,0.3s						
CBX				IAML		00 40 48.8	
	comp=E,88nm,0.2s						
IKP	**In-Ko-Pah, Jac**	1.16	341	eP	Pg	00 40 32.7	+0.4
TJIG	**Tijuana**	1.24	316	eP	Pg	00 40 33.6	-0.1
TJIG				eS	Sg	00 40 49.5	-0.3
BAR	**Barrett**	1.42	323	eP	Pn	00 40 36.6	+0.6
MONP2	**Monument Peak**	1.49	334	eP	Pn	00 40 38.1	+1.0

*IDC **19** 00:42:26.1±1.1, 56°.49S×26°.18W, h0^{km}, mb3.9/2, mb1 4.0/2, mb1mx3.7/21, mbtmp3.9/2, MS3.5/2, Ms1 3.5/2, ms1mx3.1/16, Error ellipse: s-maj=77.7km s-min=35.7km az=97.0*

*NEIC **19** 00:42:31.3±1.2, 56°.7S±0°.1×25°.8W±0°.3, h35^{km}±2^{km}, mb4.5/15, Error ellipse: s-maj=29.3km s-min=17.7km az=52.0*

ISC 19 00:42:30.4±0.7**, 56°.6S**±0°.1×**25°.7W**±0°.2**, h29^{km}, n33, σ0^{s}69**/29**, mb4.6**/9**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	**Hope Point**	6.57	286	Pn	Pn	00 44 05.2	+0.3
VNA1	**Neumayer--Stat**	15.95	159	P	Pn	00 46 12.4	+0.1
VNA3	**Neumayer Olymp**	16.17	161	P	Pn	00 46 14.9	-0.2
VNA2	**Neumayer--Watz**	16.34	158	P	Pn	00 46 17.0	-0.4
	baz=319,slow=15						
SNAA	**Sanae**	17.87	156	P	P	00 46 37.7	+0.7
SNAA	**Sanae**	17.87	156	P	P	00 46 37.7	+0.7
PMSA	**Palmer Station**	20.16	231	LR	LR	00 52 43.1	
	comp=Z,120nm,19.8s,baz=230,slow=31						
BELA	**Belgrano 2**	21.56	185		P	00 47 16.1	-0.9
QSPA	**South Pole Qui**	33.62	180	P	P	00 49 07.9	0.0
QSPA				IAmb	IAmb	00 49 13.1	
	comp=Z,4.6nm,0.6s						
CPUP	**Villa Florida**	37.82	310	P	P	00 49 45.3	+1.2
AC02	**Maricunga**	42.88	295	P	P	00 50 25.7	-0.9
GO02	**Mina Guanaco**	44.50	296	P	P	00 50 38.0	-1.4
GO02				IAmb	IAmb	00 50 38.3	
	comp=Z,15nm,1.4s						
VNDA	**Vanda**	46.02	182	P	P	00 50 51.1	+0.6
	comp=Z,1.9nm,0.8s,baz=174,slow=5.0,SNR=5.8						
VNDA	**Vanda**	46.02	182	P	P	00 50 50.7	+0.2
VNDA				IAmb	IAmb	00 50 52.4	
	comp=Z,4.0nm,1.1s						
LVC	**Limon Verde**	46.31	299	P	P	00 50 53.4	-0.4
LVC				IAmb	IAmb	00 50 57.7	
	comp=Z,8.7nm,1.1s						
PB06	**IPOC Station P**	46.55	298	P	P	00 50 54.4	-1.1
PB09	**IPOC Station P**	47.16	299	P	P	00 51 01.1	+0.8
PB01	**IPOC Station P**	47.92	299	P	P	00 51 06.5	+0.4
PB01				IAmb	IAmb	00 51 24.7	
	comp=Z,11nm,1.4s						
H10S2	**ASCENSION HYDR**	48.34	15	T	T	01 43 55.2	
	baz=31,slow=74,SNR=2.8						
H10S3	**ASCENSION HYDR**	48.34	15	T	T	01 43 56.4	
	baz=189,slow=74,SNR=4.0						
PB08	**IPOC Station P**	48.53	300	P	P	00 51 10.8	-0.4
PB08				IAmb	IAmb	00 51 22.8	
	comp=Z,3.0nm,0.7s						
PSGCX	**Pisagua**	49.46	300	P	P	00 51 17.5	-0.4
MNMC	**Minye Minye**	49.61	301	P	P	00 51 19.2	-0.1
MNMC				IAmb	IAmb	00 51 27.3	
	comp=Z,5.0nm,0.8s						
PB16	**IPOC Station P**	50.26	301	P	P	00 51 24.3	-0.3
PB16				IAmb	IAmb	00 51 38.4	
	comp=Z,5.7nm,1.5s						
DBIC	**Dimbokro**	65.37	23	LR	LR	01 16 27.6	
	comp=Z,43nm,20.5s,baz=226,slow=31						
TORD	**Torodi Ar. Bea**	73.17	28	P	P	00 53 57.8	-0.4
	comp=Z,0.6nm,0.7s,baz=197,slow=6.7,SNR=3.5						
YKA	**Yellowknife Ar**	137.16	317	PKP	PKPdf	01 01 48.1	-1.0
	comp=Z,0.3nm,0.7s,baz=124,slow=3.0,SNR=4.1						
INK	**Inuvik**	146.78	320	PKPbc	PKPbc	01 02 07.2	-0.7
	comp=Z,0.6nm,0.4s,baz=80,slow=1.9,SNR=5.6						
INK	**Inuvik**	146.78	320		PKPdf	01 02 05.6	-0.5
BCAR	**Beaver Creek A**	148.50	308		PKPbc	01 02 13.6	+0.7
SONM	**Songino Array**	149.94	86	PKPbc	PKiKP	01 02 18.8	+1.0
	comp=Z,0.6nm,0.7s,baz=220,slow=3.4,SNR=3.8						
SONM	**Songino Array**	149.94	86		PKPbc	01 02 17.1	+0.1
ILAR	**Eielson Array**	151.12	311	PKPbc	PKPbc	01 02 18.6	-0.5
	comp=Z,1.3nm,0.9s,baz=114,slow=2.0,SNR=6.7						

*IDC **19** 00:56:33.7±0.8, 46°.44N×153°.85E, h0^{km}, mb4.0/17, mb1 4.2/23, mb1mx4.0/47, mbtmp4.0/23, ML3.3/6, MS3.1/4, Ms1 3.1/4, ms1mx2.7/39, Error ellipse: s-maj=20.5km s-min=13.8km az=149.0*

*NEIC **19** 00:56:35.6±1.7, 46°.4N±0°.1×153°.9E±0°.1, h10^{km}±1^{km}, mb4.4/44, Error ellipse: s-maj=21.1km s-min=12.8km az=137.0*

*MOS **19** 00:56:36.5±1.0, 46°.44N×153°.77E, h31^{km}, mb4.6/23, Error ellipse: s-maj=8.1km s-min=6.2km az=70.2*

*JMA **19** 00:56:36.1±0.8, 46°.67N×153°.73E, h30^{km}, M4.5*

*SKHL **19** 00:56:37.6±0.4, 46°.60N×153°.80E, h37^{km}±5^{km}, mb5.1/8*

ISC 19 00:56:37.3±0.6**, 46°.43N**±0°.08×**153°.83E**±0°.07**, h25^{km}, n192, σ1^{s}56**/193**, mb4.4**/54**, 3C-9D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	4.33	256	d iPN	Pn	00 57 43.0	+1.4
KUR				i S	Sn	00 58 32.0	+0.8
KUR				pmax	pmax		
	comp=Z,829nm,0.4s						
KUR				pmax	pmax		
	comp=N,211nm,0.3s						
KUR				pmax	pmax		
	comp=E,93nm,0.2s						
KUR				smax	smax		
	comp=E,361nm,0.7s						
KUR				smax	smax		
	comp=N,290nm,0.5s						
KUR				smax	smax		
	comp=N,544nm,1.1s						
KUR				smax	smax		
	comp=E,252nm,1.0s						
KUR	**Kuril'sk**	4.33	256	i P	Pn	00 57 43.0	+1.4
KUR				AMB	AMB	00 57 43.8	
	comp=E,210nm,0.4s						
KUR				AMB	AMB	00 57 43.8	
	comp=E,70nm,0.4s						
KUR				AMB	AMB	00 57 43.8	
	comp=E,350nm,0.4s						
KUR				i S	Sn	00 58 31.6	+0.4
KUR				A	A	00 58 34.0	
	comp=E,290nm,0.6s						
KUR				A	A	00 58 34.0	
	comp=E,360nm,0.6s						
SKR	**Severo-Kuril's**	4.52	19	ePN	Pn	00 57 44.5	+0.3
SKR				pmax	pmax		
	comp=Z,16nm,0.5s						
SKR	**Severo-Kuril's**	4.52	19	eP	Pn	00 57 42.7	-1.5
SKR				AMB	AMB	00 57 43.3	
	comp=Z,90nm,0.4s						
SKR				eS	Sn	00 58 31.7	-4.2
SKR				A	A	00 58 37.0	
	comp=Z,220nm,0.4s						
SKR				A	A	00 58 37.0	
	comp=Z,180nm,0.4s						
PAU	**Pauzhetka**	5.42	20	eP	Pn	00 57 54.9	-1.5
PAU				eS	Sn	00 58 52.9	-5.0
PAU				A	A	00 58 56.1	
	comp=Z,180nm,0.3s						
PAU				A	A	00 58 56.1	
	comp=Z,190nm,0.3s						
YUK	**Yuzh-Kuril'sk**	6.11	250	PN	Pn	00 58 07.2	+1.3
YUK	**Yuzh-Kuril'sk**	6.11	250	eP	Pn	00 58 07.3	+1.3
YUK				AMB	AMB	00 58 07.9	
	comp=Z,140nm,0.4s						
YUK				eS	Sn	00 59 14.4	-0.6
YUK				A	A	00 59 18.0	
	comp=Z,190nm,0.5s						
YUK				A	A	00 59 18.0	
	comp=Z,230nm,0.5s						
GRPR	**Tuman**	6.19	250	⇓iPN	Pn	00 58 08.1	+1.0
GRPR				pmax	pmax		
	comp=Z,129nm,0.3s						
GRPR				pmax	pmax		
	comp=E,73nm,0.4s						
GRPR	**Tuman**	6.19	250	i P	Pn	00 58 08.0	+1.0
GRPR				AMB	AMB	00 58 10.0	
	comp=E,70nm,0.4s						
GRPR				AMB	AMB	00 58 10.0	
	comp=E,130nm,0.4s						
GRPR				eS	Sn	00 59 16.0	-0.9
GRPR				A	A	00 59 23.0	
	comp=E,180nm,0.4s						
GRPR				A	A	00 59 23.0	
	comp=E,50nm,0.4s						
GLVR	**Golovnino**	6.46	248	ePN	Pn	00 58 09.0	-1.8
GLVR				pmax	pmax		
	comp=Z,172nm,0.1s						
GLVR	**Golovnino**	6.46	248	eP	Pn	00 58 10.5	-0.3
GLVR				AMB	AMB	00 58 11.0	
	comp=Z,90nm,0.4s						
GLVR				eS	Sn	00 59 20.5	-3.3
NEM2	**Nemuro 2**	6.50	245	P	Pn	00 58 09.6	-1.8
NEM2				eS	Sn	00 59 18.5	-6.2
NMR	**Nemuro--Hokkai**	6.51	245	d iPN	Pn	00 58 09.8	-1.7
JRA	**Rausu**	6.63	251	P	Pn	00 58 13.8	+0.6
JNK	**Nakash**	7.05	250	P	Pn	00 58 18.8	-0.1
JNK				eS	Sn	00 59 35.6	-2.6
PEA0B	**Petropavlovsk-**	7.14	19	PN	Pn	00 58 20.2	0.0
PEA0B	**Petropavlovsk-**	7.14	19	Pn	Pn	00 58 20.2	0.0
PETK	**Petropavlovsk-**	7.14	19	Pn	Pn	00 58 20.0	-0.2
	comp=Z,0.4nm,0.3s,baz=173,slow=13,SNR=4.7						
PETK	**Petropavlovsk-**	7.14	19		Pn	00 58 19.9	-0.2
PET	**Petropavlovsk**	7.31	24	eP	Pn	00 58 22.0	-0.4
JAK	**Akkeshi**	7.35	245	P	Pn	00 58 21.3	-1.7
JTKR	**Abashiri--Toko**	7.42	254	P	Pn	00 58 24.8	+0.8

YSS	Yuzh-Sakhalins	7.63	278	*e*PN	Pb	00 58 39.4	-9.5
YSS	Yuzh-Sakhalins	7.63	278	*e*P	Pn	00 58 27.3	+0.4
YSS				AMB	AMB	00 58 27.7	
	comp=Z,10.0nm,0.4s						
JMP	Maruseppu	7.78	256	P	Pn	00 58 30.2	+1.3
JAR	Ashorobuto	7.80	250	P	Pn	00 58 29.4	+0.2
JKK2	Kamakawa 2	8.24	256	P	Pn	00 58 36.5	+1.3
JKA	Kamikawa-asahi	8.25	258	Pn	Pn	00 58 36.7	+1.4
JKA	Kamikawa-asahi	8.25	258	*e*P	Pn	00 58 36.9	+1.6
ASAJ	Asahikawa	8.25	258	Pn	Pn	00 58 36.9	+1.6
	comp=Z,1.4nm,0.3s,baz=95,slow=15,SNR=10						
ASAJ	Asahikawa	8.25	258	P	Pn	00 58 37.2	+1.8
JCH	Churui	8.39	247	P	Pn	00 58 36.0	-1.3
JCH				*e*S	Sn	01 00 04.9	-6.2
MYR	Moyori	8.61	245	*e*P	Pn	00 58 39.0	-1.2
TYV	Tymovskoe	8.62	305	*e*P	Pn	00 58 39.0	-1.4
TYV				AMB	AMB	00 58 41.3	
	comp=Z,10.0nm,0.9s						
JFR	Furan	8.63	252	P	Pn	00 58 42.5	+2.0
ERM	Erimo	8.84	244	PN	Pn	00 58 43.5	+0.1
ERM	Erimo	8.84	244	Pn	Pn	00 58 43.5	+0.1
ERM	Erimo	8.84	244	*e*P	Pn	00 58 43.5	+0.1
JBT2	Biratori 2	8.95	250	P	Pn	00 58 44.8	-0.2
JKB	Kayabe	10.25	248	P	Pn	00 59 00.5	-2.2
JKB				*e*S	Sn	01 00 47.9	-8.8
JSH	Shimam	10.54	254	P	Pn	00 59 07.2	+0.5
JANG	Nango	10.80	240	P	Pn	00 59 06.1	-4.2
JANG				*e*S	Sn	01 00 57.5	-13
JTM	Tenmabayashi	10.83	243	P	Pn	00 59 07.1	-3.6
OFUJ	Ofunato	11.56	235	*e*S	Sn	01 01 16.9	-12
MA2	Magadan	13.30	353	LR	LR	01 04 33.8	
	comp=Z,57nm,19.3s,baz=106,slow=36						
EKMR	Ekimchan	15.01	304	*e*P	Pn	01 00 03.6	-4.1
KLR	Kul'dur	15.08	289	Pn	Pn	01 00 09.9	+1.3
	comp=Z,0.1nm,0.3s,baz=98,slow=15,SNR=1.6						
MJA0	Matsu Arr-Jizo	15.27	235	*e*P	Pn	01 00 11.5	+0.3
MJAR	Matsushiro Arr	15.29	235	Pn	Pn	01 00 11.4	0.0
	comp=Z,0.1nm,0.3s,baz=30,slow=10,SNR=5.8						
MJAR				LR	LR	01 07 03.5	
	comp=Z,41nm,20.1s,baz=65,slow=41						
MJAR	Matsushiro Arr	15.29	235	*e*P	Pn	01 00 11.4	0.0
USA0B	Ussuriysk Arra	15.52	270	P	Pn	01 00 14.7	+0.3
USA0B				pmax	pmax		
	comp=Z,11nm,1.1s						
USA0B	Ussuriysk Arra	15.52	270	Pn	Pn	01 00 14.7	+0.3
USRK	Ussuriysk Ar.	15.52	270	Pn	Pn	01 00 14.6	+0.2
	baz=79,slow=11,SNR=4.2						
USRK	Ussuriysk Ar.	15.52	270	P	Pn	01 00 14.7	+0.3
SEY	Seymchan	16.56	358	Pn	Pn	01 00 28.6	+1.0
	comp=Z,0.2nm,0.3s,baz=0.0,slow=20,SNR=2.2						
BMKR	Bomnak	17.83	307	*e*P	Pn	01 00 40.7	-2.8
BMKR				AMB	AMB	01 00 46.7	
	comp=Z,10.0nm,0.6s						
ZEA	Zeya	18.48	303	*e*P	Pn	01 00 55.4	+3.9
ZEA	Zeya	18.48	303	*e*P	Pn	01 00 51.6	+0.1
KROS	Kirovskiy	18.80	305	*e*P	Pn	01 00 55.2	-0.2
KROS				AMB	AMB	01 00 58.8	
	comp=Z,10.0nm,0.6s						
YAK	Yakutsk	20.86	327⇓	*e*P	P	01 01 17.2	+0.1
YAK				pmax	pmax		
	comp=Z,7.0nm,0.7s						
YAK	Yakutsk	20.86	327	*e*P	P	01 01 17.2	+0.1
KSRS	Korea Array	21.18	254	P	P	01 01 21.8	+1.1
	comp=Z,2.2nm,0.7s,baz=61,slow=10,SNR=8.0						
KSRS	Korea Array	21.18	254	*e*P	P	01 01 21.8	+1.1
TIXI	Tiksi	27.92	343⇓	*e*P	P	01 02 23.9	-1.1
TIXI				pmax	pmax		
	comp=Z,23nm,2.5s						
TIXI	Tiksi	27.92	343	P	P	01 02 23.8	-1.1
TIXI	Tiksi	27.92	343	*e*P	P	01 02 23.9	-1.1
TNA	Tin City	28.03	33	P	P	01 02 25.4	-0.6
ANM	Nome	28.66	36	P	P	01 02 32.6	+0.9
ANM				pmax	pmax		
	comp=Z,12nm,1.4s						
ANM	Nome	28.66	36	P	P	01 02 32.6	+0.9
ANM				IAmb	IAmb	01 02 47.8	
	comp=Z,12nm,1.4s						
H11N2	WAKE ISLAND Hy	28.71	154	T	T	01 34 15.3	
	baz=340,slow=75,SNR=23						
H11N1	WAKE ISLAND Hy	28.72	154	T	T	01 34 22.5	
	baz=340,slow=75,SNR=9.7						
H11N3	WAKE ISLAND Hy	28.72	154	T	T	01 34 19.9	
	baz=340,slow=75,SNR=7.1						
H11S1	WAKE ISLAND Hy	29.80	155	T	T	01 35 42.5	
	baz=341,slow=76,SNR=22						
H11S3	WAKE ISLAND Hy	29.81	155	T	T	01 35 47.3	
	baz=341,slow=76,SNR=21						
H11S2	WAKE ISLAND Hy	29.82	155	T	T	01 35 43.6	
	baz=341,slow=76,SNR=6.8						
ULN	Ulaanbaatar	31.47	290⇑	*e*P	P	01 02 56.4	-0.5
ULN				pmax	pmax		
	comp=Z,1.0nm,1.0s						
ULN	Ulaanbaatar	31.47	290	*e*P	P	01 02 56.4	-0.5
SONM	Songino Array	31.91	290	P	P	01 03 00.3	-0.4
	comp=Z,0.6nm,0.8s,baz=71,slow=6.4,SNR=3.8						
SONM	Songino Array	31.91	290	*e*P	P	01 03 03.5	+2.8
SONM				pmax	pmax		
	comp=Z,1.0nm,0.8s						
TTA	Tatalina	32.34	41	P	P	01 03 04.7	+0.4
TTA				pmax	pmax		
	comp=Z,11nm,1.5s						
TTA	Tatalina	32.34	41	P	P	01 03 04.7	+0.4
TTA				IAmb	IAmb	01 03 15.9	
	comp=Z,11nm,1.5s						
SVW2	Sparrevohn	32.38	45	P	P	01 03 04.7	+0.1
SVW2				IAmb	IAmb	01 03 14.3	
	comp=Z,8.9nm,1.4s						
IMAR	Indian Mountai	33.74	36	P	P	01 03 16.9	+0.5
BPAW	Bear Paw Mtn.	34.69	39	P	P	01 03 25.6	+0.9
BPAW				IAmb	IAmb	01 03 42.2	
	comp=Z,3.1nm,1.0s						
BRLK	Bradley Lake	34.69	47	P	P	01 03 24.7	-0.1
TRF	Thorofare Moun	34.97	40	P	P	01 03 28.1	+0.9
TRF				IAmb	IAmb	01 03 31.7	
	comp=Z,5.5nm,1.2s						
COLD	Coldfoot	35.33	34	P	P	01 03 30.8	+0.7
COLD				IAmb	IAmb	01 03 31.3	
	comp=Z,2.6nm,0.8s						
I23K	Minto, Yukon-K	35.46	38	P	P	01 03 32.3	+1.1
TOLK	Toolik Lake Re	35.76	32	P	P	01 03 35.0	+1.1
WRH	Wood River Hil	35.97	39	P	P	01 03 36.2	+0.6
WRH				IAmb	IAmb	01 03 48.6	
	comp=Z,6.8nm,1.4s						
COLA	College	36.09	38	*de*P	P	01 03 36.7	+0.1
COLA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
HDA	Harding Lake	36.47	39	P	P	01 03 40.1	+0.2
IL31		36.50	38	P	P	01 03 40.2	+0.1
ILAR	Eielson Array	36.50	38	P	P	01 03 40.0	-0.1
	comp=Z,0.6nm,0.6s,baz=249,slow=8.0,SNR=7.8						
ILAR	Eielson Array	36.50	38	*e*P	P	01 03 40.3	+0.2
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
M24K	Tolsona, Glenn	36.87	43	P	P	01 03 44.6	+1.1
BMAR	Burnt Mountain	37.51	34	P	P	01 03 50.0	+1.2
BCAR	Beaver Creek A	38.82	41	P	P	01 04 00.9	+1.1
EGAK	Eagle	38.95	38	P	P	01 04 00.9	0.0
EGAK				IAmb	IAmb	01 04 01.8	
	comp=Z,3.7nm,0.8s						
HYT	Haines Junctio	41.16	44	P	P	01 04 20.9	+1.4
HYT				IAmb	IAmb	01 04 23.7	
	comp=Z,18nm,1.4s						
INK	Inuvik	41.66	32	P	P	01 04 22.9	-0.2
	comp=Z,1.3nm,0.5s,baz=257,slow=8.2,SNR=4.3						
INK	Inuvik	41.66	32	P	P	01 04 23.9	+0.7
INK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
INK	Inuvik	41.66	32	P	P	01 04 23.9	+0.7
ZAA0	Zalesovo Array	43.20	306	P	P	01 04 34.8	-1.1
ZAA0				IAmb	IAmb	01 04 41.4	
	comp=Z,3.7nm,0.8s						
ZALV	Zalesovo Beam	43.20	306	P	P	01 04 34.7	-1.2
	comp=Z,0.9nm,0.4s,baz=61,slow=6.8,SNR=2.4						
ZALV				PcP	PcP	01 06 25.1	+0.3
	comp=Z,0.9nm,0.6s,baz=83,slow=4.6,SNR=4.8						
ZALV	Zalesovo Beam	43.20	306	P	P	01 04 34.4	-1.5
C36M	Paulatuk	44.85	30	P	P	01 04 50.0	+1.0
C36M				IAmb	IAmb	01 04 50.4	
	comp=Z,3.9nm,0.6s						
MK31	Makanchi Array	47.53	298	P	P	01 05 09.8	-0.6
MK31				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MK31	Makanchi Array	47.53	298	P	P	01 05 09.8	-0.6
MK31				IAmb	IAmb	01 05 10.4	
	comp=Z,2.6nm,1.0s						
MKAR	Makanchi Array	47.53	298	P	P	01 05 09.8	-0.5
	comp=Z,2.0nm,0.7s,baz=68,slow=7.2,SNR=29						
MKAR				PcP	PcP	01 06 40.3	+0.2
	comp=Z,1.1nm,0.7s,baz=58,slow=3.3,SNR=7.8						
MKAR	Makanchi Array	47.53	298	P	P	01 05 09.6	-0.7
MAKZ	Makanchi	47.71	298	P	P	01 05 10.8	-1.0
MAKZ				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MAKZ	Makanchi	47.71	298	P	P	01 05 10.8	-1.0
KURK	Kurchatov	47.95	304	P	P	01 05 12.3	-1.2
KURK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KURK	Kurchatov	47.95	304	P	P	01 05 12.2	-1.2
KURK				IAmb	IAmb	01 05 13.0	
	comp=Z,2.5nm,0.7s						
KURK	Kurchatov	47.95	304	*e*P	P	01 05 12.3	-1.2
YKA	Yellowknife Ar	50.89	37	P	P	01 05 36.4	+0.6
	comp=Z,2.0nm,0.8s,baz=297,slow=6.6,SNR=20						
RES	Resolute Bay	50.99	19	P	P	01 05 36.7	+0.4
	comp=Z,2.3nm,0.8s,baz=310,slow=6.6,SNR=6.5						
BRVK	Borovoye	51.48	310⇓	*e*P	P	01 05 39.8	-0.6
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BRVK	Borovoye	51.48	310	*e*P	P	01 05 39.8	-0.6
AAK	Ala-Archa	54.42	297	P	P	01 06 03.0	+0.6
AAK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
AAK	Ala-Archa	54.42	297	P	P	01 06 03.0	+0.6
AAK				IAmb	IAmb	01 06 03.7	
	comp=Z,4.9nm,1.3s						
AAK	Ala-Archa	54.42	297	*e*P	P	01 06 03.0	+0.6
ARU	Arti	55.58	318*c*	*i*P	P	01 06 09.5	-0.9
ARU				S	S	01 13 55.4	+1.2
ARU				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ARU	Arti	55.58	318	*i* P	P	01 06 09.5	-0.9
KK31	Karatay Array	56.59	299	P	P	01 06 17.7	-0.1
KK31				pmax	pmax		
	comp=Z,2.0nm,1.3s						
KK31	Karatay Array	56.59	299	P	P	01 06 17.7	-0.1
KKAR	Karatay Array	56.59	299	P	P	01 06 17.3	-0.5
KKAR	Karatay Array	56.59	299	P	P	01 06 17.3	-0.5
ARCES	ARCESS Array B	58.32	341	P	P	01 06 29.9	+0.4
	comp=Z,7.3nm,1.0s,baz=18,slow=6.9,SNR=8.9						
ARCES	ARCESS Array B	58.32	341	*e*P	P	01 06 30.2	+0.6
ARCES				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ABKAR	Akbulak array	59.01	310	P	P	01 06 34.4	-0.2
ABKAR	Akbulak array	59.01	310	P	P	01 06 34.5	-0.2
ABKAR				IAmb	IAmb	01 06 35.9	
	comp=Z,3.5nm,0.7s						
NIL	Nilore	60.48	289	P	P	01 06 45.9	+0.9
NIL				pmax	pmax		
	comp=Z,9.0nm,0.9s						
NIL	Nilore	60.48	289	P	P	01 06 45.9	+0.9
SUMG	Summit	60.99	4	P	P	01 06 50.3	+1.9
SUMG				pmax	pmax		
	comp=Z,10.0nm,1.5s						
SUMG	Summit	60.99	4	P	P	01 06 50.3	+1.9
FCC	Fort Churchill	61.26	33	P	P	01 06 50.1	+0.2
FCC				pmax	pmax		
	comp=Z,4.0nm,1.3s						
FCC	Fort Churchill	61.26	33	P	P	01 06 50.1	+0.2
FCC				IAmb	IAmb	01 07 02.8	
	comp=Z,3.5nm,1.3s						
NVAR	Mina Array Bea	62.15	63	P	P	01 06 56.9	+0.3
	comp=Z,0.3nm,0.5s,baz=278,slow=6.3,SNR=2.6						
KBL	Kabul	62.64	292	P	P	01 06 59.6	-0.3
KBL				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KBL	Kabul	62.64	292	P	P	01 06 59.5	-0.3
FIA1	FINESS Array S	64.54	335	P	P	01 07 11.7	0.0
FINES	FINESS Array B	64.54	335	P	P	01 07 11.6	-0.1
	comp=Z,3.8nm,0.5s,baz=36,slow=6.9,SNR=42						
OBN	Obninsk	65.85	326	LR	LR	01 38 48.9	
	comp=Z,7.8nm,19.2s,baz=171,slow=38						
OBN	Obninsk	65.85	326⇓	*e*P	P	01 07 19.9	-0.4
OBN				pmax	pmax		
	comp=Z,24nm,2.5s						
OBN	Obninsk	65.85	326	*e*P	P	01 07 19.9	-0.4
GEYT	Alibeck	67.19	301	P	P	01 07 30.6	+1.4
	comp=Z,1.8nm,0.7s,baz=38,slow=17,SNR=3.6						
GEYT	Alibeck	67.19	301	P	P	01 07 29.9	+0.7
WRA	Warramunga Arr	68.37	200	P	P	01 07 36.8	+0.2
	comp=Z,0.5nm,0.8s,baz=36,slow=4.4,SNR=1.5						
NC405	NORSAR Array S	68.52	341	P	P	01 07 38.4	+1.3
NB2	NORSAR Subarra	68.69	342	P	P	01 07 38.1	-0.2
	comp=Z,5.2nm,0.7s,baz=29,slow=6.5						
NOA	NORSAR Array B	68.69	342	P	P	01 07 38.7	+0.4
	comp=Z,17nm,0.3s,baz=29,slow=6.5,SNR=12						
NOA	NORSAR Array B	68.69	342	*e*P	P	01 07 39.6	+1.3
NOA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
NCK	Nalchik	71.26	314⇑	*e*P	P	01 07 55.3	+1.0
NCK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KIV	Kislovodsk	71.38	315	*e*P	P	01 07 57.3	+2.2
KIV				pmax	pmax		
	comp=Z,24nm,1.0s						
KIV				MLR	MLR		
	comp=Z,128nm,18.0s						
KIV	Kislovodsk	71.38	315	P	P	01 07 55.9	+0.8
KBZ	Khabaz	71.44	314	P	P	01 07 56.6	+1.3
	comp=Z,5.2nm,0.8s,baz=79,slow=6.0,SNR=14						
KBZ	Khabaz	71.44	314⇓	*e*P	P	01 07 56.8	+1.5
KBZ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ASAR	Alice Springs	72.06	199	P	P	01 07 59.4	+0.2
	comp=Z,0.6nm,0.8s,baz=9.8,slow=5.3,SNR=5.0						
ASAR	Alice Springs	72.06	199	P	P	01 07 59.2	+0.1
AKASG	Malin Array Be	72.09	327	P	P	01 07 58.8	-0.3
	comp=Z,1.9nm,0.5s,baz=35,slow=6.2,SNR=14						
AKASG				LR	LR	01 42 15.3	
	comp=Z,46nm,18.2s,baz=330,slow=38						
AKASG	Malin Array Be	72.09	327	P	P	01 07 59.1	0.0
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.8s						
AKASG	Malin Array Be	72.09	327	P	P	01 07 59.1	0.0
AKBB	Malin Array Si	72.09	327	P	P	01 07 59.0	-0.1
AKBB				pmax	pmax		
	comp=Z,4.0nm,0.7s						
AKBB	Malin Array Si	72.09	327	P	P	01 07 59.0	-0.1
AKBB				IAmb	IAmb	01 07 59.5	
	comp=Z,3.9nm,0.7s						
KOLS	Kolonicke sedl	76.09	329	*e*P	P	01 08 23.3	+0.7
KOLS	Kolonicke sedl	76.09	329	*e*P	P	01 08 23.3	+0.7
BUR08	Bucovina Ar. S	76.11	327	P	P	01 08 23.5	+0.7
BUR08				IAmb	IAmb	01 08 39.4	
	comp=Z,3.6nm,1.1s						
BURAR	Bucovina Array	76.13	327	P	P	01 08 23.5	+0.6
CLL	Collm	76.96	336	*e*P	P	01 08 27.0	-0.4
CLL	Collm	76.96	336	*e*P	P	01 08 27.0	-0.4
TX31	Lajitas Ar. Si	77.22	61	P	P	01 08 29.4	+0.1
TXAR	Lajitas Array	77.22	61	P	P	01 08 29.6	+0.2
	comp=Z,1.2nm,0.7s,baz=303,slow=4.4,SNR=19						
TXAR	Lajitas Array	77.22	61	P	P	01 08 29.4	0.0
KHC	Kasperske Hory	78.74	335	*e*P	P	01 08 37.4	0.0
KHC	Kasperske Hory	78.74	335	*e*P	P	01 08 37.4	0.0
GERES	GERESS Array B	78.96	334	P	P	01 08 39.2	+0.5
GERES	GERESS Array B	78.96	334	P	P	01 08 39.2	+0.5
SOKA	Soboth	80.48	333	*e*P	P	01 08 49.6	+2.7
KBA	Koelnbreinsper	80.65	334	*e*P	P	01 08 51.3	+3.3
	comp=Z,3.3nm,0.7s						
DIVS	Divibare	81.05	328	P	P	01 08 51.1	+1.1
DIVS				IAmb	IAmb	01 08 53.5	
	comp=Z,4.3nm,1.1s						
MOTA	Moosalm	81.07	335	*e*P	P	01 08 49.8	-0.4
	comp=Z,0.9nm,0.5s						
VTS	Vitosha	81.08	325	P	P	01 08 51.5	+1.2
VTS				pmax	pmax		
	comp=Z,4.0nm,0.8s						
VTS	Vitosha	81.08	325	P	P	01 08 51.5	+1.2
VTS				IAmb	IAmb	01 08 53.8	
	comp=Z,4.1nm,0.8s						
ABTA	Abfaltersbach	81.20	334	*e*P	P	01 08 48.5	-2.3
	comp=Z,0.8nm,0.5s						
NRCA	Norcia	84.53	332	P	P	01 09 10.6	+2.5
RAYN	Ar Rayn	85.01	299	P	P	01 09 11.4	+0.6
RAYN				pmax	pmax		
	comp=Z,4.0nm,1.4s						
RAYN	Ar Rayn	85.01	299	P	P	01 09 11.4	+0.6
RAYN				IAmb	IAmb	01 09 14.8	
	comp=Z,3.6nm,1.4s						
H03N2	Juan Fernandez	138.26	91	T	T	03 51 12.7	
	baz=307,slow=76,SNR=1.7						
H03N1	Juan Fernandez	138.27	91	T	T	03 51 10.3	
	baz=307,slow=76,SNR=1.4						
H03N3	Juan Fernandez	138.27	91	T	T	03 51 11.5	
	baz=307,SNR=3.0						

IDC 19 01:12:17.8±7.9**, 11°.73N×142°.95E, h0^{km}, mb3.7**/5**, mb1 4.0**/5**, mb1mx3.7**/30**, mbtmp3.7**/5**, Error ellipse: s-maj=219.9km s-min=47.4km az=3.0, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	Songino Array	47.21	327	P	P	01 20 52.6	0.0
	0.1nm,0.4s,baz=142,slow=7.3,SNR=2.1						
MKAR	Makanchi Array	61.54	317	P	P	01 22 36.8	-0.1
	0.2nm,0.6s,baz=87,slow=6.4,SNR=5.4						
ILAR	Eielson Array	71.04	25	P	P	01 23 37.1	-0.3
	0.5nm,0.5s,baz=246,slow=5.9,SNR=16						
YKA	Yellowknife Ar	85.36	27	P	P	01 24 57.4	+0.6
	0.2nm,0.5s,baz=287,slow=4.4,SNR=3.6						
ARCES	ARCESS Array B	88.26	342	P	P	01 25 10.7	-0.1
	5.8nm,1.1s,baz=71,slow=7.8,SNR=4.5						

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*IASPEI **19** 01:26:09.7±0.9, 64°.68N±0°.02×17°.48W±0°.03, h11^{km}±6^{km}, mb3.8/16, Error ellipse: s-maj=4.1km s-min=2.6km az=125.2, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*REY **19** 01:26:10.6, 64°.67N×17°.46W, h1^{km}*

*IDC **19** 01:26:11.3±0.8, 64°.44N×17°.70W, h0^{km}, mb3.7/11, mb1 3.9/12, mb1mx3.7/40, mbtmp3.7/12, ML4.0/1, MS3.1/1, Ms1 3.1/1, ms1mx2.5/49, Error ellipse: s-maj=27.6km s-min=10.8km az=13.0*

*NEIC **19** 01:26:12.0±1.5, 64°.50N±0°.10×17°.6W±0°.1, h8^{km}±5^{km}, mb4.3/9, Error ellipse: s-maj=14.5km s-min=7.0km az=187.0*

ISC 19 01:26:12.1±0.4**, 64°.67N**±0°.02×**17°.47W**±0°.02**, h10^{km}, n95, σ2^{s}.18**/108**, mb3.8**/16**, Iceland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARD	Bardarbunga	0.03	162	P	Pg	01 26 11.4	-2.8
	baz=172						
BARD				S	Sg	01 26 12.2	-3.5
	baz=172						
IVON	Vonarskard	0.12	272	P	Pg	01 26 13.7	-1.4
	baz=273						
IDJK	Dyngjujokull	0.19	149	P	Pg	01 26 15.0	-1.3
	baz=150						
IURH	Urdarhals	0.21	42	P	Pg	01 26 15.2	-1.2
	baz=40						
IHAM	Hamarinn	0.24	219	P	Pg	01 26 15.6	-1.5
	baz=220						
IGRF	Grimsfjall	0.28	162	P	Pg	01 26 16.4	-1.3
	baz=163						
IKVE	Kverkfjoll	0.34	88	P	Pg	01 26 17.5	-1.4
	baz=88						
IBJK	Bruarjokull	0.37	123	P	Pg	01 26 17.7	-1.7
	baz=123						
IHUS	Husbondi	0.38	192	P	Pg	01 26 18.5	-1.2
	baz=193						
ISKR	Skrokkalda	0.41	255	P	Pg	01 26 18.7	-1.5
	baz=255						
THOR	Thorvaldshraun	0.43	51	P	Pg	01 26 19.0	-1.6
	baz=51						
THOR				S	Sg	01 26 25.3	-1.0
	baz=51						
IKRE	Kreppuhraun	0.48	76	P	Pg	01 26 19.6	-1.9
	baz=75						
IKRE				S	Sg	01 26 26.6	-1.2
	baz=75						
IJOK	Jokulheimar	0.48	223	P	Pg	01 26 19.8	-1.7
	baz=224						
IASK	Askja	0.52	42	P	Pg	01 26 20.3	-1.9
	baz=41						
IMKO	Mokollar	0.57	57	P	Pg	01 26 21.4	-1.9
	baz=56						
IMKO				S	Sg	01 26 29.9	-0.9
	baz=56						
IIEY	Innrieyrar	0.64	207	P	Pg	01 26 22.5	-2.0
	baz=207						
IIEY				S	Sg	01 26 32.0	-0.9
	baz=207						
IKSK	Karasker	0.67	139	P	Pg	01 26 22.4	-2.6
	baz=140						
ISVA	Svartarkot	0.68	8	P	Pg	01 26 23.1	-2.1
	baz=7.1						
ISVA				S	Sg	01 26 32.8	-1.3
	baz=7.1						
IKAL	Kalfafell	0.73	188	P	Pg	01 26 24.1	-2.0
	baz=188						
IKAL				S	Sg	01 26 34.0	-1.6
	baz=188						
IVSH	V-Sauoahnukur	0.76	79	P	Pg	01 26 24.2	-2.5
	baz=78						
IVSH				S	Sg	01 26 34.9	-1.8
	baz=78						
IVAT	Vatnsfell	0.79	233	P	Pg	01 26 25.2	-2.2
	baz=233						
IFAG	Fagurholsmyri	0.87	156	P	Pg	01 26 26.4	-2.5
	baz=156						
IFAG				S	Sg	01 26 38.6	-1.6
	baz=156						
IADA	Aoalbol	0.88	66	P	Pg	01 26 26.2	-2.8
	baz=66						
IADA				S	Sg	01 26 37.8	-2.8
	baz=66						
IHVE	Hveravellir	0.92	284	P	Pg	01 26 27.0	-2.9
	baz=284						
IMEL	Melhnausar	0.97	20	P	Pg	01 26 27.8	-2.9
	baz=20						
IREN	Reynihlio	1.01	13	P	Pg	01 26 28.6	-2.9
	baz=13						
ISNB	Snabyli	1.07	209	P	Pg	01 26 29.7	-2.8
	baz=209						
IKVO	Krokottuvotn	1.08	13	P	Pg	01 26 29.7	-3.1
	baz=13						
IGRS	Grimsstaoir	1.13	30	P	Pb	01 26 30.6	-3.1
	baz=29						
IFED	Fedgar	1.16	237	P	Pb	01 26 31.7	-2.6
	baz=238						
IRJU	Rjupnafell	1.18	207	P	Pb	01 26 31.8	-2.8
	baz=207						
ISKI	Skildingahlsh	1.22	9	P	Pn	01 26 32.0	-3.2
	baz=8.3						
IGHA	Grjothals	1.23	16	P	Pn	01 26 31.9	-3.4
	baz=15						
IGYG	Gygjarholskot	1.25	253	P	Pn	01 26 32.5	-3.1
	baz=253						
IGRA	Granastaoir	1.26	358	P	Pn	01 26 32.4	-3.2
	baz=358						
IHAU	Haukadalur	1.29	238	P	Pn	01 26 33.6	-2.6
	baz=238						
IHVO	Lagu-Hvolar	1.30	208	P	Pn	01 26 33.8	-2.4
	baz=209						
IDIM	Dimmadalss	1.32	10	P	Pn	01 26 33.6	-3.0
	baz=9.4						
IHLA	Hella	1.34	344	P	Pn	01 26 34.1	-2.7
	baz=343						
IALF	Alftagrof	1.40	213	P	Pn	01 26 35.5	-2.1
	baz=214						
IHED	Heoinshofoi	1.42	3	P	Pn	01 26 35.0	-3.0
	baz=2.4						
IESK	Eystri-Skogar	1.44	218	P	Pn	01 26 36.2	-2.0
	baz=218						
ISAU	Saurbar	1.45	243	P	Pn	01 26 35.7	-2.7
	baz=244						
IMID	Miomork	1.47	227	P	Pn	01 26 36.3	-2.3
	baz=228						
IBRE	Brettingsstaoi	1.47	353	P	Pn	01 26 36.0	-2.7
	baz=353						
ISIG	Siglufjorour	1.59	338	P	Pn	01 26 37.9	-2.4
	baz=338						
IASM	Asmuli	1.61	240	P	Pn	01 26 38.8	-1.7
	baz=240						
IASB	`sbjarnarst	1.66	275	P	Pn	01 26 38.9	-2.3
	baz=274						
BORG	Borgarnes	1.66	274	Pg	Pn	01 26 38.8	-2.4
	12nm,0.3s,baz=89,slow=7.3,SNR=35						
BORG				Lg	Lg	01 27 01.8	
	11nm,0.3s,baz=55,slow=14,SNR=10						

BORG	Borgarnes	1.66	274	Pn	Pn	01 26 39.1	-2.1
BORG				Sn	Sn	01 27 01.9	-0.7
IKRO	Krokur	1.69	252	P	Pn	01 26 39.4	-2.2
	baz=252						
ISOL	Solvholt	1.69	245	P	Pn	01 26 39.5	-2.1
	baz=246						
IHEI	Heioarbar	1.70	256	P	Pn	01 26 39.6	-2.2
	baz=256						
ILEI	Leirhofn	1.79	13	P	Pn	01 26 40.9	-2.2
	baz=12						
IHRN	Hraun	1.83	324	P	Pn	01 26 41.4	-2.1
	baz=324						
ISAN	Sandskeio	1.89	253	P	Pn	01 26 42.5	-1.8
	baz=253						
IGRI	Grimsey	1.90	353	P	Pn	01 26 42.1	-2.3
	baz=353						
IKUD	Kuludalsa	1.94	262	P	Pn	01 26 43.3	-1.8
	baz=262						
SCO	Scoresbysund	6.09	346	*e*	Pn	01 27 37.5	-4.4
	baz=154,slow=8.6						
SCO				*i* P	Pb	01 27 41.5	-17
SCO				*e*S	Sn	01 28 55.8	+4.2
EKB10	Eskdalemuir Ar	11.72	136	Pn	Pn	01 28 59.2	0.0
EKA	Eskdalemuir Ar	11.75	136	Pn	Pn	01 28 58.0	-1.6
	baz=335,slow=15,SNR=1.7						
NRS	Narsarsuaq	13.15	267	Pn	Pn	01 29 17.2	-1.4
NB201	NORSAR Array S	13.55	92	Pn	Pn	01 29 24.6	+0.5
CLL	Collm	20.69	116	*e*(P)	Pn	01 30 54.0	-0.3
BRG	Berggiesshubel	21.40	115	*e*x	P	01 31 00.5	+0.9
BRG				Amp		01 31 02.2	
	comp=Z,35nm,1.8s						
FRB	Frobisher Bay	21.76	291	P	P	01 31 04.0	+0.6
	comp=Z,1.5nm,0.8s,baz=63,slow=13,SNR=3.1						
OSTC	Ostas	22.54	113	*e*P	P	01 31 17.7	+5.8
KHC	Kasperske Hory	22.66	118	*e*P	P	01 31 11.7	-1.5
DPC	Dobruska-Polom	22.75	113	*e*P	P	01 31 16.1	+2.0
GERES	GERESS Array B	22.94	119	P	P	01 31 16.7	+0.5
	comp=Z,0.7nm,0.9s,baz=311,slow=7.6,SNR=2.7						
CKRC	Cesky Krumlov	23.20	118	*e*P	P	01 31 20.5	+1.8
VRAC	Vranov	23.68	114	LR	LR	01 40 40.6	
	comp=Z,50nm,21.7s,baz=334,slow=37						
MTE	Manteigas	24.98	162	P	P	01 31 33.7	-2.0
MTE				IAmb	IAmb	01 31 37.7	
	comp=Z,9.6nm,1.0s						
TRI	Trieste	25.60	123	P	P	01 31 40.5	-0.7
TRI				IAmb	IAmb	01 31 50.0	
	comp=Z,7.5nm,0.9s						
KBZ	Khabaz	39.10	92	P	P	01 33 41.1	+2.0
	comp=Z,2.3nm,0.9s,baz=322,slow=8.5,SNR=3.8						
YKA	Yellowknife Ar	39.22	313	P	P	01 33 41.1	+1.2
	comp=Z,1.0nm,1.0s,baz=45,slow=8.9,SNR=8.1						
YKA				PcP	PcP	01 35 50.8	+2.2
	comp=Z,0.2nm,0.5s,baz=61,slow=5.0,SNR=3.6						
ELL	Elmali	39.49	112	P	P	01 33 42.7	+0.1
TIXI	Tiksi	42.03	15	P	P	01 34 04.7	+1.8
TIXI				IAmb	IAmb	01 34 06.6	
	comp=Z,5.6nm,1.1s						
TOLK	Toolik Lake Re	42.75	336	P	P	01 34 10.3	+1.3
ILAR	Eielson Array	45.69	332	P	P	01 34 34.6	+2.2
	comp=Z,1.4nm,1.1s,baz=24,slow=6.2,SNR=8.8						
ILAR				PcP	PcP	01 36 11.2	+1.1
	comp=Z,0.7nm,1.0s,baz=12,slow=4.6,SNR=4.4						
ILAR	Eielson Array	45.69	332	P	P	01 34 34.5	+2.1
IMAR	Indian Mountai	45.86	337	P	P	01 34 35.1	+1.4
ZALV	Zalesovo Beam	47.62	51	P	P	01 34 50.0	+2.3
	comp=Z,0.7nm,0.8s,baz=28,slow=3.8,SNR=3.6						
ZALV	Zalesovo Beam	47.62	51	P	P	01 34 49.6	+1.9
KURK	Kurchatov	48.10	58	P	P	01 34 52.8	+1.3
KURK				IAmb	IAmb	01 34 54.2	
	comp=Z,3.3nm,1.1s						
EGMT	Eagleton	48.89	297	P	P	01 34 56.2	-1.4
MKAR	Makanchi Array	52.71	58	P	P	01 35 28.2	+1.7
	comp=Z,0.9nm,1.0s,baz=339,slow=6.5,SNR=6.0						
MKAR	Makanchi Array	52.71	58	P	P	01 35 27.9	+1.5
TORD	Torodi Ar. Bea	53.14	156	P	P	01 35 28.7	-1.1
	comp=Z,3.2nm,0.7s,baz=352,slow=8.7,SNR=2.7						
BW06	Boulder Array	53.19	293	P	P	01 35 31.0	+0.7
BW06				IAmb	IAmb	01 35 31.9	
	comp=Z,3.1nm,1.1s						
PD31	Pinedale Array	53.19	293	P	P	01 35 31.0	+0.7
PDAR	Pinedale Array	53.19	293	P	P	01 35 30.6	+0.3
	comp=Z,2.4nm,1.1s,baz=49,slow=6.7,SNR=8.3						
PDAR	Pinedale Array	53.19	293	P	P	01 35 31.2	+0.9
SONM	Songino Array	59.63	40	P	P	01 36 17.5	+1.5
	comp=Z,0.5nm,0.9s,baz=344,slow=4.7,SNR=3.7						
TXAR	Lajitas Array	62.30	280	P	P	01 36 35.3	+1.1
	comp=Z,0.5nm,1.0s,baz=93,slow=2.5,SNR=3.6						
TXAR				PcP	PcP	01 37 15.1	+1.1
	comp=Z,0.7nm,1.1s,baz=36,slow=3.4,SNR=3.7						

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*ECX **19** 01:30:12.9±0.6, 31°.50N×115°.66W, h6^{km}±4^{km}, MD1.9, ML2.2*

*MEX **19** 01:30:13.9±0.3, 31°.38N×115°.78W, h9^{km}±11^{km}, MD3.5*

ISC 19 01:30:10.9±1.2**, 31°.54N**±0°.04×**115°.67W**±0°.05**, h11**^{km}±12^{km}**, n12,** σ0^{s}.**42**/19**, 1C-2D, Baja California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPIG	San Pedro Mart	0.52	161	⇓*e*P	Pb	01 30 21.8	-0.5
	baz=321,slow=10						
SPIG				*i* S	Sg	01 30 28.0	-0.1
SPIG	San Pedro Mart	0.52	161	*e*P	Pg	01 30 21.5	+0.3
SPIG				*e*S	Sg	01 30 28.5	+0.4
ECBX	El Chinero	0.53	97	*e*P	Pg	01 30 21.1	-0.1
ECBX				*e*S	Sg	01 30 28.0	-0.3
SPX	San Pedro Mart	0.53	161	⇓*i*P	Pb	01 30 21.8	-0.6
SPX				*e*S	Sg	01 30 28.4	0.0
SPX				*e*		01 30 29.1	
SPX				IAML		01 30 29.1	
	comp=N,161nm,0.1s						
SVX	San Vicente	0.54	247	*e*P	Pb	01 30 22.3	-0.2
SVX				*e*S	Sb	01 30 29.7	-0.6
SFX	San Felipe	0.86	125	*e*P	Pb	01 30 27.8	-0.1
CBX	Cerro Bola	1.15	313	*e*P	Pn	01 30 33.5	+0.5
CBX				*e*S	Sn	01 30 48.8	-0.1
CBX				⇑*e*		01 30 51.8	
CBX				IAML		01 30 51.8	
	comp=N,75nm,0.3s						
IKP	In-Ko-Pah, Jac	1.17	341	*e*P	Pn	01 30 33.9	+0.6
TJIG	Tijuana	1.23	316	*e*P	Pn	01 30 34.8	+0.6
TJIG				*e*S	Sn	01 30 50.8	-0.1
TJIG	Tijuana	1.23	316	*e*P	Pn	01 30 34.7	+0.6
BAR	Barrett	1.42	323	*e*P	Pg	01 30 37.9	-0.3
MONP2	Monument Peak	1.49	335	*e*P	Pg	01 30 39.6	+0.1

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*IDC **19** 01:43:24.2±7.0, 10°.76S×165°.96E, h204^{km}±71^{km}, mb3.3/8, mb1 3.7/9, mb1mx3.4/44, mbtmp3.9/9, MS4.1/1, Ms1 4.1/1, ms1mx2.7/19, Error ellipse: s-maj=48.8km s-min=22.6km az=160.0*

*NOU **19** 01:44:18.7, 14°.99S×167°.18E, h54^{km}, MLv4.9, Vanuatu Islands*

ISC 19 01:43:23.4±0.8**, 10°.79S**±0°.09×**166°.1E**±0°.2**, h200**^{km}**, n21,** σ1^{s}.**66**/17**, mb3.5**/8**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	4.75	167	P	Pn	01 44 31.4	-3.2
DVP	Devils Point	7.18	164	P	Pn	01 45 01.0	-5.0
KOUNC	Koumac, New Ca	9.87	190	P	Pn	01 45 46.3	+5.4
LIFNC	LIFOU	9.99	174	P	Pn	01 45 40.9	-1.6
DZM	Mont Dzumac	11.23	178	P	Pn	01 46 00.3	+1.8
	6.6nm,0.3s,baz=348,slow=11,SNR=74						
DZM				S	Sn	01 48 04.4	+0.6
	0.8nm,0.3s,baz=139,slow=19,SNR=2.6						
DZM	Mont Dzumac	11.23	178	P	Pn	01 46 00.5	+2.0
YATNC	Mamie plateau,	11.23	176	P	Pn	01 45 58.9	+0.4
ONTNC	Ouen Toro	11.46	178	P	Pn	01 46 04.0	+2.6
OUENC	Ouen Island, N	11.59	177	P	Pn	01 46 05.5	+2.5
RAO	Raoul Island	23.66	143	LR	LR	01 55 39.5	
	comp=Z,529nm,21.4s,baz=135,slow=31						
H11S2	WAKE ISLAND Hy	29.09	1	T	T	02 19 53.3	
	baz=180,slow=76,SNR=4.9						
H11S3	WAKE ISLAND Hy	29.10	1	T	T	02 19 53.6	
	baz=180,slow=76,SNR=5.1						
H11S1	WAKE ISLAND Hy	29.11	1	T	T	02 19 54.7	
	baz=180,slow=76,SNR=5.0						
WRA	Warramunga Arr	31.92	250	P	P	01 49 29.4	-1.0
	1.1nm,0.9s,baz=81,slow=8.9,SNR=4.7						
ASAR	Alice Springs	33.24	243	P	P	01 49 40.7	-1.2
	0.4nm,0.5s,baz=66,slow=10,SNR=5.3						
ASAR				PcP	PcP	01 52 19.9	+0.2
	0.5nm,0.6s,baz=66,slow=2.2,SNR=5.2						
FITZ	Fitzroy Crossi	39.81	255	P	P	01 50 36.8	-0.6
	2.2nm,0.7s,baz=90,slow=5.1,SNR=1.7						
SONM	Songino Array	78.68	324	P	P	01 55 03.5	0.0
	0.2nm,0.5s,baz=133,slow=5.1,SNR=4.3						
ILAR	Eielson Array	83.15	18	P	P	01 55 27.3	+0.7
	1.1nm,0.6s,baz=234,slow=5.3,SNR=16						
NVAR	Mina Array Bea	85.57	50	P	P	01 55 40.8	+1.2
	0.4nm,0.8s,baz=243,slow=6.0,SNR=3.9						
MKAR	Makanchi Array	93.59	317	P	P	01 56 16.8	0.0
	0.7nm,0.6s,baz=85,slow=6.0,SNR=5.8						
YKA	Yellowknife Ar	94.57	27	P	P	01 56 20.1	-0.7
	0.2nm,0.6s,baz=251,slow=4.4,SNR=4.4						

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*NEIC **19** 01:45:02.2±0.8, 38°.92N±0°.05×144°.6E±0°.2, h25^{km}±8^{km}, mb4.3/14, Error ellipse: s-maj=19.0km s-min=1.3km az=112.0*

*IDC **19** 01:45:06.8±0.8, 39°.27N×143°.38E, h0^{km}, mb3.8/15, mb1 3.9/17, mb1mx3.9/47, mbtmp3.8/17, ML3.3/2, MS3.2/7, Ms1 3.2/7, ms1mx2.8/47, Error ellipse: s-maj=20.0km s-min=19.1km az=167.0*

*JMA **19** 01:45:09.2±0.2, 39°.43N×143°.51E, h33^{km}, M4.0*

*NIED **19** 01:45:09.3, 39°.43N×143°.51E, h33^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.83; $M_{\theta\theta}$-0.09; $M_{\phi\phi}$-0.74; $M_{r\theta}$0.32; $M_{\theta\phi}$-0.45; $M_{\phi r}$0.53; Fault plane solution: $M_0$1.09000×10^{15} NP1:ϕ_s29.00000°, δ62.00000°, λ93.00000°. NP2:ϕ_s204.00000°, δ28.00000°, λ85.00000°.*

ISC 19 01:45:07.8±3.4**, 39°.39N**±0°.05×**143°.44E**±0°.07**, h6**^{km}±21^{km}**, n77,** σ1^{s}.**36**/76**, mb4.1**/25**, 1C-1D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MIYJ	Miyakonagasawa	1.27	279	P	Pn	01 45 32.1	0.0
MIYJ				S	Sn	01 45 48.5	-0.9
JTH	Tanohata	1.34	295	P	Pn	01 45 32.8	-0.2
JTH				*e*S	Sn	01 45 50.5	-0.5
OFUJ	Ofunato	1.41	258	P	Pn	01 45 34.3	+0.3
JOM	Ohasama	1.67	274	P	Pn	01 45 38.3	+0.8
JANG	Nango	1.78	304	P	Pn	01 45 38.3	-0.8
JMK	Ichinoseki	1.78	256	P	Pn	01 45 39.7	+0.6
JMK				*e*S	Sn	01 46 01.4	-0.6
JIO	Ouri	1.88	241	P	Pn	01 45 40.7	+0.3
JIO				*e*S	Sn	01 46 02.4	-2.1
JRG	Rokugo	2.18	271	P	Pn	01 45 45.6	+1.1
JYK	Kaneyama	2.44	260	P	Pn	01 45 49.6	+1.4
JMM	Marumori	2.57	235		Pn	01 45 50.6	+0.6
JMM				Sn	Sb	01 46 27.6	+1.4
ERM	Erimo	2.63	355	Pn	Pn	01 45 51.7	+1.0
ERM				Sn	Sb	01 46 30.5	+2.6
JEM	Erimo	2.63	355	Pn	Pn	01 45 52.5	+1.7
JNBK	Urakawa-nobuka	2.93	350	P	Pn	01 45 55.4	+0.5
JNBK				*e*S	Sn	01 46 29.4	-1.0
JFT	Otama	3.07	234	P	Pn	01 45 58.0	+1.1
JKB	Kayabe	3.10	324	P	Pn	01 45 57.5	+0.4
JCH	Churui	3.22	359	P	Pn	01 45 57.9	-1.0
JCH				*e*S	Sn	01 46 34.1	-3.4
JEW	Eniwo	3.76	337	Pn	Pb	01 46 12.6	-2.0
JKA	Kamikawa-asahi	4.76	353		Pn	01 46 21.1	+1.1
ASAJ	Asahikawa	4.76	353	Pn	Pn	01 46 20.9	+0.8
	1.4nm,0.3s,baz=245,slow=17,SNR=9.1						
ASAJ				Sn	Sn	01 47 16.1	+0.5
	0.4nm,0.3s,baz=131,slow=19,SNR=1.7						
ASAJ				LR	LR	01 48 36.4	
	comp=Z,93nm,19.3s,baz=142,slow=43						
MAJO	Matsushiro	5.02	237	Pn	Pn	01 46 25.2	+1.5
MAT	Matsushiro	5.02	237	P	Pn	01 46 26.0	+2.4
MAT				*e*S	Sn	01 47 20.9	-1.0
MJAR	Matsushiro Arr	5.02	237	Pn	Pn	01 46 25.9	+2.3
	0.5nm,0.3s,baz=41,slow=11,SNR=47						
MJAR				LR	LR	01 48 36.6	
	comp=Z,142nm,19.6s,baz=70,slow=43						
MJAR	Matsushiro Arr	5.02	237	Pn	Pn	01 46 24.7	+1.1
JGF	Kuroka	6.14	234	Pn	Pn	01 46 38.3	-0.7
YSS	Yuzh-Sakhalins	7.58	356	Pn	Pn	01 46 57.5	-1.1
JWT	Wachi	7.60	240	Pn	Pn	01 47 00.1	+1.0
JHS	Saijyo	9.33	245	Pn	Pn	01 47 24.2	+1.4
USA0B	Ussuriysk Arra	9.81	303	Pn	Pn	01 47 35.5	+6.2
USRK	Ussuriysk Ar.	9.81	303	Pn	Pn	01 47 32.7	+3.4
	baz=102,slow=13,SNR=8.2						
USRK				LR	LR	01 51 16.8	
	comp=Z,177nm,18.5s,baz=142,slow=38						
KSRS	Korea Array	12.33	266	LR	LR	01 52 31.7	
	comp=Z,92nm,18.1s,baz=45,slow=36						
KLR	Kul'dur	12.90	323	Pn	Pn	01 48 12.2	+0.6
	0.1nm,0.3s,baz=123,slow=16,SNR=2.7						
KLR				LR	LR	01 53 36.4	
	comp=Z,140nm,19.1s,baz=104,slow=39						
PETK	Petropavlovsk-	16.85	31	P	Pn	01 48 56.4	-7.7
JOW	Kunigami	17.81	230		Pn	01 49 13.4	-2.9
JOW				IAmb	IAmb	01 49 26.2	
	comp=Z,21nm,0.9s						
SEY	Seymchan	24.18	10	P	P	01 50 25.7	+1.1
	comp=Z,2.0nm,0.2s,baz=194,slow=7.5,SNR=12						
HHC	Hu-ho-hao-te	24.36	284	*e*P	P	01 50 27.1	+0.5
HHC				pmax	pmax		
	comp=Z,5.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,180nm,6.8s						
WHN	Wuhan	25.34	259	⇑P	P	01 50 35.1	-0.3
WHN				pmax	pmax		
	comp=Z,28nm,0.8s						
ULN	Ulaanbaatar	27.46	300	P	P	01 50 55.1	+0.5
SONM	Songino Array	27.90	300	P	P	01 50 58.9	+0.4
	comp=Z,1.8nm,0.8s,baz=92,slow=9.5,SNR=12						
SONM				LR	LR	02 02 40.7	
	comp=Z,85nm,19.6s,baz=26,slow=38						
SONM	Songino Array	27.90	300	P	P	01 50 59.2	+0.7
XAN	Xi'an	28.07	270	P	P	01 51 02.1	+2.0
XAN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
H11N2	WAKE ISLAND Hy	28.14	127	T	T	02 20 31.4	
	baz=320,slow=74,SNR=32						
H11N1	WAKE ISLAND Hy	28.15	127	T	T	02 20 32.6	
	baz=320,slow=74,SNR=20						
H11N3	WAKE ISLAND Hy	28.16	127	T	T	02 20 30.2	
	baz=320,slow=74,SNR=27						
H11S1	WAKE ISLAND Hy	28.95	129	T	T	02 21 35.5	
	baz=321,SNR=4.3						
H11S3	WAKE ISLAND Hy	28.96	129	T	T	02 21 30.6	
	baz=321						
H11S2	WAKE ISLAND Hy	28.97	129	T	T	02 21 35.8	
	baz=321						
ENH	Enshi	29.18	262	P	P	01 51 07.3	-2.7
ENH				IAmb	IAmb	01 51 10.8	
	comp=Z,10nm,1.1s						
CD2	Chengdu	33.32	268	*e*P	P	01 51 45.8	-0.6
GTA	Gaotai	33.47	284	*e*P	P	01 51 48.8	+1.0
GTA				pP	pP	01 51 52.8	+3.8
GTA				sP	pwP	01 51 56.5	+4.5
GTA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KMI	Kunming	36.93	260	⇓P	P	01 52 15.8	-2.0
KMI				sP	pwP	01 52 31.8	+10
WMQ	Urumqi	41.25	295	*e*P	P	01 52 56.0	+2.4
ZAA0	Zalesovo Array	41.56	310	P	P	01 52 55.8	-0.1
ZALV	Zalesovo Beam	41.56	310	P	P	01 52 56.1	+0.3
	comp=Z,2.0nm,0.5s,baz=89,slow=7.7,SNR=12						
ZALV	Zalesovo Beam	41.56	310	P	P	01 52 55.5	-0.3
MK31	Makanchi Array	44.26	300	P	P	01 53 17.5	-0.5
MKAR	Makanchi Array	44.26	300	P	P	01 53 18.1	+0.1
	comp=Z,1.7nm,0.7s,baz=84,slow=9.3,SNR=21						
MKAR				LR	LR	02 12 17.6	
	comp=Z,61nm,19.3s,baz=5.5,slow=37						
MKAR	Makanchi Array	44.26	300	P	P	01 53 17.9	-0.1
MAKZ	Makanchi	44.47	301	P	P	01 53 19.4	-0.2
MAKZ				IAmb	IAmb	01 53 20.9	
	comp=Z,3.0nm,0.9s						
KURK	Kurchatov	45.78	307	P	P	01 53 29.7	-0.2
KURK				IAmb	IAmb	01 53 30.8	
	comp=Z,6.2nm,0.9s						
KURBB	Kurchatov Arra	45.85	306	P	P	01 53 30.5	0.0
	comp=Z,5.0nm,0.7s,baz=81,slow=8.2,SNR=33						
KNK	Knik Glacier	46.12	38	P	P	01 53 22.6	-10
KNK				IAmb	IAmb	01 53 41.6	
	comp=Z,3.2nm,1.0s						
ILAR	Eielson Array	46.65	34	P	P	01 53 37.5	+0.8
	comp=Z,0.5nm,0.7s,baz=262,slow=6.5,SNR=7.4						
BRVK	Borovoye	50.25	311	P	P	01 54 03.8	-0.7
BRVK				IAmb	IAmb	01 54 06.2	
	comp=Z,2.6nm,0.8s						
INK	Inuvik	51.56	28	P	P	01 54 15.2	+1.1
	comp=Z,0.5nm,0.5s,baz=287,slow=7.9,SNR=2.3						
JAGI	Jajag, Banyuwa	54.82	216	P	P	01 54 31.4	-7.4
ARU	Arti	55.67	318	P	P	01 54 43.3	-1.1
ABKAR	Akbulak array	57.66	310	P	P	01 54 57.3	-1.3
ABKAR				IAmb	IAmb	01 55 13.3	
	comp=Z,2.3nm,0.8s						
ABKAR	Akbulak array	57.66	310	P	P	01 54 57.4	-1.3
WRA	Warramunga Arr	59.63	190	P	P	01 55 11.7	-1.0
	comp=Z,0.7nm,0.8s,baz=8.6,slow=7.2,SNR=5.0						
YKA	Yellowknife Ar	60.97	31	P	P	01 55 22.4	+1.0
	comp=Z,0.3nm,0.8s,baz=296,slow=5.9,SNR=2.5						
ASAR	Alice Springs	63.36	190	P	P	01 55 37.0	-0.8
	comp=Z,0.4nm,0.9s,baz=1.9,slow=5.6,SNR=2.1						
FINES	FINESS Array B	67.47	332	P	P	01 56 04.2	+0.2
	comp=Z,1.0nm,0.7s,baz=46,slow=4.0,SNR=4.0						
KIV	Kislovodsk	70.57	311	P	P	01 56 20.4	-3.3
KBZ	Khabaz	70.58	311	P	P	01 56 24.2	+0.6
	comp=Z,2.4nm,0.9s,baz=36,slow=8.7,SNR=5.7						
NVAR	Mina Array Bea	72.31	55	P	P	01 56 35.4	+0.9
	comp=Z,0.1nm,0.3s,baz=297,slow=4.0,SNR=2.3						
PDAR	Pinedale Array	74.88	47	P	P	01 56 50.4	+0.8
	comp=Z,0.2nm,0.5s,baz=309,slow=9.1,SNR=2.0						
TXAR	Lajitas Array	87.43	54	P	P	01 57 56.7	+0.4
	comp=Z,0.1nm,0.6s,baz=251,slow=2.8,SNR=2.0						

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*IDC **19** 01:58:11.3±1.0, 27°.72N×141°.42E, h90^{km}±12^{km}, mb3.2/5, mb1 3.4/7, mb1mx3.2/31, mbtmp3.5/7, MS3.1/4, Ms1 3.2/4, ms1mx2.8/26, Error ellipse: s-maj=28.7km s-min=16.4km az=76.0*

ISC 19 01:58:11.6±0.8**, 27°.7N**±0°.1×**141°.6E**±0°.2**, h100**^{km}**, n11,** σ1^{s}.**25**/10**, mb3.6**/6**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	0.83	137	P	Pn	01 58 28.3	-2.0
	80nm,0.3s,baz=310,slow=17,SNR=13						
JCJ				S	Sn	01 58 44.9	+0.6
	515nm,0.3s,baz=298,slow=21,SNR=32						
MJAR	Matsushiro Arr	9.25	343	P	Pn	02 00 20.9	-1.2
	0.1nm,0.3s,baz=160,slow=11,SNR=1.9						
JNU	Nakatsue	10.67	303	LR	LR	02 03 44.2	
	comp=Z,111nm,18.2s,baz=101,slow=32						
KSRS	Korea Array	15.03	314	P	Pn	02 01 37.8	-0.8
	0.1nm,0.3s,baz=120,slow=11,SNR=2.6						
KSRS				LR	LR	02 06 34.1	
	comp=Z,48nm,19.7s,baz=116,slow=34						
SONM	Songino Array	33.88	316	P	P	02 04 44.0	-0.8
	0.2nm,0.5s,baz=107,slow=8.2,SNR=1.7						
SONM				LR	LR	02 18 45.1	
	comp=Z,56nm,18.7s,baz=22,slow=36						
CMAR	Chiang Mai Arr	40.09	266	LR	LR	02 21 20.1	
	comp=Z,25nm,20.8s,baz=175,slow=35						
WRA	Warramunga Arr	47.88	189	P	P	02 06 40.1	+0.4
	8.4nm,0.8s,baz=9.8,slow=8.4,SNR=31						
MKAR	Makanchi Array	49.65	309	P	P	02 06 54.2	+1.1
	0.5nm,0.6s,baz=93,slow=8.9,SNR=7.8						
ASAR	Alice Springs	51.60	189	P	P	02 07 08.6	+0.7
	0.3nm,0.5s,baz=17,slow=9.7,SNR=5.0						
ILAR	Eielson Array	57.45	29	P	P	02 07 50.6	+0.9
	0.9nm,1.0s,baz=263,slow=6.3,SNR=6.1						
YKA	Yellowknife Ar	71.88	28	P	P	02 09 24.5	+1.0
	0.3nm,0.9s,baz=302,slow=5.9,SNR=3.8						

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*IDC **19** 02:23:48.4±0.8, 31°.66N×138°.45E, h382^{km}±11^{km}, mb2.8/7, mb1 2.9/9, mb1mx2.8/33, mbtmp3.5/9, Error ellipse: s-maj=31.0km s-min=14.8km az=73.0*

*JMA **19** 02:23:50.8±0.4, 31°.94N×138°.69E, h372^{km}, M3.5*

ISC 19 02:23:48.0±0.9**, 31°.80N**±0°.09×**138°.6E**±0°.1**, h368**^{km}**, n22,** σ2^{s}.**49**/26**, mb3.0**/7**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2	1.68	38	P	Pn	02 24 42.4	+3.5
	32nm,0.3s,baz=349,slow=21,SNR=9.2						
JHJ				S	S	02 25 24.7	+4.8
	22nm,0.3s,baz=72,slow=19,SNR=1.9						
JHJ2	Mitsune	1.69	39	P	Pn	02 24 42.1	+3.1
TK02	Tokai 2	2.25	343	P	Pn	02 24 45.9	+3.6
TTO4	TONANKAI O.B.S	2.36	339	P	Pn	02 24 46.6	+3.4
BSO3	Boso 3	3.42	28	P	Pn	02 24 54.0	+1.9
JOD2	Odawara 2	3.49	7	P	Pn	02 24 55.3	+2.2
BSO1	Boso 1	3.50	35	P	Pn	02 24 54.6	+2.0
BSO4	Boso 4	3.52	25	P	Pn	02 24 55.5	+2.3
JNY	Yasuok	3.60	351	P	Pn	02 24 57.7	+3.5
JHU	Hanno	4.09	8	P	Pn	02 25 00.8	+1.9
JRY	Ryogami san	4.22	4	P	Pn	02 25 02.7	+2.5
JRY				*e*S	S	02 25 58.5	-0.2
JAG	Ashikaga	4.68	9	P	Pn	02 25 06.0	+1.1
JAG				S	S	02 26 05.6	-1.7
MJAR	Matsushiro Arr	4.74	357	P	Pn	02 25 08.6	+3.0
	0.2nm,0.3s,baz=171,slow=10,SNR=5.5						
JHO	Hitachi	5.08	19	P	Pn	02 25 10.3	+1.0
JHO				*e*S	S	02 26 13.0	-2.2
KSRS	Korea Array	10.41	306	P	P	02 26 12.4	+1.3
	0.3nm,0.3s,baz=122,slow=10.0,SNR=7.1						
SONM	Songino Array	29.17	313	P	P	02 29 16.0	-0.8
	0.2nm,0.5s,baz=120,slow=8.5,SNR=4.3						
MKAR	Makanchi Array	45.10	306	P	P	02 31 27.6	-1.4
	0.4nm,0.8s,baz=82,slow=11,SNR=5.0						
WRA	Warramunga Arr	51.60	185	P	P	02 32 16.0	-2.2
	0.5nm,0.6s,baz=0.1,slow=7.6,SNR=10						
ASAR	Alice Springs	55.33	185	P	P	02 32 43.3	-1.7
	0.4nm,0.7s,baz=16,slow=13,SNR=5.9						
YKA	Yellowknife Ar	69.52	28	P	P	02 34 18.0	+0.5
	0.2nm,0.6s,baz=301,slow=5.0,SNR=2.8						
FINES	FINESS Array B	72.33	332	P	P	02 34 33.6	-0.6
	0.5nm,0.4s,baz=72,slow=6.2,SNR=7.0						
AKASG	Malin Array Be	76.97	322	P	P	02 34 59.7	-1.1
	0.6nm,0.4s,baz=52,slow=5.1,SNR=4.6						

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*MOS **19** 02:32:30.4±0.0, 43°.14N×46°.31E, h6^{km}, MPVA3.6*

*NORS **19** 02:32:30.5±0.0, 43°.09N×46°.35E, h13^{km}, MPVA3.7*

*TIF **19** 02:32:30.7, 43°.18N×46°.29E, h13^{km}±1^{km}*

*DRS **19** 02:32:31.3±0.0, 43°.05N×46°.21E, h12^{km}, ML2.2/10*

ISC 19 02:32:32.0±1.1**, 43°.21N**±0°.04×**46°.37E**±0°.02**, h9**^{km}±8^{km}**, n33,** σ1^{s}.**12**/66**, 11C-8D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DLMR	Dylym	0.23	125	⇓*e*Pg	Pg	02 32 37.4	+0.7
	136nm,0.2s						
DLMR				⇓*e*Sg	Sg	02 32 41.7	+1.8
	565nm,0.2s						
DVE	Vedeno	0.30	216	*i* Pg	Pg	02 32 36.9	-1.2
DVE				*e*Sg	Sg	02 32 41.6	-0.6
DBC	Dubki	0.38	119	⇑*i*Pg	Pb	02 32 39.7	-1.3
	78nm,0.2s						
DBC				⇑*i*Sg	Sb	02 32 46.2	-0.9
	143nm,0.3s						
GROC	Groznyy	0.42	270	*e*Pg	Pg	02 32 39.9	-0.4
GROC				*e*Sg	Sg	02 32 46.5	+0.7
KRNR	Karanay	0.55	134	⇑*e*Pg	Pb	02 32 42.3	-1.5
	10nm,0.4s						
KRNR				⇑*i*Sg	Sb	02 32 50.6	-1.2
	78nm,0.1s						
BTLR	Botlikh	0.55	191	*i* Pg	Pg	02 32 41.6	-1.1
BTLR				⇑*e*Sg	Sg	02 32 49.4	-0.5
	31nm,0.3s						
BUJR	Buynaksk	0.66	125	⇑*e*Pg	Pn	02 32 47.0	-0.6
	21nm,0.2s						
BUJR				⇑*i*Sg	Sn	02 32 57.0	-1.1
	164nm,0.5s						
ARKR	Arakani	0.76	142	⇓*e*Pg	Pb	02 32 46.4	-1.1
	12nm,0.2s						
ARKR				⇓*e*Sg	Sb	02 32 57.0	-0.8
	56nm,0.5s						
GNBR	Gunib	0.93	152	⇑*e*Pg	Pb	02 32 49.6	-0.7
	21nm,0.4s						
GNBR				⇑*i*Sg	Sb	02 33 03.1	+0.4
	87nm,0.2s						
KMGR	Komgaron	1.11	263	*e*Pg	Pb	02 32 52.7	-0.7
KMGR				*e*Sg	Sn	02 33 09.6	+0.3
SGKR	Sergokala	1.21	128	⇓*e*Pg	Pn	02 32 56.1	+1.0
	9.1nm,0.1s						
SGKR				⇓*e*Sg	Sn	02 33 13.7	+2.2
	48nm,0.5s						
VLKR	Vladikavkaz	1.25	263	*e*Pg	Pn	02 32 55.3	-0.4
VLKR				*e*Sg	Sn	02 33 14.1	+1.4
TRKR	Terskaya	1.30	294	*e*Pg	Pb	02 32 56.0	-0.7
TRKR				*e*Sg	Sg	02 33 15.4	+1.6
BTKR	Batakoyurt	1.34	278	*e*Pg	Pb	02 32 56.8	-0.6
BTKR				*e*Sg	Sg	02 33 17.6	+2.3

LGD	**Lagodekhi**	1.37	184	P	Pn	02 32 56.7	-0.7
LGD				S	Sn	02 33 14.9	-0.8
URKR	**Urkarakh**	1.40	138	⇓*e*Pg	Pg	02 32 59.2	+0.4
	10nm,0.3s						
URKR				⇓*i*Sg	Sg	02 33 19.0	+2.1
	32nm,0.4s						
PNSH	**Pansheti**	1.41	247	P	Pn	02 32 56.5	-1.6
PNSH				S	Sn	02 33 14.8	-2.0
ARNR	**Ardon**	1.53	270	*e*Pg	Pb	02 32 59.7	-0.8
ARNR				*e*Sg	Sg	02 33 21.8	+0.7
LACR	**Lac**	1.57	257	*e*Pg	Pn	02 32 58.5	-1.7
LACR				*e*Sg	Sn	02 33 19.7	-0.9
GUDG	**Gudauri**	1.58	243	P	Pn	02 33 00.3	-0.1
GUDG				S	Sn	02 33 20.7	-0.3
PRTR	**Priterechnaya**	1.61	290	*e*Pg	Pb	02 33 00.8	-1.2
PRTR				*e*Sg	Sg	02 33 24.3	+0.3
KORR	**Kora**	1.69	267	*e*Pg	Pn	02 33 01.6	-0.1
KORR				*e*Sg	Sb	02 33 25.2	+0.5
STDR	**Stavd-Durt**	1.69	276	*e*Pg	Pb	02 33 02.3	-1.0
STDR				*e*Sg	Sg	02 33 26.4	0.0
DDFL	**Dedoflistskaro**	1.77	186	P	Pg	02 33 05.9	-0.1
DDFL				S	Sb	02 33 28.5	+1.5
ZEI	**Tsey**	1.86	258	*e*Pg	Pn	02 33 03.5	-0.8
ZEI				*e*Sg	Sn	02 33 27.8	-0.2
LSNR	**Lesken**	1.86	273	*e*Pg	Pb	02 33 05.1	-1.1
LSNR				*e*Sg	Sb	02 33 30.9	+1.2
BTNK	**Botanikuri**	1.91	218	P	Pb	02 33 07.8	+0.6
BTNK				S	Sb	02 33 33.2	+2.0
AKT	**Akhty**	2.00	149	⇑*e*Pg	Pg	02 33 09.8	-0.5
	8.2nm,0.4s						
AKT				⇑*e*Sg	Sg	02 33 36.5	+0.3
	29nm,0.4s						
DIGR	**Digorskoe uzhe**	2.07	262	*e*Pg	Pn	02 33 06.5	-0.7
DIGR				*e*Sg	Sn	02 33 34.0	+0.9
ONI	**Oni**	2.23	255	P	Pn	02 33 08.5	-0.8
ONI				S	Sn	02 33 38.1	+1.2
BRNG	**Burnasheti**	2.46	231	P	Pn	02 33 13.0	+0.5
BRNG				S	Sn	02 33 44.9	+2.2
DMNI	**Dmanisi**	2.48	222	P	Pn	02 33 13.1	+0.4
DMNI				S	Sn	02 33 45.0	+1.9
BKRG	**Bakuriani**	2.55	237	P	Pn	02 33 13.8	0.0
BKRG				S	Sn	02 33 45.5	+0.5

IDC 19 02:51:41.4±33.0, 21°.08S×179°.39W, h380^{km}±292^{km}, mb3.0/4, mb1 3.3/4, mb1mx3.0/29, mbtmp3.8/4, Error ellipse: s-maj=282.2km s-min=70.3km az=135.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	43.12	258	P	P	02 59 05.0	-1.3
	0.3nm,0.3s,baz=89,slow=8.5,SNR=7.5						
WRA	**Warramunga Arr**	43.24	263	P	P	02 59 07.6	+0.4
	0.5nm,0.4s,baz=96,slow=8.3,SNR=17						
FITZ	**Fitzroy Crossi**	51.66	263	P	P	03 00 12.0	+0.7
	3.5nm,0.9s,baz=100,slow=11,SNR=2.0						
ILAR	**Eielson Array**	89.17	13	P	P	03 03 54.5	+0.1
	0.2nm,0.5s,baz=214,slow=4.7,SNR=4.6						
AKASG	**Malin Array Be**	142.88	330	PKP	PKPdf	03 10 29.1	-1.0
	1.5nm,0.4s,baz=44,slow=4.1,SNR=8.8						

IDC 19 02:58:56.5±2.4, 3°.60N×127°.39E, h0^{km}, mb3.3/3, mb1 3.5/3, mb1mx3.3/31, mbtmp3.3/3, MS3.2/1, Ms1 3.2/1, ms1mx2.4/20, Error ellipse: s-maj=189.9km s-min=25.7km az=67.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	24.38	164	P	P	03 04 16.6	+0.1
	0.6nm,0.9s,baz=343,slow=9.9,SNR=5.1						
WRA				LR	LR	03 14 52.2	
	comp=Z,48nm,18.1s,baz=15,slow=39						
ASAR	**Alice Springs**	27.84	167	P	P	03 04 48.0	+0.1
	0.3nm,0.4s,baz=358,slow=7.5,SNR=6.5						
MKAR	**Makanchi Array**	58.03	325	P	P	03 08 51.2	-0.2
	0.2nm,0.4s,baz=115,slow=7.6,SNR=7.0						

IDC 19 03:09:12.8±2.6, 6°.95S×132°.10E, h0^{km}, mb3.4/1, mb1 3.6/4, mb1mx3.4/24, mbtmp3.4/4, ML3.1/3, Error ellipse: s-maj=105.0km s-min=29.4km az=81.0, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	12.75	209	Pn	Pn	03 12 15.3	-0.2
	0.1nm,0.3s,baz=29,slow=10,SNR=3.8						
FITZ				Sn	Sn	03 14 31.4	-6.9
	0.2nm,0.3s,baz=240,slow=20,SNR=1.3						
WRA	**Warramunga Arr**	13.10	171	Pn	Pn	03 12 20.5	+0.2
	0.1nm,0.3s,baz=355,slow=13,SNR=8.4						
WRA				Sn	Sn	03 14 39.5	-7.3
	0.1nm,0.3s,baz=356,slow=23,SNR=2.0						
ASAR	**Alice Springs**	16.71	174	Pn	Pn	03 13 08.4	-0.1
	0.1nm,0.3s,baz=348,slow=7.6,SNR=1.7						
MKAR	**Makanchi Array**	69.34	326	P	P	03 20 22.3	0.0
	0.4nm,1.0s,baz=116,slow=6.6,SNR=3.4						

KRSC 19 03:31:15.7±3.3, 48°.18N×157°.00E, h7^{km}±58^{km}, ML3.7, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	2.57	347	*e*S	Sn	03 32 29.4	+0.2
PAU	**Pauzhetka**	3.29	358	*e*S	Sb	03 32 51.8	-2.8
KDTR	**Khodutka, Kamc**	3.70	10	*e*P	Pn	03 32 16.5	+3.3
KDTR				*e*S	Sb	03 33 02.8	-3.5
RUS	**Russkaya**	4.37	12	*e*P	Pn	03 32 26.0	+3.6
UGLR	**Uglovaya**	5.17	12	*e*P	Pn	03 32 37.9	+4.4
AVH	**Avacha**	5.21	12	*e*P	Pn	03 32 39.7	+5.6
KOK	**Koryaka**	5.22	11	*e*P	Pn	03 32 39.7	+5.4
SDLR	**Sedlovina**	5.24	13	*e*P	Pn	03 32 37.7	+3.1

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*TUL **19** 04:06:15.0±1.0, 35°.89N±0°.01×97°.27W±0°.02, h2^{km}±7^{km}, ML3.1, mb_Lg3.3/94(NEIC), Error ellipse: s-maj=2.3km s-min=1.9km az=99.0*

*NEIC **19** 04:06:15.3±0.6, 35°.90N±0°.01×97°.27W±0°.02, h6^{km}±7^{km}, Error ellipse: s-maj=2.6km s-min=1.9km az=101.0*

*ANF **19** 04:06:15.2±0.6, 35°.88N×97°.24W, h5^{km}, ML3.9/8, Error ellipse: s-maj=9.7km s-min=4.7km az=172.0*

ISC 19 04:06:15.3±1.1, 35°.90N±0°.02×97°.27W±0°.02, h5^{km}±9^{km}, n85, $\sigma 0^{s}.52$/70, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK029	**Liberty Lake**	0.18	236		Pg	04 06 18.8	-0.2
OK029				Sg	Sg	04 06 21.7	+0.3
OK025	**Westminster Rd**	0.32	191		Pg	04 06 21.5	-0.1
OK031	**S. Brethren Rd**	0.35	81		Pg	04 06 22.2	+0.1
OK031				Sg	Sg	04 06 27.1	+0.4
BCOK	**Bluff Creek, N**	0.37	229		Pg	04 06 22.3	-0.1
BCOK				Sg	Sg	04 06 27.6	+0.2
OK030	**Cody Creek RV**	0.39	86		Pg	04 06 23.0	+0.1
OKCFA	**Oklahoma City**	0.51	197	Pg	Pg	04 06 24.9	-0.1
OKCFA				Sg	Sg	04 06 32.1	+0.5
OKCSW	**OKLAHOMA CITY**	0.51	196		Pg	04 06 25.0	-0.1
OKCSW				Sg	Sg	04 06 32.4	+0.5
QUOK	**Quay**	0.53	59	Pg	Pg	04 06 25.6	+0.1
QUOK				Sg	Sg	04 06 32.8	+0.5
FNO	**Franklin**	0.65	190		Pg	04 06 27.9	+0.1
FNO				Sg	Sb	04 06 37.0	-1.4
CROK	**Carrier**	0.84	316		Pg	04 06 31.3	-0.1
CROK				Sg	Sg	04 06 42.5	+0.2
KAN13	**South Haven SW**	1.12	351		Pg	04 06 36.4	-0.5
T35A	**Sooner Cattle**	1.18	31	Pg	Pg	04 06 37.3	-0.7
T35B	**Sooner Cattle**	1.18	31	P		04 06 37.2	
	baz=211						
T35B				S		04 06 53.5	
	baz=211						
KAN14	**Manchester OK**	1.20	332		Pg	04 06 37.6	-0.7
TUL1	**Leonard**	1.20	89	P	Pg	04 06 37.0	-1.3
	baz=269						
TUL1				S	Sg	04 06 53.9	+0.2
	baz=269						
TUL1	**Leonard**	1.20	89	Pg	Pg	04 06 36.9	-1.3
TUL1	**Leonard**	1.20	89	P		04 06 36.9	
	baz=269						
TUL1				S		04 06 53.7	
	baz=269						
KAN05	**Bluff City Nor**	1.30	338	Pn	Pn	04 06 39.5	-0.6
KAN01	**Argonia South**	1.31	343		Pn	04 06 39.7	-0.6
X34A	**Smith Ranch, M**	1.38	200		Pn	04 06 40.8	-0.4
KAN10	**Anthony SW Sta**	1.39	332		Pn	04 06 40.9	-0.5
KS21	**Milan North St**	1.42	347	IAmb_Lg		04 07 03.5	
	comp=Z,164nm,0.9s						
KAN08	**Anthony NE Sta**	1.44	337		Pn	04 06 41.9	-0.2
U32A	**Winter Ranch,**	1.48	289		Pn	04 06 42.1	-0.6
U32A	**Winter Ranch,**	1.48	289	P		04 06 42.3	
	baz=109						
U32A				S		04 07 03.2	
	baz=109						
KAN12	**Harper NE Stat**	1.52	337		Pn	04 06 43.1	0.0
WMOK	**Wichita Mounta**	1.70	227	P	Pn	04 06 45.6	0.0
	baz=47						
WMOK				S	Sb	04 07 08.2	-0.4
	baz=47						
WMOK	**Wichita Mounta**	1.70	227		Pn	04 06 45.4	-0.2
WMOK	**Wichita Mounta**	1.70	227	P		04 06 45.7	
	baz=47						
WMOK				S		04 07 08.4	
	baz=47						
X37A	**Clayton**	2.03	130	Pn	Pn	04 06 50.1	0.0
X37A				IAmb_Lg		04 07 24.5	
	comp=Z,148nm,0.9s						
X37A	**Clayton**	2.03	130	P		04 06 50.7	
	baz=310						
X37A				S		04 07 17.3	
	baz=310						
U38A	**Gravette**	2.39	76		Pn	04 06 55.2	+0.1
U38A				IAmb_Lg		04 07 32.2	
	comp=Z,104nm,1.0s						
U38A	**Gravette**	2.39	76	P		04 06 55.9	
	baz=258						
Z35A	**Perchaven, San**	2.56	180	Pn	Pn	04 06 57.3	-0.2
Z35A	**Perchaven, San**	2.56	180	P		04 06 57.6	
	baz=360						
HHAR	**Hobbs**	2.72	81		Pn	04 06 59.7	0.0
R32A	**Long Quarter,**	2.77	336	Pn	Pn	04 07 00.5	+0.1
R32A				IAmb_Lg		04 07 42.9	
	comp=Z,72nm,0.8s						
R32A	**Long Quarter,**	2.77	336	S		04 07 35.6	
	baz=155						
W39A	**Magazine**	2.92	103	P	Pn	04 07 02.5	+0.1
	baz=285						
W39A				S	Sn	04 07 38.7	+0.8
	baz=285						
W39A	**Magazine**	2.92	103		Pn	04 07 02.5	+0.1
W39A				IAmb_Lg		04 07 54.8	
	comp=Z,111nm,0.8s						
W39A	**Magazine**	2.92	103	P		04 07 02.3	
	baz=285						
Z38A	**Mt. Pleasant**	3.24	144	Pn	Pn	04 07 06.6	-0.1
Z38A				IAmb_Lg		04 08 01.9	
	comp=Z,80nm,0.8s						
Z38A	**Mt. Pleasant**	3.24	144	S		04 07 46.1	
	baz=325						
KSU1	**Kansas State U**	3.24	9	P	Pn	04 07 07.4	+0.6
	baz=189						
KSU1	**Kansas State U**	3.24	9	Pn	Pn	04 07 06.9	+0.2
KSU1				IAmb_Lg		04 08 04.5	
	comp=Z,69nm,0.9s						
KSU1	**Kansas State U**	3.24	9	P		04 07 07.6	
	baz=189						
MIAR	**Mount Ida**	3.31	113	P	Pn	04 07 08.2	+0.5
	baz=295						
MIAR				S	Sn	04 07 48.4	+1.0
	baz=295						
MIAR	**Mount Ida**	3.31	113	Pn	Pn	04 07 07.7	0.0
MIAR				IAmb_Lg		04 08 04.8	
	comp=Z,77nm,0.9s						
MIAR	**Mount Ida**	3.31	113	P		04 07 08.4	
	baz=295						
CBKS	**Cedar Bluff**	3.51	327	P	Pn	04 07 11.7	+1.1
	baz=145						
CBKS				S	Sn	04 07 53.5	+1.0
	baz=145						
CBKS	**Cedar Bluff**	3.51	327	Pn	Pn	04 07 10.7	+0.1
CBKS	**Cedar Bluff**	3.51	327	S		04 07 53.3	
	baz=145						
U40A	**Yellville**	3.60	81	P	Pn	04 07 11.4	-0.4
	baz=264						
U40A	**Yellville**	3.60	81		Pn	04 07 11.8	+0.1
U40A				IAmb_Lg		04 08 10.3	
	comp=Z,60nm,0.8s						
U40A	**Yellville**	3.60	81	P		04 07 11.9	
	baz=264						
U40A				P		04 07 11.9	
	baz=264						
S39A	**Bolivar**	3.63	59	Pn	Pn	04 07 12.3	+0.1
S39A				IAmb_Lg		04 08 11.5	
	comp=Z,64nm,0.8s						
S39A	**Bolivar**	3.63	59	S		04 07 56.6	
	baz=242						
AMTX	**Amarillo**	3.75	256	P	Pn	04 07 14.5	+0.7
	baz=73						
AMTX				S	Sn	04 07 58.8	+0.5
	baz=73						
AMTX	**Amarillo**	3.75	256	Pn	Pn	04 07 13.8	-0.1
AMTX				IAmb_Lg		04 08 16.2	
	comp=Z,57nm,0.7s						
ABTX	**Abilene, Hawle**	3.81	212	Pn	Pn	04 07 14.5	-0.2
X40A	**Basin Creek Fa**	3.89	110		Pn	04 07 15.7	0.0
X40A				IAmb_Lg		04 08 23.5	
	comp=Z,113nm,1.0s						
WHTX	**Lake Whitney,**	3.90	182	Pn	Pn	04 07 15.7	-0.2
WHTX	**Lake Whitney,**	3.90	182	P		04 07 15.7	
	baz=2.2						
WLAR	**White Oak Lake**	4.07	122	IAmb_Lg		04 08 34.0	
	comp=Z,98nm,1.1s						
237A	**Washetta, Mont**	4.07	162		Pn	04 07 17.8	-0.4
237A				IAmb_Lg		04 08 31.8	
	comp=Z,44nm,1.1s						
237A	**Washetta, Mont**	4.07	162	P		04 07 17.9	
	baz=343						
WHAR	**Wooly Hollow**	4.10	97	Pn	Pn	04 07 18.6	0.0
WHAR				IAmb_Lg		04 08 27.3	
	comp=Z,95nm,1.3s						
FCAR	**Ozark Folk Cen**	4.17	89	Pn	Pn	04 07 19.7	+0.1
FCAR				IAmb_Lg		04 08 30.2	
	comp=Z,49nm,0.8s						
MGMO	**Mountain Grove**	4.21	71	IAmb_Lg		04 08 30.5	
	comp=Z,94nm,0.8s						
R40A	**Maddies Statio**	4.65	58	IAmb_Lg		04 08 41.8	
	comp=Z,41nm,0.7s						
P38A	**Dawn**	4.75	37	Pn	Pn	04 07 27.8	+0.2
N33A	**J Bar K, Exete**	4.83	358	Pn	Pn	04 07 28.8	+0.1
N33A				IAmb_Lg		04 08 50.1	
	comp=Z,41nm,1.1s						
MSTX	**Muleshoe**	4.92	249	Pn	Pn	04 07 29.8	-0.2
CCAR	**Cane Creek**	4.93	112	IAmb_Lg		04 08 58.1	
	comp=Z,35nm,0.7s						
T42A	**Van Buren**	5.10	75	IAmb_Lg		04 08 54.9	
	comp=Z,50nm,0.9s						
435B	**Jarrell**	5.11	183	IAmb_Lg		04 08 58.2	
	comp=Z,40nm,0.8s						
KSCO	**Kaye Shedlock'**	5.28	308	IAmb_Lg		04 09 14.5	
	comp=Z,63nm,0.7s						
CCM	**Cathedral Cave**	5.28	64	Pn	Pn	04 07 34.9	+0.1
CCM				IAmb_Lg		04 09 08.6	
	comp=Z,56nm,0.7s						
HBAR	**Harrisburg**	5.39	92	IAmb_Lg		04 09 12.1	
	comp=Z,80nm,0.8s						
BGNE	**Belgrade**	5.54	353	Pn	Pn	04 07 38.6	+0.2
BGNE				IAmb_Lg		04 09 23.8	
	comp=Z,33nm,0.8s						
PBMO	**Poplar Bluff**	5.59	79	IAmb_Lg		04 09 14.4	
	comp=Z,73nm,0.8s						
LPAR	**Lepanto**	5.67	91	IAmb_Lg		04 09 22.0	
	comp=Z,77nm,0.9s						
143A	**Socs Landing,**	5.80	122	IAmb_Lg		04 09 32.0	
	comp=Z,36nm,0.8s						
JCT	**Junction City**	5.81	202	Pn	Pn	04 07 40.6	-1.5
JCT				IAmb_Lg		04 09 25.4	
	comp=Z,64nm,0.8s						
FVM	**French Village**	5.86	67	IAmb_Lg		04 09 25.2	
	comp=Z,55nm,1.1s						
L34A	**Svendsen Farm,**	6.10	6	IAmb_Lg		04 09 33.9	
	comp=Z,72nm,0.9s						
SLM	**Saint Louis**	6.24	62	IAmb_Lg		04 09 39.3	
	comp=Z,54nm,0.8s						
GLAT	**Glass**	6.47	84	IAmb_Lg		04 09 54.1	
	comp=Z,70nm,0.8s						
OXF	**Oxford**	6.58	100	IAmb_Lg		04 09 58.7	
	comp=Z,26nm,0.9s						
W45A	**Hickory Valley**	6.63	94	IAmb_Lg		04 09 54.4	
	comp=Z,37nm,0.8s						
S44A	**Carbondale**	6.67	72	IAmb_Lg		04 09 57.0	
	comp=Z,57nm,0.8s						
SIUC	**Southern Illin**	6.71	72	IAmb_Lg		04 09 56.9	
	comp=Z,66nm,0.8s						
K31A	**O'Neill**	6.81	351	IAmb_Lg		04 10 00.3	
	comp=Z,41nm,0.8s						
SDCO	**Great Sand Dun**	6.86	288	Pn	Pn	04 07 56.6	-0.2
SDCO				IAmb_Lg		04 09 57.1	
	comp=Z,30nm,1.2s						
L40A	**Anamosa**	7.75	36	IAmb_Lg		04 10 21.4	
	comp=Z,26nm,0.9s						
OLIL	**Olney**	7.83	66	IAmb_Lg		04 10 46.3	
	comp=Z,38nm,0.9s						
Y22D	**IRIS PASSCAL I**	8.13	260	IAmb_Lg		04 10 51.4	
	comp=Z,38nm,1.0s						
PHWY	**Pilot Hill**	8.38	313	IAmb_Lg		04 10 47.9	
	comp=Z,27nm,1.0s						
JFWS	**Jewell Farm**	8.86	36	IAmb_Lg		04 10 57.1	
	comp=Z,33nm,0.8s						
WCI	**Wyandotte Cave**	9.07	72	IAmb_Lg		04 11 04.5	
	comp=Z,28nm,1.0s						
SFIN	**Lafayette**	9.17	58	IAmb_Lg		04 11 05.1	
	comp=Z,41nm,0.7s						
HQIL	**Hanson Quary C**	9.41	48	IAmb_Lg		04 11 19.2	
	comp=Z,43nm,1.1s						

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*ATH **19** 04:34:14.2, 38°.42N×20°.55E, h14^{km}±1^{km}, ML2.6/3, Error ellipse: s-maj=2.0km s-min=0.6km az=277.0*

*THE **19** 04:34:14.7, 38°.42N×20°.54E, h9^{km}±1^{km}, ML2.6/15, Error ellipse: s-maj=1.1km s-min=0.3km az=280.0*

ISC 19 04:34:13.8±0.8, 38°.43N±0°.02×20°.51E±0°.03, h16^{km}±5^{km}, n52, $\sigma 0^{s}.88$/88, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VSK1	**VASILIKIADES**	0.05	117	P	Pg	04 34 15.9	-0.9
VSK1				S	Sg	04 34 17.1	-1.6
KEF5	**Kardakata, Kep**	0.16	191	P	Pg	04 34 18.0	+0.1
KEF5				S	Sg	04 34 20.8	+0.2
	11μm,0.3s						
KEF5	**Kardakata, Kep**	0.16	191	P	Pg	04 34 18.0	+0.1
KEF5				S	Sg	04 34 20.4	-0.2
KEF4	**Livadi, Kephal**	0.19	201	P	Pg	04 34 18.6	+0.3
KEF4				S	Sg	04 34 22.2	+0.9
KEF4	**Livadi, Kephal**	0.19	201	P	Pg	04 34 18.6	+0.3
KEF4				S	Sg	04 34 21.5	+0.2
DMLN	**Damoulianata-K**	0.22	209	P	Pg	04 34 19.2	+0.4
DMLN				S	Sg	04 34 23.1	+0.9
	3μm,0.2s						
DMLN	**Damoulianata-K**	0.22	209	P	Pg	04 34 19.3	+0.4
DMLN				S	Sg	04 34 22.7	+0.4
EVGI	**Lefkada island**	0.22	32	P	Pg	04 34 19.1	+0.2
EVGI				S	Sg	04 34 22.8	+0.5
	1μm,0.2s						
EVGI	**Lefkada island**	0.22	32	P	Pg	04 34 19.0	+0.2
EVGI				S	Sg	04 34 22.2	-0.1
LXRA	**Lixouri, Kepha**	0.24	193	P	Pg	04 34 19.4	+0.3
LXRA				S	Sg	04 34 23.4	+0.7
ARGA	**Argostoli. Kep**	0.26	185	P	Pg	04 34 19.6	+0.2
ARGA				S	Sg	04 34 23.4	+0.2
KEF3	**Kipouria, Keph**	0.26	209	P	Pg	04 34 19.4	-0.1
KEF3				S	Sg	04 34 23.4	+0.1
	5μm,0.1s						
KEF3	**Kipouria, Keph**	0.26	209	P	Pg	04 34 19.4	-0.1
KEF3				S	Sg	04 34 23.1	-0.2
NYDR	**Nydri-Lefkada**	0.32	28	P	Pg	04 34 20.6	+0.1
NYDR				S	Sg	04 34 25.9	+0.9
	2μm,0.4s						
NYDR	**Nydri-Lefkada**	0.32	28	P	Pg	04 34 20.6	+0.1
NYDR				S	Sg	04 34 24.9	-0.2
PSDA	**Pessada-Kefalo**	0.32	169	P	Pg	04 34 20.6	+0.1
PSDA				S	Sg	04 34 25.8	+0.7
	810nm,0.3s						
PSDA	**Pessada-Kefalo**	0.32	169	P	Pg	04 34 20.7	+0.1
PSDA				S	Sg	04 34 24.9	-0.2
LKD2	**Lefkada island**	0.38	18	P	Pg	04 34 21.7	+0.2
LKD2				S	Sg	04 34 27.6	+0.8
	772nm,0.5s						
LKD2	**Lefkada island**	0.38	18	P	Pg	04 34 21.8	+0.2
LKD2				S	Sg	04 34 27.0	+0.2
TSLK	**Tsoukalades, L**	0.41	16	P	Pg	04 34 22.4	+0.3
TSLK				S	Sg	04 34 29.0	+1.2
	1μm,0.4s						
TSLK	**Tsoukalades, L**	0.41	16	P	Pg	04 34 22.5	+0.3
TSLK				S	Sg	04 34 28.3	+0.6
PDO	**Prodromos**	0.56	72	P	Pg	04 34 24.6	-0.2
PDO				S	Sb	04 34 33.0	+0.1
	940nm,0.3s						
PDO	**Prodromos**	0.56	72	P	Pg	04 34 24.6	-0.2
PDO				S	Sg	04 34 32.0	-0.2
PDO				AML	AML	04 34 37.0	
	comp=E,1146μm,0.3s						
PDO				AML	AML	04 34 38.3	
	comp=N,1486μm,0.4s						
VLMS	**Volimes, Zakyn**	0.57	167	P	Pg	04 34 25.1	+0.1
VLMS				S	Sb	04 34 33.9	+0.6
	comp=N,2μm,0.3s						
VLMS	**Volimes, Zakyn**	0.57	167	P	Pg	04 34 24.9	-0.1
VLMS				S	Sg	04 34 32.1	-0.5
VLMS				AML	AML	04 34 37.7	
	comp=E,2733μm,0.3s						
VLMS				AML	AML	04 34 37.8	
	comp=N,4266μm,0.3s						
AXS	**Araxos**	0.72	109	P	Pg	04 34 27.4	-0.5
AXS				S	Sb	04 34 38.0	+0.3
	comp=N,255nm,0.6s						
AXS	**Araxos**	0.72	109	P	Pg	04 34 27.0	-0.9
AXS				S	Sg	04 34 37.4	-0.1
AXS				AML	AML	04 34 39.8	
	comp=N,673μm,0.8s						
AXS				AML	AML	04 34 42.7	
	comp=E,360μm,0.3s						
LTHK	**Lithakia**	0.77	160	P	Pg	04 34 28.0	-0.8
LTHK				S	Sb	04 34 40.3	+1.3
	comp=E,458nm,0.4s						
LTHK	**Lithakia**	0.77	160	P	Pg	04 34 28.0	-0.8
LTHK				S	Sg	04 34 38.7	-0.2
RLS	**Riolos of Patr**	0.84	116	P	Pg	04 34 29.6	-0.6
RLS	**Riolos of Patr**	0.84	116	P	Pg	04 34 29.4	-0.8
LAKA	**Lakka**	1.17	99	P	Pb	04 34 35.0	-0.7
LAKA				S	Sn	04 34 53.3	+2.0
	comp=E,318nm,0.5s						
LAKA	**Lakka**	1.17	99	P	Pb	04 34 35.0	-0.7
SERG	**Sergoula**	1.22	90	P	Pb	04 34 36.2	-0.3
SERG				S	Sn	04 34 54.6	+2.2
	comp=E,150nm,0.5s						
SERG	**Sergoula**	1.22	90	P	Pb	04 34 35.5	-0.9
TRIZ	**Trizonia**	1.23	93	P	Pn	04 34 36.0	-0.4
TRIZ				S	Sn	04 34 54.8	+2.1
	comp=E,190nm,0.4s						
TRIZ	**Trizonia**	1.23	93	P	Pn	04 34 35.9	-0.5
KALE	**Kalithea**	1.28	91	P	Pn	04 34 37.0	-0.2
KALE	**Kalithea**	1.28	91	P	Pn	04 34 36.5	-0.7
MAKR	**Makrakomi, Fth**	1.40	65	P	Pn	04 34 39.3	+0.6
AGG	**Agios Georgios**	1.54	67	P	Pb	04 34 42.1	0.0
AGG	**Agios Georgios**	1.54	67	P	Pn	04 34 41.6	+0.9
DBRK	**Dubrovnik**	4.60	338	*e*Pn	Pn	04 35 21.8	-0.9
DBRK				Sn	Sn	04 36 13.6	-2.2
STON	**Ston**	4.92	335	*e*Pn	Pn	04 35 26.3	-0.8
STON				Sn	Sn	04 36 20.2	-3.5
MAKA	**Makarska**	5.52	333	*e*Pn	Pn	04 35 36.6	+1.2
MAKA				Sn	Sn	04 36 38.0	-0.6
HVAR	**Hvar**	5.65	328	*i* Pn	Pn	04 35 37.9	+0.8
HVAR				Sn	Sn	04 36 39.3	-2.4
RICI	**Ricice**	5.67	334	*i* Pn	Pn	04 35 38.0	+0.7
KIJV	**Kijevo**	6.37	332	*e*Pn	Pn	04 35 48.0	+1.0
ZIRJ	**Zirje**	6.38	326	*e*Pn	Pn	04 35 47.7	+0.6
MORI	**Morici**	6.53	328	*e*Pn	Pn	04 35 50.2	+1.1
DUGI	**Dugi Otok**	6.91	325	*e*Pn	Pn	04 35 55.2	+0.8
NVLJ	**Novalja**	7.44	327	*e*Pn	Pn	04 36 02.6	+0.9

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*ANF **19** 04:35:40.7±0.9, 38°.39N×112°.21W, h5^{km}, ML3.6/7, Error ellipse: s-maj=13.6km s-min=9.0km az=43.0*

*UUSS **19** 04:35:40.7±0.4, 38°.37N±0°.02×112°.22W±0°.02, h6^{km}±4^{km}, ML3.2/14, ML3.4/114(NEIC), Error ellipse: s-maj=2.7km s-min=2.4km az=66.0*

*NEIC **19** 04:35:40.5±0.5, 38°.36N±0°.02×112°.21W±0°.01, h6^{km}±8^{km}, Error ellipse: s-maj=2.8km s-min=0.6km az=212.0*

*IDC **19** 04:35:43.8±1.0, 38°.53N×112°.12W, h0^{km}, mb3.0/1, mb1 3.1/6, mb1mx3.1/48, mbtmp2.8/6, ML3.0/5, MS2.6/1,* *Ms1 2.7/1, ms1mx2.2/20, Error ellipse: s-maj=12.3km s-min=9.0km az=132.0*

ISC 19 04:35:40.5±1.2**, 38°.37N**±0°.02×**112°.24W**±0°.02**, h3**^{km}±10^{km}**, n110,** σ1^{s}.06/106**, Utah**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MVU	Marysvale	0.14	9		Pg	04 35 43.8	+0.5
MSU	Marysvale	0.15	19		Pg	04 35 43.9	+0.3
TCRU	Three Creeks R	0.29	326	IAML		04 35 52.0	
	comp=E,3μm,0.1s						
TCRU				IAML		04 35 54.2	
	comp=N,2μm,0.3s						
TCRU	Three Creeks R	0.29	326		Pg	04 35 46.9	+0.7
TCRU					Sg	04 35 51.7	+1.6
MTPU	Mount Pierson	0.33	172		Pg	04 35 47.2	+0.3
MTPU					Sg	04 35 52.1	+0.9
MTPU	Mount Pierson	0.33	172	IAML		04 35 52.2	
	comp=E,1μm,0.4s						
MTPU				IAML		04 35 54.2	
	comp=N,1μm,0.6s						
NMUT	North Mineral	0.50	288		Pg	04 35 50.8	+0.7
WCU	Willow Creek	0.61	11		Pg	04 35 52.4	+0.2
DWU	Dry Willow Pea	0.65	247		Pg	04 35 53.3	+0.3
BTU	Barney Top	0.68	154		Pg	04 35 53.9	+0.4
OWUT	Old Woman Plat	0.76	57		Pg	04 35 55.1	-0.1
MMU	Miners Mountai	0.76	102		Pg	04 35 54.5	-0.6
IMU	Iron Mountain	0.77	291		Pg	04 35 55.7	+0.5
BHU	Blowhard Mount	0.91	212		Pg	04 35 58.1	+0.1
PKCU	Pink Cliffs	0.92	183		Pg	04 35 58.4	+0.2
PKCU	Pink Cliffs	0.92	183	IAML		04 36 13.6	
	comp=N,1μm,0.4s						
PKCU				IAML		04 36 16.4	
	comp=E,2μm,0.4s						
FLU	Fool Peak	1.01	3		Pb	04 36 00.0	-0.8
SZCU	Shurtz Canyon	1.02	221		Pg	04 35 59.9	-0.1
SZCU	Shurtz Canyon	1.02	221	IAML		04 36 16.7	
	comp=N,892nm,0.3s						
SZCU				IAML		04 36 18.9	
	comp=E,2μm,0.4s						
SNO	Snow College	1.09	30		Pg	04 36 01.3	-0.2
ARUT	Antelope Range	1.11	239		Pg	04 36 02.1	+0.3
LEVU	Levan	1.19	16		Pg	04 36 03.0	-0.2
CCUT	Cedar City	1.20	228		Pg	04 36 03.7	+0.1
CCUT	Cedar City	1.20	228	IAML		04 36 24.1	
	comp=N,305nm,0.5s						
CCUT				IAML		04 36 24.1	
	comp=E,528nm,0.6s						
TMUT	Trail Mountain	1.23	41		Pg	04 36 03.2	-0.9
TMUT	Trail Mountain	1.23	41	IAML		04 36 24.8	
	comp=N,429nm,0.6s						
TMUT				IAML		04 36 24.8	
	comp=E,476nm,0.5s						
HMU	Henry Mountain	1.26	109		Pg	04 36 03.5	-1.1
PSUT	Pine Spring	1.28	278		Pn	04 36 05.1	-0.4
PSUT	Pine Spring	1.28	278	IAML		04 36 26.4	
	comp=E,268nm,1.0s						
EKU	East Kanab	1.30	189		Pn	04 36 05.1	-0.8
KNB	Kanab	1.42	199		Pn	04 36 07.1	-0.3
KNB	Kanab	1.42	199	IAML		04 36 31.0	
	comp=N,280nm,0.6s						
ELU	Electric Lake	1.51	32		Pb	04 36 08.6	-0.8
SRU	San Rafael Swe	1.54	61		Pn	04 36 08.6	-0.4
SRU	San Rafael Swe	1.54	61	IAML		04 36 32.5	
	comp=E,711nm,0.5s						
SRU				IAML		04 36 32.8	
	comp=N,427nm,0.6s						
SUU	Santaquin Cany	1.56	13		Pg	04 36 10.1	-0.4
LCMT	Little Creek M	1.57	211		Pn	04 36 09.5	0.0
LCMT	Little Creek M	1.57	211	IAML		04 36 33.9	
	comp=N,366nm,0.6s						
LCMT				IAML		04 36 36.4	
	comp=E,533nm,0.6s						
NLU	North Lily Min	1.59	5		Pn	04 36 09.2	-0.6
P17A	Butcher Ranch,	1.61	46		Pn	04 36 09.5	-0.5
P17A	Butcher Ranch,	1.61	46	IAML		04 36 34.8	
	comp=E,194nm,0.8s						
P17A				IAML		04 36 39.6	
	comp=N,203nm,0.8s						
MPU	Maple Canyon	1.71	16		Pg	04 36 12.7	-0.6
ICU	Indian Springs	1.80	228		Pn	04 36 13.3	+0.7
EMUT	Emma Park	1.82	37		Pb	04 36 13.7	-0.9
DCM	Dugout Coal Mi	1.85	44		Pb	04 36 14.0	-1.2
DUG	Dugway, Tooele	1.88	347	P	Pn	04 36 13.2	-0.5
	baz=166						
DUG	Dugway, Tooele	1.88	347		Pn	04 36 13.0	-0.8
U15A	North Rim	1.94	181		Pn	04 36 14.1	-0.6
U15A				IAML		04 36 45.3	
	comp=N,309nm,0.6s						
U15A				IAML		04 36 45.7	
	comp=E,258nm,0.8s						
ROA	Roan Cliffs	1.95	48		Pb	04 36 16.0	-0.9
ARGU	Argyle Ridge	1.96	42		Pb	04 36 16.3	-0.9
JLU	Jordanelle	2.31	15		Pn	04 36 19.4	-0.5
CTU	Camp Tracy	2.35	9	Pn	Pn	04 36 20.1	-0.2
PRN	Pahroc Range	2.42	248	Pn	Pn	04 36 20.8	-0.3
PRN				IAML		04 36 59.3	
	comp=E,272nm,0.5s						
PV10	Paradox Valley	2.52	89	Pn	Pn	04 36 21.8	-0.8
PV10				IAML		04 36 58.9	
	comp=N,302nm,0.6s						
PV10				IAML		04 36 59.9	
	comp=E,296nm,0.8s						
PV14	Lion Creek, Pa	2.53	89	Pn	Pn	04 36 22.0	-0.7
PV23	Carpenter Ridg	2.54	87	Pn	Pn	04 36 22.2	-0.7
PV19	Morning Glory	2.56	90	Pn	Pn	04 36 22.4	-0.8
PV19				IAML		04 37 01.8	
	comp=E,206nm,0.5s						
PV19				IAML		04 37 05.6	
	comp=N,250nm,0.8s						
PV20	West Nyswonger	2.57	90	Pn	Pn	04 36 22.6	-0.7
PV17	East Wray Mesa	2.58	91	Pn	Pn	04 36 22.7	-0.8
PV17				IAML		04 37 08.1	
	comp=E,279nm,0.6s						
PV16	Nyswonger Mesa	2.62	90		Pn	04 36 23.0	-0.9
PV04	Paradox Valley	2.62	88		Pn	04 36 23.3	-0.7
PV04				IAML		04 37 05.7	
	comp=E,243nm,0.8s						
PV18	Skein Mesa, Pa	2.62	92	Pn	Pn	04 36 23.4	-0.6
PV18				IAML		04 37 02.0	
	comp=N,286nm,0.9s						
PV18				IAML		04 37 06.0	
	comp=E,208nm,0.8s						
BGU	Big Grassy Mou	2.63	347	Pn	Pn	04 36 23.6	-0.4
R11A	Troy Canyon, C	2.63	271	P	Pn	04 36 24.4	+0.4
	baz=89						
R11A				S	Sn	04 36 56.9	+0.4
	baz=89						
R11A	Troy Canyon, C	2.63	271		Pn	04 36 23.9	-0.2
R11A				IAML		04 37 05.2	
	comp=E,68nm,0.5s						
R11A				IAML		04 37 07.0	
	comp=N,74nm,0.5s						
PV11	David Mesa, Pa	2.65	90	Pn	Pn	04 36 23.7	-0.6
PV03	Paradox Valley	2.67	91		Pn	04 36 24.0	-0.7
PV03				IAML		04 37 09.9	
	comp=E,246nm,0.7s						
PV12	Saucer Basin,	2.71	90		Pn	04 36 24.5	-0.7
PV02	Paradox Valley	2.76	92		Pn	04 36 25.3	-0.6
TCUT	Toone Canyon	2.82	13	Pn	Pn	04 36 26.2	-0.5
TCUT				IAML		04 36 46.9	
	comp=N,106nm,0.5s						
TCUT				IAML		04 37 15.9	
	comp=E,98nm,0.6s						
PV07	Paradox Valley	2.83	87	Pn	Pn	04 36 26.2	-0.6
PV07				IAML		04 37 09.0	
	comp=N,149nm,0.7s						
PV07				IAML		04 37 15.0	
	comp=E,215nm,1.0s						
PV01	Paradox Valley	2.90	93		Pn	04 36 27.1	-0.7
PV01				IAML		04 37 15.8	
	comp=N,160nm,0.7s						
PV01				IAML		04 37 18.6	
	comp=E,124nm,0.7s						
WUAZ	Wupatki	2.93	166	P	Pn	04 36 28.9	+0.8
	baz=347						
WUAZ				S	Sn	04 37 04.5	+0.6
	baz=347						
WUAZ	Wupatki	2.93	166	Pn	Pn	04 36 27.5	-0.6
SPUT	South Promonto	2.94	357		Pn	04 36 27.9	-0.4
PV15	Paradox Valley	2.96	89		Pn	04 36 27.9	-0.7
PV15				IAML		04 37 21.4	
	comp=E,216nm,1.0s						
PV15				IAML		04 37 22.5	
	comp=N,187nm,0.7s						
SHPR	Sheep Range	2.97	232		Pn	04 36 28.5	-0.3
MVCO	Mesa Verde	3.18	110	P	Pn	04 36 33.6	+1.9
	baz=293						
MVCO				Sb	Sb	04 37 18.0	+0.9
	baz=293						
MVCO	Mesa Verde	3.18	110		Pn	04 36 31.0	-0.7
MVCO				IAML		04 37 21.3	
	comp=N,143nm,0.7s						
MVCO				IAML		04 37 26.5	
	comp=N,144nm,0.7s						
ELK	Elko	3.32	317	Pn	Pb	04 36 37.0	-3.2
	comp=N,0.3nm,0.3s,baz=132,slow=14,SNR=3.8						
ELK				Lg	Lg	04 37 24.6	
	comp=N,1.0nm,0.3s,baz=218,slow=9.5,SNR=3.9						
ELK	Elko	3.32	317	Pn	Pn	04 36 33.3	-0.3
HVU	Hansel Valley	3.43	353		Pn	04 36 34.8	-0.3
TPNV	Topopah Spring	3.48	247	P	Pn	04 36 36.1	+0.3
	baz=65						
TPNV	Topopah Spring	3.48	247	Pn	Pn	04 36 35.5	-0.3
TPNV				IAML		04 37 34.5	
	comp=N,54nm,0.6s						
TPNV				IAML		04 37 37.2	
	comp=N,43nm,0.7s						
W13A	Hualapai Mount	3.52	203	Pn	Pn	04 36 35.9	-0.4
O20A	White River Ci	3.57	59	Pn	Pn	04 36 36.5	-0.6
W18A	Petrified Fore	3.82	147	P	Pn	04 36 41.6	+1.3
	baz=329						
W18A				Sb	Sb	04 37 37.6	+2.2
	baz=329						
W18A	Petrified Fore	3.82	147	Pn	Pn	04 36 39.9	-0.5
W18A				IAML		04 37 47.4	
	comp=N,96nm,0.5s						
TPH	Tonopah	3.93	267	Pn	Pn	04 36 41.8	-0.3
TPH	Tonopah	3.93	267	IAML		04 37 46.5	
	comp=E,45nm,0.8s						
TPH				IAML		04 37 54.9	
	comp=N,63nm,0.7s						
X16A	Lo Mia Camp, P	3.99	170	Pn	Pn	04 36 42.4	-0.4
X16A				IAML		04 37 53.5	
	comp=N,44nm,0.9s						
X16A				IAML		04 37 54.4	
	comp=E,41nm,1.1s						
SHOC	Shoshone, Teco	4.06	234	P	Pn	04 36 44.4	+0.9
	baz=51						
SMCO	Snowmass	4.20	77	Pn	Pn	04 36 44.9	-0.9
SMCO				IAML		04 37 59.5	
	comp=E,55nm,0.8s						
X18A	Snowflake	4.25	154		Pn	04 36 46.0	-0.4
NV11	Mina Array Sit	4.65	273	Pn	Pn	04 36 51.7	-0.1
NV11				IAML		04 38 12.0	
	comp=N,19nm,0.7s						
NV11				IAML		04 38 13.4	
	comp=E,15nm,1.1s						
NVAR	Mina Array Bea	4.76	273	Pn	Pb	04 37 00.6	-4.2
	comp=E,0.4nm,0.3s,baz=104,slow=11,SNR=6.8						
NVAR				Pg	Pg	04 37 08.1	-3.7
	comp=E,6.2nm,0.3s,baz=96,slow=20,SNR=40						
NVAR				Lg	Lg	04 38 07.1	
	baz=126,slow=18,SNR=1.7						
NVAR				LR	LR	04 39 14.0	
	comp=E,69nm,19.3s,baz=167,slow=44						
GSC	Goldstone, Bar	4.77	232		Pn	04 36 53.2	-0.2
GSC				IAML		04 38 18.3	
	comp=N,15nm,1.0s						
GSC				IAML		04 38 36.0	
	comp=E,22nm,3.9s						
BW06	Boulder Array	4.85	24	Pn	Pn	04 36 54.1	-0.5
BW06				IAML		04 38 37.9	
	comp=E,11nm,4.2s						
PD31	Pinedale Array	4.85	24		Pn	04 36 53.9	-0.7
PDAR	Pinedale Array	4.85	24	Pn	Pn	04 36 57.9	+3.3
	comp=E,0.2nm,0.3s,baz=188,slow=11,SNR=6.3						
PDAR				Pg	Pb	04 37 07.0	+0.7
	comp=E,0.8nm,0.3s,baz=196,slow=14,SNR=20						
PDAR				Lg	Lg	04 38 11.0	
	comp=E,0.7nm,0.3s,baz=210,slow=27,SNR=3.1						
PDAR	Pinedale Array	4.85	24		Pn	04 36 54.1	-0.5
RYN	Ryan	4.94	275		Pn	04 36 55.5	-0.3
RYN				IAML		04 38 20.0	
	comp=N,24nm,0.8s						
RYN				IAML		04 38 23.0	
	comp=E,25nm,0.7s						
HLID	Hailey	5.45	343	Pn	Pn	04 37 02.3	-0.4
PAHR	Pah Rah Range	5.72	286	Pn	Pn	04 37 06.8	+0.3
ANMO	Albuquerque	5.77	125	Pn	Pn	04 37 09.2	+2.0
	comp=E,0.3nm,0.3s,baz=308,slow=13,SNR=5.6						
ANMO				Pg	Pg	04 37 27.9	-3.1
	comp=E,1.0nm,0.3s,baz=314,slow=16,SNR=9.4						
ANMO				Lg	Lg	04 38 39.0	
	comp=E,1.0nm,0.3s,baz=30,slow=20,SNR=3.7						
ANMO	Albuquerque	5.77	125	Pn	Pn	04 37 06.4	-0.8
PNTR	Pine Nut	5.80	279	Pn	Pn	04 37 09.1	+1.4
PFO	Pinyon Flats O	5.85	217	Pn	Pn	04 37 16.0	+7.8
	comp=E,0.2nm,0.3s,baz=30,slow=14,SNR=3.4						
PFO				Lg	Lg	04 38 43.9	
	comp=E,0.2nm,0.3s,baz=142,slow=19,SNR=1.8						
VCNR	Virginia City	5.86	281	Pn	Pn	04 37 07.7	-0.8
YKA	Yellowknife Ar	24.20	357	P	P	04 40 59.2	+1.2
	comp=E,0.4nm,0.8s,baz=176,slow=10,SNR=5.5						

TAP 19 04:49:55.4, 22°.73N×120°.87E, h9^{km}**, ML2.2, B, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ECL	Taimali	0.15	149	P	Pg	04 49 59.3	+0.6
	baz=139						
ECL				S	Sg	04 50 01.6	+0.5
	baz=139						
TSMG	Majia	0.21	263	eP	Pg	04 50 00.2	+0.5
	baz=261						
TSMG				S	Sg	04 50 02.9	+0.3
	baz=261						
TWG	Pinlang	0.21	64	i P	Pg	04 50 00.4	+0.6
	baz=66						
TWG				eS	Sg	04 50 03.3	+0.6
	baz=66						
TWGBT	Beinan	0.21	66	i P	Pg	04 50 00.3	+0.5
	baz=66						
TWGBT				eS	Sg	04 50 03.6	+0.8
	baz=66						
SSD	Sandimen	0.22	274	eP	Pg	04 50 00.2	+0.4
	baz=273						
SSD				S	Sg	04 50 03.3	+0.4
	baz=273						
MASBT	Mashibuluo	0.25	242	i P	Pg	04 50 00.9	+0.6
	baz=234						
MASBT				S	Sg	04 50 04.2	+0.4
	baz=234						
TTN	Taitung	0.26	85	eP	Pb	04 50 02.0	-0.3
	baz=86						
TTN				eS	Sb	04 50 07.2	+0.4
	baz=86						
LONT	Longtian	0.30	54	P	Pg	04 50 01.9	+0.5
	baz=55						
LONT				eS	Sg	04 50 05.9	+0.5
	baz=55						
SLGT	Liugui	0.33	322	P	Pg	04 50 02.3	+0.3
	baz=328						
SLGT				eS	Sg	04 50 07.5	+1.0
	baz=328						
SGLT	Jiouru	0.35	269	eP	Pg	04 50 02.4	+0.2
	baz=268						
SSPT	Xinbi	0.37	228	eP	Pb	04 50 03.9	-0.2
	baz=219						
SSPT				eS	Sg	04 50 08.4	+0.8
	baz=219						
SCST	Cishan	0.38	294	eP	Pb	04 50 04.0	-0.3
	baz=295						
SCST				eS	Sb	04 50 10.4	+0.2
	baz=295						
TWM1	Shoushan	0.42	283	eP	Pb	04 50 05.1	+0.1
	baz=290						
TWM1				eS	Sb	04 50 12.2	+0.7
	baz=290						
SCZT	Fangliau	0.42	213	eP	Pg	04 50 04.1	+0.4
	baz=210						
SGST	Jiashian	0.44	323	eP	Pb	04 50 04.7	-0.6
	baz=329						
SGST				eS	Sb	04 50 11.5	-0.5
	baz=329						
STYT	Tauyuan	0.44	347	eP	Pg	04 50 04.6	+0.6
	baz=356						
STYT				eS	Sg	04 50 10.6	+0.6
	baz=356						
STYH	Taoyuan	0.45	349	eP	Pg	04 50 04.6	+0.4
	baz=354						
STYH				eS	Sg	04 50 10.9	+0.9
	baz=354						
EDH	Donghe	0.47	59	eP	Pb	04 50 05.4	-0.5
	baz=77						
EDH				eS	Sb	04 50 12.9	+0.1
	baz=77						
ELDTW	Lidau	0.48	17	eP	Pg	04 50 05.1	+0.3
	baz=19						
CHN1	Nanshi	0.55	325	eP	Pb	04 50 07.7	+0.4
	baz=330						
CHN1				eS	Sb	04 50 16.1	+0.9
	baz=330						
WTP	Ta-pu	0.56	336	eP	Pb	04 50 07.6	+0.2
	baz=343						
WTP				eS	Sb	04 50 16.1	+0.4
	baz=343						
CHN3	Shinhua	0.58	307	eP	Pn	04 50 09.0	-0.7
	baz=313						
TPUB	Ta-pu	0.61	339	eP	Pb	04 50 08.2	-0.1
	baz=340						
TPUB				eS	Sb	04 50 17.2	+0.3
	baz=340						
FULB	Fuli	0.61	40	eP	Pg	04 50 07.7	+0.5
	baz=31						
FULB				eS	Sb	04 50 16.4	-0.5
	baz=31						
TWK	Hsinying	0.64	327	eP	Pb	04 50 09.6	+0.9
	baz=331						
TWK				eS	Sn	04 50 19.4	-1.5
	baz=331						
CHN4	Tsaushan	0.67	338	P	Pn	04 50 10.3	-0.8
	baz=355						
CHN4				S	Sn	04 50 21.1	-0.5
	baz=355						
TWF1	Yuli	0.73	33	P	Pg	04 50 09.5	-0.1
	baz=34						
TWF1				eS	Sg	04 50 18.5	-0.7
	baz=34						
YULB	Yu-li	0.77	31	eP	Pg	04 50 09.8	-0.4
	baz=32						
YULB				eS	Sg	04 50 20.0	-0.3
	baz=32						
ALS	Alishan	0.78	356	eP	Pb	04 50 11.3	0.0
	baz=9.0						
ALS				eS	Sn	04 50 23.5	-1.2
	baz=9.0						
EHY	Hungye	0.88	28	eP	Pg	04 50 12.2	-0.1
	baz=36						
EHY				eS	Sg	04 50 23.5	-0.3
	baz=36						
CHN5	Tsauling	0.88	349	eP	Pn	04 50 13.6	-0.4
	baz=2.0						
CHN5				eS	Sn	04 50 27.2	+0.2
	baz=2.0						
VWDT	VWDT	1.05	14	eP	Pg	04 50 15.6	0.0
	baz=18						
VWDT				eS	Sb	04 50 29.7	+0.1
	baz=18						
TYC	Yuchr	1.17	360	eP	Pn	04 50 19.1	+1.3
	baz=2.0						
TYC				eS	Sn	04 50 36.4	+2.5
	baz=2.0						

TAP 19 04:50:01.3, 22°.73N×120°.87E, h9^{km}**, ML2.2, B, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ECL	Taimali	0.16	149	i P	Pg	04 50 05.3	+0.7
	baz=147						
ECL				i S	Sg	04 50 07.5	+0.5
	baz=147						
TSMG	Majia	0.21	263	P	Pg	04 50 06.2	+0.6
	baz=262						
TSMG				S	Sg	04 50 08.9	+0.4
	baz=262						
TWG	Pinlang	0.21	65	i P	Pg	04 50 06.3	+0.7
	baz=67						
TWG				eS	Sg	04 50 09.2	+0.7
	baz=67						
TWGBT	Beinan	0.21	66	P	Pg	04 50 06.2	+0.5
	baz=67						
TWGBT				eS	Sg	04 50 09.2	+0.5
	baz=67						
SSD	Sandimen	0.22	274	eP	Pg	04 50 06.3	+0.5
	baz=273						
SSD				eS	Sg	04 50 09.0	+0.2
	baz=273						
MASBT	Mashibuluo	0.25	241	P	Pg	04 50 06.9	+0.6
	baz=234						
MASBT				S	Sg	04 50 10.1	+0.4
	baz=234						
TTN	Taitung	0.26	85	eP	Pb	04 50 07.8	-0.4
	baz=87						
TTN				eS	Sb	04 50 12.2	-0.5
	baz=87						
LONT	Longtian	0.30	54	P	Pg	04 50 07.8	+0.5
	baz=55						
LONT				eS	Sg	04 50 11.4	+0.2
	baz=55						
SLGT	Liugui	0.33	322	eP	Pg	04 50 08.5	+0.6
	baz=328						
SLGT				eS	Sg	04 50 13.4	+1.1
	baz=328						
SGLT	Jiouru	0.35	269	eP	Pb	04 50 09.4	-0.3
	baz=268						
SGLT				eS	Sb	04 50 15.0	-0.3
	baz=268						
SGLT	Jiouru	0.35	269	S	Pb	04 50 09.5	-0.2
	baz=268						
SSPT	Xinbi	0.37	228	eP	Pb	04 50 09.5	-0.6
	baz=219						
SSPT				eS	Sg	04 50 14.2	+0.7
	baz=219						
TAW	Tawu	0.37	176	eS	Sg	04 50 14.0	+0.4
	baz=173						
SCST	Cishan	0.38	294	eS	Sb	04 50 16.4	+0.2
	baz=295						
TWM1	Shoushan	0.42	283	eS	Sb	04 50 18.0	+0.6
	baz=290						
SCZT	Fangliau	0.42	213	eP	Pg	04 50 10.2	+0.5
	baz=216						
SCZT				eS	Sg	04 50 15.8	+0.5
	baz=216						
SCZT	Fangliau	0.42	213	S	Pb	04 50 10.1	-0.9
	baz=210						
SGST	Jiashian	0.44	323	eS	Sb	04 50 17.6	-0.3
	baz=329						
STYT	Tauyuan	0.44	347	eP	Pb	04 50 11.1	-0.2
	baz=356						
STYT				eS	Sg	04 50 16.5	+0.7
	baz=356						
STYH	Taoyuan	0.45	349	eS	Sg	04 50 16.9	+1.0
	baz=354						
EDH	Donghe	0.47	59	eS	Sb	04 50 18.7	-0.1
	baz=77						
ELDTW	Lidau	0.47	17	P	Pg	04 50 11.0	+0.4
	baz=19						
ELDTW				eS	Sg	04 50 17.2	+0.3
	baz=19						
ELDTW	Lidau	0.47	17	eS	Pg	04 50 11.0	+0.4
	baz=19						
CHN1	Nanshi	0.55	325	eP	Pb	04 50 13.6	+0.4
	baz=330						
CHN1				eS	Sb	04 50 22.0	+0.8
	baz=330						
WTP	Ta-pu	0.56	335	eP	Pb	04 50 13.4	0.0
	baz=343						
WTP				eS	Sb	04 50 22.1	+0.5
	baz=343						
CHN3	Shinhua	0.58	307	eS	Sn	04 50 25.5	+0.2
	baz=307						
TPUB	Ta-pu	0.61	339	eS	Sb	04 50 23.7	+0.8
	baz=340						
FULB	Fuli	0.61	40	eS	Sb	04 50 22.5	-0.3
	baz=31						
TWK	Hsinying	0.64	327	eP	Pb	04 50 15.3	+0.7
	baz=331						
TWK				eS	Sn	04 50 25.3	-1.6
	baz=331						
CHN4	Tsaushan	0.67	338	eP	Pb	04 50 15.7	+0.6
	baz=355						
CHN4				eS	Sn	04 50 26.3	-1.3
	baz=355						
TWF1	Yuli	0.73	33	eS	Sg	04 50 25.1	+0.1
	baz=34						
YULB	Yu-li	0.77	31	eS	Sg	04 50 26.0	-0.1
	baz=32						
ALS	Alishan	0.78	356	eP	Pb	04 50 17.4	+0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	baz=9.0						
ALS				eS	Sb	04 50 28.7	+0.7
	baz=9.0						
CHN5	Tsauling	0.88	349	eS	Sn	04 50 34.0	+1.1
	baz=2.0						
VWDT	VWDT	1.05	14	eS	Sb	04 50 35.8	+0.3
	baz=18						
TYC	Yuchr	1.17	360	eS	Sn	04 50 42.1	+2.2
	baz=2.0						

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*IDC **19** 04:56:40.8±4.2, 15.°77N×98.°04W, h0^{km}, mb3.8/8, mb1 4.1/11, mb1mx3.9/40, mbtmp3.9/11, ML3.9/3, MS3.3/5, Ms1 3.3/5, ms1mx2.9/44, Error ellipse: s-maj=76.7km s-min=16.9km az=178.0*

*NEIC **19** 04:56:44.5±0.9, 16.°27N±0.°09×97.°87W±0.°09, h0^{km}±1^{km}, Error ellipse: s-maj=20.0km s-min=6.1km az=223.0*

*MEX **19** 04:56:47.7±1.1, 16.°26N×98.°03W, h3^{km}±14^{km}, MD4.2*

ISC 19 04:56:45.3±1.0**, 16.°21N**±0.°05×**98.°01W**±0.°03**, h16**^{km}±6^{km}**, n99,** σ1^{s}**35**/109**, mb4.2**/23**, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.22	329	eP	Pg	04 56 50.4	0.0
PNIG				i S	Sg	04 56 53.4	-0.3
PNIG	Pinotepa	0.22	329		Pg	04 56 50.4	0.0
PNIG					Sg	04 56 53.2	-0.5
YOIG	Yosondua	0.79	34	eP	Pb	04 57 01.0	+0.1
YOIG				eS	Sb	04 57 11.2	-0.2
PEIG	Puerto Escondi	0.85	104	eP	Pn	04 57 02.7	-0.1
PEIG				eS	Sn	04 57 15.1	+0.1
TXIG	Tlaxiaco	1.07	13	eP	Pb	04 57 05.1	-0.6
TXIG				eS	Sb	04 57 18.9	-0.6
TLIG	Tlapa	1.45	339	eP	Pn	04 57 10.3	-0.8
TLIG	Tlapa	1.45	339	Pn	Pn	04 57 10.4	-0.8
TLIG				Sn	Sn	04 57 27.8	-2.2
VHO	Vista Hermosa	1.50	55	eP	Pb	04 57 12.3	-0.7
OXBJ	Oaxaca	1.50	55	eP	Pb	04 57 12.3	-0.7
OXBJ				i S	Sb	04 57 31.3	-0.7
HLIG	Huajuapan de L	1.63	7	eP	Pn	04 57 13.6	0.0
HLIG				eS	Sn	04 57 33.0	-1.4
HUIG	Huatulco	1.88	103	eP	Pn	04 57 17.3	+0.4
HUIG				i S	Sb	04 57 41.1	-1.6
ACP2	Acapulco	1.92	291	i P	Pn	04 57 17.1	-0.4
ACP2				i S	Sn	04 57 41.0	-0.2
TOIG	Toxpalan	2.09	26	eP	Pn	04 57 20.2	+0.3
TOIG				eS	Sn	04 57 45.3	-0.3
TPIG	Tehuac#an	2.29	16	i P	Pn	04 57 22.2	-0.5
TPIG				i S	Sn	04 57 50.0	-0.7
TPIG	Tehuac#an	2.29	16		Pn	04 57 23.9	+1.2
CAIG	El Cayaco	2.32	292	eP	Pn	04 57 19.9	-3.0
CAIG				eS	Sn	04 57 50.7	-0.5
CMIG	Matias Romero	3.12	73	Pn	Pn	04 57 34.4	+0.4
	14nm,0.3s,baz=256,slow=11,SNR=177						
CMIG				Pg	Pb	04 57 42.0	+1.4
	25nm,0.3s,baz=258,slow=14,SNR=41						
CMIG				LR	LR	04 58 16.7	
	comp=Z,78nm,18.6s,baz=196,slow=29						
CMIG				Lg	Lg	04 58 26.4	
	124nm,0.3s,baz=178,slow=23,SNR=17						
CMIG	Matias Romero	3.12	73	i P	Pn	04 57 34.3	+0.3
CMIG	Matias Romero	3.12	73		Pn	04 57 34.3	+0.3
UNM	Universidad Na	3.30	340		Pn	04 57 38.8	+2.1
UNM				Sn	Sb	04 58 24.0	+0.2
ZIIG	Zihuatanejo	3.59	293	eP	Pn	04 57 40.1	-0.2
ZIIG				eS	Sn	04 58 23.6	+1.1
MOIG	Morelia	4.59	319		Pn	04 57 58.3	+3.9
MOIG				Sn	Sb	04 58 57.6	-3.4
CCIG	Comitan	5.64	88	Pn	Pn	04 58 07.3	-1.5
TEIG	Tepich	10.08	65	Pn	Pn	04 59 09.0	-0.5
	2.1nm,0.3s,baz=61,slow=23,SNR=16						
TEIG				Sn	Sn	05 00 55.1	-7.2
	1.1nm,0.3s,baz=350,slow=22,SNR=2.9						
TEIG				LR	LR	05 03 39.7	
	comp=Z,148nm,21.5s,baz=268,slow=41						
H06E1	SOCORRO T-PHAS	12.58	284	T	T	05 11 58.7	
	SNR=7.4						
TXAR	Lajitas Array	14.07	339	Pn	P	05 00 10.6	-1.3
	0.1nm,0.3s,baz=156,slow=12,SNR=9.0						
TXAR				LR	LR	05 06 00.2	
	comp=Z,287nm,19.4s,baz=0.0,slow=39						
TXAR	Lajitas Array	14.07	339		Pn	05 00 04.5	+0.3
WHTX	Lake Whitney,	15.72	2	Pn	Pn	05 00 27.0	+0.7
WHTX				IAmb	IAmb	05 00 32.1	
	comp=Z,20nm,1.1s						
237A	Washetta, Mont	15.85	7	Pn	Pn	05 00 28.8	+0.9
237A				IAmb	IAmb	05 00 33.5	
	comp=Z,16nm,0.8s						
ABTX	Abilene, Hawle	16.41	355	Pn	Pn	05 00 35.8	+0.6
MSTX	Muleshoe	18.20	347	P	P	05 00 58.9	+1.1
X37A	Clayton	18.46	7	P	Pn	05 01 01.5	+0.9
WMOK	Wichita Mounta	18.47	358	P	P	05 01 00.5	-0.1
AMTX	Amarillo	18.89	351	P	Pn	05 01 06.5	+0.5
FNO	Franklin	18.98	2	P	Pn	05 01 07.1	+0.2
BNM	Barren Site	19.48	338	P	Pn	05 01 13.5	+0.3
OK030	Cody Creek RV	19.67	3	P	P	05 01 14.3	+0.5
OK030				IAmb	IAmb	05 01 15.4	
	comp=Z,13nm,0.7s						
TUL1	Leonard	19.73	5	P	P	05 01 14.8	+0.5
TUL1				IAmb	IAmb	05 01 21.2	
	comp=Z,12nm,0.8s						
ANMO	Albuquerque	20.14	339	P	Pn	05 01 21.2	+0.2
	comp=Z,3.7nm,1.0s,baz=145,slow=9.5,SNR=8.3						
ANMO				LR	LR	05 09 53.5	
	comp=Z,115nm,20.4s,baz=154,slow=39						
ANMO	Albuquerque	20.14	339	P	Pn	05 01 20.6	-0.4
U40A	Yellville	20.59	12	P	P	05 01 23.7	0.0
T35A	Sooner Cattle	20.67	3	P	P	05 01 24.2	-0.5
T35A				IAmb	IAmb	05 01 32.3	
	comp=Z,8.7nm,0.8s						
KAN13	South Haven SW	20.73	1	P	P	05 01 23.6	-1.7
X18A	Snowflake	21.16	332	P	P	05 01 32.1	+1.9
X18A				IAmb	IAmb	05 01 34.0	
	comp=Z,8.6nm,1.0s						
MGMO	Mountain Grove	21.48	13	P	P	05 01 33.5	+0.2
MGMO				IAmb	IAmb	05 01 37.3	
	comp=Z,14nm,1.1s						
PBMO	Poplar Bluff	21.57	17	P	P	05 01 34.2	0.0
PBMO				IAmb	IAmb	05 01 37.8	
	comp=Z,13nm,0.8s						
GOGA	Godfrey	21.59	35	P	P	05 01 34.1	-0.3
Y52A	Lilburn	21.61	33	P	P	05 01 34.4	-0.4
T42A	Van Buren	21.63	15	P	P	05 01 35.3	+0.3
X16A	Lo Mia Camp, P	21.78	329	P	P	05 01 38.6	+1.8
X16A				IAmb	IAmb	05 01 48.5	
	comp=Z,6.9nm,0.8s						
S39A	Bolivar	21.80	10	P	P	05 01 37.5	+0.8
S39A				IAmb	IAmb	05 01 40.2	
	comp=Z,7.0nm,0.9s						
SWET	Sewanee	21.80	27	P	P	05 01 36.1	-0.7
WVT	Waverly	21.82	23	P	P	05 01 36.5	-0.5
WVT				IAmb	IAmb	05 01 48.2	
	comp=Z,9.7nm,0.8s						
V48A	Smith Brothers	21.87	25	P	P	05 01 37.6	0.0
V48A				IAmb	IAmb	05 01 48.9	
	comp=Z,12nm,0.9s						
W50A	Signal Mountai	22.07	29	P	P	05 01 39.5	-0.3
SDCO	Great Sand Dun	22.45	344	P	P	05 01 45.2	+1.1
R40A	Maddies Statio	22.57	12	P	P	05 01 44.1	-0.9
R40A				IAmb	IAmb	05 01 55.7	
	comp=Z,7.2nm,0.8s						
WUAZ	Wupatki	22.64	331	P	P	05 01 47.2	+1.3
WUAZ				IAmb	IAmb	05 01 51.7	
	comp=Z,7.1nm,0.8s						
MVCO	Mesa Verde	22.89	338	P	P	05 01 50.0	+1.3
MVCO				IAmb	IAmb	05 02 05.0	
	comp=Z,5.5nm,0.8s						
TKL	Tuckaleechee C	23.17	31	P	P	05 01 52.7	+1.4
	comp=Z,2.2nm,0.8s,baz=176,slow=13,SNR=2.1						
TKL	Tuckaleechee C	23.17	31	P	P	05 01 50.6	-0.7
PV01	Paradox Valley	23.74	339	P	P	05 01 58.7	+1.5
PV01				IAmb	IAmb	05 02 08.5	
	comp=Z,6.6nm,0.9s						
U15A	North Rim	23.81	330	P	P	05 01 59.3	+1.4
P40A	Paris	23.82	11	P	P	05 01 58.1	+0.5
PV03	Paradox Valley	23.95	339	P	P	05 02 00.6	+1.4
PV03				IAmb	IAmb	05 02 01.1	
	comp=Z,5.5nm,1.0s						
SMCO	Snowmass	24.20	343	P	P	05 02 02.8	+1.2
SMCO				IAmb	IAmb	05 02 07.2	
	comp=Z,6.3nm,1.0s						
ISCO	Idaho Springs	24.43	346	P	P	05 02 04.9	+1.2
KNB	Kanab	24.54	330	P	P	05 02 06.5	+1.9
PKCU	Pink Cliffs	24.65	332	P	P	05 02 07.1	+1.4
N38A	Joes South For	24.85	9	P	P	05 02 07.4	+0.3
MTPU	Mount Pierson	25.08	333	P	P	05 02 11.1	+1.4
SRU	San Rafael Swe	25.32	337	P	P	05 02 12.9	+1.3
O20A	White River Ci	25.45	342	P	P	05 02 13.7	+0.9
L34A	Svendsen Farm,	25.71	3	P	P	05 02 15.9	+0.9
P49A	Miami Univ. Ec	25.98	24	P	P	05 02 17.7	+0.2
MPU	Maple Canyon	26.53	336	P	P	05 02 23.9	+1.3
NLU	North Lily Min	26.65	335	P	P	05 02 25.4	+1.7
DUG	Dugway, Tooele	27.15	335	P	P	05 02 29.6	+1.5
PD31	Pinedale Array	28.26	342	P	P	05 02 39.1	+1.0
PDAR	Pinedale Array	28.26	342	P	P	05 02 39.4	+1.3
	comp=Z,0.4nm,0.5s,baz=139,slow=10,SNR=5.3						
PDAR	Pinedale Array	28.26	342	P	P	05 02 39.7	+1.6
NVAR	Mina Array Bea	28.43	325	P	P	05 02 42.0	+2.3
	comp=Z,1.2nm,0.9s,baz=145,slow=10,SNR=7.0						
NVAR	Mina Array Bea	28.43	325	P	P	05 02 41.4	+1.7
RLMT	Red Lodge	30.35	344	P	P	05 02 58.0	+1.5
RLMT				IAmb	IAmb	05 03 07.2	
	comp=Z,3.7nm,1.0s						
DLMT	Dillon	31.55	340	P	P	05 03 08.2	+1.1
DLMT				IAmb	IAmb	05 03 10.2	
	comp=Z,2.7nm,0.7s						
ULM	Lac du Bonnet	34.00	2	P	P	05 03 28.3	-0.1
	comp=Z,1.3nm,0.5s,baz=164,slow=10,SNR=3.8						
ULM	Lac du Bonnet	34.00	2	P	P	05 03 27.4	-1.0
ULM				IAmb	IAmb	05 03 29.2	
	comp=Z,2.0nm,0.7s						
FFC	Flin Flon	38.56	356	P	P	05 04 08.1	+0.8
FFC				IAmb	IAmb	05 04 16.3	
	comp=Z,4.1nm,0.8s						
PB01	IPOC Station P	46.41	142	P	P	05 05 12.4	+0.8
YKA	Yellowknife Ar	47.69	350	P	P	05 05 21.1	+0.2
	comp=Z,1.2nm,0.9s,baz=152,slow=7.6,SNR=12						
H03N2	Juan Fernandez	52.62	160	T	T	06 02 26.4	
	baz=338,slow=77,SNR=196						
H03N1	Juan Fernandez	52.63	160	T	T	06 02 30.3	
	baz=338,slow=77,SNR=215						
H03N3	Juan Fernandez	52.64	160	T	T	06 02 29.3	
	baz=338,slow=77,SNR=164						
INK	Inuvik	56.76	345	P	P	05 06 29.2	+1.1
	comp=Z,3.8nm,0.9s,baz=128,slow=6.4,SNR=17						
INK	Inuvik	56.76	345	P	P	05 06 29.4	+1.2
INK				IAmb	IAmb	05 06 42.0	
	comp=Z,2.8nm,1.0s						
ILAR	Eielson Array	58.57	338	P	P	05 06 42.0	+0.8
	comp=Z,0.8nm,0.9s,baz=132,slow=4.2,SNR=6.8						
ISOG	Isortoq, Green	62.75	24	eP	P	05 07 04.0	-5.5
ANGG	Ammassalik, Gr	63.29	24	eP	P	05 07 13.3	+0.3
AKASG	Malin Array Be	98.95	31	LR	LR	05 56 43.8	
	comp=Z,27nm,18.7s,baz=315,slow=36						

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*NNC **19** 05:00:00.6±1.9, 54.°69N×86.°54E, h0^{km}, mb3.0, mpv3.1, Error ellipse: s-maj=24.1km s-min=10.4km az=153.0, Suspected Mining explosion.*

*IDC **19** 05:00:01.9±2.8, 54.°60N×86.°56E, h0^{km}, mb1 3.6/2, mb1mx3.2/39, mbtmp3.6/2, ML3.2/2, Error ellipse: s-maj=22.2km s-min=14.6km az=49.0*

ISC 19 05:00:04.4±4.6**, 54.°6N**±0.°2×**86.°3E**±0.°2**, h0**^{km}**, n8,** σ1^{s}**04**/13**, 8C-2D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.05	236	i		05 07 20.9	
	baz=57,slow=353,SNR=1.2						
ZAA0	Zalesovo Array	1.05	236	⇑P	Pg	05 00 23.5	-1.0
	0.5nm,0.2s						
ZAA0				⇑S	Sn	05 00 41.4	-0.3
	4.0nm,0.7s						
ZALV	Zalesovo Beam	1.05	236	Pg	Pg	05 00 23.7	-0.8
	4.2nm,0.3s,baz=52,slow=17,SNR=39						
ZALV				Lg	Lg	05 00 42.0	
	4.5nm,0.3s,baz=57,slow=30,SNR=23						
KURK	Kurchatov	6.04	234	⇓Pn	Pn	05 01 35.6	+0.7
	1.3nm,0.3s						
KURK				⇑Sn	Sn	05 02 47.1	+2.3
	2.8nm,0.7s						
KURK				⇑Lg	Lg	05 03 19.3	
	8.2nm,0.9s						
KURBB	Kurchatov Arra	6.15	233	Pn	Pn	05 01 37.1	+0.7
	0.4nm,0.3s,baz=52,slow=14,SNR=49						
KURBB				Sn	Sn	05 02 46.4	-0.9
	0.0nm,0.3s,baz=45,slow=21,SNR=2.5						
KURBB				Lg	Lg	05 03 22.9	
	0.1nm,0.3s,baz=51,slow=34,SNR=5.7						
MK31	Makanchi Array	8.17	200	Pn	Pn	05 02 04.5	+0.4
	0.8nm,0.2s,baz=24,slow=13,SNR=48						
MK31				⇑Sn	Sn	05 03 37.9	+0.8
	1.3nm,0.7s,baz=25,slow=24,SNR=5.6						
MK31				⇑Lg	Lg	05 04 25.2	
	2.5nm,0.9s,baz=203,slow=14,SNR=4.3						
MKAR	Makanchi Array	8.17	200	Pn	Pn	05 02 03.8	-0.3
	0.4nm,0.3s,baz=24,slow=13,SNR=45						
MKAR				Sn	Sn	05 03 36.8	-0.2
	0.1nm,0.3s,baz=24,slow=24,SNR=7.7						
MKAR				Lg	Lg	05 04 23.4	
	0.1nm,0.3s,baz=23,slow=33,SNR=3.3						
MAKZ	Makanchi	8.22	201	⇓Pn	Pn	05 02 04.9	+0.2
	0.3nm,0.3s						
MAKZ				⇑Sn	Sn	05 03 39.0	+0.8
	0.7nm,0.7s						
MAKZ				⇑Lg	Lg	05 04 25.8	
	1.4nm,0.8s						

RSNC 19 05:02:07.5±1.1**, 7.°46N**×**73.°22W, h132**^{km}±7^{km}**, ML1.8, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAMC	Pamplona, Colo	0.53	103	eP	Pn	05 02 27.0	-0.6
PAMC				eS	Sn	05 02 42.2	-0.5
PAMC				i		05 02 44.1	
	comp=Z,6.5nm,0.4s						
PAMC	Pamplona, Colo	0.53	103	eP	Pn	05 02 27.0	-0.6
PAMC				eS	Sn	05 02 42.2	-0.5
PAMC				i		05 02 44.1	
	comp=Z,6.5nm,0.4s						
BRRC	Barranca, Sant	0.60	235	eP	Pn	05 02 27.4	-0.1
BRRC				eS	Sn	05 02 42.5	-0.1
BRRC				i		05 02 42.9	
	comp=Z,9.2nm,0.4s						
BRRC	Barranca, Sant	0.60	235	eP	Pn	05 02 27.4	-0.1
BRRC				eS	Sn	05 02 42.5	-0.1
BRRC				i		05 02 42.9	
	comp=Z,9.2nm,0.4s						
OCAC	Ocana	0.78	352	eP	Pn	05 02 29.1	+0.2
OCAC				eS	Sn	05 02 45.6	+0.4
OCAC				i		05 02 49.6	
	comp=Z,8.5nm,0.5s						
OCAC	Ocana	0.78	352	eP	Pn	05 02 29.1	+0.2
OCAC				eS	Sn	05 02 45.6	+0.4
OCAC				i		05 02 49.6	
	comp=Z,8.5nm,0.5s						
BARC	Barichara	0.86	178	eP	Pn	05 02 29.5	-0.2
BARC				eS	Sn	05 02 45.7	-0.9
BARC				i		05 02 46.8	
	comp=Z,19nm,0.1s						
BARC	Barichara	0.86	178	eP	Pn	05 02 29.5	-0.2
BARC				eS	Sn	05 02 45.7	-0.9
BARC				i		05 02 46.8	
	comp=Z,19nm,0.1s						
PTBC	PUERTO BERRIO,	1.53	233	eP	Pn	05 02 35.5	-0.6
PTBC				eS	Sn	05 02 57.3	-0.7
PTBC				i		05 03 01.6	
	comp=Z,6.4nm,0.1s						
PTBC	PUERTO BERRIO,	1.53	233	eP	Pn	05 02 35.5	-0.6
PTBC				eS	Sn	05 02 57.3	-0.7
PTBC				i		05 03 01.6	
	comp=Z,6.4nm,0.1s						
RUSC	La Rusia	1.56	175	eP	Pn	05 02 36.3	-0.7
RUSC				eS	Sn	05 02 58.7	-0.8
RUSC				i		05 03 05.9	
	comp=Z,1.7nm,0.4s						
SMLC	San Martn de	1.58	328	eP	Pn	05 02 35.6	-1.1
SMLC				eS	Sn	05 02 57.6	-1.3
SMLC				i		05 02 59.4	
	comp=Z,20nm,0.1s						
SMLC	San Martn de	1.58	328	eP	Pn	05 02 35.6	-1.1
SMLC				eS	Sn	05 02 58.5	-0.5
SPBC	San Pablo de B	1.99	205	eP	Pn	05 02 41.2	-0.3
SPBC				eS	Sn	05 03 07.5	-0.1
SPBC	San Pablo de B	1.99	205	eP	Pn	05 02 41.2	-0.3
SPBC				eS	Sn	05 03 07.5	-0.1
UREC	San Jos de Ur	2.31	277	eP	Pn	05 02 45.9	+0.4
UREC				eS	Sn	05 03 13.8	-0.9
CHIC	Chingaza	2.86	190	eP	Pn	05 02 53.1	+0.3
CHIC				eS	Sn	05 03 28.2	+0.5
CHIC				i		05 03 35.9	
	comp=Z,1.2nm,0.3s						

RSNC 19 05:04:02.9±1.0**, 6.°76N**×**73.°13W, h145**^{km}±6^{km}**, ML1.3, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.17	199	eP	Pn	05 04 24.1	+1.3
BARC				eS	Sn	05 04 37.2	-0.8
BARC				i		05 04 40.7	
	comp=Z,3.2nm,0.4s						
BRRC	Barranca, Sant	0.68	301	eP	Pn	05 04 24.8	+0.1
BRRC				eS	Sn	05 04 41.5	+0.2
BRRC				i		05 04 46.4	
	comp=Z,2.7nm,0.1s						
PAMC	Pamplona, Colo	0.71	36	eP	Pn	05 04 25.3	-0.2
PAMC				eS	Sn	05 04 42.3	-0.5
PAMC				i		05 04 45.1	
	comp=Z,5.5nm,0.4s						
RUSC	La Rusia	0.86	177	eP	Pn	05 04 26.5	-0.2
RUSC				eS	Sn	05 04 44.6	-0.1
RUSC				i		05 04 46.3	
	comp=Z,2.5nm,0.2s						
PTBC	PUERTO BERRIO,	1.34	261	eP	Pn	05 04 30.1	-0.3
PTBC				eS	Sn	05 04 50.3	-1.2
PTBC				i		05 05 00.3	
	comp=Z,1.9nm,0.2s						
SPBC	San Pablo de B	1.45	221	eP	Pn	05 04 30.8	-0.8
SPBC				eS	Sn	05 04 53.8	+0.2
OCAC	Ocana	1.48	353	eP	Pn	05 04 31.4	-0.7
OCAC				eS	Sn	05 04 54.2	-0.2
OCAC				i		05 04 58.3	
	comp=Z,4.8nm,0.2s						
SMLC	San Martn de	2.23	335	eP	Pn	05 04 39.5	-1.0
SMLC				eS	Sn	05 05 09.0	-0.6

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*PGC **19** 05:19:35.4±1.1, 48.°89N×129.°20W, h10^{km}, MLSn3.1/29, Mw3.8/29, 238km southwest of Pt. Hardy, Bc Vancouver Island, Canada Region*

*IDC **19** 05:19:37.8±1.4, 49.°10N×128.°88W, h0^{km}, mb3.5/5, mb1 3.8/14, mb1mx3.6/63, mbtmp3.6/14, ML3.4/9, MS3.5/12, Ms1 3.5/12, ms1mx3.2/45, Error ellipse: s-maj=26.2km s-min=10.2km az=65.0*

*NEIC **19** 05:19:39.5±1.5, 49.°20N±0.°04×128.°71W±0.°07, h10^{km}±2^{km}, mb4.1/24, Mwr3.8(OTT), Error ellipse: s-maj=9.9km s-min=4.8km az=308.0*

ISC 19 05:19:37.3±1.8**, 49.°13N**±0.°05×**128.°77W**±0.°05**, h1**^{km}±11^{km}**, n247,** σ1^{s}**38**/252**, mb4.1**/9**, MS3.5**/6**, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEMF	NEPTUNE Canada	1.20	191	P	Pn	05 19 50.5	-10
EDB	Eliza Dome	1.31	55	Pn	Pg	05 20 02.3	0.0
EDB				Sn	Sg	05 20 22.4	+3.1
NC89	ODP889	1.35	109	Pn	Pn	05 20 00.9	-2.1
FHRB	Fair Harbour	1.42	49	Pn	Pg	05 20 04.3	-0.2
ETB	Estevan Point	1.48	80	Pn	Pb	05 20 04.9	-0.7
NC27	ODP1027	1.53	153	Pn	Pn	05 19 59.0	-6.3
HOLB	Holberg	1.57	15	Pn	Pn	05 20 05.7	-0.6
HOLB				Sn	Sg	05 20 27.8	+0.1
MAYB	Maynard	1.64	39	Pn	Pb	05 20 07.4	-1.0
WOSB	Woss	1.77	53	Pn	Pb	05 20 09.7	-0.8
PHC	Port Hardy	1.80	28	Pn	Pb	05 20 09.6	-1.4
PHC				Sn	Sg	05 20 34.2	-0.9
TOFB	Tofino	1.88	88	Pn	Pn	05 20 09.8	-0.7
TOFB				Sn	Sb	05 20 35.1	-1.2
TLCB	Telegraph Cove	1.89	41	Pn	Pb	05 20 11.4	-1.2
TLCB				Sn	Sg	05 20 36.9	-1.2
GDR	Gold River	1.90	69	Pn	Pb	05 20 10.9	-1.8
B012	Ucluelet	2.14	94	Pn	Pn	05 20 13.8	-0.1
B012				Sn	Sn	05 20 40.1	-0.9
BTB	Buttle Lake	2.15	80	Pn	Pn	05 20 14.6	+0.2
OZB	Mount Ozzard	2.16	93	Pn	Pn	05 20 13.3	-1.2
OZB				Sn	Sn	05 20 41.1	-0.8
NCRB	Newcastle Ridg	2.17	53	Pn	Pb	05 20 16.0	-1.5
CBB	Campbell River	2.40	67	Pn	Pb	05 20 18.6	-2.5
CBB				Sn	Sb	05 20 50.9	-0.3
BFSB	Bamfield	2.41	96	Sn	Sn	05 20 47.4	-0.5
B927	Port Alberni	2.60	87	Pn	Pn	05 20 19.7	-0.7
MGB	Mount Grey	2.69	91	Pn	Pn	05 20 20.7	-1.0
MGB				Sn	Sn	05 20 54.8	-0.1
OCP	Olym-Cheeka Pk	2.87	105	Pn	Pn	05 20 23.3	-0.8
TXB	Texada	2.89	77	Pn	Pn	05 20 25.3	+1.0
GHNB	Nanoose	2.98	85	Pn	Pn	05 20 26.4	+0.8
B926	Mesachie Lake	3.07	94	Pn	Pn	05 20 27.1	+0.2
B926				Sn	Sn	05 21 04.2	0.0
BBB	Bella Bella	3.09	8	Pn	Pn	05 20 27.2	+0.2
	26nm,0.3s,baz=221,slow=6.9,SNR=246						
BBB				Sn	Sn	05 21 03.5	-1.1
	23nm,0.3s,baz=82,slow=23,SNR=9.9						
BBB	Bella Bella	3.09	8	Pn	Pn	05 20 27.1	0.0
BBB				Sn	Sn	05 21 03.3	-1.3
BBB	Bella Bella	3.09	8	Pn	Pn	05 20 27.4	+0.4
BBB				Sn	Sn	05 21 03.1	-1.4
NLLB	Nanaimo Lost L	3.14	86	Pn	Pn	05 20 29.2	+1.4
SHB	Sechelt	3.23	80	Pn	Pn	05 20 30.3	+1.1
OBC	Olympics--Boni	3.30	108	Pn	Pn	05 20 29.8	-0.3
GOBB	Galiano Island	3.47	91	Pn	Pn	05 20 32.9	+0.6
HG4B	Hotspring	3.52	335	Pn	Pn	05 20 31.6	-1.5
STW	Striped Peak	3.52	104	Pn	Pn	05 20 33.2	+0.1
B009	North Saanich	3.54	96	Pn	Pn	05 20 32.5	-0.8
B009				Sn	Sn	05 21 15.8	0.0
B010	North Saanich	3.54	96	Pn	Pn	05 20 32.7	-0.6
B010				Sn	Sn	05 21 16.4	+0.6
PGC	Sidney	3.54	96	Pn	Pn	05 20 32.8	-0.5
PGC				Sn	Sn	05 21 15.6	-0.2
PGC	Sidney	3.54	96	Pn	Pn	05 20 33.5	+0.1
PGC				Sn	Sn	05 21 15.4	-0.4
PA02	PA02 Ocean	3.54	96	Sn	Sn	05 21 15.7	-0.1
B011	North Saanich	3.55	96	Pn	Pn	05 20 33.1	-0.3
B011				Sn	Sn	05 21 15.9	0.0
BIB	Bowen Island	3.59	84	Pn	Pn	05 20 34.7	+0.8
WPB	Watts Point	3.67	80	Pn	Pn	05 20 36.5	+1.4
VGZ	Gonzales	3.67	99	Sn	Sn	05 21 18.0	-1.0
NLWA	Neilton Lookou	3.71	116	Pn	Pn	05 20 36.8	+1.1
WISH	Wishkah	3.91	119	Sn	Sn	05 21 22.5	-2.3
WSLR	Whistler	3.93	73	Pn	Pn	05 20 41.0	+2.3
MCW	Mount Constitu	3.94	94	Pn	Pn	05 20 39.9	+1.0
BLN	Blyn Mountain	4.01	104	Pn	Pn	05 20 39.7	-0.2
A04D	Lummi Island	4.02	94	P	Pn	05 20 39.1	-0.7
	baz=279						
HDW	Hoodsport	4.09	109	Pn	Pn	05 20 41.0	0.0
D03D	Eldon	4.11	111	P	Pn	05 20 41.9	+0.7
	baz=296						
GNW	Green Mountain	4.26	109	Sn	Sn	05 21 31.9	-1.7
E03A	Lebam	4.36	124	Pn	Pn	05 20 44.1	-0.4
A05A	Maple Falls	4.40	89	Pn	Pn	05 20 46.4	+1.3
B05A	Bryant	4.51	99	P	Pn	05 20 46.9	+0.3
	baz=284						
MBW	Mount Baker	4.54	92	Pn	Pn	05 20 47.9	+0.7
LLLB	Lillooet	4.70	69	Pn	Pn	05 20 51.5	+2.3
GRNB	Grenville Isla	4.78	352	Pn	Pn	05 20 49.4	-1.0
UBRB	Upper Baezaeko	4.79	36	Pn	Pn	05 20 52.9	+2.3
HOPB	Hope	4.82	84	Pn	Pn	05 20 52.4	+1.5
RPW	Rockport	4.85	95	Pn	Pn	05 20 52.1	+0.8
B06A	Marblemount	4.85	94	Pn	Pn	05 20 54.2	+2.9
E04D	Cinebar	4.91	119	P	Pn	05 20 52.7	+0.7
	baz=305						
D05A	Enumclaw	4.94	111		Pn	05 20 54.8	+2.3
KITB	Kitimat	4.96	1	Pn	Pn	05 20 53.4	+0.7
FMW	Mount Fremont	5.25	112	Pn	Pn	05 20 57.3	+0.4
LON	Longmire	5.25	114	Pn	Pn	05 20 57.5	+0.7
LON				Sn	Sn	05 21 56.5	-1.5
LON	Longmire	5.25	114		Pn	05 20 58.5	+1.6
LTY	Liberty	5.73	106	Pn	Pn	05 21 04.5	+1.0
LTY	Liberty	5.73	106		Pn	05 21 04.9	+1.4
COR	Corvallis	5.89	138	Pn	Pn	05 21 06.1	+0.5
PNT	Penticton	6.00	85	Pn	Pn	05 21 08.3	+1.1
I02D	Swisshome	6.06	144	P	Pn	05 21 09.1	+1.2
	baz=328						
H04D	Lebanon	6.19	136	P	Pn	05 21 10.9	+1.1
	baz=321						
B08A	Colville Reser	6.29	93	Pn	Pn	05 21 12.8	+1.7

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H04A  Detroit Lake       6.33 132  Pn     Pn     05 21 12.9 +1.2
I03D  Drain, OR          6.60 143  P      Pn     05 21 16.4 +1.1
      baz=328
J01E  Myrtle Point       6.85 149  P      Pn     05 21 19.8 +1.1
      baz=333
I04A  Tendick Farm,      6.91 138  P      Pn     05 21 21.2 +1.6
      baz=324
D08A  Wollman Farm,      6.92 104  Pn     Pn     05 21 21.0 +1.3
KEBM  Edson Butte        6.98 152  Pn     Pn     05 21 21.8 +1.2
C09A  Chrisman Ranch     7.11  97  Pn     Pn     05 21 23.2 +0.9
MNB   Mounoet Dainar     7.28  61  Pn     Pn     05 21 27.5 +2.6
K02D  Willamette Mer     7.35 149  P      Pn     05 21 27.7 +1.9
      baz=334
PINE  Pine Mountain      7.60 132  Pn     Pn     05 21 32.0 +2.8
KBO   Bosley Butte       7.61 154  Pn     Pn     05 21 30.5 +1.2
HUMO  Hull Mountain      7.68 146         Pn     05 21 31.7 +1.5
G08A  Pilot Rock         7.71 116  Pn     Pn     05 21 33.0 +2.4
NEW   Newport            7.76  92  Pn     Pn     05 21 32.9 +1.6
      0.3nm,0.3s,baz=275,slow=14,SNR=6.0
NEW                                LR     LR     05 24 40.4
      comp=Z,551nm,18.2s,baz=268,slow=39
NEW   Newport            7.76  92  P      Pn     05 21 32.0 +0.7
      baz=281
NEW   Newport            7.76  92         Pn     05 21 32.6 +1.3
L02E  Cave Junction      7.86 151  P      Pn     05 21 34.5 +1.9
      baz=335
L04D  Klamath Falls      8.26 144  P      Pn     05 21 39.8 +1.6
      baz=330,SNR=5.9
KRMB  Red Mountain       8.34 154  Pn     Pn     05 21 40.9 +1.6
F10A  Beach Ranch, E     8.42 108  Pn     Pn     05 21 41.3 +0.8
YBH   Yreka Blue Hor     8.54 148  Pn     Pn     05 21 45.0 +3.0
      0.3nm,0.3s,baz=338,slow=12,SNR=40
YBH                                LR     LR     05 24 41.0
      comp=Z,244nm,20.3s,baz=336,slow=36
YBH   Yreka Blue Hor     8.54 148  Pn     Pn     05 21 45.4 +3.4
M02C  Callahan           8.79 149  P      Pn     05 21 47.7 +2.2
      baz=334,SNR=15
M04C  Macdoel            8.81 144  P      Pn     05 21 48.1 +2.2
      baz=329,SNR=12
BMO   Blue Mountains     8.93 114  Pn     Pn     05 21 48.3 +0.9
KHMM  Horse Mountain     8.99 155  Pn     Pn     05 21 49.2 +0.9
NBC5  NorthernBC 5       9.16  21  Pn     Pn     05 21 53.1 +2.6
N02D  Trinity Center     9.21 150  P      Pn     05 21 53.6 +2.3
      baz=335,SNR=11
MOD   Modoc Plateau      9.35 137  Pn     Pn     05 21 56.1 +2.9
DLBC  Dease Lake         9.36 356  Pn     Pn     05 21 56.5 +3.3
      0.2nm,0.3s,baz=199,slow=13,SNR=5.9
WDC   Whiskeytown Da     9.62 150  Pn     Pn     05 21 58.7 +1.9
JTMT  Jette              9.73  93         Pn     05 21 59.6 +1.2
WVOR  Wild Horse Val     9.74 130         Pn     05 22 01.9 +3.4
WALA  Waterton Lakes     9.75  85  Pn     Pn     05 21 59.0 +0.3
O02D  Mt. Diablo Mer     9.91 152  P      Pn     05 22 02.8 +2.0
      baz=337
O03E  Paynes Creek      10.13 148  P      Pn     05 22 05.8 +2.0
      baz=334
MSO   Missoula          10.21  97  P      Pn     05 22 06.0 +1.1
      baz=289
FNBB  Fort Nelson       10.35  17  Pn     Pn     05 22 09.1 +2.5
ORV   Oroville          10.89 149  Pn     Pn     05 22 15.9 +1.8
BEKR  Beckworth         11.03 144  Pn     Pn     05 22 18.3 +2.0
HLID  Hailey            11.37 114  P      Pn     05 22 22.3 +1.4
      baz=305
LRM   Limekiln Ridge    11.53 101  Pn     Pn     05 22 21.8 -1.3
PAHR  Pah Rah Range     11.56 141         Pn     05 22 25.8 +2.4
AFDM  Forest Hills D    11.62 148  Pn     Pn     05 22 26.0 +1.9
VCNR  Virginia City     11.80 143  Pn     Pn     05 22 28.8 +2.0
BOZ   Bozeman (W)       12.15 100  P      Pn     05 22 31.6 +0.1
      baz=294
EGMT  Eagleton          12.64  88  P      Pn     05 22 39.3 +1.1
      baz=282
NVAR  Mina Array Bea    13.09 141  Pn     Pn     05 22 47.5 +3.1
      0.1nm,0.3s,baz=305,slow=12,SNR=9.7
NVAR                               LR     LR     05 27 47.1
      comp=Z,148nm,18.6s,baz=343,slow=37
NV11  Mina Array Sit    13.14 140         Pn     05 22 46.8 +1.6
LHV   Little Huntoon    13.15 142         Pn     05 22 46.9 +1.8
MDPB  Devils Postpil    13.47 145  Pn     Pn     05 22 51.2 +1.6
TPH   Tonopah           13.84 139         Pn     05 22 56.8 +2.1
SPUT  South Promonto    13.89 118         Pn     05 22 57.3 +2.0
Q23K  Middleton Isla    14.50 322  P      Pn     05 23 03.3  0.0
      baz=127
GRAC  Grapevine Rang    14.69 141  P      Pn     05 23 08.2 +2.0
      baz=330
BW06  Boulder Array     14.79 108  P      Pn     05 23 07.9 +0.3
      baz=302
PD31  Pinedale Array    14.79 108         Pn     05 23 08.4 +0.8
PDAR  Pinedale Array    14.79 108  Pn     P      05 23 11.3 -2.5
      0.1nm,0.3s,baz=320,slow=10,SNR=7.7
PDAR                               LR     LR     05 29 09.0
      comp=Z,275nm,20.0s,baz=306,slow=38
PDAR  Pinedale Array    14.79 108         Pn     05 23 07.3 -0.3
CWC   Cottonwood Cre    14.89 144  P      Pn     05 23 10.5 +1.5
      baz=332
NLU   North Lily Min    15.00 121         Pn     05 23 12.1 +1.6
TPNV  Topopah Spring    15.21 139  Pn     P      05 23 15.0 -3.4
TPNV                               IAmb   IAmb   05 23 22.4
      comp=Z,9.7nm,1.3s
LAO   LASA Array        15.31  91  P      Pn     05 23 15.3 +0.9
      baz=288
N25K  Chitina, Valde    15.34 330  P      Pn     05 23 15.6 +0.8
      baz=137
FURC  Furnace Creek,    15.35 141  P      P      05 23 16.6 -3.3
      baz=330
ISA   Isabella, Lake    15.44 147  P      Pn     05 23 17.5 +1.3
      baz=334
MPMC  Manual Prospec    15.46 143  P      Pn     05 23 17.8 +1.2
      baz=332
YKA   Yellowknife Ar    15.53  25  Pn     Pn     05 23 16.0 -1.1
      comp=Z,0.1nm,0.3s,baz=209,slow=12,SNR=6.5
BCAR  Beaver Creek A    15.69 338         Pn     05 23 20.1 +0.8
LRMC  Laurel Mtn Rad    15.89 145  P      P      05 23 23.6 -2.4
      baz=333
SHOC  Shoshone, Teco    16.09 141  P      P      05 23 26.1 -1.9
      baz=330
SZCU  Shurtz Canyon     16.18 130         P      05 23 27.3 -2.0
DGMT  Dagmar            16.19  83  P      Pn     05 23 26.1 +0.2
      baz=282
DGMT  Dagmar            16.19  83  Pn     P      05 23 26.4 -2.8
DGMT                               IAmb   IAmb   05 23 36.4
      comp=Z,16nm,1.1s
EDW2  Edwards Air Fo    16.31 147  P      P      05 23 29.0 -1.6
      baz=334
GSC   Goldstone, Bar    16.39 143  P      P      05 23 30.3 -1.1
      baz=332
GSC   Goldstone, Bar    16.39 143         Pn     05 23 26.7 -1.8
SRU   San Rafael Swe    16.45 121         P      05 23 31.1 -1.1
SRU                                IAmb   IAmb   05 23 41.3
      comp=Z,6.3nm,0.9s
LCMT  Little Creek M    16.55 131         P      05 23 32.5 -0.9
K22A  Casper            16.76 104  P      P      05 23 33.7 -1.9
      baz=301
K22A  Casper            16.76 104         P      05 23 33.4 -2.2
K22A                               IAmb   IAmb   05 23 58.2
      comp=Z,13nm,1.1s
DOT   Dot Lake          16.76 336  Pn     P      05 23 33.7 -1.6
HOM   Homer             16.89 317  P      P      05 23 36.0 -0.7
      baz=118
SCRK  Sand Creek        17.00 337  P      P      05 23 37.5 -0.6
      baz=144
O20A  White River Ci    17.11 114  P      P      05 23 39.6  0.0
      baz=309
GMRC  Granite Mounta    17.30 141  P      P      05 23 42.0 +0.4
      baz=330
FFC   Flin Flon         17.39  61  Pn     P      05 23 40.3 -2.0
U15A  North Rim         17.49 130  P      P      05 23 44.4 +0.6
EPYK  Eagle Plains      17.77 349  P      P      05 23 46.4 -0.2
      baz=162
W13A  Hualapai Mount    17.80 136  P      P      05 23 47.2 -0.1
PV14  Lion Creek, Pa    17.81 120  P      P      05 23 48.2 +0.8
PV14                               IAmb   IAmb   05 23 55.0
      comp=Z,20nm,1.0s
PV22  Blue Mesa, Par    17.84 119  P      P      05 23 47.5 -0.1
PV22                               IAmb   IAmb   05 24 01.6
      comp=Z,8.5nm,1.0s
PV04  Paradox Valley    17.86 119  P      P      05 23 49.0 +1.1
PV04                               IAmb   IAmb   05 23 55.7
      comp=Z,17nm,1.1s
PV20  West Nyswonger    17.86 120  P      P      05 23 47.7 -0.2
PV20                               IAmb   IAmb   05 23 55.6
      comp=Z,19nm,1.1s
PV17  East Wray Mesa    17.91 120  P      P      05 23 48.9 +0.5
PV17                               IAmb   IAmb   05 23 55.5
      comp=Z,18nm,1.0s
PV16  Nyswonger Mesa    17.91 120  P      P      05 23 49.5 +1.0
PV16                               IAmb   IAmb   05 23 55.6
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      comp=Z,15nm,1.0s
PFO   Pinyon Flats O    18.01 145  LR     LR     05 29 35.4
      comp=Z,97nm,20.0s,baz=326,slow=33
N23A  Red Feather La    18.07 109  P      P      05 23 50.7 +0.5
      baz=305
HDA   Harding Lake      18.15 334  P      P      05 23 51.2 +0.5
      baz=139
MCK   McKinley          18.26 331  P      P      05 23 52.1 +0.2
      baz=134
BC3   Big Chuckawall    18.36 142  P      P      05 23 54.4 +1.1
      baz=332
ILAR  Eielson Array     18.41 335  P      Pn     05 23 53.6 +0.2
      comp=Z,0.0nm,0.3s,baz=155,slow=12,SNR=6.6
ILAR                               LR     LR     05 29 48.8
      comp=Z,93nm,18.5s,baz=128,slow=33
WUAZ  Wupatki           18.66 130  P      Pn     05 23 57.8 +0.9
      baz=322
NEA2  Nenana            18.91 333  P      Pn     05 23 59.4 -0.2
      baz=135
ISCO  Idaho Springs     18.92 111  P      Pn     05 23 59.4 -0.7
      baz=308
MVCO  Mesa Verde        18.92 121  P      Pn     05 24 01.4 +1.3
      baz=316
IKP   In-Ko-Pah, Jac    19.00 145  P      Pn     05 24 03.0 +2.0
      baz=334
MDND  Maddock           19.33  83  P      Pn     05 24 05.4 +0.7
      baz=285
MDND  Maddock           19.33  83  P      Pn     05 24 04.3 -0.5
INK   Inuvik            19.38 355  P      Pn     05 24 04.2 -0.9
      comp=Z,0.0nm,0.3s,baz=129,slow=6.5,SNR=2.7
I23K  Minto, Yukon-K    19.40 333  P      Pn     05 24 04.8 -0.6
      baz=136
S22A  4UR Ranch, Cre    19.50 117  P      Pn     05 24 07.2  0.0
      baz=313
MLY   Manley            19.73 332  P      Pn     05 24 08.2 -1.2
      baz=133
SDCO  Great Sand Dun    20.29 115  P      Pn     05 24 15.8 -0.7
      baz=312
OGNE  Ogallala          20.51 103  P      Pn     05 24 18.5 -0.3
      baz=303
SUSD  Miller            20.87  92  P      Pn     05 24 21.9 -1.1
      baz=294
COLD  Coldfoot          21.16 337  P      P      05 24 24.3 +0.8
      baz=138
ULM   Lac du Bonnet     21.22  74  P      P      05 24 25.4 +1.2
      comp=Z,7.2nm,0.7s,baz=286,slow=10,SNR=10
ULM                                LR     LR     05 33 06.1
      comp=Z,304nm,19.9s,baz=302,slow=38
ULM   Lac du Bonnet     21.22  74  P      P      05 24 23.7 -0.6
KSCO  Kaye Shedlock’    21.24 109  P      P      05 24 25.6 +1.0
      baz=307
TUC   Tucson            21.55 135  P      P      05 24 29.0 +1.0
      baz=327
AGMN  Agassiz Nation    21.64  80  P      P      05 24 29.1 +0.3
AGMN                               IAmb   IAmb   05 24 31.5
      comp=Z,18nm,1.0s
ANMO  Albuquerque       21.70 122  P      P      05 24 31.4 +1.7
      comp=Z,1.0nm,0.8s,baz=333,slow=4.5,SNR=3.9
ANMO                               LR     LR     05 32 16.6
      comp=Z,70nm,18.1s,baz=314,slow=35
ANMO  Albuquerque       21.70 122  P      P      05 24 30.2 +0.5
      baz=318
TOLK  Toolik Lake Re    22.10 340  P      P      05 24 34.2 +0.6
      baz=142
FCC   Fort Churchill    22.33  51  P      P      05 24 37.4 +1.4
ECSD  EROS Data Cent    22.70  92  P      P      05 24 40.7 +0.5
      baz=295
ECSD  EROS Data Cent    22.70  92  P      P      05 24 39.2 -1.0
ECSD                               IAmb   IAmb   05 24 46.6
      comp=Z,11nm,1.2s
121A  Cookes Peak, D    22.84 129  P      P      05 24 42.5 +0.6
      baz=323
B35A  Bob, Littlefor    23.00  79  P      P      05 24 44.2 +0.9
EYMN  Ely               24.55  78  P      P      05 24 59.0 +0.6
      baz=287
EYMN  Ely               24.55  78  P      P      05 24 58.0 -0.3
MNTX  Cornudas Mount    24.75 126  P      P      05 25 02.0 +1.8
      baz=322
GDL2  Guadalupe Moun    24.91 124  P      P      05 25 02.5 +0.7
TXAR  Lajitas Array     27.52 127  P      P      05 25 26.8 +1.5
      comp=Z,0.4nm,0.9s,baz=326,slow=11,SNR=3.6
TXAR  Lajitas Array     27.52 127  P      P      05 25 26.5 +1.1
LPIG  La Paz            28.89 143  LR     LR     05 37 42.2
      comp=Z,55nm,18.7s,baz=337,slow=38
RES   Resolute Bay      29.33  18  P      P      05 25 42.0 +1.2
      comp=Z,0.3nm,0.6s,baz=252,slow=9.6,SNR=1.5
MIAR  Mount Ida         29.69 106  P      P      05 25 45.3 +0.8
      baz=310
ACSO  Alum Creek Sta    33.31  88  P      P      05 26 16.9 +0.5
      baz=301
LSQQ  Lebel-sur-Quev    33.37  70  P      P      05 26 17.1 +0.4
      baz=290
ALGO  Algonquin Park    33.87  76  P      P      05 26 21.5 +0.4
      baz=294
G54A  Lake Saint Pet    34.07  77  P      P      05 26 22.8 -0.2
      baz=295
H53A  Bobcaygeon        34.11  78  P      P      05 26 23.0 -0.2
      baz=296
P52A  Corning           34.18  88  P      P      05 26 23.8  0.0
      baz=302
M53A  WI Miller and     34.21  84  P      P      05 26 24.5 +0.3
      baz=300
LRAL  Lakeview Retre    34.85 102  P      P      05 26 30.5 +0.7
      baz=310
FRB   Frobisher Bay     34.87  42  LR     LR     05 40 55.6
      comp=Z,165nm,21.1s,baz=292,slow=37
J56A  Wolcott           35.81  79  P      P      05 26 37.5 -0.4
      baz=298
G57A  Newington         36.18  75  P      P      05 26 40.7 -0.3
      baz=296
H58A  Gabriels          37.00  76  P      P      05 26 48.1 -0.1
      baz=297
H59A  Cadyville         37.21  75  P      P      05 26 48.1 -1.8
      baz=297
J59A  Piesco            37.24  78  P      P      05 26 51.4 +1.2
      baz=298
F59A  Saint Guilaume    37.24  73  P      P      05 26 49.6 -0.5
      baz=296
R58B  Mineral           37.87  88  P      P      05 26 56.3 +0.8
      baz=304
D60A  Saint Jean D’O    37.95  71  P      P      05 26 56.1  0.0
      baz=295
K61A  Williamstown      38.41  78  P      P      05 27 00.2 +0.1
      baz=300
E61A  Lac Etchemin      38.43  71  P      P      05 27 00.3 +0.2
      baz=296
M61A  Granite Spring    38.77  80  P      P      05 27 02.9 -0.2
      baz=301
H62A  Milan             38.85  74  P      P      05 27 04.2 +0.5
      baz=298
NHSC  New Hope          39.24  96  P      P      05 27 07.6 +0.6
      baz=309
H65A  Eastbrook         40.62  72  P      P      05 27 18.3 -0.1
      baz=299
H11N2 WAKE ISLAND Hy    58.59 264  T      T      06 32 38.3
      baz=43,slow=75,SNR=27
H11N3 WAKE ISLAND Hy    58.60 264  T      T      06 32 35.8
      baz=43,slow=75,SNR=28
H11N1 WAKE ISLAND Hy    58.61 264  T      T      06 32 35.8
      baz=43,slow=75,SNR=12
NOA   NORSAR Array B    65.55  20  LR     LR     05 59 12.3
      comp=Z,38nm,18.4s,baz=270,slow=36
ZALV  Zalesovo Beam     73.46 340  LR     LR     06 08 45.5
      comp=Z,22nm,19.4s,baz=11,slow=40
HHC   Hu-ho-hao-te      75.84 317  eP     P      05 31 26.3 +1.3
HHC                                pmax   pmax
      comp=Z,3.0nm,0.7s
HHC                                pmax   pmax
      comp=Z,130nm,6.6s
MKAR  Makanchi Array    80.72 339  P      P      05 31 50.7 -1.2
      comp=Z,0.2nm,0.7s,baz=37,slow=4.6,SNR=1.9
WMQ   Urumqi            82.07 334  eP     P      05 32 01.6 +2.4
KSH   Kashi             89.06 341  P      P      05 32 32.4 -1.7
KSH   Kashi             89.06 341  SS     SS     05 49 18.4 +3.7
KSH                                pmax   pmax
      comp=Z,3.0nm,1.0s
KSH                                pmax   pmax
      comp=Z,500nm,7.1s
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*IDC **19** 05:35:17.0±0.8, 28°.66N×51°.89E, h0^{km}, mb4.2/22, mb1 4.3/25, mb1mx4.2/49, mbtmp4.2/25, ML3.7/3, MS3.1/6, Ms1 3.1/6, ms1mx2.8/52, Error ellipse: s-maj=18.7km s-min=13.3km az=179.0*

*MOS **19** 05:35:16.8±1.0, 28°.59N×51°.95E, h12^{km}, mb4.5/24, Error ellipse: s-maj=7.8km s-min=5.2km az=95.5*

*NEIC **19** 05:35:18.5±1.4, 28°.76N±0°.04×51°.82E±0°.07, h10^{km}±1^{km}, Error ellipse: s-maj=10.8km s-min=7.0km az=267.0*

*TEH **19** 05:35:18.0, 28°.70N×51°.86E, h9^{km}, ML4.3*

*THR **19** 05:35:19.4±0.3, 28°.74N×51°.73E, h38^{km}±9^{km}, ML4.0*

*OMAN **19** 05:35:21.1, 28°.70N×52°.07E, h10^{km}, mb5.5/5, ml4.3/10, ms3.0/1*

*DSN **19** 05:35:24.1±2.0, 28°.43N×52°.12E, h10^{km}, ML4.4/13, Error ellipse: s-maj=24.2km s-min=8.8km az=175.0*

ISC 19 05:35:19.6±0.4**, 28°.72N**±0°.04×**51°.90E**±0°.04**, h15^{km}, n244, σ1^{s}.33**/260**, mb4.3**/53**, MS3.4**/3**, 6C-7D, Southern Iran**

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Code  Station Name       Δ°   AZ°    Phase ID          Time      Res
                                   Op     ISC         h  m  s    ISC
AHBU  AHRAM              0.55 285  ePn    Pg     05 35 28.9 -1.4
KAZ1  Kazerun            0.93 346  ePg    Pb     05 35 35.5 -1.9
KAZ1                               e             05 36 03.2
      comp=Z,99nm,0.6s
QIR1  Qir                1.04 103  ePg    Pb     05 35 39.2 -0.1
QIR1                               e             05 36 03.0
      comp=Z,99nm,0.6s
SHI   Shiraz             1.06  30  ePg    Pb     05 35 38.7 -1.1
SHI                                e             05 36 10.1
      comp=Z,99nm,0.4s
JHRM  Jahrom             1.49  98   Pn    Pn     05 35 47.6 +1.6
JHRM  Jahrom             1.49  98  ePg    Pn     05 35 47.8 +1.8
JHRM                               e             05 36 15.5
      comp=Z,99nm,0.6s
LMD1  Lamerd             1.78 141  ePg    Pn     05 35 51.6 +1.8
LMD1                               e             05 36 26.9
      comp=Z,99nm,0.4s
KLNJ  Kolanjah           2.29 353  ePn    Pn     05 35 58.3 +1.1
ABEH  Behbahan           2.35 323  ePn    Pn     05 35 59.7 +2.0
LAR1  LAR                2.43 115  ePn    Pn     05 36 00.7 +1.9
LAR1                               e             05 36 56.2
      comp=Z,99nm,0.5s
IRAM  Ramesheh           3.10   8  ePn    Pn     05 36 09.4 +1.2
ISAD  Sadrabad           3.54  26  ePn    Pn     05 36 16.2 +2.0
IMEH  Mehriz             3.55  41  ePn    Pn     05 36 16.8 +2.4
IGAR  Gharneh            3.67   2  ePn    Pn     05 36 17.0 +1.0
SHK1  Shahrekord         3.70 347  ePn    Pn     05 36 19.9 +3.5
UMR   Umm Al-Rimmam      3.75 284  eP            05 36 18.3
RDF   Al-Radifah         3.82 274  eP            05 36 18.4
JRN   Qarnain Island     3.86 167  ePn    Pn     05 36 19.2 +0.8
JRN   Qarnain Island     3.86 167   P     Pn     05 36 19.1 +0.8
BNDS  Bandar-Abbas       4.00 108  ePn    Pn     05 36 22.3 +1.8
BNDS  Bandar-Abbas       4.00 108  ePn    Pn     05 36 22.3 +1.8
GENO  Geno               4.00 108  ePn    Pn     05 36 22.0 +1.5
IPIR  Pirpir             4.04 348  ePn    Pn     05 36 21.9 +0.7
MIB   Mutribah           4.12 286  eP            05 36 23.7
ICHK  Chekchek           4.13  31  ePn    Pn     05 36 24.0 +1.7
NASN  Na'in              4.14  11  ePn    Pn     05 36 22.6 +0.1
NASN  Na'in              4.14  11  ePn    Pn     05 36 22.6 +0.1
IZEF  Zefreh             4.18   5  ePn    Pn     05 36 24.4 +1.4
IBAF  Bafgh              4.28  47  ePn    Pn     05 36 25.9 +1.6
KHGB  Koh Gabri          4.32  66  ePn    Pn     05 36 26.0 +1.1
NGRK  Negar Kerman       4.33  77  ePn    Pn     05 36 26.9 +1.7
NGRK                               e             05 36 44.4
      comp=Z,99nm,0.3s
YZKH  Yazd               4.33  32  ePn    Pn     05 36 26.0 +1.0
YZKH  Yazd               4.33  32  ePn    Pn     05 36 26.0 +1.0
RST   Umm Al-Ruwaisa     4.36 281  eP            05 36 26.3
KRBR  Kerman             4.43  72  ePn    Pn     05 36 28.2 +1.7
KRBR  Kerman             4.43  72  ePn    Pn     05 36 28.2 +1.7
TVBK  TV Kerman          4.43  72  ePn    Pn     05 36 28.6 +2.0
TVBK                               e             05 36 53.0
      comp=Z,99nm,0.4s
IKLH  Kolahrood          4.59 357  ePn    Pn     05 36 29.5 +0.8
SHME  Shamm              4.62 124  i P    Pn     05 36 29.2 +0.4
      SNR=7.9
SHME                                S     Sn     05 37 20.6 -1.6
SHME  Shamm              4.62 124  ePn    Pn     05 36 29.2 +0.4
SHME  Shamm              4.62 124   P     Pn     05 36 29.3 +0.4
      SNR=7.7
SHME                                S     Sn     05 37 21.1 -1.2
SLWR  Sila               4.64 182   P     Pn     05 36 30.5 +1.4
SLWR                                S     Sn     05 37 24.1 +1.4
ANAR  Anarak             4.72  19  ePn    Pn     05 36 31.8 +1.4
BANOM Banah              4.81 124  i P    Pn     05 36 32.0 +0.5
      SNR=31
BANOM Banah              4.81 124  ePn    Pn     05 36 31.6 +0.2
BANOM Banah              4.81 124   P     Pn     05 36 31.7 +0.2
      SNR=31
BANOM                               S     Sn     05 37 25.7 -1.3
AJN   Ajban              4.98 146   P     Pn     05 36 32.4 -1.4
AJN   Ajban              4.98 146  ePn    Pn     05 36 35.5 +1.7
NAZ   Nazwa, Dubai       5.01 137   P     Pn     05 36 35.3 +1.1
NAZ   Nazwa, Dubai       5.01 137  ePn    Pn     05 36 35.4 +1.1
NAZ   Nazwa, Dubai       5.01 137   P     Pn     05 36 35.5 +1.2
NAZ                                 S     Sn     05 37 32.3 +0.3
CHMN  Cheshme madani     5.06  76  ePn    Pn     05 36 36.5 +1.3
MASF  Masafi             5.06 130   P     Pn     05 36 35.1 +0.2
      SNR=8.0
MASF                                S     Sn     05 37 32.3 -0.9
MSFE  Esma-Masafi        5.07 130  i P    Pn     05 36 35.4 +0.3
      SNR=7.7
MSFE  Esma-Masafi        5.07 130  ePn    Pn     05 36 35.2 +0.2
ASUD  Al Ashush, Dub     5.11 142  i P    Pn     05 36 37.6 +2.0
      SNR=10
ASUD  Al Ashush, Dub     5.11 142  ePn    Pn     05 36 37.0 +1.5
ASUD  Al Ashush, Dub     5.11 142   P     Pn     05 36 37.7 +2.2
      SNR=10
ASUD                                S     Sn     05 37 35.6 +1.4
FAQ   Al Faqa, Dubai     5.16 139   P     Pn     05 36 37.1 +0.8
FAQ   Al Faqa, Dubai     5.16 139  ePn    Pn     05 36 37.2 +0.9
FAQ   Al Faqa, Dubai     5.16 139   P     Pn     05 36 37.8 +1.5
      SNR=5.1
FAQ                                 S     Sn     05 37 35.0 -0.6
MDH   Madha              5.20 130  i P    Pn     05 36 37.0 +0.2
      SNR=14
MDH   Madha              5.20 130  ePn    Pn     05 36 36.8  0.0
MDH   Madha              5.20 130   P     Pn     05 36 37.1 +0.2
      SNR=15
MDH                                 S     Sn     05 37 35.0 -1.6
KRSH  Karshahi           5.24   2  ePn    Pn     05 36 37.8 +0.3
MZWR  Madinat Zayed      5.25 160  ePn    Pn     05 36 38.6 +1.1
UOSS  Minazif            5.38 133  i P    Pn     05 36 39.2 -0.1
      SNR=17
UOSS  Minazif            5.38 133         Pn     05 36 39.5 +0.1
UOSS  Minazif            5.38 133  ePn    Pn     05 36 39.0 -0.3
UOSS  Minazif            5.38 133   P     Pn     05 36 39.4 +0.1
UOSS                                S     Sn     05 37 38.3 -2.8
HATD  Hatta, Dubai       5.42 135  i P    Pn     05 36 40.9 +1.0
      SNR=7.3
HATD  Hatta, Dubai       5.42 135  ePn    Pn     05 36 41.1 +1.2
HATD  Hatta, Dubai       5.42 135   P     Pn     05 36 41.3 +1.4
      SNR=11
HATD                                S     Sn     05 37 40.9 -1.2
ASHO  Ashiyiah           5.48 136  i P    Pn     05 36 41.0 +0.2
      SNR=35
ASHO  Ashiyiah           5.48 136  ePn    Pn     05 36 41.0 +0.2
ASHO  Ashiyiah           5.48 136   P     Pn     05 36 41.1 +0.4
      SNR=6.2
ASHO                                S     Sn     05 37 42.3 -1.2
IKMR  Kamar-syah         5.65 329  ePn    Pn     05 36 43.5 +0.5
KBAM  BAM                5.76  84  ePn    Pn     05 36 46.7 +2.1
KBAM                               e             05 36 49.8
      comp=Z,99nm,0.7s
ALNE  Al Ain             5.79 142  i P    Pn     05 36 46.4 +1.4
      SNR=11
ALNE  Al Ain             5.79 142  ePn    Pn     05 36 46.2 +1.2
ALNE  Al Ain             5.79 142   P     Pn     05 36 46.3 +1.4
      SNR=11
ALNE                                S     Sn     05 37 53.9 +2.7
IKFM  Kafar-mosalman     5.91 325  ePn    Pn     05 36 49.0 +2.4
TPRV  Parvadeh(Tabas     5.95  43  ePn    Pn     05 36 48.8 +1.6
IDOB  Doab               5.97 329  ePn    Pn     05 36 50.0 +2.4
HSAM  Samen              6.15 334  ePn    Pn     05 36 52.0 +1.8
SOHO  SOHO               6.18 137  i P    Pn     05 36 50.3  0.0
      SNR=12
SOHO  SOHO               6.18 137  ePn    Pn     05 36 50.3  0.0
SOHO  SOHO               6.18 137   P     Pn     05 36 50.2  0.0
SOHO                                S     Sn     05 37 59.9 -0.7
IVRN  Varamin            6.26 359  ePn    Pn     05 36 51.9 +0.5
HAGD  Aghdareh           6.52 340  ePn    Pn     05 36 56.5 +1.4
TNSJ  Nastanj            6.60  36  ePn    Pn     05 36 57.0 +0.9
TKDS  Koohdasht(Taba     6.62  41  ePn    Pn     05 36 57.6 +1.2
TABS  Tabas              6.64  41  ePn    Pn     05 36 58.0 +1.3
TABS  Tabas              6.64  41  ePn    Pn     05 36 58.0 +1.3
UMZA  Um Al Zommool      6.67 153   P     Pn     05 36 57.1 +0.1
UMZA                                S     Sn     05 38 12.8  0.0
ARQ   Araqi              6.79 141   P     Pn     05 36 58.7 +0.1
      SNR=6.5
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DAMV	Damavand	6.89	1	IAML		05 38 22.5	
	comp=E,24nm,0.6s						
IALM	Almabolaq	6.89	334	ePn	Pn	05 37 01.5	+1.2
HOQ	Hoqain	7.06	135	P	Pn	05 37 02.4	-0.1
	SNR=12						
HOQ				S	Sn	05 38 19.6	-2.9
IKOO	Kooshah	7.15	57	ePn	Pn	05 37 06.1	+2.2
ISHM	Shahmirzad	7.16	9	ePn	Pn	05 37 06.0	+2.0
IGHG	Ghaleghazi	7.20	322	ePn	Pn	05 37 06.2	+1.6
QABG	Abgarm-Qazvin	7.24	345	ePn	Pn	05 37 06.9	+1.9
ILIN	Lien	7.47	327	ePn	Pn	05 37 09.2	+1.0
IDHR	Dehrash	7.58	323	ePn	Pn	05 37 10.8	+1.1
BSY	Bisya	7.63	140	P	Pn	05 37 10.4	+0.1
	SNR=16						
BSY				P	Pn	05 37 10.4	+0.1
	SNR=16						
BSY				S	Sn	05 38 34.2	-2.5
BSY				S	Sn	05 38 34.2	-2.5
RAYN	Ar Rayn	7.73	229	P	Pn	05 37 10.8	-0.9
RAYN	Ar Rayn	7.73	229	Pn	Pn	05 37 10.8	-0.9
WSAR	Wadi Sarin	8.16	130	Pn	Pn	05 37 16.7	-0.8
	comp=E,2.6nm,0.3s,baz=322,slow=6.3,SNR=33						
WSAR				Sn	Sn	05 38 44.5	-4.9
	comp=E,2.1nm,0.3s,baz=169,slow=20,SNR=8.5						
SBZV	Sabzevar	9.04	31	ePn	Pn	05 37 31.1	+1.4
ISFR	Sfrayin	9.76	30	ePn	Pn	05 37 41.4	+1.7
HRA	Herat	10.48	55	Pn	Pn	05 37 49.4	0.0
GEYT	Alibeck	10.55	28	Pn	Pn	05 37 49.9	-0.4
GYA0B	ALIBECK ARRAY	10.55	28	Pn	Pn	05 37 49.9	-0.4
GEVA	Gevas	12.07	325	Pn	Pn	05 38 09.1	-2.1
MARD	Mardin	12.66	315		Pn	05 38 17.2	-2.0
GNI	Garni	12.83	335	LR	LR	05 43 49.1	
	comp=E,85nm,18.3s,baz=168,slow=40						
EIL	Elat	14.83	278	LR	LR	05 45 27.4	
	comp=E,32nm,21.2s,baz=296,slow=41						
ZEI	Tsey	15.45	337	eP	Pn	05 38 58.8	+1.7
ZEI				pmax	pmax		
	comp=Z,11nm,1.0s						
KBL	Kabul	15.71	64	P	Pn	05 39 01.1	+0.5
KBL				pmax	pmax		
	comp=Z,15nm,1.3s						
KBL	Kabul	15.71	64	Pn	Pn	05 39 01.1	+0.5
NEY	Neytrino	16.27	335⇓	eP	Pn	05 39 08.9	+1.2
NEY				pmax	pmax		
	comp=Z,2.0nm,0.8s						
SOCY	Socotra	16.57	173	Pn	Pn	05 39 06.3	-5.2
KBZ	Khabaz	16.62	337	Pn	Pn	05 39 13.8	+1.9
	comp=Z,0.1nm,0.3s,baz=164,slow=7.0,SNR=11						
KBZ	Khabaz	16.62	337⇑	eP	Pn	05 39 13.3	+1.3
KBZ				pmax	pmax		
	comp=Z,10.0nm,1.1s						
SHA1	Shidzhatmaz	16.72	336⇓	eP	Pn	05 39 13.7	+0.3
KIV	Kislovodsk	16.90	337	eP	Pn	05 39 17.3	+1.8
KIV				pmax	pmax		
	comp=Z,32nm,1.0s						
KIV	Kislovodsk	16.90	337	Pn	Pn	05 39 13.2	-2.4
BR131	Keskin Array S	18.63	311⇓	eP	P	05 39 38.2	+1.5
BRTR	Keskin Array B	18.63	311	Pn	P	05 39 38.0	+1.3
	comp=Z,0.4nm,0.3s,baz=136,slow=13,SNR=12						
BRTR				LR	LR	05 49 02.9	
	comp=Z,128nm,18.4s,baz=333,slow=44						
NIL	Nilore	18.91	70	P	P	05 39 39.4	-0.4
NIL				pmax	pmax		
	comp=Z,9.0nm,0.7s						
NIL	Nilore	18.91	70		P	05 39 39.4	-0.4
ATD	Arta Tunnel	19.08	208	LR	LR	05 47 20.6	
	comp=Z,21nm,21.1s,baz=60,slow=38						
MDUB	Mudurnu	20.62	310	P	P	05 39 56.6	-1.9
KK07	Karatay Array	20.73	41	P	P	05 39 59.7	+0.2
KK01	Karatay Array	20.75	41	P	P	05 39 59.7	0.0
KK31	Karatay Array	20.75	41	P	P	05 40 00.0	+0.3
KK31				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KK31	Karatay Array	20.75	41		P	05 40 00.0	+0.3
KK31				IAmb	IAmb	05 40 02.1	
	comp=Z,10nm,0.8s						
KKAR	Karatay Array	20.75	41	P	P	05 40 00.1	+0.4
KKAR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KKAR	Karatay Array	20.75	41	P	P	05 40 00.1	+0.4
KKAR				IAmb	IAmb	05 40 02.1	
	comp=Z,10nm,0.8s						
KKAR	Karatay Array	20.75	41		P	05 40 00.0	+0.4
ABKAR	Akbulak array	21.41	15	P	P	05 40 06.6	-0.1
ABKAR	Akbulak array	21.41	15	P	P	05 40 06.0	-0.7
AKTO	Aktyubinsk	22.18	10	P	P	05 40 15.4	+0.4
	comp=Z,4.6nm,0.5s,baz=201,slow=11,SNR=14						
AKTO				LR	LR	05 49 28.1	
	comp=Z,66nm,19.6s,baz=248,slow=38						
KSH	Kashi	22.59	55	P	P	05 40 16.8	-2.8
KSH				pmax	pmax		
	comp=Z,3.0nm,0.5s						
KSH				pmax	pmax		
	comp=Z,160nm,6.4s						
AAK	Ala-Archa	22.93	47	P	P	05 40 24.9	+1.8
	comp=Z,6.2nm,0.9s,baz=213,slow=9.7,SNR=9.9						
AAK	Ala-Archa	22.93	47⇑	eP	P	05 40 24.8	+1.6
AAK				pmax	pmax		
	comp=Z,15nm,0.8s						
AAK	Ala-Archa	22.93	47	P	P	05 40 21.0	-2.2
AAK				IAmb	IAmb	05 40 31.8	
	comp=Z,6.7nm,0.9s						
VRH	Novokhopyorsk	23.72	344	eP	P	05 40 31.1	+0.2
VRH				pmax	pmax		
	comp=Z,20nm,0.6s						
BELG	Belogornoye	23.86	354⇑	eP	P	05 40 31.9	-0.2
BELG				pmax	pmax		
	comp=Z,2.0nm,1.0s						
VSR	Storozhevoye	24.42	340	eP	P	05 40 35.8	-1.6
VSR				pmax	pmax		
	comp=Z,10.0nm,1.2s						
LPSR	Galich'ya Gora	25.72	342	eP	P	05 40 49.7	+0.6
LPSR				pmax	pmax		
	comp=Z,20nm,1.0s						
MLR	Muntele Rosu	26.45	316	P	P	05 40 55.6	-0.4
	comp=Z,2.2nm,0.5s,baz=141,slow=18,SNR=2.5						
AKASG	Malin Array Be	27.83	328	P	P	05 41 07.3	-0.8
	comp=Z,2.0nm,0.7s,baz=130,slow=9.0,SNR=6.7						
AKASG	Malin Array Be	27.83	328	i P	P	05 41 09.6	+1.4
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.7s						
AKASG	Malin Array Be	27.83	328	P	P	05 41 07.1	-1.1
AKBB	Malin Array Si	27.83	328⇓	eP	P	05 41 09.8	+1.6
BRVK	Borovoye	27.84	24⇑	eP	P	05 41 08.8	+0.5
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BRVK	Borovoye	27.84	24	P	P	05 41 08.2	-0.1
BRVK				IAmb	IAmb	05 41 10.0	
	comp=Z,4.8nm,1.2s						
BVAR	Borovoye Array	27.85	24	P	P	05 41 08.3	-0.1
	comp=Z,2.7nm,0.8s,baz=299,slow=1.5,SNR=16						
BVAR				PcP	PcP	05 44 23.8	-0.2
	comp=Z,0.6nm,0.5s,baz=178,slow=7.0,SNR=3.9						
BURAR	Bucovina Array	27.99	320	P	P	05 41 07.9	-1.9
OBN	Obninsk	28.60	342	eP	P	05 41 17.2	+2.2
OBN				pmax	pmax		
	comp=Z,7.0nm,1.2s						
MAKZ	Makanchi	29.60	44	P	P	05 41 23.7	-0.3
MAKZ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MAKZ	Makanchi	29.60	44	P	P	05 41 23.7	-0.3
MAKZ				IAmb	IAmb	05 41 27.3	
	comp=Z,5.3nm,0.8s						
KURBB	Kurchatov Arra	29.70	35	P	P	05 41 25.6	+0.8
	comp=Z,2.8nm,0.8s,baz=235,slow=9.1,SNR=29						
MK31	Makanchi Array	29.79	44	P	P	05 41 25.9	+0.2
MK31				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MK31	Makanchi Array	29.79	44	P	P	05 41 25.9	+0.2
MK31				IAmb	IAmb	05 41 27.5	
	comp=Z,4.5nm,1.0s						
MKAR	Makanchi Array	29.79	44	P	P	05 41 26.2	+0.5
	comp=Z,4.9nm,0.9s,baz=235,slow=7.3,SNR=34						
MKAR				PcP	PcP	05 44 27.6	-1.4
	comp=Z,0.2nm,0.5s,baz=240,slow=4.4,SNR=3.2						
MKAR	Makanchi Array	29.79	44	P	P	05 41 25.9	+0.3
KURK	Kurchatov	29.80	35⇓	eP	P	05 41 26.0	+0.3
KURK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KURK	Kurchatov	29.80	35	P	P	05 41 25.5	-0.2
KURK				IAmb	IAmb	05 41 27.7	
	comp=Z,5.0nm,0.9s						
KIRV	Kirov	29.90	357⇑	eP	P	05 41 26.0	-0.5
KOLS	Kolonicke sedl	30.36	320	eP	P	05 41 32.7	+2.0
KOLS	Kolonicke sedl	30.36	320	eP	P	05 41 32.7	+2.0
CRVS	Cervenica-Dubn	30.80	319	eP	P	05 41 36.0	+1.4
CRVS	Cervenica-Dubn	30.80	319	eP	P	05 41 36.0	+1.4
PSZ	Piszkesteto	31.26	317	P	P	05 41 37.4	-1.4
PSZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
PSZ	Piszkesteto	31.26	317	P	P	05 41 37.4	-1.4
PSZ				IAmb	IAmb	05 41 41.1	
	comp=Z,3.0nm,0.8s						
LANS	Liptovska Anna	32.07	318	eP	P	05 41 46.9	+1.1
LANS	Liptovska Anna	32.07	318	eP	P	05 41 46.9	+1.1
WMQ	Urumqi	32.27	52	eP	P	05 41 49.1	+1.4
WMQ				pmax	pmax		
	comp=Z,10.0nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,160nm,4.7s						
WMQ				LR	LR		
	comp=N,280nm,29.1s						
WMQ				LR	LR		
	comp=E,2μm,29.1s						
WMQ				LR	LR		
	comp=Z,27nm,29.1s						
KMBO	Kilima Mbogo	32.83	208	LR	LR	05 56 48.4	
	comp=Z,76nm,18.4s,baz=314,slow=39						
KLMR	Klimovskoe	33.19	349	eP	P	05 41 54.4	-0.9
KLMR				pmax	pmax		
	comp=Z,13nm,1.2s						
KLMR	Klimovskoe	33.19	349	eP	P	05 41 54.5	-0.9
KLMR				AMP		05 41 55.4	
	comp=Z,13nm,1.2s						
KRLC	Kraliky	34.05	319	eP	P	05 42 05.5	+2.4
KRLC	Kraliky	34.05	319	eP	P	05 42 05.5	+2.4
DGZ	Jazzator, Alta	34.14	42⇓	eP	P	05 42 04.0	0.0
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
DPC	Dobruska-Polom	34.44	319	eP	P	05 42 08.5	+2.1
DPC	Dobruska-Polom	34.44	319	eP	P	05 42 08.5	+2.1
CHVC	Chvalec	34.69	319	eP	P	05 42 10.7	+2.1
ZAA0	Zalesovo Array	34.77	34	P	P	05 42 08.9	-0.3
ZAA0				IAmb	IAmb	05 42 10.4	
	comp=Z,7.0nm,0.9s						
ZALV	Zalesovo Beam	34.77	34	P	P	05 42 08.8	-0.4
	comp=Z,2.8nm,0.3s,baz=239,slow=8.4,SNR=22						
ZALV	Zalesovo Beam	34.77	34	i P	P	05 42 09.0	-0.3
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ZALV	Zalesovo Beam	34.77	34	P	P	05 42 08.9	-0.3
KBA	Koelnbreinsper	35.07	312	eP	P	05 42 14.3	+2.2
	comp=Z,1.8nm,0.5s						
GERES	GERESS Array B	35.42	315	P	P	05 42 16.0	+1.0
	comp=Z,0.8nm,0.8s,baz=103,slow=7.1,SNR=3.3						
GERES	GERESS Array B	35.42	315	P	P	05 42 16.0	+1.0
KHC	Kasperske Hory	35.60	316	eP	P	05 42 17.7	+1.2
KHC	Kasperske Hory	35.60	316	eP	P	05 42 17.7	+1.2
WTTA	Wattenberg	36.24	312	eP	P	05 42 23.9	+1.8
	comp=Z,2.1nm,0.4s						
SQTA	Sankt Quirin	36.51	312	eP	P	05 42 25.4	+1.0
	comp=Z,2.1nm,0.3s						
MOTA	Moosalm	36.61	312	eP	P	05 42 26.6	+1.3
	comp=Z,2.4nm,0.5s						
CLL	Collm	36.75	319	e(P)	P	05 42 27.0	+0.8
CLL	Collm	36.75	319	eP	P	05 42 29.0	+2.8
FETA	Feichten	36.77	311	eP	P	05 42 27.3	+0.6
	comp=Z,0.9nm,0.4s						
FIA1	FINESS Array S	36.95	340	P	P	05 42 26.5	-1.3
FINES	FINESS Array B	36.95	340	P	P	05 42 27.4	-0.3
	comp=Z,2.9nm,0.5s,baz=150,slow=8.9,SNR=18						
DAVA	Damuels	37.40	311	eP	P	05 42 32.1	+0.1
	comp=Z,5.5nm,0.6s						
GTA	Gaotai	40.68	62	P	P	05 43 00.6	+1.0
GTA				pP	sP	05 43 10.1	+3.6
GTA				sP	pP	05 43 13.6	+9.1
GTA				pmax	pmax		
	comp=Z,19nm,0.8s						
NC405	NORSAR Array S	41.95	332	P	P	05 43 08.7	-0.8
NB2	NORSAR Subarra	42.11	332	P	P	05 43 09.8	-1.1
	comp=Z,1.2nm,0.5s,baz=122,slow=8.6						
NOA	NORSAR Array B	42.11	332	P	P	05 43 10.1	-0.9
	comp=Z,1.2nm,0.8s,baz=107,slow=9.6,SNR=11						
ARCES	ARCESS Array B	43.59	347	P	P	05 43 22.6	-0.1
	comp=Z,3.1nm,0.8s,baz=131,slow=5.5,SNR=7.9						
CHTO	Chiang Mai	43.93	92	P	P	05 43 26.4	+0.2
CHTO				pmax	pmax		
	comp=Z,5.0nm,1.0s						
CHTO	Chiang Mai	43.93	92	P	P	05 43 26.4	+0.2
CHTO				IAmb	IAmb	05 43 27.9	
	comp=Z,4.7nm,1.0s						
LZH	Lanzhou	44.04	67	eP	P	05 43 27.3	+0.3
LZH				pP	pP	05 43 29.5	-2.5
LZH				sP	sP	05 43 31.4	-2.6
LZH				pmax	pmax		
	comp=Z,23nm,1.1s						
CMAR	Chiang Mai Arr	44.07	93	P	P	05 43 26.4	-0.8
	comp=Z,0.7nm,0.3s,baz=299,slow=6.1,SNR=5.4						
CMAR	Chiang Mai Arr	44.07	93	i P	P	05 43 29.5	+2.3
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CMAR	Chiang Mai Arr	44.07	93	P	P	05 43 26.9	-0.3
NRIK	Noril'sk	45.55	17	P	P	05 43 39.6	+1.2
	comp=Z,4.4nm,0.8s,baz=198,slow=4.6,SNR=6.2						
NRIK	Noril'sk	45.55	17	P	P	05 43 38.0	-0.4
NRIK				IAmb	IAmb	05 43 40.6	
	comp=Z,4.2nm,0.8s						
SONM	Songino Array	45.82	50	P	P	05 43 41.6	+0.6
	comp=Z,1.8nm,0.7s,baz=261,slow=8.7,SNR=13						
SONM	Songino Array	45.82	50	P	P	05 43 41.8	+0.8
SONM				pmax	pmax		
	comp=Z,1.0nm,0.8s						
SONM	Songino Array	45.82	50	P	P	05 43 41.8	+0.8
ULN	Ulaanbaatar	46.26	50⇑	eP	P	05 43 45.1	+0.6
ULN				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ULN	Ulaanbaatar	46.26	50	P	P	05 43 43.5	-1.0
ULN				IAmb	IAmb	05 43 45.6	
	comp=Z,5.4nm,1.1s						
MDT	Midelt	48.24	290	P	P	05 44 01.3	+1.3
	comp=Z,1.0nm,0.5s,baz=102,slow=23,SNR=4.6						
XAN	Xi'an	48.45	69	P	P	05 44 01.0	-0.6
XAN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
XAN	Xi'an	48.45	69	P	P	05 44 00.3	-1.3
XAN				pmax	pmax		
	comp=Z,7.0nm,1.2s						
XAN	Xi'an	48.45	69	P	P	05 44 00.3	-1.3
BTO	Baotou	48.47	60	eP	P	05 44 00.8	-0.9
TORD	Torodi Ar. Bea	49.03	262	P	P	05 44 06.0	-0.1
	comp=Z,4.0nm,0.7s,baz=55,slow=8.8,SNR=9.0						
HHC	Hu-ho-hao-te	49.61	59	eP	P	05 44 10.8	+0.3
HHC				pmax	pmax		
	comp=Z,6.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,200nm,7.6s						
BOD	Bodaibo	51.41	37	eP	P	05 44 23.4	-0.2
BOD				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KOWA	Kowa	53.44	267	P	P	05 44 39.3	0.0
DBIC	Dimbokro	57.76	259	P	P	05 45 10.5	+0.2
	comp=Z,4.2nm,0.6s,baz=32,slow=5.6,SNR=11						
DBIC	Dimbokro	57.76	259	P	P	05 45 10.2	-0.2
ZEA	Zeya	58.90	42	eP	P	05 45 22.1	+4.3
ZEA				e		05 45 30.7	
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.3s						
KLR	Kul'dur	62.45	47⇓	eP	P	05 45 41.3	-0.8
KLR				pmax	pmax		
	comp=Z,2.0nm,1.3s						
KSRS	Korea Array	62.72	60	P	P	05 45 43.1	-0.9
	comp=Z,2.3nm,0.6s,baz=283,slow=6.6,SNR=10						
SEY	Seymchan	69.39	29	P	P	05 46 27.3	+0.8
	comp=Z,3.0nm,0.6s,baz=256,slow=6.9,SNR=9.3						
IMAR	Indian Mountai	83.56	10	P	P	05 47 46.9	+0.2
ILAR	Eielson Array	85.67	8	P	P	05 47 56.9	-0.5
	comp=Z,0.7nm,0.8s,baz=333,slow=2.9,SNR=7.2						
BPAW	Bear Paw Mtn.	85.75	10	P	P	05 47 58.0	+0.1
YKA	Yellowknife Ar	88.46	354	P	P	05 48 11.2	+0.3
	comp=Z,0.8nm,0.8s,baz=15,slow=5.0,SNR=15						
ASAR	Alice Springs	94.52	114	P	P	05 48 38.6	-1.1
	comp=Z,0.2nm,0.3s,baz=305,slow=4.7,SNR=3.6						
VNA2	Neumayer--Watz	107.70	197	PKiKP	PKiKP	05 53 46.6	+1.4
VNA1	Neumayer--Stat	107.76	198	PKiKP	PKiKP	05 53 46.7	+1.4

IDC 19 05:51:33.0±9.8**, 4°.30S×145°.90E, h0^{km}, mb3.7**/3**, mb1 3.9**/4**, mb1mx3.5**/33**, mbtmp3.7**/4**, ML3.9**/1**, MS3.4**/2**, Ms1 3.4**/2**, ms1mx2.8**/39**, Error ellipse: s-maj=148.7km s-min=76.1km az=27.0, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	19.21	215	P	P	05 55 57.2	-1.6
	0.4nm,0.3s,baz=38,slow=11,SNR=25						
ASAR	Alice Springs	22.47	210	P	P	05 56 35.0	+0.8
	0.6nm,0.4s,baz=38,slow=11,SNR=5.8						
FITZ	Fitzroy Crossi	24.11	234	P	P	05 56 50.9	+0.2
	3.2nm,0.8s,baz=45,slow=10.0,SNR=8.0						
KAPI	Kappang	26.07	267	LR	LR	06 09 31.9	
	comp=Z,72nm,18.6s,baz=78,slow=41						
STKA	Stephens Creek	27.73	188	P	P	05 57 23.5	+0.1
	0.9nm,0.5s,baz=13,slow=14,SNR=3.5						
KLR	Kul'dur	54.71	349	LR	LR	06 23 02.5	
	comp=Z,46nm,20.2s,baz=44,slow=34						

WEL 19 06:00:05.1±1.1**, 38°S**±8°×**18°0W**±°**, h33^{km}, M3.4**/22**, ML3.6**/22**, MLv3.4**/22**, Error ellipse: s-maj=0.0km s-min=0.0km az=26.6, East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	1.32	262	P	Pn	06 00 27.1	-0.1
MXZ	Matakaoa Point	1.40	273	P	Pn	06 00 27.3	-1.0
MXZ				S	Sn	06 00 44.2	-1.4
PKGZ	Pakihiroa	1.59	260	P	Pn	06 00 30.5	-0.6
CNGZ	Carnagh Statio	1.69	240	P	Pn	06 00 33.3	+0.9
TWGZ	Tauwhareparae	1.73	251	P	Pn	06 00 33.4	+0.5
HAZ	Te Kaha	1.81	266	P	Pn	06 00 33.8	-0.2
HAZ				S	Sn	06 00 55.8	0.0
RUGZ	Raukumara Rang	1.92	260	P	Pn	06 00 35.2	-0.3
TKGZ	Te Karaka	1.92	245	P	Pn	06 00 35.8	+0.3
TKGZ				S	Sn	06 00 59.5	+0.9
RIGZ	Rimuhau	2.10	239	P	Pn	06 00 38.5	+0.4
RIGZ				S	Sn	06 01 04.4	+1.3
MWZ	Matawai	2.12	250	P	Pn	06 00 37.9	-0.4
PRGZ	Paritu Road	2.14	233	P	Pn	06 00 39.1	+0.5
MHGZ	Mahia Peninsul	2.27	228	P	Pn	06 00 40.4	0.0
KNZ	Kokohu	2.33	233	P	Pn	06 00 41.1	0.0
URZ	Urewera	2.41	254	P	Pn	06 00 42.7	+0.4
URZ				S	Sn	06 01 10.8	+0.1
SNGZ	Shannon Statio	2.43	241	P	Pn	06 00 42.7	+0.1
SNGZ				S	Sn	06 01 12.1	+0.9
RTZ	Ruatahuna	2.62	247	P	Pn	06 00 45.7	+0.5
RAHZ	Arahi	2.67	241	P	Pn	06 00 46.3	+0.5
MUGZ	Murupara	2.73	251	P	Pn	06 00 46.8	+0.2
MTHZ	Maungataniwha	2.81	244	P	Pn	06 00 48.1	+0.3
TARZ	Mount Tarawera	2.87	257	P	Pn	06 00 48.9	+0.2
ARHZ	Aropaoanui	2.90	235	P	Pn	06 00 50.1	+1.1
NMHZ	Naumai	2.94	239	P	Pn	06 00 50.3	+0.6
CKHZ	Cape Kidnapper	3.09	228	P	Pn	06 00 51.5	0.0
BKZ	Black Stump Fm	3.19	240	P	Pn	06 00 53.3	+0.2
MCHZ	McNeill Hill	3.19	235	P	Pn	06 00 53.4	+0.4
KAHZ	Kahuranaki	3.29	228	P	Pn	06 00 54.5	0.0
KWHZ	Kaweka Forest	3.36	237	P	Pn	06 00 55.3	-0.2
KRHZ	Kereru	3.52	234	P	Pn	06 00 57.2	-0.3
BHHZ	Black Hill Sta	3.64	238	P	Pn	06 00 59.1	-0.1
WPHZ	Waipukurau	3.72	228	P	Pn	06 01 00.2	-0.1
TMVZ	Te Maari	3.73	245	P	Pn	06 01 00.4	-0.1
ETVZ	East Tongariro	3.73	245	P	Pn	06 00 59.9	-0.7
OTVZ	Oturere	3.77	245	P	Pn	06 01 00.7	-0.5
PNHZ	Pukenui	3.78	232	P	Pn	06 01 00.4	-0.7
MKAZ	Moumakai	3.94	276	P	Pn	06 01 02.3	-1.0
DVHZ	Dannevirke	4.03	228	P	Pn	06 01 03.9	-0.7
HIZ	Hauiti	4.20	256	P	Pn	06 01 07.6	+0.7
BFZ	Birch Farm	4.25	223	P	Pn	06 01 05.6	-1.9
CTZ	Chatham Island	6.59	159	P	Pn	06 01 41.7	+2.0
CTZ				S	Sn	06 02 51.2	-2.4

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*UPP **19** 06:00:43.5±1.5, 66°.64N×13°.38E, h0^{km}, ML2.7, Suspected explosion*

*NAO **19** 06:00:43.4±0.7, 66°.75N×13°.42E, ML2.9*

*BER **19** 06:00:44.7±1.5, 66°.69N×13°.41E, h4^{km}±4^{km}, ML2.5, ML2.5(HEL), Fault plane solution: NP1:ϕ_s246.40000°, δ29.40000°, λ39.10000°., Confirmed Earthquake*

*HEL **19** 06:00:45.9±0.2, 66°.69N×13°.62E, h10^{km}, ML2.5, ML2.7(UPP), Confirmed Earthquake*

*IDC **19** 06:00:45.3±1.1, 66°.64N×13°.75E, h0^{km}, mb1 3.6/5, mb1mx3.2/60, mbtmp3.6/5, ML2.4/5, Error ellipse: s-maj=16.1km s-min=8.3km az=108.0*

ISC 19 06:00:44.3±0.8**, 66°.72N**±0°.02×**13°.45E**±0°.02**, h11**^{km}±5^{km}**, n105, σ1^{s}45**/173**, 6C-2D, Northern Norway**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NBB15	Halsa Church	0.06	62⇓	iP	Pg	06 00 46.3	-0.2
NBB15				AMPG		06 00 46.4	
	comp=Z,63μm,0.1s						
NBB15				eS	Sg	06 00 47.5	-0.6
NBB15				AMSG		06 00 47.6	
	comp=E,1457μm,0.1s						
NBB15				AMSG		06 00 47.6	
	comp=E,3035μm,0.1s						
KONS	Konsvik	0.25	211	Pg	Pg	06 00 49.0	-0.5
KONS				Lg	Lg	06 00 52.3	
KONS	Konsvik	0.25	211⇑	iP	Pg	06 00 49.0	-0.5
KONS				AMPG		06 00 49.2	
	comp=Z,5μm,0.1s						
KONS				eS	Sg	06 00 52.2	-0.8
KONS				AMSG		06 00 52.8	
	comp=E,10μm,0.2s						
KONS				IAML		06 00 52.8	
	comp=Z,1μm,0.3s						
KONS				AMSG		06 00 52.8	
	comp=Z,9μm,0.2s						
NBB40	Tonnes	0.27	221⇑	iP	Pn	06 00 56.0	+1.9
NBB40				AMPG		06 00 56.2	
	comp=Z,39μm,0.1s						
NBB40				eS	Sb	06 00 59.4	+3.8
NBB40				IAML		06 00 59.9	
	comp=Z,648nm,0.3s						
NBB40				AMSG		06 01 00.1	
	comp=E,43μm,0.1s						
NBB40				AMSG		06 01 00.1	
	comp=E,50μm,0.1s						
NBB30	Finnes	0.28	24⇑	eP	Pg	06 00 50.4	+0.4
NBB30				AMPG		06 00 51.1	
	comp=Z,5μm,0.1s						
NBB30				eS	Sg	06 00 54.6	+0.7
NBB30				AMSG		06 00 55.2	
	comp=E,18μm,0.1s						
NBB30				AMSG		06 00 56.2	
	comp=E,22μm,0.1s						
NBB30				IAML		06 00 57.1	
	comp=Z,283nm,0.3s						
NBB05	Inndyr	0.40	35⇑	iP	Pg	06 00 52.4	+0.2
NBB05				AMPG		06 00 52.8	
	comp=Z,24μm,0.1s						
NBB05	Inndyr	0.40	35	eS	Sg	06 00 58.3	+0.9
NBB05				AMSG		06 00 59.6	
	comp=E,172μm,0.1s						
NBB05	Inndyr	0.40	35	IAML		06 00 59.8	
	comp=Z,1μm,0.1s						
NBB05				AMSG		06 01 00.3	
	comp=Z,214μm,0.1s						
NBB14	Nordeng Farm	0.42	187	eP	Pg	06 00 51.6	-0.9
NBB14				eS	Sg	06 00 56.5	-1.5
NBB14				IAML		06 00 57.0	
	comp=Z,186nm,0.2s						
STOK	Stokkvaagen	0.42	204	Pg	Pg	06 00 52.0	-0.6
STOK				Lg	Lg	06 00 57.3	
STOK	Stokkvaagen	0.42	204	eP	Pg	06 00 51.9	-0.6
STOK				eS	Sg	06 00 57.2	-0.9
NBB28	Valnes	0.62	39⇑	e	Pg	06 00 56.3	-0.1
NBB28				eP	Pg	06 00 56.3	-0.1
NBB28				AMPG		06 00 56.4	
	comp=Z,3μm,0.1s						
NBB28	Valnes	0.62	39	eS	Sg	06 01 04.8	+0.2
NBB28				IAML		06 01 05.9	
	comp=Z,279nm,0.4s						
NBB28				AMSG		06 01 06.5	
	comp=E,27μm,0.1s						
NBB28				AMSG		06 01 06.7	
	comp=E,32μm,0.1s						
NBB03	Karbol	0.72	56	eP	Pg	06 00 57.4	-0.8
NBB03	Karbol	0.72	56	eS	Sg	06 01 07.1	-0.4
NBB03				IAML		06 01 08.7	
	comp=Z,239nm,0.2s						
NBB29	Rokland skole	0.80	69	eP	Pg	06 00 58.8	-0.8
NBB29				AMPG		06 01 00.1	

	comp=Z,6µm,0.1s						
NBB29	Rokland skole	0.80	69	eS	Sb	06 01 10.9	+0.1
NBB29				AMSG		06 01 13.4	
	comp=E,89µm,0.1s						
NBB29				AMSG		06 01 13.8	
	comp=E,70µm,0.1s						
NBB29				IAML		06 01 26.8	
	comp=Z,888nm,0.4s						
NBB08	Skaug oppvekst	0.82	34	eP	Pg	06 00 59.6	-0.5
NBB08	Skaug oppvekst	0.82	34	AMPG		06 01 00.7	
	comp=Z,6µm,0.1s						
NBB08	Skaug oppvekst	0.82	34	eS	Sb	06 01 11.6	0.0
NBB08				IAML		06 01 14.7	
	comp=Z,308nm,0.4s						
NBB08				AMSG		06 01 15.6	
	comp=E,37µm,0.1s						
NBB08				AMSG		06 01 15.7	
	comp=E,33µm,0.1s						
N2RO	R¸st	0.96	328	eP	Pg	06 01 02.0	-0.7
N2RO				AMPG		06 01 03.4	
	comp=Z,343nm,0.1s						
N2RO				eS	Sg	06 01 15.7	+0.5
N2RO				IAML		06 01 17.5	
	comp=Z,84nm,0.2s						
N2RO				AMSG		06 01 18.2	
	comp=E,2µm,0.1s						
N2RO				AMSG		06 01 18.3	
	comp=E,2µm,0.1s						
FAUS	Fauske	0.98	46⇑	eP	Pg	06 01 02.1	-1.1
FAUS				AMPG		06 01 02.7	
	comp=Z,605nm,0.1s						
FAUS				eSg	Sb	06 01 17.1	+0.8
FAUS				IAML		06 01 17.8	
	comp=Z,112nm,0.1s						
FAUS				AMSG		06 01 17.9	
	comp=Z,4µm,0.1s						
FAUS				AMSG		06 01 18.8	
	comp=E,6µm,0.1s						
N2VA	Vr¸y	1.00	343	eP	Pg	06 01 03.4	-0.1
N2VA				AMPG		06 01 04.9	
	comp=Z,139nm,0.1s						
N2VA				eS	Sg	06 01 16.8	+0.4
N2VA				AMSG		06 01 19.5	
	comp=Z,2µm,0.1s						
N2VA				AMSG		06 01 19.6	
	comp=E,2µm,0.1s						
N2ST	Straumen	1.06	52	eP	Pb	06 01 03.3	-1.2
N2ST				AMPG		06 01 04.3	
	comp=Z,3µm,0.1s						
N2ST				eS	Sb	06 01 18.8	+0.4
N2ST				AMSG		06 01 20.8	
	comp=E,22µm,0.1s						
N2ST				AMSG		06 01 21.2	
	comp=E,19µm,0.1s						
N2ST				IAML		06 01 23.1	
	comp=Z,242nm,0.2s						
N2TV	T¥rnvik	1.08	37	eP	Pb	06 01 03.6	-1.4
N2TV				AMPG		06 01 05.0	
	comp=Z,315nm,0.1s						
N2TV				eS	Sn	06 01 20.5	+0.3
N2TV				AMSG		06 01 22.2	
	comp=Z,8µm,0.1s						
N2TV				AMSG		06 01 22.9	
	comp=E,6µm,0.1s						
N2TV				IAML		06 01 26.3	
	comp=Z,142nm,0.3s						
N2SV	S¸rv¥gen	1.19	352	eP	Pn	06 01 05.8	-1.1
N2SV				AMPG		06 01 06.7	
	comp=Z,390nm,0.1s						
N2SV				eS	Sb	06 01 21.4	-0.9
N2SV				AMSG		06 01 25.1	
	comp=Z,1µm,0.2s						
N2SV				AMSG		06 01 25.2	
	comp=E,1µm,0.1s						
N2SV				IAML		06 01 26.2	
	comp=Z,56nm,0.3s						
N2NF	Nordfold	1.26	33⇓	eP	Pn	06 01 07.7	-0.1
N2NF				eS	Sg	06 01 25.0	+0.3
N2NF				IAML		06 01 29.0	
	comp=Z,98nm,0.2s						
LOF	Lofoten	1.42	1	Pg	Pn	06 01 09.0	-1.0
LOF				Lg	Lg	06 01 27.4	
LOF	Lofoten	1.42	1	eP	Pn	06 01 08.9	-1.1
LOF				AMPG		06 01 09.7	
	comp=Z,117nm,0.1s						
LOF				eS	Sn	06 01 27.1	-1.6
LOF				AMSG		06 01 30.2	
	comp=E,371nm,0.1s						
LOF				AMSG		06 01 30.3	
	comp=E,483nm,0.1s						
LOF				IAML		06 01 33.0	
	comp=Z,59nm,0.3s						
N2IH	Innhavet	1.58	36	eP	Pb	06 01 13.4	-0.2
N2IH				AMPG		06 01 16.1	
	comp=Z,573nm,0.1s						
N2IH				eSg	Sg	06 01 35.4	+0.2
N2IH				AMSG		06 01 37.8	
	comp=E,2µm,0.1s						
N2IH				IAML		06 01 38.6	
	comp=Z,190nm,0.3s						
N2IH				AMSG		06 01 38.6	
	comp=Z,3µm,0.2s						
N2HS	Hamsund	1.61	29	eP	Pb	06 01 13.6	-0.3
N2HS				AMPG		06 01 16.0	
	comp=Z,692nm,0.1s						
N2HS				eSg	Sg	06 01 36.4	+0.5
N2HS				IAML		06 01 38.4	
	comp=Z,162nm,0.3s						
N2HS				AMSG		06 01 39.1	
	comp=E,4µm,0.1s						
N2HS				AMSG		06 01 39.6	
	comp=E,8µm,0.1s						
N2VI	Vinje	1.64	10	AMPG		06 01 16.1	
	comp=Z,473nm,0.1s						
N2VI				eS	Sn	06 01 32.8	-1.3
N2VI				AMSG		06 01 33.5	
	comp=E,916nm,0.1s						
N2VI				AMSG		06 01 33.5	
	comp=E,643nm,0.0s						
N2VI				IAML		06 01 39.5	
	comp=Z,47nm,0.4s						
N2DI	Digermulen	1.71	20	eP	Pn	06 01 14.1	+0.1
N2DI				eS	Sn	06 01 36.6	+0.8
N2DI				IAML		06 01 45.0	
	comp=Z,54nm,0.6s						
N2LO	L¸dingen	1.95	28	eP	Pb	06 01 19.0	-0.7
N2LO				eP	Pn	06 01 19.4	+2.2
N2LO				eSg	Sg	06 01 46.8	0.0
N2LO				IAML		06 01 49.0	
	comp=Z,60nm,0.4s						
SALU	Saltoluokta	2.09	69	P	Pn	06 01 20.8	+1.5
SALU				S	Sb	06 01 49.5	+1.2
SALU	Saltoluokta	2.09	69	P	Pn	06 01 20.8	+1.5
SALU				S	Sb	06 01 49.5	+1.2
SALU	Saltoluokta	2.09	69	eP	Pn	06 01 20.8	+1.5
SALU				eSG	Sb	06 01 49.5	+1.2
N2SO	Sortland	2.15	20	eP	Pb	06 01 22.4	-0.8
N2SO				eSg	Sg	06 01 52.8	-0.4
NSS	Namsos	2.28	196	ePg	Pn	06 01 23.7	+1.9
NSS				AMPG		06 01 25.9	
	comp=Z,80nm,0.2s						
NSS				eSg	Sb	06 01 54.0	+0.5
NSS				IAML		06 01 56.0	
	comp=Z,31nm,0.4s						
NSS				AMSG		06 01 57.4	
	comp=Z,255nm,0.3s						
NSS				AMSG		06 01 57.5	
	comp=E,286nm,0.2s						
NSS	Namsos	2.28	196	eP	Pn	06 01 23.6	+1.9
NSS				eS	Sb	06 01 52.5	-1.0
N2HA	Harstad	2.39	28	eP	Pn	06 01 25.4	+2.1
N2HA				eS	Sn	06 01 54.4	+1.8
NIKU	Nikkaluokta	2.46	59	P	Pn	06 01 25.5	+1.2
NIKU				S	Sb	06 01 57.3	-1.3
NIKU	Nikkaluokta	2.46	59	P	Pn	06 01 25.5	+1.2
NIKU				S	Sb	06 01 57.3	-1.3
NIKU	Nikkaluokta	2.46	59	eP	Pn	06 01 25.5	+1.2
NIKU				eSB	Sb	06 01 57.3	-1.3
RATU	Laukkuluspa	2.63	62	P	Pn	06 01 28.5	+1.8
RATU				S	Sb	06 02 02.0	-1.8
RATU	Laukkuluspa	2.63	62	P	Pn	06 01 28.5	+1.8
RATU				S	Sb	06 02 02.0	-1.8
RATU	Laukkuluspa	2.63	62	eP	Pn	06 01 28.5	+1.8
RATU				eSB	Sb	06 02 02.0	-1.8
DUNU	Dundret	2.84	78	P	Pn	06 01 30.8	+1.3
DUNU				S	Sn	06 02 05.4	+1.8
DUNU	Dundret	2.84	78	P	Pn	06 01 30.8	+1.3
DUNU				S	Sn	06 02 05.4	+1.8
DUNU	Dundret	2.84	78	eP	Pn	06 01 30.8	+1.3
DUNU				eS	Sn	06 02 05.4	+1.8
KUA	Kurravaara	2.94	62	P	Pn	06 01 31.8	+0.8
KUA				S	Sn	06 02 08.0	+1.7
KUA	Kurravaara	2.94	62	P	Pn	06 01 31.8	+0.8
KUA				S	Sn	06 02 08.0	+1.7
KUA	Kurravaara	2.94	62	eP	Pn	06 01 31.8	+0.8
KUA				eS	Sn	06 02 08.0	+1.7
LILU	Lilltraesk	2.98	116	P	Pn	06 01 32.3	+0.8
LILU				S	Sn	06 02 08.7	+1.5
LILU	Lilltraesk	2.98	116	P	Pn	06 01 32.3	+0.8
LILU				S	Sn	06 02 08.7	+1.5
LILU	Lilltraesk	2.98	116	eP	Pn	06 01 32.3	+0.8
LILU				eS	Sn	06 02 08.7	+1.5
KOVU	Salmi	3.00	57	P	Pn	06 01 33.6	+2.0
KOVU	Salmi	3.00	57	P	Pn	06 01 33.6	+2.0
KOVU	Salmi	3.00	57	eP	Pn	06 01 33.6	+2.0
HARU	Harads	3.08	97	P	Pn	06 01 33.3	+0.5
HARU				S	Sn	06 02 10.8	+1.4
HARU	Harads	3.08	97	P	Pn	06 01 33.3	+0.5
HARU				S	Sn	06 02 10.8	+1.4
HARU	Harads	3.08	97	eP	Pn	06 01 33.3	+0.5
HARU				eS	Sn	06 02 10.8	+1.4
NOD	Norderasen	3.34	169	eP	Pn	06 01 37.9	+1.5
NOD				AMPG		06 01 38.2	
	comp=Z,503nm,0.2s						
NOD				eSg	Sb	06 02 27.2	+3.2
NOD				AMSG		06 02 30.8	
	comp=E,4µm,0.3s						
NOD				AMSG		06 02 31.2	
	comp=E,4µm,0.3s						
SVAU	Svanoeiden	3.38	128	P	Pn	06 01 37.0	0.0
SVAU				S	Sn	06 02 17.4	+0.4
SVAU	Svanoeiden	3.38	128	P	Pn	06 01 37.0	0.0
SVAU				S	Sn	06 02 17.4	+0.4
SVAU	Svanoeiden	3.38	128	eP	Pn	06 01 37.0	0.0
SVAU				eS	Sn	06 02 17.4	+0.4
TRO	Tromso	3.57	32	ePg	Pb	06 01 49.8	+2.4
TRO				AMPG		06 01 51.4	
	comp=Z,68nm,0.1s						
TRO				eS	Sn	06 02 18.8	-2.9
TRO				AMSG		06 02 25.1	
	comp=E,82nm,0.2s						
TRO				AMSG		06 02 25.5	
	comp=E,100nm,0.1s						
TRO				IAML		06 02 47.1	
	comp=Z,11nm,0.6s						
KIF	Kilpisjarvi	3.61	47	Pn	Pn	06 01 41.3	+1.2
KIF				Pg	Pb	06 01 50.5	+2.4
KIF				Lg	Lg	06 02 35.8	
KIF	Kilpisjarvi	3.61	47	eP	Pn	06 01 42.0	+2.0
KIF				eS	Sn	06 02 23.4	+0.8
KIF				MSG		06 02 40.0	
	comp=Z,13nm,0.2s						
KIF				AMSG		06 02 43.4	
	comp=E,2µm,0.1s						
KIF				AMSG		06 02 44.0	
	comp=E,1µm,0.2s						
KIF	Kilpisjarvi	3.61	47	eP	Pn	06 01 42.0	+2.0
KIF				eS	Sn	06 02 23.4	+0.8
KIF				MSG		06 02 40.0	
	comp=Z,13nm,0.2s						
PAJU	Pajala	3.83	81	eP	Pn	06 01 44.4	+1.3
PAJU	Pajala	3.83	81	eP	Pn	06 01 44.4	+1.3
JETT	Jettan, Norway	3.86	39	eP	Pn	06 01 45.0	+1.5
BURU	Burvik	3.92	119	eP	Pn	06 01 45.4	+1.1
BURU				eS	Sn	06 02 28.8	-1.5
BURU	Burvik	3.92	119	eP	Pn	06 01 45.4	+1.1
BURU				eS	Sn	06 02 28.8	-1.5
KALU	Kalix	4.09	98	eP	Pn	06 01 46.9	+0.2
KALU				eS	Sn	06 02 33.4	-1.1
KALU	Kalix	4.09	98	eP	Pn	06 01 46.9	+0.2
KALU				eS	Sn	06 02 33.4	-1.1
KTK1	Kautokeino	4.36	54	eP	Pn	06 01 51.7	+1.3
KTK1				eS	Sn	06 02 41.2	+0.1
KTK1	Kautokeino	4.36	54	eP	Pn	06 01 51.1	+0.7
KTK1				eS	Sn	06 02 41.0	-0.1
TOF	Tornio	4.42	93	MSG		06 02 43.9	
	comp=Z,8.9nm,0.2s						
TOF	Tornio	4.42	93	MSG		06 02 43.9	
	comp=Z,8.9nm,0.2s						
HEMU	Hemsoen	4.51	152	eP	Pn	06 01 53.4	+1.0
HEMU				eS	Sn	06 02 44.2	-0.5
HEMU	Hemsoen	4.51	152	eP	Pn	06 01 53.4	+1.0
HEMU				eS	Sn	06 02 44.2	-0.5
OBF0	Syolatti, Pyha	5.00	111	MSG		06 02 57.3	
	comp=Z,7.2nm,0.1s						
OBF0	Syolatti, Pyha	5.00	111	MSG		06 02 57.3	
	comp=Z,7.2nm,0.1s						
DOMB	Dombas	5.06	204	eP	Pn	06 02 01.2	+1.1
DOMB				eS	Sn	06 02 53.6	-4.8
DOMB				IAML		06 03 23.6	
	comp=Z,7.8nm,0.6s						
ARCES	ARCESS Array B	5.32	52	Pn	Pn	06 02 04.3	+0.7
	baz=241,slow=14,SNR=18						
ARCES				Pg	Pb	06 02 19.5	+2.4
	baz=230,slow=14,SNR=9.3						
ARCES				Sn	Sn	06 03 01.4	-3.4
	baz=238,slow=22,SNR=10						
ARCES				Lg	Lg	06 03 27.8	
	baz=239,slow=25,SNR=6.7						
ARA0	ARCESS Array S	5.32	52	Pn	Pn	06 02 03.3	-0.3
	baz=235,slow=14						
ARA0				Sn	Sn	06 03 01.8	-2.9
	baz=237,slow=22						
ARA0				Lg	Lg	06 03 28.7	
ARA0	ARCESS Array S	5.32	52	eP	Pn	06 02 04.3	+0.8
ARA0				eS	Sn	06 03 02.9	-1.9
OUL	Oulu	5.36	102	eP	Pn	06 02 04.4	+0.4
OUL				eS	Sn	06 03 03.1	-2.5
OUL	Oulu	5.36	102	eP	Pn	06 02 04.4	+0.4
OUL				eS	Sn	06 03 03.1	-2.5
VAF	Ylistaro	5.39	129	MSG		06 03 09.4	
	comp=Z,4.8nm,0.1s						
VAF	Ylistaro	5.39	129	MSG		06 03 09.4	
	comp=Z,4.8nm,0.1s						
HAMF	Hammerfest	5.43	39	eS	Sn	06 03 06.3	-1.0
NOA	NORSAR Array B	5.78	191	Pn	Pn	06 02 10.0	+0.1
	comp=Z,0.0nm,0.3s,baz=2.2,slow=13,SNR=6.5						
NOA				Lg	Lg	06 03 40.6	
	comp=Z,0.1nm,0.3s,baz=299,slow=20,SNR=2.8						
NC602	NORSAR Array S	6.06	189	eP	Pn	06 02 14.6	+0.8
NRA0	NORESS Array S	6.06	189	Pn	Pn	06 02 14.2	+0.5
	baz=4.0,slow=14						
NRA0				Sn	Sn	06 03 22.2	-0.8
	baz=18,slow=28						
NRA0				Lg	Lg	06 03 50.9	
	baz=4.9,slow=37						
HFS	Hagfors	6.61	179	Pn	Pn	06 02 21.8	+0.6
	comp=Z,0.2nm,0.3s,baz=5.9,slow=15,SNR=6.9						
HFS				Sn	Sn	06 03 33.6	-2.9
	comp=Z,0.4nm,0.3s,baz=174,slow=40,SNR=2.3						
HFS				Lg	Lg	06 04 09.2	
	comp=Z,0.9nm,0.3s,baz=0.9,slow=30,SNR=6.7						
HFS	Hagfors	6.61	179	Pn	Pn	06 02 21.7	+0.4
	baz=354,slow=12						
HFS				Sn	Sn	06 03 34.8	-1.7
	baz=5.2,slow=22						
HFS				Lg	Lg	06 04 08.8	
	baz=356,slow=28						
NRTU	Norrtaelje	7.44	159	eP	Pn	06 02 32.1	-0.6
NRTU				eS	Sn	06 03 54.3	-2.5
NRTU	Norrtaelje	7.44	159	eP	Pn	06 02 32.1	-0.6
NRTU				eS	Sn	06 03 54.3	-2.5
FIA0	FINESS Array S	7.64	128	Pn	Pn	06 02 35.0	-0.5
	baz=324,slow=14						
FIA0				Sn	Sn	06 03 58.8	-3.1
	baz=330,slow=22						
FIA0				Lg	Lg	06 04 40.3	
	baz=324,slow=28						
FINES	FINESS Array B	7.64	128	Pn	Pn	06 02 34.9	-0.5
	comp=Z,0.2nm,0.3s,baz=316,slow=12,SNR=7.3						
FINES				Sn	Sn	06 03 58.3	-3.6
	comp=Z,0.4nm,0.3s,baz=330,slow=22,SNR=2.1						
FINES				Lg	Lg	06 04 40.0	
	comp=Z,1.1nm,0.3s,baz=325,slow=28,SNR=7.7						
APA0	Apatity Array	7.65	74	Pn	Pn	06 02 36.8	+1.3
	baz=266,slow=11						
APA0				Sn	Sn	06 03 58.0	-4.0
	baz=270,slow=22						
SPITS	Spitsbergen Ar	11.56	3	Pn	Pn	06 03 29.3	+0.4
	baz=173,slow=13,SNR=1.9						

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*IDC **19** 06:03:22.6±1.0, 4°.74S×102°.04E, h0^{km}, mb4.4/19,*
mb1 4.4/20, mb1mx4.2/55, mbtmp4.4/20, MS3.1/2,
Ms1 3.2/2, ms1mx2.7/39, Error ellipse: s-maj=35.3km
s-min=12.7km az=56.0
*NEIC **19** 06:03:25.0±1.7, 4°.93S±0°.07×101°.91E±0°.07, h21^{km}±5^{km},*
mb4.5/20, Error ellipse: s-maj=10.5km s-min=9.6km
az=207.0
*BJI **19** 06:03:26.2±0.0, 4°.90S×101°.90E, h36^{km}, mB5.1/18,*
mb4.4/34, Ms4.6/2, Ms7 4.2/1
*DJA **19** 06:03:26.9±0.4, 5°S±3°×10°2E±°, h42^{km}±15^{km}, M4.6/17,*
mb4.7/6, mB5.2/2, MLv4.6/17, Mw(mB)4.5/2
ISC 19 06:03:27.9±0.6**, 4°.81S**±0°.08×**101°.93E**±0°.07**, h36^{km}, n86,**
σ1^{s}**41**/86**, mb4.4**/32**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNAI	Manna	1.12	66	Pn	Pn	06 03 46.3	-0.7
MNAI				Sn	Sn	06 04 02.0	+0.7
MNAI	Manna	1.12	66	P	Pn	06 03 47.2	+0.1
MASI	Maura Aman, Be	1.69	11	P	Pn	06 03 57.4	+2.5
LHSI	Lahat	1.87	58	P	Pn	06 03 59.3	+1.9
LWLI	Liwa	2.14	96	P	Pn	06 04 02.3	+1.2
KASI	Kota Agung	2.66	106	P	Pn	06 04 08.1	-0.1
KLSI		2.80	88	P	Pn	06 04 10.9	+0.8
KLSI				S	Sn	06 04 43.2	+0.5
BLSI	Bandar Lampung	3.35	100	P	Pn	06 04 20.2	+2.4
PMBI	Palembang	3.40	57	Pn	Pn	06 04 17.8	-0.6
JMBI	JAMBI	3.59	29	P	Pn	06 04 23.5	+2.4
SDSI	Sungai Dareh	3.89	353	P	Pn	06 04 27.0	+1.9
PDSI	Padang	4.14	339	P	Pn	06 04 29.2	+0.6
SISI	Saibi	4.47	321	P	Pn	06 04 33.9	+0.7
DSRI	Dabo	5.06	32	P	Pn	06 04 43.7	+2.5
	0.2nm38nm,0.9s						
BKNI	Bangkinang	5.18	350	Pn	Pn	06 04 42.9	0.0
LEM	Lembang	6.01	110	Pn	Pn	06 04 56.2	+1.9
	20nm,0.3s,baz=296,slow=23,SNR=1.4						
LEM				Sn	Sn	06 06 07.0	+5.0
	18nm,0.3s,baz=324,slow=23,SNR=1.2						
LEM				LR	LR	06 07 46.9	
	comp=Z,209nm,20.8s,baz=208,slow=45						
MNSI	Mandailing Nat	6.04	337	P	Pn	06 04 55.7	+0.9
	0.3nm1µm31nm,0.4s						
CISI	Cisompet, Garu	6.46	115	Pn	Pn	06 04 59.9	-0.6
CISI	Cisompet, Garu	6.46	115	P	Pn	06 05 00.1	-0.4
	0.8nm3µm101nm,0.6s						
XMIS	Christmas Isla	6.73	147	Pn	Pn	06 04 57.8	-6.5
GSI	Gunungsitoli	7.47	324	Pn	Pn	06 05 14.4	0.0
GSI	Gunungsitoli	7.47	324	P	Pn	06 05 13.9	-0.5
	0.3nm37nm,0.8s						
PSI	Prapat	8.14	338	Pn	Pn	06 05 19.5	-4.1
	baz=360,slow=22,SNR=1.5						
PSI				Sn	Sn	06 06 53.7	-0.7
	0.3nm,0.3s,baz=360,slow=18,SNR=1.2						
UGM	Wanagama	9.08	110	Pn	Pn	06 05 35.7	-0.8
MLSI	Meulaboh, Aceh	10.57	328	P	Pn	06 05 57.1	+0.2
	72nm,1.0s						
JAGI	Jajag, Banyuwa	12.68	107	Pn	Pn	06 06 23.1	-2.6
BATI	Baumata	22.20	105	P	P	06 08 20.6	-0.8
	28nm,0.4s,baz=247,slow=4.4,SNR=1.9						
CMAR	Chiang Mai Arr	23.31	353	P	P	06 08 32.6	-0.2
	1.8nm,0.4s,baz=178,slow=8.5,SNR=8.8						
CMAR				LR	LR	06 18 22.3	
	comp=Z,35nm,20.1s,baz=190,slow=39						
SLVN	Son La	26.06	4	P	P	06 08 58.1	0.0
SLVN				IAmb	IAmb	06 09 16.6	
	comp=Z,10nm,1.3s						
FITZ	Fitzroy Crossi	26.68	122	P	P	06 09 03.0	-0.8
	comp=Z,5.0nm,0.8s,baz=334,slow=8.2,SNR=9.4						
FITZ	Fitzroy Crossi	26.68	122	P	P	06 09 03.2	-0.6
FITZ				IAmb	IAmb	06 09 05.8	
	comp=Z,8.8nm,1.2s						
H08S2	Diego Garcia H	29.39	263	T	T	06 39 58.0	
	baz=93,slow=74						
H08S3	Diego Garcia H	29.40	263	T	T	06 40 01.4	
	baz=93,slow=74						
H08S1	Diego Carcia H	29.41	263	T	T	06 40 04.1	
	baz=93						
SHL	Shillong	31.73	343	P	P	06 09 48.5	-0.3
SHL				IAmb	IAmb	06 09 49.1	
	comp=Z,6.9nm,0.6s						
H01W3	Cape Leeuwin H	31.99	161	T	T	06 43 42.9	
	baz=334,slow=74						
H01W2	Cape Leeuwin H	32.00	161	T	T	06 43 37.9	
	baz=334,slow=74						
H01W1	Cape Leeuwin H	32.00	161	T	T	06 43 43.5	
	baz=334						
WB0	Warramunga Arr	34.93	118	P	P	06 10 15.4	-1.2
WRA	Warramunga Arr	34.95	118	P	P	06 10 15.4	-1.3
	comp=Z,0.8nm,0.4s,baz=306,slow=10,SNR=17						
WRA				PcP	PcP	06 12 48.5	-0.4
	comp=Z,2.1nm,1.2s,baz=302,slow=2.0,SNR=2.5						
WRA	Warramunga Arr	34.95	118	P	P	06 10 14.1	-2.6
WB2	Warramunga Arr	34.96	118	P	P	06 10 14.9	-1.9
WB2				IAmb	IAmb	06 10 22.7	
	comp=Z,15nm,1.3s						
WR0	Warramunga Arr	35.13	118	P	P	06 10 17.4	-0.9
ASAR	Alice Springs	36.07	124	P	P	06 10 25.9	-0.5
	comp=Z,1.2nm,0.5s,baz=296,slow=7.6,SNR=17						
ASAR				PcP	PcP	06 12 52.1	0.0
	comp=Z,0.5nm,0.5s,baz=267,slow=1.9,SNR=3.5						
ASAR	Alice Springs	36.07	124	P	P	06 10 25.5	-0.9
AS31	Alice Springs	36.07	124	P	P	06 10 26.2	-0.1
AS31				IAmb	IAmb	06 10 36.1	
	comp=Z,1.7nm,0.3s						
XAN	Xi'an	39.20	9	P	P	06 11 01.3	+8.6
XAN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
XAN				pmax	pmax		
	comp=Z,170nm,4.9s						
NJ2	Nanjing	40.05	23	eP	P	06 11 01.3	+1.6
NJ2				pmax	pmax		
	comp=Z,3.0nm,0.5s						
LZH	Lanzhou	40.73	2	eP	P	06 11 10.0	+4.6
LZH				pmax	pmax		
	comp=Z,12nm,1.3s						
STKA	Stephens Creek	45.86	131	P	P	06 11 46.8	-0.1
	comp=Z,2.3nm,0.5s,baz=308,slow=7.8,SNR=5.1						
HHC	Hu-ho-hao-te	46.29	10	eP	P	06 11 52.0	+1.8
HHC				pmax	pmax		
	comp=Z,4.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,180nm,7.6s						
NIL	Nilore	46.90	327	P	P	06 11 55.2	+0.3
NIL				IAmb	IAmb	06 12 10.9	
	comp=Z,8.6nm,1.2s						
KSRS	Korea Array	48.52	28	P	P	06 12 05.7	-1.7
	comp=Z,1.0nm,0.6s,baz=225,slow=7.8,SNR=7.4						
WMQ	Urumqi	50.09	347	eP	P	06 12 20.8	+1.5
KSH	Kashi	50.19	334	P	P	06 12 20.0	-0.3
KSH				PP	PP	06 14 16.3	+0.4
KSH				S	S	06 19 31.3	+1.3
KSH				pmax	pmax		
	comp=Z,5.0nm,0.5s						
JSG	Sagara	52.05	38	P	P	06 12 31.3	-2.8
SONM	Songino Array	52.57	4	P	P	06 12 38.6	+0.6
	comp=Z,8.4nm,0.6s,baz=184,slow=9.6,SNR=49						
SONM	Songino Array	52.57	4	P	P	06 12 38.4	+0.4
ULN	Ulaanbaatar	52.65	4	P	P	06 12 38.0	-0.5
ULN				IAmb	IAmb	06 12 39.8	
	comp=Z,5.8nm,1.0s						
MJAR	Matsushiro Arr	53.31	36	P	P	06 12 41.9	-1.6
	comp=Z,2.0nm,0.6s,baz=220,slow=7.5,SNR=2.8						
MK31	Makanchi Array	54.25	343	P	P	06 12 49.7	-0.5
MKAR	Makanchi Array	54.25	343	P	P	06 12 50.1	-0.1
	comp=Z,2.3nm,0.5s,baz=151,slow=9.1,SNR=59						
MKAR	Makanchi Array	54.25	343	P	P	06 12 49.8	-0.4
MAKZ	Makanchi	54.35	343	P	P	06 12 49.9	-1.1
USA0B	Ussuriysk Arra	55.78	26	P	P	06 13 00.4	-0.9
USRK	Ussuriysk Ar.	55.78	26	P	P	06 13 00.8	-0.4
	comp=Z,7.1nm,0.7s,baz=221,slow=6.4,SNR=18						
USRK	Ussuriysk Ar.	55.78	26	P	P	06 13 00.5	-0.7
KURBB	Kurchatov Arra	58.78	343	P	P	06 13 22.1	-0.2
	comp=Z,1.1nm,0.7s,baz=158,slow=6.6,SNR=7.6						
KLR	Kul'dur	59.75	22	P	P	06 13 28.4	-0.7
	comp=Z,4.4nm,0.7s,baz=230,slow=6.4,SNR=19						
ZAA0	Zalesovo Array	60.28	348	P	P	06 13 32.4	-0.2
ZAA0				IAmb	IAmb	06 13 33.1	
	comp=Z,3.6nm,0.6s						
ZALV	Zalesovo Beam	60.28	348	P	P	06 13 32.2	-0.4
	comp=Z,2.8nm,0.4s,baz=161,slow=5.4,SNR=16						
ZALV	Zalesovo Beam	60.28	348	P	P	06 13 31.7	-0.9

ABKAR	Akbulak array	65.02	331	P	P	06 14 04.0	-0.3
ABKAR	Akbulak array	65.02	331	P	P	06 14 03.8	-0.5
ABKAR	comp=Z,4.5nm,1.1s			IAmb	IAmb	06 14 18.4	
PETK	Petropavlovsk- comp=Z,2.4nm,0.7s,baz=216,slow=6.8,SNR=4.7	74.25	31	P	P	06 15 00.1	-1.0
BKZ	Black Stump Fm	75.01	129	P	P	06 15 05.9	-0.1
SEY	Seymchan comp=Z,3.4nm,0.4s,baz=236,slow=7.3,SNR=10	77.52	21	P	P	06 15 18.5	-1.1
VNDA	Vanda	79.05	169	P	P	06 15 28.2	+0.3
AKASG	Malin Array Be comp=Z,0.7nm,0.5s,baz=88,slow=4.7,SNR=2.5	82.87	322	P	P	06 15 48.4	-0.2
FINES	FINESS Array B comp=Z,1.8nm,0.8s,baz=111,slow=4.7,SNR=5.6	87.48	332	P	P	06 16 11.6	0.0
FINES	FINESS Array B	87.48	332	P	P	06 16 12.2	+0.7
VYHS	Vyhne	89.00	319	*e*P	P	06 16 20.9	+1.8
ARCES	ARCESS Array B comp=Z,17nm,1.3s,baz=347,slow=2.6,SNR=3.9	89.76	340	P	P	06 16 22.3	+0.2
NVAR	Mina Array Bea comp=Z,0.3nm,0.6s,baz=306,slow=1.7,SNR=2.8	130.48	42	PKP	PKiKP	06 22 36.4	0.0
TXAR	Lajitas Array comp=Z,1.7nm,0.7s,baz=278,slow=1.2,SNR=16	145.63	42	PKPbc	PKPab	06 23 04.0	+0.1
TXAR	Lajitas Array	145.63	42		PKPab	06 23 04.1	+0.3

*SOME **19** 06:45:05.6, 40°.65N×77°.68E, h20^{km}*

*NNC **19** 06:45:07.9±0.8, 40°.79N×77°.78E, h0^{km}, mb4.3, mpv4.0, Error ellipse: s-maj=5.3km s-min=3.8km az=174.0*

*KRNET **19** 06:45:09.3±0.1, 40°.85N×77°.76E, h17^{km}, mb3.6*

ISC 19 06:45:11.8±2.0**, 40°.97N**±0°.07×**77°.80E**±0°.03**, h2^{km}**±12^{km}**, n76, σ1^{s}36**/115**, 33C-19D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDJ	Kajisay baz=42	1.24	338	⇓*i*P	Pn	06 45 34.6	-1.8
KDJ	baz=42			⇓*i*S	Sn	06 45 53.1	-0.7
PRZ	Przheval'sk baz=16	1.57	17	⇑*i*P	Pb	06 45 41.2	-0.6
PRZ	baz=16			⇑*i*S	Sg	06 46 04.2	+1.8
ULHL	Ulahol baz=21	1.72	318	⇑*i*P	Pn	06 45 42.5	-0.5
ULHL	baz=21			⇑*i*S	Sb	06 46 06.7	+0.2
ULHL	Ulahol SNR=26	1.72	318	P	Pn	06 45 42.1	-0.9
ANVS	Anan'yevo baz=58	1.81	357	⇑*i*P	Pb	06 45 45.4	-0.4
ANVS	baz=58			⇑*i*S	Sg	06 46 11.3	+1.3
BOOM	Boomskoye usch baz=21	2.06	318	⇑*i*P	Pb	06 45 47.9	-2.0
BOOM	baz=21			⇑*i*S	Sb	06 46 15.9	-0.1
SATY	Saty 35nm,0.3s	2.13	12	⇓*i*P	Pb	06 45 50.0	-1.2
SATY	179nm,0.2s			*e*S	Sg	06 46 22.7	+2.3
SATY	Saty 35nm,0.3s	2.13	12	Pg	Pb	06 45 50.0	-1.2
SATY	179nm,0.2s			Lg	Lg	06 46 22.7	
TNSS	Tian-Shan 59nm,0.3s	2.16	343	*e*P	Pb	06 45 50.4	-1.4
TNSS	124nm,0.2s			*e*S	Sg	06 46 23.2	+2.1
TNSS	Tian-Shan 59nm,0.3s	2.16	343	Pg	Pb	06 45 50.4	-1.4
TNSS	124nm,0.2s			Lg	Lg	06 46 23.3	
IZV	Izvestkoviy 33nm,0.2s	2.24	337	*e*P	Pb	06 45 51.0	-2.1
IZV	214nm,0.3s			*e*S	Sg	06 46 24.6	+0.8
IZV	Izvestkoviy 33nm,0.2s	2.24	337	Pg	Pb	06 45 51.0	-2.1
IZV	214nm,0.3s			Lg	Lg	06 46 24.6	
MDOK	Medeo 39nm,0.3s	2.26	346	*e*P	Pb	06 45 51.9	-1.5
MDOK	136nm,0.4s			*e*S	Sg	06 46 26.3	+1.9
MDOK	Medeo 28nm,0.5s	2.26	346	⇓Pg	Pb	06 45 51.8	-1.6
MDOK	127nm,0.7s			⇑Lg	Lg	06 46 26.1	
MDOK	Medeo 39nm,0.3s	2.26	346	Pg	Pb	06 45 51.9	-1.5
MDOK	136nm,0.4s			Lg	Lg	06 46 26.3	
KOTS	Kotyrbulak 76nm,0.2s	2.31	348	*e*P	Pb	06 45 52.9	-1.4
KOTS	134nm,0.4s			*e*S	Sg	06 46 27.9	+1.7
KOTS	Kotyrbulak 76nm,0.2s	2.31	348	Pg	Pb	06 45 52.9	-1.4
KOTS	134nm,0.4s			Lg	Lg	06 46 27.9	
KNDC	Almaty 89nm,0.8s	2.33	345	⇓Pg	Pb	06 45 52.9	-1.5
KNDC	279nm,0.6s			⇑Lg	Lg	06 46 26.9	
AAA	Alma-Ata 55nm,0.1s	2.33	344	*e*P	Pb	06 45 53.3	-1.2
AAA	163nm,0.3s			*e*S	Sg	06 46 28.8	+2.2
AAA	Alma-Ata 55nm,0.1s	2.33	344	Pg	Pb	06 45 53.3	-1.2
AAA	163nm,0.3s			Lg	Lg	06 46 28.8	
UZB	Uzynbulak 29nm,0.4s	2.36	22	*e*P	Pb	06 45 53.5	-1.6
UZB	103nm,0.4s			*e*S	Sg	06 46 28.7	+1.1
UZB	Uzynbulak 29nm,0.4s	2.36	22	Pg	Pb	06 45 53.5	-1.6
UZB	103nm,0.4s			Lg	Lg	06 46 28.7	
KST	Kastek 41nm,0.2s	2.48	327	*e*P	Pb	06 45 55.4	-1.7
KST	88nm,0.3s			*e*S	Sg	06 46 32.1	+0.7
KST	Kastek 41nm,0.2s	2.48	327	Pg	Pb	06 45 55.4	-1.7
KST	88nm,0.3s			Lg	Lg	06 46 32.1	
SHLS	Shalkode 42nm,0.3s	2.51	29	*e*P	Pg	06 45 58.9	-1.0
SHLS	143nm,0.3s			*e*S	Sg	06 46 38.0	+5.6
SHLS	Shalkode 42nm,0.3s	2.51	29	Pg	Pg	06 45 58.9	-1.0
SHLS	143nm,0.3s			Lg	Lg	06 46 38.0	
KURS	Kuram 34nm,0.4s	2.53	6	*e*P	Pb	06 45 56.7	-1.2
KURS	101nm,0.6s			*e*S	Sg	06 46 34.5	+1.4
KURS	Kuram 34nm,0.4s	2.53	6	Pg	Pb	06 45 56.7	-1.2
KURS	101nm,0.6s			Lg	Lg	06 46 34.5	
TKM2	Tokmak 2 baz=23	2.54	321	⇑*i*P	Pn	06 45 54.6	+0.3
TKM2	baz=23			⇑*i*S	Sb	06 46 27.5	-2.6
TKM2	Tokmak 2 SNR=8.9	2.54	321	P	Pn	06 45 55.3	+1.0
TKM2	Tokmak 2 8.4nm,0.3s	2.54	321	⇑Pn	Pn	06 45 54.2	0.0
TKM2	80nm,0.9s			⇑Lg	Lg	06 46 33.6	
KPKS	Kokpek 57nm,0.2s	2.58	15	*e*P	Pb	06 45 57.1	-1.7
KPKS	5µm,0.6s			*e*S	Sg	06 46 34.9	+0.3
PDGK	Podgornoye 14nm,0.1s	2.67	28	Pg	Pb	06 45 58.9	-1.5
PDGK	76nm,0.4s			Lg	Lg	06 46 38.1	
PDGK	Podgornoye 6.4nm,0.5s	2.67	28	⇓Pn	Pn	06 45 56.4	+0.5
PDGK	23nm,0.7s			⇓Pg	Pb	06 46 00.1	-0.3
PDGK	161nm,0.7s			⇑Lg	Lg	06 46 38.0	
KBK	Karagaybulak baz=12	2.71	309	⇓*e*P	Pn	06 45 56.8	+0.2
KBK	baz=12			⇓*i*S	Sn	06 46 30.9	+0.9
KBK	Karagaybulak SNR=18	2.71	309	P	Pn	06 45 57.1	+0.5
DGS	Degeres 53nm,0.3s	2.72	327	*e*P	Pb	06 45 59.5	-1.7
DGS	142nm,0.4s			*e*S	Sg	06 46 39.2	0.0
DGS	Degeres 53nm,0.3s	2.72	327	Pg	Pb	06 45 59.5	-1.7
DGS	142nm,0.4s			Lg	Lg	06 46 39.2	
ARLS	Aral baz=92	2.76	290	⇑*i*P	Pn	06 45 56.8	-0.4
ARLS	baz=92			⇑*i*S	Sn	06 46 30.8	-0.3
UCH	Uchtor baz=1.0	2.76	298	⇑*i*P	Pn	06 45 57.1	-0.4
UCH	baz=1.0			⇑*i*S	Sn	06 46 31.9	+0.3
UCH	Uchtor SNR=8.2	2.76	298	P	Pn	06 45 56.6	-0.9
KTBS	Karatobe 50nm,0.3s	2.86	344	*e*P	Pb	06 46 02.6	-1.0
KTBS	338nm,0.4s			*e*S	Sg	06 46 44.4	+0.7
KTBS	Karatobe 50nm,0.3s	2.86	344	Pg	Pb	06 46 02.6	-1.0
KTBS	338nm,0.4s			Lg	Lg	06 46 44.3	
CHKK	Chushkaly 17nm,0.3s	2.94	349	*e*P	Pb	06 46 03.7	-1.3
CHKK	81nm,0.2s			⇑*i*S	Sg	06 46 46.5	+0.2
CHKK	Chushkaly 17nm,0.3s	2.94	349	Pg	Pb	06 46 03.7	-1.3
CHKK	81nm,0.2s			Lg	Lg	06 46 46.5	
AAK	Ala-Archa baz=7.0	2.98	305	⇓*i*P	Pn	06 46 00.3	+0.1
AAK	baz=7.0			⇓*i*S	Sn	06 46 37.4	+0.9
AAK	Ala-Archa SNR=7.8	2.98	305	P	Pb	06 46 05.3	-0.3
AAK	Ala-Archa 9.7nm,0.5s	2.98	305	⇑Pg	Pb	06 46 04.6	-1.0
AAK				⇑Lg	Lg	06 46 44.7	
CHMS	Chumysh baz=15	3.04	313	⇑*i*P	Pn	06 46 01.3	+0.4
CHMS	baz=15			⇑*i*S	Sn	06 46 39.0	+1.1
CHMS	Chumysh SNR=15	3.04	313	P	Pb	06 46 06.7	+0.1
KUU	Kurty 7.9nm,0.4s	3.11	340	*e*P	Pb	06 46 07.2	-0.6
KUU	78nm,0.2s			⇓*i*S	Sg	06 46 52.4	+0.7
KUU	Kurty 7.9nm,0.4s	3.11	340	Pg	Pb	06 46 07.2	-0.6
KUU	78nm,0.2s			Lg	Lg	06 46 52.4	
KTMS	Ketmen 11nm,0.2s	3.12	37	*e*P	Pb	06 46 06.7	-1.3
KTMS	59nm,0.2s			*e*S	Sg	06 46 51.5	-0.4
KTMS	Ketmen 11nm,0.2s	3.12	37	Pg	Pb	06 46 06.7	-1.3
KTMS	59nm,0.2s			Lg	Lg	06 46 51.5	
MNBS	Baschi 12nm,0.2s	3.13	8	*e*P	Pb	06 46 08.0	-0.3
MNBS	120nm,0.3s			*e*S	Sg	06 46 53.9	+1.4
MNBS	Baschi 12nm,0.2s	3.13	8	Pg	Pb	06 46 08.0	-0.3
MNBS	120nm,0.3s			Lg	Lg	06 46 53.9	
ARXS	Arharly 24nm,0.4s	3.24	0	*e*P	Pb	06 46 09.2	-0.9
ARXS	154nm,0.5s			*e*S	Sg	06 46 55.6	-0.2
ARXS	Arharly 24nm,0.4s	3.24	0	Pg	Pb	06 46 09.2	-0.9
ARXS	154nm,0.5s			Lg	Lg	06 46 55.6	
AML	Almayashu baz=94	3.29	292	⇑*i*P	Pn	06 46 04.4	-0.3
AML	baz=94			⇑*i*S	Sn	06 46 44.0	-0.5
AML	Almayashu SNR=24	3.29	292	P	Pb	06 46 09.9	-1.2
USP	Ospenovka baz=16	3.35	314	⇓*i*P	Pn	06 46 05.7	+0.4
USP	baz=16			⇓*i*S	Sn	06 46 46.6	+0.9
USP	Ospenovka SNR=10	3.35	314	P	Pb	06 46 11.3	-0.7
EKS2	Erkin-Say baz=3.0	3.44	301	⇑*i*P	Pn	06 46 06.6	0.0
EKS2	baz=3.0			⇑*i*S	Sn	06 46 48.1	+0.1
EKS2	Erkin-Say SNR=7.8	3.44	301	P	Pb	06 46 13.9	+0.3
DJR	Jarkent 7.5nm,0.2s	3.66	23	*e*P	Pb	06 46 17.1	-0.3
DJR	23nm,0.6s			⇓*i*S	Sg	06 47 09.5	0.0
DJR	Jarkent 7.5nm,0.2s	3.66	23	Pg	Pb	06 46 17.1	-0.3
DJR	23nm,0.6s			Lg	Lg	06 47 09.5	
MRKS	Merke 7.9nm,0.4s	3.84	299	*e*P	Pb	06 46 18.1	-2.3
MRKS	11nm,0.4s			*e*S	Sb	06 47 11.0	+3.6
MRKS	Merke 7.9nm,0.4s	3.84	299	Pg	Pb	06 46 18.1	-2.3
MRKS	11nm,0.4s			Lg	Lg	06 47 11.0	
TDK	Taldyqorghan 31nm,0.3s	4.05	6	*e*P	Pb	06 46 24.9	+1.0
TDK	66nm,0.3s			*e*S	Sg	06 47 22.7	+0.8
TDK	Taldyqorghan 31nm,0.3s	4.05	6	Pg	Pb	06 46 24.9	+1.0
TDK	66nm,0.3s			Lg	Lg	06 47 22.7	
MNAS	Manas baz=94	4.24	293	⇓*i*P	Pn	06 46 17.6	+0.1
MNAS	baz=94			⇓*i*S	Sn	06 47 06.8	-0.8
BTLS	Baital 5.2nm,0.3s	4.91	327	*e*P	Pb	06 46 39.2	+0.8
BTLS	17nm,0.3s			*e*S	Sg	06 47 47.8	-1.6
BTLS	Baital 5.2nm,0.3s	4.91	327	Pg	Pb	06 46 39.2	+0.8
BTLS	17nm,0.3s			Lg	Lg	06 47 47.8	
KK31	Karatay Array 1.1nm,0.5s,baz=116,slow=17,SNR=10	5.83	294	⇓Pg	Pb	06 46 57.4	+3.3
KK31	2.3nm,0.5s,baz=112,slow=27,SNR=7.5			⇓Lg	Lg	06 48 11.9	
MAKZ	Makanchi 2.0nm,1.2s	6.57	26	⇑Pn	Pn	06 46 48.8	-0.5
MAKZ	4.8nm,1.0s			⇑Lg	Lg	06 48 39.9	
MK31	Makanchi Array 0.2nm,0.3s,baz=204,slow=12,SNR=25	6.66	28	⇑Pn	Pn	06 46 49.8	-0.9
MK31	2.6nm,0.9s,baz=199,slow=22,SNR=4.0			⇑Sn	Sn	06 48 08.4	+1.3
MK31	4.4nm,0.8s,baz=214,slow=25,SNR=3.5			⇑Lg	Lg	06 48 41.5	

IDC 19 06:54:55.1±12.0**, 25°.38S**×**177°.66W, h364^{km}**±118^{km}**, mb2.9**/2**, mb1 3.2**/3**, mb1mx2.9**/33**, mbtmp3.8**/3**, Error ellipse: s-maj=69.7km s-min=49.6km az=55.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera 0.9nm,0.3s,baz=174,slow=2.2,SNR=6.4	13.59	198	P	P	06 57 53.6	+0.1
URZ	0.2nm,0.3s,baz=307,slow=12,SNR=1.5			S	S	07 00 20.1	-1.2
ASAR	Alice Springs 0.6nm,0.7s,baz=94,slow=8.5,SNR=5.4	43.91	262	P	P	07 02 28.2	+0.6
WRA	Warramunga Arr 0.4nm,0.5s,baz=104,slow=8.3,SNR=13	44.45	267	P	P	07 02 31.2	-0.6
AKASG	Malin Array Be 0.3nm,0.3s,baz=43,slow=3.9,SNR=3.0	147.36	328	PKPbc	PKPbc	07 13 55.4	-0.7

*NNC **19** 07:19:16.7±0.5, 49°.98N×78°.61E, h0^{km}, mb3.5, mpv2.9, Error ellipse: s-maj=9.3km s-min=2.5km az=78.0, Suspected Mining explosion.*

*IDC **19** 07:19:18.5±0.9, 50°.05N×78°.79E, h0^{km}, mb1 2.8/3, mb1mx2.8/43, mbtmp2.8/3, ML2.6/3, Error ellipse: s-maj=13.0km s-min=6.3km az=59.0*

ISC 19 07:19:18.0±0.9**, 50°.01N**±0°.05×**78°.66E**±0°.07**, h0^{km}, n21, σ0^{s}79**/29**, 18C-11D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR07	Kurchatov Arra	0.58	351	⇑P	Pg	07 19 28.6	-0.5
KUR07				⇓S	Sg	07 19 37.6	+0.9
KUR06	Kurchatov Arra	0.60	351	⇑P	Pg	07 19 28.0	-1.5
KUR06				⇓S	Sg	07 19 38.0	+0.7
KUR14	Kurchatov Arra	0.61	356	⇑P	Pg	07 19 29.0	-0.6
KUR14				⇑S	Sg	07 19 37.8	+0.3
KUR15	Kurchatov Arra	0.61	354	⇑P	Pg	07 19 29.0	-0.8
KUR15				⇑S	Sg	07 19 37.7	0.0
KURBB	Kurchatov Arra 2.3nm,0.3s,baz=165,slow=18,SNR=179	0.62	352	Pg	Pg	07 19 29.5	-0.4
KURBB	4.9nm,0.3s,baz=160,slow=41,SNR=12			Lg	Lg	07 19 39.7	
KURBB	Kurchatov Arra 26nm,0.5s	0.62	352	⇑P	Pg	07 19 29.2	-0.7
KURBB	141nm,0.5s			⇑S	Sb	07 19 39.5	-1.5
KUR16	Kurchatov Arra	0.63	350	⇓P	Pg	07 19 29.5	-0.5
KUR16				⇓S	Sg	07 19 38.4	+0.3
KUR17	Kurchatov Arra	0.64	349	⇓P	Pg	07 19 29.8	-0.4
KUR17				⇓S	Sg	07 19 39.4	+1.1
KUR05	Kurchatov Arra	0.64	353	⇑P	Pg	07 19 29.5	-0.7
KUR05				⇑S	Sg	07 19 38.8	+0.3
KUR04	Kurchatov Arra	0.66	353	⇑P	Pg	07 19 30.0	-0.6
KUR04				⇑S	Sg	07 19 39.4	+0.3
MAKZ	Makanchi 6.0nm,1.1s	3.89	144	⇓Pg	Pb	07 20 27.1	-0.4
MAKZ	20nm,0.7s			⇓Lg	Lg	07 21 17.0	
MK31	Makanchi Array 0.1nm,0.1s,baz=327,slow=10,SNR=34	4.02	142	⇓Pn	Pn	07 20 21.5	+0.7
MK31	1.6nm,0.4s,baz=329,slow=15,SNR=20			⇑Pg	Pb	07 20 29.8	+0.1
MK31	24nm,0.6s,baz=329,slow=26,SNR=13			⇑Lg	Lg	07 21 23.3	
MKAR	Makanchi Array 0.4nm,0.3s,baz=325,slow=10,SNR=55	4.02	142	Pn	Pn	07 20 21.3	+0.5
MKAR	1.0nm,0.3s,baz=329,slow=15,SNR=16			Pg	Pb	07 20 28.6	-1.1
MKAR	2.2nm,0.3s,baz=328,slow=30,SNR=20			Lg	Lg	07 21 22.3	
ZALV	Zalesovo Beam 1.0nm,0.3s,baz=231,slow=14,SNR=9.3	5.48	42	Pn	Pn	07 20 41.9	+1.2
ZALV	0.4nm,0.3s,baz=226,slow=26,SNR=5.7			Lg	Lg	07 22 08.9	
I46RU	ZALESOVO INFRA baz=222,slow=339,SNR=1.6	5.48	42	*i*		07 52 20.0	
BVAR	Borovoye Array 0.1nm,0.3s,baz=119,slow=17,SNR=1.9	5.98	303	Pn	Pn	07 20 48.2	+0.5
BVAR	0.9nm,0.3s,baz=116,slow=27,SNR=15			Sn	Sn	07 21 56.3	-0.6
BVAR	0.7nm,0.3s,baz=104,slow=34,SNR=3.2			Lg	Lg	07 22 28.3	
BRVK	Borovoye 1.4nm,0.9s	6.05	303	⇑Pg	Pb	07 21 05.4	+1.1
BRVK	4.9nm,0.6s			⇑Sn	Sn	07 21 57.8	-0.9
BRVK	6.7nm,1.0s			⇓Lg	Lg	07 22 31.8	
PDGK	Podgornoye 9.7nm,0.7s	6.71	175	⇓Lg	Lg	07 22 51.4	
TKM2	Tokmak 2 6.0nm,0.8s	7.40	198	⇑Lg	Lg	07 23 11.3	
AAK	Ala-Archa 0.3nm,0.3s,baz=283,slow=22,SNR=4.9	7.92	203	Lg	Lg	07 23 27.0	
AAK	Ala-Archa 4.4nm,0.8s	7.92	203	⇑Lg	Lg	07 23 26.0	

IDC 19 08:06:19.7±3.0**, 53°.49N**×**87°.36E, h0^{km}, mb1 2.3**/2**, mb1mx2.3**/46**, mbtmp2.3**/2**, ML2.1**/2**, Error ellipse: s-maj=26.7km s-min=16.2km az=67.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA baz=104,slow=336,SNR=1.3	1.58	288	*i*		08 18 40.0	
ZALV	Zalesovo Beam 0.3nm,0.3s,baz=107,slow=17,SNR=6.9	1.58	288	Pg	Pn	08 06 47.6	-1.3
ZALV	0.3nm,0.3s,baz=107,slow=29,SNR=4.6			Lg	Lg	08 07 10.2	
KURBB	Kurchatov Arra 0.0nm,0.3s,baz=62,slow=13,SNR=5.8	6.16	246	Pn	Pn	08 07 52.6	+0.8
KURBB	0.0nm,0.3s,baz=58,slow=31,SNR=4.1			Lg	Lg	08 09 33.6	
MKAR	Makanchi Array 0.0nm,0.3s,baz=26,slow=10,SNR=1.9	7.45	208	Pn	Pn	08 08 10.9	+1.3
MKAR	0.0nm,0.3s,baz=18,slow=29,SNR=1.7			Lg	Lg	08 10 13.9	

*IDC **19** 08:30:07.0±14.0, 12°.53S×166°.49E, h203^{km}±159^{km}, mb3.3/5, mb1 3.5/6, mb1mx3.2/35, mbtmp3.7/6, Error ellipse: s-maj=119.0km s-min=35.4km az=158.0*

ISC 19 08:30:06.7±1.3**, 12°.5S**±0°.1×**166°.5E**±0°.3**, h200^{km}, n6, σ0^{s}77**/7**, mb3.5**/5**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac 0.1nm,0.3s,baz=342,slow=19,SNR=1.4	9.52	180	P	Pn	08 32 19.1	-0.6
DZM	0.1nm,0.3s,baz=323,slow=20,SNR=1.2			S	Sn	08 34 07.0	+0.6
WRA	Warramunga Arr 0.8nm,0.8s,baz=86,slow=9.3,SNR=5.0	31.68	252	P	P	08 36 11.7	0.0
ASAR	Alice Springs 0.4nm,0.7s,baz=73,slow=9.1,SNR=4.2	32.80	246	P	P	08 36 21.8	+0.4
CMAR	Chiang Mai Arr 0.9nm,0.4s,baz=108,slow=5.0,SNR=1.5	73.34	294	P	P	08 41 17.4	+0.4
ILAR	Eielson Array 0.3nm,0.6s,baz=227,slow=5.4,SNR=2.2	84.67	18	P	P	08 42 18.1	+0.6
MKAR	Makanchi Array 0.5nm,0.8s,baz=104,slow=4.6,SNR=4.0	95.06	317	P	P	08 43 05.9	-1.0

*NOU **19** 08:33:41.6, 22°.27S×170°.24E, h0^{km}, MLv4.6, Southeast of Loyalty Islands*

*IDC **19** 08:33:41.1±1.6, 22°.07S×170°.28E, h0^{km}, mb4.0/8, mb1 4.2/9, mb1mx4.0/26, mbtmp4.0/9, ML4.2/1, MS3.5/3, Ms1 3.5/3, ms1mx3.1/25, Error ellipse: s-maj=56.5km s-min=24.6km az=146.0*

*NEIC **19** 08:33:50.3±1.1, 21°.91S±0°.07×169°.87E±0°.08, h41^{km}±12^{km}, mb4.3/7, Error ellipse: s-maj=14.2km s-min=6.2km az=46.0*

ISC 19 08:33:45.5±0.8**, 22°.11S**±0°.09×**170°.18E**±0°.09**, h25^{km}, n37, σ1^{s}33**/35**, mb4.1**/10**, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PINNC	Pines Island,	2.58	258	P	Pn	08 34 24.7	-0.9
LIFNC	LIFOU	3.04	295	P	Pn	08 34 32.0	0.0
YATNC	Mamie plateau,	3.05	270	P	Pn	08 34 31.0	-1.1
OUENC	Ouen Island, N	3.10	264	P	Pn	08 34 32.3	-0.6
ONTNC	Ouen Toro	3.45	266	P	Pn	08 34 37.7	0.0
DZM	Mont Dzumac 23nm,0.3s,baz=126,slow=14,SNR=495	3.46	270	Pn	Pn	08 34 37.6	-0.3
DZM	40nm,0.3s,baz=311,slow=19,SNR=20			Sn	Sn	08 35 16.6	-1.6
DZM	Mont Dzumac 104nm,0.2s	3.46	270	*e*Pn	Pn	08 34 37.6	-0.3
DZM	130nm,0.2s			*e*Sn	Sn	08 35 18.3	+0.1
DZM				*e*LR	LR	08 35 26.4	

	comp=Z,261nm,23.2s						
DZM	Mont Dzumac	3.46	270	P	Pn	08 34 37.8	-0.1
DVP	Devils Point	4.74	336	P	Pn	08 34 56.5	+1.0
KOUNC	Koumac, New Ca	5.70	285	P	Pn	08 35 09.6	+0.9
NFK	Norfolk Island	7.20	196	P	Pn	08 35 26.0	-3.1
SANVU	Saraoutou	7.20	336	Pn	Pn	08 35 29.0	-0.2
SANVU	Saraoutou	7.20	336	P	Pn	08 35 30.6	+1.4
MSVF	Nonsavu	8.59	61	Pn	Pn	08 35 54.3	+5.9
URZ	Urewera	17.17	161	LR	LR	08 43 06.2	
	comp=Z,152nm,18.1s,baz=31,slow=33						
EIDS	Eidsvold	17.78	256	P	P	08 37 53.8	+1.8
EIDS				IAmb	IAmb	08 38 08.1	
	comp=Z,33nm,1.4s						
BKZ	Black Stump Fm	17.84	164	P	P	08 37 59.0	+6.4
BKZ				IAmb	IAmb	08 38 06.7	
	comp=Z,16nm,1.3s						
OXZ	Oxford	21.22	176	P	P	08 38 33.8	+4.4
OXZ				IAmb	IAmb	08 38 38.9	
	comp=Z,10nm,0.8s						
RPZ	Rata Peaks	21.56	178	LR	LR	08 45 28.1	
	comp=Z,145nm,21.3s,baz=349,slow=33						
STKA	Stephens Creek	27.19	243	P	P	08 39 28.4	+1.1
	comp=Z,2.0nm,0.6s,baz=81,slow=15,SNR=5.3						
AS31	Alice Springs	33.40	260	P	P	08 40 23.4	+1.1
ASAR	Alice Springs	33.40	260	P	P	08 40 22.1	-0.2
	comp=Z,1.5nm,0.7s,baz=93,slow=8.5,SNR=7.7						
ASAR				PcP	PcP	08 43 02.9	-0.8
	comp=Z,0.4nm,0.8s,baz=91,slow=4.6,SNR=2.3						
ASAR	Alice Springs	33.40	260	P	P	08 40 23.3	+1.0
WB0	Warramunga Arr	33.45	267	P	P	08 40 21.8	-1.0
WB0				IAmb	IAmb	08 40 29.1	
	comp=Z,14nm,1.4s						
WRA	Warramunga Arr	33.47	267	P	P	08 40 21.8	-1.2
	comp=Z,0.6nm,0.6s,baz=98,slow=8.0,SNR=7.9						
WRA				LR	LR	08 54 27.9	
	comp=Z,83nm,18.3s,baz=115,slow=37						
WRA	Warramunga Arr	33.47	267	P	P	08 40 22.4	-0.5
MJAR	Matsushiro Arr	65.69	332	P	P	08 44 27.1	-0.7
	comp=Z,2.9nm,0.9s,baz=191,slow=8.2,SNR=4.6						
QSPA	South Pole Qui	67.96	180	P	P	08 44 47.2	+5.0
KSRS	Korea Array	71.36	326	P	P	08 45 03.7	+0.5
	comp=Z,1.0nm,0.7s,baz=163,slow=5.0,SNR=4.3						
CMAR	Chiang Mai Arr	80.48	294	P	P	08 45 56.5	+0.8
	comp=Z,1.5nm,0.3s,baz=132,slow=4.5,SNR=4.4						
SONM	Songino Array	90.03	323	P	P	08 46 42.9	-0.1
	comp=Z,1.4nm,0.9s,baz=138,slow=3.2,SNR=6.3						
ILAR	Eielson Array	92.70	17	P	P	08 46 52.7	-2.2
	comp=Z,0.2nm,0.6s,baz=229,slow=4.5,SNR=4.5						
ARCES	ARCESS Array B	128.05	345	PKP	PKPdf	08 52 47.8	-0.9
	comp=Z,2.5nm,0.8s,baz=65,slow=2.6,SNR=1.5						
CLL	Collm	145.87	334	*i* PKPbc	PKPbc	08 53 21.8	-0.7
	comp=Z,69nm,0.8s						
EKA	Eskdalemuir Ar	146.45	353	PKPbc	PKPbc	08 53 23.3	-0.7
	comp=Z,1.7nm,0.4s,baz=359,slow=3.0,SNR=12						
GERES	GERESS Array B	147.42	331	PKPbc	PKPbc	08 53 27.2	0.0
	comp=Z,1.4nm,0.6s,baz=38,slow=6.8,SNR=6.8						
DAVOX	Davos/Dischmat	150.67	332	PKPbc	PKPbc	08 53 35.2	-0.4
	comp=Z,2.7nm,0.5s,baz=36,slow=8.7,SNR=3.1						

*IPEC **19** 08:37:44.1±0.3, 51°.47N×16°.31E, h0^{km}, ML3.0/2, Error ellipse: s-maj=2.9km s-min=1.6km az=69.0*

*IDC **19** 08:37:44.5±0.5, 51°.44N×16°.11E, h0^{km}, mb3.5/5, mb1 3.7/12, mb1mx3.5/43, mbtmp3.5/12, ML3.2/8, Error ellipse: s-maj=10.1km s-min=5.9km az=109.0*

*BGR **19** 08:37:45.7±0.5, 51°.39N×16°.20E, h1^{km}, ML3.4/12, Error ellipse: s-maj=5.6km s-min=2.2km az=24.0*

*PRU **19** 08:37:45.7±0.0, 51°.41N×16°.19E, h0^{km}*

*UPP **19** 08:37:47.0±3.2, 51°.63N×15°.85E, h0^{km}, ML2.2, Suspected explosion*

*VIE **19** 08:37:47.7±0.8, 51°.27N×15°.94E, h0^{km}, mb2.9/12, ml3.1/13, ms3.9/1, Error ellipse: s-maj=4.9km s-min=4.2km az=166.0   77 km WNW of Wroclaw Suspected Mining induced.*

ISC 19 08:37:42.6±0.5**, 51°.53N**±0°.03×**16°.23E**±0°.02**, h0^{km}, n78, σ1^{s}49**/157**, mb3.5**/5**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.69	177	*i* Pg	Pg	08 37 56.4	+0.5
KSP				*e*Sg	Sg	08 38 04.3	-0.5
KSP	Ksiaz	0.69	177	*e*Pg	Pg	08 37 56.4	+0.5
KSP				*e*Sg	Sg	08 38 03.5	-1.3
CHVC	Chvalec	0.95	187	*e*PG	Pg	08 38 01.3	+0.5
CHVC				*e*SG	Sg	08 38 12.6	-0.6
	comp=Z,218nm,0.5s						
OSTC	Ostas	0.98	181	*e*PG	Pg	08 38 01.9	+0.6
OSTC				*e*SG	Sg	08 38 13.4	-0.6
	comp=Z,310nm,0.9s						
UPC	Upice	1.04	188	*e*PG	Pg	08 38 02.6	+0.2
UPC				*e*SG	Sg	08 38 15.5	-0.4
	comp=Z,474nm,0.4s						
DPC	Dobruska-Polom	1.19	177	*e*PG	Pg	08 38 05.2	-0.1
DPC				*e*SG	Sg	08 38 19.3	-1.4
	comp=Z,192nm,0.5s						
DPC	Dobruska-Polom	1.19	177	*e*Pg	Pg	08 38 05.2	-0.1
DPC				*e*Sg	Sg	08 38 19.5	-1.2
PVCC	Panska Ves	1.46	227	*e*PG	Pg	08 38 10.6	+0.1
PVCC				*e*SG	Sb	08 38 29.6	0.0
	comp=Z,761nm,0.4s						
KRLC	Kraliky	1.50	166	*e*PG	Pn	08 38 10.8	0.0
KRLC				*e*SG	Sg	08 38 30.6	-0.2
	comp=Z,613nm,1.6s						
BRG	Berggiesshubel	1.58	246	Pn	Pn	08 38 12.0	+0.1
BRG				Pg	Pg	08 38 13.8	+0.8
BRG				Sg	Sg	08 38 34.3	+0.8
BRG				Amp		08 38 37.0	
	comp=Z,195nm,0.5s						
BRG	Berggiesshubel	1.58	246	*e*Pn	Pn	08 38 12.0	+0.1
BRG				*e*Pg	Pg	08 38 13.8	+0.8
BRG				*e*Sg	Sg	08 38 34.5	+1.1
PRA	Prague	1.86	219	*e*PG	Pn	08 38 16.3	+0.6
PRA				*e*SG	Sb	08 38 40.8	-0.3
	comp=Z,98nm,1.0s						
PRU	Pruhonice	1.88	215	*e*PG	Pb	08 38 17.2	-0.6
PRU				*e*SG	Sb	08 38 41.5	-0.4
	comp=Z,185nm,0.6s						
MORC	Moravsky Berou	1.95	154	*e*PN	Pn	08 38 17.0	0.0
MORC				*e*SG	Sn	08 38 42.7	+0.6
MORC	Moravsky Berou	1.95	154	*e*Pn	Pn	08 38 16.9	0.0
	baz=336						
MORC				*e*Sg	Sn	08 38 42.7	+0.6
	comp=Z,91nm,0.5s,baz=336						
MORC	Moravsky Berou	1.95	154	*e*Pn	Pn	08 38 16.9	0.0
MORC				*e*Sg	Sb	08 38 43.2	-0.5
CLL	Collm	2.04	265	*e*Pn	Pn	08 38 19.0	+0.9
CLL				*e*Pg	Pg	08 38 22.0	+0.4
CLL				*e*Sg	Sg	08 38 49.0	+1.1
	comp=Z,100nm,0.6s						
CLL	Collm	2.04	265	*e*Pn	Pn	08 38 18.6	+0.5
CLL				*e*Sg	Sg	08 38 48.6	+0.6
OKC	Ostrava-Krasne	2.09	144	*e*PG	Pg	08 38 22.3	-0.3
OKC				*e*SG	Sb	08 38 48.5	+0.7
	comp=Z,152nm,0.6s						
VRAC	Vranov	2.24	174	Pn	Pn	08 38 21.4	+0.5
	comp=Z,7.0nm,0.3s,baz=344,slow=13,SNR=20						
VRAC				Lg	Lg	08 38 52.1	
	comp=Z,12nm,0.3s,baz=105,slow=12,SNR=15						
VRAC	Vranov	2.24	174	*e*PN	Pn	08 38 21.4	+0.5
VRAC				*e*SG	Sb	08 38 52.2	0.0
VRAC	Vranov	2.24	174	*e*Pn	Pn	08 38 21.4	+0.5
	baz=355						
VRAC				*e*Sg	Sb	08 38 52.1	-0.1
	baz=355						
TREC	Trest	2.29	192	*e*PG	Pb	08 38 24.2	-0.6
TREC				*e*SG	Sb	08 38 54.2	+0.5
	comp=Z,76nm,0.3s						
PBCC	Pribram	2.33	218	*e*PG	Pb	08 38 26.2	+0.6
PBCC				*e*SG	Sb	08 38 55.5	+0.6
KRUC	Moravsky	2.48	178	*e*PN	Pn	08 38 25.1	+0.9
KRUC				*e*SG	Sb	08 38 59.4	+0.4
KRUC	Moravsky	2.48	178	*e*Pn	Pn	08 38 25.0	+0.9
	baz=359						
KRUC				*e*Sg	Sb	08 38 59.3	+0.3
	comp=Z,91nm,0.7s,baz=359						
OJC	Ojcow	2.61	119	*e*Pg	Pg	08 38 33.1	+0.4
OJC				*e*Sg	Sg	08 39 07.7	+1.2
TANN	Tannenbergstha	2.63	246	*e*Pn	Pn	08 38 27.5	+1.1
TANN				*e*Pg	Pg	08 38 33.6	+0.5
TANN				*e*Sg	Sg	08 39 06.2	-0.9
NKC	Novy Kostel	2.73	243	*e*PN	Pn	08 38 28.8	+1.1
NKC				*e*PG	Pg	08 38 33.8	-1.0
NKC				*e*SG	Sg	08 39 10.2	0.0
	comp=Z,129nm,0.5s						
JAVC	Velka Javorina	2.83	160	*e*PN	Pn	08 38 29.8	+0.7
JAVC	Velka Javorina	2.83	160	*e*Pn	Pn	08 38 29.8	+0.7
	baz=342						
KHC	Kasperske Hory	2.95	216	*e*PN	Pn	08 38 31.8	+1.1
KHC				*e*PG	Pb	08 38 37.3	+1.3
KHC				*e*SN	Sn	08 39 04.0	-2.7
KHC				*e*SG	Sg	08 39 15.4	-1.8
	comp=Z,65nm,0.7s						
CKRC	Cesky Krumlov	2.98	205	*e*PN	Pn	08 38 32.3	+1.1
CKRC				*e*PG	Pb	08 38 37.7	+1.1
CKRC				*e*SG	Sb	08 39 16.0	+2.4
MANZ	Manzenberg	3.04	241	*e*Pn	Pn	08 38 33.3	+1.3
MANZ				*e*Pg	Pg	08 38 41.5	+0.6
MANZ				*e*Sg	Sg	08 39 20.0	-0.3
ROTZ	Rotzenmuhle	3.11	237	*e*Pn	Pn	08 38 34.1	+1.2
ROTZ				*e*Sg	Sg	08 39 21.5	-1.0
SMOL	Smolenice	3.12	165	*e*PG	Pg	08 38 43.2	+0.8
SMOL				*e*SG	Sg	08 39 22.0	-0.8
SMOL				*e*LG	Lg	08 39 27.9	
GEC2	GERESS Array S	3.15	212	*e*Pn	Pn	08 38 34.1	+0.6
GEC2				*e*Pg	Pg	08 38 42.0	-0.9
GEC2				*e*Sg	Sb	08 39 20.5	+2.2
GERES	GERESS Array B	3.15	212	Pn	Pn	08 38 33.6	+0.2
	comp=Z,2.3nm,0.3s,baz=36,slow=13,SNR=46						
GERES				Pg	Pb	08 38 40.4	+1.0
	comp=Z,19nm,0.3s,baz=31,slow=16,SNR=71						
GERES				Sn	Sn	08 39 10.1	-1.7
	comp=Z,6.2nm,0.3s,baz=34,slow=25,SNR=5.2						
GERES				Lg	Lg	08 39 19.0	
	comp=Z,9.8nm,0.3s,baz=36,slow=28,SNR=4.5						
LANS	Liptovska Anna	3.16	138	*e*PN	Pn	08 38 34.8	+1.2
LANS				*e*PG	Pg	08 38 44.0	+0.9
LANS				*e*SG	Sg	08 39 23.1	-1.0
LANS				*e*LG	Lg	08 39 40.1	
WET	Wettzell	3.22	223	*e*Pn	Pn	08 38 35.2	+0.8
WET				*e*Sg	Sb	08 39 23.0	+2.8
MODS	Modra-Piesok	3.23	168	*e*PN	Pn	08 38 35.9	+1.3
MODS				*e*PG	Pg	08 38 43.6	-1.0
MODS				*e*SG	Sg	08 39 25.4	-1.1
MODS				*e*LG	Lg	08 39 36.3	
NIE	Niedzica	3.35	128	*e*P	Pg	08 38 45.8	-1.0
NIE				*e*S	Sg	08 39 30.4	+0.2
ZST	Bratislava	3.39	170	*e*PG	Pg	08 38 46.1	-1.4
ZST				*e*SG	Sg	08 39 28.9	-2.5
VYHS	Vyhne	3.48	150	*e*PN	Pn	08 38 39.0	+1.1
VYHS				*e*PG	Pg	08 38 49.9	+0.7
VYHS				*e*SG	Sg	08 39 33.4	-0.8
CONA	Conrad Observa	3.62	184	*i* Pn	Pn	08 38 41.1	+1.2
	comp=Z,3.1nm,0.4s,SNR=4.8						
CONA				*e*Sg	Sg	08 39 37.9	-0.9
	comp=Z,64nm,0.4s						
BSD	Bornholm Skovb	3.67	348	*e*	Pn	08 38 40.4	-0.1
	baz=198,slow=18						
BSD				*i* P	Pb	08 38 42.0	-6.3
BSD				*i* S	Sn	08 39 24.1	-0.5
BSD				IAML		08 39 27.0	
	comp=Z,8.1nm,0.4s						
GRF	Grafenberg Arr	3.69	242	*e*Pn	Pn	08 38 41.9	+1.1
GRF				*e*Sg	Sg	08 39 40.8	-0.2
MOA	Molln	3.90	200	*i* Pn	Pn	08 38 44.7	+0.9
	comp=Z,5.1nm,0.3s,SNR=13						
MOA				*i* Pg	Pg	08 38 56.8	-0.6
	comp=Z,15nm,0.4s						
MOA				*i* Sn	Sn	08 39 32.2	+1.9
	comp=Z,11nm,0.4s						
MOA				*i* Sg	Sg	08 39 47.2	-0.8
	comp=Z,120nm,0.8s						
CRVS	Cervenica-Dubn	4.27	126	*e*PG	Pg	08 39 06.8	+2.5
CRVS				*e*SG	Sg	08 40 02.7	+3.1
ARSA	Arzberg	4.31	186	*e*Sg	Sg	08 40 01.8	+0.8
	comp=Z,49nm,0.7s						
LUNU	Lund	4.43	339	P	Pn	08 38 52.3	+1.3
KOLS	Kolonicke sedl	4.67	122	*e*PN	Pn	08 38 55.2	+0.9
KOLS				*e*PG	Pg	08 39 14.9	+2.9
KBA	Koelnbreinsper	4.84	204	*i* Pn	Pn	08 38 58.1	+1.2
	comp=Z,3.6nm,0.4s						
KBA				*e*Sg	Sg	08 40 17.0	-1.1
BJUU	Bjuv	4.93	339	P	Pn	08 38 58.6	+0.8
BJUU				S	Sn	08 39 54.5	-1.0
DEL	Delary	5.14	345	P	Pn	08 39 01.8	+1.1
DEL				S	Sn	08 39 59.2	-1.5
OBKA	Obir	5.15	193	*i* Sg	Sg	08 40 26.9	-1.0
	comp=Z,56nm,1.2s						
WATA	Walderalm	5.18	218	*e*Sg	Sg	08 40 28.4	-0.7
	comp=Z,12nm,0.4s						
MYKA	Terra Mystica	5.20	200	*e*Sg	Sb	08 40 22.4	+5.1
	comp=Z,13nm,0.5s						
WTTA	Wattenberg	5.22	217	*e*Sg	Sg	08 40 31.0	+0.7
	comp=Z,25nm,0.5s						
MOTA	Moosalm	5.36	221	*e*Pn	Pn	08 39 05.6	+1.6
	comp=Z,2.1nm,0.3s						
MOTA				*e*Sg	Sg	08 40 34.5	-0.3
	comp=Z,31nm,0.7s						
ABTA	Abfaltersbach	5.38	208	*e*Sg	Sg	08 40 34.2	-1.0
	comp=Z,26nm,0.8s						
RETA	Reutte	5.39	223	*i* Pn	Pn	08 39 04.8	+0.5
	comp=Z,2.8nm,0.3s						
RETA				Sg	Sg	08 40 32.1	-3.6
	comp=Z,33nm,0.7s						
FETA	Feichten	5.78	221	*i* Pn	Pn	08 39 10.8	+1.1
	comp=Z,2.5nm,0.5s						
FETA				*e*Sg	Sg	08 40 46.8	-1.2
	comp=Z,17nm,0.7s						
FABU	Falkenberg	5.85	341	P	Pn	08 39 12.8	+2.4
DAVA	Damuels	5.94	227	*i* Pn	Pn	08 39 12.4	+0.6
	comp=Z,3.4nm,0.3s						
DAVA				Sg	Sg	08 40 55.2	+2.0
	comp=Z,36nm,0.7s						
DAVOX	Davos/Dischmat	6.32	224	Pn	Pn	08 39 17.8	+0.7
	comp=Z,0.6nm,0.3s,baz=80,slow=11,SNR=2.6						
DAVOX				Sn	Sn	08 40 27.7	-2.5
	comp=Z,0.5nm,0.3s,baz=182,slow=16,SNR=1.4						
DAVOX				Lg	Lg	08 41 00.9	
	comp=Z,0.7nm,0.3s,baz=347,slow=24,SNR=4.7						
NACGM	Naroch	7.18	58	*i* P	Pn	08 39 31.1	+2.4
NACGM				*i* P	Pn	08 39 31.1	+2.4
NACGM				*i* P	Pn	08 39 31.1	+2.4
NACGM				*i* PP	Pb	08 39 45.0	-3.0
NACGM				*i* S	Sn	08 40 53.8	+3.0
NACGM				*i* SS	Sb	08 41 09.9	-4.2
NACGM				*i* LQ	LQ	08 41 39.3	
NACGM				*i* LR	LR	08 41 56.7	
AKASG	Malin Array Be	8.22	91	Pn	Pn	08 39 42.8	-0.2
	comp=Z,1.9nm,0.3s,baz=280,slow=12,SNR=8.2						
AKASG				Sn	Sn	08 41 12.6	-3.9
	comp=Z,1.1nm,0.3s,baz=273,slow=21,SNR=2.6						
AKASG				Lg	Lg	08 42 10.3	
	comp=Z,0.4nm,0.3s,baz=272,slow=28,SNR=1.7						
HFS	Hagfors	8.74	352	Pn	Pn	08 39 50.5	+0.5
	comp=Z,0.3nm,0.3s,baz=177,slow=15,SNR=8.0						
HFS				Sn	Sn	08 41 28.2	-1.0
	comp=Z,0.5nm,0.3s,baz=170,slow=25,SNR=1.9						
NOA	NORSAR Array B	9.93	346	Pn	Pn	08 40 06.1	-0.3
	comp=Z,0.0nm,0.3s,baz=159,slow=12,SNR=5.4						
NOA				Sn	Sn	08 41 45.9	-13
	comp=Z,0.0nm,0.3s,baz=158,slow=18,SNR=1.7						
FINES	FINESS Array B	11.31	25	Pn	Pn	08 40 24.7	-0.5
	comp=Z,0.6nm,0.3s,baz=201,slow=14,SNR=14						
FINES				Sn	Sn	08 42 25.2	-7.0
	comp=Z,0.3nm,0.3s,baz=206,slow=18,SNR=2.1						
EKA	Eskdalemuir Ar	12.16	296	Pn	Pn	08 40 34.6	-2.4
	baz=99,slow=13,SNR=1.8						
ARCES	ARCESS Array B	18.59	10	Pn	P	08 41 59.1	-1.8
	baz=192,slow=12,SNR=19						
AKTO	Aktyubinsk	26.07	76	P	P	08 43 19.3	+1.7
	comp=Z,0.8nm,0.5s,baz=280,slow=13,SNR=2.1						
TORD	Torodi Ar. Bea	40.05	202	P	P	08 45 20.1	+0.7
	comp=Z,0.8nm,0.9s,baz=24,slow=4.4,SNR=1.5						
MKAR	Makanchi Array	42.13	69	P	P	08 45 38.6	+2.2
	comp=Z,0.1nm,0.4s,baz=303,slow=7.8,SNR=2.0						
YKA	Yellowknife Ar	59.87	336	P	P	08 47 51.2	+1.7
	comp=Z,0.5nm,0.7s,baz=32,slow=7.1,SNR=11						
PDAR	Pinedale Array	74.97	322	P	P	08 49 28.0	+2.3
	comp=Z,0.3nm,0.7s,baz=64,slow=4.2,SNR=3.1						

IDC 19 08:39:00.7±3.0**, 7°.36S**×**118°.93E, h0^{km}, mb3.1**/2**, mb1 3.3**/3**, mb1mx3.1**/48**, mbtmp3.2**/3**, ML3.1**/1**, Error ellipse: s-maj=309.1km s-min=28.9km az=52.0, Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	19.49	131	P	Pn	08 43 31.0	+0.4
	0.1nm,0.3s,baz=312,slow=10,SNR=2.5						
ASAR	Alice Springs	21.67	140	P	P	08 43 51.9	-1.2
	0.1nm,0.3s,baz=321,slow=8.8,SNR=1.9						
MKAR	Makanchi Array	62.97	333	P	P	08 49 29.2	0.0
	0.3nm,0.5s,baz=136,slow=8.0,SNR=4.4						

*TAP **19** 08:50:10.7, 24°.00N×121°.79E, h52^{km}, ML3.2, C*

*JMA **19** 08:50:11.7±0.1, 24°.24N×121°.82E, h16^{km}, M2.6*

ISC 19 08:50:10.7±1.2**, 24°.00N**±0°.02×**121°.77E**±0°.02**, h58^{km}**±5^{km}**, n100, σ1^{s}29**/194**, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HWA	Hwalien	0.15	260	*e*P	Pn	08 50 20.0	+0.4
	baz=262						
HWA				*e*S	Sn	08 50 27.1	+1.0
	baz=262						
TWD	Chiawan	0.18	296	*i* P	Pn	08 50 19.6	-0.2
	baz=297						
TWD				S	Sn	08 50 26.2	-0.1
	baz=297						
NACB	Ninganchiao	0.23	317	*i* P	Pn	08 50 20.0	-0.1
	baz=315						
NACB				S	Sn	08 50 27.1	+0.2
	baz=315						
ETLH	Xiulin Townshi	0.33	308	*i* P	Pn	08 50 20.9	-0.1
	baz=306						
ETLH				*e*S	Sn	08 50 28.4	0.0
	baz=306						
ESL	Shilin	0.36	239	*e*P	Pn	08 50 20.7	-0.4
	baz=240						
ESL				*e*S	Sn	08 50 27.7	-0.9
	baz=240						
ENA	Nanau	0.42	356	*i* P	Pn	08 50 21.7	0.0
	baz=355						
ENA				S	Sn	08 50 29.8	+0.2
	baz=355						
EWUT	Wuta	0.44	1	*i* P	Pn	08 50 21.7	-0.2
	baz=358						
EWUT				*e*S	Sn	08 50 30.4	+0.4
	baz=358						
EGFH	Guangfu	0.46	223	*e*P	Pn	08 50 21.6	-0.5
	baz=225						
EGFH				*e*S	Sn	08 50 29.7	-0.5
	baz=225						
WHF	Hehuan Shan	0.48	287	*i* P	Pn	08 50 22.8	0.0
	baz=287						
WHF				S	Sn	08 50 31.5	0.0
	baz=287						
FUSS	Fushou	0.54	297	P	Pn	08 50 23.6	+0.4
	baz=296						
FUSS				*e*S	Sn	08 50 32.7	+0.5
	baz=296						
CHGB	Renai	0.55	276	P	Pn	08 50 23.6	+0.4
	baz=276						
CHGB				*e*S	Sn	08 50 32.3	0.0
	baz=276						
NNSB	Datong	0.55	320	P	Pn	08 50 23.3	+0.1
	baz=319						
NNSB				S	Sn	08 50 32.1	-0.1
	baz=319						
NNSH	Datong	0.55	320	P	Pn	08 50 23.4	+0.2
	baz=319						
NNSH				*e*S	Sn	08 50 32.2	0.0
	baz=319						
NNS	Nan Shan	0.57	320	*e*P	Pn	08 50 23.5	+0.1
	baz=319						
NNS				S	Sn	08 50 32.6	0.0
	baz=319						
HGSD	Ruisui	0.60	212	*e*P	Pn	08 50 23.6	0.0
	baz=213						
HGSD				S	Sn	08 50 33.4	+0.4
	baz=213						
TWC	Suao	0.61	7	*i* P	Pn	08 50 24.2	+0.5
	baz=6.0						
TWC				S	Sn	08 50 33.9	+0.8
	baz=6.0						
TDCB	Techi	0.61	294	P	Pn	08 50 24.4	+0.5
	baz=293						
TDCB				*e*S	Sn	08 50 33.5	-0.1
	baz=293						
VWDT	VWDT	0.63	247	*e*P	Pn	08 50 24.3	+0.4
	baz=247						
VWDT				*e*S	Sn	08 50 33.7	+0.1
	baz=247						
NDS	Dongshan	0.63	356	*e*P	Pn	08 50 24.4	+0.4
	baz=354						
NDS				*e*S	Sn	08 50 34.6	+1.0
	baz=354						
NDT	Datong Townshi	0.64	339	*e*P	Pn	08 50 24.7	+0.6
	baz=337						
NDT				*e*S	Sn	08 50 34.0	0.0
	baz=337						
EHY	Hungye	0.64	220	*e*P	Pn	08 50 23.4	-0.7
	baz=220						
EHY				*e*S	Sn	08 50 32.9	-1.0
	baz=220						
ENTT	Nioudou	0.66	344	*e*P	Pn	08 50 24.8	+0.4
	baz=343						
ENTT				*e*S	Sn	08 50 34.9	+0.6
	baz=343						
TWE	Neicheng	0.72	353	P	Pn	08 50 25.7	+0.6
	baz=352						
TWE				*e*S	Sn	08 50 36.7	+1.1
	baz=352						
WPL	Puli Township	0.74	271	*e*P	Pn	08 50 25.9	+0.5
	baz=271						
WPL				*e*S	Sn	08 50 37.0	+0.9
	baz=271						
YULB	Yu-li	0.75	216	*e*P	Pn	08 50 25.1	-0.3
	baz=216						
YULB				*e*S	Sn	08 50 35.0	-1.2
	baz=216						
YHNB	Yeheng	0.76	332	*e*P	Pn	08 50 26.0	+0.4
	baz=330						
YHNB				*e*S	Sn	08 50 36.5	0.0
	baz=330						
NSK	Sanguang	0.77	331	*e*P	Pn	08 50 26.1	+0.4
	baz=330						
NSK				*e*S	Sn	08 50 36.9	+0.1
	baz=330						
DPDB	Guoxing	0.77	272	*e*P	Pn	08 50 27.8	+2.0
	baz=272						
DPDB				*e*S	Sn	08 50 37.1	+0.3
	baz=272						
EYUL	Yuli	0.77	212	*e*P	Pn	08 50 25.9	+0.2
	baz=213						
EYUL				*e*S	Sn	08 50 37.3	+0.6
	baz=213						
SSLB	Suanglung	0.78	254	*e*P	Pn	08 50 25.7	-0.1
	baz=254						
SSLB				*e*S	Sn	08 50 36.8	-0.1
	baz=254						
TWF1	Yuli	0.78	214	*e*P	Pn	08 50 25.2	-0.7
	baz=214						
TWF1				*e*S	Sn	08 50 35.0	-1.9
	baz=214						
WCS	Beigang Elemen	0.79	274	*e*P	Pn	08 50 27.0	+1.1
	baz=274						
WCS				*e*S	Sn	08 50 37.2	+0.2
	baz=274						
WHP	Taichung City	0.80	290	*e*P	Pn	08 50 27.2	+1.0
	baz=290						
WHP				*e*S	Sn	08 50 38.2	+0.7
	baz=290						
SMLT	Sun Moon Lake	0.81	262	*e*P	Pn	08 50 26.9	+0.7
	baz=261						
SMLT				*e*S	Sn	08 50 39.3	+1.7
	baz=261						
NWLT	Wulai	0.81	342	*e*P	Pn	08 50 26.5	+0.2
	baz=341						
NWLT				*e*S	Sn	08 50 37.8	+0.2
	baz=341						
TYC	Yuchr	0.84	263	*e*P	Pn	08 50 27.5	+0.9
	baz=263						
TYC				*e*S	Sn	08 50 39.0	+0.7
	baz=263						
NTC	Toucheng	0.85	4	*e*P	Pn	08 50 27.5	+0.8
	baz=2.0						
NTC				*e*S	Sn	08 50 38.6	+0.2
	baz=2.0						
EGS		0.85	10	*e*P	Pn	08 50 28.3	+1.6
	baz=9.0						
EGS				*e*S	Sn	08 50 40.4	+1.9
	baz=9.0						
WHYT	Xinyi Township	0.89	250	*e*P	Pn	08 50 28.5	+1.2
	baz=250						

WHYT				*e*S	**Sn**	**08 50 41.3**	**+1.8**
	baz=250						
YUS	**Yu-Shan**	**0.91**	**236**	*e*P	**Pn**	**08 50 28.3**	**+0.4**
	baz=236						
YUS				*e*S	**Sn**	**08 50 40.0**	**-0.5**
	baz=236						
FULB	**Fuli**	**0.91**	**209**	*e*P	**Pn**	**08 50 27.8**	**+0.2**
	baz=209						
FULB				*e*S	**Sn**	**08 50 40.6**	**+0.6**
	baz=209						
LIOB	**Emei**	**0.94**	**313**	*e*P	**Pn**	**08 50 29.4**	**+1.5**
	baz=312						
LIOB				*e*S	**Sn**	**08 50 42.1**	**+1.6**
	baz=312						
NSTT	**Nanjuang**	**0.94**	**312**	*e*P	**Pn**	**08 50 29.4**	**+1.5**
	baz=311						
NSTT				*e*S	**Sn**	**08 50 42.4**	**+1.8**
	baz=311						
NJD	**Zhudong**	**0.96**	**320**	*e*P	**Pn**	**08 50 29.3**	**+1.2**
	baz=319						
NJD				*e*S	**Sn**	**08 50 43.5**	**+2.6**
	baz=319						
TIPB	**Shuangxi**	**0.97**	**3**	*e*P	**Pn**	**08 50 29.4**	**+1.2**
	baz=2.0						
TIPB				*e*S	**Sn**	**08 50 42.7**	**+1.5**
	baz=2.0						
WJS	**Zhushan**	**0.97**	**260**	*e*P	**Pn**	**08 50 30.1**	**+1.8**
	baz=259						
WJS				*e*S	**Sn**	**08 50 44.0**	**+2.8**
	baz=259						
CHKT	**Chengkung**	**0.97**	**203**	*e*S	**Sn**	**08 50 39.7**	**-1.6**
	baz=203						
TWQ1	**Liyutan**	**0.97**	**291**	*e*P	**Pn**	**08 50 29.2**	**+0.9**
	baz=290						
TWQ1				*e*S	**Sn**	**08 50 43.0**	**+1.7**
	baz=290						
WWF	**Wufeng**	**0.98**	**273**	*e*P	**Pn**	**08 50 28.4**	**0.0**
	baz=272						
WWF				*e*S	**Sn**	**08 50 44.8**	**+3.3**
	baz=272						
NHDH	**Xindian Distri**	**0.98**	**347**	*e*P	**Pn**	**08 50 29.1**	**+0.7**
	baz=346						
NHDH				*e*S	**Sn**	**08 50 42.0**	**+0.5**
	baz=346						
TWA	**Mucha**	**0.99**	**350**	*e*P	**Pn**	**08 50 29.5**	**+1.0**
	baz=349						
TWA				*e*S	**Sn**	**08 50 42.9**	**+1.2**
	baz=349						
TATO	**Taipei**	**1.00**	**345**	*e*P	**Pn**	**08 50 28.8**	**+0.1**
	baz=344						
TATO				*e*S	**Sn**	**08 50 42.8**	**+0.8**
	baz=344						
WNT	**Mingjian**	**1.00**	**263**	*e*P	**Pn**	**08 50 30.2**	**+1.6**
	baz=263						
WNT				*e*S	**Sn**	**08 50 44.2**	**+2.2**
	baz=263						
WNT1	**Nantou City**	**1.00**	**265**	*e*P	**Pn**	**08 50 30.3**	**+1.6**
	baz=265						
WNT1				*e*S	**Sn**	**08 50 44.9**	**+2.9**
	baz=265						
NSY	**Sanyi**	**1.01**	**294**	*e*P	**Pn**	**08 50 29.8**	**+1.0**
	baz=294						
NSY				*e*S	**Sn**	**08 50 43.1**	**+0.9**
	baz=294						
TCU	**Taichung**	**1.01**	**278**	*e*P	**Pn**	**08 50 30.2**	**+1.4**
	baz=278						
TCU				*e*S	**Sn**	**08 50 44.1**	**+1.9**
	baz=278						
ALS	**Alishan**	**1.01**	**241**	*e*P	**Pn**	**08 50 30.1**	**+1.0**
	baz=241						
ALS				*e*S	**Sn**	**08 50 44.0**	**+1.4**
	baz=241						
TWB1	**Santiao Chiao**	**1.02**	**11**	*e*P	**Pn**	**08 50 30.5**	**+1.6**
	baz=10.0						
TWB1				*e*S	**Sn**	**08 50 44.2**	**+1.8**
	baz=10.0						
HSN1	**Hsinchu**	**1.03**	**319**	*e*P	**Pn**	**08 50 29.6**	**+0.6**
	baz=317						
HSN1				*e*S	**Sn**	**08 50 45.2**	**+2.5**
	baz=317						
NMLH	**Miaoli**	**1.04**	**301**	*e*P	**Pn**	**08 50 29.4**	**+0.2**
	baz=300						
NMLH				*e*S	**Sn**	**08 50 44.6**	**+1.8**
	baz=300						
NWF	**Wu-fen Shan**	**1.06**	**1**	*e*P	**Pn**	**08 50 29.8**	**+0.2**
	baz=359						
NWF				*e*S	**Sn**	**08 50 43.1**	**-0.4**
	baz=359						
WFSB	**Wu-fen Shan**	**1.06**	**1**	*e*P	**Pn**	**08 50 29.7**	**+0.2**
	baz=359						
WFSB				*e*S	**Sn**	**08 50 45.2**	**+1.8**
	baz=359						
ELDTW	**Lidau**	**1.06**	**221**	*e*P	**Pn**	**08 50 28.0**	**-1.6**
	baz=220						
ELDTW				*e*S	**Sn**	**08 50 44.0**	**+0.3**
	baz=220						
CHN5	**Tsauling**	**1.08**	**248**	*e*P	**Pn**	**08 50 31.4**	**+1.7**
	baz=248						
CHN5				*e*S	**Sn**	**08 50 45.9**	**+1.9**
	baz=248						
NTY	**Taoyuan**	**1.08**	**337**	*e*S	**Sn**	**08 50 45.7**	**+1.9**
	baz=336						
WDJ	**Dajia District**	**1.09**	**289**	*e*P	**Pn**	**08 50 30.8**	**+1.0**
	baz=288						
WDJ				*e*S	**Sn**	**08 50 44.7**	**+0.7**
	baz=288						
NCU	**National Centr**	**1.10**	**331**	*e*S	**Sn**	**08 50 45.2**	**+0.9**
	baz=330						
EDH	**Donghe**	**1.11**	**203**	*e*P	**Pn**	**08 50 29.9**	**-0.2**
	baz=203						
EDH				*e*S	**Sn**	**08 50 43.3**	**-1.2**
	baz=203						
WCHH	**Zhanghua**	**1.11**	**274**	*e*P	**Pn**	**08 50 30.7**	**+0.6**
	baz=274						
WCHH				*e*S	**Sn**	**08 50 45.0**	**+0.4**
	baz=274						
TWS1	**Kuangyinshan**	**1.14**	**344**	*e*P	**Pn**	**08 50 31.0**	**+0.5**
	baz=343						
TWS1				*e*S	**Sn**	**08 50 45.8**	**+0.6**
	baz=343						
WGK	**Gukeng**	**1.15**	**254**	*e*P	**Pn**	**08 50 32.8**	**+2.1**
	baz=254						
WGK				*e*S	**Sn**	**08 50 49.1**	**+3.6**
	baz=254						
YM01	**YM01**	**1.15**	**351**	*e*P	**Pn**	**08 50 31.4**	**+0.7**
	baz=350						
YM01				*e*S	**Sn**	**08 50 45.4**	**-0.2**
	baz=350						
WDLH	**Douliu**	**1.17**	**255**	*e*P	**Pn**	**08 50 32.7**	**+1.8**
	baz=255						
WDLH				*e*S	**Sn**	**08 50 46.7**	**+0.8**
	baz=255						
YOJ	**Yonaguni jima**	**1.22**	**68**	P	**Pn**	**08 50 31.7**	**+0.1**
YOJ				*e*S	**Sn**	**08 50 47.0**	**-0.2**
STYT	**Tauyuan**	**1.25**	**228**	*e*P	**Pn**	**08 50 33.8**	**+1.8**
	baz=228						
STYT				*e*S	**Sn**	**08 50 49.8**	**+1.8**
	baz=228						
TPUB	**Ta-pu**	**1.26**	**236**	*e*P	**Pn**	**08 50 33.6**	**+1.5**
	baz=236						
TPUB				*e*S	**Sn**	**08 50 48.3**	**+0.2**
	baz=236						
CHN4	**Tsaushan**	**1.26**	**239**	*e*P	**Pn**	**08 50 33.6**	**+1.5**
	baz=239						
CHN4				*e*S	**Sn**	**08 50 48.5**	**+0.4**
	baz=239						
WTP	**Ta-pu**	**1.30**	**235**	*e*P	**Pn**	**08 50 34.2**	**+1.5**
	baz=234						
WTP				*e*S	**Sn**	**08 50 48.2**	**-0.9**
	baz=234						
TWGBT	**Beinan**	**1.34**	**208**	*e*P	**Pn**	**08 50 32.0**	**-1.2**
	baz=208						
TWGBT				*e*S	**Sn**	**08 50 48.9**	**-1.1**
	baz=208						
TWK	**Hsinying**	**1.39**	**238**	*e*P	**Pn**	**08 50 34.1**	**+0.3**
	baz=238						
TWK				*e*S	**Sn**	**08 50 52.9**	**+1.7**
	baz=238						
CHN1	**Nanshi**	**1.40**	**235**	*e*P	**Pn**	**08 50 35.7**	**+1.7**
	baz=235						
CHN1				*e*S	**Sn**	**08 50 53.5**	**+2.0**
	baz=235						
SGST	**Jiashian**	**1.42**	**230**	*e*P	**Pn**	**08 50 35.9**	**+1.6**
	baz=230						
SGST				*e*S	**Sn**	**08 50 53.9**	**+1.9**
	baz=230						
MASBT	**Mashibuluo**	**1.73**	**217**	*e*P	**Pn**	**08 50 40.5**	**+1.9**
	baz=217						
MASBT				*e*S	**Sn**	**08 51 00.5**	**+0.9**
	baz=217						
IRIF	**Iriomote-Funau**	**1.82**	**79**	*e*S	**Sn**	**08 51 02.0**	**+0.4**
HATJ	**Hateruma jima**	**1.86**	**88**	P	**Pn**	**08 50 40.7**	**+0.5**
HATJ				*e*S	**Sn**	**08 51 03.2**	**+0.6**
SCZT	**Fangliau**	**1.94**	**213**	*e*P	**Pn**	**08 50 42.5**	**+1.2**
	baz=213						
SCZT				*e*S	**Sn**	**08 51 08.0**	**+3.5**
	baz=213						
JKRS	**Kuro-shima**	**2.06**	**83**	P	**Pn**	**08 50 44.1**	**+1.2**
JKRS				*e*S	**Sn**	**08 51 09.1**	**+1.6**
PHUB	**P'eng-hu**	**2.07**	**257**	*e*P	**Pn**	**08 50 43.0**	**-0.1**
	baz=256						
PHUB				*e*S	**Sn**	**08 51 06.1**	**-1.7**
	baz=256						
JIJ	**Ishigaki jima**	**2.20**	**80**	P	**Pn**	**08 50 44.8**	**0.0**
JIJ				S	**Sn**	**08 51 09.8**	**-1.0**
VWUC	**VWUC**	**2.33**	**295**	*e*P	**Pn**	**08 50 46.0**	**-0.6**
	baz=294						
VWUC				*e*S	**Sn**	**08 51 12.0**	**-2.2**
	baz=294						
PTTC	**Pingtan**	**2.35**	**310**	*e*P	**Pn**	**08 50 46.3**	**-0.6**
	baz=309						
PTTC				*e*S	**Sn**	**08 51 12.8**	**-1.8**
	baz=309						
JISG	**Ishigakijimahi**	**2.39**	**75**	P	**Pn**	**08 50 47.4**	**0.0**
PTMZ	**Houxiangcun**	**2.62**	**294**	*e*P	**Pn**	**08 50 49.9**	**-0.8**
	baz=293						
PTMZ				*e*S	**Sn**	**08 51 19.1**	**-2.2**
	baz=293						
MATB	**Ma-tsu**	**2.70**	**323**	*e*P	**Pn**	**08 50 51.4**	**-0.3**
	baz=321						
MATB				*e*S	**Sn**	**08 51 20.8**	**-2.4**
	baz=321						
JTJ	**Tarama**	**2.75**	**76**	S	**Sn**	**08 51 24.3**	**-0.1**
KNMB	**Chin-men Tao**	**3.12**	**279**	*e*P	**Pn**	**08 50 56.5**	**-1.0**
	baz=278						
KNMB				*e*S	**Sn**	**08 51 30.0**	**-3.5**
	baz=278						
LYJJ	**Jianjiangzhen**	**3.12**	**325**	*e*P	**Pn**	**08 50 56.4**	**-1.0**
	baz=324						
LYJJ				*e*S	**Sn**	**08 51 31.7**	**-1.8**
	baz=324						
MHZQ	**Yeshan**	**3.25**	**311**	*e*P	**Pn**	**08 50 58.5**	**-0.6**
	baz=309						
MHZQ				*e*S	**Sn**	**08 51 34.4**	**-2.2**
	baz=309						
XPSS	**Dashiqiu**	**3.25**	**334**	*e*P	**Pn**	**08 50 58.6**	**-0.5**
	baz=333						
XPSS				*e*S	**Sn**	**08 51 33.1**	**-3.5**
	baz=333						
AXDP	**Jialang**	**3.58**	**285**	*e*P	**Pn**	**08 51 03.1**	**-0.6**
	baz=284						
AXDP				*e*S	**Sn**	**08 51 40.7**	**-3.9**
	baz=284						

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*NDI **19** 09:18:15.6±3.9, 26°.74N×96°.93E, h15^{km}±71^{km}, ML3.7, mb4.0(NEIC)*

*NEIC **19** 09:18:19.6±1.8, 26°.6N±0°.1×96°.7E±0°.1, h57^{km}±11^{km}, mb4.0/11, Error ellipse: s-maj=20.7km s-min=11.4km az=57.0*

*IDC **19** 09:18:19.2±3.5, 26°.67N×96°.97E, h52^{km}±33^{km}, mb3.8/16, mb1 3.9/17, mb1mx3.7/40, mbtmp4.0/17, ML4.0/1, MS3.1/5, Ms1 3.1/5, ms1mx2.8/56, Error ellipse: s-maj=25.9km s-min=13.0km az=53.0*

ISC 19 09:18:14.6±0.6**, 26°.65N**±0°.05×**96°.87E**±0°.05**, h15^{km}, n68, σ1^{s}44**/85**, mb4.1**/26**, MS3.1**/4**, Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
LKP	**Lekhapani**	**1.14**	**307**	*e*P	**Pg**	**09 18 38.0**	**+1.4**
LKP				*e*S	**Sg**	**09 18 52.8**	**+1.2**
LKP				IAML		09 19 01.9	
	comp=N,4μm,0.5s						
LKP				IAML		09 19 02.1	
	comp=E,5μm,0.4s						
MOKO	**MOKOCHONG**	**2.13**	**262**	*e*P	**Pb**	**09 18 53.8**	**+0.8**
MOKO				*e*S	**Sb**	**09 19 18.1**	**-1.3**
MOKO				IAML		09 19 24.4	
	comp=N,734nm,0.6s						
MOKO				IAML		09 19 26.1	
	comp=E,720nm,0.6s						
KOHI	**KOHIMA**	**2.65**	**250**	*e*P	**Pb**	**09 19 02.0**	**+0.2**
KOHI				*e*S	**Sb**	**09 19 35.4**	**+1.2**
KOHI				IAML		09 19 40.2	
	comp=N,258nm,0.3s						
KOHI				IAML		09 19 42.8	
	comp=E,389nm,0.8s						
ZIRO	**ZIRO**	**2.83**	**289**	*e*P	**Pn**	**09 19 01.8**	**+2.3**
ZIRO				*e*S	**Sn**	**09 19 33.2**	**-0.2**
ZIRO				IAML		09 19 39.6	
	comp=N,2μm,0.2s						
ZIRO				IAML		09 19 40.0	
	comp=E,2μm,0.8s						
TEZP	**TEZPUR**	**3.64**	**270**	*e*P	**Pn**	**09 19 13.3**	**+2.9**
TEZP				*e*S	**Sn**	**09 19 52.4**	**-0.7**
TEZP				IAML		09 19 58.7	
	comp=N,378nm,0.1s						
TEZP				IAML		09 19 59.2	
	comp=E,339nm,0.1s						
SHL	**Shillong**	**4.61**	**258**	*e*P	**Pn**	**09 19 25.9**	**+2.0**
SHL				*e*S	**Sn**	**09 20 17.7**	**+0.4**
SHL				IAML		09 20 22.0	
	comp=E,116nm,0.7s						
SHL				IAML		09 20 23.6	
	comp=N,261nm,0.3s						
SHL	**Shillong**	**4.61**	**258**	Pn	**Pn**	**09 19 25.6**	**+1.7**
GUWA	**GUWAHATI**	**4.66**	**266**	*e*P	**Pn**	**09 19 26.2**	**+1.7**
GUWA				*e*S	**Sn**	**09 20 16.4**	**-2.0**
GUWA				IAML		09 20 20.4	
	comp=E,100nm,0.2s						
GUWA				IAML		09 20 20.7	
	comp=N,124nm,0.4s						
SAIH	**SAIHA**	**5.44**	**221**	*e*P	**Pn**	**09 19 38.0**	**+2.7**
SAIH				*e*S	**Sn**	**09 20 36.6**	**-1.1**
SAIH				IAML		09 20 46.8	
	comp=N,40nm,1.0s						
SAIH				IAML		09 20 47.2	
	comp=E,96nm,0.8s						
LSA	**Lhasa**	**5.89**	**302**		**Pn**	**09 19 44.9**	**+3.1**
GTK	**Tadong**	**7.41**	**277**	*e*P	**Pn**	**09 20 03.3**	**+1.0**
GTK				*e*S	**Sn**	**09 21 21.2**	**-5.0**
GTK				IAML		09 21 29.5	
	comp=N,42nm,0.3s						
GTK				IAML		09 21 29.9	
	comp=E,46nm,0.4s						
TAPN	**Taplejung**	**8.20**	**277**	*e*Pn	**Pn**	**09 20 13.1**	**-0.3**
TAPN				*e*Sn	**Sn**	**09 21 45.5**	**-0.4**
	comp=E,47nm,0.4s						
CMAR	**Chiang Mai Arr**	**8.37**	**166**	P	**Pn**	**09 20 17.9**	**+2.4**
	comp=E,0.5nm,0.3s,baz=340,slow=13,SNR=2.1						
CMAR				S	**Sn**	**09 21 48.3**	**-1.5**
	comp=E,0.5nm,0.3s,baz=340,slow=26,SNR=1.3						
CMAR				Lg	Lg	09 22 41.8	
	comp=E,0.5nm,0.3s,baz=346,slow=26,SNR=1.4						
CMAR				LR	LR	09 24 08.6	
	comp=E,32nm,18.8s,baz=8.0,slow=42						
ODAN	**Odare**	**8.48**	**274**	*e*Pn	**Pn**	**09 20 18.5**	**+1.4**
ODAN				*e*Sn	**Sn**	**09 21 50.5**	**-2.1**
	comp=E,64nm,0.6s						
RAMN	**Ramite**	**9.18**	**274**	*e*Pn	**Pn**	**09 20 27.2**	**+0.4**
RAMN				*e*Sn	**Sn**	**09 22 09.6**	**-0.4**
	comp=E,38nm,0.5s						
GUN	**Gumba**	**9.86**	**280**	*e*Pn	**Pn**	**09 20 36.6**	**+0.5**
GUN				*e*Sn	**Sn**	**09 22 24.3**	**-2.5**
	comp=E,85nm,0.6s						
PKI	**Pulchoki**	**10.25**	**278**	*e*Pn	**Pn**	**09 20 42.0**	**+0.5**
PKI				*e*Sn	**Sn**	**09 22 34.1**	**-2.3**
	comp=E,47nm,0.7s						
PKIN	**Phulchoki**	**10.26**	**278**	*e*Pn	**Pn**	**09 20 42.0**	**+0.4**
PKIN				*e*Sn	**Sn**	**09 22 34.7**	**-1.9**
	comp=E,30nm,0.5s						
KKN	**Kakani**	**10.38**	**279**	*e*Pn	**Pn**	**09 20 43.5**	**+0.3**
KKN				*e*Sn	**Sn**	**09 22 36.3**	**-3.1**
DMN	**Daman**	**10.52**	**278**	*e*Pn	**Pn**	**09 20 45.1**	**-0.1**
DMN				*e*Sn	**Sn**	**09 22 40.4**	**-2.6**
	comp=E,22nm,0.6s						
GKN	**Gorkha**	**10.96**	**280**	*e*Pn	**Pn**	**09 20 50.6**	**-0.5**
GKN				*e*Sn	**Sn**	**09 22 50.8**	**-2.8**
	comp=E,33nm,0.5s						
NIL	**Nilore**	**21.56**	**295**	P	**P**	**09 23 02.9**	**-0.7**
NIL				IAmb	IAmb	09 23 08.7	
	comp=Z,8.0nm,0.6s						
SHLS	**Shalkode**	**21.73**	**324**	*e*P	**P**	**09 23 03.8**	**-1.6**
	baz=324						
SATY	**Saty**	**22.23**	**322**	*e*P	**P**	**09 23 11.8**	**+1.0**
	baz=322						
KPKS	**Kokpek**	**22.35**	**323**	*e*P	**P**	**09 23 12.7**	**+0.6**
	comp=Z,11nm,1.2s,baz=323						
SONM	**Songino Array**	**22.44**	**17**	P	**P**	**09 23 12.7**	**-0.3**
	comp=Z,1.4nm,0.7s,baz=203,slow=14,SNR=12						
SONM	**Songino Array**	**22.44**	**17**	P	**P**	**09 23 12.8**	**-0.1**
ZSN	**Zaisan**	**22.82**	**339**	*e*P	**P**	**09 23 17.7**	**+0.8**
	baz=338						
TNSS	**Tian-Shan**	**23.03**	**320**	*e*P	**P**	**09 23 19.4**	**-0.2**
	baz=320						
MDOK	**Medeo**	**23.06**	**321**	*e*P	**P**	**09 23 20.7**	**+1.2**
	baz=321						
AAA	**Alma-Ata**	**23.16**	**321**	*e*P	**P**	**09 23 21.5**	**+0.9**
	comp=Z,12nm,0.5s,baz=320						
MK31	**Makanchi Array**	**23.19**	**334**	P	**P**	**09 23 20.9**	**+0.2**
MK31				IAmb	IAmb	09 23 23.5	
	comp=Z,2.4nm,0.8s						
MKAR	**Makanchi Array**	**23.19**	**334**	P	**P**	**09 23 21.2**	**+0.5**
	comp=Z,1.0nm,0.4s,baz=140,slow=9.6,SNR=27						
MKAR	**Makanchi Array**	**23.19**	**334**	P	**P**	**09 23 21.5**	**+0.7**
MAKZ	**Makanchi**	**23.32**	**334**	P	**P**	**09 23 21.8**	**-0.3**
MAKZ				IAmb	IAmb	09 23 24.2	
	comp=Z,4.9nm,1.1s						
TDK	**Taldyqorghan**	**23.56**	**326**	*e*P	**P**	**09 23 25.3**	**+0.8**
	baz=326						
KUU	**Kurty**	**23.92**	**321**	*e*P	**P**	**09 23 28.4**	**+0.4**
	comp=Z,3.9nm,0.6s,baz=321						
AAK	**Ala-Archa**	**24.25**	**317**	P	**P**	**09 23 33.4**	**+2.2**
	comp=Z,3.8nm,0.9s,baz=133,slow=4.2,SNR=9.9						
AAK	**Ala-Archa**	**24.25**	**317**	P	**P**	**09 23 31.5**	**+0.3**
AAK				IAmb	IAmb	09 23 35.1	
	comp=Z,5.3nm,1.0s						
PALK	**Pallekele**	**24.65**	**221**	LR	LR	09 34 49.9	
	comp=Z,27nm,19.5s,baz=146,slow=40						
KBL	**Kabul**	**25.16**	**295**	P	**P**	**09 23 37.3**	**-2.3**
TLY	**Talaya**	**25.52**	**10**	LR	LR	09 34 44.6	
	comp=Z,42nm,18.5s,baz=194,slow=39						
BTLS	**Baital**	**25.92**	**321**	*e*P	**P**	**09 23 46.5**	**+0.5**
	baz=321						
SEM	**Semipalatinsk**	**26.93**	**336**	*e*P	**P**	**09 23 55.4**	**-0.1**
	baz=336						
KURBB	**Kurchatov Arra**	**27.75**	**335**	P	**P**	**09 24 03.4**	**+0.9**
	comp=Z,0.9nm,0.6s,baz=146,slow=10.0,SNR=8.8						
KURK	**Kurchatov**	**27.79**	**335**	P	**P**	**09 24 03.6**	**+0.7**
KURK				IAmb	IAmb	09 24 23.4	
	comp=Z,2.4nm,0.7s						
JOW	**Kunigami**	**28.01**	**82**	LR	LR	09 35 56.3	
	comp=Z,77nm,21.9s,baz=11,slow=38						
ZALV	**Zalesovo Beam**	**28.70**	**345**	P	**P**	**09 24 11.4**	**+0.5**
	comp=Z,0.9nm,0.5s,baz=160,slow=7.9,SNR=4.9						
BRZS	**Berezniki**	**29.81**	**328**	*e*P	**P**	**09 24 22.0**	**+1.1**
	baz=328						
BRVK	**Borovoye**	**32.99**	**330**	P	**P**	**09 24 50.3**	**+1.5**
BRVK				IAmb	IAmb	09 24 51.6	
	comp=Z,5.0nm,1.2s						
ABKAR	**Akbulak array**	**36.32**	**318**	P	**P**	**09 25 18.2**	**+0.6**
ABKAR				IAmb	IAmb	09 25 22.4	
	comp=Z,5.0nm,1.5s						
ABKAR	**Akbulak array**	**36.32**	**318**	P	**P**	**09 25 18.5**	**+0.9**
MJAR	**Matsushiro Arr**	**36.33**	**64**	P	**P**	**09 25 17.6**	**-0.4**
	comp=Z,2.4nm,0.8s,baz=272,slow=11,SNR=2.5						
BELG	**Belogornoye**	**44.72**	**319**	LR	LR	09 48 54.5	
	comp=Z,61nm,19.2s,baz=349,slow=41						
KBZ	**Khabaz**	**46.46**	**306**	P	**P**	**09 26 41.4**	**+0.5**
	comp=Z,1.3nm,0.7s,baz=141,slow=11,SNR=3.6						
BRTR	**Keskin Array B**	**53.50**	**301**	P	**P**	**09 27 34.6**	**0.0**
	comp=Z,3.2nm,0.8s,baz=112,slow=8.7,SNR=8.5						
AKASG	**Malin Array Be**	**55.89**	**315**	P	**P**	**09 27 50.0**	**-1.7**
	comp=Z,1.1nm,0.5s,baz=78,slow=6.2,SNR=4.2						
FINES	**FINESS Array B**	**57.81**	**328**	P	**P**	**09 28 05.4**	**+0.3**
	comp=Z,2.5nm,0.9s,baz=86,slow=12,SNR=5.1						
FINES				PcP	**PcP**	**09 28 57.3**	**-0.3**
	comp=Z,1.0nm,0.7s,baz=119,slow=4.9,SNR=3.8						
ARCES	**ARCESS Array B**	**58.79**	**337**	P	**P**	**09 28 13.5**	**+1.7**
	comp=Z,6.8nm,1.0s,baz=95,slow=8.2,SNR=2.4						
ARCES				PcP	**PcP**	**09 29 01.4**	**0.0**
	comp=Z,6.0nm,1.1s,baz=81,slow=5.6,SNR=1.3						
WRA	**Warramunga Arr**	**58.87**	**138**	P	**P**	**09 28 12.6**	**-0.4**
	comp=Z,1.5nm,0.5s,baz=328,slow=7.6,SNR=29						
WRA	**Warramunga Arr**	**58.87**	**138**	P	**P**	**09 28 12.4**	**-0.6**
ASAR	**Alice Springs**	**61.51**	**141**	P	**P**	**09 28 30.9**	**-0.2**
	comp=Z,0.5nm,0.4s,baz=324,slow=6.8,SNR=14						
NB2	**NORSAR Subarra**	**65.00**	**328**	P	**P**	**09 28 53.5**	**-0.3**
	comp=Z,1.3nm,0.6s,baz=80,slow=6.5						
NOA	**NORSAR Array B**	**65.00**	**328**	P	**P**	**09 28 53.5**	**-0.3**
	comp=Z,35nm,0.6s,baz=81,slow=6.6,SNR=6.6						
GERES	**GERESS Array B**	**66.09**	**314**	P	**P**	**09 29 01.2**	**0.0**
	comp=Z,0.8nm,0.4s,baz=62,slow=6.6,SNR=5.7						
YKA	**Yellowknife Ar**	**87.67**	**14**	P	**P**	**09 31 01.1**	**-1.2**
	comp=Z,0.5nm,0.9s,baz=330,slow=4.0,SNR=6.7						
TORD	**Torodi Ar. Bea**	**88.73**	**284**	P	**P**	**09 31 08.2**	**0.0**
	comp=Z,0.2nm,0.4s,baz=91,slow=3.9,SNR=3.7						
TXAR	**Lajitas Array**	**120.96**	**21**	PKP	**PKPdf**	**09 37 05.6**	**-1.5**
	comp=Z,0.2nm,0.5s,baz=2.9,slow=3.6,SNR=1.5						

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*NNC **19** 09:25:33.2±0.6, 51°.22N×75°.04E, h0^{km}, mb3.1, mpv2.7, Error ellipse: s-maj=14.4km s-min=3.9km az=30.0, Suspected Mining explosion.*

*IDC **19** 09:25:38.8±3.7, 51°.55N×75°.83E, h0^{km}, mb1 3.0/2, mb1mx2.8/45, mbtmp3.0/2, ML2.6/2, Error ellipse: s-maj=29.6km s-min=24.5km az=94.0*

ISC 19 09:25:37.5±1.3**, 51°.5N**±0°.1×**75°.72E**±0°.09**, h0^{km}, n8, σ1^{s}08**/8**, 4C-2D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**1.96**	**114**	Pg	**Pb**	**09 26 13.7**	**-0.4**
	0.4nm,0.3s,baz=303,slow=18,SNR=23						
KURBB				Lg	Lg	09 26 41.6	
	0.2nm,0.3s,baz=302,slow=34,SNR=4.2						
KURBB	**Kurchatov Arra**	**1.96**	**114**	⇓Pg	**Pg**	**09 26 15.3**	**+0.2**
	1.6nm,0.2s						
KURBB				⇑Lg	Lg	09 26 45.1	
	33nm,0.6s						
BRVK	**Borovoye**	**3.70**	**298**	⇑Pg	**Pn**	**09 26 35.9**	**+0.1**
	1.6nm,0.5s						
BRVK				⇑Lg	Lg	09 27 23.4	
	11nm,0.6s						
I46RU	**ZALESOVO INFRA**	**6.07**	**62**	*i*		10 04 50.0	
	baz=249,slow=301,SNR=2.9						
ZALV	**Zalesovo Beam**	**6.07**	**62**	Pn	**Pn**	**09 27 08.4**	**+0.1**
	1.5nm,0.3s,baz=255,slow=14,SNR=8.1						
ZALV				Lg	Lg	09 28 49.7	
	baz=250,slow=30,SNR=1.5						
MAKZ	**Makanchi**	**6.21**	**136**	⇑Sn	**Sn**	**09 28 22.1**	**+0.1**
	1.0nm,0.6s						
MAKZ				⇓Lg	Lg	09 28 56.6	
	5.9nm,0.8s						
MK31	**Makanchi Array**	**6.36**	**135**	Pn	**Pn**	**09 27 10.7**	**-1.7**
	0.1nm,0.3s,baz=321,slow=14,SNR=6.3						
MK31				Sn	**Sn**	**09 28 25.9**	**+0.2**
	1.5nm,0.4s,baz=246,slow=14,SNR=26						
MK31				Lg	Lg	09 29 00.7	
	2.3nm,0.6s,baz=312,slow=28,SNR=5.9						
MKAR	**Makanchi Array**	**6.36**	**135**	Pn	**Pn**	**09 27 14.0**	**+1.7**
	0.1nm,0.3s,baz=316,slow=11,SNR=3.6						
MKAR				Lg	Lg	09 28 59.2	
	0.2nm,0.3s,baz=325,slow=27,SNR=3.4						

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*NNC **19** 09:26:09.0±1.1, 43°.62N×69°.65E, h0^{km}, mb3.6, mpv2.9, Error ellipse: s-maj=14.6km s-min=6.0km az=43.0, Suspected Mining explosion.*

*SOME **19** 09:26:08.9, 43°.72N×69°.75E*

*KRNET **19** 09:26:08.9±0.1, 43°.63N×69°.54E, mb3.2*

ISC 19 09:26:13.9±2.4**, 43°.63N**±0°.10×**69°.85E**±0°.10**, h0^{km}, n13, σ1^{s}63**/24**, 21C-2D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
BRLS	**Borolday**	**0.60**	**181**	*e*P	**Pg**	**09 26 24.6**	**-0.7**
	baz=68						
BRLS				*e*S	**Sb**	**09 26 37.1**	**+0.9**
	baz=68						
KK31	**Karatay Array**	**0.71**	**137**	⇑P	**Pg**	**09 26 24.8**	**-2.8**
	1.9nm,0.3s,baz=329,slow=20,SNR=9.3						
KK31				S	**Sg**	**09 26 36.1**	**-0.7**
	19nm,0.5s,baz=306,slow=31,SNR=57						
MNAS	**Manas**	**2.26**	**119**	⇑*i*P	**Pn**	**09 26 52.6**	**0.0**
	baz=17						
MNAS				⇑*i*S	**Sb**	**09 27 24.4**	**+0.2**
	baz=17						
TRKS	**Terek-Say**	**2.30**	**155**	⇑*i*P	**Pn**	**09 26 53.5**	**+0.2**

	baz=50						
TRKS	baz=50			⇑*i*S	**Sb**	**09 27 25.5**	**0.0**
EKS2	**Erkin-Say** baz=6.0	**3.04**	**107**	⇑*i*P	**Pn**	**09 27 03.5**	**+0.2**
EKS2	baz=6.0			⇑*i*S	**Sn**	**09 27 43.3**	**+2.9**
AML	**Almayashu** baz=15	**3.20**	**117**	⇑*i*P	**Pn**	**09 27 05.9**	**+0.1**
AML	baz=15			⇑*i*S	**Sn**	**09 27 47.4**	**+2.5**
ARSB	**Arslanbob** baz=31	**3.27**	**134**	⇑*i*P	**Pn**	**09 27 06.6**	**+0.1**
ARSB	baz=31			⇑*i*S	**Sn**	**09 27 48.3**	**+2.1**
AAK	**Ala-Archa** baz=4.0	**3.54**	**105**	⇑*i*P	**Pn**	**09 27 10.4**	**+0.1**
AAK	baz=4.0			⇑*i*S	**Sn**	**09 27 55.7**	**+2.7**
AAK	**Ala-Archa** 4.4nm,0.5s	**3.54**	**105**	⇑Pg	**Pb**	**09 27 15.5**	**-2.1**
AAK	6.3nm,0.5s			⇑Lg	Lg	09 28 06.1	
CHMS	**Chumysh** baz=98	**3.63**	**98**	⇑*e*P	**Pn**	**09 27 11.5**	**0.0**
CHMS	baz=98			⇑*i*S	**Sn**	**09 27 57.4**	**+2.3**
UCH	**Uchtor** baz=9.0	**3.70**	**111**	⇑*i*P	**Pn**	**09 27 12.9**	**+0.1**
UCH	baz=9.0			⇑*i*S	**Sn**	**09 27 59.5**	**+2.2**
ARLS	**Aral** baz=15	**3.74**	**117**	⇓*i*P	**Pn**	**09 27 13.4**	**+0.4**
ARLS	baz=15			⇓*i*S	**Sn**	**09 28 00.1**	**+2.2**
TKM2	**Tokmak 2** 2.7nm,0.7s	**4.26**	**98**	⇑Pg	**Pb**	**09 27 29.9**	**+0.2**
TKM2	4.3nm,0.5s			⇑Lg	Lg	09 28 27.3	

TEH ***19*** *10:02:10.4, 30°.77N×56°.71E, h10^{km}, ML3.5*
THR ***19*** *10:02:10.7±0.9, 30°.78N×56°.69E, h14^{km}±7^{km}, ML3.4*
ISC 19 10:02:10.5±0.9**, 30°.78N**±0°.05×**56°.69E**±0°.04**, h11**^{km}**, n26, σ1^{s}.75**/28**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHGB	**Koh Gabri**	**0.44**	**204**	*e*Pg	**Pg**	**10 02 19.2**	**0.0**
KHGB	comp=Z,99nm,0.3s			*e*		10 02 26.5	
TVBK	**TV Kerman**	**0.79**	**175**	*e*Pg	**Pg**	**10 02 26.0**	**+0.2**
TVBK	comp=Z,99nm,0.4s			*e*		10 02 40.7	
KRBR	**Kerman**	**0.80**	**175**	*e*Pg	**Pg**	**10 02 26.0**	**+0.1**
KRBR	**Kerman**	**0.80**	**175**	*e*Pg	**Pg**	**10 02 26.0**	**+0.1**
NGRK	**Negar Kerman**	**1.13**	**178**	*e*Pg	**Pg**	**10 02 32.1**	**-0.2**
NGRK	comp=Z,99nm,0.2s			*e*		10 02 50.8	
CHMN	**Cheshme madani**	**1.18**	**141**	*e*Pg	**Pb**	**10 02 31.8**	**-1.2**
CHMN	comp=Z,99nm,0.5s			*e*		10 02 54.8	
IBAF	**Bafgh**	**1.25**	**310**	*e*Pg	**Pn**	**10 02 33.6**	**-0.5**
IBAF	comp=Z,99nm,0.2s			*e*		10 02 51.7	
IMEH	**Mehriz**	**1.88**	**289**	*e*Pn	**Pb**	**10 02 44.6**	**-0.4**
IMEH	comp=Z,99nm,0.4s			*e*		10 03 12.5	
KBAM	**BAM**	**2.24**	**136**	*e*Pn	**Pb**	**10 02 49.6**	**-1.5**
KBAM	comp=Z,99nm,0.3s			*e*		10 02 52.6	
TPRV	**Parvadeh(Tabas**	**2.24**	**360**	*e*Pn	**Pb**	**10 02 49.7**	**-1.4**
TPRV	comp=Z,99nm,0.6s			*e*		10 03 29.2	
BSRN	**Basiran**	**2.40**	**60**	*e*Pn	**Pn**	**10 02 51.4**	**+1.6**
BSRN				*e*Sg	**Sg**	**10 03 26.0**	**-1.6**
BSRN	**Basiran**	**2.40**	**60**	*e*Pn	**Pn**	**10 02 51.4**	**+1.6**
YZKH	**Yazd**	**2.40**	**312**	*e*Pn	**Pb**	**10 02 52.3**	**-1.5**
YZKH				*e*Sg	**Sg**	**10 03 25.9**	**-1.9**
YZKH	comp=N,190nm,0.4s			IAML		10 03 28.5	
YZKH	**Yazd**	**2.40**	**312**	*e*Pn	**Pb**	**10 02 52.3**	**-1.5**
ICHK	**Chekchek**	**2.43**	**307**	*e*Pn	**Pb**	**10 02 53.4**	**-1.0**
ICHK	comp=Z,99nm,0.4s			*e*		10 03 30.5	
IKOO	**Kooshah**	**2.57**	**50**	*e*Pn	**Pn**	**10 02 53.9**	**+1.6**
IKOO	comp=Z,99nm,0.4s			*e*		10 03 37.8	
TKDS	**Koohdasht(Taba**	**2.85**	**7**	*e*Pn	**Pn**	**10 02 58.0**	**+2.0**
TKDS	comp=Z,99nm,0.8s			*e*		10 03 53.1	
TABS	**Tabas**	**2.89**	**7**	*e*Pn	**Pn**	**10 02 58.7**	**+2.2**
TABS	**Tabas**	**2.89**	**7**	*e*Pn	**Pn**	**10 02 58.7**	**+2.2**
NHDN	**Nehbandan**	**2.95**	**77**	*e*Pn	**Pn**	**10 02 59.3**	**+1.9**
TNSJ	**Nastanj**	**3.18**	**359**	*e*Pn	**Pn**	**10 03 03.1**	**+2.6**
TNSJ	comp=Z,99nm,0.5s			*e*		10 04 00.5	
AFRZ	**Afriz**	**3.30**	**36**	*e*Pn	**Pn**	**10 03 03.4**	**+1.2**
ANAR	**Anarak**	**3.48**	**315**	*e*Pn	**Pn**	**10 03 07.0**	**+2.3**
IMON	**Monand**	**3.49**	**46**	*e*Pn	**Pn**	**10 03 07.7**	**+2.7**
IRAM	**Ramesheh**	**3.83**	**287**	*e*Pn	**Pn**	**10 03 11.5**	**+2.0**
IZEF	**Zefreh**	**4.27**	**301**	*e*Pn	**Pn**	**10 03 18.6**	**+3.0**

IDC ***19*** *10:11:21.0±2.0, 7°.31S×154°.95E, h0^{km}, mb3.7/6, mb1 3.9/6, mb1mx3.7/28, mbtmp3.6/6, Error ellipse: s-maj=79.3km s-min=27.3km az=128.0*
ISC 19 10:11:25.6±1.8**, 7°.4S**±0°.3×**155°.0E**±0°.4**, h31**^{km}**, n6, σ0^{s}.81**/6**, mb3.6**/6**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 1.5nm,0.9s,baz=62,slow=9.8,SNR=5.7	**23.57**	**236**	P	**P**	**10 16 34.8**	**+1.0**
ASAR	**Alice Springs** 0.5nm,0.8s,baz=59,slow=9.4,SNR=2.5	**25.90**	**229**	P	**P**	**10 16 54.2**	**-0.9**
SONM	**Songino Array** 0.3nm,0.7s,baz=126,slow=5.2,SNR=2.0	**69.64**	**327**	P	**P**	**10 22 32.2**	**0.0**
MKAR	**Makanchi Array** 0.6nm,0.8s,baz=116,slow=4.2,SNR=6.0	**83.67**	**319**	P	**P**	**10 23 51.0**	**-0.4**
ILAR	**Eielson Array** 0.5nm,1.0s,baz=248,slow=5.1,SNR=4.3	**83.74**	**21**	P	**P**	**10 23 51.2**	**-0.1**
YKA	**Yellowknife Ar** 0.4nm,0.9s,baz=264,slow=3.9,SNR=5.4	**96.69**	**28**	P	**P**	**10 24 52.9**	**+0.3**

IDC ***19*** *10:11:57.8±15.0, 21°.44S×178°.66W, h474^{km}±127^{km}, mb3.1/5, mb1 3.2/6, mb1mx2.9/28, mbtmp4.0/6, Error ellipse: s-maj=167.2km s-min=41.1km az=36.0*
ISC 19 10:11:54.9±4.7**, 21°.3S**±0°.4×**178°.5W**±0°.5**, h450**^{km}**, n6, σ0^{s}.90**/7**, mb3.3**/5**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera** 1.2nm,0.3s,baz=273,slow=1.9,SNR=12	**17.34**	**192**	P	**P**	**10 15 30.9**	**+0.3**
CTA	**Charters Tower** 1.7nm,0.4s,baz=93,slow=11,SNR=5.1	**32.95**	**266**	P	**P**	**10 17 52.4**	**+1.4**
STKA	**Stephens Creek** 0.5nm,0.4s,baz=78,slow=9.3,SNR=3.1	**37.03**	**245**	P	**P**	**10 18 24.4**	**-0.6**
ASAR	**Alice Springs** 0.6nm,0.4s,baz=96,slow=7.9,SNR=9.7	**43.89**	**258**	P	**P**	**10 19 20.0**	**-0.4**
ASAR	0.1nm,0.3s,baz=104,slow=5.3,SNR=4.1			PcP	**PcP**	**10 20 57.2**	**+0.1**
WRA	**Warramunga Arr** 0.4nm,0.3s,baz=96,slow=7.9,SNR=25	**44.03**	**263**	P	**P**	**10 19 21.0**	**-0.5**
FITZ	**Fitzroy Crossi** 3.4nm,1.0s,baz=100,slow=6.1,SNR=1.5	**52.46**	**263**	P	**P**	**10 20 24.2**	**-0.5**

IDC 19 10:13:17.0±3.1**, 54°.12N**×**87°.16E, h0**^{km}**, mb1 2.5**/2**, mb1mx2.5**/51**, mbtmp2.5**/2**, ML2.4**/2**, Error ellipse: s-maj=28.5km s-min=17.6km az=61.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA** baz=85,slow=328,SNR=1.8	**1.39**	**264**	*i*		10 22 50.0	
ZALV	**Zalesovo Beam** 0.7nm,0.3s,baz=84,slow=17,SNR=10.0	**1.39**	**264**	Pg	Pg	10 13 42.0	-1.6
ZALV	0.9nm,0.3s,baz=78,slow=30,SNR=6.9			Lg	Lg	10 14 01.5	
KURBB	**Kurchatov Arra** 0.1nm,0.3s,baz=54,slow=14,SNR=2.7	**6.34**	**240**	Pn	Pn	10 14 52.3	+0.7
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=26,slow=17,SNR=4.9	**7.97**	**205**	Pn	Pn	10 15 15.4	+1.4
MKAR	0.0nm,0.3s,baz=17,slow=30,SNR=1.9			Lg	Lg	10 17 30.5	

NEIC ***19*** *10:24:02.7, 53°.50S×159°.31E, h10^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.22; $M_{\theta\theta}$1.87; $M_{\phi\phi}$-2.09; $M_{r\theta}$0.51; $M_{\theta\phi}$-0.37; $M_{\phi r}$0.08; Fault plane solution: $M_0$2.08000×10^{17} NP1:ϕ_s141.23000°, δ76.89000°, λ8.93000°. NP2:ϕ_s49.19000°, δ81.30000°, λ166.74000°. Principal axes: T 2.0398, Plg16.0000°, Azm5.0000°; N 0.0869, Plg74.0000°, Azm197.0000°; P -2.1267, Plg3.0000°, Azm96.0000°;*
IDC ***19*** *10:24:02.5±0.4, 53°.36S×159°.42E, h0^{km}, mb5.0/21, mb1 5.0/23, mb1mx4.8/37, mbtmp4.9/23, ML4.3/2, MS4.7/20, Ms1 4.7/20, ms1mx4.6/29 Error ellipse: s-maj=16.7km s-min=13.2km az=55.0*
NEIC ***19*** *10:24:03.6±2.0, 53°.44S±0°.06×159°.4E±0°.1, h10^{km}±1^{km}, mb5.2/40, Ms_20 4.9/61, Mwb5.5/12, Mwc5.5(GCMT), Error ellipse: s-maj=15.1km s-min=9.6km az=96.0*
BJI ***19*** *10:24:03.0±0.0, 53°.40S×159°.50E, h5^{km}, mB5.7/9, mb5.0/21, Ms5.2/10, Ms7 4.8/9*
MOS ***19*** *10:24:05.5±1.7, 53°.46S×159°.00E, h20^{km}, mb5.3/15, Error ellipse: s-maj=27.2km s-min=8.7km az=103.3*
GCMT ***19*** *10:24:06.6±0.1, 53°.38S±0°.01×159°.08E±0°.01, h13^{km}, MW5.5/129, Moment Tensor Solution. s120,c204; s129,c228; Duration: 1^{s}.3 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.20±.02; $M_{\theta\theta}$2.02±.03; $M_{\phi\phi}$-1.82±.02; $M_{r\theta}$-0.06±.04; $M_{\theta\phi}$0.49±.02; $M_{\phi r}$0.19±.05; Best double couple: $M_0$1.99300×10^{17} NP1:ϕ_s218.00000°, δ85.00000°, λ-176.00000°. NP2:ϕ_s128.00000°, δ86.00000°, λ-5.00000°. Principal axes: T 2.0820, Plg1.0000°, Azm173.0000°; N -0.1780, Plg83.0000°, Azm270.0000°; P -1.9040, Plg7.0000°, Azm83.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NEIC ***19*** *10:24:08, 53°.39S×159°.10E, h14^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-0.26; $M_{\theta\theta}$2.16; $M_{\phi\phi}$-1.90; $M_{r\theta}$-0.09; $M_{\theta\phi}$0.55; $M_{\phi r}$0.16; Fault plane solution: $M_0$2.12000×10^{17} NP1:ϕ_s218.00000°, δ85.00000°, λ-177.00000°. NP2:ϕ_s127.00000°, δ87.00000°, λ-5.00000°. Principal axes: T 2.2348, Plg2.0000°, Azm173.0000°; N -0.2457, Plg84.0000°, Azm278.0000°; P -1.9891, Plg6.0000°, Azm82.0000°;*
ISC 19 10:24:04.3±0.3**, 53°.30S**±0°.05×**159°.72E**±0°.05**, h10**^{km}**, n386, σ2^{s}.01**/360**, mb5.1**/52**, MS4.9**/54**, 33C-4D, Macquarie Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MCQ	**Macquarie Isla** baz=1.1,SNR=1000	**1.28**	**200**	P	Pn	10 24 21.5	-6.7
MCQ	**Macquarie Isla**	**1.28**	**200**	P	Pn	10 24 21.9	-6.3
MCQ	**Macquarie Isla**	**1.28**	**200**	Pg	Pn	10 24 21.9	-6.3
APZ	**The Paps**	**8.38**	**43**	P	**Pn**	**10 26 04.0**	**-1.7**
APZ				S	**Sn**	**10 27 33.7**	**-6.6**
PYZ	**Puysegur Point**	**8.44**	**35**	Pn	**Pn**	**10 26 08.4**	**+1.8**
PYZ	**Puysegur Point**	**8.44**	**35**	P	**Pn**	**10 26 06.6**	**0.0**
SYZ	**Scrubby Hill**	**9.09**	**46**	P	**Pn**	**10 26 15.1**	**-0.4**
SYZ				S	Sn	10 27 47.4	-10
WHZ	**Wether Hill Ro**	**9.14**	**39**	Pn	**Pn**	**10 26 15.7**	**-0.4**
WHZ	**Wether Hill Ro**	**9.14**	**39**	P	**Pn**	**10 26 15.1**	**-1.0**
WHZ				S	**Sn**	**10 27 55.1**	**-3.8**
DCZ	**Deep Cove**	**9.22**	**35**	Pn	**Pn**	**10 26 18.7**	**+1.5**
DCZ	**Deep Cove**	**9.22**	**35**	P	**Pn**	**10 26 15.1**	**-2.1**
MLZ	**Mavora Lakes**	**9.64**	**38**	Pn	**Pn**	**10 26 24.2**	**+1.1**
MLZ	**Mavora Lakes**	**9.64**	**38**	P	**Pn**	**10 26 22.8**	**-0.3**
MLZ				S	**Sn**	**10 28 06.2**	**-5.2**
TUZ	**Tuapeka**	**9.76**	**45**	P	**Pn**	**10 26 24.8**	**+0.2**
TUZ				S	**Sn**	**10 28 09.7**	**-4.5**
MSZ	**Milford Sound**	**10.18**	**35**	P	**Pn**	**10 26 33.1**	**+2.8**
MSZ				S	**Sn**	**10 28 26.7**	**+2.4**
EAZ	**Earnscleugh**	**10.22**	**42**	P	**Pn**	**10 26 30.5**	**-0.4**
EAZ				S	**Sn**	**10 28 19.9**	**-5.5**
HHSZ	**Highcliff Hill**	**10.24**	**48**	P	**Pn**	**10 26 32.1**	**+0.9**
HHSZ				S	**Sn**	**10 28 22.5**	**-3.5**
WKZ	**Wanaka**	**10.44**	**39**		**Pn**	**10 26 35.0**	**+1.0**
WKZ	**Wanaka**	**10.44**	**39**	P	**Pn**	**10 26 31.3**	**-2.6**
WKZ				S	**Sn**	**10 28 27.6**	**-3.4**
ODZ	**Otahua Downs**	**10.92**	**45**		**Pn**	**10 26 41.3**	**+0.8**
ODZ	**Otahua Downs**	**10.92**	**45**	P	**Pn**	**10 26 40.4**	**-0.1**
ODZ				S	**Sn**	**10 28 37.1**	**-5.5**
LBZ	**Lake Benmore**	**11.27**	**42**	Pn	**Pn**	**10 26 47.9**	**+2.7**
TMZ	**Timaru**	**11.60**	**44**	P	**Pn**	**10 26 51.4**	**+1.5**
FOZ	**Fox Glacier**	**11.84**	**38**	Pn	**Pn**	**10 26 55.5**	**+2.4**
ARCZ	**Arundel**	**12.03**	**43**	P	**Pn**	**10 26 56.5**	**+0.8**
RPZ	**Rata Peaks** 1.6nm,0.3s,baz=121,slow=0.4,SNR=12	**12.17**	**43**	Pn	**Pn**	**10 26 58.5**	**+0.9**
RPZ	0.6nm,0.3s,baz=7.1,slow=22,SNR=2.0			Sn	**Sn**	**10 29 05.3**	**-8.0**
RPZ	comp=Z,5µm,20.1s,baz=194,slow=32			LR	LR	10 30 37.8	
RPZ	**Rata Peaks**	**12.17**	**43**	Pn	**Pn**	**10 26 59.4**	**+1.7**
RPZ	**Rata Peaks**	**12.17**	**43**	P	**Pn**	**10 26 59.3**	**+1.6**
RPZ				S	**Sn**	**10 29 07.8**	**-5.6**
GCSZ	**Gaunt Creek Bo**	**12.22**	**39**	P	**Pn**	**10 27 00.7**	**+2.4**
WVZ	**Waitaha Valley**	**12.58**	**40**	P	**Pn**	**10 27 04.2**	**+1.0**
RACZ	**Rakaia**	**12.62**	**46**	P	**Pn**	**10 27 06.4**	**+2.7**
MQZ	**McQueen’s Vall**	**12.85**	**47**	Pn	**Pn**	**10 27 07.7**	**+0.8**
MQZ	**McQueen’s Vall**	**12.85**	**47**	P	**Pn**	**10 27 07.5**	**+0.6**
OXZ	**Oxford**	**12.90**	**44**		**Pn**	**10 27 07.7**	**+0.2**
OXZ	**Oxford**	**12.90**	**44**	P	**Pn**	**10 27 06.3**	**-1.3**
OKCZ	**Okains Bay**	**13.02**	**48**	P	**Pn**	**10 27 10.5**	**+1.3**
OKCZ				S	**Sn**	**10 29 26.2**	**-7.9**
TAU	**Tasmania Unive**	**13.28**	**317**	P	**Pn**	**10 27 08.9**	**-3.8**
TAU	**Tasmania Unive**	**13.28**	**317**		**Pn**	**10 27 08.9**	**-3.8**
LTZ	**Lake Taylor**	**13.44**	**43**	Pn	**Pn**	**10 27 17.8**	**+2.7**
KHZ	**Kahutara**	**14.28**	**46**	Pn	**Pn**	**10 27 29.5**	**+3.1**
THZ	**Tophouse**	**14.55**	**43**	Pn	**Pn**	**10 27 33.3**	**+3.1**
BSWZ	**Blackbirch Sta**	**14.99**	**45**		**Pn**	**10 27 39.0**	**+2.8**
NNZ	**Nelson**	**15.20**	**43**	Pn	**P**	**10 27 41.7**	**-2.2**
NNZ	comp=Z,298nm,1.8s			IAmb	IAmb	10 27 52.8	
TUWZ	**Tuamarina**	**15.26**	**45**		**P**	**10 27 42.8**	**-1.8**
BHW	**Baring Head**	**15.68**	**47**	Pn	**P**	**10 27 47.4**	**-1.8**
PLWZ	**Palliser**	**15.71**	**48**	Pn	**Pn**	**10 27 47.5**	**+1.9**
MSWZ	**Moikau Station**	**15.84**	**48**		**P**	**10 27 49.4**	**-1.6**
BFZ	**Birch Farm** comp=Z,242nm,1.6s	**16.87**	**48**	IAmb	IAmb	10 28 05.4	
BKZ	**Black Stump Fm**	**18.22**	**46**	P	**P**	**10 28 19.6**	**+2.1**
TOO	**Toolangi** baz=19,SNR=28	**18.58**	**322**	P	**Pn**	**10 28 21.8**	**+0.2**
TOO	**Toolangi**	**18.58**	**322**	P	**Pn**	**10 28 21.7**	**+0.2**
TOO	comp=Z,138nm,1.1s			pmax	pmax		
TOO	**Toolangi**	**18.58**	**322**	P	**Pn**	**10 28 21.7**	**+0.2**
TOO	comp=Z,138nm,1.1s			IAmb	IAmb	10 28 28.9	
URZ	**Urewera** comp=Z,0.9nm,0.3s,baz=219,slow=7.1,SNR=7.9	**19.25**	**46**	P	**Pn**	**10 28 30.6**	**+1.0**
URZ	comp=Z,9µm,18.1s,baz=228,slow=36			LR	LR	10 35 50.8	
CNB	**Canberra Magne** baz=20,SNR=15	**19.41**	**334**	P	**Pn**	**10 28 32.1**	**+0.3**
CAN	**Canberra**	**19.51**	**333**	P	**Pn**	**10 28 32.5**	**-0.3**
CAN	comp=Z,312nm,1.5s			pmax	pmax		
CAN	**Canberra**	**19.51**	**333**		**Pn**	**10 28 32.5**	**-0.3**
CAN	comp=Z,312nm,1.5s			IAmb	IAmb	10 28 35.8	
RIV	**Riverview** baz=20,SNR=4.0	**20.40**	**339**	P	**P**	**10 28 41.0**	**-0.2**
OUZ	**Omahuta**	**20.56**	**34**	Pn	Pn	10 28 47.3	+2.1
YNG	**Young** baz=21,SNR=14	**20.64**	**333**	P	**P**	**10 28 44.4**	**+0.6**
ARPS	**Mount Arapiles** baz=21,SNR=9.5	**20.71**	**316**	P	**P**	**10 28 43.8**	**-0.8**
MGCD	**Mangrove Creek** baz=21,SNR=12	**21.01**	**340**	P	**P**	**10 28 49.5**	**+1.7**
ARMA	**Armidale** baz=24,SNR=5.8	**23.62**	**342**	P	**P**	**10 29 15.8**	**+0.3**
ARMA	**Armidale** comp=Z,57nm,1.2s	**23.62**	**342**	IAmb	IAmb	10 29 23.2	
CMSA	**Cobar Meteorol** baz=24,SNR=11	**24.01**	**329**	P	**P**	**10 29 19.3**	**+0.2**
VNDA	**Vanda** comp=Z,24nm,0.8s,baz=341,slow=9.2,SNR=43	**24.33**	**179**	P	**P**	**10 29 20.7**	**-0.9**
VNDA	comp=Z,2µm,21.5s,baz=4.0,slow=32			LR	LR	10 37 11.4	
VNDA	**Vanda**	**24.33**	**179**	P	**P**	**10 29 20.0**	**-1.7**
VNDA	comp=Z,29nm,0.8s			pmax	pmax		
VNDA	**Vanda**	**24.33**	**179**	P	**P**	**10 29 19.9**	**-1.7**
VNDA	comp=Z,29nm,0.8s			IAmb	IAmb	10 29 21.9	
SBA	**Scott Base** comp=Z,3µm,18.0s	**24.78**	**176**	IAMs_20	IAMs_20	10 36 53.6	
HTT	**Hallett** baz=25,SNR=6.7	**24.80**	**315**	P	**P**	**10 29 25.6**	**-0.7**
STKA	**Stephens Creek** comp=Z,78nm,1.2s,baz=144,slow=11,SNR=37	**25.09**	**321**	P	**P**	**10 29 28.8**	**-0.2**
STKA	**Stephens Creek** baz=25,SNR=52	**25.09**	**321**	P	**P**	**10 29 29.1**	**+0.1**
STKA	**Stephens Creek**	**25.09**	**321**	*c i*P	**P**	**10 29 28.4**	**-0.6**
STKA	**Stephens Creek**	**25.09**	**321**	P	**P**	**10 29 28.3**	**-0.6**
BBOO	**Buckleboo** baz=26,SNR=7.9	**26.58**	**311**	P	**P**	**10 29 41.6**	**-0.9**
BBOO	**Buckleboo**	**26.58**	**311**	P	**P**	**10 29 41.6**	**-0.9**
BBOO	comp=Z,35nm,1.1s			IAmb	IAmb	10 30 00.4	
RMQ	**Roma** baz=28,SNR=16	**28.01**	**339**	P	**P**	**10 29 55.7**	**+0.4**
EIDS	**Eidsvold** baz=29,SNR=3.0	**28.64**	**344**	P	**P**	**10 30 01.1**	**+0.2**
EIDS	**Eidsvold** comp=Z,35nm,1.1s	**28.64**	**344**	IAmb	IAmb	10 30 08.0	
DZM	**Mont Dzumac** comp=Z,91nm,1.3s	**31.60**	**12**	*e*P	**P**	**10 30 28.6**	**+1.4**
DZM	comp=Z,877nm,27.4s			*e*S	**S**	**10 35 37.4**	**+1.3**
DZM	comp=Z,4µm,24.4s			*e*LQ	LQ	10 37 26.8	
DZM	comp=Z,3µm,23.4s			*e*LR	LR	10 38 48.5	
DZM	**Mont Dzumac**	**31.60**	**12**	P	**P**	**10 30 29.4**	**+2.1**
DZM	comp=Z,28nm,1.0s			IAmb	IAmb	10 30 37.3	
DZM	**Mont Dzumac**	**31.60**	**12**	P	**P**	**10 30 29.5**	**+2.3**
FORT	**Forrest**	**32.12**	**302**	P	**P**	**10 30 30.2**	**-1.5**
FORT	comp=Z,29nm,0.9s			IAmb	IAmb	10 30 41.4	
KOUNC	**Koumac, New Ca**	**32.88**	**8**	P	**P**	**10 30 40.0**	**+1.6**
LIFNC	**LIFOU**	**32.98**	**13**	P	**P**	**10 30 41.7**	**+2.5**
CTA	**Charters Tower** comp=Z,40nm,1.0s,baz=180,slow=9.9,SNR=17	**34.75**	**337**	P	**P**	**10 30 54.1**	**-0.5**
CTA	comp=Z,1µm,19.1s,baz=152,slow=34			LR	LR	10 43 38.9	
CTAO	**Charters Tower**	**34.75**	**337**	P	**P**	**10 30 54.2**	**-0.4**
CTAO	comp=Z,76nm,1.2s			pmax	pmax		
CTAO	comp=Z,2µm,20.0s			MLR	MLR		
CTAO	**Charters Tower**	**34.75**	**337**	P	**P**	**10 30 54.2**	**-0.4**
ASAR	**Alice Springs** comp=Z,32nm,0.9s,baz=152,slow=8.3,SNR=94	**35.45**	**316**	P	**P**	**10 30 59.5**	**-1.2**
ASAR	comp=Z,3.0nm,1.0s,baz=143,slow=4.0,SNR=1.6			PcP	**PcP**	**10 33 28.2**	**-2.1**
ASAR	**Alice Springs**	**35.45**	**316**	P	**P**	**10 30 58.8**	**-1.9**
ASAR						10 33 28.2	
ASAR	**Alice Springs**	**35.45**	**316**	P	**P**	**10 30 58.8**	**-1.9**
QIS	**Mount Isa** baz=36,SNR=8.7	**36.16**	**327**	P	**P**	**10 31 06.3**	**-0.6**
NWAO	**Narrogin (SRO)** comp=Z,16nm,0.9s,baz=142,slow=5.5,SNR=6.7	**36.40**	**287**	P	**P**	**10 31 06.8**	**-1.9**
NWAO	comp=Z,655nm,18.1s,baz=130,slow=33			LR	LR	10 44 09.1	
NWAO	**Narrogin (SRO)**	**36.40**	**287**	P	**P**	**10 31 04.9**	**-3.8**
NWAO	comp=Z,122nm,1.9s			pmax	pmax		
NWAO	**Narrogin (SRO)**	**36.40**	**287**	P	**P**	**10 31 04.9**	**-3.8**
NWAO	comp=Z,122nm,1.9s			IAmb	IAmb	10 31 07.3	
NWAO	**Narrogin (SRO)**	**36.40**	**287**	P	**P**	**10 31 05.8**	**-2.9**
NWAO	comp=Z,144nm,1.9s			IAmb	IAmb	10 31 07.3	
WRKA	**Warakurna** baz=37,SNR=16	**36.75**	**308**	P	**P**	**10 31 11.6**	**-0.3**
H01W1	**Cape Leeuwin H** baz=132,slow=8.7,SNR=3.0	**36.79**	**281**	P	**P**	**10 31 10.5**	**-1.2**
H01W1	baz=135,slow=75,SNR=1521			T	T	11 09 58.2	
H01W2	**Cape Leeuwin H** baz=132,slow=8.7,SNR=5.4	**36.79**	**281**	P	**P**	**10 31 10.2**	**-1.6**
H01W2	baz=135,slow=75,SNR=1411			T	T	11 09 54.1	
H01W3	**Cape Leeuwin H** baz=132,slow=8.7,SNR=5.0	**36.80**	**281**	P	**P**	**10 31 10.5**	**-1.4**
H01W3	baz=135,slow=75,SNR=1085			T	T	11 09 55.0	
QSPA	**South Pole Qui** comp=Z,55nm,0.8s,baz=7.1,slow=2.9,SNR=226	**36.81**	**180**	P	**P**	**10 31 11.8**	**-0.3**
QSPA	**South Pole Qui**	**36.81**	**180**	P	**P**	**10 31 10.8**	**-1.3**
QSPA	**South Pole Qui** comp=Z,2µm,20.0s	**36.81**	**180**	IAMs_20	IAMs_20	10 43 48.1	
KLBR	**Kellerberrin** baz=37,SNR=13	**37.08**	**289**	P	**P**	**10 31 13.1**	**-1.4**
MTSU	**Mount Surprise** baz=37,SNR=7.8	**37.09**	**335**	P	**P**	**10 31 15.4**	**+0.6**
MUN	**Mundaring** baz=38,SNR=3.8	**37.68**	**287**	P	**P**	**10 31 18.4**	**-1.2**
SANVU	**Saraoutou** comp=Z,34nm,1.1s	**38.23**	**12**	IAmb	IAmb	10 31 28.9	
SANVU	**Saraoutou**	**38.23**	**12**	P	**P**	**10 31 26.7**	**+2.4**
MSVF	**Nonsavu**	**38.27**	**29**	*i* P	**P**	**10 31 26.0**	**+1.2**
MSVF	comp=Z,14nm,1.2s			pmax	pmax		
MSVF	**Nonsavu**	**38.27**	**29**	P	**P**	**10 31 25.9**	**+1.2**
MSVF	**Nonsavu**	**38.27**	**29**	P	**P**	**10 31 27.0**	**+2.3**
BLDU	**Ballidu** baz=38,SNR=6.1	**38.40**	**289**	P	**P**	**10 31 24.4**	**-1.4**
WR0	**Warramunga Arr** comp=Z,41nm,1.1s	**38.53**	**320**	IAmb	IAmb	10 31 29.4	
WR9	**Warramunga Arr** comp=Z,2µm,20.0s	**38.54**	**320**	IAMs_20	IAMs_20	10 47 54.8	
WR8	**Warramunga Arr** comp=Z,2µm,18.0s	**38.55**	**320**	IAMs_20	IAMs_20	10 47 23.9	
WR7	**Warramunga Arr** comp=Z,2µm,18.0s	**38.55**	**320**	IAMs_20	IAMs_20	10 47 23.2	
WR6	**Warramunga Arr** comp=Z,2µm,18.0s	**38.56**	**320**	IAMs_20	IAMs_20	10 47 13.5	
WR4	**Warramunga Arr** comp=Z,2µm,18.0s	**38.59**	**320**	IAMs_20	IAMs_20	10 47 25.0	
WR3	**Warramunga Arr** comp=Z,2µm,18.0s	**38.60**	**320**	IAMs_20	IAMs_20	10 47 24.3	
WC4	**Warramunga Arr** comp=Z,3µm,21.0s	**38.60**	**320**	IAMs_20	IAMs_20	10 47 38.4	
WB2	**Warramunga Arr**	**38.62**	**320**	P	**P**	**10 31 25.5**	**-2.0**
WR1	**Warramunga Arr** comp=Z,2µm,18.0s	**38.62**	**320**	IAMs_20	IAMs_20	10 47 25.9	
WRA	**Warramunga Arr** comp=Z,20nm,1.0s,baz=151,slow=7.5,SNR=22	**38.62**	**320**	P	**P**	**10 31 25.8**	**-1.9**
WRA	comp=Z,4.5nm,0.9s,baz=154,slow=2.7,SNR=3.1			PcP	**PcP**	**10 33 37.6**	**-2.2**
WRA	comp=Z,2µm,18.0s,baz=155,slow=35			LR	LR	10 46 30.8	
WRA	**Warramunga Arr**	**38.62**	**320**	P	**P**	**10 31 26.0**	**-1.6**
WRA	comp=Z,1.0nm,1.0s			pmax	pmax		
WRA	**Warramunga Arr**	**38.62**	**320**	P	**P**	**10 31 26.0**	**-1.6**
WRAB	**Tennant Creek**	**38.62**	**320**	*ce*P	**P**	**10 31 26.3**	**-1.4**
WRAB	comp=Z,25nm,1.0s			pmax	pmax		
WRAB	**Tennant Creek**	**38.62**	**320**	P	**P**	**10 31 25.9**	**-1.8**
WRAB	comp=Z,31nm,1.0s			IAmb	IAmb	10 31 32.5	
WRAB	**Tennant Creek** comp=Z,2µm,18.0s	**38.62**	**320**	IAMs_20	IAMs_20	10 44 32.9	
WC2	**Warramunga Arr** comp=Z,2µm,18.0s	**38.62**	**320**	IAMs_20	IAMs_20	10 46 52.0	
WC1	**Warramunga Arr** comp=Z,2µm,18.0s	**38.64**	**320**	IAMs_20	IAMs_20	10 47 26.3	
MORW	**Morawa** baz=40,SNR=13	**39.95**	**290**	P	**P**	**10 31 37.0**	**-1.7**
MORW	**Morawa**	**39.95**	**290**	P	**P**	**10 31 36.1**	**-2.6**
MORW	comp=Z,46nm,1.0s			IAmb	IAmb	10 31 38.7	
MEEK	**Meekatharra** baz=40,SNR=4.1	**40.41**	**295**	P	**P**	**10 31 40.5**	**-2.1**
COEN	**Coen**	**41.39**	**335**	P	**P**	**10 31 50.8**	**+0.2**
COEN	comp=Z,47nm,1.0s			IAmb	IAmb	10 31 51.7	
HNR	**Honiara** comp=Z,2µm,22.0s	**43.75**	**0**	IAMs_20	IAMs_20	10 46 24.5	
PSAD3	**Pilbara Seismi** comp=Z,1µm,19.0s	**43.83**	**300**	IAMs_20	IAMs_20	10 51 32.8	

PSAC2	Pilbara Seismi	43.83	301	IAMs_20	IAMs_20	10 48 42.0	
	comp=Z,1µm,18.0s						
PSAA3	Pilbara Seismi	43.84	301	IAMs_20	IAMs_20	10 48 40.3	
	comp=Z,2µm,18.0s						
PSA00	Pilbara Seismi	43.85	301	P	P	10 32 08.0	-2.7
PSA00	Pilbara Seismi	43.85	301	P	P	10 32 07.7	-3.0
PSA00				IAmb	IAmb	10 32 53.7	
	comp=Z,13nm,0.7s						
PSAB2	Pilbara Seismi	43.86	301	IAMs_20	IAMs_20	10 49 29.7	
	comp=Z,2µm,18.0s						
PSAB1	Pilbara Seismi	43.87	301	IAMs_20	IAMs_20	10 48 18.9	
	comp=Z,1µm,20.0s						
PSAD1	Pilbara Seismi	43.96	301	IAMs_20	IAMs_20	10 51 35.3	
	comp=Z,2µm,22.0s						
FITZ	Fitzroy Crossi	43.97	310	P	P	10 32 11.3	-0.2
	comp=Z,19nm,0.9s,baz=158,slow=10,SNR=12						
FITZ				LR	LR	10 48 11.4	
	comp=Z,489nm,18.1s,baz=155,slow=33						
FITZ	Fitzroy Crossi	43.97	310	P	P	10 32 11.4	-0.2
	baz=44,SNR=8.7						
FITZ	Fitzroy Crossi	43.97	310	P	P	10 32 10.8	-0.7
FITZ				IAmb	IAmb	10 32 34.3	
	comp=Z,119nm,1.8s						
FITZ				IAMs_20	IAMs_20	10 49 47.9	
	comp=Z,1µm,18.0s						
MBWA	Marble Bar	44.26	301	IAMs_20	IAMs_20	10 48 31.2	
	comp=Z,1µm,18.0s						
RAR	Rarotonga	44.48	60	P	P	10 32 16.8	+1.2
	comp=Z,16nm,0.9s,baz=226,slow=16,SNR=3.0						
MAW	Mawson	44.65	213	LR	LR	10 48 37.6	
	comp=Z,946nm,20.6s,baz=106,slow=33						
KNRA	Kununurra	44.72	315	IAMs_20	IAMs_20	10 49 08.8	
	comp=Z,1µm,19.0s						
PMG	Port Moresby	44.94	342	LR	LR	10 49 12.6	
	comp=Z,1µm,19.1s,baz=188,slow=34						
PMG	Port Moresby	44.94	342	P	P	10 32 19.1	-0.2
PMG				pmax	pmax		
	comp=Z,61nm,1.0s						
PMG	Port Moresby	44.94	342	P	P	10 32 19.1	-0.2
PMG	Port Moresby	44.94	342	IAMs_20	IAMs_20	10 49 09.8	
	comp=Z,1µm,20.0s						
PMG	Port Moresby	44.94	342	P	P	10 32 21.1	+1.8
TBI	Tubuai	48.42	72	*e*S	S	10 39 49.7	+2.6
	comp=Z,849nm,28.8s						
TBI				*e*LR	LR	10 46 40.7	
	comp=Z,3µm,32.0s,baz=216						
BELA	Belgrano 2	48.78	176	P	P	10 32 47.0	-1.7
RABL	Rabaul	49.35	350	P	P	10 32 53.0	-0.8
RABL	Rabaul	49.35	350	P	P	10 32 56.4	+2.6
SYO	Syowa Base	50.39	204	⇓*e*pP	P	10 33 00.2	-0.8
SOEI	Soe	51.94	313	IAMs_20	IAMs_20	10 52 51.7	
	comp=Z,1µm,19.0s						
PPT2	Papeete2	52.93	68	*e*S	S	10 40 52.6	+2.7
	comp=Z,907nm,29.2s						
PPT2				*e*LR	LR	10 48 44.5	
	comp=Z,2µm,24.0s,baz=206						
PPT	Papeete	52.95	68	P	P	10 33 21.5	+0.7
	comp=Z,23nm,0.7s,baz=74,slow=14,SNR=3.2						
PPT				LR	LR	10 52 04.8	
	comp=Z,654nm,20.7s,baz=198,slow=32						
JAY	Jayapura	53.01	336	LR	LR	10 54 24.9	
	comp=Z,693nm,18.6s,baz=162,slow=34						
TIAR	Tiarei	53.08	68	*e*P	P	10 33 24.0	+2.2
	comp=Z,24nm,0.9s						
NVL	N'lazarevskaya	54.11	193	⇓*i*P	P	10 33 26.9	-1.7
NVL				*e*S	S	10 41 05.9	+1.3
NVL				pmax	pmax		
	comp=Z,50nm,1.1s						
SNAA	Sanae	54.72	187	P	P	10 33 31.6	-1.5
SNAA	Sanae	54.72	187	P	P	10 33 31.5	-1.7
SNAA				pmax	pmax		
	comp=Z,104nm,1.4s						
SNAA	Sanae	54.72	187	P	P	10 33 31.5	-1.7
FAKI	Fak Fak	55.09	326	IAMs_20	IAMs_20	10 55 22.4	
	comp=Z,968nm,20.0s						
VNA3	Neumayer Olymp	55.52	184	P	P	10 33 37.6	-1.4
VNA2	Neumayer--Watz	55.73	185	P	P	10 33 39.2	-1.2
	baz=162,slow=6.5						
VNA1	Neumayer--Stat	56.05	185	P	P	10 33 41.7	-0.9
RKT	Rikitea	57.10	85	*e*S	S	10 41 47.6	+1.9
	comp=Z,956nm,32.8s						
RKT				*e*LR	LR	10 50 29.2	
	comp=Z,2µm,32.2s						
KAPI	Kappang	58.15	311	LR	LR	10 59 57.6	
	comp=Z,788nm,18.1s,baz=154,slow=37						
KAPI	Kappang	58.15	311	IAMs_20	IAMs_20	10 59 37.1	
	comp=Z,890nm,18.0s						
SANI	Sanana	58.18	319	P	P	10 33 56.7	-1.7
	comp=Z,30nm,1.0s						
LEM	Lembang	62.58	298	P	P	10 34 28.0	-0.7
	comp=Z,24nm,0.5s,baz=160,slow=5.0,SNR=4.8						
TOLI2	Tolitoli	63.17	315	P	P	10 34 31.3	-1.1
TOLI2				IAmb	IAmb	10 34 37.2	
	comp=Z,26nm,0.9s						
GO09	Cerro Castillo	67.01	147	P	P	10 34 57.5	+0.5
GUMO	Guam	67.83	344	LR	LR	11 04 02.9	
	comp=Z,188nm,18.2s,baz=166,slow=35						
SBUM	Sibu	68.22	308	P	P	10 35 09.0	+4.0
KSM	Kuching	68.29	305	P	P	10 35 09.0	+3.5
PDSI	Padang	71.38	295	P	P	10 35 22.4	-2.1
	comp=Z,5µmcomp=Z,16nm,1.1s						
MYKOM	Kota Tinggi	71.84	299	P	P	10 35 31.0	+3.8
MNSI	Mandailing Nat	73.28	295	P	P	10 35 34.8	-1.0
	comp=Z,33nm,1.0s						
GSI	Gunungsitoli	74.80	294	P	P	10 35 44.4	-0.3
	comp=Z,67nm,1.1s						
RPSI	Rantau Prapat	75.22	296	P	P	10 35 46.4	-0.8
PSI	Prapat	75.31	296	P	P	10 35 46.4	-1.4
	comp=Z,11nm,0.8s,baz=180,slow=4.5,SNR=7.9						
PLCA	Paso Flores	76.79	143	P	P	10 35 55.8	-0.2
	comp=Z,3.9nm,1.0s,baz=233,slow=2.8,SNR=4.2						
PLCA				LR	LR	11 02 16.1	
	comp=Z,396nm,19.8s,baz=208,slow=30						
PLCA	Paso Flores	76.79	143	P	P	10 35 55.8	-0.2
PLCA				pmax	pmax		
	comp=Z,19nm,1.4s						
PLCA	Paso Flores	76.79	143	IAmb	IAmb	10 36 09.6	
	comp=Z,19nm,1.4s						
TRTT	Trang	79.12	299	P	P	10 36 11.0	+2.0
	comp=Z,20nm,1.1s						
H03S2	Juan Fernandez	79.43	134	T	T	12 04 18.7	
	baz=209,slow=74,SNR=1643						
H03S1	Juan Fernandez	79.43	134	T	T	12 04 20.1	
	baz=209,slow=74,SNR=1812						
H03S3	Juan Fernandez	79.45	134	T	T	12 04 19.4	
	baz=209,slow=74,SNR=1724						
H03N3	Juan Fernandez	79.76	133	T	T	12 04 37.2	
	baz=217,slow=76,SNR=886						
H03N2	Juan Fernandez	79.77	133	T	T	12 04 36.9	
	baz=217,slow=76,SNR=1105						
H03N1	Juan Fernandez	79.77	133	T	T	12 04 34.5	
	baz=217,slow=76,SNR=292						
RER	Riviere de l'E	81.27	246	P	P	10 36 21.0	+0.3
H08S2	Diego Garcia H	82.27	268	T	T	12 06 44.1	
	baz=142,slow=77,SNR=31						
H08S1	Diego Carcia H	82.28	268	T	T	12 06 48.4	
	baz=142,slow=77,SNR=10						
H08S3	Diego Garcia H	82.29	268	T	T	12 06 44.7	
	baz=142,slow=77,SNR=131						
SRAK	Srakaew	83.17	304	P	P	10 36 34.0	+3.5
QIZ	Qiongzhong	83.88	313	P	P	10 36 34.3	+0.2
QIZ				S	S	10 46 59.0	+1.5
QIZ				LR	LR		
	comp=Z,360nm,19.4s						
QIZ				LR	LR		
	comp=Z,590nm,22.4s						
QIZ				LR	LR		
	comp=Z,220nm,23.7s						
UTHA	Uthaitani	85.78	303	P	P	10 36 47.8	+4.1
	comp=Z,312nmcomp=Z,20nm,1.1s						
UMPA	Umpang Tak	86.62	303	P	P	10 36 51.4	+3.5
	comp=Z,4µmcomp=Z,10.0nm,1.3s						
UTTA	Uttaradit	87.08	305	P	P	10 36 51.9	+1.9
	comp=Z,17nm,1.0s						
SUKH	Sukhothai	87.32	304	P	P	10 36 55.0	+3.8
	comp=Z,16nm,1.1s						
SUR	Sutherland	87.50	214	P	P	10 36 51.4	-1.0
	comp=Z,15nm,0.9s,baz=157,slow=6.4,SNR=6.2						
LAMP	Lampang	88.20	305	P	P	10 36 60.0	+4.6
	comp=Z,13nm,0.7s						
CMAR	Chiang Mai Arr	88.49	304	P	P	10 36 56.1	-0.7
	comp=Z,6.0nm,0.9s,baz=172,slow=4.3,SNR=20						
CMAR				LR	LR	11 14 47.7	
	comp=Z,136nm,20.6s,baz=145,slow=34						
CMAR	Chiang Mai Arr	88.49	304	*ce*P	P	10 36 57.5	+0.7
CMAR				pmax	pmax		
	comp=Z,12nm,1.0s						
CMAR	Chiang Mai Arr	88.49	304	P	P	10 36 56.5	-0.3
CHTO	Chiang Mai	88.79	304	P	P	10 36 58.4	+0.2
CHTO				pmax	pmax		
	comp=Z,21nm,1.1s						
CHTO	Chiang Mai	88.79	304	P	P	10 36 58.4	+0.2
CHTO				IAmb	IAmb	10 37 03.0	
	comp=Z,21nm,1.1s						
PALK	Pallekele	89.27	283	P	P	10 36 59.9	-0.7
	comp=Z,10nm,1.0s,baz=292,slow=12,SNR=4.5						
PALK	Pallekele	89.27	283	*ce*P	P	10 37 02.4	+1.7
BOSA	Boshof	89.34	219	P	P	10 36 60.0	-1.1
	comp=Z,3.8nm,0.7s,baz=158,slow=5.2,SNR=7.9						
BOSA				LR	LR	11 09 41.3	
	comp=Z,300nm,19.8s,baz=160,slow=31						
JMN	Monobe	89.54	339	IAMs_20	IAMs_20	11 22 36.1	
	comp=Z,632nm,20.0s						
MJAR	Matsushiro Arr	91.41	343	P	P	10 37 08.9	-1.1
	comp=Z,4.4nm,0.9s,baz=179,slow=6.9,SNR=4.8						
MJAR				LR	LR	11 17 44.0	
	comp=Z,106nm,18.9s,baz=165,slow=35						
MAJO	Matsushiro	91.41	343	*i* P	P	10 37 11.0	+1.0
MAJO				pmax	pmax		
	comp=Z,11nm,1.0s						
GYA	Guiyang	91.78	314	*e*P	P	10 37 14.8	+2.7
GYA				pmax	pmax		
	comp=Z,4.0nm,1.4s						
NJ2	Nanjing	92.12	326	*e*P	P	10 37 14.8	+1.4
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.5s						
WHN	Wuhan	92.33	322	⇑P	P	10 37 25.9	+12
KMI	Kunming	92.37	310	⇑P	P	10 37 15.1	+0.1
KMI				pmax	pmax		
	comp=Z,9.0nm,1.3s						
KMI				LR	LR		
	comp=Z,170nm,9.2s						
KMI				LR	LR		
	comp=Z,480nm,19.5s						
KMI				LR	LR		
	comp=Z,320nm,28.4s						
CPUP	Villa Florida	94.42	147	P	P	10 37 24.5	+0.1
	comp=Z,2.8nm,0.9s,baz=225,slow=4.3,SNR=3.7						
CPUP				LR	LR	11 14 09.9	
	comp=Z,274nm,20.0s,baz=196,slow=32						
KSRS	Korea Array	94.50	335	P	P	10 37 24.2	+0.1
	comp=Z,1.5nm,0.8s,baz=155,slow=5.7,SNR=4.7						
KSRS				LR	LR	11 19 10.6	
	comp=Z,268nm,19.5s,baz=162,slow=35						
MATP	Matopo	95.36	225	P	P	10 37 28.3	-0.7
	comp=Z,2.2nm,0.7s,baz=159,slow=8.6,SNR=3.1						
CD2	Chengdu	96.90	314	P	P	10 37 37.8	+2.4
CD2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
XAN	Xi'an	97.51	320	P	Pdif	10 37 41.0	+2.8
XAN				pP	pwP	10 37 45.6	+1.0
XAN				pmax	pmax		
	comp=Z,7.0nm,1.1s						
USRK	Ussuriysk Ar.	100.00	340	LR	LR	11 21 37.4	
	comp=Z,269nm,18.3s,baz=159,slow=35						
TSUM	Tsumeb	100.73	216	IAMs_20	IAMs_20	11 17 37.1	
	comp=Z,477nm,21.0s						
LZH	Lanzhou	101.33	317	*e*P	Pdif	10 37 57.9	+2.7
LZH				pP	pwP	10 38 03.3	+1.4
LZH				sP	sPdif	10 38 07.8	+9.5
LZH				pmax	pmax		
	comp=Z,12nm,1.3s						
HHC	Hu-ho-hao-te	102.56	325	*e*P	Pdif	10 37 58.4	-2.1
HHC				pmax	pmax		
	comp=Z,1.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,140nm,6.6s						
SKR	Severo-Kuril's	103.66	358	*e*P	Pdif	10 37 56.7	-8.2
SKR				pmax	pmax		
	comp=Z,100nm,5.3s						
SKR				MLR	MLR		
	comp=Z,100nm,18.0s						
SONM	Songino Array	110.46	325	PP	PP	10 43 10.8	-1.6
	comp=Z,0.6nm,1.0s,baz=151,slow=3.4,SNR=4.2						
CMB	Columbia Colle	114.06	58	IAMs_20	IAMs_20	11 38 33.2	
	comp=Z,249nm,18.0s						
WMQ	Urumqi	114.70	311	*e*PKP	PKiKP	10 42 44.6	+0.5
WMQ				LR	LR		
	comp=Z,370nm,29.0s						
NVAR	Mina Array Bea	115.42	59	PKP	PKiKP	10 42 46.4	+0.5
	comp=Z,1.0nm,0.9s,baz=183,slow=3.1,SNR=6.1						
TXAR	Lajitas Array	116.76	76	PKP	PKiKP	10 42 49.6	+1.0
	comp=Z,0.1nm,0.6s,baz=188,slow=2.6,SNR=3.7						
TXAR				PKKPab	PKKPbc	10 53 14.7	+1.1
	comp=Z,0.6nm,0.8s,baz=62,slow=4.2,SNR=3.7						
KSH	Kashi	117.15	300	PKP	PKiKP	10 42 51.3	+2.2
KSH				PP	PP	10 44 04.0	+4.0
KSH				PKS	PKSdf	10 46 24.4	-1.4
KSH				AMB	AMB		
	comp=Z,120nm,5.8s						
KSH				LR	LR		
	comp=Z,120nm,9.4s						
KSH				LR	LR		
	comp=Z,160nm,5.3s						
KSH				LR	LR		
	comp=Z,950nm,7.5s						
MK31	Makanchi Array	119.44	310	*i* PKIKP	PKiKP	10 42 54.8	+1.6
MKAR	Makanchi Array	119.44	310	PKP	PKPdf	10 42 52.2	-0.9
	comp=Z,0.6nm,0.8s,baz=104,slow=2.5,SNR=5.6						
MKAR	Makanchi Array	119.44	310	PKIKP	PKPdf	10 42 52.6	-0.5
MKAR	Makanchi Array	119.44	310		PKPdf	10 42 52.6	-0.5
KUU	Kurty	120.17	304	*e*PKP	PKPdf	10 42 53.8	-0.8
	baz=304						
KUU	Kurty	120.17	304	*e*PKIKP	PKPdf	10 42 53.8	-0.8
AAK	Ala-Archa	120.20	302	PKP	PKPdf	10 42 54.4	-0.5
	comp=Z,0.6nm,0.3s,baz=117,slow=6.8,SNR=1.5						
AAK	Ala-Archa	120.20	302	*i* PKIKP	PKiKP	10 42 55.3	+0.3
BTLS	Baital	122.14	303	*e*PKP	PKPdf	10 42 57.8	-0.5
	baz=303						
BTLS	Baital	122.14	303	*e*PKIKP	PKPdf	10 42 57.8	-0.5
IUG	Iuzhnay	122.17	299	*e*PKP	PKPdf	10 42 58.5	-0.2
	baz=298						
IUG	Iuzhnay	122.17	299	*e*PKIKP	PKPdf	10 42 58.4	-0.2
CAST	Castle Rocks	122.30	23	IAMs_20	IAMs_20	11 24 30.7	
	comp=Z,401nm,22.0s						
KKAR	Karatay Array	122.58	300	PKIKP	PKPdf	10 42 58.0	-1.3
KKAR	Karatay Array	122.58	300		PKPdf	10 42 58.0	-1.3
SEM	Semipalatinsk	122.99	311	*e*PKP	PKPdf	10 42 59.4	-0.7
	baz=311						
SEM	Semipalatinsk	122.99	311	*e*PKIKP	PKPdf	10 42 59.4	-0.7
RND	Reindeer	123.08	25	PKIKP	PKPdf	10 42 59.3	-0.4
RND	Reindeer	123.08	25		PKPdf	10 42 59.2	-0.4
PDAR	Pinedale Array	123.14	62	PKP	PKiKP	10 43 01.1	+0.2
	comp=Z,0.8nm,1.0s,baz=151,slow=3.4,SNR=4.8						
NEW	Newport	123.18	52	PKP	PKPdf	10 43 00.1	-0.2
	comp=Z,3.0nm,0.8s,baz=225,slow=2.9,SNR=2.8						
KURBB	Kurchatov Arra	123.92	311	PKP	PKPdf	10 43 01.1	-0.5
	comp=Z,0.8nm,0.4s,baz=138,slow=1.5,SNR=5.1						
KURK	Kurchatov	123.95	311	*i* PKIKP	PKiKP	10 43 01.6	-0.2
KURK	Kurchatov	123.95	311		PKPdf	10 43 01.1	-0.4
IMAR	Indian Mountai	124.11	21		PKPdf	10 43 01.5	0.0
COLA	College	124.55	24	*i* PKIKP	PKiKP	10 43 03.7	+1.1
BCAR	Beaver Creek A	124.70	28		PKPdf	10 43 01.0	-1.7
ILAR	Eielson Array	124.70	25	PKP	PKPdf	10 43 02.6	0.0
	comp=Z,1.9nm,1.1s,baz=265,slow=3.1,SNR=10.0						
ILAR				PKKPab	PKKPab	10 52 40.0	-1.0
	comp=Z,0.7nm,0.9s,baz=12,slow=4.6,SNR=6.4						
ILAR	Eielson Array	124.70	25	PKIKP	PKPdf	10 43 00.9	-1.7
ILAR	Eielson Array	124.70	25		PKPdf	10 43 00.9	-1.7
GEYT	Alibeck	125.81	287	PKP	PKPdf	10 43 04.9	-0.7
	comp=Z,2.9nm,0.8s,baz=242,slow=6.4,SNR=4.7						
BRZS	Berezniki	126.22	307	*e*PKP	PKPdf	10 43 06.0	0.0
	baz=307						
BRZS	Berezniki	126.22	307	*e*PKIKP	PKPdf	10 43 06.0	0.0
TIXI	Tiksi	126.55	348	*i* PKIKP	PKiKP	10 43 07.1	+0.7
BVAR	Borovoye Array	129.29	309	PKP	PKPdf	10 43 11.5	-0.2
	comp=Z,0.5nm,0.7s,baz=155,slow=35,SNR=2.7						
BRVK	Borovoye	129.36	309	*i* PKIKP	PKiKP	10 43 12.7	+0.1
NRIK	Noril'sk	133.05	332	PKP	PKPdf	10 43 18.1	-0.2
	comp=Z,0.9nm,0.4s,baz=71,slow=1.6,SNR=3.7						
NRIK	Noril'sk	133.05	332	*i* PKIKP	PKiKP	10 43 21.0	+1.5
WCI	Wyandotte Cave	133.24	81	PKIKP	PKPdf	10 43 20.1	+0.4
WCI	Wyandotte Cave	133.24	81		PKPdf	10 43 20.1	+0.4
YKA	Yellowknife Ar	133.43	40	PKhKP	PKPpre	10 43 11.1	
	comp=Z,0.3nm,0.9s,baz=211,slow=2.6,SNR=4.9						
YKA				PKP	PKPdf	10 43 19.4	+0.2
	comp=Z,0.9nm,0.8s,baz=214,slow=2.4,SNR=5.8						
YKA				PP	PP	10 45 49.7	+1.6
	comp=Z,0.2nm,0.8s,baz=243,slow=6.2,SNR=3.7						
GNI	Garni	135.07	280	*i* PKIKP	PKPdf	10 43 23.6	+0.3
ULM	Lac du Bonnet	135.16	62	PKP	PKPdf	10 43 23.3	+0.4
	comp=Z,2.1nm,0.9s,baz=220,slow=19,SNR=4.7						
ARU	Arti	136.85	307	*i* PKIKP	PKPdf	10 43 26.4	+0.6
ARU						10 46 06.4	
ARU				SS	SS	11 04 04.4	-10
KBZ	Khabaz	138.36	283	*i* PKIKP	PKiKP	10 43 30.8	-0.3
SHA1	Shidzhatmaz	138.50	283	*i* PKIKP	PKPdf	10 43 30.2	+0.6
KIV	Kislovodsk	138.61	283	*i* PKIKP	PKPdf	10 43 29.6	0.0
KIV				pmax	pmax		
	comp=Z,20nm,1.0s						
BR131	Keskin Array S	141.42	272	*i* PKIKP	PKiKP	10 43 40.5	+2.8
BRTR	Keskin Array B	141.42	272	PKP	PKPdf	10 43 34.0	-0.9
	comp=Z,0.6nm,0.7s,baz=144,slow=1.7,SNR=1.7						
KIRV	Kirov	142.23	307	*i* PKIKP	PKiKP	10 43 39.4	+0.9
VRH	Novokhopyorsk	143.04	293	*e*PKIKP	PKPbc	10 43 35.2	+1.1
VRH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
VLDQ	Val d'Or	144.26	75		PKPab	10 43 36.6	-0.8
VORD	Divnogorie	144.28	291	*e*PKIKP	PKPab	10 43 37.2	-0.2
VORD				pmax	pmax		
	comp=Z,6.0nm,0.6s						
RES	Resolute Bay	144.43	26	PKP	PKPab	10 43 37.3	0.0
	comp=Z,26nm,0.9s,baz=259,slow=4.4,SNR=35						
VSR	Storozhevoye	144.47	291	*e*PKIKP	PKPab	10 43 36.7	-1.4
VSR				pmax	pmax		
	comp=Z,20nm,1.5s						
TRQ	Mont Tremblant	144.98	79		PKPbc	10 43 38.6	-1.7
LPSR	Galich'ya Gora	145.21	293	*e*PKIKP	PKPbc	10 43 39.4	-1.3
LPSR				pmax	pmax		
	comp=Z,30nm,1.2s						
EUNU	Eureka	146.09	17		PKPdf	10 43 42.1	+0.3
LATQ	La Tuque	146.62	79		PKPbc	10 43 44.3	-0.9
G62A	West of Eustis	146.83	83		PKPbc	10 43 46.3	+0.4
MOS	Moscow	147.14	298	*e*PKP2	PKiKP	10 43 48.4	-0.3
MOS				pmax	pmax		
	comp=Z,43nm,0.8s						
OBN	Obninsk	147.49	297	*i* PKP2	PKPbc	10 43 46.0	-1.3
OBN				*e*		10 47 11.6	
OBN				pmax	pmax		
	comp=Z,109nm,1.4s						
TPGR	Topolog	147.57	275	⇑P	PKPab	10 43 50.3	+0.1
KLMR	Klimovskoe	147.70	308	*e*PKP2	PKPbc	10 43 46.7	-1.0
KLMR				pmax	pmax		
	comp=Z,82nm,1.4s						
KLMR	Klimovskoe	147.70	308	*e*PKPdf	PKPbc	10 43 46.8	-1.0
KLMR				AMP		10 43 55.2	
	comp=Z,82nm,1.4s						
HARR	Harsova	147.77	274	⇑P	PKPbc	10 43 48.5	+0.1
HARR	Harsova	147.77	274	⇑PKP2	PKPbc	10 43 48.5	+0.1
CFR	Carcaliu	147.91	275	⇑P	PKPbc	10 43 48.0	-0.8
CFR	Carcaliu	147.91	275	⇑PKP2	PKPbc	10 43 48.0	-0.8
TMCR	Tamitsa	149.00	314	*e*PKIKP	PKPbc	10 43 49.4	-1.6
TMCR				pmax	pmax		
	comp=Z,16nm,0.9s						
VRI	Vrincioaia	149.11	275	⇑P	PKPab	10 43 54.8	-1.6
VRI	Vrincioaia	149.11	275	⇑PKP2	PKPab	10 43 54.8	-1.6
PLOR	Plostina	149.15	275	⇑P	PKPbc	10 43 51.0	-1.1
PLOR	Plostina	149.15	275	⇑PKP2	PKPbc	10 43 51.0	-1.1
MLR	Muntele Rosu	149.38	274	PKPbc	PKPbc	10 43 51.4	-1.4
	comp=Z,7.9nm,0.6s,baz=258,slow=6.2,SNR=5.6						
MLR	Muntele Rosu	149.38	274	⇑P	PKPbc	10 43 51.8	-1.0
MLR	Muntele Rosu	149.38	274	⇑PKP2	PKPbc	10 43 51.8	-1.0
VTS	Vitosha	149.42	267	⇑P	PKPbc	10 43 51.8	-1.2
VTS	Vitosha	149.42	267	PKP2	PKPbc	10 43 51.9	-1.1
VTS	Vitosha	149.42	267		PKPbc	10 43 51.9	-1.1
HUMR	Humele	149.45	272	⇑P	PKPab	10 43 59.8	+2.1
TESR	Tescani	149.49	276	⇓P	PKPbc	10 43 52.6	-0.3
VOIR		149.89	273	⇑P	PKiKP	10 43 56.7	+1.8
VOIR		149.89	273	⇑PKP2	PKiKP	10 43 56.7	+1.8
AKASG	Malin Array Be	149.90	285	PKPbc	PKPbc	10 43 52.7	-1.0
	comp=Z,11nm,0.7s,baz=83,slow=2.6,SNR=23						
AKASG	Malin Array Be	149.90	285	PKP2	PKPbc	10 43 52.8	-0.9
AKBB	Malin Array Si	149.90	285	PKHKP	PKPpre	10 43 50.9	
AKBB	Malin Array Si	149.90	285		PKPdf	10 43 50.9	+2.1
DOPR	Dopca	149.97	275	⇑P	PKiKP	10 43 56.5	+1.5
BIZ	Bicaz	150.03	277	⇑P	PKiKP	10 43 54.9	-0.1
ARR	Arges	150.11	273	⇑P	PKiKP	10 43 54.9	-0.4
TULEG	Thule	150.54	21		PKPbc	10 43 54.1	-0.4
BURAR	Bucovina Array	150.88	277	⇑P	PKiKP	10 43 56.9	0.0
BURAR	Bucovina Array	150.88	277	⇑PKIKP	PKiKP	10 43 56.9	0.0
BURAR	Bucovina Array	150.88	277		PKiKP	10 43 56.6	-0.2
HERR	Herculane	151.18	270	⇑P	PKPbc	10 43 56.3	-0.6
GZR	Gura Zlata	151.23	272	⇑P	PKiKP	10 44 00.7	+3.1
GZR	Gura Zlata	151.23	272	⇑PKIKP	PKiKP	10 44 00.7	+3.1
MDVR	Moldovita	151.55	270	⇑P	PKiKP	10 43 58.2	-0.1
GRUS	Gruza	151.65	267	⇑P	PKPbc	10 43 57.6	-0.4
PDG	Podgorica	151.69	264	⇑P	PKPbc	10 43 57.0	-1.2
SPITS	Spitsbergen Ar	151.88	345	PKPbc	PKPbc	10 43 57.5	-0.1
	comp=Z,10nm,0.7s,baz=132,slow=2.1,SNR=2.7						
MNK	Minsk	152.03	292	*i* PKP	PKiKP	10 43 58.6	-0.2
	comp=E,4.0nm,1.0s						
MNK				*i* PKP	PKiKP	10 43 58.6	-0.2
	comp=N,36nm,1.1s						
MNK				*i* PKP	PKiKP	10 43 58.6	-0.2
	comp=Z,13nm,0.9s						
MNK				*i* PP	PP	10 47 50.8	+10
MNK				*i* SKS	SKSdf	10 51 06.0	+7.2
MNK				*i* SKKS	SKKSdf	10 59 50.3	+5.5
MNK				*i* PPS	PPS	11 04 54.2	
MNK				*i* SS	SS	11 07 22.5	+14
MNK				*i* LQ	LQ	11 45 01.2	
MNK				*i* LR	LR	11 56 38.8	
BZS	Buzias	152.04	271	⇓P	PKPab	10 44 05.4	-3.0
DIVS	Divibare	152.21	267		PKPbc	10 43 57.3	-2.1
LVV	L'vov	152.57	281	*e*PKIKP	PKiKP	10 44 00.5	+0.3
NACGM	Naroch	152.76	293	*i* PKP	PKiKP	10 44 00.4	0.0
NACGM				*i* PKP	PKiKP	10 44 00.4	0.0
NACGM				*i* PKP	PKiKP	10 44 00.4	0.0
NACGM				*i* PP	PP	10 47 33.1	-12
NACGM				*i* SKS	SKSdf	10 50 12.2	-47
NACGM				*i* PPP	PPP	10 51 30.2	
NACGM				*i* SKKS	SKKSdf	10 59 37.1	-6.2
NACGM				*i* SS	SS	11 07 30.2	+14
NACGM				*i* SSS	SSS	11 13 21.1	
NACGM				*i* LQ	LQ	11 45 28.7	
NACGM				*i* LR	LR	11 55 29.5	
KEST	Kesra	152.81	242	PKPbc	PKPbc	10 44 00.9	-0.2
	comp=Z,9.2nm,0.9s,baz=21,slow=5.1,SNR=4.1						
UZH	Uzhgorod	153.09	277	*e*PKIKP	PKiKP	10 44 03.1	+1.9
KOLS	Kolonicke sedl	153.24	278	*e*PKIKP	PKiKP	10 44 05.6	+4.0
KOLS	Kolonicke sedl	153.24	278	*e*PKP	PKiKP	10 44 05.6	+4.0
ARCES	ARCESS Array B	153.63	325	PKPbc	PKPbc	10 44 01.1	-0.6
	comp=Z,3.6nm,0.7s,baz=64,slow=2.1,SNR=6.6						
ARCES				PKPab	PKPab	10 44 14.1	-0.4
	comp=Z,9.7nm,0.8s,baz=64,slow=3.1,SNR=8.0						
CRVS	Cervenica-Dubn	153.71	277	*e*PKIKP	PKiKP	10 44 06.3	+3.7
CRVS	Cervenica-Dubn	153.71	277	*e*PKP	PKiKP	10 44 06.3	+3.7
MORH	Mrgy, Hungar	154.13	270	⇑P	PKiKP	10 44 04.7	+1.2
FINES	FINESS Array B	154.23	307	PKPbc	PKPbc	10 44 02.3	-0.9
	comp=Z,1.5nm,0.6s,baz=96,slow=4.2,SNR=1.8						
VYHS	Vyhne	155.09	275	*e*PKP2	PKPab	10 44 24.0	+2.7
MODS	Modra-Piesok	155.97	273	*e*PKP2	PKPab	10 44 27.8	+2.7
ARSA	Arzberg	156.51	270	*e*P	PKPab	10 44 29.8	+2.3
	comp=Z,23nm,0.8s						
SOKA	Soboth	156.53	268	*e*P	PKPab	10 44 30.3	+2.6
	comp=Z,9.3nm,0.9s						
CONA	Conrad Observa	156.62	271	*e*P	PKPab	10 44 25.9	-2.1
	comp=Z,8.6nm,1.6s						
KRLC	Kraliky	156.97	277	*e*PKP2	PKPab	10 44 28.0	-1.4
KRLC	Kraliky	156.97	277	*e*PKPAB	PKPab	10 44 28.0	-1.4
KRLC				*e*pPKP	sPKPab	10 44 31.9	-0.6
MYKA	Terra Mystica	157.34	267	*e*P	PKPab	10 44 33.8	+2.7
	comp=Z,16nm,1.6s						
DPC	Dobruska-Polom	157.35	277	*e*PKP2	PKPab	10 44 30.3	-0.7
DPC	Dobruska-Polom	157.35	277	*e*PKPAB	PKPab	10 44 30.3	-0.7
DPC				*e*pPKP	sPKPab	10 44 34.4	+0.3
OSTC	Ostas	157.49	278	*e*PKPAB	PKPab	10 44 35.0	+3.4
CHVC	Chvalec	157.59	278	*e*PKPAB	PKPab	10 44 34.8	+2.8
KBA	Koelnbreinsper	157.74	267	*e*P	PKPab	10 44 32.4	-0.6
	comp=Z,6.8nm,1.0s						
ABTA	Abfaltersbach	158.08	266	*e*P	PKPab	10 44 33.4	-0.9
	comp=Z,12nm,1.0s						
GERES	GERESS Array B	158.32	272	PKPab	PKPab	10 44 33.4	-1.9
	comp=Z,3.7nm,0.8s,baz=131,slow=5.7,SNR=12						
KHC	Kasperske Hory	158.51	273	*e*PKP2	PKPab	10 44 34.1	-2.0
KHC	Kasperske Hory	158.51	273	*e*PKPAB	PKPab	10 44 34.1	-2.0
KHC				*e*pPKP	pPKPab	10 44 38.1	-0.3
WTTA	Wattenberg	158.85	266	*e*P	PKPab	10 44 39.5	+1.7
	comp=Z,11nm,0.9s						
WATA	Walderalm	158.92	266	*e*P	PKPab	10 44 40.3	+2.3
	comp=Z,13nm,1.3s						
SQTA	Sankt Quirin	159.09	266	*e*P	PKPab	10 44 40.8	+2.0
	comp=Z,11nm,0.7s						
MOTA	Moosalm	159.21	266	*e*P	PKPab	10 44 41.1	+1.8
	comp=Z,16nm,1.0s						
FETA	Feichten	159.28	265	*e*P	PKPab	10 44 41.2	+1.6

	comp=Z,24nm,1.7s						
RETA	Reutte	159.48	266	*e*P	PKPab	10 44 39.1	-1.3
	comp=Z,13nm,1.0s						
CLL	Collm	159.65	278	*e*PKPab	PKPab	10 44 40.0	-0.9
	comp=Z,17nm,1.4s						
CLL				*e*SS	SS	11 08 12.0	-19
CLL				*e*PSPS		11 09 59.0	
CLL				*e*SSS	SSS	11 14 12.0	
CLL				LmV		12 05 00.0	
	comp=Z,300nm,20.6s						
CLL	Collm	159.65	278	*e*PKP2	PKPab	10 44 40.0	-0.9
CLL				pmax	pmax		
	comp=Z,17nm,1.4s						
DAVOX	Davos/Dischmat	159.67	264	PKPab	PKPab	10 44 39.0	-2.4
	comp=Z,12nm,0.9s,baz=129,slow=10,SNR=6.2						
DAVOX	Davos/Dischmat	159.67	264	PKP2	PKPab	10 44 39.0	-2.4
DAVA	Damuels	159.91	265	*e*P	PKPab	10 44 40.1	-2.3
	comp=Z,18nm,0.9s						
HFS	Hagfors	160.32	304	PKPab	PKPab	10 44 42.9	-0.6
	comp=Z,13nm,1.0s,baz=98,slow=6.1,SNR=6.3						

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*IDC **19** 10:42:51.1±0.8, 53°.41N×62°.89E, h0^{km}, mb3.5/1, mb1 3.1/6, mb1mx2.9/55, mbtmp3.0/6, ML2.2/5, Error ellipse: s-maj=13.3km s-min=7.7km az=22.0*

*NNC **19** 10:42:57.1±2.2, 52°.85N×63°.43E, h0^{km}, mb3.3, mpv2.9, Error ellipse: s-maj=45.4km s-min=9.2km az=153.0, Suspected Mining explosion.*

ISC 19 10:42:49.8±0.8**, 53°.34N**±0°.05×**62°.86E**±0°.04**, h0^{km}, n11,** σ**1^{s}.97**/16**, 4C-4D, Western Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARU	Arti	3.97	323	Pn	Pn	10 43 53.8	+2.0
	0.0nm,0.3s,baz=143,slow=15,SNR=5.2						
ARU				Pg	Pg	10 44 03.9	-1.9
	0.0nm,0.3s,baz=146,slow=11,SNR=5.3						
ARU				Sn	Sn	10 44 40.0	+1.0
	0.0nm,0.3s,baz=291,slow=20,SNR=1.3						
ARU				Lg	Lg	10 44 54.9	
	0.0nm,0.3s,baz=352,slow=23,SNR=8.5						
AKTO	Aktyubinsk	4.18	228	Pn	Pn	10 43 58.1	+3.4
	0.2nm,0.3s,baz=47,slow=14,SNR=2.3						
AKTO				Pg	Pg	10 44 07.3	-2.5
	0.2nm,0.3s,baz=45,slow=10.0,SNR=2.3						
AKTO				Sn	Sn	10 44 45.4	+1.1
	0.5nm,0.3s,baz=68,slow=8.5,SNR=4.0						
AKTO				Lg	Lg	10 45 03.2	
	0.7nm,0.3s,baz=25,slow=16,SNR=3.8						
AKTO	Aktyubinsk	4.18	228	⇓Pn	Pb	10 44 02.8	-1.3
AKTO				⇓Lg	Lg	10 45 08.7	
	28nm,0.9s						
I31KZ	AKTYUBINSK INF	4.19	227	*i*		11 17 50.0	
	baz=45,slow=325,SNR=3.3						
BRVK	Borovoye	4.47	91	⇑Pn	Pn	10 44 01.0	+2.3
	1.9nm,0.5s						
BRVK				⇑Pg	Pg	10 44 13.6	-1.8
	2.3nm,0.6s						
BRVK				⇑Lg	Lg	10 45 10.2	
	18nm,0.6s						
AB31	Akbulak array	4.48	205	⇑Pn	Pn	10 44 01.3	+2.5
	0.6nm,0.5s,baz=39,slow=15,SNR=28						
AB31				⇓Pg	Pg	10 44 14.2	-1.4
	0.5nm,0.3s,baz=27,slow=12,SNR=13						
AB31				⇓Lg	Lg	10 45 13.1	
	9.6nm,0.5s,baz=12,slow=28,SNR=5.1						
BVAR	Borovoye Array	4.54	91	Pn	Pn	10 44 01.1	+1.4
	0.9nm,0.3s,baz=242,slow=12,SNR=9.1						
BVAR				Sn	Sn	10 44 54.2	+1.0
	1.2nm,0.3s,baz=131,slow=50,SNR=1.5						
BVAR				Lg	Lg	10 45 14.2	
	1.9nm,0.3s,baz=251,slow=20,SNR=4.8						
KURBB	Kurchatov Arra	10.04	99	Pn	Pn	10 45 15.1	-0.1
	0.0nm,0.3s,baz=285,slow=13,SNR=1.7						
KURBB				Lg	Lg	10 48 08.1	
	0.0nm,0.3s,baz=293,slow=30,SNR=2.7						
I46RU	ZALESOVO INFRA	13.04	79	*i*		11 57 20.0	
	baz=278,slow=328,SNR=3.7						
MKAR	Makanchi Array	14.07	110	Pn	Pn	10 46 09.0	-1.3
	0.0nm,0.3s,baz=326,slow=18,SNR=1.5						
MKAR				Lg	Lg	10 50 17.7	
	0.1nm,0.3s,baz=303,slow=24,SNR=2.4						
FINES	FINESS Array B	21.16	307	P	P	10 47 36.9	+0.8
	1.1nm,0.5s,baz=97,slow=11,SNR=1.8						

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*ECX **19** 11:03:18.6±0.8, 31°.51N×115°.66W, h5^{km}±3^{km}, MD1.9, ML2.1*

*MEX **19** 11:03:19.5±8.0, 31°.14N×116°.00W, h20^{km}±999^{km}, MD3.7*

ISC 19 11:03:16.7±1.2**, 31°.56N**±0°.04×**115°.58W**±0°.05**, h9^{km}**±11^{km}**, n13,** σ**1^{s}.17**/23**, 2C-3D, Baja California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VTX	Valle De La Tr	0.24	226	*e*P	Pg	11 03 22.0	+0.3
VTX				*e*S	Sg	11 03 24.5	-0.5
VTX				IAML		11 03 25.5	
	comp=E,864nm,0.1s						
SJX	San Joaquin	0.38	302	⇓*i*P	Pn	11 03 28.4	0.0
SJX				*e*S	Sb	11 03 35.7	+4.1
ECBX	El Chinero	0.46	101	⇑*i*P	Pb	11 03 26.8	-0.1
ECBX				*e*S	Sb	11 03 33.6	-0.2
SPIG	San Pedro Mart	0.52	169	⇓*e*P	Pb	11 03 27.7	-0.5
	baz=312,slow=11						
SPIG				*i* S	Sg	11 03 34.3	+0.5
SPIG	San Pedro Mart	0.52	169	*e*P	Pg	11 03 27.4	+0.5
SPIG				*e*S	Sg	11 03 34.4	+0.5
SPX	San Pedro Mart	0.53	169	⇓*i*P	Pb	11 03 27.7	-0.7
SPX				*e*S	Sg	11 03 34.3	+0.2
SFX	San Felipe	0.81	130	*e*P	Pb	11 03 33.7	+0.7
SFX				*e*S	Sb	11 03 44.8	+0.8
SQX	San Quintin	1.01	195	*e*P	Pg	11 03 35.4	-0.8
SQX				*e*S	Sg	11 03 47.8	-1.6
IKP	In-Ko-Pah, Jac	1.18	338	*e*P	Pn	11 03 39.8	+0.4
CBX	Cerro Bola	1.19	309	*e*P	Pn	11 03 39.3	-0.3
CBX				*e*S	Sn	11 03 54.7	-1.3
CBX				⇑*e*		11 03 56.2	
CBX				IAML		11 03 56.2	
	comp=E,35nm,0.2s						
TJIG	Tijuana	1.27	313	*e*P	Pg	11 03 40.7	-0.5
TJIG				*i* S	Sg	11 03 56.8	-0.9
TJIG	Tijuana	1.27	313	*e*P	Pg	11 03 40.7	-0.5
BAR	Barrett	1.45	321	*e*P	Pg	11 03 43.9	-0.6

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*JMA **19** 11:19:50.7±0.2, 40°.69N×142°.65E, h23^{km}±3^{km}, M3.8*

*IDC **19** 11:19:56.5±4.0, 40°.54N×142°.36E, h76^{km}±35^{km}, mb3.4/6, mb1 3.5/8, mb1mx3.2/43, mbtmp3.7/8, Error ellipse: s-maj=35.8km s-min=25.6km az=73.0*

ISC 19 11:19:50.9±1.1**, 40°.72N**±0°.05×**142°.61E**±0°.07**, h22^{km}**±8^{km}**, n28,** σ**1^{s}.47**/28**, mb3.6**/6**, 8D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKEN	Kujiedanarisaw	0.86	233	⇓P	Pb	11 20 06.6	-0.4
JKEN				*e*S	Sb	11 20 18.2	+0.2
JANG	Nango	0.90	248	⇓P	Pb	11 20 07.7	-0.1
JTH	Tanohata	0.97	216	⇓P	Pb	11 20 08.1	-0.8
JTH				*e*S	Sb	11 20 20.7	-0.5
JARK	Aomorirokkasho	0.98	287	⇓P	Pn	11 20 09.0	-0.3
JTM	Tenmabayashi	1.17	274	⇓P	Pn	11 20 12.0	+0.1
JTM				*e*S	Sn	11 20 27.7	+0.5
JKZ	Kuzumaki	1.22	233	P	Pn	11 20 12.5	-0.1
JOT	Ohata	1.35	300	⇓P	Pn	11 20 14.2	-0.2
JOT				*e*S	Sn	11 20 32.5	+0.9
JEM	Erimo	1.36	18	P	Pn	11 20 15.0	+0.5
JNBK	Urakawa-nobuka	1.56	4	P	Pn	11 20 18.1	+0.8
JAH	Hinai	1.59	251	⇓P	Pn	11 20 18.8	+1.1
JOM	Ohasama	1.60	219	P	Pn	11 20 18.2	+0.4
JOM				*e*S	Sn	11 20 38.1	+0.3
JKB	Kayabe	1.66	315	P	Pn	11 20 18.9	+0.2
JSR	Shiriuchi	1.84	297	⇓P	Pn	11 20 22.0	+0.9
MAT	Matsushiro	5.41	221	P	Pn	11 21 12.0	+1.8
MAT				*e*S	Sn	11 22 16.7	+4.9
MJAR	Matsushiro Arr	5.41	221	P	Pn	11 21 11.0	+0.8
	0.1nm,0.3s,baz=33,slow=12,SNR=7.1						
USRK	Ussuriysk Ar.	8.58	297	P	Pn	11 21 56.5	+2.8
	baz=100,slow=15,SNR=6.8						
SONM	Songino Array	26.70	298	P	P	11 25 28.2	-0.3
	0.4nm,0.7s,baz=82,slow=8.2,SNR=4.9						
H11N2	WAKE ISLAND Hy	29.46	128	T	T	11 56 53.3	
	baz=318,slow=75,SNR=19						
H11N1	WAKE ISLAND Hy	29.47	128	T	T	11 56 53.4	
	baz=318,slow=75,SNR=13						
H11N3	WAKE ISLAND Hy	29.48	128	T	T	11 57 08.3	
	baz=318,slow=75,SNR=14						
H11S1	WAKE ISLAND Hy	30.29	130	T	T	11 58 33.6	
	baz=322						
H11S3	WAKE ISLAND Hy	30.30	130	T	T	11 58 37.6	
	baz=322						
H11S2	WAKE ISLAND Hy	30.31	130	T	T	11 58 12.7	
	baz=322						
ZALV	Zalesovo Beam	40.21	309	P	P	11 27 24.7	-0.7
	1.3nm,0.5s,baz=83,slow=9.3,SNR=4.2						
MKAR	Makanchi Array	43.05	299	P	P	11 27 48.0	-0.8
	0.6nm,0.5s,baz=88,slow=8.1,SNR=13						
ILAR	Eielson Array	45.91	34	P	P	11 28 13.1	+1.8
	0.7nm,1.2s,baz=243,slow=5.9,SNR=2.7						
WRA	Warramunga Arr	60.84	189	P	P	11 29 59.2	-2.2
	0.4nm,0.7s,baz=7.5,slow=7.2,SNR=1.8						
FINES	FINESS Array B	66.00	332	P	P	11 30 34.2	-0.9
	1.4nm,0.6s,baz=46,slow=8.0,SNR=2.6						

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*IDC **19** 11:20:44.0±1.5, 0°.46N×97°.46E, h0^{km}, mb3.9/8, mb1 4.0/9, mb1mx3.8/40, mbtmp3.9/9, ML3.6/2, Error ellipse: s-maj=48.5km s-min=18.5km az=64.0*

*DJA **19** 11:20:46.8±1.1, 0°N±6°×9°7E±1°1, h59^{km}±17^{km}, M4.0/7, mb4.3/2, MLv3.9/7*

ISC 19 11:20:48.2±1.0**, 0°.46N**±0°.08×**97°.4E**±0°.1**, h29^{km}, n22,** σ**1^{s}.20**/17**, mb4.0**/8**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSI	Gunungsitoli	0.86	13	P	Pb	11 21 05.5	+0.9
GSI				S	Sn	11 21 17.3	+1.3
MNSI	Mandailing Nat	2.23	81	P	Pn	11 21 24.5	+1.3
TPTI		2.79	356	P	Pn	11 21 29.6	-1.3
PSI	Prapat	2.79	34	Pn	Pn	11 21 28.9	-2.2
	1.8nm,0.3s,baz=180,slow=2.5,SNR=2.9						
PDSI	Padang	3.37	114	P	Pn	11 21 41.0	+2.0
KLSI		8.95	125	P	Pn	11 22 55.1	-0.6
CMAR	Chiang Mai Arr	17.95	5	P	P	11 24 55.4	-0.8
	0.2nm,0.3s,baz=194,slow=10.0,SNR=14						
H08S2	Diego Garcia H	26.09	252	T	T	11 53 09.1	
	baz=73,slow=76,SNR=20						
H08S3	Diego Garcia H	26.09	252	T	T	11 53 07.4	
	baz=73,slow=76,SNR=123						
H08S1	Diego Carcia H	26.11	252	T	T	11 53 15.3	
	baz=73,slow=76,SNR=5.4						
H01W3	Cape Leeuwin H	38.50	158	T	T	12 08 49.1	
	baz=334,slow=76,SNR=9.3						
H01W2	Cape Leeuwin H	38.51	158	T	T	12 08 47.6	
	baz=334,slow=76,SNR=7.8						
H01W1	Cape Leeuwin H	38.51	158	T	T	12 08 59.9	
	baz=334,slow=76,SNR=7.9						
WRA	Warramunga Arr	41.50	121	P	P	11 28 32.6	-0.6
	0.8nm,0.7s,baz=299,slow=9.0,SNR=7.3						
ASAR	Alice Springs	42.81	127	P	P	11 28 43.5	-0.4
	0.9nm,0.8s,baz=315,slow=8.4,SNR=7.3						
KSRS	Korea Array	46.35	34	P	P	11 29 11.0	-0.9
	1.6nm,0.8s,baz=214,slow=8.9,SNR=5.5						
SONM	Songino Array	47.83	8	P	P	11 29 23.2	-0.2
	0.6nm,0.9s,baz=192,slow=8.1,SNR=4.2						
MKAR	Makanchi Array	48.00	346	P	P	11 29 24.9	+0.4
	1.0nm,0.6s,baz=155,slow=7.9,SNR=8.2						
STKA	Stephens Creek	52.73	132	P	P	11 30 00.6	-0.1
	0.5nm,0.3s,baz=343,slow=11,SNR=3.4						
ZALV	Zalesovo Beam	54.31	351	P	P	11 30 12.5	+0.7
	1.7nm,0.8s,baz=186,slow=4.5,SNR=5.1						
ARCES	ARCESS Array B	83.29	340	P	P	11 33 12.6	+0.7
	3.7nm,1.0s,baz=111,slow=6.8,SNR=1.6						
TXAR	Lajitas Array	144.20	32	PKP	PKPdf	11 40 21.0	-1.3
	0.4nm,0.7s,baz=190,slow=0.8,SNR=3.8						

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*NOU **19** 11:34:31.8, 23°.56S×176°.59W, h408^{km}, mb4.1, South of Fiji Islands*

*IDC **19** 11:34:52.4±10.0, 24°.89S×179°.21W, h418^{km}±97^{km}, mb3.5/7, mb1 3.7/8, mb1mx3.3/44, mbtmp4.3/8, Error ellipse: s-maj=72.1km s-min=31.1km az=43.0*

ISC 19 11:34:55.4±1.5**, 25°.0S**±0°.1×**179°.2W**±0°.2**, h450^{km}, n24,** σ**1^{s}.45**/32**, mb4.0**/6**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	4.42	165	P	P	11 36 16.5	+2.3
GLKZ				S	S	11 37 16.3	-2.2
MXZ	Matakaoa Point	12.72	189	P	P	11 37 42.2	+0.3
MXZ				S	S	11 39 58.2	-1.1
WMGZ	Waiomatatini S	12.95	188	P	P	11 37 45.3	+0.8
WMGZ				S	S	11 40 04.6	+0.6
HAZ	Te Kaha	12.99	191	P	P	11 37 45.7	+0.9
HAZ				S	S	11 40 05.9	+1.2
YATNC	Mamie plateau,	13.06	280	P	P	11 37 47.7	+1.8
PKGZ	Pakihiroa	13.07	189	P	P	11 37 46.6	+0.8
PKGZ				S	S	11 40 04.3	-2.2
LIFNC	LIFOU	13.16	286	P	P	11 37 47.3	+0.4
RUGZ	Raukumara Rang	13.21	191	P	P	11 37 48.1	+0.7
RUGZ				S	S	11 40 09.9	+0.6
PUZ	Puketiti	13.22	189	P	P	11 37 47.4	0.0
PUZ				S	S	11 40 07.6	-1.8
OPRZ	Ohinepanea	13.32	195	P	P	11 37 51.7	+3.3
TWGZ	Tauwhareparae	13.37	190	P	P	11 37 50.4	+1.4
TWGZ				S	S	11 40 13.9	+1.6
DZM	Mont Dzumac	13.46	280	P	P	11 37 51.7	+1.4
URZ	Urewera	13.60	192	P	P	11 37 49.5	-1.9
	5.7nm,0.3s,baz=8.2,slow=14,SNR=28						
URZ				S	S	11 40 16.3	-0.4
	0.9nm,0.3s,baz=18,slow=19,SNR=6.2						
URZ	Urewera	13.60	192	P	P	11 37 50.3	-1.1
CNGZ	Carnagh Statio	13.64	189	P	P	11 37 54.6	+2.8
SANVU	Saraoutou	15.87	304	P	P	11 38 07.1	-8.9
RPZ	Rata Peaks	20.31	201	P	P	11 38 59.3	-0.2
	2.2nm,0.5s,baz=338,slow=20,SNR=2.1						
CTA	Charters Tower	32.20	272	P	P	11 40 44.3	-0.7
	5.9nm,0.4s,baz=90,slow=11,SNR=12						
STKA	Stephens Creek	34.99	250	P	P	11 41 08.0	-0.6
	0.7nm,0.4s,baz=70,slow=10,SNR=4.2						
ASAR	Alice Springs	42.57	262	P	P	11 42 10.1	-0.4
	1.7nm,0.3s,baz=94,slow=7.3,SNR=56						
WRA	Warramunga Arr	43.05	267	P	P	11 42 13.4	-0.9
	1.8nm,0.3s,baz=103,slow=7.0,SNR=84						
FITZ	Fitzroy Crossi	51.46	266	P	P	11 43 17.2	-0.8
	1.6nm,0.5s,baz=101,slow=6.7,SNR=9.1						
CMAR	Chiang Mai Arr	90.56	290	P	P	11 47 08.6	-0.3
	0.7nm,0.4s,baz=124,slow=4.5,SNR=2.0						
HFS	Hagfors	143.74	349	PKP	PKPdf	11 53 37.9	+0.2
	2.8nm,0.9s,baz=35,slow=3.5,SNR=5.1						

IDC 19 11:43:19.2±8.5**, 25°.93S**×**29°.12E, h0^{km}, mb1 2.6**/1**, mb1mx2.5**/58**, mbtmp2.6**/1**, ML2.3**/1**, Error ellipse: s-maj=102.0km s-min=58.8km az=141.0, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOSA	Boshof	4.36	231	Pn	Pn	11 44 27.6	+0.8
	0.1nm,0.3s,baz=50,slow=11,SNR=1.6						
BOSA				Pg	Pb	11 44 36.9	+0.1
	0.3nm,0.3s,baz=52,slow=14,SNR=1.3						
BOSA				Lg	Lg	11 45 38.6	
	1.0nm,0.3s,baz=151,slow=18,SNR=4.1						
I47ZA	BOSHOF INFRASO	4.37	231	*i*		12 10 00.0	
	baz=54,slow=318,SNR=0.8						
I35NA	TSUMEB INFRASO	12.60	300	*i*		12 57 10.0	
	baz=125,slow=297,SNR=0.7						

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*IDC **19** 11:45:37.6±1.7, 16°.48S×71°.54W, h95^{km}±16^{km}, mb3.6/7, mb1 3.8/11, mb1mx3.7/35, mbtmp4.0/11, MS2.8/1, Ms1 2.8/1, ms1mx2.5/28, Error ellipse: s-maj=24.5km s-min=13.0km az=47.0*

*NEIC **19** 11:45:38.8±1.8, 16°.52S±0°.05×71°.6W±0°.1, h121^{km}±11^{km}, mb4.2/3, Error ellipse: s-maj=20.5km s-min=2.1km az=68.0*

*VAO **19** 11:45:51.1±0.6, 16°.10S×70°.69W, h144^{km}±4^{km}, mb4.2*

ISC 19 11:45:37.8±0.6**, 16°.53S**±0°.07×**71°.61W**±0°.08**, h96^{km}, n56,** σ**1^{s}.47**/53**, mb4.0**/7**, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AP01	Chacalluta	2.20	147	Pn	Pn	11 46 16.2	+3.4
MNMC	Minye Minye	3.22	144	Pn	Pn	11 46 29.6	+2.9
PSGCX	Pisagua	3.37	155		Pn	11 46 30.0	+1.6
TA01	Diego Aracena	4.24	162		Pn	11 46 41.3	+1.1
PB08	IPOC Station P	4.29	147	Pn	Pn	11 46 43.7	+2.5
PATCX	Punta Patache	4.49	162	Pn	Pn	11 46 44.4	+0.7
PB01	IPOC Station P	4.92	156	Pn	Pn	11 46 50.7	+1.2
PB07	IPOC Station P	5.42	163		Pn	11 46 57.0	+0.6
PB09	IPOC Station P	5.70	157	Pn	Pn	11 47 02.0	+1.8
PB04	IPOC Station P	5.94	167	Pn	Pn	11 47 04.0	+0.6
PB06	IPOC Station P	6.44	163		Pn	11 47 09.9	-0.3
LVC	Limon Verde	6.56	158	P	Pn	11 47 12.9	+0.8
	1.4nm,0.3s,baz=9.9,slow=8.4,SNR=26						
LVC				S	Sn	11 48 25.0	-0.7
	5.0nm,0.3s,baz=111,slow=24,SNR=11						
LVC				LR	LR	11 50 05.3	
	comp=Z,82nm,21.0s,baz=126,slow=41						
LVC	Limon Verde	6.56	158		Pn	11 47 13.2	+1.1
LVC	Limon Verde	6.56	158	*e*P	Pn	11 47 27.6	+15
NNA	Nana	6.79	311	P	Pn	11 47 16.3	+1.4
	1.0nm,0.3s,baz=144,slow=7.2,SNR=5.3						
NNA				S	Sn	11 48 31.4	+0.6
	2.5nm,0.3s,baz=242,slow=20,SNR=1.6						
NNA	Nana	6.79	311	Pn	Pn	11 47 16.9	+2.0
PB15	IPOC Station P	6.95	163	Pn	Pn	11 47 18.9	+1.8
ETMB	Extrema	8.49	39	*e*P	Pn	11 47 39.3	+1.3
GO02	Mina Guanaco	8.80	168	Pn	Pn	11 47 43.2	+0.8
CZSB	Cruzeiro do Su	8.81	353	*e*P	Pn	11 47 51.7	+9.3
AC01	Pan de Azucar	9.62	175	Pn	Pn	11 47 54.3	+1.0
SIV	San Ignacio	10.13	88	P	Pn	11 48 00.0	-0.4
	1.4nm,0.3s,baz=296,slow=11,SNR=21						
SAML	Samuel	11.14	49		Pn	11 48 13.1	-1.1
SAML	Samuel	11.14	49	*e*P	Pn	11 48 13.3	-0.8
VILB	Vilhena	11.59	74	*e*P	Pn	11 48 19.4	-0.8
H03N1	Juan Fernandez	18.08	200	T	T	12 07 58.3	
	baz=22,slow=73,SNR=21						
H03N2	Juan Fernandez	18.09	200	T	T	12 08 00.8	
	baz=22,slow=73,SNR=18						
H03N3	Juan Fernandez	18.10	200	T	T	12 07 59.1	
	baz=22,slow=73,SNR=20						
TRCB	Terra Rica	18.92	112	*e*P	Pn	11 49 53.5	+0.6
PTGA	Pitinga	19.44	37	P	P	11 49 56.0	-0.9
	3.3nm,0.3s,baz=206,slow=13,SNR=23						
PTGA	Pitinga	19.44	37	P	P	11 49 55.9	-0.9
PTGA				IAmb	IAmb	11 49 57.1	
	comp=Z,9.8nm,0.5s						
PTGA	Pitinga	19.44	37	*e*P	P	11 49 56.2	-0.7
ITTB	Itaituba	19.72	54	*e*P	P	11 50 00.2	+0.4
PTGB	Pitanga	20.01	117	*e*P	Pn	11 50 05.5	-0.2
PTGB				*e*pP	sP	11 50 32.0	-3.3
SNDB	Serra Nova Dou	20.20	80	*e*P	P	11 50 05.2	+0.1
SNDB				*e*pP	pP	11 50 29.7	+4.9
IPMB	Ipameri, GO	22.39	97	*e*P	P	11 50 28.7	+0.1
PEXB	Peixe	23.00	82	*e*P	P	11 50 34.3	-0.4
PRPB	Parauapebas	23.69	67	*e*P	P	11 50 41.8	+0.8
PLCA	Paso Flores	24.14	178	*e*P	P	11 50 57.4	+12
SMTB	Santa Maria do	24.62	75	*e*P	P	11 50 51.5	+2.0
TXAR	Lajitas Array	55.11	326	P	P	11 54 59.4	-0.9
	comp=Z,0.3nm,0.6s,baz=149,slow=9.8,SNR=5.1						
TXAR				PcP	PcP	11 56 00.6	0.0
	comp=Z,0.7nm,1.1s,baz=164,slow=5.1,SNR=3.9						
PDAR	Pinedale Array	68.55	331	P	P	11 56 30.3	-0.1
	comp=Z,0.2nm,0.7s,baz=134,slow=7.7,SNR=2.6						
ULM	Lac du Bonnet	69.84	344	P	P	11 56 36.0	-1.8
	comp=Z,1.0nm,0.4s,baz=179,slow=5.5,SNR=2.7						
ULM	Lac du Bonnet	69.84	344	IAmb	IAmb	11 56 59.8	
	comp=Z,4.3nm,1.5s						
DBIC	Dimbokro	69.91	76	P	P	11 56 37.9	-1.3
	comp=Z,2.5nm,0.6s,baz=220,slow=4.6,SNR=5.1						
DBIC	Dimbokro	69.91	76	P	P	11 56 37.2	-2.0
NVAR	Mina Array Bea	70.02	323	P	P	11 56 39.2	-0.3
	comp=Z,0.6nm,0.8s,baz=153,slow=6.0,SNR=5.5						
TORD	Torodi Ar. Bea	78.20	72	P	P	11 57 27.2	-0.1
	comp=Z,1.1nm,0.3s,baz=266,slow=4.3,SNR=2.7						
YKA	Yellowknife Ar	85.68	341	P	P	11 58 05.0	-0.4
	comp=Z,0.9nm,0.5s,baz=130,slow=5.6,SNR=18						
ASAR	Alice Springs	132.91	213	PKP	PKPdf	12 04 42.0	-0.8
	comp=Z,0.2nm,0.5s,baz=143,slow=2.4,SNR=5.3						
WRA	Warramunga Arr	135.69	216	PKP	PKPdf	12 04 48.3	+0.4
	comp=Z,0.8nm,0.8s,baz=141,slow=1.8,SNR=7.4						
ZALV	Zalesovo Beam	138.39	21	PKP	PKPdf	12 04 52.4	+0.6
	comp=Z,0.8nm,0.6s,baz=321,slow=0.9,SNR=1.5						
KURBB	Kurchatov Arra	138.40	29	PKP	PKPdf	12 04 51.2	-0.8
	comp=Z,0.4nm,1.1s,baz=272,slow=2.6,SNR=2.7						
MKAR	Makanchi Array	142.87	30	PKhKP	PKPpre	12 04 56.1	
	comp=Z,0.1nm,0.3s,baz=294,slow=1.4,SNR=5.7						
MJAR	Matsushiro Arr	146.91	313	PKPbc	PKPbc	12 05 09.8	+0.3
	comp=Z,2.4nm,0.9s,baz=90,slow=3.9,SNR=4.2						
SONM	Songino Array	148.74	3	PKPbc	PKPbc	12 05 14.8	+0.6
	comp=Z,0.7nm,0.7s,baz=335,slow=2.2,SNR=7.0						

IDC 19 11:47:16.4±6.9**, 19°.39N**×**122°.52E, h0^{km}, mb3.5**/4**, mb1 3.6**/4**, mb1mx3.2**/62**, mbtmp3.5**/4**, Error ellipse: s-maj=188.8km s-min=58.4km az=17.0, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SONM	Songino Array	31.25	339	P	P	11 53 37.8	-0.1
	0.4nm,0.7s,baz=162,slow=8.8,SNR=4.0						
H11S3	WAKE ISLAND Hy	41.70	84	T	T	12 40 01.5	
	baz=278,slow=75,SNR=46						
H11S1	WAKE ISLAND Hy	41.72	84	T	T	12 40 05.0	
	baz=278,slow=75,SNR=32						
H11S2	WAKE ISLAND Hy	41.72	84	T	T	12 40 02.6	
	baz=278,slow=75,SNR=34						
H11N1	WAKE ISLAND Hy	41.73	82	T	T	12 40 04.4	
	baz=277,slow=75,SNR=44						
H11N2	WAKE ISLAND Hy	41.73	82	T	T	12 40 03.6	
	baz=277,slow=75,SNR=46						
H11N3	WAKE ISLAND Hy	41.74	82	T	T	12 40 03.9	
	baz=277,slow=75,SNR=44						
MKAR	Makanchi Array	42.69	319	P	P	11 55 15.4	+0.4
	0.3nm,0.7s,baz=116,slow=6.6,SNR=3.1						
KURBB	Kurchatov Arra	46.60	322	P	P	11 55 45.6	-0.5
	0.6nm,0.8s,baz=126,slow=7.0,SNR=7.7						
YKA	Yellowknife Ar	86.88	23	P	P	12 00 02.8	0.0
	0.3nm,0.7s,baz=316,slow=3.7,SNR=6.6						

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*NOU **19** 11:47:19.4, 12°.91S×167°.22E, h180^{km}, mb4.3, Santa Cruz Islands*

*NEIC **19** 11:47:23.5±0.7, 13°.29S±0°.09×167°.1E±0°.1, h192^{km}±7^{km}, mb4.2/8, Error ellipse: s-maj=23.2km s-min=8.2km az=59.0*

*IDC **19** 11:47:23.5±2.6, 13°.33S×167°.10E, h191^{km}±23^{km}, mb3.7/12, mb1 3.8/15, mb1mx3.6/43, mbtmp4.2/15, MS4.2/1, Ms1 4.2/1, ms1mx2.8/34, Error ellipse: s-maj=19.4km s-min=13.7km az=71.0*

ISC 19 11:47:23.9±0.7**, 13°.30S**±0°.07×**167°.2E**±0°.1**, h200^{km}, n36,** σ**1^{s}.01**/36**, mb3.9**/15**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	Saraoutou	2.14	179		Pn	11 48 02.5	-1.4
SANVU	Saraoutou	2.14	179	P	Pn	11 48 02.8	-1.1
LIFNC	LIFOU	7.44	179	P	Pn	11 49 08.4	-1.5
KOUNC	Koumac, New Ca	7.72	200	P	Pn	11 49 14.0	+0.5
HNR	Honiara	8.04	298	P	Pn	11 49 16.8	-1.0
	6.4nm,0.3s,baz=150,slow=3.1,SNR=2.2						
YATNC	Mamie plateau,	8.72	182	P	Pn	11 49 26.8	+0.3
DZM	Mont Dzumac	8.75	184	P	Pn	11 49 26.9	-0.2
	1.4nm,0.3s,baz=43,slow=16,SNR=21						
DZM				S	Sn	11 51 04.3	-1.1
	0.5nm,0.3s,baz=95,slow=22,SNR=1.1						
DZM	Mont Dzumac	8.75	184	P	Pn	11 49 29.2	+2.1
OUENC	Ouen Island, N	9.08	182	P	Pn	11 49 32.0	+0.8
PMG	Port Moresby	19.98	279	P	P	11 51 41.1	-0.2
	1.0nm,0.3s,baz=68,slow=4.9,SNR=5.4						
PMG	Port Moresby	19.98	279	IAmb	IAmb	11 51 42.6	
	comp=Z,16nm,1.1s						
URZ	Urewera	26.39	162	P	P	11 52 41.6	-0.3
	comp=Z,4.5nm,0.7s,baz=308,slow=13,SNR=2.2						
LTZ	Lake Taylor	29.71	172	P	P	11 53 11.8	+0.5
STKA	Stephens Creek	29.85	228	P	P	11 53 13.1	+0.4
	comp=Z,9.6nm,0.4s,baz=52,slow=9.0,SNR=46						
RPZ	Rata Peaks	30.50	174	P	P	11 53 18.5	+0.3
	comp=Z,9.2nm,0.8s,baz=4.8,slow=15,SNR=8.6						
RPZ	Rata Peaks	30.50	174	P	P	11 53 18.5	+0.3
WRA	Warramunga Arr	32.09	254	P	P	11 53 31.0	-1.5
	comp=Z,0.2nm,0.3s,baz=82,slow=8.7,SNR=7.2						
RAR	Rarotonga	32.50	109	LR	LR	12 04 36.3	
	comp=Z,432nm,20.8s,baz=282,slow=32						
AS31	Alice Springs	33.10	247	P	P	11 53 40.3	-1.0
AS31				IAmb	IAmb	11 53 41.2	
	comp=Z,1.2nm,0.3s						
ASAR	Alice Springs	33.10	247	P	P	11 53 40.2	-1.0
	comp=Z,1.7nm,0.4s,baz=76,slow=9.7,SNR=57						

ASAR				PcP	PcP	11 56 20.1	+0.2
	comp=Z,0.6nm,0.6s,baz=73,slow=2.2,SNR=7.6						
FITZ	Fitzroy Crossi	40.19	258	P	P	11 54 41.7	+0.6
	comp=Z,1.6nm,0.7s,baz=83,slow=8.1,SNR=1.5						
FITZ	Fitzroy Crossi	40.19	258	IAmb	IAmb	11 54 42.7	
	comp=Z,7.2nm,1.3s						
VNDA	Vanda	64.28	181	P	P	11 57 38.0	+0.6
	comp=Z,1.4nm,0.8s,baz=6.7,slow=6.8,SNR=1.6						
PETK	Petropavlovsk-	66.63	354	P	P	11 57 54.2	+1.5
	comp=Z,1.3nm,0.6s,baz=149,slow=4.9,SNR=8.5						
CMAR	Chiang Mai Arr	74.27	294	P	P	11 58 41.2	+1.6
	comp=Z,0.4nm,0.3s,baz=132,slow=4.6,SNR=5.6						
QSPA	South Pole Qui	76.72	180	P	P	11 58 53.5	+0.6
QSPA				IAmb	IAmb	11 58 55.6	
	comp=Z,7.7nm,1.1s						
SONM	Songino Array	81.28	324	P	P	11 59 18.3	+0.3
	comp=Z,0.2nm,0.5s,baz=114,slow=4.2,SNR=2.6						
IL31		85.21	18	P	P	11 59 37.6	+0.2
ILAR	Eielson Array	85.21	18	P	P	11 59 37.3	-0.1
	comp=Z,1.1nm,0.6s,baz=240,slow=5.0,SNR=42						
ILAR				pP	pP	12 00 23.5	-2.3
	comp=Z,0.7nm,0.6s,baz=237,slow=6.0,SNR=4.8						
ILAR	Eielson Array	85.21	18	P	P	11 59 37.2	-0.3
MKAR	Makanchi Array	96.09	317	P	P	12 00 28.8	0.0
	comp=Z,0.4nm,0.6s,baz=86,slow=6.6,SNR=8.0						
MKAR				pP	pP	12 01 15.9	-2.1
	comp=Z,0.2nm,0.6s,baz=93,slow=6.7,SNR=1.6						
MKAR	Makanchi Array	96.09	317	P	P	12 00 29.1	+0.3
YKA	Yellowknife Ar	96.33	27	pP	pP	12 01 17.4	-1.1
	comp=Z,0.2nm,0.8s,baz=262,slow=4.4,SNR=2.5						
ARCES	ARCESS Array B	118.84	346	PKP	PKiKP	12 05 48.0	0.0
	comp=Z,5.0nm,0.9s,baz=55,slow=1.6,SNR=19						
FINES	FINESS Array B	124.36	339	PKP	PKiKP	12 05 59.1	+0.2
	comp=Z,2.0nm,0.8s,baz=48,slow=2.8,SNR=6.0						
BOSA	Boshof	124.38	221	PKP	PKiKP	12 06 00.6	+0.3
	comp=Z,2.5nm,0.8s,baz=127,slow=5.1,SNR=3.5						

IDC 19 11:49:60.0±3.1**, 11°.26N×92°.52E, h0^{km}, mb3.3**/5**, mb1 3.5**/5**, mb1mx3.2**/64**, mbtmp3.3**/5**, Error ellipse: s-maj=130.8km s-min=24.6km az=62.0, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S3	Diego Garcia H	27.38	228	T	T	12 23 12.9	
	baz=47,slow=74						
H08S2	Diego Garcia H	27.38	228	T	T	12 23 12.5	
	baz=47,slow=74						
H08S1	Diego Carcia H	27.39	228	T	T	12 23 12.1	
	baz=47						
MKAR	Makanchi Array	36.46	348	P	P	11 57 06.8	+0.2
	0.6nm,0.7s,baz=165,slow=8.4,SNR=6.6						
SONM	Songino Array	38.28	15	P	P	11 57 21.9	-0.2
	0.3nm,0.8s,baz=198,slow=9.1,SNR=2.4						
KURBB	Kurchatov Arra	40.90	346	P	P	11 57 43.4	-0.4
	0.2nm,0.6s,baz=170,slow=7.2,SNR=2.9						
WRA	Warramunga Arr	51.54	127	P	P	11 59 07.7	-0.4
	0.4nm,0.7s,baz=306,slow=8.0,SNR=2.0						
ASAR	Alice Springs	53.32	131	P	P	11 59 21.4	+0.2
	0.3nm,0.8s,baz=305,slow=6.8,SNR=1.8						

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*IDC **19** 12:03:20.4±1.0, 13°.11N×120°.12E, h0^{km}, mb3.6/7, mb1 3.8/7, mb1mx3.4/58, mbtmp3.6/7, MS3.5/1, Ms1 3.5/1, ms1mx2.5/43, Error ellipse: s-maj=23.6km s-min=18.4km az=87.0*

*MAN **19** 12:03:23.0, 13°.16N×119°.95E, h29^{km}, MS3.1*

ISC 19 12:03:23.6±1.5**, 13°.13N**±0°.04×**120°.08E**±0°.06**, h24**^{km}±12^{km}**, n20, σ1^{s}.01**/28**, mb3.6**/6**, 1C-2D, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	Lubang	0.62	15	*e*P	Pb	12 03 35.5	-0.3
LUBP				*e*S	Sb	12 03 44.0	-0.1
PGP	Puerto Galera	0.92	67⇑	*e*P	Pn	12 03 39.7	-1.5
PGP				*i* S	Sn	12 03 51.6	-2.1
BUSP	Coron	1.13	174	*e*P	Pn	12 03 43.8	-0.1
BUSP				*e*S	Sn	12 03 58.3	-0.5
SJMP	San Jose	1.21	123	*e*P	Pn	12 03 45.1	0.0
SJMP				*e*S	Sn	12 03 59.1	-1.7
TGY	Tagaytay City	1.27	41	Pn	Pn	12 03 46.3	+0.3
	577nm,0.3s,baz=205,slow=4.4,SNR=27						
TGY				Sn	Sb	12 04 04.1	+1.2
	599nm,0.3s,baz=126,slow=23,SNR=21						
TGY	Tagaytay City	1.27	41⇓	*e*P	Pn	12 03 46.7	+0.7
TGY				*e*S	Sn	12 04 03.4	+1.0
MACP	Maragondon, Ca	1.28	29	*e*P	Pn	12 03 45.5	-0.6
MACP				*e*S	Sn	12 04 01.9	-0.6
LQP	Lukban	1.72	55	*e*P	Pn	12 03 51.2	-1.1
LQP				*i* S	Sb	12 04 16.9	+1.0
QVP	Quezon City--P	1.73	31	*e*P	Pn	12 03 52.4	+0.2
QVP				*e*S	Sb	12 04 15.2	-0.8
BOAC	Boac	1.75	79	*e*P	Pn	12 03 53.6	+1.2
ENPP	El Nido	2.02	199	*e*P	Pn	12 03 55.8	-0.5
ENPP				*e*S	Sn	12 04 19.6	-1.1
JAP	San Jose, Anti	2.99	142⇓	*e*P	Pn	12 04 11.3	+1.7
CMAR	Chiang Mai Arr	21.01	287	P		12 08 07.6	
	0.4nm,0.4s,baz=111,slow=12,SNR=1.3						
WRA	Warramunga Arr	35.74	157	P	P	12 10 20.2	-0.6
	0.3nm,0.4s,baz=330,slow=10,SNR=1.5						
SONM	Songino Array	36.43	344	P	P	12 10 26.4	-0.2
	1.5nm,0.6s,baz=163,slow=10,SNR=17						
ASAR	Alice Springs	38.99	160	P	P	12 10 48.6	+0.2
	0.3nm,0.6s,baz=341,slow=6.6,SNR=6.4						
MKAR	Makanchi Array	46.13	324	P	P	12 11 47.4	+1.2
	0.2nm,0.4s,baz=135,slow=9.6,SNR=6.1						
KURBB	Kurchatov Arra	50.33	327	P	P	12 12 19.1	+0.7
	0.8nm,0.9s,baz=131,slow=8.1,SNR=8.5						
DZM	Mont Dzumac	57.37	127	LR	LR	12 39 32.1	
	comp=Z,36nm,19.2s,baz=296,slow=38						
ARCES	ARCESS Array B	79.40	339	P	P	12 15 27.5	+0.1
	3.3nm,1.0s,baz=73,slow=7.0,SNR=7.4						

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*NOU **19** 12:05:48.6, 36°.37S×178°.61W, h0^{km}, mb4.1, East of North Island, N.Z.*

*WEL **19** 12:05:57.6±0.8, 37°S±6°×17°9W±°, h33^{km}, M4.1/30, ML4.5/27, MLv4.1/30, Error ellipse: s-maj=0.0km s-min=0.0km az=175.1*

*IDC **19** 12:05:57.8±3.1, 36°.22S×179°.82W, h0^{km}, mb4.1/3, mb1 4.2/5, mb1mx3.9/34, mbtmp4.1/5, ML3.7/2, MS3.3/1, Ms1 3.3/1, ms1mx2.6/26, Error ellipse: s-maj=65.4km s-min=32.0km az=122.0*

ISC 19 12:05:52.6±1.4**, 36°.47S**±0°.09×**178°.96W**±0°.08**, h10**^{km}**, n48, σ1^{s}.53**/63**, mb4.1**/3**, East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUZ	Puketiti	2.74	233	P	Pn	12 06 37.9	+1.3
PUZ				S	Sn	12 07 08.3	-1.5
PKGZ	Pakihiroa	2.76	238	P	Pn	12 06 38.0	+1.0
PKGZ				S	Sn	12 07 09.2	-1.2
HAZ	Te Kaha	2.91	243	P	Pn	12 06 39.8	+0.9
HAZ				S	Sn	12 07 13.6	-0.3
TWGZ	Tauwhareparae	2.98	234	P	Pn	12 06 41.7	+1.7
TWGZ				S	Sn	12 07 15.3	-0.5
CNGZ	Carnagh Statio	3.02	227	P	Pn	12 06 42.7	+2.1
RUGZ	Raukumara Rang	3.08	240	P	Pn	12 06 42.4	+1.1
RUGZ				S	Sn	12 07 18.3	+0.1
TKGZ	Te Karaka	3.22	231	P	Pn	12 06 44.6	+1.5
TKGZ				S	Sn	12 07 21.8	+0.3
MWZ	Matawai	3.36	235	P	Pn	12 06 45.9	+0.7
MWZ				S	Sn	12 07 24.0	-1.2
RIGZ	Rimuhau	3.43	228	P	Pn	12 06 47.8	+1.6
RIGZ				S	Sn	12 07 27.1	+0.1
PRGZ	Paritu Road	3.51	225	P	Pn	12 06 48.6	+1.4
URZ	Urewera	3.61	239	Pn	Pn	12 06 49.6	+1.1
	9.4nm,0.3s,baz=221,slow=1.0,SNR=58						
URZ				Sn	Sn	12 07 29.9	-1.3
	22nm,0.3s,baz=166,slow=22,SNR=4.3						
URZ	Urewera	3.61	239	P	Pn	12 06 49.5	+1.0
URZ				S	Sn	12 07 29.2	-1.9
MHGZ	Mahia Peninsul	3.66	222	P	Pn	12 06 50.6	+1.4
MHGZ				S	Sn	12 07 32.3	-0.1
KNZ	Kokohu	3.69	225	P	Pn	12 06 50.6	+0.9
KNZ				S	Sn	12 07 32.3	-1.0
SNGZ	Shannon Statio	3.74	231	P	Pn	12 06 51.1	+0.7
SNGZ				S	Sn	12 07 33.6	-0.9
MARZ	Manawahe	3.80	245	P	Pn	12 06 52.3	+1.1
MARZ				S	Sn	12 07 32.7	-3.3
OPRZ	Ohinepanea	3.84	248	P	Pn	12 06 52.2	+0.5
OPRZ				S	Sn	12 07 32.7	-4.2
RTZ	Ruatahuna	3.88	235	P	Pn	12 06 53.8	+1.5
MUGZ	Murupara	3.95	238	P	Pn	12 06 54.6	+1.4
RAHZ	Arahi	3.98	231	P	Pn	12 06 51.6	-2.1
TARZ	Mount Tarawera	4.02	243	P	Pn	12 06 56.6	+2.2
TGRZ	Tauranga	4.03	250	P	Pn	12 06 54.3	+0.1
RRRZ	Republican Roa	4.06	241	P	Pn	12 06 57.6	+2.8
MTHZ	Maungataniwha	4.10	233	P	Pn	12 06 56.6	+1.2
ARHZ	Aropaoanui	4.25	228	P	Pn	12 06 58.7	+1.3
NMHZ	Naumai	4.26	231	P	Pn	12 06 59.6	+2.0
MRHZ	Matea Rd	4.37	236	P	Pn	12 07 00.2	+1.1
CKHZ	Cape Kidnapper	4.47	223	P	Pn	12 07 00.8	+0.5
BKZ	Black Stump Fm	4.50	232	P	Pn	12 07 01.3	+0.4
MCHZ	McNeill Hill	4.54	228	P	Pn	12 07 02.1	+0.7
KAHZ	Kahuranaki	4.67	223	P	Pn	12 07 03.6	+0.4
KWHZ	Kaweka Forest	4.70	230	P	Pn	12 07 03.9	+0.3
WIAZ	Waiheke Island	4.76	264	P	Pn	12 07 05.0	+0.5
PXZ	Pawanui	4.85	221	P	Pn	12 07 05.3	-0.3
ETAZ	East Tamaki Re	4.94	263	P	Pn	12 07 07.6	+0.8
MBAZ	Motutapu North	4.95	265	P	Pn	12 07 07.9	+0.9
BHHZ	Black Hill Sta	4.96	231	P	Pn	12 07 07.8	+0.6
TMVZ	Te Maari	4.99	236	P	Pn	12 07 08.6	+1.0
ETVZ	East Tongariro	4.99	236	P	Pn	12 07 08.8	+1.1
OTVZ	Oturere	5.04	236	P	Pn	12 07 09.2	+0.8
WPHZ	Waipukurau	5.10	224	P	Pn	12 07 09.0	-0.1
CTZ	Chatham Island	7.48	167	P	Pn	12 07 46.0	+4.3
CTZ				S	Sn	12 09 02.8	-3.8
RPZ	Rata Peaks	10.53	224	Pn	Pn	12 08 23.9	+0.4
	0.5nm,0.3s,baz=23,slow=12,SNR=2.4						
RPZ				Sn	Sn	12 10 08.3	-13
	1.5nm,0.3s,baz=113,slow=24,SNR=8.2						
DZM	Mont Dzumac	19.15	315	LR	LR	12 15 27.1	
	comp=Z,92nm,19.5s,baz=340,slow=31						
CTA	Charters Tower	34.48	289	P	P	12 12 40.8	-0.1
	0.9nm,0.3s,baz=126,slow=14,SNR=2.0						
ASAR	Alice Springs	42.36	274	P	P	12 13 48.4	+1.2
	1.2nm,0.5s,baz=119,slow=7.9,SNR=29						
WRA	Warramunga Arr	43.89	279	P	P	12 14 00.2	+0.7
	1.4nm,0.4s,baz=120,slow=7.7,SNR=34						
FINES	FINESS Array B	150.45	336	PKPbc	PKPab	12 25 49.0	-1.0
	3.0nm,0.9s,baz=39,slow=5.3,SNR=4.3						

IDC 19 12:18:43.7±8.1**, 26°.03S×28°.46E, h0^{km}, mb1 2.6**/1**, mb1mx2.6**/32**, mbtmp2.6**/1**, ML2.5**/1**, Error ellipse: s-maj=86.3km s-min=55.1km az=137.0, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOSA	Boshof	3.84	227	Pn	Pn	12 19 44.5	+0.4
	0.2nm,0.3s,baz=54,slow=15,SNR=1.4						
BOSA				Pg	Pb	12 19 53.0	+0.6
	0.5nm,0.3s,baz=51,slow=16,SNR=8.6						
BOSA				Lg	Lg	12 20 46.4	
	4.0nm,0.3s,baz=115,slow=1.7,SNR=17						
I47ZA	BOSHOF INFRASO	3.86	227	*i*		12 40 10.0	
	baz=48,slow=307,SNR=0.7						
I35NA	TSUMEB INFRASO	12.13	302	*i*		13 35 20.0	
	baz=124,slow=312,SNR=1.4						

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*IDC **19** 12:26:07.6±2.4, 6°.20S×154°.35E, h0^{km}, mb3.5/6, mb1 3.7/7, mb1mx3.6/24, mbtmp3.6/7, ML1.8/1, MS3.2/1, Ms1 3.2/1, ms1mx2.6/25, Error ellipse: s-maj=79.1km s-min=25.1km az=121.0*

ISC 19 12:26:14.8±1.9**, 6°.2S**±0°.3×**154°.1E**±0°.3**, h48**^{km}**, n11, σ0^{s}.95**/8**, mb3.4**/7**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	7.58	245	Pn	Pn	12 28 01.8	-1.0
	0.7nm,0.3s,baz=164,slow=22,SNR=2.8						
PMG				Sn	Sn	12 29 27.5	0.0
	0.7nm,0.3s,baz=36,slow=22,SNR=1.5						
WRA	Warramunga Arr	23.56	233	P	P	12 31 21.6	+0.5
	0.8nm,1.0s,baz=55,slow=10.0,SNR=1.9						
WRA				LR	LR	12 40 44.8	
	comp=Z,57nm,18.6s,baz=160,slow=37						
ASAR	Alice Springs	26.05	226	P	P	12 31 45.1	+1.2
	1.0nm,0.8s,baz=65,slow=9.1,SNR=11						
H11S3	WAKE ISLAND Hy	27.53	27	T	T	13 00 18.4	
	baz=206						
H11S2	WAKE ISLAND Hy	27.53	27	T	T	13 00 18.8	
	baz=206						
H11S1	WAKE ISLAND Hy	27.54	27	T	T	13 00 18.7	
	baz=206						
CMAR	Chiang Mai Arr	59.68	295	P	P	12 36 20.7	+5.9
	0.4nm,0.3s,baz=96,slow=7.6,SNR=1.8						
SONM	Songino Array	68.24	328	P	P	12 37 11.2	+0.5
	0.2nm,0.4s,baz=136,slow=5.5,SNR=6.9						
MKAR	Makanchi Array	82.27	319	P	P	12 38 31.7	+0.5
	0.5nm,0.8s,baz=104,slow=6.0,SNR=6.0						
ILAR	Eielson Array	83.00	22	P	P	12 38 33.5	-1.1
	0.2nm,0.7s,baz=203,slow=3.5,SNR=2.0						
ZALV	Zalesovo Beam	83.07	326	P	P	12 38 35.6	+0.4
	0.5nm,0.5s,baz=85,slow=6.5,SNR=2.7						

IDC 19 12:30:43.3±999.0**, 50°.73N×49°.52E, h0^{km}, Error ellipse: s-maj=1048.0km s-min=121.0km az=88.0, Western Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I31KZ	AKTYUBINSK INF	5.44	90	*i*		13 03 50.0	
	baz=277,slow=314,SNR=1.0						
I46RU	ZALESOVO INFRA	21.67	68	*i*		14 42 50.0	
	baz=278,slow=346,SNR=0.7						
I34MN	SONGINO INFRAS	36.46	72	*i*		16 15 10.0	
	baz=292,slow=331,SNR=0.6						

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*IDC **19** 12:45:36.7±1.6, 8°.06S×120°.41E, h0^{km}, mb3.7/4, mb1 3.8/7, mb1mx3.5/56, mbtmp3.7/7, ML3.5/3, Error ellipse: s-maj=116.8km s-min=17.9km az=61.0*

*DJA **19** 12:45:38.9±0.3, 8°S±3°×12°0E±°, h10^{km}, M4.0/7, MLv4.0/7*

ISC 19 12:45:41.1±0.8**, 8°.01S**±0°.04×**120°.40E**±0°.06**, h33**^{km}**, n17, σ0^{s}.69**/18**, mb3.9**/3**, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EDFI	Ende, Flores	1.48	120	P	Pn	12 46 05.4	-0.1
WSI	Waingapu	1.66	183	P	Pn	12 46 07.8	0.0
BSSI	Bau Bau, Buton	1.85	3	P	Pn	12 46 09.9	-0.7
BSSI				S	Sn	12 46 32.6	-0.3
MMRI	Maumere	1.93	109	P	Pn	12 46 11.8	+0.2
BASI	Baing, Sumba	2.21	175	P	Pn	12 46 15.1	-0.3
BKSI	Bulukumba	2.68	354	P	Pn	12 46 21.4	-0.5
PLAI	Plampang	2.72	252	P	Pn	12 46 21.6	-0.9
KAPI	Kappang	3.04	348	Pn	Pn	12 46 26.8	-0.1
	4.8nm,0.3s,baz=150,slow=7.7,SNR=16						
KAPI				Sn	Sn	12 47 02.1	0.0
	6.2nm,0.3s,baz=217,slow=16,SNR=7.5						
TWSI	Taliwang, Sumb	3.55	258	P	Pb	12 46 43.9	+0.6
BATI	Baumata	3.90	124	Pn	Pb	12 46 44.5	-4.7
	3.7nm,0.3s,baz=46,slow=3.2,SNR=4.4						
SOEI	Soe	4.20	115	P	Pb	12 47 00.3	+5.9
FITZ	Fitzroy Crossi	11.26	154	Pn	Pn	12 48 19.6	-0.1
	0.1nm,0.3s,baz=331,slow=10,SNR=6.5						
FITZ				Sn	Sn	12 50 24.0	-0.4
	0.1nm,0.3s,baz=147,slow=7.1,SNR=3.9						
WRA	Warramunga Arr	17.98	133	P	Pn	12 49 47.1	-1.5
	0.3nm,0.3s,baz=307,slow=12,SNR=17						
ASAR	Alice Springs	20.25	142	P	P	12 50 13.7	-0.2
	1.1nm,0.4s,baz=316,slow=10,SNR=67						
STKA	Stephens Creek	30.88	143	P	P	12 51 54.2	-0.4
	0.7nm,0.3s,baz=328,slow=12,SNR=3.9						
MKAR	Makanchi Array	64.22	332	P	P	12 56 13.7	+0.9
	0.1nm,0.4s,baz=150,slow=6.7,SNR=2.0						
ZALV	Zalesovo Beam	68.62	338	P	P	12 56 42.0	+1.3
	0.5nm,0.3s,baz=134,slow=4.2,SNR=2.1						

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*IDC **19** 12:57:38.1±1.2, 38°.67N×49°.02E, h0^{km}, mb3.8/8, mb1 3.8/13, mb1mx3.6/54, mbtmp3.7/13, ML2.1/3, MS2.8/2, Ms1 2.8/2, ms1mx2.4/56, Error ellipse: s-maj=21.0km s-min=11.0km az=7.0*

*TEH **19** 12:57:39.4, 38°.65N×48°.55E, h28^{km}, ML3.7*

*AZER **19** 12:57:39.3±0.0, 38°.74N×48°.55E, h15^{km}, ml3.7/32, Error ellipse: s-maj=1.1km s-min=0.4km az=23.0*

*NNC **19** 12:57:46.3±5.2, 39°.20N×49°.35E, h18^{km}±50^{km}, mb4.0, Error ellipse: s-maj=44.1km s-min=16.4km az=59.0*

ISC 19 12:57:39.9±0.7**, 38°.72N**±0°.03×**48°.67E**±0°.03**, h30**^{km}±5^{km}**, n92, σ2^{s}.07**/127**, mb3.8**/8**, 4C-4D, Iran-Armenia-Azerbaijan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKRN	Lenkeran, Azer	0.09	98	P	Pb	12 57 45.2	+0.1
	SNR=1188						
LKRN				S	Sb	12 57 49.4	+0.7
LKRN	Lenkeran, Azer	0.09	98	*e*Pg	Pb	12 57 45.2	+0.1
ASTR	Astara	0.19	149	P	Pb	12 57 45.8	-0.2
	SNR=418						
ASTR				S	Sb	12 57 50.5	+0.3
ASTR	Astara	0.19	149	*e*Pg	Pb	12 57 45.8	-0.2
LRK	Lerik	0.27	253	P	Pb	12 57 45.8	-1.3
	SNR=5373						
LRK				S	Sb	12 57 50.4	-1.5
LRK	Lerik	0.27	253	*e*Pg	Pb	12 57 45.7	-1.3
YRD	Yardimli	0.38	300	P	Pb	12 57 47.7	-1.0
	SNR=3244						
YRD				S	Sb	12 57 53.7	-1.0
YRD	Yardimli	0.38	300	*e*Pg	Pb	12 57 47.7	-1.0
GLBA	Clilabad	0.56	338	P	Pb	12 57 51.2	-0.1
	SNR=99						
GLBA				S	Sn	12 58 00.4	+0.4
GLBA	Clilabad	0.56	338	*e*Pg	Pb	12 57 51.2	-0.1
SAAT	Saatly	1.15	351	P	Pb	12 58 01.4	+0.2
	SNR=4.4						
SAAT				S	Sb	12 58 18.8	+3.0
SAAT	Saatly	1.15	351	*e*Pg	Pb	12 58 01.9	+0.7
ISRB	Sarab	1.19	222	*e*Pg	Pn	12 57 59.9	-0.8
ALIB	Äli-Bayra	1.26	12	P	Pb	12 58 04.1	+1.1
	SNR=6.5						
ALIB				S	Sb	12 58 21.5	+2.6
ALIB	Äli-Bayra	1.26	12	*e*Pg	Pb	12 58 04.1	+1.1
QRD	Qoradiz	1.28	306	P	Pn	12 58 01.7	0.0
	SNR=9.5						
QRD				S	Sn	12 58 18.5	+0.7
QRD	Qoradiz	1.28	306	*e*Pg	Pn	12 58 01.9	+0.2
BLQ	Beylaqan	1.32	320	P	Pn	12 58 02.6	+0.4
	SNR=29						
BLQ				S	Sb	12 58 20.4	-0.1
BLQ	Beylaqan	1.32	320	*e*Pg	Pn	12 58 02.9	+0.7
IHRS	Heris	1.34	253	*e*Sg	Sn	12 58 19.4	-0.1
IHRS				*e*Pg	Pn	12 58 02.2	-0.5
IHRS				*e*		12 58 20.8	
	comp=Z,99nm,0.2s						
KDMR	Kurdemir	1.69	347	Pn	Pn	12 58 08.6	+1.3
	SNR=4.6						
KDMR				Sn	Sb	12 58 32.1	+0.9
ZRD	Zardab	1.73	334	Pn	Pb	12 58 09.8	-1.2
	SNR=5.2						
ZRD				Sn	Sb	12 58 32.9	+0.7
ZRD	Zardab	1.73	334	*e*Pg	Pb	12 58 09.7	-1.2
IHSH	Hashtrud	1.80	218	*e*Pg	Pb	12 58 09.6	+7.8
GBS	Qobustan	1.82	7	Pn	Pb	12 58 12.1	-0.5
	SNR=12						
GBS				Sn	Sb	12 58 37.6	+2.5
GBS	Qobustan	1.82	7	*e*Pn	Pb	12 58 12.1	-0.5
AGDM	Agdam	1.83	319	Pn	Pn	12 58 10.2	+0.9
	SNR=13						
AGDM				Sn	Sb	12 58 34.7	-0.6
BRDA	Brd	1.92	324	Pn	Pb	12 58 13.0	-1.3
	SNR=8.5						
BRDA				Sn	Sb	12 58 38.6	+0.8
BRDA	Brd	1.92	324	*e*Pn	Pb	12 58 12.9	-1.3
ITBZ	Tabriz	2.04	257	*e*Pn	Pn	12 58 12.4	+0.2
ITBZ				*e*		12 58 19.1	
	comp=Z,99nm,0.4s						
PQL	Pirkuli	2.06	358	Pn	Pn	12 58 14.7	+2.0
	SNR=9.8						
PQL				Sn	Sb	12 58 43.9	+1.9
ORD	Ordubad	2.10	276	Pn	Pn	12 58 14.1	+1.1
	SNR=55						
ORD				Sn	Sn	12 58 40.8	+2.8
IML	Ismayilli	2.10	350	Pn	Pn	12 58 15.0	+2.0
	SNR=4.5						
IML				Sn	Sb	12 58 42.8	-0.2
ATGJ	Altiaghaj	2.15	6	Pn	Pb	12 58 16.6	-1.5
	SNR=5.8						
ATGJ				Sn	Sb	12 58 45.2	+0.8
QBL	Gabala	2.31	344	Pn	Pn	12 58 17.3	+1.4
	SNR=2.9						
QBL				Sn	Sb	12 58 46.3	-2.7
IMRD	Marand	2.32	271	*e*Pn	Pn	12 58 17.0	+0.9
IMRD				*e*		12 58 58.3	
	comp=Z,99nm,0.8s						
SIZA	Siyzn	2.36	4	Pn	Pb	12 58 19.2	-2.5
	SNR=6.6						
SIZA				Sn	Sb	12 58 48.6	-1.7
MNGR	Mingechevir, A	2.38	330	Pn	Pn	12 58 18.4	+1.6
	SNR=4.7						
MNGR				Sn	Sb	12 58 50.1	-0.9
XNQ	Khinaliq	2.48	351	Pn	Pn	12 58 19.6	+1.2
	SNR=5.2						
XNQ				Sn	Sn	12 58 50.6	+2.9
NAX	Nakhchivan	2.51	281	Pn	Pn	12 58 19.8	+1.1
	SNR=5.8						
NAX				Sn	Sb	12 58 54.4	-0.5
SBZ	Shahbuz	2.51	286	Pn	Pn	12 58 21.5	+2.8
	SNR=32						
SBZ				Sn	Sn	12 58 51.8	+3.4
QUBA	Quba, Azerbaij	2.63	357	Pn	Pb	12 58 24.2	-2.2
	SNR=4.7						
QUBA				Sn	Sb	12 58 55.7	-2.5
GANJ	Ganja	2.64	317	Pn	Pn	12 58 21.6	+1.2
	SNR=7.4						
GANJ				Sn	Sn	12 58 53.3	+2.0
IGZV	Ghazvin	2.64	152	*e*Pn	Pn	12 58 21.0	+0.4
IGZV				*e*		12 58 54.3	
	comp=Z,99nm,0.2s						
SEKA	Sheki	2.73	336	Pn	Pn	12 58 23.0	+1.4
	SNR=13						
SEKA				Sn	Sn	12 58 55.6	+2.0
QALM	Alamut, Qazvin	2.78	145	*e*Pn	Pn	12 58 21.8	-0.7
QALM				*e*		12 58 55.1	
	comp=Z,99nm,0.2s						
QSAR	Qusar	2.81	354	Pn	Pn	12 58 24.8	+2.1
	SNR=6.9						
QSAR				Sn	Sb	12 59 00.7	-2.5
GDB	GEDABAY	3.00	313	Pn	Pn	12 58 26.8	+1.3
	SNR=9.1						
GDB				Sn	Sn	12 59 03.4	+2.8
MAHB	Mahabad	3.05	231	*e*Pn	Pn	12 58 26.5	+0.3
MAHB				*e*		12 59 21.6	
	comp=Z,99nm,0.4s						
QABG	Abgarm-Qazvin	3.10	166	*e*Pn	Pn	12 58 25.7	-1.2
QABG				*e*		12 59 18.0	
	comp=Z,99nm,0.5s						
HYR	Heyderabad	3.12	290	Pn	Pn	12 58 29.7	+2.6
	SNR=6.1						
HYR				Sn	Sn	12 59 08.1	+4.6
ZKTA	Zakatala	3.31	332	Pn	Pn	12 58 31.5	+1.9
	SNR=5.5						
ZKTA				Sn	Sn	12 59 10.0	+2.2
GNI	Garni	3.35	296	Pn	Pb	12 58 37.4	-1.3
	comp=Z,3.1nm,0.3s,baz=34,slow=3.6,SNR=4.2						
GNI				Sn	Sb	12 59 22.9	+3.8
	comp=Z,4.1nm,0.3s,baz=11,slow=22,SNR=1.6						
GNI				LR	LR	12 59 58.5	
	comp=Z,93nm,19.6s,baz=80,slow=39						
IMHD	Mahdasht	3.43	152	*e*Pn	Pn	12 58 31.7	+0.4
QZX	Qazax, Azerbai	3.44	314	Pn	Pn	12 58 33.4	+2.0
	SNR=5.2						
QZX				Sn	Sn	12 59 15.3	+4.1
IRAZ	Razeghan	3.46	163	*e*Pn	Pn	12 58 32.2	+0.3
IRAZ				*e*		12 59 30.5	
	comp=Z,99nm,0.9s						
IPRN	Peran	3.83	129	*e*Pn	Pn	12 58 36.7	-0.2
IPRN				*e*		12 59 22.5	
	comp=Z,99nm,0.2s						
HAGD	Aghdareh	3.91	174	*e*Pn	Pn	12 58 38.5	+0.4
HAGD				*e*		12 59 58.1	
	comp=Z,99nm,0.9s						
IGLO	Ghaloghah	4.66	117	*e*Pn	Pn	12 58 49.2	+0.8
ISHM	Shahmirzad	4.70	127	*e*Pn	Pn	12 58 50.4	+1.4
ISHM				*e*		12 59 46.2	
	comp=Z,99nm,0.2s						
IANJ	Anjilo	5.31	126	*e*Pn	Pn	12 58 59.0	+1.7
KRSH	Karshahi	5.51	148	*e*Pn	Pn	12 59 01.1	+1.1
KBZ	Khabaz	6.62	321	Pn	Pn	12 59 24.6	+10
	comp=Z,0.1nm,0.3s,baz=162,slow=9.6,SNR=1.6						
KBZ				Sn	Sb	13 00 44.6	-8.3
	comp=Z,0.1nm,0.3s,baz=98,slow=18,SNR=1.5						
ANAR	Anarak	6.88	142	*e*Pn	Pn	12 59 19.7	+0.9
GEYT	Alibeck	7.47	93	Pn	Pn	12 59 26.1	-0.7
	comp=Z,2.8nm,0.3s,baz=278,slow=13,SNR=19						

GEYT				Sn	**Sn**	**13 00 48.6**	**-1.9**
	comp=Z,1.6nm,0.3s,baz=286,slow=27,SNR=3.3						
GYA0B	**ALIBECK ARRAY**	**7.47**	**93**	⇑Pn	**Pn**	**12 59 26.1**	**-0.7**
GYA0B				⇑Sn	**Sn**	**13 00 48.2**	**-2.3**
SBZV	**Sabzevar**	**7.48**	**105**	*e*Pn	**Pn**	**12 59 27.6**	**+0.5**
IPAY	**Payeh**	**8.51**	**102**	*e*Pn	**Pn**	**12 59 42.0**	**+0.8**
IKRD	**Kardeh**	**8.81**	**99**	*e*Pn	Pn	12 59 46.4	+12
IMYA	**Miami**	**9.39**	**101**	*e*Pn	**Pn**	**12 59 54.1**	**+0.8**
AFRZ	**Afriz**	**9.90**	**119**	*e*Pn	**Pn**	**13 00 02.1**	**+1.8**
ASF	**Jabal al Asfar**	**11.61**	**239**	Pn	**Pn**	**13 00 26.4**	**+2.9**
	comp=Z,0.0nm,0.3s,baz=86,slow=14,SNR=1.6						
AB31	**Akbulak array**	**13.28**	**34**	⇑Pn	**Pn**	**13 00 44.3**	**-1.9**
	comp=Z,1.6nm,0.7s,baz=205,slow=12,SNR=24						
AB31				Sn	**Sn**	**13 03 04.5**	**-8.1**
	comp=Z,0.6nm,0.4s,baz=212,slow=24,SNR=9.9						
AKTO	**Aktyubinsk**	**13.46**	**27**	Pn	**Pn**	**13 00 46.3**	**-2.3**
	comp=Z,0.5nm,0.3s,baz=202,slow=6.7,SNR=10						
AKTO				Sn	**Sn**	**13 03 09.6**	**-7.4**
	comp=Z,0.6nm,0.3s,baz=241,slow=22,SNR=8.2						
AKTO	**Aktyubinsk**	**13.46**	**27**	⇓Pn	**Pn**	**13 00 47.5**	**-1.1**
	comp=Z,1.9nm,0.3s						
AKTO				⇓Sn	**Sn**	**13 03 08.8**	**-8.3**
	comp=Z,5.1nm,0.8s						
BELG	**Belogornoye**	**13.69**	**357**	Pn	**Pn**	**13 00 47.5**	**-4.3**
	comp=Z,1.0nm,0.3s,baz=311,slow=6.4,SNR=4.2						
EIL	**Elat**	**14.49**	**236**	LR	LR	13 07 43.7	
	comp=Z,53nm,18.4s,baz=348,slow=41						
KK31	**Karatay Array**	**17.07**	**68**	⇓P	**Pn**	**13 01 35.6**	**-0.6**
	comp=Z,2.6nm,0.7s,baz=268,slow=16,SNR=21						
AKASG	**Malin Array Be**	**18.22**	**317**	P	**P**	**13 01 53.9**	**+3.7**
	comp=Z,0.2nm,0.3s,baz=119,slow=12,SNR=1.4						
ARU	**Arti**	**18.90**	**17**	P	**P**	**13 01 55.0**	**-2.6**
	comp=Z,0.0nm,0.3s,baz=231,slow=7.9,SNR=5.5						
AAK	**Ala-Archa**	**19.95**	**70**	P	**Pn**	**13 02 12.6**	**+1.3**
	comp=Z,0.3nm,0.3s,baz=220,slow=6.2,SNR=23						
AAK	**Ala-Archa**	**19.95**	**70**	⇓P	**Pn**	**13 02 11.9**	**+0.6**
	comp=Z,6.4nm,0.8s						
BRVK	**Borovoye**	**20.67**	**39**	⇑P	**P**	**13 02 18.0**	**+1.0**
	comp=Z,4.4nm,0.6s						
BVAR	**Borovoye Array**	**20.70**	**39**	P	**P**	**13 02 17.3**	**-0.1**
	comp=Z,1.0nm,0.3s,baz=300,slow=5.8,SNR=15						
KURBB	**Kurchatov Arra**	**24.17**	**51**	P	**P**	**13 02 54.9**	**+1.7**
	comp=Z,0.5nm,0.3s,baz=260,slow=9.1,SNR=12						
MK31	**Makanchi Array**	**25.82**	**61**	P	**P**	**13 03 09.7**	**+1.3**
	comp=Z,3.6nm,0.7s,baz=260,slow=6.5,SNR=41						
MKAR	**Makanchi Array**	**25.82**	**61**	P	**P**	**13 03 09.9**	**+1.6**
	comp=Z,4.2nm,0.7s,baz=265,slow=6.6,SNR=36						
ZALV	**Zalesovo Beam**	**28.86**	**46**	P	**P**	**13 03 36.7**	**+1.3**
	comp=Z,0.5nm,0.3s,baz=267,slow=12,SNR=2.6						
SONM	**Songino Array**	**42.12**	**58**	P	**P**	**13 05 30.9**	**+1.6**
	comp=Z,0.3nm,0.6s,baz=267,slow=8.1,SNR=2.2						
CMAR	**Chiang Mai Arr**	**47.89**	**100**	P	**P**	**13 06 16.1**	**+0.8**
	comp=Z,0.2nm,0.4s,baz=294,slow=8.8,SNR=4.4						
KSRS	**Korea Array**	**60.44**	**64**	P	**P**	**13 07 47.0**	**+0.4**
	comp=Z,0.9nm,0.9s,baz=282,slow=6.7,SNR=1.7						
MJAR	**Matsushiro Arr**	**68.02**	**60**	P	**P**	**13 08 37.1**	**+0.8**
	comp=Z,1.0nm,0.7s,baz=302,slow=5.3,SNR=2.2						

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*IDC **19** 13:02:31.9±3.0, 30°.41S×177°.54W, h0^{km}, mb3.7/3, mb1 4.0/5, mb1mx3.8/19, mbtmp3.9/5, ML3.6/2, Error ellipse: s-maj=64.1km s-min=23.5km az=104.0*

ISC 19 13:02:32.0±2.4**, 30°.44S**±0°.08×**177°.2W**±0°.3**, h24**^{km}**, n7,** σ**1**^{s}**.54**/9**, mb3.9**/3**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.32**	**333**	Pn	**Pn**	**13 02 55.5**	**+0.6**
	1µm,0.3s,baz=256,slow=7.6,SNR=33						
RAO				Sn	**Sn**	**13 03 09.9**	**-1.8**
	2µm,0.3s,baz=100,slow=21,SNR=23						
URZ	**Urewera**	**9.09**	**209**	Pn	**Pn**	**13 04 41.6**	**-0.1**
	0.4nm,0.3s,baz=215,slow=2.5,SNR=8.1						
URZ				Sn	**Sn**	**13 06 22.4**	**-0.8**
	0.6nm,0.3s,baz=207,slow=6.0,SNR=1.6						
RPZ	**Rata Peaks**	**16.19**	**212**	Pn	**P**	**13 06 20.1**	**-0.8**
	0.3nm,0.3s,baz=90,slow=20,SNR=2.4						
RPZ				Sn	Sn	13 09 05.1	-12
	0.2nm,0.3s,baz=61,slow=10,SNR=1.6						
STKA	**Stephens Creek**	**35.11**	**257**	P	**P**	**13 09 23.1**	**-0.5**
	0.7nm,0.4s,baz=132,slow=12,SNR=1.3						
ASAR	**Alice Springs**	**43.76**	**267**	P	**P**	**13 10 38.1**	**+2.2**
	0.4nm,0.6s,baz=106,slow=7.1,SNR=18						
WRA	**Warramunga Arr**	**44.76**	**272**	P	**P**	**13 10 45.6**	**+1.8**
	0.8nm,0.5s,baz=110,slow=8.1,SNR=32						
FINES	**FINESS Array B**	**145.40**	**340**	PKPbc	**PKiKP**	**13 22 10.1**	**-1.0**
	2.4nm,0.7s,baz=53,slow=5.4,SNR=6.9						

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*BJI **19** 13:18:29.7±0.0, 16°.35S×168°.15E, h5^{km}, mB6.5/76, mb6.2/89, Ms6.4/99, Ms7 6.2/92*

*IDC **19** 13:18:31.4±0.3, 16°.36S×168°.26E, h0^{km}, mb5.9/27, mb1 6.0/27, mb1mx6.0/27, mbtmp5.9/27, MS5.9/27, Ms1 5.9/27, ms1mx5.8/31, Error ellipse: s-maj=12.6km s-min=10.1km az=93.0*

*NEIC **19** 13:18:32.2, 16°.44S×168°.12E, h21^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}2.00; $M_{\theta\theta}$1.41; $M_{\phi\phi}$-3.40; $M_{r\theta}$-0.20; $M_{\theta\phi}$-1.34; $M_{\phi r}$0.62; Fault plane solution: $M_0$3.32000×10^{18} NP1:ϕ_s225.30000°, δ49.19000°, λ136.68000°. NP2:ϕ_s346.95000°, δ58.72000°, λ49.89000°. Principal axes: T 2.2826, Plg56.0000°, Azm202.0000°; N 1.5198, Plg33.0000°, Azm11.0000°; P -3.8024, Plg5.0000°, Azm104.0000°;*

*NEIC **19** 13:18:32.8±2.1, 16°.43S±0°.06×168°.15E±0°.06, h10^{km}±1^{km}, mb6.4/198, Ms_20 6.2/634, Mwb6.3/40, Mwc6.4/42, Mww6.4, Mwc6.4(GCMT) Error ellipse: s-maj=10.6km s-min=8.3km az=40.0*

*NOU **19** 13:18:32.6, 16°.50S×168°.28E, h5^{km}, ML6.4, Vanuatu Islands*

*MOS **19** 13:18:35.7±1.4, 16°.36S×168°.10E, h37^{km}, mb6.5/57, MS6.1/22, Error ellipse: s-maj=7.9km s-min=5.7km az=128.2*

*GCMT **19** 13:18:39.8±0.0, 16°.41S×168°.23E, h12^{km}, MW6.4/173, Moment Tensor Solution. s173,c420; s173,c776; Duration: 3^{s}.8 Moment tensor: Scale 10^{18}Nm; M_{rr}4.11±.02; $M_{\theta\theta}$0.29±.02; $M_{\phi\phi}$-4.40±.02; $M_{r\theta}$0.90±.04; $M_{\theta\phi}$-1.83±.01; $M_{\phi r}$1.55±.04; Best double couple: $M_0$4.91300×10^{18} NP1:ϕ_s193.00000°, δ35.00000°, λ81.00000°. NP2:ϕ_s24.00000°, δ56.00000°, λ96.00000°. Principal axes: T 4.4690, Plg78.0000°, Azm317.0000°; N 0.8850, Plg5.0000°, Azm201.0000°; P -5.3570, Plg11.0000°, Azm110.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*NEIC **19** 13:18:41, 16°.43S×168°.24E, h12^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}4.17; $M_{\theta\theta}$0.37; $M_{\phi\phi}$-4.54; $M_{r\theta}$1.07; $M_{\theta\phi}$-1.89; $M_{\phi r}$1.92; Fault plane solution: $M_0$5.24000×10^{18} NP1:ϕ_s192.00000°, δ33.00000°, λ80.00000°. NP2:ϕ_s24.00000°, δ58.00000°, λ97.00000°. Principal axes: T 4.6867, Plg76.0000°, Azm315.0000°; N 0.9729, Plg6.0000°, Azm201.0000°; P -5.6596, Plg12.0000°, Azm110.0000°;*

*NEIC **19** 13:18:43, 16°.30S×168°.19E, h12^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}4.49; $M_{\theta\theta}$0.90; $M_{\phi\phi}$-5.39; $M_{r\theta}$1.04; $M_{\theta\phi}$-1.84; $M_{\phi r}$0.38; Fault plane solution: $M_0$5.44000×10^{18} NP1:ϕ_s180.00000°, δ43.00000°, λ68.00000°. NP2:ϕ_s29.00000°, δ50.00000°, λ109.00000°. Principal axes: T 4.7720, Plg75.0000°, Azm3.0000°; N 1.1529, Plg15.0000°, Azm197.0000°; P -5.9248, Plg4.0000°, Azm106.0000°;*

*NEIC **19** 13:18:52, 16°.06S×168°.20E, h10^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}4.35; $M_{\theta\theta}$0.35; $M_{\phi\phi}$-4.70; $M_{r\theta}$-0.66; $M_{\theta\phi}$-2.03; $M_{\phi r}$2.52; Fault plane solution: $M_0$5.59000×10^{18} NP1:ϕ_s218.76000°, δ36.27000°, λ121.14000°. NP2:ϕ_s1.92000°, δ59.58000°, λ69.22000°. Principal axes: T 5.2918, Plg68.0000°, Azm230.0000°; N 0.5976, Plg18.0000°, Azm13.0000°; P -5.8894, Plg12.0000°, Azm107.0000°;*

ISC 19 13:18:33.1±0.5**, 16°.44S**±0°.03×**168°.21E**±0°.03**, h13**^{km}±2^{km}**, n1784,** σ**1**^{s}**.91**/1557**, mb6.3**/191**, MS6.2**/384**, 75C-58D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	**Devils Point**	**1.28**	**181**	P	**Pn**	**13 18 55.5**	**-1.1**
SANVU	**Saraoutou**	**1.38**	**316**	Pn	**Pn**	**13 18 55.0**	**-3.0**
SANVU				Sn	**Sn**	**13 19 16.1**	**-0.2**
SANVU	**Saraoutou**	**1.38**	**316**	P	**Pg**	**13 18 59.6**	**-0.1**
LIFNC	**LIFOU**	**4.41**	**192**	P	**Pn**	**13 19 37.7**	**-2.0**
KOUNC	**Koumac, New Ca**	**5.53**	**222**	P	**Pn**	**13 19 54.7**	**-0.4**
YATNC	**Mamie plateau,**	**5.72**	**192**	P	**Pn**	**13 19 57.8**	**0.0**
DZM	**Mont Dzumac**	**5.84**	**196**	Pn	**Pn**	**13 19 57.7**	**-1.8**
	166nm,0.3s,baz=43,slow=12,SNR=258						
DZM				Sn	**Sn**	**13 21 06.5**	**+0.1**
	105nm,0.3s,baz=312,slow=22,SNR=4.7						
DZM	**Mont Dzumac**	**5.84**	**196**	*e*Pn	**Pn**	**13 19 57.7**	**-1.8**
	5µm,1.0s						
DZM				*e*Sn	**Sn**	**13 21 04.4**	**-2.0**
	4µm,1.1s						
DZM				*e*LR	LR	13 21 27.0	
	comp=Z,115µm,21.9s						
DZM	**Mont Dzumac**	**5.84**	**196**	Pn	**Pn**	**13 19 58.3**	**-1.2**
DZM	**Mont Dzumac**	**5.84**	**196**	P	**Pn**	**13 19 59.0**	**-0.5**
I22FR	**PORTLAGUERRE I**	**5.86**	**192**	Pn	**Pn**	**13 20 01.6**	**+2.0**
	baz=53,slow=33,SNR=14						
I22FR				*i*		13 55 00.0	
	baz=9.3,slow=322,SNR=4.6						
ONTNC	**Ouen Toro**	**6.07**	**196**	P	**Pn**	**13 20 01.0**	**-1.5**
	4µm,1.0s						
OUENC	**Ouen Island, N**	**6.08**	**192**	P	**Pn**	**13 20 01.5**	**-1.2**
	2µm,0.9s						
PINNC	**Pines Island,**	**6.18**	**187**	P	**Pn**	**13 20 02.5**	**-1.6**
	3µm,1.1s						
MSVF	**Nonsavu**	**9.50**	**99**	*d i*P	**Pn**	**13 20 52.1**	**+2.4**
MSVF	**Nonsavu**	**9.50**	**99**	Pn	**Pn**	**13 20 51.1**	**+1.4**
MSVF	**Nonsavu**	**9.50**	**99**	P	**Pn**	**13 20 49.5**	**-0.2**
HNR	**Honiara**	**10.65**	**310**	Pn	**Pn**	**13 21 08.6**	**+3.2**
	75nm,0.3s,baz=213,slow=3.8,SNR=45						
HNR				Sn	**Sn**	**13 23 06.2**	**+1.7**
	8.1nm,0.3s,baz=128,slow=22,SNR=1.8						
HNR	**Honiara**	**10.65**	**310**	P	**Pn**	**13 21 07.4**	**+2.0**
HNR	**Honiara**	**10.65**	**310**		**Pn**	**13 21 07.4**	**+2.0**
HNR	**Honiara**	**10.65**	**310**	P	**Pn**	**13 21 07.5**	**+2.0**
NFK	**Norfolk Island**	**12.54**	**181**	P	**Pn**	**13 21 34.7**	**+3.4**
	baz=13,SNR=6.3						
NFK	**Norfolk Island**	**12.54**	**181**	P	**Pn**	**13 21 32.4**	**+1.1**
FUNA	**Funafuti**	**13.30**	**55**	Pn	**Pn**	**13 21 41.4**	**-0.3**
LHI	**Lord Howe Isla**	**17.16**	**207**	P	**P**	**13 22 35.1**	**+0.8**
	baz=17,SNR=3.9						
LHI	**Lord Howe Isla**	**17.16**	**207**	P	**P**	**13 22 34.3**	**0.0**
RAO	**Raoul Island**	**18.03**	**137**	PP	**P**	**13 22 47.4**	**+3.5**
	65nm,0.3s,baz=172,slow=9.7,SNR=18						
RAO	**Raoul Island**	**18.03**	**137**	P	**P**	**13 22 46.1**	**+2.2**
RAO				pmax	pmax		
	comp=Z,12µm,1.5s						
RAO	**Raoul Island**	**18.03**	**137**	P	**P**	**13 22 46.0**	**+2.2**
EIDS	**Eidsvold**	**18.28**	**238**	P	**P**	**13 22 48.6**	**+1.9**
	baz=18,SNR=54						
EIDS	**Eidsvold**	**18.28**	**238**		**P**	**13 22 48.4**	**+1.6**
TARA	**Tarawa**	**18.29**	**15**	P	**P**	**13 22 46.9**	**+0.1**
TARA				IAmb	IAmb	13 22 57.7	
	comp=Z,2µm,1.1s						
OUZ	**Omahuta**	**19.31**	**167**	P	**P**	**13 22 58.2**	**+0.3**
AFI	**Afiamalu**	**19.48**	**85**	P	**Pn**	**13 23 01.3**	**+0.1**
AFI				pmax	pmax		
	comp=Z,277nm,1.1s						
AFI	**Afiamalu**	**19.48**	**85**		**Pn**	**13 23 01.3**	**+0.1**
AFI	**Afiamalu**	**19.48**	**85**	P	**Pn**	**13 23 01.1**	**-0.1**
RABL	**Rabaul**	**19.91**	**306**		**P**	**13 23 05.1**	**+0.5**
RABL	**Rabaul**	**19.91**	**306**	P	**Pn**	**13 23 07.8**	**+1.5**
ARMA	**Armidale**	**20.58**	**225**	P	Pn	13 23 14.6	+0.4
	baz=21,SNR=32						
ARMA	**Armidale**	**20.58**	**225**		Pn	13 23 14.1	-0.1
RMQ	**Roma**	**20.65**	**238**	P	Pn	13 23 15.5	+0.5
	baz=21,SNR=133						
NIUE	**Niue**	**20.98**	**100**	P	Pn	13 23 17.6	-1.3
	baz=21,SNR=5.2						
NIUE	**Niue**	**20.98**	**100**	P	**P**	**13 23 16.4**	**+0.1**
NIUE				IAmb	IAmb	13 23 37.5	
	comp=Z,2µm,1.5s						
NIUE				IAMs_20	IAMs_20	13 29 35.6	
	comp=Z,113µm,22.0s						
CTA	**Charters Tower**	**21.16**	**257**	P	**P**	**13 23 20.3**	**+2.1**
	comp=Z,199nm,0.9s,baz=79,slow=13,SNR=46						
CTA				S	Sn	13 27 20.9	+0.8
	comp=Z,24nm,0.9s,baz=252,slow=19,SNR=1.4						
CTA				LR	LR	13 30 57.6	
	comp=Z,32µm,18.0s,baz=78,slow=35						
CTAO	**Charters Tower**	**21.16**	**257**	P	**P**	**13 23 20.2**	**+2.1**
CTAO				pmax	pmax		
	comp=Z,703nm,1.3s						
CTAO				MLR	MLR		
	comp=Z,31µm,19.0s						
CTAO	**Charters Tower**	**21.16**	**257**		**P**	**13 23 20.2**	**+2.0**
PMG	**Port Moresby**	**21.66**	**286**	P	**P**	**13 23 25.9**	**+2.3**
	comp=Z,139nm,0.9s,baz=92,slow=6.3,SNR=48						
PMG				S	Sn	13 27 32.9	+0.6
	comp=Z,32nm,1.1s,baz=32,slow=24,SNR=0.8						
PMG				LR	LR	13 30 18.6	
	comp=Z,57µm,21.4s,baz=106,slow=33						
PMG	**Port Moresby**	**21.66**	**286**	P	**P**	**13 23 23.3**	**-0.3**
PMG	**Port Moresby**	**21.66**	**286**	IAMs_20	IAMs_20	13 30 08.3	
	comp=Z,74µm,21.0s						
PMG	**Port Moresby**	**21.66**	**286**	P	**P**	**13 23 26.3**	**+2.7**
MGCD	**Mangrove Creek**	**22.74**	**220**	P	**P**	**13 23 37.7**	**+2.8**
	baz=23,SNR=21						
HIZ	**Hauiti**	**22.75**	**166**	P	**P**	**13 23 35.4**	**+0.3**
HIZ				IAmb	IAmb	13 23 42.5	
	comp=Z,1µm,1.3s						
MKRZ	**Makatiti**	**22.80**	**163**	P	**P**	**13 23 42.7**	**+7.0**
MXZ	**Matakaoa Point**	**22.85**	**159**	P	**P**	**13 23 36.7**	**+0.6**
MTSU	**Mount Surprise**	**22.87**	**262**	P	**P**	**13 23 37.1**	**+0.6**
	baz=23,SNR=110						
HLRZ	**Highlands Stat**	**22.88**	**163**	P	**P**	**13 23 42.7**	**+6.3**
TARZ	**Mount Tarawera**	**22.91**	**163**	P	**P**	**13 23 40.0**	**+3.2**
HRRZ	**Handcock Road**	**22.99**	**164**	P	**P**	**13 23 43.3**	**+5.7**
RRRZ	**Republican Roa**	**23.00**	**163**	P	**P**	**13 23 41.9**	**+4.2**
URZ	**Urewera**	**23.10**	**162**	P	**P**	**13 23 39.6**	**+1.0**
	comp=Z,225nm,0.9s,baz=17,slow=3.8,SNR=52						
URZ				S	Sn	13 28 01.5	-4.9
	comp=Z,12nm,0.8s,baz=343,slow=8.4,SNR=0.9						
URZ				LR	LR	13 30 55.8	
	comp=Z,96µm,21.1s,baz=338,slow=32						
URZ	**Urewera**	**23.10**	**162**	IAMs_20	IAMs_20	13 30 35.5	
	comp=Z,101µm,21.0s						
PRRZ	**Plateau Road**	**23.12**	**163**	P	**P**	**13 23 41.0**	**+2.1**
RIV	**Riverview**	**23.14**	**218**	P	**P**	**13 23 40.9**	**+1.8**
	baz=23,SNR=12						
ALRZ	**Allen Road**	**23.16**	**164**	P	**P**	**13 23 43.4**	**+4.1**
MUGZ	**Murupara**	**23.20**	**163**	P	**P**	**13 23 45.3**	**+5.6**
MWZ	**Matawai**	**23.30**	**161**	P	**P**	**13 23 40.0**	**-0.7**
TWGZ	**Tauwhareparae**	**23.30**	**160**	P	**P**	**13 23 41.4**	**+0.7**
NEZ	**North Egmont**	**23.32**	**168**	P	P	13 23 48.7	+7.7
RTZ	**Ruatahuna**	**23.39**	**162**	P	**P**	**13 23 45.4**	**+3.7**
HATZ	**Hinemaiaia**	**23.41**	**164**	P	**P**	**13 23 46.7**	**+4.9**
RAGZ	**Rawiri**	**23.41**	**162**	P	**P**	**13 23 46.2**	**+4.3**
TWVZ	**Taurewa**	**23.42**	**166**	P	**P**	**13 23 46.8**	**+4.8**
MRHZ	**Matea Rd**	**23.44**	**164**	P	**P**	**13 23 44.9**	**+2.7**
KRVZ	**Karewarewa**	**23.49**	**165**	P	**P**	**13 23 47.3**	**+4.6**
TMVZ	**Te Maari**	**23.52**	**165**	P	**P**	**13 23 48.1**	**+5.0**
ETVZ	**East Tongariro**	**23.54**	**165**	P	**P**	**13 23 48.7**	**+5.5**
OTVZ	**Oturere**	**23.56**	**165**	P	**P**	**13 23 46.4**	**+3.0**
SNGZ	**Shannon Statio**	**23.65**	**162**	P	**P**	**13 23 44.6**	**+0.4**
RIGZ	**Rimuhau**	**23.71**	**161**	P	**P**	**13 23 45.7**	**+0.9**
BKZ	**Black Stump Fm**	**23.77**	**164**	P	**P**	**13 23 45.5**	**+0.1**
BKZ				IAmb	IAmb	13 23 50.9	
	comp=Z,862nm,1.2s						
BKZ	**Black Stump Fm**	**23.77**	**164**	P	**P**	**13 23 46.4**	**+1.0**
KNTN	**Kanton**	**23.96**	**58**	P	**P**	**13 23 46.1**	**-1.2**
KNTN	**Kanton**	**23.96**	**58**	P	**P**	**13 23 49.5**	**+2.1**
COEN	**Coen**	**24.28**	**272**	P	**P**	**13 23 50.4**	**+0.1**
QLP	**Quilpie**	**24.44**	**242**	P	**P**	**13 23 52.7**	**+1.0**
	baz=24,SNR=79						
QRZ	**Quartz Range**	**24.58**	**172**	P	**P**	**13 23 53.9**	**+1.0**
MANU	**Manus Island**	**25.01**	**303**	P	**P**	**13 23 58.1**	**+1.2**
KWAJ	**Kwajalein Atol**	**25.09**	**359**	P	**P**	**13 23 58.1**	**+0.5**
KWAJ				pmax	pmax		
	comp=Z,4µm,1.3s						
KWAJ				MLR	MLR		
	comp=Z,28µm,18.0s						
KWAJ	**Kwajalein Atol**	**25.09**	**359**	P	**P**	**13 23 58.1**	**+0.5**
NNZ	**Nelson**	**25.09**	**171**	P	**P**	**13 23 58.4**	**+1.0**
NNZ				IAMs_20	IAMs_20	13 32 60.0	
	comp=Z,55µm,20.0s						
BFZ	**Birch Farm**	**25.14**	**166**	P	**P**	**13 23 57.5**	**-0.3**
BFZ				IAmb	IAmb	13 24 08.3	
	comp=Z,756nm,1.3s						
YNG	**Young**	**25.15**	**221**	P	**P**	**13 23 59.7**	**+1.6**
	baz=25,SNR=58						
CNB	**Canberra Magne**	**25.23**	**218**	P	**P**	**13 23 58.5**	**-0.3**
	baz=25,SNR=41						
CMSA	**Cobar Meteorol**	**25.40**	**230**	P	**P**	**13 23 59.6**	**-0.8**
	baz=25,SNR=182						
SNZO	**South Karori**	**25.41**	**169**	P	**P**	**13 24 01.1**	**+0.8**
SNZO				IAmb	IAmb	13 24 12.1	
	comp=Z,973nm,1.4s						
CAN	**Canberra**	**25.45**	**219**	P	**P**	**13 24 00.8**	**0.0**
CAN				pmax	pmax		
	comp=Z,520nm,1.4s						
CAN	**Canberra**	**25.45**	**219**	P	**P**	**13 24 00.8**	**0.0**
MSWZ	**Moikau Station**	**25.62**	**168**	P	**P**	**13 24 01.6**	**-0.7**
BSWZ	**Blackbirch Sta**	**25.66**	**170**	P	**P**	**13 24 03.6**	**+1.0**
KHZ	**Kahutara**	**26.29**	**171**	IAMs_20	IAMs_20	13 34 07.7	
	comp=Z,63µm,19.0s						
LTZ	**Lake Taylor**	**26.48**	**173**	IAMs_20	IAMs_20	13 34 36.7	
	comp=Z,45µm,18.0s						
FOZ	**Fox Glacier**	**27.04**	**177**	P	**P**	**13 24 17.1**	**+2.1**
RPZ	**Rata Peaks**	**27.29**	**175**	P	**P**	**13 24 18.3**	**+1.0**
	comp=Z,29nm,0.9s,baz=281,slow=3.5,SNR=16						
RPZ				LR	LR	13 35 09.0	
	comp=Z,29µm,18.2s,baz=331,slow=36						
RPZ				PKiKP	**PKiKP**	**13 35 14.0**	**-0.2**
	comp=Z,11nm,1.1s,baz=2.0,slow=8.8,SNR=4.1						
RPZ	**Rata Peaks**	**27.29**	**175**	P	**P**	**13 24 17.8**	**+0.5**
RPZ				IAMs_20	IAMs_20	13 35 25.1	
	comp=Z,52µm,18.0s						
QIS	**Mount Isa**	**27.41**	**257**	P	**P**	**13 24 19.6**	**+0.9**
	baz=27,SNR=48						
MQZ	**McQueen's Vall**	**27.44**	**173**	P	**P**	**13 24 19.1**	**+0.6**
LBZ	**Lake Benmore**	**27.91**	**177**	P	**P**	**13 24 23.2**	**+0.4**
LBZ				IAMs_20	IAMs_20	13 36 22.2	
	comp=Z,43µm,18.0s						
WKZ	**Wanaka**	**28.30**	**179**	P	**P**	**13 24 27.0**	**+0.6**
WKZ				IAMs_20	IAMs_20	13 34 20.7	
	comp=Z,60µm,21.0s						
ODZ	**Otahua Downs**	**28.59**	**176**	IAMs_20	IAMs_20	13 36 23.3	
	comp=Z,42µm,18.0s						
STKA	**Stephens Creek**	**28.63**	**233**	P	**P**	**13 24 30.9**	**+1.5**
	comp=Z,275nm,1.0s,baz=60,slow=8.5,SNR=101						
STKA				PcP	**PcP**	**13 27 42.4**	**+2.0**
	comp=Z,72nm,1.0s,baz=64,slow=3.8,SNR=5.0						
STKA				PKiKP	**PKiKP**	**13 35 16.0**	**+0.7**
	comp=Z,15nm,1.0s,baz=130,slow=0.9,SNR=8.2						
STKA				LR	LR	13 35 37.1	
	comp=Z,20µm,18.4s,baz=61,slow=36						
STKA				P3KPbc		13 56 47.0	
	comp=Z,11nm,1.0s,baz=247,slow=3.2,SNR=11						
STKA	**Stephens Creek**	**28.63**	**233**	P	**P**	**13 24 28.8**	**-0.6**
	baz=29,SNR=40						
STKA	**Stephens Creek**	**28.63**	**233**	P	**P**	**13 24 29.3**	**-0.1**
MLZ	**Mavora Lakes**	**28.84**	**180**	IAMs_20	IAMs_20	13 34 21.8	
	comp=Z,40µm,20.0s						
TOO	**Toolangi**	**29.06**	**219**	P	**P**	**13 24 34.5**	**+1.3**
	baz=29,SNR=46						
RAR	**Rarotonga**	**30.64**	**104**	P	**P**	**13 24 49.4**	**+2.0**
	comp=Z,111nm,1.1s,baz=247,slow=6.2,SNR=9.1						
RAR				LR	LR	13 34 21.6	
	comp=Z,33µm,21.7s,baz=256,slow=31						
RAR	**Rarotonga**	**30.64**	**104**	P	**P**	**13 24 48.3**	**+1.0**
RAR				IAmb	IAmb	13 24 55.5	
	comp=Z,522nm,1.5s						
RAR	**Rarotonga**	**30.64**	**104**	IAMs_20	IAMs_20	13 34 01.4	
	comp=Z,40µm,20.0s						
ARPS	**Mount Arapiles**	**30.90**	**224**	P	**P**	**13 24 50.6**	**+1.1**
	baz=31,SNR=22						
HTT	**Hallett**	**31.33**	**232**	P	**P**	**13 24 53.6**	**+0.2**
	baz=31,SNR=83						
TAU	**Tasmania Unive**	**31.84**	**210**	P	**P**	**13 24 57.6**	**0.0**
TAU				pmax	pmax		
	comp=Z,488nm,1.4s						
TAU				MLR	MLR		
	comp=Z,29µm,19.0s						
TAU	**Tasmania Unive**	**31.84**	**210**	P	**P**	**13 24 57.6**	**0.0**
TAU				IAmb	IAmb	13 25 02.1	
	comp=Z,488nm,1.4s						
WR0	**Warramunga Arr**	**32.14**	**259**	P	**P**	**13 24 59.4**	**-1.2**
WB0	**Warramunga Arr**	**32.28**	**259**	IAmb	IAmb	13 25 04.7	
	comp=Z,582nm,1.4s						
WB2	**Warramunga Arr**	**32.32**	**259**	IAmb	IAmb	13 25 05.1	
	comp=Z,481nm,1.4s						
WRAB	**Tennant Creek**	**32.32**	**259**	*ce*P	**P**	**13 25 01.4**	**-0.8**
WRAB				pmax	pmax		
	comp=Z,422nm,1.7s						
WRAB	**Tennant Creek**	**32.32**	**259**	P	**P**	**13 25 00.6**	**-1.6**
WRAB				IAmb	IAmb	13 25 05.1	
	comp=Z,496nm,1.5s						
WRA	**Warramunga Arr**	**32.33**	**259**	P	**P**	**13 25 02.4**	**+0.1**
	comp=Z,123nm,1.0s,baz=89,slow=7.5,SNR=78						
WRA				PP	**PnPn**	**13 26 11.0**	**+2.1**
	comp=Z,35nm,0.9s,baz=88,slow=11,SNR=1.6						
WRA				PcP	**PcP**	**13 27 52.0**	**+1.7**
	comp=Z,17nm,1.0s,baz=87,slow=3.5,SNR=5.3						
WRA				ScP	**ScP**	**13 31 35.7**	**+1.8**
	comp=Z,29nm,1.3s,baz=76,slow=3.5,SNR=4.8						
WRA				PKiKP	**PKiKP**	**13 35 16.6**	**-1.5**
	comp=Z,16nm,1.0s,baz=12,slow=0.3,SNR=21						
WRA				LR	LR	13 37 11.2	
	comp=Z,25µm,20.5s,baz=90,slow=35						
WRA				P3KPbc		13 56 31.2	
	comp=Z,2.0nm,0.8s,baz=287,slow=2.7,SNR=6.3						
WRA	**Warramunga Arr**	**32.33**	**259**	P	**P**	**13 25 00.4**	**-1.9**
I07AU	**WARRAMUNGA INF**	**32.34**	**259**	*i*		16 31 20.0	
	baz=90,slow=309,SNR=0.6						
AS31	**Alice Springs**	**32.95**	**252**	P	**P**	**13 25 06.2**	**-1.5**
ASAR	**Alice Springs**	**32.95**	**252**	P	**P**	**13 25 07.4**	**-0.4**
	comp=Z,738nm,1.0s,baz=78,slow=8.4,SNR=614						
ASAR				PKiKP	**PKiKP**	**13 35 17.6**	**-0.9**
	comp=Z,9.5nm,1.0s,baz=97,slow=1.4,SNR=13						
ASAR				LR	LR	13 38 04.8	
	comp=Z,45µm,18.4s,baz=84,slow=36						
ASAR				P3KPbc		13 56 27.4	
	comp=Z,1.2nm,0.9s,baz=272,slow=4.7,SNR=5.0						
ASAR				P3KP		13 57 49.0	
	comp=Z,1.4nm,1.0s,baz=198,slow=1.8,SNR=3.0						
ASAR	**Alice Springs**	**32.95**	**252**	P	**P**	**13 25 06.6**	**-1.2**
BBOO	**Buckleboo**	**33.29**	**235**	P	**P**	**13 25 09.7**	**-0.9**
	baz=33,SNR=50						
BBOO	**Buckleboo**	**33.29**	**235**	IAmb	IAmb	13 25 14.6	
	comp=Z,969nm,1.4s						
H11S2	**WAKE ISLAND Hy**	**34.74**	**357**	P	**P**	**13 25 21.7**	**-1.3**
H11S3	**WAKE ISLAND Hy**	**34.75**	**357**	P	**P**	**13 25 21.7**	**-1.3**
KDU	**Kakadu**	**34.76**	**271**	P	**P**	**13 25 23.3**	**-0.2**
	baz=35,SNR=25						
H11S1	**WAKE ISLAND Hy**	**34.76**	**357**	P	**P**	**13 25 21.8**	**-1.3**
WAKE	**Wake Island**	**35.53**	**357**	P	**P**	**13 25 29.0**	**-1.0**
WAKE				IAmb	IAmb	13 25 39.0	
	comp=Z,686nm,1.5s						
WAKE				PcP	**PcP**	**13 27 58.2**	**-1.0**
H11N1	**WAKE ISLAND Hy**	**35.95**	**358**	P	**P**	**13 25 34.6**	**+1.3**
	baz=194,slow=13,SNR=4.0						
H11N3	**WAKE ISLAND Hy**	**35.96**	**358**	P	**P**	**13 25 32.8**	**-0.5**
	baz=194,slow=13,SNR=3.5						
H11N2	**WAKE ISLAND Hy**	**35.97**	**358**	P	**P**	**13 25 34.0**	**+0.6**
	baz=194,slow=13,SNR=3.2						
GUMO	**Guam**	**37.72**	**321**	P	**P**	**13 25 47.9**	**-0.7**
	comp=Z,207nm,1.0s,baz=176,slow=2.4,SNR=8.4						
GUMO				LR	LR	13 41 17.0	
	comp=Z,9µm,19.3s,baz=137,slow=36						
GUMO	**Guam**	**37.72**	**321**	P	**P**	**13 25 48.0**	**-0.7**
GUMO				pmax	pmax		
	comp=Z,1µm,1.5s						
GUMO				MLR	MLR		
	comp=Z,22µm,18.0s						
GUMO	**Guam**	**37.72**	**321**	P	**P**	**13 25 48.0**	**-0.6**
GUMO				IAmb	IAmb	13 25 50.6	
	comp=Z,1µm,1.4s						
GUMO	**Guam**	**37.72**	**321**	P	**P**	**13 25 50.8**	**+2.1**
FAKI	**Fak Fak**	**37.82**	**287**	P	**P**	**13 25 49.1**	**-0.6**
FAKI				IAmb	IAmb	13 25 53.0	
	comp=Z,1µm,1.5s						
FAKI				IAMs_20	IAMs_20	13 42 50.6	
	comp=Z,29µm,21.0s						
KNRA	**Kununurra**	**37.87**	**265**	IAMs_20	IAMs_20	13 40 43.0	
	comp=Z,34µm,20.0s						
WRKA	**Warakurna**	**38.18**	**250**	P	**P**	**13 25 50.9**	**-1.7**
	baz=38,SNR=229						
FORT	**Forrest**	**39.24**	**241**	P	**P**	**13 26 00.1**	**-1.3**
	baz=39,SNR=57						
FORT	**Forrest**	**39.24**	**241**	IAmb	IAmb	13 26 05.2	
	comp=Z,2µm,1.4s						
SIJI	**Sorong**	**39.55**	**289**	LR	LR	13 42 33.8	
	comp=Z,48µm,21.8s,baz=115,slow=36						
SARN	**Sarigan**	**39.67**	**325**	P	**P**	**13 26 04.7**	**-0.4**
TBI	**Tubuai**	**40.28**	**107**	*e*S	**S**	**13 32 18.1**	**+0.6**
	comp=Z,34µm,27.8s						
TBI				*e*LQ	LQ	13 35 30.5	
	comp=Z,17µm,29.0s						
TBI				*e*LR	LR	13 37 11.7	
	comp=Z,129µm,30.5s,baz=276						

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PAE    Paea              40.31  98 eP       P        13 26 12.0 +1.5
              comp=Z,48nm,1.3s
PPT2   Papeete2          40.32  98 eP       P        13 26 12.8 +2.1
              comp=Z,208nm,1.4s
PPT2                               eS       S        13 32 18.9 +0.5
              comp=Z,26µm,25.5s
PPT2                               eLQ      LQ       13 35 31.2
              comp=Z,52µm,28.2s
PPT2                               eLR      LR       13 37 13.0
              comp=Z,146µm,26.2s,baz=260
PPT    Papeete           40.33  98  P       P        13 26 13.3 +2.7
              comp=Z,108nm,1.1s,baz=225,slow=2.8,SNR=11
PPT                                 LR      LR       13 38 49.7
              comp=Z,34µm,21.0s,baz=260,slow=30
PPTF   Pamatai, Papee    40.34  98  P       P        13 26 11.0 +0.2
PPTF                                IAMs_20 IAMs_20  13 38 28.2
              comp=Z,30µm,22.0s
TIAR   Tiarei            40.55  98 eP       P        13 26 14.6 +2.1
              comp=Z,116nm,1.3s
TVO    Taravao           40.62  98 eP       P        13 26 14.9 +1.8
              comp=Z,62nm,1.4s
FITZ   Fitzroy Crossi    40.62 261  P       P        13 26 11.9 -1.1
              baz=41,SNR=96
MEH    Mehetia           41.73  99 eP       P        13 26 24.0 +1.8
              comp=Z,168nm,1.5s
VAH    Vaihoa            42.44  95 eP       P        13 26 29.9 +1.9
              comp=Z,483nm,1.5s
SOEI   Soe               43.24 273  IAMs_20 IAMs_20  13 45 11.8
              comp=Z,30µm,20.0s
BATI   Baumata           43.72 272  LR      LR       13 44 19.1
              comp=Z,28µm,20.7s,baz=110,slow=35
KMBL   Kambalda          44.56 242  P       P        13 26 43.1 -1.8
              baz=44,SNR=73
MMRI   Maumere           45.46 274  P       P        13 26 50.5 -1.8
MMRI                                IAmb    IAmb     13 27 12.1
              comp=Z,837nm,1.1s
PSAD2  Pilbara Seismi    45.76 256  IAMs_20 IAMs_20  13 45 38.4
              comp=Z,22µm,19.0s
PSAC2  Pilbara Seismi    45.82 256  IAMs_20 IAMs_20  13 45 28.9
              comp=Z,21µm,20.0s
PSAB2  Pilbara Seismi    45.86 256  IAMs_20 IAMs_20  13 44 51.9
              comp=Z,24µm,21.0s
PSAA3  Pilbara Seismi    45.86 256  IAMs_20 IAMs_20  13 44 53.1
              comp=Z,24µm,22.0s
PSAB3  Pilbara Seismi    45.86 256  IAMs_20 IAMs_20  13 45 40.0
              comp=Z,22µm,19.0s
PSAA2  Pilbara Seismi    45.87 256  IAMs_20 IAMs_20  13 44 53.3
              comp=Z,23µm,20.0s
PSA00  Pilbara Seismi    45.87 256  IAMs_20 IAMs_20  13 44 53.3
              comp=Z,23µm,21.0s
PSAA1  Pilbara Seismi    45.88 256  IAMs_20 IAMs_20  13 44 53.5
              comp=Z,22µm,20.0s
PSAC3  Pilbara Seismi    45.88 256  IAMs_20 IAMs_20  13 45 28.7
              comp=Z,24µm,22.0s
PSAD1  Pilbara Seismi    45.89 256  IAMs_20 IAMs_20  13 44 43.8
              comp=Z,24µm,22.0s
PSAB1  Pilbara Seismi    45.89 256  IAMs_20 IAMs_20  13 44 53.9
              comp=Z,23µm,20.0s
PSAC1  Pilbara Seismi    45.91 256  IAMs_20 IAMs_20  13 44 54.2
              comp=Z,23µm,20.0s
PSAD3  Pilbara Seismi    45.93 256  IAMs_20 IAMs_20  13 44 54.8
              comp=Z,24µm,21.0s
MBWA   Marble Bar        45.99 256  IAMs_20 IAMs_20  13 45 35.6
              comp=Z,24µm,19.0s
MBWA   Marble Bar        45.99 256  P       P        13 26 56.8 +0.4
MBWA                                S       S        13 33 46.2 +4.7
MEEK   Meekatharra       46.98 249  P       P        13 27 03.1 -1.1
              baz=47,SNR=79
MATI   Mati              47.57 296 eP       P        13 27 06.6 -2.3
DDMP   Don Marcelino,    47.63 295 eP       P        13 27 08.6 -0.8
KLBR   Kellerberrin      48.08 242  P       P        13 27 12.6 -0.1
              baz=48,SNR=44
DAV    Davao City (W)    48.21 296  IAMs_20 IAMs_20  13 45 03.1
              comp=Z,19µm,20.0s
DAV    Davao City (W)    48.21 296⇓eP       P        13 27 15.9 +2.1
KCP    Kidapawan         48.61 295⇓iP       P        13 27 17.8 +0.8
NWAO   Narrogin (SRO)    48.67 240  P       P        13 27 15.5 -1.7
              baz=49,SNR=76
NWAO   Narrogin (SRO)    48.67 240  P       P        13 27 15.8 -1.4
NWAO                                pmax    pmax
              comp=Z,994nm,1.2s
NWAO                                MLR     MLR
              comp=Z,38µm,18.0s
NWAO   Narrogin (SRO)    48.67 240  P       P        13 27 15.8 -1.4
NWAO   Narrogin (SRO)    48.67 240  IAmb    IAmb     13 27 20.4
              comp=Z,798nm,1.2s
NWAO   Narrogin (SRO)    48.67 240  P       P        13 27 17.2  0.0
NWAO                                P       P        13 27 17.2  0.0
KAPI   Kappang           48.82 278  LR      LR       13 44 59.8
              comp=Z,7µm,21.1s,baz=96,slow=32
KAPI   Kappang           48.82 278  P       P        13 27 19.1 +0.5
KAPI                                pmax    pmax
              comp=Z,977nm,1.3s
KAPI   Kappang           48.82 278  P       P        13 27 19.1 +0.5
KAPI                                IAmb    IAmb     13 27 22.6
              comp=Z,977nm,1.2s
KAPI   Kappang           48.82 278  P       P        13 27 19.0 +0.5
KAPI                                S       S        13 34 25.2 +3.4
SKMP   Bagumbayan, Su    48.85 294 eP       P        13 27 17.8 -0.9
BLDU   Ballidu           48.89 244  P       P        13 27 18.7 -0.2
              baz=49,SNR=29
BUKP   Musuan            49.06 296 eP       P        13 27 22.7 +2.3
GLSP   General Luna,     49.12 299 eP       P        13 27 20.2 -0.5
BUTP   Butuan            49.12 298 eP       P        13 27 21.8 +1.0
MORW   Morawa            49.37 246  P       P        13 27 22.7 +0.1
              baz=49,SNR=29
MORW   Morawa            49.37 246  IAmb    IAmb     13 27 25.4
              comp=Z,345nm,1.1s
MORW                                IAMs_20 IAMs_20  13 46 58.8
              comp=Z,31µm,22.0s
MUN    Mundaring         49.43 242  P       P        13 27 23.1  0.0
              baz=49,SNR=14
CGP    Cagayan de Oro    49.66 297⇓eP       P        13 27 27.4 +2.5
JCJ    Chichijima        50.11 329  P       P        13 27 27.8 -0.3
              comp=Z,2µm,0.9s,baz=143,slow=1.9,SNR=18
KIP    Kipapa            50.13  42ceP       P        13 27 28.1 -0.2
KIP                                 pmax    pmax
              comp=Z,560nm,1.7s
OPA    Opana             50.32  42  IAmb    IAmb     13 27 36.2
              comp=Z,1µm,1.3s
MSLP   Maasin            50.37 299 eP       P        13 27 31.0 +0.8
PAGZ   Pagadian          50.49 295 eP       P        13 27 31.9 +0.7
PUH    Pauahi            50.60  47  P       P        13 27 32.1  0.0
PUH                                 IAmb    IAmb     13 27 59.1
              comp=Z,545nm,1.4s
TAOE   Nuku Hiva Isla    50.84  88 eP       P        13 27 36.2 +2.2
              comp=Z,960nm,1.4s
TAOE                               eS       S        13 34 49.5 -0.7
              comp=Z,32µm,26.1s
TAOE                               eLR      LR       13 42 04.6
              comp=Z,104µm,29.5s,baz=257
TAOE   Nuku Hiva Isla    50.84  88  IAMs_20 IAMs_20  13 43 32.9
              comp=Z,29µm,22.0s
GIRL   Giralia           51.02 254  P       P        13 27 35.0 -0.2
              baz=51,SNR=4.8
LLP    Lapu-Lapu         51.21 298 eP       P        13 27 39.0 +2.3
H01W1  Cape Leeuwin H    51.45 238  P       P        13 27 39.1 +1.2
H01W3  Cape Leeuwin H    51.46 238  P       P        13 27 39.2 +1.2
H01W2  Cape Leeuwin H    51.46 238  P       P        13 27 39.3 +1.2
CNP    Catarman          51.78 301 eP       P        13 27 41.4 +0.5
CNOP   Candoni, Negro    52.09 297 eP       P        13 27 41.8 -1.4
GUIM   Jordan            52.53 298 eP       P        13 27 45.4 -1.2
JAGI   Jajag, Banyuwa    53.25 272  P       P        13 27 50.5 -1.4
JAGI                                IAmb    IAmb     13 27 54.3
              comp=Z,837nm,1.4s
SCSP   San Jose Seism    53.33 302 eP       P        13 27 52.6 +0.3
RKT    Rikitea           53.61 107 eS       S        13 35 27.7 -0.1
              comp=Z,8µm,28.0s
RKT                                eLR      LR       13 43 22.1
              comp=Z,106µm,30.0s
JCNP   Jose Panganiba    54.34 302 eP       P        13 27 59.7 -0.1
BOAC   Boac              54.61 300 eP       P        13 28 02.3 +0.6
SJMP   San Jose          54.70 299 eP       P        13 28 03.2 +0.8
LQP    Lukban            55.20 301 eP       P        13 28 06.3 +0.1
BUSP   Coron             55.25 298 eP       P        13 28 06.8 +0.4
JMZ    Minamidaito 2     55.32 319  IAMs_20 IAMs_20  13 51 45.7
              comp=Z,15µm,18.0s
PGP    Puerto Galera     55.37 300⇑eP       P        13 28 06.1 -1.2
ENPP   El Nido           55.52 296 eP       P        13 28 07.6 -0.7
TGY    Tagaytay City     55.69 300  LR      LR       13 51 00.1
              comp=Z,5µm,20.0s,baz=124,slow=35
BATP   Bataraza          55.82 293 eP       P        13 28 10.4 -0.1
QVP    Quezon City--P    55.91 301 eP       P        13 28 11.8 +0.7
MACP   Maragondon, Ca    55.96 300 eP       P        13 28 11.6 +0.2
KKM    Kota Kinabalu     56.07 289  P       P        13 28 11.6 -0.8
KKM                                 IAmb    IAmb     13 28 22.0
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              comp=Z,703nm,1.3s
LUBP   Lubang            56.08 300 eP       P        13 28 10.9 -1.4
CAUP   Cauayan           56.49 304 eP       P        13 28 16.0 +0.8
CVP    Callao Caves      56.91 305⇓eP       P        13 28 18.1 -0.1
SMPP   San Manuel, Pa    56.98 302 eP       P        13 28 17.8 -1.0
SGCP   Mt. Cagua         57.03 305 eP       P        13 28 20.0 +0.9
SZP    Santa             57.91 304  IAMs_20 IAMs_20  13 52 29.2
              comp=Z,14µm,20.0s
JOW    Kunigami          57.91 317  LR      LR       13 51 59.3
              comp=Z,10µm,21.1s,baz=150,slow=35
JOW    Kunigami          57.91 317  IAMs_20 IAMs_20  13 51 47.5
              comp=Z,14µm,21.0s
SBUM   Sibu              58.38 283  P       P        13 28 30.0 +1.3
JYT    Yasato            58.70 334  IAmb    IAmb     13 28 33.6
              comp=Z,566nm,1.1s
JGF    Kuroka            59.45 331  IAmb    IAmb     13 28 37.8
              comp=Z,495nm,1.3s
JMN    Monobe            59.67 327  P       P        13 28 37.3  0.0
JMN                                 IAMs_20 IAMs_20  13 54 06.3
              comp=Z,15µm,19.0s
KSM    Kuching           59.83 282  IAmb    IAmb     13 28 48.9
              comp=Z,549nm,1.2s
KSM                                 PcP     PcP      13 29 23.2 -2.2
KSM    Kuching           59.83 282  P       P        13 28 39.0 +0.2
MJAR   Matsushiro Arr    59.83 332  P       P        13 28 38.0 -0.3
              comp=Z,262nm,0.9s,baz=164,slow=8.1,SNR=144
MJAR                                LR      LR       13 57 00.1
              comp=Z,3µm,18.1s,baz=155,slow=39
MJAR                                PKPPKP  P'P'df   13 58 06.0 +4.4
              comp=Z,4.8nm,1.0s,baz=288,slow=2.5,SNR=5.3
MJAR                                PKP2bc           13 58 14.7
              comp=Z,26nm,1.2s,baz=310,slow=1.9,SNR=11
MJAR   Matsushiro Arr    59.83 332  P       P        13 28 38.1 -0.3
MJAR                                pmax    pmax
              comp=Z,140nm,1.0s
MJAR   Matsushiro Arr    59.83 332  P       P        13 28 38.1 -0.3
MAJO   Matsushiro        59.84 332  P       P        13 28 38.5 +0.1
MAJO                                pmax    pmax
              comp=Z,489nm,1.0s
MAJO   Matsushiro        59.84 332  P       P        13 28 38.5 +0.1
MAJO                                IAmb    IAmb     13 28 41.0
              comp=Z,489nm,1.0s
MAT    Matsushiro        59.84 332  P       P        13 28 36.2 -2.1
MAT                                 S       S        13 36 50.8 +1.1
MJB9   Matsu-Tunnel      59.84 332  P       P        13 28 37.1 -1.3
MJB9                                IAmb    IAmb     13 28 41.0
              comp=Z,540nm,1.0s
MJB9                                PcP     PcP      13 29 27.9 +3.0
LEM    Lembang           59.92 272  LR      LR       13 54 41.3
              comp=Z,7µm,21.0s,baz=104,slow=36
YOJ    Yonaguni jima     59.98 312  IAMs_20 IAMs_20  13 50 06.0
              comp=Z,13µm,21.0s
YULB   Yu-li             60.58 310  IAmb    IAmb     13 28 53.0
              comp=Z,269nm,1.1s
NACB   Ninganchiao       60.82 311  P       P        13 28 44.6 -0.7
JNU    Nakatsue          60.83 324  LR      LR       13 50 31.9
              comp=Z,6µm,21.7s,baz=129,slow=32
JNU                                 PKP2bc           13 58 12.5
              comp=Z,11nm,1.0s,baz=0.0,slow=8.1,SNR=1.9
JNU    Nakatsue          60.83 324  P       P        13 28 44.5 -0.8
XMIS   Christmas Isla    60.93 267  IAMs_20 IAMs_20  13 52 22.6
              comp=Z,13µm,22.0s
JHS    Saijyo            61.05 327  IAmb    IAmb     13 28 50.1
              comp=Z,461nm,1.0s
JHS                                 IAMs_20 IAMs_20  13 54 26.9
              comp=Z,13µm,19.0s
SSLB   Suanglung         61.06 310  IAmb    IAmb     13 28 49.3
              comp=Z,412nm,1.2s
SSLB                                IAMs_20 IAMs_20  13 51 12.8
              comp=Z,14µm,22.0s
VNDA   Vanda             61.18 182  P       P        13 28 47.3 +0.3
              comp=Z,47nm,1.1s,baz=360,slow=7.5,SNR=26
VNDA                                LR      LR       13 52 20.9
              comp=Z,12µm,19.3s,baz=18,slow=33
VNDA                                PKP2bc           13 58 12.3
              comp=Z,6.1nm,1.1s,baz=244,slow=7.2,SNR=3.4
YHNB   Yeheng            61.28 311  IAMs_20 IAMs_20  13 50 58.5
              comp=Z,19µm,22.0s
TATO   Taipei            61.38 311  P       P        13 28 49.4 +0.3
TATO   Taipei            61.38 311  IAMs_20 IAMs_20  13 53 35.0
              comp=Z,12µm,20.0s
SBA    Scott Base        61.44 180  P       P        13 28 49.5 +0.8
SBA                                 pmax    pmax
              comp=Z,605nm,1.4s
SBA    Scott Base        61.44 180  P       P        13 28 49.5 +0.8
SBA                                 IAmb    IAmb     13 28 53.8
              comp=Z,605nm,1.4s
ERM    Erimo             62.60 339 i P      P        13 28 58.1 +1.2
ERM                                 pmax    pmax
              comp=Z,129nm,1.0s
ERM    Erimo             62.60 339  P       P        13 28 57.7 +0.8
ERM                                 IAmb    IAmb     13 29 11.3
              comp=Z,192nm,1.0s
ERM    Erimo             62.60 339  IAMs_20 IAMs_20  13 56 13.3
              comp=Z,12µm,19.0s
KNMB   Chin-men Tao      63.36 309  IAmb    IAmb     13 29 05.8
              comp=Z,300nm,1.2s
QZH    Quanzhou          63.48 309⇓iP       P        13 29 03.9 +0.7
QZH                                 S       S        13 37 35.5 -0.8
QZH                                 pmax    pmax
              comp=Z,240nm,1.9s
QZH                                 pmax    pmax
              comp=Z,4µm,6.4s
QZH                                 LR      LR
              comp=Z,5µm,19.5s
QZH                                 LR      LR
              comp=Z,4µm,17.5s
QZH                                 LR      LR
              comp=Z,8µm,21.6s
YUK    Yuzh-Kuril'sk     63.56 342d iP      P        13 29 01.0 -2.2
YUK                                i                 13 29 42.1
YUK                                i                 13 31 22.0
YUK                                i S      S        13 37 32.2 -4.2
YUK                                i SS     SS       13 41 44.6 +0.3
YUK                                eSSS     SSS      13 44 25.2
YUK                                 pmax    pmax
              comp=Z,1µm,4.6s
YUK                                 pmax    pmax
              comp=E,218nm,1.3s
YUK                                 pmax    pmax
              comp=Z,555nm,1.3s
KUR    Kuril'sk          64.11 344c iP      P        13 29 06.5 -0.3
KUR                                e                 13 29 42.5
KUR                                i S      S        13 37 44.7 +1.5
KUR                                 pmax    pmax
              comp=Z,779nm,2.0s
KUR                                 pmax    pmax
              comp=N,303nm,1.6s
KUR                                 pmax    pmax
              comp=E,255nm,2.0s
KUR                                 pmax    pmax
              comp=Z,7µm,6.5s
KUR                                 pmax    pmax
              comp=N,2µm,6.0s
KUR                                 MLR     MLR
              comp=Z,9µm,17.0s
KUR                                 MLR     MLR
              comp=E,7µm,15.0s
ASAJ   Asahikawa         64.65 340  LR      LR       13 53 20.9
              comp=E,6µm,20.7s,baz=170,slow=32
ASAJ                                PKP2bc           13 58 01.7
              comp=E,62nm,1.2s,baz=264,slow=8.2,SNR=12
TJN    Taejon            65.18 324⇑eP       P        13 29 13.5 -0.6
SSE    Sheshan           65.38 316  P       P        13 29 15.0 -0.4
SSE                                 S       S        13 37 59.0 -0.5
SSE                                 pmax    pmax
              comp=E,180nm,1.2s
SSE                                 pmax    pmax
              comp=E,2µm,7.2s
SSE                                 LR      LR
              comp=E,2µm,20.6s
SSE                                 LR      LR
              comp=E,3µm,20.6s
SSE    Sheshan           65.38 316  IAmb    IAmb     13 29 18.1
              comp=Z,438nm,1.1s
SSE    Sheshan           65.38 316  IAMs_20 IAMs_20  13 54 43.0
              comp=Z,11µm,21.0s
HKC    Hong Kong Obse    65.43 304 ⇑P       P        13 29 17.0 +1.0
KSRS   Korea Array       65.66 326  P       P        13 29 17.4 +0.3
              comp=Z,135nm,0.9s,baz=140,slow=6.8,SNR=130
KSRS                                PP      PP       13 31 37.3 -4.6
              comp=Z,7.4nm,0.9s,baz=157,slow=9.0,SNR=3.3
KSRS                                PKPPKP           13 57 53.9
              comp=Z,12nm,1.1s,baz=304,slow=2.7,SNR=13
KSAR   Wonju Array Be    65.67 326  P       P        13 29 17.3 +0.1
KSAR   Wonju Array Be    65.67 326  P       P        13 29 17.3 +0.1
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KS19   Wonju Array Si    65.72 326  IAmb    IAmb     13 29 20.5
              comp=Z,294nm,1.1s
MYKOM  Kota Tinggi       66.03 280  P       P        13 29 20.0  0.0
INCN   Inchon            66.38 325  P       P        13 29 22.2 +0.3
INCN                                pmax    pmax
              comp=Z,1µm,1.5s
INCN   Inchon            66.38 325  P       P        13 29 22.2 +0.3
GZH    Guangzhou         66.49 305  P       P        13 29 24.1 +1.3
GZH                                 S       S        13 38 14.8 +1.5
GZH                                 LR      LR
              comp=Z,11µm,26.5s
GZH                                 LR      LR
              comp=Z,12µm,26.5s
YSS    Yuzh-Sakhalins    67.13 341⇑iP       P        13 29 26.8 +0.5
YSS                                e                 13 29 36.7
YSS                                e                 13 29 57.3
YSS                                e                 13 31 54.5
YSS                                ePPP     PPP      13 33 29.1
YSS                                eS       S        13 38 22.0 +1.9
YSS                                ePS               13 38 44.6
YSS                                eSS      SS       13 42 39.9 +0.1
YSS                                 pmax    pmax
              comp=Z,170nm,1.1s
YSS                                 pmax    pmax
              comp=Z,4µm,3.7s
YSS                                 pmax    pmax
              comp=N,2µm,3.4s
YSS                                 smax    smax
              comp=N,2µm,9.6s
YSS    Yuzh-Sakhalins    67.13 341  P       P        13 29 26.5 +0.2
YSS                                 IAmb    IAmb     13 29 30.8
              comp=Z,413nm,1.1s
QIZ    Qiongzhong        67.36 299  P       P        13 29 28.8 +0.4
QIZ                                 PP      PP       13 31 55.1 -2.0
QIZ                                 S       S        13 38 27.5 +3.5
QIZ                                 pmax    pmax
              comp=Z,85nm,1.6s
QIZ                                 LR      LR
              comp=Z,5µm,29.9s
QIZ                                 LR      LR
              comp=Z,9µm,30.9s
QIZ                                 LR      LR
              comp=Z,25µm,34.8s
NJ2    Nanjing           67.53 316⇑iP       P        13 29 29.3 +0.1
NJ2                                 pP      pP       13 29 33.3 -0.3
NJ2                                 sP      sP       13 29 35.3 +0.1
NJ2                                 PcP     PcP      13 29 54.8 -1.6
NJ2                                 S       S        13 38 26.8 +1.3
NJ2                                 ScS     SKSac    13 39 23.6 -3.3
NJ2                                 SS      SS       13 42 47.0 +0.4
NJ2                                 pmax    pmax
              comp=Z,530nm,1.1s
NJ2                                 pmax    pmax
              comp=Z,5µm,4.6s
NJ2                                 LR      LR
              comp=Z,7µm,21.0s
NJ2                                 LR      LR
              comp=Z,7µm,18.8s
NJ2                                 LR      LR
              comp=Z,12µm,21.8s
TEY    Ternei            67.60 336ceP       P        13 29 24.7 -4.6
TEY                                 pmax    pmax
              comp=Z,80nm,2.0s
TEY                                 pmax    pmax
              comp=Z,900nm,4.2s
SKR    Severo-Kuril’s    67.67 352 eP       P        13 29 30.9 +1.2
SKR                                e                 13 31 56.8
SKR                                eS       S        13 38 27.3 +0.8
SKR                                 pmax    pmax
              comp=Z,2µm,5.6s
SKR                                 pmax    pmax
              comp=Z,60nm,1.1s
SKR                                 MLR     MLR
              comp=Z,1µm,17.0s
MSHR   Mys Shultsa       67.91 331ceP       P        13 29 31.4  0.0
MSHR                                pmax    pmax
              comp=Z,891nm,1.7s
USA0B  Ussuriysk Arra    68.81 333c iP      P        13 29 37.2 +0.2
USRK   Ussuriysk Ar.     68.81 333  P       P        13 29 38.6 +1.6
              comp=Z,365nm,1.0s,baz=129,slow=3.3,SNR=197
USRK                                PKP2bc           13 57 49.5
              comp=Z,17nm,1.2s,baz=299,slow=3.9,SNR=24
USRK   Ussuriysk Ar.     68.81 333  P       P        13 29 37.4 +0.4
ADK    Adak              69.30  10  IAMs_20 IAMs_20  13 54 09.2
              comp=Z,13µm,22.0s
PET    Petropavlovsk     69.67 354 eP       P        13 29 41.1 -1.0
PET                                e                 13 30 03.2
PET                                eS       S        13 38 47.9 -2.2
PET                                eSS      SS       13 43 21.0 +2.1
PET                                 pmax    pmax
              comp=Z,127nm,1.8s
PET                                 pmax    pmax
              comp=Z,5µm,7.3s
PET                                 pmax    pmax
              comp=Z,4µm,16.9s
WHN    Wuhan             69.75 312 ⇑P       P        13 29 42.9 -0.2
WHN                                 S       S        13 38 51.3 -0.8
WHN                                 pmax    pmax
              comp=Z,2µm,1.5s
WHN                                 pmax    pmax
              comp=Z,7µm,6.4s
WHN                                 LR      LR
              comp=Z,28µm,23.8s
WHN                                 LR      LR
              comp=Z,15µm,21.7s
WHN                                 LR      LR
              comp=Z,69µm,30.7s
PEA0B  Petropavlovsk-    69.86 353  P       P        13 29 43.0 -0.3
PEA0B                               pmax    pmax
              comp=Z,358nm,1.4s
PEA0B  Petropavlovsk-    69.86 353  P       P        13 29 43.0 -0.3
PEA0B                               IAmb    IAmb     13 29 46.6
              comp=Z,358nm,1.4s
PETK   Petropavlovsk-    69.86 353  P       P        13 29 43.9 +0.6
              comp=Z,62nm,0.9s,baz=168,slow=3.8,SNR=63
PETK                                PKP2bc           13 57 46.4
              comp=Z,39nm,1.3s,baz=197,slow=1.5,SNR=14
PETK   Petropavlovsk-    69.86 353  P       P        13 29 41.9 -1.4
DL2    Dalian            70.20 323  P       P        13 29 45.1 -0.6
DL2                                 PP      PP       13 32 18.3 -3.1
DL2                                 S       S        13 38 56.3 -0.7
DL2                                 SS      SS       13 43 24.6 -3.1
DL2                                 pmax    pmax
              comp=Z,2µm,0.9s
DL2                                 pmax    pmax
              comp=Z,5µm,5.7s
DL2                                 LR      LR
              comp=Z,8µm,26.9s
DL2                                 LR      LR
              comp=Z,7µm,25.9s
DL2                                 LR      LR
              comp=Z,16µm,30.1s
MDJ    Mudanjiang        70.21 332  P       P        13 29 46.0 +0.4
MDJ                                 pP      pP       13 29 48.4 -1.7
MDJ                                 sP      sP       13 29 51.8 +0.2
MDJ                                 S       S        13 39 00.3 +3.4
MDJ                                 sS      sS       13 39 06.6 +2.4
MDJ                                 ScS     ScS      13 39 49.6 +1.7
MDJ                                 SS      SS       13 43 30.9 +3.3
MDJ                                 pmax    pmax
              comp=Z,500nm,1.3s
MDJ                                 pmax    pmax
              comp=Z,6µm,4.8s
MDJ                                 LR      LR
              comp=Z,8µm,27.6s
MDJ                                 LR      LR
              comp=Z,8µm,25.3s
MDJ                                 LR      LR
              comp=Z,18µm,30.3s
MDJ    Mudanjiang        70.21 332  IAMs_20 IAMs_20  13 55 43.1
              comp=Z,10µm,21.0s
TYV    Tymovskoe         70.67 343 eP       P        13 29 48.7 +0.4
TYV                                e                 13 39 04.5
TYV                                 pmax    pmax
              comp=Z,3µm,3.3s
TYV                                 pmax    pmax
              comp=Z,149nm,1.8s
PSI    Prapat            71.01 279  PKP2bc           13 57 40.6
              comp=Z,4.2nm,0.2s,baz=359,slow=16,SNR=11
SNY    Shenyang          71.13 326 ⇑P       P        13 29 50.5 -0.8
SNY                                 S       S        13 39 07.0 -0.6
SNY                                 pmax    pmax
              comp=Z,80nm,1.7s
SNY                                 pmax    pmax
              comp=Z,4µm,6.3s
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SNY				LR	LR		
	comp=Z,7μm,19.4s						
SNY				LR	LR		
	comp=Z,6μm,24.6s						
SNY				LR	LR		
	comp=Z,16μm,23.7s						
TIA	**Tai'an**	**71.21**	**318**	P	**P**	**13 29 51.3**	**-0.7**
TIA				PP	**PP**	**13 32 30.8**	**+0.6**
TIA				S	**S**	**13 39 08.6**	**-0.4**
TIA				pmax	pmax		
	comp=Z,88nm,1.4s						
TIA				pmax	pmax		
	comp=Z,450nm,3.5s						
TIA				LR	LR		
	comp=Z,9μm,24.2s						
TIA				LR	LR		
	comp=Z,6μm,25.0s						
TIA				LR	LR		
	comp=Z,18μm,25.0s						
CN2	**Changchun**	**71.57**	**329**	*e*P	**P**	**13 29 52.3**	**-1.6**
CN2				PP	**PP**	**13 32 33.5**	**+0.4**
CN2				S	**S**	**13 39 12.3**	**-0.5**
CN2				SS	**SS**	**13 43 49.8**	**+1.3**
CN2				pmax	pmax		
	comp=Z,790nm,1.2s						
CN2				pmax	pmax		
	comp=Z,5μm,5.0s						
CN2				LR	LR		
	comp=Z,6μm,27.0s						
CN2				LR	LR		
	comp=Z,6μm,27.0s						
CN2				LR	LR		
	comp=Z,12μm,28.0s						
GSI	**Gunungsitoli**	**71.83**	**277**	P	**P**	**13 29 56.3**	**+0.1**
GSI				IAmb	IAmb	13 29 59.5	
	comp=Z,474nm,1.1s						
GSI				IAMs_20	IAMs_20	14 01 54.6	
	comp=Z,13μm,21.0s						
TRTT	**Trang**	**71.94**	**284**	P	**P**	**13 29 56.7**	**0.0**
	comp=Z,4μmcomp=Z,199nm,1.4s						
SRAK	**Srakaew**	**72.02**	**291**	P	**P**	**13 29 56.7**	**-0.5**
	comp=Z,7μmcomp=Z,258nm,1.2s						
GRNR	**Gornyy**	**72.50**	**339**	⇓*i*P	**P**	**13 30 01.5**	**+2.1**
GRNR				pmax	pmax		
	comp=N,50nm,1.2s						
GRNR				pmax	pmax		
	comp=E,40nm,1.2s						
GRNR				pmax	pmax		
	comp=Z,190nm,1.2s						
PATY	**Pattaya**	**72.67**	**290**	P	**P**	**13 30 04.0**	**+2.9**
	comp=Z,68nm,1.3s						
CHAI	**Chaiyaphum**	**72.80**	**293**	P	**P**	**13 30 03.4**	**+1.5**
	comp=Z,811nmcomp=Z,68nm,1.1s						
KLR	**Kul'dur**	**72.93**	**336**	PKP2bc		13 57 33.6	
	comp=Z,1.5nm,1.0s,baz=91,slow=4.4,SNR=4.5						
ENH	**Enshi**	**73.15**	**309**	IAMs_20	IAMs_20	13 57 44.8	
	comp=Z,14μm,22.0s						
SURT	**Suratani**	**73.15**	**285**	P	**P**	**13 30 07.7**	**+3.6**
	comp=Z,1.9nm,1.1s						
PKDT	**Phuket**	**73.22**	**284**	P	**P**	**13 30 05.2**	**+0.8**
	comp=Z,4μmcomp=Z,124nm,1.8s						
GYA	**Guiyang**	**73.43**	**305**	⇑P	**P**	**13 30 06.0**	**+0.4**
GYA				S	**S**	**13 39 28.9**	**-6.1**
GYA				pmax	pmax		
	comp=Z,360nm,1.8s						
GYA				LR	LR		
	comp=Z,8μm,27.9s						
GYA				LR	LR		
	comp=Z,5μm,26.0s						
GYA				LR	LR		
	comp=Z,14μm,29.1s						
QSPA	**South Pole Qui**	**73.59**	**180**	P	**P**	**13 30 06.6**	**+0.7**
	comp=Z,332nm,1.0s,baz=26,slow=1.4,SNR=88						
QSPA				LR	LR	13 58 33.6	
	comp=Z,10μm,20.1s,baz=34,slow=33						
QSPA	**South Pole Qui**	**73.59**	**180**	P	**P**	**13 30 05.5**	**-0.4**
QSPA				IAmb	IAmb	13 30 09.9	
	comp=Z,563nm,1.1s						
QSPA	**South Pole Qui**	**73.59**	**180**	IAMs_20	IAMs_20	14 00 32.8	
	comp=Z,12μm,19.0s						
PHET	**Kaeng Krachan**	**73.78**	**289**	P	**P**	**13 30 09.8**	**+2.1**
	comp=Z,2μmcomp=Z,137nm,1.2s						
BJT	**Baijiatuau**	**74.15**	**321**	IAMs_20	IAMs_20	13 59 13.4	
	comp=Z,10μm,22.0s						
BJI	**Beijing**	**74.16**	**321**	P	**P**	**13 30 09.0**	**-0.4**
BJI				PP	**PP**	**13 32 55.8**	**+0.5**
BJI				S	**S**	**13 39 44.8**	**+2.4**
BJI				SS	**SS**	**13 44 32.3**	**+4.1**
BJI				pmax	pmax		
	comp=Z,190nm,1.3s						
BJI				pmax	pmax		
	comp=Z,4μm,6.8s						
BJI				LR	LR		
	comp=Z,10μm,26.5s						
BJI				LR	LR		
	comp=Z,9μm,29.4s						
BJI				LR	LR		
	comp=Z,27μm,32.2s						
PHIT	**Phitsanulok**	**74.69**	**293**	P	**P**	**13 30 15.9**	**+3.0**
	comp=Z,4μmcomp=Z,283nm,1.1s						
SRDT	**SRDT**	**74.77**	**290**	P	**P**	**13 30 15.1**	**+1.7**
	comp=Z,69nm,2.0s						
UTTA	**Uttaradit**	**74.78**	**294**	P	**P**	**13 30 15.0**	**+1.5**
	comp=Z,1μmcomp=Z,87nm,1.1s						
UTHA	**Uthaitani**	**74.93**	**292**	P	**P**	**13 30 15.7**	**+1.3**
	comp=Z,107nm,1.2s						
NANT	**Nan**	**75.07**	**295**	P	**P**	**13 30 18.1**	**+3.0**
	comp=Z,24μmcomp=Z,1μm,1.2s						
TIY	**Taiyuan**	**75.13**	**317**	*e*P	**P**	**13 30 15.9**	**+0.7**
TIY				S	**S**	**13 39 57.1**	**+3.6**
TIY				pmax	pmax		
	comp=Z,640nm,1.2s						
TIY				pmax	pmax		
	comp=Z,4μm,6.8s						
TIY				LR	LR		
	comp=Z,5μm,15.9s						
TIY				LR	LR		
	comp=Z,1μm,14.9s						
TIY				LR	LR		
	comp=Z,26μm,41.0s						
SUKH	**Sukhothai**	**75.49**	**293**	P	**P**	**13 30 18.8**	**+1.3**
	comp=Z,55nm,1.2s						
XAN	**Xi'an**	**75.51**	**312**	P	**P**	**13 30 17.0**	**-0.4**
XAN				pP	pP	13 30 21.8	0.0
XAN				sP	sP	13 30 23.8	+0.4
XAN				PP	**PP**	**13 33 08.0**	**+1.1**
XAN				S	**S**	**13 39 57.3**	**-0.5**
XAN				sS	sS	13 40 05.4	+0.2
XAN				SKS	**SKSac**	**13 40 21.3**	**-5.9**
XAN				pmax	pmax		
	comp=Z,380nm,1.3s						
XAN				pmax	pmax		
	comp=Z,6μm,5.7s						
XAN				LR	LR		
	comp=Z,13μm,21.7s						
XAN				LR	LR		
	comp=Z,9μm,24.9s						
XAN				LR	LR		
	comp=Z,23μm,24.9s						
XAN	**Xi'an**	**75.51**	**312**	IAmb	IAmb	13 30 20.2	
	comp=Z,483nm,1.3s						
XAN	**Xi'an**	**75.51**	**312**	IAMs_20	IAMs_20	13 59 17.2	
	comp=Z,13μm,22.0s						
UMPA	**Umpang Tak**	**75.69**	**292**	P	**P**	**13 30 20.2**	**+1.4**
	comp=Z,4μmcomp=Z,114nm,1.1s						
LAMP	**Lampang**	**75.89**	**294**	P	**P**	**13 30 21.2**	**+1.4**
	comp=Z,2μmcomp=Z,239nm,0.9s						
KMI	**Kunming**	**75.97**	**302**	⇑P	**P**	**13 30 21.3**	**+0.8**
KMI				pP	pP	13 30 23.8	-1.1
KMI				sP	sP	13 30 25.5	-1.0
KMI				PcP	**PcP**	**13 30 33.4**	**+0.6**
KMI				PP	**PP**	**13 33 11.3**	**+0.1**
KMI				S	**S**	**13 40 03.0**	**-0.7**
KMI				SS	**SS**	**13 44 55.0**	**-1.8**
KMI				pmax	pmax		
	comp=Z,410nm,1.6s						
KMI				pmax	pmax		
	comp=Z,4μm,6.1s						
KMI				LR	LR		
	comp=Z,5μm,19.0s						
KMI				LR	LR		
	comp=Z,2μm,20.1s						
KMI				LR	LR		
	comp=Z,8μm,23.4s						
KMI	**Kunming**	**75.97**	**302**	IAmb	IAmb	13 30 24.9	
	comp=Z,829nm,1.4s						
KMI	**Kunming**	**75.97**	**302**	IAMs_20	IAMs_20	13 58 49.7	
	comp=Z,9μm,22.0s						
CM09	**Chiang Mai Arr**	**76.42**	**294**	P	**P**	**13 30 24.0**	**+1.1**
	comp=Z,984nmcomp=Z,92nm,1.1s						
CM01	**Chiang Mai Arr**	**76.44**	**294**	P	**P**	**13 30 24.4**	**+1.4**
	comp=Z,991nmcomp=Z,85nm,1.2s						
CM02	**Chiang Mai Arr**	**76.46**	**294**	P	**P**	**13 30 24.4**	**+1.3**
	comp=Z,884nmcomp=Z,82nm,1.1s						
CM31	**Chiang Mai Arr**	**76.47**	**294**	P	**P**	**13 30 24.8**	**+1.6**
	comp=Z,28μmcomp=Z,2μm,1.3s						
CMAR	**Chiang Mai Arr**	**76.47**	**294**	P	**P**	**13 30 24.1**	**+0.9**
	comp=Z,44nm,0.9s,baz=126,slow=4.3,SNR=76						
CMAR				PKiKP	**PKiKP**	**13 36 08.5**	**+0.7**
	comp=Z,5.3nm,0.9s,baz=309,slow=1.3,SNR=5.9						
CMAR				PKKPbc	**PKKPbc**	**13 49 37.4**	**+1.8**
	comp=Z,0.7nm,0.3s,baz=303,slow=5.0,SNR=1.2						
CMAR				PKP2ab		13 57 20.2	
	comp=Z,0.6nm,0.4s,baz=258,slow=4.8,SNR=5.4						
CMAR				PKPPKP		13 57 36.6	
	comp=Z,0.7nm,0.3s,baz=275,slow=4.2,SNR=4.3						
CMMT	**Chiang Mai**	**76.60**	**294**	P	**P**	**13 30 23.6**	**-0.3**
	comp=Z,2μmcomp=Z,83nm,2.0s						
CHTO	**Chiang Mai**	**76.61**	**294**	P	**P**	**13 30 24.8**	**+0.9**
CHTO				pmax	pmax		
	comp=Z,227nm,1.3s						
CHTO				MLR	MLR		
	comp=Z,6μm,22.0s						
CHTO	**Chiang Mai**	**76.61**	**294**	P	**P**	**13 30 24.8**	**+0.9**
CHTO	**Chiang Mai**	**76.61**	**294**	P	**P**	**13 30 24.4**	**+0.4**
MA2	**Magadan**	**77.07**	**351**	P	**P**	**13 30 26.5**	**+0.9**
MA2				pmax	pmax		
	comp=Z,113nm,1.4s						
MA2	**Magadan**	**77.07**	**351**	P	**P**	**13 30 26.5**	**+0.9**
MHMT	**Maesarieng**	**77.25**	**293**	P	**P**	**13 30 27.6**	**0.0**
HHC	**Hu-ho-hao-te**	**77.47**	**320**	*e*P	**P**	**13 30 29.0**	**+0.6**
HHC				S	**S**	**13 40 21.6**	**+2.4**
HHC				SS	**SS**	**13 45 15.3**	**-3.4**
HHC				pmax	pmax		
	comp=Z,170nm,1.4s						
HHC				pmax	pmax		
	comp=Z,5μm,6.1s						
HHC				LR	LR		
	comp=Z,7μm,18.9s						
HHC				LR	LR		
	comp=Z,9μm,18.9s						
HHC				LR	LR		
	comp=Z,18μm,18.0s						
CHGN	**Chignik**	**77.69**	**18**	IAmb	IAmb	13 30 31.5	
	comp=Z,435nm,1.2s						
CD2	**Chengdu**	**77.76**	**307**	⇑P	**P**	**13 30 30.5**	**+0.2**
CD2				PP	**PP**	**13 33 24.6**	**-1.4**
CD2				S	**S**	**13 40 24.0**	**+1.3**
CD2				SS	**SS**	**13 45 25.3**	**+1.9**
CD2				pmax	pmax		
	comp=Z,450nm,1.3s						
CD2				pmax	pmax		
	comp=Z,6μm,6.7s						
CD2				LR	LR		
	comp=Z,9μm,18.6s						
CD2				LR	LR		
	comp=Z,8μm,23.1s						
CD2				LR	LR		
	comp=Z,11μm,22.6s						
HIA	**Hailar**	**78.21**	**330**	IAMs_20	IAMs_20	14 01 59.0	
	comp=Z,9μm,21.0s						
ZEA	**Zeya**	**78.22**	**337**	*e*P	**P**	**13 30 32.8**	**+0.7**
ZEA				*e*S	**S**	**13 40 31.1**	**+4.7**
ZEA				*e*		13 40 51.4	
ZEA				pmax	pmax		
	comp=E,30nm,1.2s						
ZEA				pmax	pmax		
	comp=N,110nm,1.1s						
ZEA				pmax	pmax		
	comp=Z,210nm,1.1s						
ZEA				pmax	pmax		
	comp=E,700nm,3.5s						
ZEA				pmax	pmax		
	comp=N,1μm,5.5s						
ZEA				pmax	pmax		
	comp=Z,3μm,4.7s						
ZEA				smax	smax		
	comp=N,2μm,11.3s						
BTO	**Baotou**	**78.30**	**319**	*e*P	**P**	**13 30 34.0**	**+0.9**
BTO				S	**S**	**13 40 30.3**	**+2.1**
PBA	**Port Blair**	**79.66**	**285**	*e*P	P	13 30 40.4	-0.5
DGPR	**DIGLIPUR**	**79.99**	**287**	*e*P	**P**	**13 30 43.2**	**+0.5**
DGPR				IAmb	IAmb	13 30 48.3	
	comp=Z,161nm,1.2s						
OHAK	**Old Harbor**	**80.07**	**20**	IAmb	IAmb	13 30 43.9	
	comp=Z,707nm,1.4s						
SEY	**Seymchan**	**80.08**	**353**	*i* P	**P**	**13 30 41.5**	**-0.7**
LZH	**Lanzhou**	**80.14**	**312**	⇑P	**P**	**13 30 44.8**	**+1.5**
LZH				pP	PcP	13 30 50.8	+0.2
LZH				sP	sP	13 30 53.8	+4.5
LZH				S	**S**	**13 40 48.5**	**+0.5**
LZH				SS	**SS**	**13 46 02.6**	**+3.5**
LZH				pmax	pmax		
	comp=Z,490nm,1.3s						
LZH				pmax	pmax		
	comp=Z,6μm,4.6s						
LZH				LR	LR		
	comp=Z,7μm,15.2s						
LZH				LR	LR		
	comp=Z,7μm,15.5s						
LZH				LR	LR		
	comp=Z,12μm,18.2s						
MAW	**Mawson**	**80.64**	**202**	P	**P**	**13 30 46.7**	**+1.5**
	comp=Z,69nm,1.1s,baz=98,slow=7.8,SNR=9.6						
MAW	**Mawson**	**80.64**	**202**	P	**P**	**13 30 45.8**	**+0.5**
	baz=80,SNR=6.7						
KDAK	**Kodiak Island**	**80.75**	**20**	P	**P**	**13 30 46.5**	**+0.7**
	comp=Z,161nm,1.0s,baz=264,slow=3.6,SNR=29						
KDAK				PP	**PP**	**13 33 46.6**	**-3.6**
	comp=Z,29nm,1.1s,baz=321,slow=2.2,SNR=5.0						
KDAK	**Kodiak Island**	**80.75**	**20**	P	**P**	**13 30 47.2**	**+1.4**
KDAK				pmax	pmax		
	comp=Z,477nm,1.3s						
KDAK	**Kodiak Island**	**80.75**	**20**	P	**P**	**13 30 47.2**	**+1.4**
KDAK				IAmb	IAmb	13 30 49.6	
	comp=Z,477nm,1.3s						
GAMB	**Gambell**	**81.47**	**9**	P	**P**	**13 30 49.9**	**+0.4**
LKP	**Lekhapani**	**82.52**	**301**	*e*P	**P**	**13 30 55.5**	**-0.5**
LKP				IAmb	IAmb	13 31 00.5	
	comp=Z,786nm,1.4s						
LKP				*i* x	x	13 59 05.2	
HOM	**Homer**	**82.53**	**19**	P	**P**	**13 30 55.6**	**+0.4**
	baz=219,SNR=17						
CNPM	**China Poot**	**82.56**	**20**	IAMs_20	IAMs_20	14 00 38.2	
	comp=Z,7μm,20.0s						
BRLK	**Bradley Lake**	**82.85**	**20**	P	**P**	**13 30 57.8**	**+0.9**
BRLK				IAmb	IAmb	13 31 09.3	
	comp=Z,596nm,1.3s						
BRLK				IAMs_20	IAMs_20	14 04 15.6	
	comp=Z,8μm,20.0s						
CIT	**Chita**	**83.00**	**329**	*e*P	**P**	**13 30 58.5**	**+0.6**
CIT				*e*		13 31 06.5	
CIT				*e*		13 31 16.5	
CIT				*e*S	**S**	**13 41 20.3**	**+3.5**
CIT				pmax	pmax		
	comp=Z,1μm,1.6s						
SAIH	**SAIHA**	**83.14**	**296**	*e*P	**P**	**13 30 59.7**	**+0.2**
SAIH				IAmb	IAmb	13 31 03.0	
	comp=Z,1μm,1.7s						
SAIH				*i* x	x	13 59 17.9	
MOKO	**MOKOCHONG**	**83.24**	**300**	*e*P	**P**	**13 30 58.5**	**-1.4**
MOKO				IAmb	IAmb	13 31 12.0	
	comp=Z,333nm,1.0s						
ANM	**Nome**	**83.26**	**11**	IAMs_20	IAMs_20	14 02 16.4	
	comp=Z,10μm,22.0s						
KOHI	**KOHIMA**	**83.35**	**299**	*e*P	**P**	**13 30 58.9**	**-1.6**
KOHI				IAmb	IAmb	13 31 03.5	
	comp=Z,293nm,1.0s						
CAPN	**Captain Cook N**	**83.55**	**19**	P	**P**	**13 31 01.6**	**+1.2**
	baz=219,SNR=72						
JORH	**JORHAT**	**83.61**	**300**	*e*P	**P**	**13 30 59.8**	**-1.8**
O22K	**Cooper Landing**	**83.78**	**19**	P	**P**	**13 31 01.5**	**-0.1**
	baz=220,SNR=50						
O22K	**Cooper Landing**	**83.78**	**19**	IAMs_20	IAMs_20	14 04 55.5	
	comp=Z,9μm,20.0s						
TTA	**Tatalina**	**83.91**	**16**	P	**P**	**13 31 03.1**	**+0.7**
TTA				pmax	pmax		
	comp=Z,410nm,1.5s						
TTA	**Tatalina**	**83.91**	**16**	P	**P**	**13 31 03.1**	**+0.7**
TTA				IAmb	IAmb	13 31 07.6	
	comp=Z,410nm,1.5s						
YAK	**Yakutsk**	**83.92**	**343**	*c* *i*P	**P**	**13 31 01.6**	**-0.7**
YAK				*e*		13 31 10.4	
YAK				*e*		13 34 14.6	
YAK				*e*S	**S**	**13 41 23.4**	**-2.1**
YAK				*e*SS	**SS**	**13 46 57.9**	**+4.0**
YAK				*e*SSS	SSS	13 50 25.1	
YAK				pmax	pmax		
	comp=Z,105nm,1.1s						
YAK				pmax	pmax		
	comp=E,40nm,1.6s						
YAK				pmax	pmax		
	comp=N,50nm,1.4s						
YAK				pmax	pmax		
	comp=Z,173nm,1.5s						
YAK				pmax	pmax		
	comp=N,196nm,2.0s						
YAK				pmax	pmax		
	comp=E,96nm,1.8s						
YAK				smax	smax		
	comp=N,301nm,2.9s						
YAK				smax	smax		
	comp=E,176nm,2.5s						
YAK				MLR	MLR		
	comp=Z,6μm,18.0s						
YAK				MLR	MLR		
	comp=E,2μm,16.0s						
YAK				MLR	MLR		
	comp=N,3μm,17.0s						
YAK	**Yakutsk**	**83.92**	**343**	IAMs_20	IAMs_20	14 09 22.4	
	comp=Z,7μm,20.0s						
ULN	**Ulaanbaatar**	**84.05**	**324**	P	**P**	**13 31 03.9**	**+0.3**
ULN				pmax	pmax		
	comp=Z,546nm,1.1s						
ULN	**Ulaanbaatar**	**84.05**	**324**	P	**P**	**13 31 03.9**	**+0.3**
ULN				IAmb	IAmb	13 31 07.1	
	comp=Z,546nm,1.1s						
ULN	**Ulaanbaatar**	**84.05**	**324**	P	**P**	**13 31 03.5**	**0.0**
SILR	**SILCHAR**	**84.11**	**298**	*e*P	**P**	**13 31 05.2**	**+1.0**
Q23K	**Middleton Isla**	**84.12**	**21**	P	**P**	**13 31 04.0**	**+0.5**
	baz=223						
ZIRO	**ZIRO**	**84.23**	**301**	*e*P	**P**	**13 31 04.3**	**-0.7**
ZIRO				IAmb	IAmb	13 31 09.9	
	comp=Z,207nm,1.1s						
ZIRO				*i* x	x	13 59 47.5	
RC01	**Rabbit Creek A**	**84.24**	**19**	P	**P**	**13 31 03.8**	**-0.2**
	baz=220,SNR=168						
MCCM	**Marconi Confer**	**84.31**	**48**	IAMs_20	IAMs_20	14 02 48.9	
	comp=Z,9μm,19.0s						
SONM	**Songino Array**	**84.40**	**323**	P	**P**	**13 31 05.0**	**-0.4**
	comp=Z,253nm,1.1s,baz=139,slow=3.7,SNR=248						
SONM				PKKP	**PKKPdf**	**13 49 12.0**	**+0.3**
	comp=Z,2.1nm,1.1s,baz=273,slow=3.2,SNR=1.8						
SONM				PKKPbc	**PKKPbc**	**13 49 18.6**	**-0.7**
	comp=Z,6.7nm,1.2s,baz=278,slow=1.5,SNR=6.8						
SONM				PKPPKP	**P'P'df**	**13 57 22.1**	**+1.6**
	comp=Z,4.3nm,1.2s,baz=242,slow=1.6,SNR=7.5						
SONM	**Songino Array**	**84.40**	**323**	P	**P**	**13 31 05.1**	**-0.2**
SONM				pmax	pmax		
	comp=Z,353nm,1.2s						
SONM	**Songino Array**	**84.40**	**323**	P	**P**	**13 31 05.1**	**-0.2**
GTA	**Gaotai**	**84.50**	**314**	⇑P	**P**	**13 31 06.0**	**0.0**
GTA				pP	pP	13 31 10.3	-0.2
GTA				sP	sP	13 31 13.5	+1.4
GTA				S	**S**	**13 41 27.8**	**-4.8**
GTA				sS	pS	13 41 37.4	-0.8
GTA				SS	**SS**	**13 46 59.3**	**-4.5**
GTA				pmax	pmax		
	comp=Z,170nm,1.5s						
GTA				pmax	pmax		
	comp=Z,4μm,6.8s						
GTA				LR	LR		
	comp=Z,5μm,19.5s						
GTA				LR	LR		
	comp=Z,8μm,22.3s						
GTA				LR	LR		
	comp=Z,10μm,22.5s						
JCC	**Jacoby Creek,**	**84.69**	**45**	IAmb	IAmb	13 31 09.7	
	comp=Z,510nm,1.5s						
JCC				IAMs_20	IAMs_20	14 04 31.0	
	comp=Z,7μm,18.0s						
BELO	**BELONIA**	**84.74**	**296**	*e*P	**P**	**13 31 08.5**	**+1.1**
BELO				*i* x	x	14 00 12.9	
SAO	**San Andreas Ge**	**84.75**	**49**	IAMs_20	IAMs_20	14 01 26.7	
	comp=Z,7μm,20.0s						
SNCC	**San Nicolas Is**	**84.75**	**53**	P	**P**	**13 31 08.5**	**+1.2**
	baz=247,SNR=21						
TEZP	**TEZPUR**	**84.78**	**300**	*e*P	**P**	**13 31 06.3**	**-1.2**
TEZP				*i* x	x	13 59 56.0	
KHMM	**Horse Mountain**	**84.92**	**45**	IAMs_20	IAMs_20	14 12 06.1	
	comp=Z,9μm,18.0s						
BELA	**Belgrano 2**	**84.95**	**175**	P	**P**	**13 31 05.9**	**-1.7**
SCZ2	**Santa Cruz Isl**	**84.97**	**53**	P	**P**	**13 31 09.6**	**+1.2**
	baz=246,SNR=27						
PMPB	**Monarch Peak**	**84.99**	**50**	IAMs_20	IAMs_20	14 01 51.2	
	comp=Z,13μm,20.0s						
GHO	**Glory Hole Cre**	**85.01**	**19**	IAMs_20	IAMs_20	14 04 59.1	
	comp=Z,8μm,20.0s						
SBC	**Santa Barbara**	**85.08**	**52**	P	**P**	**13 31 10.4**	**+1.5**
	baz=246,SNR=5.8						
CUT	**Chulitna**	**85.09**	**18**	P	**P**	**13 31 07.4**	**-0.8**
	baz=220,SNR=140						
KRMB	**Red Mountain**	**85.09**	**44**	IAmb	IAmb	13 31 12.0	
	comp=Z,465nm,1.5s						
AGT	**Agartala**	**85.13**	**296**	*e*P	**P**	**13 31 11.4**	**+2.0**
EYAK	**Cordova Ski Ar**	**85.14**	**21**	IAmb	IAmb	13 31 23.9	
	comp=Z,284nm,1.4s						
KAIM	**Kayak Island**	**85.17**	**22**	IAmb	IAmb	13 31 12.9	
	comp=Z,403nm,0.9s						
KAIM				IAMs_20	IAMs_20	14 07 33.4	
	comp=Z,9μm,18.0s						
SHL	**Shillong**	**85.17**	**298**	*e*P	**P**	**13 31 09.5**	**-0.3**
SHL	**Shillong**	**85.17**	**298**	P	**P**	**13 31 09.4**	**-0.3**
	SNR=318						
PKM	**Mcpherson Peak**	**85.19**	**52**	P	**P**	**13 31 10.9**	**+1.2**
	baz=246,SNR=137						
KBO	**Bosley Butte**	**85.20**	**44**	IAmb	IAmb	13 31 21.1	
	comp=Z,579nm,1.5s						
PAGB	**Antelope Grade**	**85.20**	**51**	IAmb	IAmb	13 31 16.4	
	comp=Z,352nm,1.3s						
SMMC	**Simmler**	**85.22**	**51**	P	**P**	**13 31 11.0**	**+1.3**
	baz=246,SNR=75						
SML	**Sawmill**	**85.22**	**19**	IAmb	IAmb	13 31 34.9	
	comp=Z,207nm,1.1s						
SML				IAMs_20	IAMs_20	14 05 03.8	
	comp=Z,7μm,20.0s						
O02D	**Mt. Diablo Mer**	**85.26**	**46**	P	**P**	**13 31 11.4**	**+1.6**
	baz=244,SNR=283						
RAGM	**Ragged Mountai**	**85.40**	**21**	IAMs_20	IAMs_20	14 11 05.6	
	comp=Z,11μm,18.0s						
SCI2	**San Clemente I**	**85.40**	**54**	P	**P**	**13 31 11.7**	**+1.2**
	baz=247,SNR=27						
SUCK	**Suckling Hills**	**85.50**	**22**	IAMs_20	IAMs_20	14 12 45.1	
	comp=Z,9μm,18.0s						
HMT	**Hamilton**	**85.51**	**22**	IAMs_20	IAMs_20	14 10 58.5	
	comp=Z,11μm,18.0s						
GUWA	**GUWAHATI**	**85.55**	**299**	*e*P	**P**	**13 31 10.9**	**-0.6**
GUWA				*i* x	x	14 00 17.1	
SCM	**Sheep Creek Mo**	**85.56**	**19**	IAmb	IAmb	13 31 38.6	
	comp=Z,400nm,1.4s						
L02E	**Cave Junction**	**85.58**	**44**	P	**P**	**13 31 12.5**	**+1.2**
	baz=243,SNR=49						
WDC	**Whiskeytown Da**	**85.60**	**46**	IAMs_20	IAMs_20	14 06 42.1	
	comp=Z,9μm,18.0s						
N02D	**Trinity Center**	**85.66**	**45**	P	**P**	**13 31 13.0**	**+1.2**
	baz=244,SNR=238						
CIS	**Catalina Islan**	**85.67**	**54**	P	**P**	**13 31 12.6**	**+0.7**
	baz=247,SNR=39						
M02C	**Callahan**	**85.75**	**45**	P	**P**	**13 31 13.6**	**+1.4**
	baz=244,SNR=224						
K02D	**Willamette Mer**	**85.78**	**43**	P	**P**	**13 31 13.4**	**+1.1**
	baz=243,SNR=86						
KTH	**Kantishna Hill**	**85.79**	**17**	IAmb	IAmb	13 31 15.4	
	comp=Z,357nm,1.2s						
KTH				IAMs_20	IAMs_20	14 05 29.6	
	comp=Z,7μm,20.0s						
J01E	**Myrtle Point**	**85.82**	**43**	P	**P**	**13 31 13.3**	**+0.9**
	baz=243,SNR=33						
FMP	**Fort Macarthur**	**85.88**	**53**	P	**P**	**13 31 13.8**	**+0.9**
	baz=247,SNR=11						
ORV	**Oroville**	**85.88**	**47**	IAMs_20	IAMs_20	14 04 18.7	
	comp=Z,11μm,19.0s						
TRF	**Thorofare Moun**	**85.89**	**17**	IAmb	IAmb	13 31 20.8	
	comp=Z,282nm,1.2s						
OSI	**Osito Audit: C**	**85.90**	**52**	P	**P**	**13 31 14.1**	**+1.0**
	baz=247,SNR=16						
H02N1	**VAN INLET T-PH**	**85.99**	**31**	P	**P**	**13 31 13.8**	**+0.7**
H02N1				T	T	15 06 12.9	
	SNR=19						
O03E	**Paynes Creek**	**85.99**	**46**	P	**P**	**13 31 14.1**	**+0.7**

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       baz=245,SNR=321
DIB    Dawson Inlet,     85.99  31  IAmb     IAmb     13 31 17.1
       comp=Z,575nm,1.3s
H02S1  DAWSON INLET T    85.99  31  P        P        13 31 13.1 +0.2
H02S1                               T        T        15 06 09.3
       SNR=68
ARVC   Arvin             86.02  52  P        P        13 31 14.8 +1.2
       baz=247,SNR=98
CMB    Columbia Colle    86.04  49  IAMs_20  IAMs_20  14 00 01.9
       comp=Z,9µm,22.0s
DECC   Green Verdugo     86.06  53  P        P        13 31 14.5 +0.7
       baz=247,SNR=8.8
VOG    Valley Oaks Go    86.08  51  P        P        13 31 14.8 +0.9
       baz=246,SNR=16
VES    Vestal, Richgr    86.11  51  P        P        13 31 14.6 +0.6
       baz=247,SNR=109
M24K   Tolsona, Glenn    86.14  20  P        P        13 31 14.6 +1.0
       baz=224
M24K   Tolsona, Glenn    86.14  20  IAmb     IAmb     13 31 17.8
       comp=Z,287nm,1.2s
BPAW   Bear Paw Mtn.     86.20  17  IAmb     IAmb     13 31 17.3
       comp=Z,255nm,1.3s
CRQM   Cirque            86.20  22  IAmb     IAmb     13 31 16.4
       comp=Z,213nm,1.3s
CRQM                                IAMs_20  IAMs_20  14 11 30.1
       comp=Z,8µm,19.0s
HUMO   Hull Mountain     86.21  44  IAmb     IAmb     13 31 19.3
       comp=Z,609nm,1.2s
MWC    Mount Wilson      86.26  53  IAmb     IAmb     13 31 25.1
       comp=Z,850nm,1.4s
RND    Reindeer          86.27  18  IAmb     IAmb     13 31 18.5
       comp=Z,861nm,1.5s
N25K   Chitina, Valde    86.30  21  P        P        13 31 15.2 +0.8
       baz=225
N25K   Chitina, Valde    86.30  21  IAmb     IAmb     13 31 18.2
       comp=Z,231nm,1.1s
I02D   Swisshome         86.30  42  P        P        13 31 16.1 +1.4
       baz=243,SNR=28
TGL    Tana Glacier      86.31  22  IAmb     IAmb     13 31 19.7
       comp=Z,266nm,1.4s
TGL                                 IAMs_20  IAMs_20  14 11 31.7
       comp=Z,7µm,19.0s
TJX    Tijuana           86.39  55  IAMs_20  IAMs_20  14 01 38.5
       comp=Z,10µm,20.0s
BOD    Bodaibo           86.40 334 eP        P        13 31 14.0  -0.9
BOD                                 pmax     pmax
       comp=Z,290nm,1.8s
VRDI   Verde Repeater    86.42  21  IAmb     IAmb     13 31 25.1
       comp=Z,306nm,1.5s
I03D   Drain, OR         86.44  43  P        P        13 31 16.4 +1.0
       baz=243,SNR=83
L04D   Klamath Falls     86.48  44  P        P        13 31 16.7 +0.9
       baz=244,SNR=141
109C   Camp Elliot, M    86.49  54  P        P        13 31 16.8 +0.9
       baz=248,SNR=18
109C   Camp Elliot, M    86.49  54  IAMs_20  IAMs_20  14 01 42.2
       comp=Z,12µm,20.0s
MCK    McKinley          86.50  18  P        P        13 31 16.4 +1.1
       baz=221,SNR=68
ISA    Isabella, Lake    86.50  51  P        P        13 31 17.1 +1.1
       baz=247,SNR=376
EDW2   Edwards Air Fo    86.56  52  P        P        13 31 17.3 +1.0
       baz=247,SNR=309
BFSC   Mount Baldy Ra    86.57  53  P        P        13 31 17.0 +0.5
       baz=248,SNR=198
M04C   Macdoel           86.60  45  P        P        13 31 17.4 +1.0
       baz=244,SNR=95
RUBR   Rubicon Trail     86.62  48  IAMs_20  IAMs_20  14 01 58.3
       comp=Z,6µm,20.0s
MURC   Murrieta          86.69  54  P        P        13 31 17.5 +0.5
       baz=248,SNR=60
BAR    Barrett           86.75  55  IAMs_20  IAMs_20  14 01 59.1
       comp=Z,12µm,20.0s
TKX    Tecate            86.76  55  IAMs_20  IAMs_20  14 01 47.4
       comp=Z,10µm,20.0s
BEKR   Beckworth         86.81  47  IAMs_20  IAMs_20  14 04 47.3
       comp=Z,9µm,20.0s
MDPB   Devils Postpil    86.83  49  IAMs_20  IAMs_20  14 02 42.8
       comp=Z,9µm,20.0s
H06S1  SOCORRO T         86.84  70  P        P        13 31 19.2 +1.2
H06S1                               T        T        15 07 13.8
       SNR=15
H06N1  SOCORRO T-PHAS86.86  69  P        P        13 31 18.7 +0.7
OMMB   Old Mammoth Mi    86.88  49  IAMs_20  IAMs_20  14 02 44.1
       comp=Z,11µm,20.0s
H06E1  SOCORRO T-PHAS86.89  70  P        P        13 31 18.9 +0.7
WAKR   Walker            86.92  48  IAMs_20  IAMs_20  14 03 34.0
       comp=Z,8µm,20.0s
DHUB   DHUBRI            86.92 298 eP        P        13 31 16.4  -1.8
DHUB                               i x       x        14 01 06.7
BARN   Barnard Glacie    86.94  22  IAmb     IAmb     13 31 22.3
       comp=Z,391nm,1.4s
CTGM   Chitina Glacie    86.99  22  IAmb     IAmb     13 31 21.7
       comp=Z,149nm,0.9s
MLY    Manley            86.99  16  P        P        13 31 19.0 +1.3
       baz=219,SNR=66
MLAC   Mammoth, Mammo87.00  49  P        P        13 31 19.8 +1.2
       baz=247,SNR=126
K04D   Chiloquin, OR     87.02  44  P        P        13 31 19.0 +0.6
       baz=245
LRMC   Laurel Mtn Rad    87.03  52  P        P        13 31 19.8 +1.1
       baz=248,SNR=207
MONP2  Monument Peak     87.03  55  P        P        13 31 20.0 +1.2
       baz=248,SNR=136
PNTR   Pine Nut          87.03  48  IAMs_20  IAMs_20  14 03 47.2
       comp=Z,6µm,20.0s
J04D   Umpqua Nationa    87.05  43  P        P        13 31 19.4 +0.7
       baz=244,SNR=115
ESJX   Sierra Juarez     87.08  56  IAMs_20  IAMs_20  14 01 58.7
       comp=Z,8µm,21.0s
VCNR   Virginia City     87.08  48  IAMs_20  IAMs_20  14 00 44.4
       comp=Z,7µm,22.0s
I04A   Tendick Farm,     87.09  43  P        P        13 31 19.0 +0.3
       baz=244,SNR=92
CWC    Cottonwood Cre    87.09  51  P        P        13 31 20.0 +1.0
       baz=247
NEA2   Nenana            87.11  17  P        P        13 31 19.4 +1.1
       baz=221,SNR=105
BBRC   Big Bear Solar    87.15  53  P        P        13 31 20.4 +1.0
       baz=248,SNR=66
G03D   McMinnville, O    87.17  41  P        P        13 31 20.3 +1.4
       baz=243,SNR=62
IKP    In-Ko-Pah, Jac    87.18  55  P        P        13 31 20.5 +1.1
       baz=248,SNR=76
H04D   Lebanon           87.20  42  P        P        13 31 20.2 +1.1
       baz=244,SNR=62
TIN    Tinemaha, Big     87.22  50  P        P        13 31 21.1 +1.5
       baz=247,SNR=78
LSA    Lhasa             87.23 302  P        P        13 31 20.3 +0.1
LSA                                 pmax     pmax
       comp=Z,250nm,1.1s
LSA                                 LR       LR
       comp=Z,10µm,23.5s
LSA                                 LR       LR
       comp=Z,20µm,25.3s
LSA                                 LR       LR
       comp=Z,27µm,26.7s
LSA    Lhasa             87.23 302 i P       P        13 31 20.7 +0.5
       SNR=89
YERR   Yerington         87.25  48  IAMs_20  IAMs_20  14 05 36.9
       comp=Z,8µm,19.0s
PFO    Pinyon Flats O    87.26  54  P        P        13 31 20.5 +0.6
       baz=248,SNR=129
PFO    Pinyon Flats O    87.26  54  P        P        13 31 21.2 +1.3
PFO                                 pmax     pmax
       comp=Z,230nm,1.5s
PFO    Pinyon Flats O    87.26  54  P        P        13 31 21.2 +1.3
PFO                                 IAmb     IAmb     13 31 22.3
       comp=Z,230nm,1.5s
TPFO   Pinon Flats       87.26  54  P        P        13 31 20.9 +1.1
       baz=248,SNR=118
RRX    Edison Barstow    87.32  53  P        P        13 31 21.0 +1.0
       baz=248,SNR=27
SYO    Syowa Base        87.33 196⇑iP        P        13 31 19.4   0.0
SYO    Syowa Base        87.33 196⇑iPcP      PcP      13 31 21.2  -0.2
SYO    Syowa Base        87.33 196⇑iPP       PP       13 34 42.2  -0.8
MPMC   Manual Prospec    87.39  51  P        P        13 31 21.4 +0.9
       baz=248,SNR=328
PAHR   Pah Rah Range     87.44  47  IAMs_20  IAMs_20  14 04 38.8
       comp=Z,7µm,19.0s
I23K   Minto, Yukon-K    87.46  17  P        P        13 31 21.3 +1.5
       baz=220,SNR=25
I23K   Minto, Yukon-K    87.46  17  IAMs_20  IAMs_20  14 06 31.6
       comp=Z,7µm,20.0s
ZAK    Zakamensk         87.46 325 eP        P        13 31 19.8  -0.6
ZAK                                 pmax     pmax
       comp=Z,141nm,1.5s
LHV    Little Huntoon    87.49  49  IAMs_20  IAMs_20  14 03 54.2
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       comp=Z,8µm,20.0s
SWSC   Sam W. Stewart    87.53  55  P        P        13 31 22.1 +1.1
       baz=249,SNR=130
HDA    Harding Lake      87.59  18  P        P        13 31 22.2 +1.6
       baz=223
GSC    Goldstone, Bar    87.62  52  P        P        13 31 22.4 +0.9
       baz=248,SNR=266
RYN    Ryan              87.62  49  IAMs_20  IAMs_20  14 03 58.8
       comp=Z,8µm,20.0s
MDM    Murphy Dome       87.63  17  P        P        13 31 19.9  -0.9
MDM                                 IAmb     IAmb     13 31 24.7
       comp=Z,208nm,1.1s
K05A   Summer Lake       87.64  44  IAmb     IAmb     13 31 24.3
       comp=Z,628nm,1.5s
J05D   Fort Rock, OR     87.65  44  P        P        13 31 22.7 +1.2
       baz=245,SNR=263
TCOL   CIGO, UAF Yank    87.67  17  P        P        13 31 22.0 +1.1
       baz=222,SNR=73
COLA   College           87.67  17  P        P        13 31 18.9  -2.0
COLA                                pmax     pmax
       comp=Z,208nm,1.0s
COLA   College           87.67  17  P        P        13 31 18.9  -2.0
COLA                                IAmb     IAmb     13 31 24.8
       comp=Z,208nm,1.0s
BBB    Bella Bella       87.69  34  IAmb     IAmb     13 31 23.6
       comp=Z,264nm,1.5s
MOD    Modoc Plateau     87.69  45  IAMs_20  IAMs_20  14 08 36.4
       comp=Z,7µm,18.0s
UABX   UABC, Campus M    87.70  55  IAMs_20  IAMs_20  14 02 28.2
       comp=Z,8µm,21.0s
NVAR   Mina Array Bea    87.70  49  P        P        13 31 23.6 +1.6
       comp=Z,233nm,1.0s,baz=230,slow=6.5,SNR=293
NVAR                                PKKPbc   PKKPbc   13 49 12.2 +1.2
       comp=Z,2.0nm,0.6s,baz=78,slow=3.9,SNR=18
NVAR                                PKPPKP   P'P'df   13 57 15.6  -0.3
       comp=Z,3.6nm,1.0s,baz=101,slow=3.9,SNR=12
NVAR                                LR       LR       14 05 04.3
       comp=Z,7µm,19.0s,baz=250,slow=32
NVAR   Mina Array Bea    87.70  49  P        P        13 31 23.4 +1.4
F04D   Rainier, OR       87.72  40  P        P        13 31 22.9 +1.4
       baz=244,SNR=17
BELC   Belle Mtn. Jos    87.76  54  P        P        13 31 23.3 +1.0
       baz=249,SNR=394
HEC    Hector,Ludlow     87.81  53  P        P        13 31 23.3 +0.9
       baz=248,SNR=79
NV11   Mina Array Sit    87.81  49  IAMs_20  IAMs_20  14 04 04.8
       comp=Z,8µm,20.0s
GRAC   Grapevine Rang    87.84  51  P        P        13 31 23.7 +1.2
       baz=248,SNR=131
IRK    Irkutsk           87.86 326 eP        P        13 31 19.2  -2.9
IRK                                 pmax     pmax
       comp=Z,266nm,2.9s
ILAR   Eielson Array     87.87  18  P        P        13 31 20.9  -0.9
       comp=Z,92nm,1.0s,baz=234,slow=3.0,SNR=92
ILAR                                PKKPbc   PKKPdf   13 49 08.2 +2.0
       comp=Z,1.5nm,1.1s,baz=325,slow=2.9,SNR=5.1
ILAR                                PKPPKP   P'P'df   13 57 14.1 +1.5
       comp=Z,4.7nm,1.0s,baz=358,slow=1.9,SNR=9.9
ILAR                                LR       LR       14 06 56.8
       comp=Z,5µm,19.7s,baz=236,slow=33
ILAR   Eielson Array     87.87  18  P        P        13 31 21.5  -0.4
ILAR   Eielson Array     87.87  18  P        P        13 31 21.4  -0.4
TLY    Talaya            87.91 326  PKKPbc   PKKPbc   13 49 11.4 +0.5
       comp=Z,0.8nm,0.5s,baz=201,slow=2.5,SNR=5.7
TLY    Talaya            87.91 326c iP       P        13 31 21.4  -1.0
TLY                                 e                 13 34 44.6
TLY                                 eS       S        13 41 52.6   -13
TLY                                 pmax     pmax
       comp=Z,452nm,1.7s
TLY                                 MLR      MLR
       comp=Z,9µm,16.0s
TLY    Talaya            87.91 326  IAMs_20  IAMs_20  14 06 56.5
       comp=Z,8µm,22.0s
TLY    Talaya            87.91 326  P        P        13 31 21.7  -0.7
TLY                                 P        P        13 31 21.7  -0.7
DOT    Dot Lake          87.92  19  IAmb     IAmb     13 31 26.7
       comp=Z,144nm,1.2s
POKR   Poker Plat Res    87.97  17  P        P        13 31 22.5 +0.1
       baz=222,SNR=30
POKR   Poker Plat Res    87.97  17  IAMs_20  IAMs_20  14 11 37.3
       comp=Z,6µm,19.0s
FURC   Furnace Creek,    88.01  51  P        P        13 31 24.2 +1.0
       baz=248,SNR=182
I05D   Terrebonne, OR    88.03  43  P        P        13 31 24.1 +1.0
       baz=245,SNR=139
PINE   Pine Mountain     88.05  43  IAmb     IAmb     13 31 31.3
       comp=Z,146nm,1.1s
BC3    Big Chuckawall    88.06  54  P        P        13 31 24.9 +1.3
       baz=249,SNR=247
SCRK   Sand Creek        88.17  19  P        P        13 31 24.4 +0.9
       baz=225
E04D   Cinebar           88.21  40  P        P        13 31 24.9 +1.0
       baz=244
SHOC   Shoshone, Teco    88.24  52  P        P        13 31 25.4 +1.0
       baz=248,SNR=248
GMRC   Granite Mounta    88.31  53  P        P        13 31 25.8 +0.9
       baz=249,SNR=252
D03D   Eldon             88.32  39  P        P        13 31 25.7 +1.3
       baz=243,SNR=82
GLA    Glamis            88.33  55  P        P        13 31 26.6 +1.7
       baz=249,SNR=101
GLA    Glamis            88.33  55  IAMs_20  IAMs_20  14 02 58.0
       comp=Z,10µm,20.0s
D04E   Lakebay           88.36  40  P        P        13 31 25.9 +1.4
       baz=244,SNR=30
G05D   Wamic, OR         88.42  42  P        P        13 31 25.8 +0.8
       baz=245,SNR=142
IRM    Iron Mountain     88.48  54  P        P        13 31 26.7 +1.1
       baz=249,SNR=473
GTK    Tadong            88.53 299 eP        P        13 31 25.6  -0.5
F05D   White Salmon      88.61  41  P        P        13 31 26.9 +1.1
       baz=245
TPNV   Topopah Spring    88.65  51  P        P        13 31 27.4 +0.9
       baz=248,SNR=563
BWNR   Bhubaneshwar      88.73 291 eP        P        13 31 24.4  -2.5
LON    Longmire          88.76  40  IAmb     IAmb     13 31 32.4
       comp=Z,296nm,1.4s
PRP    Porcupine Dome    88.81  18  IAMs_20  IAMs_20  14 07 15.5
       comp=Z,8µm,20.0s
COLD   Coldfoot          88.84  15  P        P        13 31 29.3 +2.9
       baz=220,SNR=60
PIX    Pinacate          88.90  57  IAmb     IAmb     13 31 31.9
       comp=Z,374nm,1.4s
WVOR   Wild Horse Val    89.04  45  IAmb     IAmb     13 31 42.0
       comp=Z,520nm,1.4s
WVOR                                IAMs_20  IAMs_20  14 08 28.1
       comp=Z,7µm,19.0s
A04D   Lummi Island      89.08  38  P        P        13 31 29.1 +1.2
       baz=244,SNR=48
NEE2   Needles Airpor    89.10  53  P        P        13 31 29.7 +1.3
       baz=249,SNR=5.6
I07A   Izee              89.12  43  IAmb     IAmb     13 31 39.9
       comp=Z,456nm,1.4s
B05A   Bryant            89.24  39  P        P        13 31 29.7 +1.0
       baz=244,SNR=194
SLBS   Sierra La Lagu    89.29  65  P        P        13 31 31.9 +2.3
SLBS                                IAmb     IAmb     13 31 38.1
       comp=Z,276nm,1.4s
PDMCI  Parker Dam,Lak    89.31  54  P        P        13 31 30.7 +1.3
       baz=250
MOY    Mondy             89.35 325 eP        P        13 31 28.5  -0.8
MOY                                 pmax     pmax
       comp=Z,378nm,3.6s
214A   Organ Pipe Nat    89.56  57  P        P        13 31 32.0 +1.4
       baz=250
214A   Organ Pipe Nat    89.56  57  IAMs_20  IAMs_20  14 03 11.4
       comp=Z,7µm,20.0s
EGAK   Eagle             89.62  19  P        P        13 31 30.0  -0.1
R11A   Troy Canyon, C    89.65  50  P        P        13 31 32.2 +1.0
       baz=249,SNR=244
R11A   Troy Canyon, C    89.65  50  IAMs_20  IAMs_20  14 06 36.6
       comp=Z,9µm,19.0s
PALK   Pallekele         89.65 278c iP       P        13 31 31.9 +0.4
PALK                                pmax     pmax
       comp=Z,106nm,1.5s
PALK   Pallekele         89.65 278  P        P        13 31 31.5   0.0
C06D   Leavenworth       89.82  39  P        P        13 31 32.3 +0.8
       baz=245,SNR=16
PMSA   Palmer Station    89.86 160  P        P        13 31 31.1  -0.3
PMSA   Palmer Station    89.86 160 eP        P        13 31 33.2 +1.8
HAWA   Hanford           90.04  41  IAMs_20  IAMs_20  14 15 25.5
       comp=Z,6µm,18.0s
TOLK   Toolik Lake Re    90.08  14  P        P        13 31 34.1 +1.9
       baz=220,SNR=18
TOLK   Toolik Lake Re    90.08  14  IAMs_20  IAMs_20  14 09 08.9
       comp=Z,8µm,20.0s
ELK    Elko              90.76  48  IAMs_20  IAMs_20  14 07 57.9
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       comp=Z,6µm,19.0s
A21K   Barrow            90.78  11  P        P        13 31 36.9 +1.6
       baz=214,SNR=12
TUC    Tucson            91.30  57  P        P        13 31 40.3 +1.5
       baz=251
TUC    Tucson            91.30  57  P        P        13 31 39.7 +0.9
TUC                                 pmax     pmax
       comp=Z,288nm,1.5s
TUC    Tucson            91.30  57  P        P        13 31 39.7 +0.9
TUC                                 IAmb     IAmb     13 31 49.7
       comp=Z,288nm,1.4s
TUC    Tucson            91.30  57  IAMs_20  IAMs_20  14 03 54.5
       comp=Z,7µm,21.0s
MFID   Camas Ranch       91.32  45  IAMs_20  IAMs_20  14 15 25.4
       comp=Z,6µm,18.0s
U15A   North Rim         91.45  52  IAmb     IAmb     13 31 44.7
       comp=Z,295nm,1.0s
NVL    N'lazarevskaya    91.49 188 eP        P        13 31 38.4  -0.5
NVL                                eS        SKSac    13 42 09.3  -1.6
NVL                                 pmax     pmax
       comp=Z,149nm,1.2s
MDRS   Chennai           91.72 283 eP        P        13 31 41.1 +0.1
MDRS                               i x       x        13 35 20.8
TIXI   Tiksi             91.82 348ceP        P        13 31 39.0  -1.2
TIXI                                pmax     pmax
       comp=Z,346nm,2.5s
WUAZ   Wupatki           91.86  54  P        P        13 31 42.5 +1.0
       baz=251
SNAA   Sanae             91.89 183  P        P        13 31 40.5  -0.4
SNAA   Sanae             91.89 183ceP        P        13 31 40.1  -0.8
SNAA                                pmax     pmax
       comp=Z,315nm,2.1s
SNAA   Sanae             91.89 183  IAmb     IAmb     13 31 51.3
       comp=Z,231nm,1.5s
SNAA                                IAMs_20  IAMs_20  14 11 04.1
       comp=Z,9µm,18.0s
EPYK   Eagle Plains      92.06  19  P        P        13 31 42.2 +0.7
       baz=232
NEW    Newport           92.28  40  P        P        13 31 43.4 +0.5
       baz=248,SNR=73
DUG    Dugway, Tooele    92.31  49  P        P        13 31 44.3 +0.8
       baz=250
DUG    Dugway, Tooele    92.31  49  IAmb     IAmb     13 31 54.6
       comp=Z,152nm,1.4s
DUG                                 IAMs_20  IAMs_20  14 06 00.9
       comp=Z,10µm,19.0s
HLID   Hailey            92.33  45  P        P        13 31 44.4 +0.9
       baz=250
HLID   Hailey            92.33  45  IAMs_20  IAMs_20  14 11 00.3
       comp=Z,9µm,19.0s
VNA3   Neumayer Olymp    92.52 181  P        P        13 31 43.0  -0.8
VNA2   Neumayer--Watz    92.80 181  P        P        13 31 44.5  -0.5
       baz=187,slow=3.5
W18A   Petrified Fore    93.00  54  P        P        13 31 47.6 +0.8
       baz=252
VNA1   Neumayer--Stat    93.10 181  P        P        13 31 48.5 +2.1
MSO    Missoula          93.78  42  P        P        13 31 49.7  -0.3
       baz=250,SNR=19
121A   Cookes Peak, D    93.78  57  P        P        13 31 51.5 +1.1
       baz=253
GO10   Punta Arenas      94.06 149 eP        P        13 31 53.6 +2.4
GO10   Punta Arenas      94.06 149  IAMs_20  IAMs_20  14 04 21.1
       comp=Z,9µm,22.0s
INK    Inuvik            94.21  18  PP       PP       13 35 35.6  -2.6
       comp=Z,8.2nm,0.9s,baz=208,slow=6.9,SNR=4.4
INK                                 PKPPKP            13 56 56.9
       comp=Z,1.9nm,1.1s,baz=347,slow=1.7,SNR=5.2
INK                                 LR       LR       14 09 58.4
       comp=Z,4µm,20.4s,baz=231,slow=33
AHID   Auburn Hatcher    94.36  47  IAMs_20  IAMs_20  14 12 10.3
       comp=Z,6µm,18.0s
GO09   Cerro Castillo    94.45 147 eP        P        13 31 49.8  -3.2
GO09   Cerro Castillo    94.45 147  IAMs_20  IAMs_20  14 04 13.5
       comp=Z,8µm,21.0s
HYB    Hyderabad         94.48 287 i P       P        13 31 52.0  -1.8
HYB                                ePP       PP       13 35 40.0  -1.7
HYB                                eSKS      SKSac    13 42 29.0  -0.3
HYB    Hyderabad         94.48 287 eP        P        13 31 50.5  -3.3
HYB                                i x       x        13 35 36.4
WMQ    Urumqi            94.57 314  P        P        13 31 53.8 +0.2
WMQ                                 PP       PP       13 35 41.4  -0.4
WMQ                                 SKS      SKSac    13 42 27.6  -1.2
WMQ                                 pmax     pmax
       comp=Z,360nm,2.1s
WMQ                                 pmax     pmax
       comp=Z,2µm,3.6s
WMQ                                 LR       LR
       comp=Z,6µm,21.3s
WMQ                                 LR       LR
       comp=Z,7µm,22.5s
WMQ                                 LR       LR
       comp=Z,8µm,25.7s
WMQ    Urumqi            94.57 314  IAmb     IAmb     13 31 59.6
       comp=Z,340nm,1.4s
MVCO   Mesa Verde        94.58  53  P        P        13 31 54.4 +0.3
       baz=253
EPT    El Paso           94.60  58  IAMs_20  IAMs_20  14 13 11.2
       comp=Z,6µm,18.0s
PV03   Paradox Valley    94.62  52  IAMs_20  IAMs_20  14 07 27.0
       comp=Z,10µm,20.0s
REDW   Red Top Meadow    94.72  46  IAMs_20  IAMs_20  14 06 40.7
       comp=Z,6µm,20.0s
SNOW   Snow King Moun    94.82  46  IAMs_20  IAMs_20  14 06 42.3
       comp=Z,6µm,20.0s
BOZ    Bozeman (W)       94.89  44  P        P        13 31 55.6 +0.4
       baz=252,SNR=60
Y22D   IRIS PASSCAL I    94.91  56  P        P        13 31 56.1 +0.6
       baz=254
Y22D   IRIS PASSCAL I    94.91  56  IAMs_20  IAMs_20  14 06 12.8
       comp=Z,6µm,19.0s
LOHW   Long Hollow       94.97  46  IAMs_20  IAMs_20  14 10 02.3
       comp=Z,6µm,19.0s
FLWY   Flagg Ranch       95.05  46  IAMs_20  IAMs_20  14 09 55.3
       comp=Z,8µm,20.0s
H17A   Grant Village     95.22  45  P        P        13 31 58.2 +1.4
       baz=252,SNR=28
BW06   Boulder Array     95.44  47  P        P        13 31 57.4  -0.5
       baz=253,SNR=58
BW06   Boulder Array     95.44  47  P        P        13 31 58.2 +0.3
PDAR   Pinedale Array    95.44  47  P        P        13 31 58.5 +0.6
       comp=Z,8.4nm,0.8s,baz=249,slow=2.9,SNR=51
PDAR                                PP       PP       13 35 38.8   -10
       comp=Z,3.1nm,1.1s,baz=251,slow=5.6,SNR=2.6
PDAR                                PKKP     PKKPbc   13 48 50.0  -1.3
       comp=Z,4.6nm,0.9s,baz=108,slow=4.3,SNR=16
PDAR                                PKPPKP   P'P'df   13 57 06.5 +5.2
       comp=Z,0.9nm,0.9s,baz=240,slow=1.2,SNR=5.6
PDAR                                LR       LR       14 07 32.4
       comp=Z,2µm,21.9s,baz=248,slow=31
PDAR   Pinedale Array    95.44  47  P        P        13 31 58.7 +0.8
MNTX   Cornudas Mount    95.50  59  P        P        13 31 58.2 +0.1
       baz=254,SNR=48
MNTX   Cornudas Mount    95.50  59  IAMs_20  IAMs_20  14 12 14.5
       comp=Z,5µm,18.0s
ANMO   Albuquerque       95.53  55  P        P        13 31 58.9 +0.5
       baz=254
ANMO   Albuquerque       95.53  55ceP        P        13 31 59.1 +0.7
ANMO                                pmax     pmax
       comp=Z,91nm,1.4s
ANMO   Albuquerque       95.53  55  IAMs_20  IAMs_20  14 06 14.0
       comp=Z,7µm,21.0s
O20A   White River Ci    95.62  50  P        P        13 31 59.3 +0.6
       baz=253,SNR=43
O20A   White River Ci    95.62  50  P        P        13 32 00.8 +2.1
O20A                                IAmb     IAmb     13 32 02.8
       comp=Z,112nm,1.1s
S22A   4UR Ranch, Cre    96.01  53  P        P        13 32 01.1 +0.4
       baz=254,SNR=72
SMCO   Snowmass          96.29  51  IAMs_20  IAMs_20  14 08 14.8
       comp=Z,10µm,20.0s
TXAR   Lajitas Array     96.30  61  P        P        13 32 03.6 +1.7
       comp=Z,11nm,0.8s,baz=235,slow=4.4,SNR=61
TXAR                                PP       PP       13 35 56.0 +0.4
       comp=Z,15nm,1.2s,baz=270,slow=5.0,SNR=5.9
TXAR                                PKPPKP   P'P'df   13 57 02.8 +1.8
       comp=Z,0.4nm,0.9s,baz=132,slow=1.9,SNR=3.6
TXAR                                LR       LR       14 08 43.1
       comp=Z,5µm,19.3s,baz=0.0,slow=31
TXAR   Lajitas Array     96.30  61  P        P        13 32 01.9   0.0
RLMT   Red Lodge         96.33  45  P        P        13 32 02.8 +0.9
       baz=253,SNR=21
DGZ    Jazzator, Alta    96.55 320c iP       P        13 32 02.1  -0.5
DGZ                                 pmax     pmax
       comp=Z,99nm,1.5s
EGMT   Eagleton          96.85  42  P        P        13 32 04.6 +0.7
       baz=253
SDCO   Great Sand Dun    97.02  53  P        P        13 32 05.3   0.0
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	baz=255,SNR=15						
BHPL	**Bhopal**	**97.03**	**292**	*e*P	**P**	**13 32 02.8**	**-2.5**
BHPL				IAmb	IAmb	13 32 09.4	
	comp=Z,171nm,1.8s						
BHPL				*i* Lg	Lg	14 06 03.8	
MNCI	**Minicoy**	**97.21**	**277**	IAMs_20	IAMs_20	14 15 04.3	
	comp=Z,6µm,20.0s						
MNCY	**Minicoy**	**97.23**	**276**	*e*P	**P**	**13 32 03.4**	**-2.9**
ISCO	**Idaho Springs**	**97.47**	**51**	P	Pdif	13 32 08.0	+0.6
	baz=255,SNR=8.5						
N23A	**Red Feather La**	**97.52**	**50**	P	Pdif	13 32 07.7	+0.3
	baz=255,SNR=22						
ZSN	**Zaisan**	**97.53**	**317**	*e*P	**P**	**13 32 04.6**	**-2.4**
	comp=Z,102nm,1.9s,baz=317						
ZSN	**Zaisan**	**97.53**	**317**	*e*P	**P**	**13 32 04.6**	**-2.4**
ZSN				pmax	pmax		
	comp=Z,102nm,1.9s						
K22A	**Casper**	**97.56**	**48**	P	**P**	**13 32 07.2**	**-0.2**
	baz=255,SNR=22						
Q24A	**Divide**	**97.61**	**52**	P	Pdif	13 32 08.1	+0.2
	baz=255,SNR=15						
C36M	**Paulatuk**	**97.70**	**19**	P	Pdif	13 32 07.5	+0.3
	baz=244,SNR=36						
C36M	**Paulatuk**	**97.70**	**19**	P	**P**	**13 32 06.1**	**-1.0**
T25A	**Trinidad**	**97.70**	**54**	P	**P**	**13 32 08.2**	**0.0**
	baz=255,SNR=8.2						
GO07	**Milladeo Hill,**	**98.03**	**139**	*e*P	Pdif	13 32 14.2	+4.7
MSTX	**Muleshoe**	**98.21**	**57**	Pdiff	**P**	**13 32 10.3**	**-0.1**
	baz=256						
DDI	**Dehra Dun**	**98.25**	**299**	*e*P	**P**	**13 32 10.0**	**-0.6**
GOA	**Goa**	**98.36**	**284**	*e*P	**P**	**13 32 09.9**	**-1.4**
GOA				IAmb	IAmb	13 32 15.7	
	comp=Z,16nm,0.9s						
YKA	**Yellowknife Ar**	**98.65**	**27**	P	**P**	**13 32 11.4**	**-0.1**
	comp=Z,71nm,1.0s,baz=249,slow=4.0,SNR=112						
YKA				PP	PP	13 36 04.6	-8.0
	comp=Z,8.5nm,1.1s,baz=253,slow=6.5,SNR=5.2						
YKA				PKiKP	**PKiKP**	**13 36 43.9**	**+0.9**
	comp=Z,1.6nm,0.9s,baz=220,slow=0.8,SNR=6.3						
YKA				PKKPbc	**PKKPbc**	**13 48 41.7**	**-1.2**
	comp=Z,3.3nm,1.0s,baz=76,slow=3.2,SNR=10						
YKA				PKPPKP		13 56 53.4	
	comp=Z,0.8nm,1.0s,baz=67,slow=1.9,SNR=3.6						
YKA				LR	LR	14 13 35.6	
	comp=Z,3µm,18.5s,baz=0.0,slow=34						
LAO	**LASA Array**	**98.80**	**44**	IAMs_20	IAMs_20	14 17 05.6	
	comp=Z,5µm,19.0s						
H03S2	**Juan Fernandez**	**98.89**	**129**	T	T	15 22 17.4	
	baz=242,slow=74,SNR=19						
H03S1	**Juan Fernandez**	**98.90**	**129**	T	T	15 22 19.1	
	baz=242,slow=74,SNR=18						
H03S3	**Juan Fernandez**	**98.90**	**129**	T	T	15 22 20.8	
	baz=242,slow=74,SNR=23						
H03N3	**Juan Fernandez**	**99.06**	**129**	T	T	15 22 28.5	
	baz=254,slow=77						
H03N2	**Juan Fernandez**	**99.06**	**129**	T	T	15 22 26.9	
	baz=254,slow=77						
MK31	**Makanchi Array**	**99.06**	**316**	P	**Pdif**	**13 32 13.3**	**-0.6**
MK31				pmax	pmax		
	comp=Z,177nm,1.5s						
MK31	**Makanchi Array**	**99.06**	**316**		**Pdif**	**13 32 13.3**	**-0.6**
MK31				IAmb	IAmb	13 32 17.1	
	comp=Z,177nm,1.4s						
MKAR	**Makanchi Array**	**99.06**	**316**	P	**Pdif**	**13 32 14.0**	**+0.1**
	comp=Z,39nm,1.0s,baz=101,slow=5.2,SNR=83						
MKAR				PKiKP	**PKiKP**	**13 36 45.9**	**+1.6**
	comp=Z,11nm,1.1s,baz=132,slow=0.6,SNR=8.6						
MKAR				PKKPbc	**PKKPbc**	**13 48 40.5**	**-0.7**
	comp=Z,3.3nm,1.0s,baz=260,slow=4.4,SNR=8.1						
MKAR				PKPPKP		13 56 57.7	
	comp=Z,1.0nm,0.9s,baz=318,slow=1.6,SNR=7.7						
MKAR	**Makanchi Array**	**99.06**	**316**	P	**Pdif**	**13 32 14.0**	**+0.1**
MKAR	**Makanchi Array**	**99.06**	**316**		**Pdif**	**13 32 13.7**	**-0.2**
H03N1	**Juan Fernandez**	**99.07**	**129**	T	T	15 22 29.1	
	baz=254,slow=77						
LL02	**Futaleuf**	**99.12**	**140**	*e*P	**Pdif**	**13 32 08.0**	**-6.3**
SMLA	**Simla**	**99.19**	**300**	*e*P	**Pdif**	**13 32 11.7**	**-3.0**
SMLA				IAmb	IAmb	13 32 19.4	
	comp=Z,41nm,0.9s						
MAKZ	**Makanchi**	**99.27**	**316**	P	**Pdif**	**13 32 14.6**	**-0.2**
MAKZ				pmax	pmax		
	comp=Z,173nm,1.5s						
MAKZ				MLR	MLR		
	comp=Z,5µm,21.0s						
MAKZ	**Makanchi**	**99.27**	**316**		**Pdif**	**13 32 14.6**	**-0.2**
MAKZ				IAmb	IAmb	13 32 18.8	
	comp=Z,173nm,1.5s						
ZAA0	**Zalesovo Array**	**99.30**	**323**		**Pdif**	**13 32 14.5**	**-0.2**
ZAA0				IAmb	IAmb	13 32 16.7	
	comp=Z,88nm,1.2s						
ZALV	**Zalesovo Beam**	**99.30**	**323**	P	**Pdif**	**13 32 13.8**	**-0.9**
	comp=Z,34nm,1.0s,baz=106,slow=5.3,SNR=53						
ZALV				PKiKP	**PKiKP**	**13 36 46.0**	**+1.6**
	comp=Z,3.8nm,0.8s,baz=101,slow=2.9,SNR=1.7						
ZALV				PKKPbc	**PKKPbc**	**13 48 39.9**	**-0.8**
	comp=Z,0.5nm,0.3s,baz=292,slow=4.5,SNR=1.7						
ZALV				PKPPKP		13 56 54.9	
	comp=Z,0.5nm,0.4s,baz=221,slow=7.9,SNR=7.3						
AMTX	**Amarillo**	**99.30**	**56**	Pdiff	**Pdif**	**13 32 15.2**	**-0.1**
	baz=256						
AMTX	**Amarillo**	**99.30**	**56**	IAMs_20	IAMs_20	14 08 44.1	
	comp=Z,7µm,21.0s						
KSCO	**Kaye Shedlock'**	**99.52**	**52**	Pdiff	**Pdif**	**13 32 16.3**	**0.0**
	baz=257						
RSSD	**Black Hills**	**99.68**	**47**	Pdiff	**Pdif**	**13 32 16.6**	**-0.3**
	baz=257						
RSSD	**Black Hills**	**99.68**	**47**	IAMs_20	IAMs_20	14 15 24.0	
	comp=Z,7µm,18.0s						
833A	**Chaparral WMA,**	**99.68**	**63**	Pdiff	**Pdif**	**13 32 16.5**	**-0.5**
	baz=256						
JCT	**Junction City**	**99.83**	**61**	Pdiff	**Pdif**	**13 32 16.9**	**-0.8**
	baz=257						
JCT	**Junction City**	**99.83**	**61**	IAMs_20	IAMs_20	14 11 03.8	
	comp=Z,6µm,20.0s						
BOM	**Bombay**	**100.14**	**287**	*e*P	**Pdif**	**13 32 21.0**	**+1.8**
BOM				*e*x	x	13 35 44.2	
SHLS	**Shalkode**	**100.16**	**312**	*e*P	**Pdif**	**13 32 15.1**	**-3.9**
	comp=Z,99nm,2.1s,baz=312						
SHLS				*e*PP	**PP**	**13 36 19.4**	**-5.6**
	baz=312						
SHLS	**Shalkode**	**100.16**	**312**	*e*P	**Pdif**	**13 32 15.0**	**-3.9**
SHLS				*e*		13 36 19.3	
SHLS				pmax	pmax		
	comp=Z,99nm,2.1s						
DHRM	**DHARAMSHALA**	**100.16**	**301**	*e*P	**Pdif**	**13 32 16.9**	**-2.5**
DHRM				IAmb	IAmb	13 32 24.0	
	comp=Z,40nm,1.0s						
OGNE	**Ogallala**	**100.40**	**50**	Pdiff	**Pdif**	**13 32 19.4**	**-0.7**
	baz=257						
OGNE	**Ogallala**	**100.40**	**50**	IAMs_20	IAMs_20	14 09 32.5	
	comp=Z,7µm,20.0s						
ABTX	**Abilene, Hawle**	**100.44**	**59**	Pdiff	**Pdif**	**13 32 20.4**	**0.0**
	baz=257						
UZB	**Uzynbulak**	**100.47**	**312**	*e*P	**Pdif**	**13 32 18.0**	**-2.4**
	comp=Z,86nm,2.8s,baz=312						
UZB				*e*PP	**PP**	**13 36 24.5**	**-2.8**
	baz=312						
UZB				*e*S	**SKSac**	**13 42 56.9**	**-2.4**
	baz=312						
UZB	**Uzynbulak**	**100.47**	**312**	*e*P	**Pdif**	**13 32 18.0**	**-2.4**
UZB				*e*		13 36 24.5	
UZB				*e*S	**SKSac**	**13 42 56.8**	**-2.5**
UZB				pmax	pmax		
	comp=Z,86nm,2.8s						
DGMT	**Dagmar**	**100.56**	**43**	Pdiff	**Pdif**	**13 32 20.9**	**+0.5**
	baz=257						
KPKS	**Kokpek**	**100.78**	**312**	*e*P	**Pdif**	**13 32 19.6**	**-2.1**
	comp=Z,103nm,2.1s,baz=312						
KPKS				*e*PP	**PP**	**13 36 26.4**	**-3.1**
	baz=312						
KPKS	**Kokpek**	**100.78**	**312**	*e*P	**Pdif**	**13 32 19.6**	**-2.1**
KPKS				*e*		13 36 26.4	
KPKS				pmax	pmax		
	comp=Z,103nm,2.1s						
KVTX	**Kingsville**	**100.80**	**64**	IAMs_20	IAMs_20	14 14 32.1	
	comp=Z,7µm,19.0s						
SATY	**Saty**	**100.89**	**312**	*e*P	**Pdif**	**13 32 19.7**	**-2.5**
	comp=Z,54nm,3.0s,baz=312						
SATY				*e*PP	**PP**	**13 36 27.2**	**-3.3**
	baz=312						
SATY	**Saty**	**100.89**	**312**	*e*P	**Pdif**	**13 32 19.7**	**-2.5**
SATY				*e*		13 36 27.1	
SATY				pmax	pmax		
	comp=Z,54nm,3.0s						
SEM	**Semipalatinsk**	**101.20**	**319**	*e*P	**Pdif**	**13 32 21.2**	**-2.3**
	comp=Z,78nm,2.4s,baz=319						
SEM				*e*S	**SKSac**	**13 43 00.3**	**-2.3**
	baz=319						
SEM				LR	LR	14 10 35.7	
	comp=Z,2µm,21.2s						
SEM	**Semipalatinsk**	**101.20**	**319**	*e*P	**Pdif**	**13 32 21.2**	**-2.3**
SEM				*e*S	**SKSac**	**13 43 00.3**	**-2.3**
SEM				pmax	pmax		
	comp=Z,78nm,2.4s						
SEM				MLR	MLR		
	comp=Z,2µm,21.0s						
PLCA	**Paso Flores**	**101.27**	**139**	P	**Pdif**	**13 32 24.7**	**+0.6**
	comp=Z,32nm,1.3s,baz=227,slow=5.4,SNR=11						
PLCA				PP	**PP**	**13 36 31.4**	**-1.1**
	comp=Z,17nm,1.3s,baz=242,slow=6.7,SNR=5.1						
PLCA				PKKPbc	**PKKPbc**	**13 48 34.1**	**-0.4**
	comp=Z,6.2nm,1.0s,baz=96,slow=5.3,SNR=6.0						
PLCA				PKPPKP	**P'P'df**	**13 56 50.1**	**-4.6**
	comp=Z,5.9nm,1.2s,baz=55,slow=3.6,SNR=2.9						
PLCA	**Paso Flores**	**101.27**	**139**	*e*P	**Pdif**	**13 32 25.1**	**+1.0**
TDK	**Taldyqorghan**	**101.30**	**314**	*e*P	**Pdif**	**13 32 22.1**	**-1.7**
	comp=Z,152nm,2.1s,baz=314						
TDK				*e*PP	**PP**	**13 36 30.9**	**-2.5**
	baz=314						
TDK				*e*S	**SKSac**	**13 43 01.4**	**-1.5**
	baz=314						
TDK				LR	LR	14 11 16.5	
	comp=Z,5µm,21.2s						
TDK	**Taldyqorghan**	**101.30**	**314**	*e*P	**Pdif**	**13 32 22.1**	**-1.7**
TDK				*e*		13 36 30.8	
TDK				*e*S	**SKSac**	**13 43 01.4**	**-1.5**
TDK				pmax	pmax		
	comp=Z,152nm,2.1s						
TDK				MLR	MLR		
	comp=Z,5µm,21.0s						
WMOK	**Wichita Mounta**	**101.60**	**57**	Pdiff	**Pdif**	**13 32 24.9**	**-0.5**
	baz=258						
WMOK	**Wichita Mounta**	**101.60**	**57**	IAMs_20	IAMs_20	14 13 16.9	
	comp=Z,5µm,20.0s						
CBKS	**Cedar Bluff**	**101.68**	**53**	Pdiff	**Pdif**	**13 32 25.5**	**-0.2**
	baz=258						
CBKS	**Cedar Bluff**	**101.68**	**53**	IAMs_20	IAMs_20	14 13 06.6	
	comp=Z,8µm,20.0s						
BI03	**Tigo**	**101.68**	**134**	IAMs_20	IAMs_20	14 07 41.4	
	comp=Z,7µm,20.0s						
435B	**Jarrell**	**101.76**	**61**	Pdiff	**Pdif**	**13 32 26.2**	**0.0**
	baz=258						
435B	**Jarrell**	**101.76**	**61**	IAMs_20	IAMs_20	14 16 12.5	
	comp=Z,6µm,19.0s						
U32A	**Winter Ranch,**	**101.76**	**55**	IAMs_20	IAMs_20	14 18 40.5	
	comp=Z,7µm,18.0s						
MDOK	**Medeo**	**101.89**	**312**	*e*P	**Pdif**	**13 32 24.3**	**-2.4**
	baz=312						
MDOK				*e*S	**SKSac**	**13 43 03.8**	**-2.4**
	baz=312						
MDOK				LR	LR	14 11 09.9	
	comp=Z,1µm,18.9s						
MDOK	**Medeo**	**101.89**	**312**	*e*P	**Pdif**	**13 32 24.3**	**-2.4**
MDOK				*e*S	**SKSac**	**13 43 03.7**	**-2.4**
MDOK				MLR	MLR		
	comp=Z,1µm,19.0s						
TNSS	**Tian-Shan**	**101.93**	**311**	*e*P	**Pdif**	**13 32 24.9**	**-2.4**
	baz=312						
TNSS	**Tian-Shan**	**101.93**	**311**	*e*P	**Pdif**	**13 32 24.8**	**-2.4**
KSH	**Kashi**	**101.96**	**308**	P	**Pdif**	**13 32 28.5**	**+1.4**
KSH				pP	sPdif	13 32 35.0	+1.9
KSH				PP	**PP**	**13 36 39.4**	**+0.8**
KSH				SKS	**SKSac**	**13 43 09.9**	**+3.3**
KSH				S	**Sdif**	**13 44 08.4**	**-1.0**
KSH				pmax	pmax		
	comp=Z,54nm,1.3s						
KSH				pmax	pmax		
	comp=Z,2µm,5.6s						
KSH				LR	LR		
	comp=Z,4µm,17.7s						
KSH				LR	LR		
	comp=Z,9µm,17.2s						
KSH				LR	LR		
	comp=Z,18µm,24.3s						
NRIK	**Noril'sk**	**101.99**	**339**	P	**Pdif**	**13 32 25.9**	**-0.4**
	comp=Z,11nm,0.9s,baz=118,slow=4.4,SNR=26						
NRIK				PP	**PP**	**13 36 35.1**	**-2.7**
	comp=Z,15nm,1.1s,baz=114,slow=7.2,SNR=5.5						
NRIK				PKKPbc	**PKKPbc**	**13 48 33.2**	**-0.1**
	comp=Z,3.0nm,0.5s,baz=263,slow=2.6,SNR=7.9						
NRIK				PKPPKP		13 56 40.3	
	comp=Z,0.8nm,0.3s,baz=199,slow=1.9,SNR=4.7						
AAA	**Alma-Ata**	**101.99**	**312**	*e*P	**Pdif**	**13 32 24.4**	**-2.6**
	baz=312						
AAA				*e*S	**SKSac**	**13 43 04.3**	**-2.1**
	baz=312						
AAA				LR	LR	14 11 14.3	
	comp=Z,2µm,18.9s						
AAA	**Alma-Ata**	**101.99**	**312**	*e*P	**Pdif**	**13 32 24.4**	**-2.6**
AAA				*e*S	**SKSac**	**13 43 04.3**	**-2.1**
AAA				MLR	MLR		
	comp=Z,2µm,19.0s						
CHKK	**Chushkaly**	**102.06**	**312**	*e*P	**Pdif**	**13 32 25.6**	**-1.7**
	baz=312						
CHKK	**Chushkaly**	**102.06**	**312**	*e*P	**Pdif**	**13 32 25.6**	**-1.7**
WHTX	**Lake Whitney,**	**102.12**	**60**	Pdiff	**Pdif**	**13 32 27.8**	**0.0**
	baz=258						
KURK	**Kurchatov**	**102.28**	**319**	P	**Pdif**	**13 32 27.5**	**-0.5**
KURK	**Kurchatov**	**102.28**	**319**	IAMs_20	IAMs_20	14 22 34.7	
	comp=Z,7µm,19.0s						
KURK	**Kurchatov**	**102.28**	**319**	P	**Pdif**	**13 32 27.2**	**-0.8**
KURBB	**Kurchatov Arra**	**102.32**	**319**	P	**Pdif**	**13 32 27.5**	**-0.7**
	comp=Z,2.4nm,0.7s,baz=104,slow=3.3,SNR=2.9						
KURBB				PP	**PP**	**13 36 37.0**	**-3.8**
	comp=Z,15nm,1.0s,baz=98,slow=7.0,SNR=7.3						
KURBB				PKiKP	**PKiKP**	**13 36 50.8**	**+0.8**
	comp=Z,19nm,1.1s,baz=104,slow=1.4,SNR=7.4						
KUU	**Kurty**	**102.53**	**312**	*e*P	**Pdif**	**13 32 26.7**	**-2.7**
	comp=Z,166nm,2.4s,baz=312						
KUU				*e*PP	**PP**	**13 36 39.4**	**-3.3**
	baz=312						
KUU				*e*S	**SKSac**	**13 43 06.4**	**-2.5**
	baz=312						
KUU	**Kurty**	**102.53**	**312**	*e*P	**Pdif**	**13 32 26.6**	**-2.7**
KUU				*e*		13 36 39.4	
KUU				*e*S	**SKSac**	**13 43 06.4**	**-2.5**
KUU				pmax	pmax		
	comp=Z,166nm,2.4s						
OKCFA	**Oklahoma City**	**102.80**	**57**	IAMs_20	IAMs_20	14 10 01.7	
	comp=Z,6µm,22.0s						
OK029	**Liberty Lake**	**102.87**	**56**	IAMs_20	IAMs_20	14 11 08.6	
	comp=Z,8µm,19.0s						
OK025	**Westminster Rd**	**102.93**	**56**	IAMs_20	IAMs_20	14 16 34.0	
	comp=Z,8µm,18.0s						
BI02	**San Fabin de**	**102.98**	**135**	IAMs_20	IAMs_20	14 12 49.7	
	comp=Z,5µm,18.0s						
KS21	**Milan North St**	**102.99**	**55**	IAMs_20	IAMs_20	14 15 19.6	
	comp=Z,9µm,22.0s						
FFC	**Flin Flon**	**103.14**	**37**	IAMs_20	IAMs_20	14 21 33.7	
	comp=Z,5µm,18.0s						
SUSD	**Miller**	**103.31**	**47**	Pdiff	**Pdif**	**13 32 32.9**	**+0.1**
	baz=260						
BGNE	**Belgrade**	**103.37**	**50**	Pdiff	**Pdif**	**13 32 33.3**	**+0.1**
	baz=260						
OK030	**Cody Creek RV**	**103.43**	**56**	IAMs_20	IAMs_20	14 17 34.4	
	comp=Z,8µm,18.0s						
MDND	**Maddock**	**103.45**	**44**	IAMs_20	IAMs_20	14 24 44.3	
	comp=Z,5µm,18.0s						
AAK	**Ala-Archa**	**103.63**	**311**	PKiKP	**PKiKP**	**13 36 49.8**	**-3.1**
	comp=Z,8.3nm,1.0s,baz=95,slow=2.8,SNR=5.1						
AAK				PKKPbc	**PKKPbc**	**13 48 29.0**	**+1.1**
	comp=Z,3.9nm,1.0s,baz=246,slow=3.2,SNR=7.1						
AAK	**Ala-Archa**	**103.63**	**311**	P	**Pdif**	**13 32 33.4**	**-1.1**
RER	**Riviere de l'E**	**103.96**	**243**	IAMs_20	IAMs_20	14 18 11.8	
	comp=Z,7µm,19.0s						
KSU1	**Kansas State U**	**104.13**	**53**	Pdiff	**Pdif**	**13 32 36.8**	**+0.2**
	baz=260						
KSU1	**Kansas State U**	**104.13**	**53**	IAMs_20	IAMs_20	14 12 47.4	
	comp=Z,7µm,20.0s						
TUL1	**Leonard**	**104.22**	**56**	Pdiff	**Pdif**	**13 32 37.0**	**-0.1**
	baz=260						
X37A	**Clayton**	**104.33**	**58**	IAMs_20	IAMs_20	14 16 57.2	
	comp=Z,6µm,19.0s						
BTLS	**Baital**	**104.34**	**313**	*e*Pdif	**Pdif**	**13 32 35.3**	**-2.1**
	comp=Z,40nm,2.4s,baz=313						
BTLS	**Baital**	**104.34**	**313**	*e*P	**Pdif**	**13 32 35.2**	**-2.1**
BTLS				pmax	pmax		
	comp=Z,40nm,2.4s						
NATX	**Nacogdoches**	**104.41**	**61**	Pdiff	**Pdif**	**13 32 38.1**	**+0.2**
	baz=259						
NATX	**Nacogdoches**	**104.41**	**61**	IAMs_20	IAMs_20	14 13 42.5	
	comp=Z,7µm,20.0s						
MT09	**Talagante**	**104.69**	**132**	*e*P	PKiKP	13 36 46.0	-9.2
ECSD	**EROS Data Cent**	**104.87**	**48**	PKiKP	**PKiKP**	**13 36 54.5**	**-0.4**
	baz=261						
ROCH	**El Roble**	**105.10**	**132**	*e*P	**PKiKP**	**13 36 52.1**	**-3.9**
LMEL	**Las Melosas**	**105.21**	**133**	*e*P	**PKiKP**	**13 36 58.3**	**+2.1**
PEL	**Peldehue**	**105.24**	**132**	*e*P	PKiKP	13 37 07.5	+11
SNET	**Serv Nac Est T**	**105.60**	**80**	IAMs_20	IAMs_20	14 10 36.3	
	comp=Z,6µm,20.0s						
ESQI	**Esquipulas**	**105.70**	**79**	IAMs_20	IAMs_20	14 09 17.8	
	comp=Z,6µm,21.0s						
W39A	**Magazine**	**105.72**	**57**	PKiKP	**PKiKP**	**13 36 56.0**	**-0.7**
	baz=261						
W39A	**Magazine**	**105.72**	**57**	IAMs_20	IAMs_20	14 16 18.0	
	comp=Z,7µm,21.0s						
MIAR	**Mount Ida**	**105.78**	**58**	IAMs_20	IAMs_20	14 15 34.7	
	comp=Z,7µm,19.0s						
BRZS	**Berezniki**	**105.93**	**318**	*e*Pdif	**Pdif**	**13 32 41.8**	**-2.6**
	comp=Z,48nm,2.6s,baz=318						
BRZS				*e*PKiKP	**PKiKP**	**13 36 55.4**	**-1.3**
	baz=318						
BRZS	**Berezniki**	**105.93**	**318**	*e*P	**Pdif**	**13 32 41.7**	**-2.6**
BRZS				pmax	pmax		
	comp=Z,47nm,2.6s						
AGMN	**Agassiz Nation**	**106.00**	**44**	IAMs_20	IAMs_20	14 19 37.0	
	comp=Z,5µm,18.0s						
ULM	**Lac du Bonnet**	**106.21**	**42**	Pdiff	**Pdif**	**13 32 45.1**	**-0.4**
	comp=Z,8.8nm,1.3s,baz=294,slow=1.0,SNR=4.1						
ULM				PKiKP	**PKiKP**	**13 36 56.7**	**-0.5**
	comp=Z,3.6nm,0.6s,baz=230,slow=1.4,SNR=8.8						
ULM				PKKPab	**PKKPab**	**13 48 35.4**	**+1.7**
	comp=Z,2.1nm,0.7s,baz=91,slow=5.2,SNR=4.1						
ULM				PKPPKP		13 56 41.4	
	comp=Z,2.4nm,1.0s,baz=58,slow=3.7,SNR=3.9						
X40A	**Basin Creek Fa**	**106.38**	**58**	IAMs_20	IAMs_20	14 15 32.5	
	comp=Z,7µm,19.0s						
U40A	**Yellville**	**106.64**	**56**	PKiKP	**PKiKP**	**13 36 58.5**	**+0.1**
	baz=262						
U40A	**Yellville**	**106.64**	**56**	IAMs_20	IAMs_20	14 14 34.3	
	comp=Z,6µm,20.0s						
IUG	**Iuzhnay**	**106.83**	**310**	*e*Pdif	**Pdif**	**13 32 46.0**	**-2.6**
	baz=310						
IUG				*e*PKiKP	**PKiKP**	**13 36 57.0**	**-1.7**
	baz=310						
IUG				*e*PP	**PP**	**13 37 11.8**	**-3.0**
	baz=310						
IUG	**Iuzhnay**	**106.83**	**310**	*e*P	**Pdif**	**13 32 46.0**	**-2.6**
IUG				*e*		13 37 11.7	
CRIN	**San Cristobal**	**107.44**	**82**	IAMs_20	IAMs_20	14 10 04.1	
	comp=Z,5µm,22.0s						
BVAR	**Borovoye Array**	**107.64**	**321**	Pdiff	**Pdif**	**13 32 52.0**	**+0.1**
	comp=Z,1.5nm,1.0s,baz=31,slow=18,SNR=7.5						
BVAR				PP	**PP**	**13 37 17.0**	**-3.3**
	comp=Z,7.5nm,0.9s,baz=167,slow=7.0,SNR=7.3						
TEIG	**Tepich**	**107.90**	**74**	IAMs_20	IAMs_20	14 12 38.8	
	comp=Z,8µm,21.0s						
GO03	**Copiap**	**108.43**	**127**	IAMs_20	IAMs_20	14 13 09.9	
	comp=Z,9µm,22.0s						
AC01	**Pan de Azucar**	**108.87**	**126**	IAMs_20	IAMs_20	14 12 04.8	
	comp=Z,7µm,20.0s						
JTS	**Las Juntas de**	**108.88**	**85**	IAMs_20	IAMs_20	14 10 57.1	
	comp=Z,8µm,22.0s						
EYMN	**Ely**	**108.88**	**44**	PKiKP	**PKiKP**	**13 37 02.1**	**-0.1**
	baz=266						
EYMN	**Ely**	**108.88**	**44**	IAMs_20	IAMs_20	14 19 50.2	
	comp=Z,7µm,19.0s						
ACON	**Acoyapa**	**109.06**	**83**	IAMs_20	IAMs_20	14 10 54.9	
	comp=Z,7µm,22.0s						
OXF	**Oxford**	**109.18**	**59**	IAMs_20	IAMs_20	14 21 16.8	
	comp=Z,6µm,18.0s						
HDC	**Heredia**	**109.61**	**85**	IAMs_20	IAMs_20	14 13 26.6	
	comp=Z,6µm,19.0s						
HDIL	**Hopedale**	**109.90**	**52**	IAMs_20	IAMs_20	14 15 15.1	
	comp=Z,8µm,21.0s						
ESPN	**Las Esperanzas**	**109.94**	**83**	IAMs_20	IAMs_20	14 11 54.3	
	comp=Z,9µm,22.0s						
ATAH	**Atahualpa**	**110.09**	**104**	PP	**PP**	**13 37 39.2**	**-0.1**
	comp=Z,2.9nm,0.7s,baz=270,slow=10,SNR=1.5						
ATAH				PKKPbc	**PKKPbc**	**13 48 10.1**	**+2.9**
	comp=Z,2.5nm,0.4s,baz=113,slow=7.5,SNR=4.5						
GO02	**Mina Guanaco**	**110.15**	**125**	IAMs_20	IAMs_20	14 12 43.7	
	comp=Z,7µm,21.0s						
PB10	**IPOC Station P**	**110.19**	**123**	IAMs_20	IAMs_20	14 11 40.2	
	comp=Z,7µm,21.0s						
PLAL	**Pickwick Lake**	**110.33**	**58**	IAMs_20	IAMs_20	14 20 59.1	
	comp=Z,4µm,20.0s						
COWI	**Conover**	**110.39**	**46**	IAMs_20	IAMs_20	14 16 41.3	
	comp=Z,8µm,20.0s						
WVT	**Waverly**	**110.64**	**57**	IAMs_20	IAMs_20	14 18 36.4	
	comp=Z,8µm,20.0s						
OLIL	**Olney**	**110.67**	**54**	IAMs_20	IAMs_20	14 15 44.2	
	comp=Z,8µm,21.0s						
BRAL	**Brewton**	**110.74**	**62**	IAMs_20	IAMs_20	14 18 43.4	
	comp=Z,6µm,21.0s						
L44A	**Lake County Fo**	**111.06**	**51**	PKiKP	**PKiKP**	**13 37 06.9**	**+0.4**
	baz=267						
L44A	**Lake County Fo**	**111.06**	**51**	IAMs_20	IAMs_20	14 17 00.5	
	comp=Z,7µm,21.0s						
HQIL	**Hanson Quary C**	**111.08**	**51**	IAMs_20	IAMs_20	14 17 48.1	
	comp=Z,7µm,19.0s						
PB04	**IPOC Station P**	**111.09**	**122**	*e*P	**PP**	**13 37 44.3**	**-1.5**
PB04	**IPOC Station P**	**111.09**	**122**	IAMs_20	IAMs_20	14 11 32.0	
	comp=Z,7µm,22.0s						
PB15	**IPOC Station P**	**111.21**	**123**	IAMs_20	IAMs_20	14 12 11.1	
	comp=Z,9µm,22.0s						
PB06	**IPOC Station P**	**111.38**	**123**	*e*P	**PP**	**13 37 53.5**	**+5.7**
PB06	**IPOC Station P**	**111.38**	**123**	IAMs_20	IAMs_20	14 11 30.0	
	comp=Z,8µm,21.0s						
PB03	**IPOC Station P**	**111.55**	**122**	*e*P	**PP**	**13 37 47.4**	**-1.7**
PB07	**IPOC Station P**	**111.59**	**122**	*e*P	**PP**	**13 37 49.8**	**+0.4**
PB02	**IPOC Station P**	**111.78**	**122**	*e*P	**PP**	**13 37 51.1**	**+0.4**
451A	**Vernon**	**111.79**	**63**	IAMs_20	IAMs_20	14 20 36.2	
	comp=Z,6µm,19.0s						
PATCX	**Punta Patache**	**111.81**	**121**	IAMs_20	IAMs_20	14 13 44.2	
	comp=Z,8µm,22.0s						
TA01	**Diego Aracena**	**111.91**	**121**	*e*P	**PP**	**13 37 49.6**	**-1.8**
TA01	**Diego Aracena**	**111.91**	**121**	IAMs_20	IAMs_20	14 13 58.8	
	comp=Z,7µm,20.0s						
LVC	**Limon Verde**	**111.95**	**123**	PP	**PP**	**13 37 50.6**	**-1.6**
	comp=Z,21nm,1.1s,baz=221,slow=9.4,SNR=3.9						
LVC				PKKPbc	**PKKPbc**	**13 48 01.9**	**+0.5**
	comp=Z,26nm,1.1s,baz=98,slow=3.5,SNR=15						
LVC	**Limon Verde**	**111.95**	**123**	IAMs_20	IAMs_20	14 13 46.8	
	comp=Z,7µm,20.0s						
PB09	**IPOC Station P**	**112.08**	**122**	*e*P	**PP**	**13 37 51.1**	**-1.9**
TA02	**Huaiquique**	**112.09**	**120**	*e*P	**PP**	**13 37 54.3**	**+1.6**
PB01	**IPOC Station P**	**112.25**	**121**	*e*P	**PP**	**13 37 54.2**	**+0.1**
PB01	**IPOC Station P**	**112.25**	**121**	IAMs_20	IAMs_20	14 15 43.8	
	comp=Z,7µm,20.0s						
OPO	**Ambohidratompo**	**112.34**	**242**	PKKPbc	PKKPbc	13 48 00.7	+0.9
	comp=Z,1.0nm,0.3s,baz=302,slow=9.5,SNR=1.6						
PSGCX	**Pisagua**	**112.41**	**120**	IAMs_20	IAMs_20	14 12 59.2	
	comp=Z,7µm,22.0s						
OTAV	**Otavalo**	**112.42**	**97**	*e*P	**PP**	**13 37 49.0**	**-7.3**
AP01	**Chacalluta**	**112.79**	**119**	IAMs_20	IAMs_20	14 14 26.5	
	comp=Z,6µm,22.0s						
553A	**Crawfordville**	**112.87**	**64**	IAMs_20	IAMs_20	14 22 08.9	
	comp=Z,7µm,20.0s						
PB08	**IPOC Station P**	**112.95**	**121**	*e*P	**PP**	**13 38 05.3**	**+5.8**
PB08	**IPOC Station P**	**112.95**	**121**	IAMs_20	IAMs_20	14 13 11.6	
	comp=Z,7µm,21.0s						
SVE	**Sverdlovsk**	**113.22**	**325**	⇓*i*PKIKP	**PKiKP**	**13 37 10.5**	**+0.4**
SVE				pmax	pmax		
	comp=Z,58nm,1.5s						
P49A	**Miami Univ. Ec**	**113.34**	**54**	PKiKP	**PKiKP**	**13 37 11.1**	**+0.2**
	baz=268						
P49A	**Miami Univ. Ec**	**113.34**	**54**	IAMs_20	IAMs_20	14 18 41.5	
	comp=Z,6µm,19.0s						
BCIP	**Isla Barro Col**	**113.50**	**87**	IAMs_20	IAMs_20	14 13 35.7	
	comp=Z,5µm,22.0s						
PB16	**IPOC Station P**	**113.51**	**119**	IAMs_20	IAMs_20	14 13 21.5	
	comp=Z,9µm,22.0s						
GCUF	**Volcan Galeras**	**113.77**	**96**	*e*P	**PKiKP**	**13 37 13.7**	**+0.5**
N49A	**Columbus Grove**	**113.80**	**52**	IAMs_20	IAMs_20	14 17 23.9	
	comp=Z,7µm,22.0s						
AAM	**Ann Arbor**	**114.22**	**51**	IAMs_20	IAMs_20	14 21 59.2	
	comp=Z,5µm,20.0s						
154A	**Montrose**	**114.23**	**61**	IAMs_20	IAMs_20	14 29 34.0	
	comp=Z,5µm,18.0s						
Q51A	**Peebles**	**114.39**	**54**	IAMs_20	IAMs_20	14 18 17.7	
	comp=Z,7µm,21.0s						
ARU	**Arti**	**114.40**	**325**	PKP	**PKiKP**	**13 37 12.6**	**+0.2**
	comp=Z,9.7nm,0.6s,baz=108,slow=1.1,SNR=33						
ARU				PP	**PP**	**13 38 10.2**	**+1.5**
	comp=Z,9.0nm,1.0s,baz=63,slow=6.8,SNR=5.2						
ARU	**Arti**	**114.40**	**325**	*i* PKIKP	PKPdf	13 37 11.7	-0.7
ARU						13 38 06.0	
ARU				PPP	PPP	13 40 29.9	
ARU						13 44 23.9	
ARU				SP	SP	13 47 40.9	-3.5

ARU				PS	**PKKPbc**	**13 47 49.5**	**-4.0**
ARU				SS	SS	13 54 15.9	+15
ARU	**Arti**	**114.40**	**325**	IAMs_20	IAMs_20	14 26 13.0	
	comp=Z,5µm,21.0s						
V53A	**Saluda**	**114.67**	**58**	IAMs_20	IAMs_20	14 22 25.5	
	comp=Z,5µm,19.0s						
ACSO	**Alum Creek Sta**	**114.70**	**53**	PKiKP	PKPdf	13 37 13.1	-0.4
	baz=269						
ACSO	**Alum Creek Sta**	**114.70**	**53**	IAMs_20	IAMs_20	14 26 54.1	
	comp=Z,7µm,18.0s						
PIZC	**Pizarro, Choco**	**114.81**	**92**	*e*P	**PP**	**13 38 13.0**	**+0.2**
K50A	**Casco**	**114.98**	**50**	IAMs_20	IAMs_20	14 19 13.0	
	comp=Z,7µm,20.0s						
456A	**Hilliard**	**114.99**	**63**	IAMs_20	IAMs_20	14 23 12.5	
	comp=Z,5µm,20.0s						
PCON	**Cinco Dias**	**115.00**	**95**	*e*P	PP	13 37 59.7	-15
N51A	**Ashland**	**115.17**	**52**	IAMs_20	IAMs_20	14 22 05.2	
	comp=Z,5µm,20.0s						
Q52A	**Bidwell**	**115.23**	**54**	IAMs_20	IAMs_20	14 26 39.9	
	comp=Z,6µm,18.0s						
P52A	**Corning**	**115.34**	**54**	PKiKP	**PKPdf**	**13 37 14.6**	**-0.2**
	baz=269						
AKTO	**Aktyubinsk**	**115.35**	**318**	Pdiff	**Pdif**	**13 33 26.6**	**+0.5**
	comp=Z,0.7nm,0.8s,baz=104,slow=4.5,SNR=4.1						
AKTO				PKP	**PKiKP**	**13 37 14.2**	**-0.3**
	comp=Z,38nm,1.1s,baz=62,slow=1.7,SNR=29						
AKTO				PP	**PP**	**13 38 16.1**	**+0.5**
	comp=Z,8.1nm,1.0s,baz=71,slow=10,SNR=4.2						
R53A	**Hurricane**	**115.46**	**55**	IAMs_20	IAMs_20	14 24 42.1	
	comp=Z,7µm,18.0s						
061Z	**Ochoppi**	**115.48**	**69**	IAMs_20	IAMs_20	14 17 56.5	
	comp=Z,6µm,22.0s						
U54A	**Nelsons Funny**	**115.51**	**57**	PKiKP	**PKPdf**	**13 37 14.8**	**-0.5**
	baz=268						
U54A	**Nelsons Funny**	**115.51**	**57**	IAMs_20	IAMs_20	14 23 43.7	
	comp=Z,7µm,19.0s						
YOTC	**Yotoco, Valle**	**115.52**	**93**	*e*P	PP	13 38 03.1	-15
O52A	**Adamsville**	**115.58**	**53**	IAMs_20	IAMs_20	14 18 08.0	
	comp=Z,8µm,22.0s						
GEYT	**Alibeck**	**115.65**	**305**	PKP	**PKiKP**	**13 37 15.5**	**0.0**
	comp=Z,32nm,0.9s,baz=140,slow=1.2,SNR=25						
GEYT				PP	**PP**	**13 38 17.9**	**-0.3**
	comp=Z,15nm,1.1s,baz=66,slow=3.6,SNR=2.1						
GEYT				PKKPbc	**PKKPab**	**13 47 50.9**	**-1.6**
	comp=Z,1.8nm,0.7s,baz=287,slow=11,SNR=5.3						
GEYT	**Alibeck**	**115.65**	**305**		**PKiKP**	**13 37 16.6**	**+1.2**
Z56A	**Williston**	**115.73**	**61**	IAMs_20	IAMs_20	14 22 51.9	
	comp=Z,5µm,20.0s						
CAPC	**Capurgana**	**115.76**	**88**	*e*P	**PP**	**13 38 14.4**	**-5.1**
Q53A	**Leroy**	**115.80**	**54**	PKiKP	**PKPdf**	**13 37 15.1**	**-0.5**
	baz=269						
GARC	**Garzon, Huila**	**115.82**	**96**	*e*P	**PKiKP**	**13 37 23.7**	**+6.9**
KMSC	**Kings Mountain**	**115.85**	**59**	PKiKP	**PKPdf**	**13 37 15.5**	**-0.4**
	baz=268						
KMSC	**Kings Mountain**	**115.85**	**59**	IAMs_20	IAMs_20	14 28 47.9	
	comp=Z,6µm,18.0s						
JSC	**Jenkinsville**	**115.88**	**60**	IAMs_20	IAMs_20	14 20 14.5	
	comp=Z,4µm,20.0s						
P53A	**Whipple**	**115.92**	**54**	IAMs_20	IAMs_20	14 26 49.1	
	comp=Z,7µm,18.0s						
M52A	**Chesterland**	**115.94**	**51**	IAMs_20	IAMs_20	14 20 32.4	
	comp=Z,7µm,21.0s						
257A	**Skidaway Islan**	**115.94**	**62**	IAMs_20	IAMs_20	14 21 40.4	
	comp=Z,5µm,21.0s						
S54A	**Dingess, Beckl**	**115.95**	**56**	IAMs_20	IAMs_20	14 22 15.3	
	comp=Z,7µm,20.0s						
V55A	**Taylorsville**	**115.98**	**58**	IAMs_20	IAMs_20	14 21 23.1	
	comp=Z,6µm,20.0s						
SOHO	**SOHO**	**115.99**	**289**	*i* P	**PKPdf**	**13 37 15.4**	**-1.1**
	SNR=51						
O53A	**New Philadelph**	**116.05**	**53**	PKiKP	**PKPdf**	**13 37 15.7**	**-0.4**
	baz=270						
060A	**Indiantown**	**116.10**	**68**	IAMs_20	IAMs_20	14 21 46.7	
	comp=Z,5µm,20.0s						
I51A	**Listowel**	**116.13**	**49**	PKiKP	**PKPdf**	**13 37 15.5**	**-0.6**
	baz=272						
R54A	**Victor**	**116.21**	**55**	PKiKP	**PKPdf**	**13 37 15.9**	**-0.6**
	baz=269						
N53A	**Lisbon**	**116.34**	**52**	IAMs_20	IAMs_20	14 19 05.0	
	comp=Z,6µm,21.0s						
MDH	**Madha**	**116.34**	**290**	*i* P	**PKPdf**	**13 37 15.8**	**-1.3**
	SNR=6.5						
Q54A	**Coxs Mills**	**116.34**	**54**	IAMs_20	IAMs_20	14 24 13.5	
	comp=Z,5µm,19.0s						
UOSS	**Minazif**	**116.38**	**290**	*i* P	**PKPdf**	**13 37 15.7**	**-1.5**
	SNR=27						
UOSS	**Minazif**	**116.38**	**290**		**PKiKP**	**13 37 18.4**	**+1.1**
BANOM	**Banah**	**116.41**	**291**	*i* P	**PKPdf**	**13 37 16.1**	**-1.2**
	SNR=20						
HATD	**Hatta, Dubai**	**116.44**	**290**	*i* P	**PKPdf**	**13 37 16.4**	**-0.9**
	SNR=40						
M53A	**Wl Miller and**	**116.45**	**52**	PKiKP	**PKPdf**	**13 37 16.3**	**-0.6**
	baz=271						
M53A	**Wl Miller and**	**116.45**	**52**	IAMs_20	IAMs_20	14 22 44.0	
	comp=Z,6µm,21.0s						
DBBC	**Dabeiba**	**116.45**	**90**	*e*P	**PP**	**13 38 24.5**	**+0.1**
MSFE	**Esma-Masafi**	**116.47**	**290**	*i* P	**PKPdf**	**13 37 16.7**	**-0.7**
	SNR=26						
KBS	**Kingsbay**	**116.48**	**355**	*e*PKPdf	**PKiKP**	**13 37 17.8**	**+2.0**
KBS				IVmB_BB		13 37 33.8	
	comp=Z,2µm,4.1s						
KBS				*e*PP	**PP**	**13 38 24.5**	**+1.9**
KBS				*e*PKSdf	PKSdf	13 40 54.9	+2.9
KBS				*e*SP	SP	13 48 04.8	+2.7
KBS				*e*SS	**SS**	**13 54 29.0**	**+2.5**
KBS				IVMs_BB	IVMs_BB	14 20 38.8	
	comp=Z,2µm,4.2s						
ASHO	**Ashiyiah**	**116.48**	**290**	*i* P	**PKPdf**	**13 37 16.5**	**-0.9**
	SNR=37						
ORTC	**Ortega, Tolima**	**116.55**	**94**	*e*P	PP	13 38 08.8	-16
BIRD	**Birdtown, Kers**	**116.55**	**59**	IAMs_20	IAMs_20	14 20 25.4	
	comp=Z,7µm,20.0s						
V56A	**Mocksville**	**116.56**	**58**	PKiKP	**PKPdf**	**13 37 16.4**	**-0.9**
	baz=268						
SHME	**Shamm**	**116.56**	**291**	*i* P	**PKPdf**	**13 37 16.3**	**-1.2**
	SNR=11						
BLA	**Blacksburg**	**116.65**	**56**	PKiKP	**PKiKP**	**13 37 17.6**	**+0.1**
	baz=269						
BLA	**Blacksburg**	**116.65**	**56**	IAMs_20	IAMs_20	14 22 07.8	
	comp=Z,6µm,20.0s						
TOLC	**Tolima**	**116.66**	**93**	*e*P	**PKPdf**	**13 37 10.7**	**-7.7**
U56A	**King**	**116.67**	**57**	PKiKP	**PKPdf**	**13 37 17.0**	**-0.4**
	baz=269						
U56A	**King**	**116.67**	**57**	IAMs_20	IAMs_20	14 24 37.3	
	comp=Z,6µm,20.0s						
ALNE	**Al Ain**	**116.69**	**289**	*i* P	**PKPdf**	**13 37 15.9**	**-1.9**
	SNR=13						
NHSC	**New Hope**	**116.72**	**61**	IAMs_20	IAMs_20	14 28 45.0	
	comp=Z,5µm,19.0s						
RREF	**El Recreo**	**116.72**	**93**	*e*P	PKiKP	13 37 32.2	+13
SPA0	**Spitsbergen Ar**	**116.72**	**354**	*e*PKPdf	**PKiKP**	**13 37 17.2**	**+0.8**
SPA0				*e*PS	**PKKPdf**	**13 48 08.8**	**-3.9**
SPITS	**Spitsbergen Ar**	**116.72**	**354**	PKP	**PKiKP**	**13 37 16.4**	**0.0**
	comp=Z,8.5nm,0.6s,baz=137,slow=12,SNR=15						
L53A	**Girard**	**116.75**	**51**	PKiKP	**PKPdf**	**13 37 17.3**	**-0.1**
	baz=272						
GUY2C	**Guyana, Caldas**	**116.79**	**92**	*e*P	**PKiKP**	**13 37 21.2**	**+2.3**
PRAC	**Prado**	**116.84**	**94**	*e*P	PP	13 38 18.9	-8.2
ALLY	**Alegheny Colle**	**116.84**	**51**	IAMs_20	IAMs_20	14 21 40.4	
	comp=Z,7µm,20.0s						
NAZ	**Nazwa, Dubai**	**116.88**	**290**	*i* P	**PKPdf**	**13 37 18.0**	**-0.2**
	SNR=18						
FAQ	**Al Faqa, Dubai**	**116.91**	**290**	*i* P	**PKPdf**	**13 37 18.1**	**-0.1**
	SNR=12						
FAQ				*i* P	**PKiKP**	**13 37 20.0**	**+1.7**
	SNR=7.5						
ERPA	**Erie**	**116.94**	**51**	PKiKP	**PKPdf**	**13 37 17.5**	**-0.2**
	baz=272						
T56A	**Rocky Mt**	**116.96**	**56**	PKiKP	**PKPdf**	**13 37 17.5**	**-0.5**
	baz=269						
N54A	**Moraine State**	**116.98**	**52**	PKiKP	**PKPdf**	**13 37 16.2**	**-1.7**
	baz=271						
N54A	**Moraine State**	**116.98**	**52**	IAMs_20	IAMs_20	14 19 24.0	
	comp=Z,6µm,22.0s						
HOPEN	**Hopen**	**116.99**	**351**	*e*PKPdf	**PKPdf**	**13 37 16.8**	**-0.1**
HOPEN				*e*SP	SP	13 48 10.0	+3.2
HOPEN				IVMs_BB	IVMs_BB	14 16 24.4	
	comp=Z,4µm,3.5s						
ASUD	**Al Ashush, Dub**	**117.14**	**290**	*i* P	**PKPdf**	**13 37 17.7**	**-0.9**
	SNR=21						
V57A	**Coltrane Farms**	**117.15**	**58**	PKiKP	**PKPdf**	**13 37 17.9**	**-0.4**
	baz=269						
Y58A	**Scranton**	**117.18**	**60**	IAMs_20	IAMs_20	14 21 21.1	
	comp=Z,6µm,20.0s						
M54A	**Oil Creek Stat**	**117.21**	**51**	PKiKP	**PKiKP**	**13 37 18.4**	**0.0**
	baz=272						
MACC	**Macarena, Meta**	**117.38**	**96**	*e*P	**PKPdf**	**13 37 18.7**	**-0.8**
MOTC	**Monteria, Cord**	**117.41**	**89**	*e*P	**PKPdf**	**13 37 15.6**	**-3.9**
AJN	**Ajban**	**117.44**	**289**	*i* P	**PKPdf**	**13 37 18.9**	**-0.3**
	SNR=8.1						
T57A	**Hurt**	**117.58**	**57**	PKiKP	**PKiKP**	**13 37 19.2**	**+0.1**
	baz=270						
T57A	**Hurt**	**117.58**	**57**	IAMs_20	IAMs_20	14 20 00.5	
	comp=Z,6µm,22.0s						
V58A	**Windy Hill, Pi**	**117.68**	**58**	IAMs_20	IAMs_20	14 24 25.2	
	comp=Z,7µm,20.0s						
ROSC	**El Rosal**	**117.69**	**93**	PP	PP	13 38 35.3	+1.8
	comp=Z,4.2nm,0.3s,baz=79,slow=12,SNR=4.5						
S57A	**Dark Hollow, R**	**117.82**	**56**	IAMs_20	IAMs_20	14 25 11.7	
	comp=Z,6µm,20.0s						
HSPB	**Hornsund (broa**	**117.84**	**353**	*e*PKPdf	**PKiKP**	**13 37 19.6**	**+1.1**
HSPB				*e*PP	**PP**	**13 38 33.9**	**+1.8**
HSPB				*e*SP	SP	13 48 13.7	-0.8
HSPB				*e*SS	**SS**	**13 54 47.7**	**+3.5**
HSPB				IVMs_BB	IVMs_BB	14 31 24.1	
	comp=Z,2µm,3.8s						
H53A	**Bobcaygeon**	**117.84**	**48**	PKiKP	**PKPdf**	**13 37 19.2**	**-0.2**
	baz=274						
Y59A	**Loris**	**117.84**	**60**	IAMs_20	IAMs_20	14 21 51.6	
	comp=Z,6µm,20.0s						
P56A	**Dayton Farm, R**	**117.89**	**54**	PKiKP	**PKPdf**	**13 37 18.8**	**-0.9**
	baz=271						
MATQ	**Matagami**	**117.95**	**42**	PKiKP	**PKPdf**	**13 37 18.7**	**-0.7**
	baz=278						
WVNY	**West Valley, N**	**117.96**	**50**	IAMs_20	IAMs_20	14 20 51.8	
	comp=Z,5µm,22.0s						
PTBC	**PUERTO BERRIO,**	**118.01**	**91**	*e*P	PP	13 38 26.4	-8.9
O56A	**Blue Knob Stat**	**118.08**	**53**	PKiKP	**PKPdf**	**13 37 19.3**	**-0.8**
	baz=272						
ALGO	**Algonquin Park**	**118.10**	**46**	PKiKP	**PKPdf**	**13 37 19.0**	**-0.8**
	baz=275						
G54A	**Lake Saint Pet**	**118.13**	**47**	PKiKP	**PKiKP**	**13 37 20.0**	**0.0**
	baz=275						
U58A	**Oxford**	**118.15**	**57**	PKiKP	**PKPdf**	**13 37 20.1**	**-0.2**
	baz=270						
SPBC	**San Pablo de B**	**118.15**	**92**	*e*P	**PKPdf**	**13 37 18.6**	**-2.4**
T58A	**Grand View Acr**	**118.16**	**57**	PKiKP	**PKPdf**	**13 37 19.6**	**-0.6**
	baz=270						
CHIC	**Chingaza**	**118.20**	**94**	*e*P	PP	13 38 22.4	-15
Q57A	**Strasburg**	**118.23**	**54**	PKiKP	**PKPdf**	**13 37 19.8**	**-0.6**
	baz=271						
VLDQ	**Val d'Or**	**118.28**	**44**		**PKPdf**	**13 37 20.0**	**-0.1**
M56A	**Emporium**	**118.32**	**51**	PKiKP	**PKPdf**	**13 37 20.2**	**-0.3**
	baz=273						
Y60A	**Bolivia**	**118.39**	**60**	IAMs_20	IAMs_20	14 23 53.1	
	comp=Z,5µm,20.0s						
V59A	**Middlesex**	**118.39**	**58**	PKiKP	**PKPdf**	**13 37 20.0**	**-0.7**
	baz=270						
MMNY	**Mt. Morris Dam**	**118.46**	**50**	IAMs_20	IAMs_20	14 20 26.9	
	comp=Z,6µm,21.0s						
LSQQ	**Lebel-sur-Quev**	**118.47**	**43**	PKiKP	**PKPdf**	**13 37 20.0**	**-0.5**
	baz=278						
P57A	**Homestead Farm**	**118.53**	**54**	IAMs_20	IAMs_20	14 29 29.2	
	comp=Z,6µm,18.0s						
S58A	**Poland Farm, P**	**118.54**	**56**	PKiKP	**PKPdf**	**13 37 20.1**	**-0.8**
	baz=271						
S58A	**Poland Farm, P**	**118.54**	**56**	IAMs_20	IAMs_20	14 25 40.7	
	comp=Z,5µm,19.0s						
CPUP	**Villa Florida**	**118.63**	**133**	PKP	**PKPdf**	**13 37 20.8**	**-0.8**
	comp=Z,8.9nm,1.0s,baz=220,slow=3.0,SNR=10						
CPUP				PP	**PP**	**13 38 37.2**	**-1.1**
	comp=Z,23nm,1.3s,baz=237,slow=7.4,SNR=7.5						
CPUP				PKKPbc	**PKKPbc**	**13 47 38.0**	**0.0**
	comp=Z,16nm,1.1s,baz=69,slow=3.5,SNR=11						
R58B	**Mineral**	**118.67**	**55**	PKiKP	**PKPdf**	**13 37 20.7**	**-0.5**
	baz=271						
R58B	**Mineral**	**118.67**	**55**	IAMs_20	IAMs_20	14 20 50.2	
	comp=Z,6µm,20.0s						
CNNC	**Cliffs of the**	**118.67**	**59**	IAMs_20	IAMs_20	14 21 53.6	
	comp=Z,7µm,21.0s						
L56A	**Greenwood**	**118.75**	**51**	PKiKP	**PKPdf**	**13 37 20.9**	**-0.4**
	baz=274						
L56A	**Greenwood**	**118.75**	**51**	IAMs_20	IAMs_20	14 28 40.8	
	comp=Z,4µm,18.0s						
O57A	**Amberson**	**118.79**	**53**	PKiKP	**PKPdf**	**13 37 20.8**	**-0.6**
	baz=272						
KIRV	**Kirov**	**118.80**	**328**	PKP	**PKPdf**	**13 37 20.7**	**0.0**
	comp=Z,32nm,0.7s,baz=17,slow=0.7,SNR=22						
KIRV				PP	**PP**	**13 38 35.6**	**-3.6**
	comp=Z,20nm,0.9s,baz=98,slow=2.0,SNR=4.4						
KIRV	**Kirov**	**118.80**	**328**	*i* PKIKP	**PKiKP**	**13 37 21.0**	**+0.2**
N57A	**Milroy**	**118.83**	**52**	PKiKP	**PKPdf**	**13 37 20.9**	**-0.5**
	baz=273						
SMLC	**San Martn de**	**118.94**	**89**	*e*P	PP	13 38 27.6	-14
T59A	**Double "B" Far**	**118.94**	**57**	IAMs_20	IAMs_20	14 24 44.5	
	comp=Z,6µm,20.0s						
ARGC	**Ariguani, Magd**	**119.02**	**88**	*e*P	**PP**	**13 38 37.4**	**-4.8**
CBN	**Corbin Frederi**	**119.06**	**55**	IAMs_20	IAMs_20	14 21 02.6	
	comp=Z,7µm,21.0s						
M57A	**Sunshine Farm,**	**119.12**	**52**	PKiKP	**PKiKP**	**13 37 22.0**	**0.0**
	baz=274						
M57A	**Sunshine Farm,**	**119.12**	**52**	IAMs_20	IAMs_20	14 24 05.7	
	comp=Z,7µm,20.0s						
RUSC	**La Rusia**	**119.16**	**92**	*e*P	PKiKP	13 37 32.8	+9.2
J56A	**Wolcott**	**119.18**	**49**	PKiKP	**PKPdf**	**13 37 21.2**	**-0.8**
	baz=275						
V60A	**Jim Taylor Roa**	**119.19**	**58**	IAMs_20	IAMs_20	14 24 06.1	
	comp=Z,7µm,20.0s						
L57A	**Andrews Acres**	**119.29**	**51**	PKiKP	**PKPdf**	**13 37 21.9**	**-0.4**
	baz=274						
SMRC	**Santa Marta, M**	**119.33**	**86**	*e*P	**PP**	**13 38 38.3**	**-6.1**
O58A	**Lewisberry**	**119.34**	**53**	PKiKP	**PKPdf**	**13 37 21.9**	**-0.6**
	baz=273						
E55A	**Montcerf-Lytto**	**119.43**	**46**	PKiKP	**PKPdf**	**13 37 22.2**	**-0.1**
	baz=277						
N58A	**Sunbury**	**119.46**	**52**	PKiKP	**PKPdf**	**13 37 22.2**	**-0.4**
	baz=274						
K57A	**Scipio Center**	**119.48**	**50**	PKiKP	**PKPdf**	**13 37 22.4**	**-0.3**
	baz=275						
PAGS	**Pennsylvania G**	**119.49**	**53**	IAMs_20	IAMs_20	14 21 41.6	
	comp=Z,7µm,20.0s						
BJO1	**Bjornoya**	**119.51**	**351**	*e*PP	PP	13 38 45.6	+2.0
BJO1				*e*PS	**PS**	**13 48 35.5**	**+3.0**
BJO1				*e*SS	SS	13 55 10.5	+4.6
DAG	**Danmarks Havn**	**119.55**	**2**	*i* P	**PKPdf**	**13 37 19.1**	**-2.7**
DAG	**Danmarks Havn**	**119.55**	**2**	*i* PKIKP	**PKPdf**	**13 37 19.1**	**-2.7**
DAG	**Danmarks Havn**	**119.55**	**2**	*i* P	**PKPdf**	**13 37 19.2**	**-2.7**
T60A	**Surry**	**119.60**	**56**	IAMs_20	IAMs_20	14 25 02.8	
	comp=Z,6µm,19.0s						
NUUG	**Nuugaatsiaq**	**119.73**	**14**	*i* P	**PKiKP**	**13 37 22.6**	**+0.3**
D55A	**Sainte-Anne-du**	**119.75**	**45**	PKiKP	**PKPdf**	**13 37 22.7**	**-0.3**
	baz=278						
MVL	**Millersville**	**119.79**	**53**	IAMs_20	IAMs_20	14 21 11.5	
	comp=Z,6µm,21.0s						
U61A	**Possum Corner**	**119.84**	**57**	PKiKP	**PKPdf**	**13 37 22.8**	**-0.7**
	baz=271						
U61A	**Possum Corner**	**119.84**	**57**	IAMs_20	IAMs_20	14 26 05.4	
	comp=Z,7µm,20.0s						
BINY	**Binghamton**	**119.91**	**51**	PKiKP	**PKiKP**	**13 37 23.6**	**+0.1**
	baz=275						
BINY	**Binghamton**	**119.91**	**51**	IAMs_20	IAMs_20	14 24 29.5	
	comp=Z,5µm,21.0s						
L58A	**Harry Jones Me**	**120.03**	**51**	PKiKP	**PKPdf**	**13 37 23.2**	**-0.5**
	baz=275						
K58A	**Earlville**	**120.11**	**50**	PKiKP	**PKPdf**	**13 37 23.1**	**-0.8**
	baz=275						
K58A	**Earlville**	**120.11**	**50**	IAMs_20	IAMs_20	14 22 30.7	
	comp=Z,7µm,21.0s						
E56A	**St. Veronique**	**120.12**	**45**	PKiKP	**PKiKP**	**13 37 23.8**	**0.0**
	baz=278						
H57A	**Richville**	**120.13**	**48**	PKiKP	**PKPdf**	**13 37 23.1**	**-0.7**
	baz=276						
N59A	**State Game Lan**	**120.17**	**52**	PKiKP	**PKPdf**	**13 37 23.6**	**-0.5**
	baz=274						
ETMB	**Extrema**	**120.17**	**112**	*e*P	**PKiKP**	**13 37 25.3**	**+0.4**
D56A	**ZEC Mazanza, M**	**120.23**	**45**	PKiKP	**PKPdf**	**13 37 23.1**	**-0.9**
	baz=278						
G57A	**Newington**	**120.34**	**47**	PKiKP	**PKPdf**	**13 37 24.1**	**-0.1**
	baz=277						
P60A	**Greenville**	**120.35**	**53**	PKiKP	**PKPdf**	**13 37 24.4**	**0.0**
	baz=274						
P60A	**Greenville**	**120.35**	**53**	IAMs_20	IAMs_20	14 21 06.3	
	comp=Z,7µm,22.0s						
WUPA	**West Chester U**	**120.36**	**53**	IAMs_20	IAMs_20	14 21 06.7	
	comp=Z,4µm,22.0s						
M59A	**Waymart**	**120.38**	**51**	PKiKP	**PKPdf**	**13 37 24.0**	**-0.5**
	baz=275						
PSUB	**Penn St. - Bra**	**120.48**	**53**	IAMs_20	IAMs_20	14 21 20.8	
	comp=Z,7µm,21.0s						
O60A	**Telford**	**120.49**	**53**	PKiKP	**PKPdf**	**13 37 24.4**	**-0.2**
	baz=274						
I58A	**Old Forge**	**120.51**	**49**	PKiKP	**PKPdf**	**13 37 24.7**	**0.0**
	baz=276						
L59A	**Walton**	**120.61**	**50**	PKiKP	**PKPdf**	**13 37 24.9**	**0.0**
	baz=275						
L59A	**Walton**	**120.61**	**50**	IAMs_20	IAMs_20	14 24 57.0	
	comp=Z,5µm,20.0s						
K59A	**Cooperstown**	**120.69**	**50**	PKiKP	**PKPdf**	**13 37 24.6**	**-0.4**
	baz=276						
LVZ	**Lovozero**	**120.70**	**341**	*i* PKIKP	**PKiKP**	**13 37 25.2**	**+0.8**
E57A	**Chemin Saint G**	**120.74**	**45**	PKiKP	**PKiKP**	**13 37 25.1**	**0.0**
	baz=279						
J59A	**Piesco**	**120.87**	**49**	PKiKP	**PKPdf**	**13 37 24.6**	**-0.8**
	baz=277						
CNLB	**Canela**	**120.91**	**140**	*e*P	**PKiKP**	**13 37 26.8**	**+0.7**
G58A	**Ormstown**	**120.98**	**47**	PKiKP	**PKPdf**	**13 37 25.1**	**-0.3**
	baz=278						
H58A	**Gabriels**	**120.99**	**48**	PKiKP	**PKPdf**	**13 37 25.5**	**-0.1**
	baz=277						
M60A	**Port Jervis**	**121.00**	**51**	PKiKP	**PKPdf**	**13 37 25.4**	**-0.2**
	baz=275						
L60A	**Shokan**	**121.24**	**51**	PKiKP	**PKPdf**	**13 37 25.5**	**-0.6**
	baz=276						
APA	**Apatity**	**121.28**	**341**	⇑*i*PKIKP	**PKPdf**	**13 37 24.6**	**-0.7**
APA				*i*		13 44 17.0	
APA				*i* PPS	PPS	13 50 08.0	
APA				pmax	pmax		
	comp=Z,31nm,0.8s						
H59A	**Cadyville**	**121.31**	**47**	PKiKP	**PKPdf**	**13 37 25.6**	**-0.5**
	baz=278						
E58A	**La Victoria**	**121.34**	**45**	PKiKP	**PKPdf**	**13 37 25.7**	**-0.4**
	baz=279						
BELG	**Belogornoye**	**121.43**	**322**	PKP	**PKiKP**	**13 37 26.2**	**0.0**
	comp=Z,335nm,0.9s,baz=333,slow=0.9,SNR=33						
BELG				PP	**PP**	**13 38 55.8**	**-1.7**
	comp=Z,40nm,0.9s,baz=291,slow=2.5,SNR=1.6						
D58A	**Chemin du LacG**	**121.49**	**45**	PKiKP	**PKPdf**	**13 37 25.6**	**-0.8**
	baz=280						
LATQ	**La Tuque**	**121.51**	**44**	PKiKP	**PKPdf**	**13 37 26.0**	**-0.4**
	baz=280						
ITAB	**Concordia**	**121.55**	**137**	*e*P	**PKiKP**	**13 37 27.6**	**+0.3**
PAL	**Palisades**	**121.57**	**52**	PKiKP	**PKPdf**	**13 37 25.9**	**-0.8**
	baz=276						
URIC	**Uribia, Colomb**	**121.59**	**86**	*e*P	PP	13 38 50.9	-8.9
KEV	**Kevo**	**121.60**	**345**	IAMs_20	IAMs_20	14 35 10.6	
	comp=Z,5µm,21.0s						
TMCR	**Tamitsa**	**121.61**	**337**	*e*PKIKP	**PKPdf**	**13 37 24.8**	**-1.2**
TMCR				*e*		13 38 54.7	
M61A	**Granite Spring**	**121.64**	**51**	PKiKP	**PKPdf**	**13 37 26.7**	**-0.1**
	baz=276						
SIV	**San Ignacio**	**121.67**	**121**	PKP	**PKPdf**	**13 37 26.8**	**-0.9**
	comp=Z,9.1nm,1.0s,baz=231,slow=2.8,SNR=17						
SIV				PP	**PP**	**13 39 00.3**	**+0.4**
	comp=Z,7.1nm,1.1s,baz=237,slow=7.6,SNR=3.2						
SIV				PKKPbc	**PKKPbc**	**13 47 26.7**	**+0.1**
	comp=Z,18nm,0.9s,baz=92,slow=5.3,SNR=28						
J60A	**Lant Hill Farm**	**121.68**	**49**	PKiKP	**PKPdf**	**13 37 26.2**	**-0.6**
	baz=277						
I60A	**Shoreham**	**121.70**	**48**	PKiKP	**PKPdf**	**13 37 26.5**	**-0.4**
	baz=278						
L61A	**Hillsdale 1, H**	**121.71**	**50**	PKiKP	**PKiKP**	**13 37 27.1**	**0.0**
	baz=276						
HAMF	**Hammerfest**	**121.72**	**347**	*e*PKPdf	**PKiKP**	**13 37 26.6**	**+0.3**
HAMF				*e*PP	**PP**	**13 38 56.7**	**-2.1**
HAMF				*e*SKSac	**SKSac**	**13 44 27.3**	**+2.4**
HAMF				*e*SP	**SP**	**13 48 52.5**	**+3.2**
HAMF				*e*SS	**SS**	**13 55 39.9**	**+5.6**
HAMF				IVMs_BB	IVMs_BB	14 24 09.2	
	comp=Z,3µm,4.0s						
F59A	**Saint Guilaume**	**121.77**	**46**	PKiKP	**PKPdf**	**13 37 26.5**	**-0.4**
	baz=279						
SUMG	**Summit**	**121.78**	**9**	*i* P	**PKPdf**	**13 37 26.6**	**-0.1**
SUMG				*i*		13 38 56.4	
SUMG	**Summit**	**121.78**	**9**	*i* PKIKP	**PKPdf**	**13 37 26.6**	**-0.1**
SUMG				*i*		13 38 56.4	
SUMG	**Summit**	**121.78**	**9**	*i* P	**PKPdf**	**13 37 26.6**	**-0.1**
SUMG				*i*		13 38 56.5	
KSCT	**Kent School, K**	**121.81**	**51**	IAMs_20	IAMs_20	14 25 56.9	
	comp=Z,6µm,19.0s						
K61A	**Williamstown**	**121.87**	**50**	PKiKP	**PKPdf**	**13 37 26.8**	**-0.4**
	baz=277						
DBG	**Daneborg**	**121.94**	**3**	*i* P	**PKPdf**	**13 37 25.6**	**-0.8**
H60A	**Morristown**	**122.02**	**47**	PKiKP	**PKPdf**	**13 37 27.2**	**-0.3**
	baz=279						
ARA0	**ARCESS Array S**	**122.13**	**345**	*e*PKPdf	**PKiKP**	**13 37 27.2**	**+0.1**
ARCES	**ARCESS Array B**	**122.13**	**345**	PKP	**PKPdf**	**13 37 25.9**	**-1.0**
	comp=Z,28nm,0.6s,baz=76,slow=1.5,SNR=61						
ARCES				PKKPbc	**PKKPab**	**13 47 24.0**	**+0.9**
	comp=Z,17nm,1.0s,baz=245,slow=1.9,SNR=10.0						
ARCES	**ARCESS Array B**	**122.13**	**345**	PKIKP	**PKPdf**	**13 37 26.0**	**-1.0**
SDV	**Santo Domingo**	**122.26**	**90**	PKP	**PKPdf**	**13 37 27.6**	**-1.4**
	comp=Z,17nm,0.8s,baz=290,slow=2.6						
SDV	**Santo Domingo**	**122.26**	**90**	IAMs_20	IAMs_20	14 18 55.9	
	comp=Z,6µm,21.0s						
SDV	**Santo Domingo**	**122.26**	**90**	*e*P	**PKiKP**	**13 37 30.5**	**+1.3**
SDV	**Santo Domingo**	**122.26**	**90**	*e*P	**PKiKP**	**13 37 29.6**	**+0.4**
YLE	**Yale**	**122.27**	**51**	IAMs_20	IAMs_20	14 33 10.9	
	comp=Z,6µm,18.0s						
SUR	**Sutherland**	**122.28**	**213**	IAMs_20	IAMs_20	14 38 05.9	
	comp=Z,6µm,19.0s						
M62A	**Hamden**	**122.28**	**51**	PKiKP	**PKPdf**	**13 37 27.1**	**-0.9**
	baz=276						
J61A	**Chester**	**122.30**	**49**	PKiKP	**PKPdf**	**13 37 27.2**	**-0.9**
	baz=278						
F60A	**Warwick**	**122.32**	**46**	PKiKP	**PKPdf**	**13 37 27.5**	**-0.4**
	baz=280						
L61B	**Northampton**	**122.32**	**50**	PKiKP	**PKiKP**	**13 37 28.4**	**+0.1**
	baz=277						
L62A	**Suffield**	**122.39**	**50**	IAMs_20	IAMs_20	14 21 54.1	
	comp=Z,7µm,22.0s						
H61A	**Lyndonville**	**122.57**	**47**	PKiKP	**PKPdf**	**13 37 28.2**	**-0.3**
	baz=279						
QUA2	**Belchertown**	**122.59**	**50**	IAMs_20	IAMs_20	14 22 13.3	
	comp=Z,7µm,22.0s						
E60A	**Ste Agathe de**	**122.59**	**45**	PKiKP	**PKPdf**	**13 37 28.5**	**0.0**
	baz=281						
KLMR	**Klimovskoe**	**122.61**	**333**	*e*PKIKP	**PKPdf**	**13 37 25.5**	**-2.6**
KLMR				pmax	pmax		
	comp=Z,282nm,1.5s						
KLMR	**Klimovskoe**	**122.61**	**333**	*e*PKPdf	**PKPdf**	**13 37 25.5**	**-2.6**
KLMR				AMP		13 37 30.8	
	comp=Z,282nm,1.5s						
KLMR				*e*PP	PP	13 38 56.5	-8.7
KLMR				*e*PKKPbc	**PKKPab**	**13 47 21.5**	**+0.3**
KLMR				*e*SKKPbc	SKKPbc	13 51 17.3	+2.6
KLMR				LQ	LQ	14 15 46.8	
KLMR				LQ	LQ	14 15 46.8	
KLMR				LR	LR	14 24 36.3	
LBNH	**Lisbon**	**122.62**	**48**	PKiKP	**PKPdf**	**13 37 28.3**	**-0.3**
	baz=279						
BOSA	**Boshof**	**122.64**	**219**	PKP	**PKiKP**	**13 37 29.6**	**0.0**
	comp=Z,60nm,1.0s,baz=118,slow=2.0,SNR=30						
BOSA				PP	**PP**	**13 39 06.0**	**+0.3**
	comp=Z,21nm,1.2s,baz=151,slow=10,SNR=2.4						
BOSA				PKKPbc	**PKKPab**	**13 47 24.6**	**0.0**
	comp=Z,5.7nm,1.1s,baz=322,slow=5.0,SNR=3.7						
BOSA	**Boshof**	**122.64**	**219**	PKIKP	**PKiKP**	**13 37 30.7**	**+1.1**
BOSA	**Boshof**	**122.64**	**219**	PKPdf	**PKiKP**	**13 37 30.7**	**+1.1**
G61A	**St-Isidore-de-**	**122.73**	**46**	PKiKP	**PKPdf**	**13 37 28.7**	**-0.2**
	baz=280						
UCCT	**U. Connecticut**	**122.74**	**51**	IAMs_20	IAMs_20	14 27 08.4	
	comp=Z,5µm,19.0s						
D60A	**Saint Jean D'O**	**122.84**	**44**	PKiKP	**PKPdf**	**13 37 28.9**	**-0.1**
	baz=282						
M63A	**Gales Ferry**	**122.92**	**51**	IAMs_20	IAMs_20	14 31 10.2	
	comp=Z,5µm,19.0s						
F61A	**St Evariste**	**122.97**	**46**	PKiKP	**PKPdf**	**13 37 29.3**	**+0.1**
	baz=281						
KTK1	**Kautokeino**	**123.06**	**346**	*e*PKPdf	**PKPdf**	**13 37 28.5**	**-0.3**
I62A	**Tamworth**	**123.10**	**48**	PKiKP	**PKiKP**	**13 37 29.9**	**+0.2**
	baz=279						
H62A	**Milan**	**123.11**	**47**	PKiKP	**PKPdf**	**13 37 29.3**	**-0.3**
	baz=280						
K63A	**Dunstable**	**123.14**	**50**	PKiKP	**PKiKP**	**13 37 29.8**	**-0.1**
	baz=278						
HRV	**Adam Dziewonsk**	**123.14**	**50**	PKiKP	**PKPdf**	**13 37 29.7**	**0.0**
	baz=278						
HRV	**Adam Dziewonsk**	**123.14**	**50**	IAMs_20	IAMs_20	14 22 28.8	
	comp=Z,7µm,22.0s						
L63A	**North Scituate**	**123.19**	**50**	PKiKP	**PKPdf**	**13 37 29.7**	**-0.1**
	baz=278						
L63A	**North Scituate**	**123.19**	**50**	IAMs_20	IAMs_20	14 26 53.2	
	comp=Z,6µm,20.0s						
E61A	**Lac Etchemin**	**123.23**	**45**	PKiKP	**PKPdf**	**13 37 29.5**	**-0.3**
	baz=282						
BRYW	**Bryant College**	**123.23**	**50**	IAMs_20	IAMs_20	14 26 54.4	
	comp=Z,5µm,19.0s						
SAML	**Samuel**	**123.24**	**113**	IAMs_20	IAMs_20	14 22 42.1	
	comp=Z,4µm,22.0s						
D61A	**St Aubert, Com**	**123.28**	**44**	PKiKP	**PKPdf**	**13 37 29.4**	**-0.3**

	baz=282						
JETT	**Jettan, Norway**	**123.28**	**347**	*e*PKPdf	**PKiKP**	**13 37 30.0**	**+0.5**
JETT				*e*PS	**PS**	**13 49 07.4**	**+1.0**
PTGB	**Pitanga**	**123.29**	**135**	*e*P	**PKiKP**	**13 37 31.8**	**+0.9**
WES	**Weston**	**123.33**	**50**	IAMs_20	IAMs_20	14 22 34.9	
	comp=Z,7µm,22.0s						
MAK	**Makhachkala**	**123.42**	**311**	*e*P	**Pdif**	**13 33 58.1**	**-4.1**
MAK				*i*		13 37 26.6	
MAK				*e*		13 39 09.8	
MAK				*e*		13 44 22.9	
MAK				*e*PS	**PS**	**13 49 01.7**	**-6.9**
MAK				*e*SS	SS	13 55 53.3	-4.5
MAK				pmax	pmax		
	comp=Z,657nm,1.3s						
G62A	**West of Eustis**	**123.43**	**46**	PKiKP	**PKPdf**	**13 37 30.1**	**-0.1**
	baz=281						
BCX	**Boston College**	**123.45**	**50**	IAMs_20	IAMs_20	14 23 10.0	
	comp=Z,6µm,22.0s						
TRO	**Tromso**	**123.53**	**348**	*e*PKPdf	**PKiKP**	**13 37 30.1**	**+0.3**
TRO				IVmB_BB		13 37 44.7	
	comp=Z,2µm,3.9s						
TRO				*e*PS	**PS**	**13 49 10.1**	**+1.7**
TRO				*e*SS	SS	13 55 59.4	+2.2
TRO				IVMs_BB	IVMs_BB	14 18 53.2	
	comp=Z,4µm,4.3s						
M64A	**Tiverton**	**123.53**	**51**	IAMs_20	IAMs_20	14 35 19.2	
	comp=Z,5µm,18.0s						
SFJD	**Kangerlussuaq**	**123.54**	**17**	PP	PP	13 39 09.4	-1.7
	baz=315,slow=10.0						
SFJD	**Kangerlussuaq**	**123.54**	**17**	*i* P	**PKPdf**	**13 37 29.3**	**-0.3**
SFJD	**Kangerlussuaq**	**123.54**	**17**	*i* PKIKP	**PKPdf**	**13 37 29.3**	**-0.3**
SFJD	**Kangerlussuaq**	**123.54**	**17**	*i* P	**PKPdf**	**13 37 29.4**	**-0.3**
I63A	**Otisfield**	**123.61**	**48**	PKiKP	**PKiKP**	**13 37 30.7**	**-0.1**
	baz=280						
L64A	**Middleborough**	**123.75**	**50**	IAMs_20	IAMs_20	14 23 20.0	
	comp=Z,5µm,20.0s						
GRTK	**Grand Turk**	**123.93**	**75**	IAMs_20	IAMs_20	14 21 39.7	
	comp=Z,4µm,20.0s						
VILB	**Vilhena**	**123.94**	**118**	*e*P	**PKPdf**	**13 37 31.5**	**-0.6**
M65A	**Busby, Falmout**	**123.94**	**51**	IAMs_20	IAMs_20	14 35 48.3	
	comp=Z,5µm,18.0s						
D62A	**Allapoint, All**	**124.06**	**44**	PKiKP	**PKPdf**	**13 37 31.3**	**0.0**
	baz=283						
D62A	**Allapoint, All**	**124.06**	**44**	IAMs_20	IAMs_20	14 29 14.8	
	comp=Z,7µm,21.0s						
G63A	**Kingsbury**	**124.09**	**46**	PKiKP	**PKiKP**	**13 37 31.6**	**-0.1**
	baz=281						
TRCB	**Terra Rica**	**124.16**	**133**	*e*P	**PKPdf**	**13 37 32.4**	**0.0**
PKME	**Peaks-Kenny Pk**	**124.28**	**46**	PKiKP	**PKiKP**	**13 37 31.9**	**-0.1**
	baz=282						
F63A	**Nahmakanta, Br**	**124.32**	**46**	PKiKP	**PKiKP**	**13 37 32.1**	**0.0**
	baz=282						
RDF	**Al-Radifah**	**124.36**	**294**	*e*P		13 37 31.9	
H64A	**Troy**	**124.46**	**47**	PKiKP	**PKiKP**	**13 37 32.4**	**0.0**
	baz=281						
MIB	**Mutribah**	**124.55**	**295**	*e*P		13 37 32.1	
ICESG	**Greenland Ices**	**124.55**	**12**	*i* P	**PKPdf**	**13 37 31.4**	**-0.6**
E63A	**Oxbow**	**124.63**	**45**	PKiKP	**PKPdf**	**13 37 32.2**	**-0.1**
	baz=283						
G64A	**Maxfield**	**124.66**	**46**	PKiKP	**PKPdf**	**13 37 32.4**	**0.0**
	baz=282						
D63A	**Stockholm**	**124.70**	**44**	PKiKP	**PKPdf**	**13 37 32.3**	**-0.2**
	baz=284						
F64A	**Sherman**	**124.80**	**45**	PKiKP	**PKPdf**	**13 37 32.5**	**-0.3**
	baz=283						
RST	**Umm Al-Ruwaisa**	**124.84**	**295**	*e*P		13 37 32.5	
PQI	**Presque Isle**	**124.84**	**44**		**PKiKP**	**13 37 33.6**	**+0.5**
E64A	**Bridgewater**	**125.03**	**44**	PKiKP	**PKPdf**	**13 37 33.0**	**-0.1**
	baz=284						
NUUK	**Nuuk**	**125.11**	**20**	*i* P	**PKPdf**	**13 37 32.4**	**-0.3**
VRH	**Novokhopyorsk**	**125.29**	**322**	*i* PKIKP	**PKPdf**	**13 37 33.0**	**-0.5**
VRH				*e*		13 39 19.4	
VRH				pmax	pmax		
	comp=Z,180nm,0.8s						
JMIC	**Jan Mayen**	**125.43**	**359**	*e*PKPdf	**PKiKP**	**13 37 34.2**	**+0.6**
G65A	**Princeton**	**125.49**	**46**	PKiKP	**PKPdf**	**13 37 34.2**	**+0.2**
	baz=283						
G65A	**Princeton**	**125.49**	**46**		**PKPdf**	**13 37 32.8**	**-1.3**
SCO	**Scoresbysund**	**125.62**	**4**	*i* P	**PKiKP**	**13 37 34.1**	**+0.2**
SCO	**Scoresbysund**	**125.62**	**4**	*i* PKIKP	**PKiKP**	**13 37 34.1**	**+0.2**
SCO	**Scoresbysund**	**125.62**	**4**	*i* P	**PKiKP**	**13 37 34.1**	**+0.2**
PP1B	**Ponte de Pedra**	**125.72**	**127**	*e*P	**PKPdf**	**13 37 35.1**	**-0.3**
MOS	**Moscow**	**125.81**	**328**	*i* PKIKP	**PKPdf**	**13 37 32.6**	**-1.7**
MOS				*e*		13 39 27.0	
MOS				pmax	pmax		
	comp=Z,324nm,1.7s						
LOF	**Lofoten**	**125.86**	**349**	*e*PKPdf	**PKPdf**	**13 37 33.9**	**-0.2**
LOF				*e*PP	**PP**	**13 39 28.1**	**+1.5**
LOF				*e*SS	SS	13 56 33.5	+7.0
LOF				IVMs_BB	IVMs_BB	14 21 56.5	
	comp=Z,5µm,4.4s						
GNI	**Garni**	**125.89**	**308**	PKP	**PKiKP**	**13 37 36.1**	**+0.4**
	comp=Z,121nm,1.0s,baz=175,slow=2.7,SNR=36						
GNI	**Garni**	**125.89**	**308**	P	**PKiKP**	**13 37 36.3**	**+0.6**
GNI	**Garni**	**125.89**	**308**	*i* P	**PKiKP**	**13 37 36.6**	**+0.9**
FRTB	**Fartura**	**125.90**	**136**	*e*P	**PKiKP**	**13 37 36.3**	**+0.3**
PCMB	**Pacaembu**	**125.90**	**133**	*e*P	**PKiKP**	**13 37 36.6**	**+0.5**
RAYN	**Ar Rayn**	**125.98**	**287**	*i* P	**PKiKP**	**13 37 36.0**	**-0.1**
	SNR=110						
ZEI	**Tsey**	**126.05**	**311**	*i* PKIKP	**PKPdf**	**13 37 35.4**	**-0.1**
ZEI				pmax	pmax		
	comp=Z,127nm,1.0s						
NCK	**Nalchik**	**126.13**	**312**	*i* PKIKP	**PKPdf**	**13 37 35.3**	**-0.1**
FAUS	**Fauske**	**126.15**	**347**	*e*PKPdf	**PKiKP**	**13 37 36.2**	**+1.1**
FAUS				*e*SKSac	**SKSac**	**13 44 41.3**	**+2.1**
FAUS				*e*SS	**SS**	**13 56 33.3**	**+3.1**
FAUS				IVMs_BB	IVMs_BB	14 24 17.0	
	comp=Z,4µm,5.1s						
GOF	**Gofitskoye**	**126.17**	**314**	⇓*i*PKIKP	**PKiKP**	**13 37 35.9**	**+0.1**
GOF				pmax	pmax		
	comp=Z,244nm,1.3s						
TASB	**TASBURUN-IGDIR**	**126.30**	**308**	*e*P	**PKiKP**	**13 37 37.1**	**+0.8**
LPSR	**Galich'ya Gora**	**126.41**	**324**	*i* PKIKP	**PKPdf**	**13 37 35.6**	**0.0**
LPSR				pmax	pmax		
	comp=Z,380nm,1.2s						
KBZ	**Khabaz**	**126.58**	**313**	PKP	**PKiKP**	**13 37 36.6**	**-0.1**
	comp=Z,43nm,1.0s,baz=78,slow=2.8,SNR=30						
KBZ				PP	**PP**	**13 39 32.4**	**0.0**
	comp=Z,21nm,1.1s,baz=47,slow=7.3,SNR=5.7						
AKH	**Akhalkalaki**	**126.61**	**310**	⇑P	**PKiKP**	**13 37 38.0**	**+0.9**
AKH	**Akhalkalaki**	**126.61**	**310**	*e*P	**PKiKP**	**13 37 37.5**	**+0.4**
OBN	**Obninsk**	**126.62**	**328**	PKP	**PKPdf**	**13 37 36.0**	**+0.1**
	comp=Z,14nm,0.6s,baz=99,slow=1.3,SNR=27						
OBN				PP	**PP**	**13 39 32.8**	**+0.6**
	comp=Z,4.1nm,0.4s,baz=54,slow=6.8,SNR=3.4						
OBN	**Obninsk**	**126.62**	**328***c*	*i*PKIKP	**PKiKP**	**13 37 36.3**	**-0.1**
OBN				*i*		13 37 47.2	
OBN				*i*		13 39 33.5	
OBN				*i* PS	**PS**	**13 49 32.8**	**-3.4**
OBN				*i*		13 51 11.4	
OBN				*i* SS	SS	13 56 27.8	-9.2
OBN				pmax	pmax		
	comp=Z,394nm,1.6s						
OBN	**Obninsk**	**126.62**	**328**	IAMs_20	IAMs_20	14 33 05.1	
	comp=Z,6µm,22.0s						
KVAR	**Kislovodsk Arr**	**126.67**	**313**	PKP	**PKiKP**	**13 37 37.1**	**+0.1**
	comp=Z,24nm,1.0s,baz=73,slow=20,SNR=8.8						
KVAR				PP	**PP**	**13 39 34.5**	**+1.3**
	comp=Z,21nm,1.0s,baz=258,slow=20,SNR=1.9						
KIV	**Kislovodsk**	**126.67**	**313**	⇑P	**PKiKP**	**13 37 37.1**	**+0.1**
KIV	**Kislovodsk**	**126.67**	**313**	*i* P	**PKPdf**	**13 37 36.7**	**+0.2**
	SNR=21						
KIV	**Kislovodsk**	**126.67**	**313**	*i* P	**PKiKP**	**13 37 37.3**	**+0.3**
KIV	**Kislovodsk**	**126.67**	**313**	*e*P	**Pdif**	**13 34 15.4**	**-1.4**
KIV				*i*		13 37 36.1	
KIV				*e*		13 39 30.8	
KIV				*e*PS	**PS**	**13 49 34.0**	**-3.5**
KIV				*e*SS	SS	13 56 37.7	-1.2
KIV				*e*SSS	SSS	14 01 19.1	
KIV				pmax	pmax		
	comp=Z,417nm,1.1s						
CLDR	**Caldiran**	**126.68**	**307**	*e*P	**PKPdf**	**13 37 37.1**	**+0.2**
PET01	**Itanhaem-SP**	**126.72**	**139**	*e*P	**PKPdf**	**13 37 37.1**	**-0.1**
SHA1	**Shidzhatmaz**	**126.74**	**313**	*i* PKIKP	**PKPdf**	**13 37 36.5**	**-0.3**
H09W1	**TRISTAN DA CUN**	**126.75**	**179**	PKP	**PKPdf**	**13 37 36.7**	**-0.1**
H09N1	**TRISTAN DA CUN**	**126.78**	**179**	PKP	**PKiKP**	**13 37 37.2**	**-0.1**
VSR	**Storozhevoye**	**126.79**	**322**	*i* PKIKP	**PKPdf**	**13 37 36.1**	**-0.3**
VSR				*e*		13 39 29.9	
VSR				pmax	pmax		
	comp=Z,330nm,1.5s						
NEY	**Neytrino**	**126.81**	**312***c*	*i*PKIKP	**PKPdf**	**13 37 36.7**	**-0.2**
VORD	**Divnogorie**	**126.81**	**322**	*i* PKIKP	**PKPdf**	**13 37 36.3**	**-0.1**
VORD				pmax	pmax		
	comp=Z,140nm,1.1s						
ATD	**Arta Tunnel**	**126.88**	**272**	IAMs_20	IAMs_20	14 31 46.9	
	comp=Z,3µm,20.0s						
KARS	**Kars**	**127.07**	**309**	*e*P	**PKPdf**	**13 37 37.7**	**+0.2**
PUL	**Pulkovo**	**127.07**	**335**	*i* PKIKP	**PKiKP**	**13 37 37.2**	**+0.1**
VANB	**Van**	**127.17**	**306**	*e*P	**PKiKP**	**13 37 39.8**	**+1.6**
CUKT	**Cukurca**	**127.18**	**304**	*e*P	**PKiKP**	**13 37 39.3**	**+1.0**
AGRB	**Hanur-Agry**	**127.31**	**307**	*e*P	**PKiKP**	**13 37 39.4**	**+0.8**
KONS	**Konsvik**	**127.35**	**348**	*e*PKPdf	**PKiKP**	**13 37 38.3**	**+0.8**
CHVG	**Ch'k'valeri**	**127.38**	**311**	⇓P	**PKiKP**	**13 37 38.7**	**+0.4**
CHVG	**Ch'k'valeri**	**127.38**	**311**	⇓PKIKP	**PKiKP**	**13 37 38.7**	**+0.4**
AKDM	**Akdamar-Van**	**127.52**	**306**	*e*P	**PKiKP**	**13 37 39.6**	**+0.6**
SENK	**Senkaya-Erzuru**	**127.62**	**309**	*e*P	**PKiKP**	**13 37 40.1**	**+0.9**
FINES	**FINESS Array B**	**127.64**	**338**	PKhKP	PKPpre	13 37 33.7	
	comp=Z,10nm,0.9s,baz=114,slow=4.8,SNR=3.8						
FINES				PKP	**PKPdf**	**13 37 37.0**	**-0.6**
	comp=Z,32nm,0.9s,baz=114,slow=2.3,SNR=28						
FINES				PP	**PP**	**13 39 32.3**	**-6.3**
	comp=Z,8.0nm,1.0s,baz=19,slow=8.8,SNR=1.9						
MLAZ	**Malazgirt-MUS**	**127.73**	**307**	*e*P	**PKiKP**	**13 37 40.3**	**+1.0**
ITRB	**Iturama**	**127.78**	**132**	*e*P	**PKPdf**	**13 37 38.9**	**-0.4**
VAO	**Valinhos**	**127.84**	**138**	*e*P	**PKiKP**	**13 37 39.9**	**-0.1**
SIRT	**Sirnak**	**128.07**	**305**	*e*P	**PKiKP**	**13 37 46.0**	**+6.0**
KOPR	**Koprukoy-ERZUR**	**128.10**	**308**	*e*P	**PKiKP**	**13 37 40.9**	**+0.8**
BB19B	**Bebedouro**	**128.15**	**135**	*e*P	**PKiKP**	**13 37 40.7**	**+0.1**
GURO	**Guroymak-BITLI**	**128.22**	**306**	*i* P	**PKiKP**	**13 37 41.2**	**+0.9**
SJG	**San Juan**	**128.22**	**80**	PP	PP	13 39 45.2	+1.0
	comp=Z,6.8nm,0.3s,baz=270,slow=1.5,SNR=3.2						
SJG	**San Juan**	**128.22**	**80**	IAMs_20	IAMs_20	14 21 33.7	
	comp=Z,4µm,22.0s						
SJG	**San Juan**	**128.22**	**80**	*e*P	**PKiKP**	**13 37 40.7**	**0.0**
PCRV	**Puerto La Cruz**	**128.31**	**90**	PP	PP	13 39 46.1	+1.2
	comp=Z,11nm,0.9s,baz=138,slow=4.0,SNR=4.4						
PDPR	**Patillas Dam,**	**128.33**	**80**	PKPdf	**PKiKP**	**13 37 41.1**	**+0.2**
PARB	**Paraibuna**	**128.45**	**139**	*e*P	**PKPdf**	**13 37 40.2**	**-0.3**
VRTB	**Varto-Mus**	**128.56**	**307**	*e*P	**PKiKP**	**13 37 42.4**	**+1.4**
KMBO	**Kilima Mbogo**	**128.56**	**255**	PKP	**PKiKP**	**13 37 42.3**	**+0.4**
	comp=Z,47nm,1.2s,baz=89,slow=2.6,SNR=49						
CHOM	**Cayeli-Rize**	**128.70**	**310**	*i* P	**PKiKP**	**13 37 41.5**	**+0.5**
TEND	**Ethiopian Broa**	**128.70**	**272**	*e*P	**PKiKP**	**13 37 43.0**	**+1.2**
TEND				*e*S	**SKiKP**	**13 41 09.2**	**-8.4**
KARO	**Karliova-Bingo**	**128.84**	**307**	*e*P	**PKiKP**	**13 37 42.8**	**+1.2**
SOC	**Sochi**	**128.85**	**313***c*	*i*PKIKP	**PKPdf**	**13 37 39.6**	**-0.9**
SOC				*e*PS	PS	13 49 43.4	-13
SOC				pmax	pmax		
	comp=Z,161nm,1.3s						
SOC				MLR	MLR		
	comp=Z,4µm,21.0s						
SVAN	**Silvan-Diyarba**	**128.94**	**306**	*e*P	**PKiKP**	**13 37 42.4**	**+0.8**
BNGB	**Bingl**	**129.19**	**307**	*e*P	**PKiKP**	**13 37 43.1**	**+0.9**
YEDI	**Yedisu-Bingol**	**129.20**	**308**	*e*P	**PKiKP**	**13 37 42.1**	**-0.2**
ARAG	**Araguaiana, MT**	**129.21**	**127**	*e*P	**PKPdf**	**13 37 41.6**	**-0.4**
NSS	**Namsos**	**129.30**	**347**	*e*PKPdf	**PKiKP**	**13 37 42.6**	**+1.1**
NSS				IVmB_BB		13 37 45.3	
	comp=Z,5µm,4.5s						
NSS				*e*PP	**PP**	**13 39 50.7**	**+1.4**
NSS				*e*SKPdf	**SKPdf**	**13 41 11.4**	**-4.5**
VSU	**Vasula**	**129.34**	**335**	*e*P	**PKiKP**	**13 37 41.9**	**+0.2**
ESAR	**Angra dos Reis**	**129.42**	**140**	*e*P	**PKiKP**	**13 37 43.3**	**+0.2**
ANKE	**Ethiopia-Afar**	**129.45**	**269**	*e*P	**PKiKP**	**13 37 44.2**	**+0.5**
ANKE				*e*S	SKPbc	13 41 10.8	+6.1
KTUT	**Trabzon**	**129.45**	**310**	*e*P	**PKPdf**	**13 37 41.7**	**-0.1**
LSZ	**Lusaka**	**129.50**	**233**	IAMs_20	IAMs_20	14 33 23.5	
	comp=Z,4µm,19.0s						
PTGA	**Pitinga**	**129.52**	**105**	PKP	**PKPdf**	**13 37 41.9**	**-0.8**
	comp=Z,12nm,0.8s,baz=196,slow=1.8,SNR=13						
PTGA	**Pitinga**	**129.52**	**105**	*e*P	**PKiKP**	**13 37 43.3**	**-0.2**
ERZN	**Erzincan**	**129.79**	**308**	*e*P	**PKiKP**	**13 37 43.3**	**-0.1**
DESE	**Dese**	**129.88**	**271**	*e*P	**PKiKP**	**13 37 44.8**	**+0.3**
DESE				*e*S	SKPbc	13 41 06.1	+0.1
ANN	**Anapa**	**130.07**	**315**	*i* PKIKP	**PKPdf**	**13 37 41.8**	**-1.0**
ANN				*e*		13 39 52.7	
ANN				pmax	pmax		
	comp=Z,159nm,1.8s						
ANN				MLR	MLR		
	comp=Z,13µm,24.0s						
ESPY	**Espiye-Giresun**	**130.24**	**310**	*e*P	**PKPdf**	**13 37 42.1**	**-1.2**
MTSE	**Matsula**	**130.32**	**337**	*e*P	**PKiKP**	**13 37 43.8**	**+0.2**
IPMB	**Ipameri, GO**	**130.44**	**132**	*e*P	**PKiKP**	**13 37 46.6**	**+1.3**
VAS01	**Vassouras-RJ**	**130.59**	**140**	*e*P	**PKPdf**	**13 37 44.3**	**-0.3**
AAL	**Aland**	**130.64**	**340**	*e*P	**PKPdf**	**13 37 42.7**	**-0.7**
BSCB	**Bom Sucesso**	**130.69**	**138**	*e*P	**PKiKP**	**13 37 45.4**	**-0.4**
SABA	**Saba**	**130.92**	**81**	IAMs_20	IAMs_20	14 24 38.0	
	comp=Z,4µm,21.0s						
URFA	**Urfa**	**130.92**	**306**	*e*P	**PKiKP**	**13 37 46.1**	**+0.4**
NPGB	**Novo Progresso**	**130.99**	**115**	*e*P	**PKPdf**	**13 37 45.5**	**0.0**
MALT	**Malatya**	**131.05**	**307**	*e*P	**PKiKP**	**13 37 46.5**	**+0.5**
SEUS	**St. Eustatius**	**131.15**	**81**	IAMs_20	IAMs_20	14 24 23.2	
	comp=Z,3µm,20.0s						
MNK	**Minsk**	**131.25**	**330**	*e*PKIKP	**PKPdf**	**13 37 44.0**	**-0.7**
MNK				*e*		13 40 06.0	
MNK				*e*		13 58 08.0	
MNK				pmax	pmax		
	comp=Z,620nm,1.5s						
MNK	**Minsk**	**131.25**	**330**	*i* PKP	**PKiKP**	**13 37 45.9**	**+0.2**
	comp=E,6.0nm,2.0s						
MNK				*i* PKP	**PKiKP**	**13 37 45.9**	**+0.2**
	comp=N,14nm,0.8s						
MNK				*i* PKP	**PKiKP**	**13 37 45.9**	**+0.2**
	comp=Z,97nm,1.6s						
MNK				*i* PP	**PP**	**13 40 09.9**	**+7.6**
MNK				*i* SKP		13 41 14.4	
MNK				*i* PKS		13 41 22.3	
MNK				*i* SKS	**SKSdf**	**13 44 57.2**	**+1.3**
MNK				*i* PKKP	**PKKPdf**	**13 47 37.6**	**-6.8**
MNK				*i* SKKP		13 51 00.4	
MNK				*i* PKKS		13 51 32.2	
MNK				*i* SKKS	**SKKSdf**	**13 54 49.6**	**-7.5**
MNK				*i* SS	SS	13 58 11.2	+37
MNK				*i* LQ	LQ	14 28 51.0	
MNK				*i* LR	LR	14 32 16.8	
MNK				*i* LRM	MLR	14 35 08.3	
	comp=Z,3µm,20.0s						
MNK				*i* LRM	MLR	14 35 13.5	
	comp=N,5µm,33.8s						
MNK				*i* LRM	MLR	14 35 14.5	
	comp=E,217nm,15.6s						
IDID	**Didziasalis**	**131.29**	**332**	*e*P	**PKPdf**	**13 37 45.0**	**+0.2**
DUB01	**Friburgo-RJ**	**131.39**	**141**	*e*P	**PKiKP**	**13 37 47.2**	**+0.1**
RSDY	**Resadiye-TOKAT**	**131.40**	**310**	*i* P	**PKiKP**	**13 37 47.9**	**+1.4**
ISAL	**Salakas**	**131.41**	**332**	*e*P	**PKiKP**	**13 37 46.4**	**+0.4**
IIGN	**Ignalina**	**131.51**	**332**	*e*P	**PKiKP**	**13 37 45.9**	**-0.3**
NACGM	**Naroch**	**131.52**	**331**	*i* PKP	**PKPdf**	**13 37 42.8**	**-2.4**
NACGM				*i* PKP	**PKPdf**	**13 37 42.8**	**-2.4**
NACGM				*i* PKP	**PKPdf**	**13 37 42.8**	**-2.4**
NACGM				*i* PP	**PP**	**13 40 02.5**	**-1.6**
NACGM				*i* PKS		13 41 16.7	
NACGM				*i* PPP	PPP	13 42 27.1	
NACGM				*i* SKS	SKSac	13 44 37.5	-18
NACGM				*i* PS	PS	13 49 57.2	-22
NACGM				*i* SKKS	SKKSdf	13 55 37.3	+41
NACGM				*i* SS	SS	13 57 07.5	-30
NACGM				*i* SSS	SSS	14 01 35.3	
NACGM				*i* LQ	LQ	14 21 09.0	
NACGM				*i* LR	LR	14 31 43.9	
GRGR	**Grenville**	**131.58**	**88**	IAMs_20	IAMs_20	14 28 01.9	
	comp=Z,4µm,21.0s						
DARE	**Darende-Malaty**	**131.72**	**307**	*i* P	**PKiKP**	**13 37 47.6**	**+0.3**
SNDB	**Serra Nova Dou**	**131.80**	**123**	*e*P	**PKPdf**	**13 37 46.8**	**-0.3**
MOL	**Molde**	**131.96**	**348**	*e*PKPdf	**PKiKP**	**13 37 47.4**	**+0.5**
MOL				IVmB_BB		13 37 55.5	
	comp=Z,3µm,3.3s						
MOL				IVMs_BB	IVMs_BB	14 28 31.9	
	comp=Z,4µm,4.6s						
TOKT	**Tokat**	**131.99**	**310**	*e*P	**PKPdf**	**13 37 46.9**	**+0.2**
CAM01	**Campos-RJ**	**132.01**	**141**	*e*P	**PKiKP**	**13 37 48.1**	**-0.2**
BDFB	**Brasilia**	**132.10**	**130**	PKP	**PKPdf**	**13 37 47.5**	**-0.2**
	comp=Z,33nm,1.1s,baz=194,slow=1.0,SNR=14						
BDFB				PP	**PP**	**13 40 10.4**	**+1.7**
	comp=Z,23nm,1.2s,baz=258,slow=7.8,SNR=3.9						
DOMB	**Dombas**	**132.12**	**347**	*e*PKPdf	**PKiKP**	**13 37 47.5**	**+0.2**
DOMB				*e*PP	**PP**	**13 40 12.9**	**+5.3**
DOMB				IVMs_BB	IVMs_BB	14 25 29.8	
	comp=Z,5µm,4.9s						
KVT	**Kavak**	**132.15**	**311**	*i* P	**PKiKP**	**13 37 49.3**	**+1.3**
GAZ	**Gaziantep**	**132.23**	**305**	*e*P	**PKiKP**	**13 37 48.9**	**+0.6**
GAZ	**Gaziantep**	**132.23**	**305**	IAMs_20	IAMs_20	14 38 03.1	
	comp=Z,4µm,22.0s						
KMRS	**Kahramanmaras**	**132.40**	**306**	*e*P	**PKiKP**	**13 37 48.9**	**+0.3**
PABE	**Paberze**	**132.41**	**333**	*e*P	**PKiKP**	**13 37 48.3**	**+0.4**
AKN	**Aaknes**	**132.43**	**348**	*e*PKPdf	**PKiKP**	**13 37 48.6**	**+0.7**
SNOP	**Sinop**	**132.48**	**312**	*e*P	**PKiKP**	**13 37 49.5**	**+0.9**
NB2	**NORSAR Subarra**	**132.50**	**345**	PKPdf	**PKPdf**	**13 37 47.0**	**0.0**
	comp=Z,6.0nm,0.8s,baz=31,slow=1.9						
NB2	**NORSAR Subarra**	**132.50**	**345**	PKPdf	**PKPdf**	**13 37 47.0**	**0.0**
	baz=31,slow=1.9						
NOA	**NORSAR Array B**	**132.50**	**345**	PKP	**PKPdf**	**13 37 46.5**	**-0.5**
	comp=Z,7.6nm,0.7s,baz=35,slow=2.0,SNR=19						
NOA				PP	**PP**	**13 40 12.0**	**+1.9**
	comp=Z,3.7nm,1.0s,baz=37,slow=6.1,SNR=4.0						
FDF	**Fort de France**	**132.52**	**85**	IAMs_20	IAMs_20	14 24 29.8	
	comp=Z,5µm,22.0s						
DIKM	**Dikmen**	**132.55**	**312**	⇑P	**PKPdf**	**13 37 46.2**	**-1.4**
DIKM	**Dikmen**	**132.55**	**312**	*e*P	**PKiKP**	**13 37 51.2**	**+2.4**
SARI	**SarD1z-Kayseri**	**132.57**	**307**	*i* P	**PKiKP**	**13 37 49.2**	**+0.1**
HFS	**Hagfors**	**132.62**	**343**	PKhKP	PKPpre	13 37 40.9	
	comp=Z,8.8nm,0.8s,baz=69,slow=7.9,SNR=5.4						
HFS				PKP	**PKiKP**	**13 37 48.0**	**-0.3**
	comp=Z,12nm,0.8s,baz=90,slow=3.6,SNR=10						
HFS				PP	**PP**	**13 40 13.2**	**+2.4**
	comp=Z,9.3nm,0.9s,baz=1.1,slow=7.5,SNR=3.5						
HFS	**Hagfors**	**132.62**	**343**	PKIKP	**PKiKP**	**13 37 48.0**	**-0.3**
AKASG	**Malin Array Be**	**132.65**	**325**	PKhKP	PKPpre	13 37 35.4	
	comp=Z,1.5nm,0.6s,baz=56,slow=2.9,SNR=4.6						
AKASG				PKP	**PKPdf**	**13 37 46.7**	**-0.8**
	comp=Z,35nm,0.9s,baz=57,slow=2.5,SNR=58						
AKASG				PP	**PP**	**13 40 09.4**	**-2.1**
	comp=Z,21nm,1.0s,baz=48,slow=7.1,SNR=7.8						
AKASG				SKPbc	**SKPab**	**13 41 16.5**	**+0.6**
	comp=Z,3.2nm,0.8s,baz=48,slow=1.4,SNR=2.1						
AKASG	**Malin Array Be**	**132.65**	**325**	PKPdf	**PKiKP**	**13 37 48.6**	**0.0**
AKBB	**Malin Array Si**	**132.65**	**325**	IAMs_20	IAMs_20	14 40 31.6	
	comp=Z,6µm,19.0s						
NC602	**NORSAR Array S**	**132.68**	**345**	*e*PKPdf	**PKiKP**	**13 37 48.3**	**-0.1**
NC602				*e*SKPdf	**SKPdf**	**13 41 20.3**	**-2.0**
BNN	**Bunyan**	**132.89**	**308**	*i* P	**PKiKP**	**13 37 49.5**	**-0.2**
PBUR	**Paburge**	**132.91**	**335**	*e*P	**PKiKP**	**13 37 49.7**	**+0.7**
KOZT	**Kozan**	**133.24**	**306**	*e*P	**PKiKP**	**13 37 51.1**	**+0.8**
FOO	**Floro**	**133.33**	**349**	*e*pPKPdf	**pPKPdf**	**13 37 53.1**	**+0.1**
FOO				IVmB_BB		13 37 55.6	
	comp=Z,5µm,4.6s						
FOO				IVMs_BB	IVMs_BB	14 26 50.0	
	comp=Z,6µm,4.7s						
CEYT	**Ceyhan**	**133.41**	**306**	*e*P	**PKiKP**	**13 37 51.7**	**+1.1**
ALF01	**Guarapari-ES**	**133.49**	**141**	*e*P	**PKiKP**	**13 37 51.0**	**-0.3**
SKAR	**Skarslia**	**133.50**	**347**	*e*PKPdf	**PKiKP**	**13 37 49.8**	**-0.4**
SKAR				*e*SKPdf	**SKPab**	**13 41 19.5**	**+0.3**
SKAR				*e*SP	**SKKPbc**	**13 50 34.6**	**-2.1**
SKAR				IVMs_BB	IVMs_BB	14 30 34.5	
	comp=Z,5µm,4.6s						
HYA	**Hoyanger**	**133.51**	**348**	*e*PKPdf	**PKiKP**	**13 37 51.1**	**+1.1**
OSL	**Oslo**	**133.58**	**345**	*e*PKPdf	**PKPdf**	**13 37 48.1**	**-0.9**
SUW	**Suwalki**	**133.72**	**332**	*e*PKP	**PKPdf**	**13 37 49.1**	**-0.3**
SUW	**Suwalki**	**133.72**	**332**	*e*P	**PKiKP**	**13 37 50.6**	**-0.1**
CMRD	**Camardi-Nigde**	**133.84**	**307**	*i* P	**PKiKP**	**13 37 52.3**	**+0.6**
SUE	**Sulen**	**133.89**	**349**	*e*Pdif	**Pdif**	**13 34 48.6**	**+0.3**
SUE				*e*SKPdf	**SKPdf**	**13 41 24.7**	**+0.2**
KARA	**Karaisali**	**133.89**	**306**	*e*P	**PKiKP**	**13 37 52.5**	**+0.9**
CANT	**Cankiri**	**134.05**	**311**	*e*P	**PKiKP**	**13 37 52.7**	**+0.8**
KONO	**Kongsberg**	**134.11**	**345**	*e*PKPdf	**PKiKP**	**13 37 51.4**	**+0.1**
KONO				IVmB_BB		13 37 56.4	
	comp=Z,3µm,5.0s						
KONO				*e*		13 38 25.7	
KONO				*e*SKPdf	**SKPab**	**13 41 23.4**	**+1.5**
KONO				*e*SS	**SS**	**13 58 11.9**	**+3.8**
KONO				IVMs_BB	IVMs_BB	14 34 03.0	
	comp=Z,5µm,5.0s						
TSUM	**Tsumeb**	**134.29**	**220**	PKP	**PKiKP**	**13 37 52.6**	**-0.6**
	comp=Z,18nm,1.0s,baz=137,slow=4.0						
TSUM				PP	**PP**	**13 40 22.9**	**+0.6**
	comp=Z,8.9nm,1.1s,baz=102,slow=6.4,SNR=3.4						
MALB	**Monte Alegre**	**134.30**	**109**	*e*P	**PKPdf**	**13 37 52.0**	**+0.3**
BR131	**Keskin Array S**	**134.30**	**310**	*i* PKIKP	**PKPdf**	**13 37 50.1**	**-1.1**
BRTR	**Keskin Array B**	**134.30**	**310**	PKhKP	PKPpre	13 37 41.1	
	comp=Z,4.1nm,0.9s,baz=55,slow=4.7,SNR=3.6						
BRTR				PKP	**PKPdf**	**13 37 51.5**	**+0.3**
	comp=Z,48nm,1.0s,baz=148,slow=1.4,SNR=28						
BRTR				PP	**PP**	**13 40 23.1**	**+0.3**
	comp=Z,14nm,1.1s,baz=116,slow=2.9,SNR=7.8						
BRTR				SKKPbc	SKKPbc	13 50 28.4	-4.2
	comp=Z,8.3nm,1.2s,baz=224,slow=3.4,SNR=5.3						
BRTR	**Keskin Array B**	**134.30**	**310**	*i* P	**PKiKP**	**13 37 52.5**	**-0.1**
ASK	**Askoy**	**134.34**	**348**	*e*PKPdf	**PKiKP**	**13 37 51.1**	**-0.6**
KAMT	**Kaman**	**134.35**	**309**	*e*P	**PKPdf**	**13 37 51.9**	**+0.6**
BER	**Bergen**	**134.40**	**348**	*e*PKPdf	**PKiKP**	**13 37 51.8**	**-0.1**
BER				*i*		13 41 34.6	
BER				IVMs_BB	IVMs_BB	14 29 18.0	
	comp=Z,7µm,4.5s						
YAYX	**Yaylak**	**134.40**	**309**	*i* P	**PKiKP**	**13 37 52.9**	**+0.2**
SORM	**Soroca**	**134.45**	**323**	⇑P	**PKPdf**	**13 37 51.2**	**+0.3**
SORM	**Soroca**	**134.45**	**323**	⇑PKIKP	**PKPdf**	**13 37 51.2**	**+0.3**
MMAI	**Mount Meron Ar**	**134.46**	**300**	PKP	**PKiKP**	**13 37 52.5**	**-0.4**
	comp=Z,57nm,0.7s,baz=44,slow=4.4,SNR=7.7						
MMLI	**Mount Malkishu**	**134.54**	**299**	*e*P	**PKiKP**	**13 37 52.6**	**-0.5**
ODD1	**Odda**	**134.56**	**347**	*e*PKPdf	**PKiKP**	**13 37 52.3**	**0.0**
SJMB	**Sao Joao De Ma**	**134.65**	**139**	*e*P	**PKPdf**	**13 37 52.0**	**-0.3**
RIB01	**Linhares ES**	**134.68**	**141**	*e*P	**PKiKP**	**13 37 53.4**	**-0.3**
KIS	**Kishinev**	**134.73**	**321**	*e*PKP	**PKPdf**	**13 37 51.7**	**+0.2**
KIS	**Kishinev**	**134.73**	**321**	*e*PP	PP	13 40 23.6	-1.3
	comp=Z,200nm,5.8s						
KIS	**Kishinev**	**134.73**	**321**	*e*PKIKP	**PKPdf**	**13 37 52.0**	**+0.5**
KIS				*e*		13 40 24.0	
KIS				pmax	pmax		
	comp=Z,200nm,5.8s						
MBAR	**Mbarara**	**134.76**	**252**	PP	PP	13 40 27.4	+1.0
MILM	**Milestii Mici**	**134.77**	**321**	⇓P	**PKPdf**	**13 37 48.6**	**-3.0**
AFSR	**Afar-Bala (An**	**134.80**	**310**	*e*P	**PKiKP**	**13 37 54.8**	**+1.3**
LOD	**Lodumlu**	**134.89**	**310**	*e*P	**PKiKP**	**13 37 54.0**	**+0.3**
EREN	**Erenkoy**	**134.98**	**304**	*e*P	**PKiKP**	**13 37 53.7**	**-0.1**
SILI	**Silifke-Mersin**	**134.98**	**305**	*e*P	**PKiKP**	**13 37 54.5**	**+0.7**
BLS5	**Blasjo**	**135.05**	**347**	*e*PKPdf	**PKiKP**	**13 37 53.3**	**0.0**
BLS5				IVmB_BB		13 38 02.8	
	comp=Z,3µm,3.6s						
BLS5				*e*SKSac	**SKSac**	**13 45 06.4**	**+2.0**
KEBE	**Keben-Mersin**	**135.13**	**305**	*e*P	**PKiKP**	**13 37 54.8**	**+0.6**
HRFI	**Mount Harif**	**135.19**	**296**	*e*P	**PKPdf**	**13 37 52.4**	**-0.6**
IKL	**Isikli**	**135.20**	**305**	*e*P	**PKiKP**	**13 37 54.3**	**0.0**
EIL	**Elat**	**135.31**	**296**	PKP	**PKiKP**	**13 37 54.1**	**-0.6**
	comp=Z,173nm,1.1s,baz=26,slow=2.5,SNR=6.5						
EIL				PP	**PP**	**13 40 29.8**	**+0.3**
	comp=Z,13nm,1.1s,baz=45,slow=13,SNR=2.8						
EIL				SKPab	**SKiKP**	**13 41 31.4**	**+0.7**
	comp=Z,13nm,1.0s,baz=161,slow=6.6,SNR=3.7						
EIL	**Elat**	**135.31**	**296**	*e*P	**PKPdf**	**13 37 52.3**	**-0.9**
AKKU	**Akkuyu-Mersin**	**135.32**	**305**	*e*P	**PKiKP**	**13 37 54.7**	**+0.2**
TEVE	**Tevekalti-Mers**	**135.34**	**305**	*e*P	**PKiKP**	**13 37 56.7**	**+2.0**
KMY	**Karmoy**	**135.50**	**348**	*e*SKSdf	**SKSdf**	**13 45 05.4**	**+2.3**
YUVA	**Yuva-Kibriscik**	**135.51**	**311**	*e*P	**PKiKP**	**13 37 55.9**	**+0.9**
VASR	**Vaslui**	**135.52**	**321**	⇑P	**PKPdf**	**13 37 51.7**	**-1.3**
BERE	**Bereket-Mersin**	**135.53**	**305**	*e*P	**PKiKP**	**13 37 54.8**	**-0.4**
TLCR		**135.57**	**319**	⇓P	**PKiKP**	**13 37 55.3**	**+0.6**
TLCR		**135.57**	**319**	⇓PKIKP	**PKiKP**	**13 37 55.3**	**+0.6**
HOMB	**Homborsund**	**135.60**	**345**	*e*PKPdf	**PKiKP**	**13 37 54.5**	**+0.1**
HOMB				*e*PP	**PP**	**13 40 32.0**	**+2.3**
HOMB				*e*SKPdf	**SKiKP**	**13 41 30.0**	**-0.3**
HOMB				*e*SP	**SP**	**13 50 52.2**	**+2.2**
HOMB				IVMs_BB	IVMs_BB	14 32 20.8	
	comp=Z,4µm,5.5s						
TEKE	**Tekeli-Mersin**	**135.67**	**305**	*e*P	**PKiKP**	**13 37 55.3**	**+0.1**
LADK	**Ladik-KONYA**	**135.70**	**308**	*e*P	**PKiKP**	**13 37 56.5**	**+1.1**
CSS	**Mathiatis**	**135.77**	**303**	*e*P	**PKiKP**	**13 37 57.4**	**+1.9**
KONT	**Konya--Tatoy**	**135.77**	**308**	*i* P	**PKiKP**	**13 37 54.9**	**-0.6**
MDUB	**Mudurnu**	**135.84**	**312**	*e*P	**PKiKP**	**13 37 56.3**	**+0.7**
VARL	**Varlezi**	**135.84**	**320**	⇑P	**PKPdf**	**13 37 54.1**	**+0.4**
SNART	**Snartemo**	**135.85**	**346**	*e*PKPdf	**PKiKP**	**13 37 55.0**	**+0.1**
SNART				*e*SKPdf	**SKPab**	**13 41 29.7**	**+0.2**
SNART				*e*SKSdf	**SKSdf**	**13 45 02.7**	**-1.1**
LVV	**L'vov**	**135.91**	**327**	*e*PKHKP	PKPpre	13 37 45.1	
LVV				*i*		13 40 27.6	
LVV				*i* PPP	PPP	13 43 26.9	
LVV				*e*SS	SS	13 58 50.1	+19
LVV				MLR	MLR		
	comp=N,3µm,23.0s						
LVV				MLR	MLR		
	comp=E,3µm,23.0s						
LVV				MLR	MLR		
	comp=Z,4µm,23.0s						
AUSIV	**SIVRIHISAR**	**135.93**	**310**	*i* P	**PKiKP**	**13 37 55.9**	**+0.1**
SVRH	**Sivrihisar-ESK**	**135.94**	**310**	*e*P	**PKiKP**	**13 37 57.3**	**+1.5**
TPGR	**Topolog**	**135.97**	**319**	⇑P	**PKPdf**	**13 37 53.7**	**-0.3**
CFR	**Carcaliu**	**136.00**	**319**	⇑P	**PKPdf**	**13 37 54.6**	**+0.6**
CFR	**Carcaliu**	**136.00**	**319**	⇑PKIKP	**PKPdf**	**13 37 54.6**	**+0.6**
LEF	**Lefka**	**136.09**	**304**	⇑P	**PKPdf**	**13 37 53.1**	**-1.3**
LEF	**Lefka**	**136.09**	**304**	*e*P	**PKiKP**	**13 37 56.4**	**+0.3**
BEL	**Belsk**	**136.25**	**331**	*e*PKP	**PKiKP**	**13 37 55.7**	**-0.2**
TESR	**Tescani**	**136.26**	**322**	⇑P	**PKPdf**	**13 37 54.8**	**+0.4**
MFTR	**Murfatlar**	**136.27**	**318**	⇑P	**PKPdf**	**13 37 54.8**	**+0.3**

BSD	Bornholm Skovb	136.28	338	eP	PKiKP	13 37 57.9	+2.1
CIFT	Cifteler, Eski	136.31	310	eP	PKiKP	13 37 57.8	+1.2
GULT	Gulveren	136.34	312	i P	PKPdf	13 37 54.9	0.0
TLBR	Topalu	136.35	318	⇑P	PKiKP	13 37 56.1	-0.2
HARR	Harsova	136.35	319	⇓P	PKiKP	13 37 55.8	-0.5
HARR	Harsova	136.35	319	⇓PKIKP	PKiKP	13 37 55.8	-0.5
BIZ	Bicaz	136.37	322	⇑P	PKiKP	13 37 55.8	-0.6
BURAR	Bucovina Array	136.52	324	⇑P	PKPdf	13 37 55.3	+0.3
BURAR	Bucovina Array	136.52	324	⇑PKIKP	PKPdf	13 37 55.3	+0.3
VRI	Vrincioaia	136.54	321	⇓P	PKPdf	13 37 51.2	-3.8
VRI	Vrincioaia	136.54	321	⇓PKIKP	PKPdf	13 37 51.2	-3.8
BISRR	Bisoca	136.71	320	⇑P	PKPdf	13 37 54.9	-0.5
KWP	Kalwaria Pacla	136.72	328	ePKP	PKPdf	13 37 55.2	0.0
GKP	Gorka Klasztor	136.79	335	ePKP	PKiKP	13 37 56.5	-0.4
GKP	Gorka Klasztor	136.79	335	eP	PKiKP	13 37 56.6	-0.4
HRT	Hereke	136.80	313	eP	PKiKP	13 37 58.1	+0.6
AUBOZ	BOZOYUK	136.87	311	i P	PKPdf	13 37 54.9	-1.0
ADVT	Abdulvahap	136.89	312	eP	PKiKP	13 37 57.8	+0.2
SHUT	Suhut-Afyon	136.95	309	eP	PKiKP	13 37 57.2	-0.7
ISR	Istrita	137.02	320	⇓P	PKiKP	13 37 59.6	+1.8
ISR	Istrita	137.02	320	⇓PKIKP	PKiKP	13 37 59.6	+1.8
ISP	Isparta	137.20	308	eP	PKPdf	13 37 54.5	-2.1
MLR	Muntele Rosu	137.20	321	PKhKP	PKPpre	13 37 47.0	
	comp=Z,3.4nm,0.6s,baz=92,slow=11,SNR=3.5						
MLR				PKP	PKPdf	13 37 56.1	-0.3
	comp=Z,51nm,1.1s,baz=0.8,slow=5.1,SNR=13						
MLR				PP	PP	13 40 39.4	-1.3
	comp=Z,30nm,1.1s,baz=127,slow=2.6,SNR=4.8						
MLR	Muntele Rosu	137.20	321	⇓P	PKPdf	13 37 55.5	-0.9
MLR				⇑P	PKPdf	13 37 57.0	+0.6
MLR	Muntele Rosu	137.20	321	⇑PKIKP	PKPdf	13 37 57.0	+0.6
MLR	Muntele Rosu	137.20	321	IAMs_20	IAMs_20	14 43 04.4	
	comp=Z,4µm,22.0s						
DOPR	Dopca	137.29	322	⇑P	PKPdf	13 37 55.5	-0.9
RGN	Rugen	137.30	339	IAMs_20	IAMs_20	14 42 52.6	
	comp=Z,4µm,20.0s						
ARCR	ARCALIA	137.30	324	⇑P	PKiKP	13 37 58.0	-0.2
KOLS	Kolonicke sedl	137.37	327	ePKIKP	PKiKP	13 37 57.4	-0.9
KOLS				e		13 40 42.2	
KOLS	Kolonicke sedl	137.37	327	ePKP	PKiKP	13 37 57.4	-0.9
KOLS				ePP	PP	13 40 42.2	+0.9
KOLS				eSS	SS	13 59 06.6	+19
KOLS				eL	L	14 32 12.7	
TVSB	Tavsanli	137.44	311	eP	PKPdf	13 37 56.5	-0.5
BMR	Baia Mare	137.45	325	⇑P	PKiKP	13 38 00.5	+2.0
BMR	Baia Mare	137.45	325	⇑PKIKP	PKiKP	13 38 00.5	+2.0
UZH	Uzhgorod	137.54	327	ePKIKP	PKPdf	13 37 49.8	-6.9
UZH				e		13 37 56.7	
UZH				e		13 38 03.5	
UZH				e		13 40 41.4	
VOIR		137.77	321	⇑P	PKiKP	13 37 58.7	-0.7
VOIR		137.77	321	⇑PKIKP	PKiKP	13 37 58.7	-0.7
OJC	Ojcow	137.79	330	ePKP	PKPdf	13 37 57.7	+0.6
CRVS	Cervenica-Dubn	137.81	327	ePKIKP	PKPdf	13 37 57.9	+0.6
CRVS	Cervenica-Dubn	137.81	327	ePKP	PKPdf	13 37 57.8	+0.5
KCTX	Karacabey (Bur	137.94	313	eP	PKiKP	13 37 59.7	-0.1
PHSR	Pinarhisar	137.97	315	eP	PKPdf	13 37 58.6	+0.9
ARR	Arges	138.06	321	⇓P	PKiKP	13 37 59.6	-0.3
NIE	Niedzica	138.07	329	ePKP	PKPdf	13 37 57.9	+0.1
EDC	Edincik	138.25	313	eP	PKiKP	13 38 00.8	+0.4
HUMR	Humele	138.28	320	⇑P	PKPdf	13 37 55.6	-2.6
MRMT	Marmara Adasi	138.34	313	eP	PKPdf	13 37 58.3	-0.3
KULA	Kula-Manisa	138.36	310	P	PKPdf	13 37 58.9	+0.2
KULA	Kula-Manisa	138.36	310	eP	PKiKP	13 38 00.9	+0.1
DRGR		138.40	324	⇑P	PKPdf	13 37 55.7	-2.8
DRGR		138.40	324	⇑PKIKP	PKPdf	13 37 55.7	-2.8
EDRB	Edirne	138.40	315	eP	PKiKP	13 38 00.8	+0.2
GZKV	Gazikoy-Tekird	138.47	314	eP	PKPdf	13 37 45.9	-13
KECS	Kecovo	138.57	328	ePKIKP	PKPdf	13 37 59.2	+0.5
KECS	Kecovo	138.57	328	ePKP	PKPdf	13 37 59.2	+0.5
LANS	Liptovska Anna	138.66	329	ePKIKP	PKiKP	13 38 00.4	-0.6
LANS				e		13 40 50.2	
LANS	Liptovska Anna	138.66	329	ePKP	PKiKP	13 38 00.4	-0.6
LANS				ePP	PP	13 40 50.2	+0.9
RUE	Ruedersdorf	138.76	336	ePKPdf	PKiKP	13 37 59.9	-1.0
	baz=34,slow=1.8						
BSEG	Bad Segeberg	138.81	340	ePKPdf	PKiKP	13 38 00.1	-0.9
	baz=34,slow=1.8						
OKC	Ostrava-Krasne	138.83	331	eSS	SS	13 59 14.0	+8.9
OKC				AMS	AMS	14 35 00.0	
	comp=Z,4µm,24.9s						
DALY	Dalyan (Mula)	138.93	308	eP	PKiKP	13 38 03.9	+2.1
KSP	Ksiaz	138.96	333	ePKP	PKPdf	13 37 56.7	-2.6
LPK	Lapseki	139.01	313	eP	PKPdf	13 37 58.9	-0.8
PLVB	Pleven	139.07	319	⇑P	PKPdf	13 37 59.0	-0.7
YER	Yerkesik	139.11	308	eP	PKiKP	13 38 01.7	-0.6
GZR	Gura Zlata	139.15	322	⇓P	PKPdf	13 37 57.3	-2.6
GZR	Gura Zlata	139.15	322	⇓PKIKP	PKPdf	13 37 57.3	-2.6
MORC	Moravsky Berou	139.16	331	⇓P	PKPdf	13 37 55.1	-4.7
MORC	Moravsky Berou	139.16	331	ePKP	PKPdf	13 37 54.2	-5.6
MORC				e		13 40 52.7	
MORC	Moravsky Berou	139.16	331	⇓PKIKP	PKPdf	13 37 55.1	-4.7
MORC	Moravsky Berou	139.16	331	IAMs_20	IAMs_20	14 44 54.3	
	comp=Z,4µm,20.0s						
OSTC	Ostas	139.21	333	ePKP	PKPdf	13 37 58.4	-1.4
OSTC				ePP	PP	13 40 54.7	+2.1
OSTC				eSS	SS	13 59 19.0	+10
OSTC				AMS	AMS	14 32 30.0	
	comp=Z,10µm,29.4s						
PSZ	Piszkesteto	139.24	327	⇑P	PKPdf	13 37 58.5	-1.5
PSZ	Piszkesteto	139.24	327	⇑PKIKP	PKPdf	13 37 58.5	-1.5
PSZ	Piszkesteto	139.24	327	IAMs_20	IAMs_20	14 38 19.7	
	comp=Z,4µm,22.0s						
TURN	Turunc	139.25	308	eP	PKiKP	13 38 02.8	+0.3
CHVC	Chvalec	139.25	333	ePKP	PKPdf	13 37 59.0	-0.9
CHVC				ePP	PP	13 40 52.9	0.0
CHVC				AMS	AMS	14 32 30.0	
	comp=Z,11µm,32.6s						
ALN	Alexandroupoli	139.28	315	eP	PKPdf	13 37 57.5	-2.7
SIRR	Siria	139.29	324	⇑P	PKPdf	13 37 57.9	-2.2
SRE	Strehaia	139.29	321	⇑P	PKPdf	13 37 57.9	-2.2
SRE	Strehaia	139.29	321	⇑PKIKP	PKPdf	13 37 57.9	-2.2
KRLC	Kraliky	139.30	332	ePKIKP	PKPdf	13 37 55.0	-5.0
KRLC				e		13 40 54.2	
KRLC				MLR	MLR		
	comp=Z,5µm,26.0s						
KRLC	Kraliky	139.30	332	ePKP	PKPdf	13 37 55.0	-5.0
KRLC				ePP	PP	13 40 54.2	+1.0
KRLC				AMS	AMS	14 37 30.0	
	comp=Z,5µm,26.0s						
DPC	Dobruska-Polom	139.31	332	ePKIKP	PKPdf	13 37 55.9	-4.1
DPC				e		13 40 55.0	
DPC				MLR	MLR		
	comp=Z,7µm,26.3s						
DPC	Dobruska-Polom	139.31	332	ePKP	PKPdf	13 37 55.9	-4.1
DPC				ePP	PP	13 40 55.0	+1.8
DPC				ex	x	13 58 51.6	
DPC				AMS	AMS	14 33 00.0	
	comp=Z,7µm,26.3s						
UPC	Upice	139.33	333	ePKIKP	PKPdf	13 37 58.4	-1.6
UPC				e		13 40 53.6	
UPC				MLR	MLR		
	comp=Z,10µm,27.0s						
UPC	Upice	139.33	333	ePKP	PKPdf	13 37 58.4	-1.6
UPC				ePP	PP	13 40 53.6	+0.3
UPC				eSS	SS	13 59 23.2	+12
UPC				AMS	AMS	14 32 30.0	
	comp=Z,10µm,27.0s						
GDU01	Guandu, BA	139.36	136	eP	PKPdf	13 38 00.4	-0.7
KDZ	Kurdzhali	139.38	316	eP	PKPdf	13 38 01.1	+0.7
VYHS	Vyhne	139.41	329	ePKIKP	PKPdf	13 37 59.4	-0.8
VYHS				e		13 40 54.1	
VYHS				eSS	SS	13 59 40.7	+29
VYHS	Vyhne	139.41	329	ePKP	PKPdf	13 37 59.4	-0.8
VYHS				ePP	PP	13 40 54.1	+0.2
VYHS				eSS	SS	13 59 40.7	+29
DKL	Dikili	139.43	312	eP	PKiKP	13 38 02.5	-0.3
RDO	Rodhopi	139.52	315	P	PKPdf	13 37 58.5	-2.1
RDO	Rodhopi	139.52	315	eP	PKPdf	13 37 59.4	-1.2
PLD	Plovdiv	139.64	317	eP	PKPdf	13 37 57.2	-3.6
HERR	Herculane	139.64	322	⇓P	PKPdf	13 37 53.1	-7.6
BZS	Buzias	139.69	323	⇓P	PKPdf	13 37 56.8	-4.0
BZS	Buzias	139.69	323	⇓PKIKP	PKPdf	13 37 56.8	-4.0
JAVC	Velka Javorina	139.73	330	ePKP	PKPdf	13 37 55.0	-5.8
JAVC				e		13 40 58.8	
FLTG	Flechtingen	139.82	338	ePKPdf	PKPdf	13 38 01.3	+0.5
	baz=34,slow=1.8						
VRAC	Vranov	139.93	331	PKhKP	PKPpre	13 37 54.2	
	comp=Z,5.5nm,0.7s,baz=77,slow=4.4,SNR=8.2						
VRAC				PKP	PKiKP	13 38 02.6	-0.9
	comp=Z,6.7nm,0.7s,baz=36,slow=1.4,SNR=19						
VRAC				PP	PP	13 40 57.1	0.0
	comp=Z,9.8nm,0.7s,baz=60,slow=5.7,SNR=7.7						
VRAC	Vranov	139.93	331	ePKP	PKPdf	13 37 55.0	-6.1
VRAC				e		13 40 57.3	
BRG	Berggiesshubel	139.94	335	ePKP	PKPdf	13 37 53.7	-7.4
BRG				Amp		13 37 56.1	
	comp=Z,20nm,1.7s						
BRG				ex	x	13 37 58.2	
BRG				Amp		13 37 59.6	
	comp=Z,26nm,1.2s						
BRG				ex	x	13 38 02.1	
BRG				Amp		13 38 05.0	
	comp=Z,230nm,1.5s						
BRG				PP	PP	13 41 00.7	+3.8
BRG				Amp		13 41 04.5	
	comp=Z,63nm,1.6s						
BRG	Berggiesshubel	139.94	335	ePKPdf	PKPdf	13 38 02.1	+1.0
	baz=34,slow=1.8						
PVCC	Panska Ves	139.94	334	ePKIKP	PKPdf	13 38 01.4	+0.3
PVCC				MLR	MLR		
	comp=Z,8µm,26.1s						
PVCC	Panska Ves	139.94	334	ePKP	PKPdf	13 38 01.4	+0.3
PVCC				AMS	AMS	14 34 20.0	
	comp=Z,8µm,26.1s						
CLL	Collm	139.98	336	ePKPlp		13 37 50.0	
CLL				ePKPpre	PKPpre	13 37 56.0	
	comp=Z,26nm,1.2s						
CLL				ePKPdf	PKPdf	13 38 01.0	-0.1
	comp=Z,143nm,1.5s						
CLL				i (pPKPdf)		13 38 05.3	
	comp=Z,75nm,1.0s						
CLL				ePP	PP	13 40 56.0	-1.2
CLL				ePKSdf	PKSdf	13 41 36.0	-0.9
CLL				ePPP	PPP	13 44 00.0	
CLL				eSKSac	SKSac	13 45 18.0	+1.6
CLL				e(PPPP)		13 46 18.0	
CLL				eSKKSac	SKKSac	13 48 00.0	+8.8
CLL				e(PSKS)		13 51 24.0	
CLL				ePPS	PPS	13 53 12.0	
CLL				eSKKSdf	SKKSdf	13 54 30.0	-10
CLL				eSS	SS	13 59 24.0	+5.8
CLL				eSSS	SSS	14 04 30.0	
CLL				e		14 09 48.0	
CLL	Collm	139.98	336	ePKIKP	PKPdf	13 37 56.0	-5.1
CLL				i		13 38 05.3	
CLL				pmax	pmax		
	comp=Z,26nm,1.2s						
CLL	Collm	139.98	336	IAMs_20	IAMs_20	14 41 51.3	
	comp=Z,5µm,22.0s						
SMOL	Smolenice	140.09	330	ePKIKP	PKPdf	13 38 02.4	+1.0
SMOL				e		13 40 58.7	
SMOL	Smolenice	140.09	330	ePKP	PKPdf	13 38 02.4	+1.0
SMOL				ePP	PP	13 40 58.7	+0.6
BANR	Banloc	140.11	323	⇓P	PKPdf	13 38 01.7	+0.2
MDVR	Moldovita	140.12	322	⇑P	PKPdf	13 37 57.2	-4.5
SRO	Srobarova	140.12	328	ePKIKP	PKPdf	13 38 02.6	+1.1
SRO				e		13 41 00.1	
SRO	Srobarova	140.12	328	ePKP	PKPdf	13 38 02.6	+1.1
SRO				ePP	PP	13 41 00.0	+1.7
FBE	Freiberg	140.14	335	ePKPdf	PKPdf	13 38 02.6	+1.2
	baz=34,slow=1.8						
ASSE	Asse, Remlinge	140.19	338	ePKPdf	PKPdf	13 38 02.4	+1.0
	baz=34,slow=1.8						
KRUC	Moravsky	140.19	331	ePKP	PKPdf	13 37 55.7	-5.9
KRUC				e		13 40 58.8	
MODS	Modra-Piesok	140.25	330	ePKIKP	PKPdf	13 38 02.6	+0.8
MODS				e		13 40 59.9	
MODS				eSS	SS	13 59 48.1	+26
MODS	Modra-Piesok	140.25	330	ePKP	PKPdf	13 38 02.6	+0.8
MODS				ePP	PP	13 40 59.9	+0.8
MODS				eSS	SS	13 59 48.1	+26
MODS				eL	L	14 33 35.8	
KAVA	Kavala	140.28	315	P	PKPdf	13 38 00.9	-1.1
THAS	Thassos island	140.32	315	P	PKPdf	13 38 00.8	-1.2
PRA	Prague	140.34	334	eSS	SS	13 59 38.8	+16
PRA				AMS	AMS	14 35 00.0	
	comp=Z,5µm,24.8s						
VTS	Vitosha	140.34	318	⇑P	PKPdf	13 37 56.4	-5.9
VTS	Vitosha	140.34	318	⇑PKHKP	PKPpre	13 37 56.4	
VTS	Vitosha	140.34	318	IAMs_20	IAMs_20	14 41 54.5	
	comp=Z,3µm,21.0s						
PRU	Pruhonice	140.35	333	ePKIKP	PKPdf	13 37 57.1	-4.7
PRU				e		13 40 58.7	
PRU	Pruhonice	140.35	333	ePKP	PKPdf	13 37 57.1	-4.7
PRU				ePP	PP	13 40 58.7	-0.9
PRU				ex	x	13 59 44.1	
PRU				AMS	AMS	14 35 00.0	
	comp=Z,10µm,28.0s						
TREC	Trest	140.44	332	ePKIKP	PKPdf	13 38 02.1	0.0
TREC	Trest	140.44	332	ePKP	PKPdf	13 38 02.1	0.0
TREC				AMS	AMS	14 30 50.0	
	comp=Z,10µm,37.4s						
ZST	Bratislava	140.46	329	ePKIKP	PKPdf	13 38 02.8	+0.7
ZST				e		13 41 02.0	
ZST				eSS	SS	13 59 55.9	+32
ZST	Bratislava	140.46	329	ePKP	PKPdf	13 38 02.8	+0.7
ZST				ePP	PP	13 41 02.0	+1.6
ZST				eSS	SS	13 59 55.9	+32
KARP	Karpathos	140.48	306	IAMs_20	IAMs_20	14 43 05.2	
	comp=Z,3µm,21.0s						
NVR	Nevrokopi	140.55	316	P	PKPdf	13 38 01.4	-1.1
EKA	Eskdalemuir Ar	140.62	352	PKhKP	PKPpre	13 37 53.6	
	comp=Z,5.8nm,0.8s,baz=20,slow=2.7,SNR=8.4						
BOVS	Bovan	140.76	321	⇓P	PKPdf	13 37 58.9	-3.9
PBCC	Pribram	140.81	333	ePKP	PKPdf	13 38 03.6	+0.9
TANN	Tannenbergstha	140.89	335	ePKPdf	PKPdf	13 38 03.6	+0.7
	baz=34,slow=1.8						
PLN	Plauen	140.96	336	ePKPdf	PKPdf	13 38 03.7	+0.8
	baz=34,slow=1.8						
MORH	Mrgy, Hungar	140.98	326	⇓P	PKPdf	13 37 59.8	-3.2
MORH	Mrgy, Hungar	140.98	326	⇓iP	PKPdf	13 37 57.4	-5.7
GUNZ	Gunzen	140.98	335	ePKPdf	PKPdf	13 38 04.0	+1.0
	baz=34,slow=1.8						
FRGS	Fruska Gora	140.99	324	⇑P	PKPdf	13 38 00.8	-2.4
FRGS	Fruska Gora	140.99	324	eP	PKPdf	13 38 00.2	-3.0
IBBN	Ibbenburen	141.01	341	ePKPdf	PKPdf	13 38 03.8	+0.8
	baz=34,slow=1.8						
WERN	Wernitzgruen	141.03	335	ePKPdf	PKPdf	13 38 04.1	+1.0
	baz=34,slow=1.8						
NKC	Novy Kostel	141.04	335	ePKIKP	PKPdf	13 37 59.2	-3.9
NKC				MLR	MLR		
	comp=Z,10µm,22.8s						
NKC	Novy Kostel	141.04	335	ePKP	PKPdf	13 37 59.2	-3.9
NKC				AMS	AMS	14 38 50.0	
	comp=Z,10µm,22.8s						
CONA	Conrad Observa	141.25	330	i P	PKPdf	13 37 59.0	-4.6
	comp=Z,120nm,1.6s,SNR=26						
CONA				eP	PP	13 41 07.2	+1.9
	comp=Z,92nm,1.9s						
KNT	Kendrikon	141.28	317	eP	PKPdf	13 37 56.5	-7.3
CKRC	Cesky Krumlov	141.32	332	ePKP	PKPdf	13 37 58.4	-5.3
CKRC				ePP	PP	13 41 08.8	+3.2
CKRC				ex	x	13 59 48.7	
MANZ	Manzenberg	141.37	335	ePKPdf	PKPdf	13 38 04.6	+0.9
	baz=34,slow=1.8						
KHC	Kasperske Hory	141.41	333	ePKIKP	PKPdf	13 37 59.0	-4.8
KHC				e		13 41 09.5	
KHC				eSS	SS	13 59 27.7	-7.6
KHC	Kasperske Hory	141.41	333	ePKP	PKPdf	13 37 59.0	-4.8
KHC				ePP	PP	13 41 09.5	+3.4
KHC				ex	x	13 59 27.7	
KHC				AMS	AMS	14 35 30.0	
	comp=Z,10µm,27.6s						
KHC	Kasperske Hory	141.41	333	IAMs_20	IAMs_20	14 47 13.8	
	comp=Z,5µm,21.0s						
HORT	Hortiatis	141.42	316	P	PKPdf	13 38 01.7	-2.5
HORT	Hortiatis	141.42	316	eP	PKPdf	13 37 56.2	-8.0
VAY	Valandovo	141.42	317	i P	PKPdf	13 37 56.9	-7.1
SANT	Santorini	141.50	308	IAMs_20	IAMs_20	14 33 10.0	
	comp=Z,3µm,18.0s						
UBBA	Unterbreizbach	141.51	338	ePKPdf	PKPdf	13 38 04.7	+1.0
	baz=34,slow=1.8						
DIVS	Divibare	141.52	322	eP	PKPdf	13 37 59.6	-4.7
GEC2	GERESS Array S	141.57	333	IAMs_20	IAMs_20	14 40 15.1	
	comp=Z,5µm,21.0s						
GEC2	GERESS Array S	141.57	333	ePKPdf	PKPdf	13 38 05.1	+0.8
	baz=34,slow=1.8						
GERES	GERESS Array B	141.57	333	PKhKP	PKPpre	13 37 59.5	
	comp=Z,5.0nm,0.8s,baz=50,slow=4.2,SNR=26						
GERES				PP	PP	13 41 10.4	+3.2
	comp=Z,4.2nm,0.9s,baz=22,slow=3.4,SNR=4.4						
WET	Wettzell	141.70	334	ePKPdf	PKPdf	13 38 05.0	+0.7
	baz=34,slow=1.8						
GRG	Griva	141.71	317	P	PKPdf	13 37 59.6	-5.0
GRG	Griva	141.71	317	eP	PKPdf	13 37 59.0	-5.6
KASTN	Kahler Asten	141.74	339	ePKPdf	PKPdf	13 38 04.9	+0.5
	baz=34,slow=1.8						
BEHE	Becsehely	141.79	328	⇓iP	PKPdf	13 38 04.6	0.0
SKO	Skopje	141.81	319	i P	PKPdf	13 37 59.8	-5.0
ARSA	Arzberg	141.88	330	i P	PKPdf	13 38 00.5	-4.3
	comp=Z,76nm,1.3s,SNR=15						
ARSA				eP	PP	13 41 12.4	+3.4
	comp=Z,75nm,1.7s						
BUG	Bochum--Univer	141.91	341	ePKPdf	PKPdf	13 38 05.1	+0.6
	baz=34,slow=1.8						
GRA1	Grafenberg Arr	141.95	336	IAMs_20	IAMs_20	14 40 04.5	
	comp=Z,5µm,22.0s						
GRF	Grafenberg Arr	141.95	336	eL	L	14 43 42.6	
	comp=Z,4µm,22.0s						
GRFO	Grafenberg	141.96	336	IAMs_20	IAMs_20	14 40 04.6	
	comp=Z,5µm,22.0s						
BBLS	Lazići	142.00	323	eP	PKPdf	13 38 01.6	-3.5
MOA	Molln	142.05	331	i P	PKPdf	13 38 01.6	-3.5
	comp=Z,86nm,1.8s,SNR=22						
LIT	Litokhoron	142.06	315	P	PKPdf	13 37 59.8	-5.5
KOGS	Kog	142.08	328	i PKPdf	PKPdf	13 38 00.8	-4.3
KOGS				ePP	PP	13 41 12.0	+1.8
HAPS	Han Pijesak,Bl	142.13	323	eP	PKPdf	13 38 01.8	-3.6
IVA	Berane	142.28	321	ePKP	PKPdf	13 38 01.6	-4.1
IDI	Anoyia	142.31	307	PKhKP	PKPpre	13 38 02.3	
	comp=Z,24nm,0.5s,baz=15,slow=6.6,SNR=10.0						
PLE	Pljevlja	142.32	322	ePKP	PKPdf	13 38 01.6	-4.2
FNA	Florina	142.47	317	P	PKPdf	13 38 01.7	-4.3
FNA	Florina	142.47	317	eP	PKPdf	13 38 00.8	-5.2
KOME	Kolasin	142.52	321	ePKP	PKPdf	13 38 02.0	-4.1
SOKA	Soboth	142.53	329	i P	PKPdf	13 38 02.3	-3.7
	comp=Z,62nm,1.6s,SNR=29						
SOKA				eP	PP	13 41 15.0	+1.9
	comp=Z,148nm,1.7s						
PTJ	Puntijarka	142.59	328	P	PKPdf	13 38 02.6	-3.5
PHP	Peshkopia	142.60	319	P	PKPdf	13 38 01.4	-4.8
ZAG	Zagreb	142.63	328	eP	PKPdf	13 38 04.3	-1.8
THL	Klokotos Trika	142.64	315	P	PKPdf	13 38 06.0	-0.3
OHR	Ohrid	142.67	318	i P	PKPdf	13 38 01.9	-4.5
AGG	Agios Georgios	142.68	314	P	PKPdf	13 38 06.4	0.0
AGG	Agios Georgios	142.68	314	eP	PKPdf	13 37 57.5	-8.9
UPM	Unac-Piva	142.68	322	ePKP	PKPdf	13 38 01.6	-4.9
BLY	Banja Luka	142.71	325	⇓iP	PKPdf	13 38 02.6	-3.6
ROSB	Rosrio	142.72	118	eP	PKPdf	13 38 06.3	-0.9
AHRW	Bad Neuenahr-A	142.75	340	ePKPdf	PKPdf	13 38 06.8	+0.7
	baz=34,slow=1.8						
CWF	Charnwood Fore	142.85	349	eP	PKPdf	13 38 04.8	-1.4
OBKA	Obir	142.88	329	i P	PKPdf	13 38 03.2	-3.4
	comp=Z,56nm,1.2s,SNR=15						
OBKA				i P	PP	13 41 16.8	+1.6
	comp=Z,90nm,1.9s						
KPRO	Kipourio	142.89	316	P	PKPdf	13 38 07.4	+0.6
CRES	Cresnjev	142.91	328	eP	PKPdf	13 38 03.9	-2.7
NKME	Niksic	142.91	321	ePKP	PKPdf	13 38 02.5	-4.2
PDG	Podgorica	142.92	321	⇑P	PKPdf	13 38 03.1	-3.6
PDG	Podgorica	142.92	321	⇓iP	PKPdf	13 38 02.7	-3.9
PDG	Podgorica	142.92	321	IAMs_20	IAMs_20	14 45 30.5	
	comp=Z,4µm,21.0s						
TTG	Podgorica	142.92	321	ePKP	PKPdf	13 38 02.8	-3.9
BEBN	Eben Emael	142.97	342	dPKPdf	PKPdf	13 38 05.8	-0.7
BEBN				dPKiKP	PKiKP	13 38 08.8	-0.9
MGRS	Mrkonjic Grad	142.97	325	eP	PKPdf	13 38 03.4	-3.4
BTNL	Ternell	143.01	341	dPKP	PKPdf	13 38 05.3	-1.4
BTNL				dPKiKP	PKiKP	13 38 08.4	-1.5
MEM	Membach	143.03	341	dPKP	PKPdf	13 38 05.5	-1.1
MEM				dPKiKP	PKiKP	13 38 08.6	-1.3
KBA	Koelnbreinsper	143.04	331	i P	PKPbc	13 38 03.4	-0.4
	comp=Z,116nm,1.5s,SNR=40						
KBA				eP	PP	13 41 16.8	+0.6
	comp=Z,127nm,1.6s						
CEME	Cevo	143.06	321	ePKP	PKPab	13 38 02.5	+0.2
GVDS	Gavdos	143.08	307	P	PKPbc	13 38 04.6	+0.6
GVDS	Gavdos	143.08	307	eP	PKPab	13 38 02.0	-0.6
GVD	Gavdhos	143.09	307	P	PKPdf	13 38 05.9	-1.3
DRME	Dracevica, Mon	143.10	320	eP	PKPbc	13 38 03.5	-0.4
DRME	Dracevica, Mon	143.10	320	ePKP	PKPab	13 38 03.0	+0.6
TIR	Tirane	143.14	319	⇑P	PKPbc	13 38 04.4	+0.4
TIR	Tirane	143.14	319	⇑PKIKP	PKPbc	13 38 04.4	+0.4
TRIZ	Trizonia	143.16	313	P	PKPbc	13 38 03.9	-0.2
ANX	Ano Chora	143.16	314	P	PKPbc	13 38 03.6	-0.7
ULC	Ulcinj	143.19	320	ePKP	PKPab	13 38 03.1	+0.3
LJU	Ljubljana	143.22	329	i PKPdf	PKPab	13 38 03.3	+0.5
LJU				i		13 38 10.9	
LJU				ePP	PP	13 41 19.0	+1.9
LJU	Ljubljana	143.22	329	⇓iP	PKPbc	13 38 04.0	-0.1
MYKA	Terra Mystica	143.23	330	i P	PKPbc	13 38 03.9	-0.2
	comp=Z,159nm,1.9s,SNR=32						
MYKA				eP	PP	13 41 18.8	+1.6
	comp=Z,64nm,1.5s						
EFP	Efpalio	143.24	313	P	PKPbc	13 38 05.5	+1.2
BHOU	Houvegnez	143.26	341	dPKPdf	PKPbc	13 38 05.4	+1.4
BHOU				dPKiKP	PKPdf	13 38 08.4	+1.3
TREB	Trebinje	143.30	322	eP	PKPbc	13 38 03.8	-0.6
LSK	Leskovik	143.30	317	P	PKPab	13 38 03.5	+0.1
ANKY	Antikythira Is	143.31	309	P	PKPbc	13 38 05.8	+1.2
HLM1	Long Mynd	143.32	351	eP	PKPdf	13 38 07.6	+0.5
UCC	Uccle	143.35	343	dPKPdf	PKPdf	13 38 06.1	-1.0
HCY	Herceg Novi	143.37	321	ePKP	PKPab	13 38 03.5	0.0
KTHR	Kythira	143.38	309	P	PKPbc	13 38 04.6	-0.2
JAN	Janina	143.38	316	P	PKPbc	13 38 04.7	-0.1
BCLA	Clavier	143.41	342	dPKPdf	PKPdf	13 38 06.3	-0.9
BCLA				dPKiKP	PKiKP	13 38 09.0	-1.6
BCLA				dpPKiKP	pPKPdf	13 38 12.2	+0.4
DBRK	Dubrovnik	143.44	322	i P	PKPab	13 38 03.4	-0.4
STU	Stuttgart	143.48	337	IAMs_20	IAMs_20	14 47 19.9	
	comp=Z,3µm,22.0s						
CEY	Cerknica	143.49	329	i PKPdf	PKPab	13 38 04.2	+0.3
CEY				e		13 41 46.2	
CEY	Cerknica	143.49	329	eP	PKPab	13 38 03.8	-0.1
BGES	Gesves	143.51	342	dPKPdf	PKPdf	13 38 07.6	+0.1
RICI	Ricice	143.53	324	P	PKPab	13 38 04.0	-0.1
STON	Ston	143.59	322	i P	PKPab	13 38 03.2	-1.1
ZOU	Zoufplan	143.60	331	PKPdf	PKPbc	13 38 05.4	+0.1
ZOU				IAMs_20	IAMs_20	14 47 34.8	
	comp=Z,4µm,20.0s						
KIJV	Kijevo	143.61	325	i P	PKPab	13 38 04.2	-0.2
WATA	Walderalm	143.65	333	i P	PKPbc	13 38 06.1	+0.7
	comp=Z,284nm,1.6s,SNR=56						
WATA				eP	PP	13 41 18.2	-1.6
	comp=Z,57nm,1.5s						
PDO	Prodromos	143.67	314	P	PKPab	13 38 05.0	+0.2
RCHB	Rochefort	143.67	341	dPKiKP	PKiKP	13 38 09.6	-1.6
ABTA	Abfaltersbach	143.67	331	i P	PKPbc	13 38 05.2	-0.2
	comp=Z,178nm,1.1s,SNR=56						
WTTA	Wattenberg	143.68	333	i P	PKPbc	13 38 06.2	+0.7
	comp=Z,350nm,1.4s,SNR=121						
WTTA				eP	PP	13 41 16.5	-3.5
	comp=Z,82nm,1.6s						
BMRD	Maredsous	143.68	342	dPKPdf	PKPdf	13 38 07.2	-0.5
BMRD				dPKiKP	PKiKP	13 38 09.6	-1.6
AXS	Araxos	143.72	313	P	PKPbc	13 38 05.9	+0.2
RIY	Rijeka	143.75	328	eP	PKPab	13 38 04.7	-0.1
ITM	Ithomi	143.78	311	P	PKPab	13 38 04.7	-0.6
ITM	Ithomi	143.78	311	eP	PKPab	13 38 03.8	-1.5
ITM	Ithomi	143.78	311	PKPdf	PKPbc	13 38 07.0	+1.0
IGT	Igoumenitsa	143.79	316	P	PKPab	13 38 05.0	-0.2
WLF	Walferdange	143.81	340	dPKPdf	PKPdf	13 38 07.0	-1.0
WLF	Walferdange	143.81	340	IAMs_20	IAMs_20	14 48 08.3	
	comp=Z,5µm,20.0s						
WLF	Walferdange	143.81	340	ePKPdf	PKPdf	13 38 08.7	+0.7
	baz=34,slow=1.8						
SRN	Sarande	143.83	317	P	PKPbc	13 38 05.8	-0.2
TRI	Trieste	143.84	329	IAMs_20	IAMs_20	14 52 07.2	
	comp=Z,4µm,20.0s						
MOTA	Moosalm	143.84	333	i P	PKPbc	13 38 06.3	+0.3
	comp=Z,322nm,1.5s,SNR=84						
MOTA				eP	PP	13 41 22.0	+1.0
	comp=Z,53nm,1.3s						
MCH1	Michaelchurch	143.84	351	eP	PKPbc	13 38 05.5	-0.1
RETA	Reutte	143.88	334	i P	PKPbc	13 38 06.5	+0.4
	comp=Z,285nm,1.7s,SNR=71						
SQTA	Sankt Quirin	143.90	333	i P	PKPbc	13 38 06.9	+0.8
	comp=Z,453nm,1.9s,SNR=75						
SQTA				eP	PP	13 41 22.2	+1.0
	comp=Z,48nm,1.5s						
DOU	Dourbes	143.91	342	dPKPdf	PKPbc	13 38 06.1	+0.2
DOU				dPKiKP	PKPdf	13 38 09.8	+1.6
TSLK	Tsoukalades, L	143.92	315	P	PKPbc	13 38 06.5	+0.2
LKD2	Lefkada island	143.94	315	P	PKPab	13 38 05.5	-0.3
NYDR	Nydri-Lefkada	143.94	314	P	PKPbc	13 38 06.3	-0.1
UBR	Ueberruh	144.00	335	ePKPdf	PKPdf	13 38 09.0	+0.4
	baz=34,slow=1.8						

EVGI	Lefkada island	144.02	314	P	PKPab	13 38 06.2	+0.1
PYL	PYLOS	144.04	311	P	PKPab	13 38 05.4	-0.8
KEK	Kerkira	144.05	317	P	PKPab	13 38 05.8	-0.4
NVLJ	Novalja	144.07	327	iP	PKPab	13 38 05.9	-0.2
MORI	Morici	144.09	325	iP	PKPab	13 38 05.7	-0.5
HVAR	Hvar	144.12	324	iP	PKPab	13 38 05.6	-0.7
BFO	Black Forest	144.17	337	ePKPdf	PKPdf	13 38 09.5	+0.7
	baz=34,slow=1.8						
WOL	Wolverton	144.20	349	eP	PKPdf	13 38 09.4	+0.7
FETA	Feichten	144.26	333	iP	PKPbc	13 38 07.4	+0.1
	comp=Z,286nm,1.0s,SNR=125						
FETA				eP	PP	13 41 17.7	-5.8
	comp=Z,54nm,1.3s						
ZIRJ	Zirje	144.26	325	iP	PKPab	13 38 06.2	-0.6
BATH	Bath	144.27	350	eP	PKPbc	13 38 07.4	+0.5
VLS	Valsamata	144.28	314	P	PKPab	13 38 05.0	-2.1
PSDA	Pessada-Kefalo	144.31	314	P	PKPbc	13 38 07.5	0.0
KEF5	Kardakata, Kep	144.31	314	P	PKPab	13 38 07.3	+0.1
LTHK	Lithakia	144.32	313	P	PKPab	13 38 07.0	-0.2
KEF4	Livadi, Kephal	144.35	314	P	PKPbc	13 38 08.0	+0.4
DUGI	Dugi Otok	144.36	326	iP	PKPab	13 38 06.8	-0.4
VLMS	Volimes, Zakyn	144.37	313	P	PKPab	13 38 06.8	-0.7
DMLN	Damoulianata-K	144.40	314	P	PKPbc	13 38 08.0	+0.2
DAVA	Damuels	144.41	334	iP	PKPbc	13 38 08.1	+0.4
	comp=Z,356nm,1.2s,SNR=68						
DAVA				eP	PP	13 41 27.8	+3.5
	comp=Z,118nm,1.5s						
KEF3	Kipouria, Keph	144.43	314	P	PKPbc	13 38 08.1	+0.2
ECH	Echery	144.70	338	IAMs_20	IAMs_20	14 51 37.1	
	comp=Z,3µm,19.0s						
DAVOX	Davos/Dischmat	144.81	334	PKP	PKPab	13 38 08.8	-0.2
	comp=Z,264nm,1.0s,baz=37,slow=2.7,SNR=99						
HTL	Hartland	145.04	352	eP	PKPbc	13 38 08.8	-0.6
TUE	Stuetta	145.28	334		PKPdf	13 38 11.1	+0.2
DYA	Yadsworthy	145.50	351	eP	PKPdf	13 38 09.5	-1.4
MATE	Matera	145.51	320	⇓P	PKPab	13 38 11.9	+0.4
NBLI	Livramento-PB	145.66	132	eP	PKPdf	13 38 12.1	-0.3
CCA1	Carnmenellis	145.93	352	eP	PKPab	13 38 13.4	+0.7
NBRF	Rio Formoso -	146.00	136	eP	PKPdf	13 38 12.5	-0.4
PRMA	PARMA	146.18	331	IAMs_20	IAMs_20	14 50 10.1	
	comp=Z,4µm,19.0s						
NRCA	Norcia	146.18	326		PKPab	13 38 14.5	+0.4
MURB	Monte Urbino	146.19	327		PKPab	13 38 15.2	+1.0
SENIN	Lac Senin/Sane	146.19	336	IAMs_20	IAMs_20	14 51 02.7	
	comp=Z,4µm,22.0s						
TIP	Timpagrande	146.32	318	⇑P	PKPab	13 38 15.3	+0.6
TIP	Timpagrande	146.32	318		PKPab	13 38 15.1	+0.4
AQU	L'Aquila	146.35	325	eP	PKPbc	13 38 13.5	-0.4
AQU	L'Aquila	146.35	325	IAMs_20	IAMs_20	14 50 26.0	
	comp=Z,5µm,20.0s						
JSA	Saint Aubin	146.41	349	eP	PKPbc	13 38 13.6	-0.1
CLF	Chambon-Foret	146.45	343	IAMs_20	IAMs_20	14 53 59.1	
	comp=Z,5µm,21.0s						
PAOL	Paolisi	146.56	322	IAMs_20	IAMs_20	14 51 22.8	
	comp=Z,4µm,20.0s						
VLC	Villacollemand	146.60	330	IAMs_20	IAMs_20	14 52 24.3	
	comp=Z,4µm,22.0s						
NBPA	Parau_RN	146.63	129	eP	PKPdf	13 38 14.5	+0.5
OSSC	Osservatorio P	146.66	329	IAMs_20	IAMs_20	14 54 04.8	
	comp=Z,3µm,20.0s						
RCBR	Riachuelo	147.47	131	PKPbc	PKPdf	13 38 16.5	+1.1
	comp=Z,161nm,1.1s,baz=194,slow=1.4,SNR=29						
RCBR	Riachuelo	147.47	131	eP	PKPbc	13 38 17.0	-0.9
BNI	Bardonecchia	147.52	335	IAMs_20	IAMs_20	14 45 11.3	
	comp=Z,5µm,22.0s						
SSB	Saint Sauveur	148.15	338	IAMs_20	IAMs_20	14 54 25.2	
	comp=Z,3µm,20.0s						
VAE	Valguarnera	148.81	317	PKPbc	PKPbc	13 38 21.1	+0.3
	comp=Z,11nm,0.3s,baz=135,slow=2.9,SNR=3.3						
RAFF	Raffo Rosso	148.98	317	IAMs_20	IAMs_20	14 54 04.4	
	comp=Z,3µm,18.0s						
H07N1	FLORES T-PHASE	151.36	32	PKPbc	PKPbc	13 38 26.9	0.0
H07S1	FLORES T-PHASE	151.55	33	PKPbc	PKPbc	13 38 26.2	-1.1
MAHO	Mahon	152.77	332	PKP	PKPdf	13 38 21.7	-1.2
MAHO	Mahon	152.77	332	PP	PP	13 42 10.2	-2.7
KEST	Kesra	153.10	320	PKP	PKPdf	13 38 24.8	+1.1
	comp=Z,26nm,1.1s,baz=273,slow=3.4,SNR=8.5						
KEST				PKPbc	PKiKP	13 38 31.5	+0.4
	comp=Z,173nm,1.0s,baz=295,slow=3.3,SNR=34						
KEST	Kesra	153.10	320	IAMs_20	IAMs_20	15 03 11.1	
	comp=Z,4µm,21.0s						
PBRG	Braganca	154.35	351	ePKPbc	PKPdf	13 38 25.2	0.0
PBRG	Braganca	154.35	351	ePP	PP	13 42 22.0	+0.6
PGAV	Gavieira, Arco	154.38	354	ePKPbc	PKPdf	13 38 26.2	+0.9
PGAV	Gavieira, Arco	154.38	354	ePKPab	PKPab	13 38 49.0	+1.4
PGAV	Gavieira, Arco	154.38	354	ePP	PP	13 42 22.5	+0.9
PGAV	Gavieira, Arco	154.38	354	eLQ	LQ	14 23 38.0	
PGAV				eLR	LR	14 32 10.6	
	comp=Z,4µm,18.0s						
PCAB	Cabril	154.61	353	ePKPbc	PKPdf	13 38 26.2	+0.7
PCAB	Cabril	154.61	353	ePP	PP	13 42 25.5	+2.7
POLO	Lamas de Olo	154.92	353	ePKPbc	PKPdf	13 38 27.2	+1.1
POLO	Lamas de Olo	154.92	353	ePKPab	PKPab	13 38 51.4	+1.5
POLO	Lamas de Olo	154.92	353	ePP	PP	13 42 30.8	+6.2
PVRL	Vila Real	155.00	353	ePP	PP	13 42 25.1	0.0
MVO	Moncorvo	155.02	351	ePKPbc	PKPdf	13 38 27.2	+1.0
MVO	Moncorvo	155.02	351	ePKPab	PKPab	13 38 51.9	+1.6
MVO	Moncorvo	155.02	351	ePP	PP	13 42 25.1	-0.1
MVO	Moncorvo	155.02	351	eLQ	LQ	14 24 11.9	
MVO				eLR	LR	14 31 34.6	
	comp=Z,5µm,20.0s						
UCM	Universidad Co	155.09	344	PKP	PKPdf	13 38 23.6	-2.6
UCM	Universidad Co	155.09	344	PP	PP	13 42 27.0	+1.3
PVIS	Viseu	155.58	353	ePKPbc	PKPdf	13 38 28.7	+1.8
PVIS	Viseu	155.58	353	ePKPab	PKPab	13 38 54.8	+2.1
PVIS	Viseu	155.58	353	ePP	PP	13 42 37.8	+10
H10N1	ASCENSION HYDR	155.72	174	PKP	PKPdf	13 38 30.3	+2.8
H10N3	ASCENSION HYDR	155.72	173	PKP	PKPdf	13 38 30.3	+2.8
H10N2	ASCENSION HYDR	155.74	173	PKP	PKPdf	13 38 28.3	+0.8
MTE	Manteigas	155.84	352	IAMs_20	IAMs_20	14 48 13.4	
	comp=Z,5µm,22.0s						
MTE	Manteigas	155.84	352	ePKPbc	PKPdf	13 38 27.2	-0.1
MTE	Manteigas	155.84	352	ePKPab	PKPab	13 38 56.4	+2.5
MTE	Manteigas	155.84	352	eLQ	LQ	14 24 47.0	
MTE				eLR	LR	14 33 22.9	
	comp=Z,4µm,22.0s						
ESDC	Sonseca Array	155.87	345	PKP	PKPdf	13 38 28.2	+0.8
	comp=Z,6.6nm,1.2s,baz=353,slow=4.1,SNR=15						
ESDC				PKPab	PKPab	13 38 55.2	+1.2
	comp=Z,17nm,1.2s,baz=9.1,slow=2.5,SNR=4.6						
ESDC				PP	PP	13 42 30.2	+0.2
	comp=Z,16nm,1.3s,baz=15,slow=3.8,SNR=7.6						
PAB	San Pablo	156.08	346	IAMs_20	IAMs_20	15 01 28.9	
	comp=Z,4µm,21.0s						
COI	Coimbra	156.14	354	ePP	PP	13 42 27.3	-4.0
PCAS	Casmilo, Conde	156.30	354	ePKPbc	PKPdf	13 38 29.2	+1.4
PCAS	Casmilo, Conde	156.30	354	ePKPab	PKPab	13 38 57.9	+2.2
PCAS	Casmilo, Conde	156.30	354	ePP	PP	13 42 34.7	+2.5
PCBR	Castelo Branco	156.39	352	ePKPbc	PKPdf	13 38 29.2	+1.3
PCBR	Castelo Branco	156.39	352	ePP	PP	13 42 36.4	+3.7
PMRV	Marv??o	156.78	351	ePKPbc	PKPdf	13 38 29.6	+1.1
PMRV	Marv??o	156.78	351	ePP	PP	13 42 40.0	+5.1
PMRV	Marv??o	156.78	351	eLR	LR	14 32 21.1	
	comp=Z,3µm,22.0s						
PSBE	So Bento	156.86	354	ePKPbc	PKPdf	13 38 29.4	+0.8
PSBE	So Bento	156.86	354	ePKPab	PKPab	13 39 00.2	+2.0
PSBE	So Bento	156.86	354	ePP	PP	13 42 38.6	+3.2
CART	Cartagena	156.88	338	PKP	PKPdf	13 38 28.3	-0.3
CART	Cartagena	156.88	338	PP	PP	13 42 32.8	-2.9
CART	Cartagena	156.88	338	IAMs_20	IAMs_20	14 55 08.5	
	comp=Z,3µm,21.0s						
PMTG	Montargil	157.24	353	ePKPab	PKPab	13 39 01.3	+1.5
PMTG	Montargil	157.24	353	ePP	PP	13 42 37.4	0.0
PMAFR	Mafra	157.46	355	ePKPbc	PKPdf	13 38 28.8	-0.6
PMAFR	Mafra	157.46	355	ePKPab	PKPab	13 39 03.2	+2.4
PMAFR	Mafra	157.46	355	ePP	PP	13 42 39.1	+0.5
LIS	Lisbon	157.69	355	ePKPdf	PKPdf	13 38 28.2	-1.4
LIS				ePP	PP	13 42 40.5	+0.7
LIS				AMS	AMS	14 50 50.6	
	comp=Z,4µm,22.0s						
LIS	Lisbon	157.69	355	ePKIKP	PKPdf	13 38 28.2	-1.4
LIS				e		13 42 40.5	
EVO	Evora	157.75	352	PKP	PKPdf	13 38 31.2	+1.5
EVO	Evora	157.75	352	PP	PP	13 42 34.1	-6.1
EVO	Evora	157.75	352	ePKPbc	PKPdf	13 38 31.7	+2.0
EVO	Evora	157.75	352	ePKPab	PKPab	13 39 04.1	+2.1
EVO	Evora	157.75	352	ePP	PP	13 42 40.4	+0.2
PBAR	Barrancos	157.95	350	ePKPbc	PKPdf	13 38 31.1	+1.1
PBAR	Barrancos	157.95	350	ePKPab	PKPab	13 39 04.3	+1.4
PBAR	Barrancos	157.95	350	ePP	PP	13 42 41.2	-0.1
PBEJ	Beja	158.22	352	ePKPbc	PKPdf	13 38 30.6	+0.3
PBEJ	Beja	158.22	352	ePKPab	PKPab	13 39 03.3	-0.8
PBEJ	Beja	158.22	352	ePP	PP	13 42 45.2	+2.4
PNCL	Nicolau / Gran	158.22	353	ePKPbc	PKPdf	13 38 31.6	+1.3
PNCL	Nicolau / Gran	158.22	353	ePKPab	PKPab	13 39 04.8	+0.8
PNCL	Nicolau / Gran	158.22	353	ePP	PP	13 42 42.1	-0.7
MESJ	Messejana	158.45	352	ePKPdf	PKPdf	13 38 29.2	-1.4
MESJ				ePP	PP	13 42 44.6	+0.6
MESJ				AMS	AMS	14 56 41.2	
	comp=Z,4µm,19.6s						
MESJ	Messejana	158.45	352	ePKIKP	PKPdf	13 38 29.2	-1.4
MESJ				e		13 42 44.6	
MESJ	Messejana	158.45	352	ePKPbc	PKPdf	13 38 32.6	+2.0
MESJ	Messejana	158.45	352	ePKPab	PKPab	13 39 06.3	+1.3
MESJ	Messejana	158.45	352	ePP	PP	13 42 46.0	+2.0
PCVE	Castro Verde	158.63	352	ePKPbc	PKPdf	13 38 32.9	+2.1
PCVE	Castro Verde	158.63	352	ePKPab	PKPab	13 39 06.3	+0.5
PCVE	Castro Verde	158.63	352	ePP	PP	13 42 50.0	+4.9
EMAL	Malaga-Limoner	158.73	344	PKP	PKPdf	13 38 28.5	-2.5
EMAL	Malaga-Limoner	158.73	344	PP	PP	13 42 48.8	+3.0
PTEO	Sao Teotonio	158.80	353	ePKPbc	PKPdf	13 38 31.1	+0.1
PTEO	Sao Teotonio	158.80	353	ePKPab	PKPab	13 39 08.2	+1.6
PTEO	Sao Teotonio	158.80	353	ePP	PP	13 42 47.8	+1.9
PVAQ	Vaqueiros	158.81	351	ePKPbc	PKPdf	13 38 32.6	+1.6
PVAQ	Vaqueiros	158.81	351	ePKPab	PKPab	13 39 12.2	+5.6
PVAQ	Vaqueiros	158.81	351	ePP	PP	13 42 51.3	+5.3
PVAQ	Vaqueiros	158.81	351	eLQ	LQ	14 25 19.5	
PVAQ				eLR	LR	14 32 30.7	
	comp=Z,4µm,22.0s						
PBDV	Barranco-do-Ve	159.00	351	ePKPbc	PKPdf	13 38 33.1	+1.8
PBDV	Barranco-do-Ve	159.00	351	ePKPab	PKPab	13 39 10.7	+3.2
PBDV	Barranco-do-Ve	159.00	351	ePP	PP	13 42 48.7	+1.6
MORF	Marmelete	159.03	353	ePKPdf	PKPdf	13 38 29.9	-1.4
MORF				ePP	PP	13 42 47.8	+0.5
MORF				AMS	AMS	14 51 05.3	
	comp=Z,4µm,22.3s						
MORF	Marmelete	159.03	353	ePKIKP	PKPdf	13 38 29.9	-1.4
MORF				e		13 42 47.8	
PFVI	Vila Bisbo	159.22	353	ePKPbc	PKPdf	13 38 32.6	+1.1
PFVI	Vila Bisbo	159.22	353	ePKPab	PKPab	13 39 10.7	+2.3
SFS	San Fernando	159.45	347	PKP	PKPdf	13 38 31.5	-0.3
SFS	San Fernando	159.45	347	PP	PP	13 42 52.2	+2.7
MELI	Melilla	159.62	339	PKP	PKPdf	13 38 30.8	-1.3
MELI	Melilla	159.62	339	PP	PP	13 42 45.3	-5.4
CEU	Ceuta	159.80	345	PKP	PKPdf	13 38 34.5	+2.3
CEU	Ceuta	159.80	345	PP	PP	13 42 48.5	-3.0
PVLZ	Peæn de	160.18	342	PKP	PKPdf	13 38 31.7	-0.9
PVLZ	Peæn de	160.18	342	PP	PP	13 42 47.6	-6.0
IFR	Ifrane	161.97	342	PKP	PKPdf	13 38 32.3	-2.6
IFR	Ifrane	161.97	342	PP	PP	13 43 00.0	-3.4
MDT	Midelt	162.45	340	PKP	PKPdf	13 38 35.7	+0.4
	comp=Z,15nm,0.7s,baz=256,slow=13,SNR=5.5						
MDT				PP	PP	13 43 10.0	+4.0
	comp=Z,12nm,1.1s,baz=27,slow=5.0,SNR=5.1						
AVE	Averroes	162.76	348	PKP	PKPdf	13 38 33.6	-1.9
AVE	Averroes	162.76	348	PP	PP	13 43 10.7	+3.4
PMOZ	Porto Moniz, M	162.97	16	ePP	PP	13 43 09.2	+0.6
PMOZ	Porto Moniz, M	162.97	16	eLR	LR	14 33 32.7	
	comp=Z,3µm,22.0s						
TORD	Torodi Ar. Bea	166.55	258	PKP	PKPdf	13 38 38.3	-1.0
	comp=Z,100nm,1.1s,baz=350,slow=0.7,SNR=100						
TORD				PKPab	PKPab	13 39 40.9	-0.5
	comp=Z,32nm,1.1s,baz=80,slow=1.5,SNR=3.9						
KIC	Kosan Boka	167.83	215	ePKIKP	PKPdf	13 38 39.3	-1.0
	comp=Z,831nm,1.3s						
LIC	Lamto	167.88	214	ePKIKP	PKPdf	13 38 39.1	-1.2
	comp=Z,1µm,1.4s						
DBIC	Dimbokro	168.15	216	PKP	PKPdf	13 38 39.3	-1.1
	comp=Z,186nm,1.0s,baz=119,slow=0.8,SNR=50						
DBIC				PKPab	PKPab	13 39 50.2	+2.0
	comp=Z,19nm,1.1s,baz=148,slow=5.4,SNR=4.0						
DBIC				PP	PP	13 43 40.0	+3.9
	comp=Z,14nm,1.2s,baz=137,slow=5.1,SNR=6.2						
TIC	Toumodi	168.22	215	ePKIKP	PKPdf	13 38 39.6	-0.9
KOWA	Kowa	172.26	257	PKP	PKPdf	13 38 42.5	-0.2
	comp=Z,117nm,1.1s,baz=278,slow=0.5,SNR=63						
KOWA				PKPab	PKPab	13 40 07.4	+0.7
	comp=Z,11nm,0.8s,baz=130,slow=6.4,SNR=2.1						
KOWA				PP	PP	13 43 56.6	-1.6
	comp=Z,19nm,1.1s,baz=95,slow=1.7,SNR=7.2						

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*IDC **19** 13:21:26.0±0.8, 15°.33S×167°.63E, h0^{km}, mb4.9/11, mb1 5.0/11, mb1mx4.8/28, mbtmp4.8/11, Error ellipse: s-maj=32.5km s-min=25.7km az=99.0*

ISC 19 13:21:41.5±0.7**, 15°.7S**±0°.1×**167°.7E**±0°.2**, h124**^{km}**, n17,** σ1^{s}.**73**/17**, mb4.8**/15**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	23.94	161	P	P	13 26 45.5	+1.3
	66nm,1.1s,baz=346,slow=4.2,SNR=3.3						
RPZ	Rata Peaks	28.05	175	P	P	13 27 22.8	+1.8
	29nm,1.1s,baz=0.0,slow=5.1,SNR=2.4						
ASAR	Alice Springs	32.69	251	P	P	13 28 01.2	-1.1
	35nm,0.9s,baz=77,slow=8.3,SNR=4.5						
MJAR	Matsushiro Arr	58.96	332	P	P	13 31 29.0	+1.1
	13nm,1.1s,baz=171,slow=9.4,SNR=2.9						
ASAJ	Asahikawa	63.80	340	P	P	13 32 02.8	+2.5
	13nm,1.1s,baz=185,slow=12,SNR=1.3						
USRK	Ussuriysk Ar.	67.94	333	P	P	13 32 29.8	+2.9
	44nm,1.2s,baz=148,slow=5.0,SNR=3.3						
PETK	Petropavlovsk-	69.09	354	P	P	13 32 36.1	+2.3
	8.8nm,1.0s,baz=176,slow=8.4,SNR=2.0						
SONM	Songino Array	83.52	324	P	P	13 33 55.5	-0.2
	7.2nm,1.0s,baz=116,slow=12,SNR=2.4						
ILAR	Eielson Array	87.35	18	P	P	13 34 13.9	-0.2
	3.2nm,0.9s,baz=240,slow=5.1,SNR=2.0						
NVAR	Mina Array Bea	87.63	49	P	P	13 34 15.7	-0.7
	8.3nm,0.9s,baz=233,slow=7.5,SNR=8.2						
PDAR	Pinedale Array	95.34	47	P	P	13 34 50.8	-1.2
	0.9nm,0.9s,baz=252,slow=4.6,SNR=1.8						
TXAR	Lajitas Array	96.41	61	P	P	13 34 56.1	-0.9
	4.3nm,1.2s,baz=258,slow=4.4,SNR=3.8						
MKAR	Makanchi Array	98.18	316	P	P	13 35 02.1	-2.4
	2.6nm,1.0s,baz=90,slow=9.9,SNR=1.2						
YKA	Yellowknife Ar	98.25	27	P	P	13 35 03.6	-0.8
	1.3nm,0.8s,baz=248,slow=3.8,SNR=2.9						
ZALV	Zalesovo Beam	98.42	324	P	P	13 35 03.0	-2.3
	2.0nm,0.9s,baz=116,slow=3.4,SNR=1.7						
ARCES	ARCESS Array B	121.31	345	PKP	PKPdf	13 40 19.3	-0.1
	6.7nm,1.1s,baz=70,slow=3.0,SNR=5.0						
DAVOX	Davos/Dischmat	143.94	334	PKP	PKPdf	13 41 02.0	-0.5
	8.6nm,0.8s,baz=259,slow=7.7,SNR=1.6						

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*IDC **19** 13:23:15.6±0.8, 16°.45S×168°.18E, h0^{km}, mb4.7/12, mb1 4.9/13, mb1mx4.7/35, mbtmp4.7/13, ML5.2/1, Error ellipse: s-maj=28.7km s-min=20.0km az=106.0*

*NEIC **19** 13:23:17.3±1.6, 16°.45S±0°.07×168°.1E±0°.2, h10^{km}±2^{km}, mb5.2/12, Error ellipse: s-maj=27.5km s-min=8.1km az=72.0*

ISC 19 13:23:21.0±0.6**, 16°.44S**±0°.06×**168°.0E**±0°.1**, h35**^{km}**, n33,** σ1^{s}.**01**/34**, mb4.9**/18**, 2C, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	1.27	321	Pn	Pn	13 23 42.3	0.0
DZM	Mont Dzumac	5.80	195	Pn	Pn	13 24 45.1	+0.4
	68nm,0.3s,baz=63,slow=18,SNR=5.6						
DZM				Sn	Sn	13 25 51.5	+1.4
	15nm,0.3s,baz=129,slow=20,SNR=2.2						
OUZ	Omahuta	19.35	166	P	Pn	13 27 44.2	-0.6
BKZ	Black Stump Fm	23.82	164	P	P	13 28 30.8	0.0
BKZ				IAmb	IAmb	13 28 32.4	
	comp=Z,66nm,1.3s						
BFZ	Birch Farm	25.18	165	P	P	13 28 42.4	-0.8
BFZ				IAmb	IAmb	13 28 45.5	
	comp=Z,68nm,1.2s						
THZ	Tophouse	25.58	172	P	P	13 28 44.8	-2.1
TOO	Toolangi	28.96	219	P	P	13 29 17.8	+0.6
TAU	Tasmania Unive	31.76	210	P	P	13 29 41.6	-0.2
TAU				IAmb	IAmb	13 29 43.8	
	comp=Z,56nm,1.3s						
WR0	Warramunga Arr	31.98	259	P	P	13 29 42.4	-1.7
WRAB	Tennant Creek	32.16	259	P	P	13 29 44.8	-0.9
WRAB				IAmb	IAmb	13 29 47.8	
	comp=Z,44nm,1.2s						
WRA	Warramunga Arr	32.17	259	P	P	13 29 46.6	+0.8
	comp=Z,6.1nm,0.8s,baz=88,slow=9.2,SNR=2.5						
AS31	Alice Springs	32.80	252	P	P	13 29 52.2	+0.9
AS31				IAmb	IAmb	13 29 53.3	
	comp=Z,20nm,0.7s						
ASAR	Alice Springs	32.80	252	P	P	13 29 52.1	+0.8
	comp=Z,54nm,0.7s,baz=78,slow=8.7,SNR=9.2						
ASAR	Alice Springs	32.80	252	P	P	13 29 52.0	+0.7
SAUI	Saumlaki	36.83	279	P	P	13 30 24.6	-1.4
FORT	Forrest	39.10	241	P	P	13 30 45.4	+0.3
FORT				IAmb	IAmb	13 30 47.9	
	comp=Z,63nm,0.9s						
NWAO	Narrogin (SRO)	48.53	240	P	P	13 32 00.5	-0.4
MJAR	Matsushiro Arr	59.76	332	P	P	13 33 22.2	-0.3
	comp=Z,8.4nm,0.9s,baz=172,slow=9.2,SNR=4.4						
ASAJ	Asahikawa	64.59	340	P	P	13 33 55.8	+1.1
	comp=Z,3.4nm,0.5s,baz=261,slow=3.1,SNR=6.3						
KSRS	Korea Array	65.56	326	P	P	13 34 02.1	+1.0
	comp=Z,2.8nm,0.8s,baz=141,slow=7.3,SNR=3.5						
USRK	Ussuriysk Ar.	68.74	333	P	P	13 34 21.3	+0.1
	comp=Z,5.1nm,0.7s,baz=141,slow=7.1,SNR=4.1						
QSPA	South Pole Qui	73.60	180	P	P	13 34 50.2	-0.4
	comp=Z,12nm,1.0s,baz=12,slow=8.5,SNR=2.7						
SONM	Songino Array	84.31	323	P	P	13 35 50.9	+1.5
	comp=Z,4.6nm,1.1s,baz=125,slow=5.8,SNR=1.6						
SYO	Syowa Base	87.29	196	⇑eP	P	13 36 03.0	-0.7
SYO	Syowa Base	87.29	196	⇑ePcP	PcP	13 36 05.0	-0.8
NVAR	Mina Array Bea	87.82	49	P	P	13 36 08.5	+1.4
	comp=Z,4.0nm,0.8s,baz=229,slow=7.7,SNR=3.8						
ILAR	Eielson Array	87.92	18	P	P	13 36 05.4	-1.3
	comp=Z,1.4nm,0.8s,baz=238,slow=5.2,SNR=1.5						
INK	Inuvik	94.26	19	P	P	13 36 36.0	0.0
	comp=Z,7.2nm,1.2s,baz=26,slow=3.7,SNR=1.0						
PDAR	Pinedale Array	95.56	47	P	P	13 36 43.5	+0.6
	comp=Z,1.2nm,0.8s,baz=216,slow=4.5,SNR=1.4						
ARCES	ARCESS Array B	122.08	345	PKP	PKPdf	13 42 09.7	-1.6
	comp=Z,3.7nm,0.9s,baz=126,slow=2.1,SNR=4.1						
DAVOX	Davos/Dischmat	144.73	334	PKP	PKPdf	13 42 54.3	-0.1
	comp=Z,10nm,0.7s,baz=360,slow=8.8,SNR=2.8						
RCBR	Riachuelo	147.59	131	PKPbc	PKPdf	13 43 00.7	+0.7
	comp=Z,12nm,0.8s,baz=153,slow=5.8,SNR=2.7						
TORD	Torodi Ar. Bea	166.40	258	PKP	PKPdf	13 43 24.9	+1.4
	comp=Z,4.5nm,0.8s,baz=48,slow=2.1,SNR=3.6						

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*IDC **19** 13:38:27.3±0.7, 16°.43S×168°.18E, h0^{km}, mb4.6/19, mb1 4.7/21, mb1mx4.5/44, mbtmp4.6/21, ML4.7/2, Error ellipse: s-maj=21.1km s-min=15.7km az=107.0*

*BJI **19** 13:38:27.0±0.0, 16°.22S×168°.10E, h6^{km}, mB5.5/4, mb4.8/37, Ms5.6/7, Ms7 5.6/7*

*NEIC **19** 13:38:27.8±1.5, 16°.44S±0°.08×168°.2E±0°.1, h10^{km}±1^{km}, mb4.9/18, Error ellipse: s-maj=23.2km s-min=12.0km az=71.0*

*MOS **19** 13:38:30.7±1.1, 16°.38S×168°.02E, h31^{km}, mb5.0/8, Error ellipse: s-maj=14.7km s-min=10.2km az=28.1*

ISC 19 13:38:32.5±0.4**, 16°.49S**±0°.06×**168°.09E**±0°.07**, h35**^{km}**, n113,** σ1^{s}.**53**/118**, mb4.8**/41**, 2C, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	1.34	320		Pn	13 38 52.8	-2.0
DZM	Mont Dzumac	5.77	195	Pn	Pn	13 39 55.0	-0.7
	16nm,0.3s,baz=46,slow=18,SNR=39						
DZM				Sn	Sn	13 41 01.8	+1.1
	3.8nm,0.3s,baz=145,slow=23,SNR=5.8						
DZM	Mont Dzumac	5.77	195	Pn	Pn	13 39 54.1	-1.6
MSVF	Nonsavu	9.60	99	iP	Pn	13 40 48.9	+0.5
HNR	Honiara	10.59	310	Pn	Pn	13 40 59.7	-2.1
	7.3nm,0.3s,baz=192,slow=9.3,SNR=2.1						
RABL	Rabaul	19.85	306	P	P	13 42 59.1	-1.5
ARMA	Armidale	20.47	224	P	P	13 43 06.2	-1.1
CTA	Charters Tower	21.04	257	P	P	13 43 14.2	+0.7
	8.4nm,0.8s,baz=97,slow=15,SNR=6.2						
NIUE	Niue	21.09	100	P	P	13 43 08.2	-5.8
NIUE				IAmb	IAmb	13 43 16.3	
	comp=Z,116nm,1.1s						
PMG	Port Moresby	21.57	286	P	P	13 43 21.8	+2.6
	comp=Z,30nm,1.0s,baz=139,slow=6.1,SNR=6.7						
PMG	Port Moresby	21.57	286	iP	P	13 43 17.1	-2.1
PMG	Port Moresby	21.57	286	P	P	13 43 14.3	-4.9
PMG				IAmb	IAmb	13 43 24.4	
	comp=Z,41nm,1.0s						
URZ	Urewera	23.09	162	P	P	13 43 36.3	+1.1
	comp=Z,12nm,0.9s,baz=341,slow=18,SNR=2.7						
BKZ	Black Stump Fm	23.76	164	P	P	13 43 38.9	-2.9
BKZ				IAmb	IAmb	13 43 46.5	
	comp=Z,32nm,1.2s						
STKA	Stephens Creek	28.51	233	P	P	13 44 26.3	+1.6
	comp=Z,18nm,1.1s,baz=54,slow=8.9,SNR=17						
STKA	Stephens Creek	28.51	233	P	P	13 44 24.8	0.0
WB2	Warramunga Arr	32.20	259	P	P	13 44 57.5	-0.1
WRAB	Tennant Creek	32.20	259	iP	P	13 44 56.3	-1.3
WRAB				pmax	pmax		
	comp=Z,72nm,4.1s						
WRA	Warramunga Arr	32.21	259	P	P	13 44 57.3	-0.4
	comp=Z,3.5nm,0.8s,baz=91,slow=9.1,SNR=14						
WRA	Warramunga Arr	32.21	259	P	P	13 44 56.9	-0.8
AS31	Alice Springs	32.83	252	P	P	13 45 03.4	+0.3
AS31				IAmb	IAmb	13 45 04.7	
	comp=Z,10nm,0.8s						
ASAR	Alice Springs	32.83	252	P	P	13 45 03.4	+0.3
	comp=Z,29nm,0.8s,baz=79,slow=8.8,SNR=118						
ASAR	Alice Springs	32.83	252	P	P	13 45 03.0	-0.1
FORT	Forrest	39.12	241	P	P	13 45 56.3	-0.5
FORT				IAmb	IAmb	13 46 03.4	
	comp=Z,21nm,0.8s						
FITZ	Fitzroy Crossi	40.50	261	P	P	13 46 09.5	+1.1
	comp=Z,8.7nm,1.0s,baz=90,slow=8.1,SNR=3.4						
NWAO	Narrogin (SRO)	48.55	240	P	P	13 47 12.8	+0.2
KAPI	Kappang	48.72	278	P	P	13 47 13.8	-0.2
KKM	Kota Kinabalu	55.98	289	P	P	13 48 07.4	-0.6
JHJ2	Mitsune	56.24	331	P	P	13 48 08.8	-0.6
MJAR	Matsushiro Arr	59.82	332	P	P	13 48 34.0	-0.5
	comp=Z,15nm,1.0s,baz=165,slow=7.7,SNR=17						
MJAR	Matsushiro Arr	59.82	332	P	P	13 48 34.0	-0.5
MAJO	Matsushiro	59.82	332	iP	P	13 48 34.2	-0.3
MAJO				pmax	pmax		
	comp=Z,25nm,1.0s						
MAT	Matsushiro	59.82	332	P	P	13 48 34.1	-0.4
JNU	Nakatsue	60.80	324	P	P	13 48 40.7	-0.6
	comp=Z,29nm,1.1s,baz=86,slow=6.6,SNR=4.4						
ASAJ	Asahikawa	64.66	340	P	P	13 49 07.6	+0.9
	comp=Z,12nm,1.1s,baz=217,slow=9.7,SNR=4.9						
KSRS	Korea Array	65.63	326	P	P	13 49 13.6	+0.5
	comp=Z,4.1nm,0.8s,baz=145,slow=6.7,SNR=13						
YSS	Yuzh-Sakhalins	67.14	341	eP	P	13 49 23.5	+1.0
NJ2	Nanjing	67.48	316	P	P	13 49 26.9	+1.8
NJ2				pmax	pmax		
	comp=Z,15nm,0.6s						
USRK	Ussuriysk Ar.	68.80	333	P	P	13 49 34.4	+1.3
	comp=Z,9.9nm,0.9s,baz=156,slow=6.6,SNR=9.2						
USRK	Ussuriysk Ar.	68.80	333	P	P	13 49 33.1	0.0
MNSI	Mandailing Nat	69.66	277	P	P	13 49 50.0	+11
WHN	Wuhan	69.70	312	⇑P	P	13 49 39.5	+0.5
DL2	Dalian	70.17	323	P	P	13 49 42.1	+0.4
DL2				pmax	pmax		
	comp=Z,48nm,1.0s						
MDJ	Mudanjiang	70.20	332	P	P	13 49 42.6	+0.9
MDJ				pmax	pmax		
	comp=Z,19nm,1.1s						
CN2	Changchun	71.55	329	eP	P	13 49 49.6	-0.4
CN2				sP	pP	13 49 58.8	-2.0
CN2				PP	PP	13 52 31.1	+1.8
CN2				pmax	pmax		
	comp=Z,20nm,0.9s						
KLR	Kul'dur	72.93	336	P	P	13 49 58.6	+0.6
	comp=Z,5.9nm,0.9s,baz=122,slow=7.5,SNR=6.0						
QSPA	South Pole Qui	73.55	180	P	P	13 50 01.9	+0.1
	comp=Z,8.7nm,1.0s,baz=339,slow=1.9,SNR=4.8						
QSPA	South Pole Qui	73.55	180	P	P	13 50 01.8	0.0
QSPA				IAmb	IAmb	13 50 06.6	
	comp=Z,21nm,1.3s						
BJI	Beijing	74.12	321	P	P	13 50 05.8	+0.5
BJI				pmax	pmax		
	comp=Z,5.0nm,1.1s						
TIY	Taiyuan	75.08	317	eP	P	13 50 11.9	+0.9
TIY				pmax	pmax		
	comp=Z,14nm,1.1s						
KMI	Kunming	75.90	302	eP	P	13 50 18.3	+2.1
KMI				pP	pP	13 50 20.6	-6.4
KMI				sP	PcP	13 50 22.5	-6.1
KMI				pmax	pmax		
	comp=Z,6.0nm,1.2s						
KMI				LR	LR		
	comp=Z,2µm,20.6s						
KMI				LR	LR		
	comp=Z,4µm,22.1s						
CMAR	Chiang Mai Arr	76.39	294	P	P	13 50 19.6	+0.8
	comp=Z,1.4nm,0.3s,baz=120,slow=4.7,SNR=6.4						
HHC	Hu-ho-hao-te	77.43	320	eP	P	13 50 24.9	+0.5
HHC				pmax	pmax		
	comp=Z,7.0nm,1.2s						
HHC				pmax	pmax		

	comp=Z,420nm,7.6s						
CD2	**Chengdu**	**77.70**	**308**	*e*P	**P**	**13 50 26.0**	**0.0**
CD2				pmax	pmax		
	comp=Z,10.0nm,1.6s						
HIA	**Hailar**	**78.20**	**330**	*i* P	**P**	**13 50 27.4**	**-0.9**
HIA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ZEA	**Zeya**	**78.21**	**337**	*e*P	**P**	**13 50 29.6**	**+1.4**
ZEA				pmax	pmax		
	comp=Z,10.0nm,2.1s						
LZH	**Lanzhou**	**80.08**	**312**	*e*P	**P**	**13 50 39.8**	**+0.7**
LZH				pP	PcP	13 50 43.4	-3.0
LZH				sP	pP	13 50 46.4	-3.6
LZH				pmax	pmax		
	comp=Z,16nm,1.0s						
YAK	**Yakutsk**	**83.93**	**343***c*	*i*P	**P**	**13 50 57.6**	**-0.9**
YAK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ULN	**Ulaanbaatar**	**84.01**	**324**	*i* P	**P**	**13 50 59.2**	**-0.3**
ULN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
ULN	**Ulaanbaatar**	**84.01**	**324**	P	**P**	**13 50 57.5**	**-1.9**
ULN				IAmb	IAmb	13 51 02.3	
	comp=Z,8.0nm,1.1s						
SONM	**Songino Array**	**84.37**	**323**	P	**P**	**13 51 01.7**	**+0.5**
	comp=Z,4.8nm,1.0s,baz=145,slow=3.6,SNR=8.1						
SONM	**Songino Array**	**84.37**	**323**	P	**P**	**13 50 59.8**	**-1.5**
O02D	**Mt. Diablo Mer**	**85.37**	**46**	P	**P**	**13 51 07.5**	**+1.1**
	baz=244						
N02D	**Trinity Center**	**85.78**	**45**	P	**P**	**13 51 09.5**	**+1.1**
	baz=244						
M02C	**Callahan**	**85.86**	**45**	P	**P**	**13 51 09.3**	**+0.5**
	baz=244						
K02D	**Willamette Mer**	**85.89**	**43**	P	**P**	**13 51 10.6**	**+1.6**
	baz=243						
O03E	**Paynes Creek**	**86.10**	**46**	P	**P**	**13 51 09.6**	**-0.4**
	baz=244						
VES	**Vestal, Richgr**	**86.23**	**51**	P	**P**	**13 51 10.7**	**+0.1**
	baz=246						
MWC	**Mount Wilson**	**86.38**	**53**	P	**P**	**13 51 09.8**	**-1.8**
MWC				IAmb	IAmb	13 51 16.3	
	comp=Z,19nm,1.2s						
N25K	**Chitina, Valde**	**86.38**	**21**	P	**P**	**13 51 12.8**	**+1.9**
	baz=225						
MCK	**McKinley**	**86.58**	**18**	P	**P**	**13 51 14.7**	**+3.0**
	baz=221						
L04D	**Klamath Falls**	**86.59**	**44**	P	**P**	**13 51 13.3**	**+0.9**
	baz=244						
ISA	**Isabella, Lake**	**86.62**	**51**	P	**P**	**13 51 13.0**	**+0.3**
	baz=247						
EDW2	**Edwards Air Fo**	**86.68**	**52**	P	**P**	**13 51 13.6**	**+0.6**
	baz=247						
BFSC	**Mount Baldy Ra**	**86.69**	**53**	P	**P**	**13 51 14.9**	**+1.7**
	baz=248						
MLAC	**Mammoth, Mammo**	**87.12**	**50**	P	**P**	**13 51 16.2**	**+1.0**
	baz=247						
LRMC	**Laurel Mtn Rad**	**87.14**	**52**	P	**P**	**13 51 16.0**	**+0.7**
	baz=247						
J04D	**Umpqua Nationa**	**87.16**	**43**	P	**P**	**13 51 16.6**	**+1.3**
	baz=244						
I04A	**Tendick Farm,**	**87.20**	**43**	P	**P**	**13 51 17.0**	**+1.7**
	baz=244						
CWC	**Cottonwood Cre**	**87.21**	**51**	P	**P**	**13 51 16.2**	**+0.5**
	baz=247						
PFO	**Pinyon Flats O**	**87.38**	**54**	P	**P**	**13 51 19.0**	**+2.5**
	baz=248						
TPFO	**Pinon Flats**	**87.38**	**54**	P	**P**	**13 51 19.3**	**+2.8**
	baz=248						
MPMC	**Manual Prospec**	**87.51**	**51**	P	**P**	**13 51 17.6**	**+0.4**
	baz=248						
SWSC	**Sam W. Stewart**	**87.65**	**55**	P	**P**	**13 51 19.0**	**+1.4**
	baz=249						
HDA	**Harding Lake**	**87.66**	**18**	P	**P**	**13 51 17.5**	**+0.6**
	baz=223						
COLA	**College**	**87.75**	**17**	*i* P	**P**	**13 51 16.2**	**-1.1**
COLA				pmax	pmax		
	comp=Z,15nm,2.3s						
J05D	**Fort Rock, OR**	**87.76**	**44**	P	**P**	**13 51 18.2**	**0.0**
	baz=245						
NVAR	**Mina Array Bea**	**87.82**	**49**	P	**P**	**13 51 18.8**	**+0.2**
	comp=Z,3.1nm,0.9s,baz=229,slow=8.1,SNR=12						
BELC	**Belle Mtn. Jos**	**87.88**	**54**	P	**P**	**13 51 20.1**	**+1.2**
	baz=248						
TLY	**Talaya**	**87.88**	**326**	*i* P	**P**	**13 51 18.5**	**+0.2**
TLY				pmax	pmax		
	comp=Z,5.0nm,1.1s						
HEC	**Hector,Ludlow**	**87.92**	**53**	P	**P**	**13 51 19.2**	**+0.2**
	baz=248						
ILAR	**Eielson Array**	**87.95**	**18**	P	**P**	**13 51 16.6**	**-1.7**
	comp=Z,1.0nm,0.7s,baz=235,slow=5.1,SNR=10						
FURC	**Furnace Creek,**	**88.13**	**51**	P	**P**	**13 51 20.9**	**+1.1**
	baz=248						
I05D	**Terrebonne, OR**	**88.13**	**43**	P	**P**	**13 51 22.0**	**+2.3**
	baz=245						
BC3	**Big Chuckawall**	**88.18**	**54**	P	**P**	**13 51 20.2**	**-0.1**
	baz=249						
E04D	**Cinebar**	**88.31**	**40**	P	**P**	**13 51 21.6**	**+1.2**
	baz=244						
SHOC	**Shoshone, Teco**	**88.36**	**52**	P	**P**	**13 51 21.1**	**+0.2**
	baz=248						
GMRC	**Granite Mounta**	**88.42**	**53**	P	**P**	**13 51 21.4**	**0.0**
	baz=249						
GLA	**Glamis**	**88.45**	**55**	P	**P**	**13 51 21.7**	**+0.1**
	baz=249						
B05A	**Bryant**	**89.35**	**39**	P	**P**	**13 51 26.0**	**+0.8**
	baz=244						
PDMCI	**Parker Dam,Lak**	**89.42**	**54**	P	**P**	**13 51 25.4**	**-0.5**
	baz=250						
214A	**Organ Pipe Nat**	**89.67**	**57**	P	**P**	**13 51 29.9**	**+2.6**
	baz=250						
R11A	**Troy Canyon, C**	**89.77**	**50**	P	**P**	**13 51 27.9**	**+0.2**
	baz=249						
WMQ	**Urumqi**	**94.52**	**314**	*e*P	**P**	**13 51 50.3**	**+0.8**
WMQ				pP	PcP	13 51 54.9	+5.1
WMQ				pmax	pmax		
	comp=Z,11nm,1.9s						
WMQ				pmax	pmax		
	comp=Z,180nm,6.7s						
YKA	**Yellowknife Ar**	**98.74**	**27**	P	**P**	**13 52 07.5**	**-0.5**
	comp=Z,0.7nm,0.9s,baz=251,slow=4.2,SNR=4.0						
MKAR	**Makanchi Array**	**99.01**	**316**	P	**Pdif**	**13 52 11.0**	**+1.3**
	comp=Z,0.9nm,1.0s,baz=87,slow=5.7,SNR=2.0						
TMCR	**Tamitsa**	**121.61**	**337**	*e*PKIKP	**PKPdf**	**13 57 21.4**	**-0.6**
TMCR				pmax	pmax		
	comp=Z,21nm,1.0s						
ARCES	**ARCESS Array B**	**122.14**	**345**	PKP	**PKPdf**	**13 57 22.2**	**-0.7**
	comp=Z,5.5nm,0.9s,baz=8.5,slow=2.5,SNR=4.0						
MNK	**Minsk**	**131.23**	**330**	*i* PKP	**PKiKP**	**13 57 44.0**	**+2.3**
	comp=E,1.0nm,0.6s						
MNK				*i* PKP	**PKiKP**	**13 57 44.0**	**+2.3**
	comp=N,14nm,0.8s						
MNK				*i* PKP	**PKiKP**	**13 57 44.0**	**+2.3**
	comp=Z,9.0nm,0.8s						
MNK				*i* PP	PP	14 00 10.2	+12
MNK				*i* SKS	**SKSdf**	**14 04 55.3**	**+5.9**
MNK				*i* PKKP	**PKKPdf**	**14 07 37.1**	**-3.2**
MNK				*i* SKKP		14 11 12.5	
MNK				*i* SKKS	**SKKSdf**	**14 14 49.1**	**-1.6**
MNK				*i* SS	SS	14 17 48.2	+20
MNK				*i* LQ	LQ	14 48 37.3	
MNK				*i* LR	LR	14 52 18.7	
MNK				*i* LRM	MLR	14 54 26.0	
	comp=Z,873nm,16.1s						
MNK				*i* LRM	MLR	14 54 58.2	
	comp=N,870nm,18.9s						
MNK				*i* LRM	MLR	14 55 27.2	
	comp=E,107nm,15.9s						
AKASG	**Malin Array Be**	**132.62**	**325**	PKP	**PKPdf**	**13 57 43.1**	**-0.4**
	comp=E,0.6nm,0.5s,baz=72,slow=1.4,SNR=1.9						
BRTR	**Keskin Array B**	**134.24**	**310**	PKP	**PKPdf**	**13 57 46.4**	**-0.7**
	comp=E,3.2nm,1.1s,baz=5.0,slow=4.2,SNR=5.7						
CLL	**Collm**	**139.97**	**336**	*e*(pPKPdf)		13 58 01.0	
GERES	**GERESS Array B**	**141.56**	**333**	PKP	**PKPdf**	**13 58 00.6**	**+0.4**
	comp=E,0.3nm,0.7s,baz=66,slow=5.7,SNR=3.4						

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*IDC **19** 13:40:47.4±1.0, 3.°02S×142.°52E, h0^{km}, mb4.1/7, mb1 4.3/9, mb1mx4.0/41, mbtmp4.3/9, ML4.1/2, Error ellipse: s-maj=33.6km s-min=20.1km az=98.0*

ISC 19 13:40:51.9±0.9**, 3.°1S**±0.°1×**142.°6E**±0.°2**, h27**^{km}**, n17, σ0.^{s}78**/10**, mb4.0**/8**, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.76**	**144**	Pn	Pn	13 42 49.4	+6.2
	0.5nm,0.3s,baz=329,slow=20,SNR=3.1						
HNR	**Honiara**	**18.39**	**111**	P	**P**	**13 45 05.4**	**+0.4**
	1.7nm,0.3s,baz=270,slow=1.0,SNR=1.9						
WRA	**Warramunga Arr**	**18.57**	**205**	P	**P**	**13 45 05.9**	**-1.0**
	0.4nm,0.3s,baz=30,slow=10,SNR=14						
ASAR	**Alice Springs**	**22.10**	**202**	P	**P**	**13 45 44.8**	**-0.5**
	3.0nm,0.8s,baz=28,slow=9.7,SNR=8.7						
FITZ	**Fitzroy Crossi**	**22.30**	**227**	P	**P**	**13 45 47.3**	**0.0**
	4.5nm,0.8s,baz=46,slow=13,SNR=7.3						
STKA	**Stephens Creek**	**28.64**	**182**	P	**P**	**13 46 46.8**	**+0.4**
	3.3nm,1.0s,baz=360,slow=15,SNR=2.6						
H11S3	**WAKE ISLAND Hy**	**32.02**	**47**	T	T	14 20 55.8	
	baz=229,slow=75,SNR=7.9						
H11S2	**WAKE ISLAND Hy**	**32.03**	**47**	T	T	14 20 51.8	
	baz=229,slow=75,SNR=6.0						
H11S1	**WAKE ISLAND Hy**	**32.03**	**47**	T	T	14 20 55.4	
	baz=229,slow=75,SNR=9.2						
H11N1	**WAKE ISLAND Hy**	**32.95**	**46**	T	T	14 22 08.6	
	baz=227,slow=74						
H11N2	**WAKE ISLAND Hy**	**32.96**	**46**	T	T	14 22 07.5	
	baz=227,slow=74						
H11N3	**WAKE ISLAND Hy**	**32.96**	**46**	T	T	14 22 10.2	
	baz=227						
XAN	**Xi'an**	**48.66**	**322**	P	**P**	**13 49 35.0**	**+1.1**
XAN				pmax	pmax		
	comp=Z,6.0nm,1.3s						
XAN				pmax	pmax		
	comp=Z,810nm,7.9s						
MKAR	**Makanchi Array**	**72.46**	**321**	P	**P**	**13 52 15.8**	**-0.3**
	comp=Z,1.3nm,0.8s,baz=106,slow=7.7,SNR=6.0						
ZALV	**Zalesovo Beam**	**74.23**	**329**	P	**P**	**13 52 25.6**	**-0.7**
	comp=Z,1.3nm,0.7s,baz=109,slow=7.8,SNR=4.9						
ILAR	**Eielson Array**	**84.61**	**24**	P	**P**	**13 53 21.8**	**-0.8**
	comp=Z,1.2nm,0.8s,baz=259,slow=4.7,SNR=9.5						
QSPA	**South Pole Qui**	**86.85**	**180**	P	**P**	**13 53 34.2**	**+0.3**
	comp=Z,3.1nm,0.9s,baz=265,slow=1.3,SNR=5.8						

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*IDC **19** 13:48:41.8±1.3, 16.°50S×168.°21E, h0^{km}, mb3.9/7, mb1 4.1/8, mb1mx3.8/43, mbtmp3.9/8, ML4.1/1, Error ellipse: s-maj=52.0km s-min=23.5km az=135.0*

ISC 19 13:48:47.0±0.9**, 16.°6S**±0.°1×**168.°3E**±0.°2**, h35**^{km}**, n8, σ1.^{s}20**/9**, mb3.8**/7**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**5.70**	**197**	Pn	**Pn**	**13 50 09.8**	**+0.6**
	5.5nm,0.3s,baz=215,slow=23,SNR=27						
DZM				Sn	**Sn**	**13 51 12.8**	**-0.6**
	baz=330,slow=23,SNR=1.0						
STKA	**Stephens Creek**	**28.57**	**233**	P	**P**	**13 54 40.8**	**+1.0**
	1.7nm,0.8s,baz=63,slow=6.8,SNR=3.4						
WRA	**Warramunga Arr**	**32.36**	**259**	P	**P**	**13 55 11.8**	**-1.6**
	0.5nm,0.7s,baz=90,slow=8.5,SNR=1.1						
ASAR	**Alice Springs**	**32.96**	**252**	P	**P**	**13 55 17.8**	**-0.9**
	6.1nm,0.7s,baz=79,slow=8.6,SNR=39						
SONM	**Songino Array**	**84.58**	**323**	P	**P**	**14 01 18.3**	**+1.6**
	0.3nm,0.7s,baz=142,slow=5.3,SNR=2.1						
NVAR	**Mina Array Bea**	**87.77**	**49**	P	**P**	**14 01 32.5**	**-0.4**
	0.8nm,0.9s,baz=224,slow=8.1,SNR=4.5						
ILAR	**Eielson Array**	**88.02**	**18**	P	**P**	**14 01 33.3**	**+0.2**
	0.2nm,0.6s,baz=224,slow=6.3,SNR=1.6						
YKA	**Yellowknife Ar**	**98.77**	**27**	P	**P**	**14 02 21.7**	**-0.9**
	0.1nm,0.3s,baz=235,slow=3.8,SNR=2.0						

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*IDC **19** 13:49:03.5±2.7, 2.°37S×136.°85E, h0^{km}, mb3.4/2, mb1 3.9/4, mb1mx3.5/40, mbtmp3.7/4, ML3.8/2, Error ellipse: s-maj=81.8km s-min=29.8km az=85.0*

*DJA **19** 13:49:04.9±0.4, 2°S±8°×13°7E±°, h10^{km}, M4.3/7, mb4.3/1, MLv4.3/7*

ISC 19 13:49:06.8±1.1**, 2.°4S**±0.°1×**137.°12E**±0.°07**, h35**^{km}**, n9, σ1.^{s}10**/9**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRPI	**Serui, Papua**	**1.00**	**299**	P	**Pn**	**13 49 22.8**	**-1.5**
BAKI	**Biak**	**1.53**	**319**	P	**Pn**	**13 49 30.7**	**-1.0**
SMPI	**Sarmi**	**1.63**	**77**	P	**Pn**	**13 49 32.6**	**-0.4**
FAKI	**Fak Fak**	**4.89**	**263**	P	**Pn**	**13 50 17.8**	**-0.2**
SWI	**Sorong**	**6.04**	**284**	P	**Pn**	**13 50 34.5**	**+0.8**
WRA	**Warramunga Arr**	**17.69**	**189**	P	**P**	**13 53 10.6**	**-0.7**
	0.4nm,0.3s,baz=8.9,slow=12,SNR=13						
WRA				S	Sn	13 56 13.1	-14
	0.0nm,0.3s,baz=359,slow=22,SNR=1.1						
FITZ	**Fitzroy Crossi**	**19.28**	**215**	P	**Pn**	**13 53 29.5**	**-0.3**
	0.2nm,0.3s,baz=39,slow=9.8,SNR=2.0						
FITZ				S	Sn	13 56 52.9	-12
	0.1nm,0.3s,baz=126,slow=23,SNR=1.2						
ASAR	**Alice Springs**	**21.42**	**188**	P	**P**	**13 53 51.4**	**-0.5**
	1.1nm,0.4s,baz=15,slow=11,SNR=27						
MKAR	**Makanchi Array**	**68.54**	**323**	P	**P**	**14 00 07.5**	**+1.5**
	0.2nm,0.6s,baz=111,slow=8.2,SNR=2.0						

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*IDC **19** 13:52:51.6±1.3, 16.°52S×168.°17E, h0^{km}, mb3.9/6, mb1 4.1/7, mb1mx3.8/39, mbtmp3.9/7, ML3.6/1, Error ellipse: s-maj=49.5km s-min=23.6km az=124.0*

ISC 19 13:52:57.1±1.1**, 16.°5S**±0.°1×**168.°1E**±0.°2**, h35**^{km}**, n7, σ1.^{s}45**/7**, mb3.9**/5**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**5.75**	**196**	Pn	**Pn**	**13 54 19.0**	**-1.1**
	1.5nm,0.3s,baz=87,slow=18,SNR=4.5						
DZM				Sn	**Sn**	**13 55 26.6**	**+1.7**
	1.2nm,0.3s,baz=140,slow=22,SNR=7.3						
STKA	**Stephens Creek**	**28.53**	**233**	P	**P**	**13 58 49.9**	**+0.4**
	2.0nm,0.7s,baz=345,slow=14,SNR=4.0						
ASAR	**Alice Springs**	**32.87**	**252**	P	**P**	**13 59 26.9**	**-1.1**
	3.6nm,0.7s,baz=79,slow=8.8,SNR=31						
SONM	**Songino Array**	**84.42**	**323**	P	**P**	**14 05 26.9**	**+0.8**
	0.4nm,0.8s,baz=138,slow=8.9,SNR=3.1						
NVAR	**Mina Array Bea**	**87.80**	**49**	P	**P**	**14 05 42.1**	**-1.0**
	0.7nm,0.8s,baz=230,slow=8.5,SNR=5.1						
ILAR	**Eielson Array**	**87.96**	**18**	P	**P**	**14 05 44.0**	**+1.1**
	0.1nm,0.5s,baz=233,slow=4.5,SNR=1.9						
MKAR	**Makanchi Array**	**99.06**	**316**	P	Pdif	14 06 34.5	0.0
	0.2nm,0.8s,baz=100,slow=6.0,SNR=2.3						

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*IDC **19** 14:08:45.0±0.5, 16.°02S×178.°86W, h0^{km}, mb4.5/20, mb1 4.7/20, mb1mx4.6/27, mbtmp4.5/20, MS4.6/6, Ms1 4.6/6, ms1mx4.3/25, Error ellipse: s-maj=21.6km s-min=14.4km az=134.0*

*BJI **19** 14:08:48.3±0.0, 16.°04S×178.°83W, h36^{km}, mB5.2/2, mb4.7/30, Ms5.4/4, Ms7 5.1/5*

*MOS **19** 14:08:49.2±1.1, 15.°95S×179.°04W, h36^{km}, mb5.1/17, Error ellipse: s-maj=12.0km s-min=10.7km az=63.2*

*NEIC **19** 14:08:49.3±1.9, 16.°10S±0.°06×178.°9W±0.°1, h35^{km}±1^{km}, mb5.1/32, Error ellipse: s-maj=19.1km s-min=3.2km az=122.0*

*GCMT **19** 14:08:51.3±0.3, 16.°00S±0.°02×178.°77W±0.°02, h12^{km}, MW5.2/73, Moment Tensor Solution. s12,c15; s73,c107; Duration: 1.^{s}0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.08±.40; M$_{\theta\theta}$3.92±.37; M$_{\phi\phi}$-3.99±.33; M$_{r\theta}$0.11±1.01; M$_{\theta\phi}$7.17±.25; M$_{\phi r}$-3.30±.94; Best double couple: M$_0$8.80900×10^{16} NP1:φ$_s$283.00000°,δ69.00000°, λ-5.00000°. NP2:φ$_s$15.00000°,δ86.00000°,λ-159.00000°. Principal axes: T 8.4700, Plg11.0000°, Azm147.0000°; N 0.6880, Plg69.0000°, Azm26.0000°; P -9.1490, Plg18.0000°, Azm241.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 19 14:08:48.3±0.3**, 15.°99S**±0.°07×**178.°96W**±0.°07**, h22**^{km}**, n256, σ1.^{s}21**/244**, mb4.8**/57**, MS4.8**/5**, 26C-4D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.35**	**238**	*i* P	**Pn**	**14 09 38.5**	**-1.0**
MSVF	**Nonsavu**	**3.35**	**238**	Pn	**Pn**	**14 09 37.7**	**-1.8**
AFI	**Afiamalu**	**7.24**	**74**	P	**Pn**	**14 10 31.5**	**-1.5**
AFI	**Afiamalu**	**7.24**	**74**	Pn	**Pn**	**14 10 31.5**	**-1.5**
AFI	**Afiamalu**	**7.24**	**74**	P	**Pn**	**14 10 29.3**	**-3.7**
FUNA	**Funafuti**	**7.63**	**346**	Pn	**Pn**	**14 10 35.6**	**-2.7**
RAO	**Raoul Island**	**13.23**	**176**	LR	LR	14 16 20.2	
	comp=Z,3μm,20.4s,baz=349,slow=34						
DZM	**Mont Dzumac**	**15.07**	**244**	Pn	**P**	**14 12 23.7**	**-1.6**
	0.3nm,0.3s,baz=57,slow=14,SNR=4.9						
DZM				LR	LR	14 17 26.0	
	comp=Z,3μm,18.2s,baz=22,slow=34						
RAR	**Rarotonga**	**18.91**	**109**	P	**Pn**	**14 13 11.3**	**+3.0**
	0.8nm,0.3s,baz=265,slow=3.4,SNR=3.8						
RAR				LR	LR	14 18 12.7	
	comp=Z,1μm,20.3s,baz=268,slow=30						
OUZ	**Omahuta**	**20.28**	**198**		Pn	14 13 24.9	+0.3
OUZ				IAmb	IAmb	14 13 33.2	
	comp=Z,91nm,1.0s						
URZ	**Urewera**	**22.45**	**188**	P	**P**	**14 13 44.3**	**-1.6**
	comp=Z,14nm,0.7s,baz=34,slow=5.5,SNR=10						
URZ				LR	LR	14 22 01.8	
	comp=Z,3μm,18.8s,baz=24,slow=36						
TUWZ	**Tuamarina**	**26.08**	**192**	P	**P**	**14 14 18.4**	**-2.0**
OXZ	**Oxford**	**28.31**	**194**	P	**P**	**14 14 37.4**	**-2.9**
RPZ	**Rata Peaks**	**28.91**	**195**	P	**P**	**14 14 46.3**	**+0.5**
	comp=Z,2.2nm,0.7s,baz=27,slow=16,SNR=1.2						
FOZ	**Fox Glacier**	**29.07**	**197**	P	**P**	**14 14 44.7**	**-2.4**
ARMA	**Armidale**	**30.50**	**237**	P	**P**	**14 15 01.8**	**+1.7**
	baz=31,SNR=4.8						
MLZ	**Mavora Lakes**	**31.24**	**198**	P	**P**	**14 15 04.9**	**-1.4**
DCZ	**Deep Cove**	**31.62**	**199**	P	**P**	**14 15 08.2**	**-1.5**
DCZ				IAmb	IAmb	14 15 15.3	
	comp=Z,33nm,0.9s						
WHZ	**Wether Hill Ro**	**31.77**	**197**	P	**P**	**14 15 09.6**	**-1.4**
RMQ	**Roma**	**31.77**	**245**	P	**P**	**14 15 12.9**	**+1.6**
	baz=32,SNR=5.2						
PMG	**Port Moresby**	**33.66**	**277**	P	**P**	**14 15 29.0**	**+1.1**
	comp=Z,5.2nm,0.7s,baz=192,slow=9.3,SNR=2.6						
CNB	**Canberra Magne**	**34.22**	**230**	P	**P**	**14 15 34.0**	**+1.4**
	baz=34,SNR=6.0						
MTSU	**Mount Surprise**	**35.14**	**261**	P	**P**	**14 15 42.2**	**+1.5**
	baz=35,SNR=5.3						
CMSA	**Cobar Meteorol**	**35.68**	**238**	P	**P**	**14 15 45.8**	**+0.7**
	baz=36,SNR=15						
QLP	**Quilpie**	**35.77**	**247**	P	**P**	**14 15 46.6**	**+0.7**
	baz=36,SNR=4.4						
TOO	**Toolangi**	**38.00**	**229**	P	**P**	**14 16 06.6**	**+1.6**
	baz=38,SNR=9.2						
TOO	**Toolangi**	**38.00**	**229**	P	**P**	**14 16 03.2**	**-1.8**
TOO				pmax	pmax		
	comp=Z,37nm,1.2s						
TOO	**Toolangi**	**38.00**	**229**	P	**P**	**14 16 03.2**	**-1.8**
TOO				IAmb	IAmb	14 16 18.9	
	comp=Z,37nm,1.1s						
STKA	**Stephens Creek**	**39.13**	**239**	P	**P**	**14 16 15.3**	**+0.9**
	comp=Z,23nm,1.0s,baz=65,slow=7.1,SNR=25						
STKA				LR	LR	14 30 59.6	
	comp=Z,712nm,19.8s,baz=42,slow=34						
STKA	**Stephens Creek**	**39.13**	**239**	P	**P**	**14 16 15.4**	**+0.9**
	baz=39,SNR=19						
STKA	**Stephens Creek**	**39.13**	**239**	P	**P**	**14 16 11.5**	**-2.9**
ARPS	**Mount Arapiles**	**40.40**	**232**	P	**P**	**14 16 25.5**	**+0.6**
	baz=41,SNR=9.5						
HTT	**Hallett**	**41.70**	**237**	P	**P**	**14 16 36.3**	**+0.5**
	baz=42,SNR=8.9						
BBOO	**Buckleboo**	**43.90**	**239**	P	**P**	**14 16 53.7**	**+0.1**
	baz=44,SNR=6.6						
BBOO	**Buckleboo**	**43.90**	**239**	P	**P**	**14 16 50.6**	**-3.0**
BBOO				IAmb	IAmb	14 17 04.6	
	comp=Z,47nm,1.2s						
WR0	**Warramunga Arr**	**44.30**	**258**	P	**P**	**14 16 53.6**	**-3.4**
WB0	**Warramunga Arr**	**44.45**	**258**	P	**P**	**14 16 57.3**	**-0.8**
WB0				IAmb	IAmb	14 16 58.6	
	comp=Z,23nm,1.1s						
WB2	**Warramunga Arr**	**44.48**	**258**	P	**P**	**14 16 57.6**	**-0.8**
WB2				IAmb	IAmb	14 16 59.1	
	comp=Z,18nm,1.1s						
WRAB	**Tennant Creek**	**44.48**	**258**	*i* P	**P**	**14 16 57.3**	**-1.1**
WRAB				pmax	pmax		
	comp=Z,19nm,1.2s						
WRAB	**Tennant Creek**	**44.48**	**258**	P	**P**	**14 16 56.4**	**-2.1**
WRAB				IAmb	IAmb	14 17 13.5	
	comp=Z,23nm,1.2s						
WRA	**Warramunga Arr**	**44.49**	**258**	P	**P**	**14 16 58.2**	**-0.3**
	comp=Z,12nm,1.0s,baz=88,slow=8.2,SNR=31						
WRA	**Warramunga Arr**	**44.49**	**258**	P	**P**	**14 16 57.0**	**-1.5**
AS31	**Alice Springs**	**44.84**	**252**	P	**P**	**14 17 00.7**	**-0.6**
ASAR	**Alice Springs**	**44.84**	**252**	P	**P**	**14 17 01.2**	**0.0**
	comp=Z,32nm,0.9s,baz=84,slow=8.4,SNR=222						
ASAR	**Alice Springs**	**44.84**	**252**	P	**P**	**14 17 00.3**	**-0.9**
WRKA	**Warakurna**	**49.96**	**251**	P	**P**	**14 17 40.9**	**-0.2**
	baz=50,SNR=21						
FITZ	**Fitzroy Crossi**	**52.85**	**259**	P	**P**	**14 18 03.9**	**+1.2**
	baz=53,SNR=4.1						
APSI	**Ampana**	**60.40**	**278**	P	**P**	**14 18 57.6**	**+1.0**
	comp=Z,38nm,1.2s						
VNDA	**Vanda**	**62.30**	**185**	P	P	14 19 13.7	+5.3
	comp=Z,4.4nm,1.0s,baz=342,slow=9.9,SNR=5.4						
TWSI	**Taliwang, Sumb**	**62.89**	**268**	P	**P**	**14 19 11.6**	**-1.8**
	comp=Z,32nm,0.9s						
MJAR	**Matsushiro Arr**	**66.06**	**323**	P	**P**	**14 19 34.2**	**+0.5**
	comp=Z,9.7nm,0.9s,baz=161,slow=6.0,SNR=12						
MJAR	**Matsushiro Arr**	**66.06**	**323**	P	**P**	**14 19 34.4**	**+0.7**
MJAR				pmax	pmax		
	comp=Z,8.0nm,1.1s						
MJAR	**Matsushiro Arr**	**66.06**	**323**	P	**P**	**14 19 34.4**	**+0.7**
MAJO	**Matsushiro**	**66.06**	**323**	*i* P	**P**	**14 19 32.8**	**-0.9**
MAJO				pmax	pmax		
	comp=Z,13nm,1.0s						
MAT	**Matsushiro**	**66.06**	**323**	P	**P**	**14 19 33.8**	**+0.1**
YSS	**Yuzh-Sakhalins**	**71.47**	**333**⇓	*e*P	**P**	**14 20 08.6**	**+1.5**
YSS				*e*		14 20 18.4	
PEA0B	**Petropavlovsk-**	**71.70**	**345***c*	*e*P	**P**	**14 20 08.5**	**+0.1**
PETK	**Petropavlovsk-**	**71.70**	**345**	P	**P**	**14 20 08.7**	**+0.3**
	comp=Z,10nm,0.8s,baz=134,slow=11,SNR=15						
PETK	**Petropavlovsk-**	**71.70**	**345**	P	**P**	**14 20 09.3**	**+0.9**
PETK	**Petropavlovsk-**	**71.70**	**345**	P	**P**	**14 20 09.3**	**+0.9**
KSRS	**Korea Array**	**72.93**	**318**	P	**P**	**14 20 17.5**	**+1.5**
	comp=Z,3.2nm,0.9s,baz=133,slow=7.2,SNR=10						
KSRS				LR	LR	14 50 06.2	
	comp=Z,154nm,18.9s,baz=290,slow=34						
QSPA	**South Pole Qui**	**74.05**	**180**	P	**P**	**14 20 22.1**	**-0.4**
USRK	**Ussuriysk Ar.**	**74.74**	**326**	P	**P**	**14 20 28.8**	**+2.2**
	comp=Z,2.0nm,0.8s,baz=131,slow=5.3,SNR=4.6						
USRK	**Ussuriysk Ar.**	**74.74**	**326**	P	**P**	**14 20 24.6**	**-1.9**
PKM	**Mcpherson Peak**	**75.54**	**47**	P	**P**	**14 20 32.2**	**+0.6**
	baz=238						
NJ2	**Nanjing**	**76.32**	**309**	*e*P	**P**	**14 20 36.9**	**+1.0**
NJ2				pmax	pmax		
	comp=Z,3.0nm,0.5s						
MDJ	**Mudanjiang**	**76.32**	**325**	P	**P**	**14 20 36.6**	**+1.0**
MDJ				pmax	pmax		
	comp=Z,11nm,2.0s						
O02D	**Mt. Diablo Mer**	**76.44**	**41**	P	**P**	**14 20 36.9**	**+0.4**
	baz=235						
VES	**Vestal, Richgr**	**76.55**	**46**	P	**P**	**14 20 37.1**	**0.0**
	baz=239						
KDAK	**Kodiak Island**	**76.68**	**14**	P	**P**	**14 20 37.3**	**+0.1**
	comp=Z,16nm,0.8s,baz=217,slow=6.8,SNR=10						
KDAK	**Kodiak Island**	**76.68**	**14**	P	**P**	**14 20 37.0**	**-0.3**
KDAK				IAmb	IAmb	14 20 38.1	
	comp=Z,23nm,1.0s						
BFSC	**Mount Baldy Ra**	**76.74**	**48**	P	**P**	**14 20 39.4**	**+1.0**
	baz=240						
EDW2	**Edwards Air Fo**	**76.82**	**48**	P	**P**	**14 20 39.4**	**+0.7**
	baz=240						
ISA	**Isabella, Lake**	**76.88**	**47**	P	**P**	**14 20 39.6**	**+0.5**
	baz=239						
N02D	**Trinity Center**	**76.95**	**40**	P	**P**	**14 20 39.9**	**+0.6**
	baz=235						
MONP2	**Monument Peak**	**76.98**	**50**	P	**P**	**14 20 40.3**	**+0.4**
	baz=241						
L02E	**Cave Junction**	**77.08**	**39**	P	**P**	**14 20 39.7**	**-0.3**
	baz=234						
M02C	**Callahan**	**77.10**	**40**	P	**P**	**14 20 41.0**	**+0.8**
	baz=235						
GRNR	**Gornyy**	**77.10**	**333**⇑	*i*P	**P**	**14 20 41.0**	**+1.1**
GRNR				pmax	pmax		
	comp=Z,5.0nm,1.1s						
GRNR				MLR	MLR		
	comp=E,420nm,14.0s						
GRNR				MLR	MLR		
	comp=N,340nm,16.0s						
GRNR				MLR	MLR		
	comp=Z,530nm,14.0s						
O03E	**Paynes Creek**	**77.14**	**41**	P	**P**	**14 20 40.7**	**+0.3**
	baz=236						
TPFO	**Pinon Flats**	**77.30**	**49**	P	**P**	**14 20 43.7**	**+2.1**
	baz=241						
LRMC	**Laurel Mtn Rad**	**77.34**	**47**	P	**P**	**14 20 45.0**	**+3.3**
	baz=240						
K02D	**Willamette Mer**	**77.36**	**38**	P	**P**	**14 20 43.7**	**+2.1**
	baz=234						
YBH	**Yreka Blue Hor**	**77.38**	**40**	P	**P**	**14 20 42.2**	**+0.5**
	comp=Z,7.2nm,0.8s,baz=202,slow=5.0,SNR=8.1						
CWC	**Cottonwood Cre**	**77.55**	**46**	P	**P**	**14 20 43.5**	**+0.6**
	baz=239						
MLAC	**Mammoth, Mammo**	**77.64**	**45**	P	**P**	**14 20 44.9**	**+1.4**
	baz=238						

MPMC	Manual Prospec	77.77	47	P	P	14 20 44.5	+0.3
	baz=240						
BELC	Belle Mtn. Jos	77.83	49	P	P	14 20 45.3	+0.9
	baz=241						
GSC	Goldstone, Bar	77.88	48	P	P	14 20 45.9	+1.2
	baz=240						
L04D	Klamath Falls	77.91	39	P	P	14 20 46.3	+1.5
	baz=235						
M04C	Macdoel	77.95	40	P	P	14 20 45.1	+0.1
	baz=236						
HEC	Hector,Ludlow	77.98	48	P	P	14 20 45.9	+0.6
	baz=241						
BC3	Big Chuckawall	78.06	50	P	P	14 20 47.9	+2.1
	baz=241						
I02D	Swisshome	78.08	37	P	P	14 20 46.3	+0.8
	baz=234						
I03D	Drain, OR	78.14	38	P	P	14 20 46.6	+0.8
	baz=234						
CN2	Changchun	78.19	322	*e*P	P	14 20 46.6	+0.5
CN2				PP	PP	14 23 45.4	+2.2
CN2				S	S	14 30 39.6	0.0
CN2				pmax	pmax		
	comp=Z,10.0nm,1.5s						
KLR	Kul'dur	78.20	329	*i* P	P	14 20 44.7	-1.3
KLR				pmax	pmax		
	comp=Z,10.0nm,1.7s						
GLA	Glamis	78.24	51	P	P	14 20 47.6	+0.9
	baz=242						
GRAC	Grapevine Rang	78.33	46	P	P	14 20 47.2	+0.1
	baz=240						
FURC	Furnace Creek,	78.41	47	P	P	14 20 48.5	+1.0
	baz=240						
NVAR	Mina Array Bea	78.42	44	P	P	14 20 48.3	+0.5
	comp=Z,4.7nm,0.9s,baz=226,slow=8.8,SNR=19						
GMRC	Granite Mounta	78.45	49	P	P	14 20 47.2	-0.7
	baz=241						
K04D	Chiloquin, OR	78.47	39	P	P	14 20 49.8	+2.0
	baz=235						
IRM	Iron Mountain	78.52	49	P	P	14 20 48.6	+0.4
	baz=242						
SHOC	Shoshone, Teco	78.55	47	P	P	14 20 49.0	+0.7
	baz=240						
J04D	Umpqua Nationa	78.61	39	P	P	14 20 48.9	+0.2
	baz=235						
I04A	Tendick Farm,	78.75	38	P	P	14 20 49.9	+0.7
	baz=235						
BRLK	Bradley Lake	78.85	14	P	P	14 20 47.7	-1.7
WHN	Wuhan	79.06	306	⇓P	P	14 20 53.0	+1.9
WHN				pmax	pmax		
	comp=Z,54nm,1.4s						
K05A	Summer Lake	79.06	40	P	P	14 20 51.7	+0.5
K05A				IAmb	IAmb	14 21 06.4	
	comp=Z,25nm,1.2s						
TPNV	Topopah Spring	79.08	46	P	P	14 20 50.9	-0.5
TPNV				pmax	pmax		
	comp=Z,8.0nm,1.1s						
TPNV	Topopah Spring	79.08	46	P	P	14 20 50.9	-0.5
J05D	Fort Rock, OR	79.16	39	P	P	14 20 52.3	+0.7
	baz=236						
MA2	Magadan	79.22	345	*ce*P	P	14 20 49.6	-1.8
MA2				pmax	pmax		
	comp=Z,9.0nm,1.7s						
214A	Organ Pipe Nat	79.25	52	P	P	14 20 53.5	+1.2
	baz=243						
PDMCI	Parker Dam,Lak	79.32	50	P	P	14 20 53.4	+0.8
	baz=242						
TIA	Tai'an	79.58	312	P	P	14 20 55.3	+1.4
TIA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
PINE	Pine Mountain	79.62	39	P	P	14 20 54.4	+0.2
PINE				IAmb	IAmb	14 21 03.8	
	comp=Z,34nm,1.2s						
I05D	Terrebonne, OR	79.69	38	P	P	14 20 55.0	+0.6
	baz=236						
GAMB	Gambell	79.71	3	P	P	14 20 53.8	-0.1
G05D	Wamic, OR	80.21	37	P	P	14 20 57.6	+0.5
	baz=235						
R11A	Troy Canyon, C	80.22	45	P	P	14 20 58.1	+0.5
	baz=241						
E04D	Cinebar	80.25	36	P	P	14 20 58.1	+0.8
	baz=234						
RC01	Rabbit Creek A	80.29	14	P	P	14 20 56.9	-0.3
	baz=208						
SUA	Susitna One	80.39	13	P	P	14 20 57.7	-0.2
SUA				IAmb	IAmb	14 21 07.8	
	comp=Z,16nm,1.0s						
D03D	Eldon	80.54	35	P	P	14 20 58.8	0.0
	baz=234						
TTA	Tatalina	80.69	10	P	P	14 20 58.4	-1.0
TTA				pmax	pmax		
	comp=Z,20nm,1.1s						
TTA	Tatalina	80.69	10	P	P	14 20 58.4	-1.0
TTA				IAmb	IAmb	14 21 00.8	
	comp=Z,20nm,1.1s						
B05A	Bryant	81.51	34	P	P	14 21 03.1	-0.8
	baz=234						
SEY	Seymchan	81.80	347	*i* P	P	14 21 04.3	-0.9
N25K	Chitina, Valde	82.00	16	P	P	14 21 06.1	-0.3
	baz=213						
M24K	Tolsona, Glenn	82.03	15	P	P	14 21 07.3	+0.8
	baz=212						
BJI	Beijing	82.06	315	P	P	14 21 08.0	+1.0
RND	Reindeer	82.53	13	P	P	14 21 07.9	-1.2
RND				pmax	pmax		
	comp=Z,40nm,1.5s						
RND	Reindeer	82.53	13	P	P	14 21 07.9	-1.2
MCK	McKinley	82.80	13	P	P	14 21 09.8	-0.6
	baz=209						
ZEA	Zeya	83.26	331	*e*P	P	14 21 14.4	+1.4
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.4s						
121A	Cookes Peak, D	83.36	54	P	P	14 21 13.9	-0.4
	baz=246						
HLID	Hailey	83.54	41	P	P	14 21 15.2	+0.3
MLY	Manley	83.58	12	P	P	14 21 12.8	-1.7
	baz=207						
WRH	Wood River Hil	83.62	13	P	P	14 21 13.4	-1.2
HDA	Harding Lake	83.82	13	P	P	14 21 15.0	-0.6
	baz=211						
HDA	Harding Lake	83.82	13	P	P	14 21 15.1	-0.6
HDA				IAmb	IAmb	14 21 25.6	
	comp=Z,22nm,1.4s						
CCB	Clear Creek Bu	83.84	13	P	P	14 21 14.7	-1.1
CCB				IAmb	IAmb	14 21 24.2	
	comp=Z,19nm,1.2s						
DOT	Dot Lake	83.85	15	P	P	14 21 15.4	-0.4
DOT				IAmb	IAmb	14 21 24.7	
	comp=Z,15nm,1.2s						
IMAR	Indian Mountai	83.89	10	P	P	14 21 15.7	-0.3
I23K	Minto, Yukon-K	83.95	12	P	P	14 21 15.5	-0.8
	baz=208						
BCAR	Beaver Creek A	83.96	16	P	P	14 21 15.4	-1.1
TCOL	CIGO, UAF Yank	84.02	13	P	P	14 21 16.3	-0.4
	baz=210						
COLA	College	84.03	13	*i* P	P	14 21 14.9	-1.7
COLA				pmax	pmax		
	comp=Z,12nm,1.4s						
SCRK	Sand Creek	84.15	15	P	P	14 21 16.2	-1.2
	baz=214						
ILAR	Eielson Array	84.15	13	P	P	14 21 16.0	-1.3
	comp=Z,6.2nm,1.1s,baz=228,slow=5.2,SNR=22						
POKR	Poker Plat Res	84.33	13	P	P	14 21 17.6	-0.7
	baz=210						
XAN	Xi'an	84.68	307	P	P	14 21 21.6	+0.8
XAN				pP	pwP	14 21 31.4	+0.7
XAN				pmax	pmax		
	comp=Z,4.0nm,1.3s						
ANMO	Albuquerque	85.33	52	*ce*P	P	14 21 23.9	-0.3
ANMO				pmax	pmax		
	comp=Z,17nm,2.5s						
TXAR	Lajitas Array	85.42	58	P	P	14 21 25.3	+0.6
	comp=Z,1.7nm,0.7s,baz=224,slow=5.2,SNR=14						
EGAK	Eagle	85.51	15	P	P	14 21 22.1	-2.1
EGAK				IAmb	IAmb	14 21 33.2	
	comp=Z,15nm,1.1s						
HHC	Hu-ho-hao-te	85.56	315	*e*P	P	14 21 27.0	+1.9
HHC				pmax	pmax		
	comp=Z,8.0nm,1.2s						
COLD	Coldfoot	85.64	11	P	P	14 21 24.7	-0.1
	baz=208						
O20A	White River Ci	86.11	46	P	P	14 21 27.8	-0.2
	baz=245						
S22A	4UR Ranch, Cre	86.15	49	P	P	14 21 28.0	-0.4
	baz=246						
PDAR	Pinedale Array	86.33	44	P	P	14 21 28.6	-0.5
	comp=Z,1.1nm,0.7s,baz=206,slow=2.4,SNR=12						
PDAR	Pinedale Array	86.33	44	P	P	14 21 28.1	-0.9
H17A	Grant Village	86.38	42	P	P	14 21 30.0	+0.8
	baz=244						
KMI	Kunming	86.49	297	⇑P	P	14 21 30.3	+0.1
KMI				pP	sP	14 21 43.5	+4.1
KMI				pmax	pmax		
	comp=Z,5.0nm,1.9s						
KMI				LR	LR		
	comp=Z,480nm,16.3s						
KMI				LR	LR		
	comp=Z,520nm,17.6s						
KMI				LR	LR		
	comp=Z,560nm,21.4s						
TOLK	Toolik Lake Re	87.00	10	P	P	14 21 31.7	+0.2
	baz=208						
CD2	Chengdu	87.59	303	P	P	14 21 37.0	+1.8
CD2				pmax	pmax		
	comp=Z,10.0nm,1.8s						
CMAR	Chiang Mai Arr	87.75	290	P	P	14 21 38.0	+1.8
	comp=Z,0.3nm,0.3s,baz=101,slow=2.8,SNR=1.8						
Q24A	Divide	87.84	49	P	P	14 21 36.3	-0.3
	baz=247						
LZH	Lanzhou	89.31	308	*e*P	P	14 21 46.0	+2.6
LZH				pP	pwP	14 21 55.0	+1.7
LZH				sP	sP	14 22 01.0	+8.4
LZH				pmax	pmax		
	comp=Z,13nm,1.3s						
SYO	Syowa Base	90.90	193	⇓*e*X	P	14 21 52.6	+2.6
ULN	Ulaanbaatar	91.36	320	*ce*P	P	14 21 52.3	-0.4
ULN				pmax	pmax		
	comp=Z,4.0nm,1.2s						
SONM	Songino Array	91.76	319	P	P	14 21 54.7	+0.2
	comp=Z,0.8nm,0.9s,baz=117,slow=1.7,SNR=6.0						
SNAA	Sanae	92.52	179	P	P	14 21 59.5	+1.9
SNAA	Sanae	92.52	179	*ce*P	P	14 21 58.1	+0.5
SNAA				pmax	pmax		
	comp=Z,11nm,1.0s						
VNA3	Neumayer Olymp	92.68	177	P	P	14 21 56.7	-1.6
YKA	Yellowknife Ar	92.82	25	P	P	14 21 59.8	+0.9
	comp=Z,0.4nm,0.8s,baz=236,slow=4.2,SNR=5.9						
PLCA	Paso Flores	93.03	134	P	P	14 22 01.4	+0.8
	comp=Z,3.0nm,1.0s,baz=233,slow=4.0,SNR=3.2						
VNA2	Neumayer--Watz	93.11	177	P	P	14 21 59.9	-0.4
	baz=181,slow=3.6						
VNA1	Neumayer--Stat	93.34	177	P	P	14 22 00.2	-1.0
TIXI	Tiksi	94.18	345	*ce*P	P	14 22 03.7	-1.2
TIXI				pmax	pmax		
	comp=Z,33nm,2.5s						
MKAR	Makanchi Array	107.43	315	PKiKP	PKiKP	14 27 12.7	-0.6
	comp=Z,0.3nm,0.5s,baz=171,slow=1.8,SNR=5.8						
KURBB	Kurchatov Arra	110.11	319	PKiKP	PKiKP	14 27 17.6	-0.5
	comp=Z,0.7nm,0.5s,baz=89,slow=2.0,SNR=7.9						
BVAR	Borovoye Array	115.03	321	PKP	PKiKP	14 27 26.7	-0.8
	comp=Z,0.7nm,0.7s,baz=243,slow=30,SNR=5.2						
BRVK	Borovoye	115.09	321	*i* PKIKP	PKiKP	14 27 26.8	-0.8
ARU	Arti	120.97	327	PKP	PKPdf	14 27 38.8	0.0
	comp=Z,1.1nm,0.7s,baz=292,slow=0.7,SNR=5.4						
ARU	Arti	120.97	327	*i* PKIKP	PKPdf	14 27 38.7	-0.1
ARU						14 29 06.6	
ARU						14 34 47.8	
ARU				SP	SP	14 38 48.5	-8.0
AKTO	Aktyubinsk	123.07	320	PKP	PKPdf	14 27 43.1	+0.1
	comp=Z,1.6nm,0.7s,baz=105,slow=2.9,SNR=6.4						
KIRV	Kirov	124.60	332	*i* PKIKP	PKiKP	14 27 46.3	+0.3
GEYT	Alibeck	125.52	305	PKP	PKiKP	14 27 48.6	0.0
	comp=Z,1.8nm,0.9s,baz=200,slow=7.5,SNR=4.0						
TMCR	Tamitsa	125.64	341	*e*PKIKP	PKPdf	14 27 43.1	-4.4
TMCR				pmax	pmax		
	comp=Z,20nm,0.6s						
KLMR	Klimovskoe	127.39	337	*e*PKIKP	PKPdf	14 27 49.6	-1.4
KLMR				pmax	pmax		
	comp=Z,14nm,1.0s						
KLMR	Klimovskoe	127.39	337	*e*PKPdf	PKPdf	14 27 49.6	-1.4
KLMR				AMP		14 27 51.3	
	comp=Z,14nm,1.0s						
MOS	Moscow	131.50	333	*e*PKHKP	PKPpre	14 27 39.7	
AKASG	Malin Array Be	138.62	333	PKP	PKPdf	14 28 12.3	-0.1
	comp=Z,2.3nm,0.8s,baz=41,slow=2.4,SNR=6.6						
BRTR	Keskin Array B	143.05	316	PKhKP	PKPpre	14 28 17.9	
	comp=Z,2.9nm,1.0s,baz=116,slow=5.6,SNR=8.4						
CRVS	Cervenica-Dubn	143.18	337	*e*PKIKP	PKPbc	14 28 19.2	+1.5
CRVS	Cervenica-Dubn	143.18	337	*e*PKP	PKPbc	14 28 19.2	+1.5
DPC	Dobruska-Polom	143.57	343	*e*PKIKP	PKPbc	14 28 19.5	+0.7
DPC	Dobruska-Polom	143.57	343	*e*PKP	PKPbc	14 28 19.5	+0.7
KRLC	Kraliky	143.69	343	*e*PKIKP	PKiKP	14 28 26.4	+1.3
MORC	Moravsky Berou	143.73	342	*e*PKP	PKPdf	14 28 20.8	-1.0
MLR	Muntele Rosu	143.92	330	⇑P	PKiKP	14 28 29.5	+3.7
MLR	Muntele Rosu	143.92	330	⇑PKIKP	PKiKP	14 28 29.5	+3.7
DRGR		144.40	334	⇑P	PKPab	14 28 21.2	0.0
DRGR		144.40	334	⇑PKIKP	PKPab	14 28 21.2	0.0
VRAC	Vranov	144.43	342	PKP	PKPbc	14 28 21.4	0.0
	comp=Z,2.6nm,0.4s,baz=28,slow=2.0,SNR=7.1						
VRAC	Vranov	144.43	342	⇑P	PKPdf	14 28 22.3	-0.6
VRAC	Vranov	144.43	342	*e*PKP	PKPbc	14 28 21.5	+0.1
VRAC	Vranov	144.43	342	⇑PKIKP	PKPdf	14 28 22.3	-0.6
VYHS	Vyhne	144.45	340	*e*PKIKP	PKPbc	14 28 21.4	-0.1
VYHS	Vyhne	144.45	340	*e*PKP	PKPbc	14 28 21.4	-0.1
JAVC	Velka Javorina	144.51	341	*e*PKP	PKPdf	14 28 22.9	-0.2
ARR	Arges	144.64	331	⇑P	PKPdf	14 28 23.2	-0.3
MMAI	Mount Meron Ar	144.64	305	PKP	PKPbc	14 28 23.0	+0.3
	comp=Z,44nm,0.9s,baz=56,slow=4.4,SNR=10						
KRUC	Moravsky	144.71	342	*e*PKP	PKPbc	14 28 22.4	+0.1
MODS	Modra-Piesok	145.06	341	*e*PKIKP	PKPab	14 28 23.7	+0.2
MODS	Modra-Piesok	145.06	341	*e*PKP	PKPab	14 28 23.7	+0.2
SIRR	Siria	145.25	335	⇑P	PKPbc	14 28 24.2	0.0
GRF	Grafenberg Arr	145.38	348	*e*PKP	PKPab	14 28 24.8	+0.2
GRF				*e*pPKPbc	sPKPdf	14 28 34.0	+0.5
	baz=23,slow=2.8						
KHC	Kasperske Hory	145.40	345	*e*PKIKP	PKPbc	14 28 24.1	-0.4
KHC				*e*		14 28 33.5	
KHC	Kasperske Hory	145.40	345	*e*PKP	PKPbc	14 28 24.1	-0.4
KHC				*e*pPKP	sPKPbc	14 28 33.5	0.0
GZR	Gura Zlata	145.47	333	⇑P	PKPbc	14 28 24.5	-0.4
GZR	Gura Zlata	145.47	333	⇑PKIKP	PKPbc	14 28 24.5	-0.4
CKRC	Cesky Krumlov	145.50	344	*e*PKP	PKPab	14 28 25.0	-0.1
GERES	GERESS Array B	145.63	345	PKPbc	PKPdf	14 28 24.7	-0.5
	comp=Z,3.5nm,0.6s,baz=29,slow=3.0,SNR=26						
BZS	Buzias	145.79	334	⇑P	PKPdf	14 28 25.5	+0.1
BZS	Buzias	145.79	334	⇑PKP2	PKPdf	14 28 25.5	+0.1
CONA	Conrad Observa	145.89	342	*i* P	PKPab	14 28 26.5	-0.2
	comp=Z,29nm,1.3s,SNR=8.9						
HERR	Herculane	146.02	332	⇑P	PKPdf	14 28 26.0	+0.2
EIL	Elat	146.05	300	PKPbc	PKPab	14 28 27.5	-0.3
	comp=Z,8.6nm,1.0s,baz=10,slow=7.9,SNR=2.9						
MBAR	Mbarara	146.37	243	PKPbc	PKiKP	14 28 30.9	-0.9
	comp=Z,6.5nm,0.9s,baz=18,slow=20,SNR=3.9						
MOA	Molln	146.41	344	*i* P	PKPbc	14 28 27.8	+0.1
	comp=Z,14nm,1.0s,SNR=5.4						
MORH	Mrgy, Hungar	146.47	338	⇑P	PKPdf	14 28 26.9	+0.5
ARSA	Arzberg	146.60	342	*e*P	PKPbc	14 28 28.6	+0.3
	comp=Z,9.8nm,1.1s						
FRGS	Fruska Gora	146.91	335	⇑P	PKPbc	14 28 29.4	+0.2
SOKA	Soboth	147.26	342	*i* P	PKPbc	14 28 29.7	-0.5
	comp=Z,14nm,1.3s,SNR=7.0						
PERS	Pernice	147.27	342	*i* PKPbc	PKPbc	14 28 29.5	-0.7
VTS	Vitosha	147.36	329	⇑P	PKPbc	14 28 30.8	+0.1
VTS	Vitosha	147.36	329	⇑PKP2	PKPbc	14 28 30.8	+0.1
KBA	Koelnbreinsper	147.36	344	*e*P	PKPbc	14 28 29.8	-0.8
	comp=Z,7.0nm,0.8s						
WATA	Walderalm	147.55	347	*e*P	PKPbc	14 28 30.8	-0.2
	comp=Z,22nm,1.2s						
OBKA	Obir	147.55	343	*e*P	PKPbc	14 28 30.7	-0.3
	comp=Z,10nm,1.3s						
RETA	Reutte	147.58	348	*e*P	PKPbc	14 28 31.0	0.0
	comp=Z,12nm,1.0s						
WTTA	Wattenberg	147.60	346	*i* P	PKPbc	14 28 31.2	-0.1
	comp=Z,22nm,1.1s,SNR=5.2						
MOTA	Moosalm	147.64	347	*i* P	PKPbc	14 28 31.3	0.0
	comp=Z,28nm,1.2s,SNR=6.2						
MYKA	Terra Mystica	147.70	344	*e*P	PKPbc	14 28 30.5	-0.9
	comp=Z,26nm,1.6s						
SQTA	Sankt Quirin	147.74	347	*e*P	PKPbc	14 28 31.8	+0.2
	comp=Z,19nm,1.0s						
ABTA	Abfaltersbach	147.88	345	*i* P	PKPbc	14 28 31.1	-0.8
	comp=Z,24nm,1.1s,SNR=7.2						
LJU	Ljubljana	147.98	342	*i* PKPbc	PKPbc	14 28 31.9	-0.2
FETA	Feichten	148.03	347	*i* P	PKPbc	14 28 32.7	+0.3
	comp=Z,22nm,1.3s,SNR=6.0						
DAVOX	Davos/Dischmat	148.43	348	PKPbc	PKPbc	14 28 33.4	-0.1
	comp=Z,6.7nm,0.8s,baz=359,slow=5.7,SNR=9.0						
PDG	Podgorica	149.36	333	⇑P	PKPbc	14 28 35.5	-0.2
FNA	Florina	149.65	329	PKP2	PKPbc	14 28 36.5	-0.1
FNA	Florina	149.65	329		PKPbc	14 28 36.5	-0.1
TIP	Timpagrande	153.11	332	⇓P	PKPdf	14 28 37.1	-0.3

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*TEH **19** 14:11:10.0, 29°.98N×57°.65E, h8^{km}, ML3.5*
*THR **19** 14:11:11.2±0.9, 30°.06N×57°.62E, h14^{km}±9^{km}, ML3.4*
ISC 19 14:11:09.6±1.5, **29°.95N**±0°.06×**57°.68E**±0°.03, **h2**^{km}±16^{km},
n28, σ**1^{s}.23**/30, **Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHMN	Cheshme madani	0.15	235	*e*Pg	Pg	14 11 13.3	+0.7
CHMN				*e*Sg	Sg	14 11 14.9	+0.2
TVBK	TV Kerman	0.80	273	*e*Pg	Pg	14 11 25.2	+0.3
TVBK				*e*		14 11 39.1	
	comp=Z,99nm,0.2s						
KRBR	Kerman	0.80	273	*e*Pg	Pg	14 11 25.2	+0.2
KRBR				*e*Sg	Sb	14 11 36.1	-1.7
KRBR	Kerman	0.80	273	*e*Pg	Pg	14 11 25.2	+0.2
NGRK	Negar Kerman	0.88	250	*e*Pg	Pb	14 11 27.6	-0.2
KBAM	BAM	1.05	140	*e*Pg	Pg	14 11 30.5	+0.8
KBAM				*e*		14 11 48.4	
	comp=Z,99nm,0.2s						
KHGB	Koh Gabri	1.13	292	*e*Pg	Pg	14 11 30.3	-0.9
KHNJ	Kahnooj	1.99	179	*e*Pn	Pb	14 11 46.1	-0.4
BSRN	Basiran	2.36	31	*e*Pn	Pn	14 11 50.7	+1.2
BSRN				*e*Sg	Sb	14 12 23.4	+0.8
BSRN	Basiran	2.36	31	*e*Pn	Pn	14 11 50.7	+1.2
NHDN	Nehbandan	2.50	54	*e*Pn	Pn	14 11 52.0	+0.7
ZHSF	Zahedan	2.71	96	*e*Pn	Pb	14 11 57.1	-1.7
ZHSF	Zahedan	2.71	96	*e*Pn	Pb	14 11 57.1	-1.7
IKOO	Kooshah	2.71	24	*e*Pn	Pn	14 11 54.9	+0.5
IKOO				*e*		14 12 02.4	
	comp=Z,99nm,0.3s						
GENO	Geno	2.87	208	*e*Pn	Pb	14 11 59.1	-2.4
GENO				*e*		14 12 03.1	
	comp=Z,99nm,0.3s						
BNDS	Bandar-Abbas	2.87	208	*e*Pn	Pb	14 12 00.1	-1.4
BNDS	Bandar-Abbas	2.87	208	*e*Pn	Pb	14 12 00.1	-1.4
IMEH	Mehriz	3.01	299	*e*Pn	Pn	14 12 00.1	+1.6
IMEH				*e*		14 12 50.9	
	comp=Z,99nm,0.7s						
ITEG	Tejag	3.08	17	*e*Pn	Pn	14 11 59.9	+0.6
ITEG				*e*		14 12 52.8	
	comp=Z,99nm,0.3s						
TPRV	Parvadeh(Tabas	3.19	345	*e*Pn	Pn	14 12 01.9	+1.1
TPRV				*e*		14 12 53.0	
	comp=Z,99nm,0.5s						
YZKH	Yazd	3.60	313	*e*Pn	Pn	14 12 07.7	+1.3
YZKH	Yazd	3.60	313	*e*Pn	Pn	14 12 07.7	+1.3
AFRZ	Afriz	3.65	18	*e*Pn	Pn	14 12 07.7	+0.5
IMON	Monand	3.65	27	*e*		14 12 24.1	
	comp=Z,99nm,0.3s						
IMON				*e*Pn	Pn	14 12 08.8	+1.5
TKDS	Koohdasht(Taba	3.69	353	*e*Pn	Pn	14 12 08.7	+1.1
TKDS				*e*		14 13 14.8	
	comp=Z,99nm,0.8s						
TABS	Tabas	3.72	353	IAML		14 13 16.1	
	comp=N,58nm,0.5s						
TNSJ	Nastanj	4.11	347	*e*Pn	Pn	14 12 14.4	+1.0
ANAR	Anarak	4.67	315	*e*Pn	Pn	14 12 22.6	+1.4

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*HEL **19** 14:25:09.0±0.6, 67°.69N×33°.67E, h0^{km}, ML2.1, Explosion*
*IDC **19** 14:25:09.7±1.7, 67°.75N×33°.77E, h0^{km}, mb1 3.6/5, mb1mx3.1/56, mbtmp3.7/5, ML2.9/5, Error ellipse: s-maj=22.1km s-min=10.5km az=69.0*
ISC 19 14:25:08.0±1.8, **67°.62N**±0°.06×**33°.5E**±0°.1, **h0**^{km}**, n20,**
σ**1^{s}.76**/30, **Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VRF	Varrio	1.48	277	PG	Pn	14 25 37.1	+1.2
	baz=90						
VRF				MSG		14 25 55.4	
	comp=Z,19nm,0.2s						
VRF				SN	Sn	14 25 57.6	+1.7
KU6	Riekki	2.14	223	PG	Pg	14 25 48.9	+0.1
	baz=45						
KU6				MSG		14 26 15.3	
	comp=Z,11nm,0.2s						
KU6				SG	Sg	14 26 17.5	+1.0
MSF	Maaselka	2.46	228	PG	Pg	14 25 54.3	-0.6
MSF				SG	Sg	14 26 28.4	+1.6
SGF	Sodankyl	2.68	269	PG	Pg	14 25 57.7	-1.4
SGF				SG	Sg	14 26 32.6	-1.2
RNF	Rovaniemi	3.09	254	PN	Pn	14 26 00.2	+2.3
ARA0	ARCESS Array S	3.50	307	*e*P	Pn	14 26 05.1	+1.5
ARA0				*e*S	Sn	14 26 45.8	+0.1
ARA0	ARCESS Array S	3.50	307	PN	Pn	14 26 04.2	+0.6
	baz=120						
ARA0				SN	Sn	14 26 46.1	+0.4
ARCES	ARCESS Array B	3.50	307	Pn	Pn	14 26 05.2	+1.6
	baz=119,slow=14,SNR=18						
ARCES				Pg	Pb	14 26 13.1	+2.3
	baz=117,slow=14,SNR=15						
ARCES				Sn	Sn	14 26 46.4	+0.8
	baz=119,slow=25,SNR=10						
ARCES				Lg	Lg	14 26 58.4	
	baz=112,slow=33,SNR=8.5						
TOF	Tornio	3.93	251	PG	Pg	14 26 21.1	-2.1
OUL	Oulu	3.97	234	PG	Pg	14 26 23.0	-1.0
KTK1	Kautokeino	4.05	295	*e*P	Pn	14 26 13.2	+2.0
KTK1				*e*S	Sn	14 26 59.5	+0.3
KTK1				IAML		14 27 23.1	
	comp=Z,23nm,0.6s						
PAJU	Pajala	4.06	266	PG	Pg	14 26 23.4	-2.2
LANU	Lannavaara	4.38	281	PG	Pg	14 26 29.9	-1.8
KALU	Kalix	4.38	251	PG	Pg	14 26 29.7	-2.1
	baz=58						
KIF	Kilpisjarvi	4.90	292	*e*P	Pn	14 26 23.8	+1.0
KIF				*e*S	Sn	14 27 17.9	-2.2
JETT	Jettan, Norway	5.17	298	*e*P	Pn	14 26 28.3	+1.8
JETT				*e*S	Sn	14 27 24.6	-2.2
FINES	FINESS Array B	6.96	211	Pn	Pn	14 26 52.1	+1.0
	comp=Z,0.2nm,0.3s,baz=27,slow=16,SNR=5.5						
FINES				Lg	Lg	14 28 48.9	
	comp=Z,1.6nm,0.3s,baz=23,slow=29,SNR=10						
HFS	Hagfors	11.45	239	Pn	Pn	14 27 52.8	+0.3
	comp=Z,0.1nm,0.3s,baz=30,slow=12,SNR=2.2						
SPITS	Spitsbergen Ar	11.66	343	Pn	Pn	14 27 52.2	-3.1
	baz=139,slow=13,SNR=6.2						
AKASG	Malin Array Be	17.10	189	Pn	Pn	14 29 03.8	-4.2
	comp=Z,0.3nm,0.3s,baz=8.0,slow=13,SNR=2.6						

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*IDC **19** 14:26:02.9±1.3, 32°.65N×47°.80E, h0^{km}, mb3.7/12, mb1 3.8/15, mb1mx3.6/53, mbtmp3.7/15, ML3.1/3, MS4.2/1, Ms1 4.4/1, ms1mx3.6/38, Error ellipse: s-maj=28.8km s-min=16.7km az=7.0*
*TEH **19** 14:26:03.9, 32°.60N×47°.77E, h7^{km}, ML3.6*
*ISN **19** 14:26:05.6±2.0, 32°.59N×47°.79E, h29^{km}±13^{km}, ML3.4*
ISC 19 14:26:05.1±0.6, **32°.58N**±0°.04×**47°.77E**±0°.04, **h15**^{km}**, n41,**
σ**1^{s}.42**/43, **mb3.6**/12, **Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DHL1	Dehloran	0.42	283	*e*Pg	Pg	14 26 12.4	-1.2
IKFM	Kafar-mosalman	0.94	4	*e*Pg	Pb	14 26 22.2	-0.9
IKFM				*e*		14 26 43.5	
	comp=Z,99nm,0.4s						
IKMR	Kamar-syah	1.06	29	*e*Pg	Pb	14 26 24.2	-1.0
IKMR				*e*		14 26 48.3	
	comp=Z,99nm,0.3s						
IDOB	Doab	1.25	16	*e*Pg	Pb	14 26 28.4	-0.1
AHWZ	Ahwaz	1.45	149	*e*Pg	Pb	14 26 32.0	+0.1
IBDR	Badra	1.64	289	*e*Pg	Pn	14 26 34.0	+0.7
	baz=108						
IBDR				*e*Sg	Sg	14 26 58.0	+0.2
IBDR				AML	AML	14 27 02.6	
	comp=E,504nm,0.8s						
IBDR				AML	AML	14 27 04.2	
	comp=N,591nm,0.6s						
HSAM	Samen	1.77	23	*e*Pg	Pb	14 26 38.0	+0.6
HSAM				*e*		14 27 08.7	
	comp=Z,99nm,0.7s						
KCHF	Cheshme Sefid,	1.79	340	*e*Pg	Pb	14 26 37.7	-0.1
KCHF				*e*		14 27 13.8	
	comp=Z,99nm,0.5s						
IBZA	Bozab	1.88	2	*e*Pn	Pb	14 26 39.3	-0.1
IBZA				*e*		14 27 13.2	
	comp=Z,99nm,0.5s						
IGHG	Ghaleghazi	2.01	330	*e*Pn	Pn	14 26 40.2	+1.5
IGHG				*e*		14 27 28.3	
	comp=Z,99nm,0.8s						
IALM	Almabolaq	2.29	8	*e*Pn	Pb	14 26 45.5	-0.9

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IDHR  Dehrash            2.41 332  ePn     Pn      14 26 45.6 +1.5
IDHR                               e               14 26 58.0
      comp=Z,99nm,0.6s
ILIN  Lien               2.42 344  ePn     Pn      14 26 46.3 +1.9
ILIN                               e               14 27 30.3
      comp=Z,99nm,0.5s
HAGD  Aghdareh           2.51  27  ePn     Pb      14 26 48.5 -1.5
HAGD                               e               14 27 32.0
      comp=Z,99nm,0.7s
MIB   Mutribah           2.80 188  eP              14 26 51.0
ABEH  Behbahan           2.90 132  ePn     Pn      14 26 53.1 +2.4
BHD   Baghdad            2.93 284  ePn     Pn      14 26 52.0 +0.8
BHD                                eSn     Sn      14 27 27.0 +0.9
RST   Umm Al-Ruwaisa     3.15 192  eP              14 26 55.2
IKLH  Kolahrood          3.29  76  ePn     Pn      14 26 59.0 +2.7
IKLH                               e               14 28 01.5
      comp=Z,99nm,0.6s
KLNJ  Kolanjah           3.61 115  e               14 27 04.8
      comp=Z,99nm,0.3s
KLNJ                               ePn     Pn      14 27 01.8 +0.9
IGAR  Gharneh            3.62  92  ePn     Pn      14 27 01.6 +0.8
IGAR                               e               14 28 15.3
      comp=Z,99nm,0.5s
KRSH  Karshahi           3.91  68  ePn     Pn      14 27 07.3 +2.5
IMHD  Mahdasht           3.92  37  ePn     Pn      14 27 07.0 +2.2
MAHB  Mahabad            4.51 338  ePn     Pn      14 27 15.1 +2.2
ANAR  Anarak             5.05  82  ePn     Pn      14 27 22.1 +1.7
ILAS  Lasjerd            5.13  56  ePn     Pn      14 27 23.2 +1.5
IFIR  Firoozkooh         5.14  52  ePn     Pn      14 27 23.0 +1.3
IANJ  Anjilo             5.86  59  ePn     Pn      14 27 32.9 +1.3
WSAR  Wadi Sarin        13.37 131   Pn     Pn      14 29 12.6 -1.7
      comp=Z,0.4nm,0.3s,baz=356,slow=10,SNR=6.3
BRTR  Keskin Array B    13.45 306   Pn     Pn      14 29 18.0 +2.5
      comp=Z,0.0nm,0.3s,baz=124,slow=12,SNR=1.9
AKTO  Aktyubinsk        19.38  20   P      P       14 30 27.7 -2.6
      comp=Z,0.1nm,0.3s,baz=228,slow=9.3,SNR=2.2
AKASG Malin Array Be    22.69 328   P      P       14 31 04.2 -1.7
      comp=Z,1.1nm,0.5s,baz=136,slow=9.6,SNR=9.5
BVAR  Borovoye Array    26.12  32   P      P       14 31 38.6 +0.3
      comp=Z,1.0nm,0.7s,baz=196,slow=18,SNR=6.8
KURBB Kurchatov Arra    28.92  42   P      P       14 32 01.6 -1.8
      comp=Z,0.2nm,0.4s,baz=245,slow=9.8,SNR=2.8
MKAR  Makanchi Array    29.85  51   P      P       14 32 12.5 +0.8
      comp=Z,1.0nm,0.6s,baz=248,slow=8.4,SNR=14
GERES GERESS Array B    30.19 313   P      P       14 32 16.2 +1.3
      comp=Z,0.2nm,0.4s,baz=75,slow=12,SNR=2.3
FINES FINESS Array B    32.12 340   P      P       14 32 31.1 -0.4
      comp=Z,0.6nm,0.3s,baz=145,slow=8.2,SNR=6.3
ARCES ARCESS Array B    39.06 348   P      P       14 33 30.8 -0.2
      comp=Z,3.7nm,0.9s,baz=141,slow=10,SNR=2.1
ESDC  Sonseca Array     41.90 295   P      P       14 33 55.2 +0.2
      comp=Z,0.8nm,0.7s,baz=74,slow=8.2,SNR=4.0
EKA   Eskdalemuir Ar    41.94 318   P      P       14 33 54.5 -0.5
      comp=Z,1.4nm,0.4s,baz=102,slow=8.8,SNR=8.4
SONM  Songino Array     46.20  53   P      P       14 34 29.7 +0.3
      comp=Z,0.2nm,0.6s,baz=293,slow=7.5,SNR=2.1
CMAR  Chiang Mai Arr    47.85  94   P      P       14 34 42.2 -0.3
      comp=Z,0.4nm,0.7s,baz=300,slow=7.2,SNR=4.6
CMAR                                LR     LR      14 59 27.5
      comp=Z,219nm,18.4s,baz=305,slow=42
KOWA  Kowa              50.27 262   P      P       14 35 01.3 +0.1
      comp=Z,0.8nm,0.4s,baz=76,slow=4.2,SNR=1.8
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*IDC **19** 14:32:39.7±0.5, 16.°44S×168.°26E, h0^{km}, mb5.0/21, mb1 5.1/23, mb1mx5.1/26, mbtmp5.0/23, ML5.4/3, MS4.5/7, Ms1 4.5/7, ms1mx4.0/37, Error ellipse: s-maj=16.1km s-min=13.6km az=88.0*

*BJI **19** 14:32:39.8±0.0, 16.°18S×168.°27E, h5^{km}, mB5.7/32, mb5.1/64, Ms5.3/26, Ms7 5.0/27*

*MOS **19** 14:32:40.1±1.1, 16.°42S×168.°10E, h10^{km}, mb5.5/36, Error ellipse: s-maj=9.0km s-min=7.2km az=129.0*

*NOU **19** 14:32:40.3, 16.°43S×168.°37E, h0^{km}, mb5.3, Vanuatu Islands*

*NEIC **19** 14:32:41.6±2.4, 16.°51S±0.°05×168.°09E±0.°07, h10^{km}±1^{km}, mb5.4/113, Ms_20 5.4/16, Error ellipse: s-maj=13.0km s-min=7.6km az=60.0*

ISC 19 14:32:45.2±0.3**, 16.°51S**±0.°03×**168.°20E**±0.°05**, h35^{km}, n497,** σ**1^{s}46**/490**, mb5.3**/131**, MS4.9**/23**, 44C-32D, Fault plane solution: NP1:**ϕ_s40.59789°, δ84.17297°, λ-82.48267°. **NP2:**ϕ_s168.17131°, δ9.50101°, λ-142.04344°. **Principal axes:** T Plg38.7275°, Azm123.7877°; N Plg7.4783°, Azm219.8303°; P Plg50.2818°, Azm318.9217°; **Vanuatu Islands**

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Code  Station Name       Δ°   AZ°   Phase ID          Time      Res
                                    Op     ISC      h  m  s    ISC
DVP   Devils Point       1.21 181   P      Pn      14 33 03.4 -2.3
SANVU Saraoutou          1.42 318   Pn     Pn      14 33 05.5 -3.0
SANVU                               Sn     Sn      14 33 23.9 -2.1
SANVU Saraoutou          1.42 318   P      Pn      14 33 05.7 -2.8
LIFNC LIFOU              4.35 192   P      Pn      14 33 48.7  0.0
KOUNC Koumac, New Ca     5.47 222   P      Pn      14 34 04.7 +0.4
YATNC Mamie plateau,     5.66 192   P      Pn      14 34 06.2 -0.6
DZM   Mont Dzumac        5.78 196   Pn     Pn      14 34 08.0 -0.5
      36nm,0.3s,baz=45,slow=17,SNR=68
DZM                                 Sn     Sn      14 35 12.7 -1.0
      13nm,0.3s,baz=294,slow=24,SNR=5.8
DZM                                 LR     LR      14 36 02.6
      comp=Z,3µm,18.4s,baz=320,slow=35
DZM   Mont Dzumac        5.78 196  ePn     Pn      14 34 08.5  0.0
      154nm,0.3s
DZM                                eSn     Sn      14 35 10.1 -3.6
      105nm,0.2s
DZM                                eLR     LR      14 35 29.0
      comp=Z,3µm,23.9s
DZM   Mont Dzumac        5.78 196   Pn     Pn      14 34 07.9 -0.7
DZM                                 Sn     Sn      14 35 10.6 -3.1
DZM   Mont Dzumac        5.78 196   P      Pn      14 34 08.6  0.0
ONTNC Ouen Toro          6.00 196   P      Pn      14 34 12.2 +0.7
OUENC Ouen Island, N     6.02 192   P      Pn      14 34 13.3 +1.5
PINNC Pines Island,      6.12 187   P      Pn      14 34 13.4 +0.3
MSVF  Nonsavu            9.50  99 ceP      Pn      14 35 02.9 +3.3
MSVF                                pmax   pmax
      comp=Z,153nm,1.7s
MSVF  Nonsavu            9.50  99   Pn     Pn      14 35 02.8 +3.3
MSVF  Nonsavu            9.50  99   P      Pn      14 34 55.8 -3.8
HNR   Honiara           10.68 310   Pn     Pn      14 35 15.9 +0.2
      comp=Z,9.9nm,0.3s,baz=174,slow=2.3,SNR=10
HNR                                 LR     LR      14 39 02.1
      comp=Z,2µm,18.5s,baz=73,slow=36
HNR   Honiara           10.68 310          Pn      14 35 15.1 -0.7
FUNA  Funafuti          13.34  55   Pn     Pn      14 35 53.0 +0.9
RAO   Raoul Island      17.99 137   P      Pn      14 36 51.9 -0.7
      comp=Z,74nm,0.3s,baz=72,slow=20,SNR=1.6
RAO   Raoul Island      17.99 137   P      Pn      14 36 52.1 -0.5
RAO                                 pmax   pmax
      comp=Z,1µm,1.3s
RAO   Raoul Island      17.99 137          Pn      14 36 52.1 -0.5
EIDS  Eidsvold          18.24 238   P      Pn      14 36 56.1 +0.5
      baz=18,SNR=8.7
EIDS  Eidsvold          18.24 238   P      P       14 36 55.2 -0.4
TARA  Tarawa            18.35  15   P      Pn      14 37 00.1 +3.1
TARA                                IAmb   IAmb    14 37 07.5
      comp=Z,174nm,0.9s
OUZ   Omahuta           19.25 166          Pn      14 37 07.3 -0.4
RABL  Rabaul            19.94 306   P      Pn      14 37 15.7 -0.5
ARMA  Armidale          20.53 225   P      P       14 37 20.9 +0.2
      baz=20,SNR=6.2
ARMA  Armidale          20.53 225          Pn      14 37 21.8 -1.2
RMQ   Roma              20.61 238   P      P       14 37 22.1 +0.5
      baz=21,SNR=16
CTA   Charters Tower    21.14 257   P      P       14 37 29.0 +1.8
      comp=Z,21nm,0.9s,baz=92,slow=11,SNR=21
CTA                                 LR     LR      14 44 09.4
      comp=Z,1µm,20.1s,baz=76,slow=32
CTAO  Charters Tower    21.14 257   P      P       14 37 28.4 +1.2
CTAO                                pmax   pmax
      comp=Z,44nm,0.9s
CTAO  Charters Tower    21.14 257   P      P       14 37 28.4 +1.2
PMG   Port Moresby      21.67 286   P      P       14 37 34.3 +1.3
      comp=Z,48nm,0.9s,baz=100,slow=8.5,SNR=10
PMG                                 LR     LR      14 44 30.6
      comp=Z,2µm,18.7s,baz=88,slow=33
PMG   Port Moresby      21.67 286   P      P       14 37 33.3 +0.3
PMG   Port Moresby      21.67 286   P      P       14 37 34.9 +1.9
HIZ   Hauiti            22.69 166   P      P       14 37 44.7 +1.0
HIZ                                 IAmb   IAmb    14 37 48.4
      comp=Z,124nm,1.1s
MTSU  Mount Surprise    22.86 262   P      P       14 37 47.2 +1.6
      baz=23,SNR=24
URZ   Urewera           23.05 162   P      P       14 37 48.0 +0.7
      comp=Z,44nm,0.8s,baz=22,slow=3.7,SNR=19
BKZ   Black Stump Fm    23.71 164   P      P       14 37 54.5 +0.6
BKZ                                 IAmb   IAmb    14 37 56.9
      comp=Z,116nm,1.1s
COEN  Coen              24.27 273   P      P       14 37 59.5 +0.1
QLP   Quilpie           24.40 242   P      P       14 38 01.4 +0.9
      baz=24,SNR=9.4
QRZ   Quartz Range      24.52 172   P      P       14 38 03.9 +2.5
QRZ                                 IAmb   IAmb    14 38 05.4
      comp=Z,92nm,1.4s
NNZ   Nelson            25.03 171   P      P       14 38 06.9 +1.0
NNZ                                 IAmb   IAmb    14 38 40.8
      comp=Z,76nm,1.3s
BFZ   Birch Farm        25.08 165   P      P       14 38 06.5 +0.1
BFZ                                 IAmb   IAmb    14 38 09.6
      comp=Z,48nm,0.9s
CNB   Canberra Magne    25.18 218   P      P       14 38 08.9 +1.4
      baz=25,SNR=11
TUWZ  Tuamarina         25.33 170   P      P       14 38 08.8 +0.2
SNZO  South Karori      25.35 169   P      P       14 38 09.7 +0.9
CMSA  Cobar Meteorol    25.35 230   P      P       14 38 09.8 +0.8
      baz=25,SNR=20
CAN   Canberra          25.40 219   P      P       14 38 10.1 +0.6
CAN                                 pmax   pmax
      comp=Z,138nm,1.9s
CAN   Canberra          25.40 219   P      P       14 38 10.1 +0.6
CAN                                 IAmb   IAmb    14 38 14.2
      comp=Z,138nm,1.9s
BHW   Baring Head       25.48 168   P      P       14 38 08.7 -1.3
THZ   Tophouse          25.50 172   P      P       14 38 11.1 +0.9
MSWZ  Moikau Station    25.56 168   P      P       14 38 10.0 -0.7
BSWZ  Blackbirch Sta    25.59 170   P      P       14 38 13.0 +1.9
PLWZ  Palliser          25.71 168   P      P       14 38 11.4 -0.8
KHZ   Kahutara          26.23 171   P      P       14 38 17.2 +0.4
LTZ   Lake Taylor       26.42 173   P      P       14 38 19.2 +0.6
OXZ   Oxford            26.93 174   P      P       14 38 23.9 +0.8
FOZ   Fox Glacier       26.98 177   P      P       14 38 24.6 +1.1
RPZ   Rata Peaks        27.23 175   P      P       14 38 26.5 +0.7
      comp=Z,8.6nm,0.8s,baz=317,slow=3.5,SNR=5.8
RPZ                                 LR     LR      14 48 27.7
      comp=Z,745nm,19.4s,baz=340,slow=35
RPZ   Rata Peaks        27.23 175   P      P       14 38 25.7 -0.1
MQZ   McQueen's Vall    27.38 173   P      P       14 38 27.2 +0.1
QIS   Mount Isa         27.39 257   P      P       14 38 28.1 +0.5
      baz=27,SNR=8.1
LBZ   Lake Benmore      27.84 177   P      P       14 38 32.1 +0.8
WKZ   Wanaka            28.24 179   P      P       14 38 35.1 +0.2
WKZ                                 IAmb   IAmb    14 39 32.6
      comp=Z,190nm,2.0s
ODZ   Otahua Downs      28.52 176   P      P       14 38 37.4  0.0
STKA  Stephens Creek    28.58 233   P      P       14 38 38.9 +0.8
      comp=Z,24nm,0.8s,baz=56,slow=7.7,SNR=36
STKA                                PcP    PcP     14 41 49.2 +0.3
      comp=Z,5.7nm,0.9s,baz=60,slow=7.2,SNR=3.4
STKA  Stephens Creek    28.58 233   P      P       14 38 38.9 +0.8
      baz=29,SNR=36
STKA  Stephens Creek    28.58 233   P      P       14 38 38.7 +0.6
MLZ   Mavora Lakes      28.77 180   P      P       14 38 40.1 +0.4
MLZ                                 IAmb   IAmb    14 38 54.4
      comp=Z,72nm,1.9s
TOO   Toolangi          29.00 219   P      P       14 38 42.2 +0.4
TOO                                 pmax   pmax
      comp=Z,44nm,1.5s
TOO   Toolangi          29.00 219   P      P       14 38 42.2 +0.4
ARPS  Mount Arapiles    30.85 224   P      P       14 38 59.3 +1.2
      baz=31,SNR=5.7
HTT   Hallett           31.29 232   P      P       14 39 02.7 +0.7
      baz=31,SNR=8.0
TAU   Tasmania Unive    31.78 210   P      P       14 39 06.0 -0.2
TAU                                 pmax   pmax
      comp=Z,101nm,1.8s
TAU   Tasmania Unive    31.78 210   P      P       14 39 06.0 -0.2
TAU                                 IAmb   IAmb    14 39 08.3
      comp=Z,101nm,1.8s
WR0   Warramunga Arr    32.12 259   P      P       14 39 08.2 -1.3
WB0   Warramunga Arr    32.26 259   P      P       14 39 09.0 -1.8
WB2   Warramunga Arr    32.30 259   P      P       14 39 09.9 -1.2
WB2                                 IAmb   IAmb    14 39 14.0
      comp=Z,83nm,1.9s
WRAB  Tennant Creek     32.30 259   P      P       14 39 09.5 -1.6
WRAB                                pmax   pmax
      comp=Z,14nm,0.9s
WRAB  Tennant Creek     32.30 259   P      P       14 39 09.5 -1.6
WRA   Warramunga Arr    32.31 259   P      P       14 39 09.9 -1.2
      comp=Z,7.4nm,0.7s,baz=90,slow=8.9,SNR=22
WRA                                 PKiKP  PKiKP   14 49 25.0 -1.7
      comp=Z,1.2nm,0.9s,baz=42,slow=1.7,SNR=5.4
WRA                                 LR     LR      14 51 23.0
      comp=Z,598nm,19.6s,baz=65,slow=35
WRA   Warramunga Arr    32.31 259   P      P       14 39 10.0 -1.2
WRA   Warramunga Arr    32.31 259   P      P       14 39 09.7 -1.5
AS31  Alice Springs     32.93 252   P      P       14 39 15.6 -1.0
AS31                                IAmb   IAmb    14 39 20.9
      comp=Z,35nm,0.7s
ASAR  Alice Springs     32.93 252   P      P       14 39 16.1 -0.4
      comp=Z,99nm,0.7s,baz=80,slow=8.7,SNR=398
ASAR                                ScP    ScP     14 45 46.1 +4.0
      comp=Z,0.8nm,0.9s,baz=76,slow=3.9,SNR=3.6
ASAR                                PKiKP  PKiKP   14 49 25.6 -1.5
      comp=Z,0.5nm,0.8s,baz=94,slow=1.2,SNR=5.9
ASAR                                LR     LR      14 51 35.5
      comp=Z,1µm,19.3s,baz=100,slow=34
ASAR  Alice Springs     32.93 252   P      P       14 39 14.9 -1.7
BBOO  Buckleboo         33.25 235   P      P       14 39 19.6 +0.4
      baz=33,SNR=11
BBOO  Buckleboo         33.25 235   P      P       14 39 19.0 -0.2
BBOO                                IAmb   IAmb    14 39 26.3
      comp=Z,39nm,0.9s
KDU   Kakadu            34.75 271   P      P       14 39 32.6 +0.2
      baz=35,SNR=3.3
WRKA  Warakurna         38.15 250   P      P       14 40 01.1 -0.4
      baz=38,SNR=30
FORT  Forrest           39.20 241   P      P       14 40 10.3 +0.2
      baz=39,SNR=11
FORT  Forrest           39.20 241   P      P       14 40 10.3 +0.2
FORT                                IAmb   IAmb    14 40 14.7
      comp=Z,60nm,0.8s
TBI   Tubuai            40.27 107  eLR     LR      14 51 30.6
      comp=Z,1µm,30.5s
PPT2  Papeete2          40.32  98  eLR     LR      14 51 34.7
      comp=Z,1µm,24.8s
FITZ  Fitzroy Crossi    40.60 261   P      P       14 40 21.6 -0.3
      baz=41,SNR=22
FITZ  Fitzroy Crossi    40.60 261   P      P       14 40 21.4 -0.5
NLAI  Namlea            42.47 284   P      P       14 40 38.6 +1.3
      comp=Z,2µmcomp=Z,50nm,1.0s
SOEI  Soe               43.24 273   P      P       14 40 44.3 +0.7
SOEI                                IAmb   IAmb    14 41 12.8
      comp=Z,65nm,0.9s
SOEI  Soe               43.24 273   P      P       14 40 44.1 +0.5
      comp=Z,80nm,0.9s
BATI  Baumata           43.71 272   P      P       14 40 48.5 +1.2
      comp=Z,120nm,0.9s
SANI  Sanana            43.94 285   P      P       14 40 52.6 +3.5
      comp=Z,86nm,0.8s
KMBL  Kambalda          44.52 242   P      P       14 40 53.1 -0.5
      baz=44,SNR=11
MMRI  Maumere           45.45 274   P      P       14 41 01.5 +0.3
MMRI                                IAmb   IAmb    14 41 20.7
      comp=Z,68nm,1.0s
MMRI  Maumere           45.45 274   P      P       14 41 03.3 +2.1
      comp=Z,80nm,1.0s
PSA00 Pilbara Seismi    45.85 256   P      P       14 41 04.3 +0.1
PSA00                               IAmb   IAmb    14 41 08.9
      comp=Z,68nm,1.3s
EDFI  Ende, Flores      45.95 274   P      P       14 41 04.7 -0.5
      comp=Z,423nmcomp=Z,47nm,0.8s
MEEK  Meekatharra       46.95 249   P      P       14 41 13.2 +0.2
      baz=47,SNR=15
KLBR  Kellerberrin      48.05 242   P      P       14 41 20.9 -0.5
      baz=48,SNR=7.4
BKSI  Bulukumba         48.38 278   P      P       14 41 26.5 +2.4
      comp=Z,37nm,1.0s
NWAO  Narrogin (SRO)    48.63 241   P      P       14 41 25.7 -0.1
      baz=49,SNR=8.0
NWAO  Narrogin (SRO)    48.63 241   P      P       14 41 24.7 -1.1
NWAO                                pmax   pmax
      comp=Z,69nm,0.9s
NWAO  Narrogin (SRO)    48.63 241   P      P       14 41 24.8 -1.0
NWAO  Narrogin (SRO)    48.63 241   P      P       14 41 24.7 -1.1
NWAO                                IAmb   IAmb    14 41 29.9
      comp=Z,56nm,0.9s
BNSI  Bone              48.67 279   P      P       14 41 26.5 +0.2
      comp=Z,59nm,0.9s
KAPI  Kappang           48.82 278 ceP      P       14 41 31.9 +4.4
KAPI  Kappang           48.82 278   P      P       14 41 30.0 +2.5
BLDU  Ballidu           48.85 244   P      P       14 41 28.2 +0.7
      baz=49,SNR=5.0
MORW  Morawa            49.33 246   P      P       14 41 30.9 -0.3
      baz=49,SNR=8.5
MORW  Morawa            49.33 246   P      P       14 41 30.8 -0.5
MORW                                IAmb   IAmb    14 41 35.5
      comp=Z,35nm,0.8s
TTSI  Tana Toraja       49.37 280   P      P       14 41 35.2 +3.5
      comp=Z,36nm,0.9s
MUN   Mundaring         49.40 242   P      P       14 41 31.6  0.0
      baz=49,SNR=3.5
PLAI  Plampang          49.68 272   P      P       14 41 37.2 +3.2
      comp=Z,100nm,0.8s
TOLI2 Tolitoli          49.94 286   P      P       14 41 35.3 -0.8
TWSI  Taliwang, Sumb    50.56 272   P      P       14 41 40.6 -0.1
      comp=Z,1µmcomp=Z,140nm,0.9s
TAOE  Nuku Hiva Isla    50.85  88  eLR     LR      14 56 29.6
      comp=Z,1µm,27.3s
KBKI  Kotabaru          52.74 279   P      P       14 41 59.2 +2.1
      comp=Z,38nm,0.8s
JAGI  Jajag, Banyuwa    53.24 272   P      P       14 42 02.5 +1.8
JAGI                                IAmb   IAmb    14 42 42.3
      comp=Z,61nm,0.7s
BBKI  Banjar Baru       53.95 278   P      P       14 42 07.1 +1.1
      comp=Z,35nm,1.4s
MTKI  Muara Teweh, K    54.70 281   P      P       14 42 11.6 +0.2
      comp=Z,13nm,0.6s
SPMM  Sapulut           55.31 288   P      P       14 42 19.0 +3.2
KKM   Kota Kinabalu     56.08 289   P      P       14 42 21.8 +0.4
KKM                                 IAmb   IAmb    14 42 27.4
      comp=Z,32nm,1.0s
UGM   Wanagama          56.86 271   P      P       14 42 26.8 -0.2
UGM   Wanagama          56.86 271   P      P       14 42 30.1 +3.2
JOW   Kunigami          57.95 317   P      P       14 42 34.4  0.0
JYT   Yasato            58.76 334   P      P       14 42 42.5 +2.8
INU   Inuyama           59.45 331   P      P       14 42 43.6 -0.9
INU                                 IAmb   IAmb    14 42 49.1
      comp=Z,80nm,1.4s
JGF   Kuroka            59.50 331   P      P       14 42 43.9 -1.1
JGF                                 IAmb   IAmb    14 42 48.9
      comp=Z,34nm,0.8s
CISI  Cisompet, Garu    59.54 271   P      P       14 42 43.9 -1.8
CISI  Cisompet, Garu    59.54 271   P      P       14 42 48.5 +2.8
      comp=Z,101nm,0.8s
JMN   Monobe            59.72 327   P      P       14 42 46.3 -0.2
KSM   Kuching           59.83 282   P      P       14 42 46.4 -1.2
KSM                                 IAmb   IAmb    14 42 52.0
      comp=Z,42nm,1.2s
KSM   Kuching           59.83 282   P      P       14 42 51.0 +3.3
MJAR  Matsushiro Arr    59.88 332   P      P       14 42 46.8 -0.8
      comp=Z,47nm,0.9s,baz=165,slow=7.7,SNR=26
MJAR  Matsushiro Arr    59.88 332   P      P       14 42 46.1 -1.5
MAJO  Matsushiro        59.89 332 ceP      P       14 42 47.1 -0.5
MAJO                                pmax   pmax
      comp=Z,74nm,1.0s
MAJO  Matsushiro        59.89 332   P      P       14 42 46.4 -1.1
MAT   Matsushiro        59.89 332   P      P       14 42 46.4 -1.2
JMM   Marumori          59.91 335   P      P       14 42 47.2 -0.5
LEM   Lembang           59.92 272   P      P       14 42 48.5 +0.1
      comp=Z,99nm,0.8s
JSU   Suzuyama          59.93 323   P      P       14 42 47.4 -0.6
YOJ   Yonaguni jima     60.01 312   P      P       14 42 47.6 -1.0
YOJ                                 pmax   pmax
      comp=Z,126nm,0.8s
YOJ   Yonaguni jima     60.01 312   P      P       14 42 47.6 -1.0
JWT   Wachi             60.17 329   P      P       14 42 49.0 -0.5
YULB  Yu-li             60.61 310   P      P       14 42 51.2 -1.6
YULB                                IAmb   IAmb    14 43 00.7
      comp=Z,26nm,1.0s
CBJI  Citeko            60.76 272   P      P       14 42 54.9 +0.9
      comp=Z,7µmcomp=Z,118nm,0.6s
DBJI  Dramaga           60.82 272   P      P       14 42 54.3 -0.2
      comp=Z,145nm,1.1s
NACB  Ninganchiao       60.86 311   P      P       14 42 53.0 -1.4
SSLB  Suanglung         61.10 310   IAmb   IAmb    14 43 00.3
      comp=Z,41nm,0.8s
VNDA  Vanda             61.12 182   P      P       14 42 55.5 +0.1
      comp=Z,5.2nm,1.1s,baz=6.8,slow=7.5,SNR=4.0
VNDA  Vanda             61.12 182   IAmb   IAmb    14 43 00.8
      comp=Z,65nm,1.9s
SBA   Scott Base        61.38 180   P      P       14 42 57.3 +0.2
SBA                                 pmax   pmax
      comp=Z,52nm,1.2s
SBA   Scott Base        61.38 180   P      P       14 42 57.3 +0.2
SBA                                 IAmb   IAmb    14 42 59.8
      comp=Z,52nm,1.1s
JTM   Tenmabayashi      62.32 337   P      P       14 43 03.5 -0.5
KASI  Kota Agung        63.25 272   P      P       14 43 09.3 -1.5
      comp=Z,59nm,1.1s
LWLI  Liwa              63.81 273   P      P       14 43 15.6 +1.0
      comp=Z,66nm,0.9s
TJN   Taejon            65.23 324 ceP      P       14 43 20.9 -2.3
KSRS  Korea Array       65.70 326   P      P       14 43 26.4 +0.1
      comp=Z,18nm,0.8s,baz=141,slow=7.3,SNR=30
KSAR  Wonju Array Be    65.72 326   P      P       14 43 26.4 +0.1
KSAR  Wonju Array Be    65.72 326   P      P       14 43 26.4 +0.1
YSS   Yuzh-Sakhalins    67.19 341  eP      P       14 43 36.5 +1.0
YSS                                e               14 43 39.4
YSS                                 pmax   pmax
      comp=Z,20nm,1.0s
NJ2   Nanjing           67.57 316  eP      P       14 43 38.3  0.0
NJ2                                 pP     pP      14 43 41.8 -7.2
NJ2                                 pmax   pmax
      comp=Z,14nm,0.6s
MSHR  Mys Shultsa       67.96 331 i P      P       14 43 40.2 -0.3
PDSI  Padang            68.42 276   P      P       14 43 43.3 -0.8
      comp=Z,8.4nm,0.6s
USA0B Ussuriysk Arra    68.87 333 i P      P       14 43 46.4 +0.3
USRK  Ussuriysk Ar.     68.87 333   P      P       14 43 46.6 +0.5
      comp=Z,59nm,1.0s,baz=150,slow=5.1,SNR=18
PET   Petropavlovsk     69.73 354 i P      P       14 43 52.2 +0.9
PET                                 pmax   pmax
      comp=Z,41nm,1.1s
MNSI  Mandailing Nat    69.77 277   P      P       14 43 51.2 -1.2
      comp=Z,29nm,1.4s
WHN   Wuhan             69.79 312 ⇓P      P       14 43 51.3 -0.9
WHN                                 pmax   pmax
      comp=Z,100nm,1.4s
PEA0B Petropavlovsk-    69.92 353 ceP      P       14 43 52.3 -0.2
PETK  Petropavlovsk-    69.92 353   P      P       14 43 52.3 -0.2
      comp=Z,6.9nm,0.8s,baz=144,slow=5.8,SNR=16
PETK  Petropavlovsk-    69.92 353   P      P       14 43 52.2 -0.3
DL2   Dalian            70.25 323   P      P       14 43 54.5 -0.3
DL2                                 pmax   pmax
      comp=Z,330nm,4.0s
MDJ   Mudanjiang        70.26 332   P      P       14 43 54.8  0.0
MDJ                                 pP     pP      14 43 57.9 -7.7
MDJ                                 sP     sP      14 43 59.8  -10
MDJ                                 S      S       14 53 07.6 +3.4
MDJ                                 sS     pS      14 53 14.0 -3.5
MDJ                                 ScS    SKKSac  14 53 53.9 +0.3
MDJ                                 SS     SS      14 57 39.5 +4.1
MDJ                                 pmax   pmax
      comp=Z,46nm,1.0s
MDJ                                 LR     LR
      comp=Z,350nm,5.4s
MDJ                                 LR     LR
      comp=Z,510nm,11.8s
MDJ                                 LR     LR
      comp=Z,800nm,10.5s
SNY   Shenyang          71.17 326 ⇑P      P       14 43 59.4 -0.9
SNY                                 pmax   pmax
      comp=Z,11nm,0.6s
TIA   Tai'an            71.25 318   P      P       14 44 00.4 -0.6
TIA                                 pmax   pmax
      comp=Z,10.0nm,1.0s
CN2   Changchun         71.62 329  eP      P       14 44 02.4 -0.6
CN2                                 PP     PP      14 46 43.6 +1.0
CN2                                 S      S       14 53 22.6 +2.6
CN2                                 SS     SS      14 58 00.1 +3.7
CN2                                 pmax   pmax
      comp=Z,110nm,0.8s
CN2                                 LR     LR
      comp=Z,480nm,21.0s
CN2                                 LR     LR
      comp=Z,410nm,21.0s
CN2                                 LR     LR
      comp=Z,560nm,22.0s
GSI   Gunungsitoli      71.83 277   P      P       14 44 04.9 -0.1
GSI                                 IAmb   IAmb    14 44 13.2
      comp=Z,22nm,0.8s
GSI   Gunungsitoli      71.83 277   P      P       14 44 04.5 -0.5
      comp=Z,31nm,0.8s
GRNR  Gornyy            72.56 339⇓iP      P       14 44 09.7 +1.2
GRNR                               eS      SKiKP   14 53 36.1 -4.6
GRNR                                pmax   pmax
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       comp=N,2.0nm,1.0s
GRNR                                 pmax     pmax
       comp=Z,8.0nm,1.2s
GRNR                                 smax     smax
       comp=N,2.0nm,1.1s
GRNR                                 MLR      MLR
       comp=E,130nm,18.0s
GRNR                                 MLR      MLR
       comp=N,360nm,16.0s
GRNR                                 MLR      MLR
       comp=Z,350nm,16.0s
NONG   Nongkai           72.67 295   P        P          14 44 14.0 +4.1
KLR    Kul'dur           72.98 336ceP         P          14 44 11.1  0.0
KLR                                  pmax     pmax
       comp=Z,36nm,1.0s
GYA    Guiyang           73.46 305 ⇓P         P          14 44 14.6 +0.1
GYA                                  pmax     pmax
       comp=Z,20nm,1.3s
QSPA   South Pole Qui    73.53 180   P        P          14 44 14.6 +0.2
QSPA                                 IAmb     IAmb       14 44 16.0
       comp=Z,54nm,1.1s
BJI    Beijing           74.20 321   P        P          14 44 18.0 -0.4
BJI                                  pmax     pmax
       comp=Z,16nm,1.2s
UTTA   Uttaradit         74.80 294   P        P          14 44 27.3 +4.9
SUKH   Sukhothai         75.51 293   P        P          14 44 36.3  +10
XAN    Xi'an             75.54 313   P        P          14 44 25.9 -0.5
XAN                                  pP       pP         14 44 29.6 -7.6
XAN                                  sP       PcP        14 44 32.4 -6.9
XAN                                  S        S          14 54 06.0 +1.1
XAN                                  pmax     pmax
       comp=Z,14nm,1.0s
XAN                                  pmax     pmax
       comp=Z,490nm,5.2s
XAN                                  LR       LR
       comp=Z,460nm,18.7s
XAN                                  LR       LR
       comp=Z,590nm,18.4s
XAN                                  LR       LR
       comp=Z,700nm,22.5s
XAN    Xi'an             75.54 313   IAmb     IAmb       14 44 30.7
       comp=Z,24nm,1.0s
LAMP   Lampang           75.91 294   P        P          14 44 34.0 +5.2
KMI    Kunming           76.00 302 ⇓P         P          14 44 30.3 +0.9
KMI                                  pP       pP         14 44 33.8 -6.5
KMI                                  sP       PcP        14 44 35.8 -5.8
KMI                                  LR       LR
       comp=Z,340nm,17.0s
KMI                                  LR       LR
       comp=Z,240nm,25.4s
KMI                                  LR       LR
       comp=Z,510nm,17.8s
CM04   Chiang Mai Arr    76.43 294   P        P          14 44 33.3 +1.6
CM09   Chiang Mai Arr    76.44 294   P        P          14 44 33.6 +1.8
CM01   Chiang Mai Arr    76.46 294   P        P          14 44 34.7 +2.8
CM05   Chiang Mai Arr    76.46 294   P        P          14 44 33.0 +1.1
CM02   Chiang Mai Arr    76.48 294   P        P          14 44 33.6 +1.6
CM31   Chiang Mai Arr    76.49 294   P        P          14 44 35.0 +2.9
CMAR   Chiang Mai Arr    76.49 294   P        P          14 44 33.0 +1.0
       comp=Z,5.3nm,0.9s,baz=128,slow=4.4,SNR=17
CMAR                                 PKiKP    PKiKP      14 50 16.0 -0.5
       comp=Z,0.3nm,0.3s,baz=180,slow=0.1,SNR=3.0
CM15   Chiang Mai Arr    76.50 294   P        P          14 44 33.8 +1.7
CM13   Chiang Mai Arr    76.50 294   P        P          14 44 33.9 +1.7
CMMT   Chiang Mai        76.62 294   P        P          14 44 34.4 +1.6
CM33   Chiang Mai Arr    76.62 294   P        P          14 44 33.0 +0.2
MHMT   Maesarieng        77.27 293   P        P          14 44 45.9 +9.5
HHC    Hu-ho-hao-te      77.51 320 eP         P          14 44 37.8 +0.3
HHC                                  pP       PcP        14 44 40.8 -6.9
HHC                                  pmax     pmax
       comp=Z,14nm,1.2s
HHC                                  pmax     pmax
       comp=Z,350nm,7.6s
CD2    Chengdu           77.80 308   P        P          14 44 39.1 -0.1
CD2                                  pP       PcP        14 44 42.0 -7.1
CD2                                  pmax     pmax
       comp=Z,10.0nm,1.1s
HIA    Hailar            78.26 330 i P        P          14 44 41.4 +0.1
HIA                                  pmax     pmax
       comp=Z,33nm,1.0s
ZEA    Zeya              78.27 337 eP         P          14 44 42.0 +0.8
ZEA                                  pmax     pmax
       comp=N,10.0nm,0.8s
ZEA                                  pmax     pmax
       comp=Z,30nm,0.8s
OHAK   Old Harbor        80.13  20   P        P          14 44 51.7 +0.4
OHAK                                 IAmb     IAmb       14 44 56.7
       comp=Z,50nm,1.1s
SEY    Seymchan          80.14 353 i P        P          14 44 50.5 -0.7
LZH    Lanzhou           80.17 312 eP         P          14 44 53.0 +0.7
LZH                                  pP       PcP        14 44 56.5 -3.0
LZH                                  sP       pP         14 45 00.3 -2.9
LZH                                  pmax     pmax
       comp=Z,19nm,1.0s
KDAK   Kodiak Island     80.81  20 i P        P          14 44 53.3 -1.6
KDAK                                 pmax     pmax
       comp=Z,25nm,1.1s
CNPM   China Poot        82.62  20   P        P          14 45 03.8 -0.7
CNPM                                 IAmb     IAmb       14 45 10.4
       comp=Z,71nm,1.3s
BRLK   Bradley Lake      82.91  20   P        P          14 45 06.0  0.0
CAPN   Captain Cook N    83.61  19   P        P          14 45 11.0 +1.5
       baz=219
O22K   Cooper Landing    83.84  19   P        P          14 45 11.8 +1.2
       baz=220
O22K   Cooper Landing    83.84  19   P        P          14 45 10.7  0.0
TTA    Tatalina          83.98  16   IAmb     IAmb       14 45 17.6
       comp=Z,18nm,1.0s
YAK    Yakutsk           83.98 343ceP         P          14 45 11.5 +0.1
YAK                                  pmax     pmax
       comp=Z,31nm,0.8s
ULN    Ulaanbaatar       84.09 324ceP         P          14 45 11.7 -0.8
ULN                                  pmax     pmax
       comp=Z,57nm,1.0s
ULN    Ulaanbaatar       84.09 324   P        P          14 45 11.4 -1.1
ULN                                  IAmb     IAmb       14 45 17.0
       comp=Z,45nm,0.9s
SUA    Susitna One       84.28  18   IAmb     IAmb       14 45 19.8
       comp=Z,51nm,1.0s
RC01   Rabbit Creek A    84.30  19   P        P          14 45 13.7 +0.6
       baz=220
SONM   Songino Array     84.45 323   P        P          14 45 14.1 -0.2
       comp=Z,22nm,1.0s,baz=136,slow=5.1,SNR=44
SONM   Songino Array     84.45 323   P        P          14 45 13.9 -0.4
GTA    Gaotai            84.54 314   P        P          14 45 15.1 +0.1
GTA                                  pP       PcP        14 45 19.1 +0.6
GTA                                  sP       pP         14 45 22.8 -3.1
GTA                                  pmax     pmax
       comp=Z,13nm,1.2s
GTA                                  pmax     pmax
       comp=Z,270nm,6.4s
GTA                                  LR       LR
       comp=Z,520nm,15.5s
GTA                                  LR       LR
       comp=Z,370nm,17.9s
GTA                                  LR       LR
       comp=Z,440nm,21.5s
SNCC   San Nicolas Is    84.80  53   P        P          14 45 17.0 +0.7
       baz=247
PMR    Palmer            84.87  19   IAmb     IAmb       14 45 21.3
       comp=Z,43nm,1.3s
KNK    Knik Glacier      84.95  19   P        P          14 45 16.3 -0.1
KNK                                  IAmb     IAmb       14 45 18.3
       comp=Z,79nm,1.7s
KHMM   Horse Mountain    84.97  45   P        P          14 45 17.7 +0.6
KHMM                                 IAmb     IAmb       14 45 23.9
       comp=Z,48nm,1.0s
SCZ2   Santa Cruz Isl    85.01  53   P        P          14 45 18.2 +0.8
       baz=246
SBC    Santa Barbara     85.13  52   P        P          14 45 18.7 +0.9
       baz=246
CUT    Chulitna          85.15  18   P        P          14 45 17.7 +0.4
       baz=220
PKM    Mcpherson Peak    85.23  52   P        P          14 45 19.6 +1.0
       baz=246
SMMC   Simmler           85.27  51   P        P          14 45 19.4 +0.8
       baz=246
SML    Sawmill           85.29  19   P        P          14 45 17.6 -0.5
SML                                  IAmb     IAmb       14 45 23.8
       comp=Z,62nm,1.6s
O02D   Mt. Diablo Mer    85.31  46   P        P          14 45 19.8 +1.1
       baz=244,SNR=26
SCI2   San Clemente I    85.45  54   P        P          14 45 20.1 +0.6
       baz=247
SCM    Sheep Creek Mo    85.62  19   P        P          14 45 19.4 -0.4
SCM                                  pmax     pmax
       comp=Z,25nm,1.1s
SCM    Sheep Creek Mo    85.62  19   P        P          14 45 19.4 -0.4
SCM                                  IAmb     IAmb       14 45 26.0
       comp=Z,25nm,1.1s
L02E   Cave Junction     85.64  44   P        P          14 45 21.2 +1.0
       baz=243
CIS    Catalina Islan    85.71  53   P        P          14 45 21.5 +0.7
       baz=247
N02D   Trinity Center    85.71  45   P        P          14 45 22.2 +1.4
       baz=244,SNR=39
M02C   Callahan          85.80  45   P        P          14 45 22.4 +1.2
       baz=244,SNR=26
K02D   Willamette Mer    85.83  43   P        P          14 45 22.0 +0.7
       baz=243,SNR=15
J01E   Myrtle Point      85.87  43   P        P          14 45 22.2 +0.8
       baz=243
OSI    Osito Audit: C    85.95  52   P        P          14 45 22.6 +0.5
       baz=247
TRF    Thorofare Moun    85.95  17   IAmb     IAmb       14 45 26.2
       comp=Z,22nm,1.0s
O03E   Paynes Creek      86.04  46   P        P          14 45 22.8 +0.4
       baz=245,SNR=34
ARVC   Arvin             86.07  52   P        P          14 45 23.0 +0.5
       baz=247
DECC   Green Verdugo     86.11  53   P        P          14 45 23.1 +0.3
       baz=247
VOG    Valley Oaks Go    86.13  51   P        P          14 45 23.2 +0.5
       baz=246
VES    Vestal, Richgr    86.16  51   P        P          14 45 23.2 +0.3
       baz=247,SNR=9.1
M24K   Tolsona, Glenn    86.20  20   P        P          14 45 23.4 +0.8
       baz=224
HUMO   Hull Mountain     86.26  44   IAmb     IAmb       14 45 30.1
       comp=Z,41nm,1.2s
RND    Reindeer          86.34  18   IAmb     IAmb       14 45 29.2
       comp=Z,20nm,1.0s
I02D   Swisshome         86.36  42   P        P          14 45 24.7 +1.0
       baz=243
N25K   Chitina, Valde    86.36  21   P        P          14 45 23.8 +0.3
       baz=225
BOD    Bodaibo           86.45 334 eP         P          14 45 22.3 -1.6
BOD                                  pmax     pmax
       comp=Z,14nm,1.9s
I03D   Drain, OR         86.49  43   P        P          14 45 25.0 +0.6
       baz=243
L04D   Klamath Falls     86.53  44   P        P          14 45 25.4 +0.6
       baz=244,SNR=11
109C   Camp Elliot, M    86.53  54   P        P          14 45 25.6 +0.8
       baz=248
ISA    Isabella, Lake    86.55  51   P        P          14 45 25.7 +0.7
       baz=247,SNR=29
MCK    McKinley          86.56  18   P        P          14 45 25.5 +1.2
       baz=221
EDW2   Edwards Air Fo    86.61  52   P        P          14 45 26.1 +0.9
       baz=247,SNR=29
BFSC   Mount Baldy Ra    86.62  53   P        P          14 45 25.8 +0.4
       baz=248,SNR=14
M04C   Macdoel           86.65  45   P        P          14 45 26.2 +0.7
       baz=245,SNR=19
MURC   Murrieta          86.73  54   P        P          14 45 26.5 +0.6
       baz=248
BALM   Baldy             86.74  22   P        P          14 45 24.6 -0.8
BALM                                 IAmb     IAmb       14 45 30.8
       comp=Z,13nm,0.9s
BEKR   Beckworth         86.86  47   P        P          14 45 25.4 -1.1
BEKR                                 IAmb     IAmb       14 45 32.9
       comp=Z,61nm,1.3s
MDPB   Devils Postpil    86.87  49   P        P          14 45 27.2 +0.4
BARN   Barnard Glacie    87.00  22   P        P          14 45 27.1 +0.4
BARN                                 IAmb     IAmb       14 45 32.4
       comp=Z,26nm,1.2s
IMAR   Indian Mountai    87.04  15   P        P          14 45 26.3 -0.3
MLAC   Mammoth, Mammo87.05  49   P        P          14 45 28.6 +1.0
       baz=247,SNR=21
MLY    Manley            87.06  16   P        P          14 45 28.2 +1.5
       baz=219
MONP2  Monument Peak     87.07  55   P        P          14 45 28.5 +0.7
       baz=248,SNR=16
K04D   Chiloquin, OR     87.07  44   P        P          14 45 28.1 +0.6
       baz=245
LRMC   Laurel Mtn Rad    87.07  52   P        P          14 45 28.4 +0.8
       baz=248,SNR=20
J04D   Umpqua Nationa    87.10  43   P        P          14 45 28.3 +0.6
       baz=244,SNR=10
CWC    Cottonwood Cre    87.14  51   P        P          14 45 28.5 +0.5
       baz=247
I04A   Tendick Farm,     87.14  43   P        P          14 45 28.1 +0.4
       baz=244
NEA2   Nenana            87.18  17   P        P          14 45 28.5 +1.2
       baz=221
BBRC   Big Bear Solar    87.19  53   P        P          14 45 29.0 +0.7
       baz=248
G03D   McMinnville, O    87.22  41   P        P          14 45 28.7 +0.8
       baz=243
IKP    In-Ko-Pah, Jac    87.22  55   P        P          14 45 29.2 +0.8
       baz=248,SNR=10.0
H04D   Lebanon           87.25  42   P        P          14 45 28.7 +0.6
       baz=244
SYO    Syowa Base        87.27 196⇑eP         P          14 45 26.6 -1.2
SYO    Syowa Base        87.27 196⇑esP        P          14 45 32.0 +4.2
TIN    Tinemaha, Big     87.27  50   P        P          14 45 29.5 +1.0
       baz=247,SNR=6.3
PFO    Pinyon Flats O    87.31  54   P        P          14 45 29.3 +0.5
       baz=248,SNR=9.5
PFO    Pinyon Flats O    87.31  54ceP         P          14 45 29.8 +1.0
TPFO   Pinon Flats       87.31  54   P        P          14 45 29.2 +0.4
       baz=248,SNR=11
MPMC   Manual Prospec    87.44  51   P        P          14 45 30.2 +0.8
       baz=248,SNR=42
ZAK    Zakamensk         87.51 325 eP         P          14 45 26.8 -2.5
ZAK                                  pmax     pmax
       comp=Z,10.0nm,1.0s
I23K   Minto, Yukon-K    87.52  17   P        P          14 45 30.0 +1.1
       baz=220
SWSC   Sam W. Stewart    87.58  55   P        P          14 45 30.6 +0.7
       baz=249,SNR=11
HDA    Harding Lake      87.65  18   P        P          14 45 29.5 -0.1
       baz=223
HDA    Harding Lake      87.65  18   IAmb     IAmb       14 45 35.0
       comp=Z,32nm,1.1s
GSC    Goldstone, Bar    87.67  52   P        P          14 45 31.1 +0.6
       baz=248,SNR=20
RYN    Ryan              87.67  49   P        P          14 45 31.1 +0.6
RYN                                  IAmb     IAmb       14 45 36.9
       comp=Z,42nm,1.1s
MDM    Murphy Dome       87.69  17   P        P          14 45 28.2 -1.5
MDM                                  IAmb     IAmb       14 45 35.7
       comp=Z,14nm,0.9s
J05D   Fort Rock, OR     87.70  44   P        P          14 45 31.2 +0.7
       baz=245,SNR=26
TCOL   CIGO, UAF Yank    87.73  17   P        P          14 45 30.9 +1.0
       baz=222
COLA   College           87.73  17ceP         P          14 45 29.5 -0.4
COLA                                 pmax     pmax
       comp=Z,13nm,1.0s
MOD    Modoc Plateau     87.74  45   P        P          14 45 30.0 -0.8
MOD                                  IAmb     IAmb       14 45 37.0
       comp=Z,35nm,1.1s
NVAR   Mina Array Bea    87.75  49   P        P          14 45 32.0 +1.1
       comp=Z,19nm,0.9s,baz=228,slow=8.2,SNR=109
NVAR   Mina Array Bea    87.75  49   P        P          14 45 31.9 +0.9
F04D   Rainier, OR       87.77  40   P        P          14 45 31.0 +0.4
       baz=244
BELC   Belle Mtn. Jos    87.81  54   P        P          14 45 32.0 +0.8
       baz=248,SNR=30
HEC    Hector,Ludlow     87.85  53   P        P          14 45 31.9 +0.6
       baz=248
GRAC   Grapevine Rang    87.88  51   P        P          14 45 32.2 +0.8
       baz=248,SNR=23
ILAR   Eielson Array     87.93  18   P        P          14 45 29.4 -1.5
       comp=Z,5.4nm,0.9s,baz=239,slow=4.6,SNR=27
ILAR   Eielson Array     87.93  18   P        P          14 45 29.7 -1.2
ILAR   Eielson Array     87.93  18   P        P          14 45 29.7 -1.2
TLY    Talaya            87.96 326 i P        P          14 45 31.5 +0.2
TLY                                  pmax     pmax
       comp=Z,5.0nm,0.9s
POKR   Poker Plat Res    88.03  17   P        P          14 45 32.1 +0.7
       baz=222
FURC   Furnace Creek,    88.06  51   P        P          14 45 33.0 +0.9
       baz=248,SNR=16
I05D   Terrebonne, OR    88.08  43   P        P          14 45 32.5 +0.4
       baz=245
BC3    Big Chuckawall    88.10  54   P        P          14 45 33.4 +0.9
       baz=249,SNR=16
SCRK   Sand Creek        88.24  19   P        P          14 45 32.9 +0.4
       baz=225
E04D   Cinebar           88.26  40   P        P          14 45 34.1 +1.2
       baz=244
SHOC   Shoshone, Teco    88.29  52   P        P          14 45 33.8 +0.5
       baz=248,SNR=9.1
BCAR   Beaver Creek A    88.32  20   P        P          14 45 32.5 -0.4
GMRC   Granite Mounta    88.35  53   P        P          14 45 34.4 +0.7
       baz=249,SNR=21
D03D   Eldon             88.38  39   P        P          14 45 34.4 +1.0
       baz=243
GLA    Glamis            88.38  55   P        P          14 45 34.7 +0.9
       baz=249
D04E   Lakebay           88.41  40   P        P          14 45 34.7 +1.1
       baz=244
G05D   Wamic, OR         88.48  42   P        P          14 45 34.7 +0.8
       baz=245
IRM    Iron Mountain     88.52  54   P        P          14 45 35.5 +1.0
       baz=249,SNR=34
F05D   White Salmon      88.66  41   P        P          14 45 35.5 +0.7
       baz=245
TPNV   Topopah Spring    88.70  51   P        P          14 45 36.0 +0.6
       baz=248,SNR=27
TPNV   Topopah Spring    88.70  51   P        P          14 45 34.9 -0.5
TPNV                                 pmax     pmax
       comp=Z,37nm,1.1s
TPNV   Topopah Spring    88.70  51   P        P          14 45 34.9 -0.5
TPNV                                 IAmb     IAmb       14 45 37.5
       comp=Z,37nm,1.1s
COLD   Coldfoot          88.90  15   P        P          14 45 36.7 +1.3
       baz=220
A04D   Lummi Island      89.13  38   P        P          14 45 37.8 +0.9
       baz=244
B05A   Bryant            89.30  39   P        P          14 45 38.7 +1.0
       baz=244
TAPN   Taplejung         89.31 299 eP         P          14 45 35.9 -2.8
PDMCI  Parker Dam,Lak    89.35  54   P        P          14 45 39.0 +0.8
       baz=250,SNR=21
ODAN   Odare             89.43 298 eP         P          14 45 38.2 -0.9
       comp=Z,21nm,0.8s
214A   Organ Pipe Nat    89.60  57   P        P          14 45 39.8 +0.2
       baz=250
R11A   Troy Canyon, C    89.70  50   P        P          14 45 40.5 +0.4
       baz=249,SNR=23
LTY    Liberty           89.73  40   IAmb     IAmb       14 45 45.9
       comp=Z,32nm,1.2s
C06D   Leavenworth       89.88  39   P        P          14 45 40.9 +0.5
       baz=245
RAMN   Ramite            90.12 298 eP         P          14 45 41.6 -0.8
       comp=Z,5.0nm,0.5s
BMAR   Burnt Mountain    90.51  16   P        P          14 45 43.6 +0.6
ELK    Elko              90.81  48   IAmb     IAmb       14 45 51.7
       comp=Z,25nm,1.1s
A21K   Barrow            90.84  11   P        P          14 45 45.1 +0.7
       baz=214
BMO    Blue Mountains    90.92  43   IAmb     IAmb       14 45 51.6
       comp=Z,27nm,1.2s
GUN    Gumba             91.03 299 eP         P          14 45 45.0 -1.8
       comp=Z,27nm,1.1s
PSUT   Pine Spring       91.03  50   P        P          14 45 46.5 +0.1
PKI    Pulchoki          91.33 298 eP         P          14 45 47.1 -1.0
       comp=Z,22nm,1.0s
PKIN   Phulchoki         91.34 298 eP         P          14 45 47.4 -0.7
       comp=Z,16nm,1.1s
TUC    Tucson            91.34  57   P        P          14 45 48.7 +1.0
       baz=251
KKN    Kakani            91.50 298 eP         P          14 45 47.6 -1.2
       comp=Z,30nm,1.2s
DMN    Daman             91.59 298 eP         P          14 45 49.0 -0.2
       comp=Z,28nm,1.0s
SNAA   Sanae             91.83 183   P        P          14 45 48.7 -0.6
SNAA   Sanae             91.83 183 i P        P          14 45 46.5 -2.8
SNAA                                 pmax     pmax
       comp=Z,10.0nm,1.1s
TIXI   Tiksi             91.88 348ceP         P          14 45 52.6 +3.4
WUAZ   Wupatki           91.90  54   P        P          14 45 51.0 +0.6
       baz=251
GKN    Gorkha            92.11 298 eP         P          14 45 50.4 -1.1
       comp=Z,11nm,0.8s
EPYK   Eagle Plains      92.12  19   P        P          14 45 52.0 +1.5
       baz=232
NEW    Newport           92.33  40   P        P          14 45 52.5 +0.6
       baz=248
DUG    Dugway, Tooele    92.36  49   P        P          14 45 52.8 +0.4
       baz=250
HLID   Hailey            92.39  45   P        P          14 45 53.3 +0.8
       baz=250
VNA3   Neumayer Olymp    92.46 181   P        P          14 45 52.3 +0.1
VNA2   Neumayer--Watz    92.74 181   P        P          14 45 53.5  0.0
       baz=167,slow=3.4
VNA1   Neumayer--Stat    93.03 181   P        P          14 45 57.2 +2.5
W18A   Petrified Fore    93.05  54   P        P          14 45 56.4 +0.7
       baz=252
121A   Cookes Peak, D    93.82  57   P        P          14 45 59.9 +0.6
       baz=253
WMQ    Urumqi            94.60 314 eP         P          14 46 01.8 -0.7
WMQ                                  pP       PcP        14 46 05.6 +2.7
WMQ                                  sP       pP         14 46 08.3 -5.2
WMQ                                  pmax     pmax
       comp=Z,22nm,1.3s
WMQ                                  pmax     pmax
       comp=Z,860nm,5.3s
WMQ                                  LR       LR
       comp=Z,520nm,23.1s
WMQ                                  LR       LR
       comp=Z,600nm,29.2s
WMQ                                  LR       LR
       comp=Z,870nm,28.3s
BOZ    Bozeman (W)       94.94  44   P        P          14 46 05.0 +0.9
       baz=252
H17A   Grant Village     95.28  45   P        P          14 46 06.6 +0.7
       baz=252
BW06   Boulder Array     95.49  47   P        P          14 46 07.2 +0.4
       baz=253
PDAR   Pinedale Array    95.49  47   P        P          14 46 06.8 -0.1
       comp=Z,1.2nm,0.8s,baz=270,slow=3.0,SNR=9.5
PDAR                                 PKKP     PKKPdf     15 03 02.9 +2.3
       comp=Z,0.9nm,1.0s,baz=100,slow=5.3,SNR=4.3
MNTX   Cornudas Mount    95.54  59   P        P          14 46 06.8 -0.2
       baz=254
ANMO   Albuquerque       95.57  55   P        P          14 46 07.5 +0.2
       baz=254
ANMO   Albuquerque       95.57  55ceP         P          14 46 08.8 +1.5
ANMO                                 pmax     pmax
       comp=Z,7.0nm,1.3s
O20A   White River Ci    95.67  50   P        P          14 46 07.9 +0.2
       baz=253
S22A   4UR Ranch, Cre    96.05  53   P        P          14 46 10.0 +0.5
       baz=254
TX32   Lajitas Array     96.33  61   IAmb     IAmb       14 46 12.8
       comp=Z,11nm,1.4s
TXAR   Lajitas Array     96.33  61   P        P          14 46 11.8 +1.0
       comp=Z,2.9nm,1.2s,baz=226,slow=5.0,SNR=10
TXAR   Lajitas Array     96.33  61   P        P          14 46 10.2 -0.6
RLMT   Red Lodge         96.38  45   P        P          14 46 11.8 +1.0
       baz=253
DGZ    Jazzator, Alta    96.59 320 i P        P          14 46 09.6 -1.9
DGZ                                  pmax     pmax
       comp=Z,6.0nm,0.9s
ISCO   Idaho Springs     97.52  51   P        Pdif       14 46 17.2 +0.9
       baz=255
N23A   Red Feather La    97.56  50   P        Pdif       14 46 17.4 +1.0
       baz=255
ZSN    Zaisan            97.57 317 eP         P          14 46 14.8 -1.1
       baz=317
ZSN    Zaisan            97.57 317 eP         P          14 46 14.7 -1.1
YKA    Yellowknife Ar    98.71  27   P        P          14 46 20.4 -0.1
       comp=Z,3.3nm,0.9s,baz=250,slow=4.1,SNR=37
YKA                                  PP       PP         14 50 16.1 -6.0
       comp=Z,0.6nm,0.9s,baz=257,slow=6.2,SNR=3.2
YKA                                  PKKPbc   PKKPbc     15 02 48.5 -2.9
       comp=Z,0.7nm,1.1s,baz=87,slow=4.5,SNR=4.4
MK31   Makanchi Array    99.10 316ceP         Pdif       14 46 21.1 -1.6
MKAR   Makanchi Array    99.10 316   P        Pdif       14 46 22.7 -0.1
       comp=Z,3.0nm,0.8s,baz=110,slow=6.1,SNR=13
MKAR                                 PP       PP         14 50 14.4  -11
       comp=Z,1.1nm,1.0s,baz=108,slow=10,SNR=4.5
MKAR                                 PKiKP    PKiKP      14 50 52.2 -0.8
       comp=Z,0.4nm,0.5s,baz=99,slow=2.6,SNR=11
MKAR                                 PKKPbc   PKKPbc     15 02 46.7 -3.1
       comp=Z,0.6nm,0.8s,baz=15,slow=2.2,SNR=4.6
ZAA0   Zalesovo Array    99.34 323   IAMs_20  IAMs_20    15 40 10.7
       comp=Z,1µm,22.0s
ZALV   Zalesovo Beam     99.34 323   P        Pdif       14 46 22.6 -1.0
       comp=Z,1.5nm,0.5s,baz=56,slow=2.7,SNR=11
ZALV   Zalesovo Beam     99.34 323 i P        Pdif       14 46 23.6  0.0
ZALV                                 pmax     pmax
       comp=Z,2.0nm,0.4s
AMTX   Amarillo          99.35  56   IAMs_20  IAMs_20    15 34 56.2
```

	comp=Z,2μm,21.0s						
RSSD	**Black Hills**	**99.73**	**47**	P	**Pdif**	**14 46 26.0**	**+0.2**
	baz=257						
SEM	**Semipalatinsk**	**101.25**	**319**	*e*P	**Pdif**	**14 46 31.1**	**-1.4**
	baz=319						
SEM	**Semipalatinsk**	**101.25**	**319**	*e*P	**Pdif**	**14 46 31.0**	**-1.4**
LC01	**Cunco**	**101.35**	**136**	IAMs_20	IAMs_20	15 40 03.2	
	comp=Z,1μm,20.0s						
AAA	**Alma-Ata**	**102.03**	**312**	*e*P	**Pdif**	**14 46 34.2**	**-1.7**
	baz=312						
AAA	**Alma-Ata**	**102.03**	**312**	*e*P	**Pdif**	**14 46 34.2**	**-1.7**
NRIK	**Noril'sk**	**102.04**	**339**	IAMs_20	IAMs_20	15 33 01.4	
	comp=Z,1μm,21.0s						
KUU	**Kurty**	**102.57**	**312**	*e*P	**Pdif**	**14 46 37.0**	**-1.3**
	comp=Z,2.6nm,1.3s,baz=312						
KUU	**Kurty**	**102.57**	**312**	*e*P	**Pdif**	**14 46 36.9**	**-1.3**
KUU				pmax	pmax		
	comp=Z,3.0nm,1.3s						
AAK	**Ala-Archa**	**103.67**	**311**	IAMs_20	IAMs_20	15 30 20.0	
	comp=Z,1μm,22.0s						
HQIL	**Hanson Quary C**	**111.12**	**51**	IAMs_20	IAMs_20	15 22 36.5	
	comp=Z,2μm,22.0s						
ARU	**Arti**	**114.45**	**325**	*i* PKIKP	PKPdf	14 51 20.4	-0.7
ARU						14 52 20.9	
ARU						14 58 29.7	
ARU				SP	SP	15 01 55.0	+3.7
ARU				SS	**SS**	**15 08 12.2**	**+4.2**
GEYT	**Alibeck**	**115.68**	**305**	PKP	**PKPdf**	**14 51 23.6**	**-0.5**
	comp=Z,2.7nm,0.7s,baz=238,slow=10,SNR=7.0						
GTBY	**Guantanamo Bay**	**120.07**	**76**	IAMs_20	IAMs_20	15 25 54.3	
	comp=Z,935nm,21.0s						
APA	**Apatity**	**121.34**	**341**	⇓*i*PKIKP	**PKPdf**	**14 51 30.9**	**-3.2**
APA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
BELG	**Belogornoye**	**121.48**	**322**	*i* PKIKP	**PKPdf**	**14 51 33.4**	**-1.3**
ARCES	**ARCESS Array B**	**122.19**	**345**	PKP	**PKPdf**	**14 51 34.6**	**-1.0**
	comp=Z,4.7nm,0.6s,baz=53,slow=1.4,SNR=31						
ARCES	**ARCESS Array B**	**122.19**	**345**	PKIKP	**PKPdf**	**14 51 35.1**	**-0.6**
ARCES	**ARCESS Array B**	**122.19**	**345**	PKPdf	**PKPdf**	**14 51 35.1**	**-0.6**
BOSA	**Boshof**	**122.59**	**219**	PKP	**PKiKP**	**14 51 38.2**	**+0.2**
	comp=Z,5.4nm,0.9s,baz=132,slow=7.0,SNR=4.5						
KLMR	**Klimovskoe**	**122.66**	**333**	*e*PKIKP	**PKPdf**	**14 51 32.8**	**-4.0**
KLMR				pmax	pmax		
	comp=Z,37nm,1.3s						
KLMR	**Klimovskoe**	**122.66**	**333**	*e*PKPdf	**PKPdf**	**14 51 32.8**	**-4.0**
KLMR				AMP		14 51 40.8	
	comp=Z,37nm,1.3s						
RDF	**Al-Radifah**	**124.37**	**294**	*e*P		14 51 40.5	
MIB	**Mutribah**	**124.56**	**295**	*e*P		14 51 40.5	
RST	**Umm Al-Ruwaisa**	**124.86**	**295**	*e*P		14 51 40.8	
VRH	**Novokhopyorsk**	**125.33**	**322**	*e*PKIKP	**PKPdf**	**14 51 40.9**	**-1.3**
VRH				pmax	pmax		
	comp=Z,20nm,0.7s						
MOS	**Moscow**	**125.86**	**328**	*e*PKIKP	**PKPdf**	**14 51 41.8**	**-1.2**
GNI	**Garni**	**125.93**	**308**	*i* PKIKP	**PKPdf**	**14 51 43.0**	**-0.9**
ZEI	**Tsey**	**126.09**	**311**	*i* PKIKP	**PKPdf**	**14 51 41.1**	**-3.1**
ZEI				pmax	pmax		
	comp=Z,13nm,1.0s						
LPSR	**Galich'ya Gora**	**126.45**	**324**	*e*PKIKP	**PKPdf**	**14 51 43.8**	**-0.5**
LPSR				pmax	pmax		
	comp=Z,30nm,1.3s						
KBZ	**Khabaz**	**126.61**	**313**	PKP	**PKPdf**	**14 51 44.5**	**-0.3**
	comp=Z,3.0nm,0.8s,baz=30,slow=3.2,SNR=5.8						
OBN	**Obninsk**	**126.67**	**328**	⇓*i*PKIKP	**PKPdf**	**14 51 43.7**	**-0.9**
OBN				*e*		14 53 38.1	
OBN				*e*SS	SS	15 10 45.2	+0.8
OBN				pmax	pmax		
	comp=Z,15nm,1.2s						
KIV	**Kislovodsk**	**126.71**	**313**	*e*PKIKP	**PKPdf**	**14 51 45.0**	**-0.2**
KIV				pmax	pmax		
	comp=Z,45nm,1.1s						
SHA1	**Shidzhatmaz**	**126.78**	**313**	*i* PKIKP	**PKPdf**	**14 51 45.1**	**-0.4**
VSR	**Storozhevoye**	**126.83**	**322**	*e*PKIKP	**PKPdf**	**14 51 43.4**	**-1.7**
VSR				pmax	pmax		
	comp=Z,20nm,1.1s						
NEY	**Neytrino**	**126.84**	**312**	*i* PKIKP	**PKPdf**	**14 51 45.7**	**+0.1**
FINES	**FINESS Array B**	**127.69**	**338**	PKP	**PKPdf**	**14 51 45.7**	**-0.7**
	comp=Z,7.4nm,1.0s,baz=65,slow=1.9,SNR=15						
FINES	**FINESS Array B**	**127.69**	**338**	*c i*PKIKP	**PKPdf**	**14 51 46.2**	**-0.2**
FINES				pmax	pmax		
	comp=Z,7.0nm,1.0s						
FINES	**FINESS Array B**	**127.69**	**338**		**PKPdf**	**14 51 45.9**	**-0.5**
KMBO	**Kilima Mbogo**	**128.54**	**255**	PKP	**PKPdf**	**14 51 49.6**	**-0.2**
	comp=Z,0.6nm,0.3s,baz=129,slow=7.6,SNR=3.5						
NACGM	**Naroch**	**131.57**	**331**	*i* PKP	**PKiKP**	**14 51 58.7**	**+3.8**
NACGM				*i* PKP	**PKiKP**	**14 51 58.7**	**+3.8**
NACGM				*i* PKP	**PKiKP**	**14 51 58.7**	**+3.8**
NACGM				*i* PP	PP	14 54 26.9	+14
NACGM				*i* PKS	PKSdf	14 55 09.8	-20
NACGM				*i* PPP	PPP	14 57 14.5	
NACGM				*i* SKS	SKSdf	14 59 18.0	+15
NACGM				*i* PS	PS	15 03 21.3	-67
NACGM				*i* SKKS	**SKKSdf**	**15 09 10.4**	**+7.7**
NACGM				*i* SS	**SS**	**15 11 45.4**	**+0.6**
NACGM				*i* SSS	SSS	15 17 13.9	
NACGM				*i* LQ	LQ	15 42 11.2	
NACGM				*i* LR	LR	15 52 09.4	
NB2	**NORSAR Subarra**	**132.56**	**345**	PKPdf	**PKPdf**	**14 51 56.0**	**+0.3**
	comp=Z,0.8nm,0.7s,baz=31,slow=1.9						
NOA	**NORSAR Array B**	**132.56**	**345**	PKP	**PKPdf**	**14 51 56.0**	**+0.3**
	comp=Z,1.5nm,0.7s,baz=33,slow=1.9,SNR=4.9						
AKASG	**Malin Array Be**	**132.70**	**325**	PKP	**PKPdf**	**14 51 55.6**	**-0.6**
	comp=Z,4.7nm,0.7s,baz=56,slow=2.4,SNR=7.4						
AKASG	**Malin Array Be**	**132.70**	**325**	*c i*PKIKP	**PKPdf**	**14 51 56.7**	**+0.5**
AKASG				pmax	pmax		
	comp=Z,5.0nm,0.7s						
SUW	**Suwalki**	**133.78**	**332**	*e*PKP	**PKiKP**	**14 52 02.8**	**+3.4**
BRTR	**Keskin Array B**	**134.34**	**310**	PKP	**PKPdf**	**14 51 58.3**	**-1.6**
	comp=Z,2.7nm,0.8s,baz=136,slow=4.0,SNR=8.8						
BRTR	**Keskin Array B**	**134.34**	**310**	PKIKP	**PKiKP**	**14 52 00.7**	**-0.6**
BRTR	**Keskin Array B**	**134.34**	**310**	PKPdf	**PKiKP**	**14 52 00.7**	**-0.6**
BURAR	**Bucovina Array**	**136.56**	**324**	PKPdf	**PKiKP**	**14 52 05.5**	**0.0**
KOLS	**Kolonicke sedl**	**137.41**	**327**	*e*PKIKP	**PKPdf**	**14 52 05.8**	**+0.7**
KOLS	**Kolonicke sedl**	**137.41**	**327**	*e*PKP	**PKPdf**	**14 52 05.8**	**+0.7**
OJC	**Ojcow**	**137.84**	**330**	*e*PKP	**PKiKP**	**14 52 09.4**	**+1.6**
CRVS	**Cervenica-Dubn**	**137.86**	**327**	*e*PKIKP	**PKPdf**	**14 52 06.6**	**+0.6**
CRVS	**Cervenica-Dubn**	**137.86**	**327**	*e*PKP	**PKPdf**	**14 52 06.6**	**+0.6**
NIE	**Niedzica**	**138.12**	**329**	*e*PKP	**PKiKP**	**14 52 09.6**	**+1.1**
KRLC	**Kraliky**	**139.35**	**332**	*e*PKIKP	**PKiKP**	**14 52 10.8**	**-0.2**
KRLC	**Kraliky**	**139.35**	**332**	*e*PKP	**PKiKP**	**14 52 10.8**	**-0.2**
DPC	**Dobruska-Polom**	**139.36**	**332**	*e*PKIKP	**PKPdf**	**14 52 08.1**	**-0.6**
DPC	**Dobruska-Polom**	**139.36**	**332**	*e*PKP	**PKPdf**	**14 52 08.1**	**-0.6**
UPC	**Upice**	**139.38**	**333**	*e*PKIKP	**PKiKP**	**14 52 11.1**	**+0.1**
UPC	**Upice**	**139.38**	**333**	*e*PKP	**PKiKP**	**14 52 11.1**	**+0.1**
VYHS	**Vyhne**	**139.45**	**329**	*e*PKIKP	**PKPdf**	**14 52 09.8**	**+0.9**
VYHS	**Vyhne**	**139.45**	**329**	*e*PKP	**PKPdf**	**14 52 09.8**	**+0.9**
BRG	**Berggiesshubel**	**139.99**	**335**	*e*PKP	**PKPdf**	**14 52 06.5**	**-3.2**
BRG				Amp		14 52 09.9	
	comp=Z,16nm,1.5s						
BRG				Amp		15 07 30.0	
	comp=Z,3.8nm,19.5s						
BRG				Amp		15 07 38.0	
	comp=N,2.3nm,25.7s						
BRG				Amp		15 07 40.0	
	comp=E,2.2nm,22.3s						
CLL	**Collm**	**140.03**	**336**	*i* PKPdf	**PKiKP**	**14 52 11.6**	**-0.7**
	comp=Z,5.0nm,0.7s						
CLL				*i* (pPKPdf)		14 52 15.9	
	comp=Z,11nm,0.9s						
MODS	**Modra-Piesok**	**140.30**	**330**	*e*PKIKP	**PKiKP**	**14 52 12.3**	**-0.7**
MODS	**Modra-Piesok**	**140.30**	**330**	*e*PKP	**PKiKP**	**14 52 12.3**	**-0.7**
CONA	**Conrad Observa**	**141.30**	**330**	*e*P	**PKiKP**	**14 52 15.2**	**+0.1**
	comp=Z,4.3nm,0.5s						
CONA				*e*P	**pPKPdf**	**14 52 18.9**	**-4.9**
	comp=Z,8.1nm,0.7s						
CKRC	**Cesky Krumlov**	**141.37**	**332**	*e*PKP	**PKPdf**	**14 52 11.8**	**-0.6**
KHC	**Kasperske Hory**	**141.46**	**333**	*e*PKIKP	**PKPdf**	**14 52 13.7**	**+1.1**
KHC	**Kasperske Hory**	**141.46**	**333**	*e*PKP	**PKPdf**	**14 52 13.7**	**+1.1**
GERES	**GERESS Array B**	**141.62**	**333**	PKhKP	PKPpre	14 52 07.9	
	comp=Z,1.1nm,0.5s,baz=294,slow=1.3,SNR=7.8						
GERES				PKP	**PKPdf**	**14 52 14.0**	**+1.1**
	comp=Z,1.9nm,0.8s,baz=48,slow=1.5,SNR=7.6						
MOA	**Molln**	**142.10**	**331**	*e*P	**PKPdf**	**14 52 14.0**	**+0.3**
	comp=Z,4.8nm,1.1s						
FNA	**Florina**	**142.51**	**317**	IAMs_20	IAMs_20	15 49 20.5	
	comp=Z,858nm,21.0s						
SOKA	**Soboth**	**142.58**	**329**	*e*P	**PKPdf**	**14 52 14.5**	**-0.2**
	comp=Z,12nm,1.2s						
OBKA	**Obir**	**142.93**	**329**	*e*P	**PKPdf**	**14 52 15.3**	**0.0**
	comp=Z,7.5nm,1.1s						
KBA	**Koelnbreinsper**	**143.09**	**331**	*e*P	**PKPdf**	**14 52 15.7**	**0.0**
	comp=Z,12nm,0.9s						
MYKA	**Terra Mystica**	**143.28**	**330**	*e*P	**PKPdf**	**14 52 15.6**	**-0.3**
	comp=Z,7.0nm,0.9s						
ABTA	**Abfaltersbach**	**143.72**	**331**	*i* P	PKPab	14 52 13.8	+0.3
	comp=Z,12nm,0.6s,SNR=8.9						
WTTA	**Wattenberg**	**143.73**	**333**	*e*P	PKPbc	14 52 14.9	+0.6
	comp=Z,8.9nm,1.2s						
WTTA				*e*P	**PKiKP**	**14 52 20.3**	**+0.1**
	comp=Z,31nm,1.4s						
ITM	**Ithomi**	**143.82**	**311**	PKPdf	PKPbc	14 52 14.5	-0.3
MOTA	**Moosalm**	**143.90**	**333**	*e*P	PKPbc	14 52 15.4	+0.5
	comp=Z,15nm,1.2s						
MOTA				*e*P	**PKiKP**	**14 52 18.9**	**-1.6**
	comp=Z,20nm,1.1s						
RETA	**Reutte**	**143.93**	**334**	*e*P	PKPbc	14 52 15.7	+0.8
	comp=Z,7.3nm,1.1s						
SQTA	**Sankt Quirin**	**143.95**	**333**	*e*P	PKPbc	14 52 15.7	+0.7
	comp=Z,14nm,1.0s						
SQTA				*e*P	**PKiKP**	**14 52 19.8**	**-0.9**
	comp=Z,15nm,0.7s						
FETA	**Feichten**	**144.31**	**333**	*i* P	PKPbc	14 52 16.5	+0.4
	comp=Z,18nm,1.0s,SNR=12						
FETA				*e*P	**PKiKP**	**14 52 21.0**	**-0.4**
	comp=Z,29nm,0.9s						
TUE	**Stuetta**	**145.33**	**334**		**PKPdf**	**14 52 20.2**	**+0.5**
NRCA	**Norcia**	**146.23**	**326**		**PKPbc**	**14 52 22.5**	**+0.3**
VSL	**Villasalto**	**150.58**	**325**		**PKPbc**	**14 52 33.5**	**-0.2**
KEST	**Kesra**	**153.14**	**319**	PKPbc	**PKiKP**	**14 52 40.4**	**+0.5**
	comp=Z,19nm,0.9s,baz=247,slow=10,SNR=7.3						
TORD	**Torodi Ar. Bea**	**166.53**	**257**	PKP	**PKPdf**	**14 52 47.3**	**-0.6**
	comp=Z,8.3nm,1.1s,baz=60,slow=2.1						
KIC	**Kosan Boka**	**167.78**	**215**	*e*PKIKP	**PKPdf**	**14 52 47.5**	**-1.3**
	comp=Z,45nm,1.2s						
LIC	**Lamto**	**167.82**	**214**	*e*PKIKP	**PKPdf**	**14 52 47.6**	**-1.2**
	comp=Z,82nm,1.3s						
DBIC	**Dimbokro**	**168.10**	**216**	PKP	**PKPdf**	**14 52 48.1**	**-0.9**
	comp=Z,13nm,1.0s,baz=132,slow=2.4,SNR=9.5						
TIC	**Toumodi**	**168.16**	**215**	*e*PKIKP	**PKPdf**	**14 52 47.8**	**-1.3**

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*ATH **19** 14:36:27.5, 41.°70N×20.°54E, h10^{km}±31^{km}, ML2.6/5 Error ellipse: s-maj=31.6km s-min=1.8km az=0.0*
*SKO **19** 14:36:28.6, 41.°55N×20.°53E, h10^{km}*
*TIR **19** 14:36:29.1, 41.°58N×20.°43E, h6^{km}±2^{km}, Md2.6, Ml2.6*
*THE **19** 14:36:29.1, 41.°60N×20.°52E, h6^{km}±3^{km}, ML2.4/4, Error ellipse: s-maj=3.9km s-min=1.7km az=352.0*
*BEO **19** 14:36:29.9±0.4, 41.°49N×20.°55E, h5^{km}±3^{km}, ML2.3/8*
*PDG **19** 14:36:29.1±0.1, 41.°55N×20.°52E, h5^{km}, ML2.6/9, Error ellipse: s-maj=0.2km s-min=0.2km az=0.0*
ISC 19 14:36:29.0±1.1**, 41.°57N**±0.°02×**20.°53E**±0.°02**, h0**^{km}±10^{km}**, n58, σ1.^{s}18**/97**, 2C-1D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PHP	**Peshkopia**	**0.13**	**329**	P	**Pg**	**14 36 31.8**	**+0.2**
PHP	**Peshkopia**	**0.13**	**329**	P	**Pg**	**14 36 31.8**	**+0.2**
	baz=9.0						
PHP				S	**Sg**	**14 36 33.9**	**+0.5**
	baz=9.0						
PHP				AMP			
	comp=N,7.4nm,0.2s,baz=9.0						
OHR	**Ohrid**	**0.50**	**156**	⇑*i*Pg	**Pg**	**14 36 38.4**	**-0.2**
OHR				*i* Sg	**Sg**	**14 36 46.3**	**+1.2**
OHR				*e*Lg	Lg	14 36 46.5	
	comp=N,161nm,0.3s						
OHR				*e*Lg	Lg	14 36 46.8	
	comp=E,126nm,0.3s						
TIR	**Tirane**	**0.55**	**246**	P	**Pg**	**14 36 39.3**	**-0.2**
TIR				S	**Sg**	**14 36 47.3**	**+0.6**
	comp=E,480nm,0.5s						
TIR	**Tirane**	**0.55**	**246**	*e*Pg	**Pg**	**14 36 39.1**	**-0.4**
TIR				*e*Sg	**Sb**	**14 36 48.6**	**-1.3**
TIR	**Tirane**	**0.55**	**246**	P	**Pg**	**14 36 39.1**	**-0.4**
	baz=242						
TIR				S	**Sg**	**14 36 46.3**	**-0.3**
	baz=242						
TIR				AMP			
	comp=N,1.6nm,0.3s,baz=242						
TIR	**Tirane**	**0.55**	**246**	*i* Pg	**Pg**	**14 36 39.3**	**-0.2**
TIR	**Tirane**	**0.55**	**246**	P	**Pg**	**14 36 39.3**	**-0.2**
TIR				S	**Sg**	**14 36 47.2**	**+0.6**
TIR				AML	AML	14 36 50.3	
	comp=N,2412μm,0.3s						
TIR				AML	AML	14 36 50.7	
	comp=E,2233μm,0.5s						
PRZK	**Prizren**	**0.66**	**15**	*i* Pg	**Pg**	**14 36 41.9**	**+0.2**
PUK	**Puka**	**0.67**	**315**	P	**Pg**	**14 36 41.2**	**-0.7**
	baz=321						
PUK				S	**Sg**	**14 36 50.9**	**+0.3**
	baz=321						
PUK				AMP			
	comp=N,1.1nm,0.6s,baz=321						
SKO	**Skopje**	**0.79**	**59**	*e*Pg	**Pg**	**14 36 44.2**	**0.0**
SKO				*e*Sg	**Sb**	**14 36 56.6**	**-0.3**
SKO	**Skopje**	**0.79**	**59**	*i* Pg	**Pg**	**14 36 44.4**	**+0.3**
SKO				*i* Sg	**Sb**	**14 36 56.3**	**-0.6**
BCI	**Bajram Curri**	**0.87**	**337**	P	**Pg**	**14 36 45.6**	**-0.1**
	baz=342						
BCI				S	**Sb**	**14 36 58.0**	**-1.2**
	baz=342						
KBN	**Korca**	**0.96**	**168**	P	**Pn**	**14 36 49.3**	**-0.6**
KBN				S	**Sb**	**14 37 02.3**	**+0.3**
	comp=N,158nm,0.4s						
KBN	**Korca**	**0.96**	**168**	P	**Pb**	**14 36 48.5**	**-0.1**
	baz=164						
KBN				S	**Sn**	**14 37 03.3**	**-1.0**
	baz=164						
KBN	**Korca**	**0.96**	**168**	P	**Pb**	**14 36 48.5**	**-0.1**
	baz=163						
KBN				S	**Sn**	**14 37 03.3**	**-1.0**
	baz=163						
FNA	**Florina**	**1.01**	**141**	P	**Pg**	**14 36 47.3**	**-1.1**
FNA				S	**Sb**	**14 37 03.6**	**+0.3**
	comp=N,562nm,0.4s						
FNA	**Florina**	**1.01**	**141**	*i* Pg	**Pg**	**14 36 47.6**	**-0.8**
FNA				*i* Sg	**Sb**	**14 37 02.6**	**-0.6**
FNA	**Florina**	**1.01**	**141**	P	**Pg**	**14 36 47.4**	**-1.1**
FNA				S	**Sb**	**14 37 02.5**	**-0.8**
FNA				AML	AML	14 37 08.0	
	comp=N,1142μm,0.4s						
FNA				AML	AML	14 37 08.7	
	comp=E,1082μm,0.3s						
ULC	**Ulcinj**	**1.04**	**293**	*e*Pg	**Pg**	**14 36 48.1**	**-0.9**
ULC				*i* Sg	**Sn**	**14 37 04.7**	**-1.5**
PVY	**Plav**	**1.11**	**338**	*e*Pg	**Pg**	**14 36 49.9**	**-0.4**
PVY				*i* Sg	**Sn**	**14 37 07.5**	**-0.5**
GJIK	**Gjilan**	**1.12**	**37**	*i* Pg	**Pg**	**14 36 50.6**	**+0.1**
NEST	**Nestorio**	**1.22**	**161**	P	**Pg**	**14 36 51.6**	**-0.8**
NEST				S	**Sn**	**14 37 10.6**	**0.0**
	comp=E,92nm,0.4s						
NEST	**Nestorio**	**1.22**	**161**	P	**Pg**	**14 36 51.4**	**-1.0**
NEST				S	**Sn**	**14 37 10.6**	**0.0**
NEST				AML	AML	14 37 18.8	
	comp=N,232μm,0.5s						
NEST				AML	AML	14 37 20.2	
	comp=E,220μm,0.5s						
PDG	**Podgorica**	**1.28**	**313**	*e*Pg	**Pn**	**14 36 53.4**	**-0.8**
PDG				*e*Sg	**Sn**	**14 37 13.3**	**+1.2**
PDG	**Podgorica**	**1.28**	**313**	*i* Pg	**Pg**	**14 36 53.9**	**+0.2**
TTG	**Podgorica**	**1.28**	**313**	*e*Pg	**Pn**	**14 36 53.0**	**-1.2**
TTG				*i* Sg	**Sn**	**14 37 13.2**	**+1.2**
SMRK	**Smrekonice**	**1.34**	**13**	*i* Pg	**Pg**	**14 36 55.1**	**+0.4**
IVA	**Berane**	**1.39**	**340**	*e*Pg	**Pb**	**14 36 55.2**	**-0.7**
IVA				*i* Sg	**Sn**	**14 37 17.1**	**+2.3**
LSK	**Leskovik**	**1.42**	**178**	P	**Pg**	**14 36 57.2**	**+1.0**
	baz=174						
LSK				S	**Sg**	**14 37 18.5**	**+3.9**
	baz=174						
PENT	**Pentalofos**	**1.45**	**161**	P	**Pb**	**14 36 56.6**	**-0.3**
PENT				AML	AML	14 37 23.5	
	comp=E,155μm,0.5s						
PENT				AML	AML	14 37 24.7	
	comp=N,134μm,0.3s						
KOME	**Kolasin**	**1.49**	**330**	*e*Pg	**Pg**	**14 36 57.3**	**-0.2**
KOME				*i* Sg	**Sg**	**14 37 20.4**	**+3.6**
GRG	**Griva**	**1.54**	**113**	*i* Pn	**Pn**	**14 36 57.4**	**-0.3**
VAY	**Valandovo**	**1.55**	**99**	*e*Pn	**Pb**	**14 36 57.9**	**-0.7**
VAY				*e*Sn	**Sg**	**14 37 18.9**	**0.0**
VAY	**Valandovo**	**1.55**	**99**	*i* Pn	**Pb**	**14 36 58.0**	**-0.6**
KZN	**Kozani**	**1.57**	**143**	P	**Pb**	**14 36 58.5**	**-0.5**
KZN				AML	AML	14 37 23.5	
	comp=N,170μm,0.5s						
KZN				AML	AML	14 37 25.4	
	comp=E,289μm,0.5s						
NKME	**Niksic**	**1.68**	**316**	*e*Pn	**Pb**	**14 37 00.2**	**-0.6**
NKME				*i* Sn	**Sg**	**14 37 25.0**	**+2.1**
NKY	**Niksic**	**1.69**	**318**	*e*Pn	**Pg**	**14 37 01.0**	**-0.4**
NKY				*i* Sn	**Sg**	**14 37 25.3**	**+2.0**
BOSS	**Bosilegrad**	**1.72**	**57**	*e*Pn	**Pn**	**14 37 00.0**	**-0.3**
BOSS				*e*Sn	**Sg**	**14 37 24.2**	**-0.1**
KPRO	**Kipourio**	**1.73**	**158**	P	**Pn**	**14 37 00.6**	**+0.2**
HCY	**Herceg Novi**	**1.75**	**301**	⇓*i*Pn	**Pb**	**14 37 00.8**	**-1.3**
HCY				*i* Sn	**Sg**	**14 37 26.8**	**+1.4**
KEK	**Kerkira**	**1.94**	**197**	P	**Pb**	**14 37 04.2**	**-1.0**
IVAS	**Ivanjica**	**2.02**	**352**	*e*Pn	**Pn**	**14 37 04.2**	**-0.3**
IVAS				*e*Sn	**Sb**	**14 37 32.7**	**+0.2**
UPM	**Unac-Piva**	**2.03**	**324**	⇑*i*Pn	**Pb**	**14 37 05.2**	**-1.7**
UPM				*i* Sn	**Sg**	**14 37 33.5**	**-0.7**
IGT	**Igoumenitsa**	**2.04**	**184**	P	**Pb**	**14 37 06.2**	**-0.7**
DBRK	**Dubrovnik**	**2.09**	**303**	*e*Pn	**Pb**	**14 37 06.1**	**-1.7**
DBRK				Sn	**Sg**	**14 37 37.7**	**+1.6**
LIT	**Litokhoron**	**2.09**	**134**	*i* Pn	**Pn**	**14 37 05.9**	**+0.6**
LIT	**Litokhoron**	**2.09**	**134**	P	**Pn**	**14 37 05.5**	**+0.2**
ZAPS	**Zavoj**	**2.31**	**42**	*e*Pn	**Pb**	**14 37 09.5**	**-2.0**
BBLS	**Lazići**	**2.44**	**340**	*e*Pn	**Pb**	**14 37 11.4**	**-2.4**
BBLS				*e*Sn	**Sb**	**14 37 43.7**	**-0.8**
STON	**Ston**	**2.47**	**303**	*e*Pn	**Pb**	**14 37 11.9**	**-2.5**
NVR	**Nevrokopi**	**2.51**	**94**	P	**Pn**	**14 37 12.2**	**+1.1**
DIVS	**Divibare**	**2.56**	**351**	*e*Pn	**Pn**	**14 37 12.4**	**+0.6**
DIVS				*e*Sn	**Sb**	**14 37 46.0**	**-1.9**
HVAR	**Hvar**	**3.43**	**299**	*i* Pn	**Pn**	**14 37 24.9**	**+1.2**
HVAR				Sn	**Sn**	**14 38 06.9**	**+2.0**
KIJV	**Kijevo**	**3.89**	**310**	*e*Pn	**Pn**	**14 37 31.2**	**+1.1**
KIJV				Sn	**Sn**	**14 38 19.8**	**+3.3**
ZIRJ	**Zirje**	**4.17**	**302**	*e*Pn	**Pn**	**14 37 34.9**	**+1.0**
ZIRJ				Sn	**Sn**	**14 38 24.5**	**+1.3**
DUGI	**Dugi Otok**	**4.70**	**303**	*e*Pn	**Pn**	**14 37 42.4**	**+1.3**
DUGI				Sn	**Sn**	**14 38 37.9**	**+1.5**
NVLJ	**Novalja**	**5.11**	**308**	*e*Pn	**Pn**	**14 37 46.2**	**-0.6**

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*JMA **19** 14:53:11.7±0.3, 44.°70N×141.°15E, h268^{km}±3^{km}, M3.0*
*IDC **19** 14:53:12.3±0.7, 44.°70N×141.°10E, h252^{km}±6^{km}, mb2.9/10, mb1 3.2/11, mb1mx3.1/37, mbtmp3.5/11, Error ellipse: s-maj=18.4km s-min=13.4km az=116.0*
ISC 19 14:53:12.7±0.7**, 44.°61N**±0.°06×**141.°20E**±0.°08**, h261**^{km}**, n32, σ1.^{s}00**/37**, mb3.2**/10**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYG	**Yagishiri**	**0.25**	**139**	P	**Pn**	**14 53 46.3**	**0.0**
JSS	**Shosan**	**0.51**	**114**	P	**Pn**	**14 53 47.6**	**+0.7**
JSS				*e*S	**S**	**14 54 14.9**	**+1.1**
JRR	**Rishiri**	**0.53**	**9**	P	**Pn**	**14 53 47.0**	**+0.2**
JRBN	**Rebuntou**	**0.81**	**353**	P	**Pn**	**14 53 47.3**	**-0.6**
JWK2	**Keihoku**	**0.86**	**35**	P	**Pn**	**14 53 47.7**	**-0.4**
JWK2				*e*S	**S**	**14 54 15.0**	**-1.1**
JHR	**Hokuryu**	**0.95**	**156**	P	**Pn**	**14 53 49.4**	**+0.7**
JSE	**Soyaes**	**1.04**	**70**	P	**Pn**	**14 53 48.5**	**-0.5**
ASAJ	**Asahikawa**	**1.12**	**116**	P	**Pn**	**14 53 49.7**	**+0.2**
	4.4nm,0.3s,baz=276,slow=8.7,SNR=70						
ASAJ				S	**S**	**14 54 17.6**	**-1.0**
	0.3nm,0.3s,baz=18,slow=20,SNR=3.3						
ASAJ	**Asahikawa**	**1.12**	**116**	P	**Pn**	**14 53 49.7**	**+0.2**
JKK2	**Kamakawa 2**	**1.34**	**123**	P	**Pn**	**14 53 51.3**	**+0.4**
JKK2				*e*S	**S**	**14 54 21.8**	**+0.7**
JSK	**Shakotan**	**1.36**	**203**	P	**Pn**	**14 53 51.2**	**+0.1**
JFR	**Furan**	**1.77**	**145**	P	**Pn**	**14 53 54.3**	**+0.2**
JEW	**Eniwo**	**1.78**	**174**	P	**Pn**	**14 53 55.1**	**+0.8**
JTKR	**Abashiri--Toko**	**2.05**	**107**	P	**Pn**	**14 53 57.6**	**+1.2**
JAR	**Ashorobuto**	**2.27**	**124**	P	**Pn**	**14 53 59.6**	**+1.0**
JCH	**Churui**	**2.54**	**141**	*e*S	**S**	**14 54 37.1**	**-2.4**
JNBK	**Urakawa-nobuka**	**2.59**	**154**	*e*S	**S**	**14 54 40.0**	**-0.5**
JKB	**Kayabe**	**2.73**	**183**	P	**Pn**	**14 54 02.9**	**-0.1**
JAK	**Akkeshi**	**3.00**	**121**	*e*S	**S**	**14 54 44.5**	**-3.5**
JOMM	**Oshimamatsumae**	**3.21**	**196**	P	**Pn**	**14 54 07.8**	**-0.3**
JOT	**Ohata**	**3.23**	**182**	P	**Pn**	**14 54 08.0**	**-0.4**
JOT				*e*S	**S**	**14 54 51.8**	**-0.8**
SEY	**Seymchan**	**19.45**	**15**	P	**P**	**14 57 18.6**	**-1.1**
	0.2nm,0.3s,baz=74,slow=22,SNR=8.0						
SONM	**Songino Array**	**24.17**	**290**	P	**P**	**14 58 05.4**	**0.0**
	0.4nm,0.6s,baz=93,slow=7.7,SNR=4.3						
MKAR	**Makanchi Array**	**40.36**	**295**	P	**P**	**15 00 25.1**	**0.0**
	0.3nm,0.7s,baz=90,slow=7.8,SNR=3.5						
ILAR	**Eielson Array**	**43.33**	**36**	P	**P**	**15 00 48.9**	**+0.1**
	0.3nm,0.7s,baz=285,slow=8.1,SNR=5.6						
INK	**Inuvik**	**47.81**	**30**	P	**P**	**15 01 23.1**	**-0.4**
	0.7nm,0.3s,baz=302,slow=9.1,SNR=7.7						
YKA	**Yellowknife Ar**	**57.41**	**32**	P	**P**	**15 02 33.9**	**+0.1**
	0.5nm,0.7s,baz=306,slow=6.1,SNR=13						
WRA	**Warramunga Arr**	**64.55**	**187**	P	**P**	**15 03 22.6**	**+0.6**
	0.7nm,1.1s,baz=3.6,slow=6.9,SNR=7.6						
AKASG	**Malin Array Be**	**68.27**	**321**	P	**P**	**15 03 44.6**	**-0.6**
	0.3nm,0.3s,baz=45,slow=6.4,SNR=0.8						
ASAR	**Alice Springs**	**68.27**	**187**	P	**P**	**15 03 46.3**	**+0.8**
	0.4nm,0.7s,baz=8.0,slow=6.0,SNR=7.0						
NVAR	**Mina Array Bea**	**70.67**	**55**	P	**P**	**15 04 01.7**	**+1.4**
	0.2nm,0.5s,baz=310,slow=5.6,SNR=2.8						
PDAR	**Pinedale Array**	**72.53**	**47**	P	**P**	**15 04 12.3**	**+1.0**
	0.3nm,0.5s,baz=282,slow=2.9,SNR=4.4						

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*NEIC **19** 15:10:44.9±2.0, 37.°93S±0.°06×180.°0W±0.°1, h10^{km}±1^{km}, mb4.5/15, Error ellipse: s-maj=15.8km s-min=9.8km az=96.0*
*NOU **19** 15:10:46.5, 37.°83S×179.°86W, h125^{km}, MLv4.5, East of North Island, N.Z.*
*IDC **19** 15:10:46.1±2.4, 37.°50S×179.°64E, h0^{km}, mb4.2/3, mb1 4.3/5, mb1mx4.0/30, mbtmp4.2/5, ML4.1/2, Error ellipse: s-maj=70.9km s-min=27.6km az=146.0*
*WEL **19** 15:10:50.9±1.1, 38°S±8°×18°0E±°, h33^{km}, M4.1/42, ML4.3/42, MLv4.1/42, Error ellipse: s-maj=0.0km s-min=0.0km az=51.1*
ISC 19 15:10:46.4±1.8**, 37.°87S**±0.°05×**179.°88E**±0.°07**, h15**^{km}±9^{km}**, n165, σ2.^{s}11**/179**, mb4.6**/9**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**1.16**	**272**	P	**Pg**	**15 11 09.6**	**+0.8**
MXZ	**Matakaoa Point**	**1.28**	**283**	P	**Pg**	**15 11 10.4**	**-0.8**
MXZ				S	**Sb**	**15 11 25.0**	**-1.6**
PUZ	**Puketiti**	**1.30**	**261**	P	**Pg**	**15 11 12.4**	**+1.0**
PUZ				S	**Sg**	**15 11 27.9**	**-0.4**
PKGZ	**Pakihiroa**	**1.43**	**269**	P	**Pg**	**15 11 13.2**	**-0.7**
CNGZ	**Carnagh Statio**	**1.45**	**245**	P	**Pg**	**15 11 16.0**	**+1.7**
TWGZ	**Tauwhareparae**	**1.53**	**258**	P	**Pg**	**15 11 15.7**	**-0.1**
TWGZ				S	**Sg**	**15 11 35.2**	**-0.5**
HAZ	**Te Kaha**	**1.66**	**273**	P	**Pb**	**15 11 16.4**	**-0.4**
TKGZ	**Te Karaka**	**1.70**	**250**	P	**Pg**	**15 11 18.6**	**-0.5**
TKGZ				S	**Sb**	**15 11 39.7**	**+1.2**
RUGZ	**Raukumara Rang**	**1.74**	**266**	P	**Pb**	**15 11 17.8**	**-0.4**
RIGZ	**Rimuhau**	**1.86**	**243**	P	**Pb**	**15 11 21.1**	**+0.9**
PRGZ	**Paritu Road**	**1.89**	**236**	P	**Pb**	**15 11 21.8**	**+1.2**
MHGZ	**Mahia Peninsul**	**2.01**	**230**	P	**Pb**	**15 11 23.7**	**+1.1**
KNZ	**Kokohu**	**2.08**	**236**	P	**Pb**	**15 11 23.9**	**+0.1**
SNGZ	**Shannon Statio**	**2.19**	**245**	P	**Pb**	**15 11 25.2**	**-0.6**
URZ	**Urewera**	**2.22**	**259**	Pn	**Pb**	**15 11 24.8**	**-1.4**
	65nm,0.3s,baz=256,slow=3.8,SNR=1024						
URZ				Sn	**Sn**	**15 11 50.8**	**+1.0**
	96nm,0.3s,baz=243,slow=19,SNR=19						
URZ	**Urewera**	**2.22**	**259**	P	**Pb**	**15 11 25.1**	**-1.1**
WHRZ	**Whale Island**	**2.30**	**270**	P	**Pb**	**15 11 25.8**	**-1.8**
WHHZ	**Waihua**	**2.40**	**239**	P	**Pb**	**15 11 28.4**	**-0.9**
RTZ	**Ruatahuna**	**2.40**	**251**	P	**Pb**	**15 11 28.2**	**-1.2**
RAHZ	**Arahi**	**2.43**	**244**	P	**Pb**	**15 11 28.7**	**-1.2**
EDRZ	**Edgecumbe**	**2.49**	**264**	P	**Pb**	**15 11 28.8**	**-2.1**
MUGZ	**Murupara**	**2.52**	**255**	P	**Pn**	**15 11 29.3**	**+2.4**
MARZ	**Manawahe**	**2.54**	**266**	P	**Pn**	**15 11 27.6**	**+0.5**
MTHZ	**Maungataniwha**	**2.58**	**247**	P	**Pb**	**15 11 30.6**	**-1.9**
OPRZ	**Ohinepanea**	**2.63**	**270**	P	**Pn**	**15 11 29.4**	**+1.1**
ARHZ	**Aropaoanui**	**2.65**	**238**	P	**Pb**	**15 11 32.1**	**-1.5**
TARZ	**Mount Tarawera**	**2.69**	**261**	P	**Pn**	**15 11 31.6**	**+2.3**
RRRZ	**Republican Roa**	**2.69**	**259**	P	**Pn**	**15 11 31.5**	**+2.2**
NMHZ	**Naumai**	**2.70**	**242**	P	**Pb**	**15 11 32.8**	**-1.7**
MKRZ	**Makatiti**	**2.71**	**263**	P	**Pb**	**15 11 32.5**	**-2.1**
OMRZ	**Omania**	**2.78**	**264**	P	**Pn**	**15 11 32.4**	**+1.9**
HLRZ	**Highlands Stat**	**2.81**	**261**	P	**Pn**	**15 11 33.2**	**+2.4**
PRRZ	**Plateau Road**	**2.82**	**256**	P	**Pn**	**15 11 33.0**	**+2.1**
CKHZ	**Cape Kidnapper**	**2.82**	**230**	P	**Pn**	**15 11 34.1**	**+3.1**
ALRZ	**Allen Road**	**2.87**	**255**	P	**Pn**	**15 11 34.0**	**+2.4**
TGRZ	**Tauranga**	**2.87**	**272**	P	**Pn**	**15 11 32.4**	**+0.8**
KARZ	**Kaharoa**	**2.88**	**266**	P	**Pn**	**15 11 33.3**	**+1.5**
HRRZ	**Handcock Road**	**2.88**	**259**	P	**Pn**	**15 11 33.9**	**+2.1**
MRHZ	**Matea Rd**	**2.89**	**250**	P	**Pn**	**15 11 34.4**	**+2.5**
HSRZ	**Hossack Road**	**2.90**	**260**	P	**Pn**	**15 11 34.4**	**+2.4**
NGRZ	**Ngongotaha**	**2.93**	**264**	P	**Pn**	**15 11 34.8**	**+2.3**
UTU	**Utuhina**	**2.93**	**263**	P	**Pn**	**15 11 35.3**	**+2.9**

MCHZ	McNeill Hill	2.94	237	P	Pn	15 11 35.8	+3.2
MYRZ	Mayor Island	2.95	280	P	Pn	15 11 34.0	+1.3
BKZ	Black Stump Fm	2.95	243	Pn	Pn	15 11 35.6	+2.8
BKZ				Sn	Sn	15 12 10.2	+2.2
BKZ	Black Stump Fm	2.95	243	P	Pn	15 11 35.7	+2.9
WPRZ	Whakapapatarin	3.00	256	P	Pn	15 11 36.0	+2.6
GRRZ	Galatos Road	3.01	260	P	Pn	15 11 36.1	+2.5
KAHZ	Kahuranaki	3.03	230	P	Pn	15 11 36.8	+2.9
KMRZ	Kaimai	3.12	269	P	Pn	15 11 36.1	+1.1
KWHZ	Kaweka Forest	3.12	239	P	Pn	15 11 38.0	+2.9
HATZ	Hinemaiaia	3.15	250	P	Pn	15 11 37.6	+2.2
WHTZ	Whakaora	3.19	254	P	Pn	15 11 38.7	+2.7
PXZ	Pawanui	3.19	227	P	Pn	15 11 38.4	+2.3
KUTZ	Kaahu Road	3.25	258	P	Pn	15 11 38.9	+2.0
KRHZ	Kereru	3.26	236	P	Pn	15 11 39.7	+2.6
RITZ	Rihia Road	3.34	250	P	Pn	15 11 40.8	+2.6
WATZ	Wairara	3.37	254	P	Pn	15 11 40.7	+2.2
RATZ	Rangitukua	3.38	252	P	Pn	15 11 41.1	+2.5
BHHZ	Black Hill Sta	3.40	240	P	Pn	15 11 41.6	+2.7
TLZ	Tolley Road	3.46	261	P	Pn	15 11 41.4	+1.6
WPHZ	Waipukurau	3.46	230	P	Pn	15 11 42.2	+2.4
KATZ	Kakaramea	3.47	250	P	Pn	15 11 42.6	+2.6
PRHZ	Porangahau	3.48	226	P	Pn	15 11 42.3	+2.3
KUZ	Kuaotunu	3.50	287	P	Pn	15 11 39.9	-0.4
TMVZ	Te Maari	3.50	248	P	Pn	15 11 42.7	+2.2
ETVZ	East Tongariro	3.50	248	P	Pn	15 11 42.7	+2.2
PNHZ	Pukenui	3.52	233	P	Pn	15 11 42.9	+2.3
KRVZ	Karewarewa	3.54	249	P	Pn	15 11 43.3	+2.3
OTVZ	Oturere	3.55	247	P	Pn	15 11 43.4	+2.3
MOVZ	Moawhango	3.58	243	P	Pn	15 11 43.6	+2.2
WTVZ	West Tongariro	3.59	248	P	Pn	15 11 43.9	+2.3
TUVZ	Tukino	3.59	246	P	Pn	15 11 44.2	+2.5
NGZ	Ngauruhoe	3.60	247	P	Pn	15 11 44.1	+2.3
WHVZ	Whangaehu Hut	3.65	246	P	Pn	15 11 44.9	+2.4
WNVZ	Wahianoa	3.66	245	P	Pn	15 11 45.0	+2.4
FWVZ	Far West T-bar	3.66	247	P	Pn	15 11 45.2	+2.5
TRVZ	Turoa	3.68	246	P	Pn	15 11 45.3	+2.3
TWVZ	Taurewa	3.69	250	P	Pn	15 11 45.0	+2.1
ANWZ	Angora Road	3.70	225	P	Pn	15 11 45.4	+2.4
TSZ	Takapari Road	3.75	233	P	Pn	15 11 45.7	+1.9
MTVZ	Mangateitei	3.77	245	P	Pn	15 11 46.4	+2.4
DVHZ	Dannevirke	3.77	229	P	Pn	15 11 45.9	+1.9
PKVZ	Pokaka	3.82	247	P	Pn	15 11 47.3	+2.5
MKAZ	Moumakai	3.83	280	P	Pn	15 11 45.4	+0.6
GRZ	Great Barrier	3.89	293	P	Pn	15 11 45.4	-0.3
WIAZ	Waiheke Island	3.93	284	P	Pn	15 11 46.4	+0.2
BFZ	Birch Farm	3.98	224	Pn	Pn	15 11 48.2	+1.3
BFZ				Sn	Sn	15 12 33.7	+0.5
HIZ	Hauiti	4.01	259		Pn	15 11 50.1	+2.8
HIZ	Hauiti	4.01	259	P	Pn	15 11 49.8	+2.5
ETAZ	East Tamaki Re	4.05	282	P	Pn	15 11 49.0	+1.2
PRWZ	Pori Road	4.05	227	P	Pn	15 11 50.0	+2.2
POWZ	Post Office Ro	4.07	231	P	Pn	15 11 50.9	+2.8
MBAZ	Motutapu North	4.12	284	P	Pn	15 11 50.0	+1.2
VRZ	Vera Road	4.21	251	P	Pn	15 11 52.5	+2.5
EPAZ	Eden Park BICE	4.21	282	P	Pn	15 11 51.8	+1.7
ABAZ	Army Bay	4.22	286	P	Pn	15 11 51.3	+1.1
HBAZ	Herne Bay Bore	4.23	282	P	Pn	15 11 52.0	+1.7
TIWZ	Tintock	4.24	226	P	Pn	15 11 52.6	+2.1
AWAZ	Awhitu Peninsu	4.24	279	P	Pn	15 11 52.1	+1.6
OHWZ	Ohakea	4.25	235	P	Pn	15 11 53.8	+3.2
WAZ	Wanganui	4.26	242	P	Pn	15 11 53.6	+2.8
WTAZ	Waiatarua	4.33	281	P	Pn	15 11 53.2	+1.6
RVAZ	Riverhead Bore	4.37	283	P	Pn	15 11 53.3	+1.1
MHEZ	Mangahewa	4.52	253	P	Pn	15 11 58.8	+4.5
LREZ	Lake Rotokare	4.57	248	P	Pn	15 11 58.1	+3.1
NEZ	North Egmont	4.74	251	P	Pn	15 12 00.8	+3.4
PKE	Pukeiti	4.80	252	P	Pn	15 12 02.2	+3.9
KHEZ	Kahui Hut	4.81	251	P	Pn	15 12 02.0	+3.7
WCZ	Waipu Caves	4.84	292	P	Pn	15 11 59.2	+0.5
NBEZ	Newall Road No	4.91	252	P	Pn	15 12 04.2	+4.5
NMEZ	Namu Road	4.94	250	P	Pn	15 12 04.3	+4.2
MSWZ	Moikau Station	5.03	224		Pn	15 12 01.4	+0.1
MSWZ				Sn	Sn	15 12 58.4	-0.8
PLWZ	Palliser	5.13	223	Pn	Pn	15 12 02.6	-0.2
PLWZ				Sn	Sn	15 13 00.4	-1.3
BHW	Baring Head	5.24	226		Pn	15 12 04.6	+0.5
BHW				Sn	Sn	15 13 03.4	-0.8
SNZO	South Karori	5.27	228	Pn	Pn	15 12 05.0	+0.5
SNZO				Sn	Sn	15 13 04.1	-0.9
OUZ	Omahuta	5.71	296	Pn	Pn	15 12 11.3	+0.7
OUZ	Omahuta	5.71	296	P	Pn	15 12 11.3	+0.7
TUWZ	Tuamarina	5.80	230		Pn	15 12 11.8	0.0
CMWZ	Cape Campbell	5.83	227	Pn	Pn	15 12 11.3	-1.0
CMWZ					Sn	15 13 18.5	-0.4
BSWZ	Blackbirch Sta	6.01	228	Pn	Pn	15 12 14.8	0.0
BSWZ					Sn	15 13 23.0	-0.3
NNZ	Nelson	6.03	234	Pn	Pn	15 12 15.3	+0.3
QRZ	Quartz Range	6.41	240	Pn	Pn	15 12 20.0	-0.3
CTZ	Chatham Island	6.43	157	P	Pn	15 12 27.2	+6.6
THZ	Tophouse	6.62	232	Pn	Pn	15 12 23.3	0.0
THZ					Sn	15 13 37.8	-0.8
KHZ	Kahutara	6.65	225	Pn	Pn	15 12 22.8	-0.7
KHZ					Sn	15 13 36.8	-2.1
LTZ	Lake Taylor	7.60	227		Pn	15 12 36.0	-0.7
MQZ	McQueen’s Vall	8.00	221	Pn	Pn	15 12 41.1	-0.9
MQZ					Sn	15 14 06.8	-5.3
OXZ	Oxford	8.07	225		Pn	15 12 42.4	-0.7
RAO	Raoul Island	8.79	13	Pn	Pn	15 12 52.8	-0.2
RPZ	Rata Peaks	8.88	226	Pn	Pn	15 12 55.2	+1.0
	1.6nm,0.3s,baz=88,slow=4.6,SNR=12						
RPZ				Sn	Sn	15 14 27.9	-6.0
	3.7nm,0.3s,baz=133,slow=16,SNR=14						
RPZ	Rata Peaks	8.88	226	Pn	Pn	15 12 53.9	-0.2
FOZ	Fox Glacier	9.50	230	Pn	Pn	15 13 02.9	+0.2
LBZ	Lake Benmore	9.78	225	Pn	Pn	15 13 06.9	+0.3
ODZ	Otahua Downs	9.96	221		Pn	15 13 09.0	0.0
WKZ	Wanaka	10.71	226	Pn	Pn	15 13 18.4	-0.9
MLZ	Mavora Lakes	11.55	226	Pn	Pn	15 13 30.4	-0.3
WHZ	Wether Hill Ro	11.96	224	Pn	Pn	15 13 36.1	-0.3
DCZ	Deep Cove	12.16	227	Pn	Pn	15 13 39.0	0.0
PYZ	Puysegur Point	12.83	226	Pn	Pn	15 13 48.1	-0.1
MSVF	Nonsavu	20.13	355	Pn	Pn	15 15 22.5	+0.7
MSVF				IAmb	IAmb	15 15 56.5	
	comp=Z,10nm,1.2s						
STKA	Stephens Creek	31.81	269	P	P	15 17 11.8	+1.4
	comp=Z,1.2nm,0.7s,baz=100,slow=12,SNR=2.8						
STKA	Stephens Creek	31.81	269	IAmb	IAmb	15 17 19.2	
	comp=Z,1.3nm,1.4s						
COEN	Coen	40.31	296	P	P	15 18 22.5	-0.8
COEN				IAmb	IAmb	15 18 55.2	
	comp=Z,21nm,1.6s						
AS31	Alice Springs	41.56	276	P	P	15 18 33.2	-0.4
ASAR	Alice Springs	41.56	276	P	P	15 18 33.2	-0.4
	comp=Z,3.7nm,0.6s,baz=122,slow=8.2,SNR=88						
RABL	Rabaul	42.00	316	P	P	15 18 38.6	+1.3
FORT	Forrest	42.92	263	P	P	15 18 45.0	+0.4
FORT				IAmb	IAmb	15 18 55.7	
	comp=Z,15nm,0.8s						
WR0	Warramunga Arr	43.05	281	P	P	15 18 45.4	-0.4
WR0				IAmb	IAmb	15 19 05.6	
	comp=Z,25nm,1.6s						
WB2	Warramunga Arr	43.21	281	P	P	15 18 46.5	-0.5
WB2				IAmb	IAmb	15 19 08.7	
	comp=Z,22nm,1.6s						
WRAB	Tennant Creek	43.22	281	P	P	15 18 46.2	-0.9
WRA	Warramunga Arr	43.22	281	P	P	15 18 46.5	-0.6
	comp=Z,1.7nm,0.5s,baz=121,slow=7.7,SNR=17						
WRA	Warramunga Arr	43.22	281	P	P	15 18 46.1	-1.0
WB0	Warramunga Arr	43.28	282	P	P	15 18 47.0	-0.6
WB0				IAmb	IAmb	15 19 01.8	
	comp=Z,7.7nm,1.1s						
CASY	Casey	47.78	211	P	P	15 19 21.9	-0.7
KNRA	Kununurra	50.01	282	P	P	15 19 32.6	-7.8
NWAO	Narrogin (SRO)	50.46	256	P	P	15 19 42.4	-1.3
FITZ	Fitzroy Crossi	51.05	277	P	P	15 19 48.0	-0.2
QIZ	Qiongzhong	86.70	297	P	P	15 23 29.0	-0.9
QIZ				PP	PP	15 26 52.3	-0.2
QIZ	Qiongzhong	86.70	297	S	S	15 34 06.6	-0.2
QIZ				LR	LR		
	comp=N,410nm,17.1s						
QIZ				LR	LR		
	comp=E,580nm,23.5s						
QIZ				LR	LR		
	comp=Z,560nm,17.8s						
NJ2	Nanjing	89.85	312	*e*P	P	15 23 44.9	+0.4
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.5s						
HHC	Hu-ho-hao-te	100.17	314	*e*P	Pdif	15 24 31.5	-0.1
LZH	Lanzhou	101.76	307	*e*P	Pdif	15 24 51.0	+12
LZH				pP	pwP	15 24 57.3	+10
LZH				sP	sPdif	15 25 02.8	+19
LZH				pmax	pmax		
	comp=Z,14nm,1.0s						
ARCES	ARCESS Array B	145.41	344	PKPbc	PKPab	15 30 23.6	+0.8
	comp=Z,16nm,1.3s,baz=35,slow=4.4,SNR=6.9						
FINES	FINESS Array B	151.32	334	PKPbc	PKiKP	15 30 39.3	+0.3
	comp=Z,4.5nm,1.1s,baz=28,slow=8.6,SNR=3.6						

*ISK **19** 15:16:35.2, 36°.54N×31°.10E, h105^{km}±1^{km}, ML3.3/24*
*NIC **19** 15:16:36.8±0.0, 36°.26N×31°.13E, h7^{km}±3^{km}, Ml3.5/5*
*DDA **19** 15:16:37.5, 36°.58N×31°.15E, h75^{km}±1^{km}, ML3.2*
ISC 19 15:16:35.1±1.3**, 36°.53N**±0°.03×**31°.14E**±0°.03**, h108**^{km}±8^{km}**,**
n67, σ0^{s}.99/104**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEMT	Kemer-ANTALYA	0.48	279	PG	Pn	15 16 51.7	+0.1
KEMT				SG	Sn	15 17 03.8	-0.1
KEPZ	Antalya-Kepez	0.53	45	*i* P	Pn	15 16 51.6	-0.4
KEPZ				*i* S	Sn	15 17 01.7	-3.0
ANTB	Antalya	0.54	314	PG	Pn	15 16 52.0	0.0
ANTB				SG	Sn	15 17 03.7	-1.0
AKUM	Antalya-Kumluc	0.67	253	*i* P	Pn	15 16 53.5	+0.5
AKUM				*i* S	Sn	15 17 07.1	+0.5
AKUM				IAML		15 17 08.0	
	comp=E,868nm,0.3s						
ALAN	Alanya-ANTALYA	0.72	87	PG	Pn	15 16 53.9	+0.4
KORT	Korkueli	0.79	307	*i* P	Pn	15 16 55.0	+0.8
KORT				*i* S	Sn	15 17 09.8	+1.2
BUCA	Burdur, Bucak-	0.92	330	*i* P	Pn	15 16 55.7	+0.2
BUCA				*i* S	Sn	15 17 10.4	-0.3
GAZI	Gazipasa	0.99	107	*i* P	Pn	15 16 56.8	+0.7
GAZI				*i* S	Sn	15 17 12.4	+0.5
ELL	Elmali	1.01	283	PG	Pn	15 16 56.4	0.0
ELL				SG	Sn	15 17 12.1	-0.4
ELL	Elmali	1.01	283	P	Pn	15 16 57.9	+1.5
ELL				S	Sn	15 17 13.9	+1.4
BCK	Bucak	1.03	335	PG	Pn	15 16 56.8	+0.2
BCK				SG	Sn	15 17 12.6	-0.1
SEDI	Konya, Seydise	1.04	28	*i* P	Pn	15 16 57.0	+0.2
SEDI				*i* S	Sn	15 17 12.2	-0.9
KSL	Kastellorizon	1.31	254	P	Pn	15 17 00.2	+0.6
KSL				S	Sn	15 17 17.5	-0.6
ISP	Isparta	1.38	339	PN	Pn	15 17 00.9	+0.4
ISP				SN	Sn	15 17 19.3	-0.5
ERMK	Ermenek	1.43	85	*i* P	Pn	15 17 02.9	+1.6
ERMK				*i* S	Sn	15 17 22.9	+1.9
ERMK				IAML		15 17 24.0	
	comp=N,568nm,0.5s						
BRDR	BURDUR-Merkez	1.45	324	*i* P	Pn	15 17 01.7	+0.4
BRDR				*i* S	Sn	15 17 21.4	+0.2
GOLH	Golhisar	1.45	300	*i* P	Pn	15 17 03.1	+1.8
GOLH				*i* S	Sn	15 17 21.9	+0.7
BAGO	Egridir - ISPA	1.49	349	*i* P	Pn	15 17 01.7	-0.1
BAGO				*i* S	Sn	15 17 21.1	-0.9
CAEL	Denizli, Camel	1.58	293	*i* P	Pn	15 17 04.3	+1.4
CAEL				*i* S	Sn	15 17 24.8	+0.9
KMER	Konya-Meram	1.58	38	*i* P	Pn	15 17 03.4	+0.5
KMER				*i* S	Sn	15 17 23.9	-0.1
KKBE	Karaman, Kazim	1.60	64	*i* P	Pn	15 17 03.8	+0.6
KKBE				*i* S	Sn	15 17 24.1	-0.4
DOGA	KONYA_Doganhis	1.63	15	*i* P	Pn	15 17 03.9	+0.3
DOGA				*i* S	Sn	15 17 24.0	-1.2
DOGA				IAML		15 17 25.0	
	comp=N,188nm,0.4s						
BASM	Basmaki-Afyon	1.64	328	PN	Pn	15 17 04.0	+0.4
TEKE	Tekeli-Mersin	1.64	103	PN	Pn	15 17 04.4	+0.9
FETY	Fethiye	1.66	274	PN	Pn	15 17 03.5	-0.3
BERE	Bereket-Mersin	1.69	96	PN	Pn	15 17 06.2	+1.9
KONT	Konya--Tatoy	1.72	34	PN	Pn	15 17 05.2	+0.7
KONT	Konya--Tatoy	1.72	34	*i* P	Pn	15 17 05.1	+0.6
KONT				*i* S	Sn	15 17 10.1	-17
YVAC	Isparta, Yalva	1.74	3	*i* P	Pn	15 17 05.1	+0.2
YVAC				*i* S	Sn	15 17 26.1	-1.5
AKMS	Akamas	1.79	147	P	Pn	15 17 05.6	+0.1
AKMS				S	Sn	15 17 26.5	-2.0
AKMS				AML	AML	15 17 29.9	
	comp=N,3.1nm,0.3s						
AKMS				AML	AML	15 17 29.9	
	comp=N,3.1nm,0.3s						
AKMS				AML	AML	15 17 31.6	
	comp=N,1.3nm,0.2s						
AKMS				AML	AML	15 17 31.6	
	comp=N,1.3nm,0.2s						
ALFC	Alefka	1.81	139	P	Pn	15 17 05.1	-0.6
ALFC				S	Sn	15 17 27.3	-1.7
ALFC				AML	AML	15 17 30.8	
	comp=N,2.1nm,0.3s						
ALFC				AML	AML	15 17 30.8	
	comp=N,2.1nm,0.3s						
TEVE	Tevekalti-Mers	1.86	92	PN	Pn	15 17 08.4	+2.1
OREN	Orenkoy-Mersin	1.90	99	PN	Pn	15 17 07.6	+0.9
KZIL	AFYON_Kizioren	1.90	336	*i* P	Pn	15 17 06.9	0.0
KZIL				*i* S	Sn	15 17 30.9	-0.2
AKDN	Akdeniz- Kıbrı	1.93	129	PN	Pn	15 17 08.1	+1.0
LADK	Ladik-KONYA	1.93	30	PN	Pn	15 17 07.9	+0.6
TEPK	Tepekoy-MERSIN	1.96	98	PN	Pn	15 17 09.2	+1.6
GULN	MERSIN_Gulnar	1.97	99	*i* P	Pn	15 17 08.5	+0.9
GULN				*i* S	Sn	15 17 32.4	-0.1
AKK1	Akkuyu-Mersin	1.98	100	PN	Pn	15 17 09.7	+2.0
AKKU	Akkuyu-Mersin	1.98	100	PN	Pn	15 17 09.1	+1.3
AKK2	Akkuyu-Mersin	1.98	101	PN	Pn	15 17 09.1	+1.3
LEF	Lefka	2.00	134	PN	Pn	15 17 08.4	+0.4
TAVA	DENIZLI_Tavas	2.01	298	*i* P	Pn	15 17 09.0	+0.7
TAVA				*i* S	Sn	15 17 32.8	-0.8
DALY	Dalyan (Mula)	2.02	279	PN	Pn	15 17 08.4	+0.2
DALY	Dalyan (Mula)	2.02	279	*i* P	Pn	15 17 08.7	+0.5
DALY				*i* S	Sn	15 17 32.5	-1.0
YESI	Yesilovacik-Me	2.05	99	PN	Pn	15 17 09.1	+0.5
IKL	Isikli	2.07	97	PN	Pn	15 17 10.4	+1.5
KEBE	Keben-Mersin	2.08	91	PN	Pn	15 17 10.6	+1.6
SHUT	Suhut-Afyon	2.08	347	PN	Pn	15 17 09.9	+0.8
TISA	Tisan-Mersin	2.08	99	PN	Pn	15 17 10.5	+1.5
NATA	Nata	2.10	146	P	Pn	15 17 10.0	+0.7
NATA				S	Sn	15 17 35.2	-0.2
NATA				AML	AML	15 17 43.2	
	comp=N,3.0nm,0.7s						
NATA				AML	AML	15 17 43.2	
	comp=N,3.0nm,0.7s						
NATA				AML	AML	15 17 43.4	
	comp=N,3.4nm,0.4s						
NATA				AML	AML	15 17 43.4	
	comp=N,3.4nm,0.4s						
KARG	Kargicak-Mersi	2.10	98	PN	Pn	15 17 10.3	+1.0
KDHN	Kadinhani	2.14	21	*i* P	Pn	15 17 09.7	-0.1
KDHN				*i* S	Sn	15 17 34.8	-1.6
KHL	Karahalli	2.21	325	PN	Pn	15 17 10.9	+0.2
KHAL	Karahalli	2.26	325	*i* P	Pn	15 17 11.4	-0.1
KHAL				*i* S	Sn	15 17 38.6	-0.6
SZAC	Souni	2.27	141	P	Pn	15 17 12.2	+0.7
SZAC				S	Sn	15 17 39.7	+0.4
TURN	Turunc	2.34	277	*i* P	Pn	15 17 13.0	+0.6
TURN				*i* S	Sn	15 17 39.6	-1.3
YER	Yerkesik	2.37	286	PN	Pn	15 17 13.8	+1.0
MULA	Mugla, Merkez-	2.37	289	*i* P	Pn	15 17 13.4	+0.4
MULA				*i* S	Sn	15 17 40.8	-1.1
ASGA	Asgata	2.44	135	P	Pn	15 17 14.3	+0.5
ASGA				S	Sn	15 17 42.7	-0.6
ASGA				AML	AML	15 17 49.5	
	comp=N,0.7nm,0.3s						
ASGA				AML	AML	15 17 49.5	
	comp=N,0.7nm,0.3s						
ASGA				AML	AML	15 17 52.4	
	comp=N,0.7nm,0.3s						
ASGA				AML	AML	15 17 52.4	
	comp=N,0.7nm,0.3s						
ARG	Arkhangelos	2.45	264	PN	Pn	15 17 14.4	+0.6
MVOU	Mavrovouni	2.53	126	P	Pn	15 17 14.1	-0.7
MVOU				S	Sn	15 17 43.4	-1.9
KULA	Kula-Manisa	2.80	316	PN	Pn	15 17 18.7	+0.3
MLSB	Milas	2.80	287	PN	Pn	15 17 19.6	+1.1
OSC1	CSNet OBS 1	3.02	178	P	Pn	15 17 21.7	+0.3
OSC1				S	Sn	15 17 55.5	-1.5
BODT	Bodrum	3.12	281	PN	Pn	15 17 22.6	-0.1
RCY	Rachaya	4.90	127	*e*P	Pn	15 17 47.2	+0.5

NOU 19 15:24:41.5, 16°.42S×168°.25E, h0^{km}**, MLv4.8, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	1.40	314	P	Pn	15 25 06.9	-1.4
LIFNC	LIFOU	4.44	192	P	Pn	15 25 49.5	-0.6
KOUNC	Koumac, New Ca	5.57	222	P	Pn	15 26 05.8	+0.1
YATNC	Mamie plateau,	5.75	193	P	Pn	15 26 07.1	-1.1
DZM	Mont Dzumac	5.87	197	P	Pn	15 26 10.0	0.0
ONTNC	Ouen Toro	6.10	196	P	Pn	15 26 13.3	+0.4
OUENC	Ouen Island, N	6.11	192	P	Pn	15 26 13.0	-0.1
PINNC	Pines Island,	6.21	187	P	Pn	15 26 14.8	+0.4

WEL 19 16:02:53.7±0.9**, 33°S**±17°×**18°0E**±2°5**, h399**^{km}±19^{km}**,**
M3.5/30**, mB4.0**/12**, MLv4.4**/30**, Mw(mB)3.0**/12**, Error ellipse: s-maj=0.0km s-min=0.0km az=121.1, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	4.67	195	P	Pn	16 04 08.5	-3.6
WMGZ				S	S	16 05 17.2	+1.3
RUGZ	Raukumara Rang	5.00	201	P	Pn	16 04 15.4	-0.3
RUGZ				S	S	16 05 21.0	-1.3
TWGZ	Tauwhareparae	5.11	198	P	Pn	16 04 17.6	+0.9
TWGZ				S	S	16 05 25.8	+1.5
MWZ	Matawai	5.38	201	P	Pn	16 04 20.2	+0.6
MWZ				S	S	16 05 29.8	+0.2
TKGZ	Te Karaka	5.39	198	P	Pn	16 04 18.6	-1.0
TKGZ				S	S	16 05 30.5	+0.9
URZ	Urewera	5.45	204	P	Pn	16 04 17.5	-2.7
URZ				S	S	16 05 30.9	+0.2
RAGZ	Rawiri	5.57	201	P	Pn	16 04 21.7	+0.1
RAGZ				S	S	16 05 34.7	+1.5
RIGZ	Rimuhau	5.67	198	P	Pn	16 04 23.6	+1.0
RIGZ				S	S	16 05 36.2	+1.1
RTZ	Ruatahuna	5.82	204	P	Pn	16 04 24.1	-0.1
RTZ				S	S	16 05 37.1	-0.9
SNGZ	Shannon Statio	5.85	201	P	Pn	16 04 22.4	-2.2
SNGZ				S	S	16 05 41.3	+2.5
KNZ	Kokohu	5.99	197	P	Pn	16 04 26.4	+0.4
RAHZ	Arahi	6.05	202	P	Pn	16 04 27.8	+1.0
RAHZ				S	S	16 05 42.1	-0.6
MTHZ	Maungataniwha	6.08	204	P	Pn	16 04 27.8	+0.7
MTHZ				S	S	16 05 42.5	-0.6
TLZ	Tolley Road	6.16	214	P	Pn	16 04 30.3	+2.4
MRHZ	Matea Rd	6.21	207	P	Pn	16 04 28.2	-0.3
MRHZ				S	S	16 05 44.7	-1.2
WATZ	Wairara	6.38	211	P	Pn	16 04 31.3	+0.9
ARHZ	Aropaoanui	6.40	201	P	Pn	16 04 31.7	+1.1
ARHZ				S	S	16 05 49.0	-0.6
BKZ	Black Stump Fm	6.48	205	P	Pn	16 04 30.5	-0.9
BKZ				S	S	16 05 51.8	+0.5
KWHZ	Kaweka Forest	6.73	204	P	Pn	16 04 34.2	-0.1
KWHZ				S	S	16 05 57.6	+1.1
TMVZ	Te Maari	6.73	210	P	Pn	16 04 34.3	-0.1
ETVZ	East Tongariro	6.75	209	P	Pn	16 04 34.5	0.0
OTVZ	Oturere	6.79	210	P	Pn	16 04 35.1	0.0
NGZ	Ngauruhoe	6.83	210	P	P	16 04 35.8	-0.2
TUVZ	Tukino	6.88	209	P	Pn	16 04 36.1	+0.1
BHHZ	Black Hill Sta	6.92	206	P	Pn	16 04 35.6	-0.7
BHHZ				S	S	16 05 58.8	-1.4
KAHZ	Kahuranaki	6.93	200	P	P	16 04 37.3	+0.2
KRHZ	Kereru	6.95	204	P	Pn	16 04 36.2	-0.5
PKVZ	Pokaka	7.03	211	P	Pn	16 04 37.7	+0.1
PXZ	Pawanui	7.15	199	P	P	16 04 39.2	-0.3
VRZ	Vera Road	7.16	214	P	P	16 04 40.1	+0.5
PNHZ	Pukenui	7.25	204	P	Pn	16 04 39.8	-0.2
WPHZ	Waipukurau	7.31	202	P	P	16 04 41.0	-0.3
TSZ	Takapari Road	7.46	204	P	Pn	16 04 41.4	-1.0
WAZ	Wanganui	7.57	211	P	Pn	16 04 43.6	-0.1
DVHZ	Dannevirke	7.61	202	P	Pn	16 04 43.9	-0.1
ANWZ	Angora Road	7.66	200	P	P	16 04 45.5	+0.4
PRWZ	Pori Road	7.90	203	P	P	16 04 47.7	-0.1
BFZ	Birch Farm	7.93	201	P	Pn	16 04 47.6	-0.1
MRZ	Mangatainoka R	8.13	204	P	Pn	16 04 48.6	-1.4
HOWZ	Holdsworth Sta	8.36	204	P	Pn	16 04 51.9	-0.7

*IDC **19** 16:06:11.7±2.1, 7°.37S×146°.23E, h184^{km}±39^{km}, mb3.2/5, mb1 3.4/7, mb1mx3.2/25, mbtmp3.7/7, Error ellipse: s-maj=57.6km s-min=23.2km az=117.0*
ISC 19 16:06:12.6±1.2**, 7°.5S**±0°.1×**146°.3E**±0°.2**, h200**^{km}**, n8,**
σ0^{s}.78/9**, mb3.7**/4**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	2.09	156	P	Pn	16 06 52.1	0.0
	25nm,0.3s,baz=333,slow=6.3,SNR=139						
PMG				S	Sn	16 07 22.7	-0.3
	3.9nm,0.3s,baz=284,slow=23,SNR=9.7						
WRA	Warramunga Arr	16.98	222	P	Pn	16 09 58.0	-0.7
	0.2nm,0.3s,baz=45,slow=12,SNR=17						
ASAR	Alice Springs	20.02	215	P	P	16 10 31.9	+1.5
	0.9nm,0.5s,baz=50,slow=8.9,SNR=24						
FITZ	Fitzroy Crossi	22.72	240	P	P	16 10 56.9	-0.8
	3.4nm,1.0s,baz=47,slow=7.8,SNR=12						
CMAR	Chiang Mai Arr	53.36	300	P	P	16 15 11.9	+0.1
	2.3nm,0.7s,baz=122,slow=5.8,SNR=26						
SONM	Songino Array	65.36	332	P	P	16 16 33.4	-0.3
	0.2nm,0.4s,baz=129,slow=3.9,SNR=2.9						
MKAR	Makanchi Array	78.20	321	P	P	16 17 50.2	+0.2
	0.7nm,0.7s,baz=98,slow=7.2,SNR=7.8						
TORD	Torodi Ar. Bea	144.76	282	PKP	PKPdf	16 25 27.0	+0.3
	1.5nm,0.7s,baz=72,slow=3.5,SNR=4.6						

*RSNC **19** 16:09:07.0±1.1, 6°.04N×73°.71W, h109^{km}±4^{km}, ML3.1, Mw3.3*
*IDC **19** 16:09:08.2±5.6, 5°.36N×75°.58W, h106^{km}±57^{km}, Error ellipse: s-maj=85.1km s-min=67.8km az=100.0*
ISC 19 16:09:05.0±1.1**, 6°.04N**±0°.03×**73°.69W**±0°.04**, h124**^{km}±7^{km}**,**
n28, σ1^{s}.00/52**, 2C-3D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPBC	San Pablo de B	0.54	225	*e*P	Pn	16 09 23.9	+0.2
SPBC				*e*S	Sn	16 09 37.0	-0.9
SPBC				*i*		16 09 39.8	
	comp=Z,512nm,0.2s						
RUSC	La Rusia	0.62	104	⇓*i*P	Pn	16 09 25.6	+0.9
RUSC				*e*S	Sn	16 09 38.1	-1.4
RUSC				*i*		16 09 41.6	
	comp=Z,102nm,0.2s						
BARC	Barichara	0.74	42	⇓*i*P	Pn	16 09 26.3	+1.0
BARC				*e*S	Sn	16 09 40.2	-0.5
BARC				*i*		16 09 42.0	
	comp=Z,499nm,0.1s						
PTBC	PUERTO BERRIO,	0.91	303	⇓*e*P	Pn	16 09 26.1	-0.4
PTBC				*e*S	Sn	16 09 41.4	-1.4
PTBC				*i*		16 09 44.9	
	comp=Z,289nm,0.3s						
BRRC	Barranca, Sant	1.06	359	⇑*e*P	Pn	16 09 28.6	+0.6
BRRC				*e*S	Sn	16 09 45.4	0.0
BRRC				*i*		16 09 48.9	
	comp=Z,170nm,0.1s						
NORC	Norcasia	1.27	248	*e*P	Pn	16 09 30.2	0.0
NORC				*e*S	Sn	16 09 48.6	-0.6
NORC				*i*		16 09 52.9	
	comp=Z,247nm,0.1s						
ROSC	El Rosal	1.35	208	P	Pn	16 09 33.5	+2.1
	comp=Z,15nm,0.3s,baz=293,slow=22,SNR=26						
ROSC				S	Sn	16 09 52.5	+1.2
	comp=Z,33nm,0.3s,baz=198,slow=20,SNR=23						
ROSC	El Rosal	1.35	208	*e*P	Pn	16 09 32.8	+1.4
ROSC				*e*S	Sn	16 09 51.4	+0.1
ROSC				*i*		16 09 59.3	
	comp=Z,132nm,0.2s						
CHIC	Chingaza	1.40	182	⇑*e*P	Pn	16 09 32.9	+0.9
CHIC				*e*S	Sn	16 09 52.1	-0.3
CHIC				*i*		16 09 55.6	
	comp=Z,105nm,0.4s						
PAMC	Pamplona, Colo	1.62	37	*e*P	Pn	16 09 35.7	+1.1
PAMC				*e*S	Sn	16 09 56.9	-0.1
PAMC				*i*		16 10 03.0	
	comp=Z,86nm,0.2s						
GUY2C	Guyana, Caldas	1.86	244	*e*P	Pn	16 09 38.4	+1.0
GUY2C				*e*S	Sn	16 10 02.7	+0.7
GUY2C				*i*		16 10 08.3	
	comp=Z,107nm,0.6s						
RREF	El Recreo	2.00	236	*e*P	Pn	16 09 40.2	+0.9
RREF				*e*S	Sn	16 10 05.5	+0.1
RREF				*i*		16 10 13.2	

	comp=Z,107nm,0.3s						
TOLC	**Tolima**	**2.17**	**228**	*e*P	**Pn**	**16 09 42.4**	**+1.3**
TOLC				*e*S	**Sn**	**16 10 09.4**	**+0.6**
TOLC				*i*		16 10 15.8	
	comp=Z,98nm,0.6s						
OCAC	**Ocana**	**2.21**	**9**	*e*P	**Pn**	**16 09 42.6**	**+1.2**
OCAC				*e*S	**Sn**	**16 10 10.5**	**+1.0**
OCAC				*i*		16 10 19.7	
	comp=Z,151nm,0.2s						
ANIL	**Santa Ana**	**2.30**	**228**	*e*P	**Pn**	**16 09 43.5**	**+0.9**
ANIL				*e*S	**Sn**	**16 10 12.3**	**+0.8**
ANIL				*i*		16 10 16.8	
	comp=Z,28nm,0.3s						
PTGC	**Puerto Gaitan,**	**2.40**	**140**	*e*P	**Pn**	**16 09 44.3**	**+0.7**
PTGC				*e*S	**Sn**	**16 10 11.6**	**-1.7**
PTGC				*i*		16 10 15.9	
	comp=Z,56nm,0.2s						
UREC	**San Jos de Ur**	**2.50**	**313**	*e*S	**Sn**	**16 10 12.9**	**-2.8**
UREC				*i*		16 10 15.8	
	comp=Z,118nm,0.2s						
PRAC	**Prado**	**2.60**	**207**	*e*P	**Pn**	**16 09 46.8**	**+0.5**
PRAC				*e*S	**Sn**	**16 10 18.1**	**+0.1**
PRAC				*i*		16 10 25.7	
	comp=Z,94nm,0.3s						
ORTC	**Ortega, Tolima**	**2.62**	**216**	*e*P	**Pn**	**16 09 47.5**	**+1.0**
ORTC				*e*S	**Sn**	**16 10 18.6**	**0.0**
ORTC				*i*		16 10 25.4	
	comp=Z,107nm,0.6s						
DBBC	**Dabeiba**	**2.69**	**291**	*e*P	**Pn**	**16 09 48.0**	**+0.6**
DBBC				*e*S	**Sn**	**16 10 19.6**	**-0.5**
SMLC	**San Martn de**	**2.77**	**352**	*e*P	**Pn**	**16 09 48.7**	**+0.3**
SMLC				*e*S	**Sn**	**16 10 21.8**	**0.0**
SMLC				*i*		16 10 25.6	
	comp=Z,126nm,0.1s						
PLMC	**San Jos del P**	**2.82**	**247**	*e*P	**Pn**	**16 09 49.8**	**+0.7**
PLMC				*e*S	**Sn**	**16 10 23.0**	**-0.1**
YOTC	**Yotoco, Valle**	**3.34**	**232**	*e*P	**Pn**	**16 09 56.6**	**+0.5**
YOTC				*e*S	**Sn**	**16 10 36.3**	**+0.8**
GUVC	**San Jose del G**	**3.63**	**163**	*e*P	**Pn**	**16 09 60.0**	**+0.2**
GUVC				*e*S	**Sn**	**16 10 40.4**	**-1.7**
GUVC				*i*		16 10 47.6	
	comp=Z,65nm,0.3s						
SDV	**Santo Domingo**	**4.14**	**47**	*e*S	**Sn**	**16 10 55.5**	**+0.9**
SDV				*i*		16 11 00.2	
	comp=Z,16nm,0.5s						
GARC	**Garzon, Huila**	**4.23**	**205**	*e*P	**Pn**	**16 10 07.8**	**-0.2**
GARC				*e*S	**Sn**	**16 10 55.1**	**-1.6**
ASAR	**Alice Springs**	**148.20**	**234**	PKPbc	**PKPbc**	**16 28 36.6**	**-0.8**
	comp=Z,0.2nm,0.5s,baz=110,slow=3.8,SNR=6.8						
WRA	**Warramunga Arr**	**149.47**	**240**	PKPbc	**PKPbc**	**16 28 40.2**	**-0.4**
	comp=Z,0.6nm,0.8s,baz=103,slow=3.3,SNR=7.5						

NOU 19 16:22:59.7, 16°.41S×168°.30E, h0^{km}, MLv4.7, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	**Devils Point**	**1.31**	**185**	P	Pg	16 23 23.2	-1.7
SANVU	**Saraoutou**	**1.43**	**312**	P	Pn	16 23 25.3	-1.5
KOUNC	**Koumac, New Ca**	**5.61**	**222**	P	Pn	16 24 24.6	+0.2
YATNC	**Mamie plateau,**	**5.78**	**193**	P	Pn	16 24 26.2	-0.5
DZM	**Mont Dzumac**	**5.90**	**197**	P	Pn	16 24 28.7	+0.2
ONTNC	**Ouen Toro**	**6.12**	**196**	P	Pn	16 24 31.7	+0.3
OUENC	**Ouen Island, N**	**6.13**	**193**	P	Pn	16 24 31.8	+0.2

BJI ***19*** *16:32:44.1±0.0, 52°.96N×159°.01E, h85^{km}, mB5.3/53, mb5.2/79, Ms4.8/69, Ms7 4.6/70*

KRSC ***19*** *16:32:45.9±1.0, 52°.69N×159°.31E, h90^{km}±8^{km}, ML6.2*

NEIC ***19*** *16:32:47.4±1.9, 52°.81N±0°.07×159°.01E±0°.08, h82^{km}±1^{km}, mb5.8/780, Mwb5.5/15, Mww5.4, Mwc5.4(GCMT), Error ellipse: s-maj=12.3km s-min=8.6km az=4.0*

MOS ***19*** *16:32:47.2±1.0, 52°.82N×158°.87E, h101^{km}, mb5.5/51, MS4.3/11, Error ellipse: s-maj=5.6km s-min=3.1km az=84.7*

MOS Felt (III-IV) at Petropavlovsk-Kamchatskiy.

BGR ***19*** *16:32:48.5±0.0, 53°.20N×157°.19E, h33^{km}, mb6.0, mB_BB6.1, Ms4.6*

NEIC ***19*** *16:32:48, 52°.85N×158°.96E, h83^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-0.62; $M_{\theta\theta}$0.34; $M_{\phi\phi}$0.28; $M_{r\theta}$-0.45; $M_{\theta\phi}$-0.09; $M_{\phi r}$-1.77; Fault plane solution: $M_0$1.90000×10^{17} NP1:ϕ_s13.17000°, δ83.36000°, λ-87.72000°. NP2:ϕ_s174.14000°, δ7.02000°, λ-108.91000°. Principal axes: T 1.6880, Plg38.0000°, Azm101.0000°; N 0.3746, Plg2.0000°, Azm193.0000°; P -2.0625, Plg52.0000°, Azm286.0000°;*

IDC ***19*** *16:32:49.5±0.5, 52°.95N×158°.87E, h97^{km}±3^{km}, mb5.1/41, mb1 5.3/46, mb1mx5.2/50, mbtmp5.5/46, MS4.3/34, Ms1 4.3/34, ms1mx4.1/54 Error ellipse: s-maj=8.6km s-min=6.7km az=143.0*

GCMT ***19*** *16:32:50.4±0.1, 52°.85N±0°.01×159°.29E±0°.01, h97^{km}±2^{km}, MW5.4/145, Moment Tensor Solution. s93,c135; s145,c259; Duration: 1^{s}3 Moment tensor: Scale 10^{17} Nm; M_{rr}0.21±.04; $M_{\theta\theta}$0.02±.04; $M_{\phi\phi}$-0.23±.04; $M_{r\theta}$-0.64±.02; $M_{\theta\phi}$-0.21±.04; $M_{\phi r}$-1.53±.02; Best double couple: $M_0$1.68300×10^{17} NP1:ϕ_s46.00000°, δ5.00000°, λ113.00000°. NP2:ϕ_s203.00000°, δ85.00000°, λ88.00000°. Principal axes: T 1.6170, Plg50.0000°, Azm110.0000°; N 0.1330, Plg2.0000°, Azm203.0000°; P -1.7500, Plg40.0000°, Azm295.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***19*** *16:32:50, 52°.92N×159°.07E, h80^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.52; $M_{\theta\theta}$-0.26; $M_{\phi\phi}$-0.25; $M_{r\theta}$-0.54; $M_{\theta\phi}$0.04; $M_{\phi r}$-1.17; Fault plane solution: $M_0$1.36000×10^{17} NP1:ϕ_s17.00000°, δ8.00000°, λ83.00000°. NP2:ϕ_s204.00000°, δ82.00000°, λ91.00000°. Principal axes: T 1.4796, Plg53.0000°, Azm115.0000°; N -0.2869, Plg1.0000°, Azm24.0000°; P -1.1927, Plg37.0000°, Azm293.0000°;*

NEIC ***19*** *16:32:51, 52°.85N×159°.34E, h91^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.32; $M_{\theta\theta}$-0.02; $M_{\phi\phi}$-0.30; $M_{r\theta}$-0.78; $M_{\theta\phi}$-0.14; $M_{\phi r}$-1.66; Fault plane solution: $M_0$1.87000×10^{17} NP1:ϕ_s19.00000°, δ5.00000°, λ84.00000°. NP2:ϕ_s205.00000°, δ85.00000°, λ91.00000°. Principal axes: T 1.8480, Plg50.0000°, Azm116.0000°; N 0.0339, Plg1.0000°, Azm25.0000°; P -1.8819, Plg40.0000°, Azm295.0000°;*

ISC 19 16:32:47.9±0.3**, 52°.81N**±0°.03×**159°.05E**±0°.02**, h89**^{km}±2^{km}**, h88**^{km}**:pP-P, n1931,** σ**1^{s}25**/1901**, mb5.7**/665**, 247C-325D, Fault plane solution: NP1:**ϕ_s4.15271°, δ85.73262°, λ-89.52818°. **NP2:**ϕ_s177.83748°**,** δ4.29333°**,** λ-96.29765°. **Principal axes:** T Plg40.7308°**,** Azm93.7124°**;** N Plg0.4705°**,** Azm184.1176°**;** P Plg49.2653°**,** Azm274.6640°**; Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DALK	**Dalny**	**0.29**	**322**	PN	**Pn**	**16 33 01.5**	**+0.5**
DALK				S	**Sn**	**16 33 11.1**	**+0.3**
DALK	**Dalny**	**0.29**	**322**	*e*P	**Pn**	**16 33 01.5**	**+0.5**
DALK				*e*S	**Sn**	**16 33 11.1**	**+0.3**
PET	**Petropavlovsk**	**0.32**	**313**	⇑*i*PN	**Pn**	**16 33 00.8**	**-0.4**
PET				*e*S	**Sn**	**16 33 11.9**	**+0.8**
PET				pmax	pmax		
	comp=Z,331μm,0.7s						
PET				pmax	pmax		
	comp=Z,385μm,0.4s						
PET				smax	smax		
	comp=N,594μm,0.6s						
PET				smax	smax		
	comp=E,828μm,0.5s						
PET	**Petropavlovsk**	**0.32**	**313**		**Pn**	**16 33 00.9**	**-0.3**
PET				Sn	**Sn**	**16 33 11.9**	**+0.8**
NLC	**Nalytchevo**	**0.41**	**26**	PN	**Pn**	**16 33 02.0**	**+0.3**
NLC				S	**Sn**	**16 33 12.2**	**+0.2**
NLC	**Nalytchevo**	**0.41**	**26**	*e*P	**Pn**	**16 33 02.0**	**+0.3**
NLC				*e*S	**Sn**	**16 33 12.2**	**+0.2**
UGLR	**Uglovaya**	**0.43**	**342**	PN	**Pn**	**16 33 03.1**	**+1.1**
UGLR	**Uglovaya**	**0.43**	**342**	*e*P	**Pn**	**16 33 03.1**	**+1.1**
SMAR	**Somma**	**0.48**	**342**	PN	**Pn**	**16 33 03.4**	**+0.8**
SMAR	**Somma**	**0.48**	**342**	*i* P	**Pn**	**16 33 03.4**	**+0.8**
SDLR	**Sedlovina**	**0.48**	**348**	PN	**Pn**	**16 33 03.4**	**+0.9**
SDLR	**Sedlovina**	**0.48**	**348**	*e*P	**Pn**	**16 33 03.4**	**+0.9**
RUS	**Russkaya**	**0.49**	**221**	PN	**Pn**	**16 33 02.3**	**-0.1**
RUS				S	**Sn**	**16 33 13.3**	**+0.2**
RUS	**Russkaya**	**0.49**	**221**	*e*P	**Pn**	**16 33 02.3**	**-0.1**
RUS				*e*S	**Sn**	**16 33 13.3**	**+0.2**
AVH	**Avacha**	**0.50**	**338**	PN	**Pn**	**16 33 03.8**	**+1.3**
AVH	**Avacha**	**0.50**	**338**	*e*P	**Pn**	**16 33 03.8**	**+1.3**
KRER	**Koryakskii**	**0.53**	**340**	PN	**Pn**	**16 33 04.1**	**+1.2**
KRER	**Koryakskii**	**0.53**	**340**	*i* P	**Pn**	**16 33 04.1**	**+1.2**
KOK	**Koryaka**	**0.55**	**333**	PN	**Pn**	**16 33 04.2**	**+1.3**
KOK	**Koryaka**	**0.55**	**333**	*i* P	**Pn**	**16 33 04.2**	**+1.3**
KRMR	**Karymshinskiy**	**0.56**	**273**	PN	**Pn**	**16 33 04.4**	**+1.5**
KRMR				S	**Sn**	**16 33 16.1**	**+2.0**
KRMR	**Karymshinskiy**	**0.56**	**273**	*e*P	**Pn**	**16 33 04.4**	**+1.5**
KRMR				*e*S	**Sn**	**16 33 16.1**	**+2.0**
KRX	**Arik**	**0.60**	**337**	PN	**Pn**	**16 33 04.4**	**+0.9**
KRX	**Arik**	**0.60**	**337**	*i* P	**Pn**	**16 33 04.4**	**+0.9**
MTVR	**Mutnovka**	**0.62**	**239**	PN	**Pn**	**16 33 04.4**	**+0.8**
MTVR	**Mutnovka**	**0.62**	**239**	*e*P	**Pn**	**16 33 04.4**	**+0.8**
GRL	**Gorelyy**	**0.65**	**247**	PN	**Pn**	**16 33 05.1**	**+1.3**
GRL	**Gorelyy**	**0.65**	**247**	*i* P	**Pn**	**16 33 05.1**	**+1.3**
SPN	**Mys Shipunski**	**0.66**	**63**	PN	**Pn**	**16 33 03.2**	**-0.6**
SPN				S	**Sn**	**16 33 14.4**	**-1.3**
SPN	**Mys Shipunski**	**0.66**	**63**	*e*P	**Pn**	**16 33 03.2**	**-0.6**
SPN				*e*S	**Sn**	**16 33 14.4**	**-1.3**
I44RU	**PETROPAVLOVSK-**	**0.86**	**291**	P	**Pn**	**16 33 06.4**	**+0.5**
	baz=100,slow=16,SNR=2.9						
I44RU				S	**Sn**	**16 33 21.1**	**+1.7**
	baz=174,slow=223						
PEA0B	**Petropavlovsk-**	**0.87**	**291**	PN	**Pn**	**16 33 06.9**	**+0.9**
PEA0B						16 33 19.8	
PEA0B	**Petropavlovsk-**	**0.87**	**291**		**Pn**	**16 33 06.9**	**+0.9**
PEA0B				Sn	**Sn**	**16 33 19.8**	**+0.2**
PETK	**Petropavlovsk-**	**0.87**	**291**	P	**Pn**	**16 33 06.8**	**+0.8**
	comp=E,5μm,0.3s,baz=110,slow=15						
PETK				S	**Sn**	**16 33 21.7**	**+2.1**
	comp=E,5μm,0.3s,baz=166,slow=24,SNR=11						
PETK	**Petropavlovsk-**	**0.87**	**291**		**Pn**	**16 33 04.8**	**-1.2**
APC	**Apacha**	**1.15**	**277**	PN	**Pn**	**16 33 11.1**	**+1.9**
APC				S	**Sn**	**16 33 28.2**	**+3.0**
APC	**Apacha**	**1.15**	**277**	*e*P	**Pn**	**16 33 11.1**	**+1.9**
APC				*e*S	**Sn**	**16 33 28.2**	**+3.0**
KDTR	**Khodutka, Kamc**	**1.16**	**211**	PN	**Pn**	**16 33 09.5**	**+0.2**
KDTR				S	**Sn**	**16 33 25.0**	**-0.4**
KDTR	**Khodutka, Kamc**	**1.16**	**211**	*e*P	**Pn**	**16 33 09.5**	**+0.2**
KDTR				*e*S	**Sn**	**16 33 25.0**	**-0.4**
KII	**Karymskiy**	**1.26**	**11**	PN	**Pn**	**16 33 11.8**	**+1.3**
KII	**Karymskiy**	**1.26**	**11**	*e*P	**Pn**	**16 33 11.8**	**+1.3**
PAU	**Pauzhetka**	**1.92**	**227**	PN	**Pn**	**16 33 20.6**	**+1.7**
PAU	**Pauzhetka**	**1.92**	**227**	*e*P	**Pn**	**16 33 20.6**	**+1.7**
MKZ	**Mys Kozlova**	**2.37**	**41**	PN	**Pn**	**16 33 24.7**	**-0.1**
MKZ	**Mys Kozlova**	**2.37**	**41**	*e*P	**Pn**	**16 33 24.7**	**-0.1**
KZV	**Kizimen**	**2.43**	**17**	PN	**Pn**	**16 33 27.6**	**+1.8**
KZV	**Kizimen**	**2.43**	**17**	*i* P	**Pn**	**16 33 27.6**	**+1.8**
TUMD	**Tumrok D**	**2.53**	**18**	*e*P	**Pn**	**16 33 28.8**	**+1.8**
TUMR	**Tumrok**	**2.57**	**14**	PN	**Pn**	**16 33 30.0**	**+2.4**
TUMR	**Tumrok**	**2.57**	**14**	*i* P	**Pn**	**16 33 30.0**	**+2.4**
SKR	**Severo-Kuril's**	**2.80**	**222**	⇓*i*PN	**Pn**	**16 33 31.7**	**+1.1**
SKR				*e*S	**Sn**	**16 34 04.7**	**+1.3**
SKR				pmax	pmax		
	comp=Z,1μm,0.8s						
SKR				smax	smax		
	comp=N,21μm,0.8s						
SKR				smax	smax		
	comp=E,13μm,0.7s						
SKR	**Severo-Kuril's**	**2.80**	**222**	*e*P	**Pn**	**16 33 31.6**	**+1.0**
SKR				*e*S	**Sn**	**16 34 04.7**	**+1.3**
KMNR	**Kamenistaya**	**3.04**	**13**	PN	**Pn**	**16 33 36.6**	**+2.7**
KMNR	**Kamenistaya**	**3.04**	**13**	*i* P	**Pn**	**16 33 36.6**	**+2.7**
ESO	**Esso**	**3.13**	**356**	PN	**Pn**	**16 33 37.9**	**+2.8**
ESO	**Esso**	**3.13**	**356**	*e*P	**Pn**	**16 33 37.9**	**+2.8**
KIRR	**Kirishev**	**3.24**	**13**	PN	**Pn**	**16 33 39.1**	**+2.4**
KIRR	**Kirishev**	**3.24**	**13**	*e*P	**Pn**	**16 33 39.1**	**+2.4**
BZMR	**Bezymyannaya**	**3.25**	**14**	PN	**Pn**	**16 33 39.7**	**+2.9**
BZMR	**Bezymyannaya**	**3.25**	**14**	*e*P	**Pn**	**16 33 39.7**	**+2.9**
BZGR	**Bezymyannyi-Gr**	**3.29**	**16**	PN	**Pn**	**16 33 40.3**	**+3.1**
BZGR				S	**Sn**	**16 34 18.1**	**+2.8**
BZGR	**Bezymyannyi-Gr**	**3.29**	**16**	*e*P	**Pn**	**16 33 40.3**	**+3.1**
BZGR				*e*S	**Sn**	**16 34 18.1**	**+2.8**
KOZ	**Kozyrevsk**	**3.29**	**8**	PN	**Pn**	**16 33 39.7**	**+2.4**
KOZ	**Kozyrevsk**	**3.29**	**8**	*e*P	**Pn**	**16 33 39.7**	**+2.4**
SRDR	**Sredinnyy**	**3.54**	**6**	PN	**Pn**	**16 33 42.6**	**+2.0**
SRDR	**Sredinnyy**	**3.54**	**6**	*e*P	**Pn**	**16 33 42.6**	**+2.0**
KLY	**Klyuchi**	**3.64**	**14**	PN	**Pn**	**16 33 44.5**	**+2.7**
KLY	**Klyuchi**	**3.64**	**14**	*e*P	**Pn**	**16 33 44.5**	**+2.7**
BDR	**Baidarnaya**	**3.97**	**18**	PN	**Pn**	**16 33 49.1**	**+2.6**
BDR	**Baidarnaya**	**3.97**	**18**	*e*P	**Pn**	**16 33 49.1**	**+2.6**
SMKR	**Semkarok**	**4.04**	**19**	PN	**Pn**	**16 33 49.0**	**+1.6**
SMKR	**Semkarok**	**4.04**	**19**	*e*P	**Pn**	**16 33 49.0**	**+1.6**
SRKR	**Sorokina**	**4.05**	**17**	PN	**Pn**	**16 33 49.8**	**+2.3**
SRKR	**Sorokina**	**4.05**	**17**	*e*P	**Pn**	**16 33 49.8**	**+2.3**
KBTR	**Krutoberegovo**	**4.06**	**31**	PN	**Pn**	**16 33 48.0**	**+0.5**
KBTR	**Krutoberegovo**	**4.06**	**31**	*i* P	**Pn**	**16 33 48.0**	**+0.5**
KBG	**Krutoberegovo**	**4.06**	**30**	PN	**Pn**	**16 33 48.3**	**+0.7**
KBG				S	**Sn**	**16 34 31.7**	**-2.2**
KBG	**Krutoberegovo**	**4.06**	**30**	*e*P	**Pn**	**16 33 48.3**	**+0.7**
KBG				*e*S	**Sn**	**16 34 31.7**	**-2.2**
BKI	**Bering**	**4.74**	**57**	PN	**Pn**	**16 33 56.0**	**-0.8**
BKI	**Bering**	**4.74**	**57**	*e*P	**Pn**	**16 33 56.0**	**-0.8**
BKI				*e*S	**Sn**	**16 34 43.6**	**-6.8**
PALN	**Palana**	**6.32**	**4**	PN	**Pn**	**16 34 20.3**	**+2.0**
PALN	**Palana**	**6.32**	**4**	*e*P	**Pn**	**16 34 20.3**	**+2.0**
OSSR	**Ossora**	**6.84**	**18**	PN	**Pn**	**16 34 25.9**	**+0.6**
OSSR	**Ossora**	**6.84**	**18**	*e*P	**Pn**	**16 34 25.9**	**+0.6**
MA2	**Magadan**	**8.20**	**329**	P	**Pn**	**16 34 44.8**	**+0.9**
	comp=E,18nm,0.3s,baz=136,slow=13,SNR=208						
MA2				LR	LR	16 38 09.5	
	comp=E,3μm,20.6s,baz=140,slow=40						
MA2	**Magadan**	**8.20**	**329**	PN	**Pn**	**16 34 45.9**	**+2.0**
MA2	**Magadan**	**8.20**	**329**	Pn	**Pn**	**16 34 45.9**	**+2.0**
TILK	**Tilichiki**	**8.60**	**24**	PN	**Pn**	**16 34 50.0**	**+0.8**
TILK	**Tilichiki**	**8.60**	**24**	*e*P	**Pn**	**16 34 50.0**	**+0.8**
SMY	**Shemya**	**9.13**	**84**	PN	**Pn**	**16 34 55.8**	**-0.8**
SMY	**Shemya**	**9.13**	**84**	Pn	**Pn**	**16 34 55.8**	**-0.8**
SMY				Sn	**Sn**	**16 36 29.0**	**-8.4**
OKH	**Okha**	**9.71**	**281**	*d i*PN	**Pn**	**16 35 06.5**	**+2.1**
OKH				*e*S	**Sn**	**16 36 50.0**	**-1.5**
OKH				pmax	pmax		
	comp=Z,1μm,11.5s						
OKH				smax	smax		
	comp=N,500nm,17.1s						
OKH				smax	smax		
	comp=E,1μm,17.3s						
OKH				MLR	MLR		
	comp=E,2μm,13.0s						
OKH				MLR	MLR		
	comp=Z,2μm,15.0s						
OKH				MLR	MLR		
	comp=N,2μm,17.0s						
TYV	**Tymovskoe**	**10.33**	**266**	*e*PN	**Pn**	**16 35 17.5**	**+4.5**
TYV				pmax	pmax		
	comp=Z,4μm,2.3s						
TYV				pmax	pmax		
	comp=Z,495nm,1.5s						
TYV				MLR	MLR		
	comp=Z,3μm,13.0s						
TYV				MLR	MLR		
	comp=E,3μm,12.0s						
KMSK	**Kamenskaya**	**10.41**	**19**	PN	**Pn**	**16 35 17.0**	**+3.1**
KMSK	**Kamenskaya**	**10.41**	**19**	*e*P	**Pn**	**16 35 17.0**	**+3.1**
KUR	**Kuril'sk**	**10.54**	**228**	*c i*PN	**Pn**	**16 35 14.8**	**-1.0**
KUR				S	**Sn**	**16 37 12.8**	**+0.9**
KUR				pmax	pmax		
	comp=Z,215nm,0.6s						
KUR				pmax	pmax		
	comp=N,71nm,0.2s						
KUR				pmax	pmax		
	comp=E,48nm,0.3s						
KUR				pmax	pmax		
	comp=Z,597nm,1.3s						
SEY	**Seymchan**	**10.75**	**343**	P	**Pn**	**16 35 21.5**	**+2.9**
	comp=Z,1.0nm,0.3s,baz=148,slow=11,SNR=192						
SEY				LR	LR	16 39 43.7	
	comp=Z,2μm,21.1s,baz=158,slow=39						
UGL	**Uglegorsk**	**11.34**	**258**	⇓*i*PN	**Pn**	**16 35 31.0**	**+4.3**
UGL				*e*S	**Sn**	**16 37 39.1**	**+7.8**
UGL				pmax	pmax		
	comp=Z,6μm,1.9s						
UGL				pmax	pmax		
	comp=Z,1μm,1.2s						
UGL				smax	smax		
	comp=E,2μm,7.2s						
UGL				MLR	MLR		
	comp=N,2μm,17.0s						
UGL				MLR	MLR		
	comp=E,3μm,15.0s						
YSS	**Yuzh-Sakhalins**	**12.02**	**247**	κ *i*PN	**Pn**	**16 35 38.5**	**+2.7**
YSS				*e*S	**Sn**	**16 37 49.7**	**+1.9**
YSS				pmax	pmax		
	comp=Z,150nm,1.2s						
YSS				MLR	MLR		
	comp=Z,3μm,13.0s						
YSS	**Yuzh-Sakhalins**	**12.02**	**247**	Pn	**Pn**	**16 35 38.0**	**+2.1**
YUK	**Yuzh-Kuril'sk**	**12.38**	**230**	⇑*i*PN	**Pn**	**16 35 40.0**	**-0.7**
YUK				S	**Sn**	**16 37 57.4**	**+0.8**
YUK				pmax	pmax		
	comp=N,100nm,0.3s						
YUK				pmax	pmax		
	comp=E,169nm,0.3s						
YUK				pmax	pmax		
	comp=Z,1μm,0.3s						
YUK				pmax	pmax		
	comp=Z,1μm,1.0s						
GRPR	**Tuman**	**12.45**	**230**	⇑*i*PN	**Pn**	**16 35 40.9**	**-0.8**
GRPR				S	**Sn**	**16 37 56.1**	**-2.3**
GRPR				pmax	pmax		
	comp=Z,701nm,1.0s						
GRPR				pmax	pmax		
	comp=Z,514nm,0.4s						
GRPR				pmax	pmax		
	comp=N,344nm,0.3s						
GRPR				pmax	pmax		
	comp=E,331nm,0.4s						
AMKA	**Amchitka**	**12.54**	**88**	Pn	**Pn**	**16 35 42.4**	**-0.3**
NMR	**Nemuro--Hokkai**	**12.96**	**229**	*d i*PN	Pn	16 35 43.2	-5.2
JKA	**Kamikawa-asahi**	**13.93**	**238**	Pn	**Pn**	**16 36 01.7**	**+0.6**
ASAJ	**Asahikawa**	**13.93**	**238**	P	**Pn**	**16 36 02.5**	**+1.4**
	comp=E,8.1nm,0.3s,baz=55,slow=10,SNR=134						
GRNR	**Gornyy**	**14.14**	**271**	⇓*i*P	**P**	**16 36 07.0**	**-1.7**
GRNR				pmax	pmax		
	comp=E,90nm,0.5s						
GRNR				pmax	pmax		
	comp=N,30nm,0.9s						
GRNR				pmax	pmax		
	comp=Z,130nm,0.6s						
GRNR				MLR	MLR		
	comp=N,810nm,16.0s						
GRNR				MLR	MLR		
	comp=E,700nm,16.0s						
GRNR				MLR	MLR		
	comp=Z,780nm,15.0s						
ADK	**Adak**	**14.85**	**84**	P	**Pn**	**16 36 14.0**	**+1.1**
ADK	**Adak**	**14.85**	**84**	Pn	**Pn**	**16 36 14.0**	**+1.1**
GSTR	**Great Sitkin T**	**15.18**	**83**	P	**P**	**16 36 20.1**	**-0.1**
ERM	**Erimo**	**15.20**	**231**	P	**Pn**	**16 36 13.4**	**-4.0**
ERM				pmax	pmax		
	comp=Z,224nm,0.5s						
ERM	**Erimo**	**15.20**	**231**	Pn	**Pn**	**16 36 13.4**	**-4.0**
ERM				IAmb	IAmb	16 36 22.5	
	comp=Z,224nm,0.5s						
JEW	**Eniwo**	**15.42**	**237**	P	**Pn**	**16 36 20.8**	**+0.5**
ATKA	**Atka Island**	**16.27**	**81**		**P**	**16 36 33.0**	**+0.7**
TEY	**Ternei**	**16.62**	**251**	⇓*e*P	**P**	**16 36 35.8**	**-0.4**
TEY				pmax	pmax		
	comp=Z,40nm,2.5s						
TEY				pmax	pmax		
	comp=E,50nm,2.1s						
TEY				pmax	pmax		
	comp=Z,500nm,4.0s						
TEY				pmax	pmax		
	comp=E,400nm,3.6s						
TEY				pmax	pmax		
	comp=N,30nm,1.7s						
JTM	**Tenmabayashi**	**17.15**	**233**	P	**Pn**	**16 36 37.1**	**-4.5**
KLR	**Kul'dur**	**17.50**	**269**	P	**Pn**	**16 36 46.4**	**+0.5**
	comp=N,1.5nm,0.3s,baz=64,slow=11,SNR=114						
KLR				PcP	**PcP**	**16 41 21.4**	**+0.3**
	comp=N,0.3nm,0.3s,baz=92,slow=5.0,SNR=1.8						
KLR				LR	LR	16 44 11.9	
	comp=N,818nm,19.8s,baz=74,slow=39						
KLR				ScP	**ScP**	**16 44 49.4**	**+1.5**
	baz=26,slow=3.6						
SPIA	**Saint Paul Isl**	**18.06**	**64**	P	**Pn**	**16 36 53.4**	**+0.8**
YAK	**Yakutsk**	**18.16**	**312**	P	**P**	**16 36 51.8**	**-1.0**
	comp=N,1.2nm,0.3s,baz=97,slow=4.9,SNR=260						
YAK				S	**S**	**16 40 13.2**	**-2.1**
	comp=N,0.1nm,0.3s,baz=68,slow=18,SNR=2.6						
YAK				LR	LR	16 44 38.1	
	comp=N,986nm,18.3s,baz=116,slow=39						
YAK	**Yakutsk**	**18.16**	**312**	*d i*P	**P**	**16 36 52.2**	**-0.7**
YAK				pmax	pmax		
	comp=Z,1μm,1.0s						
YAK				pmax	pmax		
	comp=E,291nm,0.9s						
YAK				pmax	pmax		
	comp=N,160nm,1.1s						
YAK	**Yakutsk**	**18.16**	**312**		**P**	**16 36 51.5**	**-1.3**
GAMB	**Gambell**	**18.70**	**43**	P	**Pn**	**16 36 59.5**	**-0.6**
ZEA	**Zeya**	**18.96**	**286**	*e*P	**P**	**16 37 02.0**	**+0.2**
ZEA				*e*S	S	16 40 20.9	-11
ZEA				pmax	pmax		
	comp=E,50nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,80nm,1.3s						
ZEA				smax	smax		
	comp=E,300nm,10.5s						
ZEA				MLR	MLR		
	comp=E,400nm,18.0s						
ZEA				MLR	MLR		
	comp=Z,700nm,17.0s						
NIKH	**Nikolski High**	**19.29**	**77**	P	**Pn**	**16 37 06.5**	**-0.8**
NIKH				IAmb	IAmb	16 37 09.4	
	comp=Z,525nm,0.9s						
JMM	**Marumori**	**19.61**	**228**	P	**P**	**16 37 09.4**	**+0.5**
JMM				IAmb	IAmb	16 37 11.4	
	comp=Z,344nm,0.8s						
USA0B	**Ussuriysk Arra**	**19.79**	**255**	P	**P**	**16 37 09.7**	**-1.2**
USA0B				IAmb	IAmb	16 37 35.5	
	comp=Z,495nm,1.4s						
USRK	**Ussuriysk Ar.**	**19.79**	**255**	P	**P**	**16 37 10.4**	**-0.5**
	baz=58,slow=9.7,SNR=116						
USRK				PcP	**PcP**	**16 41 26.6**	**+1.5**
	baz=28,slow=4.3,SNR=3.2						
USRK				ScP	**ScP**	**16 44 54.4**	**+1.5**
	baz=58,slow=1.9,SNR=13						
USRK	**Ussuriysk Ar.**	**19.79**	**255**	P	**P**	**16 37 09.8**	**-1.1**
USRK					**ScP**	**16 44 54.5**	**+1.5**
UNV	**Unalaska Valle**	**20.49**	**73**	P	**P**	**16 37 18.8**	**+0.5**
UNV				IAmb	IAmb	16 37 20.2	
	comp=Z,346nm,1.1s						
JSD	**Sado**	**20.65**	**233**	P	**P**	**16 37 20.1**	**-0.1**
AKUT	**Akutan**	**20.86**	**72**	P	**P**	**16 37 23.0**	**+0.8**
MDJ	**Mudanjiang**	**20.97**	**259**	P	**P**	**16 37 22.9**	**-0.7**
MDJ				sP	sP	16 37 49.6	-2.8
MDJ				S	**S**	**16 41 13.0**	**+0.8**
MDJ				sS	sS	16 41 40.8	+0.3
MDJ				ScP	**ScP**	**16 44 55.9**	**+0.1**
MDJ				PcS	**PcS**	**16 45 05.0**	**-0.2**
MDJ				ScS	**ScS**	**16 48 41.0**	**+1.7**
MDJ				pmax	pmax		
	comp=Z,66nm,0.9s						
MDJ				LR	LR		
	comp=Z,900nm,15.0s						
MDJ				LR	LR		
	comp=Z,700nm,15.5s						
MDJ				LR	LR		
	comp=Z,1μm,19.5s						
MDJ	**Mudanjiang**	**20.97**	**259**	P	**P**	**16 37 22.4**	**-1.2**
MDJ					**PcP**	**16 41 28.5**	**+1.2**
JYT	**Yasato**	**21.23**	**226**	P	**P**	**16 37 26.5**	**+0.1**
JYT				IAmb	IAmb	16 37 29.2	
	comp=Z,506nm,1.1s						
MSHR	**Mys Shultsa**	**21.25**	**252**	*ce*P	**P**	**16 37 24.3**	**-2.3**
MSHR				pmax	pmax		
	comp=Z,115nm,2.5s						
ANM	**Nome**	**21.57**	**43**	P	**P**	**16 37 31.0**	**+1.1**
ANM				pmax	pmax		
	comp=Z,906nm,1.7s						
ANM	**Nome**	**21.57**	**43**	P	**P**	**16 37 31.0**	**+1.1**
ANM				IAmb	IAmb	16 37 34.2	
	comp=Z,906nm,1.7s						
MJB9	**Matsu-Tunnel**	**21.87**	**230**	P	**P**	**16 37 33.6**	**+0.4**
MJB9				IAmb	IAmb	16 37 34.9	
	comp=Z,437nm,0.8s						
MAJO	**Matsushiro**	**21.87**	**230**	P	**P**	**16 37 33.5**	**+0.2**
MAJO				pmax	pmax		
	comp=Z,431nm,0.9s						
MAJO	**Matsushiro**	**21.87**	**230**	P	**P**	**16 37 33.5**	**+0.2**
MAJO				IAmb	IAmb	16 37 34.9	
	comp=Z,431nm,0.8s						

MAT	Matsushiro	21.87	230	P	P	16 37 33.4	+0.1
MAT				S	S	16 41 28.4	-1.4
MJAR	Matsushiro Arr	21.87	230	P	P	16 37 33.6	+0.4
	comp=Z,242nm,1.0s,baz=19,slow=12,SNR=10.0						
MJAR				PcP	PcP	16 41 29.5	+0.3
	comp=Z,2.4nm,0.6s,baz=76,slow=1.9,SNR=4.0						
MJAR				ScP	ScP	16 44 58.1	-0.1
	comp=Z,8.0nm,1.1s,baz=355,slow=1.5,SNR=8.1						
MJAR				LR	LR	16 46 19.4	
	comp=Z,510nm,21.4s,baz=45,slow=37						
MJAR	Matsushiro Arr	21.87	230	P	P	16 37 33.2	-0.1
FALS	False Pass	22.08	70	P	P	16 37 34.7	-0.6
FALS				IAmb	IAmb	16 37 38.3	
	comp=Z,408nm,0.7s						
JGF	Kuroka	23.04	230	P	P	16 37 45.0	-0.4
TIXI	Tiksi	23.08	336	P	P	16 37 45.1	-0.3
TIXI				pmax	pmax		
	comp=Z,240nm,1.0s						
TIXI	Tiksi	23.08	336	P	P	16 37 45.1	-0.3
INU	Inuyama	23.40	231	P	P	16 37 48.7	-0.1
JSG	Sagara	23.43	228	P	P	16 37 50.9	+1.9
JSG				IAmb	IAmb	16 37 59.3	
	comp=Z,391nm,0.9s						
RDOG	Red Dog Mine	23.64	35	P	P	16 37 50.9	+0.2
RDOG				IAmb	IAmb	16 37 53.3	
	comp=Z,437nm,1.0s						
SDPT	Sand Point	23.65	68	P	P	16 37 50.4	-0.4
SDPT				IAmb	IAmb	16 38 34.8	
	comp=Z,768nm,1.8s						
CN2	Changchun	23.91	261	*e*P	P	16 37 49.6	-3.6
CN2				pP	pP	16 38 10.6	-2.1
CN2				PP	PnPn	16 38 27.4	+0.8
CN2				S	S	16 41 55.1	-7.9
CN2				sS	Sn	16 42 31.3	-2.5
CN2				pmax	pmax		
	comp=Z,90nm,1.3s						
CN2				pmax	pmax		
	comp=Z,620nm,3.0s						
CN2				LR	LR		
	comp=Z,950nm,15.0s						
CN2				LR	LR		
	comp=Z,1µm,15.0s						
CN2				LR	LR		
	comp=Z,2µm,16.0s						
JWT	Wachi	24.23	233	P	P	16 37 56.6	+0.4
CHGN	Chignik	24.62	65	P	P	16 37 59.5	-0.1
HIA	Hailar	24.75	278	P	P	16 37 59.6	-1.3
HIA				pmax	pmax		
	comp=Z,164nm,1.1s						
HIA	Hailar	24.75	278	P	P	16 37 59.6	-1.3
TTA	Tatalina	25.42	49	P	P	16 38 07.3	+0.4
TTA				pmax	pmax		
	comp=Z,229nm,0.9s						
TTA	Tatalina	25.42	49	P	P	16 38 07.3	+0.4
TTA				IAmb	IAmb	16 38 10.6	
	comp=Z,229nm,0.9s						
JHS	Saijyo	25.59	236	P	P	16 38 09.5	+0.9
JHS				IAmb	IAmb	16 38 12.9	
	comp=Z,218nm,0.8s						
SVW2	Sparrevohn	25.61	53	P	P	16 38 09.6	+1.0
BOD	Bodaibo	25.73	299	*e*P	P	16 38 07.8	-1.9
BOD				*e*		16 48 56.0	
BOD				pmax	pmax		
	comp=Z,326nm,1.5s						
JMN	Monobe	26.22	233	P	P	16 38 15.6	+1.3
JMN				IAmb	IAmb	16 38 18.8	
	comp=Z,370nm,1.2s						
KS19	Wonju Array Si	26.52	247	P	P	16 38 16.2	-0.8
KSRS	Korea Array	26.52	247	P	P	16 38 16.9	0.0
	comp=Z,44nm,0.9s,baz=42,slow=9.0,SNR=92						
KSRS				PcP	PcP	16 41 40.9	+1.6
	comp=Z,7.6nm,0.9s,baz=4.9,slow=2.1,SNR=9.0						
KSRS				ScP	ScP	16 45 11.3	+0.4
	comp=Z,3.8nm,0.9s,baz=42,slow=2.4,SNR=9.1						
KSRS				LR	LR	16 48 04.6	
	comp=Z,726nm,21.6s,baz=50,slow=34						
KSAR	Wonju Array Be	26.55	247	P	P	16 38 16.1	-1.1
KSAR						16 41 40.1	
KSAR	Wonju Array Be	26.55	247	P	P	16 38 16.1	-1.1
KSAR					PcP	16 41 40.1	+0.8
IMAR	Indian Mountai	26.64	42	P	P	16 38 17.7	0.0
A21K	Barrow	26.85	30	P	P	16 38 19.6	+0.1
	baz=250,SNR=13						
A21K	Barrow	26.85	30	P	P	16 38 19.7	+0.1
A21K				IAmb	IAmb	16 38 43.9	
	comp=Z,512nm,1.6s						
SII	Sitkinak Islan	26.88	63	P	P	16 38 18.4	-1.6
SII				IAmb	IAmb	16 38 24.3	
	comp=Z,202nm,0.8s						
RSO	Redoubt South	27.04	54	P	P	16 38 21.9	+0.3
PPLA	Purkeypile	27.17	49	P	P	16 38 23.6	+0.9
PPLA				IAmb	IAmb	16 38 30.9	
	comp=Z,220nm,1.2s						
INCN	Inchon	27.23	249	P	P	16 38 22.1	-1.2
INCN				pmax	pmax		
	comp=Z,60nm,1.1s						
INCN	Inchon	27.23	249	P	P	16 38 22.1	-1.2
INCN	Inchon	27.23	249	P	P	16 38 23.8	+0.5
OHAK	Old Harbor	27.23	61	P	P	16 38 22.1	-1.0
OHAK				IAmb	IAmb	16 38 23.7	
	comp=Z,402nm,1.3s						
CIT	Chita	27.41	287	*e*P	P	16 38 23.6	-1.3
CIT				*e*		16 38 44.6	
CIT				*e*		16 39 02.6	
CIT				*e*		16 39 11.6	
CIT				pmax	pmax		
	comp=Z,96nm,1.5s						
KDAK	Kodiak Island	27.50	60	P	P	16 38 24.7	-0.7
	comp=Z,56nm,0.9s,baz=288,slow=2.6,SNR=42						
KDAK				PcP	PcP	16 41 42.4	+1.2
	comp=Z,20nm,0.8s,baz=186,slow=5.6,SNR=3.9						
KDAK				ScP	ScP	16 45 14.0	+0.4
	comp=Z,14nm,1.1s,baz=20,slow=2.8,SNR=4.7						
KDAK	Kodiak Island	27.50	60	P	P	16 38 24.4	-1.0
SKT	Skwentna	27.51	51	P	P	16 38 25.6	0.0
TJN	Taejon	27.61	246	*ce*P	P	16 38 27.5	+0.9
HOM	Homer	27.68	56	P	P	16 38 26.8	-0.3
	baz=278						
BPAW	Bear Paw Mtn.	27.70	46	P	P	16 38 27.7	+0.4
KTH	Kantishna Hill	27.73	48	P	P	16 38 28.1	+0.5
MLY	Manley	27.82	44	P	P	16 38 28.8	+0.4
	baz=268,SNR=98						
JTU	Tsushima	27.88	241	P	P	16 38 29.4	+0.3
CNPM	China Poot	27.90	56	P	P	16 38 28.5	-0.6
SUA	Susitna One	27.92	52	P	P	16 38 29.1	-0.3
SUA					S	16 43 06.5	0.0
TRF	Thorofare Moun	28.02	48	P	P	16 38 30.5	+0.2
TRF				IAmb	IAmb	16 38 33.2	
	comp=Z,191nm,1.0s						
BRLK	Bradley Lake	28.05	56	P	P	16 38 29.7	-0.8
CUT	Chulitna	28.07	50	P	P	16 38 30.5	-0.1
	baz=274,SNR=56						
COLD	Coldfoot	28.18	40	P	P	16 38 31.9	+0.4
	baz=265,SNR=85						
COLD	Coldfoot	28.18	40	P	P	16 38 31.2	-0.2
JNU	Nakatsue	28.20	237	P	P	16 38 32.9	+0.8
	comp=Z,50nm,0.8s,baz=21,slow=4.3,SNR=61						
JNU	Nakatsue	28.20	237	P	P	16 38 31.3	-0.8
JNU				IAmb	IAmb	16 38 35.5	
	comp=Z,393nm,1.8s						
BWN	Browne	28.37	46	P	P	16 38 34.7	+1.5
BWN				IAmb	IAmb	16 38 37.2	
	comp=Z,239nm,0.9s						
I23K	Minto, Yukon-K	28.41	44	P	P	16 38 34.1	+0.6
	baz=269,SNR=60						
I23K	Minto, Yukon-K	28.41	44	P	P	16 38 34.0	+0.4
RC01	Rabbit Creek A	28.44	53	P	P	16 38 32.8	-1.1
	baz=276,SNR=19						
O22K	Cooper Landing	28.52	54	P	P	16 38 34.2	-0.4
	baz=278,SNR=18						
O22K	Cooper Landing	28.52	54	P	P	16 38 33.9	-0.7
O22K				IAmb	IAmb	16 38 41.3	
	comp=Z,141nm,0.7s						
NEA2	Nenana	28.53	45	P	P	16 38 34.9	+0.2
	baz=271,SNR=167						
TOLK	Toolik Lake Re	28.57	37	P	P	16 38 35.4	+0.3
	baz=263,SNR=156						
TOLK	Toolik Lake Re	28.57	37	P	P	16 38 35.2	+0.1
TOLK				IAmb	IAmb	16 38 36.3	
	comp=Z,92nm,0.6s						
MCK	McKinley	28.61	47	P	P	16 38 35.5	+0.1
	baz=272,SNR=150						
RND	Reindeer	28.66	48	P	P	16 38 35.4	-0.5
RND				pmax	pmax		
	comp=Z,157nm,0.8s						
RND	Reindeer	28.66	48	P	P	16 38 35.4	-0.5
RND				IAmb	IAmb	16 38 37.3	
	comp=Z,157nm,0.8s						
PMR	Palmer	28.68	52	P	P	16 38 34.8	-1.1
PMR				pmax	pmax		
	comp=Z,73nm,0.8s						
PMR	Palmer	28.68	52	P	P	16 38 34.8	-1.1
SEW	Seward	28.71	55	P	P	16 38 35.7	-0.5
SEW				IAmb	IAmb	16 38 36.9	
	comp=Z,159nm,0.8s						
GHO	Glory Hole Cre	28.76	51	P	P	16 38 37.3	+0.5
GHO					S	16 43 17.7	-1.8
MDM	Murphy Dome	28.89	45	P	P	16 38 37.9	+0.1
WRH	Wood River Hil	28.96	46	P	P	16 38 38.7	+0.3
WRH				IAmb	IAmb	16 38 40.5	
	comp=Z,229nm,0.9s						
KNK	Knik Glacier	29.02	52	P	P	16 38 39.0	-0.1
SML	Sawmill	29.03	51	P	P	16 38 39.4	+0.2
TCOL	CIGO, UAF Yank	29.05	45	P	P	16 38 39.7	+0.5
	baz=271,SNR=34						
TCOL	CIGO, UAF Yank	29.05	45	IAmb	IAmb	16 38 41.7	
	comp=Z,135nm,0.9s						
COLA	College	29.05	45	*c i*P	P	16 38 39.7	+0.5
COLA				pmax	pmax		
	comp=Z,125nm,0.9s						
COLA	College	29.05	45	P	P	16 38 39.5	+0.3
COLA				IAmb	IAmb	16 38 41.7	
	comp=Z,144nm,0.9s						
DL2	Dalian	29.16	257	P	P	16 38 39.0	-1.5
DL2				sP	sP	16 39 07.6	-3.7
DL2				PcP	PcP	16 41 46.4	+0.7
DL2				S	S	16 43 23.3	-2.8
DL2				ScP	ScP	16 45 20.3	+1.2
DL2				PcS	PcS	16 45 26.5	-2.1
DL2				ScS	ScS	16 49 11.1	-2.2
DL2				pmax	pmax		
	comp=Z,67nm,1.0s						
DL2				pmax	pmax		
	comp=Z,350nm,4.6s						
DL2				LR	LR		
	comp=Z,710nm,20.7s						
DL2				LR	LR		
	comp=Z,880nm,19.9s						
DL2				LR	LR		
	comp=Z,2µm,24.3s						
POKR	Poker Plat Res	29.22	44	P	P	16 38 41.4	+0.6
	baz=271,SNR=30						
POKR	Poker Plat Res	29.22	44	P	P	16 38 41.3	+0.5
HDA	Harding Lake	29.46	46	P	P	16 38 42.4	-0.4
	baz=273						
HDA	Harding Lake	29.46	46	IAmb	IAmb	16 38 43.8	
	comp=Z,103nm,0.6s						
IL31		29.47	45	IAmb	IAmb	16 38 44.8	
	comp=Z,169nm,0.8s						
ILAR	Eielson Array	29.47	45	P	P	16 38 42.8	-0.2
	comp=Z,136nm,0.8s,baz=263,slow=7.8,SNR=805						
ILAR				PcP	PcP	16 41 45.7	-0.4
	comp=Z,7.8nm,0.9s,baz=286,slow=3.5,SNR=5.3						
ILAR				S	S	16 43 29.8	-0.7
	comp=Z,6.0nm,1.0s,baz=259,slow=12,SNR=4.8						
ILAR				ScP	ScP	16 45 19.6	0.0
	comp=Z,5.7nm,1.1s,baz=276,slow=3.5,SNR=7.6						
ILAR				PKiKP	PKiKP	16 49 17.2	-1.4
	comp=Z,0.3nm,0.8s,baz=291,slow=3.8,SNR=4.2						
ILAR				LR	LR	16 52 04.9	
	comp=Z,263nm,18.2s,baz=264,slow=39						
ILAR	Eielson Array	29.47	45	ScP	ScP	16 45 18.3	-1.3
ILAR	Eielson Array	29.47	45	P	P	16 38 42.3	-0.7
SCM	Sheep Creek Mo	29.50	51	P	P	16 38 43.5	+0.1
SCM				S	S	16 43 33.9	+2.7
SCM				pmax	pmax		
	comp=Z,422nm,0.9s						
SCM	Sheep Creek Mo	29.50	51	P	P	16 38 43.5	+0.1
SCM					S	16 43 33.9	+2.7
JSU	Suzuyama	29.71	236	P	P	16 38 46.0	+0.6
JSU				IAmb	IAmb	16 38 47.7	
	comp=Z,146nm,1.1s						
M24K	Tolsona, Glenn	30.01	50	P	P	16 38 48.7	+0.9
	baz=278,SNR=56						
FYU	Fort Yukon	30.11	41	IAmb	IAmb	16 38 50.7	
	comp=Z,109nm,0.8s						
HIN	Hinchinbrook I	30.12	54	P	P	16 38 48.7	-0.1
HIN				IAmb	IAmb	16 38 49.9	
	comp=Z,224nm,0.8s						
KLU	Klutina	30.21	51	IAmb	IAmb	16 38 51.2	
	comp=Z,146nm,1.0s						
PAX	Paxson	30.23	48	P	P	16 38 49.0	-0.8
PAX				S	S	16 43 41.5	-1.1
PAX				pmax	pmax		
	comp=Z,42nm,0.8s						
PAX	Paxson	30.23	48	P	P	16 38 49.0	-0.8
PAX					S	16 43 41.5	-1.1
BMAR	Burnt Mountain	30.37	39	P	P	16 38 51.4	+0.5
Q23K	Middleton Isla	30.38	55	P	P	16 38 51.2	+0.3
MID	Middleton Isla	30.38	55	P	P	16 38 51.1	+0.1
MID				pmax	pmax		
	comp=Z,241nm,0.8s						
MID	Middleton Isla	30.38	55	P	P	16 38 51.1	+0.1
EYAK	Cordova Ski Ar	30.45	53	IAmb	IAmb	16 38 53.1	
	comp=Z,118nm,0.8s						
SCRK	Sand Creek	30.78	46	P	P	16 38 54.0	-0.6
	baz=276,SNR=254						
DOT	Dot Lake	30.78	47	P	P	16 38 53.8	-0.8
N25K	Chitina, Valde	30.82	51	P	P	16 38 55.8	+0.7
	baz=280,SNR=53						
N25K	Chitina, Valde	30.82	51	IAmb	IAmb	16 38 56.8	
	comp=Z,130nm,0.8s						
RAGM	Ragged Mountai	31.01	53	IAmb	IAmb	16 39 00.2	
	comp=Z,186nm,0.8s						
MENT	Mentasta	31.03	48	P	P	16 38 57.0	+0.2
HMT	Hamilton	31.22	53	P	P	16 38 59.1	+0.6
HMT				IAmb	IAmb	16 39 00.4	
	comp=Z,200nm,1.0s						
GLB	Gilahina Butte	31.22	51	IAmb	IAmb	16 39 00.4	
	comp=Z,164nm,1.3s						
VRDI	Verde Repeater	31.43	51	IAmb	IAmb	16 39 02.2	
	comp=Z,105nm,0.8s						
SUCK	Suckling Hills	31.51	54	P	P	16 39 01.8	+0.8
MCARA	McCarthy VSAT	31.61	51	IAmb	IAmb	16 39 06.4	
	comp=Z,132nm,0.8s						
CRQM	Cirque	31.68	52	P	P	16 39 03.4	+0.8
BJI	Beijing	31.70	264	P	P	16 39 01.4	-1.4
BJI				PcP	PcP	16 41 52.9	+0.5
BJI				S	S	16 44 06.8	+1.0
BJI				ScP	ScP	16 45 29.4	+2.0
BJI				ScS	ScS	16 49 24.6	-1.0
BJI				pmax	pmax		
	comp=Z,11nm,1.4s						
BJI				LR	LR		
	comp=Z,720nm,18.1s						
BJI				LR	LR		
	comp=Z,750nm,17.9s						
BJI				LR	LR		
	comp=Z,1µm,37.9s						
TGL	Tana Glacier	31.82	52	P	P	16 39 04.4	+0.5
TGL				IAmb	IAmb	16 39 05.8	
	comp=Z,149nm,0.8s						
BCAR	Beaver Creek A	31.88	48	P	P	16 39 04.6	+0.4
EGAK	Eagle	31.91	44	P	P	16 39 03.9	-0.5
BALM	Baldy	32.00	52	IAmb	IAmb	16 39 07.3	
	comp=Z,124nm,1.1s						
IRK	Irkutsk	32.65	291	*e*P	P	16 39 09.6	-1.5
IRK				pmax	pmax		
	comp=Z,177nm,2.0s						
TABL	Table Mountain	32.71	52	P	P	16 39 12.8	+1.1
ULN	Ulaanbaatar	32.95	283	P	P	16 39 13.5	-0.3
ULN				pmax	pmax		
	comp=Z,39nm,1.0s						
ULN	Ulaanbaatar	32.95	283	P	P	16 39 13.5	-0.3
ULN	Ulaanbaatar	32.95	283	P	P	16 39 13.5	-0.3
TLY	Talaya	33.23	291	*e*P	P	16 39 15.7	-0.5
TLY				*e*		16 40 41.6	
TLY				*e*S	S	16 44 34.9	+5.4
TLY				pmax	pmax		
	comp=Z,75nm,1.5s						
TLY				MLR	MLR		
	comp=Z,1µm,16.0s						
TLY	Talaya	33.23	291	P	P	16 39 15.7	-0.5
TLY				IAmb	IAmb	16 39 39.7	
	comp=Z,137nm,1.5s						
TLY					PcP	16 41 57.7	+1.3
SONM	Songino Array	33.35	283	P	P	16 39 17.0	-0.3
	comp=Z,19nm,0.7s,baz=63,slow=7.4,SNR=131						
SONM				PcP	PcP	16 41 57.8	+0.8
	comp=Z,14nm,0.8s,baz=90,slow=1.8,SNR=9.2						
SONM				ScP	ScP	16 45 34.5	+1.4
	comp=Z,34nm,1.1s,baz=98,slow=1.1,SNR=34						
SONM				LR	LR	16 54 24.8	
	comp=Z,2µm,18.5s,baz=54,slow=39						
SONM	Songino Array	33.35	283	P	P	16 39 16.5	-0.9
EPYK	Eagle Plains	33.53	41	P	P	16 39 19.5	+0.9
	baz=278,SNR=39						
EPYK	Eagle Plains	33.53	41	P	P	16 39 19.4	+0.9
EPYK				IAmb	IAmb	16 39 20.5	
	comp=Z,97nm,0.8s						
H11N2	WAKE ISLAND Hy	33.57	167	T	T	17 15 10.9	
	baz=351,slow=76,SNR=502						
H11N3	WAKE ISLAND Hy	33.59	167	T	T	17 15 09.8	
	baz=351,slow=76,SNR=1421						
H11N1	WAKE ISLAND Hy	33.59	167	T	T	17 15 13.2	
	baz=351,slow=76,SNR=1330						
TIA	Tai'an	33.62	257	P	P	16 39 18.3	-1.4
TIA				pmax	pmax		
	comp=Z,15nm,0.9s						
TIA				pmax	pmax		
	comp=Z,92nm,3.5s						
TIA				LR	LR		
	comp=Z,550nm,22.1s						
TIA				LR	LR		
	comp=Z,790nm,24.2s						
TIA				LR	LR		
	comp=Z,1µm,25.0s						
WAKE	Wake Island	33.98	167	P	P	16 39 23.8	+1.0
ZAK	Zakamensk	33.99	289	*e*P	P	16 39 22.5	-0.4
ZAK				pmax	pmax		
	comp=Z,33nm,1.4s						
HHC	Hu-ho-hao-te	34.01	269	*e*P	P	16 39 21.4	-1.7
HHC				PP	PnPn	16 40 40.1	+1.0
HHC				S	S	16 44 34.9	-6.9
HHC				pmax	pmax		
	comp=Z,19nm,1.9s						
HHC				pmax	pmax		
	comp=Z,230nm,6.6s						
HHC				LR	LR		
	comp=Z,580nm,14.2s						
HHC				LR	LR		
	comp=Z,750nm,16.2s						
HHC				LR	LR		
	comp=Z,770nm,19.0s						
HYT	Haines Junctio	34.34	51	P	P	16 39 26.9	+1.1
INK	Inuvik	34.48	37	P	P	16 39 27.4	+0.7
INK				S	S	16 44 49.1	+0.8
INK				pmax	pmax		
	comp=Z,128nm,0.8s						
INK	Inuvik	34.48	37	P	P	16 39 27.4	+0.7
INK				IAmb	IAmb	16 39 28.7	
	comp=Z,128nm,0.8s						
INK					S	16 44 49.1	+0.8
INK				ScP	ScP	16 45 36.1	-0.4
JOW	Kunigami	34.63	234	P	P	16 39 28.5	+0.1
H11S1	WAKE ISLAND Hy	34.75	167	T	T	17 16 44.6	
	baz=352,slow=76,SNR=1697						
H11S3	WAKE ISLAND Hy	34.76	167	T	T	17 16 46.3	
	baz=352,slow=76,SNR=6443						
H11S2	WAKE ISLAND Hy	34.77	167	T	T	17 16 45.1	
	baz=352,slow=76,SNR=1046						
SSE	Sheshan	34.96	247	P	P	16 39 33.8	+2.6
SSE				pmax	pmax		
	comp=Z,22nm,1.0s						
SSE				LR	LR		
	comp=Z,280nm,22.7s						
SSE	Sheshan	34.96	247	P	P	16 39 31.6	+0.4
BTO	Baotou	35.09	270	*e*P	P	16 39 29.4	-3.0
NJ2	Nanjing	35.56	250	⇑*i*P	P	16 39 36.0	-0.4
NJ2				pP	pP	16 39 54.8	-2.3
NJ2				sP	sP	16 40 02.0	-5.3
NJ2				pmax	pmax		
	comp=Z,75nm,1.0s						
NJ2				LR	LR		
	comp=Z,700nm,17.5s						
NJ2				LR	LR		
	comp=Z,740nm,14.2s						
NJ2				LR	LR		
	comp=Z,530nm,17.1s						
NRIK	Noril'sk	35.78	325	P	P	16 39 37.5	-0.3
	comp=Z,11nm,0.8s,baz=90,slow=9.5,SNR=25						
NRIK				PcP	PcP	16 42 04.6	+1.1
	comp=Z,5.9nm,0.4s,baz=113,slow=4.1,SNR=6.4						
NRIK				ScP	ScP	16 45 42.3	+1.1
	comp=Z,9.5nm,0.9s,baz=33,slow=1.3,SNR=3.9						
NRIK				LR	LR	16 56 03.5	
	comp=Z,1µm,18.1s,baz=81,slow=39						
NRIK	Noril'sk	35.78	325	P	P	16 39 37.3	-0.5
SKAG	Skagway	35.79	53	P	P	16 39 39.9	+1.8
BESE	Bessie Mountai	36.32	54	P	P	16 39 43.8	+1.1
C36M	Paulatuk	37.64	34	P	P	16 39 54.3	+0.7
	baz=285,SNR=250						
C36M	Paulatuk	37.64	34	P	P	16 39 54.0	+0.4
ANA2	Anatahan	37.87	201	P	P	16 39 54.0	-2.1
ANA2				IAmb	IAmb	16 39 55.4	
	comp=Z,64nm,0.8s						
WRAK	Wrangell Islan	38.40	56	IAmb	IAmb	16 40 03.7	
	comp=Z,158nm,0.9s						
CRAG	Craig	38.40	58	P	P	16 40 02.2	+2.0
CRAG				IAmb	IAmb	16 40 03.8	
	comp=Z,137nm,1.2s						
YOJ	Yonaguni jima	39.23	238	P	P	16 40 06.3	-1.1
YOJ				pmax	pmax		
	comp=Z,87nm,1.1s						
YOJ	Yonaguni jima	39.23	238	P	P	16 40 06.3	-1.1
YOJ				IAmb	IAmb	16 40 21.2	
	comp=Z,87nm,1.1s						
WHN	Wuhan	39.27	253	⇑P	P	16 40 06.5	-1.2
WHN				S	S	16 46 06.4	+4.6
WHN				pmax	pmax		
	comp=Z,150nm,1.4s						
WHN				LR	LR		
	comp=Z,1µm,5.0s						
WHN				LR	LR		
	comp=Z,770nm,11.9s						
WHN				LR	LR		
	comp=Z,4µm,37.6s						
TATO	Taipei	39.61	240	P	P	16 40 10.6	0.0
TATO				IAmb	IAmb	16 40 52.9	
	comp=Z,306nm,1.7s						
DIB	Dawson Inlet,	39.76	61	P	P	16 40 13.0	+1.5
DIB				IAmb	IAmb	16 40 14.4	
	comp=Z,141nm,1.2s						
YHNB	Yeheng	39.91	240	P	P	16 40 13.3	+0.1
XAN	Xi'an	40.01	262	P	P	16 40 12.0	-1.9
XAN				pP	pP	16 40 30.3	-4.5
XAN				sP	sP	16 40 42.3	-2.7
XAN				PP	PP	16 41 47.8	+0.5
XAN				ScS	ScS	16 50 12.4	+0.9
XAN				pmax	pmax		
	comp=Z,19nm,1.4s						
XAN				pmax	pmax		
	comp=Z,270nm,6.5s						
XAN				LR	LR		
	comp=Z,850nm,12.7s						
XAN				LR	LR		
	comp=Z,710nm,15.7s						
XAN				LR	LR		
	comp=Z,1µm,14.6s						
XAN	Xi'an	40.01	262	P	P	16 40 11.7	-2.2
XAN				pmax	pmax		
	comp=Z,69nm,1.9s						
XAN	Xi'an	40.01	262	P	P	16 40 11.7	-2.2
NACB	Ninganchiao	40.20	239	P	P	16 40 13.3	-2.2
SSLB	Suanglung	40.85	240	P	P	16 40 20.4	-0.5
YULB	Yu-li	41.00	239	P	P	16 40 22.2	+0.2
QZH	Quanzhou	41.18	243	⇓*i*P	P	16 40 23.9	+0.4
QZH				S	S	16 46 32.6	+2.3
QZH				pmax	pmax		
	comp=Z,44nm,0.9s						
QZH				LR	LR		
	comp=Z,730nm,19.9s						
QZH				LR	LR		
	comp=Z,560nm,19.6s						
TPUB	Ta-pu	41.42	240	P	P	16 40 25.2	-0.3
TPUB				IAmb	IAmb	16 40 27.8	
	comp=Z,188nm,1.3s						
TWG	Pinlang	41.58	239	P	P	16 40 26.8	-0.1
TWG				IAmb	IAmb	16 40 30.1	
	comp=Z,55nm,0.5s						
KNMB	Chin-men Tao	41.67	243	P	P	16 40 28.0	+0.4
LZH	Lanzhou	41.70	269	*e*P	P	16 40 27.3	-0.6
LZH				pP	pP	16 40 47.3	-1.7
LZH				sP	sP	16 40 54.9	-4.2
LZH				PP	PP	16 42 07.4	+1.7

LZH				PcP	**PcP**	**16 42 23.8**	**+0.9**
LZH				ScP	**ScP**	**16 46 06.8**	**+2.0**
LZH				ScS	**ScS**	**16 50 21.3**	**-0.7**
LZH				pmax	pmax		
	comp=Z,59nm,1.0s						
LZH				pmax	pmax		
	comp=Z,380nm,5.2s						
GTA	**Gaotai**	**42.01**	**276**	P	**P**	**16 40 29.8**	**-0.5**
GTA				pP	pP	16 40 48.6	-2.7
GTA				sP	sP	16 40 57.6	-3.8
GTA				PcP	**PcP**	**16 42 24.8**	**+1.0**
GTA				ScP	**ScP**	**16 46 06.9**	**+1.0**
GTA				S	**S**	**16 46 41.4**	**-1.2**
GTA				sS	sS	16 47 13.8	-4.2
GTA				ScS	**ScS**	**16 50 22.1**	**-1.6**
GTA				pmax	pmax		
	comp=Z,28nm,1.2s						
GTA				pmax	pmax		
	comp=Z,290nm,9.6s						
GTA				LR	LR		
	comp=Z,660nm,18.7s						
GTA				LR	LR		
	comp=Z,580nm,19.1s						
GTA				LR	LR		
	comp=Z,580nm,19.9s						
ENH	**Enshi**	**42.33**	**258**	PcP	**PcP**	**16 42 25.6**	**+0.7**
EUNU	**Eureka**	**42.38**	**14**	P	**P**	**16 40 33.8**	**+1.0**
EUNU				IAmb	IAmb	16 40 34.9	
	comp=Z,135nm,0.8s						
ZAA0	**Zalesovo Array**	**42.40**	**302**	P	**P**	**16 40 30.6**	**-2.5**
ZALV	**Zalesovo Beam**	**42.40**	**302**	P	**P**	**16 40 30.8**	**-2.3**
	comp=Z,4.3nm,0.3s,baz=59,slow=7.5,SNR=32						
ZALV				PP	**PP**	**16 42 13.2**	**+0.5**
	comp=Z,10nm,0.9s,baz=46,slow=11,SNR=4.2						
ZALV				PcP	**PcP**	**16 42 25.0**	**+0.4**
	comp=Z,66nm,1.1s,baz=46,slow=4.3,SNR=13						
ZALV				ScP	**ScP**	**16 46 07.1**	**+0.1**
	comp=Z,6.1nm,0.9s,baz=57,slow=5.5,SNR=5.8						
ZALV				LR	LR	16 59 40.8	
	comp=Z,854nm,18.0s,baz=58,slow=38						
ZALV	**Zalesovo Beam**	**42.40**	**302**	P	**P**	**16 40 31.1**	**-2.0**
BBB	**Bella Bella**	**42.57**	**60**	P	**P**	**16 40 36.2**	**+1.7**
BBB				IAmb	IAmb	16 40 37.6	
	comp=Z,154nm,1.0s						
BBB				PcP	**PcP**	**16 42 26.8**	**+1.6**
DGZ	**Jazzator, Alta**	**43.23**	**296**	*d i*P	**P**	**16 40 39.2**	**-0.9**
DGZ				pmax	pmax		
	comp=Z,34nm,0.9s						
JOHN	**Johnston Islan**	**43.63**	**134**	P	**P**	**16 40 44.6**	**+1.2**
JOHN				IAmb	IAmb	16 41 03.5	
	comp=Z,168nm,0.9s						
YKA	**Yellowknife Ar**	**43.80**	**42**	P	**P**	**16 40 45.1**	**+0.8**
	comp=Z,67nm,0.8s,baz=300,slow=7.5,SNR=618						
YKA				ScP	**ScP**	**16 46 12.5**	**0.0**
	comp=Z,2.7nm,0.9s,baz=302,slow=3.8,SNR=5.9						
YKA				PKiKP	**PKiKP**	**16 49 28.6**	**-1.5**
	comp=Z,0.7nm,0.7s,baz=303,slow=0.7,SNR=4.1						
OPA	**Opana**	**45.15**	**117**	P	**P**	**16 40 56.5**	**+1.0**
OPA				pmax	pmax		
	comp=Z,351nm,1.4s						
OPA	**Opana**	**45.15**	**117**	P	**P**	**16 40 56.5**	**+1.0**
CD2	**Chengdu**	**45.31**	**264**	P	**P**	**16 40 55.4**	**-1.4**
CD2				ScP	**ScP**	**16 46 21.3**	**+1.9**
CD2				S	**S**	**16 47 30.6**	**-0.1**
CD2				pmax	pmax		
	comp=Z,30nm,1.0s						
CD2				pmax	pmax		
	comp=Z,80nm,4.0s						
CD2				LR	LR		
	comp=Z,540nm,20.6s						
CD2				LR	LR		
	comp=Z,440nm,19.6s						
CD2				LR	LR		
	comp=Z,560nm,21.0s						
KIP	**Kipapa**	**45.36**	**117**	P	**P**	**16 40 58.6**	**+1.4**
KIP				pmax	pmax		
	comp=Z,164nm,1.1s						
KIP	**Kipapa**	**45.36**	**117**	P	**P**	**16 40 58.6**	**+1.4**
KIP				IAmb	IAmb	16 40 59.9	
	comp=Z,164nm,1.1s						
ZSN	**Zaisan**	**45.90**	**295**	⇓*i*P	**P**	**16 41 00.1**	**-1.2**
	comp=Z,14nm,1.0s,baz=294						
ZSN	**Zaisan**	**45.90**	**295**	*d i*P	**P**	**16 41 00.0**	**-1.2**
ZSN				pmax	pmax		
	comp=Z,14nm,1.0s						
SZP	**Santa**	**46.30**	**235**	P	**P**	**16 41 06.0**	**+1.4**
WMQ	**Urumqi**	**46.47**	**289**	*e*P	**P**	**16 41 05.4**	**-0.4**
WMQ				pP	pP	16 41 27.5	+0.5
WMQ				sP	sP	16 41 36.0	-1.1
WMQ				PcP	**PcP**	**16 42 38.4**	**-0.5**
WMQ				PP	**PP**	**16 42 56.9**	**+1.0**
WMQ				ScP	**ScP**	**16 46 25.1**	**+1.1**
WMQ				PcS	**PcS**	**16 46 31.9**	**-1.8**
WMQ				ScS	**ScS**	**16 50 48.3**	**-3.4**
WMQ				pmax	pmax		
	comp=Z,60nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,360nm,3.6s						
WMQ				LR	LR		
	comp=Z,830nm,29.2s						
WMQ				LR	LR		
	comp=Z,1µm,29.1s						
WMQ				LR	LR		
	comp=Z,1µm,28.9s						
WMQ	**Urumqi**	**46.47**	**289**	P	**P**	**16 41 05.8**	**0.0**
WMQ				pmax	pmax		
	comp=Z,74nm,0.9s						
WMQ	**Urumqi**	**46.47**	**289**	P	**P**	**16 41 05.8**	**0.0**
WMQ				IAmb	IAmb	16 41 06.6	
	comp=Z,74nm,0.9s						
SEM	**Semipalatinsk**	**46.67**	**300**	⇓*i*P	**P**	**16 41 05.0**	**-2.5**
	comp=Z,57nm,1.8s,baz=300						
SEM	**Semipalatinsk**	**46.67**	**300**	*d i*P	**P**	**16 41 05.0**	**-2.5**
SEM				pmax	pmax		
	comp=Z,57nm,1.8s						
GYA	**Guiyang**	**46.82**	**257**	⇓P	**P**	**16 41 07.4**	**-1.3**
GYA				pmax	pmax		
	comp=Z,24nm,0.9s						
GYA				LR	LR		
	comp=Z,430nm,23.1s						
GYA				LR	LR		
	comp=Z,400nm,24.6s						
GYA				LR	LR		
	comp=Z,740nm,23.7s						
HLK	**Haleakala**	**46.86**	**116**	P	**P**	**16 41 11.0**	**+1.7**
PGC	**Sidney**	**47.01**	**62**	P	**P**	**16 41 11.0**	**+1.2**
PGC				IAmb	IAmb	16 41 11.6	
	comp=Z,58nm,0.8s						
KBS	**Kingsbay**	**47.07**	**352**	P	**P**	**16 41 10.3**	**+0.4**
KBS				pmax	pmax		
	comp=Z,42nm,1.1s						
KBS	**Kingsbay**	**47.07**	**352**	P	**P**	**16 41 10.2**	**+0.4**
KBS	**Kingsbay**	**47.07**	**352**	*e*P	**P**	**16 41 08.7**	**-1.3**
SPA0	**Spitsbergen Ar**	**47.31**	**350**	P	**P**	**16 41 11.2**	**-0.7**
SPA0				IAmb	IAmb	16 41 13.5	
	comp=Z,94nm,1.2s						
SPA0	**Spitsbergen Ar**	**47.31**	**350**	*e*P	**P**	**16 41 11.2**	**-0.7**
KURK	**Kurchatov**	**47.35**	**302**	*ce*P	**P**	**16 41 10.5**	**-1.9**
KURK				pmax	pmax		
	comp=Z,172nm,1.3s						
KURK	**Kurchatov**	**47.35**	**302**	P	**P**	**16 41 10.4**	**-1.9**
KURK				IAmb	IAmb	16 41 11.9	
	comp=Z,111nm,0.9s						
KURK				PcP	**PcP**	**16 42 41.6**	**-0.1**
KURK	**Kurchatov**	**47.35**	**302**	P	**P**	**16 41 11.3**	**-1.1**
A04D	**Lummi Island**	**47.37**	**62**	P	**P**	**16 41 14.1**	**+1.6**
	baz=306,SNR=9.1						
TULEG	**Thule**	**47.38**	**14**	P	**P**	**16 41 11.8**	**-0.5**
TULEG	**Thule**	**47.38**	**14**	*i* P	**P**	**16 41 12.3**	**-0.1**
TULEG				IAmb	IAmb	16 41 13.2	
	comp=Z,42nm,0.7s						
NLWA	**Neilton Lookou**	**47.53**	**64**	P	**P**	**16 41 15.4**	**+1.5**
NLWA				IAmb	IAmb	16 41 16.8	
	comp=Z,174nm,0.9s						
HOPEN	**Hopen**	**47.67**	**347**	*e*P	**P**	**16 41 14.2**	**-0.4**
MK31	**Makanchi Array**	**47.71**	**295**	*i* P	**P**	**16 41 13.3**	**-2.0**
MK31				pmax	pmax		
	comp=Z,21nm,0.7s						
MK31	**Makanchi Array**	**47.71**	**295**	P	**P**	**16 41 13.7**	**-1.6**
MK31				PcP	**PcP**	**16 42 43.1**	**-0.1**
MKAR	**Makanchi Array**	**47.71**	**295**	P	**P**	**16 41 13.5**	**-1.8**
	comp=Z,15nm,0.6s,baz=50,slow=6.2,SNR=183						
MKAR				PcP	**PcP**	**16 42 43.3**	**+0.1**
	comp=Z,4.7nm,0.6s,baz=62,slow=8.4,SNR=4.7						
MKAR				ScP	**ScP**	**16 46 29.3**	**+0.1**
	comp=Z,12nm,1.2s,baz=58,slow=4.6,SNR=7.0						
MKAR				ScS	**ScS**	**16 50 52.9**	**-6.8**
	comp=Z,1.3nm,1.0s,baz=44,slow=8.5,SNR=4.0						
MKAR				LR	LR	17 02 42.9	
	comp=Z,433nm,18.2s,baz=43,slow=38						
D03D	**Eldon**	**47.87**	**63**	P	**P**	**16 41 18.0**	**+1.6**
	baz=307,SNR=47						
MAKZ	**Makanchi**	**47.87**	**295**	P	**P**	**16 41 14.3**	**-2.3**
MAKZ						16 42 43.1	
MAKZ				pmax	pmax		
	comp=Z,28nm,0.9s						
MAKZ	**Makanchi**	**47.87**	**295**	P	**P**	**16 41 14.3**	**-2.3**
MAKZ				PcP	**PcP**	**16 42 43.1**	**-0.6**
KKH	**Kailua Kona**	**47.88**	**116**	P	**P**	**16 41 16.3**	**-0.5**
KKH						16 42 45.5	
KKH	**Kailua Kona**	**47.88**	**116**	P	**P**	**16 41 16.3**	**-0.5**
KKH				PcP	**PcP**	**16 42 45.5**	**+1.5**
HUH	**Hualalai**	**47.95**	**116**	P	**P**	**16 41 16.7**	**-1.0**
HUH				IAmb	IAmb	16 41 27.1	
	comp=Z,82nm,1.0s						
B05A	**Bryant**	**47.96**	**62**	P	**P**	**16 41 18.5**	**+1.3**
	baz=307,SNR=25						
KHLU	**Kahalu`u**	**48.00**	**116**	P	**P**	**16 41 17.9**	**0.0**
KHLU				IAmb	IAmb	16 41 19.9	
	comp=Z,115nm,1.0s						
POHA	**Pohakuloa**	**48.06**	**116**	P	**P**	**16 41 19.5**	**+0.9**
B06A	**Marblemount**	**48.14**	**61**	P	**P**	**16 41 19.2**	**+0.7**
B06A				IAmb	IAmb	16 41 20.6	
	comp=Z,159nm,1.0s						
E03A	**Lebam**	**48.20**	**65**	P	**P**	**16 41 20.4**	**+1.3**
HMH	**Humu‘ula Sheep**	**48.21**	**116**	P	**P**	**16 41 20.8**	**+1.0**
HMH				PcP	**PcP**	**16 42 47.1**	**+1.4**
MLOA	**Mauna Loa Obse**	**48.22**	**116**	P	**P**	**16 41 20.6**	**+0.6**
MLOA				IAmb	IAmb	16 41 22.4	
	comp=Z,147nm,0.9s						
MWH	**Moku‘aweowe**	**48.24**	**116**	P	**P**	**16 41 20.5**	**+0.2**
D04E	**Lakebay**	**48.25**	**64**	P	**P**	**16 41 21.5**	**+2.1**
	baz=307,SNR=14						
MLH	**Mauna Loa**	**48.35**	**116**	P	**P**	**16 41 21.4**	**+0.6**
AIN	**Ainahou**	**48.41**	**116**	P	**P**	**16 41 22.3**	**+1.1**
KHU	**Kahuku**	**48.43**	**116**	P	**P**	**16 41 22.2**	**+0.8**
KHU				pmax	pmax		
	comp=Z,240nm,1.0s						
KHU	**Kahuku**	**48.43**	**116**	P	**P**	**16 41 22.2**	**+0.8**
RSD	**Rainshed**	**48.44**	**116**	P	**P**	**16 41 23.0**	**+1.7**
PUH	**Pauahi**	**48.54**	**116**	P	**P**	**16 41 23.1**	**+1.0**
HLP	**Hilina Pali**	**48.56**	**116**	P	**P**	**16 41 23.4**	**+1.2**
HLP				IAmb	IAmb	16 41 44.8	
	comp=Z,118nm,0.8s						
D05A	**Enumclaw**	**48.67**	**63**	P	**P**	**16 41 24.2**	**+1.5**
E04D	**Cinebar**	**48.74**	**64**	P	**P**	**16 41 24.9**	**+1.7**
	baz=308,SNR=59						
F04D	**Rainier, OR**	**48.79**	**65**	P	**P**	**16 41 24.9**	**+1.3**
	baz=308,SNR=5.4						
C06D	**Leavenworth**	**48.81**	**62**	P	**P**	**16 41 24.8**	**+1.1**
	baz=308,SNR=8.5						
LON	**Longmire**	**49.04**	**63**	P	**P**	**16 41 26.0**	**+0.5**
LON				pmax	pmax		
	comp=Z,32nm,0.9s						
LON	**Longmire**	**49.04**	**63**	P	**P**	**16 41 26.0**	**+0.5**
G03D	**McMinnville, O**	**49.19**	**66**	P	**P**	**16 41 28.1**	**+1.5**
	baz=308,SNR=7.2						
LTY	**Liberty**	**49.34**	**62**	IAmb	IAmb	16 41 29.8	
	comp=Z,146nm,1.4s						
B08A	**Colville Reser**	**49.38**	**60**	P	**P**	**16 41 28.6**	**+0.5**
B08A				PcP	**PcP**	**16 42 50.1**	**+0.9**
I02D	**Swisshome**	**49.55**	**67**	P	**P**	**16 41 31.2**	**+1.8**
	baz=309,SNR=19						
COR	**Corvallis**	**49.56**	**67**	P	**P**	**16 41 31.0**	**+1.6**
COR				pmax	pmax		
	comp=Z,164nm,0.9s						
COR	**Corvallis**	**49.56**	**67**	P	**P**	**16 41 31.0**	**+1.6**
F05D	**White Salmon**	**49.76**	**64**	P	**P**	**16 41 32.1**	**+1.1**
	baz=309,SNR=12						
H04D	**Lebanon**	**49.91**	**66**	P	**P**	**16 41 33.7**	**+1.6**
	baz=309,SNR=18						
KEBM	**Edson Butte**	**50.06**	**69**	PcP	**PcP**	**16 42 53.2**	**+1.4**
I03D	**Drain, OR**	**50.09**	**67**	P	**P**	**16 41 35.5**	**+2.0**
	baz=310,SNR=34						
BRVK	**Borovoye**	**50.10**	**308**	*i* P	**P**	**16 41 31.6**	**-1.9**
BRVK				pmax	pmax		
	comp=Z,67nm,0.9s						
BRVK	**Borovoye**	**50.10**	**308**	P	**P**	**16 41 31.6**	**-1.9**
BRVK				IAmb	IAmb	16 41 32.9	
	comp=Z,69nm,0.8s						
BRVK				PcP	**PcP**	**16 42 51.1**	**-0.6**
BRVK	**Borovoye**	**50.10**	**308**	P	**P**	**16 41 32.3**	**-1.1**
J01E	**Myrtle Point**	**50.10**	**68**	P	**P**	**16 41 35.8**	**+2.1**
	baz=310,SNR=25						
H04A	**Detroit Lake**	**50.12**	**66**	IAmb	IAmb	16 41 36.1	
	comp=Z,144nm,1.1s						
H04A				PcP	**PcP**	**16 42 52.0**	**0.0**
KMI	**Kunming**	**50.15**	**259**	⇓P	**P**	**16 41 33.0**	**-1.4**
KMI				pP	pP	16 41 56.8	+0.7
KMI				sP	sP	16 42 07.0	+0.9
KMI				PcP	**PcP**	**16 42 52.1**	**-0.5**
KMI				PP	**PP**	**16 43 27.3**	**-2.9**
KMI				ScP	**ScP**	**16 46 38.4**	**-1.7**
KMI				S	**S**	**16 48 36.5**	**-3.1**
KMI				pmax	pmax		
	comp=Z,34nm,1.4s						
KMI				pmax	pmax		
	comp=Z,190nm,8.3s						
KMI				LR	LR		
	comp=Z,710nm,22.6s						
KMI				LR	LR		
	comp=Z,430nm,24.2s						
KMI				LR	LR		
	comp=Z,920nm,25.9s						
KMI	**Kunming**	**50.15**	**259**	P	**P**	**16 41 32.8**	**-1.6**
KMI				pmax	pmax		
	comp=Z,30nm,0.9s						
KMI	**Kunming**	**50.15**	**259**	P	**P**	**16 41 32.8**	**-1.6**
E07A	**Sunnyside**	**50.21**	**63**	P	**P**	**16 41 35.0**	**+0.6**
E07A				IAmb	IAmb	16 41 36.7	
	comp=Z,129nm,1.0s						
G05D	**Wamic, OR**	**50.24**	**65**	P	**P**	**16 41 36.2**	**+1.5**
	baz=309,SNR=30						
C09A	**Chrisman Ranch**	**50.28**	**60**	IAmb	IAmb	16 41 36.8	
	comp=Z,121nm,1.1s						
D08A	**Wollman Farm,**	**50.40**	**61**	IAmb	IAmb	16 41 37.6	
	comp=Z,76nm,1.1s						
HAWA	**Hanford**	**50.49**	**63**	P	**P**	**16 41 37.2**	**+0.7**
HAWA				IAmb	IAmb	16 41 38.7	
	comp=Z,119nm,1.1s						
KBO	**Bosley Butte**	**50.55**	**69**	P	**P**	**16 41 36.8**	**-0.3**
K02D	**Willamette Mer**	**50.55**	**69**	P	**P**	**16 41 39.0**	**+1.9**
	baz=310,SNR=32						
I04A	**Tendick Farm,**	**50.55**	**67**	P	**P**	**16 41 38.5**	**+1.4**
	baz=310,SNR=81						
NEW	**Newport**	**50.59**	**59**	P	**P**	**16 41 38.0**	**+0.7**
	comp=Z,49nm,0.9s,baz=313,slow=7.2,SNR=47						
NEW				LR	LR	17 00 45.9	
	comp=Z,217nm,21.0s,baz=308,slow=33						
NEW	**Newport**	**50.59**	**59**	P	**P**	**16 41 38.0**	**+0.7**
	baz=309,SNR=44						
NEW	**Newport**	**50.59**	**59**	P	**P**	**16 41 37.8**	**+0.4**
NEW				IAmb	IAmb	16 41 39.2	
	comp=Z,81nm,1.1s						
KULLO	**Kullorsuaq**	**50.60**	**12**	*i* P	**P**	**16 41 37.4**	**+0.5**
	comp=Z,118nm,0.7s						
KULLO	**Kullorsuaq**	**50.60**	**12**	*i* P	**P**	**16 41 37.4**	**+0.5**
KULLO				pmax	pmax		
	comp=Z,120nm,0.7s						
KULLO	**Kullorsuaq**	**50.60**	**12**	*i* P	**P**	**16 41 37.4**	**+0.5**
KULLO				IAmb	IAmb	16 41 37.9	
	comp=Z,118nm,0.7s						
E08A	**Dider Farm, El**	**50.68**	**62**	IAmb	IAmb	16 41 39.9	
	comp=Z,86nm,1.0s						
DAG	**Danmarks Havn**	**50.69**	**359**	*i* P	**P**	**16 41 37.1**	**-0.4**
	comp=Z,40nm,1.0s						
DAG	**Danmarks Havn**	**50.69**	**359**	*i* P	**P**	**16 41 37.1**	**-0.4**
DAG				pmax	pmax		
	comp=Z,40nm,1.0s						
DAG	**Danmarks Havn**	**50.69**	**359**	*i* P	**P**	**16 41 37.2**	**-0.4**
DAG				IAmb	IAmb	16 41 38.3	
	comp=Z,40nm,1.0s						
QIZ	**Qiongzhong**	**50.74**	**248**	P	**P**	**16 41 38.0**	**-0.7**
QIZ				sP	**sP**	**16 42 07.5**	**-2.8**
QIZ				S	**S**	**16 48 48.3**	**+0.8**
QIZ				pmax	pmax		
	comp=Z,130nm,1.1s						
QIZ				LR	LR		
	comp=Z,320nm,18.2s						
QIZ				LR	LR		
	comp=Z,420nm,12.2s						
QIZ				LR	LR		
	comp=Z,320nm,23.7s						
I05D	**Terrebonne, OR**	**50.80**	**66**	P	**P**	**16 41 40.1**	**+1.2**
	baz=310,SNR=20						
BRZS	**Berezniki**	**50.83**	**304**	⇓*i*P	**P**	**16 41 36.9**	**-2.1**
	comp=Z,38nm,1.0s,baz=304						
BRZS	**Berezniki**	**50.83**	**304**	*d i*P	**P**	**16 41 36.9**	**-2.1**
BRZS				pmax	pmax		
	comp=Z,38nm,1.0s						
L02E	**Cave Junction**	**50.93**	**69**	P	**P**	**16 41 42.1**	**+2.2**
	baz=310,SNR=33						
TDK	**Taldyqorghan**	**50.95**	**296**	*i* P	**P**	**16 41 39.0**	**-1.0**
	comp=Z,50nm,0.7s,baz=296						
TDK	**Taldyqorghan**	**50.95**	**296**	*i* P	**P**	**16 41 38.9**	**-1.0**
TDK				pmax	pmax		
	comp=Z,50nm,0.7s						
HUMO	**Hull Mountain**	**51.01**	**68**	P	**P**	**16 41 41.8**	**+1.4**
HUMO				IAmb	IAmb	16 41 43.7	
	comp=Z,100nm,1.1s						
HUMO				PcP	**PcP**	**16 42 57.2**	**+1.9**
J04D	**Umpqua Nationa**	**51.08**	**67**	P	**P**	**16 41 43.1**	**+1.8**
	baz=310,SNR=98						
KRMB	**Red Mountain**	**51.17**	**70**	IAmb	IAmb	16 41 45.2	
	comp=Z,103nm,1.0s						
PINE	**Pine Mountain**	**51.37**	**66**	IAmb	IAmb	16 41 46.4	
	comp=Z,114nm,0.9s						
PINE				PcP	**PcP**	**16 42 58.6**	**+1.7**
PDGK	**Podgornoye**	**51.42**	**293**	*i* P	**P**	**16 41 42.0**	**-1.7**
PDGK				pmax	pmax		
	comp=Z,59nm,0.9s						
G08A	**Pilot Rock**	**51.50**	**63**	P	**P**	**16 41 44.1**	**-0.1**
G08A				PcP	**PcP**	**16 42 58.3**	**+1.1**
J05D	**Fort Rock, OR**	**51.54**	**67**	P	**P**	**16 41 46.6**	**+2.1**
	baz=310,SNR=181						
SHLS	**Shalkode**	**51.55**	**293**	⇓*i*P	**P**	**16 41 41.5**	**-3.1**
	comp=Z,24nm,0.6s,baz=293						
SHLS	**Shalkode**	**51.55**	**293**	*d i*P	**P**	**16 41 41.5**	**-3.1**
SHLS				pmax	pmax		
	comp=Z,24nm,0.6s						
JCC	**Jacoby Creek,**	**51.56**	**71**	P	**P**	**16 41 45.2**	**+0.7**
JCC				PcP	**PcP**	**16 42 57.1**	**-0.2**
L04D	**Klamath Falls**	**51.63**	**68**	P	**P**	**16 41 47.2**	**+1.9**
	baz=311,SNR=67						
K04D	**Chiloquin, OR**	**51.67**	**68**	P	**P**	**16 41 47.4**	**+1.9**
	baz=311,SNR=10						
YBH	**Yreka Blue Hor**	**51.72**	**69**	P	**P**	**16 41 48.2**	**+2.3**
	comp=Z,87nm,0.8s,baz=341,slow=3.7,SNR=167						
YBH				LR	LR	17 02 39.8	
	comp=Z,127nm,18.1s,baz=312,slow=35						
WALA	**Waterton Lakes**	**51.75**	**57**	P	**P**	**16 41 46.8**	**+0.8**
WALA				IAmb	IAmb	16 41 48.0	
	comp=Z,123nm,0.9s						
WALA				PcP	**PcP**	**16 42 59.5**	**+1.4**
KPKS	**Kokpek**	**51.78**	**294**	⇓*i*P	**P**	**16 41 45.0**	**-1.3**
	comp=Z,36nm,1.1s,baz=294						
KPKS	**Kokpek**	**51.78**	**294**	*d i*P	**P**	**16 41 45.0**	**-1.3**
KPKS				pmax	pmax		
	comp=Z,36nm,1.1s						
UZB	**Uzynbulak**	**51.80**	**293**	*e*P	**P**	**16 41 45.1**	**-1.4**
	comp=Z,22nm,1.4s,baz=293						
UZB	**Uzynbulak**	**51.80**	**293**	*e*P	**P**	**16 41 45.1**	**-1.4**
UZB				pmax	pmax		
	comp=Z,22nm,1.4s						
M02C	**Callahan**	**51.86**	**69**	P	**P**	**16 41 49.4**	**+2.5**
	baz=311,SNR=52						
I07A	**Izee**	**51.98**	**65**	P	**P**	**16 41 48.5**	**+0.7**
F10A	**Beach Ranch, E**	**51.99**	**62**	IAmb	IAmb	16 41 49.9	
	comp=Z,60nm,0.9s						
SVE	**Sverdlovsk**	**52.05**	**316**	*ce*P	**P**	**16 41 46.9**	**-1.1**
SVE				pmax	pmax		
	comp=Z,44nm,1.3s						
K05A	**Summer Lake**	**52.09**	**67**	P	**P**	**16 41 50.5**	**+1.8**
K05A				IAmb	IAmb	16 41 51.5	
	comp=Z,95nm,0.8s						
K05A				PcP	**PcP**	**16 43 00.7**	**+1.1**
M04C	**Macdoel**	**52.18**	**68**	P	**P**	**16 41 51.2**	**+1.9**
	baz=311,SNR=40						
SATY	**Saty**	**52.20**	**294**	⇓*i*P	**P**	**16 41 48.4**	**-1.0**
	comp=Z,31nm,1.2s,baz=294						
SATY	**Saty**	**52.20**	**294**	*d i*P	**P**	**16 41 48.4**	**-1.0**
SATY				pmax	pmax		
	comp=Z,31nm,1.2s						
N02D	**Trinity Center**	**52.22**	**70**	P	**P**	**16 41 51.9**	**+2.3**
	baz=311,SNR=81						
UPNV	**Upernavik**	**52.35**	**13**	⇓*i*P	**P**	**16 41 50.0**	**0.0**
UPNV				IAmb	IAmb	16 41 50.6	
	comp=Z,59nm,0.9s						
CHKK	**Chushkaly**	**52.46**	**295**	*e*P	**P**	**16 41 49.4**	**-1.9**
	baz=295						
CHKK	**Chushkaly**	**52.46**	**295**	*e*P	**P**	**16 41 49.3**	**-1.9**
WDC	**Whiskeytown Da**	**52.57**	**70**	P	**P**	**16 41 53.7**	**+1.7**
WDC				pmax	pmax		
	comp=Z,147nm,1.1s						
WDC	**Whiskeytown Da**	**52.57**	**70**	P	**P**	**16 41 53.7**	**+1.7**
WDC				IAmb	IAmb	16 41 55.2	
	comp=Z,147nm,1.1s						
LKP	**Lekhapani**	**52.67**	**267**	*e*P	**P**	**16 41 53.0**	**+0.1**
LKP				IAmb	IAmb	16 41 55.0	
	comp=Z,58nm,0.6s						
LKP				*i* x	x	16 43 02.1	
BMO	**Blue Mountains**	**52.68**	**63**	P	**P**	**16 41 53.9**	**+1.0**
BMO				pmax	pmax		
	comp=Z,86nm,1.1s						
BMO	**Blue Mountains**	**52.68**	**63**	P	**P**	**16 41 53.9**	**+1.0**
BMO				IAmb	IAmb	16 41 55.2	
	comp=Z,86nm,1.1s						
O02D	**Mt. Diablo Mer**	**52.70**	**71**	P	**P**	**16 41 55.4**	**+2.3**
	baz=312,SNR=50						
LVZ	**Lovozero**	**52.72**	**337**	P	**P**	**16 41 51.2**	**-1.6**
LVZ				pmax	pmax		
	comp=Z,47nm,0.9s						
LVZ	**Lovozero**	**52.72**	**337**	P	**P**	**16 41 51.2**	**-1.6**
HAMF	**Hammerfest**	**52.76**	**343**	*e*P	**P**	**16 41 51.2**	**-1.8**
KUU	**Kurty**	**52.79**	**296**	⇓*i*P	**P**	**16 41 51.6**	**-2.2**
	comp=Z,50nm,0.7s,baz=296						
KUU	**Kurty**	**52.79**	**296**	*d i*P	**P**	**16 41 51.5**	**-2.2**
KUU				pmax	pmax		
	comp=Z,50nm,0.7s						
MDOK	**Medeo**	**52.88**	**295**	*i* P	**P**	**16 41 53.2**	**-1.4**
	baz=295						
MDOK	**Medeo**	**52.88**	**295**	*i* P	**P**	**16 41 53.1**	**-1.4**
KEV	**Kevo**	**52.88**	**341**	P	**P**	**16 41 53.0**	**-0.9**
KEV				pmax	pmax		
	comp=Z,165nm,1.8s						
KEV	**Kevo**	**52.88**	**341**	P	**P**	**16 41 53.0**	**-0.9**
KEV				IAmb	IAmb	16 42 53.8	
	comp=Z,165nm,1.8s						
AAA	**Alma-Ata**	**52.92**	**295**	⇓*i*P	**P**	**16 41 53.6**	**-1.2**
	comp=Z,21nm,0.7s,baz=295						
AAA	**Alma-Ata**	**52.92**	**295**	*d i*P	**P**	**16 41 53.5**	**-1.2**
AAA				pmax	pmax		
	comp=Z,21nm,0.7s						
MOD	**Modoc Plateau**	**52.96**	**67**	P	**P**	**16 41 56.6**	**+1.4**
TNSS	**Tian-Shan**	**53.02**	**295**	*e*P	**P**	**16 41 54.4**	**-1.5**
	baz=294						
TNSS	**Tian-Shan**	**53.02**	**295**	*e*P	**P**	**16 41 54.3**	**-1.5**
MSO	**Missoula**	**53.17**	**59**	P	**P**	**16 41 57.4**	**+0.8**
	baz=311,SNR=51						
MSO	**Missoula**	**53.17**	**59**	P	**P**	**16 41 56.9**	**+0.3**
MSO				IAmb	IAmb	16 41 58.7	
	comp=Z,150nm,1.2s						
DBG	**Daneborg**	**53.17**	**360**	*i* P	**P**	**16 41 55.1**	**-0.9**
ARU	**Arti**	**53.18**	**317**	*d i*P	**P**	**16 41 54.7**	**-1.6**
ARU				*PP	**pP**	**16 42 17.7**	**-0.3**
ARU						16 42 57.7	
ARU				S	**S**	**16 49 19.2**	**-0.7**
ARU						16 51 30.8	
ARU				pmax	pmax		
	comp=Z,72nm,0.8s						
ARU	**Arti**	**53.18**	**317**	P	**P**	**16 41 54.6**	**-1.7**
ARU				IAmb	IAmb	16 41 55.8	
	comp=Z,62nm,0.7s						
O03E	**Paynes Creek**	**53.18**	**70**	P	**P**	**16 41 58.1**	**+1.4**
	baz=312,SNR=126						
APA	**Apatity**	**53.27**	**337**	⇓*i*P	**P**	**16 41 54.5**	**-2.3**
APA				pmax	pmax		
	comp=Z,32nm,0.9s						
APA				MLR	MLR		
	comp=Z,1µm,18.0s						
BTLS	**Baital**	**53.28**	**298**	⇓*i*P	**P**	**16 41 55.5**	**-1.8**
	comp=Z,24nm,1.1s,baz=298						
BTLS	**Baital**	**53.28**	**298**	*d i*P	**P**	**16 41 55.4**	**-1.8**
BTLS				pmax	pmax		
	comp=Z,24nm,1.1s						
ARA0	**ARCESS Array S**	**53.36**	**341**	*e*P	**P**	**16 41 55.3**	**-2.2**

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ARCES ARCESS Array B   53.36 341    P       P        16 41 56.5 -1.0
      comp=Z,28nm,0.9s,baz=42,slow=6.1,SNR=32
ARCES                               PcP     PcP      16 43 03.2 -0.4
      comp=Z,10nm,0.8s,baz=35,slow=4.4,SNR=5.4
ARCES                               LR      LR       17 08 00.9
      comp=Z,254nm,21.7s,baz=35,slow=40
ARCES ARCESS Array B   53.36 341    P       P        16 41 56.4 -1.1
ARCES                               PcP     PcP      16 43 03.5 -0.1
WVOR  Wild Horse Val   53.54  66    IAmb    IAmb     16 42 02.3
      comp=Z,124nm,1.1s
FFC   Flin Flon        53.68  45    P       P        16 42 00.5 +0.5
FFC                                 IAmb    IAmb     16 42 01.9
      comp=Z,86nm,0.8s
FFC                                 PcP     PcP      16 43 05.5 +0.4
ZIRO  ZIRO             53.74 269   eP       P        16 42 00.1 -0.9
ZIRO                                IAmb    IAmb     16 42 02.8
      comp=Z,19nm,0.3s
LSA   Lhasa            53.81 273    P       P        16 42 01.6 -0.3
LSA   Lhasa            53.81 273   iP       P        16 42 01.6 -0.3
      SNR=19
LSA   Lhasa            53.81 273    P       P        16 42 02.0 +0.1
LSA                                 pmax    pmax
      comp=Z,15nm,0.8s
LSA   Lhasa            53.81 273    P       P        16 42 02.0 +0.1
LSA   Lhasa            53.81 273    P       P        16 42 02.0 +0.1
TKM2  Tokmak 2         53.84 295    P       P        16 42 00.1 -1.5
      SNR=16
TKM2  Tokmak 2         53.84 295   iP       P        16 42 00.0 -1.6
TKM2                                pmax    pmax
      comp=Z,33nm,0.8s
NUUG  Nuugaatsiaq      53.87  12   iP       P        16 42 00.9 -0.2
ULHL  Ulahol           53.93 294    P       P        16 42 01.3 -1.1
      SNR=23
MCCM  Marconi Confer   54.01  72    IAmb    IAmb     16 42 05.1
      comp=Z,121nm,0.9s
SGDS  Sogindy          54.02 296⇓iP       P        16 42 01.6 -1.2
      baz=296
SGDS  Sogindy          54.02 296d iP       P        16 42 01.5 -1.2
FCC   Fort Churchill   54.10  38    P       P        16 42 03.5 +0.6
FCC                                 pmax    pmax
      comp=Z,98nm,0.9s
FCC   Fort Churchill   54.10  38    P       P        16 42 03.5 +0.6
FCC                                 IAmb    IAmb     16 42 04.4
      comp=Z,98nm,0.9s
USP   Ospenovka        54.21 296    P       P        16 42 03.1 -1.0
      SNR=99
MOKO  MOKOCHONG        54.22 267   eP       P        16 42 04.0 -0.5
MOKO                                IAmb    IAmb     16 42 06.4
      comp=Z,38nm,0.6s
KTK1  Kautokeino       54.24 342   eP       P        16 42 02.9 -0.9
CHMS  Chumysh          54.25 296    P       P        16 42 03.3 -1.1
      SNR=46
JETT  Jettan, Norway   54.28 343   eP       P        16 42 03.4 -0.8
SUMG  Summit           54.32   6   iP       P        16 42 05.1 +0.2
      comp=Z,229nm,0.8s
SUMG  Summit           54.32   6    P       P        16 42 05.1 +0.2
SUMG                                pmax    pmax
      comp=Z,95nm,0.8s
SUMG  Summit           54.32   6    P       P        16 42 05.0 +0.2
SUMG                                IAmb    IAmb     16 42 06.6
      comp=Z,95nm,0.8s
SUMG  Summit           54.32   6   iP       P        16 42 05.1 +0.2
SUMG                                IAmb    IAmb     16 42 06.8
      comp=Z,230nm,0.8s
KBK   Karagaybulak     54.37 295    P       P        16 42 04.4 -1.0
      SNR=40
MFID  Camas Ranch      54.42  63    IAmb    IAmb     16 42 08.2
      comp=Z,78nm,1.1s
TRO   Tromso           54.46 344   eP       P        16 42 03.2 -2.3
EGMT  Eagleton         54.52  56    P       P        16 42 06.9 +0.6
      baz=312,SNR=5.9
EGMT  Eagleton         54.52  56    IAmb    IAmb     16 42 08.1
      comp=Z,106nm,1.1s
AFDM  Forest Hills D   54.56  70    IAmb    IAmb     16 42 09.4
      comp=Z,98nm,1.1s
AAK   Ala-Archa        54.63 296    P       P        16 42 06.3 -1.0
      SNR=63
AAK   Ala-Archa        54.63 296   iP       P        16 42 06.2 -1.0
      SNR=135
AAK   Ala-Archa        54.63 296   iP       P        16 42 06.1 -1.2
AAK                                 pmax    pmax
      comp=Z,181nm,0.9s
AAK   Ala-Archa        54.63 296    P       P        16 42 06.3 -1.0
AAK                                 IAmb    IAmb     16 42 07.4
      comp=Z,72nm,0.9s
AAK                                 PcP     PcP      16 43 09.4 +0.3
AAK   Ala-Archa        54.63 296    P       P        16 42 06.5 -0.8
TMCR  Tamitsa          54.74 333   eP       P        16 42 05.1 -2.4
TMCR                                pmax    pmax
      comp=Z,119nm,0.9s
DLMT  Dillon           54.84  60    IAmb    IAmb     16 42 11.1
      comp=Z,73nm,1.1s
UCH   Uchtor           54.90 295    P       P        16 42 08.5 -1.1
      SNR=16
KOHI  KOHIMA           54.90 267   eP       P        16 42 08.7 -0.8
KOHI                                IAmb    IAmb     16 42 12.6
      comp=Z,32nm,0.8s
KOHI                               ix       x        16 43 10.5
RUBR  Rubicon Trail    54.96  70    IAmb    IAmb     16 42 12.7
      comp=Z,105nm,0.8s
EKS2  Erkin-Say        55.01 296    P       P        16 42 09.1 -0.9
      SNR=89
TEZP  TEZPUR           55.04 269   eP       P        16 42 08.4 -1.8
TEZP                               ix       x        16 43 10.1
MCMT  McKenzie Canyo   55.07  60    P       P        16 42 11.2 +0.7
HLID  Hailey           55.09  62    P       P        16 42 12.1 +1.5
      baz=312,SNR=59
HLID  Hailey           55.09  62    P       P        16 42 11.7 +1.1
HLID                                PcP     PcP      16 43 12.0 +1.1
BCYI  Bear Canyon      55.12  61    P       P        16 42 11.7 +0.8
BOZ   Bozeman (W)      55.19  59    P       P        16 42 12.6 +1.3
      baz=312,SNR=117
BOZ   Bozeman (W)      55.19  59    IAmb    IAmb     16 42 13.6
      comp=Z,80nm,0.8s
KIRV  Kirov            55.24 323ceP       P        16 42 10.3 -0.9
NONG  Nongkai          55.34 253    P       P        16 42 13.0 +0.5
      comp=Z,82nm,1.0s
AML   Almayashu        55.41 296    P       P        16 42 12.4 -0.8
      SNR=29
YERR  Yerington        55.52  69    P       P        16 42 15.6 +1.8
QLMT  Earthquake Lak   55.81  59    P       P        16 42 16.8 +0.9
KSH   Kashi            55.93 292    P       P        16 42 18.6 +2.0
KSH                                 sP      sP       16 42 49.5 +1.1
KSH                                 PcP     PcP      16 43 16.3 +2.1
KSH                                 S       S        16 49 57.9 +0.3
KSH                                 ScS     ScS      16 51 54.9 -2.3
KSH                                 pmax    pmax
      comp=Z,26nm,0.9s
KSH                                 pmax    pmax
      comp=Z,190nm,5.7s
KSH                                 LR      LR
      comp=Z,280nm,7.1s
KSH                                 LR      LR
      comp=Z,440nm,9.9s
KSH                                 LR      LR
      comp=Z,2µm,20.5s
GCMT  Greycliff        56.07  57    P       P        16 42 19.2 +1.6
YHH   Holmes Hill      56.14  59    P       P        16 42 19.3 +1.1
DZA   Taraz            56.17 298⇓iP       P        16 42 16.7 -1.6
      comp=Z,8.7nm,0.7s,baz=298
DZA   Taraz            56.17 298d iP       P        16 42 16.6 -1.6
DZA                                 pmax    pmax
      comp=Z,9.0nm,0.7s
UBPT  Khong Chiam      56.22 249    P       P        16 42 19.0 +0.2
      comp=Z,1µmcomp=Z,80nm,1.3s
UBPT  Khong Chiam      56.22 249    P       P        16 42 19.7 +1.0
UBPT                                IAmb    IAmb     16 42 21.0
      comp=Z,132nm,1.0s
ILULI Ilulissat        56.30  12   iP       P        16 42 18.1 -0.5
      comp=Z,95nm,0.7s
ILULI Ilulissat        56.30  12    P       P        16 42 18.1 -0.5
ILULI                               pmax    pmax
      comp=Z,95nm,0.7s
ILULI Ilulissat        56.30  12    P       P        16 42 18.1 -0.5
ILULI                               IAmb    IAmb     16 42 19.3
      comp=Z,95nm,0.7s
ILULI Ilulissat        56.30  12   iP       P        16 42 18.1 -0.5
ILULI                               IAmb    IAmb     16 42 19.1
      comp=Z,95nm,0.7s
SHL   Shillong         56.37 269    P       P        16 42 18.9 -1.1
SHL                                 pmax    pmax
      comp=Z,28nm,0.8s
SHL   Shillong         56.37 269   eP       P        16 42 18.3 -1.6
SHL                                 IAmb    IAmb     16 42 21.4
      comp=Z,99nm,1.8s
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SHL                                ix       x        16 43 16.0
SHL   Shillong         56.37 269    P       P        16 42 18.9 -1.1
SHL   Shillong         56.37 269    P       P        16 42 18.9 -1.1
      SNR=12
NVAR  Mina Array Bea   56.44  69    P       P        16 42 22.3 +2.0
      comp=Z,85nm,0.8s,baz=292,slow=7.6,SNR=572
NVAR                                LR      LR       17 05 35.8
      comp=Z,144nm,18.8s,baz=303,slow=35
NVAR  Mina Array Bea   56.44  69    P       P        16 42 21.7 +1.3
LHV   Little Huntoon   56.45  69    P       P        16 42 22.4 +2.3
KK31  Karatay Array    56.47 299   iP       P        16 42 18.3 -2.0
KK31                                pmax    pmax
      comp=Z,39nm,0.8s
KK31  Karatay Array    56.47 299    IAmb    IAmb     16 42 19.8
      comp=Z,49nm,0.8s
KKAR  Karatay Array    56.47 299    P       P        16 42 18.2 -2.1
KKAR                                                 16 43 15.4
KKAR                                pmax    pmax
      comp=Z,49nm,0.9s
KKAR  Karatay Array    56.47 299    P       P        16 42 18.2 -2.1
KKAR                                IAmb    IAmb     16 42 19.8
      comp=Z,49nm,0.8s
KKAR                                        PcP      16 43 14.7 -1.4
KKAR  Karatay Array    56.47 299    P       P        16 42 18.6 -1.7
KKAR                                PcP     PcP      16 43 15.4 -0.7
NV11  Mina Array Sit   56.52  69    IAmb    IAmb     16 42 23.9
      comp=Z,106nm,1.0s
LKWY  Lake             56.53  59    IAmb    IAmb     16 42 24.9
      comp=Z,108nm,0.9s
PMPB  Monarch Peak     56.54  73    IAmb    IAmb     16 42 31.4
      comp=Z,99nm,1.2s
YMP   Mirror Lake Pl   56.54  59    P       P        16 42 22.8 +1.7
MDPB  Devils Postpil   56.55  70    IAmb    IAmb     16 42 24.4
      comp=Z,97nm,1.0s
H17A  Grant Village    56.55  59    P       P        16 42 24.2 +3.0
      baz=313,SNR=126
H17A  Grant Village    56.55  59    P       P        16 42 23.6 +2.4
ELK   Elko             56.56  65    LR      LR       17 03 33.7
      comp=Z,181nm,21.5s,baz=323,slow=33
ELK   Elko             56.56  65    P       P        16 42 22.9 +1.7
ELK                                 pmax    pmax
      comp=Z,54nm,0.9s
ELK   Elko             56.56  65    P       P        16 42 22.9 +1.7
ELK                                 IAmb    IAmb     16 42 24.3
      comp=Z,54nm,0.8s
OMMB  Old Mammoth Mi   56.60  70    IAmb    IAmb     16 42 26.2
      comp=Z,70nm,1.0s
LOF   Lofoten          56.68 345   eP       P        16 42 20.8 -0.6
MLAC  Mammoth, Mammo56.69  70    P       P        16 42 24.7 +2.5
      baz=314,SNR=9.5
FLWY  Flagg Ranch      56.70  60    IAmb    IAmb     16 42 25.6
      comp=Z,96nm,0.9s
RLMT  Red Lodge        56.73  58    P       P        16 42 24.2 +1.8
      baz=314,SNR=87
KLMR  Klimovskoe       56.88 329   eP       P        16 42 19.5 -3.3
KLMR                               e*PP     pP       16 42 43.9 -1.2
KLMR                                pmax    pmax
      comp=Z,93nm,0.8s
KLMR  Klimovskoe       56.88 329   eP       P        16 42 19.6 -3.3
KLMR                                AMP              16 42 23.1
      comp=Z,93nm,0.8s
KLMR                               epP      pP       16 42 43.9 -1.2
KLMR                                LQ      LQ       17 02 21.0
KLMR                                LQ      LQ       17 02 21.0
KLMR                                LR      LR       17 05 36.7
KHON  Khomkaen         56.89 252    P       P        16 42 25.2 +1.6
      comp=Z,137nm,1.0s
DGMT  Dagmar           56.94  52    P       P        16 42 24.3 +0.8
      baz=314,SNR=14
DGMT  Dagmar           56.94  52    P       P        16 42 24.1 +0.6
DGMT                                IAmb    IAmb     16 42 25.6
      comp=Z,107nm,1.0s
SCO   Scoresbysund     57.02   0   iP       P        16 42 24.6 +0.9
      comp=Z,15nm,0.8s
SCO   Scoresbysund     57.02   0   iP       P        16 42 24.6 +0.9
SCO                                 pmax    pmax
      comp=Z,15nm,0.8s
SCO   Scoresbysund     57.02   0   iP       P        16 42 24.6 +0.9
SCO                                 IAmb    IAmb     16 42 25.5
      comp=Z,15nm,0.8s
LAMP  Lampang          57.04 257    P       P        16 42 26.0 +1.4
      comp=Z,520nmcomp=Z,56nm,0.8s
CM34  Chiang Mai Arr   57.07 257    P       P        16 42 24.0 -0.8
GTK   Tadong           57.07 273   eP       P        16 42 23.7 -1.2
GTK                                ix       x        16 43 19.8
LOHW  Long Hollow      57.08  60    IAmb    IAmb     16 42 28.1
      comp=Z,125nm,1.1s
RABL  Rabaul           57.08 188    P       P        16 42 25.9 +1.1
FAUS  Fauske           57.09 344   eP       P        16 42 23.6 -0.6
SNOW  Snow King Moun   57.10  60    IAmb    IAmb     16 42 28.5
      comp=Z,100nm,1.0s
UTTA  Uttaradit        57.11 255    P       P        16 42 25.5 +0.5
      comp=Z,395nmcomp=Z,45nm,0.9s
LAO   LASA Array       57.19  55    P       P        16 42 26.9 +1.5
      baz=314,SNR=19
PAGB  Antelope Grade   57.20  73    P       P        16 42 26.9 +1.4
PAGB                                IAmb    IAmb     16 42 28.5
      comp=Z,84nm,0.9s
CM35  Chiang Mai Arr   57.20 257    P       P        16 42 25.0 -0.7
CM33  Chiang Mai Arr   57.22 258    P       P        16 42 25.0 -0.8
CMMT  Chiang Mai       57.22 258    P       P        16 42 24.7 -1.2
      comp=Z,340nmcomp=Z,25nm,0.8s
CHTO  Chiang Mai       57.22 258    P       P        16 42 25.5 -0.4
CHTO                                pmax    pmax
      comp=Z,29nm,0.8s
CHTO  Chiang Mai       57.22 258    P       P        16 42 25.5 -0.4
CHTO  Chiang Mai       57.22 258    P       P        16 42 26.2 +0.3
DLV   T  Lat           57.26 244    IAmb    IAmb     16 42 29.3
      comp=Z,83nm,0.9s
VOG   Valley Oaks Go   57.28  72    P       P        16 42 27.4 +1.3
      baz=315
CM36  Chiang Mai Arr   57.36 257    P       P        16 42 27.0 +0.1
IUG   Iuzhnay          57.38 298⇓eP       P        16 42 25.7 -1.1
      comp=Z,37nm,0.8s,baz=298
IUG   Iuzhnay          57.38 298deP       P        16 42 25.7 -1.1
IUG                                 pmax    pmax
      comp=Z,37nm,0.8s
CM32  Chiang Mai Arr   57.41 258    P       P        16 42 28.0 +0.8
TIN   Tinemaha, Big    57.43  70    P       P        16 42 29.5 +2.2
      baz=314,SNR=33
CM09  Chiang Mai Arr   57.48 257    P       P        16 42 28.0 +0.3
      comp=Z,232nmcomp=Z,26nm,0.9s
AB31  Akbulak array    57.50 310   iP       P        16 42 25.4 -2.0
AB31                                pmax    pmax
      comp=Z,37nm,0.8s
ABKAR Akbulak array    57.50 310    P       P        16 42 24.9 -2.5
ABKAR                               PcP     PcP      16 43 19.4 -0.6
ABKAR Akbulak array    57.50 310    IAmb    IAmb     16 42 26.8
      comp=Z,46nm,0.9s
CM31  Chiang Mai Arr   57.50 257    P       P        16 42 28.0 +0.2
      comp=Z,9µmcomp=Z,776nm,0.8s
CMAR  Chiang Mai Arr   57.50 257    P       P        16 42 27.9 +0.1
      comp=Z,16nm,0.8s,baz=27,slow=6.7,SNR=93
CMAR                                PcP     PcP      16 43 21.4 +1.0
      comp=Z,11nm,0.8s,baz=25,slow=4.1,SNR=8.2
CMAR                                ScP     ScP      16 47 10.9 -1.1
      comp=Z,8.8nm,1.0s,baz=16,slow=4.4,SNR=14
CMAR                                LR      LR       17 10 16.1
      comp=Z,291nm,18.7s,baz=90,slow=39
CMAR                                PKPPKP  P'P'df   17 12 12.9 -1.2
      comp=Z,0.4nm,0.5s,baz=232,slow=2.8,SNR=4.1
CMAR                                PKP2bc           17 12 25.8
      comp=Z,1.3nm,0.9s,baz=232,slow=3.7,SNR=6.4
CMAR  Chiang Mai Arr   57.50 257    P       P        16 42 27.7 -0.1
CMAR                                ScP     ScP      16 47 11.2 -0.8
CMAR                                        P'P'df   17 12 20.6 +6.5
CM15  Chiang Mai Arr   57.52 257    P       P        16 42 28.4 +0.5
      comp=Z,241nmcomp=Z,27nm,0.8s
CM02  Chiang Mai Arr   57.52 257    P       P        16 42 28.0 +0.1
      comp=Z,273nmcomp=Z,33nm,0.9s
CM01  Chiang Mai Arr   57.52 257    P       P        16 42 28.0  0.0
      comp=Z,307nmcomp=Z,38nm,0.9s
CM04  Chiang Mai Arr   57.52 257    P       P        16 42 28.0  0.0
      comp=Z,239nmcomp=Z,31nm,0.9s
CM05  Chiang Mai Arr   57.54 257    P       P        16 42 28.4 +0.3
      comp=Z,218nmcomp=Z,29nm,0.9s
CM13  Chiang Mai Arr   57.55 257    P       P        16 42 28.6 +0.4
      comp=Z,204nmcomp=Z,28nm,0.8s
TAPN  Taplejung        57.59 273   eP       P        16 42 27.9 -0.8
      comp=Z,39nm,0.3s
PHIT  Phitsanulok      57.62 255    P       P        16 42 32.0 +3.3
      comp=Z,90nm,1.0s
SMMC  Simmler          57.63  73    P       P        16 42 30.5 +1.8
      baz=315,SNR=12
ICESG Greenland Ices   57.64   8   iP       P        16 42 29.1 +0.6
ICESG                               IAmb    IAmb     16 42 29.5
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      comp=Z,64nm,0.6s
CHAI  Chaiyaphum       57.72 253    P       P        16 42 29.9 +0.5
      comp=Z,603nmcomp=Z,39nm,1.2s
VES   Vestal, Richgr   57.79  72    P       P        16 42 30.6 +1.0
      baz=315,SNR=12
SUKH  Sukhothai        57.85 256    P       P        16 42 31.9 +1.6
      comp=Z,24nm,0.9s
MYLDM Lahad Datu       57.95 230    P       P        16 42 32.8 +1.9
MYLDM                               IAmb    IAmb     16 42 34.9
      comp=Z,86nm,1.3s
CWC   Cottonwood Cre   57.95  71    P       P        16 42 32.7 +1.7
      baz=315
GRAC  Grapevine Rang   57.97  70    P       P        16 42 33.0 +2.0
      baz=315,SNR=9.2
SAIH  SAIHA            57.99 265   eP       P        16 42 30.1 -1.2
SAIH                                IAmb    IAmb     16 42 33.3
      comp=Z,29nm,0.7s
SAIH                               ix       x        16 43 22.5
R11A  Troy Canyon, C   58.03  67    P       P        16 42 32.9 +1.3
      baz=315,SNR=200
R11A  Troy Canyon, C   58.03  67    P       P        16 42 32.3 +0.8
R11A                                IAmb    IAmb     16 42 34.2
      comp=Z,81nm,0.9s
PKM   Mcpherson Peak   58.04  73    P       P        16 42 33.5 +1.9
      baz=315,SNR=30
ODAN  Odare            58.14 273   eP       P        16 42 31.4 -1.1
      comp=Z,29nm,0.5s
TNTI  Ternate          58.18 218    IAmb    IAmb     16 42 34.3
      comp=Z,53nm,1.0s
TNTI  Ternate          58.18 218    P       P        16 42 32.4 -0.1
      comp=Z,60nm,1.1s
BW06  Boulder Array    58.22  60    P       P        16 42 34.3 +1.5
      baz=315,SNR=227
PD31  Pinedale Array   58.22  60    P       P        16 42 33.9 +1.1
PDAR  Pinedale Array   58.22  60    P       P        16 42 34.2 +1.4
      comp=Z,151nm,0.9s,baz=317,slow=2.7,SNR=841
PDAR                                LR      LR       17 07 53.9
      comp=Z,123nm,21.9s,baz=328,slow=36
PDAR                                PKPPKP  P'P'df   17 12 16.2 +1.2
      comp=Z,1.1nm,0.9s,baz=90,slow=3.0,SNR=3.6
PDAR  Pinedale Array   58.22  60    P       P        16 42 33.6 +0.8
KONS  Konsvik          58.25 345   eP       P        16 42 31.4 -0.9
DUG   Dugway, Tooele   58.27  64    P       P        16 42 35.0 +1.9
      baz=315,SNR=112
ISA   Isabella, Lake   58.27  72    P       P        16 42 33.7 +0.6
      baz=315,SNR=59
ISA   Isabella, Lake   58.27  72    IAmb    IAmb     16 42 35.0
      comp=Z,70nm,0.9s
KKM   Kota Kinabalu    58.27 233    P       P        16 42 34.9 +1.5
KKM                                 IAmb    IAmb     16 42 36.6
      comp=Z,146nm,1.5s
GUN   Gumba            58.29 275   eP       P        16 42 32.4 -1.3
      comp=Z,34nm,0.3s
MHMT  Maesarieng       58.32 258    P       P        16 42 33.0 -0.5
      comp=Z,62nm,1.0s
SWI   Sorong           58.32 213    P       P        16 42 34.5 +1.0
      comp=Z,2µmcomp=Z,128nm,1.3s
SIJI  Sorong           58.33 213    P       P        16 42 35.3 +1.7
      comp=Z,90nm,1.1s,baz=5.8,slow=8.2,SNR=14
SBC   Santa Barbara    58.41  74    P       P        16 42 35.8 +1.8
      baz=315
ARVC  Arvin            58.44  72    P       P        16 42 34.8 +0.6
      baz=315
SFJD  Kangerlussuaq    58.44  13   iP       P        16 42 33.5 -0.2
SFJD  Kangerlussuaq    58.44  13   iP       P        16 42 33.5 -0.2
SFJD  Kangerlussuaq    58.44  13    P       P        16 42 33.2 -0.5
SFJD                                IAmb    IAmb     16 42 34.5
      comp=Z,64nm,0.6s
SFJD  Kangerlussuaq    58.44  13   iP       P        16 42 33.6 -0.2
MPMC  Manual Prospec   58.56  71    P       P        16 42 36.7 +1.5
      baz=315,SNR=132
RAMN  Ramite           58.56 274   eP       P        16 42 34.4 -1.0
      comp=Z,76nm,0.3s
FURC  Furnace Creek,   58.62  70    P       P        16 42 37.5 +2.1
      baz=315,SNR=139
TPNV  Topopah Spring   58.63  69    P       P        16 42 37.3 +1.6
      baz=315,SNR=218
KKN   Kakani           58.74 276   eP       P        16 42 35.7 -1.0
      comp=Z,60nm,0.5s
SCZ2  Santa Cruz Isl   58.78  74    P       P        16 42 37.8 +1.2
      baz=316,SNR=8.7
PKI   Pulchoki         58.82 275   eP       P        16 42 36.2 -1.2
      comp=Z,69nm,0.7s
PKIN  Phulchoki        58.83 275   eP       P        16 42 36.1 -1.2
      comp=Z,58nm,0.6s
LRMC  Laurel Mtn Rad   58.85  71    P       P        16 42 38.4 +1.2
      baz=315,SNR=101
OSI   Osito Audit: C   58.87  73    P       P        16 42 38.8 +1.6
      baz=316,SNR=12
OSI   Osito Audit: C   58.87  73    P       P        16 42 38.4 +1.1
GKN   Gorkha           58.98 276   eP       P        16 42 37.0 -1.2
      comp=Z,26nm,0.2s
DMN   Daman            58.98 276   eP       P        16 42 37.4 -1.0
      comp=Z,68nm,0.7s
EDW2  Edwards Air Fo   59.10  72    P       P        16 42 40.3 +1.5
      baz=316,SNR=118
SRAK  Srakaew          59.20 251    P       P        16 42 38.0 -1.6
      comp=Z,12µmcomp=Z,1µm,1.0s
UMPA  Umpang Tak       59.31 256    P       P        16 42 42.7 +2.3
      comp=Z,749nmcomp=Z,73nm,0.7s
DECC  Green Verdugo    59.35  73    P       P        16 42 42.1 +1.6
      baz=316,SNR=18
SHOC  Shoshone, Teco   59.36  70    P       P        16 42 42.1 +1.5
      baz=316,SNR=9.2
SNCC  San Nicolas Is   59.37  74    P       P        16 42 42.2 +1.5
      baz=316
UTHA  Uthaitani        59.48 255    P       P        16 42 42.9 +1.4
      comp=Z,666nmcomp=Z,36nm,0.8s
ULM   Lac du Bonnet    59.48  46    P       P        16 42 41.8 +0.6
      comp=Z,51nm,0.7s,baz=315,slow=7.0,SNR=117
ULM                                 LR      LR       17 09 36.6
      comp=Z,230nm,18.6s,baz=298,slow=37
ULM   Lac du Bonnet    59.48  46c iP       P        16 42 41.6 +0.5
ULM   Lac du Bonnet    59.48  46    IAmb    IAmb     16 42 42.7
      comp=Z,57nm,0.8s
GSC   Goldstone, Bar   59.48  71    P       P        16 42 43.0 +1.4
      baz=316,SNR=101
GSC   Goldstone, Bar   59.48  71    P       P        16 42 42.9 +1.4
GSC                                 pmax    pmax
      comp=Z,129nm,0.9s
GSC   Goldstone, Bar   59.48  71    P       P        16 42 42.9 +1.3
MDND  Maddock          59.55  50    P       P        16 42 43.1 +1.4
      baz=316,SNR=28
SHPR  Sheep Range      59.56  69    P       P        16 42 43.5 +1.4
SHPR                                IAmb    IAmb     16 42 45.1
      comp=Z,66nm,1.1s
RRX   Edison Barstow   59.68  71    P       P        16 42 44.4 +1.7
      baz=316
BFSC  Mount Baldy Ra   59.75  72    P       P        16 42 44.5 +1.1
      baz=316,SNR=47
FMP   Fort Macarthur   59.76  73    P       P        16 42 44.5 +1.2
      baz=316
MVU   Marysvale        59.79  65    P       P        16 42 45.4 +1.6
K22A  Casper           59.88  58    P       P        16 42 45.3 +1.0
      baz=316,SNR=13
K22A  Casper           59.88  58    IAmb    IAmb     16 42 46.6
      comp=Z,65nm,0.9s
P17A  Butcher Ranch,   59.91  63    P       P        16 42 45.8 +1.3
CIS   Catalina Islan   59.91  73    P       P        16 42 45.6 +1.2
      baz=316,SNR=16
HEC   Hector,Ludlow    60.09  71    P       P        16 42 47.3 +1.6
      baz=316,SNR=166
RSSD  Black Hills      60.09  56    P       P        16 42 46.9 +1.2
      baz=316
RSSD  Black Hills      60.09  56    P       P        16 42 46.7 +0.9
RSSD                                pmax    pmax
      comp=Z,224nm,0.8s
RSSD  Black Hills      60.09  56    P       P        16 42 46.7 +0.9
FIA1  FINESS Array S   60.13 336    IAmb    IAmb     16 42 45.3
      comp=Z,47nm,0.8s
FINES FINESS Array B   60.13 336    P       P        16 42 44.6 -0.7
      comp=Z,32nm,0.7s,baz=41,slow=6.8,SNR=106
FINES                               LR      LR       17 12 41.0
      comp=Z,449nm,19.3s,baz=22,slow=40
FINES FINESS Array B   60.13 336    P       P        16 42 44.4 -1.0
SCI2  San Clemente I   60.14  74    P       P        16 42 47.3 +1.4
      baz=316
BBRC  Big Bear Solar   60.16  72    P       P        16 42 47.7 +1.3
      baz=316,SNR=20
RWWY  Rawlins          60.21  59    IAmb    IAmb     16 42 47.8
      comp=Z,140nm,1.2s
NSS   Namsos           60.26 344   eP       P        16 42 45.5 -0.7
LCMT  Little Creek M   60.28  67    P       P        16 42 48.7 +1.6
PUL   Pulkovo          60.45 333ceP       P        16 42 46.9 -0.7
PUL                                 pmax    pmax
      comp=Z,180nm,0.5s
MURC  Murrieta         60.48  72    P       P        16 42 49.4 +1.2
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	baz=316,SNR=35						
GMRC	Granite Mounta	60.51	70	P	P	16 42 50.1	+1.5
	baz=316,SNR=97						
BELG	Belogornoye	60.52	319	*d i*P	P	16 42 46.7	-1.5
BELG				pmax	pmax		
	comp=Z,15nm,0.9s						
TOLI2	Tolitoli	60.54	225	IAmb	IAmb	16 42 50.6	
	comp=Z,108nm,1.1s						
KNTN	Kanton	60.60	146	P	P	16 42 50.3	+1.1
KNTN	Kanton	60.60	146	P	P	16 42 50.5	+1.4
SRDT	SRDT	60.62	254	P	P	16 42 49.0	-0.4
	comp=Z,18nm,1.7s						
PATY	Pattaya	60.75	252	P	P	16 42 51.0	+0.8
	comp=Z,111nm,1.0s						
O20A	White River Ci	60.78	61	P	P	16 42 51.8	+1.3
	baz=316,SNR=76						
DHRM	DHARAMSHALA	60.86	286	*i* P	P	16 42 47.8	-3.4
BELC	Belle Mtn. Jos	60.88	71	P	P	16 42 52.0	+0.9
	baz=316,SNR=83						
PFO	Pinyon Flats O	60.89	72	P	P	16 42 52.2	+1.0
	comp=Z,43nm,0.7s,baz=327,slow=6.3,SNR=64						
PFO	Pinyon Flats O	60.89	72	P	P	16 42 52.2	+1.0
	baz=316,SNR=34						
PFO	Pinyon Flats O	60.89	72	P	P	16 42 52.0	+0.7
PFO				IAmb	IAmb	16 42 52.9	
	comp=Z,49nm,0.8s						
TPFO	Pinon Flats	60.90	72	P	P	16 42 52.3	+1.1
	baz=316,SNR=32						
AGMN	Agassiz Nation	60.92	48	P	P	16 42 51.3	+0.2
	baz=318,SNR=40						
AGMN	Agassiz Nation	60.92	48	IAmb	IAmb	16 42 52.5	
	comp=Z,62nm,0.8s						
NUUK	Nuuk	60.92	15	*i* P	P	16 42 51.4	+0.7
NUUK				IAmb	IAmb	16 42 52.6	
	comp=Z,50nm,1.0s						
109C	Camp Elliot, M	61.04	73	P	P	16 42 53.3	+1.3
	baz=316,SNR=6.5						
109C	Camp Elliot, M	61.04	73	IAmb	IAmb	16 42 54.5	
	comp=Z,96nm,0.9s						
NEE2	Needles Airpor	61.12	70	P	P	16 42 53.6	+1.1
	baz=316,SNR=8.4						
SMLA	Simla	61.16	284	*e*P	P	16 42 50.7	-2.2
SMLA				IAmb	IAmb	16 42 53.1	
	comp=Z,69nm,0.4s						
SMLA				*i* pP	pP	16 43 06.4	-8.8
SMLA				*e*sP	PcP	16 43 35.2	+0.4
ISOG	Isortoq, Green	61.17	8	*i* P	P	16 42 52.2	-0.2
ANGG	Ammassalik, Gr	61.22	8	P	P	16 42 52.2	-0.5
ANGG				IAmb	IAmb	16 42 53.3	
	comp=Z,37nm,0.6s						
ANGG	Ammassalik, Gr	61.22	8	*i* P	P	16 42 52.6	-0.1
ANGG				IAmb	IAmb	16 42 53.3	
	comp=Z,34nm,0.6s						
U15A	North Rim	61.23	67	P	P	16 42 55.3	+1.6
U15A				IAmb	IAmb	16 42 56.7	
	comp=Z,75nm,1.1s						
IRM	Iron Mountain	61.26	71	P	P	16 42 55.1	+1.6
	baz=316,SNR=104						
D32A	Dogwood Acres,	61.26	49	P	P	16 42 53.9	+0.5
W13A	Hualapai Mount	61.29	69	P	P	16 42 55.4	+1.3
W13A				IAmb	IAmb	16 42 56.6	
	comp=Z,80nm,0.9s						
MONP2	Monument Peak	61.43	72	P	P	16 42 56.1	+1.1
	baz=317,SNR=32						
BC3	Big Chuckawall	61.44	71	P	P	16 42 56.0	+1.1
	baz=317,SNR=94						
BAR	Barrett	61.44	73	IAmb	IAmb	16 42 57.1	
	comp=Z,64nm,0.9s						
N23A	Red Feather La	61.44	59	P	P	16 42 56.5	+1.5
	baz=317,SNR=56						
PHET	Kaeng Krachan	61.47	253	P	P	16 42 56.8	+1.7
	comp=Z,2µmcomp=Z,210nm,0.9s						
MOS	Moscow	61.55	327	*e*P	P	16 42 51.5	-3.6
MOS				*e**PP	pP	16 43 16.6	-0.8
MOS				*e*		16 43 32.1	
MOS				*e*S	S	16 51 03.4	-6.2
MOS				*e*		16 52 38.7	
MOS				pmax	pmax		
	comp=Z,144nm,1.4s						
MOS				MLR	MLR		
	comp=Z,700nm,20.0s						
TKX	Tecate	61.56	73	IAmb	IAmb	16 42 57.9	
	comp=Z,88nm,1.3s						
PV23	Carpenter Ridg	61.58	63	P	P	16 42 57.2	+1.2
NIL	Nilore	61.62	289	P	P	16 42 55.0	-1.0
NIL				pmax	pmax		
	comp=Z,154nm,1.0s						
NIL	Nilore	61.62	289	P	P	16 42 55.0	-1.0
NIL	Nilore	61.62	289	P	P	16 42 55.5	-0.4
PV10	Paradox Valley	61.62	63	P	P	16 42 58.0	+1.8
LUWI	Luwuk	61.64	222	P	P	16 42 55.6	-0.6
CBX	Cerro Bola	61.71	73	IAmb	IAmb	16 42 59.5	
	comp=Z,47nm,0.8s						
PDMCI	Parker Dam,Lak	61.72	70	P	P	16 42 57.9	+1.3
	baz=317,SNR=54						
PV17	East Wray Mesa	61.73	63	P	P	16 42 58.2	+1.2
SWSC	Sam W. Stewart	61.76	72	P	P	16 42 57.9	+1.0
	baz=317,SNR=13						
PV12	Saucer Basin,	61.79	63	P	P	16 42 58.6	+1.3
IKP	In-Ko-Pah, Jac	61.79	72	P	P	16 42 58.4	+1.2
	baz=317,SNR=32						
B35A	Bob, Littlefor	61.82	46	IAmb	IAmb	16 42 58.3	
	comp=Z,68nm,0.9s						
RMX	La Rumorosa	61.84	72	IAmb	IAmb	16 43 00.5	
	comp=Z,78nm,1.0s						
PV02	Paradox Valley	61.90	63	P	P	16 42 59.2	+1.1
CCX	Cicese	62.04	73	P	P	16 42 59.6	+0.8
CCX				IAmb	IAmb	16 43 00.9	
	comp=Z,227nm,1.9s						
PV01	Paradox Valley	62.05	63	P	P	16 43 00.1	+1.0
PV01				IAmb	IAmb	16 43 01.6	
	comp=Z,161nm,1.4s						
XMAS	Kiritimati	62.08	129	P	P	16 43 00.2	+1.1
SMCO	Snowmass	62.15	61	IAmb	IAmb	16 43 02.4	
	comp=Z,101nm,0.9s						
GLA	Glamis	62.24	71	P	P	16 43 01.8	+1.6
	baz=317,SNR=43						
SUSD	Miller	62.35	52	P	P	16 43 01.0	+0.4
	baz=318						
SUSD	Miller	62.35	52	P	P	16 43 01.1	+0.4
SUSD				IAmb	IAmb	16 43 02.2	
	comp=Z,89nm,0.8s						
ESJX	Sierra Juarez	62.35	73	IAmb	IAmb	16 43 03.7	
	comp=Z,75nm,0.9s						
WUAZ	Wupatki	62.41	67	P	P	16 43 03.2	+1.8
	baz=317,SNR=97						
ISCO	Idaho Springs	62.41	60	P	P	16 43 03.4	+1.8
	baz=317,SNR=103						
OBN	Obninsk	62.41	327	⇓*i*P	P	16 42 59.4	-1.5
OBN				*i*		16 43 37.9	
OBN				*e*		16 45 19.2	
OBN				*i* S	S	16 51 16.4	-4.0
OBN				*e*SS	SS	16 55 28.2	+3.7
OBN				pmax	pmax		
	comp=Z,178nm,2.5s						
OBN				MLR	MLR		
	comp=Z,564nm,23.0s						
OBN	Obninsk	62.41	327	P	P	16 42 59.4	-1.5
OBN					PcP	16 43 38.9	-0.6
CPBX	Cerro Prieto	62.42	72	IAmb	IAmb	16 43 04.0	
	comp=Z,118nm,1.1s						
VSU	Vasula	62.54	334	*e*P	P	16 43 01.0	-0.7
VSU	Vasula	62.54	334	*d i*P	P	16 43 00.7	-0.9
VSU				pmax	pmax		
	comp=Z,132nm,0.8s						
AAL	Aland	62.67	338	*e*P	P	16 43 01.6	-0.9
MVCO	Mesa Verde	62.76	64	P	P	16 43 05.1	+1.3
	baz=317,SNR=64						
MVCO	Mesa Verde	62.76	64	IAmb	IAmb	16 43 06.3	
	comp=Z,111nm,0.8s						
MOL	Molde	62.79	346	*e*P	P	16 43 02.7	-0.6
PMG	Port Moresby	62.80	193	P	P	16 43 04.8	+1.0
	comp=Z,38nm,0.8s,baz=9.8,slow=8.4,SNR=22						
PMG	Port Moresby	62.80	193	P	P	16 43 04.7	+0.8
PMG	Port Moresby	62.80	193	P	P	16 43 04.8	+1.0
113A	Mohawk Valley,	63.05	71	IAmb	IAmb	16 43 08.0	
	comp=Z,67nm,1.1s						
DOMB	Dombas	63.06	345	*e*P	P	16 43 04.6	-0.5
MTSE	Matsula	63.07	336	*e*P	P	16 43 04.0	-1.2
EYMN	Ely	63.11	45	P	P	16 43 05.9	+0.2
	baz=320,SNR=69						
EYMN	Ely	63.11	45	IAmb	IAmb	16 43 07.0	
	comp=Z,104nm,0.9s						
X16A	Lo Mia Camp, P	63.17	68	IAmb	IAmb	16 43 09.6	
	comp=Z,96nm,0.8s						
AKN	Aaknes	63.25	346	*e*P	P	16 43 06.3	0.0
Q24A	Divide	63.27	60	P	P	16 43 08.6	+1.3
	baz=318,SNR=30						
S22A	4UR Ranch, Cre	63.27	62	P	P	16 43 09.2	+2.0
	baz=317,SNR=139						
SPX	San Pedro Mart	63.34	73	P	P	16 43 09.0	+1.2
SPX				IAmb	IAmb	16 43 10.5	
	comp=Z,64nm,0.9s						
KBL	Kabul	63.35	293	P	P	16 43 05.0	-2.8
KBL				pmax	pmax		
	comp=Z,40nm,1.0s						
KBL	Kabul	63.35	293	P	P	16 43 05.0	-2.8
KBL	Kabul	63.35	293	P	P	16 43 05.5	-2.2
	SNR=16						
OGNE	Ogallala	63.42	57	P	P	16 43 08.9	+0.9
	baz=318,SNR=28						
NC303	NORSAR Array S	63.44	343	IAmb	IAmb	16 43 09.8	
	comp=Z,69nm,0.9s						
NC405	NORSAR Array S	63.48	343	P	P	16 43 07.4	-0.5
NC405				IAmb	IAmb	16 43 08.2	
	comp=Z,57nm,0.8s						
UPP	Uppsala	63.48	339	*e*P	P	16 43 07.1	-0.7
W18A	Petrified Fore	63.61	66	P	P	16 43 11.3	+1.9
	baz=318,SNR=9.3						
NB2	NORSAR Subarra	63.64	343	P	P	16 43 08.3	-0.7
	comp=Z,37nm,0.8s,baz=22,slow=6.9						
NB2	NORSAR Subarra	63.64	343	P	P	16 43 08.3	-0.7
	baz=22,slow=6.9						
NOA	NORSAR Array B	63.64	343	P	P	16 43 08.5	-0.5
	comp=Z,19nm,0.6s,baz=21,slow=6.7,SNR=72						
NOA				LR	LR	17 14 41.7	
	comp=Z,97nm,18.7s,baz=20,slow=40						
LPSR	Galich'ya Gora	63.65	324	*e*P	P	16 43 07.5	-1.6
LPSR				*e*		16 43 41.3	
LPSR				pmax	pmax		
	comp=Z,50nm,0.8s						
SFX	San Felipe	63.70	73	P	P	16 43 10.7	+0.9
NBO00	NORSAR Array S	63.72	343	IAmb	IAmb	16 43 09.8	
	comp=Z,93nm,1.1s						
VRH	Novokhopyorsk	63.75	321	*e*P	P	16 43 08.2	-1.6
VRH				*e*		16 43 42.3	
VRH				pmax	pmax		
	comp=Z,60nm,0.6s						
K31A	O'Neill	63.80	54	IAmb	IAmb	16 43 12.1	
	comp=Z,161nm,1.0s						
NC602	NORSAR Array S	63.87	343	P	P	16 43 09.9	-0.5
NC602				IAmb	IAmb	16 43 27.4	
	comp=Z,301nm,2.0s						
NC602	NORSAR Array S	63.87	343	*e*P	P	16 43 09.7	-0.7
NAO01	NORSAR Array S	63.88	343	IAmb	IAmb	16 43 10.7	
	comp=Z,147nm,1.2s						
SDCO	Great Sand Dun	63.98	61	P	P	16 43 13.3	+1.4
	baz=318,SNR=78						
SDCO	Great Sand Dun	63.98	61	IAmb	IAmb	16 43 14.7	
	comp=Z,94nm,1.2s						
ECSD	EROS Data Cent	64.00	51	P	P	16 43 11.9	+0.3
	baz=319,SNR=75						
ECSD	EROS Data Cent	64.00	51	IAmb	IAmb	16 43 13.0	
	comp=Z,106nm,0.8s						
FOO	Floro	64.09	347	*e*P	P	16 43 11.7	-0.2
E38A	The Farm, Brul	64.12	46	P	P	16 43 12.2	-0.1
E38A				IAmb	IAmb	16 43 13.3	
	comp=Z,118nm,0.9s						
PIX	Pinacate	64.12	71	IAmb	IAmb	16 43 15.0	
	comp=Z,90nm,1.2s						
214A	Organ Pipe Nat	64.20	71	P	P	16 43 14.5	+1.4
	baz=318,SNR=88						
214A	Organ Pipe Nat	64.20	71	IAmb	IAmb	16 43 15.8	
	comp=Z,142nm,1.1s						
HYA	Hoyanger	64.33	346	*e*P	P	16 43 13.3	-0.2
BKB	Balikpapan	64.37	228	P	P	16 43 15.2	+0.9
BKB	Balikpapan	64.37	228	P	P	16 43 16.2	+1.9
	comp=Z,2µmcomp=Z,247nm,1.1s						
SKAR	Skarslia	64.47	345	*e*P	P	16 43 13.9	-0.5
KSCO	Kaye Shedlock'	64.55	59	P	P	16 43 16.5	+1.0
	baz=318						
KSCO	Kaye Shedlock'	64.55	59	IAmb	IAmb	16 43 17.6	
	comp=Z,110nm,1.1s						
SPMN	Marine on St.	64.62	48	P	P	16 43 15.9	+0.2
	baz=320,SNR=12						
SPMN	Marine on St.	64.62	48	P	P	16 43 15.8	+0.2
SPMN				IAmb	IAmb	16 43 17.0	
	comp=Z,96nm,0.8s						
SUE	Sulen	64.65	346	*e*P	P	16 43 14.9	-0.5
TTSI	Tana Toraja	64.68	224	P	P	16 43 18.1	+1.8
	comp=Z,28nm,1.0s						
VSR	Storozhevoye	64.69	323	*e*P	P	16 43 13.9	-2.0
VSR				*e*		16 43 47.4	
VSR				pmax	pmax		
	comp=Z,60nm,1.0s						
NRS	Narsarsuaq	64.72	13	*i* P	P	16 43 15.8	-0.1
	comp=Z,54nm,1.0s						
NRS	Narsarsuaq	64.72	13	*i* P	P	16 43 15.8	-0.1
NRS				pmax	pmax		
	comp=Z,54nm,1.0s						
NRS	Narsarsuaq	64.72	13	*i* P	P	16 43 15.9	-0.1
NRS				IAmb	IAmb	16 43 17.1	
	comp=Z,54nm,1.0s						
OSL	Oslo	64.76	343	*e*P	P	16 43 16.0	-0.2
VORD	Divnogorie	64.84	323	*e*P	P	16 43 15.6	-1.3
VORD				*e*		16 43 48.2	
VORD				pmax	pmax		
	comp=Z,50nm,1.1s						
MTKI	Muara Teweh, K	65.00	230	P	P	16 43 19.7	+1.3
	comp=Z,63nm,1.5s						
T25A	Trinidad	65.01	61	P	P	16 43 19.6	+1.0
	baz=318,SNR=45						
BGNE	Belgrade	65.01	54	P	P	16 43 18.6	+0.3
	baz=319,SNR=9.2						
TUC	Tucson	65.09	69	P	P	16 43 20.6	+1.6
	baz=318						
TUC	Tucson	65.09	69	P	P	16 43 20.2	+1.2
TUC				pmax	pmax		
	comp=Z,71nm,1.1s						
TUC	Tucson	65.09	69	P	P	16 43 20.2	+1.2
KSM	Kuching	65.13	236	IAmb	IAmb	16 43 22.5	
	comp=Z,145nm,1.0s						
KSM	Kuching	65.13	236	P	P	16 43 21.0	+1.7
SURT	Suratani	65.13	251	P	P	16 43 21.4	+2.1
	comp=Z,4.3nm,1.1s						
ASK	Askoy	65.13	346	*e*P	P	16 43 18.8	+0.2
DGPR	DIGLIPUR	65.20	259	*e*P	P	16 43 19.5	-0.2
DGPR				IAmb	IAmb	16 43 23.8	
	comp=Z,64nm,1.0s						
BER	Bergen	65.21	346	*e*P	P	16 43 19.5	+0.4
ISAL	Salakas	65.22	333	*e*P	P	16 43 18.9	-0.4
KONO	Kongsberg	65.23	343	P	P	16 43 19.3	0.0
KONO				pmax	pmax		
	comp=Z,72nm,1.3s						
KONO	Kongsberg	65.23	343	P	P	16 43 19.3	0.0
KONO	Kongsberg	65.23	343	*e*P	P	16 43 18.7	-0.6
IDID	Didziasalis	65.27	332	*e*P	P	16 43 18.8	-0.8
IIGN	Ignalina	65.38	333	*e*P	P	16 43 19.9	-0.4
ODD1	Odda	65.46	345	*e*P	P	16 43 20.4	-0.5
SPSI	Sidrap Palu	65.53	224	P	P	16 43 22.9	+1.1
	comp=Z,95nm,1.3s						
TRTT	Trang	65.53	249	P	P	16 43 22.1	+0.2
	comp=Z,2µmcomp=Z,206nm,1.1s						
ANMO	Albuquerque	65.54	64	LR	LR	17 12 51.0	
	comp=Z,84nm,18.6s,baz=323,slow=37						
ANMO	Albuquerque	65.54	64	P	P	16 43 23.6	+1.5
	baz=318						
ANMO	Albuquerque	65.54	64	P	P	16 43 23.2	+1.2
ANMO				pmax	pmax		
	comp=Z,81nm,1.0s						
ANMO	Albuquerque	65.54	64	P	P	16 43 23.1	+1.2
ANMO				IAmb	IAmb	16 43 24.6	
	comp=Z,81nm,1.0s						
COWI	Conover	65.56	45	IAmb	IAmb	16 43 22.7	
	comp=Z,85nm,0.9s						
NACGM	Naroch	65.61	332	*i* P	P	16 43 21.6	-0.2
NACGM				*i* P	P	16 43 21.6	-0.2
NACGM				*i* P	P	16 43 21.6	-0.2
NACGM				*i* PP	PP	16 45 25.1	-21
NACGM				*i* PPP	PPP	16 47 01.5	
NACGM				*i* S	S	16 51 58.3	-1.8
NACGM				*i* SS	SS	16 55 37.8	-37
NACGM				*i* SSS	SSS	16 59 59.4	
NACGM				*i* LQ	LQ	17 07 42.2	
NACGM				*i* LR	LR	17 13 40.2	
MNK	Minsk	65.64	331	*e*P	P	16 43 22.0	-0.1
MNK				pmax	pmax		
	comp=Z,380nm,1.0s						
MNK	Minsk	65.64	331	*i* P	P	16 43 22.3	+0.2
	comp=E,7.0nm,1.3s						
MNK				*i* P	P	16 43 22.3	+0.2
	comp=N,56nm,1.0s						
MNK				*i* P	P	16 43 22.3	+0.2
	comp=Z,122nm,1.0s						
MNK				*i* pP	pP	16 43 45.1	+0.5
MNK				*i* PP	PP	16 45 48.1	+1.3
MNK				*i* PPP	PPP	16 47 23.1	
MNK				*i* S	S	16 52 01.5	+1.0
MNK				*i* SS	SS	16 56 20.1	+5.3
MNK				*i* SSS	SSS	16 59 29.9	
MNK				*i* LQ	LQ	17 07 39.0	
MNK				*i* LR	LR	17 12 39.9	
MNK				*i* LRM	MLR	17 14 48.4	
	comp=E,32nm,20.4s						
MNK				*i* LRM	MLR	17 14 48.4	
	comp=N,362nm,20.9s						
MNK				*i* LRM	MLR	17 15 30.1	
	comp=Z,303nm,17.1s						
STKI	Sintang	65.76	234	P	P	16 43 26.1	+2.8
	comp=Z,10µmcomp=Z,28nm,0.5s						
BNSI	Bone	65.78	223	P	P	16 43 24.8	+1.4
	comp=Z,922nmcomp=Z,104nm,1.1s						
PABE	Paberze	65.86	334	*e*P	P	16 43 22.9	-0.5
N33A	J Bar K, Exete	65.87	54	P	P	16 43 23.6	-0.2
N33A				IAmb	IAmb	16 43 24.6	
	comp=Z,129nm,0.9s						
PBUR	Paburge	65.93	335	*e*P	P	16 43 22.9	-0.9
Y22D	IRIS PASSCAL I	65.94	65	P	P	16 43 26.5	+2.0
	baz=319						
BLS5	Blasjo	65.96	345	*e*P	P	16 43 23.7	-0.3
CBKS	Cedar Bluff	66.19	57	P	P	16 43 25.8	-0.1
	baz=320,SNR=12						
CBKS	Cedar Bluff	66.19	57	P	P	16 43 25.7	-0.2
CBKS				pmax	pmax		
	comp=Z,116nm,1.1s						
CBKS	Cedar Bluff	66.19	57	P	P	16 43 25.7	-0.2
CBKS				IAmb	IAmb	16 43 27.0	
	comp=Z,116nm,1.1s						
E43A	Lone Tree Farm	66.25	44	IAmb	IAmb	16 43 26.9	
	comp=Z,109nm,1.4s						
PKDT	Phuket	66.26	251	P	P	16 43 26.8	+0.3
F42A	Maple Grove Fa	66.26	45	P	P	16 43 26.1	-0.1
F42A				IAmb	IAmb	16 43 27.4	
	comp=Z,98nm,1.1s						
KAPI	Kappang	66.48	223	P	P	16 43 28.7	+0.8
	comp=Z,19nm,0.8s,baz=7.9,slow=8.4,SNR=5.0						
KAPI	Kappang	66.48	223	P	P	16 43 28.7	+0.8
KAPI				IAmb	IAmb	16 43 36.0	
	comp=Z,120nm,1.6s						
KAPI	Kappang	66.48	223	P	P	16 43 29.4	+1.6
KBKI	Kotabaru	66.50	228	P	P	16 43 29.3	+1.3
	comp=Z,968nmcomp=Z,92nm,1.1s						
121A	Cookes Peak, D	66.61	67	P	P	16 43 30.6	+1.7
	baz=319,SNR=49						
121A	Cookes Peak, D	66.61	67	P	P	16 43 30.6	+1.7
121A				IAmb	IAmb	16 43 32.0	
	comp=Z,132nm,1.1s						
K38A	Parkersburg	66.63	50	IAmb	IAmb	16 43 29.6	
	comp=Z,78nm,0.9s						
I40A	Norwalk	66.64	48	IAmb	IAmb	16 43 29.7	
	comp=Z,110nm,0.9s						
N35A	Tabor	66.65	53	IAmb	IAmb	16 43 30.3	
	comp=Z,133nm,0.8s						
GEYT	Alibeck	66.71	302	P	P	16 43 28.1	-1.2
	comp=Z,22nm,0.8s,baz=44,slow=4.5,SNR=34						
GEYT				LR	LR	17 15 11.9	
	comp=Z,622nm,18.9s,baz=340,slow=38						
GEYT	Alibeck	66.71	302	P	P	16 43 28.0	-1.2
HOMB	Homborsund	66.72	344	*e*	P	16 43 30.8	+2.0
SNART	Snartemo	66.87	344	*e*P	P	16 43 29.4	-0.4
SNART	Snartemo	66.87	344	*i* P	P	16 43 30.4	+0.6
SCIA	State Center	67.00	51	P	P	16 43 31.5	+0.6
	baz=321,SNR=103						
MATQ	Matagami	67.13	36	P	P	16 43 30.9	-0.7
	baz=327,SNR=21						
HRA	Herat	67.22	297	P	P	16 43 31.7	-1.0
HRA				PcP	PcP	16 44 00.0	0.0
BBKI	Banjar Baru	67.25	229	P	P	16 43 34.1	+1.3
	comp=Z,129nm,1.1s						
E46A	Sault Ste Mari	67.37	42	IAmb	IAmb	16 43 33.5	
	comp=Z,70nm,0.8s						
SUW	Suwalki	67.40	334	*e*P	P	16 43 32.4	-0.8
SUW	Suwalki	67.40	334	P	P	16 43 31.9	-1.4
SUW						16 44 00.4	
SUW				pmax	pmax		
	comp=Z,142nm,1.2s						
SUW	Suwalki	67.40	334	P	P	16 43 31.9	-1.4
SUW				IAmb	IAmb	16 43 34.5	
	comp=Z,142nm,1.2s						
SUW					PcP	16 44 00.4	+0.2
I42A	Draeger Farm,	67.40	47	IAmb	IAmb	16 43 34.4	
	comp=Z,77nm,0.9s						
H43A	Windswept, Lux	67.44	45	IAmb	IAmb	16 43 34.7	
	comp=Z,84nm,0.8s						
HSIG		67.45	72	IAmb	IAmb	16 43 36.5	
	comp=Z,119nm,1.1s						
KSU1	Kansas State U	67.54	55	P	P	16 43 33.6	-0.8
	baz=321,SNR=10						
KSU1	Kansas State U	67.54	55	P	P	16 43 33.6	-0.8
KSU1				IAmb	IAmb	16 43 34.7	
	comp=Z,59nm,0.7s						
JFWS	Jewell Farm	67.58	48	P	P	16 43 33.9	-0.7
	baz=322,SNR=8.0						
GOET	G??ttrup	67.76	343	*i* P	P	16 43 36.4	+1.0
	comp=Z,137nm,0.8s						
GOET	G??ttrup	67.76	343	*i* P	P	16 43 36.5	+1.0
GOET				IAmb	IAmb	16 43 37.2	
	comp=Z,138nm,0.8s						
L40A	Anamosa	67.81	49	IAmb	IAmb	16 43 36.6	
	comp=Z,105nm,0.8s						
COEN	Coen	67.88	197	P	P	16 43 37.5	+0.8
G45A	Suttons Bay	67.88	44	IAmb	IAmb	16 43 37.3	
	comp=Z,83nm,0.8s						
LSQQ	Lebel-sur-Quev	67.95	36	P	P	16 43 36.2	-0.6
	baz=327						
SRIG	Santa Rosalia	67.98	74	IAmb	IAmb	16 43 39.6	
	comp=Z,155nm,0.9s						
PBKI	Pangkalan Bun	68.07	232	P	P	16 43 39.8	+1.8
	comp=Z,6µmcomp=Z,275nm,1.2s						
AMTX	Amarillo	68.16	61	P	P	16 43 39.2	+0.7
	baz=320						
AMTX	Amarillo	68.16	61	IAmb	IAmb	16 43 41.2	
	comp=Z,178nm,1.4s						
GOF	Gofitskoye	68.17	317	⇑*e*P	P	16 43 38.1	-0.1
GOF				*e*S	SKiKP	16 53 25.1	+1.1
GOF				pmax	pmax		
	comp=Z,110nm,0.9s						
MYKOM	Kota Tinggi	68.22	242	P	P	16 43 40.0	+1.1
MYKOM				IAmb	IAmb	16 43 41.8	
	comp=Z,93nm,0.9s						
MYKOM	Kota Tinggi	68.22	242	P	P	16 43 40.0	+1.1
MSTX	Muleshoe	68.28	62	IAmb	IAmb	16 43 41.1	
	comp=Z,156nm,1.1s						
MUD	Monsted U'grnd	68.32	343	*i* P	P	16 43 39.6	+0.7
	comp=Z,169nm,1.3s						
MUD	Monsted U'grnd	68.32	343	*i* P	P	16 43 39.6	+0.7
MUD				pmax	pmax		
	comp=Z,170nm,1.3s						
MUD	Monsted U'grnd	68.32	343	*i* P	P	16 43 39.7	+0.7
MUD				IAmb	IAmb	16 43 40.5	
	comp=Z,170nm,1.3s						
CPRX	Cap Rock	68.40	64	P	P	16 43 41.1	+1.0
COP	Copenhagen	68.42	340	⇓*i*P	P	16 43 40.0	+0.5
	comp=Z,140nm,1.0s						
COP	Copenhagen	68.42	340	⇓*i*P	P	16 43 40.0	+0.5
COP				pmax	pmax		
	comp=Z,140nm,1.0s						
COP	Copenhagen	68.42	340	⇓*i*P	P	16 43 40.1	+0.5
COP				IAmb	IAmb	16 43 40.9	
	comp=Z,140nm,1.0s						
U32A	Winter Ranch,	68.42	58	IAmb	IAmb	16 43 41.1	
	comp=Z,91nm,1.0s						
BSD	Bornholm Skovb	68.42	339	*i* P	P	16 43 39.2	-0.4
	comp=Z,82nm,1.1s						
BSD	Bornholm Skovb	68.42	339	*e*P	P	16 43 37.2	-2.5
BSD	Bornholm Skovb	68.42	339	*i* P	P	16 43 39.2	-0.4
BSD				pmax	pmax		
	comp=Z,82nm,1.1s						
BSD	Bornholm Skovb	68.42	339	*i* P	P	16 43 39.3	-0.4
BSD				IAmb	IAmb	16 43 40.2	
	comp=Z,82nm,1.1s						
I45A	Fountain	68.45	45	P	P	16 43 40.5	+0.5
GROC	Groznyy	68.48	314	*e*P	P	16 43 38.1	-2.1
GROC				*e*		16 44 03.1	
GROC				pmax	pmax		
	comp=Z,14nm,0.6s						
GLMI	Grayling	68.49	43	P	P	16 43 40.2	-0.1

	baz=324						
AKASG	**Malin Array Be**	68.53	328	P	**P**	**16 43 39.0**	**-1.3**
	comp=Z,54nm,0.6s,baz=31,slow=6.5,SNR=121						
AKASG				LR	LR	17 16 58.8	
	comp=Z,376nm,20.6s,baz=30,slow=39						
AKASG	**Malin Array Be**	68.53	328	P	**P**	**16 43 38.7**	**-1.6**
AKBB	**Malin Array Si**	68.53	328	*ce*P	**P**	**16 43 39.0**	**-1.4**
AKBB	**Malin Array Si**	68.53	328	IAmb	IAmb	16 43 40.9	
	comp=Z,84nm,0.9s						
L42A	**Oliver, Polo**	68.56	48	P	**P**	**16 43 39.9**	**-0.8**
L42A				IAmb	IAmb	16 43 41.1	
	comp=Z,118nm,0.8s						
MNTX	**Cornudas Mount**	68.58	66	P	**P**	**16 43 42.5**	**+1.5**
	baz=320,SNR=166						
MNTX	**Cornudas Mount**	68.58	66	IAmb	IAmb	16 43 43.7	
	comp=Z,161nm,1.1s						
VLDQ	**Val d'Or**	68.58	37	IAmb	IAmb	16 43 40.2	
	comp=Z,113nm,0.9s						
K43A	**Burlington**	68.60	47	IAmb	IAmb	16 43 42.1	
	comp=Z,159nm,0.9s						
P38A	**Dawn**	68.63	52	P	**P**	**16 43 41.2**	**0.0**
P38A				IAmb	IAmb	16 43 42.4	
	comp=Z,144nm,0.8s						
LLD	**Lille Linde**	68.79	340	⇑*i*P	**P**	**16 43 41.8**	**-0.1**
LLD	**Lille Linde**	68.79	340	⇑*i*P	**P**	**16 43 41.8**	**-0.1**
LLD	**Lille Linde**	68.79	340	⇑*i*P	**P**	**16 43 41.9**	**-0.1**
CROK	**Carrier**	68.85	57	P	**P**	**16 43 42.4**	**-0.3**
CROK				IAmb	IAmb	16 43 43.5	
	comp=Z,227nm,1.2s						
NCK	**Nalchik**	69.20	315	*i* P	**P**	**16 43 43.6**	**-1.1**
NCK				pmax	pmax		
	comp=Z,23nm,1.0s						
L44A	**Lake County Fo**	69.21	47	P	**P**	**16 43 44.3**	**-0.4**
	baz=323,SNR=5.7						
L44A	**Lake County Fo**	69.21	47	IAmb	IAmb	16 43 45.5	
	comp=Z,92nm,0.8s						
KIV	**Kislovodsk**	69.21	316	⇓P	**P**	**16 43 44.9**	**0.0**
KIV	**Kislovodsk**	69.21	316	*i* P	**P**	**16 43 44.9**	**0.0**
	SNR=5.6						
KIV	**Kislovodsk**	69.21	316	P	**P**	**16 43 44.9**	**0.0**
KIV				pmax	pmax		
	comp=Z,17nm,0.8s						
KIV	**Kislovodsk**	69.21	316	P	**P**	**16 43 44.9**	**0.0**
KIV	**Kislovodsk**	69.21	316	P	**P**	**16 43 44.9**	**0.0**
RGN	**Rugen**	69.30	339	P	**P**	**16 43 45.0**	**-0.1**
RGN	**Rugen**	69.30	339	*e*P	**P**	**16 43 46.3**	**+1.3**
	comp=Z,355nm,1.2s,baz=20,slow=5.9						
KBZ	**Khabaz**	69.31	316	P	**P**	**16 43 44.5**	**-0.8**
	comp=Z,27nm,0.9s,baz=53,slow=3.8,SNR=46						
KBZ				LR	LR	17 16 53.4	
	comp=Z,214nm,20.4s,baz=16,slow=38						
KAC	**Achnashellach**	69.31	351	*e*P	**P**	**16 43 45.3**	**+0.2**
SHA1	**Shidzhatmaz**	69.40	316	*c i*P	**P**	**16 43 46.2**	**0.0**
KPL	**Plockton**	69.50	351	*e*P	**P**	**16 43 45.9**	**-0.4**
KPL				IAmb	IAmb	16 43 47.2	
	comp=Z,68nm,1.0s						
HQIL	**Hanson Quary C**	69.54	47	P	**P**	**16 43 46.5**	**-0.3**
HQIL				IAmb	IAmb	16 43 47.5	
	comp=Z,95nm,1.0s						
GKP	**Gorka Klasztor**	69.59	337	*e*P	**P**	**16 43 46.9**	**0.0**
GKP	**Gorka Klasztor**	69.59	337	*e*P	**P**	**16 43 46.8**	**-0.1**
DRUM	**Mains of Drumt**	69.60	349	*e*P	**P**	**16 43 46.2**	**-0.7**
ZEI	**Tsey**	69.64	315	*e*P	**P**	**16 43 44.8**	**-2.9**
ZEI				pmax	pmax		
	comp=Z,19nm,1.0s						
OK029	**Liberty Lake**	69.66	57	IAmb	IAmb	16 43 49.0	
	comp=Z,148nm,1.2s						
BATI	**Baumata**	69.67	217	P	**P**	**16 43 47.3**	**-0.5**
	comp=Z,39nm,0.7s,baz=135,slow=18,SNR=2.6						
BCOK	**Bluff Creek, N**	69.69	58	IAmb	IAmb	16 43 49.2	
	comp=Z,157nm,1.0s						
J47A	**Sunmer**	69.70	44	IAmb	IAmb	16 43 49.0	
	comp=Z,151nm,0.9s						
NEY	**Neytrino**	69.77	316	*i* P	**P**	**16 43 47.7**	**-0.7**
M44A	**Midewin, Midew**	69.78	48	P	**P**	**16 43 48.1**	**-0.2**
M44A				IAmb	IAmb	16 43 49.0	
	comp=Z,100nm,0.8s						
WMOK	**Wichita Mounta**	69.80	59	P	**P**	**16 43 49.1**	**+0.6**
	baz=321,SNR=40						
WMOK	**Wichita Mounta**	69.80	59	IAmb	IAmb	16 43 50.2	
	comp=Z,128nm,1.1s						
OK031	**S. Brethren Rd**	69.86	57	IAmb	IAmb	16 43 50.1	
	comp=Z,166nm,1.2s						
HDIL	**Hopedale**	69.88	49	P	**P**	**16 43 48.9**	**-0.1**
	baz=323,SNR=23						
HDIL	**Hopedale**	69.88	49	P	**P**	**16 43 48.8**	**-0.1**
OK025	**Westminster Rd**	69.89	58	P	**P**	**16 43 49.4**	**+0.3**
OK025				IAmb	IAmb	16 43 50.4	
	comp=Z,102nm,0.9s						
OK030	**Cody Creek RV**	69.90	57	P	**P**	**16 43 49.5**	**+0.3**
OK030				IAmb	IAmb	16 43 50.4	
	comp=Z,127nm,1.0s						
SKMB	**Sankelmark Bun**	69.92	342	*e*P	**P**	**16 43 50.6**	**+1.7**
	comp=Z,408nm,1.2s,baz=20,slow=5.9						
BEL	**Belsk**	70.00	334	*e*P	**P**	**16 43 50.0**	**+0.6**
L46A	**Eue Claire**	70.06	46	P	**P**	**16 43 50.0**	**0.0**
PSI	**Prapat**	70.08	247	P	**P**	**16 43 51.0**	**+0.4**
	comp=Z,66nm,0.8s,baz=0.1,slow=5.5,SNR=7.4						
PSI				LR	LR	17 15 43.1	
	comp=Z,125nm,20.9s,baz=88,slow=37						
ALGO	**Algonquin Park**	70.17	39	P	**P**	**16 43 49.5**	**-1.1**
	baz=327,SNR=14						
RPSI	**Rantau Prapat**	70.17	247	P	**P**	**16 43 50.5**	**-0.5**
RPSI				IAmb	IAmb	16 43 52.4	
	comp=Z,101nm,1.0s						
D55A	**Sainte-Anne-du**	70.22	36	P	**P**	**16 43 50.4**	**-0.5**
	baz=328,SNR=24						
INVG	**Invergeldie, C**	70.25	350	*e*P	**P**	**16 43 50.0**	**-0.9**
INVG				IAmb	IAmb	16 43 51.4	
	comp=Z,47nm,0.8s						
R40A	**Maddies Statio**	70.29	52	IAmb	IAmb	16 43 52.3	
	comp=Z,117nm,0.8s						
X34A	**Smith Ranch, M**	70.40	59	P	**P**	**16 43 52.5**	**+0.3**
X34A				IAmb	IAmb	16 43 54.3	
	comp=Z,100nm,1.2s						
TUL1	**Leonard**	70.42	56	P	**P**	**16 43 52.5**	**+0.2**
	baz=322,SNR=16						
TUL1	**Leonard**	70.42	56	IAmb	IAmb	16 43 53.6	
	comp=Z,118nm,0.9s						
D56A	**ZEC Mazanza, M**	70.45	36	P	**P**	**16 43 52.0**	**-0.3**
	baz=329,SNR=23						
BSEG	**Bad Segeberg**	70.49	341	*e*P	**P**	**16 43 53.6**	**+1.3**
	comp=Z,213nm,1.2s,baz=20,slow=5.9						
E55A	**Montcerf-Lytto**	70.49	37	P	**P**	**16 43 51.9**	**-0.6**
	baz=328,SNR=8.9						
P43A	**Skaggs, Pawnee**	70.51	50	P	**P**	**16 43 52.8**	**+0.1**
P43A				IAmb	IAmb	16 43 53.7	
	comp=Z,126nm,0.8s						
EAB	**Aberfoyle**	70.51	350	*e*P	**P**	**16 43 52.4**	**-0.1**
LAWE	**Loch Awe, Argy**	70.55	351	*e*P	**P**	**16 43 52.2**	**-0.5**
LAWE				IAmb	IAmb	16 43 53.6	
	comp=Z,99nm,0.9s						
O44A	**Mansfield**	70.58	49	IAmb	IAmb	16 43 53.9	
	comp=Z,59nm,0.8s						
ESY	**Stoneypath**	70.59	349	*e*P	**P**	**16 43 52.6**	**-0.3**
HYB	**Hyderabad**	70.60	273	*i* P	**P**	**16 43 52.0**	**-1.7**
HYB				*e*PcP	**PcP**	**16 44 13.5**	**-0.8**
G54A	**Lake Saint Pet**	70.62	39	P	**P**	**16 43 52.4**	**-1.0**
	baz=327,SNR=8.1						
ANN	**Anapa**	70.64	320	*e*P	**P**	**16 43 50.8**	**-2.7**
ANN				*e**PP	**PcP**	**16 44 11.9**	**-2.1**
ANN				*e*S	**S**	**16 52 55.6**	**-4.5**
ANN				pmax	pmax		
	comp=Z,69nm,1.0s						
U38A	**Gravette**	70.71	55	IAmb	IAmb	16 43 54.9	
	comp=Z,98nm,0.8s						
SOC	**Sochi**	70.74	318	*e*P	**P**	**16 43 51.9**	**-2.2**
SOC				*e*		16 46 28.5	
SOC				*e*PPP	PPP	16 48 12.6	
SOC				*e*S	**S**	**16 52 59.1**	**-2.3**
SOC				*e*		16 53 47.3	
SOC				*e*SS	**SS**	**16 57 31.8**	**-2.2**
SOC				pmax	pmax		
	comp=Z,49nm,1.2s						
SOC				MLR	MLR		
	comp=Z,171nm,20.0s						
SADO	**Sadowa**	70.75	40	LR	LR	17 15 38.2	
	comp=Z,125nm,19.4s,baz=296,slow=36						
E56A	**St. Veronique**	70.78	36	P	**P**	**16 43 53.7**	**-0.6**
	baz=329,SNR=16						
I51A	**Listowel**	70.81	42	P	**P**	**16 43 54.5**	**0.0**
	baz=326,SNR=20						
KMMI	**Kalianget**	70.82	228	P	**P**	**16 43 58.2**	**+3.4**
	comp=Z,230nm,1.3s						
LATQ	**La Tuque**	70.85	34	P	**P**	**16 43 54.6**	**-0.1**
	baz=330,SNR=8.6						
LATQ	**La Tuque**	70.85	34	P	**P**	**16 43 54.9**	**+0.2**
LVV	**L'vov**	70.90	331	*e*P	**P**	**16 43 54.2**	**-0.8**
LVV				*e**PP	**pP**	**16 44 21.4**	**+3.6**
LVV				*e*PPP	PPP	16 48 17.2	
LVV				*e*S	**S**	**16 52 56.3**	**-6.7**
LVV				*e*PS	PnS	16 53 22.3	-20
LVV				pmax	pmax		
	comp=Z,110nm,1.2s						
LVV				MLR	MLR		
	comp=N,300nm,16.0s						
LVV				MLR	MLR		
	comp=E,200nm,16.0s						
LVV				MLR	MLR		
	comp=Z,300nm,16.0s						
PGBU	**Glenifferbraes**	70.90	350	*e*P	**P**	**16 43 54.9**	**0.0**
PGBU				IAmb	IAmb	16 43 57.7	
	comp=Z,440nm,1.5s						
L48A	**N Adams**	70.92	45	IAmb	IAmb	16 43 56.4	
	comp=Z,162nm,0.9s						
AKH	**Akhalkalaki**	70.94	314	⇓P	**P**	**16 43 55.2**	**-0.4**
AAM	**Ann Arbor**	70.96	44	P	**P**	**16 43 55.6**	**+0.2**
	baz=325,SNR=7.5						
AAM	**Ann Arbor**	70.96	44	IAmb	IAmb	16 43 56.8	
	comp=Z,140nm,0.8s						
CCM	**Cathedral Cave**	70.96	52	P	**P**	**16 43 55.5**	**0.0**
	baz=323						
CCM	**Cathedral Cave**	70.96	52	P	**P**	**16 43 55.3**	**-0.3**
CCM				pmax	pmax		
	comp=Z,92nm,1.0s						
CCM	**Cathedral Cave**	70.96	52	P	**P**	**16 43 55.2**	**-0.3**
CCM				IAmb	IAmb	16 43 56.6	
	comp=Z,92nm,1.0s						
ABTX	**Abilene, Hawle**	70.98	61	P	**P**	**16 43 56.4**	**+0.7**
	baz=321,SNR=23						
ABTX	**Abilene, Hawle**	70.98	61	IAmb	IAmb	16 43 57.5	
	comp=Z,119nm,0.9s						
K50A	**Casco**	71.00	43	P	**P**	**16 43 55.8**	**+0.1**
SFIN	**Lafayette**	71.02	48	P	**P**	**16 43 55.5**	**-0.3**
	baz=324,SNR=13						
AFI	**Afiamalu**	71.04	150	P	**P**	**16 43 56.4**	**+0.2**
AFI				pmax	pmax		
	comp=Z,61nm,1.2s						
AFI	**Afiamalu**	71.04	150	P	**P**	**16 43 56.4**	**+0.2**
SORM	**Soroca**	71.05	328	⇓P	**P**	**16 43 54.7**	**-1.2**
D58A	**Chemin du LacG**	71.07	35	P	**P**	**16 43 55.9**	**-0.2**
	baz=330,SNR=8.9						
RUE	**Ruedersdorf**	71.12	338	*e*P	**P**	**16 43 57.0**	**+0.8**
	comp=Z,224nm,1.0s,baz=20,slow=5.9						
H53A	**Bobcaygeon**	71.13	40	P	**P**	**16 43 55.6**	**-0.8**
	baz=327,SNR=9.4						
SBSI	**Sibolga**	71.13	246	P	**P**	**16 43 56.1**	**-0.7**
	comp=Z,32nm,1.1s						
MGMO	**Mountain Grove**	71.19	53	P	**P**	**16 43 56.5**	**-0.5**
MGMO				IAmb	IAmb	16 43 57.4	
	comp=Z,74nm,0.8s						
E57A	**Chemin Saint G**	71.21	36	P	**P**	**16 43 56.7**	**-0.2**
	baz=329,SNR=25						
N47A	**Urbana**	71.24	46	P	**P**	**16 43 56.5**	**-0.7**
N47A				IAmb	IAmb	16 43 57.5	
	comp=Z,82nm,0.9s						
ESK	**Eskdalemuir**	71.25	349	*e*P	**P**	**16 43 57.0**	**0.0**
ESK				IAmb	IAmb	16 43 58.0	
	comp=Z,72nm,0.9s						
ESK	**Eskdalemuir**	71.25	349	P	**P**	**16 43 57.3**	**+0.3**
ESK				pmax	pmax		
	comp=Z,72nm,0.9s						
ESK	**Eskdalemuir**	71.25	349	P	**P**	**16 43 57.3**	**+0.3**
ESK				IAmb	IAmb	16 43 58.2	
	comp=Z,72nm,0.9s						
TX32	**Lajitas Array**	71.33	66	IAmb	IAmb	16 44 00.5	
	comp=Z,159nm,0.9s						
TXAR	**Lajitas Array**	71.33	66	P	**P**	**16 43 59.2**	**+1.2**
	comp=Z,107nm,0.8s,baz=298,slow=4.5,SNR=897						
TXAR	**Lajitas Array**	71.33	66	P	**P**	**16 43 58.9**	**+0.8**
Q44A	**Meyer Farm, Va**	71.33	50	IAmb	IAmb	16 43 58.7	
	comp=Z,80nm,0.8s						
MNSI	**Mandailing Nat**	71.38	245	P	**P**	**16 43 57.3**	**-1.0**
	comp=Z,843nmcomp=Z,37nm,1.2s						
GNI	**Garni**	71.41	313	P	**P**	**16 43 58.4**	**0.0**
GNI	**Garni**	71.41	313	P	**P**	**16 43 58.3**	**-0.1**
GNI				pmax	pmax		
	comp=Z,34nm,0.9s						
GNI	**Garni**	71.41	313	P	**P**	**16 43 58.3**	**-0.1**
FVM	**French Village**	71.41	51	IAmb	IAmb	16 43 59.4	
	comp=Z,108nm,0.8s						
KWP	**Kalwaria Pacla**	71.45	332	*e*P	**P**	**16 43 58.6**	**+0.3**
D59A	**Saint-Raymond**	71.50	34	P	**P**	**16 43 58.7**	**0.0**
	baz=330,SNR=14						
F57A	**Harrington**	71.53	36	P	**P**	**16 43 57.3**	**-1.5**
	baz=329						
U40A	**Yellville**	71.53	54	P	**P**	**16 43 58.8**	**-0.3**
	baz=323,SNR=133						
E58A	**La Victoria**	71.55	35	P	**P**	**16 43 58.8**	**-0.1**
	baz=330,SNR=23						
NEWG	**New Galloway**	71.56	350	*e*P	**P**	**16 43 58.3**	**-0.5**
NEWG				IAmb	IAmb	16 44 00.2	
	comp=Z,109nm,1.3s						
X37A	**Clayton**	71.67	57	P	**P**	**16 43 59.9**	**+0.1**
Z35A	**Perchaven, San**	71.69	59	IAmb	IAmb	16 44 00.9	
	comp=Z,92nm,1.0s						
PMBI	**Palembang**	71.72	239	P	**P**	**16 44 01.1**	**+0.8**
E59A	**St. Maurice**	71.73	35	P	**P**	**16 43 59.7**	**-0.3**
	baz=330						
OJC	**Ojcow**	71.73	334	*e*P	**P**	**16 44 00.1**	**+0.2**
OJC	**Ojcow**	71.73	334	IAmb	IAmb	16 44 01.2	
	comp=Z,108nm,1.1s						
CLGH	**Cloghs, Cushen**	71.78	351	*e*P	**P**	**16 43 59.8**	**-0.3**
FLTG	**Flechtingen**	71.81	340	*e*P	**P**	**16 44 00.8**	**+0.4**
	comp=Z,159nm,1.0s,baz=20,slow=5.9						
GAL1	**Galloway**	71.85	350	*e*P	**P**	**16 44 00.0**	**-0.5**
GAL1				IAmb	IAmb	16 44 01.3	
	comp=Z,196nm,1.4s						
N49A	**Columbus Grove**	71.86	45	IAmb	IAmb	16 44 01.9	
	comp=Z,94nm,0.9s						
D61A	**St Aubert, Com**	71.88	33	P	**P**	**16 44 01.1**	**+0.2**
	baz=331,SNR=20						
D60A	**Saint Jean D'O**	71.89	34	P	**P**	**16 44 00.7**	**-0.2**
	baz=331,SNR=13						
OLIL	**Olney**	71.89	49	IAmb	IAmb	16 44 02.2	
	comp=Z,103nm,1.1s						
KESW	**Keswick, Cumbr**	71.95	349	*e*P	**P**	**16 44 01.2**	**0.0**
KESW				IAmb	IAmb	16 44 02.4	
	comp=Z,206nm,0.9s						
M50A	**Fremont**	71.95	44	P	**P**	**16 44 01.0**	**-0.4**
M50A				IAmb	IAmb	16 44 02.3	
	comp=Z,73nm,0.8s						
MILM	**Milestii Mici**	71.95	327	⇓P	**P**	**16 44 00.1**	**-1.2**
W39A	**Magazine**	71.99	55	P	**P**	**16 44 01.9**	**+0.2**
	baz=323,SNR=19						
G57A	**Newington**	72.03	37	P	**P**	**16 44 01.2**	**-0.6**
	baz=329,SNR=14						
KSP	**Ksiaz**	72.05	336	*e*P	**P**	**16 44 02.0**	**+0.2**
GSI	**Gunungsitoli**	72.07	247	P	**P**	**16 44 03.1**	**+0.6**
	comp=Z,2µmcomp=Z,206nm,1.4s						
SLBS	**Sierra La Lagu**	72.08	74	P	**P**	**16 44 03.3**	**+0.7**
SLBS				IAmb	IAmb	16 44 05.6	
	comp=Z,91nm,1.1s						
ASSE	**Asse, Remlinge**	72.12	340	*e*P	**P**	**16 44 03.2**	**+1.0**
	comp=Z,211nm,1.3s,baz=20,slow=5.9						
SENK	**Senkaya-Erzuru**	72.13	314	*e*P	**P**	**16 44 02.8**	**0.0**
IAS	**Iasi**	72.13	328	⇓P	**P**	**16 44 01.7**	**-0.7**
MSVF	**Nonsavu**	72.15	161	P	**P**	**16 44 04.4**	**+1.6**
MSVF				pmax	pmax		
	comp=Z,75nm,1.4s						
MSVF	**Nonsavu**	72.15	161	P	**P**	**16 44 04.4**	**+1.6**
F59A	**Saint Guilaume**	72.18	35	P	**P**	**16 44 02.7**	**+0.1**
	baz=330,SNR=19						
E60A	**Ste Agathe de**	72.19	34	P	**P**	**16 44 02.6**	**-0.1**
	baz=331,SNR=19						
S44A	**Carbondale**	72.20	51	P	**P**	**16 44 03.0**	**0.0**
J54A	**Appleton**	72.20	40	IAmb	IAmb	16 44 03.6	
	comp=Z,107nm,0.9s						
KOLS	**Kolonicke sedl**	72.20	332	*e*P	**P**	**16 44 02.6**	**-0.2**
KOLS				pmax	pmax		
	comp=Z,56nm,1.1s						
KOLS	**Kolonicke sedl**	72.20	332	*e*P	**P**	**16 44 02.6**	**-0.2**
BLO	**Bloomington**	72.26	48	P	**P**	**16 44 02.9**	**-0.4**
BLO				pmax	pmax		
	comp=Z,83nm,0.9s						
BLO	**Bloomington**	72.26	48	P	**P**	**16 44 02.9**	**-0.4**
BLO				IAmb	IAmb	16 44 04.1	
	comp=Z,83nm,0.9s						
FCAR	**Ozark Folk Cen**	72.26	54	IAmb	IAmb	16 44 04.0	
	comp=Z,136nm,0.8s						
PDSI	**Padang**	72.31	244	P	**P**	**16 44 03.2**	**-0.7**
	comp=Z,430nmcomp=Z,38nm,1.2s						
NIE	**Niedzica**	72.32	333	*e*P	**P**	**16 44 03.8**	**+0.2**
G58A	**Ormstown**	72.33	36	P	**P**	**16 44 02.9**	**-0.7**
	baz=330,SNR=6.8						
OSTC	**Ostas**	72.34	336	*e*P	**P**	**16 44 03.8**	**+0.2**
CHVC	**Chvalec**	72.35	336	*e*P	**P**	**16 44 03.0**	**-0.7**
D62A	**Allapoint, All**	72.36	32	P	**P**	**16 44 03.7**	**0.0**
	baz=332,SNR=18						
D62A	**Allapoint, All**	72.36	32	IAmb	IAmb	16 44 05.1	
	comp=Z,76nm,0.8s						
MEDO	**Medina**	72.36	40	P	**P**	**16 44 03.5**	**-0.3**
F60A	**Warwick**	72.36	35	P	**P**	**16 44 03.4**	**-0.4**
	baz=330,SNR=5.1						
CHOM	**Cayeli-Rize**	72.37	316	*e*P	**P**	**16 44 02.5**	**-1.4**
PBMO	**Poplar Bluff**	72.37	52	IAmb	IAmb	16 44 05.2	
	comp=Z,108nm,0.8s						
CLL	**Collm**	72.39	338	P	**P**	**16 44 03.6**	**-0.3**
CLL				pmax	pmax		
	comp=Z,141nm,0.9s						
CLL	**Collm**	72.39	338	P	**P**	**16 44 03.6**	**-0.3**
CLL				IAmb	IAmb	16 44 05.0	
	comp=Z,141nm,0.9s						
CLL	**Collm**	72.39	338	*e*P	**P**	**16 44 04.2**	**+0.3**
	comp=Z,201nm,1.1s,baz=20,slow=5.9						
HPK	**Haverah Park**	72.39	348	*e*P	**P**	**16 44 03.9**	**0.0**
HPK				IAmb	IAmb	16 44 05.0	
	comp=Z,130nm,0.8s						
O49A	**Covington**	72.40	46	IAmb	IAmb	16 44 05.0	
	comp=Z,104nm,1.0s						
PRAR	**RASCA**	72.41	328	⇓P	**P**	**16 44 03.1**	**-1.0**
H57A	**Richville**	72.43	38	P	**P**	**16 44 03.4**	**-0.8**
	baz=329,SNR=16						
UPC	**Upice**	72.43	336	*e*P	**P**	**16 44 04.4**	**+0.2**
UPC	**Upice**	72.43	336	*e*P	**P**	**16 44 04.4**	**+0.2**
IOMK	**Kirk Michael**	72.44	350	*e*P	**P**	**16 44 04.2**	**+0.2**
IOMK				IAmb	IAmb	16 44 04.9	
	comp=Z,294nm,1.1s						
E61A	**Lac Etchemin**	72.46	33	P	**P**	**16 44 04.5**	**+0.1**
	baz=331,SNR=5.6						
CRVS	**Cervenica-Dubn**	72.46	332	*e*P	**P**	**16 44 04.3**	**-0.1**
CRVS				pmax	pmax		
	comp=Z,66nm,1.1s						
CRVS	**Cervenica-Dubn**	72.46	332	*e*P	**P**	**16 44 04.3**	**-0.1**
UZH	**Uzhgorod**	72.47	332	*e*P	**P**	**16 44 03.3**	**-1.1**
UZH				*e*		16 44 18.0	
BURAR	**Bucovina Array**	72.50	329	⇓P	**P**	**16 44 04.4**	**-0.3**
BURAR	**Bucovina Array**	72.50	329	P	**P**	**16 44 03.8**	**-0.9**
DPC	**Dobruska-Polom**	72.50	336	*e*P	**P**	**16 44 04.7**	**+0.1**
DPC	**Dobruska-Polom**	72.50	336	*e*P	**P**	**16 44 04.7**	**+0.1**
OKC	**Ostrava-Krasne**	72.51	335	*e*P	**P**	**16 44 05.5**	**+0.9**
OKC				*e*		16 54 04.5	
OKC	**Ostrava-Krasne**	72.51	335	*e*P	**P**	**16 44 05.5**	**+0.9**
OKC	**Ostrava-Krasne**	72.51	335	*e*SG	**SKSac**	**16 54 04.5**	**+3.4**
P48A	**Milroy**	72.52	47	IAmb	IAmb	16 44 05.4	
	comp=Z,141nm,0.8s						
IBBN	**Ibbenburen**	72.53	342	*e*P	**P**	**16 44 05.7**	**+1.1**
	comp=Z,345nm,1.2s,baz=20,slow=5.9						
J55A	**Hilton**	72.53	40	P	**P**	**16 44 04.2**	**-0.6**
J55A				IAmb	IAmb	16 44 05.3	
	comp=Z,75nm,0.9s						
M52A	**Chesterland**	72.55	43	IAmb	IAmb	16 44 06.2	
	comp=Z,103nm,0.9s						
WIM	**Isle of Man**	72.56	350	*e*P	**P**	**16 44 04.5**	**-0.3**
JCT	**Junction City**	72.56	63	P	**P**	**16 44 05.8**	**+0.5**
	baz=322,SNR=27						
JCT	**Junction City**	72.56	63	IAmb	IAmb	16 44 07.0	
	comp=Z,165nm,1.4s						
BRG	**Berggiesshubel**	72.58	338	⇓*i*P	**P**	**16 44 05.0**	**-0.1**
BRG				Amp		16 44 06.9	
	comp=Z,91nm,1.2s						
BRG				*e*x	x	16 44 21.0	
BRG				Amp		16 44 22.1	
	comp=Z,17nm,1.1s						
BRG				*e*x	x	16 44 28.5	
BRG				Amp		16 44 29.3	
	comp=Z,21nm,1.0s						
BRG	**Berggiesshubel**	72.58	338	*e*P	**P**	**16 44 05.4**	**+0.3**
	comp=Z,91nm,1.2s,baz=20,slow=5.9						
LONY	**Lake Ozonia**	72.59	37	P	**P**	**16 44 04.3**	**-0.9**
	baz=329,SNR=6.8						
CLDR	**Caldiran**	72.60	312	*e*P	**P**	**16 44 04.4**	**-1.2**
MIAR	**Mount Ida**	72.61	56	P	**P**	**16 44 05.9**	**+0.4**
	baz=323,SNR=34						
MIAR	**Mount Ida**	72.61	56	P	**P**	**16 44 05.7**	**+0.2**
MIAR				pmax	pmax		
	comp=Z,70nm,0.8s						
MIAR	**Mount Ida**	72.61	56	P	**P**	**16 44 05.7**	**+0.2**
MIAR				IAmb	IAmb	16 44 06.9	
	comp=Z,70nm,0.8s						
ERPA	**Erie**	72.63	42	P	**P**	**16 44 05.4**	**-0.1**
	baz=327,SNR=10						
ERPA	**Erie**	72.63	42	IAmb	IAmb	16 44 06.4	
	comp=Z,90nm,0.9s						
WHTX	**Lake Whitney,**	72.63	60	P	**P**	**16 44 05.9**	**+0.3**
	baz=322,SNR=12						
WHTX	**Lake Whitney,**	72.63	60	P	**P**	**16 44 05.8**	**+0.3**
WHTX				IAmb	IAmb	16 44 07.1	
	comp=Z,228nm,1.6s						
KRLC	**Kraliky**	72.64	336	*e*P	**P**	**16 44 05.4**	**-0.1**
KRLC	**Kraliky**	72.64	336	*e*P	**P**	**16 44 05.4**	**-0.1**
AGRB	**Hanur-Agry**	72.66	313	*e*P	**P**	**16 44 06.0**	**+0.1**
L53A	**Girard**	72.66	42	P	**P**	**16 44 05.6**	**0.0**
	baz=327,SNR=22						
WHAR	**Wooly Hollow**	72.66	54	IAmb	IAmb	16 44 06.8	
	comp=Z,96nm,0.9s						
FBE	**Freiberg**	72.67	338	*e*P	**P**	**16 44 06.2**	**+0.7**
	comp=Z,162nm,1.2s,baz=20,slow=5.9						
F61A	**St Evariste**	72.69	34	P	**P**	**16 44 06.1**	**+0.4**
	baz=331,SNR=18						
D63A	**Stockholm**	72.70	32	P	**P**	**16 44 05.8**	**0.0**
	baz=332,SNR=7.6						
USIN	**University of**	72.72	49	P	**P**	**16 44 06.2**	**+0.2**
MORC	**Moravsky Berou**	72.72	335	⇓P	**P**	**16 44 06.3**	**+0.4**
MORC	**Moravsky Berou**	72.72	335	⇓*i*P	**P**	**16 44 06.1**	**+0.1**
MORC	**Moravsky Berou**	72.72	335	IAmb	IAmb	16 44 07.4	
	comp=Z,99nm,1.1s						
NEUB	**Neuenburg**	72.76	339	*e*P	**P**	**16 44 06.6**	**+0.6**
	comp=Z,148nm,1.2s,baz=20,slow=5.9						
PVCC	**Panska Ves**	72.76	337	*e*P	**P**	**16 44 06.2**	**+0.1**
PVCC	**Panska Ves**	72.76	337	*e*P	**P**	**16 44 06.2**	**+0.1**
P49A	**Miami Univ. Ec**	72.77	47	P	**P**	**16 44 05.8**	**-0.5**
	baz=325,SNR=26						
P49A	**Miami Univ. Ec**	72.77	47	IAmb	IAmb	16 44 07.0	
	comp=Z,139nm,0.9s						
W41B	**Gary Mavity, V**	72.77	54	P	**P**	**16 44 06.3**	**-0.1**
	baz=323,SNR=46						
LANS	**Liptovska Anna**	72.79	334	*e*P	**P**	**16 44 07.4**	**+1.1**
LANS				pmax	pmax		
	comp=Z,59nm,0.9s						
LANS	**Liptovska Anna**	72.79	334	*e*P	**P**	**16 44 07.4**	**+1.1**
GTTG	**Gottingen**	72.82	340	*e*P	**P**	**16 44 08.0**	**+1.6**
	comp=Z,170nm,1.3s,baz=20,slow=5.9						
BIZ	**Bicaz**	72.82	328	⇓P	**P**	**16 44 06.0**	**-0.5**
MOQ	**Mont Orford**	72.83	35	P	**P**	**16 44 06.9**	**+0.3**
J56A	**Wolcott**	72.89	39	P	**P**	**16 44 06.2**	**-0.7**
	baz=328,SNR=7.5						
H59A	**Cadyville**	72.90	36	P	**P**	**16 44 06.4**	**-0.6**
	baz=330,SNR=9.6						
Z38A	**Mt. Pleasant**	72.91	57	IAmb	IAmb	16 44 08.5	
	comp=Z,71nm,0.8s						
H58A	**Gabriels**	72.92	37	P	**P**	**16 44 06.8**	**-0.4**
	baz=330,SNR=6.5						
M53A	**WI Miller and**	72.92	43	P	**P**	**16 44 07.4**	**+0.2**
	baz=327,SNR=22						
M53A	**WI Miller and**	72.92	43	IAmb	IAmb	16 44 08.3	
	comp=Z,139nm,0.9s						
BIR	**Birlad**	72.92	327	⇓P	**P**	**16 44 07.8**	**+0.7**
MDRS	**Chennai**	72.94	269	*e*P	**P**	**16 44 07.3**	**-0.3**
MMNY	**Mt. Morris Dam**	72.94	40	P	**P**	**16 44 06.8**	**-0.5**
MMNY				IAmb	IAmb	16 44 07.8	
	comp=Z,110nm,0.9s						
WVNY	**West Valley, N**	72.94	41	IAmb	IAmb	16 44 08.1	
	comp=Z,97nm,0.9s						
ACSO	**Alum Creek Sta**	72.95	45	P	**P**	**16 44 07.1**	**-0.3**
	baz=326,SNR=31						
ACSO	**Alum Creek Sta**	72.95	45	IAmb	IAmb	16 44 08.5	
	comp=Z,128nm,0.8s						
LBWR	**Ladybower, Pea**	72.95	348	*e*P	**P**	**16 44 07.0**	**-0.1**
LBWR				IAmb	IAmb	16 44 08.1	
	comp=Z,144nm,0.9s						
ALLY	**Alegheny Colle**	72.96	42	IAmb	IAmb	16 44 08.5	
	comp=Z,166nm,1.2s						
G60A	**Masonville**	72.99	35	P	**P**	**16 44 07.5**	**-0.1**
	baz=330						
PENMO	**Penman**	73.02	52	P	**P**	**16 44 08.5**	**+0.7**
TESR	**Tescani**	73.03	328	⇓P	**P**	**16 44 06.9**	**-0.8**

X40A	Basin Creek Fa	73.03	55	P	P	16 44 07.8	-0.1
	baz=323,SNR=18						
G61A	St-Isidore-de-	73.11	35	P	P	16 44 08.7	+0.5
	baz=331,SNR=16						
KECS	Kecovo	73.12	333	eP	P	16 44 08.1	-0.1
KECS				pmax	pmax		
	comp=Z,26nm,1.1s						
KECS	Kecovo	73.12	333	eP	P	16 44 08.1	-0.1
LHSI	Lahat	73.13	239	P	P	16 44 09.2	+0.5
	comp=Z,1µmcomp=Z,111nm,1.1s						
WCI	Wyandotte Cave	73.13	48	P	P	16 44 08.6	+0.1
	baz=325						
WCI	Wyandotte Cave	73.13	48	P	P	16 44 08.5	+0.1
WCI				pmax	pmax		
	comp=Z,124nm,0.8s						
WCI	Wyandotte Cave	73.13	48	P	P	16 44 08.5	+0.1
WCI				IAmb	IAmb	16 44 09.6	
	comp=Z,124nm,0.8s						
E63A	Oxbow	73.15	32	P	P	16 44 08.0	-0.4
	baz=332,SNR=6.2						
UGM	Wanagama	73.16	231	P	P	16 44 10.0	+1.1
	comp=Z,156nm,1.8s						
VARL	Varlezi	73.17	327	⇓P	P	16 44 08.4	-0.1
GHRR		73.17	327	⇓P	P	16 44 09.1	+0.5
PEBM	Pemiscott Bayo	73.18	52	P	P	16 44 09.2	+0.4
K56A	Middlesex	73.20	40	P	P	16 44 08.6	-0.3
	baz=328,SNR=14						
GNAR	Gosnell	73.22	52	P	P	16 44 09.8	+0.8
MASI	Maura Aman, Be	73.22	241	P	P	16 44 10.4	+1.1
	comp=Z,6µmcomp=Z,401nm,1.1s						
KLSI		73.24	238	P	P	16 44 09.5	+0.2
	comp=Z,318nmcomp=Z,22nm,1.1s						
ARCR	ARCALIA	73.24	330	⇑P	P	16 44 09.2	+0.2
I58A	Old Forge	73.25	38	P	P	16 44 08.3	-0.9
	baz=329						
PRU	Pruhonice	73.27	337	eP	P	16 44 08.8	-0.3
PRU	Pruhonice	73.27	337	eP	P	16 44 08.8	-0.3
M54A	Oil Creek Stat	73.27	42	P	P	16 44 09.1	-0.2
	baz=327,SNR=16						
M54A	Oil Creek Stat	73.27	42	IAmb	IAmb	16 44 10.8	
	comp=Z,97nm,1.0s						
VANB	Van	73.28	312	eP	P	16 44 08.7	-0.8
H60A	Morristown	73.33	36	P	P	16 44 09.4	-0.2
	baz=330,SNR=5.9						
GLAT	Glass	73.33	52	P	P	16 44 10.3	+0.6
E64A	Bridgewater	73.34	32	P	P	16 44 09.4	-0.2
	baz=332,SNR=7.6						
TANN	Tannenbergstha	73.35	338	eP	P	16 44 10.3	+0.7
	comp=Z,90nm,1.4s,baz=20,slow=5.9						
PLN	Plauen	73.35	339	eP	P	16 44 10.4	+0.8
	comp=Z,91nm,1.1s,baz=20,slow=5.9						
ESPY	Espiye-Giresun	73.37	317	eP	P	16 44 08.1	-1.8
KOPT	Kop Dagi	73.37	315	P	P	16 44 10.7	+0.4
N53A	Lisbon	73.38	43	IAmb	IAmb	16 44 11.0	
	comp=Z,124nm,0.9s						
VRAC	Vranov	73.40	335	⇓P	P	16 44 10.6	+0.7
VRAC	Vranov	73.40	335	⇓iP	P	16 44 10.3	+0.4
GUNZ	Gunzen	73.43	338	eP	P	16 44 10.9	+0.8
	comp=Z,94nm,1.1s,baz=20,slow=5.9						
CTA	Charters Tower	73.43	193	P	P	16 44 10.9	+0.7
	comp=Z,48nm,0.8s,baz=6.1,slow=7.8,SNR=44						
CTAO	Charters Tower	73.43	193	P	P	16 44 11.0	+0.7
CTAO				pmax	pmax		
	comp=Z,61nm,0.9s						
CTAO	Charters Tower	73.43	193	P	P	16 44 11.0	+0.7
BUG	Bochum--Univer	73.44	342	eP	P	16 44 11.0	+0.9
	comp=Z,230nm,1.0s,baz=20,slow=5.9						
KASTN	Kahler Asten	73.45	341	eP	P	16 44 11.3	+1.1
	comp=Z,184nm,1.2s,baz=20,slow=5.9						
TLCR		73.47	326	⇓P	P	16 44 10.5	+0.1
237A	Washetta, Mont	73.48	59	P	P	16 44 10.7	0.0
K57A	Scipio Center	73.48	39	P	P	16 44 09.9	-0.6
	baz=329,SNR=5.8						
WERN	Wernitzgruen	73.49	338	eP	P	16 44 11.4	+0.9
	comp=Z,104nm,0.9s,baz=20,slow=5.9						
UBBA	Unterbreizbach	73.50	340	eP	P	16 44 11.2	+0.9
	comp=Z,156nm,1.6s,baz=20,slow=5.9						
VT1	Waterbury	73.50	36	P	P	16 44 10.8	+0.2
G62A	West of Eustis	73.51	34	P	P	16 44 11.0	+0.4
	baz=331,SNR=14						
G62A	West of Eustis	73.51	34	IAmb	IAmb	16 44 12.3	
	comp=Z,108nm,1.1s						
435B	Jarrell	73.51	61	P	P	16 44 11.0	+0.2
	baz=322						
NKC	Novy Kostel	73.52	338	eP	P	16 44 11.1	+0.5
NKC	Novy Kostel	73.52	338	eP	P	16 44 11.1	+0.5
WLAR	White Oak Lake	73.52	56	IAmb	IAmb	16 44 12.4	
	comp=Z,76nm,0.8s						
SCHL	Schela	73.53	327	⇓P	P	16 44 11.2	+0.5
PETR	Petresti	73.53	327	⇓P	P	16 44 11.5	+0.8
JAVC	Velka Javorina	73.53	335	⇓iP	P	16 44 12.0	+1.2
O52A	Adamsville	73.53	44	P	P	16 44 10.8	0.0
CWF	Charnwood Fore	73.55	348	eP	P	16 44 10.3	-0.4
CWF				IAmb	IAmb	16 44 10.8	
	comp=Z,105nm,1.1s						
ODBI	Odobesti	73.55	327	⇓P	P	16 44 11.8	+0.9
F63A	Nahmakanta, Br	73.56	33	P	P	16 44 10.9	0.0
	baz=332,SNR=7.2						
VYHS	Vyhne	73.56	334	eP	P	16 44 11.0	+0.1
VYHS				pmax	pmax		
	comp=Z,78nm,1.2s						
VYHS	Vyhne	73.56	334	eP	P	16 44 11.0	+0.1
VRI	Vrincioaia	73.57	327	⇓P	P	16 44 10.6	-0.3
L56A	Greenwood	73.58	40	P	P	16 44 11.0	-0.2
	baz=328,SNR=17						
L56A	Greenwood	73.58	40	IAmb	IAmb	16 44 11.8	
	comp=Z,171nm,1.2s						
HALT	Halls	73.59	52	P	P	16 44 11.3	+0.1
N54A	Moraine State	73.60	43	P	P	16 44 11.2	0.0
	baz=327,SNR=26						
N54A	Moraine State	73.60	43	IAmb	IAmb	16 44 12.3	
	comp=Z,133nm,1.0s						
PLOR	Plostina	73.61	327	⇓P	P	16 44 11.0	-0.2
J59A	Piesco	73.62	38	P	P	16 44 10.5	-0.8
	baz=330,SNR=11						
LEM	Lembang	73.62	234	P	P	16 44 11.8	0.0
	comp=Z,29nm,0.8s,baz=77,slow=9.5,SNR=5.7						
H61A	Lyndonville	73.62	35	P	P	16 44 10.3	-1.0
	baz=331,SNR=16						
FOEL	Foel Wylfa	73.63	349	eP	P	16 44 10.3	-0.9
FOEL				IAmb	IAmb	16 44 11.3	
	comp=Z,93nm,0.9s						
F64A	Sherman	73.67	32	P	P	16 44 11.4	0.0
	baz=332,SNR=6.0						
M55A	Ridgway	73.67	42	P	P	16 44 11.5	-0.1
M55A				IAmb	IAmb	16 44 12.7	
	comp=Z,111nm,0.9s						
OZUR		73.67	328	⇓P	P	16 44 11.8	+0.2
KRUC	Moravsky	73.67	335	⇓iP	P	16 44 11.8	+0.3
PBCC	Pribram	73.68	337	eP	P	16 44 11.2	-0.3
AKDM	Akdamar-Van	73.68	313	eP	P	16 44 09.7	-2.3
TREC	Trest	73.69	336	eP	P	16 44 11.4	-0.2
TREC	Trest	73.69	336	eP	P	16 44 11.4	-0.2
O53A	New Philadelph	73.69	44	P	P	16 44 11.6	-0.1
	baz=327,SNR=27						
O53A	New Philadelph	73.69	44	IAmb	IAmb	16 44 12.6	
	comp=Z,143nm,0.8s						
IGLA	Glengowla, Co	73.70	353	eP	P	16 44 11.4	-0.2
CFR	Carcaliu	73.71	326	⇓P	P	16 44 10.9	-0.8
I60A	Shoreham	73.73	37	P	P	16 44 11.5	-0.4
	baz=330						
T47A	Sharon Grove	73.77	50	IAmb	IAmb	16 44 13.8	
	comp=Z,147nm,0.8s						
Q51A	Peebles	73.79	46	IAmb	IAmb	16 44 13.4	
	comp=Z,102nm,0.8s						
K58A	Earlville	73.79	39	P	P	16 44 11.9	-0.4
	baz=329,SNR=10						
PSZ	Piszkesteto	73.80	333	⇓P	P	16 44 12.9	+0.6
PSZ	Piszkesteto	73.80	333	P	P	16 44 12.4	+0.1
PSZ				pmax	pmax		
	comp=Z,66nm,1.0s						
PSZ	Piszkesteto	73.80	333	P	P	16 44 12.4	+0.1
CJR	Cluj-Napoca	73.81	330	⇓P	P	16 44 12.6	+0.2
P52A	Corning	73.81	45	P	P	16 44 12.0	-0.4
	baz=326,SNR=21						
P52A	Corning	73.81	45	IAmb	IAmb	16 44 13.0	
	comp=Z,88nm,0.8s						
DBJI	Dramaga	73.81	235	P	P	16 44 12.5	-0.2
	comp=Z,319µmcomp=Z,10µmcomp=Z,86nm,1.2s						
JURR	Jurilovca	73.82	325	⇓P	P	16 44 11.9	-0.5
MANZ	Manzenberg	73.83	338	eP	P	16 44 13.1	+0.6
	comp=Z,71nm,1.1s,baz=20,slow=5.9						
YEDI	Yedisu-Bingol	73.83	315	eP	P	16 44 11.5	-1.3
H62A	Milan	73.86	35	P	P	16 44 13.0	+0.4
	baz=331,SNR=17						
BISRR	Bisoca	73.86	327	⇓P	P	16 44 13.5	+0.8
LWLI	Liwa	73.86	238	P	P	16 44 12.5	-0.6
	comp=Z,4µmcomp=Z,72nm,1.0s						
LBNH	Lisbon	73.88	36	P	P	16 44 13.1	+0.4
	baz=331,SNR=6.5						
LBNH	Lisbon	73.88	36	P	P	16 44 13.4	+0.6
LBNH				pmax	pmax		
	comp=Z,60nm,0.9s						
LBNH	Lisbon	73.88	36	P	P	16 44 13.4	+0.6
PKME	Peaks-Kenny Pk	73.88	33	P	P	16 44 13.1	+0.3
	baz=332						
M56A	Emporium	73.89	41	P	P	16 44 12.5	-0.4
	baz=328,SNR=12						
M56A	Emporium	73.89	41	P	P	16 44 12.5	-0.4
M56A				IAmb	IAmb	16 44 13.6	
	comp=Z,101nm,1.1s						
TPGR	Topolog	73.89	326	⇓P	P	16 44 12.4	-0.4
G63A	Kingsbury	73.91	34	P	P	16 44 13.3	+0.4
	baz=332						
DOPR	Dopca	73.91	328	⇓P	P	16 44 13.4	+0.4
SMOL	Smolenice	73.92	335	eP	P	16 44 14.0	+1.1
SMOL				pmax	pmax		
	comp=Z,42nm,1.2s						
SMOL	Smolenice	73.92	335	eP	P	16 44 14.0	+1.1
GRER		73.92	327	⇑P	P	16 44 14.2	+1.2
GURO	Guroymak-BITLI	73.92	313	eP	P	16 44 12.9	-0.4
X43A	Marvell	73.97	54	P	P	16 44 13.7	+0.3
	baz=324,SNR=5.3						
R50A	Paris	73.97	47	IAmb	IAmb	16 44 14.7	
	comp=Z,83nm,0.9s						
L57A	Andrews Acres	73.98	40	P	P	16 44 13.1	-0.4
	baz=329,SNR=7.6						
ACCN	Adirondack Com	73.99	37	IAmb	IAmb	16 44 14.2	
	comp=Z,75nm,0.9s						
DRGR		74.00	330	⇓P	P	16 44 13.4	-0.2
ROTZ	Rotzenmuhle	74.02	338	eP	P	16 44 14.4	+0.9
	comp=Z,100nm,1.1s,baz=20,slow=5.9						
Z41A	Richland Creek	74.02	56	P	P	16 44 14.1	+0.4
	baz=323						
KASI	Kota Agung	74.07	237	P	P	16 44 13.2	-1.0
	comp=Z,59nm,1.2s						
G64A	Maxfield	74.07	33	P	P	16 44 14.4	+0.5
	baz=332						
MDB	Medias	74.08	329	⇓P	P	16 44 14.4	+0.5
K59A	Cooperstown	74.08	38	P	P	16 44 13.6	-0.4
	baz=329,SNR=17						
MODS	Modra-Piesok	74.08	335	eP	P	16 44 14.0	+0.1
MODS				pmax	pmax		
	comp=Z,89nm,1.2s						
MODS	Modra-Piesok	74.08	335	eP	P	16 44 14.0	+0.1
O54A	Avella	74.09	43	IAmb	IAmb	16 44 15.2	
	comp=Z,122nm,0.9s						
WVT	Waverly	74.13	51	P	P	16 44 14.7	+0.3
	baz=325						
WVT	Waverly	74.13	51	P	P	16 44 14.7	+0.3
WVT				pmax	pmax		
	comp=Z,87nm,0.8s						
WVT	Waverly	74.13	51	P	P	16 44 14.7	+0.3
WVT				IAmb	IAmb	16 44 15.8	
	comp=Z,87nm,0.8s						
BINY	Binghamton	74.14	39	P	P	16 44 13.9	-0.5
	baz=329,SNR=6.6						
BNGB	Bingl	74.15	315	eP	P	16 44 14.8	+0.2
MLR	Muntele Rosu	74.16	328	⇓P	P	16 44 15.1	+0.5
H63A	New Sharon	74.16	34	P	P	16 44 14.7	+0.4
	baz=332,SNR=6.6						
J60A	Lant Hill Farm	74.20	37	P	P	16 44 14.4	-0.3
	baz=330,SNR=7.0						
HARR	Harsova	74.21	326	⇓P	P	16 44 14.2	-0.4
TIRR	Tirgusor	74.25	326	P	P	16 44 14.6	-0.3
TIRR				pmax	pmax		
	comp=Z,191nm,0.9s						
TIRR	Tirgusor	74.25	326	P	P	16 44 14.6	-0.3
P53A	Whipple	74.25	44	IAmb	IAmb	16 44 16.0	
	comp=Z,116nm,1.1s						
NATX	Nacogdoches	74.27	58	P	P	16 44 16.1	+0.9
	baz=323,SNR=8.2						
NATX	Nacogdoches	74.27	58	P	P	16 44 15.9	+0.7
NATX				IAmb	IAmb	16 44 17.2	
	comp=Z,130nm,0.7s						
W45A	Hickory Valley	74.27	52	IAmb	IAmb	16 44 16.8	
	comp=Z,114nm,0.9s						
ISR	Istrita	74.29	327	⇓P	P	16 44 15.4	+0.1
ZST	Bratislava	74.29	335	eP	P	16 44 15.6	+0.5
ZST				pmax	pmax		
	comp=Z,220nm,1.2s						
ZST	Bratislava	74.29	335	eP	P	16 44 15.6	+0.5
TLBR	Topalu	74.30	326	⇑P	P	16 44 15.0	-0.1
KHC	Kasperske Hory	74.30	337	eP	P	16 44 15.9	+0.7
KHC	Kasperske Hory	74.30	337	eP	P	16 44 15.9	+0.7
KHC	Kasperske Hory	74.30	337	IAmb	IAmb	16 44 17.1	
	comp=Z,128nm,1.0s						
GRA1	Grafenberg Arr	74.30	339	P	P	16 44 15.7	+0.5
GRF	Grafenberg Arr	74.30	339	P	P	16 44 15.7	+0.5
GRF				pmax	pmax		
	comp=Z,193nm,1.0s						
GRF	Grafenberg Arr	74.30	339	eP	P	16 44 16.4	+1.2
	comp=Z,222nm,1.1s,baz=20,slow=5.9						
GRF				eL	L	17 17 56.7	
	comp=Z,360nm,21.0s						
GRFO	Grafenberg	74.31	339	P	P	16 44 15.6	+0.4
GRFO				pmax	pmax		
	comp=Z,174nm,1.0s						
GRFO	Grafenberg	74.31	339	P	P	16 44 15.6	+0.4
GRFO				IAmb	IAmb	16 44 17.1	
	comp=Z,174nm,1.0s						
Q52A	Bidwell	74.31	45	IAmb	IAmb	16 44 16.1	
	comp=Z,102nm,0.9s						
KVT	Kavak	74.32	319	eP	P	16 44 15.5	0.0
SRO	Srobarova	74.32	334	eP	P	16 44 16.1	+0.8
SRO				pmax	pmax		
	comp=Z,95nm,1.2s						
SRO	Srobarova	74.32	334	eP	P	16 44 16.1	+0.8
N56A	West Decatur	74.33	42	P	P	16 44 15.4	-0.1
	baz=328,SNR=25						
L58A	Harry Jones Me	74.33	39	P	P	16 44 15.1	-0.3
	baz=329,SNR=8.8						
AHRW	Bad Neuenahr-A	74.34	342	eP	P	16 44 16.4	+1.1
	comp=Z,190nm,1.1s,baz=20,slow=5.9						
SRO2	Moca	74.35	334	eP	P	16 44 15.3	-0.1
SRO2				pmax	pmax		
	comp=Z,72nm,0.8s						
SRO2	Moca	74.35	334	eP	P	16 44 15.3	-0.1
BEBN	Eben Emael	74.35	343	κP	P	16 44 15.9	+0.5
	comp=Z,253nm,1.2s						
WVL	Waterville	74.38	34	P	P	16 44 16.0	+0.3
TNS	Taunus Mts	74.38	341	eP	P	16 44 16.6	+1.0
	comp=Z,146nm,1.2s,baz=20,slow=5.9						
RSDY	Resadiye-TOKAT	74.38	318	eP	P	16 44 15.6	-0.2
I62A	Tamworth	74.40	35	P	P	16 44 16.0	+0.2
	baz=331						
CKRC	Cesky Krumlov	74.41	337	eP	P	16 44 15.5	-0.3
J61A	Chester	74.43	36	P	P	16 44 16.1	+0.1
	baz=330,SNR=5.8						
M57A	Sunshine Farm,	74.43	40	P	P	16 44 15.9	-0.2
	baz=329,SNR=20						
M57A	Sunshine Farm,	74.43	40	P	P	16 44 15.8	-0.2
M57A				IAmb	IAmb	16 44 16.9	
	comp=Z,112nm,0.8s						
WET	Wettzell	74.45	338	eP	P	16 44 17.2	+1.1
	comp=Z,140nm,1.1s,baz=20,slow=5.9						
H64A	Troy	74.46	34	P	P	16 44 16.5	+0.4
	baz=332						
833A	Chaparral WMA,	74.47	64	P	P	16 44 17.6	+1.2
	baz=322,SNR=14						
BTNL	Ternell	74.47	342	κP	P	16 44 16.8	+0.6
	comp=Z,234nm,1.1s						
MEM	Membach	74.47	343	κP	P	16 44 16.6	+0.5
	comp=Z,357nm,1.0s						
AMRR	Amara	74.48	326	⇓P	P	16 44 16.6	+0.3
MCH1	Michaelchurch	74.48	349	eP	P	16 44 15.3	-0.8
MCH1				IAmb	IAmb	16 44 17.1	
	comp=Z,48nm,0.8s						
MFTR	Murfatlar	74.49	325	⇓P	P	16 44 16.1	-0.2
VOIR		74.49	328	⇓P	P	16 44 16.7	+0.3
EFOR	EFORIE	74.50	325	⇓P	P	16 44 16.0	-0.3
G65A	Princeton	74.51	32	P	P	16 44 16.7	+0.3
	baz=333						
L59A	Walton	74.51	39	P	P	16 44 16.1	-0.4
	baz=329,SNR=11						
L59A	Walton	74.51	39	P	P	16 44 16.1	-0.4
L59A				IAmb	IAmb	16 44 17.2	
	comp=Z,121nm,1.0s						
I63A	Otisfield	74.51	35	P	P	16 44 17.4	+1.0
	baz=331,SNR=8.7						
I63A	Otisfield	74.51	35	IAmb	IAmb	16 44 18.3	
	comp=Z,149nm,0.9s						
IWEX	Carrickbyrne,	74.52	351	eP	P	16 44 15.1	-1.2
GEC2	GERESS Array S	74.53	337	eP	P	16 44 17.2	+0.6
	comp=Z,92nm,1.3s,baz=20,slow=5.9						
GERES	GERESS Array B	74.53	337	P	P	16 44 16.7	+0.1
	comp=Z,23nm,0.8s,baz=36,slow=5.0,SNR=156						
GERES				LR	LR	17 22 00.5	
	comp=Z,329nm,19.1s,baz=20,slow=40						
GERES	GERESS Array B	74.53	337	P	P	16 44 16.4	-0.2
K60A	Five Rivers En	74.58	38	P	P	16 44 17.1	+0.2
	baz=330						
BSTI	Sart Tilman	74.58	343	κP	P	16 44 17.5	+0.8
	comp=Z,65nm,1.2s						
UCC	Uccle	74.58	344	κP	P	16 44 17.0	+0.3
UCC	Uccle	74.58	344	IAmb	IAmb	16 44 18.0	
	comp=Z,120nm,1.1s						
STRD	Stroud	74.60	348	eP	P	16 44 16.0	-0.8
STRD				IAmb	IAmb	16 44 17.4	
	comp=Z,113nm,1.1s						
SVAN	Silvan-Diyarba	74.62	314	eP	P	16 44 17.2	0.0
M58A	Price’s Panora	74.67	40	P	P	16 44 17.2	-0.2
	baz=329,SNR=9.3						
ARR	Arges	74.69	329	⇓P	P	16 44 18.4	+0.8
OXF	Oxford	74.69	53	P	P	16 44 17.8	+0.2
	baz=324,SNR=16						
OXF	Oxford	74.69	53	IAmb	IAmb	16 44 18.9	
	comp=Z,138nm,0.9s						
Q53A	Leroy	74.71	45	P	P	16 44 18.0	+0.2
	baz=327,SNR=37						
BHOU	Houvegnez	74.72	342	κP	P	16 44 18.4	+0.8
	comp=Z,167nm,1.3s						
H65A	Eastbrook	74.73	33	P	P	16 44 18.0	+0.3
	baz=333						
MCWV	Mont Chateau	74.75	43	P	P	16 44 18.2	+0.3
	baz=328,SNR=21						
MCWV	Mont Chateau	74.75	43	IAmb	IAmb	16 44 19.3	
	comp=Z,70nm,0.9s						
ICOR	Ion Corvin	74.75	326	⇓P	P	16 44 18.3	+0.5
K61A	Williamstown	74.76	37	P	P	16 44 17.7	-0.2
	baz=330,SNR=8.7						
N57A	Milroy	74.76	41	P	P	16 44 17.9	-0.1
	baz=328,SNR=44						
O56A	Blue Knob Stat	74.76	42	P	P	16 44 17.8	-0.2
	baz=328,SNR=22						
O56A	Blue Knob Stat	74.76	42	P	P	16 44 18.0	0.0
O56A				IAmb	IAmb	16 44 19.0	
	comp=Z,118nm,0.8s						
TOKT	Tokat	74.77	318	eP	P	16 44 18.1	0.0
U49A	Red Boiling Sp	74.77	49	IAmb	IAmb	16 44 19.4	
	comp=Z,70nm,0.8s						
LEHL	Lehliu	74.77	327	⇓P	P	16 44 18.3	+0.4
SULR		74.78	327	⇓P	P	16 44 17.4	-0.5
T50A	Nancy	74.78	48	IAmb	IAmb	16 44 19.4	
	comp=Z,86nm,0.9s						
BCLA	Clavier	74.78	343	κP	P	16 44 18.0	+0.2
	comp=Z,131nm,1.2s						
SIRR	Siria	74.79	331	⇓P	P	16 44 18.1	0.0
LMN	Caledonia Moun	74.79	30	P	P	16 44 18.4	+0.4
J62A	Henniker	74.80	36	P	P	16 44 18.6	+0.5
	baz=331						
DZM	Mont Dzumac	74.84	173	eP	P	16 44 20.3	+1.8
	comp=Z,195nm,1.2s						
DZM				eS	S	16 53 48.2	0.0
	comp=Z,522nm,24.3s						
DZM	Mont Dzumac	74.84	173	eLR	LR	17 07 24.1	
	comp=Z,335nm,23.1s						
DZM	Mont Dzumac	74.84	173	IAmb	IAmb	16 44 21.9	
	comp=Z,108nm,1.2s						
BGES	Gesves	74.86	343	dP	P	16 44 18.6	+0.3
	comp=Z,124nm,1.1s						
YATNC	Mamie plateau,	74.86	172	P	P	16 44 21.0	+2.5
CONA	Conrad Observa	74.86	335	i P	P	16 44 19.4	+0.9
	comp=Z,90nm,1.1s,SNR=41						
CLTN	Cedars of Leba	74.86	50	IAmb	IAmb	16 44 20.0	
	comp=Z,115nm,0.8s						
SNF	Seneffe	74.88	344	κP	P	16 44 18.9	+0.5
Q54A	Coxs Mills	74.90	44	P	P	16 44 18.9	+0.1
Q54A				IAmb	IAmb	16 44 20.1	
	comp=Z,152nm,1.4s						
M59A	Waymart	74.92	39	P	P	16 44 18.1	-0.7
	baz=329,SNR=8.8						
V48A	Smith Brothers	74.92	50	IAmb	IAmb	16 44 20.1	
	comp=Z,94nm,0.8s						
WOL	Wolverton	74.93	347	eP	P	16 44 18.3	-0.4
PLAL	Pickwick Lake	74.95	52	IAmb	IAmb	16 44 20.1	
	comp=Z,81nm,0.8s						
GOA	Goa	74.95	276	eP	P	16 44 18.1	-1.2
GOA				IAmb	IAmb	16 44 19.4	
	comp=Z,35nm,1.0s						
GOA				i x	x	16 44 28.6	
I64A	Boothbay	74.95	34	P	P	16 44 18.1	-0.8
	baz=332						
R53A	Hurricane	74.97	45	IAmb	IAmb	16 44 20.4	
	comp=Z,94nm,0.8s						
BMRD	Maredsous	74.99	343	κP	P	16 44 19.6	+0.5
	comp=Z,170nm,1.2s						
L60A	Shokan	74.99	38	P	P	16 44 18.9	-0.4
	baz=330,SNR=11						
J63A	Strafford	75.02	35	P	P	16 44 18.0	-1.4
	baz=331						
N58A	Sunbury	75.02	40	P	P	16 44 19.0	-0.4
	baz=329,SNR=16						
N58A	Sunbury	75.02	40	P	P	16 44 19.1	-0.4
N58A				IAmb	IAmb	16 44 20.1	
	comp=Z,90nm,0.9s						
RCHB	Rochefort	75.05	343	κP	P	16 44 19.8	+0.4
	comp=Z,123nm,1.2s						
L61A	Hillsdale 1, H	75.06	38	P	P	16 44 19.6	-0.1
	baz=330,SNR=5.3						
HKT	Hockley	75.09	60	P	P	16 44 20.5	+0.6
HKT				pmax	pmax		
	comp=Z,102nm,1.7s						
HKT	Hockley	75.09	60	P	P	16 44 20.5	+0.6
K62A	Royalston	75.14	37	P	P	16 44 20.2	+0.1
	baz=331						
Y45A	Yeager Farm, C	75.15	53	IAmb	IAmb	16 44 22.0	
	comp=Z,125nm,0.8s						
L61B	Northampton	75.16	37	P	P	16 44 20.2	-0.1
	baz=331						
O57A	Amberson	75.19	41	P	P	16 44 20.6	+0.2
	baz=328,SNR=19						
DOU	Dourbes	75.22	343	κP	P	16 44 20.7	+0.3
	comp=Z,88nm,1.2s						
GZR	Gura Zlata	75.24	330	⇓P	P	16 44 20.5	-0.2
DYBB	Diyarbakir	75.25	314	eP	P	16 44 20.9	0.0
P56A	Dayton Farm, R	75.30	43	P	P	16 44 21.4	+0.3
	baz=328,SNR=45						
N59A	State Game Lan	75.32	40	P	P	16 44 20.9	-0.3
	baz=329,SNR=16						
N59A	State Game Lan	75.32	40	P	P	16 44 21.0	-0.2
N59A				IAmb	IAmb	16 44 22.0	
	comp=Z,79nm,0.8s						
HUMR	Humele	75.33	328	⇓P	P	16 44 20.3	-0.9
MOA	Molln	75.33	336	i P	P	16 44 21.7	+0.5
	comp=Z,66nm,1.4s,SNR=23						
WLF	Walferdange	75.35	342	κP	P	16 44 22.0	+0.8
WLF	Walferdange	75.35	342	eP	P	16 44 22.4	+1.2
	comp=Z,1µm,3.0s,baz=20,slow=5.9						
K63A	Dunstable	75.37	36	P	P	16 44 21.3	-0.1
	baz=331,SNR=5.6						
WB0	Warramunga Arr	75.38	204	P	P	16 44 22.1	+0.6
BZS	Buzias	75.39	331	⇓P	P	16 44 21.2	-0.3
M60A	Port Jervis	75.41	39	P	P	16 44 21.0	-0.7
	baz=330,SNR=10.0						
R54A	Victor	75.51	45	P	P	16 44 22.2	-0.1
	baz=327,SNR=14						
HRV	Adam Dziewonsk	75.52	36	P	P	16 44 22.5	+0.2
	baz=331						
HRV	Adam Dziewonsk	75.52	36	P	P	16 44 22.9	+0.6
HRV				pmax	pmax		
	comp=Z,235nm,1.8s						
HRV	Adam Dziewonsk	75.52	36	P	P	16 44 22.9	+0.6
HRV				IAmb	IAmb	16 44 23.1	
	comp=Z,235nm,1.8s						
WR0	Warramunga Arr	75.52	204	IAmb	IAmb	16 46 27.0	
	comp=Z,37nm,0.5s						
PAGS	Pennsylvania G	75.54	41	IAmb	IAmb	16 44 23.1	
	comp=Z,69nm,0.9s						
WRAB	Tennant Creek	75.55	204	P	P	16 44 23.0	+0.5
WRAB				pmax	pmax		
	comp=Z,85nm,1.5s						
WRAB	Tennant Creek	75.55	204	P	P	16 44 23.0	+0.5
Q56A	Snyder Ridge,	75.55	43	P	P	16 44 22.6	+0.1
O58A	Lewisberry	75.55	41	P	P	16 44 22.3	-0.2
	baz=329,SNR=18						
WB2	Warramunga Arr	75.55	204	IAmb	IAmb	16 44 24.8	
	comp=Z,132nm,1.6s						

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WRA   Warramunga Arr   75.56 204   P      P      16 44 23.4 +0.8
      comp=Z,22nm,0.6s,baz=24,slow=6.4,SNR=325
WRA   Warramunga Arr   75.56 204   P      P      16 44 22.6  0.0
ARSA  Arzberg          75.57 335 i P      P      16 44 23.5 +0.9
      comp=Z,85nm,1.3s,SNR=36
COPA  Copaceanca       75.60 328 ⇓P      P      16 44 22.6 -0.1
STU   Stuttgart        75.61 340   IAmb   IAmb   16 44 25.9
      comp=Z,84nm,0.8s
STU   Stuttgart        75.61 340 eP      P      16 44 23.4 +0.8
      comp=Z,147nm,1.2s,baz=20,slow=5.9
N60A  Cedar Hill Far   75.62  39   P      P      16 44 22.4 -0.4
      baz=330,SNR=7.7
HTL   Hartland         75.64 349 eP      P      16 44 23.0 +0.2
HTL                                IAmb   IAmb   16 44 24.0
      comp=Z,144nm,1.0s
P57A  Homestead Farm   75.66  42   P      P      16 44 23.0 -0.1
      baz=328,SNR=9.3
P57A  Homestead Farm   75.66  42   P      P      16 44 22.8 -0.2
MALT  Malatya          75.68 316 eP      P      16 44 23.4  0.0
RAZG  Razgrad          75.68 326 ⇓P      P      16 44 22.8 -0.4
O59A  Robesonia        75.68  40   P      P      16 44 22.9 -0.3
      baz=329,SNR=8.1
CANT  Cankiri          75.69 320 eP      P      16 44 23.6 +0.3
S54A  Dingess, Beckl   75.69  45   P      P      16 44 23.4  0.0
      baz=327,SNR=5.7
MORH  Mrgy, Hungar     75.70 333 ⇓P      P      16 44 22.8 -0.4
MORH  Mrgy, Hungar     75.70 333⇓iP      P      16 44 22.6 -0.6
TRNY  Table Rock, Ra   75.72  39   IAmb   IAmb   16 44 24.7
      comp=Z,143nm,1.6s
FUR   Furstenfeldbru   75.73 338 eP      P      16 44 24.3 +0.9
      comp=Z,190nm,1.1s,baz=20,slow=5.9
M61A  Granite Spring   75.75  38   P      P      16 44 23.2 -0.4
      baz=330,SNR=6.4
LUPA  Lehigh Univers   75.75  40   P      P      16 44 23.3 -0.3
LUPA                               IAmb   IAmb   16 44 24.3
      comp=Z,79nm,1.0s
SRE   Strehaia         75.77 329 ⇓P      P      16 44 23.6 -0.1
RJOB  Jochberg         75.79 337 eP      P      16 44 24.9 +1.1
      comp=Z,276nm,0.9s,baz=20,slow=5.9
HERR  Herculane        75.81 330 ⇓P      P      16 44 23.4 -0.5
DARE  Darende-Malaty   75.86 316 eP      P      16 44 24.9 +0.5
X48A  Hartselle        75.87  51   P      P      16 44 24.0 -0.4
Q57A  Strasburg        75.87  43   P      P      16 44 24.1 -0.2
      baz=328,SNR=6.8
PAL   Palisades        75.96  39   P      P      16 44 24.6 -0.2
      baz=330,SNR=9.8
PAL   Palisades        75.96  39   P      P      16 44 24.6 -0.2
PAL                                pmax   pmax
      comp=Z,94nm,0.7s
PAL   Palisades        75.96  39   P      P      16 44 24.6 -0.2
PAL                                IAmb   IAmb   16 44 25.5
      comp=Z,94nm,0.7s
M62A  Hamden           75.96  38   P      P      16 44 24.2 -0.5
      baz=331
BEHE  Becsehely        75.97 334⇓iP      P      16 44 28.5 +3.7
ZIMR                   75.98 327 ⇓P      P      16 44 24.2 -0.6
O60A  Telford          75.98  40   P      P      16 44 24.5 -0.4
      baz=330
VLAD  Vladila          75.98 328 ⇓P      P      16 44 24.2 -0.7
BRNJ  Basking Ridge    75.99  39   IAmb   IAmb   16 44 25.7
      comp=Z,67nm,0.8s
VBMS  Vicksburg        76.00  55   P      P      16 44 25.7 +0.5
      baz=324
VBMS  Vicksburg        76.00  55   IAmb   IAmb   16 44 27.1
      comp=Z,78nm,0.8s
V51A  Loudon           76.01  49   IAmb   IAmb   16 44 26.3
      comp=Z,84nm,0.8s
N61A  South Mountain   76.03  39   P      P      16 44 24.8 -0.4
      baz=330
BRYW  Bryant College   76.04  36   P      P      16 44 25.3  0.0
W50A  Signal Mountai   76.06  50   IAmb   IAmb   16 44 26.6
      comp=Z,107nm,0.8s
L63A  North Scituate   76.06  37   P      P      16 44 25.7 +0.4
      baz=331
MDVR  Moldovita        76.12 330 ⇓P      P      16 44 25.1 -0.6
CPNY  Central Park     76.13  39   IAmb   IAmb   16 44 26.6
      comp=Z,102nm,0.8s
KOGS  Kog              76.13 334 i P      P      16 44 25.8 +0.1
GBN   Guysborough      76.17  28   IAmb   IAmb   16 44 28.4
      comp=Z,120nm,1.4s
P59A  Jarrettsville    76.18  41   P      P      16 44 25.9 -0.2
      baz=329,SNR=11
N62A  Caumsett State   76.19  38   P      P      16 44 25.7 -0.4
      baz=330
PUNG  Punghina         76.20 329 ⇓P      P      16 44 25.3 -0.7
BFO   Black Forest     76.20 340   P      P      16 44 26.2 +0.1
BFO                                pmax   pmax
      comp=Z,75nm,0.9s
BFO   Black Forest     76.20 340   P      P      16 44 26.2 +0.1
BFO                                IAmb   IAmb   16 44 27.5
      comp=Z,75nm,0.9s
BFO   Black Forest     76.20 340 eP      P      16 44 26.8 +0.7
      comp=Z,152nm,1.4s,baz=20,slow=5.9
CPCT  Cooper Cave      76.22  49   IAmb   IAmb   16 44 27.4
      comp=Z,75nm,0.8s
SOKA  Soboth           76.23 335 i P      P      16 44 27.0 +0.7
      comp=Z,162nm,1.4s,SNR=56
URFA  Urfa             76.24 315 eP      P      16 44 25.8 -0.8
Q58A  Fox Den Farm,    76.25  42   P      P      16 44 26.7 +0.2
      baz=329,SNR=33
KBA   Koelnbreinsper   76.27 337 i P      P      16 44 27.9 +1.2
      comp=Z,425nm,0.9s,SNR=206
L64A  Middleborough    76.28  36   P      P      16 44 26.8 +0.3
      baz=332,SNR=8.6
L64A  Middleborough    76.28  36   P      P      16 44 26.9 +0.3
L64A                               IAmb   IAmb   16 44 28.0
      comp=Z,88nm,0.8s
BNN   Bunyan           76.30 318 eP      P      16 44 25.4 -1.5
M63A  Gales Ferry      76.31  37   P      P      16 44 26.7 -0.1
      baz=331,SNR=7.2
M63A  Gales Ferry      76.31  37   IAmb   IAmb   16 44 27.5
      comp=Z,88nm,0.9s
FITZ  Fitzroy Crossi   76.31 213   P      P      16 44 28.4 +1.6
      comp=Z,40nm,0.9s,baz=16,slow=6.4,SNR=44
V52A  Sevierville      76.32  48   IAmb   IAmb   16 44 28.1
      comp=Z,63nm,0.8s
P60A  Greenville       76.33  40   P      P      16 44 26.5 -0.4
      baz=330,SNR=5.2
P60A  Greenville       76.33  40   P      P      16 44 26.6 -0.3
FRGS  Fruska Gora      76.34 332 ⇓P      P      16 44 27.0  0.0
FRGS  Fruska Gora      76.34 332⇓iP      P      16 44 26.6 -0.3
KALN  Kalnik           76.37 334 i P      P      16 44 27.1  0.0
TKL   Tuckaleechee C   76.39  48   LR     LR     17 20 51.1
      comp=Z,167nm,18.4s,baz=329,slow=38
BR131 Keskin Array S   76.44 320d iP     P      16 44 26.6 -1.1
BR131 Keskin Array S   76.44 320   IAmb   IAmb   16 44 28.4
      comp=Z,64nm,0.8s
BRTR  Keskin Array B   76.44 320   P      P      16 44 27.6 -0.2
      comp=Z,33nm,0.7s,baz=52,slow=2.9,SNR=116
BRTR                               LR     LR     17 23 35.9
      comp=Z,203nm,18.9s,baz=26,slow=40
SARI  SarD1z-Kayseri   76.44 317 eP      P      16 44 26.1 -1.7
WATA  Walderalm        76.45 338 i P      P      16 44 28.5 +0.8
      comp=Z,155nm,1.1s,SNR=33
UBR   Ueberruh         76.45 339 eP      P      16 44 28.4 +0.8
      comp=Z,145nm,1.1s,baz=20,slow=5.9
R57A  Stanardsville    76.45  43   P      P      16 44 27.9 +0.3
      baz=328,SNR=12
PLVB  Pleven           76.46 328 ⇓P      P      16 44 26.7 -0.9
FPAL  Fort Paine       76.47  50   IAmb   IAmb   16 44 28.9
      comp=Z,100nm,0.8s
M64A  Tiverton         76.48  36   P      P      16 44 27.9 +0.2
      baz=331
RETA  Reutte           76.49 338 i P      P      16 44 28.3 +0.6
      comp=Z,91nm,1.1s,SNR=29
WTTA  Wattenberg       76.50 338 i P      P      16 44 29.0 +1.1
      comp=Z,225nm,1.1s,SNR=59
O61A  Allentown        76.50  39   P      P      16 44 27.6 -0.3
      baz=330
OBKA  Obir             76.51 336 i P      P      16 44 28.6 +0.6
      comp=Z,186nm,1.4s,SNR=68
344A  Westbrook Farm   76.51  56   P      P      16 44 29.4 +1.4
344A                               IAmb   IAmb   16 44 30.0
      comp=Z,76nm,0.7s
S56A  Natural Bridge   76.54  44   P      P      16 44 28.4 +0.3
      baz=328,SNR=8.0
U54A  Nelsons Funny    76.54  46   P      P      16 44 28.5 +0.2
      baz=327,SNR=13
U54A  Nelsons Funny    76.54  46   IAmb   IAmb   16 44 29.5
      comp=Z,84nm,0.8s
MOTA  Moosalm          76.54 338 i P      P      16 44 28.8 +0.6
      comp=Z,218nm,1.1s,SNR=68
ECH   Echery           76.55 341   IAmb   IAmb   16 44 29.5
      comp=Z,160nm,1.0s
BLA   Blacksburg       76.57  45   P      P      16 44 28.6 +0.2
      baz=328,SNR=10
BLA   Blacksburg       76.57  45   P      P      16 44 28.6 +0.2
BLA                                pmax   pmax
      comp=Z,76nm,0.9s
BLA   Blacksburg       76.57  45   P      P      16 44 28.6 +0.2
BLA                                IAmb   IAmb   16 44 29.6
      comp=Z,76nm,0.9s
MYKA  Terra Mystica    76.62 336 i P      P      16 44 28.9 +0.3
      comp=Z,86nm,1.1s,SNR=18
SQTA  Sankt Quirin     76.64 338 i P      P      16 44 29.5 +0.8
      comp=Z,212nm,1.0s,SNR=81
R58A  Rapidan          76.67  43   P      P      16 44 29.0 +0.1
      baz=329,SNR=12
M65A  Busby, Falmout   76.67  36   P      P      16 44 28.5 -0.3
      baz=332
PTJ   Puntijarka       76.70 334   P      P      16 44 29.2 +0.1
KAMT  Kaman            76.71 319 eP      P      16 44 27.1 -2.1
MDUB  Mudurnu          76.73 322 eP      P      16 44 27.9 -1.4
MDUB  Mudurnu          76.73 322   P      P      16 44 28.4 -0.9
S57A  Dark Hollow, R   76.73  44   P      P      16 44 29.7 +0.5
      baz=328,SNR=11
S57A  Dark Hollow, R   76.73  44   IAmb   IAmb   16 44 31.3
      comp=Z,74nm,0.9s
Q59A  Harwood          76.73  42   P      P      16 44 29.4 +0.2
      baz=329
ZAG   Zagreb           76.78 334⇓iP      P      16 44 29.8 +0.5
ABTA  Abfaltersbach    76.78 337 i P      P      16 44 29.9 +0.4
      comp=Z,222nm,1.0s,SNR=86
W52A  Murphy           76.79  49   IAmb   IAmb   16 44 30.9
      comp=Z,86nm,1.1s
X51A  Calhoun          76.80  50   IAmb   IAmb   16 44 30.8
      comp=Z,74nm,0.9s
ZOU   Zoufplan         76.85 337   P      P      16 44 29.4 -0.6
ZOU                                IAmb   IAmb   16 44 31.2
      comp=Z,187nm,1.9s
T56A  Rocky Mt         76.89  45   P      P      16 44 29.9 -0.3
      baz=328
AFSR  Afar-Bala (An    76.90 320 eP      P      16 44 28.3 -2.0
CRES  Cresnjev         76.91 335⇓iP      P      16 44 30.2 +0.1
FETA  Feichten         76.93 338 i P      P      16 44 31.4 +1.0
      comp=Z,168nm,1.0s,SNR=70
LJU   Ljubljana        76.95 335 i P      P      16 44 30.1 -0.1
LJU   Ljubljana        76.95 335⇓iP      P      16 44 30.2 -0.1
SHME  Shamm            76.99 296 i P      P      16 44 29.4 -1.4
      SNR=13
SHME  Shamm            76.99 296   P      P      16 44 30.0 -0.9
      SNR=8.5
R58B  Mineral          77.00  43   P      P      16 44 30.8 +0.1
      baz=329,SNR=8.8
CBN   Corbin Frederi   77.00  42   P      P      16 44 30.7  0.0
      baz=329
CBN   Corbin Frederi   77.00  42   IAmb   IAmb   16 44 32.0
      comp=Z,87nm,1.1s
BANOM Banah            77.00 296 i P      P      16 44 30.0 -1.0
      SNR=48
BANOM Banah            77.00 296   P      P      16 44 30.0 -1.0
      SNR=20
YAYX  Yaylak           77.04 319 eP      P      16 44 29.9 -1.2
LRAL  Lakeview Retre   77.05  52   P      P      16 44 30.5 -0.6
      baz=325,SNR=14
ZAIG  Zacatecas        77.05  70   IAmb   IAmb   16 44 34.4
      comp=Z,93nm,0.9s
R59A  King George, V   77.11  42   P      P      16 44 31.5 +0.2
      baz=329,SNR=5.8
JSA   Saint Aubin      77.14 347 eP      P      16 44 29.9 -1.4
GAZ   Gaziantep        77.16 316 eP      P      16 44 32.0 +0.3
GAZ   Gaziantep        77.16 316   P      P      16 44 31.9 +0.3
GAZ                                IAmb   IAmb   16 44 33.1
      comp=Z,87nm,0.8s
BOVS  Bovan            77.16 330 ⇓P      P      16 44 30.3 -1.2
PALK  Pallekele        77.20 265   P      P      16 44 31.7 -0.5
PALK                               pmax   pmax
      comp=Z,86nm,1.0s
PALK  Pallekele        77.20 265   P      P      16 44 31.7 -0.5
PALK                               IAmb   IAmb   16 44 33.1
      comp=Z,86nm,0.9s
PALK  Pallekele        77.20 265   P      P      16 44 32.1 -0.1
S58A  Poland Farm, P   77.23  43   P      P      16 44 32.0  0.0
      baz=329,SNR=5.6
T57A  Hurt             77.25  44   P      P      16 44 32.0 -0.2
      baz=328,SNR=7.3
T57A  Hurt             77.25  44   P      P      16 44 31.9 -0.2
Q61A  Milford          77.25  41   P      P      16 44 32.6 +0.6
      baz=330
DIVS  Divibare         77.25 331⇓iP      P      16 44 31.6 -0.5
DIVS  Divibare         77.25 331   P      P      16 44 31.8 -0.4
DIVS                               IAmb   IAmb   16 44 32.8
      comp=Z,81nm,0.8s
CEY   Cerknica         77.26 335⇓iP      P      16 44 31.7 -0.4
BOJS  Bojanci          77.27 335 i P      P      16 44 32.1 +0.1
R60A  Leonardtown, M   77.27  42   P      P      16 44 32.5 +0.3
      baz=329
U56A  King             77.31  45   P      P      16 44 32.6 +0.1
      baz=328
U56A  King             77.31  45   IAmb   IAmb   16 44 33.7
      comp=Z,118nm,1.4s
SRCK  Saricakaya, Es   77.32 322 eP      P      16 44 31.7 -0.8
BG3   Lake Jocassee    77.32  48   IAmb   IAmb   16 44 34.0
      comp=Z,64nm,0.8s
S59A  Mechanicsville   77.42  43   P      P      16 44 33.3 +0.3
      baz=329,SNR=12
BLY   Banja Luka       77.45 333⇓iP      P      16 44 32.5 -0.6
TRI   Trieste          77.45 336   P      P      16 44 32.4 -0.7
TRI                                pmax   pmax
      comp=Z,183nm,1.7s
TRI   Trieste          77.45 336   P      P      16 44 32.4 -0.7
TRI                                IAmb   IAmb   16 44 33.6
      comp=Z,183nm,1.7s
KOZT  Kozan            77.47 317 eP      P      16 44 33.3 -0.1
MDH   Madha            77.50 295 i P      P      16 44 32.1 -1.6
      SNR=6.1
MDH   Madha            77.50 295   P      P      16 44 32.6 -1.1
      SNR=5.6
MASF  Masafi           77.52 295   P      P      16 44 32.9 -1.0
      SNR=8.2
MSFE  Esma-Masafi      77.53 295 i P      P      16 44 32.6 -1.3
      SNR=6.5
HAPS  Han Pijesak,Bl   77.57 332 eP      P      16 44 32.7 -1.2
T58A  Grand View Acr   77.59  44   P      P      16 44 34.1  0.0
      baz=328,SNR=10
VTS   Vitosha          77.60 328 ⇓P      P      16 44 34.1 -0.1
VTS   Vitosha          77.60 328   IAmb   IAmb   16 44 35.0
      comp=Z,84nm,0.9s
RIY   Rijeka           77.63 335⇓iP      P      16 44 33.6 -0.5
BBLS  Lazi&#263;i      77.64 331⇓iP      P      16 44 34.4 +0.1
CTI   Castel Tesino    77.64 337   IAmb   IAmb   16 44 35.1
      comp=Z,119nm,0.9s
MDNY  Mudanya-Bursa    77.67 323 eP      P      16 44 33.1 -1.3
Z51A  Franklin         77.68  51   P      P      16 44 34.3 -0.3
U57A  Blanch           77.69  45   P      P      16 44 34.7 +0.1
      baz=328,SNR=8.2
V56A  Mocksville       77.72  46   P      P      16 44 34.6 -0.1
      baz=328,SNR=8.6
S60A  Water View       77.72  42   P      P      16 44 34.8 +0.1
      baz=329,SNR=5.1
CIFT  Cifteler, Eski   77.75 321 eP      P      16 44 34.8 -0.2
MGRS  Mrkonjic Grad    77.78 333⇓iP      P      16 44 35.4 +0.4
UOSS  Minazif          77.83 295 i P      P      16 44 33.8 -1.7
      SNR=17
UOSS  Minazif          77.83 295   P      P      16 44 33.6 -1.9
UOSS  Minazif          77.83 295   P      P      16 44 34.1 -1.4
BIDO  Bidbid           77.89 293   P      P      16 44 36.8 +0.9
      SNR=6.5
KMSC  Kings Mountain   77.91  47   P      P      16 44 35.5 -0.4
      baz=328,SNR=13
KMSC  Kings Mountain   77.91  47   IAmb   IAmb   16 44 36.8
      comp=Z,73nm,0.8s
KCTX  Karacabey (Bur   77.95 324 eP      P      16 44 35.9 -0.1
V57A  Coltrane Farms   77.96  45   P      P      16 44 36.1 -0.1
      baz=328,SNR=8.7
HATD  Hatta, Dubai     77.97 295 i P      P      16 44 35.0 -1.3
      SNR=23
HATD  Hatta, Dubai     77.97 295   P      P      16 44 35.4 -0.9
      SNR=20
U58A  Oxford           78.06  44   P      P      16 44 36.7  0.0
      baz=328,SNR=11
NAZ   Nazwa, Dubai     78.09 296 i P      P      16 44 35.6 -1.5
      SNR=10
NAZ   Nazwa, Dubai     78.09 296   P      P      16 44 36.4 -0.7
      SNR=10
ASHO  Ashiyiah         78.12 295 i P      P      16 44 35.2 -2.0
      SNR=26
ASHO  Ashiyiah         78.12 295   P      P      16 44 36.8 -0.4
      SNR=20
PLE   Pljevlja         78.13 331 eP      P      16 44 35.3 -1.8
WBK   Wadi Bani Khal   78.14 292   P      P      16 44 38.0 +0.7
      SNR=14
RDO   Rodhopi          78.16 326   P      P      16 44 37.0 -0.1
ALN   Alexandroupoli   78.21 326   P      P      16 44 36.7 -0.6
ALN                                pmax   pmax
      comp=Z,73nm,0.9s
ALN   Alexandroupoli   78.21 326   P      P      16 44 36.7 -0.6
ALN                                IAmb   IAmb   16 44 38.1
      comp=Z,73nm,0.9s
NVLJ  Novalja          78.24 335 i P      P      16 44 36.8 -0.7
W56A  Indian Trail     78.25  46   P      P      16 44 37.4 -0.3
      baz=328,SNR=6.2
JLN   Jalan Bani Buh   78.25 291   P      P      16 44 38.0 +0.1
      SNR=12
250A  Grady            78.27  52   P      P      16 44 37.9  0.0
250A                               IAmb   IAmb   16 45 02.0
      comp=Z,275nm,1.6s
SOHO  SOHO             78.29 294 i P      P      16 44 36.2 -1.9
      SNR=19
SOHO  SOHO             78.29 294   P      P      16 44 36.8 -1.3
HOQ   Hoqain           78.30 293   P      P      16 44 37.2 -1.0
      SNR=16
SMDO  Samad            78.30 293   P      P      16 44 37.5 -0.8
      SNR=14
ENEZ  Enez             78.31 325 eP      P      16 44 36.9 -1.1
FAQ   Al Faqa, Dubai   78.33 295 i P      P      16 44 35.5 -2.8
      SNR=13
FAQ   Al Faqa, Dubai   78.33 295   P      P      16 44 36.9 -1.4
      SNR=10.0
V58A  Windy Hill, Pi   78.33  45   IAmb   IAmb   16 44 39.4
      comp=Z,97nm,0.9s
KIJV  Kijevo           78.35 333 i P      P      16 44 37.8 -0.4
UPM   Unac-Piva        78.39 331 eP      P      16 44 38.2 -0.4
UPM   Unac-Piva        78.39 331 eP      P      16 44 37.8 -0.8
GOGA  Godfrey          78.40  49   P      P      16 44 38.6  0.0
      baz=327,SNR=5.5
GOGA  Godfrey          78.40  49   P      P      16 44 38.3 -0.2
GOGA                               pmax   pmax
      comp=Z,20nm,0.8s
GOGA  Godfrey          78.40  49   P      P      16 44 38.3 -0.2
IVA   Berane           78.40 331 eP      P      16 44 38.2 -0.3
W57A  Gilead           78.49  46   P      P      16 44 39.0  0.0
W57A                               IAmb   IAmb   16 44 40.0
      comp=Z,71nm,0.8s
TRD   Trivandrum       78.50 269 eP      P      16 44 38.6 -0.7
KOME  Kolasin          78.53 331 eP      P      16 44 38.4 -0.9
NVR   Nevrokopi        78.54 327   P      P      16 44 39.0 -0.3
BRAL  Brewton          78.56  53   P      P      16 44 39.6 +0.2
      baz=326
ASUD  Al Ashush, Dub   78.56 296 i P      P      16 44 37.9 -1.7
      SNR=16
ASUD  Al Ashush, Dub   78.56 296   P      P      16 44 39.2 -0.4
      SNR=6.6
U60A  Pendleton        78.57  43   P      P      16 44 39.4  0.0
      baz=329
MIB   Mutribah         78.59 305 eP             16 44 37.7
UMR   Umm Al-Rimmam    78.61 304 eP             16 44 37.4
RICI  Ricice           78.62 333   P      P      16 44 38.9 -0.8
PVY   Plav             78.64 330 eP      P      16 44 39.3 -0.6
KAVA  Kavala           78.64 327   P      P      16 44 39.3 -0.4
SHUT  Suhut-Afyon      78.64 321 eP      P      16 44 39.9 -0.1
MORI  Morici           78.67 334 i P      P      16 44 39.0 -0.8
NKY   Niksic           78.72 331 eP      P      16 44 39.5 -0.8
DUGI  Dugi Otok        78.72 334 i P      P      16 44 39.6 -0.6
V59A  Middlesex        78.72  44   P      P      16 44 40.3  0.0
      baz=329,SNR=9.6
SKO   Skopje           78.75 329 i P      P      16 44 40.3 -0.1
BRY   Bratogost        78.77 332⇓iP      P      16 44 39.6 -1.0
BRY   Bratogost        78.77 332 eP      P      16 44 39.7 -0.9
NKME  Niksic           78.78 331 eP      P      16 44 39.7 -0.8
ALNE  Al Ain           78.79 295 i P      P      16 44 38.9 -2.0
      SNR=12
ALNE  Al Ain           78.79 295   P      P      16 44 40.5 -0.4
      SNR=24
AJN   Ajban            78.80 296 i P      P      16 44 38.7 -2.2
      SNR=6.8
AJN   Ajban            78.80 296   P      P      16 44 39.2 -1.7
      SNR=6.6
JMDO  Jabal Madar      78.81 292   P      P      16 44 40.5 -0.5
      SNR=21
MAKA  Makarska         78.85 333 i P      P      16 44 39.5 -1.3
ZIRJ  Zirje            78.88 334 i P      P      16 44 40.3 -0.8
W58A  Raeford          78.93  45   P      P      16 44 41.8 +0.4
      baz=328,SNR=17
ARQ   Araqi            78.93 294   P      P      16 44 41.4 -0.3
      SNR=17
VAY   Valandovo        78.98 328 i P      P      16 44 41.8 +0.1
CEME  Cevo             78.99 331 eP      P      16 44 40.8 -0.9
PDG   Podgorica        79.00 331 ⇓P      P      16 44 41.3 -0.3
PDG   Podgorica        79.00 331⇓iP      P      16 44 41.0 -0.6
PDG   Podgorica        79.00 331   P      P      16 44 41.1 -0.6
TTG   Podgorica        79.00 331 eP      P      16 44 41.1 -0.6
TREB  Trebinje         79.00 332 eP      P      16 44 40.2 -1.5
RST   Umm Al-Ruwaisa   79.01 305 eP             16 44 39.9
KNT   Kendrikon        79.02 328   P      P      16 44 41.8 -0.1
BSY   Bisya            79.02 293   P      P      16 44 41.5 -0.7
      SNR=23
X57A  Johnson Farm,    79.03  46   P      P      16 44 42.2 +0.2
      baz=328
STON  Ston             79.04 332 i P      P      16 44 39.6 -2.3
DBRK  Dubrovnik        79.10 332 i P      P      16 44 39.7 -2.6
HVAR  Hvar             79.11 333 i P      P      16 44 41.0 -1.3
V60A  Jim Taylor Roa   79.14  44   P      P      16 44 42.8 +0.2
      baz=329,SNR=6.7
V60A  Jim Taylor Roa   79.14  44   IAmb   IAmb   16 44 43.6
      comp=Z,98nm,0.7s
W59A  Clinton          79.15  45   P      P      16 44 42.9 +0.3
      baz=329
HCY   Herceg Novi      79.20 331⇓iP      P      16 44 41.6 -1.2
HCY   Herceg Novi      79.20 331 eP      P      16 44 41.8 -1.0
RDF   Al-Radifah       79.20 304 eP             16 44 40.3
BUM   Brajici-Budva    79.22 331 eP      P      16 44 42.0 -1.0
KEBE  Keben-Mersin     79.23 318 eP      P      16 44 42.1 -1.1
154A  Montrose         79.23  49   IAmb   IAmb   16 44 44.6
      comp=Z,169nm,1.1s
AS31  Alice Springs    79.24 203   P      P      16 44 44.4 +1.3
ASAR  Alice Springs    79.24 203   P      P      16 44 44.5 +1.5
      comp=Z,28nm,0.8s,baz=18,slow=5.1,SNR=297
ASAR  Alice Springs    79.24 203   P      P      16 44 44.3 +1.2
DRME  Dracevica, Mon   79.24 331⇓iP      P      16 44 42.6 -0.4
DRME  Dracevica, Mon   79.24 331 eP      P      16 44 42.7 -0.3
ISP   Isparta          79.29 321   P      P      16 44 42.9 -0.6
ISP                                pmax   pmax
      comp=Z,48nm,0.9s
ISP   Isparta          79.29 321   P      P      16 44 42.9 -0.6
PHP   Peshkopia        79.32 330   P      P      16 44 42.8 -0.7
CNNC  Cliffs of the    79.32  44   P      P      16 44 43.9 +0.3
      baz=329
GRG   Griva            79.37 328   P      P      16 44 43.5 -0.3
LIA   Limnos Island    79.39 326   P      P      16 44 43.2 -0.7
ZCCA  Zocca            79.40 337   IAmb   IAmb   16 44 47.2
      comp=Z,165nm,0.9s
OUR   Ouranopolis      79.41 327   P      P      16 44 43.2 -0.8
ULC   Ulcinj           79.42 331 eP      P      16 44 43.2 -0.9
MANT  Manisa           79.44 323   P      P      16 44 44.1 -0.4
PLG   Polygyros        79.55 327   P      P      16 44 44.0 -0.8
W60A  Pink Hill        79.55  44   P      P      16 44 45.3 +0.5
      baz=329,SNR=5.3
X59A  McDuffie Farm,   79.58  45   P      P      16 44 45.2 +0.2
      baz=329
JRN   Qarnain Island   79.66 298   P      P      16 44 45.1 -0.5
      SNR=7.0
BNI   Bardonecchia     79.67 340   IAmb   IAmb   16 44 56.7
      comp=Z,98nm,1.0s
Y58A  Scranton         79.69  46   P      P      16 44 45.8 +0.3
Y58A                               IAmb   IAmb   16 44 46.8
      comp=Z,124nm,0.7s
VLC   Villacollemand   79.72 338   IAmb   IAmb   16 44 47.8
      comp=Z,132nm,0.7s
OHR   Ohrid            79.73 329 i P      P      16 44 45.2 -0.6
TEKE  Tekeli-Mersin    79.73 318 eP      P      16 44 43.8 -2.0
W61A  Ground Anchor    79.75  44   P      P      16 44 46.7 +0.8
      baz=329
MSSA  Maissana         79.77 338   IAmb   IAmb   16 44 47.0
      comp=Z,155nm,1.0s
TIR   Tirane           79.80 330 ⇓P      P      16 44 46.1  0.0
X60A  Albert Glenn T   79.85  45   P      P      16 44 46.6 +0.2
      baz=329
FNA   Florina          79.85 329   P      P      16 44 45.8 -0.6
FNA   Florina          79.85 329   IAmb   IAmb   16 44 46.8
      comp=Z,92nm,0.9s
V62A  Hyde County Ai   79.85  43   P      P      16 44 46.9 +0.5
      baz=330
SSB   Saint Sauveur    79.87 342   P      P      16 44 47.1 +0.6
SSB                                pmax   pmax
      comp=Z,121nm,0.7s
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SSB	Saint Sauveur	79.87	342	P	P	16 44 47.1	+0.6
SSB				IAmb	IAmb	16 44 48.5	
	comp=Z,121nm,0.7s						
Y59A	Loris	79.96	46	IAmb	IAmb	16 44 48.1	
	comp=Z,130nm,0.8s						
TIGA	Tifton	79.98	50	P	P	16 44 47.9	+0.7
	baz=327,SNR=5.4						
TIGA	Tifton	79.98	50	IAmb	IAmb	16 44 49.0	
	comp=Z,231nm,1.2s						
MHTO	MHTO	79.98	291	P	P	16 44 47.0	-0.4
	SNR=36						
255A	Hazlehurst	80.09	49	IAmb	IAmb	16 44 49.6	
	comp=Z,176nm,1.2s						
OSSC	Osservatorio P	80.12	337	P	P	16 44 47.8	0.0
OSSC				IAmb	IAmb	16 44 48.9	
	comp=Z,101nm,0.8s						
NHSC	New Hope	80.14	47	P	P	16 44 48.1	+0.1
	baz=328						
TAOE	Nuku Hiva Isla	80.15	119	eLR	LR	17 09 05.4	
	comp=Z,673nm,37.3s						
KZN	Kozani	80.16	328	P	P	16 44 47.2	-0.9
UMZA	Um Al Zommool	80.18	295	P	P	16 44 47.1	-1.3
NRCA	Norcia	80.31	335	P	P	16 44 49.6	+0.7
PENT	Pentalofos	80.46	329	P	P	16 44 49.2	-0.6
XOR	Xorichti	80.55	327	P	P	16 44 48.8	-1.4
KPRO	Kipourio	80.61	328	P	P	16 44 49.5	-1.0
SGRT	San Giovanni R	80.62	333	P	P	16 44 50.3	-0.3
SGRT				IAmb	IAmb	16 44 51.2	
	comp=Z,132nm,0.7s						
CSS	Mathiatis	80.67	317	IAmb	IAmb	16 44 51.3	
	comp=Z,111nm,0.8s						
LSK	Leskovik	80.67	329	P	P	16 44 50.8	-0.1
AQU	L'Aquila	80.69	335	⇓iP	P	16 44 51.5	+0.6
LEF	Lefka	80.71	318	⇓P	P	16 44 50.7	-0.4
LATE	Laterza	80.84	336	P	P	16 44 51.7	0.0
SMIA	Simia	80.98	327	P	P	16 44 51.4	-1.1
SLWR	Sila	80.98	298	P	P	16 44 51.4	-1.2
JAN	Janina	81.04	329	P	P	16 44 53.0	+0.2
DQM	DQM	81.07	291	P	P	16 44 52.2	-1.0
MNCY	Minicoy	81.07	272	eP	P	16 44 52.8	-0.4
MNCY				IAmb	IAmb	16 44 55.4	
	comp=Z,86nm,1.0s						
SRN	Sarande	81.10	329	P	P	16 44 52.4	-0.7
AGG	Agios Georgios	81.14	327	P	P	16 44 51.6	-1.8
AGG				pmax	pmax		
	comp=Z,54nm,0.8s						
AGG	Agios Georgios	81.14	327	P	P	16 44 51.6	-1.8
MBWA	Marble Bar	81.18	217	P	P	16 44 54.4	+0.9
LKR	Lokris	81.25	327	P	P	16 44 52.2	-1.7
IGT	Igoumenitsa	81.32	329	P	P	16 44 53.5	-0.7
KEK	Kerkira	81.32	329	P	P	16 44 53.5	-0.7
MATE	Matera	81.38	332	⇓P	P	16 44 54.4	0.0
PSAC2	Pilbara Seismi	81.49	216	P	P	16 44 55.3	+0.2
PSA00	Pilbara Seismi	81.52	216	P	P	16 44 55.1	-0.2
PAOL	Paolisi	81.61	334	P	P	16 44 55.4	-0.5
ANX	Ano Chora	81.66	327	P	P	16 44 55.2	-1.0
VAH	Vaihoa	81.81	129	eP	P	16 44 57.7	+0.8
	comp=Z,123nm,1.4s						
EFP	Efpalio	81.82	327	P	P	16 44 55.8	-1.1
LTK	Loutraki	81.83	326	P	P	16 44 54.6	-2.4
PDO	Prodromos	81.90	328	P	P	16 44 56.5	-0.8
THAL	Thalero	81.92	327	P	P	16 44 55.5	-1.9
NYDR	Nydri-Lefkada	81.95	328	P	P	16 44 56.3	-1.2
LAKA	Lakka	81.97	327	P	P	16 44 56.5	-1.2
EVGI	Lefkada island	82.05	328	P	P	16 44 57.2	-0.9
RLS	Riolos of Patr	82.30	327	P	P	16 44 58.9	-0.5
VLS	Valsamata	82.47	328	P	P	16 44 57.7	-2.6
PSDA	Pessada-Kefalo	82.53	328	P	P	16 44 59.7	-0.9
KARP	Karpathos	82.57	322	IAmb	IAmb	16 45 00.9	
	comp=Z,163nm,0.9s						
VLX	Vlachokerasia	82.62	327	P	P	16 44 59.5	-1.7
TIP	Timpagrande	82.72	331	⇓P	P	16 45 02.0	+0.3
TIP	Timpagrande	82.72	331	P	P	16 45 01.3	-0.3
LTHK	Lithakia	82.82	328	P	P	16 45 00.7	-1.4
PPT	Papeete	82.93	131	P	P	16 45 04.3	+1.5
	comp=Z,84nm,1.0s,baz=295,slow=3.7,SNR=6.1						
PPT				LR	LR	17 16 43.7	
	comp=Z,174nm,21.2s,baz=354,slow=32						
ITM	Ithomi	82.94	327	P	P	16 45 01.3	-1.5
ITM	Ithomi	82.94	327	IAmb	IAmb	16 45 02.4	
	comp=Z,126nm,0.8s						
PPT2	Papeete2	82.95	131	eP	P	16 45 04.2	+1.3
	comp=Z,92nm,1.2s						
PPT2	Papeete2	82.95	131	eLR	LR	17 10 57.5	
	comp=Z,2µm,30.0s,baz=336						
PPTF	Pamatai, Papee	82.95	131	IAmb	IAmb	16 45 05.6	
	comp=Z,150nm,1.2s						
PAE	Paea	83.01	131	eP	P	16 45 04.3	+1.2
	comp=Z,22nm,1.1s						
TIAR	Tiarei	83.03	131	eP	P	16 45 04.5	+1.2
	comp=Z,29nm,0.9s						
ARMA	Armidale	83.12	186	P	P	16 45 04.6	+1.0
PYL	PYLOS	83.26	327	P	P	16 45 02.5	-1.9
DWPF	Disney Wildern	83.79	51	P	P	16 45 08.4	+1.2
	baz=328						
MEH	Mehetia	83.89	130	eP	P	16 45 08.9	+1.2
	comp=Z,33nm,1.1s						
DOK	Doka	84.03	293	P	P	16 45 07.4	-1.2
DMTO	DMTO	84.30	292	P	P	16 45 08.8	-1.1
VSL	Villasalto	84.38	337	P	P	16 45 10.3	+0.2
VSL				IAmb	IAmb	16 45 11.6	
	comp=Z,111nm,1.0s						
RAYN	Ar Rayn	84.68	302	i P	P	16 45 10.7	-1.1
	SNR=98						
RAYN	Ar Rayn	84.68	302	P	P	16 45 10.8	-1.1
RAYN				pmax	pmax		
	comp=Z,140nm,1.0s						
RAYN	Ar Rayn	84.68	302	P	P	16 45 10.8	-1.1
RAYN				IAmb	IAmb	16 45 12.3	
	comp=Z,140nm,1.0s						
WHFO	Wadi Hawf	84.80	293	P	P	16 45 11.1	-1.4
PBRG	Braganca	84.97	349	eP	P	16 45 13.9	+0.9
	comp=Z,70nm,1.6s						
PBRG				epP	pP	16 45 37.1	+0.5
PGAV	Gavieira, Arco	84.97	351	eP	P	16 45 13.9	+0.8
	comp=Z,88nm,1.5s						
PGAV				epP	pP	16 45 37.9	+1.3
PCAB	Cabril	85.20	350	eP	P	16 45 15.3	+1.1
	comp=Z,79nm,1.8s						
PCAB				epP	pP	16 45 38.8	+1.2
RAFF	Raffo Rosso	85.23	332	IAmb	IAmb	16 45 18.1	
	comp=Z,120nm,1.0s						
POLO	Lamas de Olo	85.51	350	eP	P	16 45 16.4	+0.6
	comp=Z,39nm,1.4s						
POLO				epP	pP	16 45 40.0	+0.8
ABTO	Aybut	85.52	293	P	P	16 45 14.9	-1.3
PVRL	Vila Real	85.60	350	eP	P	16 45 16.9	+0.7
	comp=Z,141nm,1.3s						
PVRL				epP	pP	16 45 40.4	+0.8
MVO	Moncorvo	85.63	350	eP	P	16 45 16.8	+0.4
	comp=Z,76nm,1.4s						
MVO				epP	pP	16 45 40.6	+0.8
STKA	Stephens Creek	85.69	195	P	P	16 45 17.8	+1.4
	comp=Z,31nm,0.8s,baz=344,slow=6.8,SNR=56						
STKA				LR	LR	17 17 47.8	
	comp=Z,39nm,21.1s,baz=15,slow=31						
PVIS	Viseu	86.17	350	eP	P	16 45 20.3	+1.3
	comp=Z,77nm,1.2s						
PVIS				epP	pP	16 45 43.7	+1.2
MTE	Manteigas	86.44	350	IAmb	IAmb	16 45 23.7	
	comp=Z,48nm,0.9s						
MTE	Manteigas	86.44	350	eP	P	16 45 21.7	+1.3
	comp=Z,90nm,1.4s						
MTE				epP	pP	16 45 45.4	+1.6
ESDC	Sonseca Array	86.72	347	P	P	16 45 22.0	+0.3
	comp=Z,29nm,0.9s,baz=357,slow=5.3,SNR=35						
ESDC				LR	LR	17 30 05.1	
	comp=Z,136nm,18.3s,baz=330,slow=40						
COI	Coimbra	86.72	350	IAmb	IAmb	16 45 24.8	
	comp=Z,52nm,0.9s						
PCAS	Casmilo, Conde	86.89	350	eP	P	16 45 22.7	+0.2
	comp=Z,86nm,1.5s						
PCAS				epP	pP	16 45 47.4	+1.4
PAB	San Pablo	86.90	347	P	P	16 45 22.4	-0.2
PAB				pmax	pmax		
	comp=Z,27nm,0.9s						
PAB	San Pablo	86.90	347	P	P	16 45 22.4	-0.2
PCBR	Castelo Branco	86.99	350	eP	P	16 45 23.3	+0.3
	comp=Z,55nm,1.2s						
PCBR				epP	pP	16 45 48.2	+1.8
PMRV	Marv??o	87.39	350	eP	P	16 45 25.4	+0.5
	comp=Z,46nm,1.4s						
FORT	Forrest	87.52	206	IAmb	IAmb	16 45 27.3	
	comp=Z,44nm,0.7s						
BBOO	Buckleboo	87.59	199	P	P	16 45 26.6	+1.0
PMTG	Montargil	87.83	350	eP	P	16 45 28.4	+1.4
	comp=Z,40nm,1.4s						
PMTG				epP	pP	16 45 50.8	+0.2
KEST	Kesra	87.96	336	P	P	16 45 27.9	0.0
	comp=Z,125nm,1.0s,baz=315,slow=2.6,SNR=41						
KEST				LR	LR	17 30 12.2	
	comp=Z,280nm,19.7s,baz=346,slow=39						
PESTR	Estremoz	87.97	350	P	P	16 45 27.7	0.0
TBI	Tubuai	88.04	134	eP	P	16 45 29.8	+1.9
	comp=Z,383nm,1.2s						
TBI	Tubuai	88.04	134	eLR	LR	17 13 03.3	
	comp=Z,823nm,32.0s,baz=334						
TBI	Tubuai	88.04	134	eT	T	18 22 18.4	
	comp=Z,20nm,0.2s						
PMAFR	Mafra	88.05	351	eP	P	16 45 30.0	+1.9
EVO	Evora	88.34	350	eP	P	16 45 31.8	+2.4
	comp=Z,44nm,1.5s						
OUZ	Omahuta	88.57	168	IAmb	IAmb	16 45 33.8	
	comp=Z,48nm,1.0s						
PBAR	Barrancos	88.59	349	eP	P	16 45 29.8	-0.8
	comp=Z,50nm,1.7s						
PNCL	Nicolau / Gran	88.81	350	eP	P	16 45 33.4	+1.8
	comp=Z,43nm,1.6s						
PBEJ	Beja	88.83	350	eP	P	16 45 32.3	+0.6
	comp=Z,36nm,1.4s						
PCVE	Castro Verde	89.24	350	eP	P	16 45 36.0	+2.3
SOCY	Socotra	89.29	289	P	P	16 45 31.8	-2.5
	SNR=23						
PVAQ	Vaqueiros	89.43	349	eP	P	16 45 34.8	+0.3
NWAO	Narrogin (SRO)	92.83	214	P	P	16 45 50.1	0.0
	comp=Z,6.0nm,0.7s,baz=164,slow=14,SNR=2.4						
SDDR	Presa de Saban	96.30	47	P	P	16 46 07.2	+0.6
SDDR				IAmb	IAmb	16 46 08.0	
	comp=Z,19nm,0.8s						
DBIC	Dimbokro	119.19	342	PKP	PKiKP	16 51 26.8	+0.1
	comp=Z,9.5nm,0.7s,baz=12,slow=0.8,SNR=13						
DBIC	Dimbokro	119.19	342		PKiKP	16 51 26.7	0.0
TIC	Toumodi	119.25	342	ePKIKP	PKiKP	16 51 27.0	+0.1
KIC	Kosan Boka	119.47	341	ePKIKP	PKiKP	16 51 27.4	+0.1
	comp=Z,7.6nm,0.6s						
LIC	Lamto	119.66	342	ePKIKP	PKiKP	16 51 27.7	0.0
	comp=Z,20nm,0.8s						
MCPB	Macapa, AP	121.65	37	eP	PKPdf	16 51 31.3	-0.1
ETMB	Extrema	123.76	57	eP	PKPdf	16 51 34.9	-0.4
ITTB	Itaituba	123.87	43	eP	PKiKP	16 51 35.8	-0.1
SAML	Samuel	124.54	54	PKIKP	PKiKP	16 51 37.0	-0.2
SAML	Samuel	124.54	54		PKiKP	16 51 37.0	-0.2
SAML	Samuel	124.54	54	eP	PKiKP	16 51 37.1	-0.2
NPGB	Novo Progresso	126.44	44	eP	PKPdf	16 51 40.6	+0.1
ROSB	Rosrio	126.68	29	eP	PKiKP	16 51 41.5	0.0
PRPB	Parauapebas	127.84	37	eP	PKiKP	16 51 43.8	0.0
PB16	IPOC Station P	129.06	66		PKiKP	16 51 46.7	-0.1
VILB	Vilhena	129.44	53	eP	PKiKP	16 51 47.5	+0.6
MNMC	Minye Minye	129.65	67	PKPpre	PKPpre	16 51 32.8	
MNMC				PKPdf	PKiKP	16 51 48.2	+0.6
VNDA	Vanda	130.07	179	PKP	PKiKP	16 51 46.6	+0.3
	comp=Z,4.3nm,0.7s,baz=340,slow=3.7,SNR=9.2						
VNDA				SKPbc	SKPab	16 54 59.9	0.0
	comp=Z,3.1nm,0.9s,baz=40,slow=3.4,SNR=3.9						
VNDA	Vanda	130.07	179	PKPpre	PKPpre	16 51 33.0	
SMTB	Santa Maria do	131.14	36	eP	PKiKP	16 51 50.5	+0.1
PB01	IPOC Station P	131.24	69		PKiKP	16 51 50.0	-0.5
NBPA	Parau_RN	131.25	22	eP	PKiKP	16 51 50.8	+0.1
PB07	IPOC Station P	131.55	70		PKiKP	16 51 50.7	-0.5
SNDB	Serra Nova Dou	132.57	42	eP	PKiKP	16 51 52.9	-0.3
LVC	Limon Verde	132.80	69	PKIKP	PKiKP	16 51 53.5	-0.5
LVC	Limon Verde	132.80	69		PKiKP	16 51 53.5	-0.5
LVC	Limon Verde	132.80	69	eP	PKiKP	16 51 54.4	+0.5
PEXB	Peixe	133.87	39	eP	PKiKP	16 51 55.5	-0.4
NBRF	Rio Formoso -	134.51	20	eP	PKiKP	16 51 58.1	+0.9
AC01	Pan de Azucar	134.56	74		PKPpre	16 51 45.0	
H03N2	Juan Fernandez	134.83	88	T	T	19 22 27.8	
	baz=314,slow=77,SNR=1182						
H03N1	Juan Fernandez	134.84	88	T	T	19 22 29.2	
	baz=314,slow=77,SNR=1266						
H03N3	Juan Fernandez	134.84	88	T	T	19 22 28.5	
	baz=314,slow=77,SNR=1432						
TSUM	Tsumeb	135.12	303		PKPpre	16 51 45.9	
SDBA	SAO DESIDERIO	135.37	34	eP	PKiKP	16 51 58.3	-0.7
ARAG	Araguaiana, MT	135.70	45	eP	PKiKP	16 51 59.2	-0.4
PP1B	Ponte de Pedra	135.99	50	eP	PKiKP	16 51 59.8	-0.4
LCO	Las Campanas	136.63	77	PKIKP	PKPdf	16 51 59.6	-0.1
LCO	Las Campanas	136.63	77	PKPdf	PKPdf	16 51 59.6	-0.1
JANB	Januaria	138.04	35	eP	PKPdf	16 52 02.9	+0.5
GDU01	Guandu, BA	138.28	28	eP	PKPdf	16 52 03.3	+0.6
BOSA	Boshof	138.41	287	PKhKP	PKPpre	16 51 52.3	
	comp=Z,5.6nm,0.9s,baz=38,slow=5.6,SNR=4.0						
BOSA				PKP	PKPdf	16 52 01.3	-1.5
	comp=Z,6.5nm,0.8s,baz=59,slow=1.7,SNR=7.8						
BOSA				SKPab	SKiKP	16 55 32.6	-0.2
	comp=Z,7.4nm,1.1s,baz=56,slow=3.6,SNR=3.6						
CPUP	Villa Florida	142.11	60	PKhKP	PKPpre	16 52 05.0	
	comp=Z,5.7nm,0.8s,baz=314,slow=3.6,SNR=14						
CPUP	Villa Florida	142.11	60	eP	PKPdf	16 52 09.9	+0.5
SJMB	Sao Joao De Ma	142.49	33	eP	PKPdf	16 52 11.2	+0.9
BSCB	Bom Sucesso	143.32	39	eP	PKPdf	16 52 12.4	+0.6
SUR	Sutherland	143.77	288	PKPdf	PKPdf	16 52 11.7	-0.7
VAO	Valinhos	144.24	44	eP	PKPdf	16 52 13.8	+0.5
ALF01	Guarapari-ES	144.42	33	eP	PKPdf	16 52 13.0	-0.6
PLCA	Paso Flores	144.64	90	PKP	PKPdf	16 52 13.1	-0.4
	comp=Z,106nm,1.0s,baz=302,slow=3.8,SNR=150						
PLCA				SKPbc	SKiKP	16 55 45.7	+0.6
	comp=Z,11nm,1.1s,baz=274,slow=3.4,SNR=4.8						
PLCA	Paso Flores	144.64	90	eP	PKPdf	16 52 13.7	+0.2
VAS01	Vassouras-RJ	144.99	38	eP	PKPdf	16 52 14.4	-0.2
PARB	Paraibuna	145.09	42	eP	PKPbc	16 52 12.9	-1.6
DUB01	Friburgo-RJ	145.21	36	eP	PKPbc	16 52 14.3	-0.4
CAM01	Campos-RJ	145.22	35	eP	PKPbc	16 52 14.6	-0.2
PET01	Itanhaem-SP	145.25	45	eP	PKPab	16 52 15.6	+0.6
MAN01	Angra dos Reis	145.33	39	eP	PKPbc	16 52 14.9	-0.3
ITAB	Concordia	145.51	54	eP	PKPab	16 52 16.2	+0.3
CPSB	Cacapava Do Su	147.41	59	eP	PKPbc	16 52 20.1	-0.9
CNLB	Canela	147.85	55	eP	PKPbc	16 52 20.9	-1.5
SYO	Syowa Base	148.08	216	⇑ePKPdf	PKPdf	16 52 19.0	+0.8
SYO	Syowa Base	148.08	216	⇓ePKPbc	PKPbc	16 52 21.4	-0.2
PLTB	Pedras Altas	148.40	61	eP	PKPdf	16 52 20.9	+0.8
GO09	Cerro Castillo	148.90	108		PKiKP	16 52 25.0	-0.6
GO10	Punta Arenas	150.33	111		PKiKP	16 52 28.9	+0.4
BELA	Belgrano 2	154.34	173	PKPdf	PKPdf	16 52 26.6	-1.0
BELA				PKPbc	PKPbc	16 52 35.1	-0.9
BELA				PKPab	PKPab	16 52 49.4	-1.2
EFI	East Falkland	157.41	102	PKP2	PKPab	16 53 03.3	-1.2
EFI	East Falkland	157.41	102		PKPab	16 53 03.3	-1.2
SNAA	Sanae	159.45	196	PKPab	PKPab	16 53 12.5	-0.4
SNAA	Sanae	159.45	196	PKP2	PKPab	16 53 12.2	-0.7
SNAA	Sanae	159.45	196		PKPab	16 53 12.2	-0.7
VNA2	Neumayer--Watz	160.82	194	PKPab	PKPab	16 53 19.1	+0.3
VNA3	Neumayer Olymp	160.82	191	PKPab	PKPab	16 53 18.7	-0.1
VNA1	Neumayer--Stat	161.19	193	PKPab	PKPab	16 53 19.7	-0.6

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*IDC **19** 16:43:09.6±2.6, 7°.62S×127°.55E, h144^{km}±28^{km}, mb3.4/6, mb1 3.8/10, mb1mx3.6/28, mbtmp4.1/10, MS3.8/1, Ms1 3.8/1, ms1mx2.9/24 Error ellipse: s-maj=34.3km s-min=13.3km az=83.0*

*NEIC **19** 16:43:10.5±2.1, 7°.59S±0°.07×127°.66E±0°.07, h155^{km}±7^{km}, mb4.7/29, Error ellipse: s-maj=10.3km s-min=9.7km az=159.0*

ISC 19 16:43:11.1±0.4, **7°.60S**±0°.05×**127°.65E**±0°.06, **h162**^{km}, **n58**, σ**1^{s}58**/58, **mb4.6**/16, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	3.63	96	Pn	Pn	16 44 04.0	-3.1
SOEI	Soe	3.97	237		Pn	16 44 12.9	+1.4
BATI	Baumata	4.72	236	P	Pn	16 44 22.2	+1.1
	40nm,0.3s,baz=57,slow=4.0,SNR=49						
BATI				S	Sn	16 45 13.8	-2.0
	85nm,0.3s,baz=73,slow=22,SNR=9.8						
MMRI	Maumere	5.46	259	Pn	Pn	16 44 32.7	+1.8
FAKI	Fak Fak	6.53	45	Pn	Pn	16 44 43.4	-1.5
SIJI	Sorong	7.60	28	P	Pn	16 44 59.3	+0.1
	7.6nm,0.3s,baz=48,slow=21,SNR=19						
SIJI				S	Sn	16 46 24.3	-0.1
	0.7nm,0.3s,baz=37,slow=20,SNR=1.9						
KNRA	Kununurra	8.10	172	Pn	Pn	16 45 01.7	-4.1
LUWI	Luwuk	8.13	323	Pn	Pn	16 45 00.1	-6.2
FITZ	Fitzroy Crossi	10.62	190	P	Pn	16 45 36.9	-2.2
	3.2nm,0.3s,baz=344,slow=7.3,SNR=14						
FITZ				S	Sn	16 47 26.9	-10
	2.8nm,0.3s,baz=92,slow=22,SNR=5.6						
FITZ	Fitzroy Crossi	10.62	190		Pn	16 45 36.7	-2.4
WB0	Warramunga Arr	13.75	152	Pn	Pn	16 46 17.0	-2.5
WRAB	Tennant Creek	13.87	153	Pn	Pn	16 46 18.4	-2.6
WRA	Warramunga Arr	13.88	153	P	Pn	16 46 19.5	-1.6
	1.4nm,0.3s,baz=327,slow=12,SNR=17						
WRA				S	Sn	16 48 42.8	-12
	2.2nm,0.3s,baz=328,slow=22,SNR=14						
WRA	Warramunga Arr	13.88	153		Pn	16 46 18.7	-2.4
WB2	Warramunga Arr	13.88	153	Pn	Pn	16 46 18.4	-2.8
WR0	Warramunga Arr	13.98	152		Pn	16 46 20.2	-2.2
PSA00	Pilbara Seismi	15.80	208	P	Pn	16 46 46.1	+1.2
PSA00				IAmb	IAmb	16 46 51.4	
	comp=Z,15nm,1.1s						
PSA00	Pilbara Seismi	15.80	208	P	Pn	16 46 45.5	+0.5
PSA00				IAmb	IAmb	16 46 54.8	
	comp=Z,6.6nm,0.7s						
COEN	Coen	16.50	114	P	Pn	16 46 53.6	+0.2
UGM	Wanagama	16.98	268	P	P	16 46 58.0	-0.6
AS31	Alice Springs	17.06	160	P	Pn	16 47 00.9	+0.7
AS31				IAmb	IAmb	16 47 03.4	
	comp=Z,10nm,0.5s						
ASAR	Alice Springs	17.06	160	P	Pn	16 47 01.0	+0.8
	comp=Z,3.1nm,0.3s,baz=344,slow=12,SNR=58						
ASAR				S	S	16 49 58.4	-11
	comp=Z,0.3nm,0.3s,baz=332,slow=19,SNR=4.1						
ASAR	Alice Springs	17.06	160	P	Pn	16 47 00.6	+0.4
ASAR					S	16 50 07.6	-1.5
KSM	Kuching	19.51	297	P	P	16 47 26.8	+0.6
KSM				IAmb	IAmb	16 47 40.9	
	comp=Z,15nm,1.1s						
CISI	Cisompet, Garu	19.66	269	P	P	16 47 24.7	-3.2
CISI				IAmb	IAmb	16 47 51.8	
	comp=Z,98nm,1.5s						
GIRL	Giralia	19.76	219	P	P	16 47 28.8	+0.1
FORT	Forrest	23.06	179	P	P	16 48 03.0	+0.6
FORT				IAmb	IAmb	16 48 35.1	
	comp=Z,20nm,0.9s						
MORW	Morawa	23.99	206	P	P	16 48 11.7	+0.7
MORW				IAmb	IAmb	16 48 13.9	
	comp=Z,15nm,0.7s						
RABL	Rabaul	24.61	83	P	P	16 48 22.0	+5.2
BBOO	Buckleboo	26.27	164	P	P	16 48 31.8	+0.3
BBOO				IAmb	IAmb	16 48 33.5	
	comp=Z,49nm,1.7s						
NWAO	Narrogin (SRO)	26.99	200	P	P	16 48 38.5	+0.5
NWAO				IAmb	IAmb	16 49 08.3	
	comp=Z,58nm,1.6s						
NWAO	Narrogin (SRO)	26.99	200	P	P	16 48 38.4	+0.5
NWAO				IAmb	IAmb	16 49 08.4	
	comp=Z,52nm,1.6s						
STKA	Stephens Creek	27.43	154	P	P	16 48 42.2	+0.4
	comp=Z,4.5nm,0.5s,baz=326,slow=10,SNR=9.7						
STKA	Stephens Creek	27.43	154	P	P	16 48 42.6	+0.8
TPUB	Ta-pu	31.47	348	P	P	16 49 16.4	-1.2
CAN	Canberra	33.83	148	P	P	16 49 38.1	-0.1
CAN				IAmb	IAmb	16 50 04.2	
	comp=Z,50nm,1.8s						
TOO	Toolangi	33.94	154	P	P	16 49 36.2	-2.8
TOO				IAmb	IAmb	16 50 04.4	
	comp=Z,21nm,1.6s						
JOW	Kunigami	34.23	1	P	P	16 49 39.5	-2.0
SLVN	Son La	37.02	321	P	P	16 50 06.7	+1.2
JCJ	Chichijima	37.26	22	LR	LR	17 01 44.8	
	comp=Z,163nm,22.0s,baz=314,slow=30						
CMAR	Chiang Mai Arr	38.38	313	P	P	16 50 17.4	+0.5
	comp=Z,0.4nm,0.5s,baz=140,slow=6.9,SNR=2.7						
JWT	Wachi	43.27	9	P	P	16 50 56.2	-0.5
KSRS	Korea Array	44.82	0	P	P	16 51 09.2	+0.2
	comp=Z,0.6nm,0.5s,baz=179,slow=8.8,SNR=5.5						
LSA	Lhasa	51.06	318	P	P	16 51 58.2	+0.5
WHZ	Wether Hill Ro	51.53	145	P	P	16 52 00.8	+0.4
TUWZ	Tuamarina	53.01	137	P	P	16 52 11.9	+0.6
KHZ	Kahutara	53.18	138	P	P	16 52 14.1	+1.6
KHZ				IAmb	IAmb	16 52 55.4	
	comp=Z,35nm,1.4s						
BFZ	Birch Farm	54.27	135	P	P	16 52 21.6	+1.0
BFZ				IAmb	IAmb	16 52 29.1	
	comp=Z,39nm,1.4s						
SONM	Songino Array	58.31	343	P	P	16 52 49.3	+0.2
	comp=Z,0.5nm,0.9s,baz=156,slow=5.5,SNR=4.1						
MK31	Makanchi Array	67.47	328	P	P	16 53 49.2	-0.4
MKAR	Makanchi Array	67.47	328	P	P	16 53 49.5	0.0
	comp=Z,0.3nm,0.4s,baz=128,slow=6.8,SNR=10						
MKAR	Makanchi Array	67.47	328	P	P	16 53 49.4	-0.2
ZALV	Zalesovo Beam	71.11	335	P	P	16 54 11.3	-0.4
	comp=Z,0.4nm,0.4s,baz=96,slow=5.9,SNR=2.2						
KURK	Kurchatov	71.83	330	P	P	16 54 16.1	0.0
VNDA	Vanda	72.14	173	P	P	16 54 19.4	+1.8
VNDA				IAmb	IAmb	16 54 43.5	
	comp=Z,23nm,1.6s						
AMKA	Amchitka	73.55	31	P	P	16 54 27.0	+0.8
SOCY	Socotra	75.81	285	P	P	16 54 39.0	-1.2
SOCY				IAmb	IAmb	16 55 03.0	
	comp=Z,6.0nm,1.1s						
CPUP	Villa Florida	145.93	172	PKPbc	PKPbc	17 02 32.7	+0.3
	comp=Z,0.9nm,0.4s,baz=169,slow=5.2,SNR=3.7						

NOU 19 16:48:11.4, 16°.41S×168°.33E, h0^{km}, MLv5.1, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	Devils Point	1.31	186	P	Pg	16 48 35.1	-1.5
KOUNC	Koumac, New Ca	5.63	222	P	Pn	16 49 36.0	-0.4
YATNC	Mamie plateau,	5.78	193	P	Pn	16 49 38.1	-0.4
DZM	Mont Dzumac	5.91	197	P	Pn	16 49 40.6	+0.3
ONTNC	Ouen Toro	6.13	196	P	Pn	16 49 43.7	+0.5
OUENC	Ouen Island, N	6.14	193	P	Pn	16 49 43.6	+0.2

PRU 19 16:53:53.8±0.0, **50°.00N**×**18°.60E**, **h0**^{km}, **Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LANS	Liptovska Anna	1.02	146	ePG	Pg	16 54 12.9	-0.4
LANS				eSG	Sb	16 54 27.7	-0.6
LANS				eLG	Lg	16 54 30.1	
KRLC	Kraliky	1.18	274	ePG	Pg	16 54 14.3	-2.0
KRLC				eSG	Sg	16 54 31.9	+0.4
	comp=Z,1.9nm,0.6s						
DPC	Dobruska-Polom	1.51	284	ePG	Pn	16 54 21.1	-1.0
DPC				eSG	Sn	16 54 42.4	0.0
VYHS	Vyhne	1.52	174	ePG	Pn	16 54 21.0	-1.2

IDC 19 16:59:24.2±2.4, **6°.20S**×**129°.67E**, **h0**^{km}, **mb3.3**/1, **mb1 3.6**/4, **mb1mx3.3**/40, **mbtmp3.4**/4, **ML3.1**/3, **Error ellipse: s-maj=92.4km s-min=30.1km az=76.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	12.46	198	Pn	Pn	17 02 25.0	+2.0
	0.1nm,0.3s,baz=27,slow=13,SNR=5.6						
FITZ				Sn	Sn	17 04 32.7	-10
	0.2nm,0.3s,baz=119,slow=19,SNR=1.2						
WRA	Warramunga Arr	14.39	162	Pn	Pn	17 02 48.4	-1.1
	0.1nm,0.3s,baz=338,slow=12,SNR=4.2						
WRA				Sn	Sn	17 05 15.5	-14
	0.3nm,0.3s,baz=340,slow=22,SNR=10						
ASAR	Alice Springs	17.84	167	P	Pn	17 03 33.4	-0.7
	0.1nm,0.3s,baz=344,slow=9.8,SNR=11						
ASAR				S	Sn	17 06 40.2	-13
	0.1nm,0.3s,baz=355,slow=28,SNR=2.2						
MKAR	Makanchi Array	67.38	327	P	P	17 10 21.4	0.0
	0.2nm,0.5s,baz=125,slow=7.3,SNR=2.1						

IDC 19 17:04:32.6±1.7, **10°.13S**×**124°.31E**, **h0**^{km}, **mb3.5**/1, **mb1 3.5**/4, **mb1mx3.3**/43, **mbtmp3.3**/4, **ML3.0**/3, **Error ellipse: s-maj=30.2km s-min=18.2km az=7.0, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	0.64	263	Pg	Pg	17 04 45.0	+0.1
	247nm,0.3s,baz=113,slow=4.0,SNR=98						
FITZ	Fitzroy Crossi	8.02	171	Pn	Pn	17 06 29.7	-0.8
	0.3nm,0.3s,baz=355,slow=8.2,SNR=4.1						
FITZ				Sn	Sn	17 07 57.7	-4.3
	0.8nm,0.3s,baz=124,slow=17,SNR=7.2						
WRA	Warramunga Arr	13.74	136	Pn	Pn	17 07 50.1	+1.2
	0.1nm,0.3s,baz=308,slow=15,SNR=2.5						
WRA				Sn	Sn	17 10 15.3	-7.0
	0.2nm,0.3s,baz=310,slow=25,SNR=6.4						
ASAR	Alice Springs	16.28	147	Pn	Pn	17 08 22.9	+0.1
	0.1nm,0.3s,baz=321,slow=12,SNR=6.5						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR				Sn	Sn	17 11 16.5	-7.8
	0.1nm,0.3s,baz=310,slow=21,SNR=4.8						
MKAR	Makanchi Array	67.94	330	P	P	17 15 33.1	-0.2
	0.4nm,0.8s,baz=141,slow=7.0,SNR=6.8						

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*IDC **19** 17:21:13.2±1.6, 9°.29S×114°.26E, h0^{km}, mb3.6/4, mb1 4.0/7, mb1mx3.6/31, mbtmp3.9/7, ML4.1/3, Error ellipse: s-maj=46.1km s-min=21.8km az=50.0*

*NEIC **19** 17:21:25.9±1.5, 9°.0S±0°.1×114°.97E±0°.07, h87^{km}±11^{km}, mb3.8/7, Error ellipse: s-maj=20.6km s-min=9.7km az=185.0*

*DJA **19** 17:21:25.3±0.3, 9°S±5°×11°5E±°, h62^{km}±8^{km}, M4.4/15, mb4.6/7, mB5.6/1, MLv4.2/15, Mw(mB)5.1/1*

ISC 19 17:21:23.8±0.7**, 9°.34S**±0°.06×**115°.00E**±0°.06**, h35^{km}, n40, σ2^s.06**/42**, mb3.9**/9**, South of Bali**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DNP	Denpasar	0.69	18	P	Pn	17 21 40.3	+3.2
DNP				S	Sn	17 21 52.6	+6.0
JAGI	Jajag, Banyuwa	1.20	316		Pn	17 21 45.0	+1.0
JAGI				Sn	Sn	17 21 58.9	-0.3
JAGI	Jajag, Banyuwa	1.20	316	P	Pn	17 21 45.1	+1.0
SRBI	Singaraja	1.26	10	P	Pn	17 21 45.4	+0.4
ABJI	Asem Bagus	1.71	334	P	Pn	17 21 51.6	+0.5
TWSI	Taliwang, Sumb	1.96	72	P	Pn	17 21 58.0	+3.5
KMMI	Kalianget	2.49	336	P	Pn	17 22 01.8	-0.1
PLAI	Plampang	2.79	80	P	Pn	17 22 09.9	+3.9
UGM	Wanagama	4.64	287		Pn	17 22 32.9	+1.3
UGM	Wanagama	4.64	287	P	Pn	17 22 33.8	+2.3
BSSI	Bau Bau, Buton	6.30	60	P	Pn	17 22 55.4	+1.1
	0.3nm64nm,0.8s						
KAPI	Kappang	6.38	48	Pn	Pn	17 22 55.7	+0.3
	5.1nm,0.3s,baz=205,slow=2.9,SNR=9.4						
KAPI				Sn	Sn	17 24 02.0	-5.1
	4.2nm,0.3s,baz=90,slow=22,SNR=6.8						
KAPI	Kappang	6.38	48		Pn	17 22 55.6	+0.2
BKSI	Bulukumba	6.46	52	P	Pn	17 22 56.9	+0.4
	0.1nm30nm,0.9s						
EDFI	Ende, Flores	6.64	85	P	Pn	17 22 59.7	+0.7
	0.1nm15nm,1.1s						
BNSI	Bone	7.06	46	P	Pn	17 23 06.5	+1.8
	0.2nm43nm,0.4s						
CISI	Cisompet, Garu	7.32	283	Pn	Pn	17 23 06.6	-1.7
CISI	Cisompet, Garu	7.32	283	P	Pn	17 23 09.6	+1.2
	0.3nm5µm55nm,0.7s						
BATI	Baumata	8.59	96	Pn	Pn	17 23 27.8	+2.1
	2.9nm,0.3s,baz=103,slow=14,SNR=1.9						
BATI				Sn	Sn	17 25 02.5	+1.1
	1.7nm,0.3s,baz=18,slow=20,SNR=3.1						
SOEI	Soe	9.15	93	Pn	Pn	17 23 33.0	-0.6
XMIS	Christmas Isla	9.28	262	Pn	Pn	17 23 34.9	-0.3
MNAI	Manna	12.93	292	Pn	Pn	17 24 22.6	-2.6
PSA00	Pilbara Seismi	13.03	160	Pn	Pn	17 24 27.4	+0.9
GIRL	Giralia	13.25	183	Pn	Pn	17 24 32.0	+2.5
FITZ	Fitzroy Crossi	13.51	131	Pn	Pn	17 24 34.8	+1.6
	0.5nm,0.3s,baz=307,slow=10.0,SNR=29						
FITZ				Sn	Sn	17 26 57.7	-4.4
	0.3nm,0.3s,baz=223,slow=19,SNR=5.6						
FITZ	Fitzroy Crossi	13.51	131	Pn	Pn	17 24 34.5	+1.4
WB0	Warramunga Arr	21.42	121	P	P	17 26 08.1	-0.9
WB0				IAmb	IAmb	17 26 36.4	
	comp=Z,14nm,1.5s						
WRA	Warramunga Arr	21.45	122	P	P	17 26 09.8	+0.5
	comp=Z,0.6nm,0.5s,baz=293,slow=12,SNR=9.2						
WRAB	Tennant Creek	21.46	122	P	P	17 26 09.7	+0.4
WRAB				IAmb	IAmb	17 26 32.5	
	comp=Z,11nm,1.2s						
WB2	Warramunga Arr	21.46	122	P	P	17 26 09.3	-0.1
AS31	Alice Springs	23.01	131	P	P	17 26 26.0	+0.1
AS31				IAmb	IAmb	17 26 26.4	
	comp=Z,0.9nm,0.7s						
ASAR	Alice Springs	23.01	131	P	P	17 26 25.9	0.0
	comp=Z,2.0nm,0.7s,baz=305,slow=9.2,SNR=43						
ASAR	Alice Springs	23.01	131	P	P	17 26 26.1	+0.2
STKA	Stephens Creek	33.33	136	P	P	17 27 58.5	-0.1
	comp=Z,1.8nm,0.7s,baz=290,slow=8.8,SNR=5.4						
STKA	Stephens Creek	33.33	136	P	P	17 27 58.8	+0.2
STKA				IAmb	IAmb	17 28 24.5	
	comp=Z,1.3nm,1.4s						
HHC	Hu-ho-hao-te	50.04	357	*e*P	P	17 30 14.5	-0.6
HHC				pmax	pmax		
	comp=Z,3.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,200nm,6.6s						
WMQ	Urumqi	58.43	337	*e*P	P	17 31 15.0	-1.1
MKAR	Makanchi Array	63.03	335	P	P	17 31 40.0	-7.4
	comp=Z,0.1nm,0.4s,baz=152,slow=7.2,SNR=3.6						
ABKAR	Akbulak array	75.60	326	P	P	17 32 58.9	-6.1
ABKAR	Akbulak array	75.60	326	P	P	17 32 58.7	-6.4
ABKAR				IAmb	IAmb	17 33 24.1	
	comp=Z,1.4nm,1.1s						

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*AEIC **19** 17:25:39±1.6, 52°.6N±0°.2×174°.5W±0°.2, h216^{km}±3^{km}, ML3.0/15, mb3.8/12(NEIC), Error ellipse: s-maj=29.5km s-min=8.8km az=158.0*

NEIC 19 17:25:39.7±1.8**, 52°.9N**±0°.2×**174°.7W**±0°.1**, h201**^{km}±14^{km}**, Error ellipse: s-maj=35.9km s-min=7.6km az=167.0, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOKL	Mount Kliuchef	0.65	154		Pn	17 26 07.9	+0.3
KOKL					S	17 26 27.3	-1.9
KOFP	Korovin Flat P	0.73	151		Pn	17 26 07.5	-0.5
KOFP					S	17 26 30.7	+0.9
ATKA	Atka Island	0.77	157		Pn	17 26 07.7	-0.4
ATKA	Atka Island	0.77	157		S	17 26 30.5	+0.5
GSMY	Great Sitkin M	1.21	225		Pn	17 26 11.1	0.0
GSMY					S	17 26 35.4	+0.3
ETKA	Kagalaska Isla	1.49	226		Pn	17 26 13.5	+0.1
ADK	Adak	1.60	231		Pn	17 26 14.2	-0.1
ADK	Adak	1.60	231		S	17 26 41.5	+0.7
KIMD	Kanaga Island	1.95	235		Pn	17 26 17.9	+0.2
KIMD					S	17 26 46.6	0.0
TAFP	Tanaga Falls P	2.26	245		Pn	17 26 21.3	+0.3
NIKH	Nikolski High	3.52	87	Pn	Pn	17 26 34.2	-1.3
AMKA	Amchitka	4.01	250	Pn	Pn	17 26 41.6	0.0
UNV	Unalaska Valle	4.98	76	Pn	Pn	17 26 53.2	-0.5
OHAK	Old Harbor	12.97	62	Pn	Pn	17 28 34.9	-1.6
SVW2	Sparrevohn	13.20	44	Pn	Pn	17 28 39.1	-0.3
KDAK	Kodiak Island	13.46	60	Pn	Pn	17 28 40.9	-1.6
TTA	Tatalina	14.05	37		P	17 28 51.1	-0.6
CNPM	China Poot	14.57	54		Pn	17 28 56.1	-0.2
BRLK	Bradley Lake	14.81	53		Pn	17 28 59.2	0.0
PPLA	Purkeypile	15.49	41	P	Pn	17 29 07.6	0.0
KTH	Kantishna Hill	16.32	40		P	17 29 16.5	-0.2
TRF	Thorofare Moun	16.52	41	P	P	17 29 18.4	-0.7
TRF				IAmb	IAmb	17 29 20.2	
	comp=Z,6.8nm,1.4s						
BPAW	Bear Paw Mtn.	16.57	38	Pn	Pn	17 29 21.2	+0.7
BPAW				IAmb	IAmb	17 29 35.1	
	comp=Z,6.4nm,1.4s						
RND	Reindeer	17.07	42	P	P	17 29 25.4	+0.4
RND				IAmb	IAmb	17 29 26.6	
	comp=Z,4.5nm,0.6s						
HIN	Hinchinbrook I	17.10	53	P	Pn	17 29 26.3	-0.4
MDM	Murphy Dome	18.04	38	P	P	17 29 35.9	+0.5
HDA	Harding Lake	18.27	40	P	P	17 29 38.5	+0.6
PAX	Paxson	18.31	45	P	Pn	17 29 40.4	-0.6
ILAR	Eielson Array	18.45	39	P	P	17 29 41.0	+1.0
DOT	Dot Lake	19.14	44	P	P	17 29 46.2	-1.3
DOT				IAmb	IAmb	17 29 50.6	
	comp=Z,1.8nm,0.8s						
BMAR	Burnt Mountain	20.56	33	P	P	17 30 01.6	-0.9
EGAK	Eagle	20.72	42	P	P	17 30 03.2	-0.9
EGAK				IAmb	IAmb	17 30 04.6	
	comp=Z,3.3nm,1.4s						
INK	Inuvik	24.74	36	P	P	17 30 42.8	+0.7
INK				IAmb	IAmb	17 30 45.9	
	comp=Z,4.4nm,1.4s						

NOU 19 17:26:23.0, 16°.40S×168°.18E, h0^{km}, MLv4.7, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	Devils Point	1.32	180	P	Pg	17 26 47.2	-1.1
SANVU	Saraoutou	1.33	315	P	Pg	17 26 47.6	-1.0
KOUNC	Koumac, New Ca	5.54	221	P	Pn	17 27 46.7	-0.1
YATNC	Mamie plateau,	5.76	192	P	Pn	17 27 50.3	+0.5
DZM	Mont Dzumac	5.88	196	P	Pn	17 27 50.8	-0.7
ONTNC	Ouen Toro	6.10	195	P	Pn	17 27 54.1	-0.3
OUENC	Ouen Island, N	6.12	192	P	Pn	17 27 55.1	+0.4

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*TAP **19** 17:28:51.0, 24°.64N×122°.50E, h89^{km}±1^{km}, ML2.9, D*

*JMA **19** 17:28:51.1±0.2, 24°.61N×122°.40E, h95^{km}±2^{km}, M1.7*

ISC 19 17:28:52.5±1.4**, 24°.63N**±0°.04×**122°.44E**±0°.02**, h85**^{km}±9^{km}**, n87, σ0^s.94**/157**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.49	111	P	Pn	17 29 06.8	+0.2
JYNG				S	Sn	17 29 18.5	+1.4
TWC	Suao	0.54	268	*e*S	Sn	17 29 18.1	+0.3
	baz=267						
TWB1	Santiao Chiao	0.56	313	*e*P	Pn	17 29 07.0	-0.2
	baz=309						
TWB1				S	Sn	17 29 18.4	+0.3
	baz=309						
EWUT	Wuta	0.63	253	*e*P	Pn	17 29 07.5	-0.4
	baz=253						
EWUT				*e*S	Sn	17 29 20.2	+0.9
	baz=253						
TIPB	Shuangxi	0.66	302	P	Pn	17 29 07.9	-0.3
	baz=298						
TIPB				S	Sn	17 29 19.6	-0.2
	baz=298						
NDS	Dongshan	0.66	271	*e*P	Pn	17 29 08.0	-0.1
	baz=269						
NDS				*e*S	Sn	17 29 20.1	+0.3
	baz=269						
ENA	Nanau	0.67	253	P	Pn	17 29 08.4	+0.1
	baz=252						
ENA				S	Sn	17 29 21.1	+1.2
	baz=252						
TWE	Neicheng	0.71	278	*i* P	Pn	17 29 08.6	-0.1
	baz=276						
TWE				S	Sn	17 29 21.1	+0.4
	baz=276						
ENTT	Nioudou	0.80	271	P	Pn	17 29 09.7	+0.1
	baz=270						
NDT	Datong Townshi	0.84	268	P	Pn	17 29 10.7	+0.6
	baz=267						
NDT				S	Sn	17 29 24.1	+0.9
	baz=267						
NWLT	Wulai	0.87	280	P	Pn	17 29 09.8	-0.6
	baz=278						
NWLT				S	Sn	17 29 24.2	+0.6
	baz=278						
NACB	Ninganchiao	0.89	240	*e*P	Pn	17 29 09.7	-0.9
	baz=240						
NACB				S	Sn	17 29 23.9	-0.2
	baz=240						
NHDH	Xindian Distri	0.90	292	*e*P	Pn	17 29 10.8	+0.2
	baz=290						
NHDH				*e*S	Sn	17 29 25.3	+1.1
	baz=290						
TATO	Taipei	0.93	292	*e*P	Pn	17 29 09.9	-1.1
	baz=290						
TATO				*e*S	Sn	17 29 25.9	+1.0
	baz=290						
TWD	Chiawan	0.94	235	P	Pn	17 29 10.7	-0.5
	baz=235						
TWD				S	Sn	17 29 25.5	+0.3
	baz=235						
YM01	YM01	0.94	303	*e*P	Pn	17 29 09.5	-1.7
	baz=301						
YM01				*e*S	Sn	17 29 23.7	-1.5
	baz=301						
YM11	YM11	0.95	304	*e*P	Pn	17 29 11.2	-0.2
	baz=302						
YM11				*e*S	Sn	17 29 26.7	+1.2
	baz=302						
YM08	YM08	0.95	306	*e*S	Sn	17 29 24.4	-1.0
	baz=303						
YM10	YM10	0.96	303	*e*P	Pn	17 29 10.6	-0.8
	baz=301						
YM10				*e*S	Sn	17 29 24.8	-0.8
	baz=301						
YM05	YM05	0.96	304	P	Pn	17 29 10.4	-1.0
	baz=301						
YM05				*e*S	Sn	17 29 24.6	-0.9
	baz=301						
ETLH	Xiulin Townshi	0.97	245	P	Pn	17 29 11.0	-0.6
	baz=245						
ETLH				S	Sn	17 29 26.0	+0.1
	baz=245						
YHNB	Yeheng	0.97	273	P	Pn	17 29 11.5	-0.1
	baz=271						
YHNB				S	Sn	17 29 25.4	-0.4
	baz=271						
YM04	YM04	0.97	303	*e*P	Pn	17 29 10.6	-1.0
	baz=300						
YM04				*e*S	Sn	17 29 24.6	-1.2
	baz=300						
NNSB	Datong	0.98	259	P	Pn	17 29 11.7	0.0
	baz=258						
NNSB				S	Sn	17 29 26.6	+0.4
	baz=258						
NNSH	Datong	0.98	259	P	Pn	17 29 11.9	+0.1
	baz=258						
NNSH				S	Sn	17 29 27.1	+0.9
	baz=258						
NSK	Sanguang	0.99	273	*e*P	Pn	17 29 11.2	-0.5
	baz=272						
NSK				S	Sn	17 29 25.4	-0.7
	baz=272						
NNS	Nan Shan	0.99	259	*e*P	Pn	17 29 11.3	-0.5
	baz=258						
NNS				S	Sn	17 29 26.6	+0.2
	baz=258						
HWA	Hwalien	1.00	230	*e*S	Sn	17 29 27.2	+0.9
	baz=230						
TWS1	Kuangyinshan	1.04	297	P	Pn	17 29 11.7	-0.6
	baz=295						
TWS1				*e*S	Sn	17 29 26.7	-0.5
	baz=295						
NTST	Danshui	1.05	301	*e*S	Sn	17 29 26.7	-0.6
	baz=298						
NTY	Taoyuan	1.10	290	*e*S	Sn	17 29 29.8	+1.3
	baz=288						
FUSS	Fushou	1.16	251	*e*P	Pn	17 29 13.9	-0.1
	baz=251						
WHF	Hehuan Shan	1.18	246	*e*S	Sn	17 29 30.2	-0.6
	baz=246						
NCUH	Zhongli	1.19	287	*e*S	Sn	17 29 30.3	-0.1
	baz=285						
IRIF	Iriomote-Funau	1.21	104	P	Pn	17 29 14.1	-0.3
IRIF				S	Sn	17 29 30.9	+0.1
TWT	Tachien	1.21	252	P	Pn	17 29 15.2	+0.6
	baz=252						
TWT				S	Sn	17 29 32.2	+1.1
	baz=252						
ESL	Shilin	1.23	229	P	Pn	17 29 13.8	-0.8
	baz=229						
ESL				S	Sn	17 29 30.0	-1.2
	baz=229						
TDCB	Techi	1.23	253	*e*P	Pn	17 29 15.0	+0.2
	baz=252						
TDCB				*e*S	Sn	17 29 31.4	-0.1
	baz=252						
CHGB	Renai	1.29	244	P	Pn	17 29 15.5	-0.1
	baz=244						
CHGB				S	Sn	17 29 32.7	-0.1
	baz=244						
LIOB	Emei	1.30	271	P	Pn	17 29 15.2	-0.3
	baz=270						
LIOB				S	Sn	17 29 32.6	-0.1
	baz=270						
HSN1	Hsinchu	1.30	277	*e*S	Sn	17 29 32.4	-0.5
	baz=275						
NSTT	Nanjuang	1.31	270	S	Sn	17 29 32.5	-0.5
	baz=269						
EGFH	Guangfu	1.33	224	*e*S	Sn	17 29 32.9	-0.6
	baz=225						
HATJ	Hateruma jima	1.37	114	P	Pn	17 29 16.4	+0.1
HATJ				*e*S	Sn	17 29 35.2	+0.9
WHP	Taichung City	1.41	256	P	Pn	17 29 17.2	+0.2
	baz=255						
WHP				S	Sn	17 29 36.1	+0.8
	baz=255						
HGSD	Ruisui	1.46	220	P	Pn	17 29 16.8	-0.8
	baz=220						
HGSD				S	Sn	17 29 36.0	-0.5
	baz=220						
VWDT	VWDT	1.47	234	P	Pn	17 29 17.4	-0.2
	baz=234						
VWDT				S	Sn	17 29 36.6	0.0
	baz=234						
JKRS	Kuro-shima	1.48	105	P	Pn	17 29 17.8	0.0
JKRS				S	Sn	17 29 37.4	+0.5
WPL	Puli Township	1.49	246	*e*P	Pn	17 29 18.4	+0.6
	baz=246						
WPL				*e*S	Sn	17 29 37.2	+0.2
	baz=246						
DPDB	Guoxing	1.50	247	P	Pn	17 29 18.2	+0.1
	baz=247						
DPDB				*e*S	Sn	17 29 38.7	+1.2
	baz=247						
NMLH	Miaoli	1.50	267	S	Sn	17 29 36.8	-0.7
	baz=266						
WCS	Beigang Elemen	1.51	248	P	Pn	17 29 19.1	+1.0
	baz=248						
WCS				S	Sn	17 29 38.3	+0.9
	baz=248						
EHY	Hungye	1.52	223	P	Pn	17 29 17.2	-1.0
	baz=223						
EHY				S	Sn	17 29 36.3	-1.4
	baz=223						
NSY	Sanyi	1.54	262	*e*P	Pn	17 29 18.8	+0.2
	baz=262						
NSY				*e*S	Sn	17 29 38.7	+0.3
	baz=262						
TWQ1	Liyutan	1.54	260	*e*S	Sn	17 29 38.4	+0.1
	baz=259						
JIJ	Ishigaki jima	1.57	99	P	Pn	17 29 19.1	+0.2
JIJ				S	Sn	17 29 38.4	-0.6
SMLT	Sun Moon Lake	1.59	243	P	Pn	17 29 20.1	+0.8
	baz=242						
SMLT				*e*S	Sn	17 29 41.8	+2.2
	baz=242						
SSLB	Suanglung	1.59	239	*e*P	Pn	17 29 19.6	+0.3
	baz=239						
SSLB				*e*S	Sn	17 29 41.3	+1.7
	baz=239						
TYC	Yuchr	1.61	244	P	Pn	17 29 20.4	+0.9
	baz=243						
TYC				*e*S	Sn	17 29 40.8	+0.8
	baz=243						
YULB	Yu-li	1.61	221	P	Pn	17 29 18.2	-1.4
	baz=221						
YULB				*e*S	Sn	17 29 38.4	-1.6
	baz=221						
EYUL	Yuli	1.64	219	*e*P	Pn	17 29 19.0	-0.8
	baz=219						
EYUL				*e*S	Sn	17 29 41.0	+0.5
	baz=219						
TWF1	Yuli	1.65	220	*e*P	Pn	17 29 18.8	-1.1
	baz=220						
JISG	Ishigakijimahi	1.70	91	P	Pn	17 29 20.2	-0.4
JISG				S	Sn	17 29 42.1	+0.1
WHYT	Xinyi Township	1.72	238	*e*P	Pn	17 29 21.7	+0.7
	baz=238						
WHYT				S	Sn	17 29 44.5	+2.0
	baz=238						
WJS	Zhushan	1.76	243	*e*P	Pn	17 29 21.8	+0.4
	baz=243						
WJS				*e*S	Sn	17 29 44.2	+1.0
	baz=243						
FULB	Fuli	1.77	217	P	Pn	17 29 20.6	-0.9
	baz=217						
FULB				S	Sn	17 29 43.5	0.0
	baz=217						
WNT	Mingjian	1.77	245	*e*P	Pn	17 29 21.9	+0.4
	baz=245						
WNT				S	Sn	17 29 44.5	+1.0
	baz=245						
YUS	Yu-Shan	1.77	231	*e*P	Pn	17 29 21.3	-0.7
	baz=230						
YUS				*e*S	Sn	17 29 44.2	-0.1
	baz=230						
CHKT	Chengkung	1.81	213	*e*P	Pn	17 29 20.5	-1.6
	baz=213						
CHKT				*e*S	Sn	17 29 41.4	-3.1
	baz=213						
ALS	Alishan	1.86	234	P	Pn	17 29 23.6	+0.6
	baz=233						
ALS				S	Sn	17 29 47.7	+1.5
	baz=233						
CHN5	Tsauling	1.91	238	*e*P	Pn	17 29 24.5	+1.1
	baz=238						
CHN5				S	Sn	17 29 48.6	+1.7
	baz=238						
ELDTW	Lidau	1.94	223	*e*P	Pn	17 29 23.0	-0.9
	baz=223						
ELDTW				*e*S	Sn	17 29 46.2	-1.4
	baz=223						
EDH	Donghe	1.95	213	P	Pn	17 29 22.4	-1.4
	baz=213						
EDH				*e*S	Sn	17 29 45.8	-2.0
	baz=213						
WDLH	Douliu	1.97	242	*e*P	Pn	17 29 24.9	+0.7
	baz=242						
WDLH				*e*S	Sn	17 29 50.3	+2.0
	baz=242						
WRL	Guolierlin Hig	2.02	249	*e*S	Sn	17 29 48.0	-1.4
	baz=249						
JTJ	Tarama	2.06	89	P	Pn	17 29 25.5	+0.2
JTJ				S	Sn	17 29 50.7	+0.4
LONT	Longtian	2.09	215	*e*P	Pn	17 29 24.6	-1.2
	baz=216						
LONT				*e*S	Sn	17 29 50.2	-1.0
	baz=216						
WTK	Tuku	2.10	244	*e*P	Pn	17 29 25.4	-0.4
	baz=243						
WTK				*e*S	Sn	17 29 51.6	+0.4
	baz=243						
STYH	Taoyuan	2.10	227	P	Pn	17 29 25.7	-0.3
	baz=227						
STYH				*e*S	Sn	17 29 52.0	+0.6
	baz=227						
CHN4	Tsaushan	2.12	233	*e*P	Pn	17 29 26.8	+0.7
	baz=233						
CHN4				*e*S	Sn	17 29 53.8	+2.1
	baz=233						
TPUB	Ta-pu	2.12	232	*e*P	Pn	17 29 26.3	+0.1
	baz=232						
TPUB				*e*S	Sn	17 29 53.4	+1.6
	baz=232						
WTP	Ta-pu	2.17	231	*e*P	Pn	17 29 26.6	-0.2
	baz=231						
WTP				*e*S	Sn	17 29 55.4	+2.4
	baz=231						
TWGBT	Beinan	2.19	215	*e*P	Pn	17 29 26.2	-0.9
	baz=215						
TWGBT				*e*S	Sn	17 29 52.4	-1.2
	baz=215						
TWG	Pinlang	2.19	215	*e*P	Pn	17 29 26.3	-0.8
	baz=215						
TWG				*e*S	Sn	17 29 52.6	-0.9
	baz=215						
SGST	Jiashian	2.29	228	P	Pn	17 29 28.1	-0.4
	baz=228						
SLGT	Liugui	2.31	226	*e*P	Pn	17 29 29.3	+0.5
	baz=226						
SLGT				*e*S	Sn	17 29 58.4	+2.0
	baz=226						
MASBT	Mashibuluo	2.60	220	*e*P	Pn	17 29 32.8	+0.1
	baz=220						
MASBT				*e*S	Sn	17 30 05.7	+2.3
	baz=220						

NOU 19 17:38:14.0, 16°.38S×168°.28E, h0^{km}, MLv5.1, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	Devils Point	1.34	184	P	Pg	17 38 37.7	-2.0
SANVU	Saraoutou	1.39	312	P	Pn	17 38 39.2	-1.5
KOUNC	Koumac, New Ca	5.62	222	P	Pn	17 39 38.8	-0.1
DZM	Mont Dzumac	5.92	197	P	Pn	17 39 43.6	+0.5
ONTNC	Ouen Toro	6.14	196	P	Pn	17 39 46.5	+0.4

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*IDC **19** 17:41:55.0±1.4, 16°.31S×168°.19E, h0^{km}, mb4.1/7, mb1 4.3/8, mb1mx4.0/27, mbtmp4.1/8, ML4.5/1, Error ellipse: s-maj=48.7km s-min=23.2km az=135.0*

*NEIC **19** 17:41:55.6±1.8, 16°.27S±0°.08×168°.2E±0°.1, h10^{km}±2^{km}, mb4.3/6, Error ellipse: s-maj=24.8km s-min=11.1km az=72.0*

*NOU **19** 17:41:57.2, 16°.21S×168°.35E, h61^{km}, MLv4.8, Vanuatu*

Islands

ISC 19 17:41:59.5±0.8,16°.30S±0°.06×168°.1E±0°.1,h35km,n25, σ1s.28/26,mb3.9/9,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	1.24	313		Pn	17 42 19.1	-1.1
SANVU	Saraoutou	1.24	313	P	Pn	17 42 19.5	-0.8
DVP	Devils Point	1.42	178	P	Pn	17 42 22.4	-0.4
LIFNC	LIFOU	4.54	191	P	Pn	17 43 03.9	-1.7
KOUNC	Koumac, New Ca	5.59	220	P	Pn	17 43 21.1	+0.9
YATNC	Mamie plateau,	5.85	191	P	Pn	17 43 22.3	-1.4
DZM	Mont Dzumac	5.96	195	Pn	Pn	17 43 24.7	-0.6
	12nm,0.3s,baz=151,slow=21,SNR=89						
DZM				Sn	Sn	17 44 29.3	-3.1
	0.5nm,0.3s,baz=120,slow=20,SNR=2.9						
OUENC	Ouen Island, N	6.21	191	P	Pn	17 43 29.3	+0.6
PINNC	Pines Island,	6.32	186	P	Pn	17 43 29.7	-0.4
HNR	Honiara	10.51	310	Pn	Pn	17 44 26.6	-1.1
CTA	Charters Tower	21.13	256	P	P	17 46 43.7	+2.3
	3.9nm,0.9s,baz=70,slow=15,SNR=2.3						
STKA	Stephens Creek	28.66	232	P	P	17 47 54.2	+1.1
	5.1nm,0.7s,baz=58,slow=7.9,SNR=11						
STKA	Stephens Creek	28.66	232	P	P	17 47 54.0	+1.0
STKA				IAmb	IAmb	17 47 55.1	
	comp=Z,1.5nm,0.8s						
WRA	Warramunga Arr	32.30	258	P	P	17 48 25.4	+0.1
	comp=Z,0.8nm,0.8s,baz=87,slow=9.1,SNR=3.0						
AS31	Alice Springs	32.94	252	P	P	17 48 30.7	-0.3
AS31				IAmb	IAmb	17 48 32.8	
	comp=Z,4.8nm,0.6s						
ASAR	Alice Springs	32.94	252	P	P	17 48 31.4	+0.4
	comp=Z,11nm,0.6s,baz=78,slow=8.3,SNR=218						
ASAR	Alice Springs	32.94	252	P	P	17 48 30.8	-0.1
WAKE	Wake Island	35.39	358	P	P	17 48 50.3	-1.8
FORT	Forrest	39.25	241	P	P	17 49 25.8	+1.0
FORT				IAmb	IAmb	17 49 26.2	
	comp=Z,12nm,0.7s						
CMAR	Chiang Mai Arr	76.35	294	P	P	17 53 44.4	-1.1
SONM	Songino Array	84.25	323	P	P	17 54 29.0	+1.4
	comp=Z,0.6nm,0.8s,baz=135,slow=3.6,SNR=4.9						
SONM	Songino Array	84.25	323	P	P	17 54 28.3	+0.7
SONM				IAmb	IAmb	17 54 29.7	
	comp=Z,1.1nm,1.1s						
NVAR	Mina Array Bea	87.66	49	P	P	17 54 45.6	+0.8
	comp=Z,0.5nm,0.7s,baz=212,slow=5.3,SNR=3.7						
NVAR	Mina Array Bea	87.66	49	P	P	17 54 45.5	+0.7
ILAR	Eielson Array	87.76	18	P	P	17 54 45.5	+1.2
	comp=Z,0.5nm,0.8s,baz=224,slow=5.0,SNR=4.1						

IDC 19 17:50:22.8±0.8,14°.57S×66°.14E,h0km,mb4.0/8, mb1 4.1/8,mb1mx3.8/46,mbtmp4.0/8,MS3.6/2,Ms1 3.7/2, ms1mx3.1/40,Error ellipse: s-maj=27.3km s-min=19.7km az=169.0

NEIC 19 17:50:23.9±1.5,14°.5S±0°.1×66°.2E±0°.1,h10km±1km, mb4.4/17,Error ellipse: s-maj=24.6km s-min=22.6km az=290.0

ISC 19 17:50:24.6±0.8,14°.6S±0°.1×66°.1E±0°.1,h13km,n41, σ1s.19/36,mb4.4/21,Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	9.27	43	T	T	18 01 59.4	
	baz=222,slow=75,SNR=21						
H08S2	Diego Garcia H	9.29	43	T	T	18 02 00.2	
	baz=222,slow=75,SNR=71						
H08S3	Diego Garcia H	9.29	43	T	T	18 02 00.9	
	baz=222,slow=75,SNR=230						
MATP	Matopo	36.29	255	P	P	17 57 28.7	+0.4
	1.2nm,0.8s,baz=114,slow=10.0,SNR=3.0						
LSZ	Lusaka	36.63	264	P	P	17 57 31.8	+0.6
	0.6nm,0.3s,baz=188,slow=7.1,SNR=2.2						
RAYN	Ar Rayn	42.88	332	P	P	17 58 23.6	+0.7
RAMN	Ramite	45.80	26	eP	P	17 58 47.9	+1.3
	13nm,0.7s						
PKI	Pulchoki	45.87	24	eP	P	17 58 49.2	+2.0
	9.3nm,1.0s						
PKIN	Phulchoki	45.87	24	eP	P	17 58 48.7	+1.6
	9.6nm,0.9s						
GKN	Gorkha	45.95	23	eP	P	17 58 49.3	+1.7
	14nm,0.9s						
CMAR	Chiang Mai Arr	46.07	46	P	P	17 58 49.5	+0.9
	0.3nm,0.7s,baz=237,slow=9.4,SNR=5.0						
CMAR				PcP	PcP	18 00 24.6	-0.2
	0.7nm,1.1s,baz=225,slow=5.0,SNR=4.9						
CMAR				LR	LR	18 15 22.3	
	comp=Z,49nm,21.7s,baz=228,slow=33						
CMAR	Chiang Mai Arr	46.07	46	P	P	17 58 47.8	-0.8
TAPN	Taplejung	46.63	27	eP	P	17 58 55.1	+2.0
	13nm,1.2s						
H01W3	Cape Leeuwin H	47.57	124	T	T	18 49 49.4	
	baz=283,slow=75,SNR=19						
H01W2	Cape Leeuwin H	47.57	124	T	T	18 49 47.4	
	baz=283,slow=75,SNR=17						
H01W1	Cape Leeuwin H	47.59	124	T	T	18 49 50.5	
	baz=283,slow=75,SNR=14						
TOKA	Tokat	61.15	334	P	P	18 00 36.4	-2.4
WMQ	Urumqi	61.35	18	P	P	18 00 39.0	-1.2
WMQ				IAmb	IAmb	18 00 41.3	
	comp=Z,4.9nm,0.8s						
MAKZ	Makanchi	62.72	12	P	P	18 00 49.1	-0.2
MAKZ				IAmb	IAmb	18 00 51.3	
	comp=Z,2.6nm,0.9s						
MK31	Makanchi Array	62.77	12	P	P	18 00 49.1	-0.5
MK31				IAmb	IAmb	18 00 52.3	
	comp=Z,1.9nm,1.1s						
MKAR	Makanchi Array	62.77	12	P	P	18 00 49.6	0.0
	comp=Z,1.7nm,0.9s,baz=209,slow=8.5,SNR=14						
MKAR				LR	LR	18 26 14.9	
	comp=Z,77nm,20.5s,baz=310,slow=34						
MKAR	Makanchi Array	62.77	12	P	P	18 00 49.0	-0.6
XAN	Xi'an	63.20	39	P	P	18 00 52.6	-0.2
XAN				IAmb	IAmb	18 00 55.0	
	comp=Z,5.9nm,1.3s						
ABKAR	Akbulak array	63.76	355	P	P	18 00 55.5	-0.6
ABKAR				IAmb	IAmb	18 00 57.5	
	comp=Z,3.0nm,1.0s						
ASAR	Alice Springs	64.19	109	P	P	18 00 59.5	-0.1
	comp=Z,2.2nm,0.8s,baz=275,slow=6.1,SNR=19						
ASAR	Alice Springs	64.19	109	P	P	18 00 58.0	-1.6
AS31	Alice Springs	64.19	109	P	P	18 00 56.0	-3.6
WRA	Warramunga Arr	65.00	105	P	P	18 01 05.2	+0.3
	comp=Z,2.9nm,0.8s,baz=269,slow=5.8,SNR=15						
WRA	Warramunga Arr	65.00	105	P	P	18 01 05.3	+0.3
WB2	Warramunga Arr	65.01	105	P	P	18 01 04.9	0.0
WRAB	Tennant Creek	65.01	105	P	P	18 01 04.8	-0.1
KURK	Kurchatov	65.91	9	P	P	18 01 08.6	-1.4
KURK				IAmb	IAmb	18 01 13.0	
	comp=Z,2.7nm,1.1s						
BRVK	Borovoye	67.43	3	P	P	18 01 19.8	+0.1
BRVK				IAmb	IAmb	18 01 21.1	
	comp=Z,3.5nm,1.2s						
ZAA0	Zalesovo Array	70.08	12	P	P	18 01 35.9	-0.3
ZAA0				IAmb	IAmb	18 01 36.7	
	comp=Z,3.5nm,1.1s						
ZALV	Zalesovo Beam	70.08	12	P	P	18 01 35.9	-0.2
	comp=Z,2.5nm,0.9s,baz=211,slow=4.7,SNR=9.6						
ZALV	Zalesovo Beam	70.08	12	P	P	18 01 35.5	-0.7
SONM	Songino Array	71.75	27	P	P	18 01 47.8	+1.2
	comp=Z,1.5nm,0.8s,baz=226,slow=6.4,SNR=14						
SONM	Songino Array	71.75	27	P	P	18 01 46.4	-0.2
QSPA	South Pole Qui	75.53	180	P	P	18 02 09.5	+0.8
YKA	Yellowknife Ar	132.12	0	PKP	PKPdf	18 09 37.5	-0.2
	comp=Z,0.4nm,0.7s,baz=48,slow=2.7,SNR=5.9						
PDAR	Pinedale Array	151.64	353	PKPbc	PKiKP	18 10 19.8	0.0
	comp=Z,3.1nm,0.8s,baz=71,slow=2.1,SNR=12						

JMA 19 17:52:24.6±0.1,23°.86N×122°.03E,h22km±3km,M2.7

TAP 19 17:52:25.5,23°.93N×122°.04E,h27km,ML3.0,C

ISC 19 17:52:25.1±1.0,23°.89N±0°.02×122°.04E±0°.02,h25km±10km, n100,σ0s.77/166,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HWA	Hwalien	0.41	283	P	Pb	17 52 34.4	+0.7
	baz=268						
HWA				S	Sn	17 52 42.2	0.0
	baz=268						
TWD	Chiawan	0.45	296	i P	Pb	17 52 34.2	-0.3
	baz=282						
TWD				i S	Sb	17 52 40.9	+0.1
	baz=282						
NACB	Ninganchiao	0.50	305	P	Pb	17 52 34.6	-0.6
	baz=293						
NACB				S	Sb	17 52 42.0	-0.2
	baz=293						
ESL	Shilin	0.56	263	i P	Pb	17 52 35.9	-0.4
	baz=253						
ESL				eS	Sb	17 52 44.4	+0.4
	baz=253						
EGFH	Guangfu	0.60	249	P	Pb	17 52 37.1	+0.1
	baz=236						
EGFH				eS	Sn	17 52 46.8	-0.2
	baz=236						
ETLH	Xiulin Townshi	0.60	302	eP	Pb	17 52 36.4	-0.7
	baz=299						
ETLH				S	Sb	17 52 45.7	+0.4
	baz=299						
ENA	Nanau	0.60	333	P	Pb	17 52 36.7	-0.4
	baz=332						
ENA				S	Sb	17 52 45.6	+0.4
	baz=332						
EWUT	Wuta	0.60	337	eP	Pb	17 52 36.6	-0.5
	baz=335						
HGSD	Ruisui	0.69	235	P	Pb	17 52 38.4	-0.1
	baz=232						
TWC	Suao	0.74	347	i P	Pb	17 52 39.4	0.0
	baz=360						
TWC				S	Sb	17 52 49.2	+0.1
	baz=360						
WHF	Hehuan Shan	0.75	290	i P	Pb	17 52 39.5	-0.4
	baz=276						
WHF				S	Sb	17 52 49.4	-0.5
	baz=276						
EHY	Hungye	0.76	240	i P	Pb	17 52 39.6	0.0
	baz=249						
EHY				eS	Sn	17 52 50.5	-0.3
	baz=249						
NDS	Dongshan	0.80	338	P	Pb	17 52 40.2	-0.2
	baz=337						
NDS				eS	Sn	17 52 51.4	-0.5
	baz=337						
NNSB	Datong	0.81	312	eP	Pb	17 52 40.3	-0.3
	baz=310						
NNSB				eS	Sb	17 52 50.6	-0.5
	baz=310						
NNSH	Datong	0.81	312	P	Pb	17 52 40.2	-0.4
	baz=310						
NNSH				eS	Sb	17 52 50.7	-0.5
	baz=310						
CHGB	Renai	0.81	283	P	Pb	17 52 40.5	-0.2
	baz=270						
CHGB				eS	Sn	17 52 51.8	-0.6
	baz=270						
FUSS	Fushou	0.81	297	P	Pb	17 52 40.4	-0.3
	baz=293						
FUSS				S	Sb	17 52 51.3	-0.1
	baz=293						
NNS	Nan Shan	0.82	312	P	Pb	17 52 40.2	-0.6
	baz=310						
NNS				S	Sb	17 52 51.8	+0.3
	baz=310						
VWDT	VWDT	0.83	261	P	Pb	17 52 40.9	0.0
	baz=258						
VWDT				S	Sn	17 52 52.4	-0.2
	baz=258						
YULB	Yu-li	0.84	234	P	Pb	17 52 40.6	-0.4
	baz=246						
YULB				eS	Sb	17 52 52.1	+0.2
	baz=246						
EYUL	Yuli	0.85	231	P	Pb	17 52 41.2	0.0
	baz=244						
EYUL				eS	Sn	17 52 53.1	-0.1
	baz=244						
NDT	Datong Townshi	0.86	326	P	Pb	17 52 41.0	-0.4
	baz=316						
NDT				eS	Sn	17 52 53.3	-0.1
	baz=316						
TWF1	Yuli	0.86	232	i P	Pb	17 52 41.3	-0.1
	baz=245						
TWF1				S	Sn	17 52 53.8	+0.3
	baz=245						
ENTT	Nioudou	0.86	330	P	Pb	17 52 41.4	-0.1
	baz=319						
TWT	Tachien	0.87	295	eP	Pb	17 52 41.6	-0.1
	baz=291						
TWT				eS	Sb	17 52 52.8	-0.2
	baz=291						
TDCB	Techi	0.88	295	eP	Pb	17 52 41.6	-0.3
	baz=292						
TDCB				eS	Sb	17 52 52.9	-0.5
	baz=292						
TWE	Neicheng	0.90	338	P	Pb	17 52 41.7	-0.3
	baz=338						
TWE				S	Sn	17 52 53.9	-0.4
	baz=338						
ILA	Ilan	0.92	343	S	Sn	17 52 55.1	+0.4
	baz=330						
FULB	Fuli	0.97	225	P	Pn	17 52 42.3	-0.8
	baz=210						
NTC	Toucheng	0.98	349	eS	Sn	17 52 56.3	-0.1
YHNB	Yeheng	0.99	322	eP	Pn	17 52 43.0	-0.4
	baz=320						
WPL	Puli Township	1.00	277	eP	Pb	17 52 43.8	+0.1
	baz=275						
CHKT	Chengkung	1.00	218	eP	Pn	17 52 42.3	-1.2
	baz=205						
CHKT				eS	Sb	17 52 54.0	-2.4
	baz=205						
SSLB	Suanglung	1.00	265	eP	Pn	17 52 43.3	-0.3
	baz=262						
JYNG	Yonagunijimaku	1.00	56	P	Pn	17 52 43.4	-0.1
JYNG				S	Sb	17 52 56.5	-0.1
NSK	Sanguang	1.00	322	P	Pb	17 52 44.0	+0.1
	baz=307						
NSK				S	Sb	17 52 56.3	-0.4
	baz=307						
NWLT	Wulai	1.01	331	eP	Pn	17 52 43.0	-0.8
	baz=330						
NWLT				eS	Sn	17 52 57.0	-0.2
	baz=330						
DPDB	Guoxing	1.03	278	eP	Pn	17 52 44.0	+0.1
	baz=276						
SMLT	Sun Moon Lake	1.04	270	i P	Pb	17 52 44.4	-0.2
	baz=267						
SMLT				S	Sn	17 52 57.9	-0.1
	baz=267						
WCS	Beigang Elemen	1.04	280	P	Pb	17 52 44.5	0.0
	baz=277						
YOJ	Yonaguni jima	1.06	57	P	Pb	17 52 44.5	-0.2
	baz=59						
YOJ				eS	Sn	17 52 58.4	+0.1
	baz=59						
YOJ	Yonaguni jima	1.06	57	P	Pn	17 52 44.3	0.0
YOJ				S	Sb	17 52 58.0	-0.2
WHP	Taichung City	1.07	292	eP	Pb	17 52 44.8	-0.2
	baz=289						
TYC	Yuchr	1.08	271	i P	Pn	17 52 44.8	+0.2
	baz=268						
TYC				S	Sb	17 52 58.6	-0.2
	baz=268						
TIPB	Shuangxi	1.10	350	P	Pb	17 52 45.2	-0.2
	baz=359						
TIPB				S	Sn	17 52 59.8	+0.5
	baz=359						
WHYT	Xinyi Township	1.10	260	P	Pb	17 52 45.4	-0.2
	baz=251						
WHYT				eS	Sb	17 52 59.3	-0.2
	baz=251						
TWB1	Santiao Chiao	1.12	358	P	Pn	17 52 45.1	-0.1
	baz=358						
TWB1				eS	Sn	17 52 59.6	-0.1
	baz=358						
EDH	Donghe	1.13	217	P	Pn	17 52 44.7	-0.6
	baz=215						
TWA	Mucha	1.17	339	eP	Pb	17 52 46.9	+0.3
	baz=339						
TWA				eS	Sb	17 53 01.7	+0.4
	baz=339						
ELDTW	Lidau	1.17	234	eP	Pn	17 52 45.3	-0.6
	baz=219						
ALS	Alishan	1.19	252	i P	Pb	17 52 47.1	-0.1
	baz=249						
ALS				eS	Sb	17 53 02.4	+0.1
	baz=249						
TATO	Taipei	1.20	335	eP	Pb	17 52 47.0	0.0
	baz=334						
TATO				eS	Sb	17 53 03.0	+0.8
	baz=334						
LIOB	Emei	1.20	309	eP	Pb	17 52 47.7	+0.5
	baz=307						
WJS	Zhushan	1.20	267	eP	Pb	17 52 46.8	-0.4
	baz=265						
NSTT	Nanjuang	1.20	308	eP	Pb	17 52 48.0	+0.8
	baz=306						
NSTT				eS	Sb	17 53 02.3	-0.1
	baz=306						
NWF	Wu-fen Shan	1.20	349	eP	Pb	17 52 46.8	-0.5
	baz=348						
NWF				eS	Sb	17 53 02.7	+0.3
	baz=348						
WFSB	Wu-fen Shan	1.20	349	eP	Pb	17 52 46.8	-0.5
	baz=348						
WFSB				eS	Sb	17 53 02.4	+0.1
	baz=348						
WNT	Mingjian	1.24	270	P	Pb	17 52 48.3	+0.5
	baz=267						
WNT				S	Sb	17 53 04.7	+1.2
	baz=267						
TCU	Taichung	1.27	282	eP	Pb	17 52 48.3	-0.1
	baz=280						
CHN5	Tsauling	1.28	257	P	Pb	17 52 49.1	+0.6
	baz=244						
CHN5				S	Sb	17 53 05.5	+0.9
	baz=244						
NSY	Sanyi	1.28	295	eS	Sb	17 53 05.9	+1.3
	baz=292						
TNOU	National Taiwa	1.28	349	eS	Sn	17 53 03.4	-0.4
	baz=6.0						
LONT	Longtian	1.28	221	eP	Pn	17 52 46.1	-1.4
	baz=219						
LONT				eS	Sn	17 53 03.4	-0.4
	baz=219						
LDUT	Ludao	1.32	204	eP	Pn	17 52 47.2	-0.7
	baz=202						
LDUT				eS	Sn	17 53 02.3	-2.3
	baz=202						
YM01	YM01	1.32	341	eP	Pn	17 52 48.4	+0.4
	baz=340						
NCU	National Centr	1.33	324	eS	Sb	17 53 06.5	+0.5
	baz=323						
TWS1	Kuangyinshan	1.33	335	eP	Pb	17 52 49.3	-0.2
	baz=334						
YM10	YM10	1.34	341	eP	Pb	17 52 48.9	-0.7
	baz=340						
YM04	YM04	1.34	340	eP	Pb	17 52 49.1	-0.5
	baz=339						
YM04				eS	Sn	17 53 05.1	-0.3
	baz=339						
STYH	Taoyuan	1.36	239	P	Pb	17 52 49.3	-0.6
	baz=236						
STYH				S	Sb	17 53 07.2	+0.3
	baz=236						
WCHH	Zhanghua	1.37	278	eS	Sb	17 53 08.7	+1.6
	baz=275						
STYT	Tauyuan	1.38	239	P	Pn	17 52 49.3	+0.5
	baz=236						
STYT				S	Sb	17 53 07.3	-0.2
	baz=236						
TWGBT	Beinan	1.38	220	eP	Pn	17 52 48.3	-0.5
	baz=228						
TWGBT				eS	Sb	17 53 07.6	+0.1
	baz=228						
TWG	Pinlang	1.38	220	P	Pn	17 52 47.9	-0.9
	baz=228						
TWG				S	Sb	17 53 07.0	-0.5
	baz=228						
WDLH	Douliu	1.39	262	eP	Pn	17 52 49.4	+0.6
	baz=259						
WDLH				eS	Sb	17 53 08.8	+1.2
	baz=259						
TPUB	Ta-pu	1.42	246	P	Pb	17 52 50.2	-0.6
	baz=243						
TPUB				eS	Sb	17 53 09.5	+1.0
	baz=243						
WTP	Ta-pu	1.45	244	P	Pb	17 52 51.4	-0.2
	baz=241						
WTP				eS	Sb	17 53 12.1	+2.4
	baz=241						
TWK	Hsinying	1.55	247	P	Pb	17 52 52.5	-0.7
	baz=244						
TWK				S	Sb	17 53 13.3	+0.9
	baz=244						
CHN1	Nanshi	1.55	244	eP	Pb	17 52 52.5	-0.7
	baz=241						
CHN1				eS	Sb	17 53 12.1	-0.4
	baz=241						
SLGT	Liugui	1.56	235	P	Pb	17 52 52.5	-0.8
	baz=223						
SGST	Jiashian	1.56	239	P	Pn	17 52 51.8	+0.6
	baz=237						
SGST				S	Sb	17 53 14.2	+1.6
	baz=237						
IRIF	Iriomote-Funau	1.61	74	P	Pn	17 52 52.3	+0.4
IRIF				eS	Sn	17 53 12.1	+0.3
HATJ	Hateruma jima	1.62	84	eS	Sn	17 53 12.8	+0.6
SSD	Sandimen	1.72	229	eP	Pn	17 52 54.5	+1.0
	baz=220						
SSD				eS	Sb	17 53 17.1	-0.1
	baz=220						
SCST	Cishan	1.73	235	eP	Pn	17 52 53.6	0.0
	baz=233						
SCST				eS	Sb	17 53 18.6	+1.0
	baz=233						
TSMG	Majia	1.74	228	eP	Pn	17 52 54.6	+0.9
	baz=217						
MASBT	Mashibuluo	1.81	226	eP	Pn	17 52 55.0	+0.3
	baz=215						
MASBT				eS	Sb	17 53 21.0	+1.2
	baz=215						
TWM1	Shoushan	1.82	235	eP	Pb	17 52 57.8	0.0
	baz=233						
TWM1				eS	Sb	17 53 24.2	+4.0
	baz=233						
JKRS	Kuro-shima	1.83	79	P	Pn	17 52 55.9	+0.9
JKRS				S	Sn	17 53 18.7	+1.3
SSPT	Xinbi	1.94	224	eP	Pn	17 52 58.1	+1.6
	baz=216						
JIJ	Ishigaki jima	1.98	76	P	Pn	17 52 57.1	+0.1
JIJ				S	Sn	17 53 20.1	-0.9
SCZT	Fangliau	1.99	221	eP	Pn	17 52 58.6	+1.4
	baz=214						
SCZT				eS	Sb	17 53 25.2	+0.1
	baz=214						
SLIU	Shizi	2.02	215	eP	Pn	17 52 58.8	+1.3
	baz=214						
JISG	Ishigakijimahi	2.19	71	P	Pn	17 52 59.9	0.0
JISG				S	Sn	17 53 25.1	-1.1
JTJ	Tarama	2.54	72	P	Pn	17 53 06.0	+1.2
JTJ				S	Sn	17 53 33.8	-1.1
VWUC	VWUC	2.60	296	eP	Pn	17 53 06.3	+0.8
	baz=294						
PTMZ	Houxiangcun	2.90	294	eP	Pn	17 53 10.1	+0.5
	baz=292						
MATB	Ma-tsu	2.95	320	eS	Sn	17 53 43.0	-2.0
	baz=319						
KNMB	Chin-men Tao	3.38	281	eS	Sn	17 53 54.1	-1.5
	baz=278						
AXDP	Jialang	3.84	286	eS	Sn	17 54 05.9	-1.1
	baz=284						

JMA 19 17:58:16.7±0.1,41°.00N×142°.94E,h18km,M3.5

IDC 19 17:58:20.0±3.1,40°.97N×142°.92E,h56km±23km,mb3.4/6, mb1 3.4/9,mb1mx3.2/47,mbtmp3.6/9,ML2.7/3,MS2.7/1, Ms1 2.7/1,ms1mx2.3/39,Error ellipse: s-maj=36.0km s-min=24.6km az=137.0

ISC 19 17:58:17.9±1.0,40°.98N±0°.05×143°.06E±0°.06,h38km±3km, n34,σ1s.28/38,mb3.6/6,2C-4D,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JEM	Erimo	1.04	4	P	Pn	17 58 35.7	-0.2
JEM				eS	Sn	17 58 49.2	+0.1
JARK	Aomorirokkasho	1.28	272	P	Pn	17 58 38.1	-1.1
JKEN	Kujiedanarisaw	1.28	233	⇓P	Pn	17 58 38.7	-0.6
JNBK	Urakawa-nobuka	1.32	350	⇑P	Pn	17 58 39.7	-0.1
JANG	Nango	1.32	243	⇓P	Pn	17 58 39.2	-0.6
JANG				eS	Sn	17 58 55.5	-0.6
JAHD	Aomorihigashid	1.33	283	⇓P	Pn	17 58 38.8	-1.1
JTM	Tenmabayashi	1.52	263	P	Pn	17 58 42.2	-0.3
JTM				eS	Sn	17 59 00.5	-0.6
JOT	Ohata	1.57	285	⇓P	Pn	17 58 42.4	-0.8
JCH	Churui	1.65	8	P	Pn	17 58 44.8	+0.5
JCH				eS	Sn	17 59 04.5	+0.3
JKB	Kayabe	1.77	301	⇑P	Pn	17 58 45.4	-0.6
JIAM	Iburiatsuma	1.85	333	P	Pn	17 58 48.8	+1.8

JIAM				eS	Sn	17 59 12.6	+3.5
JBT2	Biratori 2	1.87	344	P	Pn	17 58 48.4	+1.1
JOM	Ohasama	2.02	222	P	Pn	17 58 50.8	+1.3
JFR	Furan	2.21	351	P	Pn	17 58 52.8	+0.8
JEW	Eniwo	2.21	328	P	Pn	17 58 53.1	+1.1
JEW				eS	Sn	17 59 19.4	+1.3
JAK	Akkeshi	2.35	31	P	Pn	17 58 53.7	-0.3
JAK				S	Sn	17 59 19.6	-2.0
JOMM	Oshimamatsumae	2.36	284	P	Pn	17 58 54.8	+0.7
JAR	Ashorobuto	2.37	13	P	Pn	17 58 54.2	-0.1
JMK	Ichinoseki	2.47	215	P	Pn	17 58 57.3	+1.7
ASAJ	Asahikawa	3.15	354	P	Pn	17 59 06.2	+1.2
	2.0nm,0.3s,baz=200,slow=13,SNR=30						
ASAJ				S	Sn	17 59 38.1	-3.2
	1.9nm,0.3s,baz=162,slow=20,SNR=4.7						
ASAJ				LR	LR	18 00 39.6	
	comp=Z,104nm,18.5s,baz=65,slow=44						
MJAR	Matsushiro Arr	5.83	222	P	Pn	17 59 43.2	+1.4
	0.1nm,0.3s,baz=37,slow=13,SNR=3.2						
USRK	Ussuriysk Ar.	8.78	295	P	Pn	18 00 22.7	+0.6
	baz=98,slow=15,SNR=4.4						
SONM	Songino Array	26.88	297	P	P	18 03 55.5	+0.4
	0.6nm,0.6s,baz=84,slow=9.3,SNR=7.1						
SONM				PcP	PcP	18 07 15.9	-0.6
	0.2nm,0.7s,baz=106,slow=5.1,SNR=2.8						
H11N2	WAKE ISLAND Hy	29.36	129	T	T	18 35 02.9	
	baz=322,slow=75,SNR=20						
H11N1	WAKE ISLAND Hy	29.37	129	T	T	18 35 11.0	
	baz=322,slow=75,SNR=16						
H11N3	WAKE ISLAND Hy	29.37	129	T	T	18 35 04.2	
	baz=322,slow=75,SNR=18						
H11S1	WAKE ISLAND Hy	30.20	131	T	T	18 36 08.4	
	baz=323,slow=74,SNR=6.9						
H11S3	WAKE ISLAND Hy	30.21	131	T	T	18 36 10.1	
	baz=323,slow=74,SNR=6.4						
H11S2	WAKE ISLAND Hy	30.22	131	T	T	18 36 10.1	
	baz=323,slow=74,SNR=4.3						
ZALV	Zalesovo Beam	40.31	309	P	P	18 05 51.3	+0.1
	0.7nm,0.5s,baz=82,slow=11,SNR=4.4						
MKAR	Makanchi Array	43.22	299	P	P	18 06 15.0	-0.2
	0.4nm,0.6s,baz=81,slow=9.7,SNR=7.4						
MKAR				PcP	PcP	18 08 01.9	-1.9
	0.3nm,0.9s,baz=64,slow=3.4,SNR=2.5						
ILAR	Eielson Array	45.50	34	P	P	18 06 34.5	+1.5
	0.2nm,0.5s,baz=252,slow=6.0,SNR=3.4						
FINES	FINESS Array B	65.93	332	P	P	18 08 59.2	-0.2
	1.0nm,0.5s,baz=49,slow=8.8,SNR=7.5						
AKASG	Malin Array Be	71.96	322	P	P	18 09 37.0	-0.1
	0.6nm,0.4s,baz=43,slow=5.9,SNR=6.6						

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*IDC **19** 18:00:52.2±6.5, 1°.26N×100°.10E, h0^{km}, mb3.4/3, mb1 3.6/3, mb1mx3.3/30, mbtmp3.4/3, MS3.5/3, Ms1 3.5/3, ms1mx3.0/34, Error ellipse: s-maj=368.6km s-min=26.6km az=55.0*

*DJA **19** 18:01:14.7±0.8, 1°N±8°×10°0E±°, h194^{km}±7^{km}, M3.1/6, MLv3.1/6*

ISC 19 18:01:14.0±1.1, 1°.2N±0°.2×100°.1E±0°.1, h200^{km}, n10, σ0^{s}.76/9, mb2.9/3, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MNSI	Mandailing Nat	0.60	233	P	Pn	18 01 42.0	+0.5
BKNI	Bangkinang	1.28	130	P	Pn	18 01 46.6	+0.7
BKNI				S	Sn	18 02 11.7	+1.1
PDSI	Padang	2.09	169	P	Pn	18 01 53.3	-0.3
GSI	Gunungsitoli	2.49	273	P	Pn	18 01 58.3	+0.5
TPTI		3.56	306	P	Pn	18 02 10.7	+0.4
FITZ	Fitzroy Crossi	31.62	128	LR	LR	18 21 23.1	
	comp=Z,83nm,18.3s,baz=271,slow=39						
WRA	Warramunga Arr	39.61	124	P	P	18 08 25.6	-0.8
	0.1nm,0.4s,baz=302,slow=8.9,SNR=1.0						
ASAR	Alice Springs	41.12	129	P	P	18 08 38.7	-0.1
	0.3nm,0.8s,baz=303,slow=7.7,SNR=3.3						
ASAR				LR	LR	18 29 00.7	
	comp=Z,57nm,18.2s,baz=280,slow=41						
SONM	Songino Array	46.82	6	LR	LR	18 30 06.3	
	comp=Z,67nm,20.7s,baz=222,slow=38						
MKAR	Makanchi Array	48.03	344	P	P	18 09 32.5	-0.6
	0.8nm,0.3s,baz=159,slow=8.4,SNR=36						

IDC 19 18:09:06.8±10.0, 6°.93S×129°.35E, h262^{km}±117^{km}, mb2.7/1, mb1 2.9/4, mb1mx2.7/41, mbtmp3.5/4, Error ellipse: s-maj=75.2km s-min=45.3km az=40.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	11.68	198	P	P	18 11 47.7	-1.5
	0.1nm,0.3s,baz=27,slow=9.0,SNR=3.9						
FITZ				S	S	18 13 53.9	-2.6
	0.0nm,0.3s,baz=90,slow=20,SNR=3.3						
WRA	Warramunga Arr	13.81	160	P	Pn	18 12 10.7	-1.6
	0.0nm,0.3s,baz=342,slow=12,SNR=4.2						
WRA				S	S	18 14 34.0	-11
	0.1nm,0.3s,baz=323,slow=28,SNR=3.6						
ASAR	Alice Springs	17.21	166	P	P	18 12 50.7	+0.5
	0.0nm,0.3s,baz=344,slow=9.3,SNR=4.7						
MKAR	Makanchi Array	67.81	327	P	P	18 19 36.7	-0.1
	0.1nm,0.3s,baz=123,slow=8.7,SNR=4.9						

IDC 19 18:10:41.6±1.6, 1°.65N×127°.06E, h0^{km}, mb3.4/4, mb1 3.6/4, mb1mx3.3/44, mbtmp3.4/4, Error ellipse: s-maj=158.9km s-min=20.9km az=68.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	22.62	162	P	P	18 15 44.6	+0.3
	0.6nm,0.3s,baz=342,slow=11,SNR=21						
ASAR	Alice Springs	26.03	166	P	P	18 16 16.3	-0.5
	0.4nm,0.8s,baz=344,slow=7.6,SNR=5.4						
MKAR	Makanchi Array	59.44	326	P	P	18 20 45.5	-0.8
	0.3nm,0.4s,baz=118,slow=8.3,SNR=12						
ZALV	Zalesovo Beam	62.58	333	P	P	18 21 08.3	+0.9
	0.3nm,0.4s,baz=137,slow=9.6,SNR=2.3						

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*MAN **19** 18:12:07.4, 5°.17N×126°.64E, h8^{km}, MS3.7*

*IDC **19** 18:12:07.3±1.5, 5°.40N×126°.02E, h0^{km}, mb3.7/5, mb1 3.9/5, mb1mx3.5/47, mbtmp3.7/5, MS4.2/2, Ms1 4.2/2, ms1mx2.9/43, Error ellipse: s-maj=103.2km s-min=22.6km az=68.0*

*NEIC **19** 18:12:15.4±1.6, 5°.30N±0°.04×125°.8E±0°.2, h68^{km}±11^{km}, mb4.2/11, Error ellipse: s-maj=24.4km s-min=4.3km az=79.0*

ISC 19 18:12:15.5±1.1, 5°.46N±0°.06×126°.37E±0°.10, h72^{km}±11^{km}, n32, σ1^{s}.77/33, mb4.0/9, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	Don Marcelino,	0.92	314	eP	Pn	18 12 30.0	-3.1
DDMP				eS	Sn	18 12 45.7	-0.5
MATI	Mati	1.48	356	eP	Pn	18 12 38.5	-1.8
MATI				eS	Sn	18 13 02.8	+3.8
DAV	Davao City (W)	1.78	334		Pn	18 12 43.9	-0.5
KCP	Kidapawan	2.00	320	⇑eP	Pn	18 12 47.6	+0.3
KCP				i S	Sn	18 13 18.0	+6.6
SKMP	Bagumbayan, Su	2.10	300	eP	Pn	18 12 48.9	+0.2
SKMP				eS	Sn	18 13 17.0	+3.2
BUKP	Musuan	2.73	332	eP	Pn	18 12 57.0	-0.1
BUKP				eS	Sn	18 13 35.1	+5.9
CGP	Cagayan de Oro	3.41	331	⇓eP	Pn	18 13 08.2	+1.8
CGP				eS	Sn	18 13 48.5	+2.9
BUTP	Butuan	3.56	348	eP	Pn	18 13 07.3	-1.1
TNTI	Ternate	4.76	168	Pn	Pn	18 13 24.6	-0.4
TOLI2	Tolitoli	7.06	232	Pn	Pn	18 13 48.7	-7.6
JAGI	Jajag, Banyuwa	18.44	221	Pn	Pn	18 16 29.0	+2.6
JAGI				IAmb	IAmb	18 16 44.5	
	comp=Z,22nm,0.8s						
FITZ	Fitzroy Crossi	23.42	182	P	P	18 17 17.4	-1.2
	comp=Z,4.2nm,0.9s,baz=337,slow=7.7,SNR=3.9						
FITZ	Fitzroy Crossi	23.42	182	P	P	18 17 17.2	-1.4
FITZ				IAmb	IAmb	18 17 35.8	
	comp=Z,9.3nm,1.1s						
WB0	Warramunga Arr	26.29	163	P	P	18 17 45.5	+1.0
WB0				IAmb	IAmb	18 17 56.5	
	comp=Z,4.9nm,0.8s						
WRAB	Tennant Creek	26.43	163	P	P	18 17 47.3	+1.5
WRAB				IAmb	IAmb	18 17 51.5	
	comp=Z,14nm,1.4s						
WRA	Warramunga Arr	26.43	163	P	P	18 17 47.2	+1.4
	comp=Z,0.7nm,0.6s,baz=342,slow=10,SNR=5.4						
WRA	Warramunga Arr	26.43	163	P	P	18 17 47.0	+1.2
WB2	Warramunga Arr	26.44	163	P	P	18 17 47.3	+1.4
WB2				IAmb	IAmb	18 17 51.5	
	comp=Z,18nm,1.5s						
ASAR	Alice Springs	29.87	166	P	P	18 18 16.2	-0.3
	comp=Z,0.4nm,0.6s,baz=346,slow=7.0,SNR=7.2						
ASAR				PcP	PcP	18 21 19.1	+0.9
	comp=Z,0.4nm,0.8s,baz=353,slow=2.3,SNR=5.8						
ASAR	Alice Springs	29.87	166	P	P	18 18 16.4	-0.1
KSRS	Korea Array	31.87	2	LR	LR	18 32 20.7	
	comp=Z,13nm,19.4s,baz=255,slow=38						
CTAO	Charters Tower	32.05	143	P	P	18 18 36.9	+1.3
STKA	Stephens Creek	39.87	160	P	P	18 19 43.8	+1.4
	comp=Z,1.3nm,0.7s,baz=349,slow=10,SNR=1.4						
STKA	Stephens Creek	39.87	160	P	P	18 19 43.5	+1.2
STKA				IAmb	IAmb	18 20 01.6	
	comp=Z,1.2nm,1.2s						
MK31	Makanchi Array	55.94	325	P	P	18 21 47.1	+0.7
MKAR	Makanchi Array	55.94	325	P	P	18 21 46.3	-0.1
	comp=Z,0.6nm,0.6s,baz=122,slow=7.6,SNR=10.0						
MKAR	Makanchi Array	55.94	325	P	P	18 21 46.0	-0.4
NIL	Nilore	56.60	307	P	P	18 21 48.6	-2.7
KURK	Kurchatov	60.10	327	P	P	18 22 13.3	-2.0
KURK				IAmb	IAmb	18 22 20.7	
	comp=Z,2.9nm,1.1s						
KKAR	Karatay Array	61.73	317	P	P	18 22 24.9	-1.7
FINES	FINESS Array B	90.15	332	LR	LR	19 08 44.3	
	comp=Z,156nm,18.2s,baz=276,slow=38						
NOA	NORSAR Array B	97.08	334	LR	LR	19 16 46.6	
	comp=Z,68nm,19.7s,baz=315,slow=40						

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*IDC **19** 18:16:42.7±0.9, 14°.56S×66°.17E, h0^{km}, mb4.0/9, mb1 4.1/9, mb1mx3.9/41, mbtmp4.0/9, MS4.0/25, Ms1 4.0/25, ms1mx3.9/49, Error ellipse: s-maj=30.3km s-min=21.7km az=30.0*

*NEIC **19** 18:16:44.1±1.2, 14°.5S±0°.1×66°.1E±0°.1, h10^{km}±1^{km}, mb4.4/29, Error ellipse: s-maj=23.8km s-min=20.1km az=160.0*

*GCMT **19** 18:16:47.2±0.3, 14°.38S±0°.04×66°.11E±0°.04, h21^{km}, MW5.0/78, Moment Tensor Solution. s23,c24; s78,c104; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-4.52±.29; $M_{\theta\theta}$2.12±.19; $M_{\phi\phi}$2.40±.19; $M_{r\theta}$1.03±.34; $M_{\theta\phi}$-1.02±.10; $M_{\phi r}$-0.35±.37; Best double couple: $M_0$4.04200×10^{16} NP1:ϕ_s143.00000°, δ38.00000°, λ-82.00000°. NP2: ϕ_s313.00000°, δ52.00000°, λ-96.00000°. Principal axes: T 3.4030, Plg7.0000°, Azm47.0000°; N 1.2780, Plg5.0000°, Azm317.0000°; P -4.6810, Plg81.0000°, Azm191.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 19 18:16:44.3±0.7, 14°.6S±0°.1×66°.1E±0°.1, h13^{km}, n105, σ0^{s}.87/80, mb4.5/27, MS4.2/24, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S1	Diego Carcia H	9.28	43	T	T	18 28 19.2	
	baz=222,slow=75,SNR=49						
H08S2	Diego Garcia H	9.29	43	T	T	18 28 21.2	
	baz=222,slow=75,SNR=236						
H08S3	Diego Garcia H	9.30	43	T	T	18 28 22.6	
	baz=222,slow=75,SNR=590						
OPO	Ambohidratompo	18.57	255	LR	LR	18 25 39.5	
	comp=Z,228nm,18.4s,baz=220,slow=29						
ABPO	Ambohimpanom	18.61	254	P	P	18 21 01.3	-0.6
PALK	Pallekele	26.07	35	LR	LR	18 30 10.7	
	comp=Z,912nm,21.2s,baz=323,slow=31						
FURI	Furi	35.82	309	P	P	18 23 43.4	-0.8
LSZ	Lusaka	36.62	264	P	P	18 23 52.3	+1.4
	1.1nm,0.4s,baz=92,slow=12,SNR=4.1						
LSZ	Lusaka	36.62	264	P	P	18 23 52.2	+1.3
LSZ				IAmb	IAmb	18 23 58.6	
	comp=Z,16nm,1.4s						
PSI	Prapat	36.80	65	LR	LR	18 35 48.5	
	comp=Z,555nm,20.8s,baz=268,slow=31						
BOSA	Boshof	40.28	243	LR	LR	18 38 00.2	
	comp=Z,287nm,19.0s,baz=86,slow=32						
LEM	Lembang	41.45	84	LR	LR	18 38 30.3	
	comp=Z,126nm,20.3s,baz=235,slow=32						
RAYN	Ar Rayn	42.88	332	P	P	18 24 41.2	-1.5
RAYN				IAmb	IAmb	18 24 46.1	
	comp=Z,5.8nm,1.1s						
RAMN	Ramite	45.81	26	eP	P	18 25 08.4	+2.0
	comp=Z,33nm,1.2s						
PKI	Pulchoki	45.87	24	eP	P	18 25 09.0	+2.0
PKIN	Phulchoki	45.87	24	eP	P	18 25 08.0	+1.1
GKN	Gorkha	45.96	23	eP	P	18 25 09.0	+1.6
	comp=Z,16nm,1.0s						
KKN	Kakani	46.01	24	eP	P	18 25 09.5	+1.5
	comp=Z,13nm,0.9s						
CM31	Chiang Mai Arr	46.08	46	P	P	18 25 07.6	-0.7
CM31				IAmb	IAmb	18 25 20.7	
	comp=Z,9.6nm,1.5s						
CMAR	Chiang Mai Arr	46.08	46	P	P	18 25 09.7	+1.3
	comp=Z,0.8nm,1.0s,baz=233,slow=8.1,SNR=6.2						
CMAR				LR	LR	18 41 53.1	
	comp=Z,146nm,21.4s,baz=248,slow=33						
CMAR	Chiang Mai Arr	46.08	46	P	P	18 25 07.9	-0.5
GUN	Gumba	46.36	24	eP	P	18 25 12.5	+1.7
	comp=Z,24nm,1.1s						
TSUM	Tsumeb	46.55	257	P	P	18 25 12.4	+0.1
TSUM				IAmb	IAmb	18 25 30.7	
	comp=Z,7.0nm,1.4s						
TAPN	Taplejung	46.63	27	eP	P	18 25 14.3	+1.4
	comp=Z,11nm,1.1s						
SHL	Shillong	47.12	32	P	P	18 25 15.8	-0.8
H01W3	Cape Leeuwin H	47.58	124	T	T	19 16 19.1	
	baz=283,slow=75,SNR=40						
H01W2	Cape Leeuwin H	47.58	124	T	T	19 16 19.3	
	baz=283,slow=75,SNR=38						
H01W1	Cape Leeuwin H	47.59	124	T	T	19 16 20.4	
	baz=283,slow=75,SNR=38						
KBL	Kabul	48.90	3	P	P	18 25 29.8	-0.6
KBL				IAmb	IAmb	18 25 32.9	
	comp=Z,3.4nm,1.1s						
UBPT	Khong Chiam	48.92	54	P	P	18 25 29.1	-1.4
LSA	Lhasa	50.19	29	P	P	18 25 41.7	+1.2
GEYT	Alibeck	52.74	352	LR	LR	18 47 06.4	
	comp=Z,90nm,19.2s,baz=210,slow=35						
MAW	Mawson	53.05	182	LR	LR	18 42 55.7	
	comp=Z,185nm,21.6s,baz=51,slow=30						
KAPI	Kappang	53.59	85	LR	LR	18 46 18.6	
	comp=Z,114nm,20.1s,baz=244,slow=33						
BATI	Baumata	56.26	93	LR	LR	18 47 13.0	
	comp=Z,142nm,19.5s,baz=262,slow=33						
FITZ	Fitzroy Crossi	57.03	102	LR	LR	18 46 43.0	
	comp=Z,230nm,21.8s,baz=278,slow=32						
AAK	Ala-Archa	57.43	7	P	P	18 26 33.0	+0.1
AAK				IAmb	IAmb	18 26 34.4	
	comp=Z,2.6nm,1.1s						
KK31	Karatay Array	57.52	4	P	P	18 26 33.4	0.0
KKAR	Karatay Array	57.52	4	P	P	18 26 33.2	-0.1
KKAR	Karatay Array	57.52	4	P	P	18 26 33.4	0.0
KKAR				IAmb	IAmb	18 26 49.1	
	comp=Z,2.8nm,1.4s						
WMQ	Urumqi	61.35	18	P	P	18 26 59.3	-0.6
BRTR	Keskin Array B	61.90	332	P	P	18 27 06.0	+2.2
	comp=Z,0.6nm,0.9s,baz=128,slow=9.3,SNR=4.0						
BRTR				LR	LR	18 52 22.7	
	comp=Z,93nm,19.1s,baz=9.0,slow=35						
MAKZ	Makanchi	62.72	12	P	P	18 27 08.8	-0.2
MAKZ				IAmb	IAmb	18 27 10.7	
	comp=Z,3.0nm,0.9s						
MK31	Makanchi Array	62.77	12		P	18 27 08.9	-0.5
MK31				IAmb	IAmb	18 27 16.4	
	comp=Z,3.5nm,1.2s						
MKAR	Makanchi Array	62.77	12	P	P	18 27 09.4	0.0
	comp=Z,2.2nm,1.0s,baz=206,slow=7.7,SNR=14						
MKAR				LR	LR	18 51 43.7	
	comp=Z,168nm,19.1s,baz=135,slow=34						
MKAR	Makanchi Array	62.77	12	P	P	18 27 08.5	-0.9
XAN	Xi'an	63.21	39	P	P	18 27 13.5	+0.9
ABKAR	Akbulak array	63.76	355	P	P	18 27 15.6	-0.2
ABKAR				IAmb	IAmb	18 27 17.4	
	comp=Z,3.4nm,1.1s						
ABKAR	Akbulak array	63.76	355	P	P	18 27 14.9	-0.9
ASAR	Alice Springs	64.20	109	P	P	18 27 19.4	0.0
	comp=Z,2.2nm,0.8s,baz=270,slow=5.7,SNR=34						
ASAR				LR	LR	18 53 18.2	
	comp=Z,195nm,18.2s,baz=267,slow=34						
ASAR	Alice Springs	64.20	109	P	P	18 27 19.5	+0.1
WRA	Warramunga Arr	65.00	105	P	P	18 27 25.1	+0.5
	comp=Z,2.9nm,0.8s,baz=266,slow=6.0,SNR=14						
WRA	Warramunga Arr	65.00	105	P	P	18 27 24.9	+0.2
KURK	Kurchatov	65.91	9	P	P	18 27 29.8	0.0
KURK				IAmb	IAmb	18 27 30.9	
	comp=Z,4.8nm,1.1s						
BRVK	Borovoye	67.43	3	P	P	18 27 39.6	+0.2
BRVK				IAmb	IAmb	18 27 40.9	
	comp=Z,3.5nm,1.1s						
ZAA0	Zalesovo Array	70.08	12	P	P	18 27 55.5	-0.5
ZAA0				IAmb	IAmb	18 27 58.2	
	comp=Z,4.6nm,1.2s						
ZALV	Zalesovo Beam	70.08	12	P	P	18 27 55.6	-0.4
	comp=Z,2.8nm,0.9s,baz=224,slow=4.1,SNR=10						
ZALV				LR	LR	18 57 08.8	
	comp=Z,135nm,19.0s,baz=234,slow=35						
ZALV	Zalesovo Beam	70.08	12		P	18 27 54.8	-1.2
STKA	Stephens Creek	70.26	119	LR	LR	18 54 02.3	
	comp=Z,124nm,21.1s,baz=213,slow=32						
ARU	Arti	71.00	356	P	P	18 28 01.1	-0.4
SONM	Songino Array	71.75	27	P	P	18 28 07.1	+0.7
	comp=Z,1.3nm,0.9s,baz=211,slow=6.5,SNR=9.7						
SONM				LR	LR	18 58 10.1	
	comp=Z,139nm,20.6s,baz=200,slow=35						
SONM	Songino Array	71.75	27	P	P	18 28 06.7	+0.2
DIVS	Divibare	71.92	327	P	P	18 28 07.9	+0.4
AKASG	Malin Array Be	72.56	336	P	P	18 28 10.8	-0.1
	comp=Z,0.1nm,0.3s,baz=144,slow=5.5,SNR=4.7						
AKASG	Malin Array Be	72.56	336	P	P	18 28 10.0	-1.0
AKBB	Malin Array Si	72.56	336	P	P	18 28 10.1	-0.9
AKBB				IAmb	IAmb	18 28 24.5	
	comp=Z,3.1nm,1.1s						
KEST	Kesra	73.35	315	LR	LR	19 00 25.3	
	comp=Z,125nm,19.1s,baz=242,slow=36						
DBIC	Dimbokro	73.45	282	LR	LR	18 58 33.3	
	comp=Z,123nm,20.9s,baz=31,slow=34						
KSRS	Korea Array	77.72	46	LR	LR	19 01 57.6	
	comp=Z,52nm,21.8s,baz=262,slow=35						
KHC	Kasperske Hory	78.55	328	P	P	18 28 45.5	0.0
KHC				IAmb	IAmb	18 29 04.9	
	comp=Z,6.3nm,1.5s						
GUMO	Guam	82.80	74	LR	LR	19 02 07.9	
	comp=Z,32nm,19.7s,baz=281,slow=33						
ESDC	Sonseca Array	84.50	313	LR	LR	19 07 11.2	
	comp=Z,104nm,18.2s,baz=300,slow=36						
MJAR	Matsushiro Arr	84.74	50	LR	LR	19 08 44.6	
	comp=Z,40nm,18.1s,baz=210,slow=37						
NRIK	Noril'sk	85.04	7	LR	LR	19 06 02.6	
	comp=Z,119nm,19.9s,baz=283,slow=35						
ARCES	ARCESS Array B	88.58	347	LR	LR	19 08 00.8	
	comp=Z,126nm,19.5s,baz=235,slow=35						
ILAR	Eielson Array	125.01	17	PKP	PKPdf	18 35 43.3	-0.6
	comp=Z,1.3nm,1.1s,baz=330,slow=2.2,SNR=5.5						
ILAR	Eielson Array	125.01	17		PKPdf	18 35 43.5	-0.4
YKA	Yellowknife Ar	132.12	0	PKP	PKPdf	18 35 55.8	-1.7
	comp=Z,0.3nm,0.7s,baz=359,slow=2.0,SNR=3.9						
JFWS	Jewell Farm	145.20	329		PKPdf	18 36 21.7	-0.2
DGMT	Dagmar	145.25	349		PKPdf	18 36 22.6	+0.7
R49A	Shelbyville	145.32	318		PKPbc	18 36 21.8	-0.3
F33A	5 Mile Ranch,	145.47	338		PKPab	18 36 22.8	+0.3
NEW	Newport	146.28	4	PKPbc	PKPbc	18 36 25.0	+0.2
	comp=Z,1.7nm,0.5s,baz=333,slow=2.1,SNR=6.4						
NEW	Newport	146.28	4		PKPbc	18 36 25.0	+0.2
JTMT	Jette	146.91	0		PKPab	18 36 27.3	-0.8
Q44A	Meyer Farm, Va	147.32	323		PKPdf	18 36 24.7	-1.0
ECSD	EROS Data Cent	147.38	336	PKPbc	PKPbc	18 36 28.7	+0.6
MSO	Missoula	147.82	0		PKPbc	18 36 28.0	-1.3
P40A	Paris	148.59	326		PKPdf	18 36 28.5	+0.8
CCM	Cathedral Cave	149.18	324		PKPdf	18 36 28.8	+0.1
RSSD	Black Hills	149.36	346		PKPdf	18 36 29.2	+0.1
T42A	Van Buren	149.78	322		PKPbc	18 36 34.7	+0.2
I07A	Izee	150.18	8		PKiKP	18 36 36.8	+0.5
BCYI	Bear Canyon	150.34	359		PKiKP	18 36 37.0	+0.2
MGMO	Mountain Grove	150.39	323		PKiKP	18 36 36.5	-0.3
LOHW	Long Hollow	150.91	355		PKiKP	18 36 38.8	+0.9
HUMO	Hull Mountain	150.97	14		PKPdf	18 36 30.6	-0.9
HLID	Hailey	151.09	1		PKiKP	18 36 39.2	+1.0
FCAR	Ozark Folk Cen	151.16	321		PKPbc	18 36 37.7	-0.2
REDW	Red Top Meadow	151.17	355		PKiKP	18 36 39.5	+1.0
U40A	Yellville	151.28	323		PKiKP	18 36 38.5	-0.1
BW06	Boulder Array	151.64	353		PKiKP	18 36 39.7	+0.2
PD31	Pinedale Array	151.64	353		PKPbc	18 36 39.1	+0.1
PDAR	Pinedale Array	151.64	353	PKPbc	PKiKP	18 36 39.5	0.0
	comp=Z,2.3nm,0.8s,baz=54,slow=2.1,SNR=17						
PDAR	Pinedale Array	151.64	353		PKiKP	18 36 39.4	-0.1

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*MOS **19** 18:46:17.8±1.0, 55°.40N×109°.27E, h11^{km}, mb4.2/1, Error ellipse: s-maj=10.0km s-min=6.1km az=67.5*

*IDC **19** 18:46:19.2±1.3, 55°.61N×109°.08E, h0^{km}, mb3.7/8, mb1 3.8/13, mb1mx3.6/60, mbtmp3.8/13, ML3.3/5, MS3.4/2, Ms1 3.4/2, ms1mx2.7/52, Error ellipse: s-maj=26.5km s-min=13.9km az=126.0*

*BYKL **19** 18:46:19.9±0.2, 55°.33N×109°.34E*

ISC 19 18:46:19.5±1.0, 55°.42N±0°.03×109°.23E±0°.02, h11^{km}±7^{km}, n76, σ2^{s}.55/154, mb3.6/9, 2D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIZ	Nizh Angarsk	0.39	27	ePg	Pg	18 46 28.4	+1.1
NIZ				Pmax		18 46 29.5	
	240nm,0.3s						
NIZ				eSg	Sg	18 46 34.5	+1.9
NIZ				Smax		18 46 34.9	
	2µm,0.6s						
NIZ	Nizh Angarsk	0.39	27	ePG	Pg	18 46 27.8	+0.5
NIZ				e		18 46 33.3	
NIZ				pmax	pmax		
	comp=Z,244nm,0.3s						
NIZ				smax	smax		
	comp=N,2µm,0.5s						
KMO	Kumora	1.21	67	⇓iPg	Pn	18 46 41.2	-1.2
KMO				ePb	Pg	18 46 43.4	+0.6
KMO				max		18 46 43.7	
	comp=N,3µm,0.4s						
KMO				eSg	Sb	18 46 57.0	-1.1
KMO				eSb	Sn	18 46 59.8	+1.0
KMO				max		18 47 02.2	
	comp=N,2µm,0.8s						
KMO	Kumora	1.21	67	⇓iPG	Pn	18 46 41.2	-1.2
KMO				e		18 46 56.8	
KMO				pmax	pmax		
	comp=Z,3µm,0.4s						
KMO				smax	smax		
	comp=N,2µm,1.1s						
YLYR	Ulyunkhan	1.24	116	ePg	Pn	18 46 40.8	-2.0
YLYR				ePb	Pb	18 46 42.2	-0.7
YLYR				max		18 46 42.4	
	comp=N,347nm,0.4s						
YLYR				eSg	Sb	18 46 56.2	-2.7
YLYR				eSb	Sg	18 46 59.4	+0.1
YLYR				max		18 46 59.5	
	comp=N,4µm,0.7s						
YOA	Uoyan	1.58	62	ePn	Pn	18 46 48.1	+0.6
YOA				ePg	Pb	18 46 49.1	+0.3
YOA				Pmax		18 46 49.5	
	comp=N,2µm,0.5s						
YOA				eSg	Sg	18 47 10.0	-0.3
YOA				Smax		18 47 19.0	
	comp=N,4µm,1.2s						
YOA	Uoyan	1.58	62	ePN	Pb	18 46 49.0	+0.3
YOA				i		18 47 10.2	
YOA				pmax	pmax		
	comp=Z,2µm,0.4s						
YOA				smax	smax		
	comp=E,4µm,0.9s						
SYVR	Suvo	1.83	165	ePg	Pn	18 46 51.3	+0.4
SYVR				Pmax		18 46 52.2	
	comp=E,215nm,0.4s						
SYVR				eSg	Sb	18 47 14.8	-1.0
SYVR				Smax		18 47 15.4	
	comp=E,1µm,0.6s						
SYVR	Suvo	1.83	165	ePN	Pn	18 46 50.8	-0.1
SYVR				e		18 47 14.7	
SYVR				pmax	pmax		
	comp=Z,466nm,0.5s						
SYVR				smax	smax		
	comp=N,2µm,0.4s						
OGRR	Ongureny	2.02	209	ePn	Pn	18 46 54.2	+0.7
OGRR				ePg	Pb	18 46 57.0	+0.7
OGRR				Pmax		18 46 58.9	
	comp=N,203nm,0.5s						
OGRR				eSn	Sn	18 47 19.4	+0.6
OGRR				eSg	Sb	18 47 22.4	+1.0
OGRR				Smax		18 47 24.5	
	comp=N,1µm,0.3s						

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OGRR  Ongureny          2.02 209  ePN    Pn     18 46 54.3 +0.7
OGRR                              e             18 46 55.8
OGRR                              e             18 47 21.1
OGRR                               pmax  pmax
      comp=Z,202nm,0.6s
OGRR                               smax  smax
      comp=E,1µm,0.5s
MXMB  Maximikha         2.18 188  ePn    Pn     18 46 55.6 -0.2
MXMB                              ePg    Pb     18 46 58.0 -1.0
MXMB                              eSn    Sn     18 47 22.6 -0.2
MXMB                              eSg    Sb     18 47 26.1  0.0
UKT   Uakit             2.51  87  ePn    Pn     18 47 00.7 +0.4
UKT                               ePg    Pb     18 47 03.1 -1.5
UKT                               e             18 47 06.7
UKT                                max          18 47 07.0
      comp=E,422nm,0.8s
UKT                               e             18 47 09.1
UKT                               eSg    Sb     18 47 35.4  0.0
UKT                                Smax         18 47 36.3
      comp=E,2µm,1.2s
UKT   Uakit             2.51  87  ePN    Pn     18 46 58.4 -1.9
UKT                               e             18 47 03.1
UKT                               e             18 47 35.6
UKT                                pmax  pmax
      comp=Z,424nm,0.7s
UKT                                smax  smax
      comp=N,2µm,1.0s
SVKR  Severomuysk       2.54  72  ePn    Pn     18 47 01.6 +0.8
SVKR                              ePg    Pb     18 47 04.5 -0.7
SVKR                              e             18 47 10.1
SVKR                               max          18 47 10.4
      comp=N,325nm,0.5s
SVKR                              eSg    Sb     18 47 38.1 +1.6
SVKR                               Smax         18 47 44.0
      comp=N,3µm,1.1s
SVKR  Severomuysk       2.54  72  ePN    Pn     18 47 01.7 +0.9
SVKR                              e             18 47 04.3
SVKR                              e             18 47 37.8
SVKR                               pmax  pmax
      comp=Z,323nm,0.5s
SVKR                               smax  smax
      comp=N,3µm,1.4s
TRG   Tyrgan            3.16 214  ePn    Pn     18 47 09.3  0.0
TRG                               ePg    Pb     18 47 15.1 -0.6
TRG                                Pmax         18 47 18.7
      comp=N,50nm,0.3s
TRG                               eSn    Sn     18 47 45.0 -1.9
TRG                               eSg    Sb     18 47 55.5 +1.2
TRG                                Smax         18 47 58.1
      comp=N,550nm,0.3s
TRG   Tyrgan            3.16 214  ePN    Pn     18 47 09.3  0.0
TRG                               e             18 47 15.5
TRG                               eS     Sn     18 47 45.1 -1.9
TRG                               e             18 47 55.3
TRG                                pmax  pmax
      comp=Z,67nm,0.2s
TRG                                smax  smax
      comp=N,551nm,0.3s
BOD   Bodaibo           3.57  46  ePn    Pn     18 47 15.4 +0.6
BOD                               ePg    Pb     18 47 23.1 +0.5
BOD                                Pmax         18 47 26.8
      comp=N,45nm,0.8s
BOD                               eSn    Sn     18 47 57.9 +1.0
BOD                               eSg    Sb     18 48 09.8 +4.0
BOD                                Smax         18 48 10.8
      comp=N,611nm,1.0s
BOD   Bodaibo           3.57  46  ePN    Pn     18 47 14.6 -0.2
BOD                               e             18 47 23.2
BOD                               e             18 48 10.1
BOD                                pmax  pmax
      comp=Z,46nm,0.6s
BOD                                smax  smax
      comp=N,610nm,0.7s
STDB  Stepnoy Dvoret    3.68 209  ePn    Pn     18 47 16.4 +0.1
STDB                              ePg    Pb     18 47 25.1 +0.6
STDB                              eSg    Sg     18 48 13.6 -3.9
UUDB  Ulan-Yde          3.68 195  ePn    Pn     18 47 17.8 +1.4
UUDB                              ePg    Pb     18 47 25.3 +0.7
UUDB                               Pmax         18 47 32.4
      comp=N,47nm,0.8s
UUDB                              eSn    Sn     18 47 58.4 -1.4
UUDB                              eSg    Sb     18 48 12.0 +2.8
UUDB                               Smax         18 48 14.0
      comp=N,186nm,0.3s
FFNB  Fofonovo          3.69 204  ePn    Pn     18 47 17.1 +0.7
FFNB                              ePg    Pb     18 47 25.1 +0.5
FFNB                              eSg    Sb     18 48 11.3 +2.0
NLYR  Nelyaty           3.79  71  ePn    Pn     18 47 18.1 +0.2
NLYR                              ePg    Pb     18 47 27.7 +1.2
NLYR                               Pmax         18 47 31.0
      comp=N,147nm,0.8s
NLYR                              e             18 47 33.9
NLYR                              eSg    Sg     18 48 17.4 -3.8
NLYR                               Smax         18 48 27.7
      comp=N,435nm,1.3s
NLYR  Nelyaty           3.79  71  ePN    Pn     18 47 17.9  0.0
NLYR                              e             18 47 26.9
NLYR                              e             18 48 16.8
NLYR                               pmax  pmax
      comp=Z,147nm,0.8s
NLYR                               smax  smax
      comp=N,436nm,1.8s
HRMR  Khuramsha         4.04 201  ePn    Pn     18 47 21.2 -0.1
HRMR                              ePg    Pb     18 47 31.6 +1.0
HRMR                               Pmax         18 47 37.2
      comp=N,111nm,0.4s
HRMR                              eSn    Sn     18 48 07.6 -0.9
HRMR                              eSg    Sb     18 48 22.2 +2.8
HRMR                               Smax         18 48 26.3
      comp=N,815nm,0.5s
BGT   Bolshoye Golou    4.08 215  ePn    Pn     18 47 22.2 +0.4
BGT                               ePg    Pb     18 47 32.5 +1.2
BGT                                Pmax         18 47 35.3
      comp=N,118nm,0.7s
BGT                               eSg    Sb     18 48 24.2 +3.7
BGT                                Smax         18 48 33.6
      comp=N,326nm,0.6s
CIT   Chita             4.27 141  ePg    Pb     18 47 34.8 +0.2
CIT                                Pmax         18 47 39.3
      comp=N,47nm,0.4s
CIT                               eSg    Sb     18 48 27.3 +1.2
CIT                                Smax         18 48 31.9
      comp=N,385nm,0.3s
CIT   Chita             4.27 141  ePN    Pn     18 47 23.1 -1.4
CIT                               e             18 47 34.4
CIT                               eS     Sn     18 48 10.6 -3.6
CIT                               e             18 48 29.2
CIT                                pmax  pmax
      comp=Z,36nm,0.9s
CIT                                smax  smax
      comp=E,411nm,1.0s
IRK   Irkutsk           4.33 225  e      Pb     18 47 38.5 +2.8
IRK                               eSn    Sn     18 48 15.7 -0.1
IRK                               eSg    Sb     18 48 33.6 +5.7
IRK                                Smax         18 48 37.3
      comp=E,968nm,0.5s
VTMR  Vitim             4.41  23  ePn    Pn     18 47 28.4 +2.1
VTMR                              ePg    Pb     18 47 41.2 +4.3
VTMR                              eSg    Sg     18 48 38.9 -2.0
LSTR  Listvyanka        4.42 218  ePn    Pn     18 47 26.1 -0.4
LSTR                               max          18 47 41.8
      comp=E,27nm,0.8s
LSTR                              eSn    Sn     18 48 14.8 -3.1
LSTR                              eSg    Sb     18 48 34.5 +4.1
LSTR                               Smax         18 48 37.6
      comp=E,298nm,1.3s
IVK   Ivanovka          4.62 220  ePn    Pn     18 47 29.2 -0.1
IVK                               ePg    Pb     18 47 42.3 +1.7
IVK                                Pmax         18 47 46.4
      comp=E,25nm,0.6s
IVK                               eSn    Sn     18 48 21.3 -1.7
IVK                               eSg    Sb     18 48 42.3 +6.0
IVK                                Smax         18 48 45.1
      comp=E,385nm,0.3s
TLY   Talaya            5.01 224   Pn    Pn     18 47 37.5 +2.8
      comp=E,0.0nm,0.3s,baz=344,slow=3.3,SNR=2.9
TLY                                Pg    Pb     18 47 49.4 +2.2
      comp=E,0.1nm,0.3s,baz=14,slow=7.6,SNR=17
TLY                                Lg    Lg     18 48 51.7
      comp=E,0.4nm,0.3s,baz=265,slow=20,SNR=13
TLY   Talaya            5.01 224  ePn    Pn     18 47 36.1 +1.4
TLY                               ePg    Pb     18 47 49.6 +2.3
TLY                                Pmax         18 47 52.0
      comp=E,34nm,0.6s
TLY                               eSn    Sn     18 48 30.5 -2.0
TLY                               eSg    Sb     18 48 52.8 +5.3
TLY                                Smax         18 48 54.7
      comp=E,193nm,0.9s
TLY   Talaya            5.01 224  ePN    Pn     18 47 35.8 +1.1
TLY                               e             18 47 49.9
TLY                               eS     Sn     18 48 30.6 -2.0
TLY                               e             18 48 52.8
TLY                                pmax  pmax
      comp=Z,34nm,0.6s
TLY                                smax  smax
      comp=E,162nm,0.7s
CRS   Chara             5.26  70  ePn    Pn     18 47 38.6 +0.5
CRS                               ePg    Pb     18 47 54.3 +2.8
CRS                                Pmax         18 47 54.4
      comp=E,68nm,1.0s
CRS                               eSg    Sb     18 49 01.5 +6.8
CRS                                Smax         18 49 13.0
      comp=E,407nm,1.4s
ARS   Arshan            5.36 232  ePn    Pn     18 47 40.1 +0.7
ARS                               ePg    Pb     18 47 55.2 +2.1
ARS                                Pmax         18 48 00.8
      comp=E,78nm,0.7s
ARS                               eSn    Sn     18 48 39.9 -1.2
ARS                               eSg    Sb     18 49 04.4 +7.1
ARS                                Smax         18 49 09.3
      comp=E,992nm,0.6s
ARS   Arshan            5.36 232  ePN    Pn     18 47 40.4 +1.0
ARS                               eS     Sn     18 48 41.1  0.0
ARS                               eS     Sb     18 49 02.9 +5.6
ARS                                smax  smax
      comp=E,1µm,0.8s
KPC   Khapcheranga      6.04 160  ePn    Pn     18 47 47.9 -0.9
KPC                               ePg    Pb     18 48 07.6 +2.8
KPC                                Pmax         18 48 12.5
      comp=E,8.0nm,0.6s
KPC                               eSn    Sn     18 48 54.7 -3.2
KPC                               eSg    Sb     18 49 23.8 +6.7
KPC                                Smax         18 49 25.5
      comp=E,225nm,1.0s
KPC   Khapcheranga      6.04 160  ePN    Pn     18 47 47.6 -1.2
KPC                               e             18 48 06.1
KPC                               eS     Sn     18 48 54.8 -3.2
KPC                               e             18 49 22.8
KPC                                pmax  pmax
      comp=Z,25nm,0.6s
KPC                                smax  smax
      comp=E,224nm,1.0s
MOY   Mondy             6.18 236  ePn    Pn     18 47 52.6 +1.7
MOY                                max          18 47 57.0
      comp=E,57nm,1.4s
MOY                               eSn    Sn     18 49 01.3 -0.2
MOY                               eSg    Sg     18 49 30.4 -7.5
MOY                                Smax         18 49 35.9
      comp=E,433nm,1.5s
MOY   Mondy             6.18 236  ePN    Pn     18 47 52.5 +1.7
MOY                               e             18 48 11.1
MOY                               eS     Sn     18 49 01.1 -0.4
MOY                               e             18 49 30.3
KHNR  Khani             6.19  72  ePn    Pn     18 47 51.0 +0.2
KHNR                              ePg    Pb     18 48 10.1 +2.8
KHNR                              eSg    Sb     18 49 29.4 +8.1
ZAK   Zakamensk         6.20 218  ePg    Pb     18 48 10.8 +3.3
ZAK                                Pmax         18 48 16.0
      comp=E,15nm,0.5s
ZAK                               eSg    Sb     18 49 30.2 +8.5
ZAK                                Smax         18 49 34.1
      comp=E,201nm,1.9s
ZAK   Zakamensk         6.20 218  ePG    Pb     18 48 12.0 +4.5
ZAK                               e             18 49 28.5
ZAK                                pmax  pmax
      comp=Z,15nm,0.4s
ZAK                                smax  smax
      comp=E,160nm,0.8s
ORL   Orlik             6.26 246  ePn    Pn     18 47 53.5 +1.6
ORL                                max          18 48 04.9
      comp=E,44nm,1.0s
ORL                               eSn    Sn     18 49 02.4 -1.1
ORL                               eSg    Sg     18 49 34.8 -5.6
ORL                                Smax         18 49 38.7
      comp=E,625nm,1.2s
ORL   Orlik             6.26 246  ePN    Pn     18 47 53.3 +1.4
ORL                               e             18 48 12.6
ORL                               eS     Sn     18 49 02.7 -0.8
ORL                               e             18 49 32.9
ORL                                pmax  pmax
      comp=Z,49nm,0.6s
ORL                                smax  smax
      comp=N,677nm,1.4s
TUP   Tupik             6.26  95  ePn    Pn     18 47 51.0 -0.8
TUP                               ePg    Pb     18 48 10.9 +2.4
TUP                                Pmax         18 48 12.3
      comp=N,22nm,1.0s
TUP                               eSn    Sn     18 48 58.6 -4.8
TUP                               eSg    Sb     18 49 31.7 +8.3
TUP                                Smax         18 49 41.7
      comp=N,259nm,1.0s
TUP   Tupik             6.26  95  ePN    Pn     18 47 50.8 -1.0
TUP                               e             18 48 10.3
TUP                               eS     Sn     18 49 01.0 -2.4
TUP                               e             18 49 31.0
TUP                                pmax  pmax
      comp=Z,28nm,0.7s
TUP                                smax  smax
      comp=N,263nm,0.9s
ULN   Ulaanbaatar       7.69 191  ePg    Pb     18 48 37.8 +4.9
ULN                               eSg    Sg     18 50 17.1 -9.0
ULN   Ulaanbaatar       7.69 191  i PN   Pn     18 48 11.5  0.0
SONM  Songino Array     7.80 194   Pn    Pn     18 48 14.1 +1.1
      comp=N,0.2nm,0.3s,baz=11,slow=13,SNR=13
SONM                               Lg    Lg     18 50 26.1
      comp=N,2.9nm,0.3s,baz=21,slow=26,SNR=9.9
HIA   Hailar            8.91 129  ePg    Pg     18 48 59.2  -11
HIA                               eSg    Sg     18 50 51.8  -13
ZEA   Zeya             10.60  92  eP     Pn     18 48 50.7 -0.4
ZALV  Zalesovo Beam    14.18 274   Pn    Pn     18 49 41.2 +1.2
      comp=N,0.3nm,0.3s,baz=76,slow=11,SNR=20
ZALV                               Lg    Lg     18 53 46.1
      comp=N,0.2nm,0.3s,baz=86,slow=20,SNR=6.8
DGZ   Jazzator, Alta   14.41 256  i P    Pn     18 49 44.1 +0.7
KLR   Kul'dur          15.06 105   Lg    Lg     18 54 08.0
      comp=N,0.2nm,0.3s,baz=234,slow=18,SNR=4.1
KLR   Kul'dur          15.06 105  i P    Pn     18 49 52.5 +0.4
NRIK  Noril'sk         17.04 333  i P    Pn     18 50 14.1 -3.3
TIXI  Tiksi            18.31  20  i P    Pn     18 50 31.4 -1.7
MK31  Makanchi Array   18.89 254  i P    P      18 50 39.3 -0.5
MKAR  Makanchi Array   18.89 254   P     P      18 50 39.3 -0.5
      comp=N,0.9nm,0.3s,baz=70,slow=12,SNR=56
MKAR                               Lg    Lg     18 56 16.1
      baz=57,slow=19,SNR=3.5
MKAR  Makanchi Array   18.89 254  i P    P      18 50 39.7 -0.1
MKAR                               pmax  pmax
      comp=Z,2.0nm,0.4s
KURK  Kurchatov        18.89 268   P     P      18 50 40.5 +0.7
KURBB Kurchatov Arra   18.99 268   P     P      18 50 40.5 -0.3
      comp=Z,0.3nm,0.3s,baz=65,slow=12,SNR=41
KURBB                              Lg    Lg     18 56 19.1
      baz=72,slow=33,SNR=5.6
BVAR  Borovoye Array   22.63 280   P     P      18 51 19.5 -0.8
      comp=Z,2.1nm,0.6s,baz=79,slow=7.7,SNR=24
BRVK  Borovoye         22.68 280  i P    P      18 51 19.9 -0.8
BRVK                               pmax  pmax
      comp=Z,6.0nm,0.9s
SEY   Seymchan         22.95  53  i P    P      18 51 22.8 -0.6
AAK   Ala-Archa        25.82 255   P     P      18 51 51.5 +0.8
      comp=Z,0.7nm,0.5s,baz=75,slow=5.5,SNR=5.9
AAK                                LR    LR     19 01 08.7
      comp=Z,64nm,18.1s,baz=326,slow=34
AKTO  Aktyubinsk       30.68 282   P     P      18 52 33.5 -0.4
      comp=Z,0.6nm,0.7s,baz=90,slow=4.0,SNR=2.6
AKTO                               LR    LR     19 06 58.6
      comp=Z,81nm,19.9s,baz=341,slow=41
FINES FINESS Array B   41.13 314   P     P      18 54 03.5 +0.3
      comp=Z,2.9nm,0.8s,baz=64,slow=8.7,SNR=5.6
AKASG Malin Array Be   45.81 299   P     P      18 54 40.5 -0.4
      comp=Z,1.0nm,0.4s,baz=46,slow=9.1,SNR=8.8
ILAR  Eielson Array    46.87  35   P     P      18 54 50.4 +1.3
      comp=Z,0.4nm,0.8s,baz=245,slow=6.1,SNR=4.0
BRTR  Keskin Array B   50.77 285   P     P      18 55 20.8 +1.2
      comp=Z,0.5nm,0.6s,baz=55,slow=6.3,SNR=4.0
YKA   Yellowknife Ar   57.54  22   P     P      18 56 07.9 -0.5
      comp=Z,0.1nm,0.7s,baz=338,slow=6.4,SNR=3.4
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*NEIC **19** 18:48:12.5±1.4,25.°9N±0.°1×124.°04E±0.°07,h204km±8km, mb4.1/10,Error ellipse: s-maj=16.7km s-min=6.7km az=158.0*

*IDC **19** 18:48:14.9±3.2,26.°01N×124.°14E,h224km±37km,mb3.4/9, mb1 3.4/10,mb1mx3.1/56,mbtmp4.0/10,MS3.0/1, Ms1 3.2/1,ms1mx2.5/35,Error ellipse: s-maj=50.3km s-min=15.3km az=63.0*

*JMA **19** 18:48:15.2±0.2,25.°85N×123.°91E,h192km,M3.7*

ISC 19 18:48:13.4±0.7,**25.°87N**±0.°08×**123.°96E**±0.°05,**h211**km±8km, **n60,σ1.s51**/82,**mb3.9**/13,**Northeast of Taiwan**

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Code  Station Name      Δ°   AZ°   Phase ID         Time      Res
                                  Op     ISC     h  m  s     ISC
JISG  Ishigakijimahi    1.32 166  P      Pn     18 48 46.6  0.0
JISG                              S      S      18 49 10.9 -1.3
JTJ   Tarama            1.40 151  P      Pn     18 48 47.6 +0.4
JTJ                               S      S      18 49 12.7 -0.6
JIKM  Ikemajima         1.50 129  P      Pn     18 48 49.0 +0.9
JIKM                              S      S      18 49 14.9 +0.2
JIJ   Ishigaki jima     1.51 174  P      Pn     18 48 47.9 -0.3
JIJ                               S      S      18 49 12.5 -2.5
JIRB  Irabujima         1.51 133  P      Pn     18 48 48.8 +0.6
JIRB                              S      S      18 49 14.2 -0.7
IRIF  Iriomote-Funau    1.54 188  P      Pn     18 48 48.0 -0.5
IRIF                              S      S      18 49 13.6 -1.9
JKRS  Kuro-shima        1.63 178  P      Pn     18 48 49.1 -0.1
JKRS                              S      S      18 49 15.0 -1.8
YOJ   Yonaguni jima     1.65 212  P      Pn     18 48 49.3 -0.1
YOJ                               S      S      18 49 15.2 -1.9
YOJ   Yonaguni jima     1.65 212  Pn     Pn     18 48 48.3 -1.1
YOJ                                      S      18 49 15.5 -1.6
JMJ2  Miyako jima3      1.67 132  P      Pn     18 48 50.8 +1.2
JMJ2                              S      S      18 49 17.6 +0.1
JYNG  Yonagunijimaku    1.69 213  P      Pn     18 48 49.6 -0.2
JYNG                              S      S      18 49 16.4 -1.3
JOGS  Gusukube          1.71 130  P      Pn     18 48 51.3 +1.3
JOGS                              S      S      18 49 18.5 +0.4
HATJ  Hateruma jima     1.81 185  P      Pn     18 48 51.1 +0.2
HATJ                              S      S      18 49 18.1 -1.8
TATO  Taipei            2.41 249         Pn     18 48 58.0 +1.0
JKE   Kume jima 2       2.58  79  P      Pn     18 48 59.8 +1.0
JKE                               S      S      18 49 33.5 -0.4
YHNB  Yeheng            2.63 244         Pn     18 48 59.9 +0.4
NACB  Ninganchiao       2.73 232         Pn     18 48 59.2 -1.4
JAGN  Aguni-jima        3.03  76  P      Pn     18 49 04.5 +0.5
JAGN                              S      S      18 49 41.8 -1.3
SSLB  Suanglung         3.43 233         Pn     18 49 08.3 -0.5
JJT3  Tamagusuku3       3.45  85  P      Pn     18 49 09.8 +0.9
JJT3                              S      S      18 49 51.5 -0.5
YULB  Yu-li             3.46 225         Pn     18 49 07.1 -1.9
JNTH  Nagotoyohara      3.71  79  P      Pn     18 49 12.3 +0.3
JNTH                              S      S      18 49 55.0 -2.6
JIH   Iheya             3.77  71  P      Pn     18 49 13.1 +0.3
JIH                               S      S      18 49 56.9 -2.2
TPUB  Ta-pu             3.97 231         Pn     18 49 14.8 -0.4
JOW   Kunigami          3.99  75  P      Pn     18 49 15.4  0.0
      14nm,0.3s,baz=153,slow=17,SNR=58
JOW                               S      S      18 49 57.9 -6.0
      43nm,0.3s,baz=118,slow=26,SNR=12
JOW   Kunigami          3.99  75  P      Pn     18 49 15.2 -0.2
JOW                               S      S      18 50 00.2 -3.6
JOW   Kunigami          3.99  75         Pn     18 49 15.2 -0.2
TWG   Pinlang           4.02 222  Pn     Pn     18 49 14.1 -1.8
JYRO  Yoronjima         4.19  73  P      Pn     18 49 17.5 -0.3
JYRO                              S      S      18 50 04.6 -3.6
JOKE  Okinoerabujima    4.39  69  P      Pn     18 49 19.7 -0.7
JOKE                              S      S      18 50 09.2 -3.6
JTK   Tokunoshima       4.85  66  P      Pn     18 49 25.0 -1.1
JTK                               S      S      18 50 19.5 -3.8
KNMB  Chin-men Tao      5.24 256  Pn     Pn     18 49 30.4 -0.7
JMN   Monobe           11.63  45  Pn     Pn     18 50 51.1 -2.3
KSRS  Korea Array      12.03  15  P      Pn     18 51 00.9 +2.7
      0.2nm,0.3s,baz=196,slow=11,SNR=9.2
JHS   Saijyo           12.04  39  Pn     Pn     18 50 57.4 -1.1
CMAR  Chiang Mai Arr   24.29 257  LR     LR     19 03 46.6
      comp=Z,36nm,19.1s,baz=181,slow=38
MK31  Makanchi Array   38.95 313  P      P      18 55 19.0 +0.1
MK31                              IAmb   IAmb   18 56 31.9
      comp=Z,6.1nm,1.5s
MKAR  Makanchi Array   38.95 313  P      P      18 55 19.1 +0.1
      comp=Z,0.5nm,0.3s,baz=99,slow=9.5,SNR=23
MKAR  Makanchi Array   38.95 313  P      P      18 55 18.9 -0.1
ZALV  Zalesovo Beam    40.27 325  P      P      18 55 29.1 -0.5
      comp=Z,3.5nm,0.5s,baz=117,slow=8.7,SNR=16
ZALV  Zalesovo Beam    40.27 325  P      P      18 55 28.6 -1.0
KURK  Kurchatov        42.48 318  P      P      18 55 47.6 -0.1
KURK                              IAmb   IAmb   18 56 33.8
      comp=Z,8.3nm,1.3s
KURBB Kurchatov Arra   42.50 318  P      P      18 55 47.9 +0.1
      comp=Z,0.8nm,0.5s,baz=109,slow=9.3,SNR=14
KKAR  Karatay Array    46.49 306  P      P      18 56 20.0 +0.4
WRAB  Tennant Creek    46.63 167  P      P      18 56 18.9 -1.9
WRAB                              IAmb   IAmb   18 57 41.8
      comp=Z,30nm,1.4s
WRA   Warramunga Arr   46.64 167  P      P      18 56 21.4 +0.5
      comp=Z,0.4nm,0.5s,baz=348,slow=8.8,SNR=4.7
WRA   Warramunga Arr   46.64 167  P      P      18 56 21.2 +0.4
WB2   Warramunga Arr   46.64 167  P      P      18 56 20.4 -0.5
WR0   Warramunga Arr   46.70 166  P      P      18 56 21.7 +0.4
BRVK  Borovoye         48.08 319  P      P      18 56 31.3 -0.3
BRVK                              IAmb   IAmb   18 56 44.9
      comp=Z,10nm,1.9s
ASAR  Alice Springs    50.18 168  P      P      18 56 48.8 +1.0
      comp=Z,0.3nm,0.8s,baz=8.0,slow=14,SNR=2.2
ABKAR Akbulak array    54.10 313  P      P      18 57 17.0 +0.6
ABKAR Akbulak array    54.10 313         P      18 57 16.9 +0.6
ABKAR                             IAmb   IAmb   18 57 18.1
      comp=Z,2.0nm,0.9s
ARU   Arti             55.31 322  P      P      18 57 25.0 +0.1
      comp=Z,1.5nm,0.5s,baz=132,slow=2.4,SNR=10
ARU   Arti             55.31 322  P      P      18 57 24.5 -0.4
ARU                               IAmb   IAmb   18 57 25.5
      comp=Z,4.1nm,0.6s
GEYT  Alibeck          56.14 300  P      P      18 57 33.0 +1.7
      comp=Z,2.3nm,0.5s,baz=299,slow=6.1,SNR=5.6
GEYT  Alibeck          56.14 300  P      P      18 57 32.2 +1.0
GEYT                              IAmb   IAmb   18 57 33.4
      comp=Z,2.5nm,0.7s
ARCES ARCESS Array B   68.92 338  P      P      18 58 55.1  0.0
      comp=Z,1.9nm,0.8s,baz=65,slow=6.4,SNR=3.3
FINES FINESS Array B   71.27 330  P      P      18 59 09.6 +0.1
      comp=Z,1.7nm,0.8s,baz=81,slow=6.0,SNR=6.6
FINES FINESS Array B   71.27 330  P      P      18 59 09.7 +0.3
```

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*IDC **19** 18:54:25.7±1.8,8.°90S×126.°11E,h0km,mb3.2/1, mb1 3.7/5,mb1mx3.4/36,mbtmp3.5/5,ML3.6/4,Error ellipse: s-maj=46.3km s-min=27.1km az=72.0*

ISC 19 18:54:30.4±1.4,**9.°2S**±0.°1×**126.°16E**±0.°10,**h35**km,**n5, σ2.s55**/9,**Timor region**

```
Code  Station Name      Δ°   AZ°   Phase ID         Time      Res
                                  Op     ISC     h  m  s     ISC
BATI  Baumata           2.65 248  Pn     Pn     18 55 11.8 +1.1
      2.6nm,0.3s,baz=139,slow=14,SNR=1.5
BATI                              Sn     Sn     18 55 40.9 -0.8
      12nm,0.3s,baz=173,slow=4.3,SNR=6.0
FITZ  Fitzroy Crossi    8.86 183  Pn     Pn     18 56 39.5 +3.4
      0.9nm,0.3s,baz=30,slow=10.0,SNR=6.1
FITZ                              Sn     Sn     18 58 12.2 -2.6
      0.9nm,0.3s,baz=114,slow=20,SNR=5.0
WRA   Warramunga Arr   13.29 144  Pn     Pn     18 57 39.5 +2.8
      0.3nm,0.3s,baz=316,slow=15,SNR=5.8
WRA                               Sn     Sn     19 00 00.6 -2.8
      0.3nm,0.3s,baz=329,slow=27,SNR=6.1
ASAR  Alice Springs    16.19 154  Pn     P      18 58 17.6 -0.5
      0.3nm,0.3s,baz=321,slow=11,SNR=13
ASAR                              Sn     Sn     19 01 12.6 -1.3
      0.1nm,0.3s,baz=320,slow=16,SNR=5.0
MKAR  Makanchi Array   68.05 329  P      P      19 05 25.3 -1.1
      0.1nm,0.5s,baz=126,slow=7.5,SNR=2.8
```

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*TAP **19** 19:04:14.8,23.°95N×122.°66E,h26km±1km,ML2.7,D*

*JMA **19** 19:04:15.1±0.2,24.°01N×122.°63E,h29km±5km,M2.1*

ISC 19 19:04:14.4±1.2,**23.°91N**±0.°03×**122.°66E**±0.°02,**h22**km±14km, **n74,σ0.s88**/107,**Taiwan region**

```
Code  Station Name      Δ°   AZ°   Phase ID         Time      Res
                                  Op     ISC     h  m  s     ISC
JYNG  Yonagunijimaku    0.60  26  P      Pb     19 04 25.7 -0.6
JYNG                              S      Sb     19 04 32.9 -1.4
YOJ   Yonaguni jima     0.64  31  eP     Pb     19 04 26.9  0.0
```

	baz=36						
YOJ				eS	Sb	19 04 34.1	-1.3
	baz=36						
YOJ	Yonaguni jima	0.64	31	P	Pb	19 04 26.4	-0.5
YOJ				S	Sb	19 04 34.2	-1.2
EWUT	Wuta	0.96	304	eP	Pn	19 04 31.9	-0.7
	baz=301						
EWUT				eS	Sn	19 04 45.1	-0.5
	baz=301						
ENA	Nanau	0.98	302	eP	Pn	19 04 32.4	-0.5
	baz=299						
ENA				eS	Sn	19 04 46.4	+0.3
	baz=299						
NACB	Ninganchiao	1.00	285	eP	Pn	19 04 32.7	-0.5
	baz=282						
TWC	Suao	1.01	313	eP	Pb	19 04 33.1	-0.2
	baz=311						
TWC				eS	Sn	19 04 45.6	-1.2
	baz=311						
HATJ	Hateruma jima	1.06	82	P	Pb	19 04 34.4	+0.3
HATJ				S	Sb	19 04 48.6	+1.0
IRIF	Iriomote-Funau	1.07	67	P	Pb	19 04 34.3	+0.1
IRIF				eS	Sb	19 04 48.4	+0.6
ETLH	Xiulin Townshi	1.11	285	eP	Pn	19 04 34.4	-0.4
	baz=283						
NDS	Dongshan	1.12	310	eP	Pn	19 04 34.5	-0.3
	baz=308						
NDS				eS	Sb	19 04 50.5	+1.3
	baz=308						
ESL	Shilin	1.12	265	eP	Pn	19 04 33.7	-1.2
	baz=263						
ESL				eS	Sb	19 04 50.0	+0.6
	baz=263						
HGSD	Ruisui	1.21	250	eP	Pn	19 04 36.5	+0.5
	baz=248						
TWE	Neicheng	1.21	312	eP	Pb	19 04 37.7	+1.1
	baz=310						
TWE				eS	Sb	19 04 53.1	+1.3
	baz=310						
ENTT	Nioudou	1.23	306	eP	Pb	19 04 37.2	+0.2
	baz=304						
NDT	Datong Townshi	1.25	304	eP	Pb	19 04 37.6	+0.2
	baz=287						
NDT				eS	Sb	19 04 53.8	+0.8
	baz=287						
TWB1	Santiao Chiao	1.25	331	eP	Pb	19 04 36.5	-0.9
	baz=329						
NNSB	Datong	1.27	294	eP	Pn	19 04 36.9	-0.1
	baz=292						
NNSH	Datong	1.27	294	eP	Pn	19 04 36.5	-0.5
	baz=292						
JKRS	Kuro-shima	1.28	75	P	Pb	19 04 38.0	+0.2
JKRS				S	Sb	19 04 54.7	+0.9
NNS	Nan Shan	1.28	294	eP	Pb	19 04 37.5	-0.6
	baz=292						
EHY	Hungye	1.29	252	eP	Pn	19 04 36.7	-0.4
	baz=250						
EHY				eS	Sn	19 04 53.4	-0.2
	baz=250						
WHF	Hehuan Shan	1.29	281	eP	Pn	19 04 37.6	0.0
	baz=278						
TIPB	Shuangxi	1.30	324	eP	Pb	19 04 37.4	-0.8
	baz=338						
TIPB				eS	Sb	19 04 55.4	+0.9
	baz=338						
FUSS	Fushou	1.33	285	eP	Pn	19 04 38.3	+0.4
	baz=283						
EYUL	Yuli	1.35	246	eP	Pn	19 04 37.7	-0.2
	baz=232						
YULB	Yu-li	1.35	248	eP	Pn	19 04 38.6	+0.7
	baz=246						
YULB				eS	Sn	19 04 55.2	0.0
	baz=246						
NWLT	Wulai	1.36	310	eP	Pb	19 04 39.5	+0.2
	baz=307						
CHGB	Renai	1.36	276	eP	Pn	19 04 38.4	+0.1
	baz=274						
TWF1	Yuli	1.37	246	eS	Sn	19 04 55.3	-0.3
	baz=244						
YHNB	Yeheng	1.39	303	eP	Pn	19 04 38.8	+0.2
	baz=301						
YHNB				eS	Sb	19 04 58.8	+1.6
	baz=301						
TWT	Tachien	1.39	284	eP	Pb	19 04 39.4	-0.5
	baz=282						
VWDT	VWDT	1.40	264	eP	Pn	19 04 38.8	+0.2
	baz=262						
VWDT				eS	Sn	19 04 55.2	-1.1
	baz=262						
WFSB	Wu-fen Shan	1.40	326	eP	Pb	19 04 39.7	-0.3
	baz=324						
NSK	Sanguang	1.41	303	eP	Pn	19 04 38.6	-0.2
	baz=288						
JIJ	Ishigaki jima	1.43	71	P	Pn	19 04 39.3	+0.3
JIJ				S	Sn	19 04 57.1	-0.1
FULB	Fuli	1.44	241	eP	Pn	19 04 39.4	+0.3
	baz=226						
FULB				eS	Sn	19 04 55.3	-2.1
	baz=226						
TWA	Mucha	1.44	318	eP	Pb	19 04 40.8	+0.1
	baz=316						
TATO	Taipei	1.50	315	eS	Sb	19 05 01.3	+1.1
	baz=330						
EDH	Donghe	1.56	233	eS	Sn	19 04 58.4	-1.8
	baz=221						
SSLB	Suanglung	1.56	266	eP	Pn	19 04 41.5	+0.6
	baz=264						
YM01	YM01	1.58	321	eP	Pb	19 04 42.1	-0.9
	baz=320						
DPDB	Guoxing	1.59	275	eP	Pn	19 04 42.2	+1.0
	baz=273						
YM10	YM10	1.59	321	eP	Pn	19 04 41.3	0.0
	baz=319						
YM11	YM11	1.59	322	eP	Pb	19 04 44.3	+1.1
	baz=320						
YM05	YM05	1.59	322	eP	Pb	19 04 44.0	+0.7
	baz=320						
WCS	Beigang Elemen	1.60	275	eP	Pn	19 04 42.2	+0.8
	baz=274						
YM04	YM04	1.60	321	eP	Pn	19 04 41.8	+0.3
	baz=319						
WHP	Taichung City	1.60	283	eP	Pb	19 04 44.0	+0.5
	baz=271						
SMLT	Sun Moon Lake	1.61	269	eS	Sn	19 05 01.8	+0.1
	baz=267						
TYC	Yuchr	1.65	270	eP	Pn	19 04 43.0	+1.0
	baz=268						
JISG	Ishigakijimahi	1.65	66	P	Pn	19 04 42.2	+0.1
JISG				S	Sn	19 05 02.1	-0.5
LIOB	Emei	1.67	296	eP	Pb	19 04 44.1	-0.3
	baz=294						
WHYT	Xinyi Township	1.67	263	eP	Pb	19 04 44.0	-0.5
	baz=261						
ELDTW	Lidau	1.67	245	eP	Pn	19 04 42.7	+0.3
	baz=243						
NSTT	Nanjuang	1.67	296	eP	Pb	19 04 44.1	-0.4
	baz=294						
ALS	Alishan	1.74	257	eP	Pn	19 04 44.1	+0.5
	baz=245						
WJS	Zhushan	1.77	267	eP	Pb	19 04 46.5	+0.3
	baz=266						
WJS				eS	Sb	19 05 09.1	+1.1
	baz=266						
WNT	Mingjian	1.81	269	eP	Pb	19 04 46.8	-0.1
	baz=267						
WNT				eS	Sb	19 05 08.3	-0.7
	baz=267						
TWGBT	Beinan	1.81	233	eS	Sn	19 05 05.9	-0.7
	baz=223						
TWG	Pinlang	1.82	234	eS	Sn	19 05 05.8	-0.9
	baz=223						
CHN5	Tsauling	1.84	261	eP	Pn	19 04 46.5	+1.7
	baz=259						
CHN5				eS	Sb	19 05 10.4	+0.4
	baz=259						
STYH	Taoyuan	1.88	247	eP	Pn	19 04 47.1	+1.9
	baz=236						
WDLH	Douliu	1.95	264	eS	Sb	19 05 14.4	+1.1
	baz=262						
TPUB	Ta-pu	1.96	252	eP	Pb	19 04 48.5	-0.9
	baz=242						
TPUB				eS	Sb	19 05 13.2	-0.1
	baz=242						
CHN4	Tsaushan	1.97	254	eP	Pn	19 04 48.5	+2.0
	baz=242						
CHN4				eS	Sb	19 05 15.3	+1.4
	baz=242						
WTP	Ta-pu	1.99	251	eP	Pn	19 04 48.3	+1.6
	baz=250						
WTP				eS	Sb	19 05 14.5	+0.2
	baz=250						
SLGT	Liugui	2.06	244	eP	Pb	19 04 50.8	-0.4
	baz=235						
SLGT				eS	Sb	19 05 15.8	-0.6
	baz=235						
SGST	Jiashian	2.08	247	eP	Pn	19 04 50.1	+2.2
	baz=235						
SGST				eS	Sb	19 05 16.5	-0.3
	baz=235						
CHN1	Nanshi	2.08	250	eP	Pb	19 04 50.6	-0.9
	baz=249						
CHN1				eS	Sb	19 05 16.8	-0.2
	baz=249						
WTK	Tuku	2.09	264	eP	Pb	19 04 50.2	-1.5
	baz=263						
WTK				eS	Sb	19 05 16.1	-1.1
	baz=263						
TWK	Hsinying	2.09	253	eP	Pn	19 04 50.2	+2.0
	baz=251						
TWK				eS	Sb	19 05 17.1	-0.1
	baz=251						
MASBT	Mashibuluo	2.27	236	eP	Pb	19 04 53.5	-1.2
	baz=228						
MASBT				eS	Sb	19 05 21.8	-0.5
	baz=228						
SCZT	Fangliau	2.42	231	eS	Sn	19 05 22.9	+1.3
	baz=223						

IDC 19 19:16:34.4±2.2**,5°.26N×126°.79E,h0^{km},mb3.5**/3**, mb1 3.6**/3**,mb1mx3.2**/42**,mbtmp3.5**/3**,MS3.7**/2**,Ms1 3.7**/2**, ms1mx2.8**/33**,Error ellipse: s-maj=169.7km s-min=25.4km az=66.0,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	26.12	164	P	P	19 22 08.4	-1.9
	0.6nm,0.4s,baz=343,slow=10,SNR=4.9						
JCJ	Chichijima	26.21	32	LR	LR	19 30 42.7	
	comp=Z,178nm,20.1s,baz=162,slow=32						
ASAR	Alice Springs	29.57	167	P	P	19 22 42.9	+1.7
	0.2nm,0.5s,baz=350,slow=9.9,SNR=3.0						
MKAR	Makanchi Array	56.35	325	P	P	19 26 17.3	-0.1
	0.5nm,0.5s,baz=118,slow=8.1,SNR=9.9						
YKA	Yellowknife Ar	98.09	24	LR	LR	20 20 20.2	
	comp=Z,34nm,19.4s,baz=0.0,slow=39						

IDC 19 19:17:31.0±2.3**,6°.94S×132°.12E,h0^{km},mb3.6**/1**, mb1 3.7**/5**,mb1mx3.4**/37**,mbtmp3.5**/5**,ML3.4**/4**,Error ellipse: s-maj=97.5km s-min=25.3km az=85.0,Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	6.09	352	Pn	Pn	19 19 01.9	-0.4
	0.6nm,0.3s,baz=59,slow=23,SNR=6.4						
SIJI				Sn	Sn	19 20 04.8	-8.0
	1.5nm,0.3s,baz=296,slow=24,SNR=13						
FITZ	Fitzroy Crossi	12.76	209	Pn	Pn	19 20 33.0	-0.9
	0.5nm,0.3s,baz=29,slow=11,SNR=32						
FITZ				Sn	Sn	19 22 45.8	-11
	0.3nm,0.3s,baz=203,slow=17,SNR=5.4						
WRA	Warramunga Arr	13.10	171	Pn	Pn	19 20 38.8	+0.3
	0.1nm,0.3s,baz=355,slow=13,SNR=9.0						
WRA				Sn	Sn	19 22 58.4	-6.8
	0.3nm,0.3s,baz=351,slow=24,SNR=7.5						
ASAR	Alice Springs	16.72	174	Pn	Pn	19 21 27.1	+0.2
	0.1nm,0.3s,baz=351,slow=9.7,SNR=5.1						
ASAR				Sn	Sn	19 24 25.1	-8.1
	0.1nm,0.3s,baz=2.0,slow=28,SNR=2.5						
MKAR	Makanchi Array	69.34	326	P	P	19 28 40.6	+0.2
	0.2nm,0.4s,baz=114,slow=7.9,SNR=6.8						

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*ATH **19** 19:50:22.8, 38°.43N×20°.54E, h14^{km}± 1^{km}, ML3.5/15, Error ellipse: s-maj=1.4km s-min=0.5km az=269.0*

*IDC **19** 19:50:22.6±3.1, 38°.74N×20°.54E, h0^{km}, mb3.8/4, mb1 3.7/8, mb1mx3.5/37, mbtmp3.7/8, ML3.4/4, MS2.9/2, Ms1 2.9/2, ms1mx2.6/55, Error ellipse: s-maj=60.6km s-min=19.4km az=40.0*

*BEO **19** 19:50:23.0±0.8, 38°.40N×20°.39E, h12^{km}±4^{km}, ML3.3/10*

*THE **19** 19:50:23.2, 38°.41N×20°.58E, h7^{km}± 1^{km}, ML3.8/13, Error ellipse: s-maj=1.1km s-min=0.4km az=262.0*

ISC 19 19:50:22.2±0.7**,38°.43N**±0°.02×**20°.55E**±0°.02**,h17**^{km}±4^{km}**, n157,σ1^{s}.29**/191**,mb3.8**/4**,13C-2D,Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VSK1	VASILIKIADES	0.02	152	P	Pg	19 50 24.4	-0.8
VSK1				S	Sg	19 50 25.6	-1.7
	278µm,0.4s						
KEF5	Kardakata, Kep	0.16	204	P	Pg	19 50 26.4	-0.1
KEF5				S	Sg	19 50 29.6	+0.2
	161µm,0.3s						
KEF5	Kardakata, Kep	0.16	204	P	Pg	19 50 26.5	-0.1
KEF5				S	Sg	19 50 29.6	+0.2
KEF4	Livadi, Kephal	0.20	211	P	Pg	19 50 27.1	+0.1
KEF4				S	Sg	19 50 30.6	+0.4
	355µm,0.3s						
KEF4	Livadi, Kephal	0.20	211	P	Pg	19 50 27.1	+0.1
KEF4				S	Sg	19 50 30.3	+0.1
EVGI	Lefkada island	0.21	23	P	Pg	19 50 27.5	+0.3
EVGI				S	Sg	19 50 31.1	+0.4
	15µm,0.4s						
EVGI	Lefkada island	0.21	23	P	Pg	19 50 27.6	+0.3
EVGI				S	Sg	19 50 30.7	+0.1
DMLN	Damoulianata-K	0.23	217	P	Pg	19 50 27.6	0.0
DMLN				S	Sg	19 50 31.8	+0.5
	35µm,0.8s						
DMLN	Damoulianata-K	0.23	217	P	Pg	19 50 27.7	0.0
DMLN				S	Sg	19 50 31.3	+0.1
LXRA	Lixouri, Kepha	0.24	202	P	Pb	19 50 28.1	-0.1
LXRA				S	Sb	19 50 32.0	-0.1
ARG2	Argostoli	0.25	192	P	Pb	19 50 28.1	-0.2
ARG2				S	Sb	19 50 32.1	-0.3
	116µm,0.3s						
ARGA	Argostoli. Kep	0.26	193	P	Pb	19 50 28.1	-0.3
ARGA				S	Sb	19 50 32.3	-0.2
KEF3	Kipouria, Keph	0.28	216	P	Pg	19 50 27.8	-0.4
KEF3				S	Sg	19 50 32.2	-0.2
	61µm,0.8s						
KEF3	Kipouria, Keph	0.28	216	P	Pg	19 50 27.8	-0.4
KEF3				S	Sg	19 50 31.8	-0.6
NYDR	Nydri-Lefkada	0.31	22	P	Pb	19 50 29.1	-0.2
NYDR				S	Sb	19 50 34.2	+0.1
	31µm,0.5s						
NYDR	Nydri-Lefkada	0.31	22	P	Pb	19 50 29.2	-0.2
NYDR				S	Sb	19 50 34.2	+0.1
PSDA	Pessada-Kefalo	0.31	175	P	Pb	19 50 29.1	-0.3
PSDA				S	Sb	19 50 33.6	-0.6
	9µm,0.4s						
PSDA	Pessada-Kefalo	0.31	175	P	Pb	19 50 29.1	-0.3
PSDA				S	Sb	19 50 34.3	+0.1
LKD2	Lefkada island	0.37	13	P	Pb	19 50 30.1	-0.3
LKD2				S	Sb	19 50 35.9	0.0
	10µm,0.5s						
LKD2	Lefkada island	0.37	13	P	Pb	19 50 30.2	-0.3
LKD2				S	Sb	19 50 35.3	-0.6
LKD2				AML	AML	19 50 38.1	
	comp=E,19037µm,0.4s						
LKD2				AML	AML	19 50 38.5	
	comp=N,20060µm,0.5s						
TSLK	Tsoukalades, L	0.41	11	P	Pb	19 50 30.9	-0.1
TSLK	Tsoukalades, L	0.41	11	P	Pb	19 50 30.9	-0.1
TSLK				S	Sb	19 50 37.0	+0.1
TSLK				AML	AML	19 50 38.6	
	comp=E,24159µm,0.5s						
TSLK				AML	AML	19 50 39.0	
	comp=N,23122µm,0.5s						
AST1	Astakos	0.44	75	P	Pb	19 50 31.7	+0.2
AST1				S	Sb	19 50 37.8	0.0
	comp=N,23µm,0.3s						
PDO	Prodromos	0.52	71	P	Pb	19 50 33.0	+0.1
PDO	Prodromos	0.52	71	P	Pb	19 50 33.1	+0.1
PDO				S	Sb	19 50 40.7	+0.4
PDO				AML	AML	19 50 43.9	
	comp=E,11768µm,0.4s						
PDO				AML	AML	19 50 45.9	
	comp=N,19104µm,0.3s						
VLMS	Volimes, Zakyn	0.56	171	P	Pb	19 50 33.3	-0.2
VLMS	Volimes, Zakyn	0.56	171	P	Pb	19 50 33.3	-0.2
VLMS				S	Sb	19 50 40.9	-0.3
VLMS				AML	AML	19 50 46.9	
	comp=N,42708µm,0.7s						
VLMS				AML	AML	19 50 48.2	
	comp=E,38913µm,0.4s						
AXS	Araxos	0.69	109	P	Pb	19 50 36.0	+0.2
AXS				S	Sn	19 50 46.0	-1.5
	comp=E,4µm,0.7s						
AXS	Araxos	0.69	109	P	Pn	19 50 36.3	-0.9
AXS				S	Sn	19 50 46.6	-0.8
AXS				AML	AML	19 50 48.4	
	comp=N,12084µm,0.7s						
AXS				AML	AML	19 50 51.1	
	comp=E,5314µm,0.8s						
LTHK	Lithakia	0.75	162	P	Pb	19 50 36.5	-0.3
LTHK	Lithakia	0.75	162	P	Pb	19 50 36.5	-0.3
LTHK				S	Sn	19 50 48.3	-0.7
LTHK				AML	AML	19 50 50.5	
	comp=E,12366µm,0.4s						
LTHK				AML	AML	19 50 50.7	
	comp=N,19099µm,0.2s						
RLS	Riolos of Patr	0.81	117	P	Pb	19 50 38.0	+0.2
RLS	Riolos of Patr	0.81	117	P	Pb	19 50 38.0	+0.2
RLS				AML	AML	19 50 55.2	
	comp=N,5397µm,0.5s						
RLS				AML	AML	19 50 59.4	
	comp=E,3414µm,0.7s						
UPR	University Cam	0.98	98	P	Pn	19 50 41.9	+0.7
EFP	Efpalio	1.06	90	P	Pn	19 50 42.1	-0.3
EFP	Efpalio	1.06	90	P	Pn	19 50 42.2	-0.1
ANX	Ano Chora	1.09	81	P	Pn	19 50 42.9	+0.1
ANX	Ano Chora	1.09	81	P	Pn	19 50 43.0	+0.1
ANX				AML	AML	19 51 10.2	
	comp=N,4946µm,0.6s						
ANX				AML	AML	19 51 11.4	
	comp=E,4302µm,0.6s						
EVR	Evrytania	1.10	63	P	Pn	19 50 43.0	+0.1
EVR	Evrytania	1.10	63	P	Pn	19 50 43.0	+0.1
EVR				AML	AML	19 51 18.2	
	comp=N,2153µm,0.6s						
EVR				AML	AML	19 51 18.8	
	comp=E,1893µm,0.6s						
IGT	Igoumenitsa	1.12	351	P	Pg	19 50 43.1	-0.7
IGT				S	Sn	19 51 02.0	+3.9
	comp=E,1µm,0.6s						
IGT	Igoumenitsa	1.12	351	ePg	Pg	19 50 43.3	-0.6
IGT				eSg	Sn	19 50 59.1	+1.0
IGT	Igoumenitsa	1.12	351	P	Pg	19 50 43.2	-0.7
IGT				AML	AML	19 51 02.8	
	comp=E,3528µm,0.8s						
IGT				AML	AML	19 51 04.3	
	comp=N,2325µm,0.4s						
LAKA	Lakka	1.14	99	P	Pn	19 50 43.6	+0.2
LAKA	Lakka	1.14	99	P	Pn	19 50 43.6	+0.2
LAKA				AML	AML	19 51 05.6	
	comp=N,9330µm,1.0s						
LAKA				AML	AML	19 51 07.7	
	comp=E,9384µm,0.5s						
SERG	Sergoula	1.18	90	P	Pn	19 50 44.3	+0.3
SERG	Sergoula	1.18	90	P	Pn	19 50 44.4	+0.3
SERG				AML	AML	19 51 04.3	
	comp=N,4412µm,0.3s						
SERG				AML	AML	19 51 07.9	
	comp=E,3748µm,0.6s						
TRIZ	Trizonia	1.20	92	P	Pn	19 50 44.6	+0.4
TRIZ	Trizonia	1.20	92	P	Pn	19 50 44.6	+0.4
ALIK	Aliki, Aigiali	1.24	97	P	Pn	19 50 45.4	+0.7
KALE	Kalithea	1.25	91	P	Pn	19 50 45.4	+0.4
KALE	Kalithea	1.25	91	P	Pn	19 50 45.4	+0.4
KALE				AML	AML	19 51 14.6	
	comp=N,3493µm,0.7s						
KALE				AML	AML	19 51 18.6	
	comp=E,2462µm,0.5s						
JAN	Janina	1.25	11	P	Pg	19 50 46.7	+0.3
JAN	Janina	1.25	11	P	Pg	19 50 46.1	-0.3
JAN				AML	AML	19 51 08.6	
	comp=N,2492µm,0.4s						
JAN				AML	AML	19 51 12.1	
	comp=E,2653µm,0.6s						
MAKR	Makrakomi, Fth	1.37	64	P	Pg	19 50 48.2	-0.4
MAKR	Makrakomi, Fth	1.37	64	P	Pg	19 50 48.2	-0.4
KASA	Kassiopi	1.40	340	P	Pn	19 50 47.9	+0.9
KEK	Kerkira	1.41	336	P	Pb	19 50 48.6	+0.5
KEK	Kerkira	1.41	336	P	Pb	19 50 48.8	+0.6
AGG	Agios Georgios	1.51	66	P	Pg	19 50 50.5	-0.9
AGG	Agios Georgios	1.51	66	P	Pg	19 50 50.1	-1.2
SRN	Sarande	1.51	344	P	Pb	19 50 50.4	+0.5
THL	Klokotos Trika	1.61	45	P	Pg	19 50 52.3	-0.9
THL	Klokotos Trika	1.61	45	P	Pg	19 50 52.3	-0.9
THL				AML	AML	19 51 23.6	
	comp=N,1789µm,1.0s						
THL				AML	AML	19 51 24.1	
	comp=E,2321µm,0.5s						
KPRO	Kipourio	1.65	22	P	Pg	19 50 53.6	-0.4
ITM	Ithomi	1.65	138	P	Pg	19 50 53.1	-1.0
AXAR	Agios Charalam	1.69	78	P	Pg	19 50 53.2	-1.5
THAL	Thalero	1.71	103	P	Pg	19 50 53.1	-2.0
LSK	Leskovik	1.72	1	P	Pb	19 50 54.1	+0.6
LKR	Lokris	1.93	83	P	Pb	19 50 57.0	+0.1
LTK	Loutraki	1.94	101	P	Pb	19 50 57.3	+0.1
ATAL	Atalanti	1.95	81	P	Pg	19 50 58.3	-1.5
NEST	Nestorio	2.02	11	P	Pg	19 50 59.8	-1.3
SMIA	Simia	2.13	77	P	Pg	19 51 01.7	-1.4
VIL2	Platees	2.15	95	P	Pb	19 51 00.6	-0.1
FNA	Florina	2.44	15	ePn	Pb	19 51 04.3	-1.4
FNA				eSn	Sb	19 51 34.1	-1.4
VLI	Veliai	2.55	131	P	Pb	19 51 08.3	+0.8
OHR	Ohrid	2.69	4	i Pn	Pb	19 51 08.4	-1.5
TIR	Tirane	2.96	350	ePn	Pn	19 51 10.6	+2.1
TIR	Tirane	2.96	350	⇑P	Pn	19 51 09.8	+1.3
TIP	Timpagrande	3.06	285	⇑P	Pn	19 51 11.2	+1.3
TIP				⇑S	Sn	19 51 48.9	+2.8
VAY	Valandovo	3.28	28	ePn	Pn	19 51 14.8	+1.9
VAY				eSn	Sn	19 51 55.2	+3.7
SRS	Serrai	3.56	40	ePn	Pn	19 51 18.9	+2.1
SRS				eSn	Sn	19 52 01.4	+2.9
DRME	Dracevica, Mon	3.90	345	ePn	Pn	19 51 22.5	+1.2
PDG	Podgorica	4.12	347	ePn	Pn	19 51 25.1	+0.7
PDG	Podgorica	4.12	347	⇑P	Pn	19 51 25.6	+1.2
PDG				⇑S	Sn	19 52 11.6	-0.6
PDG	Podgorica	4.12	347	ePn	Pn	19 51 25.2	+0.8
HCY	Herceg Novi	4.31	339	ePn	Pn	19 51 26.7	-0.3
BOSS	Bosilegrad	4.32	19	ePn	Pn	19 51 30.3	+3.1
BOSS				eSn	Sn	19 52 18.8	+1.6
TREB	Trebinje	4.60	339	ePn	Pn	19 51 31.3	+0.3
TREB	Trebinje	4.60	339	ePn	Pn	19 51 31.3	+0.3
DBRK	Dubrovnik	4.62	337	ePn	Pn	19 51 30.1	-1.1
VTS	Vitosha	4.66	25	⇓P	Pn	19 51 33.9	+2.0
VTS				⇑S	Sn	19 52 28.5	+2.8
IDI	Anoyia	4.68	131	Pn	Pb	19 51 38.1	-5.8
	comp=E,0.5nm,0.3s,baz=270,slow=17,SNR=2.3						
IDI				Sn	Sn	19 52 30.5	+4.4
	comp=E,1.9nm,0.3s,baz=258,slow=19,SNR=2.4						
IDI				LR	LR	19 53 21.3	
	comp=E,16nm,19.8s,baz=274,slow=36						
BRY	Bratogost	4.72	342	ePn	Pn	19 51 32.7	-0.1
STON	Ston	4.94	335	ePn	Pn	19 51 34.5	-1.1
STON				Sn	Sn	19 52 28.8	-3.6
ZAPS	Zavoj	5.09	17	ePn	Pn	19 51 40.9	+3.1
ZAPS				eSn	Sn	19 52 37.0	+0.8
IVAS	Ivanjica	5.15	357	ePn	Pn	19 51 39.6	+0.9
IVAS				eSn	Sn	19 52 37.5	-0.2
LSTV	Lastovo	5.15	328	ePn	Pn	19 51 38.4	-0.2
LSTV				Sn	Sn	19 52 32.8	-4.8
BOVS	Bovan	5.28	9	⇑P	Pn	19 51 40.5	+0.3
GRUS	Gruza	5.46	1	⇑P	Pn	19 51 42.8	0.0
BBLS	Lazići	5.50	351	ePn	Pn	19 51 44.1	+0.6
BBLS				eSn	Sn	19 52 46.8	+0.4
BBLS	Lazići	5.50	351	ePn	Pn	19 51 43.6	+0.1
MAKA	Makarska	5.54	332	ePn	Pn	19 51 44.5	+0.5
MAKA				Sn	Sn	19 52 44.3	-2.9
HVAR	Hvar	5.68	328	i Pn	Pn	19 51 45.9	+0.2
DIVS	Divibare	5.68	356	ePn	Pn	19 51 46.4	+0.5
DIVS				eSn	Sn	19 52 49.7	-1.1
DIVS	Divibare	5.68	356	ePn	Pn	19 51 45.8	-0.1
RICI	Ricice	5.69	334	i Pn	Pn	19 51 46.2	+0.3
RICI				Sn	Sn	19 52 48.2	-2.6
HAPS	Han Pijesak,BI	5.78	348	ePn	Pn	19 51 47.0	-0.3
TRUS	Trudelj	5.79	359	ePn	Pn	19 51 48.5	+1.1
TRUS				eSn	Sn	19 52 52.5	-0.9
KIJV	Kijevo	6.39	332	ePn	Pn	19 51 56.3	+0.8
ZIRJ	Zirje	6.41	326	ePn	Pn	19 51 55.6	-0.1

MGRS	Mrkonjic Grad	6.53	338	*e*Pn	Pn	19 51 57.6	+0.1
MORI	Morici	6.55	328	*e*Pn	Pn	19 51 58.2	+0.5
FRGS	Fruska Gora	6.75	356	*e*Pn	Pn	19 51 55.2	-5.3
DUGI	Dugi Otok	6.93	325	*e*Pn	Pn	19 52 03.7	+0.7
GZR	Gura Zlata	7.16	13	⇑P	Pn	19 52 06.7	+0.6
BZS	Buzias	7.23	6	⇑P	Pn	19 52 07.5	+0.4
NVLJ	Novalja	7.47	327	*e*Pn	Pn	19 52 10.7	+0.4
ARR	Arges	7.57	22	⇓P	Pn	19 52 12.5	+0.7
VOIR		7.76	24	⇑P	Pn	19 52 16.3	+1.8
MORH	Mrgy, Hungar	7.91	350	*e*Pn	Pn	19 52 13.4	-3.0
RIY	Rijeka	8.24	329	*e*Pn	Pn	19 52 23.5	+2.5
CRES	Cresnjev	8.30	335	*e*Pn	Pn	19 52 21.6	-0.2
CEY	Cerknica	8.61	330	*e*Pn	Pn	19 52 26.4	+0.4
PLOR	Plostina	8.69	29	⇑P	Pn	19 52 29.9	+2.7
VRI	Vrincioaia	8.73	30	⇑P	Pn	19 52 29.6	+1.9
LJU	Ljubljana	8.82	332	*e*Pn	Pn	19 52 29.1	+0.2
SOKA	Soboth	9.19	336	Pn	Pn	19 52 34.2	+0.1
	comp=E,3.8nm,0.4s,SNR=5.5						
OBKA	Obir	9.21	333	*e*Pn	Pn	19 52 36.3	+1.9
	comp=E,4.5nm,0.7s						
OBKA				*e*Sn	Sn	19 54 15.2	-2.4
	comp=E,4.2nm,0.6s						
KBA	Koelnbreinsper	10.14	331	*e*Pn	Pn	19 52 48.1	+1.0
	comp=E,1.2nm,0.5s						
ABTA	Abfaltersbach	10.21	327	*e*Pn	Pn	19 52 48.4	+0.4
	comp=E,1.8nm,0.5s						
BRTR	Keskin Array B	10.26	79	Pn	Pn	19 52 56.1	+7.3
	comp=E,0.1nm,0.3s,baz=268,slow=12,SNR=3.4						
WTTA	Wattenberg	10.98	326	*e*Pn	Pn	19 53 00.8	+2.1
	comp=E,1.7nm,0.3s						
WATA	Walderalm	11.07	326	*e*Pn	Pn	19 53 02.2	+2.4
	comp=E,1.9nm,0.4s						
FETA	Feichten	11.21	323	*e*Sn	Sn	19 55 06.3	-0.6
	comp=E,1.5nm,0.6s						
MOTA	Moosalm	11.28	325	*i* Pn	Pn	19 53 04.5	+1.7
	comp=E,2.3nm,0.5s,SNR=4.5						
DAVOX	Davos/Dischmat	11.46	320	Pn	Pn	19 53 04.8	-0.4
	comp=E,0.2nm,0.3s,baz=136,slow=19,SNR=2.8						
GERES	GERESS Array B	11.53	337	Pn	Pn	19 53 05.2	-0.9
	comp=E,0.3nm,0.3s,baz=152,slow=15,SNR=8.2						
HFS	Hagfors	22.16	351	P	P	19 55 17.6	+0.6
	comp=E,2.5nm,0.6s,baz=157,slow=8.0,SNR=7.5						
FINES	FINESS Array B	23.30	7	P	P	19 55 29.5	+0.6
	comp=E,1.5nm,0.7s,baz=203,slow=12,SNR=4.3						
MKAR	Makanchi Array	45.15	59	P	P	19 58 38.5	+0.6
	comp=E,0.6nm,0.5s,baz=276,slow=6.9,SNR=17						
ZALV	Zalesovo Beam	45.51	48	P	P	19 58 41.3	+0.8
	comp=E,1.9nm,0.5s,baz=272,slow=8.6,SNR=10						
CM33	Chiang Mai Arr	69.63	82	P	P	20 01 25.0	-5.9
CMMT	Chiang Mai	69.63	82	P	P	20 01 24.1	-6.8
CM32	Chiang Mai Arr	69.64	82	P	P	20 01 27.0	-4.0
CM13	Chiang Mai Arr	69.82	82	P	P	20 01 28.9	-3.2
CM31	Chiang Mai Arr	69.83	82	P	P	20 01 25.4	-6.8
CM02	Chiang Mai Arr	69.85	82	P	P	20 01 24.2	-8.0
CM01	Chiang Mai Arr	69.86	82	P	P	20 01 24.0	-8.4
CM05	Chiang Mai Arr	69.86	82	P	P	20 01 23.3	-9.1
CM35	Chiang Mai Arr	69.87	82	P	P	20 01 35.0	+2.6
CM09	Chiang Mai Arr	69.88	82	P	P	20 01 26.1	-6.3
CM04	Chiang Mai Arr	69.89	82	P	P	20 01 25.1	-7.4
CM36	Chiang Mai Arr	69.91	82	P	P	20 01 33.0	+0.3
UMPA	Umpang Tak	71.06	84	P	P	20 01 54.0	+14
PSI	Prapat	79.15	95	LR	LR	20 42 38.0	
	comp=E,42nm,18.3s,baz=261,slow=40						

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*NOU **19** 19:54:46.5, 16°40S×168°29E, h0km, MLv5.2, Vanuatu Islands*

*IDC **19** 19:54:47.4±1.0, 16°49S×168°11E, h0km, mb4.2/15, mb1 4.4/16, mb1mx4.2/39, mbtmp4.2/16, ML4.3/1, MS3.7/5, Ms1 3.7/5, ms1mx3.3/33, Error ellipse: s-maj=28.7km s-min=17.4km az=132.0*

*NEIC **19** 19:54:48.7±1.7, 16°38S±0°03×168°04E±0°08, h10km±1km, mb4.7/25, Error ellipse: s-maj=13.6km s-min=5.8km az=268.0*

ISC 19 19:54:52.1±0.5**, 16°47S**±0°05×**168°12E**±0°08**, h35km, n63,** σ1^{s}**44**/60**, mb4.6**/25**, MS3.7**/7**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	Devils Point	1.25	177	P	Pn	19 55 10.0	-3.1
SANVU	Saraoutou	1.34	319		Pn	19 55 11.2	-3.2
SANVU	Saraoutou	1.34	319	P	Pn	19 55 12.0	-2.4
LIFNC	LIFOU	4.37	191	P	Pn	19 55 55.4	-0.6
KOUNC	Koumac, New Ca	5.45	221	P	Pn	19 56 11.4	+0.5
YATNC	Mamie plateau,	5.68	192	P	Pn	19 56 13.0	-1.1
DZM	Mont Dzumac	5.79	196	Pn	Pn	19 56 14.6	-1.1
	7.5nm,0.3s,baz=289,slow=18,SNR=82						
DZM				Sn	Sn	19 57 22.1	+1.1
	2.3nm,0.3s,baz=318,slow=23,SNR=7.2						
DZM	Mont Dzumac	5.79	196	*e*Pn	Pn	19 56 15.2	-0.5
	30nm,0.3s						
DZM				*e*Sn	Sn	19 57 13.7	-7.3
	6.2nm,0.3s						
DZM	Mont Dzumac	5.79	196		Pn	19 56 15.4	-0.3
DZM	Mont Dzumac	5.79	196	P	Pn	19 56 15.4	-0.3
ONTNC	Ouen Toro	6.02	195	P	Pn	19 56 18.9	+0.2
OUENC	Ouen Island, N	6.04	191	P	Pn	19 56 18.7	-0.3
MSVF	Nonsavu	9.58	99		Pn	19 57 07.6	-0.1
CTA	Charters Tower	21.07	257	P	P	19 59 32.9	-0.6
	4.5nm,1.0s,baz=62,slow=14,SNR=2.7						
PMG	Port Moresby	21.58	286	P	P	19 59 40.0	+1.0
	6.5nm,0.8s,baz=121,slow=9.6,SNR=3.8						
STKA	Stephens Creek	28.54	233	P	P	20 00 45.4	+0.7
	4.3nm,0.8s,baz=35,slow=12,SNR=6.5						
STKA				LR	LR	20 12 10.3	
	comp=Z,117nm,18.9s,baz=34,slow=37						
STKA	Stephens Creek	28.54	233	P	P	20 00 45.4	+0.7
WRA	Warramunga Arr	32.24	259	P	P	20 01 16.2	-1.3
	0.9nm,0.8s,baz=89,slow=9.6,SNR=5.0						
WRA	Warramunga Arr	32.24	259	P	P	20 01 16.6	-0.9
AS31	Alice Springs	32.86	252	P	P	20 01 22.9	0.0
ASAR	Alice Springs	32.86	252	P	P	20 01 23.2	+0.2
	13nm,0.8s,baz=79,slow=8.5,SNR=117						
ASAR				LR	LR	20 13 51.1	
	comp=Z,137nm,19.2s,baz=84,slow=35						
ASAR	Alice Springs	32.86	252	P	P	20 01 23.5	+0.6
GUMO	Guam	37.68	321	LR	LR	20 15 02.1	
	comp=Z,96nm,21.2s,baz=122,slow=32						
TBI	Tubuai	40.36	107	*e*LR	LR	20 13 39.2	
	comp=Z,106nm,30.5s						
PPT2	Papeete2	40.41	98	*e*LR	LR	20 13 33.4	
	comp=Z,125nm,24.2s						
FITZ	Fitzroy Crossi	40.53	261	LR	LR	20 19 16.6	
	comp=Z,124nm,18.4s,baz=85,slow=36						
JOW	Kunigami	57.87	317	LR	LR	20 27 26.3	
	comp=Z,100nm,19.9s,baz=100,slow=34						
MJAR	Matsushiro Arr	59.81	332	P	P	20 04 53.2	-0.8
	5.5nm,0.9s,baz=167,slow=8.2,SNR=9.1						
MJAR	Matsushiro Arr	59.81	332	P	P	20 04 53.6	-0.5
MJAR				IAmb	IAmb	20 05 00.8	
	comp=Z,10nm,1.5s						
KSRS	Korea Array	65.63	326	P	P	20 05 33.4	+0.7
	comp=Z,1.5nm,0.9s,baz=146,slow=6.9,SNR=6.3						
USA0B	Ussuriysk Arra	68.80	333	P	P	20 05 52.4	-0.2
USRK	Ussuriysk Ar.	68.80	333	P	P	20 05 55.4	+2.7
	comp=Z,3.8nm,0.7s,baz=107,slow=6.6,SNR=7.7						
USRK	Ussuriysk Ar.	68.80	333	P	P	20 05 51.7	-0.9
MDJ	Mudanjiang	70.19	332	P	P	20 06 02.0	+0.7
QSPA	South Pole Qui	73.57	180	P	P	20 06 21.7	+0.2
QSPA				IAmb	IAmb	20 06 26.6	
	comp=Z,8.7nm,1.1s						
BJT	Baijiatuau	74.11	321	P	P	20 06 25.4	+0.5
BJT				IAmb	IAmb	20 06 27.6	
	comp=Z,8.5nm,1.2s						
CMAR	Chiang Mai Arr	76.40	294	P	P	20 06 39.9	+1.4
	comp=Z,1.0nm,1.1s,baz=119,slow=4.4,SNR=4.3						
ULN	Ulaanbaatar	84.01	324	P	P	20 07 19.8	+0.8
ULN				IAmb	IAmb	20 07 21.7	
	comp=Z,5.3nm,1.1s						
SUA	Susitna One	84.27	19	P	P	20 07 20.1	+0.1
SONM	Songino Array	84.37	323	P	P	20 07 21.6	+0.8
	comp=Z,1.7nm,1.0s,baz=160,slow=4.7,SNR=8.6						
SONM	Songino Array	84.37	323	P	P	20 07 21.7	+0.8
YBH	Yreka Blue Hor	86.07	45	P	P	20 07 31.2	+1.7
	comp=Z,3.5nm,1.0s,baz=261,slow=5.8,SNR=3.8						
YBH	Yreka Blue Hor	86.07	45	P	P	20 07 28.2	-1.2
YBH				IAmb	IAmb	20 07 35.0	
	comp=Z,7.6nm,1.2s						
CMB	Columbia Colle	86.13	49	P	P	20 07 29.7	-0.1
CMB				IAmb	IAmb	20 07 31.9	
	comp=Z,7.2nm,1.2s						
ISA	Isabella, Lake	86.59	51		P	20 07 32.7	+0.6
ISA				IAmb	IAmb	20 07 47.6	
	comp=Z,4.9nm,0.8s						
OMMB	Old Mammoth Mi	86.96	49	P	P	20 07 35.6	+1.4
WAKR	Walker	87.00	49	P	P	20 07 34.2	0.0
WAKR				IAmb	IAmb	20 07 37.0	
	comp=Z,5.3nm,1.0s						
PAHR	Pah Rah Range	87.52	47		P	20 07 37.3	+0.6
PAHR				IAmb	IAmb	20 08 01.7	
	comp=Z,5.2nm,1.0s						
HDA	Harding Lake	87.64	18	P	P	20 07 36.1	-0.3
HDA				IAmb	IAmb	20 07 38.2	
	comp=Z,3.6nm,1.0s						
NVAR	Mina Array Bea	87.79	49	P	P	20 07 39.5	+1.4
	comp=Z,3.3nm,0.9s,baz=228,slow=7.9,SNR=8.1						
ILAR	Eielson Array	87.92	18	P	P	20 07 37.3	-0.5
	comp=Z,0.8nm,1.0s,baz=243,slow=6.3,SNR=5.6						
ILAR	Eielson Array	87.92	18	P	P	20 07 37.6	-0.2
TPNV	Topopah Spring	88.73	51	P	P	20 07 43.6	+1.1
I07A	Izee	89.20	43		P	20 07 44.6	+0.1
I07A				IAmb	IAmb	20 08 04.6	
	comp=Z,5.7nm,1.2s						
SHPR	Sheep Range	89.39	52		P	20 07 45.9	+0.3
W13A	Hualapai Mount	89.87	53		P	20 07 49.5	+1.6
G08A	Pilot Rock	90.04	42	P	P	20 07 48.7	+0.3
G08A				IAmb	IAmb	20 07 51.5	
	comp=Z,7.2nm,1.2s						
F10A	Beach Ranch, E	91.42	42	P	P	20 07 55.2	+0.5
U15A	North Rim	91.53	53	P	P	20 07 56.5	+0.7
U15A				IAmb	IAmb	20 08 18.0	
	comp=Z,3.7nm,0.9s						
YKA	Yellowknife Ar	98.71	27	P	P	20 08 26.5	-1.0
	comp=Z,0.5nm,0.9s,baz=249,slow=4.0,SNR=4.8						
MKAR	Makanchi Array	99.02	316	P	Pdif	20 08 29.7	+0.4
	comp=Z,0.2nm,0.7s,baz=116,slow=3.4,SNR=3.4						
DAVOX	Davos/Dischmat	144.79	334	PKP	PKPdf	20 14 26.1	+0.5
	comp=Z,1.8nm,0.7s,baz=90,slow=8.3,SNR=5.3						
TUE	Stuetta	145.26	334		PKPdf	20 14 27.1	+0.6

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*BJI **19** 19:56:31.5±0.0, 16°30S×168°20E, h5km, mB5.3/26, mb4.7/48, Ms5.0/7, Ms7 4.6/7*

*IDC **19** 19:56:32.6±0.8, 16°37S×168°25E, h0km, mb4.5/22, mb1 4.7/23, mb1mx4.5/42, mbtmp4.5/23, ML4.7/1, MS3.8/5, Ms1 3.8/5, ms1mx3.4/28, Error ellipse: s-maj=25.4km s-min=15.5km az=144.0*

*MOS **19** 19:56:33.1±1.1, 16°18S×168°10E, h11km, mb4.8/6, Error ellipse: s-maj=10.8km s-min=8.8km az=15.7*

*NEIC **19** 19:56:35.6±1.8, 16°39S±0°06×168°10E±0°03, h25km±5km, mb5.1/83, Error ellipse: s-maj=9.9km s-min=3.6km az=160.0*

ISC 19 19:56:37.6±0.4**, 16°46S**±0°05×**168°15E**±0°07**, h35km, n235,** σ1^{s}**28**/236**, mb5.0**/80**, MS3.7**/7**, 1C-1D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	1.36	318	Pn	Pn	19 56 57.5	-2.6
LIFNC	LIFOU	4.38	191	P	Pn	19 57 41.8	+0.2
YATNC	Mamie plateau,	5.69	192	P	Pn	19 57 59.9	+0.2
DZM	Mont Dzumac	5.81	196	Pn	Pn	19 58 02.5	+1.2
	19nm,0.3s,baz=348,slow=18,SNR=15						
DZM				Sn	Sn	19 59 07.6	+0.9
	baz=307,slow=20,SNR=3.2						
DZM	Mont Dzumac	5.81	196	*e*Pn	Pn	19 58 02.1	+0.8
	48nm,0.3s						
DZM				*e*Sn	Sn	19 59 00.6	-6.2
	23nm,0.3s						
DZM	Mont Dzumac	5.81	196	Pn	Pn	19 58 00.3	-1.0
ONTNC	Ouen Toro	6.03	195	P	Pn	19 58 06.6	+2.3
OUENC	Ouen Island, N	6.05	192	P	Pn	19 58 06.1	+1.5
MSVF	Nonsavu	9.55	99	P	Pn	19 58 57.0	+4.3
MSVF	Nonsavu	9.55	99	Pn	Pn	19 58 52.5	-0.2
HNR	Honiara	10.62	310	Pn	Pn	19 59 11.7	+4.4
	9.2nm,0.3s,baz=36,slow=2.6,SNR=7.1						
HNR				Sn	Sn	20 01 10.3	+5.3
	6.8nm,0.3s,baz=198,slow=9.6,SNR=2.9						
HNR				LR	LR	20 02 47.5	
	comp=Z,797nm,18.5s,baz=160,slow=35						
HNR	Honiara	10.62	310	P	Pn	19 59 03.2	-4.1
HNR	Honiara	10.62	310		Pn	19 59 03.2	-4.1
CTA	Charters Tower	21.10	257	P	P	20 01 21.9	+2.6
	8.2nm,1.0s,baz=81,slow=14,SNR=3.7						
PMG	Port Moresby	21.62	286	P	P	20 01 26.5	+1.8
	14nm,0.9s,baz=242,slow=12,SNR=4.4						
PMG	Port Moresby	21.62	286	P	P	20 01 22.7	-2.1
HIZ	Hauiti	22.74	166	P	P	20 01 34.2	-2.4
HIZ				IAmb	IAmb	20 01 43.2	
	comp=Z,64nm,1.2s						
URZ	Urewera	23.10	162	LR	LR	20 08 29.1	
	comp=Z,396nm,18.6s,baz=31,slow=31						
COEN	Coen	24.23	273	P	P	20 01 48.5	-2.8
TUWZ	Tuamarina	25.38	170	P	P	20 02 00.2	-1.3
STKA	Stephens Creek	28.57	233	P	P	20 02 32.3	+1.9
	comp=Z,9.8nm,0.8s,baz=62,slow=8.1,SNR=17						
STKA				PcP	PcP	20 05 41.8	+0.6
	comp=Z,1.7nm,0.8s,baz=326,slow=3.6,SNR=3.0						
STKA	Stephens Creek	28.57	233	P	P	20 02 29.8	-0.6
WR0	Warramunga Arr	32.09	259	P	P	20 02 56.3	-5.3
WRA	Warramunga Arr	32.27	259	P	P	20 03 02.8	-0.5
	comp=Z,2.5nm,1.0s,baz=70,slow=5.2,SNR=2.6						
WRA				PcP	PcP	20 05 50.8	-0.3
	comp=Z,0.6nm,0.7s,baz=101,slow=3.5,SNR=2.1						
WRA	Warramunga Arr	32.27	259	P	P	20 03 02.8	-0.5
AS31	Alice Springs	32.90	252	P	P	20 03 09.5	+0.8
ASAR	Alice Springs	32.90	252	P	P	20 03 09.4	+0.7
	comp=Z,22nm,0.7s,baz=79,slow=8.8,SNR=68						
ASAR	Alice Springs	32.90	252	P	P	20 03 09.2	+0.5
TBI	Tubuai	40.33	107	*e*LR	LR	20 15 25.9	
	comp=Z,134nm,32.5s						
PPT2	Papeete2	40.38	98	*e*LR	LR	20 15 21.8	
	comp=Z,132nm,27.0s						
MJAR	Matsushiro Arr	59.83	332	P	P	20 06 39.2	-0.4
	comp=Z,8.9nm,1.0s,baz=165,slow=7.7,SNR=9.7						
LEM	Lembang	59.87	272	LR	LR	20 31 54.7	
	comp=Z,79nm,20.8s,baz=102,slow=35						
KSRS	Korea Array	65.64	326	P	P	20 07 18.6	+0.4
	comp=Z,1.5nm,0.8s,baz=143,slow=7.3,SNR=4.8						
KSRS				LR	LR	20 34 06.2	
	comp=Z,41nm,20.4s,baz=198,slow=34						
YSS	Yuzh-Sakhalins	67.13	341	*i* P	P	20 07 27.6	0.0
YSS				pmax	pmax		
	comp=Z,7.0nm,1.0s						
NJ2	Nanjing	67.51	316	*e*P	P	20 07 30.6	+0.3
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
MSHR	Mys Shultsa	67.91	331	*i* P	P	20 07 33.0	+0.4
USRK	Ussuriysk Ar.	68.81	333	P	P	20 07 39.7	+1.5
	comp=Z,7.1nm,0.9s,baz=153,slow=6.0,SNR=9.8						
USRK				LR	LR	20 33 54.3	
	comp=Z,41nm,21.7s,baz=144,slow=33						
USRK	Ussuriysk Ar.	68.81	333	P	P	20 07 38.6	+0.4
COCO	West Island	68.92	263	*i* P	P	20 07 39.2	-0.4
PETK	Petropavlovsk-	69.87	353	P	P	20 07 44.4	-0.2
	comp=Z,2.1nm,0.8s,baz=160,slow=9.1,SNR=2.4						
DL2	Dalian	70.19	323	P	P	20 07 46.9	+0.1
DL2				pmax	pmax		
	comp=Z,35nm,1.0s						
MDJ	Mudanjiang	70.20	332	P	P	20 07 47.8	+1.0
MDJ				pP	pP	20 07 50.9	-6.7
MDJ				sP	sP	20 07 52.6	-9.1
MDJ				S	S	20 17 00.1	+4.2
MDJ				sS	pS	20 17 06.0	-3.3
MDJ				ScS	ScS	20 17 49.6	+2.9
MDJ				SS	SS	20 21 29.3	+2.4
MDJ				pmax	pmax		
	comp=Z,18nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,130nm,4.0s						
MDJ				LR	LR		
	comp=Z,260nm,6.0s						
MDJ				LR	LR		
	comp=Z,350nm,5.3s						
MDJ	Mudanjiang	70.20	332	P	P	20 07 46.4	-0.4
MDJ				IAmb	IAmb	20 07 49.0	
	comp=Z,13nm,0.8s						
PSI	Prapat	70.96	279	P	P	20 07 51.2	-1.1
	comp=Z,4.8nm,0.9s,baz=181,slow=6.2,SNR=5.2						
CN2	Changchun	71.56	329	*e*P	P	20 07 53.4	-1.7
CN2				pmax	pmax		
	comp=Z,10.0nm,1.2s						
KLR	Kul'dur	72.93	336	P	P	20 08 03.7	+0.6
	comp=Z,3.8nm,1.0s,baz=116,slow=4.6,SNR=9.5						
GYA	Guiyang	73.39	305	⇓P	P	20 08 07.1	+0.5
GYA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
BJT	Baijiatuau	74.13	321	P	P	20 08 09.7	-0.7
BJT				pmax	pmax		
	comp=Z,10.0nm,1.1s						
BJT	Baijiatuau	74.13	321	P	P	20 08 09.7	-0.7
BJI	Beijing	74.14	321	P	P	20 08 10.9	+0.5
BJI				pmax	pmax		
	comp=Z,6.0nm,1.1s						
XAN	Xi'an	75.48	313	P	P	20 08 18.8	+0.3
XAN				pP	pP	20 08 22.6	-6.7
XAN				sP	PcP	20 08 25.5	-5.9
XAN				pmax	pmax		
	comp=Z,9.0nm,0.8s						
XAN				pmax	pmax		
	comp=Z,240nm,4.3s						
XAN	Xi'an	75.48	313	P	P	20 08 17.8	-0.7
XAN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
XAN	Xi'an	75.48	313	P	P	20 08 17.8	-0.7
KMI	Kunming	75.94	302	⇑P	P	20 08 22.5	+1.0
KMI				pP	pP	20 08 25.0	-7.4
KMI				sP	PcP	20 08 27.1	-6.7
KMI				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KMI	Kunming	75.94	302	P	P	20 08 19.6	-1.9
KMI				pmax	pmax		
	comp=Z,15nm,1.2s						
KMI	Kunming	75.94	302	P	P	20 08 19.6	-1.9
CMAR	Chiang Mai Arr	76.43	294	P	P	20 08 24.8	+0.7
	comp=Z,0.9nm,0.7s,baz=128,slow=4.9,SNR=9.2						
CMAR	Chiang Mai Arr	76.43	294	P	P	20 08 24.2	+0.1
HHC	Hu-ho-hao-te	77.45	320	*e*P	P	20 08 30.3	+0.8
HHC				pP	PcP	20 08 33.4	-6.4
HHC				pmax	pmax		
	comp=Z,5.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,110nm,6.6s						
CD2	Chengdu	77.73	308	P	P	20 08 31.6	+0.3
CD2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
LZH	Lanzhou	80.11	312	*e*P	P	20 08 45.3	+1.0
LZH				pP	PcP	20 08 49.6	-2.0
LZH				sP	pP	20 08 53.3	-2.0
LZH				pmax	pmax		
	comp=Z,16nm,1.0s						
HOM	Homer	82.57	19	P	P	20 08 57.4	+0.8
	baz=219						
CAPN	Captain Cook N	83.59	19	P	P	20 09 03.2	+1.4
	baz=219						
O22K	Cooper Landing	83.82	20	P	P	20 09 02.3	-0.7
	baz=220						
O22K	Cooper Landing	83.82	20	P	P	20 09 03.2	+0.2
YAK	Yakutsk	83.93	343	*i* P	P	20 09 03.6	+0.1
YAK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ULN	Ulaanbaatar	84.03	324	P	P	20 09 04.9	+0.3
ULN				pmax	pmax		
	comp=Z,14nm,1.1s						
ULN	Ulaanbaatar	84.03	324	P	P	20 09 04.9	+0.3
ULN				IAmb	IAmb	20 09 10.8	
	comp=Z,14nm,1.1s						
SUA	Susitna One	84.25	18	P	P	20 09 04.3	-1.0
RC01	Rabbit Creek A	84.28	19	P	P	20 09 06.0	+0.7
	baz=220						
SONM	Songino Array	84.39	323	P	P	20 09 06.7	+0.3
	comp=Z,5.3nm,1.2s,baz=136,slow=4.8,SNR=9.1						
SONM	Songino Array	84.39	323	P	P	20 09 04.6	-1.8
GTA	Gaotai	84.47	314	*e*P	P	20 09 06.4	-0.6
GTA				pP	PcP	20 09 10.6	0.0
GTA				sP	pP	20 09 13.9	-4.1
GTA				pmax	pmax		
	comp=Z,3.0nm,1.4s						
PMR	Palmer	84.85	19	P	P	20 09 08.2	0.0
PMR				pmax	pmax		
	comp=Z,25nm,1.3s						
PMR	Palmer	84.85	19	P	P	20 09 08.2	0.0
SHL	Shillong	85.13	298	P	P	20 09 10.6	-0.1
SHL				pmax	pmax		
	comp=Z,16nm,0.8s						
SHL	Shillong	85.13	298	P	P	20 09 10.6	-0.1
O02D	Mt. Diablo Mer	85.31	46	P	P	20 09 11.9	+0.7
	baz=244						
L02E	Cave Junction	85.64	44	P	P	20 09 13.8	+1.2
	baz=243						
WDC	Whiskeytown Da	85.66	46	P	P	20 09 13.0	+0.2
WDC				pmax	pmax		
	comp=Z,12nm,1.2s						
WDC	Whiskeytown Da	85.66	46	P	P	20 09 13.0	+0.2
WDC				IAmb	IAmb	20 09 18.9	
	comp=Z,12nm,1.1s						
N02D	Trinity Center	85.72	45	P	P	20 09 14.0	+0.8
	baz=244						
M02C	Callahan	85.80	45	P	P	20 09 14.3	+0.7
	baz=244						
KTH	Kantishna Hill	85.83	17	P	P	20 09 12.5	-0.7
KTH				IAmb	IAmb	20 09 16.6	
	comp=Z,12nm,1.2s						
K02D	Willamette Mer	85.84	43	P	P	20 09 14.5	+0.8
	baz=243						
TRF	Thorofare Moun	85.93	17	P	P	20 09 13.4	-0.4
ORV	Oroville	85.94	47	P	P	20 09 14.1	-0.1
ORV				pmax	pmax		
	comp=Z,12nm,1.1s						
ORV	Oroville	85.94	47	P	P	20 09 14.1	-0.1
ORV				IAmb	IAmb	20 09 15.5	
	comp=Z,12nm,1.1s						
O03E	Paynes Creek	86.04	46	P	P	20 09 14.5	-0.3
	baz=245,SNR=6.4						
YBH	Yreka Blue Hor	86.05	45	P	P	20 09 15.2	+0.5
	comp=Z,7.0nm,1.0s,baz=77,slow=15,SNR=8.1						
YBH	Yreka Blue Hor	86.05	45	P	P	20 09 14.7	-0.1
YBH				IAmb	IAmb	20 09 21.7	
	comp=Z,14nm,1.1s						
AFDM	Forest Hills D	86.06	48	P	P	20 09 14.6	-0.2
AFDM				IAmb	IAmb	20 09 16.1	
	comp=Z,13nm,1.0s						
CMB	Columbia Colle	86.10	49	P	P	20 09 14.9	-0.2
CMB				pmax	pmax		
	comp=Z,9.0nm,1.0s						
CMB	Columbia Colle	86.10	49	P	P	20 09 14.9	-0.2
CMB				IAmb	IAmb	20 09 16.4	
	comp=Z,9.4nm,0.9s						
HUMO	Hull Mountain	86.27	44	P	P	20 09 15.7	0.0
HUMO				IAmb	IAmb	20 09 17.7	
	comp=Z,9.2nm,1.0s						
MWC	Mount Wilson	86.32	53	P	P	20 09 16.1	-0.3
MWC				pmax	pmax		
	comp=Z,14nm,1.1s						
MWC	Mount Wilson	86.32	53	P	P	20 09 16.1	-0.3
MWC				IAmb	IAmb	20 09 22.2	
	comp=Z,14nm,1.1s						
I03D	Drain, OR	86.49	43	P	P	20 09 17.0	+0.2
	baz=243						
L04D	Klamath Falls	86.53	44	P	P	20 09 17.8	+0.5
	baz=244						
MCK	McKinley	86.53	18	P	P	20 09 17.3	+0.7
	baz=221						
ISA	Isabella, Lake	86.56	51	P	P	20 09 17.3	-0.1
	baz=247,SNR=12						
ISA	Isabella, Lake	86.56	51	P	P	20 09 16.6	-0.8
ISA				pmax	pmax		
	comp=Z,13nm,1.0s						
ISA	Isabella, Lake	86.56	51	P	P	20 09 16.6	-0.8
ISA				IAmb	IAmb	20 09 23.5	
	comp=Z,13nm,0.9s						
EDW2	Edwards Air Fo	86.62	52	P	P	20 09 18.1	+0.4
	baz=247						
BFSC	Mount Baldy Ra	86.63	53	P	P	20 09 18.2	+0.3
	baz=248						
M04C	Macdoel	86.65	45	P	P	20 09 17.8	-0.1
	baz=245						
CBX	Cerro Bola	86.68	55	P	P	20 09 18.9	+0.7
BEKR	Beckworth	86.87	47	P	P	20 09 18.3	-0.7
BEKR				IAmb	IAmb	20 09 24.9	
	comp=Z,13nm,1.1s						
MDPB	Devils Postpil	86.88	49	P	P	20 09 19.0	-0.2
MDPB				IAmb	IAmb	20 09 20.7	
	comp=Z,14nm,1.0s						
OMMB	Old Mammoth Mi	86.93	49	P	P	20 09 18.4	-1.1
OMMB				IAmb	IAmb	20 09 26.2	
	comp=Z,17nm,1.1s						
WAKR	Walker	86.97	48	P	P	20 09 19.7	+0.2
MLY	Manley	87.03	16	P	P	20 09 19.5	+0.4
	baz=219						
MONP2	Monument Peak	87.08	55	P	P	20 09 20.5	+0.2
	baz=248						
PNTR	Pine Nut	87.09	48	P	P	20 09 20.4	+0.3
PNTR				IAmb	IAmb	20 09 26.3	

	comp=Z,17nm,1.1s						
J04D	Umpqua Nationa	87.10	43	P	P	20 09 20.2	+0.1
	baz=244						
I04A	Tendick Farm,	87.15	43	P	P	20 09 20.6	+0.6
	baz=244						
NEA2	Nenana	87.15	17	P	P	20 09 20.4	+0.8
	baz=221						
CWC	Cottonwood Cre	87.15	51	P	P	20 09 20.5	+0.1
	baz=247						
LSA	Lhasa	87.20	302	P	P	20 09 21.6	+0.4
LSA				pmax	pmax		
	comp=Z,20nm,0.8s						
LSA	Lhasa	87.20	302	P	P	20 09 21.3	+0.1
LSA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
LSA	Lhasa	87.20	302	P	P	20 09 21.3	+0.1
IKP	In-Ko-Pah, Jac	87.24	55	P	P	20 09 20.7	-0.2
	baz=249						
H04D	Lebanon	87.25	42	P	P	20 09 21.5	+1.0
	baz=244						
YERR	Yerington	87.30	48	P	P	20 09 20.5	-0.6
YERR				IAmb	IAmb	20 09 27.1	
	comp=Z,18nm,1.4s						
PFO	Pinyon Flats O	87.32	54	P	P	20 09 21.6	+0.4
	baz=248						
TPFO	Pinon Flats	87.32	54	P	P	20 09 21.7	+0.5
	baz=248						
WRH	Wood River Hil	87.34	17	P	P	20 09 19.2	-1.2
MPMC	Manual Prospec	87.45	51	P	P	20 09 21.9	0.0
	baz=248						
ZAK	Zakamensk	87.45	325	*e*P	P	20 09 21.4	-0.1
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.4s						
PAHR	Pah Rah Range	87.49	47	P	P	20 09 21.2	-0.8
LHV	Little Huntoon	87.54	49	P	P	20 09 22.5	+0.5
CCB	Clear Creek Bu	87.55	17	P	P	20 09 20.0	-1.5
HDA	Harding Lake	87.62	18	P	P	20 09 22.3	+0.5
	baz=223						
HDA	Harding Lake	87.62	18	P	P	20 09 21.0	-0.8
HDA				IAmb	IAmb	20 09 27.6	
	comp=Z,9.9nm,1.2s						
E03A	Lebam	87.64	40	P	P	20 09 22.3	0.0
MDM	Murphy Dome	87.66	17	P	P	20 09 20.3	-1.7
RYN	Ryan	87.68	49	P	P	20 09 21.9	-1.0
RYN				IAmb	IAmb	20 09 28.9	
	comp=Z,11nm,1.0s						
H04A	Detroit Lake	87.68	42	P	P	20 09 21.3	-1.3
H04A				IAmb	IAmb	20 09 29.6	
	comp=Z,6.9nm,1.0s						
K05A	Summer Lake	87.69	44	P	P	20 09 23.7	+0.8
J05D	Fort Rock, OR	87.70	44	P	P	20 09 22.7	-0.2
	baz=245,SNR=6.3						
COLA	College	87.71	17	*i* P	P	20 09 20.2	-2.0
COLA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MOD	Modoc Plateau	87.75	45	P	P	20 09 23.2	0.0
MOD				IAmb	IAmb	20 09 24.5	
	comp=Z,9.6nm,1.1s						
NVAR	Mina Array Bea	87.76	49	P	P	20 09 24.1	+0.8
	comp=Z,7.2nm,0.8s,baz=229,slow=8.1,SNR=18						
NVAR	Mina Array Bea	87.76	49	P	P	20 09 23.2	-0.1
BELC	Belle Mtn. Jos	87.82	54	P	P	20 09 24.0	+0.3
	baz=249,SNR=8.8						
HEC	Hector,Ludlow	87.86	53	P	P	20 09 23.6	-0.1
	baz=248						
NV11	Mina Array Sit	87.87	49	P	P	20 09 23.8	0.0
GRAC	Grapevine Rang	87.89	51	P	P	20 09 24.6	+0.8
	baz=248						
IL31		87.91	18	P	P	20 09 21.8	-1.3
ILAR	Eielson Array	87.91	18	P	P	20 09 21.3	-1.9
	comp=Z,1.9nm,0.8s,baz=240,slow=5.3,SNR=14						
ILAR	Eielson Array	87.91	18	P	P	20 09 20.6	-2.6
POKR	Poker Plat Res	88.01	17	P	P	20 09 24.0	+0.3
	baz=222						
FURC	Furnace Creek,	88.07	51	P	P	20 09 24.9	+0.3
	baz=248						
I05D	Terrebonne, OR	88.08	43	P	P	20 09 25.0	+0.4
	baz=245						
PINE	Pine Mountain	88.11	43	P	P	20 09 24.9	0.0
PINE				IAmb	IAmb	20 09 31.3	
	comp=Z,7.9nm,1.0s						
BC3	Big Chuckawall	88.11	54	P	P	20 09 25.4	+0.4
	baz=249						
SCRK	Sand Creek	88.21	19	P	P	20 09 25.6	+0.8
	baz=225						
E04D	Cinebar	88.26	40	P	P	20 09 26.2	+0.9
	baz=244						
SHOC	Shoshone, Teco	88.30	52	P	P	20 09 26.3	+0.5
	baz=248						
GMRC	Granite Mounta	88.36	53	P	P	20 09 26.3	+0.1
	baz=249,SNR=5.9						
D03D	Eldon	88.37	39	P	P	20 09 26.9	+1.2
	baz=244						
TPH	Tonopah	88.41	50	P	P	20 09 26.3	-0.1
TPH				pmax	pmax		
	comp=Z,92nm,1.4s						
TPH	Tonopah	88.41	50	P	P	20 09 26.3	-0.1
IRM	Iron Mountain	88.53	54	P	P	20 09 27.5	+0.6
	baz=249,SNR=6.9						
TPNV	Topopah Spring	88.71	51	P	P	20 09 28.0	+0.1
	baz=248						
TPNV	Topopah Spring	88.71	51	P	P	20 09 26.4	-1.4
TPNV				pmax	pmax		
	comp=Z,13nm,1.0s						
TPNV	Topopah Spring	88.71	51	P	P	20 09 26.4	-1.4
COLD	Coldfoot	88.87	15	P	P	20 09 28.7	+1.0
	baz=220						
D05A	Enumclaw	88.89	40	P	P	20 09 27.0	-1.2
WVOR	Wild Horse Val	89.09	45	P	P	20 09 27.5	-2.0
WVOR				pmax	pmax		
	comp=Z,18nm,1.4s						
WVOR	Wild Horse Val	89.09	45	P	P	20 09 27.5	-2.0
113A	Mohawk Valley,	89.13	56	P	P	20 09 28.1	-1.6
113A				IAmb	IAmb	20 09 36.0	
	comp=Z,11nm,1.2s						
A04D	Lummi Island	89.13	38	P	P	20 09 29.8	+0.5
	baz=244						
I07A	Izee	89.17	43	P	P	20 09 28.5	-1.3
I07A				IAmb	IAmb	20 09 36.1	
	comp=Z,17nm,1.3s						
B05A	Bryant	89.29	39	P	P	20 09 31.1	+1.1
	baz=244						
SHPR	Sheep Range	89.36	52	P	P	20 09 31.1	+0.2
SHPR				IAmb	IAmb	20 09 37.4	
	comp=Z,10nm,1.2s						
PDMCI	Parker Dam,Lak	89.36	54	P	P	20 09 31.5	+0.7
	baz=250						
214A	Organ Pipe Nat	89.61	57	P	P	20 09 32.5	+0.5
	baz=250						
214A	Organ Pipe Nat	89.61	57	P	P	20 09 30.4	-1.6
R11A	Troy Canyon, C	89.71	50	P	P	20 09 33.0	+0.5
	baz=249						
R11A	Troy Canyon, C	89.71	50	P	P	20 09 31.5	-1.0
LTY	Liberty	89.73	40	P	P	20 09 31.4	-0.9
LTY				IAmb	IAmb	20 09 33.4	
	comp=Z,10nm,1.1s						
PRN	Pahroc Range	89.76	51	P	P	20 09 32.2	-0.6
W13A	Hualapai Mount	89.84	53	P	P	20 09 33.1	-0.2
W13A				IAmb	IAmb	20 09 39.5	
	comp=Z,7.8nm,1.0s						
G08A	Pilot Rock	90.01	42	P	P	20 09 34.0	+0.3
G08A				IAmb	IAmb	20 09 35.1	
	comp=Z,14nm,1.1s						
HAWA	Hanford	90.09	41	P	P	20 09 33.9	0.0
HAWA				IAmb	IAmb	20 09 40.0	
	comp=Z,14nm,1.1s						
E08A	Dider Farm, El	90.43	41	P	P	20 09 35.3	-0.1
D08A	Wollman Farm,	90.74	41	P	P	20 09 36.1	-0.8
D08A				IAmb	IAmb	20 09 38.4	
	comp=Z,7.7nm,0.9s						
ELK	Elko	90.82	48	P	P	20 09 38.1	+0.4
	comp=Z,4.4nm,1.0s,baz=242,slow=5.2,SNR=4.9						
ELK	Elko	90.82	48	P	P	20 09 37.8	0.0
ELK				IAmb	IAmb	20 09 44.3	
	comp=Z,7.6nm,1.1s						
BMO	Blue Mountains	90.92	43	P	P	20 09 37.5	-0.4
BMO				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BMO	Blue Mountains	90.92	43	P	P	20 09 37.5	-0.4
LCMT	Little Creek M	90.98	52	P	P	20 09 38.4	0.0
B08A	Colville Reser	91.01	40	P	P	20 09 38.0	-0.1
B08A				IAmb	IAmb	20 09 39.1	
	comp=Z,7.3nm,0.9s						
E09A	Wood Farm, Sta	91.02	42	P	P	20 09 37.5	-0.7
E09A				IAmb	IAmb	20 09 39.5	
	comp=Z,14nm,1.2s						
CCUT	Cedar City	91.07	51	P	P	20 09 38.8	-0.2
TUC	Tucson	91.35	57	P	P	20 09 40.9	+0.7
	baz=252						
TUC	Tucson	91.35	57	P	P	20 09 39.8	-0.4
TUC				pmax	pmax		
	comp=Z,7.0nm,1.1s						
TUC	Tucson	91.35	57	P	P	20 09 39.8	-0.4
TUC				IAmb	IAmb	20 09 46.7	
	comp=Z,6.7nm,1.1s						
MFID	Camas Ranch	91.38	45	P	P	20 09 39.4	-0.7
MFID				IAmb	IAmb	20 09 41.5	
	comp=Z,9.8nm,1.1s						
F10A	Beach Ranch, E	91.40	42	P	P	20 09 37.2	-2.9
U15A	North Rim	91.50	53	P	P	20 09 39.7	-1.3
U15A				IAmb	IAmb	20 09 47.5	
	comp=Z,7.3nm,0.8s						
WUAZ	Wupatki	91.91	54	P	P	20 09 43.0	+0.1
	baz=251						
WUAZ	Wupatki	91.91	54	P	P	20 09 41.6	-1.2
WUAZ				IAmb	IAmb	20 09 49.2	
	comp=Z,6.6nm,1.0s						
MTPU	Mount Pierson	92.12	51	P	P	20 09 43.8	-0.2
MVU	Marysvale	92.25	51	P	P	20 09 44.1	-0.3
319A	Douglas	92.28	58	P	P	20 09 43.2	-1.3
NEW	Newport	92.33	40	P	P	20 09 44.0	-0.3
	comp=Z,2.9nm,0.8s,baz=157,slow=1.9,SNR=4.5						
NEW	Newport	92.33	40	P	P	20 09 44.8	+0.5
	baz=248						
NEW	Newport	92.33	40	P	P	20 09 44.0	-0.3
NEW	Newport	92.33	40	P	P	20 09 43.5	-0.8
HLID	Hailey	92.39	45	P	P	20 09 45.8	+0.9
	baz=250						
HVU	Hansel Valley	92.92	47	P	P	20 09 46.2	-1.1
HVU				pmax	pmax		
	comp=Z,6.0nm,1.0s						
HVU	Hansel Valley	92.92	47	P	P	20 09 46.2	-1.1
W18A	Petrified Fore	93.06	54	P	P	20 09 48.7	+0.5
	baz=252						
WMQ	Urumqi	94.54	314	*e*P	P	20 09 46.5	-8.1
WMQ				pmax	pmax		
	comp=Z,16nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,240nm,4.3s						
WMQ				LR	LR		
	comp=N,480nm,28.9s						
WMQ				LR	LR		
	comp=E,560nm,28.8s						
WMQ				LR	LR		
	comp=Z,47nm,29.1s						
BOZ	Bozeman (W)	94.94	44	P	P	20 09 54.7	-1.8
BOZ				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BOZ	Bozeman (W)	94.94	44	P	P	20 09 54.7	-1.8
BOZ				IAmb	IAmb	20 10 05.1	
	comp=Z,4.4nm,0.6s						
ANMO	Albuquerque	95.58	55	*i* P	P	20 09 59.6	-0.2
ANMO				pmax	pmax		
	comp=Z,1.0nm,0.7s						
TXAR	Lajitas Array	96.36	61	P	P	20 10 03.4	+0.1
	comp=Z,0.2nm,0.3s,baz=200,slow=7.6,SNR=2.7						
DGZ	Jazzator, Alta	96.53	320	*i* P	P	20 10 04.4	+0.7
DGZ				pmax	pmax		
	comp=Z,10.0nm,3.3s						
EGMT	Eagleton	96.90	42	P	P	20 10 02.9	-2.4
YKA	Yellowknife Ar	98.69	27	P	P	20 10 12.3	-0.6
	comp=Z,1.4nm,0.9s,baz=253,slow=4.2,SNR=12						
MK31	Makanchi Array	99.04	316	*i* P	Pdif	20 10 16.2	+1.3
MKAR	Makanchi Array	99.04	316	P	Pdif	20 10 15.3	+0.5
	comp=Z,0.8nm,1.0s,baz=101,slow=5.2,SNR=4.9						
MKAR	Makanchi Array	99.04	316	P	Pdif	20 10 13.2	-1.6
ZALV	Zalesovo Beam	99.28	323	P	Pdif	20 10 17.4	+1.7
	comp=Z,0.3nm,0.4s,baz=45,slow=9.0,SNR=3.6						
RAYN	Ar Rayn	125.94	287	PKIKP	PKPdf	20 15 36.8	+0.1
RAYN	Ar Rayn	125.94	287		PKPdf	20 15 36.8	+0.1
VYHS	Vyhne	139.40	329	*e*PKIKP	PKiKP	20 16 04.1	+0.6
VYHS	Vyhne	139.40	329	*e*PKP	PKiKP	20 16 04.1	+0.6
DAVOX	Davos/Dischmat	144.80	334	PKP	PKPbc	20 16 10.5	+0.4
	baz=186,slow=10						
TEOL	Teolo	145.09	331		PKPbc	20 16 09.1	-1.8
TUE	Stuetta	145.27	334		PKPbc	20 16 08.6	-3.1
INTR	Introdacqua	146.29	324		PKPdf	20 16 12.3	-1.4

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*IDC **19** 20:14:38.3±0.7, 1°.82N×126°.35E, h0^{km}, mb3.9/11, mb1 4.0/12, mb1mx3.8/53, mbtmp3.9/12, ML3.5/1, MS3.4/1, Ms1 3.4/1, ms1mx2.7/43, Error ellipse: s-maj=40.2km s-min=14.0km az=71.0*

*DJA **19** 20:14:42.6±0.6, 2°N±8°×12°7E±°, h10^{km}, M4.2/9, mb4.5/3, mB4.7/1, MLv4.0/9, Mw(mB)3.9/1*

*NEIC **19** 20:14:43.8±2.0, 1°.91N±0°.09×126°.58E±0°.07, h46^{km}±6^{km}, mb4.2/25, Error ellipse: s-maj=14.8km s-min=8.3km az=210.0*

ISC 19 20:14:44.1±0.5**, 1°.89N**±0°.06×**126°.63E**±0°.08**, h47^{km}, n62,** σ1^{s}.**17**/63**, mb4.1**/24**, 1D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.33	146		Pn	20 15 06.7	+0.4
TNTI	Ternate	1.33	146	P	Pn	20 15 06.5	+0.2
KMSI	Cibinong	2.95	244	P	Pn	20 15 28.1	-0.4
GTOI	Gorontalo	3.83	251	P	Pn	20 15 40.3	-0.2
SANI	Sanana	3.97	189	P	Pn	20 15 41.7	-0.8
DDMP	Don Marcelino,	4.29	348	*e*P	Pn	20 15 44.7	-2.1
DDMP				*e*S	Sn	20 16 38.5	+2.9
LUWI	Luwuk	4.83	233	Pn	Pn	20 15 53.5	-0.9
MRSI	Marisa	4.89	253	P	Pn	20 15 55.7	+0.5
SKMP	Bagumbayan, Su	5.05	336	*e*P	Pn	20 15 57.5	+0.2
SKMP				*e*S	Sn	20 16 53.0	-1.4
KCP	Kidapawan	5.31	343	⇓*e*P	Pn	20 16 12.7	+12
SIJI	Sorong	5.39	121	LR	LR	20 18 28.2	
	comp=Z,373nm,20.5s,baz=274,slow=41						
APSI	Ampana	5.71	241	P	Pn	20 16 04.9	-1.4
	0.2nm645nm51nm,0.9s						
TOLI2	Tolitoli	5.90	263		Pn	20 16 07.0	-1.9
BUKP	Musuan	6.15	345	*e*P	Pn	20 16 15.9	+3.4
PAGZ	Pagadian	6.74	331	*e*P	Pn	20 16 19.0	-1.7
MYLDM	Lahad Datu	8.75	292	Pn	Pn	20 16 49.4	+1.4
BNSI	Bone	9.03	226	P	Pn	20 16 52.2	+0.2
KAPI	Kappang	9.71	225	Pn	Pn	20 17 03.5	+2.3
KKM	Kota Kinabalu	11.18	292	Pn	Pn	20 17 21.5	+0.1
SBUM	Sibu	14.41	272	P	P	20 18 09.9	-1.3
FITZ	Fitzroy Crossi	19.89	183	P	P	20 19 11.2	-0.5
	0.1nm,0.3s,baz=27,slow=15,SNR=2.3						
FITZ	Fitzroy Crossi	19.89	183	P	P	20 19 11.0	-0.7
TPUB	Ta-pu	22.06	345	P	P	20 19 34.2	-1.0
WB0	Warramunga Arr	22.83	161	P	P	20 19 43.0	-0.4
WB0				IAmb	IAmb	20 19 46.7	
	comp=Z,8.2nm,0.8s						
WRAB	Tennant Creek	22.97	161	P	P	20 19 45.4	+0.6
WRAB				IAmb	IAmb	20 19 48.0	
	comp=Z,11nm,0.8s						
WRA	Warramunga Arr	22.98	161	P	P	20 19 44.5	-0.4
	comp=Z,7.1nm,0.7s,baz=342,slow=12,SNR=51						
WRA	Warramunga Arr	22.98	161	P	P	20 19 44.9	0.0
WB2	Warramunga Arr	22.98	161	P	P	20 19 45.1	+0.2
WB2				IAmb	IAmb	20 19 48.1	
	comp=Z,9.3nm,0.8s						
WR0	Warramunga Arr	23.06	161	P	P	20 19 45.5	-0.2
WR0				IAmb	IAmb	20 19 50.6	
	comp=Z,8.2nm,0.9s						
AS31	Alice Springs	26.37	165	P	P	20 20 17.8	+1.6
ASAR	Alice Springs	26.37	165	P	P	20 20 17.2	+1.0
	comp=Z,2.3nm,0.8s,baz=346,slow=14,SNR=19						
ASAR	Alice Springs	26.37	165	P	P	20 20 17.6	+1.4
CMAR	Chiang Mai Arr	31.75	303	P	P	20 21 04.5	+0.5
	comp=Z,0.4nm,0.8s,baz=128,slow=5.6,SNR=4.7						
CMAR	Chiang Mai Arr	31.75	303	P	P	20 21 04.1	+0.1
JMN	Monobe	32.39	11	P	P	20 21 07.5	-2.0
KSRS	Korea Array	35.41	2	P	P	20 21 38.4	+2.8
	comp=Z,0.4nm,0.7s,baz=175,slow=9.8,SNR=4.6						
MJAR	Matsushiro Arr	36.10	16	P	P	20 21 43.1	+1.5
	comp=Z,4.4nm,0.9s,baz=184,slow=10,SNR=6.3						
STKA	Stephens Creek	36.46	158	P	P	20 21 45.4	+0.7
	comp=Z,0.8nm,0.5s,baz=302,slow=9.5,SNR=3.5						
STKA	Stephens Creek	36.46	158	P	P	20 21 45.3	+0.7
JTM	Tenmabayashi	40.87	17	P	P	20 22 21.4	0.0
SHL	Shillong	40.90	308	P	P	20 22 21.6	-0.7
SHL				IAmb	IAmb	20 22 25.8	
	comp=Z,3.2nm,0.9s						
LSA	Lhasa	43.59	313	P	P	20 22 44.8	+0.3
ULN	Ulaanbaatar	48.83	343	P	P	20 23 23.5	-1.5
SONM	Songino Array	49.00	342	P	P	20 23 27.0	+0.7
	comp=Z,0.3nm,0.4s,baz=158,slow=8.3,SNR=5.0						
SONM				PcP	PcP	20 24 49.7	0.0
	comp=Z,0.3nm,0.9s,baz=132,slow=2.1,SNR=2.3						
SONM	Songino Array	49.00	342	P	P	20 23 26.3	+0.1
MK31	Makanchi Array	59.01	326	P	P	20 24 38.6	-0.5
MK31				IAmb	IAmb	20 24 44.0	
	comp=Z,1.1nm,0.8s						
MKAR	Makanchi Array	59.01	326	P	P	20 24 39.1	-0.1
	comp=Z,0.8nm,0.3s,baz=120,slow=7.6,SNR=36						
MKAR	Makanchi Array	59.01	326	P	P	20 24 38.5	-0.6
MAKZ	Makanchi	59.19	326	P	P	20 24 39.1	-1.3
MAKZ				IAmb	IAmb	20 24 43.5	
	comp=Z,3.4nm,1.1s						
YAK	Yakutsk	60.04	2	P	P	20 24 46.7	+0.8
KURBB	Kurchatov Arra	63.23	328	P	P	20 25 07.6	-0.1
	comp=Z,1.6nm,0.6s,baz=129,slow=6.3,SNR=4.3						
KURK	Kurchatov	63.23	328	P	P	20 25 06.2	-1.5
JOHN	Johnston Islan	64.43	72	P	P	20 25 15.1	-1.1
KKAR	Karatay Array	64.51	318	P	P	20 25 15.5	-0.8
KKAR				IAmb	IAmb	20 25 27.3	
	comp=Z,2.3nm,1.4s						
BRVK	Borovoye	68.87	327	P	P	20 25 42.5	-1.3
BRVK				IAmb	IAmb	20 25 48.7	
	comp=Z,3.5nm,1.1s						
TIXI	Tiksi	69.67	1	P	P	20 25 48.7	+0.3
TIXI				IAmb	IAmb	20 25 50.4	
	comp=Z,2.5nm,1.1s						
NRIK	Noril'sk	72.18	346	P	P	20 26 04.7	+1.0
NRIK				IAmb	IAmb	20 26 19.5	
	comp=Z,2.5nm,0.8s						
ABKAR	Akbulak array	73.51	321	P	P	20 26 11.9	-0.1
ABKAR				IAmb	IAmb	20 26 25.2	
	comp=Z,2.9nm,1.4s						
ABKAR	Akbulak array	73.51	321	P	P	20 26 11.5	-0.5
AKTO	Aktyubinsk	75.03	322	P	P	20 26 20.9	0.0
	comp=Z,0.5nm,0.4s,baz=39,slow=6.5,SNR=1.8						
ARU	Arti	76.43	328	P	P	20 26 28.1	-0.6
	comp=Z,0.8nm,0.6s,baz=216,slow=3.9,SNR=5.3						
KBZ	Khabaz	84.16	314	P	P	20 27 10.2	-0.3
	comp=Z,7.7nm,0.7s,baz=131,slow=8.2,SNR=5.3						

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*IDC **19** 20:25:10.9±1.0, 41°.05N×47°.92E, h0^{km}, mb3.9/6, mb1 3.8/13, mb1mx3.6/45, mbtmp3.8/13, ML3.1/6, MS3.8/3, Ms1 3.8/3, ms1mx2.8/54, Error ellipse: s-maj=18.1km s-min=9.2km az=152.0*

*AZER **19** 20:25:12.8±0.1, 41°.12N×47°.92E, h11^{km}, ml3.7/34, Error ellipse: s-maj=1.0km s-min=0.9km az=283.0*

*NSSP **19** 20:25:13.0, 41°.17N×47°.85E, h10^{km}, Ms3.7*

*MOS **19** 20:25:13.6±0.0, 41°.13N×47°.83E, h7^{km}, MPVA4.6*

*DRS **19** 20:25:13.5±0.0, 41°.00N×47°.89E, h16^{km}, ML3.6/10*

*DDA **19** 20:25:31.6, 41°.21N×46°.41E, h40^{km}±1^{km}, ML2.9*

ISC 19 20:25:13.9±0.8**, 41°.08N**±0°.01×**47°.92E**±0°.01**, h19^{km}**±**2^{km}, n144,** σ2^{s}.**18**/241**, mb4.0**/6**, 12C-23D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QBL	Gabala	0.14	205	P	Pg	20 25 19.2	+1.0
	SNR=5548						
QBL				S	Sg	20 25 23.0	+1.9
XNQ	Khinaliq	0.19	61	P	Pb	20 25 19.0	+0.7
XNQ				S	Sg	20 25 22.5	0.0
IML	Ismayilli	0.35	145	P	Pb	20 25 22.4	+0.8
	SNR=945						
IML				S	Sn	20 25 29.2	-1.3
AKT	Akhty	0.43	341	⇓*i*PG	Pg	20 25 22.3	-0.4
AKT				*e*		20 25 28.2	
AKT				pmax	pmax		
	comp=Z,3μm,0.2s						
AKT				smax	smax		
	comp=N,6μm,0.3s						
AKT	Akhty	0.43	341	⇓*i*Pg	Pg	20 25 22.3	-0.4
	comp=N,3μm,0.2s						
AKT				⇓*e*Sg	Sg	20 25 28.2	-0.5
	comp=N,6μm,0.3s						
QSAR	Qusar	0.51	31	P	Pg	20 25 24.4	+0.2
	SNR=44						
QSAR				S	Sb	20 25 31.6	+0.4
QUBA	Quba, Azerbaij	0.52	57	P	Pb	20 25 24.9	+0.6
	SNR=106						
QUBA				S	Sb	20 25 32.6	+1.2
SEKA	Sheki	0.56	284	P	Pb	20 25 24.8	-0.2
	SNR=1111						
SEKA				S	Sb	20 25 33.1	+0.4
PQL	Pirkuli	0.59	119	P	Pg	20 25 26.5	+0.8
	SNR=112						
PQL				S	Sn	20 25 37.4	+0.9
MNGR	Mingechevir, A	0.70	245	P	Pn	20 25 28.9	+0.2
	SNR=128						
MNGR				S	Sn	20 25 40.1	+1.0
KDMR	Kurdemir	0.73	164	P	Pn	20 25 29.3	+0.1
	SNR=22						
KDMR				S	Sn	20 25 42.0	+2.2
SIZA	Siyzn	0.74	90	P	Pg	20 25 29.2	+0.7
	SNR=565						
SIZA				S	Sn	20 25 41.6	+1.3
ATGJ	Altiaghaj	0.80	105	P	Pg	20 25 30.2	+0.7
	SNR=54						
ATGJ				S	Sn	20 25 42.3	+0.5
ZRD	Zardab	0.82	193	P	Pn	20 25 31.4	+1.1
	SNR=46						
ZRD				S	Sn	20 25 45.2	+3.3
GBS	Qobustan	0.95	125	P	Pg	20 25 34.2	+1.8
	SNR=22						
GBS				S	Sn	20 25 49.0	+3.7
BRDA	Brd	0.99	215	P	Pg	20 25 34.3	+1.2
	SNR=135						
BRDA				S	Sn	20 25 50.0	+3.8
URKR	Urkarakh	1.11	349	⇓*i*PG	Pn	20 25 34.4	-0.1
URKR				*i*		20 25 50.9	
URKR				pmax	pmax		
	comp=Z,310nm,0.3s						
URKR				smax	smax		
	comp=N,591nm,0.3s						
URKR	Urkarakh	1.11	349	⇓*i*Pg	Pn	20 25 34.4	-0.1
	comp=N,310nm,0.3s						
URKR				⇓*i*Sg	Sb	20 25 49.2	+0.6
	comp=N,591nm,0.3s						
ZKTA	Zakatala	1.12	300	P	Pn	20 25 34.7	+0.1
	SNR=370						
ZKTA				S	Sg	20 25 51.9	+1.4
AGDM	Agdam	1.15	213	P	Pb	20 25 36.0	+0.9
	SNR=1778						
AGDM				S	Sg	20 25 53.3	+2.2
SAAT	Saatly	1.27	162	P	Pb	20 25 37.4	+0.2
	SNR=28						
SAAT				S	Sg	20 25 55.9	+0.8
GANJ	Ganja	1.28	251	P	Pn	20 25 37.1	+0.2
	SNR=245						
GANJ				S	Sb	20 25 54.9	+1.3
BLQ	Beylaqan	1.38	192	P	Pn	20 25 38.9	+0.7
	SNR=155						
BLQ				S	Sg	20 25 59.0	+0.4
ALIB	Äli-Bayra	1.39	143	P	Pg	20 25 41.4	+0.7
ALIB				S	Sg	20 25 58.8	-0.1
SGKR	Sergokala	1.40	352	⇓*e*PG	Pb	20 25 39.4	+0.1
SGKR				*e*		20 26 00.5	
SGKR				pmax	pmax		
	comp=Z,140nm,0.4s						
SGKR				smax	smax		
	comp=N,753nm,0.6s						
SGKR	Sergokala	1.40	352	⇓*e*Pg	Pb	20 25 39.4	+0.1
	comp=N,140nm,0.4s						
SGKR				⇓*e*Sg	Sg	20 26 00.5	+1.5
	comp=N,753nm,0.6s						
DDFL	Dedoflistskaro	1.41	286	P	Pg	20 25 40.8	-0.2
DDFL				S	Sg	20 26 04.3	+4.9
DDFL	Dedoflistskaro	1.41	286	*i* P	Pb	20 25 40.6	+1.0
DDFL				*i* S	Sn	20 25 54.2	-2.4
DDFL	Dedoflistskaro	1.41	286	PG	Pg	20 25 40.8	-0.2
DDFL				S	Sg	20 26 04.3	+4.9
LGD	Lagodekhi	1.47	302	P	Pb	20 25 40.6	0.0
LGD	Lagodekhi	1.47	302	PG	Pb	20 25 40.6	0.0
LGD				S	Sg	20 26 03.8	+2.5
GNBR	Gunib	1.49	332	⇑*i*PG	Pb	20 25 41.4	+0.4
GNBR				*e*		20 26 02.4	
GNBR				pmax	pmax		
	comp=Z,226nm,0.6s						
GNBR				smax	smax		
	comp=N,564nm,0.6s						
GNBR	Gunib	1.49	332	⇑*i*Pg	Pb	20 25 41.4	+0.4
	comp=N,226nm,0.6s						
GNBR				⇓*e*Sg	Sg	20 26 02.5	+0.3
	comp=N,564nm,0.6s						
GOBA	Gobu	1.54	116	Pn	Pb	20 25 42.7	+1.0

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       SNR=5.1
GOBA                              Sn     Sb     20 26 01.5 +0.7
NDR    Nardaran         1.65 107  Pn     Pb     20 25 44.3 +0.7
       SNR=21
NDR                               Sg     Sb     20 26 05.8 +1.8
ARKR   Arakani          1.67 336⇑iPN     Pb     20 25 44.5 +0.4
ARKR                             e              20 26 08.7
ARKR                              pmax   pmax
       comp=Z,176nm,0.7s
ARKR                              smax   smax
       comp=N,399nm,0.8s
ARKR   Arakani          1.67 336⇑iPg     Pb     20 25 44.5 +0.4
       comp=N,176nm,0.7s
ARKR                            ⇓eSg     Sg     20 26 08.7 +0.9
       comp=N,399nm,0.8s
GDB    GEDABAY          1.68 258  Pn     Pn     20 25 43.0 +0.7
       SNR=921
GDB                               Sn     Sb     20 26 05.5 +0.4
QRD    Qoradiz          1.68 196  Pn     Pn     20 25 42.9 +0.7
       SNR=234
QRD                               Sn     Sg     20 26 07.1 -0.9
XNZR   Khunzakh         1.72 329 ePg     Pb     20 25 46.1 +1.1
XNZR                             eSg     Sg     20 26 09.1 -0.3
BUJR   Buynaksk         1.85 341⇑ePN     Pb     20 25 48.6 +1.6
BUJR                             i              20 26 15.2
BUJR                              pmax   pmax
       comp=Z,262nm,0.6s
BUJR                              smax   smax
       comp=N,1µm,0.9s
BUJR   Buynaksk         1.85 341⇑ePg     Pb     20 25 48.7 +1.6
       comp=N,262nm,0.6s
BUJR                            ⇓iSg     Sg     20 26 15.2 +1.8
       comp=N,1µm,0.9s
GLBA   Clilabad         1.87 169  Pn     Pn     20 25 46.2 +1.3
       SNR=48
GLBA                              Sn     Sb     20 26 12.2 +1.8
KRNR   Karanay          1.90 337⇓ePN     Pb     20 25 48.7 +0.6
KRNR                             e              20 26 16.6
KRNR                              pmax   pmax
       comp=Z,72nm,0.3s
KRNR                              smax   smax
       comp=E,328nm,0.8s
KRNR   Karanay          1.90 337⇓ePg     Pb     20 25 48.7 +0.6
       comp=E,72nm,0.3s
KRNR                            ⇓eSg     Sg     20 26 16.6 +1.4
       comp=E,328nm,0.8s
MAK    Makhachkala      1.91 351 ePN     Pn     20 25 46.8 +1.4
MAK                              e              20 26 14.9
MAK                               pmax   pmax
       comp=Z,240nm,0.4s
MAK                               smax   smax
       comp=E,900nm,0.6s
MAK                               smax   smax
       comp=E,1µm,0.6s
MAK    Makhachkala      1.91 351 ePg     Pg     20 25 50.0 -0.6
MAK                              eSg     Sg     20 26 15.6 +0.3
QZX    Qazax, Azerbai   1.92 270  Pn     Pn     20 25 47.2 +1.6
       SNR=214
QZX                               Sn     Sb     20 26 12.8 +0.7
GRS    Goris            1.99 218⇓iP      Pb     20 25 49.0 -0.5
GRS                             ⇑iS      Sg     20 26 17.0 -0.9
BTLR   Botlikh          2.03 322⇓ePN     Pb     20 25 50.6 +0.4
BTLR                             e              20 26 18.0
BTLR                              pmax   pmax
       comp=Z,99nm,0.6s
BTLR                              smax   smax
       comp=N,87nm,0.9s
BTLR   Botlikh          2.03 322⇓ePg     Pb     20 25 50.6 +0.4
       comp=N,99nm,0.6s
BTLR                            ⇓eSg     Sg     20 26 18.0 -1.2
       comp=N,87nm,0.9s
DBC    Dubki            2.10 338⇓iPN     Pb     20 25 52.0 +0.6
DBC                              i              20 26 21.4
DBC                               pmax   pmax
       comp=Z,114nm,0.6s
DBC                               smax   smax
       comp=N,344nm,0.8s
DBC    Dubki            2.10 338⇓iPg     Pb     20 25 52.1 +0.6
       comp=N,114nm,0.6s
DBC                             ⇓iSg     Sg     20 26 21.4 -0.2
       comp=N,344nm,0.8s
KANR   Karaman          2.14 352 ePg     Pb     20 25 52.7 +0.7
KANR                             eSg     Sb     20 26 20.8 +2.7
YRD    Yardimli         2.17 173  Pn     Pn     20 25 50.1 +0.8
       SNR=34
YRD                               Sn     Sb     20 26 20.4 +1.1
DLMR   Dylym            2.21 335⇑ePN     Pb     20 25 53.6 +0.4
DLMR                             e              20 26 23.7
DLMR                              pmax   pmax
       comp=Z,267nm,0.4s
DLMR                              smax   smax
       comp=N,944nm,0.9s
DLMR   Dylym            2.21 335⇑ePg     Pb     20 25 53.6 +0.4
       comp=N,268nm,0.4s
DLMR                            ⇑eSg     Sg     20 26 23.7 -1.2
       comp=N,944nm,0.9s
DVE    Vedeno           2.30 325 ePg     Pb     20 25 54.4 -0.4
DVE                              eSg     Sb     20 26 25.0 +2.0
BTNK   Botanikuri       2.42 285  P      Pb     20 25 55.8 -1.0
BTNK                              S      Sb     20 26 29.0 +2.6
BTNK   Botanikuri       2.42 285 iP      Pb     20 25 55.9 -1.0
BTNK                             iS      Sn     20 26 13.8 -7.8
BTNK                              IAML          20 26 31.0
       comp=E,236nm,0.4s
BTNK   Botanikuri       2.42 285  PN     Pb     20 25 55.8 -1.0
BTNK                              S      Sb     20 26 29.0 +2.6
SEAG   Tbilisi Sea      2.44 287  P      Pb     20 25 56.3 -0.9
SEAG                              S      Sb     20 26 27.6 +0.7
SEAG   Tbilisi Sea      2.44 287  PN     Pb     20 25 56.3 -0.9
SEAG                              S      Sb     20 26 28.0 +1.1
LRK    Lerik            2.45 172  Pn     Pn     20 25 54.1 +1.0
       SNR=33
LRK                               Sn     Sb     20 26 26.6 -0.8
LKRN   Lenkeran, Azer   2.46 164  Pn     Pn     20 25 53.8 +0.9
       SNR=5.5
LKRN                              Sn     Sb     20 26 27.1 -0.2
SBZ    Shahbuz          2.47 228  Pn     Pn     20 25 55.5 +2.3
       SNR=16
SBZ                               Sn     Sb     20 26 27.7  0.0
KAPZ   Kaputan          2.56 254 iP      Pn     20 25 56.7 +2.2
KAPZ                             iS      Sb     20 26 31.9 +1.4
GNI    Garni            2.59 250  Pn     Pn     20 25 57.5 +2.6
       comp=E,7.4nm,0.3s,baz=274,slow=3.9,SNR=32
GNI                               Lg     Lg     20 26 34.1
       comp=E,9.1nm,0.3s,baz=152,slow=21,SNR=7.1
GNI    Garni            2.59 250 iP      Pb     20 25 59.8  0.0
GNI                              iS      Sg     20 26 36.5 -0.7
GNI    Garni            2.59 250 ePn     Pn     20 25 57.2 +2.3
GNI                              eSn     Sb     20 26 33.2 +1.9
ASTR   Astara           2.60 165  Pn     Pn     20 25 56.4 +1.4
       SNR=4.2
ASTR                              Sn     Sb     20 26 30.4 -1.0
ORD    Ordubad          2.61 215  Pn     Pn     20 25 57.0 +2.0
       SNR=42
ORD                               Sn     Sb     20 26 30.7 -1.0
GROC   Groznyy          2.65 324 ePN     Pn     20 25 57.1 +1.6
GROC                             e              20 26 41.9
GROC                              pmax   pmax
       comp=Z,24nm,0.3s
GROC                              pmax   pmax
       comp=Z,51nm,0.6s
GROC                              smax   smax
       comp=N,296nm,0.9s
GROC                              smax   smax
       comp=N,223nm,0.8s
GROC                              MLR    MLR
       comp=Z,78nm,2.0s
GROC   Groznyy          2.65 324 ePn     Pb     20 25 59.2 -1.5
GROC                             eSn     Sb     20 26 34.3 +1.6
NAX    Nakhchivan       2.66 225  Pn     Pn     20 25 58.3 +2.5
       SNR=7.0
NAX                               Sg     Sg     20 26 37.8 -1.5
STE    Stepanavan       2.68 270 eP      Pb     20 25 59.2 -2.2
STE                              eS      Sb     20 26 32.6 -1.4
HYR    Heyderabad       2.71 241  Pn     Pn     20 25 59.2 +2.8
       SNR=10
HYR                               Sg     Sg     20 26 38.4 -2.4
NRKZ   NAREK            2.71 248 iP      Pb     20 26 00.1 -1.6
NRKZ                             iS      Sb     20 26 37.3 +2.7
DMNI   Dmanisi          2.82 276  P      Pn     20 26 00.0 +1.9
DMNI                              S      Sb     20 26 35.4 -2.6
DMNI   Dmanisi          2.82 276  PN     Pn     20 26 00.0 +1.9
DMNI                              S      Sb     20 26 35.4 -2.6
PNSH   Pansheti         2.92 303  P      Pn     20 26 02.4 +3.0
PNSH   Pansheti         2.92 303  PN     Pn     20 26 02.4 +3.0
GUDG   Gudauri          2.92 299  P      Pb     20 26 03.2 -2.3
GUDG                              S      Sb     20 26 41.7 +0.8
GUDG   Gudauri          2.92 299  PN     Pb     20 26 03.2 -2.3
GUDG                              S      Sb     20 26 41.7 +0.8
KMGR   Komgaron         3.01 312 ePn     Pb     20 26 04.4 -2.5
KMGR                             eSn     Sn     20 26 39.0 +2.8
VLKR   Vladikavkaz      3.11 310 ePn     Pn     20 26 05.4 +3.4
VLKR                             eSn     Sb     20 26 47.1 +0.9
BRNG   Burnasheti       3.13 281  P      Pn     20 26 04.7 +2.4
BRNG                              S      Sn     20 26 43.4 +4.2
IGDI   IGDIR            3.17 249 iP      Pb     20 26 08.4 -1.1
IGDI                             iS      Sn     20 26 30.4 -10
LACR   Lac              3.22 304 ePn     Pn     20 26 07.1 +3.6
LACR                             eSn     Sn     20 26 43.4 +2.0
BGD    Bogdanovka       3.27 275  P      Pn     20 26 08.0 +3.7
BGD                               S      Sb     20 26 54.1 +3.3
BGD    Bogdanovka       3.27 275  PN     Pn     20 26 08.0 +3.7
BGD                               S      Sb     20 26 54.1 +3.3
VNNZ   Vanand           3.27 254 iP      Pb     20 26 08.8 -2.5
VNNZ                             iS      Sb     20 26 53.6 +2.9
EAK    Akyaka           3.29 265 iP      Pn     20 26 06.9 +2.4
EAK                              iS      Sn     20 26 34.1 -9.2
EAK                               IAML          20 26 58.0
       comp=N,90nm,0.8s
EAK                               IAML          20 27 05.0
       comp=E,79nm,0.5s
AKH    Akhalkalaki      3.35 277  P      Pn     20 26 08.3 +2.9
AKH                               S      Sb     20 26 49.8 -3.4
AKH    Akhalkalaki      3.35 277  PN     Pn     20 26 08.3 +2.9
AKH                               S      Sb     20 26 49.8 -3.4
BKRG   Bakuriani        3.37 283  P      Pn     20 26 08.1 +2.4
BKRG                              S      Sb     20 26 50.2 -3.7
BKRG   Bakuriani        3.37 283  PN     Pn     20 26 08.1 +2.4
BKRG                              S      Sb     20 26 50.2 -3.7
BTKR   Batakoyurt       3.40 314 ePn     Pn     20 26 09.4 +3.5
BTKR                             eSn     Sb     20 26 51.6 -2.8
ARNR   Ardon            3.42 309 ePn     Pn     20 26 09.9 +3.7
ARNR                             eSn     Sn     20 26 50.1 +3.8
ZEI    Tsey             3.45 301 ePN     Pn     20 26 09.0 +2.2
ZEI                               pmax   pmax
       comp=Z,17nm,0.6s
ZEI    Tsey             3.45 301 ePn     Pn     20 26 10.3 +3.5
ZEI                              eSn     Sb     20 26 53.1 -3.0
KORR   Kora             3.50 306 ePn     Pn     20 26 11.6 +4.3
DIGO   Kars             3.51 261 iP      Pn     20 26 10.3 +2.6
DIGO                             iS      Sn     20 26 41.9 -7.0
DIGO                              IAML          20 27 10.0
       comp=N,49nm,0.4s
DIGO                              IAML          20 27 10.0
       comp=E,76nm,0.8s
TRKR   Terskaya         3.54 319 ePn     Pn     20 26 10.0 +2.2
TRKR                             eSn     Sn     20 26 54.0 +4.8
CLDR   Caldiran         3.62 239 iP      Pb     20 26 17.2 -0.2
CLDR                             iS      Sb     20 26 59.8 -1.3
ONI    Oni              3.66 296  P      Pn     20 26 12.5 +2.9
ONI    Oni              3.66 296  PN     Pn     20 26 12.5 +2.9
ONI    Oni              3.66 296 ePn     Pn     20 26 13.0 +3.4
ONI                              eSn     Sn     20 26 55.0 +2.7
STDR   Stavd-Durt       3.67 310 ePn     Pb     20 26 19.6 +1.6
STDR                             eSn     Sb     20 27 03.1 +1.0
DIGR   Digorskoe uzhe   3.71 301 ePn     Pn     20 26 14.1 +3.8
DIGR                             eSn     Sn     20 26 57.8 +4.2
LSNR   Lesken           3.75 307 ePn     Pn     20 26 15.1 +4.3
PRTR   Priterechnaya    3.79 316 ePn     Pn     20 26 14.4 +3.1
PRTR                             eSn     Sn     20 26 58.8 +3.5
KOTA   Agri, Merkez-K   3.81 252 iP      Pb     20 26 18.9 -1.8
KOTA                             iS      Sn     20 27 00.1 +3.9
ABS    Abastumani       3.90 282  P      Pn     20 26 15.9 +3.0
ABS                               S      Sb     20 27 13.2 +4.3
ABS    Abastumani       3.90 282  PN     Pn     20 26 15.9 +3.0
ABS                               S      Sb     20 27 13.2 +4.3
EPOS   Posof            3.93 278 iP      Pn     20 26 15.7 +2.3
EPOS                             iS      Sn     20 26 57.3 -1.8
NEY    Neytrino         4.43 301 ePn     Pn     20 26 23.7 +3.5
KBZ    Khabaz           4.56 307  Pn     Pn     20 26 25.1 +3.3
       comp=E,0.4nm,0.3s,baz=140,slow=2.0,SNR=7.2
KBZ                               Lg     Lg     20 27 34.2
       comp=E,0.5nm,0.3s,baz=282,slow=20,SNR=3.5
KBZ    Khabaz           4.56 307 ePn     Pn     20 26 25.3 +3.5
SHA1   Shidzhatmaz      4.71 306 ePn     Pn     20 26 27.4 +3.2
SHA1                             eSn     Sn     20 27 23.1 +4.6
BEYR   Belyy Ugol+      4.77 310 ePn     Pn     20 26 25.9 +1.1
KIV0   Kislovodsk Arr   4.81 308 ePn     Pn     20 26 27.8 +2.4
KIV0                             eSn     Sn     20 27 24.9 +4.2
KIV    Kislovodsk       4.82 308 ePN     Pn     20 26 25.8 +0.3
KIV                               pmax   pmax
       comp=Z,19nm,1.0s
KIV    Kislovodsk       4.82 308 ePn     Pn     20 26 27.9 +2.4
KIV                              eSn     Sn     20 27 24.4 +3.6
GOF    Gofitskoye       5.34 320⇑eP      Pn     20 26 34.2 +1.6
GOF                              eS      Sn     20 27 36.1 +2.5
GOF                               pmax   pmax
       comp=Z,11nm,0.5s
GOF                               smax   smax
       comp=N,34nm,0.8s
GOF                               smax   smax
       comp=E,45nm,0.9s
GEYT   Alibeck          8.49 108  Pn     Pn     20 27 13.7 -2.1
       comp=E,0.4nm,0.3s,baz=311,slow=12,SNR=6.1
BELG   Belogornoye     11.32 359  Pn     Pn     20 27 53.3 -1.1
       comp=E,0.3nm,0.3s,baz=20,slow=17,SNR=2.4
BELG                              Sn     Sn     20 29 55.9 -4.4
       comp=E,0.4nm,0.3s,baz=353,slow=18,SNR=2.8
AKTO   Aktyubinsk      11.71  34  Pn     Pn     20 27 58.9 -0.9
       comp=E,0.3nm,0.3s,baz=215,slow=9.3,SNR=6.0
AKTO                              Sn     Sn     20 30 04.0 -5.9
       comp=E,0.3nm,0.3s,baz=192,slow=19,SNR=3.0
AKTO   Aktyubinsk      11.71  34 ⇑Pn     Pn     20 27 59.0 -0.7
       comp=E,2.0nm,0.8s
AKTO                              Sn     Sn     20 30 06.6 -3.3
AB31   Akbulak array   11.77  42  Pn     Pn     20 28 01.1 +0.4
       comp=E,0.4nm,0.4s,baz=230,slow=12,SNR=13
AB31                             ⇓Sn     Sn     20 30 07.1 -4.4
       comp=E,0.7nm,0.5s,baz=232,slow=22,SNR=4.5
AKASG  Malin Array Be  16.14 313  Pn     Pn     20 28 58.1 -1.4
       comp=E,0.2nm,0.3s,baz=118,slow=12,SNR=3.0
ARU    Arti            16.86  21  Pn     Pn     20 29 04.8 -3.8
       comp=E,0.0nm,0.3s,baz=230,slow=9.2,SNR=7.3
ARU                               LR     LR     20 37 28.4
       comp=E,122nm,19.6s,baz=311,slow=44
BVAR   Borovoye Array  19.33  44  P      Pn     20 29 39.0 +0.1
       comp=E,0.2nm,0.3s,baz=294,slow=4.6,SNR=5.3
AAK    Ala-Archa       19.83  77  P      Pn     20 29 47.0 +1.8
       comp=E,0.1nm,0.3s,baz=232,slow=7.4,SNR=5.5
KURBB  Kurchatov Arra  23.21  55  P      P      20 30 20.6 +1.1
       comp=E,0.4nm,0.5s,baz=260,slow=11,SNR=6.1
KURK   Kurchatov       23.29  55  P      P      20 30 20.6 +0.3
VRAC   Vranov          23.43 301  LR     LR     20 42 02.7
       comp=E,150nm,18.6s,baz=350,slow=43
FINES  FINESS Array B  24.32 334  P      P      20 30 29.3 -0.8
       comp=E,3.5nm,0.7s,baz=137,slow=9.3,SNR=19
MKAR   Makanchi Array  25.27  65  P      P      20 30 39.0 +0.2
       comp=E,0.4nm,0.6s,baz=270,slow=7.7,SNR=7.3
MKAR   Makanchi Array  25.27  65  P      P      20 30 39.0 +0.2
VAE    Valguarnera     26.09 273  LR     LR     20 42 26.1
       comp=E,694nm,21.3s,baz=224,slow=40
HFS    Hagfors         28.41 324  P      P      20 31 05.8 -1.1
       comp=E,6.4nm,1.1s,baz=115,slow=16,SNR=2.4
ARCES  ARCESS Array B  30.84 345  P      P      20 31 28.1 -0.3
       comp=E,1.7nm,0.9s,baz=135,slow=13,SNR=3.5
DBIC   Dimbokro        58.01 249  P      P      20 35 03.6 -2.0
       comp=E,4.0nm,0.9s,baz=29,slow=10,SNR=3.2
```

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*DJA **19** 20:28:39.4±2.8, 10°S±9°×11°9E±°, h23^{km}±33^{km}, M4.1/9, mb4.5/2, MLv3.9/9*

*IDC **19** 20:28:40.2±5.3, 10°.17S×119°.34E, h59^{km}±45^{km}, mb3.2/4, mb1 3.5/8, mb1mx3.3/38, mbtmp3.6/8, ML3.5/4, MS4.0/1, Ms1 4.0/1, ms1mx2.7/21, Error ellipse: s-maj=104.8km s-min=18.1km az=63.0*

ISC 19 20:28:38.2±0.8, **10°.16S**±0°.07×**119°.45E**±0°.06, **h35**^{km}, **n16**, σ**2.^{s}17**/17, **mb3.5**/4, **Sumba region**

```
Code   Station Name       Δ°   AZ°   Phase ID        Time      Res
                                   Op     ISC     h  m  s    ISC
WSI    Waingapu         0.97  60  P      Pn     20 28 56.5 +1.2
BASI   Baing, Sumba     1.11  93  P      Pn     20 29 00.4 +3.1
PLAI   Plampang         2.12 309  P      Pn     20 29 12.4 +1.2
EDFI   Ende, Flores     2.62  58  P      Pn     20 29 18.9 +0.8
TWSI   Taliwang, Sumb   2.90 299  P      Pn     20 29 24.1 +2.1
BSSI   Bau Bau, Buton   4.12  15  P      Pn     20 29 40.3 +1.5
KAPI   Kappang          5.12   3  P      Pn     20 29 54.9 +2.3
       5.2nm,0.3s,baz=165,slow=5.0,SNR=25
KAPI                              S      Sn     20 30 48.7 -1.8
       5.6nm,0.3s,baz=163,slow=20,SNR=7.6
JAGI   Jajag, Banyuwa   5.49 287  P      Pn     20 29 59.0 +1.4
FITZ   Fitzroy Crossi   9.91 143  P      Pn     20 30 59.6 +1.3
       0.2nm,0.3s,baz=345,slow=12,SNR=4.1
FITZ                              S      Sn     20 32 43.1 -5.2
       0.6nm,0.3s,baz=175,slow=22,SNR=9.9
WRA    Warramunga Arr  17.34 126  P      P      20 32 39.8 +1.0
       0.1nm,0.3s,baz=297,slow=15,SNR=7.0
ASAR   Alice Springs   19.25 136  P      Pn     20 33 02.4 +1.4
       0.1nm,0.3s,baz=323,slow=12,SNR=12
STKA   Stephens Creek  29.78 140  P      P      20 34 41.4 -0.4
       1.1nm,0.6s,baz=330,slow=15,SNR=2.9
JHJ    Hachijo jima 2  47.20  23  LR     LR     20 56 32.6
       comp=Z,158nm,19.9s,baz=117,slow=35
SONM   Songino Array   58.89 350  P      P      20 38 33.4 -0.4
       0.1nm,0.4s,baz=179,slow=5.8,SNR=2.8
MKAR   Makanchi Array  65.69 333  P      P      20 39 18.3 -0.9
       0.3nm,0.5s,baz=147,slow=6.5,SNR=5.4
KURBB  Kurchatov Arra  70.20 334  P      P      20 39 45.9 -1.5
       0.2nm,0.5s,baz=134,slow=5.5,SNR=4.1
```

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*NEIC **19** 20:42:00.7±2.8, 3°.55S±0°.10×137°.88E±0°.09, h91^{km}±11^{km}, mb4.3/13, Error ellipse: s-maj=14.3km s-min=12.9km az=180.0*

*DJA **19** 20:42:01.4±0.5, 4°S±7°×13°8E±°, h106^{km}±8^{km}, M4.3/3, mb4.2/3, MLv4.3/3*

*IDC **19** 20:42:01.1±2.2, 3°.63S×137°.88E, h80^{km}±26^{km}, mb3.5/5, mb1 3.9/11, mb1mx3.7/28, mbtmp4.0/11, MS2.9/1, Ms1 2.9/1, ms1mx2.4/33, Error ellipse: s-maj=25.6km s-min=16.9km az=73.0*

ISC 19 20:41:60.0±0.6, **3°.52S**±0°.07×**137°.87E**±0°.06, **h82**^{km}, **n31**, σ**2.^{s}20**/32, **mb3.7**/4, **Irian Jaya**

```
Code   Station Name       Δ°   AZ°   Phase ID        Time      Res
                                   Op     ISC     h  m  s    ISC
SRPI   Serui, Papua     2.31 315  P      Pn     20 42 38.5 +2.4
GENI   Genyem           2.47  68  P      Pn     20 42 39.9 +1.6
JAY    Jayapura         3.00  71  P      Pn     20 42 47.0 +1.5
       baz=247,slow=12
JAY                               S      Sn     20 43 14.2 -6.2
       3.9nm,0.3s,baz=135,slow=16,SNR=3.8
FAKI   Fak Fak          5.65 276  Pn     Pn     20 43 23.9 +2.5
SIJI   Sorong           7.11 292  P      Pn     20 43 42.1 +0.8
       1.1nm,0.3s,baz=90,slow=20,SNR=2.0
SIJI                              S      Sn     20 44 53.4 -7.3
       2.6nm,0.3s,baz=60,slow=20,SNR=4.8
PMG    Port Moresby    10.92 123  P      Pn     20 44 34.3 +0.9
       0.6nm,0.3s,baz=325,slow=9.6,SNR=6.6
COEN   Coen            11.62 154  Pn     Pn     20 44 42.2 -0.7
WB0    Warramunga Arr  16.50 192         Pn     20 45 45.1 -1.4
WB0                               IAmb   IAmb   20 45 50.8
       comp=Z,46nm,1.6s
WR0    Warramunga Arr  16.66 191         Pn     20 45 47.5 -1.0
WR0                               IAmb   IAmb   20 45 52.1
       comp=Z,11nm,0.8s
WRAB   Tennant Creek   16.67 192         Pn     20 45 47.6 -1.0
WRAB                              IAmb   IAmb   20 45 52.3
       comp=Z,14nm,0.8s
WB2    Warramunga Arr  16.68 192         Pn     20 45 46.9 -1.8
WB2                               IAmb   IAmb   20 45 52.4
       comp=Z,15nm,0.9s
WRA    Warramunga Arr  16.68 192  P      Pn     20 45 48.2 -0.5
       comp=Z,2.1nm,0.3s,baz=16,slow=12,SNR=62
WRA    Warramunga Arr  16.68 192         Pn     20 45 47.6 -1.2
KAPI   Kappang         18.13 265  LR     LR     20 54 01.4
       comp=Z,31nm,18.2s,baz=96,slow=40
CTA    Charters Tower  18.38 154  P      P      20 46 08.3 -0.2
       comp=Z,0.2nm,0.3s,baz=312,slow=13,SNR=7.5
CTAO   Charters Tower  18.38 154         P      20 46 07.4 -1.1
CTAO                              IAmb   IAmb   20 46 12.3
       comp=Z,16nm,1.0s
FITZ   Fitzroy Crossi  18.80 219  P      Pn     20 46 13.9 -0.5
       comp=Z,0.2nm,0.3s,baz=21,slow=8.3,SNR=12
FITZ   Fitzroy Crossi  18.80 219  P      Pn     20 46 13.9 -0.5
FITZ                              IAmb   IAmb   20 46 36.1
       comp=Z,55nm,1.9s
AS31   Alice Springs   20.39 190  P      P      20 46 31.6 +1.2
AS31                              IAmb   IAmb   20 46 33.0
       comp=Z,5.6nm,0.6s
ASAR   Alice Springs   20.39 190  P      P      20 46 31.6 +1.2
       comp=Z,9.5nm,0.6s,baz=16,slow=10,SNR=90
ASAR   Alice Springs   20.39 190  P      P      20 46 31.0 +0.6
EIDS   Eidsvold        25.16 151  P      P      20 47 18.8 +1.0
STKA   Stephens Creek  28.42 173  P      P      20 47 46.5 -0.5
       comp=Z,0.8nm,0.4s,baz=348,slow=6.7,SNR=5.3
STKA   Stephens Creek  28.42 173  P      P      20 47 46.7 -0.3
JWT    Wachi           38.67 357  P      P      20 49 16.5 +0.7
CMAR   Chiang Mai Arr  44.12 301  P      P      20 50 02.5 +1.9
       comp=Z,0.8nm,0.7s,baz=118,slow=6.5,SNR=8.4
CMAR   Chiang Mai Arr  44.12 301  P      P      20 49 59.5 -1.2
CHTO   Chiang Mai      44.28 302  P      P      20 50 02.0 +0.1
MDJ    Mudanjiang      48.49 352  P      P      20 50 33.8 -0.6
SONM   Songino Array   58.10 336  P      P      20 51 47.4 +2.4
       comp=Z,0.3nm,0.5s,baz=157,slow=7.9,SNR=2.8
MKAR   Makanchi Array  69.92 323  P      P      20 53 04.1 +1.7
       comp=Z,0.1nm,0.6s,baz=96,slow=9.8,SNR=5.2
```

IDC 19 20:56:35.3±1.2, **30°.32N**×**141°.31E**, **h0**^{km}, **mb3.6**/3, **mb1 3.8**/4, **mb1mx3.4**/54, **mbtmp3.6**/4, **ML3.0**/1, **Error ellipse: s-maj=59.0km s-min=4.4km az=78.0**, **Southeast of Honshu**

```
Code   Station Name       Δ°   AZ°   Phase ID        Time      Res
                                   Op     ISC     h  m  s    ISC
MJAR   Matsushiro Arr   6.72 338  Pn     Pn     20 58 15.1 -0.2
       0.3nm,0.3s,baz=159,slow=11,SNR=14
MJAR                              Sn     Sn     20 59 31.4 -1.2
       0.2nm,0.3s,baz=283,slow=24,SNR=4.3
MAT    Matsushiro       6.72 338  P      Pn     20 58 15.4 +0.1
MAT                              eS      Sn     20 59 27.4 -5.3
MKAR   Makanchi Array  47.87 307  P      P      21 05 15.9 +0.9
       0.4nm,0.6s,baz=86,slow=9.3,SNR=5.6
WRA    Warramunga Arr  50.42 189  P      P      21 05 34.4 -0.3
       1.0nm,0.6s,baz=6.5,slow=7.7,SNR=12
ASAR   Alice Springs   54.15 188  P      P      21 06 02.3 -0.1
       0.6nm,0.8s,baz=0.0,slow=7.4,SNR=2.9
```

IDC 19 21:00:47.3±4.2, **25°.09S**×**175°.60W**, **h0**^{km}, **mb4.0**/3, **mb1 4.2**/3, **mb1mx3.7**/30, **mbtmp4.0**/3, **MS3.1**/1, **Ms1 3.1**/1, **ms1mx2.7**/33, **Error ellipse: s-maj=232.8km s-min=56.9km az=161.0**, **South of Tonga Islands**

```
Code   Station Name       Δ°   AZ°   Phase ID        Time      Res
                                   Op     ISC     h  m  s    ISC
RAR    Rarotonga       15.06  78  LR     LR     21 10 38.2
       comp=Z,69nm,18.2s,baz=251,slow=39
CTA    Charters Tower  35.49 270  P      P      21 07 46.3 +0.4
       2.2nm,0.6s,baz=104,slow=12
ASAR   Alice Springs   45.80 261  P      P      21 09 11.9 +0.8
       1.9nm,0.8s,baz=100,slow=6.8,SNR=14
WRA    Warramunga Arr  46.32 266  P      P      21 09 13.6 -1.7
       0.7nm,0.6s,baz=106,slow=7.9,SNR=7.4
BRTR   Keskin Array B 151.48 308  PKPbc  PKPbc  21 20 43.4 -0.2
       0.7nm,0.8s,baz=29,slow=3.3,SNR=2.9
```

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*INET **19** 21:02:32.0, 8°.43N×82°.83W, h18^{km}, MW2.4*

UPA 19 21:02:33.4±0.8, **8°.43N**×**82°.88W**, **h19**^{km}±2^{km}, **MW3.7**, **2C-5D**, **Panama-Costa Rica border region**

```
Code   Station Name       Δ°   AZ°   Phase ID        Time      Res
                                   Op     ISC     h  m  s    ISC
SBAR3  San Bartolo, C   0.11 181⇑iP      Pg     21 02 37.8 +0.4
CDITO  Canoas           0.14   4⇓iP      Pg     21 02 38.4 +0.7
CDITO                            eS      Sg     21 02 40.9 +0.2
BRU2   Volcan           0.41  27⇓iP      Pb     21 02 42.6 +0.4
BRU2                             eS      Sb     21 02 48.9 +0.8
BCO2   Palmira          0.45  51⇓iP      Pb     21 02 43.2 +0.2
BCO2                             eS      Sb     21 02 51.0 +1.6
CHIR3  Chiriqui UPA,    0.55  93⇓iP      Pb     21 02 44.0 -0.3
CHIR3                            eS      Sb     21 02 51.3 -0.4
PSOM3  Paja de Sombre   0.61  65 eP      Pb     21 02 45.2 -0.2
PSOM3                            eS      Sg     21 02 54.3 +0.5
CHGR2  Aguacate         0.89  55⇓iP      Pb     21 02 49.4 -0.8
CHGR2                            eS      Sg     21 03 02.2 -0.3
DRK0   Durika           0.90 337⇑iP      Pb     21 02 49.9 -0.7
DRK0                             eS      Sb     21 03 02.2 -0.1
CNI2   El Empalme, Bo   1.07  22 eS      Sb     21 03 05.2 -1.7
```

*NOU **19** 21:08:33.1, 15°.87S×168°.31E, h98km, MLv4.8, Vanuatu Islands*

*IDC **19** 21:08:34.7±1.9, 16°.29S×167°.89E, h0km, mb3.9/3, mb1 4.2/4, mb1mx3.7/28, mbtmp3.9/4, ML3.6/1, MS3.5/1, Ms1 3.5/1, ms1mx2.7/40, Error ellipse: s-maj=50.7km s-min=28.6km az=120.0*

ISC 19 21:08:39.8±1.4**, 16°.23S**±0°.07×**167°.8E**±0°.2**, h35km, n10, σ1ˢ24**/10**, mb3.7**/3**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**0.94**	**325**	P	**Pn**	**21 08 55.2**	**-1.3**
DVP	**Devils Point**	**1.54**	**165**	P	**Pn**	**21 09 03.7**	**-1.1**
YATNC	**Mamie plateau,**	**5.86**	**188**	P	**Pn**	**21 10 04.4**	**+0.3**
DZM	**Mont Dzumac**	**5.94**	**192**	Pn	**Pn**	**21 10 03.7**	**-1.7**
	1.4nm,0.3s,baz=340,slow=22,SNR=11						
DZM				Sn	**Sn**	**21 11 12.2**	**-0.2**
	0.6nm,0.3s,baz=143,slow=20,SNR=2.0						
DZM	**Mont Dzumac**	**5.94**	**192**	P	**Pn**	**21 10 03.9**	**-1.5**
OUENC	**Ouen Island, N**	**6.22**	**188**	P	**Pn**	**21 10 08.6**	**-0.5**
WRA	**Warramunga Arr**	**31.95**	**258**	P	**P**	**21 15 04.0**	**+1.4**
	1.1nm,1.1s,baz=86,slow=9.1,SNR=2.9						
ASAR	**Alice Springs**	**32.62**	**251**	P	**P**	**21 15 08.8**	**+0.4**
	3.9nm,0.8s,baz=82,slow=9.1,SNR=18						
FITZ	**Fitzroy Crossi**	**40.23**	**261**	LR	LR	21 31 16.7	
	comp=Z,70nm,19.8s,baz=114,slow=34						
ILAR	**Eielson Array**	**87.80**	**18**	P	**P**	**21 21 25.4**	**+0.5**
	0.4nm,0.9s,baz=238,slow=5.0,SNR=3.1						

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*SOME **19** 21:09:39.4, 40°.83N×77°.82E, h5km*

*KRNET **19** 21:09:39.8±0.1, 40°.83N×77°.84E, h19km, mb2.7*

*NNC **19** 21:09:42.1±1.2, 40°.87N×77°.82E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=8.6km s-min=6.0km az=171.0*

ISC 19 21:09:35.8±2.2**, 40°.67N**±0°.08×**77°.81E**±0°.04**, h12km**±16km**, n62, σ1ˢ29**/93**, 27C-13D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDJ	**Kajisay**	**1.54**	**342**	⇑*i*P	**Pb**	**21 10 06.0**	**+1.7**
	baz=40						
KDJ				⇑*i*S	**Sg**	**21 10 25.5**	**+0.1**
	baz=40						
PRZ	**Przheval'sk**	**1.87**	**14**	⇑*i*P	**Pg**	**21 10 12.2**	**+0.5**
	baz=14						
PRZ				⇑*i*S	**Sg**	**21 10 35.2**	**-0.8**
	baz=14						
ULHL	**Ulahol**	**1.97**	**324**	⇑*i*P	**Pb**	**21 10 14.3**	**+2.6**
	baz=20						
ULHL				⇑*i*S	**Sg**	**21 10 39.3**	**+0.1**
	baz=20						
ANVS	**Anan'yevo**	**2.12**	**357**	⇓*i*P	**Pb**	**21 10 16.3**	**+2.0**
	baz=56						
ANVS				⇓*i*S	**Sg**	**21 10 43.4**	**-0.6**
	baz=56						
BOOM	**Boomskoye usch**	**2.30**	**323**	⇓*i*P	**Pb**	**21 10 19.4**	**+2.1**
	baz=20						
BOOM				⇓*i*S	**Sg**	**21 10 48.4**	**-1.3**
	baz=20						
SATY	**Saty**	**2.43**	**10**	⇓*e*P	**Pg**	**21 10 22.9**	**+0.5**
	5.1nm,0.3s						
SATY				*e*S	**Sg**	**21 10 54.2**	**+0.1**
	11nm,0.2s						
SATY	**Saty**	**2.43**	**10**	Pg	**Pg**	**21 10 23.0**	**+0.5**
	5.1nm,0.3s						
SATY				Lg	Lg	21 10 54.2	
	11nm,0.2s						
TNSS	**Tian-Shan**	**2.46**	**345**	⇑*e*P	**Pg**	**21 10 23.3**	**+0.3**
	7.2nm,0.2s						
TNSS				*e*S	**Sg**	**21 10 54.9**	**+0.2**
	8.3nm,0.3s						
TNSS	**Tian-Shan**	**2.46**	**345**	Pg	**Pg**	**21 10 23.3**	**+0.3**
	7.2nm,0.2s						
TNSS				Lg	Lg	21 10 54.9	
	8.3nm,0.3s						
IZV	**Izvestkoviy**	**2.53**	**340**	⇑*e*P	**Pg**	**21 10 24.7**	**+0.3**
	7.0nm,0.3s						
IZV				*e*S	**Sg**	**21 10 57.0**	**-0.1**
	20nm,0.3s						
IZV	**Izvestkoviy**	**2.53**	**340**	Pg	**Pg**	**21 10 24.7**	**+0.3**
	7.0nm,0.3s						
IZV				Lg	Lg	21 10 57.0	
	20nm,0.3s						
MDOK	**Medeo**	**2.56**	**347**	⇓*e*P	**Pg**	**21 10 24.9**	**+0.1**
	6.9nm,0.3s						
MDOK				*e*S	**Sg**	**21 10 57.6**	**-0.5**
	8.4nm,0.4s						
MDOK	**Medeo**	**2.56**	**347**	⇑Pn	**Pg**	**21 10 24.5**	**-0.4**
	4.6nm,0.4s						
MDOK				⇑Lg	Lg	21 10 57.0	
	8.8nm,0.5s						
MDOK	**Medeo**	**2.56**	**347**	Pg	**Pg**	**21 10 24.9**	**+0.1**
	6.9nm,0.3s						
MDOK				Lg	Lg	21 10 57.6	
	8.4nm,0.4s						
KOTS	**Kotyrbulak**	**2.62**	**349**	⇑*e*P	**Pg**	**21 10 26.1**	**+0.1**
	14nm,0.4s						
KOTS				*e*S	**Sg**	**21 10 59.8**	**-0.2**
	18nm,0.4s						
KOTS	**Kotyrbulak**	**2.62**	**349**	Pg	**Pg**	**21 10 26.1**	**+0.1**
	14nm,0.4s						
KOTS				Lg	Lg	21 10 59.8	
	18nm,0.4s						
KNDC	**Almaty**	**2.63**	**346**	⇑Pn	**Pg**	**21 10 26.3**	**+0.1**
	5.3nm,0.3s						
KNDC				⇑Lg	Lg	21 11 00.3	
	44nm,0.7s						
UZB	**Uzynbulak**	**2.64**	**20**	*e*P	**Pg**	**21 10 26.3**	**-0.1**
	5.1nm,0.3s						
UZB				*e*S	**Sg**	**21 11 00.1**	**-0.6**
	13nm,0.5s						
UZB	**Uzynbulak**	**2.64**	**20**	Pg	**Pg**	**21 10 26.4**	**-0.1**
	5.5nm,0.3s						
UZB				Lg	Lg	21 11 00.0	
	13nm,0.5s						
KST	**Kastek**	**2.75**	**331**	*e*P	**Pg**	**21 10 28.4**	**-0.1**
	4.3nm,0.3s						
KST				*e*S	**Sg**	**21 11 03.6**	**-0.4**
	12nm,0.5s						
KST	**Kastek**	**2.75**	**331**	Pg	**Pg**	**21 10 28.4**	**-0.1**
	4.3nm,0.3s						
KST				Lg	Lg	21 11 03.6	
	12nm,0.5s						
SHLS	**Shalkode**	**2.78**	**26**	*e*P	**Pg**	**21 10 31.4**	**+2.3**
	11nm,0.5s						
SHLS				*e*S	**Sg**	**21 11 08.8**	**+3.6**
	19nm,0.3s						
SHLS	**Shalkode**	**2.78**	**26**	Pg	**Pg**	**21 10 31.4**	**+2.3**
	11nm,0.5s						
SHLS				Lg	Lg	21 11 08.8	
	19nm,0.3s						
TKM2	**Tokmak 2**	**2.79**	**324**	⇑*i*P	**Pb**	**21 10 26.3**	**+0.5**
	baz=22						
TKM2				⇑*i*S	**Sb**	**21 11 00.3**	**+0.3**
	baz=22						
TKM2	**Tokmak 2**	**2.79**	**324**	⇑Pg	**Pb**	**21 10 28.8**	**+3.1**
	2.8nm,0.5s						
TKM2				⇑Lg	Lg	21 11 06.2	
	9.5nm,0.6s						
KURS	**Kuram**	**2.83**	**5**	*e*P	**Pg**	**21 10 30.0**	**-0.1**
	3.2nm,0.3s						
KURS				*e*S	**Sg**	**21 11 06.4**	**-0.4**
	15nm,0.3s						
KURS	**Kuram**	**2.83**	**5**	Pg	**Pg**	**21 10 30.0**	**-0.1**
	3.2nm,0.3s						
KURS				Lg	Lg	21 11 06.4	
	15nm,0.3s						
KPKS	**Kokpek**	**2.88**	**13**	*e*P	**Pg**	**21 10 30.6**	**-0.3**
	10nm,0.3s						
KPKS				*e*S	**Sg**	**21 11 07.1**	**-1.1**
	17nm,0.5s						
ARLS	**Aral**	**2.88**	**296**	⇓*i*P	**Pb**	**21 10 28.4**	**+1.1**
	baz=92						
ARLS				⇓*i*S	**Sb**	**21 11 03.8**	**+1.2**
	baz=92						
KBK	**Karagaybulak**	**2.92**	**314**	⇑*i*P	**Pb**	**21 10 28.3**	**+0.4**
	baz=11						
KBK				⇑*i*S	**Sb**	**21 11 03.7**	**0.0**
	baz=11						
KBK	**Karagaybulak**	**2.92**	**314**	P	**Pg**	**21 10 32.8**	**+0.9**
	SNR=7.9						
UCH	**Uchtor**	**2.93**	**303**	⇑*i*P	**Pb**	**21 10 28.8**	**+0.6**
	baz=0.0						
UCH				⇑*i*S	**Sb**	**21 11 05.0**	**+0.9**
	baz=0.0						
UCH	**Uchtor**	**2.93**	**303**	P	**Pg**	**21 10 33.0**	**+1.1**
	SNR=6.8						
PDGK	**Podgornoye**	**2.94**	**25**	Pg	**Pg**	**21 10 31.3**	**-1.0**
	1.8nm,0.3s						
PDGK				Lg	Lg	21 11 08.6	
	5.8nm,0.4s						
PDGK	**Podgornoye**	**2.94**	**25**	⇓Pg	**Pg**	**21 10 31.2**	**-1.0**
	1.8nm,0.5s						
PDGK				⇓Lg	Lg	21 11 09.4	
	15nm,0.6s						
DGS	**Degeres**	**2.99**	**330**	*e*P	**Pg**	**21 10 33.2**	**+0.1**
	2.0nm,0.3s						
DGS				*e*S	**Sg**	**21 11 11.8**	**0.0**
	10nm,0.4s						
DGS	**Degeres**	**2.99**	**330**	Pg	**Pg**	**21 10 33.2**	**+0.1**
	2.0nm,0.3s						
DGS				Lg	Lg	21 11 11.8	
	10nm,0.4s						
KTBS	**Karatobe**	**3.16**	**345**	*e*P	**Pg**	**21 10 35.7**	**-0.6**
	2.4nm,0.3s						
KTBS				*e*S	**Sg**	**21 11 16.2**	**-1.0**
	32nm,0.3s						
KTBS	**Karatobe**	**3.16**	**345**	Pg	**Pg**	**21 10 35.7**	**-0.6**
	2.4nm,0.3s						
KTBS				Lg	Lg	21 11 16.2	
	32nm,0.3s						
AAK	**Ala-Archa**	**3.17**	**310**	⇑*e*P	**Pb**	**21 10 32.1**	**0.0**
	baz=7.0						
AAK				⇑*i*S	**Sb**	**21 11 09.9**	**-0.9**
	baz=7.0						
AAK	**Ala-Archa**	**3.17**	**310**	⇓Pg	Pb	21 10 36.5	+4.4
	1.9nm,0.3s						
AAK				Lg	Lg	21 11 18.2	
	7.7nm,0.8s						
CHKK	**Chushkaly**	**3.24**	**349**	*e*P	**Pg**	**21 10 37.3**	**-0.7**
	2.0nm,0.2s						
CHKK				*e*S	**Sg**	**21 11 18.8**	**-1.2**
	20nm,0.3s						
CHKK	**Chushkaly**	**3.24**	**349**	Pg	**Pg**	**21 10 37.3**	**-0.7**
	2.0nm,0.2s						
CHKK				Lg	Lg	21 11 18.8	
	20nm,0.3s						
CHMS	**Chumysh**	**3.26**	**317**	⇑*i*P	**Pb**	**21 10 32.8**	**-0.9**
	baz=14						
CHMS				⇑*i*S	**Sb**	**21 11 11.4**	**-1.9**
	baz=14						
CHMS	**Chumysh**	**3.26**	**317**	P	**Pg**	**21 10 38.7**	**+0.4**
	SNR=9.3						
KTMS	**Ketmen**	**3.36**	**33**	*e*P	**Pg**	**21 10 39.0**	**-1.2**
	0.9nm,0.2s						
KTMS				*e*S	**Sg**	**21 11 21.9**	**-2.0**
	5.7nm,0.3s						
KTMS	**Ketmen**	**3.36**	**33**	Pg	**Pg**	**21 10 39.0**	**-1.2**
	0.9nm,0.2s						
KTMS				Lg	Lg	21 11 21.9	
	5.7nm,0.3s						
KUU	**Kurty**	**3.41**	**342**	*e*P	**Pb**	**21 10 39.4**	**+3.3**
	0.8nm,0.2s						
KUU				*e*S	**Sg**	**21 11 22.5**	**-2.6**
	4.5nm,0.4s						
KUU	**Kurty**	**3.41**	**342**	Pg	**Pb**	**21 10 39.4**	**+3.3**
	0.8nm,0.2s						
KUU				Lg	Lg	21 11 22.5	
	4.5nm,0.4s						
AML	**Almayashu**	**3.42**	**297**	⇑*i*P	**Pb**	**21 10 36.2**	**-0.4**
	baz=94						
AML				⇑*i*S	**Sb**	**21 11 17.1**	**-1.2**
	baz=94						
MNBS	**Baschi**	**3.44**	**7**	*e*P	**Pg**	**21 10 40.7**	**-1.0**
	1.6nm,0.3s						
MNBS				*e*S	**Sg**	**21 11 24.9**	**-1.4**
	20nm,0.5s						
MNBS	**Baschi**	**3.44**	**7**	Pg	**Pg**	**21 10 40.7**	**-1.0**
	1.6nm,0.3s						
MNBS				Lg	Lg	21 11 24.9	
	20nm,0.5s						
ARXS	**Arharly**	**3.55**	**0**	*e*P	**Pg**	**21 10 42.3**	**-1.4**
	4.0nm,0.4s						
ARXS				*e*S	**Sg**	**21 11 27.4**	**-2.2**
	16nm,0.4s						
ARXS	**Arharly**	**3.55**	**0**	Pg	**Pg**	**21 10 42.3**	**-1.4**
	4.0nm,0.4s						
ARXS				Lg	Lg	21 11 27.4	
	16nm,0.4s						
USP	**Ospenovka**	**3.58**	**318**	P	**Pg**	**21 10 44.4**	**-0.1**
	SNR=8.7						
EKS2	**Erkin-Say**	**3.62**	**305**	⇓*i*P	**Pb**	**21 10 38.4**	**-1.4**
	baz=2.0						
EKS2				⇓*i*S	**Sb**	**21 11 21.2**	**-2.4**
	baz=2.0						
EKS2	**Erkin-Say**	**3.62**	**305**	P	**Pg**	**21 10 46.1**	**+1.0**
	SNR=7.9						
SGDS	**Sogindy**	**3.65**	**321**	Pg	**Pg**	**21 10 45.2**	**-0.6**
	0.8nm,0.4s						
SGDS				Lg	Lg	21 11 32.5	
	2.0nm,0.3s						
DJR	**Jarkent**	**3.95**	**21**	*e*P	**Pg**	**21 10 49.6**	**-1.8**
	0.6nm,0.1s						
DJR				*e*S	**Sg**	**21 11 39.9**	**-2.7**
	3.0nm,0.7s						
DJR	**Jarkent**	**3.95**	**21**	Pg	**Pg**	**21 10 49.6**	**-1.8**
	0.6nm,0.1s						
DJR				Lg	Lg	21 11 39.9	
	3.0nm,0.7s						
MRKS	**Merke**	**4.01**	**303**	*e*P	**Pg**	**21 10 52.4**	**-0.2**
	2.3nm,0.3s						
MRKS				*e*S	**Sg**	**21 11 44.6**	**0.0**
	1.9nm,0.5s						
MRKS	**Merke**	**4.01**	**303**	Pg	**Pg**	**21 10 52.4**	**-0.2**
	2.3nm,0.3s						
MRKS				Lg	Lg	21 11 44.6	
	1.9nm,0.5s						

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*IDC **19** 21:31:29.8±1.1, 16°.08S×167°.84E, h0km, mb4.3/13, mb1 4.5/14, mb1mx4.2/41, mbtmp4.3/14, ML3.9/1, MS3.6/9, Ms1 3.6/9, ms1mx3.3/37, Error ellipse: s-maj=33.3km s-min=17.7km az=128.0*

*NEIC **19** 21:31:31.4±0.9, 16°.17S±0°.06×167°.92E±0°.07, h10km±1km, mb4.6/21, Error ellipse: s-maj=15.1km s-min=4.5km az=229.0*

ISC 19 21:31:34.5±0.5**, 16°.19S**±0°.06×**167°.90E**±0°.08**, h35km, n45, σ1ˢ35**/42**, mb4.5**/22**, MS3.7**/10**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**0.99**	**318**		**Pn**	**21 31 50.5**	**-1.5**
DZM	**Mont Dzumac**	**6.01**	**193**	Pn	**Pn**	**21 32 60.0**	**-1.1**
	3.1nm,0.3s,baz=330,slow=21,SNR=21						
DZM				Sn	**Sn**	**21 34 10.5**	**+1.7**
	1.4nm,0.3s,baz=292,slow=20,SNR=3.7						
DZM				LR	LR	21 35 11.7	
	comp=Z,116nm,19.0s,baz=279,slow=36						
DZM	**Mont Dzumac**	**6.01**	**193**	*e*Pn	**Pn**	**21 32 59.8**	**-1.3**
	8.9nm,0.3s						
DZM				*e*Sn	**Sn**	**21 34 03.5**	**-5.2**
	3.4nm,0.3s						
DZM				*e*LR	LR	21 34 19.8	
	comp=Z,116nm,24.6s						
MSVF	**Nonsavu**	**9.84**	**100**		**Pn**	**21 33 54.0**	**+0.4**
HNR	**Honiara**	**10.26**	**310**	LR	LR	21 37 47.2	
	comp=Z,261nm,18.5s,baz=96,slow=37						
HNR	**Honiara**	**10.26**	**310**	Pn	**Pn**	**21 33 58.6**	**-0.7**
TARA	**Tarawa**	**18.12**	**16**	Pn	**Pn**	**21 35 40.7**	**-2.9**
RAO	**Raoul Island**	**18.42**	**137**	P	**P**	**21 35 46.8**	**0.0**
CTA	**Charters Tower**	**20.93**	**256**	P	**P**	**21 36 14.5**	**+0.2**
	4.2nm,1.0s,baz=82,slow=15,SNR=3.4						
PMG	**Port Moresby**	**21.30**	**286**	P	**P**	**21 36 20.5**	**+2.1**
	3.9nm,0.4s,baz=135,slow=3.4,SNR=4.0						
PMG				LR	LR	21 43 33.6	
	comp=Z,176nm,18.5s,baz=186,slow=34						
PMG	**Port Moresby**	**21.30**	**286**	P	**P**	**21 36 18.9**	**+0.5**
COEN	**Coen**	**23.97**	**272**	P	**P**	**21 36 47.9**	**+2.0**
COEN				IAmb	IAmb	21 36 51.1	
	comp=Z,20nm,1.1s						
KNTN	**Kanton**	**24.08**	**58**	P	**P**	**21 36 45.9**	**-1.0**
STKA	**Stephens Creek**	**28.55**	**232**	P	**P**	**21 37 28.6**	**+1.5**
	comp=Z,4.6nm,0.8s,baz=44,slow=8.5,SNR=9.0						
STKA				LR	LR	21 47 32.9	
	comp=Z,94nm,18.6s,baz=37,slow=34						
STKA	**Stephens Creek**	**28.55**	**232**	P	**P**	**21 37 27.9**	**+0.8**
WB0	**Warramunga Arr**	**32.04**	**259**	P	**P**	**21 37 58.4**	**+0.3**
WB0				IAmb	IAmb	21 38 01.9	
	comp=Z,7.9nm,1.0s						
WRA	**Warramunga Arr**	**32.09**	**258**	P	**P**	**21 37 57.9**	**-0.7**
	comp=Z,3.2nm,1.1s,baz=88,slow=8.5,SNR=6.2						
WRA				LR	LR	21 49 34.0	
	comp=Z,113nm,21.5s,baz=85,slow=34						
WRA	**Warramunga Arr**	**32.09**	**258**	P	**P**	**21 37 58.6**	**+0.1**
AS31	**Alice Springs**	**32.75**	**251**	P	**P**	**21 38 05.2**	**+0.8**
AS31				IAmb	IAmb	21 38 07.5	
	comp=Z,6.4nm,0.8s						
ASAR	**Alice Springs**	**32.75**	**251**	P	**P**	**21 38 05.4**	**+1.0**
	comp=Z,19nm,0.8s,baz=79,slow=9.0,SNR=78						
ASAR				LR	LR	21 50 08.7	
	comp=Z,169nm,20.9s,baz=126,slow=34						
ASAR	**Alice Springs**	**32.75**	**251**	P	**P**	**21 38 04.6**	**+0.2**
FORT	**Forrest**	**39.10**	**241**	P	**P**	**21 38 58.8**	**+0.2**
FITZ	**Fitzroy Crossi**	**40.36**	**261**	P	**P**	**21 39 09.2**	**0.0**
	comp=Z,5.8nm,0.8s,baz=63,slow=7.8,SNR=8.9						
FITZ				LR	LR	21 56 06.9	
	comp=Z,147nm,18.4s,baz=120,slow=37						
FITZ	**Fitzroy Crossi**	**40.36**	**261**	P	**P**	**21 39 10.1**	**+0.9**
FITZ				IAmb	IAmb	21 39 12.4	
	comp=Z,13nm,1.1s						
TBI	**Tubuai**	**40.64**	**107**	*e*LR	LR	21 50 18.0	
	comp=Z,139nm,29.5s						
PPT2	**Papeete2**	**40.66**	**98**	*e*LR	LR	21 50 22.3	
	comp=Z,143nm,25.0s						
PPT	**Papeete**	**40.66**	**98**	LR	LR	21 52 03.5	
	comp=Z,117nm,20.0s,baz=202,slow=30						
TAOE	**Nuku Hiva Isla**	**51.13**	**88**	*e*LR	LR	21 55 13.9	
	comp=Z,232nm,26.2s						
MJAR	**Matsushiro Arr**	**59.47**	**332**	P	**P**	**21 41 33.7**	**-0.4**
	comp=Z,3.3nm,0.9s,baz=162,slow=7.3,SNR=4.8						
USRK	**Ussuriysk Ar.**	**68.45**	**333**	P	**P**	**21 42 32.4**	**-0.5**
	comp=Z,4.6nm,0.9s,baz=91,slow=7.6,SNR=5.8						
USRK	**Ussuriysk Ar.**	**68.45**	**333**	P	**P**	**21 42 33.5**	**+0.6**
MDJ	**Mudanjiang**	**69.85**	**332**	P	**P**	**21 42 42.1**	**+0.6**
MDJ				IAmb	IAmb	21 42 44.9	
	comp=Z,7.7nm,1.0s						
CMAR	**Chiang Mai Arr**	**76.09**	**294**	P	**P**	**21 43 19.1**	**0.0**
	comp=Z,0.5nm,0.7s,baz=155,slow=5.0,SNR=1.7						
ULN	**Ulaanbaatar**	**83.66**	**324**	P	**P**	**21 43 60.0**	**+0.3**
ULN				IAmb	IAmb	21 44 02.3	
	comp=Z,6.6nm,1.1s						
SONM	**Songino Array**	**84.02**	**323**	P	**P**	**21 44 01.9**	**+0.4**
	comp=Z,3.3nm,1.1s,baz=138,slow=4.7,SNR=13						
SONM	**Songino Array**	**84.02**	**323**	P	**P**	**21 44 02.1**	**+0.6**
SONM				IAmb	IAmb	21 44 04.0	
	comp=Z,3.8nm,1.1s						
ORV	**Oroville**	**85.93**	**47**	P	**P**	**21 44 12.1**	**+1.0**
ISA	**Isabella, Lake**	**86.58**	**52**	P	**P**	**21 44 15.3**	**+0.8**
ISA				IAmb	IAmb	21 44 19.0	
	comp=Z,4.1nm,1.0s						
OMMB	**Old Mammoth Mi**	**86.94**	**50**	P	**P**	**21 44 17.5**	**+1.0**
OMMB				IAmb	IAmb	21 44 19.4	
	comp=Z,5.2nm,1.2s						
WAKR	**Walker**	**86.97**	**49**	P	**P**	**21 44 17.2**	**+0.7**
WAKR				IAmb	IAmb	21 44 21.4	
	comp=Z,7.0nm,1.2s						
HDA	**Harding Lake**	**87.44**	**18**	P	**P**	**21 44 18.9**	**+1.1**
HDA				IAmb	IAmb	21 44 22.0	
	comp=Z,2.9nm,0.9s						
ILAR	**Eielson Array**	**87.72**	**18**	P	**P**	**21 44 19.9**	**+0.7**
	comp=Z,1.3nm,0.9s,baz=237,slow=6.0,SNR=10						
ILAR				LR	LR	22 20 16.3	
	comp=Z,28nm,18.5s,baz=95,slow=33						
NVAR	**Mina Array Bea**	**87.76**	**49**	P	**P**	**21 44 21.5**	**+1.2**
	comp=Z,1.3nm,0.8s,baz=230,slow=7.3,SNR=6.9						
YKA	**Yellowknife Ar**	**98.56**	**27**	P	**P**	**21 45 09.8**	**+0.6**
	comp=Z,0.7nm,0.9s,baz=76,slow=19,SNR=5.1						
MKAR	**Makanchi Array**	**98.67**	**316**	P	**P**	**21 45 08.6**	**-1.6**
	comp=Z,0.4nm,0.9s,baz=104,slow=3.0,SNR=3.5						

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*IDC **19** 21:48:43.6±2.0, 4°.09S×136°.29E, h0km, mb3.8/2, mb1 4.1/6, mb1mx3.8/35, mbtmp4.0/6, ML3.9/4, MS3.4/1, Ms1 3.4/1, ms1mx2.6/34, Error ellipse: s-maj=59.5km s-min=24.6km az=82.0*

*NEIC **19** 21:48:50.1±2.6, 4°.2S±0°.1×136°.0E±0°.1, h62km±9km, mb4.1/9, Error ellipse: s-maj=21.2km s-min=10.8km az=56.0*

ISC 19 21:48:49.7±1.0**, 4°.49S**±0°.08×**135°.8E**±0°.1**, h35km, n20, σ2ˢ33**/22**, mb3.9**/3**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**3.89**	**294**	Pn	**Pn**	**21 49 49.1**	**+2.1**
SIJI	**Sorong**	**5.80**	**308**	Pn	**Pn**	**21 50 13.2**	**0.0**
	11nm,0.3s,baz=257,slow=22,SNR=27						
SIJI				Sn	**Sn**	**21 51 18.6**	**-0.1**
	1.7nm,0.3s,baz=217,slow=20,SNR=1.9						
COEN	**Coen**	**11.88**	**143**	Pn	**Pn**	**21 51 37.7**	**+1.1**
WB0	**Warramunga Arr**	**15.24**	**185**	Pn	**P**	**21 52 25.0**	**-2.0**
WB0				IAmb	IAmb	21 53 01.3	
	comp=Z,14nm,1.1s						
WRAB	**Tennant Creek**	**15.41**	**185**	Pn	**P**	**21 52 28.5**	**-0.3**
WRAB				IAmb	IAmb	21 52 56.0	
	comp=Z,19nm,1.4s						
WB2	**Warramunga Arr**	**15.42**	**185**	Pn	**Pn**	**21 52 26.4**	**+1.7**
WB2				IAmb	IAmb	21 52 39.7	
	comp=Z,18nm,1.4s						
WR0	**Warramunga Arr**	**15.42**	**185**	Pn	**P**	**21 52 28.1**	**-0.8**
WRA	**Warramunga Arr**	**15.42**	**185**	Pn	**Pn**	**21 52 26.5**	**+1.8**
	comp=Z,0.3nm,0.3s,baz=9.3,slow=13,SNR=13						
WRA				Sn	**Sn**	**21 55 11.6**	**-3.0**
	comp=Z,0.4nm,0.3s,baz=2.5,slow=24,SNR=7.8						
WRA	**Warramunga Arr**	**15.42**	**185**	Pn	**Pn**	**21 52 26.7**	**+1.9**
FITZ	**Fitzroy Crossi**	**16.79**	**216**	P	**P**	**21 52 46.0**	**+1.9**
	comp=Z,0.3nm,0.3s,baz=41,slow=11,SNR=14						
FITZ				S	**Sn**	**21 55 45.9**	**-1.9**
	comp=Z,0.5nm,0.3s,baz=208,slow=15,SNR=5.4						
FITZ	**Fitzroy Crossi**	**16.79**	**216**	P	**P**	**21 52 45.7**	**+1.6**
AS31	**Alice Springs**	**19.15**	**185**	P	**Pn**	**21 53 15.8**	**+4.6**
ASAR	**Alice Springs**	**19.15**	**185**	P	**Pn**	**21 53 15.4**	**+4.2**
	comp=Z,0.6nm,0.3s,baz=8.7,slow=10,SNR=28						
ASAR				S	**S**	**21 56 43.7**	**-1.8**
	comp=Z,0.1nm,0.3s,baz=2.4,slow=27,SNR=3.5						
ASAR	**Alice Springs**	**19.15**	**185**	P	**Pn**	**21 53 14.7**	**+3.5**
SBUM	**Sibu**	**24.57**	**286**	P	**P**	**21 54 04.5**	**-2.1**
SBUM				IAmb	IAmb	21 54 15.3	
	comp=Z,7.0nm,1.1s						
JTU	**Tsushima**	**39.28**	**352**	P	P	21 56 08.1	-7.0
PYZ	**Puysegur Point**	**49.40**	**152**	P	**P**	**21 57 34.9**	**-1.1**
PALK	**Pallekele**	**56.23**	**282**	LR	LR	22 25 57.2	
	comp=Z,29nm,18.8s,baz=231,slow=40						
MKAR	**Makanchi Array**	**69.48**	**324**	P	**P**	**21 59 54.0**	**-0.5**
	comp=Z,0.5nm,0.4s,baz=105,slow=7.1,SNR=16						
ZALV	**Zalesovo Beam**	**72.06**	**331**	P	**P**	**22 00 07.9**	**-2.2**
	comp=Z,0.5nm,0.5s,baz=111,slow=7.9,SNR=2.7						

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*IDC **19** 21:51:53.1±1.8, 16°.15S×168°.04E, h0km, mb4.2/5, mb1 4.3/6, mb1mx3.9/36, mbtmp4.1/6, ML3.7/1, MS3.4/1, Ms1 3.4/1, ms1mx2.8/31, Error ellipse: s-maj=56.5km s-min=26.7km az=124.0*

ISC 19 21:51:58.1±1.5**, 16°.3S**±0°.1×**168°.1E**±0°.3**, h35km, n6, σ0ˢ32**/7**, mb4.1**/5**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**5.98**	**195**	Pn	**Pn**	**21 53 23.9**	**-0.3**
	1.8nm,0.3s,baz=27,slow=16,SNR=12						
DZM				Sn	**Sn**	**21 54 31.7**	**+0.2**
	baz=180,slow=20,SNR=1.7						
STKA	**Stephens Creek**	**28.64**	**232**	P	**P**	**21 57 51.5**	**+0.1**
	2.3nm,0.7s,baz=47,slow=6.8,SNR=4.3						
WRA	**Warramunga Arr**	**32.25**	**258**	P	**P**	**21 58 23.3**	**-0.2**
	1.2nm,0.9s,baz=81,slow=8.1,SNR=2.6						
ASAR	**Alice Springs**	**32.90**	**252**	P	**P**	**21 58 29.6**	**+0.4**
	7.6nm,0.8s,baz=80,slow=9.0,SNR=33						
ASAR				LR	LR	22 10 54.8	
	comp=Z,65nm,20.0s,baz=5.0,slow=35						
SONM	**Songino Array**	**84.19**	**323**	P	**P**	**22 04 25.7**	**-0.2**
	1.8nm,1.1s,baz=125,slow=4.9,SNR=6.3						
ILAR	**Eielson Array**	**87.74**	**18**	P	**P**	**22 04 43.1**	**+0.2**
	1.0nm,0.9s,baz=228,slow=5.5,SNR=8.2						

IDC 19 21:57:37.7±8.3**, 5°.85S**×**150°.82E, h93km**±58km**, mb3.3**/3**, mb1 3.5**/4**, mb1mx3.2**/30**, mbtmp3.7**/4**, ML1.8**/1**, Error ellipse: s-maj=92.8km s-min=39.6km az=104.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.06**	**226**	P	Pn	21 58 50.9	-0.3
	2.6nm,0.3s,baz=74,slow=4.3,SNR=5.8						
PMG				S	Sn	21 59 49.5	+1.1
	8.0nm,0.3s,baz=146,slow=20,SNR=17						
WRA	**Warramunga Arr**	**21.28**	**227**	P	P	22 02 16.4	-0.4
	1.2nm,0.5s,baz=53,slow=10,SNR=13						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**24.05**	**221**	P	P	22 02 44.6	+0.1
	1.8nm,0.7s,baz=56,slow=8.4,SNR=18						
MKAR	**Makanchi Array**	**79.83**	**319**	P	P	22 09 36.2	+0.1
	0.3nm,0.7s,baz=104,slow=6.2,SNR=3.3						

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*KRNET **19** 22:31:13.7±0.1, 41°.55N×71°.75E, h17km, mb2.0*

*NNC **19** 22:31:17.6±4.2, 41°.81N×71°.60E, h0km, mb2.5, mpv2.7, Error ellipse: s-maj=34.8km s-min=10.2km az=14.0*

ISC 19 22:31:15.0±1.6**, 41°.55N**±0°.04×**71°.73E**±0°.05**, h8**km±14km**, n13,** σ**1^{s}.44**/19**, 5C-11D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARSB	**Arslanbob**	**0.97**	**103**	⇓*i*P	**Pg**	**22 31 31.7**	**-2.0**
	baz=3.0						
ARSB				⇓*i*S	**Sg**	**22 31 45.6**	**-0.7**
	baz=3.0						
MNAS	**Manas**	**1.10**	**31**	⇓*i*P	**Pg**	**22 31 34.7**	**-1.5**
	baz=31						
MNAS				⇓*i*S	**Sg**	**22 31 50.1**	**-0.4**
	baz=31						
OHH	**Osh**	**1.30**	**142**	⇑*i*P	**Pn**	**22 31 38.3**	**-1.2**
	baz=42						
OHH				⇑*i*S	**Sb**	**22 31 56.4**	**-0.1**
	baz=42						
MRKS	**Merke**	**1.63**	**42**	P	**Pg**	**22 31 47.9**	**+1.5**
	2.1nm,0.4s						
MRKS				S	**Sg**	**22 32 08.2**	**+0.6**
	3.0nm,0.1s						
BTK	**Batken**	**1.64**	**205**	⇓*i*P	**Pn**	**22 31 45.0**	**+0.8**
	baz=6.0						
BTK				⇓*i*S	**Sb**	**22 32 07.5**	**+1.1**
	baz=6.0						
KK31	**Karatay Array**	**1.80**	**330**	⇓P	**Pn**	**22 31 46.1**	**-0.2**
	0.8nm,0.3s,baz=134,slow=12,SNR=19						
KK31				⇑S	**Sn**	**22 32 06.1**	**-3.2**
	1.0nm,0.2s,baz=156,slow=30,SNR=6.6						
ARLS	**Aral**	**1.97**	**80**	⇓*i*P	**Pn**	**22 31 49.8**	**+1.0**
	baz=80						
ARLS				⇓*i*S	**Sb**	**22 32 16.3**	**+0.4**
	baz=80						
DRK	**Karamyk**	**2.07**	**178**	⇓*i*P	**Pn**	**22 31 51.6**	**+1.3**
	baz=79						
DRK				⇓*i*S	**Sb**	**22 32 19.5**	**+0.6**
	baz=79						
AAK	**Ala-Archa**	**2.33**	**61**	⇑Lg	Lg	22 32 28.6	
	1.0nm,0.4s						
SGDS	**Sogindy**	**2.87**	**47**	Pg	**Pb**	**22 32 07.8**	**+1.4**
	3.2nm,0.6s						
SGDS				Lg	Lg	22 32 42.5	
	1.0nm,0.3s						
TKM2	**Tokmak 2**	**3.18**	**63**	⇑Lg	Lg	22 32 57.1	
	2.0nm,0.7s						
DGS	**Degeres**	**3.44**	**59**	Pg	**Pb**	**22 32 17.8**	**+1.6**
	0.6nm,0.4s						
DGS				Lg	Lg	22 32 59.9	
	1.0nm,0.5s						
KST	**Kastek**	**3.48**	**63**	Pg	**Pb**	**22 32 17.6**	**+0.7**
	1.2nm,0.2s						
KST				Lg	Lg	22 32 59.0	
	2.5nm,0.6s						

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*IDC **19** 22:46:43.9±4.6, 22°.15S×69°.37E, h0km, mb3.6/6, mb1 3.8/6, mb1mx3.5/34, mbtmp3.6/6, MS3.5/6, Ms1 3.5/6, ms1mx3.3/31, Error ellipse: s-maj=132.9km s-min=35.9km az=56.0*

ISC 19 22:46:46.0±4.5**, 22°.1S**±0°.5×**69°.5E**±0°.7**, h10**km**, n13,** σ**0^{s}.91**/6**, mb3.7**/6**, MS3.5**/6**, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**14.67**	**12**	T	T	23 05 10.5	
H08S2	**Diego Garcia H**	**14.67**	**12**	T	T	23 05 20.6	
	baz=113,slow=74,SNR=6.7						
H08S3	**Diego Garcia H**	**14.69**	**12**	T	T	23 05 18.2	
	baz=192,slow=74,SNR=29						
KMBO	**Kilima Mbogo**	**37.65**	**299**	LR	LR	23 06 29.1	
	comp=Z,17nm,21.8s,baz=108,slow=32						
BOSA	**Boshof**	**40.30**	**251**	LR	LR	23 06 33.7	
	comp=Z,118nm,19.5s,baz=89,slow=30						
CMAR	**Chiang Mai Arr**	**49.57**	**38**	P	**P**	**22 55 37.2**	**-0.3**
	0.7nm,0.3s,baz=220,slow=8.7,SNR=5.6						
CMAR				LR	LR	23 14 41.2	
	comp=Z,44nm,18.2s,baz=270,slow=34						
ASAR	**Alice Springs**	**58.92**	**105**	P	**P**	**22 56 45.8**	**0.0**
	0.4nm,0.5s,baz=258,slow=6.6,SNR=4.2						
WRA	**Warramunga Arr**	**60.17**	**101**	P	**P**	**22 56 54.3**	**-0.2**
	0.5nm,0.8s,baz=254,slow=7.0,SNR=1.4						
WRA				LR	LR	23 20 41.4	
	comp=Z,25nm,18.5s,baz=350,slow=34						
STKA	**Stephens Creek**	**63.97**	**116**	LR	LR	23 20 14.7	
	comp=Z,73nm,20.4s,baz=206,slow=31						
MKAR	**Makanchi Array**	**69.55**	**9**	P	**P**	**22 57 54.5**	**-0.4**
	0.4nm,0.8s,baz=198,slow=7.3,SNR=3.8						
ZALV	**Zalesovo Beam**	**76.89**	**9**	P	**P**	**22 58 37.3**	**-0.8**
	0.3nm,0.4s,baz=28,slow=29,SNR=2.4						
SONM	**Songino Array**	**77.12**	**25**	P	**P**	**22 58 40.9**	**+1.2**
	1.1nm,1.1s,baz=235,slow=5.1,SNR=4.3						
KSRS	**Korea Array**	**80.82**	**43**	LR	LR	23 35 00.1	
	comp=Z,25nm,18.1s,baz=345,slow=36						

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*THE **19** 22:56:13.6, 38°.43N×20°.50E, h17km±1km, ML2.6/11, Error ellipse: s-maj=1.8km s-min=0.4km az=288.0*

*ATH **19** 22:56:14.1, 38°.42N×20°.53E, h15km±1km, ML2.4/4, Error ellipse: s-maj=1.8km s-min=0.5km az=280.0*

ISC 19 22:56:13.7±0.8**, 38°.42N**±0°.02×**20°.52E**±0°.03**, h17**km±6km**, n47,** σ**0^{s}.42**/73**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEF5	**Kardakata, Kep**	**0.15**	**195**	P	**Pg**	**22 56 17.7**	**-0.1**
KEF5				S	**Sg**	**22 56 20.5**	**-0.1**
	13µm,0.4s						
KEF5	**Kardakata, Kep**	**0.15**	**195**	P	**Pg**	**22 56 17.7**	**-0.1**
KEF5				S	**Sg**	**22 56 20.4**	**-0.1**
KEF4	**Livadi, Kephal**	**0.18**	**204**	P	**Pg**	**22 56 18.3**	**+0.1**
KEF4				S	**Sb**	**22 56 21.8**	**+0.1**
KEF4	**Livadi, Kephal**	**0.18**	**204**	P	**Pg**	**22 56 18.3**	**+0.1**
KEF4				S	**Sb**	**22 56 21.9**	**+0.2**
DMLN	**Damoulianata-K**	**0.21**	**212**	P	**Pg**	**22 56 18.9**	**+0.1**
DMLN				S	**Sb**	**22 56 22.9**	**+0.1**
	2µm,0.3s						
DMLN	**Damoulianata-K**	**0.21**	**212**	P	**Pg**	**22 56 18.9**	**+0.1**
DMLN				S	**Sb**	**22 56 22.8**	**+0.1**
EVGI	**Lefkada island**	**0.23**	**29**	P	**Pg**	**22 56 18.8**	**-0.2**
EVGI				S	**Sg**	**22 56 22.5**	**-0.1**
	1µm,0.2s						
EVGI	**Lefkada island**	**0.23**	**29**	P	**Pg**	**22 56 18.8**	**-0.2**
EVGI				S	**Sg**	**22 56 22.3**	**-0.3**
LXRA	**Lixouri, Kepha**	**0.23**	**196**	P	**Pg**	**22 56 19.2**	**+0.3**
LXRA				S	**Sb**	**22 56 23.3**	**+0.2**
ARGA	**Argostoli. Kep**	**0.25**	**187**	P	**Pg**	**22 56 19.3**	**+0.1**
ARGA				S	**Sg**	**22 56 23.5**	**+0.5**
KEF3	**Kipouria, Keph**	**0.26**	**211**	P	**Pg**	**22 56 19.0**	**-0.4**
KEF3				S	**Sg**	**22 56 23.2**	**-0.1**
	5µm,0.3s						
KEF3	**Kipouria, Keph**	**0.26**	**211**	P	**Pg**	**22 56 19.0**	**-0.4**
KEF3				S	**Sg**	**22 56 23.1**	**-0.1**
PSDA	**Pessada-Kefalo**	**0.31**	**170**	P	**Pg**	**22 56 20.3**	**0.0**
PSDA				S	**Sg**	**22 56 25.3**	**+0.4**
PSDA	**Pessada-Kefalo**	**0.31**	**170**	P	**Pg**	**22 56 20.4**	**0.0**
PSDA				S	**Sb**	**22 56 25.5**	**0.0**
NYDR	**Nydri-Lefkada**	**0.32**	**26**	P	**Pg**	**22 56 20.3**	**-0.2**
NYDR				S	**Sg**	**22 56 25.5**	**+0.2**
	2µm,0.4s						
NYDR	**Nydri-Lefkada**	**0.32**	**26**	P	**Pg**	**22 56 20.4**	**-0.2**
NYDR				S	**Sg**	**22 56 25.5**	**+0.2**
LKD2	**Lefkada island**	**0.38**	**17**	P	**Pg**	**22 56 21.4**	**-0.2**
LKD2				S	**Sg**	**22 56 27.4**	**+0.3**
	548nm,0.5s						
LKD2	**Lefkada island**	**0.38**	**17**	P	**Pg**	**22 56 21.4**	**-0.2**
LKD2				S	**Sg**	**22 56 27.3**	**+0.3**
LKD2				AML	AML	22 56 29.3	
	comp=E,1034µm,0.5s						
LKD2				AML	AML	22 56 31.9	
	comp=N,1112µm,0.4s						
TSLK	**Tsoukalades, L**	**0.42**	**15**	P	**Pg**	**22 56 22.2**	**0.0**
TSLK	**Tsoukalades, L**	**0.42**	**15**	P	**Pg**	**22 56 22.2**	**0.0**
TSLK				S	**Sb**	**22 56 29.0**	**+0.4**
PDO	**Prodromos**	**0.55**	**71**	P	**Pg**	**22 56 24.4**	**-0.2**
PDO				S	**Sb**	**22 56 33.2**	**+0.7**
	comp=N,642nm,0.4s						
PDO	**Prodromos**	**0.55**	**71**	P	**Pg**	**22 56 24.4**	**-0.2**
PDO				AML	AML	22 56 37.6	
	comp=E,629µm,0.4s						
PDO				AML	AML	22 56 38.2	
	comp=N,1161µm,0.4s						
VLMS	**Volimes, Zakyn**	**0.56**	**168**	P	**Pg**	**22 56 24.7**	**0.0**
VLMS				S	**Sb**	**22 56 33.8**	**+1.2**
	comp=N,2µm,0.4s						
VLMS	**Volimes, Zakyn**	**0.56**	**168**	P	**Pg**	**22 56 24.7**	**0.0**
VLMS				S	**Sb**	**22 56 33.0**	**+0.4**
VLMS				AML	AML	22 56 37.5	
	comp=N,2965µm,0.3s						
VLMS				AML	AML	22 56 37.8	
	comp=E,3213µm,0.5s						
AXS	**Araxos**	**0.71**	**108**	P	**Pg**	**22 56 27.3**	**-0.3**
AXS				S	**Sn**	**22 56 39.0**	**-0.4**
	comp=E,208nm,0.9s						
AXS	**Araxos**	**0.71**	**108**	P	**Pg**	**22 56 27.4**	**-0.3**
LTHK	**Lithakia**	**0.75**	**160**	P	**Pb**	**22 56 27.9**	**-0.4**
LTHK				S	**Sg**	**22 56 38.3**	**-0.1**
	comp=E,448nm,0.2s						
LTHK	**Lithakia**	**0.75**	**160**	P	**Pb**	**22 56 27.8**	**-0.4**
LTHK				S	**Sb**	**22 56 39.3**	**+1.1**
RLS	**Riolos of Patr**	**0.83**	**116**	P	**Pb**	**22 56 29.5**	**-0.1**
RLS				S	**Sb**	**22 56 40.9**	**+0.4**
	comp=E,118nm,0.5s						
RLS	**Riolos of Patr**	**0.83**	**116**	P	**Pb**	**22 56 29.4**	**-0.1**
ANX	**Ano Chora**	**1.11**	**81**	P	**Pb**	**22 56 34.5**	**0.0**
IGT	**Igoumenitsa**	**1.12**	**353**	P	**Pn**	**22 56 34.8**	**+0.2**
IGT				AML	AML	22 56 53.9	
	comp=E,244µm,0.7s						
IGT				AML	AML	22 56 57.2	
	comp=N,188µm,0.3s						
EVR	**Evrytania**	**1.12**	**64**	P	**Pb**	**22 56 34.5**	**-0.2**
LAKA	**Lakka**	**1.16**	**99**	P	**Pn**	**22 56 35.0**	**-0.1**
SERG	**Sergoula**	**1.21**	**90**	P	**Pn**	**22 56 35.8**	**0.0**
TRIZ	**Trizonia**	**1.22**	**92**	P	**Pn**	**22 56 35.6**	**-0.3**
KALE	**Kalithea**	**1.27**	**91**	P	**Pn**	**22 56 36.7**	**0.0**
AGG	**Agios Georgios**	**1.54**	**67**	P	**Pb**	**22 56 41.7**	**-0.1**
STON	**Ston**	**4.94**	**335**	*i* Pn	**Pn**	**22 57 25.1**	**-1.8**
LSTV	**Lastovo**	**5.14**	**329**	*e*Pn	**Pn**	**22 57 29.4**	**-0.4**
HVAR	**Hvar**	**5.67**	**328**	*e*Pn	**Pn**	**22 57 37.7**	**+0.7**
RICI	**Ricice**	**5.68**	**334**	*e*Pn	**Pn**	**22 57 36.9**	**-0.3**
KIJV	**Kijevo**	**6.38**	**332**	*e*Pn	**Pn**	**22 57 47.7**	**+0.8**
ZIRJ	**Zirje**	**6.39**	**326**	*e*Pn	**Pn**	**22 57 46.9**	**-0.1**
MORI	**Morici**	**6.54**	**328**	*e*Pn	**Pn**	**22 57 49.8**	**+0.8**
DUGI	**Dugi Otok**	**6.92**	**325**	*e*Pn	**Pn**	**22 57 54.4**	**+0.2**
NVLJ	**Novalja**	**7.46**	**327**	*e*Pn	**Pn**	**22 58 02.0**	**+0.4**

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*IDC **19** 23:28:15.2±4.7, 1°.31N×124°.11E, h240km±48km, mb3.4/5, mb1 3.6/8, mb1mx3.3/38, mbtmp4.1/8, MS3.5/2, Ms1 3.5/2, ms1mx2.7/30, Error ellipse: s-maj=62.8km s-min=14.1km az=64.0*

*NEIC **19** 23:28:16.5±1.4, 1°.18N±0°.07×124°.05E±0°.08, h254km±9km, mb4.2/23, Error ellipse: s-maj=12.4km s-min=9.3km az=49.0*

*DJA **19** 23:28:17.8±0.5, 1°N±5°×12°4E±°, h255km±4km, M4.2/12, mb4.2/2, mB4.9/1, MLv4.1/12, Mw(mB)4.2/1*

ISC 19 23:28:16.4±0.5**, 1°.14N**±0°.06×**124°.01E**±0°.06**, h250**km**, n58,** σ**1^{s}.40**/58**, mb4.1**/15**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**0.56**	**183**	S	**S**	**23 29 19.6**	**+4.0**
GTOI	**Gorontalo**	**1.12**	**243**	P	**Pn**	**23 28 54.9**	**+2.7**
GTOI				S	**S**	**23 29 22.8**	**+2.6**
MRSI	**Marisa**	**2.17**	**252**	P	**Pn**	**23 29 02.1**	**+1.6**
MRSI				S	**S**	**23 29 35.8**	**+0.5**
LUWI	**Luwuk**	**2.50**	**210**	Pn	**Pn**	**23 29 04.8**	**+1.1**
LUWI				S	**S**	**23 29 39.2**	**-1.8**
LUWI	**Luwuk**	**2.50**	**210**	P	**Pn**	**23 29 05.2**	**+1.5**
SGSI	**Sangihe**	**2.95**	**31**	P	**Pn**	**23 29 10.6**	**+2.2**
APSI	**Ampana**	**3.12**	**229**	P	**Pn**	**23 29 11.4**	**+1.1**
TOLI2	**Tolitoli**	**3.23**	**270**		**Pn**	**23 29 12.2**	**+0.7**
TNTI	**Ternate**	**3.37**	**96**	Pn	**Pn**	**23 29 13.0**	**-0.1**
TNTI	**Ternate**	**3.37**	**96**	P	**Pn**	**23 29 15.6**	**+2.6**
SANI	**Sanana**	**3.73**	**148**	P	**Pn**	**23 29 17.4**	**+0.2**
NLAI	**Namlea**	**5.33**	**145**	P	**Pn**	**23 29 38.8**	**+2.5**
	0.5nm2µm58nm,1.2s						
SPSI	**Sidrap Palu**	**6.61**	**220**	P	**Pn**	**23 29 53.5**	**+1.2**
MYLDM	**Lahad Datu**	**6.81**	**306**	Pn	**Pn**	**23 29 55.0**	**+0.2**
KAPI	**Kappang**	**7.45**	**215**	P	**Pn**	**23 30 03.8**	**+0.9**
	1.5nm,0.3s,baz=97,slow=13,SNR=5.1						
FAKI	**Fak Fak**	**9.17**	**116**	Pn	**Pn**	**23 30 22.5**	**-2.1**
KKM	**Kota Kinabalu**	**9.18**	**302**	Pn	**Pn**	**23 30 23.9**	**-0.9**
SOEI	**Soe**	**10.83**	**179**	Pn	**Pn**	**23 30 46.8**	**+1.2**
BATI	**Baumata**	**11.28**	**182**	P	**P**	**23 30 54.0**	**-1.1**
	7.2nm,0.3s,baz=120,slow=1.4,SNR=5.9						
SBUM	**Sibu**	**11.86**	**276**		**P**	**23 31 02.2**	**+0.7**
JAGI	**Jajag, Banyuwa**	**13.70**	**226**		**P**	**23 31 23.7**	**+1.7**
KSM	**Kuching**	**13.71**	**272**		**P**	**23 31 23.4**	**+1.3**
FITZ	**Fitzroy Crossi**	**19.18**	**175**	P	**P**	**23 32 22.9**	**+1.1**
	1.0nm,0.3s,baz=5.6,slow=9.5,SNR=12						
FITZ	**Fitzroy Crossi**	**19.18**	**175**	P	**P**	**23 32 23.7**	**+1.8**
FITZ				IAmb	IAmb	23 32 34.3	
	comp=Z,6.3nm,1.1s						
TPUB	**Ta-pu**	**22.27**	**352**	P	**P**	**23 32 53.7**	**+0.7**
TPUB				IAmb	IAmb	23 33 02.0	
	comp=Z,5.8nm,0.9s						
YULB	**Yu-li**	**22.28**	**353**	P	**P**	**23 32 51.7**	**-1.4**
YULB				IAmb	IAmb	23 33 04.7	
	comp=Z,6.6nm,0.9s						
SSLB	**Suanglung**	**22.71**	**353**	IAmb	IAmb	23 32 59.0	
	comp=Z,13nm,1.0s						
PSA00	**Pilbara Seismi**	**22.94**	**190**	P	**P**	**23 32 58.3**	**-0.8**
PSA00				IAmb	IAmb	23 32 59.2	
	comp=Z,5.9nm,0.7s						
WB0	**Warramunga Arr**	**23.14**	**154**	P	**P**	**23 33 01.1**	**+0.1**
WB0				IAmb	IAmb	23 33 03.4	
	comp=Z,9.8nm,1.1s						
WRA	**Warramunga Arr**	**23.27**	**155**	P	**P**	**23 33 02.5**	**+0.4**
	comp=Z,1.3nm,0.4s,baz=336,slow=10,SNR=19						
WRA	**Warramunga Arr**	**23.27**	**155**	P	**P**	**23 33 02.1**	**0.0**
WB2	**Warramunga Arr**	**23.28**	**155**	P	**P**	**23 33 02.3**	**+0.1**
WB2				IAmb	IAmb	23 33 04.1	
	comp=Z,9.6nm,1.1s						
WR0	**Warramunga Arr**	**23.37**	**154**	P	**P**	**23 33 03.4**	**+0.3**
WR0				IAmb	IAmb	23 33 08.8	
	comp=Z,6.4nm,1.1s						
KNMB	**Chin-men Tao**	**23.82**	**347**	P	**P**	**23 33 06.0**	**-1.1**
COEN	**Coen**	**24.20**	**129**	P	**P**	**23 33 10.3**	**-0.3**
GSI	**Gunungsitoli**	**26.43**	**271**	P	**P**	**23 33 29.4**	**-1.3**
GSI				IAmb	IAmb	23 33 43.7	
	comp=Z,4.4nm,0.7s						
ASAR	**Alice Springs**	**26.47**	**159**	P	**P**	**23 33 31.4**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=331,slow=7.1,SNR=6.2						
FORT	**Forrest**	**31.98**	**173**	P	**P**	**23 34 19.4**	**+0.1**
NWAO	**Narrogin (SRO)**	**34.48**	**190**	P	**P**	**23 34 40.8**	**-0.2**
NWAO	**Narrogin (SRO)**	**34.48**	**190**	P	**P**	**23 34 40.9**	**-0.1**
NWAO				IAmb	IAmb	23 34 44.4	
	comp=Z,2.7nm,0.7s						
JEW	**Eniwo**	**44.36**	**18**	P	**P**	**23 36 02.8**	**+0.6**
WAKE	**Wake Island**	**45.48**	**64**	P	**P**	**23 36 11.8**	**+0.5**
DZM	**Mont Dzumac**	**47.38**	**122**	LR	LR	23 58 21.9	
	comp=Z,80nm,18.4s,baz=94,slow=38						
ULN	**Ulaanbaatar**	**48.81**	**345**	P	**P**	**23 36 36.6**	**-0.1**
SONM	**Songino Array**	**48.96**	**344**	P	**P**	**23 36 37.3**	**-0.5**
	comp=Z,1.4nm,0.7s,baz=158,slow=8.8,SNR=12						
SONM	**Songino Array**	**48.96**	**344**	P	**P**	**23 36 37.9**	**+0.1**
MK31	**Makanchi Array**	**58.19**	**327**	P	**P**	**23 37 44.1**	**-0.5**
MKAR	**Makanchi Array**	**58.19**	**327**	P	**P**	**23 37 42.8**	**-1.7**
	comp=Z,2.0nm,0.4s,baz=123,slow=7.5,SNR=54						
MKAR	**Makanchi Array**	**58.19**	**327**	P	**P**	**23 37 43.9**	**-0.7**
MAKZ	**Makanchi**	**58.37**	**327**	P	**P**	**23 37 45.4**	**-0.4**
MAKZ				IAmb	IAmb	23 37 45.6	
	comp=Z,2.5nm,0.5s						
PETK	**Petropavlovsk-**	**58.85**	**23**	LR	LR	00 06 35.6	
	comp=Z,21nm,18.7s,baz=15,slow=39						
ZALV	**Zalesovo Beam**	**61.71**	**335**	P	**P**	**23 38 06.8**	**-1.4**
	comp=Z,0.7nm,0.6s,baz=100,slow=3.4,SNR=4.1						
ZALV	**Zalesovo Beam**	**61.71**	**335**	P	**P**	**23 38 07.0**	**-1.2**
KHZ	**Kahutara**	**62.14**	**140**	P	**P**	**23 38 08.8**	**-2.4**
KHZ				IAmb	IAmb	23 38 10.2	
	comp=Z,12nm,1.1s						
KURK	**Kurchatov**	**62.51**	**329**	P	**P**	**23 38 12.4**	**-1.2**
PLWZ	**Palliser**	**62.83**	**139**	P	**P**	**23 38 13.6**	**-2.4**
KKAR	**Karatay Array**	**63.32**	**319**	P	**P**	**23 38 18.7**	**-0.4**
TORD	**Torodi Ar. Bea**	**121.08**	**286**	PKP	**PKiKP**	**23 46 41.6**	**+1.1**
	comp=Z,1.5nm,0.6s,baz=225,slow=0.4,SNR=7.7						

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*NOU **19** 23:29:58.5, 36°.36S×177°.82E, h360km, MLv3.9, Off E. Coast of N. Island, N.Z.*

WEL 19 23:30:07.7, 37°S±6°×**17°7E**±1°3**, h296**km±9km**, M3.1**/30**, MLv3.1**/30**, Error ellipse: s-maj=0.0km s-min=0.0km az=96.8, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HAZ	**Te Kaha**	**1.28**	**146**	P	Pn	23 30 48.5	-0.5
HAZ				S	S	23 31 18.2	-3.7
MARZ	**Manawahe**	**1.30**	**187**	P	Pn	23 30 50.0	+0.8
RUGZ	**Raukumara Rang**	**1.42**	**154**	P	Pn	23 30 49.1	-0.9
RUGZ				S	S	23 31 19.1	-4.6
MXZ	**Matakaoa Point**	**1.43**	**128**	P	Pn	23 30 49.5	-0.4
MXZ				S	S	23 31 20.6	-3.0
PKGZ	**Pakihiroa**	**1.53**	**142**	P	Pn	23 30 50.7	0.0
PKGZ				S	S	23 31 21.5	-3.3
TARZ	**Mount Tarawera**	**1.57**	**191**	P	Pn	23 30 52.1	+1.1
URZ	**Urewera**	**1.58**	**174**	P	Pn	23 30 50.5	-0.4
URZ				S	S	23 31 22.2	-3.0
WMGZ	**Waiomatatini S**	**1.66**	**133**	P	Pn	23 30 51.5	+0.1
WMGZ				S	S	23 31 23.7	-2.6
MWZ	**Matawai**	**1.72**	**163**	P	Pn	23 30 51.8	-0.1
MWZ				S	S	23 31 25.3	-1.9
TWGZ	**Tauwhareparae**	**1.72**	**150**	P	Pn	23 30 52.5	+0.5
TWGZ				S	S	23 31 24.7	-2.5
MUGZ	**Murupara**	**1.79**	**183**	P	Pn	23 30 52.5	+0.1
RAGZ	**Rawiri**	**1.85**	**167**	P	Pn	23 30 53.3	+0.3
RAGZ				S	S	23 31 28.8	-0.2
TKGZ	**Te Karaka**	**1.91**	**157**	P	Pn	23 30 53.4	+0.1
TKGZ				S	S	23 31 26.5	-3.1
RTZ	**Ruatahuna**	**1.93**	**178**	P	Pn	23 30 53.3	-0.2
RTZ				S	S	23 31 28.0	-2.1
CNGZ	**Carnagh Statio**	**2.08**	**150**	P	Pn	23 30 55.2	+0.5
SNGZ	**Shannon Statio**	**2.12**	**170**	P	Pn	23 30 55.1	+0.1
SNGZ				S	S	23 31 30.0	-2.8
RIGZ	**Rimuhau**	**2.13**	**161**	P	Pn	23 30 55.6	+0.4
RIGZ				S	S	23 31 31.7	-1.2
MTHZ	**Maungataniwha**	**2.16**	**181**	P	Pn	23 30 55.4	0.0
MTHZ				S	S	23 31 30.9	-2.5
RAHZ	**Arahi**	**2.23**	**176**	P	Pn	23 30 56.2	+0.3
RAHZ				S	S	23 31 32.6	-1.8
PRGZ	**Paritu Road**	**2.37**	**161**	P	Pn	23 30 57.5	+0.4
WHHZ	**Waihua**	**2.40**	**173**	P	Pn	23 30 57.9	+0.5
NMHZ	**Naumai**	**2.41**	**181**	P	Pn	23 30 58.4	+0.8
NMHZ				S	S	23 31 36.8	-0.5
KNZ	**Kokohu**	**2.41**	**165**	P	Pn	23 30 57.4	0.0
KNZ				S	S	23 31 34.1	-3.1
BKZ	**Black Stump Fm**	**2.49**	**187**	P	Pn	23 30 58.2	-0.1
BKZ				S	S	23 31 35.7	-3.0
ARHZ	**Aropaoanui**	**2.57**	**178**	P	Pn	23 30 59.4	+0.4
ARHZ				S	S	23 31 38.7	-1.1
MHGZ	**Mahia Peninsul**	**2.59**	**162**	P	Pn	23 30 59.5	+0.4
MHGZ				S	S	23 31 35.5	-4.7
TMVZ	**Te Maari**	**2.60**	**201**	P	Pn	23 31 00.1	+0.8
ETVZ	**East Tongariro**	**2.61**	**200**	P	Pn	23 31 00.1	+0.6
TWVZ	**Taurewa**	**2.64**	**205**	P	Pn	23 31 00.4	+0.7
OTVZ	**Oturere**	**2.65**	**201**	P	Pn	23 31 00.6	+0.7
NGZ	**Ngauruhoe**	**2.68**	**202**	P	Pn	23 31 01.0	+0.9
KWHZ	**Kaweka Forest**	**2.75**	**187**	P	Pn	23 31 00.9	+0.1
KWHZ				S	S	23 31 40.4	-2.7
MCHZ	**McNeill Hill**	**2.75**	**183**	P	Pn	23 31 01.1	+0.5
MCHZ				S	S	23 31 41.6	-1.4
FWVZ	**Far West T-bar**	**2.77**	**202**	P	Pn	23 31 02.0	+0.9
WNVZ	**Wahianoa**	**2.82**	**201**	P	Pn	23 31 01.9	+0.4
MOVZ	**Moawhango**	**2.86**	**198**	P	Pn	23 31 01.6	-0.1
MOVZ				S	S	23 31 42.3	-2.6
BHHZ	**Black Hill Sta**	**2.87**	**193**	P	Pn	23 31 01.7	-0.1
BHHZ				S	S	23 31 42.2	-2.9
MTVZ	**Mangateitei**	**2.91**	**202**	P	Pn	23 31 02.8	+0.5
CKHZ	**Cape Kidnapper**	**2.97**	**177**	P	Pn	23 31 02.9	+0.2
CKHZ				S	S	23 31 44.2	-2.5
KRHZ	**Kereru**	**2.98**	**188**	P	Pn	23 31 02.7	-0.2
KAHZ	**Kahuranaki**	**3.10**	**180**	P	Pn	23 31 04.2	+0.1
PNHZ	**Pukenui**	**3.26**	**189**	P	Pn	23 31 05.2	-0.6
PNHZ				S	S	23 31 49.4	-2.8
PXZ	**Pawanui**	**3.34**	**180**	P	Pn	23 31 06.6	+0.1
PXZ				S	S	23 31 49.9	-3.5
TSZ	**Takapari Road**	**3.44**	**192**	P	Pn	23 31 07.0	-0.6
PRHZ	**Porangahau**	**3.58**	**183**	P	Pn	23 31 08.9	-0.1
DVHZ	**Dannevirke**	**3.65**	**189**	P	Pn	23 31 09.4	-0.4
DVHZ				S	S	23 31 57.0	-2.5
ANWZ	**Angora Road**	**3.78**	**185**	P	Pn	23 31 08.6	-2.5
ANWZ				S	S	23 32 00.2	-1.7
BFZ	**Birch Farm**	**4.02**	**187**	P	Pn	23 31 13.5	-0.3
BFZ				S	S	23 32 04.9	-1.9
MRZ	**Mangatainoka R**	**4.10**	**194**	P	Pn	23 31 13.4	-1.2
MRZ				S	S	23 32 05.0	-3.3
OGWZ	**Otaki Gorge**	**4.33**	**197**	P	Pn	23 31 16.2	-1.1
OGWZ				S	S	23 32 08.7	-4.4
HOWZ	**Holdsworth Sta**	**4.34**	**194**	P	Pn	23 31 16.2	-1.2
HOWZ				S	S	23 32 09.3	-3.9
KIW	**Kapiti Island**	**4.44**	**200**	P	Pn	23 31 17.5	-1.0
KIW				S	S	23 32 10.4	-4.9
MTW	**Mount Morrison**	**4.59**	**193**	P	Pn	23 31 18.9	-1.3
MTW				S	S	23 32 14.7	-3.7
MSWZ	**Moikau Station**	**4.89**	**195**	P	Pn	23 31 22.3	-1.4
MSWZ				S	S	23 32 19.9	-4.7
TCW	**Tory Channel**	**4.95**	**203**	P	Pn	23 31 23.3	-1.1
BHW	**Baring Head**	**4.97**	**198**	P	Pn	23 31 23.3	-1.2
PLWZ	**Palliser**	**5.04**	**194**	P	Pn	23 31 24.2	-1.1
TUWZ	**Tuamarina**	**5.26**	**205**	P	Pn	23 31 27.1	-0.8
QRZ	**Quartz Range**	**5.35**	**218**	P	Pn	23 31 28.6	-0.4
KHZ	**Kahutara**	**6.28**	**203**	P	Pn	23 31 39.3	-0.7

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*IDC **19** 23:32:21.9±1.8, 3°.12S×142°.74E, h0km, mb3.6/4, mb1 3.9/5, mb1mx3.6/28, mbtmp3.7/5, ML3.8/1, MS3.6/1, Ms1 3.6/1, ms1mx2.7/40, Error ellipse: s-maj=72.0km s-min=25.4km az=109.0*

*NEIC **19** 23:32:28.5±1.7, 3°.1S±0°.2×142°.57E±0°.04, h35km±2km, mb4.0/7, Error ellipse: s-maj=29.8km s-min=6.4km az=3.0*

ISC 19 23:32:26.9±1.2**, 3°.1S**±0°.1×**142°.6E**±0°.2**, h27**km**, n22,** σ**1^{s}.21**/15**, mb3.8**/6**, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**10.37**	**270**	Pn	**Pn**	**23 34 53.8**	**-0.1**
WB0	**Warramunga Arr**	**18.45**	**205**	P	**Pn**	**23 36 41.9**	**+1.0**
WR0	**Warramunga Arr**	**18.56**	**205**	P	**Pn**	**23 36 42.8**	**+0.6**
WR0				IAmb	IAmb	23 36 55.6	
	comp=Z,7.0nm,0.9s						
WB2	**Warramunga Arr**	**18.62**	**205**	P	**P**	**23 36 42.0**	**-0.5**
WB2				IAmb	IAmb	23 36 44.8	
	comp=Z,10nm,1.2s						
WRA	**Warramunga Arr**	**18.63**	**205**	P	**P**	**23 36 40.3**	**-2.3**
	comp=Z,0.3nm,0.3s,baz=29,slow=10,SNR=9.8						
WRA	**Warramunga Arr**	**18.63**	**205**	P	**P**	**23 36 40.4**	**-2.2**
ASAR	**Alice Springs**	**22.16**	**202**	P	**P**	**23 37 19.6**	**-1.3**
	comp=Z,1.2nm,0.8s,baz=29,slow=11,SNR=9.2						
TOLI2	**Tolitoli**	**22.23**	**280**	P	**P**	**23 37 22.4**	**+0.7**
TOLI2				IAmb	IAmb	23 37 37.1	
	comp=Z,6.1nm,0.9s						
FITZ	**Fitzroy Crossi**	**22.37**	**227**	P	**P**	**23 37 22.8**	**-0.4**
	comp=Z,5.9nm,1.1s,baz=35,slow=13,SNR=2.2						
FITZ	**Fitzroy Crossi**	**22.37**	**227**	P	**P**	**23 37 23.5**	**+0.3**
EIDS	**Eidsvold**	**23.63**	**161**	P	**P**	**23 37 37.5**	**+1.5**
BBOO	**Buckleboo**	**30.23**	**191**	P	**P**	**23 38 35.6**	**+0.2**
BBOO				IAmb	IAmb	23 38 53.2	
	comp=Z,15nm,1.3s						
FORT	**Forrest**	**30.82**	**205**	P	**P**	**23 38 40.0**	**-0.7**
H11S3	**WAKE ISLAND Hy**	**31.94**	**47**	T	T	00 12 26.8	
	baz=229,slow=75,SNR=18						
H11S2	**WAKE ISLAND Hy**	**31.95**	**47**	T	T	00 12 28.6	
	baz=229,slow=75,SNR=6.6						
H11S1	**WAKE ISLAND Hy**	**31.96**	**47**	T	T	00 12 28.1	
	baz=229,slow=75,SNR=9.8						
H11N1	**WAKE ISLAND Hy**	**32.87**	**46**	T	T	00 13 46.2	
	baz=230,slow=76,SNR=16						
H11N2	**WAKE ISLAND Hy**	**32.88**	**45**	T	T	00 13 47.0	
	baz=230,slow=76,SNR=19						
H11N3	**WAKE ISLAND Hy**	**32.89**	**46**	T	T	00 13 45.5	
	baz=230,slow=76,SNR=8.4						
RPZ	**Rata Peaks**	**47.68**	**152**	LR	LR	00 01 00.5	
	comp=Z,58nm,18.3s,baz=16,slow=36						
MKAR	**Makanchi Array**	**72.48**	**321**	P	**P**	**23 43 51.3**	**0.0**
	comp=Z,0.4nm,0.8s,baz=110,slow=6.6,SNR=3.9						
ILAR	**Eielson Array**	**84.54**	**24**	P	**P**	**23 44 56.9**	**-0.5**
	comp=Z,0.4nm,0.9s,baz=261,slow=5.3,SNR=4.1						

TAP 19 23:32:32.8, 24°.63N×121°.99E, h14^{km}, ML2.1, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWC	**Suao**	**0.13**	**261**	*i* P	Pg	23 32 36.1	-0.1
	baz=260						
TWC				S	Sg	23 32 38.5	-0.1
	baz=260						
NDS	**Dongshan**	**0.25**	**271**	*e*P	Pg	23 32 38.1	0.0
	baz=267						
ILA	**Ilan**	**0.26**	**302**	*e*S	Sb	23 32 43.2	-0.3
	baz=298						
EWUT	**Wuta**	**0.26**	**226**	*e*P	Pg	23 32 38.4	0.0
	baz=220						
EWUT				*e*S	Sg	23 32 42.2	0.0
	baz=220						
NTC	**Toucheng**	**0.27**	**328**	*e*P	Pg	23 32 38.5	0.0
	baz=327						
NTC				*e*S	Sb	23 32 43.9	0.0
	baz=327						
ENA	**Nanau**	**0.30**	**228**	*e*P	Pg	23 32 39.1	+0.1
	baz=222						
ENA				*e*S	Sg	23 32 42.5	-0.7
	baz=222						
TWE	**Neicheng**	**0.30**	**288**	P	Pg	23 32 39.4	+0.2
	baz=283						
TWE				*e*S	Sg	23 32 43.8	+0.4
	baz=283						
TIPB	**Shuangxi**	**0.37**	**337**	P	Pg	23 32 40.5	+0.1
	baz=337						
TIPB				S	Sg	23 32 45.4	-0.1
	baz=337						
ENTT	**Nioudou**	**0.38**	**272**	*e*P	Pb	23 32 41.1	-0.3
	baz=271						
ENTT				*e*S	Sg	23 32 45.9	+0.1
	baz=271						
NDT	**Datong Townshi**	**0.43**	**267**	*e*P	Pb	23 32 42.4	+0.2
	baz=266						
NDT				*e*S	Sb	23 32 48.4	-0.2
	baz=266						
NWLT	**Wulai**	**0.46**	**289**	*e*P	Pb	23 32 42.9	+0.1
	baz=282						
NWLT				*e*S	Sg	23 32 48.6	+0.3
	baz=282						
NWF	**Wu-fen Shan**	**0.48**	**337**	*e*S	Sb	23 32 50.6	+0.5
	baz=326						
TWA	**Mucha**	**0.51**	**314**	*e*S	Sg	23 32 50.0	+0.4
	baz=314						
NHDH	**Xindian Distri**	**0.54**	**309**	*e*S	Sb	23 32 51.3	-0.3
	baz=308						
YHNB	**Yeheng**	**0.56**	**274**	*e*S	Sg	23 32 51.5	+0.3
	baz=273						
TATO	**Taipei**	**0.57**	**307**	*e*S	Sg	23 32 51.7	+0.1
	baz=307						
NSK	**Sanguang**	**0.57**	**275**	*e*S	Sg	23 32 52.1	+0.3
	baz=274						
NACB	**Ninganchiao**	**0.58**	**218**	P	Pg	23 32 44.2	+0.1
	baz=208						
NACB				S	Sg	23 32 51.7	-0.1
	baz=208						
NNS	**Nan Shan**	**0.59**	**252**	P	Pg	23 32 43.7	-0.7
	baz=251						
ETLH	**Xiulin Townshi**	**0.62**	**228**	*e*P	Pb	23 32 45.3	-0.2
	baz=227						
ETLH				*e*S	Sb	23 32 54.0	-0.2
	baz=227						
YM01	**YM01**	**0.64**	**324**	P	Pg	23 32 45.2	-0.1
	baz=323						
YM01				S	Sg	23 32 53.4	-0.4
	baz=323						
TWD	**Chiawan**	**0.65**	**213**	*e*P	Pg	23 32 45.7	+0.1
	baz=213						
YM10	**YM10**	**0.65**	**324**	*e*P	Pb	23 32 46.3	+0.3
	baz=323						
YM05	**YM05**	**0.66**	**325**	P	Pb	23 32 46.6	+0.5
	baz=324						
YM05				*e*S	Sb	23 32 55.0	-0.2
	baz=324						
TWS1	**Kuangyinshan**	**0.70**	**312**	*e*P	Pn	23 32 47.9	-0.4
	baz=312						
TWS1				*e*S	Sb	23 32 57.1	+0.8
	baz=312						
NTST	**Danshui**	**0.72**	**318**	*e*P	Pb	23 32 47.4	+0.2
	baz=325						
FUSS	**Fushou**	**0.78**	**241**	*e*S	Sb	23 32 59.0	+0.3
	baz=240						
LIOB	**Emei**	**0.88**	**271**	*e*P	Pn	23 32 52.0	+1.1
	baz=266						
CHGB	**Renai**	**0.93**	**233**	*e*P	Pb	23 32 51.3	+0.4
	baz=232						
CHGB				*e*S	Sb	23 33 03.8	+0.6
	baz=232						
PCYT	**Pengchaiyu**	**1.00**	**4**	*e*P	Pn	23 32 52.5	0.0
	baz=10.0						
WHP	**Taichung City**	**1.01**	**250**	*e*P	Pn	23 32 52.6	-0.1
	baz=249						
WHP				*e*S	Sg	23 33 06.1	+0.5
	baz=249						
VWDT	**VWDT**	**1.16**	**222**	*e*P	Pg	23 32 56.5	+1.2
	baz=223						
HGSD	**Ruisui**	**1.24**	**205**	*e*P	Pn	23 32 55.0	-0.8
	baz=223						
SSLB	**Suanglung**	**1.26**	**229**	P	Pg	23 32 56.8	-0.3
	baz=228						
SSLB				*e*S	Sn	23 33 12.9	0.0
	baz=228						
SSLB	**Suanglung**	**1.26**	**229**	P	Pb	23 32 56.6	+0.3

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*IDC **19** 23:49:14.6±2.4, 33°.33S×178°.96W, h0^{km}, mb4.2/4, mb1 4.4/5, mb1mx4.0/38, mbtmp4.3/5, ML4.2/1, MS3.6/1, Ms1 3.6/1, ms1mx2.7/26, Error ellipse: s-maj=57.9km s-min=37.9km az=130.0*

*NEIC **19** 23:49:17.1±2.2, 33°.76S±0°.09×178°.6W±0°.1, h35^{km}±2^{km}, mb4.3/12, Error ellipse: s-maj=22.4km s-min=12.5km az=118.0*

*WEL **19** 23:49:19.0±1.2, 34°S±14°×17°9W±3°4, h33^{km}, M4.5/6, mB5.1/2, ML4.8/6, MLv4.5/6, Mw(mB)4.5/2, Error ellipse: s-maj=0.0km s-min=0.0km az=111.0*

ISC 19 23:49:18.3±0.9, **33°.58S**±0°.07×**178°.7W**±0°.1, **h41**^{km}, **n44**, σ**1ˢ65**/47, **mb4.3**/8, **South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**4.35**	**9**	P	**Pn**	**23 50 22.7**	**+0.8**
GLKZ				S	**Sn**	**23 51 11.2**	**-0.2**
RAO	**Raoul Island**	**4.36**	**9**	LR	LR	23 51 39.3	
	comp=Z,757nm,21.2s,baz=131,slow=35						
RAO	**Raoul Island**	**4.36**	**9**	Pn	Pn	23 50 26.9	+4.8
MXZ	**Matakaoa Point**	**4.67**	**211**	Pn	**Pn**	**23 50 27.1**	**+0.8**
MXZ	**Matakaoa Point**	**4.67**	**211**	P	**Pn**	**23 50 26.4**	**+0.2**
MXZ				S	**Sn**	**23 51 19.6**	**+0.5**
WMGZ	**Waiomatatini S**	**4.84**	**208**	P	**Pn**	**23 50 29.3**	**+0.7**
WMGZ				S	**Sn**	**23 51 25.7**	**+2.3**
PKGZ	**Pakihiroa**	**5.04**	**211**	P	**Pn**	**23 50 32.5**	**+1.1**
PKGZ				S	**Sn**	**23 51 28.5**	**+0.1**
HAZ	**Te Kaha**	**5.06**	**214**	P	**Pn**	**23 50 34.1**	**+2.5**
TWGZ	**Tauwhareparae**	**5.33**	**210**	P	**Pn**	**23 50 38.5**	**+3.2**
CNGZ	**Carnagh Statio**	**5.50**	**206**	P	**Pn**	**23 50 39.6**	**+1.9**
MYRZ	**Mayor Island**	**5.55**	**227**	P	Pn	23 50 42.4	+4.1
TKGZ	**Te Karaka**	**5.60**	**209**	P	**Pn**	**23 50 41.6**	**+2.6**
TKGZ				S	**Sn**	**23 51 41.3**	**-0.8**
MWZ	**Matawai**	**5.65**	**212**	P	**Pn**	**23 50 40.8**	**+1.1**
MWZ				S	**Sn**	**23 51 43.2**	**-0.2**
URZ	**Urewera**	**5.78**	**215**	Pn	**Pn**	**23 50 42.6**	**+1.1**
	6.8nm,0.3s,baz=265,slow=4.1,SNR=28						
URZ				Sn	**Sn**	**23 51 44.5**	**-2.0**
	0.2nm,0.3s,baz=185,slow=21,SNR=2.0						
URZ	**Urewera**	**5.78**	**215**	Pn	**Pn**	**23 50 41.6**	**+0.2**
URZ	**Urewera**	**5.78**	**215**	P	**Pn**	**23 50 41.7**	**+0.2**
URZ				S	**Sn**	**23 51 46.2**	**-0.4**
OUZ	**Omahuta**	**6.58**	**253**		**Pn**	**23 50 53.9**	**+1.3**
BKZ	**Black Stump Fm**	**6.80**	**213**		**Pn**	**23 50 55.9**	**+0.4**
HIZ	**Hauiti**	**7.18**	**225**	Pn	**Pn**	**23 51 02.4**	**+1.7**
BFZ	**Birch Farm**	**8.16**	**208**	Pn	**Pn**	**23 51 12.7**	**-1.5**
MSWZ	**Moikau Station**	**9.19**	**210**	Pn	**Pn**	**23 51 25.7**	**-2.4**
PLWZ	**Palliser**	**9.31**	**209**	Pn	**Pn**	**23 51 27.9**	**-2.0**
BHW	**Baring Head**	**9.34**	**211**	Pn	**Pn**	**23 51 27.6**	**-2.7**
TUWZ	**Tuamarina**	**9.78**	**215**	Pn	**Pn**	**23 51 34.0**	**-2.3**
KHZ	**Kahutara**	**10.74**	**213**	Pn	**Pn**	**23 51 45.5**	**-3.9**
LTZ	**Lake Taylor**	**11.61**	**215**	Pn	**Pn**	**23 51 58.1**	**-3.3**
DCZ	**Deep Cove**	**16.10**	**218**	Pn	**Pn**	**23 53 00.5**	**-1.1**
NIUE	**Niue**	**16.43**	**31**	Pn	**Pn**	**23 53 04.9**	**-0.9**
PYZ	**Puysegur Point**	**16.82**	**217**		**Pn**	**23 53 10.7**	**0.0**
PYZ				IAmb	IAmb	23 53 11.1	
	comp=Z,33nm,1.0s						
CTA	**Charters Tower**	**33.87**	**284**	P	**P**	**23 55 58.4**	**+1.2**
	comp=Z,3.0nm,0.6s,baz=123,slow=9.8,SNR=7.3						
CTAO	**Charters Tower**	**33.87**	**284**	P	**P**	**23 55 59.3**	**+2.1**
CTAO				IAmb	IAmb	23 56 16.2	
	comp=Z,5.1nm,1.1s						
COEN	**Coen**	**39.70**	**290**	P	**P**	**23 56 47.6**	**+0.9**
COEN				IAmb	IAmb	23 56 51.5	
	comp=Z,4.1nm,1.1s						
ASAR	**Alice Springs**	**42.46**	**271**	P	**P**	**23 57 08.6**	**-0.9**
	comp=Z,1.9nm,0.7s,baz=110,slow=7.6,SNR=17						
WR0	**Warramunga Arr**	**43.56**	**276**	P	**P**	**23 57 18.1**	**-0.2**
WB2	**Warramunga Arr**	**43.72**	**276**	P	**P**	**23 57 20.0**	**+0.3**
WB2				IAmb	IAmb	23 57 27.4	
	comp=Z,4.9nm,0.9s						
WRA	**Warramunga Arr**	**43.73**	**276**	P	**P**	**23 57 19.5**	**-0.3**
	comp=Z,1.5nm,0.4s,baz=115,slow=7.7,SNR=39						
WRA	**Warramunga Arr**	**43.73**	**276**	IAmb	IAmb	23 57 19.8	
	comp=Z,0.2nm,0.9s						
WB0	**Warramunga Arr**	**43.77**	**276**	P	**P**	**23 57 20.1**	**0.0**
WB0				IAmb	IAmb	23 57 21.0	
	comp=Z,3.2nm,0.6s						
FITZ	**Fitzroy Crossi**	**51.85**	**273**	P	**P**	**23 58 22.7**	**+0.1**
FITZ				IAmb	IAmb	23 58 33.3	
	comp=Z,5.1nm,1.1s						
USRK	**Ussuriysk Ar.**	**89.49**	**327**	P	**P**	**00 02 10.8**	**+0.1**
	comp=Z,1.2nm,0.6s,baz=134,slow=4.2,SNR=4.1						
YPP	**Pitchstone Pla**	**99.04**	**42**	P	Pdif	00 02 54.9	0.0
H17A	**Grant Village**	**99.25**	**42**	P	**Pdif**	**00 02 52.9**	**-2.9**
FINES	**FINESS Array B**	**147.89**	**338**	PKPbc	**PKPab**	**00 08 59.9**	**-0.9**
	comp=Z,1.6nm,0.5s,baz=45,slow=3.7,SNR=18						
NB2	**NORSAR Subarra**	**151.78**	**350**	PKP	**PKiKP**	**00 09 10.0**	**+1.9**
	comp=Z,0.7nm,0.5s,baz=14,slow=2.6						

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*NEIC **19** 23:55:53.2±1.4, 54°.9N±0°.2×162°.5E±0°.2, h35^{km}±2^{km}, mb4.1/14, Error ellipse: s-maj=41.0km s-min=13.3km az=152.0*

*IDC **19** 23:56:01.1±2.0, 55°.54N×165°.06E, h0^{km}, mb3.6/3, mb1 3.9/5, mb1mx3.4/54, mbtmp3.6/5, ML4.9/1, MS3.7/1, Ms1 3.8/1, ms1mx2.6/44, Error ellipse: s-maj=46.1km s-min=19.3km az=168.0*

*KRSC **19** 23:56:02.2±1.1, 55°.91N×164°.14E, h7^{km}±23^{km}, ML3.7*

ISC 19 23:56:01.3±1.5, **55°.72N**±0°.04×**164°.03E**±0°.05, **h11**^{km}±10^{km}, **n61**, σ**1ˢ63**/65, **mb3.9**/10, **Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.84**	**306**	*e*P	**Pg**	**23 56 17.5**	**0.0**
KBTR				*e*S	**Sg**	**23 56 28.4**	**-0.1**
KBG	**Krutoberegovo**	**0.92**	**306**	*e*P	**Pg**	**23 56 19.1**	**+0.1**
KBG				*e*S	**Sg**	**23 56 30.9**	**-0.1**
BKI	**Bering**	**1.22**	**114**	*e*P	Pn	23 56 26.8	+2.6
BKI				*e*S	**Sn**	**23 56 43.8**	**+3.2**
SMKR	**Semkarok**	**1.68**	**302**	*e*P	**Pn**	**23 56 31.5**	**+0.9**
SMKR				*e*S	**Sn**	**23 56 53.8**	**+1.7**
MKZ	**Mys Kozlova**	**1.76**	**230**	*e*P	**Pg**	**23 56 37.4**	**+2.4**
MKZ				*e*S	**Sg**	**23 57 01.9**	**+4.1**
BDR	**Baidarnaya**	**1.80**	**300**	*e*P	**Pb**	**23 56 33.5**	**-0.7**
SRKR	**Sorokina**	**1.86**	**302**	*e*P	**Pn**	**23 56 34.1**	**+1.0**
KLY	**Klyuchi**	**1.99**	**289**	*e*P	**Pn**	**23 56 35.7**	**+0.9**
KLY				*e*S	**Sn**	**23 57 00.9**	**+1.2**
TUMD	**Tumrok D**	**2.13**	**258**	*e*P	**Pg**	**23 56 42.3**	**+0.2**
TUMD				*e*S	**Sg**	**23 57 10.5**	**+0.7**
KMNR	**Kamenistaya**	**2.15**	**273**	P	**Pg**	**23 56 42.0**	**-0.4**
KMNR				S	**Sg**	**23 57 10.4**	**+0.2**
KZV	**Kizimen**	**2.22**	**256**	*e*P	**Pg**	**23 56 43.8**	**+0.1**
KZV				S	**Sg**	**23 57 12.4**	**-0.1**
TUMR	**Tumrok**	**2.25**	**261**	*e*P	**Pg**	**23 56 44.5**	**0.0**
TUMR				S	**Sg**	**23 57 13.7**	**0.0**
KOZ	**Kozyrevsk**	**2.37**	**280**	*e*P	**Pb**	**23 56 44.6**	**+0.7**
SRDR	**Sredinnyy**	**2.50**	**286**	*e*P	**Pb**	**23 56 45.9**	**-0.2**
SRDR				*e*S	**Sb**	**23 57 17.5**	**+0.6**
KII	**Karymskiy**	**3.14**	**239**	P	**Pb**	**23 56 58.3**	**+1.2**
SPN	**Mys Shipunski**	**3.52**	**223**	P	**Pb**	**23 57 01.9**	**-1.6**
NLC	**Nalytchevo**	**3.74**	**229**	S	**Sb**	**23 57 51.8**	**-0.7**
SDLR	**Sedlovina**	**3.87**	**233**	*e*P	**Pb**	**23 57 07.8**	**-1.8**
SDLR				*e*S	**Sb**	**23 57 56.0**	**-0.4**
KRER	**Koryakskii**	**3.92**	**234**	*e*P	**Pb**	**23 57 09.1**	**-1.3**
SMAR	**Somma**	**3.92**	**233**	*e*P	**Pb**	**23 57 08.6**	**-1.8**
KRX	**Arik**	**3.93**	**235**	*e*P	**Pb**	**23 57 08.8**	**-1.7**
UGLR	**Uglovaya**	**3.94**	**233**	*e*P	**Pb**	**23 57 09.0**	**-1.8**
AVH	**Avacha**	**3.94**	**234**	*e*P	**Pb**	**23 57 09.1**	**-1.7**
KOK	**Koryaka**	**3.98**	**235**	*e*P	**Pb**	**23 57 09.5**	**-1.8**
GNL	**Ganaly**	**4.07**	**243**	*e*P	**Pb**	**23 57 10.9**	**-2.1**
DALK	**Dalny**	**4.09**	**231**	*e*P	**Pb**	**23 57 10.8**	**-2.5**
PET	**Petropavlovsk**	**4.14**	**232**	Sn	Pn	23 57 10.6	+6.2
KRMR	**Karymshinskiy**	**4.51**	**233**	P	**Pb**	**23 57 18.3**	**-2.1**
KRMR				S	**Sb**	**23 58 13.2**	**-1.4**
PEA0B	**Petropavlovsk-**	**4.53**	**237**	Sn	Pn	23 57 17.4	+7.6
PETK	**Petropavlovsk-**	**4.53**	**237**	Pn	**Pb**	**23 57 17.0**	**-3.7**
	0.8nm,0.3s,baz=63,slow=18,SNR=14						
PETK				Sn	**Sb**	**23 58 15.5**	**+0.2**
	0.4nm,0.3s,baz=89,slow=23,SNR=4.3						
PETK	**Petropavlovsk-**	**4.53**	**237**	Sn	Pn	23 57 17.4	+7.6
RUS	**Russkaya**	**4.62**	**227**	*e*P	**Pb**	**23 57 18.3**	**-4.0**
GRL	**Gorelyy**	**4.72**	**230**	*e*P	**Pb**	**23 57 20.7**	**-3.4**
MTVR	**Mutnovka**	**4.73**	**229**	*e*P	**Pb**	**23 57 20.7**	**-3.5**
KDTR	**Khodutka, Kamc**	**5.27**	**225**	*e*P	Pb	23 57 26.6	-6.7
MA2	**Magadan**	**8.10**	**304**	Pn	Pn	23 58 09.8	+11
	1.2nm,0.3s,baz=128,slow=19,SNR=1.8						
NIKH	**Nikolski High**	**16.00**	**89**	Pn	**Pn**	**23 59 45.6**	**-0.5**
TTA	**Tatalina**	**21.32**	**54**	P	**P**	**00 00 49.7**	**+1.9**
TTA				IAmb	IAmb	00 00 55.7	
	comp=Z,6.2nm,1.3s						
IMAR	**Indian Mountai**	**22.51**	**46**	P	**P**	**00 01 01.7**	**+1.2**
RSO	**Redoubt South**	**23.00**	**60**	P	**P**	**00 01 02.5**	**-3.4**
SUA	**Susitna One**	**23.85**	**57**	P	**P**	**00 01 13.8**	**-0.5**
SUA				IAmb	IAmb	00 01 30.1	
	comp=Z,6.1nm,1.3s						
CNPM	**China Poot**	**23.90**	**62**	P	**P**	**00 01 14.0**	**-0.7**
TRF	**Thorofare Moun**	**23.90**	**53**	P	**P**	**00 01 14.9**	**+0.1**
TRF				IAmb	IAmb	00 01 25.5	
	comp=Z,7.1nm,1.4s						
BRLK	**Bradley Lake**	**24.03**	**62**	P	**P**	**00 01 15.0**	**-0.9**
BRLK				IAmb	IAmb	00 01 31.2	
	comp=Z,12nm,1.1s						
TOLK	**Toolik Lake Re**	**24.47**	**40**	P	**P**	**00 01 19.5**	**-0.5**
RND	**Reindeer**	**24.55**	**53**	P	**P**	**00 01 20.0**	**-0.7**
RND				IAmb	IAmb	00 01 20.3	
	comp=Z,3.1nm,1.2s						
WRH	**Wood River Hil**	**24.83**	**50**	P	**P**	**00 01 23.2**	**+0.1**
SML	**Sawmill**	**24.95**	**56**	P	**P**	**00 01 23.3**	**-1.0**
ILAR	**Eielson Array**	**25.34**	**49**	P	**P**	**00 01 25.9**	**-1.8**
	comp=Z,0.6nm,0.9s,baz=268,slow=11,SNR=6.1						
ILAR	**Eielson Array**	**25.34**	**49**	P	**P**	**00 01 27.2**	**-0.6**
SCM	**Sheep Creek Mo**	**25.42**	**56**	P	**P**	**00 01 28.5**	**-0.1**
SCM				IAmb	IAmb	00 01 31.5	
	comp=Z,13nm,1.2s						
BMAR	**Burnt Mountain**	**26.25**	**43**	P	**P**	**00 01 35.7**	**-0.3**
HYT	**Haines Junctio**	**30.26**	**56**	P	**P**	**00 02 11.9**	**0.0**
HYT				IAmb	IAmb	00 02 29.9	
	comp=Z,1.9nm,1.0s						
INK	**Inuvik**	**30.38**	**41**	P	**P**	**00 02 11.7**	**-0.9**
	comp=Z,0.8nm,0.4s,baz=304,slow=7.3,SNR=4.3						
INK	**Inuvik**	**30.38**	**41**	P	**P**	**00 02 12.3**	**-0.3**
C36M	**Paulatuk**	**33.57**	**38**	P	**P**	**00 02 40.2**	**-0.5**
H11N2	**WAKE ISLAND Hy**	**35.99**	**175**	T	T	00 41 57.1	
	baz=357,slow=76,SNR=65						
H11N3	**WAKE ISLAND Hy**	**36.01**	**175**	T	T	00 41 59.3	
	baz=357,slow=76,SNR=43						
H11N1	**WAKE ISLAND Hy**	**36.01**	**175**	T	T	00 42 05.3	
	baz=357,slow=76,SNR=44						
YKA	**Yellowknife Ar**	**39.67**	**46**	P	**P**	**00 03 32.4**	**-0.4**
	comp=Z,0.3nm,0.5s,baz=299,slow=7.3,SNR=5.1						
NVAR	**Mina Array Bea**	**52.75**	**75**	LR	LR	00 26 27.2	
	comp=Z,70nm,18.0s,baz=274,slow=35						

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*NEIC **19** 23:59:57.5±1.7, 6°.00S±0°.07×127°.93E±0°.07, h400^{km}±8^{km}, mb4.4/56, Error ellipse: s-maj=11.4km s-min=9.0km az=139.0*

*DJA **19** 23:59:57.5±0.3, 6°S±4°×12°8E±°, h383^{km}±6^{km}, M4.6/21, mB5.0/10, mb4.7/21, MLv5.0/13, Mw(mB)4.3/10*

*IDC **19** 23:59:57.4±1.2, 6°.06S×127°.93E, h403^{km}±14^{km}, mb4.0/17, mb1 4.0/24, mb1mx3.8/44, mbtmp4.7/24, Error ellipse: s-maj=12.8km s-min=8.4km az=77.0*

ISC 19 23:59:57.2±0.3, **6°.04S**±0°.04×**127°.93E**±0°.05, **h400**^{km}, **n163**, σ**1ˢ52**/170, **mb4.3**/64, **1C**, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**2.48**	**53**	P	**Pn**	**00 00 56.1**	**-0.4**
NLAI	**Namlea**	**2.90**	**343**	P	**Pn**	**00 00 59.5**	**-0.2**
SAUI	**Saumlaki**	**3.86**	**120**	Pn	**Pn**	**00 01 08.8**	**+0.7**
SAUI					**S**	**00 02 01.9**	**-3.5**
SOEI	**Soe**	**5.18**	**224**	Pn	**Pn**	**00 01 21.4**	**+0.1**
SOEI				S	**S**	**00 02 26.3**	**-3.2**
SOEI	**Soe**	**5.18**	**224**	P	**Pn**	**00 01 21.1**	**-0.2**
	3.5nm2μm208nm,0.7s						
FAKI	**Fak Fak**	**5.30**	**54**	Pn	**Pn**	**00 01 21.8**	**-0.7**
FAKI				S	**S**	**00 02 29.5**	**-2.3**
FAKI	**Fak Fak**	**5.30**	**54**	P	**Pn**	**00 01 21.6**	**-0.9**
	2.6nm9μm786nm,1.0s						
BATI	**Baumata**	**5.92**	**225**	P	**Pn**	**00 01 29.1**	**0.0**
	56nm,0.3s,baz=65,slow=1.7,SNR=33						
BATI				S	**S**	**00 02 38.2**	**-5.5**
	57nm,0.3s,baz=285,slow=18,SNR=25						
BATI	**Baumata**	**5.92**	**225**	P	**Pn**	**00 01 29.1**	**0.0**
	1.6nm1μm106nm,0.5s						
SIJI	**Sorong**	**6.12**	**33**	P	**Pn**	**00 01 30.4**	**-0.9**
	58nm,0.3s,baz=201,slow=12,SNR=44						
SIJI				S	**S**	**00 02 42.3**	**-5.5**
	28nm,0.3s,baz=81,slow=23,SNR=11						
SWI	**Sorong**	**6.12**	**33**	P	**Pn**	**00 01 30.5**	**-0.8**
	1.3nm4μm295nm,0.9s						
MMRI	**Maumere**	**6.21**	**245**	Pn	**Pn**	**00 01 32.8**	**+0.6**
KMPI	**Kaimana, Papua**	**6.22**	**68**	P	**Pn**	**00 01 31.8**	**-0.5**
	4.4nm14μm954nm,0.5s						
EDFI	**Ende, Flores**	**6.75**	**246**	P	**Pn**	**00 01 36.7**	**-1.6**
	0.1nm23nm,0.7s						
LUWI	**Luwuk**	**7.15**	**314**		**P**	**00 01 44.0**	**+0.7**
RKPI	**Ransiki, Papua**	**7.69**	**54**	P	**P**	**00 01 50.0**	**+0.8**
	2.4nm8μm523nm,0.7s						
BNSI	**Bone**	**7.96**	**281**	P	**Pn**	**00 01 50.2**	**-1.7**
	0.3nm821nm75nm,1.3s						
KAPI	**Kappang**	**8.21**	**277**	P	**Pn**	**00 01 54.5**	**-0.2**
	3.3nm,0.3s,baz=106,slow=6.5,SNR=11						
KAPI	**Kappang**	**8.21**	**277**		**P**	**00 01 55.1**	**+0.1**
BASI	**Baing, Sumba**	**8.38**	**240**	P	**Pn**	**00 01 54.9**	**-1.7**
	71nm,0.8s						
SPSI	**Sidrap Palu**	**8.39**	**284**	P	**Pn**	**00 01 56.9**	**+0.1**
	1μm92nm,0.6s						
TTSI	**Tana Toraja**	**8.62**	**290**	P	**P**	**00 01 59.8**	**+0.2**
	1μm56nm,0.8s						
MRSI	**Marisa**	**8.81**	**317**	P	**Pn**	**00 02 01.7**	**0.0**
	38nm,0.7s						
BAKI	**Biak**	**9.47**	**60**	P	**Pn**	**00 02 10.8**	**+1.5**
	146nm,0.7s						
TOLI2	**Tolitoli**	**10.07**	**315**		**Pn**	**00 02 16.1**	**-0.1**
PLAI	**Plampang**	**10.44**	**254**	P	**P**	**00 02 16.8**	**-3.0**
	766nm71nm,0.8s						
TWSI	**Taliwang, Sumb**	**11.28**	**256**	P	**Pn**	**00 02 30.8**	**+0.6**
	20nm,0.7s						
KBKI	**Kotabaru**	**12.04**	**283**	P	**P**	**00 02 38.1**	**+0.6**
	52nm,0.8s						
FITZ	**Fitzroy Crossi**	**12.19**	**190**	P	**P**	**00 02 38.7**	**-0.4**
	0.5nm,0.3s,baz=23,slow=9.3,SNR=13						
FITZ	**Fitzroy Crossi**	**12.19**	**190**	P	**P**	**00 02 39.9**	**+0.8**
BBKI	**Banjar Baru**	**13.29**	**281**	P	**Pn**	**00 02 52.8**	**-0.8**
	98nm,0.8s						
ABJI	**Asem Bagus**	**13.71**	**262**	P	**Pn**	**00 02 57.2**	**-1.1**
JAGI	**Jajag, Banyuwa**	**13.88**	**259**	P	**P**	**00 02 56.2**	**-1.5**
WB0	**Warramunga Arr**	**15.02**	**156**	P	**P**	**00 03 10.5**	**+0.5**
WRA	**Warramunga Arr**	**15.16**	**156**	P	**P**	**00 03 12.1**	**+0.5**
	3.7nm,0.3s,baz=336,slow=11,SNR=159						
WRA				S	**S**	**00 05 54.9**	**+2.6**
	baz=333,slow=16,SNR=2.2						
WRA	**Warramunga Arr**	**15.16**	**156**	P	**P**	**00 03 11.1**	**-0.5**
WB2	**Warramunga Arr**	**15.16**	**156**	P	**P**	**00 03 12.3**	**+0.8**
WB2				IAmb	IAmb	00 03 12.8	
	comp=Z,12nm,0.6s						
WR0	**Warramunga Arr**	**15.26**	**156**	P	**P**	**00 03 13.1**	**+0.6**
KKM	**Kota Kinabalu**	**16.76**	**316**	P	**P**	**00 03 29.6**	**+0.7**
KKM				IAmb	IAmb	00 03 41.0	
	comp=Z,14nm,0.7s						
COEN	**Coen**	**16.94**	**119**	P	**P**	**00 03 31.0**	**+0.4**
PSA00	**Pilbara Seismi**	**17.31**	**206**	P	**P**	**00 03 35.0**	**+0.4**
PSA00				IAmb	IAmb	00 03 36.0	
	comp=Z,18nm,0.9s						
UGM	**Wanagama**	**17.38**	**263**	P	**P**	**00 03 36.4**	**+1.0**
UGM				IAmb	IAmb	00 03 49.9	
	comp=Z,31nm,0.8s						
SBUM	**Sibu**	**17.81**	**298**	P	**P**	**00 03 40.9**	**+0.9**
SBUM				IAmb	IAmb	00 03 41.9	
	comp=Z,12nm,0.7s						
AS31	**Alice Springs**	**18.44**	**162**	P	**P**	**00 03 47.1**	**+0.5**
ASAR	**Alice Springs**	**18.44**	**162**	P	**P**	**00 03 46.9**	**+0.2**
	comp=Z,2.5nm,0.3s,baz=343,slow=11,SNR=106						
ASAR				pP	sP	00 04 40.5	-53
	comp=Z,0.4nm,0.3s,baz=333,slow=10,SNR=4.5						
ASAR				S	**S**	**00 06 54.1**	**-1.6**
	comp=Z,0.2nm,0.3s,baz=333,slow=15,SNR=6.4						
ASAR	**Alice Springs**	**18.44**	**162**	P	**P**	**00 03 47.0**	**+0.4**
KSM	**Kuching**	**19.11**	**292**	P	**P**	**00 03 53.0**	**-0.6**
KSM				IAmb	IAmb	00 03 55.6	
	comp=Z,20nm,0.9s						
PMG	**Port Moresby**	**19.34**	**101**	P	**P**	**00 03 56.6**	**+0.8**
	comp=Z,4.1nm,0.3s,baz=283,slow=5.2,SNR=7.0						
CISI	**Cisompet, Garu**	**20.03**	**265**	P	**P**	**00 04 03.1**	**+0.8**
LEM	**Lembang**	**20.20**	**267**	P	**P**	**00 04 04.2**	**+0.3**
	comp=Z,31nm,0.8s,baz=86,slow=11,SNR=5.1						
GIRL	**Giralia**	**21.15**	**217**	P	**P**	**00 04 13.0**	**+0.8**
XMIS	**Christmas Isla**	**22.48**	**257**	P	**P**	**00 04 24.2**	**-0.3**
FORT	**Forrest**	**24.61**	**180**	P	**P**	**00 04 44.3**	**+0.9**
FORT				IAmb	IAmb	00 04 46.2	
	comp=Z,21nm,0.8s						
MYKOM	**Kota Tinggi**	**25.27**	**287**	P	**P**	**00 04 50.6**	**+1.0**
MYKOM				IAmb	IAmb	00 04 52.9	
	comp=Z,24nm,0.8s						
MORW	**Morawa**	**25.52**	**205**	P	**P**	**00 04 51.5**	**-0.1**
BBOO	**Buckleboo**	**27.69**	**165**	P	**P**	**00 05 11.6**	**+0.8**
NWAO	**Narrogin (SRO)**	**28.55**	**199**	P	**P**	**00 05 18.1**	**-0.1**
	comp=Z,4.6nm,0.6s,baz=38,slow=13,SNR=2.0						
NWAO	**Narrogin (SRO)**	**28.55**	**199**	P	**P**	**00 05 17.9**	**-0.3**
STKA	**Stephens Creek**	**28.71**	**155**	P	**P**	**00 05 19.6**	**-0.1**
	comp=Z,1.8nm,0.5s,baz=338,slow=5.7,SNR=8.4						
STKA				pP	**pP**	**00 06 31.4**	**-0.8**
	comp=Z,3.5nm,0.8s,baz=308,slow=11,SNR=5.2						
STKA	**Stephens Creek**	**28.71**	**155**	P	**P**	**00 05 20.4**	**+0.7**
YULB	**Yu-li**	**29.96**	**348**	P	**P**	**00 05 27.8**	**-2.9**
TPUB	**Ta-pu**	**30.02**	**346**	P	**P**	**00 05 29.0**	**-2.3**
TPUB				IAmb	IAmb	00 05 42.5	
	comp=Z,25nm,1.1s						
RPSI	**Rantau Prapat**	**30.24**	**286**	P	**P**	**00 05 34.1**	**+0.8**
PSI	**Prapat**	**30.27**	**286**	P	**P**	**00 05 33.8**	**0.0**
	comp=Z,30nm,0.8s,baz=179,slow=1.7,SNR=29						
YHNB	**Yeheng**	**31.18**	**348**	P	**P**	**00 05 40.3**	**-1.2**
YHNB				IAmb	IAmb	00 05 57.8	
	comp=Z,16nm,1.0s						
JOW	**Kunigami**	**32.68**	**1**	P	**P**	**00 05 54.2**	**0.0**
LHMI	**Lhok Sumawe**	**32.90**	**289**	P	**P**	**00 05 57.9**	**+1.6**
LAMP	**Lampang**	**37.07**	**312**	P	**P**	**00 06 35.5**	**+4.0**
CM36	**Chiang Mai Arr**	**37.47**	**311**	P	**P**	**00 06 38.0**	**+3.2**
CM04	**Chiang Mai Arr**	**37.49**	**311**	P	**P**	**00 06 38.4**	**+3.4**
	comp=Z,0.1nmcomp=Z,124nmcomp=Z,15nm,0.8s						
CM09	**Chiang Mai Arr**	**37.50**	**311**	P	**P**	**00 06 38.8**	**+3.7**
	comp=Z,0.0nmcomp=Z,116nmcomp=Z,14nm,0.8s						
CM05	**Chiang Mai Arr**	**37.51**	**311**	P	**P**	**00 06 38.0**	**+2.8**
	comp=Z,0.0nmcomp=Z,118nmcomp=Z,13nm,0.7s						
CM01	**Chiang Mai Arr**	**37.51**	**311**	P	**P**	**00 06 38.9**	**+3.7**
	comp=Z,0.1nmcomp=Z,129nmcomp=Z,15nm,0.9s						
CM35	**Chiang Mai Arr**	**37.53**	**311**	P	**P**	**00 06 38.0**	**+2.8**
CM02	**Chiang Mai Arr**	**37.53**	**311**	P	**P**	**00 06 39.0**	**+3.6**
	comp=Z,0.0nmcomp=Z,102nmcomp=Z,15nm,0.8s						
CMAR	**Chiang Mai Arr**	**37.55**	**311**	P	**P**	**00 06 38.0**	**+2.5**
	comp=Z,6.9nm,0.6s,baz=143,slow=7.1,SNR=37						
CM13	**Chiang Mai Arr**	**37.55**	**311**	P	**P**	**00 06 39.0**	**+3.5**
	comp=Z,0.1nmcomp=Z,122nmcomp=Z,15nm,0.7s						
CM15	**Chiang Mai Arr**	**37.56**	**311**	P	**P**	**00 06 39.5**	**+3.9**
	comp=Z,0.2nmcomp=Z,17nm,0.8s						
CM34	**Chiang Mai Arr**	**37.63**	**312**	P	**P**	**00 06 39.0**	**+2.8**
CM32	**Chiang Mai Arr**	**37.74**	**311**	P	**P**	**00 06 40.0**	**+3.0**
CHTO	**Chiang Mai**	**37.77**	**311**	P	**P**	**00 06 40.8**	**+3.5**
CHTO				IAmb	IAmb	00 06 41.2	
	comp=Z,13nm,0.7s						
CM33	**Chiang Mai Arr**	**37.77**	**311**	P	**P**	**00 06 40.0**	**+2.8**
GYA	**Guiyang**	**38.33**	**328**	*e*P	**P**	**00 06 41.4**	**-0.5**
GYA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
WHN	**Wuhan**	**38.63**	**341**	⇑P	**P**	**00 06 44.3**	**+0.2**
JMN	**Monobe**	**39.95**	**8**	P	**P**	**00 06 54.7**	**-0.2**
JMN				IAmb	IAmb	00 07 00.6	
	comp=Z,23nm,1.1s						
JHS	**Saijyo**	**41.11**	**6**	P	**P**	**00 07 04.3**	**+0.1**
JHS				IAmb	IAmb	00 07 05.6	
	comp=Z,22nm,0.7s						
JWT	**Wachi**	**41.70**	**9**	P	**P**	**00 07 08.1**	**-0.8**

JWT				IAmb	IAmb	00 07 11.4	
	comp=Z,16nm,0.9s						
KSAR	**Wonju Array Be**	**43.26**	**360**	P	**P**	**00 07 21.7**	**+0.5**
KSRS	**Korea Array**	**43.27**	**360**	P	**P**	**00 07 21.4**	**+0.1**
	comp=Z,7.4nm,0.7s,baz=179,slow=9.6,SNR=46						
KSRS				PcP	**PcP**	**00 09 02.6**	**+0.6**
	comp=Z,1.2nm,0.6s,baz=174,slow=2.6,SNR=5.3						
KS19	**Wonju Array Si**	**43.32**	**360**	P	**P**	**00 07 21.8**	**+0.1**
KS19				IAmb	IAmb	00 07 22.4	
	comp=Z,12nm,0.8s						
MAT	**Matsushiro**	**43.44**	**12**	P	**P**	**00 07 20.7**	**-2.0**
MJAR	**Matsushiro Arr**	**43.44**	**12**	P	**P**	**00 07 21.4**	**-1.4**
	comp=Z,8.6nm,0.7s,baz=187,slow=9.3,SNR=12						
XAN	**Xi'an**	**43.73**	**337**	P	**P**	**00 07 23.8**	**-1.3**
XAN				pmax	pmax		
	comp=Z,13nm,0.7s						
XAN				pmax	pmax		
	comp=Z,68nm,6.5s						
XAN	**Xi'an**	**43.73**	**337**	P	**P**	**00 07 23.5**	**-1.7**
JSD	**Sado**	**44.89**	**12**	P	**P**	**00 07 33.4**	**-0.7**
JMM	**Marumori**	**45.29**	**14**	P	**P**	**00 07 37.2**	**0.0**
JMM				IAmb	IAmb	00 07 39.4	
	comp=Z,20nm,0.7s						
BJI	**Beijing**	**47.12**	**348**	P	**P**	**00 07 49.8**	**-1.3**
BJI				pmax	pmax		
	comp=Z,5.0nm,0.9s						
LZH	**Lanzhou**	**47.61**	**333**	*e*P	**P**	**00 07 54.9**	**-0.3**
LZH				pP	pP	00 09 12.5	-2.6
LZH				sP	PP	00 09 54.5	+3.1
LZH				pmax	pmax		
	comp=Z,14nm,1.1s						
JTM	**Tenmabayashi**	**48.13**	**13**	P	**P**	**00 07 58.8**	**-0.1**
JTM				IAmb	IAmb	00 08 13.5	
	comp=Z,42nm,1.1s						
HHC	**Hu-ho-hao-te**	**49.02**	**344**	*e*P	**P**	**00 08 05.8**	**+0.1**
HHC				pmax	pmax		
	comp=Z,4.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,120nm,7.6s						
CN2	**Changchun**	**49.66**	**358**	*e*P	**P**	**00 08 09.3**	**-0.9**
USA0B	**Ussuriysk Arra**	**50.14**	**4**		**P**	**00 08 14.0**	**+0.2**
USA0B				IAmb	IAmb	00 08 14.5	
	comp=Z,12nm,0.8s						
USRK	**Ussuriysk Ar.**	**50.14**	**4**	P	**P**	**00 08 13.8**	**0.0**
	comp=Z,10nm,0.6s,baz=186,slow=7.3,SNR=22						
USRK	**Ussuriysk Ar.**	**50.14**	**4**		**P**	**00 08 13.5**	**-0.3**
ODAN	**Odare**	**51.08**	**312**	*e*P	**P**	**00 08 21.4**	**0.0**
	comp=Z,15nm,0.5s						
TAPN	**Taplejung**	**51.12**	**312**	*e*P	**P**	**00 08 21.1**	**-0.6**
	comp=Z,7.8nm,0.4s						
ASAJ	**Asahikawa**	**51.65**	**13**	P	**P**	**00 08 24.7**	**-0.2**
	comp=Z,5.9nm,0.4s,baz=128,slow=28,SNR=5.4						
JKA	**Kamikawa-asahi**	**51.65**	**13**	P	**P**	**00 08 23.7**	**-1.2**
RAMN	**Ramite**	**51.72**	**311**	*e*P	**P**	**00 08 26.2**	**+0.2**
	comp=Z,31nm,0.5s						
GTA	**Gaotai**	**52.16**	**332**	*e*P	**P**	**00 08 28.6**	**-0.3**
GTA				pP	PcP	00 08 35.8	-59
GTA				sP	sP	00 08 39.3	-116
GTA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
QRZ	**Quartz Range**	**52.74**	**138**	P	**P**	**00 08 33.4**	**+0.4**
QRZ				IAmb	IAmb	00 08 44.9	
	comp=Z,26nm,1.2s						
GUN	**Gumba**	**52.78**	**312**	*e*P	**P**	**00 08 33.2**	**-0.6**
	comp=Z,22nm,0.5s						
PKI	**Pulchoki**	**52.95**	**311**	*e*P	**P**	**00 08 34.5**	**-0.5**
	comp=Z,12nm,0.5s						
PKIN	**Phulchoki**	**52.96**	**311**	*e*P	**P**	**00 08 34.5**	**-0.5**
	comp=Z,13nm,0.5s						
KKN	**Kakani**	**53.16**	**311**	*e*P	**P**	**00 08 35.3**	**-1.1**
	comp=Z,11nm,0.5s						
DMN	**Daman**	**53.20**	**311**	*e*P	**P**	**00 08 36.7**	**0.0**
	comp=Z,11nm,0.5s						
GKN	**Gorkha**	**53.76**	**311**	*e*P	**P**	**00 08 40.3**	**-0.3**
	comp=Z,30nm,0.4s						
KHZ	**Kahutara**	**54.16**	**139**	P	**P**	**00 08 44.3**	**+1.2**
KLR	**Kul'dur**	**55.14**	**3**	P	**P**	**00 08 49.9**	**+0.1**
	comp=Z,0.9nm,0.4s,baz=257,slow=10,SNR=4.9						
ULN	**Ulaanbaatar**	**56.74**	**343**		**P**	**00 09 01.5**	**+0.3**
SONM	**Songino Array**	**56.90**	**343**	P	**P**	**00 09 02.7**	**+0.4**
	comp=Z,6.6nm,0.8s,baz=166,slow=7.3,SNR=49						
SONM	**Songino Array**	**56.90**	**343**	P	**P**	**00 09 03.1**	**+0.8**
WMQ	**Urumqi**	**61.48**	**328**	*e*P	**P**	**00 09 35.0**	**+1.6**
PEA0B	**Petropavlovsk-**	**64.08**	**19**	P	**P**	**00 09 50.8**	**+0.8**
PEA0B				IAmb	IAmb	00 09 51.5	
	comp=Z,14nm,0.7s						
PETK	**Petropavlovsk-**	**64.08**	**19**	P	**P**	**00 09 50.9**	**+0.8**
	comp=Z,11nm,0.6s,baz=171,slow=3.6,SNR=16						
ZSN	**Zaisan**	**65.39**	**329**	*e*P	**P**	**00 09 57.7**	**-0.8**
	baz=329						
SHLS	**Shalkode**	**65.71**	**323**	*e*P	**P**	**00 09 58.7**	**-2.1**
	baz=323						
KSH	**Kashi**	**65.93**	**318**	P	**P**	**00 10 02.8**	**+0.6**
KSH				PcP	**PcP**	**00 10 31.6**	**+2.1**
KSH				S	**S**	**00 18 20.8**	**+3.6**
KSH				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KSH				pmax	pmax		
	comp=Z,160nm,5.5s						
SATY	**Saty**	**66.29**	**322**	*e*P	**P**	**00 10 03.7**	**-0.7**
	baz=322						
MK31	**Makanchi Array**	**66.31**	**328**	IAmb	IAmb	00 10 04.9	
	comp=Z,3.4nm,0.6s						
MKAR	**Makanchi Array**	**66.31**	**328**	P	**P**	**00 10 04.3**	**0.0**
	comp=Z,5.3nm,0.4s,baz=116,slow=8.5,SNR=130						
MKAR	**Makanchi Array**	**66.31**	**328**	P	**P**	**00 10 04.0**	**-0.4**
KPKS	**Kokpek**	**66.36**	**323**	*e*P	**P**	**00 10 03.6**	**-1.2**
	baz=323						
MAKZ	**Makanchi**	**66.49**	**327**	P	**P**	**00 10 04.9**	**-0.5**
MAKZ				IAmb	IAmb	00 10 05.8	
	comp=Z,3.5nm,0.5s						
TNSS	**Tian-Shan**	**67.17**	**322**	*e*P	**P**	**00 10 10.3**	**0.0**
	baz=322						
AAA	**Alma-Ata**	**67.28**	**322**	*e*P	**P**	**00 10 09.6**	**-1.0**
	comp=Z,4.7nm,0.6s,baz=322						
TDK	**Taldyqorghan**	**67.40**	**324**	*e*P	**P**	**00 10 10.0**	**-1.1**
	comp=Z,2.1nm,0.5s,baz=324						
CHKK	**Chushkaly**	**67.59**	**323**	*e*P	**P**	**00 10 11.9**	**-0.5**
	baz=322						
KUU	**Kurty**	**68.01**	**322**	*e*P	**P**	**00 10 14.5**	**-0.5**
	comp=Z,2.9nm,0.5s,baz=322						
AAK	**Ala-Archa**	**68.49**	**320**	P	**P**	**00 10 18.6**	**+0.5**
SEM	**Semipalatinsk**	**69.63**	**330**	*e*P	**P**	**00 10 23.8**	**-1.1**
	baz=330						
ZAA0	**Zalesovo Array**	**69.83**	**335**	IAmb	IAmb	00 10 25.6	
	comp=Z,6.4nm,0.8s						
ZALV	**Zalesovo Beam**	**69.83**	**335**	P	**P**	**00 10 24.8**	**-0.9**
	comp=Z,6.1nm,0.6s,baz=125,slow=5.1,SNR=30						
KURK	**Kurchatov**	**70.64**	**329**	P	**P**	**00 10 30.6**	**-0.1**
KURK				IAmb	IAmb	00 10 31.3	
	comp=Z,9.4nm,0.9s						
SEY	**Seymchan**	**71.26**	**12**	P	**P**	**00 10 34.4**	**+0.3**
	comp=Z,11nm,0.6s,baz=215,slow=9.4						
BRZS	**Berezniki**	**73.38**	**326**	*e*P	**P**	**00 10 46.2**	**-0.6**
	baz=326						
SOCY	**Socotra**	**75.70**	**284**	P	**P**	**00 10 60.0**	**-0.8**
SOCY				IAmb	IAmb	00 11 05.7	
	comp=Z,8.5nm,0.7s						
TIXI	**Tiksi**	**77.54**	**0**	P	**P**	**00 11 09.5**	**-0.1**
NRIK	**Noril'sk**	**80.14**	**347**	P	**P**	**00 11 23.9**	**+0.2**
	comp=Z,2.8nm,0.6s,baz=134,slow=6.9,SNR=7.7						
NRIK	**Noril'sk**	**80.14**	**347**	IAmb	IAmb	00 11 24.8	
	comp=Z,6.3nm,1.1s						
ABKAR	**Akbulak array**	**80.49**	**322**	P	**P**	**00 11 25.2**	**-0.8**
ABKAR	**Akbulak array**	**80.49**	**322**	IAmb	IAmb	00 11 28.2	
	comp=Z,2.3nm,0.9s						
GAMB	**Gambell**	**82.83**	**23**	P	**P**	**00 11 38.6**	**+1.0**
GAMB				IAmb	IAmb	00 11 39.1	
	comp=Z,5.0nm,0.8s						
SDPT	**Sand Point**	**84.63**	**33**	P	**P**	**00 11 46.4**	**-0.4**
COLD	**Coldfoot**	**92.38**	**23**	P	**P**	**00 12 23.3**	**+0.2**
COLD				IAmb	IAmb	00 12 23.5	
	comp=Z,2.1nm,0.6s						
TOLK	**Toolik Lake Re**	**92.85**	**21**	P	**P**	**00 12 25.5**	**+0.2**
TOLK				IAmb	IAmb	00 12 26.5	
	comp=Z,3.8nm,0.8s						
HIN	**Hinchinbrook I**	**93.01**	**30**	P	**P**	**00 12 25.6**	**-0.6**
ILAR	**Eielson Array**	**93.36**	**25**	P	**P**	**00 12 26.5**	**-1.2**
	comp=Z,0.6nm,0.7s,baz=236,slow=7.0,SNR=0.7						
ARCES	**ARCESS Array B**	**99.97**	**340**	P	**Pdif**	**00 12 56.5**	**-0.9**
	comp=Z,2.4nm,0.9s,baz=54,slow=6.2,SNR=3.7						
PDAR	**Pinedale Array**	**117.67**	**45**	PKP	**PKPdf**	**00 17 56.4**	**-0.8**
	comp=Z,0.2nm,0.5s,baz=52,slow=2.4,SNR=4.1						
PDAR	**Pinedale Array**	**117.67**	**45**		**PKPdf**	**00 17 56.9**	**-0.3**
FRB	**Frobisher Bay**	**121.18**	**8**	PKP	**PKPdf**	**00 18 02.1**	**-0.9**
	comp=Z,0.8nm,0.7s,baz=45,slow=7.1,SNR=2.0						
TXAR	**Lajitas Array**	**126.18**	**58**	PKP	**PKiKP**	**00 18 14.5**	**+0.3**
	comp=Z,0.3nm,0.6s,baz=196,slow=2.4,SNR=4.7						

NSSP ***20*** *00:44:48.6, 41°.20N×47°.83E, h10^{km}, Ms2.8*
DRS ***20*** *00:44:51.3±0.0, 41°.20N×48°.13E, h16^{km}, ML2.7/8*
ISC 20 00:44:49.1±2.3**, 41°.11N**±0°.05×**48°.1E**±0°.1**, h15**^{km}±12^{km}**,**
n13, σ1ˢ.26/26**, 4C-10D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKT	**Akhty**	**0.46**	**323**	⇓*i*Pg	**Pb**	**00 44 58.6**	**-0.3**
	521nm,0.2s						
AKT				*e*Sg	**Sb**	**00 45 04.5**	**-1.1**
	1μm,0.4s						
URKR	**Urkarakh**	**1.11**	**342**	*i* Pg	**Pn**	**00 45 10.7**	**+0.5**
	60nm,0.2s						
URKR				*e*Sg	**Sn**	**00 45 25.2**	**-0.1**
	89nm,0.2s						
GNBR	**Gunib**	**1.53**	**327**	*i* Pg	**Pg**	**00 45 18.1**	**-0.4**
	22nm,0.7s						
GNBR				*e*Sg	**Sg**	**00 45 39.0**	**+0.6**
	71nm,0.9s						
ARKR	**Arakani**	**1.70**	**331**	*e*Pg	**Pg**	**00 45 21.2**	**-0.5**
	28nm,0.7s						
ARKR				*e*Sg	**Sg**	**00 45 44.1**	**+0.3**
	57nm,0.8s						
KRNR	**Karanay**	**1.93**	**333**	*i* Pg	**Pg**	**00 45 26.6**	**+0.6**
	14nm,0.5s						
KRNR				⇑*e*Sg	**Sg**	**00 45 53.1**	**+2.1**
	48nm,0.8s						
BTLR	**Botlikh**	**2.09**	**319**	*i* Pg	**Pg**	**00 45 29.5**	**+0.4**
	16nm,0.5s						
BTLR				⇑*e*Sg	**Sg**	**00 45 59.1**	**+2.9**
	29nm,0.5s						
GRS	**Goris**	**2.10**	**220**	⇓*i*P	**Pb**	**00 45 27.0**	**0.0**
GRS				⇑*i*S	**Sb**	**00 45 54.0**	**+1.1**
DBC	**Dubki**	**2.12**	**334**	*i* Pg	**Pg**	**00 45 28.4**	**-1.4**
	26nm,0.4s						
DBC				*e*Sg	**Sg**	**00 45 56.6**	**-0.8**
	49nm,0.8s						
DLMR	**Dylym**	**2.24**	**331**	*e*Pg	**Pg**	**00 45 30.4**	**-1.6**
	48nm,0.5s						
DLMR				⇑*e*Sg	**Sg**	**00 46 01.4**	**+0.4**
	86nm,0.6s						
KAPZ	**Kaputan**	**2.70**	**254**	⇓*i*P	**Pb**	**00 45 35.4**	**-1.8**
KAPZ				⇓*i*S	**Sb**	**00 46 09.7**	**-0.5**
GNI	**Garni**	**2.73**	**250**	⇓*i*P	**Pb**	**00 45 36.0**	**-1.6**
GNI				⇓*i*S	**Sb**	**00 46 10.7**	**-0.2**
NRKZ	**NAREK**	**2.84**	**248**	⇓*i*P	**Pb**	**00 45 41.0**	**+1.4**
NRKZ				⇓*i*S	**Sg**	**00 46 19.4**	**-1.0**
VNNZ	**Vanand**	**3.41**	**254**	⇓*i*P	**Pb**	**00 45 48.4**	**-0.8**
VNNZ				⇓*i*S	**Sb**	**00 46 32.2**	**+1.8**

IDC ***20*** *00:46:59.1±2.6, 7°.26S×119°.41E, h0^{km}, mb3.1/2,*
mb1 3.3/3, mb1mx3.1/35, mbtmp3.1/3, ML3.2/1, Error
ellipse: s-maj=265.2km s-min=27.9km az=53.0
DJA ***20*** *00:47:00.7±0.4, 8°S±5°×11°9E±°, h10^{km}, M3.1/7, MLv3.1/7*
ISC 20 00:47:03.2±1.2**, 7°.59S**±0°.09×**119°.06E**±0°.07**, h35**^{km}**, n8,**
σ0ˢ.82/8**, Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	**Plampang**	**1.77**	**226**	P	**Pn**	**00 47 30.5**	**-0.8**
BSSI	**Bau Bau, Buton**	**2.02**	**45**	P	**Pn**	**00 47 34.2**	**-0.6**
TWSI	**Taliwang, Sumb**	**2.44**	**242**	P	**Pn**	**00 47 40.5**	**-0.1**
EDFI	**Ende, Flores**	**2.85**	**114**	P	**Pn**	**00 47 46.1**	**-0.2**
BASI	**Baing, Sumba**	**3.01**	**150**	P	**Pn**	**00 47 47.9**	**-0.5**
WRA	**Warramunga Arr**	**19.24**	**131**	P	**P**	**00 51 24.2**	**-0.5**
	0.1nm,0.3s,baz=311,slow=10.0,SNR=1.9						
ASAR	**Alice Springs**	**21.41**	**140**	P	**P**	**00 51 49.5**	**+1.2**
	0.4nm,0.7s,baz=317,slow=9.2,SNR=6.5						
MKAR	**Makanchi Array**	**63.24**	**333**	P	**P**	**00 57 28.6**	**+0.4**
	0.1nm,0.4s,baz=148,slow=7.1,SNR=4.9						

ISU ***20*** *01:05:10, 40°.53N×71°.83E, h5^{km}, Hypocentre not*
reviewed by the ISC
KRNET ***20*** *01:05:10.4±0.1, 40°.48N×71°.83E, h11^{km}, mb3.2*
SOME ***20*** *01:05:10.8, 40°.52N×71°.90E, h15^{km}*
NNC ***20*** *01:05:12.3±1.0, 40°.65N×71°.86E, h0^{km}, mb3.6, mpv3.3,*
Error ellipse: s-maj=8.7km s-min=4.6km az=176.0
ISC 20 01:05:09.6±0.8**, 40°.45N**±0°.03×**71°.75E**±0°.02**, h10**^{km}**, n60,**
σ2ˢ.48/97**, 30C-18D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FRG	**Fergana**	**0.29**	**5**	*e*P		01 05 15.0	
FRG				*e*S		01 05 18.0	
SHAK	**Shakhimardan**	**0.49**	**181**	*e*P		01 05 21.0	
SHAK				*e*S		01 05 30.0	
ANR	**Andizhan**	**0.56**	**56**	*e*P		01 05 21.0	
ANR				*e*S		01 05 28.0	
OHH	**Osh**	**0.79**	**84**	⇑*i*P	**Pg**	**01 05 23.9**	**-1.0**
	baz=86						
OHH				⇑*i*S	**Sg**	**01 05 34.2**	**-1.1**
	baz=86						
OHH	**Osh**	**0.79**	**84**	*e*P		01 05 23.0	
OHH				*e*S		01 05 34.0	
BTK	**Batken**	**0.81**	**242**	⇓*i*P	**Pn**	**01 05 27.0**	**-0.2**
	baz=42						
BTK				⇓*i*S	**Sn**	**01 05 39.0**	**-0.3**
	baz=42						
BTK	**Batken**	**0.81**	**242**	*e*P		01 05 27.0	
BTK				*e*S		01 05 39.0	
DRK	**Karamyk**	**0.97**	**178**	⇑*i*P	**Pb**	**01 05 29.2**	**+0.6**
	baz=81						
DRK				⇑*i*S	**Sb**	**01 05 42.3**	**+0.7**
	baz=81						
TRKS	**Terek-Say**	**1.18**	**337**	⇑*i*P	**Pb**	**01 05 31.0**	**-1.1**
	baz=33						
TRKS				⇑*i*S	**Sg**	**01 05 45.7**	**-1.8**
	baz=33						
ARSB	**Arslanbob**	**1.28**	**46**	⇑*i*P	**Pn**	**01 05 33.0**	**-0.7**
	baz=46						
ARSB				⇑*i*S	**Sb**	**01 05 49.2**	**-1.3**
	baz=46						
ARSB	**Arslanbob**	**1.28**	**46**	*e*P		01 05 33.0	
ARSB				*e*S		01 05 49.0	
SFK	**Sufi-Kurgan**	**1.41**	**107**	⇑*i*P	**Pn**	**01 05 35.9**	**+0.4**
	baz=9.0						
SFK				⇑*i*S	**Sn**	**01 05 54.1**	**-0.2**
	baz=9.0						
SFK	**Sufi-Kurgan**	**1.41**	**107**	*e*P		01 05 36.0	
SFK				*e*S		01 05 54.0	
CHMG	**Chimgan**	**1.72**	**310**	*e*P		01 05 42.0	
CHMG				*e*S		01 06 05.0	
CHRV	**Charvak**	**1.81**	**312**	*e*P		01 05 45.0	
CHRV				*e*S		01 06 07.0	
TAS	**Tashkent**	**2.06**	**296**	⇑*i*P	**Pb**	**01 05 46.8**	**-0.2**
	baz=95						
TAS				⇑*i*S	**Sb**	**01 06 13.3**	**+0.6**
	baz=95						
MNAS	**Manas**	**2.12**	**15**	⇓*i*P	**Pb**	**01 05 46.7**	**-1.4**
	baz=14						
MNAS				⇓*i*S	**Sb**	**01 06 12.9**	**-1.6**
	baz=14						
IUG	**Iuzhnay**	**2.13**	**323**	*e*P	**Pg**	**01 05 49.6**	**-0.9**
	10nm,0.1s						
IUG				*e*S	**Sg**	**01 06 17.6**	**-0.6**
	109nm,0.3s						
AML	**Almayashu**	**2.23**	**40**	⇑*i*P	**Pn**	**01 05 47.8**	**+0.8**
	baz=40						
AML				⇑*i*S	**Sn**	**01 06 15.4**	**+0.6**
	baz=40						
AML	**Almayashu**	**2.23**	**40**	P	**Pn**	**01 05 48.2**	**+1.2**
	SNR=32						
ARLS	**Aral**	**2.40**	**53**	⇑*i*P	**Pn**	**01 05 49.8**	**+0.7**
	baz=53						
ARLS				⇑*i*S	**Sn**	**01 06 19.1**	**+0.4**
	baz=53						
DZA	**Taraz**	**2.46**	**353**	*e*P	**Pb**	**01 05 54.0**	**+0.1**
	56nm,0.2s						
DZA				*e*S	**Sb**	**01 06 25.8**	**+1.4**
	335nm,0.2s						
CHM	**Chimkent**	**2.47**	**320**	*e*P	**Pg**	**01 05 56.6**	**-0.3**
	3.2nm,0.1s						
CHM				*e*S	**Sg**	**01 06 29.9**	**+1.0**
	884nm,0.3s						
MRKS	**Merke**	**2.55**	**25**	*e*P	**Pb**	**01 05 55.5**	**0.0**
	15nm,0.4s						
MRKS				*e*S	**Sb**	**01 06 28.2**	**+1.3**
	69nm,0.3s						
MRKS	**Merke**	**2.55**	**25**	Pg	**Pb**	**01 05 55.5**	**0.0**
	15nm,0.4s						
MRKS				Lg	Lg	01 06 28.5	
	69nm,0.3s						
EKS2	**Erkin-Say**	**2.69**	**34**	⇓*e*P	**Pn**	**01 05 54.2**	**+1.2**
	baz=33						
EKS2				⇓*i*S	**Sn**	**01 06 26.3**	**+0.7**
	baz=33						
EKS2	**Erkin-Say**	**2.69**	**34**	P	**Pb**	**01 05 58.0**	**+0.2**
	SNR=8.6						
UCH	**Uchtor**	**2.74**	**49**	⇓*i*P	**Pn**	**01 05 55.1**	**+1.2**
	baz=48						
UCH				⇓*i*S	**Sn**	**01 06 27.6**	**+0.2**
	baz=48						
UCH	**Uchtor**	**2.74**	**49**	P	**Pn**	**01 05 55.2**	**+1.2**
	SNR=7.0						
KK31	**Karatay Array**	**2.81**	**341**	Pn	**Pn**	**01 05 55.9**	**+1.3**
	0.6nm,0.3s,baz=146,slow=12,SNR=64						
KK31				⇑Pg	**Pb**	**01 06 00.4**	**+0.6**
	1.1nm,0.2s,baz=157,slow=17,SNR=10						
KK31				⇑Lg	Lg	01 06 35.2	
	13nm,0.3s,baz=158,slow=30						
AAK	**Ala-Archa**	**3.00**	**42**	⇑*e*P	**Pn**	**01 05 58.6**	**+1.2**
	baz=42						
AAK				⇑*i*S	**Sn**	**01 06 33.9**	**+0.3**
	baz=42						
AAK	**Ala-Archa**	**3.00**	**42**	⇓Pn	**Pn**	**01 05 58.7**	**+1.3**
	1.9nm,0.3s						
AAK				⇑Pg	**Pg**	**01 06 05.7**	**-1.5**
	6.2nm,0.6s						
AAK				⇓Lg	Lg	01 06 41.4	
	22nm,0.4s						
FRU1	**Bishkek**	**3.20**	**42**	⇓*i*P	**Pn**	**01 06 01.3**	**+1.3**
	baz=41						
FRU1				⇓*i*S	**Sn**	**01 06 38.2**	**0.0**
	baz=41						
KBK	**Karagaybulak**	**3.26**	**46**	⇓*i*P	**Pn**	**01 06 02.4**	**+1.5**
	baz=46						
KBK				⇓*i*S	**Sn**	**01 06 40.1**	**+0.2**
	baz=46						
CHMS	**Chumysh**	**3.40**	**40**	⇑*i*P	**Pn**	**01 06 04.0**	**+1.3**
	baz=40						
CHMS				⇑*i*S	**Sn**	**01 06 43.1**	**+0.1**
	baz=40						
USP	**Ospenovka**	**3.49**	**35**	⇑*i*P	**Pn**	**01 06 05.1**	**+1.2**
	baz=35						
USP				⇑*i*S	**Sn**	**01 06 45.0**	**-0.2**
	baz=35						
USP	**Ospenovka**	**3.49**	**35**	P	**Pn**	**01 06 05.8**	**+1.9**
	SNR=7.7						
SGDS	**Sogindy**	**3.69**	**35**	Pg	**Pb**	**01 06 15.0**	**+0.1**
	2.1nm,0.4s						
SGDS				Lg	Lg	01 07 01.7	
	19nm,0.5s						
BOOM	**Boomskoye usch**	**3.75**	**56**	⇓*e*P	**Pn**	**01 06 08.7**	**+1.0**
	baz=56						
BOOM				⇓*e*S	**Sn**	**01 06 51.6**	**-0.4**
	baz=56						
TKM2	**Tokmak 2**	**3.79**	**48**	⇑*e*P	**Pn**	**01 06 09.7**	**+1.4**
	baz=48						
TKM2				⇑*i*S	**Sn**	**01 06 52.7**	**-0.4**
	baz=48						
TKM2	**Tokmak 2**	**3.79**	**48**	P	**Pn**	**01 06 09.8**	**+1.4**
	SNR=5.1						
TKM2	**Tokmak 2**	**3.79**	**48**	⇓Pn	**Pn**	**01 06 09.6**	**+1.4**
	1.4nm,0.3s						
TKM2				⇓Pg	**Pg**	**01 06 21.5**	**-0.8**
	2.0nm,0.4s						
TKM2				⇑Lg	Lg	01 07 06.4	
	10nm,0.5s						
ULHL	**Ulahol**	**3.83**	**61**	⇑*i*P	**Pn**	**01 06 10.2**	**+1.4**
	baz=61						
ULHL				⇑*i*S	**Sn**	**01 06 53.3**	**-0.6**
	baz=61						
KTAB	**Kitab**	**3.97**	**252**	*e*P		01 05 45.0	
KTAB				*e*S		01 06 08.0	
KST	**Kastek**	**4.08**	**49**	*e*P	**Pb**	**01 06 22.9**	**+1.2**
	3.0nm,0.3s						
KST				*e*S	**Sb**	**01 07 15.2**	**+4.2**
	15nm,0.6s						
KST	**Kastek**	**4.08**	**49**	Pg	**Pb**	**01 06 22.9**	**+1.2**
	3.0nm,0.3s						
KST				Lg	Lg	01 07 15.2	
	15nm,0.6s						
DGS	**Degeres**	**4.10**	**46**	*e*P	**Pb**	**01 06 24.4**	**+2.5**
	6.3nm,0.5s						
DGS				*e*S	**Sg**	**01 07 17.4**	**-3.9**
	19nm,0.7s						
DGS	**Degeres**	**4.10**	**46**	Pg	**Pb**	**01 06 24.4**	**+2.5**
	6.3nm,0.5s						
DGS				Lg	Lg	01 07 17.4	
	19nm,0.7s						
TNSS	**Tian-Shan**	**4.67**	**55**	*e*P	**Pb**	**01 06 33.7**	**+1.9**
	1.7nm,0.4s						
TNSS				*e*S	**Sb**	**01 07 33.8**	**+5.6**
	6.1nm,0.4s						
TNSS	**Tian-Shan**	**4.67**	**55**	Pg	**Pb**	**01 06 33.7**	**+1.9**
	1.7nm,0.4s						
TNSS				Lg	Lg	01 07 33.8	
	6.1nm,0.4s						
MDOK	**Medeo**	**4.80**	**54**	*e*P	**Pb**	**01 06 35.7**	**+1.8**
	2.5nm,0.5s						
MDOK				*e*S	**Sb**	**01 07 37.2**	**+5.5**
	11nm,0.6s						
MDOK	**Medeo**	**4.80**	**54**	Pg	**Pb**	**01 06 35.7**	**+1.8**
	2.5nm,0.5s						
MDOK				Lg	Lg	01 07 37.2	
	11nm,0.6s						
KUU	**Kurty**	**4.84**	**43**	*e*P	**Pb**	**01 06 35.4**	**+0.9**
	1.3nm,0.3s						
KUU				*e*S	**Sb**	**01 07 36.8**	**+3.9**
	19nm,0.6s						
KUU	**Kurty**	**4.84**	**43**	Pg	**Pb**	**01 06 35.4**	**+0.9**
	1.3nm,0.3s						
KUU				Lg	Lg	01 07 36.8	
	19nm,0.6s						
KOTS	**Kotyrbulak**	**4.88**	**53**	*e*P	**Pb**	**01 06 37.4**	**+2.2**
	9.1nm,0.4s						
KOTS				*e*S	**Sg**	**01 07 40.1**	**-6.0**
	13nm,0.7s						
KOTS	**Kotyrbulak**	**4.88**	**53**	Pg	**Pb**	**01 06 37.4**	**+2.2**
	9.1nm,0.4s						
KOTS				Lg	Lg	01 07 40.1	
	13nm,0.7s						
BTLS	**Baital**	**4.89**	**19**	*e*P	**Pb**	**01 06 38.8**	**+3.5**
	2.5nm,0.3s						
BTLS				*e*S	**Sg**	**01 07 42.1**	**-4.5**
	6.8nm,0.4s						
BTLS	**Baital**	**4.89**	**19**	Pg	**Pb**	**01 06 38.8**	**+3.5**
	2.5nm,0.3s						
BTLS				Lg	Lg	01 07 42.1	
	6.8nm,0.4s						
KTBS	**Karatobe**	**4.91**	**47**	*e*P	**Pb**	**01 06 37.4**	**+1.7**
	1.9nm,0.6s						
KTBS				*e*S	**Sb**	**01 07 40.1**	**+5.4**
	24nm,0.5s						
KTBS	**Karatobe**	**4.91**	**47**	Pg	**Pb**	**01 06 37.4**	**+1.7**
	1.9nm,0.6s						
KTBS				Lg	Lg	01 07 40.1	
	24nm,0.5s						
CHKK	**Chushkaly**	**5.17**	**47**	*e*P	**Pb**	**01 06 42.8**	**+2.7**
	1.4nm,0.0s						
CHKK				*e*S	**Sg**	**01 07 48.9**	**-6.7**
	12nm,0.3s						
CHKK	**Chushkaly**	**5.17**	**47**	Pg	**Pb**	**01 06 42.8**	**+2.7**
	1.4nm,0.0s						
CHKK				Lg	Lg	01 07 48.9	
	12nm,0.3s						
SATY	**Saty**	**5.62**	**60**	*e*P	**Pb**	**01 06 51.4**	**+3.6**
	1.0nm,0.3s						
SATY				*e*S	**Sg**	**01 08 04.2**	**-5.7**
	7.6nm,0.7s						
SATY	**Saty**	**5.62**	**60**	Pg	**Pb**	**01 06 51.4**	**+3.6**
	1.0nm,0.3s						
SATY				Lg	Lg	01 08 04.2	
	7.6nm,0.7s						
ARXS	**Arharly**	**5.87**	**48**	*e*P	**Pb**	**01 06 55.9**	**+3.9**
	2.5nm,0.5s						
ARXS				*e*S	**Sg**	**01 08 11.4**	**-6.5**
	11nm,0.5s						
ARXS	**Arharly**	**5.87**	**48**	Pg	**Pb**	**01 06 55.9**	**+3.9**
	2.5nm,0.5s						
ARXS				Lg	Lg	01 08 11.4	
	11nm,0.5s						
KPKS	**Kokpek**	**5.98**	**57**	*e*P	**Pb**	**01 06 57.9**	**+3.9**
	1.5nm,0.3s						
KPKS				*e*S	**Sg**	**01 08 15.2**	**-6.4**
	3.9nm,0.1s						
SHLS	**Shalkode**	**6.37**	**62**	Pg	**Pg**	**01 07 08.9**	**-2.5**

	1.6nm,0.2s						
SHLS				Lg	Lg	01 08 34.2	
	7.6nm,0.8s						
PDGK	Podgornoye	6.45	61	Pg	Pb	01 07 07.0	+5.0
	0.8nm,0.5s						
PDGK				Lg	Lg	01 08 30.9	
	1.7nm,0.4s						
DJR	Jarkent	7.11	54	Pg	Pg	01 07 20.8	-4.8
	0.9nm,0.1s						

*NEIC **20** 01:09:13.1±1.6, 5°.9S±0°.1×105°.6E±0°.2, h152^{km}±8^{km}, mb4.1/6, Error ellipse: s-maj=27.2km s-min=12.7km az=55.0*

*IDC **20** 01:09:15.6±2.8, 5°.89S×105°.71E, h166^{km}±17^{km}, mb3.4/7, mb1 3.6/9, mb1mx3.3/39, mbtmp4.0/9, MS2.3/1, Ms1 2.3/1, ms1mx2.2/19, Error ellipse: s-maj=51.4km s-min=15.6km az=60.0*

*DJA **20** 01:09:16.1±0.4, 6°S±5°×10°6E±°, h159^{km}±4^{km}, M4.4/11, mb4.6/2, mB5.5/1, MLv4.2/11, Mw(mB)4.9/1*

ISC 20 01:09:14.9±0.9**, 6°.1S**±0°.1×**105°.7E**±0°.1**, h173**^{km}±6^{km}**, n29,** σ**1^{s}48**/34**, mb3.6**/11**, Sunda Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BLSI	Bandar Lampung	0.83	331	S	Sn	01 10 00.0	-0.7
DBJI	Dramaga	1.19	112	P	Pn	01 09 43.1	-0.4
DBJI				S	Sn	01 10 03.5	-1.9
CBJI	Citeko	1.24	105	P	Pn	01 09 45.4	+1.5
CBJI				S	Sn	01 10 07.7	+1.5
SKJI	Sukabumi	1.27	135	P	Pn	01 09 44.0	-0.2
SKJI				S	Sn	01 10 05.2	-1.7
KLSI		1.67	327	P	Pn	01 09 49.4	+1.3
KLSI				S	Sn	01 10 14.1	+0.4
LEM	Lembang	2.09	110	P	Pn	01 09 53.0	+0.4
	27nm,0.3s,baz=339,slow=5.3,SNR=21						
LEM				S	Sn	01 10 22.6	+0.8
	30nm,0.3s,baz=117,slow=24,SNR=3.6						
LEM				LR	LR	01 10 48.8	
	comp=Z,67nm,19.8s,baz=43,slow=44						
CISI	Cisompet, Garu	2.59	124		Pn	01 09 57.3	-1.1
CISI	Cisompet, Garu	2.59	124	P	Pn	01 09 57.4	-1.1
JCJI	Jatiwangi	2.64	99	P	Pn	01 09 59.0	+0.1
LHSI	Lahat	3.10	317	P	Pn	01 10 07.3	+2.8
UGM	Wanagama	5.16	111	Pn	Pn	01 10 30.0	-1.0
UGM	Wanagama	5.16	111	P	Pn	01 10 30.0	-1.0
	0.6nm96nm,1.1s						
JAGI	Jajag, Banyuwa	8.76	106	Pn	Pn	01 11 17.1	-1.3
GSI	Gunungsitoli	10.91	312		Pn	01 11 42.8	-3.8
BATI	Baumata	18.29	104	P	Pn	01 13 17.9	-0.2
	4.9nm,0.3s,baz=180,slow=4.5,SNR=5.2						
WRA	Warramunga Arr	31.08	119	P	P	01 15 18.0	+0.9
	0.4nm,0.5s,baz=310,slow=8.8,SNR=5.3						
WRA				PcP	PcP	01 18 09.7	+1.2
	0.4nm,0.4s,baz=311,slow=1.9,SNR=7.3						
WRAB	Tennant Creek	31.09	119	P	P	01 15 16.2	-0.9
WR0	Warramunga Arr	31.26	119	P	P	01 15 19.5	+0.8
WR0				IAmb	IAmb	01 15 37.5	
	comp=Z,14nm,1.4s						
AS31	Alice Springs	32.30	126	P	P	01 15 29.1	+1.4
AS31				IAmb	IAmb	01 15 43.8	
	comp=Z,0.9nm,0.9s						
ASAR	Alice Springs	32.30	126	P	P	01 15 29.6	+1.8
	comp=Z,0.4nm,0.3s,baz=298,slow=7.7,SNR=8.6						
STKA	Stephens Creek	42.24	132	P	P	01 16 54.0	+2.7
	comp=Z,1.4nm,0.5s,baz=327,slow=14,SNR=3.8						
STKA	Stephens Creek	42.24	132	IAmb	IAmb	01 16 54.3	
	comp=Z,0.4nm,0.7s						
KSRS	Korea Array	48.06	24	P	P	01 17 35.0	-1.9
	comp=Z,0.8nm,0.9s,baz=208,slow=7.0,SNR=2.6						
SONM	Songino Array	53.71	1	P	P	01 18 19.9	+0.8
	comp=Z,0.5nm,0.4s,baz=179,slow=10,SNR=8.2						
USA0B	Ussuriysk Arra	55.42	23	P	P	01 18 30.3	-1.0
USA0B				IAmb	IAmb	01 18 32.6	
	comp=Z,13nm,1.5s						
USRK	Ussuriysk Ar.	55.42	23	P	P	01 18 31.0	-0.3
	comp=Z,1.9nm,0.5s,baz=223,slow=5.3,SNR=6.3						
MK31	Makanchi Array	56.60	341	P	P	01 18 38.4	-1.3
MK31				IAmb	IAmb	01 18 39.7	
	comp=Z,1.6nm,1.4s						
MKAR	Makanchi Array	56.60	341	P	P	01 18 39.3	-0.4
	comp=Z,0.5nm,0.5s,baz=149,slow=8.7,SNR=11						
TXAR	Lajitas Array	143.96	47	PKP	PKPdf	01 28 30.6	0.0
	comp=Z,0.2nm,0.5s,baz=243,slow=1.0,SNR=5.3						

*IDC **20** 01:20:06.6±2.4, 26°.02N×125°.69E, h80^{km}±21^{km}, mb3.8/15, mb1 3.9/17, mb1mx3.7/39, mbtmp4.1/17, MS2.5/1, Ms1 2.5/1, ms1mx2.1/41, Error ellipse: s-maj=18.7km s-min=14.5km az=61.0*

*NEIC **20** 01:20:08.8±1.5, 26°.00N±0°.10×125°.71E±0°.09, h102^{km}±8^{km}, mb4.5/31, Error ellipse: s-maj=15.2km s-min=9.6km az=148.0*

*JMA **20** 01:20:08.5±0.2, 26°.01N×125°.71E, h102^{km}±4^{km}, M3.7*

ISC 20 01:20:08.7±0.7**, 26°.02N**±0°.06×**125°.71E**±0°.05**, h100**^{km}±7^{km}**, n80,** σ**0^{s}90**/95**, mb4.3**/30**, Northeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKE	Kume jima 2	1.01	72	P	Pn	01 20 29.7	+0.5
JKE				S	Sn	01 20 44.9	+0.2
JIKM	Ikemajima	1.17	201	P	Pn	01 20 31.4	+0.4
JIKM				S	Sn	01 20 47.9	0.0
JIRB	Irabujima	1.28	202	P	Pn	01 20 32.5	+0.1
JIRB				S	Sn	01 20 49.1	-1.1
JOGS	Gusukube	1.29	193	P	Pn	01 20 32.9	+0.5
JOGS				S	Sn	01 20 50.2	-0.1
JMJ2	Miyako jima3	1.32	195	P	Pn	01 20 33.2	+0.4
JMJ2				S	Sn	01 20 50.9	-0.1
JAGN	Aguni-jima	1.48	67	P	Pn	01 20 35.3	+0.6
JAGN				S	Sn	01 20 54.9	+0.4
JTJ	Tarama	1.65	214	P	Pn	01 20 37.1	+0.3
JTJ				S	Sn	01 20 57.4	-0.8
JJT3	Tamagusuku3	1.87	86	P	Pn	01 20 40.2	+0.7
JJT3				S	Sn	01 21 03.1	+0.1
JISG	Ishigakijimahi	1.91	222	P	Pn	01 20 40.3	+0.2
JISG				S	Sn	01 21 03.0	-1.1
JNTH	Nagotoyohara	2.13	76	P	Pn	01 20 43.1	+0.2
JNTH				S	Sn	01 21 07.6	-1.5
JIJ	Ishigaki jima	2.18	221	P	Pn	01 20 43.3	-0.3
JIJ				S	Sn	01 21 07.8	-2.5
JIH	Iheya	2.26	63	P	Pn	01 20 45.0	+0.4
JIH				S	Sn	01 21 11.1	-1.0
JKRS	Kuro-shima	2.35	221	P	Pn	01 20 45.7	-0.2
JKRS				S	Sn	01 21 13.4	-1.0
JOW	Kunigami	2.43	70	P	Pn	01 20 45.8	-1.1
	25nm,0.3s,baz=132,slow=26,SNR=38						
JOW				S	Sn	01 21 13.9	-2.3
	65nm,0.3s,baz=121,slow=26,SNR=19						
JOW	Kunigami	2.43	70	P	Pn	01 20 46.7	-0.2
JOW				S	Sn	01 21 14.2	-2.1
JOW	Kunigami	2.43	70	Pn	Pn	01 20 47.0	+0.1
IRIF	Iriomote-Funau	2.46	227	P	Pn	01 20 47.2	-0.1
IRIF				S	Sn	01 21 16.0	-0.8
HATJ	Hateruma jima	2.61	222	P	Pn	01 20 49.5	+0.2
HATJ				S	Sn	01 21 19.7	-0.8
JYRO	Yoronjima	2.65	67	P	Pn	01 20 49.4	-0.3
JYRO				S	Sn	01 21 19.5	-1.8
JOKE	Okinoerabujima	2.88	62	P	Pn	01 20 52.5	-0.4
JOKE				*e*S	Sn	01 21 24.9	-2.0
YOJ	Yonaguni jima	2.90	238	P	Pn	01 20 53.4	+0.3
YOJ				*e*S	Sn	01 21 26.7	-0.6
YOJ	Yonaguni jima	2.90	238	Pn	Pn	01 20 54.2	+1.2
JYNG	Yonagunijimaku	2.96	239	P	Pn	01 20 54.7	+0.9
JTK	Tokunoshima	3.38	58	P	Pn	01 20 59.4	-0.1
YHNB	Yeheng	4.15	252	Pn	Pn	01 21 12.1	+2.2
YULB	Yu-li	4.79	238		Pn	01 21 17.1	-1.6
SSLB	Suanglung	4.86	244	Pn	Pn	01 21 19.0	-0.5
TPUB	Ta-pu	5.36	241		Pn	01 21 26.3	0.0
KNMB	Chin-men Tao	6.81	258	Pn	Pn	01 21 46.0	0.0
KSRS	Korea Array	11.55	9	P	Pn	01 22 50.1	-0.2
	0.2nm,0.3s,baz=192,slow=13,SNR=12						
KSRS				LR	LR	01 27 07.2	
	comp=Z,21nm,18.3s,baz=310,slow=36						
XAN	Xi'an	16.58	303		P	01 23 55.5	-0.4
SONM	Songino Array	26.55	330	P	P	01 25 37.6	+0.4
	3.1nm,0.4s,baz=144,slow=11,SNR=56						
SONM	Songino Array	26.55	330	P	P	01 25 37.5	+0.2
SBUM	Sibu	26.79	211	P	P	01 25 41.0	+1.6
SBUM				IAmb	IAmb	01 25 43.4	
	comp=Z,9.1nm,0.7s						
MK31	Makanchi Array	40.00	313	P	P	01 27 33.2	-0.4
MKAR	Makanchi Array	40.00	313	P	P	01 27 33.7	+0.1
	comp=Z,1.8nm,0.4s,baz=99,slow=9.9,SNR=85						
MKAR				PcP	PcP	01 29 36.7	-0.1
	comp=Z,0.5nm,0.7s,baz=92,slow=4.0,SNR=5.0						
MKAR	Makanchi Array	40.00	313	P	P	01 27 33.3	-0.3
SEY	Seymchan	40.90	18	P	P	01 27 41.2	+0.5
	comp=Z,1.2nm,0.5s,baz=177,slow=8.3,SNR=4.2						
ZAA0	Zalesovo Array	41.06	324	P	P	01 27 41.6	-0.6
ZAA0				IAmb	IAmb	01 27 42.0	
	comp=Z,2.3nm,0.5s						
ZALV	Zalesovo Beam	41.06	324	P	P	01 27 41.6	-0.6
	comp=Z,2.6nm,0.4s,baz=112,slow=8.6,SNR=22						
ZALV	Zalesovo Beam	41.06	324	P	P	01 27 41.2	-1.0
KURK	Kurchatov	43.43	317	P	P	01 28 01.1	-0.4
KURK				IAmb	IAmb	01 28 02.1	
	comp=Z,3.6nm,0.3s						
FITZ	Fitzroy Crossi	43.85	180	P	P	01 28 04.9	-0.2
FITZ				IAmb	IAmb	01 28 08.1	
	comp=Z,6.9nm,1.1s						
WRA	Warramunga Arr	46.45	169	P	P	01 28 25.5	-0.2
	comp=Z,1.3nm,0.6s,baz=350,slow=8.5,SNR=9.8						
WB2	Warramunga Arr	46.45	169	P	P	01 28 25.0	-0.7
WR0	Warramunga Arr	46.50	169	P	P	01 28 25.7	-0.4
WR0				IAmb	IAmb	01 28 38.7	
	comp=Z,14nm,1.3s						
KKAR	Karatay Array	47.69	306	P	P	01 28 34.9	-0.2
NRIK	Noril'sk	48.77	343	PcP	PcP	01 30 06.5	+0.1
	comp=Z,2.4nm,0.6s,baz=131,slow=6.1,SNR=6.2						
KBL	Kabul	49.13	294	P	P	01 28 46.8	+0.2
ASAR	Alice Springs	50.03	170	P	P	01 28 53.2	0.0
	comp=Z,0.9nm,0.5s,baz=356,slow=13,SNR=17						
ABKAR	Akbulak array	55.14	313	P	P	01 29 30.8	+0.2
IMAR	Indian Mountai	62.70	27	P	P	01 30 23.6	+1.0
PPLA	Purkeypile	63.61	30	P	P	01 30 29.8	+1.0
PPLA				IAmb	IAmb	01 30 35.9	
	comp=Z,7.8nm,1.2s						
TOLK	Toolik Lake Re	64.13	24	P	P	01 30 32.9	+0.9
TOLK				IAmb	IAmb	01 30 34.1	
	comp=Z,4.3nm,0.8s						
SUA	Susitna One	64.45	32	P	P	01 30 34.9	+0.5
I23K	Minto, Yukon-K	64.59	28	P	P	01 30 36.1	+1.1
I23K				IAmb	IAmb	01 31 05.2	
	comp=Z,9.7nm,1.5s						
BWN	Browne	64.67	29	P	P	01 30 37.6	+2.0
RND	Reindeer	65.05	30	P	P	01 30 38.2	+0.1
ILAR	Eielson Array	65.69	28	P	P	01 30 41.9	-0.3
	comp=Z,1.0nm,0.6s,baz=254,slow=5.4,SNR=27						
HDA	Harding Lake	65.72	28	IAmb	IAmb	01 30 43.4	
	comp=Z,5.4nm,0.7s						
BMAR	Burnt Mountain	66.15	25	P	P	01 30 47.1	+1.9
PAX	Paxson	66.63	30	IAmb	IAmb	01 30 52.0	
	comp=Z,3.7nm,0.8s						
DOT	Dot Lake	67.11	29	IAmb	IAmb	01 30 52.4	
	comp=Z,4.4nm,0.7s						
EGAK	Eagle	68.09	27	IAmb	IAmb	01 30 58.5	
	comp=Z,3.0nm,0.8s						
BCAR	Beaver Creek A	68.25	29	P	P	01 30 59.1	+0.7
SOCY	Socotra	68.45	273	P	P	01 30 59.2	-1.3
SOCY				IAmb	IAmb	01 31 00.6	
	comp=Z,4.7nm,0.7s						
ARCES	ARCESS Array B	69.37	338	P	P	01 31 04.4	-0.9
	comp=Z,1.4nm,0.7s,baz=58,slow=4.6,SNR=6.5						
INK	Inuvik	69.97	23	P	P	01 31 09.8	+0.9
	comp=Z,3.9nm,0.7s,baz=292,slow=6.7,SNR=17						
INK	Inuvik	69.97	23	P	P	01 31 09.7	+0.9
INK				IAmb	IAmb	01 31 10.7	
	comp=Z,6.5nm,0.9s						
FIA1	FINESS Array S	71.92	330	P	P	01 31 20.5	-0.3
FINES	FINESS Array B	71.92	330	P	P	01 31 20.5	-0.3
	comp=Z,1.7nm,0.5s,baz=64,slow=5.8,SNR=21						
C36M	Paulatuk	72.68	20	IAmb	IAmb	01 31 26.4	
	comp=Z,8.2nm,0.7s						
AKASG	Malin Array Be	74.21	319	P	P	01 31 33.7	-0.8
	comp=Z,0.5nm,0.3s,baz=63,slow=6.8,SNR=5.1						
AKASG	Malin Array Be	74.21	319	IAmb	IAmb	01 31 34.3	
	comp=Z,0.9nm,0.8s						
BRTR	Keskin Array B	75.37	307	P	P	01 31 42.0	+0.4
	comp=Z,0.7nm,0.6s,baz=72,slow=3.6,SNR=2.7						
NB2	NORSAR Subarra	78.49	333	P	P	01 31 57.7	-0.9
	comp=Z,0.9nm,0.5s,baz=54,slow=5.6						
NOA	NORSAR Array B	78.49	333	P	P	01 31 58.1	-0.5
	comp=Z,1.3nm,0.6s,baz=53,slow=5.7,SNR=7.5						
YKA	Yellowknife Ar	79.65	24	P	P	01 32 05.5	+0.7
	comp=Z,1.0nm,0.5s,baz=307,slow=4.7,SNR=14						
GERES	GERESS Array B	83.98	322	P	P	01 32 28.1	+0.2
	comp=Z,0.5nm,0.7s,baz=46,slow=3.3,SNR=2.4						
NVAR	Mina Array Bea	92.27	45	P	P	01 33 09.7	+1.7
	comp=Z,0.2nm,0.5s,baz=289,slow=5.4,SNR=2.0						

*DDA **20** 01:24:30.8, 35°.80N×33°.36E, h7^{km}±7^{km}, ML1.8*

*ISK **20** 01:24:30.9, 35°.79N×33°.36E, h5^{km}, ML2.5/15*

*NIC **20** 01:24:35.2±0.0, 35°.57N×33°.26E, h12^{km}±14^{km}, Ml1.9/2*

ISC 20 01:24:29.8±1.1**, 35°.83N**±0°.02×**33°.37E**±0°.03**, h6**^{km}±13^{km}**, n29,** σ**1^{s}59**/49**, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKK2	Akkuyu-Mersin	0.34	26	PG	Pb	01 24 38.9	+0.7
AKK2				SG	Sb	01 24 44.5	+0.6
AKK1	Akkuyu-Mersin	0.34	25	PG	Pb	01 24 39.1	+0.8
AKK1				SG	Sb	01 24 44.8	+0.9
AKKU	Akkuyu-Mersin	0.36	25	PG	Pb	01 24 39.4	+0.8
AKKU				SG	Sb	01 24 45.3	+0.8
TEKE	Tekeli-Mersin	0.37	327	PG	Pb	01 24 39.2	+0.4
TEKE				SG	Sb	01 24 45.3	+0.5
GULN	MERSIN_Gulnar	0.38	22	*i* P	Pb	01 24 39.9	+1.0
GULN				*i* S	Sb	01 24 44.2	-0.8
TISA	Tisan-Mersin	0.42	38	PG	Pb	01 24 40.2	+0.7
TEPK	Tepekoy-MERSIN	0.42	20	PG	Pb	01 24 40.3	+0.7
TEPK				SG	Sb	01 24 47.2	+1.0
YESI	Yesilovacik-Me	0.43	32	PG	Pb	01 24 40.5	+0.8
YESI				SG	Sb	01 24 47.2	+0.8
IKL	Isikli	0.48	32	PG	Pb	01 24 41.6	+0.9
IKL				SG	Sb	01 24 49.2	+1.2
BERE	Bereket-Mersin	0.53	347	PG	Pb	01 24 42.4	+0.9
BERE				SG	Sb	01 24 50.9	+1.4
TEVE	Tevekalti-Mers	0.61	6	PG	Pb	01 24 43.8	+1.0
KEBE	Keben-Mersin	0.68	25	PG	Pb	01 24 45.3	+1.3
ATHAL	Athalassa	0.69	178	S	Sg	01 24 51.2	-0.8
LEF	Lefka	0.81	209	PG	Pg	01 24 46.8	+1.5
LEF	Lefka	0.81	209	*i* P	Pg	01 24 45.9	+0.6
LEF				*i* S	Sg	01 24 52.3	-3.5
LEF				IAML		01 25 07.0	
	comp=E,36nm,1.7s						
LEF				IAML		01 25 14.0	
	comp=N,51nm,3.1s						
MVOU	Mavrovouni	0.84	165	P	Pg	01 24 46.4	+0.4
MVOU				AML	AML	01 24 56.7	
	comp=N,0.3nm,0.4s						
MVOU				AML	AML	01 24 56.7	
	comp=N,0.3nm,0.4s						
MVOU				AML	AML	01 24 56.7	
	comp=N,0.4nm,0.3s						
MVOU				AML	AML	01 24 56.7	
	comp=N,0.4nm,0.3s						
MVOU				S	Sg	01 24 57.1	+0.2
CSS	Mathiatis	0.87	182	PG	Pg	01 24 47.3	+0.9
CSS	Mathiatis	0.87	182	P	Pg	01 24 46.9	+0.4
CSS				S	Sg	01 24 56.3	-1.4
ERMK	Ermenek	0.89	336	*i* P	Pb	01 24 49.2	+1.5
ERMK				*i* S	Sg	01 24 58.5	+0.1
ERMK				IAML		01 25 06.0	
	comp=N,57nm,0.4s						
ERMK				IAML		01 25 06.0	
	comp=E,34nm,0.3s						
KIZK	Mersin	0.90	44	PG	Pn	01 24 49.5	+0.5
KIZK	Mersin	0.90	44	*i* P	Pn	01 24 49.4	+0.5
KIZK				*i* S	Sg	01 24 57.3	-1.6
KIZK				IAML		01 25 05.0	
	comp=E,37nm,1.8s						
KIZK				IAML		01 25 27.0	
	comp=N,46nm,1.6s						
ALFC	Alefka	0.92	223	P	Pg	01 24 47.5	0.0
ALFC				S	Sg	01 24 58.4	-1.0
ALFC				AML	AML	01 25 00.2	
	comp=N,0.2nm,0.6s						
ALFC				AML	AML	01 25 00.2	
	comp=N,0.2nm,0.6s						
ALFC				AML	AML	01 25 01.8	
	comp=N,0.2nm,0.4s						
ALFC				AML	AML	01 25 01.8	
	comp=N,0.2nm,0.4s						
GAZI	Gazipasa	0.94	296	PG	Pg	01 24 49.7	+1.8
GAZI	Gazipasa	0.94	296	*i* P	Pg	01 24 49.4	+1.5
GAZI				*i* S	Sg	01 24 57.4	-2.7
GAZI				IAML		01 25 05.0	
	comp=N,30nm,0.9s						
GAZI				IAML		01 25 23.0	
	comp=E,39nm,1.1s						
ASGA	Asgata	1.05	185	P	Pg	01 24 50.3	+0.4
ASGA				S	Sg	01 25 01.8	-1.6
SZAC	Souni	1.14	200	P	Pg	01 24 51.9	+0.2
SZAC				S	Sg	01 25 04.4	-2.2
NATA	Nata	1.23	212	S	Sg	01 25 08.1	-1.4
KKBE	Karaman, Kazim	1.43	346	*i* P	Pb	01 24 58.8	+2.0
KKBE				*i* S	Sg	01 25 09.8	-5.9
KERG	Konya-Eregli	1.69	21	*i* P	Pg	01 25 03.0	+0.7
KERG				*i* S	Sn	01 25 18.8	-3.3
KERG				IAML		01 25 51.0	
	comp=E,8.7nm,2.1s						

IDC 20 01:59:24.8±4.0**, 7°.22S**×**156°.97E, h0**^{km}**, mb3.8**/3**, mb1 4.0**/3**, mb1mx3.5**/26**, mbtmp3.7**/3**, Error ellipse: s-maj=379.9km s-min=34.0km az=135.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	25.33	238	P	P	02 04 53.8	+0.2
	1.3nm,0.9s,baz=62,slow=10,SNR=3.8						
H11S3	WAKE ISLAND Hy	27.29	20	T	T	02 33 33.2	
	baz=201,slow=76,SNR=14						
H11S2	WAKE ISLAND Hy	27.29	20	T	T	02 33 28.0	
	baz=201,slow=76,SNR=11						
H11S1	WAKE ISLAND Hy	27.31	20	T	T	02 33 26.1	
	baz=201,slow=76,SNR=7.9						
ASAR	Alice Springs	27.52	231	P	P	02 05 13.2	-0.3
	0.3nm,0.7s,baz=60,slow=8.6,SNR=4.5						
YKA	Yellowknife Ar	95.62	28	P	P	02 12 51.8	-0.1
	0.8nm,0.9s,baz=261,slow=4.2,SNR=9.5						

*NEIC **20** 02:05:05±2.1, 17°.33N±0°.07×95°.41W±0°.06, h104^{km}±4^{km}, mb4.6/109, Md4.5/30(MEX), Error ellipse: s-maj=12.1km s-min=6.7km az=215.0*

*IDC **20** 02:05:05.6±0.6, 17°.27N×95°.08W, h106^{km}±4^{km}, mb3.6/10, mb1 3.9/13, mb1mx3.7/34, mbtmp4.0/13, MS3.0/2, Ms1 3.0/2, ms1mx2.6/28, Error ellipse: s-maj=18.3km s-min=11.3km az=51.0*

*MEX **20** 02:05:06.2±1.1, 17°.05N×95°.48W, h105^{km}±10^{km}, MD4.5*

ISC 20 02:05:03.8±0.6**, 17°.14N**±0°.05×**95°.43W**±0°.04**, h96**^{km}±5^{km}**, n223,** σ**1^{s}98**/207**, mb4.6**/40**, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.52	95	LR	LR	02 05 06.1	
	comp=Z,18nm,19.8s,baz=18,slow=1.9						
CMIG				P	Pn	02 05 21.3	+1.9
	2µm,0.3s,baz=256,slow=8.2						
CMIG				S	Sn	02 05 33.6	+2.7
	1µm,0.3s,baz=139,slow=21,SNR=104						
CMIG	Matias Romero	0.52	95	*i* P	Pn	02 05 21.6	+2.2
CMIG				*i* S	Sn	02 05 34.2	+3.2
CMIG	Matias Romero	0.52	95		Pn	02 05 21.6	+2.2
CMIG					Sn	02 05 34.2	+3.2
VHO	Vista Hermosa	1.25	267	*e*P	Pn	02 05 29.4	+2.3
VHO				*i* S	Sn	02 05 48.3	+3.7
HUIG	Huatulco	1.51	206	*e*P	Pn	02 05 30.8	+0.7
HUIG				*e*S	Sn	02 05 49.9	+0.1
HUIG	Huatulco	1.51	206		Pn	02 05 30.8	+0.7
HUIG					Sn	02 05 49.9	+0.1
PEIG	Puerto Escondi	2.00	236	*e*P	Pn	02 05 36.3	-0.1
PEIG				*i* S	Sn	02 06 00.2	-0.9
YOIG	Yosondua	2.05	262	*e*P	Pn	02 05 38.3	+1.2
YOIG				*e*S	Sn	02 06 02.6	+0.1
TXIG	Tlaxiaco	2.24	273	*e*P	Pn	02 05 41.3	+1.7
TXIG				*e*S	Sn	02 06 07.4	+0.3
HLIG	Huajuapan de L	2.37	287	*i* P	Pn	02 05 43.1	+1.7
HLIG				*i* S	Sn	02 06 09.9	-0.1
PNIG	Pinotepa	2.69	254	*e*P	Pn	02 05 45.1	-0.3
PNIG				*i* S	Sn	02 06 17.2	-0.2
PNIG	Pinotepa	2.69	254		Pn	02 05 45.1	-0.3
PNIG					Sn	02 06 17.2	-0.2
FTIG	Fresnillo de T	2.69	287	*e*P	Pn	02 05 47.4	+1.8
FTIG				*i* S	Sn	02 06 18.7	+1.2
TLIG	Tlapa	3.03	278	*e*P	Pn	02 05 51.5	+1.5
TLIG				*i* S	Sn	02 06 24.8	-0.8
TLIG	Tlapa	3.03	278		Sn	02 06 24.8	-0.8
TLIG	Tlapa	3.03	278	Pn	Pn	02 05 51.5	+1.5
CCIG	Comitan	3.26	105	Pn	Pn	02 05 55.0	+1.9
HUEH	Huehuetenango	4.18	115	Pn	Pn	02 06 07.0	+1.4
UNM	Universidad Na	4.18	302	Pn	Pn	02 06 07.2	+1.5
RTAL	Retalhuleu	4.43	125	Pn	Pn	02 06 11.8	+3.0
CAIG	El Cayaco	4.63	270	*e*P	Pn	02 06 11.5	0.0
CAIG				*i* S	Sn	02 07 01.3	-2.9
CAIG	El Cayaco	4.63	270		Pn	02 06 11.5	0.0
PETF	Flores	5.32	92	Pn	Pn	02 06 20.6	-0.3
MOIG	Morelia	6.03	296	Pn	Pn	02 06 32.5	+1.8
ESQI	Esquipulas	6.39	113	Pn	Pn	02 06 37.9	+2.3
MTO3	Montecristo	6.44	114	Pn	Pn	02 06 37.6	+1.3
TEIG	Tepich	7.44	65	P	Pn	02 06 47.5	-2.2
	6.7nm,0.3s,baz=247,slow=2.4,SNR=30						
TEIG				S	Sn	02 08 05.5	-7.0
	66nm,0.3s,baz=316,slow=20,SNR=20						
TEIG				LR	LR	02 10 18.2	
	comp=Z,63nm,18.1s,baz=278,slow=44						
TEIG	Tepich	7.44	65	Pn	Pn	02 06 48.6	-1.1
JTS	Las Juntas de	12.24	122	P	Pn	02 07 55.0	+0.2
	4.0nm,0.3s,baz=26,slow=18,SNR=12						
JCT	Junction City	13.87	344	Pn	Pn	02 08 13.1	-3.2
TXAR	Lajitas Array	14.30	330	P	Pn	02 08 22.8	+0.9
	0.1nm,0.3s,baz=150,slow=13,SNR=5.4						
344A	Westbrook Farm	14.88	16	Pn	Pn	02 08 26.7	-2.4
ABTX	Abilene, Hawle	15.88	347	Pn	Pn	02 08 39.6	-2.2
Z35A	Perchaven, San	16.21	355	Pn	Pn	02 08 42.4	-3.5
Z41A	Richland Creek	16.23	8	P	Pn	02 08 46.6	+0.6
	baz=189						
WLAR	White Oak Lake	16.61	7	Pn	Pn	02 08 48.3	-2.5
WLAR				IAmb	IAmb	02 08 54.1	
	comp=Z,27nm,0.8s						
352A	Blakely	17.17	32		Pn	02 08 55.6	-2.0
352A				IAmb	IAmb	02 08 58.2	
	comp=Z,27nm,0.6s						
Z47A	Carrollton	17.31	21		P	02 08 57.6	-1.8
Z47A				IAmb	IAmb	02 09 04.7	
	comp=Z,24nm,1.1s						
MIAR	Mount Ida	17.41	5	P	P	02 08 59.5	-1.0
	baz=186,SNR=9.6						
MIAR	Mount Ida	17.41	5		P	02 08 59.3	-1.2
MIAR				IAmb	IAmb	02 09 02.0	
	comp=Z,16nm,0.7s						
Y45A	Yeager Farm, C	17.48	16		P	02 08 59.1	-2.0
Y45A				IAmb	IAmb	02 09 03.2	
	comp=Z,20nm,0.9s						
LRAL	Lakeview Retre	17.56	24	P	P	02 09 01.1	-1.0
	baz=208						
LRAL	Lakeview Retre	17.56	24		P	02 09 00.4	-1.8
X43A	Marvell	17.78	12	P	P	02 09 04.6	0.0
	baz=194						
WMOK	Wichita Mounta	17.78	351	P	P	02 09 04.7	0.0
	baz=169						
MSTX	Muleshoe	18.01	340	P	P	02 09 07.5	+0.3
	baz=156						
W39A	Magazine	18.05	4	P	P	02 09 06.8	-0.7
	baz=185,SNR=5.7						
W39A	Magazine	18.05	4	P	P	02 09 06.6	-0.8
OXF	Oxford	18.12	16	P	P	02 09 07.5	-0.8
	baz=199						
OXF	Oxford	18.12	16	P	P	02 09 07.3	-1.0
OXF				IAmb	IAmb	02 09 08.9	
	comp=Z,29nm,0.8s						
W41B	Gary Mavity, V	18.19	8	P	P	02 09 09.2	+0.3
	baz=190						
WHAR	Wooly Hollow	18.30	8	P	P	02 09 09.1	-1.0
OK025	Westminster Rd	18.45	355	P	P	02 09 11.2	-0.7
OK025				IAmb	IAmb	02 09 12.7	
	comp=Z,16nm,0.6s						
BCOK	Bluff Creek, N	18.55	354	P	P	02 09 12.8	-0.2
BCOK				IAmb	IAmb	02 09 14.4	
	comp=Z,46nm,0.9s						
TUL1	Leonard	18.70	359	P	P	02 09 14.0	-0.6
	baz=179,SNR=5.6						
TUL1	Leonard	18.70	359	IAmb	IAmb	02 09 14.8	
	comp=Z,15nm,0.7s						
OK030	Cody Creek RV	18.75	357	IAmb	IAmb	02 09 16.1	
	comp=Z,33nm,0.9s						

OK031	S. Brethren Rd	18.78	356	P	P	02 09 14.2	-1.3
OK031				IAmb	IAmb	02 09 16.0	
	comp=Z,24nm,0.8s						
FCAR	Ozark Folk Cen	18.91	8	IAmb	IAmb	02 09 17.8	
	comp=Z,27nm,0.7s						
PLAL	Pickwick Lake	18.95	19	P	P	02 09 15.5	-1.8
QUOK	Quay	18.99	357	P	P	02 09 16.8	-1.0
QUOK				IAmb	IAmb	02 09 18.4	
	comp=Z,30nm,0.8s						
HHAR	Hobbs	19.11	4	IAmb	IAmb	02 09 19.4	
	comp=Z,14nm,0.8s						
LCAR	Lake Charles	19.23	11	IAmb	IAmb	02 09 20.4	
	comp=Z,16nm,0.7s						
U38A	Gravette	19.25	3	IAmb	IAmb	02 09 20.9	
	comp=Z,16nm,0.8s						
U40A	Yellville	19.28	6	P	P	02 09 20.6	-0.3
	baz=187,SNR=40						
CROK	Carrier	19.42	354	P	P	02 09 21.5	-1.0
FPAL	Fort Paine	19.43	25	P	P	02 09 21.4	-1.2
GOGA	Godfrey	19.45	31	P	P	02 09 20.7	-2.2
	baz=217,SNR=5.7						
GOGA	Godfrey	19.45	31	P	P	02 09 21.0	-1.8
GOGA				IAmb	IAmb	02 09 33.4	
	comp=Z,27nm,0.7s						
HALT	Halls	19.46	15	P	P	02 09 21.8	-1.1
Y52A	Lilburn	19.53	29	P	P	02 09 22.3	-1.4
Y52A				IAmb	IAmb	02 09 35.1	
	comp=Z,43nm,1.1s						
BNM	Barren Site	19.70	331	P	P	02 09 25.8	+0.1
T35A	Sooner Cattle	19.73	357	P	P	02 09 25.2	-0.6
T35A				IAmb	IAmb	02 09 26.4	
	comp=Z,28nm,0.8s						
V48A	Smith Brothers	20.05	21	P	P	02 09 27.6	-1.7
PBMO	Poplar Bluff	20.06	12	P	P	02 09 28.7	-0.7
WVT	Waverly	20.08	18	P	P	02 09 28.4	-1.3
	baz=202						
WVT	Waverly	20.08	18	P	P	02 09 28.3	-1.3
PARMO	Parma	20.09	13	P	P	02 09 28.4	-1.2
W50A	Signal Mountai	20.12	25	P	P	02 09 28.0	-2.2
W50A				IAmb	IAmb	02 09 28.4	
	comp=Z,11nm,0.6s						
MGMO	Mountain Grove	20.13	7	P	P	02 09 29.2	-1.0
T42A	Van Buren	20.18	10	P	P	02 09 29.9	-0.8
T42A				IAmb	IAmb	02 09 34.3	
	comp=Z,16nm,0.8s						
ANMO	Albuquerque	20.29	333	P	P	02 09 33.2	+1.1
	comp=Z,0.9nm,0.6s,baz=153,slow=14,SNR=2.9						
ANMO				LR	LR	02 18 53.3	
	comp=Z,57nm,19.3s,baz=358,slow=41						
TUC	Tucson	20.52	320	P	Pn	02 09 36.0	-1.6
	baz=134						
TUC	Tucson	20.52	320	P	P	02 09 35.7	+1.1
W52A	Murphy	20.62	28	P	P	02 09 33.6	-1.9
V51A	Loudon	21.04	26	IAmb	IAmb	02 09 40.5	
	comp=Z,13nm,0.6s						
TKL	Tuckaleechee C	21.16	27	P	P	02 09 38.2	-3.0
	comp=Z,10.0nm,0.8s,baz=190,slow=12,SNR=13						
CCM	Cathedral Cave	21.16	9	P	P	02 09 40.4	-0.9
	baz=191						
CCM	Cathedral Cave	21.16	9	P	P	02 09 39.8	-1.4
PAULI	Pauline	21.40	32	IAmb	IAmb	02 09 42.7	
	comp=Z,27nm,1.0s						
PIX	Pinacate	21.77	315	P	P	02 09 49.7	+1.9
SLM	Saint Louis	21.90	11	P	P	02 09 47.6	-1.4
SLM				IAmb	IAmb	02 09 49.9	
	comp=Z,30nm,1.2s						
KMSC	Kings Mountain	21.90	32	P	P	02 09 47.0	-2.1
	baz=219,SNR=10.0						
KMSC	Kings Mountain	21.90	32	IAmb	IAmb	02 09 48.3	
	comp=Z,36nm,0.8s						
BIRD	Birdtown, Kers	21.98	35	IAmb	IAmb	02 09 49.1	
	comp=Z,21nm,0.9s						
X57A	Johnson Farm,	22.05	36	P	P	02 09 48.2	-2.5
	baz=222						
W56A	Indian Trail	22.28	34	P	P	02 09 50.7	-2.5
	baz=220						
WCI	Wyandotte Cave	22.49	19	P	P	02 09 52.7	-2.5
	baz=203						
WCI	Wyandotte Cave	22.49	19	P	P	02 09 53.1	-2.2
WCI				IAmb	IAmb	02 09 56.0	
	comp=Z,28nm,0.8s						
P40A	Paris	22.50	7	IAmb	IAmb	02 09 55.5	
	comp=Z,15nm,0.7s						
V55A	Taylorsville	22.52	31	IAmb	IAmb	02 09 54.1	
	comp=Z,32nm,0.8s						
U54A	Nelsons Funny	22.76	29	P	P	02 09 55.6	-2.5
	baz=216,SNR=6.4						
U54A	Nelsons Funny	22.76	29	IAmb	IAmb	02 09 56.4	
	comp=Z,28nm,0.7s						
V56A	Mocksville	22.85	33	P	P	02 09 56.3	-2.6
	baz=220						
R49A	Shelbyville	22.91	21	IAmb	IAmb	02 09 59.4	
	comp=Z,36nm,1.1s						
S51A	Beattyville	22.93	25	IAmb	IAmb	02 09 58.4	
	comp=Z,14nm,0.7s						
W58A	Raeford	22.94	36	P	P	02 09 57.2	-2.6
	baz=223,SNR=6.2						
X59A	McDuffie Farm,	22.98	38	P	P	02 09 58.1	-2.1
	baz=225						
P43A	Skaggs, Pawnee	23.00	12	IAmb	IAmb	02 09 59.8	
	comp=Z,52nm,1.2s						
R50A	Paris	23.20	23	IAmb	IAmb	02 10 01.3	
	comp=Z,26nm,1.4s						
V57A	Coltrane Farms	23.28	34	P	P	02 10 00.7	-2.4
	baz=221,SNR=6.0						
BLO	Bloomington	23.29	18	P	P	02 10 01.5	-1.6
BLO				IAmb	IAmb	02 10 03.3	
	comp=Z,26nm,0.7s						
U56A	King	23.32	32	P	P	02 10 01.3	-2.2
	baz=219,SNR=7.0						
U56A	King	23.32	32	IAmb	IAmb	02 10 01.7	
	comp=Z,38nm,1.1s						
N38A	Joes South For	23.65	4	IAmb	IAmb	02 10 07.2	
	comp=Z,18nm,0.7s						
N41A	Harden Midland	23.82	9	IAmb	IAmb	02 10 07.6	
	comp=Z,25nm,0.7s						
CNNC	Cliffs of the	23.86	38	P	P	02 10 06.7	-1.6
	baz=226						
P48A	Milroy	23.89	19	IAmb	IAmb	02 10 07.2	
	comp=Z,20nm,0.6s						
U57A	Blanch	23.93	33	P	P	02 10 06.7	-2.2
	baz=221						
HDIL	Hopedale	23.93	12	P	P	02 10 07.9	-1.0
	baz=195						
BLA	Blacksburg	23.98	31	P	P	02 10 07.3	-2.1
	baz=218						
T56A	Rocky Mt	24.03	31	P	P	02 10 07.5	-2.3
	baz=219,SNR=5.2						
V59A	Middlesex	24.03	36	P	P	02 10 07.3	-2.6
	baz=224,SNR=8.1						
S54A	Dingess, Beckl	24.04	28	P	P	02 10 07.8	-2.1
	baz=215						
P49A	Miami Univ. Ec	24.18	21	P	P	02 10 08.4	-2.8
	baz=206,SNR=8.8						
P49A	Miami Univ. Ec	24.18	21	IAmb	IAmb	02 10 10.0	
	comp=Z,22nm,0.8s						
Q51A	Peebles	24.23	23	IAmb	IAmb	02 10 11.4	
	comp=Z,18nm,0.7s						
SFIN	Lafayette	24.26	16	P	P	02 10 10.5	-1.3
	baz=200,SNR=6.6						
U58A	Oxford	24.32	35	P	P	02 10 10.2	-2.3
	baz=222						
BC3	Big Chuckawall	24.38	316	P	P	02 10 14.5	+1.3
	baz=127						
T57A	Hurt	24.40	33	P	P	02 10 10.9	-2.3
	baz=220,SNR=6.3						
T57A	Hurt	24.40	33	IAmb	IAmb	02 10 13.0	
	comp=Z,19nm,0.8s						
CBX	Cerro Bola	24.43	312	P	P	02 10 15.1	+1.4
IRM	Iron Mountain	24.49	318	P	P	02 10 14.0	0.0
	baz=129						
R54A	Victor	24.49	28	P	P	02 10 11.8	-2.3
	baz=215,SNR=5.8						
V60A	Jim Taylor Roa	24.59	38	P	P	02 10 14.8	-0.2
	baz=226						
T58A	Grand View Acr	24.74	34	P	P	02 10 13.7	-2.5
	baz=222						
SCIA	State Center	24.76	4	P	P	02 10 14.9	-1.5
	baz=185						
S56A	Natural Bridge	24.77	31	P	P	02 10 13.8	-2.8
	baz=219,SNR=5.8						
Q53A	Leroy	24.82	27	P	P	02 10 15.1	-1.9
	baz=213						
L40A	Anamosa	25.10	7	IAmb	IAmb	02 10 19.8	
	comp=Z,17nm,0.7s						
S57A	Dark Hollow, R	25.14	32	P	P	02 10 18.0	-2.0
	baz=220						
U60A	Pendleton	25.15	36	P	P	02 10 17.8	-2.2
	baz=225						
P52A	Corning	25.22	25	P	P	02 10 18.3	-2.4
	baz=211,SNR=9.4						
L42A	Oliver, Polo	25.27	10	P	P	02 10 18.8	-2.3
ACSO	Alum Creek Sta	25.41	23	P	P	02 10 20.1	-2.3
	baz=209,SNR=6.9						
ACSO	Alum Creek Sta	25.41	23	IAmb	IAmb	02 10 23.2	
	comp=Z,30nm,1.0s						
SDV	Santo Domingo	25.48	106	P	P	02 10 22.6	-1.0
	comp=Z,8.4nm,0.6s,baz=301,slow=4.3,SNR=13						
SDV	Santo Domingo	25.48	106	P	P	02 10 22.9	-0.6
SDV				IAmb	IAmb	02 10 24.3	
	comp=Z,9.4nm,0.7s						
K38A	Parkersburg	25.53	5	IAmb	IAmb	02 10 22.9	
	comp=Z,36nm,1.1s						
N49A	Columbus Grove	25.61	20	IAmb	IAmb	02 10 24.8	
	comp=Z,12nm,0.7s						
O52A	Adamsville	25.75	24	IAmb	IAmb	02 10 26.4	
	comp=Z,23nm,0.8s						
R57A	Stanardsville	25.77	32	P	P	02 10 24.5	-1.1
	baz=220						
L44A	Lake County Fo	25.77	13	P	P	02 10 25.0	-0.6
	baz=197						
Q56A	Snyder Ridge,	26.02	30	P	P	02 10 26.2	-1.7
	baz=218						
R58A	Rapidan	26.03	32	P	P	02 10 25.8	-2.2
	baz=221						
JFWS	Jewell Farm	26.07	9	P	P	02 10 26.7	-1.6
	baz=191,SNR=6.4						
JFWS	Jewell Farm	26.07	9	IAmb	IAmb	02 10 27.4	
	comp=Z,17nm,0.6s						
O53A	New Philadelph	26.12	25	P	P	02 10 26.6	-2.2
	baz=212						
O53A	New Philadelph	26.12	25	IAmb	IAmb	02 10 27.7	
	comp=Z,18nm,0.7s						
R59A	King George, V	26.42	34	P	P	02 10 30.4	-1.1
	baz=222						
M50A	Fremont	26.43	21	IAmb	IAmb	02 10 30.6	
	comp=Z,14nm,0.8s						
N54A	Moraine State	27.22	26	P	P	02 10 36.9	-1.7
	baz=214						
O56A	Blue Knob Stat	27.29	29	P	P	02 10 37.2	-2.2
	baz=217						
M53A	WI Miller and	27.34	25	P	P	02 10 37.9	-1.8
	baz=212						
M54A	Oil Creek Stat	27.81	26	P	P	02 10 41.6	-2.3
	baz=214						
N56A	West Decatur	27.93	28	P	P	02 10 42.5	-2.5
	baz=217						
L53A	Girard	27.94	25	P	P	02 10 43.2	-1.9
	baz=212						
SPMN	Marine on St.	28.09	4	P	P	02 10 45.1	-1.3
	baz=185						
ERPA	Erie	28.19	25	P	P	02 10 45.4	-1.9
	baz=213						
PDAR	Pinedale Array	28.25	338	P	P	02 10 49.0	+1.0
	comp=Z,0.3nm,0.8s,baz=134,slow=10,SNR=3.3						
M56A	Emporium	28.43	28	P	P	02 10 47.2	-2.3
	baz=217						
PSUB	Penn St. - Bra	28.57	33	P	P	02 10 49.3	-1.3
M57A	Sunshine Farm,	28.80	29	P	P	02 10 50.5	-2.2
	baz=219						
NVAR	Mina Array Bea	29.17	321	P	P	02 10 57.9	+1.5
	comp=Z,2.0nm,0.7s,baz=132,slow=8.7,SNR=20						
NVAR				pP	sP	02 11 23.4	-5.9
	comp=Z,0.9nm,0.8s,baz=120,slow=11,SNR=2.6						
NVAR	Mina Array Bea	29.17	321	P	P	02 10 57.7	+1.4
L56A	Greenwood	29.23	28	P	P	02 10 54.2	-2.4
	baz=217						
I51A	Listowel	29.25	22	P	P	02 10 54.2	-2.4
	baz=209						
E38A	The Farm, Brul	29.56	5	IAmb	IAmb	02 11 17.5	
	comp=Z,12nm,1.4s						
K56A	Middlesex	29.79	27	P	P	02 10 58.8	-2.6
	baz=217						
E43A	Lone Tree Farm	29.98	12	IAmb	IAmb	02 11 02.1	
	comp=Z,9.0nm,0.9s						
J56A	Wolcott	30.45	27	P	P	02 11 05.1	-2.2
	baz=217						
H53A	Bobcaygeon	30.81	24	P	P	02 11 08.1	-2.3
	baz=213						
N63A	Mattituck	30.89	35	P	P	02 11 09.2	-2.0
	baz=226						
EYMN	Ely	30.89	5	P	P	02 11 09.5	-1.6
	baz=187						
AGMN	Agassiz Nation	31.08	359	P	P	02 11 11.3	-1.5
	baz=179						
I58A	Old Forge	31.63	29	P	P	02 11 15.6	-2.1
	baz=220						
J59A	Piesco	31.68	30	P	P	02 11 15.8	-2.3
	baz=221						
G54A	Lake Saint Pet	31.69	24	P	P	02 11 15.9	-2.3
	baz=213						
K61A	Williamstown	31.69	32	P	P	02 11 16.1	-2.1
	baz=223						
H57A	Richville	32.04	28	P	P	02 11 18.0	-3.3
	baz=218						
I60A	Shoreham	32.54	30	P	P	02 11 23.3	-2.3
	baz=222						
H58A	Gabriels	32.55	29	P	P	02 11 22.4	-3.3
	baz=220						
ULM	Lac du Bonnet	33.03	359	P	P	02 11 28.9	-1.0
	comp=Z,0.7nm,0.4s,baz=149,slow=11,SNR=2.2						
G59A	Clarenceville	33.52	29	P	P	02 11 32.0	-2.1
	baz=221						
E56A	St. Veronique	33.85	26	P	P	02 11 34.8	-2.1
	baz=217						
D55A	Sainte-Anne-du	34.05	25	P	P	02 11 36.6	-2.1
	baz=216						
E57A	Chemin Saint G	34.12	27	P	P	02 11 37.4	-2.0
	baz=218						
D56A	ZEC Mazanza, M	34.37	25	P	P	02 11 39.3	-2.1
	baz=217						
E58A	La Victoria	34.46	27	P	P	02 11 40.3	-2.0
	baz=220						
F60A	Warwick	34.76	29	P	P	02 11 42.4	-2.4
	baz=222						
G62A	West of Eustis	34.90	31	P	P	02 11 44.3	-1.8
	baz=225						
LSQQ	Lebel-sur-Quev	35.19	21	P	P	02 11 46.4	-2.1
	baz=212						
D58A	Chemin du LacG	35.19	27	P	P	02 11 46.7	-1.9
	baz=220						
E60A	Ste Agathe de	35.29	29	P	P	02 11 47.3	-2.1
	baz=222						
LATQ	La Tuque	35.46	27	P	P	02 11 48.9	-1.9
	baz=219						
MATQ	Matagami	35.57	20	P	P	02 11 49.6	-2.2
	baz=210,SNR=5.5						
D60A	Saint Jean D’O	35.94	29	P	P	02 11 52.8	-2.1
	baz=223						
D61A	St Aubert, Com	36.49	29	P	P	02 11 57.9	-1.7
	baz=223						
E63A	Oxbow	36.79	32	P	P	02 12 00.0	-2.2
	baz=226						
D62A	Allapoint, All	36.94	30	P	P	02 12 01.6	-1.8
	baz=225						
E64A	Bridgewater	37.09	32	P	P	02 12 03.0	-1.8
	baz=227						
D63A	Stockholm	37.37	31	P	P	02 12 05.2	-2.0
	baz=226						
PB16	IPOC Station P	43.51	143	P	P	02 13 02.3	+3.6
YKA	Yellowknife Ar	47.26	348	P	P	02 13 26.6	-0.4
	comp=Z,0.6nm,0.5s,baz=148,slow=7.7,SNR=14						
YKA				pP	pP	02 13 53.4	+3.4
	comp=Z,1.1nm,0.8s,baz=150,slow=7.8,SNR=6.7						
I23K	Minto, Yukon-K	59.78	337	P	P	02 14 58.0	-0.4
	baz=116						
MLY	Manley	60.26	336	P	P	02 15 01.5	-0.3
	baz=115						
PLCA	Paso Flores	62.04	159	P	P	02 15 14.9	+0.7
	comp=Z,2.1nm,0.8s,baz=302,slow=9.5,SNR=6.5						
PLCA	Paso Flores	62.04	159	IAmb	IAmb	02 15 25.8	
	comp=Z,8.1nm,1.4s						
ESDC	Sonseca Array	80.36	51	P	P	02 17 04.2	-0.7
	comp=Z,1.2nm,0.9s,baz=298,slow=7.0,SNR=5.7						
ARCES	ARCESS Array B	84.19	18	P	P	02 17 25.6	+1.5
	comp=Z,1.1nm,0.8s,baz=299,slow=5.0,SNR=4.3						
ARCES				pP	pP	02 17 51.3	+1.9
	comp=Z,3.0nm,0.9s,baz=354,slow=3.7,SNR=2.1						
KSH	Kashi	123.07	8	PKP	PKiKP	02 23 51.5	+1.6
KSH				PP	PP	02 25 34.4	+5.8
KSH				AMB	AMB		
	comp=Z,290nm,5.8s						
WRA	Warramunga Arr	132.87	258	PKP	PKPdf	02 24 08.7	+0.1
	comp=Z,0.4nm,0.6s,baz=85,slow=2.6,SNR=5.7						

TRN 20 02:33:04.6, 10°.06N×61°.71W, h110km, MD3.5, Trinidad

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRN	Trinidad (W)	0.66	27	*e*P	Pn	02 33 22.9	+0.2
TRN				*e*S	Sn	02 33 35.6	-0.6
ORIV	Oritupano	1.94	240	*e*P	Pn	02 33 36.5	-0.5
ORIV				*e*S	Sn	02 34 01.7	+0.1
GRGR	Grenville	2.06	1	*e*P	Pn	02 33 38.7	+0.2
GRGR				*e*S	Sn	02 34 02.7	-1.5
GCMP	Grenada, Carri	2.43	7	*e*P	Pn	02 33 44.1	+1.0
GCMP				*e*S	Sn	02 34 12.0	-0.6
BAUV	El Baul	6.34	260	*e*P	Pn	02 34 34.9	-0.8

IDC 20 02:44:06.8±2.7, 18°.35S×177°.71W, h0km, mb3.9/3, mb1 4.2/3, mb1mx3.6/35, mbtmp3.9/3, Error ellipse: s-maj=301.2km s-min=33.4km az=159.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	45.21	260	P	P	02 52 25.1	-1.0
	0.3nm,0.5s,baz=97,slow=7.5,SNR=7.2						
ASAR	Alice Springs	45.32	255	P	P	02 52 27.4	+0.5
	3.8nm,0.5s,baz=89,slow=8.2,SNR=65						
TXAR	Lajitas Array	85.67	57	P	P	02 56 48.0	0.0
	0.5nm,0.9s,baz=215,slow=6.2,SNR=4.5						

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*NOU **20** 02:47:21.2, 15°.48S×169°.07E, h208km, MLv5.1, Vanuatu Islands*

*IDC **20** 02:47:30.7±1.1, 16°.45S×168°.32E, h0km, mb4.2/7, mb1 4.4/8, mb1mx4.1/34, mbtmp4.2/8, ML4.1/1, MS3.2/6, Ms1 3.2/6, ms1mx3.1/24, Error ellipse: s-maj=45.3km s-min=20.3km az=132.0*

*NEIC **20** 02:47:32.7±1.4, 16°.40S±0°.07×168°.09E±0°.09, h10km±1km, mb4.7/28, Error ellipse: s-maj=15.9km s-min=10.9km az=56.0*

ISC 20 02:47:36.5±0.6, **16°.38S**±0°.06×**168°.15E**±0°.09, **h35km, n48,** σ**1^{s}00**/38, **mb4.6**/22, **MS3.2**/6, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	Saraoutou	1.30	315		Pn	02 47 57.1	-1.1
SANVU	Saraoutou	1.30	315	P	Pn	02 47 58.1	-0.1
KOUNC	Koumac, New Ca	5.54	221	P	Pn	02 48 59.0	+2.5
YATNC	Mamie plateau,	5.78	192	P	Pn	02 48 59.5	-0.3
DZM	Mont Dzumac	5.89	196	Pn	Pn	02 48 59.7	-1.8
	4.9nm,0.3s,baz=106,slow=23,SNR=36						
DZM				Sn	Sn	02 50 06.8	-1.0
	1.0nm,0.3s,baz=310,slow=20,SNR=3.6						
DZM	Mont Dzumac	5.89	196	*e*Pn	Pn	02 49 00.2	-1.3
	10nm,0.3s						
DZM				*e*Sn	Sn	02 50 07.4	-0.4
	4.5nm,0.3s						
DZM				*e*LR	LR	02 50 23.8	
	comp=Z,58nm,21.9s						
DZM	Mont Dzumac	5.89	196		Pn	02 48 59.8	-1.7
DZM	Mont Dzumac	5.89	196	P	Pn	02 49 01.0	-0.5
ONTNC	Ouen Toro	6.12	195	P	Pn	02 49 05.2	+0.8
MSVF	Nonsavu	9.56	100		Pn	02 49 52.9	+1.0
HNR	Honiara	10.56	310	LR	LR	02 53 59.0	
	comp=Z,116nm,19.1s,baz=100,slow=36						
PMG	Port Moresby	21.59	286	LR	LR	02 59 12.7	
	comp=Z,91nm,19.0s,baz=146,slow=32						
URZ	Urewera	23.18	162	LR	LR	03 00 13.7	
	comp=Z,69nm,18.5s,baz=31,slow=33						
STKA	Stephens Creek	28.62	233	P	P	02 53 30.1	+0.2
	2.9nm,0.8s,baz=57,slow=7.9,SNR=6.7						
STKA	Stephens Creek	28.62	233	IAmb	IAmb	02 53 33.5	
	comp=Z,2.0nm,1.2s						
WRA	Warramunga Arr	32.29	259	P	P	02 54 02.6	+0.2
	comp=Z,1.2nm,1.0s,baz=90,slow=8.6,SNR=2.5						
WRA				LR	LR	03 05 40.1	
	comp=Z,48nm,20.4s,baz=75,slow=34						
AS31	Alice Springs	32.92	252	P	P	02 54 07.2	-0.7
ASAR	Alice Springs	32.92	252	P	P	02 54 07.8	-0.2
	comp=Z,5.0nm,0.7s,baz=79,slow=8.8,SNR=42						
ASAR				LR	LR	03 06 06.4	
	comp=Z,41nm,19.4s,baz=119,slow=34						
ASAR	Alice Springs	32.92	252	P	P	02 54 06.1	-1.8
PPT2	Papeete2	40.39	98	*e*LR	LR	03 06 19.3	
	comp=Z,64nm,26.2s						
PPT	Papeete	40.39	98	LR	LR	03 10 46.4	
	comp=Z,26nm,18.2s,baz=288,slow=35						
USRK	Ussuriysk Ar.	68.73	333	P	P	02 58 37.3	+0.7
QSPA	South Pole Qui	73.66	180	P	P	02 59 06.6	+0.1
QSPA				IAmb	IAmb	02 59 07.8	
	comp=Z,10nm,1.2s						
SONM	Songino Array	84.32	323	P	P	03 00 06.9	+1.9
	comp=Z,0.7nm,1.0s,baz=119,slow=5.1,SNR=3.3						
SONM	Songino Array	84.32	323	IAmb	IAmb	03 00 13.3	
	comp=Z,2.0nm,1.4s						
SHL	Shillong	85.09	298	P	P	03 00 08.2	-1.3
AFDM	Forest Hills D	86.00	48	P	P	03 00 13.8	+0.3
CMB	Columbia Colle	86.04	49	P	P	03 00 14.1	+0.3
CMB				IAmb	IAmb	03 00 17.4	
	comp=Z,4.6nm,1.1s						
ISA	Isabella, Lake	86.50	51	P	P	03 00 15.7	-0.4
ISA				IAmb	IAmb	03 00 19.5	
	comp=Z,5.0nm,1.0s						
BEKR	Beckworth	86.81	47	P	P	03 00 17.8	+0.1
BEKR				IAmb	IAmb	03 00 20.4	
	comp=Z,3.4nm,1.0s						
MDPB	Devils Postpil	86.83	49	P	P	03 00 18.6	+0.6
MDPB				IAmb	IAmb	03 00 21.7	
	comp=Z,5.3nm,1.0s						
OMMB	Old Mammoth Mi	86.87	49	P	P	03 00 17.6	-0.6
OMMB				IAmb	IAmb	03 00 21.6	
	comp=Z,4.2nm,1.0s						
WAKR	Walker	86.91	49	P	P	03 00 18.6	+0.4
WAKR				IAmb	IAmb	03 00 21.8	
	comp=Z,6.7nm,1.1s						
LHV	Little Huntoon	87.49	49	P	P	03 00 21.4	+0.7
HDA	Harding Lake	87.54	18	P	P	03 00 21.3	+0.9
RYN	Ryan	87.62	49	P	P	03 00 22.5	+0.9
NVAR	Mina Array Bea	87.70	49	P	P	03 00 22.1	0.0
	comp=Z,3.0nm,0.9s,baz=230,slow=8.5,SNR=16						
NV11	Mina Array Sit	87.81	49	P	P	03 00 22.6	+0.1
IL31		87.82	18	P	P	03 00 21.1	-0.6
IL31				IAmb	IAmb	03 00 21.5	
	comp=Z,5.5nm,1.4s						
ILAR	Eielson Array	87.82	18	P	P	03 00 20.4	-1.3
	comp=Z,1.1nm,0.9s,baz=241,slow=6.2,SNR=7.2						
TPNV	Topopah Spring	88.65	51	P	P	03 00 26.9	+0.4
TPNV				IAmb	IAmb	03 00 31.1	
	comp=Z,4.7nm,1.2s						
PRN	Pahroc Range	89.71	51	IAmb	IAmb	03 00 35.6	
	comp=Z,5.3nm,0.9s						
W13A	Hualapai Mount	89.78	53	IAmb	IAmb	03 00 35.4	
	comp=Z,3.9nm,1.1s						
G08A	Pilot Rock	89.95	42	IAmb	IAmb	03 00 36.3	
	comp=Z,6.3nm,1.1s						
ELK	Elko	90.76	48	P	P	03 00 37.1	+0.7
ELK				IAmb	IAmb	03 00 39.2	
	comp=Z,5.3nm,1.3s						
B08A	Colville Reser	90.94	40	IAmb	IAmb	03 00 39.6	
	comp=Z,4.0nm,1.1s						
U15A	North Rim	91.45	53	IAmb	IAmb	03 00 43.5	
	comp=Z,3.0nm,0.9s						
YKA	Yellowknife Ar	98.61	27	P	P	03 01 10.2	-1.3
	comp=Z,0.7nm,0.9s,baz=247,slow=4.2,SNR=6.9						

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*IDC **20** 02:54:26.3±1.9, 6°.73S×130°.16E, h0km, mb3.4/1, mb1 3.7/5, mb1mx3.4/30, mbtmp3.5/5, ML3.4/4, Error ellipse: s-maj=71.2km s-min=26.1km az=88.0*

ISC 20 02:54:30.3±1.0, **6°.75S**±0°.08×**130°.5E**±0°.2, **h35km, n5,** σ**0^{s}74**/6, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	5.90	8	Pn	Pn	02 55 56.0	+0.7
	1.2nm,0.3s,baz=0.0,slow=20,SNR=1.4						
SIJI				Sn	Sn	02 57 00.8	-1.0
	1.7nm,0.3s,baz=258,slow=23,SNR=1.4						
FITZ	Fitzroy Crossi	12.21	202	Pn	Pn	02 57 21.6	-0.3
	0.6nm,0.3s,baz=26,slow=11,SNR=56						
FITZ				Sn	Sn	02 59 29.1	-7.8
	0.3nm,0.3s,baz=85,slow=19,SNR=1.8						
WRA	Warramunga Arr	13.64	164	Pn	Pn	02 57 41.2	-0.2
	0.1nm,0.3s,baz=344,slow=13,SNR=2.6						
WRA				Sn	Sn	03 00 02.4	-9.4

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
	0.5nm,0.3s,baz=341,slow=22,SNR=9.5						
ASAR	Alice Springs	17.14	169	P	P	02 58 28.7	+0.1
	0.1nm,0.3s,baz=350,slow=12,SNR=1.5						
MKAR	Makanchi Array	68.27	327	P	P	03 05 27.8	+0.1
	0.2nm,0.5s,baz=119,slow=8.3,SNR=2.6						

ISC 20 03:05:22.1±1.3**, 46°.30N**±0°.04×**13°.09E**±0°.04**, h6**^{km}±7^{km}**,**
n12, σ0^s.49/20**, 6C-1D, Austria**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOO	Bordano	0.02	25	⇑*e*Pg	Pg	03 05 23.2	-0.2
BOO				*e*Sg	Sg	03 05 24.1	-0.2
BUA	Buia	0.09	163	⇑*e*Pg	Pg	03 05 24.0	-0.1
BUA				*e*Sg	Sg	03 05 25.8	+0.4
MPRI	Monte Prat	0.09	229	⇑*e*Pg	Pg	03 05 24.1	-0.1
MPRI				*e*Sg	Sg	03 05 25.9	+0.3
BAD	Bernadia	0.13	120	⇑*e*Pg	Pg	03 05 24.8	0.0
BAD				*e*Sg	Sg	03 05 27.2	+0.6
FUSE	Fusea	0.13	333	⇓*e*Pg	Pg	03 05 24.6	-0.2
CLUD	Cludinico	0.21	318	⇑*e*Pg	Pg	03 05 26.2	-0.1
CLUD				*e*Sg	Sg	03 05 29.8	+0.6
COLI	Coloredo	0.26	129	⇑*e*Pg	Pg	03 05 27.4	+0.1
ZOU	Zoufplan	0.27	343	*e*Pg	Pg	03 05 27.5	0.0
ROBS	Robic	0.30	101	*i* Pg	Pg	03 05 27.6	-0.3
ROBS				*e*Sg	Sg	03 05 33.2	+1.3
ROBS				IAML		03 05 34.2	
	comp=Z,2.8nm,0.1s						
DRE	Drenchia	0.41	108	*e*Pg	Pg	03 05 29.7	-0.3
VOJS	Vojsko	0.61	116	*e*Pg	Pg	03 05 33.4	-0.6
VOJS				*e*Sg	Sb	03 05 43.5	-0.7
VOJS				IAML		03 05 44.6	
	comp=Z,0.5nm,0.1s						
GORS	Gorjuse	0.63	88	*i* Pg	Pg	03 05 34.0	-0.2
GORS				*i* Sg	Sb	03 05 44.6	-0.1
GORS				IAML		03 05 46.0	
	comp=Z,0.7nm,0.1s						

IASPEI ***20*** *03:24:13.5±1.0, 35°.83N±0°.03×97°.43W±0°.03, h8^{km}±7^{km}, Error ellipse: s-maj=4.5km s-min=3.7km az=89.1, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*
ANF ***20*** *03:24:13.2±0.5, 35°.80N×97°.39W, h5^{km}, ML3.7/8, Error ellipse: s-maj=8.7km s-min=4.1km az=161.0*
TUL ***20*** *03:24:13.6±1.0, 35°.82N±0°.02×97°.42W±0°.02, h6^{km}±7^{km}, ML3.2, mb_Lg3.2/62(NEIC), Error ellipse: s-maj=2.6km s-min=2.4km az=147.0*
NEIC ***20*** *03:24:13.7±0.8, 35°.84N±0°.01×97°.42W±0°.02, h5^{km}±2^{km}, Error ellipse: s-maj=3.1km s-min=2.8km az=228.0*
ISC 20 03:24:13.8±0.9**, 35°.83N**±0°.02×**97°.42W**±0°.02**, h6**^{km}±6^{km}**,**
n80, σ0^s.50/74**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK029	Liberty Lake	0.04	217		Pg	03 24 15.1	-0.1
OK029				Sg	Sg	03 24 16.3	0.0
BCOK	Bluff Creek, N	0.23	221		Pg	03 24 18.2	-0.1
BCOK				Sg	Sg	03 24 21.3	-0.1
OK009	Oakdale Elemen	0.25	180		Pg	03 24 18.6	-0.1
OK025	Westminster Rd	0.26	164		Pg	03 24 18.8	-0.1
OK025				Sg	Sg	03 24 22.6	+0.2
OK001	Jones High Sch	0.29	158	Pg	Pg	03 24 19.4	-0.2
OK001				Sg	Sg	03 24 23.7	+0.3
OKCFA	Oklahoma City	0.41	183		Pg	03 24 21.6	-0.3
OKCSW	OKLAHOMA CITY	0.42	182		Pg	03 24 21.7	-0.4
OKCSW				Sg	Sg	03 24 28.1	+0.4
OK031	S. Brethren Rd	0.49	75		Pg	03 24 23.3	0.0
OK031				Sg	Sg	03 24 30.0	+0.3
OK030	Cody Creek RV	0.53	79		Pg	03 24 24.0	0.0
OK030				Sg	Sg	03 24 31.1	+0.1
FNO	Franklin	0.57	178		Pg	03 24 24.9	0.0
QUOK	Quay	0.67	59		Pg	03 24 26.7	-0.1
CROK	Carrier	0.81	326	Pg	Pg	03 24 29.2	-0.2
CROK				Sg	Sg	03 24 40.4	+0.4
KAN13	South Haven SW	1.18	358		Pg	03 24 36.1	-0.4
KAN14	Manchester OK	1.21	339		Pg	03 24 36.3	-0.7
X34A	Smith Ranch, M	1.27	195		Pg	03 24 37.3	-0.9
T35A	Sooner Cattle	1.31	34		Pn	03 24 37.9	-0.8
T35B	Sooner Cattle	1.31	34	P		03 24 37.9	
	baz=214						
T35B				S		03 24 55.9	
	baz=214						
KAN05	Bluff City Nor	1.33	344		Pn	03 24 38.2	-0.7
TUL1	Leonard	1.33	86	P	Pn	03 24 37.6	-1.3
	baz=266						
TUL1				S	Sg	03 24 55.7	-0.9
	baz=266						
TUL1	Leonard	1.33	86		Pn	03 24 37.5	-1.4
TUL1				IAmb_Lg		03 24 58.6	
	comp=Z,150nm,0.9s						
TUL1	Leonard	1.33	86	P		03 24 37.3	
	baz=266						
TUL1				S		03 24 55.6	
	baz=266						
KAN01	Argonia South	1.35	349		Pn	03 24 38.6	-0.6
U32A	Winter Ranch,	1.39	294		Pn	03 24 39.0	-0.8
U32A	Winter Ranch,	1.39	294	P		03 24 39.0	
	baz=113						
KAN10	Anthony SW Sta	1.40	337		Pn	03 24 39.7	-0.2
KAN08	Anthony NE Sta	1.46	343		Pn	03 24 40.6	-0.1
KAN12	Harper NE Stat	1.54	343		Pn	03 24 41.6	-0.1
WMOK	Wichita Mounta	1.56	226	P	Pn	03 24 41.7	-0.4
	baz=45						
WMOK				S	Sn	03 25 02.1	-0.4
	baz=45						
WMOK	Wichita Mounta	1.56	226		Pn	03 24 41.2	-0.9
WMOK	Wichita Mounta	1.56	226	P		03 24 41.6	
	baz=45,SNR=116						
WMOK				S		03 25 02.1	
	baz=45						
X37A	Clayton	2.09	126		Pn	03 24 49.9	+0.6
X37A	Clayton	2.09	126	P		03 24 49.3	
	baz=307						
Z35A	Perchaven, San	2.50	177		Pn	03 24 55.1	+0.1
Z35A	Perchaven, San	2.50	177	P		03 24 55.1	
	baz=357,SNR=12						
U38A	Gravette	2.53	75		Pn	03 24 56.2	+0.7
U38A	Gravette	2.53	75	P		03 24 55.9	
	baz=257,SNR=50						
R32A	Long Quarter,	2.78	339	Pn	Pn	03 24 59.7	+0.8
R32A	Long Quarter,	2.78	339	P		03 25 00.7	
	baz=158,SNR=7.7						
R32A				S		03 25 33.4	
	baz=158						
HHAR	Hobbs	2.86	80		Pn	03 25 00.4	+0.4
W39A	Magazine	3.04	101	P	Pn	03 25 02.8	+0.4
	baz=283						
W39A				S	Sn	03 25 39.0	0.0
	baz=283						
W39A	Magazine	3.04	101		Pn	03 25 02.4	0.0
W39A	Magazine	3.04	101	P		03 25 02.3	
	baz=283,SNR=12						
Z38A	Mt. Pleasant	3.26	141	Pn	Pn	03 25 05.0	-0.5
KSU1	Kansas State U	3.33	11	P	Pn	03 25 06.8	+0.4
	baz=191						
KSU1	Kansas State U	3.33	11	Pn	Pn	03 25 06.2	-0.2
KSU1				IAmb_Lg		03 26 04.3	
	comp=Z,39nm,0.9s						
MIAR	Mount Ida	3.40	111	P	Pn	03 25 07.8	+0.4
	baz=293						
MIAR				S	Sn	03 25 48.1	+0.1
	baz=293						
MIAR	Mount Ida	3.40	111	Pn	Pn	03 25 07.8	+0.4
MIAR	Mount Ida	3.40	111	P		03 25 07.9	
	baz=293,SNR=41						
CBKS	Cedar Bluff	3.50	329	P	Pn	03 25 09.5	+0.6
	baz=148						
CBKS				S	Sn	03 25 51.2	+0.6
	baz=148						
CBKS	Cedar Bluff	3.50	329	Pn	Pn	03 25 08.7	-0.2
CBKS	Cedar Bluff	3.50	329	S		03 25 51.2	
	baz=148						
AMTX	Amarillo	3.61	256	P	Pn	03 25 10.9	+0.6
	baz=74						
AMTX				S	Sn	03 25 53.8	+0.6
	baz=74						
AMTX	Amarillo	3.61	256		Pn	03 25 10.9	+0.6
ABTX	Abilene, Hawle	3.69	211	S	Sn	03 25 55.8	+0.6
	baz=29						
ABTX	Abilene, Hawle	3.69	211	Pn	Pn	03 25 11.6	+0.2
U40A	Yellville	3.74	81		Pn	03 25 12.8	+0.7
U40A				IAmb_Lg		03 26 13.9	
	comp=Z,57nm,0.8s						
S39A	Bolivar	3.78	59		Pn	03 25 12.7	+0.1
S39A				IAmb_Lg		03 26 12.9	
	comp=Z,53nm,0.8s						
S39A	Bolivar	3.78	59	P		03 25 12.6	
	baz=242,SNR=20						
X40A	Basin Creek Fa	3.99	108	Pn	Pn	03 25 15.2	-0.3
237A	Washetta, Mont	4.05	160	Pn	Pn	03 25 15.8	-0.5
WLAR	White Oak Lake	4.14	120	Pn	Pn	03 25 18.0	+0.4
WLAR				IAmb_Lg		03 26 29.8	
	comp=Z,32nm,1.1s						
WHAR	Wooly Hollow	4.22	96	Pn	Pn	03 25 18.9	+0.3
WHAR				IAmb_Lg		03 26 26.9	
	comp=Z,44nm,1.0s						
W41B	Gary Mavity, V	4.27	97	P		03 25 19.4	
	baz=280,SNR=21						
FCAR	Ozark Folk Cen	4.30	88		Pn	03 25 19.3	-0.5
FCAR				IAmb_Lg		03 26 27.6	
	comp=Z,31nm,0.8s						
MGMO	Mountain Grove	4.36	71	Pn	Pn	03 25 20.5	-0.1
MGMO				IAmb_Lg		03 26 33.3	
	comp=Z,41nm,0.8s						
MSTX	Muleshoe	4.77	249	Pn	Pn	03 25 26.0	-0.4
R40A	Maddies Statio	4.80	58	IAmb_Lg		03 26 51.3	
	comp=Z,30nm,0.8s						
R40A	Maddies Statio	4.80	58	P		03 25 26.6	
	baz=241,SNR=15						
P38A	Dawn	4.88	38	Pn	Pn	03 25 27.7	-0.1
N33A	J Bar K, Exete	4.90	360	IAmb_Lg		03 26 59.4	
	comp=Z,35nm,0.9s						
435B	Jarrell	5.04	182	IAmb_Lg		03 26 59.5	
	comp=Z,30nm,0.9s						
LCAR	Lake Charles	5.09	85	Pn	Pn	03 25 30.6	0.0
N35A	Tabor	5.21	15	IAmb_Lg		03 27 09.9	
	comp=Z,50nm,0.8s						
T42A	Van Buren	5.24	75	Pn	Pn	03 25 33.1	+0.4
CCM	Cathedral Cave	5.42	64	Pn	Pn	03 25 35.2	0.0
CCM				IAmb_Lg		03 27 03.2	
	comp=Z,22nm,0.8s						
BGNE	Belgrade	5.60	354	IAmb_Lg		03 27 15.4	
	comp=Z,22nm,0.7s						
P40A	Paris	5.64	47	Pn	Pn	03 25 38.6	+0.4
P40A				IAmb_Lg		03 27 13.2	
	comp=Z,50nm,0.9s						
JCT	Junction City	5.70	201	Pn	Pn	03 25 38.6	-0.4
JCT				IAmb_Lg		03 27 16.8	
	comp=Z,48nm,1.1s						
PBMO	Poplar Bluff	5.73	78	IAmb_Lg		03 27 19.5	
	comp=Z,50nm,0.8s						
L34A	Svendsen Farm,	6.18	7	IAmb_Lg		03 27 33.1	
	comp=Z,38nm,0.8s						
GLAT	Glass	6.61	84	IAmb_Lg		03 27 46.0	
	comp=Z,40nm,0.8s						
SDCO	Great Sand Dun	6.76	289		Pn	03 25 53.7	-0.1
SDCO	Great Sand Dun	6.76	289	P		03 25 54.6	
	baz=104,SNR=9.0						
S44A	Carbondale	6.81	72	IAmb_Lg		03 27 55.3	
	comp=Z,28nm,0.9s						
SIUC	Southern Illin	6.85	72	IAmb_Lg		03 27 48.9	
	comp=Z,34nm,0.7s						
K31A	O'Neill	6.86	352	IAmb_Lg		03 28 04.7	
	comp=Z,26nm,0.7s						
SCIA	State Center	6.90	27	IAmb_Lg		03 28 08.8	
	comp=Z,21nm,0.7s						
N41A	Harden Midland	7.10	45	IAmb_Lg		03 27 57.3	
	comp=Z,32nm,0.8s						
L40A	Anamosa	7.88	36	IAmb_Lg		03 28 34.6	
	comp=Z,20nm,1.0s						
USIN	University of	8.10	72	IAmb_Lg		03 28 35.5	
	comp=Z,28nm,0.9s						
T47A	Sharon Grove	8.40	79	IAmb_Lg		03 28 55.9	
	comp=Z,15nm,0.8s						
L42A	Oliver, Polo	8.63	42	IAmb_Lg		03 28 48.8	
	comp=Z,27nm,1.0s						
M44A	Midewin, Midew	9.20	50	IAmb_Lg		03 29 03.1	
	comp=Z,27nm,1.0s						
WCI	Wyandotte Cave	9.22	72	IAmb_Lg		03 29 04.7	
	comp=Z,18nm,1.0s						
K22A	Casper	9.80	317	IAmb_Lg		03 29 48.1	
	comp=Z,16nm,1.1s						

MDD ***20*** *03:37:18.5±3.5, 37°.08N×13°.47W, h83^{km}±144^{km}, mb3.5/2, Error ellipse: s-maj=30.2km s-min=23.1km az=92.0, PRXIMO*
INMG ***20*** *03:37:19.7±1.5, 36°.94N×13°.62W, h10^{km}, ML1.9, Error ellipse: s-maj=9.1km s-min=6.7km az=90.0*
ISC 20 03:37:18.9±4.1**, 37°.2N**±0°.1×**13°.1W**±0°.2**, h10**^{km}**, n33,**
σ1^s.41/46**, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PFVI	Vila Bisbo	3.42	89	P	Pn	03 38 12.7	+0.3
	2.4nm,0.1s,SNR=6.4						
PFVI				S	Sn	03 38 51.9	-1.1
	1.0nm,0.1s,SNR=7.9						
PFVI	Vila Bisbo	3.42	89	*e*Pn	Pn	03 38 12.8	+0.5
PFVI				*e*Sn	Sn	03 38 51.9	-1.1
PMAFR	Mafra	3.51	58	P	Pn	03 38 14.8	+1.3
	1.8nm,0.1s,SNR=7.9						
PMAFR				S	Sn	03 38 56.0	+0.9
	6.8nm,0.2s,SNR=4.0						
PTEO	Sao Teotonio	3.52	83	*e*Sn	Sn	03 38 55.5	+0.2
MORF	Marmelete	3.56	86	*e*Pn	Pn	03 38 15.0	+0.7
MORF				*e*Sn	Sn	03 38 56.3	-0.2
MORF				A	A	03 38 59.1	
	1.9nm,0.1s						
PNCL	Nicolau / Gran	3.76	74	*e*Pn	Pn	03 38 17.7	+0.8
PNCL				*e*Sn	Sn	03 39 01.7	+0.5
MESJ	Messejana	3.95	79	*e*Pn	Pn	03 38 20.4	+0.9
MESJ				*e*Sn	Sn	03 39 09.7	+3.8
PCVE	Castro Verde	4.07	82	*e*Pn	Pn	03 38 21.8	+0.6
PCVE				*e*Sn	Sn	03 39 08.3	-0.5
PSBE	So Bento	4.12	54	*e*Pn	Pn	03 38 23.6	+1.6
PBDV	Barranco-do-Ve	4.14	87	*e*Pn	Pn	03 38 23.3	+1.1
PBDV				*e*Sn	Sn	03 39 10.6	0.0
PBDV				A	A	03 39 15.9	
	2.4nm,0.9s						
PMTG	Montargil	4.29	62	*e*Pn	Pn	03 38 25.2	+0.9
PMTG				*e*Sn	Sn	03 39 15.3	+0.9
PMTG				A	A	03 39 19.8	
	0.6nm,0.2s						
PVAQ	Vaqueiros	4.31	85	*e*Pn	Pn	03 38 25.2	+0.7
PVAQ				*e*Sn	Sn	03 39 14.3	-0.5
PVAQ				A	A	03 39 19.1	
	1.6nm,0.1s						
EGRO	El Granado	4.50	84	P	Pn	03 38 28.0	+0.9
	0.3nm,0.1s,SNR=7.9						
EGRO				S	Sn	03 39 18.4	-1.2
	0.6nm,0.2s,SNR=7.9						
PCAS	Casmilo, Conde	4.62	50	*e*Pn	Pn	03 38 29.6	+0.8
PCAS				*e*Sn	Sn	03 39 23.3	+0.8
PESTR	Estremoz	4.68	67	*e*Pn	Pn	03 38 30.9	+1.3
PESTR				*e*Sn	Sn	03 39 24.3	+0.4
PMRV	Marv??o	5.03	62	*e*Pn	Pn	03 38 35.6	+1.1
PMRV				*e*Sn	Sn	03 39 32.9	+0.2
PMRV				A	A	03 39 36.4	
	0.7nm,0.1s						
EMIN	Mina Concepcio	5.16	81	P	Pn	03 38 35.8	-0.4
	0.1nm,0.1s,SNR=7.9						
EMIN				S	Sn	03 39 33.3	-2.5
	0.2nm,0.2s,SNR=7.9						
PCBR	Castelo Branco	5.16	57	*e*Pn	Pn	03 38 37.4	+1.2
PVIS	Viseu	5.39	47	*e*Sn	Sn	03 39 40.6	-1.0
PVIS				A	A	03 39 44.4	
	1.9nm,0.1s						
MTE	Manteigas	5.41	52	*e*Sn	Sn	03 39 43.1	+0.9
ESPR	Espera	5.81	91	S	Sn	03 39 49.8	-2.1
	SNR=7.9						
POLO	Lamas de Olo	5.88	43	*e*Sn	Sn	03 39 52.4	-1.4
EZAM	Zamans	6.03	33	S	Sn	03 39 51.8	-5.3
	0.6nm,0.1s,SNR=7.9						
PGAV	Gavieira, Arco	6.08	37	*e*Sn	Sn	03 39 56.0	-2.5
PGAV				A	A	03 39 58.6	
	2.0nm,0.5s						
ELOB	Lobios	6.10	38	S	Sn	03 39 55.7	-3.4
	1.0nm,0.2s,SNR=7.9						
MVO	Moncorvo	6.18	48	S	Sn	03 39 59.0	-2.1
	0.3nm,0.1s,SNR=7.9						
MVO	Moncorvo	6.18	48	*e*Sn	Sn	03 40 00.0	-1.1
EPLA	Plasencia	6.22	60	S	Sn	03 40 00.1	-1.8
	0.7nm,0.2s,SNR=7.9						
EMAZ	Mazaricos	6.58	28	S	Sn	03 40 03.2	-7.7
	0.6nm,0.1s,SNR=7.9						
EAGO	Agolada(Pontev	6.82	33	S	Sn	03 40 10.2	-6.5
	1.2nm,0.2s,SNR=7.9						
EADA	Adamuz	6.84	79	P	Pn	03 38 59.9	+0.5
	0.2nm,0.1s,SNR=7.9						
EADA				S	Sn	03 40 14.8	-2.6
	0.2nm,0.1s,SNR=7.9						
PAB	San Pablo	7.28	68	P	Pn	03 39 05.4	-0.1
	0.1nm,0.2s,SNR=7.9						
PAB				S	Sn	03 40 24.9	-3.3
	0.1nm,0.2s,SNR=7.9						
ESDC	Sonseca Array	7.61	68	P	Pn	03 39 10.5	+0.7
	0.4nm,0.2s,baz=256,slow=13,SNR=4.2						

IDC ***20*** *03:40:16.7±3.3, 29°.39S×137°.68E, h0^{km}, mb1 3.4/4, mb1mx3.2/43, mbtmp3.2/4, ML2.8/4, Error ellipse: s-maj=116.3km s-min=19.3km az=45.0*
AUST ***20*** *03:40:18.1±2.8, 29°.61S×137°.61E, h10^{km}, Error ellipse: s-maj=22.7km s-min=17.3km az=169.0*
ISC 20 03:40:16.2±0.9**, 29°.48S**±0°.06×**137°.61E**±0°.06**, h10**^{km}**, n12,**
σ1^s.32/19**, South Australia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LCRK	Leigh Creek	1.10	152	P	Pn	03 40 37.7	0.0
	baz=1.0						
LCRK				S	Sn	03 40 52.4	-0.7
	baz=1.0						
OOD	Oodnadatta	2.38	314	P	Pb	03 40 59.1	0.0
	baz=2.5,SNR=6.0						
OOD				S	Sb	03 41 29.0	+0.4
	baz=2.5						
MULG	Mulgathing	3.19	255	P	Pn	03 41 07.4	+1.0
	baz=3.1,SNR=13						
BBOO	Buckleboo	3.58	201	P	Pn	03 41 12.4	+0.6
	baz=3.5						
BBOO				S	Sn	03 41 53.1	-1.1
	baz=3.5						
HTT	Hallett	4.10	164	P	Pn	03 41 20.1	+1.1
	baz=4.0						
HTT				S	Sn	03 42 06.2	-0.9
	baz=4.0						
STKA	Stephens Creek	4.19	126	Pn	Pn	03 41 20.6	+0.5
	0.3nm,0.3s,baz=308,slow=11,SNR=6.7						
STKA				Sn	Sn	03 42 07.5	-1.6
	1.3nm,0.3s,baz=319,slow=18,SNR=8.5						
STKA				Lg	Lg	03 42 31.2	
	1.9nm,0.3s,baz=68,slow=19,SNR=6.4						
STKA	Stephens Creek	4.19	126	P	Pn	03 41 21.2	+1.0
	baz=4.1						
STKA				S	Sn	03 42 08.2	-0.9
	baz=4.1						
ASAR	Alice Springs	6.67	329	Pn	Pn	03 41 57.0	+2.7
	0.2nm,0.3s,baz=149,slow=13,SNR=6.0						
ASAR				Sn	Sn	03 43 09.2	-1.3
	0.3nm,0.3s,baz=150,slow=23,SNR=5.8						
CMSA	Cobar Meteorol	7.27	108	P	Pn	03 42 03.6	+1.0
	baz=7.2						
WRA	Warramunga Arr	9.95	342	Pn	Pn	03 42 40.2	+1.0
	0.1nm,0.3s,baz=156,slow=13,SNR=5.9						
WRA				Sn	Sn	03 44 28.4	-2.6
	0.1nm,0.3s,baz=165,slow=24,SNR=1.8						
FITZ	Fitzroy Crossi	15.74	313	Pn	Pn	03 43 57.7	-0.4
	0.0nm,0.3s,baz=139,slow=9.3,SNR=1.5						
PHIT	Phitsanulok	58.66	317	P	P	03 50 05.0	-9.0

IDC ***20*** *03:43:17.6±4.6, 1°.09S×103°.46E, h0^{km}, mb3.4/3, mb1 3.6/3, mb1mx3.2/52, mbtmp3.4/3, MS3.3/2, Ms1 3.3/2, ms1mx2.7/30, Error ellipse: s-maj=260.4km s-min=30.9km az=53.0*
DJA ***20*** *03:43:30.6±0.4, 2°S±4°×10°2E±°, h127^{km}±5^{km}, M3.8/11, mb4.0/2, MLv3.6/11*
ISC 20 03:43:29.6±1.1**, 2°.3S**±0°.1×**101°.97E**±0°.07**, h150**^{km}**, n15,**
σ0^s.55/14**, mb3.3**/3**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRJI	Kerinci	0.53	288	P	Pn	03 43 50.4	-0.8
SDSI	Sungai Dareh	1.42	338	P	Pn	03 43 58.5	+0.2
JMBI	JAMBI	1.79	70	P	Pn	03 44 02.6	+0.3
PDSI	Padang	2.01	312	P	Pn	03 44 04.3	-0.6
MNAI	Manna	2.31	155	P	Pn	03 44 09.1	+0.6
SISI	Saibi	3.02	288	P	Pn	03 44 17.9	+0.7
DSRI	Dabo	3.15	56	P	Pn	03 44 18.8	-0.1
KASI	Kota Agung	4.12	142	P	Pn	03 44 32.2	+0.8
PBSI	Pulau Batu	4.28	301	P	Pn	03 44 33.9	+0.3
GSI	Gunungsitoli	5.63	309	P	Pn	03 44 51.5	0.0
	0.2nm41nm,0.5s						
TPTI		7.27	319	P	Pn	03 45 13.6	+0.3
WRA	Warramunga Arr	36.18	121	P	P	03 50 17.5	-0.5
	0.6nm,0.7s,baz=299,slow=10,SNR=4.6						
WRA				LR	LR	04 04 57.0	
	comp=Z,33nm,18.6s,baz=30,slow=37						
ASAR	Alice Springs	37.53	127	P	P	03 50 28.9	-0.5
	0.3nm,0.5s,baz=302,slow=8.3,SNR=5.4						
MKAR	Makanchi Array	51.82	343	P	P	03 52 22.5	+0.3
	0.1nm,0.5s,baz=163,slow=9.1,SNR=2.2						
ATD	Arta Tunnel	60.34	285	LR	LR	04 18 45.1	
	comp=Z,33nm,18.3s,baz=338,slow=35						

NEIC ***20*** *03:45:47.5±1.3, 59°.37N±0°.05×136°.64W±0°.09, h13^{km}±8^{km}, Error ellipse: s-maj=8.9km s-min=5.3km az=216.0*
AEIC ***20*** *03:45:47±1.3, 59°.41N±0°.04×136°.6W±0°.1, h15^{km}±7^{km}, Error ellipse: s-maj=10.7km s-min=4.1km az=59.0*
PGC ***20*** *03:45:48.0±0.0, 59°.43N×136°.70W, h5^{km}, ML2.8/10, 91km Wnw of Haines, Ak Southeastern Alaska*
ISC 20 03:45:47.2±1.0**, 59°.41N**±0°.04×**136°.62W**±0°.04**, h15**^{km}±7^{km}**,**
n68, σ1^s.14/81**, Southeastern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLBC	Pleasant Camp	0.14	70	P	Pg	03 45 51.2	+0.3
PLBC				S	Sg	03 45 54.0	+0.7
PLBC	Pleasant Camp	0.14	70		Pg	03 45 51.4	+0.5
SKAG	Skagway	0.66	85		Pg	03 46 00.1	+0.1
SKAG	Skagway	0.66	85	IAML		03 46 09.7	
	comp=E,887nm,0.4s						
SKAG				IAML		03 46 10.0	
	comp=N,541nm,0.4s						
BESE	Bessie Mountai	1.23	132	P	Pn	03 46 10.0	0.0
BESE				S	Sn	03 46 27.3	+0.8
BESE	Bessie Mountai	1.23	132	Pn	Pn	03 46 09.7	-0.3
YUK7	Dusty Glacier	1.36	326	P	Pn	03 46 11.4	-0.5
YUK7				S	Sb	03 46 29.2	-0.6
YUK7	Dusty Glacier	1.36	326		Pn	03 46 11.4	-0.5
YUK7					Sb	03 46 29.1	-0.7
HYT	Haines Junctio	1.49	343	P	Pn	03 46 13.1	-0.4
HYT				S	Sb	03 46 34.0	+0.6
HYT	Haines Junctio	1.49	343	Pn	Pn	03 46 13.3	-0.3
HYT				IAML		03 46 35.9	
	comp=N,147nm,0.4s						
HYT				IAML		03 46 36.1	
	comp=E,150nm,0.8s						
HYT	Haines Junctio	1.49	343		Sb	03 46 34.0	+0.6
WHY	Whitehorse	1.53	34	Pn	Pn	03 46 14.8	+0.8
WHY				Sn	Sb	03 46 35.7	+1.2
WHY	Whitehorse	1.53	34		Pn	03 46 15.1	+1.0
JIS	Juneau Island	1.63	133		Pn	03 46 15.5	+0.2
JIS	Juneau Island	1.63	133	Pn	Pn	03 46 15.4	+0.1
YUK6	Outpost Mounta	1.77	331	Pn	Pn	03 46 18.3	+0.8
YUK6				Sn	Sb	03 46 41.7	+0.2
YUK6	Outpost Mounta	1.77	331		Pn	03 46 18.6	+1.1
YUK5	Granite Creek	1.83	341	Pn	Pn	03 46 19.2	+0.9
YUK5				Sn	Sn	03 46 42.5	+1.2
YUK5	Granite Creek	1.83	341		Pn	03 46 19.2	+0.9
YUK4	Talbot Arm	2.19	333	Pn	Pb	03 46 25.5	-1.1
YUK4				Sg	Sg	03 46 57.0	-0.4
YUK4	Talbot Arm	2.19	333		Pb	03 46 25.5	-1.1
TABL	Table Mountain	2.50	296		Pn	03 46 28.2	+0.6
TABL	Table Mountain	2.50	296	IAML		03 47 03.2	
	comp=N,119nm,0.6s						
TABL				IAML		03 47 03.4	
	comp=E,112nm,0.6s						
LOGN	Logan Glacier	2.61	305	Pn	Pn	03 46 29.7	+0.6
LOGN				Sn	Sn	03 47 01.9	+1.3
LOGN	Logan Glacier	2.61	305		Pn	03 46 29.6	+0.6
CTGM	Chitina Glacie	2.83	306	Pn	Pn	03 46 32.9	+1.0
CTGM	Chitina Glacie	2.83	306		Pn	03 46 32.8	+0.8

GRNC	Granite Creek	2.90	299	Pn	Pn	03 46 33.7	+0.8
GRNC				Sn	Sn	03 47 07.9	+0.3
GRNC	Granite Creek	2.90	299		Pn	03 46 33.6	+0.7
BARN	Barnard Glacie	3.01	305		Pn	03 46 35.2	+0.7
YUK3	Moose Creek	3.04	323	Pn	Pn	03 46 35.9	+0.9
YUK3				Sg	Sg	03 47 22.1	-2.5
YUK3	Moose Creek	3.04	323		Pn	03 46 35.8	+0.9
YUK2	White River	3.17	321	Pn	Pn	03 46 37.9	+1.3
YUK2				Sn	Sn	03 47 14.6	+0.4
YUK2				Sg	Sb	03 47 25.1	+3.5
YUK2	White River	3.17	321		Pn	03 46 37.8	+1.3
KULT	Kultieth River	3.19	288		Pn	03 46 37.9	+1.0
KIAG	Kiagna River	3.25	300	Pn	Pn	03 46 38.7	+0.9
KIAG	Kiagna River	3.25	300		Pn	03 46 38.5	+0.8
BALM	Baldy	3.29	302	Pn	Pn	03 46 39.4	+1.1
BALM	Baldy	3.29	302	Pn	Pn	03 46 38.5	+0.2
BALM				IAML		03 47 33.6	
	comp=N,24nm,1.8s						
BALM				IAML		03 47 40.0	
	comp=E,26nm,0.8s						
TGL	Tana Glacier	3.39	296		Pn	03 46 40.6	+1.0
PTPK	Patty Peak	3.41	304	Pn	Pn	03 46 41.9	+1.9
CRQM	Cirque	3.54	295		Pn	03 46 42.5	+0.8
CRQM	Cirque	3.54	295	IAML		03 47 44.7	
	comp=E,23nm,1.1s						
CRQM				IAML		03 47 54.8	
	comp=N,42nm,0.7s						
DLBC	Dease Lake	3.55	103	Pn	Pn	03 46 42.9	+1.1
DLBC				Sg	Sg	03 47 38.4	-2.8
DLBC	Dease Lake	3.55	103		Pn	03 46 42.9	+1.1
BVCY	Beaver Creek	3.66	327	Sg	Sg	03 47 41.9	-2.6
BERG	Berg Lake	3.70	288		Pn	03 46 44.8	+1.0
MCARA	McCarthy VSAT	3.75	305	Pn	Pn	03 46 46.0	+1.6
MCARA				IAML		03 47 50.8	
	comp=E,24nm,0.7s						
MCARA				IAML		03 47 54.1	
	comp=N,30nm,1.0s						
WRAK	Wrangell Islan	3.77	141	Pn	Pn	03 46 45.1	+0.5
VRDI	Verde Repeater	3.86	301	Pn	Pn	03 46 46.6	+0.5
GLB	Gilahina Butte	4.11	303	Pn	Pn	03 46 48.9	-0.5
GLB				IAML		03 47 56.0	
	comp=N,12nm,3.3s						
RAGM	Ragged Mountai	4.18	287	Pn	Pn	03 46 49.9	-0.5
BMRM	Bremner River	4.28	295		Pn	03 46 52.5	+0.6
BCAR	Beaver Creek A	4.44	328	Pn	Pn	03 46 53.7	-0.3
N25K	Chitina, Valde	4.52	303	Pn	Pn	03 46 56.3	+1.2
N25K				IAML		03 49 08.6	
	comp=N,9.4nm,4.5s						
DAWY	Dawson	4.85	345	Pn	Pn	03 47 00.6	+0.9
DAWY				Sg	Sg	03 48 20.1	-2.7
DAWY	Dawson	4.85	345		Pn	03 47 00.1	+0.4
MENT	Mentasta	4.93	319		Pn	03 47 01.3	+0.6
MENT				IAML		03 47 48.4	
	comp=E,12nm,4.4s						
MENT				IAML		03 49 34.0	
	comp=N,12nm,4.7s						
KLU	Klutina	5.06	298	Pn	Pn	03 47 03.3	+0.7
KLU				IAML		03 48 21.6	
	comp=N,9.5nm,1.8s						
KLU				IAML		03 48 27.0	
	comp=E,9.4nm,3.6s						
FID	Port Fidalgo	5.12	289	Pn	Pn	03 47 05.5	+2.2
FID				IAML		03 48 11.3	
	comp=E,13nm,2.8s						
FID				IAML		03 49 03.8	
	comp=N,13nm,3.2s						
M24K	Tolsona, Glenn	5.41	304	Pn	Pn	03 47 08.6	+1.2
GLI	Glacier Island	5.44	290	Pn	Pn	03 47 08.8	+1.2
DOT	Dot Lake	5.54	323	Pn	Pn	03 47 09.7	+0.6
DOT	Dot Lake	5.54	323	Pn	Pn	03 47 09.1	0.0
EGAK	Eagle	5.79	340	Pn	Pn	03 47 13.6	+1.1
SCM	Sheep Creek Mo	5.81	299	Pn	Pn	03 47 14.2	+1.4
KNK	Knik Glacier	6.20	294	Pn	Pn	03 47 19.9	+1.8
SEW	Seward	6.53	282	Pn	Pn	03 47 22.8	+0.3

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*IDC **20** 03:49:46.3±16.0, 26°.20S×177°.27W, h250^{km}±159^{km}, mb3.3/3, mb1 3.6/4, mb1mx3.2/32, mbtmp4.0/4, Error ellipse: s-maj=137.5km s-min=41.0km az=8.0*

ISC 20 03:49:41.2±1.4, **25°.9S**±0°.2×**177°.3W**±0°.3, **h200**^{km}**, n10,** σ**0^{s}.88**/10, **mb3.7**/3, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	13.17	200	P	Pn	03 52 39.8	-0.8
	2.3nm,0.3s,baz=345,slow=2.7,SNR=16						
URZ				S	S	03 54 50.5	-17
	1.2nm,0.3s,baz=162,slow=21,SNR=5.8						
ASAR	Alice Springs	44.17	262	P	P	03 57 30.4	0.0
	1.0nm,0.4s,baz=95,slow=7.5,SNR=17						
WRA	Warramunga Arr	44.76	267	P	P	03 57 35.1	0.0
	0.5nm,0.4s,baz=103,slow=7.7,SNR=16						
FITZ	Fitzroy Crossi	53.15	266	P	P	03 58 39.5	+0.8
	2.2nm,0.9s,baz=109,slow=6.7,SNR=6.1						
SNAA	Sanae	82.58	178	P	P	04 01 42.8	+1.4
VNA3	Neumayer Olymp	82.69	176	P	P	04 01 42.4	+0.4
VNA2	Neumayer--Watz	83.14	177	P	P	04 01 45.0	+0.8
MKAR	Makanchi Array	115.35	312	PKP	PKPdf	04 07 57.8	-1.0
	0.2nm,0.4s,baz=145,slow=1.4,SNR=5.1						
HFS	Hagfors	144.99	350	PKPbc	PKPbc	04 08 53.1	-0.6
	1.4nm,0.4s,baz=31,slow=3.4,SNR=2.1						
BRTR	Keskin Array B	150.77	306	PKPbc	PKPbc	04 09 09.8	-0.3
	1.0nm,1.0s,baz=47,slow=4.9,SNR=4.6						

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*MOS **20** 03:52:17.0±1.0, 39°.67N×143°.33E, h11^{km}, mb4.6/26, Error ellipse: s-maj=8.1km s-min=5.1km az=106.0*

*IDC **20** 03:52:18.2±0.7, 39°.67N×143°.23E, h0^{km}, mb3.9/18, mb1 4.1/22, mb1mx4.0/46, mbtmp3.9/22, ML3.2/4, MS3.4/5, Ms1 3.4/5, ms1mx3.0/53, Error ellipse: s-maj=17.5km s-min=15.2km az=127.0*

*JMA **20** 03:52:19.6±0.2, 39°.73N×143°.29E, h18^{km}±2^{km}, M4.4*

*NIED **20** 03:52:19.7, 39°.73N×143°.29E, h18^{km}, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$1.17; M$_{\theta\theta}$0.12; M$_{\phi\phi}$-1.29; M$_{r\theta}$0.58; M$_{\theta\phi}$0.07; M$_{\phi r}$0.92; Fault plane solution: M$_{0}$1.64000×10^{15} NP1:φ$_{s}$19.00000°, δ66.00000°, λ109.00000°. NP2:φ$_{s}$158.00000°, δ30.00000°, λ53.00000°.*

*NEIC **20** 03:52:20.8±1.8, 39°.66N±0°.07×143°.3E±0°.1, h23^{km}±6^{km}, mb4.4/16 Error ellipse: s-maj=15.9km s-min=8.1km az=112.0*

ISC 20 03:52:19.4±0.5, **39°.73N**±0°.04×**143°.27E**±0°.04, **h11**^{km}**, n158,** σ**1^{s}.39**/169, **mb4.3**/53, **MS3.9**/4, **8C-1D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	1.10	281	P	Pb	03 52 40.2	-0.4
JTH				S	Sb	03 52 55.1	+0.1
MIYJ	Miyakonagasawa	1.13	263	P	Pb	03 52 40.5	-0.5
MIYJ				eS	Sg	03 52 55.8	-0.1
JKEN	Kujiedanarisaw	1.29	292	P	Pn	03 52 42.7	-0.7
JKEN				eS	Sb	03 52 59.1	-1.2
JANG	Nango	1.49	296	P	Pn	03 52 45.8	-0.4
JANG				eS	Sn	03 53 05.1	-0.6
JOM	Ohasama	1.55	261	P	Pn	03 52 47.3	+0.3
JOM				S	Sb	03 53 07.6	-0.2
JMK	Ichinoseki	1.77	245	P	Pb	03 52 50.5	-1.4
JMK				eS	Sb	03 53 13.3	-0.9
JIO	Ouri	1.97	230	P	Pn	03 52 52.5	-0.2
JIO				eS	Sn	03 53 16.2	-1.1
JTM	Tenmabayashi	1.99	303	P	Pn	03 52 53.8	+0.8
JTM				eS	Sn	03 53 18.3	+0.4
JRG	Rokugo	2.07	262	P	Pn	03 52 55.1	+1.0
JAH	Hinai	2.08	284	P	Pn	03 52 55.4	+1.2
JAH				eS	Sn	03 53 21.5	+1.4
ERM	Erimo	2.28	358	P	Pn	03 52 58.2	+1.1
ERM	Erimo	2.28	358	Pn	Pn	03 52 58.1	+1.1
JEM	Erimo	2.28	358	P	Pn	03 52 58.5	+1.5
JEM				eS	Sn	03 53 25.8	+0.7
JOT	Ohata	2.36	315	P	Pn	03 52 59.3	+1.1
JYK	Kaneyama	2.40	251	P	Pn	03 52 59.8	+1.1
JYK				eS	Sn	03 53 29.5	+1.4
JNBK	Urakawa-nobuka	2.58	351	P	Pn	03 53 02.9	+1.8
JNBK				eS	Sn	03 53 33.7	+1.3
JMM	Marumori	2.69	227	Pn	Pn	03 53 01.8	-0.8
JEW	Eniwo	3.40	337	Pn	Pn	03 53 15.7	+3.3
NMR	Nemuro--Hokkai	4.07	26	eP	Pn	03 53 21.7	+0.1
NMR				i S	Sn	03 54 06.2	-3.1
JYT	Yasato	4.26	216	Pn	Pn	03 53 23.4	-0.8
JSD	Sado	4.26	248		Pn	03 53 25.9	+1.6
GLVR	Golovnino	4.34	22	eP	Pn	03 53 26.5	+1.2
GLVR				i S	Sn	03 54 13.8	-2.1
GLVR				pmax	pmax		
	comp=E,82nm,0.3s						
GLVR				pmax	pmax		
	comp=Z,105nm,0.3s						
GLVR				smax	smax		
	comp=N,431nm,0.5s						
GLVR				smax	smax		
	comp=E,628nm,0.5s						
JKA	Kamikawa-asahi	4.41	354		Pn	03 53 27.2	+0.9
ASAJ	Asahikawa	4.41	354	Pn	Pn	03 53 27.8	+1.5
	comp=E,2.5nm,0.3s,baz=226,slow=8.0,SNR=12						
ASAJ	Asahikawa	4.41	354	P	Pn	03 53 27.2	+0.9
GRPR	Tuman	4.65	23	eP	Pn	03 53 29.4	-0.1
GRPR				i S	Sn	03 54 19.4	-4.1
GRPR				pmax	pmax		
	comp=N,70nm,0.4s						
GRPR				pmax	pmax		
	comp=Z,101nm,0.4s						
GRPR				pmax	pmax		
	comp=E,33nm,0.3s						
GRPR				smax	smax		
	comp=N,805nm,0.4s						
GRPR				smax	smax		
	comp=E,1µm,0.5s						
YUK	Yuzh-Kuril'sk	4.71	23	eP	Pn	03 53 31.2	+0.8
YUK				i S	Sn	03 54 21.8	-3.2
YUK				pmax	pmax		
	comp=Z,122nm,0.4s						
YUK				pmax	pmax		
	comp=N,38nm,0.2s						
YUK				pmax	pmax		
	comp=E,74nm,0.3s						
YUK				smax	smax		
	comp=N,600nm,0.4s						
YUK				smax	smax		
	comp=E,772nm,0.5s						
MJAR	Matsushiro Arr	5.11	233	Pn	Pn	03 53 36.4	+0.5
	baz=38,slow=12						
MAJO	Matsushiro	5.11	233	i P	Pn	03 53 37.2	+1.3
MAJO	Matsushiro	5.11	233		Pn	03 53 36.7	+0.8
MAT	Matsushiro	5.11	233	P	Pn	03 53 37.6	+1.7
MAT				eS	Sn	03 54 36.7	+1.8
JGF	Kuroka	6.25	231	Pn	Pn	03 53 53.2	+1.6
KUR	Kuril'sk	6.46	30	eP	Pn	03 53 52.8	-1.6
KUR				eS	Sn	03 55 05.8	-2.3
KUR				pmax	pmax		
	comp=Z,55nm,0.4s						
KUR				smax	smax		
	comp=E,149nm,0.5s						
KUR				smax	smax		
	comp=N,114nm,0.6s						
YSS	Yuzh-Sakhalins	7.23	357	ceP	Pn	03 54 06.6	+1.6
YSS				pmax	pmax		
	comp=Z,14nm,1.3s						
YSS	Yuzh-Sakhalins	7.23	357	Pn	Pn	03 54 06.0	+1.0
USA0B	Ussuriysk Arra	9.52	302	P	Pn	03 54 39.9	+3.5
USA0B	Ussuriysk Arra	9.52	302	Pn	Pn	03 54 39.9	+3.5
USRK	Ussuriysk Ar.	9.52	302	Pn	Pn	03 54 38.4	+2.0
	baz=102,slow=12,SNR=11						
USRK				LR	LR	03 58 16.9	
	comp=Z,209nm,18.7s,baz=102,slow=38						
USRK	Ussuriysk Ar.	9.52	302	P	Pn	03 54 39.8	+3.5
USRK	Ussuriysk Ar.	9.52	302	Pn	Pn	03 54 39.8	+3.5
MDJ	Mudanjiang	11.26	300	P	Pn	03 55 03.3	+3.1
MDJ				pmax	pmax		
	comp=Z,6.0nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,200nm,5.1s						
MDJ	Mudanjiang	11.26	300	Pn	Pn	03 55 02.8	+2.6
JNU	Nakatsue	11.96	240	LR	LR	04 00 04.8	
	comp=Z,206nm,20.5s,baz=40,slow=39						
KSRS	Korea Array	12.23	264	Pn	Pn	03 55 15.2	+1.7
	comp=Z,0.2nm,0.3s,baz=86,slow=13,SNR=8.6						
KSRS				LR	LR	03 59 17.5	
	comp=Z,122nm,19.2s,baz=102,slow=34						
KLR	Kul'dur	12.55	323	Pn	Pn	03 55 19.5	+1.7
	comp=Z,0.1nm,0.3s,baz=137,slow=12,SNR=5.6						
KLR				LR	LR	04 00 08.8	
	comp=Z,121nm,20.3s,baz=134,slow=37						
ZEA	Zeya	17.74	327	eP	Pn	03 56 27.1	+0.9
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MA2	Magadan	20.42	11	ceP	Pn	03 56 58.1	-0.4
MA2				pmax	pmax		
	comp=Z,33nm,2.5s						
MA2	Magadan	20.42	11	P	P	03 56 55.2	-1.2
MA2				IAmb	IAmb	03 56 59.1	
	comp=Z,11nm,0.7s						
TIA	Tai'an	20.89	269	P	P	03 57 00.5	-1.1
TIA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
TIA				LR	LR		
	comp=N,170nm,8.6s						
TIA				LR	LR		
	comp=E,230nm,10.2s						
TIA				LR	LR		
	comp=Z,260nm,12.0s						
SEY	Seymchan	23.87	10	P	P	03 57 33.2	+0.7
	comp=Z,8.5nm,0.8s,baz=202,slow=6.7,SNR=18						
HHC	Hu-ho-hao-te	24.15	283	eP	P	03 57 34.8	-0.8
HHC				S	S	04 01 45.3	-8.1
HHC				pmax	pmax		
	comp=Z,4.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,160nm,4.7s						
HHC				LR	LR		
	comp=N,100nm,12.8s						
HHC				LR	LR		
	comp=E,190nm,13.6s						
HHC				LR	LR		
	comp=Z,260nm,16.2s						
BOD	Bodaibo	26.13	324	eP	P	03 57 52.5	-0.7
BOD				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ULN	Ulaanbaatar	27.18	299	ceP	P	03 58 03.4	+0.4
ULN				pmax	pmax		
	comp=Z,8.0nm,1.3s						
ULN	Ulaanbaatar	27.18	299	P	P	03 58 03.1	+0.1
SONM	Songino Array	27.62	299	P	P	03 58 07.1	+0.1
	comp=Z,3.4nm,0.9s,baz=100,slow=9.3,SNR=10						
SONM				LR	LR	04 09 22.0	
	comp=Z,120nm,19.4s,baz=224,slow=37						
SONM	Songino Array	27.62	299	P	P	03 58 06.7	-0.2
SONM				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SONM	Songino Array	27.62	299	P	P	03 58 06.7	-0.2
XAN	Xi'an	27.94	269	P	P	03 58 08.3	-1.6
XAN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
XAN				pmax	pmax		
	comp=Z,95nm,3.8s						
XAN	Xi'an	27.94	269	P	P	03 58 08.5	-1.4
XAN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
XAN	Xi'an	27.94	269	P	P	03 58 08.4	-1.4
H11N2	WAKE ISLAND Hy	28.45	128	T	T	04 29 07.5	
	baz=318,slow=75,SNR=122						
H11N1	WAKE ISLAND Hy	28.46	128	T	T	04 29 11.2	
	baz=318,slow=75,SNR=84						
H11N3	WAKE ISLAND Hy	28.47	128	T	T	04 29 06.6	
	baz=318,slow=75,SNR=109						
ENH	Enshi	29.10	262	P	P	03 58 19.3	-0.9
H11S1	WAKE ISLAND Hy	29.27	130	T	T	04 29 09.8	
	baz=321,slow=76,SNR=28						
H11S3	WAKE ISLAND Hy	29.27	130	T	T	04 29 11.0	
	baz=321,slow=76,SNR=24						
H11S2	WAKE ISLAND Hy	29.29	130	T	T	04 29 11.7	
	baz=321,slow=76,SNR=18						
TLY	Talaya	29.77	307	i P	P	03 58 26.2	+0.3
TLY				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ZAK	Zakamensk	29.85	304	eP	P	03 58 24.7	-2.0
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.2s						
LZH	Lanzhou	31.15	276	⇑P	P	03 58 38.8	+0.4
LZH				pP	pwP	03 58 48.9	+5.1
LZH				sP	sP	03 58 55.3	+13
LZH				pmax	pmax		
	comp=Z,16nm,1.3s						
TIXI	Tiksi	32.81	352	ceP	P	03 58 50.8	-1.6
TIXI				pmax	pmax		
	comp=Z,12nm,1.7s						
GYA	Guiyang	33.17	258	⇓P	P	03 58 56.0	-0.2
GYA				pmax	pmax		
	comp=Z,12nm,0.8s						
CD2	Chengdu	33.20	267	eP	P	03 58 55.3	-1.0
CD2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GTA	Gaotai	33.26	284	eP	P	03 58 57.3	+0.5
GTA				pP	sP	03 59 01.3	+0.6
GTA				sP	pwP	03 59 04.6	+2.3
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
DGZ	Jazzator, Alta	40.06	303	i P	P	03 59 55.7	+1.0
DGZ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
WMQ	Urumqi	40.99	294	eP	P	04 00 04.3	+1.9
ZAA0	Zalesovo Array	41.24	310	P	P	04 00 03.9	-0.3
ZAA0				IAmb	IAmb	04 00 05.3	
	comp=Z,3.8nm,0.7s						
ZALV	Zalesovo Beam	41.24	310	P	P	04 00 04.8	+0.6
	comp=Z,3.7nm,0.6s,baz=89,slow=8.1,SNR=15						
ZALV	Zalesovo Beam	41.24	310	P	P	04 00 03.7	-0.4
NRIK	Noril'sk	41.46	334	P	P	04 00 04.4	-1.4
NRIK				pmax	pmax		
	comp=Z,14nm,1.7s						
NRIK	Noril'sk	41.46	334	P	P	04 00 04.4	-1.4
NRIK				IAmb	IAmb	04 01 28.3	
	comp=Z,14nm,1.7s						
ZSN	Zaisan	42.12	300	eP	P	04 00 12.0	+0.5
	baz=300						
ZSN	Zaisan	42.12	300	eP	P	04 00 12.0	+0.5
CHTO	Chiang Mai	43.40	254	P	P	04 00 21.7	-0.5
CHTO				pmax	pmax		
	comp=Z,3.0nm,0.9s						
CHTO	Chiang Mai	43.40	254	P	P	04 00 21.7	-0.5
MK31	Makanchi Array	43.98	300	P	P	04 00 26.4	-0.2
MK31				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MK31	Makanchi Array	43.98	300	P	P	04 00 26.4	-0.2
MK31				IAmb	IAmb	04 00 27.9	
	comp=Z,4.3nm,0.8s						
MKAR	Makanchi Array	43.98	300	P	P	04 00 27.0	+0.4
	comp=Z,3.6nm,0.8s,baz=83,slow=9.4,SNR=38						
MKAR	Makanchi Array	43.98	300	P	P	04 00 26.4	-0.2
MAKZ	Makanchi	44.18	300	P	P	04 00 28.3	+0.1
MAKZ				pmax	pmax		
	comp=Z,9.0nm,1.2s						
MAKZ	Makanchi	44.18	300	P	P	04 00 28.3	+0.1
MAKZ				IAmb	IAmb	04 00 30.2	
	comp=Z,8.5nm,1.2s						
SEM	Semipalatinsk	44.51	306	eP	P	04 00 30.1	-0.9
	baz=305						
SEM	Semipalatinsk	44.51	306	eP	P	04 00 30.1	-0.9
KURK	Kurchatov	45.47	306	ceP	P	04 00 38.3	0.0
KURK				pmax	pmax		
	comp=Z,12nm,1.3s						
KURK	Kurchatov	45.47	306	P	P	04 00 37.8	-0.6
ILAR	Eielson Array	46.44	34	P	P	04 00 47.4	+1.6
	comp=Z,0.6nm,0.8s,baz=268,slow=6.7,SNR=7.8						
TAPN	Taplejung	47.25	273	eP	P	04 00 53.5	+0.5
KPKS	Kokpek	47.36	297	eP	P	04 00 52.1	-1.4
	baz=296						
KPKS	Kokpek	47.36	297	eP	P	04 00 52.9	-0.6
SATY	Saty	47.69	296	eP	P	04 00 55.6	-0.5
	baz=296						
SATY	Saty	47.69	296	eP	P	04 00 55.5	-0.5
ODAN	Odare	47.74	272	eP	P	04 00 56.9	+0.1
	comp=Z,9.0nm,0.4s						
RAMN	Ramite	48.30	273	eP	P	04 01 01.6	+0.5
	comp=Z,23nm,0.7s						
GUN	Gumba	48.38	274	eP	P	04 01 02.4	+0.6
	comp=Z,18nm,0.6s						
CHKK	Chushkaly	48.40	298	eP	P	04 01 01.4	-0.1
	baz=298						
CHKK	Chushkaly	48.40	298	eP	P	04 01 01.3	-0.1
MDOK	Medeo	48.59	297	eP	P	04 01 03.0	-0.1
	baz=297						
MDOK	Medeo	48.59	297	eP	P	04 01 03.0	-0.1
KUU	Kurty	48.83	298	eP	P	04 01 04.2	-0.5
	comp=Z,5.0nm,0.8s,baz=298						
KUU	Kurty	48.83	298	eP	P	04 01 04.2	-0.5
KUU				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KKN	Kakani	48.90	274	eP	P	04 01 06.6	+0.9
	comp=Z,25nm,0.6s						
PKI	Pulchoki	48.91	274	eP	P	04 01 06.2	+0.3
PKIN	Phulchoki	48.92	274	eP	P	04 01 06.2	+0.3
GKN	Gorkha	49.29	275	eP	P	04 01 09.2	+0.6
BRZS	Berezniki	49.34	307	eP	P	04 01 08.2	-0.4
	baz=306						
BRZS	Berezniki	49.34	307	eP	P	04 01 08.1	-0.4
BRVK	Borovoye	49.93	311	P	P	04 01 13.1	+0.2
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BRVK	Borovoye	49.93	311	P	P	04 01 13.1	+0.2
BRVK				IAmb	IAmb	04 01 15.0	
	comp=Z,5.1nm,0.8s						
BTLS	Baital	49.99	300	eP	P	04 01 12.8	-0.8
	baz=300						
BTLS	Baital	49.99	300	eP	P	04 01 12.8	-0.8
AAK	Ala-Archa	50.53	297	i P	P	04 01 17.6	-0.3
AAK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
INK	Inuvik	51.32	28	P	P	04 01 25.1	+1.9
	comp=Z,0.5nm,0.5s,baz=305,slow=3.6,SNR=2.1						
DZA	Taraz	52.60	298	eP	P	04 01 33.1	-0.1
	baz=298						
DZA	Taraz	52.60	298	eP	P	04 01 33.0	-0.1
KKAR	Karatay Array	53.07	299	P	P	04 01 36.1	-0.5
KKAR	Karatay Array	53.07	299	P	P	04 01 36.1	-0.5
IUG	Iuzhnay	53.77	298	eP	P	04 01 41.0	-0.9
	comp=Z,4.0nm,1.4s,baz=298						
IUG	Iuzhnay	53.77	298	eP	P	04 01 41.0	-0.9
IUG				pmax	pmax		
	comp=Z,4.0nm,1.4s						
ARU	Arti	55.33	318	c iP	P	04 01 53.5	+0.6
ARU				S	S	04 09 38.1	+1.5
ARU				SS	SS	04 13 19.5	-0.9
ARU				pmax	pmax		
	comp=Z,10.0nm,1.2s						
ARU	Arti	55.33	318	P	P	04 01 52.9	+0.1
ABKAR	Akbulak array	57.34	309	P	P	04 02 06.7	-0.6
KIRV	Kirov	58.99	322	i P	P	04 02 18.9	+0.2
RES	Resolute Bay	59.62	15	P	P	04 02 24.1	+1.2
	comp=Z,1.9nm,0.8s,baz=316,slow=6.1,SNR=8.9						
WRA	Warramunga Arr	59.95	190	P	P	04 02 25.2	-0.5
	comp=Z,2.1nm,0.8s,baz=7.8,slow=6.7,SNR=9.6						
YKA	Yellowknife Ar	60.75	31	P	P	04 02 31.6	+0.9
	comp=Z,0.1nm,0.4s,baz=305,slow=5.9,SNR=2.4						
BELG	Belogornoye	62.83	317	i P	P	04 02 43.8	-1.1
BELG				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ASAR	Alice Springs	63.67	190	P	P	04 02 51.0	+0.2
	comp=Z,0.9nm,0.7s,baz=10,slow=6.2,SNR=10.0						
OBN	Obninsk	66.81	323	eP	P	04 03 11.6	+0.8
OBN				e		04 05 37.5	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
FINES	FINESS Array B	67.11	332	P	P	04 03 13.2	+0.6
	comp=Z,3.5nm,0.8s,baz=90,slow=3.8,SNR=8.5						
LPSR	Galich'ya Gora	67.17	320	eP	P	04 03 12.5	-0.6
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
VSR	Storozhevoye	67.87	319	eP	P	04 03 16.9	-0.7
VSR				pmax	pmax		
	comp=Z,8.0nm,1.0s						
VORD	Divnogorie	67.95	319	eP	P	04 03 17.3	-0.8
VORD				pmax	pmax		
	comp=Z,5.0nm,0.5s						
KIV	Kislovodsk	70.24	311	eP	P	04 03 31.7	-0.9
KIV				pmax	pmax		
	comp=Z,35nm,1.0s						
KBZ	Khabaz	70.25	311	ceP	P	04 03 32.7	+0.2
KBZ				pmax	pmax		
	comp=Z,7.0nm,1.0s						
NVAR	Mina Array Bea	72.22	55	P	P	04 03 46.0	+1.2
	comp=Z,0.6nm,0.8s,baz=288,slow=7.0,SNR=6.8						
HFS	Hagfors	72.23	336	LR	LR	04 37 33.6	
	comp=Z,2µm,19.3s,baz=248,slow=38						
NB2	NORSAR Subarra	72.26	338	P	P	04 03 45.1	+0.6
	comp=Z,1.0nm,0.6s,baz=40,slow=5.9						
NOA	NORSAR Array B	72.26	338	P	P	04 03 45.0	+0.6
	comp=Z,2.4nm,0.8s,baz=39,slow=5.8,SNR=5.5						
NOA	NORSAR Array B	72.26	338	P	P	04 03 45.0	+0.6
AKASG	Malin Array Be	73.05	323	P	P	04 03 49.3	0.0
	comp=Z,0.6nm,0.5s,baz=42,slow=6.2,SNR=5.7						
AKASG	Malin Array Be	73.05	323	IAmb	IAmb	04 03 50.3	

	comp=Z,0.7nm,0.7s						
FRB	**Frobisher Bay**	73.81	14	P	P	04 03 54.0	+0.5
	comp=Z,1.6nm,0.6s,baz=321,slow=9.7,SNR=5.1						
FRB	**Frobisher Bay**	73.81	14	P	P	04 03 54.0	+0.5
PDAR	**Pinedale Array**	74.75	47	P	P	04 04 00.8	+1.2
	comp=Z,0.4nm,0.6s,baz=264,slow=3.5,SNR=4.7						
BRTR	**Keskin Array B**	78.14	312	P	P	04 04 19.0	+0.1
	comp=Z,0.5nm,0.6s,baz=87,slow=5.1,SNR=2.1						
CLL	**Collm**	79.47	331	*e*P	P	04 04 26.0	+0.3
GERES	**GERESS Array B**	81.17	329	P	P	04 04 35.2	+0.2
	comp=Z,0.4nm,0.5s,baz=348,slow=4.5,SNR=4.0						
TXAR	**Lajitas Array**	87.33	54	P	P	04 05 08.0	+1.3
	comp=Z,0.4nm,0.9s,baz=268,slow=4.3,SNR=3.2						

ROM 20 03:59:29.8±0.0, 43°.368N±0°.002×12°.607E±0°.003, h9^{km}, ML0.8/2, 12C, Error ellipse: s-maj=0.2km s-min=0.1km az=134.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MURB	**Monte Urbino**	0.12	210	⇑P	Pg	03 59 33.0	+0.4
MURB	**Monte Urbino**	0.12	210	⇑P	Pg	03 59 33.0	+0.4
MURB				S	Sg	03 59 35.6	+0.9
MURB				AML	AML		
	comp=E,153µm,0.3s						
MURB				AML	AML		
	comp=N,130µm,0.2s						
MURB	**Monte Urbino**	0.12	210	⇑P	Pg	03 59 33.0	+0.4
MURB	**Monte Urbino**	0.12	210	⇑P	Pg	03 59 33.0	+0.4
MURB				AML	AML		
	comp=E,153µm,0.3s						
MURB				AML	AML		
	comp=N,130µm,0.2s						
MURB				AML	AML		
	comp=E,153µm,0.3s						
MURB				AML	AML		
	comp=N,130µm,0.2s						
MURB	**Monte Urbino**	0.12	210	⇑P	Pg	03 59 33.0	+0.4
FOSV	**Fossato di Vic**	0.13	123	P	Pg	03 59 33.3	+0.4
FOSV				S	Sg	03 59 35.8	+0.8
FOSV	**Fossato di Vic**	0.13	123	P	Pg	03 59 33.3	+0.4
FOSV	**Fossato di Vic**	0.13	123	P	Pg	03 59 33.3	+0.4
FOSV	**Fossato di Vic**	0.13	123	P	Pg	03 59 33.3	+0.4
ATVO	**AVT- Monte Val**	0.15	276	P	Pg	03 59 33.5	+0.5
ATVO				S	Sg	03 59 36.2	+0.9
ATVO				AML	AML		
	comp=E,32µm,0.2s						
ATVO				AML	AML		
	comp=N,29µm,0.2s						
ATVO				AML	AML		
	comp=N,29µm,0.2s						
ATVO	**AVT- Monte Val**	0.15	276	P	Pg	03 59 32.5	-0.5
ATVO				AML	AML		
	comp=E,32µm,0.2s						
ATVO				AML	AML		
	comp=N,29µm,0.2s						
ATVO				AML	AML		
	comp=E,32µm,0.2s						
ATVO				AML	AML		
	comp=N,29µm,0.2s						
FRON	**Frontone**	0.17	30	⇑P	Pg	03 59 34.1	+0.6
FRON				S	Sg	03 59 37.2	+1.2
FRON	**Frontone**	0.17	30	⇑P	Pg	03 59 34.1	+0.6
ATCC	**AVT- Casa Cast**	0.18	172	P	Pg	03 59 34.2	+0.6
ATCC				S	Sg	03 59 37.5	+1.2
ATCC	**AVT- Casa Cast**	0.18	172	P	Pg	03 59 34.2	+0.6
ARVD	**Arcevia**	0.28	62	⇑P	Pg	03 59 36.0	+0.6
ARVD				S	Sb	03 59 41.0	-0.7
ARVD	**Arcevia**	0.28	62	⇑P	Pg	03 59 36.0	+0.6
ARVD	**Arcevia**	0.28	62	⇑P	Pg	03 59 36.0	+0.6
ARVD	**Arcevia**	0.28	62	⇑P	Pg	03 59 36.0	+0.6
ARVD	**Arcevia**	0.28	62	⇑P	Pg	03 59 36.0	+0.6
SSP9	**Sansepolcro**	0.40	301	S	Sb	03 59 49.0	+3.6
TRI	**Trieste**	2.48	19	S	Sb	04 00 47.0	+1.8

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*GEN **20** 03:59:56.0, 44°.15N×10°.93E, h27^{km}±3^{km}, Ml1.4*

ROM 20 03:59:56.5±0.2, 44°.170N±0°.006×10°.919E±0°.007, h18^{km}±1^{km}, Md1.6/7, 4C-2D, Error ellipse: s-maj=0.7km s-min=0.2km az=342.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FNVD	**Fontana Vidola**	0.15	91	⇓P	Pg	04 00 00.5	-0.3
FNVD				S	Sg	04 00 03.5	-0.2
FNVD				END			
MTCR	**Monte La Croce**	0.15	158	⇑P	Pg	04 00 01.2	+0.3
MTCR				S	Sg	04 00 04.7	+0.8
MTCR				END			
POPM	**Popiglio**	0.17	223	P	Pg	04 00 01.4	+0.3
POPM				S	Sg	04 00 05.0	+0.9
POPM	**Popiglio**	0.17	223	S	Sb	04 00 02.0	-0.9
POPM	**Popiglio**	0.17	223	⇑P	Pg	04 00 01.4	+0.3
POPM				S	Sg	04 00 04.9	+0.8
POPM				END			
ZCCA	**Zocca**	0.18	13	S	Sb	04 00 02.0	-1.6
ZCCA	**Zocca**	0.18	13	⇑P	Pg	04 00 01.3	0.0
ZCCA				S	Sg	04 00 05.8	+1.2
ZCCA				END			
BDI	**Bagni Di Lucca**	0.26	245	⇑P	Pb	04 00 02.4	0.0
BDI				S	Sb	04 00 06.8	+0.4
BDI				END			
SARO	**Sassorosso**	0.37	272	P	Pg	04 00 04.3	-0.1
SARO				S	Sb	04 00 10.0	-0.2
SARO	**Sassorosso**	0.37	272	⇓P	Pg	04 00 04.2	-0.1
SARO				S	Sg	04 00 09.8	+0.1
SARO				END			
VLC	**Villacollemand**	0.38	269	P	Pg	04 00 04.6	+0.1
VLC				S	Sb	04 00 10.4	0.0
VLC				END			
ERBM	**Eremo**	0.44	305	P	Pg	04 00 05.5	0.0
PII	**Pisa**	0.53	213	P	Pb	04 00 07.4	+0.2
PII				S	Sb	04 00 14.7	+0.3
GRAM	**Graiana**	0.69	298	P	Pb	04 00 09.6	-0.4

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*MAN **20** 04:12:43.6, 5°.92N×126°.01E, h145^{km}, mb4.3, ML3.2, MS2.9*

*IDC **20** 04:12:47.6±0.8, 6°.06N×125°.86E, h150^{km}±15^{km}, mb3.3/5, mb1 3.5/5, mb1mx3.1/40, mbtmp3.7/5, MS3.1/2, Ms1 3.1/2, ms1mx2.7/31, Error ellipse: s-maj=101.6km s-min=21.7km az=68.0*

ISC 20 04:12:46.6±0.9, 6°.00N±0°.09×125°.85E±0°.09, h135^{km}±8^{km}, n13, σ$1^{s}.96$/18, mb3.7/5, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	0.17	306	*e*P	Pn	04 13 04.5	-0.4
DDMP				*e*S	Sn	04 13 18.8	0.0
MATI	**Mati**	1.02	23	*e*P	Pn	04 13 08.4	-1.7
MATI				*e*S	Sn	04 13 28.1	+0.1
DAV	**Davao City (W)**	1.09	346	P	Pn	04 13 11.6	+0.8
	107nm,0.3s,baz=51,slow=4.7,SNR=2.2						
DAV				S	Sn	04 13 32.4	+3.1
	75nm,0.3s,baz=104,slow=23,SNR=7.3						
KCP	**Kidapawan**	1.25	323	⇓*i*P	Pn	04 13 14.4	+1.9
KCP				*i* S	Sn	04 13 34.5	+2.4
SKMP	**Bagumbayan, Su**	1.40	292	*e*P	Pn	04 13 13.8	0.0
SKMP				*e*S	Sn	04 13 30.1	-4.6
BUKP	**Musuan**	2.02	337	*e*P	Pn	04 13 19.6	-1.6
BUKP				*e*S	Sn	04 13 46.0	-1.7
PAGZ	**Pagadian**	3.06	307	*e*P	Pn	04 13 35.2	+1.1
BATI	**Baumata**	16.25	188	LR	LR	04 23 40.7	
	comp=Z,91nm,18.1s,baz=327,slow=40						
FITZ	**Fitzroy Crossi**	23.95	180	P	P	04 17 48.9	+0.4
	2.3nm,0.5s,baz=4.2,slow=7.0,SNR=13						
FITZ				LR	LR	04 27 54.4	
	comp=Z,30nm,20.8s,baz=152,slow=38						
WRA	**Warramunga Arr**	27.10	162	P	P	04 18 16.0	-0.9
	0.5nm,0.4s,baz=342,slow=9.8,SNR=13						
ASAR	**Alice Springs**	30.52	165	P	P	04 18 47.6	+0.4
	0.9nm,0.4s,baz=340,slow=7.0,SNR=19						
STKA	**Stephens Creek**	40.55	159	P	P	04 20 13.6	+0.8
	1.3nm,0.7s,baz=339,slow=14,SNR=2.9						
MKAR	**Makanchi Array**	55.20	325	P	P	04 22 04.4	-1.0
	0.1nm,0.3s,baz=115,slow=7.1,SNR=2.5						

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*NIED **20** 04:25:21.0, 39°.91N×143°.73E, h8^{km}, MW6.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{18}Nm; M_{rr}1.43; $M_{\theta\theta}$0.12; $M_{\phi\phi}$-1.55; $M_{r\theta}$0.63; $M_{\theta\phi}$-0.36; $M_{\phi r}$0.66; Fault plane solution: $M_0$1.79000×10^{18} NP1:ϕ_s28.00000°, δ61.00000°, λ108.00000°. NP2:ϕ_s174.00000°, δ34.00000°, λ61.00000°.*

*BJI **20** 04:25:20.0±0.0, 39°.85N×143°.70E, h10^{km}, mB6.6/79, mb6.0/64, Ms6.7/97, Ms7 6.6/90*

*JMA **20** 04:25:20.9±0.3, 39°.91N×143°.73E, h8^{km}±4^{km}, M6.5*

JMA Felt III J1.

*IDC **20** 04:25:21.5±0.3, 39°.80N×143°.67E, h0^{km}, mb5.3/50, mb1 5.3/59, mb1mx5.3/66, mbtmp5.3/59, ML4.7/9, MS6.1/32, Ms1 6.1/32, ms1mx6.0/41, Error ellipse: s-maj=10.6km s-min=8.5km az=83.0*

*MOS **20** 04:25:22.3±1.1, 39°.93N×143°.55E, h12^{km}, mb6.1/88, MS6.3/59, Error ellipse: s-maj=5.4km s-min=3.3km az=107.1*

*NEIC **20** 04:25:23.4±1.5, 39°.82N±0°.05×143°.59E±0°.07, h10^{km}±1^{km}, mb5.8/555, Ms_20 6.2/839, Mwb6.2/78, Mww6.2, Mwc6.2(GCMT), Error ellipse: s-maj=10.3km s-min=7.6km az=128.0*

*NEIC **20** 04:25:23.1, 39°.84N×143°.58E, h12^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}1.68; $M_{\theta\theta}$-0.13; $M_{\phi\phi}$-1.55; $M_{r\theta}$0.64; $M_{\theta\phi}$-0.23; $M_{\phi r}$2.01; Fault plane solution: $M_0$2.67000×10^{18} NP1:ϕ_s183.06000°, δ19.19000°, λ77.99000°. NP2:ϕ_s15.75000°, δ71.25000°, λ94.14000°. Principal axes: T 2.7233, Plg64.0000°, Azm292.0000°; N -0.1130, Plg4.0000°, Azm194.0000°; P -2.6103, Plg26.0000°, Azm102.0000°;*

*GCMT **20** 04:25:28.4±0.0, 39°.85N×143°.83E, h12^{km}, MW6.2/173, Moment Tensor Solution. s160,c370; s173,c671; Duration: $3^{s}.0$ Moment tensor: Scale 10^{18}Nm; M_{rr}1.36±.01; $M_{\theta\theta}$0.07±.01; $M_{\phi\phi}$-1.43±.01; $M_{r\theta}$0.66±.02; $M_{\theta\phi}$-0.41±.01; $M_{\phi r}$1.77±.02; Best double couple: $M_0$2.38000×10^{18} NP1:ϕ_s188.00000°, δ19.00000°, λ79.00000°. NP2:ϕ_s19.00000°, δ71.00000°, λ94.00000°. Principal axes: T 2.2990, Plg63.0000°, Azm295.0000°; N 0.1610, Plg3.0000°, Azm198.0000°; P -2.4620, Plg26.0000°, Azm106.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*NEIC **20** 04:25:28, 39°.84N×143°.89E, h12^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}1.35; $M_{\theta\theta}$0.11; $M_{\phi\phi}$-1.46; $M_{r\theta}$0.92; $M_{\theta\phi}$-0.43; $M_{\phi r}$2.31; Fault plane solution: $M_0$2.89000×10^{18} NP1:ϕ_s186.00000°, δ16.00000°, λ76.00000°. NP2:ϕ_s21.00000°, δ75.00000°, λ94.00000°. Principal axes: T 2.7835, Plg60.0000°, Azm297.0000°; N 0.2015, Plg4.0000°, Azm200.0000°; P -2.9850, Plg30.0000°, Azm108.0000°;*

*NEIC **20** 04:25:29, 39°.85N×143°.96E, h12^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}0.99; $M_{\theta\theta}$0.19; $M_{\phi\phi}$-1.18; $M_{r\theta}$0.70; $M_{\theta\phi}$-0.29; $M_{\phi r}$2.48; Fault plane solution: $M_0$2.81000×10^{18} NP1:ϕ_s186.00000°, δ12.00000°, λ80.00000°. NP2:ϕ_s15.00000°, δ78.00000°, λ92.00000°. Principal axes: T 2.6848, Plg57.0000°, Azm288.0000°; N 0.2437, Plg2.0000°, Azm195.0000°; P -2.9285, Plg33.0000°, Azm104.0000°;*

*BGR **20** 04:25:30.3±0.0, 40°.95N×144°.13E, h27^{km}, mb5.1, mB_BB6.4, Ms6.6*

ISC 20 04:25:23.8±0.3, 39°.82N±0°.02×143°.62E±0°.03, h13^{km}±1^{km}, h14^{km}:pP-P, n2116, σ$1^{s}.61$/1903, mb5.8/540, MS6.2/541, 138C-108D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTH	**Tanohata**	1.35	276	⇑P	Pn	04 25 47.2	-1.2
JTH				*e*S	Sn	04 26 05.9	-0.3
MIYJ	**Miyakonagasawa**	1.41	261	⇑P	Pn	04 25 48.6	-0.5
MIYJ				*e*S	Sb	04 26 07.7	0.0
JKEN	**Kujiedanarisaw**	1.51	285	⇑P	Pn	04 25 49.1	-1.5
OFUJ	**Ofunato**	1.68	245	⇑P	Pn	04 25 52.3	-0.5
JANG	**Nango**	1.70	290	⇑P	Pn	04 25 52.0	-1.2
JANG				*e*S	Sn	04 26 15.0	+0.1
JKZ	**Kuzumaki**	1.77	276	⇑P	Pn	04 25 53.7	-0.4
JOM	**Ohasama**	1.83	260	⇑P	Pn	04 25 55.1	+0.2
JOM				*e*S	Sb	04 26 20.3	+0.5
JKMT	**Kesennumamotoy**	1.94	239	⇑P	Pn	04 25 55.9	-0.6
JMK	**Ichinoseki**	2.05	246	⇑P	Pn	04 25 57.7	-0.2
JTM	**Tenmabayashi**	2.17	297	Pn	Pn	04 26 00.6	+0.9
JTM	**Tenmabayashi**	2.17	297	⇑P	Pn	04 25 59.2	-0.4
ERM	**Erimo**	2.22	351	P	Pn	04 25 58.9	-1.4
ERM	**Erimo**	2.22	351	Pn	Pn	04 25 58.9	-1.4
ERM	**Erimo**	2.22	351	⇑P	Pn	04 25 58.3	-2.0
JIO	**Ouri**	2.23	233	⇑P	Pn	04 25 59.4	-1.0
JIKH	**Ishinomakikobu**	2.25	229	P	Pn	04 25 59.5	-1.2
JAH	**Hinai**	2.32	280	⇑P	Pn	04 26 02.0	+0.4
JRG	**Rokugo**	2.34	261	⇑P	Pn	04 26 02.2	+0.2
JOT	**Ohata**	2.50	309	⇑P	Pn	04 26 03.5	-0.7
JOT				*e*S	Sn	04 26 34.7	+0.2
JNBK	**Urakawa-nobuka**	2.54	345	P	Pn	04 26 03.4	-1.3
JHHS	**Hirosakihyakuz**	2.63	289	P	Pn	04 26 06.7	+0.8
JYK	**Kaneyama**	2.68	251	⇑P	Pn	04 26 07.0	+0.4
JSI2	**Shiura 2**	2.74	298	⇑P	Pn	04 26 07.4	0.0
JCH	**Churui**	2.80	356	P	Pn	04 26 06.4	-1.9
JCH				*e*S	Sn	04 26 39.7	-2.2
JKB	**Kayabe**	2.85	317	⇑P	Pn	04 26 08.8	-0.1
JKB				*e*S	Sn	04 26 42.9	-0.1
JIW	**Iwasaki**	2.87	287	⇑P	Pn	04 26 09.7	+0.5
JMM	**Marumori**	2.94	229	⇑P	Pn	04 26 09.0	-1.2
JMM	**Marumori**	2.94	229	Pn	Pn	04 26 09.1	-1.2
JMM	**Marumori**	2.94	229	⇑P	Pn	04 26 08.9	-1.2
JYS	**Shirataka**	3.19	241	⇑P	Pn	04 26 13.9	+0.2
JAK	**Akkeshi**	3.28	14	P	Pn	04 26 11.9	-2.9
JAK				*e*S	Sn	04 26 49.6	-4.0
JFR	**Furan**	3.43	347	P	Pn	04 26 16.0	-0.9
JFR				*e*S	Sn	04 26 57.2	-0.2
JEW	**Eniwo**	3.43	332	P	Pn	04 26 17.7	+0.8
JEW	**Eniwo**	3.43	332	Pn	Pn	04 26 16.9	0.0
JEW	**Eniwo**	3.43	332	⇑P	Pn	04 26 16.4	-0.5
JFT	**Otama**	3.44	229	P	Pn	04 26 17.0	-0.2
JFT				*e*S	Sn	04 27 00.6	+2.8
JAR	**Ashorobuto**	3.48	2	⇑P	Pn	04 26 14.7	-2.9
JAR				*e*S	Sn	04 26 54.4	-4.2
JAW	**Awa shima**	3.66	250	P	Pn	04 26 21.5	+1.4
NMR	**Nemuro--Hokkai**	3.88	23	*e*P	Pn	04 26 19.4	-3.8
NMR				*i* S	Sn	04 27 03.0	-5.6
JTKR	**Abashiri--Toko**	4.15	3	⇑P	Pn	04 26 24.5	-2.4
GLVR	**Golovnino**	4.17	19	*e*P	Pn	04 26 24.1	-2.9
GLVR				*i* S	Sn	04 27 11.0	-4.6
GLVR				pmax	pmax		
	comp=Z,2µm,0.6s						
GLVR				pmax	pmax		
	comp=Z,8µm,1.0s						
GLVR				pmax	pmax		
	comp=N,1µm,0.3s						
GLVR				smax	smax		
	comp=N,12µm,0.4s						
GLVR				smax	smax		
	comp=E,13µm,0.6s						
JKA	**Kamikawa-asahi**	4.36	350	Pn	Pn	04 26 29.0	-0.7
ASAJ	**Asahikawa**	4.36	350	Pn	Pn	04 26 28.9	-0.8
	comp=E,35nm,0.3s,baz=168,slow=12,SNR=68						
ASAJ				Sn	Sn	04 27 24.6	+4.2
	comp=E,91nm,0.3s,baz=92,slow=29,SNR=6.1						
ASAJ	**Asahikawa**	4.36	350	P	Pn	04 26 29.0	-0.8
GRPR	**Tuman**	4.47	20	*e*P	Pn	04 26 27.7	-3.5
GRPR				*i* S	Sn	04 27 17.2	-5.8
GRPR				pmax	pmax		
	comp=N,1µm,0.4s						
GRPR				pmax	pmax		
	comp=Z,2µm,0.4s						
GRPR				smax	smax		
	comp=N,10µm,0.4s						
GRPR				smax	smax		
	comp=E,11µm,0.4s						
JYT	**Yasato**	4.49	218	Pn	Pn	04 26 30.5	-1.0
JYT	**Yasato**	4.49	218	⇑P	Pn	04 26 29.8	-1.7
YUK	**Yuzh-Kuril'sk**	4.53	21	*e*P	Pn	04 26 29.4	-2.7
YUK				*i* S	Sn	04 27 20.7	-3.9
YUK				pmax	pmax		
	comp=N,1079µm,0.5s						
YUK				pmax	pmax		
	comp=Z,3497µm,0.5s						
YUK				pmax	pmax		
	comp=E,902µm,0.4s						
YUK				smax	smax		
	comp=N,15µm,0.6s						
YUK				smax	smax		
	comp=E,11µm,0.6s						
JSD	**Sado**	4.54	249	P	Pn	04 26 32.5	+0.3
JSD	**Sado**	4.54	249	Pn	Pn	04 26 32.6	+0.5
JSD	**Sado**	4.54	249	⇑P	Pn	04 26 32.5	+0.3
JKT	**Katashina**	4.59	230	P	Pn	04 26 34.4	+1.4
JAG	**Ashikaga**	4.72	225	⇑P	Pn	04 26 34.1	-0.5
JJN	**Nakama**	5.07	239	P	Pn	04 26 40.8	+1.4
JRY	**Ryogami san**	5.32	226	⇑P	Pn	04 26 42.3	-0.6
MJAR	**Matsushiro Arr**	5.37	234	Pn	Pn	04 26 43.8	+0.2
	comp=E,6.8nm,0.3s,baz=36,slow=13,SNR=13						
MJAR	**Matsushiro Arr**	5.37	234	P	Pn	04 26 44.3	+0.7
MJAR	**Matsushiro Arr**	5.37	234		Pn	04 26 44.3	+0.7
MAJO	**Matsushiro**	5.37	234	*c i*P	Pn	04 26 44.7	+1.1
MAJO	**Matsushiro**	5.37	234	Pn	Pn	04 26 43.9	+0.2
MAJO	**Matsushiro**	5.37	234	⇑P	Pn	04 26 44.4	+0.7
MAT	**Matsushiro**	5.37	234	P	Pn	04 26 44.4	+0.8
MAT				S	Sn	04 27 48.7	+3.4
MJB9	**Matsu-Tunnel**	5.37	234		Pn	04 26 45.3	+1.7
JGN	**Niukaw**	6.13	236	⇑P	Pn	04 26 55.6	+1.4
KUR	**Kuril'sk**	6.25	29	*d i*P	Pn	04 26 54.6	-1.1
KUR				*i* S	Sn	04 28 02.9	-4.1
KUR				pmax	pmax		
	comp=Z,2µm,0.7s						
KUR				pmax	pmax		
	comp=N,542nm,0.8s						
KUR				pmax	pmax		
	comp=E,515nm,0.6s						
KUR				pmax	pmax		
	comp=Z,16µm,3.7s						
KUR				smax	smax		
	comp=E,73µm,9.2s						
KUR				smax	smax		
	comp=N,36µm,6.9s						
KUR				smax	smax		
	comp=E,3µm,0.6s						
KUR				smax	smax		
	comp=N,2µm,0.5s						
KUR				MLR	MLR		
	comp=Z,167µm,14.0s						
KUR				MLR	MLR		
	comp=E,198µm,17.0s						
KUR				MLR	MLR		
	comp=N,141µm,13.0s						
JGF	**Kuroka**	6.51	232	Pn	Pn	04 27 00.2	+0.9
JGF	**Kuroka**	6.51	232	⇑P	Pn	04 27 00.1	+0.8
JYZW	**Yoshizawa**	6.71	226	P	Pn	04 27 03.3	+1.2
JSG	**Sagara**	6.72	222		Pn	04 27 02.4	+0.3
JSG	**Sagara**	6.72	222	⇑P	Pn	04 27 05.2	+3.1
INU	**Inuyama**	6.88	232	Pn	Pn	04 27 04.9	+0.6
INU	**Inuyama**	6.88	232	⇑P	Pn	04 27 04.3	-0.1
YSS	**Yuzh-Sakhalins**	7.16	355	α*e*P	Pn	04 27 07.1	-1.0
YSS				*e*S	Sn	04 28 25.2	-4.1
YSS				pmax	pmax		
	comp=N,300nm,1.1s						
YSS				pmax	pmax		
	comp=E,120nm,1.1s						
YSS				pmax	pmax		
	comp=Z,460nm,1.1s						
YSS				pmax	pmax		
	comp=Z,11µm,7.6s						
YSS				pmax	pmax		
	comp=N,11µm,8.7s						
YSS				MLR	MLR		
	comp=N,227µm,17.0s						
YSS	**Yuzh-Sakhalins**	7.16	355	Pn	Pn	04 27 07.0	-1.1
YSS	**Yuzh-Sakhalins**	7.16	355	⇑P	Pn	04 27 06.6	-1.5
TEY	**Ternei**	7.35	317	⇑*e*P	Pn	04 27 11.4	+0.6
TEY				pmax	pmax		
	comp=Z,130nm,1.5s						
TEY				pmax	pmax		
	comp=N,90nm,1.5s						
TEY				pmax	pmax		
	comp=E,100nm,1.5s						
TEY				pmax	pmax		
	comp=N,2µm,9.1s						
TEY				pmax	pmax		
	comp=E,2µm,9.1s						
TEY				pmax	pmax		
	comp=Z,2µm,9.1s						
JHJ2	**Mitsune**	7.36	206	Pn	Pn	04 27 09.7	-1.2
JHJ2	**Mitsune**	7.36	206	⇑P	Pn	04 27 12.2	+1.2
JHJ	**Hachijo jima 2**	7.36	206	Pn	Pn	04 27 11.2	+0.3
	comp=Z,144nm,0.3s,baz=87,slow=23,SNR=7.6						
JHJ				Sn	Sn	04 28 27.9	-6.5
	comp=Z,430nm,0.3s,baz=76,slow=24,SNR=9.4						
JWT	**Wachi**	7.94	238	Pn	Pn	04 27 20.0	+1.1
JWT	**Wachi**	7.94	238	⇑P	Pn	04 27 20.2	+1.4
UGL	**Uglegorsk**	9.32	354	*e*P	Pn	04 27 36.5	-1.3
UGL				*e*S	Sn	04 29 19.3	-3.1
UGL				pmax	pmax		
	comp=Z,231nm,1.3s						
UGL				pmax	pmax		
	comp=Z,11µm,10.4s						
UGL				smax	smax		
	comp=N,370nm,1.2s						
UGL				MLR	MLR		
	comp=Z,166µm,15.0s						
UGL				MLR	MLR		
	comp=N,158µm,14.0s						
UGL				MLR	MLR		
	comp=E,272µm,15.0s						
JHS	**Saijyo**	9.64	243	Pn	Pn	04 27 43.3	+1.1
JHS	**Saijyo**	9.64	243	⇑P	Pn	04 27 43.8	+1.6
USA0B	**Ussuriysk Arra**	9.70	301	P	Pn	04 27 44.2	+1.3
USA0B	**Ussuriysk Arra**	9.70	301	Pn	Pn	04 27 44.2	+1.3
USRK	**Ussuriysk Ar.**	9.70	301	Pn	Pn	04 27 44.2	+1.3
	baz=98,slow=14,SNR=192						
MSHR	**Mys Shultsa**	9.79	290	*c i*P	Pn	04 27 44.4	+0.2
JMN	**Monobe**	9.89	235	Pn	Pn	04 27 46.2	+0.5
JMN	**Monobe**	9.89	235	⇑P	Pn	04 27 45.1	-0.6
TYV	**Tymovskoe**	11.06	357	*e*P	Pn	04 28 00.6	-1.0
TYV				*e*S	Sn	04 30 06.0	+0.9
TYV				pmax	pmax		
	comp=Z,5µm,3.7s						
TYV				pmax	pmax		
	comp=Z,119nm,1.2s						
TYV				smax	smax		
	comp=E,112nm,1.6s						
TYV				smax	smax		
	comp=E,19µm,5.8s						
TYV				MLR	MLR		
	comp=E,237µm,12.0s						
TYV				MLR	MLR		
	comp=Z,231µm,15.0s						
MDJ	**Mudanjiang**	11.45	299	P	Pn	04 28 08.3	+1.4
MDJ				S	Sn	04 30 23.0	+8.4
MDJ				pmax	pmax		
	comp=Z,34µm,7.7s						
MDJ				LR	LR		
	comp=Z,170µm,12.6s						
MDJ				LR	LR		
	comp=Z,274µm,13.5s						
MDJ				LR	LR		
	comp=Z,341µm,13.8s						
MDJ	**Mudanjiang**	11.45	299	Pn	Pn	04 28 08.4	+1.5
GRNR	**Gornyy**	12.06	338	⇑*i*P	Pn	04 28 15.5	+0.3
GRNR				*e*S	Sn	04 30 30.0	+0.5
GRNR				pmax	pmax		
	comp=N,190nm,1.1s						
GRNR				pmax	pmax		
	comp=E,120nm,1.1s						
GRNR				pmax	pmax		
	comp=Z,210nm,1.1s						
GRNR				smax	smax		
	comp=N,40nm,1.1s						
GRNR				MLR	MLR		
	comp=E,61µm,15.0s						
GRNR				MLR	MLR		
	comp=N,104µm,16.0s						
GRNR				MLR	MLR		
	comp=Z,91µm,15.0s						
JNU	**Nakatsue**	12.23	241	Pn	Pn	04 28 18.2	+0.5
	comp=Z,5.6nm,0.3s,baz=50,slow=6.4,SNR=24						
JNU				LR	LR	04 33 30.9	
	comp=Z,264µm,18.4s,baz=50,slow=40						
JNU	**Nakatsue**	12.23	241	Pn	Pn	04 28 17.6	-0.1
JNU	**Nakatsue**	12.23	241	⇑P	Pn	04 28 17.9	+0.1
KSRS	**Korea Array**	12.50	264	Pn	Pn	04 28 23.6	+2.4
	comp=Z,2.4nm,0.3s,baz=80,slow=12,SNR=82						
KSRS				LR	LR	04 32 46.6	
	comp=Z,108µm,18.7s,baz=66,slow=35						
JTU	**Tsushima**	12.51	249	Pn	Pn	04 28 21.3	-0.1
JTU	**Tsushima**	12.51	249	⇑P	Pn	04 28 21.9	+0.5
KS19	**Wonju Array Si**	12.53	264		Pn	04 28 22.9	+1.2
KSAR	**Wonju Array Be**	12.53	264	P	Pn	04 28 22.6	+0.9

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KSAR  Wonju Array Be     12.53 264            Pn        04 28 22.6 +0.9
KLR   Kul'dur            12.64 322   Pn       Pn        04 28 22.3 -0.9
      comp=Z,2.2nm,0.3s,baz=131,slow=12,SNR=230
KLR                                  LR       LR        04 33 47.2
      comp=Z,192µm,18.0s,baz=134,slow=40
KLR   Kul'dur            12.64 322ceP         Pn        04 28 23.0 -0.2
JCJ   Chichijima         12.75 186   Pn       Pn        04 28 21.6 -3.1
      comp=Z,37nm,0.3s,baz=140,slow=1.6,SNR=4.4
JCJ                                  Sn       Sn        04 30 33.8  -13
      comp=Z,49nm,0.3s,baz=106,slow=23,SNR=4.4
TJN   Taejon             13.25 260ceP         Pn        04 28 33.0 +1.4
INCN  Inchon             13.48 265   P        Pn        04 28 36.3 +1.6
INCN  Inchon             13.48 265   Pn       Pn        04 28 36.3 +1.6
INCN  Inchon             13.48 265   P        Pn        04 28 35.5 +0.8
INCN                                 P        Pn        04 28 35.5 +0.8
INCN  Inchon             13.48 265 ⇑P         Pn        04 28 35.7 +1.0
NKL   Nikolayevsk        13.49 352  eP        Pn        04 28 31.4 -3.3
NKL                                  pmax     pmax
      comp=E,47nm,0.9s
NKL                                  pmax     pmax
      comp=N,9.0nm,1.4s
NKL                                  pmax     pmax
      comp=Z,102nm,1.4s
NKL                                  MLR      MLR
      comp=Z,112µm,15.0s
JSU   Suzuyama           13.53 236   Pn       Pn        04 28 35.9 +0.5
JSU   Suzuyama           13.53 236 ⇑P         Pn        04 28 32.2 -3.2
OKH   Okha               13.74 358c iP        Pn        04 28 36.4 -1.8
OKH                                  pmax     pmax
      comp=Z,6µm,12.3s
OKH                                  MLR      MLR
      comp=Z,153µm,16.0s
OKH                                  MLR      MLR
      comp=N,238µm,16.0s
OKH                                  MLR      MLR
      comp=E,309µm,16.0s
SKR   Severo-Kuril's     13.96  35  eP        Pn        04 28 40.9 -0.3
SKR                                 eS        Sn        04 31 25.0 +9.1
SKR                                  pmax     pmax
      comp=Z,800nm,5.2s
SKR                                  MLR      MLR
      comp=Z,64µm,14.0s
SKR                                  MLR      MLR
      comp=Z,64µm,14.0s
CN2   Changchun          14.12 292  eP        Pn        04 28 42.3 -1.1
CN2                                  pmax     pmax
      comp=Z,27µm,8.0s
CN2                                  LR       LR
      comp=Z,103µm,13.0s
CN2                                  LR       LR
      comp=Z,100µm,13.0s
CN2                                  LR       LR
      comp=Z,111µm,14.0s
SNY   Shenyang           15.30 284 ⇑P         Pn        04 28 58.3 -1.1
SNY                                  S        Sn        04 31 51.4 +2.7
SNY                                  LR       LR
      comp=Z,98µm,14.0s
SNY                                  LR       LR
      comp=Z,89µm,17.3s
SNY                                  LR       LR
      comp=Z,133µm,16.6s
PEA0B Petropavlovsk-     16.41  31   P        Pn        04 29 13.8 +0.1
PEA0B                                pmax     pmax
      comp=Z,816nm,1.8s
PEA0B Petropavlovsk-     16.41  31   Pn       Pn        04 29 13.8 +0.1
PETK  Petropavlovsk-     16.41  31   Pn       Pn        04 29 08.2 -5.5
      comp=Z,0.3nm,0.3s,baz=188,slow=9.0,SNR=8.3
PETK                                 LR       LR        04 35 11.5
      comp=Z,42µm,19.2s,baz=218,slow=36
PETK  Petropavlovsk-     16.41  31   P        Pn        04 29 09.0 -4.7
PETK  Petropavlovsk-     16.41  31            Pn        04 29 09.0 -4.7
PET   Petropavlovsk      16.74  33⇑iP         P         04 29 20.7 +0.6
PET                                 eS        Sn        04 32 23.2 -0.3
PET                                  pmax     pmax
      comp=Z,365nm,1.1s
PET                                  pmax     pmax
      comp=Z,5µm,14.3s
PET                                  smax     smax
      comp=E,37µm,10.3s
PET                                  smax     smax
      comp=N,15µm,11.1s
PET                                  MLR      MLR
      comp=Z,165µm,15.0s
PET                                  MLR      MLR
      comp=Z,173µm,14.0s
PET   Petropavlovsk      16.74  33   P        P         04 29 19.3 -0.8
PET   Petropavlovsk      16.74  33 ⇑P         Pn        04 29 18.8 +0.9
DL2   Dalian             17.03 274⇑iP         Pn        04 29 20.6 -0.9
DL2                                  PP       PnPn      04 29 34.1 +3.0
DL2                                  S        Sn        04 32 30.8 +0.2
DL2                                  SS       SnSn      04 32 50.3 +6.6
DL2                                  pmax     pmax
      comp=Z,840nm,1.1s
DL2                                  pmax     pmax
      comp=Z,24µm,6.0s
DL2                                  LR       LR
      comp=Z,94µm,13.6s
DL2                                  LR       LR
      comp=Z,62µm,14.7s
DL2                                  LR       LR
      comp=Z,90µm,15.1s
JMZ   Minamidaito 2      17.39 220 ⇓P         P         04 29 27.6 +0.1
ZEA   Zeya               17.81 327ceP         Pn        04 29 28.3 -2.9
ZEA                                  pmax     pmax
      comp=E,130nm,1.6s
ZEA                                  pmax     pmax
      comp=N,180nm,1.4s
ZEA                                  pmax     pmax
      comp=Z,300nm,1.6s
ZEA                                  pmax     pmax
      comp=E,4µm,8.4s
ZEA                                  pmax     pmax
      comp=N,6µm,12.0s
ZEA                                  pmax     pmax
      comp=Z,8µm,10.2s
ZEA                                  MLR      MLR
      comp=E,110µm,14.0s
ZEA                                  MLR      MLR
      comp=Z,110µm,15.0s
JOW   Kunigami           18.19 229   P        Pn        04 29 34.2 -1.8
      comp=Z,2.2nm,0.3s,baz=45,slow=5.2,SNR=12
JOW   Kunigami           18.19 229            Pn        04 29 34.1 -1.9
JOW   Kunigami           18.19 229 ⇑P         Pn        04 29 32.4 -3.6
SSE   Sheshan            20.20 251   P        P         04 29 57.9 -0.3
SSE                                  S        S         04 33 43.8 -0.8
SSE                                  pmax     pmax
      comp=Z,5µm,8.1s
SSE   Sheshan            20.20 251   P        P         04 29 55.9 -2.4
MA2   Magadan            20.29  11   P        P         04 29 59.5 +0.5
      comp=Z,173nm,0.8s,baz=195,slow=9.0,SNR=55
MA2                                  LR       LR        04 38 38.8
      comp=Z,71µm,19.0s,baz=200,slow=39
MA2   Magadan            20.29  11   P        P         04 29 58.0 -0.9
MA2                                  IAmb     IAmb      04 30 30.2
      comp=Z,1µm,2.0s
MA2                                  IAMs_20  IAMs_20   04 38 17.7
      comp=Z,73µm,20.0s
MA2   Magadan            20.29  11 ⇑P         P         04 29 56.9 -2.1
BJI   Beijing            21.02 279   P        P         04 30 04.4 -2.6
BJI                                  S        S         04 33 59.4 -1.3
BJI                                  pmax     pmax
      comp=Z,260nm,1.1s
BJI                                  pmax     pmax
      comp=Z,15µm,13.0s
BJI                                  LR       LR
      comp=Z,67µm,13.9s
BJI                                  LR       LR
      comp=Z,68µm,17.1s
BJI                                  LR       LR
      comp=Z,42µm,18.4s
BJT   Baijiatuau         21.03 279   P        P         04 30 04.8 -2.4
BJT                                  pmax     pmax
      comp=Z,621nm,1.3s
BJT                                  MLR      MLR
      comp=Z,69µm,18.0s
BJT   Baijiatuau         21.03 279   P        P         04 30 04.8 -2.4
BJT                                  IAmb     IAmb      04 30 18.1
      comp=Z,621nm,1.3s
BJT   Baijiatuau         21.03 279   IAMs_20  IAMs_20   04 38 25.6
      comp=Z,69µm,18.0s
TIA   Tai'an             21.15 269   P        P         04 30 05.8 -2.8
TIA                                  S        S         04 33 57.1 -6.4
TIA                                  pmax     pmax
      comp=Z,16µm,12.0s
TIA                                  LR       LR
      comp=Z,103µm,12.7s
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TIA                                  LR       LR
      comp=Z,172µm,13.2s
TIA                                  LR       LR
      comp=Z,242µm,12.9s
NJ2   Nanjing            21.45 257  eP        P         04 30 09.4 -2.3
NJ2                                  pP       pP        04 30 14.9  0.0
NJ2                                  sP       pwP       04 30 18.8 +0.9
NJ2                                  S        S         04 34 09.0 -0.4
NJ2                                  sS       Sn        04 34 17.8 +0.4
NJ2                                  pmax     pmax
      comp=Z,15µm,10.9s
NJ2                                  LR       LR
      comp=Z,128µm,17.5s
NJ2                                  LR       LR
      comp=Z,88µm,15.6s
NJ2                                  LR       LR
      comp=Z,121µm,16.1s
ANA2  Anatahan           23.46 175   P        P         04 30 31.3 -1.8
ANA2                                 IAmb     IAmb      04 31 15.3
      comp=Z,450nm,1.6s
SEY   Seymchan           23.74  10   P        P         04 30 34.9 -0.5
      comp=Z,277nm,1.1s,baz=198,slow=7.5,SNR=84
SEY                                  LR       LR        04 41 35.8
      comp=Z,70µm,18.8s,baz=197,slow=41
TATO  Taipei             23.75 238   P        P         04 30 34.9 -0.9
TATO  Taipei             23.75 238   IAMs_20  IAMs_20   04 41 20.6
      comp=Z,89µm,18.0s
TATO  Taipei             23.75 238   P        P         04 30 32.8 -3.0
TATO                                 P        P         04 30 32.8 -3.0
TATO                                 P        P         04 30 32.8 -3.0
YAK   Yakutsk            23.81 344   P        P         04 30 34.8 -1.2
      comp=Z,158nm,0.6s,baz=140,slow=3.8,SNR=43
YAK                                  LR       LR        04 40 19.5
      comp=Z,45µm,20.0s,baz=146,slow=38
YAK   Yakutsk            23.81 344c iP        P         04 30 33.1 -2.9
YAK                                 eS        S         04 34 47.0 -4.1
YAK                                 eSSS      SSS       04 35 37.4
YAK                                  pmax     pmax
      comp=Z,367nm,0.9s
YAK                                  pmax     pmax
      comp=N,218nm,1.1s
YAK                                  pmax     pmax
      comp=E,33nm,1.0s
YAK                                  smax     smax
      comp=N,5µm,2.9s
YAK                                  smax     smax
      comp=E,8µm,4.9s
YAK                                  MLR      MLR
      comp=Z,53µm,19.0s
YAK   Yakutsk            23.81 344   P        P         04 30 33.4 -2.6
YAK                                  IAMs_20  IAMs_20   04 40 53.1
      comp=Z,54µm,18.0s
YAK   Yakutsk            23.81 344 ⇑P         P         04 30 32.8 -3.3
CIT   Chita              24.02 311  eP        P         04 30 37.1 -1.2
CIT                                 eS        S         04 34 54.7 -0.2
CIT                                  pmax     pmax
      comp=Z,3µm,2.5s
YHNB  Yeheng             24.03 238   IAmb     IAmb      04 30 52.8
      comp=Z,521nm,1.2s
YHNB                                 IAMs_20  IAMs_20   04 40 21.2
      comp=Z,75µm,18.0s
NACB  Ninganchiao        24.24 237   IAmb     IAmb      04 30 50.3
      comp=Z,285nm,0.9s
HHC   Hu-ho-hao-te       24.39 283  eP        P         04 30 39.0 -2.8
HHC                                  S        S         04 34 55.1 -5.9
HHC                                  pmax     pmax
      comp=Z,14µm,5.8s
HHC                                  LR       LR
      comp=Z,57µm,15.3s
HHC                                  LR       LR
      comp=Z,98µm,15.3s
HHC                                  LR       LR
      comp=Z,115µm,14.5s
SMY   Shemya             24.50  48   P        P         04 30 42.4 -0.1
SMY                                  pmax     pmax
      comp=Z,754nm,1.5s
SMY                                  MLR      MLR
      comp=Z,24µm,19.0s
SMY   Shemya             24.50  48   P        P         04 30 42.4 -0.1
SSLB  Suanglung          24.92 237   IAmb     IAmb      04 31 03.2
      comp=Z,291nm,0.9s
SSLB                                 IAMs_20  IAMs_20   04 41 03.2
      comp=Z,91µm,19.0s
YULB  Yu-li              24.98 236   IAMs_20  IAMs_20   04 42 02.8
      comp=Z,64µm,20.0s
TPUB  Ta-pu              25.48 237   P        P         04 30 50.8 -0.8
TWG   Pinlang            25.54 235   P        P         04 30 51.2 -1.0
TWG                                  IAMs_20  IAMs_20   04 41 37.5
      comp=Z,62µm,19.0s
WHN   Wuhan              25.55 258 ⇑P         P         04 30 51.8 -0.5
WHN                                  sP       pwP       04 31 01.9 +3.3
WHN                                  S        S         04 35 19.8 +0.2
WHN                                  pmax     pmax
      comp=Z,3µm,1.1s
WHN                                  pmax     pmax
      comp=Z,19µm,5.4s
WHN                                  LR       LR
      comp=Z,462µm,15.7s
WHN                                  LR       LR
      comp=Z,247µm,15.3s
WHN                                  LR       LR
      comp=Z,257µm,16.8s
BTO   Baotou             25.58 283  eP        P         04 30 51.8 -0.8
BTO                                  S        S         04 35 18.0 -2.2
QZH   Quanzhou           25.70 242⇑iP         P         04 30 53.5 -0.2
QZH                                  S        S         04 35 22.5 +0.4
QZH                                  pmax     pmax
      comp=Z,310nm,2.0s
QZH                                  pmax     pmax
      comp=Z,13µm,7.8s
QZH                                  LR       LR
      comp=Z,73µm,17.9s
QZH                                  LR       LR
      comp=Z,57µm,17.0s
QZH                                  LR       LR
      comp=Z,64µm,13.2s
GUMO  Guam               26.15 177   LR       LR        04 41 46.8
      comp=Z,23µm,18.9s,baz=4.0,slow=38
GUMO  Guam               26.15 177   P        P         04 30 57.0 -0.8
GUMO                                 pmax     pmax
      comp=Z,492nm,1.4s
GUMO  Guam               26.15 177   P        P         04 30 57.0 -0.8
GUMO                                 IAmb     IAmb      04 31 40.6
      comp=Z,492nm,1.4s
KNMB  Chin-men Tao       26.16 242   P        P         04 30 57.6 -0.2
BOD   Bodaibo            26.21 323  eP        P         04 30 57.1 -0.9
BOD                                  pmax     pmax
      comp=Z,381nm,2.2s
ULN   Ulaanbaatar        27.36 299ceP         P         04 31 08.7  0.0
ULN                                  pmax     pmax
      comp=Z,726nm,1.7s
ULN                                  MLR      MLR
      comp=Z,104µm,15.0s
ULN   Ulaanbaatar        27.36 299   P        P         04 31 08.3 -0.5
ULN   Ulaanbaatar        27.36 299   P        P         04 31 09.2 +0.5
ULN   Ulaanbaatar        27.36 299 ⇑P         P         04 31 08.8  0.0
SONM  Songino Array      27.80 299   P        P         04 31 12.8 +0.1
      comp=Z,102nm,0.8s,baz=100,slow=8.8,SNR=155
SONM                                 LR       LR        04 43 06.7
      comp=Z,48µm,18.4s,baz=101,slow=38
SONM  Songino Array      27.80 299   P        P         04 31 12.1 -0.6
SONM                                 IAmb     IAmb      04 31 16.8
      comp=Z,306nm,1.2s
XAN   Xi'an              28.21 269   P        P         04 31 15.5 -0.7
XAN                                  pP       pP        04 31 19.4 -0.2
XAN                                  sP       pwP       04 31 23.0 +0.4
XAN                                  PP       PnPn      04 32 07.3 +3.0
XAN                                  S        S         04 36 01.1 -0.5
XAN                                  sS       sS        04 36 11.3 +4.1
XAN                                  ScS      ScS       04 42 00.3 -2.8
XAN                                  pmax     pmax
      comp=Z,99nm,1.0s
XAN                                  pmax     pmax
      comp=Z,13µm,8.4s
XAN                                  LR       LR
      comp=Z,95µm,14.6s
XAN                                  LR       LR
      comp=Z,121µm,15.2s
XAN                                  LR       LR
      comp=Z,139µm,14.6s
XAN   Xi'an              28.21 269   P        P         04 31 15.6 -0.7
XAN                                  pmax     pmax
      comp=Z,767nm,1.4s
XAN                                  MLR      MLR
      comp=Z,38µm,19.0s
XAN   Xi'an              28.21 269   P        P         04 31 15.6 -0.7
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H11N2 WAKE ISLAND Hy     28.30 128   T        T         05 00 44.6
      baz=318,slow=75,SNR=215
H11N1 WAKE ISLAND Hy     28.31 128   T        T         05 00 46.2
      baz=318,slow=75,SNR=148
H11N3 WAKE ISLAND Hy     28.32 128   T        T         05 00 45.6
      baz=318,slow=75,SNR=432
H11S1 WAKE ISLAND Hy     29.12 130   T        T         05 01 57.9
      baz=326
H11S3 WAKE ISLAND Hy     29.13 130   T        T         05 01 51.5
      baz=326
H11S2 WAKE ISLAND Hy     29.14 130   T        T         05 01 55.2
      baz=326
ENH   Enshi              29.37 262   P        P         04 31 26.1 -0.5
ENH                                  IAMs_20  IAMs_20   04 43 16.5
      comp=Z,73µm,19.0s
IRK   Irkutsk            29.63 308  eP        P         04 31 28.6 -0.1
IRK                                  pmax     pmax
      comp=Z,702nm,2.3s
ADK   Adak               29.79  53   IAMs_20  IAMs_20   04 39 43.4
      comp=Z,43µm,18.0s
SZP   Santa              29.92 229   P        P         04 31 31.6 +0.1
TLY   Talaya             29.93 307   P        P         04 31 32.3 +1.0
      comp=Z,31nm,0.7s,baz=107,slow=5.5,SNR=50
TLY                                  LR       LR        04 44 20.1
      comp=Z,13µm,19.5s,baz=104,slow=38
TLY   Talaya             29.93 307c iP        P         04 31 31.0 -0.4
TLY                                 e                   04 32 37.3
TLY                                 eS        S         04 36 33.9 +5.5
TLY                                  pmax     pmax
      comp=Z,430nm,1.7s
TLY                                  MLR      MLR
      comp=Z,243µm,14.0s
TLY   Talaya             29.93 307   P        P         04 31 31.3 -0.1
TLY   Talaya             29.93 307   P        P         04 31 32.0 +0.6
TLY                                  P        P         04 31 32.0 +0.6
TLY   Talaya             29.93 307 ⇑P         P         04 31 31.3 -0.1
ZAK   Zakamensk          30.02 304  eP        P         04 31 32.6 +0.3
ZAK                                  pmax     pmax
      comp=Z,226nm,1.3s
HKC   Hong Kong Obse     30.48 244 ⇑P         P         04 31 38.0 +1.6
GZH   Guangzhou          30.55 246   P        P         04 31 33.1 -3.9
GZH                                  PP       PnPn      04 32 31.0 -5.0
GZH                                  S        S         04 36 32.3 -6.1
GZH                                  pmax     pmax
      comp=Z,10µm,9.0s
GZH                                  LR       LR
      comp=Z,74µm,13.3s
GZH                                  LR       LR
      comp=Z,49µm,11.4s
LZH   Lanzhou            31.40 276 ⇑P         P         04 31 44.6 -0.1
LZH                                  pP       pP        04 31 48.6 +0.6
LZH                                  sP       pwP       04 31 52.3 +1.2
LZH                                  PP       PnPn      04 32 49.3 +2.1
LZH                                  S        S         04 36 46.6 -5.4
LZH                                  sS       sS        04 37 03.4 +5.9
LZH                                  SS       ScP       04 38 34.6  +14
LZH                                  pmax     pmax
      comp=Z,95nm,1.0s
LZH                                  pmax     pmax
      comp=Z,8µm,8.9s
LZH                                  LR       LR
      comp=Z,89µm,15.2s
LZH                                  LR       LR
      comp=Z,109µm,14.1s
LZH                                  LR       LR
      comp=Z,112µm,15.2s
MOY   Mondy              31.57 306  eP        P         04 31 44.9 -1.1
MOY                                  pmax     pmax
      comp=Z,537nm,3.0s
TIXI  Tiksi              32.77 351   P        P         04 31 55.4 -0.6
TIXI                                 pmax     pmax
      comp=Z,160nm,1.3s
TIXI                                 MLR      MLR
      comp=Z,60µm,19.0s
TIXI  Tiksi              32.77 351   P        P         04 31 55.4 -0.6
TIXI                                 IAmb     IAmb      04 32 08.5
      comp=Z,160nm,1.3s
TIXI                                 IAMs_20  IAMs_20   04 47 01.7
      comp=Z,60µm,19.0s
TIXI  Tiksi              32.77 351 ⇑P         P         04 31 54.5 -1.5
GYA   Guiyang            33.45 258 ⇑P         P         04 32 02.5 -0.1
GYA                                  S        S         04 37 23.4 -0.4
GYA                                  pmax     pmax
      comp=Z,69nm,0.9s
GYA                                  pmax     pmax
      comp=Z,6µm,6.5s
GYA                                  LR       LR
      comp=Z,82µm,14.6s
GYA                                  LR       LR
      comp=Z,50µm,14.1s
GYA                                  LR       LR
      comp=Z,34µm,16.0s
CD2   Chengdu            33.47 267 ⇑P         P         04 32 01.5 -1.2
CD2                                  PP       PnPn      04 33 15.0 +1.3
CD2                                  S        S         04 37 24.8 +0.8
CD2                                  pmax     pmax
      comp=Z,470nm,1.2s
CD2                                  pmax     pmax
      comp=Z,4µm,11.2s
CD2                                  LR       LR
      comp=Z,97µm,12.8s
CD2                                  LR       LR
      comp=Z,111µm,16.1s
CD2                                  LR       LR
      comp=Z,77µm,14.9s
GTA   Gaotai             33.49 284 ⇑P         P         04 32 03.0 +0.1
GTA                                  pP       pP        04 32 06.8 +0.5
GTA                                  sP       pwP       04 32 10.6 +1.3
GTA                                  PP       PP        04 33 16.8 -1.8
GTA                                  S        S         04 37 18.1 -6.3
GTA                                  sS       sS        04 37 36.0 +5.7
GTA                                  ScS      ScS       04 42 22.3 -6.6
GTA                                  pmax     pmax
      comp=Z,140nm,1.1s
GTA                                  pmax     pmax
      comp=Z,9µm,8.0s
GTA                                  LR       LR
      comp=Z,41µm,17.5s
GTA                                  LR       LR
      comp=Z,95µm,17.1s
GTA                                  LR       LR
      comp=Z,109µm,15.9s
GAMB  Gambell            35.44  33   P        P         04 32 18.8 -0.5
GAMB                                 IAMs_20  IAMs_20   04 48 09.7
      comp=Z,32µm,19.0s
GAMB  Gambell            35.44  33 ⇓p         P         04 32 22.1 +2.9
QIZ   Qiongzhong         35.67 244   P        P         04 32 22.3 +0.5
QIZ                                  PP       PP        04 33 44.0 +1.2
QIZ                                  S        S         04 38 01.0 +3.0
QIZ                                  pmax     pmax
      comp=Z,5µm,8.3s
QIZ                                  LR       LR
      comp=Z,60µm,16.7s
QIZ                                  LR       LR
      comp=Z,42µm,12.3s
QIZ                                  LR       LR
      comp=Z,57µm,18.1s
QIZ   Qiongzhong         35.67 244   P        P         04 32 21.7  0.0
QIZ                                  IAmb     IAmb      04 32 34.4
      comp=Z,165nm,1.5s
QIZ   Qiongzhong         35.67 244   IAMs_20  IAMs_20   04 47 52.9
      comp=Z,56µm,19.0s
DAV   Davao City (W)     36.41 211   IAMs_20  IAMs_20   04 47 01.4
      comp=Z,33µm,18.0s
DAV   Davao City (W)     36.41 211⇑eP         P         04 32 27.2 -0.9
KMI   Kunming            37.13 259 ⇑P         P         04 32 34.1 -0.4
KMI                                  pP       sP        04 32 38.8 -0.5
KMI                                  sP       pwP       04 32 41.0 +0.1
KMI                                  PP       PP        04 33 58.6 -0.5
KMI                                  PcP      PcP       04 34 52.6 -2.1
KMI                                  S        S         04 38 19.1 -1.7
KMI                                  sS       sS        04 38 27.6 +1.2
KMI                                  SS       SnSn      04 40 50.4 -4.7
KMI                                  pmax     pmax
      comp=Z,190nm,1.2s
KMI                                  pmax     pmax
      comp=Z,8µm,7.1s
KMI                                  LR       LR
      comp=Z,43µm,16.2s
KMI                                  LR       LR
      comp=Z,45µm,17.0s
KMI                                  LR       LR
      comp=Z,62µm,17.2s
KWAJ  Kwajalein Atol     37.59 139   IAMs_20  IAMs_20   04 48 17.3
      comp=Z,33µm,18.0s
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ANM	**Nome**	**38.32**	**33**	IAMs_20	IAMs_20	04 49 45.5	
	comp=Z,30µm,19.0s						
SLVN	**Son La**	**38.46**	**253**	P	**P**	**04 32 45.6**	**0.0**
SLVN				IAmb	IAmb	04 33 13.1	
	comp=Z,199nm,1.3s						
SLVN				IAMs_20	IAMs_20	04 49 09.9	
	comp=Z,36µm,18.0s						
DGZ	**Jazzator, Alta**	**40.24**	**303***c*	*i*P	**P**	**04 33 00.8**	**+0.6**
DGZ				pmax	pmax		
	comp=Z,461nm,1.1s						
DGZ				MLR	MLR		
	comp=Z,140µm,14.0s						
RDOG	**Red Dog Mine**	**40.24**	**28**	P	**P**	**04 32 59.9**	**+0.1**
RDOG				IAMs_20	IAMs_20	04 49 55.4	
	comp=Z,23µm,20.0s						
NONG	**Nongkai**	**41.06**	**250**	P	**P**	**04 33 08.1**	**+0.9**
	comp=Z,51µmcomp=Z,400nm,1.2s						
WMQ	**Urumqi**	**41.20**	**294**	P	**P**	**04 33 09.3**	**+1.2**
WMQ				pP	pwP	04 33 15.8	+1.5
WMQ				sP	sP	04 33 21.3	+8.4
WMQ				PP	**PnPn**	**04 34 46.4**	**-1.1**
WMQ				S	**S**	**04 39 19.0**	**-2.2**
WMQ				sS	sS	04 39 26.6	-0.3
WMQ				SS	**SS**	**04 42 23.3**	**-0.7**
WMQ				pmax	pmax		
	comp=Z,240nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,7µm,4.7s						
WMQ				LR	LR		
	comp=Z,51µm,18.9s						
WMQ				LR	LR		
	comp=Z,51µm,15.1s						
WMQ				LR	LR		
	comp=Z,17µm,11.5s						
WMQ	**Urumqi**	**41.20**	**294**	IAMs_20	IAMs_20	04 50 50.0	
	comp=Z,22µm,19.0s						
LKP	**Lekhapani**	**41.25**	**267**	*e*P	**P**	**04 33 10.3**	**+1.6**
MYLDM	**Lahad Datu**	**41.26**	**220**	P	**P**	**04 33 08.8**	**0.0**
MYLDM	**Lahad Datu**	**41.26**	**220**	⇑P	**P**	**04 33 10.9**	**+2.1**
UBPT	**Khong Chiam**	**41.27**	**245**	P	**P**	**04 33 10.0**	**+1.2**
	comp=Z,2µmcomp=Z,86nm,1.4s						
UBPT	**Khong Chiam**	**41.27**	**245**	P	**P**	**04 33 09.2**	**+0.3**
UBPT				IAmb	IAmb	04 33 21.5	
	comp=Z,234nm,1.2s						
UBPT				IAMs_20	IAMs_20	04 50 41.7	
	comp=Z,38µm,20.0s						
UBPT	**Khong Chiam**	**41.27**	**245**	⇑P	**P**	**04 33 09.6**	**+0.7**
ZAA0	**Zalesovo Array**	**41.38**	**310**	P	**P**	**04 33 08.8**	**-0.5**
ZAA0				IAMs_20	IAMs_20	04 51 01.9	
	comp=Z,39µm,19.0s						
ZALV	**Zalesovo Beam**	**41.38**	**310**	P	**P**	**04 33 09.2**	**-0.1**
	comp=Z,33nm,0.5s,baz=95,slow=8.6,SNR=142						
ZALV				PcP	**PcP**	**04 35 08.1**	**+0.8**
	comp=Z,24nm,0.6s,baz=91,slow=3.9,SNR=2.9						
ZALV				LR	LR	04 51 11.8	
	comp=Z,33µm,19.2s,baz=85,slow=37						
ZALV	**Zalesovo Beam**	**41.38**	**310**	P	**P**	**04 33 08.4**	**-1.0**
NRIK	**Noril'sk**	**41.50**	**334**	P	**P**	**04 33 10.4**	**+0.3**
	comp=Z,39nm,0.9s,baz=107,slow=9.1,SNR=50						
NRIK				LR	LR	04 51 33.4	
	comp=Z,45µm,18.4s,baz=100,slow=38						
NRIK	**Noril'sk**	**41.50**	**334**	P	**P**	**04 33 09.8**	**-0.4**
TNTI	**Ternate**	**41.59**	**205**	P	**P**	**04 33 12.1**	**+0.6**
TNTI				IAmb	IAmb	04 33 39.5	
	comp=Z,388nm,1.6s						
TNTI	**Ternate**	**41.59**	**205**	P	**P**	**04 33 13.5**	**+2.0**
	comp=Z,5µmcomp=Z,3µmcomp=Z,143nm,1.7s						
DLV	**T Lat**	**41.62**	**238**	P	**P**	**04 33 11.7**	**-0.2**
DLV				IAmb	IAmb	04 33 24.9	
	comp=Z,256nm,1.0s						
KKM	**Kota Kinabalu**	**41.69**	**223**	P	**P**	**04 33 13.5**	**+1.1**
KKM				IAmb	IAmb	04 33 17.4	
	comp=Z,265nm,1.2s						
KKM				IAMs_20	IAMs_20	04 49 55.9	
	comp=Z,22µm,20.0s						
KKM	**Kota Kinabalu**	**41.69**	**223**	⇑P	**P**	**04 33 13.3**	**+0.9**
SMPI	**Sarmi**	**41.85**	**187**	P	**P**	**04 33 14.7**	**+1.2**
	comp=Z,4µmcomp=Z,3µmcomp=Z,112nm,1.4s						
DIBR	**DIBRUGARH**	**41.90**	**268**	*e*P	**P**	**04 33 14.1**	**+0.1**
DIBR				IAmb	IAmb	04 33 18.8	
	comp=Z,551nm,0.9s						
SWI	**Sorong**	**42.04**	**199**	P	**P**	**04 33 17.3**	**+2.2**
	comp=Z,6µmcomp=Z,3µmcomp=Z,91nm,1.9s						
TTA	**Tatalina**	**42.15**	**36**	P	**P**	**04 33 16.7**	**+1.0**
TTA				pmax	pmax		
	comp=Z,58nm,1.1s						
TTA				MLR	MLR		
	comp=Z,18µm,19.0s						
TTA	**Tatalina**	**42.15**	**36**	P	**P**	**04 33 16.6**	**+1.0**
TTA	**Tatalina**	**42.15**	**36**	⇓P	**P**	**04 33 17.2**	**+1.6**
SVW2	**Sparrevohn**	**42.27**	**39**	P	**P**	**04 33 16.7**	**+0.1**
ZSN	**Zaisan**	**42.30**	**300**	*e*P	**P**	**04 33 14.8**	**-2.2**
	comp=Z,905nm,2.6s,baz=300						
ZSN				*e*S	**S**	**04 39 36.0**	**-1.4**
	baz=300						
ZSN				LR	LR	04 51 50.5	
	comp=Z,14µm,11.9s,baz=300						
ZSN	**Zaisan**	**42.30**	**300**	*e*P	**P**	**04 33 14.8**	**-2.2**
ZSN				*e*S	**S**	**04 39 36.0**	**-1.4**
ZSN				pmax	pmax		
	comp=Z,905nm,2.6s						
ZSN				MLR	MLR		
	comp=Z,14µm,12.0s						
ZIRO	**ZIRO**	**42.69**	**269**	*e*P	**P**	**04 33 21.3**	**+0.7**
ZIRO				IAmb	IAmb	04 33 26.5	
	comp=Z,629nm,1.2s						
JORH	**JORHAT**	**42.78**	**268**	*e*P	**P**	**04 33 21.3**	**+0.2**
JORH				IAmb	IAmb	04 33 26.9	
	comp=Z,2µm,1.4s						
MOKO	**MOKOCHONG**	**42.79**	**267**	*e*P	**P**	**04 33 21.8**	**+0.4**
MOKO				IAmb	IAmb	04 33 27.7	
	comp=Z,1µm,1.2s						
KMSI	**Cibinong**	**42.97**	**210**	P	**P**	**04 33 24.9**	**+2.2**
	comp=Z,477nmcomp=Z,261nm,0.8s						
SII	**Sitkinak Islan**	**43.11**	**46**	IAMs_20	IAMs_20	04 48 35.9	
	comp=Z,26µm,20.0s						
UTTA	**Uttaradit**	**43.16**	**252**	P	**P**	**04 33 24.8**	**+0.5**
	comp=Z,3µmcomp=Z,324nm,1.1s						
A21K	**Barrow**	**43.22**	**24**	P	**P**	**04 33 23.5**	**-0.6**
	baz=256,SNR=8.2						
A21K	**Barrow**	**43.22**	**24**	IAmb	IAmb	04 33 40.9	
	comp=Z,200nm,1.1s						
GTOI	**Gorontalo**	**43.29**	**211**	P	**P**	**04 33 26.8**	**+1.5**
	comp=Z,3µmcomp=Z,108nm,1.5s						
CHAI	**Chaiyaphum**	**43.31**	**249**	P	**P**	**04 33 25.6**	**0.0**
	comp=Z,4µmcomp=Z,412nm,1.4s						
LAMP	**Lampang**	**43.35**	**254**	P	**P**	**04 33 26.8**	**+1.0**
	comp=Z,3µmcomp=Z,274nm,1.2s						
IMAR	**Indian Mountai**	**43.38**	**32**	P	**P**	**04 33 25.1**	**-0.3**
KOHI	**KOHIMA**	**43.41**	**267**	*e*P	**P**	**04 33 26.7**	**+0.2**
KOHI				IAmb	IAmb	04 33 30.1	
	comp=Z,1µm,1.3s						
CM34	**Chiang Mai Arr**	**43.50**	**255**	P	**P**	**04 33 27.0**	**0.0**
OHAK	**Old Harbor**	**43.55**	**45**	IAMs_20	IAMs_20	04 51 11.4	
	comp=Z,27µm,20.0s						
CM35	**Chiang Mai Arr**	**43.60**	**254**	P	**P**	**04 33 28.0**	**+0.1**
PHIT	**Phitsanulok**	**43.61**	**252**	P	**P**	**04 33 29.0**	**+1.1**
	comp=Z,6µmcomp=Z,570nm,1.2s						
RSO	**Redoubt South**	**43.65**	**40**	P	**P**	**04 33 27.4**	**-0.6**
CM33	**Chiang Mai Arr**	**43.67**	**255**	P	**P**	**04 33 28.0**	**-0.4**
CHTO	**Chiang Mai**	**43.67**	**255**	P	**P**	**04 33 28.3**	**-0.1**
CHTO				pmax	pmax		
	comp=Z,115nm,1.0s						
CHTO				MLR	MLR		
	comp=Z,38µm,18.0s						
CHTO	**Chiang Mai**	**43.67**	**255**	P	**P**	**04 33 28.3**	**-0.1**
CHTO	**Chiang Mai**	**43.67**	**255**	IAMs_20	IAMs_20	04 53 35.3	
	comp=Z,38µm,18.0s						
CHTO	**Chiang Mai**	**43.67**	**255**	P	**P**	**04 33 28.9**	**+0.5**
CHTO				P	**P**	**04 33 28.9**	**+0.5**
CHTO				S	**S**	**04 39 57.8**	**-0.3**
CHTO				S	**S**	**04 39 57.8**	**-0.3**
CHTO	**Chiang Mai**	**43.67**	**255**	⇑P	**P**	**04 33 28.1**	**-0.3**
LSA	**Lhasa**	**43.73**	**273**	P	**P**	**04 33 30.0**	**+0.7**
LSA	**Lhasa**	**43.73**	**273**	P	**P**	**04 33 30.1**	**+0.8**
LSA	**Lhasa**	**43.73**	**273**	P	**P**	**04 33 29.1**	**-0.2**
LSA				pmax	pmax		
	comp=Z,828nm,1.9s						
LSA				MLR	MLR		
	comp=Z,50µm,18.0s						
LSA	**Lhasa**	**43.73**	**273**	P	**P**	**04 33 29.1**	**-0.2**
CM36	**Chiang Mai Arr**	**43.75**	**254**	P	**P**	**04 33 29.0**	**0.0**
TOLI2	**Tolitoli**	**43.78**	**214**	P	**P**	**04 33 28.8**	**-0.5**
TOLI2				IAmb	IAmb	04 33 54.9	
	comp=Z,219nm,1.4s						
TOLI2				IAMs_20	IAMs_20	04 53 55.7	
	comp=Z,19µm,18.0s						
FAKI	**Fak Fak**	**43.79**	**197**	P	**P**	**04 33 29.4**	**0.0**
FAKI				IAmb	IAmb	04 33 51.3	
	comp=Z,258nm,1.4s						
FAKI				IAMs_20	IAMs_20	04 49 18.5	
	comp=Z,39µm,20.0s						
FAKI	**Fak Fak**	**43.79**	**197**	⇓P	**P**	**04 33 31.9**	**+2.5**
FAKI	**Fak Fak**	**43.79**	**197**	P	**P**	**04 33 30.2**	**+0.9**
	comp=Z,5µmcomp=Z,3µmcomp=Z,131nm,1.6s						
CM32	**Chiang Mai Arr**	**43.85**	**255**	P	**P**	**04 33 30.0**	**+0.2**
MRSI	**Marisa**	**43.87**	**212**	P	**P**	**04 33 29.9**	**0.0**
	comp=Z,8µmcomp=Z,304nm,1.4s						
CM09	**Chiang Mai Arr**	**43.87**	**254**	P	**P**	**04 33 31.0**	**+1.0**
	comp=Z,740nmcomp=Z,80nm,1.4s						
KDAK	**Kodiak Island**	**43.88**	**44**	P	**P**	**04 33 29.8**	**+0.2**
	comp=Z,51nm,1.1s,baz=323,slow=6.7,SNR=8.4						
KDAK				LR	LR	04 54 45.1	
	comp=Z,8µm,18.4s,baz=254,slow=40						
KDAK	**Kodiak Island**	**43.88**	**44**	P	**P**	**04 33 29.6**	**0.0**
KDAK	**Kodiak Island**	**43.88**	**44**	IAMs_20	IAMs_20	04 50 58.2	
	comp=Z,20µm,19.0s						
KDAK	**Kodiak Island**	**43.88**	**44**	⇑P	**P**	**04 33 30.5**	**+0.8**
CM31	**Chiang Mai Arr**	**43.90**	**254**	P	**P**	**04 33 31.0**	**+0.8**
	comp=Z,22µmcomp=Z,2µm,0.9s						
CM31	**Chiang Mai Arr**	**43.90**	**254**	P	**P**	**04 33 30.3**	**0.0**
CM31				IAmb	IAmb	04 33 41.9	
	comp=Z,393nm,1.7s						
CMAR	**Chiang Mai Arr**	**43.90**	**254**	P	**P**	**04 33 31.0**	**+0.7**
	comp=Z,22nm,0.8s,baz=48,slow=6.6,SNR=48						
CMAR				LR	LR	04 51 34.2	
	comp=Z,18µm,19.3s,baz=93,slow=36						
CMAR	**Chiang Mai Arr**	**43.90**	**254**	P	**P**	**04 33 30.9**	**+0.7**
CM04	**Chiang Mai Arr**	**43.91**	**254**	P	**P**	**04 33 31.4**	**+1.0**
	comp=Z,660nmcomp=Z,57nm,1.3s						
CM01	**Chiang Mai Arr**	**43.91**	**254**	P	**P**	**04 33 31.5**	**+1.2**
	comp=Z,1µmcomp=Z,89nm,1.6s						
CM02	**Chiang Mai Arr**	**43.91**	**254**	P	**P**	**04 33 31.0**	**+0.7**
	comp=Z,770nmcomp=Z,71nm,1.1s						
CM15	**Chiang Mai Arr**	**43.91**	**254**	P	**P**	**04 33 31.8**	**+1.4**
	comp=Z,692nmcomp=Z,76nm,1.1s						
CM05	**Chiang Mai Arr**	**43.93**	**254**	P	**P**	**04 33 31.6**	**+1.1**
	comp=Z,764nmcomp=Z,63nm,1.1s						
CM13	**Chiang Mai Arr**	**43.95**	**254**	P	**P**	**04 33 31.0**	**+0.4**
	comp=Z,684nmcomp=Z,65nm,1.3s						
SUKH	**Sukhothai**	**44.00**	**253**	P	**P**	**04 33 32.0**	**+1.0**
	comp=Z,3µmcomp=Z,317nm,1.1s						
IMP	**Imphal**	**44.01**	**266**	*e*P	**P**	**04 33 31.4**	**+0.3**
IMP				IAmb	IAmb	04 33 36.4	
	comp=Z,172nm,0.8s						
MK31	**Makanchi Array**	**44.16**	**300**	P	**P**	**04 33 31.7**	**-0.4**
MK31				pmax	pmax		
	comp=Z,438nm,1.7s						
MK31	**Makanchi Array**	**44.16**	**300**	P	**P**	**04 33 31.6**	**-0.4**
MK31				IAmb	IAmb	04 33 43.8	
	comp=Z,438nm,1.6s						
MKAR	**Makanchi Array**	**44.16**	**300**	P	**P**	**04 33 31.6**	**-0.5**
	comp=Z,46nm,0.8s,baz=83,slow=8.4,SNR=290						
MKAR				S	**S**	**04 40 07.7**	**+2.9**
	comp=Z,2.9nm,0.9s,baz=84,slow=16,SNR=2.1						
MKAR				LR	LR	04 51 20.8	
	comp=Z,19µm,20.1s,baz=74,slow=35						
MKAR	**Makanchi Array**	**44.16**	**300**	P	**P**	**04 33 31.3**	**-0.8**
SKT	**Skwentna**	**44.21**	**38**	P	**P**	**04 33 33.9**	**+1.6**
HOM	**Homer**	**44.24**	**41**	P	**P**	**04 33 31.8**	**-0.7**
	baz=273						
MAKZ	**Makanchi**	**44.37**	**300**	P	**P**	**04 33 33.3**	**-0.4**
MAKZ				pmax	pmax		
	comp=Z,1µm,2.0s						
MAKZ				MLR	MLR		
	comp=Z,30µm,20.0s						
MAKZ	**Makanchi**	**44.37**	**300**	P	**P**	**04 33 33.3**	**-0.4**
MAKZ				IAMs_20	IAMs_20	04 54 23.9	
	comp=Z,30µm,20.0s						
MAKZ	**Makanchi**	**44.37**	**300**	⇑P	**P**	**04 33 33.4**	**-0.4**
CAPN	**Captain Cook N**	**44.43**	**40**	P	**P**	**04 33 33.2**	**-0.8**
	baz=273						
BPAW	**Bear Paw Mtn.**	**44.45**	**35**	IAMs_20	IAMs_20	04 53 41.7	
	comp=Z,20µm,18.0s						
CNPM	**China Poot**	**44.46**	**41**	P	**P**	**04 33 34.5**	**+0.3**
CNPM				IAmb	IAmb	04 33 49.9	
	comp=Z,180nm,1.6s						
RABL	**Rabaul**	**44.49**	**168**	P	**P**	**04 33 35.1**	**+0.1**
RABL	**Rabaul**	**44.49**	**168**	P	**P**	**04 33 38.8**	**+3.8**
SRAK	**Srakaew**	**44.54**	**247**	P	**P**	**04 33 33.0**	**-2.4**
	comp=Z,20µmcomp=Z,2µm,1.2s						
MLY	**Manley**	**44.58**	**33**	P	**P**	**04 33 34.3**	**-0.9**
	baz=269,SNR=46						
SEM	**Semipalatinsk**	**44.68**	**306**	*e*P	**P**	**04 33 33.8**	**-2.7**
	comp=Z,521nm,2.3s,baz=305						
SEM				*e*S	**S**	**04 40 10.5**	**-2.0**
	baz=305						
SEM				LR	LR	04 52 33.0	
	baz=305						
SEM	**Semipalatinsk**	**44.68**	**306**	*e*P	**P**	**04 33 33.7**	**-2.7**
SEM				*e*S	**S**	**04 40 10.4**	**-2.0**
SEM				pmax	pmax		
	comp=Z,521nm,2.3s						
SANI	**Sanana**	**44.69**	**205**	⇑P	**P**	**04 33 35.6**	**-1.0**
SANI	**Sanana**	**44.69**	**205**	P	**P**	**04 33 35.0**	**-1.5**
	comp=Z,9µmcomp=Z,4µmcomp=Z,135nm,1.1s						
CUT	**Chulitna**	**44.79**	**37**	P	**P**	**04 33 36.3**	**-0.6**
	baz=272						
COLD	**Coldfoot**	**44.88**	**30**	P	**P**	**04 33 36.0**	**-1.5**
	baz=267,SNR=27						
SILR	**SILCHAR**	**44.91**	**266**	*e*P	**P**	**04 33 39.3**	**+1.0**
LUWI	**Luwuk**	**44.92**	**210**	P	**P**	**04 33 38.0**	**-0.4**
LUWI	**Luwuk**	**44.92**	**210**	P	**P**	**04 33 38.8**	**+0.5**
	comp=Z,4µmcomp=Z,151nm,1.6s						
GUWA	**GUWAHATI**	**45.03**	**269**	*e*P	**P**	**04 33 39.3**	**+0.1**
GUWA				IAmb	IAmb	04 33 51.1	
	comp=Z,852nm,1.7s						
RC01	**Rabbit Creek A**	**45.10**	**39**	P	**P**	**04 33 38.3**	**-1.1**
	baz=274,SNR=15						
BWN	**Browne**	**45.12**	**35**	IAMs_20	IAMs_20	04 54 04.3	
	comp=Z,24µm,19.0s						
O22K	**Cooper Landing**	**45.15**	**40**	P	**P**	**04 33 38.4**	**-1.3**
	baz=274						
O22K	**Cooper Landing**	**45.15**	**40**	IAmb	IAmb	04 34 11.4	
	comp=Z,124nm,0.8s						
O22K				IAMs_20	IAMs_20	04 55 54.5	
	comp=Z,17µm,18.0s						
I23K	**Minto, Yukon-K**	**45.16**	**33**	P	**P**	**04 33 39.3**	**-0.4**
	baz=270,SNR=25						
SHL	**Shillong**	**45.20**	**268**	P	**P**	**04 33 40.2**	**-0.6**
SHL				pmax	pmax		
	comp=Z,210nm,1.1s						
SHL				MLR	MLR		
	comp=Z,39µm,20.0s						
SHL	**Shillong**	**45.20**	**268**	*e*P	**P**	**04 33 39.3**	**-1.6**
SHL				IAmb	IAmb	04 33 46.5	
	comp=Z,377nm,1.7s						
SHL	**Shillong**	**45.20**	**268**	P	**P**	**04 33 40.2**	**-0.6**
SHL				IAmb	IAmb	04 34 09.3	
	comp=Z,210nm,1.1s						
SHL				IAMs_20	IAMs_20	04 54 27.8	
	comp=Z,39µm,20.0s						
SHL	**Shillong**	**45.20**	**268**	P	**P**	**04 33 40.8**	**0.0**
	SNR=59						
TOLK	**Toolik Lake Re**	**45.20**	**28**	P	**P**	**04 33 39.9**	**-0.2**
	baz=266,SNR=25						
TOLK	**Toolik Lake Re**	**45.20**	**28**	IAmb	IAmb	04 33 58.4	
	comp=Z,293nm,1.6s						
TOLK				IAMs_20	IAMs_20	04 53 20.4	
	comp=Z,20µm,20.0s						
APSI	**Ampana**	**45.24**	**212**	P	**P**	**04 33 40.1**	**-0.8**
	comp=Z,4µmcomp=Z,216nm,1.1s						
NEA2	**Nenana**	**45.29**	**34**	P	**P**	**04 33 41.0**	**+0.2**
	baz=271,SNR=9.1						
SEW	**Seward**	**45.32**	**40**	P	**P**	**04 33 41.1**	**0.0**
SEW				IAMs_20	IAMs_20	04 54 31.9	
	comp=Z,22µm,19.0s						
MCK	**McKinley**	**45.36**	**35**	P	**P**	**04 33 40.6**	**-0.8**
	baz=272,SNR=18						
UTHA	**Uthaitani**	**45.38**	**251**	P	**P**	**04 33 43.7**	**+1.7**
	comp=Z,1µmcomp=Z,139nm,1.1s						
UMPA	**Umpang Tak**	**45.38**	**252**	P	**P**	**04 33 44.7**	**+2.5**
	comp=Z,4µmcomp=Z,286nm,1.3s						
RND	**Reindeer**	**45.41**	**36**	IAmb	IAmb	04 33 55.6	
	comp=Z,117nm,1.2s						
GHO	**Glory Hole Cre**	**45.45**	**38**	IAmb	IAmb	04 33 57.0	
	comp=Z,203nm,1.3s						
NLAI	**Namlea**	**45.46**	**203**	P	**P**	**04 33 43.9**	**+1.3**
	comp=Z,4µmcomp=Z,46nm,1.5s						
KURK	**Kurchatov**	**45.63**	**306**	P	**P**	**04 33 43.6**	**0.0**
KURK	**Kurchatov**	**45.63**	**306**	P	**P**	**04 33 43.0**	**-0.6**
KURK	**Kurchatov**	**45.63**	**306**	IAMs_20	IAMs_20	04 53 31.1	
	comp=Z,18µm,19.0s						
KURK	**Kurchatov**	**45.63**	**306**	P	**P**	**04 33 43.4**	**-0.3**
KURK				P	**P**	**04 33 43.4**	**-0.3**
KURK				S	**S**	**04 40 25.9**	**+0.1**
KURK				S	**S**	**04 40 25.9**	**+0.1**
KURK	**Kurchatov**	**45.63**	**306**	⇑P	**P**	**04 33 43.0**	**-0.6**
MDM	**Murphy Dome**	**45.64**	**34**	IAmb	IAmb	04 34 29.2	
	comp=Z,126nm,1.1s						
MDM				IAMs_20	IAMs_20	04 52 31.1	
	comp=Z,20µm,20.0s						
KNK	**Knik Glacier**	**45.70**	**39**	IAmb	IAmb	04 34 01.8	
	comp=Z,150nm,1.1s						
KURBB	**Kurchatov Arra**	**45.70**	**306**	P	**P**	**04 33 43.6**	**-0.6**
	comp=Z,102nm,0.8s,baz=79,slow=8.3,SNR=363						
KURBB				S	**S**	**04 40 35.0**	**+8.1**
	comp=Z,6.5nm,1.0s,baz=73,slow=16,SNR=4.0						
WRH	**Wood River Hil**	**45.71**	**34**	IAmb	IAmb	04 35 01.3	
	comp=Z,169nm,1.6s						
WRH				IAMs_20	IAMs_20	04 52 33.0	
	comp=Z,18µm,20.0s						
SML	**Sawmill**	**45.73**	**38**	IAmb	IAmb	04 33 59.4	
	comp=Z,207nm,1.3s						
TCOL	**CIGO, UAF Yank**	**45.80**	**34**	P	**P**	**04 33 43.9**	**-0.9**
	baz=271						
TCOL	**CIGO, UAF Yank**	**45.80**	**34**	IAmb	IAmb	04 34 09.8	
	comp=Z,115nm,0.8s						
TCOL				IAMs_20	IAMs_20	04 52 45.3	
	comp=Z,18µm,20.0s						
COLA	**College**	**45.80**	**34**	P	**P**	**04 33 44.7**	**-0.1**
COLA				pmax	pmax		
	comp=Z,115nm,0.9s						
COLA				MLR	MLR		
	comp=Z,16µm,19.0s						
COLA	**College**	**45.80**	**34**	P	**P**	**04 33 44.7**	**-0.1**
COLA				IAmb	IAmb	04 34 09.8	
	comp=Z,115nm,0.8s						
COLA	**College**	**45.80**	**34**	⇑P	**P**	**04 33 46.4**	**+1.6**
CCB	**Clear Creek Bu**	**45.83**	**34**	IAMs_20	IAMs_20	04 52 37.2	
	comp=Z,23µm,19.0s						
POKR	**Poker Plat Res**	**45.98**	**33**	P	**P**	**04 33 44.8**	**-1.4**
	baz=272,SNR=36						
SAIH	**SAIHA**	**46.02**	**264**	*e*P	**P**	**04 33 47.0**	**-0.2**
SAIH				IAmb	IAmb	04 33 50.7	
	comp=Z,2µm,1.8s						
PATY	**Pattaya**	**46.12**	**247**	P	**P**	**04 33 50.0**	**+2.1**
	comp=Z,14µmcomp=Z,198nm,0.8s						
SCM	**Sheep Creek Mo**	**46.20**	**38**	IAmb	IAmb	04 34 24.3	
	comp=Z,135nm,1.1s						
HDA	**Harding Lake**	**46.21**	**34**	P	**P**	**04 33 46.6**	**-1.4**
	baz=273						
HDA	**Harding Lake**	**46.21**	**34**	IAMs_20	IAMs_20	04 54 24.2	
	comp=Z,24µm,18.0s						
IL31		**46.22**	**34**	IAmb	IAmb	04 34 09.1	
	comp=Z,100nm,0.9s						
ILAR	**Eielson Array**	**46.22**	**34**	P	**P**	**04 33 47.4**	**-0.7**
	comp=Z,6.9nm,0.9s,baz=260,slow=6.6,SNR=49						
ILAR				LR	LR	04 53 09.7	
	comp=Z,13µm,21.3s,baz=281,slow=36						
ILAR	**Eielson Array**	**46.22**	**34**	P	**P**	**04 33 47.7**	**-0.4**
ILAR	**Eielson Array**	**46.22**	**34**	P	**P**	**04 33 47.7**	**-0.4**
JOHN	**Johnston Islan**	**46.59**	**106**	P	**P**	**04 33 52.6**	**+1.0**
JOHN	**Johnston Islan**	**46.59**	**106**	IAMs_20	IAMs_20	04 50 19.8	
	comp=Z,28µm,19.0s						
TARA	**Tarawa**	**46.65**	**138**	P	**P**	**04 33 52.9**	**+0.8**
TARA	**Tarawa**	**46.65**	**138**	IAMs_20	IAMs_20	04 53 45.6	
	comp=Z,25µm,18.0s						
FID	**Port Fidalgo**	**46.72**	**39**	IAmb	IAmb	04 34 16.3	
	comp=Z,162nm,1.4s						
FID				IAMs_20	IAMs_20	04 54 47.7	
	comp=Z,20µm,18.0s						
M24K	**Tolsona, Glenn**	**46.72**	**37**	P	**P**	**04 33 51.5**	**-0.7**
	baz=276						
M24K	**Tolsona, Glenn**	**46.72**	**37**	IAmb	IAmb	04 34 47.6	
	comp=Z,166nm,1.2s						
HIN	**Hinchinbrook I**	**46.75**	**40**	IAmb	IAmb	04 34 09.6	
	comp=Z,180nm,1.3s						
HIN				IAMs_20	IAMs_20	04 56 44.0	
	comp=Z,20µm,18.0s						
PRP	**Porcupine Dome**	**46.76**	**33**	IAmb	IAmb	04 34 15.2	
	comp=Z,95nm,0.8s						
SMKI	**Samarinda**	**46.77**	**218**	P	**P**	**04 33 54.3**	**+1.3**
	comp=Z,22µmcomp=Z,9µmcomp=Z,305nm,1.7s						
BELO	**BELONIA**	**46.78**	**265**	*e*P	**P**	**04 33 53.5**	**+0.5**
SBUM	**Sibu**	**46.85**	**226**	P	**P**	**04 33 54.6**	**+0.9**
SBUM				IAmb	IAmb	04 34 06.1	
	comp=Z,170nm,1.4s						
SBUM				IAMs_20	IAMs_20	04 55 27.0	
	comp=Z,27µm,18.0s						
SBUM	**Sibu**	**46.85**	**226**	P	**P**	**04 33 55.0**	**+1.4**
SBUM	**Sibu**	**46.85**	**226**	⇑P	**P**	**04 33 53.8**	**+0.2**
KLU	**Klutina**	**46.91**	**38**	IAmb	IAmb	04 34 17.1	
	comp=Z,94nm,1.1s						
Q23K	**Middleton Isla**	**46.95**	**41**	P	**P**	**04 33 52.6**	**-1.3**
	baz=278						
PAX	**Paxson**	**46.97**	**36**	IAMs_20	IAMs_20	04 55 16.3	
	comp=Z,18µm,19.0s						
PHET	**Kaeng Krachan**	**47.01**	**248**	P	**P**	**04 33 56.0**	**+1.1**
	comp=Z,4µmcomp=Z,458nm,0.9s						
PDGK	**Podgornoye**	**47.05**	**296**	*i* P	**P**	**04 33 53.0**	**-2.1**
PDGK				pmax	pmax		
	comp=Z,506nm,1.9s						
BMAR	**Burnt Mountain**	**47.06**	**30**	P	**P**	**04 33 53.7**	**-1.0**
EYAK	**Cordova Ski Ar**	**47.10**	**40**	IAmb	IAmb	04 34 12.6	
	comp=Z,116nm,1.3s						
EYAK				IAMs_20	IAMs_20	04 56 29.8	
	comp=Z,27µm,18.0s						
SHLS	**Shalkode**	**47.12**	**296**	*e*P	**P**	**04 33 51.1**	**-4.6**
	comp=Z,479nm,2.3s,baz=296						
SHLS				*e*S	**S**	**04 40 42.0**	**-5.7**
	baz=296						
SHLS	**Shalkode**	**47.12**	**296**	*e*P	**P**	**04 33 51.1**	**-4.6**
SHLS				*e*S	**S**	**04 40 42.0**	**-5.7**
SHLS				pmax	pmax		
	comp=Z,479nm,2.3s						
TDK	**Taldyqorghan**	**47.26**	**299**	*e*S	**S**	**04 40 47.6**	**-1.9**
	baz=299						
TDK				LR	LR	04 54 28.7	
	comp=Z,24µm,13.6s,baz=299						
UZB	**Uzynbulak**	**47.43**	**296**	*e*P	**P**	**04 33 55.7**	**-2.5**
	comp=Z,353nm,2.4s,baz=296						
UZB				*e*S	**S**	**04 40 50.5**	**-1.7**
	baz=296						
UZB	**Uzynbulak**	**47.43**	**296**	*e*P	**P**	**04 33 55.6**	**-2.5**
UZB				*e*S	**S**	**04 40 50.4**	**-1.7**
UZB				pmax	pmax		
	comp=Z,353nm,2.4s						
TAPN	**Taplejung**	**47.51**	**273**	*e*P	**P**	**04 33 59.8**	**+0.7**
	comp=Z,1µm,1.2s						
N25K	**Chitina, Valde**	**47.52**	**38**	P	**P**	**04 33 57.5**	**-1.0**
	baz=277						
N25K	**Chitina, Valde**	**47.52**	**38**	IAmb	IAmb	04 35 29.3	
	comp=Z,212nm,2.0s						
DOT	**Dot Lake**	**47.53**	**35**	IAMs_20	IAMs_20	04 55 11.4	
	comp=Z,20µm,18.0s						
SCRK	**Sand Creek**	**47.53**	**35**	P	**P**	**04 33 57.8**	**-0.7**
	baz=276,SNR=46						
KPKS	**Kokpek**	**47.56**	**297**	*e*P	**P**	**04 33 56.4**	**-2.7**
	comp=Z,625nm,2.7s,baz=296						
KPKS				*e*S	**S**	**04 40 52.1**	**-1.8**
	baz=296						
KPKS	**Kokpek**	**47.56**	**297**	*e*P	**P**	**04 33 56.3**	**-2.7**
KPKS				*e*S	**S**	**04 40 52.0**	**-1.8**
KPKS				pmax	pmax		
	comp=Z,625nm,2.7s						
BKB	**Balikpapan**	**47.64**	**217**	P	**P**	**04 34 00.1**	**+0.3**
BKB	**Balikpapan**	**47.64**	**217**	P	**P**	**04 33 59.7**	**0.0**
	comp=Z,19µmcomp=Z,10µmcomp=Z,336nm,1.0s						
RAGM	**Ragged Mountai**	**47.65**	**40**	IAmb	IAmb	04 34 49.4	
	comp=Z,123nm,1.2s						
RAGM				IAMs_20	IAMs_20	04 56 55.8	
	comp=Z,27µm,18.0s						
MENT	**Mentasta**	**47.77**	**36**	IAmb	IAmb	04 34 17.2	
	comp=Z,101nm,1.1s						
KAIM	**Kayak Island**	**47.85**	**40**	P	**P**	**04 34 01.5**	**+0.6**
KAIM				IAmb	IAmb	04 35 01.3	
	comp=Z,204nm,1.4s						
KAIM				IAMs_20	IAMs_20	04 51 36.0	
	comp=Z,18µm,20.0s						
SATY	**Saty**	**47.89**	**296**	*e*P	**P**	**04 33 60.0**	**-1.7**
	comp=Z,380nm,2.4s,baz=296						
SATY				*e*S	**S**	**04 40 57.9**	**-0.6**
	baz=296						
SATY	**Saty**	**47.89**	**296**	*e*P	**P**	**04 33 59.9**	**-1.7**
SATY				*e*S	**S**	**04 40 57.9**	**-0.6**
SATY				pmax	pmax		
	comp=Z,380nm,2.4s						
GLB	**Gilahina Butte**	**47.92**	**38**	IAmb	IAmb	04 34 20.7	

	comp=Z,93nm,1.4s						
TTSI	Tana Toraja	47.93	213	P	P	04 34 00.0	-2.0
	comp=Z,9µmcomp=Z,3µmcomp=Z,44nm,1.4s						
ODAN	Odare	48.00	272	*e*P	P	04 34 03.6	+0.8
VRDI	Verde Repeater	48.12	38	IAmb	IAmb	04 34 21.6	
	comp=Z,75nm,1.1s						
VRDI				IAMs_20	IAMs_20	04 55 08.1	
	comp=Z,17µm,19.0s						
SUCK	Suckling Hills	48.14	40	IAMs_20	IAMs_20	04 56 33.8	
	comp=Z,22µm,19.0s						
MCARA	McCarthy VSAT	48.30	38	IAmb	IAmb	04 34 20.1	
	comp=Z,151nm,1.2s						
MCARA				IAMs_20	IAMs_20	04 56 02.9	
	comp=Z,16µm,18.0s						
MTKI	Muara Teweh, K	48.32	220	P	P	04 34 07.4	+2.3
	comp=Z,8µmcomp=Z,150nm,1.4s						
CRQM	Cirque	48.34	39	P	P	04 34 05.4	+0.4
CRQM				IAMs_20	IAMs_20	04 53 51.7	
	comp=Z,18µm,20.0s						
TGL	Tana Glacier	48.49	39	IAmb	IAmb	04 34 38.1	
	comp=Z,166nm,1.2s						
TGL				IAMs_20	IAMs_20	04 55 25.1	
	comp=Z,19µm,19.0s						
RAMN	Ramite	48.56	273	*e*P	P	04 34 07.2	0.0
	comp=Z,1µm,1.1s						
CHKK	Chushkaly	48.59	298	*e*P	P	04 34 04.9	-2.0
	baz=298						
CHKK	Chushkaly	48.59	298	*e*P	P	04 34 04.9	-2.0
BCAR	Beaver Creek A	48.62	36	P	P	04 34 06.3	-0.6
GUN	Gumba	48.64	274	*e*P	P	04 34 08.2	+0.3
	comp=Z,1µm,1.0s						
EGAK	Eagle	48.66	33	IAmb	IAmb	04 34 28.5	
	comp=Z,80nm,0.8s						
BALM	Baldy	48.68	39	IAmb	IAmb	04 34 22.0	
	comp=Z,100nm,1.2s						
KSM	Kuching	48.72	227	IAmb	IAmb	04 34 12.5	
	comp=Z,197nm,1.2s						
KSM	Kuching	48.72	227	P	P	04 34 10.0	+1.9
KSM	Kuching	48.72	227	⇑P	P	04 34 08.7	+0.5
SPSI	Sidrap Palu	48.78	212	P	P	04 34 07.8	-0.7
	comp=Z,12µmcomp=Z,3µmcomp=Z,104nm,1.4s						
MDOK	Medeo	48.79	297	*e*P	P	04 34 06.4	-2.2
	baz=297						
MDOK				*e*S	S	04 41 09.6	-1.8
	baz=297						
MDOK				LR	LR	04 54 54.1	
	comp=Z,30µm,13.3s,baz=297						
MDOK	Medeo	48.79	297	*e*P	P	04 34 06.4	-2.2
MDOK				*e*S	S	04 41 09.5	-1.8
MDOK				MLR	MLR		
	comp=Z,30µm,13.0s						
AAA	Alma-Ata	48.86	297	*e*S	S	04 41 10.1	-2.1
	baz=297						
AAA				LR	LR	04 54 54.1	
	comp=Z,19µm,13.3s,baz=297						
AAA	Alma-Ata	48.86	297	*e*P	P	04 34 10.1	+1.0
BARN	Barnard Glacie	49.01	38	IAMs_20	IAMs_20	04 58 20.0	
	comp=Z,18µm,18.0s						
KUU	Kurty	49.02	298	*e*P	P	04 34 07.3	-3.0
	comp=Z,590nm,1.7s,baz=298						
KUU				*e*S	S	04 41 12.2	-2.1
	baz=298						
KUU	Kurty	49.02	298	*e*P	P	04 34 07.2	-3.0
KUU				*e*S	S	04 41 12.2	-2.1
KUU				pmax	pmax		
	comp=Z,590nm,1.7s						
BNSI	Bone	49.04	212	P	P	04 34 09.9	-0.6
	comp=Z,4µmcomp=Z,228nm,1.2s						
PMG	Port Moresby	49.08	175	P	P	04 34 11.2	+0.4
	comp=Z,6.5nm,0.2s,baz=323,slow=10,SNR=5.2						
PMG	Port Moresby	49.08	175	P	P	04 34 11.9	+1.1
PMG				pmax	pmax		
	comp=Z,56nm,1.2s						
PMG	Port Moresby	49.08	175	P	P	04 34 11.9	+1.1
KKN	Kakani	49.16	275	*e*P	P	04 34 12.2	+0.5
	comp=Z,915nm,0.9s						
PKI	Pulchoki	49.17	274	*e*P	P	04 34 11.9	0.0
	comp=Z,2µm,1.5s						
PKIN	Phulchoki	49.17	274	*e*P	P	04 34 12.3	+0.4
	comp=Z,2µm,1.5s						
CTGM	Chitina Glacie	49.18	39	IAmb	IAmb	04 34 26.7	
	comp=Z,111nm,1.2s						
CTGM				IAMs_20	IAMs_20	04 56 31.0	
	comp=Z,17µm,18.0s						
DMN	Daman	49.38	274	*e*P	P	04 34 13.9	+0.4
	comp=Z,4µm,2.1s						
BRZS	Berezniki	49.50	307	*e*P	P	04 34 10.9	-2.9
	comp=Z,470nm,2.9s,baz=306						
BRZS				*e*S	S	04 41 18.8	-2.0
	baz=306						
BRZS	Berezniki	49.50	307	*e*P	P	04 34 10.8	-2.9
BRZS				*e*S	S	04 41 18.8	-2.0
BRZS				pmax	pmax		
	comp=Z,470nm,2.9s						
GKN	Gorkha	49.54	275	*e*P	P	04 34 14.7	+0.1
	comp=Z,3µm,1.7s						
ULHL	Ulahol	49.67	296	P	P	04 34 16.0	+0.6
	SNR=14						
KAPI	Kappang	49.74	212	P	P	04 34 17.0	+1.2
KAPI				pmax	pmax		
	comp=Z,372nm,1.3s						
KAPI	Kappang	49.74	212	P	P	04 34 17.0	+1.2
KAPI	Kappang	49.74	212	P	P	04 34 16.1	+0.2
KAPI				P	P	04 34 16.1	+0.2
KAPI				S	S	04 41 24.5	-0.1
KAPI				S	S	04 41 24.5	-0.1
KAPI	Kappang	49.74	212	⇑P	P	04 34 16.2	+0.4
KBKI	Kotabaru	49.77	217	P	P	04 34 16.1	0.0
	comp=Z,2µmcomp=Z,100nm,1.2s						
TKM2	Tokmak 2	49.87	297	P	P	04 34 17.2	+0.3
	SNR=125						
TKM2	Tokmak 2	49.87	297	*i* P	P	04 34 17.1	+0.2
TKM2				pmax	pmax		
	comp=Z,937nm,1.6s						
BVAR	Borovoye Array	50.02	311	P	P	04 34 17.8	+0.1
	comp=Z,32nm,0.7s,baz=63,slow=14,SNR=193						
BVAR				S	S	04 41 29.4	+1.4
	comp=Z,0.9nm,0.6s,baz=63,slow=23,SNR=1.9						
BRVK	Borovoye	50.07	311	P	P	04 34 17.8	-0.3
BRVK				pmax	pmax		
	comp=Z,1µm,1.9s						
BRVK				MLR	MLR		
	comp=Z,11µm,18.0s						
BRVK	Borovoye	50.07	311	P	P	04 34 17.8	-0.3
BRVK	Borovoye	50.07	311	P	P	04 34 18.5	+0.5
BRVK				P	P	04 34 18.5	+0.5
BRVK				S	S	04 41 28.6	-0.1
BRVK				S	S	04 41 28.6	-0.1
BRVK	Borovoye	50.07	311	⇑P	P	04 34 17.7	-0.3
EPYK	Eagle Plains	50.25	31	P	P	04 34 19.6	+0.4
	baz=280,SNR=40						
EPYK	Eagle Plains	50.25	31	IAmb	IAmb	04 35 13.7	
	comp=Z,163nm,1.1s						
SURT	Suratani	50.33	245	P	P	04 34 24.1	+3.7
	comp=Z,98nmcomp=Z,11nm,1.1s						
SGDS	Sogindy	50.34	298	*e*P	P	04 34 17.9	-2.4
	comp=Z,189nm,2.3s,baz=298						
SGDS				*e*S	S	04 41 31.3	-1.6
	baz=298						
SGDS	Sogindy	50.34	298	*e*P	P	04 34 17.9	-2.4
SGDS				*e*S	S	04 41 31.2	-1.6
SGDS				pmax	pmax		
	comp=Z,189nm,2.3s						
KBK	Karagaybulak	50.41	297	P	P	04 34 20.8	-0.3
	SNR=145						
CHMS	Chumysh	50.42	297	P	P	04 34 21.6	+0.7
	SNR=20						
USP	Ospenovka	50.49	298	P	P	04 34 21.9	+0.5
	SNR=60						
TRTT	Trang	50.51	243	P	P	04 34 22.7	+0.9
	comp=Z,4µmcomp=Z,149nm,1.3s						
BBKI	Banjar Baru	50.53	218	P	P	04 34 20.7	-1.3
	comp=Z,4µmcomp=Z,150nm,1.3s						
AAK	Ala-Archa	50.73	297	P	P	04 34 24.1	+0.7
	SNR=37						
AAK	Ala-Archa	50.73	297	*i* P	P	04 34 23.6	+0.2
	SNR=54						
AAK	Ala-Archa	50.73	297	P	P	04 34 23.0	-0.4
AAK				pmax	pmax		
	comp=Z,341nm,1.6s						
AAK				MLR	MLR		
	comp=Z,21µm,19.0s						
AAK	Ala-Archa	50.73	297	P	P	04 34 23.0	-0.4
AAK	Ala-Archa	50.73	297	IAMs_20	IAMs_20	04 56 50.0	
	comp=Z,21µm,19.0s						
AAK	Ala-Archa	50.73	297	P	P	04 34 23.0	-0.4
AAK	Ala-Archa	50.73	297	⇑P	P	04 34 23.0	-0.4
UCH	Uchtor	50.87	297	P	P	04 34 25.9	+1.1
	SNR=33						
KSH	Kashi	50.89	293	P	P	04 34 27.9	+3.3
KSH				sP	pwP	04 34 37.5	+6.7
KSH				PP	PP	04 36 27.5	+6.8
KSH				S	S	04 41 43.9	+3.2
KSH				ScS	ScS	04 44 15.9	+0.7
KSH				SS	SS	04 45 20.6	+5.5
KSH				pmax	pmax		
	comp=Z,92nm,0.9s						
KSH				pmax	pmax		
	comp=Z,14µm,8.1s						
KSH				LR	LR		
	comp=Z,49µm,15.3s						
KSH				LR	LR		
	comp=Z,77µm,13.0s						
KSH				LR	LR		
	comp=Z,159µm,14.8s						
HYT	Haines Junctio	51.04	38	IAmb	IAmb	04 34 47.1	
	comp=Z,232nm,1.1s						
INK	Inuvik	51.12	28	IAmb	IAmb	04 34 38.7	
	comp=Z,80nm,0.8s						
INK				IAMs_20	IAMs_20	04 59 07.0	
	comp=Z,24µm,20.0s						
INK	Inuvik	51.12	28	⇑P	P	04 34 25.3	-0.4
EKS2	Erkin-Say	51.21	297	P	P	04 34 26.8	-0.2
	SNR=79						
HNR	Honiara	51.29	159	IAMs_20	IAMs_20	04 50 12.5	
	comp=Z,18µm,20.0s						
PKDT	Phuket	51.40	244	P	P	04 34 29.6	+1.1
AML	Almayashu	51.47	297	P	P	04 34 29.4	+0.2
	SNR=64						
DGPR	DIGLIPUR	51.70	254	*e*P	P	04 34 30.7	0.0
DGPR				IAmb	IAmb	04 34 36.0	
	comp=Z,536nm,1.6s						
MMRI	Maumere	52.12	207	P	P	04 34 34.5	+0.7
MMRI	Maumere	52.12	207	P	P	04 34 35.5	+1.7
	comp=Z,9µmcomp=Z,9µmcomp=Z,385nm,1.3s						
MYKOM	Kota Tinggi	52.30	234	IAmb	IAmb	04 34 39.7	
	comp=Z,241nm,1.6s						
MYKOM				IAMs_20	IAMs_20	04 57 42.2	
	comp=Z,22µm,18.0s						
MYKOM	Kota Tinggi	52.30	234	P	P	04 34 36.0	+0.8
MYKOM	Kota Tinggi	52.30	234	⇑P	P	04 34 36.2	+1.0
EDFI	Ende, Flores	52.42	208	P	P	04 34 34.3	-1.8
	comp=Z,5µmcomp=Z,3µmcomp=Z,123nm,1.5s						
SOEI	Soe	52.49	204	IAMs_20	IAMs_20	04 55 06.1	
	comp=Z,15µm,21.0s						
SOEI	Soe	52.49	204	⇑P	P	04 34 36.2	-0.5
BWNR	Bhubaneshwar	52.77	266	*e*P	P	04 34 37.0	-1.6
BWNR				IAmb	IAmb	04 34 41.1	
	comp=Z,638nm,1.8s						
DZA	Taraz	52.79	298	*e*P	P	04 34 36.7	-2.0
	comp=Z,80nm,1.0s,baz=298						
DZA				*e*S	S	04 42 05.5	-1.1
	baz=298						
DZA	Taraz	52.79	298	*e*P	P	04 34 36.6	-2.0
DZA				*e*S	S	04 42 05.4	-1.1
DZA				pmax	pmax		
	comp=Z,80nm,1.0s						
PBA	Port Blair	52.83	252	*e*x	x	04 34 37.9	
PBA	Port Blair	52.83	252	P	P	04 34 40.0	+0.8
PBA	Port Blair	52.83	252	P	P	04 34 38.3	-0.9
BESE	Bessie Mountai	52.94	40	P	P	04 34 40.2	+0.7
BESE				IAMs_20	IAMs_20	04 58 17.5	
	comp=Z,18µm,19.0s						
BATI	Baumata	53.10	205	P	P	04 34 41.7	+0.6
	comp=Z,4µmcomp=Z,2µmcomp=Z,117nm,1.2s						
KDU	Kakadu	53.25	194	⇓P	P	04 34 41.9	-0.2
KDU				⇑P	pP	04 34 44.1	-1.4
KDU				⇓P	sP	04 34 44.3	-2.5
KK31	Karatay Array	53.26	299	P	P	04 34 41.6	-0.5
KK31	Karatay Array	53.26	299	P	P	04 34 41.6	-0.5
KKAR	Karatay Array	53.26	299	P	P	04 34 41.4	-0.7
KKAR	Karatay Array	53.26	299	P	P	04 34 41.4	-0.7
KKAR	Karatay Array	53.26	299	⇑P	P	04 34 41.3	-0.8
JIS	Juneau Island	53.26	41	IAMs_20	IAMs_20	04 58 29.2	
	comp=Z,19µm,20.0s						
DDI	Dehra Dun	53.42	281	*e*P	P	04 34 40.3	-3.2
COEN	Coen	53.50	181	P	P	04 34 44.5	+0.6
COEN	Coen	53.50	181	⇑P	P	04 34 44.6	+0.6
COEN				⇑P	pP	04 34 46.5	-0.8
DSRI	Dabo	53.64	231	P	P	04 34 48.1	+3.0
	comp=Z,10µmcomp=Z,99nm,1.7s						
TPI	Tanjungpandan	53.69	227	P	P	04 34 45.0	-0.4
	comp=Z,15µmcomp=Z,3µmcomp=Z,141nm,1.4s						
SMLA	Simla	53.70	283	*e*P	P	04 34 43.9	-1.5
SMLA				*i* PP	PP	04 36 45.5	-0.7
SMLA				*e*x	x	04 42 06.8	
DHRM	DHARAMSHALA	53.81	284	*e*P	P	04 34 42.7	-3.9
DHRM				IAmb	IAmb	04 34 53.1	
	comp=Z,165nm,1.0s						
IUG	Iuzhnay	53.97	298	*e*P	P	04 34 45.2	-2.1
	comp=Z,72nm,1.5s,baz=298						
IUG	Iuzhnay	53.97	298	*e*P	P	04 34 45.2	-2.1
IUG				pmax	pmax		
	comp=Z,72nm,1.5s						
PLAI	Plampang	54.00	212	P	P	04 34 44.5	-3.1
	comp=Z,9µmcomp=Z,3µmcomp=Z,110nm,1.8s						
PPBI	Pangkal Pinang	54.06	229	P	P	04 34 48.6	+0.4
	comp=Z,16µmcomp=Z,12µmcomp=Z,91nm,0.8s						
KMMI	Kalianget	54.09	217	P	P	04 34 48.6	+0.3
	comp=Z,12µmcomp=Z,134nm,1.8s						
C36M	Paulatuk	54.18	26	P	P	04 34 47.7	-0.6
	baz=288,SNR=26						
C36M	Paulatuk	54.18	26	IAmb	IAmb	04 35 02.4	
	comp=Z,119nm,1.1s						
SVE	Sverdlovsk	54.23	318	*de*P	P	04 34 49.5	+0.6
SVE				*e*		04 36 53.9	
SVE				*e*S	S	04 42 26.4	+0.8
SVE				*e*		04 44 32.3	
SVE				*e*SS	SS	04 46 11.0	+4.1
SVE				pmax	pmax		
	comp=Z,641nm,1.5s						
SVE				MLR	MLR		
	comp=N,39µm,14.0s						
SVE				MLR	MLR		
	comp=Z,165µm,14.0s						
SVE				MLR	MLR		
	comp=E,113µm,14.0s						
LHMI	Lhok Sumawe	54.26	243	P	P	04 34 50.5	+0.8
LHMI	Lhok Sumawe	54.26	243	P	P	04 34 50.8	+1.1
	comp=E,29µmcomp=E,13µmcomp=E,253nm,1.5s						
TWSI	Taliwang, Sumb	54.29	213	P	P	04 34 50.1	+0.3
	comp=E,6µmcomp=E,1µmcomp=E,70nm,1.1s						
TSI	Tuntungan	54.42	240	P	P	04 34 51.3	+0.5
SRBI	Singaraja	54.43	215	P	P	04 34 50.2	-0.6
	comp=E,12µmcomp=E,9µmcomp=E,304nm,1.6s						
ABJI	Asem Bagus	54.62	217	P	P	04 34 51.5	-0.6
	comp=E,13µmcomp=E,7µmcomp=E,145nm,1.8s						
PSI	Prapat	54.70	239	P	P	04 34 53.0	0.0
	comp=E,51nm,1.0s,baz=360,slow=4.4,SNR=33						
RPSI	Rantau Prapat	54.78	239	IAmb	IAmb	04 35 05.0	
	comp=Z,158nm,1.2s						
RPSI				IAMs_20	IAMs_20	05 01 56.8	
	comp=Z,21µm,19.0s						
TAS	Tashkent	54.81	297	P	P	04 34 53.1	-0.3
TAS				pmax	pmax		
	comp=Z,726nm,1.7s						
TAS	Tashkent	54.81	297	P	P	04 34 53.1	-0.3
JMBI	JAMBI	55.12	232	P	P	04 34 57.7	+1.9
BKNI	Bangkinang	55.20	235	P	P	04 34 56.9	+0.5
BKNI				IAMs_20	IAMs_20	05 00 05.5	
	comp=Z,19µm,18.0s						
BKNI	Bangkinang	55.20	235	P	P	04 34 57.2	+0.8
	comp=Z,18µmcomp=Z,8µmcomp=Z,534nm,1.1s						
JAGI	Jajag, Banyuwa	55.25	216	P	P	04 34 54.3	-2.4
	comp=Z,10µmcomp=Z,3µmcomp=Z,82nm,1.4s						
MLSI	Meulaboh, Aceh	55.33	243	P	P	04 34 56.5	-0.9
	comp=Z,24µmcomp=Z,5µmcomp=Z,256nm,1.4s						
NIL	Nilore	55.41	287	P	P	04 34 58.5	+0.6
NIL				pmax	pmax		
	comp=Z,1µm,1.5s						
NIL				MLR	MLR		
	comp=Z,15µm,18.0s						
NIL	Nilore	55.41	287	P	P	04 34 58.5	+0.6
NIL	Nilore	55.41	287	IAMs_20	IAMs_20	05 00 15.5	
	comp=Z,15µm,18.0s						
POHA	Pohakuloa	55.41	92	P	P	04 34 58.9	+0.6
POHA				IAmb	IAmb	04 35 21.6	
	comp=Z,137nm,1.0s						
POHA	Pohakuloa	55.41	92	⇑P	P	04 34 59.4	+1.1
ARU	Arti	55.44	318	P	P	04 34 58.3	+0.6
	comp=Z,18nm,0.7s,baz=54,slow=3.3,SNR=74						
ARU	Arti	55.44	318	*c i*P	P	04 34 57.6	-0.1
ARU						04 36 01.5	
ARU						04 37 01.2	
ARU				PPP	PPP	04 38 14.8	
ARU				S	S	04 42 41.6	-0.3
ARU						04 44 42.7	
ARU				SSS	SSS	04 48 27.0	
ARU				pmax	pmax		
	comp=Z,373nm,1.9s						
ARU				pmax	pmax		
	comp=Z,4µm,9.1s						
ARU				MLR	MLR		
	comp=Z,137µm,15.0s						
ARU	Arti	55.44	318	P	P	04 34 57.4	-0.3
MLOA	Mauna Loa Obse	55.51	93	P	P	04 34 58.8	-0.4
TPTI		55.53	241	P	P	04 34 56.1	-2.7
	comp=Z,1µmcomp=Z,29nm,1.3s						
MLH	Mauna Loa	55.68	93	P	P	04 35 01.0	+0.8
MLH				IAmb	IAmb	04 35 26.6	
	comp=Z,163nm,1.2s						
AIN	Ainahou	55.69	93	P	P	04 35 00.4	+0.2
AIN				IAmb	IAmb	04 36 11.4	
	comp=Z,173nm,1.2s						
MNSI	Mandailing Nat	55.78	237	P	P	04 34 58.8	-1.8
	comp=Z,13µmcomp=Z,48nm,0.4s						
SMRI	Semarang	55.80	221	P	P	04 35 01.0	+0.3
SMRI	Semarang	55.80	221	P	P	04 35 00.2	-0.5
	comp=Z,13µmcomp=Z,10µmcomp=Z,280nm,1.7s						
SDSI	Sungai Dareh	55.92	234	P	P	04 35 02.4	+0.8
	comp=Z,18µmcomp=Z,323nm,1.6s						
DIB	Dawson Inlet,	56.03	46	IAmb	IAmb	04 35 52.4	
	comp=Z,108nm,1.4s						
UGM	Wanagama	56.50	220	P	P	04 35 05.8	0.0
UGM	Wanagama	56.50	220	P	P	04 35 06.6	+0.9
	comp=Z,11µmcomp=Z,6µmcomp=Z,324nm,1.4s						
PDSI	Padang	56.52	235	P	P	04 35 04.3	-1.6
	comp=Z,9µmcomp=Z,3µmcomp=Z,52nm,1.5s						
GSI	Gunungsitoli	56.71	239	⇑P	P	04 35 07.2	-0.1
GSI	Gunungsitoli	56.71	239	P	P	04 35 06.5	-0.8
	comp=Z,15µmcomp=Z,9µmcomp=Z,442nm,1.6s						
KRJI	Kerinci	56.81	233	P	P	04 35 07.4	-0.7
	comp=Z,19µmcomp=Z,555nm,1.8s						
KNRA	Kununurra	56.92	197	P	P	04 35 10.2	+1.6
KNRA				IAmb	IAmb	04 35 20.8	
	comp=Z,90nm,1.0s						
KLSI		56.93	228	P	P	04 35 08.1	-0.7
	comp=Z,4µmcomp=Z,2µmcomp=Z,103nm,1.7s						
LHSI	Lahat	56.93	230	P	P	04 35 08.6	-0.2
	comp=Z,9µmcomp=Z,324nm,1.3s						
MASI	Maura Aman, Be	57.16	232	P	P	04 35 09.9	-0.6
	comp=Z,11µmcomp=Z,499nm,1.7s						
EUNU	Eureka	57.17	9	IAmb	IAmb	04 35 31.3	
	comp=Z,259nm,1.5s						
EUNU	Eureka	57.17	9	⇑P	P	04 35 10.2	+0.3
BLSI	Bandar Lampung	57.18	227	P	P	04 35 09.5	-1.1
	comp=Z,5µmcomp=Z,203nm,0.5s						
PBSI	Pulau Batu	57.26	238	P	P	04 35 09.4	-1.8
	comp=Z,17µmcomp=Z,6µmcomp=Z,289nm,1.6s						
DBJI	Dramaga	57.32	225	P	P	04 35 09.7	-1.9
	comp=Z,15µmcomp=Z,89nm,1.5s						
AB31	Akbulak array	57.49	309	*i* P	P	04 35 11.8	-0.6
AB31				pmax	pmax		
	comp=Z,91nm,0.7s						
ABKAR	Akbulak array	57.49	309	P	P	04 35 11.8	-0.6
BHPL	Bhopal	57.57	274	*e*P	P	04 35 11.4	-2.0
BHPL				IAmb	IAmb	04 35 15.5	
	comp=Z,211nm,1.0s						
LWLI	Liwa	57.58	229	P	P	04 35 12.3	-1.2
	comp=Z,156nm,1.0s						
CISI	Cisompet, Garu	57.59	223	P	P	04 35 12.4	-1.1
	comp=Z,3µmcomp=Z,131nm,1.6s						
MNAI	Manna	57.70	230	P	P	04 35 14.9	+0.7
SISI	Saibi	57.70	236	P	P	04 35 13.4	-0.9
	comp=Z,3µmcomp=Z,100nm,1.4s						
KASI	Kota Agung	57.74	228	P	P	04 35 11.7	-2.8
	comp=Z,10µmcomp=Z,2µmcomp=Z,102nm,1.1s						
HOPEN	Hopen	57.76	346	*e*P	P	04 35 15.0	+1.1
HOPEN				IVmB_BB		04 35 16.2	
	comp=Z,4µm,2.8s						
HOPEN				*e*S	S	04 43 13.7	+1.6
HOPEN				IVMs_BB	IVMs_BB	05 04 44.0	
	comp=Z,17µm,16.2s						
KBL	Kabul	58.05	290	P	P	04 35 16.2	-0.7
KBL				pmax	pmax		
	comp=Z,300nm,1.2s						
KBL				MLR	MLR		
	comp=Z,18µm,18.0s						
KBL	Kabul	58.05	290	P	P	04 35 16.2	-0.7
KBL				IAMs_20	IAMs_20	05 02 48.7	
	comp=Z,18µm,18.0s						
KBL	Kabul	58.05	290	P	P	04 35 16.2	-0.7
	SNR=147						
KBL				P	P	04 35 16.2	-0.7
	SNR=147						
KBL				S	S	04 43 16.2	-1.3
KBL				S	S	04 43 16.2	-1.3
AKTO	Aktyubinsk	58.12	311	P	P	04 35 16.7	-0.1
	comp=Z,54nm,0.7s,baz=71,slow=7.1,SNR=65						
SPA0	Spitsbergen Ar	58.13	349	P	P	04 35 17.8	+1.3
SPA0	Spitsbergen Ar	58.13	349	*e*P	P	04 35 17.2	+0.7
SPA0				IVmB_BB		04 35 18.3	
	comp=Z,3µm,4.0s						
SPA0				*e*PP	PP	04 37 25.8	+1.0
SPA0				*e*S	S	04 43 17.2	+0.2
SPITS	Spitsbergen Ar	58.13	349	P	P	04 35 17.2	+0.7
	comp=Z,92nm,1.2s,baz=135,slow=9.5,SNR=13						
KBS	Kingsbay	58.21	350	P	P	04 35 17.7	+0.7
KBS				pmax	pmax		
	comp=Z,257nm,1.3s						
KBS				MLR	MLR		
	comp=Z,22µm,18.0s						
KBS	Kingsbay	58.21	350	P	P	04 35 17.7	+0.7
KBS	Kingsbay	58.21	350	IAMs_20	IAMs_20	05 04 30.2	
	comp=Z,22µm,18.0s						
KBS	Kingsbay	58.21	350	*e*P	P	04 35 18.3	+1.3
KBS				IVmB_BB		04 35 19.3	
	comp=Z,3µm,3.6s						
KBS				*e*PP	PP	04 37 25.8	+0.3
KBS				*e*S	S	04 43 19.6	+1.7
KBS	Kingsbay	58.21	350	*i* P	P	04 35 17.8	+0.8
KBS				IAmb	IAmb	04 35 19.7	
	comp=Z,194nm,1.1s						
KBS				IAMs_20	IAMs_20	05 04 24.8	
	comp=Z,49µm,17.3s						
KBS	Kingsbay	58.21	350	⇑P	P	04 35 18.5	+1.4
FUNA	Funafuti	58.29	137	IAMs_20	IAMs_20	04 59 24.0	
	comp=Z,24µm,18.0s						
KNTN	Kanton	58.90	125	P	P	04 35 24.0	+1.3
KNTN				IAmb	IAmb	04 35 37.8	
	comp=Z,96nm,1.2s						
KNTN				IAMs_20	IAMs_20	05 05 40.1	
	comp=Z,13µm,18.0s						
KIRV	Kirov	59.08	322	P	P	04 35 24.0	+0.7
	comp=Z,54nm,0.7s,baz=350,slow=0.3,SNR=28						
HSPB	Hornsund (broa	59.09	348	*e*P	P	04 35 23.8	+0.7
HSPB				*e*S	S	04 43 29.8	+0.4
HSPB				*e*L	L	04 58 18.8	
	comp=Z,19µm,25.9s						
HSPB	Hornsund (broa	59.09	348	IVmB_BB		04 35 25.5	
	comp=Z,4µm,2.6s						
HSPB				*e*S	S	04 43 29.9	+0.6
HSPB				IVMs_BB	IVMs_BB	05 04 15.2	
	comp=Z,8µm,16.8s						
SANVU	Saraoutou	59.21	153	P	P	04 35 24.8	+0.2
SANVU	Saraoutou	59.21	153	⇓P	P	04 35 24.9	+0.2
SANVU				⇓P	P	04 35 24.9	+0.2
SANVU	Saraoutou	59.21	153	P	P	04 35 25.3	+0.6
CTA	Charters Tower	59.65	177	P	P	04 35 28.2	+0.6
	comp=Z,8.5nm,0.9s,baz=326,slow=7.2,SNR=5.1						
CTAO	Charters Tower	59.65	177	P	P	04 35 28.9	+1.3
CTAO				pmax	pmax		
	comp=Z,95nm,1.7s						
CTAO	Charters Tower	59.65	177	P	P	04 35 28.9	+1.3
CTAO				IAmb	IAmb	04 35 46.2	
	comp=Z,95nm,1.6s						
WB0	Warramunga Arr	59.90	190	IAmb	IAmb	04 35 32.5	
	comp=Z,92nm,0.8s						
HYB	Hyderabad	60.02	268	*i* P	P	04 35 29.0	-1.4
	comp=Z,371nm,1.5s						
HYB				*e*PP	PP	04 37 52.0	+9.2
HYB				*e*PPP	PPP	04 39 08.0	
HYB				*e*S	S	04 43 43.0	+0.1
HYB	Hyderabad	60.02	268	*e*x	x	04 35 27.0	
HYB				IAmb	IAmb	04 35 41.4	
	comp=Z,164nm,1.2s						

WRAB	**Tennant Creek**	**60.07**	**190**	P	**P**	**04 35 30.2**	**-0.3**
WRAB				pmax	pmax		
	comp=Z,98nm,1.0s						
WRAB	**Tennant Creek**	**60.07**	**190**	P	**P**	**04 35 30.2**	**-0.3**
WRAB				IAmb	IAmb	04 35 45.5	
	comp=Z,98nm,1.0s						
WR0	**Warramunga Arr**	**60.07**	**190**	IAmb	IAmb	04 35 44.9	
	comp=Z,132nm,1.2s						
WB2	**Warramunga Arr**	**60.08**	**190**	IAmb	IAmb	04 36 41.8	
	comp=Z,133nm,1.2s						
WRA	**Warramunga Arr**	**60.08**	**190**	P	**P**	**04 35 29.0**	**-1.6**
	comp=Z,57nm,0.7s,baz=8.7,slow=6.9,SNR=101						
WRA				S	**S**	**04 43 39.2**	**-4.0**
	comp=Z,14nm,1.4s,baz=7.8,slow=12,SNR=5.6						
WRA				LR	LR	05 02 11.5	
	comp=Z,3µm,20.2s,baz=35,slow=37						
WRA				PKP2bc		05 05 05.1	
	comp=Z,2.5nm,1.0s,baz=181,slow=1.9,SNR=4.8						
BJO1	**Bjornoya**	**60.22**	**345**	*e*P	**P**	**04 35 31.6**	**+0.6**
LVZ	**Lovozero**	**60.29**	**336**	*ce*P	**P**	**04 35 31.8**	**+0.2**
LVZ				pmax	pmax		
	comp=Z,254nm,2.5s						
LVZ				MLR	MLR		
	comp=Z,39µm,17.0s						
LVZ	**Lovozero**	**60.29**	**336**	P	**P**	**04 35 31.2**	**-0.4**
YKA	**Yellowknife Ar**	**60.53**	**31**	P	**P**	**04 35 32.8**	**-0.5**
	comp=Z,5.1nm,0.6s,baz=305,slow=5.7,SNR=106						
YKA				PKP2bc		05 05 03.8	
	comp=Z,2.2nm,1.2s,baz=91,slow=2.8,SNR=5.3						
YKA				LR	LR	05 06 26.2	
	comp=Z,6µm,18.0s,baz=0.0,slow=41						
APA	**Apatity**	**60.87**	**336**	⇓*i*P	**P**	**04 35 34.8**	**-0.7**
APA				*i*		04 37 53.0	
APA				*i* PPP	PPP	04 39 18.0	
APA				*i* S	**S**	**04 43 51.0**	**-1.4**
APA				*i* PS		04 44 05.0	
APA				*i*		04 45 23.0	
APA				pmax	pmax		
	comp=Z,31nm,0.7s						
APA				MLR	MLR		
	comp=Z,39µm,17.0s						
TMCR	**Tamitsa**	**61.14**	**331**	*e*P	**P**	**04 35 35.0**	**-2.3**
TMCR				*e*S	**S**	**04 43 55.7**	**-0.2**
TMCR				pmax	pmax		
	comp=Z,103nm,0.9s						
MDRS	**Chennai**	**61.33**	**263**	*e*P	**P**	**04 35 39.0**	**-0.4**
MDRS				IAmb	IAmb	04 35 52.5	
	comp=Z,223nm,1.2s						
KEV	**Kevo**	**61.45**	**339**	P	**P**	**04 35 39.4**	**0.0**
KEV				pmax	pmax		
	comp=Z,96nm,0.9s						
KEV				MLR	MLR		
	comp=Z,30µm,19.0s						
KEV	**Kevo**	**61.45**	**339**	P	**P**	**04 35 39.4**	**0.0**
KEV				IAmb	IAmb	04 35 53.1	
	comp=Z,96nm,0.9s						
KEV	**Kevo**	**61.45**	**339**	⇓P	**P**	**04 35 39.9**	**+0.5**
KEV				⇑P	**pP**	**04 35 40.2**	**-2.6**
HAMF	**Hammerfest**	**61.76**	**341**	*e*P	**P**	**04 35 41.7**	**+0.2**
HAMF				IVmBBB		04 35 43.4	
	comp=Z,3µm,3.0s						
HAMF				*e*S	**S**	**04 44 04.6**	**+0.9**
HAMF				IVMs_BB	IVMs_BB	05 08 49.4	
	comp=Z,20µm,18.7s						
ARA0	**ARCESS Array S**	**62.00**	**339**	*e*P	**P**	**04 35 43.8**	**+0.6**
ARCES	**ARCESS Array B**	**62.00**	**339**	P	**P**	**04 35 43.5**	**+0.3**
	comp=Z,15nm,0.7s,baz=54,slow=6.2,SNR=25						
ARCES				LR	LR	05 07 39.4	
	comp=Z,29µm,18.1s,baz=40,slow=41						
ARCES	**ARCESS Array B**	**62.00**	**339**	P	**P**	**04 35 43.5**	**+0.3**
ARCES				pmax	pmax		
	comp=Z,76nm,1.2s						
ARCES	**ARCESS Array B**	**62.00**	**339**	P	**P**	**04 35 43.5**	**+0.3**
ARCES				IAmb	IAmb	04 35 55.1	
	comp=Z,76nm,1.2s						
TULEG	**Thule**	**62.11**	**8**	*i* P	**P**	**04 35 42.0**	**-1.7**
TULEG				IAmb	IAmb	04 35 43.9	
	comp=Z,17nm,0.8s						
TULEG				IAMs_20	IAMs_20	05 07 03.3	
	comp=Z,39µm,17.0s						
KLMR	**Klimovskoe**	**62.33**	**328**	*e*P	**P**	**04 35 42.8**	**-2.7**
KLMR				*e*		04 37 59.7	
KLMR				*e*S	**S**	**04 44 09.0**	**-2.1**
KLMR				pmax	pmax		
	comp=Z,390nm,1.5s						
KLMR				MLR	MLR		
	comp=Z,41µm,15.0s						
KLMR	**Klimovskoe**	**62.33**	**328**	*e*P	**P**	**04 35 42.8**	**-2.7**
KLMR				AMP		04 35 57.8	
	comp=Z,390nm,1.5s						
KLMR				*e*PP	**PP**	**04 37 59.8**	**-2.3**
KLMR				*e*S	**S**	**04 44 09.1**	**-2.1**
KLMR				*e*S	**S**	**04 44 09.1**	**-2.1**
KLMR				LQ	LQ	04 59 22.6	
KLMR				LQ	LQ	04 59 22.6	
KLMR				LR	LR	05 04 10.4	
KLMR				AMP		05 05 38.3	
	comp=Z,41µm,15.2s						
BELG	**Belogornoye**	**62.95**	**317**	P	**P**	**04 35 50.0**	**+0.3**
	comp=Z,186nm,0.7s,baz=13,slow=0.6,SNR=153						
BELG	**Belogornoye**	**62.95**	**317**	P	**P**	**04 35 50.0**	**+0.3**
KTK1	**Kautokeino**	**62.96**	**340**	*e*P	**P**	**04 35 50.3**	**+0.8**
KTK1				*e*pP	**pP**	**04 35 53.1**	**+0.2**
KTK1				IVMs_BB	IVMs_BB	05 08 01.7	
	comp=Z,14µm,17.9s						
POO	**Poona**	**62.99**	**272**	*e*P	**P**	**04 35 49.6**	**-1.0**
POO				IAmb	IAmb	04 36 02.6	
	comp=Z,353nm,1.1s						
HRA	**Herat**	**62.99**	**293**	P	**P**	**04 35 50.5**	**-0.1**
HRA				IAMs_20	IAMs_20	05 05 35.0	
	comp=Z,19µm,18.0s						
KOUNC	**Koumac, New Ca**	**63.08**	**158**	P	**P**	**04 35 53.8**	**+3.0**
DAG	**Danmarks Havn**	**63.15**	**355**	*i* P	**P**	**04 35 50.1**	**-0.5**
	comp=Z,51nm,1.0s						
	comp=Z,16µm,21.0s						
DAG	**Danmarks Havn**	**63.15**	**355**	*i* P	**P**	**04 35 50.1**	**-0.5**
DAG				pmax	pmax		
	comp=Z,51nm,1.0s						
DAG				MLR	MLR		
	comp=Z,16µm,21.0s						
DAG	**Danmarks Havn**	**63.15**	**355**	*i* P	**P**	**04 35 50.1**	**-0.5**
DAG				IAmb	IAmb	04 35 52.2	
	comp=Z,51nm,1.0s						
DAG				IAMs_20	IAMs_20	05 01 03.6	
	comp=Z,16µm,20.8s						
JETT	**Jettan, Norway**	**63.32**	**341**	*e*P	**P**	**04 35 53.0**	**+0.9**
BHUJ	**Bhuj**	**63.51**	**279**	*e*P	**P**	**04 35 52.1**	**-1.7**
BHUJ				IAmb	IAmb	04 35 57.7	
	comp=Z,73nm,0.8s						
A04D	**Lummi Island**	**63.56**	**48**	P	**P**	**04 35 53.1**	**-0.7**
	baz=301						
TRO	**Tromso**	**63.64**	**341**	*e*P	**P**	**04 35 54.5**	**+0.5**
TRO				IAmb	IAmb	04 35 55.3	
	comp=Z,51nm,0.7s						
TRO				*e*PP	**PP**	**04 38 14.1**	**+0.7**
TRO				*e*S	**S**	**04 44 27.4**	**+0.1**
TRO				IVMs_BB	IVMs_BB	05 10 53.8	
	comp=Z,15µm,14.6s						
ASAR	**Alice Springs**	**63.80**	**190**	P	**P**	**04 35 54.6**	**-1.0**
	comp=Z,33nm,0.8s,baz=10.0,slow=7.0,SNR=66						
ASAR				LR	LR	05 02 20.5	
	comp=Z,5µm,21.9s,baz=3.5,slow=35						
ASAR				PKP2bc		05 04 52.8	
	comp=Z,1.9nm,1.0s,baz=182,slow=2.0,SNR=5.0						
ASAR	**Alice Springs**	**63.80**	**190**	P	**P**	**04 35 54.7**	**-0.9**
ASAR	**Alice Springs**	**63.80**	**190**	P	**P**	**04 35 54.7**	**-0.9**
ASHT	**Ashkhabad**	**63.82**	**299**	P	**P**	**04 35 56.9**	**+1.2**
ASHT				pmax	pmax		
	comp=Z,172nm,0.4s						
ASHT				MLR	MLR		
	comp=Z,19µm,18.0s						
ASHT	**Ashkhabad**	**63.82**	**299**	P	**P**	**04 35 56.9**	**+1.2**
ASHT				IAMs_20	IAMs_20	05 05 57.8	
	comp=Z,19µm,18.0s						
D03D	**Eldon**	**63.95**	**49**	P	**P**	**04 35 55.5**	**-1.0**
	baz=301						
GEYT	**Alibeck**	**64.01**	**299**	P	**P**	**04 35 57.1**	**+0.1**
	comp=Z,32nm,0.8s,baz=46,slow=4.3,SNR=35						
GEYT	**Alibeck**	**64.01**	**299**	P	**P**	**04 35 57.2**	**+0.1**
GEYT				IAmb	IAmb	04 36 09.4	
	comp=Z,77nm,1.0s						
GYA0B	**ALIBECK ARRAY**	**64.01**	**299**	IAmb	IAmb	04 36 08.8	
	comp=Z,100nm,0.9s						
GYA0B				IAMs_20	IAMs_20	05 03 39.8	
	comp=Z,15µm,18.0s						
B05A	**Bryant**	**64.15**	**48**	P	**P**	**04 35 56.8**	**-0.9**
	baz=302						
E03A	**Lebam**	**64.19**	**50**	IAmb	IAmb	04 36 18.1	
	comp=Z,82nm,1.0s						
D04E	**Lakebay**	**64.33**	**49**	P	**P**	**04 35 58.2**	**-0.7**
	baz=302						
B06A	**Marblemount**	**64.36**	**47**	IAmb	IAmb	04 36 13.6	
	comp=Z,85nm,1.4s						
MBWA	**Marble Bar**	**64.63**	**205**	P	**P**	**04 36 00.2**	**-0.9**
MBWA				P	**P**	**04 36 00.2**	**-0.9**
MBWA				P	**P**	**04 36 00.2**	**-0.9**
MBWA				S	**S**	**04 44 38.8**	**-1.8**
MBWA				S	**S**	**04 44 38.8**	**-1.8**
MBWA				S	**S**	**04 44 38.8**	**-1.8**
PALK	**Pallekele**	**64.65**	**258**	P	**P**	**04 36 01.5**	**-0.1**
PALK				pmax	pmax		
	comp=Z,165nm,1.4s						
PALK				MLR	MLR		
	comp=Z,18µm,20.0s						
PALK	**Pallekele**	**64.65**	**258**	P	**P**	**04 36 01.5**	**-0.1**
PALK				IAmb	IAmb	04 36 20.2	
	comp=Z,165nm,1.4s						
PALK	**Pallekele**	**64.65**	**258**	IAMs_20	IAMs_20	05 05 00.6	
	comp=Z,18µm,20.0s						
PALK	**Pallekele**	**64.65**	**258**	P	**P**	**04 36 01.1**	**-0.5**
PALK				P	**P**	**04 36 01.1**	**-0.5**
PALK				P	**P**	**04 36 01.1**	**-0.5**
PALK				S	**S**	**04 44 43.2**	**+1.8**
PALK				S	**S**	**04 44 43.2**	**+1.8**
PALK				S	**S**	**04 44 43.2**	**+1.8**
F04D	**Rainier, OR**	**64.76**	**50**	P	**P**	**04 36 00.7**	**-1.1**
	baz=302						
E04D	**Cinebar**	**64.77**	**50**	P	**P**	**04 36 00.3**	**-1.5**
	baz=302						
D05A	**Enumclaw**	**64.77**	**49**	P	**P**	**04 36 02.8**	**+1.0**
D05A				IAmb	IAmb	04 36 17.4	
	comp=Z,142nm,1.3s						
GOA	**Goa**	**64.80**	**269**	*e*P	**P**	**04 36 01.7**	**-0.7**
GOA				IAmb	IAmb	04 36 06.0	
	comp=Z,178nm,0.9s						
GOA				*i* x	x	04 44 43.6	
PSAB1	**Pilbara Seismi**	**64.99**	**204**	IAMs_20	IAMs_20	05 04 01.6	
	comp=Z,11µm,21.0s						
C06D	**Leavenworth**	**65.01**	**48**	P	**P**	**04 36 01.8**	**-1.6**
	baz=302						
PSAC3	**Pilbara Seismi**	**65.03**	**204**	IAMs_20	IAMs_20	05 04 04.9	
	comp=Z,12µm,20.0s						
PSAD3	**Pilbara Seismi**	**65.07**	**204**	IAMs_20	IAMs_20	05 04 03.8	
	comp=Z,11µm,20.0s						
G03D	**McMinnville, O**	**65.07**	**51**	P	**P**	**04 36 02.4**	**-1.4**
	baz=302						
DZM	**Mont Dzumac**	**65.16**	**157**	P	**P**	**04 36 05.0**	**+0.4**
	comp=Z,27nm,1.1s,baz=6.2,slow=8.2,SNR=8.2						
DZM	**Mont Dzumac**	**65.16**	**157**	*e*P	**P**	**04 36 07.3**	**+2.7**
	comp=Z,380nm,1.4s						
DZM				*e*S	**S**	**04 44 50.4**	**+3.2**
	comp=Z,7µm,23.8s						
DZM				*e*LQ	LQ	04 52 38.4	
	comp=Z,28µm,30.4s						
DZM				*e*LR	LR	04 55 32.4	
	comp=Z,15µm,22.4s						
DZM	**Mont Dzumac**	**65.16**	**157**	IAMs_20	IAMs_20	05 06 50.8	
	comp=Z,20µm,19.0s						
DZM	**Mont Dzumac**	**65.16**	**157**	P	**P**	**04 36 07.1**	**+2.5**
XMAS	**Kiritimati**	**65.18**	**109**	P	**P**	**04 36 06.5**	**+1.6**
EIDS	**Eidsvold**	**65.22**	**173**	P	**P**	**04 36 05.9**	**+1.1**
EIDS				IAmb	IAmb	04 36 22.4	
	comp=Z,58nm,1.1s						
EIDS				IAMs_20	IAMs_20	05 01 26.4	
	comp=Z,11µm,22.0s						
I02D	**Swisshome**	**65.30**	**52**	P	**P**	**04 36 03.8**	**-1.5**
	baz=302						
COR	**Corvallis**	**65.38**	**52**	P	**P**	**04 36 07.1**	**+1.3**
COR				pmax	pmax		
	comp=Z,214nm,1.4s						
COR	**Corvallis**	**65.38**	**52**	P	**P**	**04 36 07.1**	**+1.3**
ONTNC	**Ouen Toro**	**65.38**	**157**	P	**P**	**04 36 08.4**	**+2.5**
LTY	**Liberty**	**65.50**	**48**	IAmb	IAmb	04 36 23.4	
	comp=Z,75nm,1.4s						
N2IH	**Innhavet**	**65.60**	**341**	*e*P	**P**	**04 36 07.0**	**+0.2**
N2IH				*e*S	**S**	**04 44 52.8**	**+1.3**
N2HS	**Hamsund**	**65.61**	**341**	*e*P	**P**	**04 36 06.9**	**0.0**
DBG	**Daneborg**	**65.64**	**355**	*i* P	**P**	**04 36 07.0**	**0.0**
DBG				IAmb	IAmb	04 36 08.6	
	comp=Z,40nm,1.3s						
DBG				IAMs_20	IAMs_20	05 16 14.9	
	comp=Z,22µm,15.8s						
MSVF	**Nonsavu**	**65.65**	**144**	P	**P**	**04 36 08.6**	**+0.8**
MSVF				pmax	pmax		
	comp=Z,74nm,1.2s						
MSVF	**Nonsavu**	**65.65**	**144**	P	**P**	**04 36 08.6**	**+0.8**
MSVF				IAmb	IAmb	04 36 13.1	
	comp=Z,74nm,1.2s						
MSVF	**Nonsavu**	**65.65**	**144**	IAMs_20	IAMs_20	05 03 44.2	
	comp=Z,10µm,18.0s						
MSVF	**Nonsavu**	**65.65**	**144**	P	**P**	**04 36 10.3**	**+2.5**
B08A	**Colville Reser**	**65.66**	**47**	P	**P**	**04 36 07.6**	**0.0**
B08A				IAmb	IAmb	04 36 23.0	
	comp=Z,92nm,1.3s						
B08A				IAMs_20	IAMs_20	05 07 59.9	
	comp=Z,10µm,18.0s						
H04D	**Lebanon**	**65.75**	**52**	P	**P**	**04 36 06.5**	**-1.7**
	baz=303						
J01E	**Myrtle Point**	**65.76**	**53**	P	**P**	**04 36 06.8**	**-1.5**
	baz=303						
N2VI	**Vinje**	**65.77**	**342**	*e*P	**P**	**04 36 08.6**	**+0.7**
N2VI				*e*S	**S**	**04 44 54.3**	**+0.8**
F05D	**White Salmon**	**65.78**	**50**	P	**P**	**04 36 07.4**	**-1.0**
	baz=303						
I03D	**Drain, OR**	**65.83**	**53**	P	**P**	**04 36 08.4**	**-0.3**
	baz=303,SNR=17						
MOS	**Moscow**	**66.05**	**323**	*e*P	**P**	**04 36 08.4**	**-1.5**
MOS				*e*S	**S**	**04 44 53.1**	**-4.2**
MOS				*e*		04 45 59.8	
MOS				pmax	pmax		
	comp=Z,2µm,3.0s						
MOS				pmax	pmax		
	comp=Z,371nm,1.9s						
MOS				smax	smax		
	comp=N,4µm,6.0s						
MOS				smax	smax		
	comp=E,4µm,6.0s						
MOS				MLR	MLR		
	comp=N,39µm,16.0s						
MOS				MLR	MLR		
	comp=E,48µm,16.0s						
MOS				MLR	MLR		
	comp=Z,59µm,16.0s						
LOF	**Lofoten**	**66.07**	**342**	*e*P	**P**	**04 36 10.6**	**+0.8**
LOF				IVmB_BB		04 36 11.7	
	comp=Z,3µm,3.2s						
LOF				*e*sP	**sP**	**04 36 14.7**	**+0.1**
LOF				IVMs_BB	IVMs_BB	05 10 54.2	
	comp=Z,13µm,11.9s						
KBO	**Bosley Butte**	**66.08**	**54**	IAmb	IAmb	04 36 17.2	
	comp=Z,169nm,1.5s						
N2TV	**T¥rnvik**	**66.11**	**341**	*e*P	**P**	**04 36 10.9**	**+0.8**
N2TV				*e*S	**S**	**04 44 59.1**	**+1.4**
N2ST	**Straumen**	**66.15**	**341**	*e*P	**P**	**04 36 11.0**	**+0.6**
K02D	**Willamette Mer**	**66.17**	**54**	P	**P**	**04 36 10.0**	**-1.0**
	baz=303,SNR=10						
FAUS	**Fauske**	**66.21**	**341**	*e*S	**S**	**04 45 00.6**	**+1.7**
FAUS				IVMs_BB	IVMs_BB	05 11 06.9	
	comp=Z,12µm,13.4s						
G05D	**Wamic, OR**	**66.21**	**50**	P	**P**	**04 36 09.9**	**-1.4**
	baz=303						
I04A	**Tendick Farm,**	**66.34**	**52**	P	**P**	**04 36 10.5**	**-1.6**
	baz=303,SNR=27						
NBB08	**Skaug oppvekst**	**66.37**	**341**	*e*P	**P**	**04 36 12.5**	**+0.7**
NBB08				IVmB_BB		04 36 13.8	
	comp=Z,5µm,2.6s						
NBB08	**Skaug oppvekst**	**66.37**	**341**	*e*S	**S**	**04 45 01.7**	**+0.8**
N2SV	**S¸rv¥gen**	**66.38**	**342**	*e*P	**P**	**04 36 10.8**	**-1.1**
N2SV				*e*S	**S**	**04 45 01.9**	**+0.9**
L02E	**Cave Junction**	**66.50**	**54**	P	**P**	**04 36 11.3**	**-1.9**
	baz=303						
C09A	**Chrisman Ranch**	**66.56**	**47**	IAmb	IAmb	04 36 28.6	
	comp=Z,75nm,1.1s						
C09A				IAMs_20	IAMs_20	05 08 52.7	
	comp=Z,9µm,18.0s						
NBB28	**Valnes**	**66.56**	**341**	*e*P	**P**	**04 36 13.1**	**+0.1**
D08A	**Wollman Farm,**	**66.61**	**48**	IAmb	IAmb	04 36 28.2	
	comp=Z,98nm,1.4s						
D08A				IAMs_20	IAMs_20	05 08 57.0	
	comp=Z,10µm,18.0s						
HAWA	**Hanford**	**66.62**	**48**	IAmb	IAmb	04 36 28.6	
	comp=Z,83nm,1.5s						
N2VA	**Vr¸y**	**66.64**	**342**	*e*P	**P**	**04 36 13.8**	**+0.3**
PUL	**Pulkovo**	**66.67**	**330**	*ce*P	**P**	**04 36 14.2**	**+0.4**
PUL				pmax	pmax		
	comp=Z,210nm,0.7s						
PUL				MLR	MLR		
	comp=Z,37µm,17.0s						
VRH	**Novokhopyorsk**	**66.68**	**318**	*e*P	**P**	**04 36 14.4**	**+0.4**
VRH				*e*		04 36 15.4	
VRH				*e*		04 38 35.6	
VRH				*e*S	**S**	**04 45 03.8**	**-1.3**
VRH				*e*SS	**SS**	**04 49 18.8**	**-3.0**
VRH				pmax	pmax		
	comp=Z,300nm,1.6s						
VRH				smax	smax		
	comp=E,10µm,16.5s						
VRH				MLR	MLR		
	comp=Z,115µm,15.0s						
I05D	**Terrebonne, OR**	**66.69**	**51**	P	**P**	**04 36 12.2**	**-2.2**
	baz=304,SNR=9.8						
TRD	**Trivandrum**	**66.70**	**261**	*e*P	**P**	**04 36 14.8**	**+0.2**
TRD				IAmb	IAmb	04 36 18.3	
	comp=Z,301nm,1.0s						
NBB05	**Inndyr**	**66.79**	**341**	*e*P	**P**	**04 36 15.4**	**+0.9**
NBB05				IVmB_BB		04 36 16.2	
	comp=Z,5µm,3.1s						
NBB05	**Inndyr**	**66.79**	**341**	*e*S	**S**	**04 45 06.2**	**+0.3**
J04D	**Umpqua Nationa**	**66.83**	**52**	P	**P**	**04 36 14.0**	**-1.4**
	baz=304,SNR=22						
E08A	**Dider Farm, El**	**66.84**	**48**	IAmb	IAmb	04 36 29.9	
	comp=Z,108nm,1.5s						
UPNV	**Upernavik**	**66.86**	**6**	IAMs_20	IAMs_20	05 09 48.4	
	comp=Z,27µm,18.2s						
N2RO	**R¸st**	**66.89**	**342**	*e*pP	**pP**	**04 36 18.7**	**+0.1**
N2RO				*e*S	**S**	**04 45 07.5**	**+0.3**
OBN	**Obninsk**	**66.90**	**323**	P	**P**	**04 36 15.8**	**+0.5**
	comp=Z,8.2nm,0.5s,baz=88,slow=1.4,SNR=21						
OBN	**Obninsk**	**66.90**	**323**	*ce*P	**P**	**04 36 14.7**	**-0.7**
OBN				*e*		04 36 43.0	
OBN				*i*		04 38 41.5	
OBN				*e*S	**S**	**04 45 03.6**	**-4.0**
OBN				*e*SS	**SS**	**04 49 31.6**	**+6.5**
OBN				pmax	pmax		
	comp=Z,435nm,2.5s						
OBN				pmax	pmax		
	comp=Z,2µm,2.5s						
OBN				MLR	MLR		
	comp=Z,76µm,16.0s						
OBN	**Obninsk**	**66.90**	**323**	P	**P**	**04 36 15.0**	**-0.3**
NBB30	**Finnes**	**66.91**	**341**	*e*P	**P**	**04 36 15.3**	**+0.1**
NEW	**Newport**	**66.94**	**46**	P	**P**	**04 36 14.9**	**-1.0**
	baz=304,SNR=16						
NEW	**Newport**	**66.94**	**46**	IAmb	IAmb	04 36 31.1	
	comp=Z,72nm,1.1s						
KHMM	**Horse Mountain**	**67.12**	**55**	IAmb	IAmb	04 36 35.3	
	comp=Z,82nm,1.0s						
FINES	**FINESS Array B**	**67.15**	**332**	P	**P**	**04 36 16.4**	**-0.5**
	comp=Z,51nm,0.7s,baz=53,slow=7.4,SNR=106						
FINES				LR	LR	05 08 50.5	
	comp=Z,55µm,18.8s,baz=34,slow=39						
FINES	**FINESS Array B**	**67.15**	**332**	P	**P**	**04 36 16.6**	**-0.3**
FINES	**FINESS Array B**	**67.15**	**332**	P	**P**	**04 36 16.6**	**-0.3**
LPSR	**Galich'ya Gora**	**67.27**	**320**	*e*P	**P**	**04 36 18.0**	**+0.2**
LPSR				*e*		04 36 20.5	
LPSR				*e*S	**S**	**04 45 10.5**	**-1.7**
LPSR				*e*SS	**SS**	**04 49 25.4**	**-5.6**
LPSR				pmax	pmax		
	comp=Z,240nm,1.3s						
LPSR				smax	smax		
	comp=N,5µm,11.7s						
LPSR				MLR	MLR		
	comp=Z,70µm,14.0s						
L04D	**Klamath Falls**	**67.28**	**53**	P	**P**	**04 36 17.9**	**-0.3**
	baz=304,SNR=32						
J05D	**Fort Rock, OR**	**67.34**	**52**	P	**P**	**04 36 16.5**	**-2.1**
	baz=304,SNR=39						
E09A	**Wood Farm, Sta**	**67.35**	**48**	IAmb	IAmb	04 36 33.3	
	comp=Z,108nm,1.2s						
K04D	**Chiloquin, OR**	**67.39**	**53**	P	**P**	**04 36 17.1**	**-1.8**
	baz=304						
M02C	**Callahan**	**67.39**	**54**	P	**P**	**04 36 17.6**	**-1.3**
	baz=304,SNR=12						
KONS	**Konsvik**	**67.44**	**341**	*e*P	**P**	**04 36 19.3**	**+0.7**
KONS				*e*pP	**pP**	**04 36 22.4**	**+0.4**
COCO	**West Island**	**67.55**	**230**	P	**P**	**04 36 20.9**	**+0.9**
COCO				pmax	pmax		
	comp=Z,1µm,2.0s						
COCO	**West Island**	**67.55**	**230**	P	**P**	**04 36 20.9**	**+0.9**
STOK	**Stokkvaagen**	**67.59**	**341**	*e*P	**P**	**04 36 20.8**	**+1.3**
AFI	**Afiamalu**	**67.66**	**133**	IAMs_20	IAMs_20	05 05 03.6	
	comp=Z,13µm,19.0s						
N02D	**Trinity Center**	**67.72**	**55**	P	**P**	**04 36 20.2**	**-0.8**
	baz=304,SNR=14						
M04C	**Macdoel**	**67.81**	**54**	P	**P**	**04 36 20.5**	**-1.0**
	baz=304,SNR=22						
SUMG	**Summit**	**67.89**	**1**	*i* P	**P**	**04 36 22.0**	**+0.1**
	comp=Z,140nm,0.9s						
	comp=Z,70µm,23.0s						
SUMG	**Summit**	**67.89**	**1**	*i* P	**P**	**04 36 22.0**	**+0.1**
SUMG				pmax	pmax		
	comp=Z,140nm,0.9s						
SUMG				MLR	MLR		
	comp=Z,70µm,23.0s						
SUMG	**Summit**	**67.89**	**1**	*i* P	**P**	**04 36 22.0**	**+0.1**
SUMG				IAmb	IAmb	04 36 24.3	
	comp=Z,140nm,0.9s						
SUMG				IAMs_20	IAMs_20	05 04 39.5	
	comp=Z,70µm,23.1s						
I07A	**Izee**	**67.93**	**51**	IAmb	IAmb	04 37 10.3	
	comp=Z,95nm,1.7s						
VSR	**Storozhevoye**	**67.97**	**319**	*e*P	**P**	**04 36 21.6**	**-0.7**
VSR				*e*		04 36 23.1	
VSR				*e*		04 38 48.0	
VSR				*e*S	**S**	**04 45 20.9**	**+0.2**
VSR				pmax	pmax		
	comp=Z,420nm,2.1s						
VSR				smax	smax		
	comp=N,5µm,13.4s						
VSR				MLR	MLR		
	comp=Z,26µm,14.0s						
WDC	**Whiskeytown Da**	**68.04**	**55**	P	**P**	**04 36 23.5**	**+0.6**
WDC				pmax	pmax		
	comp=Z,80nm,1.3s						
WDC	**Whiskeytown Da**	**68.04**	**55**	P	**P**	**04 36 23.5**	**+0.6**
WDC				IAmb	IAmb	04 36 34.3	
	comp=Z,80nm,1.2s						
VORD	**Divnogorie**	**68.06**	**319**	*e*P	**P**	**04 36 22.6**	**-0.2**
VORD				*e*		04 36 24.7	
VORD				*e*S	**S**	**04 45 18.1**	**-3.6**
VORD				pmax	pmax		
	comp=Z,160nm,1.2s						
VORD				smax	smax		
	comp=N,2µm,8.6s						
VORD				MLR	MLR		
	comp=Z,28µm,14.0s						
O02D	**Mt. Diablo Mer**	**68.11**	**55**	P	**P**	**04 36 22.5**	**-0.9**
	baz=304,SNR=5.3						
F10A	**Beach Ranch, E**	**68.18**	**48**	IAmb	IAmb	04 36 53.4	
	comp=Z,106nm,1.9s						
F10A				IAMs_20	IAMs_20	05 09 54.8	
	comp=Z,9µm,18.0s						
WALA	**Waterton Lakes**	**68.22**	**44**	IAmb	IAmb	04 37 06.2	
	comp=Z,78nm,1.3s						
WALA				IAMs_20	IAMs_20	05 06 24.6	
	comp=Z,14µm,18.0s						
O03E	**Paynes Creek**	**68.67**	**55**	P	**P**	**04 36 25.4**	**-1.5**
	baz=305,SNR=32						
JTMT	**Jette**	**68.80**	**45**	IAmb	IAmb	04 36 42.5	
	comp=Z,116nm,1.3s						
GDXM	**Geysers**	**68.87**	**57**	IAmb	IAmb	04 36 40.0	
	comp=Z,68nm,1.2s						
VSU	**Vasula**	**68.93**	**330**	*e*P	**P**	**04 36 28.0**	**0.0**
VSU	**Vasula**	**68.93**	**330**	*i* P	**P**	**04 36 26.9**	**-1.1**
VSU				pmax	pmax		
	comp=Z,200nm,1.0s						
VSU				MLR	MLR		
	comp=Z,36µm,18.0s						
GROC	**Groznyy**	**68.99**	**309**	*e*P	**P**	**04 36 29.0**	**+0.2**
GROC				*e*		04 36 54.5	
GROC				*e*		04 39 02.8	
GROC				*e*S	**S**	**04 45 31.0**	**-2.1**
GROC				pmax	pmax		
	comp=Z,69nm,0.8s						
NSS	**Namsos**	**69.28**	**340**	IVmB_BB		04 36 30.3	
	comp=Z,7µm,5.4s						
NSS				*e*P	**P**	**04 36 30.3**	**+0.2**

NSS				eS	S	04 45 38.2	+2.4
NSS				IVMs_BB	IVMs_BB	05 13 50.1	
	comp=Z,14µm,15.1s						
WVOR	Wild Horse Val	69.39	52	IAmb	IAmb	04 37 09.7	
	comp=Z,119nm,1.5s						
SCO	Scoresbysund	69.51	355	i P	P	04 36 32.0	+0.5
	comp=Z,38nm,1.2s						
	comp=Z,14µm,18.0s						
SCO	Scoresbysund	69.51	355	i P	P	04 36 32.0	+0.5
SCO				pmax	pmax		
	comp=Z,38nm,1.2s						
SCO				MLR	MLR		
	comp=Z,14µm,18.0s						
SCO	Scoresbysund	69.51	355	P	P	04 36 31.9	+0.5
SCO				IAmb	IAmb	04 36 52.8	
	comp=Z,84nm,1.2s						
SCO				IAMs_20	IAMs_20	05 05 16.7	
	comp=Z,16µm,21.0s						
SCO	Scoresbysund	69.51	355	i P	P	04 36 32.0	+0.5
SCO				IAmb	IAmb	04 36 36.4	
	comp=Z,38nm,1.2s						
SCO				IAMs_20	IAMs_20	05 18 26.4	
	comp=Z,14µm,17.7s						
GOF	Gofitskoye	69.53	312	⇑iP	P	04 36 32.7	+0.7
GOF				i S	S	04 45 42.6	+3.2
GOF				pmax	pmax		
	comp=Z,466nm,0.9s						
GOF				smax	smax		
	comp=E,128nm,1.8s						
MSO	Missoula	69.53	46	P	P	04 36 30.4	-1.7
	baz=307,SNR=18						
BEKR	Beckworth	69.82	55	IAmb	IAmb	04 36 48.9	
	comp=Z,69nm,1.1s						
MNCY	Minicoy	69.85	264	eP	P	04 36 34.0	-0.4
MNCY				eP	pP	04 36 35.0	-3.0
MNCY				IAmb	IAmb	04 36 38.5	
	comp=Z,265nm,1.3s						
MTSE	Matsula	69.86	331	eP	P	04 36 30.1	-3.7
NCK	Nalchik	70.13	310	i P	P	04 36 36.3	+0.5
NCK				pmax	pmax		
	comp=Z,80nm,1.1s						
AAL	Aland	70.17	334	eP	P	04 36 35.3	-0.4
ARMA	Armidale	70.28	173	P	P	04 36 37.4	+0.6
ARMA				IAmb	IAmb	04 36 43.4	
	comp=Z,92nm,1.3s						
ZEI	Tsey	70.36	310	eP	P	04 36 36.8	-0.7
ZEI				pmax	pmax		
	comp=Z,148nm,1.5s						
KVAR	Kislovodsk Arr	70.38	311	P	P	04 36 37.3	-0.1
	comp=Z,48nm,0.8s,baz=109,slow=18,SNR=21						
KIV	Kislovodsk	70.38	311	⇓P	P	04 36 39.2	+1.7
KIV	Kislovodsk	70.38	311	i P	P	04 36 37.8	+0.3
	SNR=54						
KIV	Kislovodsk	70.38	311	eP	P	04 36 37.9	+0.4
KIV				e		04 39 13.8	
KIV				ePPP	PPP	04 40 50.8	
KIV				eS	S	04 45 50.8	+1.1
KIV				eSS	SS	04 50 23.1	+3.5
KIV				pmax	pmax		
	comp=Z,763nm,1.1s						
KIV				pmax	pmax		
	comp=Z,5µm,4.5s						
KIV	Kislovodsk	70.38	311	P	P	04 36 37.8	+0.3
KIV	Kislovodsk	70.38	311	P	P	04 36 38.4	+0.9
KIV				P	P	04 36 38.4	+0.9
KIV				S	S	04 45 52.6	+3.0
KIV				S	S	04 45 52.6	+3.0
KBZ	Khabaz	70.40	311	P	P	04 36 38.2	+0.9
	comp=Z,85nm,0.8s,baz=56,slow=3.4,SNR=113						
KBZ				LR	LR	05 12 26.2	
	comp=Z,15µm,18.3s,baz=16,slow=40						
RUBR	Rubicon Trail	70.42	55	IAmb	IAmb	04 36 52.8	
	comp=Z,95nm,0.9s						
FFC	Flin Flon	70.43	34	P	P	04 36 37.2	-0.2
FFC				pmax	pmax		
	comp=Z,49nm,1.0s						
FFC				MLR	MLR		
	comp=Z,7µm,20.0s						
FFC	Flin Flon	70.43	34	P	P	04 36 37.2	-0.2
MFID	Camas Ranch	70.49	49	IAmb	IAmb	04 37 08.2	
	comp=Z,106nm,1.6s						
PAHR	Pah Rah Range	70.52	54	IAmb	IAmb	04 36 53.4	
	comp=Z,64nm,1.1s						
SHA1	Shidzhatmaz	70.53	311	c iP	P	04 36 38.5	0.0
FCC	Fort Churchill	70.74	28	IAmb	IAmb	04 36 52.8	
	comp=Z,189nm,1.6s						
FCC				IAMs_20	IAMs_20	05 11 59.2	
	comp=Z,13µm,20.0s						
ILULI	Ilulissat	70.74	6	i P	P	04 36 39.2	+0.2
	comp=Z,34nm,0.9s						
	comp=Z,33µm,21.0s						
ILULI	Ilulissat	70.74	6	i P	P	04 36 39.2	+0.2
ILULI				pmax	pmax		
	comp=Z,34nm,0.9s						
ILULI				MLR	MLR		
	comp=Z,33µm,21.0s						
ILULI	Ilulissat	70.74	6	P	P	04 36 38.6	-0.5
ILULI				IAmb	IAmb	04 36 54.7	
	comp=Z,66nm,1.0s						
ILULI	Ilulissat	70.74	6	i P	P	04 36 39.2	+0.2
ILULI				IAmb	IAmb	04 36 43.1	
	comp=Z,34nm,0.9s						
ILULI				IAMs_20	IAMs_20	05 09 52.5	
	comp=Z,33µm,20.6s						
PNTR	Pine Nut	70.75	55	IAmb	IAmb	04 36 51.4	
	comp=Z,163nm,1.5s						
NEY	Neytrino	70.78	311	d iP	P	04 36 40.6	+0.6
NEY				pmax	pmax		
	comp=Z,13nm,0.8s						
NEY				MLR	MLR		
	comp=Z,6µm,14.0s						
CMB	Columbia Colle	70.86	56	IAmb	IAmb	04 36 51.7	
	comp=Z,82nm,1.2s						
SAO	San Andreas Ge	70.92	58	IAmb	IAmb	04 37 06.9	
	comp=Z,158nm,1.9s						
YERR	Yerington	71.03	55	IAmb	IAmb	04 36 56.8	
	comp=Z,108nm,1.1s						
EGMT	Eagleton	71.05	43	P	P	04 36 40.4	-1.1
	baz=309,SNR=12						
EGMT	Eagleton	71.05	43	IAMs_20	IAMs_20	05 13 32.3	
	comp=Z,9µm,19.0s						
IDID	Didziasalis	71.08	327	eP	P	04 36 42.0	+0.7
MNK	Minsk	71.15	326	⇓iP	P	04 36 42.0	+0.2
MNK				e		04 37 03.0	
MNK				e		04 39 23.0	
MNK				e		04 41 05.0	
MNK				eS	S	04 46 00.0	+2.0
MNK				e		04 46 18.0	
MNK				e		04 46 36.0	
MNK				e		04 50 32.0	
MNK				e		04 53 42.0	
MNK				pmax	pmax		
	comp=Z,7µm,7.0s						
MNK				pmax	pmax		
	comp=Z,870nm,1.5s						
MNK				pmax	pmax		
	comp=E,730nm,1.2s						
MNK				pmax	pmax		
	comp=N,710nm,1.8s						
MNK				smax	smax		
	comp=E,9µm,14.0s						
MNK				smax	smax		
	comp=N,6µm,12.0s						
MNK				MLR	MLR		
	comp=E,58µm,16.0s						
MNK				MLR	MLR		
	comp=N,52µm,14.0s						
MNK				MLR	MLR		
	comp=Z,92µm,16.0s						
MNK				MLR	MLR		
	comp=N,57µm,16.0s						
MNK				MLR	MLR		
	comp=Z,122µm,18.0s						
MNK	Minsk	71.15	326	i P	P	04 36 39.3	-2.5
	comp=E,9.0nm,1.3s						
MNK				i P	P	04 36 39.3	-2.5
	comp=N,59nm,1.0s						
MNK				i P	P	04 36 39.3	-2.5
	comp=Z,102nm,0.7s						
MNK				i PcP	PcP	04 36 59.1	-2.7
MNK				i PP	PP	04 39 16.9	-2.1
MNK				i PPP	PPP	04 40 59.9	
MNK				i S	S	04 45 54.5	-3.5
MNK				i ScS	SKSac	04 46 43.0	-1.1
MNK				i SS	SS	04 50 30.9	+0.3
MNK				i SSS	SSS	04 53 50.0	
MNK				i LQ	LQ	05 03 01.8	
MNK				i LR	LR	05 08 26.9	
MNK				i LRM	MLR	05 11 08.1	
	comp=N,47µm,17.6s						
MNK				i LRM	MLR	05 11 11.7	
	comp=Z,36µm,15.0s						
MNK				i LRM	MLR	05 11 16.1	
	comp=E,3µm,13.7s						
ISAL	Salakas	71.15	328	eP	P	04 36 42.6	+0.8
DLMT	Dillon	71.16	46	IAmb	IAmb	04 36 59.6	
	comp=Z,110nm,1.2s						
UPP	Uppsala	71.20	334	eP	P	04 36 42.0	0.0
HLID	Hailey	71.22	49	P	P	04 36 40.7	-2.0
	baz=307,SNR=29						
IIGN	Ignalina	71.27	328	eP	P	04 36 43.3	+0.8
NACGM	Naroch	71.34	327	i P	P	04 36 43.3	+0.4
NACGM				i P	P	04 36 43.3	+0.4
NACGM				i P	P	04 36 43.3	+0.4
NACGM				i PcP	pwP	04 36 52.9	+2.9
NACGM				i PP	PP	04 39 13.1	-7.5
NACGM				i PPP	PPP	04 40 53.8	
NACGM				i S	S	04 45 56.0	-4.1
NACGM				i SS	SS	04 50 29.5	-4.0
NACGM				i SSS	SSS	04 53 50.4	
NACGM				i LQ	LQ	05 02 49.4	
NACGM				i LR	LR	05 08 12.8	
STKA	Stephens Creek	71.36	182	P	P	04 36 43.7	+0.5
	comp=Z,14nm,0.7s,baz=349,slow=5.8,SNR=25						
STKA				LR	LR	05 07 55.5	
	comp=Z,4µm,21.1s,baz=357,slow=36						
ICESG	Greenland Ices	71.38	1	i P	P	04 36 44.0	+0.6
ICESG				IAmb	IAmb	04 36 45.1	
	comp=Z,70nm,0.9s						
GNI	Garni	71.42	307	P	P	04 36 44.3	+0.4
	comp=Z,21nm,0.7s,baz=127,slow=3.2,SNR=17						
GNI	Garni	71.42	307	P	P	04 36 44.7	+0.8
GNI	Garni	71.42	307	ceP	P	04 36 44.6	+0.7
GNI				pmax	pmax		
	comp=Z,215nm,1.7s						
GNI				MLR	MLR		
	comp=Z,13µm,15.0s						
GNI	Garni	71.42	307	P	P	04 36 44.3	+0.4
GNI	Garni	71.42	307	IAMs_20	IAMs_20	05 10 46.7	
	comp=Z,14µm,19.0s						
GNI	Garni	71.42	307	P	P	04 36 44.7	+0.8
GNI				S	S	04 46 05.0	+3.0
AKH	Akhalkalaki	71.43	309	⇑P	P	04 36 45.0	+1.0
CHVG	Ch'k'valeri	71.48	310	⇓P	P	04 36 44.7	+0.7
BOZ	Bozeman (W)	71.55	46	P	P	04 36 43.3	-1.3
	baz=308,SNR=54						
BOZ	Bozeman (W)	71.55	46	IAmb	IAmb	04 36 59.3	
	comp=Z,139nm,1.6s						
BOZ				IAMs_20	IAMs_20	05 11 28.7	
	comp=Z,8µm,18.0s						
FORT	Forrest	71.71	194	P	P	04 36 46.3	+1.0
TASB	TASBURUN-IGDIR	71.83	307	eP	P	04 36 47.4	+1.1
JLN	Jalan Bani Buh	71.87	284	P	P	04 36 47.2	+0.5
	SNR=25						
JLN				P	P	04 36 47.2	+0.5
	SNR=25						
WBK	Wadi Bani Khal	71.93	285	P	P	04 36 47.7	+0.7
	SNR=29						
WBK				P	P	04 36 47.7	+0.7
	SNR=29						
BANOM	Banah	71.95	289	i P	P	04 36 47.1	0.0
	SNR=19						
BANOM	Banah	71.95	289	P	P	04 36 46.8	-0.4
	SNR=13						
BANOM				P	P	04 36 46.8	-0.4
	SNR=13						
NVAR	Mina Array Bea	71.95	55	P	P	04 36 47.8	+0.5
	comp=Z,25nm,1.0s,baz=298,slow=6.3,SNR=67						
NVAR				LR	LR	05 09 33.8	
	comp=Z,3µm,18.3s,baz=308,slow=37						
NVAR	Mina Array Bea	71.95	55	P	P	04 36 46.8	-0.5
SHME	Shamm	71.99	289	i P	P	04 36 46.8	-0.5
	SNR=9.5						
SHME	Shamm	71.99	289	P	P	04 36 47.1	-0.3
	SNR=10						
SHME				P	P	04 36 47.1	-0.3
	SNR=10						
BIDO	Bidbid	72.02	286	P	P	04 36 48.0	+0.5
	SNR=22						
BIDO				P	P	04 36 48.0	+0.5
	SNR=22						
MOL	Molde	72.03	340	eP	P	04 36 47.1	+0.2
MOL				IVmB_BB		04 36 51.4	
	comp=Z,5µm,5.4s						
NV11	Mina Array Sit	72.05	55	IAmb	IAmb	04 37 02.9	
	comp=Z,97nm,1.3s						
DOMB	Dombas	72.07	339	eP	P	04 36 47.9	+0.7
DOMB				IVmB_BB		04 36 48.9	
	comp=Z,3µm,3.4s						
DOMB				eS	S	04 46 12.2	+3.7
DOMB				IVMs_BB	IVMs_BB	05 12 49.1	
	comp=Z,12µm,15.0s						
PABE	Paberze	72.07	329	eP	P	04 36 47.9	+0.6
MLAC	Mammoth, Mammo	72.09	56	P	P	04 36 46.3	-1.8
	baz=307,SNR=21						
KARS	Kars	72.15	308	eP	P	04 36 48.4	+0.1
HFS	Hagfors	72.25	336	P	P	04 36 48.4	+0.1
	comp=Z,40nm,0.8s,baz=57,slow=5.5,SNR=42						
YHL	Hebgen Lake	72.26	46	P	P	04 36 49.5	+0.4
NB2	NORSAR Subarra	72.28	338	P	P	04 36 48.3	-0.2
	comp=Z,301nm,1.2s,baz=38,slow=6.2						
NOA	NORSAR Array B	72.28	338	P	P	04 36 48.2	-0.4
	comp=Z,26nm,0.8s,baz=37,slow=6.0,SNR=70						
NOA				PP	PP	04 39 33.4	+4.9
	comp=Z,3.5nm,0.7s,baz=40,slow=8.7,SNR=3.7						
NOA				LR	LR	05 11 51.5	
	comp=Z,23µm,20.4s,baz=40,slow=39						
PAGB	Antelope Grade	72.31	58	IAmb	IAmb	04 37 10.1	
	comp=Z,78nm,1.0s						
SOC	Sochi	72.32	312	c iP	P	04 36 48.2	-0.8
SOC				i		04 39 26.5	
SOC				i PPP	PPP	04 41 11.3	
SOC				i S	S	04 46 11.3	-0.5
SOC				eSS	SS	04 50 49.8	+0.8
SOC				pmax	pmax		
	comp=Z,137nm,1.0s						
MDH	Madha	72.32	288	i P	P	04 36 48.3	-1.0
	SNR=17						
MDH	Madha	72.32	288	P	P	04 36 48.3	-1.0
	SNR=11						
MDH				P	P	04 36 48.3	-1.0
	SNR=11						
SMDO	Samad	72.35	285	P	P	04 36 50.2	+0.5
	SNR=43						
SMDO				P	P	04 36 50.2	+0.5
	SNR=43						
MASF	Masafi	72.38	289	P	P	04 36 49.5	-0.2
	SNR=17						
MASF				P	P	04 36 49.5	-0.2
	SNR=17						
MSFE	Esma-Masafi	72.39	289	i P	P	04 36 49.6	-0.2
	SNR=12						
NBO00	NORSAR Array S	72.41	338	P	P	04 36 49.5	+0.2
NC602	NORSAR Array S	72.43	338	eP	P	04 36 50.0	+0.7
NC602				esP	sP	04 36 54.6	+0.4
NC602				eS	S	04 46 14.1	+1.6
YMR	Madison River	72.50	46	IAmb	IAmb	04 37 50.4	
	comp=Z,95nm,1.4s						
PBUR	Paburge	72.50	330	eP	P	04 36 50.1	+0.3
AKN	Aaknes	72.50	340	IVmBBB		04 36 52.2	
	comp=Z,5µm,3.4s						
AKN				eS	S	04 46 18.4	+4.9
AKN				IVMs_BB	IVMs_BB	05 17 18.5	
	comp=Z,10µm,16.7s						
VOG	Valley Oaks Go	72.52	57	P	P	04 36 48.6	-1.8
	baz=307						
CLDR	Caldiran	72.54	307	eP	P	04 36 50.8	+0.1
HOQ	Hoqain	72.59	286	P	P	04 36 51.0	0.0
	SNR=41						
HOQ				P	P	04 36 51.0	0.0
	SNR=41						
UOSS	Minazif	72.60	288	i P	P	04 36 50.0	-1.0
	SNR=19						
UOSS	Minazif	72.60	288	P	P	04 36 50.8	-0.2
UOSS				IAmb	IAmb	04 37 03.2	
	comp=Z,102nm,0.9s						
UOSS	Minazif	72.60	288	P	P	04 36 50.5	-0.5
BBOO	Buckleboo	72.60	187	P	P	04 36 51.2	+0.6
BBOO				IAmb	IAmb	04 37 08.7	
	comp=Z,91nm,1.2s						
YNR	Norris Junctio	72.63	46	IAmb	IAmb	04 37 07.6	
	comp=Z,93nm,1.3s						
SENK	Senkaya-Erzuru	72.63	308	eP	P	04 36 52.7	+1.5
UMQ	Umm Al-Quwin	72.65	289	P	P	04 36 51.2	-0.1
UMQ	Umm Al-Quwin	72.65	289	P	P	04 36 51.7	+0.4
JMDO	Jabal Madar	72.71	285	P	P	04 36 51.5	-0.3
	SNR=33						
JMDO				P	P	04 36 51.5	-0.3
	SNR=33						
HATD	Hatta, Dubai	72.72	288	i P	P	04 36 51.1	-0.6
	SNR=28						
HATD	Hatta, Dubai	72.72	288	P	P	04 36 51.5	-0.2
	SNR=46						
HATD				P	P	04 36 51.5	-0.2
	SNR=46						
SMMC	Simmler	72.72	58	P	P	04 36 49.7	-1.9
	baz=307						
TIN	Tinemaha, Big	72.83	56	P	P	04 36 51.0	-1.3
	baz=307,SNR=11						
SOHO	SOHO	72.83	287	i P	P	04 36 51.3	-1.1
	SNR=18						
SOHO	SOHO	72.83	287	P	P	04 36 51.8	-0.6
SOHO				P	P	04 36 51.8	-0.6
ANN	Anapa	72.84	314	eP	P	04 36 50.6	-1.5
ANN				i *PP	pP	04 36 53.8	-1.7
ANN				i		04 37 07.5	
ANN				i PPP	PPP	04 41 16.2	
ANN				i S	S	04 46 17.6	-0.1
ANN				eSSS	SSS	04 54 10.9	
ANN				pmax	pmax		
	comp=Z,65nm,0.8s						
AGRB	Hanur-Agry	72.84	307	eP	P	04 36 53.9	+1.4
ASHO	Ashiyiah	72.86	288	i P	P	04 36 52.5	-0.1
	SNR=25						
ASHO	Ashiyiah	72.86	288	P	P	04 36 52.5	-0.1
	SNR=42						
H17A	Grant Village	72.89	46	P	P	04 36 51.4	-1.4
	baz=309,SNR=34						
H17A	Grant Village	72.89	46	IAmb	IAmb	04 37 10.0	
	comp=Z,87nm,1.2s						
H17A				IAMs_20	IAMs_20	05 09 02.1	
	comp=Z,20µm,20.0s						
YMP	Mirror Lake Pl	72.90	46	IAmb	IAmb	04 37 25.7	
	comp=Z,102nm,1.4s						
SFJD	Kangerlussuaq	72.96	6	i P	P	04 36 52.4	+0.1
	comp=Z,2µm,20.0s						
SFJD	Kangerlussuaq	72.96	6	P	P	04 36 52.6	+0.2
SFJD				pmax	pmax		
	comp=Z,89nm,1.3s						
SFJD				MLR	MLR		
	comp=Z,26µm,20.0s						
SFJD	Kangerlussuaq	72.96	6	P	P	04 36 52.6	+0.2
SFJD				IAmb	IAmb	04 37 07.2	
	comp=Z,89nm,1.2s						
SFJD	Kangerlussuaq	72.96	6	i P	P	04 36 52.5	+0.1
SFJD				IAMs_20	IAMs_20	05 11 46.5	
	comp=Z,2µm,19.5s						
NAZ	Nazwa, Dubai	72.97	288	i P	P	04 36 54.9	+1.7
	SNR=18						
NAZ	Nazwa, Dubai	72.97	288	P	P	04 36 53.2	0.0
	SNR=13						
NAZ				P	P	04 36 53.2	0.0
	SNR=13						
VES	Vestal, Richgr	73.00	57	P	P	04 36 52.3	-0.9
	baz=307,SNR=17						
FLWY	Flagg Ranch	73.01	47	IAmb	IAmb	04 37 20.8	
	comp=Z,84nm,1.2s						
PKM	Mcpherson Peak	73.10	59	P	P	04 36 52.9	-1.2
	baz=307,SNR=19						
AKASG	Malin Array Be	73.14	323	P	P	04 36 53.1	-0.6
	comp=Z,50nm,0.7s,baz=45,slow=5.9,SNR=206						
AKASG				LR	LR	05 11 06.4	
	comp=Z,23µm,18.2s,baz=40,slow=38						
AKASG	Malin Array Be	73.14	323	P	P	04 36 53.4	-0.4
AKASG				pmax	pmax		
	comp=Z,73nm,1.2s						
AKASG	Malin Array Be	73.14	323	P	P	04 36 53.4	-0.4
AKBB	Malin Array Si	73.14	323	IAmb	IAmb	04 37 06.0	
	comp=Z,128nm,1.0s						
RLMT	Red Lodge	73.14	45	P	P	04 36 53.7	-0.5
	baz=310,SNR=13						
RLMT	Red Lodge	73.14	45	IAmb	IAmb	04 37 20.6	
	comp=Z,147nm,1.9s						
FAQ	Al Faqa, Dubai	73.16	288	i P	P	04 36 54.4	0.0
	SNR=11						
FAQ	Al Faqa, Dubai	73.16	288	P	P	04 36 54.4	0.0
	SNR=15						
BSY	Bisya	73.16	286	P	P	04 36 54.9	+0.5
	SNR=56						
BSY				P	P	04 36 54.9	+0.5
	SNR=56						
MORW	Morawa	73.18	205	P	P	04 36 54.0	-0.1
MORW				IAmb	IAmb	04 37 06.5	
	comp=Z,172nm,1.6s						
VANB	Van	73.20	306	eP	P	04 36 55.7	+1.2
CHOM	Cayeli-Rize	73.25	310	eP	P	04 36 54.7	0.0
KOPR	Koprukoy-ERZUR	73.28	308	eP	P	04 36 56.6	+1.5
CWC	Cottonwood Cre	73.29	56	P	P	04 36 54.2	-1.0
	baz=307						
OSL	Oslo	73.31	337	eP	P	04 36 55.5	+0.9
OSL				eS	S	04 46 23.1	+0.5
OSL				eSS	SS	04 51 07.2	+3.9
ARQ	Araqi	73.31	287	P	P	04 36 55.7	+0.4
	SNR=44						
ARQ				P	P	04 36 55.7	+0.4
	SNR=44						
SNOW	Snow King Moun	73.38	47	IAmb	IAmb	04 37 17.3	
	comp=Z,167nm,2.0s						
MLAZ	Malazgirt-MUS	73.38	307	eP	P	04 36 56.5	+0.9
REDW	Red Top Meadow	73.38	47	P	P	04 36 56.3	+0.6
REDW				IAmb	IAmb	04 37 28.7	
	comp=Z,104nm,1.6s						
SKAR	Skarslia	73.40	339	eP	P	04 36 56.2	+1.0
SKAR				eS	SKiKP	04 46 25.4	-0.2
SKAR				IVMs_BB	IVMs_BB	05 13 03.2	
	comp=Z,12µm,15.7s						
GRAC	Grapevine Rang	73.41	56	P	P	04 36 54.8	-0.9
	baz=308,SNR=12						
ASUD	Al Ashush, Dub	73.42	288	i P	P	04 36 57.0	+1.1
	SNR=10.0						
ASUD				i P	pP	04 36 59.0	-0.5
	SNR=8.3						
ASUD	Al Ashush, Dub	73.42	288	P	P	04 36 55.9	0.0
	SNR=7.8						
ASUD				P	P	04 36 55.9	0.0
	SNR=7.8						
SBC	Santa Barbara	73.43	59	P	P	04 36 55.0	-0.8
	baz=307						
ALNE	Al Ain	73.45	288	i P	P	04 36 56.6	+0.5
	SNR=16						
ALNE				i P	pP	04 36 58.7	-1.0
	SNR=30						
ALNE	Al Ain	73.45	288	P	P	04 36 56.6	+0.5
	SNR=36						
ALNE				P	P	04 36 56.6	+0.5
	SNR=36						
SUW	Suwalki	73.46	328	eP	P	04 36 54.7	-0.9
SUW				eS	S	04 46 22.7	-1.8
SUW				eL	L	05 12 56.9	
	comp=Z,33µm,18.5s						
SUW	Suwalki	73.46	328	eP	P	04 36 55.2	-0.4
FOO	Floro	73.50	341	eS	SKiKP	04 46 31.2	+5.6
ISA	Isabella, Lake	73.51	57	P	P	04 36 55.1	-1.2
	baz=308,SNR=16						
GEVA	Gevas	73.57	306	P	P	04 36 57.3	+0.5
GEVA				IAmb	IAmb	04 37 09.4	
	comp=Z,102nm,1.0s						
DGMT	Dagmar	73.59	40	P	P	04 36 56.0	-0.5
	baz=312,SNR=8.2						
DGMT	Dagmar	73.59	40	IAmb	IAmb	04 37 22.0	
	comp=Z,198nm,1.8s						
DGMT	Dagmar	73.59	40	IAMs_20	IAMs_20	05 12 32.3	
	comp=Z,10µm,18.0s						
ARVC	Arvin	73.60	58	P	P	04 36 55.8	-1.0
	baz=307,SNR=6.7						
AKDM	Akdamar-Van	73.61	306	eP	P	04 36 58.0	+1.0
MHTO	MHTO	73.64	284	P	P	04 36 57.0	-0.2
	SNR=98						
MHTO				P	P	04 36 57.0	-0.2
	SNR=98						
R11A	Troy Canyon, C	73.70	54	P	P	04 36 57.7	+0.2
	baz=308,SNR=31						
AJN	Ajban	73.71	288	i P	P	04 36 58.9	+1.4
	SNR=12						
AJN	Ajban	73.71	288	P	P	04 36 57.1	-0.5
	SNR=9.0						
AJN				P	P	04 36 57.1	-0.5
	SNR=9.0						

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LAO    LASA Array        73.75  42  P        P        04 36 57.0 -0.5
       baz=311,SNR=11
LAO    LASA Array        73.75  42  IAmb     IAmb     04 37 14.4
       comp=Z,108nm,1.2s
LAO                                 IAMs_20  IAMs_20  05 12 24.6
       comp=Z,9µm,19.0s
SCZ2   Santa Cruz Isl    73.75  59  P        P        04 36 56.9 -0.9
       baz=307
KONO   Kongsberg         73.88 338  P        P        04 36 57.9 -0.1
KONO                                pmax     pmax
       comp=Z,397nm,2.0s
KONO                                MLR      MLR
       comp=Z,34µm,20.0s
KONO   Kongsberg         73.88 338  P        P        04 36 57.9 -0.1
KONO   Kongsberg         73.88 338 eP        P        04 36 58.8 +0.8
KONO                                IVmB_BB           04 36 59.5
       comp=Z,3µm,4.3s
KONO                               esP       sP       04 37 03.5 +0.8
KONO                               eS        S        04 46 29.8 +0.8
KONO                               i                  04 47 08.1
CUKT   Cukurca           73.88 305 eP        P        04 36 57.8 -0.8
MPMC   Manual Prospec    73.90  56  P        P        04 36 58.1 -0.7
       baz=308,SNR=52
KTUT   Trabzon           73.91 310 eP        P        04 36 57.9 -0.6
OSI    Osito Audit: C    73.98  58  P        P        04 36 58.4 -0.7
       baz=308
OSI    Osito Audit: C    73.98  58  P        P        04 36 59.4 +0.3
SUE    Sulen             74.03 341 eS        S        04 46 33.3 +2.7
VRTB   Varto-Mus         74.04 308 eP        P        04 37 00.8 +1.3
FURC   Furnace Creek,    74.05  56  P        P        04 36 59.3 -0.1
       baz=308,SNR=37
GURO   Guroymak-BITLI    74.06 307 eP        P        04 37 00.9 +1.3
LRMC   Laurel Mtn Rad    74.13  57  P        P        04 36 58.7 -1.4
       baz=308
TPNV   Topopah Spring    74.15  55  P        P        04 36 59.5 -0.7
       baz=308,SNR=54
TPNV   Topopah Spring    74.15  55  IAmb     IAmb     04 37 17.2
       comp=Z,103nm,1.1s
TPNV                                IAMs_20  IAMs_20  05 15 00.1
       comp=Z,7µm,18.0s
KARO   Karliova-Bingo    74.19 308 eP        P        04 37 00.8 +0.4
DUG    Dugway, Tooele    74.24  51  P        P        04 37 00.8 +0.2
       baz=309,SNR=33
SNCC   San Nicolas Is    74.28  60  P        P        04 36 59.4 -1.4
       baz=308
SNCC   San Nicolas Is    74.28  60  IAMs_20  IAMs_20  05 14 58.9
       comp=Z,8µm,18.0s
EDW2   Edwards Air Fo    74.29  58  P        P        04 37 00.6 -0.3
       baz=308,SNR=30
YEDI   Yedisu-Bingol     74.42 308 eP        P        04 37 02.7 +1.0
BER    Bergen            74.45 340  IVmBBB            04 37 03.7
       comp=Z,4µm,3.2s
BER                                eS        S        04 46 37.6 +2.3
BER                                 IVMs_BB  IVMs_BB  05 16 07.3
       comp=Z,15µm,19.0s
DECC   Green Verdugo     74.45  58  P        P        04 37 00.6 -1.2
       baz=308
SIRT   Sirnak            74.46 306 eP        P        04 37 02.6 +0.7
TCUT   Toone Canyon      74.49  49  IAmb     IAmb     04 37 28.6
       comp=Z,158nm,1.6s
BW06   Boulder Array     74.49  47  P        P        04 37 00.9 -1.2
       baz=310,SNR=26
PDAR   Pinedale Array    74.49  47  P        P        04 37 01.9 -0.3
       comp=Z,4.9nm,0.5s,baz=269,slow=1.3,SNR=61
PDAR   Pinedale Array    74.49  47  P        P        04 37 01.6 -0.6
SIM    Simferopol'       74.54 316c iP       P        04 37 02.0 -0.1
SIM                                eS        S        04 46 34.1 -2.9
ESPY   Espiye-Giresun    74.56 311 eP        P        04 37 02.2 -0.1
DQM    DQM               74.59 283  P        P        04 37 02.5 -0.3
       SNR=19
DQM                                 P        P        04 37 02.5 -0.3
       SNR=19
BNGB   Bingl             74.61 308 eP        P        04 37 02.4 -0.4
PRN    Pahroc Range      74.62  54  IAMs_20  IAMs_20  05 15 37.5
       comp=Z,8µm,18.0s
MWC    Mount Wilson      74.65  58  IAmb     IAmb     04 37 24.2
       comp=Z,111nm,1.3s
SHOC   Shoshone, Teco    74.78  56  P        P        04 37 03.1 -0.6
       baz=308,SNR=9.4
FMP    Fort Macarthur    74.81  59  P        P        04 37 03.1 -0.7
       baz=308
ERZN   Erzincan          74.82 309 eP        P        04 37 04.0  0.0
SVAN   Silvan-Diyarba    74.82 307 eP        P        04 37 04.8 +0.9
ANGG   Ammassalik, Gr    74.89   1  IAmb     IAmb     04 37 16.6
       comp=Z,75nm,0.8s
ANGG   Ammassalik, Gr    74.89   1 i P       P        04 37 01.4 -2.4
ANGG                                IAMs_20  IAMs_20  05 08 53.6
       comp=Z,30µm,20.3s
BFSC   Mount Baldy Ra    74.91  58  P        P        04 37 03.1 -1.5
       baz=308,SNR=24
CIS    Catalina Islan    74.92  59  P        P        04 37 04.6 +0.1
       baz=308,SNR=5.4
CAN    Canberra          74.93 175  P        P        04 37 05.7 +1.4
CAN                                 pmax     pmax
       comp=Z,213nm,2.0s
CAN                                 MLR      MLR
       comp=Z,11µm,18.0s
CAN    Canberra          74.93 175  P        P        04 37 05.7 +1.4
CAN                                 IAmb     IAmb     04 37 20.9
       comp=Z,213nm,2.0s
CAN                                 IAMs_20  IAMs_20  05 14 32.4
       comp=Z,11µm,18.0s
RRX    Edison Barstow    74.94  57  P        P        04 37 04.0 -0.7
       baz=308
ISOG   Isortoq, Green    74.95   1 eP        P        04 36 59.1 -4.9
BLS5   Blasjo            74.96 339  IVMs_BB  IVMs_BB  05 16 60.0
       comp=Z,14µm,16.3s
SCI2   San Clemente I    75.09  60  P        P        04 37 04.8 -0.7
       baz=308
BORG   Borgarnes         75.10 353  P        P        04 37 05.4 +0.4
       comp=Z,30nm,0.8s,baz=67,slow=4.3,SNR=9.3
BORG   Borgarnes         75.10 353  P        P        04 37 05.9 +0.9
BORG                                pmax     pmax
       comp=Z,85nm,1.0s
BORG   Borgarnes         75.10 353  P        P        04 37 05.8 +0.9
BORG                                IAmb     IAmb     04 37 18.6
       comp=Z,85nm,1.0s
SHPR   Sheep Range       75.11  55  IAmb     IAmb     04 37 17.3
       comp=Z,84nm,1.2s
SORM   Soroca            75.32 321 ⇓P        P        04 37 06.0 -0.5
HOMB   Homborsund        75.34 337 eS        S        04 46 45.5 +0.2
BBRC   Big Bear Solar    75.37  58  P        P        04 37 06.2 -1.2
       baz=308
HEC    Hector,Ludlow     75.40  57  P        P        04 37 06.5 -0.9
       baz=309,SNR=9.0
CCUT   Cedar City        75.57  53  IAmb     IAmb     04 37 38.9
       comp=Z,169nm,1.7s
DYBB   Diyarbakir        75.60 307 eP        P        04 37 08.7 +0.3
MURC   Murrieta          75.60  58  P        P        04 37 07.5 -1.0
       baz=308,SNR=7.4
NUUK   Nuuk              75.63   7 i P       P        04 37 08.8 +0.8
NUUK                                IAmb     IAmb     04 37 10.1
       comp=Z,79nm,1.1s
NUUK                                IAMs_20  IAMs_20  05 12 33.3
       comp=Z,32µm,18.5s
RSDY   Resadiye-TOKAT    75.71 311 eP        P        04 37 10.1 +1.1
MAZI   Mazidag           75.72 307 eP        P        04 37 10.6 +1.4
BSD    Bornholm Skovb    75.80 332 i P       P        04 37 08.1 -1.0
       comp=Z,25µm,18.0s
BSD    Bornholm Skovb    75.80 332 eP        P        04 37 08.9 -0.2
BSD    Bornholm Skovb    75.80 332 i P       P        04 37 08.1 -1.0
BSD                                 MLR      MLR
       comp=Z,25µm,18.0s
BSD    Bornholm Skovb    75.80 332 i P       P        04 37 08.2 -1.0
BSD                                 IAMs_20  IAMs_20  05 13 47.7
       comp=Z,25µm,17.5s
GMRC   Granite Mounta    75.86  57  P        P        04 37 09.6 -0.4
       baz=309,SNR=27
SNOP   Sinop             75.87 313 eP        P        04 37 08.5 -1.3
UMR    Umm Al-Rimmam     75.88 297 eP                 04 37 07.9
KIS    Kishinev          75.88 320 eP        P        04 37 06.0 -3.8
       comp=Z,2µm,8.3s
KIS    Kishinev          75.88 320 ePcP      PcP      04 37 21.0 -1.3
KIS    Kishinev          75.88 320 ePP       PP       04 39 53.0 -6.4
       comp=Z,2µm,8.5s
KIS    Kishinev          75.88 320 eP        P        04 37 06.0 -3.8
KIS                                e                  04 37 21.0
KIS                                i S       S        04 46 47.0 -4.8
KIS                                ePS       PnS      04 47 19.0 -9.1
KIS                                eSSS      SSS      04 55 00.0
KIS                                 pmax     pmax
       comp=Z,2µm,8.3s
KIS                                 smax     smax
       comp=E,2µm,14.3s
KIS                                 smax     smax
       comp=N,2µm,8.2s
KIS                                 MLR      MLR
       comp=Z,15µm,13.0s
KIS                                 MLR      MLR
       comp=N,14µm,13.5s
KIS                                 MLR      MLR
       comp=E,10µm,14.0s
RDMU   Red Mountain      75.91  49  IAmb     IAmb     04 37 36.5
       comp=Z,114nm,1.1s
P17A   Butcher Ranch,    75.93  50  IAmb     IAmb     04 37 36.7
       comp=Z,90nm,1.2s
MILM   Milestii Mici     75.94 320 ⇓P        P        04 37 10.1  0.0
MTPU   Mount Pierson     75.98  52  IAmb     IAmb     04 37 23.0
       comp=Z,110nm,1.5s
MIB    Mutribah          75.98 297 eP                 04 37 09.2
KVT    Kavak             76.01 312 eP        P        04 37 12.2 +1.5
BEL    Belsk             76.05 328 eP        P        04 37 11.5 +0.8
BEL                                eS        S        04 46 55.0 +1.6
BEL                                eL        L        05 14 35.6
       comp=Z,62µm,16.4s
PFO    Pinyon Flats O    76.08  58  P        P        04 37 11.6 +0.3
       baz=309,SNR=15
PFO    Pinyon Flats O    76.08  58  P        P        04 37 12.0 +0.7
PFO                                 pmax     pmax
       comp=Z,79nm,1.4s
PFO                                 MLR      MLR
       comp=Z,6µm,18.0s
PFO    Pinyon Flats O    76.08  58  P        P        04 37 12.0 +0.7
TPFO   Pinon Flats       76.08  58  P        P        04 37 11.1 -0.2
       baz=309,SNR=18
DIKM   Dikmen            76.08 313 ⇓P        P        04 37 11.7 +0.7
DIKM   Dikmen            76.08 313 eP        P        04 37 11.5 +0.5
109C   Camp Elliot, M    76.10  59  P        P        04 37 11.1 -0.2
       baz=309,SNR=5.8
BELC   Belle Mtn. Jos    76.13  57  P        P        04 37 10.5 -1.1
       baz=309,SNR=6.8
LVV    L'vov             76.14 325 eP        P        04 37 12.2 +1.0
LVV                                e                  04 37 27.1
LVV                                e                  04 40 03.0
LVV                                eS        S        04 46 52.1 -2.4
LVV                                e                  04 47 21.1
LVV                                ePS       PnS      04 47 53.8 +23
LVV                                 pmax     pmax
       comp=Z,600nm,2.0s
LVV                                 MLR      MLR
       comp=E,45µm,15.0s
LVV                                 MLR      MLR
       comp=N,33µm,14.0s
LVV                                 MLR      MLR
       comp=Z,53µm,15.0s
GOET   G??ttrup          76.14 336 i P       P        04 37 12.2 +1.2
       comp=Z,120nm,0.8s
       comp=Z,28µm,15.0s
GOET   G??ttrup          76.14 336 i P       P        04 37 12.3 +1.2
GOET                                IAmb     IAmb     04 37 13.5
       comp=Z,121nm,0.8s
GOET                                IAMs_20  IAMs_20  05 14 41.4
       comp=Z,28µm,14.7s
COP    Copenhagen        76.20 334 i P       P        04 37 12.6 +1.2
       comp=Z,53nm,0.9s
       comp=Z,29µm,16.0s
COP    Copenhagen        76.20 334 i P       P        04 37 12.6 +1.2
COP                                 pmax     pmax
       comp=Z,53nm,0.9s
COP                                 MLR      MLR
       comp=Z,29µm,16.0s
COP    Copenhagen        76.20 334 i P       P        04 37 12.7 +1.2
COP                                 IAmb     IAmb     04 37 13.6
       comp=Z,53nm,0.9s
COP                                 IAMs_20  IAMs_20  05 14 03.9
       comp=Z,29µm,16.2s
TOKT   Tokat             76.22 311 eP        P        04 37 12.3 +0.4
ULM    Lac du Bonnet     76.23  35  P        P        04 37 11.0 -0.7
       comp=Z,6.3nm,0.7s,baz=314,slow=6.5,SNR=19
ULM    Lac du Bonnet     76.23  35  P        P        04 37 11.0 -0.7
ULM    Lac du Bonnet     76.23  35  IAmb     IAmb     04 37 26.1
       comp=Z,95nm,1.5s
KNB    Kanab             76.24  53  IAmb     IAmb     04 37 24.1
       comp=Z,171nm,1.5s
MDND   Maddock           76.25  38  P        P        04 37 10.8 -1.1
       baz=315
MDND   Maddock           76.25  38  IAmb     IAmb     04 37 37.4
       comp=Z,175nm,1.3s
MDND                                IAMs_20  IAMs_20  05 16 28.6
       comp=Z,9µm,18.0s
TOKA   Tokat             76.25 311  P        P        04 37 11.9 -0.2
TOKA                                IAmb     IAmb     04 37 24.8
       comp=Z,179nm,1.4s
TOKA                                IAMs_20  IAMs_20  05 15 17.3
       comp=Z,8µm,19.0s
K22A   Casper            76.26  46  P        P        04 37 10.9 -1.4
       baz=312
K22A   Casper            76.26  46  IAmb     IAmb     04 37 38.0
       comp=Z,152nm,1.6s
PKCU   Pink Cliffs       76.28  53  IAmb     IAmb     04 37 43.8
       comp=Z,88nm,1.2s
IAS    Iasi              76.36 321 ⇓P        P        04 37 12.7 +0.2
TJX    Tijuana           76.37  59  P        P        04 37 12.9  0.0
TJX                                 IAmb     IAmb     04 37 42.2
       comp=Z,116nm,0.9s
GKP    Gorka Klasztor    76.37 330 eP        P        04 37 13.8 +1.3
GKP                                eS        S        04 46 57.2 +0.3
GKP                                eL        L        05 14 09.0
       comp=Z,46µm,19.1s
GKP    Gorka Klasztor    76.37 330 eP        P        04 37 13.2 +0.8
RDF    Al-Radifah        76.38 296 eP                 04 37 10.3
NWAO   Narrogin (SRO)    76.39 203  P        P        04 37 12.0 -0.6
       comp=Z,15nm,0.8s,baz=68,slow=6.0,SNR=5.7
NWAO   Narrogin (SRO)    76.39 203  P        P        04 37 12.7  0.0
NWAO                                pmax     pmax
       comp=Z,85nm,1.3s
NWAO                                MLR      MLR
       comp=Z,8µm,18.0s
NWAO   Narrogin (SRO)    76.39 203  P        P        04 37 12.7  0.0
NWAO                                IAmb     IAmb     04 37 23.7
       comp=Z,85nm,1.2s
NWAO                                IAMs_20  IAMs_20  05 11 22.8
       comp=Z,8µm,18.0s
RST    Umm Al-Ruwaisa    76.40 297 eP                 04 37 10.8
MALT   Malatya           76.41 309 eP        P        04 37 14.3 +1.2
SLWR   Sila              76.41 290  P        P        04 37 12.6 -0.6
NEE2   Needles Airpor    76.54  56  P        P        04 37 13.1 -0.7
       baz=309
MONP2  Monument Peak     76.55  58  P        P        04 37 13.4 -0.7
       baz=309,SNR=6.8
IRM    Iron Mountain     76.59  57  P        P        04 37 13.1 -1.0
       baz=309,SNR=26
RSSD   Black Hills       76.61  43  P        P        04 37 13.3 -1.0
       baz=313
RSSD   Black Hills       76.61  43  P        P        04 37 13.9 -0.4
RSSD                                pmax     pmax
       comp=Z,102nm,1.6s
RSSD                                MLR      MLR
       comp=Z,10µm,20.0s
RSSD   Black Hills       76.61  43  P        P        04 37 13.9 -0.4
RSSD                                IAmb     IAmb     04 37 39.7
       comp=Z,102nm,1.6s
RSSD   Black Hills       76.61  43  IAMs_20  IAMs_20  05 14 17.4
       comp=Z,10µm,20.0s
TKX    Tecate            76.63  59  IAmb     IAmb     04 37 25.2
       comp=Z,175nm,2.0s
VASR   Vaslui            76.64 320 ⇓P        P        04 37 14.5 +0.4
MUD    Monsted U'grnd    76.64 336 i P       P        04 37 14.6 +0.8
       comp=Z,33µm,17.0s
MUD    Monsted U'grnd    76.64 336 eP        P        04 37 14.6 +0.8
MUD                                 MLR      MLR
       comp=Z,33µm,17.0s
MUD    Monsted U'grnd    76.64 336 eP        P        04 37 14.6 +0.8
MUD                                 IAMs_20  IAMs_20  05 12 25.6
       comp=Z,33µm,17.3s
BC3    Big Chuckawall    76.70  57  P        P        04 37 13.7 -1.1
       baz=309,SNR=20
URFA   Urfa              76.73 308 eP        P        04 37 15.0 +0.1
DARE   Darende-Malaty    76.80 309 eP        P        04 37 16.1 +0.8
KWP    Kalwaria Pacla    76.86 325 eP        P        04 37 16.6 +1.3
KWP                                eS        S        04 47 03.9 +1.4
KWP                                eL        L        05 14 37.6
       comp=Z,87µm,16.1s
KWP    Kalwaria Pacla    76.86 325  IAMs_20  IAMs_20  05 11 01.6
       comp=Z,18µm,22.0s
IKP    In-Ko-Pah, Jac    76.90  58  P        P        04 37 15.4 -0.5
       baz=309,SNR=12
SWSC   Sam W. Stewart    76.92  58  P        P        04 37 15.7 -0.2
       baz=309,SNR=5.7
U15A   North Rim         76.95  53  IAmb     IAmb     04 37 46.9
       comp=Z,135nm,1.4s
U15A                                IAMs_20  IAMs_20  05 17 04.1
       comp=Z,7µm,18.0s
RMX    La Rumorosa       76.95  58  P        P        04 37 17.0 +0.7
O20A   White River Ci    76.96  48  P        P        04 37 16.2 -0.1
       baz=312,SNR=13
BIR    Birlad            76.98 320 ⇓P        P        04 37 17.0 +1.0
TOO    Toolangi          77.03 178  P        P        04 37 18.0 +1.8
TOO                                 pmax     pmax
       comp=Z,30nm,1.2s
TOO                                 MLR      MLR
       comp=Z,8µm,21.0s
TOO    Toolangi          77.03 178  P        P        04 37 18.0 +1.8
PDMCI  Parker Dam,Lak    77.14  56  P        P        04 37 16.9 -0.2
       baz=310,SNR=33
TLCR                     77.14 319 ⇓P        P        04 37 17.4 +0.5
BUR08  Bucovina Ar. S    77.17 322  IAmb     IAmb     04 37 30.8
       comp=Z,57nm,0.8s
BURAR  Bucovina Array    77.18 322 ⇓P        P        04 37 17.4 +0.2
BURAR  Bucovina Array    77.18 322  P        P        04 37 17.1 -0.2
SHAO   Shalim            77.18 283  P        P        04 37 18.1 +0.5
SHAO                                P        P        04 37 18.1 +0.5
GHRR                     77.23 320 ⇓P        P        04 37 18.4 +0.9
BIZ    Bicaz             77.25 321 ⇓P        P        04 37 18.0 +0.4
TESR   Tescani           77.29 321 ⇓P        P        04 37 17.8  0.0
ILGA   Ilgaz             77.35 313  IAMs_20  IAMs_20  05 14 27.1
       comp=Z,10µm,21.0s
KURC   Kurucasile-Bar    77.36 314 eP        P        04 37 15.3 -2.9
SCHL   Schela            77.42 320 ⇓P        P        04 37 18.5  0.0
RAO    Raoul Island      77.47 146  IAMs_20  IAMs_20  05 05 32.9
       comp=Z,8µm,20.0s
GLA    Glamis            77.49  57  P        P        04 37 19.1 -0.1
       baz=310,SNR=11
GLA    Glamis            77.49  57  IAmb     IAmb     04 37 40.5
       comp=Z,88nm,1.4s
CFR    Carcaliu          77.49 319 ⇓P        P        04 37 18.8 -0.1
SARI   SarD1z-Kayseri    77.54 310 eP        P        04 37 20.2 +0.6
PETR   Petresti          77.56 320 ⇓P        P        04 37 20.0 +0.7
KOLS   Kolonicke sedl    77.57 325 eP        P        04 37 20.1 +0.8
KOLS                                pmax     pmax
       comp=Z,65nm,1.1s
KOLS   Kolonicke sedl    77.57 325 eP        P        04 37 20.1 +0.8
KOLS                               eS        S        04 47 12.5 +2.3
TPGR   Topolog           77.58 319 ⇓P        P        04 37 20.1 +0.7
BNN    Bunyan            77.59 310 eP        P        04 37 19.7 -0.1
PV23   Carpenter Ridg    77.62  50  IAmb     IAmb     04 37 41.3
       comp=Z,162nm,1.4s
ODBI   Odobesti          77.62 320 ⇓P        P        04 37 21.2 +1.6
PV10   Paradox Valley    77.65  50  IAMs_20  IAMs_20  05 16 01.0
       comp=Z,8µm,18.0s
PV14   Lion Creek, Pa    77.66  50  IAMs_20  IAMs_20  05 15 58.8
       comp=Z,9µm,18.0s
AGMN   Agassiz Nation    77.67  36  P        P        04 37 19.5 -0.3
       baz=317,SNR=17
AGMN   Agassiz Nation    77.67  36  IAMs_20  IAMs_20  05 16 53.9
       comp=Z,9µm,19.0s
OJC    Ojcow             77.67 327 eP        P        04 37 19.3 -0.6
OJC                                eS        S        04 47 10.7 -0.6
OJC                                eL        L        05 14 56.4
       comp=Z,47µm,18.2s
CANT   Cankiri           77.70 313 eP        P        04 37 19.6 -0.7
VRI    Vrincioaia        77.71 320 ⇓P        P        04 37 21.2 +1.0
PV04   Paradox Valley    77.72  50  IAMs_20  IAMs_20  05 15 51.4
       comp=Z,8µm,19.0s
PHWY   Pilot Hill        77.75  46  IAmb     IAmb     04 37 46.6
       comp=Z,120nm,1.9s
N23A   Red Feather La    77.76  47  P        P        04 37 20.3 -0.6
       baz=313,SNR=28
PLOR   Plostina          77.76 320 ⇓P        P        04 37 21.6 +1.1
UZH    Uzhgorod          77.78 325 eP        P        04 37 18.2 -2.2
UZH                                e                  04 37 23.5
UZH                                i                  04 37 27.6
UZH                                e                  04 40 17.0
UZH                                i S       S        04 47 04.8 -7.6
UZH                                e                  04 47 56.2
UZH                                e                  04 55 29.1
UZH                                 MLR      MLR
       comp=N,8µm,16.0s
UZH                                 MLR      MLR
       comp=E,15µm,16.0s
UZH                                 MLR      MLR
       comp=Z,10µm,16.0s
PV12   Saucer Basin,     77.83  50  IAMs_20  IAMs_20  05 11 39.2
       comp=Z,8µm,20.0s
DMTO   DMTO              77.88 283  P        P        04 37 20.8 -0.7
DMTO                                P        P        04 37 20.8 -0.7
GRER                     77.93 320 ⇓P        P        04 37 22.8 +1.5
DOK    Doka              77.94 284  P        P        04 37 21.2 -0.6
       SNR=12
DOK                                 P        P        04 37 21.2 -0.6
       SNR=12
HARR   Harsova           77.94 319 ⇓P        P        04 37 22.0 +0.6
BMR    Baia Mare         77.94 323 ⇓P        P        04 37 21.9 +0.6
BISRR  Bisoca            77.94 320 ⇓P        P        04 37 22.5 +1.0
CRVS   Cervenica-Dubn    77.95 325 eP        P        04 37 22.5 +1.1
CRVS                                pmax     pmax
       comp=Z,262nm,1.3s
CRVS   Cervenica-Dubn    77.95 325 eP        P        04 37 22.5 +1.1
CRVS                               eS        S        04 47 11.9 -2.4
CRVS                               eL        L        05 15 38.3
ARCR   ARCALIA           77.97 322 ⇓P        P        04 37 21.9 +0.3
TLBR   Topalu            77.98 319 ⇓P        P        04 37 22.4 +0.7
D32A   Dogwood Acres,    77.98  37  IAMs_20  IAMs_20  05 10 03.4
       comp=Z,10µm,19.0s
OZUR                     78.00 321 ⇓P        P        04 37 22.8 +0.9
NIE    Niedzica          78.07 326 eP        P        04 37 22.2 +0.1
NIE                                eS        S        04 47 21.0 +5.4
NIE                                eL        L        05 15 23.1
       comp=Z,38µm,17.5s
WUAZ   Wupatki           78.10  54  P        P        04 37 22.0 -0.7
       baz=311,SNR=38
MANR   Mangalia          78.22 318 ⇓P        P        04 37 23.8 +0.9
BR131  Keskin Array S    78.28 312c iP       P        04 37 22.9 -0.7
BR131  Keskin Array S    78.28 312  IAmb     IAmb     04 37 35.8
       comp=Z,154nm,1.2s
BRTR   Keskin Array B    78.28 312  P        P        04 37 23.4 -0.2
       comp=Z,10nm,0.8s,baz=62,slow=4.3,SNR=40
BRTR                                PP       PP       04 40 21.6 +1.7
       comp=Z,5.9nm,0.8s,baz=64,slow=6.5,SNR=4.8
BRTR                                LR       LR       05 19 06.8
       comp=Z,15µm,19.1s,baz=18,slow=41
DOPR   Dopca             78.29 321 ⇓P        P        04 37 24.8 +1.5
RUE    Ruedersdorf       78.30 331 eP        P        04 37 24.4 +1.2
       baz=34,slow=5.3
ISR    Istrita           78.33 320 ⇓P        P        04 37 25.1 +1.5
BSEG   Bad Segeberg      78.34 334 eP        P        04 37 24.3 +0.9
       baz=34,slow=5.3
MLR    Muntele Rosu      78.36 321  P        P        04 37 24.5 +0.6
       comp=Z,12nm,0.8s,baz=0.7,slow=4.5,SNR=12
MLR    Muntele Rosu      78.36 321 ⇓P        P        04 37 24.8 +0.9
MLR    Muntele Rosu      78.36 321  IAmb     IAmb     04 37 37.1
       comp=Z,235nm,1.5s
ICOR   Ion Corvin        78.41 319 ⇓P        P        04 37 25.3 +1.3
KDZE   Karadeniz Ereo    78.43 315 eP        P        04 37 24.3 +0.1
KAMT   Kaman             78.48 312 eP        P        04 37 24.2 -0.5
KOZT   Kozan             78.50 309 eP        P        04 37 25.6 +0.9
B35A   Bob, Littlefor    78.58  35  IAMs_20  IAMs_20  05 17 26.9
       comp=Z,9µm,18.0s
CJR    Cluj-Napoca       78.60 323 ⇓P        P        04 37 25.9 +0.8
LANS   Liptovska Anna    78.63 326 eP        P        04 37 29.1 +3.9
LANS                                pmax     pmax
       comp=Z,86nm,1.2s
LANS   Liptovska Anna    78.63 326 eP        P        04 37 29.1 +3.9
SECR                     78.63 320 ⇓P        P        04 37 26.2 +1.0
KSP    Ksiaz             78.63 329 eP        P        04 37 25.2 +0.1
KSP                                eS        S        04 47 20.3 -1.2
KSP                                eL        L        05 15 18.9
       comp=Z,28µm,19.6s
WHFO   Wadi Hawf         78.64 284  P        P        04 37 24.8 -1.0
       SNR=11
LEHL   Lehliu            78.65 319 ⇓P        P        04 37 25.2 -0.2
OKC    Ostrava-Krasne    78.66 327 eP        P        04 37 27.0 +1.7
OKC                                eS        S        04 47 21.4 -0.4
OKC                                 MLR      MLR
       comp=Z,30µm,17.0s
OKC    Ostrava-Krasne    78.66 327 eP        P        04 37 27.0 +1.7
OKC                                eS        S        04 47 21.4 -0.4
OKC                                 AMS      AMS      05 15 20.0
       comp=Z,30µm,17.0s
ANTO   Ankara            78.67 313  IAMs_20  IAMs_20  05 18 01.0
       comp=Z,14µm,19.0s
LOD    Lodumlu           78.67 313 eP        P        04 37 25.5 -0.2
ISCO   Idaho Springs     78.68  47  P        P        04 37 25.6 -0.4
       baz=313,SNR=7.4
ISCO   Idaho Springs     78.68  47  P        P        04 37 26.7 +0.6
ISCO   Idaho Springs     78.68  47  P        P        04 37 26.6 +0.6
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ISCO				IAMs_20	IAMs_20	05 12 20.6	
	comp=Z,10µm,19.0s						
KECS	**Kecovo**	**78.69**	**325**	*e*P	**P**	**04 37 26.3**	**+0.8**
KECS				pmax	pmax		
	comp=Z,29nm,1.1s						
KECS	**Kecovo**	**78.69**	**325**	*e*P	**P**	**04 37 26.3**	**+0.8**
BR231	**Keskin MP Arra**	**78.69**	**313**	IAmb	IAmb	04 37 38.4	
	comp=Z,104nm,0.9s						
YAYX	**Yaylak**	**78.71**	**312**	*e*P	**P**	**04 37 25.9**	**-0.1**
MVCO	**Mesa Verde**	**78.74**	**51**	P	**P**	**04 37 26.0**	**-0.3**
	baz=312,SNR=22						
MVCO	**Mesa Verde**	**78.74**	**51**	IAmb	IAmb	04 37 43.6	
	comp=Z,173nm,1.7s						
MVCO				IAMs_20	IAMs_20	05 16 38.4	
	comp=Z,7µm,18.0s						
SFX	**San Felipe**	**78.75**	**59**	P	**P**	**04 37 26.0**	**-0.1**
SULR		**78.79**	**320**	⇓P	**P**	**04 37 26.9**	**+0.8**
AFSR	**Afar-Bala (An**	**78.79**	**312**	*e*P	**P**	**04 37 25.1**	**-1.3**
VOIR		**78.83**	**321**	⇓P	**P**	**04 37 27.5**	**+1.1**
SERE	**Sereflikochisa**	**78.85**	**312**	*e*P	**P**	**04 37 27.9**	**+1.2**
CEYT	**Ceyhan**	**78.86**	**309**	*e*P	**P**	**04 37 27.0**	**+0.3**
OSTC	**Ostas**	**78.88**	**329**	*e*P	**P**	**04 37 27.6**	**+1.0**
OSTC				*e*S	**S**	**04 47 24.0**	**-0.3**
CHVC	**Chvalec**	**78.92**	**329**	*e*P	**P**	**04 37 27.7**	**+0.9**
CHVC				AMS	AMS	05 17 30.0	
	comp=Z,53µm,14.4s						
DRGR		**78.95**	**323**	⇓P	**P**	**04 37 27.8**	**+0.7**
MORC	**Moravsky Berou**	**78.95**	**328**	⇓P	**P**	**04 37 28.0**	**+1.0**
MORC	**Moravsky Berou**	**78.95**	**328**	⇑*i*P	**P**	**04 37 27.3**	**+0.3**
MORC				*e*		04 40 23.0	
MORC				*e*S	**S**	**04 47 21.2**	**-3.9**
MORC	**Moravsky Berou**	**78.95**	**328**	IAmb	IAmb	04 37 39.5	
	comp=Z,135nm,1.0s						
SUSD	**Miller**	**78.99**	**40**	P	**P**	**04 37 26.5**	**-0.8**
	baz=316						
SUSD	**Miller**	**78.99**	**40**	IAmb	IAmb	04 37 44.1	
	comp=Z,89nm,0.9s						
SUSD				IAMs_20	IAMs_20	05 11 54.3	
	comp=Z,11µm,20.0s						
DPC	**Dobruska-Polom**	**79.00**	**329**	*e*P	**P**	**04 37 28.3**	**+1.1**
DPC				*e*		04 37 38.0	
DPC				*e*S	**S**	**04 47 26.3**	**+0.7**
DPC				MLR	MLR		
	comp=Z,47µm,15.0s						
DPC	**Dobruska-Polom**	**79.00**	**329**	*e*P	**P**	**04 37 28.3**	**+1.1**
DPC				*e*x	x	04 37 38.0	
DPC				*e*S	**S**	**04 47 26.3**	**+0.7**
DPC				AMS	AMS	05 17 20.0	
	comp=Z,47µm,15.0s						
UPC	**Upice**	**79.00**	**329**	*e*P	**P**	**04 37 28.0**	**+0.8**
UPC				*e*S	**S**	**04 47 25.7**	**+0.2**
UPC				MLR	MLR		
	comp=Z,61µm,14.5s						
UPC	**Upice**	**79.00**	**329**	*e*P	**P**	**04 37 28.0**	**+0.8**
UPC				*e*S	**S**	**04 47 25.7**	**+0.2**
UPC				AMS	AMS	05 17 40.0	
	comp=Z,61µm,14.5s						
KRLC	**Kraliky**	**79.03**	**328**	*e*P	**P**	**04 37 28.2**	**+0.8**
KRLC				MLR	MLR		
	comp=Z,35µm,14.9s						
KRLC	**Kraliky**	**79.03**	**328**	*e*P	**P**	**04 37 28.2**	**+0.8**
KRLC				AMS	AMS	05 16 20.0	
	comp=Z,35µm,14.9s						
ARR	**Arges**	**79.09**	**321**	⇓P	**P**	**04 37 29.1**	**+1.3**
KARA	**Karaisali**	**79.11**	**310**	*e*P	**P**	**04 37 28.1**	**+0.1**
MDUB	**Mudurnu**	**79.15**	**314**	*e*P	**P**	**04 37 28.1**	**-0.2**
MDUB	**Mudurnu**	**79.15**	**314**	P	**P**	**04 37 27.9**	**-0.5**
F33A	**5 Mile Ranch,**	**79.27**	**38**	IAMs_20	IAMs_20	05 18 41.5	
	comp=Z,10µm,19.0s						
FLTG	**Flechtingen**	**79.34**	**333**	*e*P	**P**	**04 37 29.5**	**+0.6**
	comp=Z,30nm,0.8s,baz=34,slow=5.3						
ABTO	**Aybut**	**79.34**	**284**	P	**P**	**04 37 28.7**	**-1.0**
	SNR=20						
ABTO				P	**P**	**04 37 28.7**	**-1.0**
	SNR=20						
S22A	**4UR Ranch, Cre**	**79.37**	**49**	P	**P**	**04 37 29.3**	**-0.6**
	baz=313,SNR=21						
W18A	**Petrified Fore**	**79.38**	**53**	P	**P**	**04 37 29.2**	**-0.6**
	baz=312						
PSZ	**Piszkesteto**	**79.38**	**325**	⇓P	**P**	**04 37 30.5**	**+1.1**
KRTS	**Karatas**	**79.38**	**309**	*e*P	**P**	**04 37 30.6**	**+1.1**
VYHS	**Vyhne**	**79.40**	**326**	*e*P	**P**	**04 37 30.7**	**+1.3**
VYHS				pmax	pmax		
	comp=Z,820nm,2.6s						
VYHS	**Vyhne**	**79.40**	**326**	*e*P	**P**	**04 37 30.7**	**+1.3**
VYHS				*e*S	**S**	**04 47 28.3**	**-1.5**
VYHS				*e*L	L	05 16 28.1	
SAUV	**Serdivan-Sakar**	**79.44**	**315**	*e*P	**P**	**04 37 30.3**	**+0.6**
RAZG	**Razgrad**	**79.46**	**319**	⇓P	**P**	**04 37 30.0**	**+0.1**
SPNC	**Sapanca-Adapaz**	**79.49**	**315**	*e*P	**P**	**04 37 32.2**	**+2.2**
214A	**Organ Pipe Nat**	**79.50**	**57**	P	**P**	**04 37 29.6**	**-0.6**
	baz=311,SNR=26						
Q24A	**Divide**	**79.52**	**48**	P	**P**	**04 37 29.9**	**-0.7**
	baz=313						
BRG	**Berggiesshubel**	**79.52**	**330**	*i* P	**P**	**04 37 29.5**	**-0.5**
BRG				Amp		04 37 35.1	
	comp=Z,551nm,2.5s						
BRG				*e*x	x	04 37 40.7	
BRG				Amp		04 37 42.2	
	comp=Z,92nm,1.2s						
BRG				PP	**PP**	**04 40 32.9**	**+3.2**
BRG				Amp		04 40 36.8	
	comp=Z,106nm,2.1s						
BRG				S	**S**	**04 47 34.0**	**+3.1**
BRG				Amp		05 18 50.0	
	comp=E,19nm,13.7s						
BRG				Amp		05 18 53.0	
	comp=Z,45nm,14.7s						
BRG				Amp		05 18 58.0	
	comp=N,29nm,14.5s						
BRG	**Berggiesshubel**	**79.52**	**330**	*e*P	**P**	**04 37 31.0**	**+1.0**
	comp=N,14nm,0.8s,baz=34,slow=5.3						
CLL	**Collm**	**79.52**	**331**	*i* P	**P**	**04 37 29.9**	**-0.1**
	comp=Z,51nm,0.9s						
CLL				*i* (PcP)	**PcP**	**04 37 40.9**	**+2.9**
	comp=Z,148nm,1.0s						
CLL				*e*PP	**PP**	**04 40 30.0**	**+0.3**
CLL				*e*PPP	PPP	04 42 18.0	
CLL				*e*S	**S**	**04 47 27.0**	**-4.0**
CLL				*e*PS	**PnS**	**04 48 18.0**	**+3.8**
CLL				*e*(SS)		04 52 24.0	
CLL				*e*		04 53 30.0	
CLL				*e*SSS	SSS	04 56 06.0	
CLL				LmH		05 11 00.0	
	comp=N,42µm,19.4s						
CLL				LmH		05 11 00.0	
	comp=E,56µm,21.5s						
CLL				LmV		05 18 00.0	
	comp=Z,33µm,18.4s						
CLL	**Collm**	**79.52**	**331**	*i* P	**P**	**04 37 29.9**	**-0.1**
CLL				*i*		04 37 40.9	
CLL				*e*S	**S**	**04 47 27.0**	**-4.0**
CLL				pmax	pmax		
	comp=Z,51nm,0.9s						
CLL				MLR	MLR		
	comp=Z,33µm,18.4s						
CLL	**Collm**	**79.52**	**331**	P	**P**	**04 37 29.6**	**-0.4**
CLL				IAmb	IAmb	04 37 42.4	
	comp=Z,128nm,1.0s						
CLL	**Collm**	**79.52**	**331**	*e*P	**P**	**04 37 30.8**	**+0.8**
	baz=34,slow=5.3						
SILT	**Sile**	**79.52**	**315**	*e*P	**P**	**04 37 31.7**	**+1.5**
HUMR	**Humele**	**79.53**	**320**	⇓P	**P**	**04 37 30.7**	**+0.6**
YESY	**Yesilyurt**	**79.53**	**311**	*e*P	**P**	**04 37 31.3**	**+0.8**
GULT	**Gulveren**	**79.55**	**314**	*e*P	**P**	**04 37 29.9**	**-0.6**
PVCC	**Panska Ves**	**79.55**	**330**	*e*P	**P**	**04 37 30.9**	**+0.7**
PVCC				*e*S	**S**	**04 47 31.2**	**-0.1**
PVCC				MLR	MLR		
	comp=Z,49µm,16.1s						
PVCC	**Panska Ves**	**79.55**	**330**	*e*P	**P**	**04 37 30.9**	**+0.7**
PVCC				*e*S	**S**	**04 47 31.2**	**-0.1**
PVCC				AMS	AMS	05 17 00.0	
	comp=Z,49µm,16.1s						
NRDL	**Niedersach Rie**	**79.60**	**333**	*e*P	**P**	**04 37 31.0**	**+0.7**
	baz=34,slow=5.3						
JAVC	**Velka Javorina**	**79.61**	**327**	⇑*i*P	**P**	**04 37 32.0**	**+1.4**
JAVC				*e*		04 40 28.1	
JAVC				*e*S	**S**	**04 47 35.9**	**+3.8**
OUZ	**Omahuta**	**79.63**	**155**	P	**P**	**04 37 33.0**	**+2.5**
OUZ				IAMs_20	IAMs_20	05 14 31.1	
	comp=Z,12µm,19.0s						
SVRH	**Sivrihisar-ESK**	**79.67**	**313**	*e*P	**P**	**04 37 31.5**	**+0.3**
BSZH	**Besenyszg**	**79.68**	**325**	⇓P	**P**	**04 37 32.2**	**+1.3**
COPA	**Copaceanca**	**79.70**	**320**	⇓P	**P**	**04 37 31.2**	**+0.1**
ASSE	**Asse, Remlinge**	**79.70**	**333**	*e*P	**P**	**04 37 31.9**	**+1.0**
	baz=34,slow=5.3						
FBE	**Freiberg**	**79.70**	**331**	*e*P	**P**	**04 37 32.0**	**+1.1**
	comp=Z,22nm,0.8s,baz=34,slow=5.3						
VRAC	**Vranov**	**79.70**	**328**	P	**P**	**04 37 31.2**	**+0.2**
	comp=Z,33nm,0.8s,baz=43,slow=4.7,SNR=40						
VRAC	**Vranov**	**79.70**	**328**	⇓P	**P**	**04 37 32.4**	**+1.3**
VRAC	**Vranov**	**79.70**	**328**	⇑*i*P	**P**	**04 37 31.4**	**+0.3**
VRAC				*e*		04 40 28.6	
VRAC				*e*S	**S**	**04 47 32.9**	**-0.2**
HRT	**Hereke**	**79.74**	**315**	*e*P	**P**	**04 37 31.4**	**-0.1**
SRCK	**Saricakaya, Es**	**79.76**	**314**	*e*P	**P**	**04 37 30.7**	**-0.8**
KLYT	**Kilyos**	**79.78**	**316**	*e*P	**P**	**04 37 30.9**	**-0.6**
KPL	**Plockton**	**79.81**	**344**	*e*P	**P**	**04 37 32.4**	**+1.0**
SIRR	**Siria**	**79.83**	**323**	⇓P	**P**	**04 37 32.7**	**+1.0**
EYMN	**Ely**	**79.86**	**34**	P	**P**	**04 37 31.2**	**-0.7**
	baz=320,SNR=14						
EYMN	**Ely**	**79.86**	**34**	IAMs_20	IAMs_20	05 19 39.9	
	comp=Z,11µm,18.0s						
OGNE	**Ogallala**	**79.87**	**45**	P	**P**	**04 37 32.0**	**-0.3**
	baz=315						
OGNE	**Ogallala**	**79.87**	**45**	IAmb	IAmb	04 37 57.8	
	comp=Z,149nm,1.1s						
OGNE				IAMs_20	IAMs_20	05 16 28.9	
	comp=Z,11µm,19.0s						
ISK	**Istanbul-Kandi**	**79.90**	**316**	*e*P	**P**	**04 37 31.1**	**-1.1**
KAVV	**Kandilli-Istan**	**79.90**	**316**	*e*P	**P**	**04 37 31.5**	**-0.7**
GZR	**Gura Zlata**	**79.96**	**322**	⇓P	**P**	**04 37 32.7**	**+0.1**
PRA	**Prague**	**79.97**	**330**	*e*P	**P**	**04 37 33.3**	**+0.9**
PRA				*e*		04 37 43.1	
PRA				*e*S	**S**	**04 47 35.8**	**+0.1**
PRA				MLR	MLR		
	comp=Z,22µm,15.4s						
PRA	**Prague**	**79.97**	**330**	*e*P	**P**	**04 37 33.3**	**+0.9**
PRA				*e*x	x	04 37 43.1	
PRA				*e*S	**S**	**04 47 35.8**	**+0.1**
PRA				AMS	AMS	05 17 00.0	
	comp=Z,22µm,15.4s						
ZIMR		**79.97**	**320**	⇓P	**P**	**04 37 33.7**	**+1.1**
BGKT	**Bogazkoy**	**79.97**	**316**	*e*P	**P**	**04 37 33.3**	**+0.7**
ADVT	**Abdulvahap**	**79.97**	**315**	*e*P	**P**	**04 37 32.5**	**-0.2**
SMOL	**Smolenice**	**79.98**	**327**	*e*P	**P**	**04 37 34.2**	**+1.6**
SMOL				pmax	pmax		
	comp=Z,90nm,1.2s						
SMOL	**Smolenice**	**79.98**	**327**	*e*P	**P**	**04 37 34.1**	**+1.5**
KRUC	**Moravsky**	**79.98**	**328**	⇑*i*P	**P**	**04 37 33.1**	**+0.6**
KRUC				*e*		04 40 30.3	
KRUC				*e*S	**S**	**04 47 34.3**	**-1.6**
CIFT	**Cifteler, Eski**	**79.99**	**313**	*e*P	**P**	**04 37 31.9**	**-1.0**
PRU	**Pruhonice**	**79.99**	**329**	*e*P	**P**	**04 37 33.3**	**+0.7**
PRU				*e*		04 37 43.0	
PRU				*e*S	**S**	**04 47 33.6**	**-2.4**
PRU				MLR	MLR		
	comp=Z,46µm,16.1s						
PRU	**Pruhonice**	**79.99**	**329**	*e*P	**P**	**04 37 33.3**	**+0.7**
PRU				*e*x	x	04 37 43.0	
PRU				*e*S	**S**	**04 47 33.6**	**-2.4**
PRU				AMS	AMS	05 16 20.0	
	comp=Z,46µm,16.1s						
CTYL	**Yalikoy Yolu**	**80.02**	**316**	*e*P	**P**	**04 37 33.5**	**+0.6**
LADK	**Ladik-KONYA**	**80.05**	**312**	*e*P	**P**	**04 37 33.8**	**+0.6**
NEUB	**Neuenburg**	**80.06**	**332**	*e*P	**P**	**04 37 33.4**	**+0.5**
	comp=Z,26nm,0.9s,baz=34,slow=5.3						
CTKS	**Kestanelik-??a**	**80.08**	**316**	*e*P	**P**	**04 37 33.9**	**+0.7**
CAVI	**Cavuskoy**	**80.08**	**315**	*e*P	**P**	**04 37 33.7**	**+0.4**
YLV	**Yalova**	**80.08**	**315**	*e*P	**P**	**04 37 33.3**	**0.0**
SDCO	**Great Sand Dun**	**80.14**	**49**	P	**P**	**04 37 33.2**	**-0.8**
	baz=313						
SDCO	**Great Sand Dun**	**80.14**	**49**	IAMs_20	IAMs_20	05 15 12.4	
	comp=Z,7µm,19.0s						
SRO	**Srobarova**	**80.14**	**326**	*e*P	**P**	**04 37 35.3**	**+1.9**
SRO				pmax	pmax		
	comp=Z,205nm,1.2s						
SRO	**Srobarova**	**80.14**	**326**	*e*P	**P**	**04 37 35.3**	**+1.9**
SRO2	**Moca**	**80.15**	**326**	*e*P	**P**	**04 37 34.6**	**+1.2**
SRO2				pmax	pmax		
	comp=Z,155nm,1.4s						
SRO2	**Moca**	**80.15**	**326**	*e*P	**P**	**04 37 34.6**	**+1.2**
MODS	**Modra-Piesok**	**80.15**	**327**	*e*P	**P**	**04 37 33.8**	**+0.3**
MODS				pmax	pmax		
	comp=Z,207nm,1.3s						
MODS	**Modra-Piesok**	**80.15**	**327**	*e*P	**P**	**04 37 33.8**	**+0.3**
MODS				*e*S	**S**	**04 47 33.2**	**-4.6**
MODS				*e*L	L	05 16 26.8	
TREC	**Trest**	**80.17**	**328**	*e*P	**P**	**04 37 34.3**	**+0.7**
TREC				MLR	MLR		
	comp=Z,46µm,14.8s						
TREC	**Trest**	**80.17**	**328**	*e*P	**P**	**04 37 34.3**	**+0.7**
TREC				AMS	AMS	05 18 30.0	
	comp=Z,46µm,14.8s						
AMBH	**Ambrzfalva**	**80.19**	**324**	⇓P	**P**	**04 37 33.2**	**-0.5**
VLAD	**Vladila**	**80.20**	**320**	⇓P	**P**	**04 37 34.3**	**+0.5**
KONT	**Konya--Tatoy**	**80.22**	**312**	*e*P	**P**	**04 37 33.5**	**-0.6**
GEMT	**Gemlik**	**80.27**	**315**	*e*P	**P**	**04 37 33.9**	**-0.4**
INVG	**Invergeldie, C**	**80.28**	**342**	*e*P	**P**	**04 37 34.2**	**+0.2**
INVG				IAMs_20	IAMs_20	05 18 54.7	
	comp=Z,17µm,18.6s						
SRE	**Strehaia**	**80.29**	**321**	⇓P	**P**	**04 37 35.8**	**+1.5**
PHSR	**Pinarhisar**	**80.32**	**317**	*e*P	**P**	**04 37 34.5**	**0.0**
BZS	**Buzias**	**80.33**	**323**	⇓P	**P**	**04 37 34.3**	**-0.2**
ZST	**Bratislava**	**80.36**	**327**	*e*P	**P**	**04 37 36.0**	**+1.4**
ZST	**Bratislava**	**80.36**	**327**	*e*P	**P**	**04 37 36.0**	**+1.4**
ZST	**Bratislava**	**80.36**	**327**	*e*S	**S**	**04 47 38.6**	**-1.4**
SILI	**Silifke-Mersin**	**80.38**	**310**	*e*P	**P**	**04 37 34.8**	**-0.1**
ESY	**Stoneypath**	**80.40**	**341**	*e*P	**P**	**04 37 35.0**	**+0.3**
K31A	**O'Neill**	**80.40**	**42**	IAmb	IAmb	04 38 00.2	
	comp=Z,180nm,1.1s						
K31A				IAMs_20	IAMs_20	05 17 14.7	
	comp=Z,13µm,19.0s						
GTTG	**Gottingen**	**80.43**	**333**	*e*P	**P**	**04 37 35.5**	**+0.6**
	baz=34,slow=5.3						
RAR	**Rarotonga**	**80.44**	**128**	IAMs_20	IAMs_20	05 15 56.0	
	comp=Z,13µm,19.0s						
PBCC	**Pribram**	**80.45**	**330**	*e*P	**P**	**04 37 35.1**	**0.0**
PBCC				*e*S	**S**	**04 47 43.9**	**+3.1**
TANN	**Tannenbergstha**	**80.45**	**331**	*e*P	**P**	**04 37 35.7**	**+0.6**
	comp=Z,6.2nm,0.9s,baz=34,slow=5.3						
WERD	**Werda**	**80.48**	**331**	*e*P	**P**	**04 37 36.1**	**+0.8**
	comp=Z,10.0nm,0.8s,baz=34,slow=5.3						
MDNY	**Mudanya-Bursa**	**80.48**	**315**	*e*P	**P**	**04 37 34.1**	**-1.3**
HERR	**Herculane**	**80.51**	**322**	⇓P	**P**	**04 37 35.8**	**+0.3**
DGAR	**Diego Garcia**	**80.51**	**252**	IAMs_20	IAMs_20	05 14 22.1	
	comp=Z,8µm,18.0s						
PLVB	**Pleven**	**80.54**	**320**	⇓P	**P**	**04 37 36.2**	**+0.5**
GUNZ	**Gunzen**	**80.54**	**331**	*e*P	**P**	**04 37 36.9**	**+1.3**
	baz=34,slow=5.3						
F36A	**Milaca**	**80.55**	**37**	IAMs_20	IAMs_20	05 20 16.2	
	comp=Z,11µm,18.0s						
IBBN	**Ibbenburen**	**80.56**	**334**	*e*P	**P**	**04 37 36.1**	**+0.6**
	baz=34,slow=5.3						
TUC	**Tucson**	**80.57**	**56**	P	**P**	**04 37 35.8**	**-0.3**
	baz=311						
TUC	**Tucson**	**80.57**	**56**	P	**P**	**04 37 36.2**	**+0.1**
TUC				pmax	pmax		
	comp=Z,30nm,1.2s						
TUC	**Tucson**	**80.57**	**56**	P	**P**	**04 37 36.2**	**+0.1**
EAB	**Aberfoyle**	**80.57**	**343**	*e*P	**P**	**04 37 36.6**	**+1.1**
EDRB	**Edirne**	**80.57**	**317**	P	**P**	**04 37 33.9**	**-1.9**
EDRB	**Edirne**	**80.57**	**317**	*e*P	**P**	**04 37 35.6**	**-0.2**
WERN	**Wernitzgruen**	**80.58**	**331**	*e*P	**P**	**04 37 37.1**	**+1.2**
	comp=Z,16nm,0.8s,baz=34,slow=5.3						
NKC	**Novy Kostel**	**80.60**	**331**	*e*P	**P**	**04 37 36.5**	**+0.6**
NKC				*e*S	**S**	**04 47 43.1**	**+0.6**
NKC				MLR	MLR		
	comp=Z,41µm,14.6s						
NKC	**Novy Kostel**	**80.60**	**331**	*e*P	**P**	**04 37 36.5**	**+0.6**
NKC				*e*S	**S**	**04 47 43.1**	**+0.6**
NKC				AMS	AMS	05 17 30.0	
	comp=Z,41µm,14.6s						
IKL	**Isikli**	**80.61**	**310**	*e*P	**P**	**04 37 35.8**	**-0.4**
TEVE	**Tevekalti-Mers**	**80.62**	**310**	*e*P	**P**	**04 37 36.2**	**-0.1**
ECSD	**EROS Data Cent**	**80.67**	**40**	P	**P**	**04 37 35.8**	**-0.5**
	baz=318,SNR=14						
ECSD	**EROS Data Cent**	**80.67**	**40**	IAmb	IAmb	04 37 51.2	
	comp=Z,161nm,1.6s						
ECSD	**EROS Data Cent**	**80.67**	**40**	IAMs_20	IAMs_20	05 19 27.5	
	comp=Z,12µm,18.0s						
BAIL	**Bailesti**	**80.70**	**321**	⇓P	**P**	**04 37 37.8**	**+1.3**
PUNG	**Punghina**	**80.71**	**321**	⇓P	**P**	**04 37 37.0**	**+0.5**
AKKU	**Akkuyu-Mersin**	**80.74**	**310**	*e*P	**P**	**04 37 36.9**	**0.0**
EREN	**Erenkoy**	**80.80**	**309**	*e*P	**P**	**04 37 36.6**	**-0.6**
BERE	**Bereket-Mersin**	**80.81**	**310**	*e*P	**P**	**04 37 37.8**	**+0.4**
TVSB	**Tavsanli**	**80.81**	**314**	*e*P	**P**	**04 37 36.8**	**-0.5**
SHUT	**Suhut-Afyon**	**80.83**	**313**	*e*P	**P**	**04 37 36.2**	**-1.3**
KCTX	**Karacabey (Bur**	**80.84**	**315**	*e*P	**P**	**04 37 36.9**	**-0.5**
E38A	**The Farm, Brul**	**80.87**	**35**	IAMs_20	IAMs_20	05 17 40.5	
	comp=Z,9µm,19.0s						
KSCO	**Kaye Shedlock’**	**80.90**	**46**	P	**P**	**04 37 37.2**	**-0.6**
	baz=315						
KSCO	**Kaye Shedlock’**	**80.90**	**46**	IAmb	IAmb	04 38 03.4	
	comp=Z,136nm,1.4s						
KSCO				IAMs_20	IAMs_20	05 14 26.3	
	comp=Z,7µm,20.0s						
MDVR	**Moldovita**	**80.92**	**322**	⇓P	**P**	**04 37 37.9**	**+0.2**
MANZ	**Manzenberg**	**80.93**	**331**	*e*P	**P**	**04 37 38.7**	**+1.1**
	comp=Z,14nm,0.9s,baz=34,slow=5.3						
PGBU	**Glenifferbraes**	**80.94**	**342**	*e*P	**P**	**04 37 38.9**	**+1.3**
MRMT	**Marmara Adasi**	**81.01**	**316**	*e*P	**P**	**04 37 39.4**	**+1.1**
CKRC	**Cesky Krumlov**	**81.01**	**329**	*e*P	**P**	**04 37 38.8**	**+0.7**
CKRC				*e*S	**S**	**04 47 47.4**	**+0.6**
CKRC				AMS	AMS	05 19 10.0	
	comp=Z,26µm,15.4s						
TEKE	**Tekeli-Mersin**	**81.01**	**310**	*e*P	**P**	**04 37 36.2**	**-2.1**
UBBA	**Unterbreizbach**	**81.02**	**332**	*e*P	**P**	**04 37 39.4**	**+1.4**
	baz=34,slow=5.3						
EDC	**Edincik**	**81.05**	**316**	*e*P	**P**	**04 37 38.9**	**+0.5**
KHC	**Kasperske Hory**	**81.05**	**329**	*e*P	**P**	**04 37 38.6**	**+0.2**
KHC				*e*		04 37 42.6	
KHC				*e*		04 37 48.7	
KHC				*e*S	**S**	**04 47 48.6**	**+1.3**
KHC				MLR	MLR		
	comp=Z,44µm,16.8s						
KHC	**Kasperske Hory**	**81.05**	**329**	*e*P	**P**	**04 37 38.6**	**+0.2**
KHC				*e*pP	**sP**	**04 37 42.6**	**-0.6**
KHC				*e*x	x	04 37 48.7	
KHC				*e*S	**S**	**04 47 48.6**	**+1.3**
KHC				AMS	AMS	05 17 00.0	
	comp=Z,44µm,16.8s						
KHC	**Kasperske Hory**	**81.05**	**329**	IAmb	IAmb	04 37 51.5	
	comp=Z,119nm,1.1s						
EKA	**Eskdalemuir Ar**	**81.06**	**342**	P	**P**	**04 37 38.5**	**+0.3**
	comp=Z,11nm,0.7s,baz=25,slow=4.8,SNR=23						
ROTZ	**Rotzenmuhle**	**81.07**	**331**	*e*P	**P**	**04 37 39.5**	**+1.1**
	baz=34,slow=5.3						
CONA	**Conrad Observa**	**81.09**	**327**	*i* P	**P**	**04 37 40.0**	**+1.4**
	comp=Z,112nm,1.8s,SNR=32						
ESK	**Eskdalemuir**	**81.09**	**342**	*e*P	**P**	**04 37 38.1**	**-0.3**
ESK				IAMs_20	IAMs_20	05 19 36.9	
	comp=Z,23µm,15.5s						
ESK	**Eskdalemuir**	**81.09**	**342**	P	**P**	**04 37 38.3**	**-0.1**
ESK	**Eskdalemuir**	**81.09**	**342**	P	**P**	**04 37 38.2**	**-0.1**
ESK	**Eskdalemuir**	**81.09**	**342**	IAMs_20	IAMs_20	05 18 40.9	
	comp=Z,14µm,18.0s						
GEDZ	**Gediz**	**81.13**	**314**	*e*P	**P**	**04 37 39.2**	**+0.2**
RKY	**Sarkoy-Tekirda**	**81.17**	**316**	*e*P	**P**	**04 37 39.8**	**+0.6**
RAYN	**Ar Rayn**	**81.18**	**293**	*i* P	**P**	**04 37 42.1**	**+2.6**
	SNR=18						
RAYN	**Ar Rayn**	**81.18**	**293**	P	**P**	**04 37 39.4**	**-0.1**
RAYN				pmax	pmax		
	comp=Z,222nm,1.3s						
RAYN				MLR	MLR		
	comp=Z,11µm,18.0s						
RAYN	**Ar Rayn**	**81.18**	**293**	P	**P**	**04 37 39.4**	**-0.1**
RAYN				IAmb	IAmb	04 37 51.3	
	comp=Z,222nm,1.3s						
RAYN				IAMs_20	IAMs_20	05 17 39.7	
	comp=Z,11µm,18.0s						
T25A	**Trinidad**	**81.19**	**49**	P	**P**	**04 37 38.7**	**-0.9**
	baz=314,SNR=14						
EDMD	**Edmundbyers**	**81.22**	**341**	*e*P	**P**	**04 37 38.2**	**-0.9**
EDMD				IAMs_20	IAMs_20	05 19 34.8	
	comp=Z,20µm,16.1s						
MORH	**Mrgy, Hungar**	**81.23**	**325**	⇓P	**P**	**04 37 39.4**	**+0.1**
MORH	**Mrgy, Hungar**	**81.23**	**325**	⇑*i*P	**P**	**04 37 38.7**	**-0.6**
GEC2	**GERESS Array S**	**81.23**	**329**	*e*P	**P**	**04 37 40.0**	**+0.6**
	baz=34,slow=5.3						
GEC2				*e*sP	**pwP**	**04 37 51.0**	**+4.6**
GERES	**GERESS Array B**	**81.23**	**329**	P	**P**	**04 37 38.9**	**-0.5**
	comp=Z,10nm,0.7s,baz=44,slow=5.9,SNR=75						
GERES				PKKPbc	PKKPbc	04 56 23.5	+10
	comp=Z,0.2nm,0.3s,baz=124,slow=1.9,SNR=4.6						
GERES				LR	LR	05 17 36.1	
	comp=Z,34µm,18.0s,baz=18,slow=39						
GERES	**GERESS Array B**	**81.23**	**329**	P	**P**	**04 37 39.3**	**-0.1**
GERES	**GERESS Array B**	**81.23**	**329**	P	**P**	**04 37 39.3**	**-0.1**
KASTN	**Kahler Asten**	**81.26**	**333**	*e*P	**P**	**04 37 40.3**	**+0.9**
	baz=34,slow=5.3						
WET	**Wettzell**	**81.32**	**330**	*e*P	**P**	**04 37 40.7**	**+1.0**
	comp=Z,18nm,0.9s,baz=34,slow=5.3						
SIMA	**Simav-Kutahya**	**81.34**	**314**	*e*P	**P**	**04 37 38.2**	**-1.9**
ISP	**Isparta**	**81.36**	**313**	P	**P**	**04 37 40.7**	**+0.4**
ISP				pmax	pmax		
	comp=Z,59nm,1.0s						
ISP	**Isparta**	**81.36**	**313**	P	**P**	**04 37 40.7**	**+0.4**
ISP	**Isparta**	**81.36**	**313**	IAMs_20	IAMs_20	05 18 52.1	
	comp=Z,11µm,20.0s						
SPMN	**Marine on St.**	**81.36**	**37**	P	**P**	**04 37 38.9**	**-1.1**
	baz=320						
SPMN	**Marine on St.**	**81.36**	**37**	IAMs_20	IAMs_20	05 14 10.7	
	comp=Z,8µm,18.0s						
GAZI	**Gazipasa**	**81.42**	**310**	*e*P	**P**	**04 37 38.9**	**-1.6**
BUG	**Bochum--Univer**	**81.45**	**334**	*e*P	**P**	**04 37 41.2**	**+0.8**
	comp=Z,16nm,0.9s,baz=34,slow=5.3						
BUG				*e*sP	**pwP**	**04 37 51.8**	**+4.5**
ANMO	**Albuquerque**	**81.49**	**51**	P	**P**	**04 37 40.8**	**-0.3**
	baz=313						
ANMO	**Albuquerque**	**81.49**	**51**	P	**P**	**04 37 41.5**	**+0.4**
ANMO				pmax	pmax		
	comp=Z,59nm,1.3s						
ANMO	**Albuquerque**	**81.49**	**51**	P	**P**	**04 37 41.5**	**+0.4**
ANMO	**Albuquerque**	**81.49**	**51**	IAMs_20	IAMs_20	05 20 22.1	
	comp=Z,7µm,19.0s						
GRF	**Grafenberg Arr**	**81.50**	**331**	*e*P	**P**	**04 37 41.7**	**+1.0**
	baz=34,slow=5.3						
GRF				*e*L	L	05 18 44.2	
	comp=Z,26µm,18.8s						
GRFO	**Grafenberg**	**81.50**	**331**	P	**P**	**04 37 40.7**	**0.0**
GRFO				pmax	pmax		
	comp=Z,240nm,1.1s						
GRFO	**Grafenberg**	**81.50**	**331**	P	**P**	**04 37 40.7**	**0.0**
GRFO				IAMs_20	IAMs_20	05 18 42.2	
	comp=Z,9µm,21.0s						
FRGS	**Fruska Gora**	**81.52**	**324**	⇓P	**P**	**04 37 40.8**	**-0.1**
FRGS	**Fruska Gora**	**81.52**	**324**	⇑*i*P	**P**	**04 37 40.2**	**-0.7**
BCK	**Bucak**	**81.57**	**312**	*e*P	**P**	**04 37 40.0**	**-1.4**
BGNE	**Belgrade**	**81.59**	**42**	P	**P**	**04 37 39.5**	**-1.8**
	baz=317						
BGNE	**Belgrade**	**81.59**	**42**	IAmb	IAmb	04 37 52.6	
	comp=Z,101nm,0.8s						
BGNE				IAMs_20	IAMs_20	05 18 04.2	
	comp=Z,10µm,18.0s						
ALN	**Alexandroupoli**	**81.62**	**317**	P	**P**	**04 37 39.0**	**-2.4**
LPK	**Lapseki**	**81.62**	**316**	*e*P	**P**	**04 37 40.8**	**-0.7**
ENEZ	**Enez**	**81.68**	**317**	*e*P	**P**	**04 37 42.2**	**+0.5**
CSS	**Mathiatis**	**81.69**	**309**	IAmb	IAmb	04 37 53.9	
	comp=Z,86nm,1.0s						
RDO	**Rodhopi**	**81.70**	**318**	P	**P**	**04 37 41.0**	**-0.9**
GELI	**Tayfur-Gelibol**	**81.75**	**317**	*e*P	**P**	**04 37 41.0**	**-1.2**
ARSA	**Arzberg**	**81.77**	**327**	*i* P	**P**	**04 37 43.2**	**+1.0**
	comp=Z,84nm,1.4s,SNR=17						
BOVS	**Bovan**	**81.78**	**321**	⇓P	**P**	**04 37 41.9**	**-0.3**
VTS	**Vitosha**	**81.79**	**320**	⇓P	**P**	**04 37 43.2**	**+0.7**
VTS	**Vitosha**	**81.79**	**320**	IAmb	IAmb	04 37 55.3	
	comp=Z,71nm,0.8s						
Y22D	**IRIS PASSCAL I**	**81.80**	**52**	P	**P**	**04 37 41.6**	**-1.1**
	baz=313						
D41A	**Chassel**	**81.80**	**33**	IAMs_20	IAMs_20	05 15 56.2	
	comp=Z,9µm,18.0s						
MOA	**Molln**	**81.81**	**328**	*i* P	**P**	**04 37 43.2**	**+0.8**
	comp=Z,76nm,1.2s,SNR=18						
LEF	**Lefka**	**81.84**	**309**	*e*P	**P**	**04 37 41.0**	**-1.7**
BEHE	**Becsehely**	**81.85**	**326**	⇑*i*P	**P**	**04 37 46.0**	**+3.4**
GAL1	**Galloway**	**81.86**	**342**	*e*P	**P**	**04 37 42.8**	**+0.3**
GAL1				IAMs_20	IAMs_20	05 20 04.2	
	comp=Z,14µm,12.8s						
KULA	**Kula-Manisa**	**81.92**	**314**	P	**P**	**04 37 43.1**	**-0.1**
HPK	**Haverah Park**	**81.92**	**340**	*e*P	**P**	**04 37 43.9**	**+1.2**
HPK				IAMs_20	IAMs_20	05 19 46.6	
	comp=Z,24µm,18.0s						
ANTB	**Antalya**	**81.93**	**312**	*e*P	**P**	**04 37 41.8**	**-1.3**
I37A	**Lemond, Waseca**	**82.00**	**38**	IAMs_20	IAMs_20	05 20 41.7	
	comp=Z,10µm,18.0s						
KORT	**Korkueli**	**82.03**	**312**	*e*P	**P**	**04 37 43.0**	**-0.9**
SOCY	**Socotra**	**82.03**	**279**	P	**P**	**04 37 42.3**	**-1.8**
SOCY				IAMs_20	IAMs_20	05 20 43.6	
	comp=Z,6µm,18.0s						
SOCY	**Socotra**	**82.03**	**279**	P	**P**	**04 37 41.5**	**-2.6**
	SNR=48						
TNS	**Taunus Mts**	**82.07**	**333**	*e*P	**P**	**04 37 44.4**	**+0.7**

	comp=Z,12nm,0.8s,baz=34,slow=5.3						
TNS				esP	pwP	04 37 55.4	+4.7
L34A	Svendsen Farm,	82.09	41	IAMs_20	IAMs_20	05 13 49.2	
	comp=Z,9µm,20.0s						
319A	Douglas	82.14	56	IAmb	IAmb	04 37 58.9	
	comp=Z,93nm,1.1s						
GADA	Gvkgeada	82.21	317	P	P	04 37 44.3	-0.2
GADA	Gvkgeada	82.21	317	eP	P	04 37 44.9	+0.4
DIVS	Divibare	82.24	323	⇑iP	P	04 37 43.9	-0.9
EZN	Ezine	82.25	316	P	P	04 37 43.1	-1.6
EZN	Ezine	82.25	316	eP	P	04 37 43.4	-1.3
KALN	Kalnik	82.25	326	i P	P	04 37 44.3	-0.4
AHRW	Bad Neuenahr-A	82.28	334	eP	P	04 37 45.7	+1.0
	baz=34,slow=5.3						
AHRW				esP	pwP	04 37 56.4	+4.7
121A	Cookes Peak, D	82.31	54	P	P	04 37 45.5	0.0
	baz=313,SNR=15						
121A	Cookes Peak, D	82.31	54	IAmb	IAmb	04 38 03.1	
	comp=Z,180nm,1.7s						
121A				IAMs_20	IAMs_20	05 18 22.1	
	comp=Z,7µm,18.0s						
COWI	Conover	82.31	34	IAMs_20	IAMs_20	05 20 34.7	
	comp=Z,8µm,18.0s						
KAVA	Kavala	82.34	318	P	P	04 37 44.3	-0.9
BOZC	Bozcaada	82.38	316	eP	P	04 37 44.2	-1.3
GROS	Grobnik	82.40	327	eP	P	04 37 44.9	-0.7
GROS				e		04 37 56.7	
BISS	Bistriski jare	82.41	327	eP	P	04 37 45.6	+0.1
BISS				e		04 37 57.0	
NVR	Nevrokopi	82.41	319	P	P	04 37 45.5	-0.2
TAU	Tasmania Unive	82.42	177	P	P	04 37 46.8	+1.6
TAU				pmax	pmax		
	comp=Z,156nm,1.6s						
TAU	Tasmania Unive	82.42	177	P	P	04 37 46.8	+1.6
TAU				IAmb	IAmb	04 38 04.2	
	comp=Z,156nm,1.6s						
PERS	Pernice	82.42	327	eP	P	04 37 45.3	-0.3
PERS				i		04 37 57.1	
PERS				eS	S	04 48 00.2	-1.4
SOKA	Soboth	82.42	327	i P	P	04 37 46.4	+0.7
	comp=Z,136nm,1.6s,SNR=64						
LBWR	Ladybower, Pea	82.44	340	eP	P	04 37 46.6	+1.0
LBWR				IAMs_20	IAMs_20	05 20 10.4	
	comp=Z,22µm,18.8s						
N33A	J Bar K, Exete	82.44	42	IAMs_20	IAMs_20	05 18 39.8	
	comp=Z,10µm,19.0s						
ELL	Elmali	82.46	312	eP	P	04 37 45.3	-0.8
DKL	Dikili	82.48	315	eP	P	04 37 46.9	+0.9
RJOB	Jochberg	82.49	329	eP	P	04 37 47.3	+1.3
	comp=Z,77nm,0.8s,baz=34,slow=5.3						
G40A	Rib Lake	82.50	35	IAmb	IAmb	04 38 29.3	
	comp=Z,106nm,1.8s						
G40A				IAMs_20	IAMs_20	05 18 40.7	
	comp=Z,10µm,19.0s						
THAS	Thassos island	82.52	318	P	P	04 37 44.9	-1.3
BEBN	Eben Emael	82.53	335	dP	P	04 37 45.8	-0.2
BEBN				dx	x	04 37 57.0	
BTNL	Ternell	82.56	334	dP	P	04 37 46.5	+0.3
BTNL				dx	x	04 37 57.2	
MEM	Membach	82.58	334	κP	P	04 37 46.5	+0.2
MEM				dx	x	04 37 57.1	
CBKS	Cedar Bluff	82.63	45	P	P	04 37 46.2	-0.7
	baz=316,SNR=5.5						
CBKS	Cedar Bluff	82.63	45	IAmb	IAmb	04 38 11.5	
	comp=Z,108nm,1.3s						
CBKS				IAMs_20	IAMs_20	05 18 03.9	
	comp=Z,11µm,19.0s						
HSIG		82.63	58	P	P	04 37 47.7	+0.7
HSIG				IAmb	IAmb	04 38 04.2	
	comp=Z,101nm,1.7s						
PTJ	Puntijarka	82.64	326	P	P	04 37 46.5	-0.3
BBLS	Lazići	82.69	323	⇑iP	P	04 37 47.4	+0.3
PRK	Paraskevi	82.69	316	P	P	04 37 46.9	-0.2
ZAG	Zagreb	82.69	326	⇑iP	P	04 37 46.8	-0.2
SRS	Serrai	82.72	319	P	P	04 37 45.8	-1.5
HAPS	Han Pijesak,Bl	82.73	323	eP	P	04 37 46.9	-0.5
FUR	Furstenfeldbru	82.73	330	eP	P	04 37 48.3	+1.1
	baz=34,slow=5.3						
AYDB	Zeytinkoy-Aydi	82.75	314	eP	P	04 37 47.1	-0.5
BSTI	Sart Tilman	82.75	335	dP	P	04 37 48.8	+1.6
BSTI				dx	x	04 37 59.0	
OBKA	Obir	82.76	327	i P	P	04 37 47.8	+0.3
	comp=Z,36nm,0.7s,SNR=22						
BHOU	Houvegnez	82.80	334	dP	P	04 37 47.0	-0.5
BHOU				dx	x	04 37 58.7	
LIA	Limnos Island	82.80	317	P	P	04 37 46.6	-1.0
KBA	Koelnbreinsper	82.80	328	i P	P	04 37 48.4	+0.7
	comp=Z,184nm,1.2s,SNR=43						
BLCB	Balcova	82.90	315	eP	P	04 37 48.1	-0.1
CRES	Cresnjev	82.92	326	⇑iP	P	04 37 47.8	-0.4
CWF	Charnwood Fore	82.93	339	eP	P	04 37 47.4	-0.7
CWF				IAMs_20	IAMs_20	05 22 54.4	
	comp=Z,25µm,15.3s						
SIGR	SIGRI	82.94	316	P	P	04 37 47.5	-0.9
UCC	Uccle	82.96	335	dP	P	04 37 48.2	0.0
UCC				dx	x	04 37 58.7	
UCC	Uccle	82.96	335	P	P	04 37 49.3	+1.1
UCC				pmax	pmax		
	comp=Z,160nm,1.6s						
UCC				MLR	MLR		
	comp=Z,31µm,18.0s						
UCC	Uccle	82.96	335	P	P	04 37 49.3	+1.1
UCC				IAmb	IAmb	04 38 00.6	
	comp=Z,160nm,1.6s						
BCLA	Clavier	82.97	335	κP	P	04 37 47.6	-0.7
BCLA				dx	x	04 37 59.2	
AKAS	Kas	82.99	312	eP	P	04 37 46.5	-2.4
AKAS	Kas	82.99	312	IAmb	IAmb	04 38 00.1	
	comp=Z,105nm,1.2s						
AKAS				IAMs_20	IAMs_20	05 21 14.6	
	comp=Z,10µm,18.0s						
E43A	Lone Tree Farm	83.00	33	P	P	04 37 48.3	-0.3
E43A				IAmb	IAmb	04 38 19.7	
	comp=Z,96nm,1.7s						
E43A				IAMs_20	IAMs_20	05 21 08.8	
	comp=Z,10µm,18.0s						
FETY	Fethiye	83.01	313	eP	P	04 37 48.5	-0.3
STU	Stuttgart	83.01	332	IAmb	IAmb	04 38 01.3	
	comp=Z,94nm,1.0s						
STU	Stuttgart	83.01	332	eP	P	04 37 49.6	+1.0
	comp=Z,29nm,0.8s,baz=34,slow=5.3						
F42A	Maple Grove Fa	83.01	34	IAMs_20	IAMs_20	05 21 05.2	
	comp=Z,8µm,19.0s						
BLY	Banja Luka	83.02	325	⇑iP	P	04 37 48.1	-0.6
MYKA	Terra Mystica	83.04	328	i P	P	04 37 48.8	0.0
	comp=Z,19nm,0.8s,SNR=24						
KNT	Kendrikon	83.04	319	P	P	04 37 47.2	-1.7
HIZ	Hauiti	83.05	156	IAMs_20	IAMs_20	05 19 42.6	
	comp=Z,7µm,19.0s						
SOH	Sokhos	83.06	319	P	P	04 37 47.4	-1.7
KSL	Kastellorizon	83.06	312	P	P	04 37 47.8	-1.3
BGES	Gesves	83.08	335	κP	P	04 37 48.7	-0.2
BGES				dx	x	04 37 59.4	
VAY	Valandovo	83.09	319	i P	P	04 37 49.8	+0.7
OUR	Ouranopolis	83.10	318	P	P	04 37 48.4	-0.8
YER	Yerkesik	83.11	313	P	P	04 37 50.2	+0.8
YER	Yerkesik	83.11	313	eP	P	04 37 51.3	+1.9
PLE	Pljevlja	83.11	323	eP	P	04 37 49.2	-0.2
DALY	Dalyan (Mula)	83.12	313	eP	P	04 37 47.5	-1.9
LJU	Ljubljana	83.14	327	i P	P	04 37 49.0	-0.4
LJU				i		04 37 51.5	
LJU				i		04 38 00.2	
LJU				eS	S	04 48 06.7	-2.0
LJU	Ljubljana	83.14	327	⇑iP	P	04 37 48.8	-0.5
SKO	Skopje	83.16	321	i P	P	04 37 51.0	+1.5
URLA	Izmir	83.16	315	eP	P	04 37 48.3	-1.3
IVA	Berane	83.22	322	eP	P	04 37 49.6	-0.3
RCHB	Rochefort	83.22	335	dP	P	04 37 50.2	+0.5
RCHB				dx	x	04 38 00.6	
SNF	Seneffe	83.23	335	dP	P	04 37 49.6	0.0
SNF				dx	x	04 38 00.0	
BMRD	Maredsous	83.25	335	dP	P	04 37 49.7	-0.1
BMRD				dx	x	04 38 00.8	
MLSB	Milas	83.27	314	eP	P	04 37 51.3	+1.1
N35A	Tabor	83.28	41	IAMs_20	IAMs_20	05 19 51.7	
	comp=Z,8µm,18.0s						
GCAM	G?zelcaml?	83.28	314	eP	P	04 37 49.1	-1.1
FOEL	Foel Wylfa	83.29	340	eP	P	04 37 49.1	-0.9
FOEL				IAMs_20	IAMs_20	05 20 46.4	
	comp=Z,32µm,17.1s						
WATA	Walderalm	83.29	329	i P	P	04 37 50.9	+0.6
	comp=Z,87nm,1.6s,SNR=21						
MGRS	Mrkonjic Grad	83.32	325	⇑iP	P	04 37 51.4	+1.1
WTTA	Wattenberg	83.33	329	i P	P	04 37 51.3	+0.8
	comp=Z,74nm,1.4s,SNR=28						
WLF	Walferdange	83.33	334	dP	P	04 37 50.9	+0.6
WLF				dx	x	04 38 01.3	
WLF	Walferdange	83.33	334	eP	P	04 37 51.2	+1.0
	comp=Z,5.8nm,0.9s,baz=34,slow=5.3						
K38A	Parkersburg	83.34	38	IAMs_20	IAMs_20	05 22 06.2	
	comp=Z,8µm,19.0s						
PLG	Polygyros	83.35	318	P	P	04 37 49.9	-0.6
HORT	Hortiatis	83.36	319	P	P	04 37 49.6	-1.1
ZOU	Zoufplan	83.37	328	IAmb	IAmb	04 38 02.5	
	comp=Z,162nm,1.5s						
TURN	Turunc	83.38	313	eP	P	04 37 51.3	+0.6
I40A	Norwalk	83.39	36	IAMs_20	IAMs_20	05 20 11.2	
	comp=Z,13µm,19.0s						
PVY	Plav	83.40	322	eP	P	04 37 51.1	+0.2
ABTA	Abfaltersbach	83.40	329	i P	P	04 37 50.5	-0.3
	comp=Z,64nm,1.2s,SNR=21						
KOME	Kolasin	83.42	322	⇑iP	P	04 37 50.7	-0.2
CEY	Cerknica	83.43	327	⇑iP	P	04 37 49.2	-1.6
UPM	Unac-Piva	83.43	323	eP	P	04 37 50.4	-0.7
CHOS	Chios island	83.43	315	P	P	04 37 52.0	+0.9
GRG	Griva	83.44	319	P	P	04 37 48.4	-2.6
LLW	Llanuwychllyn	83.45	341	eP	P	04 37 50.6	-0.1
JAVS	Javornik	83.45	327	eP	P	04 37 49.6	-1.4
JAVS				i		04 38 01.4	
JAVS				ePP	PP	04 41 04.2	+1.9
JAVS				eS	S	04 48 10.0	-2.1
R32A	Long Quarter,	83.47	44	IAMs_20	IAMs_20	05 17 23.0	
	comp=Z,9µm,21.0s						
MOTA	Moosalm	83.47	330	i P	P	04 37 51.9	+0.7
	comp=Z,56nm,1.0s,SNR=25						
DOU	Dourbes	83.48	335	dP	P	04 37 49.4	-1.6
DOU				dx	x	04 38 02.4	
RETA	Reutte	83.49	330	i P	P	04 37 52.0	+0.8
	comp=Z,100nm,1.2s,SNR=28						
SQTA	Sankt Quirin	83.53	330	i P	P	04 37 52.0	+0.6
	comp=Z,46nm,1.1s,SNR=28						
URZ	Urewera	83.55	154	P	P	04 37 50.0	-1.2
	comp=Z,18nm,0.9s,baz=67,slow=6.0,SNR=3.2						
URZ	Urewera	83.55	154	IAMs_20	IAMs_20	05 19 26.0	
	comp=Z,7µm,18.0s						
PAIG	Paliouri	83.56	318	P	P	04 37 50.2	-1.4
UBR	Ueberruh	83.58	330	eP	P	04 37 52.5	+0.9
	baz=34,slow=5.3						
MATQ	Matagami	83.69	25	P	P	04 37 50.7	-1.3
	baz=329						
NKY	Niksic	83.69	322	eP	P	04 37 52.0	-0.3
SCIA	State Center	83.69	39	P	P	04 37 50.5	-1.7
	baz=320						
SCIA	State Center	83.69	39	IAMs_20	IAMs_20	05 22 06.5	
	comp=Z,9µm,18.0s						
BFO	Black Forest	83.70	332	P	P	04 37 52.5	+0.3
BFO				pmax	pmax		
	comp=Z,424nm,1.9s						
BFO				MLR	MLR		
	comp=Z,26µm,20.0s						
BFO	Black Forest	83.70	332	P	P	04 37 52.5	+0.3
BFO	Black Forest	83.70	332	eP	P	04 37 52.8	+0.7
	comp=Z,12nm,0.8s,baz=34,slow=5.3						
BODT	Bodrum	83.70	314	eP	P	04 37 50.9	-1.5
RIY	Rijeka	83.73	327	⇑iP	P	04 37 51.1	-1.3
DSB	Dublin	83.74	342	IAmb	IAmb	04 38 05.2	
	comp=Z,139nm,1.3s						
DSB				IAMs_20	IAMs_20	05 20 13.5	
	comp=Z,11µm,21.0s						
NKME	Niksic	83.75	322	eP	P	04 37 52.1	-0.5
BRY	Bratogost	83.83	323	eP	P	04 37 52.5	-0.6
BRY	Bratogost	83.83	323	eP	P	04 37 52.3	-0.8
PDG	Podgorica	83.86	322	⇓P	P	04 37 53.5	+0.5
PDG	Podgorica	83.86	322	⇑iP	P	04 37 52.5	-0.6
TTG	Podgorica	83.86	322	⇑iP	P	04 37 53.0	-0.1
PHP	Peshkopia	83.86	321	P	P	04 37 52.2	-1.0
FETA	Feichten	83.88	330	i P	P	04 37 54.0	+0.7
	comp=Z,47nm,1.3s,SNR=19						
CEME	Cevo	83.93	322	⇑iP	P	04 37 53.0	-0.5
KIJV	Kijevo	83.95	325	i P	P	04 37 53.4	-0.1
RICI	Ricice	84.02	324	P	P	04 37 52.8	-1.1
STRD	Stroud	84.02	339	eP	P	04 37 54.0	+0.3
STRD				IAMs_20	IAMs_20	05 23 29.6	
	comp=Z,21µm,15.4s						
MCH1	Michaelchurch	84.05	340	eP	P	04 37 54.0	+0.2
TREB	Trebinje	84.06	323	eP	P	04 37 53.4	-0.7
DRME	Dracevica, Mon	84.08	322	⇑iP	P	04 37 54.1	-0.1
DRME	Dracevica, Mon	84.08	322	⇑iP	P	04 37 54.3	+0.1
FNA	Florina	84.09	320	P	P	04 37 51.7	-2.6
FNA	Florina	84.09	320	IAmb	IAmb	04 38 06.4	
	comp=Z,77nm,1.0s						
KSU1	Kansas State U	84.09	43	P	P	04 37 53.4	-0.9
	baz=318						
KSU1	Kansas State U	84.09	43	IAmb	IAmb	04 38 05.3	
	comp=Z,44nm,0.8s						
KSU1	Kansas State U	84.09	43	IAMs_20	IAMs_20	05 19 44.3	
	comp=Z,12µm,18.0s						
E46A	Sault Ste Mari	84.10	31	IAmb	IAmb	04 38 06.3	
	comp=Z,198nm,1.9s						
BUM	Brajici-Budva	84.13	322	⇑iP	P	04 37 54.1	-0.5
I42A	Draeger Farm,	84.15	35	IAmb	IAmb	04 38 04.6	
	comp=Z,116nm,1.6s						
I42A				IAMs_20	IAMs_20	05 18 51.4	
	comp=Z,8µm,19.0s						
BKZ	Black Stump Fm	84.17	155	P	P	04 37 55.5	+1.1
BKZ				IAMs_20	IAMs_20	05 17 33.2	
	comp=Z,10µm,19.0s						
NVLJ	Novalja	84.18	326	i P	P	04 37 53.2	-1.4
H43A	Windswept, Lux	84.19	34	IAmb	IAmb	04 38 35.0	
	comp=Z,66nm,1.1s						
H43A				IAMs_20	IAMs_20	05 22 46.5	
	comp=Z,11µm,19.0s						
DBRK	Dubrovnik	84.20	323	i P	P	04 37 52.6	-2.2
HCY	Herceg Novi	84.21	323	⇑iP	P	04 37 55.0	+0.1
ECH	Echery	84.22	332	IAmb	IAmb	04 38 06.6	
	comp=Z,127nm,1.3s						
ECH				IAMs_20	IAMs_20	05 17 39.9	
	comp=Z,14µm,21.0s						
ULC	Ulcinj	84.22	322	eP	P	04 37 55.4	+0.4
MAKA	Makarska	84.23	324	i P	P	04 37 53.6	-1.3
STON	Ston	84.25	323	i P	P	04 37 52.8	-2.2
KZN	Kozani	84.25	319	P	P	04 37 54.3	-0.9
NEO	Neokhori	84.25	318	P	P	04 37 52.8	-2.4
KYMI	Kymi, Euboea I	84.30	317	P	P	04 37 54.0	-1.4
JFWS	Jewell Farm	84.31	37	P	P	04 37 54.6	-0.8
	baz=322						
JFWS	Jewell Farm	84.31	37	IAMs_20	IAMs_20	05 20 50.9	
	comp=Z,12µm,18.0s						
AMTX	Amarillo	84.35	49	P	P	04 37 55.3	-0.6
	baz=316						
AMTX	Amarillo	84.35	49	IAmb	IAmb	04 38 11.0	
	comp=Z,58nm,1.1s						
MSTX	Muleshoe	84.36	50	P	P	04 37 54.7	-1.2
	baz=315,SNR=17						
MSTX	Muleshoe	84.36	50	IAmb	IAmb	04 38 16.4	
	comp=Z,92nm,1.3s						
MNTX	Cornudas Mount	84.36	53	P	P	04 37 55.3	-0.5
	baz=314,SNR=22						
MNTX	Cornudas Mount	84.36	53	P	P	04 37 55.6	-0.2
MNTX				IAmb	IAmb	04 38 16.8	
	comp=Z,60nm,1.2s						
MORI	Morici	84.36	325	i P	P	04 37 54.4	-1.2
PPT	Papeete	84.38	118	LR	LR	05 07 52.6	
	comp=Z,10µm,21.8s,baz=291,slow=30						
PPT2	Papeete2	84.39	118	ePP	PP	04 41 03.3	-8.1
	comp=Z,869nm,24.0s						
PPT2				eS	S	04 48 24.0	+2.0
	comp=Z,18µm,33.2s						
PPT2				eSS	SS	04 53 54.5	+1.8
	comp=Z,3µm,24.2s						
PPT2				eLQ	LQ	05 00 14.9	
	comp=Z,8µm,27.0s						
PPT2				eLR	LR	05 04 19.3	
	comp=Z,24µm,23.0s,baz=318						
PPT2	Papeete2	84.39	118	eT	T	06 10 47.2	
	comp=Z,5.4nm,0.3s						
PPTF	Pamatai, Papee	84.40	118	IAMs_20	IAMs_20	05 08 55.8	
	comp=Z,12µm,20.0s						
TIR	Tirane	84.40	321	P	P	04 37 53.5	-2.3
TIR	Tirane	84.40	321	⇓P	P	04 37 56.3	+0.4
TIR	Tirane	84.40	321	P	P	04 37 55.9	+0.1
TIR				pmax	pmax		
	comp=Z,136nm,1.0s						
TIR	Tirane	84.40	321	P	P	04 37 55.9	+0.1
DAVOX	Davos/Dischmat	84.41	330	P	P	04 37 56.7	+0.6
	comp=Z,26nm,0.8s,baz=25,slow=4.2,SNR=56						
QRZ	Quartz Range	84.48	158	IAMs_20	IAMs_20	05 17 01.4	
	comp=Z,7µm,19.0s						
KBN	Korca	84.50	320	P	P	04 37 56.4	-0.1
LSQQ	Lebel-sur-Quev	84.51	25	P	P	04 37 55.5	-0.8
	baz=330						
L40A	Anamosa	84.52	38	IAmb	IAmb	04 38 25.5	
	comp=Z,86nm,1.3s						
L40A				IAMs_20	IAMs_20	05 16 10.5	
	comp=Z,10µm,20.0s						
NEST	Nestorio	84.53	320	P	P	04 37 55.5	-1.1
N38A	Joes South For	84.53	40	IAmb	IAmb	04 38 07.5	
	comp=Z,67nm,0.8s						
N38A				IAMs_20	IAMs_20	05 18 37.8	
	comp=Z,7µm,18.0s						
DUGI	Dugi Otok	84.55	325	i P	P	04 37 56.0	-0.6
ZIRJ	Zirje	84.56	325	i P	P	04 37 55.6	-1.0
G45A	Suttons Bay	84.63	33	IAMs_20	IAMs_20	05 20 07.0	
	comp=Z,12µm,20.0s						
THL	Klokotos Trika	84.68	319	P	P	04 37 52.5	-4.8
LSTV	Lastovo	84.70	324	i P	P	04 37 56.0	-1.3
KPRO	Kipourio	84.72	319	P	P	04 37 56.1	-1.5
U32A	Winter Ranch,	84.79	46	IAmb	IAmb	04 38 23.8	
	comp=Z,114nm,1.4s						
U32A				IAMs_20	IAMs_20	05 17 55.2	
	comp=Z,10µm,20.0s						
DION	Dionisos Attik	84.79	316	P	P	04 37 57.6	-0.3
ATAL	Atalanti	84.82	317	P	P	04 37 55.8	-2.2
LKR	Lokris	84.86	317	P	P	04 37 56.4	-1.8
TUE	Stuetta	84.87	330	P	P	04 37 57.8	-0.6
KARP	Karpathos	84.87	313	IAMs_20	IAMs_20	05 22 54.3	
	comp=Z,11µm,22.0s						
KAN01	Argonia South	84.91	45	IAmb	IAmb	04 38 24.0	
	comp=Z,167nm,1.6s						
AGG	Agios Georgios	84.93	318	P	P	04 37 55.5	-3.1
AGG	Agios Georgios	84.93	318	IAmb	IAmb	04 38 09.0	
	comp=Z,98nm,1.3s						
KAN14	Manchester OK	84.94	45	IAmb	IAmb	04 38 24.1	
	comp=Z,163nm,1.6s						
AXAR	Agios Charalam	84.95	318	P	P	04 37 58.7	0.0
LSK	Leskovik	84.95	320	P	P	04 37 57.6	-1.2
ATHU	Athens Univers	84.95	317	P	P	04 37 55.6	-3.1
ATH	Athens Observa	84.99	317	P	P	04 37 56.6	-2.2
VLY	Voula,Athens	85.03	316	P	P	04 37 54.8	-4.3
KAN13	South Haven SW	85.16	45	IAmb	IAmb	04 38 25.2	
	comp=Z,117nm,1.3s						
VLDQ	Val d'Or	85.17	26	IAmb	IAmb	04 38 28.7	
	comp=Z,74nm,1.2s						
I45A	Fountain	85.20	34	IAMs_20	IAMs_20	05 20 37.1	
	comp=Z,9µm,20.0s						
JAN	Janina	85.20	319	P	P	04 37 59.3	-0.7
TAOE	Nuku Hiva Isla	85.21	106	eS	S	04 48 30.0	-0.4
	comp=Z,13µm,35.6s						
TAOE	Nuku Hiva Isla	85.21	106	eLR	LR	05 04 51.6	
	comp=Z,21µm,20.5s,baz=314						
GLMI	Grayling	85.24	32	P	P	04 37 59.4	-0.7
	baz=325						
GLMI	Grayling	85.24	32	IAmb	IAmb	04 38 24.4	
	comp=Z,92nm,1.1s						
GLMI				IAMs_20	IAMs_20	05 21 53.0	
	comp=Z,11µm,20.0s						
P38A	Dawn	85.27	41	IAMs_20	IAMs_20	05 21 57.4	
	comp=Z,9µm,18.0s						
L42A	Oliver, Polo	85.29	37	IAMs_20	IAMs_20	05 22 27.8	
	comp=Z,12µm,18.0s						
LTK	Loutraki	85.34	317	P	P	04 37 57.9	-2.8
K43A	Burlington	85.35	36	IAMs_20	IAMs_20	05 20 28.2	
	comp=Z,8µm,20.0s						
THZ	Tophouse	85.45	158	IAMs_20	IAMs_20	05 23 37.2	
	comp=Z,6µm,18.0s						
SRN	Sarande	85.45	320	P	P	04 37 55.1	-6.0
ANX	Ano Chora	85.46	318	P	P	04 37 59.6	-1.8
KALE	Kalithea	85.50	318	P	P	04 37 59.3	-2.2
SERG	Sergoula	85.53	318	P	P	04 37 59.9	-1.7
TRIZ	Trizonia	85.55	318	P	P	04 37 59.7	-2.0
IGT	Igoumenitsa	85.56	320	P	P	04 37 59.9	-1.8
SNZO	South Karori	85.56	157	P	P	04 38 02.0	+0.8
SNZO				IAmb	IAmb	04 38 19.5	
	comp=Z,102nm,1.4s						
SNZO	South Karori	85.56	157	IAMs_20	IAMs_20	05 11 20.0	
	comp=Z,8µm,20.0s						
EFP	Efpalio	85.59	318	P	P	04 38 00.5	-1.4
MEH	Mehetia	85.62	117	eT	T	06 12 20.0	
	comp=Z,31nm,0.3s						
KEK	Kerkira	85.68	320	P	P	04 38 01.1	-1.2
LAKA	Lakka	85.70	318	P	P	04 38 00.8	-1.7
SENIN	Lac Senin/Sane	85.73	331	P	P	04 38 02.7	-0.1
SENIN				IAmb	IAmb	04 38 14.6	
	comp=Z,68nm,1.1s						
N41A	Harden Midland	85.75	38	IAMs_20	IAMs_20	05 19 26.9	
	comp=Z,8µm,18.0s						
T35A	Sooner Cattle	85.75	44	IAmb	IAmb	04 38 28.4	
	comp=Z,97nm,1.2s						
T35A				IAMs_20	IAMs_20	05 23 57.6	
	comp=Z,12µm,18.0s						
PDO	Prodromos	85.83	318	P	P	04 38 01.1	-2.0
PRMA	PARMA	85.91	329	IAmb	IAmb	04 38 15.6	
	comp=Z,137nm,1.2s						
L44A	Lake County Fo	85.96	36	P	P	04 38 02.9	-0.7
	baz=323						
L44A	Lake County Fo	85.96	36	IAMs_20	IAMs_20	05 20 55.2	
	comp=Z,9µm,19.0s						
LKD2	Lefkada island	85.96	319	P	P	04 38 02.0	-1.7
AXS	Araxos	86.04	318	P	P	04 38 02.6	-1.5
OK029	Liberty Lake	86.07	45	IAmb	IAmb	04 38 30.1	
	comp=Z,182nm,1.5s						
OK029				IAMs_20	IAMs_20	05 20 15.0	
	comp=Z,10µm,19.0s						
P40A	Paris	86.08	40	IAmb	IAmb	04 38 34.7	
	comp=Z,121nm,1.3s						
P40A				IAMs_20	IAMs_20	05 23 41.8	
	comp=Z,7µm,18.0s						
RLS	Riolos of Patr	86.10	318	P	P	04 38 03.5	-0.9
WMOK	Wichita Mounta	86.11	47	IAMs_20	IAMs_20	05 17 53.1	
	comp=Z,7µm,19.0s						
VLX	Vlachokerasia	86.14	317	P	P	04 38 02.5	-2.3
QUOK	Quay	86.20	45	IAmb	IAmb	04 38 31.3	
	comp=Z,91nm,1.3s						
MURB	Monte Urbino	86.23	327	P	P	04 38 05.0	-0.1
KHZ	Kahutara	86.23	158	IAMs_20	IAMs_20	05 18 25.9	
	comp=Z,10µm,18.0s						
HQIL	Hanson Quary C	86.28	36	IAMs_20	IAMs_20	05 15 13.9	
	comp=Z,8µm,20.0s						
OK031	S. Brethren Rd	86.29	45	IAmb	IAmb	04 38 31.9	
	comp=Z,104nm,1.4s						
OK025	Westminster Rd	86.29	46	IAmb	IAmb	04 38 22.8	
	comp=Z,122nm,1.2s						
OK025				IAMs_20	IAMs_20	05 20 20.9	
	comp=Z,10µm,19.0s						
OK030	Cody Creek RV	86.34	45	IAmb	IAmb	04 38 34.8	
	comp=Z,122nm,1.5s						
OKCFA	Oklahoma City	86.35	46	IAmb	IAmb	04 38 32.3	
	comp=Z,143nm,1.3s						
OKCFA				IAMs_20	IAMs_20	05 20 23.5	
	comp=Z,10µm,19.0s						
KEF5	Kardakata, Kep	86.44	319	P	P	04 38 05.2	-0.9
J47A	Sunmer	86.45	33	IAmb	IAmb	04 38 20.1	
	comp=Z,68nm,1.1s						
J47A				IAMs_20	IAMs_20	05 24 02.1	
	comp=Z,9µm,18.0s						
KEF4	Livadi, Kephal	86.48	319	P	P	04 38 06.1	-0.2
FNO	Franklin	86.50	46	IAmb	IAmb	04 38 33.5	
	comp=Z,98nm,1.1s						
PSDA	Pessada-Kefalo	86.51	319	P	P	04 38 04.6	-1.8
ITM	Ithomi	86.52	317	P	P	04 38 04.3	-2.2
M44A	Midewin, Midew	86.53	36	IAmb	IAmb	04 39 08.1	
	comp=Z,111nm,1.3s						
M44A				IAMs_20	IAMs_20	05 22 08.3	
	comp=Z,9µm,18.0s						
OSSC	Osservatorio P	86.55	327	IAmb	IAmb	04 38 17.6	
	comp=Z,60nm,1.2s						
KEF3	Kipouria, Keph	86.56	319	P	P	04 38 06.4	-0.3
AQU	L'Aquila	86.59	325	⇑iP	P	04 38 06.2	-0.6
HDIL	Hopedale	86.61	38	P	P	04 38 05.6	-1.2
	baz=322,SNR=6.0						
HDIL	Hopedale	86.61	38	IAmb	IAmb	04 38 17.9	
	comp=Z,58nm,0.9s						
HDIL				IAMs_20	IAMs_20	05 23 10.6	
	comp=Z,10µm,20.0s						
INTR	Introdacqua	86.64	325	P	P	04 38 06.5	-0.6
INTR				IAmb	IAmb	04 38 19.6	
	comp=Z,90nm,1.1s						
OXZ	Oxford	86.66	160	IAMs_20	IAMs_20	05 11 54.2	
	comp=Z,6µm,18.0s						
LTHK	Lithakia	86.69	318	P	P	04 38 04.3	-3.0
X34A	Smith Ranch, M	86.74	47	IAmb	IAmb	04 38 25.4	
	comp=Z,140nm,1.4s						
X34A				IAMs_20	IAMs_20	05 19 19.8	
	comp=Z,11µm,19.0s						

L46A	Eue Claire	86.81	35	IAMs_20	IAMs_20	05 22 18.7	
	comp=Z,9µm,20.0s						
ALGO	Algonquin Park	86.81	28	P	P	04 38 05.8	-1.9
	baz=329						
S39A	Bolivar	86.85	42	IAMs_20	IAMs_20	05 23 38.3	
	comp=Z,7µm,18.0s						
SLBS	Sierra La Lagu	86.85	62	IAMs_20	IAMs_20	05 18 29.0	
	comp=Z,7µm,18.0s						
TUL1	Leonard	86.89	44	P	P	04 38 08.3	-0.1
	baz=319						
TUL1	Leonard	86.89	44	IAmb	IAmb	04 38 24.8	
	comp=Z,210nm,1.9s						
TUL1				IAMs_20	IAMs_20	05 24 25.6	
	comp=Z,10µm,19.0s						
R40A	Maddies Statio	86.92	41	IAMs_20	IAMs_20	05 22 57.2	
	comp=Z,12µm,18.0s						
D56A	ZEC Mazanza, M	86.99	25	P	P	04 38 06.4	-2.2
	baz=332						
LATE	Laterza	87.06	327	IAmb	IAmb	04 38 21.1	
	comp=Z,93nm,1.5s						
LATE				IAMs_20	IAMs_20	05 21 56.5	
	comp=Z,10µm,18.0s						
TXAR	Lajitas Array	87.07	54	P	P	04 38 09.2	-0.2
	comp=Z,5.2nm,0.7s,baz=296,slow=2.8,SNR=60						
TXAR				PKKPbc	PKKPbc	04 56 04.2	+4.2
	comp=Z,0.5nm,0.9s,baz=141,slow=3.5,SNR=3.4						
TXAR				LR	LR	05 17 42.8	
	comp=Z,3µm,18.3s,baz=0.0,slow=36						
TXAR	Lajitas Array	87.07	54	P	P	04 38 08.7	-0.7
E55A	Montcerf-Lytto	87.08	26	P	P	04 38 07.8	-1.2
	baz=331						
PAOL	Paolisi	87.13	324	IAmb	IAmb	04 38 46.2	
	comp=Z,63nm,1.3s						
ABTX	Abilene, Hawle	87.15	49	P	P	04 38 09.4	-0.3
	baz=317						
ABTX	Abilene, Hawle	87.15	49	IAmb	IAmb	04 38 30.5	
	comp=Z,94nm,1.2s						
LBZ	Lake Benmore	87.17	161	IAMs_20	IAMs_20	05 22 50.7	
	comp=Z,7µm,19.0s						
P43A	Skaggs, Pawnee	87.22	38	IAmb	IAmb	04 38 20.0	
	comp=Z,204nm,2.0s						
P43A				IAMs_20	IAMs_20	05 24 00.8	
	comp=Z,10µm,18.0s						
U38A	Gravette	87.24	43	IAMs_20	IAMs_20	05 21 40.9	
	comp=Z,9µm,19.0s						
G54A	Lake Saint Pet	87.28	28	P	P	04 38 09.0	-1.0
	baz=329						
WKZ	Wanaka	87.31	162	IAMs_20	IAMs_20	05 10 23.2	
	comp=Z,9µm,20.0s						
O44A	Mansfield	87.31	37	IAMs_20	IAMs_20	05 17 56.2	
	comp=Z,10µm,21.0s						
LATQ	La Tuque	87.33	24	P	P	04 38 09.0	-1.3
	baz=333						
LATQ	La Tuque	87.33	24	IAMs_20	IAMs_20	05 24 26.7	
	comp=Z,8µm,18.0s						
E56A	St. Veronique	87.34	26	P	P	04 38 09.2	-1.2
	baz=331						
HPIG		87.47	57	P	P	04 38 12.2	+0.6
HPIG				IAmb	IAmb	04 38 29.2	
	comp=Z,81nm,1.4s						
I51A	Listowel	87.53	31	P	P	04 38 10.4	-0.9
	baz=327						
D58A	Chemin du LacG	87.55	24	P	P	04 38 10.8	-0.5
	baz=333						
TIP	Timpagrande	87.58	322	⇓P	P	04 38 11.7	0.0
HHAR	Hobbs	87.60	43	IAMs_20	IAMs_20	05 23 59.2	
	comp=Z,10µm,18.0s						
CCM	Cathedral Cave	87.62	40	P	P	04 38 11.6	-0.2
	baz=321						
CCM	Cathedral Cave	87.62	40	P	P	04 38 11.6	-0.2
CCM				pmax	pmax		
	comp=Z,63nm,1.0s						
CCM	Cathedral Cave	87.62	40	P	P	04 38 11.6	-0.2
CCM				IAmb	IAmb	04 38 21.8	
	comp=Z,63nm,0.9s						
CCM	Cathedral Cave	87.62	40	IAMs_20	IAMs_20	05 23 34.5	
	comp=Z,8µm,19.0s						
SLM	Saint Louis	87.66	39	IAmb	IAmb	04 38 22.0	
	comp=Z,59nm,0.9s						
SLM				IAMs_20	IAMs_20	05 18 31.6	
	comp=Z,8µm,18.0s						
L48A	N Adams	87.67	34	IAmb	IAmb	04 38 40.5	
	comp=Z,82nm,1.2s						
L48A				IAMs_20	IAMs_20	05 24 39.5	
	comp=Z,11µm,18.0s						
AAM	Ann Arbor	87.71	33	P	P	04 38 10.9	-1.3
	baz=326						
AAM	Ann Arbor	87.71	33	IAMs_20	IAMs_20	05 21 51.4	
	comp=Z,12µm,19.0s						
K50A	Casco	87.74	32	IAmb	IAmb	04 38 23.4	
	comp=Z,161nm,1.8s						
E57A	Chemin Saint G	87.75	25	P	P	04 38 11.3	-1.1
	baz=332						
SFIN	Lafayette	87.76	36	P	P	04 38 12.0	-0.5
	baz=324						
SFIN	Lafayette	87.76	36	IAmb	IAmb	04 38 29.4	
	comp=Z,47nm,1.1s						
SFIN				IAMs_20	IAMs_20	05 23 04.1	
	comp=Z,10µm,18.0s						
MGMO	Mountain Grove	87.80	41	P	P	04 38 12.1	-0.6
MGMO				IAmb	IAmb	04 38 23.3	
	comp=Z,36nm,0.9s						
MGMO				IAMs_20	IAMs_20	05 22 58.4	
	comp=Z,9µm,20.0s						
H53A	Bobcaygeon	87.80	29	P	P	04 38 12.0	-0.6
	baz=329						
ODZ	Otahua Downs	87.91	161	IAMs_20	IAMs_20	05 11 30.1	
	comp=Z,8µm,18.0s						
D59A	Saint-Raymond	87.95	23	P	P	04 38 12.4	-0.8
	baz=334						
N47A	Urbana	87.99	35	IAmb	IAmb	04 38 41.5	
	comp=Z,73nm,1.2s						
N47A				IAMs_20	IAMs_20	05 23 04.0	
	comp=Z,10µm,20.0s						
Z35A	Perchaven, San	88.00	47	IAMs_20	IAMs_20	05 21 48.2	
	comp=Z,10µm,18.0s						
Q44A	Meyer Farm, Va	88.04	38	IAmb	IAmb	04 38 43.5	
	comp=Z,95nm,1.2s						
Q44A				IAMs_20	IAMs_20	05 23 18.6	
	comp=Z,9µm,19.0s						
E58A	La Victoria	88.07	25	P	P	04 38 13.1	-0.7
	baz=333						
F57A	Harrington	88.10	26	P	P	04 38 13.4	-0.6
	baz=332						
U40A	Yellville	88.11	42	P	P	04 38 13.3	-0.9
	baz=320,SNR=20						
U40A	Yellville	88.11	42	IAmb	IAmb	04 38 42.9	
	comp=Z,66nm,1.1s						
U40A				IAMs_20	IAMs_20	05 21 35.7	
	comp=Z,8µm,20.0s						
D61A	St Aubert, Com	88.27	22	P	P	04 38 13.8	-0.9
	baz=335						
D60A	Saint Jean D'O	88.31	23	P	P	04 38 14.6	-0.3
	baz=334						
P46A	Rosedale	88.32	37	IAmb	IAmb	04 38 43.0	
	comp=Z,60nm,1.0s						
F58A	St-Lin Laurent	88.34	25	P	P	04 38 14.6	-0.4
	baz=332						
T42A	Van Buren	88.49	41	P	P	04 38 15.5	-0.5
T42A				IAmb	IAmb	04 38 46.2	
	comp=Z,71nm,1.3s						
T42A				IAMs_20	IAMs_20	05 23 53.6	
	comp=Z,8µm,19.0s						
W39A	Magazine	88.50	44	P	P	04 38 15.6	-0.5
	baz=320						
W39A	Magazine	88.50	44	IAmb	IAmb	04 38 36.5	
	comp=Z,70nm,1.6s						
W39A				IAMs_20	IAMs_20	05 18 54.3	
	comp=Z,7µm,20.0s						
TBI	Tubuai	88.50	122	*e*PP	PP	04 41 41.2	-3.3
	comp=Z,398nm,28.0s						
TBI				*e*S	S	04 49 01.2	-0.5
	comp=Z,8µm,24.8s						
TBI				*e*SS	SS	04 54 54.7	+1.9
	comp=Z,2µm,25.2s						
TBI				*e*LQ	LQ	05 02 08.4	
	comp=Z,4µm,31.7s						
TBI				*e*LR	LR	05 05 44.3	
	comp=Z,12µm,33.5s,baz=317						
TBI	Tubuai	88.50	122	*e*T	T	06 15 55.3	
	comp=Z,21nm,0.3s						
JCT	Junction City	88.60	51	P	P	04 38 16.2	-0.5
	baz=317						
JCT	Junction City	88.60	51	IAmb	IAmb	04 38 33.0	
	comp=Z,178nm,1.9s						
OLIL	Olney	88.61	38	IAMs_20	IAMs_20	05 18 37.6	
	comp=Z,9µm,20.0s						
N49A	Columbus Grove	88.62	34	IAMs_20	IAMs_20	05 25 00.5	
	comp=Z,8µm,18.0s						
G57A	Newington	88.62	26	P	P	04 38 15.1	-1.3
	baz=331						
F59A	Saint Guilaume	88.69	25	P	P	04 38 14.9	-1.8
	baz=333						
M50A	Fremont	88.71	33	IAMs_20	IAMs_20	05 24 14.8	
	comp=Z,13µm,19.0s						
D62A	Allapoint, All	88.71	22	P	P	04 38 15.4	-1.4
	baz=336						
FCAR	Ozark Folk Cen	88.84	42	IAmb	IAmb	04 38 27.4	
	comp=Z,63nm,1.2s						
FCAR				IAMs_20	IAMs_20	05 19 41.1	
	comp=Z,8µm,19.0s						
F60A	Warwick	88.85	24	P	P	04 38 16.8	-0.7
	baz=334						
WHTX	Lake Whitney,	88.87	48	P	P	04 38 17.5	-0.3
	baz=318						
WHTX	Lake Whitney,	88.87	48	IAmb	IAmb	04 38 48.4	
	comp=Z,75nm,1.2s						
S44A	Carbondale	88.88	39	IAMs_20	IAMs_20	05 15 39.9	
	comp=Z,7µm,20.0s						
SIUC	Southern Illin	88.88	39	P	P	04 38 17.7	-0.1
SIUC				IAmb	IAmb	04 38 35.6	
	comp=Z,66nm,0.9s						
SIUC				IAMs_20	IAMs_20	05 25 20.8	
	comp=Z,7µm,19.0s						
J54A	Appleton	88.89	29	IAMs_20	IAMs_20	05 22 38.5	
	comp=Z,12µm,19.0s						
G58A	Ormstown	88.90	26	P	P	04 38 17.4	-0.3
	baz=332						
MQOL	MQOL	88.96	296	*i* P		04 38 14.4	
MQOL				*i*		04 38 20.2	
	baz=18,slow=5.6						
MQOL				*i* S		04 48 48.0	
BLO	Bloomington	89.00	37	IAmb	IAmb	04 38 28.6	
	comp=Z,128nm,1.8s						
D63A	Stockholm	89.01	21	P	P	04 38 17.4	-0.8
	baz=336						
PBMO	Poplar Bluff	89.02	41	IAmb	IAmb	04 38 48.3	
	comp=Z,91nm,1.2s						
PBMO				IAMs_20	IAMs_20	05 24 26.6	
	comp=Z,10µm,18.0s						
H57A	Richville	89.05	27	P	P	04 38 17.9	-0.6
	baz=331						
MEDO	Medina	89.06	29	IAMs_20	IAMs_20	05 22 43.8	
	comp=Z,11µm,19.0s						
MIAR	Mount Ida	89.11	44	P	P	04 38 18.5	-0.5
	baz=320,SNR=6.5						
MIAR	Mount Ida	89.11	44	IAmb	IAmb	04 38 36.4	
	comp=Z,53nm,1.2s						
MIAR				IAMs_20	IAMs_20	05 22 53.3	
	comp=Z,10µm,20.0s						
O49A	Covington	89.15	35	IAMs_20	IAMs_20	05 16 36.7	
	comp=Z,8µm,20.0s						
LCAR	Lake Charles	89.20	41	IAmb	IAmb	04 38 29.4	
	comp=Z,118nm,1.8s						
LCAR				IAMs_20	IAMs_20	05 18 01.6	
	comp=Z,8µm,20.0s						
J55A	Hilton	89.21	29	IAMs_20	IAMs_20	05 25 39.8	
	comp=Z,11µm,20.0s						
WHAR	Wooly Hollow	89.22	43	IAMs_20	IAMs_20	05 22 31.1	
	comp=Z,6µm,20.0s						
P48A	Milroy	89.26	36	IAmb	IAmb	04 39 29.1	
	comp=Z,134nm,1.8s						
P48A				IAMs_20	IAMs_20	05 23 56.7	
	comp=Z,10µm,20.0s						
M52A	Chesterland	89.29	32	IAmb	IAmb	04 38 51.3	
	comp=Z,88nm,1.1s						
Z38A	Mt. Pleasant	89.31	46	IAmb	IAmb	04 38 37.2	
	comp=Z,62nm,1.1s						
W41B	Gary Mavity, V	89.33	43	P	P	04 38 19.3	-0.6
	baz=321						
BATG	Bathurst New B	89.34	20	P	P	04 38 19.4	-0.3
BATG				IAmb	IAmb	04 38 32.6	
	comp=Z,63nm,1.2s						
BATG				IAMs_20	IAMs_20	05 22 46.8	
	comp=Z,11µm,19.0s						
ERPA	Erie	89.36	31	P	P	04 38 19.3	-0.7
	baz=328						
L53A	Girard	89.39	31	P	P	04 38 19.3	-0.8
	baz=328,SNR=8.4						
N51A	Ashland	89.39	33	IAmb	IAmb	04 38 50.6	
	comp=Z,83nm,1.4s						
N51A				IAMs_20	IAMs_20	05 22 51.9	
	comp=Z,11µm,18.0s						
USIN	University of	89.43	38	IAMs_20	IAMs_20	05 22 50.3	
	comp=Z,7µm,20.0s						
PARMO	Parma	89.44	40	IAMs_20	IAMs_20	05 24 48.9	
	comp=Z,7µm,19.0s						
H59A	Cadyville	89.46	26	P	P	04 38 19.8	-0.6
	baz=332						
H58A	Gabriels	89.50	26	P	P	04 38 20.1	-0.5
	baz=332						
P49A	Miami Univ. Ec	89.52	35	P	P	04 38 20.7	-0.1
	baz=325						
P49A	Miami Univ. Ec	89.52	35	IAMs_20	IAMs_20	05 26 32.5	
	comp=Z,8µm,18.0s						
HENM	Henderson Moun	89.54	40	IAMs_20	IAMs_20	05 25 29.5	
	comp=Z,7µm,20.0s						
X40A	Basin Creek Fa	89.55	44	P	P	04 38 20.5	-0.5
	baz=320						
X40A	Basin Creek Fa	89.55	44	IAmb	IAmb	04 38 33.8	
	comp=Z,136nm,1.9s						
X40A				IAMs_20	IAMs_20	05 22 38.9	
	comp=Z,8µm,19.0s						
J56A	Wolcott	89.55	28	P	P	04 38 20.3	-0.6
	baz=330						
J56A	Wolcott	89.55	28	IAMs_20	IAMs_20	05 24 54.9	
	comp=Z,12µm,20.0s						
G61A	St-Isidore-de-	89.59	24	P	P	04 38 20.4	-0.6
	baz=334						
MMNY	Mt. Morris Dam	89.64	29	IAMs_20	IAMs_20	05 24 59.1	
	comp=Z,12µm,19.0s						
WVNY	West Valley, N	89.65	30	IAmb	IAmb	04 38 52.1	
	comp=Z,110nm,1.4s						
WVNY				IAMs_20	IAMs_20	05 22 55.5	
	comp=Z,13µm,19.0s						
M53A	WI Miller and	89.65	32	P	P	04 38 20.6	-0.8
	baz=328,SNR=6.0						
M53A	WI Miller and	89.65	32	IAmb	IAmb	04 38 52.9	
	comp=Z,152nm,1.5s						
PVMO	Portageville	89.67	40	IAMs_20	IAMs_20	05 24 54.8	
	comp=Z,11µm,19.0s						
PENMO	Penman	89.67	40	IAMs_20	IAMs_20	05 25 04.4	
	comp=Z,10µm,19.0s						
435B	Jarrell	89.69	49	IAMs_20	IAMs_20	05 21 23.0	
	comp=Z,7µm,20.0s						
ALLY	Alegheny Colle	89.69	31	IAMs_20	IAMs_20	05 22 26.7	
	comp=Z,13µm,20.0s						
ACSO	Alum Creek Sta	89.70	34	P	P	04 38 20.5	-1.1
	baz=326,SNR=6.4						
ACSO	Alum Creek Sta	89.70	34	IAMs_20	IAMs_20	05 25 00.2	
	comp=Z,12µm,20.0s						
T45A	Paducah	89.71	39	IAMs_20	IAMs_20	05 26 11.9	
	comp=Z,9µm,18.0s						
237A	Washetta, Mont	89.80	47	IAMs_20	IAMs_20	05 22 50.9	
	comp=Z,10µm,19.0s						
HICK	Hickman	89.80	40	IAMs_20	IAMs_20	05 25 54.3	
	comp=Z,8µm,18.0s						
PEBM	Pemiscott Bayo	89.82	41	IAMs_20	IAMs_20	05 24 42.9	
	comp=Z,9µm,18.0s						
HBAR	Harrisburg	89.86	41	IAMs_20	IAMs_20	05 18 21.9	
	comp=Z,10µm,20.0s						
GNAR	Gosnell	89.86	41	IAMs_20	IAMs_20	05 24 44.9	
	comp=Z,7µm,18.0s						
WCI	Wyandotte Cave	89.86	37	P	P	04 38 22.5	+0.1
	baz=324						
WCI	Wyandotte Cave	89.86	37	P	P	04 38 22.4	+0.1
WCI				pmax	pmax		
	comp=Z,32nm,0.9s						
WCI	Wyandotte Cave	89.86	37	P	P	04 38 22.4	0.0
I58A	Old Forge	89.87	27	P	P	04 38 22.3	-0.1
	baz=331						
NCB	Newcomb	89.88	26	IAMs_20	IAMs_20	05 23 19.3	
	comp=Z,13µm,19.0s						
K56A	Middlesex	89.88	29	P	P	04 38 22.4	0.0
	baz=330						
F63A	Nahmakanta, Br	89.95	22	P	P	04 38 21.7	-1.0
	baz=336						
GLAT	Glass	89.98	40	IAMs_20	IAMs_20	05 25 22.2	
	comp=Z,7µm,20.0s						
LPAR	Lepanto	90.00	41	IAMs_20	IAMs_20	05 18 25.7	
	comp=Z,8µm,21.0s						
M54A	Oil Creek Stat	90.00	31	P	P	04 38 23.0	0.0
	baz=328						
M54A	Oil Creek Stat	90.00	31	IAmb	IAmb	04 38 53.8	
	comp=Z,168nm,1.8s						
WLAR	White Oak Lake	90.01	44	IAmb	IAmb	04 38 53.3	
	comp=Z,143nm,1.5s						
WLAR				IAMs_20	IAMs_20	05 23 33.2	
	comp=Z,8µm,18.0s						
LNXT	Lenox	90.02	40	IAMs_20	IAMs_20	05 25 15.1	
	comp=Z,9µm,18.0s						
F64A	Sherman	90.02	22	P	P	04 38 22.0	-1.0
	baz=336						
VT1	Waterbury	90.05	25	IAMs_20	IAMs_20	05 25 04.1	
	comp=Z,13µm,20.0s						
N53A	Lisbon	90.12	32	IAmb	IAmb	04 38 55.1	
	comp=Z,140nm,1.4s						
N53A				IAMs_20	IAMs_20	05 25 45.2	
	comp=Z,11µm,19.0s						
H61A	Lyndonville	90.14	25	P	P	04 38 23.2	-0.4
	baz=334						
K57A	Scipio Center	90.15	28	P	P	04 38 22.5	-1.1
	baz=330						
J59A	Piesco	90.23	27	P	P	04 38 22.9	-1.2
	baz=332						
HALT	Halls	90.24	40	IAMs_20	IAMs_20	05 25 22.0	
	comp=Z,9µm,19.0s						
L56A	Greenwood	90.28	29	P	P	04 38 24.5	+0.1
	baz=330						
L56A	Greenwood	90.28	29	IAmb	IAmb	04 38 37.0	
	comp=Z,81nm,1.4s						
O52A	Adamsville	90.28	33	IAMs_20	IAMs_20	05 26 05.2	
	comp=Z,12µm,18.0s						
P51A	Williamsport	90.29	34	IAmb	IAmb	04 39 02.8	
	comp=Z,45nm,1.1s						
P51A				IAMs_20	IAMs_20	05 25 32.8	
	comp=Z,12µm,20.0s						
PKME	Peaks-Kenny Pk	90.29	23	P	P	04 38 22.3	-1.9
	baz=335						
I60A	Shoreham	90.31	26	P	P	04 38 24.3	0.0
	baz=333						
R49A	Shelbyville	90.33	36	IAMs_20	IAMs_20	05 24 41.9	
	comp=Z,11µm,19.0s						
N54A	Moraine State	90.33	31	P	P	04 38 24.4	-0.2
	baz=328						
H62A	Milan	90.35	24	P	P	04 38 24.3	-0.2
	baz=334						
M55A	Ridgway	90.39	30	IAmb	IAmb	04 38 55.8	
	comp=Z,138nm,1.4s						
O53A	New Philadelph	90.43	33	P	P	04 38 25.1	0.0
	baz=327						
O53A	New Philadelph	90.43	33	IAmb	IAmb	04 38 55.9	
	comp=Z,68nm,1.4s						
O53A				IAMs_20	IAMs_20	05 23 31.5	
	comp=Z,11µm,19.0s						
K58A	Earlville	90.44	28	P	P	04 38 24.8	-0.2
	baz=331						
K58A	Earlville	90.44	28	IAmb	IAmb	04 38 55.8	
	comp=Z,127nm,1.4s						
K58A				IAMs_20	IAMs_20	05 26 02.3	
	comp=Z,11µm,18.0s						
HDBT	Hernando Brdge	90.47	41	IAMs_20	IAMs_20	05 18 48.3	
	comp=Z,8µm,22.0s						
T47A	Sharon Grove	90.48	38	IAmb	IAmb	04 38 36.6	
	comp=Z,47nm,1.1s						
T47A				IAMs_20	IAMs_20	05 26 17.1	
	comp=Z,7µm,20.0s						
Q51A	Peebles	90.54	35	IAmb	IAmb	04 38 56.1	
	comp=Z,90nm,1.4s						
Q51A				IAMs_20	IAMs_20	05 25 45.5	
	comp=Z,10µm,18.0s						
CCAR	Cane Creek	90.55	43	IAMs_20	IAMs_20	05 21 15.3	
	comp=Z,10µm,19.0s						
P52A	Corning	90.56	34	P	P	04 38 25.3	-0.3
	baz=327						
P52A	Corning	90.56	34	IAMs_20	IAMs_20	05 25 30.0	
	comp=Z,12µm,18.0s						
ACCN	Adirondack Com	90.58	26	IAMs_20	IAMs_20	05 24 31.4	
	comp=Z,11µm,20.0s						
M56A	Emporium	90.60	30	P	P	04 38 26.2	+0.4
	baz=329						
M56A	Emporium	90.60	30	IAmb	IAmb	04 38 56.5	
	comp=Z,97nm,1.3s						
NATX	Nacogdoches	90.62	46	P	P	04 38 25.6	-0.5
NATX				IAmb	IAmb	04 38 53.1	
	comp=Z,60nm,1.4s						
NATX				IAMs_20	IAMs_20	05 27 18.7	
	comp=Z,10µm,18.0s						
L57A	Andrews Acres	90.66	29	P	P	04 38 25.7	-0.4
	baz=330						
K59A	Cooperstown	90.71	27	P	P	04 38 26.3	-0.1
	baz=332						
R50A	Paris	90.72	36	IAmb	IAmb	04 38 37.7	
	comp=Z,63nm,1.4s						
R50A				IAMs_20	IAMs_20	05 22 37.2	
	comp=Z,7µm,18.0s						
J60A	Lant Hill Farm	90.79	26	P	P	04 38 26.8	+0.2
	baz=332						
BINY	Binghamton	90.81	28	P	P	04 38 26.9	+0.1
	baz=331						
BINY	Binghamton	90.81	28	IAMs_20	IAMs_20	05 25 40.1	
	comp=Z,13µm,20.0s						
WVT	Waverly	90.81	39	P	P	04 38 27.4	+0.5
	baz=323						
WVT	Waverly	90.81	39	P	P	04 38 26.6	-0.3
WVT				pmax	pmax		
	comp=Z,27nm,1.1s						
WVT	Waverly	90.81	39	P	P	04 38 26.6	-0.3
WVT	Waverly	90.81	39	IAMs_20	IAMs_20	05 25 03.1	
	comp=Z,10µm,19.0s						
ATD	Arta Tunnel	90.82	286	P	P	04 38 27.7	+0.3
O54A	Avella	90.83	32	IAMs_20	IAMs_20	05 22 37.1	
	comp=Z,9µm,19.0s						
W45A	Hickory Valley	90.91	41	IAmb	IAmb	04 38 37.4	
	comp=Z,66nm,1.1s						
W45A				IAMs_20	IAMs_20	05 25 32.8	
	comp=Z,9µm,19.0s						
735A	Kenedy	90.97	50	IAMs_20	IAMs_20	05 25 41.2	
	comp=Z,7µm,19.0s						
L58A	Harry Jones Me	90.99	28	P	P	04 38 28.0	+0.3
	baz=331						
N56A	West Decatur	91.04	30	P	P	04 38 27.9	0.0
	baz=329						
GGN	Saint George	91.12	21	IAMs_20	IAMs_20	05 26 18.2	
	comp=Z,12µm,18.0s						
M57A	Sunshine Farm,	91.13	29	P	P	04 38 28.4	+0.2
	baz=330						
L59A	Walton	91.16	28	P	P	04 38 27.8	-0.7
	baz=331						
L59A	Walton	91.16	28	IAmb	IAmb	04 38 41.1	
	comp=Z,93nm,1.2s						
TRY	Troy	91.16	27	IAMs_20	IAMs_20	05 24 50.3	
	comp=Z,12µm,20.0s						
OXF	Oxford	91.31	41	P	P	04 38 29.7	+0.5
	baz=322						
OXF	Oxford	91.31	41	IAMs_20	IAMs_20	05 19 15.3	
	comp=Z,10µm,20.0s						
HKT	Hockley	91.31	48	IAMs_20	IAMs_20	05 22 33.8	
	comp=Z,8µm,21.0s						
J62A	Henniker	91.34	25	P	P	04 38 29.7	+0.5
	baz=334						
M58A	Price's Panora	91.35	29	P	P	04 38 29.5	+0.1
	baz=330						
K61A	Williamstown	91.35	26	P	P	04 38 29.4	+0.1
	baz=333						
Q53A	Leroy	91.47	34	P	P	04 38 28.8	-1.1
	baz=327						
U49A	Red Boiling Sp	91.49	38	IAmb	IAmb	04 38 40.3	
	comp=Z,73nm,1.5s						
U49A				IAMs_20	IAMs_20	05 26 58.8	
	comp=Z,10µm,18.0s						
O56A	Blue Knob Stat	91.49	31	P	P	04 38 29.0	-1.0
	baz=329						
MCWV	Mont Chateau	91.50	32	IAMs_20	IAMs_20	05 26 05.6	
	comp=Z,7µm,18.0s						
CLTN	Cedars of Leba	91.57	38	IAmb	IAmb	04 38 40.7	
	comp=Z,83nm,1.7s						
CLTN				IAMs_20	IAMs_20	05 27 23.9	
	comp=Z,11µm,19.0s						
S51A	Beattyville	91.57	36	IAMs_20	IAMs_20	05 23 37.9	
	comp=Z,8µm,20.0s						
PLAL	Pickwick Lake	91.61	40	IAmb	IAmb	04 38 40.2	
	comp=Z,113nm,2.0s						
PLAL				IAMs_20	IAMs_20	05 27 31.1	
	comp=Z,8µm,18.0s						
L61A	Hillsdale 1, H	91.68	27	P	P	04 38 31.1	+0.3
	baz=332						
143A	Socs Landing,	91.68	44	IAMs_20	IAMs_20	05 24 12.4	
	comp=Z,9µm,19.0s						
Y45A	Yeager Farm, C	91.75	42	IAMs_20	IAMs_20	05 26 08.0	
	comp=Z,7µm,20.0s						
N59A	State Game Lan	92.00	29	IAMs_20	IAMs_20	05 27 08.8	
	comp=Z,11µm,19.0s						
QUA2	Belchertown	92.01	26	IAMs_20	IAMs_20	05 25 57.8	

	comp=Z,12µm,19.0s						
TEND	Ethiopian Broa	92.01	287	*e*P	P	04 38 34.5	+1.7
TEND				*e*S	SKSac	04 49 14.1	+8.2
M60A	Port Jervis	92.06	28	P	P	04 38 32.7	+0.2
	baz=332						
KSCT	Kent School, K	92.11	27	IAMs_20	IAMs_20	05 25 00.6	
	comp=Z,13µm,20.0s						
342A	Flagon Creek P	92.21	45	IAMs_20	IAMs_20	05 25 18.5	
	comp=Z,9µm,20.0s						
441A	DeRidder	92.21	46	IAMs_20	IAMs_20	05 24 28.6	
	comp=Z,8µm,18.0s						
Q56A	Snyder Ridge,	92.29	32	IAMs_20	IAMs_20	05 24 11.6	
	comp=Z,13µm,20.0s						
O59A	Robesonia	92.38	29	P	P	04 38 33.8	-0.2
	baz=331						
P57A	Homestead Farm	92.38	31	P	P	04 38 34.1	0.0
	baz=329						
ZAIG	Zacatecas	92.39	58	P	P	04 38 35.8	+1.0
ZAIG				IAMs_20	IAMs_20	05 17 17.3	
	comp=Z,6µm,20.0s						
MAHO	Mahon	92.41	330	P	P	04 38 32.3	-1.9
MAHO				S	SKSac	04 49 06.9	-0.4
S54A	Dingess, Beckl	92.44	34	IAMs_20	IAMs_20	05 27 39.9	
	comp=Z,9µm,19.0s						
SWET	Sewanee	92.46	39	IAMs_20	IAMs_20	05 27 09.7	
	comp=Z,9µm,20.0s						
UCCT	U. Connecticut	92.48	26	IAMs_20	IAMs_20	05 26 30.3	
	comp=Z,11µm,20.0s						
VBMS	Vicksburg	92.53	43	IAMs_20	IAMs_20	05 22 36.8	
	comp=Z,6µm,20.0s						
X48A	Hartselle	92.54	40	IAMs_20	IAMs_20	05 23 21.8	
	comp=Z,7µm,19.0s						
WSPT	Westport, CT	92.66	27	IAMs_20	IAMs_20	05 26 19.0	
	comp=Z,11µm,20.0s						
V51A	Loudon	92.73	37	IAMs_20	IAMs_20	05 26 00.1	
	comp=Z,12µm,19.0s						
W50A	Signal Mountai	92.77	38	IAMs_20	IAMs_20	05 28 26.9	
	comp=Z,12µm,18.0s						
M63A	Gales Ferry	92.89	26	IAMs_20	IAMs_20	05 26 34.1	
	comp=Z,12µm,19.0s						
SDMD	Soldier's Deli	92.91	30	IAMs_20	IAMs_20	05 27 22.8	
	comp=Z,7µm,20.0s						
WUPA	West Chester U	92.92	29	IAMs_20	IAMs_20	05 27 40.4	
	comp=Z,7µm,19.0s						
CPCT	Cooper Cave	92.94	38	IAMs_20	IAMs_20	05 26 09.3	
	comp=Z,10µm,20.0s						
146A	Union	92.96	42	IAMs_20	IAMs_20	05 27 09.2	
	comp=Z,10µm,20.0s						
P60A	Greenville	93.02	29	P	P	04 38 34.9	-2.1
	baz=331						
Z47A	Carrollton	93.02	41	IAmb	IAmb	04 38 54.1	
	comp=Z,33nm,1.1s						
Z47A				IAMs_20	IAMs_20	05 26 07.8	
	comp=Z,8µm,20.0s						
V52A	Sevierville	93.05	37	IAMs_20	IAMs_20	05 19 11.1	
	comp=Z,9µm,18.0s						
TKL	Tuckaleechee C	93.12	37	IAmb	IAmb	04 38 47.5	
	comp=Z,119nm,1.9s						
TKL				IAMs_20	IAMs_20	05 21 27.0	
	comp=Z,10µm,18.0s						
FPAL	Fort Paine	93.17	39	IAMs_20	IAMs_20	05 21 47.3	
	comp=Z,8µm,18.0s						
BLA	Blacksburg	93.32	34	IAMs_20	IAMs_20	05 25 07.1	
	comp=Z,10µm,20.0s						
Y49A	Blount Mountai	93.33	40	IAMs_20	IAMs_20	05 28 13.6	
	comp=Z,10µm,19.0s						
DESE	Dese	93.46	287	*e*P	P	04 38 36.6	-3.2
DESE				*e*S	SKSac	04 49 11.7	-2.9
S57A	Dark Hollow, R	93.47	32	IAMs_20	IAMs_20	05 24 52.0	
	comp=Z,13µm,20.0s						
X51A	Calhoun	93.51	38	IAMs_20	IAMs_20	05 23 29.3	
	comp=Z,7µm,20.0s						
W52A	Murphy	93.51	37	IAMs_20	IAMs_20	05 26 26.4	
	comp=Z,10µm,18.0s						
V53A	Saluda	93.55	36	IAMs_20	IAMs_20	05 24 59.4	
	comp=Z,10µm,20.0s						
LRAL	Lakeview Retre	93.70	41	IAMs_20	IAMs_20	05 28 59.5	
	comp=Z,10µm,18.0s						
346A	Big Creek Wild	93.73	43	IAMs_20	IAMs_20	05 23 05.7	
	comp=Z,6µm,20.0s						
KEST	Kesra	93.82	324	PP	PP	04 42 30.8	+5.3
	comp=Z,17nm,1.1s,baz=257,slow=7.8,SNR=4.2						
KEST				LR	LR	05 26 17.6	
	comp=Z,28µm,18.4s,baz=320,slow=39						
T57A	Hurt	94.00	33	IAMs_20	IAMs_20	05 29 36.9	
	comp=Z,10µm,19.0s						
BG3	Lake Jocassee	94.06	37	IAMs_20	IAMs_20	05 26 50.8	
	comp=Z,8µm,18.0s						
U56A	King	94.07	34	IAMs_20	IAMs_20	05 25 54.8	
	comp=Z,10µm,20.0s						
Z51A	Franklin	94.37	39	IAMs_20	IAMs_20	05 27 28.2	
	comp=Z,7µm,18.0s						
ANKE	Ethiopia-Afar	94.39	286	*e*P	P	04 38 43.7	-0.6
ANKE				*e*S	SKSac	04 49 12.9	-6.9
PBRG	Braganca	94.41	338	*e*P	P	04 38 43.2	-0.2
	comp=Z,50nm,1.8s						
KMSC	Kings Mountain	94.66	36	IAMs_20	IAMs_20	05 28 39.6	
	comp=Z,12µm,19.0s						
PGAV	Gavieira, Arco	94.69	339	*e*S	S	04 50 02.8	+5.1
PGAV	Gavieira, Arco	94.69	339	*e*LQ	LQ	05 09 09.4	
PGAV				*e*LR	LR	05 13 30.1	
	comp=Z,10µm,18.0s						
UCM	Universidad Co	94.71	335	P	P	04 38 40.2	-4.7
UCM				S	SKSac	04 49 13.7	-6.4
250A	Grady	94.91	41	IAMs_20	IAMs_20	05 27 32.7	
	comp=Z,9µm,19.0s						
HODGE	Hodges	95.00	37	P	P	04 38 46.4	+0.2
HODGE				IAmb	IAmb	04 39 23.5	
	comp=Z,91nm,1.9s						
V58A	Windy Hill, Pi	95.08	34	IAMs_20	IAMs_20	05 26 23.6	
	comp=Z,11µm,19.0s						
MVO	Moncorvo	95.08	338	*e*P	P	04 38 47.0	+0.4
	comp=Z,41nm,1.7s						
MVO	Moncorvo	95.08	338	A	A	05 28 05.3	
	comp=Z,19µm,18.0s						
MVO				*e*S	SKSac	04 49 28.8	+6.7
POLO	Lamas de Olo	95.11	339	*e*P	P	04 38 46.8	+0.1
	comp=Z,25nm,1.9s						
GOGA	Godfrey	95.11	38	IAMs_20	IAMs_20	05 28 32.8	
	comp=Z,10µm,18.0s						
152A	Waverly Hall	95.12	39	IAMs_20	IAMs_20	05 28 08.0	
	comp=Z,7µm,18.0s						
BRAL	Brewton	95.16	42	IAMs_20	IAMs_20	05 28 03.4	
	comp=Z,8µm,20.0s						
JSC	Jenkinsville	95.41	36	IAMs_20	IAMs_20	05 29 05.5	
	comp=Z,8µm,20.0s						
BIRD	Birdtown, Kers	95.47	35	IAMs_20	IAMs_20	05 26 33.9	
	comp=Z,10µm,20.0s						
ESDC	Sonseca Array	95.52	335	P	P	04 38 48.5	-0.1
	comp=Z,2.2nm,0.8s,baz=27,slow=3.9,SNR=16						
ESDC				PP	PP	04 42 42.5	+4.1
	comp=Z,5.3nm,1.0s,baz=19,slow=6.3,SNR=4.9						
ESDC				LR	LR	05 28 20.2	
	comp=Z,21µm,18.1s,baz=25,slow=40						
FURI	Furi	95.63	286	P	P	04 38 50.0	+0.2
FURI	Furi	95.63	286	IAMs_20	IAMs_20	05 26 57.2	
	comp=Z,9µm,19.0s						
MTE	Manteigas	95.94	338	*e*P	P	04 38 50.3	-0.2
MTE	Manteigas	95.94	338	*e*S	SKSac	04 49 33.4	+6.8
MTE	Manteigas	95.94	338	*e*LR	LR	05 15 44.1	
	comp=Z,14µm,16.0s						
154A	Montrose	95.94	38	IAMs_20	IAMs_20	05 26 08.7	
	comp=Z,10µm,19.0s						
352A	Blakely	95.98	40	IAMs_20	IAMs_20	05 27 13.0	
	comp=Z,8µm,18.0s						
Y57A	Sumter	96.02	35	IAMs_20	IAMs_20	05 21 24.7	
	comp=Z,10µm,19.0s						
X58A	Rowland	96.03	34	IAMs_20	IAMs_20	05 20 49.9	
	comp=Z,10µm,20.0s						
V61A	Roper	96.14	32	IAMs_20	IAMs_20	05 26 33.5	
	comp=Z,12µm,20.0s						
CART	Cartagena	96.40	332	P	P	04 38 42.6	-10
CART				S	SKSac	04 49 31.6	+2.6
TIGA	Tifton	96.67	39	IAMs_20	IAMs_20	05 28 34.2	
	comp=Z,9µm,18.0s						
Y59A	Loris	96.72	34	IAMs_20	IAMs_20	05 21 10.0	
	comp=Z,9µm,21.0s						
PMRV	Marv??o	96.79	338	*e*S	SKSac	04 49 42.9	+12
PMRV	Marv??o	96.79	338	*e*LQ	LQ	05 09 07.6	
PMRV				*e*LR	LR	05 16 20.9	
	comp=Z,12µm,18.0s						
NHSC	New Hope	96.89	36	IAMs_20	IAMs_20	05 27 17.6	
	comp=Z,11µm,20.0s						
Y60A	Bolivia	96.99	34	IAMs_20	IAMs_20	05 24 57.1	
	comp=Z,10µm,21.0s						
UNM	Universidad Na	97.05	58	IAMs_20	IAMs_20	05 26 01.8	
	comp=Z,6µm,19.0s						
553A	Crawfordville	97.28	40	IAMs_20	IAMs_20	05 31 04.3	
	comp=Z,9µm,18.0s						
PESTR	Estremoz	97.37	338	IAMs_20	IAMs_20	05 28 21.8	
	comp=Z,7µm,19.0s						
LIS	Lisbon	97.96	339	*e*PP	PP	04 42 58.3	+1.2
LIS				*e*SS	SS	04 57 08.8	+3.5
LIS				AMS	AMS	05 23 18.4	
	comp=E,22µm,17.8s						
RKT	Rikitea	98.23	113	*e*PP	PP	04 42 56.6	-4.2
	comp=E,449nm,26.2s						
RKT				*e*SKSac	SKSac	04 49 37.5	-0.9
	comp=E,5µm,26.2s						
RKT	Rikitea	98.23	113	*e*PS	PS	04 51 53.7	-0.3
	comp=E,6µm,30.0s						
RKT				*e*SS	SS	04 57 13.9	+1.8
	comp=E,4µm,26.8s						
RKT	Rikitea	98.23	113	*e*LR	LR	05 10 42.2	
	comp=E,11µm,22.8s						
EMAL	Malaga-Limoner	98.32	335	P	P	04 38 49.8	-11
EMAL				S	SKSac	04 49 38.2	-0.6
MESJ	Messejana	98.51	338	*e*PP	PP	04 43 02.4	+1.1
MESJ				*e*SS	SS	04 57 16.5	+3.4
MESJ				AMS	AMS	05 22 20.1	
	comp=N,17µm,20.8s						
TLIG	Tlapa	98.72	59	IAMs_20	IAMs_20	05 30 43.2	
	comp=Z,9µm,18.0s						
PVAQ	Vaqueiros	98.76	337	*e*S	SKSac	04 49 49.9	+8.8
PVAQ	Vaqueiros	98.76	337	*e*LR	LR	05 19 58.9	
	comp=Z,24µm,18.0s						
656A	Willston	98.89	40	IAMs_20	IAMs_20	05 32 05.9	
	comp=Z,9µm,18.0s						
MORF	Marmelete	99.13	338	*e*PP	PP	04 43 07.2	+1.0
MORF				*e*SKSac	SKSac	04 49 42.8	-0.2
MORF				*e*SS	SS	04 57 25.3	+3.4
MORF				AMS	AMS	05 24 27.7	
	comp=E,21µm,22.0s						
SFS	San Fernando	99.16	336	P	Pdif	04 39 09.9	+4.9
SFS				S	SKSac	04 49 44.5	+1.4
IFR	Ifrane	101.51	334	P	Pdif	04 39 20.3	+4.6
IFR				S	SKSac	04 49 57.6	+2.4
060A	Indiantown	101.89	39	IAMs_20	IAMs_20	05 30 35.3	
	comp=Z,10µm,21.0s						
CMLA	Cha da Macela	102.15	351	IAMs_20	IAMs_20	05 28 57.0	
	comp=Z,8µm,20.0s						
AVE	Averroes	102.46	335	P	Pdif	04 39 22.4	+2.6
AVE				S	SKSac	04 50 00.1	+0.8
061Z	Ochoppi	102.59	40	IAMs_20	IAMs_20	05 32 10.1	
	comp=Z,9µm,20.0s						
PTCN	Pitcairn Islan	102.92	112	IAMs_20	IAMs_20	05 21 35.4	
	comp=Z,7µm,19.0s						
TEIG	Tepich	103.13	49	IAMs_20	IAMs_20	05 34 51.2	
	comp=Z,7µm,19.0s						
KMBO	Kilima Mbogo	103.26	280	Pdiff	Pdif	04 39 23.6	-0.2
	comp=Z,1.3nm,0.3s,baz=30,slow=7.0,SNR=6.8						
KMBO				PP	PP	04 43 39.0	0.0
	comp=Z,1.6nm,0.4s,baz=8.4,slow=3.9,SNR=5.7						
BBSR	BB Station	103.53	24	IAMs_20	IAMs_20	05 31 59.5	
	comp=Z,6µm,19.0s						
CCIG	Comitan	103.80	55	IAMs_20	IAMs_20	05 34 16.5	
	comp=Z,5µm,19.0s						
PETF	Flores	104.73	53	IAMs_20	IAMs_20	05 30 43.9	
	comp=Z,4µm,19.0s						
PMOZ	Porto Moniz, M	105.57	343	A	A	05 28 58.8	
	comp=Z,6µm,20.0s						
ABPO	Ambohimpanom	106.72	259	IAMs_20	IAMs_20	05 28 12.4	
	comp=Z,8µm,18.0s						
ESQI	Esquipulas	106.85	54	IAMs_20	IAMs_20	05 36 54.2	
	comp=Z,5µm,20.0s						
MBAR	Mbarara	107.82	285	IAMs_20	IAMs_20	05 32 24.4	
	comp=Z,7µm,21.0s						
TGUH	Tegucigalpa,Un	108.52	53	IAMs_20	IAMs_20	05 38 44.2	
	comp=Z,5µm,20.0s						
PAF	Port-aux-Franc	109.80	222	IAMs_20	IAMs_20	05 30 07.9	
	comp=Z,5µm,19.0s						
GTBY	Guantanamo Bay	110.44	39	IAMs_20	IAMs_20	05 32 34.0	
	comp=Z,9µm,19.0s						
MTDJ	Mount Denham	110.67	42	IAMs_20	IAMs_20	05 33 37.1	
	comp=Z,9µm,20.0s						
ESPN	Las Esperanzas	111.77	51	IAMs_20	IAMs_20	05 39 29.2	
	comp=Z,6µm,20.0s						
JTS	Las Juntas de	112.85	53	IAMs_20	IAMs_20	05 38 43.2	
	comp=Z,5µm,21.0s						
HDC	Heredia	113.59	53	IAMs_20	IAMs_20	05 43 05.8	
	comp=Z,5µm,21.0s						
SJG	San Juan	116.03	32	IAMs_20	IAMs_20	05 41 00.2	
	comp=Z,6µm,19.0s						
TOA0	Torodi Ar. Sit	116.51	318		PKPdf	04 44 07.3	-0.6
TORD	Torodi Ar. Bea	116.51	318	PKP	PKPdf	04 44 06.9	-1.0
	comp=Z,1.5nm,0.6s,baz=23,slow=1.7,SNR=14						
TORD				PP	PP	04 45 12.6	-1.3
	comp=Z,9.0nm,0.9s,baz=29,slow=6.4,SNR=9.7						
BCIP	Isla Barro Col	116.81	50	IAMs_20	IAMs_20	05 42 10.9	
	comp=Z,4µm,20.0s						
PAYG	Puerto Ayora	117.46	66	IAMs_20	IAMs_20	05 37 06.7	
	comp=Z,5µm,18.0s						
SEUS	St. Eustatius	117.82	29	IAMs_20	IAMs_20	05 37 18.4	
	comp=Z,8µm,21.0s						
SKI	Saint Kitts	118.06	29	IAMs_20	IAMs_20	05 38 40.6	
	comp=Z,6µm,21.0s						
ANWB	Willy Bob	118.09	28	IAMs_20	IAMs_20	05 36 12.6	
	comp=Z,5µm,21.0s						
LSZ	Lusaka	119.09	274	IAMs_20	IAMs_20	05 37 57.9	
	comp=Z,6µm,20.0s						
RPN	Rapa Nui	119.38	102	IAMs_20	IAMs_20	05 30 47.4	
	comp=Z,7µm,19.0s						
DLPL	La Plaine	120.44	28	IAMs_20	IAMs_20	05 36 11.8	
	comp=Z,8µm,22.0s						
FDF	Fort de France	121.03	28	IAMs_20	IAMs_20	05 40 04.5	
	comp=Z,6µm,20.0s						
MCLT	Moule a Chique	122.05	28	IAMs_20	IAMs_20	05 39 42.3	
	comp=Z,7µm,22.0s						
SDV	Santo Domingo	122.09	41		PKPdf	04 44 18.2	-0.7
SDV	Santo Domingo	122.09	41	IAMs_20	IAMs_20	05 44 01.7	
	comp=Z,7µm,20.0s						
SDV	Santo Domingo	122.09	41	*e*P	PKPdf	04 44 18.9	0.0
SVB	Belmont	122.33	29	IAMs_20	IAMs_20	05 37 11.1	
	comp=Z,5µm,21.0s						
GRGR	Grenville	123.22	30	IAMs_20	IAMs_20	05 38 06.8	
	comp=Z,6µm,22.0s						
ROSC	El Rosal	123.49	47	PKIKP	PKPdf	04 44 21.1	-0.8
ROSC	El Rosal	123.49	47	PKPdf	PKPdf	04 44 21.1	-0.8
ROSC				IAMs_20	IAMs_20	05 48 23.5	
	comp=Z,6µm,19.0s						
SACV	Santiago Islan	124.21	345	IAMs_20	IAMs_20	05 41 55.3	
	comp=Z,5µm,19.0s						
OTAV	Otavalo	124.69	55	PKIKP	PKPdf	04 44 23.9	-0.3
OTAV	Otavalo	124.69	55	PKPdf	PKPdf	04 44 23.9	-0.3
OTAV	Otavalo	124.69	55	IAMs_20	IAMs_20	05 46 16.1	
	comp=Z,4µm,19.0s						
DBIC	Dimbokro	125.35	320	PKP	PKPdf	04 44 24.7	-0.2
	comp=Z,6.9nm,0.9s,baz=84,slow=5.0,SNR=5.7						
DBIC	Dimbokro	125.35	320	PKPdf	PKPdf	04 44 23.7	-1.2
TIC	Toumodi	125.45	321	*e*PKIKP	PKPdf	04 44 24.8	-0.3
KIC	Kosan Boka	125.56	320	*e*PKIKP	PKPdf	04 44 25.0	-0.3
	comp=Z,9.2nm,0.9s						
LIC	Lamto	125.81	320	*e*PKIKP	PKPdf	04 44 25.2	-0.6
	comp=Z,31nm,1.1s						
LBTB	Lobatse	126.62	266	PKIKP	PKPdf	04 44 27.1	0.0
LBTB	Lobatse	126.62	266		PKPdf	04 44 27.1	0.0
BOSA	Boshof	128.72	263	PKP	PKPdf	04 44 30.6	-0.4
	comp=Z,5.3nm,1.0s,baz=149,slow=4.4,SNR=4.0						
TSUM	Tsumeb	129.54	278	PKPdf	PKPdf	04 44 32.9	+0.1
TSUM	Tsumeb	129.54	278	IAMs_20	IAMs_20	05 53 21.5	
	comp=Z,5µm,19.0s						
QSPA	South Pole Qui	129.56	180		PKiKP	04 44 31.7	-0.4
QSPA	South Pole Qui	129.56	180	IAMs_20	IAMs_20	05 38 20.8	
	comp=Z,6µm,22.0s						
SUR	Sutherland	133.87	261	IAMs_20	IAMs_20	05 41 03.6	
	comp=Z,5µm,22.0s						
NNA	Nana	134.83	64	IAMs_20	IAMs_20	05 53 56.8	
	comp=Z,6µm,19.0s						
PTGA	Pitinga	135.55	35	IAMs_20	IAMs_20	05 49 35.9	
	comp=Z,5µm,20.0s						
PTGA	Pitinga	135.55	35	*e*P	PKiKP	04 44 46.0	+0.2
MACA	Manacapuru-AM	137.38	37	*e*P	PKiKP	04 44 48.7	-0.8
MCPB	Macapa, AP	138.20	24	*e*P	PKiKP	04 44 50.6	-0.6
NVL	N'lazarevskaya	140.52	203	*e*PKIKP	PKPdf	04 44 48.9	-2.6
NVL				*e*SS	SS	05 06 11.9	-3.3
NVL				MLR	MLR		
	comp=Z,3µm,17.0s						
ITTB	Itaituba	140.61	31	*e*P	PKPdf	04 44 53.8	+0.2
SAML	Samuel	141.06	45	PKIKP	PKPdf	04 44 54.7	+0.4
SAML	Samuel	141.06	45		PKPdf	04 44 54.7	+0.4
SAML	Samuel	141.06	45	IAMs_20	IAMs_20	05 50 21.3	
	comp=Z,5µm,22.0s						
TMAB	Tom-Au,PA,Br	141.24	19	*e*P	PKiKP	04 44 56.6	-0.7
BELA	Belgrano 2	141.83	181	PKPdf	PKPdf	04 44 54.7	+0.9
NPGB	Novo Progresso	143.19	33	*e*P	PKPdf	04 44 59.3	+1.2
NBMO	Morrinhos-CE	143.51	6	*e*P	PKPdf	04 45 00.3	+1.6
AP01	Chacalluta	143.75	64	IAMs_20	IAMs_20	05 36 48.2	
	comp=Z,5µm,22.0s						
SNAA	Sanae	143.91	197	PKPdf	PKPab	04 44 54.1	-0.8
SNAA	Sanae	143.91	197	PKIKP	PKPbc	04 44 55.8	+0.3
SNAA				MLR	MLR		
	comp=Z,4µm,20.0s						
SNAA	Sanae	143.91	197	PKPdf	PKPbc	04 44 55.8	+0.3
SNAA				IAMs_20	IAMs_20	05 48 33.2	
	comp=Z,4µm,20.0s						
SHEL	Horse Pasture	144.26	303	IAMs_20	IAMs_20	05 55 10.8	
	comp=Z,6µm,21.0s						
PB16	IPOC Station P	144.30	63	*e*P	PKPdf	04 45 00.3	-0.3
PSGCX	Pisagua	144.73	65	*e*P	PKPdf	04 45 01.3	+0.6
PSGCX	Pisagua	144.73	65	IAMs_20	IAMs_20	05 42 18.3	
	comp=Z,6µm,19.0s						
MNMC	Minye Minye	144.79	64	IAMs_20	IAMs_20	06 00 53.6	
	comp=Z,5µm,19.0s						
TA01	Diego Aracena	145.33	66	*e*P	PKPdf	04 45 02.5	+0.9
TA01	Diego Aracena	145.33	66	IAMs_20	IAMs_20	06 02 16.3	
	comp=Z,5µm,20.0s						
VNA2	Neumayer--Watz	145.47	196	PKPdf	PKPdf	04 44 59.8	-0.6
	baz=109,slow=3.3						
PATCX	Punta Patache	145.52	67	IAMs_20	IAMs_20	05 57 21.3	
	comp=Z,5µm,19.0s						
VA04	Juan Fernndez	145.67	93	IAMs_20	IAMs_20	05 39 00.7	
	comp=Z,5µm,21.0s						
VNA3	Neumayer Olymp	145.70	195	PKPdf	PKPdf	04 45 00.3	-0.4
PB08	IPOC Station P	145.77	65	*e*P	PKPbc	04 45 03.2	-0.1
PB08	IPOC Station P	145.77	65	IAMs_20	IAMs_20	06 00 59.8	
	comp=Z,5µm,19.0s						
VNA1	Neumayer--Stat	145.87	196	PKPdf	PKPdf	04 44 59.8	-1.1
VILB	Vilhena	145.99	45	*e*P	PKPbc	04 45 03.9	+0.2
NBPA	Parau_RN	146.08	1	*e*P	PKPab	04 45 04.2	-0.2
PB01	IPOC Station P	146.13	66	IAMs_20	IAMs_20	05 52 21.6	
	comp=Z,5µm,19.0s						
RCBR	Riachuelo	146.16	359	PKP2	PKPdf	04 45 03.7	+0.4
RCBR	Riachuelo	146.16	359	PKPbc	PKPdf	04 45 03.6	+0.4
RCBR	Riachuelo	146.16	359	IAMs_20	IAMs_20	05 53 28.8	
	comp=Z,5µm,20.0s						
RCBR	Riachuelo	146.16	359	*e*P	PKPbc	04 45 04.4	+0.2
PB07	IPOC Station P	146.29	68	IAMs_20	IAMs_20	05 58 09.9	
	comp=Z,5µm,19.0s						
PB04	IPOC Station P	146.49	69	IAMs_20	IAMs_20	05 41 38.2	
	comp=Z,5µm,20.0s						
PB09	IPOC Station P	146.80	67	IAMs_20	IAMs_20	05 58 29.2	
	comp=Z,5µm,20.0s						
PB10	IPOC Station P	146.93	71	*e*P	PKiKP	04 45 11.6	+2.8
PB06	IPOC Station P	147.14	69	IAMs_20	IAMs_20	05 42 35.4	
	comp=Z,5µm,20.0s						
PB15	IPOC Station P	147.52	69	IAMs_20	IAMs_20	05 40 12.6	
	comp=Z,6µm,20.0s						
LVC	Limon Verde	147.55	68	PKP2	PKPbc	04 45 09.3	+0.9
LVC	Limon Verde	147.55	68		PKPbc	04 45 09.3	+0.9
LVC	Limon Verde	147.55	68	IAMs_20	IAMs_20	05 47 30.3	
	comp=Z,5µm,18.0s						
LVC	Limon Verde	147.55	68	*e*P	PKPbc	04 45 07.2	-1.3
SMTB	Santa Maria do	147.59	21	*e*P	PKPbc	04 45 08.1	-0.1
NBLI	Livramento-PB	147.68	1	*e*P	PKPbc	04 45 07.8	-0.9
GO02	Mina Guanaco	148.61	72	*e*P	PKPab	04 45 15.2	+0.5
NBRF	Rio Formoso -	148.97	358	*e*P	PKPbc	04 45 10.3	-1.6
SNDB	Serra Nova Dou	149.29	30	*e*P	PKPdf	04 45 09.5	+1.1
GO03	Copiap	149.49	77	*e*P	PKPab	04 45 16.7	-1.2
PMSA	Palmer Station	150.30	156	IAMs_20	IAMs_20	06 02 47.7	
	comp=Z,5µm,19.0s						
PMSA	Palmer Station	150.30	156	*e*P	PKPbc	04 45 13.2	-0.4
GO04	Tololo Observa	150.36	82	*e*P	PKPab	04 45 20.0	-1.7
GO04	Tololo Observa	150.36	82	IAMs_20	IAMs_20	05 41 05.6	
	comp=Z,6µm,20.0s						
PEXB	Peixe	150.45	24	*e*P	PKPdf	04 45 11.8	+1.6
CO02	Combarbal	150.69	84	*e*P	PKiKP	04 45 16.9	+0.4
CO02	Combarbal	150.69	84	IAMs_20	IAMs_20	05 40 05.2	
	comp=Z,6µm,21.0s						
CO01	Juntas del Tor	150.81	81		PKiKP	04 45 17.6	+0.7
CO01				IAMs_20	IAMs_20	05 40 23.3	
	comp=Z,5µm,20.0s						
AROD	Rodeo	151.37	81	*e*P	PKPbc	04 45 16.9	-0.8
VCA	Vinchina	151.62	77	*e*P	PKiKP	04 45 19.4	+0.9
SDBA	SAO DESIDERIO	151.68	18	*e*P	PKPdf	04 45 15.0	+2.8
VA03	San Esteban	151.70	86	IAMs_20	IAMs_20	05 41 55.1	
	comp=Z,6µm,21.0s						
PEL	Peldehue	151.75	87	IAMs_20	IAMs_20	05 42 05.6	
	comp=Z,5µm,20.0s						
AGUA	GUANDACOL	151.78	79	*i* P	PKiKP	04 45 19.4	+0.6
ACCO	Cerro Coronel	151.88	81	*e*P	PKiKP	04 45 19.2	0.0
BO02	Sierra Bellavi	152.29	91	IAMs_20	IAMs_20	05 59 24.9	
	comp=Z,5µm,18.0s						
AUSP	Uspallata	152.37	84	*e*P	PKiKP	04 45 20.8	+0.7
LMEL	Las Melosas	152.39	88	*e*P	PKPab	04 45 29.3	-0.6
ARAG	Araguaiana, MT	152.46	34	*e*P	PKPdf	04 45 15.3	+2.1
BI02	San Fabin de	152.52	95		PKPbc	04 45 19.6	-0.2
ZON	Zonda	152.61	83	PKIKP	PKPbc	04 45 20.1	0.0
ZON	Zonda	152.61	83		PKPbc	04 45 20.1	0.0
ZON				IAMs_20	IAMs_20	05 41 19.1	
	comp=Z,5µm,20.0s						
LC01	Cunco	152.65	100		PKPbc	04 45 19.2	-0.7
LC01				IAMs_20	IAMs_20	05 53 55.4	
	comp=Z,5µm,18.0s						
RTCV	Cerro Valdivia	152.86	83	*e*P	PKiKP	04 45 21.8	+1.0
ACLC	CERRO LA CRUZ	152.91	77	*e*P	PKiKP	04 45 21.4	+0.2
AVFE	Valle Fertil	153.14	80	*e*P	PKiKP	04 45 22.2	+0.7
GDU01	Guandu, BA	153.85	7	*e*P	PKPdf	04 45 17.1	+1.8
PLCA	Paso Flores	154.01	103	PKPbc	PKiKP	04 45 23.2	+0.3
	comp=Z,4.6nm,1.0s,baz=267,slow=4.9,SNR=6.0						
PLCA				PKPab	PKPab	04 45 35.8	-0.7
	comp=Z,8.1nm,1.0s,baz=247,slow=4.0,SNR=8.3						
PLCA	Paso Flores	154.01	103	*e*P	PKPdf	04 45 16.4	+1.5
JANB	Januaria	154.37	18	*e*P	PKPdf	04 45 16.5	+0.5
AQDB	Aquidauana	154.59	46	*e*P	PKPdf	04 45 17.3	+1.2
IPMB	Ipameri, GO	155.95	29	*e*P	PKPdf	04 45 21.1	+3.0
ITRB	Iturama	156.63	35	*e*P	PKPdf	04 45 22.5	+3.5
PCMB	Pacaembu	157.85	39	*e*P	PKPdf	04 45 23.9	+3.4
NAN01	Guarapari, ES	157.86	9	*e*P	PKPdf	04 45 21.6	+1.1
CPUP	Villa Florida	157.96	59	PKPab	PKPab	04 45 53.4	-0.1
	comp=Z,4.5nm,0.9s,baz=352,slow=4.0,SNR=4.9						
CPUP	Villa Florida	157.96	59	*e*P	PKPdf	04 45 22.9	+2.5
TRCB	Terra Rica	158.13	44	*e*P	PKPdf	04 45 24.0	+3.2
BSFB	Barra de Sao F	158.73	12	*e*P	PKPdf	04 45 25.2	+3.7
RIB01	Linhares ES	159.27	11	*e*P	PKPdf	04 45 25.4	+3.2
BSCB	Bom Sucesso	159.91	23	*e*P	PKPdf	04 45 24.8	+1.8
FRTB	Fartura	160.14	38	*e*P	PKPdf	04 45 25.7	+2.6
ITAB	Concordia	161.87	51	*e*P	PKPdf	04 45 28.6	+3.8
PET01	Itanhaem-SP	162.00	34	*e*P	PKPdf	04 45 27.1	+2.0
LPA	La Plata	162.20	81	*e*PKIKP	PKPdf	04 45 15.2	-10

IDC ***20*** *04:38:48.4±1.5, 16°.38S×168°.45E, $h0^{km}$, mb3.7/4, mb1 4.1/5, mb1mx3.7/34, mbtmp3.8/5, ML4.1/1, Error ellipse: s-maj=59.1km s-min=27.7km az=139.0*

NOU ***20*** *04:38:49.6, 16°.47S×168°.25E, $h0^{km}$, MLv4.7, Vanuatu Islands*

ISC 20 04:38:53.2±1.1**, 16°.44S**±0°.07×**168°.3E**±0°.1**, $h35^{km}$, n13, $\sigma 1^{s}.21$**/14**, mb3.6**/4**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	Devils Point	1.28	187	P	Pn	04 39 12.6	-2.1
SANVU	Saraoutou	1.48	312	P	Pn	04 39 15.5	-1.8
LIFNC	LIFOU	4.44	193	P	Pn	04 39 57.0	-1.0
KOUNC	Koumac, New Ca	5.61	223	P	Pn	04 40 13.5	-0.7
YATNC	Mamie plateau,	5.75	194	P	Pn	04 40 15.5	-0.7
DZM	Mont Dzumac	5.88	197	Pn	Pn	04 40 17.3	-0.6
	5.1nm,0.3s,baz=77,slow=4.8,SNR=48						
DZM				Sn	Sn	04 41 23.5	-0.7
	3.3nm,0.3s,baz=330,slow=21,SNR=7.8						
DZM	Mont Dzumac	5.88	197	P	Pn	04 40 17.1	-0.9
ONTNC	Ouen Toro	6.10	197	P	Pn	04 40 20.5	-0.4
OUENC	Ouen Island, N	6.11	193	P	Pn	04 40 21.1	0.0
WRA	Warramunga Arr	32.46	259	P	P	04 45 22.1	+1.5
	0.6nm,0.9s,baz=83,slow=8.4,SNR=0.9						
ASAR	Alice Springs	33.08	252	P	P	04 45 26.9	+1.0
	2.7nm,0.6s,baz=77,slow=8.5,SNR=30						
NVAR	Mina Array Bea	87.61	49	P	P	04 51 37.8	-0.5
	0.3nm,0.8s,baz=243,slow=6.0,SNR=1.7						
ILAR	Eielson Array	87.83	18	P	P	04 51 39.5	+1.0
	0.2nm,0.7s,baz=218,slow=5.6,SNR=4.2						

MAN 20 04:56:20.9, 10°.06N×123°.61E, $h36^{km}$, mb3.8, ML2.6, MS2.1, 1D, Cebu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LLP	Lapu-Lapu	0.43	54	⇓eP	Pn	04 56 32.1	+1.7
LLP				eS	Sn	04 56 39.5	+2.3
MSLP	Maasin	1.23	87	eP	Pn	04 56 41.9	+0.4
MSLP				eS	Sn	04 56 57.9	+1.0
PAGZ	Pagadian	2.21	186	eP	Pn	04 56 55.8	+0.7
PAGZ				eS	Sn	04 57 18.2	-3.1

IDC ***20*** *05:06:09.0±1.0, 39°.76N×143°.62E, h0^{km}, mb3.7/13, mb1 3.8/18, mb1mx3.7/46, mbtmp3.7/18, ML2.7/5, Error ellipse: s-maj=22.7km s-min=19.5km az=146.0*

JMA ***20*** *05:06:12.0±0.3, 39°.88N×143°.63E, h31^{km}, M3.6*

ISC 20 05:06:10.5±0.8**, 39°.91N**±0°.06×**143°.62E**±0°.08**, h6^{km}, n31, σ1^{s}.33**/37**, mb3.8**/13**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	1.35	272	P	Pn	05 06 35.4	-0.6
MIYJ	Miyakonagasawa	1.43	257	P	Pn	05 06 36.5	-0.5
MIYJ				eS	Sb	05 06 53.8	-2.2
JKEN	Kujiedanarisaw	1.50	282	P	Pn	05 06 37.3	-0.6
JANG	Nango	1.68	287	P	Pn	05 06 40.0	-0.5
JOM	Ohasama	1.85	257	P	Pn	05 06 43.0	+0.2
JMK	Ichinoseki	2.09	244	P	Pn	05 06 45.6	-0.5
JOT	Ohata	2.45	308	P	Pn	05 06 51.7	+0.7
JNBK	Urakawa-nobuka	2.46	345	P	Pn	05 06 52.7	+1.5
JCH	Churui	2.71	356	P	Pn	05 06 54.8	+0.2
JCH				eS	Sn	05 07 27.3	-0.4
JYK	Kaneyama	2.71	250	P	Pn	05 06 55.2	+0.5
JAK	Akkeshi	3.19	14	P	Pn	05 07 01.0	-0.2
JAK				eS	Sn	05 07 37.7	-1.8
JAR	Ashorobuto	3.39	2	P	Pn	05 07 03.3	-0.6
JAR				eS	Sn	05 07 41.7	-2.7
ASAJ	Asahikawa	4.28	350	Pn	Pn	05 07 18.9	+2.7
	0.9nm,0.3s,baz=226,slow=18,SNR=4.1						
ASAJ				Sn	Sn	05 08 05.8	-0.5
	1.5nm,0.3s,baz=284,slow=32,SNR=6.6						
MAT	Matsushiro	5.43	233	P	Pn	05 07 31.4	-0.6
MAT				eS	Sn	05 08 38.4	+3.6
MJAR	Matsushiro Arr	5.43	233	Pn	Pn	05 07 31.7	-0.3
	0.1nm,0.3s,baz=42,slow=12,SNR=2.6						
USRK	Ussuriysk Ar.	9.66	300	Pn	Pn	05 08 31.7	+1.7
	baz=98,slow=14,SNR=8.2						
KSRS	Korea Array	12.51	264	Pn	Pn	05 09 10.4	+1.4
	0.1nm,0.3s,baz=2.1,slow=39,SNR=2.6						
KLR	Kul'dur	12.58	322	Pn	Pn	05 09 11.9	+2.1
	0.0nm,0.3s,baz=129,slow=16,SNR=2.5						
SEY	Seymchan	23.65	10	P	P	05 11 22.3	0.0
	1.4nm,0.5s,baz=183,slow=7.8,SNR=6.8						
SONM	Songino Array	27.77	299	P	P	05 11 58.8	-1.3
	1.0nm,0.7s,baz=93,slow=8.2,SNR=3.7						
ZALV	Zalesovo Beam	41.33	310	P	P	05 13 57.0	+0.3
	0.6nm,0.4s,baz=88,slow=7.8,SNR=2.5						
MKAR	Makanchi Array	44.12	300	P	P	05 14 19.9	+0.3
	0.9nm,0.9s,baz=78,slow=9.2,SNR=7.0						
KURBB	Kurchatov Arra	45.66	306	P	P	05 14 31.4	-0.3
	1.4nm,0.4s,baz=80,slow=8.4,SNR=7.8						
ILAR	Eielson Array	46.14	34	P	P	05 14 36.1	+0.8
	0.1nm,0.5s,baz=264,slow=7.2,SNR=1.5						
BVAR	Borovoye Array	49.96	311	P	P	05 15 05.4	+0.3
	0.3nm,0.5s,baz=53,slow=13,SNR=2.3						
INK	Inuvik	51.04	28	P	P	05 15 13.5	+0.5
	1.1nm,0.9s,baz=285,slow=6.1,SNR=6.2						
AKTO	Aktyubinsk	58.07	311	P	P	05 16 04.4	+0.1
	0.9nm,0.6s,baz=78,slow=9.3,SNR=2.4						
WRA	Warramunga Arr	60.17	190	P	P	05 16 17.0	-2.1
	0.5nm,0.6s,baz=7.5,slow=7.1,SNR=6.4						
FINES	FINESS Array B	67.08	332	P	P	05 17 04.2	-0.1
	2.8nm,1.1s,baz=330,slow=7.3,SNR=3.3						
NVAR	Mina Array Bea	71.90	55	P	P	05 17 35.9	+1.2
	0.2nm,0.7s,baz=286,slow=6.5,SNR=2.1						
AKASG	Malin Array Be	73.08	323	P	P	05 17 40.6	-0.6
	0.5nm,0.5s,baz=45,slow=5.5,SNR=4.4						

ASRS 20 05:08:46.9±0.3**, 52°N**±2°×**9°6E**±°**, h5^{km}, MLh3.1**/6**, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/iasp91 confirmed, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KZLR	Kyzyl	0.90	248	Pg	Pn	05 09 05.8	-0.5
KZLR				Sg	Sb	05 09 16.7	-0.7
ARDR	Aradan	1.55	291	Pg	Pg	05 09 20.6	+4.1
ARDR				Sg	Sg	05 09 38.7	+2.1
KNGR	Kungurtug, Tuv	1.81	143	Pg	Pg	05 09 22.2	+0.7
KNGR				Sg	Sg	05 09 44.6	-0.2
BLRR	Bol’shaya Rech	2.28	297	Pg	Pg	05 09 31.9	+1.2
BLRR				Sg	Sg	05 10 01.5	+1.3
DJOS	Djoyskaya Sosn	2.79	287	Pg	Pg	05 09 41.8	+1.4
DJOS				Sg	Sg	05 10 16.3	-0.3
CERR	Cheremushki	2.80	288	Sg	Sg	05 10 18.0	+1.3
DJO	Djoy, Khakassi	2.90	286	Pg	Pg	05 09 43.2	+0.8
DJO				Sg	Sg	05 10 20.5	+0.5
KTRR	Kuturchin	3.04	343	Pg	Pg	05 09 46.1	+0.9
KTRR				Sg	Sg	05 10 27.1	+2.6
TBTR	Tabat	3.23	288	Pg	Pg	05 09 49.4	+0.7
TBTR				Sg	Sg	05 10 29.9	-0.5
MOY	Mondy	3.24	95	Pg	Pg	05 09 48.8	-0.3
MOY				Sg	Sg	05 10 33.2	+2.2
SHRR	Shira	4.17	308	Sg	Sg	05 11 01.1	+0.2
LUZB	Luzhba, Kemero	4.48	294	Sg	Sg	05 11 08.3	-2.4

IDC 20 05:14:32.9±3.5**, 55°.45N**×**86°.54E, h0^{km}, mb1 3.3**/2**, mb1mx3.0**/46**, mbtmp3.3**/2**, ML2.2**/2**, Error ellipse: s-maj=28.9km s-min=27.1km az=57.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.81	214	i		05 29 00.0	
	baz=32,slow=327,SNR=1.0						
ZALV	Zalesovo Beam	1.81	214	Pn	Pn	05 15 04.2	-1.0
	2.2nm,0.3s,baz=36,slow=17,SNR=32						
ZALV				Lg	Lg	05 15 29.9	
	2.1nm,0.3s,baz=31,slow=26,SNR=9.5						
KURBB	Kurchatov Arra	6.83	228	Pn	Pn	05 16 14.2	0.0
	0.1nm,0.3s,baz=42,slow=13,SNR=1.8						
MKAR	Makanchi Array	9.07	199	Pn	Pn	05 16 46.0	+1.0
	0.0nm,0.3s,baz=22,slow=14,SNR=3.4						
MKAR				Lg	Lg	05 19 20.0	
	baz=23,slow=27,SNR=6.4						

IDC ***20*** *05:26:51.8±0.8, 39°.76N×143°.28E, h0^{km}, mb3.7/15, mb1 3.8/20, mb1mx3.8/39, mbtmp3.7/20, ML3.1/4, Error ellipse: s-maj=19.3km s-min=16.8km az=130.0*

JMA ***20*** *05:26:52.5±0.2, 39°.76N×143°.53E, h24^{km}, M4.1*

NEIC ***20*** *05:26:54.4±0.8, 39°.69N±0°.07×143°.1E±0°.1, h10^{km}±2^{km}, mb4.1/7, Error ellipse: s-maj=15.0km s-min=10.1km az=120.0*

ISC 20 05:26:52.6±0.7**, 39°.76N**±0°.05×**143°.36E**±0°.06**, h6^{km}, n61, σ1^{s}.28**/60**, mb4.0**/19**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	1.16	279	P	Pb	05 27 15.4	+0.3
MIYJ	Miyakonagasawa	1.20	262	P	Pb	05 27 16.0	+0.3
JKEN	Kujiedanarisaw	1.34	290	P	Pn	05 27 17.6	-0.2
JANG	Nango	1.54	294	P	Pn	05 27 20.4	-0.2
JOM	Ohasama	1.62	260	P	Pb	05 27 22.6	-0.3
JMK	Ichinoseki	1.84	245	P	Pn	05 27 25.1	+0.3
JTM	Tenmabayashi	2.03	301	P	Pn	05 27 28.0	+0.7
JTM				eS	Sb	05 27 54.5	-0.8
JTM	Tenmabayashi	2.03	301	Pn	Pn	05 27 28.1	+0.7
JIO	Ouri	2.04	231	P	Pn	05 27 27.1	-0.3
JAH	Hinai	2.13	282	P	Pn	05 27 30.0	+1.3
ERM	Erimo	2.25	356	Pn	Pb	05 27 32.9	-0.8
JOT	Ohata	2.39	313	P	Pn	05 27 32.9	+0.7
JYK	Kaneyama	2.47	251	P	Pn	05 27 34.8	+1.4
JNBK	Urakawa-nobuka	2.55	350	P	Pn	05 27 35.7	+1.2
JNBK				S	Sn	05 28 06.8	+0.9
JMM	Marumori	2.76	227	Pn	Pn	05 27 36.9	-0.5
JKB	Kayabe	2.76	321	P	Pn	05 27 40.1	+2.8
JCH	Churui	2.85	0	P	Pn	05 27 38.1	-0.5
JCH				eS	Sn	05 28 11.2	-2.0
JEW	Eniwo	3.39	336	Pn	Pn	05 27 48.2	+2.1
JSD	Sado	4.33	248	Pn	Pn	05 27 57.3	-1.7
JKA	Kamikawa-asahi	4.38	353	Pn	Pn	05 28 02.6	+2.9
ASAJ	Asahikawa	4.39	353	Pn	Pn	05 28 01.2	+1.5
	2.0nm,0.3s,baz=192,slow=6.1,SNR=7.5						
ASAJ				Sn	Sn	05 28 53.8	+2.7
	4.1nm,0.3s,baz=296,slow=30,SNR=4.1						
MJAR	Matsushiro Arr	5.18	233	Pn	Pn	05 28 11.7	+1.1
	0.2nm,0.3s,baz=43,slow=12,SNR=4.6						
MAJO	Matsushiro	5.18	233	Pn	Pn	05 28 08.8	-1.9
MAT	Matsushiro	5.18	233	P	Pn	05 28 12.1	+1.5
MAT				eS	Sn	05 29 15.4	+4.7
USA0B	Ussuriysk Arra	9.55	301	Pn	Pn	05 29 09.7	-0.9
USRK	Ussuriysk Ar.	9.55	301	Pn	Pn	05 29 10.8	+0.2
	baz=90,slow=12,SNR=2.3						
USRK	Ussuriysk Ar.	9.55	301	Pn	Pn	05 29 11.9	+1.2
KSRS	Korea Array	12.29	264	Pn	Pn	05 29 47.9	-0.3
	0.0nm,0.3s,baz=85,slow=13,SNR=1.3						
KSAR	Wonju Array Be	12.33	264	Pn	Pn	05 29 47.8	-0.8
KLR	Kul'dur	12.56	323	Pn	Pn	05 29 52.0	+0.2
	0.1nm,0.3s,baz=141,slow=11,SNR=3.8						
MA2	Magadan	20.38	11	P	P	05 31 30.6	+0.9
	4.0nm,0.4s,baz=196,slow=9.5,SNR=3.8						
SEY	Seymchan	23.83	10	P	P	05 32 06.3	+0.2
	3.3nm,0.6s,baz=195,slow=5.8,SNR=8.7						
ULN	Ulaanbaatar	27.22	299	P	P	05 32 36.9	-0.4
ULN				IAmb	IAmb	05 32 39.0	
	comp=Z,5.4nm,1.2s						
SONM	Songino Array	27.66	299	P	P	05 32 39.6	-1.6
	comp=Z,1.4nm,0.7s,baz=89,slow=6.5,SNR=5.4						
SONM	Songino Array	27.66	299	P	P	05 32 41.1	-0.1
SONM				IAmb	IAmb	05 32 43.1	
	comp=Z,5.0nm,1.5s						
H11N2	WAKE ISLAND Hy	28.42	128	T	T	06 03 48.7	
	baz=318,slow=75,SNR=33						
H11N1	WAKE ISLAND Hy	28.43	128	T	T	06 03 49.4	
	baz=318,slow=75,SNR=30						
H11N3	WAKE ISLAND Hy	28.44	128	T	T	06 03 42.9	
	baz=318,slow=75,SNR=28						
ENH	Enshi	29.16	262	P	P	05 32 53.5	-1.1
ENH				IAmb	IAmb	05 33 04.4	
	comp=Z,7.1nm,0.9s						
H11S1	WAKE ISLAND Hy	29.24	130	T	T	06 03 54.7	
	baz=3.6,slow=74,SNR=6.2						
H11S3	WAKE ISLAND Hy	29.25	130	T	T	06 04 11.9	
	SNR=4.1						
H11S2	WAKE ISLAND Hy	29.26	130	T	T	06 03 32.1	
	baz=326,slow=74,SNR=4.6						
WMQ	Urumqi	41.04	294	P	P	05 34 36.4	-0.3
WMQ				IAmb	IAmb	05 34 48.8	
	comp=Z,4.9nm,0.9s						
ZAA0	Zalesovo Array	41.26	310	P	P	05 34 38.7	+0.3
ZAA0				IAmb	IAmb	05 34 39.4	
	comp=Z,2.2nm,0.7s						
ZALV	Zalesovo Beam	41.26	310	P	P	05 34 38.5	+0.2
	comp=Z,2.1nm,0.5s,baz=96,slow=7.8,SNR=11						
ZALV	Zalesovo Beam	41.26	310	P	P	05 34 38.3	-0.1
IMAR	Indian Mountai	43.53	32	P	P	05 34 57.0	+0.4
MK31	Makanchi Array	44.02	300	P	P	05 35 00.5	-0.4
MKAR	Makanchi Array	44.02	300	P	P	05 35 00.8	0.0
	comp=Z,1.2nm,0.6s,baz=86,slow=8.9,SNR=14						
KURK	Kurchatov	45.50	306	P	P	05 35 12.2	-0.4
ILAR	Eielson Array	46.38	34	P	P	05 35 19.7	+0.4
	comp=Z,0.5nm,0.8s,baz=250,slow=6.5,SNR=2.9						
INK	Inuvik	51.26	28	P	P	05 35 55.9	-0.9
	comp=Z,0.9nm,0.9s,baz=342,slow=3.2,SNR=2.3						
WRA	Warramunga Arr	59.99	190	P	P	05 36 58.6	-1.3
	comp=Z,0.6nm,0.8s,baz=7.1,slow=7.4,SNR=1.8						
YKA	Yellowknife Ar	60.69	31	P	P	05 37 04.8	+0.5
	comp=Z,0.1nm,0.5s,baz=304,slow=5.8,SNR=2.1						
ASAR	Alice Springs	63.72	190	P	P	05 37 26.2	+1.2
	comp=Z,0.3nm,0.8s,baz=15,slow=14,SNR=2.2						
FINES	FINESS Array B	67.11	332	P	P	05 37 45.9	-0.7
	comp=Z,3.2nm,1.0s,baz=66,slow=4.6,SNR=5.3						
NVAR	Mina Array Bea	72.15	55	P	P	05 38 19.4	+1.1
	comp=Z,0.3nm,0.7s,baz=292,slow=4.8,SNR=2.7						
NOA	NORSAR Array B	72.25	338	P	P	05 38 18.3	-0.1
	comp=Z,34nm,0.6s,baz=37,slow=6.1,SNR=2.2						
AKASG	Malin Array Be	73.06	323	P	P	05 38 21.8	-1.5
	comp=Z,0.8nm,0.5s,baz=45,slow=6.3,SNR=4.5						
PDAR	Pinedale Array	74.68	47	P	P	05 38 34.4	+1.2
	comp=Z,0.2nm,0.6s,baz=280,slow=5.4,SNR=2.5						
TXAR	Lajitas Array	87.26	54	P	P	05 39 40.5	+0.1
	comp=Z,0.1nm,0.5s,baz=301,slow=4.0,SNR=1.4						

TAP 20 05:46:29.5, 23°.87N×121°.83E, h47^{km}±1^{km}, ML2.4, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HWA	Hwalien	0.23	297	S	Sn	05 46 45.5	+1.8
	baz=297						
TWD	Chiawan	0.30	314	i P	Pn	05 46 38.5	+0.1
	baz=315						
TWD				i S	Sn	05 46 44.0	-0.6
	baz=315						
ESL	Shilin	0.37	261	i P	Pn	05 46 38.8	-0.3
	baz=260						
ESL				i S	Sn	05 46 45.9	-0.1
	baz=260						
NACB	Ninganchiao	0.37	325	i P	Pn	05 46 39.1	-0.1
	baz=324						
NACB				i S	Sn	05 46 46.2	+0.2
	baz=324						
ETLH	Xiulin Townshi	0.46	316	i P	Pn	05 46 40.0	-0.3
	baz=316						
ETLH				i S	Sn	05 46 47.6	-0.3
	baz=316						
HGSD	Ruisui	0.53	225	i P	Pn	05 46 41.0	0.0
	baz=224						
HGSD				S	Sn	05 46 50.0	+0.8
	baz=224						
ENA	Nanau	0.56	352	i P	Pn	05 46 41.1	-0.3
	baz=352						
ENA				i S	Sn	05 46 50.2	+0.3
	baz=352						
EWUT	Wuta	0.57	355	i P	Pn	05 46 41.5	0.0
	baz=355						
EWUT				eS	Sn	05 46 47.0	-3.1
	baz=355						
WHF	Hehuan Shan	0.58	298	i P	Pn	05 46 41.7	-0.4
	baz=297						
WHF				i S	Sn	05 46 50.7	-0.4
	baz=297						
EHY	Hungye	0.59	232	P	Pn	05 46 41.0	-0.8
	baz=231						
CHGB	Renai	0.63	287	i P	Pn	05 46 42.4	0.0
	baz=287						
CHGB				S	Sn	05 46 51.6	-0.1
	baz=287						
VWDT	VWDT	0.64	260	i P	Pn	05 46 42.8	+0.4
	baz=259						
VWDT				S	Sn	05 46 51.8	+0.1
	baz=259						
FUSS	Fushou	0.65	305	i P	Pn	05 46 42.6	-0.2
	baz=304						
FUSS				i S	Sn	05 46 52.4	0.0
	baz=304						
YULB	Yu-li	0.68	226	P	Pn	05 46 42.2	-0.8
	baz=225						
YULB				S	Sn	05 46 51.8	-0.9
	baz=225						
NNSB	Datong	0.69	324	eP	Pn	05 46 43.0	-0.1
	baz=323						
NNSB				eS	Sn	05 46 52.9	-0.1
	baz=323						
NNSH	Datong	0.69	324	i P	Pn	05 46 43.2	+0.1
	baz=323						
NNSH				S	Sn	05 46 53.1	+0.2
	baz=323						
NNS	Nan Shan	0.70	324	eP	Pn	05 46 43.3	-0.1
	baz=324						
NNS				S	Sn	05 46 52.9	-0.4
	baz=324						
TWF1	Yuli	0.71	223	eS	Sn	05 46 51.7	-1.6
	baz=222						
TDCB	Techi	0.72	302	i P	Pn	05 46 43.9	+0.3
	baz=301						
TDCB				S	Sn	05 46 53.2	-0.5
	baz=301						
TWC	Suao	0.73	1	i P	Pn	05 46 44.3	+0.7
	baz=2.0						
TWC				S	Sn	05 46 54.5	+0.7
	baz=2.0						
NDS	Dongshan	0.77	352	i P	Pn	05 46 44.0	-0.1
	baz=352						
NDS				S	Sn	05 46 54.9	+0.3
	baz=352						
NDT	Datong Townshi	0.78	338	i P	Pn	05 46 44.6	+0.3
	baz=338						
NDT				S	Sn	05 46 55.1	+0.1
	baz=338						
ENTT	Nioudou	0.80	343	eP	Pn	05 46 44.6	+0.1
	baz=342						
ENTT				S	Sn	05 46 56.0	+0.5
	baz=342						
SSLB	Suanglung	0.81	264	P	Pn	05 46 43.9	-0.7
	baz=264						
SSLB				eS	Sn	05 46 56.2	+0.6
	baz=264						
FULB	Fuli	0.83	216	eP	Pn	05 46 45.4	+0.4
	baz=216						
FULB				eS	Sn	05 46 56.5	+0.3
	baz=216						
DPDB	Guoxing	0.84	281	P	Pn	05 46 45.2	+0.1
	baz=281						
DPDB				eS	Sn	05 46 57.3	+0.8
	baz=281						
SMLT	Sun Moon Lake	0.85	271	P	Pn	05 46 44.8	-0.5
	baz=270						
SMLT				eS	Sn	05 46 57.5	+0.7
	baz=270						
TWE	Neicheng	0.86	350	P	Pn	05 46 44.9	-0.4
	baz=350						
TWE				eS	Sn	05 46 57.9	+1.1
	baz=350						
WCS	Beigang Elemen	0.86	283	i P	Pn	05 46 45.4	+0.1
	baz=282						
WCS				eS	Sn	05 46 57.3	+0.5
	baz=282						
TYC	Yuchr	0.89	272	P	Pn	05 46 46.1	+0.4
	baz=272						
TYC				eS	Sn	05 46 57.9	+0.4
	baz=272						
YUS	Yu-Shan	0.89	245	eP	Pn	05 46 46.1	0.0
	baz=244						
YUS				eS	Sn	05 46 58.2	0.0
	baz=244						
YHNB	Yeheng	0.90	333	P	Pn	05 46 46.3	+0.4
	baz=332						
YHNB				S	Sn	05 46 56.3	-1.5
	baz=332						
WHP	Taichung City	0.90	297	eP	Pn	05 46 47.1	+1.1
	baz=296						
WHP				eS	Sn	05 46 58.8	+0.7
	baz=296						
NSK	Sanguang	0.91	332	P	Pn	05 46 46.5	+0.4
	baz=332						
NSK				S	Sn	05 46 58.0	-0.1
	baz=332						
NWLT	Wulai	0.95	342	P	Pn	05 46 45.9	-0.7
	baz=341						
NWLT				S	Sn	05 46 59.0	0.0
	baz=341						
EDH	Donghe	1.02	208	eS	Sn	05 46 59.4	-1.2
	baz=208						
NSTT	Nanjuang	1.07	315	eP	Pn	05 46 49.7	+1.5
	baz=315						
LIOB	Emei	1.07	316	eP	Pn	05 46 49.2	+1.0
	baz=316						
TWQ1	Liyutan	1.07	296	eS	Sn	05 47 02.1	+0.1
	baz=296						
TCU	Taichung	1.09	285	eS	Sn	05 47 04.1	+1.7
	baz=284						
CHN5	Tsauling	1.09	256	eS	Sn	05 47 03.9	+1.4
	baz=255						
TIPB	Shuangxi	1.09	360	eP	Pn	05 46 49.4	+0.9
	baz=359						

TAP 20 05:46:52.0, 24°.64N×121°.81E, h74^{km}±1^{km}, ML2.1, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWC	Suao	0.05	133	eP	Pn	05 47 02.7	+0.1
	baz=127						
TWC				eS	Sn	05 47 10.9	+0.5
	baz=127						
NDS	Dongshan	0.09	264	eP	Pn	05 47 03.1	+0.4
	baz=263						
NDS				eS	Sn	05 47 11.3	+0.8
	baz=263						
TWE	Neicheng	0.15	301	eP	Pn	05 47 03.6	+0.8
	baz=302						
TWE				eS	Sn	05 47 12.2	+1.4
	baz=302						
EWUT	Wuta	0.20	188	eS	Sn	05 47 11.2	+0.1
	baz=188						
ENA	Nanau	0.22	196	eS	Sn	05 47 11.8	+0.4
	baz=194						
NWLT	Wulai	0.31	296	eP	Pn	05 47 04.0	+0.3
	baz=295						
NWLT				eS	Sn	05 47 12.4	0.0
	baz=295						
TIPB	Shuangxi	0.33	3	eP	Pn	05 47 04.1	+0.2
	baz=2.0						
TIPB				eS	Sn	05 47 13.0	+0.4
	baz=2.0						
TIPB	Shuangxi	0.33	3	eS	Pn	05 47 04.1	+0.2
	baz=359						
YHNB	Yeheng	0.40	274	eS	Sn	05 47 13.8	+0.3
	baz=273						
TWB1	Santiao Chiao	0.40	24	eP	Pn	05 47 04.3	0.0
	baz=25						
TWB1				eS	Sn	05 47 13.2	-0.2
	baz=25						
NHDH	Xindian Distri	0.41	321	eS	Sn	05 47 14.0	+0.5
	baz=320						
NSK	Sanguang	0.41	275	eS	Sn	05 47 14.0	+0.3
	baz=274						
TATO	Taipei	0.44	319	eS	Sn	05 47 14.8	+0.8
	baz=319						
NNSB	Datong	0.44	241	eP	Pn	05 47 05.1	+0.3
	baz=241						
NNSB				eS	Sn	05 47 14.6	+0.4
	baz=241						
NNSH	Datong	0.44	241	eS	Sn	05 47 14.4	+0.1
	baz=241						
NNS	Nan Shan	0.45	243	eS	Sn	05 47 14.7	+0.5
	baz=242						
NACB	Ninganchiao	0.51	203	eS	Sn	05 47 14.1	-0.9
	baz=202						
ETLH	Xiulin Townshi	0.53	215	eS	Sn	05 47 14.9	-0.6
	baz=214						
YM01	YM01	0.55	337	eS	Sn	05 47 16.0	+0.3
	baz=336						
FUSS	Fushou	0.65	233	eS	Sn	05 47 18.1	+0.2
	baz=232						
WHF	Hehuan Shan	0.70	225	eS	Sn	05 47 19.6	+0.4
	baz=224						
LIOB	Emei	0.72	270	eP	Pn	05 47 08.0	+0.6
	baz=270						
LIOB				eS	Sn	05 47 19.8	+0.9
	baz=270						
NSTT	Nanjuang	0.73	269	eS	Sn	05 47 19.7	+0.6
	baz=268						
CHGB	Renai	0.82	225	eS	Sn	05 47 21.0	-0.2
	baz=224						
WHP	Taichung City	0.87	245	eS	Sn	05 47 22.5	+0.6
	baz=245						
VWDT	VWDT	1.07	215	eS	Sn	05 47 27.3	+1.0
	baz=214						
SSLB	Suanglung	1.16	223	eS	Sn	05 47 29.0	+0.9
	baz=222						

IDC 20 06:18:32.6±3.0**, 54°.41N**×**87°.19E, h0^{km}, mb1 3.1**/2**, mb1mx2.9**/45**, mbtmp3.1**/2**, ML2.8**/2**, Error ellipse: s-maj=26.2km s-min=18.3km az=49.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.47	252	i		06 24 30.0	
	baz=70,slow=343,SNR=2.9						
ZALV	Zalesovo Beam	1.47	252	Pg	Pn	06 18 58.5	-1.8
	2.1nm,0.3s,baz=72,slow=17,SNR=14						
ZALV				Lg	Lg	06 19 19.9	
	1.2nm,0.3s,baz=71,slow=27,SNR=7.0						
KURBB	Kurchatov Arra	6.50	238	Pn	Pn	06 20 10.5	+1.0
	0.1nm,0.3s,baz=51,slow=14,SNR=5.2						
KURBB				Lg	Lg	06 22 00.1	
	0.0nm,0.3s,baz=47,slow=29,SNR=4.7						
MKAR	Makanchi Array	8.24	204	Pn	Pn	06 20 34.2	+0.9
	0.2nm,0.3s,baz=27,slow=14,SNR=11						
MKAR				Lg	Lg	06 22 53.3	
	0.0nm,0.3s,baz=15,slow=28,SNR=5.2						

JMA 20 06:40:16.4±0.1, 38°.27N×144°.50E, h33^{km}, M3.6, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	2.36	291	P	Pn	06 40 54.5	+1.7
JIKH	Ishinomakikobu	2.39	272	P	Pn	06 40 54.5	+1.3
JIKH				S	Sn	06 41 22.7	+1.4
JKMT	Kesennumamotoy	2.43	284	P	Pn	06 40 55.4	+1.6
JKMT				S	Sn	06 41 24.2	+1.8
MIYJ	Miyakonagasawa	2.46	303	P	Pn	06 40 55.7	+1.5
JIO	Ouri	2.48	275	P	Pn	06 40 56.0	+1.5
JIO				*e*S	Sn	06 41 25.4	+1.7
JMK	Ichinoseki	2.66	286	P	Pn	06 40 58.8	+1.9
JOM	Ohasama	2.78	297	P	Pn	06 41 00.4	+1.9
JOM				*e*S	Sn	06 41 33.2	+2.3
JANG	Nango	3.13	313	P	Pn	06 41 05.2	+1.9
JYK	Kaneyama	3.31	283	P	Pn	06 41 08.6	+2.7
JYK				*e*S	Sn	06 41 47.5	+3.5
JFT	Otama	3.38	258	P	Pn	06 41 08.9	+2.1
JFT				*e*S	Sn	06 41 47.9	+2.1
JCH	Churui	4.42	349	P	Pn	06 41 21.6	+0.4
JCH				*e*S	Sn	06 42 09.6	-1.9
JKB	Kayabe	4.49	325	P	Pn	06 41 24.8	+2.8
JRY	Ryogami san	5.01	245	P	Pn	06 41 30.4	+1.2
JRY				*e*S	Sn	06 42 25.2	-0.8
MAT	Matsushiro	5.30	253	P	Pn	06 41 36.4	+3.2
MAT				*e*S	Sn	06 42 32.7	-0.4

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*NOU **20** 06:49:18.7, 15°.96S×168°.35E, h97^{km}, MLv4.9, Vanuatu Islands*

*IDC **20** 06:49:19.6±1.1, 16°.22S×167°.96E, h0^{km}, mb4.3/9, mb1 4.4/10, mb1mx4.1/33, mbtmp4.2/10, ML3.9/1, Error ellipse: s-maj=38.1km s-min=19.9km az=122.0*

ISC 20 06:49:24.6±0.8, 16°.23S±0°.06×168°.0E±0°.1, h35^{km}, n16, σ1^{s}29/17, mb4.2/9, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	1.09	315	P	Pn	06 49 41.4	-2.0
DVP	Devils Point	1.50	173	P	Pn	06 49 47.5	-1.5
KOUNC	Koumac, New Ca	5.56	219	P	Pn	06 50 44.8	0.0
	151nm,0.8s						
YATNC	Mamie plateau,	5.89	190	P	Pn	06 50 47.9	-1.6
	39nm,0.7s						
DZM	Mont Dzumac	5.99	194	Pn	Pn	06 50 49.0	-2.0
	3.0nm,0.3s,baz=116,slow=23,SNR=26						
DZM				Sn	Sn	06 51 59.0	+0.5
	1.2nm,0.3s,baz=315,slow=21,SNR=1.7						
DZM	Mont Dzumac	5.99	194	P	Pn	06 50 50.0	-0.9
	67nm,1.4s						
OUENC	Ouen Island, N	6.25	190	P	Pn	06 50 52.5	-1.9
	57nm,0.8s						
STKA	Stephens Creek	28.59	232	P	P	06 55 17.4	-0.2
	3.7nm,0.8s,baz=52,slow=13,SNR=6.2						
ASAR	Alice Springs	32.83	251	P	P	06 55 55.0	-0.1
	11nm,0.8s,baz=77,slow=9.0,SNR=24						
FITZ	Fitzroy Crossi	40.45	261	P	P	06 57 01.4	+1.3
	3.3nm,0.6s,baz=113,slow=9.3,SNR=1.9						
MJAR	Matsushiro Arr	59.55	332	P	P	06 59 24.2	-0.5
	1.8nm,0.6s,baz=166,slow=7.8,SNR=3.3						
USRK	Ussuriysk Ar.	68.53	333	P	P	07 00 23.9	+0.4
	2.6nm,1.0s,baz=110,slow=8.4,SNR=4.2						
SONM	Songino Array	84.11	323	P	P	07 01 51.4	-0.6
	1.0nm,0.6s,baz=92,slow=5.0,SNR=3.7						
NVAR	Mina Array Bea	87.72	49	P	P	07 02 11.9	+1.6
	0.9nm,0.9s,baz=216,slow=7.3,SNR=5.9						
ILAR	Eielson Array	87.73	18	P	P	07 02 09.9	+0.6
	1.2nm,0.9s,baz=236,slow=5.7,SNR=8.9						
YKA	Yellowknife Ar	98.55	27	P	P	07 02 59.1	-0.2
	0.3nm,0.8s,baz=255,slow=4.3,SNR=2.5						

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*IDC **20** 06:50:35.9±1.0, 3°.00S×142°.37E, h0^{km}, mb4.0/5, mb1 4.3/7, mb1mx3.9/32, mbtmp4.1/7, ML4.0/1, Error ellipse: s-maj=16.9km s-min=14.2km az=74.0*

*NEIC **20** 06:50:37.3±1.4, 3°.08S±0°.09×142°.63E±0°.09, h10^{km}±1^{km}, mb4.4/17, Error ellipse: s-maj=15.2km s-min=14.5km az=347.0*

*DJA **20** 06:50:40.0±0.4, 3°S±7°×14°2E±°, h10^{km}, M4.8/7, mb4.9/2, MLv4.8/7*

ISC 20 06:50:39.4±0.7, 3°.01S±0°.08×142°.60E±0°.08, h27^{km}, n39, σ1^{s}34/40, mb4.2/11, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	1.95	285	Pn	Pn	06 51 07.9	-3.0
	1.7nm,0.3s,baz=176,slow=16,SNR=3.6						
JAY				Lg	Lg	06 51 30.4	
	14nm,0.3s,baz=259,slow=22,SNR=9.6						
JAY	Jayapura	1.95	285	P	Pn	06 51 10.6	-0.3
GENI	Genyem	2.46	280	P	Pn	06 51 17.5	-0.3
WAMI	Wamena	3.97	257	P	Pn	06 51 37.8	-0.8
SMPI	Sarmi	4.01	285	P	Pn	06 51 39.3	+0.1
MANU	Manus Island	4.86	79	Pn	Pn	06 51 51.6	+0.8
MMPI	Merauke	5.85	202	P	Pn	06 52 07.7	+3.2
SRPI	Serui, Papua	6.45	280	P	Pn	06 52 14.3	+1.6
PMG	Port Moresby	7.81	145	Pn	Pn	06 52 33.7	+2.3
	2.0nm,0.3s,baz=315,slow=8.6,SNR=2.4						
PMG	Port Moresby	7.81	145		Pn	06 52 30.8	-0.5
FAKI	Fak Fak	10.33	270	Pn	Pn	06 53 07.5	+1.5
COEN	Coen	10.89	177	Pn	Pn	06 53 12.0	-1.7
WB0	Warramunga Arr	18.48	205		P	06 54 52.6	-0.9
WB0				IAmb	IAmb	06 55 12.6	
	comp=Z,22nm,1.1s						
WB2	Warramunga Arr	18.66	205	P	P	06 54 55.1	-0.3
WB2				IAmb	IAmb	06 55 08.6	
	comp=Z,23nm,1.1s						
WRA	Warramunga Arr	18.66	205	P	P	06 54 54.0	-1.5
	comp=Z,0.5nm,0.3s,baz=29,slow=10,SNR=28						
WRA	Warramunga Arr	18.66	205	P	P	06 54 55.4	-0.1
SOEI	Soe	19.40	249	P	P	06 55 03.8	0.0
SOEI				IAmb	IAmb	06 55 27.2	
	comp=Z,38nm,0.9s						
ANA2	Anatahan	19.47	9	P	P	06 55 03.0	-1.4
TOLI2	Tolitoli	22.19	280	P	P	06 55 32.4	-1.4
TOLI2				IAmb	IAmb	06 55 40.4	
	comp=Z,16nm,0.9s						
AS31	Alice Springs	22.19	202	P	P	06 55 32.9	-0.9
ASAR	Alice Springs	22.19	202	P	P	06 55 33.1	-0.7
	comp=Z,4.8nm,0.8s,baz=30,slow=9.9,SNR=24						
ASAR				S	S	06 59 38.7	+1.8
	comp=Z,2.1nm,0.9s,baz=26,slow=23,SNR=4.9						
ASAR	Alice Springs	22.19	202	P	P	06 55 32.9	-0.9
FITZ	Fitzroy Crossi	22.38	227	P	P	06 55 34.3	-1.6
	comp=Z,6.4nm,0.9s,baz=44,slow=8.5,SNR=8.0						
FITZ	Fitzroy Crossi	22.38	227	P	P	06 55 36.5	+0.7
EIDS	Eidsvold	23.68	161	P	P	06 55 48.4	-0.7
EIDS				IAmb	IAmb	06 56 14.5	
	comp=Z,12nm,1.1s						
MYLDM	Lahad Datu	25.41	289	P	P	06 56 06.5	+1.5
STKA	Stephens Creek	28.73	182	P	P	06 56 33.7	-1.0
BBOO	Buckleboo	30.27	191	P	P	06 56 48.4	0.0
BBOO				IAmb	IAmb	06 57 01.0	
	comp=Z,13nm,1.4s						
FORT	Forrest	30.85	205	P	P	06 56 50.6	-2.9
MNAI	Manna	39.58	267	P	P	06 58 10.3	+1.4
MK31	Makanchi Array	72.42	321	P	P	07 02 04.7	+1.2
MK31				IAmb	IAmb	07 02 15.8	
	comp=Z,3.5nm,1.3s						
MKAR	Makanchi Array	72.42	321	P	P	07 02 03.4	-0.1
	comp=Z,1.6nm,0.9s,baz=104,slow=6.7,SNR=8.6						
MKAR	Makanchi Array	72.42	321	P	P	07 02 04.4	+1.0
MAKZ	Makanchi	72.62	321	P	P	07 02 05.1	+0.5
MAKZ				IAmb	IAmb	07 02 14.5	
	comp=Z,2.5nm,0.9s						
ZALV	Zalesovo Beam	74.18	329	P	P	07 02 13.6	0.0
	comp=Z,1.0nm,0.7s,baz=64,slow=3.4,SNR=3.6						
ZALV	Zalesovo Beam	74.18	329	P	P	07 02 13.7	+0.1
ILAR	Eielson Array	84.51	24	P	P	07 03 09.9	+0.2
	comp=Z,1.2nm,0.7s,baz=254,slow=4.7,SNR=12						
QSPA	South Pole Qui	86.94	180	P	P	07 03 22.6	+0.6
QSPA				IAmb	IAmb	07 03 44.4	
	comp=Z,5.0nm,1.2s						
DBIC	Dimbokro	147.37	278	PKPbc	PKPab	07 10 23.7	-0.1
	comp=Z,3.5nm,0.7s,baz=91,slow=3.5,SNR=3.9						

WEL 20 06:56:28.5, 41°.0S±0°.5×174°.8E±0°.7, h8^{km}±1^{km}, M2.9/15, ML3.2/15, MLv2.9/15, Error ellipse: s-maj=0.0km s-min=0.0km az=80.5, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KIW	Kapiti Island	0.14	45	P	Pg	06 56 32.4	+0.8
KIW				S	Sg	06 56 34.1	+0.5
CAW	Cannon Point	0.26	124	P	Pb	06 56 36.0	+0.5
OGWZ	Otaki Gorge	0.33	64	P	Pb	06 56 36.3	-0.3
OGWZ				S	Sb	06 56 40.7	-1.3
BHW	Baring Head	0.45	171	P	Pb	06 56 39.8	+1.1
BHW				S	Sb	06 56 46.3	+0.7
TCW	Tory Channel	0.45	236	P	Pb	06 56 38.9	+0.1
TCW				S	Sb	06 56 44.6	-1.1
HOWZ	Holdsworth Sta	0.56	84	P	Pb	06 56 41.2	+0.6
HOWZ				S	Sb	06 56 49.0	+0.3
MSWZ	Moikau Station	0.58	142	P	Pn	06 56 42.6	-0.4
MTW	Mount Morrison	0.58	110	P	Pn	06 56 42.2	-0.8
MTW				S	Sn	06 56 51.1	-1.7
PAWZ	Paruwai Farm	0.65	131	P	Pn	06 56 43.8	-0.2
PAWZ				S	Sn	06 56 53.8	-0.6
DUWZ	D’Urville Isla	0.67	283	P	Pb	06 56 42.3	-0.1
MRZ	Mangatainoka R	0.68	64	P	Pb	06 56 42.8	+0.3
MRZ				S	Sb	06 56 51.6	-0.5
PLWZ	Palliser	0.71	150	P	Pn	06 56 45.2	+0.4
PLWZ				S	Sn	06 56 56.1	+0.2
TUWZ	Tuamarina	0.79	233	P	Pb	06 56 44.5	+0.1
TRWZ	Traveller	0.81	123	P	Pn	06 56 47.5	+1.2
TMWZ	Te Maipa	0.85	100	P	Pn	06 56 47.4	+0.6
OHWZ	Ohakea	0.86	29	P	Pb	06 56 45.6	0.0
TIWZ	Tintock	0.86	78	P	Pn	06 56 47.1	+0.2
CMWZ	Cape Campbell	0.90	208	P	Pn	06 56 48.8	+1.4
POWZ	Post Office Ro	0.94	53	P	Pb	06 56 47.5	+0.4
PRWZ	Pori Road	0.99	66	P	Pn	06 56 49.2	+0.5
BSWZ	Blackbirch Sta	1.01	222	P	Pn	06 56 49.5	+0.5
CPWZ	Castlepoint	1.08	88	P	Pn	06 56 52.1	+2.2
NNZ	Nelson	1.09	256	P	Pn	06 56 49.8	-0.2
BFZ	Birch Farm	1.15	76	P	Pn	06 56 52.4	+1.6
WAZ	Wanganui	1.22	8	P	Pg	06 56 52.0	+0.2
DVHZ	Dannevirke	1.25	58	P	Pg	06 56 53.2	+0.8
TSZ	Takapari Road	1.27	45	P	Pg	06 56 53.2	+0.3
ANWZ	Angora Road	1.38	69	P	Pg	06 56 55.5	+0.5
PNHZ	Pukenui	1.51	47	P	Pg	06 56 57.1	-0.3
LREZ	Lake Rotokare	1.53	349	P	Pg	06 56 58.8	+1.1
WPHZ	Waipukurau	1.55	55	P	Pg	06 56 58.6	+0.3
PRHZ	Porangahau	1.57	64	P	Pb	06 56 58.0	+0.1
THZ	Tophouse	1.62	240	P	Pg	06 56 59.3	-0.3
MTVZ	Mangateitei	1.66	19	P	Pg	06 56 59.9	-0.5
PREZ	Palmer Road	1.69	343	P	Pg	06 57 00.7	-0.1
QRZ	Quartz Range	1.71	274	P	Pb	06 57 00.6	+0.5
MOVZ	Moawhango	1.72	26	P	Pb	06 56 59.6	-0.8
KHZ	Kahutara	1.73	212	P	Pg	06 57 01.0	-0.5
WNVZ	Wahianoa	1.75	21	P	Pb	06 57 00.8	-0.1
TRVZ	Turoa	1.76	20	P	Pb	06 57 01.4	+0.2
KHEZ	Kahui Hut	1.76	340	P	Pg	06 57 01.9	-0.4
NEZ	North Egmont	1.77	343	P	Pg	06 57 01.9	-0.4
BHHZ	Black Hill Sta	1.77	34	P	Pb	06 57 00.9	-0.3
WHVZ	Whangaehu Hut	1.79	21	P	Pb	06 57 01.8	+0.2
KRHZ	Kereru	1.79	43	P	Pb	06 57 01.4	-0.2
FWVZ	Far West T-bar	1.80	19	P	Pb	06 57 02.1	+0.3
TUVZ	Tukino	1.82	22	P	Pb	06 57 01.7	-0.3
NBEZ	Newall Road No	1.83	337	P	Pg	06 57 03.5	0.0
VRZ	Vera Road	1.83	360	P	Pb	06 57 02.4	+0.1
PXZ	Pawanui	1.84	60	P	Pb	06 57 01.7	-0.6
PKE	Pukeiti	1.87	341	P	Pb	06 57 03.4	+0.6
NGZ	Ngauruhoe	1.89	20	P	Pb	06 57 03.3	0.0
OTVZ	Oturere	1.92	21	P	Pb	06 57 03.6	-0.2
WTVZ	West Tongariro	1.94	19	P	Pb	06 57 04.3	+0.1
TWVZ	Taurewa	1.95	15	P	Pb	06 57 04.5	+0.1
ETVZ	East Tongariro	1.96	22	P	Pb	06 57 04.2	-0.3
TMVZ	Te Maari	1.98	21	P	Pb	06 57 04.4	-0.3
KRVZ	Karewarewa	1.98	20	P	Pb	06 57 04.9	+0.1
KAHZ	Kahuranaki	1.98	55	P	Pb	06 57 03.8	-1.0
KWHZ	Kaweka Forest	1.98	40	P	Pb	06 57 04.4	-0.4
KATZ	Kakaramea	2.10	20	P	Pb	06 57 06.9	-0.1
MCHZ	McNeill Hill	2.11	45	P	Pb	06 57 05.7	-1.3
BKZ	Black Stump Fm	2.22	37	P	Pb	06 57 09.9	+0.9
RATZ	Rangitukua	2.23	20	P	Pb	06 57 09.4	+0.5
HATZ	Hinemaiaia	2.30	26	P	Pb	06 57 09.4	-0.8
DSZ	Denniston Nort	2.37	250	P	Pb	06 57 10.7	-0.8
GVZ	Greta Valley S	2.39	212	P	Pb	06 57 11.2	-0.6
NMHZ	Naumai	2.43	41	P	Pn	06 57 10.2	+1.7
HIZ	Hauiti	2.44	1	P	Pb	06 57 12.3	-0.4
MRHZ	Matea Rd	2.47	31	P	Pn	06 57 10.4	+1.3
LTZ	Lake Taylor	2.61	225	P	Pb	06 57 16.0	+0.4
MTHZ	Maungataniwha	2.64	38	P	Pn	06 57 13.4	+2.1
TLZ	Tolley Road	2.69	13	P	Pb	06 57 15.9	-1.0
INZ	Inchbonnie	3.05	234	P	Pn	06 57 19.6	+2.6

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*ECX **20** 06:57:02.1±1.1, 31°.52N×115°.66W, h6^{km}±4^{km}, MD2.1, ML2.3*

*MEX **20** 06:57:03.5±0.3, 31°.37N×115°.74W, h12^{km}, MD3.6*

ISC 20 06:57:00.8±0.9, 31°.53N±0°.04×115°.64W±0°.03, h14^{km}±9^{km}, n18, σ0^{s}62/31, 5C-5D, Baja California

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VTX	Valle De La Tr	0.18	223	⇑*i*P	Pg	06 57 05.5	+0.4
VTX				*e*S	Sg	06 57 07.7	-0.3
VTX				⇑*e*		06 57 08.6	
VTX				IAML		06 57 08.6	
	comp=E,2µm,0.1s						
SJX	San Joaquin	0.36	311	⇓*i*P	Pn	06 57 11.8	+0.3
SJX				*e*S	Sn	06 57 18.7	+0.2
SPIG	San Pedro Mart	0.50	163	⇓*e*P	Pg	06 57 11.2	+0.4
	baz=324,slow=10						
SPIG				*i* S	Sg	06 57 16.9	-0.6
SPIG	San Pedro Mart	0.50	163	*e*P	Pg	06 57 10.9	+0.1
SPIG				*e*S	Sg	06 57 18.1	+0.6
ECBX	El Chinero	0.51	96	⇑*i*P	Pg	06 57 10.3	-0.5
ECBX				*e*S	Sg	06 57 17.1	-0.4
SPX	San Pedro Mart	0.51	163	⇓*i*P	Pg	06 57 11.2	+0.2
SPX				*e*S	Sg	06 57 18.1	+0.3
SPX				IAML		06 57 22.3	
	comp=N,125nm,0.1s						
SPX				⇓*e*		06 57 22.3	
SVX	San Vicente	0.56	249	⇑*i*P	Pg	06 57 11.8	0.0
SVX				*e*S	Sg	06 57 19.1	0.0
SFX	San Felipe	0.83	125	*e*P	Pg	06 57 17.1	+0.2
SFX				*e*S	Sg	06 57 28.1	+0.2
CPBX	Cerro Prieto	0.94	18	*e*P	Pb	06 57 19.8	+1.0
SQX	San Quintin	0.97	192	⇓*e*P	Pb	06 57 18.9	-0.4
SQX				*e*S	Sg	06 57 31.2	-0.9
RMX	La Rumorosa	1.14	341	*e*P	Pb	06 57 21.3	-1.0
RMX				*e*S	Sb	06 57 35.0	-2.0
CBX	Cerro Bola	1.17	312	*e*P	Pb	06 57 22.9	0.0
CBX				*e*S	Sb	06 57 38.1	+0.1
CBX				IAML		06 57 39.7	
	comp=E,93nm,0.4s						
CBX				⇑*e*		06 57 39.7	
IKP	In-Ko-Pah, Jac	1.19	341	*e*P	Pb	06 57 23.3	+0.2
TJIG	Tijuana	1.26	316	*i* P	Pn	06 57 24.2	+0.2
TJIG				*i* S	Sb	06 57 40.3	-0.2
TJIG	Tijuana	1.26	316	*e*P	Pn	06 57 24.2	+0.2
TJIG				*e*S	Sb	06 57 40.2	-0.2
BAR	Barrett	1.45	323	*e*P	Pb	06 57 27.5	0.0
MONP2	Monument Peak	1.52	334	*e*P	Pb	06 57 28.8	0.0
SDRC	San Diego Road	1.64	318	*e*P	Pn	06 57 30.2	+1.1

DJA 20 07:24:07.3±1.2, 8°S±5°×10°7E±°, h12^{km}±9^{km}, M4.3/13, mb4.6/7, mB5.5/3, MLv4.1/13, Mw(mB)5.0/3, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CISI	Cisompet, Garu	0.83	40	P	Pg	07 24 23.3	-0.1
CISI				S	Sg	07 24 31.9	-2.4
SKJI	Sukabumi	1.39	329	P	Pn	07 24 32.1	-0.4
LEM	Lembang	1.41	14	P	Pn	07 24 32.7	-0.2
DBJI	Dramaga	1.72	342	P	Pn	07 24 36.9	-0.2
UGM	Wanagama	3.22	85	P	Pn	07 24 57.3	-0.5
KASI	Kota Agung	3.83	314	P	Pn	07 25 05.6	-0.6
KLSI		4.31	324	P	Pn	07 25 12.7	0.0
MNAI	Manna	5.75	311	P	Pn	07 25 32.6	+0.1
	0.6nm62nm,0.8s						
JAGI	Jajag, Banyuwa	6.81	93	P	Pn	07 25 47.9	+0.8
	0.8nm6µm59nm,0.9s						
TWSI	Taliwang, Sumb	9.51	94	P	Pn	07 26 24.6	+0.4
	18nm,1.3s						
PLAI	Plampang	10.40	94	P	Pn	07 26 36.4	0.0

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*NNC **20** 07:31:23.9±3.8, 37°.85N×81°.67E, h0^{km}, mb4.4, mpv4.2, Error ellipse: s-maj=29.6km s-min=24.2km az=8.0*

*IDC **20** 07:31:26.9±0.7, 36°.66N×82°.56E, h0^{km}, mb3.9/15, mb1 4.0/21, mb1mx3.8/65, mbtmp3.9/21, ML3.6/6, Error ellipse: s-maj=19.6km s-min=12.6km az=41.0*

*BJI **20** 07:31:26.4±0.0, 36°.52N×82°.54E, h7^{km}, mb3.9/10, ML4.4/6, Ms3.9/1, Ms7 3.9/2*

ISC 20 07:31:32.0±0.6, 36°.64N±0°.06×82°.52E±0°.06, h35^{km}, n53, σ1^{s}64/59, mb3.9/15, 11C-7D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	Shalkode	6.92	341	*e*P	Pn	07 33 08.9	-2.1
	baz=341						
SHLS				LR	LR	07 35 32.1	
	66nm,9.6s,baz=341						
UZB	Uzynbulak	7.03	339	*e*P	Pn	07 33 12.8	+0.2
	2.9nm,0.5s,baz=336						
UZB				LR	LR	07 35 52.1	
	25nm,6.1s,baz=336						
PDGK	Podgornoye	7.08	342	⇓Pn	Pn	07 33 13.8	+0.7
	11nm,0.5s						
PDGK				⇑Sn	Sn	07 34 32.8	+0.4
	132nm,0.8s						
SATY	Saty	7.15	335	*e*P	Pn	07 33 14.0	-0.1
	baz=333						
KPKS	Kokpek	7.43	338	*e*P	Pn	07 33 18.1	+0.2
	baz=336						
TNSS	Tian-Shan	7.69	328	*e*P	Pn	07 33 22.2	+0.3
	baz=326						
MDOK	Medeo	7.75	329	*e*P	Pn	07 33 22.8	+0.4
	baz=326						
MDOK	Medeo	7.75	329	⇑Pn	Pn	07 33 23.6	+1.1
	10nm,0.4s						
MDOK				⇑Sn	Sn	07 34 50.8	+1.7
	64nm,0.7s						
AAA	Alma-Ata	7.85	328	*e*P	Pn	07 33 24.5	+0.8
	baz=326						
AAA				*e*S	Sn	07 34 52.7	+1.4
	baz=326						
DJR	Jarkent	7.96	346	Pg	Pn	07 33 25.6	+0.4
	7.3nm,0.4s						
DJR				Lg	Lg	07 34 54.8	
	60nm,0.6s						
WMQ	Urumqi	8.19	27	*e*P	Pn	07 33 28.8	+0.4
WMQ				S	Sn	07 35 03.1	+3.3
WMQ				smax	smax		
	comp=N,71nm,1.1s						
WMQ				smax	smax		
	comp=E,45nm,1.1s						
TKM2	Tokmak 2	8.23	322	⇑Pn	Pn	07 33 29.9	+0.8
	11nm,1.0s						
TKM2				⇓Pg		07 33 58.1	
	9.8nm,0.7s						
TKM2				⇓Lg	Lg	07 35 43.4	
	72nm,1.4s						
CHKK	Chushkaly	8.35	331	*e*P	Pn	07 33 31.0	+0.4
	baz=329						
ARXS	Arharly	8.37	336	Pg	Pn	07 33 31.2	+0.4
	34nm,0.4s						
DGS	Degeres	8.38	324	Pg	Pn	07 33 32.1	+1.0
	15nm,0.5s						
DGS				Lg	Lg	07 35 06.8	
	20nm,0.7s						
AAK	Ala-Archa	8.61	317	Pn	Pn	07 33 34.3	0.0
	0.4nm,0.3s,baz=131,slow=11,SNR=5.8						
AAK				Pg		07 34 01.6	
	0.7nm,0.3s,baz=140,slow=6.5,SNR=4.5						
AAK				Lg	Lg	07 36 00.9	
	2.9nm,0.3s,baz=272,slow=16,SNR=5.9						
AAK	Ala-Archa	8.61	317	⇓Pn	Pn	07 33 36.8	+2.5
	4.4nm,1.0s						
AAK				⇑Pg		07 34 07.6	
	19nm,0.9s						
AAK				⇑Lg	Lg	07 35 56.5	
	47nm,0.8s						
KUU	Kurty	8.65	329	*e*P	Pn	07 33 33.7	-0.9
	baz=327						
TDK	Taldyqorghan	8.92	341	*e*P	Pn	07 33 38.4	+0.1
	baz=339						
GUN	Gumba	9.15	161	*e*P	Pn	07 33 43.0	+1.1
	28nm,0.9s						
PKI	Pulchoki	9.37	164	*e*P	Pn	07 33 39.1	-5.7
	17nm,0.7s						
MK31	Makanchi Array	10.15	359	P	Pn	07 33 54.4	-0.8
	3.3nm,0.5s,baz=180,slow=12,SNR=247						
MK31				⇓Pg		07 34 06.5	
	2.9nm,0.4s,baz=185,slow=12,SNR=4.4						
MK31				⇑S	Sn	07 35 46.6	-1.1
	6.2nm,0.5s,baz=187,slow=25,SNR=5.2						
MKAR	Makanchi Array	10.15	359	Pn	Pn	07 33 54.7	-0.5
	2.9nm,0.3s,baz=183,slow=12,SNR=142						
MKAR				Sn	Sn	07 35 49.2	+1.5
	2.5nm,0.3s,baz=187,slow=24,SNR=6.1						
MKAR				Lg	Lg	07 36 50.8	
	baz=163,slow=26,SNR=1.9						
MAKZ	Makanchi	10.17	358	⇑P	Pn	07 33 54.8	-0.7
	9.6nm,0.6s						
MAKZ				⇑S	Sn	07 35 46.1	-2.1
	39nm,1.2s						
RAMN	Ramite	10.26	159	*e*P	Pn	07 33 53.3	-3.7
	29nm,0.8s						
BTLS	Baital	10.56	325	*e*P	Pn	07 34 00.3	-0.5
	baz=324						
ODAN	Odare	10.59	156	*e*P	Pn	07 34 01.1	-0.4
	9.1nm,0.5s						
ZSN	Zaisan	10.95	8	*e*P	Pn	07 34 04.3	-1.7
	4.7nm,0.7s,baz=7.7						
ZSN				LR	LR	07 37 39.6	
	49nm,7.2s,baz=7.7						
KK31	Karatay Array	11.25	309	⇑Pn	Pn	07 34 09.4	-0.9
	2.0nm,0.7s,baz=128,slow=12,SNR=13						
KK31				⇓Pg		07 34 51.8	
	3.1nm,0.6s,baz=116,slow=9.7,SNR=4.2						
KK31				⇓Lg	Lg	07 36 56.8	
	18nm,0.9s						
GTA	Gaotai	13.92	73	*e*P	P	07 34 57.1	+2.6
GTA				pP	Pn	07 35 01.3	+15
GTA				sP		07 35 04.3	
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
GTA				smax	smax		
	comp=N,5.0nm,1.4s						
GTA				smax	smax		
	comp=E,5.0nm,1.0s						
KURBB	Kurchatov Arra	14.27	350	Pn	Pn	07 34 48.1	-3.3
	comp=E,0.0nm,0.3s,baz=174,slow=12,SNR=6.4						
KURBB				Lg	Lg	07 39 01.4	
	baz=186,slow=28,SNR=2.1						
BRZS	Berezniki	15.12	335	*e*P	Pn	07 35 03.1	+0.3
	baz=334						
LZH	Lanzhou	17.19	85	*e*P	Pn	07 35 24.3	-5.2
LZH				pmax	pmax		
	comp=E,12nm,1.1s						
ZALV	Zalesovo Beam	17.39	5	P	Pn	07 35 29.0	-2.6
	comp=E,0.4nm,0.3s,baz=193,slow=12,SNR=22						
BVAR	Borovoye Array	18.46	336	P	P	07 35 43.8	-0.7
	comp=E,0.4nm,0.3s,baz=168,slow=23,SNR=12						
BRVK	Borovoye	18.52	336	⇑P	P	07 35 45.2	0.0
	comp=E,12nm,0.9s						
GEYT	Alibeck	19.45	281	P	P	07 35 55.4	-0.2
	comp=E,0.5nm,0.3s,baz=113,slow=6.9,SNR=3.6						
SONM	Songino Array	20.84	50	P	P	07 36 10.9	+0.2
	comp=E,8.8nm,0.7s,baz=241,slow=11,SNR=23						
XAN	Xi'an	21.68	89	P	P	07 36 24.8	+5.1
XAN				pmax	pmax		
	comp=E,5.0nm,1.0s						
AKTO	Aktyubinsk	22.35	316	P	P	07 36 25.8	-1.0
	comp=E,1.1nm,0.5s,baz=102,slow=11,SNR=3.8						
CMAR	Chiang Mai Arr	23.18	137	P	P	07 36 34.6	-1.0
	comp=E,1.5nm,0.3s,baz=321,slow=9.4,SNR=6.4						
WSAR	Wadi Sarin	24.55	244	P	P	07 36 50.1	+1.6
	comp=E,5.3nm,0.9s,baz=306,slow=4.0,SNR=4.0						
ARU	Arti	25.52	328	P	P	07 36 57.9	+0.9
	comp=E,0.9nm,0.3s,baz=149,slow=4.4,SNR=4.2						
KSRS	Korea Array	35.98	75	P	P	07 38 29.7	+0.3
	comp=E,0.5nm,0.6s,baz=288,slow=9.1,SNR=2.0						
KLR	Kul'dur	37.53	55	P	P	07 38 43.1	+0.6
	comp=E,1.5nm,0.5s,baz=280,slow=9.0,SNR=7.2						
AKASG	Malin Array Be	40.16	308	P	P	07 39 03.6	-0.8
	comp=E,0.3nm,0.2s,baz=72,slow=8.5,SNR=2.2						
FINES	FINESS Array B	42.72	324	P	P	07 39 27.0	+1.7
	comp=E,2.0nm,0.9s,baz=95,slow=2.3,SNR=4.3						
ARCES	ARCESS Array B	44.75	335	P	P	07 39 41.0	-0.5
	comp=E,3.1nm,0.9s,baz=0.0,slow=3.6,SNR=4.2						
GERES	GERESS Array B	50.35	307	P	P	07 40 25.4	0.0
	comp=E,1.4nm,0.7s,baz=74,slow=6.1,SNR=7.8						

ILAR	Eielson Array	71.79	20	P	P	07 42 49.4	-1.1
	comp=E,0.6nm,1.0s,baz=307,slow=5.1,SNR=5.5						
WRA	Warramunga Arr	74.56	130	P	P	07 43 07.2	-0.2
	comp=E,1.4nm,0.7s,baz=327,slow=5.7,SNR=9.6						
ASAR	Alice Springs	77.11	133	P	P	07 43 22.1	+0.2
	comp=E,1.2nm,0.8s,baz=323,slow=6.3,SNR=8.4						
YKA	Yellowknife Ar	80.25	8	P	P	07 43 38.1	-0.6
	comp=E,0.6nm,0.7s,baz=351,slow=4.7,SNR=15						

IDC 20 07:32:21.9±8.0**, 17°.35S×173°.86W, h0^{km}, mb3.7**/3**,**
mb1 4.1/3**, mb1mx3.6**/47**, mbtmp3.7**/3**, Error ellipse:**
s-maj=349.9km s-min=39.6km az=140.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	49.00	258	P	P	07 41 09.9	-0.9
	0.4nm,0.7s,baz=97,slow=7.5,SNR=5.3						
ASAR	Alice Springs	49.12	253	P	P	07 41 12.2	+0.5
	1.7nm,0.4s,baz=88,slow=8.1,SNR=45						
ILAR	Eielson Array	84.43	11	P	P	07 44 55.9	0.0
	0.4nm,0.8s,baz=219,slow=3.7,SNR=4.1						

IDC 20 07:41:17.8±1.9**, 2°.38N×126°.19E, h0^{km}, mb3.4**/4**,**
mb1 3.6/4**, mb1mx3.3**/38**, mbtmp3.4**/4**, Error ellipse:**
s-maj=176.0km s-min=24.1km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	23.58	161	P	P	07 46 28.9	-1.4
	0.3nm,0.3s,baz=339,slow=10,SNR=8.8						
ASAR	Alice Springs	26.96	164	P	P	07 47 02.4	+1.1
	0.2nm,0.5s,baz=354,slow=7.9,SNR=4.1						
STKA	Stephens Creek	37.08	158	P	P	07 48 30.1	+0.3
	0.7nm,0.5s,baz=339,slow=8.6,SNR=1.8						
MKAR	Makanchi Array	58.36	326	P	P	07 51 14.8	-0.1
	0.3nm,0.5s,baz=116,slow=8.1,SNR=6.8						

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*IGQ **20** 07:45:53±1.3, 3°N±11°×8°6W±1°2, h10^{km}*
*IDC **20** 07:46:18.9±0.8, 2°.37N×84°.50W, h0^{km}, mb4.4/13, mb1 4.6/19, mb1mx4.5/36, mbtmp4.5/19, ML3.4/5, MS4.1/22, Ms1 4.1/22, ms1mx4.0/31, Error ellipse: s-maj=23.2km s-min=13.4km az=49.0*
*NEIC **20** 07:46:20.5±1.8, 2°.32N±0°.07×84°.49W±0°.07, h10^{km}±1^{km}, mb4.8/67, Error ellipse: s-maj=13.2km s-min=11.4km az=234.0*
*GCMT **20** 07:46:23.5±0.3, 2°.28N±0°.01×84°.43W±0°.02, h18^{km}±1^{km}, MW5.0/112, Moment Tensor Solution. s24,c26; s112,c158; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.44±.13; $M_{\theta\theta}$1.28±.11; $M_{\phi\phi}$-0.83±.12; $M_{r\theta}$-0.95±.29; $M_{\theta\phi}$3.53±.11; $M_{\phi r}$0.39±.27; Best double couple: $M_0$3.83900×10^{16} NP1:ϕ_s189.00000°, δ74.00000°, λ-174.00000°. NP2:ϕ_s97.00000°, δ84.00000°, λ-16.00000°. Principal axes: T 3.9740, Plg7.0000°, Azm144.0000°; N -0.2660, Plg73.0000°, Azm258.0000°; P -3.7040, Plg15.0000°, Azm52.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 20 07:46:22.7±0.4**, 2°.31N**±0°.06×**84°.50W**±0°.06**, h26^{km}, n291,**
σ1^s.09/282**, mb4.8**/41**, MS4.2**/18**, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAB1	Cabo Pasado-Ma	4.87	123	P	Pn	07 47 32.0	-2.3
CAB1				S	Sb	07 48 52.0	+6.4
CABP	Cabo Pasado	4.87	123	P	Pn	07 47 32.0	-2.3
PPLP	Puerto Lpez	5.34	136	P	Pn	07 47 37.0	-3.8
SALI	Salinas	5.68	142	P	Pn	07 47 42.0	-3.4
BV15	Puerto Quito-O	5.69	112	P	Pn	07 47 43.0	-2.6
PAC1	Pacto, Paraso	6.06	109	P	Pn	07 47 49.0	-1.8
OTAV	Otavalo	6.39	109	Pn	Pn	07 47 54.2	-1.4
OTAV				Sn	Sn	07 49 08.9	+0.9
OTAV	Otavalo	6.39	109	P	Pn	07 47 53.0	-2.6
GGPT	Toaza - Volcan	6.40	113	P	Pn	07 47 53.0	-2.6
GGPC	Guagua Pichinc	6.40	113	P	Pn	07 47 54.0	-1.9
PULU	Pululahua	6.41	111	P	Pn	07 47 55.0	-0.9
CUSE	Cuicocha Este	6.42	108	P	Pn	07 47 54.0	-2.0
CUIC	Cuicocha-Domo	6.46	108	P	Pn	07 47 55.0	-1.4
CUSW	Cuicocha Oeste	6.47	108	P	Pn	07 47 55.0	-1.6
PAYG	Puerto Ayora	6.49	243	Pn	Pn	07 47 58.1	+1.5
ILLI	Illinizas Sur	6.51	117	P	Pn	07 47 55.0	-2.3
URCU	Urcuqui	6.51	106	P	Pn	07 47 55.0	-2.3
IMBA	Imbabura, San	6.62	108	P	Pn	07 47 58.0	-0.7
BNAS	Cotopaxi Volca	6.71	116	P	Pn	07 47 59.0	-1.0
CHL1	Volc¡n Chiles	6.72	103	P	Pn	07 47 58.0	-2.3
BREF	Cotopaxi Volca	6.74	116	P	Pn	07 48 01.0	+0.4
BMOR	Cotopaxi Volca	6.75	116	P	Pn	07 48 00.0	-0.7
BTAM	Cotopaxi Volca	6.79	116	P	Pn	07 48 00.0	-1.1
ANTG	Antisana-Guama	6.84	114	P	Pn	07 48 01.0	-0.9
ANTM	Antisana-La Mi	6.88	114	P	Pn	07 48 02.0	-0.5
ANTS	Antisana-Sarah	6.92	114	P	Pn	07 48 03.0	0.0
PIS1	Pisayambo	6.97	119	P	Pn	07 48 03.0	-0.6
PIAT	Ana Tenorio	7.05	118	P	Pn	07 48 04.0	-0.6
BMAS	Trigal station	7.11	122	P	Pn	07 48 05.0	-0.5
BRUN	Tungurahua Vol	7.13	121	P	Pn	07 48 06.0	+0.4
BULB	Ulba Tungurahu	7.14	121	P	Pn	07 48 06.0	+0.2
HDC	Heredia	7.66	3		Pn	07 48 13.3	+0.6
JTS	Las Juntas de	7.95	357	Pn	Pn	07 48 14.8	-1.8
	16nm,0.3s,baz=111,slow=9.2,SNR=48						
JTS				LR	LR	07 50 46.6	
	comp=Z,2µm,21.1s,baz=238,slow=34						
JTS	Las Juntas de	7.95	357	Pn	Pn	07 48 15.6	-1.0
BCIP	Isla Barro Col	8.25	34	Pn	Pn	07 48 22.9	+2.3
ACON	Acoyapa	9.62	356		Pn	07 48 40.5	+0.9
ESPN	Las Esperanzas	9.83	1		Pn	07 48 43.4	+1.1
BOAB	BOACO BROADBAN	10.14	354	Pn	Pn	07 48 47.8	+1.1
ROSC	El Rosal	10.47	76	Pn	Pn	07 48 52.0	+0.4
	2.4nm,0.3s,baz=3.3,slow=2.4,SNR=21						
ROSC	El Rosal	10.47	76	Pn	Pn	07 48 52.9	+1.3
CRIN	San Cristobal	10.63	346		Pn	07 48 54.9	+1.4
ATAH	Atahualpa	11.19	147	Pn	Pn	07 49 02.8	+1.4
	1.1nm,0.3s,baz=294,slow=8.9,SNR=14						
ATAH				LR	LR	07 52 54.5	
	comp=Z,1µm,18.8s,baz=317,slow=35						
TGUH	Tegucigalpa,Un	11.99	347	Pn	Pn	07 49 14.0	+1.8
SNET	Serv Nac Est T	12.24	338		Pn	07 49 16.8	+1.4
MTO3	Montecristo	12.94	339		Pn	07 49 26.2	+1.0
ESQI	Esquipulas	13.08	339		Pn	07 49 27.7	+0.7
SDV	Santo Domingo	15.27	64	Pn	Pn	07 49 55.4	-1.4
	0.2nm,0.3s,baz=219,slow=15,SNR=6.7						
SDV				LR	LR	07 55 15.7	
	comp=Z,1µm,21.7s,baz=244,slow=35						
SDV	Santo Domingo	15.27	64	Pn	Pn	07 49 55.2	-1.6
SDV				IAmb	IAmb	07 50 05.5	
	comp=Z,46nm,0.9s						
NNA	Nana	16.11	152	Pn	P	07 50 09.4	-1.3
	comp=Z,0.7nm,0.3s,baz=333,slow=14,SNR=4.0						
NNA				LR	LR	07 55 55.2	
	comp=Z,295nm,20.5s,baz=316,slow=36						
NNA	Nana	16.11	152	Pn	Pn	07 50 06.8	-0.8
CMIG	Matias Romero	17.89	326	P	P	07 50 30.0	-0.3
	comp=Z,0.2nm,0.3s,baz=121,slow=7.7,SNR=11						
CMIG				LR	LR	07 56 12.5	
	comp=Z,431nm,19.4s,baz=140,slow=33						
TEIG	Tepich	18.19	349	LR	LR	07 56 56.8	
	comp=Z,697nm,19.2s,baz=162,slow=35						
TLIG	Tlapa	20.51	319	P	P	07 50 58.2	-1.0
SDDR	Presa de Saban	21.03	37	P	P	07 51 03.9	-0.7
SDDR				IAmb	IAmb	07 51 18.7	
	comp=Z,71nm,1.5s						
PCRV	Puerto La Cruz	21.23	68	P	P	07 51 07.2	+0.3
	comp=Z,44nm,1.0s,baz=269,slow=8.6,SNR=7.3						
PCRV				LR	LR	08 00 30.2	
	comp=Z,597nm,21.6s,slow=40						
MLPR	Magueyes Islan	23.15	47	P	P	07 51 25.9	-1.2
MLPR				IAmb	IAmb	07 51 34.3	
	comp=Z,31nm,1.1s						
MPR	Mayaguez	23.23	46	P	P	07 51 27.3	-0.7
MPR				IAmb	IAmb	07 51 52.6	
	comp=Z,36nm,1.2s						
OBIP	Obispado Ponce	23.51	47	P	P	07 51 30.5	-0.3
AOPR	Arecibo Observ	23.60	46	P	P	07 51 32.4	+0.7
SJG	San Juan	23.89	48	P	P	07 51 33.9	-0.5
	comp=Z,21nm,0.8s,baz=227,slow=5.7,SNR=7.5						
SJG				LR	LR	08 01 39.8	
	comp=Z,109nm,19.5s,baz=239,slow=39						
SJG	San Juan	23.89	48	P	P	07 51 34.3	-0.2
PDPR	Patillas Dam,	23.93	48	P	P	07 51 34.4	-0.4
HUMP	Col San Antoni	24.13	48	P	P	07 51 35.8	-0.9
HUMP				IAmb	IAmb	07 51 39.2	
	comp=Z,29nm,0.9s						
MTP	Monte Pirata	24.33	49	P	P	07 51 37.8	-0.7
MTP				IAmb	IAmb	07 51 42.8	
	comp=Z,32nm,1.2s						
PTGA	Pitinga	24.72	97	P	P	07 51 41.7	-0.4
	comp=Z,1.2nm,0.3s,baz=284,slow=8.0,SNR=1.9						
PTGA				LR	LR	08 01 13.9	
	comp=Z,372nm,18.8s,baz=278,slow=36						
PB16	IPOC Station P	25.27	145	P	P	07 51 49.1	+1.4
MNMC	Minye Minye	25.86	146	P	P	07 51 50.8	-1.9
LVC	Limon Verde	29.07	149	LR	LR	08 04 46.2	
	comp=Z,438nm,19.1s,baz=316,slow=38						
SIV	San Ignacio	29.44	129	P	P	07 52 24.3	-0.3
	comp=Z,3.0nm,1.1s,baz=319,slow=11,SNR=6.3						
SIV				LR	LR	08 04 44.8	
	comp=Z,1µm,18.6s,baz=296,slow=38						
344A	Westbrook Farm	29.58	349	P	P	07 52 26.0	+0.4
H06E1	SOCORRO T-PHAS	30.62	304	T	T	08 24 48.4	
	SNR=57						
LRAL	Lakeview Retre	30.66	356	P	P	07 52 34.1	-0.9
	baz=175						
LRAL	Lakeview Retre	30.66	356	P	P	07 52 35.0	-0.1
LRAL				IAmb	IAmb	07 52 36.6	
	comp=Z,11nm,0.9s						
GOGA	Godfrey	30.96	2	P	P	07 52 37.3	-0.4
	baz=182						
HPIG		31.80	322	P	P	07 52 46.0	+0.4
WLAR	White Oak Lake	32.24	346	P	P	07 52 49.5	+0.5
OXF	Oxford	32.37	352	P	P	07 52 49.9	-0.2
	baz=171						
TX31	Lajitas Ar. Si	32.48	328	P	P	07 52 51.6	+0.3
TX31				IAmb	IAmb	07 52 52.3	
	comp=Z,6.9nm,0.8s						
TX32	Lajitas Array	32.48	328	P	P	07 52 50.2	-1.1
TXAR	Lajitas Array	32.48	328	P	P	07 52 50.7	-0.6
	comp=Z,1.5nm,0.7s,baz=144,slow=9.2,SNR=21						
TXAR				LR	LR	08 04 49.7	
	comp=Z,321nm,21.3s,baz=0.0,slow=34						
TXAR	Lajitas Array	32.48	328	P	P	07 52 51.2	-0.1
MIAR	Mount Ida	33.17	346	P	P	07 52 56.3	-0.9
	baz=163						
W60A	Pink Hill	33.19	10	P	P	07 52 56.8	-0.5
	baz=192						
W41B	Gary Mavity, V	33.49	348	P	P	07 52 59.4	-0.5
	baz=166						
WVT	Waverly	33.80	355	P	P	07 53 01.5	-1.0
	baz=174						
U54A	Nelsons Funny	34.14	4	P	P	07 53 05.3	-0.4
	baz=185						
LCAR	Lake Charles	34.16	350	P	P	07 53 04.6	-1.1
LCAR				IAmb	IAmb	07 53 12.9	
	comp=Z,9.7nm,1.0s						
U40A	Yellville	34.75	348	P	P	07 53 10.6	-0.3
	baz=165,SNR=5.0						
T57A	Hurt	34.86	7	P	P	07 53 11.9	+0.1
	baz=189						
BLA	Blacksburg	34.94	6	P	P	07 53 12.6	+0.1
	baz=187						
TUL1	Leonard	35.04	344	P	P	07 53 13.3	0.0
	baz=160						
MNTX	Cornudas Mount	35.25	328	P	P	07 53 15.3	0.0
	baz=142,SNR=13						
MNTX	Cornudas Mount	35.25	328	P	P	07 53 15.2	0.0
MNTX				IAmb	IAmb	07 53 16.7	
	comp=Z,18nm,1.2s						
MGMO	Mountain Grove	35.41	349	P	P	07 53 15.8	-0.7
MGMO				IAmb	IAmb	07 53 17.3	
	comp=Z,15nm,0.9s						
S54A	Dingess, Beckl	35.45	4	P	P	07 53 16.6	-0.2
	baz=186						
WCI	Wyandotte Cave	35.79	358	P	P	07 53 19.5	-0.2
	baz=177						
MSTX	Muleshoe	35.83	334	P	P	07 53 20.0	-0.3
	baz=148						
MSTX	Muleshoe	35.83	334	P	P	07 53 19.8	-0.6
MSTX				IAmb	IAmb	07 53 25.1	
	comp=Z,20nm,1.3s						
R54A	Victor	35.85	5	P	P	07 53 20.2	-0.1
	baz=186						
H03N2	Juan Fernandez	35.94	172	T	T	08 31 19.8	
	baz=351,slow=76,SNR=90						
H03N1	Juan Fernandez	35.94	172	T	T	08 31 22.9	
	baz=351,slow=76,SNR=142						
H03N3	Juan Fernandez	35.96	172	T	T	08 31 21.4	
	baz=351,slow=76,SNR=120						
CCM	Cathedral Cave	36.11	351	P	P	07 53 22.1	-0.5
	baz=168						
AMTX	Amarillo	36.14	336	P	P	07 53 23.2	+0.2
	baz=150						
AMTX	Amarillo	36.14	336	P	P	07 53 22.2	-0.8
R58A	Rapidan	36.31	9	P	P	07 53 24.3	0.0
	baz=191						
Q53A	Leroy	36.48	4	P	P	07 53 25.6	-0.1
	baz=185						
Q57A	Strasburg	36.98	8	P	P	07 53 29.9	0.0
	baz=190						
Q58A	Fox Den Farm,	36.99	9	P	P	07 53 30.6	+0.6
	baz=191						
121A	Cookes Peak, D	37.18	326	P	P	07 53 33.4	+1.4
	baz=139,SNR=8.9						
121A	Cookes Peak, D	37.18	326	P	P	07 53 32.7	+0.7
121A				IAmb	IAmb	07 53 35.0	
	comp=Z,18nm,0.9s						
319A	Douglas	37.19	324	P	P	07 53 32.8	+0.8
319A				IAmb	IAmb	07 53 34.6	
	comp=Z,19nm,0.9s						
MCWV	Mont Chateau	37.42	6	P	P	07 53 33.4	-0.3
	baz=188						
BNM	Barren Site	37.82	329	P	P	07 53 37.9	+0.4
O53A	New Philadelph	37.89	4	P	P	07 53 37.2	-0.4
	baz=185						
HDIL	Hopedale	38.32	354	P	P	07 53 40.9	-0.3
	baz=172						
ANMO	Albuquerque	38.36	330	P	P	07 53 42.8	+0.9
	baz=143						
ANMO	Albuquerque	38.36	330	P	P	07 53 42.2	+0.3
CPUP	Villa Florida	38.73	139	LR	LR	08 11 50.1	
	comp=Z,338nm,19.0s,baz=325,slow=40						
TUC	Tucson	38.75	323	P	P	07 53 46.0	+0.9
	baz=135						
TUC	Tucson	38.75	323	P	P	07 53 46.0	+0.9
CBKS	Cedar Bluff	38.91	341	P	P	07 53 47.0	+0.7
	baz=155						
M53A	WI Miller and	39.11	5	P	P	07 53 47.4	-0.5
	baz=186						
T25A	Trinidad	39.21	335	P	P	07 53 50.5	+1.4
	baz=148,SNR=10.0						
N59A	State Game Lan	39.24	10	P	P	07 53 50.9	+1.9
	baz=194						
M56A	Emporium	39.42	7	P	P	07 53 49.9	-0.6
	baz=190						
M57A	Sunshine Farm,	39.42	9	P	P	07 53 50.0	-0.4
	baz=192						
L53A	Girard	39.66	5	P	P	07 53 51.8	-0.6
	baz=187						
214A	Organ Pipe Nat	39.75	321	P	P	07 53 54.8	+1.4
	baz=132,SNR=16						
214A	Organ Pipe Nat	39.75	321	P	P	07 53 53.9	+0.4
214A				IAmb	IAmb	07 53 55.9	
	comp=Z,17nm,0.9s						
X18A	Snowflake	39.87	326	P	P	07 53 54.9	+0.3
PIX	Pinacate	39.90	320	P	P	07 53 54.4	-0.2
KSCO	Kaye Shedlock’	40.10	338	P	P	07 53 57.2	+0.9
	baz=151,SNR=5.8						
L57A	Andrews Acres	40.11	9	P	P	07 53 55.7	-0.6
	baz=192						
W18A	Petrified Fore	40.20	327	P	P	07 53 58.4	+1.1
	baz=139,SNR=6.1						
SDCO	Great Sand Dun	40.20	334	P	P	07 53 58.3	+1.0
	baz=146,SNR=25						
SDCO	Great Sand Dun	40.20	334	P	P	07 53 58.0	+0.6
SDCO				IAmb	IAmb	07 53 59.6	
	comp=Z,16nm,0.9s						
SFX	San Felipe	40.48	318	P	P	07 54 00.1	+0.7
S22A	4UR Ranch, Cre	40.79	333	P	P	07 54 03.2	+0.9
	baz=145,SNR=6.8						
K57A	Scipio Center	40.88	9	P	P	07 54 04.0	+1.5
	baz=192						
Q24A	Divide	41.06	335	P	P	07 54 05.5	+1.0
	baz=148						
MVCO	Mesa Verde	41.16	330	P	P	07 54 06.3	+1.0
	baz=142,SNR=9.8						
MVCO	Mesa Verde	41.16	330	P	P	07 54 04.8	-0.5
L64A	Middleborough	41.32	15	P	P	07 54 08.3	+2.1
	baz=201						
WUAZ	Wupatki	41.39	326	P	P	07 54 08.3	+1.2
	baz=137,SNR=13						
GLA	Glamis	41.75	320	P	P	07 54 10.7	+0.8
	baz=131						
ISCO	Idaho Springs	41.96	335	P	P	07 54 12.7	+0.8
	baz=148,SNR=7.1						
SMCO	Snowmass	42.03	334	P	P	07 54 13.1	+0.5
SMCO				IAmb	IAmb	07 54 14.5	
	comp=Z,18nm,0.8s						
PDMCI	Parker Dam,Lak	42.15	322	P	P	07 54 14.3	+1.1
	baz=133,SNR=5.0						
IKP	In-Ko-Pah, Jac	42.32	319	P	P	07 54 16.0	+1.4
	baz=129						
BC3	Big Chuckawall	42.54	321	P	P	07 54 17.8	+1.3
	baz=131,SNR=8.5						
I60A	Shoreham	42.55	12	P	P	07 54 16.4	+0.2
	baz=197						
U15A	North Rim	42.56	326	P	P	07 54 17.0	+0.2
U15A				IAmb	IAmb	07 54 19.5	
	comp=Z,15nm,1.1s						
ECSD	EROS Data Cent	42.63	347	P	P	07 54 15.9	-1.0
	baz=162,SNR=8.3						
IRM	Iron Mountain	42.67	321	P	P	07 54 18.5	+1.0
	baz=131,SNR=19						
MONP2	Monument Peak	42.68	319	P	P	07 54 17.9	+0.2
	baz=129						
BELC	Belle Mtn. Jos	43.11	321	P	P	07 54 22.3	+1.2
	baz=130,SNR=10						
109C	Camp Elliot, M	43.13	318	P	P	07 54 22.1	+1.0
	baz=128						
109C	Camp Elliot, M	43.13	318	P	P	07 54 21.6	+0.5
109C				IAmb	IAmb	07 54 23.3	
	comp=Z,18nm,1.2s						
TPFO	Pinon Flats	43.15	320	P	P	07 54 22.5	+1.1
	baz=130						
PFO	Pinyon Flats O	43.16	320	P	P	07 54 22.3	+0.9
	baz=130						
KNB	Kanab	43.28	326	P	P	07 54 23.7	+1.2
SPMN	Marine on St.	43.36	351	P	P	07 54 21.9	-0.9
	baz=168						
O20A	White River Ci	43.37	333	P	P	07 54 24.0	+0.8
	baz=144						
GMRC	Granite Mounta	43.41	322	P	P	07 54 24.4	+0.9
	baz=131,SNR=11						
G57A	Newington	43.44	10	P	P	07 54 22.7	-0.6
	baz=194						
SRU	San Rafael Swe	43.64	330	P	P	07 54 25.7	+0.3
SZCU	Shurtz Canyon	43.84	327	P	P	07 54 28.0	+1.0
HEC	Hector,Ludlow	43.86	321	P	P	07 54 28.5	+1.4
	baz=131						
BBRC	Big Bear Solar	43.86	320	P	P	07 54 28.9	+1.6
	baz=130,SNR=7.6						
MSU	Marysvale	44.03	328	P	P	07 54 28.6	0.0
TCRU	Three Creeks R	44.24	328	P	P	07 54 30.5	+0.2
SHPR	Sheep Range	44.26	324	P	P	07 54 30.6	+0.3
H64A	Troy	44.27	16	P	P	07 54 31.3	+1.3
	baz=202						
CIS	Catalina Islan	44.31	318	P	P	07 54 31.7	+1.1
	baz=127						
BFSC	Mount Baldy Ra	44.32	320	P	P	07 54 31.8	+0.9
	baz=129,SNR=9.7						
RDMU	Red Mountain	44.33	332	P	P	07 54 30.7	-0.2
SHOC	Shoshone, Teco	44.52	322	P	P	07 54 32.9	+0.7
	baz=132,SNR=15						
G63A	Kingsbury	44.60	15	P	P	07 54 33.6	+0.8
	baz=201						
PLCA	Paso Flores	44.69	165	P	P	07 54 33.8	+0.2
	comp=Z,1.9nm,0.7s,baz=328,slow=8.3,SNR=9.3						
PLCA				LR	LR	08 09 19.3	
	comp=Z,140nm,21.5s,baz=334,slow=31						
PLCA	Paso Flores	44.69	165	P	P	07 54 33.5	-0.1
K22A	Casper	44.73	337	P	P	07 54 35.1	+1.0
	baz=148,SNR=5.1						
PRN	Pahroc Range	44.81	325	P	P	07 54 35.8	+1.1
EDW2	Edwards Air Fo	44.94	320	P	P	07 54 36.6	+0.9
	baz=129,SNR=8.4						
PSUT	Pine Spring	44.94	327	P	P	07 54 36.1	+0.3
E58A	La Victoria	44.97	11	P	P	07 54 36.8	+1.2
	baz=196						
RSSD	Black Hills	45.09	340	P	P	07 54 37.8	+0.8
	baz=152						
LRMC	Laurel Mtn Rad	45.12	321	P	P	07 54 38.4	+1.2
	baz=130						
TPNV	Topopah Spring	45.20	324	P	P	07 54 39.0	+1.2
	baz=132,SNR=12						
TPNV	Topopah Spring	45.20	324	P	P	07 54 38.9	+1.0
FURC	Furnace Creek,	45.25	323	P	P	07 54 39.2	+1.2
	baz=131,SNR=12						
MPMC	Manual Prospec	45.37	322	P	P	07 54 39.9	+0.7
	baz=130,SNR=8.6						
CTU	Camp Tracy	45.46	331	P	P	07 54 40.0	+0.2
DUG	Dugway, Tooele	45.61	329	P	P	07 54 41.8	+0.8
	baz=139						
E61A	Lac Etchemin	45.62	14	P	P	07 54 41.8	+0.9
	baz=200						
ARVC	Arvin	45.63	320	P	P	07 54 41.9	+0.8
	baz=128						
F64A	Sherman	45.63	16	P	P	07 54 42.3	+1.4
	baz=203						
ISA	Isabella, Lake	45.73	321	P	P	07 54 43.2	+1.2
	baz=129,SNR=6.3						
R11A	Troy Canyon, C	45.77	325	P	P	07 54 43.1	+0.8
	baz=134						
EYMN	Ely	45.87	353	P	P	07 54 41.9	-0.8
	baz=170						
GRAC	Grapevine Rang	45.90	323	P	P	07 54 44.7	+1.4
	baz=131						
D60A	Saint Jean D’O	45.98	13	P	P	07 54 44.8	+1.3
	baz=199						
CWC	Cottonwood Cre	45.98	322	P	P	07 54 44.9	+0.9
	baz=130						
LATQ	La Tuque	46.04	11	P	P	07 54 45.2	+1.2
	baz=196						
BW06	Boulder Array	46.08	334	P	P	07 54 44.4	-0.4
	baz=144,SNR=5.1						
PDAR	Pinedale Array	46.08	334	P	P	07 54 44.4	-0.4
	comp=Z,2.7nm,0.8s,baz=136,slow=8.6,SNR=19						
PDAR				PcP	PcP	07 56 20.3	-0.6
	comp=Z,0.8nm,0.7s,baz=137,slow=5.1,SNR=5.5						
PDAR				LR	LR	08 14 52.0	
	comp=Z,299nm,19.2s,baz=157,slow=37						
PDAR	Pinedale Array	46.08	334	P	P	07 54 44.6	-0.2
PKM	Mcpherson Peak	46.13	319	P	P	07 54 46.1	+0.9
	baz=127						
VES	Vestal, Richgr	46.23	320	P	P	07 54 47.0	+1.1
	baz=128,SNR=9.1						
SPUT	South Promonto	46.27	331	P	P	07 54 45.9	-0.3
E28A	Huff	46.30	345	P	P	07 54 45.9	-0.3
D61A	St Aubert, Com	46.42	13	P	P	07 54 47.5	+0.4
	baz=200						
SMMC	Simmler	46.50	319	P	P	07 54 49.3	+1.3
	baz=127,SNR=7.8						
TPH	Tonopah	46.53	324	P	P	07 54 48.4	+0.1
HVU	Hansel Valley	46.79	331	P	P	07 54 49.7	-0.5
AGMN	Agassiz Nation	46.85	350	P	P	07 54 50.0	-0.5
	baz=164,SNR=9.0						
AGMN	Agassiz Nation	46.85	350	P	P	07 54 49.9	-0.5
LSQQ	Lebel-sur-Quev	47.02	7	P	P	07 54 50.6	-1.2
	baz=190						
REDW	Red Top Meadow	47.13	334	P	P	07 54 52.6	-0.4
MDND	Maddock	47.21	346	P	P	07 54 53.0	-0.3
	baz=159						
ELK	Elko	47.27	328	P	P	07 54 54.5	+0.3
ELK				IAmb	IAmb	07 54 55.8	
	comp=Z,5.6nm,0.8s						
OMMB	Old Mammoth Mi	47.29	322	P	P	07 54 54.9	+0.4
NV11	Mina Array Sit	47.31	324	P	P	07 54 55.3	+0.8
NV11				IAmb	IAmb	07 54 56.6	
	comp=Z,8.6nm,0.9s						
MDPB	Devils Postpil	47.35	322	P	P	07 54 55.4	+0.5
MDPB				IAmb	IAmb	07 54 56.8	
	comp=Z,10nm,0.9s						
NVAR	Mina Array Bea	47.40	324	P	P	07 54 56.3	+1.1
	comp=Z,6.2nm,0.7s,baz=131,slow=7.4,SNR=63						
NVAR				PcP	PcP	07 56 26.3	+0.7
	comp=Z,1.0nm,0.9s,baz=152,slow=4.1,SNR=3.0						
NVAR				LR	LR	08 13 04.4	
	comp=Z,254nm,21.8s,baz=168,slow=34						
NVAR	Mina Array Bea	47.40	324	P	P	07 54 55.5	+0.3
MATQ	Matagami	47.64	6	P	P	07 54 55.6	-0.9
	baz=189						
RLMT	Red Lodge	47.89	336	P	P	07 54 58.5	-0.4
	baz=146						
LAO	LASA Array	48.09	340	P	P	07 55 00.2	0.0
	baz=150						
QLMT	Earthquake Lak	48.55	335	P	P	07 55 04.3	+0.4
ULM	Lac du Bonnet	48.74	350	P	P	07 55 04.2	-0.8

	comp=Z,14nm,0.9s,baz=167,slow=8.0,SNR=27						
ULM				LR	LR	08 16 05.4	
	comp=Z,206nm,19.1s,baz=284,slow=37						
HLID	**Hailey**	**48.92**	**331**	P	**P**	**07 55 07.1**	**+0.3**
	baz=139,SNR=10						
HLID	**Hailey**	**48.92**	**331**	P	**P**	**07 55 06.5**	**-0.3**
DGMT	**Dagmar**	**49.01**	**343**	P	**P**	**07 55 07.3**	**+0.1**
	baz=154						
BCYI	**Bear Canyon**	**49.02**	**333**	P	**P**	**07 55 07.0**	**-0.6**
MCMT	**McKenzie Canyo**	**49.17**	**333**	P	**P**	**07 55 08.4**	**-0.4**
BOZ	**Bozeman (W)**	**49.24**	**335**	P	**P**	**07 55 09.3**	**+0.1**
	baz=143,SNR=10						
ORV	**Oroville**	**50.04**	**323**	P	**P**	**07 55 15.7**	**+0.6**
WVOR	**Wild Horse Val**	**50.27**	**327**	P	**P**	**07 55 16.1**	**-0.9**
WVOR				IAmb	IAmb	07 55 18.2	
	comp=Z,17nm,1.2s						
EGMT	**Eagleton**	**50.48**	**338**	P	**P**	**07 55 18.4**	**-0.1**
	baz=146						
O03E	**Paynes Creek**	**50.68**	**323**	P	**P**	**07 55 20.2**	**+0.1**
	baz=129						
MSO	**Missoula**	**51.20**	**334**	P	**P**	**07 55 24.2**	**+0.3**
	baz=141,SNR=6.9						
MSO	**Missoula**	**51.20**	**334**	P	**P**	**07 55 23.6**	**-0.4**
MSO				IAmb	IAmb	07 55 25.1	
	comp=Z,11nm,0.8s						
M04C	**Macdoel**	**51.63**	**325**	P	**P**	**07 55 27.1**	**-0.3**
	baz=130						
N02D	**Trinity Center**	**51.64**	**323**	P	**P**	**07 55 27.2**	**-0.1**
	baz=128						
L04D	**Klamath Falls**	**52.18**	**325**	P	**P**	**07 55 31.2**	**-0.1**
	baz=129						
J05D	**Fort Rock, OR**	**52.26**	**326**	P	**P**	**07 55 32.5**	**+0.5**
	baz=131,SNR=9.1						
J04D	**Umpqua Nationa**	**52.72**	**326**	P	**P**	**07 55 35.8**	**+0.4**
	baz=130						
E09A	**Wood Farm, Sta**	**52.89**	**331**	P	**P**	**07 55 35.4**	**-0.9**
E09A				IAmb	IAmb	07 55 37.9	
	comp=Z,12nm,0.9s						
I05D	**Terrebonne, OR**	**53.01**	**327**	P	**P**	**07 55 38.0**	**+0.6**
	baz=132,SNR=5.5						
I04A	**Tendick Farm,**	**53.24**	**326**	P	**P**	**07 55 38.2**	**-0.9**
	baz=130						
G05D	**Wamic, OR**	**53.60**	**328**	P	**P**	**07 55 42.5**	**+0.8**
	baz=132						
NEW	**Newport**	**53.70**	**333**	P	**P**	**07 55 42.1**	**-0.3**
	baz=138						
J01E	**Myrtle Point**	**53.70**	**325**	P	**P**	**07 55 42.4**	**-0.1**
	baz=128						
I03D	**Drain, OR**	**53.70**	**326**	P	**P**	**07 55 42.7**	**+0.3**
	baz=129						
F05D	**White Salmon**	**54.10**	**329**	P	**P**	**07 55 46.0**	**+0.7**
	baz=132						
I02D	**Swisshome**	**54.24**	**326**	P	**P**	**07 55 47.2**	**+0.9**
	baz=129						
TAOE	**Nuku Hiva Isla**	**56.55**	**258**	*e*LR	LR	08 12 49.4	
A04D	**Lummi Island**	**56.64**	**331**	P	**P**	**07 56 03.6**	**+0.1**
	baz=132						
YKA	**Yellowknife Ar**	**64.10**	**345**	P	**P**	**07 56 53.5**	**-0.8**
	comp=Z,7.1nm,0.8s,baz=138,slow=7.1,SNR=119						
YKA				LR	LR	08 27 02.9	
	comp=Z,140nm,19.2s,baz=0.0,slow=38						
PPT	**Papeete**	**67.06**	**250**	LR	LR	08 18 40.0	
	comp=Z,284nm,20.8s,baz=20,slow=29						
PPT2	**Papeete2**	**67.06**	**250**	*e*LR	LR	08 17 37.1	
	comp=Z,408nm,25.0s						
TBI	**Tubuai**	**68.10**	**244**	*e*LR	LR	08 18 07.2	
	comp=Z,257nm,27.0s						
INK	**Inuvik**	**73.70**	**343**	P	**P**	**07 57 54.0**	**+0.2**
INK				IAmb	IAmb	07 57 55.5	
	comp=Z,11nm,1.0s						
N25K	**Chitina, Valde**	**74.14**	**334**	P	**P**	**07 57 57.5**	**+0.7**
	baz=116						
SCRK	**Sand Creek**	**74.95**	**337**	P	**P**	**07 58 02.0**	**+0.6**
	baz=117						
M24K	**Tolsona, Glenn**	**75.03**	**335**	P	**P**	**07 58 02.4**	**+0.5**
	baz=114						
SUMG	**Summit**	**75.70**	**13**	*i* P	**P**	**07 58 07.5**	**+1.6**
SUMG	**Summit**	**75.70**	**13**	*i* P	**P**	**07 58 07.5**	**+1.6**
HDA	**Harding Lake**	**76.31**	**337**	P	**P**	**07 58 09.2**	**+0.1**
	baz=114						
HDA	**Harding Lake**	**76.31**	**337**	P	**P**	**07 58 08.6**	**-0.4**
ILAR	**Eielson Array**	**76.43**	**337**	P	**P**	**07 58 09.4**	**-0.3**
	comp=Z,4.3nm,0.9s,baz=129,slow=3.9,SNR=25						
ILAR				LR	LR	08 33 17.8	
	comp=Z,174nm,20.1s,baz=140,slow=37						
ILAR	**Eielson Array**	**76.43**	**337**	P	**P**	**07 58 09.6**	**-0.2**
RND	**Reindeer**	**76.68**	**335**	P	**P**	**07 58 11.9**	**+0.7**
RND				IAmb	IAmb	07 58 14.2	
	comp=Z,6.9nm,0.8s						
MCK	**McKinley**	**76.84**	**336**	P	**P**	**07 58 12.3**	**+0.2**
	baz=112						
CUT	**Chulitna**	**76.92**	**334**	P	**P**	**07 58 12.6**	**+0.1**
	baz=111						
RAR	**Rarotonga**	**77.13**	**248**	LR	LR	08 24 53.0	
	comp=Z,526nm,20.9s,baz=288,slow=30						
I23K	**Minto, Yukon-K**	**77.55**	**337**	P	**P**	**07 58 16.4**	**+0.4**
	baz=112						
MLY	**Manley**	**78.05**	**337**	P	**P**	**07 58 18.8**	**-0.1**
	baz=111						
COLD	**Coldfoot**	**78.64**	**339**	P	**P**	**07 58 22.8**	**+0.7**
	baz=112						
TOLK	**Toolik Lake Re**	**78.96**	**340**	P	**P**	**07 58 24.4**	**+0.5**
	baz=113						
ESDC	**Sonseca Array**	**81.25**	**50**	P	**P**	**07 58 38.1**	**+1.3**
	comp=Z,2.1nm,1.0s,baz=268,slow=6.1,SNR=7.0						
DAG	**Danmarks Havn**	**82.36**	**12**	*i* P	**P**	**07 58 42.5**	**+0.8**
	comp=Z,4.7nm,0.9s						
DAG	**Danmarks Havn**	**82.36**	**12**	*i* P	**P**	**07 58 42.6**	**+0.8**
DAG				IAmb	IAmb	07 58 44.6	
	comp=Z,4.7nm,0.9s						
TOA0	**Torodi Ar. Sit**	**85.78**	**77**	P	**P**	**07 58 58.9**	**-1.6**
TOA0				IAmb	IAmb	07 59 00.6	
	comp=Z,6.6nm,1.4s						
TORD	**Torodi Ar. Bea**	**85.78**	**77**	P	**P**	**07 59 00.8**	**+0.3**
	comp=Z,1.3nm,0.8s,baz=311,slow=3.1,SNR=3.2						
TORD	**Torodi Ar. Bea**	**85.78**	**77**	P	**P**	**07 58 56.2**	**-4.3**
NOA	**NORSAR Array B**	**90.78**	**29**	LR	LR	08 38 13.9	
	comp=Z,44nm,18.6s,baz=265,slow=34						
QSPA	**South Pole Qui**	**92.34**	**180**	P	**P**	**07 59 31.2**	**+0.6**
ASAR	**Alice Springs**	**137.21**	**237**	PKP	**PKiKP**	**08 05 45.9**	**-0.6**
	comp=Z,0.8nm,0.9s,baz=90,slow=2.3,SNR=4.5						
WRA	**Warramunga Arr**	**138.22**	**242**	PKP	**PKPdf**	**08 05 46.9**	**+0.4**
	comp=Z,1.1nm,0.7s,baz=102,slow=2.5,SNR=9.4						

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*NOU **20** 08:01:29.3, 16°.45S×168°.31E, h0km, MLv5.0, Vanuatu Islands*
*IDC **20** 08:01:29.9±1.1, 16°.55S×168°.22E, h0km, mb4.1/9, mb1 4.3/10, mb1mx4.1/29, mbtmp4.1/10, ML4.5/1, MS3.7/6, Ms1 3.7/6, ms1mx3.3/30, Error ellipse: s-maj=37.5km s-min=19.3km az=130.0*
ISC 20 08:01:35.2±0.8, **16°.51S**±0°.06×**168°.2E**±0°.1, **h35**km, **n25**, σ**1s.51**/22, **mb4.0**/9, **MS3.7**/5, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	**Devils Point**	**1.21**	**180**	P	**Pn**	**08 01 51.9**	**-3.7**
SANVU	**Saraoutou**	**1.42**	**318**	P	**Pn**	**08 01 55.6**	**-2.9**
LIFNC	**LIFOU**	**4.34**	**192**	P	**Pn**	**08 02 37.4**	**-1.2**
KOUNC	**Koumac, New Ca**	**5.46**	**222**	P	**Pn**	**08 02 53.9**	**-0.2**
YATNC	**Mamie plateau,**	**5.65**	**192**	P	**Pn**	**08 02 54.9**	**-1.8**
DZM	**Mont Dzumac**	**5.77**	**196**	Pn	**Pn**	**08 02 57.1**	**-1.4**
	13nm,0.3s,baz=357,slow=22,SNR=117						
DZM				Sn	**Sn**	**08 04 04.4**	**+0.9**
	4.0nm,0.3s,baz=305,slow=21,SNR=5.9						
DZM				LR	LR	08 04 58.7	
	comp=Z,535nm,21.1s,baz=347,slow=36						
DZM	**Mont Dzumac**	**5.77**	**196**	*e*Pn	**Pn**	**08 02 56.7**	**-1.7**
	23nm,0.2s						
DZM				*e*Sn	**Sn**	**08 04 02.5**	**-1.0**
	17nm,0.2s						
DZM				*e*LR	LR	08 04 17.9	
	comp=Z,663nm,24.2s						
DZM	**Mont Dzumac**	**5.77**	**196**	P	**Pn**	**08 02 57.5**	**-0.9**
ONTNC	**Ouen Toro**	**5.99**	**196**	P	**Pn**	**08 03 01.5**	**+0.1**
OUENC	**Ouen Island, N**	**6.01**	**192**	P	**Pn**	**08 03 01.5**	**-0.1**
PINNC	**Pines Island,**	**6.11**	**186**	P	**Pn**	**08 03 02.4**	**-0.6**
HNR	**Honiara**	**10.67**	**310**	LR	LR	08 07 49.4	
	comp=Z,304nm,18.1s,baz=43,slow=35						
PMG	**Port Moresby**	**21.66**	**286**	LR	LR	08 13 21.2	
	comp=Z,249nm,18.2s,baz=107,slow=33						
URZ	**Urewera**	**23.04**	**162**	LR	LR	08 13 04.0	
	comp=Z,141nm,18.6s,baz=31,slow=30						
STKA	**Stephens Creek**	**28.57**	**233**	P	**P**	**08 07 28.1**	**+0.1**
	1.0nm,0.3s,baz=103,slow=6.5,SNR=4.9						
WRA	**Warramunga Arr**	**32.30**	**259**	P	**P**	**08 08 00.6**	**-0.5**
	0.7nm,0.6s,baz=88,slow=9.0,SNR=5.3						
ASAR	**Alice Springs**	**32.91**	**252**	P	**P**	**08 08 06.0**	**-0.4**
	7.8nm,0.6s,baz=78,slow=8.7,SNR=72						
PPT2	**Papeete2**	**40.34**	**98**	*e*LR	LR	08 20 13.8	
	comp=Z,135nm,23.2s						
KSRS	**Korea Array**	**65.70**	**326**	P	**P**	**08 12 17.9**	**+1.6**
	0.9nm,0.7s,baz=123,slow=8.1,SNR=4.3						
KLR	**Kul'dur**	**72.98**	**336**	P	**P**	**08 13 01.8**	**+0.8**
	0.8nm,0.6s,baz=147,slow=10.0,SNR=3.9						
MAW	**Mawson**	**80.57**	**202**	LR	LR	08 46 08.8	
	comp=Z,63nm,20.1s,baz=233,slow=33						
NVAR	**Mina Array Bea**	**87.76**	**49**	P	**P**	**08 14 20.8**	**-0.2**
	1.8nm,1.0s,baz=223,slow=8.1,SNR=7.7						
NVAR				LR	LR	08 49 40.8	
	comp=Z,34nm,18.1s,baz=355,slow=33						
ILAR	**Eielson Array**	**87.94**	**18**	P	**P**	**08 14 19.8**	**-1.1**
	0.5nm,0.8s,baz=226,slow=5.1,SNR=7.7						
PDAR	**Pinedale Array**	**95.50**	**47**	P	**P**	**08 14 58.5**	**+1.7**
	0.1nm,0.4s,baz=290,slow=10,SNR=1.9						
YKA	**Yellowknife Ar**	**98.72**	**27**	P	**P**	**08 15 11.5**	**+0.9**
	0.4nm,0.8s,baz=246,slow=3.8,SNR=4.2						

NNC 20 08:02:20.7±3.9, **53°.29N×90°.31E, h0km, mb4.0, mpv3.7, 5C-7D, Error ellipse: s-maj=35.8km s-min=26.3km az=101.0, Suspected Mining explosion., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZAA0	**Zalesovo Array**	**3.34**	**284**	⇓Pn	Pn	08 03 15.2	+1.0
	6.8nm,0.8s						
ZAA0				⇓Lg	Lg	08 04 01.1	
	24nm,0.8s						
KURK	**Kurchatov**	**7.66**	**255**	⇑Pn	Pn	08 04 09.8	-3.7
	8.6nm,0.8s						
KURK				⇑Sn	Sn	08 05 41.2	+0.2
	24nm,0.9s						
KURK				⇓Lg	Lg	08 06 24.1	
	68nm,0.9s						
KURBB	**Kurchatov Arra**	**7.75**	**255**	⇓Pn	Pn	08 04 12.8	-2.0
	14nm,0.9s						
KURBB				⇑Sn	Sn	08 05 43.9	+0.7
	80nm,0.8s						
KURBB				⇓Lg	Lg	08 06 31.7	
	146nm,0.9s						
MK31	**Makanchi Array**	**8.30**	**222**	Pn	Pn	08 04 22.3	0.0
	0.3nm,0.3s,baz=38,slow=12,SNR=32						
MK31				⇓Sn	Sn	08 06 00.6	+3.9
	10nm,0.9s						
MK31				⇑Lg	Lg	08 06 46.7	
	36nm,1.1s						
MAKZ	**Makanchi**	**8.41**	**223**	⇑Pn	Pn	08 04 21.9	-2.0
	7.1nm,1.6s						
MAKZ				⇓Lg	Lg	08 06 52.3	
	34nm,1.0s						

KRSC 20 08:17:36.1±0.9, **50°.98N×158°.18E, h40**km±14km, **ML3.7, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDTR	**Khodutka, Kamc**	**0.83**	**356**	*e*P	Pn	08 17 52.4	+1.1
KDTR				*e*S	Sn	08 18 03.4	+1.1
PAU	**Pauzhetka**	**0.99**	**300**	*e*P	Pn	08 17 54.9	+1.5
PAU				*e*S	Sn	08 18 07.9	+1.7
SKR	**Severo-Kuril's**	**1.34**	**258**	*e*P	Pn	08 17 59.8	+1.5
SKR				*e*S	Sn	08 18 16.5	+1.6
RUS	**Russkaya**	**1.47**	**8**	*e*P	Pn	08 18 01.2	+1.2
RUS				*e*S	Sn	08 18 19.7	+1.7
MTVR	**Mutnovka**	**1.50**	**0**	*e*P	Pn	08 18 02.1	+1.4
MTVR				*e*S	Sn	08 18 20.9	+1.8
GRL	**Gorelyy**	**1.57**	**358**	*e*P	Pn	08 18 03.4	+1.8
GRL				*e*S	Sn	08 18 23.1	+2.3
KRMR	**Karymshinskiy**	**1.85**	**359**	*e*P	Pn	08 18 09.2	+3.9
APC	**Apacha**	**2.04**	**342**	*e*P	Pn	08 18 10.5	+2.5
PET	**Petropavlovsk**	**2.06**	**8**	*e*P	Pn	08 18 11.0	+2.8
PET				*e*S	Sn	08 18 35.4	+2.7
DALK	**Dalny**	**2.08**	**10**	*e*P	Pn	08 18 10.4	+1.9
DALK				*e*S	Sn	08 18 35.0	+1.9
UGLR	**Uglovaya**	**2.27**	**10**	*e*P	Pn	08 18 13.9	+2.8
UGLR				*e*S	Sn	08 18 40.9	+3.1
AVH	**Avacha**	**2.31**	**8**	*e*P	Pn	08 18 14.4	+2.7
SMAR	**Somma**	**2.32**	**9**	*e*P	Pn	08 18 14.7	+2.8
KOK	**Koryaka**	**2.33**	**7**	*e*P	Pn	08 18 14.9	+2.9
SDLR	**Sedlovina**	**2.34**	**10**	*e*P	Pn	08 18 14.0	+1.9
KRER	**Koryakskii**	**2.35**	**8**	*e*P	Pn	08 18 16.0	+3.6
KRX	**Arik**	**2.40**	**7**	*e*P	Pn	08 18 15.6	+2.6
SPN	**Mys Shipunski**	**2.41**	**28**	*e*P	Pn	08 18 15.1	+2.2
GNL	**Ganaly**	**2.72**	**357**	*e*P	Pn	08 18 20.4	+3.0
TUMD	**Tumrok D**	**4.43**	**17**	*e*P	Pn	08 18 46.1	+5.3
KBTR	**Krutoberegovo**	**5.92**	**26**	*e*P	Pn	08 19 05.1	+4.0

ROM 20 08:32:36.3±0.3, **36°.80N**±0°.02×**13°.68E**±0°.02, **h27**km±2km, **ML2.3**/5, **1D, Error ellipse: s-maj=2.2km s-min=1.4km az=347.0, Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CLTA	**Licata**	**0.42**	**32**	P	Pb	08 32 45.1	-0.2
FAVR	**Favara**	**0.46**	**358**	P	Pn	08 32 47.0	-0.2
RAFF	**Raffo Rosso**	**0.69**	**52**	P	Pb	08 32 49.5	-0.3
RAFF				S	Sb	08 32 59.2	+0.3
RAFF				AML	AML		
	comp=N,152µm,0.3s						
RAFF				AML	AML		
	comp=E,195µm,0.6s						
HMDC	**Modica**	**0.89**	**80**	P	Pb	08 32 53.4	+0.1
HMDC				S	Sn	08 33 05.6	+0.4
MEU	**Monte Lauro**	**1.04**	**73**	⇓P	Pn	08 32 54.8	-0.4
MEU				S	Sn	08 33 07.9	-1.0
MEU				AML	AML		
	comp=N,236µm,0.3s						
MEU				AML	AML		
	comp=E,250µm,0.4s						
HLNI	**Lentini**	**1.09**	**60**	P	Pn	08 32 56.1	+0.2
HLNI				S	Sb	08 33 10.3	-0.2
HLNI				AML	AML		
	comp=E,78µm,1.0s						
HLNI				AML	AML		
	comp=N,108µm,0.5s						
HPAC	**Pachino**	**1.15**	**95**	P	Pb	08 32 57.1	-0.4
HAVL	**Avola**	**1.17**	**82**	P	Pb	08 32 57.9	0.0
HAVL				AML	AML		
	comp=E,132µm,1.5s						
HAVL				AML	AML		
	comp=N,160µm,1.5s						
SSY	**Sortino**	**1.17**	**72**	P	Pb	08 32 57.6	-0.3
SSY				S	Sb	08 33 13.8	+1.2
SSY				AML	AML		
	comp=N,233µm,0.2s						
SSY				AML	AML		
	comp=E,152µm,1.1s						

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*IDC **20** 08:36:04.4±1.4, 32°.28N×138°.12E, h360km±13km, mb3.4/13, mb1 3.4/19, mb1mx3.3/37, mbtmp4.1/19, Error ellipse: s-maj=23.3km s-min=10.2km az=78.0*
*JMA **20** 08:36:04.2±0.7, 31°.91N×138°.35E, h322km, M3.5*
ISC 20 08:36:03.5±0.8, **32°.24N**±0°.09×**138°.14E**±0°.10, **h350**km, **n31**, σ**1s.24**/33, **mb3.7**/14, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIE	**Ise**	**2.46**	**331**	P	**Pn**	**08 37 00.5**	**+2.4**
JKN2	**Miekihoku**	**2.54**	**322**	P	**Pn**	**08 37 00.3**	**+1.5**
HMMJ	**Hamamatsu 2**	**2.63**	**352**	P	**Pn**	**08 37 02.2**	**+2.6**
JTNC	**Tanabenakahech**	**2.65**	**307**	P	**Pn**	**08 37 01.5**	**+1.8**
JAO	**Obara**	**3.11**	**347**	P	**Pn**	**08 37 06.0**	**+2.2**
JOD2	**Odawara 2**	**3.12**	**14**	P	**Pn**	**08 37 05.3**	**+1.5**
JNY	**Yasuok**	**3.12**	**356**	P	**Pn**	**08 37 06.2**	**+2.3**
BSO3	**Boso 3**	**3.23**	**37**	*e*S	**S**	**08 37 53.3**	**-0.5**
BSO4	**Boso 4**	**3.30**	**33**	*e*S	**S**	**08 37 55.5**	**+0.2**
BSO1	**Boso 1**	**3.38**	**44**	S	**S**	**08 37 55.3**	**-0.6**
MJAR	**Matsushiro Arr**	**4.29**	**1**	P	**Pn**	**08 37 15.9**	**+0.4**
	0.3nm,0.3s,baz=173,slow=10,SNR=19						
MAT	**Matsushiro**	**4.29**	**1**	P	**Pn**	**08 37 16.0**	**+0.6**
MAT				S	**S**	**08 38 14.3**	**+0.7**
JNU	**Nakatsue**	**6.19**	**280**	P	**Pn**	**08 37 38.2**	**+1.8**
	1.4nm,0.3s,baz=93,slow=3.9,SNR=12						
KSRS	**Korea Array**	**9.88**	**305**	P	**Pn**	**08 38 21.4**	**+1.6**
	0.4nm,0.3s,baz=105,slow=14,SNR=9.8						
ASAJ	**Asahikawa**	**12.36**	**15**	P	**Pn**	**08 38 50.5**	**+1.2**
	0.6nm,0.3s,baz=198,slow=9.4,SNR=4.7						
USRK	**Ussuriysk Ar.**	**12.88**	**340**	P	**Pn**	**08 38 55.5**	**0.0**
	baz=164,slow=13,SNR=12						
KLR	**Kul'dur**	**17.64**	**346**	P	**P**	**08 39 45.2**	**-1.2**
	0.5nm,0.3s,baz=150,slow=8.4,SNR=23						
SONM	**Songino Array**	**28.62**	**312**	P	**P**	**08 41 28.2**	**-0.6**
	1.0nm,0.4s,baz=113,slow=10,SNR=4.1						
ZALV	**Zalesovo Beam**	**43.33**	**316**	P	**P**	**08 43 30.6**	**-1.3**
	1.7nm,0.4s,baz=79,slow=9.4,SNR=8.8						
MKAR	**Makanchi Array**	**44.55**	**306**	P	**P**	**08 43 41.4**	**-0.4**
	2.5nm,0.5s,baz=88,slow=10.0,SNR=36						
MKAR				ScP	**ScP**	**08 48 34.7**	**-1.3**
	0.4nm,0.7s,baz=97,slow=3.5,SNR=2.9						
NRIK	**Noril'sk**	**46.59**	**338**	P	**P**	**08 43 56.5**	**-0.6**
	1.6nm,0.4s,baz=116,slow=8.7,SNR=3.6						
WRA	**Warramunga Arr**	**52.01**	**185**	P	**P**	**08 44 38.3**	**-0.1**
	0.8nm,0.4s,baz=0.6,slow=7.7,SNR=27						
ASAR	**Alice Springs**	**55.74**	**185**	P	**P**	**08 45 05.2**	**+0.1**
	0.9nm,0.7s,baz=12,slow=13,SNR=15						
STKA	**Stephens Creek**	**63.85**	**177**	P	**P**	**08 46 00.2**	**+0.7**
	2.5nm,0.6s,baz=354,slow=6.0,SNR=6.2						
ARCES	**ARCESS Array B**	**67.53**	**339**	P	**P**	**08 46 22.6**	**+0.2**
	2.9nm,0.7s,baz=64,slow=8.2,SNR=12						
YKA	**Yellowknife Ar**	**69.30**	**28**	P	**P**	**08 46 33.4**	**0.0**
	0.1nm,0.6s,baz=302,slow=6.5,SNR=4.0						
FINES	**FINESS Array B**	**71.78**	**332**	P	**P**	**08 46 47.9**	**-0.3**
	1.3nm,0.4s,baz=62,slow=4.9,SNR=22						
KBZ	**Khabaz**	**71.97**	**311**	P	**P**	**08 46 50.1**	**+0.5**
	3.3nm,0.9s,baz=16,slow=1.1,SNR=4.9						
AKASG	**Malin Array Be**	**76.41**	**322**	P	**P**	**08 47 14.4**	**-0.6**
	1.3nm,0.4s,baz=50,slow=6.4,SNR=7.2						
NOA	**NORSAR Array B**	**77.53**	**337**	P	**P**	**08 47 20.4**	**-0.6**
	0.6nm,0.5s,baz=34,slow=2.7,SNR=3.3						
BRTR	**Keskin Array B**	**79.96**	**311**	P	**P**	**08 47 35.2**	**+0.5**
	0.8nm,0.5s,baz=124,slow=5.2,SNR=4.6						

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*IDC **20** 08:44:52.3±1.4, 7°.36N×76°.05W, h0km, mb3.5/1, mb1 3.8/2, mb1mx3.4/29, mbtmp3.7/2, ML2.7/1, Error ellipse: s-maj=86.7km s-min=25.9km az=61.0*
*RSNC **20** 08:45:00.3±1.5, 7°.63N×74°.27W, h27km±7km, ML3.5, Fault plane solution: NP1:φs72.00000°, δ68.00000°, λ-42.00000°.*
ISC 20 08:44:59.0±1.0, **7°.66N**±0°.03×**74°.28W**±0°.03, **h70**km±10km, **n31**, σ**1s.80**/57, **6C-2D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BRRC	**Barranca, Sant**	**0.79**	**134**	*e*P	**Pn**	**08 45 14.4**	**-0.5**
BRRC				*e*S	**Sn**	**08 45 25.6**	**-1.1**
BRRC				*i*		08 45 27.4	
	comp=Z,2µm,0.2s						
OCAC	**Ocana**	**1.11**	**59**	⇓*i*P	**Pn**	**08 45 19.6**	**+0.6**
OCAC				*e*S	**Sn**	**08 45 34.6**	**+0.7**
OCAC				*i*		08 45 40.4	
	comp=Z,798nm,0.3s						
PTBC	**PUERTO BERRIO,**	**1.13**	**189**	⇑*i*P	**Pn**	**08 45 18.3**	**-0.9**
PTBC				*e*S	**Sn**	**08 45 32.9**	**-1.4**
PTBC				*i*		08 45 33.3	
	comp=Z,1µm,0.2s						
SMLC	**San Martn de**	**1.15**	**10**	⇓*i*P	**Pn**	**08 45 19.5**	**+0.1**
SMLC				*e*S	**Sn**	**08 45 35.0**	**+0.4**
SMLC				*i*		08 45 43.7	
	comp=Z,1µm,0.2s						
UREC	**San Jos de Ur**	**1.24**	**274**	⇑*e*P	**Pn**	**08 45 21.1**	**+0.5**
UREC				*e*S	**Sn**	**08 45 38.1**	**+1.3**
UREC				*i*		08 45 39.9	
	comp=Z,1µm,0.2s						
BARC	**Barichara**	**1.52**	**134**	⇑*e*P	**Pn**	**08 45 24.6**	**+0.1**
BARC				*e*S	**Sn**	**08 45 43.4**	**-0.3**
BARC				*i*		08 45 46.6	
	comp=Z,441nm,0.2s						
PAMC	**Pamplona, Colo**	**1.60**	**102**	⇑*i*P	**Pn**	**08 45 26.5**	**+0.8**
PAMC				*e*S	**Sn**	**08 45 46.0**	**+0.1**
PAMC				*i*		08 45 47.2	
	comp=Z,784nm,0.2s						
MOTC	**Monteria, Cord**	**1.76**	**309**	⇑*e*P	**Pn**	**08 45 28.8**	**+1.4**
MOTC				*e*S	**Sn**	**08 45 51.3**	**+2.2**
MOTC				*i*		08 46 02.3	
	comp=Z,165nm,0.3s						
SPBC	**San Pablo de B**	**2.01**	**174**	*e*P	**Pn**	**08 45 30.4**	**-0.5**
SPBC				*e*S	**Sn**	**08 45 54.6**	**-0.6**
SPBC				*i*		08 45 57.5	
	comp=Z,443nm,0.2s						
RUSC	**La Rusia**	**2.12**	**146**	⇑*i*P	**Pn**	**08 45 32.8**	**0.0**
RUSC				*e*S	**Sn**	**08 45 59.4**	**+0.9**
RUSC				*i*		08 46 03.5	
	comp=Z,242nm,0.2s						
NORC	**Norcasia**	**2.17**	**196**	*e*P	**Pn**	**08 45 32.4**	**-0.6**
NORC				*e*S	**Sn**	**08 46 00.2**	**+1.3**
NORC				*i*		08 46 02.7	
	comp=Z,213nm,0.2s						
CBOC	**Ciudad Bolivar**	**2.48**	**224**	*e*P	**Pn**	**08 45 38.7**	**+1.4**
GUY2C	**Guyana, Caldas**	**2.65**	**204**	*e*P	**Pn**	**08 45 40.3**	**+0.4**
GUY2C				*e*S	**Sn**	**08 46 14.3**	**+3.1**
TAMC	**Tame, Arauca**	**2.76**	**116**	*e*P	**Pn**	**08 45 41.9**	**+0.9**
TAMC				*i*		08 46 09.9	
	comp=Z,70nm,0.6s						
TAMC				*e*S	**Sn**	**08 46 13.7**	**+0.4**
ROSC	**El Rosal**	**2.81**	**181**	Pn	**Pn**	**08 45 42.4**	**+0.4**
	comp=Z,22nm,0.3s,baz=102,slow=4.3,SNR=32						
ROSC				Sn	**Sn**	**08 46 18.6**	**+3.7**
	comp=Z,34nm,0.3s,baz=191,slow=23,SNR=4.5						
ROSC	**El Rosal**	**2.81**	**181**	*e*P	**Pn**	**08 45 42.3**	**+0.4**
ROSC				*e*S	**Sn**	**08 46 14.8**	**-0.1**
ROSC				*i*		08 46 25.0	
	comp=Z,142nm,0.3s						
CHIC	**Chingaza**	**3.06**	**170**	*e*P	**Pn**	**08 45 46.1**	**+0.7**
CHIC				*e*S	**Sn**	**08 46 23.9**	**+2.6**
CHIC				*i*		08 46 33.7	
	comp=Z,103nm,0.4s						
CAPC	**Capurgana**	**3.19**	**288**	*e*P	**Pn**	**08 45 44.3**	**-2.5**
CAPC				*e*S	**Sn**	**08 46 21.3**	**-2.4**
CAPC				*i*		08 46 26.1	
	comp=Z,85nm,0.2s						
PLMC	**San Jos del P**	**3.39**	**216**	*e*P	**Pn**	**08 45 50.3**	**+0.7**
PLMC				*e*S	**Sn**	**08 46 30.0**	**+1.4**
PLMC				*i*		08 46 39.4	
	comp=Z,43nm,0.5s						
PTAC	**Punta Ardita,**	**3.54**	**262**	*e*P	**Pn**	**08 45 51.9**	**+0.4**
PTAC				*e*S	**Sn**	**08 46 30.9**	**-1.2**
PTAC				*i*		08 46 34.3	
	comp=Z,265nm,0.3s						
SDV	**Santo Domingo**	**3.81**	**71**	*e*P	**Pn**	**08 45 57.3**	**+1.9**
SDV				*e*S	**Sn**	**08 46 40.6**	**+1.4**
SDV				*i*		08 46 43.0	
	comp=Z,71nm,0.5s						
ORTC	**Ortega, Tolima**	**3.85**	**194**	*e*P	**Pn**	**08 45 56.7**	**+0.7**
ORTC				*e*S	**Sn**	**08 46 46.0**	**+6.0**
ORTC				*i*		08 46 52.0	
	comp=Z,69nm,0.4s						
PRAC	**Prado**	**3.97**	**189**	*e*P	**Pn**	**08 45 58.0**	**+0.5**
PRAC				*e*S	**Sn**	**08 46 47.4**	**+4.5**
PTGC	**Puerto Gaitan,**	**4.05**	**148**	*e*P	**Pn**	**08 45 58.1**	**-0.5**
PTGC				*e*S	**Sn**	**08 46 45.7**	**+0.9**
PTGC				*i*		08 46 53.0	
	comp=Z,86nm,0.6s						
YOTC	**Yotoco, Valle**	**4.19**	**209**	*e*P	**Pn**	**08 46 00.8**	**+0.1**
GUVC	**San Jose del G**	**5.35**	**162**	*e*P	**Pn**	**08 46 15.4**	**-0.9**
GUVC				*e*S	**Sn**	**08 47 15.6**	**-1.0**
GUVC				*i*		08 47 25.5	
	comp=Z,98nm,0.2s						
MACC	**Macarena, Meta**	**5.50**	**175**	*e*P	**Pn**	**08 46 16.4**	**-2.0**
MACC				*e*S	**Sn**	**08 47 15.9**	**-4.5**
GARC	**Garzon, Huila**	**5.57**	**193**	*e*P	**Pn**	**08 46 19.8**	**+0.2**
GARC				*e*S	**Sn**	**08 47 25.3**	**+2.8**
GARC				*i*		08 47 31.4	
	comp=Z,32nm,0.2s						
YKA	**Yellowknife Ar**	**62.08**	**340**	P	**P**	**08 55 12.5**	**+0.3**
	comp=Z,0.3nm,0.6s,baz=134,slow=7.4,SNR=7.6						
ASAR	**Alice Springs**	**148.64**	**236**	PKPbc	**PKPbc**	**09 04 37.5**	**-1.6**
	comp=Z,0.3nm,0.5s,baz=111,slow=4.0,SNR=5.2						
WRA	**Warramunga Arr**	**149.71**	**243**	PKPbc	**PKPbc**	**09 04 39.8**	**-2.0**
	comp=Z,0.5nm,0.5s,baz=106,slow=3.4,SNR=9.0						

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*ECX **20** 08:45:35.6±0.7, 28°.13N×112°.34W, h10km±21km, MD2.8*
*MEX **20** 08:45:37.1±0.6, 28°.08N×112°.37W, h8km±9km, MD3.7*
ISC 20 08:45:33.6±4.9, **28°.2N**±0°.2×**112°.2W**±0°.5, **h10**km, **n6**, σ**0s.35**/7, **1D, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SRIG	**Santa Rosalia**	**0.83**	**180**	*i* P	**Pb**	**08 45 50.0**	**-0.2**

SRIG				*i* S	Sg	08 46 00.5	-0.1
SRIG	Santa Rosalia	0.83	180	⇓*i*P	Pb	08 45 50.0	-0.2
SRIG				*e*S	Sg	08 46 00.5	-0.1
GUYB	Guaymas	1.24	102	*e*P	Pn	08 45 46.2	-11
GUYB				*i* S	Sb	08 46 03.0	-10
HSIG		1.43	53	*i* P	Pb	08 45 59.9	-0.4
HSIG				*i* S	Sn	08 46 18.4	-0.1
HSIG		1.43	53	*e*P	Pg	08 46 01.5	+0.5
BAHB	Baha de los	2.12	327	*e*P	Pn	08 45 59.0	-10

IDC ***20*** *09:00:36.3±0.8, 39°.59N×143°.85E, h0^{km}, mb3.7/15, mb1 3.9/20, mb1mx3.7/54, mbtmp3.7/20, ML3.0/5, MS3.4/1, Ms1 3.4/1, ms1mx2.6/46, Error ellipse: s-maj=19.0km s-min=16.2km az=124.0*

NEIC ***20*** *09:00:39.0±2.3, 39°.72N±0°.04×143°.6E±0°.1, h10^{km}±1^{km}, mb4.2/9, Error ellipse: s-maj=14.3km s-min=5.2km az=113.0*

JMA ***20*** *09:00:41.1±0.2, 39°.76N×143°.59E, h43^{km}, M3.7*

NIED ***20*** *09:00:41.2, 39°.76N×143°.59E, h43^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.97; $M_{\theta\theta}$0.06; $M_{\phi\phi}$-1.04; $M_{r\theta}$-0.08; $M_{\theta\phi}$-0.36; $M_{\phi r}$0.53; Fault plane solution: $M_0$1.19000×10^{15} NP1:ϕ_s4.00000°, δ59.00000°, λ75.00000°. NP2:ϕ_s211.00000°, δ34.00000°, λ112.00000°.*

ISC 20 09:00:37.7±0.6**, 39°.76N**±0°.05×**143°.72E**±0°.06**, h6^{km}, n60, σ1^{s}35**/65**, mb3.9**/18**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTH	Tanohata	1.44	278	*e*S	Sb	09 01 20.8	-2.6
MIYJ	Miyakonagasawa	1.48	263	P	Pn	09 01 04.7	-0.1
MIYJ				*e*S	Sb	09 01 21.5	-3.0
JKEN	Kujiedanarisaw	1.60	287	P	Pn	09 01 06.0	-0.6
JANG	Nango	1.80	291	P	Pn	09 01 08.6	-0.7
JOM	Ohasama	1.89	262	P	Pn	09 01 11.0	+0.4
JMK	Ichinoseki	2.10	248	P	Pn	09 01 13.6	+0.2
JTM	Tenmabayashi	2.27	298	Pn	Pn	09 01 16.6	+0.8
JTM				Sn	Sn	09 01 44.8	+0.8
ERM	Erimo	2.29	350	Pn	Pn	09 01 17.7	+1.6
ERM				Sn	Sn	09 01 42.2	-2.4
JOT	Ohata	2.60	309	*e*S	Sn	09 01 50.7	-1.4
JNBK	Urakawa-nobuka	2.62	344	P	Pn	09 01 21.4	+0.8
JYK	Kaneyama	2.74	253	P	Pn	09 01 22.8	+0.6
JCH	Churui	2.86	355	P	Pn	09 01 23.6	-0.3
JCH				*e*S	Sn	09 01 56.9	-1.8
JKB	Kayabe	2.94	317	*e*S	Sn	09 01 59.6	-1.0
JMM	Marumori	2.96	231		Pn	09 01 24.6	-0.8
JAK	Akkeshi	3.32	13	P	Pn	09 01 29.2	-0.9
JAK				*e*S	Sn	09 02 07.7	-2.1
JEW	Eniwo	3.52	332	*e*S	Sn	09 02 14.4	-0.4
JEW	Eniwo	3.52	332	Pn	Pn	09 01 34.3	+1.4
JEW				Sn	Sn	09 02 14.2	-0.6
JAR	Ashorobuto	3.53	1	P	Pn	09 01 32.3	-0.8
JKA	Kamikawa-asahi	4.43	350		Pn	09 01 46.7	+1.2
ASAJ	Asahikawa	4.43	350	Pn	Pn	09 01 46.7	+1.2
	1.8nm,0.3s,baz=231,slow=9.4,SNR=17						
ASAJ				Sn	Sn	09 02 38.4	+1.0
	2.6nm,0.3s,baz=95,slow=28,SNR=7.2						
JSD	Sado	4.59	250	Pn	Pn	09 01 46.9	-0.8
MJAR	Matsushiro Arr	5.40	235	Pn	Pn	09 01 58.7	-0.1
	0.2nm,0.3s,baz=43,slow=12,SNR=23						
MAJO	Matsushiro	5.40	235		Pn	09 01 59.0	+0.2
MAT	Matsushiro	5.40	235	P	Pn	09 01 59.9	+1.1
MAT				*e*S	Sn	09 03 02.3	+1.0
JGF	Kuroka	6.53	233	Pn	Pn	09 02 16.1	+1.7
JWT	Wachi	7.97	239	Pn	Pn	09 02 33.6	-0.5
USRK	Ussuriysk Ar.	9.79	301	Pn	Pn	09 03 02.0	+3.0
	baz=107,slow=12,SNR=8.0						
USRK	Ussuriysk Ar.	9.79	301		Pn	09 03 02.5	+3.5
KSRS	Korea Array	12.57	264	Pn	Pn	09 03 39.0	+2.0
	0.1nm,0.3s,baz=85,slow=15,SNR=4.6						
KLR	Kul'dur	12.73	322	Pn	Pn	09 03 40.5	+1.3
	0.1nm,0.3s,baz=122,slow=11,SNR=4.4						
KLR				LR	LR	09 09 04.4	
	comp=Z,152nm,18.4s,baz=52,slow=39						
MA2	Magadan	20.33	10	P	Pn	09 05 15.9	-0.5
	2.4nm,0.5s,baz=189,slow=9.0,SNR=4.1						
MA2	Magadan	20.33	10	IAmb	IAmb	09 05 28.3	
	comp=Z,11nm,1.4s						
SEY	Seymchan	23.78	10	P	P	09 05 52.3	+1.5
	comp=Z,2.1nm,0.7s,baz=203,slow=10.0,SNR=9.5						
SONM	Songino Array	27.90	299	P	P	09 06 29.9	+1.4
	comp=Z,1.3nm,0.7s,baz=72,slow=9.3,SNR=2.9						
ZALV	Zalesovo Beam	41.48	310	P	P	09 08 26.1	+0.8
	comp=Z,0.7nm,0.5s,baz=90,slow=7.2,SNR=3.0						
IMAR	Indian Mountai	43.38	32	P	P	09 08 41.3	+0.7
MK31	Makanchi Array	44.26	300	P	P	09 08 48.4	+0.5
MKAR	Makanchi Array	44.26	300	P	P	09 08 48.5	+0.6
	comp=Z,0.8nm,0.8s,baz=82,slow=8.7,SNR=7.6						
MKAR	Makanchi Array	44.26	300	P	P	09 08 48.3	+0.4
KURK	Kurchatov	45.73	306	P	P	09 09 00.3	+0.9
KURK	Kurchatov	45.73	306	IAmb	IAmb	09 09 14.2	
	comp=Z,3.2nm,0.8s						
KURBB	Kurchatov Arra	45.80	306	P	P	09 09 00.3	+0.3
	comp=Z,1.7nm,0.8s,baz=74,slow=8.1,SNR=8.3						
ILAR	Eielson Array	46.23	34	P	P	09 09 03.4	+0.1
	comp=Z,0.6nm,0.9s,baz=267,slow=7.2,SNR=5.7						
BVAR	Borovoye Array	50.11	311	P	P	09 09 34.2	+0.8
	comp=Z,0.3nm,0.4s,baz=198,slow=9.1,SNR=2.2						
INK	Inuvik	51.13	28	P	P	09 09 42.5	+1.6
	comp=Z,0.8nm,0.5s,baz=299,slow=7.5,SNR=5.9						
INK	Inuvik	51.13	28	P	P	09 09 42.4	+1.5
INK				IAmb	IAmb	09 10 05.8	
	comp=Z,4.6nm,1.3s						
KK31	Karatay Array	53.35	299	P	P	09 09 56.0	-1.8
KK31				IAmb	IAmb	09 10 18.8	
	comp=Z,2.1nm,1.2s						
KKAR	Karatay Array	53.35	299	P	P	09 09 55.7	-2.1
ABKAR	Akbulak array	57.59	310	P	P	09 10 28.4	+0.2
WR0	Warramunga Arr	60.02	190	P	P	09 10 44.8	-0.6
WR0				IAmb	IAmb	09 10 52.9	
	comp=Z,5.7nm,1.2s						
WB2	Warramunga Arr	60.03	190	P	P	09 10 44.4	-0.9
WRA	Warramunga Arr	60.03	190	P	P	09 10 43.6	-1.8
	comp=Z,1.2nm,0.7s,baz=6.4,slow=6.7,SNR=7.5						
YKA	Yellowknife Ar	60.54	31	P	P	09 10 48.7	+0.3
	comp=Z,0.2nm,0.9s,baz=303,slow=5.6,SNR=5.1						
ASAR	Alice Springs	63.76	190	P	P	09 11 09.3	-1.1
	comp=Z,0.6nm,0.8s,baz=8.5,slow=5.9,SNR=5.0						
ASAR	Alice Springs	63.76	190	P	P	09 11 10.7	+0.2
PALK	Pallekele	64.72	258	P	P	09 11 17.7	+0.7
NOA	NORSAR Array B	72.36	338	P	P	09 12 04.6	+0.5
	comp=Z,17nm,0.4s,baz=40,slow=5.9,SNR=1.8						
AKASG	Malin Array Be	73.24	323	P	P	09 12 09.6	+0.2
	comp=Z,0.4nm,0.3s,baz=21,slow=3.7,SNR=4.5						
PDAR	Pinedale Array	74.48	47	P	P	09 12 15.0	-2.2
	comp=Z,0.3nm,0.7s,baz=186,slow=2.7,SNR=3.8						
TXAR	Lajitas Array	87.04	54	P	P	09 13 24.6	+0.1
	comp=Z,0.3nm,0.8s,baz=336,slow=2.7,SNR=3.7						

NOU 20 09:03:56.1, 22°.46S×170°.41E, h0^{km}, MLv4.1, Southeast of Loyalty Islands, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PINNC	Pines Island,	2.74	266	P	Pn	09 04 41.2	-0.2
YATNC	Mamie plateau,	3.28	276	P	Pn	09 04 48.5	-0.4
OUENC	Ouen Island, N	3.30	270	P	Pn	09 04 48.9	-0.2
LIFNC	LIFOU	3.39	299	P	Pn	09 04 50.2	-0.1
ONTNC	Ouen Toro	3.67	272	P	Pn	09 04 54.1	0.0
DZM	Mont Dzumac	3.69	275	P	Pn	09 04 54.4	-0.2
KOUNC	Koumac, New Ca	6.01	287	P	Pn	09 05 26.2	-0.1

IDC ***20*** *09:08:12.9±0.5, 22°.81S×13°.30W, h0^{km}, mb4.8/21, mb1 4.9/21, mb1mx4.6/40, mbtmp4.8/21, MS4.4/22, Ms1 4.4/22, ms1mx4.3/26, Error ellipse: s-maj=17.9km s-min=14.0km az=152.0*

MOS ***20*** *09:08:13.7±1.0, 22°.76S×13°.29W, h10^{km}, mb5.4/42, Error ellipse: s-maj=13.1km s-min=6.7km az=64.0*

BJI ***20*** *09:08:14.0±0.0, 22°.70S×13°.40W, h10^{km}, mB5.6/2, Ms5.1/4, Ms7 4.9/4*

NEIC ***20*** *09:08:15.1±1.4, 22°.8S±0°.1×13°.3W±0°.1, h10^{km}±1^{km}, mb5.2/98, Error ellipse: s-maj=18.6km s-min=17.3km az=155.0*

GCMT ***20*** *09:08:17.1±0.1, 22°.69S±0°.01×13°.29W±0°.01, h12^{km}, MW5.2/142, Moment Tensor Solution. s99,c133; s142,c244; Duration: 1^{s}0 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.87±.01; $M_{\theta\theta}$-0.10±.01; $M_{\phi\phi}$0.96±.01; $M_{r\theta}$0.10±.04; $M_{\theta\phi}$0.03±.01; $M_{\phi r}$0.07±.03; Best double couple: $M_0$0.92900×10^{17} NP1:ϕ_s355.00000°, δ43.00000°, λ-100.00000°. NP2:ϕ_s188.00000°, δ48.00000°, λ-81.00000°. Principal axes: T 0.9720, Plg2.0000°, Azm272.0000°; N -0.0850, Plg7.0000°, Azm2.0000°; P -0.8870, Plg83.0000°, Azm163.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

BGR ***20*** *09:08:27.7±0.0, 20°.94S×10°.98W, h10^{km}, mb5.1*

ISC 20 09:08:14.7±0.3**, 22°.78S**±0°.07×**13°.29W**±0°.06**, h10^{km}, n456, σ1^{s}16**/447**, mb5.2**/132**, MS4.6**/29**, 30C-14D, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H10S2	ASCENSION HYDR	13.81	354	T	T	09 25 36.0	
	baz=174,slow=74,SNR=285						
H10S3	ASCENSION HYDR	13.82	354	T	T	09 25 36.5	
	baz=46,slow=74,SNR=333						
H09W1	TRISTAN DA CUN	14.29	177	T	T	09 26 18.4	
	SNR=27						
NBRF	Rio Formoso -	25.22	300	*e*P	P	09 13 41.0	+0.2
RIB01	Linhares ES	25.52	273	*e*P	P	09 13 43.4	-0.2
ALF01	Guarapari-ES	25.57	270	*e*P	P	09 13 43.1	-0.9
NAN01	Guarapari, ES	25.63	276	*e*P	P	09 13 45.1	+0.5
BSFB	Barra de Sao F	26.04	274	*e*P	P	09 13 48.7	+0.3
SJMB	Sao Joao De Ma	26.39	274	*e*P	P	09 13 51.6	+0.2
GDU01	Guandu, BA	26.51	285	*e*P	P	09 13 52.0	-0.6
DUB01	Friburgo-RJ	26.88	266	*e*P	P	09 13 55.9	-0.1
NBLI	Livramento-PB	27.45	300	*e*P	P	09 14 01.5	+0.4
RCBR	Riachuelo	27.57	304	P	P	09 14 01.4	-0.8
	10nm,0.8s,baz=107,slow=12,SNR=5.1						
RCBR				LR	LR	09 21 56.9	
	comp=Z,2μm,21.2s,baz=138,slow=30						
RCBR	Riachuelo	27.57	304	P	P	09 14 01.6	-0.6
RCBR				pmax	pmax		
	comp=Z,55nm,1.6s						
RCBR	Riachuelo	27.57	304	P	P	09 14 01.6	-0.6
RCBR				IAmb	IAmb	09 14 53.2	
	comp=Z,55nm,1.6s						
RCBR	Riachuelo	27.57	304	*e*P	P	09 14 01.6	-0.6
NBPA	Parau_RN	28.55	303	*e*P	P	09 14 10.5	-0.4
TSUM	Tsumeb	29.01	89	P	P	09 14 14.9	-0.3
	comp=Z,3.4nm,0.9s,baz=259,slow=12,SNR=3.9						
TSUM				LR	LR	09 23 33.4	
	comp=Z,2μm,21.6s,baz=307,slow=32						
TSUM	Tsumeb	29.01	89	P	P	09 14 16.1	+0.9
LIC	Lamto	29.94	17	*e*P	P	09 14 23.4	+0.2
	comp=Z,71nm,1.1s						
KIC	Kosan Boka	30.15	17	*e*P	P	09 14 25.2	+0.2
	comp=Z,40nm,1.0s						
JANB	Januaria	30.29	279	*e*P	P	09 14 26.7	+0.3
TIC	Toumodi	30.35	16	*e*P	P	09 14 26.8	0.0
DBIC	Dimbokro	30.41	17	P	P	09 14 27.1	-0.3
	comp=Z,12nm,0.9s,baz=176,slow=11,SNR=13						
DBIC				LR	LR	09 23 51.8	
	comp=Z,515nm,18.4s,baz=174,slow=31						
DBIC	Dimbokro	30.41	17	P	P	09 14 27.9	+0.6
DBIC				pmax	pmax		
	comp=Z,14nm,0.9s						
DBIC	Dimbokro	30.41	17	P	P	09 14 27.9	+0.6
SUR	Sutherland	31.59	115	P	P	09 14 38.2	+0.4
SUR				IAmb	IAmb	09 14 46.0	
	comp=Z,116nm,1.9s						
PEXB	Peixe	34.96	282	*e*P	P	09 15 07.5	+0.2
BOSA	Boshof	35.11	108	P	P	09 15 09.0	+0.5
	comp=Z,14nm,0.8s,baz=271,slow=6.4,SNR=16						
BOSA				LR	LR	09 26 37.6	
	comp=Z,1μm,21.9s,baz=264,slow=32						
BOSA	Boshof	35.11	108	P	P	09 15 08.3	-0.3
PCMB	Pacaembu	35.12	264	*e*P	P	09 15 08.3	-0.3
ITAB	Concordia	35.38	255	*e*P	P	09 15 10.9	+0.1
PTGB	Pitanga	35.47	259	*e*P	P	09 15 10.0	-1.6
LBTB	Lobatse	35.54	102	P	P	09 15 13.1	+0.8
LBTB				pmax	pmax		
	comp=Z,19nm,1.2s						
LBTB	Lobatse	35.54	102	P	P	09 15 13.1	+0.8
SMTB	Santa Maria do	35.67	287	*e*P	P	09 15 12.1	-1.4
TRCB	Terra Rica	36.20	262	*e*P	P	09 15 16.7	-1.3
PLTB	Pedras Altas	36.76	247	*e*P	P	09 15 21.3	-1.3
KOWA	Kowa	38.15	15	P	P	09 15 35.2	+0.9
TOA0	Torodi Ar. Sit	38.61	24	P	P	09 15 38.3	+0.1
TOA0				IAmb	IAmb	09 15 40.0	
	comp=Z,40nm,0.9s						
TORD	Torodi Ar. Bea	38.61	24	P	P	09 15 38.1	-0.1
	comp=Z,38nm,1.0s,baz=204,slow=8.4,SNR=61						
TORD				LR	LR	09 28 28.7	
	comp=Z,905nm,21.1s,baz=195,slow=32						
MATP	Matopo	38.83	95	P	P	09 15 40.3	0.0
	comp=Z,2.5nm,0.7s,baz=267,slow=9.0,SNR=6.0						
PRPB	Parauapebas	38.88	289	*e*P	P	09 15 40.9	+0.3
LSZ	Lusaka	39.81	87	P	P	09 15 47.7	-0.8
LSZ				pmax	pmax		
	comp=Z,52nm,2.0s						
LSZ	Lusaka	39.81	87	P	P	09 15 47.7	-0.8
CPUP	Villa Florida	40.07	256	P	P	09 15 50.2	-0.2
	comp=Z,6.3nm,1.0s,baz=110,slow=7.0,SNR=7.4						
CPUP				LR	LR	09 29 39.2	
	comp=Z,1μm,20.9s,baz=104,slow=32						
CPUP	Villa Florida	40.07	256	P	P	09 15 48.3	-2.2
CPUP	Villa Florida	40.07	256	*e*P	P	09 15 49.9	-0.5
MCPB	Macapa, AP	43.78	295	*e*P	P	09 16 21.2	+0.2
MALB	Monte Alegre	44.87	292	*e*P	P	09 16 28.2	-1.4
ITTB	Itaituba	44.91	288	*e*P	P	09 16 29.2	-0.8
SIV	San Ignacio	45.43	270	P	P	09 16 34.0	-0.1
	comp=Z,1.6nm,0.6s,baz=107,slow=10.0,SNR=10						
VILB	Vilhena	45.54	274	*e*P	P	09 16 34.2	-0.9
VNA1	Neumayer--Stat	47.97	178	P	P	09 16 54.8	+1.5
MBAR	Mbarara	48.12	69	*i* P	P	09 16 54.6	-0.8
VNA2	Neumayer--Watz	48.28	177	P	P	09 16 56.9	+1.3
	baz=346,slow=10						
VNA3	Neumayer Olymp	48.52	178	P	P	09 16 58.1	+0.6
TAM	Tamanrasset	48.86	23	P	P	09 17 02.0	+1.2
TAM				pmax	pmax		
	comp=Z,21nm,1.5s						
TAM	Tamanrasset	48.86	23	P	P	09 17 02.0	+1.2
SNAA	Sanae	49.28	176	P	P	09 17 04.1	+0.8
SNAA	Sanae	49.28	176	P	P	09 17 03.0	-0.3
	comp=Z,6.9nm,0.9s,baz=327,slow=8.1,SNR=8.5						
SNAA	Sanae	49.28	176	P	P	09 17 04.0	+0.6
SNAA				pmax	pmax		
	comp=Z,49nm,1.6s						
SNAA	Sanae	49.28	176	P	P	09 17 04.0	+0.6
SNAA				IAmb	IAmb	09 17 05.5	
	comp=Z,49nm,1.6s						
ZON	Zonda	49.61	247	P	P	09 17 06.4	-0.1
ZON				pmax	pmax		
	comp=Z,45nm,2.0s						
ZON	Zonda	49.61	247	P	P	09 17 06.4	-0.1
ZON				IAmb	IAmb	09 18 29.2	
	comp=Z,45nm,2.0s						
SAML	Samuel	49.69	278	P	P	09 17 08.4	+1.1
SAML				pmax	pmax		
	comp=Z,17nm,1.3s						
SAML	Samuel	49.69	278	P	P	09 17 08.4	+1.1
MACA	Manacapuru-AM	49.84	286	*e*P	P	09 17 08.4	0.0
PTGA	Pitinga	50.36	289	P	P	09 17 11.7	-0.6
PTGA	Pitinga	50.36	289	*e*P	P	09 17 12.2	-0.1
AC02	Maricunga	50.51	253	P	P	09 17 13.8	-0.2
CO01	Juntas del Tor	50.96	249	P	P	09 17 17.7	+0.7
PLCA	Paso Flores	50.98	235	P	P	09 17 17.0	+0.2
	comp=Z,2.8nm,0.9s,baz=68,slow=6.2,SNR=8.7						
PLCA				LR	LR	09 35 23.8	
	comp=Z,762nm,21.3s,baz=85,slow=32						
PLCA	Paso Flores	50.98	235	P	P	09 17 17.2	+0.4
PLCA				pmax	pmax		
	comp=Z,29nm,1.8s						
PLCA	Paso Flores	50.98	235	P	P	09 17 17.2	+0.4
PLCA	Paso Flores	50.98	235	*e*P	P	09 17 17.5	+0.7
LVC	Limon Verde	51.04	259	*e*P	P	09 17 16.8	-1.0
AC05	El Transito	51.25	251	P	P	09 17 20.1	+1.0
CO03	El Pedregal	51.39	248	P	P	09 17 21.0	+1.0
CO03				IAmb	IAmb	09 17 33.8	
	comp=Z,82nm,1.9s						
GO04	Tololo Observa	51.55	249	P	P	09 17 21.8	+0.4
MT02	Curacav	51.56	245	P	P	09 17 21.3	+0.1
MT02				IAmb	IAmb	09 18 44.8	
	comp=Z,82nm,1.8s						
CO02	Combarbal	51.62	248	P	P	09 17 22.7	+0.9
CO02				IAmb	IAmb	09 18 41.3	
	comp=Z,48nm,1.4s						
PB06	IPOC Station P	51.62	258	P	P	09 17 22.9	+0.9
LC01	Cunco	51.97	238	P	P	09 17 25.5	+1.4
LC01				IAmb	IAmb	09 17 29.9	
	comp=Z,45nm,2.0s						
ETMB	Extrema	52.15	275	*e*P	P	09 17 26.3	+0.5
KMBO	Kilima Mbogo	53.56	74	LR	LR	09 38 01.7	
	comp=Z,662nm,21.4s,baz=270,slow=33						
SYO	Syowa Base	55.95	160	⇑*e*P	P	09 17 49.0	-3.7
SYO	Syowa Base	55.95	160	⇓*e*pP	P	09 17 53.6	+0.9
SYO	Syowa Base	55.95	160	⇓*e*sP	sP	09 17 57.0	+1.3
BELA	Belgrano 2	56.08	185	P	P	09 17 53.8	+0.3
CZSB	Cruzeiro do Su	58.88	275	*e*P	P	09 18 13.6	-0.6
PBDV	Barranco-do-Ve	59.92	5	*e*P	P	09 18 23.3	+2.4
MORF	Marmelete	59.93	4	*e*P	P	09 18 22.6	+1.6
PVAQ	Vaqueiros	60.09	5	P	P	09 18 23.6	+1.5
PVAQ				IAmb	IAmb	09 18 24.8	
	comp=Z,26nm,0.9s						
PVAQ	Vaqueiros	60.09	5	*e*P	P	09 18 23.6	+1.5
PBAR	Barrancos	60.92	6	*e*P	P	09 18 29.6	+1.9
EVO	Evora	61.19	5	*e*P	P	09 18 30.5	+1.0
PESTR	Estremoz	61.56	5	P	P	09 18 32.8	+0.8
PESTR				IAmb	IAmb	09 18 35.0	
	comp=Z,15nm,1.0s						
KEST	Kesra	62.02	21	P	P	09 18 36.4	+1.1
	comp=Z,18nm,1.0s,baz=178,slow=1.8,SNR=9.9						
KEST				LR	LR	09 43 06.7	
	comp=Z,426nm,20.3s,baz=201,slow=34						
KEST	Kesra	62.02	21	P	P	09 18 37.0	+1.7
KEST				IAmb	IAmb	09 18 38.5	
	comp=Z,26nm,1.1s						
PCBR	Castelo Branco	62.53	5	*e*P	P	09 18 40.1	+1.6
PCAS	Casmilo, Conde	62.67	4	*e*P	P	09 18 41.3	+1.8
ESDC	Sonseca Array	62.74	8	LR	LR	09 42 22.2	
	comp=Z,119nm,20.9s,baz=180,slow=33						
MTE	Manteigas	63.08	5	P	P	09 18 43.3	+1.0
MTE				IAmb	IAmb	09 18 44.7	
	comp=Z,20nm,0.9s						
MTE	Manteigas	63.08	5	*e*P	P	09 18 43.7	+1.4
PVIS	Viseu	63.37	5	*e*P	P	09 18 45.3	+1.1
MAW	Mawson	63.88	156	LR	LR	09 38 20.7	
	comp=Z,136nm,20.8s,baz=255,slow=28						
MVO	Moncorvo	63.89	5	*e*P	P	09 18 48.8	+1.2
SDV	Santo Domingo	64.34	293	P	P	09 18 52.0	+0.7
SDV				IAmb	IAmb	09 18 53.4	
	comp=Z,11nm,0.8s						
SDV	Santo Domingo	64.34	293	*e*P	P	09 18 51.1	-0.3
PBRG	Braganca	64.55	5	*e*P	P	09 18 53.0	+1.1
PGAV	Gavieira, Arco	64.59	4	*e*P	P	09 18 52.9	+0.7
HUMP	Col San Antoni	65.52	304	P	P	09 18 59.8	+1.1
HUMP				IAmb	IAmb	09 19 01.6	
	comp=Z,20nm,0.9s						
PDPR	Patillas Dam,	65.58	304	P	P	09 18 58.0	-1.1
PDPR				IAmb	IAmb	09 18 59.4	
	comp=Z,24nm,1.1s						
ROSC	El Rosal	65.60	287	P	P	09 18 59.6	-0.1
	comp=Z,6.4nm,0.4s,baz=229,slow=21,SNR=5.3						
ROSC				LR	LR	09 46 47.5	
	comp=Z,1μm,19.4s,baz=140,slow=35						
ROSC	El Rosal	65.60	287	P	P	09 18 59.9	+0.1
ROSC				pmax	pmax		
	comp=Z,25nm,1.2s						
ROSC	El Rosal	65.60	287	P	P	09 18 59.9	+0.1
ROSC				IAmb	IAmb	09 19 02.6	
	comp=Z,25nm,1.1s						
CBYP	Canovanas	65.61	304	P	P	09 18 58.7	-0.6
CBYP				IAmb	IAmb	09 19 01.0	
	comp=Z,19nm,0.8s						
QSPA	South Pole Qui	67.42	180	P	P	09 19 10.4	+0.1
TIP	Timpagrande	67.75	25	P	P	09 19 13.7	+1.1
TIP				IAmb	IAmb	09 19 15.5	
	comp=Z,11nm,0.8s						
LATE	Laterza	69.07	20	P	P	09 19 22.2	+1.5
LATE				IAmb	IAmb	09 19 23.8	
	comp=Z,20nm,1.2s						
INTR	Introdacqua	69.21	21	P	P	09 19 21.8	+0.2
SSB	Saint Sauveur	69.66	13	P	P	09 19 25.4	+1.1
SSB				pmax	pmax		
	comp=Z,15nm,1.0s						
SSB	Saint Sauveur	69.66	13	P	P	09 19 25.4	+1.1
SSB				IAmb	IAmb	09 19 26.7	
	comp=Z,16nm,1.0s						
NRCA	Norcia	69.68	20	P	P	09 19 23.5	-1.0
OSSC	Osservatorio P	69.73	19	P	P	09 19 25.2	+0.5
MURB	Monte Urbino	69.88	20	P	P	09 19 26.2	+0.5
MURB				IAmb	IAmb	09 19 27.4	
	comp=Z,18nm,0.8s						
BNI	Bardonecchia	69.92	15	P	P	09 19 25.2	-0.8
BNI				pmax	pmax		
	comp=Z,11nm,1.1s						
BNI	Bardonecchia	69.92	15	P	P	09 19 25.2	-0.8
MSSA	Maissana	69.96	17	P	P	09 19 26.9	+0.7
MSSA				IAmb	IAmb	09 19 28.4	
	comp=Z,31nm,1.1s						
ZCCA	Zocca	70.41	18	P	P	09 19 29.8	+0.9
ZCCA				IAmb	IAmb	09 19 33.8	
	comp=Z,63nm,1.7s						
TIR	Tirane	70.83	26	P	P	09 19 32.3	+0.8
TIR				pmax	pmax		
	comp=Z,44nm,0.8s						
TIR	Tirane	70.83	26	P	P	09 19 32.3	+0.8
FNA	Florina	70.98	27	P	P	09 19 33.0	+0.5
FNA				pmax	pmax		
	comp=Z,32nm,1.5s						
FNA	Florina	70.98	27	P	P	09 19 33.0	+0.5
FNA				IAmb	IAmb	09 19 34.7	
	comp=Z,32nm,1.5s						
SENIN	Lac Senin/Sane	71.31	15	P	P	09 19 35.8	+1.2
SENIN				IAmb	IAmb	09 21 32.0	
	comp=Z,27nm,1.6s						
TUE	Stuetta	71.92	16	P	P	09 19 38.7	+0.5
TUE				IAmb	IAmb	09 19 39.6	
	comp=Z,23nm,0.9s						
CTI	Castel Tesino	72.15	18	P	P	09 19 40.9	+1.4
CTI				pmax	pmax		
	comp=Z,14nm,0.9s						
CTI	Castel Tesino	72.15	18	P	P	09 19 40.9	+1.4
CTI				IAmb	IAmb	09 19 41.5	
	comp=Z,14nm,0.9s						
TRI	Trieste	72.47	20	P	P	09 19 41.5	+0.2
TRI				pmax	pmax		
	comp=Z,22nm,0.9s						
TRI	Trieste	72.47	20	P	P	09 19 41.5	+0.2
TRI				IAmb	IAmb	09 19 43.5	
	comp=Z,22nm,0.9s						
JAVS	Javornik	72.73	20	*i* P	P	09 19 43.6	+0.6
FETA	Feichten	72.79	17	*i* P	P	09 19 43.5	+0.2
	comp=Z,26nm,1.0s,SNR=7.8						
DAVA	Damuels	72.81	16	*e*P	P	09 19 43.3	-0.2
	comp=Z,50nm,0.9s						
VISS	Visnje	72.89	20	*i* P	P	09 19 44.5	+0.7
ZOU	Zoufplan	73.00	19	P	P	09 19 45.9	+1.2
ZOU				IAmb	IAmb	09 19 47.1	
	comp=Z,30nm,1.2s						
ECH	Echery	73.02	14	P	P	09 19 44.2	-0.3
ECH				pmax	pmax		
	comp=Z,16nm,1.1s						
ECH	Echery	73.02	14	P	P	09 19 44.1	-0.3
ABTA	Abfaltersbach	73.03	18	*i* P	P	09 19 45.7	+1.0
	comp=Z,23nm,1.2s,SNR=5.5						
SQTA	Sankt Quirin	73.10	17	*i* P	P	09 19 45.5	+0.3
	comp=Z,18nm,1.1s						
MOTA	Moosalm	73.19	17	*i* P	P	09 19 46.3	+0.6
	comp=Z,21nm,1.6s						
GCIS	Gornji Cirnik	73.20	21	*i* P	P	09 19 46.7	+1.1
RETA	Reutte	73.22	17	*e*P	P	09 19 45.4	-0.4
	comp=Z,18nm,1.1s						
UBR	Ueberruh	73.23	16	*e*P	P	09 19 45.9	+0.1
	comp=Z,30nm,0.9s,baz=201,slow=5.8						
WTTA	Wattenberg	73.26	17	*i* P	P	09 19 46.4	+0.2
	comp=Z,45nm,1.1s,SNR=12						
MYKA	Terra Mystica	73.26	19	*i* P	P	09 19 48.4	+2.4
	comp=Z,20nm,1.1s,SNR=5.4						
VTS	Vitosha	73.28	27	⇑P	P	09 19 47.2	+0.8
VTS	Vitosha	73.28	27	P	P	09 19 45.7	-0.7
VTS				pmax	pmax		
	comp=Z,13nm,0.9s						
VTS	Vitosha	73.28	27	P	P	09 19 45.7	-0.7
WATA	Walderalm	73.31	17	*i* P	P	09 19 47.7	+1.3
	comp=Z,25nm,1.2s						
RAYN	Ar Rayn	73.37	55	P	P	09 19 49.2	+2.0
RAYN				pmax	pmax		
	comp=Z,25nm,2.0s						
RAYN	Ar Rayn	73.37	55	P	P	09 19 49.2	+2.0
BFO	Black Forest	73.39	15	P	P	09 19 47.3	+0.5
BFO				pmax	pmax		
	comp=Z,24nm,1.0s						

BFO	Black Forest	73.39	15	P	P	09 19 47.3	+0.5
BFO				IAmb	IAmb	09 19 48.5	
	comp=Z,24nm,1.0s						
BFO	Black Forest	73.39	15	*e*P	P	09 19 46.8	+0.1
	comp=Z,16nm,0.9s,baz=201,slow=5.8						
OBKA	Obir	73.43	20	*e*P	P	09 19 48.1	+1.0
	comp=Z,10nm,0.9s						
BOVS	Bovan	73.49	26	⇑P	P	09 19 47.9	+0.5
KBA	Koelnbreinsper	73.58	19	*i* P	P	09 19 48.3	+0.3
	comp=Z,11nm,0.6s,SNR=8.8						
SOKA	Soboth	73.73	20	*i* P	P	09 19 49.9	+1.0
	comp=Z,31nm,1.0s,SNR=26						
FUR	Furstenfeldbru	73.98	17	*e*P	P	09 19 50.2	0.0
	comp=Z,32nm,1.0s,baz=201,slow=5.8						
RJOB	Jochberg	74.01	18	*e*P	P	09 19 49.6	-0.8
	comp=Z,79nm,0.8s,baz=201,slow=5.8						
STU	Stuttgart	74.01	15	*e*P	P	09 19 50.0	-0.3
	comp=Z,21nm,0.8s,baz=201,slow=5.8						
WLF	Walferdange	74.17	13	*d*P	P	09 19 51.7	+0.5
DOU	Dourbes	74.27	12	*d*P	P	09 19 53.0	+1.2
ARSA	Arzberg	74.39	20	*i* P	P	09 19 53.8	+1.1
	comp=Z,40nm,1.2s,SNR=9.5						
MDVR	Moldovita	74.45	25	⇑P	P	09 19 53.5	+0.4
BMRD	Maredsous	74.50	12	*d*P	P	09 19 53.6	+0.4
MORH	Mrgy, Hungar	74.53	22	⇑P	P	09 19 54.0	+0.6
MOA	Molln	74.54	19	*i* P	P	09 19 53.5	0.0
	comp=Z,14nm,0.7s,SNR=12						
BGES	Gesves	74.64	12	*d*P	P	09 19 55.5	+1.6
BCLA	Clavier	74.72	12	*d*P	P	09 19 55.8	+1.4
BHOU	Houvegnez	74.79	13	*d*P	P	09 19 56.9	+2.1
HERR	Herculane	74.81	25	⇑P	P	09 19 55.2	+0.2
BSTI	Sart Tilman	74.92	12	*d*P	P	09 19 58.0	+2.4
MEM	Membach	75.03	13	*d*P	P	09 19 58.3	+2.1
BTNL	Ternell	75.04	13	*d*P	P	09 19 58.5	+2.3
CONA	Conrad Observa	75.10	20	*i* P	P	09 19 57.4	+0.6
	comp=Z,30nm,1.2s,SNR=14						
BZS	Buzias	75.11	25	⇑P	P	09 19 57.7	+0.9
TNS	Taunus Mts	75.19	14	*e*P	P	09 19 58.7	+1.5
	comp=Z,9.4nm,0.9s,baz=201,slow=5.8						
GEC2	GERESS Array S	75.27	18	P	P	09 19 57.6	-0.2
GEC2	GERESS Array S	75.27	18	*e*P	P	09 19 57.8	+0.1
	comp=Z,8.4nm,0.8s,baz=201,slow=5.8						
GERES	GERESS Array B	75.27	18	P	P	09 19 58.0	+0.3
	comp=Z,7.2nm,0.8s,baz=191,slow=4.9,SNR=39						
GERES				LR	LR	09 51 00.1	
	comp=Z,139nm,19.9s,baz=249,slow=34						
GERES	GERESS Array B	75.27	18	P	P	09 19 58.1	+0.3
GERES	GERESS Array B	75.27	18	P	P	09 19 58.1	+0.3
WET	Wettzell	75.31	17	*e*P	P	09 19 57.5	-0.5
	comp=Z,20nm,0.9s,baz=201,slow=5.8						
GRFO	Grafenberg	75.37	16	P	P	09 19 58.1	-0.1
GRFO				pmax	pmax		
	comp=Z,49nm,1.1s						
GRFO	Grafenberg	75.37	16	P	P	09 19 58.0	-0.1
GRFO				IAmb	IAmb	09 20 00.9	
	comp=Z,49nm,1.1s						
GRA1	Grafenberg Arr	75.37	16	P	P	09 19 58.3	+0.1
GRF	Grafenberg Arr	75.37	16	P	P	09 19 58.3	+0.1
GRF				pmax	pmax		
	comp=Z,49nm,1.1s						
GRF	Grafenberg Arr	75.37	16	*e*P	P	09 19 59.0	+0.8
	comp=Z,33nm,1.0s,baz=201,slow=5.8						
GZR	Gura Zlata	75.38	25	⇑P	P	09 19 59.0	+0.5
CKRC	Cesky Krumlov	75.43	18	*e*P	P	09 19 59.1	+0.5
KHC	Kasperske Hory	75.50	18	P	P	09 19 59.1	+0.1
KHC				pmax	pmax		
	comp=Z,13nm,1.0s						
KHC	Kasperske Hory	75.50	18	*e*P	P	09 19 59.0	+0.1
KHC	Kasperske Hory	75.50	18	P	P	09 19 59.1	+0.1
SIRR	Siria	75.67	24	⇑P	P	09 20 00.8	+0.8
ROTZ	Rotzenmuhle	75.70	17	*e*P	P	09 20 00.3	+0.2
	comp=Z,19nm,0.9s,baz=201,slow=5.8						
ZST	Bratislava	75.73	20	*e*P	P	09 20 01.0	+0.7
ZST				pmax	pmax		
	comp=Z,91nm,1.2s						
ZST	Bratislava	75.73	20	*e*P	P	09 20 01.0	+0.7
MANZ	Manzenberg	75.87	17	*e*P	P	09 20 01.5	+0.4
	comp=Z,12nm,0.9s,baz=201,slow=5.8						
MODS	Modra-Piesok	75.94	20	*e*P	P	09 20 01.5	0.0
MODS				pmax	pmax		
	comp=Z,50nm,1.3s						
MODS	Modra-Piesok	75.94	20	*e*P	P	09 20 01.5	0.0
BR131	Keskin Array S	76.06	35	P	P	09 20 03.6	+1.1
BR131				pmax	pmax		
	comp=Z,24nm,1.0s						
BR131	Keskin Array S	76.06	35	P	P	09 20 03.6	+1.1
BR131				IAmb	IAmb	09 20 05.8	
	comp=Z,24nm,1.0s						
BRTR	Keskin Array B	76.06	35	P	P	09 20 03.1	+0.6
	comp=Z,11nm,1.0s,baz=192,slow=5.4,SNR=24						
BRTR				LR	LR	09 53 36.4	
	comp=Z,91nm,18.6s,baz=221,slow=36						
BRTR	Keskin Array B	76.06	35	*ce*P	P	09 20 04.1	+1.6
BRTR				pmax	pmax		
	comp=Z,12nm,1.0s						
BRTR	Keskin Array B	76.06	35	P	P	09 20 04.0	+1.4
KASTN	Kahler Asten	76.11	14	*e*P	P	09 20 03.1	+0.7
	comp=Z,6.6nm,0.9s,baz=201,slow=5.8						
ARR	Arges	76.11	27	⇑P	P	09 20 03.2	+0.6
PBCC	Pribram	76.12	18	*e*P	P	09 20 02.3	-0.2
WERN	Wernitzgruen	76.22	17	*e*P	P	09 20 03.7	+0.6
	comp=Z,13nm,0.9s,baz=201,slow=5.8						
KRUC	Moravsky	76.27	20	*e*P	P	09 20 03.2	-0.1
GUNZ	Gunzen	76.28	17	*e*P	P	09 20 03.9	+0.5
	comp=Z,15nm,0.8s,baz=201,slow=5.8						
VOIR		76.33	27	⇑P	P	09 20 04.1	+0.2
WERD	Werda	76.35	17	*e*P	P	09 20 04.7	+1.0
	comp=Z,13nm,1.0s,baz=201,slow=5.8						
TANN	Tannenbergstha	76.36	17	*e*P	P	09 20 04.8	+0.9
	comp=Z,12nm,1.0s,baz=201,slow=5.8						
PSZ	Piszkesteto	76.43	22	⇑P	P	09 20 05.1	+0.7
PSZ	Piszkesteto	76.43	22	P	P	09 20 04.7	+0.3
PSZ				pmax	pmax		
	comp=Z,43nm,1.2s						
PSZ	Piszkesteto	76.43	22	P	P	09 20 04.7	+0.3
PSZ				IAmb	IAmb	09 20 07.3	
	comp=Z,43nm,1.2s						
JAVC	Velka Javorina	76.50	20	*e*P	P	09 20 05.5	+0.8
PRU	Pruhonice	76.54	18	*e*P	P	09 20 05.3	+0.4
PRU				*e*		09 20 12.4	
PRU	Pruhonice	76.54	18	*e*P	P	09 20 05.3	+0.4
PRU				*e*pP	pwP	09 20 12.4	+0.4
VRAC	Vranov	76.55	20	⇑P	P	09 20 05.5	+0.5
VRAC	Vranov	76.55	20	*e*P	P	09 20 03.8	-1.1
MLR	Muntele Rosu	76.75	27	P	P	09 20 06.7	+0.3
MLR				pmax	pmax		
	comp=Z,37nm,0.9s						
MLR	Muntele Rosu	76.75	27	P	P	09 20 06.7	+0.3
MLR				IAmb	IAmb	09 20 08.3	
	comp=Z,37nm,0.9s						
GTTG	Gottingen	76.78	15	*e*P	P	09 20 07.5	+1.4
	comp=Z,39nm,1.0s,baz=201,slow=5.8						
DOPR	Dopca	76.90	27	⇑P	P	09 20 07.5	+0.5
NEUB	Neuenburg	76.91	16	*e*P	P	09 20 08.3	+1.5
	comp=Z,24nm,0.8s,baz=201,slow=5.8						
FBE	Freiberg	77.06	17	*e*P	P	09 20 08.7	+0.9
	comp=Z,12nm,0.9s,baz=201,slow=5.8						
KECS	Kecovo	77.12	22	*e*P	P	09 20 09.2	+1.0
KECS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KECS	Kecovo	77.12	22	*e*P	P	09 20 09.2	+1.0
BISRR	Bisoca	77.12	28	⇑P	P	09 20 09.4	+1.1
OZUR		77.17	27	⇑P	P	09 20 09.4	+0.9
BRG	Berggiesshubel	77.17	17	*e*P	P	09 20 08.6	+0.2
BRG				Amp		09 20 10.6	
	comp=Z,23nm,1.2s						
BRG	Berggiesshubel	77.17	17	*e*P	P	09 20 09.0	+0.6
	comp=Z,9.8nm,0.9s,baz=201,slow=5.8						
MORC	Moravsky Berou	77.26	20	⇓P	P	09 20 09.6	+0.7
MORC	Moravsky Berou	77.26	20	*e*P	P	09 20 09.2	+0.2
MORC	Moravsky Berou	77.26	20	P	P	09 20 09.2	+0.2
MORC				pmax	pmax		
	comp=Z,15nm,1.0s						
MORC	Moravsky Berou	77.26	20	P	P	09 20 09.2	+0.2
KRLC	Kraliky	77.28	19	*e*P	P	09 20 09.6	+0.5
KRLC	Kraliky	77.28	19	*e*P	P	09 20 09.6	+0.5
CLL	Collm	77.31	17	*e*P	P	09 20 11.0	+1.8
CLL				*e*SSS	SSS	09 38 18.0	
CLL				LmV		09 53 00.0	
	comp=Z,300nm,20.6s						
CLL	Collm	77.31	17	*e*P	P	09 20 11.0	+1.8
CLL				MLR	MLR		
	comp=Z,300nm,20.6s						
TPGR	Topolog	77.33	29	⇑P	P	09 20 09.9	+0.5
PLOR	Plostina	77.34	27	⇑P	P	09 20 10.9	+1.4
LANS	Liptovska Anna	77.34	21	*e*P	P	09 20 12.4	+3.0
LANS				pmax	pmax		
	comp=Z,10.0nm,1.4s						
LANS	Liptovska Anna	77.34	21	*e*P	P	09 20 12.4	+3.0
VRI	Vrincioaia	77.38	27	⇑P	P	09 20 09.9	+0.2
DPC	Dobruska-Polom	77.39	19	*e*P	P	09 20 10.2	+0.5
DPC	Dobruska-Polom	77.39	19	*e*P	P	09 20 10.2	+0.5
ARCR	ARCALIA	77.39	25	⇑P	P	09 20 11.3	+1.6
UPC	Upice	77.43	19	*e*P	P	09 20 10.4	+0.5
UPC	Upice	77.43	19	*e*P	P	09 20 10.4	+0.5
CFR	Carcaliu	77.45	29	⇑P	P	09 20 09.7	-0.3
ASSE	Asse, Remlinge	77.48	15	*e*P	P	09 20 11.1	+1.0
	comp=Z,8.4nm,0.8s,baz=201,slow=5.8						
CHVC	Chvalec	77.52	19	*e*P	P	09 20 10.7	+0.3
OSTC	Ostas	77.54	19	*e*P	P	09 20 11.4	+0.9
FLTG	Flechtingen	77.81	15	*e*P	P	09 20 12.4	+0.6
	comp=Z,20nm,1.0s,baz=201,slow=5.8						
KSP	Ksiaz	77.81	19	*e*P	P	09 20 14.1	+2.1
CRVS	Cervenica-Dubn	77.82	23	*e*P	P	09 20 12.9	+0.8
CRVS				pmax	pmax		
	comp=Z,55nm,1.1s						
CRVS	Cervenica-Dubn	77.82	23	*e*P	P	09 20 12.9	+0.8
NIE	Niedzica	77.85	22	*e*P	P	09 20 12.4	+0.1
UZH	Uzhgorod	77.89	23	⇑*i*P	P	09 20 12.2	-0.2
UZH				*i*		09 20 14.2	
UZH				*e*		09 20 18.3	
KOLS	Kolonicke sedl	78.13	23	*e*P	P	09 20 15.9	+2.1
KOLS	Kolonicke sedl	78.13	23	*e*P	P	09 20 15.9	+2.1
BURAR	Bucovina Array	78.17	25	P	P	09 20 14.4	+0.2
BUR08	Bucovina Ar. S	78.18	25	P	P	09 20 15.9	+1.6
BUR08				IAmb	IAmb	09 21 03.3	
	comp=Z,35nm,1.9s						
OJC	Ojcow	78.37	21	*e*P	P	09 20 15.3	+0.2
OJC	Ojcow	78.37	21	P	P	09 20 15.5	+0.4
OJC				pmax	pmax		
	comp=Z,23nm,1.0s						
OJC	Ojcow	78.37	21	P	P	09 20 15.5	+0.4
OJC				IAmb	IAmb	09 20 17.2	
	comp=Z,23nm,1.0s						
KWP	Kalwaria Pacla	78.87	23	*e*P	P	09 20 18.9	+1.0
KWP	Kalwaria Pacla	78.87	23	P	P	09 20 19.1	+1.2
KWP				pmax	pmax		
	comp=Z,27nm,1.0s						
KWP	Kalwaria Pacla	78.87	23	P	P	09 20 19.1	+1.2
KWP				IAmb	IAmb	09 20 25.5	
	comp=Z,27nm,1.0s						
BSEG	Bad Segeberg	79.08	14	*e*P	P	09 20 19.9	+1.0
	comp=Z,23nm,0.9s,baz=201,slow=5.8						
LVV	L'vov	79.51	24	*e*P	P	09 20 22.3	+0.9
VNDA	Vanda	79.88	179	LR	LR	09 52 49.3	
	comp=Z,171nm,18.2s,baz=175,slow=34						
BEL	Belsk	80.08	21	*e*P	P	09 20 14.5	-10
KOPT	Kop Dagi	80.09	39	P	P	09 20 26.4	+1.2
KOPT				IAmb	IAmb	09 20 30.8	
	comp=Z,34nm,1.1s						
GKP	Gorka Klasztor	80.23	18	*e*P	P	09 20 14.1	-11
ANN	Anapa	81.63	34	*e*P	P	09 20 30.1	-2.7
ANN				e*PP	pP	09 20 35.1	+0.2
ANN				*e*S	S	09 30 41.5	-3.6
ANN				pmax	pmax		
	comp=Z,67nm,1.3s						
SOC	Sochi	82.01	36	*e*P	P	09 20 34.2	-0.7
SOC				*e*		09 23 40.2	
SOC				*e*PPP	PPP	09 25 30.3	
SOC				*e*S	S	09 30 50.6	+1.5
SOC				pmax	pmax		
	comp=Z,21nm,0.8s						
AKASG	Malin Array Be	82.22	26	P	P	09 20 35.2	-0.6
	comp=Z,21nm,0.9s,baz=220,slow=5.5,SNR=29						
AKASG				LR	LR	09 57 44.7	
	comp=Z,120nm,18.5s,baz=300,slow=36						
AKASG	Malin Array Be	82.22	26	*ce*P	P	09 20 36.5	+0.7
AKASG				pmax	pmax		
	comp=Z,14nm,0.7s						
AKASG	Malin Array Be	82.22	26	P	P	09 20 35.6	-0.2
AKASG				IAmb	IAmb	09 20 37.8	
	comp=Z,18nm,1.1s						
AKBB	Malin Array Si	82.22	26	P	P	09 20 35.0	-0.8
AKBB				pmax	pmax		
	comp=Z,24nm,1.0s						
AKBB	Malin Array Si	82.22	26	P	P	09 20 35.0	-0.8
AKBB				IAmb	IAmb	09 20 38.5	
	comp=Z,24nm,0.9s						
GNI	Garni	82.69	41	*i* P	P	09 20 41.1	+2.3
GNI				pmax	pmax		
	comp=Z,33nm,1.4s						
SUW	Suwalki	82.69	21	*e*P	P	09 20 38.7	+0.5
SUW	Suwalki	82.69	21	*e*P	P	09 20 38.6	+0.4
SUW	Suwalki	82.69	21	P	P	09 20 38.4	+0.2
SUW				pmax	pmax		
	comp=Z,69nm,0.9s						
SUW	Suwalki	82.69	21	P	P	09 20 38.4	+0.2
NEY	Neytrino	83.45	38	*i* P	P	09 20 44.5	+1.9
NEY				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ZEI	Tsey	83.83	38	*e*P	P	09 20 46.6	+2.0
ZEI				pmax	pmax		
	comp=Z,14nm,1.1s						
KBZ	Khabaz	83.85	37	P	P	09 20 44.9	+0.4
	comp=Z,9.0nm,0.8s,baz=224,slow=4.4,SNR=13						
KBZ				LR	LR	10 00 18.5	
	comp=Z,72nm,18.3s,baz=250,slow=37						
KBZ	Khabaz	83.85	37	*ce*P	P	09 20 45.2	+0.8
KBZ				pmax	pmax		
	comp=Z,16nm,0.9s						
KIV	Kislovodsk	83.88	37	*e*P	P	09 20 46.1	+1.4
KIV				pmax	pmax		
	comp=Z,89nm,1.1s						
KIV	Kislovodsk	83.88	37	P	P	09 20 45.6	+0.9
BATG	Bathurst New B	84.37	327	P	P	09 20 47.8	+0.9
NACGM	Naroch	84.63	22	*i* P	P	09 20 46.1	-2.0
NACGM				*i* P	P	09 20 46.1	-2.0
NACGM				*i* P	P	09 20 46.1	-2.0
NACGM				*i* PP	PP	09 23 56.2	-8.0
NACGM				*i* PPP	PPP	09 25 48.5	
NACGM				*i* S	SKSac	09 31 02.0	-10
NACGM				*i* SS	SS	09 36 47.4	+0.2
NACGM				*i* SSS	SSS	09 40 35.1	
NACGM				*i* LQ	LQ	09 52 12.0	
NACGM				*i* LR	LR	09 58 55.4	
MNK	Minsk	84.70	23	*e*P	P	09 20 49.0	+0.5
MNK	Minsk	84.70	23	*i* P	P	09 20 48.3	-0.1
	comp=E,6.0nm,1.3s						
MNK				*i* P	P	09 20 48.3	-0.1
	comp=N,28nm,1.2s						
MNK				*i* P	P	09 20 48.3	-0.1
	comp=Z,26nm,0.9s						
MNK				*i* PP	PP	09 24 04.2	-0.7
MNK				*i* PPP	PPP	09 25 56.8	
MNK				*i* S	SKSac	09 31 11.8	-0.6
MNK				*i* ScS	ScS	09 31 27.2	+0.2
MNK				*i* SS	SS	09 36 49.6	+1.5
MNK				*i* SSS	SSS	09 40 20.1	
MNK				*i* LQ	LQ	09 53 07.1	
MNK				*i* LR	LR	09 59 37.7	
MNK				*i* LRM	MLR	10 01 43.6	
	comp=N,234nm,13.4s						
MNK				*i* LRM	MLR	10 01 44.9	
	comp=Z,88nm,10.2s						
MNK				*i* LRM	MLR	10 02 05.6	
	comp=E,14nm,13.1s						
GOF	Gofitskoye	84.78	36	⇑*e*P	P	09 20 50.8	+1.7
IIGN	Ignalina	84.80	21	*e*P	P	09 20 49.3	+0.3
IDID	Didziasalis	84.95	22	*e*P	P	09 20 49.9	+0.2
ISAL	Salakas	84.95	21	*e*P	P	09 20 49.9	+0.2
H61A	Lyndonville	85.73	322	P	P	09 20 55.2	+1.2
	baz=128						
D62A	Allapoint, All	85.77	325	P	P	09 20 54.9	+0.9
	baz=130						
O59A	Robesonia	85.79	317	P	P	09 20 54.6	+0.3
	baz=125						
NB2	NORSAR Subarra	85.85	12	P	P	09 20 54.9	+0.8
	comp=Z,19nm,1.4s,baz=201,slow=5.1						
NOA	NORSAR Array B	85.85	12	P	P	09 20 54.9	+0.8
	comp=Z,18nm,0.5s,baz=204,slow=5.1,SNR=6.5						
NOA				LR	LR	10 00 00.4	
	comp=Z,83nm,18.3s,baz=195,slow=36						
I60A	Shoreham	86.10	321	P	P	09 20 58.8	+3.1
	baz=127						
O58A	Lewisberry	86.15	316	P	P	09 20 57.6	+1.5
	baz=124						
L59A	Walton	86.16	319	P	P	09 20 57.7	+1.5
	baz=126						
S57A	Dark Hollow, R	86.18	314	P	P	09 20 57.7	+1.3
	baz=123						
G60A	Masonville	86.31	323	P	P	09 20 58.4	+1.7
	baz=128						
K59A	Cooperstown	86.39	320	P	P	09 20 58.8	+1.5
	baz=126						
L58A	Harry Jones Me	86.57	319	P	P	09 20 58.9	+0.8
	baz=125						
E60A	Ste Agathe de	86.60	324	P	P	09 20 59.7	+1.5
	baz=128						
O57A	Amberson	86.66	316	P	P	09 21 00.0	+1.4
	baz=124						
D60A	Saint Jean D’O	86.66	325	P	P	09 20 58.5	+0.2
	baz=129						
V55A	Taylorsville	86.72	311	P	P	09 20 58.4	-0.6
VORD	Divnogorie	86.77	30	*e*P	P	09 20 59.5	+0.7
VORD				pmax	pmax		
	comp=Z,40nm,1.4s						
K58A	Earlville	86.86	319	P	P	09 20 59.7	+0.1
	baz=125						
VSR	Storozhevoye	86.88	30	*e*P	P	09 20 59.9	+0.5
VSR				pmax	pmax		
	comp=Z,40nm,1.3s						
N57A	Milroy	86.90	317	P	P	09 21 01.0	+1.2
	baz=124						
Q56A	Snyder Ridge,	87.02	315	P	P	09 21 02.0	+1.5
	baz=123						
Q56A	Snyder Ridge,	87.02	315	P	P	09 21 01.9	+1.5
Q56A				IAmb	IAmb	09 21 02.5	
	comp=Z,19nm,0.9s						
P56A	Dayton Farm, R	87.05	315	P	P	09 21 01.9	+1.4
	baz=123						
L57A	Andrews Acres	87.16	318	P	P	09 21 02.2	+1.2
	baz=124						
O56A	Blue Knob Stat	87.28	316	P	P	09 21 02.3	+0.6
	baz=123						
K57A	Scipio Center	87.37	319	P	P	09 21 02.6	+0.6
	baz=125						
N56A	West Decatur	87.46	317	P	P	09 21 03.4	+0.9
	baz=123						
U54A	Nelsons Funny	87.48	311	P	P	09 21 03.4	+0.6
	baz=121						
U54A	Nelsons Funny	87.48	311	P	P	09 21 02.0	-0.8
E58A	La Victoria	87.61	323	P	P	09 21 03.3	+0.3
	baz=127						
L56A	Greenwood	87.67	318	P	P	09 21 04.5	+0.9
	baz=124						
L56A	Greenwood	87.67	318	P	P	09 21 04.3	+0.8
H57A	Richville	87.68	321	P	P	09 21 04.3	+0.9
	baz=125						
M56A	Emporium	87.70	317	P	P	09 21 04.3	+0.7
	baz=123						
M56A	Emporium	87.70	317	P	P	09 21 04.5	+0.8
LPSR	Galich'ya Gora	87.72	29	*e*P	P	09 21 03.7	+0.3
LPSR				pmax	pmax		
	comp=Z,50nm,1.2s						
S54A	Dingess, Beckl	87.79	313	P	P	09 21 04.9	+0.7
	baz=121						
G57A	Newington	87.82	321	P	P	09 21 05.0	+0.9
	baz=126						
LATQ	La Tuque	87.94	324	P	P	09 21 05.4	+0.8
VRH	Novokhopyorsk	88.07	31	*e*P	P	09 21 05.5	+0.4
VRH				pmax	pmax		
	comp=Z,40nm,0.8s						
W52A	Murphy	88.25	309	P	P	09 21 07.6	+1.2
OBN	Obninsk	88.47	26	*e*P	P	09 21 07.0	+0.1
OBN				*e*		09 24 34.6	
OBN				*e*S	SKSac	09 31 29.1	-6.5
OBN				pmax	pmax		
	comp=Z,20nm,1.2s						
OBN				MLR	MLR		
	comp=Z,164nm,13.0s						
250A	Grady	88.47	306	P	P	09 21 08.7	+1.2
Q53A	Leroy	88.48	314	P	P	09 21 08.2	+0.8
	baz=121						
N54A	Moraine State	88.57	316	P	P	09 21 07.9	+0.2
	baz=122						
M54A	Oil Creek Stat	88.65	317	P	P	09 21 09.3	+1.1
	baz=122						
E56A	St. Veronique	88.69	323	P	P	09 21 09.3	+1.2
	baz=126						
D56A	ZEC Mazanza, M	88.83	323	P	P	09 21 09.3	+0.5
	baz=126						
O53A	New Philadelph	88.99	315	P	P	09 21 10.6	+0.8
	baz=121						
D55A	Sainte-Anne-du	89.21	323	P	P	09 21 11.3	+0.7
	baz=125						
M53A	WI Miller and	89.26	316	P	P	09 21 11.9	+0.9
	baz=122						
M53A	WI Miller and	89.26	316	IAmb	IAmb	09 21 13.6	
	comp=Z,17nm,0.9s						
L53A	Girard	89.27	317	P	P	09 21 11.5	+0.4
	baz=122						
P52A	Corning	89.28	314	P	P	09 21 11.5	+0.3
	baz=121						
MOS	Moscow	89.34	26	*e*P	P	09 21 10.3	-0.7
MOS				pmax	pmax		
	comp=Z,69nm,1.2s						
H53A	Bobcaygeon	89.64	320	P	P	09 21 13.7	+1.0
	baz=123						
FINES	FINESS Array B	89.70	18	P	P	09 21 13.6	+1.0
	comp=Z,12nm,1.0s,baz=191,slow=3.9,SNR=17						
FINES				LR	LR	10 02 57.2	
	comp=Z,220nm,18.2s,baz=230,slow=37						
FINES	FINESS Array B	89.70	18	P	P	09 21 13.3	+0.7
SWET	Sewanee	89.75	309	IAmb	IAmb	09 21 14.5	
	comp=Z,19nm,1.0s						
G54A	Lake Saint Pet	89.80	320	P	P	09 21 14.2	+0.8
	baz=124						
ACSO	Alum Creek Sta	90.15	314	IAmb	IAmb	09 21 16.4	
	comp=Z,12nm,0.8s						
GEYT	Alibeck	90.17	49	LR	LR	09 59 55.0	
	comp=Z,145nm,21.8s,baz=310,slow=34						
CLTN	Cedars of Leba	90.45	309	P	P	09 21 17.0	+0.3
CLTN				IAmb	IAmb	09 21 19.7	
	comp=Z,29nm,1.4s						
V48A	Smith Brothers	90.64	309	IAmb	IAmb	09 21 18.7	
	comp=Z,12nm,0.9s						
WCI	Wyandotte Cave	91.42	311	P	P	09 21 22.2	+1.0
WCI				pmax	pmax		
	comp=Z,78nm,2.0s						
WCI	Wyandotte Cave	91.42	311	P	P	09 21 22.2	+1.0
BELG	Belogornoye	91.68	32	P	P	09 21 20.2	-1.8
	comp=Z,28nm,0.9s,baz=321,slow=5.2,SNR=4.1						
W45A	Hickory Valley	92.09	307	P	P	09 21 24.7	+0.4
HDBT	Hernando Brdge	92.73	307	P	P	09 21 28.2	+1.0
L44A	Lake County Fo	94.34	314	P	P	09 21 35.3	+0.7
	baz=117						
W41B	Gary Mavity, V	94.36	306	P	P	09 21 35.2	+0.4
	baz=115						
FCAR	Ozark Folk Cen	94.57	307	P	P	09 21 35.3	-0.4
FCAR				IAmb	IAmb	09 21 36.8	
	comp=Z,6.9nm,0.9s						
CCM	Cathedral Cave	94.84	309	P	P	09 21 37.6	+0.7
CCM				pmax	pmax		
	comp=Z,29nm,1.8s						
CCM	Cathedral Cave	94.84	309	P	P	09 21 37.6	+0.7
CCM				IAmb	IAmb	09 22 16.1	
	comp=Z,29nm,1.8s						
W39A	Magazine	95.52	306	P	P	09 21 40.4	+0.3
	baz=114						
KIRV	Kirov	96.10	28	*ce*P	P	09 21 43.9	+1.8
AKTO	Aktyubinsk	96.13	38	P	P	09 21 42.6	+0.1
	comp=Z,2.4nm,0.9s,baz=35,slow=3.6,SNR=5.8						
AKTO				LR	LR	10 07 23.6	
	comp=Z,66nm,18.6s,baz=215,slow=37						
ARCES	ARCESS Array B	96.17	13	LR	LR	10 04 10.5	
	comp=Z,145nm,19.4s,baz=245,slow=35						
ABKAR	Akbulak array	96.69	39	P	P	09 21 44.5	-0.6
ARU	Arti	99.23	32	P	Pdif	09 21 54.9	-1.4
	comp=Z,0.7nm,0.3s,baz=284,slow=6.3,SNR=3.6						
ARU	Arti	99.23	32	*d i*P	Pdif	09 21 56.0	-0.3
ARU						09 25 59.3	
ARU				S	SKSac	09 32 34.5	0.0
ARU				SS	SS	09 40 10.4	-6.7
ARU				pmax	pmax		
	comp=Z,23nm,3.1s						
ARU	Arti	99.23	32	IAmb	IAmb	09 21 59.4	
	comp=Z,9.8nm,1.3s						
KURBB	Kurchatov Arra	108.39	42	PKKPbc	PKKPbc	09 38 05.3	+10
	comp=Z,0.3nm,0.5s,baz=72,slow=3.0,SNR=2.6						
MKAR	Makanchi Array	109.96	47	PKKPbc	PKKPbc	09 37 57.4	+7.5
	comp=Z,0.8nm,0.9s,baz=135,slow=1.0,SNR=5.0						
WMQ	Urumqi	113.14	51	*e*PKP	PKiKP	09 26 52.9	+0.4
WMQ				LR	LR		
	comp=Z,580nm,29.2s						
WMQ				LR	LR		

	comp=Z,140nm,29.1s						
YKA	**Yellowknife Ar**	**115.16**	**330**	PKP	**PKiKP**	**09 26 54.5**	**-1.2**
	comp=Z,0.4nm,0.8s,baz=96,slow=2.3,SNR=7.5						
MOD	**Modoc Plateau**	**117.25**	**307**		**PKiKP**	**09 27 01.8**	**+1.2**
TBI	**Tubuai**	**117.40**	**226**	*e*SS	SS	09 44 29.2	+7.0
	comp=Z,91nm,29.0s						
TBI	**Tubuai**	**117.40**	**226**	*e*LR	LR	10 02 30.4	
	comp=Z,172nm,37.5s						
STKA	**Stephens Creek**	**120.57**	**155**	PKP	**PKPdf**	**09 27 07.0**	**-0.2**
	comp=Z,1.0nm,0.6s,baz=105,slow=4.0,SNR=3.1						
STKA	**Stephens Creek**	**120.57**	**155**	PKIKP	**PKPdf**	**09 27 07.0**	**-0.2**
PPT2	**Papeete2**	**121.38**	**231**	*e*SS	SS	09 45 10.0	-4.0
	comp=Z,240nm,26.8s						
PPT2	**Papeete2**	**121.38**	**231**	*e*LR	LR	10 04 23.5	
	comp=Z,187nm,23.0s						
KMI	**Kunming**	**121.98**	**74**	⇑PKP	**PKPdf**	**09 27 09.8**	**-0.5**
KMI				LR	LR		
	comp=Z,120nm,17.6s						
KMI				LR	LR		
	comp=Z,130nm,18.7s						
KMI				LR	LR		
	comp=Z,220nm,20.5s						
INK	**Inuvik**	**122.02**	**338**	PKP	**PKPdf**	**09 27 08.1**	**-0.7**
	comp=Z,3.2nm,1.1s,baz=45,slow=5.4,SNR=5.8						
INK	**Inuvik**	**122.02**	**338**	PKIKP	**PKiKP**	**09 27 09.0**	**+0.1**
INK	**Inuvik**	**122.02**	**338**		**PKiKP**	**09 27 09.0**	**+0.1**
CD2	**Chengdu**	**123.88**	**67**	*e*PKP	**PKPdf**	**09 27 13.3**	**-0.2**
CD2				SKKS		09 35 55.0	
ASAR	**Alice Springs**	**123.88**	**143**	PKP	**PKPdf**	**09 27 12.9**	**-0.9**
	comp=Z,1.0nm,0.8s,baz=189,slow=1.7,SNR=12						
LZH	**Lanzhou**	**124.52**	**61**	*e*PKP	**PKPdf**	**09 27 13.9**	**-0.9**
HYT	**Haines Junctio**	**126.15**	**330**		**PKiKP**	**09 27 18.5**	**+1.0**
BMAR	**Burnt Mountain**	**126.18**	**339**		**PKiKP**	**09 27 17.6**	**+0.4**
EGAK	**Eagle**	**126.20**	**335**		**PKiKP**	**09 27 17.5**	**+0.2**
SONM	**Songino Array**	**126.33**	**47**	PKP	**PKiKP**	**09 27 18.1**	**-0.1**
	comp=Z,1.7nm,0.9s,baz=298,slow=4.4,SNR=4.6						
SONM	**Songino Array**	**126.33**	**47**		**PKPdf**	**09 27 17.7**	**-0.1**
ULN	**Ulaanbaatar**	**126.77**	**47**	*c i*PKIKP	**PKiKP**	**09 27 19.1**	**-0.1**
ULN				pmax	pmax		
	comp=Z,5.0nm,1.7s						
TOLK	**Toolik Lake Re**	**127.06**	**342**	PKPdf	**PKPdf**	**09 27 18.5**	**0.0**
WRA	**Warramunga Arr**	**127.06**	**141**	PKP	**PKPdf**	**09 27 18.7**	**-1.3**
	comp=Z,1.3nm,0.8s,baz=237,slow=2.1,SNR=5.4						
WRA	**Warramunga Arr**	**127.06**	**141**	PKIKP	**PKPdf**	**09 27 19.7**	**-0.3**
WRA	**Warramunga Arr**	**127.06**	**141**		**PKPdf**	**09 27 19.7**	**-0.3**
BCAR	**Beaver Creek A**	**127.19**	**333**		**PKiKP**	**09 27 19.7**	**+0.3**
COLD	**Coldfoot**	**128.10**	**340**		**PKiKP**	**09 27 21.1**	**+0.1**
IL31		**128.36**	**337**		**PKPdf**	**09 27 21.0**	**0.0**
ILAR	**Eielson Array**	**128.36**	**337**	PKP	**PKPdf**	**09 27 20.9**	**-0.2**
	comp=Z,2.1nm,0.8s,baz=310,slow=0.7,SNR=24						
ILAR	**Eielson Array**	**128.36**	**337**	PKIKP	**PKiKP**	**09 27 21.3**	**-0.3**
ILAR	**Eielson Array**	**128.36**	**337**		**PKiKP**	**09 27 21.3**	**-0.3**
HDA	**Harding Lake**	**128.58**	**336**		**PKPdf**	**09 27 21.6**	**+0.2**
MDM	**Murphy Dome**	**128.75**	**337**		**PKPdf**	**09 27 22.0**	**+0.2**
CCB	**Clear Creek Bu**	**128.76**	**337**	PKPdf	**PKiKP**	**09 27 22.6**	**+0.2**
WRH	**Wood River Hil**	**128.96**	**337**	PKPdf	**PKPdf**	**09 27 20.9**	**-1.2**
KLU	**Klutina**	**129.62**	**333**		**PKPdf**	**09 27 23.9**	**+0.3**
RND	**Reindeer**	**129.82**	**336**	PKIKP	**PKiKP**	**09 27 25.0**	**+0.3**
RND	**Reindeer**	**129.82**	**336**	PKPdf	**PKiKP**	**09 27 25.0**	**+0.3**
IMAR	**Indian Mountai**	**129.99**	**340**		**PKiKP**	**09 27 24.9**	**0.0**
HHC	**Hu-ho-hao-te**	**130.61**	**55**	*e*P	PKPdf	09 27 17.9	-8.3
GHO	**Glory Hole Cre**	**130.73**	**334**		**PKPdf**	**09 27 25.4**	**-0.3**
RDOG	**Red Dog Mine**	**131.00**	**345**	PKPdf	**PKPdf**	**09 27 26.1**	**+0.2**
SKT	**Skwentna**	**131.65**	**335**		**PKiKP**	**09 27 28.0**	**-0.3**
TTA	**Tatalina**	**132.72**	**338**	PKIKP	**PKiKP**	**09 27 31.1**	**+0.6**
TTA	**Tatalina**	**132.72**	**338**		**PKiKP**	**09 27 31.1**	**+0.6**
ANM	**Nome**	**134.38**	**344**	PKIKP	**PKiKP**	**09 27 33.5**	**-0.3**
ANM	**Nome**	**134.38**	**344**		**PKiKP**	**09 27 33.5**	**-0.3**
NJ2	**Nanjing**	**136.82**	**67**	*e*PKP	**PKPdf**	**09 27 38.1**	**+0.2**
KLR	**Kul'dur**	**141.87**	**37**	PKhKP	PKPpre	09 27 40.6	
	comp=Z,1.5nm,0.7s,baz=303,slow=6.7,SNR=7.8						
KSRS	**Korea Array**	**143.67**	**57**	PKP	PKPbc	09 27 47.9	+0.3
	comp=Z,0.8nm,0.8s,baz=295,slow=2.7,SNR=3.4						
USRK	**Ussuriysk Ar.**	**144.40**	**45**	PKP	**PKPab**	**09 27 48.5**	**-0.8**
	comp=Z,3.4nm,0.8s,baz=264,slow=3.3,SNR=6.8						
YSS	**Yuzh-Sakhalins**	**149.12**	**33**	⇓*e*PKP2	**PKPbc**	**09 28 02.9**	**-0.3**
YSS				pmax	pmax		
	comp=Z,20nm,1.0s						
YSS	**Yuzh-Sakhalins**	**149.12**	**33**		**PKPbc**	**09 28 03.5**	**+0.3**
PET	**Petropavlovsk**	**149.19**	**10**	*c i*PKP2	**PKiKP**	**09 28 05.8**	**+1.4**
PET				pmax	pmax		
	comp=Z,157nm,1.7s						
MJAR	**Matsushiro Arr**	**151.81**	**54**	PKPbc	**PKPbc**	**09 28 09.1**	**-0.9**
	comp=Z,4.9nm,1.1s,baz=254,slow=3.9,SNR=5.6						

IDC 20 09:08:49.6±3.0, 29°.52N×91°.97E, h0^{km}, mb3.5/3, mb1 3.8/5, mb1mx3.3/55, mbtmp3.5/5, ML3.9/2, Error ellipse: s-maj=253.4km s-min=24.9km az=61.0, Xizang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**12.71**	**148**	Pn	Pn	09 11 52.5	+0.7
	0.6nm,0.3s,baz=324,slow=14,SNR=1.3						
MKAR	**Makanchi Array**	**18.83**	**339**	Pn	P	09 13 09.8	-1.1
	0.1nm,0.3s,baz=150,slow=15,SNR=6.1						
KURBB	**Kurchatov Arra**	**23.39**	**338**	P	P	09 14 00.1	+0.2
	0.3nm,0.5s,baz=132,slow=5.8,SNR=1.5						
WRA	**Warramunga Arr**	**63.92**	**135**	P	P	09 19 25.0	+0.4
	0.7nm,0.5s,baz=326,slow=6.6,SNR=12						
ASAR	**Alice Springs**	**66.49**	**138**	P	P	09 19 40.7	-0.6
	0.3nm,0.4s,baz=320,slow=6.0,SNR=7.9						

NNC 20 09:28:51.8±1.4, 51°.57N×75°.42E, h0^{km}, mb3.6, mpv3.3, 6C-4D, Error ellipse: s-maj=23.4km s-min=10.2km az=26.0, Suspected Mining explosion., Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KURBB	**Kurchatov Arra**	**2.18**	**114**	⇑Pn	Pn	09 29 29.2	-0.1
	4.4nm,0.4s,baz=300,slow=17						
KURBB				⇑Sn	Sb	09 29 59.4	-0.1
	58nm,0.8s						
KURK	**Kurchatov**	**2.19**	**112**	⇓Pn	Pn	09 29 28.8	-0.6
	2.4nm,0.5s						
KURK				⇑Sn	Sn	09 29 57.0	-0.2
	26nm,1.0s						
BRVK	**Borovoye**	**3.49**	**297**	⇓Pn	Pn	09 29 47.7	+0.5
	3.3nm,0.8s						
BRVK				⇑Lg	Lg	09 30 31.6	
	16nm,0.7s						
MAKZ	**Makanchi**	**6.41**	**135**	⇑Lg	Lg	09 32 12.4	
	9.2nm,1.2s						
MK31	**Makanchi Array**	**6.56**	**134**	⇑Pn	Pn	09 30 29.4	-0.1
	0.3nm,0.5s,baz=314,slow=13,SNR=4.5						
MK31				⇓Sn	Sn	09 31 44.7	-0.4
	1.1nm,0.5s						
MK31				⇓Lg	Lg	09 32 16.3	
	3.3nm,0.5s						
BTLS	**Baital**	**6.59**	**189**	Pg	Pg	09 31 33.3	+35
	0.8nm,0.2s						
ARXS	**Arharly**	**7.53**	**167**	Pg	Pg	09 31 48.0	+32
	2.4nm,0.4s						
ARXS				Lg	Lg	09 32 49.3	
	4.2nm,0.6s						
MNBS	**Baschi**	**7.75**	**164**	Pg	Pg	09 31 53.3	+33
	0.7nm,0.2s						
MNBS				Lg	Lg	09 32 57.3	
	4.9nm,0.6s						
DJR	**Jarkent**	**7.81**	**156**	Pg	Pg	09 31 54.8	+34
	0.8nm,0.6s						
DJR				Lg	Lg	09 32 60.0	
	3.6nm,0.9s						
KTBS	**Karatobe**	**7.90**	**173**	Pg	Pg	09 31 56.7	+34
	1.0nm,0.6s						
KTBS				Lg	Lg	09 33 03.8	
	12nm,0.6s						
DGS	**Degeres**	**8.33**	**178**	Pg	Pg	09 32 04.2	+33
	2.9nm,0.5s						
DGS				Lg	Lg	09 33 16.6	
	3.1nm,0.5s						
KST	**Kastek**	**8.54**	**177**	Pg	Pg	09 32 11.6	+36
	0.5nm,0.1s						

IDC 20 09:32:15.8±1.9, 1°.94N×126°.98E, h0^{km}, mb3.5/3, mb1 3.8/4, mb1mx3.4/41, mbtmp3.6/4, ML3.5/1, MS3.6/2, Ms1 3.6/2, ms1mx2.7/34, Error ellipse: s-maj=118.6km s-min=23.4km az=69.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**19.96**	**184**	P	P	09 36 50.4	+0.7
	0.1nm,0.3s,baz=14,slow=8.3,SNR=1.3						
WRA	**Warramunga Arr**	**22.92**	**162**	P	P	09 37 20.0	-1.6
	0.6nm,0.4s,baz=340,slow=11,SNR=14						
ASAR	**Alice Springs**	**26.33**	**166**	P	P	09 37 54.5	+0.9
	0.2nm,0.3s,baz=346,slow=12,SNR=16						
KSRS	**Korea Array**	**35.35**	**1**	LR	LR	09 56 24.1	
	comp=Z,23nm,18.9s,baz=68,slow=41						
MKAR	**Makanchi Array**	**59.16**	**326**	P	P	09 42 18.5	0.0
	0.4nm,0.5s,baz=121,slow=8.0,SNR=7.8						
AAK	**Ala-Archa**	**61.84**	**318**	LR	LR	10 11 08.0	
	comp=Z,170nm,20.7s,baz=240,slow=38						

ISC 20 09:39:15.3±1.2, 49°.13N±0°.05×18°.81E±0°.05, h13^{km}±13^{km}, n5, σ0ˢ.79/10, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LANS	**Liptovska Anna**	**0.43**	**87**	*e*PG	**Pg**	**09 39 23.9**	**-0.1**
LANS				*e*SG	**Sg**	**09 39 29.8**	**0.0**
KOLL	**Kolacno**	**0.61**	**206**	*e*PG	**Pg**	**09 39 26.3**	**-0.9**
KOLL				*e*SG	**Sg**	**09 39 36.2**	**+0.9**
JAVC	**Velka Javorina**	**0.80**	**251**	*e*PG	**Pn**	**09 39 32.9**	**+0.6**
JAVC				*e*SG	**Sn**	**09 39 43.8**	**-0.2**
MORC	**Moravsky Berou**	**1.05**	**309**	*e*PG	**Pg**	**09 39 35.0**	**-0.6**
MORC				*e*SG	**Sb**	**09 39 49.4**	**+0.3**
OJC	**Ojcow**	**1.27**	**30**	*e*Pg	**Pn**	**09 39 38.3**	**-0.5**
OJC				*e*Sg	**Sg**	**09 39 57.2**	**+1.0**

*NIED **20** 09:46:20.9, 39°.48N×143°.80E, h10^{km}, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.25; $M_{\theta\theta}$-0.06; $M_{\phi\phi}$-1.19; $M_{r\theta}$0.80; $M_{\theta\phi}$-0.87; $M_{\phi r}$0.36; Fault plane solution: $M_0$1.73000×10^{15} NP1:ϕ_s50.00000°, δ62.00000°, λ115.00000°. NP2:ϕ_s185.00000°, δ37.00000°, λ52.00000°.*

*JMA **20** 09:46:20.9±0.2, 39°.48N×143°.80E, h10^{km}±4^{km}, M4.3*

*MOS **20** 09:46:21.8±0.9, 39°.50N×143°.61E, h10^{km}, mb4.5/22, Error ellipse: s-maj=8.5km s-min=5.4km az=109.8*

*IDC **20** 09:46:22.4±0.8, 39°.43N×143°.54E, h0^{km}, mb4.0/17, mb1 4.2/22, mb1mx4.0/56, mbtmp4.0/22, ML3.3/5, MS3.6/4, Ms1 3.7/4, ms1mx2.9/52, Error ellipse: s-maj=18.8km s-min=15.3km az=147.0*

*NEIC **20** 09:46:24.1±1.8, 39°.45N±0°.06×143°.55E±0°.10, h10^{km}±1^{km}, mb4.4/23, Error ellipse: s-maj=14.1km s-min=8.3km az=118.0*

ISC 20 09:46:24.2±1.8, 39°.53N±0°.05×143°.62E±0°.05, h12^{km}±10^{km}, n171, σ1ˢ.42/175, mb4.3/47, 5C-1D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MIYJ	**Miyakonagasawa**	**1.39**	**273**	P	**Pn**	**09 46 48.6**	**-0.8**
MIYJ				*e*S	**Sg**	**09 47 08.3**	**-0.7**
JTH	**Tanohata**	**1.41**	**287**	P	**Pn**	**09 46 48.9**	**-0.8**
JTH				S	**Sg**	**09 47 09.0**	**-0.7**
OFUJ	**Ofunato**	**1.58**	**254**	P	**Pn**	**09 46 50.9**	**-1.1**
JKEN	**Kujiedanarisaw**	**1.62**	**295**	P	**Pn**	**09 46 51.7**	**-0.8**
JKEN				*e*S	**Sg**	**09 47 14.8**	**-1.4**
JOM	**Ohasama**	**1.80**	**269**	P	**Pn**	**09 46 54.8**	**-0.2**
JOM				*e*S	**Sb**	**09 47 19.7**	**+0.1**
JANG	**Nango**	**1.82**	**298**	P	**Pn**	**09 46 54.6**	**-0.8**
JMK	**Ichinoseki**	**1.95**	**254**	P	**Pn**	**09 46 56.6**	**-0.5**
JIO	**Ouri**	**2.07**	**239**	P	**Pn**	**09 46 57.4**	**-1.3**
JTM	**Tenmabayashi**	**2.32**	**304**	Pn	**Pn**	**09 47 02.7**	**+0.5**
ERM	**Erimo**	**2.51**	**352**	*i*P	**Pn**	**09 47 05.9**	**+1.1**
ERM	**Erimo**	**2.51**	**352**	Pn	**Pn**	**09 47 05.7**	**+0.9**
JYK	**Kaneyama**	**2.60**	**257**	P	**Pn**	**09 47 06.1**	**0.0**
JOT	**Ohata**	**2.70**	**314**	P	**Pn**	**09 47 07.7**	**+0.4**
JOT				S	**Sn**	**09 47 40.3**	**+0.4**
JMM	**Marumori**	**2.76**	**234**	Pn	**Pn**	**09 47 06.9**	**-1.3**
JNBK	**Urakawa-nobuka**	**2.83**	**347**	P	**Pn**	**09 47 09.7**	**+0.6**
JCH	**Churui**	**3.09**	**356**	P	**Pn**	**09 47 12.7**	**0.0**
JFT	**Otama**	**3.26**	**233**	P	**Pn**	**09 47 14.7**	**-0.5**
JAK	**Akkeshi**	**3.56**	**13**	P	**Pn**	**09 47 18.8**	**-0.4**
JEW	**Eniwo**	**3.69**	**334**	Pn	**Pn**	**09 47 22.9**	**+1.8**
NMR	**Nemuro--Hokkai**	**4.15**	**22**	⇓*i*P	**Pn**	**09 47 26.5**	**-0.8**
NMR				*i*S	**Sn**	**09 48 13.2**	**-2.6**
JYT	**Yasato**	**4.26**	**220**	Pn	**Pn**	**09 47 27.3**	**-1.6**
GLVR	**Golovnino**	**4.44**	**18**	*e*P	**Pn**	**09 47 30.9**	**-0.4**
GLVR				*e*S	**Sn**	**09 48 21.5**	**-1.4**
GLVR				pmax	pmax		
	comp=Z,167nm,0.5s						
GLVR				pmax	pmax		
	comp=N,143nm,0.6s						
GLVR				pmax	pmax		
	comp=Z,1µm,1.4s						
GLVR				smax	smax		
	comp=N,547nm,0.4s						
GLVR				smax	smax		
	comp=E,345nm,0.4s						
GLVR				smax	smax		
	comp=E,1µm,2.0s						
GLVR				smax	smax		
	comp=N,2µm,1.8s						
JSD	**Sado**	**4.44**	**252**	Pn	**Pn**	**09 47 31.8**	**+0.4**
JKA	**Kamikawa-asahi**	**4.65**	**351**	Pn	**Pn**	**09 47 35.6**	**+1.5**
ASAJ	**Asahikawa**	**4.65**	**351**	Pn	**Pn**	**09 47 35.4**	**+1.3**
	comp=N,4.1nm,0.3s,baz=198,slow=7.9,SNR=32						
ASAJ				Sn	**Sn**	**09 48 28.4**	**+0.4**
	comp=N,2.6nm,0.3s,baz=206,slow=26,SNR=2.0						
ASAJ	**Asahikawa**	**4.65**	**351**	P	**Pn**	**09 47 35.7**	**+1.5**
GRPR	**Tuman**	**4.74**	**19**	*e*P	**Pn**	**09 47 34.6**	**-0.9**
GRPR				*e*S	**Sn**	**09 48 27.3**	**-3.0**
GRPR				pmax	pmax		
	comp=Z,125nm,0.4s						
GRPR				pmax	pmax		
	comp=N,86nm,0.2s						
GRPR				smax	smax		
	comp=N,575nm,0.3s						
GRPR				smax	smax		
	comp=E,367nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**4.80**	**20**	*e*P	**Pn**	**09 47 35.8**	**-0.5**
YUK				*e*S	**Sn**	**09 48 29.6**	**-2.3**
YUK				pmax	pmax		
	comp=N,37nm,0.3s						
YUK				pmax	pmax		
	comp=Z,174nm,0.3s						
YUK				pmax	pmax		
	comp=Z,394nm,1.3s						
YUK				smax	smax		
	comp=N,488nm,0.4s						
YUK				smax	smax		
	comp=E,386nm,0.4s						
YUK				smax	smax		
	comp=N,771nm,1.8s						
YUK				smax	smax		
	comp=E,801nm,0.6s						
MAJO	**Matsushiro**	**5.21**	**237**	P	**Pn**	**09 47 43.1**	**+1.2**
MAJO	**Matsushiro**	**5.21**	**237**	Pn	**Pn**	**09 47 43.1**	**+1.2**
MAT	**Matsushiro**	**5.21**	**237**	P	**Pn**	**09 47 42.6**	**+0.7**
MAT				*e*S	**Sn**	**09 48 43.3**	**+1.4**
MJAR	**Matsushiro Arr**	**5.21**	**237**	Pn	**Pn**	**09 47 41.5**	**-0.4**
	comp=E,0.9nm,0.3s,baz=35,slow=13,SNR=79						
JGF	**Kuroka**	**6.33**	**234**	Pn	**Pn**	**09 47 58.0**	**+0.7**
KUR	**Kuril'sk**	**6.51**	**27**	*e*P	**Pn**	**09 47 59.6**	**-0.1**
KUR				*e*S	**Sn**	**09 49 11.1**	**-2.8**
KUR				pmax	pmax		
	comp=Z,50nm,0.5s						
KUR				pmax	pmax		
	comp=E,35nm,0.6s						
KUR				pmax	pmax		
	comp=N,22nm,0.4s						
KUR				smax	smax		
	comp=N,104nm,0.4s						
KUR				smax	smax		
	comp=E,31nm,0.5s						
INU	**Inuyama**	**6.71**	**234**		**Pn**	**09 48 03.0**	**+0.6**
YSS	**Yuzh-Sakhalins**	**7.45**	**355**	*e*P	**Pn**	**09 48 12.7**	**+0.1**
YSS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
YSS				MLR	MLR		
	comp=Z,300nm,17.0s						
YSS				MLR	MLR		
	comp=N,300nm,18.0s						
YSS				MLR	MLR		
	comp=E,200nm,15.0s						
TEY	**Ternei**	**7.57**	**319**	*e*P	**Pn**	**09 48 17.7**	**+3.4**
JWT	**Wachi**	**7.79**	**240**	Pn	**Pn**	**09 48 19.1**	**+1.8**
JHS	**Saijyo**	**9.51**	**245**	Pn	**Pn**	**09 48 43.3**	**+2.3**
USA0B	**Ussuriysk Arra**	**9.85**	**302**	P	**Pn**	**09 48 48.3**	**+2.8**
USA0B	**Ussuriysk Arra**	**9.85**	**302**		**Pn**	**09 48 48.3**	**+2.8**
USRK	**Ussuriysk Ar.**	**9.85**	**302**	Pn	**Pn**	**09 48 46.8**	**+1.3**
	baz=118,slow=13,SNR=25						
USRK	**Ussuriysk Ar.**	**9.85**	**302**	P	**Pn**	**09 48 47.6**	**+2.1**
USRK	**Ussuriysk Ar.**	**9.85**	**302**	Pn	**Pn**	**09 48 47.6**	**+2.1**
KSRS	**Korea Array**	**12.47**	**265**	Pn	**Pn**	**09 49 21.7**	**+0.3**
	comp=E,0.1nm,0.3s,baz=85,slow=13,SNR=7.7						
KSAR	**Wonju Array Be**	**12.51**	**265**	P	**Pn**	**09 49 21.1**	**-0.8**
KSAR	**Wonju Array Be**	**12.51**	**265**	Pn	**Pn**	**09 49 21.1**	**-0.8**
KLR	**Kul'dur**	**12.87**	**323**	Pn	**Pn**	**09 49 27.1**	**+0.2**
	comp=E,0.1nm,0.3s,baz=131,slow=13,SNR=8.1						
KLR	**Kul'dur**	**12.87**	**323**	*c e*P	**Pn**	**09 49 27.8**	**+0.9**
KLR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ZEA	**Zeya**	**18.05**	**327**	*e*P	**Pn**	**09 50 33.4**	**-1.3**
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ZEA				MLR	MLR		
	comp=Z,200nm,16.0s						
MA2	**Magadan**	**20.57**	**10**	P	Pn	09 51 03.9	-1.0
	comp=Z,9.7nm,0.7s,baz=191,slow=7.9,SNR=12						
MA2				LR	LR	09 58 49.6	
	comp=Z,57nm,20.0s,baz=158,slow=36						
MA2	**Magadan**	**20.57**	**10**	P	Pn	09 51 04.0	-0.8
MA2				pmax	pmax		
	comp=Z,12nm,0.8s						
MA2	**Magadan**	**20.57**	**10**	P	Pn	09 51 04.0	-0.9
MA2				IAmb	IAmb	09 51 05.6	
	comp=Z,12nm,0.8s						
BJI	**Beijing**	**21.07**	**280**	P	**P**	**09 51 06.0**	**-2.1**
BJI				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BJT	**Baijiatuau**	**21.08**	**280**	P	**P**	**09 51 06.0**	**-2.2**
BJT				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BJT	**Baijiatuau**	**21.08**	**280**	P	**P**	**09 51 06.0**	**-2.2**
NJ2	**Nanjing**	**21.39**	**257**	*e*P	**P**	**09 51 11.4**	**-0.2**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
SEY	**Seymchan**	**24.02**	**10**	P	**P**	**09 51 39.2**	**+0.6**
	comp=Z,8.8nm,1.0s,baz=190,slow=7.6,SNR=18						
SEY	**Seymchan**	**24.02**	**10**	*i*P	**P**	**09 51 39.4**	**+0.8**
YAK	**Yakutsk**	**24.09**	**344**	*c e*P	**P**	**09 51 41.8**	**+2.6**
YAK				pmax	pmax		
	comp=Z,16nm,1.0s						
HHC	**Hu-ho-hao-te**	**24.45**	**283**	*e*P	**P**	**09 51 43.8**	**+0.8**
HHC				S	**S**	**09 56 01.4**	**-1.4**
HHC				pmax	pmax		
	comp=Z,3.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,91nm,5.3s						
HHC				LR	LR		
	comp=N,100nm,14.5s						
HHC				LR	LR		
	comp=E,220nm,13.6s						
HHC				LR	LR		
	comp=Z,250nm,15.3s						
WHN	**Wuhan**	**25.50**	**258**	P	**P**	**09 51 51.8**	**-0.5**
GUMO	**Guam**	**25.86**	**177**	LR	LR	10 00 43.1	
	comp=Z,54nm,18.9s,baz=18,slow=33						
BOD	**Bodaibo**	**26.45**	**324**	*e*P	**P**	**09 52 00.9**	**+0.2**
BOD				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ULN	**Ulaanbaatar**	**27.51**	**300**	P	**P**	**09 52 11.3**	**+0.8**
ULN				pmax	pmax		
	comp=Z,6.0nm,1.1s						
ULN	**Ulaanbaatar**	**27.51**	**300**	P	**P**	**09 52 11.3**	**+0.8**
ULN				IAmb	IAmb	09 52 22.3	
	comp=Z,5.8nm,1.1s						
SONM	**Songino Array**	**27.95**	**300**	P	**P**	**09 52 14.2**	**-0.3**
	comp=Z,2.0nm,0.7s,baz=98,slow=8.2,SNR=5.3						
SONM	**Songino Array**	**27.95**	**300**	P	**P**	**09 52 14.2**	**-0.3**
SONM				pmax	pmax		
	comp=Z,3.0nm,1.1s						
SONM	**Songino Array**	**27.95**	**300**	P	**P**	**09 52 14.2**	**-0.3**
H11N2	**WAKE ISLAND Hy**	**28.12**	**128**	T	T	10 21 49.6	
	baz=318,slow=75,SNR=38						
H11N1	**WAKE ISLAND Hy**	**28.13**	**128**	T	T	10 21 49.6	
	baz=318,slow=75,SNR=27						
H11N3	**WAKE ISLAND Hy**	**28.14**	**128**	T	T	10 21 49.6	
	baz=318,slow=75,SNR=35						
XAN	**Xi'an**	**28.21**	**270**	P	**P**	**09 52 16.9**	**+0.1**
XAN				pP	pwP	09 52 21.3	-1.9
XAN				pmax	pmax		
	comp=Z,6.0nm,1.2s						
XAN				pmax	pmax		
	comp=Z,150nm,5.2s						
H11S1	**WAKE ISLAND Hy**	**28.94**	**130**	T	T	10 22 45.1	
	baz=325,SNR=4.2						
H11S3	**WAKE ISLAND Hy**	**28.94**	**130**	T	T	10 22 49.3	
	baz=325						
H11S2	**WAKE ISLAND Hy**	**28.95**	**130**	T	T	10 22 59.3	
	baz=325						
ENH	**Enshi**	**29.33**	**262**	P	**P**	**09 52 26.3**	**-0.5**
ENH				IAmb	IAmb	09 52 40.3	
	comp=Z,7.3nm,0.8s						
TLY	**Talaya**	**30.11**	**307**	*e*P	**P**	**09 52 34.7**	**+1.2**
TLY				pmax	pmax		
	comp=Z,9.0nm,1.3s						
ZAK	**Zakamensk**	**30.19**	**304**	*e*P	**P**	**09 52 33.4**	**-0.9**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
LZH	**Lanzhou**	**31.44**	**276**	*e*P	**P**	**09 52 42.9**	**-2.6**
LZH				pP	pwP	09 52 52.4	+0.4
LZH				sP	sP	09 52 56.0	+6.7
LZH				pmax	pmax		
	comp=Z,16nm,1.0s						
GYA	**Guiyang**	**33.39**	**258**	*e*P	**P**	**09 53 02.1**	**-0.6**
GYA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
CD2	**Chengdu**	**33.46**	**268**	P	**P**	**09 53 01.3**	**-1.9**
CD2				pmax	pmax		
	comp=Z,10.0nm,1.2s						
GTA	**Gaotai**	**33.56**	**284**	*e*P	**P**	**09 53 02.9**	**-1.2**
GTA				pP	pwP	09 53 10.0	-0.6
GTA				sP	sP	09 53 13.0	+5.1
GTA				pmax	pmax		
	comp=Z,2.0nm,1.8s						
DGZ	**Jazzator, Alta**	**40.40**	**304**	*i*P	**P**	**09 54 03.3**	**+1.2**
DGZ				pmax	pmax		
	comp=Z,7.0nm,0.7s						
WMQ	**Urumqi**	**41.32**	**295**	*e*P	**P**	**09 54 11.8**	**+2.1**
ZAA0	**Zalesovo Array**	**41.57**	**310**	P	**P**	**09 54 11.8**	**+0.4**
ZAA0				IAmb	IAmb	09 54 12.6	
	comp=Z,4.7nm,0.6s						
ZALV	**Zalesovo Beam**	**41.57**	**310**	P	**P**	**09 54 12.2**	**+0.7**
	comp=Z,5.8nm,0.6s,baz=92,slow=7.8,SNR=23						
ZALV				PcP	**PcP**	**09 56 09.2**	**+0.7**
	comp=Z,1.4nm,0.6s,baz=111,slow=3.3,SNR=4.2						
ZALV	**Zalesovo Beam**	**41.57**	**310**	P	**P**	**09 54 11.6**	**+0.1**
ZALV	**Zalesovo Beam**	**41.57**	**310**	P	**P**	**09 54 11.6**	**+0.1**
ZSN	**Zaisan**	**42.45**	**301**	*e*P	**P**	**09 54 19.0**	**+0.1**
	baz=301						
ZSN	**Zaisan**	**42.45**	**301**	*e*P	**P**	**09 54 18.9**	**+0.1**
IMAR	**Indian Mountai**	**43.62**	**32**	P	**P**	**09 54 29.7**	**+1.7**
MK31	**Makanchi Array**	**44.31**	**300**	P	**P**	**09 54 34.2**	**+0.4**
MK31				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MK31	**Makanchi Array**	**44.31**	**300**	P	**P**	**09 54 34.2**	**+0.4**
MK31				IAmb	IAmb	09 54 35.0	
	comp=Z,3.7nm,0.8s						
MKAR	**Makanchi Array**	**44.31**	**300**	P	**P**	**09 54 34.4**	**+0.6**
	comp=Z,2.9nm,0.7s,baz=84,slow=9.3,SNR=36						
MKAR	**Makanchi Array**	**44.31**	**300**	P	**P**	**09 54 34.2**	**+0.4**
MAKZ	**Makanchi**	**44.52**	**300**	P	**P**	**09 54 35.5**	**0.0**
MAKZ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MAKZ	**Makanchi**	**44.52**	**300**	P	**P**	**09 54 35.5**	**0.0**
MAKZ				IAmb	IAmb	09 54 40.5	
	comp=Z,3.6nm,0.8s						
SEM	**Semipalatinsk**	**44.85**	**306**	*e*P	**P**	**09 54 37.0**	**-1.3**
	baz=306						
SEM	**Semipalatinsk**	**44.85**	**306**	*e*P	**P**	**09 54 37.0**	**-1.3**
BWN	**Browne**	**45.36**	**34**	P	**P**	**09 54 44.4**	**+2.5**
TOLK	**Toolik Lake Re**	**45.46**	**28**	P	**P**	**09 54 45.1**	**+2.4**
TOLK				IAmb	IAmb	09 54 45.8	
	comp=Z,6.3nm,1.2s						
KURK	**Kurchatov**	**45.80**	**307**	P	**P**	**09 54 45.7**	**+0.1**
KURK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KURK	**Kurchatov**	**45.80**	**307**	P	**P**	**09 54 45.7**	**+0.1**
ILAR	**Eielson Array**	**46.46**	**34**	P	**P**	**09 54 52.0**	**+1.4**
	comp=Z,1.1nm,0.7s,baz=258,slow=6.8,SNR=11						
ILAR	**Eielson Array**	**46.46**	**34**	P	**P**	**09 54 52.4**	**+1.8**
ILAR	**Eielson Array**	**46.46**	**34**	P	**P**	**09 54 52.4**	**+1.8**
SHLS	**Shalkode**	**47.25**	**296**	*e*P	**P**	**09 54 54.0**	**-3.3**
	baz=296						

SHLS	Shalkode	47.25	296	eP	P	09 54 53.9	-3.3
BMAR	Burnt Mountain	47.31	30	P	P	09 55 00.2	+2.9
KPKS	Kokpek	47.69	297	eP	P	09 55 00.2	-0.4
	baz=297						
KPKS	Kokpek	47.69	297	eP	P	09 55 00.2	-0.4
SATY	Saty	48.02	296	eP	P	09 55 02.4	-0.9
	baz=296						
SATY	Saty	48.02	296	eP	P	09 55 02.3	-0.9
CHKK	Chushkaly	48.73	298	eP	P	09 55 07.7	-0.8
	baz=298						
CHKK	Chushkaly	48.73	298	eP	P	09 55 07.7	-0.8
BCAR	Beaver Creek A	48.86	36	P	P	09 55 10.9	+1.6
EGAK	Eagle	48.91	33	P	P	09 55 11.5	+1.9
EGAK				IAmb	IAmb	09 55 23.9	
	comp=Z,6.3nm,1.3s						
AAA	Alma-Ata	49.00	297	eP	P	09 55 09.3	-1.3
	baz=297						
AAA	Alma-Ata	49.00	297	eP	P	09 55 09.3	-1.3
KUU	Kurty	49.16	298	eP	P	09 55 10.6	-1.3
	baz=298						
KUU	Kurty	49.16	298	eP	P	09 55 10.5	-1.3
BRZS	Berezniki	49.67	307	eP	P	09 55 14.8	-0.9
	baz=307						
BRZS	Berezniki	49.67	307	eP	P	09 55 14.7	-0.9
BRVK	Borovoye	50.26	311	P	P	09 55 20.0	0.0
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BRVK	Borovoye	50.26	311	P	P	09 55 20.0	0.0
BRVK				IAmb	IAmb	09 55 21.7	
	comp=Z,4.7nm,0.8s						
BTLS	Baital	50.32	300	eP	P	09 55 19.6	-1.1
	baz=300						
BTLS	Baital	50.32	300	eP	P	09 55 19.6	-1.1
INK	Inuvik	51.37	28	P	P	09 55 29.7	+1.5
	comp=Z,1.7nm,0.6s,baz=307,slow=5.1,SNR=7.1						
INK	Inuvik	51.37	28	P	P	09 55 29.4	+1.2
INK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
INK	Inuvik	51.37	28	P	P	09 55 29.4	+1.2
INK				IAmb	IAmb	09 55 30.9	
	comp=Z,3.4nm,0.9s						
KK31	Karatay Array	53.40	299	P	P	09 55 43.9	+0.2
KK31				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KK31	Karatay Array	53.40	299	P	P	09 55 43.9	+0.2
KKAR	Karatay Array	53.40	299	P	P	09 55 43.6	-0.1
KKAR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KKAR	Karatay Array	53.40	299	P	P	09 55 43.6	-0.1
KK07	Karatay Array	53.41	299	P	P	09 55 42.8	-1.0
ARU	Arti	55.66	318c	iP	P	09 56 00.0	+0.1
ARU						09 56 54.7	
ARU						09 58 02.8	
ARU				S	S	10 03 49.1	+3.6
ARU				SS	SS	10 07 23.2	-6.9
ARU				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ARU	Arti	55.66	318	P	P	09 55 59.9	+0.1
AB06	Akbulak array	57.66	310	P	P	09 56 14.2	0.0
ABKAR	Akbulak array	57.67	310	P	P	09 56 14.9	+0.7
ABKAR				IAmb	IAmb	09 56 27.6	
	comp=Z,2.8nm,0.6s						
AB08	Akbulak array	57.69	310	P	P	09 56 14.5	+0.2
KBL	Kabul	58.16	290	P	P	09 56 17.4	-0.8
KBL				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KBL	Kabul	58.16	290	P	P	09 56 17.4	-0.8
KBL				IAmb	IAmb	09 56 36.0	
	comp=Z,3.3nm,0.8s						
SANVU	Saraoutou	58.95	153	P	P	09 56 22.5	-0.9
WB0	Warramunga Arr	59.61	190	P	P	09 56 26.6	-1.4
RES	Resolute Bay	59.75	15	P	P	09 56 29.0	+0.7
	comp=Z,1.8nm,0.7s,baz=320,slow=5.9,SNR=11						
WRA	Warramunga Arr	59.79	190	P	P	09 56 28.0	-1.2
	comp=Z,1.0nm,0.9s,baz=8.5,slow=7.1,SNR=2.9						
YKA	Yellowknife Ar	60.78	31	P	P	09 56 36.8	+1.3
	comp=Z,0.7nm,0.7s,baz=304,slow=5.9,SNR=14						
ASAR	Alice Springs	63.52	190	P	P	09 56 53.6	-0.7
	comp=Z,0.4nm,0.7s,baz=358,slow=6.0,SNR=4.1						
OBN	Obninsk	67.14	323	eP	P	09 57 19.8	+2.4
OBN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
FINES	FINESS Array B	67.41	333	P	P	09 57 18.7	-0.4
	comp=Z,2.7nm,0.7s,baz=64,slow=4.4,SNR=6.8						
FINES	FINESS Array B	67.41	333c	eP	P	09 57 19.8	+0.7
FINES				pmax	pmax		
	comp=Z,3.0nm,0.7s						
FINES	FINESS Array B	67.41	333	P	P	09 57 19.0	0.0
MOD	Modoc Plateau	68.86	53	P	P	09 57 27.3	-1.5
KIV	Kislovodsk	70.58	311	eP	P	09 57 40.4	+1.2
KIV				pmax	pmax		
	comp=Z,31nm,1.1s						
KBZ	Khabaz	70.59	311	P	P	09 57 39.2	+0.1
	comp=Z,3.1nm,0.8s,baz=42,slow=7.0,SNR=4.2						
NVAR	Mina Array Bea	72.12	55	P	P	09 57 50.2	+1.4
	comp=Z,0.6nm,0.7s,baz=292,slow=6.9,SNR=5.9						
NVAR	Mina Array Bea	72.12	55	P	P	09 57 51.0	+2.2
NB2	NORSAR Subarra	72.55	338	P	P	09 57 50.8	+0.1
	comp=Z,0.8nm,0.6s,baz=38,slow=6.2						
NOA	NORSAR Array B	72.55	338	P	P	09 57 50.2	-0.5
	comp=Z,20nm,0.5s,baz=37,slow=6.0,SNR=4.8						
AKASG	Malin Array Be	73.38	323	P	P	09 57 55.3	-0.4
	comp=Z,1.3nm,0.5s,baz=47,slow=5.9,SNR=7.7						
AKASG	Malin Array Be	73.38	323c	eP	P	09 57 56.0	+0.3
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
PDAR	Pinedale Array	74.69	47	P	P	09 58 05.2	+1.3
	comp=Z,0.4nm,0.5s,baz=232,slow=1.9,SNR=6.0						
PDAR	Pinedale Array	74.69	47	P	P	09 58 05.6	+1.7
BURAR	Bucovina Array	77.41	322	P	P	09 58 19.7	+0.5
PHWY	Pilot Hill	77.95	46	P	P	09 58 20.5	-2.0
PHWY				IAmb	IAmb	09 58 29.6	
	comp=Z,4.0nm,0.8s						
PPT	Papeete	84.24	118	LR	LR	10 30 57.3	
	comp=Z,36nm,20.4s,baz=36,slow=32						
TXAR	Lajitas Array	87.24	54	P	P	09 59 11.1	+0.3
	comp=Z,0.2nm,0.6s,baz=311,slow=3.0,SNR=4.0						
TXAR	Lajitas Array	87.24	54	P	P	09 59 10.6	-0.3
TXAR	Lajitas Array	87.24	54	P	P	09 59 10.6	-0.3
ESDC	Sonseca Array	95.78	335	LR	LR	10 49 30.4	
	comp=Z,164nm,20.0s,baz=230,slow=40						

TUL ***20*** *09:57:59.2±1.9, 36°.53N±0°.02×98°.21W±0°.02, h5^{km}±7^{km}, ML3.1, mb_Lg3.1/73(NEIC), Error ellipse: s-maj=2.8km s-min=2.2km az=108.0*

NEIC ***20*** *09:57:59.5±1.1, 36°.505N±0°.009×98°.16W±0°.02, h3^{km}±7^{km}, Error ellipse: s-maj=2.5km s-min=1.2km az=72.0*

ANF ***20*** *09:57:59.9±0.7, 36°.51N×98°.18W, h5^{km}, ML3.7/8, Error ellipse: s-maj=9.5km s-min=7.2km az=79.0*

ISC 20 09:57:59.5±1.2**, 36°.51N**±0°.02×**98°.19W**±0°.03**, h3**^{km}±10^{km}**, n73, σ0^{s}.97**/64**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CROK	Carrier	0.17	92		Pg	09 58 03.3	+0.5
CROK				Sg	Sg	09 58 06.3	+1.4
KAN14	Manchester OK	0.48	22		Pg	09 58 08.5	-0.2
KAN14				Sg	Sg	09 58 15.0	0.0
KAN10	Anthony SW Sta	0.62	7		Pg	09 58 10.9	-0.4
KAN10				Sg	Sg	09 58 19.5	+0.1
KAN05	Bluff City Nor	0.65	23		Pg	09 58 11.6	-0.4
KAN05				Sg	Sg	09 58 20.3	-0.1
U32A	Winter Ranch,	0.67	259		Pg	09 58 11.9	-0.4
U32A				Sg	Sg	09 58 21.3	+0.3
U32A	Winter Ranch,	0.67	259	P		09 58 11.7	
	baz=78						
KAN01	Argonia South	0.73	28		Pg	09 58 13.0	-0.5
KAN01				Sg	Sg	09 58 22.8	-0.2
KAN08	Anthony NE Sta	0.74	14		Pg	09 58 13.2	-0.5
KAN08				Sg	Sg	09 58 23.5	+0.3
KAN13	South Haven SW	0.76	49		Pg	09 58 13.7	-0.4
KAN13				Sg	Sg	09 58 24.0	0.0
KAN12	Harper NE Stat	0.80	11		Pg	09 58 14.3	-0.6
KAN12				Sg	Sg	09 58 25.3	0.0
OK029	Liberty Lake	0.93	140		Pg	09 58 17.1	-0.2
BCOK	Bluff Creek, N	0.97	151		Pg	09 58 17.9	-0.2
BCOK				IAmb_Lg		09 58 32.9	
	comp=Z,113nm,0.8s						
OK025	Westminster Rd	1.16	143		Pg	09 58 21.2	-0.5
OK031	S. Brethren Rd	1.23	117		Pg	09 58 22.6	-0.4
QUOK	Quay	1.24	105		Pg	09 58 22.9	-0.4
OKCFA	Oklahoma City	1.25	151		Pg	09 58 22.7	-0.7
OKCSW	OKLAHOMA CITY	1.26	151		Pg	09 58 23.0	-0.6
OK030	Cody Creek RV	1.28	117		Pg	09 58 23.4	-0.6
FNO	Franklin	1.41	153		Pn	09 58 25.8	-0.2
T35A	Sooner Cattle	1.41	73		Pn	09 58 25.5	-0.5
T35B	Sooner Cattle	1.41	73	P		09 58 25.5	
	baz=254,SNR=124						
WMOK	Wichita Mounta	1.83	195	P	Pn	09 58 32.0	+0.1
	baz=16						
WMOK				S	Sb	09 58 56.1	-0.9
	baz=16						
WMOK	Wichita Mounta	1.83	195	Pn	Pn	09 58 31.9	0.0
WMOK				IAmb_Lg		09 59 02.6	
	comp=Z,91nm,1.0s						
WMOK	Wichita Mounta	1.83	195	P		09 58 31.9	
	baz=16,SNR=178						
WMOK				S		09 58 56.9	
	baz=16						
X34A	Smith Ranch, M	1.93	171	Pn	Pn	09 58 34.0	+0.8
R32A	Long Quarter,	1.95	348		Pn	09 58 34.0	+0.4
R32A	Long Quarter,	1.95	348	P		09 58 34.0	
	baz=167,SNR=84						
R32A				S		09 58 59.7	
	baz=167						
TUL1	Leonard	2.03	106	P	Pn	09 58 34.8	+0.2
	baz=288						
TUL1				S	Sn	09 59 00.6	+0.1
	baz=288						
TUL1	Leonard	2.03	106		Pn	09 58 35.0	+0.4
TUL1				IAmb_Lg		09 59 07.1	
	comp=Z,68nm,0.9s						
TUL1	Leonard	2.03	106	P		09 58 34.6	
	baz=288,SNR=56						
CBKS	Cedar Bluff	2.61	332	P	Pn	09 58 43.3	+0.7
	baz=151						
CBKS				S	Sn	09 59 15.0	+0.2
	baz=151						
CBKS	Cedar Bluff	2.61	332		Pn	09 58 43.1	+0.5
CBKS	Cedar Bluff	2.61	332	P		09 58 42.5	
	baz=151,SNR=36						
CBKS				S		09 59 14.8	
	baz=151						
KSU1	Kansas State U	2.87	25	P	Pn	09 58 46.6	+0.4
	baz=206						
KSU1				S	Sn	09 59 22.4	+1.1
	baz=206						
KSU1	Kansas State U	2.87	25	Pn	Pn	09 58 46.4	+0.2
KSU1				IAmb_Lg		09 59 35.7	
	comp=Z,43nm,0.9s						
X37A	Clayton	2.99	129		Pn	09 58 48.2	+0.4
X37A				IAmb_Lg		09 59 43.0	
	comp=Z,39nm,0.7s						
X37A	Clayton	2.99	129	P		09 58 48.1	
	baz=311						
U38A	Gravette	3.07	90		Pn	09 58 50.1	+1.2
Z35A	Perchaven, San	3.26	166	Pn	Pn	09 58 51.8	+0.2
AMTX	Amarillo	3.27	241	P	Pn	09 58 52.2	+0.5
	baz=59						
AMTX	Amarillo	3.27	241	Pn	Pn	09 58 52.9	+1.2
AMTX				IAmb_Lg		09 59 45.8	
	comp=Z,47nm,0.9s						
HHAR	Hobbs	3.44	93		Pn	09 58 54.6	+0.7
W39A	Magazine	3.81	109	P	Pn	09 58 59.0	-0.1
	baz=292						
W39A	Magazine	3.81	109		Pn	09 58 57.3	-1.7
W39A				IAmb_Lg		10 00 08.4	
	comp=Z,33nm,0.7s						
W39A	Magazine	3.81	109	P		09 58 59.0	
	baz=292						
ABTX	Abilene, Hawle	4.06	198	P	Pn	09 59 04.1	+1.6
	baz=17						
S39A	Bolivar	4.07	72	Pn	Pn	09 59 03.4	+0.8
S39A				IAmb_Lg		10 00 09.2	
	comp=Z,32nm,0.8s						
S39A	Bolivar	4.07	72	P		09 59 02.4	
	baz=254,SNR=12						
Z38A	Mt. Pleasant	4.18	140	Pn	Pn	09 59 02.1	-2.0
Z38A				IAmb_Lg		10 00 17.8	
	comp=Z,59nm,0.7s						
MIAR	Mount Ida	4.24	116	P	Pn	09 59 05.4	+0.4
	baz=299						
MIAR	Mount Ida	4.24	116	IAmb_Lg		10 00 19.6	
	comp=Z,27nm,0.8s						
MIAR	Mount Ida	4.24	116	P		09 59 05.5	
	baz=299,SNR=15						
U40A	Yellville	4.30	90		Pn	09 59 06.4	+0.5
U40A				IAmb_Lg		10 00 18.1	
	comp=Z,28nm,0.8s						
KSCO	Kaye Shedlock'	4.31	307	IAmb_Lg		10 00 15.9	
	comp=Z,30nm,0.7s						
WHTX	Lake Whitney,	4.55	172	Pn	Pn	09 59 09.2	0.0
WHTX	Lake Whitney,	4.55	172	P		09 59 08.9	
	baz=353,SNR=9.7						
MGMO	Mountain Grove	4.79	81		Pn	09 59 13.1	+0.5
MGMO				IAmb_Lg		10 00 40.2	
	comp=Z,30nm,0.8s						
X40A	Basin Creek Fa	4.81	113	Pn	Pn	09 59 09.7	-3.1
X40A				IAmb_Lg		10 00 35.4	
	comp=Z,23nm,0.8s						
P38A	Dawn	4.81	48	IAmb_Lg		10 00 33.4	
	comp=Z,32nm,0.8s						
BGNE	Belgrade	4.89	0	P		09 59 13.5	
	baz=180,SNR=14						
237A	Washetta, Mont	4.91	156	Pn	Pn	09 59 13.7	-0.5
WHAR	Wooly Hollow	4.94	103	IAmb_Lg		10 00 47.6	
	comp=Z,39nm,1.1s						
WLAR	White Oak Lake	5.03	123	Pn	Pn	09 59 14.0	-1.7
WLAR				IAmb_Lg		10 00 47.1	
	comp=Z,23nm,0.7s						
R40A	Maddies Statio	5.04	68		Pn	09 59 16.7	+0.7
OGNE	Ogallala	5.35	327	Pn	Pn	09 59 16.1	-4.2
OGNE				IAmb_Lg		10 00 49.5	
	comp=Z,44nm,0.7s						
L34A	Svendsen Farm,	5.63	14	IAmb_Lg		10 01 01.8	
	comp=Z,28nm,0.8s						
P40A	Paris	5.71	56	IAmb_Lg		10 01 03.7	
	comp=Z,26nm,0.8s						
435B	Jarrell	5.74	175	IAmb_Lg		10 01 17.7	
	comp=Z,41nm,1.1s						
SDCO	Great Sand Dun	5.97	284		Pn	09 59 29.8	+0.8
K31A	O'Neill	6.12	356	IAmb_Lg		10 01 22.6	
	comp=Z,23nm,0.8s						
JCT	Junction City	6.16	193	Pn	Pn	09 59 32.0	+0.6
JCT				IAmb_Lg		10 01 29.8	
	comp=Z,28nm,0.8s						
PBMO	Poplar Bluff	6.25	85	IAmb_Lg		10 01 23.4	
	comp=Z,22nm,0.7s						
FVM	French Village	6.37	74	IAmb_Lg		10 01 24.3	
	comp=Z,30nm,0.7s						
SCIA	State Center	6.63	34	IAmb_Lg		10 01 36.7	
	comp=Z,33nm,0.8s						
SLM	Saint Louis	6.66	69	IAmb_Lg		10 01 28.7	
	comp=Z,20nm,0.8s						
S44A	Carbondale	7.24	78	IAmb_Lg		10 01 57.0	
	comp=Z,25nm,0.7s						
SIUC	Southern Illin	7.27	78	IAmb_Lg		10 01 50.0	
	comp=Z,24nm,0.7s						
PHWY	Pilot Hill	7.42	312	IAmb_Lg		10 02 10.0	
	comp=Z,15nm,1.1s						
Y22D	IRIS PASSCAL I	7.54	254	IAmb_Lg		10 02 14.6	
	comp=Z,27nm,0.9s						
O44A	Mansfield	8.46	62	IAmb_Lg		10 02 44.1	
	comp=Z,23nm,0.7s						
RWWY	Rawlins	8.71	309	IAmb_Lg		10 02 52.3	
	comp=Z,11nm,1.0s						
RSSD	Black Hills	8.81	331	IAmb_Lg		10 02 48.5	
	comp=Z,18nm,1.2s						
JFWS	Jewell Farm	8.85	41	IAmb_Lg		10 02 52.0	
	comp=Z,19nm,0.7s						
T47A	Sharon Grove	8.91	84	IAmb_Lg		10 02 59.5	
	comp=Z,20nm,1.0s						
WCI	Wyandotte Cave	9.62	76	IAmb_Lg		10 03 13.4	
	comp=Z,12nm,0.8s						

HEL ***20*** *10:59:06.0±0.1, 64°.67N×30°.65E, h0^{km}, ML2.0, Explosion*

KOLA ***20*** *10:59:06.9, 64°.68N×30°.45E, h0^{km}, ML2.5, Kostomuksha, Karelia*

IDC ***20*** *10:59:08.0±2.4, 64°.66N×30°.45E, h0^{km}, mb1 3.0/3, mb1mx2.9/37, mbtmp2.8/3, ML2.0/3, Error ellipse: s-maj=39.3km s-min=8.8km az=101.0*

ISC 20 10:59:04.4±1.0**, 64°.78N**±0°.03×**31°.17E**±0°.06**, h0**^{km}**, n25, σ1^{s}.41**/38**, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KU6	Riekki	1.36	338	PG	Pb	10 59 31.2	+0.4
	baz=171						
KU6				MSG		10 59 48.2	
	comp=Z,10nm,0.2s						
KU6				SB	Sn	10 59 49.8	+0.4
MSF	Maaselka	1.45	323	PG	Pn	10 59 31.5	-0.3
MSF				SN	Sn	10 59 51.4	-0.1
OLKF	Oulanka, Finla	1.72	335	PG	Pg	10 59 37.2	-0.1
OLKF				SN	Sg	10 59 59.9	+0.4
JOF	Joensuu	1.87	178	PG	Pn	10 59 37.9	+0.3
JOF				SG	Sn	11 00 01.7	-0.1
OUL	Oulu	2.27	280	PG	Pn	10 59 43.1	+0.1
OUL				SG	Sn	11 00 09.7	-1.9
OUF	Merijarvi	2.81	265	PB	Pn	10 59 50.0	-0.5
OUF				MSG		11 00 21.9	
	comp=Z,10nm,0.2s						
OUF				SG	Sn	11 00 25.2	+0.2
RNF	Rovaniemi	2.82	313	PB	Pn	10 59 52.3	+1.7
RNF				SB	Sn	11 00 27.8	+2.6
APA0	Apatity Array	2.94	14	P	Pb	10 59 56.5	-1.1
APA0				S	Sb	11 00 33.8	-0.2
APA	Apatity	2.95	17	P	Pb	10 59 57.0	-0.8
APA				S	Sb	11 00 34.3	0.0
OBF0	Syolatti, Pyha	3.00	268	PB	Pn	10 59 52.8	-0.2
	baz=80						
OBF0				SG	Sn	11 00 31.3	+1.7
SUF	Sumiainen	3.04	229	PB	Pn	10 59 54.2	+0.5
	baz=40						
SUF				MSG		11 00 28.4	
	comp=Z,5.7nm,0.2s						
SUF				SG	Sn	11 00 31.9	+1.2
VRF	Varrio	3.05	349	PB	Pb	10 59 57.5	-2.0
VRF				MSG		11 00 37.7	
	comp=Z,3.1nm,0.2s						
TOF	Tornio	3.14	298	PB	Pn	10 59 56.9	+1.8
TOF				MSG		11 00 34.1	
	comp=Z,4.5nm,0.2s						
SGF	Sodankyl	3.28	327	PG	Pb	11 00 02.6	-0.7
KAF	Kangasniemi	3.45	221	PB	Pn	11 00 00.9	+1.6
	baz=31						
KALU	Kalix	3.45	292	PN	Pn	10 59 59.8	+0.4
KEF	Keuruu	3.85	230	PB	Pn	11 00 05.4	+0.5
PAJU	Pajala	4.00	308	PN	Pn	11 00 08.1	+1.2
FIA0	FINESS Array S	4.07	217	PN	Pn	11 00 07.8	0.0
FINES	FINESS Array B	4.07	217	Pn	Pn	11 00 07.0	-0.8
	comp=Z,0.1nm,0.3s,baz=33,slow=14,SNR=5.6						
FINES				Pg	Pb	11 00 15.1	-1.7
	comp=Z,0.4nm,0.3s,baz=33,slow=14,SNR=9.4						
FINES				Lg	Lg	11 01 05.5	
	comp=Z,0.9nm,0.3s,baz=34,slow=25,SNR=8.8						
BURU	Burvik	4.21	272	PN	Pn	11 00 08.5	-1.2
VJF	Virojoki	4.57	203	SG	Sb	11 01 22.6	+1.8
PVF	Pernaja	4.90	212	SG	Sb	11 01 32.1	+1.7
ARCES	ARCESS Array B	5.26	338	Pn	Pn	11 00 25.7	+1.5
	baz=151,slow=12,SNR=54						
ARCES				Sn	Sn	11 01 23.8	-1.6
	baz=160,slow=24,SNR=1.4						
ARCES				Lg	Lg	11 01 43.8	
	baz=151,slow=36,SNR=2.4						
NOA	NORSAR Array B	9.82	257	Pn	Pn	11 01 22.3	-4.5
	comp=Z,0.0nm,0.3s,baz=54,slow=12,SNR=2.2						

IDC ***20*** *11:09:11.1±0.7, 39°.94N×142°.56E, h0^{km}, mb4.0/18, mb1 4.2/24, mb1mx4.1/46, mbtmp4.0/24, ML3.2/6, MS3.5/15, Ms1 3.6/15, ms1mx3.3/58, Error ellipse: s-maj=19.0km s-min=14.2km az=107.0*

JMA ***20*** *11:09:12.0, 40°.00N×142°.37E, h20^{km}±1^{km}, M4.7*

JMA Felt II J1.

NIED ***20*** *11:09:12.0, 40°.00N×142°.37E, h20^{km}, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.11; $M_{\theta\theta}$2.23; $M_{\phi\phi}$-2.34; $M_{r\theta}$0.46; $M_{\theta\phi}$-0.06; $M_{\phi r}$-0.04; Fault plane solution: $M_0$2.33000×10^{15} NP1: ϕ_s136.00000°, δ82.00000°, λ9.00000°. NP2: ϕ_s45.00000°, δ81.00000°, λ172.00000°.*

BJI ***20*** *11:09:13.5±0.0, 40°.10N×142°.40E, h5^{km}, mB5.0/25, mb4.4/37, Ms4.2/14, Ms7 3.9/13*

MOS ***20*** *11:09:15.1±0.8, 40°.06N×142°.58E, h33^{km}, mb4.6/19, Error ellipse: s-maj=8.2km s-min=5.8km az=85.1*

NEIC ***20*** *11:09:16.5±3.0, 39°.95N±0°.05×142°.7E±0°.1, h35^{km}±2^{km}, mb4.4/18, Error ellipse: s-maj=15.9km s-min=6.2km az=111.0*

ISC 20 11:09:14.0±0.8**, 39°.99N**±0°.03×**142°.35E**±0°.04**, h11**^{km}±4^{km}**, n156, σ2^{s}.15**/151**, mb4.4**/49**, MS3.6**/12**, 8C-1D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTH	Tanohata	0.38	263	P	Pg	11 09 20.0	-1.5
JTH				S	Sg	11 09 25.6	-1.0
JKEN	Kujiedanarisaw	0.54	294	P	Pg	11 09 22.6	-1.9
MIYJ	Miyakonagasawa	0.58	225	P	Pg	11 09 23.5	-1.8
MIYJ				S	Sg	11 09 31.5	-1.5
JANG	Nango	0.75	301	P	Pg	11 09 26.0	-2.5
JANG				eS	Sg	11 09 36.3	-2.0
JKZ	Kuzumaki	0.79	270	P	Pg	11 09 27.1	-2.1
JKZ				S	Sg	11 09 37.9	-1.6
JOM	Ohasama	0.97	238	P	Pg	11 09 30.0	-2.6
JOM				eS	Sg	11 09 42.6	-2.6
OFUJ	Ofunato	1.05	210	P	Pb	11 09 30.9	-3.3
OFUJ				eS	Sb	11 09 44.9	-3.0
JTM	Tenmabayashi	1.26	310	P	Pn	11 09 34.6	-3.0
JTM				eS	Sb	11 09 51.0	-3.1
JARK	Aomorirokkasho	1.27	324	P	Pn	11 09 34.5	-3.1
JARK				S	Sb	11 09 50.6	-3.5
JAH	Hinai	1.33	279	P	Pn	11 09 36.1	-2.4
JMK	Ichinoseki	1.36	221	P	Pn	11 09 36.2	-2.6
JMK				eS	Sn	11 09 53.8	-3.0
ERM	Erimo	2.11	16	P	Pn	11 09 48.7	-0.6
ERM	Erimo	2.11	16		Pn	11 09 48.7	-0.6
JMM	Marumori	2.44	210		Pn	11 09 53.0	-0.8
JEW	Eniwo	2.93	347		Pn	11 10 00.0	-0.5
JSD	Sado	3.74	240	Pn	Pn	11 10 13.0	+1.5
JYT	Yasato	4.12	205	Pn	Pn	11 10 16.9	0.0
ASAJ	Asahikawa	4.13	2	Pn	Pn	11 10 17.0	+0.1
	4.6nm,0.3s,baz=223,slow=9.8,SNR=19						
ASAJ				Sn	Sn	11 11 05.5	+0.2
	6.0nm,0.3s,baz=298,slow=32,SNR=4.7						
ASAJ	Asahikawa	4.13	2	P	Pn	11 10 16.6	-0.4
JKA	Kamikawa-asahi	4.13	2	Pn	Pn	11 10 16.6	-0.3
NMR	Nemuro--Hokkai	4.22	36⇑	iP	Pn	11 10 15.8	-2.4
NMR				i S	Sn	11 11 03.8	-3.6
GLVR	Golovnino	4.43	31	eP	Pn	11 10 18.8	-2.3
GLVR				eS	Sn	11 11 10.0	-2.6
GLVR				pmax	pmax		
	comp=Z,318nm,0.6s						
GLVR				pmax	pmax		
	comp=N,50nm,0.1s						
GLVR				smax	smax		
	comp=N,569nm,0.3s						
GLVR				smax	smax		
	comp=E,553nm,0.3s						
MJAR	Matsushiro Arr	4.74	225	Pn	Pn	11 10 26.8	+1.3
	comp=E,0.5nm,0.3s,baz=30,slow=11,SNR=38						
MJAR				Sn	Sn	11 11 23.5	+3.2
	comp=E,0.2nm,0.3s,baz=34,slow=15,SNR=4.2						
MJAR				LR	LR	11 12 05.7	
	comp=E,286nm,18.5s,baz=85,slow=36						
MJAR	Matsushiro Arr	4.74	225	P	Pn	11 10 28.8	+3.4
MJAR	Matsushiro Arr	4.74	225		Pn	11 10 28.8	+3.4
MAJO	Matsushiro	4.74	225	i P	Pn	11 10 27.9	+2.5
MAJO	Matsushiro	4.74	225	Pn	Pn	11 10 26.4	+0.9
MAT	Matsushiro	4.74	225	P	Pn	11 10 27.3	+1.9
MAT				eS	Sn	11 11 21.3	+0.9
GRPR	Tuman	4.74	31	eP	Pn	11 10 23.3	-2.1
GRPR				eS	Sn	11 11 17.3	-3.1
GRPR				pmax	pmax		
	comp=Z,185nm,0.3s						
GRPR				pmax	pmax		
	comp=N,53nm,0.2s						
GRPR				smax	smax		
	comp=E,523nm,0.4s						
GRPR				smax	smax		
	comp=N,413nm,0.3s						
YUK	Yuzh-Kuril'sk	4.81	32	eP	Pn	11 10 24.3	-2.1
YUK				eS	Sn	11 11 19.9	-2.2
YUK				pmax	pmax		
	comp=Z,169nm,0.3s						
JGF	Kuroka	5.90	224		Pn	11 10 43.9	+2.5
INU	Inuyama	6.27	224	Pn	Pn	11 10 50.1	+3.6
TEY	Ternei	6.59	322	eP	Pn	11 10 52.9	+2.1
KUR	Kuril'sk	6.63	36	eP	Pn	11 10 49.8	-1.5

KUR				*e*S	Sn	11 12 04.3	-2.6
KUR				pmax	pmax		
	comp=Z,100nm,0.5s						
KUR				pmax	pmax		
	comp=N,19nm,0.1s						
KUR				pmax	pmax		
	comp=E,19nm,0.2s						
YSS	Yuzh-Sakhalins	6.97	2	⇓*e*P	Pn	11 10 55.9	0.0
YSS				*e*S	Sn	11 12 12.6	-2.5
YSS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
YSS				MLR	MLR		
	comp=N,500nm,18.0s						
YSS				MLR	MLR		
	comp=Z,600nm,18.0s						
YSS	Yuzh-Sakhalins	6.97	2	Pn	Pn	11 10 56.5	+0.5
JWT	Wachi	7.24	232	Pn	Pn	11 11 05.2	+5.4
USRK	Ussuriysk Ar.	8.78	302	Pn	Pn	11 11 21.8	+1.0
	baz=110,slow=15,SNR=12						
USRK				LR	LR	11 14 32.5	
	comp=Z,276nm,19.3s,baz=101,slow=36						
USRK	Ussuriysk Ar.	8.78	302	P	Pn	11 11 23.0	+2.2
USRK	Ussuriysk Ar.	8.78	302		Pn	11 11 23.0	+2.2
USA0B	Ussuriysk Arra	8.78	302	P	Pn	11 11 25.5	+4.7
USA0B	Ussuriysk Arra	8.78	302	Pn	Pn	11 11 25.4	+4.7
JHS	Saijyo	8.87	239	Pn	Pn	11 11 26.9	+4.9
MDJ	Mudanjiang	10.52	300	P	Pn	11 11 49.5	+4.9
MDJ				pmax	pmax		
	comp=Z,110nm,2.5s						
JNU	Nakatsue	11.49	237	LR	LR	11 16 43.8	
	comp=Z,123nm,19.2s,baz=32,slow=39						
KSRS	Korea Array	11.55	262	Pn	Pn	11 12 00.8	+2.0
	comp=Z,0.4nm,0.3s,baz=66,slow=14,SNR=15						
KSRS				LR	LR	11 16 12.7	
	comp=Z,311nm,18.1s,baz=66,slow=36						
KS19	Wonju Array Si	11.58	262		Pn	11 12 04.5	+5.2
KSAR	Wonju Array Be	11.59	262	P	Pn	11 12 04.3	+5.0
KSAR	Wonju Array Be	11.59	262		Pn	11 12 04.3	+5.0
KLR	Kul'dur	11.92	324	Pn	Pn	11 12 05.8	+1.9
	comp=Z,0.1nm,0.3s,baz=141,slow=11,SNR=4.6						
KLR				LR	LR	11 16 36.3	
	comp=Z,217nm,19.1s,baz=134,slow=37						
JSU	Suzuyama	12.84	232		Pn	11 12 19.9	+3.4
PETK	Petropavlovsk-	16.79	34	Pn	Pn	11 13 08.0	-0.9
	comp=Z,0.2nm,0.3s,baz=209,slow=9.3,SNR=4.6						
PETK				LR	LR	11 20 10.6	
	comp=Z,206nm,18.1s,baz=208,slow=39						
PETK	Petropavlovsk-	16.79	34	P	Pn	11 13 07.2	-1.7
PETK	Petropavlovsk-	16.79	34		Pn	11 13 07.2	-1.7
ZEA	Zeya	17.15	328	*e*P	P	11 13 18.8	+3.8
ZEA				*e*S	Sn	11 16 22.2	-1.7
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ZEA				smax	smax		
	comp=E,100nm,5.0s						
ZEA				MLR	MLR		
	comp=N,300nm,14.0s						
ZEA				MLR	MLR		
	comp=Z,200nm,14.0s						
BJT	Baijiatuau	20.04	279	P	Pn	11 13 48.5	-0.2
BJT				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BJT	Baijiatuau	20.04	279	P	Pn	11 13 48.5	-0.2
MA2	Magadan	20.31	12	P	P	11 13 49.3	-0.4
	comp=Z,2.8nm,0.6s,baz=173,slow=15						
MA2				LR	LR	11 21 56.3	
	comp=Z,148nm,19.2s,baz=206,slow=38						
MA2	Magadan	20.31	12	P	P	11 13 49.1	-0.7
MA2				pmax	pmax		
	comp=Z,16nm,1.4s						
MA2	Magadan	20.31	12	P	P	11 13 49.1	-0.7
YAK	Yakutsk	23.38	345	LR	LR	11 23 35.5	
	comp=Z,90nm,19.2s,baz=158,slow=37						
YAK	Yakutsk	23.38	345	*e*P	P	11 14 24.4	+2.1
YAK				*e**PP	sP	11 14 28.7	+2.0
YAK				*e*S	S	11 18 37.0	+2.0
YAK				*e*SSS	SSS	11 19 29.1	
YAK				pmax	pmax		
	comp=Z,19nm,0.9s						
YAK				pmax	pmax		
	comp=N,7.0nm,0.9s						
YAK				smax	smax		
	comp=N,42nm,1.5s						
YAK				smax	smax		
	comp=E,24nm,1.5s						
YAK				MLR	MLR		
	comp=Z,161nm,15.0s						
YAK				MLR	MLR		
	comp=N,202nm,15.0s						
HHC	Hu-ho-hao-te	23.40	282	*e*P	P	11 14 21.5	-1.4
HHC				S	S	11 18 29.6	-6.4
HHC				pmax	pmax		
	comp=N,4.0nm,0.5s						
HHC				pmax	pmax		
	comp=N,140nm,4.6s						
HHC				LR	LR		
	comp=N,190nm,14.5s						
HHC				LR	LR		
	comp=N,240nm,17.0s						
HHC				LR	LR		
	comp=N,310nm,15.3s						
SEY	Seymchan	23.75	11	P	P	11 14 24.8	-1.2
	comp=N,1.4nm,0.7s,baz=146,slow=5.6,SNR=6.7						
ULN	Ulaanbaatar	26.43	299	*i* P	P	11 14 51.5	+0.7
ULN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
SONM	Songino Array	26.87	299	P	P	11 14 56.1	+1.4
	comp=Z,1.8nm,0.7s,baz=81,slow=8.9,SNR=2.2						
SONM				LR	LR	11 25 57.4	
	comp=Z,195nm,20.9s,baz=32,slow=37						
ENH	Enshi	28.44	260	P	P	11 15 10.0	+1.2
ENH				IAmb	IAmb	11 15 11.0	
	comp=Z,11nm,1.0s						
TLY	Talaya	29.05	307	P	P	11 15 15.0	+0.9
	comp=Z,1.4nm,0.6s,baz=80,slow=6.8,SNR=4.0						
TLY				LR	LR	11 27 05.5	
	comp=Z,55nm,19.8s,baz=276,slow=37						
TLY	Talaya	29.05	307	*i* P	P	11 15 15.7	+1.6
TLY				pmax	pmax		
	comp=Z,2.0nm,0.9s						
TLY	Talaya	29.05	307	P	P	11 15 15.1	+0.9
ZAK	Zakamensk	29.12	304	*e*P	P	11 15 14.3	-0.5
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.4s						
H11N2	WAKE ISLAND Hy	29.17	127	T	T	11 45 51.8	
	baz=319,slow=75,SNR=2136						
H11N1	WAKE ISLAND Hy	29.18	127	T	T	11 45 53.6	
	baz=319,slow=75,SNR=5028						
H11N3	WAKE ISLAND Hy	29.19	127	T	T	11 45 54.2	
	baz=319,slow=75,SNR=2749						
H11S1	WAKE ISLAND Hy	29.98	128	T	T	11 46 53.6	
	baz=321,slow=76,SNR=679						
H11S3	WAKE ISLAND Hy	29.98	129	T	T	11 46 49.6	
	baz=321,slow=76,SNR=229						
H11S2	WAKE ISLAND Hy	30.00	128	T	T	11 46 50.2	
	baz=321,slow=76,SNR=239						
GTA	Gaotai	32.51	283	*e*P	P	11 15 47.1	+2.3
GTA				pP	sP	11 15 51.1	+1.6
GTA				sP	pP	11 15 54.3	+6.2
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
CD2	Chengdu	32.51	266	P	P	11 15 46.1	+1.3
GYA	Guiyang	32.54	256	⇑P	P	11 15 46.0	+0.8
GYA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
SLVN	Son La	37.58	252	P	P	11 16 29.6	+1.0
SLVN				IAmb	IAmb	11 16 31.8	
	comp=Z,5.3nm,1.0s						
DGZ	Jazzator, Alta	39.33	303	*i* P	P	11 16 42.6	-0.6
DGZ				pmax	pmax		
	comp=Z,12nm,0.8s						
NONG	Nongkai	40.22	249	P	P	11 16 53.5	+2.9
	comp=Z,7.4nm,1.0s						
WMQ	Urumqi	40.24	294	*e*P	P	11 16 54.5	+3.8
WMQ				sP	sP	11 17 01.8	+6.4
WMQ				pmax	pmax		
	comp=Z,15nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,170nm,3.7s						
WMQ				LR	LR		
	comp=Z,790nm,29.2s						
WMQ				LR	LR		
	comp=Z,1µm,28.8s						
WMQ				LR	LR		
	comp=Z,98nm,25.1s						
ZAA0	Zalesovo Array	40.53	310	P	P	11 16 54.0	+1.2
ZAA0				IAmb	IAmb	11 16 57.2	
	comp=Z,5.8nm,0.8s						
ZALV	Zalesovo Beam	40.53	310	P	P	11 16 52.0	-0.9
	comp=Z,5.9nm,0.7s,baz=84,slow=8.0,SNR=20						
ZALV	Zalesovo Beam	40.53	310	*i* P	P	11 16 54.2	+1.3
ZALV				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ZALV	Zalesovo Beam	40.53	310	P	P	11 16 51.1	-1.7
UTTA	Uttaradit	42.29	251	P	P	11 17 11.0	+3.3
	comp=Z,437nmcomp=Z,8.0nm,0.4s						
LAMP	Lampang	42.47	252	P	P	11 17 13.2	+4.0
	comp=Z,12nm,1.2s						
CHAI	Chaiyaphum	42.48	247	P	P	11 17 13.0	+3.8
	comp=Z,13nm,1.0s						
CHTO	Chiang Mai	42.79	253	P	P	11 17 13.0	+1.2
CHTO				pmax	pmax		
	comp=Z,6.0nm,0.9s						
CHTO	Chiang Mai	42.79	253	P	P	11 17 13.0	+1.2
CHTO				IAmb	IAmb	11 17 14.3	
	comp=Z,6.4nm,0.9s						
CMAR	Chiang Mai Arr	43.01	253	P	P	11 17 13.6	0.0
	comp=Z,1.8nm,0.3s,baz=51,slow=6.7,SNR=9.3						
CMAR				LR	LR	11 35 50.4	
	comp=Z,30nm,19.0s,baz=186,slow=37						
CMAR	Chiang Mai Arr	43.01	253	P	P	11 17 16.4	+2.8
CMAR	Chiang Mai Arr	43.01	253	P	P	11 17 16.4	+2.8
SUKH	Sukhothai	43.13	251	P	P	11 17 18.2	+3.7
	comp=Z,10nm,1.0s						
MK31	Makanchi Array	43.24	300	⇑Pn	P	11 17 16.1	+1.0
	comp=Z,2.3nm,0.6s,baz=85,slow=10,SNR=26						
MK31				⇑Lg	Lg	11 19 27.8	
	comp=Z,4.1nm,0.7s						
MK31	Makanchi Array	43.24	300	P	P	11 17 16.3	+1.1
MK31				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MK31	Makanchi Array	43.24	300	P	P	11 17 16.3	+1.1
MKAR	Makanchi Array	43.24	300	P	P	11 17 14.0	-1.1
	comp=Z,2.3nm,0.7s,baz=84,slow=9.6,SNR=26						
MKAR	Makanchi Array	43.24	300	*ce*P	P	11 17 16.7	+1.5
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MKAR	Makanchi Array	43.24	300	P	P	11 17 16.6	+1.5
MAKZ	Makanchi	43.44	300	⇑Pn	P	11 17 17.3	+0.5
	comp=Z,4.7nm,0.8s						
MAKZ				⇑Lg	Lg	11 19 30.6	
	comp=Z,3.0nm,0.7s						
MAKZ	Makanchi	43.44	300	P	P	11 17 17.3	+0.5
MAKZ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MAKZ	Makanchi	43.44	300	P	P	11 17 17.3	+0.5
MAKZ				IAmb	IAmb	11 17 24.1	
	comp=Z,3.8nm,0.8s						
SRAK	Srakaew	43.73	245	P	P	11 17 19.0	-0.3
	comp=Z,147nm,1.0s						
IMAR	Indian Mountai	43.75	32	P	P	11 17 19.5	+0.6
UMPA	Umpang Tak	44.52	251	P	P	11 17 30.5	+4.8
	comp=Z,5µmcomp=Z,8.0nm,0.6s						
KURK	Kurchatov	44.74	306	P	P	11 17 27.7	+0.6
KURK				pmax	pmax		
	comp=Z,15nm,0.9s						
KURK	Kurchatov	44.74	306	P	P	11 17 27.7	+0.6
PHET	Kaeng Krachan	46.18	246	P	P	11 17 42.9	+4.0
BMAR	Burnt Mountain	47.40	30	P	P	11 17 49.6	+1.7
CRQM	Cirque	48.82	39	P	P	11 17 55.6	-3.5
KAPI	Kappang	49.38	210	LR	LR	11 37 46.6	
	comp=Z,26nm,20.4s,baz=56,slow=35						
KSH	Kashi	49.92	292	P	P	11 18 13.4	+5.6
KSH				pmax	pmax		
	comp=Z,26nm,1.6s						
KSH				pmax	pmax		
	comp=Z,440nm,6.2s						
INK	Inuvik	51.43	28	P	P	11 18 18.4	-0.1
	comp=Z,0.6nm,0.4s,baz=294,slow=4.6,SNR=6.1						
INK	Inuvik	51.43	28	P	P	11 18 19.0	+0.4
INK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
INK	Inuvik	51.43	28	P	P	11 18 19.0	+0.4
INK				IAmb	IAmb	11 18 38.7	
	comp=Z,3.2nm,0.9s						
HYT	Haines Junctio	51.51	38	P	P	11 18 19.3	-0.1
HYT				IAmb	IAmb	11 18 41.0	
	comp=Z,7.1nm,0.9s						
KK31	Karatay Array	52.32	298	P	P	11 18 25.9	+0.2
KK31				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KK31	Karatay Array	52.32	298	P	P	11 18 25.9	+0.2
KK31				IAmb	IAmb	11 18 29.0	
	comp=Z,2.8nm,0.8s						
KKAR	Karatay Array	52.32	298	P	P	11 18 26.9	+1.2
KKAR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KKAR	Karatay Array	52.32	298	P	P	11 18 26.9	+1.2
KKAR				IAmb	IAmb	11 18 29.1	
	comp=Z,2.8nm,0.8s						
NIL	Nilore	54.43	287	P	P	11 18 43.0	+1.7
NIL				pmax	pmax		
	comp=Z,12nm,0.9s						
NIL	Nilore	54.43	287	P	P	11 18 43.0	+1.7
ARU	Arti	54.66	317*c*	*i*P	P	11 18 43.4	+0.8
ARU						11 20 42.2	
ARU				S	S	11 26 24.4	+2.2
ARU				SS	SS	11 30 04.2	-0.2
ARU				pmax	pmax		
	comp=Z,10.0nm,1.7s						
ABKAR	Akbulak array	56.63	309	P	P	11 18 58.5	+1.7
ABKAR				IAmb	IAmb	11 19 01.0	
	comp=Z,5.9nm,1.4s						
KBL	Kabul	57.08	290	P	P	11 19 01.1	+0.5
KBL				pmax	pmax		
	comp=Z,11nm,1.2s						
KBL	Kabul	57.08	290	P	P	11 19 01.1	+0.5
WRA	Warramunga Arr	60.09	189	P	P	11 19 19.5	-1.7
	comp=Z,4.1nm,0.7s,baz=7.1,slow=7.0,SNR=22						
WRA	Warramunga Arr	60.09	189	*i* P	P	11 19 23.3	+2.1
WRA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
YKA	Yellowknife Ar	60.89	31	P	P	11 19 24.4	-1.9
	comp=Z,0.2nm,0.6s,baz=302,slow=5.9,SNR=3.7						
YKA	Yellowknife Ar	60.89	31	*i* P	P	11 19 30.0	+3.7
ASAR	Alice Springs	63.81	189	P	P	11 19 45.2	-1.0
	comp=Z,2.0nm,0.7s,baz=8.5,slow=5.7,SNR=19						
OBN	Obninsk	66.18	323	*e*P	P	11 20 02.1	+0.8
OBN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
FINES	FINESS Array B	66.55	332	P	P	11 20 04.0	+0.5
	comp=Z,2.8nm,0.7s,baz=46,slow=8.2,SNR=5.8						
FINES	FINESS Array B	66.55	332	*i* P	P	11 20 07.5	+3.9
FINES				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KIV	Kislovodsk	69.54	311	*e*P	P	11 20 23.0	+0.2
KIV				pmax	pmax		
	comp=Z,23nm,1.1s						
KBZ	Khabaz	69.55	310	P	P	11 20 23.4	+0.7
	comp=Z,1.3nm,0.7s,baz=56,slow=7.3,SNR=1.7						
NACGM	Naroch	70.67	326	*i* P	P	11 20 38.7	+9.3
NACGM				*i* P	P	11 20 38.7	+9.3
NACGM				*i* P	P	11 20 38.7	+9.3
NACGM				*i* PP	PP	11 22 30.0	-35
NACGM				*i* PPP	PPP	11 24 44.5	
NACGM				*i* S	SKiKP	11 30 05.0	-7.3
NACGM				*i* SS	SS	11 34 36.6	+23
NACGM				*i* SSS	SSS	11 40 07.0	
NACGM				*i* LQ	LQ	11 49 23.2	
NACGM				*i* LR	LR	11 54 16.5	
STKA	Stephens Creek	71.51	181	LR	LR	11 51 10.0	
	comp=Z,20nm,21.8s,baz=18,slow=35						
NOA	NORSAR Array B	71.75	337	P	P	11 20 34.1	-1.8
	comp=Z,1.0nm,0.7s,baz=36,slow=6.0,SNR=3.6						
NOA				LR	LR	11 57 13.9	
	comp=Z,82nm,18.8s,baz=355,slow=40						
AKASG	Malin Array Be	72.42	322	P	P	11 20 38.5	-1.4
	comp=Z,1.2nm,0.5s,baz=45,slow=6.2,SNR=3.2						
BRTR	Keskin Array B	77.45	312	P	P	11 21 09.4	-0.1
	comp=Z,0.8nm,0.7s,baz=29,slow=6.6,SNR=2.5						
CLL	Collm	78.90	330	*e*P	P	11 21 19.0	+1.9
CLL	Collm	78.90	330	*e*P	P	11 21 20.0	+2.9
GERES	GERESS Array B	80.59	328	P	P	11 21 24.7	-1.8
	comp=Z,0.3nm,0.3s,baz=46,slow=8.4,SNR=1.6						
PPT2	Papeete2	85.33	117	*e*LR	LR	11 48 43.8	
	comp=Z,52nm,23.0s						
PPT2	Papeete2	85.33	117	*e*T	T	12 55 39.5	
	comp=Z,21nm,0.3s						
PAE	Paea	85.38	117	*e*T	T	12 55 41.9	
	comp=Z,2.2nm,0.4s						
TIAR	Tiarei	85.47	117	*e*T	T	12 55 48.5	
	comp=Z,3.5nm,0.3s						
MEH	Mehetia	86.56	117	*e*T	T	12 57 10.7	
	comp=Z,62nm,0.2s						
TXAR	Lajitas Array	87.75	53	P	P	11 22 01.2	-2.0
	comp=Z,0.1nm,0.5s,baz=286,slow=3.5,SNR=4.0						
TBI	Tubuai	89.42	121	*e*T	T	13 00 43.4	
	comp=Z,17nm,0.3s						
ESDC	Sonseca Array	94.95	335	LR	LR	12 12 28.5	
	comp=Z,136nm,20.3s,baz=305,slow=40						

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*NEIC **20** 11:43:36.4±1.7, 11°.68S±0°.07×166°.6E±0°.2, h136^{km}±9^{km}, mb4.5/14, Error ellipse: s-maj=21.7km s-min=10.0km az=89.0*

*IDC **20** 11:43:39.5±4.0, 11°.84S×166°.48E, h160^{km}±28^{km}, mb3.6/5, mb1 3.8/7, mb1mx3.4/32, mbtmp4.2/7, Error ellipse: s-maj=46.9km s-min=23.5km az=69.0*

ISC 20 11:43:38.2±1.7, **11°.8S**±0°.1×**166°.5E**±0°.2, **h150^{km}, n25, σ0^{s}.91**/27, **mb4.3**/12, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	3.68	170	Pn	Pn	11 44 33.5	-0.8
SANVU				Sn	Sn	11 45 17.7	-0.2
HNR	Honiara	6.88	289	P	Pn	11 45 17.4	+0.6
	31nm,0.3s,baz=165,slow=23,SNR=14						
HNR	Honiara	6.88	289		Pn	11 45 15.3	-1.5
DZM	Mont Dzumac	10.21	180	P	Pn	11 46 02.6	+1.5
	2.4nm,0.3s,baz=292,slow=22,SNR=52						
DZM				S	Sn	11 47 52.5	-1.7
	0.7nm,0.3s,baz=348,slow=23,SNR=5.6						
DZM	Mont Dzumac	10.21	180		Pn	11 46 01.9	+0.8
EIDS	Eidsvold	19.88	225	P	Pn	11 48 00.3	-0.8
EIDS				IAmb	IAmb	11 48 19.4	
	comp=Z,23nm,1.4s						
CTA	Charters Tower	21.14	245	P	P	11 48 12.2	+0.7
	comp=Z,2.6nm,0.6s,baz=63,slow=13,SNR=2.3						
CTAO	Charters Tower	21.14	245	P	P	11 48 12.5	+0.9
ARMA	Armidale	23.11	214	P	P	11 48 32.5	+1.3
ARMA				IAmb	IAmb	11 48 59.2	
	comp=Z,16nm,1.2s						
THZ	Tophouse	30.36	171	P	P	11 49 36.5	+0.6
THZ				IAmb	IAmb	11 49 45.0	
	comp=Z,13nm,1.4s						
STKA	Stephens Creek	30.43	225	P	P	11 49 37.0	+0.4
	comp=Z,1.4nm,0.4s,baz=39,slow=10,SNR=6.7						
STKA	Stephens Creek	30.43	225	P	P	11 49 37.2	+0.5
WR0	Warramunga Arr	31.77	251	P	P	11 49 48.1	-0.5
WR0				IAmb	IAmb	11 50 15.9	
	comp=Z,12nm,1.4s						
TOO	Toolangi	31.84	213	P	P	11 49 50.4	+1.5
TOO				IAmb	IAmb	11 50 19.3	
	comp=Z,9.1nm,1.4s						
WB0	Warramunga Arr	31.87	252	P	P	11 49 49.6	+0.2
WB0				IAmb	IAmb	11 50 13.0	
	comp=Z,12nm,1.2s						
WRAB	Tennant Creek	31.94	251	P	P	11 49 49.6	-0.4
WB2	Warramunga Arr	31.94	251	P	P	11 49 50.3	+0.3
WB2				IAmb	IAmb	11 49 57.1	
	comp=Z,10nm,1.3s						
WRA	Warramunga Arr	31.95	251	P	P	11 49 49.7	-0.5
	comp=Z,1.0nm,0.6s,baz=85,slow=9.3,SNR=13						
AS31	Alice Springs	33.15	245	P	P	11 50 00.3	-0.3
ASAR	Alice Springs	33.15	245	P	P	11 49 59.9	-0.7
	comp=Z,1.6nm,0.6s,baz=69,slow=9.8,SNR=36						
ASAR	Alice Springs	33.15	245	P	P	11 49 59.8	-0.8
BBOO	Buckleboo	34.88	228	P	P	11 50 16.3	+0.8
BBOO				IAmb	IAmb	11 50 39.8	
	comp=Z,14nm,1.3s						
FITZ	Fitzroy Crossi	39.93	256	P	P	11 50 59.1	+1.0
NWAO	Narrogin (SRO)	49.68	237	P	P	11 52 14.4	-0.7
MKAR	Makanchi Array	94.59	317	P	P	11 56 41.6	-0.4
	comp=Z,0.5nm,0.5s,baz=93,slow=5.3,SNR=8.1						

IDC 20 11:58:53.5±2.8, **9°.91S**×**113°.24E, h0^{km}, mb3.2**/3, **mb1 3.5**/3, **mb1mx3.3**/31, **mbtmp3.3**/3, **Error ellipse: s-maj=155.4km s-min=26.1km az=46.0, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.67	119	P	P	12 03 55.8	-1.0
	0.4nm,0.8s,baz=293,slow=10,SNR=1.5						
ASAR	Alice Springs	24.00	127	P	P	12 04 10.5	+0.3
	0.6nm,0.6s,baz=304,slow=9.0,SNR=16						
MKAR	Makanchi Array	62.85	337	P	P	12 09 21.5	+0.2
	0.2nm,0.4s,baz=163,slow=7.4,SNR=5.4						

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*IDC **20** 12:05:37.4±1.5, 10°.73S×164°.05E, h0^{km}, mb3.8/6, mb1 4.0/9, mb1mx3.8/30, mbtmp3.9/9, ML3.8/3, MS3.2/6, Ms1 3.2/6, ms1mx3.0/24, Error ellipse: s-maj=37.2km s-min=26.1km az=120.0*

*NEIC **20** 12:05:37.5±2.0, 10°.7S±0°.2×164°.2E±0°.1, h10^{km}±2^{km}, mb4.3/9, Error ellipse: s-maj=31.6km s-min=15.0km az=35.0*

ISC 20 12:05:41.3±1.0, **10°.7S**±0°.1×**164°.1E**±0°.1, **h25^{km}, n28, σ1^{s}.17**/22, **mb4.0**/9, **MS3.2**/4, **Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.29	287	Pn	Pn	12 06 44.4	-0.7
	10nm,0.3s,baz=141,slow=6.5,SNR=4.1						
HNR				LR	LR	12 08 16.4	
	comp=Z,148nm,20.8s,baz=216,slow=38						
HNR	Honiara	4.29	287		Pn	12 06 44.0	-1.1
SANVU	Saraoutou	5.57	147	Pn	Pn	12 07 00.8	-1.8
DZM	Mont Dzumac	11.49	169	Pn	Pn	12 08 23.2	-0.7
	0.5nm,0.3s,baz=296,slow=16,SNR=7.6						
DZM				LR	LR	12 12 20.4	
	comp=Z,91nm,20.1s,baz=30,slow=35						
DZM	Mont Dzumac	11.49	169	*e*Pn	Pn	12 08 23.6	-0.3
	1.7nm,0.2s						
DZM				*e*LR	LR	12 10 51.0	
	comp=Z,245nm,24.9s						
DZM	Mont Dzumac	11.49	169		Pn	12 08 22.7	-1.1
PMG	Port Moresby	16.74	273	LR	LR	12 14 44.6	
	comp=Z,150nm,19.1s,baz=94,slow=33						
CTA	Charters Tower	19.54	239	P	P	12 10 07.1	-0.1
	0.2nm,0.3s,baz=55,slow=15,SNR=2.7						
CTAO	Charters Tower	19.54	239	P	P	12 10 06.8	-0.4
CTAO				IAmb	IAmb	12 10 15.0	
	comp=Z,8.0nm,0.9s						
COEN	Coen	20.69	259	P	P	12 10 20.3	+0.5
COEN				IAmb	IAmb	12 10 48.2	
	comp=Z,12nm,1.3s						
STKA	Stephens Creek	29.58	221	P	P	12 11 45.5	+1.2
	comp=Z,1.7nm,0.8s,baz=52,slow=19,SNR=2.3						
STKA				LR	LR	12 21 57.2	
	comp=Z,35nm,19.3s,baz=23,slow=33						
WR0	Warramunga Arr	29.90	249	P	P	12 11 46.2	-1.1
WR0				IAmb	IAmb	12 11 50.7	
	comp=Z,3.8nm,1.0s						
WB0	Warramunga Arr	29.99	249	P	P	12 11 47.2	-1.0
WB0				IAmb	IAmb	12 12 11.9	
	comp=Z,12nm,1.4s						
WRAB	Tennant Creek	30.07	249	P	P	12 11 48.4	-0.4
WRAB				IAmb	IAmb	12 11 50.0	
	comp=Z,14nm,1.5s						
WB2	Warramunga Arr	30.07	249	P	P	12 11 47.6	-1.2
WRA	Warramunga Arr	30.08	249	P	P	12 11 47.7	-1.3
	comp=Z,0.6nm,0.6s,baz=79,slow=9.1,SNR=9.2						
WRA				LR	LR	12 23 26.9	
	comp=Z,84nm,18.4s,baz=165,slow=36						
WRA	Warramunga Arr	30.08	249	P	P	12 11 49.6	+0.6
H11N1	WAKE ISLAND Hy	30.39	5	T	T	12 43 28.9	
	baz=184,slow=76,SNR=35						
H11N3	WAKE ISLAND Hy	30.39	5	T	T	12 43 28.8	
	baz=184,slow=76,SNR=28						
H11N2	WAKE ISLAND Hy	30.41	5	T	T	12 43 29.2	
	baz=184,slow=76,SNR=36						
ASAR	Alice Springs	31.50	242	P	P	12 11 59.9	-1.6
	comp=Z,0.3nm,0.4s,baz=62,slow=10,SNR=14						
FITZ	Fitzroy Crossi	37.90	254	P	P	12 12 57.7	+0.9
PPT2	Papeete2	45.33	104	*e*LR	LR	12 26 51.0	
	comp=Z,37nm,22.8s						
PETK	Petropavlovsk-	63.83	356	LR	LR	12 39 27.0	
	comp=Z,14nm,21.8s,baz=116,slow=32						
VNDA	Vanda	66.77	181	P	P	12 16 32.5	+2.3
CMAR	Chiang Mai Arr	70.52	294	P	P	12 16 55.6	+1.1
	comp=Z,0.5nm,0.4s,baz=96,slow=5.5,SNR=1.7						
ILAR	Eielson Array	83.75	19	P	P	12 18 08.2	+0.4
	comp=Z,0.5nm,1.0s,baz=240,slow=5.1,SNR=5.7						
MKAR	Makanchi Array	92.20	317	P	P	12 18 47.8	-1.2
	comp=Z,0.5nm,0.8s,baz=98,slow=5.8,SNR=5.9						

MEX ***20*** *12:15:55.7±0.7, 18°.49N×95°.90W, h24^{km}±15^{km}, MD4.3*
NEIC ***20*** *12:15:55.4±2.7, 18°.50N±0°.07×95°.99W±0°.04, h50^{km}±25^{km}, Error ellipse: s-maj=10.7km s-min=5.1km az=185.0*
ISC 20 12:15:51.6±1.0**, 18°.44N**±0°.05×**95°.94W**±0°.04**, h10**^{km}**, n23, σ1^{s}.42**/42**, Veracruz**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TOIG	Toxpalan	1.12	252	*e*P	Pb	12 16 13.9	+0.8
TOIG				*i* S	Sg	12 16 27.6	0.0
TPIG	Tehuac#an	1.35	269	*i* P	Pn	12 16 16.7	+0.1
TPIG				*i* S	Sb	12 16 33.7	-0.7
TPIG	Tehuac#an	1.35	269		Pn	12 16 16.7	+0.1
TPIG					Sb	12 16 33.7	-0.7
VHO	Vista Hermosa	1.56	209	*e*P	Pn	12 16 20.2	+0.7
VHO				*i* S	Sn	12 16 39.6	-0.2
CMIG	Matias Romero	1.68	143	*i* P	Pn	12 16 21.6	+0.6
CMIG				*i* S	Sn	12 16 40.5	-2.2
CMIG	Matias Romero	1.68	143		Pn	12 16 21.6	+0.6
CMIG					Sn	12 16 40.5	-2.2
HLIG	Huajuapan de L	1.87	251	*e*P	Pn	12 16 25.1	+1.3
HLIG				*i* S	Sn	12 16 47.7	0.0
TXIG	Tlaxiaco	2.10	236	*e*P	Pn	12 16 28.5	+1.4
TXIG				*e*S	Sn	12 16 53.8	+0.3
FTIG	Fresnillo de T	2.15	256	*e*P	Pn	12 16 28.9	+1.3
FTIG				*e*S	Sn	12 16 54.7	+0.3
YOIG	Yosondua	2.19	224	*e*P	Pn	12 16 30.2	+1.9
YOIG				*e*S	Sn	12 16 56.4	+0.7
PPM	Popocatepetl	2.62	284	*i* P	Pn	12 16 36.0	+1.6
PPM				*e*P	Pb	12 16 36.1	-2.8
TLIG	Tlapa	2.64	251	*e*P	Pn	12 16 35.8	+1.3
TLIG				*e*S	Sn	12 17 06.9	+0.2
TLIG	Tlapa	2.64	251		Pn	12 16 35.7	+1.3
TLIG					Sn	12 17 07.2	+0.6
HUIG	Huatulco	2.66	183	*i* P	Pb	12 16 40.2	+0.8
HUIG				*e*S	Sn	12 17 07.2	+0.2
HUIG	Huatulco	2.66	183		Pb	12 16 40.2	+0.8
HUIG					Sn	12 17 07.2	+0.2
PEIG	Puerto Escondi	2.69	206	*e*P	Pn	12 16 35.7	+0.8
PEIG				*e*S	Sn	12 17 08.1	+0.5
PNIG	Pinotepa	2.92	226	*e*P	Pn	12 16 38.3	+0.2
PNIG				*i* S	Sn	12 17 13.7	+0.5
PNIG				*i* S	Sb	12 17 14.1	-5.3
PNIG	Pinotepa	2.92	226		Pn	12 16 38.3	+0.2
PNIG					Sn	12 17 13.7	+0.5
YAIG	Yautepec	2.99	279	*e*P	Pn	12 16 40.4	+1.2
YAIG	Yautepec	2.99	279		Pn	12 16 40.4	+1.2
TEIG	Tepich	7.45	75	Pn	Pn	12 17 42.5	+2.1
OK031	S. Brethren Rd	17.46	358	P	P	12 19 58.5	+2.0
OK031				IAmb	IAmb	12 20 00.5	
	comp=Z,10nm,0.7s						
QUOK	Quay	17.68	358	Pn	Pn	12 19 57.2	-0.7
QUOK				IAmb	IAmb	12 20 02.5	
	comp=Z,22nm,0.5s						

IDC ***20*** *12:24:31.2±2.0, 30°.20S×177°.73W, h0^{km}, mb4.2/3, mb1 4.2/4, mb1mx3.9/25, mbtmp4.1/4, ML3.5/1, Error ellipse: s-maj=47.5km s-min=18.7km az=104.0*
NEIC ***20*** *12:24:32.2±1.6, 30°.23S±0°.07×177°.7W±0°.2, h10^{km}±1^{km}, mb4.3/12, Error ellipse: s-maj=27.4km s-min=11.1km az=90.0*
ISC 20 12:24:35.7±1.4**, 30°.26S**±0°.07×**177°.7W**±0°.2**, h33**^{km}**, n31, σ1^{s}.27**/29**, mb4.3**/7**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.02	349	Pn	Pn	12 24 52.7	-1.1
	273nm,0.3s,baz=29,slow=21,SNR=10.0						
RAO				Sn	Sn	12 25 05.4	-1.6
	3µm,0.3s,baz=348,slow=23,SNR=24						
RAO	Raoul Island	1.02	349		Pn	12 24 54.0	+0.2
URZ	Urewera	9.06	207	Pn	Pn	12 26 42.5	-1.6
	0.5nm,0.3s,baz=263,slow=3.2,SNR=7.5						
URZ				Sn	Sn	12 28 24.1	-0.8
	3.1nm,0.3s,baz=215,slow=22,SNR=18						
URZ	Urewera	9.06	207	Pn	Pn	12 26 43.4	-0.7
BKZ	Black Stump Fm	10.08	207	Pn	Pn	12 26 58.3	+0.1
BFZ	Birch Farm	11.50	204	Pn	Pn	12 27 16.3	-1.3
MSWZ	Moikau Station	12.51	205	Pn	Pn	12 27 24.6	-6.7
TUWZ	Tuamarina	13.04	209	Pn	Pn	12 27 35.8	-2.7
THZ	Tophouse	13.76	211	Pn	Pn	12 27 47.0	-1.5
KHZ	Kahutara	14.02	208	Pn	Pn	12 27 51.8	-0.2
RPZ	Rata Peaks	16.13	211	Pn	Pn	12 28 16.4	-3.6
RPZ				IAmb	IAmb	12 28 36.2	
	comp=Z,12nm,1.1s						
WKZ	Wanaka	17.92	212	P	Pn	12 28 41.5	-0.8
WKZ				IAmb	IAmb	12 28 45.4	
	comp=Z,33nm,1.4s						
CTAO	Charters Tower	34.03	279	P	P	12 31 19.1	+2.1
STKA	Stephens Creek	34.76	257	P	P	12 31 24.4	+1.2
	comp=Z,2.0nm,0.6s,baz=105,slow=14,SNR=7.5						
STKA	Stephens Creek	34.76	257	P	P	12 31 24.5	+1.4
BBOO	Buckleboo	39.26	254	P	P	12 32 01.3	0.0
BBOO				IAmb	IAmb	12 32 22.8	
	comp=Z,18nm,1.5s						
AS31	Alice Springs	43.38	267	P	P	12 32 35.0	-0.2
ASAR	Alice Springs	43.38	267	P	P	12 32 34.9	-0.4
	comp=Z,0.9nm,0.4s,baz=105,slow=7.2,SNR=20						
ASAR	Alice Springs	43.38	267	P	P	12 32 35.2	-0.1
WR0	Warramunga Arr	44.17	272	P	P	12 32 41.6	0.0
WR0				IAmb	IAmb	12 32 44.0	
	comp=Z,4.4nm,0.8s						
WB2	Warramunga Arr	44.34	272	P	P	12 32 43.4	+0.3
WB2				IAmb	IAmb	12 33 04.4	
	comp=Z,4.0nm,1.0s						
WRAB	Tennant Creek	44.35	272	P	P	12 32 43.0	-0.1
WRA	Warramunga Arr	44.35	272	P	P	12 32 42.9	-0.3
	comp=Z,2.6nm,0.5s,baz=110,slow=8.1,SNR=80						
WRA	Warramunga Arr	44.35	272	P	P	12 32 42.9	-0.3
WB0	Warramunga Arr	44.38	272	P	P	12 32 43.0	-0.2
QSPA	South Pole Qui	59.85	180	P	P	12 34 38.9	+1.1
QSPA				IAmb	IAmb	12 34 48.4	
	comp=Z,4.2nm,1.1s						
H10N3	ASCENSION HYDR	138.82	154	T	T	15 20 00.4	
	baz=204,slow=75,SNR=11						
H10N1	ASCENSION HYDR	138.82	154	T	T	15 19 54.7	
	baz=204,slow=75,SNR=9.9						
H10N2	ASCENSION HYDR	138.84	154	T	T	15 19 54.7	
	baz=204,slow=75,SNR=11						
FINES	FINESS Array B	145.10	340	PKPbc	PKPbc	12 44 08.5	0.0
	comp=Z,3.8nm,0.6s,baz=62,slow=3.3,SNR=18						
AKASG	Malin Array Be	151.35	323	PKPbc	PKPbc	12 44 25.7	+0.2
	comp=Z,0.9nm,0.3s,baz=54,slow=3.3,SNR=6.1						

IDC ***20*** *12:28:38.2±0.9, 22°.38S×68°.41W, h98^{km}±13^{km}, mb3.4/2, mb1 3.4/4, mb1mx3.2/27, mbtmp3.6/4, Error ellipse: s-maj=43.8km s-min=28.8km az=127.0*
GUC ***20*** *12:28:38.7±0.7, 22°.29S×68°.58W, h109^{km}±4^{km}, ML3.4*
ISC 20 12:28:38.7±0.9**, 22°.33S**±0°.05×**68°.57W**±0°.08**, h113**^{km}±7^{km}**, n18, σ1^{s}.00**/31**, 7C, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	0.42	228	P	Pn	12 28 55.7	-0.3
	151nm,0.3s,baz=58,slow=7.4,SNR=440						
LVC				S	Sn	12 29 08.0	-0.9
	446nm,0.3s,baz=204,slow=19,SNR=40						
LVC	Limon Verde	0.42	228	*e*P	Pn	12 28 56.1	+0.1
LVC				*e*S	Sn	12 29 08.3	-0.6
PB09	IPOC Station P	0.82	310⇑	*i*P	Pn	12 28 59.2	+0.5
PB09				*i* S	Sn	12 29 14.4	+0.7
PB09				IAML		12 29 15.9	
	comp=E,1µm,0.5s						
PB06	IPOC Station P	1.00	248⇑	*i*P	Pn	12 29 00.6	+0.2
PB06				*i* S	Sn	12 29 17.3	+0.5
PB06				IAML		12 29 20.4	
	comp=N,1µm,0.1s						
PB15	IPOC Station P	1.21	223⇑	*i*P	Pn	12 29 03.2	+0.5
PB15				*i* S	Sn	12 29 22.0	+1.2
PB07	IPOC Station P	1.36	296⇑	*i*P	Pn	12 29 04.5	+0.2
PB07				*e*S	Sn	12 29 23.6	-0.1
PB07				IAML		12 29 24.0	
	comp=N,2µm,0.4s						
PB04	IPOC Station P	1.47	269⇑	*i*P	Pn	12 29 05.5	-0.1
PB04				*e*S	Sn	12 29 26.2	+0.4
PB04				IAML		12 29 33.4	
	comp=N,836nm,0.3s						
PB01	IPOC Station P	1.54	326⇑	*i*P	Pn	12 29 06.3	0.0
PB01				*i* S	Sn	12 29 27.0	-0.3
PB01				IAML		12 29 28.1	
	comp=N,594nm,0.2s						
PATCX	Punta Patache	2.10	315	*e*P	Pn	12 29 13.0	-0.3
PATCX				*i* S	Sn	12 29 40.0	+0.3
PATCX				IAML		12 29 45.2	
	comp=N,391nm,0.3s						
PB10	IPOC Station P	2.18	237	*e*P	Pn	12 29 14.0	-0.1
PB10				*e*S	Sn	12 29 38.7	-2.6
PB10				IAML		12 29 57.7	
	comp=N,123nm,0.3s						
PB08	IPOC Station P	2.24	346	*e*P	Pn	12 29 16.2	+0.8
PB08				*i* S	Sn	12 29 44.3	+1.0
PB08				IAML		12 29 49.3	
	comp=N,138nm,0.3s						
TA01	Diego Aracena	2.31	319	*e*P	Pn	12 29 15.5	-0.3
TA01				*e*S	Sn	12 29 43.3	-1.0
TA01				IAML		12 29 45.3	
	comp=N,311nm,0.3s						
HMBC	Humberstone	2.38	329⇑	*i*P	Pn	12 29 16.1	-0.8
HMBC				*e*S	Sn	12 29 45.1	-1.0
HMBC				IAML		12 29 51.0	
	comp=N,292nm,0.5s						
LPAZ	La Paz	6.02	4	P	Pn	12 30 07.5	+1.5
	comp=N,0.2nm,0.3s,baz=202,slow=5.4,SNR=3.8						
SIV	San Ignacio	9.48	50	P	Pn	12 30 49.3	-3.0
	comp=N,0.7nm,0.3s,baz=229,slow=5.4,SNR=19						
SIV				S	Sn	12 32 27.7	-9.4
	comp=N,0.2nm,0.3s,baz=318,slow=23,SNR=2.5						
TORD	Torodi Ar. Bea	77.33	70	P	P	12 40 22.0	+0.6
	comp=N,0.7nm,0.5s,baz=260,slow=6.1,SNR=8.2						
YKA	Yellowknife Ar	92.07	340	P	P	12 41 34.8	+0.3
	comp=N,0.1nm,0.6s,baz=120,slow=7.3,SNR=2.4						
MKAR	Makanchi Array	146.11	37	PKPbc	PKPab	12 48 06.5	+0.1
	comp=N,0.2nm,0.8s,baz=318,slow=1.9,SNR=2.9						

IDC ***20*** *12:40:10.0±0.8, 21°.71S×67°.96W, h114^{km}±14^{km}, mb3.9/2, mb1 3.6/4, mb1mx3.3/22, mbtmp4.0/4, Error ellipse: s-maj=32.9km s-min=12.2km az=112.0*
GUC ***20*** *12:40:11.0±0.7, 21°.68S×68°.40W, h136^{km}±4^{km}, ML3.7*
ISC 20 12:40:09.9±0.9**, 21°.63S**±0°.04×**68°.32W**±0°.08**, h134**^{km}±9^{km}**, n20, σ1^{s}.55**/36**, 7C-2D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	IPOC Station P	0.87	259⇑	*i*P	Pn	12 40 32.7	+0.5
PB09				*e*S	Sn	12 40 50.0	+0.8
PB09				IAML		12 40 54.1	
	comp=E,549nm,0.4s						
LVC	Limon Verde	1.12	209	P	Pn	12 40 34.7	0.0
	comp=E,83nm,0.3s,baz=38,slow=2.9,SNR=529						
LVC				S	Sn	12 40 53.2	-0.4
	comp=E,79nm,0.3s,baz=93,slow=22,SNR=48						
LVC	Limon Verde	1.12	209	*e*P	Pn	12 40 34.7	0.0
LVC				*e*S	Sn	12 40 53.2	-0.4
PB01	IPOC Station P	1.23	298⇑	*i*P	Pn	12 40 35.7	+0.2
PB01				*i* S	Sn	12 40 54.6	-0.5
PB01				IAML		12 40 56.8	
	comp=E,2µm,0.3s						
PB07	IPOC Station P	1.46	266⇑	*i*P	Pn	12 40 37.9	-0.1
PB07				*i* S	Sn	12 40 58.5	-1.0
PB07				IAML		12 40 60.0	
	comp=E,1µm,0.3s						
PB06	IPOC Station P	1.58	227⇑	*i*P	Pn	12 40 39.4	0.0
PB06				*i* S	Sn	12 41 00.9	-0.9
PB06				IAML		12 41 02.1	
	comp=E,1µm,0.4s						
PB08	IPOC Station P	1.67	332⇑	*i*P	Pn	12 40 42.1	+1.4
PB08				*i* S	Sn	12 41 05.2	+1.1
PB08				IAML		12 41 08.4	
	comp=E,501nm,0.4s						
PB04	IPOC Station P	1.83	247⇑	*i*P	Pn	12 40 41.9	-0.4
PB04				*i* S	Sn	12 41 05.4	-1.6
PB04				IAML		12 41 07.7	
	comp=N,866nm,0.4s						
PATCX	Punta Patache	1.89	295	*e*P	Pn	12 40 42.9	0.0
PATCX				*i* S	Sn	12 41 06.6	-1.4
PATCX				IAML		12 41 10.0	
	comp=E,2µm,0.4s						
PB15	IPOC Station P	1.90	214⇑	*i*P	Pn	12 40 43.1	0.0
PB15				*i* S	Sn	12 41 08.2	-0.3
TA01	Diego Aracena	2.03	301⇓	*i*P	Pn	12 40 44.3	-0.2
TA01				*i* S	Sn	12 41 09.7	-1.3
TA01				IAML		12 41 10.3	
	comp=E,625nm,0.3s						
PSGC	Pisagua	2.63	320⇓	*i*P	Pn	12 40 51.3	-0.8
PSGC				*i* S	Sn	12 41 22.7	-1.9
MNMC	Minye Minye	2.76	334	*e*P	Pn	12 40 54.4	+0.5
MNMC				*i* S	Sn	12 41 28.3	+0.6
PB10	IPOC Station P	2.79	227	*e*P	Pn	12 40 53.3	-0.7
PB10				IAML		12 41 25.8	
	comp=N,170nm,0.4s						
GO02	Mina Guanaco	3.70	198	*e*P	Pn	12 41 05.4	-0.8
GO02				*i* S	Sn	12 41 47.3	-2.4
LPAZ	La Paz	5.32	2	P	Pn	12 41 30.2	+2.2
	comp=N,0.6nm,0.3s,baz=185,slow=5.2,SNR=20						
LPAZ				S	Sn	12 42 29.9	+1.3
	comp=N,0.2nm,0.3s,baz=195,slow=9.5,SNR=3.8						
SIV	San Ignacio	8.87	52	P	Pn	12 42 13.6	-1.5
	comp=N,1.3nm,0.3s,baz=247,slow=8.3,SNR=12						
SIV				S	Sn	12 43 47.0	-6.4
	comp=N,0.6nm,0.3s,baz=294,slow=21,SNR=8.9						
DBIC	Dimbokro	68.25	73	P	P	12 50 57.2	+0.5
	comp=N,1.8nm,0.5s,baz=230,slow=9.9,SNR=4.4						
TORD	Torodi Ar. Bea	76.89	70	P	P	12 51 48.2	+0.4
	comp=N,0.9nm,0.4s,baz=261,slow=4.4,SNR=4.9						
MKAR	Makanchi Array	145.42	36	PKPbc	PKPdf	12 59 33.4	+1.4
	comp=N,0.3nm,0.5s,baz=331,slow=2.9,SNR=5.8						

NEIC ***20*** *12:44:04.5±2.0, 7°.0S±0°.1×154°.73E±0°.08, h50^{km}±9^{km}, mb4.6/23, Error ellipse: s-maj=15.8km s-min=10.5km az=205.0*
IDC ***20*** *12:44:06.2±2.9, 7°.21S×154°.74E, h72^{km}±27^{km}, mb3.9/10, mb1 4.1/13, mb1mx3.9/31, mbtmp4.2/13, MS3.5/14, Ms1 3.5/14, ms1mx3.3/36, Error ellipse: s-maj=24.0km s-min=17.4km az=155.0*
DJA ***20*** *12:44:11.5±0.5, 7°S±8°×15°4E±°, h100^{km}±12^{km}, M4.5/7, mb4.1/7, MLv4.6/3*
ISC 20 12:44:03.6±0.6**, 7°.01S**±0°.08×**154°.79E**±0°.08**, h41**^{km}**, n53, σ1^{s}.32**/46**, mb4.5**/23**, MS3.5**/12**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	3.83	317	Pn	Pn	12 44 59.8	-0.3
HNR	Honiara	5.64	116	P	Pn	12 45 28.2	+3.2
	4.0nm,0.3s,baz=280,slow=11,SNR=3.1						
HNR				LR	LR	12 47 52.9	
	comp=Z,656nm,20.3s,baz=238,slow=40						
HNR	Honiara	5.64	116		Pn	12 45 27.0	+2.0
PMG	Port Moresby	7.92	252	P	Pn	12 45 56.8	+0.6
	0.6nm,0.3s,baz=1.1,slow=7.2,SNR=14						
PMG				S	Sn	12 47 26.0	+1.4
	1.0nm,0.3s,baz=124,slow=17,SNR=12						
PMG				LR	LR	12 48 50.3	
	comp=Z,240nm,18.9s,baz=60,slow=36						
PMG	Port Moresby	7.92	252		Pn	12 45 56.4	+0.1
CTA	Charters Tower	15.41	212	P	Pn	12 47 39.0	+0.7
	0.1nm,0.3s,baz=28,slow=17,SNR=3.7						
WR0	Warramunga Arr	23.48	235	P	P	12 49 08.1	-1.7
WR0				IAmb	IAmb	12 49 10.3	
	comp=Z,21nm,1.2s						
WB0	Warramunga Arr	23.51	235	P	P	12 49 08.1	-1.9
WB0				IAmb	IAmb	12 49 13.2	
	comp=Z,28nm,1.3s						
WB2	Warramunga Arr	23.63	235	P	P	12 49 09.8	-1.4
WB2				IAmb	IAmb	12 49 11.2	
	comp=Z,26nm,1.2s						
WRA	Warramunga Arr	23.64	235	P	P	12 49 08.7	-2.6
	comp=Z,11nm,1.1s,baz=61,slow=9.5,SNR=16						
WRA				LR	LR	12 57 59.5	
	comp=Z,80nm,18.2s,baz=65,slow=36						
WRA	Warramunga Arr	23.64	235	P	P	12 49 10.6	-0.7
MSVF	Nonsavu	25.06	117	P	P	12 49 22.6	-1.9
AS31	Alice Springs	26.01	228	P	P	12 49 29.8	-3.2
ASAR	Alice Springs	26.01	228	P	P	12 49 31.1	-1.8
	comp=Z,2.6nm,1.0s,baz=56,slow=9.6,SNR=12						
ASAR	Alice Springs	26.01	228	P	P	12 49 30.6	-2.4
STKA	Stephens Creek	27.63	205	P	P	12 49 44.9	-2.6
	comp=Z,5.2nm,0.9s,baz=16,slow=12,SNR=9.0						
STKA				LR	LR	13 00 00.7	
	comp=Z,170nm,19.7s,baz=23,slow=35						
STKA	Stephens Creek	27.63	205	P	P	12 49 47.2	-0.2
FITZ	Fitzroy Crossi	30.46	246	LR	LR	13 01 53.5	
	comp=Z,102nm,20.5s,baz=74,slow=35						
FITZ	Fitzroy Crossi	30.46	246	P	P	12 50 11.2	-1.5
FITZ				IAmb	IAmb	12 50 13.6	
	comp=Z,20nm,1.3s						
BATI	Baumata	30.93	262	LR	LR	13 04 06.7	
	comp=Z,135nm,19.0s,baz=132,slow=39						
BBOO	Buckleboo	31.01	212	P	P	12 50 18.9	+1.4
BBOO				IAmb	IAmb	12 50 26.9	
	comp=Z,9.7nm,1.2s						
KAPI	Kappang	34.90	271	LR	LR	13 06 22.3	
	comp=Z,19nm,19.5s,baz=69,slow=38						
RPZ	Rata Peaks	39.24	161	LR	LR	13 07 07.9	
	comp=Z,179nm,18.0s,baz=30,slow=35						
JOW	Kunigami	42.34	324	LR	LR	13 08 31.1	
	comp=Z,74nm,18.2s,baz=117,slow=34						
NWAO	Narrogin (SRO)	43.33	228	LR	LR	13 09 51.9	
	comp=Z,61nm,19.1s,baz=68,slow=36						
YULB	Yu-li	44.55	314	P	P	12 52 11.9	+0.2
YULB				IAmb	IAmb	12 52 15.9	
	comp=Z,20nm,1.2s						
NACB	Ninganchiao	44.83	315	P	P	12 52 15.5	+1.7
NACB				IAmb	IAmb	12 52 32.0	
	comp=Z,26nm,1.1s						
TPUB	Ta-pu	44.97	313	P	P	12 52 16.0	+1.0
TPUB				IAmb	IAmb	12 52 39.7	
	comp=Z,5.9nm,0.9s						
SSLB	Suanglung	45.04	314	P	P	12 52 17.0	+1.4
RAR	Rarotonga	46.09	113	LR	LR	13 11 06.7	
	comp=Z,41nm,18.9s,baz=266,slow=35						
KSRS	Korea Array	50.86	332	P	P	12 52 59.8	-0.6
	comp=Z,1.0nm,0.9s,baz=162,slow=9.3,SNR=5.6						
ENH	Enshi	57.10	313	P	P	12 53 46.4	+0.3
XAN	Xi'an	59.58	316	P	P	12 54 03.7	+0.3
XAN				IAmb	IAmb	12 54 19.8	
	comp=Z,6.1nm,1.1s						
CMAR	Chiang Mai Arr	60.61	296	P	P	12 54 11.2	+0.5
	comp=Z,3.5nm,0.9s,baz=112,slow=5.3,SNR=17						
CMAR				LR	LR	13 21 05.6	
	comp=Z,16nm,19.6s,baz=144,slow=37						
CMAR	Chiang Mai Arr	60.61	296	P	P	12 54 12.5	+1.8
GLB	Gilahina Butte	83.00	25	P	P	12 56 24.2	-0.1
GLB				IAmb	IAmb	12 56 25.5	
	comp=Z,8.6nm,1.0s						
MK31	Makanchi Array	83.28	319	P	P	12 56 26.7	+0.6
MKAR	Makanchi Array	83.28	319	P	P	12 56 26.6	+0.5
	comp=Z,2.9nm,0.8s,baz=103,slow=5.5,SNR=25						
MKAR	Makanchi Array	83.28	319	P	P	12 56 26.0	-0.1
IL31		83.47	22	P	P	12 56 25.9	-0.6
IL31				IAmb	IAmb	12 56 41.5	
	comp=Z,7.1nm,1.4s						
ILAR	Eielson Array	83.47	22	P	P	12 56 25.5	-1.1
	comp=Z,0.7nm,0.5s,baz=243,slow=4.9,SNR=22						
ILAR	Eielson Array	83.47	22	P	P	12 56 25.6	-0.9
ZALV	Zalesovo Beam	84.08	326	P	P	12 56 29.0	-0.9
	comp=Z,0.7nm,0.6s,baz=77,slow=6.7,SNR=4.1						
ZALV	Zalesovo Beam	84.08	326	P	P	12 56 28.2	-1.7
HYT	Haines Junctio	85.48	27	P	P	12 56 37.6	+0.6
HYT				IAmb	IAmb	12 56 38.8	
	comp=Z,10nm,0.9s						
EGAK	Eagle	85.61	23	P	P	12 56 37.6	+0.1
EGAK				IAmb	IAmb	12 56 53.9	
	comp=Z,5.2nm,1.0s						
EPYK	Eagle Plains	87.95	22	P	P	12 56 49.3	+0.5
NVAR	Mina Array Bea	91.89	52	P	P	12 57 08.4	+0.3
	comp=Z,0.8nm,0.8s,baz=255,slow=6.1,SNR=6.7						
NVAR				LR	LR	13 30 20.1	
	comp=Z,27nm,20.9s,baz=359,slow=30						
NVAR	Mina Array Bea	91.89	52	P	P	12 57 07.4	-0.8
NV11	Mina Array Sit	92.01	52	P	P	12 57 08.8	+0.2
TPH	Tonopah	92.69	52	P	P	12 57 12.5	+0.6
YKA	Yellowknife Ar	96.45	28	P	P	12 57 28.2	0.0
	comp=Z,2.5nm,0.9s,baz=264,slow=4.0,SNR=23						
YKA				LR	LR	13 38 15.7	
	comp=Z,18nm,19.4s,baz=0.0,slow=34						
TORD	Torodi Ar. Bea	152.83	285	PKPbc	PKPbc	13 03 56.9	-0.4
	comp=Z,1.2nm,0.8s,baz=45,slow=1.0,SNR=6.0						

IDC ***20*** *12:53:40.0±2.6, 18°.92N×147°.01E, h0^{km}, mb3.9/4, mb1 4.1/5, mb1mx3.6/49, mbtmp4.0/5, ML4.0/1, Error ellipse: s-maj=114.5km s-min=28.2km az=93.0*
NEIC ***20*** *12:53:44.4±1.1, 18°.9N±0°.1×146°.2E±0°.2, h10^{km}±2^{km}, mb4.1/4, Error ellipse: s-maj=33.0km s-min=11.4km az=60.0*
ISC 20 12:53:49.7±2.6**, 18°.7N**±0°.1×**146°.3E**±0°.7**, h64**^{km}**, n11, σ1^{s}.16**/11**, mb3.9**/6**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANA2	Anatahan	2.44	194	Pn	Pn	12 54 25.8	-1.5
GUMO	Guam	5.29	196	Pn	Pn	12 55 07.8	+1.5
	4.0nm,0.3s,baz=202,slow=21,SNR=1.0						
GUMO	Guam	5.29	196		Pn	12 55 06.4	+0.1
WRA	Warramunga Arr	40.19	198	P	P	13 01 20.4	+0.3
	0.6nm,0.8s,baz=22,slow=8.3,SNR=2.2						
MKAR	Makanchi Array	58.88	314	P	P	13 03 42.5	+0.5
	0.3nm,0.6s,baz=83,slow=9.7,SNR=4.6						
MAKZ	Makanchi	59.09	314	P	P	13 03 43.5	0.0
KKAR	Karatay Array	67.22	310	P	P	13 04 37.5	+0.1
KKAR				IAmb	IAmb	13 04 49.7	
	comp=Z,2.1nm,1.4s						
ABKAR	Akbulak array	73.73	317	P	P	13 05 16.7	-0.3
ABKAR				IAmb	IAmb	13 05 42.9	
	comp=Z,2.1nm,1.5s						
ARCES	ARCESS Array B	82.65	342	P	P	13 06 06.9	+1.0
	comp=Z,1.8nm,0.8s,baz=72,slow=8.6,SNR=6.2						
ARCES	ARCESS Array B	82.65	342	P	P	13 06 06.9	+1.0
FINES	FINESS Array B	87.11	335	P	P	13 06 26.4	-1.9
	comp=Z,2.6nm,0.8s,baz=66,slow=4.7,SNR=5.9						

NEIC ***20*** *12:56:31.4±1.6, 39°.45N±0°.07×143°.8E±0°.1, h10^{km}±2^{km}, mb4.1/7, Error ellipse: s-maj=21.1km s-min=6.1km az=117.0*
IDC ***20*** *12:56:32.6±1.5, 39°.62N×143°.49E, h0^{km}, mb3.7/8, mb1 3.8/13, mb1mx3.7/50, mbtmp3.7/13, ML3.1/4, MS3.5/5, Ms1 3.5/5, ms1mx3.0/37, Error ellipse: s-maj=33.5km s-min=19.0km az=153.0*
JMA ***20*** *12:56:35.2±0.4, 39°.61N×143°.43E, h38^{km}, M3.9*
NIED ***20*** *12:56:35.3, 39°.61N×143°.43E, h38^{km}, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}6.25; $M_{\theta\theta}$-0.71; $M_{\phi\phi}$-5.53; $M_{r\theta}$2.83; $M_{\theta\phi}$-2.18; $M_{\phi r}$4.27; Fault plane solution: $M_0$8.13000×10^{14} NP1:ϕ_s29.00000°, δ65.00000°, λ97.00000°. NP2:ϕ_s193.00000°, δ26.00000°, λ76.00000°.*
ISC 20 12:56:34.4±0.8**, 39°.62N**±0°.06×**143°.44E**±0°.08**, h11**^{km}**, n62, σ1^{s}.10**/60**, mb4.0**/14**, MS3.9**/3**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MIYJ	Miyakonagasawa	1.25	269	P	Pn	12 56 56.9	-0.9
MIYJ				*e*S	Sb	12 57 11.4	-2.7
JTH	Tanohata	1.25	285	P	Pn	12 56 56.9	-0.9
JKEN	Kujiedanarisaw	1.45	294	P	Pn	12 56 59.5	-1.0
OFUJ	Ofunato	1.47	249	P	Pn	12 56 59.9	-0.9
JANG	Nango	1.66	298	P	Pn	12 57 02.5	-0.9
JOM	Ohasama	1.67	266	P	Pn	12 57 03.4	-0.1
JMK	Ichinoseki	1.85	250	P	Pn	12 57 05.5	-0.4
JIO	Ouri	2.00	235	P	Pn	12 57 06.7	-1.4
JTM	Tenmabayashi	2.16	303	P	Pn	12 57 10.5	+0.3
JRG	Rokugo	2.18	265	P	Pn	12 57 10.7	+0.1
JAH	Hinai	2.23	286	P	Pn	12 57 11.5	+0.3
ERM	Erimo	2.40	355	Pn	Pn	12 57 13.6	-0.1
JYK	Kaneyama	2.49	255	P	Pn	12 57 14.6	-0.2
JOT	Ohata	2.53	315	P	Pn	12 57 15.2	-0.2
JNBK	Urakawa-nobuka	2.71	349	P	Pn	12 57 18.0	+0.2
JMM	Marumori	2.71	231		Pn	12 57 16.4	-1.4
JKB	Kayabe	2.91	322	P	Pn	12 57 21.1	+0.5
JCH	Churui	2.99	359	P	Pn	12 57 21.0	-0.7
JCH				*e*S	Sn	12 57 55.3	-2.3
JEW	Eniwo	3.55	336		Pn	12 57 31.5	+2.1
JYT	Yasato	4.25	218		Pn	12 57 37.7	-1.3
JSD	Sado	4.34	250	Pn	Pn	12 57 40.6	+0.4
JKA	Kamikawa-asahi	4.54	352		Pn	12 57 43.6	+0.6
ASAJ	Asahikawa	4.54	352	Pn	Pn	12 57 43.4	+0.4
	2.0nm,0.3s,baz=201,slow=18,SNR=41						
ASAJ				Sn	Sn	12 58 35.9	+0.2
	1.6nm,0.3s,baz=240,slow=26,SNR=4.8						
MJAR	Matsushiro Arr	5.14	235	Pn	Pn	12 57 51.7	+0.3
	baz=40,slow=12						
MAJO	Matsushiro	5.14	235		Pn	12 57 52.2	+0.9

MAT	**Matsushiro**	5.14	235	P	Pn	12 57 52.0	+0.7
MAT				S	Sn	12 58 51.4	+0.7
JGF	**Kuroka**	6.28	232		Pn	12 58 08.1	+1.2
INU	**Inuyama**	6.65	232	Pn	Pn	12 58 10.7	-1.3
JWT	**Wachi**	7.72	238	Pn	Pn	12 58 27.8	+1.1
JHS	**Saijyo**	9.43	244	Pn	Pn	12 58 50.7	+0.6
USRK	**Ussuriysk Ar.**	9.68	302	Pn	Pn	12 58 55.8	+2.2
	baz=104,slow=13,SNR=7.0						
USRK				LR	LR	13 02 39.7	
	comp=Z,141nm,18.9s,baz=174,slow=38						
USRK	**Ussuriysk Ar.**	9.68	302		Pn	12 58 56.3	+2.8
USA0B	**Ussuriysk Arra**	9.68	302	Pn	Pn	12 58 56.0	+2.4
KSRS	**Korea Array**	12.34	265	Pn	Pn	12 59 32.4	+2.4
	0.1nm,0.3s,baz=86,slow=14,SNR=5.0						
KSRS				LR	LR	13 03 58.4	
	comp=Z,103nm,18.3s,baz=36,slow=36						
KLR	**Kul'dur**	12.72	323	Pn	Pn	12 59 35.1	0.0
	0.1nm,0.3s,baz=143,slow=19,SNR=2.8						
KLR				LR	LR	13 04 49.5	
	comp=Z,100nm,18.8s,baz=62,slow=39						
SEY	**Seymchan**	23.96	10	P	P	13 01 47.2	-1.2
	3.0nm,0.7s,baz=186,slow=6.0,SNR=14						
HHC	**Hu-ho-hao-te**	24.30	283	*e*P	P	13 01 53.3	+1.4
HHC				S	S	13 06 11.6	+0.9
HHC				LR	LR		
	comp=N,100nm,12.8s						
HHC				LR	LR		
	comp=E,190nm,13.6s						
HHC				LR	LR		
	comp=Z,200nm,15.3s						
SONM	**Songino Array**	27.78	299	P	P	13 02 23.6	+0.3
	comp=Z,1.6nm,0.6s,baz=112,slow=9.8,SNR=2.4						
H11N2	**WAKE ISLAND Hy**	28.28	128	T	T	13 33 25.5	
	baz=318,slow=75,SNR=21						
H11N1	**WAKE ISLAND Hy**	28.29	128	T	T	13 33 23.2	
	baz=318,slow=75,SNR=22						
H11N3	**WAKE ISLAND Hy**	28.30	128	T	T	13 33 32.0	
	baz=318,slow=75,SNR=21						
H11S1	**WAKE ISLAND Hy**	29.10	130	T	T	13 33 02.2	
	baz=322,slow=74,SNR=5.8						
H11S3	**WAKE ISLAND Hy**	29.11	130	T	T	13 33 03.0	
	baz=124,slow=74,SNR=5.0						
GTA	**Gaotai**	33.41	284	*e*P	P	13 03 13.5	+0.4
GTA				pP	sP	13 03 18.3	+1.5
GTA				sP	pwP	13 03 21.5	+2.7
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
WMQ	**Urumqi**	41.15	295	*e*P	P	13 04 19.8	+1.2
ZAA0	**Zalesovo Array**	41.41	310	P	P	13 04 20.3	-0.2
ZALV	**Zalesovo Beam**	41.41	310	P	P	13 04 20.3	-0.2
	comp=Z,1.6nm,0.5s,baz=86,slow=7.7,SNR=7.9						
ZALV	**Zalesovo Beam**	41.41	310	P	P	13 04 19.8	-0.7
CMAR	**Chiang Mai Arr**	43.71	254	P	P	13 04 39.1	-0.5
	comp=Z,0.5nm,0.4s,baz=46,slow=7.4,SNR=4.4						
MK31	**Makanchi Array**	44.15	300	P	P	13 04 42.9	0.0
MK31				IAmb	IAmb	13 04 43.5	
	comp=Z,2.5nm,0.9s						
MKAR	**Makanchi Array**	44.15	300	P	P	13 04 42.6	-0.3
	comp=Z,1.9nm,0.7s,baz=84,slow=9.3,SNR=21						
MKAR	**Makanchi Array**	44.15	300	P	P	13 04 42.3	-0.5
MAKZ	**Makanchi**	44.35	300	P	P	13 04 44.3	-0.2
MAKZ				IAmb	IAmb	13 04 45.2	
	comp=Z,3.9nm,1.1s						
KURK	**Kurchatov**	45.64	306	P	P	13 04 54.3	-0.3
ILAR	**Eielson Array**	46.46	34	P	P	13 05 01.8	+0.8
	comp=Z,0.3nm,0.8s,baz=251,slow=7.2,SNR=2.2						
KK31	**Karatay Array**	53.23	299	P	P	13 05 52.1	-0.7
KK31				IAmb	IAmb	13 06 17.5	
	comp=Z,1.9nm,1.2s						
KKAR	**Karatay Array**	53.23	299	P	P	13 05 52.2	-0.5
KKAR				IAmb	IAmb	13 06 17.4	
	comp=Z,1.9nm,1.2s						
ABKAR	**Akbulak array**	57.51	309	P	P	13 06 23.3	-0.2
ABKAR				IAmb	IAmb	13 06 23.9	
	comp=Z,2.0nm,0.7s						
YKA	**Yellowknife Ar**	60.77	31	P	P	13 06 45.9	+0.1
	comp=Z,0.1nm,0.6s,baz=305,slow=6.5,SNR=2.4						
FINES	**FINESS Array B**	67.27	332	LR	LR	13 39 34.5	
	comp=Z,139nm,19.0s,baz=291,slow=38						
NVAR	**Mina Array Bea**	72.18	55	P	P	13 07 59.6	+0.1
	comp=Z,0.2nm,0.7s,baz=286,slow=6.5,SNR=1.6						
ULM	**Lac du Bonnet**	76.47	35	LR	LR	13 45 57.8	
	comp=Z,55nm,18.1s,baz=310,slow=39						

IDC 20 12:59:56.9±6.2**, 7°.61S×124°.25E, h129km±68km, mb2.8**/1**, mb1 3.1**/5**, mb1mx2.9**/41**, mbtmp3.4**/5**, MS3.0**/1**, Ms1 3.0**/1**, ms1mx2.5**/11**, Error ellipse: s-maj=83.9km s-min=33.0km az=46.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	**Baumata**	2.64	193	P	Pn	13 00 39.6	+0.7
	12nm,0.3s,baz=161,slow=2.6,SNR=13						
BATI				S	Sn	13 01 11.7	+0.4
	8.4nm,0.3s,baz=108,slow=23,SNR=6.3						
FITZ	**Fitzroy Crossi**	10.51	173	P	Pn	13 02 22.3	-1.8
	0.1nm,0.3s,baz=356,slow=11,SNR=1.2						
FITZ				S	Sn	13 04 07.7	-12
	0.4nm,0.3s,baz=140,slow=19,SNR=8.7						
WRA	**Warramunga Arr**	15.68	142	P	Pn	13 03 31.5	+0.6
	0.1nm,0.3s,baz=318,slow=12,SNR=5.7						
LEM	**Lembang**	16.52	272	LR	LR	13 10 33.9	
	comp=Z,47nm,19.7s,baz=154,slow=39						
ASAR	**Alice Springs**	18.46	151	P	P	13 04 03.4	+0.5
	0.1nm,0.3s,baz=333,slow=12,SNR=6.2						
MKAR	**Makanchi Array**	65.74	330	P	P	13 10 27.8	-0.1
	0.1nm,0.6s,baz=122,slow=6.3,SNR=1.5						

BJI ***20*** *13:01:06.8±0.0, 6°.77S×155°.18E, h14km, mB5.2/26, mb4.8/47, Ms5.0/8, Ms7 4.7/2*

NEIC ***20*** *13:01:10.0±1.4, 7°.17S±0°.08×154°.84E±0°.09, h27km±3km, mb4.9/50, Error ellipse: s-maj=14.7km s-min=10.8km az=54.0*

IDC ***20*** *13:01:13.3±3.0, 7°.08S×154°.72E, h52km±28km, mb4.2/15, mb1 4.3/18, mb1mx4.1/39, mbtmp4.4/18, ML3.2/3, MS3.6/14, Ms1 3.6/14, ms1mx3.4/31, Error ellipse: s-maj=22.7km s-min=16.4km az=131.0*

DJA ***20*** *13:01:21.0±0.7, 7°S±8°×15°4E±°, h139km±12km, M4.7/8, mB4.2/1, mb4.3/8, MLv4.8/2, Mw(mB)3.3/1*

ISC 20 13:01:12.3±0.4**, 7°.15S**±0°.06×**154°.85E**±0°.07**, h41km, n95, σ1s.47**/90**, mb4.8**/48**, MS3.6**/14**, 3C, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	**Rabaul**	3.97	318	Pn	Pn	13 02 09.9	-0.9
HNR	**Honiara**	5.53	115	P	Pn	13 02 36.0	+3.9
	4.4nm,0.3s,baz=217,slow=10,SNR=1.8						
HNR				LR	LR	13 05 01.4	
	comp=Z,820nm,18.2s,baz=248,slow=40						
PMG	**Port Moresby**	7.94	253	P	Pn	13 03 05.5	+0.3
	1.8nm,0.3s,baz=50,slow=8.3,SNR=16						
PMG				S	Sn	13 04 36.4	+2.7
	2.0nm,0.3s,baz=108,slow=19,SNR=11						
PMG				LR	LR	13 05 49.4	
	comp=Z,309nm,20.9s,baz=49,slow=35						
PMG	**Port Moresby**	7.94	253	Pn	Pn	13 03 04.2	-1.0
MANU	**Manus Island**	9.02	304	Pn	Pn	13 03 18.3	-1.8
SANVU	**Saraoutou**	14.65	125	Pn	Pn	13 04 36.3	-0.6
CTA	**Charters Tower**	15.33	212	P	P	13 04 48.3	-1.8
	0.2nm,0.3s,baz=56,slow=19,SNR=5.6						
CTAO	**Charters Tower**	15.33	212	P	Pn	13 04 46.9	+0.9
EIDS	**Eidsvold**	18.48	191	P	P	13 05 23.3	-1.5
DZM	**Mont Dzumac**	18.58	144	P	P	13 05 23.9	-2.3
ARMA	**Armidale**	23.35	187	P	P	13 06 16.4	-0.9
WR0	**Warramunga Arr**	23.46	235	P	P	13 06 17.2	-1.1
WR0				IAmb	IAmb	13 06 40.3	
	comp=Z,16nm,0.8s						
WB0	**Warramunga Arr**	23.48	236	P	P	13 06 17.4	-1.1
WB0				IAmb	IAmb	13 06 19.3	
	comp=Z,56nm,1.5s						
WB2	**Warramunga Arr**	23.60	235	P	P	13 06 18.7	-1.0
WB2				IAmb	IAmb	13 06 20.6	
	comp=Z,42nm,1.5s						
WRA	**Warramunga Arr**	23.61	235	P	P	13 06 18.6	-1.2
	comp=Z,13nm,1.1s,baz=59,slow=9.1,SNR=26						
WRA				PcP	PcP	13 10 04.8	+0.8
	comp=Z,1.1nm,0.9s,baz=61,slow=2.2,SNR=4.9						
WRA				LR	LR	13 15 09.1	
	comp=Z,88nm,18.3s,baz=45,slow=36						
WRA	**Warramunga Arr**	23.61	235	P	P	13 06 16.3	-3.5
AS31	**Alice Springs**	25.96	228	P	P	13 06 40.7	-0.5
ASAR	**Alice Springs**	25.96	228	P	P	13 06 40.2	-1.1
	comp=Z,2.8nm,0.8s,baz=62,slow=8.9,SNR=26						
ASAR				LR	LR	13 15 42.9	
	comp=Z,136nm,20.6s,baz=54,slow=34						
MSAI	**Masohi**	26.08	277	P	P	13 06 28.3	-14
STKA	**Stephens Creek**	27.54	205	P	P	13 06 54.6	-0.7
	comp=Z,5.0nm,0.6s,baz=33,slow=15,SNR=15						
STKA				LR	LR	13 17 42.0	
	comp=Z,119nm,18.5s,baz=26,slow=36						
STKA	**Stephens Creek**	27.54	205	P	P	13 06 53.0	-2.3
FITZ	**Fitzroy Crossi**	30.46	246	P	P	13 07 19.7	-1.8
	comp=Z,6.0nm,1.1s,baz=85,slow=12,SNR=1.8						
FITZ	**Fitzroy Crossi**	30.46	246	P	P	13 07 20.8	-0.7
FITZ				IAmb	IAmb	13 07 49.1	
	comp=Z,23nm,1.3s						
YULB	**Yu-li**	44.68	314	P	P	13 09 21.9	+0.4
NACB	**Ninganchiao**	44.96	315	P	P	13 09 24.4	+0.7
TPUB	**Ta-pu**	45.11	313	P	P	13 09 24.9	0.0
KSRS	**Korea Array**	51.01	332	P	P	13 10 08.3	-1.8
	comp=Z,2.8nm,0.9s,baz=157,slow=8.7,SNR=8.3						
KSRS				LR	LR	13 28 50.9	
	comp=Z,22nm,20.1s,baz=325,slow=33						
NJ2	**Nanjing**	51.94	321	*e*P	P	13 10 19.4	+2.1
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.6s						
WHN	**Wuhan**	53.95	316	⇑P	P	13 10 33.9	+1.7
WHN				pmax	pmax		
	comp=Z,56nm,1.1s						
PPT	**Papeete**	55.09	106	LR	LR	13 30 16.7	
	comp=Z,31nm,19.1s,baz=279,slow=32						
ENH	**Enshi**	57.24	313	P	P	13 10 56.6	+0.8
ENH				IAmb	IAmb	13 10 56.9	
	comp=Z,12nm,0.9s						
GYA	**Guiyang**	57.43	308	⇑P	P	13 10 58.5	+1.1
GYA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KLR	**Kul'dur**	59.67	343	P	P	13 11 11.4	-1.0
	comp=Z,1.8nm,0.6s,baz=144,slow=5.2,SNR=6.5						
XAN	**Xi'an**	59.72	316	P	P	13 11 12.8	-0.3
XAN				pP	pP	13 11 22.0	-0.9
XAN				sP	sP	13 11 26.9	+0.1
XAN				pmax	pmax		
	comp=Z,12nm,0.9s						
XAN				pmax	pmax		
	comp=Z,92nm,4.1s						
XAN	**Xi'an**	59.72	316	P	P	13 11 12.7	-0.4
XAN				IAmb	IAmb	13 11 13.8	
	comp=Z,8.1nm,0.8s						
KMI	**Kunming**	59.98	304	⇑P	P	13 11 18.0	+2.7
KMI				pP	pP	13 11 24.3	-0.9
KMI				sP	sP	13 11 26.9	-2.2
KMI				pmax	pmax		
	comp=Z,8.0nm,1.1s						
PETK	**Petropavlovsk-**	60.07	2	P	P	13 11 13.2	-1.9
	comp=Z,2.9nm,0.9s,baz=168,slow=7.6,SNR=5.6						
PETK				LR	LR	13 38 03.2	
	comp=Z,19nm,18.5s,baz=132,slow=37						
PETK	**Petropavlovsk-**	60.07	2	P	P	13 11 15.2	+0.1
CMAR	**Chiang Mai Arr**	60.72	296	P	P	13 11 20.1	-0.1
	comp=Z,7.1nm,0.9s,baz=117,slow=5.0,SNR=32						
CD2	**Chengdu**	61.80	311	P	P	13 11 28.0	+0.6
CD2				sP	pP	13 11 37.8	+0.6
CD2				pmax	pmax		
	comp=Z,20nm,0.9s						
HHC	**Hu-ho-hao-te**	62.13	324	*e*P	P	13 11 29.1	-0.4
LZH	**Lanzhou**	64.32	316	*e*P	P	13 11 45.6	+1.4
LZH				pP	pP	13 11 51.5	-2.5
LZH				sP	sP	13 11 55.0	-2.9
LZH				pmax	pmax		
	comp=Z,14nm,1.0s						
GTA	**Gaotai**	68.75	317	P	P	13 12 13.6	+1.2
GTA				pP	pP	13 12 19.9	-2.9
GTA				sP	sP	13 12 23.3	-3.5
GTA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ULN	**Ulaanbaatar**	69.06	328	P	P	13 12 13.9	-0.2
SHL	**Shillong**	69.25	301	P	P	13 12 15.7	-0.1
SHL				IAmb	IAmb	13 12 18.1	
	comp=Z,13nm,0.8s						
SONM	**Songino Array**	69.39	327	P	P	13 12 16.7	+0.7
	comp=Z,3.3nm,0.8s,baz=120,slow=8.5,SNR=2.9						
TLY	**Talaya**	73.12	330	P	P	13 12 37.7	-0.7
CHGN	**Chignik**	73.95	25	P	P	13 12 44.2	+1.1
KDAK	**Kodiak Island**	77.36	26	LR	LR	13 39 58.8	
	comp=Z,36nm,21.0s,baz=193,slow=30						
WMQ	**Urumqi**	78.84	317	*e*P	P	13 13 12.3	+1.0
WMQ				pmax	pmax		
	comp=Z,11nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,110nm,4.7s						
WMQ				LR	LR		
	comp=Z,490nm,28.9s						
WMQ				LR	LR		
	comp=Z,1µm,28.8s						
SKT	**Skwentna**	80.27	23	P	P	13 13 16.7	-1.9
PPLA	**Purkeypile**	80.56	22	P	P	13 13 20.2	-0.1
PPLA				IAmb	IAmb	13 13 37.9	
	comp=Z,13nm,1.3s						
PMR	**Palmer**	80.98	24	P	P	13 13 21.1	-1.2
PMR				IAmb	IAmb	13 13 22.5	
	comp=Z,7.6nm,0.8s						
SML	**Sawmill**	81.42	24	P	P	13 13 24.4	-0.4
SML				IAmb	IAmb	13 13 25.7	
	comp=Z,15nm,0.8s						
GLI	**Glacier Island**	81.43	25	P	P	13 13 24.0	-0.7
GLI				IAmb	IAmb	13 13 41.7	
	comp=Z,9.6nm,0.8s						
IMAR	**Indian Mountai**	81.92	19	P	P	13 13 27.4	+0.2
RND	**Reindeer**	82.10	22	P	P	13 13 27.5	-0.9
RND				IAmb	IAmb	13 13 28.3	
	comp=Z,6.1nm,0.9s						
KLU	**Klutina**	82.23	25	P	P	13 13 29.0	-0.1
KLU				IAmb	IAmb	13 13 31.0	
	comp=Z,8.8nm,0.9s						
QSPA	**South Pole Qui**	82.83	180	P	P	13 13 33.0	+0.7
QSPA				IAmb	IAmb	13 13 46.0	
	comp=Z,11nm,1.1s						
WRH	**Wood River Hil**	82.97	21	P	P	13 13 31.9	-0.9
GLB	**Gilahina Butte**	83.09	25	P	P	13 13 33.4	-0.1
GLB				IAmb	IAmb	13 13 34.8	
	comp=Z,13nm,0.9s						
VRDI	**Verde Repeater**	83.14	25	P	P	13 13 33.1	-0.8
VRDI				IAmb	IAmb	13 13 52.8	
	comp=Z,15nm,1.2s						
CCB	**Clear Creek Bu**	83.17	21	P	P	13 13 32.7	-1.1
MDM	**Murphy Dome**	83.18	21	P	P	13 13 31.9	-2.0
TGL	**Tana Glacier**	83.18	26	P	P	13 13 32.0	-2.1
HDA	**Harding Lake**	83.35	22	IAmb	IAmb	13 13 34.9	
	comp=Z,6.3nm,1.2s						
MKAR	**Makanchi Array**	83.42	319	P	P	13 13 35.2	-0.4
	comp=Z,6.0nm,0.9s,baz=110,slow=5.3,SNR=47						
MKAR	**Makanchi Array**	83.42	319	P	P	13 13 35.8	+0.2
BALM	**Baldy**	83.52	26	P	P	13 13 36.0	+0.1
BALM				IAmb	IAmb	13 13 37.0	
	comp=Z,12nm,0.9s						
IL31		83.57	22	P	P	13 13 34.7	-1.1
IL31				IAmb	IAmb	13 13 51.7	
	comp=Z,8.2nm,1.4s						
ILAR	**Eielson Array**	83.57	22	P	P	13 13 34.3	-1.6
	comp=Z,1.9nm,0.9s,baz=231,slow=5.3,SNR=18						
ILAR	**Eielson Array**	83.57	22	P	P	13 13 33.2	-2.7
MAKZ	**Makanchi**	83.63	319	P	P	13 13 36.0	-0.6
MAKZ				IAmb	IAmb	13 13 37.7	
	comp=Z,9.5nm,0.9s						
TABL	**Table Mountain**	83.78	27	P	P	13 13 37.9	+0.6
BARN	**Barnard Glacie**	83.83	26	P	P	13 13 37.8	+0.3
MENT	**Mentasta**	83.85	24	P	P	13 13 37.6	+0.2
MENT				IAmb	IAmb	13 14 01.9	
	comp=Z,10nm,1.4s						
DOT	**Dot Lake**	84.06	23	P	P	13 13 38.0	-0.4
DOT				IAmb	IAmb	13 13 39.3	
	comp=Z,6.8nm,0.9s						
ZALV	**Zalesovo Beam**	84.22	326	P	P	13 13 37.5	-1.9
	comp=Z,1.2nm,0.5s,baz=101,slow=7.7,SNR=7.5						
ZALV				LR	LR	13 51 42.5	
	comp=Z,26nm,19.5s,baz=43,slow=36						
ZALV	**Zalesovo Beam**	84.22	326	P	P	13 13 38.4	-1.0
BCAR	**Beaver Creek A**	84.69	24	P	P	13 13 42.2	+0.6
TOLK	**Toolik Lake Re**	84.81	18	IAmb	IAmb	13 13 43.4	
	comp=Z,5.0nm,0.9s						
HYT	**Haines Junctio**	85.57	27	P	P	13 13 46.4	+0.2
EGAK	**Eagle**	85.71	23	P	P	13 13 46.7	+0.1
EGAK				IAmb	IAmb	13 13 52.7	
	comp=Z,7.1nm,1.0s						
BMAR	**Burnt Mountain**	85.74	20	P	P	13 13 46.6	-0.2
KSH	**Kashi**	86.00	310	P	P	13 13 51.3	+2.5
KSH				sP	sP	13 14 00.9	-2.6
KSH				S	S	13 24 26.5	+6.4
KSH				pmax	pmax		
	comp=Z,16nm,0.9s						
KSH				pmax	pmax		
	comp=Z,200nm,5.9s						
KSH				LR	LR		
	comp=Z,430nm,8.7s						
KSH				LR	LR		
	comp=Z,550nm,8.2s						
KSH				LR	LR		
	comp=Z,250nm,11.1s						
BBB	**Bella Bella**	87.73	37	LR	LR	13 51 17.7	
	comp=Z,82nm,18.1s,baz=310,slow=34						
YBH	**Yreka Blue Hor**	89.10	48	LR	LR	13 52 02.2	
	comp=Z,60nm,18.1s,baz=313,slow=34						
INK	**Inuvik**	89.91	21	P	P	13 14 06.0	-0.6
INK				IAmb	IAmb	13 14 07.5	
	comp=Z,8.0nm,1.3s						
MWC	**Mount Wilson**	91.57	56	P	P	13 14 15.1	-0.4
NVAR	**Mina Array Bea**	91.93	52	P	P	13 14 18.2	+1.1
	comp=Z,2.5nm,1.0s,baz=257,slow=6.0,SNR=10						
NEW	**Newport**	93.96	42	LR	LR	13 54 58.1	
	comp=Z,83nm,18.7s,baz=290,slow=34						
YKA	**Yellowknife Ar**	96.54	28	P	P	13 14 37.6	+0.3
	comp=Z,3.9nm,0.9s,baz=264,slow=4.0,SNR=39						
PDAR	**Pinedale Array**	98.91	48	P	P	13 14 47.6	-1.2
	comp=Z,0.3nm,0.7s,baz=272,slow=2.3,SNR=3.5						
PDAR				LR	LR	13 58 01.0	
	comp=Z,30nm,18.4s,baz=331,slow=34						
GERES	**GERESS Array B**	127.11	329	PKP	PKPdf	13 20 10.9	-1.5
	comp=Z,0.5nm,0.7s,baz=91,slow=5.3,SNR=3.9						
TORD	**Torodi Ar. Bea**	152.93	285	PKPbc	PKPbc	13 21 05.8	-0.5
	comp=Z,3.2nm,0.8s,baz=52,slow=2.1,SNR=14						

IDC ***20*** *13:07:15.1±1.5, 33°.29N×140°.04E, h211km±6km, mb3.0/3, mb1 3.1/4, mb1mx2.8/36, mbtmp3.4/4, Error ellipse: s-maj=50.1km s-min=10.9km az=53.0*

JMA ***20*** *13:07:16.1±0.4, 33°.21N×139°.31E, h199km±4km, M2.9*

ISC 20 13:07:16.1±1.0**, 33°.21N**±0°.07×**139°.34E**±0°.08**, h203km**±8km**, n26, σ0s.91**/29**, mb3.3**/3**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	0.38	104	P	Pn	13 07 43.2	+0.1
	18nm,0.3s,baz=46,slow=22,SNR=1.3						
JHJ				S	S	13 08 05.3	+1.1
	44nm,0.3s,baz=89,slow=23,SNR=2.2						
JHJ2	**Mitsune**	0.41	104	P	Pn	13 07 43.5	+0.2
JMKN	**Mikurajimanish**	0.71	17	P	Pn	13 07 43.7	-0.8
JKO	**Kozu shima**	0.99	350	P	Pn	13 07 45.5	-0.6
JIM2	**Oshima 3**	1.51	3	P	Pn	13 07 49.8	-0.3
JIZS	**Izushimoda**	1.55	346	P	Pn	13 07 50.4	-0.1
TK04	**Tokai 4**	1.69	314	P	Pn	13 07 51.7	+0.1
TTO4	**TONANKAI O.B.S**	1.70	298	P	Pn	13 07 51.1	-0.5
BSO3	**Boso 3**	1.86	31	P	Pn	13 07 53.2	+0.1
BSO3				S	S	13 08 22.3	+0.7
BSO1	**Boso 1**	1.98	43	P	Pn	13 07 54.1	+0.1
JOD2	**Odawara 2**	2.06	354	P	Pn	13 07 56.0	+0.6
HMMJ	**Hamamatsu 2**	2.12	321	P	Pn	13 07 55.7	-0.4
JYN	**Shimob**	2.38	344	P	Pn	13 07 59.6	+0.8
JNY	**Yasuok**	2.47	331	P	Pn	13 08 00.2	+0.3
JIE	**Ise**	2.49	299	P	Pn	13 07 59.6	-0.4
JHU	**Hanno**	2.64	359	P	Pn	13 08 01.8	+0.1
JAO	**Obara**	2.68	321	P	Pn	13 08 02.4	+0.2
JKN2	**Miekihoku**	2.75	293	P	Pn	13 08 02.5	-0.5
JRY	**Ryogami san**	2.82	353	P	Pn	13 08 04.6	+0.8
JYT	**Yasato**	3.09	13	P	Pn	13 08 06.1	-0.8
JYT				*e*S	S	13 08 43.7	-2.5
JAG	**Ashikaga**	3.21	2	P	Pn	13 08 07.5	-0.8
MJAR	**Matsushiro Arr**	3.45	345	P	Pn	13 08 11.6	+0.4
	0.2nm,0.3s,baz=162,slow=12,SNR=7.6						
JFK	**Kawauchi**	4.33	16	P	Pn	13 08 22.4	+0.3
MKAR	**Makanchi Array**	44.82	305	P	P	13 15 11.5	+1.7
	0.2nm,0.5s,baz=86,slow=8.8,SNR=0.8						
WRA	**Warramunga Arr**	53.07	186	P	P	13 16 10.3	-2.2
	0.3nm,0.4s,baz=14,slow=7.2,SNR=7.9						
ASAR	**Alice Springs**	56.80	186	P	P	13 16 39.5	+0.2
	1.3nm,0.8s,baz=24,slow=11,SNR=11						

ROM 20 13:07:43.3±0.2**, 44°.186N**±0°.008×**10°.922E**±0°.007**, h17km**±2km**, ML1.3**/3**, Error ellipse: s-maj=0.8km s-min=0.5km az=15.0, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FNVD	**Fontana Vidola**	0.15	97	P	Pg	13 07 47.3	-0.2
FNVD				S	Sg	13 07 50.3	0.0
MTCR	**Monte La Croce**	0.17	161	P	Pb	13 07 48.2	+0.1
MTCR				S	Sb	13 07 51.5	+0.3
MTCR				AML	AML		
	comp=E,178µm,0.3s						
MTCR				AML	AML		
	comp=N,106µm,0.3s						
MTCR				AML	AML		
	comp=N,104µm,0.3s						
MTCR				AML	AML		
	comp=E,180µm,0.3s						
ZCCA	**Zocca**	0.17	13	P	Pb	13 07 48.2	+0.1
POPM	**Popiglio**	0.18	220	P	Pb	13 07 48.3	0.0
POPM				S	Sb	13 07 51.9	+0.3
POPM				AML	AML		
	comp=N,192µm,1.1s						
POPM				AML	AML		
	comp=E,154µm,0.2s						
BDI	**Bagni Di Lucca**	0.26	242	P	Pg	13 07 49.4	+0.1
BDI				S	Sb	13 07 53.8	-0.1
BDI				AML	AML		
	comp=N,36µm,0.1s						
BDI				AML	AML		
	comp=N,36µm,0.1s						
BDI				AML	AML		
	comp=E,38µm,0.5s						
SARO	**Sassorosso**	0.38	270	P	Pg	13 07 51.1	-0.1
SARO				S	Sb	13 07 56.9	-0.2
VLC	**Villacollemand**	0.39	266	P	Pb	13 07 51.7	0.0
VLC				S	Sb	13 07 57.4	0.0

ROM 20 13:07:46.5±0.1**, 43°.348N**±0°.004×**12°.534E**±0°.005**, h6km, ML1.1**/4**, 3C-2D, Error ellipse: s-maj=0.3km s-min=0.3km az=260.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATFO	**Monte Foce - G**	0.03	57	P	Pg	13 07 47.9	+0.1
ATFO				AML	AML		
	comp=E,729µm,0.6s						
ATFO				AML	AML		
	comp=N,624µm,1.3s						
ATFO				AML	AML		
	comp=E,729µm,0.6s						
ATFO				AML	AML		
	comp=N,624µm,1.3s						
ATFO	**Monte Foce - G**	0.03	57	P	Pg	13 07 47.9	+0.1
ATFO				S	Sg	13 07 48.7	0.0
ATFO				AML	AML		
	comp=E,729µm,0.6s						
ATFO				AML	AML		
	comp=N,624µm,1.3s						
MURB	**Monte Urbino**	0.09	184	⇑P	Pg	13 07 48.8	+0.3
MURB				AML	AML		
	comp=E,426µm,0.7s						
MURB				AML	AML		
	comp=N,434µm,0.5s						
MURB				AML	AML		
	comp=N,434µm,0.5s						
MURB				AML	AML		
	comp=E,426µm,0.7s						
MURB	**Monte Urbino**	0.09	184	P	Pg	13 07 48.7	+0.3
MURB				S	Sg	13 07 50.5	+0.7
MURB				AML	AML		
	comp=E,426µm,0.7s						
MURB				AML	AML		
	comp=N,435µm,0.5s						
MURB				AML	AML		
	comp=N,434µm,0.5s						
MURB				AML	AML		
	comp=E,426µm,0.7s						
ATVO	**AVT- Monte Val**	0.10	290	⇓P	Pg	13 07 49.0	+0.3
ATVO				AML	AML		
	comp=E,106µm,0.1s						

ATVO				AML	AML		
	comp=N,73µm,0.3s						
ATVO				AML	AML		
	comp=E,106µm,0.1s						
ATVO				AML	AML		
	comp=N,73µm,0.3s						
ATVO	**AVT- Monte Val**	**0.10**	**290**	P	Pg	13 07 49.0	+0.3
ATVO				S	Sg	13 07 50.8	+0.7
ATVO				AML	AML		
	comp=E,106µm,0.1s						
ATVO				AML	AML		
	comp=N,73µm,0.3s						
ATVO				AML	AML		
	comp=N,73µm,0.3s						
ATCC	**AVT- Casa Cast**	**0.18**	**154**	P	Pg	13 07 50.7	+0.7
ATCC				AML	AML		
	comp=E,102µm,0.7s						
ATCC				AML	AML		
	comp=N,142µm,0.3s						
ATCC				AML	AML		
	comp=N,142µm,0.3s						
ATCC				AML	AML		
	comp=E,102µm,0.7s						
ATCC	**AVT- Casa Cast**	**0.18**	**154**	P	Pg	13 07 50.6	+0.6
ATCC				AML	AML		
	comp=E,102µm,0.7s						
ATCC				AML	AML		
	comp=N,142µm,0.3s						
ATCC				AML	AML		
	comp=E,102µm,0.7s						
ATMI	**Monte Miggiano**	**0.19**	**266**	P	Pg	13 07 54.4	+4.0
ATMI	**Monte Miggiano**	**0.19**	**266**	S	Sg	13 07 55.0	+2.1
ATTE	**AVT- Monte Tez**	**0.20**	**221**	⇓P	Pg	13 07 51.1	+0.7
ATTE	**AVT- Monte Tez**	**0.20**	**221**	P	Pg	13 07 51.1	+0.6
ATTE				S	Sg	13 07 54.1	+1.0
ASSB	**Assisi San Ben**	**0.32**	**163**	⇑P	Pg	13 07 51.9	-0.8
ASSB				AML	AML		
	comp=E,37µm,0.3s						
ASSB				AML	AML		
	comp=N,34µm,0.4s						
ASSB				AML	AML		
	comp=E,37µm,0.3s						
ASSB				AML	AML		
	comp=N,34µm,0.4s						
ASSB	**Assisi San Ben**	**0.32**	**163**	AML	AML		
	comp=E,37µm,0.3s						
ASSB				AML	AML		
	comp=N,34µm,0.4s						
BLLA	**Bellaria**	**0.80**	**357**	S	Pg	13 08 01.0	-0.8
BLLA	**Bellaria**	**0.80**	**357**	⇑P	Pg	13 08 00.8	-1.0
LPEL	**Lama dei Pelig**	**1.78**	**136**	S	Sg	13 08 43.0	-0.7

IDC 20 13:31:19.6±2.6**, 3°.29N×94°.78E, h0^{km}, mb3.7**/3**, mb1 3.7**/5**, mb1mx3.4**/42**, mbtmp3.6**/5**, ML3.1**/1**, Error ellipse: s-maj=80.5km s-min=26.9km az=51.0, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	**Prapat**	**4.17**	**97**	Pn	Pn	13 32 23.6	-1.1
	1.1nm,0.3s,baz=359,slow=3.2,SNR=2.6						
CMAR	**Chiang Mai Arr**	**15.62**	**15**	Pn	Pn	13 35 03.2	+1.9
	baz=207,slow=12,SNR=1.5						
MKAR	**Makanchi Array**	**44.67**	**348**	P	P	13 39 34.1	-0.1
	0.7nm,0.5s,baz=165,slow=8.6,SNR=17						
ASAR	**Alice Springs**	**46.58**	**127**	P	P	13 39 50.1	+0.4
	0.4nm,1.0s,baz=294,slow=7.0,SNR=1.9						
ZALV	**Zalesovo Beam**	**51.15**	**352**	P	P	13 40 23.9	-0.4
	1.2nm,0.4s,baz=182,slow=7.6,SNR=7.3						

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*JMA **20** 13:52:04.5±0.1, 22°.63N×121°.51E, h8^{km}±2^{km}, M3.6*
*IDC **20** 13:52:06.5±2.8, 21°.70N×120°.03E, h0^{km}, mb3.4/4, mb1 3.6/4, mb1mx3.4/44, mbtmp3.4/4, MS3.1/2, Ms1 3.1/2, ms1mx2.6/28, Error ellipse: s-maj=285.5km s-min=23.8km az=62.0*
*TAP **20** 13:52:07.0, 22°.68N×121°.35E, h25^{km}, ML3.8, B*
ISC 20 13:52:07.1±0.8**, 22°.65N**±0°.02×**121°.41E**±0°.02**, h24**^{km}±5^{km}**, n142, σ1^{s}11**/221**, mb3.5**/4**, 5C-14D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LDUT	**Ludao**	**0.06**	**63**	⇓*i*P	**Pb**	**13 52 11.9**	**+0.6**
	baz=86						
LDUT				*i* S	**Sb**	**13 52 15.3**	**+1.1**
	baz=86						
TTN	**Taitung**	**0.27**	**294**	⇑*i*P	**Pb**	**13 52 13.1**	**-0.4**
	baz=291						
TTN				S	**Sb**	**13 52 17.7**	**-0.3**
	baz=291						
EDH	**Donghe**	**0.34**	**343**	⇑*i*P	**Pb**	**13 52 13.8**	**-0.8**
	baz=357						
EDH				*e*S	**Sb**	**13 52 19.0**	**-0.8**
	baz=357						
TWGBT	**Beinan**	**0.35**	**299**	⇑*i*P	**Pb**	**13 52 13.9**	**-0.9**
	baz=298						
TWGBT				S	**Sb**	**13 52 19.1**	**-1.0**
	baz=298						
TWG	**Pinlang**	**0.36**	**299**	⇑*i*P	**Pb**	**13 52 13.9**	**-1.0**
	baz=298						
TWG				*e*S	**Sb**	**13 52 19.3**	**-1.1**
	baz=298						
LONT	**Longtian**	**0.37**	**315**	*i* P	**Pb**	**13 52 14.1**	**-1.0**
	baz=321						
LONT				S	**Sb**	**13 52 20.2**	**-0.3**
	baz=321						
ECL	**Taimali**	**0.42**	**264**	⇓*i*P	**Pb**	**13 52 14.8**	**-1.2**
	baz=257						
ECL				*e*S	**Sb**	**13 52 20.3**	**-1.8**
	baz=257						
CHKT	**Chengkung**	**0.45**	**355**	⇑*i*P	**Pb**	**13 52 15.7**	**-0.8**
	baz=10.0						
CHKT				*e*S	**Sb**	**13 52 21.9**	**-0.9**
	baz=10.0						
TAW	**Tawu**	**0.56**	**239**	*e*P	**Pb**	**13 52 17.3**	**-0.9**
	baz=242						
TAW				*e*S	**Sb**	**13 52 24.6**	**-1.1**
	baz=242						
FULB	**Fuli**	**0.56**	**349**	*i* P	**Pb**	**13 52 17.3**	**-1.0**
	baz=359						
FULB				*e*S	**Sb**	**13 52 25.4**	**-0.6**
	baz=359						
LAY	**Lan-yu**	**0.62**	**168**	*e*P	**Pb**	**13 52 19.0**	**-0.3**
	baz=154						
LAY				*e*S	**Sb**	**13 52 27.7**	**+0.1**
	baz=154						
ELDTW	**Lidau**	**0.65**	**326**	⇓*i*P	**Pb**	**13 52 18.2**	**-1.7**
	baz=328						
ELDTW				*e*S	**Sb**	**13 52 25.6**	**-3.1**
	baz=328						
EYUL	**Yuli**	**0.70**	**353**	*e*P	**Pb**	**13 52 20.1**	**-0.7**
	baz=343						
EYUL				*e*S	**Sb**	**13 52 29.8**	**-0.2**
	baz=343						
SLIU	**Shizi**	**0.71**	**233**	*e*P	**Pb**	**13 52 19.6**	**-1.1**
	baz=228						
SLIU				*e*S	**Sb**	**13 52 27.9**	**-2.3**
	baz=228						
TSMG	**Majia**	**0.71**	**275**	*e*P	**Pb**	**13 52 19.3**	**-1.5**
	baz=269						
TSMG				*e*S	**Sb**	**13 52 26.6**	**-3.5**
	baz=269						
TWF1	**Yuli**	**0.71**	**351**	*e*P	**Pb**	**13 52 19.3**	**-1.5**
	baz=342						
TWF1				*e*S	**Sb**	**13 52 30.2**	**0.0**
	baz=342						
MASBT	**Mashibuluo**	**0.72**	**267**	⇓*i*P	**Pb**	**13 52 19.6**	**-1.3**
	baz=262						
MASBT				*e*S	**Sb**	**13 52 27.1**	**-3.4**
	baz=262						
SSD	**Sandimen**	**0.73**	**278**	⇓*i*P	**Pb**	**13 52 19.4**	**-1.7**
	baz=273						
SSD				*e*S	**Sb**	**13 52 27.6**	**-3.0**
	baz=273						
YULB	**Yu-li**	**0.75**	**352**	*e*P	**Pb**	**13 52 19.8**	**-1.7**
	baz=343						
YULB				*e*S	**Sb**	**13 52 29.1**	**-2.2**
	baz=343						
SCZT	**Fangliau**	**0.78**	**250**	*e*P	**Pb**	**13 52 20.7**	**-1.3**
	baz=239						
STYH	**Taoyuan**	**0.79**	**312**	⇓*i*P	**Pb**	**13 52 20.8**	**-1.2**
	baz=311						
STYH				*e*S	**Sb**	**13 52 29.6**	**-2.7**
	baz=311						
SLGT	**Liugui**	**0.79**	**296**	*e*P	**Pb**	**13 52 20.7**	**-1.4**
	baz=291						
STYT	**Tauyuan**	**0.79**	**311**	⇓*i*P	**Pb**	**13 52 20.9**	**-1.4**
	baz=310						
STYT				*e*S	**Sb**	**13 52 30.4**	**-2.2**
	baz=310						
SSPT	**Xinbi**	**0.80**	**258**	⇓P	**Pb**	**13 52 21.6**	**-0.6**
	baz=253						
SSPT				*e*S	**Sb**	**13 52 32.2**	**-0.4**
	baz=253						
HGSD	**Ruisui**	**0.84**	**1**	*e*P	**Pb**	**13 52 22.0**	**-1.1**
	baz=9.0						
HGSD				*e*S	**Sn**	**13 52 35.4**	**+0.4**
	baz=9.0						
TSPT	**Pingtung City**	**0.85**	**272**	*e*P	**Pb**	**13 52 22.9**	**-0.2**
	baz=266						
SGLT	**Jiouru**	**0.85**	**275**	*e*P	**Pb**	**13 52 22.6**	**-0.6**
	baz=275						
EHY	**Hungye**	**0.86**	**355**	*e*P	**Pb**	**13 52 21.5**	**-1.8**
	baz=343						
EHY				*e*S	**Sb**	**13 52 32.8**	**-1.7**
	baz=343						
SGST	**Jiashian**	**0.88**	**300**	⇓*i*P	**Pb**	**13 52 22.1**	**-1.6**
	baz=299						
SGST				*e*S	**Sb**	**13 52 35.0**	**-0.1**
	baz=299						
SCST	**Cishan**	**0.88**	**286**	*e*P	**Pb**	**13 52 23.2**	**-0.4**
	baz=282						
SCST				*e*S	**Sn**	**13 52 35.9**	**-0.1**
	baz=282						
TSEB	**Hengchuen, Pin**	**0.88**	**213**	*e*P	**Pb**	**13 52 23.3**	**-0.3**
	baz=211						
TSEB				*e*S	**Sn**	**13 52 36.1**	**+0.2**
	baz=211						
HEN	**Hengchun**	**0.89**	**224**	*e*P	**Pb**	**13 52 23.8**	**0.0**
	baz=220						
HEN				*e*S	**Sb**	**13 52 34.6**	**-0.7**
	baz=220						
TWKBT	**Hengchun**	**0.90**	**218**	P	**Pb**	**13 52 22.9**	**-1.0**
	baz=214						
TWKBT				*e*S	**Sb**	**13 52 33.6**	**-1.8**
	baz=214						
TWK1	**Hengchun**	**0.90**	**219**	*e*P	**Pb**	**13 52 22.8**	**-1.1**
	baz=214						
TWK1				*e*S	**Sb**	**13 52 34.7**	**-0.8**
	baz=214						
SNW	**Nanwan**	**0.92**	**222**	*e*P	**Pn**	**13 52 22.9**	**-1.6**
	baz=218						
SNW				*e*S	**Sb**	**13 52 35.8**	**-0.3**
	baz=218						
TWM1	**Shoushan**	**0.93**	**281**	P	**Pb**	**13 52 24.8**	**+0.2**
	baz=279						
TWM1				*e*S	**Sn**	**13 52 39.2**	**+2.0**
	baz=279						
YUS	**Yu-Shan**	**0.94**	**333**	P	**Pn**	**13 52 23.3**	**-1.9**
	baz=327						
WTP	**Ta-pu**	**0.95**	**309**	⇓*i*P	**Pn**	**13 52 24.2**	**-0.7**
	baz=309						
WTP				*e*S	**Sb**	**13 52 36.2**	**-0.8**
	baz=309						
TPUB	**Ta-pu**	**0.97**	**312**	⇓*i*P	**Pn**	**13 52 24.5**	**-0.7**
	baz=312						
TPUB				*e*S	**Sb**	**13 52 37.6**	**-0.1**
	baz=312						
CHN1	**Nanshi**	**0.97**	**304**	⇓*i*P	**Pn**	**13 52 25.0**	**-0.3**
	baz=309						
CHN1				S	**Sn**	**13 52 38.2**	**-0.2**
	baz=309						
WLCH	**Liuqiu**	**1.00**	**253**	*e*P	**Pb**	**13 52 27.8**	**+2.2**
	baz=251						
SNJT	**Kaohsiung City**	**1.00**	**276**	*e*P	**Pb**	**13 52 27.1**	**+1.4**
	baz=273						
SNJT				*e*S	**Sn**	**13 52 41.5**	**+2.6**
	baz=273						
TWP	**Hsiaoliuchiu**	**1.01**	**253**	*e*P	**Pb**	**13 52 27.1**	**+1.2**
	baz=236						
EGFH	**Guangfu**	**1.02**	**1**	*e*P	**Pb**	**13 52 26.7**	**+0.6**
	baz=8.0						
SNST	**Tainan City**	**1.02**	**304**	*e*P	**Pn**	**13 52 25.9**	**+0.1**
	baz=312						
SNST				*e*S	**Sb**	**13 52 39.0**	**0.0**
	baz=312						
KAU	**Kaohsiung**	**1.02**	**266**	*e*P	**Pb**	**13 52 26.9**	**+0.8**
	baz=263						
ALS	**Alishan**	**1.03**	**327**	⇓*i*P	**Pn**	**13 52 25.3**	**-0.9**
	baz=327						
ALS				*e*S	**Sb**	**13 52 39.5**	**0.0**
	baz=327						
CHN4	**Tsaushan**	**1.03**	**313**	⇓*i*P	**Pn**	**13 52 25.7**	**-0.3**
	baz=312						
CHN4				*e*S	**Sn**	**13 52 39.8**	**+0.1**
	baz=312						
TWK	**Hsinying**	**1.05**	**306**	*e*P	**Pn**	**13 52 26.1**	**-0.2**
	baz=314						
TWK				*e*S	**Sb**	**13 52 40.4**	**+0.4**
	baz=314						
CHN3	**Shinhua**	**1.06**	**294**	*e*P	**Pb**	**13 52 27.4**	**+0.8**
	baz=293						
CHN3				*e*S	**Sb**	**13 52 41.5**	**+1.4**
	baz=293						
VWDT	**VWDT**	**1.13**	**347**	*e*P	**Pn**	**13 52 26.4**	**-0.9**
	baz=2.0						
VWDT				*e*S	**Sn**	**13 52 40.7**	**-1.4**
	baz=2.0						
CHN5	**Tsauling**	**1.16**	**325**	*e*P	**Pn**	**13 52 27.8**	**-0.2**
	baz=323						
CHN5				*e*S	**Sb**	**13 52 44.5**	**+1.2**
	baz=323						
ESL	**Shilin**	**1.16**	**1**	*e*P	**Pn**	**13 52 26.0**	**-1.9**
	baz=2.0						
ESL				*e*S	**Sn**	**13 52 39.6**	**-3.4**
	baz=2.0						
WHYT	**Xinyi Township**	**1.17**	**334**	*e*P	**Pn**	**13 52 28.1**	**+0.2**
	baz=338						
WHYT				*e*S	**Sb**	**13 52 43.9**	**+0.6**
	baz=338						
SSLB	**Suanglung**	**1.21**	**340**	*e*P	**Pn**	**13 52 27.8**	**-0.7**
	baz=347						
CHN2	**Minshiung**	**1.23**	**316**	*e*P	**Pb**	**13 52 29.8**	**+0.1**
	baz=314						
CHN2				*e*S	**Sb**	**13 52 45.7**	**+0.5**
	baz=314						
SCLT	**Jiali**	**1.24**	**295**	*e*P	**Pn**	**13 52 29.0**	**+0.1**
	baz=294						
SCLT				*e*S	**Sb**	**13 52 47.1**	**+1.7**
	baz=294						
CHY	**Chiayi**	**1.24**	**313**	*e*P	**Pb**	**13 52 29.9**	**0.0**
	baz=312						
CHY				*e*S	**Sb**	**13 52 47.0**	**+1.6**
	baz=312						
ICHU	**Yijhu**	**1.26**	**305**	*e*P	**Pn**	**13 52 29.1**	**0.0**
	baz=303						
ICHU				*e*S	**Sn**	**13 52 45.6**	**+0.3**
	baz=303						
WGK	**Gukeng**	**1.30**	**323**	*e*P	**Pb**	**13 52 30.9**	**+0.1**
	baz=322						
WGK				*e*S	**Sb**	**13 52 48.4**	**+1.4**
	baz=322						
CHN8	**Yiju**	**1.31**	**302**	*e*P	**Pn**	**13 52 30.0**	**+0.2**
	baz=301						
CHN8				*e*S	**Sb**	**13 52 48.6**	**+1.3**
	baz=301						
WDLH	**Douliu**	**1.31**	**322**	*e*P	**Pb**	**13 52 31.1**	**0.0**
	baz=321						
WDLH				*e*S	**Sb**	**13 52 49.3**	**+1.8**
	baz=321						
SMLT	**Sun Moon Lake**	**1.32**	**339**	*e*P	**Pn**	**13 52 30.0**	**-0.1**
	baz=338						
SMLT				*e*S	**Sb**	**13 52 48.4**	**+0.6**
	baz=338						
WJS	**Zhushan**	**1.33**	**332**	P	**Pb**	**13 52 31.4**	**+0.1**
	baz=330						
WJS				*e*S	**Sb**	**13 52 48.6**	**+0.7**
	baz=330						
HWA	**Hwalien**	**1.34**	**8**	*e*P	**Pn**	**13 52 29.2**	**-1.0**
	baz=25						
TYC	**Yuchr**	**1.35**	**338**	P	**Pb**	**13 52 31.4**	**-0.4**
	baz=346						
TYC				*e*S	**Sb**	**13 52 49.3**	**+0.7**
	baz=346						
WNT	**Mingjian**	**1.40**	**332**	*e*P	**Pb**	**13 52 32.4**	**-0.1**
	baz=330						
WNT				*e*S	**Sb**	**13 52 50.7**	**+0.8**
	baz=330						
WTK	**Tuku**	**1.40**	**318**	*e*P	**Pn**	**13 52 31.1**	**0.0**
	baz=316						
WTK				*e*S	**Sb**	**13 52 50.9**	**+0.9**
	baz=316						
WPL	**Puli Township**	**1.42**	**343**	*e*P	**Pn**	**13 52 31.8**	**+0.4**
	baz=353						
WNT1	**Nantou City**	**1.42**	**332**	*e*P	**Pb**	**13 52 32.9**	**-0.1**
	baz=330						
WNT1				*e*S	**Sb**	**13 52 51.0**	**+0.3**
	baz=330						
CHGB	**Renai**	**1.43**	**351**	*e*P	**Pn**	**13 52 31.3**	**-0.3**
	baz=4.0						
TWD	**Chiawan**	**1.44**	**7**	*e*P	**Pn**	**13 52 30.6**	**-1.0**
	baz=352						
DPDB	**Guoxing**	**1.45**	**342**	*e*P	**Pn**	**13 52 32.4**	**+0.5**
	baz=340						
WSF	**Szhu**	**1.47**	**312**	*e*P	**Pn**	**13 52 31.3**	**-0.8**
	baz=311						
WSF				*e*S	**Sn**	**13 52 51.4**	**+0.7**
	baz=311						
WCS	**Beigang Elemen**	**1.48**	**342**	*e*P	**Pn**	**13 52 32.5**	**+0.3**
	baz=340						
WCS				*e*S	**Sn**	**13 52 50.7**	**0.0**
	baz=340						
WHF	**Hehuan Shan**	**1.50**	**355**	*e*P	**Pn**	**13 52 32.2**	**-0.7**
	baz=7.0						
WHF				*e*S	**Sn**	**13 52 50.6**	**-1.3**
	baz=7.0						
NACB	**Ninganchiao**	**1.53**	**6**	*e*P	**Pn**	**13 52 31.5**	**-1.4**
	baz=352						
NACB				*e*S	**Sn**	**13 52 50.4**	**-1.6**
	baz=352						
WWF	**Wufeng**	**1.54**	**335**	*e*P	**Pb**	**13 52 34.6**	**-0.3**
	baz=333						
WWF				*e*S	**Sb**	**13 52 54.0**	**+0.1**
	baz=333						
ETLH	**Xiulin Townshi**	**1.56**	**2**	*e*P	**Pn**	**13 52 34.2**	**+0.9**
	baz=2.0						
RLNB	**Erlin**	**1.57**	**322**	*e*P	**Pn**	**13 52 34.3**	**+0.8**
	baz=320						
FUSS	**Fushou**	**1.60**	**355**	*e*P	**Pn**	**13 52 33.7**	**-0.4**
	baz=6.0						
TWT	**Tachien**	**1.61**	**352**	*e*P	**Pn**	**13 52 34.1**	**-0.1**
	baz=348						
TDCB	**Techi**	**1.62**	**352**	*e*P	**Pn**	**13 52 34.3**	**0.0**
	baz=348						
WCHH	**Zhanghua**	**1.63**	**331**	*e*P	**Pb**	**13 52 35.7**	**-0.7**
	baz=315						
TCU	**Taichung**	**1.64**	**336**	*e*P	**Pb**	**13 52 35.7**	**-0.9**
	baz=333						
WHP	**Taichung City**	**1.68**	**345**	*e*P	**Pb**	**13 52 36.7**	**-0.6**
	baz=352						
WHP				*e*S	**Sb**	**13 52 58.0**	**-0.1**
	baz=352						
WDGT	**Dungji**	**1.73**	**291**	*e*P	**Pn**	**13 52 35.1**	**-0.5**
	baz=289						
NNSB	**Datong**	**1.77**	**359**	*e*P	**Pn**	**13 52 36.1**	**-0.3**
	baz=13						
NNSH	**Datong**	**1.77**	**359**	*e*P	**Pb**	**13 52 37.8**	**-1.2**
	baz=13						
NNS	**Nan Shan**	**1.79**	**359**	*e*P	**Pn**	**13 52 37.4**	**+0.9**
	baz=13						
TWQ1	**Liyutan**	**1.79**	**341**	*e*P	**Pb**	**13 52 38.4**	**-0.8**
	baz=338						
TWQ1				*e*S	**Sb**	**13 53 00.2**	**-1.1**
	baz=338						
ENA	**Nanau**	**1.80**	**10**	*e*P	**Pn**	**13 52 36.5**	**-0.1**
	baz=354						
EWUT	**Wuta**	**1.82**	**11**	*e*P	**Pn**	**13 52 36.0**	**-0.8**
	baz=355						
WDJ	**Dajia District**	**1.84**	**337**	*e*P	**Pb**	**13 52 39.0**	**-0.9**
	baz=334						
NSY	**Sanyi**	**1.86**	**341**	*e*P	**Pb**	**13 52 39.2**	**-1.2**
	baz=339						
NSY				*e*S	**Sb**	**13 53 03.2**	**-0.1**
	baz=339						
PHUB	**P'eng-hu**	**1.90**	**297**	*e*P	**Pn**	**13 52 37.1**	**-0.9**
	baz=295						
VCHM	**Qimei**	**1.91**	**287**	*e*P	**Pn**	**13 52 37.4**	**-0.7**
	baz=285						
VCHM				*e*S	**Sn**	**13 53 00.5**	**-0.9**
	baz=285						
PNG	**Penghu**	**1.94**	**299**	*e*P	**Pn**	**13 52 37.8**	**-0.7**
	baz=297						
PNG				*e*S	**Sn**	**13 53 01.3**	**-0.8**
	baz=297						
NDT	**Datong Townshi**	**1.95**	**3**	*e*P	**Pn**	**13 52 40.2**	**+1.5**
	baz=358						
NMLH	**Miaoli**	**1.97**	**343**	*e*P	**Pb**	**13 52 41.1**	**-1.1**
	baz=339						
ENTT	**Nioudou**	**1.99**	**4**	*e*P	**Pn**	**13 52 39.1**	**-0.1**
	baz=360						
NDS	**Dongshan**	**2.00**	**8**	*e*P	**Pn**	**13 52 39.3**	**0.0**
	baz=7.0						
NDS				*e*S	**Sn**	**13 53 01.9**	**-1.7**
	baz=7.0						
YHNB	**Yeheng**	**2.02**	**359**	*e*P	**Pn**	**13 52 40.0**	**+0.4**
	baz=9.0						
YHNB				*e*S	**Sn**	**13 53 04.9**	**+0.7**
	baz=9.0						
NSK	**Sanguang**	**2.02**	**359**	*e*P	**Pn**	**13 52 40.2**	**+0.5**
	baz=9.0						
NSK				*e*S	**Sn**	**13 53 04.4**	**+0.2**
	baz=9.0						
LIOB	**Emei**	**2.02**	**350**	*e*P	**Pn**	**13 52 40.9**	**+1.2**
	baz=356						
TWE	**Neicheng**	**2.08**	**6**	*e*P	**Pn**	**13 52 41.3**	**+0.9**
	baz=6.0						
NWLT	**Wulai**	**2.12**	**2**	*e*P	**Pn**	**13 52 42.0**	**+0.9**
	baz=17						
NTC	**Toucheng**	**2.23**	**10**	*e*P	**Pb**	**13 52 44.8**	**-1.9**
	baz=354						
JYNG	**Yonagunijimaku**	**2.28**	**38**	P	**Pn**	**13 52 42.2**	**-1.0**
JYNG				S	**Sn**	**13 53 09.9**	**-0.7**
TATO	**Taipei**	**2.32**	**2**	*e*P	**Pn**	**13 52 44.4**	**+0.6**
	baz=13						
YOJ	**Yonaguni jima**	**2.33**	**39**	*e*P	**Pn**	**13 52 44.1**	**+0.3**
	baz=45						
YOJ	**Yonaguni jima**	**2.33**	**39**	P	**Pn**	**13 52 43.4**	**-0.5**
YOJ				*e*S	**Sn**	**13 53 11.7**	**0.0**
TIPB	**Shuangxi**	**2.35**	**9**	*e*P	**Pn**	**13 52 45.2**	**+1.0**
	baz=353						
YM01	**YM01**	**2.49**	**3**	*e*P	**Pn**	**13 52 46.8**	**+0.6**
	baz=357						
YM05	**YM05**	**2.51**	**3**	*e*P	**Pn**	**13 52 46.2**	**-0.2**
	baz=357						
HATJ	**Hateruma jima**	**2.61**	**57**	P	**Pn**	**13 52 47.9**	**+0.2**
HATJ				*e*S	**Sn**	**13 53 17.9**	**-0.8**
IRIF	**Iriomote-Funau**	**2.71**	**51**	P	**Pn**	**13 52 49.6**	**+0.5**
IRIF				*e*S	**Sn**	**13 53 22.2**	**+1.0**
JKRS	**Kuro-shima**	**2.86**	**56**	P	**Pn**	**13 52 51.4**	**+0.2**
JKRS				*e*S	**Sn**	**13 53 24.7**	**-0.2**
VWUC	**VWUC**	**2.95**	**323**	*e*P	**Pn**	**13 52 52.0**	**-0.4**
	baz=319						
JIJ	**Ishigaki jima**	**3.04**	**55**	P	**Pn**	**13 52 53.4**	**-0.2**
JIJ				*e*S	**Sn**	**13 53 28.5**	**-0.7**
PTMZ	**Houxiangcun**	**3.17**	**319**	*e*P	**Pn**	**13 52 55.3**	**-0.2**
	baz=316						
PTTC	**Pingtan**	**3.21**	**332**	*e*P	**Pn**	**13 52 55.5**	**-0.5**
	baz=328						
KNM	**Kinmen**	**3.25**	**303**	*e*P	**Pn**	**13 52 58.0**	**+1.4**
	baz=301						
JISG	**Ishigakijimahi**	**3.29**	**53**	P	**Pn**	**13 52 56.5**	**-0.5**
JISG				S	**Sn**	**13 53 33.9**	**-1.5**
KNMB	**Chin-men Tao**	**3.31**	**304**	*e*P	**Pn**	**13 52 56.8**	**-0.5**
	baz=302						
ZPLA	**Ao Xicun**	**3.60**	**292**	*e*P	**Pn**	**13 53 01.3**	**0.0**
	baz=290						
JTJ	**Tarama**	**3.61**	**56**	P	**Pn**	**13 53 02.0**	**+0.5**
JTJ				S	**Sn**	**13 53 43.3**	**-0.1**
MATB	**Ma-tsu**	**3.74**	**339**	*e*P	**Pn**	**13 53 02.6**	**-0.6**
	baz=333						
AXDP	**Jialang**	**3.87**	**306**	*e*P	**Pn**	**13 53 04.8**	**-0.2**
	baz=305						
ZZJH	**Jiuhuzhen**	**3.92**	**298**	*e*P	**Pn**	**13 53 05.4**	**-0.3**
	baz=297						
MHZQ	**Yeshan**	**4.07**	**328**	*e*P	**Pn**	**13 53 07.1**	**-0.7**
	baz=324						
JIRB	**Irabujima**	**4.07**	**57**	P	**Pn**	**13 53 07.3**	**-0.6**
JMJ2	**Miyako jima3**	**4.15**	**59**	P	**Pn**	**13 53 09.4**	**+0.5**
JMJ2				*e*S	**Sn**	**13 53 56.8**	**+0.1**
JMJ	**Miyako jima 2**	**4.16**	**58**	*e*P	**Pn**	**13 53 09.1**	**0.0**
	baz=63						
JIKM	**Ikemajima**	**4.18**	**56**	*e*S	**Sn**	**13 53 57.9**	**+0.4**
JOGS	**Gusukube**	**4.22**	**59**	P	**Pn**	**13 53 10.3**	**+0.4**
JOGS				*e*S	**Sn**	**13 53 58.9**	**+0.4**
KAPI	**Kappang**	**27.54**	**184**	LR	LR	14 07 22.0	
	comp=Z,15nm,21.2s,baz=254,slow=34						
MKAR	**Makanchi Array**	**39.59**	**317**	P	**P**	**13 59 38.1**	**+1.6**
	0.4nm,0.8s,baz=119,slow=7.1,SNR=3.9						
ZALV	**Zalesovo Beam**	**41.65**	**328**	P	**P**	**13 59 57.5**	**+4.2**
	0.3nm,0.3s,baz=131,slow=8.4,SNR=2.1						
WRA	**Warramunga Arr**	**44.17**	**162**	P	**P**	**14 00 12.6**	**-1.5**

	0.6nm,0.8s,baz=341,slow=8.1,SNR=2.5						
ASAR	Alice Springs	47.61	164	P	P	14 00 40.6	-0.6
	0.4nm,0.8s,baz=340,slow=6.9,SNR=7.6						
MMAI	Mount Meron Ar	74.83	300	LR	LR	14 41 14.8	
	comp=Z,33nm,18.1s,baz=95,slow=40						

LJU 20 13:53:41.9, 45°.74N×14°.06E, h13^{km}, ML0.6, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAVS	Javornik	0.15	2	*i* Pg	Pg	13 53 45.5	-0.2
JAVS				*e*Sg	Sg	13 53 48.2	-0.1
JAVS				IAML		13 53 50.1	
	comp=Z,1.9nm,0.1s						
SKDS	Skadanscina	0.20	189	*i* Pg	Pg	13 53 46.3	0.0
SKDS				*i* Sg	Sg	13 53 49.9	+0.6
SKDS				IAML		13 53 51.3	
	comp=Z,6.2nm,0.1s						
CEY	Cerknica	0.26	91	*i* Pg	Pg	13 53 47.4	0.0
CEY				*i* Sg	Sg	13 53 51.6	+0.5
CEY				IAML		13 53 51.7	
	comp=Z,1.1nm,0.0s						
VOJS	Vojsko	0.31	337	*i* Pg	Pg	13 53 48.5	+0.1
VOJS				*e*Sg	Sb	13 53 54.0	-0.6
VOJS				IAML		13 53 55.4	
	comp=Z,1.4nm,0.1s						
GBAS	Gorenja Brezov	0.33	54	*i* Pg	Pg	13 53 48.6	-0.1
CRNS	Crni Vrh	0.37	23	*i* Pg	Pg	13 53 49.7	+0.3

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*VIE **20** 13:54:03.0±0.2, 46°.56N×12°.55E, h14^{km}±3^{km}, mb1.4/5, ml2.0/14, Error ellipse: s-maj=1.6km s-min=0.7km az=14.0 0 km NNW of San Stefano di Cadore*

ROM 20 13:54:02.0±0.2, 46°.512N±0°.007×12°.554E±0°.009, h5^{km}±1^{km}, ML1.8/5, 2C-2D, Error ellipse: s-maj=0.8km s-min=0.4km az=207.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CSMI	Casera Mimoias	0.07	90	⇑*e*Pg	Pg	13 54 04.2	+0.4
CSMI				*e*Sg	Sg	13 54 05.5	+0.5
FVI	Forni Avoltri	0.18	62	P	Pg	13 54 06.2	+0.6
FVI				S	Sg	13 54 09.1	+1.1
FVI				AML	AML		
	comp=E,1092µm,0.5s						
FVI				AML	AML		
	comp=N,644µm,1.1s						
CIMO	Cimolais	0.22	201	⇓*e*Pg	Pg	13 54 07.0	+0.7
CIMO				*e*Sg	Sg	13 54 10.5	+1.3
CLUD	Cludinico	0.23	104	⇑*e*Pg	Pg	13 54 07.3	+0.7
CLUD				*e*Sg	Sg	13 54 11.1	+1.4
ABTA	Abfaltersbach	0.24	353	*i* Pg	Pg	13 54 07.4	+0.7
	comp=N,7.4nm,0.1s,SNR=47						
ABTA				*e*Sg	Sg	13 54 10.6	+0.7
	comp=N,36nm,0.1s						
STAL	STALIGIAL	0.27	157	P	Pg	13 54 07.9	+0.5
STAL				S	Sg	13 54 12.4	+1.4
CSO	Casso	0.29	214	⇓*e*Pg	Pg	13 54 08.3	+0.7
CSO				*e*Sg	Sg	13 54 12.9	+1.5
FUSE	Fusea	0.32	107	*e*Pg	Pg	13 54 09.2	+0.8
FUSE				*e*Sg	Sb	13 54 14.3	-1.5
MLNI	Malnisio	0.36	174	*e*Pg	Pg	13 54 09.9	+0.8
MLNI				*e*Sg	Sg	13 54 15.4	+1.5
MPRI	Monte Prat	0.40	132	*e*Pg	Pb	13 54 10.8	-0.9
MPRI				*e*Sg	Sb	13 54 16.9	-1.2
PLRO	Paularo	0.41	85	*e*Pg	Pg	13 54 10.7	+0.7
POLC	Polcenigo	0.49	184	P	Pb	13 54 13.5	+0.5
POLC				S	Sb	13 54 19.9	-0.5
RISI	Rein	0.55	323	P	Pg	13 54 13.2	+0.6
RISI				S	Sb	13 54 21.4	-1.0
RISI				AML	AML		
	comp=E,113µm,0.9s						
RISI				AML	AML		
	comp=N,126µm,0.2s						
RISI				AML	AML		
	comp=E,113µm,0.9s						
BAD	Bernadia	0.55	120	*e*Pg	Pb	13 54 13.7	-0.5
PTCC	Patocco-Chiusa	0.56	101	P	Pb	13 54 13.7	-0.7
PTCC				S	Sb	13 54 22.3	-0.4
PTCC				AML	AML		
	comp=E,55µm,1.3s						
PTCC				AML	AML		
	comp=N,56µm,0.7s						
ACOM	Acomizza, Ital	0.66	87	P	Pb	13 54 15.5	-0.7
ACOM				S	Sb	13 54 25.5	-0.2
ACOM				AML	AML		
	comp=E,94µm,0.6s						
ACOM				AML	AML		
	comp=N,114µm,1.4s						
ACOM				AML	AML		
	comp=E,94µm,0.6s						
ACOM				AML	AML		
	comp=N,114µm,1.4s						
MYKA	Terra Mystica	0.76	81	*e*Pg	Pb	13 54 18.0	+0.2
	comp=N,0.5nm,0.1s						
MYKA				*e*Sg	Sb	13 54 28.1	-0.3
	comp=N,2.1nm,0.1s						
KBA	Koelnbreinsper	0.79	44	*e*Pg	Pb	13 54 17.8	-0.4
	comp=N,0.5nm,0.1s,SNR=7.6						
KBA				*i* Sg	Sg	13 54 28.0	+0.6
	comp=N,2.6nm,0.1s,SNR=9.1						
ABSI	Aberstueckl	0.88	285	P	Pb	13 54 19.5	-0.3
ABSI				S	Sb	13 54 31.3	-0.6
ABSI				AML	AML		
	comp=E,53µm,1.1s						
ABSI				AML	AML		
	comp=N,69µm,0.7s						
ABSI				AML	AML		
	comp=E,53µm,1.1s						
ROSI	Rosskopf	0.89	298	P	Pb	13 54 19.7	-0.4
WTTA	Wattenberg	0.98	320	*e*Pg	Pb	13 54 21.5	-0.1
	comp=E,14nm,0.1s,SNR=31						
WTTA				*e*Sg	Sb	13 54 34.5	-0.4
	comp=E,6.3nm,0.2s						
WTTA	Wattenberg	0.98	320	P	Pb	13 54 21.5	-0.1
WTTA				S	Sb	13 54 34.5	-0.4
WATA	Walderalm	1.06	321	*e*Pg	Pb	13 54 23.1	+0.1
	comp=E,4.9nm,0.2s						
WATA				*e*Sg	Sb	13 54 37.0	-0.2
	comp=E,5.2nm,0.2s						
SQTA	Sankt Quirin	1.16	308	*e*Pg	Pn	13 54 25.0	-0.1
	comp=E,1.1nm,0.1s						
SQTA				*i* Sg	Sn	13 54 41.4	0.0
	comp=E,3.1nm,0.1s						
MOTA	Moosalm	1.30	310	*e*Pg	Pb	13 54 27.6	+0.7
	comp=E,0.5nm,0.1s						
FETA	Feichten	1.35	293	*e*Pg	Pg	13 54 28.2	+0.2
	comp=E,1.5nm,0.2s,SNR=5.1						
FETA				*e*Sg	Sn	13 54 46.3	+0.2
	comp=E,0.8nm,0.2s						
OBKA	Obir	1.38	89	*e*Pg	Pg	13 54 29.1	+0.7
	comp=E,1.3nm,0.3s						
OBKA				Sg	Sn	13 54 49.2	+2.6
	comp=E,3.0nm,0.2s						
MAGA	Magasa	1.53	242	AML	AML		
	comp=E,128µm,0.6s						
MAGA				AML	AML		
	comp=N,94µm,0.4s						
MOA	Molln	1.78	40	Sg	Sg	13 55 00.9	+1.8
	comp=N,3.4nm,0.3s,SNR=4.4						

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*IDC **20** 14:01:11.2±2.2, 31°.28S×177°.61W, h0^{km}, mb4.2/5, mb1 4.3/8, mb1mx4.0/38, mbtmp4.2/8, ML3.9/3, MS3.6/2, Ms1 3.6/2, ms1mx2.9/34, Error ellipse: s-maj=48.4km s-min=22.7km az=109.0*

ISC 20 14:01:14.1±2.1, 31°.33S±0°.10×177°.5W±0°.3, h26^{km}, n12, σ1^{s}.00/12, mb4.3/5, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	2.09	351	Pn	Pn	14 01 46.3	-1.2
	179nm,0.3s,baz=132,slow=16,SNR=7.0						
RAO				Sn	Sn	14 02 12.2	-0.5
	196nm,0.3s,baz=292,slow=22,SNR=4.8						
URZ	Urewera	8.20	211	Pn	Pn	14 03 10.6	-0.7
	0.4nm,0.3s,baz=103,slow=18,SNR=1.8						
URZ				Sn	Sn	14 04 42.6	-0.5
	1.5nm,0.3s,baz=159,slow=19,SNR=5.8						
RPZ	Rata Peaks	15.31	213	Pn	Pn	14 04 46.8	-1.6
	0.4nm,0.3s,baz=0.0,slow=3.0,SNR=1.8						
DZM	Mont Dzumac	17.01	299	LR	LR	14 10 47.2	
	comp=Z,107nm,18.1s,baz=200,slow=34						
CTA	Charters Tower	34.35	280	P	P	14 07 59.3	+0.4
	2.3nm,0.6s,baz=114,slow=10,SNR=6.2						
STKA	Stephens Creek	34.67	258	P	P	14 08 01.1	-0.5
	0.7nm,0.4s,baz=106,slow=13,SNR=5.2						
ASAR	Alice Springs	43.47	268	P	P	14 09 16.1	+0.8
	1.6nm,0.5s,baz=106,slow=7.4,SNR=61						
WRA	Warramunga Arr	44.54	273	P	P	14 09 24.9	+1.0
	1.8nm,0.4s,baz=111,slow=8.1,SNR=31						
FITZ	Fitzroy Crossi	52.76	270	P	P	14 10 27.9	+0.8
	5.3nm,1.1s,baz=76,slow=4.2,SNR=2.3						
TGY	Tagaytay City	74.30	298	LR	LR	14 43 59.6	
	comp=Z,76nm,22.0s,baz=106,slow=35						
MKAR	Makanchi Array	118.67	310	PKP	PKiKP	14 20 00.7	+1.1
	0.1nm,0.3s,baz=99,slow=1.2,SNR=1.3						
FINES	FINESS Array B	146.15	340	PKPbc	PKPbc	14 20 51.8	+0.6
	1.5nm,0.5s,baz=56,slow=3.9,SNR=11						

IDC 20 14:06:24.0±3.3, 11°.05S×164°.93E, h0^{km}, mb3.7/3, mb1 4.0/4, mb1mx3.6/34, mbtmp3.8/4, ML3.6/1, MS3.1/3, Ms1 3.1/3, ms1mx2.8/29, Error ellipse: s-maj=67.4km s-min=44.4km az=76.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.16	288	LR	LR	14 09 46.5	
	comp=Z,176nm,20.1s,baz=252,slow=39						
DZM	Mont Dzumac	11.06	173	Pn	Pn	14 09 03.7	+0.1
	0.4nm,0.3s,baz=333,slow=23,SNR=17						
PMG	Port Moresby	17.57	274	LR	LR	14 16 45.0	
	comp=Z,61nm,18.3s,baz=94,slow=35						
WRA	Warramunga Arr	30.73	250	P	P	14 12 41.0	-0.2
	0.9nm,0.6s,baz=81,slow=8.8,SNR=4.7						
ASAR	Alice Springs	32.08	243	P	P	14 12 53.1	+0.1
	1.7nm,1.0s,baz=69,slow=9.6,SNR=7.0						
PSI	Prapat	67.08	278	LR	LR	14 49 34.4	
	comp=Z,14nm,18.1s,baz=78,slow=39						
MKAR	Makanchi Array	92.98	317	P	P	14 19 39.4	-0.1
	0.1nm,0.4s,baz=86,slow=5.9,SNR=2.1						

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*IDC **20** 14:20:54.6±0.8, 6°.66N×73°.06W, h158^{km}±11^{km}, mb2.7/1, mb1 3.2/3, mb1mx2.9/31, mbtmp3.5/3, Error ellipse: s-maj=67.3km s-min=7.8km az=131.0*

*RSNC **20** 14:20:55.6±1.1, 6°.73N×73°.34W, h136^{km}±4^{km}, ML3.3, Mw3.5, Fault plane solution: NP1:ϕ_s160.00000°, δ57.00000°, λ118.00000°.*

ISC 20 14:20:53.7±0.8, 6°.75N±0°.03×73°.30W±0°.04, h147^{km}±6^{km}, n31, σ1^{s}.69/57, 5C-4D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.19	142	⇑*i*P	Pn	14 21 14.2	+0.3
BARC				*e*S	Sn	14 21 28.2	-1.0
BARC				*i*		14 21 30.7	
	comp=Z,483nm,0.4s						
BRRC	Barranca, Sant	0.54	311	⇑*i*P	Pn	14 21 16.0	+1.0
BRRC				*e*S	Sn	14 21 31.1	0.0
PAMC	Pamplona, Colo	0.84	45	⇓*e*P	Pn	14 21 18.4	+1.0
PAMC				*e*S	Sn	14 21 35.7	+0.2
PAMC				*i*		14 21 38.3	
	comp=Z,356nm,0.3s						
RUSC	La Rusia	0.87	166	⇑*i*P	Pn	14 21 17.8	0.0
RUSC				*e*S	Sn	14 21 34.5	-1.6
RUSC				*i*		14 21 36.3	
	comp=Z,195nm,0.4s						
PTBC	PUERTO BERRIO,	1.17	260	⇑*e*P	Pn	14 21 19.6	-0.2
PTBC				*e*S	Sn	14 21 37.8	-1.7
PTBC				*i*		14 21 40.8	
	comp=Z,702nm,0.2s						
SPBC	San Pablo de B	1.33	215	⇓*e*P	Pn	14 21 21.9	+0.5
SPBC				*e*S	Sn	14 21 41.6	-1.0
SPBC				*i*		14 21 47.6	
	comp=Z,394nm,0.3s						
OCAC	Ocana	1.48	359	⇑*e*P	Pn	14 21 24.1	+1.0
OCAC				*e*S	Sn	14 21 46.1	+0.5
OCAC				*i*		14 21 48.2	
	comp=Z,477nm,0.4s						
TAMC	Tame, Arauca	1.53	102	⇓*i*P	Pn	14 21 24.4	+0.9
TAMC				*e*S	Sn	14 21 45.0	-1.1
TAMC				*i*		14 21 45.1	
	comp=Z,153nm,0.2s						
NORC	Norcasia	1.95	233	*e*P	Pn	14 21 28.6	+0.5
NORC				*e*S	Sn	14 21 53.7	-0.9
NORC				*i*		14 22 01.1	
	comp=Z,182nm,0.2s						
CHIC	Chingaza	2.15	192	⇓*e*P	Pn	14 21 31.6	+0.8
CHIC				*e*S	Sn	14 21 59.2	-0.1
CHIC				*i*		14 22 02.8	
	comp=Z,65nm,0.5s						
ROSC	El Rosal	2.15	208	P	Pn	14 21 33.2	+2.4
	comp=Z,32nm,0.3s,baz=301,slow=13,SNR=23						
ROSC				S	Sn	14 22 02.6	+3.3
	comp=Z,68nm,0.3s,baz=204,slow=22,SNR=16						
ROSC	El Rosal	2.15	208	*e*P	Pn	14 21 32.4	+1.5
ROSC				*e*S	Sn	14 21 59.2	-0.1
ROSC				*i*		14 22 08.0	
	comp=Z,161nm,0.3s						
SMLC	San Martn de	2.18	340	*e*P	Pn	14 21 31.6	+0.8
SMLC				*e*S	Sn	14 21 59.0	-0.4
SMLC				*i*		14 22 06.6	
	comp=Z,332nm,0.1s						
UREC	San Jos de Ur	2.43	294	*e*P	Pn	14 21 34.0	+0.1
UREC				*e*S	Sn	14 22 04.0	-0.8
UREC				*i*		14 22 06.3	
	comp=Z,295nm,0.1s						
GUY2C	Guyana, Caldas	2.55	234	*e*P	Pn	14 21 36.8	+1.0
GUY2C				*e*S	Sn	14 22 08.3	+0.2
GUY2C				*i*		14 22 17.4	
	comp=Z,195nm,0.5s						
MOTC	Monteria, Cord	3.09	311	*e*P	Pn	14 21 42.0	-0.2
MOTC				*e*S	Sn	14 22 19.9	+0.2
MOTC				*i*		14 22 21.1	
	comp=Z,69nm,0.4s						
ARGC	Ariguani, Magd	3.23	343	*e*S	Sn	14 22 23.1	+0.2
ARGC				*i*		14 22 35.5	
	comp=Z,74nm,0.3s						
SDV	Santo Domingo	3.39	51	P	Pn	14 21 47.4	+1.2
	comp=Z,12nm,0.3s,baz=218,slow=2.9,SNR=37						
SDV				S	Sn	14 22 25.5	-1.3
	comp=Z,13nm,0.3s,baz=30,slow=9.1,SNR=12						
SDV	Santo Domingo	3.39	51	*e*P	Pn	14 21 47.0	+0.8
SDV				*e*S	Sn	14 22 24.3	-2.5
SDV				*i*		14 22 30.5	
	comp=Z,24nm,0.2s						
PRAC	Prado	3.40	208	*e*P	Pn	14 21 46.9	+0.7
PRAC				*e*S	Sn	14 22 26.6	-0.3
PRAC				*i*		14 22 32.9	
	comp=Z,105nm,0.3s						
ORTC	Ortega, Tolima	3.42	215	*e*P	Pn	14 21 47.1	+0.6
ORTC				*e*S	Sn	14 22 27.2	0.0
ORTC				*i*		14 22 36.0	
	comp=Z,77nm,0.3s						
PLMC	San Jos del P	3.48	239	*e*P	Pn	14 21 48.4	+1.1
PLMC				*e*S	Sn	14 22 28.7	-0.1
PLMC				*i*		14 22 34.2	
	comp=Z,40nm,0.6s						
YOTC	Yotoco, Valle	4.09	228	*e*P	Pn	14 21 55.8	+0.6
YOTC				*e*S	Sn	14 22 38.0	-4.9
SMRC	Santa Marta, M	4.48	348	*e*S	Sn	14 22 49.6	-2.6
SMRC				*i*		14 22 58.5	
	comp=Z,29nm,0.2s						
MACC	Macarena, Meta	4.60	187	*e*P	Pn	14 22 01.4	-0.5
MACC				*e*S	Sn	14 22 49.5	-5.5
MACC				*i*		14 22 58.1	
	comp=Z,16nm,0.3s						
MARP	Paez Belalcaza	4.69	214	*e*P	Pn	14 22 03.7	+0.3
MARP				*e*S	Sn	14 22 53.7	-3.8
URIC	Uribia, Colomb	5.09	15	*e*P	Pn	14 22 07.8	-0.5
URIC				*e*S	Sn	14 23 01.9	-4.7
URIC				*i*		14 23 06.8	
	comp=Z,11nm,0.6s						
YKA	Yellowknife Ar	63.27	340	P	P	14 31 07.3	+0.8
	comp=Z,0.1nm,0.6s,baz=141,slow=6.0,SNR=2.9						
YKA				pP	PcP	14 31 43.8	+1.4
	comp=Z,0.2nm,0.7s,baz=122,slow=8.8,SNR=4.9						
MKAR	Makanchi Array	122.45	20	PKP	PKPdf	14 39 32.0	+0.1
	comp=Z,0.1nm,0.4s,baz=350,slow=1.8,SNR=4.7						
ASAR	Alice Springs	148.92	234	PKPbc	PKPbc	14 40 24.9	-0.3
	comp=Z,0.2nm,0.5s,baz=119,slow=3.1,SNR=5.2						
WRA	Warramunga Arr	150.14	241	PKPbc	PKPbc	14 40 26.8	-1.4
	comp=Z,0.3nm,0.4s,baz=103,slow=2.4,SNR=6.6						

IDC 20 14:28:39.2±3.1, 31°.28S×177°.43W, h0^{km}, mb4.0/3, mb1 4.1/4, mb1mx3.8/41, mbtmp3.9/4, ML3.2/1, Error ellipse: s-maj=68.4km s-min=46.9km az=126.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	8.29	211	Pn	Pn	14 30 40.6	0.0
	0.3nm,0.3s,baz=12,slow=19,SNR=1.5						
URZ				Sn	Sn	14 32 09.8	-5.1
	0.4nm,0.3s,baz=125,slow=20,SNR=2.2						
CTA	Charters Tower	34.43	280	P	P	14 35 29.8	+1.2
	1.5nm,0.6s,baz=110,slow=16,SNR=3.3						
ASAR	Alice Springs	43.56	268	P	P	14 36 44.7	-0.4
	0.8nm,0.4s,baz=106,slow=7.4,SNR=40						
WRA	Warramunga Arr	44.62	273	P	P	14 36 53.0	-0.7
	0.9nm,0.4s,baz=111,slow=8.1,SNR=21						
FINES	FINESS Array B	146.13	340	PKPbc	PKPdf	14 48 19.8	+0.2
	3.8nm,1.0s,baz=56,slow=5.2,SNR=6.0						

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*IDC **20** 14:31:10.9±1.7, 10°.57S×164°.38E, h0^{km}, mb3.6/4, mb1 3.9/6, mb1mx3.6/44, mbtmp3.8/6, ML3.9/2, MS3.3/2, Ms1 3.3/2, ms1mx2.9/24, Error ellipse: s-maj=40.2km s-min=32.6km az=122.0*

ISC 20 14:31:14.5±1.3, 10°.6S±0°.2×164°.3E±0°.2, h24^{km}, n7, σ1^{s}.40/6, mb3.5/4, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.42	285	Pn	Pn	14 32 18.8	-1.3
	9.5nm,0.3s,baz=185,slow=3.1,SNR=3.7						
HNR				LR	LR	14 34 11.1	
	comp=Z,211nm,18.6s,baz=62,slow=40						
DZM	Mont Dzumac	11.59	170	Pn	Pn	14 33 57.9	-0.6
	0.5nm,0.3s,baz=322,slow=22,SNR=6.3						
WRA	Warramunga Arr	30.29	249	P	P	14 37 25.8	+1.7
	0.3nm,0.3s,baz=81,slow=9.3,SNR=6.8						
GUMO	Guam	30.80	321	LR	LR	14 48 20.8	
	comp=Z,67nm,19.0s,baz=116,slow=33						
ASAR	Alice Springs	31.71	242	P	P	14 37 37.2	+0.5
	0.2nm,0.8s,baz=64,slow=10,SNR=1.1						
ILAR	Eielson Array	83.57	19	P	P	14 43 39.9	-0.4
	0.3nm,0.9s,baz=243,slow=5.0,SNR=2.1						
MKAR	Makanchi Array	92.22	317	P	P	14 44 23.3	+0.8
	0.6nm,0.6s,baz=92,slow=6.7,SNR=9.2						

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*IDC **20** 15:08:29.7±1.4, 39°.74N×143°.75E, h0^{km}, mb3.7/5, mb1 3.7/8, mb1mx3.5/32, mbtmp3.7/8, ML3.0/3, Error ellipse: s-maj=42.1km s-min=19.6km az=81.0*

*JMA **20** 15:08:33.2±0.3, 39°.89N×143°.61E, h28^{km}, M3.6*

*NIED **20** 15:08:33.3, 39°.89N×143°.61E, h28^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}2.10; $M_{\theta\theta}$0.46; $M_{\phi\phi}$-2.56; $M_{r\theta}$1.76; $M_{\theta\phi}$-1.54; $M_{\phi r}$1.18; Fault plane solution: $M_0$3.49000×10^{14} NP1:ϕ_s47.00000°, δ67.00000°, λ118.00000°. NP2:ϕ_s174.00000°, δ35.00000°, λ42.00000°.*

ISC 20 15:08:31.2±3.5, 39°.82N±0°.05×143°.70E±0°.07, h12^{km}±23^{km}, n26, σ1^{s}.25/36, mb3.6/5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	1.42	275	P	Pn	15 08 56.4	-0.4
MIYJ	Miyakonagasawa	1.47	261	P	Pn	15 08 57.8	+0.2
MIYJ				*e*S	Sn	15 09 15.6	-1.2
JKEN	Kujiedanarisaw	1.57	285	P	Pn	15 08 58.5	-0.5
JANG	Nango	1.76	289	P	Pn	15 09 01.4	-0.2
JANG				S	Sn	15 09 22.5	-1.5
JOM	Ohasama	1.89	260	P	Pb	15 09 04.4	-1.3
JMK	Ichinoseki	2.11	246	P	Pn	15 09 06.9	+0.6
JOT	Ohata	2.55	309	P	Pn	15 09 12.8	+0.4
JNBK	Urakawa-nobuka	2.56	344	P	Pn	15 09 14.0	+1.5
JNBK				*e*S	Sn	15 09 44.2	+0.6
JYK	Kaneyama	2.74	252	P	Pn	15 09 16.4	+1.3
JCH	Churui	2.80	355	P	Pn	15 09 16.0	+0.1
JCH				*e*S	Sn	15 09 48.2	-1.4
JKB	Kayabe	2.89	316	P	Pn	15 09 17.9	+0.8
JKB				*e*S	Sn	15 09 51.2	-0.5
JAK	Akkeshi	3.26	13	P	Pn	15 09 22.4	+0.2
JAK				*e*S	Sn	15 09 58.4	-2.5
JFR	Furan	3.44	346	P	Pn	15 09 25.1	+0.4
JFR				*e*S	Sn	15 10 03.8	-1.6
JEW	Eniwo	3.46	331	*e*S	Sn	15 10 05.5	-0.3
JAR	Ashorobuto	3.47	1	P	Pn	15 09 24.8	-0.3
JAR				*e*S	Sn	15 10 03.6	-2.6
JFT	Otama	3.50	230	P	Pn	15 09 26.2	+0.7
JFT				*e*S	Sn	15 10 05.6	-1.2
ASAJ	Asahikawa	4.37	350	Pn	Pn	15 09 38.6	+1.1
	1.5nm,0.3s,baz=191,slow=9.6,SNR=26						
ASAJ				Sn	Sn	15 10 29.8	+1.5
	1.2nm,0.3s,baz=298,slow=29,SNR=5.8						
MAT	Matsushiro	5.42	235	P	Pn	15 09 53.7	+1.7
MAT				*e*S	Sn	15 10 53.6	-0.8
USRK	Ussuriysk Ar.	9.75	300	Pn	Pn	15 10 53.6	+2.4
	baz=94,slow=13,SNR=5.0						
KSRS	Korea Array	12.56	264	Pn	Pn	15 11 34.8	+5.0
	0.1nm,0.3s,baz=71,slow=14,SNR=2.2						
KLR	Kul'dur	12.68	322	Pn	Pn	15 11 31.0	-0.3
	0.1nm,0.3s,baz=112,slow=4.1,SNR=4.2						
SEY	Seymchan	23.72	10	P	P	15 13 44.4	+1.5
	4.0nm,0.3s,baz=187,slow=1.1,SNR=53						
ZALV	Zalesovo Beam	41.43	310	P	P	15 16 18.0	+0.6
	0.5nm,0.4s,baz=100,slow=7.9,SNR=3.7						
MKAR	Makanchi Array	44.22	300	P	P	15 16 41.2	+1.0
	0.3nm,0.4s,baz=86,slow=7.9,SNR=4.1						
WRA	Warramunga Arr	60.09	190	P	P	15 18 39.1	+0.8
	0.4nm,0.7s,baz=8.4,slow=7.3,SNR=5.0						
ASAR	Alice Springs	63.82	190	P	P	15 19 01.9	-1.5
	0.2nm,0.8s,baz=7.8,slow=7.5,SNR=1.3						

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*NNC **20** 15:12:07.1±4.5, 37°.20N×71°.13E, h0^{km}, mb4.1, mpv3.7, Error ellipse: s-maj=40.8km s-min=34.3km az=68.0*

ISC 20 15:12:03.2±2.1, 36°.65N±0°.10×71°.3E±0°.2, h114^{km}, n5, σ2^{s}.33/9, 3C-1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DHRM	DHARAMSHALA	6.04	135	*e*P	Pn	15 13 32.5	+2.2
DHRM				*e*S	Sn	15 14 37.4	-0.8
DHRM				IAML		15 14 40.5	
	comp=N,100nm,0.2s						
DHRM				IAML		15 14 40.8	
	comp=E,94nm,0.6s						
KK31	Karatay Array	6.48	355	⇑P	Pn	15 13 37.0	+1.0
	comp=E,4.6nm,0.3s,baz=178,slow=13,SNR=86						
KK31				⇓S	Sn	15 14 45.1	-3.3
	comp=E,13nm,0.7s						
AAK	Ala-Archa	6.48	22	⇑P	Pn	15 13 37.1	+1.0
	comp=E,1.3nm,0.3s						
AAK				S	Sn	15 14 48.7	0.0
	comp=E,4.0nm,0.5s						
TKM2	Tokmak 2	7.10	27	⇑P	Pn	15 13 45.6	+1.0
	comp=E,3.7nm,0.5s						
SMLA	Simla	7.37	137	*e*P	Pn	15 13 48.6	+0.5
SMLA				*e*S	Sn	15 15 06.6	-3.6
SMLA				IAML		15 15 10.8	
	comp=E,30nm,0.0s						
SMLA				IAML		15 15 11.5	
	comp=N,23nm,0.4s						

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*IDC **20** 15:23:07.4±1.8, 35°.49N×141°.68E, h0^{km}, mb3.5/3, mb1 3.5/5, mb1mx3.2/51, mbtmp3.4/5, ML2.9/2, MS2.4/1, Ms1 2.4/1, ms1mx2.1/44, Error ellipse: s-maj=53.8km s-min=24.1km az=69.0*

*JMA **20** 15:23:10.7±0.2, 35°.48N×141°.39E, h16^{km}±2^{km}, M2.8*

ISC 20 15:23:11.4±1.4, 35°.52N±0°.09×141°.4E±0°.1, h25^{km}, n18, σ1^{s}.08/13, mb3.5/3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	0.48	292	P	Pb	15 23 20.3	-1.0
CHOJ				S	Sb	15 23 27.3	-0.8
JSMT	Sammumatsuo	0.79	279	P	Pb	15 23 25.9	-0.6
JIHU	Itakohorinouch	0.85	302	P	Pn	15 23 27.4	-0.3
JIHU				S	Sb	15 23 39.0	+0.6
BSO4	Boso 4	1.02	239	P	Pn	15 23 29.8	-0.2
BSO3	Boso 3	1.03	226	P	Pn	15 23 28.7	-1.3
JYT	Yasato	1.22	306	S	Sn	15 23 48.8	+0.4
MJAR	Matsushiro Arr	2.79	292	Pn	Pn	15 23 56.4	+2.0
	0.2nm,0.3s,baz=114,slow=8.5,SNR=9.9						

ASAJ	Asahikawa	8.63	6	Pn	Pn	15 25 13.4	-1.3
	0.4nm,0.3s,baz=214,slow=11,SNR=5.4						
KSRS	Korea Array	11.03	284	LR	LR	15 29 49.5	
	comp=Z,19nm,20.6s,baz=340,slow=36						
H11N2	WAKE ISLAND Hy	27.41	118	T	T	15 57 40.3	
	baz=311,slow=75,SNR=8.3						
H11N1	WAKE ISLAND Hy	27.41	118	T	T	15 57 40.8	
	baz=311,slow=75,SNR=5.7						
H11N3	WAKE ISLAND Hy	27.42	118	T	T	15 57 39.6	
	baz=311,slow=75,SNR=6.9						
H11S1	WAKE ISLAND Hy	28.07	121	T	T	15 58 29.3	
	baz=312,slow=75,SNR=18						
H11S3	WAKE ISLAND Hy	28.07	121	T	T	15 58 29.8	
	baz=312,slow=75,SNR=22						
H11S2	WAKE ISLAND Hy	28.08	121	T	T	15 58 29.7	
	baz=312,slow=75,SNR=17						
MKAR	Makanchi Array	44.93	303	P	P	15 31 25.4	+1.3
	0.3nm,0.5s,baz=83,slow=9.4,SNR=7.4						
WRA	Warramunga Arr	55.56	188	P	P	15 32 44.6	-0.2
	0.5nm,0.6s,baz=1.8,slow=7.3,SNR=7.8						
ASAR	Alice Springs	59.29	188	P	P	15 33 11.0	0.0
	0.3nm,0.9s,baz=20,slow=10,SNR=4.0						

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*NOU **20** 15:39:11.0, 31°.46S×176°.89W, h49km, mb5.6, Kermadec Islands Region*

*BJI **20** 15:39:14.0±0.0, 31°.20S×178°.20W, h30km, mB5.7/16, mb5.1/35, Ms5.5/16, Ms7 5.3/13*

*MOS **20** 15:39:17.9±1.0, 31°.02S×178°.35W, h51km, mb5.5/19, Error ellipse: s-maj=9.6km s-min=8.3km az=110.4*

*NEIC **20** 15:39:17.9±2.1, 31°.06S±0°.06×178°.4W±0°.1, h41km±4km, mb5.4/83, Error ellipse: s-maj=16.2km s-min=8.7km az=104.0*

*GCMT **20** 15:39:19.9±0.3, 31°.15S±0°.02×178°.03W±0°.02, h53km±1km, MW5.1/77, Moment Tensor Solution. s57,c79; s77,c118; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.68±.19; $M_{\theta\theta}$-0.38±.14; $M_{\phi\phi}$-4.31±.12; $M_{r\theta}$-1.03±.10; $M_{\theta\phi}$-0.87±.10; $M_{\phi r}$1.87±.10; Best double couple: $M_0$5.04200×10^{16} NP1:ϕ_s205.00000°, δ37.00000°, λ113.00000°. NP2: ϕ_s357.00000°, δ56.00000°, λ74.00000°. Principal axes: T 5.3010, Plg73.0000°, Azm225.0000°; N -0.5240, Plg13.0000°, Azm6.0000°; P -4.7830, Plg10.0000°, Azm99.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*IDC **20** 15:39:20.9±1.9, 30°.94S×178°.34W, h64km±16km, mb4.9/26, mb1 4.9/27, mb1mx4.9/30, mbtmp5.1/27, MS4.1/28, Ms1 4.1/28, ms1mx4.1/35 Error ellipse: s-maj=12.3km s-min=10.0km az=179.0*

ISC 20 15:39:17.1±0.2**, 31°.16S**±0°.04×**178°.25W**±0°.05**, h35**km**, n681, σ1^{s}77**/709**, mb5.4**/86**, MS4.3**/31**, 65C-24D, Fault plane solution: NP1:**ϕ_s35.16660°**,** δ50.13905°**,** λ83.79880°. **NP2:**ϕ_s224.78844°**,** δ40.26080°**,** λ97.37140°. **Principal axes:** T Plg83.1224°**,** Azm265.5347°**;** N Plg4.7562°**,** Azm39.1503°**;** P Plg4.9564°**,** Azm129.5637°**;**

Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	1.91	9	P	Pn	15 39 46.7	-0.5
GLKZ				S	Sn	15 40 06.3	-3.7
RAO	Raoul Island	1.92	9	P	Pn	15 39 46.6	-0.7
	993nm,0.3s,baz=251,slow=3.4,SNR=37						
RAO				S	Sn	15 40 05.2	-5.0
	3μm,0.3s,baz=107,slow=19,SNR=6.0						
RAO				LR	LR	15 40 34.0	
	comp=Z,5μm,18.7s,baz=170,slow=42						
RAO	Raoul Island	1.92	9	Sn	Sn	15 40 08.9	-1.4
RAO	Raoul Island	1.92	9	Pn	Pn	15 39 46.9	-0.4
RAO	Raoul Island	1.92	9	P	Pn	15 39 47.0	-0.4
RIZ	Raoul Island	1.93	8	P	Pn	15 39 46.7	-0.7
RIZ				S	Sn	15 40 08.7	-1.8
MXZ	Matakaoa Point	6.99	203	P	Pn	15 40 55.0	-2.0
MXZ				S	Sn	15 42 14.8	-0.5
WMGZ	Waiomatatini S	7.19	202	P	Pn	15 40 58.0	-1.7
WMGZ				S	Sn	15 42 18.0	-2.1
HAZ	Te Kaha	7.35	205	P	Pn	15 41 01.4	-0.5
HAZ				S	Sn	15 42 26.3	+2.3
PKGZ	Pakihiroa	7.37	203	P	Pn	15 41 00.8	-1.3
PKGZ				S	Sn	15 42 22.7	-1.8
PUZ	Puketiti	7.47	202	P	Pn	15 41 04.6	+1.0
WHRZ	Whale Island	7.75	209	P	Pn	15 41 09.8	+2.3
WHRZ				S	Sn	15 42 35.4	+1.4
MARZ	Manawahe	7.99	210	P	Pn	15 41 10.8	0.0
MARZ				S	Sn	15 42 42.0	+2.1
URZ	Urewera	8.05	207	P	Pn	15 41 09.1	-2.3
	3.4nm,0.3s,baz=260,slow=4.0,SNR=44						
URZ				S	Sn	15 42 40.1	-1.0
	14nm,0.3s,baz=183,slow=15,SNR=3.5						
OMRZ	Omania	8.22	211	P	Pn	15 41 17.2	+3.3
RRRZ	Republican Roa	8.36	210	P	Pn	15 41 18.1	+2.4
RRRZ				S	Sn	15 42 51.9	+3.1
MUGZ	Murupara	8.37	208	P	Pn	15 41 13.6	-2.3
MUGZ				S	Sn	15 42 48.9	-0.3
RTZ	Ruatahuna	8.41	206	P	Pn	15 41 14.1	-2.4
RTZ				S	Sn	15 42 48.1	-2.0
PRRZ	Plateau Road	8.54	210	P	Pn	15 41 19.5	+1.3
PRRZ				S	Sn	15 42 53.4	-0.1
RAHZ	Arahi	8.63	205	P	Pn	15 41 17.1	-2.4
RAHZ				S	Sn	15 42 55.9	+0.2
TLZ	Tolley Road	8.79	214	P	Pn	15 41 23.5	+1.8
MRHZ	Matea Rd	8.82	208	P	Pn	15 41 19.9	-2.1
MRHZ				S	Sn	15 42 58.9	-1.3
NMHZ	Naumai	8.89	206	P	Pn	15 41 21.4	-1.8
NMHZ				S	Sn	15 43 00.8	-1.3
ARHZ	Aropaoanui	8.97	204	P	Pn	15 41 21.3	-2.8
ARHZ				S	Sn	15 43 01.4	-2.5
HATZ	Hinemaiaia	9.00	209	P	Pn	15 41 22.7	-1.9
HATZ				S	Sn	15 43 02.1	-2.6
BKZ	Black Stump Fm	9.07	207	Pn	Pn	15 41 22.3	-3.3
BKZ	Black Stump Fm	9.07	207	P	Pn	15 41 23.2	-2.3
BKZ				S	Sn	15 43 04.6	-1.9
RATZ	Rangitukua	9.12	211	P	Pn	15 41 26.6	+0.4
RITZ	Rihia Road	9.17	210	P	Pn	15 41 27.0	+0.1
RITZ				S	Sn	15 43 10.4	+1.5
MCHZ	McNeill Hill	9.24	205	P	Pn	15 41 25.0	-2.8
MCHZ				S	Sn	15 43 08.2	-2.3
HIZ	Hauiti	9.27	216	P	Pn	15 41 30.4	+2.2
CKHZ	Cape Kidnapper	9.30	203	P	Pn	15 41 25.1	-3.5
CKHZ				S	Sn	15 43 09.0	-2.9
KWHZ	Kaweka Forest	9.32	206	P	Pn	15 41 26.3	-2.8
KWHZ				S	Sn	15 43 10.6	-2.0
KRVZ	Karewarewa	9.36	211	P	Pn	15 41 30.6	+1.0
KRVZ				S	Sn	15 43 15.9	+2.2
WTVZ	West Tongariro	9.40	211	P	Pn	15 41 32.0	+1.9
WTVZ				S	Sn	15 43 14.5	-0.2
OTVZ	Oturere	9.41	210	P	Pn	15 41 29.2	-1.1
OTVZ				S	Sn	15 43 12.4	-2.5
NGZ	Ngauruhoe	9.45	210	P	Pn	15 41 30.9	+0.1
BHHZ	Black Hill Sta	9.52	208	P	Pn	15 41 28.7	-3.0
BHHZ				S	Sn	15 43 14.9	-2.5
WNVZ	Wahianoa	9.57	210	P	Pn	15 41 33.1	+0.5
WNVZ				S	Sn	15 43 17.0	-2.0
PXZ	Pawanui	9.70	203	P	Pn	15 41 30.0	-4.2
PXZ				S	Sn	15 43 16.7	-5.2
VRZ	Vera Road	9.79	214	P	Pn	15 41 37.6	+2.3
PNHZ	Pukenui	9.83	206	P	Pn	15 41 31.4	-4.6
PNHZ				S	Sn	15 43 20.9	-4.2
TSZ	Takapari Road	10.05	206	P	Pn	15 41 34.1	-4.8
DVHZ	Dannevirke	10.18	205	P	Pn	15 41 37.4	-3.4
WAZ	Wanganui	10.19	211	P	Pn	15 41 40.2	-0.7
ANWZ	Angora Road	10.22	203	P	Pn	15 41 36.2	-5.0
PKE	Pukeiti	10.22	216	P	Pn	15 41 46.2	+4.9
PREZ	Palmer Road	10.25	215	P	Pn	15 41 41.2	-0.5
POWZ	Post Office Ro	10.41	206	P	Pn	15 41 41.1	-2.8
PRWZ	Pori Road	10.48	205	P	Pn	15 41 42.1	-2.7
BFZ	Birch Farm	10.49	204	P	Pn	15 41 39.3	-5.7
MRZ	Mangatainoka R	10.72	206	P	Pn	15 41 42.0	-6.0
HOWZ	Holdsworth Sta	10.95	206	P	Pn	15 41 45.7	-5.5
KIW	Kapiti Island	11.15	208	P	Pn	15 41 48.2	-5.8
CAW	Cannon Point	11.30	207	P	Pn	15 41 50.4	-5.6
MSWZ	Moikau Station	11.50	205		Pn	15 41 55.1	-3.6
MSWZ	Moikau Station	11.50	205	P	Pn	15 41 54.3	-4.4
DUWZ	D’Urville Isla	11.52	211	P	Pn	15 41 55.2	-3.8
TCW	Tory Channel	11.70	209	P	Pn	15 41 56.1	-5.4
TUWZ	Tuamarina	12.02	209		Pn	15 42 00.3	-5.6
NFK	Norfolk Island	12.14	276	P	Pn	15 42 12.4	+4.7
	baz=12,SNR=9.3						
DSZ	Denniston Nort	13.24	214	P	Pn	15 42 18.6	-4.1
MSVF	Nonsavu	13.78	345	P	Pn	15 42 32.7	+2.6
MSVF	Nonsavu	13.78	345	Pn	Pn	15 42 32.7	+2.6
MSVF	Nonsavu	13.78	345	P	Pn	15 42 33.1	+3.0
INZ	Inchbonnie	14.17	213	P	Pn	15 42 29.1	-6.1
OXZ	Oxford	14.38	210	P	Pn	15 42 31.6	-6.6
RACZ	Rakaia	14.67	209	P	Pn	15 42 35.3	-6.7
WACZ	Wakanui South	14.97	209	P	Pn	15 42 42.9	-3.2
RPZ	Rata Peaks	15.12	211	P	Pn	15 42 44.5	-3.6
	1.8nm,0.3s,baz=44,slow=2.0,SNR=14						
RPZ				S	Sn	15 45 19.8	-15
	1.8nm,0.3s,baz=127,slow=16,SNR=12						
RPZ				LR	LR	15 49 20.4	
	comp=Z,492nm,19.8s,baz=48,slow=39						
RPZ	Rata Peaks	15.12	211	P	Pn	15 42 42.6	-5.5
GCSZ	Gaunt Creek Bo	15.15	214	P	Pn	15 42 45.3	-3.0
ARCZ	Arundel	15.26	210	P	Pn	15 42 45.4	-4.4
FOZ	Fox Glacier	15.55	214	P	Pn	15 42 50.2	-3.4
TMZ	Timaru	15.68	210	P	Pn	15 42 47.1	-8.2
OUENC	Ouen Island, N	15.89	300	P	P	15 43 06.6	+5.1
LBZ	Lake Benmore	16.04	211	P	Pn	15 42 57.9	-2.0
YATNC	Mamie plateau,	16.07	301	P	P	15 43 08.8	+5.3
ONTNC	Ouen Toro	16.25	299	P	P	15 43 09.1	+3.7
	104nm,1.0s						
ODZ	Otahua Downs	16.36	209	P	Pn	15 42 58.6	-5.4
DZM	Mont Dzumac	16.39	300	P	P	15 43 09.5	+2.3
	1.2nm,0.3s,baz=171,slow=14,SNR=10						
DZM				LR	LR	15 48 13.0	
	comp=Z,2μm,19.4s,baz=130,slow=33						
DZM	Mont Dzumac	16.39	300	*e*P	P	15 43 09.2	+2.0
	262nm,1.4s						
DZM				*e*LR	LR	15 46 50.2	
	comp=Z,4μm,25.3s						
DZM	Mont Dzumac	16.39	300	P	P	15 43 11.5	+4.3
JCZ	Jackson Bay	16.46	215	P	Pn	15 43 00.9	-4.4
AFI	Afiamalu	18.17	21	P	Pn	15 43 19.6	-7.2
KOUNC	Koumac, New Ca	18.91	300	P	Pn	15 43 39.9	+4.2
RAR	Rarotonga	19.29	64	P	P	15 43 40.5	+1.5
	1.2nm,0.3s,baz=198,slow=6.5,SNR=5.4						
RAR				LR	LR	15 49 07.0	
	comp=Z,870nm,21.4s,baz=256,slow=30						
LHI	Lord Howe Isla	19.38	263	P	Pn	15 43 42.3	+1.1
	baz=19,SNR=4.0						
SANVU	Saraoutou	20.53	316	P	P	15 43 50.0	-2.6
SANVU				IAmb	IAmb	15 44 00.7	
	comp=Z,99nm,0.7s						
SANVU	Saraoutou	20.53	316	P	Pn	15 43 57.7	+2.8
ARMA	Armidale	25.85	264	P	P	15 44 47.9	+2.3
	baz=26,SNR=25						
ARMA	Armidale	25.85	264	P	P	15 44 47.5	+1.9
RIV	Riverview	25.89	256	P	P	15 44 49.4	+3.7
	baz=26,SNR=3.3						
MGCD	Mangrove Creek	25.97	257	P	P	15 44 50.1	+3.6
	baz=26,SNR=32						
TBI	Tubuai	26.70	80	*e*S	S	15 49 33.7	+7.4
	comp=Z,277nm,31.2s						
TBI				*e*LQ	LQ	15 50 24.0	
	comp=Z,504nm,23.5s						
TBI				*e*LR	LR	15 51 42.6	
	comp=Z,2μm,27.8s,baz=246						
TBI	Tubuai	26.70	80	*e*T	T	16 12 39.9	
	comp=Z,320nm,0.4s						
CNB	Canberra Magne	27.34	253	P	P	15 45 01.7	+2.9
	baz=27,SNR=24						
EIDS	Eidsvold	27.57	274	P	P	15 45 04.0	+3.0
	baz=28,SNR=11						
EIDS	Eidsvold	27.57	274	P	P	15 45 02.4	+1.5
EIDS				IAmb	IAmb	15 45 05.1	
	comp=Z,73nm,0.8s						
CAN	Canberra	27.63	253	P	P	15 45 03.1	+1.6
CAN				pmax	pmax		
	comp=Z,24nm,0.8s						
CAN	Canberra	27.63	253	P	P	15 45 03.1	+1.6
YNG	Young	28.16	255	P	P	15 45 09.9	+3.7
	baz=28,SNR=13						
KNTN	Kanton	28.90	14	P	P	15 45 11.2	-1.6
KNTN				IAmb	IAmb	15 45 27.9	
	comp=Z,105nm,1.2s						
RMQ	Roma	29.21	271	P	P	15 45 19.1	+3.5
	baz=29,SNR=74						
PAE	Paea	29.26	69	*e*T	T	16 15 49.9	
	comp=Z,124nm,0.3s						
PPT2	Papeete2	29.30	69	*e*S	S	15 50 14.0	+6.5
	comp=Z,202nm,26.5s						
PPT2				*e*LQ	LQ	15 51 21.5	
	comp=Z,482nm,24.2s						
PPT2				*e*LR	LR	15 52 49.9	
	comp=Z,1μm,26.8s,baz=233						
PPT2	Papeete2	29.30	69	*e*T	T	16 15 54.0	
	comp=Z,82nm,0.4s						
PPT	Papeete	29.31	69	LR	LR	15 53 56.1	
	comp=Z,283nm,21.3s,baz=246,slow=30						
TVO	Taravao	29.46	70	*e*T	T	16 16 05.0	
	comp=Z,25nm,0.4s						
TIAR	Tiarei	29.50	69	*e*T	T	16 16 08.3	
	comp=Z,15nm,0.4s						
HNR	Honiara	29.64	312	P	P	15 45 19.0	-0.4
	comp=Z,69nm,0.7s,baz=344,slow=0.8,SNR=9.6						
HNR				LR	LR	15 55 46.4	
	comp=Z,386nm,20.0s,baz=168,slow=34						
HNR	Honiara	29.64	312	P	P	15 45 19.0	-0.4
HNR	Honiara	29.64	312	P	P	15 45 16.6	-2.8
HNR				IAmb	IAmb	15 45 20.9	
	comp=Z,67nm,0.7s						
HNR	Honiara	29.64	312	P	P	15 45 20.9	+1.5
TAU	Tasmania Unive	29.68	237	P	P	15 45 19.4	-0.1
TAU				pmax	pmax		
	comp=Z,48nm,0.9s						
TAU	Tasmania Unive	29.68	237	P	P	15 45 19.4	-0.1
TAU				IAmb	IAmb	15 45 21.7	
	comp=Z,48nm,0.8s						
MEH	Mehetia	30.37	71	*e*T	T	16 17 13.5	
	comp=Z,135nm,0.3s						
TOO	Toolangi	30.47	248	P	P	15 45 28.9	+2.2
	baz=30,SNR=25						
TOO	Toolangi	30.47	248	P	P	15 45 28.7	+2.0
TOO						15 48 26.1	
TOO				pmax	pmax		
	comp=Z,30nm,0.9s						
TOO	Toolangi	30.47	248	P	P	15 45 28.7	+2.0
TOO				PcP	PcP	15 48 26.1	+0.7
CMSA	Cobar Meteorol	30.71	260	P	P	15 45 30.9	+2.1
	baz=31,SNR=243						
VAH	Vaihoa	32.16	67	*e*T	T	16 19 26.6	
	comp=Z,281nm,0.3s						
QLP	Quilpie	33.06	268	P	P	15 45 51.1	+1.6
	baz=33,SNR=114						
ARPS	Mount Arapiles	33.40	249	P	P	15 45 54.2	+1.9
	baz=33,SNR=17						
CTA	Charters Tower	33.72	281	P	P	15 45 56.8	+1.5
	comp=Z,107nm,0.5s,baz=107,slow=10,SNR=163						
CTA				LR	LR	15 57 41.9	
	comp=Z,772nm,21.4s,baz=98,slow=33						
CTAO	Charters Tower	33.72	281	P	P	15 45 57.3	+2.0
CTAO				pmax	pmax		
	comp=Z,132nm,0.7s						
CTAO	Charters Tower	33.72	281	P	P	15 45 57.3	+2.0
STKA	Stephens Creek	34.10	258	P	P	15 46 00.6	+2.1
	comp=Z,99nm,0.8s,baz=100,slow=9.4,SNR=178						
STKA				PKiKP	PKiKP	15 55 58.0	-1.3
	comp=Z,2.5nm,0.6s,baz=195,slow=1.0,SNR=13						
STKA				LR	LR	15 58 15.6	
	comp=Z,533nm,20.5s,baz=71,slow=33						
STKA	Stephens Creek	34.10	258	P	P	15 46 00.6	+2.1
	baz=34,SNR=191						
STKA	Stephens Creek	34.10	258	P	P	15 46 00.8	+2.3
STKA				pmax	pmax		
	comp=Z,20nm,0.8s						
STKA	Stephens Creek	34.10	258	P	P	15 46 00.8	+2.3
HTT	Hallett	36.09	255	P	P	15 46 16.8	+1.2
	baz=36,SNR=93						
MTSU	Mount Surprise	36.23	282	P	P	15 46 19.0	+2.0
	baz=36,SNR=106						
BBOO	Buckleboo	38.56	255	P	P	15 46 36.9	+0.3
	baz=38,SNR=183						
BBOO	Buckleboo	38.56	255	P	P	15 46 37.2	+0.6
RABL	Rabaul	38.66	308	P	P	15 46 36.4	-1.2
RABL	Rabaul	38.66	308	P	P	15 46 39.1	+1.6
PMG	Port Moresby	38.74	296	P	P	15 46 39.2	+1.0
	comp=Z,40nm,0.7s,baz=110,slow=5.5,SNR=31						
PMG				LR	LR	16 00 23.5	
	comp=Z,222nm,18.8s,baz=110,slow=33						
PMG	Port Moresby	38.74	296	P	P	15 46 39.0	+0.8
PMG				IAmb	IAmb	15 46 40.0	
	comp=Z,40nm,0.7s						
PMG	Port Moresby	38.74	296	P	P	15 46 39.9	+1.7
RKT	Rikitea	39.14	89	*e*LR	LR	15 57 23.9	
	comp=Z,1μm,27.5s						
QIS	Mount Isa	39.16	275	P	P	15 46 42.4	+0.6
	baz=39,SNR=21						
COEN	Coen	39.28	287	P	P	15 46 44.4	+1.6
COEN				IAmb	IAmb	15 46 46.6	
	comp=Z,53nm,0.8s						
AS31	Alice Springs	42.86	268	P	P	15 47 12.8	+0.6
AS31				IAmb	IAmb	15 47 13.9	
	comp=Z,81nm,0.7s						
ASAR	Alice Springs	42.86	268	P	P	15 47 12.6	+0.4
	comp=Z,253nm,0.6s,baz=107,slow=7.1,SNR=4466						
ASAR				S	S	15 53 31.6	-3.0
	comp=Z,1.9nm,1.0s,baz=105,slow=14,SNR=4.9						
ASAR				PKiKP	PKiKP	15 56 05.3	-1.6
	comp=Z,1.5nm,0.6s,baz=93,slow=1.5,SNR=15						
ASAR				LR	LR	16 04 41.0	
	comp=Z,426nm,18.8s,baz=115,slow=36						
ASAR	Alice Springs	42.86	268	P	P	15 47 12.4	+0.2
WR0	Warramunga Arr	43.74	273	P	P	15 47 19.3	0.0
WC3	Warramunga Arr	43.88	273	P	P	15 47 20.9	+0.5
WB2	Warramunga Arr	43.91	273	P	P	15 47 21.1	+0.4
WRAB	Tennant Creek	43.91	273	*ce*P	P	15 47 21.3	+0.6
WRAB				pmax	pmax		
	comp=Z,279nm,0.7s						
WRAB	Tennant Creek	43.91	273	P	P	15 47 20.8	+0.1
WRA	Warramunga Arr	43.92	273	P	P	15 47 21.4	+0.6
	comp=Z,290nm,0.7s,baz=113,slow=7.8,SNR=861						
WRA				PKiKP	PKiKP	15 56 06.5	-1.4
	comp=Z,1.5nm,0.6s,baz=116,slow=0.4,SNR=13						
WRA				LR	LR	16 05 20.6	
	comp=Z,557nm,18.4s,baz=105,slow=36						
WRA	Warramunga Arr	43.92	273	P	P	15 47 20.6	-0.1
WB0	Warramunga Arr	43.94	273	P	P	15 47 21.4	+0.5
FORT	Forrest	45.65	256	P	P	15 47 33.9	-0.4
	baz=46,SNR=49						
FORT	Forrest	45.65	256	P	P	15 47 33.8	-0.6
WRKA	Warakurna	47.17	264	P	P	15 47 45.8	-0.7
	baz=47,SNR=96						
SBA	Scott Base	47.27	184	P	P	15 47 47.4	+1.0
SBA						15 49 19.6	
SBA				pmax	pmax		
	comp=Z,50nm,1.1s						
SBA	Scott Base	47.27	184	P	P	15 47 47.4	+1.0
SBA				IAmb	IAmb	15 47 51.1	
	comp=Z,50nm,1.1s						
SBA				PcP	PcP	15 49 19.6	+2.6
VNDA	Vanda	47.32	186	P	P	15 47 49.6	+2.8
	comp=Z,3.6nm,0.6s,baz=6.8,slow=7.3,SNR=17						
VNDA				LR	LR	16 04 09.0	
	comp=Z,102nm,21.9s,baz=26,slow=31						
VNDA	Vanda	47.32	186	P	P	15 47 49.6	+2.8
JAY	Jayapura	48.06	298	P	P	15 47 52.3	-1.1
	comp=Z,10nm,0.5s,baz=239,slow=12,SNR=4.3						
KDU	Kakadu	48.84	281	P	P	15 47 58.8	-0.6
	baz=49,SNR=15						
KMBL	Kambalda	50.59	253	P	P	15 48 11.9	-0.7
	baz=51,SNR=11						
FITZ	Fitzroy Crossi	52.15	271	P	P	15 48 24.2	-0.1
	comp=Z,55nm,0.6s,baz=136,slow=5.7,SNR=121						
FITZ				LR	LR	16 09 44.3	
	comp=Z,377nm,19.3s,baz=108,slow=35						
FITZ	Fitzroy Crossi	52.15	271	P	P	15 48 24.3	-0.1
	baz=52,SNR=67						
FITZ	Fitzroy Crossi	52.15	271	P	P	15 48 24.6	+0.3
FITZ				IAmb	IAmb	15 48 25.9	
	comp=Z,58nm,0.7s						
KLBR	Kellerberrin	53.90	252	P	P	15 48 36.1	-1.1
	baz=54,SNR=14						
NWAO	Narrogin (SRO)	53.93	250	P	P	15 48 36.1	-1.2
	comp=Z,6.4nm,0.6s,baz=122,slow=7.8,SNR=6.6						
NWAO	Narrogin (SRO)	53.93	250	P	P	15 48 37.3	0.0
	baz=54,SNR=5.2						
NWAO	Narrogin (SRO)	53.93	250	P	P	15 48 35.5	-1.8
CASY	Casey	54.37	208	P	P	15 48 39.8	-0.3
CASY				PcP	PcP	15 49 42.8	-0.7
MEEK	Meekatharra	54.81	258	P	P	15 48 42.7	-1.1
	baz=55,SNR=16						
MLH	Mauna Loa	54.94	27	P	P	15 48 43.4	-1.6
MLH				IAmb	IAmb	15 48 47.6	
	comp=Z,76nm,0.9s						
HMH	Humu‘ula Sheep	55.00	26	P	P	15 48 46.4	+0.9
MUN	Mundaring	55.04	251	P	P	15 48 44.1	-1.3
	baz=55,SNR=6.4						
BLDU	Ballidu	55.06	252	P	P	15 48 44.1	-1.5
	baz=55,SNR=11						
PSAD2	Pilbara Seismi	55.55	264	P	P	15 48 48.2	-1.0
PSAD2				IAmb	IAmb	15 48 48.4	
	comp=Z,33nm,1.4s						
PSA00	Pilbara Seismi	55.67	264	P	P	15 48 47.6	-2.4
PSA00	Pilbara Seismi	55.67	264	P	P	15 48 49.1	-1.0
PSA00				IAmb	IAmb	15 48 49.9	
	comp=Z,72nm,1.4s						
HON	Honolulu	55.69	23	P	P	15 48 47.2	-2.8
HON				pmax	pmax		
	comp=Z,143nm,0.9s						
HON	Honolulu	55.69	23	P	P	15 48 47.2	-2.8
MORW	Morawa	56.11	254	P	P	15 48 52.1	-1.1
	baz=56,SNR=6.0						
MORW	Morawa	56.11	254	P	P	15 48 52.1	-1.1
SIJI	Sorong	56.41	292	P	P	15 48 55.3	-0.2
	comp=Z,16nm,0.5s,baz=98,slow=3.8,SNR=6.9						
SIJI				LR	LR	16 12 37.8	
	comp=Z,230nm,19.1s,baz=93,slow=36						
SOEI	Soe	57.25	279	P	P	15 49 01.8	+0.2
SOEI				IAmb	IAmb	15 49 04.2	
	comp=Z,69nm,1.0s						
SOEI	Soe	57.25	279	P	P	15 49 04.0	+2.4
BATI	Baumata	57.54	278	LR	LR	16 14 10.3	
	comp=Z,689nm,19.0s,baz=124,slow=36						
QSPA	South Pole Qui	58.95	180	P	P	15 49 14.8	+2.0
	comp=Z,61nm,0.8s,baz=286,slow=0.6,SNR=200						
QSPA	South Pole Qui	58.95	180	P	P	15 49 15.4	+2.7
RPN	Rapa Nui	59.45	105	P	P	15 49 18.4	+1.8
	comp=Z,24nm,0.4s,baz=200,slow=12,SNR=1.6						
GIRL	Giralia	60.00	260	P	P	15 49 20.6	+0.1
	baz=60,SNR=6.1						
KAPI	Kappang	63.53	281	P	P	15 49 44.2	-0.2
	comp=Z,17nm,0.8s,baz=157,slow=7.7,SNR=2.9						
KAPI				LR	LR	16 16 58.7	
	comp=Z,171nm,20.7s,baz=101,slow=36						
TOLI2	Tolitoli	66.04	287	P	P	15 49 59.5	-1.2
JAGI	Jajag, Banyuwa	66.51	274	P	P	15 50 02.8	-1.0
JAGI				IAmb	IAmb	15 50 06.7	
	comp=Z,26nm,0.6s						
BELA	Belgrano 2	69.06	172	P	P	15 50 19.7	+0.9
UGM	Wanagama	69.90	273	P	P	15 50 24.2	-0.8
MAW	Mawson	71.52	201	P	P	15 50 34.8	+0.9
	comp=Z,57nm,0.7s,baz=135,slow=7.2,SNR=19						
MAW				LR	LR	16 20 39.4	
	comp=Z,210nm,20.4s,baz=67,slow=35						
MAW	Mawson	71.52	201	P	P	15 50 34.9	+0.9
	baz=72,SNR=15						
MAW	Mawson	71.52	201	P	P	15 50 34.1	+0.2
CISI	Cisompet, Garu	72.39	272	P	P	15 50 39.3	-0.9
KKM	Kota Kinabalu	72.59	288	P	P	15 50 40.9	-0.4
KKM				IAmb	IAmb	15 50 41.4	
	comp=Z,23nm,0.9s						
LEM	Lembang	72.93	272	P	P	15 50 43.4	-0.1
	comp=Z,82nm,0.9s,baz=100,slow=2.7,SNR=17						
SBUM	Sibu	73.88	283	P	P	15 50 49.0	+0.2
KSM	Kuching	74.95	281	P	P	15 50 54.1	-1.0
KSM				IAmb	IAmb	15 50 55.3	
	comp=Z,21nm,0.8s						
KSM	Kuching	74.95	281	P	P	15 50 55.0	-0.1
KASI	Kota Agung	76.26	272	P	P	15 51 01.2	-1.4
SYO	Syowa Base	76.33	193	⇑*i*P	P	15 51 02.6	+0.6
SYO	Syowa Base	76.33	193	⇓*e*sP	sP	15 51 18.6	+3.0
KLSI		76.48	273	P	P	15 51 01.9	-2.0
LWLI	Liwa	76.89	272	P	P	15 51 05.6	-0.7
SNAA	Sanae	77.41	179	P	P	15 51 08.9	+0.7
SNAA	Sanae	77.41	179	pP	P	15 51 14.2	+6.0
SNAA	Sanae	77.41	179	P	P	15 51 09.1	+0.9
SNAA				pmax	pmax		
	comp=Z,82nm,1.0s						
SNAA	Sanae	77.41	179	P	P	15 51 09.1	+0.9
SNAA				IAmb	IAmb	15 51 15.3	
	comp=Z,82nm,1.0s						
VNA3	Neumayer Olymp	77.56	176	P	P	15 51 09.6	+0.6
VNA3	Neumayer Olymp	77.56	176	pP	P	15 51 15.5	+6.5
VNA2	Neumayer--Watz	78.00	177	P	P	15 51 12.5	+1.1
	baz=171,slow=4.2						
VNA2	Neumayer--Watz	78.00	177	pP	pP	15 51 18.1	-3.0
	baz=172,slow=4.5						
NVL	N'lazarevskaya	78.11	183	*e*P	P	15 51 12.0	0.0

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NVL                                   eS      S        16 01 17.8  +14
NVL                                   pmax    pmax
       comp=Z,75nm,1.0s
VNA1   Neumayer--Stat    78.23 177    P       P        15 51 13.8 +1.1
VNA1   Neumayer--Stat    78.23 177    pP      pP       15 51 19.5 -2.8
JGF    Kuroka            78.42 324    P       P        15 51 13.3 -0.9
JGF                                   IAmb    IAmb     15 51 15.2
       comp=Z,20nm,0.8s
MJAR   Matsushiro Arr    78.74 326    P       P        15 51 14.3 -1.6
       comp=Z,2.2nm,0.7s,baz=325,slow=1.5,SNR=9.1
MJAR                                  LR      LR       16 21 11.3
       comp=Z,54nm,20.5s,baz=165,slow=32
MAT    Matsushiro        78.74 326    P       P        15 51 14.9 -1.0
TWG    Pinlang           79.12 305    P       P        15 51 15.5 -2.8
TWG                                   IAmb    IAmb     15 51 27.6
       comp=Z,58nm,1.4s
JWT    Wachi             79.16 323    P       P        15 51 17.0 -1.2
YULB   Yu-li             79.33 306    P       P        15 51 16.4 -3.0
TPUB   Ta-pu             79.74 305    P       P        15 51 19.1 -2.5
TPUB                                  IAmb    IAmb     15 51 22.8
       comp=Z,40nm,1.1s
JHS    Saijyo            80.15 321    P       P        15 51 22.5 -1.1
H03S2  Juan Fernandez    80.23 124    T       T        17 20 32.6
       baz=238,slow=74,SNR=74
H03S1  Juan Fernandez    80.24 124    T       T        17 20 32.9
       baz=238,slow=74,SNR=94
H03S3  Juan Fernandez    80.24 124    T       T        17 20 32.1
       baz=238,slow=74,SNR=91
H03N3  Juan Fernandez    80.42 123    T       T        17 20 42.9
       baz=242,slow=72,SNR=98
H03N2  Juan Fernandez    80.42 123    T       T        17 20 40.0
       baz=242,slow=72,SNR=96
H03N1  Juan Fernandez    80.44 123    T       T        17 20 39.4
       baz=242,slow=72,SNR=170
MYKOM  Kota Tinggi       80.58 278    P       P        15 51 25.0 -1.4
PDSI   Padang            82.07 274    P       P        15 51 31.9 -2.5
PLCA   Paso Flores       82.15 133    P       P        15 51 36.4 +1.9
       comp=Z,19nm,0.8s,baz=239,slow=5.1,SNR=56
PLCA                                  LR      LR       16 19 39.8
       comp=Z,136nm,19.7s,baz=206,slow=29
PLCA   Paso Flores       82.15 133    P       P        15 51 36.3 +1.9
PLCA                                  IAmb    IAmb     15 51 37.3
       comp=Z,26nm,1.0s
DLV    T  Lat            82.20 289    P       P        15 51 34.5 -0.7
DLV                                   IAmb    IAmb     15 51 36.3
       comp=Z,40nm,0.7s
EFI    East Falkland     82.27 147    P       P        15 51 35.0 +0.2
EFI                                   pmax    pmax
       comp=Z,59nm,1.0s
EFI    East Falkland     82.27 147    P       P        15 51 35.0 +0.2
EFI                                   IAmb    IAmb     15 51 52.3
       comp=Z,59nm,1.0s
LC01   Cunco             82.33 131    P       P        15 51 35.3 -0.1
LC01                                  IAmb    IAmb     15 51 37.8
       comp=Z,43nm,0.8s
ADK    Adak              82.70   1    P       P        15 51 34.6 -2.0
ADK                                   pmax    pmax
       comp=Z,56nm,0.8s
ADK    Adak              82.70   1    P       P        15 51 34.6 -2.0
ADK                                   IAmb    IAmb     15 51 36.9
       comp=Z,56nm,0.8s
JKA    Kamikawa-asahi    83.01 333    P       P        15 51 38.3 -0.2
JKA                                   IAmb    IAmb     15 51 43.6
       comp=Z,16nm,0.7s
ASAJ   Asahikawa         83.01 333    P       P        15 51 38.3 -0.2
ASAJ                                  pmax    pmax
       comp=Z,16nm,0.7s
MNSI   Mandailing Nat    83.70 275    P       P        15 51 40.4 -2.4
BI02   San Fabin de      83.98 129    P       P        15 51 45.5 +1.4
BI02                                  IAmb    IAmb     15 51 46.4
       comp=Z,31nm,0.7s
NIKH   Nikolski High     84.18   6    P       P        15 51 42.7 -1.5
KSRS   Korea Array       84.78 320    P       P        15 51 47.5 -0.2
       comp=Z,3.4nm,0.7s,baz=142,slow=5.9,SNR=18
KSRS                                  LR      LR       16 24 31.2
       comp=Z,72nm,21.4s,baz=166,slow=32
KSAR   Wonju Array Be    84.80 320    P       P        15 51 46.7 -1.1
KSAR   Wonju Array Be    84.80 320    P       P        15 51 46.7 -1.1
SCZ2   Santa Cruz Isl    85.16  45    P       P        15 51 51.1 +1.3
       baz=227
UNV    Unalaska Valle    85.26   7    P       P        15 51 48.5 -1.1
YSS    Yuzh-Sakhalins    85.33 334ceP     P        15 51 50.4 +0.2
YSS                                   pmax    pmax
       comp=Z,15nm,0.6s
BO02   Sierra Bellavi    85.37 128    P       P        15 51 52.3 +1.2
BO02                                  IAmb    IAmb     15 51 53.3
       comp=Z,29nm,0.6s
CIS    Catalina Islan    85.51  47    P       P        15 51 52.5 +1.0
       baz=228
PKM    Mcpherson Peak    85.66  45    P       P        15 51 53.7 +1.4
       baz=227
GSI    Gunungsitoli      85.68 274    P       P        15 51 52.7 -0.2
GSI    Gunungsitoli      85.68 274    P       P        15 51 52.6 -0.2
SMMC   Simmler           85.84  44    P       P        15 51 55.0 +1.9
       baz=227
MT02   Curacav           86.00 127    P       P        15 51 55.3 +1.1
MT02                                  IAmb    IAmb     15 51 57.7
       comp=Z,49nm,1.4s
OSI    Osito Audit: C    86.13  45    P       P        15 51 55.9 +1.3
       baz=228
MURC   Murrieta          86.41  47    P       P        15 51 57.4 +1.5
       baz=229
ARVC   Arvin             86.41  45    P       P        15 51 57.4 +1.6
       baz=228
MONP2  Monument Peak     86.43  48    P       P        15 51 57.9 +1.6
       baz=229,SNR=14
IKP    In-Ko-Pah, Jac    86.47  48    P       P        15 51 57.9 +1.6
       baz=229,SNR=9.2
PEA0B  Petropavlovsk-    86.49 346    P       P        15 51 55.3 -0.5
PEA0B                                 pmax    pmax
       comp=Z,22nm,0.8s
PEA0B  Petropavlovsk-    86.49 346    P       P        15 51 55.3 -0.5
PEA0B                                 IAmb    IAmb     15 52 00.1
       comp=Z,22nm,0.8s
PETK   Petropavlovsk-    86.49 346    P       P        15 51 55.2 -0.6
       comp=Z,19nm,0.7s,baz=117,slow=7.7,SNR=25
PETK                                  LR      LR       16 24 16.4
       comp=Z,81nm,20.9s,baz=158,slow=31
PETK   Petropavlovsk-    86.49 346    P       P        15 51 55.3 -0.5
BFSC   Mount Baldy Ra    86.54  46    P       P        15 51 57.8 +1.1
       baz=228,SNR=8.8
NJ2    Nanjing           86.58 311   eP       P        15 51 59.9 +3.2
NJ2                                   pmax    pmax
       comp=Z,3.0nm,0.5s
VES    Vestal, Richgr    86.74  44    P       P        15 51 58.4 +1.0
       baz=227
EDW2   Edwards Air Fo    86.76  46    P       P        15 51 59.0 +1.4
       baz=228,SNR=16
SWSC   Sam W. Stewart    86.86  48    P       P        15 51 59.6 +1.5
       baz=230
PFO    Pinyon Flats O    86.88  47    P       P        15 51 59.9 +1.5
       baz=229,SNR=9.1
PFO    Pinyon Flats O    86.88  47    P       P        15 51 58.7 +0.3
PFO                                   pmax    pmax
       comp=Z,11nm,0.8s
PFO    Pinyon Flats O    86.88  47    P       P        15 51 58.7 +0.3
TPFO   Pinon Flats       86.88  47    P       P        15 51 59.9 +1.6
       baz=229,SNR=7.1
XPFO   Pion Flat         86.88  47    P       P        15 51 58.8 +0.4
ISA    Isabella, Lake    86.99  45    P       P        15 52 00.3 +1.5
       baz=228,SNR=16
BBRC   Big Bear Solar    87.01  47    P       P        15 52 00.5 +1.4
       baz=229
TPTI                     87.03 276    P       P        15 51 58.0 -1.4
CO02   Combarbal         87.27 125    P       P        15 52 02.0 +1.5
LRMC   Laurel Mtn Rad    87.35  45    P       P        15 52 01.9 +1.3
       baz=228,SNR=7.1
BELC   Belle Mtn. Jos    87.42  47    P       P        15 52 02.7 +1.7
       baz=229,SNR=18
CMB    Columbia Colle    87.47  42    P       P        15 52 01.7 +0.7
CMB                                   pmax    pmax
       comp=Z,13nm,0.8s
CMB    Columbia Colle    87.47  42    P       P        15 52 01.7 +0.7
CMB                                   IAmb    IAmb     15 52 02.9
       comp=Z,13nm,0.8s
BC3    Big Chuckawall    87.54  48    P       P        15 52 03.5 +1.9
       baz=230,SNR=10
GLA    Glamis            87.56  49    P       P        15 52 03.5 +2.0
       baz=230,SNR=5.6
O02D   Mt. Diablo Mer    87.62  39    P       P        15 52 03.7 +2.0
       baz=225,SNR=7.3
USRK   Ussuriysk Ar.     87.67 327    P       P        15 52 00.1 -1.7
       comp=Z,5.4nm,0.6s,baz=167,slow=3.2,SNR=9.9
USRK                                  LR      LR       16 27 37.2
       comp=Z,67nm,18.2s,baz=137,slow=33
CO03   El Pedregal       87.70 125    P       P        15 52 03.6 +1.0
CO03                                  IAmb    IAmb     15 52 04.6
       comp=Z,21nm,0.8s
CWC    Cottonwood Cre    87.74  44    P       P        15 52 03.7 +1.2
       baz=228
HEC    Hector,Ludlow     87.75  47    P       P        15 52 03.8 +1.3
       baz=229,SNR=7.3
MPMC   Manual Prospec    87.85  45    P       P        15 52 04.4 +1.3
       baz=228,SNR=17
IRM    Iron Mountain     88.06  48    P       P        15 52 05.9 +2.0
       baz=230,SNR=15
GMRC   Granite Mounta    88.14  47    P       P        15 52 06.0 +1.6
       baz=230,SNR=11
214A   Organ Pipe Nat    88.18  51    P       P        15 52 06.3 +1.8
       baz=231
N02D   Trinity Center    88.23  39    P       P        15 52 06.1 +1.5
       baz=225
O03E   Paynes Creek      88.24  40    P       P        15 52 05.4 +0.7
       baz=226,SNR=8.7
M02C   Callahan          88.44  38    P       P        15 52 07.2 +1.6
       baz=225
SHOC   Shoshone, Teco    88.48  46    P       P        15 52 07.3 +1.5
       baz=229
FURC   Furnace Creek,    88.50  45    P       P        15 52 07.4 +1.6
       baz=229
GRAC   Grapevine Rang    88.54  44    P       P        15 52 07.6 +1.5
       baz=228,SNR=6.2
PNTR   Pine Nut          88.64  42    P       P        15 52 07.5 +0.7
PNTR                                  IAmb    IAmb     15 52 09.2
       comp=Z,22nm,0.7s
TYV    Tymovskoe         88.66 336   eP       P        15 52 06.2  0.0
TYV                                  eS       S        16 02 50.4 +0.3
TYV                                   pmax    pmax
       comp=Z,100nm,2.9s
TYV                                   pmax    pmax
       comp=Z,11nm,1.0s
TYV                                   smax    smax
       comp=E,6.0nm,1.2s
NEE2   Needles Airpor    88.79  48    P       P        15 52 09.3 +2.0
       baz=230,SNR=6.9
PDMCI  Parker Dam,Lak    88.79  48    P       P        15 52 09.2 +1.9
       baz=230,SNR=8.9
NVAR   Mina Array Bea    88.94  43    P       P        15 52 09.2 +1.0
       comp=E,12nm,0.7s,baz=222,slow=8.3,SNR=88
NVAR                                  LR      LR       16 26 30.3
       comp=E,118nm,18.9s,baz=222,slow=32
NVAR   Mina Array Bea    88.94  43    P       P        15 52 09.4 +1.2
K02D   Willamette Mer    88.95  37    P       P        15 52 09.4 +1.4
       baz=224
J01E   Myrtle Point      89.14  36    P       P        15 52 10.0 +1.3
       baz=224
TPNV   Topopah Spring    89.18  45    P       P        15 52 10.8 +1.5
       baz=229,SNR=12
TPNV   Topopah Spring    89.18  45    IAmb    IAmb     15 52 11.3
       comp=Z,9.4nm,0.8s
M04C   Macdoel           89.26  39    P       P        15 52 10.7 +1.2
       baz=226
L04D   Klamath Falls     89.32  38    P       P        15 52 10.8 +1.0
       baz=225
TUC    Tucson            89.75  51    P       P        15 52 14.2 +2.2
       baz=232
I03D   Drain, OR         89.82  36    P       P        15 52 13.4 +1.5
       baz=224
I02D   Swisshome         89.86  36    P       P        15 52 13.4 +1.3
       baz=224
J04D   Umpqua Nationa    90.14  37    P       P        15 52 14.9 +1.2
       baz=225
TIA    Tai'an            90.33 313    P       P        15 52 14.0 -0.5
TIA                                   pmax    pmax
       comp=Z,9.0nm,0.9s
I04A   Tendick Farm,     90.37  37    P       P        15 52 15.6 +1.0
       baz=225
K05A   Summer Lake       90.42  38    P       P        15 52 15.8 +0.9
K05A                                  IAmb    IAmb     15 52 17.4
       comp=Z,27nm,1.2s
R11A   Troy Canyon, C    90.49  44    P       P        15 52 16.3 +0.8
       baz=230
CN2    Changchun         90.61 323   eP       P        15 52 14.8 -0.8
CN2                                   pmax    pmax
       comp=Z,20nm,0.8s
J05D   Fort Rock, OR     90.63  38    P       P        15 52 17.2 +1.3
       baz=226
H04D   Lebanon           90.72  36    P       P        15 52 17.5 +1.4
       baz=225
GRNR   Gornyy            90.86 333⇑iP     P        15 52 16.8 +0.2
GRNR                                  pmax    pmax
       comp=Z,7.0nm,1.1s
G03D   McMinnville, O    90.94  35    P       P        15 52 19.5 +2.4
       baz=225
H04A   Detroit Lake      91.11  36    P       P        15 52 19.0 +1.0
H04A                                  IAmb    IAmb     15 52 19.6
       comp=Z,16nm,0.8s
PINE   Pine Mountain     91.13  38    IAmb    IAmb     15 52 20.7
       comp=Z,21nm,0.8s
U15A   North Rim         91.30  47    IAmb    IAmb     15 52 22.2
       comp=Z,17nm,0.7s
I05D   Terrebonne, OR    91.30  37    P       P        15 52 20.1 +1.2
       baz=226
WUAZ   Wupatki           91.33  49    P       P        15 52 21.1 +1.8
       baz=232
KLR    Kul'dur           91.58 330ceP     P        15 52 19.6 -0.3
KLR                                   pmax    pmax
       comp=Z,6.0nm,0.7s
PSUT   Pine Spring       91.65  45    P       P        15 52 21.6 +0.7
GYA    Guiyang           91.74 300   eP       P        15 52 21.3 -0.1
GYA                                   pmax    pmax
       comp=Z,6.0nm,0.7s
ENH    Enshi             91.85 304    P       P        15 52 22.1 +0.3
ENH                                   IAmb    IAmb     15 52 23.0
       comp=Z,11nm,0.7s
G05D   Wamic, OR         91.94  36    P       P        15 52 23.3 +1.6
       baz=226
W18A   Petrified Fore    92.15  50    P       P        15 52 24.8 +1.6
       baz=233
E04D   Cinebar           92.24  35    P       P        15 52 24.7 +1.6
       baz=225
D03D   Eldon             92.68  34    P       P        15 52 26.9 +1.8
       baz=225
TXAR   Lajitas Array     92.98  57    P       P        15 52 28.7 +1.6
       comp=Z,1.4nm,0.9s,baz=207,slow=7.0,SNR=11
TXAR                                  LR      LR       16 27 48.5
       comp=Z,70nm,19.2s,baz=0.0,slow=31
MNTX   Cornudas Mount    93.09  55    P       P        15 52 28.5 +1.1
       baz=235
BJI    Beijing           93.31 316    P       P        15 52 26.8 -1.4
BJI                                   S       S        16 03 35.9 +2.9
BJI                                   pmax    pmax
       comp=Z,3.0nm,0.9s
BJI                                   LR      LR
       comp=Z,230nm,11.0s
BJI                                   LR      LR
       comp=Z,360nm,9.6s
BJI                                   LR      LR
       comp=Z,530nm,51.0s
DUG    Dugway, Tooele    93.33  44    P       P        15 52 29.5 +1.1
       baz=231
CMAR   Chiang Mai Arr    93.45 289    P       P        15 52 29.8 +0.4
       comp=Z,3.3nm,0.7s,baz=140,slow=3.9,SNR=22
CMAR                                  PP      PP       15 56 12.1 -2.1
       comp=Z,2.6nm,0.9s,baz=132,slow=6.0,SNR=11
CMAR                                  PKKP    PKKPdf   16 09 34.0 -0.2
       comp=Z,0.9nm,0.7s,baz=294,slow=4.5,SNR=6.4
CMAR                                  LR      LR       16 35 41.2
       comp=Z,45nm,21.6s,baz=182,slow=36
CMAR   Chiang Mai Arr    93.45 289    P       P        15 52 30.2 +0.9
CMAR   Chiang Mai Arr    93.45 289    P       P        15 52 30.2 +0.9
A04D   Lummi Island      93.70  33    P       P        15 52 31.7 +1.9
       baz=225
MA2    Magadan           93.97 345ceP     P        15 52 28.3 -2.4
MA2                                   pmax    pmax
       comp=Z,4.0nm,0.8s
KMI    Kunming           93.97 297⇓eP     P        15 52 34.6 +2.7
KMI                                   pmax    pmax
       comp=Z,5.0nm,1.2s
TIY    Taiyuan           94.21 312   eP       P        15 52 32.4 -0.1
TIY                                   pP      pwP      15 52 44.8 -1.7
TIY                                   pmax    pmax
       comp=Z,9.0nm,1.3s
TIY                                   pmax    pmax
       comp=Z,160nm,6.0s
TIY                                   LR      LR
       comp=Z,190nm,5.4s
TIY                                   LR      LR
       comp=Z,460nm,11.4s
TIY                                   LR      LR
       comp=Z,570nm,12.3s
ANMO   Albuquerque       94.22  51    P       P        15 52 33.5 +0.8
       comp=Z,3.1nm,0.8s,baz=206,slow=6.1
ANMO   Albuquerque       94.22  51    P       P        15 52 33.9 +1.2
       baz=235
XAN    Xi'an             94.40 307    P       P        15 52 35.1 +1.7
XAN                                   pmax    pmax
       comp=Z,5.0nm,1.1s
HLID   Hailey            94.52  41    P       P        15 52 35.4 +1.5
       baz=230
S22A   4UR Ranch, Cre    95.59  49    P       P        15 52 40.6 +1.5
       baz=235
CD2    Chengdu           96.31 302    P       P        15 52 43.1 +0.9
CD2                                   pmax    pmax
       comp=Z,10.0nm,0.8s
N25K   Chitina, Valde    96.38  15    P       P        15 52 42.1 +0.3
       baz=209
M24K   Tolsona, Glenn    96.47  15    P       P        15 52 42.8 +0.6
       baz=207
HHC    Hu-ho-hao-te      96.61 314   eP       P        15 52 42.1 -1.3
HHC                                   S       S        16 03 51.8  -10
SEY    Seymchan          96.67 347    PKKPbc  PKKPbc   16 09 26.7 -1.6
       comp=Z,1.4nm,0.7s,baz=41,slow=7.6,SNR=4.2
SEY    Seymchan          96.67 347  i P       P        15 52 41.3 -1.6
BW06   Boulder Array     96.83  44    P       P        15 52 44.4 -0.1
       baz=234
PDAR   Pinedale Array    96.83  44    P       P        15 52 44.4 -0.2
       comp=Z,1.1nm,0.8s,baz=194,slow=3.6,SNR=12
PDAR                                  PKKPbc  PKKPbc   16 09 26.8 -0.6
       comp=Z,1.2nm,0.7s,baz=80,slow=4.2,SNR=13
PDAR                                  LR      LR       16 28 51.8
       comp=Z,78nm,21.7s,baz=259,slow=31
RND    Reindeer          97.10  13    P       P        15 52 44.6 -0.4
RND                                   pmax    pmax
       comp=Z,6.0nm,0.8s
RND    Reindeer          97.10  13    P       P        15 52 44.6 -0.4
BOZ    Bozeman (W)       97.34  41    P       Pdif     15 52 47.5 +0.8
       baz=232
MCK    McKinley          97.38  13    P       P        15 52 46.5 +0.3
       baz=205
LPAZ   La Paz            98.03 114    P       P        15 52 52.0 +0.9
       comp=Z,2.1nm,0.6s,baz=210,slow=5.8,SNR=9.8
LPAZ                                  LR      LR       16 28 55.3
       comp=Z,41nm,21.4s,baz=274,slow=30
LPAZ   La Paz            98.03 114    P       P        15 52 52.0 +0.9
BCAR   Beaver Creek A    98.30  16    P       P        15 52 50.7 +0.3
HDA    Harding Lake      98.38  13    P       P        15 52 50.8 +0.1
       baz=207
HDA    Harding Lake      98.38  13    IAmb    IAmb     15 52 50.9
       comp=Z,4.3nm,0.6s
SCRK   Sand Creek        98.60  15    P       Pdif     15 52 52.4 +0.6
       baz=209
ILAR   Eielson Array     98.71  13    P       P        15 52 51.5 -0.6
       comp=Z,1.1nm,0.6s,baz=222,slow=5.4,SNR=18
ILAR                                  PKiKP   PKiKP    15 57 23.0 -0.3
       comp=Z,1.2nm,0.5s,baz=305,slow=2.6,SNR=19
ILAR                                  PKKPbc  PKKPbc   16 09 10.9  -12
       comp=Z,0.4nm,0.6s,baz=336,slow=3.8,SNR=4.5
ILAR                                  LR      LR       16 37 46.9
       comp=Z,36nm,18.5s,baz=256,slow=36
ILAR   Eielson Array     98.71  13    P       P        15 52 51.7 -0.5
LZH    Lanzhou           99.00 307   eP       Pdif     15 52 56.6 +2.2
LZH                                   pP      sP       15 53 08.0 -0.3
LZH                                   pmax    pmax
       comp=Z,16nm,1.3s
CPUP   Villa Florida     99.68 129    LR      LR       16 37 32.0
       comp=Z,27nm,18.3s,baz=223,slow=35
GTA    Gaotai           103.44 308   eP       PKiKP    15 57 29.1 -3.7
GTA                                   pP      PP       15 57 33.3 +2.8
GTA                                   sP               15 57 36.6
GTA                                   pmax    pmax
       comp=Z,2.0nm,1.2s
INK    Inuvik           104.57  16    PKiKP   PKiKP    15 57 32.8 -0.9
       comp=Z,1.2nm,0.5s,baz=216,slow=3.5,SNR=5.7
YKA    Yellowknife Ar   106.22  26    Pdiff   Pdif     15 53 25.7 +0.1
       comp=Z,0.3nm,0.8s,baz=223,slow=4.0,SNR=7.1
YKA                                   PKiKP   PKiKP    15 57 36.3 -0.6
       comp=Z,2.4nm,0.5s,baz=247,slow=1.0,SNR=44
YKA                                   PKKPbc  PKKPbc   16 08 58.5 -1.6
       comp=Z,4.6nm,0.7s,baz=52,slow=3.7,SNR=29
WMQ    Urumqi           113.52 308   ePKP     PKiKP    15 57 51.9 +0.5
WMQ                                   LR      LR
       comp=Z,600nm,29.0s
WMQ                                   LR      LR
       comp=Z,920nm,28.9s
DGZ    Jazzator, Alta   115.69 314  i PKIKP   PKPdf    15 57 54.2 -1.3
ZSN    Zaisan           116.61 311   ePKP     PKPdf    15 57 55.5 -1.7
       baz=311
ZSN    Zaisan           116.61 311   ePKIKP   PKPdf    15 57 55.4 -1.7
SADO   Sadowa           117.26  52    PKP     PKPdf    15 57 56.6 -1.9
       comp=Z,2.9nm,0.5s,baz=63,slow=2.3,SNR=4.8
H53A   Bobcaygeon       117.58  53    P       PKPdf    15 57 58.1 -0.9
       baz=252
MK31   Makanchi Array   118.09 310c iPKIKP    PKPdf    15 57 58.5 -1.6
MKAR   Makanchi Array   118.09 310    PKP     PKPdf    15 57 58.6 -1.5
       comp=Z,2.7nm,0.5s,baz=225,slow=1.4,SNR=56
MKAR                                  PKKPab  PKKPbc   16 08 20.5 +0.5
       comp=Z,0.7nm,0.5s,baz=269,slow=3.4,SNR=8.3
MKAR   Makanchi Array   118.09 310    PKIKP   PKPdf    15 57 58.9 -1.2
MKAR   Makanchi Array   118.09 310    PKPdf   PKPdf    15 57 58.9 -1.2
ZALV   Zalesovo Beam    118.45 318    PKP     PKPdf    15 57 58.7 -1.7
       comp=Z,2.6nm,0.5s,baz=113,slow=2.1,SNR=14
ZALV   Zalesovo Beam    118.45 318    PKIKP   PKPdf    15 57 59.0 -1.4
ZALV   Zalesovo Beam    118.45 318            PKPdf    15 57 59.0 -1.4
L58A   Harry Jones Me   118.73  56    P       PKPdf    15 58 00.4 -1.0
       baz=253
SHLS   Shalkode         118.97 305   ePKP     PKPdf    15 57 59.8 -2.2
       baz=305
SHLS   Shalkode         118.97 305   ePKIKP   PKPdf    15 57 59.8 -2.2
UZB    Uzynbulak        119.28 305   ePKP     PKPdf    15 58 01.0 -1.6
       baz=305
UZB    Uzynbulak        119.28 305   ePKIKP   PKPdf    15 58 01.0 -1.6
N61A   South Mountain   119.46  58    P       PKPdf    15 58 01.0 -1.8
       baz=253
KPKS   Kokpek           119.61 305   ePKP     PKPdf    15 58 01.5 -1.7
       baz=305
KPKS   Kokpek           119.61 305   ePKIKP   PKPdf    15 58 01.5 -1.7
MATQ   Matagami         119.62  47    P       PKPdf    15 58 01.9 -1.0
       baz=256
SATY   Saty             119.69 305   ePKP     PKPdf    15 58 01.8 -1.6
       baz=305
SATY   Saty             119.69 305   ePKIKP   PKPdf    15 58 01.8 -1.6
H57A   Richville        119.74  54    P       PKPdf    15 58 01.7 -1.6
       baz=254
E55A   Montcerf-Lytto   119.81  51    P       PKPdf    15 58 01.9 -1.4
       baz=255
PAL    Palisades        119.82  58    P       PKPdf    15 58 01.9 -1.6
       baz=253
LSQQ   Lebel-sur-Quev   119.87  48    P       PKPdf    15 58 02.3 -1.0
       baz=256
N62A   Caumsett State   120.11  58    P       PKPdf    15 58 01.7 -2.3
       baz=253
TDK    Taldyqorghan     120.21 307   ePKP     PKPdf    15 58 02.7 -1.5
       baz=307
TDK    Taldyqorghan     120.21 307   ePKIKP   PKPdf    15 58 02.7 -1.5
SEM    Semipalatinsk    120.33 313   ePKP     PKPdf    15 58 02.2 -2.4
       baz=313
SEM    Semipalatinsk    120.33 313   ePKIKP   PKPdf    15 58 02.1 -2.4
KSH    Kashi            120.44 300    PKP     PKPdf    15 58 05.0 +0.1
KSH                                   PKS     PKSdf    16 01 43.3 +1.6
KSH                                   SKS     SKSdf    16 05 15.5 +1.1
KSH                                   AMB     AMB
       comp=Z,220nm,6.4s
KSH                                   LR      LR
       comp=Z,200nm,8.6s
KSH                                   LR      LR
       comp=Z,160nm,6.9s
KSH                                   LR      LR
       comp=Z,650nm,6.4s
E56A   St. Veronique    120.52  51    P       PKPdf    15 58 03.5 -1.2
       baz=256
H58A   Gabriels         120.56  54    P       PKPdf    15 58 04.0 -0.9
       baz=255
MDOK   Medeo            120.67 305   ePKP     PKPdf    15 58 03.0 -2.4
       baz=305
MDOK   Medeo            120.67 305   ePKIKP   PKPdf    15 58 02.9 -2.4
TNSS   Tian-Shan        120.71 304   ePKP     PKPdf    15 58 04.4 -1.4
       baz=304
TNSS   Tian-Shan        120.71 304   ePKIKP   PKPdf    15 58 04.3 -1.4
AAA    Alma-Ata         120.78 305   ePKP     PKPdf    15 58 04.1 -1.4
       baz=305
AAA    Alma-Ata         120.78 305   ePKIKP   PKPdf    15 58 04.0 -1.4
EUNU   Eureka           120.78  12    PKPdf   PKPdf    15 58 03.8 -0.6
D56A   ZEC Mazanza, M   120.83  51    P       PKPdf    15 58 04.4 -0.9
       baz=256
CHKK   Chushkaly        120.90 305   ePKP     PKPdf    15 58 03.4 -2.2
       baz=305
CHKK   Chushkaly        120.90 305   ePKIKP   PKPdf    15 58 03.3 -2.2
ULHL   Ulahol           121.00 303    P       PKPdf    15 58 05.5 -0.5
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	SNR=7.8						
KUU	Kurty	121.36	305	ePKP	PKPdf	15 58 04.5	-2.0
	baz=305						
KUU	Kurty	121.36	305	ePKIKP	PKPdf	15 58 04.4	-2.0
KURK	Kurchatov	121.42	313c	iPKIKP	PKPdf	15 58 05.0	-1.2
KURK				pmax	pmax		
	comp=Z,13nm,0.6s						
TKM2	Tokmak 2	121.64	304	P	PKPdf	15 58 06.2	-1.0
	SNR=7.1						
E58A	La Victoria	121.66	52	P	PKPdf	15 58 06.3	-0.6
	baz=257						
J62A	Henniker	121.92	56	P	PKPdf	15 58 07.6	+0.1
	baz=256						
KBK	Karagaybulak	122.03	304	P	PKPdf	15 58 07.5	-0.5
	SNR=7.5						
UCH	Uchtor	122.24	303	P	PKPdf	15 58 08.2	-0.5
	SNR=13						
CHMS	Chumysh	122.26	304	P	PKPdf	15 58 07.1	-1.1
	SNR=11						
AAK	Ala-Archa	122.35	303c	iPKIKP	PKPdf	15 58 07.4	-1.2
AAK				pmax	pmax		
	comp=Z,13nm,0.6s						
AAK	Ala-Archa	122.35	303	PKPdf	PKPdf	15 58 07.9	-0.7
SGDS	Sogindy	122.45	304	ePKP	PKPdf	15 58 07.1	-1.5
	baz=304						
SGDS	Sogindy	122.45	304	ePKIKP	PKPdf	15 58 07.1	-1.5
F60A	Warwick	122.46	53	P	PKPdf	15 58 07.7	-0.7
	baz=257						
USP	Ospenovka	122.50	304	P	PKPdf	15 58 07.7	-1.0
	SNR=12						
AML	Almayashu	122.80	303	P	PKPdf	15 58 09.2	-0.5
	SNR=16						
EKS2	Erkin-Say	122.87	303	P	PKPdf	15 58 08.9	-0.6
	SNR=9.2						
E60A	Ste Agathe de	122.89	52	P	PKPdf	15 58 08.8	-0.4
	baz=258						
BTLS	Baital	123.22	306	ePKP	PKPdf	15 58 08.5	-1.5
	baz=306						
BTLS	Baital	123.22	306	ePKIKP	PKPdf	15 58 08.4	-1.5
G62A	West of Eustis	123.27	54	P	PKPdf	15 58 09.8	-0.3
	baz=258						
E61A	Lac Etchemin	123.55	52	P	PKPdf	15 58 10.7	+0.2
	baz=258						
D61A	St Aubert, Com	123.91	51	P	PKPdf	15 58 10.9	-0.3
	baz=259						
PKME	Peaks-Kenny Pk	124.14	54	P	PKPdf	15 58 11.3	-0.4
	baz=258						
G64A	Maxfield	124.51	54	P	PKPdf	15 58 12.3	0.0
	baz=259						
TULEG	Thule	124.56	16	iP	PKPdf	15 58 10.7	-0.9
TULEG				IAmb	IAmb	15 58 11.6	
	comp=Z,16nm,0.9s						
DZA	Taraz	124.68	303	ePKP	PKPdf	15 58 11.4	-1.4
	baz=303						
DZA	Taraz	124.68	303	ePKIKP	PKPdf	15 58 11.4	-1.4
BRZS	Berezniki	125.03	312	ePKP	PKPdf	15 58 11.4	-1.8
	baz=312						
BRZS	Berezniki	125.03	312	ePKIKP	PKPdf	15 58 11.4	-1.8
D63A	Stockholm	125.28	52	P	PKPdf	15 58 13.1	-0.6
	baz=260						
KKAR	Karatay Array	125.31	303	PKIKP	PKPdf	15 58 13.5	-0.5
KKAR	Karatay Array	125.31	303	PKPdf	PKPdf	15 58 13.5	-0.5
G65A	Princeton	125.33	54	P	PKPdf	15 58 13.4	-0.5
	baz=259						
E64A	Bridgewater	125.36	53	P	PKPdf	15 58 13.1	-0.9
	baz=260						
IUG	Iuzhnay	125.46	302	ePKP	PKPdf	15 58 12.9	-1.6
	baz=302						
IUG	Iuzhnay	125.46	302	ePKIKP	PKPdf	15 58 12.9	-1.6
BRLS	Borolday	125.78	303	ePKP	PKPdf	15 58 13.7	-1.3
	baz=303						
BRLS	Borolday	125.78	303	ePKIKP	PKPdf	15 58 13.6	-1.3
FRB	Frobisher Bay	126.14	31	PKhKP	PKPpre	15 58 09.4	
	comp=Z,5.7nm,0.6s,baz=270,slow=0.9,SNR=3.8						
FRB				PKP	PKPdf	15 58 13.9	-0.9
	comp=Z,5.7nm,0.6s,baz=25,slow=10,SNR=3.0						
FRB	Frobisher Bay	126.14	31	PKIKP	PKPdf	15 58 14.0	-0.9
BRVK	Borovoye	126.86	315c	iPKIKP	PKPdf	15 58 14.9	-1.7
BRVK				pmax	pmax		
	comp=Z,14nm,1.0s						
LSZ	Lusaka	127.30	213	PKIKP	PKPdf	15 58 19.9	+1.1
LSZ	Lusaka	127.30	213		PKPdf	15 58 19.9	+1.1
UPNV	Upernavik	128.84	19	iP	PKPdf	15 58 20.1	+0.2
UPNV				IAmb	IAmb	15 58 20.3	
	comp=Z,24nm,0.6s						
KBS	Kingsbay	131.93	357	ePKPdf	PKPdf	15 58 25.7	+0.1
KBS				ePP	PP	16 00 48.7	+1.6
SPA0	Spitsbergen Ar	132.44	356	ePKPdf	PKPdf	15 58 27.1	+0.4
SFJD	Kangerlussuaq	132.78	25	PKP	PKPdf	15 58 26.1	-1.3
	comp=Z,8.9nm,0.5s,baz=321,slow=3.1,SNR=11						
HOPEN	Hopen	133.26	353	ePKPdf	PKPdf	15 58 28.2	+0.1
HOPEN				ePP	PP	16 00 55.5	-0.1
DAG	Danmarks Havn	133.32	6	iP	PKPdf	15 58 26.8	-1.4
	comp=Z,7.1nm,0.8s						
DAG	Danmarks Havn	133.32	6	iPKIKP	PKPdf	15 58 26.8	-1.4
DAG				pmax	pmax		
	comp=Z,7.0nm,0.8s						
DAG	Danmarks Havn	133.32	6	iP	PKPdf	15 58 26.9	-1.4
DAG				IAmb	IAmb	15 58 27.8	
	comp=Z,7.1nm,0.8s						
KMBO	Kilima Mbogo	133.45	233	PKP	PKPdf	15 58 31.9	+1.1
	comp=Z,4.0nm,0.8s,baz=29,slow=2.7,SNR=8.7						
SUMG	Summit	133.49	16	iP	PKPdf	15 58 30.0	+0.8
SUMG	Summit	133.49	16	iPKIKP	PKPdf	15 58 30.0	+0.8
SUMG	Summit	133.49	16	iP	PKPdf	15 58 30.0	+0.8
ARU	Arti	133.54	320	iPKIKP	PKPdf	15 58 28.4	-0.8
ARU						16 00 54.5	
HSPB	Hornsund (broa	133.63	356	ePKPdf	PKPdf	15 58 29.4	+0.6
HSPB				ePP	PP	16 00 59.7	+1.8
GEYT	Alibeck	133.68	294	PKP	PKPdf	15 58 30.9	+0.8
	comp=Z,3.8nm,0.6s,baz=197,slow=4.5,SNR=5.6						
GEYT				SKPbc	SKPab	16 01 58.5	-0.1
	comp=Z,2.8nm,0.7s,baz=102,slow=11,SNR=4.9						
ICESG	Greenland Ices	135.35	20	iP	PKPdf	15 58 33.0	+0.3
ICESG				IAmb	IAmb	15 58 34.2	
	comp=Z,21nm,0.6s						
DBG	Daneborg	135.38	8	iP	PKPdf	15 58 30.9	-1.3
DBG				IAmb	IAmb	15 58 32.6	
	comp=Z,7.5nm,0.8s						
KIRV	Kirov	137.82	325c	iPKIKP	PKPdf	15 58 37.9	+0.9
MBAR	Mbarara	138.11	227	PKP	PKPdf	15 58 41.1	+1.8
	comp=Z,1.9nm,0.2s,baz=24,slow=20,SNR=5.5						
HAMF	Hammerfest	138.64	349	ePKPdf	PKPdf	15 58 38.3	+0.1
ARA0	ARCESS Array S	139.28	347	ePKPdf	PKPdf	15 58 40.8	+1.3
ARCES	ARCESS Array B	139.28	347	PKhKP	PKPpre	15 58 32.1	
	comp=Z,3.5nm,0.5s,baz=39,slow=2.3,SNR=28						
ARCES				PKP	PKPdf	15 58 37.9	-1.6
	comp=Z,17nm,0.6s,baz=40,slow=1.5,SNR=15						
JETT	Jettan, Norway	140.12	350	e	PKPdf	15 58 34.8	-6.3
KTK1	Kautokeino	140.15	348	e	PKPdf	15 58 34.0	-7.1
KTK1				ePKPdf	PKiKP	15 58 41.9	-1.7
TRO	Tromso	140.27	351	ePKPdf	PKPdf	15 58 42.0	+0.8
TRO				ePP	PP	16 01 38.5	-0.9
KLMR	Klimovskoe	141.32	331	ePKIKP	PKPdf	15 58 39.4	-4.0
KLMR				pmax	pmax		
	comp=Z,12nm,0.7s						
KLMR	Klimovskoe	141.32	331	ePKPdf	PKPdf	15 58 39.4	-4.0
KLMR				AMP		15 58 44.3	
	comp=Z,12nm,0.7s						
LOF	Lofoten	142.35	353	ePKPdf	PKiKP	15 58 47.5	-0.6
FAUS	Fauske	142.86	351	ePKPdf	PKPdf	15 58 44.9	-1.1
KONS	Konsvik	143.97	352	ePKPdf	PKPbc	15 58 46.2	+0.3
GNI	Garni	144.22	297	PKP	PKPdf	15 58 49.3	-0.2
	comp=Z,14nm,0.7s,baz=264,slow=9.2,SNR=3.7						
GNI	Garni	144.22	297c	iPKIKP	PKiKP	15 58 52.9	-0.1
GNI				pmax	pmax		
	comp=Z,115nm,2.5s						
VRH	Novokhopyorsk	144.44	316	ePKIKP	PKPab	15 58 46.2	-1.3
VRH				pmax	pmax		
	comp=Z,20nm,0.6s						
ZEI	Tsey	144.72	301	iPKIKP	PKPab	15 58 47.6	-1.5
ZEI				pmax	pmax		
	comp=Z,20nm,0.7s						
MOS	Moscow	144.83	325	ePKIKP	PKPab	15 58 47.1	-1.7
MOS				pmax	pmax		
	comp=Z,64nm,0.8s						
AKH	Akhalkalaki	145.12	299	⇓P	PKPbc	15 58 50.7	+0.2
KBZ	Khabaz	145.35	303	PKPbc	PKPbc	15 58 50.1	-0.8
	comp=Z,20nm,0.9s,baz=116,slow=2.8,SNR=19						
KVAR	Kislovodsk Arr	145.46	303	PKPbc	PKPbc	15 58 51.7	+0.2
	comp=Z,14nm,1.0s,baz=270,slow=20,SNR=4.0						
KIV	Kislovodsk	145.47	303	⇑P	PKPbc	15 58 51.3	-0.2
KIV	Kislovodsk	145.47	303	ePKIKP	PKPbc	15 58 50.3	-1.2
KIV				pmax	pmax		
	comp=Z,96nm,1.1s						
LPSR	Galich'ya Gora	145.55	319	ePKIKP	PKPdf	15 58 50.1	-1.0
LPSR				pmax	pmax		
	comp=Z,80nm,0.7s						
OBN	Obninsk	145.67	324	PKPbc	PKPdf	15 58 50.6	-0.5
	comp=Z,32nm,0.5s,baz=146,slow=1.5,SNR=30						
OBN	Obninsk	145.67	324c	ePKIKP	PKPdf	15 58 50.5	-0.7
OBN				pmax	pmax		
	comp=Z,64nm,0.7s						
OBN	Obninsk	145.67	324		PKPdf	15 58 50.0	-1.2
FINES	FINESS Array B	145.78	339	PKPbc	PKPdf	15 58 50.5	-0.6
	comp=Z,112nm,0.5s,baz=58,slow=3.4,SNR=676						
FINES	FINESS Array B	145.78	339	PKP2	PKPdf	15 58 50.7	-0.5
FINES	FINESS Array B	145.78	339		PKPdf	15 58 50.7	-0.5
VSR	Storozhevoye	145.95	317	ePKIKP	PKPdf	15 58 50.7	-1.1
VSR				pmax	pmax		
	comp=Z,100nm,0.6s						
VORD	Divnogorie	145.96	316	ePKP2	PKPdf	15 58 51.1	-0.7
VORD				pmax	pmax		
	comp=Z,60nm,0.6s						
NSS	Namsos	146.00	352	ePKPdf	PKPdf	15 58 51.3	-0.2
CHVG	Ch'k'valeri	146.06	301	⇑P	PKPab	15 58 54.1	+0.2
MARD	Mardin	147.32	292		PKPbc	15 58 57.4	+0.2
KTUT	Trabzon	147.96	298	⇓P	PKiKP	15 59 01.2	+0.8
MOL	Molde	148.35	355	ePKPdf	PKPdf	15 58 57.4	+2.0
AAL	Aland	148.53	343	eP	PKPdf	15 58 57.7	+1.9
MTSE	Matsula	148.63	338	eP	PKPbc	15 58 59.3	-0.5
DOMB	Dombas	148.74	353	ePKPbc	PKPbc	15 58 59.3	-0.7
AKN	Aaknes	148.78	355	ePKPbc	PKPbc	15 59 00.2	0.0
UPP	Uppsala	149.39	344	eP	PKPbc	15 59 00.5	-1.1
NB2	NORSAR Subarra	149.47	351	PKP	PKPbc	15 59 01.4	-0.5
	comp=Z,18nm,0.6s,baz=15,slow=2.6						
NOA	NORSAR Array B	149.47	351	PKP	PKPdf	15 58 57.2	-0.2
	comp=Z,8.8nm,0.6s,baz=14,slow=4.2,SNR=59						
NOA				PKPbc	PKPbc	15 59 01.6	-0.3
	comp=Z,24nm,0.7s,baz=14,slow=4.2,SNR=46						
FOO	Floro	149.47	357	ePKPbc	PKPbc	15 59 01.7	-0.1
NC602	NORSAR Array S	149.71	350	ePKPbc	PKPbc	15 59 01.5	-0.9
HYA	Hoyanger	149.84	356	ePKPbc	PKPbc	15 59 02.4	-0.3
HFS	Hagfors	149.94	348	PKP	PKPdf	15 58 57.6	-0.5
	comp=Z,49nm,0.7s,baz=27,slow=0.7,SNR=20						
HFS				PKPbc	PKPbc	15 59 02.0	-1.0
	comp=Z,48nm,0.7s,baz=72,slow=4.7,SNR=41						
SUE	Sulen	150.03	357	ePKPbc	PKPbc	15 59 03.0	-0.1
IDID	Didziasalis	150.07	331	eP	PKPdf	15 59 00.4	+1.9
MNK	Minsk	150.12	329	ePKP2	PKPbc	15 59 03.0	-0.6
MNK	Minsk	150.12	329	iPKP	PKPbc	15 59 02.5	-1.2
	comp=E,2.0nm,0.9s						
MNK				iPKP	PKPbc	15 59 02.5	-1.2
	comp=N,13nm,1.0s						
MNK				iPKP	PKPbc	15 59 02.5	-1.2
	comp=Z,54nm,1.0s						
MNK				iSKP		16 02 33.4	
MNK				iPKS	PP	16 02 37.3	-1.2
MNK				iPP	PP	16 02 43.2	+4.7
MNK				iPPP	PPP	16 06 04.9	
MNK				iSKS	SKSdf	16 06 07.8	+4.3
MNK				iSKKS	SKKSdf	16 15 00.1	+2.7
MNK				iSS	SS	16 21 59.7	+6.7
MNK				iSSS	SSS	16 27 40.7	
MNK				iLQ	LQ	16 58 51.7	
MNK				iLR	LR	17 10 17.7	
ISAL	Salakas	150.14	332	eP	PKPdf	15 59 01.7	+3.1
SKAR	Skarslia	150.15	354	ePKPbc	PKPbc	15 59 03.6	0.0
IIGN	Ignalina	150.26	332	eP	PKPdf	15 59 01.8	+3.0
NACGM	Naroch	150.33	330	iPKP	PKPbc	15 59 03.3	-0.8
NACGM				iPKP	PKPbc	15 59 03.3	-0.8
NACGM				iPKP	PKPbc	15 59 03.3	-0.8
NACGM				iPP	PP	16 02 19.0	-21
NACGM				iSKS	SKSdf	16 05 53.6	-10
NACGM				iPPP	PPP	16 06 09.7	
NACGM				iSS	SS	16 21 20.9	-34
NACGM				iSSS	SSS	16 26 11.4	
NACGM				iLQ	LQ	16 56 25.8	
NACGM				iLR	LR	17 04 00.9	
ASK	Askoy	150.58	357	ePKPbc	PKPbc	15 59 04.6	+0.1
OSL	Oslo	150.60	351	ePKPbc	PKPbc	15 59 04.6	0.0
BER	Bergen	150.67	356	ePKPbc	PKPbc	15 59 05.1	+0.4
KONO	Kongsberg	151.02	352	PKIKP	PKPbc	15 59 05.4	-0.2
KONO	Kongsberg	151.02	352		PKPbc	15 59 05.4	-0.2
KONO	Kongsberg	151.02	352	ePKPbc	PKPbc	15 59 05.2	-0.4
PABE	Paberze	151.04	334	eP	PKPbc	15 59 04.4	-1.3
ODD1	Odda	151.06	355	ePKPbc	PKPbc	15 59 05.6	-0.1
PBUR	Paburge	151.38	336	eP	PKPbc	15 59 05.9	-0.6
MMAI	Mount Meron Ar	151.49	283	PKPbc	PKPbc	15 59 07.9	+0.2
	comp=Z,18nm,0.4s,baz=83,slow=7.6,SNR=108						
BLS5	Blasjo	151.56	355	ePKPbc	PKPbc	15 59 07.4	+0.5
AKASG	Malin Array Be	151.77	322	PKP	PKPdf	15 59 00.1	-1.1
	comp=Z,56nm,0.8s,baz=53,slow=2.5,SNR=7.5						
AKASG				PKPbc	PKPbc	15 59 06.8	-0.7
	comp=Z,15nm,0.4s,baz=42,slow=3.2,SNR=31						
AKBB	Malin Array Si	151.77	322	PKIKP	PKPbc	15 59 06.9	-0.7
AKBB	Malin Array Si	151.77	322		PKPbc	15 59 06.9	-0.7
KMY	Karmoy	151.85	356	ePKPbc	PKPbc	15 59 07.1	-0.4
SUW	Suwalki	152.45	332	eP	PKPbc	15 59 08.6	-0.5
HOMB	Homborsund	152.50	352	ePKPbc	PKPbc	15 59 09.0	+0.1
HOMB	Homborsund	152.50	352	iP	PKPbc	15 59 09.2	+0.2
SNART	Snartemo	152.57	354	ePKPbc	PKPbc	15 59 09.1	-0.1
SNART	Snartemo	152.57	354	iP	PKPbc	15 59 09.3	+0.2
BR131	Keskin Array S	152.76	297	PKIKP	PKPbc	15 59 09.7	-0.7
BR131	Keskin Array S	152.76	297		PKPbc	15 59 09.7	-0.7
BRTR	Keskin Array B	152.76	297	PKP	PKPdf	15 59 03.0	-0.2
	comp=Z,3.1nm,1.2s,baz=336,slow=2.7,SNR=3.8						
BRTR				PKPbc	PKPbc	15 59 09.6	-0.9
	comp=Z,11nm,0.5s,baz=144,slow=4.9,SNR=54						
BRTR	Keskin Array B	152.76	297		PKPbc	15 59 09.8	-0.6
SORM	Soroca	153.60	318	⇑P	PKPbc	15 59 10.6	-1.1
MILM	Milestii Mici	153.92	315	⇓P	PKPbc	15 59 11.8	-0.7
BSD	Bornholm Skovb	154.29	342	iP	PKPbc	15 59 12.5	-0.5
BSD	Bornholm Skovb	154.29	342	ePKIKP	PKPbc	15 59 12.5	-0.5
BSD	Bornholm Skovb	154.29	342	eP	PKPbc	15 59 12.5	-0.5
LIC	Lamto	154.39	164	ePKIKP	PKPdf	15 59 06.3	+0.1
	comp=Z,41nm,0.6s						
KIC	Kosan Boka	154.59	165	ePKIKP	PKPdf	15 59 06.8	+0.3
	comp=Z,24nm,0.6s						
TLCR		154.67	311	⇓P	PKPab	15 59 30.7	+1.7
TIC	Toumodi	154.80	164	ePKIKP	PKPdf	15 59 06.9	+0.1
DBIC	Dimbokro	154.86	164	PKP	PKPdf	15 59 07.3	+0.4
	comp=Z,4.5nm,0.6s,baz=170,slow=1.4,SNR=7.3						
DBIC	Dimbokro	154.86	164		PKPdf	15 59 07.8	+1.0
TPGR	Topolog	155.06	311	⇑P	PKPab	15 59 28.6	-2.2
TIRR	Tirgusor	155.23	310	⇓P	PKPab	15 59 29.6	-1.9
PRAR	RASCA	155.23	318	⇓P	PKPab	15 59 29.0	-2.4
MFTR	Murfatlar	155.33	309	⇓P	PKPdf	15 59 14.5	+7.9
BIZ	Bicaz	155.53	317	⇑P	PKPdf	15 59 14.5	+7.8
EKA	Eskdalemuir Ar	155.59	7	PKP	PKPdf	15 59 06.3	-0.2
	comp=Z,0.9nm,0.5s,baz=329,slow=1.4,SNR=5.5						
EKA				PKPbc	pPKPdf	15 59 14.2	-2.8
	comp=Z,1.6nm,0.6s,baz=342,slow=1.9,SNR=4.6						
EKA				PKPab	PKPab	15 59 32.0	-0.6
	comp=Z,6.5nm,0.7s,baz=343,slow=2.8,SNR=8.9						
BURAR	Bucovina Array	155.67	319	⇓P	PKPdf	15 59 16.3	+9.3
VRI	Vrincioaia	155.69	314	⇑P	PKPab	15 59 34.5	+1.0
PLOR	Plostina	155.74	314	⇑P	PKPab	15 59 27.1	-6.6
ICOR	Ion Corvin	155.77	310	⇓P	PKPdf	15 59 18.6	+12
ISR	Istrita	156.15	313	⇑P	PKPdf	15 59 18.7	+11
RASA	Rasa	156.16	310	⇓P	PKPab	15 59 24.8	-11
NEHR	Nehoiu	156.16	314	⇓P	PKPdf	15 59 12.9	+5.3
MLR	Muntele Rosu	156.35	314	⇑P	PKPdf	15 59 12.7	+4.6
KOLS	Kolonicke sedl	156.42	325	ePKP2	PKPab	15 59 38.3	+1.8
KOLS	Kolonicke sedl	156.42	325	ePKP	PKPab	15 59 38.3	+1.8
DOPR	Dopca	156.45	316	⇑P	PKPdf	15 59 07.1	-0.9
ARCR	ARCALIA	156.45	319	⇑P	PKPdf	15 59 08.1	+0.2
CRVS	Cervenica-Dubn	156.84	326	ePKP2	PKPab	15 59 37.5	-0.8
CRVS	Cervenica-Dubn	156.84	326	ePKP	PKPab	15 59 37.5	-0.8
VOIR		156.92	315	⇓P	PKPab	15 59 37.2	-1.6
HUMR	Humele	157.41	313	⇑P	PKPab	15 59 40.0	-0.9
DRGR		157.54	320	⇑P	PKPdf	15 59 07.4	-2.1
LANS	Liptovska Anna	157.59	328	ePKP2	PKPab	15 59 43.4	+1.9
LANS	Liptovska Anna	157.59	328	ePKP	PKPab	15 59 43.4	+1.9
LOT	Lotru	157.69	316	⇑P	PKPdf	15 59 03.0	-6.7
UPC	Upice	157.94	335	ePKP2	PKPab	15 59 42.5	-0.4
UPC	Upice	157.94	335	ePKPAB	PKPab	15 59 42.5	-0.4
MORC	Moravsky Berou	157.94	332	⇑P	PKPdf	15 59 12.0	+2.1
DPC	Dobruska-Polom	157.95	335	ePKIKP	PKPdf	15 59 12.0	+2.2
DPC	Dobruska-Polom	157.95	335	ePKPDF	PKPdf	15 59 12.0	+2.2
DPC				ePKPAB	PKPab	15 59 42.7	-0.3
PLVB	Pleven	158.16	310	⇑P	PKPab	15 59 44.4	+0.2
CLL	Collm	158.21	341	ePKPdiff	PKPdf	15 59 23.0	+13
CLL				iPKPab	PKPab	15 59 42.7	-1.3
	comp=Z,11nm,0.8s						
CLL				i		15 59 46.9	
	comp=Z,13nm,0.6s						
CLL	Collm	158.21	341	iPKP2	PKPab	15 59 42.7	-1.3
CLL				pmax	pmax		
	comp=Z,11nm,0.8s						
GZR	Gura Zlata	158.31	317	⇓P	PKPdf	15 59 10.1	-0.4
BRG	Berggiesshubel	158.32	339	ePKP	PKPdf	15 59 09.2	-0.9
BRG				Amp		15 59 11.4	
	comp=Z,16nm,1.6s						
BRG				ix	x	15 59 43.7	
BRG				Amp		15 59 45.8	
	comp=Z,6.2nm,0.7s						
BRG				ex	x	16 43 09.2	
BRG				Amp		16 43 10.9	
	comp=Z,16nm,1.7s						
VYHS	Vyhne	158.36	328	ePKP2	PKPab	15 59 47.1	+2.3
VYHS	Vyhne	158.36	328	ePKP	PKPab	15 59 47.1	+2.3
SIRR	Siria	158.43	320	⇑P	PKPdf	15 59 15.0	+4.5
VRAC	Vranov	158.69	333	PKPab	PKPab	15 59 45.3	-0.9
	comp=Z,3.7nm,0.6s,baz=143,slow=3.1,SNR=4.1						
HERR	Herculane	158.80	316	⇓P	PKPdf	15 59 10.8	-0.1
PUNG	Punghina	158.81	314	⇑P	PKPdf	15 59 18.4	+7.5
BZS	Buzias	158.85	319	⇑P	PKPdf	15 59 11.0	+0.1
SMOL	Smolenice	158.97	330	ePKP2	PKPab	15 59 47.3	-0.1
SMOL	Smolenice	158.97	330	ePKP	PKPab	15 59 47.3	-0.1
MODS	Modra-Piesok	159.14	330	ePKIKP	PKPdf	15 59 10.4	-0.9
MODS	Modra-Piesok	159.14	330	ePKP	PKPdf	15 59 10.4	-0.9
MODS				e		15 59 48.3	
VTS	Vitosha	159.42	310	⇑P	PKPab	15 59 49.0	-0.8
KHC	Kasperske Hory	159.94	337	ePKIKP	PKPdf	15 59 12.0	-0.2
KHC				e		15 59 50.9	
KHC	Kasperske Hory	159.94	337	ePKPDF	PKPdf	15 59 12.0	-0.2
KHC				ePKPAB	PKPab	15 59 50.9	-0.8
CKRC	Cesky Krumlov	159.95	335	ePKPDF	PKPdf	15 59 12.1	-0.1
CKRC				ePKPAB	PKPab	15 59 51.0	-0.7
CONA	Conrad Observa	160.08	331	eP	PKPdf	15 59 12.1	-0.3
	comp=Z,3.0nm,0.7s						
CONA				eP	PKPab	15 59 51.9	-0.5
	comp=Z,8.2nm,0.7s						
FRGS	Fruska Gora	160.14	320	⇑P	PKPdf	15 59 12.3	-0.2
GERES	GERESS Array B	160.15	336	PKP	PKPdf	15 59 11.7	-0.8
	comp=Z,1.4nm,0.8s,baz=18,slow=0.4,SNR=7.6						
GERES				PKPab	PKPab	15 59 51.1	-1.5
	comp=Z,1.8nm,0.6s,baz=33,slow=4.8,SNR=6.8						
GRF	Grafenberg Arr	160.16	342	ePKPbc	PKPab	15 59 52.5	-0.1
	baz=28,slow=3.8						
IDI	Anoyia	160.22	288	PKP	PKPdf	15 59 13.1	+0.1
	comp=Z,11nm,0.8s,baz=230,slow=7.9,SNR=1.4						
IDI				PKPab	PKPab	15 59 52.8	-0.7
	comp=Z,13nm,0.7s,baz=62,slow=8.6,SNR=5.4						
BTNL	Ternell	160.32	352	dPKPab	PKPab	15 59 52.8	-0.5
BGES	Gesves	160.63	354	dPKPab	PKPab	15 59 53.3	-1.3
BMRD	Maredsous	160.74	354	dPKPab	PKPab	15 59 54.0	-1.0
ARSA	Arzberg	160.76	331	eP	PKPab	15 59 55.4	+0.1
	comp=Z,4.0nm,0.7s						
SOKA	Soboth	161.41	330	eP	PKPdf	15 59 13.4	-0.6
	comp=Z,6.5nm,1.8s						
SOKA				iP	PKPab	15 59 57.3	-0.9
	comp=Z,4.1nm,0.8s						
OBKA	Obir	161.75	331	iP	PKPdf	15 59 13.7	-0.6
	comp=Z,2.8nm,1.0s						
OBKA				eP	PKPab	15 59 58.5	-1.2
	comp=Z,2.6nm,0.8s						
KBA	Koelnbreinsper	161.77	334	eP	PKPdf	15 59 13.4	-1.0
	comp=Z,6.7nm,1.1s						
KBA				iP	PKPab	15 59 59.1	-0.8
	comp=Z,3.5nm,0.8s						
MYKA	Terra Mystica	162.03	333	eP	PKPdf	15 59 15.0	+0.5
	comp=Z,1.2nm,0.4s						
MYKA				eP	PKPab	15 59 59.2	-1.7
	comp=Z,3.3nm,0.5s						
TORD	Torodi Ar. Bea	162.07	180	PKP	PKPdf	15 59 15.7	+0.2
	comp=Z,5.1nm,0.4s,baz=325,slow=1.3,SNR=9.2						
TORD				PKPab	PKPab	16 00 02.4	+0.7
	comp=Z,24nm,0.6s,baz=122,slow=3.0,SNR=21						
LJU	Ljubljana	162.13	330	ePKPdf	PKPdf	15 59 13.9	-0.7
GORS	Gorjuse	162.14	331	ePKPdf	PKPdf	15 59 12.9	-1.8
WATA	Walderalm	162.17	338	eP	PKPdf	15 59 13.8	-0.9
	comp=Z,8.8nm,1.5s						
WATA				eP	PKPab	16 00 01.0	-0.6
	comp=Z,5.2nm,1.0s						
WTTA	Wattenberg	162.21	337	eP	PKPdf	15 59 14.4	-0.4
	comp=Z,9.5nm,1.5s						
WTTA				iP	PKPab	16 00 01.4	-0.4
	comp=Z,4.5nm,0.5s						
BOJS	Bojanci	162.22	327	ePKPdf	PKPdf	15 59 14.0	-0.7
RETA	Reutte	162.29	340	iP	PKPab	16 00 01.7	-0.3
	comp=Z,8.9nm,0.9s						
MOTA	Moosalm	162.31	339	eP	PKPdf	15 59 14.3	-0.7
	comp=Z,7.0nm,1.3s						
MOTA				iP	PKPab	16 00 01.8	-0.4
	comp=Z,8.2nm,0.9s						
ABTA	Abfaltersbach	162.35	335	iP	PKPdf	15 59 14.1	-0.8
	comp=Z,8.8nm,1.0s						
SQTA	Sankt Quirin	162.39	338	iP	PKPdf	15 59 14.0	-1.0
	comp=Z,11nm,1.7s						
SQTA				eP	PKPab	16 00 02.1	-0.4
	comp=Z,8.0nm,0.7s						
KOWA	Kowa	162.59	161	PKP	PKPdf	15 59 16.1	+0.2
	comp=Z,4.9nm,0.8s,baz=254,slow=2.3,SNR=11						
KOWA				PKPab	PKPab	16 00 05.3	+1.3
	comp=Z,6.6nm,0.7s,baz=201,slow=2.6,SNR=7.9						
FETA	Feichten	162.72	339	eP	PKPdf	15 59 14.4	-0.9
	comp=Z,7.5nm,1.1s						
FETA				eP	PKPab	16 00 03.6	-0.5
	comp=Z,6.2nm,0.9s						
DAVA	Damuels	162.72	341	eP	PKPab	16 00 03.1	-0.9
	comp=Z,14nm,0.7s						
DAVOX	Davos/Dischmat	163.19	340	PKP	PKPdf	15 59 15.2	-0.7
	comp=Z,4.5nm,1.0s,baz=209,slow=8.3,SNR=3.8						
DAVOX				PKPab	PKPab	16 00 05.1	-1.0
	comp=Z,9.3nm,0.7s,baz=323,slow=2.7,SNR=11						
TIP	Timpagrande	165.36	307	⇓P	PKPdf	15 59 17.6	-0.3
PGAV	Gavieira, Arco	166.55	34	ePKPdf	PKPdf	15 59 19.7	+0.9
POLO	Lamas de Olo	167.23	34	ePKPdf	PKPdf	15 59 19.9	+0.6
MVO	Moncorvo	167.76	33	ePKPdf	PKPdf	15 59 21.2	+1.5
PCBR	Castelo Branco	168.54	38	ePKPdf	PKPdf	15 59 21.6	+1.5
PNCL	Nicolau / Gran	169.06	48	ePKPdf	PKPdf	15 59 22.3	+1.8
EVO	Evora	169.12	45	ePKPdf	PKPdf	15 59 21.9	+1.4
PFVI	Vila Bisbo	169.41	53	ePKPdf	PKPdf	15 59 22.8	+2.0
MESJ	Messejana	169.42	48	ePKPdf	PKPdf	15 59 22.2	+1.5
PCVE	Castro Verde	169.66	49	ePKPdf	PKPdf	15 59 22.5	+1.6
PBAR	Barrancos	169.94	44	ePKPdf	PKPdf	15 59 22.4	+1.4
PBDV	Barranco-do-Ve	169.95	50	ePKPdf	PKPdf	15 59 23.2	+2.1
PVAQ	Vaqueiros	170.00	49	ePKPdf	PKPdf	15 59 22.6	+1.5
ESDC	Sonseca Array	170.31	27	PKP	PKPdf	15 59 21.9	+0.6
	comp=Z,5.8nm,1.1s,baz=353,slow=2.8,SNR=16						
ESDC				PKPab	PKPab	16 00 37.5	-0.1
	comp=Z,3.9nm,0.7s,baz=322,slow=4.5,SNR=18						
ESDC	Sonseca Array	170.31	27		PKPab	16 00 37.8	+0.2
KEST	Kesra	172.19	308	PKP	PKPdf	15 59 22.8	+0.4
	comp=Z,8.1nm,0.9s,baz=281,slow=2.7,SNR=5.8						
MDT	Midelt	174.35	71	PKP	PKPdf	15 59 24.7	+1.4
	comp=Z,7.6nm,0.9s,baz=193,slow=1.3,SNR=9.6						

IDC ***20*** *15:57:41.6±0.6, 35°.78N×142°.25E, h0^{km}, mb4.2/24, mb1 4.3/28, mb1mx4.1/70, mbtmp4.2/28, ML3.2/4, MS3.5/5, Ms1 3.5/5, ms1mx3.0/41 Error ellipse: s-maj=14.7km s-min=12.1km az=118.0*

JMA ***20*** *15:57:44.4±0.2, 35°.91N×142°.26E, h66^{km}±4^{km}, M3.8*

NIED ***20*** *15:57:44.5, 35°.91N×142°.26E, h66^{km}, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}2.56; $M_{\theta\theta}$-0.26; $M_{\phi\phi}$-2.30; $M_{r\theta}$0.17; $M_{\theta\phi}$-0.55; $M_{\phi r}$-0.47; Fault plane solution: $M_0$2.54000×10^{15} NP1: ϕ_s188.00000°, δ50.00000°, λ82.00000°. NP2: ϕ_s20.00000°, δ41.00000°, λ99.00000°.*

NEIC ***20*** *15:57:46.2±2.4, 35°.99N±0°.07×142°.31E±0°.09, h33^{km}±6^{km}, mb4.4/18 Error ellipse: s-maj=13.6km s-min=6.4km az=130.0*

ISC 20 15:57:43.9±0.5, **35°.84N**±0°.04×**142°.27E**±0°.05, **h18**^{km}, **n116,** σ**1^{s}93**/115, **mb4.3**/45, **MS4.2**/8, **2D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	Chosi	1.15	263	P	Pg	15 58 05.2	-1.0
JHYU	Hitachinakayam	1.45	290	P	Pb	15 58 08.8	-1.5
JHO	Hitachi	1.57	300	P	Pb	15 58 09.9	-2.5
JYT	Yasato	1.72	283	Pn	Pb	15 58 12.4	-2.6
JYT				Sn	Sb	15 58 35.0	-1.3
BSO3	Boso 3	1.77	235	P	Pn	15 58 14.0	+0.6
JFK	Kawauchi	1.89	324	P	Pn	15 58 14.0	-1.3
JFK				eS	Sn	15 58 36.6	-2.0
JFT	Otama	2.28	318	P	Pb	15 58 20.6	-3.9

JMM	Marumori	2.34	330	eS	Sn	15 58 47.6	-2.1
JMM	Marumori	2.34	330		Pn	15 58 20.1	-1.3
JMM				Sn	Sn	15 58 47.9	-1.8
JAG	Ashikaga	2.35	285	P	Pn	15 58 21.3	-0.3
JAG				S	Sn	15 58 49.4	-0.6
JIM2	Oshima 3	2.58	245	eS	Sn	15 58 55.2	-0.4
JFY	Yanaizu	2.58	308	P	Pn	15 58 24.8	0.0
JKT	Katashina	2.61	292	P	Pn	15 58 25.4	+0.2
JOD2	Odawara 2	2.66	258	P	Pn	15 58 25.9	+0.1
JRY	Ryogami san	2.74	275	P	Pn	15 58 27.1	+0.2
MJAR	Matsushiro Arr	3.36	283	Pn	Pn	15 58 36.3	+0.9
	1.8nm,0.3s,baz=96,slow=8.7,SNR=84						
MJAR				LR	LR	16 00 07.4	
	comp=Z,443nm,20.8s,baz=125,slow=44						
MAJO	Matsushiro	3.36	283		Pn	15 58 36.6	+1.1
MAT	Matsushiro	3.36	283	P	Pn	15 58 36.4	+1.0
MAT				S	Sn	15 59 16.2	+1.3
JHJ	Hachijo jima 2	3.41	218	Pn	Pn	15 58 35.3	-0.8
	6.1nm,0.3s,baz=252,slow=20,SNR=2.7						
JHJ				Sn	Sn	15 59 13.4	-2.6
	69nm,0.3s,baz=54,slow=19,SNR=3.6						
JSD	Sado	3.88	305	Pn	Pn	15 58 42.6	-0.1
JGF	Kuroka	4.00	268		Pn	15 58 46.2	+1.9
INU	Inuyama	4.31	265		Pn	15 58 50.0	+1.6
JTM	Tenmabayashi	5.03	350		Pn	15 58 57.1	-1.2
JWT	Wachi	5.62	266	Pn	Pn	15 59 07.7	+1.2
ERM	Erimo	6.20	6	Pn	Pn	15 59 12.1	-2.3
JEW	Eniwo	7.02	355	Pn	Pn	15 59 24.6	-1.1
JMN	Monobe	7.22	255		Pn	15 59 26.9	-1.6
JHS	Saijyo	7.52	266	Pn	Pn	15 59 35.3	+2.7
JKA	Kamikawa-asahi	8.27	2	Pn	Pn	15 59 40.6	-2.2
ASAJ	Asahikawa	8.27	2	Pn	Pn	15 59 40.5	-2.3
	1.8nm,0.3s,baz=222,slow=12,SNR=27						
ASAJ				Sn	Sn	16 01 12.9	-2.8
	1.7nm,0.3s,baz=118,slow=32,SNR=3.8						
JCJ	Chichijima	8.72	180	Sn	Sn	16 01 19.1	-7.9
	15nm,0.3s,baz=40,slow=22,SNR=3.9						
JNU	Nakatsue	9.79	257	Pn	Pn	16 00 04.9	+1.2
	0.5nm,0.3s,baz=64,slow=5.7,SNR=5.4						
JNU				LR	LR	16 03 52.2	
	comp=Z,274nm,18.8s,baz=86,slow=38						
JNU	Nakatsue	9.79	257	Pn	Pn	16 00 05.6	+1.9
USRK	Ussuriysk Ar.	11.47	320	Pn	Pn	16 00 29.3	+2.6
	baz=318,slow=18,SNR=5.4						
USA0B	Ussuriysk Arra	11.47	320	Pn	Pn	16 00 23.4	-3.3
KSRS	Korea Array	11.64	282	Pn	Pn	16 00 32.8	+3.8
	0.1nm,0.3s,baz=102,slow=13,SNR=19						
KSRS				LR	LR	16 04 52.2	
	comp=Z,133nm,18.9s,baz=88,slow=37						
CN2	Changchun	15.15	307	eP	P	16 01 22.8	+0.9
CN2				eS	Sn	16 04 09.3	+5.1
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,130nm,4.0s						
CN2				LR	LR		
	comp=N,560nm,12.0s						
CN2				LR	LR		
	comp=E,680nm,12.0s						
CN2				LR	LR		
	comp=Z,500nm,14.0s						
KLR	Kul'dur	15.44	333	Pn	Pn	16 01 18.5	-2.1
	comp=Z,0.1nm,0.3s,baz=133,slow=9.6,SNR=4.1						
KLR				LR	LR	16 07 13.9	
	comp=Z,262nm,18.4s,baz=134,slow=37						
SSE	Sheshan	18.21	261		Pn	16 01 53.0	-2.7
PETK	Petropavlovsk-	20.40	27	P	Pn	16 02 19.2	-2.5
	comp=Z,7.3nm,1.2s,baz=231,slow=25,SNR=2.9						
BJT	Baijiatuau	20.98	289	P	Pn	16 02 25.8	-2.8
MA2	Magadan	24.38	10	P	P	16 03 01.2	+0.4
	comp=Z,3.8nm,0.7s,baz=193,slow=8.0,SNR=4.4						
HHC	Hu-ho-hao-te	24.52	291	eP	P	16 03 01.4	-1.0
HHC				S	S	16 07 14.8	-7.4
HHC				pmax	pmax		
	comp=Z,2.0nm,0.4s						
HHC				pmax	pmax		
	comp=Z,72nm,4.8s						
HHC				LR	LR		
	comp=N,320nm,11.1s						
HHC				LR	LR		
	comp=E,310nm,11.9s						
HHC				LR	LR		
	comp=Z,320nm,11.1s						
BTO	Baotou	25.69	290	eP	P	16 03 09.3	-3.7
BTO				S	S	16 07 27.6	-13
H11N2	WAKE ISLAND Hy	26.95	120	T	T	16 31 26.5	
	baz=312,slow=75,SNR=62						
H11N1	WAKE ISLAND Hy	26.96	120	T	T	16 31 27.0	
	baz=312,slow=75,SNR=75						
H11N3	WAKE ISLAND Hy	26.97	120	T	T	16 31 26.9	
	baz=312,slow=75,SNR=58						
XAN	Xi'an	27.32	276	P	P	16 03 27.4	-0.3
XAN				pP	pwP	16 03 36.0	-0.9
XAN				sP	sP	16 03 41.0	+7.4
XAN				S	S	16 08 13.1	+6.5
XAN				sS	sS	16 08 31.6	+19
XAN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
XAN				pmax	pmax		
	comp=Z,170nm,4.6s						
XAN				LR	LR		
	comp=N,320nm,14.1s						
XAN				LR	LR		
	comp=E,270nm,13.6s						
XAN				LR	LR		
	comp=Z,490nm,13.8s						
XAN	Xi'an	27.32	276	P	P	16 03 25.6	-2.1
XAN				IAmb	IAmb	16 03 29.5	
	comp=Z,6.7nm,0.9s						
YAK	Yakutsk	27.38	347	P	P	16 03 28.1	+0.3
	comp=Z,8.1nm,0.6s,baz=354,slow=4.3,SNR=7.4						
YAK	Yakutsk	27.38	347	P	P	16 03 25.3	-2.5
H11S1	WAKE ISLAND Hy	27.64	122	T	T	16 32 15.6	
	baz=314,slow=75,SNR=168						
H11S3	WAKE ISLAND Hy	27.64	122	T	T	16 32 16.0	
	baz=314,slow=75,SNR=175						
H11S2	WAKE ISLAND Hy	27.66	122	T	T	16 32 15.9	
	baz=314,slow=75,SNR=138						
SEY	Seymchan	27.83	10	P	P	16 03 33.1	+1.3
	comp=Z,2.1nm,0.3s,baz=241,slow=1.1,SNR=18						
ENH	Enshi	27.95	268	P	P	16 03 32.8	-0.5
ENH				IAmb	IAmb	16 03 42.5	
	comp=Z,13nm,0.8s						
SONM	Songino Array	29.03	306	P	P	16 03 43.9	+1.0
	comp=Z,4.1nm,0.7s,baz=105,slow=9.3,SNR=7.0						
SONM	Songino Array	29.03	306	P	P	16 03 41.1	-1.8
LZH	Lanzhou	30.97	282	⇓P	P	16 04 01.1	+0.9
LZH				pP	pwP	16 04 07.5	-1.9
LZH				sP	sP	16 04 11.9	+5.8
LZH				pmax	pmax		
	comp=Z,14nm,1.0s						
LZH				LR	LR		
	comp=N,410nm,14.8s						
LZH				LR	LR		
	comp=E,360nm,14.3s						
LZH				LR	LR		
	comp=Z,240nm,15.2s						
TLY	Talaya	31.63	312	P	P	16 04 07.1	+1.3
	comp=Z,4.9nm,0.7s,baz=162,slow=2.1,SNR=12						
GYA	Guiyang	31.73	263	eP	P	16 04 07.3	+0.4
GYA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
GYA				LR	LR		
	comp=Z,230nm,16.4s						
CD2	Chengdu	32.39	272	P	P	16 04 12.4	-0.2
CD2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CD2				LR	LR		
	comp=N,500nm,13.2s						
CD2				LR	LR		
	comp=E,450nm,16.8s						
CD2				LR	LR		
	comp=Z,460nm,8.8s						
GTA	Gaotai	33.59	289	eP	P	16 04 24.1	+1.0
GTA				pP	pwP	16 04 30.3	-2.7
GTA				sP	sP	16 04 33.4	+4.4
GTA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,130nm,8.0s						
GTA				LR	LR		
	comp=N,280nm,13.5s						
GTA				LR	LR		
	comp=E,400nm,11.5s						
GTA				LR	LR		
	comp=Z,270nm,11.6s						
KMI	Kunming	35.49	264	⇓P	P	16 04 40.0	+0.2
KMI				pP	pwP	16 04 48.3	-0.7
KMI				sP	sP	16 04 50.8	+5.1
KMI				pmax	pmax		
	comp=Z,4.0nm,1.3s						
KMI				LR	LR		
	comp=N,310nm,13.7s						
KMI				LR	LR		
	comp=E,210nm,13.0s						
KMI				LR	LR		
	comp=Z,180nm,13.1s						
CM35	Chiang Mai Arr	41.60	257	P	P	16 05 31.0	+0.1
CMMT	Chiang Mai	41.69	258	P	P	16 05 31.0	-0.7
	comp=Z,181nmcomp=Z,3.2nm,0.9s						
CHTO	Chiang Mai	41.69	258	P	P	16 05 31.4	-0.3
CHTO				IAmb	IAmb	16 05 33.2	
	comp=Z,4.9nm,0.9s						
CM31	Chiang Mai Arr	41.88	257	P	P	16 05 31.4	-1.9
CMAR	Chiang Mai Arr	41.88	257	P	P	16 05 34.2	+1.0
	comp=Z,1.8nm,0.8s,baz=48,slow=7.4,SNR=23						
CMAR	Chiang Mai Arr	41.88	257	P	P	16 05 33.9	+0.6
CM04	Chiang Mai Arr	41.89	257	P	P	16 05 35.5	+2.2
	comp=Z,3.5nm,0.9s						
CM02	Chiang Mai Arr	41.89	257	P	P	16 05 35.4	+2.0
	comp=Z,43nmcomp=Z,4.4nm,0.9s						
CM15	Chiang Mai Arr	41.90	257	P	P	16 05 35.0	+1.6
CM05	Chiang Mai Arr	41.91	257	P	P	16 05 35.0	+1.5
	comp=Z,2.4nm,0.8s						
CM13	Chiang Mai Arr	41.93	257	P	P	16 05 35.3	+1.6
	comp=Z,2.7nm,0.7s						
WMQ	Urumqi	42.00	298	eP	P	16 05 35.5	+1.5
MHMT	Maesarieng	42.84	258	P	P	16 05 43.2	+2.2
ZAA0	Zalesovo Array	43.23	313	P	P	16 05 44.2	+0.5
ZAA0				IAmb	IAmb	16 05 47.7	
	comp=Z,4.5nm,0.8s						
ZALV	Zalesovo Beam	43.23	313	P	P	16 05 44.8	+1.1
	comp=Z,4.2nm,0.6s,baz=93,slow=7.1,SNR=21						
ZALV	Zalesovo Beam	43.23	313	P	P	16 05 44.2	+0.5
MK31	Makanchi Array	45.34	303	P	P	16 06 01.8	+1.0
MK31				IAmb	IAmb	16 06 05.0	
	comp=Z,4.4nm,0.8s						
MKAR	Makanchi Array	45.34	303	P	P	16 06 01.5	+0.7
	comp=Z,5.2nm,0.8s,baz=89,slow=9.3,SNR=22						
MKAR				LR	LR	16 25 18.1	
	comp=Z,52nm,19.8s,baz=86,slow=36						
MAKZ	Makanchi	45.55	303	P	P	16 06 04.0	+1.5
MAKZ				IAmb	IAmb	16 06 06.8	
	comp=Z,5.5nm,0.8s						
KURK	Kurchatov	47.21	309	P	P	16 06 15.7	+0.3
KURBB	Kurchatov Arra	47.28	309	P	P	16 06 16.3	+0.3
	comp=Z,4.8nm,0.6s,baz=85,slow=8.0,SNR=35						
MDM	Murphy Dome	49.56	32	P	P	16 06 35.2	+1.8
MDM				IAmb	IAmb	16 06 38.1	
	comp=Z,5.5nm,1.2s						
POKR	Poker Plat Res	49.90	31	P	P	16 06 35.4	-0.5
POKR				IAmb	IAmb	16 06 39.8	
	comp=Z,4.6nm,1.1s						
ILAR	Eielson Array	50.13	32	P	P	16 06 38.1	+0.4
	comp=Z,1.4nm,0.8s,baz=264,slow=6.6,SNR=19						
ILAR	Eielson Array	50.13	32	P	P	16 06 37.3	-0.4
KSH	Kashi	51.53	295	P	P	16 06 53.5	+4.8
KSH				sP	pwP	16 07 03.4	+4.6
KSH				pmax	pmax		
	comp=Z,6.0nm,1.3s						
KSH				pmax	pmax		
	comp=Z,300nm,6.8s						
KSH				LR	LR		
	comp=N,440nm,5.9s						
KSH				LR	LR		
	comp=E,680nm,8.5s						
AAK	Ala-Archa	51.67	299	P	P	16 06 50.3	+0.5
	comp=E,1.1nm,0.6s,baz=171,slow=6.0,SNR=6.5						
PSI	Prapat	51.80	241	P	P	16 06 50.0	-1.0
	comp=E,2.5nm,0.3s,baz=182,slow=0.8,SNR=5.8						
BVAR	Borovoye Array	51.88	313	P	P	16 06 51.3	+0.3
	comp=E,0.4nm,0.4s,baz=90,slow=8.9,SNR=5.6						
GSI	Gunungsitoli	53.80	241	P	P	16 07 06.7	+1.0
KKAR	Karatay Array	54.32	301	P	P	16 07 09.5	+0.3
INK	Inuvik	55.13	27	P	P	16 07 16.1	+1.5
	comp=E,2.6nm,0.7s,baz=302,slow=4.9,SNR=8.1						
WR0	Warramunga Arr	55.98	189	P	P	16 07 20.9	-0.3
WRA	Warramunga Arr	55.99	189	P	P	16 07 20.9	-0.4
	comp=E,3.1nm,0.8s,baz=7.6,slow=7.6,SNR=13						
WRA	Warramunga Arr	55.99	189	P	P	16 07 21.3	0.0
ABKAR	Akbulak array	59.23	311	P	P	16 07 43.9	0.0
ABKAR	Akbulak array	59.23	311	P	P	16 07 44.4	+0.5
ABKAR				IAmb	IAmb	16 08 01.4	
	comp=Z,4.3nm,1.1s						
ASAR	Alice Springs	59.71	189	P	P	16 07 47.5	+0.1
	comp=Z,1.4nm,0.8s,baz=15,slow=7.7,SNR=13						
YKA	Yellowknife Ar	64.49	30	P	P	16 08 20.2	+1.1
	comp=Z,2.0nm,0.8s,baz=301,slow=6.1,SNR=25						
DAG	Danmarks Havn	67.02	355	i P	P	16 08 44.0	+8.9
DAG	Danmarks Havn	67.02	355	eP	P	16 08 35.2	+0.1
DAG				eP	pwP	16 08 44.0	-1.4
STKA	Stephens Creek	67.37	181	P	P	16 08 38.3	+0.5
	comp=Z,0.4nm,0.3s,baz=11,slow=16,SNR=2.3						
SUMG	Summit	71.87	0	i P	P	16 09 07.1	+1.4
	comp=Z,25nm,0.9s						
SUMG	Summit	71.87	0	i P	P	16 09 07.1	+1.4
SUMG				IAmb	IAmb	16 09 08.4	
	comp=Z,25nm,0.9s						
KBZ	Khabaz	72.20	311	P	P	16 09 07.8	+0.2
	comp=Z,2.5nm,0.9s,baz=36,slow=7.2,SNR=4.1						
NVAR	Mina Array Bea	75.15	53	P	P	16 09 27.2	+1.9
	comp=Z,0.3nm,0.4s,baz=310,slow=5.8,SNR=3.0						
ICESG	Greenland Ices	75.37	1	i P	P	16 09 27.5	+1.3
NB2	NORSAR Subarra	75.55	338	P	P	16 09 27.6	+0.6
	comp=Z,1.6nm,0.8s,baz=40,slow=5.9						
NOA	NORSAR Array B	75.55	338	P	P	16 09 27.9	+0.9
	comp=Z,1.2nm,0.7s,baz=39,slow=5.8,SNR=3.8						
AKASG	Malin Array Be	75.66	323	P	P	16 09 28.1	+0.4
	comp=Z,0.3nm,0.4s,baz=45,slow=5.8,SNR=5.1						
TXAR	Lajitas Array	90.30	53	P	P	16 10 46.2	+2.2
	comp=Z,0.7nm,0.9s,baz=316,slow=7.0,SNR=4.5						
LPAZ	La Paz	146.67	62	PKPbc	PKPab	16 17 26.2	-0.6
	comp=Z,0.9nm,0.7s,baz=9.5,slow=6.1,SNR=2.8						

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*MAN **20** 16:03:10.1, 11°.63N×126°.76E, h28^{km}, mb4.8, ML3.7, MS3.7*

*IDC **20** 16:03:14.6±0.6, 11°.13N×125°.93E, h0^{km}, mb4.0/15, mb1 4.1/15, mb1mx3.9/47, mbtmp4.0/15, MS3.7/6, Ms1 3.7/6, ms1mx3.1/41, Error ellipse: s-maj=30.1km s-min=13.5km az=75.0*

ISC 20 16:03:20.2±0.6**, 11°.26N**±0°.05×**126°.32E**±0°.09**, h40^{km}, n29, σ2^{s}.20**/30**, mb4.0**/15**, MS3.6**/5**, 1C-2D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSLP	Maasin	1.82	232	eP	Pn	16 03 46.7	-2.3
MSLP				eS	Sn	16 04 11.9	+1.0
CNP	Catarman	2.04	308	eP	Pn	16 03 49.8	-2.3
BUTP	Butuan	2.38	197	eP	Pn	16 03 56.0	-0.7
BUTP				eS	Sn	16 04 28.6	+3.9
LLP	Lapu-Lapu	2.49	248	⇓eP	Pn	16 03 57.9	-0.4
LLP				eS	Sn	16 04 32.9	+5.4
CGP	Cagayan de Oro	3.21	210	⇓eP	Pn	16 04 07.8	-0.4
CGP				eS	Sn	16 04 47.3	+1.9
BUKP	Musuan	3.58	200	eP	Pn	16 04 14.1	+0.7
BUKP				eS	Sn	16 04 54.8	+0.3
DAV	Davao City (W)	4.23	190	LR	LR	16 05 42.3	
	comp=Z,206nm,18.5s,baz=304,slow=36						
KCP	Kidapawan	4.39	196	⇑eP	Pn	16 04 40.7	+16
KCP				i S	Sn	16 05 08.5	-6.1
JHJ	Hachijo jima 2	25.02	28	LR	LR	16 17 07.3	
	comp=Z,201nm,19.7s,baz=218,slow=33						
LEM	Lembang	25.87	227	LR	LR	16 19 45.8	
	comp=Z,156nm,20.3s,baz=151,slow=39						
KSRS	Korea Array	26.12	3	P	P	16 08 52.5	+2.1
	2.6nm,0.9s,baz=187,slow=11,SNR=8.4						
CMAR	Chiang Mai Arr	27.38	288	P	P	16 08 59.5	-2.7
	2.6nm,1.0s,baz=100,slow=7.6,SNR=14						
PMG	Port Moresby	29.17	134	LR	LR	16 20 48.6	
	comp=Z,55nm,20.5s,baz=64,slow=36						
WRA	Warramunga Arr	32.00	166	P	P	16 09 42.0	-0.9
	0.8nm,0.5s,baz=345,slow=9.2,SNR=6.4						
WRA				PcP	PcP	16 12 32.4	0.0
	1.0nm,1.0s,baz=6.3,slow=2.9,SNR=3.4						
USRK	Ussuriysk Ar.	33.18	7	P	P	16 09 53.6	+0.6
	1.1nm,0.7s,baz=197,slow=9.0,SNR=3.3						
ASAR	Alice Springs	35.50	168	P	P	16 10 12.7	-0.7
	0.6nm,0.4s,baz=348,slow=7.0,SNR=12						
ASAR				PcP	PcP	16 12 40.3	-1.9
	0.5nm,0.7s,baz=346,slow=3.3,SNR=3.2						
KLR	Kul'dur	38.12	6	P	P	16 10 35.8	+0.5
	1.2nm,0.6s,baz=322,slow=7.2,SNR=6.5						
SONM	Songino Array	40.11	339	P	P	16 10 51.4	-0.8
	1.9nm,0.7s,baz=160,slow=9.3,SNR=4.7						
TLY	Talaya	44.32	340	P	P	16 11 26.6	+0.3
	2.2nm,0.7s,baz=238,slow=20,SNR=6.2						
STKA	Stephens Creek	45.32	162	P	P	16 11 35.2	+0.8
	3.2nm,0.6s,baz=339,slow=12,SNR=9.8						
MKAR	Makanchi Array	51.27	322	P	P	16 12 19.9	-0.3
	4.5nm,0.8s,baz=121,slow=8.3,SNR=31						
ZALV	Zalesovo Beam	53.79	331	P	P	16 12 38.4	-0.2
	2.5nm,0.9s,baz=115,slow=6.7,SNR=9.0						
SEY	Seymchan	54.85	14	P	P	16 12 49.3	+3.0
	0.8nm,0.6s,baz=76,slow=21,SNR=4.6						
RAO	Raoul Island	67.17	128	LR	LR	16 39 28.1	
	comp=Z,209nm,19.6s,baz=134,slow=32						
ILAR	Eielson Array	78.53	26	P	P	16 15 18.6	+1.4
	0.3nm,0.6s,baz=240,slow=5.4,SNR=5.3						
ARCES	ARCESS Array B	83.29	340	LR	LR	16 54 49.4	
	comp=Z,81nm,22.0s,baz=270,slow=37						
FINES	FINESS Array B	85.05	332	P	P	16 15 50.6	-0.9
	4.4nm,1.0s,baz=142,slow=9.5,SNR=4.1						
AKASG	Malin Array Be	85.83	321	P	P	16 15 54.2	-1.5
	2.4nm,0.8s,baz=67,slow=4.3,SNR=7.4						
PLCA	Paso Flores	147.09	156	PKPbc	PKPab	16 23 01.1	+0.3
	1.7nm,0.8s,baz=249,slow=2.4,SNR=4.7						

IDC 20 16:30:55.5±9.4**, 15°.25S×166°.78E, h81^{km}**±84^{km}**, mb3.1**/2**, mb1 3.4**/3**, mb1mx3.1**/27**, mbtmp3.5**/3**, ML3.3**/1**, Error ellipse: s-maj=67.5km s-min=47.4km az=3.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	6.79	183	P	Pn	16 32 32.5	-0.1
	0.5nm,0.3s,baz=316,slow=23,SNR=17						
DZM				S	Sn	16 33 49.1	+0.6
	baz=0.0,slow=20,SNR=1.7						
WRA	Warramunga Arr	31.25	257	P	P	16 37 08.1	+0.4
	0.9nm,1.0s,baz=86,slow=10,SNR=2.0						
ASAR	Alice Springs	32.05	250	P	P	16 37 14.4	-0.4
	0.3nm,0.8s,baz=74,slow=10,SNR=5.2						
ARCES	ARCESS Array B	120.64	345	PKP	PKPdf	16 49 37.1	-0.2
	2.5nm,0.8s,baz=64,slow=2.1,SNR=7.2						

IDC 20 16:46:42.9±7.4**, 30°.42N×142°.52E, h0^{km}, mb3.3**/3**, mb1 3.5**/4**, mb1mx3.2**/33**, mbtmp3.3**/4**, ML2.2**/1**, Error ellipse: s-maj=288.7km s-min=27.5km az=71.0, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	7.09	331	Pn	Pn	16 48 27.4	-0.6
	0.0nm,0.3s,baz=138,slow=13,SNR=3.5						
MKAR	Makanchi Array	48.65	307	P	P	16 55 28.8	+0.1
	0.1nm,0.5s,baz=82,slow=8.7,SNR=2.2						
WRA	Warramunga Arr	50.68	190	P	P	16 55 45.1	+0.8
	0.4nm,0.5s,baz=6.9,slow=7.5,SNR=4.9						
ASAR	Alice Springs	54.41	190	P	P	16 56 10.8	-1.1
	0.4nm,0.8s,baz=7.3,slow=5.2,SNR=5.4						

NOU 20 16:55:41.5, 16°.33S×168°.34E, h0^{km}, MLv4.8, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	Devils Point	1.40	186	P	Pn	16 56 06.0	-2.2
SANVU	Saraoutou	1.40	309	P	Pn	16 56 07.1	-1.2
KOUNC	Koumac, New Ca	5.69	222	P	Pn	16 57 07.2	-0.2
YATNC	Mamie plateau,	5.86	193	P	Pn	16 57 08.9	-0.8
DZM	Mont Dzumac	5.99	197	P	Pn	16 57 11.0	-0.5
ONTNC	Ouen Toro	6.21	196	P	Pn	16 57 15.2	+0.8
OUENC	Ouen Island, N	6.22	193	P	Pn	16 57 15.2	+0.6
PINNC	Pines Island,	6.31	188	P	Pn	16 57 16.4	+0.6

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*IDC **20** 16:56:10.4±1.4, 39°.79N×143°.97E, h0^{km}, mb3.6/7, mb1 3.6/10, mb1mx3.4/43, mbtmp3.6/10, ML2.9/3, Error ellipse: s-maj=37.4km s-min=18.9km az=85.0*

*JMA **20** 16:56:14.6±0.2, 39°.90N×143°.57E, h25^{km}, M3.5*

*NIED **20** 16:56:14.7, 39°.90N×143°.57E, h25^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}2.46; $M_{\theta\theta}$0.41; $M_{\phi\phi}$-2.88; $M_{r\theta}$1.50; $M_{\theta\phi}$-1.04; $M_{\phi r}$1.39; Fault plane solution: $M_0$3.53000×10^{14} NP1:ϕ_s36.00000°, δ64.00000°, λ111.00000°. NP2:ϕ_s174.00000°, δ33.00000°, λ53.00000°.*

ISC 20 16:56:12.1±1.0**, 39°.85N**±0°.06×**143°.67E**±0°.08**, h6^{km}, n26, σ1^{s}.44**/35**, mb3.7**/7**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	1.39	274	P	Pn	16 56 37.6	-0.4
MIYJ	Miyakonagasawa	1.45	260	P	Pn	16 56 39.0	+0.1
JKEN	Kujiedanarisaw	1.54	284	P	Pn	16 56 39.8	-0.3
JANG	Nango	1.73	288	P	Pn	16 56 42.4	-0.3
JANG				eS	Sn	16 57 02.6	-2.5
JOM	Ohasama	1.87	259	P	Pn	16 56 45.6	+1.0
JMK	Ichinoseki	2.10	245	P	Pn	16 56 48.3	+0.6
JMK				eS	Sn	16 57 13.4	-0.7
JTM	Tenmabayashi	2.19	296	P	Pn	16 56 49.8	+0.7
JEM	Erimo	2.20	350	P	Pn	16 56 50.1	+1.0
JEM				eS	Sn	16 57 16.1	-0.5
JOT	Ohata	2.51	308	P	Pn	16 56 54.1	+0.7
JOT				eS	Sn	16 57 22.6	-1.8
JNBK	Urakawa-nobuka	2.52	344	P	Pn	16 56 55.0	+1.4
JNBK				eS	Sn	16 57 24.3	-0.3
JYK	Kaneyama	2.73	251	P	Pn	16 56 57.5	+1.1
JCH	Churui	2.77	355	P	Pn	16 56 57.5	+0.5
JCH				eS	Sn	16 57 28.9	-1.8
JKB	Kayabe	2.85	316	P	Pn	16 56 59.8	+1.7
JKB				eS	Sn	16 57 31.9	-0.8
JAK	Akkeshi	3.24	14	P	Pn	16 57 03.6	+0.2
JAK				eS	Sn	16 57 40.5	-1.7
JFR	Furan	3.41	347	eS	Sn	16 57 44.9	-1.6
JEW	Eniwo	3.42	332	P	Pn	16 57 08.6	+2.7
ASAJ	Asahikawa	4.33	350	Pn	Pn	16 57 19.7	+1.2
	1.6nm,0.3s,baz=201,slow=7.8,SNR=25						
ASAJ				Sn	Sn	16 58 07.3	-2.1
	0.9nm,0.3s,baz=330,slow=20,SNR=1.8						
MJAR	Matsushiro Arr	5.42	234	Pn	Pn	16 57 35.5	+2.1
	0.2nm,0.3s,baz=44,slow=12,SNR=13						
USRK	Ussuriysk Ar.	9.71	300	Pn	Pn	16 58 36.3	+4.0
	baz=121,slow=14,SNR=5.3						
SEY	Seymchan	23.70	10	P	P	17 01 24.4	0.0
	1.1nm,0.7s,baz=172,slow=7.9,SNR=4.0						
YAK	Yakutsk	23.79	344	P	P	17 01 25.1	-0.1
	4.4nm,0.4s,baz=305,slow=1.2,SNR=1.5						
MKAR	Makanchi Array	44.18	300	P	P	17 04 21.4	-0.3
	0.4nm,0.8s,baz=86,slow=12,SNR=4.4						
KURBB	Kurchatov Arra	45.72	306	P	P	17 04 34.3	+0.5
	0.6nm,0.5s,baz=79,slow=8.7,SNR=5.6						
BVAR	Borovoye Array	50.02	311	P	P	17 05 08.5	+1.4
	0.1nm,0.3s,baz=188,slow=8.7,SNR=4.0						
WRA	Warramunga Arr	60.12	190	P	P	17 06 19.1	-1.2
	0.4nm,0.7s,baz=7.1,slow=7.1,SNR=4.6						
ASAR	Alice Springs	63.84	190	P	P	17 06 44.9	-0.5
	0.6nm,1.0s,baz=356,slow=5.5,SNR=4.0						

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*IDC **20** 17:12:32.7±1.2, 36°.39N×141°.05E, h0^{km}, mb3.5/4, mb1 3.8/4, mb1mx3.4/50, mbtmp3.5/4, Error ellipse: s-maj=45.3km s-min=27.0km az=90.0*

*NEIC **20** 17:12:36.4±2.4, 36°.46N±0°.06×141°.08E±0°.06, h24^{km}±7^{km}, mb4.4/5, Error ellipse: s-maj=9.3km s-min=5.2km az=148.0*

*JMA **20** 17:12:36.7±0.1, 36°.44N×141°.07E, h41^{km}±2^{km}, M3.6*

JMA Felt I J1.

*NIED **20** 17:12:36.7, 36°.44N×141°.07E, h41^{km}, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.78; $M_{\theta\theta}$0.98; $M_{\phi\phi}$-0.20; $M_{r\theta}$2.45; $M_{\theta\phi}$-0.13; $M_{\phi r}$-0.31; Fault plane solution: $M_0$2.63000×10^{14} NP1: ϕ_s277.00000°, δ80.00000°, λ-89.00000°. NP2:ϕ_s94.00000°, δ10.00000°, λ-93.00000°.*

ISC 20 17:12:36.4±1.7**, 36°.48N**±0°.05×**141°.14E**±0°.08**, h24^{km}**±11^{km}**, n37, σ0^{s}.98**/40**, mb3.9**/7**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHYU	**Hitachinakayam**	**0.46**	**253**	P	**Pb**	**17 12 46.2**	**+0.3**
JHYU				S	**Sb**	**17 12 52.7**	**+0.3**
JHO	**Hitachi**	**0.47**	**286**	P	**Pb**	**17 12 46.4**	**+0.2**
JHO				S	**Sb**	**17 12 53.0**	**+0.2**
ONAJ	**Iwakimizuishiy**	**0.68**	**337**	P	**Pb**	**17 12 49.7**	**+0.1**
ONAJ				S	**Sb**	**17 12 58.6**	**-0.1**
JIHU	**Itakohorinouch**	**0.71**	**224**	P	**Pb**	**17 12 50.0**	**-0.1**
JYT	**Yasato**	**0.80**	**252**	P	**Pb**	**17 12 50.5**	**-1.1**
JYT				*e*S	**Sb**	**17 13 00.0**	**-2.0**
JYT	**Yasato**	**0.80**	**252**		**Pb**	**17 12 50.7**	**-0.9**
JYT					**Sb**	**17 13 00.4**	**-1.6**
JFK	**Kawauchi**	**0.91**	**347**	P	**Pb**	**17 12 53.0**	**-0.6**
JFT	**Otama**	**1.22**	**329**	P	**Pn**	**17 12 58.5**	**+0.5**
JFT				S	**Sn**	**17 13 13.7**	**-0.1**
JMM	**Marumori**	**1.41**	**349**	P	**Pn**	**17 13 00.5**	**-0.1**
JMM				S	**Sn**	**17 13 17.6**	**-0.9**
JMM	**Marumori**	**1.41**	**349**		**Pn**	**17 13 00.7**	**0.0**
JMM				Sn	**Sn**	**17 13 18.0**	**-0.5**
JFY	**Yanaizu**	**1.47**	**309**	P	**Pn**	**17 13 01.9**	**+0.4**
MAJO	**Matsushiro**	**2.36**	**272**		**Pn**	**17 13 14.7**	**+1.0**
MAT	**Matsushiro**	**2.36**	**272**	P	**Pn**	**17 13 14.4**	**+0.7**
MAT				S	**Sn**	**17 13 41.7**	**-0.2**
JSD	**Sado**	**2.77**	**305**	Pn	**Pn**	**17 13 20.7**	**+1.4**
JGF	**Kuroka**	**3.19**	**255**		**Pn**	**17 13 26.7**	**+1.7**
INU	**Inuyama**	**3.53**	**253**	Pn	**Pn**	**17 13 31.7**	**+2.0**
JTM	**Tenmabayashi**	**4.30**	**359**	Pn	**Pn**	**17 13 41.0**	**+0.7**
JWT	**Wachi**	**4.81**	**257**	Pn	**Pn**	**17 13 49.0**	**+1.7**
ERM	**Erimo**	**5.75**	**15**	Pn	**Pn**	**17 14 00.6**	**+0.4**
JEW	**Eniwo**	**6.36**	**2**	Pn	**Pn**	**17 14 10.3**	**+1.7**
JMN	**Monobe**	**6.55**	**247**	Pn	**Pn**	**17 14 11.7**	**+0.4**
H11N2	**WAKE ISLAND Hy**	**28.06**	**120**	T	T	17 47 53.2	
	baz=312,slow=75,SNR=28						
H11N1	**WAKE ISLAND Hy**	**28.07**	**120**	T	T	17 47 53.7	
	baz=312,slow=75,SNR=23						
H11N3	**WAKE ISLAND Hy**	**28.08**	**120**	T	T	17 47 54.8	
	baz=312,slow=75,SNR=25						
H11S1	**WAKE ISLAND Hy**	**28.75**	**122**	T	T	17 48 44.2	
	baz=314,slow=76,SNR=94						
H11S3	**WAKE ISLAND Hy**	**28.75**	**122**	T	T	17 48 41.2	
	baz=314,slow=76,SNR=62						
H11S2	**WAKE ISLAND Hy**	**28.77**	**122**	T	T	17 48 42.3	
	baz=314,slow=76,SNR=43						
ZALV	**Zalesovo Beam**	**42.13**	**313**	P	**P**	**17 20 26.4**	**-0.1**
MKAR	**Makanchi Array**	**44.23**	**303**	P	**P**	**17 20 43.5**	**-0.2**
	0.2nm,0.7s,baz=86,slow=9.9,SNR=3.3						
IMAR	**Indian Mountai**	**47.24**	**30**	P	**P**	**17 21 08.7**	**+1.6**
ILAR	**Eielson Array**	**50.08**	**32**	P	**P**	**17 21 29.6**	**+0.6**
	0.5nm,0.8s,baz=269,slow=5.3,SNR=5.0						
GSI	**Gunungsitoli**	**53.32**	**239**	P	**P**	**17 21 53.6**	**-0.2**
GSI				IAmb	IAmb	17 22 13.0	
	comp=Z,5.3nm,0.9s						
WB0	**Warramunga Arr**	**56.30**	**188**		**P**	**17 22 14.2**	**-1.0**
WR0	**Warramunga Arr**	**56.48**	**187**	P	**P**	**17 22 15.4**	**-1.1**
WR0				IAmb	IAmb	17 22 38.5	
	comp=Z,4.6nm,1.1s						
WB2	**Warramunga Arr**	**56.48**	**188**	P	**P**	**17 22 15.6**	**-0.9**
WB2				IAmb	IAmb	17 22 34.2	
	comp=Z,3.8nm,1.1s						
WRA	**Warramunga Arr**	**56.48**	**188**	P	**P**	**17 22 15.6**	**-0.9**
	comp=Z,1.1nm,0.8s,baz=4.4,slow=7.4,SNR=7.0						
ASAR	**Alice Springs**	**60.21**	**188**	P	**P**	**17 22 42.0**	**-0.5**
	comp=Z,0.4nm,0.8s,baz=359,slow=5.2,SNR=7.2						

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*NEIC **20** 17:19:44.6±1.7, 20°.67S±0°.07×177°.6W±0°.1, h480km±8km, mb4.4/24, Error ellipse: s-maj=18.5km s-min=8.8km az=67.0*

*IDC **20** 17:19:47.8±7.6, 20°.64S×177°.84W, h503km±79km, mb3.2/8, mb1 3.5/8, mb1mx3.2/33, mbtmp4.1/8, Error ellipse: s-maj=75.4km s-min=34.2km az=152.0*

ISC 20 17:19:46.3±0.6**, 20°.6S**±0°.1×**177°.67W**±0°.10**, h500**km**, n40, σ1ˢ.44**/41**, mb4.4**/18**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.96**	**305**	P	**P**	**17 21 11.2**	**-1.9**
NIUE	**Niue**	**7.44**	**79**	P	**P**	**17 21 35.5**	**-1.5**
AFI	**Afiamalu**	**8.72**	**41**	P	**P**	**17 21 46.5**	**-3.9**
OUZ	**Omahuta**	**16.46**	**206**	P	**P**	**17 23 10.1**	**-1.5**
MXZ	**Matakaoa Point**	**17.25**	**191**	P	**P**	**17 23 18.5**	**-1.0**
BKZ	**Black Stump Fm**	**19.16**	**194**	P	**P**	**17 23 33.5**	**-3.7**
BKZ				IAmb	IAmb	17 23 58.2	
	comp=Z,13nm,1.6s						
MSWZ	**Moikau Station**	**21.59**	**195**	P	**P**	**17 23 58.7**	**-0.4**
PLWZ	**Palliser**	**21.74**	**194**	P	**P**	**17 23 59.8**	**-0.7**
QRZ	**Quartz Range**	**21.81**	**200**	P	**P**	**17 23 59.8**	**-1.4**
QRZ				IAmb	IAmb	17 24 02.1	
	comp=Z,12nm,1.0s						
THZ	**Tophouse**	**22.55**	**199**	P	**P**	**17 24 05.7**	**-2.1**
LTZ	**Lake Taylor**	**23.67**	**199**	P	**P**	**17 24 16.2**	**-1.6**
LTZ				IAmb	IAmb	17 24 36.9	
	comp=Z,25nm,1.6s						
MQZ	**McQueen's Vall**	**24.41**	**197**	P	**P**	**17 24 23.0**	**-1.3**
MQZ				IAmb	IAmb	17 24 42.5	
	comp=Z,25nm,1.4s						
ARMA	**Armidale**	**29.30**	**244**	P	**P**	**17 25 07.8**	**0.0**
CTA	**Charters Tower**	**33.79**	**264**	P	**P**	**17 25 46.5**	**+0.2**
	comp=Z,3.2nm,0.4s,baz=95,slow=12,SNR=15						
CTAO	**Charters Tower**	**33.79**	**264**	P	**P**	**17 25 46.3**	**+0.1**
CTAO				IAmb	IAmb	17 26 03.0	
	comp=Z,24nm,1.6s						
TOO	**Toolangi**	**36.08**	**234**	P	**P**	**17 26 05.1**	**-0.1**
TOO				IAmb	IAmb	17 26 05.3	
	comp=Z,13nm,1.5s						
STKA	**Stephens Creek**	**38.02**	**244**	P	**P**	**17 26 21.1**	**-0.1**
	comp=Z,1.3nm,0.5s,baz=78,slow=9.8,SNR=5.0						
BBOO	**Buckleboo**	**42.78**	**244**	P	**P**	**17 26 58.4**	**-0.9**
BBOO				IAmb	IAmb	17 27 16.5	
	comp=Z,24nm,1.6s						
WR0	**Warramunga Arr**	**44.71**	**262**	P	**P**	**17 27 13.7**	**-0.8**
WR0				IAmb	IAmb	17 27 41.0	
	comp=Z,21nm,1.6s						
AS31	**Alice Springs**	**44.80**	**257**	P	**P**	**17 27 14.9**	**-0.3**
ASAR	**Alice Springs**	**44.80**	**257**	P	**P**	**17 27 14.8**	**-0.4**
	comp=Z,4.0nm,0.5s,baz=91,slow=8.3,SNR=144						
ASAR				PcP	**pP**	**17 28 47.2**	**+0.4**
	comp=Z,0.4nm,0.6s,baz=108,slow=4.4,SNR=4.1						
ASAR	**Alice Springs**	**44.80**	**257**	P	**P**	**17 27 14.6**	**-0.6**
WB0	**Warramunga Arr**	**44.87**	**262**	P	**P**	**17 27 15.0**	**-0.8**
WB0				IAmb	IAmb	17 27 18.0	
	comp=Z,19nm,1.5s						
WB2	**Warramunga Arr**	**44.88**	**262**	P	**P**	**17 27 15.0**	**-0.9**
WB2				IAmb	IAmb	17 27 23.2	
	comp=Z,22nm,1.6s						
WRAB	**Tennant Creek**	**44.89**	**262**	P	**P**	**17 27 14.8**	**-1.0**
WRAB				IAmb	IAmb	17 27 31.1	
	comp=Z,13nm,0.9s						
WRA	**Warramunga Arr**	**44.90**	**262**	P	**P**	**17 27 15.0**	**-1.0**
	comp=Z,1.0nm,0.3s,baz=96,slow=7.5,SNR=80						
WRA	**Warramunga Arr**	**44.90**	**262**	P	**P**	**17 27 15.0**	**-1.0**
WRA				PcP	**pP**	**17 28 47.1**	**-0.7**
FORT	**Forrest**	**49.54**	**247**	P	**P**	**17 27 50.1**	**-0.7**
FORT				IAmb	IAmb	17 27 51.3	
	comp=Z,22nm,1.2s						
FITZ	**Fitzroy Crossi**	**53.32**	**262**	P	**P**	**17 28 18.6**	**+0.2**
	comp=Z,1.8nm,0.5s,baz=104,slow=5.3,SNR=8.9						
SOEI	**Soe**	**56.82**	**272**	P	**P**	**17 28 45.1**	**+2.0**
VNDA	**Vanda**	**57.83**	**185**	P	**P**	**17 28 48.2**	**-0.6**
QSPA	**South Pole Qui**	**69.46**	**180**	P	**P**	**17 30 05.0**	**+1.3**
PETK	**Petropavlovsk-**	**76.46**	**345**	P	**P**	**17 30 44.9**	**+1.0**
BELA	**Belgrano 2**	**79.41**	**173**	P	**P**	**17 31 00.1**	**+0.6**
TXAR	**Lajitas Array**	**86.85**	**57**	P	**P**	**17 31 40.5**	**+2.8**
	comp=Z,0.2nm,0.6s,baz=219,slow=7.0,SNR=4.3						
ILAR	**Eielson Array**	**88.35**	**13**	P	**P**	**17 31 44.5**	**+0.7**
	comp=Z,0.5nm,0.5s,baz=219,slow=5.7,SNR=7.3						
CMAR	**Chiang Mai Arr**	**90.45**	**289**	P	**P**	**17 31 57.0**	**+2.4**
	comp=Z,0.5nm,0.8s,baz=122,slow=3.4,SNR=4.9						
AKASG	**Malin Array Be**	**143.26**	**331**	PKP	PKPbc	17 38 21.4	+0.3
	comp=Z,0.3nm,0.2s,baz=42,slow=4.2,SNR=4.4						
GERES	**GERESS Array B**	**150.39**	**345**	PKPbc	**PKiKP**	**17 38 41.7**	**+0.4**
	comp=Z,0.2nm,0.4s,baz=323,slow=1.5,SNR=3.2						
DBIC	**Dimbokro**	**164.49**	**152**		**PKPdf**	**17 38 53.1**	**-0.1**

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*IDC **20** 17:28:07.6±4.6, 37°.38N×72°.10E, h171km±33km, mb3.7/2, mb1 3.3/8, mb1mx2.9/59, mbtmp3.8/8, Error ellipse: s-maj=59.5km s-min=22.4km az=144.0*

*NNC **20** 17:28:14.8±10.0, 38°.04N×72°.27E, h0km, mb3.9, mpv3.8, Error ellipse: s-maj=76.9km s-min=56.3km az=172.0*

ISC 20 17:28:11.8±1.7**, 37°.7N**±0°.1×**71°.9E**±0°.1**, h200**km**, n12, σ1ˢ.31**/14**, 2D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**5.29**	**21**	P	**Pn**	**17 29 30.4**	**+0.4**
	2.6nm,0.3s,baz=169,slow=6.5,SNR=12						
AAK				S	**Sn**	**17 30 31.7**	**+0.1**
	2.8nm,0.3s,baz=329,slow=22,SNR=14						
AAK	**Ala-Archa**	**5.29**	**21**	P	**Pn**	**17 29 30.3**	**+0.3**
	3.7nm,0.4s						
AAK				⇓S	**Sn**	**17 30 30.8**	**-0.9**
	13nm,0.6s						
KK31	**Karatay Array**	**5.46**	**349**	P	**Pn**	**17 29 33.5**	**+1.5**
	2.2nm,0.5s,baz=157,slow=12,SNR=8.8						
KK31				⇓S	**Sn**	**17 30 35.1**	**-0.3**
	6.2nm,0.3s,baz=160,slow=21						
BRLS	**Borolday**	**5.51**	**344**	Pg	**Pn**	**17 29 30.8**	**-1.9**
	22nm,0.2s						
BRLS				Lg	Lg	17 30 31.9	
	20nm,0.3s						
KST	**Kastek**	**6.15**	**29**	Pg	Pn	17 29 56.7	+16
	3.8nm,0.6s						
KST				Lg	Lg	17 31 16.3	
	6.0nm,0.7s						
GEYT	**Alibeck**	**10.89**	**275**	P	**Pn**	**17 30 41.8**	**-0.7**
	0.7nm,0.3s,baz=110,slow=14,SNR=6.8						
MKAR	**Makanchi Array**	**11.88**	**37**	P	**Pn**	**17 30 53.6**	**-1.4**
	0.1nm,0.3s,baz=209,slow=9.8,SNR=4.1						
KURBB	**Kurchatov Arra**	**13.73**	**18**	P	**P**	**17 31 20.0**	**-0.3**
	0.1nm,0.3s,baz=204,slow=11,SNR=9.2						
AKTO	**Aktyubinsk**	**16.09**	**326**	P	**Pn**	**17 31 48.5**	**+1.4**
	0.1nm,0.3s,baz=127,slow=5.1,SNR=3.0						
ZALV	**Zalesovo Beam**	**18.50**	**25**	P	**P**	**17 32 13.1**	**+0.3**
	0.6nm,0.3s,baz=220,slow=10,SNR=18						
ARCES	**ARCESS Array B**	**40.27**	**337**	P	**P**	**17 35 31.5**	**+2.6**
	1.0nm,0.8s,baz=130,slow=11,SNR=0.8						
TORD	**Torodi Ar. Bea**	**66.45**	**269**	P	**P**	**17 38 39.5**	**-0.5**
	0.5nm,0.4s,baz=51,slow=5.0,SNR=7.0						

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*TAP **20** 17:28:28.2, 24°.54N×123°.00E, h75km, ML2.5, D*

*JMA **20** 17:28:29.0±0.1, 24°.46N×122°.93E, h73km±1km, M1.5*

ISC 20 17:28:30.0±1.3**, 24°.46N**±0°.04×**122°.94E**±0°.03**, h66**km±8km**, n67, σ1ˢ.05**/119**, 3C-4D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.01**	**156**	P	**Pn**	**17 28 39.6**	**0.0**
JYNG				S	**Sn**	**17 28 47.3**	**+0.7**
YOJ	**Yonaguni jima**	**0.06**	**90**	P	**Pn**	**17 28 39.6**	**-0.1**
YOJ				S	**Sn**	**17 28 47.3**	**+0.6**
IRIF	**Iriomote-Funau**	**0.73**	**100**	P	**Pn**	**17 28 44.7**	**-0.3**
IRIF				*e*S	**Sn**	**17 28 56.7**	**+0.7**
JKRS	**Kuro-shima**	**1.00**	**103**	P	**Pn**	**17 28 48.4**	**+0.1**
JKRS				*e*S	**Sn**	**17 29 02.8**	**+0.9**
EWUT	**Wuta**	**1.06**	**269**	*e*P	**Pn**	**17 28 48.5**	**-0.5**
	baz=269						
EWUT				*e*S	**Sn**	**17 29 04.5**	**+1.3**
	baz=269						
JIJ	**Ishigaki jima**	**1.10**	**95**	P	**Pn**	**17 28 49.1**	**-0.5**
JIJ				S	**Sn**	**17 29 03.6**	**-0.6**
NDS	**Dongshan**	**1.13**	**279**	*e*P	**Pn**	**17 28 50.0**	**0.0**
	baz=274						
NDS				*e*S	**Sn**	**17 29 04.3**	**-0.5**
	baz=274						
TIPB	**Shuangxi**	**1.13**	**297**	*e*P	**Pn**	**17 28 49.3**	**-0.8**
	baz=286						
TWE	**Neicheng**	**1.19**	**283**	⇑P	**Pn**	**17 28 50.1**	**-0.6**
	baz=282						
TWE				*e*S	**Sn**	**17 29 06.0**	**-0.2**
	baz=282						
JISG	**Ishigakijimahi**	**1.25**	**84**	P	**Pn**	**17 28 50.8**	**-0.8**
JISG				*e*S	**Sn**	**17 29 07.2**	**-0.5**
NACB	**Ninganchiao**	**1.26**	**257**	⇓P	**Pn**	**17 28 50.8**	**-0.9**
	baz=254						
NACB				*e*S	**Sn**	**17 29 06.7**	**-1.2**
	baz=254						
ENTT	**Nioudou**	**1.26**	**278**	P	**Pn**	**17 28 52.0**	**+0.2**
	baz=274						
ENTT				*e*S	**Sn**	**17 29 08.5**	**+0.5**
	baz=274						
NDT	**Datong Townshi**	**1.31**	**276**	*e*P	**Pn**	**17 28 52.4**	**+0.1**
	baz=277						
ETLH	**Xiulin Townshi**	**1.35**	**260**	*e*P	**Pn**	**17 28 52.1**	**-0.9**
	baz=248						
ETLH				*e*S	**Sn**	**17 29 09.2**	**-1.1**
	baz=248						
PCYT	**Pengchaiyu**	**1.41**	**326**	*e*P	**Pn**	**17 28 52.9**	**-0.7**
	baz=323						
PCYT				*e*S	**Sn**	**17 29 10.2**	**-1.1**
	baz=323						
NNSB	**Datong**	**1.42**	**269**	*e*P	**Pn**	**17 28 53.5**	**-0.4**
	baz=256						
NNSB				*e*S	**Sn**	**17 29 10.3**	**-1.5**
	baz=256						
YM01	**YM01**	**1.42**	**299**	*e*P	**Pn**	**17 28 52.6**	**-1.2**
	baz=287						
YM01				*e*S	**Sn**	**17 29 11.2**	**-0.6**
	baz=287						
YM08	**YM08**	**1.42**	**301**	*e*P	**Pn**	**17 28 52.9**	**-1.0**
	baz=288						
NNS	**Nan Shan**	**1.43**	**269**	*e*P	**Pn**	**17 28 54.0**	**0.0**
	baz=256						
YM10	**YM10**	**1.43**	**299**	*e*P	**Pn**	**17 28 53.7**	**-0.3**
	baz=287						
YM10				*e*S	**Sn**	**17 29 11.8**	**-0.2**
	baz=287						
YM05	**YM05**	**1.43**	**300**	*e*P	**Pn**	**17 28 53.3**	**-0.8**
	baz=287						
YHNB	**Yeheng**	**1.44**	**279**	*e*P	**Pn**	**17 28 54.2**	**+0.1**
	baz=275						
YHNB				*e*S	**Sn**	**17 29 11.8**	**-0.5**
	baz=275						
YM04	**YM04**	**1.45**	**299**	*e*P	**Pn**	**17 28 53.8**	**-0.4**
	baz=287						
NSK	**Sanguang**	**1.46**	**279**	*e*P	**Pn**	**17 28 54.6**	**+0.2**
	baz=275						
NSK				*e*S	**Sn**	**17 29 13.3**	**+0.6**
	baz=275						
WHF	**Hehuan Shan**	**1.56**	**259**	*e*P	**Pn**	**17 28 55.7**	**-0.3**
	baz=248						
FUSS	**Fushou**	**1.56**	**263**	*e*P	**Pn**	**17 28 55.4**	**-0.5**
	baz=260						
EGFH	**Guangfu**	**1.59**	**241**	*e*P	**Pn**	**17 28 55.3**	**-0.8**
	baz=233						
JTJ	**Tarama**	**1.61**	**83**	P	**Pn**	**17 28 56.4**	**0.0**
JTJ				S	**Sn**	**17 29 17.0**	**+0.7**
TWT	**Tachien**	**1.62**	**263**	*e*P	**Pn**	**17 28 57.0**	**+0.3**
	baz=260						
TWT				*e*S	**Sn**	**17 29 15.2**	**-1.6**
	baz=260						
TDCB	**Techi**	**1.64**	**263**	*e*P	**Pn**	**17 28 57.3**	**+0.5**
	baz=261						
CHGB	**Renai**	**1.66**	**256**	*e*P	**Pn**	**17 28 56.8**	**-0.4**
	baz=245						
CHGB				*e*S	**Sn**	**17 29 18.5**	**+0.7**
	baz=245						
HGSD	**Ruisui**	**1.69**	**235**	*e*P	**Pn**	**17 28 56.2**	**-1.2**
	baz=234						
HGSD				*e*S	**Sn**	**17 29 17.1**	**-1.0**
	baz=234						
EHY	**Hungye**	**1.76**	**238**	*e*P	**Pn**	**17 28 57.3**	**-1.1**
	baz=245						
EHY				*e*S	**Sn**	**17 29 17.9**	**-2.0**
	baz=245						
LIOB	**Emei**	**1.76**	**276**	*e*P	**Pn**	**17 28 58.6**	**+0.2**
	baz=273						
VWDT	**VWDT**	**1.79**	**247**	*e*P	**Pn**	**17 28 58.4**	**-0.3**
	baz=245						
VWDT				*e*S	**Sn**	**17 29 19.8**	**-0.7**
	baz=245						
WHP	**Taichung City**	**1.83**	**265**	*e*P	**Pn**	**17 28 59.8**	**+0.5**
	baz=255						
WHP				*e*S	**Sn**	**17 29 22.3**	**+0.7**
	baz=255						
YULB	**Yu-li**	**1.84**	**235**	⇑P	**Pn**	**17 28 58.5**	**-0.9**
	baz=244						
YULB				*e*S	**Sn**	**17 29 20.0**	**-1.9**
	baz=244						
EYUL	**Yuli**	**1.85**	**234**	*e*P	**Pn**	**17 28 59.0**	**-0.6**
	baz=232						
EYUL				*e*S	**Sn**	**17 29 21.6**	**-0.4**
	baz=232						
WPL	**Puli Township**	**1.86**	**257**	*e*S	**Sn**	**17 29 23.6**	**+1.2**
	baz=248						
TWF1	**Yuli**	**1.87**	**234**	⇓P	**Pn**	**17 28 59.0**	**-0.8**
	baz=226						
TWF1				*e*S	**Sn**	**17 29 20.3**	**-2.1**
	baz=226						
DPDB	**Guoxing**	**1.89**	**257**	*e*P	**Pn**	**17 29 00.4**	**+0.3**
	baz=249						
DPDB				*e*S	**Sn**	**17 29 23.6**	**+0.6**
	baz=249						
WCS	**Beigang Elemen**	**1.90**	**258**	*e*P	**Pn**	**17 29 00.4**	**+0.2**
	baz=249						
WCS				*e*S	**Sn**	**17 29 24.0**	**+0.9**
	baz=249						
SSLB	**Suanglung**	**1.94**	**250**	*e*P	**Pn**	**17 29 00.4**	**-0.3**
	baz=248						
SSLB				*e*S	**Sn**	**17 29 24.5**	**+0.4**
	baz=248						
SMLT	**Sun Moon Lake**	**1.95**	**253**	*e*P	**Pn**	**17 29 01.2**	**+0.2**
	baz=244						
SMLT				*e*S	**Sn**	**17 29 25.2**	**+0.6**
	baz=244						
FULB	**Fuli**	**1.96**	**231**	*e*P	**Pn**	**17 29 00.1**	**-1.1**
	baz=229						
FULB				*e*S	**Sn**	**17 29 23.1**	**-1.6**
	baz=229						
TYC	**Yuchr**	**1.98**	**254**	*e*P	**Pn**	**17 29 01.6**	**+0.2**
	baz=246						
TYC				*e*S	**Sn**	**17 29 26.6**	**+1.4**
	baz=246						
EDH	**Donghe**	**2.11**	**226**	*e*P	**Pn**	**17 29 01.6**	**-1.5**
	baz=218						
EDH				*e*S	**Sn**	**17 29 25.6**	**-2.7**
	baz=218						
WNT	**Mingjian**	**2.14**	**255**	*e*P	**Pn**	**17 29 04.7**	**+1.2**
	baz=252						
WNT				*e*S	**Sn**	**17 29 30.9**	**+1.8**
	baz=252						
ELDTW	**Lidau**	**2.17**	**235**	⇑P	**Pn**	**17 29 03.0**	**-1.0**
	baz=233						
ELDTW				*e*S	**Sn**	**17 29 27.9**	**-2.0**
	baz=233						
ALS	**Alishan**	**2.17**	**245**	⇓P	**Pn**	**17 29 04.6**	**+0.5**
	baz=236						
ALS				*e*S	**Sn**	**17 29 30.7**	**+0.5**
	baz=236						
LDUT	**Ludao**	**2.23**	**217**	*e*P	**Pn**	**17 29 03.3**	**-1.5**
	baz=212						
CHN5	**Tsauling**	**2.24**	**248**	*e*P	**Pn**	**17 29 06.1**	**+1.1**
	baz=238						
CHN5				*e*S	**Sn**	**17 29 33.0**	**+1.4**
	baz=238						
LONT	**Longtian**	**2.27**	**227**	*e*P	**Pn**	**17 29 03.9**	**-1.4**
	baz=235						
LONT				*e*S	**Sn**	**17 29 30.8**	**-1.4**
	baz=235						
STYH	**Taoyuan**	**2.36**	**237**	*e*P	**Pn**	**17 29 06.8**	**+0.3**
	baz=236						
STYH				*e*S	**Sn**	**17 29 34.4**	**0.0**
	baz=236						
TWGBT	**Beinan**	**2.36**	**227**	*e*P	**Pn**	**17 29 05.7**	**-0.8**
	baz=234						
TWGBT				*e*S	**Sn**	**17 29 33.5**	**-0.9**
	baz=234						
TWG	**Pinlang**	**2.37**	**227**	*e*P	**Pn**	**17 29 05.7**	**-0.9**
	baz=234						
TWG				*e*S	**Sn**	**17 29 33.6**	**-1.0**
	baz=234						
TPUB	**Ta-pu**	**2.41**	**242**	*e*P	**Pn**	**17 29 08.1**	**+0.9**
	baz=240						
TPUB				*e*S	**Sn**	**17 29 37.0**	**+1.3**
	baz=240						
CHN4	**Tsaushan**	**2.42**	**243**	⇓P	**Pn**	**17 29 08.7**	**+1.4**
	baz=236						
CHN4				*e*S	**Sn**	**17 29 38.1**	**+2.4**
	baz=236						
WTP	**Ta-pu**	**2.45**	**241**	*e*P	**Pn**	**17 29 08.9**	**+1.2**
	baz=239						
WTP				*e*S	**Sn**	**17 29 37.8**	**+1.2**
	baz=239						
TWK	**Hsinying**	**2.54**	**243**	*e*P	**Pn**	**17 29 10.1**	**+1.1**
	baz=240						
TWK				*e*S	**Sn**	**17 29 40.4**	**+1.5**
	baz=240						
CHN1	**Nanshi**	**2.55**	**241**	*e*P	**Pn**	**17 29 11.0**	**+1.9**
	baz=239						
CHN1				*e*S	**Sn**	**17 29 40.7**	**+1.7**
	baz=239						
SGST	**Jiashian**	**2.56**	**238**	*e*P	**Pn**	**17 29 10.0**	**+0.8**
	baz=243						
SGST				*e*S	**Sn**	**17 29 41.6**	**+2.3**
	baz=243						
SSD	**Sandimen**	**2.72**	**232**	*e*P	**Pn**	**17 29 13.1**	**+1.7**
	baz=228						
SSD				*e*S	**Sn**	**17 29 45.2**	**+2.0**
	baz=228						
SCST	**Cishan**	**2.74**	**236**	*e*P	**Pn**	**17 29 11.7**	**+0.1**
	baz=235						
TSMG	**Majia**	**2.74**	**231**	*e*P	**Pn**	**17 29 12.1**	**+0.5**
	baz=224						
TSMG				*e*S	**Sn**	**17 29 44.5**	**+0.9**
	baz=224						
MASBT	**Mashibuluo**	**2.81**	**229**	*e*P	**Pn**	**17 29 12.7**	**+0.1**
	baz=223						
MASBT				*e*S	**Sn**	**17 29 46.0**	**+0.7**
	baz=223						
TSEB	**Hengchuen, Pin**	**3.17**	**217**	*e*S	**Sn**	**17 29 56.0**	**+2.0**
	baz=225						

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*IDC **20** 17:37:22.2±2.1, 7°.55S×128°.85E, h138km±22km, mb3.2/3, mb1 3.6/8, mb1mx3.4/35, mbtmp4.0/8, MS3.2/1, Ms1 3.2/1, ms1mx2.3/19, Error ellipse: s-maj=23.7km s-min=19.8km az=113.0*

ISC 20 17:37:20.6±0.8**, 7°.67S**±0°.06×**129°.02E**±0°.09**, h131**km**, n9, σ3ˢ.39**/13**, mb3.5**/3**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	**Baumata**	**5.86**	**244**	P	**Pn**	**17 38 47.4**	**+2.0**
	12nm,0.3s,baz=274,slow=4.0,SNR=19						
BATI				S	**Sn**	**17 39 50.2**	**-1.2**
	12nm,0.3s,baz=86,slow=19,SNR=2.6						
SIJI	**Sorong**	**7.11**	**18**	P	**Pn**	**17 39 03.1**	**+0.8**
	0.6nm,0.3s,baz=187,slow=23,SNR=9.3						
SIJI				S	**Sn**	**17 40 17.6**	**-4.1**
	0.7nm,0.3s,baz=131,slow=19,SNR=1.2						
FITZ	**Fitzroy Crossi**	**10.88**	**197**	P	**Pn**	**17 39 53.9**	**+1.1**
	1.9nm,0.3s,baz=25,slow=10,SNR=26						
FITZ				S	**Sn**	**17 41 46.2**	**-6.6**
	0.7nm,0.3s,baz=288,slow=20,SNR=2.7						
WRA	**Warramunga Arr**	**13.25**	**158**	P	**Pn**	**17 40 26.4**	**+2.5**
	0.6nm,0.3s,baz=340,slow=13,SNR=17						
WRA				S	**Sn**	**17 42 47.3**	**-2.8**
	1.7nm,0.3s,baz=331,slow=24,SNR=12						
ASAR	**Alice Springs**	**16.59**	**164**	P	**P**	**17 41 10.4**	**+4.6**
	0.4nm,0.3s,baz=340,slow=9.6,SNR=46						
ASAR				S	**Sn**	**17 44 07.2**	**-3.3**
	0.4nm,0.3s,baz=340,slow=24,SNR=7.2						
NWAO	**Narrogin (SRO)**	**27.41**	**202**	LR	LR	17 53 33.9	
	comp=Z,54nm,21.3s,baz=45,slow=35						
CMAR	**Chiang Mai Arr**	**39.42**	**311**	P	**P**	**17 44 37.4**	**-0.7**
	0.4nm,0.8s,baz=148,slow=7.3,SNR=5.1						
MKAR	**Makanchi Array**	**68.25**	**327**	P	**P**	**17 48 07.4**	**+0.1**
	0.3nm,0.3s,baz=116,slow=8.6,SNR=22						
ZALV	**Zalesovo Beam**	**71.75**	**334**	P	**P**	**17 48 27.4**	**-1.0**
	0.6nm,0.6s,baz=114,slow=3.5,SNR=3.9						

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*DJA **20** 17:38:49.4±1.8, 4°N±15°×12°7E±°, h31km±5km, M4.3/8, mb4.4/4, mB4.7/1, MLv4.2/8, Mw(mB)3.9/1*

ISC 20 17:38:54.5±1.6**, 3°.73N**±0°.05×**126°.42E**±0°.10**, h53**km**, n10, σ1ˢ.53**/12**, 1D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**0.89**	**267**	P	**Pn**	**17 39 09.5**	**-1.4**
SGSI				S	**Sn**	**17 39 23.3**	**+0.4**
TNTI	**Ternate**	**3.09**	**162**	P	**Pn**	**17 39 39.9**	**-1.0**
MATI	**Mati**	**3.20**	**357**	*e*P	Pn	17 39 49.0	+6.6
SKMP	**Bagumbayan, Su**	**3.34**	**326**	*e*P	**Pn**	**17 39 42.2**	**-2.1**
SKMP				*e*S	**Sn**	**17 40 22.2**	**-0.6**
KCP	**Kidapawan**	**3.52**	**338**	⇓*e*P	**Pn**	**17 39 49.2**	**+2.4**
BUKP	**Musuan**	**4.34**	**342**	*e*P	**Pn**	**17 39 59.7**	**+1.7**
BUKP				*e*S	**Sn**	**17 40 47.5**	**+0.1**
GTOI	**Gorontalo**	**4.59**	**228**	P	**Pn**	**17 40 01.7**	**+0.3**
	0.1nm20nm,0.7s						
PAGZ	**Pagadian**	**5.08**	**324**	*e*P	**Pn**	**17 40 06.9**	**-1.3**
MRSI	**Marisa**	**5.52**	**234**	P	**Pn**	**17 40 15.9**	**+1.7**
	0.2nm608nm35nm,0.6s						
APSI	**Ampana**	**6.63**	**226**	P	**Pn**	**17 40 29.5**	**0.0**

*ISK **20** 17:51:14.6, 33°.92N×34°.07E, h27^{km}, ML3.2/10*
*NIC **20** 17:51:15.9±0.0, 33°.90N×33°.97E, h33^{km}±34^{km}, Ml3.2/4*
*HLW **20** 17:51:17.4, 33°.82N×33°.17E, h10^{km}±12^{km}, Md3.2*
*GII **20** 17:51:18.1±0.0, 33°.83N×33°.86E, h31^{km}, MD2.0/10, Mm2.3/9*
ISC 20 17:51:12.7±1.2, **33°.85N**±0°.03×**33°.94E**±0°.03, **h10**^{km}±10^{km}, **n56**, σ**1^{s}13**/83, **1C-1D, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASGA	**Asgata**	**1.10**	**329**	⇓P	**Pg**	**17 51 34.3**	**+0.6**
ASGA				S	**Sg**	**17 51 48.7**	**+0.7**
ASGA				AML	AML	17 51 48.9	
	0.6nm,0.2s						
ASGA				AML	AML	17 51 48.9	
	0.6nm,0.2s						
ASGA				AML	AML	17 51 49.4	
	0.9nm,0.4s						
ASGA				AML	AML	17 51 49.4	
	0.9nm,0.4s						
MVOU	**Mavrovouni**	**1.19**	**348**	P	**Pg**	**17 51 35.5**	**-0.1**
MVOU				S	**Sg**	**17 51 50.3**	**-0.7**
CSS	**Mathiatis**	**1.22**	**336**	PN	**Pg**	**17 51 35.9**	**-0.1**
CSS				SN	**Sg**	**17 51 51.3**	**-0.7**
CSS	**Mathiatis**	**1.22**	**336**	Pg	**Pg**	**17 51 36.0**	**-0.1**
CSS				Sg	**Sg**	**17 51 51.0**	**-0.9**
CSS	**Mathiatis**	**1.22**	**336**	P	**Pg**	**17 51 36.3**	**+0.2**
CSS				S	**Sg**	**17 51 51.1**	**-0.9**
AKIN	**Akıncılar- Kıb**	**1.23**	**342**	PN	**Pg**	**17 51 35.6**	**-0.7**
AKIN				SN	**Sg**	**17 51 51.9**	**-0.3**
SZAC	**Souni**	**1.26**	**316**	P	**Pg**	**17 51 37.3**	**+0.4**
SZAC				S	**Sg**	**17 51 53.5**	**+0.3**
SZAC				AML	AML	17 51 54.7	
	0.7nm,0.4s						
SZAC				AML	AML	17 51 54.7	
	0.7nm,0.4s						
SZAC				AML	AML	17 51 57.5	
	1.3nm,0.2s						
SZAC				AML	AML	17 51 57.5	
	1.3nm,0.2s						
HNTI	**Hanita**	**1.28**	**126**	Sn	**Sb**	**17 51 53.7**	**+0.2**
ATHAL	**Athalassa**	**1.36**	**341**	S	**Sb**	**17 51 56.0**	**+0.2**
NATA	**Nata**	**1.47**	**310**	P	**Pn**	**17 51 39.3**	**0.0**
MMA0B	**Mount Meron ar**	**1.48**	**124**	Pn	**Pg**	**17 51 40.9**	**-0.1**
MMA0B				Sn	**Sb**	**17 51 58.8**	**-0.4**
OFRI	**`Ofer**	**1.50**	**144**	Pn	**Pn**	**17 51 40.6**	**+0.8**
OFRI				Sn	**Sn**	**17 51 58.6**	**-0.9**
BLGI	**Bet Lehem HaGe**	**1.53**	**136**	Pn	**Pg**	**17 51 42.0**	**0.0**
BLGI				Sn	**Sn**	**17 51 59.8**	**-0.2**
LEF	**Lefka**	**1.54**	**326**	PN	**Pn**	**17 51 41.9**	**+1.7**
GEM	**Giv'at Ha'Em**	**1.57**	**113**	Pn	**Pb**	**17 51 41.9**	**0.0**
GEM				Sn	**Sn**	**17 52 00.6**	**-0.5**
OSC2	**CSNet OBS 4**	**1.60**	**242**	P	**Pn**	**17 51 40.4**	**-0.6**
OSC2				S	**Sn**	**17 52 03.2**	**+1.5**
RCY	**Rachaya**	**1.62**	**102**	*e*P	**Pb**	**17 51 42.7**	**0.0**
ALFC	**Alefka**	**1.71**	**320**	⇑P	**Pn**	**17 51 44.0**	**+1.4**
ALFC				AML	AML	17 52 06.3	
	1.0nm,0.4s						
ALFC				AML	AML	17 52 07.5	
	1.0nm,0.5s						
HWQ	**Hawqa**	**1.72**	**75**	*e*P	**Pn**	**17 51 43.6**	**+0.8**
AKMS	**Akamas**	**1.77**	**312**	P	**Pn**	**17 51 45.2**	**+1.8**
SLTI	**Sal'it**	**1.85**	**150**	Pn	**Pn**	**17 51 46.0**	**+1.5**
SLTI				Sn	**Sn**	**17 52 06.9**	**-1.1**
MMLI	**Mount Malkishu**	**1.88**	**138**	PN	**Pn**	**17 51 45.2**	**+0.3**
MMLI				SN	**Sn**	**17 52 08.2**	**-0.5**
MMLI	**Mount Malkishu**	**1.88**	**138**	Pn	**Pn**	**17 51 46.2**	**+1.3**
MMLI				Sn	**Sn**	**17 52 08.5**	**-0.2**
MMLI	**Mount Malkishu**	**1.88**	**138**	P	**Pb**	**17 51 46.6**	**-0.5**
MMLI				S	**Sn**	**17 52 09.2**	**+0.5**
HMDT	**Nahal Hemdat**	**2.08**	**140**	Pn	**Pb**	**17 51 49.7**	**-0.7**
HMDT				Sn	**Sn**	**17 52 13.7**	**+0.2**
OSC1	**CSNet OBS 1**	**2.25**	**262**	P	**Pn**	**17 51 51.2**	**+1.2**
OSC1				S	**Sn**	**17 52 18.8**	**+1.0**
TEKE	**Tekeli-Mersin**	**2.39**	**344**	PN	**Pn**	**17 51 52.8**	**+0.9**
TEKE				SN	**Sn**	**17 52 20.2**	**-1.0**
AMAZ	**Amatzia**	**2.45**	**160**	Pn	**Pn**	**17 51 53.8**	**+1.0**
AMAZ				Sn	**Sn**	**17 52 22.0**	**-0.9**
AMAZ	**Amatzia**	**2.45**	**160**	P	**Pn**	**17 51 54.7**	**+1.9**
AMAZ				S	**Sn**	**17 52 23.2**	**+0.4**
BERE	**Bereket-Mersin**	**2.56**	**347**	PN	**Pn**	**17 51 54.7**	**+0.3**
DSI	**Dead Sea**	**2.58**	**152**	Pn	**Pn**	**17 51 56.5**	**+2.0**
DSI				Sn	**Sn**	**17 52 25.6**	**-0.3**
KEBE	**Keben-Mersin**	**2.60**	**356**	PN	**Pn**	**17 51 55.4**	**+0.5**
KIZK	**Mersin**	**2.63**	**4**	PN	**Pn**	**17 51 54.9**	**-0.3**
YTIR	**Yattir**	**2.67**	**158**	Pn	**Pn**	**17 51 57.8**	**+1.9**
YTIR				Sn	**Sn**	**17 52 28.0**	**-0.3**
GAZI	**Gazipasa**	**2.73**	**331**	PN	**Pn**	**17 51 57.8**	**+1.2**
GHAJ	**Ghor Haditha**	**2.89**	**151**	Pn	**Pn**	**17 52 00.3**	**+1.6**
KZIT	**Kziot**	**2.96**	**172**	Pn	**Pn**	**17 52 01.2**	**+1.4**
KZIT				Sn	**Sn**	**17 52 33.9**	**-1.5**
KZIT	**Kziot**	**2.96**	**172**	P	**Pn**	**17 52 01.4**	**+1.6**
KZIT				AML	AML	17 52 35.8	
	0.2nm,0.4s						
KZIT				AML	AML	17 52 37.7	
	0.1nm,0.2s						
KRTS	**Karatas**	**2.96**	**23**	PN	**Pn**	**17 51 59.7**	**0.0**
KARJ	**KARJ**	**3.08**	**152**	Pn	Pn	17 51 52.6	-8.8
ZFRI	**Zfri**	**3.45**	**162**	Pn	**Pn**	**17 52 06.9**	**+0.4**
PRNI	**Paran**	**3.60**	**165**	Pn	**Pn**	**17 52 10.4**	**+1.8**
KRMI	**Paran Flat**	**3.78**	**170**	Pn	**Pn**	**17 52 12.9**	**+1.8**
KRMI				Sn	**Sn**	**17 52 54.6**	**-1.1**
CMRD	**Camardi-Nigde**	**3.90**	**12**	PN	**Pn**	**17 52 13.3**	**+0.5**
HRFI	**Mount Harif**	**3.91**	**166**	Pn	**Pn**	**17 52 14.9**	**+2.0**
HRFI				Sn	**Sn**	**17 52 58.0**	**-1.0**
KOZT	**Kozan**	**3.94**	**22**	PN	**Pn**	**17 52 13.6**	**+0.4**
SUZ	**Suez**	**4.11**	**194**	P	**Pn**	**17 52 17.3**	**+1.8**
	baz=185						
MBRI	**Mt Berech**	**4.13**	**168**	Sn	**Sn**	**17 53 03.4**	**-0.9**
HHAG	**Hagoal**	**4.19**	**202**	P	**Pn**	**17 52 17.8**	**+1.2**
	baz=194						
AQBJ	**Aqaba**	**4.22**	**167**	Sn	**Sn**	**17 53 05.7**	**-0.7**
EIL	**Elat**	**4.25**	**168**	Pn	**Pn**	**17 52 19.4**	**+1.8**
EIL				Sn	**Sn**	**17 53 06.7**	**-0.6**
KOT	**Kottamia**	**4.30**	**205**	P	**Pn**	**17 52 19.1**	**+0.8**
	baz=197						
KOT				S	**Sn**	**17 53 04.0**	**-4.5**
	baz=197						
GLL	**Jalalah**	**4.66**	**205**	P	**Pn**	**17 52 24.1**	**+0.9**
	baz=197						
HSAF	**As Saff**	**4.68**	**206**	P	**Pn**	**17 52 24.2**	**+0.7**
	baz=199						
ZAF	**Zafarana**	**4.71**	**195**	P	**Pn**	**17 52 25.3**	**+1.6**
	baz=187						
HFRF	**Wahat Farafira**	**8.26**	**218**	P	**Pn**	**17 53 12.1**	**-0.4**
	baz=214						

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*IDC **20** 17:54:56.3±0.7, 6°.76N×72°.94W, h163^{km}±7^{km}, mb3.5/7, mb1 3.8/9, mb1mx3.4/38, mbtmp4.1/9, Error ellipse: s-maj=22.0km s-min=7.4km az=131.0*
*RSNC **20** 17:54:57.8±1.9, 6°.82N×73°.19W, h144^{km}±7^{km}, ML4.1, Mw4.2, Fault plane solution: NP1:ϕ_s148.00000°, δ88.00000°, λ36.00000°.*
*NEIC **20** 17:54:57.3±2.5, 6°.77N±0°.03×73°.04W±0°.08, h166^{km}±6^{km}, mb4.4/26, Error ellipse: s-maj=11.6km s-min=3.6km az=73.0*
ISC 20 17:54:56.1±0.6, **6°.83N**±0°.03×**73°.13W**±0°.03, **h152**^{km}±5^{km}, **n93**, σ**1^{s}55**/132, **mb4.2**/16, **20C-8D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.24**	**193**	⇑*i*P	**Pn**	**17 55 17.4**	**+0.5**
BARC				*e*S	**Sn**	**17 55 32.2**	**-0.7**
BARC				*i*		17 55 34.1	
	comp=Z,5µm,0.8s						
BRRC	**Barranca, Sant**	**0.64**	**296**	⇑*i*P	**Pn**	**17 55 19.2**	**+0.8**
BRRC				*e*S	**Sn**	**17 55 34.6**	**-0.8**
BRRC				*i*		17 55 38.7	
	comp=Z,2µm,0.2s						
PAMC	**Pamplona, Colo**	**0.66**	**40**	⇓*i*P	**Pn**	**17 55 20.2**	**+1.1**
PAMC				*e*S	**Sn**	**17 55 37.3**	**+0.6**
PAMC				*i*		17 55 39.6	
	comp=Z,4µm,0.4s						
RUSC	**La Rusia**	**0.93**	**177**	⇑*i*P	**Pn**	**17 55 21.3**	**+0.3**
RUSC				*e*S	**Sn**	**17 55 39.7**	**-0.3**
RUSC				*i*		17 55 41.2	
	comp=Z,2µm,0.3s						
PTBC	**PUERTO BERRIO,**	**1.35**	**258**	⇑*i*P	**Pn**	**17 55 23.8**	**-0.5**
PTBC				*e*S	**Sn**	**17 55 44.9**	**-0.9**
PTBC				*i*		17 55 52.1	
	comp=Z,2µm,0.3s						
TAMC	**Tame, Arauca**	**1.38**	**106**	⇓*i*P	**Pn**	**17 55 25.8**	**+1.2**
TAMC				*i*		17 55 26.0	
	comp=Z,3µm,0.4s						
TAMC				*e*S	**Sn**	**17 55 47.1**	**+0.7**
OCAC	**Ocana**	**1.42**	**352**	⇑*i*P	**Pn**	**17 55 25.4**	**+0.3**
OCAC				*e*S	**Sn**	**17 55 47.3**	**0.0**
OCAC				*i*		17 55 52.1	
	comp=Z,1µm,0.5s						
SPBC	**San Pablo de B**	**1.50**	**219**	⇑*i*P	**Pn**	**17 55 26.1**	**+0.2**
SPBC				*e*S	**Sn**	**17 55 47.9**	**-0.8**
SPBC				*i*		17 55 55.4	
	comp=Z,2µm,0.3s						
NORC	**Norcasia**	**2.14**	**234**	⇑*i*P	**Pn**	**17 55 33.0**	**0.0**
NORC				*e*S	**Sn**	**17 56 00.9**	**-0.5**
NORC				*i*		17 56 09.2	
	comp=Z,1µm,0.2s						
SMLC	**San Martn de**	**2.17**	**335**	*e*P	**Pn**	**17 55 33.4**	**+0.1**
SMLC				*e*S	**Sn**	**17 56 01.9**	**-0.2**
SMLC				*i*		17 56 05.6	
	comp=Z,1µm,0.3s						
CHIC	**Chingaza**	**2.27**	**195**	⇑*i*P	**Pn**	**17 55 35.2**	**+0.4**
CHIC				*e*S	**Sn**	**17 56 04.9**	**+0.2**
CHIC				*i*		17 56 08.1	
	comp=Z,888nm,0.4s						
ROSC	**El Rosal**	**2.30**	**211**	P	**Pn**	**17 55 37.1**	**+1.8**
	comp=Z,472nm,0.3s,baz=130,slow=17,SNR=463						
ROSC				S	**Sn**	**17 56 08.2**	**+2.7**
	comp=Z,435nm,0.3s,baz=198,slow=23,SNR=15						
ROSC	**El Rosal**	**2.30**	**211**		**Pn**	**17 55 36.9**	**+1.5**
ROSC	**El Rosal**	**2.30**	**211**	⇑*i*P	**Pn**	**17 55 36.8**	**+1.5**
ROSC				*e*S	**Sn**	**17 56 05.3**	**-0.2**
ROSC				*i*		17 56 15.5	
	comp=Z,1µm,0.3s						
UREC	**San Jos de Ur**	**2.56**	**291**	*e*P	**Pn**	**17 55 37.1**	**-0.9**
UREC				*e*S	**Sn**	**17 56 08.5**	**-1.8**
UREC				*i*		17 56 20.0	
	comp=Z,784nm,0.2s						
SOCV	**Socops**	**2.68**	**57**	⇓*i*P	**Pn**	**17 55 40.3**	**+0.8**
SOCV				*e*S	**Sn**	**17 56 11.5**	**-1.5**
GUY2C	**Guyana, Caldas**	**2.74**	**235**	⇑*e*P	**Pn**	**17 55 40.9**	**+0.2**
GUY2C				*e*S	**Sn**	**17 56 14.7**	**-0.4**
GUY2C				*i*		17 56 27.4	
	comp=Z,795nm,0.5s						
PTGC	**Puerto Gaitan,**	**2.79**	**159**	⇑*e*P	**Pn**	**17 55 40.7**	**-0.2**
PTGC				*e*S	**Sn**	**17 56 12.8**	**-2.8**
PTGC				*i*		17 56 18.8	
	comp=Z,956nm,0.3s						
CBOC	**Ciudad Bolivar**	**3.02**	**252**	*e*P	**Pn**	**17 55 44.8**	**+0.8**
CBOC				*e*S	**Sn**	**17 56 20.3**	**-0.7**
CBOC				*i*		17 56 38.1	
	comp=Z,280nm,0.7s						
DBBC	**Dabeiba**	**3.07**	**274**	⇓*i*P	**Pn**	**17 55 44.8**	**+0.4**
MOTC	**Monteria, Cord**	**3.17**	**308**	⇓*e*P	**Pn**	**17 55 44.4**	**-1.4**
MOTC				*e*S	**Sn**	**17 56 22.5**	**-1.7**
MOTC				*i*		17 56 38.5	
	comp=Z,301nm,0.4s						
SDV	**Santo Domingo**	**3.21**	**50**	P	**Pn**	**17 55 47.1**	**+0.8**
	comp=Z,28nm,0.3s,baz=247,slow=3.5,SNR=70						
SDV				S	**Sn**	**17 56 24.2**	**-1.0**
	comp=Z,175nm,0.3s,baz=50,slow=21,SNR=52						
SDV	**Santo Domingo**	**3.21**	**50**	*e*P	**Pn**	**17 55 46.9**	**+0.6**
SDV				*e*S	**Sn**	**17 56 23.2**	**-2.1**
ARGC	**Ariguani, Magd**	**3.21**	**340**	*e*P	**Pn**	**17 55 47.4**	**+1.2**
ARGC				*e*S	**Sn**	**17 56 25.8**	**+0.7**
ARGC				*i*		17 56 37.6	
	comp=Z,443nm,0.2s						
PRAC	**Prado**	**3.56**	**210**	⇑*e*P	**Pn**	**17 55 50.3**	**-0.4**
PRAC				*e*S	**Sn**	**17 56 32.6**	**-0.4**
PRAC				*i*		17 56 41.6	
	comp=Z,473nm,0.4s						
ORTC	**Ortega, Tolima**	**3.59**	**216**	⇑*e*P	**Pn**	**17 55 51.1**	**0.0**
ORTC				*e*S	**Sn**	**17 56 33.2**	**-0.5**
ORTC				*i*		17 56 38.7	
	comp=Z,367nm,0.3s						
ELOV	**Elorza**	**3.62**	**87**	⇓*i*P	**Pn**	**17 55 51.7**	**+0.2**
ELOV				*e*S	**Sn**	**17 56 32.7**	**-1.7**
PLMC	**San Jos del P**	**3.67**	**239**	⇑*e*P	**Pn**	**17 55 52.9**	**+0.6**
PLMC				*e*S	**Sn**	**17 56 35.4**	**-0.4**
PLMC				*i*		17 56 41.1	
	comp=Z,277nm,0.3s						
CRJC	**Cerrejon, Guaj**	**4.17**	**3**	⇑*i*P	**Pn**	**17 55 57.5**	**-1.3**
CRJC				*e*S	**Sn**	**17 56 44.8**	**-2.8**
CRJC				*i*		17 56 47.8	
	comp=Z,269nm,0.2s						
YOTC	**Yotoco, Valle**	**4.27**	**229**	⇑*e*P	**Pn**	**17 55 59.5**	**-0.6**
YOTC				*i*		17 56 03.2	
	comp=Z,73nm,0.5s						
YOTC				*e*S	**Sn**	**17 56 49.6**	**-0.3**
GUVC	**San Jose del G**	**4.28**	**173**	*e*P	**Pn**	**17 55 59.7**	**-0.4**
GUVC				*e*S	**Sn**	**17 56 47.8**	**-2.3**
GUVC				*i*		17 56 50.5	
	comp=Z,433nm,0.3s						
SMRC	**Santa Marta, M**	**4.44**	**346**	*e*P	**Pn**	**17 56 01.9**	**-0.3**
SMRC				*e*S	**Sn**	**17 56 50.1**	**-3.6**
SMRC				*i*		17 56 53.8	
	comp=Z,220nm,0.2s						
MACC	**Macarena, Meta**	**4.71**	**189**	⇑*i*P	**Pn**	**17 56 04.1**	**-1.6**
MACC				*i*		17 56 05.0	
	comp=Z,318nm,0.4s						
MACC				*e*S	**Sn**	**17 56 53.4**	**-6.6**
BETC	**Betania**	**4.72**	**209**	⇓*e*P	**Pn**	**17 56 05.0**	**-0.9**
DABV	**Dabajuro**	**4.75**	**31**	⇑*e*P	**Pn**	**17 56 06.3**	**0.0**
DABV				*e*S	**Sn**	**17 56 58.6**	**-2.5**
MARP	**Paez Belalcaza**	**4.86**	**216**	*e*P	**Pn**	**17 56 07.9**	**-0.1**
MARP				*e*S	**Sn**	**17 56 59.4**	**-4.6**
URIC	**Uribia, Colomb**	**4.97**	**13**	⇑*e*P	**Pn**	**17 56 07.6**	**-1.5**
URIC				*i*		17 56 08.4	
	comp=Z,84nm,0.2s						
URIC				*e*S	**Sn**	**17 57 01.0**	**-5.2**
MALC	**Bahia Malaga**	**5.04**	**236**	*e*P	**Pn**	**17 56 11.2**	**+1.2**
MALC				*e*S	**Sn**	**17 57 07.2**	**-0.5**
MALC				*i*		17 57 23.0	
	comp=Z,75nm,0.6s						
POPC	**Popayan, Colom**	**5.54**	**220**	⇓*i*P	**Pn**	**17 56 17.1**	**+0.2**
POPC				*e*S	**Sn**	**17 57 17.9**	**-2.1**
FLOC	**Florencia**	**5.79**	**206**	⇑*e*P	**Pn**	**17 56 18.1**	**-1.9**
FLOC				*i*		17 56 22.0	
	comp=Z,54nm,0.2s						
FLOC				*e*S	**Sn**	**17 57 24.2**	**-1.5**
GR1C	**Gorgona, Isla**	**6.30**	**233**	*e*P	**Pn**	**17 56 26.5**	**-0.3**
GR1C				*i*		17 56 32.3	
	comp=Z,248nm,0.3s						
GR1C				*e*S	**Sn**	**17 57 33.1**	**-4.7**
BBAC	**Balboa, Cauca**	**6.30**	**221**	*e*P	**Pn**	**17 56 26.9**	**-0.2**
BBAC				*i*		17 56 29.7	
	comp=Z,49nm,0.5s						
BBAC				*e*S	**Sn**	**17 57 35.1**	**-3.1**
BCIP	**Isla Barro Col**	**7.04**	**290**	Pn	**Pn**	**17 56 35.2**	**-1.5**
OTAV	**Otavalo**	**8.43**	**219**	Pn	**Pn**	**17 56 57.2**	**+1.6**
PCRV	**Puerto La Cruz**	**9.03**	**68**	P	**Pn**	**17 57 04.6**	**+1.3**
	comp=Z,1.1nm,0.3s,baz=18,slow=7.3,SNR=6.0						
PLCV	**Puerto La Cruz**	**9.07**	**68**		**Pn**	**17 57 04.6**	**+0.8**
MTDJ	**Mount Denham**	**12.12**	**340**	Pn	**Pn**	**17 57 46.9**	**+2.9**
JTS	**Las Juntas de**	**12.19**	**287**	P	**P**	**17 57 50.3**	**-0.8**
	comp=Z,3.1nm,0.3s,baz=355,slow=2.5,SNR=7.1						
SDDR	**Presa de Saban**	**12.21**	**8**	Pn	**Pn**	**17 57 47.5**	**+2.3**
DR12	**Loma Pena Alta**	**12.44**	**17**	Pn	**Pn**	**17 57 48.0**	**0.0**
AOPR	**Arecibo Observ**	**13.03**	**28**	Pn	**Pn**	**17 57 55.0**	**-0.7**
PDPR	**Patillas Dam,**	**13.10**	**31**	Pn	**Pn**	**17 57 55.0**	**-1.6**
GTBY	**Guantanamo Bay**	**13.16**	**352**		**P**	**17 58 00.5**	**-1.3**
MTP	**Monte Pirata**	**13.42**	**33**	Pn	**Pn**	**17 58 00.0**	**-0.6**
CUPR	**Culebra, Puert**	**13.73**	**33**	Pn	**P**	**17 58 05.9**	**-2.2**
WBCY	**West Bay, Gran**	**14.84**	**328**	P	**P**	**17 58 21.2**	**+0.8**
MTO3	**Montecristo**	**17.63**	**297**	P	**Pn**	**17 58 53.8**	**+1.0**
MTO3				IAmb	IAmb	17 59 06.3	
	comp=Z,16nm,1.3s						
SAML	**Samuel**	**18.54**	**148**	P	**P**	**17 58 59.8**	**-1.5**
PAYG	**Puerto Ayora**	**18.67**	**247**	P	**Pn**	**17 59 04.7**	**-0.2**
PAYG				IAmb	IAmb	17 59 18.9	
	comp=Z,38nm,1.2s						
TEIG	**Tepich**	**19.83**	**314**	P	**Pn**	**17 59 17.2**	**-1.2**
	comp=Z,5.5nm,0.4s,baz=110,slow=1.6,SNR=5.6						
TEIG	**Tepich**	**19.83**	**314**	P	**P**	**17 59 17.0**	**+1.8**
PB07	**IPOC Station P**	**28.55**	**174**	P	**P**	**18 00 38.7**	**+0.7**
T42A	**Van Buren**	**34.24**	**334**	P	**P**	**18 01 28.4**	**+1.0**
U40A	**Yellville**	**34.49**	**331**	P	**P**	**18 01 30.1**	**+0.4**
U40A				IAmb	IAmb	18 01 30.9	
	comp=Z,3.9nm,0.7s						
KSPA	**Keystone Colle**	**34.66**	**357**	P	**P**	**18 01 33.2**	**+2.2**
TXAR	**Lajitas Array**	**36.45**	**312**	P	**P**	**18 01 47.2**	**+0.6**
	comp=Z,1.2nm,0.6s,baz=129,slow=9.0,SNR=13						
TX31	**Lajitas Ar. Si**	**36.45**	**312**	P	**P**	**18 01 47.4**	**+0.7**
TX31				IAmb	IAmb	18 01 57.4	
	comp=Z,17nm,1.5s						
TX32	**Lajitas Array**	**36.45**	**312**	P	**P**	**18 01 47.3**	**+0.7**
KAN01	**Argonia South**	**37.61**	**327**	P	**P**	**18 01 55.5**	**-0.7**
EMMW	**East Machias**	**38.06**	**7**	P	**P**	**18 02 01.1**	**+1.3**
SADO	**Sadowa**	**38.16**	**353**	P	**P**	**18 02 02.7**	**+2.1**
SADO				IAmb	IAmb	18 02 03.2	
	comp=Z,3.6nm,0.8s						
G62A	**West of Eustis**	**38.31**	**3**	P	**P**	**18 02 03.8**	**+1.8**
E63A	**Oxbow**	**39.66**	**5**	P	**P**	**18 02 14.1**	**+1.0**
E63A				IAmb	IAmb	18 02 28.6	
	comp=Z,22nm,1.2s						
E46A	**Sault Ste Mari**	**40.56**	**348**	P	**P**	**18 02 21.9**	**+1.4**
E46A				IAmb	IAmb	18 02 42.9	
	comp=Z,23nm,1.6s						
BATG	**Bathurst New B**	**40.76**	**7**	P	**P**	**18 02 22.8**	**+0.7**
SDCO	**Great Sand Dun**	**42.54**	**321**	P	**P**	**18 02 38.7**	**+1.6**
EYMN	**Ely**	**43.86**	**342**	P	**P**	**18 02 47.5**	**+0.2**
EYMN				IAmb	IAmb	18 02 52.4	
	comp=Z,7.3nm,1.4s						
ULM	**Lac du Bonnet**	**47.28**	**340**	P	**P**	**18 03 13.6**	**-0.5**
	comp=Z,1.3nm,0.4s,baz=139,slow=9.1,SNR=4.6						
ULM	**Lac du Bonnet**	**47.28**	**340**	IAmb	IAmb	18 03 24.4	
	comp=Z,7.7nm,1.4s						
PD31	**Pinedale Array**	**48.07**	**324**	P	**P**	**18 03 20.2**	**-0.3**
PDAR	**Pinedale Array**	**48.07**	**324**	P	**P**	**18 03 20.2**	**-0.3**
	comp=Z,0.4nm,0.5s,baz=125,slow=9.8,SNR=5.2						
NVAR	**Mina Array Bea**	**51.47**	**315**	P	**P**	**18 03 47.3**	**+1.0**
	comp=Z,0.3nm,0.5s,baz=108,slow=5.8,SNR=3.7						
G08A	**Pilot Rock**	**55.11**	**322**	P	**P**	**18 04 13.3**	**+0.6**
PINE	**Pine Mountain**	**55.64**	**319**	P	**P**	**18 04 18.1**	**+1.5**
PINE				IAmb	IAmb	18 04 19.2	
	comp=Z,3.1nm,0.9s						
YKA	**Yellowknife Ar**	**63.26**	**340**	P	**P**	**18 05 08.0**	**-0.2**
	comp=Z,0.7nm,0.6s,baz=126,slow=7.7,SNR=15						
SUMG	**Summit**	**68.98**	**11**	P	**P**	**18 05 45.1**	**+0.1**
SUMG				IAmb	IAmb	18 05 45.7	
	comp=Z,5.8nm,0.7s						
SUMG				PcP	**PcP**	**18 06 09.1**	**+0.9**
SUA	**Susitna One**	**78.12**	**331**	P	**P**	**18 06 39.0**	**+0.7**
SUA				IAmb	IAmb	18 06 45.1	
	comp=Z,14nm,1.5s						
PPLA	**Purkeypile**	**78.97**	**333**	P	**P**	**18 06 43.5**	**+0.5**
PPLA				IAmb	IAmb	18 07 06.0	
	comp=Z,23nm,1.6s						
IMAR	**Indian Mountai**	**79.98**	**336**	P	**P**	**18 06 48.1**	**-0.1**
ARCES	**ARCESS Array B**	**86.67**	**20**	P	**P**	**18 07 21.7**	**-0.6**
	comp=Z,2.4nm,0.8s,baz=282,slow=4.5,SNR=3.6						
MKAR	**Makanchi Array**	**122.32**	**20**	PKP	**PKPdf**	**18 13 32.0**	**-1.4**
	comp=Z,0.2nm,0.5s,baz=304,slow=2.8,SNR=6.1						
ASAR	**Alice Springs**	**149.11**	**234**	PKPbc	**PKPbc**	**18 14 26.0**	**-1.4**
	comp=Z,0.8nm,0.5s,baz=118,slow=3.8,SNR=27						
WRA	**Warramunga Arr**	**150.33**	**241**	PKPbc	**PKPbc**	**18 14 29.3**	**-1.2**
	comp=Z,0.9nm,0.4s,baz=109,slow=2.6,SNR=31						

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*IDC **20** 17:59:19.5±1.7, 7°.46S×129°.48E, h0^{km}, mb3.2/1, mb1 3.9/6, mb1mx3.6/33, mbtmp3.8/6, ML3.5/5, Error ellipse: s-maj=43.1km s-min=24.0km az=93.0*
*NEIC **20** 17:59:24.0±3.0, 6°.97S±0°.09×129°.28E±0°.09, h199^{km}±14^{km}, mb4.3/7, Error ellipse: s-maj=12.9km s-min=12.6km az=139.0*
ISC 20 17:59:23.8±0.7, **7°.11S**±0°.06×**129°.31E**±0°.06, **h200**^{km}, **n23**, σ**2^{s}70**/29, **mb4.5**/4, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**2.15**	**114**	Pn	**Pn**	**18 00 05.5**	**+1.6**
SAUI				Sn	**Sn**	**18 00 33.0**	**-2.2**
FAKI	**Fak Fak**	**5.09**	**35**	Pn	**Pn**	**18 00 38.8**	**-0.7**
FAKI				Sn	**Sn**	**18 01 34.3**	**-4.7**
SOEI	**Soe**	**5.64**	**242**	Pn	**Pn**	**18 00 47.5**	**+0.9**
SOEI				Sn	**Sn**	**18 01 49.5**	**-2.5**
BATI	**Baumata**	**6.38**	**241**	Pn	**Pn**	**18 00 56.6**	**+0.6**
	6.5nm,0.3s,baz=103,slow=2.6,SNR=11						
BATI				Sn	**Sn**	**18 02 05.1**	**-4.0**
	14nm,0.3s,baz=156,slow=23,SNR=9.2						
SIJI	**Sorong**	**6.50**	**18**	Pn	**Pn**	**18 01 01.5**	**+3.8**
	1.3nm,0.3s,baz=169,slow=23,SNR=6.7						
SIJI				Sn	**Sn**	**18 02 07.7**	**-4.3**
	1.8nm,0.3s,baz=239,slow=23,SNR=7.4						
FITZ	**Fitzroy Crossi**	**11.49**	**198**	Pn	**Pn**	**18 02 01.3**	**-1.0**
	0.1nm,0.3s,baz=16,slow=10,SNR=13						
FITZ				Sn	Sn	18 04 00.9	-10
	0.1nm,0.3s,baz=13,slow=14,SNR=2.2						
FITZ	**Fitzroy Crossi**	**11.49**	**198**		**Pn**	**18 02 02.2**	**-0.1**
WB0	**Warramunga Arr**	**13.51**	**159**	Pn	**Pn**	**18 02 28.6**	**+0.8**
WRAB	**Tennant Creek**	**13.65**	**160**	Pn	**Pn**	**18 02 30.8**	**+1.3**
WRA	**Warramunga Arr**	**13.66**	**160**	Pn	**Pn**	**18 02 28.9**	**-0.7**
	0.1nm,0.3s,baz=336,slow=13,SNR=4.1						
WRA				Sn	**S**	**18 04 54.9**	**-6.9**
	0.4nm,0.3s,baz=334,slow=22,SNR=5.5						
WRA	**Warramunga Arr**	**13.66**	**160**		**Pn**	**18 02 30.9**	**+1.3**
WB2	**Warramunga Arr**	**13.66**	**160**	Pn	**P**	**18 02 31.9**	**-0.1**
WR0	**Warramunga Arr**	**13.74**	**159**	Pn	**Pn**	**18 02 31.3**	**+0.6**
JAGI	**Jajag, Banyuwa**	**15.08**	**264**		**Pn**	**18 02 47.8**	**+0.6**
COEN	**Coen**	**15.23**	**118**		**P**	**18 02 52.5**	**+3.2**
COEN				IAmb	IAmb	18 03 13.5	
	comp=Z,6.9nm,1.1s						
AS31	**Alice Springs**	**17.04**	**165**	P	**Pn**	**18 03 14.3**	**+3.6**
ASAR	**Alice Springs**	**17.04**	**166**	Pn	**Pn**	**18 03 14.3**	**+3.6**
	comp=Z,0.4nm,0.3s,baz=342,slow=11,SNR=41						
ASAR				Sn	**S**	**18 06 16.6**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=344,slow=29,SNR=1.8						
ASAR	**Alice Springs**	**17.04**	**166**	P	**Pn**	**18 03 13.8**	**+3.1**
PMG	**Port Moresby**	**17.81**	**99**	P	**Pn**	**18 03 20.1**	**+0.4**
PMG				IAmb	IAmb	18 03 26.9	
	comp=Z,3.9nm,0.7s						
CISI	**Cisompet, Garu**	**21.33**	**267**	P	**P**	**18 03 55.8**	**+0.3**
CISI				IAmb	IAmb	18 04 11.3	
	comp=Z,25nm,1.2s						
FORT	**Forrest**	**23.58**	**183**	P	**P**	**18 04 18.1**	**+1.7**
FORT				IAmb	IAmb	18 04 22.6	
	comp=Z,8.6nm,0.8s						
BBOO	**Buckleboo**	**26.33**	**167**	P	**P**	**18 04 40.9**	**-0.4**
BBOO				IAmb	IAmb	18 05 05.1	
	comp=Z,16nm,1.4s						
MKAR	**Makanchi Array**	**67.95**	**327**	P	P	18 10 22.2	+21
	comp=Z,0.1nm,0.5s,baz=111,slow=7.9,SNR=2.5						

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*IDC **20** 18:05:02.1±0.8, 21°.79S×68°.14W, h92^{km}±16^{km}, mb3.8/2, mb1 3.5/5, mb1mx3.3/35, mbtmp3.8/5, Error ellipse: s-maj=37.4km s-min=11.9km az=110.0*
*GUC **20** 18:05:03.3±0.7, 21°.72S×68°.58W, h105^{km}±4^{km}, ML3.3*
ISC 20 18:05:02.0±0.9, **21°.68S**±0°.04×**68°.53W**±0°.07, **h110**^{km}±9^{km}, **n22**, σ**1^{s}31**/41, **12C-2D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB09	**IPOC Station P**	**0.67**	**260**	⇑*i*P	**Pn**	**18 05 20.8**	**+0.5**
PB09				*e*S	**Sn**	**18 05 33.9**	**-0.2**
PB09				IAML		18 05 37.0	
	comp=E,680nm,0.6s						
LVC	**Limon Verde**	**0.99**	**201**	P	**Pn**	**18 05 24.0**	**+0.4**
	comp=E,11nm,0.3s,baz=252,slow=20,SNR=181						
LVC				S	**Sn**	**18 05 39.1**	**-0.6**
	comp=E,42nm,0.3s,baz=223,slow=19,SNR=24						
LVC				LR	LR	18 05 56.6	
	comp=E,121nm,21.3s,baz=246,slow=50						
LVC	**Limon Verde**	**0.99**	**201**	*e*P	**Pn**	**18 05 24.0**	**+0.4**
LVC				*e*S	**Sn**	**18 05 39.7**	**-0.1**
PB01	**IPOC Station P**	**1.09**	**305**	⇑*i*P	**Pn**	**18 05 24.4**	**+0.1**
PB01				*i* S	**Sn**	**18 05 41.1**	**+0.1**
PB01				IAML		18 05 43.5	
	comp=E,435nm,0.3s						
PB03	**IPOC Station P**	**1.20**	**252**	⇑*i*P	**Pn**	**18 05 25.3**	**-0.2**
PB03				*e*S	**Sn**	**18 05 42.2**	**-1.0**
PB03				IAML		18 05 43.9	
	comp=N,654nm,0.3s						
PB07	**IPOC Station P**	**1.26**	**267**	⇑*i*P	**Pn**	**18 05 26.0**	**-0.2**
PB07				*i* S	**Sn**	**18 05 43.5**	**-1.0**
PB07				IAML		18 05 45.1	
	comp=N,541nm,0.2s						
PB02	**IPOC Station P**	**1.32**	**285**	⇑*i*P	**Pn**	**18 05 26.7**	**-0.1**
PB02				*i* S	**Sn**	**18 05 45.2**	**-0.4**
PB02				IAML		18 05 47.5	
	comp=E,552nm,0.5s						
PB06	**IPOC Station P**	**1.41**	**223**	⇓*i*P	**Pn**	**18 05 28.1**	**+0.2**
PB06				*i* S	**Sn**	**18 05 47.3**	**-0.2**
PB06				IAML		18 05 48.7	
	comp=E,610nm,0.6s						
PB08	**IPOC Station P**	**1.63**	**339**	⇑*i*P	**Pn**	**18 05 32.7**	**+1.8**

PB08				iS	Sn	18 05 54.5	+1.8
PB04	IPOC Station P	1.64	246	⇑iP	Pn	18 05 30.2	-0.5
PB04				iS	Sn	18 05 51.3	-1.2
PB04				IAML		18 05 54.7	
	comp=N,404nm,0.3s						
PATCX	Punta Patache	1.74	299	⇑iP	Pn	18 05 32.0	+0.2
PATCX				eS	Sn	18 05 54.7	+0.2
PATCX				IAML		18 05 56.2	
	comp=E,585nm,0.4s						
PB15	IPOC Station P	1.76	210	⇓iP	Pn	18 05 32.5	+0.3
PB15				eS	Sn	18 05 55.2	+0.1
HMBC	Humberstone	1.88	317	⇑iP	Pn	18 05 33.8	+0.1
HMBC				iS	Sn	18 05 57.4	-0.3
TA01	Diego Aracena	1.90	305	⇑iP	Pn	18 05 33.6	-0.1
TA01				eS	Sn	18 05 57.6	-0.2
TA01				IAML		18 06 05.0	
	comp=E,386nm,0.3s						
TA02	Huaiquique	2.05	313	eP	Pn	18 05 35.7	0.0
TA02				eS	Sn	18 06 01.3	0.0
PSGC	Pisagua	2.55	324	⇑iP	Pn	18 05 41.5	-0.7
PSGC				iS	Sn	18 06 12.5	-0.6
PSGC				IAML		18 06 17.7	
	comp=E,497nm,0.5s						
MNMC	Minye Minye	2.72	338	⇑iP	Pn	18 05 45.6	+1.0
MNMC				eS	Sn	18 06 18.8	+1.4
LPAZ	La Paz	5.37	4	P	Pn	18 06 22.8	+2.2
	comp=E,1.4nm,0.3s,baz=180,slow=6.4,SNR=18						
LPAZ				S	Sn	18 07 23.6	+2.1
	comp=E,0.2nm,0.3s,baz=84,slow=7.6,SNR=3.8						
SIV	San Ignacio	9.04	53	P	Pn	18 07 07.9	-1.9
	comp=E,1.0nm,0.3s,baz=253,slow=8.7,SNR=12						
SIV				S	Sn	18 08 44.0	-5.9
	comp=E,0.2nm,0.3s,baz=306,slow=21,SNR=6.7						
PLCA	Paso Flores	19.08	185	P	P	18 09 15.7	-0.3
	comp=E,0.1nm,0.3s,baz=23,slow=15,SNR=3.7						
DBIC	Dimbokro	68.45	73	P	P	18 15 53.2	+0.5
	comp=E,3.6nm,1.0s,baz=239,slow=5.9,SNR=2.2						
TORD	Torodi Ar. Bea	77.08	70	P	P	18 16 44.0	+0.2
	comp=E,0.6nm,0.5s,baz=258,slow=5.3,SNR=5.3						

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*MOS **20** 18:16:22.4±1.1, 27°.08N×54°.73E, h10^{km}, mb4.5/20, Error ellipse: s-maj=8.9km s-min=6.9km az=87.6*

*IDC **20** 18:16:22.9±0.6, 27°.10N×54°.74E, h0^{km}, mb4.0/24, mb1 4.1/26, mb1mx4.0/48, mbtmp4.0/26, ML4.2/2, MS3.5/13, Ms1 3.5/13, ms1mx3.3/40, Error ellipse: s-maj=15.2km s-min=13.5km az=16.0*

*DSN **20** 18:16:23.2±1.5, 27°.33N×54°.77E, h10^{km}, ML4.4/12, Error ellipse: s-maj=18.8km s-min=4.8km az=14.0*

*THR **20** 18:16:23.7±0.3, 27°.09N×54°.75E, h18^{km}±12^{km}, ML4.2*

*NEIC **20** 18:16:24.9±2.5, 27°.10N±0°.03×54°.81E±0°.05, h14^{km}±5^{km}, mb4.5/41, mb_Lg4.4(TEH), Error ellipse: s-maj=7.8km s-min=1.2km az=51.0*

*TEH **20** 18:16:24.9, 27°.12N×54°.84E, h10^{km}, ML4.4*

*OMAN **20** 18:16:27.3, 26°.96N×54°.77E, h10^{km}, mb6.0/9, ml4.1/16, Mwp4.6/3*

ISC 20 18:16:25.6±1.1**, 27°.10N**±0°.03×**54°.80E**±0°.03**, h18**^{km}±7^{km}**, n242, σ1^{s}43**/250**, mb4.3**/57**, MS3.5**/11**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LAR1	LAR	0.68	326	Pg	Pg	18 16 37.4	-1.7
LAR1	LAR	0.68	326	ePg	Pg	18 16 37.4	-1.7
LAR1				e		18 17 00.6	
	comp=Z,99nm,0.4s						
BNDS	Bandar-Abbas	1.26	76	ePg	Pb	18 16 48.0	-1.0
BNDS				eSg	Sn	18 17 05.7	+0.6
BNDS				IAML		18 17 09.8	
	comp=N,8µm,0.4s						
BNDS	Bandar-Abbas	1.26	76		Pb	18 16 47.9	-1.0
BNDS	Bandar-Abbas	1.26	76	ePg	Pb	18 16 48.0	-1.0
GENO	Geno	1.26	76		Pb	18 16 48.0	-0.9
GENO	Geno	1.26	76	ePg	Pb	18 16 48.1	-0.9
GENO				eSg	Sn	18 17 06.1	+1.0
GENO				e		18 17 11.1	
	comp=Z,99nm,0.6s						
LMD1	Lamerd	1.48	280	Pg	Pg	18 16 53.5	-0.5
LMD1	Lamerd	1.48	280	ePg	Pg	18 16 53.6	-0.5
LMD1				eSg	Sg	18 17 15.5	+2.2
LMD1				e		18 17 25.9	
	comp=Z,99nm,0.6s						
SHME	Shamm	1.59	131	eP	Pb	18 16 53.8	-0.8
	SNR=43						
SHME				S	Sg	18 17 17.4	+0.4
SHME	Shamm	1.59	131	Pn	Pb	18 16 53.7	-0.8
SHME	Shamm	1.59	131	ePn	Pb	18 16 53.8	-0.8
SHME	Shamm	1.59	131	P	Pb	18 16 53.8	-0.8
	SNR=12						
SHME				S	Sg	18 17 19.2	+2.2
JHRM	Jahrom	1.77	323	ePg	Pg	18 16 58.4	-1.3
JHRM				e		18 17 31.1	
	comp=Z,99nm,0.3s						
BANOM	Banah	1.78	131	eP	Pb	18 16 56.7	-1.1
	SNR=218						
BANOM	Banah	1.78	131	ePn	Pb	18 16 56.8	-1.0
BANOM	Banah	1.78	131	P	Pb	18 16 56.9	-1.0
	SNR=219						
BANOM				S	Sg	18 17 24.6	+1.6
QIR1	Qir	2.07	312	ePn	Pb	18 17 02.4	-0.4
QIR1				e		18 17 38.7	
	comp=Z,99nm,0.8s						
MASF	Masafi	2.11	144	P	Pb	18 17 02.3	-1.1
	SNR=13						
MSFE	Esma-Masafi	2.12	144	eP	Pb	18 17 02.0	-1.5
	SNR=32						
MSFE	Esma-Masafi	2.12	144	ePn	Pb	18 17 02.0	-1.5
NAZ	Nazwa, Dubai	2.24	160	eP	Pb	18 17 04.5	-1.1
	SNR=20						
NAZ	Nazwa, Dubai	2.24	160	ePn	Pb	18 17 04.5	-1.1
NAZ	Nazwa, Dubai	2.24	160	P	Pb	18 17 04.8	-0.8
	SNR=20						
MDH	Madha	2.24	143	eP	Pn	18 17 03.5	+1.6
	SNR=24						
MDH	Madha	2.24	143	ePn	Pn	18 17 03.5	+1.6
MDH	Madha	2.24	143	P	Pb	18 17 03.8	-1.8
	SNR=11						
FAQ	Al Faqa, Dubai	2.45	163	eP	Pn	18 17 07.1	+2.3
	SNR=18						
FAQ	Al Faqa, Dubai	2.45	163	ePn	Pb	18 17 07.3	-1.9
FAQ	Al Faqa, Dubai	2.45	163	P	Pb	18 17 07.4	-1.7
	SNR=12						
UOSS	Minazif	2.49	149	eP	Pn	18 17 06.5	+1.2
	SNR=52						
UOSS	Minazif	2.49	149	Pn	Pn	18 17 06.7	+1.4
UOSS	Minazif	2.49	149	ePn	Pn	18 17 06.8	+1.5
UOSS	Minazif	2.49	149	P	Pn	18 17 07.1	+1.8
ASUD	Al Ashush, Dub	2.51	169	eP	Pb	18 17 08.6	-1.5
	SNR=7.7						
ASUD	Al Ashush, Dub	2.51	169	P	Pb	18 17 08.8	-1.3
	SNR=6.4						
AJN	Ajban	2.53	176	eP	Pn	18 17 08.5	+2.7
	SNR=10.0						
AJN	Ajban	2.53	176	ePn	Pb	18 17 09.2	-1.3
AJN	Ajban	2.53	176	P	Pn	18 17 08.6	+2.7
	SNR=6.9						
AJN				P	Pn	18 17 08.6	+2.7
	SNR=6.9						
HATD	Hatta, Dubai	2.56	152	eP	Pn	18 17 08.3	+1.9
	SNR=30						
HATD	Hatta, Dubai	2.56	152	Pn	Pn	18 17 08.1	+1.8
HATD	Hatta, Dubai	2.56	152	ePn	Pn	18 17 08.2	+1.9
HATD	Hatta, Dubai	2.56	152	P	Pn	18 17 08.4	+2.1
	SNR=21						
KHNJ	Kahnooj	2.72	71	ePn	Pn	18 17 09.1	+0.7
ALNE	Al Ain	3.15	164	iP	Pn	18 17 16.2	+1.8
	SNR=33						
ALNE	Al Ain	3.15	164	ePn	Pn	18 17 16.7	+2.3
ALNE	Al Ain	3.15	164	P	Pn	18 17 16.9	+2.5
	SNR=9.7						
SHI	Shiraz	3.24	322	ePn	Pn	18 17 17.6	+1.9
SHI				e		18 18 39.6	
	comp=Z,99nm,1.0s						
SOHO	SOHO	3.34	152	iP	Pn	18 17 17.7	+0.7
	SNR=13						
SOHO	SOHO	3.34	152	ePn	Pn	18 17 18.2	+1.2
SOHO	SOHO	3.34	152	P	Pn	18 17 18.3	+1.2
KRBR	Kerman	3.35	31	ePn	Pn	18 17 18.1	+0.7
KRBR				IAML		18 18 18.7	
	comp=E,198nm,0.4s						
KRBR	Kerman	3.35	31	ePn	Pn	18 17 18.1	+0.7
TVBK	TV Kerman	3.35	31	ePn	Pn	18 17 19.6	+2.1
TVBK				e		18 18 17.5	
	comp=Z,99nm,0.4s						
MZWR	Madinat Zayed	3.43	194	ePn	Pn	18 17 20.6	+2.5
MZWR	Madinat Zayed	3.43	194	P	Pn	18 17 20.8	+2.6
KHGB	Koh Gabri	3.58	24	ePn	Pn	18 17 22.7	+2.2
KHGB				e		18 18 23.3	
	comp=Z,99nm,0.7s						
CHMN	Cheshme madani	3.66	41	ePn	Pn	18 17 24.2	+2.5
CHMN				e		18 18 40.2	
	comp=Z,99nm,0.9s						
KBAM	BAM	3.81	57	ePn	Pn	18 17 25.2	+1.7
KBAM				e		18 18 50.3	
	comp=Z,99nm,1.0s						
ARQ	Araqi	4.06	157	P	Pn	18 17 28.8	+2.0
	SNR=12						
SLWR	Sila	4.12	224	P	Pn	18 17 28.7	+1.0
HOQ	Hoqain	4.17	146	P	Pn	18 17 28.6	+0.1
UMZA	Um Al Zommool	4.38	176	ePn	Pn	18 17 33.4	+2.1
UMZA	Um Al Zommool	4.38	176	P	Pn	18 17 33.4	+2.1
UMZA				S	Sn	18 18 24.4	+2.6
BIDO	Bidbid	4.66	139	ePn	Pn	18 17 36.7	+1.5
BIDO	Bidbid	4.66	139	P	Pn	18 17 35.8	+0.6
KLNJ	Kolanjah	4.80	325	ePn	Pn	18 17 39.5	+2.1
BSY	Bisya	4.85	153	P	Pn	18 17 41.0	+3.2
	SNR=7.3						
ISAD	Sadrabad	4.89	349	ePn	Pn	18 17 40.9	+2.3
SMDO	Samad	4.99	143	P	Pn	18 17 41.6	+1.9
	SNR=5.2						
SMDO				P	Pn	18 17 41.6	+1.9
	SNR=5.2						
ICHK	Chekchek	5.14	356	Pn	Pn	18 17 43.8	+1.9
ICHK	Chekchek	5.14	356	ePn	Pn	18 17 43.9	+2.0
IRAM	Ramesheh	5.14	336	ePn	Pn	18 17 43.6	+1.6
WSAR	Wadi Sarin	5.18	137	Pn	Pn	18 17 43.5	+1.2
	comp=Z,6.1nm,0.3s,baz=314,slow=12,SNR=59						
WSAR				Sn	Sn	18 18 43.2	+1.6
	comp=Z,5.5nm,0.3s,baz=251,slow=17,SNR=7.8						
WSAR				LR	LR	18 20 27.2	
	comp=Z,301nm,18.2s,baz=348,slow=47						
IGAR	Gharneh	5.80	336	Pn	Pn	18 17 52.6	+1.5
IGAR	Gharneh	5.80	336	ePn	Pn	18 17 52.6	+1.5
WBK	Wadi Bani Khal	5.86	139	P	Pn	18 17 52.2	+0.6
	SNR=52						
NASN	Na'in	5.94	344	ePn	Pn	18 17 53.3	+0.3
NASN	Na'in	5.94	344	ePn	Pn	18 17 53.3	+0.3
TPRV	Parvadeh(Tabas	6.13	15	ePn	Pn	18 17 57.2	+1.8
ANAR	Anarak	6.14	352	ePn	Pn	18 17 56.7	+1.1
BSRN	Basiran	6.14	37	ePn	Pn	18 17 56.2	+0.6
BSRN	Basiran	6.14	37	ePn	Pn	18 17 56.2	+0.6
IZEF	Zefreh	6.16	340	ePn	Pn	18 17 56.8	+0.8
NHDN	Nehbandan	6.27	46	ePn	Pn	18 17 58.3	+0.9
JLN	Jalan Bani Buh	6.47	139	P	Pn	18 18 00.1	+0.1
JLN				S	Sn	18 19 13.5	0.0
IPIR	Pirpir	6.52	330	ePn	Pn	18 18 02.3	+1.4
RDF	Al-Radifah	6.66	288	eP		18 18 03.8	
UMR	Umm Al-Rimmam	6.70	293	eP		18 18 04.5	
MHTO	MHTO	6.74	154	P	Pn	18 18 04.7	+1.0
	SNR=30						
IKLH	Kolahrood	6.80	337	ePn	Pn	18 18 06.1	+1.4
TKDS	Koohdasht(Taba	6.80	17	ePn	Pn	18 18 06.2	+1.6
TNSJ	Nastanj	7.02	12	ePn	Pn	18 18 08.3	+0.7
MIB	Mutribah	7.10	294	eP		18 18 09.8	
KRSH	Karshahi	7.22	342	ePn	Pn	18 18 12.0	+1.5
QAM	Ghamsar	7.25	337	ePn	Pn	18 18 12.4	+1.6
AFRZ	Afriz	7.28	29	ePn	Pn	18 18 12.9	+1.6
DQM	DQM	7.57	160	P	Pn	18 18 15.1	0.0
	SNR=7.9						
SHRT	Shahrakht	8.07	35	ePn	Pn	18 18 23.0	+1.0
SHRT	Shahrakht	8.07	35	ePn	Pn	18 18 23.0	+1.0
IANJ	Anjilo	8.38	355	Pn	Pn	18 18 27.1	+0.7
IANJ	Anjilo	8.38	355	ePn	Pn	18 18 27.2	+0.8
ILAS	Lasjerd	8.41	350	ePn	Pn	18 18 28.7	+1.9
DOK	Doka	8.46	184	P	Pn	18 18 28.4	+1.0
	SNR=8.4						
IFIR	Firoozkooh	8.69	349	Pn	Pn	18 18 32.1	+1.3
IFIR	Firoozkooh	8.69	349	ePn	Pn	18 18 32.1	+1.3
IKFM	Kafar-mosalman	8.78	319	ePn	Pn	18 18 34.1	+2.4
SHAO	Shalim	9.06	175	iP	Pn	18 18 36.0	+0.3
	SNR=20						
SHAO	Shalim	9.06	175	P	Pn	18 18 36.0	+0.3
	SNR=6.3						
RAYN	Ar Rayn	9.13	249	iP	Pn	18 18 35.7	-0.9
	SNR=18						
RAYN	Ar Rayn	9.13	249	P	Pn	18 18 35.5	-1.1
RAYN	Ar Rayn	9.13	249	Pn	Pn	18 18 35.5	-1.1
WHFO	Wadi Hawf	9.19	186	P	Pn	18 18 38.0	+0.6
	SNR=18						
IRAZ	Razeghan	9.27	334	ePn	Pn	18 18 39.4	+0.8
DMTO	DMTO	9.34	179	P	Pn	18 18 39.0	-0.4
	SNR=31						
DMTO				S	Sn	18 20 24.1	+0.1
IPRN	Peran	9.35	348	ePn	Pn	18 18 42.1	+2.4
IGLO	Ghaloghah	9.41	355	ePn	Pn	18 18 43.6	+3.1
RBK	Rabkut	9.56	183	P	Pn	18 18 43.3	+0.7
	SNR=8.9						
HRA	Herat	9.68	40	Pn	Pn	18 18 45.5	+1.2
ABTO	Aybut	9.80	188	P	Pn	18 18 45.7	0.0
	SNR=28						
IPAY	Payeh	9.98	20	Pn	Pn	18 18 51.0	+2.7
IPAY	Payeh	9.98	20	ePn	Pn	18 18 51.1	+2.7
KBL	Kabul	14.30	55	P	Pn	18 19 49.0	+1.5
KBL	Kabul	14.30	55	Pn	Pn	18 19 49.0	+1.5
SOCY	Socotra	14.86	183	Pn	Pn	18 19 50.8	-4.2
GNI	Garni	15.46	330	Pn	P	18 20 08.8	+1.4
	comp=Z,2.3nm,0.3s,baz=126,slow=0.9,SNR=10						
GNI				LR	LR	18 27 15.5	
	comp=Z,126nm,21.6s,baz=152,slow=42						
GNI	Garni	15.46	330	P	P	18 20 08.1	+0.7
GNI				pmax	pmax		
	comp=Z,64nm,1.3s						
GNI	Garni	15.46	330	P	P	18 20 08.1	+0.7
MARD	Mardin	15.62	314	P	Pn	18 20 06.2	+1.2
MARD				IAmb	IAmb	18 20 26.5	
	comp=Z,14nm,0.6s						
NIL	Nilore	17.20	63	P	Pn	18 20 25.3	+0.3
NIL				pmax	pmax		
	comp=Z,5.0nm,0.8s						
NIL	Nilore	17.20	63		Pn	18 20 25.3	+0.3
MMAI	Mount Meron Ar	17.79	294	P	Pn	18 20 31.9	-0.5
	comp=Z,0.9nm,0.3s,baz=105,slow=17,SNR=2.5						
ZEI	Tsey	18.00	333	eP	Pn	18 20 35.5	+0.5
ZEI				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ATD	Arta Tunnel	19.14	218	LR	LR	18 29 47.4	
	comp=Z,83nm,19.0s,baz=35,slow=42						
KBZ	Khabaz	19.18	333	P	Pn	18 20 50.8	+1.6
	comp=Z,0.1nm,0.3s,baz=191,slow=5.3,SNR=4.1						
KIV	Kislovodsk	19.46	333	eP	Pn	18 20 53.9	+1.3
KIV				pmax	pmax		
	comp=Z,60nm,1.1s						
KIV	Kislovodsk	19.46	333		P	18 20 50.2	-1.2
KIV				IAmb	IAmb	18 20 58.9	
	comp=Z,39nm,1.4s						
CSS	Mathiatis	19.97	298	P	P	18 20 57.9	+0.9
KK31	Karatay Array	20.44	35	P	P	18 21 02.2	+0.1
KK31				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KK31	Karatay Array	20.44	35	P	P	18 21 02.2	+0.1
KKAR	Karatay Array	20.44	35	P	P	18 21 01.7	-0.4
KKAR						18 21 02.8	
KKAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KKAR	Karatay Array	20.44	35	P	P	18 21 02.8	+0.8
KKAR	Karatay Array	20.44	35	P	P	18 21 01.7	-0.4
KKAR				IAmb	IAmb	18 21 08.8	
	comp=Z,3.3nm,0.8s						
KSH	Kashi	21.54	50	P	P	18 21 11.3	-2.7
KSH				pmax	pmax		
	comp=Z,6.0nm,0.6s						
KSH				pmax	pmax		
	comp=Z,310nm,5.0s						
BRTR	Keskin Array B	21.63	311	P	P	18 21 15.6	+0.6
	comp=Z,2.3nm,0.6s,baz=134,slow=10,SNR=13						
BRTR	Keskin Array B	21.63	311	P	P	18 21 14.4	-0.6
BR131	Keskin Array S	21.63	311	P	P	18 21 15.1	+0.1
BR131				pmax	pmax		
	comp=Z,14nm,1.0s						
BR131	Keskin Array S	21.63	311	P	P	18 21 15.1	+0.1
BR131				IAmb	IAmb	18 21 29.5	
	comp=Z,14nm,0.9s						
AAK	Ala-Archa	22.31	41	P	P	18 21 22.6	+0.2
	comp=Z,2.4nm,0.7s,baz=227,slow=2.4,SNR=11						
AAK				LR	LR	18 30 30.9	
	comp=Z,106nm,18.4s,baz=255,slow=38						
AAK	Ala-Archa	22.31	41	P	P	18 21 22.7	+0.4
AAK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
AAK	Ala-Archa	22.31	41	P	P	18 21 22.7	+0.4
ABKAR	Akbulak array	22.48	9	P	P	18 21 23.6	-0.2
ABKAR	Akbulak array	22.48	9	P	P	18 21 23.7	-0.2
ABKAR				IAmb	IAmb	18 21 30.4	
	comp=Z,6.1nm,0.8s						
AKTO	Aktyubinsk	23.43	5	P	P	18 21 34.1	+0.4
	comp=Z,3.2nm,0.5s,baz=169,slow=14,SNR=14						
AKTO				LR	LR	18 32 29.2	
	comp=Z,86nm,21.3s,baz=133,slow=41						
IDI	Anoyia	26.78	295	LR	LR	18 35 06.0	
	comp=Z,46nm,20.8s,baz=82,slow=42						
IDI	Anoyia	26.78	295	P	P	18 22 05.2	+0.6
BRVK	Borovoye	28.38	20	P	P	18 22 18.3	-0.4
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BRVK	Borovoye	28.38	20	P	P	18 22 18.3	-0.4
BVAR	Borovoye Array	28.39	20	P	P	18 22 18.3	-0.5
	comp=Z,1.3nm,0.8s,baz=154,slow=6.9,SNR=3.6						
MAKZ	Makanchi	29.07	40	P	P	18 22 25.9	+0.9
MAKZ				pmax	pmax		
	comp=Z,5.0nm,1.5s						
MAKZ	Makanchi	29.07	40	P	P	18 22 25.9	+0.9
MK31	Makanchi Array	29.24	40	P	P	18 22 26.2	-0.3
MK31				pmax	pmax		
	comp=Z,2.0nm,1.1s						
MK31	Makanchi Array	29.24	40	P	P	18 22 26.2	-0.3
MKAR	Makanchi Array	29.24	40	P	P	18 22 26.6	+0.1
	comp=Z,0.2nm,0.3s,baz=228,slow=9.6,SNR=6.8						
MKAR				LR	LR	18 36 09.5	
	comp=Z,88nm,20.2s,baz=240,slow=40						
MKAR	Makanchi Array	29.24	40	P	P	18 22 26.4	-0.1
ARU	Arti	29.43	4	LR	LR	18 34 36.6	
	comp=Z,145nm,19.4s,baz=210,slow=37						
ITM	Ithomi	29.47	298	P	P	18 22 28.5	-0.1
KURBB	Kurchatov Arra	29.64	31	P	P	18 22 30.9	+0.9
	comp=Z,0.5nm,0.5s,baz=231,slow=8.8,SNR=4.1						
KURK	Kurchatov	29.75	31	P	P	18 22 30.9	0.0
KURK				pmax	pmax		
	comp=Z,5.0nm,1.5s						
KURK	Kurchatov	29.75	31	P	P	18 22 30.9	0.0
AKASG	Malin Array Be	30.57	327	P	P	18 22 36.8	-1.4
	comp=Z,0.7nm,0.5s,baz=131,slow=7.9,SNR=6.8						
AKBB	Malin Array Si	30.57	327	P	P	18 22 37.4	-0.7
AKBB				pmax	pmax		
	comp=Z,6.0nm,1.3s						
AKBB	Malin Array Si	30.57	327	P	P	18 22 37.4	-0.7
AKBB				IAmb	IAmb	18 22 42.9	
	comp=Z,6.4nm,1.2s						
FNA	Florina	30.70	305	P	P	18 22 40.5	+0.9
FNA				pmax	pmax		
	comp=Z,16nm,1.6s						
FNA	Florina	30.70	305	P	P	18 22 40.5	+0.9
FNA				IAmb	IAmb	18 22 45.9	
	comp=Z,16nm,1.6s						
BURAR	Bucovina Array	30.89	319	P	P	18 22 40.7	-0.4
BUR08	Bucovina Ar. S	30.91	319	P	P	18 22 41.0	-0.3
BUR08				IAmb	IAmb	18 22 55.5	
	comp=Z,8.1nm,1.6s						
WMQ	Urumqi	31.30	49	eP	P	18 22 46.5	+1.7
WMQ				pmax	pmax		
	comp=Z,9.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,190nm,5.1s						
WMQ				LR	LR		
	comp=N,670nm,29.0s						
WMQ				LR	LR		
	comp=E,1µm,29.1s						
WMQ				LR	LR		
	comp=Z,90nm,15.7s						
WMQ	Urumqi	31.30	49	P	P	18 22 44.1	-0.7
WMQ				pmax	pmax		
	comp=Z,13nm,1.7s						
WMQ	Urumqi	31.30	49	P	P	18 22 44.1	-0.7
WMQ				IAmb	IAmb	18 23 11.5	
	comp=Z,13nm,1.7s						
KOLS	Kolonicke sedl	33.25	320	eP	P	18 23 06.0	+4.2
KOLS	Kolonicke sedl	33.25	320	eP	P	18 23 06.0	+4.2
ZAA0	Zalesovo Array	34.74	31	P	P	18 23 14.2	-0.4
ZAA0				IAmb	IAmb	18 23 18.0	
	comp=Z,5.4nm,1.1s						
ZALV	Zalesovo Beam	34.74	31	P	P	18 23 14.7	+0.1
	comp=Z,4.0nm,0.6s,baz=239,slow=9.1,SNR=22						
ZALV				LR	LR	18 39 34.4	
	comp=Z,99nm,19.4s,baz=226,slow=40						
ZALV	Zalesovo Beam	34.74	31	P	P	18 23 14.1	-0.5
NRCA	Norcia	37.19	306	P	P	18 23 35.9	0.0
NRCA				IAmb	IAmb	18 23 41.4	
	comp=Z,5.2nm,0.7s						
GERES	GERESS Array B	38.38	316	P	P	18 23 44.6	-1.2
	comp=Z,0.1nm,0.3s,baz=90,slow=7.8,SNR=1.5						
KHC	Kasperske Hory	38.55	316	eP	P	18 23 45.5	-1.7
KHC	Kasperske Hory	38.55	316	eP	P	18 23 45.5	-1.7
GTA	Gaotai	39.22	60	eP	P	18 23 53.5	+0.4
GTA				pP	sP	18 24 01.5	+0.4
GTA				sP	pP	18 24 05.0	+6.3
GTA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
WTTA	Wattenberg	39.23	313	eP	P	18 23 52.7	-0.4
	comp=Z,2.7nm,0.4s						
FIA1	FINESS Array S	39.38	339	P	P	18 23 53.6	-0.2
FINES	FINESS Array B	39.38	339	P	P	18 23 53.1	-0.7
	comp=Z,2.9nm,0.7s,baz=140,slow=9.8,SNR=20						
FINES	FINESS Array B	39.38	339	P	P	18 23 52.5	-1.3
SQTA	Sankt Quirin	39.50	312	iP	P	18 23 54.6	-0.6
	comp=Z,1.1nm,0.2s						
MOTA	Moosalm	39.60	313	iP	P	18 23 55.3	-0.8
	comp=Z,1.0nm,0.2s						
FETA	Feichten	39.77	312	iP	P	18 23 56.2	-1.4
	comp=Z,1.1nm,0.3s						
MSSA	Maissana	40.03	308	P	P	18 23 58.4	-1.3
DAVOX	Davos/Dischmat	40.27	311	P	P	18 24 01.5	-0.3
	comp=Z,2.2nm,0.5s,baz=141,slow=7.8,SNR=7.3						
DAVA	Damuels	40.39	312	iP	P	18 24 01.7	-1.0
	comp=Z,5.7nm,0.3s						
TUE	Stuetta	40.56	311	P	P	18 24 03.2	-1.0
TUE				IAmb	IAmb	18 24 10.7	
	comp=Z,6.8nm,1.0s						
CMAR	Chiang Mai Arr	41.43	92	P	P	18 24 12.7	+1.3
	comp=Z,0.4nm,0.6s,baz=281,slow=9.6,SNR=5.6						
SENIN	Lac Senin/Sane	41.93	310	P	P	18 24 14.9	-0.5
SENIN				IAmb	IAmb	18 24 41.9	
	comp=Z,12nm,1.3s						
BNI	Bardonecchia	42.15	308	P	P	18 24 14.8	-2.4
BNI				pmax	pmax		
	comp=Z,12nm,1.4s						
BNI	Bardonecchia	42.15	308	P	P	18 24 14.8	-2.4
BNI				IAmb	IAmb	18 24 17.0	
	comp=Z,12nm,1.4s						
LZH	Lanzhou	42.35	65	eP	P	18 24 23.6	+4.6
LZH				pP	sP	18 24 37.1	+10
LZH				sP	pP	18 24 39.3	+15
LZH				pmax	pmax		
	comp=Z,16nm,1.0s						
HFS	Hagfors	43.24	331	P	P	18 24 24.7	-0.9
	comp=Z,2.3nm,0.7s,baz=120,slow=8.7,SNR=7.9						
NC405	NORSAR Array S	44.58	332	P	P	18 24 35.4	-1.1
NC405				IAmb	IAmb	18 24 59.6	
	comp=Z,6.8nm,0.8s						
NB2	NORSAR Subarra	44.76	332	P	P	18 24 36.8	-1.1
	comp=Z,1.1nm,0.7s,baz=117,slow=7.9						
NOA	NORSAR Array B	44.76	332	P	P	18 24 39.1	+1.3
	comp=Z,1.7nm,0.8s,baz=118,slow=7.8,SNR=4.1						
NOA				LR	LR	18 43 24.0	
	comp=Z,65nm,21.0s,baz=295,slow=36						
ARCES	ARCESS Array B	45.77	346	P	P	18 24 46.0	+0.3
	comp=Z,3.6nm,0.8s,baz=152,slow=7.8,SNR=7.3						
ARCES				PcP	PcP	18 26 22.4	-0.7
	comp=Z,2.2nm,0.9s,baz=145,slow=2.2,SNR=5.1						
ARCES	ARCESS Array B	45.77	346	P	P	18 24 46.0	+0.3
ARCES				pmax	pmax		
	comp=Z,23nm,1.5s						
HHC	Hu-ho-hao-te	48.25	58	eP	P	18 25 07.3	+1.6
HHC				pmax	pmax		
	comp=Z,3.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,50nm,4.9s						
ESDC	Sonseca Array	49.84	300	P	P	18 25 17.9	+0.1
	comp=Z,0.8nm,0.4s,baz=73,slow=7.2,SNR=9.7						
EKA	Eskdalemuir Ar	50.05	321	P	P	18 25 18.2	-0.9
	comp=Z,0.3nm,0.3s,baz=101,slow=7.1,SNR=5.1						
PAB	San Pablo	50.15	300	P	P	18 25 20.1	-0.1
PAB				pmax	pmax		
	comp=Z,13nm,1.3s						
PAB	San Pablo	50.15	300	P	P	18 25 20.1	-0.1
PAB				IAmb	IAmb	18 25 21.5	

	comp=Z,13nm,1.3s						
TOA0	Torodi Ar. Sit	51.41	265	P	P	18 25 28.9	-1.0
TOA0				IAmb	IAmb	18 25 34.0	
	comp=Z,4.1nm,0.8s						
TORD	Torodi Ar. Bea	51.41	265	P	P	18 25 29.4	-0.4
	comp=Z,4.1nm,0.8s,baz=60,slow=8.3,SNR=18						
TORD				LR	LR	18 48 06.0	
	comp=Z,89nm,18.6s,baz=205,slow=37						
TORD	Torodi Ar. Bea	51.41	265	P	P	18 25 28.1	-1.7
BJI	Beijing	51.81	59	P	P	18 25 29.6	-3.0
BJI				pmax	pmax		
	comp=Z,3.0nm,1.9s						
NJ2	Nanjing	55.22	68	*e*P	P	18 25 56.4	-1.3
NJ2				pmax	pmax		
	comp=Z,2.0nm,0.5s						
KOWA	Kowa	55.96	270	P	P	18 26 02.3	-0.9
KOWA				IAmb	IAmb	18 26 07.4	
	comp=Z,5.1nm,0.8s						
TSUM	Tsumeb	58.48	222	P	P	18 26 20.9	-0.1
TSUM				IAmb	IAmb	18 27 02.7	
	comp=Z,7.3nm,1.2s						
LBTB	Lobatse	58.97	211	P	P	18 26 25.5	+1.2
LBTB				pmax	pmax		
	comp=Z,18nm,1.6s						
LBTB	Lobatse	58.97	211	P	P	18 26 25.4	+1.2
BORG	Borgarnes	59.93	331	P	P	18 26 28.2	-2.2
BORG				pmax	pmax		
	comp=Z,153nm,1.6s						
BORG	Borgarnes	59.93	331	P	P	18 26 28.2	-2.2
DBIC	Dimbokro	60.02	262	P	P	18 26 31.5	-0.3
	comp=Z,3.1nm,0.4s,baz=32,slow=6.0,SNR=12						
DBIC	Dimbokro	60.02	262	P	P	18 26 30.8	-1.0
DBIC				IAmb	IAmb	18 26 36.9	
	comp=Z,7.3nm,1.1s						
KIC	Kosan Boka	60.06	261	*e*P	P	18 26 31.2	-0.8
	comp=Z,3.7nm,0.4s						
TIC	Toumodi	60.18	262	*e*P	P	18 26 32.3	-0.6
LIC	Lamto	60.38	261	*e*P	P	18 26 33.5	-0.7
	comp=Z,14nm,0.4s						
KSRS	Korea Array	61.29	60	LR	LR	18 54 51.3	
	comp=Z,49nm,20.2s,baz=340,slow=38						
BOSA	Boshof	62.23	209	P	P	18 26 46.8	+0.3
	comp=Z,2.9nm,0.7s,baz=29,slow=6.9,SNR=8.6						
BOSA				LR	LR	18 54 00.8	
	comp=Z,44nm,19.4s,baz=30,slow=36						
BOSA	Boshof	62.23	209	P	P	18 26 47.0	+0.5
BOSA				pmax	pmax		
	comp=Z,11nm,1.4s						
BOSA	Boshof	62.23	209	P	P	18 26 47.0	+0.5
SUMG	Summit	65.37	341	*i* P	P	18 27 07.0	0.0
	comp=Z,6.2nm,0.8s						
SUMG	Summit	65.37	341	*i* P	P	18 27 07.0	0.0
SUMG				pmax	pmax		
	comp=Z,6.0nm,0.8s						
SUMG	Summit	65.37	341	*i* P	P	18 27 07.0	0.0
SUMG				IAmb	IAmb	18 27 13.4	
	comp=Z,6.2nm,0.8s						
ILAR	Eielson Array	86.88	9	P	P	18 29 10.8	+1.8
	comp=Z,0.4nm,0.6s,baz=332,slow=4.9,SNR=5.1						
WRA	Warramunga Arr	90.08	112	P	P	18 29 24.9	0.0
	comp=Z,0.2nm,0.3s,baz=314,slow=4.3,SNR=7.3						
WRA	Warramunga Arr	90.08	112	IAmb	IAmb	18 29 27.9	
	comp=Z,0.4nm,1.4s						
YKA	Yellowknife Ar	90.32	355	P	P	18 29 26.0	+0.7
	comp=Z,0.6nm,0.8s,baz=16,slow=5.1,SNR=9.2						
ASAR	Alice Springs	91.51	116	P	P	18 29 30.2	-1.3
	comp=Z,0.5nm,0.8s,baz=298,slow=3.8,SNR=2.5						

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*NEIC **20** 18:17:52.6±1.3, 14°.51N±0°.05×92°.73W±0°.05, h43^{km}±20^{km}, Error ellipse: s-maj=8.7km s-min=4.8km az=45.0*
*MEX **20** 18:17:53.4±0.6, 14°.71N×92°.55W, h88^{km}±7^{km}, MD4.3*
*GCG **20** 18:17:56.2±0.5, 15°.35N×92°.25W, h51^{km}, MD4.1*
ISC 20 18:17:51.9±1.1**, 14°.53N**±0°.06×**92°.74W**±0°.04**, h54**^{km}±17^{km}**, n24, σ1^{s}.82**/37**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.59	50	*e*P	Pn	18 18 04.9	+0.4
THIG				*i* S	Sn	18 18 14.7	+1.1
THIG		0.59	50		Pn	18 18 04.9	+0.4
THIG					Sn	18 18 13.2	-0.4
RTAL	Retalhuleu	1.01	90		Pn	18 18 10.7	+0.8
RTAL				Sn	Sn	18 18 22.6	-0.6
PCIG		1.26	338	*i* P	Pn	18 18 14.1	+0.9
PCIG				*i* S	Sn	18 18 29.4	+0.4
PCIG		1.26	338		Pn	18 18 14.1	+0.9
PCIG					Sn	18 18 29.4	+0.4
HUEH	Huehuetenango	1.43	57		Pn	18 18 16.4	+0.7
HUEH				Sn	Sn	18 18 34.1	+0.5
CCIG	Comitan	1.84	18	*i* P	Pn	18 18 22.5	+1.2
CCIG				*i* S	Sn	18 18 46.9	+3.4
CCIG	Comitan	1.84	18		Pn	18 18 22.5	+1.2
CCIG	Comitan	1.84	18	Sn	Sn	18 18 44.4	+0.9
FUG	Fuego 3	1.84	92	*e*P	Pn	18 18 23.1	+1.9
FUG				*e*S	Sn	18 18 44.3	+0.8
PCG	Pacaya	2.07	93	*e*P	Pn	18 18 26.5	+2.0
PCG				*e*S	Sn	18 18 49.6	+0.3
TGIG		2.27	351	*i* P	Pn	18 18 26.6	-0.4
TGIG				*i* S	Sn	18 18 53.4	-0.4
TGIG		2.27	351		Pn	18 18 27.1	+0.1
TGIG					Sn	18 19 04.5	+11
MRL	Marmol	3.01	79	*e*P	Pn	18 18 38.5	+1.2
MTO3	Montecristo	3.27	92		Pn	18 18 41.4	+0.4
CMIG	Matias Romero	3.28	321	*e*P	Pn	18 18 41.9	+1.0
CMIG	Matias Romero	3.28	321		Pn	18 18 41.9	+1.0
ESQI	Esquipulas	3.29	89	Pn	Pn	18 18 42.3	+1.2
HUIG	Huatulco	3.48	291	*i* P	Pn	18 18 44.8	+1.2
HUIG				*i* S	Sn	18 19 20.4	-3.1
HUIG	Huatulco	3.48	291		Pn	18 18 44.8	+1.2
HUIG					Sn	18 19 19.3	-4.2
PETF	Flores	3.65	49		Pn	18 18 45.8	-0.1
PEIG	Puerto Escondi	4.50	290	*i* P	Pn	18 18 59.9	+2.3
PEIG				*i* S	Sn	18 19 54.2	+5.5
TEIG	Tepich	7.09	36		Pn	18 19 31.1	-1.9
BCIP	Isla Barro Col	13.70	111	Pn	Pn	18 21 01.5	-2.0

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*IDC **20** 18:42:29.0±28.0, 14°.60S×166°.36E, h0^{km}, mb3.6/3, mb1 3.8/4, mb1mx3.5/35, mbtmp3.7/4, ML3.7/1, Error ellipse: s-maj=480.8km s-min=48.0km az=54.0*
*NEIC **20** 18:42:34.7±2.8, 14°.83S±0°.06×167°.1E±0°.1, h105^{km}±5^{km}, mb4.5/14, Error ellipse: s-maj=15.7km s-min=8.3km az=83.0*
ISC 20 18:42:33.9±0.8**, 14°.79S**±0°.08×**167°.1E**±0°.1**, h100**^{km}**, n20, σ1^{s}.52**/23**, mb4.5**/9**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.66	174		Pn	18 42 52.2	+1.2
SANVU				Sn	Sn	18 43 04.5	+0.8
DZM	Mont Dzumac	7.27	185	Pn	Pn	18 44 18.8	+1.1
	1.2nm,0.3s,baz=77,slow=2.1,SNR=17						
DZM				Sn	Sn	18 45 36.0	-2.7
	0.8nm,0.3s,baz=114,slow=20,SNR=4.1						
DZM	Mont Dzumac	7.27	185	Pn	Pn	18 44 18.9	+1.3
HNR	Honiara	8.81	306	Pn	Pn	18 44 35.8	-2.7
HNR				Sn	Sn	18 46 17.5	+1.3
NIUE	Niue	22.35	104	P	P	18 47 21.9	-2.0
URZ	Urewera	24.99	161	P	P	18 47 48.5	+0.3
URZ				IAmb	IAmb	18 48 09.9	
	comp=Z,39nm,1.7s						
BKZ	Black Stump Fm	25.64	163	P	P	18 47 53.9	-0.4
STKA	Stephens Creek	28.86	229	P	P	18 48 25.2	+2.1
	comp=Z,1.6nm,0.4s,baz=62,slow=11,SNR=10.0						
STKA	Stephens Creek	28.86	229	P	P	18 48 25.4	+2.3
WR0	Warramunga Arr	31.50	256	P	P	18 48 44.4	-2.1
WR0				IAmb	IAmb	18 48 55.9	
	comp=Z,12nm,1.3s						
WRA	Warramunga Arr	31.68	256	P	P	18 48 49.0	+0.8
	comp=Z,0.4nm,0.8s,baz=85,slow=9.2,SNR=3.1						
ASAR	Alice Springs	32.53	249	P	P	18 48 56.0	+0.5
	comp=Z,0.2nm,0.5s,baz=77,slow=9.9,SNR=4.5						
BBOO	Buckleboo	33.44	232	P	P	18 49 04.0	+0.7
BBOO				IAmb	IAmb	18 49 16.7	
	comp=Z,12nm,1.2s						
FORT	Forrest	39.15	239	P	P	18 49 51.7	-0.3
FORT				IAmb	IAmb	18 49 52.3	
	comp=Z,9.5nm,0.9s						
FITZ	Fitzroy Crossi	39.87	259	P	P	18 49 58.0	-0.2
MCQ	Macquarie Isla	40.14	187	P	P	18 49 58.5	-1.3
JHJ2	Mitsune	54.31	332	P	P	18 51 49.8	-0.2
UNV	Unalaska Valle	71.99	16	P	P	18 53 48.2	+1.8
KMI	Kunming	74.22	302	P	P	18 54 00.3	-0.3
KMI				IAmb	IAmb	18 54 22.9	
	comp=Z,11nm,1.3s						
QSPA	South Pole Qui	75.24	180	P	P	18 54 06.1	+0.4
QSPA				IAmb	IAmb	18 54 13.1	
	comp=Z,4.2nm,1.3s						

IDC 20 18:50:52.6±1.8**, 0°.28N**×**125°.31E, h0**^{km}**, mb3.2**/3**, mb1 3.5**/3**, mb1mx3.2**/32**, mbtmp3.2**/3**, Error ellipse: s-maj=182.9km s-min=24.9km az=64.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.95	157	P	P	18 55 47.1	-1.1
	0.5nm,0.5s,baz=334,slow=12,SNR=8.8						
ASAR	Alice Springs	25.22	161	P	P	18 56 21.1	+0.8
	0.4nm,0.4s,baz=347,slow=12,SNR=8.3						
MKAR	Makanchi Array	59.62	327	P	P	19 00 58.4	-0.1
	0.1nm,0.4s,baz=115,slow=7.7,SNR=3.1						

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*INET **20** 19:07:22.8, 12°.46N×87°.72W, h15^{km}, MW3.6*
SNET 20 19:07:23.1±0.9**, 12°.45N**×**87°.78W, h51**^{km}±39^{km}**, ML2.9, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	Conchagua	0.82	356	*e*P	Pn	19 07 38.6	0.0
CNCH				*e*S	Sn	19 07 51.4	+1.5
CNCH				IAML		19 07 56.8	
	comp=Z,207nm,0.2s						
VSM	San Miguel	1.08	333	*e*P	Pn	19 07 42.8	+0.6
LCY	Lacayo	1.09	332	*e*P	Pn	19 07 42.5	+0.3
PACA	Pacayal	1.14	332	*e*P	Pn	19 07 43.5	+0.6
PACA				*e*S	Sn	19 07 58.7	+1.1
PACA				IAML		19 08 01.4	
	comp=Z,436nm,0.2s						
TECA	Tecapa	1.25	326	*e*P	Pn	19 07 44.9	+0.4
TGUH	Tegucigalpa,Un	1.67	17	*e*P	Pn	19 07 49.9	-0.1
LBRS	Las Brisas	1.78	316	*e*P	Pn	19 07 52.7	+1.2
BOQS	Boqueron	1.94	311	*e*P	Pn	19 07 54.4	+0.5
SBLS	San Blas	2.27	308	*e*P	Pn	19 07 58.8	+0.4

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*IDC **20** 19:09:54.4±1.1, 39°.87N×143°.62E, h0^{km}, mb3.6/9, mb1 3.7/11, mb1mx3.6/48, mbtmp3.6/11, ML2.9/2, MS2.9/2, Ms1 2.9/2, ms1mx2.5/40, Error ellipse: s-maj=26.4km s-min=22.3km az=113.0*
*JMA **20** 19:09:57.9±0.2, 40°.02N×143°.51E, h25^{km}, M3.5*
*NIED **20** 19:09:57.9, 40°.03N×143°.51E, h25^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}3.65; $M_{\theta\theta}$0.15; $M_{\phi\phi}$-3.80; $M_{r\theta}$0.96; $M_{\theta\phi}$-1.76; $M_{\phi r}$2.24; Fault plane solution: $M_0$4.74000×10^{14} NP1:ϕ_s22.00000°, δ60.00000°, λ92.00000°. NP2:ϕ_s199.00000°, δ30.00000°, λ87.00000°.*
ISC 20 19:09:56.3±3.5**, 39°.97N**±0°.06×**143°.58E**±0°.07**, h11**^{km}±23^{km}**, n32, σ1^{s}.24**/31**, mb3.6**/9**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	1.32	269	P	Pn	19 10 20.1	-0.5
MIYJ	Miyakonagasawa	1.41	254	P	Pb	19 10 22.0	-0.6
JKEN	Kujiedanarisaw	1.45	280	P	Pn	19 10 21.9	-0.5
JANG	Nango	1.63	285	P	Pn	19 10 24.7	-0.2
JANG				*e*S	Sn	19 10 44.6	-1.3
JOM	Ohasama	1.83	255	P	Pb	19 10 28.6	-1.2
JEM	Erimo	2.07	351	P	Pn	19 10 31.3	+0.4
JTM	Tenmabayashi	2.08	294	P	Pn	19 10 31.7	+0.6
JMK	Ichinoseki	2.09	242	P	Pn	19 10 31.6	+0.4
JMK				*e*S	Sn	19 10 56.2	-0.9
JOT	Ohata	2.39	307	P	Pn	19 10 35.8	+0.5
JOT				*e*S	Sn	19 11 02.7	-1.8
JNBK	Urakawa-nobuka	2.39	345	P	Pn	19 10 36.4	+1.0
JNBK				*e*S	Sn	19 11 06.3	+1.6
JCH	Churui	2.65	357	P	Pn	19 10 38.5	-0.4
JCH				*e*S	Sn	19 11 09.0	-2.0
JYK	Kaneyama	2.70	248	P	Pn	19 10 40.8	+1.1
JAK	Akkeshi	3.14	15	P	Pn	19 10 44.8	-0.8
JAK				*e*S	Sn	19 11 20.0	-3.1
ASAJ	Asahikawa	4.21	350	Pn	Pn	19 11 00.9	+0.6
	1.0nm,0.3s,baz=214,slow=6.4,SNR=15						
ASAJ				Sn	Sn	19 11 48.5	-1.0
	1.5nm,0.3s,baz=192,slow=21,SNR=4.7						
USRK	Ussuriysk Ar.	9.60	300	Pn	Pn	19 12 16.9	+2.6
	baz=98,slow=13,SNR=4.9						
KSRS	Korea Array	12.48	263	LR	LR	19 17 18.9	
	comp=Z,44nm,20.6s,baz=62,slow=36						
KLR	Kul'dur	12.51	322	Pn	Pn	19 12 59.6	+5.6
	0.1nm,0.3s,baz=141,slow=14,SNR=2.2						
KLR				LR	LR	19 18 24.6	
	comp=Z,70nm,19.1s,baz=29,slow=40						
SEY	Seymchan	23.60	10	P	P	19 15 07.2	+0.4
	0.9nm,0.3s,baz=169,slow=8.9,SNR=7.2						
SONM	Songino Array	27.71	299	P	P	19 15 46.0	+1.5
	1.3nm,0.5s,baz=86,slow=7.7,SNR=2.8						
H11N2	WAKE ISLAND Hy	28.41	128	T	T	19 45 33.5	
	baz=320,slow=75,SNR=9.2						
H11N1	WAKE ISLAND Hy	28.42	128	T	T	19 45 32.1	
	baz=320,slow=75,SNR=7.8						
H11N3	WAKE ISLAND Hy	28.43	128	T	T	19 45 30.1	
	baz=320,slow=75,SNR=9.6						
H11S1	WAKE ISLAND Hy	29.24	130	T	T	19 46 30.9	
	baz=322,slow=76,SNR=5.6						
H11S3	WAKE ISLAND Hy	29.25	130	T	T	19 46 36.1	
	baz=322,slow=76,SNR=5.0						
H11S2	WAKE ISLAND Hy	29.26	130	T	T	19 46 32.2	
	baz=322,slow=76,SNR=5.8						
ZALV	Zalesovo Beam	41.26	310	P	P	19 17 40.9	-0.3
	0.4nm,0.5s,baz=78,slow=7.5,SNR=2.2						
MKAR	Makanchi Array	44.06	300	P	P	19 18 03.8	-0.3
	0.4nm,0.8s,baz=88,slow=7.8,SNR=3.4						
ILAR	Eielson Array	46.11	34	P	P	19 18 20.8	+0.7
	0.3nm,0.8s,baz=241,slow=7.1,SNR=2.7						
INK	Inuvik	51.00	28	P	P	19 18 58.4	+0.8
	0.4nm,0.5s,baz=307,slow=6.5,SNR=1.3						
WRA	Warramunga Arr	60.22	190	P	P	19 20 03.6	-0.8
	0.5nm,0.5s,baz=7.8,slow=7.3,SNR=9.5						
YKA	Yellowknife Ar	60.42	32	P	P	19 20 05.7	+0.4
	0.1nm,0.5s,baz=280,slow=7.5,SNR=1.7						
FINES	FINESS Array B	67.01	332	P	P	19 20 49.1	+0.4
	5.2nm,1.0s,baz=31,slow=5.6,SNR=3.7						

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*BJI **20** 19:28:25.0±0.0, 41°.91N×142°.69E, h61^{km}, mB5.1/60, mb5.0/85, Ms4.6/81, Ms7 4.4/77*
*MOS **20** 19:28:26.5±0.9, 42°.02N×142°.67E, h59^{km}, mb5.5/47, MS4.4/6, Error ellipse: s-maj=5.2km s-min=3.8km az=101.8*
*GCMT **20** 19:28:27.9±0.2, 42°.09N±0°.01×143°.06E±0°.02, h67^{km}, MW5.2/125, Moment Tensor Solution. s91,c139; s125,c190; Duration: 1^{s}.0 Moment tensor: Scale 10^{17} Nm; M_{rr}0.68±.02; $M_{\theta\theta}$-0.08±.02; $M_{\phi\phi}$-0.60±.02; $M_{r\theta}$0.25±.01; $M_{\theta\phi}$-0.24±.01; $M_{\phi r}$0.30±.01; Best double couple: $M_0$0.79300×10^{17} NP1:ϕ_s193.00000°, δ31.00000°, λ75.00000°. NP2:ϕ_s30.00000°, δ60.00000°, λ99.00000°. Principal axes: T 0.7930, Plg74.0000°, Azm323.0000°; N 0.0000, Plg8.0000°, Azm206.0000°; P -0.7930, Plg14.0000°, Azm114.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **20** 19:28:27.8, 41°.94N×142°.66E, h70^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}5.42; $M_{\theta\theta}$-1.41; $M_{\phi\phi}$-4.01; $M_{r\theta}$2.26; $M_{\theta\phi}$-0.77; $M_{\phi r}$7.92; Fault plane solution: $M_0$9.59000×10^{16} NP1:ϕ_s195.10000°, δ15.17000°, λ89.28000°. NP2:ϕ_s15.85000°, δ74.83000°, λ90.19000°. Principal axes: T 10.1369, Plg60.0000°, Azm286.0000°; N -1.1962, Plg0.0000°, Azm196.0000°; P -8.9407, Plg30.0000°, Azm106.0000°;*
*NIED **20** 19:28:27.7, 41°.98N×142°.72E, h57^{km}, MW5.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}4.23; $M_{\theta\theta}$-0.37; $M_{\phi\phi}$-3.85; $M_{r\theta}$2.79; $M_{\theta\phi}$-1.30; $M_{\phi r}$3.93; Fault plane solution: $M_0$6.43000×10^{16} NP1:ϕ_s31.00000°, δ70.00000°, λ99.00000°. NP2:ϕ_s187.00000°, δ22.00000°, λ68.00000°.*
*NEIC **20** 19:28:27.9±1.7, 41°.95N±0°.05×142°.65E±0°.06, h60^{km}±4^{km}, mb5.2/344, Mwr5.3/11 Error ellipse: s-maj=7.1km s-min=5.8km az=147.0*
*JMA **20** 19:28:27.7±0.1, 41°.98N×142°.72E, h57^{km}±2^{km}, M5.1 Broadband fault plane solution: P waves. NP1: ϕ_s206.00000°, δ9.00000°, λ102.00000°. NP2:ϕ_s14.00000°, δ81.00000°, λ88.00000°. Principal axes: T Plg54.0000°, Azm282.0000°; N Plg2.0000°, Azm15.0000°; P Plg36.0000°, Azm106.0000°;*
JMA Felt III J1.
*BGR **20** 19:28:28.7±0.0, 42°.09N×142°.80E, h33^{km}, mb5.1*
*IDC **20** 19:28:28.2±1.3, 42°.06N×142°.66E, h57^{km}±11^{km}, mb4.7/29, mb1 4.8/38, mb1mx4.8/44, mbtmp5.0/38, MS4.3/41, Ms1 4.3/41, ms1mx4.2/48, Error ellipse: s-maj=11.6km s-min=8.1km az=116.0*
ISC 20 19:28:28.1±0.3**, 41°.97N**±0°.03×**142°.68E**±0°.03**, h61**^{km}±2^{km}**, h61**^{km}**:pP-P, n1135, σ1^{s}.30**/1139**, mb5.2**/338**, 154C-109D, Fault plane solution: NP1:**ϕ_s61.53446°, δ69.41007°, λ106.84124°. **NP2:**ϕ_s200.81448°**,** δ26.36641°**,** λ52.36054°. **Principal axes:** T Plg61.9115°, Azm357.3266°**;** N Plg15.7365°, Azm235.4580°**;** P Plg22.6360°, Azm138.7102°**; Fault plane solution: NP1:** ϕ_s114.69514°**,** δ27.52544°**,** λ14.81969°. **NP2:**ϕ_s11.49067°, δ83.21143°**,** λ116.73880°. **Principal axes:** T Plg45.2879°, Azm308.3757°**;** N Plg26.5366°, Azm188.0826°**;** P Plg32.9210°, Azm79.2186°**; Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNBK	Urakawa-nobuka	0.31	10	⇑P	Pn	19 28 37.4	-1.0
JNBK				*e*S	Sn	19 28 44.9	-1.0
ERM	Erimo	0.36	83	PN	Pn	19 28 37.7	-1.1
ERM						19 28 45.4	
ERM	Erimo	0.36	83		Pn	19 28 37.7	-1.1
ERM				Sn	Sn	19 28 45.4	-1.1
JEM	Erimo	0.36	83	⇑P	Pn	19 28 37.9	-0.9
JEM				*e*S	Sn	19 28 45.5	-1.0
JEM	Erimo	0.36	83	Pn	Pn	19 28 37.9	-0.9
JEM				Sn	Sn	19 28 45.4	-1.2
JSHD	Hidakashinhida	0.46	340	⇓P	Pn	19 28 39.2	-0.6
JTHR	Tokachihiroo	0.56	55	⇑P	Pn	19 28 39.9	-0.9
JTHR				*e*S	Sn	19 28 48.9	-1.1
JCH	Churui	0.82	38	⇑P	Pn	19 28 43.2	-0.6
JCH				*e*S	Sn	19 28 54.1	-1.3
JBT2	Biratori 2	0.84	344	⇓P	Pn	19 28 43.7	-0.4
JBT2				*e*S	Sn	19 28 56.4	+0.5
JIAM	Iburiatsuma	0.86	319	⇓P	Pn	19 28 45.0	+0.7
JFR	Furan	1.19	357	⇓P	Pn	19 28 48.2	-0.5
JKB	Kayabe	1.23	267	⇓P	Pn	19 28 48.7	-0.5
JKB				*e*S	Sn	19 29 04.6	-0.3
JEW	Eniwo	1.25	314	⇓P	Pn	19 28 49.6	+0.1
JEW				*e*S	Sn	19 29 06.0	+0.5
JEW	Eniwo	1.25	314	Pn	Pn	19 28 49.6	+0.1
JEW				Sn	Sn	19 29 06.1	+0.6
JOB	Onbets	1.26	42	⇑P	Pn	19 28 50.1	+0.5
JNB	Noboribetsu	1.31	293	⇓P	Pn	19 28 49.4	-0.9
JOT	Ohata	1.36	245	⇓P	Pn	19 28 50.6	-0.2
JOT				*e*S	Sn	19 29 07.8	-0.1
JARK	Aomorirokkasho	1.38	226	⇓P	Pn	19 28 51.0	-0.2
JAR	Ashorobuto	1.55	31	⇑P	Pn	19 28 53.1	-0.4
JAB	Ashibetsu	1.57	348	⇓P	Pn	19 28 53.6	-0.1
JISS	Ishikarishitsu	1.60	325	⇓P	Pn	19 28 54.3	+0.2
JTM	Tenmabayashi	1.69	226	⇓P	Pn	19 28 55.8	+0.4
JTM	Tenmabayashi	1.69	226	Pn	Pn	19 28 55.8	+0.4
JTM				Sn	Sn	19 29 16.8	+0.7
JYM2	Yakumo 2	1.72	276	⇓P	Pn	19 28 55.4	-0.4
JSR	Shiriuchi	1.75	256	⇓P	Pn	19 28 55.9	-0.2
JAK	Akkeshi	1.81	55	⇓P	Pn	19 28 56.0	-0.9
JANG	Nango	1.82	209	⇓P	Pn	19 28 57.3	+0.1
JKK2	Kamakawa 2	1.90	2	⇓P	Pn	19 28 58.7	+0.5
JHR	Hokuryu	1.90	339	⇓P	Pn	19 28 59.3	+1.1
JSI2	Shiura 2	1.93	242	⇓P	Pn	19 28 59.2	+0.6
JOMM	Oshimamatsumae	2.05	258	⇓P	Pn	19 29 00.0	-0.2
JSH	Shimam	2.06	290	⇓P	Pn	19 29 00.4	0.0
JMP	Maruseppu	2.09	14	P	Pn	19 29 01.4	+0.6
JHST	Hiyamasetana	2.13	283	⇓P	Pn	19 29 00.9	-0.4
JSK	Shakotan	2.13	311	⇓P	Pn	19 29 01.4	+0.1
ASAJ	Asahikawa	2.14	358	P	Pn	19 29 01.7	+0.2
	200nm,0.3s,baz=205,slow=12,SNR=1094						
ASAJ				S	Sn	19 29 25.5	-1.4
	85nm,0.3s,baz=225,slow=23,SNR=7.1						
ASAJ				LR	LR	19 30 14.0	
	comp=Z,6μm,20.3s,baz=318,slow=52						
JKA	Kamikawa-asahi	2.14	359	Pn	Pn	19 29 02.0	+0.5
JHHS	Hirosakihyakuz	2.19	234	⇓P	Pn	19 29 03.1	+1.0
JKZ	Kuzumaki	2.23	208	⇑P	Pn	19 29 03.2	+0.4
JAH	Hinai	2.36	222	⇑P	Pn	19 29 05.5	+1.1
JOSM	Okushiri--Mats	2.39	274	⇓P	Pn	19 29 04.5	-0.3
JSS	Shosan	2.50	346	⇓P	Pn	19 29 07.4	+1.1
JYG	Yagishiri	2.62	340	⇓P	Pn	19 29 08.4	+0.5
NMR	Nemuro--Hokkai	2.65	57	*e*PN	Pn	19 29 06.8	-1.5
NMR				*i* S	Sn	19 29 36.8	-2.5
JRA	Rausu	2.66	42	⇓P	Pn	19 29 08.4	-0.1
JOM	Ohasama	2.71	203	⇑P	Pn	19 29 09.6	+0.3
GLVR	Golovnino	2.73	49	*e*PN	Pn	19 29 09.2	-0.3
GLVR				*i* S	Sn	19 29 41.3	-0.1
GLVR				pmax	pmax		
	comp=Z,717nm,0.3s						
GLVR				pmax	pmax		
	comp=N,236nm,0.1s						
GLVR				pmax	pmax		
	comp=E,308nm,0.3s						
GLVR				smax	smax		
	comp=N,7μm,0.3s						
GLVR				smax	smax		
	comp=E,3μm,0.3s						
GRPR	Tuman	3.04	47	*e*PN	Pn	19 29 13.4	-0.3
GRPR				*i* S	Sn	19 29 48.9	+0.1
GRPR				pmax	pmax		
	comp=Z,643nm,0.3s						
GRPR				pmax	pmax		
	comp=N,266nm,0.2s						
GRPR				pmax	pmax		
	comp=E,267nm,0.3s						
GRPR				smax	smax		
	comp=N,2μm,0.3s						
GRPR				smax	smax		
	comp=E,3μm,0.4s						
YUK	Yuzh-Kuril'sk	3.11	48	*e*PN	Pn	19 29 14.5	-0.2
YUK				*i* S	Sn	19 29 50.2	-0.5
YUK				pmax	pmax		
	comp=N,167μm,0.2s						
YUK				pmax	pmax		
	comp=E,485μm,0.2s						
YUK				pmax	pmax		
	comp=Z,1089μm,0.2s						
YUK				smax	smax		
	comp=N,2μm,0.4s						
YUK				smax	smax		
	comp=E,3μm,0.4s						
JRBN	Rebuntou	3.64	342	⇓P	Pn	19 29 22.4	+0.5
JMM	Marumori	4.35	200	Pn	Pn	19 29 31.4	-0.3
YSS	Yuzh-Sakhalins	4.98	1	α*e*PN	Pn	19 29 41.7	+1.5
YSS				*e*S	Sn	19 30 36.8	+0.4
YSS				pmax	pmax		
	comp=Z,800nm,3.1s						
YSS				pmax	pmax		
	comp=Z,240nm,0.6s						
YSS				pmax	pmax		
	comp=N,200nm,0.9s						
YSS				pmax	pmax		
	comp=E,180nm,0.6s						
YSS				MLR	MLR		
	comp=Z,2μm,14.0s						
YSS				MLR	MLR		
	comp=N,1μm,11.0s						
YSS				MLR	MLR		
	comp=E,2μm,14.0s						
YSS	Yuzh-Sakhalins	4.98	1	Pn	Pn	19 29 41.8	+1.5
KUR	Kuril'sk	4.98	47	*d i*PN	Pn	19 29 40.9	+0.7
KUR				*i* S	Sn	19 30 37.5	+1.0
KUR				pmax	pmax		
	comp=N,128μm,0.3s						
KUR				pmax	pmax		
	comp=E,177μm,0.3s						
KUR				pmax	pmax		
	comp=Z,323μm,0.3s						
KUR				smax	smax		
	comp=E,374nm,0.4s						
KUR				smax	smax		
	comp=N,355nm,0.3s						
JSD	Sado	5.19	222	⇑P	Pn	19 29 44.7	+1.5

JSD	**Sado**	**5.19**	**222**	Pn	**Pn**	**19 29 44.7**	**+1.5**
TEY	**Ternei**	**5.37**	**307**	⇓*i*PN	**Pn**	**19 29 45.5**	**-0.1**
TEY				*e*		19 30 55.6	
TEY				pmax	pmax		
	comp=N,70nm,1.0s						
TEY				pmax	pmax		
	comp=E,150nm,1.0s						
TEY				pmax	pmax		
	comp=Z,150nm,1.0s						
TEY				MLR	MLR		
	comp=E,6µm,18.0s						
TEY				MLR	MLR		
	comp=N,3µm,13.0s						
TEY				MLR	MLR		
	comp=Z,4µm,15.0s						
JKT	**Katashina**	**5.84**	**208**	P	**Pn**	**19 29 53.0**	**+0.9**
JHG	**Hegura jima**	**6.05**	**229**	P	**Pn**	**19 29 57.1**	**+2.2**
JYT	**Yasato**	**6.05**	**199**	Pn	**Pn**	**19 29 54.4**	**-0.6**
JAG	**Ashikaga**	**6.08**	**205**	⇑P	**Pn**	**19 29 55.1**	**-0.3**
MAJO	**Matsushiro**	**6.44**	**214**	*d i*PN	**Pn**	**19 30 01.7**	**+1.4**
MAJO	**Matsushiro**	**6.44**	**214**	Pn	**Pn**	**19 30 00.8**	**+0.6**
MAT	**Matsushiro**	**6.44**	**214**	P	**Pn**	**19 30 00.9**	**+0.6**
MAT				*e*S	**Sn**	**19 31 10.7**	**-1.6**
MJAR	**Matsushiro Arr**	**6.44**	**214**	P	**Pn**	**19 30 01.8**	**+1.6**
	comp=Z,0.8nm,0.3s,baz=39,slow=11,SNR=45						
MJAR				LR	LR	19 33 04.1	
	comp=Z,2µm,21.0s,baz=30,slow=42						
JNG	**Nsakai**	**6.60**	**214**	P	**Pn**	**19 30 03.6**	**+1.1**
JTT	**Ttatey**	**6.78**	**219**	P	**Pn**	**19 30 07.1**	**+2.2**
JGN	**Niukaw**	**7.09**	**218**	P	**Pn**	**19 30 11.4**	**+2.1**
UGL	**Uglegorsk**	**7.12**	**357**	*e*PN	**Pn**	**19 30 10.5**	**+1.0**
UGL				pmax	pmax		
	comp=Z,129nm,0.7s						
UGL				MLR	MLR		
	comp=E,2µm,15.0s						
JGF	**Kuroka**	**7.60**	**215**		**Pn**	**19 30 16.5**	**+0.3**
JYTA	**Yamagatataniai**	**7.88**	**218**	P	**Pn**	**19 30 21.7**	**+1.7**
INU	**Inuyama**	**7.96**	**216**		**Pn**	**19 30 22.0**	**+1.0**
JSG	**Sagara**	**8.10**	**207**		**Pn**	**19 30 19.0**	**-3.9**
USRK	**Ussuriysk Ar.**	**8.13**	**289**	P	**Pn**	**19 30 23.9**	**+0.6**
	baz=96,slow=18,SNR=98						
USRK				LR	LR	19 33 47.2	
	comp=E,1µm,20.1s,baz=147,slow=39						
USRK	**Ussuriysk Ar.**	**8.13**	**289**	PN	**Pn**	**19 30 24.0**	**+0.6**
USRK	**Ussuriysk Ar.**	**8.13**	**289**		**Pn**	**19 30 23.1**	**-0.3**
USA0B	**Ussuriysk Arra**	**8.13**	**289**	*i* PN	**Pn**	**19 30 24.3**	**+0.9**
USA0B	**Ussuriysk Arra**	**8.13**	**289**	Pn	**Pn**	**19 30 22.4**	**-1.0**
MSHR	**Mys Shultsa**	**8.56**	**278**	*ce*PN	**Pn**	**19 30 31.3**	**+2.0**
MSHR				pmax	pmax		
	comp=Z,187nm,1.3s						
JWT	**Wachi**	**8.77**	**223**		**Pn**	**19 30 32.7**	**+0.4**
TYV	**Tymovskoe**	**8.89**	**360**	*e*PN	**Pn**	**19 30 35.7**	**+2.0**
TYV				*e*S	**Sn**	**19 32 17.3**	**+5.0**
TYV				pmax	pmax		
	comp=Z,300nm,3.4s						
TYV				pmax	pmax		
	comp=Z,29nm,1.5s						
TYV				smax	smax		
	comp=E,21nm,1.1s						
TYV				MLR	MLR		
	comp=E,2µm,18.0s						
JHJ	**Hachijo jima 2**	**9.13**	**195**	S	**Sn**	**19 32 10.6**	**-7.8**
	comp=E,74nm,0.3s,baz=90,slow=20,SNR=2.3						
JHJ				LR	LR	19 33 35.4	
	comp=E,794nm,19.0s,baz=66,slow=33						
JHJ2	**Mitsune**	**9.13**	**195**	Pn	**Pn**	**19 30 35.2**	**-1.9**
GRNR	**Gornyy**	**9.80**	**336**	⇑*i*PN	**Pn**	**19 30 47.4**	**+1.3**
GRNR				*e*S	**Sn**	**19 32 37.4**	**+2.9**
GRNR				pmax	pmax		
	comp=E,3.0nm,0.9s						
GRNR				pmax	pmax		
	comp=N,6.0nm,1.0s						
GRNR				pmax	pmax		
	comp=Z,6.0nm,1.1s						
GRNR				smax	smax		
	comp=N,4.0nm,1.0s						
GRNR				MLR	MLR		
	comp=N,500nm,13.0s						
GRNR				MLR	MLR		
	comp=Z,1µm,14.0s						
MDJ	**Mudanjiang**	**9.90**	**290**	P	**Pn**	**19 30 48.9**	**+1.3**
MDJ				pmax	pmax		
	comp=Z,510nm,2.8s						
MDJ				LR	LR		
	comp=Z,1µm,13.6s						
MDJ				LR	LR		
	comp=Z,2µm,21.4s						
MDJ				LR	LR		
	comp=Z,4µm,23.2s						
MDJ	**Mudanjiang**	**9.90**	**290**	Pn	**Pn**	**19 30 48.8**	**+1.3**
JHS	**Saijyo**	**10.22**	**230**		**Pn**	**19 30 53.1**	**+1.0**
KLR	**Kul'dur**	**10.54**	**317**	P	**Pn**	**19 30 57.0**	**+0.7**
	comp=Z,0.6nm,0.3s,baz=119,slow=15,SNR=27						
KLR				LR	LR	19 35 17.7	
	comp=Z,3µm,21.5s,baz=146,slow=39						
KLR	**Kul'dur**	**10.54**	**317**	*ce*PN	**Pn**	**19 30 57.4**	**+1.1**
JMN	**Monobe**	**10.77**	**223**		**Pn**	**19 30 59.3**	**-0.3**
OKH	**Okha**	**11.59**	**1**	*de*PN	**Pn**	**19 31 09.3**	**-1.2**
KSRS	**Korea Array**	**12.22**	**253**	P	**Pn**	**19 31 20.9**	**+1.6**
	comp=Z,1.4nm,0.3s,baz=69,slow=12,SNR=47						
KSRS				S	**Sn**	**19 33 39.7**	**+5.9**
	comp=Z,4.9nm,0.3s,baz=66,slow=24,SNR=18						
KSRS				LR	LR	19 35 35.1	
	comp=Z,2µm,20.4s,baz=76,slow=35						
KS19	**Wonju Array Si**	**12.24**	**253**		**Pn**	**19 31 19.3**	**-0.3**
KSAR	**Wonju Array Be**	**12.26**	**253**	PN	**Pn**	**19 31 19.9**	**+0.1**
KSAR	**Wonju Array Be**	**12.26**	**253**		**Pn**	**19 31 19.9**	**+0.1**
SKR	**Severo-Kuril's**	**12.72**	**42**	*e*PN	**Pn**	**19 31 29.5**	**+3.6**
SKR				pmax	pmax		
	comp=Z,300nm,4.8s						
SKR				pmax	pmax		
	comp=Z,100nm,4.7s						
SKR				MLR	MLR		
	comp=Z,400nm,19.0s						
CN2	**Changchun**	**12.77**	**284**	*e*P	**Pn**	**19 31 27.6**	**+0.9**
CN2				pmax	pmax		
	comp=Z,50nm,1.3s						
CN2				pmax	pmax		
	comp=Z,280nm,6.0s						
CN2				LR	LR		
	comp=Z,2µm,15.0s						
CN2				LR	LR		
	comp=Z,2µm,15.0s						
CN2				LR	LR		
	comp=Z,2µm,18.0s						
JTU	**Tsushima**	**12.81**	**239**	Pn	**Pn**	**19 31 27.1**	**-0.1**
JNU	**Nakatsue**	**12.86**	**230**	P	**Pn**	**19 31 28.8**	**+0.7**
	comp=Z,1.0nm,0.3s,baz=42,slow=11,SNR=15						
JNU				LR	LR	19 36 02.0	
	comp=Z,1µm,21.4s,baz=44,slow=35						
JNU	**Nakatsue**	**12.86**	**230**		**Pn**	**19 31 28.2**	**+0.2**
TJN	**Taejon**	**13.12**	**250**	*ce*PN	**Pn**	**19 31 34.2**	**+2.6**
INCN	**Inchon**	**13.14**	**255**	PN	**Pn**	**19 31 32.0**	**+0.2**
INCN	**Inchon**	**13.14**	**255**		**Pn**	**19 31 32.0**	**+0.2**
SNY	**Shenyang**	**14.23**	**276**	⇑P	**Pn**	**19 31 46.3**	**0.0**
SNY				pmax	pmax		
	comp=Z,25nm,1.1s						
SNY				LR	LR		
	comp=Z,350nm,11.4s						
SNY				LR	LR		
	comp=Z,280nm,12.8s						
SNY				LR	LR		
	comp=Z,470nm,10.4s						
JSU	**Suzuyama**	**14.31**	**227**		**Pn**	**19 31 46.2**	**-1.2**
JCJ	**Chichijima**	**14.85**	**182**	LR	LR	19 37 21.8	
	comp=Z,225nm,21.6s,baz=331,slow=36						
JCJ	**Chichijima**	**14.85**	**182**	Pn	**Pn**	**19 31 51.7**	**-2.8**
PEA0B	**Petropavlovsk-**	**15.03**	**37**	P	**Pn**	**19 31 52.5**	**-4.2**
PEA0B				pmax	pmax		
	comp=Z,39nm,1.1s						
PEA0B	**Petropavlovsk-**	**15.03**	**37**	Pn	**Pn**	**19 31 52.5**	**-4.2**
PETK	**Petropavlovsk-**	**15.03**	**37**	P	**Pn**	**19 31 54.4**	**-2.3**
	comp=Z,0.5nm,0.3s,baz=215,slow=8.5,SNR=24						
PETK				LR	LR	19 37 45.7	
	comp=Z,400nm,19.0s,baz=220,slow=37						
PETK	**Petropavlovsk-**	**15.03**	**37**		**Pn**	**19 31 52.8**	**-3.9**
PET	**Petropavlovsk**	**15.41**	**39**	P	**Pn**	**19 32 00.0**	**-1.5**
PET				pmax	pmax		
	comp=Z,73nm,1.5s						
PET	**Petropavlovsk**	**15.41**	**39**	Pn	**Pn**	**19 32 00.0**	**-1.5**
ZEA	**Zeya**	**15.63**	**324**	*ce*P	**Pn**	**19 32 02.5**	**-1.9**
ZEA				pmax	pmax		
	comp=N,100nm,1.8s						
ZEA				pmax	pmax		
	comp=Z,100nm,1.9s						
ZEA				pmax	pmax		
	comp=E,20nm,1.0s						
ZEA				pmax	pmax		
	comp=N,40nm,1.1s						
ZEA				pmax	pmax		
	comp=Z,70nm,1.0s						
ZEA				MLR	MLR		
	comp=E,900nm,16.0s						
ZEA				MLR	MLR		
	comp=N,800nm,14.0s						
ZEA				MLR	MLR		
	comp=Z,1µm,16.0s						
DL2	**Dalian**	**16.31**	**266**	P	**Pn**	**19 32 12.9**	**-0.2**
DL2				sP	**pP**	**19 32 31.0**	**+3.3**
DL2				S	**S**	**19 35 18.1**	**-4.5**
DL2				pmax	pmax		
	comp=Z,140nm,0.9s						
DL2				pmax	pmax		
	comp=Z,570nm,4.4s						
DL2				LR	LR		
	comp=Z,910nm,15.3s						
DL2				LR	LR		
	comp=Z,350nm,17.5s						
DL2				LR	LR		
	comp=Z,1µm,20.7s						
MA2	**Magadan**	**18.33**	**13**	P	**P**	**19 32 35.0**	**-2.2**
	comp=Z,1.1nm,0.3s,baz=194,slow=10,SNR=22						
MA2				LR	LR	19 40 38.2	
	comp=Z,285nm,18.7s,baz=198,slow=40						
MA2	**Magadan**	**18.33**	**13**	P	**P**	**19 32 35.2**	**-1.9**
MA2				pmax	pmax		
	comp=Z,97nm,1.3s						
MA2	**Magadan**	**18.33**	**13**	P	**P**	**19 32 35.2**	**-1.9**
JMZ	**Minamidaito 2**	**18.68**	**214**	P	**P**	**19 32 40.7**	**-0.6**
JMZ				IAmb	IAmb	19 32 47.7	
	comp=Z,286nm,1.1s						
JOW	**Kunigami**	**19.18**	**223**	P	**P**	**19 32 45.9**	**-0.8**
	comp=Z,4.1nm,0.3s,baz=33,slow=11,SNR=11						
JOW				LR	LR	19 40 32.6	
	comp=Z,1µm,21.4s,baz=72,slow=38						
JOW	**Kunigami**	**19.18**	**223**	P	**P**	**19 32 45.0**	**-1.7**
JOW				IAmb	IAmb	19 32 47.6	
	comp=Z,88nm,1.0s						
BJI	**Beijing**	**20.07**	**273**	P	**P**	**19 32 54.5**	**-1.8**
BJI				S	**S**	**19 36 37.5**	**-0.9**
BJI				pmax	pmax		
	comp=Z,84nm,1.0s						
BJI				LR	LR		
	comp=Z,1µm,15.9s						
BJI				LR	LR		
	comp=Z,520nm,20.6s						
BJI				LR	LR		
	comp=Z,1µm,30.4s						
SSE	**Sheshan**	**20.34**	**245**	P	**P**	**19 32 59.8**	**+0.5**
SSE				pmax	pmax		
	comp=Z,20nm,1.0s						
SSE				LR	LR		
	comp=Z,280nm,17.2s						
SSE				LR	LR		
	comp=Z,530nm,17.4s						
TIA	**Tai'an**	**20.61**	**262**	P	**P**	**19 33 00.1**	**-2.2**
TIA				S	**S**	**19 36 41.0**	**-8.2**
TIA				pmax	pmax		
	comp=Z,94nm,0.9s						
TIA				pmax	pmax		
	comp=Z,240nm,3.5s						
TIA				LR	LR		
	comp=Z,680nm,17.7s						
TIA				LR	LR		
	comp=Z,650nm,20.6s						
TIA				LR	LR		
	comp=Z,860nm,21.1s						
NJ2	**Nanjing**	**21.39**	**250**	*e*P	**P**	**19 33 08.3**	**-2.2**
NJ2				pP	**pP**	**19 33 21.8**	**-1.7**
NJ2				sP	**sP**	**19 33 30.8**	**-0.2**
NJ2				S	**S**	**19 36 57.5**	**-7.1**
NJ2				pmax	pmax		
	comp=Z,24nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,220nm,3.5s						
NJ2				LR	LR		
	comp=Z,2µm,16.1s						
NJ2				LR	LR		
	comp=Z,1µm,16.1s						
NJ2				LR	LR		
	comp=Z,1µm,18.6s						
YAK	**Yakutsk**	**21.54**	**343**	P	**P**	**19 33 07.9**	**-4.1**
	comp=Z,27nm,0.4s,baz=333,slow=0.5,SNR=23						
YAK				LR	LR	19 42 05.2	
	comp=Z,466nm,19.6s,baz=151,slow=38						
YAK	**Yakutsk**	**21.54**	**343**	*e*P	**P**	**19 33 07.8**	**-4.1**
YAK				*e**PP	**pP**	**19 33 27.5**	**+2.2**
YAK				*e*S	**S**	**19 37 00.4**	**-6.7**
YAK				*e**SS	Sn	19 37 19.2	+0.7
YAK				*e*		19 44 25.1	
YAK				pmax	pmax		
	comp=Z,33nm,0.7s						
YAK				pmax	pmax		
	comp=N,17nm,1.0s						
YAK				pmax	pmax		
	comp=E,7.0nm,0.9s						
YAK				smax	smax		
	comp=N,449nm,2.6s						
YAK				smax	smax		
	comp=E,305nm,2.2s						
YAK				MLR	MLR		
	comp=Z,759nm,21.0s						
YAK				MLR	MLR		
	comp=N,492nm,19.0s						
YAK				MLR	MLR		
	comp=E,477nm,16.0s						
YAK	**Yakutsk**	**21.54**	**343**	P	**P**	**19 33 07.3**	**-4.6**
SEY	**Seymchan**	**21.76**	**12**	P	**P**	**19 33 12.2**	**-2.1**
	comp=E,40nm,0.9s,baz=186,slow=8.8,SNR=89						
CIT	**Chita**	**22.12**	**307**	*e*P	**P**	**19 33 14.8**	**-3.5**
CIT				*e*		19 33 39.0	
CIT				*e*		19 34 03.3	
CIT				*e*S	**S**	**19 37 17.5**	**-0.9**
CIT				pmax	pmax		
	comp=Z,53nm,1.2s						
HHC	**Hu-ho-hao-te**	**23.30**	**278**	*e*P	**P**	**19 33 27.3**	**-3.4**
HHC				S	**S**	**19 37 31.8**	**-6.7**
HHC				pmax	pmax		
	comp=Z,14nm,1.1s						
HHC				pmax	pmax		
	comp=Z,190nm,4.5s						
HHC				LR	LR		
	comp=Z,330nm,14.5s						
HHC				LR	LR		
	comp=Z,930nm,18.7s						
HHC				LR	LR		
	comp=Z,1µm,21.3s						
TIY	**Taiyuan**	**23.54**	**270**	*e*P	**P**	**19 33 30.6**	**-2.4**
TIY				pP	**pP**	**19 33 48.8**	**+2.0**
TIY				S	**S**	**19 37 39.6**	**-2.8**
TIY				pmax	pmax		
	comp=Z,16nm,0.7s						
TIY				pmax	pmax		
	comp=Z,120nm,5.1s						
TIY				LR	LR		
	comp=Z,540nm,15.7s						
TIY				LR	LR		
	comp=Z,170nm,6.0s						
TIY				LR	LR		
	comp=Z,880nm,22.0s						
BOD	**Bodaibo**	**24.08**	**321**	*e*P	**P**	**19 33 33.6**	**-3.9**
BOD				pmax	pmax		
	comp=Z,19nm,1.1s						
TATO	**Taipei**	**24.39**	**233**	P	**P**	**19 33 40.2**	**-0.4**
BTO	**Baotou**	**24.50**	**278**	*e*P	**P**	**19 33 38.3**	**-3.3**
BTO				S	S	19 37 45.8	-12
YHNB	**Yeheng**	**24.68**	**232**	P	**P**	**19 33 41.3**	**-2.1**
YHNB				IAmb	IAmb	19 33 52.7	
	comp=Z,102nm,0.9s						
NACB	**Ninganchiao**	**24.93**	**231**	P	**P**	**19 33 43.4**	**-2.1**
WHN	**Wuhan**	**25.42**	**253**	⇓P	**P**	**19 33 48.3**	**-1.6**
WHN				S	**S**	**19 38 16.4**	**+4.1**
WHN				pmax	pmax		
	comp=Z,48nm,1.0s						
WHN				LR	LR		
	comp=Z,3µm,20.7s						
SSLB	**Suanglung**	**25.60**	**232**	P	**P**	**19 33 50.5**	**-1.2**
YULB	**Yu-li**	**25.71**	**231**	P	**P**	**19 33 50.9**	**-1.7**
ULN	**Ulaanbaatar**	**25.74**	**295**	P	**P**	**19 33 52.6**	**-0.3**
ULN				pmax	pmax		
	comp=Z,52nm,1.2s						
ULN	**Ulaanbaatar**	**25.74**	**295**	P	**P**	**19 33 52.6**	**-0.3**
ULN				IAmb	IAmb	19 33 54.2	
	comp=Z,52nm,1.1s						
TPUB	**Ta-pu**	**26.17**	**232**	P	**P**	**19 33 55.5**	**-1.3**
TPUB				IAmb	IAmb	19 33 58.9	
	comp=Z,59nm,1.0s						
QZH	**Quanzhou**	**26.18**	**237**	⇑*i*P	**P**	**19 33 57.5**	**+0.7**
QZH				S	**S**	**19 38 27.3**	**+2.9**
QZH				pmax	pmax		
	comp=Z,39nm,1.1s						
QZH				pmax	pmax		
	comp=Z,340nm,3.6s						
QZH				LR	LR		
	comp=Z,490nm,19.9s						
SONM	**Songino Array**	**26.19**	**295**	P	**P**	**19 33 56.8**	**0.0**
	comp=Z,17nm,0.5s,baz=86,slow=9.2,SNR=64						
SONM				LR	LR	19 45 33.8	
	comp=Z,1µm,18.5s,baz=61,slow=39						
SONM	**Songino Array**	**26.19**	**295**	P	**P**	**19 33 56.9**	**0.0**
SONM				pmax	pmax		
	comp=Z,30nm,0.9s						
SONM	**Songino Array**	**26.19**	**295**	P	**P**	**19 33 56.9**	**0.0**
TWG	**Pinlang**	**26.28**	**230**	P	**P**	**19 33 57.4**	**-0.4**
TWG				IAmb	IAmb	19 34 04.5	
	comp=Z,27nm,0.7s						
AMKA	**Amchitka**	**26.58**	**57**	P	**P**	**19 34 01.7**	**+1.4**
KNMB	**Chin-men Tao**	**26.65**	**237**	P	**P**	**19 34 01.6**	**+0.5**
KNMB				IAmb	IAmb	19 34 04.5	
	comp=Z,109nm,1.0s						
XAN	**Xi'an**	**27.62**	**264**	P	**P**	**19 34 10.0**	**+0.2**
XAN				pP	pP	19 34 24.8	+0.4
XAN				sP	sP	19 34 32.4	+0.9
XAN				PP	**PnPn**	**19 35 03.3**	**+5.4**
XAN				S	**S**	**19 38 50.4**	**+3.3**
XAN				PcS	**PcS**	**19 41 03.0**	**-4.9**
XAN				pmax	pmax		
	comp=Z,61nm,1.3s						
XAN				pmax	pmax		
	comp=Z,280nm,4.6s						
XAN				LR	LR		
	comp=Z,520nm,21.1s						
XAN				LR	LR		
	comp=Z,720nm,19.8s						
XAN				LR	LR		
	comp=Z,730nm,21.1s						
IRK	**Irkutsk**	**27.78**	**305**	*e*P	**P**	**19 34 10.5**	**-0.5**
IRK				*e*		19 34 26.4	
IRK				pmax	pmax		
	comp=Z,111nm,3.3s						
TLY	**Talaya**	**28.11**	**304**	P	**P**	**19 34 13.8**	**-0.2**
	comp=Z,20nm,0.7s,baz=108,slow=6.3,SNR=77						
TLY				PcP	**PcP**	**19 37 28.6**	**+1.8**
	comp=Z,2.5nm,0.6s,baz=91,slow=7.6,SNR=3.3						
TLY				LR	LR	19 46 03.0	
	comp=Z,1µm,20.9s,baz=68,slow=38						
TLY	**Talaya**	**28.11**	**304**	*c i*P	**P**	**19 34 14.0**	**0.0**
TLY				*e*S	**S**	**19 38 59.4**	**+4.9**
TLY				pmax	pmax		
	comp=Z,155nm,1.2s						
TLY				MLR	MLR		
	comp=Z,2µm,18.0s						
TLY	**Talaya**	**28.11**	**304**	P	**P**	**19 34 13.6**	**-0.4**
TLY				IAmb	IAmb	19 34 15.6	
	comp=Z,50nm,1.0s						
ZAK	**Zakamensk**	**28.27**	**301**	*e*P	**P**	**19 34 14.8**	**-0.7**
ZAK				pmax	pmax		
	comp=Z,35nm,1.1s						
GUMO	**Guam**	**28.34**	**176**	LR	LR	19 44 10.8	
	comp=Z,509nm,21.0s,baz=5.0,slow=33						
MOY	**Mondy**	**29.76**	**303**	*e*P	**P**	**19 34 28.7**	**0.0**
MOY				pmax	pmax		
	comp=Z,113nm,1.7s						
H11N2	**WAKE ISLAND Hy**	**30.21**	**130**	T	T	20 05 56.0	
	baz=323,slow=75,SNR=2075						
H11N1	**WAKE ISLAND Hy**	**30.22**	**130**	T	T	20 05 56.0	
	baz=323,slow=75,SNR=1256						
H11N3	**WAKE ISLAND Hy**	**30.23**	**130**	T	T	20 06 03.0	
	baz=323,slow=75,SNR=1042						
LZH	**Lanzhou**	**30.54**	**272**	⇓P	**P**	**19 34 35.8**	**-0.1**
LZH				pP	pP	19 34 51.9	+1.3
LZH				sP	sP	19 34 57.4	-0.2
LZH				S	**S**	**19 39 35.0**	**+1.7**
LZH				pmax	pmax		
	comp=Z,24nm,1.1s						
LZH				LR	LR		
	comp=Z,530nm,16.3s						
LZH				LR	LR		
	comp=Z,800nm,15.7s						
LZH				LR	LR		
	comp=Z,490nm,16.3s						
H11S1	**WAKE ISLAND Hy**	**31.07**	**132**	T	T	20 07 02.9	
	baz=324,slow=76,SNR=1855						
H11S3	**WAKE ISLAND Hy**	**31.07**	**132**	T	T	20 07 04.1	
	baz=324,slow=76,SNR=1084						
H11S2	**WAKE ISLAND Hy**	**31.09**	**132**	T	T	20 07 04.2	
	baz=324,slow=76,SNR=1519						
GTA	**Gaotai**	**32.35**	**280**	*e*P	**P**	**19 34 51.8**	**+0.1**
GTA				PcP	**PcP**	**19 37 39.9**	**+1.7**
GTA				ScS	ScS	19 45 16.3	+0.4
GTA				pmax	pmax		
	comp=Z,12nm,1.0s						
GTA				pmax	pmax		
	comp=Z,190nm,7.2s						
GTA				LR	LR		
	comp=Z,470nm,18.7s						
GTA				LR	LR		
	comp=Z,630nm,17.9s						
GTA				LR	LR		
	comp=Z,870nm,20.7s						
CD2	**Chengdu**	**32.94**	**263**	P	**P**	**19 34 55.5**	**-1.3**
CD2				S	**S**	**19 40 10.5**	**-0.1**
CD2				pmax	pmax		
	comp=Z,50nm,0.8s						
CD2				pmax	pmax		
	comp=Z,280nm,11.0s						
CD2				LR	LR		
	comp=Z,640nm,15.7s						
CD2				LR	LR		
	comp=Z,600nm,17.5s						
CD2				LR	LR		
	comp=Z,590nm,21.2s						
GYA	**Guiyang**	**33.28**	**254**	⇑P	**P**	**19 34 58.4**	**-1.5**
GYA				pP	pP	19 35 17.8	+3.1
GYA				PcP	**PcP**	**19 37 42.0**	**+1.1**
GYA				S	**S**	**19 40 21.8**	**+5.8**
GYA				sS	sS	19 40 42.8	+1.2
GYA				ScS	**ScS**	**19 45 19.8**	**-1.1**
GYA				pmax	pmax		
	comp=Z,16nm,1.2s						
GYA				LR	LR		
	comp=Z,440nm,14.6s						
GYA				LR	LR		
	comp=Z,450nm,16.2s						
GYA				LR	LR		
	comp=Z,710nm,20.0s						
GAMB	**Gambell**	**34.04**	**35**	P	**P**	**19 35 07.9**	**+2.0**
QIZ	**Qiongzhong**	**36.03**	**241**	P	**P**	**19 35 22.9**	**-0.7**
QIZ				S	**S**	**19 40 58.5**	**+0.3**
QIZ				LR	LR		
	comp=Z,530nm,15.9s						
QIZ				LR	LR		
	comp=Z,460nm,14.7s						
QIZ				LR	LR		
	comp=Z,460nm,23.5s						
KMI	**Kunming**	**36.91**	**256**	⇑P	**P**	**19 35 31.1**	**-0.1**
KMI				pP	pP	19 35 45.3	-0.9
KMI				sP	sP	19 35 51.6	-1.5
KMI				PP	**PnPn**	**19 36 56.9**	**0.0**
KMI				PcP	**PcP**	**19 37 53.3**	**+1.6**
KMI				S	**S**	**19 41 08.1**	**-3.8**
KMI				ScP	**ScP**	**19 41 31.6**	**-1.5**
KMI				SS	**SnSn**	**19 43 39.1**	**-10**
KMI				ScS	**ScS**	**19 45 39.3**	**-1.5**
KMI				pmax	pmax		
	comp=Z,33nm,1.0s						
KMI				pmax	pmax		
	comp=Z,330nm,3.8s						
KMI				LR	LR		
	comp=Z,290nm,22.3s						
KMI				LR	LR		
	comp=Z,520nm,21.5s						
KMI				LR	LR		
	comp=Z,610nm,22.5s						
ANM	**Nome**	**36.92**	**34**	P	**P**	**19 35 31.9**	**+1.2**
ANM				pmax	pmax		
	comp=Z,10.0nm,1.1s						

ANM	Nome	36.92	34	P	P	19 35 31.9	+1.2
SLVN	Son La	38.46	250	P	P	19 35 45.0	+0.8
DGZ	Jazzator, Alta	38.49	301	c iP	P	19 35 45.4	+1.2
DGZ				pmax	pmax		
	comp=Z,116nm,1.2s						
RDOG	Red Dog Mine	38.69	29	P	P	19 35 44.9	-0.6
ZAA0	Zalesovo Array	39.47	308	P	P	19 35 52.0	-0.2
ZALV	Zalesovo Beam	39.47	308	P	P	19 35 52.1	-0.1
	comp=Z,64nm,0.7s,baz=86,slow=7.4,SNR=256						
ZALV				PcP	PcP	19 38 00.0	+1.2
	comp=Z,8.4nm,0.7s,baz=86,slow=3.9,SNR=3.8						
ZALV				ScP	ScP	19 41 43.6	+1.5
	comp=Z,4.6nm,0.9s,baz=66,slow=3.7,SNR=6.0						
ZALV				LR	LR	19 53 23.7	
	comp=Z,942nm,18.0s,baz=78,slow=38						
ZALV	Zalesovo Beam	39.47	308		PcP	19 37 59.7	+0.8
WMQ	Urumqi	39.69	292	eP	P	19 35 54.5	+0.2
WMQ				pP	pP	19 36 10.3	+0.9
WMQ				PcP	PcP	19 38 01.1	+1.2
WMQ				pmax	pmax		
	comp=Z,90nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,330nm,3.6s						
WMQ				LR	LR		
	comp=Z,310nm,6.5s						
WMQ				LR	LR		
	comp=Z,760nm,8.5s						
WMQ				LR	LR		
	comp=Z,770nm,22.3s						
ZSN	Zaisan	40.63	298	eP	P	19 36 02.4	+0.4
	comp=Z,27nm,1.1s,baz=298						
ZSN	Zaisan	40.63	298	eP	P	19 36 02.3	+0.4
ZSN				pmax	pmax		
	comp=Z,27nm,1.1s						
TTA	Tatalina	40.87	38	P	P	19 36 04.6	+0.9
TTA				pmax	pmax		
	comp=Z,23nm,1.6s						
TTA	Tatalina	40.87	38	P	P	19 36 04.5	+0.9
NONG	Nongkai	41.19	247	P	P	19 36 08.0	+1.2
	comp=Z,140nm,0.9s						
A21K	Barrow	41.55	25	P	P	19 36 07.8	-1.3
	baz=259						
A21K	Barrow	41.55	25	P	P	19 36 08.4	-0.7
A21K				IAmb	IAmb	19 36 10.6	
	comp=Z,80nm,1.4s						
UBPT	Khong Chiam	41.61	241	P	P	19 36 11.0	+0.8
	comp=Z,23nm,1.3s						
UBPT	Khong Chiam	41.61	241	P	P	19 36 11.1	+0.8
UBPT				IAmb	IAmb	19 36 12.6	
	comp=Z,42nm,1.1s						
DLV	T Lat	42.22	235	P	P	19 36 16.5	+1.1
DLV				IAmb	IAmb	19 36 18.2	
	comp=Z,44nm,0.8s						
MK31	Makanchi Array	42.50	298	ceP	P	19 36 17.0	-0.3
MK31	Makanchi Array	42.50	298	P	P	19 36 16.9	-0.3
MK31				IAmb	IAmb	19 36 18.4	
	comp=Z,58nm,0.9s						
MKAR	Makanchi Array	42.50	298	P	P	19 36 17.2	0.0
	comp=Z,73nm,1.0s,baz=80,slow=8.8,SNR=298						
MKAR				PcP	PcP	19 38 09.8	+0.9
	comp=Z,3.1nm,0.4s,baz=76,slow=5.5,SNR=9.8						
MKAR				LR	LR	19 55 45.4	
	comp=Z,301nm,18.2s,baz=92,slow=39						
MKAR	Makanchi Array	42.50	298	P	P	19 36 16.9	-0.3
MKAR						19 38 07.9	
MKAR	Makanchi Array	42.50	298	P	P	19 36 16.9	-0.3
MKAR				PcP	PcP	19 38 07.9	-1.0
MYLDM	Lahad Datu	42.50	217	P	P	19 36 17.4	-0.1
PPLA	Purkeypile	42.62	38	P	P	19 36 18.6	+0.5
PPLA				IAmb	IAmb	19 36 53.3	
	comp=Z,91nm,1.6s						
KHON	Khomkaen	42.62	245	P	P	19 36 19.6	+1.2
	comp=Z,2µmcomp=Z,254nm,0.8s						
MAKZ	Makanchi	42.70	298	P	P	19 36 18.3	-0.5
MAKZ				pmax	pmax		
	comp=Z,89nm,1.0s						
MAKZ	Makanchi	42.70	298	P	P	19 36 18.3	-0.5
KDAK	Kodiak Island	42.85	45	P	P	19 36 19.4	-0.5
	comp=Z,9.0nm,0.4s,baz=332,slow=3.4,SNR=19						
KDAK	Kodiak Island	42.85	45	P	P	19 36 19.4	-0.5
KDAK				pmax	pmax		
	comp=Z,175nm,1.7s						
SEM	Semipalatinsk	42.87	304	⇑iP	P	19 36 19.8	-0.7
	comp=Z,26nm,0.8s,baz=303						
SEM	Semipalatinsk	42.87	304	c iP	P	19 36 19.7	-0.7
SEM				pmax	pmax		
	comp=Z,26nm,0.8s						
LSA	Lhasa	42.94	271	P	P	19 36 22.8	+1.3
LSA				S	S	19 42 34.5	-8.0
LSA				pmax	pmax		
	comp=Z,170nm,1.2s						
LSA				LR	LR		
	comp=Z,400nm,11.0s						
LSA				LR	LR		
	comp=Z,490nm,16.0s						
LSA				LR	LR		
	comp=Z,400nm,9.6s						
LSA	Lhasa	42.94	271	P	P	19 36 22.8	+1.3
SKT	Skwentna	42.97	39	P	P	19 36 21.4	+0.6
BPAW	Bear Paw Mtn.	43.11	36	P	P	19 36 22.2	+0.3
BPAW				PcP	PcP	19 38 12.1	+1.4
KTH	Kantishna Hill	43.16	37	P	P	19 36 22.1	-0.3
KTH				IAmb	IAmb	19 36 47.6	
	comp=Z,44nm,1.0s						
MLY	Manley	43.19	35	P	P	19 36 22.6	0.0
	baz=271,SNR=8.7						
UTTA	Uttaradit	43.20	249	P	P	19 36 24.3	+1.1
	comp=Z,707nmcomp=Z,110nm,0.9s						
TNTI	Ternate	43.28	203	P	P	19 36 21.1	-2.6
TNTI				IAmb	IAmb	19 36 45.9	
	comp=Z,49nm,1.2s						
LAMP	Lampang	43.33	251	P	P	19 36 25.6	+1.4
	comp=Z,645nmcomp=Z,86nm,0.9s						
SUA	Susitna One	43.38	40	P	P	19 36 24.6	+0.4
COLD	Coldfoot	43.40	31	P	P	19 36 23.9	-0.3
	baz=269						
COLD	Coldfoot	43.40	31	P	P	19 36 23.7	-0.5
CM34	Chiang Mai Arr	43.45	252	P	P	19 36 26.0	+0.8
TRF	Thorofare Moun	43.45	37	P	P	19 36 24.9	+0.1
BRLK	Bradley Lake	43.49	42	P	P	19 36 26.0	+0.9
CHAI	Chaiyaphum	43.49	246	P	P	19 36 27.0	+1.5
	comp=Z,1µmcomp=Z,157nm,0.9s						
CUT	Chulitna	43.53	39	P	P	19 36 25.0	-0.3
	baz=274						
CM35	Chiang Mai Arr	43.56	251	P	P	19 36 26.0	0.0
CM33	Chiang Mai Arr	43.61	252	P	P	19 36 27.0	+0.5
CMMT	Chiang Mai	43.62	252	P	P	19 36 26.0	-0.5
	comp=Z,426nmcomp=Z,25nm,0.9s						
CHTO	Chiang Mai	43.62	252	P	P	19 36 26.9	+0.4
CHTO				pmax	pmax		
	comp=Z,44nm,1.0s						
CHTO	Chiang Mai	43.62	252	P	P	19 36 26.9	+0.4
CHTO				IAmb	IAmb	19 36 28.6	
	comp=Z,44nm,0.9s						
TOLK	Toolik Lake Re	43.66	29	P	P	19 36 26.2	-0.1
	baz=268,SNR=6.2						
TOLK	Toolik Lake Re	43.66	29	P	P	19 36 25.6	-0.8
PHIT	Phitsanulok	43.68	249	P	P	19 36 28.7	+1.7
	comp=Z,254nm,1.0s						
CM36	Chiang Mai Arr	43.71	251	P	P	19 36 28.0	+0.8
I23K	Minto, Yukon-K	43.77	34	P	P	19 36 27.4	+0.2
	baz=272,SNR=6.0						
I23K	Minto, Yukon-K	43.77	34	P	P	19 36 27.5	+0.4
BWN	Browne	43.77	36	P	P	19 36 28.4	+1.2
BWN				IAmb	IAmb	19 36 30.4	
	comp=Z,92nm,1.2s						
CM32	Chiang Mai Arr	43.79	252	P	P	19 36 29.0	+1.1
KURK	Kurchatov	43.80	304	P	P	19 36 28.2	+0.6
KURK	Kurchatov	43.80	304	P	P	19 36 27.3	-0.3
CM09	Chiang Mai Arr	43.83	251	P	P	19 36 29.0	+0.8
	comp=Z,201nmcomp=Z,24nm,0.8s						
CM31	Chiang Mai Arr	43.85	251	P	P	19 36 29.7	+1.3
	comp=Z,6µmcomp=Z,574nm,0.8s						
CM31	Chiang Mai Arr	43.85	251	P	P	19 36 28.8	+0.4
CM31				IAmb	IAmb	19 36 35.9	
	comp=Z,25nm,0.8s						
CMAR	Chiang Mai Arr	43.85	251	P	P	19 36 29.4	+1.0
	comp=Z,11nm,0.8s,baz=46,slow=6.5,SNR=96						
CMAR				LR	LR	19 56 03.5	
	comp=Z,463nm,19.3s,baz=92,slow=38						
CMAR	Chiang Mai Arr	43.85	251	P	P	19 36 29.2	+0.8
CM02	Chiang Mai Arr	43.87	251	P	P	19 36 29.9	+1.3
	comp=Z,204nmcomp=Z,32nm,0.9s						
CM01	Chiang Mai Arr	43.87	251	P	P	19 36 29.9	+1.4
	comp=Z,223nmcomp=Z,29nm,1.0s						
CM04	Chiang Mai Arr	43.87	251	P	P	19 36 29.9	+1.4
	comp=Z,217nmcomp=Z,30nm,1.0s						
CM15	Chiang Mai Arr	43.87	251	P	P	19 36 29.8	+1.2
	comp=Z,191nmcomp=Z,20nm,1.1s						
SIJI	Sorong	43.88	197	P	P	19 36 30.5	+2.0
	comp=Z,21nm,0.9s,baz=350,slow=11,SNR=3.4						
KURBB	Kurchatov Arra	43.88	304	P	P	19 36 28.2	-0.1
	comp=Z,64nm,0.5s,baz=76,slow=8.7,SNR=141						
CM05	Chiang Mai Arr	43.89	251	P	P	19 36 30.0	+1.3
	comp=Z,175nmcomp=Z,26nm,1.0s						
RC01	Rabbit Creek A	43.90	40	P	P	19 36 27.5	-0.8
	baz=276						
CM13	Chiang Mai Arr	43.90	251	P	P	19 36 30.1	+1.3
	comp=Z,159nmcomp=Z,22nm,1.0s						
NEA2	Nenana	43.92	35	P	P	19 36 28.0	-0.4
	baz=273,SNR=18						
O22K	Cooper Landing	43.98	41	P	P	19 36 28.4	-0.5
O22K				IAmb	IAmb	19 37 13.8	
	comp=Z,37nm,0.7s						
SUKH	Sukhothai	44.02	250	P	P	19 36 31.1	+1.4
	comp=Z,96nm,0.9s						
MCK	McKinley	44.03	37	P	P	19 36 29.5	+0.1
	baz=274,SNR=7.9						
RND	Reindeer	44.10	37	P	P	19 36 29.3	-0.6
RND				pmax	pmax		
	comp=Z,21nm,1.2s						
RND	Reindeer	44.10	37	P	P	19 36 29.3	-0.6
PMR	Palmer	44.14	40	P	P	19 36 30.3	+0.2
PMR				pmax	pmax		
	comp=Z,15nm,1.1s						
PMR	Palmer	44.14	40	P	P	19 36 30.3	+0.2
SEW	Seward	44.16	42	P	P	19 36 31.3	+1.0
SEW				IAmb	IAmb	19 36 36.5	
	comp=Z,81nm,1.5s						
GHO	Glory Hole Cre	44.22	39	P	P	19 36 31.2	+0.3
GHO				IAmb	IAmb	19 36 57.4	
	comp=Z,26nm,0.8s						
MDM	Murphy Dome	44.26	35	P	P	19 36 31.8	+0.6
WRH	Wood River Hil	44.35	35	P	P	19 36 32.2	+0.4
CCB	Clear Creek Bu	44.46	35	P	P	19 36 32.8	+0.1
KNK	Knik Glacier	44.48	40	P	P	19 36 33.1	+0.2
SML	Sawmill	44.49	39	P	P	19 36 33.5	+0.4
SML				IAmb	IAmb	19 37 09.1	
	comp=Z,71nm,1.6s						
POKR	Poker Plat Res	44.59	34	P	P	19 36 34.0	+0.3
	baz=274						
POKR	Poker Plat Res	44.59	34	P	P	19 36 33.6	-0.2
POKR				IAmb	IAmb	19 37 02.1	
	comp=Z,22nm,1.0s						
SHL	Shillong	44.63	265	P	P	19 36 34.7	0.0
SHL				pmax	pmax		
	comp=Z,52nm,0.9s						
SHL	Shillong	44.63	265	P	P	19 36 34.7	0.0
SHL				IAmb	IAmb	19 36 53.0	
	comp=Z,52nm,0.9s						
MHMT	Maesarieng	44.76	252	P	P	19 36 36.0	+0.4
	comp=Z,1µmcomp=Z,120nm,0.8s						
SRAK	Srakaew	44.80	244	P	P	19 36 33.9	-2.0
	comp=Z,5µmcomp=Z,642nm,1.0s						
GTOI	Gorontalo	44.81	209	P	P	19 36 36.9	+0.9
IL31		44.84	35	P	P	19 36 36.0	+0.3
ILAR	Eielson Array	44.84	35	P	P	19 36 35.2	-0.6
	comp=Z,22nm,1.0s,baz=259,slow=5.1,SNR=122						
ILAR				LR	LR	19 54 55.7	
	comp=Z,93nm,21.4s,baz=274,slow=36						
ILAR	Eielson Array	44.84	35	P	P	19 36 35.6	-0.2
ILAR	Eielson Array	44.84	35	P	P	19 36 35.6	-0.2
HDA	Harding Lake	44.85	35	P	P	19 36 35.5	-0.4
	baz=275,SNR=11						
HDA	Harding Lake	44.85	35	P	P	19 36 35.6	-0.3
HDA				IAmb	IAmb	19 36 37.1	
	comp=Z,12nm,0.6s						
SCM	Sheep Creek Mo	44.96	39	P	P	19 36 37.4	+0.6
SCM				pmax	pmax		
	comp=Z,100nm,1.8s						
SCM	Sheep Creek Mo	44.96	39	P	P	19 36 37.4	+0.6
SCM				IAmb	IAmb	19 37 20.9	
	comp=Z,100nm,1.8s						
GLI	Glacier Island	45.21	40	P	P	19 36 39.5	+0.8
GLI				IAmb	IAmb	19 36 46.2	
	comp=Z,63nm,1.8s						
MRSI	Marisa	45.34	210	P	P	19 36 41.5	+1.3
	comp=Z,1µmcomp=Z,124nm,1.0s						
PRP	Porcupine Dome	45.35	34	P	P	19 36 40.5	+0.5
PRP				IAmb	IAmb	19 36 42.2	
	comp=Z,22nm,0.6s						
FYU	Fort Yukon	45.38	32	P	P	19 36 40.8	+0.8
FYU				IAmb	IAmb	19 37 08.3	
	comp=Z,17nm,1.0s						
UMPA	Umpang Tak	45.43	249	P	P	19 36 43.8	+2.8
	comp=Z,832nmcomp=Z,105nm,1.0s						
M24K	Tolsona, Glenn	45.47	39	P	P	19 36 40.8	0.0
M24K				IAmb	IAmb	19 37 24.9	
	comp=Z,42nm,1.1s						
UTHA	Uthaitani	45.47	248	P	P	19 36 43.0	+1.7
	comp=Z,416nmcomp=Z,50nm,0.7s						
FID	Port Fidalgo	45.53	41	P	P	19 36 41.3	+0.1
FID				IAmb	IAmb	19 37 01.2	
	comp=Z,65nm,1.7s						
SHLS	Shalkode	45.57	294	⇑iP	P	19 36 39.5	-2.5
	comp=Z,19nm,0.5s,baz=294						
SHLS	Shalkode	45.57	294	c iP	P	19 36 39.5	-2.5
SHLS				pmax	pmax		
	comp=Z,19nm,0.5s						
TDK	Taldyqorghan	45.63	297	i P	P	19 36 42.9	+0.5
	comp=Z,185nm,1.2s,baz=296						
TDK	Taldyqorghan	45.63	297	i P	P	19 36 42.8	+0.5
TDK				pmax	pmax		
	comp=Z,185nm,1.2s						
KLU	Klutina	45.67	39	P	P	19 36 42.7	+0.2
KLU				IAmb	IAmb	19 37 04.0	
	comp=Z,28nm,1.1s						
Q23K	Middleton Isla	45.82	42	P	P	19 36 43.8	+0.3
	baz=280						
UZB	Uzynbulak	45.88	294	⇑iP	P	19 36 44.3	-0.2
	comp=Z,23nm,0.9s,baz=294						
UZB	Uzynbulak	45.88	294	c iP	P	19 36 44.2	-0.2
UZB				pmax	pmax		
	comp=Z,23nm,0.9s						
KPKS	Kokpek	45.99	295	⇑iP	P	19 36 45.3	+0.1
	comp=Z,57nm,1.1s,baz=294						
KPKS	Kokpek	45.99	295	c iP	P	19 36 45.3	+0.1
KPKS				pmax	pmax		
	comp=Z,57nm,1.1s						
SCRK	Sand Creek	46.19	36	P	P	19 36 46.1	-0.4
	baz=278,SNR=23						
DOT	Dot Lake	46.20	36	P	P	19 36 45.8	-0.7
N25K	Chitina, Valde	46.28	39	P	P	19 36 47.6	+0.4
	baz=280						
N25K	Chitina, Valde	46.28	39	P	P	19 36 47.6	+0.4
N25K				IAmb	IAmb	19 37 27.2	
	comp=Z,29nm,1.6s						
SATY	Saty	46.33	294	⇑iP	P	19 36 48.2	+0.2
	comp=Z,22nm,0.9s,baz=294						
SATY	Saty	46.33	294	c iP	P	19 36 48.1	+0.2
SATY				pmax	pmax		
	comp=Z,23nm,0.9s						
PATY	Pattaya	46.37	244	P	P	19 36 50.0	+1.6
	comp=Z,2µmcomp=Z,53nm,1.0s						
MENT	Mentasta	46.47	37	P	P	19 36 49.5	+0.9
MENT				IAmb	IAmb	19 37 19.7	
	comp=Z,21nm,1.1s						
RAGM	Ragged Mountai	46.47	41	P	P	19 36 48.1	-0.6
RAGM				IAmb	IAmb	19 37 01.7	
	comp=Z,80nm,1.5s						
SRDT	SRDT	46.54	247	P	P	19 36 50.4	+0.7
	comp=Z,16nm,1.4s						
KAIM	Kayak Island	46.68	41	P	P	19 36 50.2	-0.1
GLB	Gilahina Butte	46.68	39	P	P	19 36 51.6	+1.3
GLB				IAmb	IAmb	19 37 15.2	
	comp=Z,26nm,1.4s						
APSI	Ampana	46.73	210	P	P	19 36 53.7	+2.6
VRDI	Verde Repeater	46.89	40	P	P	19 36 52.9	+0.8
VRDI				IAmb	IAmb	19 37 41.5	
	comp=Z,25nm,1.4s						
CHKK	Chushkaly	46.99	296	eP	P	19 36 52.9	-0.1
	baz=296						
CHKK	Chushkaly	46.99	296	eP	P	19 36 52.9	-0.1
MCARA	McCarthy VSAT	47.07	39	P	P	19 36 54.4	+1.1
MCARA				IAmb	IAmb	19 36 55.9	
	comp=Z,17nm,0.7s						
CRQM	Cirque	47.14	40	P	P	19 36 55.0	+0.9
CRQM				IAmb	IAmb	19 36 57.0	
	comp=Z,41nm,1.2s						
MDOK	Medeo	47.21	295	i P	P	19 36 55.3	+0.4
	baz=295						
MDOK	Medeo	47.21	295	i P	P	19 36 55.3	+0.4
PHET	Kaeng Krachan	47.21	245	P	P	19 36 57.0	+2.1
	comp=Z,853nmcomp=Z,98nm,0.9s						
EGAK	Eagle	47.28	34	IAmb	IAmb	19 37 20.4	
	comp=Z,20nm,0.9s						
AAA	Alma-Ata	47.28	295	⇑iP	P	19 36 55.9	+0.6
	comp=Z,33nm,0.6s,baz=295						
AAA	Alma-Ata	47.28	295	c iP	P	19 36 55.9	+0.6
AAA				pmax	pmax		
	comp=Z,33nm,0.6s						
TGL	Tana Glacier	47.29	40	P	P	19 36 55.2	0.0
TGL				IAmb	IAmb	19 37 26.1	
	comp=Z,18nm,0.8s						
TNSS	Tian-Shan	47.33	295	i P	P	19 36 56.7	+0.6
	baz=294						
TNSS	Tian-Shan	47.33	295	i P	P	19 36 56.6	+0.5
KUU	Kurty	47.41	296	⇑iP	P	19 36 55.8	-0.5
	comp=Z,44nm,0.5s,baz=296						
KUU	Kurty	47.41	296	c iP	P	19 36 55.7	-0.5
KUU				pmax	pmax		
	comp=Z,44nm,0.5s						
BALM	Baldy	47.46	40	P	P	19 36 56.8	+0.3
BALM				IAmb	IAmb	19 37 28.2	
	comp=Z,20nm,1.1s						
BRZS	Berezniki	47.66	305	⇑iP	P	19 36 58.0	-0.1
	comp=Z,15nm,0.5s,baz=305						
BRZS	Berezniki	47.66	305	c iP	P	19 36 58.0	-0.1
BRZS				pmax	pmax		
	comp=Z,15nm,0.5s						
BARN	Barnard Glacie	47.78	40	P	P	19 36 59.3	+0.2
BARN				IAmb	IAmb	19 37 01.3	
	comp=Z,12nm,0.6s						
BARN				PcP	PcP	19 38 27.2	+0.1
SBUM	Sibu	47.90	223	P	P	19 37 00.3	+0.1
SBUM				IAmb	IAmb	19 37 24.3	
	comp=Z,31nm,1.6s						
SBUM				PcP	PcP	19 38 29.3	+1.4
SBUM	Sibu	47.90	223	P	P	19 37 01.0	+0.8
CTGM	Chitina Glacie	47.95	40	P	P	19 37 00.9	+0.5
CTGM				IAmb	IAmb	19 37 02.5	
	comp=Z,48nm,1.4s						
ULHL	Ulahol	48.11	294	P	P	19 37 02.2	+0.2
	SNR=28						
BRVK	Borovoye	48.13	309	ceP	P	19 37 02.0	+0.3
BRVK				pmax	pmax		
	comp=Z,73nm,1.5s						
BRVK	Borovoye	48.13	309	P	P	19 37 01.9	+0.2
BRVK				IAmb	IAmb	19 37 02.7	
	comp=Z,59nm,1.2s						
TKM2	Tokmak 2	48.28	295	P	P	19 37 04.0	+0.8
	SNR=142						
BTLS	Baital	48.51	298	⇑iP	P	19 37 04.3	-0.4
	comp=Z,24nm,1.3s,baz=298						
BTLS	Baital	48.51	298	c iP	P	19 37 04.2	-0.4
BTLS				pmax	pmax		
	comp=Z,24nm,1.3s						
SGDS	Sogindy	48.73	296	⇑iP	P	19 37 06.6	0.0
	comp=Z,22nm,1.1s,baz=296						
SGDS	Sogindy	48.73	296	c iP	P	19 37 06.5	0.0
SGDS				pmax	pmax		
	comp=Z,22nm,1.1s						
EPYK	Eagle Plains	48.79	32	P	P	19 37 06.1	-0.4
	baz=282,SNR=20						
EPYK	Eagle Plains	48.79	32	P	P	19 37 04.2	-2.4
EPYK				IAmb	IAmb	19 37 08.6	
	comp=Z,19nm,0.7s						
CHMS	Chumysh	48.83	295	P	P	19 37 07.2	+0.1
	SNR=19						
KBK	Karagaybulak	48.83	295	P	P	19 37 07.9	+0.5
	SNR=95						
USP	Ospenovka	48.89	296	P	P	19 37 08.0	+0.3
	SNR=38						
AAK	Ala-Archa	49.14	295	LR	LR	19 59 38.5	
	comp=Z,406nm,19.8s,baz=76,slow=38						
AAK	Ala-Archa	49.14	295	P	P	19 37 10.0	+0.2
	SNR=29						
AAK	Ala-Archa	49.14	295	i P	P	19 37 10.0	+0.2
	SNR=47						
AAK	Ala-Archa	49.14	295	P	P	19 37 09.8	0.0
AAK				pmax	pmax		
	comp=Z,34nm,1.0s						
AAK	Ala-Archa	49.14	295	P	P	19 37 09.8	0.0
AAK				IAmb	IAmb	19 37 11.0	
	comp=Z,34nm,0.9s						
UCH	Uchtor	49.30	295	P	P	19 37 11.7	+0.4
	SNR=17						
KSH	Kashi	49.43	291	P	P	19 37 15.8	+3.8
KSH				pP	sP	19 37 33.3	-1.0
KSH				PcP	PcP	19 38 38.3	+4.9
KSH				S	S	19 44 20.5	+5.8
KSH				ScS	ScS	19 46 57.3	-0.9
KSH				pmax	pmax		
	comp=Z,80nm,0.9s						
KSH				pmax	pmax		
	comp=Z,500nm,6.0s						
KSH				LR	LR		
	comp=Z,910nm,12.5s						
KSH				LR	LR		
	comp=Z,650nm,6.7s						
KSH				LR	LR		
	comp=Z,2µm,19.7s						
MTKI	Muara Teweh, K	49.55	218	P	P	19 37 14.0	+1.1
	comp=Z,1µmcomp=Z,52nm,0.9s						
INK	Inuvik	49.57	29	P	P	19 37 12.5	+0.1
	comp=Z,6.4nm,0.4s,baz=301,slow=8.8,SNR=40						
INK	Inuvik	49.57	29	IAmb	IAmb	19 37 14.6	
	comp=Z,9.5nm,0.6s						
EKS2	Erkin-Say	49.62	295	P	P	19 37 13.9	+0.6
	SNR=8.8						
KSM	Kuching	49.71	225	P	P	19 37 14.8	+0.6
KSM				IAmb	IAmb	19 37 34.1	
	comp=Z,50nm,1.1s						
KSM	Kuching	49.71	225	P	P	19 37 16.0	+1.8
HYT	Haines Junctio	49.80	39	P	P	19 37 16.2	+1.8
AML	Almayashu	49.89	295	P	P	19 37 16.2	+0.5
	SNR=48						
STKI	Sintang	50.31	222	P	P	19 37 20.9	+2.2
	comp=Z,13nm,0.7s						
BNSI	Bone	50.52	210	P	P	19 37 22.7	+2.5
	comp=Z,40nm,1.1s						
RNTT	Ranong	50.54	243	P	P	19 37 17.1	-3.4
	comp=Z,167nmcomp=Z,16nm,1.1s						
SURT	Suratani	50.65	242	P	P	19 37 24.9	+3.6
	comp=Z,1.1nm,1.1s						
TRTT	Trang	50.90	241	P	P	19 37 24.2	+1.1
	comp=Z,839nmcomp=Z,42nm,1.6s						
DZA	Taraz	51.16	297	eP	P	19 37 25.2	+0.3
	comp=Z,58nm,0.9s,baz=296						
DZA	Taraz	51.16	297	eP	P	19 37 25.1	+0.3
DZA				pmax	pmax		
	comp=Z,58nm,0.9s						
KAPI	Kappang	51.22	210	P	P	19 37 25.8	+0.3
KAPI				pmax	pmax		
	comp=Z,79nm,1.3s						
KAPI	Kappang	51.22	210	P	P	19 37 25.8	+0.3
PMG	Port Moresby	51.29	174	P	P	19 37 28.4	+2.4
KKAR	Karatay Array	51.62	297	P	P	19 37 27.3	-1.0
KKAR				pmax	pmax		
	comp=Z,39nm,0.8s						
KKAR	Karatay Array	51.62	297	P	P	19 37 28.0	-0.2
KKAR	Karatay Array	51.62	297	P	P	19 37 27.3	-1.0
PKDT	Phuket	51.74	242	P	P	19 37 31.1	+1.6
BESE	Bessie Mountai	51.77	41	P	P	19 37 30.9	+1.7
BESE				IAmb	IAmb	19 37 39.9	
	comp=Z,13nm,1.0s						
BBKI	Banjar Baru	51.81	216	P	P	19 37 33.7	+3.8
JIS	Juneau Island	52.11	42	IAmb	IAmb	19 37 35.2	
	comp=Z,18nm,1.1s						
SVE	Sverdlovsk	52.17	316	d iP	P	19 37 32.5	+0.4
SVE				pmax	pmax		
	comp=Z,84nm,1.1s						
SVE				MLR	MLR		
	comp=Z,973nm,15.0s						
IUG	Iuzhnay	52.35	296	⇑iP	P	19 37 34.0	+0.2
	comp=Z,20nm,1.3s,baz=296						
IUG	Iuzhnay	52.35	296	c iP	P	19 37 34.0	+0.2
IUG				pmax	pmax		
	comp=Z,20nm,1.3s						
C36M	Paulatuk	52.56	26	P	P	19 37 34.7	-0.1
	baz=290,SNR=7.9						
C36M	Paulatuk	52.56	26	P	P	19 37 34.8	0.0
C36M				IAmb	IAmb	19 37 57.1	
	comp=Z,18nm,1.1s						
ARU	Arti	53.38	316	c iP	P	19 37 40.9	-0.2
ARU				*PP	pP	19 37 56.0	-1.0
ARU						19 38 47.6	

ARU				S	S	19 45 09.8	+1.5
ARU				pmax	pmax		
	comp=Z,80nm,1.0s						
ARU				MLR	MLR		
	comp=Z,978nm,17.0s						
ARU	Arti	53.38	316	P	P	19 37 40.6	-0.4
ARU				PcP	PcP	19 38 47.5	-0.2
NDI	New Delhi	53.82	278	eP	P	19 37 45.0	+0.3
NIL	Nilore	54.12	285	P	P	19 37 47.4	+0.5
NIL				pmax	pmax		
	comp=Z,60nm,0.9s						
NIL	Nilore	54.12	285	P	P	19 37 47.4	+0.5
SOEI	Soe	54.18	203	P	P	19 37 50.2	+2.8
	comp=Z,59nm,0.9s						
TPI	Tanjungpandan	54.68	225	P	P	19 37 52.9	+1.9
TSI	Tuntungan	54.91	238	P	P	19 37 56.0	+3.3
EUNU	Eureka	55.16	9	P	P	19 37 53.4	-0.4
EUNU				IAmb	IAmb	19 37 56.1	
	comp=Z,21nm,0.7s						
PSI	Prapat	55.23	237	LR	LR	20 03 44.3	
	comp=Z,116nm,18.1s,baz=88,slow=38						
ABKAR	Akbulak array	55.59	308	P	P	19 37 57.2	0.0
ABKAR	Akbulak array	55.59	308	IAmb	IAmb	19 37 58.6	
	comp=Z,124nm,1.6s						
BKNI	Bangkinang	55.87	233	P	P	19 38 02.5	+2.9
	comp=Z,1µmcomp=Z,95nm,0.9s						
SPA0	Spitsbergen Ar	55.88	348	eP	P	19 37 59.5	+0.6
KBS	Kingsbay	55.97	350	ceP	P	19 38 01.7	+2.2
KBS				pmax	pmax		
	comp=Z,27nm,1.7s						
KBL	Kabul	56.67	289	P	P	19 38 03.9	-1.5
KBL				pmax	pmax		
	comp=Z,44nm,1.0s						
KBL	Kabul	56.67	289	P	P	19 38 03.9	-1.5
KBL	Kabul	56.67	289	P	P	19 38 04.5	-0.8
	SNR=30						
HSPB	Hornsund (broa	56.83	348	eP	P	19 38 06.7	+1.1
KIRV	Kirov	56.95	321	c iP	P	19 38 06.4	-0.3
PDSI	Padang	57.20	233	P	P	19 38 12.4	+3.3
GSI	Gunungsitoli	57.23	237	P	P	19 38 10.6	+1.3
	comp=Z,2µmcomp=Z,81nm,1.5s						
LHSI	Lahat	57.81	228	P	P	19 38 14.9	+1.6
KLSI		57.86	226	P	P	19 38 13.8	+0.1
	comp=Z,11nm,1.0s						
APA	Apatity	58.61	335	⇓iP	P	19 38 16.9	-1.3
APA				pmax	pmax		
	comp=Z,9.0nm,1.2s						
APA				MLR	MLR		
	comp=Z,2µm,15.0s						
KASI	Kota Agung	58.68	226	P	P	19 38 22.3	+2.9
TMCR	Tamitsa	58.91	330	eP	P	19 38 19.0	-1.3
TMCR				pmax	pmax		
	comp=Z,61nm,1.3s						
YKA	Yellowknife Ar	59.08	32	P	P	19 38 21.7	+0.2
	comp=Z,4.7nm,0.8s,baz=306,slow=6.3,SNR=49						
YKA				LR	LR	20 07 41.8	
	comp=Z,124nm,18.4s,baz=0.0,slow=40						
HYB	Hyderabad	59.41	266	i P	P	19 38 24.0	-0.5
HYB				epP	pP	19 38 41.0	+0.6
HYB				ePcP	PcP	19 39 11.0	-0.8
HAMF	Hammerfest	59.49	340	eP	P	19 38 24.4	+0.1
ARA0	ARCESS Array S	59.74	339	eP	P	19 38 25.8	-0.2
ARCES	ARCESS Array B	59.74	339	P	P	19 38 25.6	-0.4
	comp=Z,3.1nm,0.5s,baz=318,slow=1.6,SNR=51						
ARCES				LR	LR	20 09 24.4	
	comp=Z,462nm,18.6s,baz=40,slow=41						
ARCES	ARCESS Array B	59.74	339	P	P	19 38 25.5	-0.4
TULEG	Thule	60.08	8	i P	P	19 38 27.2	-1.0
TULEG				IAmb	IAmb	19 38 29.1	
	comp=Z,21nm,0.8s						
KLMR	Klimovskoe	60.14	327	eP	P	19 38 26.4	-2.4
KLMR				pmax	pmax		
	comp=Z,72nm,1.3s						
KLMR	Klimovskoe	60.14	327	eP	P	19 38 26.4	-2.4
KLMR				AMP		19 38 29.8	
	comp=Z,72nm,1.3s						
KTK1	Kautokeino	60.69	339	eP	P	19 38 32.7	+0.1
DAG	Danmarks Havn	60.94	355	i P	P	19 38 33.2	-0.9
	comp=Z,23nm,1.0s						
DAG	Danmarks Havn	60.94	355	i P	P	19 38 33.2	-0.9
DAG				pmax	pmax		
	comp=Z,23nm,1.0s						
DAG	Danmarks Havn	60.94	355	i P	P	19 38 33.3	-0.9
DAG				IAmb	IAmb	19 38 35.8	
	comp=Z,23nm,1.0s						
JETT	Jettan, Norway	61.06	340	eP	P	19 38 34.9	-0.2
TRO	Tromso	61.37	341	eP	P	19 38 37.2	+0.1
HRA	Herat	61.51	292	P	P	19 38 38.7	-0.1
HRA				IAmb	IAmb	19 38 40.4	
	comp=Z,32nm,1.0s						
WB0	Warramunga Arr	61.91	189	IAmb	IAmb	19 38 42.2	
	comp=Z,27nm,0.9s						
WRAB	Tennant Creek	62.07	189	P	P	19 38 41.9	-0.5
WRAB				pmax	pmax		
	comp=Z,29nm,1.1s						
WRAB	Tennant Creek	62.07	189	P	P	19 38 41.9	-0.5
WRAB				IAmb	IAmb	19 39 03.9	
	comp=Z,29nm,1.1s						
WR0	Warramunga Arr	62.08	189	P	P	19 38 41.9	-0.5
WR0				IAmb	IAmb	19 38 59.9	
	comp=Z,45nm,1.2s						
WB2	Warramunga Arr	62.08	189	P	P	19 38 41.5	-0.9
WB2				IAmb	IAmb	19 39 04.0	
	comp=Z,26nm,1.0s						
WRA	Warramunga Arr	62.08	189	P	P	19 38 42.3	-0.2
	comp=Z,18nm,1.0s,baz=4.8,slow=7.0,SNR=61						
WRA				LR	LR	20 05 41.0	
	comp=Z,89nm,21.3s,baz=110,slow=36						
WRA	Warramunga Arr	62.08	189	P	P	19 38 41.2	-1.2
GEYT	Alibeck	62.37	297	P	P	19 38 44.5	+0.1
	comp=Z,26nm,1.0s,baz=90,slow=1.5,SNR=37						
GEYT				LR	LR	20 08 13.0	
	comp=Z,659nm,18.4s,baz=40,slow=38						
B05A	Bryant	63.23	48	P	P	19 38 50.4	+0.5
	baz=304						
E03A	Lebam	63.36	50	IAmb	IAmb	19 38 58.5	
	comp=Z,27nm,1.1s						
DBG	Daneborg	63.44	355	i P	P	19 38 50.6	-0.2
DBG				IAmb	IAmb	19 38 53.5	
	comp=Z,28nm,1.1s						
LOF	Lofoten	63.80	341	eP	P	19 38 53.4	+0.1
MOS	Moscow	63.90	323	eP	P	19 38 53.0	-1.1
MOS				e*PP	pP	19 39 11.1	+0.6
MOS				e*SP	sP	19 39 17.3	0.0
MOS				e		19 39 27.9	
MOS				eS	S	19 47 23.6	-1.2
MOS				pmax	pmax		
	comp=Z,64nm,1.0s						
E04D	Cinebar	63.92	50	P	P	19 38 54.4	0.0
	baz=304,SNR=6.4						
FAUS	Fauske	63.94	340	eP	P	19 38 53.9	-0.3
LON	Longmire	64.25	49	P	P	19 38 57.5	+0.9
LON				pmax	pmax		
	comp=Z,7.0nm,1.1s						
LON	Longmire	64.25	49	P	P	19 38 57.5	+0.9
PALK	Pallekele	64.44	256	LR	LR	20 08 02.6	
	comp=Z,180nm,22.0s,baz=153,slow=37						
VRH	Novokhopyorsk	64.61	317	eP	P	19 38 57.8	-1.0
VRH				pmax	pmax		
	comp=Z,60nm,1.0s						
OBN	Obninsk	64.75	322	⇑iP	P	19 38 59.4	-0.3
OBN				e*PP	pP	19 39 16.5	+0.4
OBN				e*SP	sP	19 39 23.0	+0.1
OBN				e		19 39 33.3	
OBN				e		19 41 24.5	
OBN				ePPP	PPP	19 42 55.8	
OBN				eS	S	19 47 35.7	+0.4
OBN				eSS	SS	19 51 47.6	+1.1
OBN				pmax	pmax		
	comp=Z,78nm,1.1s						
OBN				pmax	pmax		
	comp=Z,641nm,3.4s						
OBN				MLR	MLR		
	comp=Z,606nm,17.0s						
OBN	Obninsk	64.75	322	P	P	19 38 59.0	-0.7
UPNV	Upernavik	64.79	6	i P	P	19 38 59.5	-0.2
UPNV				IAmb	IAmb	19 39 00.5	
	comp=Z,24nm,1.0s						
FIA1	FINESS Array S	64.92	332	P	P	19 38 59.8	-0.8
FINES	FINESS Array B	64.92	332	P	P	19 39 00.1	-0.6
	comp=Z,33nm,0.6s,baz=50,slow=7.7,SNR=172						
FINES				LR	LR	20 10 09.9	
	comp=Z,804nm,18.7s,baz=50,slow=39						
FINES	FINESS Array B	64.92	332	P	P	19 38 60.0	-0.7
LPSR	Galich'ya Gora	65.17	319	eP	P	19 39 01.6	-0.9
LPSR				pmax	pmax		
	comp=Z,50nm,1.0s						
H04A	Detroit Lake	65.21	52	P	P	19 39 03.1	+0.2
H04A				IAmb	IAmb	19 39 06.1	
	comp=Z,16nm,1.0s						
G05D	Wamic, OR	65.39	51	P	P	19 39 04.6	+0.5
	baz=305						
K02D	Willamette Mer	65.47	54	P	P	19 39 04.9	+0.1
	baz=305						
I04A	Tendick Farm,	65.59	52	P	P	19 39 06.2	+0.8
	baz=305						
C09A	Chrisman Ranch	65.60	47	IAmb	IAmb	19 39 08.2	
	comp=Z,31nm,1.4s						
SUMG	Summit	65.75	0	i P	P	19 39 06.8	+0.4
	comp=Z,68nm,0.7s						
SUMG	Summit	65.75	0	i P	P	19 39 06.8	+0.4
SUMG				pmax	pmax		
	comp=Z,68nm,0.7s						
SUMG	Summit	65.75	0	IAmb	IAmb	19 39 10.3	
	comp=Z,35nm,0.8s						
SUMG	Summit	65.75	0	i P	P	19 39 06.8	+0.4
SUMG				IAmb	IAmb	19 39 08.7	
	comp=Z,68nm,0.7s						
ASAR	Alice Springs	65.81	189	P	P	19 39 07.5	+0.6
	comp=Z,6.2nm,0.8s,baz=11,slow=6.4,SNR=37						
ASAR				LR	LR	20 07 11.1	
	comp=Z,189nm,22.0s,baz=357,slow=35						
ASAR	Alice Springs	65.81	189	P	P	19 39 07.1	+0.2
VSR	Storozhevoye	65.89	318	eP	P	19 39 06.5	-0.6
VSR				pmax	pmax		
	comp=Z,60nm,1.0s						
I05D	Terrebonne, OR	65.90	51	P	P	19 39 07.9	+0.4
	baz=306						
NEW	Newport	65.95	46	P	P	19 39 07.7	+0.1
	baz=307,SNR=6.4						
NEW	Newport	65.95	46	P	P	19 39 07.0	-0.7
NEW				pmax	pmax		
	comp=Z,12nm,1.1s						
NEW	Newport	65.95	46	P	P	19 39 07.0	-0.7
VORD	Divnogorie	65.98	318	eP	P	19 39 07.2	-0.5
VORD				pmax	pmax		
	comp=Z,40nm,1.1s						
J04D	Umpqua Nationa	66.09	53	P	P	19 39 09.3	+0.5
	baz=306						
NUUG	Nuugaatsiaq	66.23	5	i P	P	19 39 08.6	-0.3
NUUG				IAmb	IAmb	19 39 12.6	
	comp=Z,19nm,1.0s						
E09A	Wood Farm, Sta	66.44	48	IAmb	IAmb	19 39 13.9	
	comp=Z,24nm,1.2s						
PINE	Pine Mountain	66.45	52	IAmb	IAmb	19 39 14.8	
	comp=Z,15nm,0.9s						
L04D	Klamath Falls	66.57	54	P	P	19 39 12.5	+0.6
	baz=306						
J05D	Fort Rock, OR	66.58	52	P	P	19 39 12.5	+0.5
	baz=306,SNR=6.2						
YBH	Yreka Blue Hor	66.61	54	P	P	19 39 12.8	+0.7
YBH				pmax	pmax		
	comp=Z,10.0nm,1.3s						
YBH	Yreka Blue Hor	66.61	54	P	P	19 39 12.8	+0.7
M02C	Callahan	66.72	55	P	P	19 39 13.3	+0.5
	baz=306						
NSS	Namsos	67.01	339	eP	P	19 39 14.7	+0.6
N02D	Trinity Center	67.06	55	P	P	19 39 15.1	+0.2
	baz=306						
GROC	Groznyy	67.10	308	eP	P	19 39 15.0	0.0
GROC				e		19 39 41.9	
GROC				pmax	pmax		
	comp=Z,18nm,0.8s						
M04C	Macdoel	67.11	54	P	P	19 39 15.8	+0.6
	baz=306,SNR=6.6						
K05A	Summer Lake	67.11	53	P	P	19 39 16.1	+0.7
WALA	Waterton Lakes	67.16	44	P	P	19 39 15.9	+0.4
DZM	Mont Dzumac	67.41	156	eLR	LR	19 59 35.8	
	comp=Z,568nm,23.2s						
O02D	Mt. Diablo Mer	67.48	56	P	P	19 39 17.9	+0.3
	baz=306						
GOF	Gofitskoye	67.57	311	⇑iP	P	19 39 18.6	+0.7
GOF				pmax	pmax		
	comp=Z,117nm,0.8s						
MTSE	Matsula	67.63	330	eP	P	19 39 14.5	-3.6
JTMT	Jette	67.78	45	P	P	19 39 20.0	+0.5
AAL	Aland	67.92	333	eP	P	19 39 19.5	-0.4
O03E	Paynes Creek	68.02	55	P	P	19 39 21.6	+0.6
	baz=307,SNR=6.9						
NCK	Nalchik	68.20	309	⇑iP	P	19 39 22.5	+0.5
NCK				pmax	pmax		
	comp=Z,53nm,1.0s						
KIV	Kislovodsk	68.44	310	⇓P	P	19 39 25.0	+1.4
KIV	Kislovodsk	68.44	310	i P	P	19 39 25.1	+1.5
	SNR=35						
KIV	Kislovodsk	68.44	310	eP	P	19 39 24.3	+0.7
KIV				MLR	MLR		
	comp=Z,1µm,17.0s						
KIV	Kislovodsk	68.44	310	P	P	19 39 23.8	+0.3
ZEI	Tsey	68.45	309	eP	P	19 39 23.1	-0.7
ZEI				pmax	pmax		
	comp=Z,37nm,0.9s						
KBZ	Khabaz	68.46	310	P	P	19 39 24.4	+0.9
	comp=Z,40nm,0.9s,baz=49,slow=1.3,SNR=57						
KBZ				LR	LR	20 11 53.6	
	comp=Z,322nm,21.1s,baz=35,slow=38						
MSO	Missoula	68.54	46	P	P	19 39 24.5	+0.3
	baz=309						
ORV	Oroville	68.65	56	P	P	19 39 25.3	+0.5
ORV				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ORV	Oroville	68.65	56	P	P	19 39 25.3	+0.5
ILULI	Ilulissat	68.66	5	i P	P	19 39 24.8	+0.5
	comp=Z,27nm,1.0s						
ILULI	Ilulissat	68.66	5	i P	P	19 39 24.8	+0.5
ILULI				pmax	pmax		
	comp=Z,27nm,1.0s						
ILULI	Ilulissat	68.66	5	IAmb	IAmb	19 39 25.4	
	comp=Z,26nm,1.0s						
ILULI	Ilulissat	68.66	5	i P	P	19 39 24.8	+0.5
ILULI				IAmb	IAmb	19 39 28.5	
	comp=Z,27nm,1.0s						
IDID	Didziasalis	68.88	327	eP	P	19 39 26.8	+0.8
UPP	Uppsala	68.95	334	eP	P	19 39 25.9	-0.4
ISAL	Salakas	68.96	327	eP	P	19 39 27.2	+0.8
MNK	Minsk	68.97	325	eP	P	19 39 26.0	-0.5
MNK	Minsk	68.97	325	i P	P	19 39 25.7	-0.8
	comp=E,8.0nm,1.4s						
MNK				i P	P	19 39 25.7	-0.8
	comp=N,58nm,1.4s						
MNK				i P	P	19 39 25.7	-0.8
	comp=Z,72nm,1.1s						
MNK				i PcP	sP	19 39 49.5	-0.4
MNK				i PP	PP	19 41 58.4	-0.5
MNK				i PPP	PPP	19 43 38.8	
MNK				i S	S	19 48 26.8	+0.6
MNK				i ScS	SKKSac	19 49 20.6	0.0
MNK				i SS	SS	19 52 53.5	+1.7
MNK				i SSS	SSS	19 56 10.8	
MNK				i LQ	LQ	20 04 57.1	
MNK				i LR	LR	20 10 12.1	
MNK				i LRM	MLR	20 12 09.7	
	comp=N,461nm,18.5s						
MNK				i LRM	MLR	20 12 12.9	
	comp=Z,474nm,21.7s						
MNK				i LRM	MLR	20 12 16.7	
	comp=E,50nm,15.3s						
FFC	Flin Flon	69.05	34	P	P	19 39 27.1	+0.1
FFC				pmax	pmax		
	comp=Z,28nm,1.0s						
FFC	Flin Flon	69.05	34	P	P	19 39 27.1	+0.1
FFC				IAmb	IAmb	19 39 29.4	
	comp=Z,28nm,1.0s						
IIGN	Ignalina	69.07	327	eP	P	19 39 27.6	+0.5
NACGM	Naroch	69.15	326	i P	P	19 39 27.3	-0.3
NACGM				i P	P	19 39 27.3	-0.3
NACGM				i P	P	19 39 27.3	-0.3
NACGM				i PcP	PcP	19 39 51.8	+0.6
NACGM				i PP	PP	19 41 47.2	-13
NACGM				i PPP	PPP	19 43 48.9	
NACGM				i S	S	19 48 25.8	-2.6
NACGM				i PS	PnS	19 49 23.9	+23
NACGM				i SS	SS	19 52 51.9	-2.6
NACGM				i SSS	SSS	19 55 59.0	
NACGM				i LQ	LQ	20 06 17.1	
NACGM				i LR	LR	20 10 18.0	
FCC	Fort Churchill	69.17	28	P	P	19 39 27.6	0.0
FCC				pmax	pmax		
	comp=Z,47nm,1.4s						
FCC	Fort Churchill	69.17	28	P	P	19 39 27.6	0.0
FCC				IAmb	IAmb	19 39 29.1	
	comp=Z,47nm,1.4s						
ICESG	Greenland Ices	69.24	1	i P	P	19 39 28.8	+0.3
ICESG				IAmb	IAmb	19 39 29.8	
	comp=Z,48nm,0.9s						
AKH	Akhalkalaki	69.54	308	⇑P	P	19 39 32.2	+1.6
GNI	Garni	69.57	306	P	P	19 39 31.8	+1.1
GNI	Garni	69.57	306	P	P	19 39 31.5	+0.8
GNI				pmax	pmax		
	comp=Z,113nm,1.4s						
GNI	Garni	69.57	306	P	P	19 39 31.5	+0.8
DOMB	Dombas	69.80	339	eP	P	19 39 31.4	-0.2
PAHR	Pah Rah Range	69.85	54	P	P	19 39 33.3	+0.9
GUZR	Guzeripl'	69.87	311	c iP	P	19 39 32.8	+0.4
GUZR				pmax	pmax		
	comp=Z,37nm,1.0s						
PABE	Paberze	69.87	328	eP	P	19 39 32.1	+0.1
NC204	NORSAR Array S	69.95	338	P	P	19 39 32.2	-0.4
EGMT	Eagleton	69.95	43	P	P	19 39 32.9	0.0
	baz=311,SNR=9.3						
EGMT	Eagleton	69.95	43	IAmb	IAmb	19 39 35.5	
	comp=Z,19nm,1.1s						
NB2	NORSAR Subarra	70.02	337	P	P	19 39 32.4	-0.5
	comp=Z,34nm,0.8s,baz=36,slow=6.2						
NOA	NORSAR Array B	70.02	337	P	P	19 39 32.5	-0.5
	comp=Z,24nm,0.8s,baz=36,slow=6.1,SNR=57						
NOA				LR	LR	20 13 50.9	
	comp=Z,298nm,20.9s,baz=40,slow=39						
NBO00	NORSAR Array S	70.15	337	P	P	19 39 33.1	-0.6
NC602	NORSAR Array S	70.17	337	eP	P	19 39 32.9	-0.9
DLMT	Dillon	70.19	46	P	P	19 39 35.3	+0.9
DLMT				IAmb	IAmb	19 39 36.9	
	comp=Z,33nm,1.5s						
NAO01	NORSAR Array S	70.27	337	P	P	19 39 34.1	-0.3
HLID	Hailey	70.34	49	P	P	19 39 35.4	0.0
	baz=310,SNR=6.7						
HLID	Hailey	70.34	49	P	P	19 39 35.0	-0.4
SOC	Sochi	70.35	311	eP	P	19 39 34.7	-0.5
SOC				e*PP	pP	19 39 53.0	+1.3
SOC				e		19 42 10.8	
SOC				ePPP	PPP	19 43 54.2	
SOC				eS	S	19 48 43.8	+1.0
SOC				e*SS	sS	19 49 11.5	+0.6
SOC				eSS	SS	19 53 12.4	-1.2
SOC				pmax	pmax		
	comp=Z,32nm,0.9s						
SOC				MLR	MLR		
	comp=Z,333nm,15.0s						
YERR	Yerington	70.38	55	IAmb	IAmb	19 39 39.0	
	comp=Z,18nm,1.0s						
BOZ	Bozeman (W)	70.56	46	P	P	19 39 37.1	+0.4
	baz=310,SNR=17						
BANOM	Banah	70.60	288	P	P	19 39 37.6	+0.5
BANOM	Banah	70.60	288	P	P	19 39 37.6	+0.5
SHME	Shamm	70.64	288	i P	P	19 39 37.8	+0.5
	SNR=6.0						
SHME	Shamm	70.64	288	P	P	19 39 38.0	+0.8
	SNR=6.1						
WBK	Wadi Bani Khal	70.72	283	P	P	19 39 39.5	+1.6
ANN	Anapa	70.83	313	eP	P	19 39 31.5	-6.6
ANN				e*PP	pP	19 39 49.1	-5.5
ANN				e		19 42 18.0	
ANN				eS	S	19 48 37.2	-11
ANN				pmax	pmax		
	comp=Z,91nm,1.4s						
SFJD	Kangerlussuaq	70.88	5	i P	P	19 39 38.5	+0.5
SFJD	Kangerlussuaq	70.88	5	i P	P	19 39 38.5	+0.5
SFJD	Kangerlussuaq	70.88	5	P	P	19 39 37.3	-0.7
SFJD				IAmb	IAmb	19 39 39.1	
	comp=Z,26nm,1.1s						
SFJD	Kangerlussuaq	70.88	5	i P	P	19 39 38.6	+0.5
AKASG	Malin Array Be	71.00	322	P	P	19 39 38.6	-0.4
	comp=Z,6.1nm,0.3s,baz=45,slow=6.2,SNR=131						
AKASG				LR	LR	20 13 51.0	
	comp=Z,634nm,19.2s,baz=30,slow=38						
AKASG	Malin Array Be	71.00	322	P	P	19 39 38.1	-0.9
AKBB	Malin Array Si	71.00	322	IAmb	IAmb	19 39 39.9	
	comp=Z,38nm,0.8s						
MASF	Masafi	71.04	287	P	P	19 39 40.3	+0.5
MSFE	Esma-Masafi	71.05	287	P	P	19 39 40.4	+0.6
OSL	Oslo	71.05	337	eP	P	19 39 39.8	+0.7
SKAR	Skarslia	71.13	338	eP	P	19 39 40.5	+0.7
SUW	Suwalki	71.27	327	eP	P	19 39 40.6	+0.1
SUW	Suwalki	71.27	327	eP	P	19 39 40.1	-0.4
SUW	Suwalki	71.27	327	IAmb	IAmb	19 39 41.4	
	comp=Z,61nm,1.1s						
UOSS	Minazif	71.27	287	i P	P	19 39 41.6	+0.5
	SNR=7.0						
UOSS	Minazif	71.27	287	P	P	19 39 40.2	-0.9
UOSS				IAmb	IAmb	19 39 42.3	
	comp=Z,33nm,0.9s						
UOSS	Minazif	71.27	287	P	P	19 39 41.6	+0.5
YHL	Hebgen Lake	71.28	46	P	P	19 39 40.4	-0.8
LHV	Little Huntoon	71.29	55	IAmb	IAmb	19 39 45.0	
	comp=Z,23nm,1.0s						
NVAR	Mina Array Bea	71.30	55	P	P	19 39 42.5	+1.1
	comp=Z,7.3nm,0.8s,baz=295,slow=5.2,SNR=31						
NVAR				LR	LR	20 08 18.1	
	comp=Z,40nm,20.5s,baz=278,slow=34						
NVAR	Mina Array Bea	71.30	55	P	P	19 39 42.1	+0.8
HYA	Hoyanger	71.30	339	eP	P	19 39 40.7	+0.1
HOQ	Hoqain	71.32	285	P	P	19 39 42.2	+0.8
NV11	Mina Array Sit	71.39	55	P	P	19 39 42.5	+0.7
HATD	Hatta, Dubai	71.39	287	i P	P	19 39 42.5	+0.7
	SNR=6.3						
HATD	Hatta, Dubai	71.39	287	P	P	19 39 43.0	+1.1
	SNR=6.4						
JMDO	Jabal Madar	71.49	284	P	P	19 39 43.3	+0.8
YMR	Madison River	71.52	46	P	P	19 39 43.8	+1.2
SOHO	SOHO	71.53	286	P	P	19 39 43.0	+0.3
SOHO	SOHO	71.53	286	P	P	19 39 43.1	+0.4
ASHO	Ashiyiah	71.53	287	P	P	19 39 43.2	+0.5
ASHO	Ashiyiah	71.53	287	P	P	19 39 43.8	+1.0
	SNR=5.6						
KONO	Kongsberg	71.62	337	eP	P	19 39 42.7	+0.1
GEVA	Gevas	71.74	305	IAmb	IAmb	19 39 46.2	
	comp=Z,24nm,0.9s						
YNE	Yellowstone No	71.81	45	P	P	19 39 45.1	+0.7
FAQ	Al Faqa, Dubai	71.83	287	P	P	19 39 44.8	+0.3
H17A	Grant Village	71.91	46	P	P	19 39 45.7	+0.7
	baz=311,SNR=17						
BSY	Bisya	71.92	285	P	P	19 39 46.1	+1.0
ARQ	Araqi	72.04	285	P	P	19 39 46.5	+0.7
	SNR=7.5						
ASUD	Al Ashush, Dub	72.09	287	P	P	19 39 46.8	+0.8
RLMT	Red Lodge	72.12	45	P	P	19 39 46.5	+0.4
	baz=312						
RLMT	Red Lodge	72.12	45	P	P	19 39 46.6	+0.4
ALNE	Al Ain	72.14	286	i P	P	19 39 48.1	+1.7
	SNR=5.4						
ALNE	Al Ain	72.14	286	P	P	19 39 47.0	+0.6
BER	Bergen	72.19	339	eP	P	19 39 46.0	0.0
ODD1	Odda	72.24	338	eP	P	19 39 46.8	+0.4
DGMT	Dagmar	72.40	40	P	P	19 39 47.7	+0.2
	baz=314						
DGMT	Dagmar	72.40	40	P	P	19 39 47.1	-0.4
DGMT				IAmb	IAmb	19 39 49.5	
	comp=Z,16nm,0.7s						
HVU	Hansel Valley	72.41	49	P	P	19 39 49.4	+1.5
HVU				pmax	pmax		
	comp=Z,8.0nm,0.9s						
HVU	Hansel Valley	72.41	49	P	P	19 39 49.4	+1.5
VES	Vestal, Richgr	72.45	58	P	P	19 39 48.4	+0.5
	baz=309						
MHTO	MHTO	72.45	283	P	P	19 39 49.1	+0.9
	SNR=18						
PKM	Mcpherson Peak	72.59	59	P	P	19 39 49.3	+0.2
	baz=309						
LAO	LASA Array	72.63	42	P	P	19 39 49.3	+0.3
	baz=313						
CWC	Cottonwood Cre	72.69	56	P	P	19 39 50.2	+0.6
	baz=310						
BLS5	Blasjo	72.70	338	eP	P	19 39 50.0	+0.9
GRAC	Grapevine Rang	72.78	56	P	P	19 39 50.4	+0.4
	baz=310,SNR=7.0						
ISA	Isabella, Lake	72.94	57	P	P	19 39 51.6	+0.6
	baz=310						
ISA	Isabella, Lake	72.94	57	P	P	19 39 50.3	-0.7
ISA				pmax	pmax		
	comp=Z,13nm,1.7s						
ISA	Isabella, Lake	72.94	57	P	P	19 39 50.3	-0.7
R11A	Troy Canyon, C	73.00	54	P	P	19 39 52.0	+0.5
	baz=310						
HOMB	Homborsund	73.08	337	eP	P	19 39 51.1	-0.2

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SORM  Soroca            73.20 320 ⇓P    P     19 39 52.3  0.0
KMY   Karmoy            73.21 339 eP    P     19 39 52.9 +0.8
MPMC  Manual Prospec    73.31  56  P    P     19 39 53.5 +0.2
      baz=310,SNR=8.6
DUG   Dugway, Tooele    73.43  51  P    P     19 39 53.6 -0.3
      baz=311,SNR=7.9
FURC  Furnace Creek,    73.43  56  P    P     19 39 54.7 +1.0
      baz=310,SNR=6.6
STKA  Stephens Creek    73.49 181  P    P     19 39 55.1 +1.2
      comp=Z,1.2nm,0.4s,baz=360,slow=6.4,SNR=4.5
STKA                               LR   LR    20 11 35.6
      comp=Z,95nm,21.9s,baz=18,slow=35
TPNV  Topopah Spring    73.50  55  P    P     19 39 55.2 +0.7
      baz=310,SNR=11
TPNV  Topopah Spring    73.50  55  P    P     19 39 55.1 +0.7
TPNV                               pmax pmax
      comp=Z,12nm,1.0s
TPNV  Topopah Spring    73.50  55  P    P     19 39 55.1 +0.7
BW06  Boulder Array     73.55  47  P    P     19 39 54.7  0.0
      baz=312,SNR=5.2
PDAR  Pinedale Array    73.55  47  P    P     19 39 55.1 +0.5
      comp=Z,4.7nm,0.8s,baz=318,slow=2.0,SNR=39
PDAR                               LR   LR    20 13 30.3
      comp=Z,62nm,21.1s,baz=331,slow=37
PDAR  Pinedale Array    73.55  47  P    P     19 39 54.7  0.0
LRMC  Laurel Mtn Rad    73.56  57  P    P     19 39 55.5 +0.8
      baz=310
NUUK  Nuuk              73.58   7 i P   P     19 39 54.7 +0.6
NUUK                               IAmb IAmb  19 39 56.1
      comp=Z,45nm,0.9s
EDW2  Edwards Air Fo    73.74  58  P    P     19 39 55.9 +0.1
      baz=310,SNR=5.4
MARD  Mardin            73.76 306  P    P     19 39 56.8 +0.9
SNCC  San Nicolas Is    73.81  60  P    P     19 39 56.7 +0.6
      baz=310
BEL   Belsk             73.85 327 eP    P     19 39 57.1 +1.1
LVV   L'vov             73.97 324 eP    P     19 39 57.1 +0.4
NLU   North Lily Min    74.01  50  P    P     19 39 58.1 +0.7
BFSC  Mount Baldy Ra    74.37  58  P    P     19 40 00.3 +0.8
      baz=310
SHPR  Sheep Range       74.45  55  P    P     19 40 00.4 +0.4
VASR  Vaslui            74.53 320 ⇑P    P     19 40 01.3 +1.3
TCRU  Three Creeks R    74.69  52  P    P     19 40 02.4 +1.0
KWP   Kalwaria Pacla    74.69 324 eP    P     19 40 01.4 +0.5
HEC   Hector,Ludlow     74.82  57  P    P     19 40 02.6 +0.6
      baz=311,SNR=6.7
ULM   Lac du Bonnet     74.86  35  P    P     19 40 01.9  0.0
      comp=Z,8.3nm,0.5s,baz=317,slow=5.8,SNR=23
ULM                                LR   LR    20 14 49.8
      comp=Z,128nm,20.3s,baz=296,slow=37
ULM   Lac du Bonnet     74.86  35  P    P     19 40 01.3 -0.6
ULM                                IAmb IAmb  19 40 03.1
      comp=Z,28nm,1.3s
BIR   Birlad            74.88 319 ⇑P    P     19 40 03.7 +1.6
MDND  Maddock           75.00  38  P    P     19 40 03.3 +0.5
      baz=317
RDMU  Red Mountain      75.02  49  P    P     19 40 03.7 +0.4
VARL  Varlezi           75.03 319 ⇓P    P     19 40 04.8 +1.9
BUR08 Bucovina Ar. S    75.03 322  IAmb IAmb  19 40 04.7
      comp=Z,24nm,0.7s
BURAR Bucovina Array    75.05 322 ⇓P    P     19 40 03.8 +0.7
BURAR Bucovina Array    75.05 322  P    P     19 40 02.7 -0.5
TLCR                    75.06 318 ⇓P    P     19 40 04.5 +1.4
BIZ   Bicaz             75.12 321 ⇑P    P     19 40 04.2 +0.7
GHRR                    75.13 319 ⇓P    P     19 40 05.4 +1.8
TESR  Tescani           75.17 320 ⇓P    P     19 40 04.3 +0.6
Q16A  Castle Valley     75.22  51  P    P     19 40 04.7 +0.3
K22A  Casper            75.26  45  P    P     19 40 04.7 +0.1
      baz=314
K22A  Casper            75.26  45  P    P     19 40 04.4 -0.2
K22A                               IAmb IAmb  19 40 06.5
      comp=Z,21nm,1.3s
GMRC  Granite Mounta    75.27  56  P    P     19 40 05.3 +0.6
      baz=311,SNR=5.7
JURR  Jurilovca         75.33 318 ⇑P    P     19 40 05.5 +0.9
KOLS  Kolonicke sedl    75.40 324 eP    P     19 40 05.4 +0.4
KOLS                               pmax pmax
      comp=Z,22nm,1.1s
KOLS  Kolonicke sedl    75.40 324 eP    P     19 40 05.4 +0.4
KOLS                              ePP   PP    19 42 53.1 -0.8
CFR   Carcaliu          75.41 318 ⇑P    P     19 40 05.4 +0.3
OJC   Ojcow             75.49 326 eP    P     19 40 06.1 +0.6
OJC   Ojcow             75.49 326  P    P     19 40 05.8 +0.3
OJC                                pmax pmax
      comp=Z,60nm,0.9s
OJC   Ojcow             75.49 326  P    P     19 40 05.8 +0.3
TPGR  Topolog           75.49 318 ⇑P    P     19 40 06.2 +0.6
ODBI  Odobesti          75.52 319 ⇑P    P     19 40 07.3 +1.6
RSSD  Black Hills       75.53  43  P    P     19 40 06.2 +0.1
      baz=315
RSSD  Black Hills       75.53  43  P    P     19 40 05.9 -0.2
RSSD                               pmax pmax
      comp=Z,16nm,1.2s
RSSD  Black Hills       75.53  43  P    P     19 40 05.9 -0.2
PFO   Pinyon Flats O    75.53  58  P    P     19 40 06.6 +0.4
      baz=311
TPFO  Pinon Flats       75.54  58  P    P     19 40 06.7 +0.4
      baz=311
BELC  Belle Mtn. Jos    75.57  57  P    P     19 40 06.4 -0.1
      baz=311
VRI   Vrincioaia        75.60 320 ⇓P    P     19 40 07.2 +0.9
UZH   Uzhgorod          75.62 324⇑iP    P     19 40 06.7 +0.5
UZH                               e           19 40 19.1
PLOR  Plostina          75.65 320 ⇓P    P     19 40 06.7 +0.1
CRVS  Cervenica-Dubn    75.78 324 eP    P     19 40 07.7 +0.5
CRVS                               pmax pmax
      comp=Z,35nm,1.0s
CRVS  Cervenica-Dubn    75.78 324 eP    P     19 40 07.7 +0.5
TIRR  Tirgusor          75.78 318 ⇓P    P     19 40 07.9 +0.7
TIRR  Tirgusor          75.78 318  IAmb IAmb  19 40 08.8
      comp=Z,40nm,0.9s
ARCR  ARCALIA           75.84 322 ⇓P    P     19 40 09.4 +1.8
BISRR Bisoca            75.84 319 ⇑P    P     19 40 08.7 +1.1
HARR  Harsova           75.86 318 ⇓P    P     19 40 08.4 +0.8
NIE   Niedzica          75.89 325 eP    P     19 40 09.2 +1.3
OZUR                    75.89 320 ⇑P    P     19 40 09.4 +1.5
IRM   Iron Mountain     76.00  57  P    P     19 40 09.6 +0.8
      baz=311
MONP2 Monument Peak     76.03  58  P    P     19 40 09.7 +0.6
      baz=311
O20A  White River Ci    76.06  48  P    P     19 40 09.1 -0.1
      baz=314,SNR=5.3
O20A  White River Ci    76.06  48  P    P     19 40 09.1 -0.1
O20A                               IAmb IAmb  19 40 32.8
      comp=Z,24nm,1.4s
RUE   Ruedersdorf       76.07 331 eP    P     19 40 09.7 +1.0
      comp=Z,30nm,1.0s,baz=35,slow=5.5
BSEG  Bad Segeberg      76.10 333 eP    P     19 40 09.6 +0.8
      comp=Z,28nm,0.9s,baz=35,slow=5.5
BC3   Big Chuckawall    76.14  57  P    P     19 40 10.1 +0.5
      baz=311
DOPR  Dopca             76.17 320 ⇑P    P     19 40 11.3 +1.8
ISR   Istrita           76.23 319 ⇓P    P     19 40 11.3 +1.4
U15A  North Rim         76.23  53  IAmb IAmb  19 40 43.5
      comp=Z,33nm,1.6s
MLR   Muntele Rosu      76.25 320 ⇑P    P     19 40 11.5 +1.4
MLR   Muntele Rosu      76.25 320  P    P     19 40 10.5 +0.4
MLR                                pmax pmax
      comp=Z,47nm,1.4s
MLR   Muntele Rosu      76.25 320  P    P     19 40 10.5 +0.4
MLR                                IAmb IAmb  19 40 12.0
      comp=Z,47nm,1.4s
BR131 Keskin Array S    76.32 311  IAmb IAmb  19 40 12.3
      comp=Z,28nm,0.9s
BRTR  Keskin Array B    76.32 311  P    P     19 40 11.0 +0.4
      comp=Z,14nm,0.9s,baz=60,slow=4.3,SNR=39
BRTR                               PP   PP    19 43 02.5 +0.3
      comp=Z,4.3nm,0.9s,baz=60,slow=5.6,SNR=5.8
BRTR                               LR   LR    20 18 58.3
      comp=Z,297nm,18.6s,baz=63,slow=40
BRTR  Keskin Array B    76.32 311  P    P     19 40 10.4 -0.2
ICOR  Ion Corvin        76.33 318 ⇓P    P     19 40 11.7 +1.3
AGMN  Agassiz Nation    76.34  36  P    P     19 40 10.0 -0.4
      baz=319,SNR=7.3
IKP   In-Ko-Pah, Jac    76.38  58  P    P     19 40 11.0  0.0
      baz=311
KSP   Ksiaz             76.42 328 eP    P     19 40 11.2 +0.5
LANS  Liptovska Anna    76.44 326 eP    P     19 40 15.0 +4.0
LANS                               pmax pmax
      comp=Z,20nm,1.2s
LANS  Liptovska Anna    76.44 326 eP    P     19 40 15.0 +4.0
CJR   Cluj-Napoca       76.46 322 ⇓P    P     19 40 12.7 +1.6
KECS  Kecovo            76.52 325 eP    P     19 40 12.1 +0.7
KECS                               pmax pmax
      comp=Z,8.0nm,1.0s
KECS  Kecovo            76.52 325 eP    P     19 40 12.1 +0.7
PDMCI Parker Dam,Lak    76.53  56  P    P     19 40 11.3 -0.3
      baz=312
OSTC  Ostas             76.67 328 eP    P     19 40 13.5 +1.2
SULR                    76.69 319 ⇑P    P     19 40 14.2 +1.8
CHVC  Chvalec           76.71 328 eP    P     19 40 13.3 +0.8
BR231 Keskin MP Arra    76.72 312  IAmb IAmb  19 40 15.3
      comp=Z,44nm,0.8s
VOIR                    76.72 320 ⇓P    P     19 40 13.6 +0.9
DOK   Doka              76.74 283  P    P     19 40 13.6 +0.5
MORC  Moravsky Berou    76.75 327 ⇑P    P     19 40 13.7 +0.9
MORC  Moravsky Berou    76.75 327 eP    P     19 40 13.3 +0.5
MORC  Moravsky Berou    76.75 327  P    P     19 40 13.1 +0.3
MORC                               pmax pmax
      comp=Z,39nm,1.0s
MORC  Moravsky Berou    76.75 327  P    P     19 40 13.1 +0.3
MORC                               IAmb IAmb  19 40 14.8
      comp=Z,39nm,1.0s
N23A  Red Feather La    76.79  46  P    P     19 40 13.2 -0.2
      baz=315,SNR=6.8
UPC   Upice             76.79 328 eP    P     19 40 13.8 +0.9
UPC   Upice             76.79 328 eP    P     19 40 13.8 +0.9
DPC   Dobruska-Polom    76.79 328 eP    P     19 40 13.6 +0.6
DPC   Dobruska-Polom    76.79 328 eP    P     19 40 13.6 +0.6
DRGR                    76.81 322 ⇓P    P     19 40 13.9 +0.7
KRLC  Kraliky           76.83 328 eP    P     19 40 14.1 +0.9
KRLC  Kraliky           76.83 328 eP    P     19 40 14.1 +0.9
GLA   Glamis            76.93  57  P    P     19 40 15.1 +1.1
      baz=312
ARR   Arges             76.97 320 ⇓P    P     19 40 15.7 +1.6
FLTG  Flechtingen       77.10 332 eP    P     19 40 14.7 +0.1
      comp=Z,34nm,0.8s,baz=35,slow=5.5
PSZ   Piszkesteto       77.21 325 ⇓P    P     19 40 16.5 +1.1
PSZ   Piszkesteto       77.21 325  IAmb IAmb  19 40 17.5
      comp=Z,42nm,1.1s
B35A  Bob, Littlefor    77.22  35  P    P     19 40 14.7 -0.6
B35A                               IAmb IAmb  19 40 16.6
      comp=Z,17nm,0.7s
VYHS  Vyhne             77.22 325 eP    P     19 40 16.3 +1.0
VYHS  Vyhne             77.22 325 eP    P     19 40 16.3 +1.0
BRG   Berggiesshubel    77.30 330 eP    P     19 40 15.9 +0.2
BRG                                Amp        19 40 19.1
      comp=Z,16nm,1.0s
BRG   Berggiesshubel    77.30 330 eP    P     19 40 16.5 +0.7
      comp=Z,9.2nm,0.9s,baz=35,slow=5.5
CLL   Collm             77.30 330 i P   P     19 40 15.6 -0.1
      comp=Z,44nm,0.9s
CLL                               esP   sP    19 40 39.0 -0.2
CLL                                Lm   MLR   20 17 00.0
      comp=Z,600nm,19.6s
CLL   Collm             77.30 330 i P   P     19 40 15.6 -0.1
CLL                                pmax pmax
      comp=Z,44nm,0.9s
CLL   Collm             77.30 330  IAmb IAmb  19 40 16.9
      comp=Z,33nm,0.7s
CLL   Collm             77.30 330 eP    P     19 40 16.1 +0.4
      comp=Z,28nm,0.9s,baz=35,slow=5.5
PVCC  Panska Ves        77.34 329 eP    P     19 40 16.9 +1.0
PVCC  Panska Ves        77.34 329 eP    P     19 40 16.9 +1.0
NRDL  Niedersach Rie    77.36 333 eP    P     19 40 16.8 +0.8
      comp=Z,12nm,0.8s,baz=35,slow=5.5
RAZG  Razgrad           77.38 318 ⇓P    P     19 40 17.7 +1.3
WUAZ  Wupatki           77.40  53  P    P     19 40 16.9 +0.1
      baz=313
DEV   Deva              77.40 322 ⇑P    P     19 40 17.9 +1.5
JAVC  Velka Javorina    77.42 326 eP    P     19 40 18.0 +1.5
WHFO  Wadi Hawf         77.45 283  P    P     19 40 16.8 -0.4
ASSE  Asse, Remlinge    77.46 332 eP    P     19 40 17.4 +0.9
      comp=Z,14nm,0.9s,baz=35,slow=5.5
VRAC  Vranov            77.51 327 ⇑P    P     19 40 17.9 +1.0
VRAC  Vranov            77.51 327 eP    P     19 40 17.5 +0.6
SIRR  Siria             77.68 323 ⇓P    P     19 40 18.9 +0.9
ISCO  Idaho Springs     77.74  47  P    P     19 40 18.7 -0.1
      baz=315,SNR=6.7
PRU   Pruhonice         77.78 329 eP    P     19 40 18.9 +0.5
PRU   Pruhonice         77.78 329 eP    P     19 40 18.9 +0.5
KRUC  Moravsky          77.78 327 eP    P     19 40 19.1 +0.6
SMOL  Smolenice         77.79 326 eP    P     19 40 19.7 +1.2
SMOL                               pmax pmax
      comp=Z,14nm,0.9s
SMOL  Smolenice         77.79 326 eP    P     19 40 19.7 +1.2
SUSD  Miller            77.81  40  P    P     19 40 18.8 +0.1
      baz=318
GZR   Gura Zlata        77.83 321 ⇑P    P     19 40 19.3 +0.4
NEUB  Neuenburg         77.83 331 eP    P     19 40 19.8 +1.1
      comp=Z,30nm,0.8s,baz=35,slow=5.5
MVCO  Mesa Verde        77.93  51  P    P     19 40 19.0 -0.8
      baz=314
MODS  Modra-Piesok      77.96 326 eP    P     19 40 20.0 +0.5
MODS                               pmax pmax
      comp=Z,32nm,1.1s
MODS  Modra-Piesok      77.96 326 eP    P     19 40 20.0 +0.5
SRO   Srobarova         77.97 325 eP    P     19 40 21.0 +1.5
SRO   Srobarova         77.97 325 eP    P     19 40 21.0 +1.5
SRO2  Moca              77.97 325 eP    P     19 40 20.5 +1.0
SRO2  Moca              77.97 325 eP    P     19 40 20.5 +1.0
F33A  5 Mile Ranch,     78.01  38  P    P     19 40 19.1 -0.7
F33A                               IAmb IAmb  19 40 21.3
      comp=Z,15nm,0.8s
ZST   Bratislava        78.17 326 eP    P     19 40 22.0 +1.4
ZST                                pmax pmax
      comp=Z,138nm,1.5s
ZST   Bratislava        78.17 326 eP    P     19 40 22.0 +1.4
BZS   Buzias            78.19 322 ⇑P    P     19 40 21.1 +0.3
GTTG  Gottingen         78.20 332 eP    P     19 40 21.5 +0.8
      comp=Z,22nm,0.8s,baz=35,slow=5.5
TANN  Tannenbergstha    78.22 330 eP    P     19 40 21.7 +0.8
      comp=Z,5.0nm,1.0s,baz=35,slow=5.5
PBCC  Pribram           78.23 329 eP    P     19 40 21.5 +0.5
WERD  Werda             78.25 330 eP    P     19 40 21.7 +0.6
      comp=Z,7.8nm,0.9s,baz=35,slow=5.5
IBBN  Ibbenburen        78.31 334 eP    P     19 40 22.1 +0.8
      comp=Z,24nm,0.8s,baz=35,slow=5.5
GUNZ  Gunzen            78.31 330 eP    P     19 40 21.8 +0.4
      comp=Z,9.1nm,0.8s,baz=35,slow=5.5
WERN  Wernitzgruen      78.36 330 eP    P     19 40 22.3 +0.6
      comp=Z,13nm,0.9s,baz=35,slow=5.5
NKC   Novy Kostel       78.38 330 eP    P     19 40 22.3 +0.5
NKC   Novy Kostel       78.38 330 eP    P     19 40 22.3 +0.5
HERR  Herculane         78.38 321 ⇑P    P     19 40 21.6 -0.2
PLVB  Pleven            78.44 319 ⇑P    P     19 40 22.0 -0.2
EYMN  Ely               78.47  34  P    P     19 40 22.3 -0.1
      baz=322,SNR=18
EYMN  Ely               78.47  34  IAmb IAmb  19 40 23.6
      comp=Z,29nm,1.0s
S22A  4UR Ranch, Cre    78.51  49  P    P     19 40 22.6 -0.4
      baz=315
Q24A  Divide            78.59  47  P    P     19 40 23.5  0.0
      baz=315
PUNG  Punghina          78.59 320 ⇓P    P     19 40 24.1 +1.1
MANZ  Manzenberg        78.70 330 eP    P     19 40 24.4 +0.8
      comp=Z,12nm,0.8s,baz=35,slow=5.5
MDVR  Moldovita         78.78 321 ⇑P    P     19 40 24.2 +0.1
UBBA  Unterbreizbach    78.79 332 eP    P     19 40 24.6 +0.8
      baz=35,slow=5.5
CKRC  Cesky Krumlov     78.81 328 eP    P     19 40 24.5 +0.3
OGNE  Ogallala          78.83  44  P    P     19 40 25.1 +0.6
      baz=317,SNR=5.1
OGNE  Ogallala          78.83  44  P    P     19 40 24.6 +0.1
OGNE                               IAmb IAmb  19 40 27.1
      comp=Z,26nm,0.8s
KHC   Kasperske Hory    78.84 329 eP    P     19 40 24.8 +0.4
KHC   Kasperske Hory    78.84 329 eP    P     19 40 24.8 +0.4
KHC   Kasperske Hory    78.84 329  IAmb IAmb  19 40 26.3
      comp=Z,24nm,0.7s
ROTZ  Rotzenmuhle       78.85 330 eP    P     19 40 25.3 +1.0
      comp=Z,14nm,0.9s,baz=35,slow=5.5
CONA  Conrad Observa    78.90 327 i P   P     19 40 25.8 +1.0
      comp=Z,33nm,1.4s,SNR=13
214A  Organ Pipe Nat    78.92  57  P    P     19 40 25.7 +0.5
      baz=313
KASTN Kahler Asten      79.02 333 eP    P     19 40 25.7 +0.4
      comp=Z,14nm,0.9s,baz=35,slow=5.5
GEC2  GERESS Array S    79.03 328  IAmb IAmb  19 40 26.8
      comp=Z,15nm,1.0s
GEC2  GERESS Array S    79.03 328 eP    P     19 40 25.9 +0.5
      comp=Z,5.7nm,0.8s,baz=35,slow=5.5
GERES GERESS Array B    79.03 328  P    P     19 40 25.4  0.0
      comp=Z,5.5nm,0.7s,baz=46,slow=5.8,SNR=40
GERES                              LR   LR    20 20 26.8
      comp=Z,212nm,18.1s,baz=40,slow=40
GERES GERESS Array B    79.03 328  P    P     19 40 25.3 -0.2
MORH  Mrgy, Hungar      79.06 324 ⇑P    P     19 40 25.6  0.0
MORH  Mrgy, Hungar      79.06 324⇑iP    P     19 40 25.1 -0.5
WET   Wettzell          79.10 329 eP    P     19 40 26.4 +0.6
      comp=Z,19nm,0.9s,baz=35,slow=5.5
BUG   Bochum--Univer    79.20 333 eP    P     19 40 26.9 +0.7
      comp=Z,26nm,0.9s,baz=35,slow=5.5
SDCO  Great Sand Dun    79.25  49  P    P     19 40 27.1 -0.1
      baz=315
GRF   Grafenberg Arr    79.28 330 eP    P     19 40 27.7 +1.0
      comp=Z,37nm,0.8s,baz=35,slow=5.5
GRFO  Grafenberg        79.28 330  P    P     19 40 26.7  0.0
GRFO                               pmax pmax
      comp=Z,51nm,0.9s
GRFO  Grafenberg        79.28 330  P    P     19 40 26.7  0.0
GRFO                               IAmb IAmb  19 40 28.6
      comp=Z,51nm,0.9s
FRGS  Fruska Gora       79.36 323 ⇑P    P     19 40 27.8 +0.5
FRGS  Fruska Gora       79.36 323⇑iP    P     19 40 27.4 +0.1
ECSD  EROS Data Cent    79.46  39  P    P     19 40 28.3 +0.5
      baz=319,SNR=14
ECSD  EROS Data Cent    79.46  39  IAmb IAmb  19 40 29.3
      comp=Z,19nm,1.0s
E38A  The Farm, Brul    79.51  35  IAmb IAmb  19 40 29.7
      comp=Z,57nm,1.3s
ALN   Alexandroupoli    79.56 316  P    P     19 40 28.7 +0.3
ALN   Alexandroupoli    79.56 316  IAmb IAmb  19 40 30.2
      comp=Z,36nm,1.0s
ARSA  Arzberg           79.57 326 eP    P     19 40 28.9 +0.5
      comp=Z,8.8nm,0.8s
MOA   Molln             79.61 328 eP    P     19 40 29.1 +0.6
      comp=Z,9.4nm,1.2s
RDO   Rodhopi           79.64 317  P    P     19 40 29.5 +0.7
RAO   Raoul Island      79.66 146  LR   LR    20 12 22.9
      comp=Z,268nm,18.6s,baz=118,slow=33
BOVS  Bovan             79.66 321 ⇑P    P     19 40 28.4 -0.4
RAYN  Ar Rayn           79.69 292 i P   P     19 40 29.8 +0.3
      SNR=17
RAYN  Ar Rayn           79.69 292  P    P     19 40 29.2 -0.3
RAYN                               pmax pmax
      comp=Z,24nm,1.1s
RAYN  Ar Rayn           79.69 292  P    P     19 40 29.2 -0.3
RAYN                               IAmb IAmb  19 40 30.9
      comp=Z,24nm,1.1s
VTS   Vitosha           79.69 319 ⇑P    P     19 40 30.4 +1.1
VTS   Vitosha           79.69 319  IAmb IAmb  19 40 31.4
      comp=Z,37nm,0.9s
CSS   Mathiatis         79.79 308  IAmb IAmb  19 40 41.3
      comp=Z,41nm,1.1s
TNS   Taunus Mts        79.83 332 eP    P     19 40 30.4 +0.7
      comp=Z,11nm,0.9s,baz=35,slow=5.5
KSCO  Kaye Shedlock’    79.92  46  P    P     19 40 30.7 +0.2
      baz=317
TUC   Tucson            79.94  56  P    P     19 40 31.3 +0.6
      baz=314
TUC   Tucson            79.94  56  P    P     19 40 29.9 -0.8
TUC                                pmax pmax
      comp=Z,7.0nm,1.3s
TUC   Tucson            79.94  56  P    P     19 40 29.9 -0.8
AHRW  Bad Neuenahr-A    80.03 333 eP    P     19 40 31.5 +0.8
      comp=Z,18nm,0.9s,baz=35,slow=5.5
DIVS  Divibare          80.10 322  IAmb IAmb  19 40 32.7
      comp=Z,24nm,1.0s
GROS  Grobnik           80.21 326 i P   P     19 40 32.0 +0.1
PERS  Pernice           80.23 326 i P   P     19 40 32.4 +0.4
SOKA  Soboth            80.23 326 i P   P     19 40 32.5 +0.5
      comp=Z,37nm,0.8s,SNR=29
RJOB  Jochberg          80.28 328 eP    P     19 40 33.0 +0.8
      comp=Z,74nm,0.8s,baz=35,slow=5.5
BEBN  Eben Emael        80.28 334 dP    P     19 40 31.7 -0.3
      comp=Z,56nm,0.8s
T25A  Trinidad          80.30  48  P    P     19 40 33.1 +0.4
      baz=316,SNR=5.8
MEM   Membach           80.33 334 dP    P     19 40 31.9 -0.4
NVR   Nevrokopi         80.33 318  P    P     19 40 33.1 +0.5
BGNE  Belgrade          80.47  42  P    P     19 40 33.4 +0.1
      baz=319
BGNE  Belgrade          80.47  42  P    P     19 40 33.3  0.0
BSTI  Sart Tilman       80.50 334 dP    P     19 40 34.0 +0.8
FUR   Furstenfeldbru    80.51 329 eP    P     19 40 34.1 +0.7
      comp=Z,34nm,0.8s,baz=35,slow=5.5
BBLS  Lazi&#263;i       80.55 322⇑iP    P     19 40 34.2 +0.5
OBKA  Obir              80.57 327 i P   P     19 40 34.0 +0.2
      comp=Z,15nm,0.7s,SNR=10
HAPS  Han Pijesak,Bl    80.58 323 eP    P     19 40 33.5 -0.5
KBA   Koelnbreinsper    80.60 328 i P   P     19 40 34.6 +0.5
      comp=Z,34nm,1.1s,SNR=13
ANMO  Albuquerque       80.69  51ceP    P     19 40 36.9 +2.1
ANMO                               pmax pmax
      comp=Z,9.0nm,1.7s
BCLA  Clavier           80.73 334 dP    P     19 40 34.2 -0.2
I37A  Lemond, Waseca    80.73  37  P    P     19 40 34.5 -0.2
I37A                               IAmb IAmb  19 40 36.5
      comp=Z,32nm,0.8s
CRES  Cresnjev          80.74 326⇑iP    P     19 40 34.5 -0.2
STU   Stuttgart         80.78 331  IAmb IAmb  19 40 36.8
      comp=Z,38nm,0.9s
STU   Stuttgart         80.78 331 eP    P     19 40 35.4 +0.5
      comp=Z,27nm,0.8s,baz=35,slow=5.5
BGES  Gesves            80.83 334 dP    P     19 40 35.2 +0.2
VNDS  Vrh nad Dolski    80.83 326 i P   P     19 40 34.9 -0.2
MYKA  Terra Mystica     80.84 327 i P   P     19 40 35.1 -0.1
      comp=Z,27nm,1.0s,SNR=9.7
BLY   Banja Luka        80.85 324 eP    P     19 40 33.5 -1.8
COWI  Conover           80.92  34  IAmb IAmb  19 40 36.8
      comp=Z,21nm,1.1s
LJU   Ljubljana         80.95 326 eP    P     19 40 35.5 -0.3
LJU   Ljubljana         80.95 326⇑iP    P     19 40 35.5 -0.3
SNF   Seneffe           80.98 335 dP    P     19 40 35.7  0.0
VAY   Valandovo         80.99 319 i P   P     19 40 36.7 +0.6
SOCY  Socotra           81.00 278  P    P     19 40 34.6 -2.0
SOCY                               IAmb IAmb  19 40 36.3
      comp=Z,48nm,1.1s
BMRD  Maredsous         81.00 334 dP    P     19 40 35.6 -0.3
SKO   Skopje            81.05 320 i P   P     19 40 37.5 +1.1
WATA  Walderalm         81.08 329 i P   P     19 40 37.1 +0.5
      comp=Z,52nm,1.4s,SNR=13
IVA   Berane            81.09 321 eP    P     19 40 37.0 +0.3
WLF   Walferdange       81.09 333 dP    P     19 40 36.2 -0.2
WLF   Walferdange       81.09 333 eP    P     19 40 37.5 +1.0
      comp=Z,8.8nm,0.8s,baz=35,slow=5.5
WTTA  Wattenberg        81.12 329 i P   P     19 40 37.4 +0.5
      comp=Z,25nm,0.9s,SNR=13
MGRS  Mrkonjic Grad     81.16 324 eP    P     19 40 37.2 +0.3
ZOU   Zoufplan          81.17 328  P    P     19 40 36.0 -1.2
ZOU                                IAmb IAmb  19 40 38.5
      comp=Z,38nm,1.5s
ABTA  Abfaltersbach     81.20 328 i P   P     19 40 36.8 -0.4
      comp=Z,22nm,1.3s,SNR=7.1
DOU   Dourbes           81.24 334 dP    P     19 40 35.7 -1.4
CEY   Cerknica          81.24 326⇑iP    P     19 40 36.9 -0.4
MOTA  Moosalm           81.26 329 i P   P     19 40 38.0 +0.4
      comp=Z,64nm,0.9s,SNR=22
RETA  Reutte            81.27 329 i P   P     19 40 38.1 +0.6
      comp=Z,44nm,1.0s,SNR=13
PLG   Polygyros         81.27 318  P    P     19 40 37.5 -0.1
KOME  Kolasin           81.28 321⇑iP    P     19 40 37.5 -0.2
SQTA  Sankt Quirin      81.32 329 i P   P     19 40 38.3 +0.4
      comp=Z,42nm,1.1s,SNR=12
UBR   Ueberruh          81.36 330 eP    P     19 40 38.4 +0.5
      baz=35,slow=5.5
BFO   Black Forest      81.47 331  P    P     19 40 38.1 -0.4
BFO                                pmax pmax
      comp=Z,50nm,1.4s
BFO   Black Forest      81.47 331  P    P     19 40 38.1 -0.4
BFO                                IAmb IAmb  19 40 39.3
      comp=Z,50nm,1.4s
BFO   Black Forest      81.47 331 eP    P     19 40 38.6 +0.1
      comp=Z,13nm,0.9s,baz=35,slow=5.5
TRI   Trieste           81.54 327  IAmb IAmb  19 40 39.3
      comp=Z,25nm,0.8s
E43A  Lone Tree Farm    81.57  32  IAmb IAmb  19 40 40.1
      comp=Z,16nm,1.1s
CBKS  Cedar Bluff       81.59  44  P    P     19 40 39.8 +0.5
      baz=318
CBKS  Cedar Bluff       81.59  44  P    P     19 40 39.4  0.0
CBKS                               pmax pmax
      comp=Z,28nm,1.2s
CBKS  Cedar Bluff       81.59  44  P    P     19 40 39.4  0.0
CBKS                               IAmb IAmb  19 40 41.0
      comp=Z,28nm,1.2s
121A  Cookes Peak, D    81.61  54  P    P     19 40 40.4 +0.7
      baz=315
FETA  Feichten          81.67 329 i P   P     19 40 40.1 +0.3
      comp=Z,31nm,1.0s,SNR=14
BRY   Bratogost         81.69 322⇑iP    P     19 40 39.3 -0.6
BRY   Bratogost         81.69 322 eP    P     19 40 39.4 -0.5
PDG   Podgorica         81.73 321⇑iP    P     19 40 39.9  0.0
TTG   Podgorica         81.73 321⇑iP    P     19 40 40.0  0.0
PHP   Peshkopia         81.75 320  P    P     19 40 40.0 -0.1
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DAVA	Damuels	81.77	330	*i*P	P	19 40 40.7	+0.4
	comp=Z,38nm,0.8s,SNR=12						
KIJV	Kijevo	81.78	324	*i*P	P	19 40 40.2	0.0
RICI	Ricice	81.86	323	P	P	19 40 39.9	-0.8
TREB	Trebinje	81.92	322	*e*P	P	19 40 39.9	-1.1
DRME	Dracevica, Mon	81.95	321	⇑*i*P	P	19 40 41.1	0.0
DRME	Dracevica, Mon	81.95	321	⇑*i*P	P	19 40 41.4	+0.3
ECH	Echery	81.98	332	IAmb	IAmb	19 40 42.3	
	comp=Z,23nm,1.0s						
FNA	Florina	81.99	319	IAmb	IAmb	19 40 42.5	
	comp=Z,22nm,1.1s						
NVLJ	Novalja	82.00	325	*i*P	P	19 40 40.4	-0.9
OHR	Ohrid	82.02	320	*i*P	P	19 40 41.7	+0.2
MATQ	Matagami	82.04	25	P	P	19 40 41.1	-0.3
	baz=331,SNR=8.2						
HCY	Herceg Novi	82.07	322	⇑*i*P	P	19 40 39.2	-2.5
HCY	Herceg Novi	82.07	322	⇑*i*P	P	19 40 41.3	-0.4
MAKA	Makarska	82.08	323	*i*P	P	19 40 40.9	-0.8
ULC	Ulcinj	82.10	321	*e*P	P	19 40 41.6	-0.3
STON	Ston	82.10	323	*i*P	P	19 40 39.8	-2.1
CTI	Castel Tesino	82.11	328	P	P	19 40 41.0	-1.0
CTI				pmax	pmax		
	comp=Z,21nm,0.6s						
CTI	Castel Tesino	82.11	328	P	P	19 40 41.0	-1.0
CTI				IAmb	IAmb	19 40 42.3	
	comp=Z,21nm,0.6s						
MORI	Morici	82.20	324	*i*P	P	19 40 41.6	-0.8
DUGI	Dugi Otok	82.38	325	*i*P	P	19 40 42.7	-0.6
ZIRJ	Zirje	82.39	324	*i*P	P	19 40 39.5	-3.8
NEST	Nestorio	82.43	319	P	P	19 40 43.7	-0.1
LSTV	Lastovo	82.55	323	*i*P	P	19 40 43.2	-0.9
E46A	Sault Ste Mari	82.62	31	IAmb	IAmb	19 40 45.5	
	comp=Z,27nm,1.1s						
TUE	Stuetta	82.65	330	IAmb	IAmb	19 40 46.5	
	comp=Z,28nm,1.0s						
TEOL	Teolo	82.67	328	IAmb	IAmb	19 40 45.8	
	comp=Z,40nm,1.0s						
ATAL	Atalanti	82.75	317	P	P	19 40 44.6	-0.8
LKR	Lokris	82.80	317	P	P	19 40 44.8	-0.8
LSK	Leskovik	82.85	319	P	P	19 40 46.7	+0.7
AGG	Agios Georgios	82.86	317	IAmb	IAmb	19 40 46.2	
	comp=Z,33nm,1.2s						
LSQQ	Lebel-sur-Quev	82.86	25	P	P	19 40 45.9	+0.2
	baz=331						
SALO	Salr	82.91	328	P	P	19 40 45.5	-0.6
KSU1	Kansas State U	82.98	42	P	P	19 40 47.0	+0.4
	baz=320						
JFWS	Jewell Farm	83.00	36	P	P	19 40 46.7	+0.1
	baz=323						
JAN	Janina	83.11	319	P	P	19 40 47.7	+0.5
L40A	Anamosa	83.25	37	IAmb	IAmb	19 40 48.9	
	comp=Z,42nm,1.4s						
ANX	Ano Chora	83.39	317	P	P	19 40 48.3	-0.5
KALE	Kalithea	83.43	317	P	P	19 40 47.8	-1.2
AMTX	Amarillo	83.45	48	P	P	19 40 49.5	+0.4
	baz=318						
IGT	Igoumenitsa	83.46	319	P	P	19 40 48.9	-0.1
SENIN	Lac Senin/Sane	83.50	331	IAmb	IAmb	19 40 51.7	
	comp=Z,12nm,0.8s						
EFP	Efpalio	83.53	317	P	P	19 40 48.5	-0.8
LAKA	Lakka	83.63	317	P	P	19 40 49.2	-0.7
MNTX	Cornudas Mount	83.63	53	P	P	19 40 50.4	+0.4
	baz=316						
ZCCA	Zocca	83.78	327	IAmb	IAmb	19 41 01.3	
	comp=Z,27nm,0.9s						
SGRT	San Giovanni R	83.87	323	P	P	19 40 50.6	-0.6
AXS	Araxos	83.97	317	P	P	19 40 51.3	-0.3
EVGI	Lefkada island	84.00	318	P	P	19 40 51.4	-0.4
P38A	Dawn	84.09	40	IAmb	IAmb	19 40 54.0	
	comp=Z,19nm,1.0s						
VLC	Villacollemand	84.18	328	IAmb	IAmb	19 40 55.1	
	comp=Z,25nm,0.9s						
OSSC	Osservatorio P	84.36	327	IAmb	IAmb	19 40 54.4	
	comp=Z,47nm,1.3s						
MSSA	Maissana	84.39	328		P	19 40 52.4	-1.3
AQU	L'Aquila	84.41	325	⇑*i*P	P	19 40 54.0	+0.1
ITM	Ithomi	84.47	316	P	P	19 40 53.5	-0.7
INTR	Introdacqua	84.47	324	IAmb	IAmb	19 40 55.9	
	comp=Z,46nm,1.2s						
N41A	Harden Midland	84.49	38	IAmb	IAmb	19 40 56.4	
	comp=Z,58nm,1.5s						
T35A	Sooner Cattle	84.70	44	P	P	19 40 55.7	+0.3
T35A				IAmb	IAmb	19 41 13.7	
	comp=Z,24nm,1.2s						
PYL	PYLOS	84.78	316	P	P	19 40 54.6	-1.1
BNI	Bardonecchia	84.85	330	P	P	19 40 56.0	-0.1
BNI				pmax	pmax		
	comp=Z,21nm,1.0s						
BNI	Bardonecchia	84.85	330	P	P	19 40 56.0	-0.1
BNI				IAmb	IAmb	19 40 57.8	
	comp=Z,21nm,1.0s						
P40A	Paris	84.87	39	IAmb	IAmb	19 40 58.0	
	comp=Z,16nm,0.9s						
LATE	Laterza	84.88	326	IAmb	IAmb	19 40 57.8	
	comp=Z,18nm,1.1s						
PAOL	Paolisi	84.98	323	P	P	19 40 56.2	-0.6
PAOL				IAmb	IAmb	19 40 57.4	
	comp=Z,22nm,1.2s						
J47A	Sunmer	85.03	33	IAmb	IAmb	19 40 58.9	
	comp=Z,37nm,0.9s						
D55A	Sainte-Anne-du	85.14	25	P	P	19 40 56.9	-0.5
	baz=332,SNR=5.4						
WMOK	Wichita Mounta	85.15	47	P	P	19 40 57.0	-0.6
	baz=319,SNR=5.5						
ALGO	Algonquin Park	85.23	27	P	P	19 40 57.3	-0.5
	baz=331,SNR=6.2						
HDIL	Hopedale	85.32	37	P	P	19 40 58.1	-0.3
	baz=324						
D56A	ZEC Mazanza, M	85.34	25	P	P	19 40 58.3	0.0
	baz=333,SNR=15						
SSB	Saint Sauveur	85.42	332	P	P	19 40 58.7	-0.2
SSB				pmax	pmax		
	comp=Z,21nm,1.0s						
SSB	Saint Sauveur	85.42	332	P	P	19 40 58.7	-0.2
SSB				IAmb	IAmb	19 41 00.5	
	comp=Z,21nm,1.0s						
E55A	Montcerf-Lytto	85.45	26	P	P	19 40 58.4	-0.5
	baz=332						
TIP	Timpagrande	85.46	321	IAmb	IAmb	19 41 00.8	
	comp=Z,41nm,1.1s						
E56A	St. Veronique	85.70	25	P	P	19 40 59.8	-0.3
	baz=333,SNR=6.3						
G54A	Lake Saint Pet	85.70	27	P	P	19 40 59.8	-0.4
	baz=331,SNR=6.2						
S39A	Bolivar	85.71	41	IAmb	IAmb	19 41 01.3	
	comp=Z,17nm,1.3s						
R40A	Maddies Statio	85.75	40	IAmb	IAmb	19 41 02.0	
	comp=Z,9.9nm,0.8s						
TUL1	Leonard	85.84	44	P	P	19 41 01.2	+0.1
	baz=320						
PPT	Papeete	86.02	118	LR	LR	20 18 07.4	
	comp=Z,184nm,18.1s,baz=358,slow=35						
I51A	Listowel	86.03	30	P	P	19 41 01.7	-0.1
	baz=329,SNR=7.1						
PPT2	Papeete2	86.03	118	*e*S	S	19 51 29.7	-1.9
	comp=Z,70nm,26.0s						
PPT2	Papeete2	86.03	118	*e*LR	LR	20 08 09.1	
	comp=Z,789nm,26.2s,baz=316						
PPT2	Papeete2	86.03	118	*e*T	T	21 15 37.0	
	comp=Z,10nm,0.3s						
TIAR	Tiarei	86.16	118	*e*T	T	21 15 46.0	
	comp=Z,3.4nm,0.3s						
H53A	Bobcaygeon	86.25	28	P	P	19 41 02.8	-0.1
	baz=330						
L48A	N Adams	86.27	33	P	P	19 41 03.1	+0.1
L48A				IAmb	IAmb	19 41 05.4	
	comp=Z,27nm,0.9s						
TXAR	Lajitas Array	86.36	53	P	P	19 41 05.0	+1.2
	comp=Z,17nm,1.2s,baz=282,slow=2.4,SNR=20						
PLVO	Plevna	86.36	27	IAmb	IAmb	19 41 04.5	
	comp=Z,21nm,1.0s						
E58A	La Victoria	86.40	24	P	P	19 41 03.5	-0.1
	baz=334						
CCM	Cathedral Cave	86.42	40	P	P	19 41 03.7	-0.2
	baz=323						
CCM	Cathedral Cave	86.42	40	P	P	19 41 04.2	+0.3
CCM				pmax	pmax		
	comp=Z,22nm,1.1s						
CCM	Cathedral Cave	86.42	40	P	P	19 41 04.2	+0.3
CCM				IAmb	IAmb	19 41 05.6	
	comp=Z,22nm,1.1s						
SFIN	Lafayette	86.44	36	P	P	19 41 04.0	+0.1
	baz=325						
TAOE	Nuku Hiva Isla	86.46	105	*e*LR	LR	20 08 27.4	
	comp=Z,599nm,24.9s						
TAOE	Nuku Hiva Isla	86.46	105	*e*T	T	21 16 11.6	
	comp=Z,133nm,0.3s						
D61A	St Aubert, Com	86.54	22	P	P	19 41 04.6	+0.3
	baz=336						
D60A	Saint Jean D'O	86.60	22	P	P	19 41 04.3	-0.2
	baz=336,SNR=5.3						
N47A	Urbana	86.63	35	IAmb	IAmb	19 41 06.1	
	comp=Z,42nm,1.3s						
DELO	Deloro Mine	86.64	28	IAmb	IAmb	19 41 06.1	
	comp=Z,20nm,1.1s						
FVM	French Village	86.87	39	IAmb	IAmb	19 41 07.8	
	comp=Z,7.7nm,0.8s						
E60A	Ste Agathe de	86.94	23	P	P	19 41 06.2	-0.1
	baz=335						
U40A	Yellville	86.98	42	P	P	19 41 06.6	-0.1
	baz=322,SNR=5.6						
U40A	Yellville	86.98	42	IAmb	IAmb	19 41 08.1	
	comp=Z,28nm,1.2s						
G57A	Newington	87.00	26	P	P	19 41 07.0	+0.4
	baz=333						
F59A	Saint Guilaume	87.02	24	P	P	19 41 06.9	+0.3
	baz=334						
N49A	Columbus Grove	87.23	34	P	P	19 41 07.9	+0.2
N49A				IAmb	IAmb	19 41 09.5	
	comp=Z,30nm,1.1s						
MEH	Mehetia	87.23	117	*e*T	T	21 17 06.6	
	comp=Z,18nm,0.3s						
D63A	Stockholm	87.25	21	P	P	19 41 08.3	+0.6
	baz=338						
G58A	Ormstown	87.25	25	P	P	19 41 07.8	+0.1
	baz=334						
T42A	Van Buren	87.31	40	IAmb	IAmb	19 41 09.9	
	comp=Z,8.7nm,0.9s						
F61A	St Evariste	87.44	23	P	P	19 41 09.0	+0.3
	baz=336						
H57A	Richville	87.44	26	P	P	19 41 07.5	-1.1
	baz=333						
S44A	Carbondale	87.65	39	P	P	19 41 09.8	0.0
FCAR	Ozark Folk Cen	87.72	42	IAmb	IAmb	19 41 11.5	
	comp=Z,8.2nm,0.9s						
E63A	Oxbow	87.74	21	P	P	19 41 09.1	-1.0
	baz=337						
JCT	Junction City	87.77	50	P	P	19 41 10.9	+0.2
	baz=319						
H59A	Cadyville	87.82	25	P	P	19 41 10.3	-0.2
	baz=334						
PBMO	Poplar Bluff	87.83	40	IAmb	IAmb	19 41 12.6	
	comp=Z,32nm,1.3s						
ERPA	Erie	87.86	30	P	P	19 41 10.7	-0.1
	baz=330						
ERPA	Erie	87.86	30	P	P	19 41 11.0	+0.2
H58A	Gabriels	87.87	25	P	P	19 41 10.6	-0.2
	baz=334						
E64A	Bridgewater	87.90	21	P	P	19 41 11.1	+0.3
	baz=338						
L53A	Girard	87.90	31	P	P	19 41 11.3	+0.3
	baz=330						
G61A	St-Isidore-de-	87.91	23	P	P	19 41 11.2	+0.3
	baz=335						
N51A	Ashland	87.96	32	IAmb	IAmb	19 41 12.9	
	comp=Z,34nm,1.1s						
J56A	Wolcott	87.99	28	P	P	19 41 11.7	+0.3
	baz=332						
MIAR	Mount Ida	88.04	43	P	P	19 41 12.2	+0.4
	baz=322						
P49A	Miami Univ. Ec	88.16	35	P	P	19 41 12.3	0.0
	baz=327,SNR=6.3						
P49A	Miami Univ. Ec	88.16	35	IAmb	IAmb	19 41 13.9	
	comp=Z,34nm,1.1s						
M53A	WI Miller and	88.19	31	P	P	19 41 12.6	+0.3
	baz=329						
M53A	WI Miller and	88.19	31	P	P	19 41 12.4	0.0
M53A				IAmb	IAmb	19 41 14.4	
	comp=Z,33nm,1.1s						
H60A	Morristown	88.21	24	P	P	19 41 12.8	+0.4
	baz=334						
W41B	Gary Mavity, V	88.22	42	P	P	19 41 12.9	+0.3
	baz=322						
G62A	West of Eustis	88.26	23	P	P	19 41 12.8	+0.2
	baz=336						
I58A	Old Forge	88.26	26	P	P	19 41 12.8	+0.2
	baz=333						
ACSO	Alum Creek Sta	88.30	33	P	P	19 41 13.3	+0.4
	baz=328						
K56A	Middlesex	88.33	28	P	P	19 41 13.2	+0.2
	baz=331						
X40A	Basin Creek Fa	88.47	43	P	P	19 41 14.4	+0.7
	baz=322						
H61A	Lyndonville	88.47	24	P	P	19 41 14.0	+0.4
	baz=335						
M54A	Oil Creek Stat	88.51	30	P	P	19 41 14.4	+0.5
	baz=330,SNR=6.0						
M54A	Oil Creek Stat	88.51	30	IAmb	IAmb	19 41 15.8	
	comp=Z,24nm,1.1s						
I59A	Olmsteadville	88.52	26	P	P	19 41 14.2	+0.3
	baz=334						
WCI	Wyandotte Cave	88.56	36	P	P	19 41 14.7	+0.5
	baz=326						
G63A	Kingsbury	88.61	22	P	P	19 41 14.6	+0.4
	baz=337						
J59A	Piesco	88.61	26	P	P	19 41 14.5	+0.2
	baz=333						
J59A	Piesco	88.61	26	P	P	19 41 13.6	-0.8
H62A	Milan	88.66	23	P	P	19 41 15.0	+0.5
	baz=336						
I60A	Shoreham	88.67	25	P	P	19 41 14.9	+0.4
	baz=334						
LBNH	Lisbon	88.73	24	P	P	19 41 15.0	+0.1
	baz=335						
L56A	Greenwood	88.74	29	P	P	19 41 15.3	+0.3
	baz=331						
K58A	Earlville	88.86	27	P	P	19 41 15.8	+0.3
	baz=332						
N54A	Moraine State	88.86	31	P	P	19 41 15.7	+0.2
	baz=330						
M55A	Ridgway	88.88	30	P	P	19 41 15.7	0.0
H63A	New Sharon	88.91	23	P	P	19 41 16.0	+0.3
	baz=336						
O53A	New Philadelph	89.00	32	P	P	19 41 16.7	+0.6
	baz=329						
M56A	Emporium	89.08	29	P	P	19 41 17.2	+0.6
	baz=331						
G65A	Princeton	89.10	21	P	P	19 41 17.0	+0.5
	baz=338						
L57A	Andrews Acres	89.11	28	P	P	19 41 17.0	+0.2
	baz=332						
K59A	Cooperstown	89.11	27	P	P	19 41 17.0	+0.2
	baz=333						
P52A	Corning	89.15	33	P	P	19 41 17.2	+0.3
	baz=328						
P52A	Corning	89.15	33	IAmb	IAmb	19 41 18.4	
	comp=Z,19nm,1.0s						
J60A	Lant Hill Farm	89.17	26	P	P	19 41 17.3	+0.5
	baz=334						
Q51A	Peebles	89.17	34	P	P	19 41 17.0	0.0
T47A	Sharon Grove	89.22	38	IAmb	IAmb	19 41 19.3	
	comp=Z,12nm,0.8s						
BINY	Binghamton	89.24	28	P	P	19 41 17.5	+0.2
	baz=332						
I63A	Otisfield	89.31	23	P	P	19 41 18.2	+0.6
	baz=336						
L58A	Harry Jones Me	89.42	28	P	P	19 41 18.9	+0.8
	baz=332						
N56A	West Decatur	89.54	30	P	P	19 41 18.9	+0.2
	baz=331						
L59A	Walton	89.57	27	P	P	19 41 19.3	+0.4
	baz=333						
P53A	Whipple	89.58	33	P	P	19 41 19.2	+0.3
WVT	Waverly	89.59	39	P	P	19 41 19.7	+0.7
	baz=325						
M57A	Sunshine Farm,	89.60	29	P	P	19 41 19.6	+0.7
	baz=332,SNR=6.2						
I64A	Boothbay	89.70	23	P	P	19 41 19.7	+0.3
	baz=337						
K61A	Williamstown	89.73	26	P	P	19 41 20.2	+0.6
	baz=334						
M58A	Price's Panora	89.80	28	P	P	19 41 20.7	+0.8
	baz=332						
J63A	Strafford	89.86	24	P	P	19 41 20.4	+0.3
	baz=336						
N57A	Milroy	89.95	29	P	P	19 41 21.2	+0.6
	baz=331,SNR=8.0						
O56A	Blue Knob Stat	90.00	30	P	P	19 41 21.3	+0.4
	baz=331,SNR=5.2						
O56A	Blue Knob Stat	90.00	30	IAmb	IAmb	19 41 23.4	
	comp=Z,24nm,1.0s						
M59A	Waymart	90.01	28	P	P	19 41 21.3	+0.4
	baz=333						
L60A	Shokan	90.03	27	P	P	19 41 21.4	+0.4
	baz=334						
MCWV	Mont Chateau	90.04	31	P	P	19 41 21.8	+0.7
	baz=330						
Q53A	Leroy	90.06	33	P	P	19 41 22.0	+0.8
	baz=329						
K62A	Royalston	90.06	25	P	P	19 41 21.6	+0.5
	baz=335						
L61A	Hillsdale 1, H	90.06	26	P	P	19 41 21.6	+0.5
	baz=334						
L61B	Northampton	90.12	25	P	P	19 41 22.1	+0.8
	baz=334						
OXF	Oxford	90.15	41	P	P	19 41 22.2	+0.6
	baz=324						
N58A	Sunbury	90.18	29	P	P	19 41 22.2	+0.6
	baz=332						
T50A	Nancy	90.21	36	IAmb	IAmb	19 41 24.2	
	comp=Z,24nm,1.3s						
U49A	Red Boiling Sp	90.21	37	P	P	19 41 21.7	-0.2
U49A				IAmb	IAmb	19 41 24.4	
	comp=Z,27nm,1.4s						
TBI	Tubuai	90.25	122	*e*LR	LR	20 10 06.9	
	comp=Z,397nm,32.0s,baz=319						
TBI	Tubuai	90.25	122	*e*T	T	21 20 52.1	
	comp=Z,26nm,0.3s						
K63A	Dunstable	90.26	24	P	P	19 41 22.4	+0.4
	baz=335						
O57A	Amberson	90.40	30	P	P	19 41 22.9	+0.2
	baz=331						
HRV	Adam Dziewonsk	90.42	25	P	P	19 41 23.4	+0.6
	baz=335						
N59A	State Game Lan	90.45	28	P	P	19 41 23.6	+0.6
	baz=332						
M60A	Port Jervis	90.48	27	P	P	19 41 23.0	0.0
	baz=333						
P56A	Dayton Farm, R	90.56	31	P	P	19 41 23.6	+0.1
	baz=330						
O58A	Lewisberry	90.74	29	P	P	19 41 24.1	-0.2
	baz=332						
M61A	Granite Spring	90.78	27	P	P	19 41 24.2	-0.3
	baz=334						
PAL	Palisades	91.01	27	P	P	19 41 24.5	-1.0
	baz=334						
S54A	Dingess, Beckl	91.05	33	P	P	19 41 24.2	-1.7
	baz=329						
P60A	Greenville	91.48	29	P	P	19 41 26.6	-1.0
	baz=332						
KEST	Kesra	91.66	324	P	P	19 41 28.6	-0.1
	comp=Z,11nm,1.1s,baz=11,slow=5.5,SNR=5.0						
KEST				LR	LR	20 27 27.0	
	comp=Z,391nm,19.7s,baz=332,slow=39						
KEST	Kesra	91.66	324	IAmb	IAmb	19 41 29.7	
	comp=Z,13nm,1.1s						
U57A	Blanch	93.03	33	P	P	19 41 34.0	-1.0
	baz=330						
V56A	Mocksville	93.09	34	P	P	19 41 35.3	+0.1
	baz=329						
ESDC	Sonseca Array	93.27	335	P	P	19 41 35.9	-0.2
	comp=Z,7.2nm,1.1s,baz=16,slow=3.4,SNR=19						
ESDC				LR	LR	20 29 11.7	
	comp=Z,216nm,18.6s,baz=25,slow=39						
ESDC	Sonseca Array	93.27	335	P	P	19 41 36.0	-0.1
V57A	Coltrane Farms	93.32	33	P	P	19 41 35.3	-1.0
	baz=330						
RKT	Rikitea	99.72	112	*e*LR	LR	20 14 38.7	
	comp=Z,1μm,36.2s						
KMBO	Kilima Mbogo	102.20	280	P	Pdif	19 42 17.7	+0.7
	comp=Z,3.6nm,0.9s,baz=29,slow=7.9,SNR=10						
TORD	Torodi Ar. Bea	114.44	318	PKP	PKiKP	19 47 01.4	-0.1
	comp=Z,0.8nm,0.5s,baz=325,slow=2.6,SNR=4.5						
TORD				PP	PP	19 47 53.4	-4.2
	comp=Z,8.1nm,1.1s,baz=7.0,slow=6.9,SNR=17						
TORD	Torodi Ar. Bea	114.44	318		PKiKP	19 47 00.8	-0.6
DBIC	Dimbokro	123.23	320	PKP	PKPdf	19 47 18.5	+0.1
	comp=Z,2.0nm,0.7s,baz=75,slow=5.2,SNR=3.8						
DBIC				PP	PP	19 48 57.8	-0.4
	comp=Z,6.6nm,1.0s,baz=4.3,slow=10,SNR=4.7						
LPAZ	La Paz	143.21	55	PKP	PKPdf	19 47 55.0	-1.4
	comp=Z,0.6nm,0.6s,baz=333,slow=6.8,SNR=2.5						
LPAZ	La Paz	143.21	55	PKIKP	PKPdf	19 47 55.0	-1.4
BELA	Belgrano 2	143.97	181	PKPdf	PKPab	19 47 51.6	-1.0
NBLI	Livramento-PB	145.53	359	*e*P	PKPab	19 48 00.5	+0.3
SNAA	Sanae	145.75	199	PKPbc	PKPab	19 47 59.3	-0.1
SNAA	Sanae	145.75	199	PKP2	PKPdf	19 47 58.4	0.0
SNAA	Sanae	145.75	199	PKPdf	PKPdf	19 47 58.4	0.0
SMTB	Santa Maria do	145.80	18	*e*P	PKPab	19 48 01.8	+0.6
LVC	Limon Verde	147.32	64	*e*P	PKPdf	19 48 03.1	+0.2
VNA2	Neumayer--Watz	147.32	198	PKPbc	PKPbc	19 48 04.0	+0.5
VNA3	Neumayer Olymp	147.58	196	PKPbc	PKPbc	19 48 04.4	+0.2
SNDB	Serra Nova Dou	147.72	26	*e*P	PKPbc	19 48 06.5	+0.3
VNA1	Neumayer--Stat	147.72	198	PKPbc	PKPbc	19 48 05.1	+0.6
PEXB	Peixe	148.74	21	*e*P	PKPbc	19 48 08.3	-0.6
SDBA	SAO DESIDERIO	149.81	15	*e*P	PKPdf	19 48 08.9	+2.1
GO04	Tololo Observa	150.67	77	PKPdf	PKPdf	19 48 06.2	-1.7
GO04					PKPbc	19 48 13.5	0.0
CO01	Juntas del Tor	151.08	76		PKiKP	19 48 15.1	0.0
BO02	Sierra Bellavi	152.93	86		PKiKP	19 48 19.1	+0.6
BI02	San Fabin de	153.32	90		PKiKP	19 48 19.7	+0.5
PLCA	Paso Flores	155.11	98	PKPab	PKPab	19 48 41.0	+2.1
	comp=Z,1.6nm,0.8s,baz=256,slow=3.4,SNR=2.6						
PLCA	Paso Flores	155.11	98	PKP2	PKPab	19 48 41.0	+2.1

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*NEIC **20** 20:25:27.9±2.5, 35.°07N±0.°07×137.°58E±0.°08, $h287^{km}\pm6^{km}$, mb4.3/22 Error ellipse: s-maj=11.1km s-min=9.6km az=147.0*

*IDC **20** 20:25:28.3±1.2, 34.°98N×137.°57E, $h276^{km}\pm14^{km}$, mb3.4/5, mb1 3.3/9, mb1mx3.0/50, mbtmp3.9/9, Error ellipse: s-maj=24.9km s-min=14.3km az=66.0*

*JMA **20** 20:25:28.5±0.1, 35.°15N×137.°44E, $h283^{km}\pm1^{km}$, M3.7 Broadband fault plane solution: P waves. NP1: ϕ_s317.00000°, δ49.00000°, λ23.00000°. NP2: ϕ_s212.00000°, δ73.00000°, λ137.00000°. Principal axes: T Plg42.0000°, Azm166.0000°; N Plg44.0000°, Azm15.0000°; P Plg15.0000°, Azm270.0000°;*

ISC 20 20:25:27.9±0.6, **35.°08N**±0.°06×**137.°53E**±0.°05, **$h281^{km}\pm5^{km}$, n74, $\sigma 1^{s}$20**/86, **mb4.3**/17, **8C-1D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAO	Obara	0.29	309	⇑P	Pn	20 26 04.9	+0.9
INU	Inuyama	0.50	302	Pn	Pn	20 26 04.9	+0.6
JGF	Kuroka	0.54	345	Pn	Pn	20 26 04.8	+0.3
JSG	Sagara	0.68	127	Pn	Pn	20 26 06.5	+1.6
JYTA	Yamagatataniai	0.83	308	⇑P	Pn	20 26 06.0	+0.6
JYN	Shimob	0.93	63	⇑P	Pn	20 26 07.2	+1.2
JIE	Ise	0.97	225	⇑P	Pn	20 26 07.0	+0.8
JIE				*e*S	S	20 26 36.5	0.0
TK02	Tokai 2	1.15	171	P	Pn	20 26 08.7	+1.8
JOD2	Odawara 2	1.29	82	P	Pn	20 26 09.3	+1.4
JRY	Ryogami san	1.46	50	⇑P	Pn	20 26 10.3	+1.4
JRY				*e*S	S	20 26 42.3	+0.8
JKG	Kaga	1.54	321	⇑P	Pn	20 26 09.6	+0.2
JKG				*e*S	S	20 26 42.2	-0.2
MJAR	Matsushiro Arr	1.56	21	P	Pn	20 26 10.6	+1.0
	baz=204,slow=8.2						
MAJO	Matsushiro	1.56	20	Pn	Pn	20 26 10.4	+0.8
MAJO				S	S	20 26 43.2	+0.5
MAT	Matsushiro	1.56	20	P	Pn	20 26 10.3	+0.7
MAT				S	S	20 26 42.8	+0.1
MAT	Matsushiro	1.56	20	P	Pn	20 26 10.4	+0.8
MAT				*e*S	S	20 26 42.8	+0.1
TTO1	TONANKAI O.B.S	1.58	203	P	Pn	20 26 11.2	+1.7
JWT	Wachi	1.76	277	⇑P	Pn	20 26 11.3	+0.2
JWT				S	S	20 26 44.0	-1.3
JWT	Wachi	1.76	277	Pn	Pn	20 26 11.2	+0.2
JWT				S	S	20 26 44.4	-1.0
JWY	Kouya	1.82	242	⇑P	Pn	20 26 12.1	+0.4
JWY				S	S	20 26 45.4	-1.0
JTNC	Tanabenakahech	2.03	232	P	Pn	20 26 13.9	+0.6
JTNC				*e*S	S	20 26 48.9	-0.5
JAG	Ashikaga	2.06	49	⇓P	Pn	20 26 13.5	0.0
JYT	Yasato	2.45	61	Pn	Pn	20 26 16.8	-0.2
JYT				S	S	20 26 53.5	-2.5
JHJ2	Mitsune	2.73	135	Pn	Pn	20 26 20.0	+0.2
JSD	Sado	3.01	11	Pn	Pn	20 26 22.6	+0.3
JMN	Monobe	3.31	247	Pn	Pn	20 26 25.5	-0.1
JHS	Saijyo	3.62	270	Pn	Pn	20 26 28.9	-0.1
JHS				S	S	20 27 16.6	-1.1
JMM	Marumori	3.82	42	Pn	Pn	20 26 31.5	+0.4
JMM				S	S	20 27 19.2	-2.5
JNU	Nakatsue	5.86	252	P	Pn	20 26 55.1	+0.1
	0.8nm,0.3s,baz=78,slow=7.1,SNR=8.4						
JTM	Tenmabayashi	6.34	25	Pn	Pn	20 27 00.5	-0.3

KSRS	Korea Array	8.11	290	P	Pn	20 27 23.2	+0.5
	0.3nm,0.3s,baz=109,slow=13,SNR=10						
KSAR	Wonju Array Be	8.14	290	Pn	Pn	20 27 22.6	-0.4
KS19	Wonju Array Si	8.17	290	Pn	Pn	20 27 23.1	-0.4
ERM	Erimo	8.20	31	Pn	Pn	20 27 22.2	-1.6
JEW	Eniwo	8.32	20	Pn	Pn	20 27 21.8	-3.5
JCJ	Chichijima	8.90	152	Pn	Pn	20 27 31.2	-1.5
ASAJ	Asahikawa	9.83	22	P	Pn	20 27 44.2	+0.3
	0.5nm,0.3s,baz=215,slow=8.3,SNR=7.8						
YSS	Yuzh-Sakhalins	12.49	17	P	P	20 28 17.9	-0.2
KLR	Kul'dur	14.77	345	P	Pn	20 28 44.3	+0.3
	0.2nm,0.3s,baz=172,slow=8.3,SNR=4.3						
BJT	Baijiatuau	17.63	293	P	P	20 29 11.7	-2.8
SSLB	Suanglung	18.28	236	P	P	20 29 19.8	-1.9
SSLB				IAmb	IAmb	20 29 46.5	
	comp=Z,32nm,1.6s						
TPUB	Ta-pu	18.82	236	P	P	20 29 25.6	-2.1
XAN	Xi'an	23.55	276	P	P	20 30 12.2	-1.4
XAN				IAmb	IAmb	20 30 12.8	
	comp=Z,5.6nm,1.2s						
ENH	Enshi	24.05	266	P	P	20 30 16.8	-1.3
ENH				IAmb	IAmb	20 30 17.4	
	comp=Z,8.9nm,0.6s						
SONM	Songino Array	26.39	308	P	P	20 30 42.1	+3.1
	comp=Z,2.2nm,0.6s,baz=114,slow=9.9,SNR=3.8						
SONM	Songino Array	26.39	308	IAmb	IAmb	20 30 42.6	
	comp=Z,1.6nm,0.7s						
LZH	Lanzhou	27.34	282	eP	P	20 30 46.8	-0.8
LZH				pP	pP	20 31 44.0	+2.3
LZH				sP	sP	20 32 17.3	+2.8
LZH				pmax	pmax		
	comp=Z,13nm,1.0s						
CD2	Chengdu	28.55	271	P	P	20 30 56.5	-1.7
CD2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
TLY	Talaya	29.35	315	P	P	20 31 07.3	+2.3
	comp=Z,7.3nm,0.8s,baz=96,slow=10,SNR=5.2						
WMQ	Urumqi	38.95	298	eP	P	20 32 28.5	+1.3
WMQ				pmax	pmax		
	comp=Z,5.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,230nm,5.7s						
WMQ				LR	LR		
	comp=N,620nm,29.0s						
WMQ				LR	LR		
	comp=E,1µm,28.9s						
WMQ				LR	LR		
	comp=Z,5.0nm,23.3s						
ZALV	Zalesovo Beam	40.96	314	PcP	PcP	20 34 37.9	+0.3
	comp=Z,0.4nm,0.4s,baz=87,slow=5.9,SNR=2.7						
MKAR	Makanchi Array	42.52	303	P	P	20 32 56.9	+0.7
	comp=Z,0.6nm,0.5s,baz=85,slow=10,SNR=16						
MKAR	Makanchi Array	42.52	303	P	P	20 32 56.3	+0.1
MAKZ	Makanchi	42.74	303	P	P	20 32 58.6	+0.8
KURK	Kurchatov	44.69	309	P	P	20 33 12.9	-0.3
SOEI	Soe	46.33	198	P	P	20 33 26.4	-0.1
SOEI				IAmb	IAmb	20 33 39.7	
	comp=Z,48nm,1.3s						
KKAR	Karatay Array	51.38	300	P	P	20 34 05.3	+1.0
FITZ	Fitzroy Crossi	54.08	194	P	P	20 34 24.9	+0.8
FITZ				IAmb	IAmb	20 34 44.3	
	comp=Z,31nm,1.6s						
WB0	Warramunga Arr	54.63	184	P	P	20 34 27.8	-0.3
WB0				IAmb	IAmb	20 34 56.6	
	comp=Z,7.5nm,1.2s						
WRAB	Tennant Creek	54.80	184	P	P	20 34 28.8	-0.4
WRAB				IAmb	IAmb	20 34 30.4	
	comp=Z,18nm,1.4s						
WB2	Warramunga Arr	54.80	184	P	P	20 34 29.1	-0.2
WB2				IAmb	IAmb	20 34 49.0	
	comp=Z,18nm,1.6s						
WRA	Warramunga Arr	54.81	184	P	P	20 34 29.0	-0.3
	comp=Z,0.8nm,0.3s,baz=0.1,slow=7.6,SNR=51						
WRA	Warramunga Arr	54.81	184	P	P	20 34 28.6	-0.7
WR0	Warramunga Arr	54.81	183	P	P	20 34 29.0	-0.4
WR0				IAmb	IAmb	20 34 29.8	
	comp=Z,10nm,1.3s						
ABKAR	Akbulak array	56.79	310	P	P	20 34 45.0	+2.0
ABKAR	Akbulak array	56.79	310	P	P	20 34 45.0	+2.0
ABKAR				IAmb	IAmb	20 35 24.1	
	comp=Z,3.4nm,1.4s						
AS31	Alice Springs	58.53	184	P	P	20 34 55.5	+0.1
ASAR	Alice Springs	58.53	184	P	P	20 34 55.8	+0.5
	comp=Z,0.6nm,0.6s,baz=9.6,slow=13,SNR=13						
ASAR	Alice Springs	58.53	184	P	P	20 34 55.5	+0.2
FORT	Forrest	66.12	189	P	P	20 35 45.0	-0.2
BBOO	Buckleboo	67.55	181	P	P	20 35 54.6	+0.4
FIA1	FINESS Array S	69.04	331	P	P	20 36 02.5	-0.6
FINES	FINESS Array B	69.04	331	P	P	20 36 02.4	-0.7
TIRR	Tirgusor	78.05	316	P	P	20 36 58.0	+2.4
PMPB	Monarch Peak	78.32	54	P	P	20 36 55.4	-2.0
PMPB				IAmb	IAmb	20 36 55.9	
	comp=Z,9.3nm,1.0s						

IDC 20 20:37:15.8±1.9**,50°.00N×28°.89W,h0^{km},mb3.4**/4**, mb1 3.7**/4**,mb1mx3.3**/51**,mbtmp3.5**/4**,Error ellipse: s-maj=64.8km s-min=30.3km az=8.0,Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
ESDC	Sonseca Array	20.38	111	P	P	20 41 54.8	+0.8
	1.1nm,0.8s,baz=310,slow=12,SNR=3.8						
PDAR	Pinedale Array	53.56	295	P	P	20 46 39.0	+0.5
	0.7nm,0.7s,baz=70,slow=8.7,SNR=6.7						
KURBB	Kurchatov Arra	62.23	43	P	P	20 47 40.0	+1.1
	0.5nm,0.8s,baz=314,slow=7.9,SNR=2.7						
MKAR	Makanchi Array	66.74	44	P	P	20 48 07.8	-0.7
	0.1nm,0.5s,baz=312,slow=5.0,SNR=3.5						
ASAR	Alice Springs	150.47	33	PKPbc	PKPbc	20 57 07.7	-1.6
	0.2nm,0.3s,baz=350,slow=1.1,SNR=4.6						

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*VAO **20** 20:53:26.5±1.8, 14°.75S×76°.68W, h10^{km}, mb4.4*

*IDC **20** 20:53:34.6±1.1, 15°.07S×75°.68W, h0^{km}, mb3.9/6, mb1 4.1/9, mb1mx3.9/44, mbtmp4.1/9, ML3.9/3, MS3.2/5, Ms1 3.2/5, ms1mx3.0/30, Error ellipse: s-maj=34.8km s-min=21.6km az=55.0*

*NEIC **20** 20:53:38.8±1.1, 15°.22S±0°.09×75°.9W±0°.1, h36^{km}±6^{km}, mb4.3/5, Error ellipse: s-maj=17.5km s-min=8.6km az=49.0*

ISC 20 20:53:37.5±0.7**,15°.12S**±0°.07×**75°.8W**±0°.1**,h29^{km},n52,** σ**1^{s}61**/51**,mb3.9**/6**,Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
NNA	Nana	3.27	342	Pn	Pn	20 54 27.1	+0.2
	3.5nm,0.3s,baz=208,slow=15,SNR=4.6						
NNA				Sn	Sb	20 55 09.8	-4.6
	40nm,0.3s,baz=160,slow=3.0,SNR=5.4						
NNA				LR	LR	20 55 57.9	
	comp=Z,210nm,20.5s,baz=154,slow=44						
NNA	Nana	3.27	342		Pb	20 54 29.1	-5.8
NNA					Sn	20 55 06.7	+1.7
PB16	IPOC Station P	6.82	119		Pn	20 55 16.4	+0.3
PSGCX	Pisagua	7.01	130		Pn	20 55 18.9	+0.6
MNMC	Minye Minye	7.14	125		Pn	20 55 20.0	-0.3
LPAZ	La Paz	7.47	100	Pn	Pn	20 55 29.4	+4.4
	4.5nm,0.3s,baz=319,slow=6.7,SNR=110						
LPAZ				LR	LR	20 58 49.0	
	comp=Z,211nm,19.7s,baz=292,slow=43						
LPAZ	La Paz	7.47	100		Pn	20 55 28.4	+3.3
LPAZ	La Paz	7.47	100	eP	Pn	20 55 28.6	+3.5
TA01	Diego Aracena	7.61	136		Pn	20 55 26.4	0.0
PATCX	Punta Patache	7.81	137		Pn	20 55 29.5	+0.3
PB08	IPOC Station P	8.06	129		Pn	20 55 33.6	+0.6
ATAH	Atahualpa	8.33	342	Pn	Pn	20 55 44.5	+7.8
	0.5nm,0.3s,baz=83,slow=8.6,SNR=2.9						
ATAH				Sn	Sn	20 57 19.9	+10
	1.4nm,0.3s,baz=359,slow=14,SNR=2.9						
ATAH				LR	LR	20 58 51.7	
	comp=Z,113nm,20.9s,baz=202,slow=38						
PB01	IPOC Station P	8.40	135		Pn	20 55 38.0	+0.5
PB07	IPOC Station P	8.64	140		Pn	20 55 40.9	+0.2
PB04	IPOC Station P	8.95	144	Pn	Pn	20 55 42.8	-2.2
PB09	IPOC Station P	9.09	138		Pn	20 55 48.2	+1.2
PB06	IPOC Station P	9.57	143		Pn	20 55 53.6	+0.2
LVC	Limon Verde	9.89	140	Pn	Pn	20 55 59.5	+1.4
	6.5nm,0.3s,baz=313,slow=9.2,SNR=45						
LVC				LR	LR	20 58 21.7	
	comp=Z,70nm,22.0s,baz=316,slow=29						
LVC	Limon Verde	9.89	140	eP	Pn	20 55 59.7	+1.6
PB15	IPOC Station P	10.02	144		Pn	20 56 00.3	+0.6
ETMB	Extrema	10.73	62	eP	Pn	20 56 08.4	-0.9
GO02	Mina Guanaco	11.56	151		Pn	20 56 20.9	0.0
AC01	Pan de Azucar	12.00	157	Pn	Pn	20 56 26.8	+0.1
SAML	Samuel	13.77	65		Pn	20 56 50.2	-0.5
SAML	Samuel	13.77	65	eP	Pn	20 56 50.3	-0.5
SIV	San Ignacio	14.21	95	Pn	Pn	20 56 54.0	-2.9
	0.5nm,0.3s,baz=274,slow=13,SNR=9.8						
GO04	Tololo Observa	15.67	164	P	P	20 57 19.1	-1.3
GO04				IAmb	IAmb	20 57 33.1	
	comp=Z,28nm,1.2s						
AQDB	Aquidauana	19.85	108	eP	Pn	20 58 08.1	+0.1
PTGA	Pitinga	21.18	49	P	P	20 58 21.4	+0.7
	comp=Z,1.6nm,0.3s,baz=319,slow=20,SNR=5.2						
NPGB	Novo Progresso	21.58	70	eP	P	20 58 23.7	-1.3
ITTB	Itaituba	22.44	64	eP	P	20 58 32.4	-1.9
ARAG	Araguaiana, MT	23.12	95	eP	P	20 58 42.1	+0.7
SNDB	Serra Nova Dou	24.01	86	eP	P	20 58 50.1	+0.1
SDV	Santo Domingo	24.39	12	P	P	20 58 55.1	+1.4
	comp=Z,2.7nm,0.6s,baz=204,slow=20,SNR=3.6						
ITRB	Iturama	24.68	104	eP	P	20 58 56.1	0.0
IPMB	Ipameri, GO	26.58	100	eP	P	20 59 13.2	-0.2
MCPB	Macapa, AP	27.66	60	eP	P	20 59 19.8	-3.3
TXAR	Lajitas Array	51.74	329	P	P	21 02 44.5	+2.0
	comp=Z,0.4nm,0.6s,baz=160,slow=12,SNR=4.5						
ULM	Lac du Bonnet	67.44	346	P	P	21 04 30.5	+0.2
	comp=Z,1.0nm,0.6s,baz=124,slow=3.6,SNR=2.9						
ULM	Lac du Bonnet	67.44	346	P	P	21 04 30.3	+0.1
ULM				IAmb	IAmb	21 04 48.5	
	comp=Z,3.9nm,1.1s						
LRM	Limekiln Ridge	69.11	333	P	P	21 04 41.8	+0.6
TOA0	Torodi Ar. Sit	81.64	74	P	P	21 05 54.2	+0.6
TORD	Torodi Ar. Bea	81.64	74	P	P	21 05 54.2	+0.7
	comp=Z,2.4nm,0.6s,baz=264,slow=5.1,SNR=6.7						
TORD	Torodi Ar. Bea	81.64	74	P	P	21 05 54.5	+1.0
TORD				IAmb	IAmb	21 05 57.1	
	comp=Z,2.5nm,0.8s						
YKA	Yellowknife Ar	83.12	343	P	P	21 06 01.0	+0.9
	comp=Z,0.3nm,0.5s,baz=138,slow=6.5,SNR=7.3						
URZ	Urewera	93.66	229	LR	LR	21 39 14.8	
	comp=Z,44nm,18.9s,baz=215,slow=29						
ASAR	Alice Springs	131.75	217	PKP	PKiKP	21 12 50.6	+0.9
	comp=Z,0.2nm,0.4s,baz=122,slow=2.0,SNR=3.7						
WRA	Warramunga Arr	134.27	221	PKP	PKiKP	21 12 55.4	+0.6
	comp=Z,0.4nm,0.4s,baz=130,slow=2.2,SNR=12						
ZALV	Zalesovo Beam	138.38	17	PKP	PKiKP	21 13 01.9	-0.2
	comp=Z,0.4nm,0.3s,baz=323,slow=2.2,SNR=3.8						
KURBB	Kurchatov Arra	138.96	25	PKP	PKiKP	21 13 02.3	-1.0
	comp=Z,0.2nm,0.5s,baz=314,slow=2.6,SNR=3.4						
MKAR	Makanchi Array	143.51	26	PKP	PKiKP	21 13 10.3	-2.5
	comp=Z,0.3nm,0.8s,baz=315,slow=0.9,SNR=3.6						
SONM	Songino Array	147.33	357	PKPbc	PKiKP	21 13 20.7	-0.1
	comp=Z,1.0nm,0.5s,baz=349,slow=2.8,SNR=2.0						

IDC 20 20:56:59.8±1.6**,1°.35N×126°.26E,h0^{km},mb3.4**/4**, mb1 3.7**/5**,mb1mx3.3**/54**,mbtmp3.5**/5**,ML3.3**/1**,Error ellipse: s-maj=119.8km s-min=20.0km az=68.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	19.34	182	P	P	21 01 26.7	-0.1
	0.1nm,0.3s,baz=17,slow=11,SNR=1.9						
WRA	Warramunga Arr	22.60	160	P	P	21 02 02.2	0.0
	0.9nm,0.5s,baz=338,slow=11,SNR=18						
ASAR	Alice Springs	25.96	164	P	P	21 02 34.3	+0.1
	0.3nm,0.4s,baz=347,slow=9.8,SNR=5.5						
MKAR	Makanchi Array	59.24	326	P	P	21 07 03.9	+0.8
	0.1nm,0.4s,baz=119,slow=8.1,SNR=7.4						
KURBB	Kurchatov Arra	63.49	328	P	P	21 07 30.8	-0.9
	0.4nm,0.7s,baz=135,slow=7.3,SNR=6.3						

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*BJI **20** 21:05:51.2±0.0, 39°.84N×143°.41E, h7^{km}, mB5.0/52, mb4.8/75, Ms4.5/66, Ms7 4.3/62*

*NIED **20** 21:05:54.5, 39°.94N×143°.54E, h31^{km}, MW4.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$6.16; M$_{\theta\theta}$1.41; M$_{\phi\phi}$-7.57; M$_{r\theta}$3.13; M$_{\theta\phi}$-2.49; M$_{\phi r}$3.84; Fault plane solution: M$_0$8.82000×10^{15} NP1:ϕ$_s$31.00000°, δ63.00000°, λ109.00000°. NP2:ϕ$_s$174.00000°, δ32.00000°, λ57.00000°.*

*NEIC **20** 21:05:55.0±1.8, 39°.79N±0°.06×143°.6E±0°.1, h21^{km}±4^{km}, mb4.8/87 Error ellipse: s-maj=12.2km s-min=7.5km az=115.0*

*MOS **20** 21:05:54.8±1.1, 39°.91N×143°.57E, h32^{km}, mb5.0/26, Error ellipse: s-maj=6.5km s-min=4.1km az=110.9*

*JMA **20** 21:05:54.5±0.2, 39°.94N×143°.54E, h31^{km}, M4.7*

*IDC **20** 21:05:56.5±4.2, 39°.83N×143°.60E, h32^{km}±31^{km}, mb4.3/34, mb1 4.4/40, mb1mx4.2/69, mbtmp4.5/40, ML3.8/6, MS4.0/18, Ms1 4.0/18, ms1mx3.7/41, Error ellipse: s-maj=13.6km s-min=10.9km az=127.0*

*BGR **20** 21:05:59.7±0.0, 40°.01N×143°.53E, h33^{km}, mb4.7*

*GCMT **20** 21:06:02.0±0.6, 39°.90N±0°.04×143°.84E±0°.05, h31^{km}±1^{km}, MW4.8/65, Moment Tensor Solution. s19,c20; s65,c89; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.14±.19; M$_{\theta\theta}$-0.52±.12; M$_{\phi\phi}$-1.62±.12; M$_{r\theta}$0.31±.14; M$_{\theta\phi}$-0.60±.07; M$_{\phi r}$1.26±.10; Best double couple: M$_0$2.39300×10^{16} NP1:ϕ$_s$207.00000°, δ29.00000°, λ98.00000°. NP2: ϕ$_s$19.00000°, δ61.00000°, λ86.00000°. Principal axes: T 2.5290, Plg73.0000°, Azm278.0000°; N -0.2700, Plg4.0000°, Azm21.0000°; P -2.2570, Plg16.0000°, Azm112.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 20 21:05:54.6±0.9**,39°.86N**±0°.04×**143°.61E**±0°.04**,h23^{km}**±5^{km}**, n400,** σ**1^{s}66**/401**,mb4.7**/143**,MS4.3**/30**,27C-17D,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
JTH	Tanohata	1.35	274	P	Pn	21 06 16.8	-1.1
JTH				eS	Sn	21 06 33.0	-2.1
MIYJ	Miyakonagasawa	1.41	259	P	Pn	21 06 18.3	-0.5
JKEN	Kujiedanarisaw	1.50	284	P	Pn	21 06 18.7	-1.3
JANG	Nango	1.69	288	P	Pn	21 06 21.7	-0.9
JOM	Ohasama	1.83	259	P	Pn	21 06 24.9	+0.3
JMK	Ichinoseki	2.06	245	P	Pn	21 06 27.6	-0.1
JMK				eS	Sn	21 06 51.8	-0.9
JTM	Tenmabayashi	2.15	296	P	Pn	21 06 29.0	0.0
JTM	Tenmabayashi	2.15	296		Pn	21 06 29.1	+0.1
ERM	Erimo	2.18	351	P	Pn	21 06 29.1	-0.3
ERM	Erimo	2.18	351		Pn	21 06 29.1	-0.3
JEM	Erimo	2.18	351	P	Pn	21 06 28.5	-0.9
JEM				eS	Sn	21 06 53.3	-2.3
JOT	Ohata	2.47	309	P	Pn	21 06 33.0	-0.4
JNBK	Urakawa-nobuka	2.50	345	P	Pn	21 06 33.8	0.0
JYK	Kaneyama	2.69	251	P	Pn	21 06 36.8	+0.4
JCH	Churui	2.76	356	P	Pn	21 06 36.6	-0.7
JKB	Kayabe	2.81	317	P	Pn	21 06 36.9	-1.2
JMM	Marumori	2.97	229		Pn	21 06 39.2	-1.0
JOMM	Oshimamatsumae	3.21	302	P	Pn	21 06 43.4	0.0
JAK	Akkeshi	3.24	14	P	Pn	21 06 42.9	-1.0
JAK				eS	Sn	21 07 19.0	-2.7
JFR	Furan	3.39	347	P	Pn	21 06 46.0	0.0
JEW	Eniwo	3.39	332	P	Pn	21 06 47.0	+1.0
JEW	Eniwo	3.39	332		Pn	21 06 46.6	+0.6
NMR	Nemuro--Hokkai	3.85	24⇑	iP	Pn	21 06 50.7	-1.6
NMR				i S	Sn	21 07 32.7	-4.0
GLVR	Golovnino	4.13	20	eP	Pn	21 06 55.1	-1.0
GLVR				i S	Sn	21 07 40.5	-3.1
GLVR				pmax	pmax		
	comp=Z,306nm,0.4s						
GLVR				pmax	pmax		
	comp=N,262nm,0.3s						
GLVR				smax	smax		
	comp=N,2µm,0.6s						
GLVR				smax	smax		
	comp=E,2µm,0.4s						
JKA	Kamikawa-asahi	4.32	350	Pn	Pn	21 06 59.0	+0.3
ASAJ	Asahikawa	4.32	350	Pn	Pn	21 06 59.2	+0.4
	comp=E,14nm,0.3s,baz=198,slow=11,SNR=166						
ASAJ				Sn	Sn	21 07 49.1	+0.7
	comp=E,13nm,0.3s,baz=140,slow=30,SNR=4.9						
ASAJ				LR	LR	21 09 04.4	
	comp=E,833nm,18.8s,baz=178,slow=43						
GRPR	Tuman	4.43	21	eP	Pn	21 06 58.9	-1.4
GRPR				i S	Sn	21 07 46.5	-4.6
GRPR				pmax	pmax		
	comp=N,149nm,0.3s						
GRPR				pmax	pmax		
	comp=E,191nm,0.3s						
GRPR				pmax	pmax		
	comp=Z,289nm,0.3s						
GRPR				smax	smax		
	comp=E,2µm,0.4s						
GRPR				smax	smax		
	comp=N,2µm,0.5s						
YUK	Yuzh-Kuril'sk	4.50	21	eP	Pn	21 06 59.9	-1.3
YUK				i S	Sn	21 07 47.7	-5.0
YUK				pmax	pmax		
	comp=Z,285µm,0.4s						
YUK				pmax	pmax		
	comp=N,93µm,0.2s						
YUK				pmax	pmax		
	comp=E,144µm,0.3s						
YUK				smax	smax		
	comp=N,4µm,0.5s						
YUK				smax	smax		
	comp=E,3µm,0.6s						
JYT	Yasato	4.52	218	Pn	Pn	21 06 59.5	-2.0
JSD	Sado	4.55	248	Pn	Pn	21 07 02.1	+0.1
MAJO	Matsushiro	5.39	234	P	Pn	21 07 14.6	+1.0
MAJO	Matsushiro	5.39	234		Pn	21 07 14.6	+1.0
MAT	Matsushiro	5.39	234	P	Pn	21 07 14.6	+1.0
MAT				eS	Sn	21 08 13.7	-1.2
KUR	Kuril'sk	6.22	29	eP	Pn	21 07 24.2	-0.6
KUR				i S	Sn	21 08 30.9	-4.3
KUR				pmax	pmax		
	comp=E,48nm,0.5s						
KUR				pmax	pmax		
	comp=Z,222nm,0.5s						
KUR				smax	smax		
	comp=N,408nm,0.6s						
KUR				smax	smax		
	comp=E,734nm,0.5s						
JGF	Kuroka	6.53	231	Pn	Pn	21 07 30.6	+1.4
INU	Inuyama	6.90	231	Pn	Pn	21 07 35.0	+0.7
YSS	Yuzh-Sakhalins	7.12	355⇓	eP	Pn	21 07 38.2	+1.0
YSS				eS	Sn	21 08 59.4	+2.2
YSS				pmax	pmax		
	comp=Z,40nm,1.0s						
YSS				pmax	pmax		
	comp=N,40nm,0.9s						
YSS				pmax	pmax		
	comp=E,30nm,1.0s						
YSS				MLR	MLR		
	comp=Z,800nm,14.0s						
YSS				MLR	MLR		
	comp=N,1µm,18.0s						
YSS				MLR	MLR		
	comp=E,1µm,17.0s						
YSS	Yuzh-Sakhalins	7.12	355	Pn	Pn	21 07 37.8	+0.7
TEY	Ternei	7.32	317⇑	eP	Pn	21 07 42.4	+2.5
TEY				pmax	pmax		
	comp=N,30nm,0.7s						
TEY				pmax	pmax		
	comp=E,60nm,0.7s						
TEY				pmax	pmax		
	comp=Z,50nm,0.7s						
TEY				MLR	MLR		
	comp=N,200nm,15.0s						
TEY				MLR	MLR		
	comp=Z,200nm,13.0s						
JHJ	Hachijo jima 2	7.40	206	Sn	Sn	21 08 55.9	-8.4
	comp=Z,38nm,0.3s,baz=270,slow=20,SNR=2.8						
JHJ				LR	LR	21 11 02.9	
	comp=Z,560nm,18.6s,baz=69,slow=42						
JWT	Wachi	7.96	238	Pn	Pn	21 07 50.0	+1.2
JHS	Saijyo	9.65	243	Pn	Pn	21 08 14.1	+2.1
USA0B	Ussuriysk Arra	9.67	300	P	Pn	21 08 15.4	+3.2
USA0B	Ussuriysk Arra	9.67	300	Pn	Pn	21 08 15.4	+3.2
USRK	Ussuriysk Ar.	9.67	300	Pn	Pn	21 08 15.1	+2.9
	baz=98,slow=14,SNR=44						
USRK				LR	LR	21 11 58.1	
	comp=Z,714nm,18.8s,baz=96,slow=37						
USRK	Ussuriysk Ar.	9.67	300	P	Pn	21 08 16.2	+4.0
USRK	Ussuriysk Ar.	9.67	300	Pn	Pn	21 08 16.2	+4.0
MSHR	Mys Shultsa	9.77	290	i P	Pn	21 08 14.7	+1.2
JMN	Monobe	9.91	235	Pn	Pn	21 08 16.1	+0.4
TYV	Tymovskoe	11.02	357	eP	Pn	21 08 30.8	+0.1
TYV				e		21 10 36.2	
TYV				pmax	pmax		
	comp=Z,11nm,0.8s						
TYV				MLR	MLR		
	comp=Z,1µm,19.0s						
MDJ	Mudanjiang	11.42	299	P	Pn	21 08 38.0	+1.8
MDJ				pmax	pmax		
	comp=Z,14nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,270nm,5.9s						
MDJ				LR	LR		
	comp=Z,1µm,13.1s						
MDJ				LR	LR		
	comp=Z,1µm,14.6s						
MDJ				LR	LR		
	comp=Z,2µm,14.0s						
MDJ	Mudanjiang	11.42	299	Pn	Pn	21 08 38.6	+2.4
GRNR	Gornyy	12.02	338⇓	iP	Pn	21 08 44.4	+0.1
GRNR				pmax	pmax		
	comp=N,20nm,0.9s						
GRNR				pmax	pmax		
	comp=Z,20nm,0.8s						
GRNR				MLR	MLR		
	comp=E,360nm,18.0s						
GRNR				MLR	MLR		
	comp=N,460nm,17.0s						
GRNR				MLR	MLR		
	comp=Z,500nm,17.0s						
JNU	Nakatsue	12.25	241	Pn	Pn	21 08 47.7	+0.1
	comp=Z,0.7nm,0.3s,baz=208,slow=12,SNR=4.8						
JNU				LR	LR	21 13 58.1	
	comp=Z,1µm,18.0s,baz=49,slow=39						
JNU	Nakatsue	12.25	241		Pn	21 08 48.4	+0.8
KSRS	Korea Array	12.50	264	Pn	Pn	21 08 54.1	+3.2
	comp=Z,0.4nm,0.3s,baz=84,slow=14,SNR=14						
KSRS				LR	LR	21 13 22.0	
	comp=Z,758nm,18.3s,baz=74,slow=36						
JTU	Tsushima	12.52	249	Pn	Pn	21 08 51.6	+0.4
KS19	Wonju Array Si	12.53	264	Pn	P	21 08 55.9	-6.9
KSAR	Wonju Array Be	12.53	264	P	Pn	21 08 54.9	+3.5
KSAR	Wonju Array Be	12.53	264	Pn	Pn	21 08 54.9	+3.6
KLR	Kul'dur	12.61	322	Pn	Pn	21 08 53.0	+0.7
	comp=Z,0.2nm,0.3s,baz=129,slow=12,SNR=34						
KLR				LR	LR	21 14 05.8	
	comp=Z,932nm,18.0s,baz=136,slow=39						
CN2	Changchun	14.10	292	eP	Pn	21 09 13.6	+0.8
CN2				eS	S	21 11 57.0	-12
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CN2				pmax	pmax		
	comp=Z,230nm,6.0s						
CN2				LR	LR		
	comp=Z,980nm,14.0s						
CN2				LR	LR		
	comp=Z,560nm,14.0s						
CN2				LR	LR		
	comp=Z,660nm,17.0s						
PETK	Petropavlovsk-	16.38	31	Pn	P	21 09 45.2	-0.3
	comp=Z,0.2nm,0.3s,baz=231,slow=14,SNR=2.4						
PETK				LR	LR	21 17 19.4	
	comp=Z,140nm,18.5s,baz=219,slow=42						
PETK	Petropavlovsk-	16.38	31	Pn	P	21 09 44.4	-1.1
DL2	Dalian	17.02	274⇓	iP	P	21 09 52.5	-0.1
DL2				eS	S	21 13 02.4	-6.5
DL2				pmax	pmax		
	comp=Z,61nm,1.0s						
DL2				pmax	pmax		
	comp=Z,260nm,5.3s						
DL2				LR	LR		
	comp=Z,520nm,14.1s						
DL2				LR	LR		
	comp=Z,400nm,12.9s						
DL2				LR	LR		
	comp=Z,590nm,15.3s						
ZEA	Zeya	17.77	327	eP	Pn	21 09 57.2	-3.0
ZEA				pmax	pmax		
	comp=E,10.0nm,0.6s						
ZEA				pmax	pmax		
	comp=N,20nm,0.7s						
ZEA				pmax	pmax		
	comp=Z,40nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,100nm,3.1s						
ZEA				MLR	MLR		
	comp=E,400nm,13.0s						
ZEA				MLR	MLR		

	comp=N,400nm,14.0s						
ZEA				MLR	MLR		
	comp=Z,600nm,14.0s						
JOW	**Kunigami**	**18.21**	**229**	LR	LR	21 17 40.9	
	comp=Z,467nm,21.1s,baz=101,slow=39						
MA2	**Magadan**	**20.25**	**11**	P	Pn	21 10 28.9	-1.0
	comp=Z,32nm,0.8s,baz=199,slow=8.4,SNR=35						
MA2	**Magadan**	**20.25**	**11**	P	Pn	21 10 29.5	-0.4
MA2				pmax	pmax		
	comp=Z,29nm,0.7s						
MA2	**Magadan**	**20.25**	**11**	P	Pn	21 10 29.5	-0.5
MA2				IAmb	IAmb	21 10 30.3	
	comp=Z,29nm,0.7s						
BJI	**Beijing**	**21.01**	**279**	P	**P**	**21 10 34.5**	**-1.8**
BJI				S	**S**	**21 14 29.4**	**+0.3**
BJI				PcP	**PcP**	**21 14 44.9**	**+2.1**
BJI				pmax	pmax		
	comp=Z,13nm,0.9s						
BJI				LR	LR		
	comp=Z,370nm,11.8s						
BJI				LR	LR		
	comp=Z,410nm,15.3s						
BJT	**Baijiatuau**	**21.02**	**279**	P	**P**	**21 10 35.6**	**-0.8**
BJT				pmax	pmax		
	comp=Z,13nm,0.8s						
BJT	**Baijiatuau**	**21.02**	**279**	P	**P**	**21 10 35.6**	**-0.8**
TIA	**Tai'an**	**21.15**	**269**	P	**P**	**21 10 36.8**	**-1.1**
TIA				pmax	pmax		
	comp=Z,38nm,1.1s						
TIA				LR	LR		
	comp=Z,460nm,11.9s						
TIA				LR	LR		
	comp=Z,1µm,14.5s						
TIA				LR	LR		
	comp=Z,1µm,14.5s						
NJ2	**Nanjing**	**21.46**	**256**	⇓P	**P**	**21 10 39.4**	**-1.8**
NJ2				pP	**pP**	**21 10 44.3**	**-2.8**
NJ2				sP	**pwP**	**21 10 48.3**	**-1.7**
NJ2				S	**S**	**21 14 29.8**	**-8.3**
NJ2				pmax	pmax		
	comp=Z,16nm,0.5s						
NJ2				LR	LR		
	comp=Z,450nm,11.4s						
NJ2				LR	LR		
	comp=Z,740nm,11.4s						
NJ2				LR	LR		
	comp=Z,500nm,11.4s						
SEY	**Seymchan**	**23.70**	**10**	P	**P**	**21 11 04.8**	**+0.5**
	comp=Z,36nm,1.1s,baz=176,slow=6.7,SNR=35						
YAK	**Yakutsk**	**23.77**	**344**	P	**P**	**21 11 04.1**	**-0.8**
	comp=Z,46nm,0.7s,baz=5.3,slow=2.0,SNR=40						
YAK				LR	LR	21 20 56.1	
	comp=Z,184nm,18.7s,baz=65,slow=38						
YAK	**Yakutsk**	**23.77**	**344**	*ce*P	**P**	**21 11 03.5**	**-1.4**
YAK				pmax	pmax		
	comp=Z,92nm,0.8s						
YAK	**Yakutsk**	**23.77**	**344**	P	**P**	**21 11 03.6**	**-1.4**
CIT	**Chita**	**24.00**	**310**	*e*P	**P**	**21 11 05.5**	**-1.8**
CIT				*e*		21 11 16.6	
CIT				*e*		21 11 34.5	
CIT				*e*		21 11 51.4	
CIT				*e*		21 15 25.0	
CIT				pmax	pmax		
	comp=Z,74nm,1.2s						
YHNB	**Yeheng**	**24.05**	**238**	P	**P**	**21 11 05.9**	**-2.1**
YHNB				IAmb	IAmb	21 11 25.2	
	comp=Z,28nm,1.1s						
NACB	**Ninganchiao**	**24.26**	**236**	P	**P**	**21 11 07.7**	**-2.2**
NACB				IAmb	IAmb	21 11 13.2	
	comp=Z,21nm,0.9s						
TIY	**Taiyuan**	**24.34**	**275**	*e*P	**P**	**21 11 12.3**	**+1.7**
TIY				PP	**PnPn**	**21 11 42.1**	**+1.1**
TIY				pmax	pmax		
	comp=Z,7.0nm,0.6s						
TIY				pmax	pmax		
	comp=Z,120nm,5.4s						
TIY				LR	LR		
	comp=Z,420nm,13.2s						
TIY				LR	LR		
	comp=Z,180nm,9.4s						
TIY				LR	LR		
	comp=Z,430nm,15.3s						
HHC	**Hu-ho-hao-te**	**24.38**	**283**	*e*P	**P**	**21 11 09.0**	**-2.0**
HHC				S	**S**	**21 15 26.5**	**-2.7**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
HHC				LR	LR		
	comp=Z,240nm,11.1s						
HHC				LR	LR		
	comp=Z,580nm,15.3s						
HHC				LR	LR		
	comp=Z,850nm,15.3s						
SSLB	**Suanglung**	**24.94**	**237**	P	**P**	**21 11 14.6**	**-1.6**
SSLB				IAmb	IAmb	21 11 30.9	
	comp=Z,20nm,0.8s						
YULB	**Yu-li**	**25.01**	**236**	P	**P**	**21 11 14.8**	**-1.8**
YULB				IAmb	IAmb	21 11 28.8	
	comp=Z,44nm,1.4s						
TPUB	**Ta-pu**	**25.50**	**236**	P	**P**	**21 11 20.1**	**-1.1**
WHN	**Wuhan**	**25.56**	**258**	⇑P	**P**	**21 11 21.8**	**+0.2**
WHN				pmax	pmax		
	comp=Z,120nm,0.8s						
WHN				LR	LR		
	comp=Z,3µm,17.8s						
WHN				LR	LR		
	comp=Z,3µm,22.8s						
WHN				LR	LR		
	comp=Z,1µm,18.2s						
TWG	**Pinlang**	**25.56**	**235**	P	**P**	**21 11 22.2**	**+0.5**
QZH	**Quanzhou**	**25.72**	**242**	*e*P	**P**	**21 11 25.3**	**+2.2**
QZH				LR	LR		
	comp=Z,450nm,16.6s						
QZH				LR	LR		
	comp=Z,340nm,17.0s						
QZH				LR	LR		
	comp=Z,350nm,12.3s						
KNMB	**Chin-men Tao**	**26.18**	**242**	P	**P**	**21 11 27.4**	**+0.1**
KNMB				IAmb	IAmb	21 11 36.2	
	comp=Z,55nm,1.4s						
BOD	**Bodaibo**	**26.18**	**323**	*e*P	**P**	**21 11 26.3**	**-0.7**
BOD				pmax	pmax		
	comp=Z,19nm,1.2s						
GUMO	**Guam**	**26.19**	**177**	LR	LR	21 20 25.6	
	comp=Z,149nm,19.1s,baz=344,slow=33						
ULN	**Ulaanbaatar**	**27.34**	**299**	P	**P**	**21 11 38.7**	**+0.9**
ULN				pmax	pmax		
	comp=Z,25nm,1.0s						
ULN	**Ulaanbaatar**	**27.34**	**299**	P	**P**	**21 11 38.7**	**+0.9**
ULN				IAmb	IAmb	21 11 39.9	
	comp=Z,24nm,0.9s						
SONM	**Songino Array**	**27.78**	**299**	P	**P**	**21 11 42.4**	**+0.7**
	comp=Z,8.4nm,0.6s,baz=84,slow=8.6,SNR=18						
SONM				LR	LR	21 23 24.5	
	comp=Z,379nm,20.8s,baz=44,slow=38						
SONM	**Songino Array**	**27.78**	**299**	P	**P**	**21 11 42.7**	**+1.0**
SONM				pmax	pmax		
	comp=Z,11nm,0.9s						
SONM	**Songino Array**	**27.78**	**299**	P	**P**	**21 11 42.6**	**+1.0**
XAN	**Xi'an**	**28.21**	**269**	P	**P**	**21 11 44.6**	**-0.9**
XAN				pP	pP	21 11 50.0	-1.9
XAN				sP	pwP	21 11 53.3	-1.1
XAN				S	**S**	**21 16 26.0**	**-3.9**
XAN				sS	pS	21 16 35.8	-1.4
XAN				SS	**SnSn**	**21 17 48.6**	**+1.8**
XAN				pmax	pmax		
	comp=Z,8.0nm,0.8s						
XAN				pmax	pmax		
	comp=Z,170nm,6.2s						
XAN				LR	LR		
	comp=Z,370nm,13.8s						
XAN				LR	LR		
	comp=Z,810nm,13.6s						
XAN				LR	LR		
	comp=Z,830nm,14.4s						
XAN	**Xi'an**	**28.21**	**269**	P	**P**	**21 11 45.1**	**-0.4**
XAN				pmax	pmax		
	comp=Z,14nm,0.9s						
XAN	**Xi'an**	**28.21**	**269**	P	**P**	**21 11 45.1**	**-0.4**
XAN				IAmb	IAmb	21 11 46.8	
	comp=Z,14nm,0.9s						
H11N2	**WAKE ISLAND Hy**	**28.33**	**128**	T	T	21 42 46.5	
	baz=318,slow=75,SNR=107						
H11N1	**WAKE ISLAND Hy**	**28.34**	**128**	T	T	21 42 52.5	
	baz=318,slow=75,SNR=143						
H11N3	**WAKE ISLAND Hy**	**28.34**	**128**	T	T	21 42 53.4	
	baz=318,slow=75,SNR=90						
ENH	**Enshi**	**29.37**	**262**	P	**P**	**21 11 55.5**	**-0.4**
TLY	**Talaya**	**29.91**	**307**	P	**P**	**21 12 01.8**	**+1.4**
	comp=Z,4.7nm,0.7s,baz=345,slow=2.6,SNR=11						
TLY				LR	LR	21 24 32.5	
	comp=Z,116nm,18.5s,baz=93,slow=37						
TLY	**Talaya**	**29.91**	**307**	*c* *i*P	**P**	**21 12 01.0**	**+0.6**
TLY				pmax	pmax		
	comp=Z,7.0nm,0.9s						
TLY	**Talaya**	**29.91**	**307**	P	**P**	**21 12 01.2**	**+0.8**
ZAK	**Zakamensk**	**30.00**	**304**	*e*P	**P**	**21 12 01.3**	**0.0**
ZAK				pmax	pmax		
	comp=Z,10.0nm,1.2s						
LZH	**Lanzhou**	**31.39**	**276**	*e*P	**P**	**21 12 15.0**	**+1.1**
LZH				pP	pP	21 12 20.3	0.0
LZH				sP	sP	21 12 23.8	+1.0
LZH				S	**S**	**21 17 16.6**	**-3.5**
LZH				sS	sS	21 17 30.1	-0.7
LZH				pmax	pmax		
	comp=Z,22nm,1.1s						
LZH				pmax	pmax		
	comp=Z,190nm,7.1s						
LZH				LR	LR		
	comp=Z,510nm,16.8s						
LZH				LR	LR		
	comp=Z,660nm,15.2s						
LZH				LR	LR		
	comp=Z,580nm,14.1s						
GYA	**Guiyang**	**33.45**	**258**	⇑P	**P**	**21 12 31.3**	**-0.6**
GYA				pmax	pmax		
	comp=Z,15nm,1.0s						
GYA				LR	LR		
	comp=Z,410nm,16.1s						
GYA				LR	LR		
	comp=Z,250nm,15.2s						
GYA				LR	LR		
	comp=Z,320nm,17.7s						
CD2	**Chengdu**	**33.47**	**267**	⇑P	**P**	**21 12 31.6**	**-0.3**
CD2				pmax	pmax		
	comp=Z,30nm,0.9s						
CD2				pmax	pmax		
	comp=Z,110nm,9.6s						
CD2				LR	LR		
	comp=Z,900nm,12.4s						
CD2				LR	LR		
	comp=Z,500nm,16.7s						
CD2				LR	LR		
	comp=Z,1µm,13.1s						
GTA	**Gaotai**	**33.48**	**284**	P	**P**	**21 12 32.5**	**+0.4**
GTA				pP	pP	21 12 36.9	-1.6
GTA				sP	pwP	21 12 39.8	-1.3
GTA				pmax	pmax		
	comp=Z,27nm,1.0s						
GTA				pmax	pmax		
	comp=Z,69nm,8.8s						
GTA				LR	LR		
	comp=Z,220nm,17.1s						
GTA				LR	LR		
	comp=Z,560nm,15.9s						
GTA				LR	LR		
	comp=Z,700nm,16.7s						
QIZ	**Qiongzhong**	**35.69**	**244**	P	**P**	**21 12 50.0**	**-1.1**
QIZ				S	**S**	**21 18 26.0**	**-0.5**
QIZ				LR	LR		
	comp=Z,370nm,14.1s						
QIZ				LR	LR		
	comp=Z,340nm,18.8s						
QIZ				LR	LR		
	comp=Z,430nm,14.5s						
KMI	**Kunming**	**37.14**	**259**	⇑P	**P**	**21 13 04.1**	**+0.3**
KMI				pP	pP	21 13 10.3	0.0
KMI				sP	pwP	21 13 13.0	+0.4
KMI				PP	**PP**	**21 14 26.0**	**-2.6**
KMI				S	**S**	**21 18 47.9**	**-1.2**
KMI				ScP	**ScP**	**21 19 09.5**	**+0.2**
KMI				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KMI				pmax	pmax		
	comp=Z,170nm,5.0s						
KMI				LR	LR		
	comp=Z,340nm,16.3s						
KMI				LR	LR		
	comp=Z,310nm,21.0s						
KMI				LR	LR		
	comp=Z,460nm,16.8s						
KMI	**Kunming**	**37.14**	**259**	IAmb	IAmb	21 13 15.2	
	comp=Z,24nm,1.4s						
DGZ	**Jazzator, Alta**	**40.21**	**303**	*c* *i*P	**P**	**21 13 30.8**	**+1.6**
DGZ				pmax	pmax		
	comp=Z,17nm,0.9s						
NONG	**Nongkai**	**41.08**	**250**	P	**P**	**21 13 37.9**	**+1.4**
	comp=Z,19nm,0.9s						
WMQ	**Urumqi**	**41.18**	**294**	*e*P	**P**	**21 13 38.5**	**+1.3**
WMQ				pP	pP	21 13 42.9	-0.8
WMQ				sP	sP	21 13 50.0	+3.8
WMQ				pmax	pmax		
	comp=Z,36nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,150nm,4.1s						
WMQ				LR	LR		
	comp=Z,370nm,29.2s						
WMQ				LR	LR		
	comp=Z,760nm,29.1s						
WMQ				LR	LR		
	comp=Z,110nm,18.9s						
WMQ	**Urumqi**	**41.18**	**294**	IAmb	IAmb	21 13 40.3	
	comp=Z,22nm,0.8s						
ZALV	**Zalesovo Beam**	**41.35**	**310**	P	**P**	**21 13 39.2**	**+0.9**
	comp=Z,5.2nm,0.4s,baz=86,slow=7.6,SNR=32						
ZALV				PcP	**PcP**	**21 15 37.1**	**+0.8**
	comp=Z,2.9nm,0.6s,baz=96,slow=3.3,SNR=3.6						
ZALV	**Zalesovo Beam**	**41.35**	**310**	P	**P**	**21 13 39.1**	**+0.7**
DLV	**T Lat**	**41.64**	**238**	P	**P**	**21 13 42.5**	**+1.1**
DLV				IAmb	IAmb	21 13 55.4	
	comp=Z,14nm,1.1s						
TTA	**Tatalina**	**42.12**	**36**	P	**P**	**21 13 46.6**	**+1.9**
TTA				pmax	pmax		
	comp=Z,10.0nm,1.4s						
TTA	**Tatalina**	**42.12**	**36**	P	**P**	**21 13 46.6**	**+1.9**
ZSN	**Zaisan**	**42.28**	**300**	*e*P	**P**	**21 13 46.3**	**+0.2**
	baz=300						
ZSN	**Zaisan**	**42.28**	**300**	*e*P	**P**	**21 13 46.2**	**+0.2**
KHON	**Khomkaen**	**42.44**	**248**	P	**P**	**21 13 48.8**	**+1.1**
	comp=Z,28nm,0.7s						
UTTA	**Uttaradit**	**43.17**	**252**	P	**P**	**21 13 54.8**	**+1.3**
	comp=Z,13nm,1.1s						
A21K	**Barrow**	**43.18**	**24**	P	**P**	**21 13 54.4**	**+1.4**
A21K				IAmb	IAmb	21 14 10.9	
	comp=Z,11nm,0.8s						
LAMP	**Lampang**	**43.35**	**254**	P	P	21 14 03.9	+8.8
	comp=Z,18nm,1.1s						
CHTO	**Chiang Mai**	**43.68**	**255**	P	**P**	**21 13 58.4**	**+0.7**
CHTO				pmax	pmax		
	comp=Z,9.0nm,0.9s						
CHTO	**Chiang Mai**	**43.68**	**255**	P	**P**	**21 13 58.4**	**+0.7**
LSA	**Lhasa**	**43.72**	**273**	P	**P**	**21 13 59.6**	**+1.1**
LSA				pmax	pmax		
	comp=Z,19nm,0.9s						
LSA	**Lhasa**	**43.72**	**273**	P	**P**	**21 14 00.2**	**+1.7**
LSA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
LSA	**Lhasa**	**43.72**	**273**	P	**P**	**21 14 00.2**	**+1.7**
CM09	**Chiang Mai Arr**	**43.88**	**254**	P	P	21 14 09.8	+11
	comp=Z,53nmcomp=Z,7.2nm,0.8s						
MRSI	**Marisa**	**43.90**	**212**	P	**P**	**21 14 00.0**	**+0.6**
	comp=Z,34nm,1.2s						
CMAR	**Chiang Mai Arr**	**43.91**	**254**	P	**P**	**21 13 60.0**	**+0.5**
	comp=Z,1.6nm,0.7s,baz=43,slow=6.5,SNR=13						
CMAR	**Chiang Mai Arr**	**43.91**	**254**	P	**P**	**21 14 00.0**	**+0.5**
CM01	**Chiang Mai Arr**	**43.92**	**254**	P	P	21 14 08.8	+9.2
	comp=Z,59nmcomp=Z,6.6nm,0.9s						
CM02	**Chiang Mai Arr**	**43.92**	**254**	P	P	21 14 09.2	+10
	comp=Z,49nmcomp=Z,5.0nm,1.0s						
CM15	**Chiang Mai Arr**	**43.92**	**254**	P	P	21 14 09.2	+10
	comp=Z,4.5nm,1.1s						
CM13	**Chiang Mai Arr**	**43.95**	**254**	P	P	21 14 09.0	+9.1
	comp=Z,3.9nm,1.0s						
SUKH	**Sukhothai**	**44.01**	**253**	P	P	21 14 04.0	+3.7
	comp=Z,14nm,1.0s						
MK31	**Makanchi Array**	**44.14**	**300**	*ce*P	**P**	**21 14 01.7**	**+0.6**
MK31	**Makanchi Array**	**44.14**	**300**	IAmb	IAmb	21 14 02.7	
	comp=Z,12nm,1.1s						
MKAR	**Makanchi Array**	**44.14**	**300**	P	**P**	**21 14 01.6**	**+0.5**
	comp=Z,10.0nm,0.9s,baz=83,slow=9.5,SNR=68						
MKAR				LR	LR	21 33 30.4	
	comp=Z,260nm,18.0s,baz=70,slow=38						
MKAR	**Makanchi Array**	**44.14**	**300**	P	**P**	**21 14 01.5**	**+0.4**
MAKZ	**Makanchi**	**44.34**	**300**	P	**P**	**21 14 02.9**	**+0.1**
MAKZ				pmax	pmax		
	comp=Z,12nm,1.0s						
MAKZ	**Makanchi**	**44.34**	**300**	P	**P**	**21 14 02.9**	**+0.1**
MAKZ				IAmb	IAmb	21 14 04.5	
	comp=Z,12nm,1.0s						
BPAW	**Bear Paw Mtn.**	**44.42**	**35**	P	P	21 14 11.8	+8.7
CNPM	**China Poot**	**44.43**	**41**	P	**P**	**21 14 06.6**	**+3.4**
SRAK	**Srakaew**	**44.56**	**247**	P	**P**	**21 14 03.1**	**-1.6**
	comp=Z,123nm,1.0s						
SEM	**Semipalatinsk**	**44.65**	**306**	*e*P	**P**	**21 14 04.2**	**-1.2**
	baz=305						
SEM				LR	LR	21 32 48.0	
	comp=Z,65nm,15.7s,baz=305						
SEM	**Semipalatinsk**	**44.65**	**306**	*e*P	**P**	**21 14 04.1**	**-1.3**
SEM				MLR	MLR		
	comp=Z,65nm,16.0s						
MHMT	**Maesarieng**	**44.83**	**255**	P	P	21 14 15.0	+8.1
	comp=Z,22nm,0.7s						
COLD	**Coldfoot**	**44.85**	**30**	P	**P**	**21 14 09.1**	**+2.6**
I23K	**Minto, Yukon-K**	**45.13**	**33**	P	P	21 14 14.6	+6.0
TOLK	**Toolik Lake Re**	**45.17**	**28**	P	**P**	**21 14 11.6**	**+2.5**
TOLK				IAmb	IAmb	21 14 20.0	
	comp=Z,6.8nm,0.8s						
GHO	**Glory Hole Cre**	**45.42**	**38**	P	**P**	**21 14 12.5**	**+1.3**
GHO				IAmb	IAmb	21 14 30.0	
	comp=Z,19nm,1.4s						
KURK	**Kurchatov**	**45.60**	**306**	P	**P**	**21 14 13.8**	**+1.2**
KURK	**Kurchatov**	**45.60**	**306**	P	**P**	**21 14 13.2**	**+0.5**
MDM	**Murphy Dome**	**45.61**	**34**	P	**P**	**21 14 14.4**	**+1.8**
KURBB	**Kurchatov Arra**	**45.68**	**306**	P	**P**	**21 14 13.8**	**+0.6**
	comp=Z,18nm,0.8s,baz=80,slow=8.5,SNR=102						
WRH	**Wood River Hil**	**45.68**	**34**	P	**P**	**21 14 15.1**	**+2.0**
CCB	**Clear Creek Bu**	**45.80**	**34**	P	**P**	**21 14 16.2**	**+2.2**
POKR	**Poker Plat Res**	**45.94**	**33**	P	**P**	**21 14 18.2**	**+3.0**
POKR				IAmb	IAmb	21 14 31.7	
	comp=Z,7.9nm,0.8s						
SCM	**Sheep Creek Mo**	**46.17**	**38**	P	**P**	**21 14 19.2**	**+2.0**
SCM				pmax	pmax		
	comp=Z,25nm,1.4s						
SCM	**Sheep Creek Mo**	**46.17**	**38**	P	**P**	**21 14 19.1**	**+2.0**
SCM				IAmb	IAmb	21 14 25.3	
	comp=Z,25nm,1.4s						
IL31		**46.19**	**34**	P	**P**	**21 14 20.4**	**+3.4**
IL31				IAmb	IAmb	21 14 30.0	
	comp=Z,7.4nm,0.8s						
ILAR	**Eielson Array**	**46.19**	**34**	P	**P**	**21 14 18.6**	**+1.5**
	comp=Z,0.9nm,0.7s,baz=260,slow=6.6,SNR=8.1						
ILAR	**Eielson Array**	**46.19**	**34**	P	**P**	**21 14 20.0**	**+2.9**
ILAR	**Eielson Array**	**46.19**	**34**	P	**P**	**21 14 20.0**	**+2.9**
PHET	**Kaeng Krachan**	**47.02**	**248**	P	**P**	**21 14 26.4**	**+2.2**
BMAR	**Burnt Mountain**	**47.03**	**30**	P	**P**	**21 14 25.8**	**+2.1**
SHLS	**Shalkode**	**47.10**	**296**	*e*P	**P**	**21 14 21.8**	**-3.0**
	comp=Z,3.4nm,0.5s,baz=296						
SHLS	**Shalkode**	**47.10**	**296**	*e*P	**P**	**21 14 21.7**	**-3.0**
SHLS				pmax	pmax		
	comp=Z,3.0nm,0.5s						
TDK	**Taldyqorghan**	**47.24**	**299**	*e*P	**P**	**21 14 25.4**	**-0.2**
	comp=Z,13nm,0.7s,baz=298						
TDK	**Taldyqorghan**	**47.24**	**299**	*e*P	**P**	**21 14 25.4**	**-0.2**
TDK				pmax	pmax		
	comp=Z,13nm,0.7s						
UZB	**Uzynbulak**	**47.41**	**296**	*e*P	**P**	**21 14 26.7**	**-0.5**
	comp=Z,4.6nm,1.1s,baz=296						
UZB	**Uzynbulak**	**47.41**	**296**	*e*P	**P**	**21 14 26.7**	**-0.5**
UZB				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KPKS	**Kokpek**	**47.54**	**297**	*e*P	**P**	**21 14 28.1**	**-0.1**
	comp=Z,12nm,1.0s,baz=296						
KPKS	**Kokpek**	**47.54**	**297**	*e*P	**P**	**21 14 28.0**	**-0.1**
KPKS				pmax	pmax		
	comp=Z,12nm,1.0s						
HMT	**Hamilton**	**47.83**	**40**	P	**P**	**21 14 31.4**	**+1.3**
SATY	**Saty**	**47.87**	**296**	*e*P	**P**	**21 14 30.2**	**-0.5**
	baz=296						
SATY	**Saty**	**47.87**	**296**	*e*P	**P**	**21 14 30.2**	**-0.5**
MTKI	**Muara Teweh, K**	**48.35**	**220**	P	**P**	**21 14 34.7**	**+0.2**
	comp=Z,2µmcomp=Z,19nm,1.3s						
CHKK	**Chushkaly**	**48.57**	**298**	*e*P	**P**	**21 14 35.8**	**-0.3**
	baz=298						
CHKK	**Chushkaly**	**48.57**	**298**	*e*P	**P**	**21 14 35.7**	**-0.3**
BALM	**Baldy**	**48.65**	**39**	P	**P**	**21 14 38.3**	**+1.9**
BALM				IAmb	IAmb	21 14 44.0	
	comp=Z,15nm,1.4s						
KSM	**Kuching**	**48.75**	**227**	P	**P**	**21 14 39.1**	**+1.5**
KSM				IAmb	IAmb	21 14 39.8	
	comp=Z,11nm,0.9s						
MDOK	**Medeo**	**48.77**	**297**	*e*P	**P**	**21 14 37.4**	**-0.2**
	baz=297						
MDOK	**Medeo**	**48.77**	**297**	*e*P	**P**	**21 14 37.4**	**-0.2**
AAA	**Alma-Ata**	**48.84**	**297**	*e*P	**P**	**21 14 38.3**	**+0.2**
	comp=Z,5.2nm,0.6s,baz=297						
AAA	**Alma-Ata**	**48.84**	**297**	*e*P	**P**	**21 14 38.3**	**+0.2**
AAA				pmax	pmax		
	comp=Z,5.0nm,0.6s						
TNSS	**Tian-Shan**	**48.88**	**297**	*e*P	**P**	**21 14 39.3**	**+0.5**
	baz=296						
TNSS	**Tian-Shan**	**48.88**	**297**	*e*P	**P**	**21 14 39.3**	**+0.5**
KUU	**Kurty**	**49.00**	**298**	*e*P	**P**	**21 14 39.0**	**-0.3**
	comp=Z,8.0nm,0.6s,baz=298						
KUU	**Kurty**	**49.00**	**298**	*e*P	**P**	**21 14 38.9**	**-0.3**
KUU				pmax	pmax		
	comp=Z,8.0nm,0.6s						
TABL	**Table Mountain**	**49.34**	**39**	P	**P**	**21 14 40.0**	**-1.8**
BRZS	**Berezniki**	**49.47**	**307**	*e*P	**P**	**21 14 42.3**	**-0.4**
	baz=306						
BRZS	**Berezniki**	**49.47**	**307**	*e*P	**P**	**21 14 42.3**	**-0.4**
TKM2	**Tokmak 2**	**49.85**	**297**	P	**P**	**21 14 47.1**	**+1.1**
	SNR=25						
BVAR	**Borovoye Array**	**49.99**	**311**	P	**P**	**21 14 47.4**	**+0.8**
	comp=Z,3.5nm,0.6s,baz=45,slow=21,SNR=39						
BRVK	**Borovoye**	**50.04**	**311**	P	**P**	**21 14 48.0**	**+1.0**
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BRVK	**Borovoye**	**50.04**	**311**	P	**P**	**21 14 48.0**	**+1.0**
BRVK				IAmb	IAmb	21 14 48.4	
	comp=Z,6.2nm,0.8s						
BTLS	**Baital**	**50.15**	**300**	*e*P	**P**	**21 14 47.2**	**-0.8**
	baz=300						
BTLS	**Baital**	**50.15**	**300**	*e*P	**P**	**21 14 47.2**	**-0.8**
SGDS	**Sogindy**	**50.32**	**298**	*e*P	**P**	**21 14 48.4**	**-1.0**
	baz=298						
SGDS	**Sogindy**	**50.32**	**298**	*e*P	**P**	**21 14 48.3**	**-1.0**
KBK	**Karagaybulak**	**50.39**	**297**	P	**P**	**21 14 51.0**	**+1.0**
	SNR=28						
USP	**Ospenovka**	**50.47**	**298**	P	**P**	**21 14 51.2**	**+0.7**
	SNR=15						
AAK	**Ala-Archa**	**50.71**	**297**	P	**P**	**21 14 53.1**	**+0.7**
	comp=Z,3.2nm,0.5s,baz=120,slow=5.3,SNR=20						
AAK	**Ala-Archa**	**50.71**	**297**	P	**P**	**21 14 52.8**	**+0.4**
	SNR=5.8						
AAK	**Ala-Archa**	**50.71**	**297**	P	**P**	**21 14 53.0**	**+0.6**
KSH	**Kashi**	**50.87**	**293**	P	P	21 14 58.1	+4.5
KSH				sP	sP	21 15 07.4	+4.6
KSH				PP	**PP**	**21 16 53.3**	**+3.5**
KSH				S	**S**	**21 22 10.8**	**+2.2**
KSH				pmax	pmax		
	comp=Z,14nm,0.9s						
KSH				pmax	pmax		
	comp=Z,310nm,5.2s						
KSH				LR	LR		
	comp=Z,420nm,6.7s						
KSH				LR	LR		
	comp=Z,480nm,6.3s						
KSH				LR	LR		
	comp=Z,760nm,9.2s						
HYT	**Haines Junctio**	**51.01**	**38**	P	**P**	**21 14 56.8**	**+2.4**
HYT				IAmb	IAmb	21 15 13.8	
	comp=Z,9.8nm,1.0s						
INK	**Inuvik**	**51.08**	**28**	P	**P**	**21 14 56.1**	**+1.5**
	comp=Z,2.2nm,0.4s,baz=281,slow=6.4,SNR=14						
EKS2	**Erkin-Say**	**51.19**	**297**	P	**P**	**21 14 56.7**	**+0.7**
	SNR=12						
AML	**Almayashu**	**51.45**	**297**	P	**P**	**21 14 59.5**	**+1.2**
	SNR=12						
DZA	**Taraz**	**52.76**	**298**	*e*P	**P**	**21 15 07.9**	**+0.3**
	comp=Z,5.5nm,0.6s,baz=298						
DZA	**Taraz**	**52.76**	**298**	*e*P	**P**	**21 15 07.9**	**+0.3**
DZA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
KKAR	**Karatay Array**	**53.23**	**299**	P	**P**	**21 15 11.3**	**+0.2**
KKAR	**Karatay Array**	**53.23**	**299**	P	**P**	**21 15 11.2**	**+0.2**
KKAR	**Karatay Array**	**53.23**	**299**	IAmb	IAmb	21 15 11.9	
	comp=Z,5.7nm,0.8s						
COEN	**Coen**	**53.54**	**181**	P	**P**	**21 15 13.8**	**+0.4**

IUG	Iuzhnay	53.94	298	eP	P	21 15 16.4	0.0
	baz=298						
IUG	Iuzhnay	53.94	298	eP	P	21 15 16.4	0.0
SVE	Sverdlovsk	54.20	318	⇓eP	P	21 15 18.9	+1.1
SVE				pmax	pmax		
	comp=Z,20nm,0.7s						
SVE				MLR	MLR		
	comp=Z,869nm,14.0s						
PSI	Prapat	54.72	239	P	P	21 15 23.4	+1.1
	comp=Z,2.0nm,0.3s,baz=359,slow=4.9,SNR=4.2						
RPSI	Rantau Prapat	54.80	239	P	P	21 15 23.4	+0.6
NIL	Nilore	55.40	287	P	P	21 15 28.5	+1.5
NIL				pmax	pmax		
	comp=Z,33nm,1.1s						
NIL	Nilore	55.40	287	P	P	21 15 28.5	+1.5
ARU	Arti	55.41	318	P	P	21 15 27.5	+0.8
	comp=Z,2.9nm,0.7s,baz=66,slow=5.3,SNR=15						
ARU	Arti	55.41	318	d iP	P	21 15 27.1	+0.5
ARU						21 17 26.8	
ARU				S	S	21 23 12.5	+2.9
ARU				SS	SS	21 26 45.5	-8.3
ARU				pmax	pmax		
	comp=Z,20nm,1.2s						
ARU				MLR	MLR		
	comp=Z,619nm,13.0s						
ARU	Arti	55.41	318	P	P	21 15 27.4	+0.8
GSI	Gunungsitoli	56.73	239	P	P	21 15 37.1	+0.5
KLSI		56.95	228	P	P	21 15 39.1	+1.0
	comp=Z,5.5nm,1.8s						
KNRA	Kununurra	56.96	197	P	P	21 15 37.0	-1.1
EUNU	Eureka	57.13	9	IAmb	IAmb	21 15 48.4	
	comp=Z,5.0nm,0.7s						
ABKAR	Akbulak array	57.46	309	P	P	21 15 42.0	+0.6
ABKAR	Akbulak array	57.46	309	IAmb	IAmb	21 15 42.5	
	comp=Z,8.8nm,0.7s						
KBL	Kabul	58.04	290	P	P	21 15 45.8	-0.1
KBL				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KBL	Kabul	58.04	290	P	P	21 15 45.8	-0.1
KBL				IAmb	IAmb	21 15 55.0	
	comp=Z,9.5nm,0.8s						
AKTO	Aktyubinsk	58.09	311	P	P	21 15 46.7	+0.9
	comp=Z,4.3nm,0.7s,baz=70,slow=14,SNR=11						
KIRV	Kirov	59.05	322	ceP	P	21 15 52.7	+0.4
RES	Resolute Bay	59.43	15	P	P	21 15 55.4	+0.7
	comp=Z,3.8nm,0.6s,baz=308,slow=6.9,SNR=23						
WB0	Warramunga Arr	59.94	190	P	P	21 15 58.5	-0.3
FITZ	Fitzroy Crossi	60.05	200	P	P	21 15 59.9	+0.3
FITZ				IAmb	IAmb	21 16 10.2	
	comp=Z,17nm,1.1s						
WR0	Warramunga Arr	60.11	190	P	P	21 15 59.6	-0.3
WRAB	Tennant Creek	60.11	190	P	P	21 15 59.3	-0.7
WRAB				pmax	pmax		
	comp=Z,10.0nm,0.8s						
WRAB	Tennant Creek	60.11	190	P	P	21 15 59.3	-0.7
WRAB				IAmb	IAmb	21 16 09.0	
	comp=Z,9.7nm,0.8s						
WB2	Warramunga Arr	60.12	190	P	P	21 16 00.0	0.0
WRA	Warramunga Arr	60.12	190	P	P	21 15 59.5	-0.6
	comp=Z,4.8nm,0.6s,baz=8.3,slow=6.9,SNR=34						
WRA	Warramunga Arr	60.12	190	P	P	21 15 59.6	-0.5
WRA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
WRA	Warramunga Arr	60.12	190	P	P	21 15 59.6	-0.5
YKA	Yellowknife Ar	60.50	31	P	P	21 16 03.2	+1.0
	comp=Z,0.7nm,0.6s,baz=304,slow=5.7,SNR=12						
TMCR	Tamitsa	61.10	331	eP	P	21 16 06.0	-0.2
TMCR				pmax	pmax		
	comp=Z,20nm,0.8s						
ARCES	ARCESS Array B	61.96	339	P	P	21 16 12.1	+0.1
	comp=Z,5.5nm,0.9s,baz=28,slow=5.6,SNR=7.4						
ARCES				LR	LR	21 46 56.4	
	comp=Z,163nm,19.1s,baz=245,slow=40						
ARCES	ARCESS Array B	61.96	339	P	P	21 16 12.6	+0.6
ARCES				pmax	pmax		
	comp=Z,24nm,1.4s						
ARCES	ARCESS Array B	61.96	339	P	P	21 16 12.6	+0.6
KLMR	Klimovskoe	62.30	328	eP	P	21 16 13.9	-0.5
KLMR				e		21 18 31.8	
KLMR				pmax	pmax		
	comp=Z,12nm,1.1s						
KLMR	Klimovskoe	62.30	328	eP	P	21 16 13.9	-0.5
KLMR				AMP		21 16 15.0	
	comp=Z,12nm,1.1s						
KLMR				ePP	PP	21 18 31.9	+0.8
HRA	Herat	62.97	293	P	P	21 16 20.2	+0.6
HRA				IAmb	IAmb	21 16 21.6	
	comp=Z,6.5nm,1.1s						
DAG	Danmarks Havn	63.10	355	i P	P	21 16 20.0	+0.5
	comp=Z,4.6nm,0.9s						
DAG				i		21 16 29.0	
DAG	Danmarks Havn	63.10	355	i P	P	21 16 20.0	+0.5
DAG				i		21 16 29.0	
DAG				pmax	pmax		
	comp=Z,5.0nm,0.9s						
DAG	Danmarks Havn	63.10	355	i P	P	21 16 20.0	+0.5
DAG				IAmb	IAmb	21 16 20.9	
	comp=Z,4.6nm,0.9s						
DAG				i		21 16 29.1	
ASAR	Alice Springs	63.84	190	P	P	21 16 25.2	+0.2
	comp=Z,2.1nm,0.6s,baz=8.1,slow=5.6,SNR=24						
GEYT	Alibeck	63.99	299	P	P	21 16 26.6	+0.5
	comp=Z,4.5nm,0.8s,baz=35,slow=3.6,SNR=9.1						
GEYT	Alibeck	63.99	299	P	P	21 16 26.9	+0.8
MOS	Moscow	66.01	323	eP	P	21 16 38.9	+0.1
VRH	Novokhopyorsk	66.64	318	eP	P	21 16 41.9	-1.1
VRH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
OBN	Obninsk	66.86	323	eP	P	21 16 44.9	+0.6
OBN				e		21 17 13.3	
OBN				e		21 19 11.3	
OBN				ePPP	PPP	21 20 45.7	
OBN				pmax	pmax		
	comp=Z,37nm,2.5s						
FINES	FINESS Array B	67.11	332	P	P	21 16 46.5	+0.8
	comp=Z,9.9nm,0.7s,baz=49,slow=6.7,SNR=39						
LPSR	Galich'ya Gora	67.24	320	eP	P	21 16 45.2	-1.5
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
SUMG	Summit	67.85	1	i P	P	21 16 52.0	+1.2
	comp=Z,12nm,0.7s						
SUMG	Summit	67.85	1	P	P	21 16 52.3	+1.5
SUMG				pmax	pmax		
	comp=Z,13nm,1.0s						
SUMG	Summit	67.85	1	P	P	21 16 52.3	+1.5
SUMG				IAmb	IAmb	21 17 03.4	
	comp=Z,13nm,1.0s						
SUMG	Summit	67.85	1	i P	P	21 16 52.0	+1.2
SUMG				IAmb	IAmb	21 16 53.1	
	comp=Z,12nm,0.7s						
VSR	Storozhevoye	67.94	319	eP	P	21 16 50.7	-0.5
VSR				pmax	pmax		
	comp=Z,10.0nm,1.4s						
VORD	Divnogorie	68.03	319	eP	P	21 16 51.8	+0.1
VORD				pmax	pmax		
	comp=Z,9.0nm,1.0s						
GOF	Gofitskoye	69.50	312	⇑eP	P	21 17 02.8	+1.8
ZEI	Tsey	70.34	310	eP	P	21 17 06.2	-0.3
ZEI				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KIV	Kislovodsk	70.36	311	⇓P	P	21 17 08.9	+2.5
KIV	Kislovodsk	70.36	311	eP	P	21 17 08.3	+1.9
KIV				pmax	pmax		
	comp=Z,110nm,1.0s						
KIV				MLR	MLR		
	comp=Z,679nm,18.0s						
KIV	Kislovodsk	70.36	311	P	P	21 17 07.9	+1.5
KBZ	Khabaz	70.37	311	P	P	21 17 07.8	+1.4
	comp=Z,13nm,0.9s,baz=36,slow=4.2,SNR=23						
KBZ	Khabaz	70.37	311	ceP	P	21 17 07.9	+1.6
KBZ				pmax	pmax		
	comp=Z,17nm,0.9s						
IDID	Didziasalis	71.04	327	eP	P	21 17 11.7	+1.5
MNK	Minsk	71.11	326	i P	P	21 17 06.7	-4.1
	comp=E,4.0nm,1.4s						
MNK				i P	P	21 17 06.7	-4.1
	comp=N,19nm,1.4s						
MNK				i P	P	21 17 06.7	-4.1
	comp=Z,25nm,1.0s						
MNK				i PcP	PcP	21 17 26.7	-4.1
MNK				i PP	PP	21 19 43.8	-4.1
MNK				i PPP	PPP	21 21 26.7	
MNK				i S	S	21 26 21.0	-4.7
MNK				i ScS	ScS	21 27 11.3	-2.0
MNK				i SS	SS	21 30 58.3	0.0
MNK				i SSS	SSS	21 34 17.2	
MNK				i LQ	LQ	21 43 24.8	
MNK				i LR	LR	21 48 49.4	
MNK				i LRM	MLR	21 51 05.9	
	comp=E,32nm,19.5s						
MNK				i LRM	MLR	21 51 23.8	
	comp=Z,189nm,12.4s						
MNK				i LRM	MLR	21 51 25.0	
	comp=N,190nm,11.8s						
ISAL	Salakas	71.12	328	eP	P	21 17 12.0	+1.3
UPP	Uppsala	71.16	334	eP	P	21 17 11.6	+0.7
IIGN	Ignalina	71.23	328	eP	P	21 17 12.7	+1.3
ICESG	Greenland Ices	71.34	1	i P	P	21 17 13.8	+1.5
AKH	Akhalkalaki	71.40	309	⇑P	P	21 17 14.9	+2.0
STKA	Stephens Creek	71.40	182	P	P	21 17 13.1	+0.5
	comp=N,1.9nm,0.6s,baz=338,slow=7.7,SNR=8.2						
STKA				LR	LR	21 53 51.3	
	comp=N,51nm,18.0s,baz=19,slow=40						
LHV	Little Huntoon	71.91	55	P	P	21 17 18.3	+2.5
LHV				IAmb	IAmb	21 17 28.9	
	comp=Z,9.6nm,1.1s						
NVAR	Mina Array Bea	71.93	55	P	P	21 17 16.2	-0.1
	comp=Z,0.5nm,0.4s,baz=49,slow=28,SNR=5.1						
NC405	NORSAR Array S	72.03	338	P	P	21 17 17.1	+0.9
PABE	Paberze	72.04	329	eP	P	21 17 17.6	+1.4
NC303	NORSAR Array S	72.04	338	P	P	21 17 17.1	+0.9
NB201	NORSAR Array S	72.21	338	P	P	21 17 18.0	+0.7
NB2	NORSAR Subarra	72.24	338	P	P	21 17 17.8	+0.4
	comp=Z,1.5nm,0.5s,baz=36,slow=6.2						
NOA	NORSAR Array B	72.24	338	P	P	21 17 17.4	0.0
	comp=Z,0.5nm,0.5s,baz=53,slow=7.0,SNR=12						
NOA				LR	LR	21 53 16.8	
	comp=Z,126nm,18.1s,baz=25,slow=39						
ELK	Elko	72.42	51	P	P	21 17 20.9	+1.7
	comp=Z,0.6nm,0.6s,baz=297,slow=9.1,SNR=2.1						
AKASG	Malin Array Be	73.11	323	P	P	21 17 23.2	+0.5
	comp=Z,4.9nm,0.6s,baz=45,slow=6.0,SNR=24						
AKASG	Malin Array Be	73.11	323	P	P	21 17 23.5	+0.8
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.9s						
AKASG	Malin Array Be	73.11	323	P	P	21 17 23.5	+0.8
AKBB	Malin Array Si	73.11	323	IAmb	IAmb	21 17 23.7	
	comp=Z,8.7nm,0.9s						
FRB	Frobisher Bay	73.62	14	P	P	21 17 25.9	+0.4
	comp=Z,4.6nm,0.7s,baz=346,slow=5.8,SNR=9.5						
TPNV	Topopah Spring	74.12	55	P	P	21 17 30.8	+1.6
TPNV				pmax	pmax		
	comp=Z,4.0nm,0.9s						
TPNV	Topopah Spring	74.12	55	P	P	21 17 30.8	+1.6
PDAR	Pinedale Array	74.47	47	P	P	21 17 32.6	+1.4
	comp=Z,0.7nm,0.6s,baz=228,slow=1.7,SNR=7.4						
SHPR	Sheep Range	75.09	55	P	P	21 17 35.7	+1.0
SORM	Soroca	75.29	321	⇓P	P	21 17 36.1	+0.6
KWP	Kalwaria Pacla	76.82	325	eP	P	21 17 46.1	+1.9
BUR08	Bucovina Ar. S	77.14	322	P	P	21 17 47.4	+1.2
BUR08				IAmb	IAmb	21 17 48.7	
	comp=Z,9.0nm,1.1s						
BURAR	Bucovina Array	77.15	322	⇓P	P	21 17 47.3	+1.1
BURAR	Bucovina Array	77.15	322	P	P	21 17 47.3	+1.1
TESR	Tescani	77.25	321	⇑P	P	21 17 47.6	+0.9
CFR	Carcaliu	77.46	319	⇓P	P	21 17 48.9	+1.0
KOLS	Kolonicke sedl	77.53	325	eP	P	21 17 49.8	+1.6
KOLS				pmax	pmax		
	comp=Z,7.0nm,1.3s						
KOLS	Kolonicke sedl	77.53	325	eP	P	21 17 49.8	+1.6
OJC	Ojcow	77.64	327	eP	P	21 17 49.9	+1.2
OJC	Ojcow	77.64	327	P	P	21 17 49.6	+0.8
OJC				pmax	pmax		
	comp=Z,13nm,0.9s						
OJC	Ojcow	77.64	327	P	P	21 17 49.6	+0.8
OJC				IAmb	IAmb	21 17 51.2	
	comp=Z,13nm,0.9s						
VRI	Vrincioaia	77.67	320	⇓P	P	21 17 50.7	+1.6
UZH	Uzhgorod	77.75	325	eP	P	21 17 46.8	-2.6
UZH				e		21 17 53.8	
UZH				e		21 17 55.7	
CRVS	Cervenica-Dubn	77.91	325	eP	P	21 17 51.8	+1.4
CRVS	Cervenica-Dubn	77.91	325	eP	P	21 17 51.8	+1.4
TLBR	Topalu	77.95	319	⇓P	P	21 17 52.2	+1.6
OZUR		77.97	321	⇑P	P	21 17 52.6	+1.9
BRTR	Keskin Array B	78.25	312	P	P	21 17 53.0	+0.4
	comp=Z,1.8nm,0.8s,baz=67,slow=4.7,SNR=5.1						
BRTR	Keskin Array B	78.25	312	P	P	21 17 53.0	+0.4
DOPR	Dopca	78.25	321	⇓P	P	21 17 54.1	+1.8
ISR	Istrita	78.30	320	⇓P	P	21 17 53.9	+1.3
MLR	Muntele Rosu	78.33	320	⇑P	P	21 17 54.0	+1.2
ICOR	Ion Corvin	78.38	319	⇑P	P	21 17 54.6	+1.6
KSP	Ksiaz	78.59	329	eP	P	21 17 55.8	+1.7
LANS	Liptovska Anna	78.59	326	eP	P	21 17 58.0	+3.9
LANS				pmax	pmax		
	comp=Z,5.0nm,0.9s						
LANS	Liptovska Anna	78.59	326	eP	P	21 17 58.0	+3.9
VOIR		78.80	321	⇑P	P	21 17 57.3	+1.9
CHVC	Chvalec	78.88	329	eP	P	21 17 56.5	+0.8
MORC	Moravsky Berou	78.92	328	⇑P	P	21 17 57.5	+1.6
MORC	Moravsky Berou	78.92	328	eP	P	21 17 57.3	+1.4
MORC	Moravsky Berou	78.92	328	P	P	21 17 56.9	+1.0
MORC				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MORC	Moravsky Berou	78.92	328	P	P	21 17 56.9	+1.0
MORC				IAmb	IAmb	21 17 57.9	
	comp=Z,9.0nm,0.9s						
DRGR		78.92	323	⇑P	P	21 17 56.2	+0.2
DPC	Dobruska-Polom	78.96	329	eP	P	21 17 56.6	+0.4
DPC	Dobruska-Polom	78.96	329	eP	P	21 17 56.6	+0.4
VYHS	Vyhne	79.36	326	eP	P	21 18 00.2	+1.9
VYHS	Vyhne	79.36	326	eP	P	21 18 00.2	+1.9
CLL	Collm	79.49	331	i P	P	21 17 59.5	+0.6
	comp=Z,7.0nm,0.9s						
PVCC	Panska Ves	79.51	330	eP	P	21 18 00.5	+1.4
PVCC	Panska Ves	79.51	330	eP	P	21 18 00.5	+1.4
JAVC	Velka Javorina	79.57	327	eP	P	21 18 01.9	+2.4
VRAC	Vranov	79.67	328	⇑P	P	21 18 01.3	+1.3
VRAC	Vranov	79.67	328	eP	P	21 18 01.6	+1.6
GZR	Gura Zlata	79.92	322	⇑P	P	21 18 02.4	+0.9
KRUC	Moravsky	79.94	328	eP	P	21 18 02.9	+1.4
PRU	Pruhonice	79.95	329	eP	P	21 18 02.9	+1.4
PRU	Pruhonice	79.95	329	eP	P	21 18 02.9	+1.4
TREC	Trest	80.13	328	eP	P	21 18 04.0	+1.5
TREC	Trest	80.13	328	eP	P	21 18 04.0	+1.5
BZS	Buzias	80.30	323	⇑P	P	21 18 04.4	+1.0
PBCC	Pribram	80.41	330	eP	P	21 18 05.2	+1.2
PBCC				ex	x	21 18 10.7	
HERR	Herculane	80.47	322	⇓P	P	21 18 04.9	+0.5
PLVB	Pleven	80.50	320	⇑P	P	21 18 05.6	+1.0
CKRC	Cesky Krumlov	80.98	329	ex	x	21 18 13.4	
KHC	Kasperske Hory	81.02	329	eP	P	21 18 08.5	+1.2
KHC	Kasperske Hory	81.02	329	eP	P	21 18 08.5	+1.2
KHC				epP	PcP	21 18 13.2	-0.5
KHC	Kasperske Hory	81.02	329	IAmb	IAmb	21 18 09.6	
	comp=Z,7.2nm,1.0s						
CONA	Conrad Observa	81.05	327	eP	P	21 18 08.7	+1.1
	comp=Z,8.5nm,1.2s						
MORH	Mrgy, Hungar	81.19	325	⇑P	P	21 18 08.3	+0.1
GERES	GERESS Array B	81.20	329	P	P	21 18 09.2	+0.9
	comp=Z,2.4nm,0.8s,baz=35,slow=5.6,SNR=12						
GERES				LR	LR	22 00 15.3	
	comp=Z,181nm,18.2s,baz=12,slow=40						
GERES	GERESS Array B	81.20	329	P	P	21 18 09.0	+0.7
GRF	Grafenberg Arr	81.46	331	eP	P	21 18 11.5	+1.9
	comp=Z,7.0nm,1.0s,baz=33,slow=4.2						
FRGS	Fruska Gora	81.48	324	⇓P	P	21 18 10.9	+1.1
VTS	Vitosha	81.76	320	⇓P	P	21 18 13.0	+1.6
VTS	Vitosha	81.76	320	P	P	21 18 12.9	+1.4
VTS				pmax	pmax		
	comp=Z,8.0nm,0.8s						
VTS	Vitosha	81.76	320	P	P	21 18 12.9	+1.4
VTS				IAmb	IAmb	21 18 14.0	
	comp=Z,8.3nm,0.8s						
SOCY	Socotra	82.02	279	P	P	21 18 12.1	-1.1
SOCY				IAmb	IAmb	21 18 12.8	
	comp=Z,14nm,1.0s						
SOKA	Soboth	82.39	327	i P	P	21 18 15.8	+1.2
	comp=Z,10.0nm,0.8s,SNR=15						
OBKA	Obir	82.72	327	eP	P	21 18 16.8	+0.4
	comp=Z,3.4nm,0.7s,SNR=5.2						
KBA	Koelnbreinsper	82.76	328	i P	P	21 18 18.1	+1.4
	comp=Z,5.3nm,0.8s						
MYKA	Terra Mystica	83.00	328	i P	P	21 18 19.0	+1.2
	comp=Z,3.3nm,0.7s						
WATA	Walderalm	83.26	329	eP	P	21 18 20.0	+0.8
	comp=Z,7.5nm,1.2s						
WTTA	Wattenberg	83.29	329	eP	P	21 18 20.3	+0.9
	comp=Z,4.5nm,1.1s						
ABTA	Abfaltersbach	83.36	329	i P	P	21 18 20.7	+1.0
	comp=Z,1.9nm,0.9s						
MOTA	Moosalm	83.43	330	eP	P	21 18 21.2	+1.0
	comp=Z,12nm,1.1s						
RETA	Reutte	83.45	330	eP	P	21 18 21.2	+1.1
	comp=Z,9.6nm,1.0s						
SQTA	Sankt Quirin	83.49	330	eP	P	21 18 21.5	+1.1
	comp=Z,7.0nm,1.2s						
PDG	Podgorica	83.83	322	⇑P	P	21 18 22.7	+0.7
FETA	Feichten	83.84	330	eP	P	21 18 23.2	+0.9
	comp=Z,6.8nm,1.1s						
DAVA	Damuels	83.95	330	i P	P	21 18 23.8	+1.1
	comp=Z,8.3nm,0.7s						
TUE	Stuetta	84.83	330	IAmb	IAmb	21 18 38.2	
	comp=Z,6.1nm,0.8s						
TXAR	Lajitas Array	87.05	54	P	P	21 18 39.8	+1.4
	comp=Z,2.1nm,0.9s,baz=293,slow=4.3,SNR=9.5						
ESDC	Sonseca Array	95.48	335	LR	LR	22 07 54.9	
	comp=Z,103nm,18.6s,baz=355,slow=39						
KMBO	Kilima Mbogo	103.25	280	i P	Pdif	21 19 53.2	+0.3
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.4s						

IDC ***20*** *21:07:16.1±0.8, 50°.11S×114°.23E, h0^{km}, mb4.4/7, mb1 4.5/7, mb1mx4.1/31, mbtmp4.4/7, MS3.8/11, Ms1 3.8/11, ms1mx3.7/23, Error ellipse: s-maj=32.4km s-min=20.5km az=132.0*

NEIC ***20*** *21:07:17.6±1.8, 50°.10S±0°.08×114°.2E±0°.1, h10^{km}±1^{km}, mb4.7/19, Error ellipse: s-maj=20.6km s-min=5.2km az=227.0*

GCMT ***20*** *21:07:18.5±0.3, 50°.03S±0°.02×114°.05E±0°.04, h12^{km}, MW4.8/73, Moment Tensor Solution.   s11,c14;   s73,c98; Duration: 0   Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.58±.07; M$_{\theta\theta}$1.75±.06; M$_{\phi\phi}$-1.17±.07; M$_{r\theta}$0.84±.21; M$_{\theta\phi}$0.64±.06; M$_{\phi r}$-0.40±.21;   Best double couple: M$_0$1.87500×10^{16} NP1:ϕ_s35.00000°, δ56.00000°, λ-168.00000°.   NP2: ϕ_s298.00000°, δ80.00000°, λ-35.00000°.   Principal axes: T 2.0960, Plg16.0000°, Azm351.0000°; N -0.4410, Plg54.0000°, Azm104.0000°; P -1.6540, Plg31.0000°, Azm251.0000°;   nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 20 21:07:18.4±0.7**, 50°.1S**±0°.1×**114°.2E**±0°.1**, h15^{km}, n43, σ1^{s}.01**/31**, mb4.7**/17**, MS3.8**/10**, 1C, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W2	Cape Leeuwin H	15.19	360	T	T	21 26 18.5	
	baz=179,slow=74,SNR=74						
H01W1	Cape Leeuwin H	15.20	360	T	T	21 26 21.0	
	baz=179,slow=74,SNR=67						
H01W3	Cape Leeuwin H	15.21	360	T	T	21 26 19.8	
	baz=179,slow=74,SNR=70						
NWAO	Narrogin (SRO)	17.31	9	LR	LR	21 16 16.2	
	comp=Z,842nm,21.1s,baz=190,slow=31						
NWAO	Narrogin (SRO)	17.31	9		P	21 11 20.0	-0.7
MORW	Morawa	21.05	5	P	P	21 12 01.0	-0.8
MORW				IAmb	IAmb	21 12 13.0	
	comp=Z,50nm,1.2s						
FORT	Forrest	21.94	34	P	P	21 12 13.3	+2.1
FORT				IAmb	IAmb	21 12 20.5	
	comp=Z,29nm,1.1s						
BBOO	Buckleboo	23.68	51	P	P	21 12 28.6	-0.8
TOO	Toolangi	25.63	73	P	P	21 12 50.0	+2.8
TOO				IAmb	IAmb	21 12 58.0	
	comp=Z,11nm,0.9s						
STKA	Stephens Creek	27.33	59	P	P	21 13 02.6	+0.1
	comp=Z,4.7nm,0.9s,baz=182,slow=6.8,SNR=6.5						
STKA				LR	LR	21 21 48.3	
	comp=Z,213nm,21.8s,baz=212,slow=32						
STKA	Stephens Creek	27.33	59	P	P	21 13 02.8	+0.3
ASAR	Alice Springs	30.56	38	P	P	21 13 31.0	-0.3
	comp=Z,5.0nm,0.9s,baz=210,slow=8.1,SNR=27						
ASAR				LR	LR	21 23 58.7	
	comp=Z,106nm,20.9s,baz=202,slow=33						
ASAR	Alice Springs	30.56	38	P	P	21 13 31.4	+0.2
VNDA	Vanda	32.75	163	LR	LR	21 26 31.8	
	comp=Z,373nm,18.1s,baz=314,slow=35						
VNDA	Vanda	32.75	163	P	P	21 13 50.5	+0.5
VNDA				IAmb	IAmb	21 13 53.2	
	comp=Z,9.0nm,1.2s						
FITZ	Fitzroy Crossi	33.23	20	P	P	21 13 54.8	+0.1
FITZ				IAmb	IAmb	21 13 57.1	
	comp=Z,13nm,1.0s						
WRA	Warramunga Arr	34.10	35	P	P	21 14 01.9	-0.4
	comp=Z,9.0nm,0.8s,baz=204,slow=8.8,SNR=22						
WRA				LR	LR	21 27 04.4	
	comp=Z,126nm,21.1s,baz=180,slow=35						
WRA	Warramunga Arr	34.10	35	P	P	21 14 01.0	-1.3
WB2	Warramunga Arr	34.10	35	P	P	21 14 01.5	-0.9
WB2				IAmb	IAmb	21 14 02.8	
	comp=Z,14nm,0.9s						
WR0	Warramunga Arr	34.16	36	P	P	21 14 02.7	-0.2
WR0				IAmb	IAmb	21 14 03.7	
	comp=Z,12nm,1.1s						
WB0	Warramunga Arr	34.28	35	P	P	21 14 03.4	-0.5
WB0				IAmb	IAmb	21 14 04.2	
	comp=Z,12nm,0.9s						
RPZ	Rata Peaks	38.56	103	P	P	21 14 38.2	-2.0
RPZ				IAmb	IAmb	21 14 39.6	
	comp=Z,31nm,1.3s						
SYO	Syowa Base	39.16	213	⇑epP	pP	21 14 48.8	+0.5
BSWZ	Blackbirch Sta	41.38	102	P	P	21 15 04.3	+0.7
MSWZ	Moikau Station	42.41	103	P	P	21 15 10.1	-1.9
BKZ	Black Stump Fm	44.46	101	P	P	21 15 29.3	+0.6
URZ	Urewera	45.38	100	P	P	21 15 35.1	-0.8
	comp=Z,10nm,0.9s,baz=357,slow=3.1,SNR=5.7						
URZ	Urewera	45.38	100	P	P	21 15 36.5	+0.5
DZM	Mont Dzumac	49.36	75	P	P	21 16 07.0	-0.2
DZM				IAmb	IAmb	21 16 25.9	
	comp=Z,11nm,1.0s						
SNAA	Sanae	50.71	201	P	P	21 16 16.9	+0.1
	comp=Z,1.6nm,0.7s,baz=157,slow=15,SNR=3.4						
SNAA	Sanae	50.71	201	IAmb	IAmb	21 16 24.7	
	comp=Z,22nm,1.4s						
SBUM	Sibu	52.37	358	P	P	21 16 29.8	+0.1
BOSA	Boshof	67.96	252	P	P	21 18 17.1	+0.3
	comp=Z,3.7nm,1.0s,baz=165,slow=0.5,SNR=3.7						
BOSA				LR	LR	21 41 43.8	
	comp=Z,68nm,20.4s,baz=167,slow=30						
BOSA	Boshof	67.96	252	IAmb	IAmb	21 18 22.1	
	comp=Z,13nm,1.4s						
CMAR	Chiang Mai Arr	69.57	345	P	P	21 18 26.8	+0.2
	comp=Z,1.4nm,0.8s,baz=190,slow=6.0,SNR=11						
CMAR				LR	LR	21 47 54.3	
	comp=Z,49nm,19.1s,baz=206,slow=35						
KMBO	Kilima Mbogo	80.75	279	LR	LR	21 47 30.3	
	comp=Z,41nm,19.9s,baz=91,slow=30						
JNU	Nakatsue	84.17	14	LR	LR	21 56 23.8	
	comp=Z,63nm,21.3s,baz=36,slow=35						
KSRS	Korea Array	88.02	11	LR	LR	22 00 24.1	
	comp=Z,16nm,19.8s,baz=242,slow=36						
PLCA	Paso Flores	89.45	176	LR	LR	21 56 43.4	
	comp=Z,122nm,21.3s,baz=179,slow=33						
ILAR	Eielson Array	137.24	39	PKP	PKiKP	21 26 40.4	-1.1
	comp=Z,0.2nm,0.7s,baz=267,slow=3.3,SNR=2.2						
TXAR	Lajitas Array	144.78	112	PKP	PKPdf	21 26 53.9	-0.6
	comp=Z,2.7nm,0.9s,baz=201,slow=6.6,SNR=11						
PDAR	Pinedale Array	149.35	87	PKPbc	PKPbc	21 27 06.5	+0.2
	comp=Z,0.9nm,1.0s,baz=191,slow=1.5,SNR=6.8						
YKA	Yellowknife Ar	151.00	46	PKPbc	PKPbc	21 27 09.2	0.0
	comp=Z,2.7nm,0.8s,baz=281,slow=1.4,SNR=34						

IDC ***20*** *21:20:55.4±54.0, 23°.50S×177°.07W, h0^{km}, mb3.9/3, mb1 4.1/3, mb1mx3.8/20, mbtmp3.9/3, Error ellipse: s-maj=996.9km s-min=170.1km az=87.0*

NEIC ***20*** *21:22:07.4±2.0, 23°.8S±0°.1×179°.5E±0°.1, h528^{km}±15^{km}, mb4.4/23, Error ellipse: s-maj=21.4km s-min=16.4km az=179.0*

ISC 20 21:22:07.4±1.0**, 23°.8S**±0°.1×**179°.6E**±0°.1**, h537^{km}, n32, σ1^{s}.29**/33**, mb4.2**/10**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	5.89	158	P	P	21 23 45.8	+1.5
RAO				S	S	21 25 00.5	-3.0
MSVF	Nonsavu	6.18	346	P	P	21 23 46.0	-1.4
OUZ	Omahuta	12.55	203	P	P	21 24 52.3	+0.9
MXZ	Matakaoa Point	13.79	184	P	P	21 25 05.8	+1.5
BKZ	Black Stump Fm	15.57	189	P	P	21 25 21.4	-1.4

BKZ				IAmb	IAmb	21 25 23.9	
	comp=Z,9.3nm,1.2s						
QRZ	Quartz Range	18.02	198	P	P	21 25 47.0	+1.1
NNZ	Nelson	18.16	195	P	P	21 25 47.4	+0.2
TUWZ	Tuamarina	18.24	194	P	P	21 25 47.7	-0.1
BSWZ	Blackbirch Sta	18.52	194	P	P	21 25 50.9	+0.5
THZ	Tophouse	18.80	196	P	P	21 25 53.2	+0.2
THZ				IAmb	IAmb	21 26 08.0	
	comp=Z,9.5nm,1.1s						
RAR	Rarotonga	19.21	86	P	P	21 25 58.3	+1.3
KHZ	Kahutara	19.27	194	P	P	21 25 57.0	-0.2
KHZ				IAmb	IAmb	21 26 06.4	
	comp=Z,15nm,1.2s						
LTZ	Lake Taylor	19.91	196	P	P	21 26 02.8	-0.3
LTZ				IAmb	IAmb	21 26 04.2	
	comp=Z,12nm,1.1s						
OXZ	Oxford	20.48	196	P	P	21 26 08.5	+0.3
OXZ				IAmb	IAmb	21 26 09.1	
	comp=Z,6.8nm,0.7s						
MQZ	McQueen's Vall	20.69	194	P	P	21 26 10.1	-0.1
RPZ	Rata Peaks	21.10	197	P	P	21 26 16.7	+2.8
RPZ				IAmb	IAmb	21 26 32.2	
	comp=Z,18nm,1.2s						
FOZ	Fox Glacier	21.30	200	P	P	21 26 15.8	+0.2
FOZ				IAmb	IAmb	21 26 16.0	
	comp=Z,5.9nm,0.9s						
MLZ	Mavora Lakes	23.48	201	P	P	21 26 36.7	+1.5
MLZ				IAmb	IAmb	21 26 47.0	
	comp=Z,5.5nm,1.0s						
DCZ	Deep Cove	23.89	202	P	P	21 26 38.9	+0.2
DCZ				IAmb	IAmb	21 26 48.4	
	comp=Z,12nm,1.0s						
WHZ	Wether Hill Ro	24.01	200	P	P	21 26 40.8	+1.0
WHZ				IAmb	IAmb	21 26 55.0	
	comp=Z,20nm,1.1s						
PYZ	Puysegur Point	24.66	202	P	P	21 26 43.2	-2.4
TOO	Toolangi	32.22	237	P	P	21 27 50.0	-1.6
STKA	Stephens Creek	34.44	248	P	P	21 28 09.3	-1.0
	comp=Z,0.5nm,0.4s,baz=56,slow=7.3,SNR=3.0						
STKA	Stephens Creek	34.44	248	P	P	21 28 09.7	-0.6
BBOO	Buckleboo	39.17	247	P	P	21 28 48.9	-0.3
ASAR	Alice Springs	41.71	261	P	P	21 29 11.2	+1.6
	comp=Z,1.4nm,0.8s,baz=99,slow=7.9,SNR=13						
WR0	Warramunga Arr	41.88	266	P	P	21 29 10.8	-0.2
WB2	Warramunga Arr	42.05	266	P	P	21 29 13.3	+1.0
WB0	Warramunga Arr	42.06	266	P	P	21 29 13.1	+0.7
WB0				IAmb	IAmb	21 29 18.3	
	comp=Z,5.3nm,1.1s						
WRA	Warramunga Arr	42.06	266	P	P	21 29 13.5	+1.0
	comp=Z,1.6nm,0.6s,baz=103,slow=8.2,SNR=27						
WRA	Warramunga Arr	42.06	266	P	P	21 29 13.5	+1.0
FORT	Forrest	46.03	250	P	P	21 29 43.8	+0.9
FORT				IAmb	IAmb	21 29 45.1	
	comp=Z,10nm,0.8s						

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*IDC **20** 21:31:57.0±1.0, 39°.40N×144°.10E, h0^{km}, mb3.6/3, mb1 3.7/3, mb1mx3.4/31, mbtmp3.6/3, Error ellipse: s-maj=17.5km s-min=12.9km az=91.0*

*JMA **20** 21:31:58.8±0.1, 39°.38N×143°.83E, h23^{km}, M3.7*

*NIED **20** 21:31:58.8, 39°.38N×143°.83E, h23^{km}, MW3.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}1.75; $M_{\theta\theta}$0.53; $M_{\phi\phi}$-2.28; $M_{r\theta}$0.20; $M_{\theta\phi}$-0.23; $M_{\phi r}$0.90; Fault plane solution: $M_0$2.23000×10^{14} NP1:ϕ_s9.00000°, δ57.00000°, λ96.00000°. NP2:ϕ_s179.00000°, δ33.00000°, λ81.00000°.*

ISC 20 21:31:59.6±1.3, **39°.47N**±0°.07×**143°.68E**±0°.09, **h11**^{km}, **n23**, σ1§**20**/23, **mb3.6**/3, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MIYJ	Miyakonagasawa	1.44	275	P	Pn	21 32 25.8	+0.1
JTH	Tanohata	1.48	289	P	Pn	21 32 26.5	+0.3
OFUJ	Ofunato	1.61	257	P	Pn	21 32 27.8	-0.2
OFUJ				*e*S	Sn	21 32 48.7	0.0
JOM	Ohasama	1.85	271	P	Pn	21 32 31.8	+0.5
JANG	Nango	1.90	299	P	Pn	21 32 32.5	+0.6
JMK	Ichinoseki	1.98	256	P	Pn	21 32 33.3	+0.2
JYK	Kaneyama	2.64	259	P	Pn	21 32 43.0	+0.9
JYK				*e*S	Sn	21 33 15.5	+1.4
JNBK	Urakawa-nobuka	2.90	346	P	Pb	21 32 48.6	-2.7
JCH	Churui	3.15	356	P	Pn	21 32 50.8	+1.6
JFT	Otama	3.27	234	P	Pn	21 32 51.0	+0.2
JOMM	Oshimamatsumae	3.47	307	P	Pn	21 32 54.7	+1.1
JAW	Awa shima	3.60	255	P	Pn	21 32 56.8	+1.5
JAK	Akkeshi	3.61	12	P	Pn	21 32 56.3	+0.9
JNS	Sasagawa	3.79	246	P	Pn	21 32 58.4	+0.4
JAR	Ashorobuto	3.83	1	P	Pn	21 32 59.6	+1.1
MJAR	Matsushiro Arr	5.21	238	Pn	Pn	21 33 19.3	+1.7
	baz=32,slow=14						
MAT	Matsushiro	5.21	238	P	Pn	21 33 18.9	+1.3
MAT				*e*S	Sn	21 34 17.2	-0.5
H11N2	WAKE ISLAND Hy	28.04	128	T	T	22 07 10.7	
	baz=320,slow=75,SNR=6.2						
H11N1	WAKE ISLAND Hy	28.05	128	T	T	22 07 08.4	
	baz=320,slow=75,SNR=5.9						
H11N3	WAKE ISLAND Hy	28.06	128	T	T	22 07 09.1	
	baz=320,slow=75,SNR=5.9						
ZALV	Zalesovo Beam	41.65	310	P	P	21 39 48.8	+1.1
	0.9nm,0.4s,baz=92,slow=8.1,SNR=5.3						
MKAR	Makanchi Array	44.38	300	P	P	21 40 11.6	+1.6
	0.6nm,0.7s,baz=80,slow=9.5,SNR=7.0						
WRA	Warramunga Arr	59.74	190	P	P	21 42 03.4	-1.1
	0.5nm,0.9s,baz=5.8,slow=7.3,SNR=2.9						

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*BJI **20** 21:41:02.0±0.0, 15°.10S×174°.70W, h544^{km}, mB5.0/4, mb4.6/4*

*IDC **20** 21:41:34.2±4.1, 17°.88S×178°.52W, h515^{km}±47^{km}, mb3.8/14, mb1 4.0/15, mb1mx3.7/34, mbtmp4.6/15, Error ellipse: s-maj=19.9km s-min=18.5km az=126.0*

*NEIC **20** 21:41:37.1±2.0, 17°.9S±0°.1×178°.4W±0°.2, h576^{km}±10^{km}, mb4.8/45, Error ellipse: s-maj=21.3km s-min=14.8km az=94.0*

*NOU **20** 21:41:37.7, 17°.76S×178°.41W, h583^{km}, mb4.8, Fiji Islands Region*

ISC 20 21:41:38.8±0.4, **17°.91S**±0°.07×**178°.51W**±0°.08, **h579**^{km}, **n126**, σ1§**17**/125, **mb4.7**/35, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.28	272	P	P	21 42 57.9	-0.1
MSVF	Nonsavu	3.28	272	P	P	21 42 57.7	-0.3
AFI	Afiamalu	7.60	59	P	P	21 43 31.0	-2.7
AFI	Afiamalu	7.60	59	P	P	21 43 31.0	-2.7
NIUE	Niue	8.22	99	P	P	21 43 37.7	-1.9
	baz=8.1,SNR=5.4						
NIUE	Niue	8.22	99	P	P	21 43 37.5	-2.1
FUNA	Funafuti	9.59	346	P	P	21 43 51.2	-1.9
RAO	Raoul Island	11.31	177	P	P	21 44 09.2	-1.1
DVP	Devils Point	12.67	269	P	P	21 44 25.5	+1.2
	120μm,0.8s						
SANVU	Saraoutou	13.91	278	P	P	21 44 37.4	+0.4
SANVU	Saraoutou	13.91	278	P	P	21 44 36.4	-0.6
YATNC	Mamie plateau,	14.33	251	P	P	21 44 41.0	-0.2
OUENC	Ouen Island, N	14.47	250	P	P	21 44 42.6	+0.1
DZM	Mont Dzumac	14.74	251	P	P	21 44 42.5	-2.7
	3.5nm,0.3s,baz=121,slow=19,SNR=27						
DZM	Mont Dzumac	14.74	251	P	P	21 44 43.5	-1.7
DZM	Mont Dzumac	14.74	251	P	P	21 44 44.9	-0.3
ONTNC	Ouen Toro	14.79	250	P	P	21 44 45.8	+0.3
KOUNC	Koumac, New Ca	16.46	258	P	P	21 45 01.3	-0.1
OUZ	Omahuta	18.62	201	P	P	21 45 23.1	+2.3
OUZ				IAmb	IAmb	21 45 25.1	
	comp=Z,17nm,1.0s						
MXZ	Matakaoa Point	19.78	187	P	P	21 45 27.9	-3.3
URZ	Urewera	20.64	190	P	P	21 45 36.0	-3.0
	comp=Z,7.8nm,0.5s,baz=9.3,slow=4.5,SNR=6.5						
URZ	Urewera	20.64	190	P	P	21 45 36.7	-2.3
URZ				IAmb	IAmb	21 45 38.5	
	comp=Z,12nm,0.8s						
HIZ	Hauiti	21.34	194	P	P	21 45 47.3	+2.0
HIZ				IAmb	IAmb	21 45 54.7	
	comp=Z,33nm,1.1s						
BKZ	Black Stump Fm	21.63	191	P	P	21 45 45.5	-2.5
BFZ	Birch Farm	23.14	190	P	P	21 45 59.1	-2.3
BFZ				IAmb	IAmb	21 45 59.1	
	comp=Z,24nm,1.0s						
MSWZ	Moikau Station	24.04	192	P	P	21 46 08.4	-0.9
BHW	Baring Head	24.10	192	P	P	21 46 07.6	-2.3
QRZ	Quartz Range	24.11	197	P	P	21 46 09.8	-0.1
QRZ				IAmb	IAmb	21 46 10.5	
	comp=Z,13nm,0.8s						
NNZ	Nelson	24.26	195	P	P	21 46 10.8	-0.4
NNZ				IAmb	IAmb	21 46 19.8	
	comp=Z,35nm,1.2s						
TUWZ	Tuamarina	24.32	194	P	P	21 46 10.5	-1.3
THZ	Tophouse	24.89	195	P	P	21 46 16.4	-0.5
KHZ	Kahutara	25.36	194	P	P	21 46 19.6	-1.3
LTZ	Lake Taylor	26.01	196	P	P	21 46 26.1	-0.7
LTZ				IAmb	IAmb	21 46 28.6	
	comp=Z,15nm,0.6s						
OXZ	Oxford	26.58	196	P	P	21 46 30.6	-1.0
OXZ				IAmb	IAmb	21 46 31.1	
	comp=Z,23nm,0.7s						
MQZ	McQueen's Vall	26.78	194	P	P	21 46 31.8	-1.6
MQZ				IAmb	IAmb	21 46 49.2	
	comp=Z,24nm,1.1s						
FOZ	Fox Glacier	27.39	199	P	P	21 46 38.1	-0.7
LBZ	Lake Benmore	28.06	197	P	P	21 46 42.4	-2.2
LBZ				IAmb	IAmb	21 46 50.6	
	comp=Z,24nm,1.2s						
ODZ	Otahua Downs	28.54	196	P	P	21 46 47.3	-1.4
WKZ	Wanaka	28.80	199	P	P	21 46 49.9	-1.3
WKZ				IAmb	IAmb	21 47 01.5	
	comp=Z,26nm,0.9s						
EIDS	Eidsvold	29.18	250	P	P	21 46 54.6	0.0
EIDS				IAmb	IAmb	21 46 54.8	
	comp=Z,22nm,0.7s						
MLZ	Mavora Lakes	29.57	199	P	P	21 46 57.9	+0.2
ARMA	Armidale	29.86	240	P	P	21 47 01.2	+0.6
	baz=30,SNR=31						
ARMA	Armidale	29.86	240	P	P	21 47 00.8	+0.3
KWAJ	Kwajalein Atol	29.87	332	P	P	21 46 58.5	-2.2
DCZ	Deep Cove	29.97	200	P	P	21 47 00.8	-0.3
DCZ				IAmb	IAmb	21 47 16.9	
	comp=Z,25nm,1.0s						
WHZ	Wether Hill Ro	30.09	199	P	P	21 47 02.5	+0.3
WHZ				IAmb	IAmb	21 47 16.3	
	comp=Z,15nm,1.0s						
MGCD	Mangrove Creek	31.22	235	P	P	21 47 12.8	+0.8
	baz=31,SNR=12						
RMQ	Roma	31.42	248	P	P	21 47 14.2	+0.4
	baz=32,SNR=14						
CNB	Canberra Magne	33.35	232	P	P	21 47 30.6	+0.5
	baz=33,SNR=57						
CTAO	Charters Tower	33.35	261	P	P	21 47 29.3	-1.0
CTAO				IAmb	IAmb	21 47 30.5	
	comp=Z,18nm,0.8s						
CAN	Canberra	33.63	232	P	P	21 47 32.5	+0.1
CAN				IAmb	IAmb	21 47 33.8	
	comp=Z,24nm,0.8s						
PMG	Port Moresby	34.37	280	P	P	21 47 38.8	0.0
CMSA	Cobar Meteorol	35.07	240	P	P	21 47 44.6	+0.1
	baz=35,SNR=77						
MTSU	Mount Surprise	35.31	264	P	P	21 47 46.1	-0.6
	baz=35,SNR=12						
QLP	Quilpie	35.45	249	P	P	21 47 47.3	-0.3
	baz=36,SNR=16						
COEN	Coen	37.01	270	P	P	21 48 00.5	-0.2
COEN				IAmb	IAmb	21 48 01.4	
	comp=Z,16nm,0.7s						
TOO	Toolangi	37.10	231	P	P	21 48 01.7	+0.6
	baz=37,SNR=28						
TOO	Toolangi	37.10	231	P	P	21 48 02.2	+1.1
TAU	Tasmania Unive	38.18	222	P	P	21 48 09.7	-0.1
TAU				IAmb	IAmb	21 48 10.8	
	comp=Z,17nm,0.8s						
STKA	Stephens Creek	38.55	241	P	P	21 48 13.6	+0.6
	comp=Z,31nm,0.5s,baz=92,slow=10,SNR=111						
STKA	Stephens Creek	38.55	241	P	P	21 48 13.6	+0.6
	baz=39,SNR=72						
STKA	Stephens Creek	38.55	241	P	P	21 48 13.5	+0.6
QIS	Mount Isa	39.56	259	P	P	21 48 20.3	-0.9
	baz=40,SNR=4.4						
ARPS	Mount Arapiles	39.58	234	P	P	21 48 21.3	+0.2
	baz=40,SNR=14						
HTT	Hallett	41.07	239	P	P	21 48 33.6	+0.5
	baz=41,SNR=59						
BBOO	Buckleboo	43.33	241	P	P	21 48 50.9	+0.1
	baz=43,SNR=220						
BBOO	Buckleboo	43.33	241	P	P	21 48 50.6	-0.1
WR0	Warramunga Arr	44.35	260	P	P	21 48 57.8	-1.0
WB0	Warramunga Arr	44.51	260	P	P	21 48 58.9	-1.2
WB0				IAmb	IAmb	21 48 59.8	
	comp=Z,18nm,0.8s						
WB2	Warramunga Arr	44.53	260	P	P	21 48 59.5	-0.8
WB2				IAmb	IAmb	21 49 00.0	
	comp=Z,18nm,0.6s						
WRAB	Tennant Creek	44.53	260	P	P	21 48 59.0	-1.2
WRAB				IAmb	IAmb	21 48 59.9	
	comp=Z,15nm,0.6s						
WRA	Warramunga Arr	44.54	260	P	P	21 48 59.3	-1.0
	comp=Z,10nm,0.5s,baz=92,slow=6.9,SNR=232						
WRA	Warramunga Arr	44.54	260	P	P	21 48 59.1	-1.2
AS31	Alice Springs	44.70	254	P	P	21 49 01.2	-0.3
ASAR	Alice Springs	44.70	254	P	P	21 49 01.2	-0.3
	comp=Z,154nm,0.5s,baz=88,slow=8.3,SNR=2161						
ASAR	Alice Springs	44.70	254	P	P	21 49 00.7	-0.8
KDU	Kakadu	47.46	269	P	P	21 49 22.0	-0.4
	baz=48,SNR=9.4						
WRKA	Warakurna	49.76	252	P	P	21 49 39.2	-0.2
	baz=50,SNR=44						
FORT	Forrest	49.92	245	P	P	21 49 39.8	-0.6
	baz=50,SNR=58						
FAKI	Fak Fak	50.48	281	P	P	21 49 43.6	-1.1
FAKI				IAmb	IAmb	21 50 00.4	
	comp=Z,49nm,1.1s						
FITZ	Fitzroy Crossi	52.94	261	P	P	21 50 02.4	+0.1
	baz=53,SNR=14						
FITZ	Fitzroy Crossi	52.94	261	P	P	21 50 02.0	-0.3
KMBL	Kambalda	55.23	244	P	P	21 50 17.5	-0.7
	baz=55,SNR=13						
SOEI	Soe	55.98	270	P	P	21 50 25.1	+1.3
SOEI				IAmb	IAmb	21 50 29.3	
	comp=Z,34nm,0.7s						
SOEI	Soe	55.98	270	P	P	21 50 25.3	+1.5
	comp=Z,57nm,0.8s						
PSA00	Pilbara Seismi	57.82	255	P	P	21 50 35.4	-0.7
PSA00	Pilbara Seismi	57.82	255	P	P	21 50 34.9	-1.2
PSA00				IAmb	IAmb	21 50 35.6	
	comp=Z,10nm,0.6s						
MEEK	Meekatharra	58.35	249	P	P	21 50 39.0	-0.7
	baz=58,SNR=8.2						
KLBR	Kellerberrin	58.75	244	P	P	21 50 41.7	-0.5
	baz=59,SNR=13						
MORW	Morawa	60.40	246	P	P	21 50 52.9	-0.3
	baz=60,SNR=4.2						
MORW	Morawa	60.40	246	P	P	21 50 52.5	-0.7
VNDA	Vanda	60.44	185	P	P	21 50 54.0	+1.4
	comp=Z,1.2nm,0.6s,baz=56,slow=7.3,SNR=1.6						
GIRL	Giralia	62.80	253	P	P	21 51 10.1	+1.1
	baz=63,SNR=3.7						
ASAJ	Asahikawa	71.23	331	P	P	21 52 02.0	+2.0
	comp=Z,2.9nm,0.5s,baz=248,slow=5.4,SNR=4.4						
KSM	Kuching	72.59	277	P	P	21 52 09.1	+0.5
PETK	Petropavlovsk-	73.65	345	P	P	21 52 14.1	+0.2
	comp=Z,6.2nm,0.6s,baz=118,slow=8.2,SNR=14						
KASI	Kota Agung	75.97	269	P	P	21 52 27.3	-0.4
NVAR	Mina Array Bea	79.49	44	P	P	21 52 48.2	+1.9
	comp=Z,2.8nm,0.7s,baz=225,slow=8.5,SNR=20						
SEY	Seymchan	83.75	347	P	P	21 53 07.5	+0.3
	comp=Z,7.8nm,0.6s,baz=147,slow=5.2,SNR=38						
ILAR	Eielson Array	85.91	13	P	P	21 53 17.4	-0.3
	comp=Z,1.9nm,0.4s,baz=221,slow=5.1,SNR=38						
TXAR	Lajitas Array	86.07	58	P	P	21 53 21.9	+2.6
	comp=Z,2.5nm,0.7s,baz=222,slow=6.3,SNR=21						
PDAR	Pinedale Array	87.41	43	P	P	21 53 27.3	+1.8
	comp=Z,2.1nm,0.6s,baz=195,slow=1.8,SNR=2.1						
CMAR	Chiang Mai Arr	88.80	290	P	P	21 53 33.9	+1.6
	comp=Z,0.5nm,0.3s,baz=127,slow=2.5,SNR=5.2						
INK	Inuvik	91.91	15	P	P	21 53 45.2	-0.2
	comp=Z,3.1nm,1.0s,baz=217,slow=4.5,SNR=7.9						
YKA	Yellowknife Ar	94.37	25	P	P	21 53 57.2	+0.4
	comp=Z,1.1nm,0.8s,baz=238,slow=4.3,SNR=12						
ARCES	ARCESS Array B	126.30	350	PKP	PKiKP	21 59 36.4	+0.2
	comp=Z,1.9nm,0.9s,baz=34,slow=0.3,SNR=1.0						
BRTR	Keskin Array B	144.71	315	PKP	PKPbc	22 00 11.3	+0.2
	comp=Z,1.5nm,0.8s,baz=103,slow=2.1,SNR=6.4						
CLL	Collm	145.44	347	*i* PKPbc	PKPab	22 00 13.4	-0.7
	comp=Z,9.0nm,0.8s						
DPC	Dobruska-Polom	145.52	343	*e*PKP	PKPab	22 00 14.5	0.0
BRG	Berggiesshubel	145.64	346	*e*PKP	PKPab	22 00 14.3	-0.7
BRG				Amp		22 00 16.0	
	comp=Z,7.9nm,1.1s						
PRU	Pruhonice	146.32	345	*e*PKP	PKPbc	22 00 16.2	+1.0
KHC	Kasperske Hory	147.35	345	*e*PKP	PKiKP	22 00 19.1	-0.6
KHC				*e*x	x	22 00 23.4	
CKRC	Cesky Krumlov	147.45	344	*e*PKP	PKiKP	22 00 19.4	-0.5
GERES	GERESS Array B	147.59	345	PKPbc	PKiKP	22 00 19.8	-0.4
	comp=Z,2.0nm,0.6s,baz=22,slow=2.9,SNR=17						
CONA	Conrad Observa	147.83	342	*e*P	PKiKP	22 00 21.0	+0.3
	comp=Z,1.9nm,0.6s						
SOKA	Soboth	149.20	342	*i* P	PKiKP	22 00 23.4	-0.2
	comp=Z,2.9nm,1.2s						
KBA	Koelnbreinsper	149.31	344	*i* P	PKiKP	22 00 23.9	-0.1
	comp=Z,1.2nm,0.5s						
WATA	Walderalm	149.50	346	*i* P	PKiKP	22 00 24.4	+0.1
	comp=Z,1.7nm,0.5s						
RETA	Reutte	149.53	348	*i* P	PKiKP	22 00 24.6	+0.4
	comp=Z,5.5nm,1.3s						
WTTA	Wattenberg	149.56	346	*i* P	PKiKP	22 00 24.6	+0.2
	comp=Z,2.7nm,0.5s,SNR=4.1						
MYKA	Terra Mystica	149.65	343	*i* P	PKiKP	22 00 24.2	-0.3
	comp=Z,1.8nm,0.4s						
SQTA	Sankt Quirin	149.69	347	*i* P	PKiKP	22 00 25.1	+0.4
	comp=Z,3.6nm,0.6s						
ABTA	Abfaltersbach	149.83	345	*e*P	PKiKP	22 00 24.8	-0.1
	comp=Z,3.0nm,0.6s,SNR=5.1						
FETA	Feichten	149.98	347	*i* P	PKiKP	22 00 26.0	+0.7
	comp=Z,6.8nm,1.4s						
ESDC	Sonseca Array	157.80	11	PKPab	PKPab	22 01 07.1	+0.7
	comp=Z,0.5nm,0.7s,baz=341,slow=5.3,SNR=2.3						
TORD	Torodi Ar. Bea	175.27	182	PKPab	PKPab	22 02 24.8	+0.8
	comp=Z,0.4nm,0.7s,baz=152,slow=3.0,SNR=1.9						

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*IDC **20** 21:49:42.0±1.8, 37°.57N×142°.87E, h0^{km}, mb3.5/3, mb1 3.6/5, mb1mx3.3/52, mbtmp3.5/5, ML2.6/2, Error ellipse: s-maj=48.4km s-min=24.1km az=72.0*

*JMA **20** 21:49:46.8±0.2, 37°.71N×142°.32E, h31^{km}±3^{km}, M3.5*

ISC 20 21:49:45.5±2.2, **37°.74N**±0°.06×**142°.35E**±0°.08, **h15**^{km}±12^{km}, **n26**, σ1§**29**/28, **mb3.6**/3, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.90	310	P	Pg	21 50 03.3	+0.4
JIKH				*e*S	Sg	21 50 14.8	0.0
JIO	Ouri	1.06	313	P	Pn	21 50 05.9	+0.1
JIO				S	Sb	21 50 19.3	0.0
JMST	Minamisoumatoc	1.16	270	P	Pn	21 50 06.7	-0.4
JMST				*e*S	Sb	21 50 21.2	-0.7
JFK	Kawauchi	1.23	253	P	Pn	21 50 07.6	-0.5
JFK				*e*S	Sb	21 50 22.6	-1.4
JMM	Marumori	1.24	276	P	Pn	21 50 08.1	-0.1
JMM				*e*S	Sb	21 50 23.8	-0.4
JOU	Okura	1.47	296	P	Pb	21 50 12.2	-0.3
JMK	Ichinoseki	1.50	324	P	Pb	21 50 12.7	-0.3
JMK				*e*S	Sn	21 50 31.0	-0.1
JFT	Otama	1.61	263	P	Pb	21 50 14.3	-0.6
JFT				*e*S	Sn	21 50 34.2	+0.4
JYS	Shirataka	1.87	286	P	Pb	21 50 18.6	-0.6
JYS				*e*S	Sb	21 50 41.5	-0.9
JOM	Ohasama	1.92	335	P	Pn	21 50 19.0	+1.4
JYK	Kaneyama	1.96	308	P	Pb	21 50 19.8	-1.0
JFY	Yanaizu	2.12	262	*e*S	Sn	21 50 47.2	+0.7
JRG	Rokugo	2.13	322	P	Pb	21 50 22.4	-1.4
MJAR	Matsushiro Arr	3.51	251	Pn	Pn	21 50 42.9	+3.3
	baz=76,slow=15						
MAT	Matsushiro	3.52	251	P	Pn	21 50 41.5	+1.9
MAT				*e*S	Sn	21 51 23.2	+2.3
ASAJ	Asahikawa	6.38	2	Pn	Pn	21 51 20.0	+1.2
	0.2nm,0.3s,baz=227,slow=19,SNR=2.4						
USRK	Ussuriysk Ar.	10.14	313	Pn	Pn	21 52 16.6	+6.1
	baz=116,slow=15,SNR=5.2						
H11N2	WAKE ISLAND Hy	27.89	123	T	T	22 24 39.6	
	baz=315,slow=75,SNR=22						
H11N1	WAKE ISLAND Hy	27.90	123	T	T	22 24 44.1	
	baz=315,slow=75,SNR=19						
H11N3	WAKE ISLAND Hy	27.91	123	T	T	22 24 42.0	
	baz=315,slow=75,SNR=20						
H11S1	WAKE ISLAND Hy	28.64	125	T	T	22 25 42.0	
	baz=317,slow=76,SNR=17						
H11S3	WAKE ISLAND Hy	28.64	125	T	T	22 25 37.3	
	baz=317,slow=76,SNR=18						
H11S2	WAKE ISLAND Hy	28.65	125	T	T	22 25 40.4	
	baz=317,slow=76,SNR=15						
MKAR	Makanchi Array	44.38	302	P	P	21 57 56.2	+1.1
	0.2nm,0.5s,baz=83,slow=8.3,SNR=4.7						
WRA	Warramunga Arr	57.86	189	P	P	21 59 36.0	-0.6
	1.0nm,1.1s,baz=6.0,slow=7.4,SNR=4.8						
ASAR	Alice Springs	61.59	189	P	P	21 59 59.7	-2.5
	0.3nm,0.7s,baz=9.4,slow=8.0,SNR=2.7						

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*IDC **20** 22:00:15.2±1.8, 43°.69N×105°.44W, h0^{km}, mb3.8/2, mb1 3.6/7, mb1mx3.5/42, mbtmp3.5/7, ML3.4/5, MS4.1/1, Ms1 4.1/1, ms1mx2.6/47, Error ellipse: s-maj=52.0km s-min=8.1km az=149.0*

*NEIC **20** 22:00:17.1±1.3, 43°.76N±0°.05×105°.31W±0°.05, h0^{km}±2^{km}, ML3.3/62, Error ellipse: s-maj=8.7km s-min=5.8km az=160.0*

ISC 20 22:00:16.4±0.9, **43°.77N**±0°.06×**105°.33W**±0°.07, **h0**^{km}, **n81**, σ1§**14**/79, **Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	1.00	69	Pg	Pg	22 00 35.6	+0.1
K22A	Casper	1.42	218	Pn	Pn	22 00 41.8	-1.8
K22A				IAML		22 01 04.9	
	comp=N,536nm,0.3s						
K22A				IAML		22 01 05.5	
	comp=E,543nm,0.3s						
PHWY	Pilot Hill	2.47	182		Pn	22 00 58.7	+0.5
RWWY	Rawlins	2.50	214		Pn	22 00 58.7	+0.2
RWWY				IAML		22 01 33.9	
	comp=E,160nm,0.4s						
RWWY				IAML		22 01 35.5	
	comp=E,191nm,0.7s						
LAO	LASA Array	2.98	348		Pn	22 01 06.4	+1.4
LAO				IAML		22 01 49.5	
	comp=E,178nm,0.3s						
LAO				IAML		22 02 06.8	
	comp=E,119nm,0.6s						
RLMT	Red Lodge	3.12	297		Pn	22 01 07.5	+0.5
RLMT				IAML		22 01 58.7	
	comp=E,51nm,0.6s						
RLMT				IAML		22 02 01.8	
	comp=E,56nm,0.3s						
BW06	Boulder Array	3.25	253		Pn	22 01 09.7	+0.9
BW06				IAML		22 01 58.5	
	comp=E,46nm,0.3s						
PD31	Pinedale Array	3.25	253	Pn	Pn	22 01 09.2	+0.5
PDAR	Pinedale Array	3.25	253	Pn	Pn	22 01 09.0	+0.2
	comp=E,5.6nm,0.3s,baz=71,slow=16,SNR=69						
PDAR				Lg	Lg	22 01 53.7	
	comp=E,21nm,0.3s,baz=73,slow=35,SNR=7.6						
PDAR	Pinedale Array	3.25	253	Pn	Pn	22 01 09.7	+0.9
YNE	Yellowstone No	3.57	292	Pn	Pn	22 01 13.6	+0.4
YMP	Mirror Lake Pl	3.60	287		Pn	22 01 14.4	+0.7
GCMT	Greycliff	3.69	305		Pn	22 01 15.4	+0.7
LKWY	Lake	3.73	284		Pn	22 01 17.1	+1.6
LKWY				IAML		22 01 48.8	
	comp=E,32nm,0.6s						
OGNE	Ogallala	3.74	138	Pn	Pn	22 01 16.1	+0.7
OGNE				IAML		22 02 21.0	
	comp=E,95nm,0.8s						
LOHW	Long Hollow	3.83	269		Pn	22 01 17.9	+1.2
H17A	Grant Village	3.83	281	IAML		22 02 22.2	
	comp=N,33nm,0.6s						
FLWY	Flagg Ranch	3.89	276		Pn	22 01 18.0	+0.4
FLWY				IAML		22 02 25.7	
	comp=N,32nm,2.3s						
SNOW	Snow King Moun	3.95	267		Pn	22 01 19.2	+0.8
SNOW				IAML		22 02 23.9	
	comp=N,28nm,1.0s						
SNOW				IAML		22 02 38.1	
	comp=N,29nm,0.7s						
YNR	Norris Junctio	3.96	286		Pn	22 01 18.9	+0.3
ISCO	Idaho Springs	3.98	183	Pn	Pn	22 01 19.8	+1.0
YPP	Pitchstone Pla	3.98	279		Pn	22 01 20.2	+1.4
REDW	Red Top Meadow	4.03	266		Pn	22 01 20.2	+0.6
REDW				IAML		22 02 26.9	
	comp=N,37nm,0.7s						
REDW				IAML		22 02 29.6	
	comp=N,42nm,0.6s						
YHH	Holmes Hill	4.09	286		Pn	22 01 21.0	+0.6
YMR	Madison River	4.15	284		Pn	22 01 22.4	+1.3
O20A	White River Ci	4.23	212	Pn	Pn	22 01 22.8	+0.5
O20A				IAML		22 02 37.3	
	comp=N,24nm,0.7s						

O20A				IAML		22 02 37.6	
	comp=E,29nm,0.5s						
E28A	**Huff**	**4.31**	**48**		**Pn**	**22 01 23.9**	**+0.7**
YHB	**Horse Butte**	**4.32**	**285**		**Pn**	**22 01 23.9**	**+0.4**
AHID	**Auburn Hatcher**	**4.33**	**259**		**Pn**	**22 01 24.3**	**+0.6**
AHID				IAML		22 02 36.7	
	comp=N,31nm,0.8s						
AHID				IAML		22 02 46.9	
	comp=E,21nm,0.8s						
YHL	**Hebgen Lake**	**4.33**	**286**		**Pn**	**22 01 27.0**	**+3.2**
ECR	**Eagle Creek**	**4.46**	**263**		**Pn**	**22 01 27.1**	**+1.7**
QLMT	**Earthquake Lak**	**4.50**	**286**		**Pn**	**22 01 27.7**	**+1.7**
DGMT	**Dagmar**	**4.76**	**9**	Pn	**Pn**	**22 01 30.8**	**+1.4**
BOZ	**Bozeman (W)**	**4.85**	**294**		**Pn**	**22 01 31.1**	**+0.5**
BOZ				IAML		22 02 52.2	
	comp=E,13nm,0.9s						
K31A	**O'Neill**	**4.94**	**101**		**Pn**	**22 01 34.5**	**+2.6**
KSCO	**Kaye Shedlock'**	**5.17**	**156**		**Pn**	**22 01 35.1**	**-0.1**
TCUT	**Toone Canyon**	**5.22**	**242**		**Pn**	**22 01 37.2**	**+1.3**
EGMT	**Eagleton**	**5.25**	**326**	Pn	**Pn**	**22 01 37.2**	**+1.0**
DLMT	**Dillon**	**5.43**	**290**	Pn	**Pn**	**22 01 40.8**	**+2.2**
HVU	**Hansel Valley**	**5.83**	**253**		**Pn**	**22 01 45.2**	**+1.0**
BCYI	**Bear Canyon**	**5.84**	**278**	Pn	**Pn**	**22 01 46.3**	**+1.9**
PV07	**Paradox Valley**	**5.89**	**206**	Pn	**Pn**	**22 01 46.3**	**+1.3**
P17A	**Butcher Ranch,**	**5.91**	**225**	Pn	**Pn**	**22 01 46.6**	**+1.4**
PV15	**Paradox Valley**	**5.92**	**205**	Pn	**Pn**	**22 01 47.0**	**+1.4**
PV23	**Carpenter Ridg**	**6.00**	**209**	Pn	**Pn**	**22 01 47.3**	**+0.7**
PV04	**Paradox Valley**	**6.01**	**208**	Pn	**Pn**	**22 01 46.9**	**+0.2**
MPU	**Maple Canyon**	**6.02**	**234**	Pn	**Pn**	**22 01 46.7**	**-0.1**
SDCO	**Great Sand Dun**	**6.02**	**181**	Pn	**Pn**	**22 01 47.3**	**+0.3**
PV12	**Saucer Basin,**	**6.05**	**207**	Pn	**Pn**	**22 01 46.4**	**-0.9**
PV14	**Lion Creek, Pa**	**6.07**	**209**	Pn	**Pn**	**22 01 48.0**	**+0.4**
PV10	**Paradox Valley**	**6.08**	**209**	Pn	**Pn**	**22 01 49.0**	**+1.3**
SRU	**San Rafael Swe**	**6.08**	**222**	Pn	**Pn**	**22 01 47.8**	**+0.2**
PV11	**David Mesa, Pa**	**6.09**	**207**	Pn	**Pn**	**22 01 48.2**	**+0.5**
PV16	**Nyswonger Mesa**	**6.09**	**208**	Pn	**Pn**	**22 01 49.5**	**+1.7**
PV03	**Paradox Valley**	**6.12**	**207**	Pn	**Pn**	**22 01 49.1**	**+0.9**
PV02	**Paradox Valley**	**6.13**	**206**	Pn	**Pn**	**22 01 49.5**	**+1.1**
PV18	**Skein Mesa, Pa**	**6.15**	**207**	Pn	**Pn**	**22 01 49.0**	**+0.4**
TMUT	**Trail Mountain**	**6.28**	**227**	Pn	**Pn**	**22 01 51.5**	**+1.0**
ECSD	**EROS Data Cent**	**6.32**	**87**	Pn	**Pn**	**22 01 51.0**	**+0.3**
NLU	**North Lily Min**	**6.32**	**235**	Pn	**Pn**	**22 01 50.8**	**-0.2**
BGU	**Big Grassy Mou**	**6.37**	**246**	Pn	**Pn**	**22 01 52.4**	**+0.7**
Q16A	**Castle Valley**	**6.54**	**224**	Pn	**Pn**	**22 01 54.6**	**+0.6**
HLID	**Hailey**	**6.59**	**271**	Pn	**Pn**	**22 01 57.3**	**+2.6**
DUG	**Dugway, Tooele**	**6.62**	**240**	Pn	**Pn**	**22 01 55.6**	**+0.5**
F33A	**5 Mile Ranch,**	**6.75**	**69**	Pn	**Pn**	**22 01 58.8**	**+2.1**
MSO	**Missoula**	**6.80**	**300**	Pn	**Pn**	**22 01 57.8**	**+0.4**
JTMT	**Jette**	**7.41**	**306**	Pn	**Pn**	**22 02 06.7**	**+0.8**
WALA	**Waterton Lakes**	**7.94**	**315**	Pn	**Pn**	**22 02 12.5**	**-0.6**
ELK	**Elko**	**7.95**	**251**	Pn	**Pn**	**22 02 12.8**	**-0.5**
	comp=E,0.4nm,0.3s,baz=70,slow=8.1,SNR=7.0						
ELK	**Elko**	**7.95**	**251**		**Pn**	**22 02 14.1**	**+0.8**
AGMN	**Agassiz Nation**	**7.99**	**52**	Pn	**Pn**	**22 02 12.4**	**-1.3**
PSUT	**Pine Spring**	**8.29**	**234**	Pn	**Pn**	**22 02 18.9**	**+0.9**
CCUT	**Cedar City**	**8.71**	**227**	Pn	**Pn**	**22 02 23.6**	**-0.2**
ULM	**Lac du Bonnet**	**9.14**	**42**	Pn	**Pn**	**22 02 27.4**	**-2.0**
	comp=E,1.7nm,0.3s,baz=227,slow=12,SNR=20						
ULM				Pg		22 03 03.2	
	comp=E,1.0nm,0.3s,baz=220,slow=16,SNR=5.8						
ULM				Lg	Lg	22 05 00.5	
	comp=E,0.6nm,0.3s,baz=112,slow=5.4,SNR=2.1						
ULM	**Lac du Bonnet**	**9.14**	**42**		**Pn**	**22 02 29.0**	**-0.5**
B35A	**Bob, Littlefor**	**9.28**	**56**	Pn	**Pn**	**22 02 30.4**	**-0.9**
NVAR	**Mina Array Bea**	**11.14**	**246**	Pn	**Pn**	**22 02 57.8**	**+0.7**
	comp=E,0.1nm,0.3s,baz=44,slow=13,SNR=4.0						
YKA	**Yellowknife Ar**	**19.52**	**347**	P	**P**	**22 04 43.7**	**-1.3**
	comp=E,0.1nm,0.3s,baz=161,slow=13,SNR=4.5						
BORG	**Borgarnes**	**49.07**	**34**	LR	LR	22 29 51.9	
	comp=E,226nm,21.0s,baz=83,slow=36						
ZALV	**Zalesovo Beam**	**82.27**	**354**	P	**P**	**22 12 40.5**	**+1.2**
	comp=E,0.3nm,0.4s,baz=5.6,slow=5.9,SNR=1.8						
MKAR	**Makanchi Array**	**89.57**	**355**	P	**P**	**22 13 14.8**	**-0.7**
	comp=E,0.3nm,0.6s,baz=7.2,slow=4.9,SNR=4.1						

TAP ***20*** *22:05:03.6, 24.°76N×122.°97E, h122^{km}, ML3.0, C*
JMA ***20*** *22:05:04.5±0.2, 24.°79N×122.°95E, h120^{km}±3^{km}, M2.2*
ISC 20 22:05:04.5±1.5**, 24.°71N**±0.°05×**122.°95E**±0.°03**, h121**^{km}±9^{km}**,**
n74, σ0.^{s}83/120**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.25**	**166**	*e*P	**Pn**	**22 05 21.2**	**-0.1**
	baz=165						
YOJ				S	**Sn**	**22 05 33.8**	**-0.2**
	baz=165						
YOJ	**Yonaguni jima**	**0.25**	**166**	P	**Pn**	**22 05 21.7**	**+0.4**
YOJ				*e*S	**Sn**	**22 05 34.3**	**+0.3**
JYNG	**Yonagunijimaku**	**0.26**	**180**	P	**Pn**	**22 05 21.8**	**+0.5**
JYNG				*e*S	**Sn**	**22 05 34.9**	**+0.9**
IRIF	**Iriomote-Funau**	**0.81**	**117**	P	**Pn**	**22 05 25.1**	**+0.4**
IRIF				*e*S	**Sn**	**22 05 40.6**	**+0.6**
TWC	**Suao**	**1.00**	**265**	*e*P	**Pn**	**22 05 26.3**	**-0.2**
	baz=259						
TWC				*e*S	**Sn**	**22 05 41.7**	**-1.5**
	baz=259						
HATJ	**Hateruma jima**	**1.02**	**129**	P	**Pn**	**22 05 27.8**	**+1.1**
HATJ				*e*S	**Sn**	**22 05 44.4**	**+0.9**
NTC	**Toucheng**	**1.02**	**278**	*e*S	**Sn**	**22 05 43.9**	**+0.2**
	baz=272						
TIPB	**Shuangxi**	**1.05**	**285**	*e*P	**Pn**	**22 05 27.3**	**+0.2**
	baz=276						
TIPB				*e*S	**Sn**	**22 05 43.5**	**-0.7**
	baz=276						
JKRS	**Kuro-shima**	**1.08**	**116**	P	**Pn**	**22 05 28.2**	**+0.9**
JKRS				*e*S	**Sn**	**22 05 45.3**	**+0.8**
EWUT	**Wuta**	**1.09**	**256**	*e*P	**Pn**	**22 05 27.4**	**-0.1**
	baz=250						
EWUT				S	**Sn**	**22 05 44.4**	**-0.5**
	baz=250						
NDS	**Dongshan**	**1.12**	**267**	*e*P	**Pn**	**22 05 27.6**	**-0.2**
	baz=259						
NDS				*e*S	**Sn**	**22 05 44.3**	**-1.1**
	baz=259						
ENA	**Nanau**	**1.13**	**256**	*e*P	**Pn**	**22 05 28.0**	**+0.2**
	baz=250						
ENA				S	**Sn**	**22 05 45.7**	**+0.1**
	baz=250						
JIJ	**Ishigaki jima**	**1.14**	**107**	P	**Pn**	**22 05 28.3**	**+0.3**
JIJ				S	**Sn**	**22 05 45.3**	**-0.5**
TWE	**Neicheng**	**1.16**	**271**	*e*P	**Pn**	**22 05 28.4**	**+0.2**
	baz=270						
TWE				*e*S	**Sn**	**22 05 45.4**	**-0.8**
	baz=270						
JISG	**Ishigakijimahi**	**1.25**	**95**	P	**Pn**	**22 05 29.2**	**+0.1**
JISG				S	**Sn**	**22 05 47.4**	**-0.3**
ENTT	**Nioudou**	**1.26**	**267**	*e*P	**Pn**	**22 05 29.6**	**+0.4**
	baz=261						
ENTT				S	**Sn**	**22 05 48.0**	**0.0**
	baz=261						
NDT	**Datong Townshi**	**1.31**	**266**	*e*P	**Pn**	**22 05 30.3**	**+0.6**
	baz=260						
NDT				*e*S	**Sn**	**22 05 49.8**	**+0.8**
	baz=260						
NWLT	**Wulai**	**1.31**	**273**	*e*P	**Pn**	**22 05 29.7**	**-0.2**
	baz=271						
NWLT				*e*S	**Sn**	**22 05 48.7**	**-0.4**
	baz=271						
NHDH	**Xindian Distri**	**1.32**	**281**	*e*S	**Sn**	**22 05 48.4**	**-0.6**
	baz=270						
YM05	**YM05**	**1.33**	**290**	*e*P	**Pn**	**22 05 30.8**	**+0.7**
	baz=283						
YM05				*e*S	**Sn**	**22 05 49.4**	**-0.2**
	baz=283						
YM10	**YM10**	**1.33**	**290**	*e*S	**Sn**	**22 05 49.9**	**+0.3**
	baz=283						
NACB	**Ninganchiao**	**1.34**	**247**	*e*P	**Pn**	**22 05 29.4**	**-0.7**
	baz=239						
NACB				*e*S	**Sn**	**22 05 48.6**	**-1.0**
	baz=239						
YM04	**YM04**	**1.35**	**289**	*e*S	**Sn**	**22 05 48.9**	**-1.0**
	baz=283						
TWD	**Chiawan**	**1.38**	**243**	*e*P	**Pn**	**22 05 30.0**	**-0.5**
	baz=236						
TWD				*e*S	**Sn**	**22 05 49.6**	**-0.8**
	baz=236						
HWA	**Hwalien**	**1.42**	**240**	*e*S	**Sn**	**22 05 50.8**	**-0.4**
	baz=238						
ETLH	**Xiulin Townshi**	**1.42**	**250**	*e*P	**Pn**	**22 05 30.6**	**-0.5**
	baz=248						
ETLH				*e*S	**Sn**	**22 05 50.4**	**-1.0**
	baz=248						
YHNB	**Yeheng**	**1.43**	**269**	*e*P	**Pn**	**22 05 31.4**	**+0.2**
	baz=267						
YHNB				S	**Sn**	**22 05 51.0**	**-0.5**
	baz=267						
NSK	**Sanguang**	**1.44**	**269**	*e*P	**Pn**	**22 05 31.4**	**0.0**
	baz=272						
NSK				S	**Sn**	**22 05 51.2**	**-0.6**
	baz=272						
NNSB	**Datong**	**1.45**	**259**	*e*P	**Pn**	**22 05 31.6**	**+0.1**
	baz=252						
NNSB				*e*S	**Sn**	**22 05 51.4**	**-0.6**
	baz=252						
NNSH	**Datong**	**1.45**	**259**	*e*P	**Pn**	**22 05 31.5**	**+0.1**
	baz=252						
NNSH				*e*S	**Sn**	**22 05 51.3**	**-0.7**
	baz=252						
NNS	**Nan Shan**	**1.46**	**260**	*e*P	**Pn**	**22 05 31.6**	**0.0**
	baz=252						
NNS				S	**Sn**	**22 05 51.4**	**-0.7**
	baz=252						
JTJ	**Tarama**	**1.60**	**92**	P	**Pn**	**22 05 33.5**	**+0.4**
JTJ				S	**Sn**	**22 05 54.5**	**-0.3**
FUSS	**Fushou**	**1.62**	**254**	*e*P	**Pn**	**22 05 33.8**	**+0.3**
	baz=248						
FUSS				*e*S	**Sn**	**22 05 55.3**	**-0.3**
	baz=248						
WHF	**Hehuan Shan**	**1.63**	**250**	*e*P	**Pn**	**22 05 33.8**	**-0.2**
	baz=249						
WHF				*e*S	**Sn**	**22 05 55.4**	**-0.9**
	baz=249						
ESL	**Shilin**	**1.64**	**238**	*e*P	**Pn**	**22 05 33.2**	**-0.4**
	baz=236						
ESL				*e*S	**Sn**	**22 05 54.2**	**-1.6**
	baz=236						
TDCB	**Techi**	**1.69**	**255**	*e*S	**Sn**	**22 05 56.5**	**-0.5**
	baz=250						
CHGB	**Renai**	**1.74**	**249**	*e*P	**Pn**	**22 05 35.1**	**+0.1**
	baz=242						
CHGB				*e*S	**Sn**	**22 05 57.1**	**-1.1**
	baz=242						
LIOB	**Emei**	**1.76**	**268**	*e*P	**Pn**	**22 05 35.8**	**+0.8**
	baz=267						
LIOB				*e*S	**Sn**	**22 05 57.7**	**-0.6**
	baz=267						
NSTT	**Nanjuang**	**1.77**	**268**	*e*S	**Sn**	**22 05 57.9**	**-0.6**
	baz=266						
HGSD	**Ruisui**	**1.84**	**229**	*e*P	**Pn**	**22 05 35.7**	**-0.3**
	baz=226						
HGSD				*e*S	**Sn**	**22 05 58.6**	**-1.4**
	baz=226						
WHP	**Taichung City**	**1.87**	**257**	*e*P	**Pn**	**22 05 37.5**	**+1.1**
	baz=253						
WHP				*e*S	**Sn**	**22 06 01.0**	**+0.1**
	baz=253						
VWDT	**VWDT**	**1.90**	**240**	*e*P	**Pn**	**22 05 37.0**	**+0.2**
	baz=235						
VWDT				*e*S	**Sn**	**22 06 00.6**	**-0.8**
	baz=235						
EHY	**Hungye**	**1.91**	**231**	*e*P	**Pn**	**22 05 36.4**	**-0.4**
	baz=230						
EHY				*e*S	**Sn**	**22 05 60.0**	**-1.5**
	baz=230						
WPL	**Puli Township**	**1.94**	**250**	*e*S	**Sn**	**22 06 02.0**	**-0.2**
	baz=247						
DPDB	**Guoxing**	**1.96**	**250**	*e*S	**Sn**	**22 06 03.5**	**+0.7**
	baz=247						
WCS	**Beigang Elemen**	**1.96**	**251**	*e*P	**Pn**	**22 05 38.7**	**+1.2**
	baz=250						
WCS				*e*S	**Sn**	**22 06 03.1**	**+0.4**
	baz=250						
NMLH	**Miaoli**	**1.97**	**266**	*e*S	**Sn**	**22 06 02.0**	**-0.8**
	baz=271						
YULB	**Yu-li**	**2.00**	**229**	*e*P	**Pn**	**22 05 37.3**	**-0.6**
	baz=235						
YULB				*e*S	**Sn**	**22 06 01.7**	**-1.8**
	baz=235						
EYUL	**Yuli**	**2.01**	**228**	*e*P	**Pn**	**22 05 38.6**	**+0.5**
	baz=234						
EYUL				*e*S	**Sn**	**22 06 04.2**	**+0.4**
	baz=234						
TWQ1	**Liyutan**	**2.01**	**260**	*e*P	**Pn**	**22 05 38.8**	**+0.7**
	baz=259						
TWQ1				*e*S	**Sn**	**22 06 03.5**	**-0.3**
	baz=259						
TWF1	**Yuli**	**2.02**	**229**	*e*P	**Pn**	**22 05 38.5**	**+0.2**
	baz=235						
TWF1				*e*S	**Sn**	**22 06 02.6**	**-1.5**
	baz=235						
JIRB	**Irabujima**	**2.03**	**86**	*e*S	**Sn**	**22 06 03.2**	**-0.9**
SSLB	**Suanglung**	**2.04**	**244**	*e*P	**Pn**	**22 05 39.2**	**+0.8**
	baz=240						
SSLB				*e*S	**Sn**	**22 06 03.7**	**-0.7**
	baz=240						
SMLT	**Sun Moon Lake**	**2.04**	**247**	*e*S	**Sn**	**22 06 05.0**	**+0.4**
	baz=240						
TYC	**Yuchr**	**2.07**	**248**	*e*S	**Sn**	**22 06 05.7**	**+0.7**
	baz=242						
JIKM	**Ikemajima**	**2.10**	**84**	P	**Pn**	**22 05 38.7**	**-0.5**
FULB	**Fuli**	**2.13**	**226**	*e*P	**Pn**	**22 05 39.5**	**-0.1**
	baz=219						
FULB				*e*S	**Sn**	**22 06 05.8**	**-0.8**
	baz=219						
WHYT	**Xinyi Township**	**2.16**	**243**	*e*S	**Sn**	**22 06 08.2**	**+1.0**
	baz=241						
JMJ2	**Miyako jima3**	**2.17**	**89**	P	**Pn**	**22 05 40.8**	**+0.8**
WJS	**Zhushan**	**2.21**	**247**	*e*S	**Sn**	**22 06 10.3**	**+2.1**
	baz=246						
WNT	**Mingjian**	**2.22**	**249**	*e*S	**Sn**	**22 06 10.0**	**+1.4**
	baz=247						
JOGS	**Gusukube**	**2.24**	**88**	*e*S	**Sn**	**22 06 06.1**	**-2.8**
EDH	**Donghe**	**2.29**	**221**	*e*P	**Pn**	**22 05 40.6**	**-1.0**
	baz=217						
EDH				*e*S	**Sn**	**22 06 08.5**	**-1.5**
	baz=217						
ALS	**Alishan**	**2.29**	**239**	*e*P	**Pn**	**22 05 42.6**	**+0.7**
	baz=233						
ALS				*e*S	**Sn**	**22 06 10.4**	**-0.1**
	baz=233						
ELDTW	**Lidau**	**2.32**	**230**	*e*P	**Pn**	**22 05 41.9**	**-0.2**
	baz=225						
ELDTW				*e*S	**Sn**	**22 06 09.5**	**-1.5**
	baz=225						
CHN5	**Tsauling**	**2.35**	**242**	*e*S	**Sn**	**22 06 12.8**	**+1.3**
	baz=235						
LONT	**Longtian**	**2.44**	**223**	*e*S	**Sn**	**22 06 12.8**	**-0.9**
	baz=228						
STYH	**Taoyuan**	**2.51**	**233**	*e*S	**Sn**	**22 06 16.1**	**+1.1**
	baz=229						
STYT	**Tauyuan**	**2.52**	**233**	*e*S	**Sn**	**22 06 16.6**	**+1.1**
	baz=229						
CHN4	**Tsaushan**	**2.54**	**238**	*e*S	**Sn**	**22 06 17.3**	**+1.5**
	baz=237						
WTP	**Ta-pu**	**2.58**	**236**	*e*S	**Sn**	**22 06 18.2**	**+1.4**
	baz=235						
TWK	**Hsinying**	**2.67**	**238**	*e*S	**Sn**	**22 06 19.5**	**+0.7**
	baz=236						
CHN1	**Nanshi**	**2.68**	**236**	*e*S	**Sn**	**22 06 20.1**	**+1.0**
	baz=235						
SGST	**Jiashian**	**2.70**	**234**	*e*S	**Sn**	**22 06 20.4**	**+0.8**
	baz=241						

IDC ***20*** *22:05:22.7±1.5, 4.°04N×126.°80E, h0^{km}, mb3.6/5, mb1 3.8/6, mb1mx3.6/36, mbtmp3.7/6, ML3.4/1, Error ellipse: s-maj=80.2km s-min=21.8km az=64.0*
NEIC ***20*** *22:05:30.9±2.4, 3.°84N±0.°04×126.°77E±0.°08, h60^{km}±11^{km}, mb4.1/14, Error ellipse: s-maj=12.4km s-min=4.1km az=108.0*
ISC 20 22:05:29.9±0.7**, 3.°76N**±0.°06×**126.°64E**±0.°10**, h45**^{km}**, n29,**
σ1.^{s}90/28**, mb4.0**/11**, 1D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**2.51**	**338**	*e*P	**Pn**	**22 06 12.0**	**+3.8**
DDMP				*e*S	**Sn**	**22 06 40.6**	**+3.1**
TNTI	**Ternate**	**3.05**	**166**	Pn	**Pn**	**22 06 18.2**	**+2.5**
SKMP	**Bagumbayan, Su**	**3.45**	**323**	*e*P	**Pn**	**22 06 20.9**	**-0.2**
SKMP				*e*S	**Sn**	**22 06 59.7**	**-1.1**
KCP	**Kidapawan**	**3.58**	**334**⇓	*e*P	**Pn**	**22 06 26.2**	**+3.2**
BUKP	**Musuan**	**4.38**	**339**	*e*P	Pn	22 06 39.3	+5.3
PAGZ	**Pagadian**	**5.20**	**322**	*e*P	**Pn**	**22 06 46.4**	**+1.2**
TOLI2	**Tolitoli**	**6.42**	**246**	Pn	**Pn**	**22 07 03.4**	**+1.5**
SIJI	**Sorong**	**6.52**	**135**	Pn	**Pn**	**22 07 01.4**	**-1.9**
	0.7nm,0.3s,baz=311,slow=19,SNR=1.4						
MYLDM	**Lahad Datu**	**8.24**	**280**	Pn	**Pn**	**22 07 29.9**	**+3.0**
FAKI	**Fak Fak**	**8.68**	**140**	Pn	**Pn**	**22 07 33.8**	**+0.8**
TPUB	**Ta-pu**	**20.28**	**344**	P	**P**	**22 09 58.5**	**-3.4**
TPUB				IAmb	IAmb	22 10 06.8	
	comp=Z,12nm,1.0s						
FITZ	**Fitzroy Crossi**	**21.74**	**183**	P	**P**	**22 10 19.1**	**+1.5**
	comp=Z,2.2nm,0.7s,baz=0.0,slow=10,SNR=1.4						
QIZ	**Qiongzhong**	**22.36**	**314**	P	**P**	**22 10 23.3**	**-1.0**
QIZ				IAmb	IAmb	22 10 34.8	
	comp=Z,12nm,1.1s						
COEN	**Coen**	**24.06**	**137**	P	**P**	**22 10 39.6**	**-1.5**
COEN				IAmb	IAmb	22 10 49.8	
	comp=Z,5.9nm,1.0s						
WB0	**Warramunga Arr**	**24.59**	**162**	P	**P**	**22 10 46.1**	**+0.2**
WB0				IAmb	IAmb	22 10 46.6	
	comp=Z,5.4nm,1.0s						
WRA	**Warramunga Arr**	**24.74**	**162**	P	**P**	**22 10 47.2**	**-0.1**
	comp=Z,1.4nm,0.7s,baz=343,slow=11,SNR=8.1						
WRA	**Warramunga Arr**	**24.74**	**162**	IAmb	IAmb	22 10 55.3	
	comp=Z,0.1nm,1.1s						
WB2	**Warramunga Arr**	**24.74**	**162**	P	**P**	**22 10 48.0**	**+0.6**
WB2				IAmb	IAmb	22 10 59.2	
	comp=Z,5.0nm,1.1s						
WR0	**Warramunga Arr**	**24.82**	**162**	P	**P**	**22 10 48.6**	**+0.6**
XMIS	**Christmas Isla**	**25.24**	**236**	P	**P**	**22 10 52.4**	**+0.5**
ASAR	**Alice Springs**	**28.16**	**166**	P	**P**	**22 11 20.0**	**+1.8**
	comp=Z,0.2nm,0.3s,baz=344,slow=9.7,SNR=1.8						
GIRL	**Giralia**	**28.91**	**204**	P	**P**	**22 11 24.9**	**+0.1**
GSI	**Gunungsitoli**	**29.14**	**266**	P	**P**	**22 11 24.7**	**-2.3**
GSI				IAmb	IAmb	22 11 26.5	
	comp=Z,7.1nm,0.8s						
STKA	**Stephens Creek**	**38.19**	**159**	P	**P**	**22 12 46.0**	**+0.7**
	comp=Z,0.9nm,0.5s,baz=326,slow=11,SNR=2.9						
STKA	**Stephens Creek**	**38.19**	**159**	IAmb	IAmb	22 12 48.5	
	comp=Z,0.6nm,1.1s						
MK31	**Makanchi Array**	**57.48**	**325**	P	**P**	**22 15 13.8**	**-0.7**
MKAR	**Makanchi Array**	**57.48**	**325**	P	**P**	**22 15 12.7**	**-1.8**
	comp=Z,0.3nm,0.4s,baz=118,slow=7.6,SNR=12						
AIS	**Amsterdam Isla**	**61.44**	**223**	P	**P**	**22 15 42.2**	**+0.4**
KURK	**Kurchatov**	**61.67**	**328**	P	**P**	**22 15 43.3**	**+0.1**
KURK				IAmb	IAmb	22 15 44.8	
	comp=Z,1.4nm,0.7s						

NOU ***20*** *22:14:09.3, 41.°05S×174.°77E, h38^{km}, MLv3.6, Cook Strait, New Zealand*
WEL 20 22:14:09.4, 41.°0S±0.°8×**17°5E**±°**, h37**^{km}±2^{km}**, M3.6**/18**,**
ML3.9/18**, MLv3.6**/18**, Error ellipse: s-maj=0.0km**
s-min=0.0km az=112.9, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KIW	**Kapiti Island**	**0.22**	**62**	P	Pn	22 14 16.8	-1.5
KIW				S	Sn	22 14 21.8	-5.1
CAW	**Cannon Point**	**0.34**	**115**	P	Pn	22 14 18.3	+0.6
TCW	**Tory Channel**	**0.38**	**229**	P	Pn	22 14 18.8	+0.7
TCW				S	Sn	22 14 25.2	+0.3
OGWZ	**Otaki Gorge**	**0.42**	**70**	P	Pn	22 14 19.1	+0.5
OGWZ				S	Sn	22 14 26.0	+0.6
BHW	**Baring Head**	**0.47**	**160**	P	Pn	22 14 20.1	+0.5
BHW				S	Sn	22 14 27.9	+1.2
DUWZ	**D'Urville Isla**	**0.58**	**286**	P	Pn	22 14 21.6	+0.4
MSWZ	**Moikau Station**	**0.64**	**136**	P	Pn	22 14 22.4	+0.4
MSWZ				S	Sn	22 14 32.2	+1.3
HOWZ	**Holdsworth Sta**	**0.66**	**85**	P	Pn	22 14 22.6	+0.4
MTW	**Mount Morrison**	**0.67**	**107**	P	Pn	22 14 22.7	+0.3
MTW				S	Sn	22 14 33.0	+1.3
TUWZ	**Tuamarina**	**0.71**	**229**	P	Pn	22 14 23.5	+0.5
PAWZ	**Paruwai Farm**	**0.72**	**126**	P	Pn	22 14 23.4	+0.3
PLWZ	**Palliser**	**0.76**	**144**	P	Pn	22 14 23.8	+0.3
MRZ	**Mangatainoka R**	**0.76**	**67**	P	Pn	22 14 24.2	+0.6
TRWZ	**Traveller**	**0.89**	**120**	P	Pn	22 14 25.4	0.0
OHWZ	**Ohakea**	**0.91**	**34**	P	Pn	22 14 26.4	+0.9
TMWZ	**Te Maipa**	**0.94**	**99**	P	Pn	22 14 26.1	0.0
TIWZ	**Tintock**	**0.95**	**79**	P	Pn	22 14 26.4	+0.2
BSWZ	**Blackbirch Sta**	**0.95**	**218**	P	Pn	22 14 27.4	+1.2
NNZ	**Nelson**	**1.00**	**255**	P	Pn	22 14 27.6	+0.8
POWZ	**Post Office Ro**	**1.02**	**56**	P	Pn	22 14 27.7	+0.6
PRWZ	**Pori Road**	**1.08**	**68**	P	Pn	22 14 28.3	+0.4
CPWZ	**Castlepoint**	**1.17**	**88**	P	Pn	22 14 29.6	+0.4
WAZ	**Wanganui**	**1.23**	**12**	P	Pn	22 14 31.4	+1.4
BFZ	**Birch Farm**	**1.24**	**77**	P	Pn	22 14 29.7	-0.4
DVHZ	**Dannevirke**	**1.33**	**61**	P	Pn	22 14 31.0	-0.4
TSZ	**Takapari Road**	**1.34**	**48**	P	Pn	22 14 31.8	+0.2
ANWZ	**Angora Road**	**1.47**	**71**	P	Pn	22 14 33.0	-0.3
LREZ	**Lake Rotokare**	**1.51**	**353**	P	Pn	22 14 35.4	+1.5
THZ	**Tophouse**	**1.54**	**238**	P	Pn	22 14 35.2	+0.9
PNHZ	**Pukenui**	**1.58**	**49**	P	Pn	22 14 34.7	-0.1
QRZ	**Quartz Range**	**1.62**	**274**	P	Pn	22 14 36.5	+1.2
WPHZ	**Waipukurau**	**1.63**	**57**	P	Pn	22 14 35.9	+0.4
NMEZ	**Namu Road**	**1.66**	**339**	P	Pn	22 14 37.8	+2.0
PRHZ	**Porangahau**	**1.66**	**66**	P	Pn	22 14 35.5	-0.4
PREZ	**Palmer Road**	**1.66**	**347**	P	Pn	22 14 38.0	+2.0
KHZ	**Kahutara**	**1.68**	**210**	P	Pn	22 14 36.8	+0.6
MTVZ	**Mangateitei**	**1.69**	**22**	P	Pn	22 14 38.4	+1.9
KHEZ	**Kahui Hut**	**1.74**	**343**	P	Pn	22 14 38.9	+1.8
NEZ	**North Egmont**	**1.74**	**346**	P	Pn	22 14 38.8	+1.7
MOVZ	**Moawhango**	**1.77**	**29**	P	Pn	22 14 38.2	+0.8
WNVZ	**Wahianoa**	**1.79**	**24**	P	Pn	22 14 39.8	+2.0
NBEZ	**Newall Road No**	**1.80**	**340**	P	Pn	22 14 39.4	+1.6
TRVZ	**Turoa**	**1.80**	**23**	P	Pn	22 14 39.7	+1.6
BHHZ	**Black Hill Sta**	**1.82**	**37**	P	Pn	22 14 38.8	+0.6
WHVZ	**Whangaehu Hut**	**1.82**	**23**	P	Pn	22 14 40.3	+1.9
VRZ	**Vera Road**	**1.84**	**3**	P	Pn	22 14 40.3	+1.9
FWVZ	**Far West T-bar**	**1.84**	**22**	P	Pn	22 14 40.3	+1.7
PKE	**Pukeiti**	**1.84**	**344**	P	Pn	22 14 40.3	+1.9
TUVZ	**Tukino**	**1.86**	**25**	P	Pn	22 14 41.2	+2.5
KRHZ	**Kereru**	**1.86**	**45**	P	Pn	22 14 38.7	0.0
MHEZ	**Mangahewa**	**1.90**	**352**	P	Pn	22 14 41.5	+2.3
PXZ	**Pawanui**	**1.92**	**62**	P	Pn	22 14 39.6	+0.1
NGZ	**Ngauruhoe**	**1.93**	**22**	P	Pn	22 14 41.9	+2.2
OTVZ	**Oturere**	**1.96**	**24**	P	Pn	22 14 41.7	+1.5
WTVZ	**West Tongariro**	**1.98**	**22**	P	Pn	22 14 42.1	+1.7
TWVZ	**Taurewa**	**1.98**	**18**	P	Pn	22 14 41.8	+1.4
ETVZ	**East Tongariro**	**2.00**	**24**	P	Pn	22 14 42.0	+1.4
TMVZ	**Te Maari**	**2.01**	**24**	P	Pn	22 14 42.5	+1.6
KRVZ	**Karewarewa**	**2.01**	**22**	P	Pn	22 14 42.9	+2.0
KWHZ	**Kaweka Forest**	**2.05**	**42**	P	Pn	22 14 41.9	+0.6
KAHZ	**Kahuranaki**	**2.06**	**56**	P	Pn	22 14 41.2	-0.2
KATZ	**Kakaramea**	**2.14**	**22**	P	Pn	22 14 45.4	+2.7
MCHZ	**McNeill Hill**	**2.18**	**47**	P	Pn	22 14 43.5	+0.5
RITZ	**Rihia Road**	**2.19**	**25**	P	Pn	22 14 47.3	+4.1
RATZ	**Rangitukua**	**2.26**	**23**	P	Pn	22 14 49.5	+5.3
BKZ	**Black Stump Fm**	**2.28**	**39**	P	Pn	22 14 45.3	+0.7
DSZ	**Denniston Nort**	**2.28**	**249**	P	Pn	22 14 45.5	+0.9
GVZ	**Greta Valley S**	**2.34**	**211**	P	Pn	22 14 45.3	0.0
WATZ	**Wairara**	**2.40**	**21**	P	Pn	22 14 50.7	+4.6
HIZ	**Hauiti**	**2.45**	**4**	P	Pn	22 14 48.9	+2.1
MRHZ	**Matea Rd**	**2.52**	**33**	P	Pn	22 14 48.1	+0.3
LTZ	**Lake Taylor**	**2.54**	**224**	P	Pn	22 14 48.2	+0.1
AMCZ	**Amberley**	**2.67**	**213**	P	Pn	22 14 50.5	+0.8
MTHZ	**Maungataniwha**	**2.70**	**39**	P	Pn	22 14 50.6	+0.4
TLZ	**Tolley Road**	**2.72**	**15**	P	Pn	22 14 52.5	+2.0
INZ	**Inchbonnie**	**2.98**	**233**	P	Pn	22 14 54.1	+0.1
OKCZ	**Okains Bay**	**3.00**	**203**	P	Pn	22 14 54.2	-0.2
OXZ	**Oxford**	**3.06**	**219**	P	Pn	22 14 53.9	-1.2
MQZ	**McQueen's Vall**	**3.12**	**208**	P	Pn	22 14 54.2	-1.7
URZ	**Urewera**	**3.30**	**36**	P	Pn	22 14 57.2	-1.3
RACZ	**Rakaia**	**3.33**	**213**	P	Pn	22 14 58.1	-0.7
MWZ	**Matawai**	**3.44**	**41**	P	Pn	22 14 59.2	-1.2
WACZ	**Wakanui South**	**3.63**	**214**	P	Pn	22 15 01.7	-1.3
TWGZ	**Tauwhareparae**	**3.79**	**44**	P	Pn	22 15 08.3	+3.1
RPZ	**Rata Peaks**	**3.83**	**223**	P	Pn	22 15 05.0	-0.8
MKAZ	**Moumakai**	**3.87**	**6**	P	Pn	22 15 07.6	+1.3
AWAZ	**Awhitu Peninsu**	**3.89**	**360**	P	Pn	22 15 08.2	+1.6
ARCZ	**Arundel**	**3.94**	**220**	P	Pn	22 15 06.8	-0.4
GCSZ	**Gaunt Creek Bo**	**3.99**	**232**	P	Pn	22 15 07.8	-0.1
ETAZ	**East Tamaki Re**	**4.01**	**3**	P	Pn	22 15 10.9	+2.8
TMZ	**Timaru**	**4.35**	**217**	P	Pn	22 15 11.7	-1.2
FOZ	**Fox Glacier**	**4.42**	**233**	P	Pn	22 15 13.4	-0.4
LBZ	**Lake Benmore**	**4.75**	**222**	P	Pn	22 15 17.6	-0.8
ODZ	**Otahua Downs**	**5.03**	**214**	P	Pn	22 15 20.7	-1.5
JCZ	**Jackson Bay**	**5.34**	**232**	P	Pn	22 15 25.4	-1.1
OUZ	**Omahuta**	**5.79**	**351**	P	Pn	22 15 33.8	+1.1
CTZ	**Chatham Island**	**7.03**	**116**	P	Pn	22 15 47.5	-2.2

JMA 20 22:16:06.0±0.1**, 37.°11N**×**141.°49E, h56**^{km}±2^{km}**, M3.7,**
Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.55**	**269**	P	Pn	22 16 18.3	0.0
ONAJ				S	Sn	22 16 27.0	-0.2
JFK	**Kawauchi**	**0.55**	**298**	P	Pn	22 16 18.2	-0.1
JFK				*e*S	Sn	22 16 27.1	-0.1

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JFFD   Fukushimafurud   0.74 269   P      Pn     22 16 20.7 +0.1
JFFD                              eS      Sn     22 16 31.1  -0.1
JMST   Minamisoumatoc   0.78 322   P      Pn     22 16 20.9  -0.1
JMST                               S      Sn     22 16 31.7  -0.3
JHO    Hitachi          0.89 236   P      Pn     22 16 22.3  -0.2
JHO                                S      Sn     22 16 34.0  -0.6
JMM    Marumori         0.94 324   P      Pn     22 16 23.1 +0.1
JMM                                S      Sn     22 16 35.6   0.0
JFT    Otama            1.01 294   P      Pn     22 16 24.9 +0.9
JFT                                S      Sn     22 16 38.2 +0.9
JIO    Ouri             1.35 355   P      Pn     22 16 28.5   0.0
JIO                                S      Sn     22 16 44.5  -0.9
JOU    Okura            1.41 333   P      Pn     22 16 30.2 +0.7
JFY    Yanaizu          1.46 282   P      Pn     22 16 30.9 +0.9
JYS    Shirataka        1.58 315   P      Pn     22 16 32.8 +1.1
MAT    Matsushiro       2.69 259   P      Pn     22 16 48.6 +1.7
MAT                                S      Sn     22 17 22.6 +4.3
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IDC ***20*** *22:22:18.3±1.1, 26°.51S×13°.74W, h0^{km}, mb4.0/10, mb1 4.1/10, mb1mx3.9/25, mbtmp4.0/10, MS3.6/7, Ms1 3.6/7, ms1mx3.3/25, Error ellipse: s-maj=33.2km s-min=20.2km az=153.0*

NEIC ***20*** *22:22:20.1±2.1, 26°.4S±0°.1×13°.8W±0°.1, h10^{km}±4^{km}, mb4.5/16, Error ellipse: s-maj=17.6km s-min=10.8km az=145.0*

ISC 20 22:22:19.8±0.6, **26°.4S**±0°.1×**13°.7W**±0°.1, **h10**^{km}, **n28**, σ**1^{s}18**/22, **mb4.2**/15, **MS3.5**/7, **Southern Mid-Atlantic Ridge**

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Code   Station Name      Δ°    AZ°   Phase ID       Time       Res
                                     Op     ISC     h  m  s    ISC
SHEL   Horse Pasture    12.72   37   Pn     Pn     22 25 19.1  -1.8
ASCN   Ascension        18.32  358   Pn     P      22 26 32.0  -2.3
ASCN                                 IAmb   IAmb   22 26 47.1
       comp=Z,68nm,0.9s
HOPE   Hope Point       32.58  205   P      P      22 28 49.7  -1.4
DBIC   Dimbokro         33.92   16   P      P      22 29 04.3 +1.1
       comp=Z,1.3nm,0.6s,baz=146,slow=7.3,SNR=1.7
DBIC                                 LR     LR     22 39 01.3
       comp=Z,98nm,19.3s,baz=179,slow=29
DBIC   Dimbokro         33.92   16   IAmb   IAmb   22 29 06.7
       comp=Z,2.4nm,0.9s
BOSA   Boshof           34.54  103   P      P      22 29 09.2 +0.5
       comp=Z,3.4nm,0.8s,baz=282,slow=10,SNR=4.5
BOSA                                 LR     LR     22 41 04.1
       comp=Z,78nm,18.4s,baz=252,slow=33
BOSA   Boshof           34.54  103   IAmb   IAmb   22 29 10.2
       comp=Z,11nm,1.1s
CPUP   Villa Florida    38.95  260   P      P      22 29 46.0  -0.2
       comp=Z,1.3nm,0.6s,baz=124,slow=11,SNR=2.0
CPUP                                 LR     LR     22 43 42.7
       comp=Z,63nm,18.1s,baz=66,slow=33
KOWA   Kowa             41.68   14   P      P      22 30 10.4 +1.6
       comp=Z,2.2nm,0.6s,baz=199,slow=9.5,SNR=8.9
KOWA   Kowa             41.68   14   IAmb   IAmb   22 30 17.4
       comp=Z,3.2nm,0.8s
TORD   Torodi Ar. Bea   42.02   23   P      P      22 30 12.9 +1.3
       comp=Z,1.0nm,0.7s,baz=196,slow=8.8,SNR=6.7
TORD                                 LR     LR     22 44 18.7
       comp=Z,70nm,18.4s,baz=330,slow=31
ZON    Zonda            47.97  250   P      P      22 30 59.9 +0.9
ZON                                  IAmb   IAmb   22 31 00.2
       comp=Z,3.7nm,1.1s
PLCA   Paso Flores      48.71  238   P      P      22 31 02.9  -1.7
       comp=Z,1.4nm,0.8s,baz=58,slow=11,SNR=3.5
PLCA                                 LR     LR     22 49 38.6
       comp=Z,42nm,20.1s,baz=144,slow=34
PLCA   Paso Flores      48.71  238   IAmb   IAmb   22 31 10.6
       comp=Z,1.2nm,0.8s
CO01   Juntas del Tor   49.43  252   P      P      22 31 10.4  -0.1
CO01                                 IAmb   IAmb   22 31 17.9
       comp=Z,9.2nm,0.9s
SAML   Samuel           49.89  281   P      P      22 31 14.8 +1.0
SAML                                 IAmb   IAmb   22 31 16.0
       comp=Z,8.8nm,1.1s
PB01   IPOC Station P   51.03  263   P      P      22 31 22.2  -0.4
PB01                                 IAmb   IAmb   22 31 22.8
       comp=Z,2.0nm,0.7s
PTGA   Pitinga          51.25  292   P      P      22 31 25.8 +1.7
       comp=Z,1.0nm,0.3s,baz=62,slow=5.1,SNR=4.5
LPAZ   La Paz           51.36  270   LR     LR     22 51 17.9
       comp=Z,74nm,21.3s,baz=112,slow=34
PB16   IPOC Station P   51.90  267   P      P      22 31 28.8  -0.8
PSGCX  Pisagua          52.04  265   P      P      22 31 31.0 +0.9
KMBO   Kilima Mbogo     54.99   71   LR     LR     22 52 56.1
       comp=Z,74nm,20.7s,baz=98,slow=33
QSPA   South Pole Qui   63.87  180   P      P      22 32 52.9 +0.4
QSPA                                 IAmb   IAmb   22 33 05.3
       comp=Z,5.1nm,0.9s
SDV    Santo Domingo    65.41  294   P      P      22 33 03.0  -0.3
       comp=Z,3.8nm,0.5s,baz=159,slow=4.0,SNR=6.2
SBA    Scott Base       76.03  180   P      P      22 34 07.3 +0.5
GERES  GERESS Array B   78.76   18   P      P      22 34 23.1 +0.6
       comp=Z,0.2nm,0.5s,baz=190,slow=4.1,SNR=3.5
AKASG  Malin Array Be   85.58   26   P      P      22 34 58.2 +0.2
       comp=Z,0.3nm,0.4s,baz=222,slow=4.6,SNR=4.4
KLR    Kul'dur         144.87   40   PKPbc  PKPab  22 41 56.0 +0.1
       comp=Z,1.6nm,0.7s,baz=311,slow=3.9,SNR=7.4
```

BJI ***20*** *22:37:47.6±0.0, 23°.03N×101°.65E, h6^{km}, mB4.7/23, mb4.4/32, ML4.4/9, Ms4.4/37, Ms7 4.3/29*

PLV ***20*** *22:37:47.0±5.3, 23°.13N×101°.75E, h12^{km}±30^{km}, ML4.5*

IDC ***20*** *22:37:48.4±0.6, 22°.97N×101°.67E, h0^{km}, mb4.2/17, mb1 4.3/18, mb1mx4.1/39, mbtmp4.2/18, ML4.0/1, MS3.6/11, Ms1 3.6/11, ms1mx3.5/32, Error ellipse: s-maj=19.3km s-min=12.2km az=78.0*

MOS ***20*** *22:37:48.6±1.2, 23°.15N×101°.95E, h11^{km}, mb4.7/20, Error ellipse: s-maj=17.6km s-min=6.2km az=119.3*

NEIC ***20*** *22:37:50.3±1.5, 23°.01N±0°.05×101°.76E±0°.07, h10^{km}±1^{km}, mb4.5/25, Error ellipse: s-maj=10.8km s-min=8.5km az=272.0*

ISC 20 22:37:50.4±0.3, **23°.03N**±0°.03×**101°.68E**±0°.04, **h10**^{km}, **n156**, σ**1^{s}75**/164, **mb4.4**/48, **MS3.6**/13, **6C-2D, Yunnan**

```
Code   Station Name      Δ°    AZ°   Phase ID       Time       Res
                                     Op     ISC     h  m  s    ISC
MLAV   Muong La stati    1.68  126  i Pg    Pn     22 38 19.4  -0.6
MLAV                                eSg     Sg     22 38 43.1  -1.4
MLAV                                 IAML          22 38 45.6
       comp=N,4µm,0.4s
MLAV                                 IAML          22 38 46.2
       comp=E,6µm,0.8s
KMI    Kunming           2.30   25  ⇓Pn     Pn     22 38 28.3  -0.3
KMI                                  Pg     Pb     22 38 32.3 +0.1
KMI                                  Sn     Sn     22 38 56.5  -0.6
KMI                                  Sg     Sb     22 39 02.6 +1.9
KMI                                  smax   smax
       comp=E,1µm,1.1s
KMI                                  smax   smax
       comp=E,1µm,1.1s
KMI    Kunming           2.30   25   Pn     Pn     22 38 29.7 +1.1
SLVN   Son La            2.66  129   Pn     Pn     22 38 32.3  -1.2
CRAI   Chiangrai         3.04  204   Pn     Pn     22 38 35.9  -2.8
HBVN   Hoa-Binh          4.05  122  ePn     Pn     22 38 51.8  -0.8
HBVN                                ePg     Pg     22 39 04.4  -3.7
HBVN                                 IAML          22 40 06.8
       comp=N,715nm,0.4s
HBVN                                 IAML          22 40 16.1
       comp=E,687nm,1.1s
LAMP   Lampang           4.88  204   Pg     Pb     22 39 19.0 +3.0
       comp=E,1.9nmcomp=E,3µmcomp=E,459nm,0.7s
LAMP                                 Pn     Pn     22 39 02.9  -1.0
       comp=E,1.9nmcomp=E,3µmcomp=E,459nm,0.7s
CMMT   Chiang Mai        4.91  212   Pn     Pn     22 39 02.3  -2.1
       comp=E,0.6nmcomp=E,374nmcomp=E,30nm,0.6s
CMMT   Chiang Mai        4.91  212  ePn     Pn     22 39 02.4  -2.1
CHTO   Chiang Mai        4.91  212          Pn     22 39 03.3  -1.1
CHTO   Chiang Mai        4.91  212   Pn     Pn     22 39 02.9  -1.5
PLV    Phu-Lien          5.10  115  ePn     Pn     22 39 05.2  -1.7
PLV                                 ePg     Pg     22 39 25.4  -2.7
NONG   Nongkai           5.13  164   Pn     Pn     22 39 07.0  -0.4
       comp=E,3.2nmcomp=E,15µmcomp=E,388nm,0.7s
CM31   Chiang Mai Arr    5.22  210   Pg     Pg     22 39 26.6  -3.9
CM31   Chiang Mai Arr    5.22  210   Pg     Pg     22 39 27.4  -3.1
CMAR   Chiang Mai Arr    5.22  210   Pn     Pn     22 39 06.6  -2.0
       comp=E,1.4nm,0.3s,baz=21,slow=13,SNR=20
CMAR                                 Pg     Pb     22 39 23.6 +1.8
       comp=E,6.7nm,0.3s,baz=38,slow=18,SNR=19
CMAR                                 Lg     Lg     22 40 33.3
       comp=E,2.9nm,0.3s,baz=7.7,slow=19,SNR=5.2
CMAR                                 LR     LR     22 41 28.1
       comp=E,352nm,18.1s,baz=66,slow=43
CMAR   Chiang Mai Arr    5.22  210   Pg     Pg     22 39 27.5  -3.0
CM04   Chiang Mai Arr    5.25  209   Pg     Pg     22 39 26.7  -4.5
       comp=E,1.4nmcomp=E,1µmcomp=E,124nm,0.7s
CM04                                 Pn     Pn     22 39 08.2  -0.9
       comp=E,1.4nmcomp=E,1µmcomp=E,124nm,0.7s
LOEI   Loei              5.51  184   Pn     Pn     22 39 11.4  -1.2
       comp=E,1.0nmcomp=E,148nm,0.7s
GYA    Guiyang           5.67   52   Pn     Pn     22 39 14.3  -0.6
GYA                                  smax   smax
       comp=E,360nm,1.1s
GYA                                  smax   smax
       comp=E,330nm,1.1s
GYA                                  LR     LR
       comp=E,1µm,3.8s
GYA                                  LR     LR
       comp=E,1µm,4.8s
SUKH   Sukhothai         5.84  200   Pn     Pn     22 39 15.8  -1.4
       comp=E,0.8nmcomp=E,116nm,1.0s
MHMT   Maesarieng        5.97  217   Pn     Pn     22 39 17.5  -1.5
UMPA   Umpang Tak        7.29  202   P      Pg     22 40 07.5  -2.6
MOKO   MOKOCHONG         7.29  298  eP      Pn     22 39 37.9 +0.6
MOKO                                 IAML          22 41 54.2
       comp=E,45nm,0.6s
MOKO                                 IAML          22 41 54.5
       comp=N,54nm,0.6s
KOHI   KOHIMA            7.41  293  eP      Pn     22 39 35.7  -3.0
KOHI                                eS      Sn     22 40 49.6   -13
KOHI                                 IAML          22 42 02.1
       comp=E,54nm,0.6s
KOHI                                 IAML          22 42 06.8
       comp=N,31nm,1.9s
SAIH   SAIHA             8.04  268  eP      Pn     22 39 48.8 +1.3
SAIH                                ex      x      22 42 07.8
CD2    Chengdu           8.06   13   P      Pn     22 39 46.3  -1.4
CD2                                  pmax   pmax
       comp=N,60nm,0.6s
CD2                                  pmax   pmax
       comp=N,110nm,4.9s
CD2                                  LR     LR
       comp=N,3µm,8.8s
CD2                                  LR     LR
       comp=N,2µm,10.4s
ZIRO   ZIRO              8.38  304  eP      Pn     22 39 51.5  -0.7
ZIRO                                 IAML          22 42 44.0
       comp=N,25nm,0.8s
ZIRO                                 IAML          22 42 44.9
       comp=E,23nm,0.8s
UBPT   Khong Chiam       8.50  154   Pn     Pn     22 39 52.8  -0.9
QIZ    Qiongzhong        8.60  116   P      Pn     22 39 53.0  -2.1
QIZ                                  S      Sn     22 41 34.8 +2.7
QIZ                                  LR     LR
       comp=E,980nm,9.8s
QIZ                                  LR     LR
       comp=E,710nm,8.3s
QIZ                                  LR     LR
       comp=E,450nm,12.7s
QIZ    Qiongzhong        8.60  116   Pn     Pn     22 39 52.9  -2.1
SRAK   Srakaew           8.98  178   P      Pg     22 40 43.4 +1.1
SHL    Shillong          9.29  288  eP      Pn     22 40 03.6  -1.0
SHL                                 ex      x      22 42 53.5
SHL    Shillong          9.29  288   Pn     Pn     22 40 04.7 +0.1
ENH    Enshi            10.04   42   Pn     Pn     22 40 13.7  -1.1
LSA    Lhasa            11.54  307   Pn     Pn     22 40 36.6 +0.9
XAN    Xi'an            12.68   28   P      Pn     22 40 48.3  -2.6
XAN                                  pP            22 40 52.5
XAN                                  S      Sn     22 43 10.4  -1.7
XAN                                  pmax   pmax
       comp=E,14nm,0.7s
XAN                                  LR     LR
       comp=E,2µm,11.9s
XAN                                  LR     LR
       comp=E,2µm,11.4s
XAN                                  LR     LR
       comp=E,610nm,11.1s
XAN    Xi'an            12.68   28   Pn     Pn     22 40 48.5  -2.3
WHN    Wuhan            13.56   54   P      Pn     22 41 05.9 +3.0
WHN                                  S      Sn     22 43 40.1 +6.5
WHN                                  LR     LR
       comp=E,2µm,6.4s
GTA    Gaotai           16.41  355  eP      Pn     22 41 41.1 +0.1
GTA                                  pP     P      22 41 45.3 +1.5
GTA                                  sP     sP     22 41 48.5 +0.1
PSI    Prapat           20.29  188   P      Pn     22 42 27.6  -1.0
       comp=E,12nm,0.9s,baz=360,slow=7.2,SNR=9.5
PSI                                  LR     LR     22 50 30.4
       comp=E,168nm,18.4s,baz=276,slow=38
RPSI   Rantau Prapat    20.39  188   P      Pn     22 42 28.9  -0.7
RPSI                                 IAmb   IAmb   22 42 32.0
       comp=Z,16nm,0.9s
RPSI   Rantau Prapat    20.39  188   P      P      22 42 27.6   0.0
BJT    Baijiatuau       20.91   33          P      22 42 31.3  -1.8
BJI    Beijing          20.93   33   P      P      22 42 34.6 +1.3
BJI                                  pmax   pmax
       comp=Z,9.0nm,0.8s
BJI                                  LR     LR
       comp=Z,360nm,9.6s
BJI                                  LR     LR
       comp=Z,400nm,12.2s
GSI    Gunungsitoli     21.96  191   P      P      22 42 44.8 +0.3
GSI                                  IAmb   IAmb   22 42 50.7
       comp=Z,9.8nm,0.7s
BHPL   Bhopal           22.30  275  eP      P      22 42 48.0  -0.3
BHPL                                 IAmb   IAmb   22 42 49.5
       comp=Z,7.2nm,0.6s
HYB    Hyderabad        22.40  260  i P     P      22 42 47.0  -2.3
SBUM   Sibu             22.87  152   P      P      22 42 54.1  -0.1
SMLA   Simla            23.24  296  eP      P      22 42 55.9  -2.0
SMLA                                 IAmb   IAmb   22 43 00.9
       comp=Z,19nm,1.1s
WMQ    Urumqi           23.73  334  eP      P      22 43 04.5 +1.7
WMQ                                  pP     pP     22 43 06.3   0.0
WMQ                                  PP     PnPn   22 43 38.5 +8.2
WMQ                                  pmax   pmax
       comp=Z,12nm,2.1s
WMQ                                  pmax   pmax
       comp=Z,120nm,4.5s
WMQ                                  LR     LR
       comp=Z,130nm,29.3s
WMQ                                  LR     LR
       comp=Z,370nm,25.9s
DHRM   DHARAMSHALA      24.24  298  eP      P      22 43 05.1  -2.8
DHRM                                 IAmb   IAmb   22 43 09.3
       comp=Z,28nm,0.8s
JOW    Kunigami         24.39   76   LR     LR     22 53 47.0
       comp=Z,281nm,18.4s,baz=275,slow=39
SONM   Songino Array    25.04    8   P      P      22 43 15.8 +0.9
       comp=Z,2.2nm,0.8s,baz=175,slow=8.7,SNR=11
SONM                                 LR     LR     22 54 09.3
       comp=Z,207nm,18.5s,baz=28,slow=39
SONM   Songino Array    25.04    8   P      P      22 43 15.1 +0.3
ULN    Ulaanbaatar      25.15    9  i P     P      22 43 16.0 +0.1
ULN                                  pmax   pmax
       comp=Z,12nm,1.0s
ULN    Ulaanbaatar      25.15    9   P      P      22 43 16.3 +0.4
ULN                                  IAmb   IAmb   22 43 19.1
       comp=Z,10nm,0.9s
PALK   Pallekele        25.54  235   LR     LR     22 54 08.0
       comp=Z,107nm,18.2s,baz=170,slow=38
KSRS   Korea Array      26.73   51   LR     LR     22 55 16.0
       comp=Z,188nm,19.1s,baz=244,slow=39
JTU    Tsushima         26.77   58   P      P      22 43 27.7  -2.9
NIL    Nilore           27.09  299   P      P      22 43 32.6  -0.9
NIL                                  IAmb   IAmb   22 43 40.6
       comp=Z,10nm,1.1s
SHLS   Shalkode         27.23  323  eP      P      22 43 32.9  -1.9
       baz=323
SHLS   Shalkode         27.23  323  eP      P      22 43 32.8  -1.9
KSH    Kashi            27.30  313   P      P      22 43 36.9 +1.4
KSH                                  PcP    PcP    22 46 58.3 +3.3
KSH                                  pmax   pmax
       comp=Z,480nm,6.1s
KSH                                  LR     LR
       comp=Z,670nm,6.6s
ZAK    Zakamensk        27.33    2  eP      P      22 43 35.8 +0.3
ZAK                                  pmax   pmax
       comp=Z,4.0nm,1.0s
UZB    Uzynbulak        27.47  322  eP      P      22 43 37.4 +0.5
       baz=322
UZB    Uzynbulak        27.47  322  eP      P      22 43 37.4 +0.5
JNU    Nakatsue         27.57   62   LR     LR     22 55 37.1
       comp=Z,107nm,18.3s,baz=251,slow=39
SATY   Saty             27.76  322  eP      P      22 43 39.8 +0.3
       baz=321
SATY   Saty             27.76  322  eP      P      22 43 39.8 +0.3
KPKS   Kokpek           27.86  323  eP      P      22 43 41.3 +0.9
       baz=322
KPKS   Kokpek           27.86  323  eP      P      22 43 41.3 +0.9
DAV    Davao City (W)   27.93  121   LR     LR     22 55 38.0
       comp=Z,44nm,18.3s,baz=331,slow=38
MK31   Makanchi Array   28.40  331 ceP      P      22 43 45.2 +0.2
MK31   Makanchi Array   28.40  331   P      P      22 43 45.6 +0.6
MK31                                 IAmb   IAmb   22 43 47.8
       comp=Z,13nm,1.1s
MKAR   Makanchi Array   28.40  331   P      P      22 43 45.3 +0.3
       comp=Z,11nm,0.8s,baz=140,slow=9.1,SNR=66
MKAR                                 PcP    PcP    22 46 58.0 +0.7
       comp=Z,0.4nm,0.7s,baz=114,slow=5.7,SNR=2.4
MKAR   Makanchi Array   28.40  331   P      P      22 43 45.4 +0.4
MAKZ   Makanchi         28.55  331   P      P      22 43 46.9 +0.5
TNSS   Tian-Shan        28.60  320  eP      P      22 43 47.8 +0.5
       baz=320
TNSS   Tian-Shan        28.60  320  eP      P      22 43 47.8 +0.5
MDOK   Medeo            28.61  320  eP      P      22 43 48.6 +1.4
       baz=320
MDOK   Medeo            28.61  320  eP      P      22 43 48.6 +1.4
TLY    Talaya           28.64    3   LR     LR     22 56 45.1
       comp=Z,130nm,19.9s,baz=169,slow=40
AAA    Alma-Ata         28.72  320  eP      P      22 43 49.2 +1.2
       comp=Z,2.8nm,0.7s,baz=320
AAA    Alma-Ata         28.72  320  eP      P      22 43 49.2 +1.2
AAA                                  pmax   pmax
       comp=Z,3.0nm,0.7s
DGZ    Jazzator, Alta   28.88  341  i P     P      22 43 50.7 +1.2
DGZ                                  pmax   pmax
       comp=Z,5.0nm,1.0s
TDK    Taldyqorghan     29.01  325  eP      P      22 43 51.6 +1.0
       comp=Z,4.4nm,0.8s,baz=324
TDK    Taldyqorghan     29.01  325  eP      P      22 43 51.5 +1.0
TDK                                  pmax   pmax
       comp=Z,4.0nm,0.8s
CHKK   Chushkaly        29.07  322  eP      P      22 43 51.7 +0.7
       baz=321
CHKK   Chushkaly        29.07  322  eP      P      22 43 51.7 +0.7
KUU    Kurty            29.46  321  eP      P      22 43 54.9 +0.4
       comp=Z,4.8nm,1.1s,baz=321
KUU    Kurty            29.46  321  eP      P      22 43 54.9 +0.4
KUU                                  pmax   pmax
       comp=Z,5.0nm,1.1s
AAK    Ala-Archa        29.86  317   P      P      22 43 59.1 +0.9
       comp=Z,2.2nm,0.7s,baz=132,slow=4.9,SNR=13
AAK                                  LR     LR     22 57 22.7
       comp=Z,100nm,19.8s,baz=120,slow=39
AAK    Ala-Archa        29.86  317 ceP      P      22 44 00.1 +1.8
AAK                                  pmax   pmax
       comp=Z,9.0nm,0.9s
AAK    Ala-Archa        29.86  317   P      P      22 44 00.7 +2.5
SGDS   Sogindy          30.22  319  eP      P      22 44 01.9 +0.6
       baz=318
SGDS   Sogindy          30.22  319  eP      P      22 44 01.9 +0.6
BTLS   Baital           31.47  321  eP      P      22 44 12.8 +0.5
       baz=320
BTLS   Baital           31.47  321  eP      P      22 44 12.7 +0.5
DZA    Taraz            32.00  316  eP      P      22 44 18.0 +1.1
       baz=315
DZA    Taraz            32.00  316  eP      P      22 44 18.0 +1.1
SEM    Semipalatinsk    32.05  334  eP      P      22 44 16.3  -1.2
       baz=333
SEM    Semipalatinsk    32.05  334  eP      P      22 44 16.2  -1.2
USA0B  Ussuriysk Arra   32.62   42   P      P      22 44 22.0  -0.2
USA0B                                IAmb   IAmb   22 44 34.1
       comp=Z,3.8nm,0.9s
USRK   Ussuriysk Ar.    32.62   42   P      P      22 44 22.0  -0.2
KURK   Kurchatov        32.95  333 ceP      P      22 44 24.6  -0.5
KURK                                 pmax   pmax
       comp=Z,9.0nm,0.7s
KURK   Kurchatov        32.95  333   P      P      22 44 25.2   0.0
ZAA0   Zalesovo Array   33.40  342   P      P      22 44 29.3 +0.4
ZALV   Zalesovo Beam    33.40  342   P      P      22 44 29.0   0.0
       comp=Z,12nm,0.9s,baz=148,slow=8.6,SNR=36
ZALV                                 LR     LR     22 59 29.2
       comp=Z,130nm,20.9s,baz=168,slow=39
ZALV   Zalesovo Beam    33.40  342  i P     P      22 44 29.8 +0.8
ZALV                                 pmax   pmax
       comp=Z,12nm,0.9s
ZALV   Zalesovo Beam    33.40  342   P      P      22 44 28.7  -0.3
BRZS   Berezniki        35.19  327  eP      P      22 44 44.7   0.0
       comp=Z,3.1nm,0.9s,baz=327
BRZS   Berezniki        35.19  327  eP      P      22 44 44.6   0.0
BRZS                                 pmax   pmax
       comp=Z,3.0nm,0.9s
KLR    Kul'dur          35.27   35  i P     P      22 44 41.1  -4.2
ZEA    Zeya             36.24   26  eP      P      22 44 52.8  -0.7
ZEA                                  pmax   pmax
       comp=Z,10.0nm,0.5s
BRVK   Borovoye         38.30  330 ceP      P      22 45 12.3 +1.2
BRVK                                 pmax   pmax
       comp=Z,3.0nm,0.6s
ASAJ   Asahikawa        39.53   48   P      P      22 45 22.1 +0.7
       comp=Z,5.1nm,0.8s,baz=265,slow=22,SNR=5.9
GEYT   Alibeck          40.01  302   P      P      22 45 25.6   0.0
       comp=Z,3.1nm,0.7s,baz=112,slow=6.6,SNR=6.0
GEYT   Alibeck          40.01  302   P      P      22 45 26.1 +0.5
DGAR   Diego Garcia     41.63  227 ceP      P      22 45 42.6 +3.5
DGAR                                 pmax   pmax
       comp=Z,237nm,1.7s
ABKAR  Akbulak array    41.91  319   P      P      22 45 40.9  -0.1
ABKAR                                IAmb   IAmb   22 45 49.6
       comp=Z,6.2nm,0.8s
ABKAR  Akbulak array    41.91  319   P      P      22 45 41.3 +0.3
SVE    Sverdlovsk       45.02  329  eP      P      22 46 05.9  -0.1
ARU    Arti             45.81  328 d iP     P      22 46 13.2 +0.9
ARU                                                22 47 56.2
ARU                                  S      S      22 53 00.3 +4.3
ARU                                  pmax   pmax
       comp=Z,16nm,2.4s
TIXI   Tiksi            51.06   11   P      P      22 46 52.4  -0.1
TIXI                                 IAmb   IAmb   22 46 55.0
       comp=Z,3.9nm,0.8s
KIV    Kislovodsk       52.28  309  eP      P      22 47 02.3 +0.1
KIV                                  pmax   pmax
       comp=Z,20nm,1.0s
KIV                                  MLR    MLR
       comp=Z,186nm,17.0s
WB0    Warramunga Arr   53.18  141   P      P      22 47 07.8  -1.2
WRA    Warramunga Arr   53.29  141   P      P      22 47 08.3  -1.4
       comp=Z,5.3nm,0.8s,baz=331,slow=8.1,SNR=26
WRA    Warramunga Arr   53.29  141   P      P      22 47 09.4  -0.4
WB2    Warramunga Arr   53.30  141   P      P      22 47 09.1  -0.8
WB2                                  IAmb   IAmb   22 47 16.3
       comp=Z,12nm,1.1s
WR0    Warramunga Arr   53.42  141   P      P      22 47 09.8  -1.0
WR0                                  IAmb   IAmb   22 47 11.9
       comp=Z,6.0nm,0.7s
VORD   Divnogorie       55.16  317  eP      P      22 47 23.5 +0.5
VORD                                 pmax   pmax
       comp=Z,3.0nm,0.5s
VSR    Storozhevoye     55.26  317  eP      P      22 47 23.1  -0.7
VSR                                  pmax   pmax
       comp=Z,4.0nm,0.7s
LPSR   Galich'ya Gora   55.56  319  eP      P      22 47 25.2  -0.7
LPSR                                 pmax   pmax
       comp=Z,10.0nm,0.8s
ASAR   Alice Springs    55.99  144   P      P      22 47 28.1  -1.3
       comp=Z,2.6nm,0.7s,baz=326,slow=6.6,SNR=15
ASAR   Alice Springs    55.99  144   P      P      22 47 28.3  -1.1
KLMR   Klimovskoe       56.65  329  eP      P      22 47 31.5  -2.0
KLMR                                 pmax   pmax
       comp=Z,19nm,1.3s
KLMR   Klimovskoe       56.65  329  eP      P      22 47 31.6  -2.0
KLMR                                 AMP           22 47 34.7
       comp=Z,19nm,1.3s
OBN    Obninsk          57.24  322  eP      P      22 47 39.0 +1.2
OBN                                 e              22 48 34.7
OBN                                 e              22 49 46.0
OBN                                  pmax   pmax
       comp=Z,6.0nm,0.8s
AKASG  Malin Array Be   61.52  316   P      P      22 48 07.2  -0.4
       comp=Z,0.9nm,0.6s,baz=79,slow=6.5,SNR=4.2
AKBB   Malin Array Si   61.52  316 ceP      P      22 48 08.6 +1.0
FINES  FINESS Array B   63.18  329   P      P      22 48 17.7  -0.7
       comp=Z,5.7nm,0.9s,baz=134,slow=11,SNR=6.4
FINES  FINESS Array B   63.18  329  i P     P      22 48 18.6 +0.2
FINES                                pmax   pmax
       comp=Z,6.0nm,0.9s
FINES  FINESS Array B   63.18  329   P      P      22 48 17.9  -0.5
KEV    Kevo             63.29  338   P      P      22 48 18.2  -0.9
KEV                                  IAmb   IAmb   22 48 35.6
       comp=Z,3.9nm,1.0s
ARCES  ARCESS Array B   63.80  338   P      P      22 48 22.2  -0.2
```

	comp=Z,3.6nm,1.0s,baz=79,slow=6.4,SNR=7.5						
BBOO	Buckleboo	64.50	148	P	P	22 48 27.1	-0.4
STKA	Stephens Creek	66.63	144	P	P	22 48 40.7	-0.6
	comp=Z,1.1nm,0.5s,baz=314,slow=6.2,SNR=4.8						
KMBO	Kilima Mbogo	67.05	258	i P	P	22 48 47.9	+3.2
NB2	NORSAR Subarra	70.36	329	P	P	22 49 02.3	-2.0
	comp=Z,3.3nm,0.9s,baz=78,slow=6.2						
NOA	NORSAR Array B	70.36	329	P	P	22 49 02.5	-1.8
	comp=Z,1.0nm,0.7s,baz=78,slow=6.1,SNR=4.7						
GERES	GERESS Array B	71.73	316	P	P	22 49 11.2	-1.7
	comp=Z,0.4nm,0.6s,baz=61,slow=6.1,SNR=1.5						
BMAR	Burnt Mountain	77.55	21	P	P	22 49 47.8	+1.6
ILAR	Eielson Array	78.04	24	P	P	22 49 48.5	-0.5
	comp=Z,0.3nm,0.7s,baz=297,slow=4.0,SNR=2.9						
C36M	Paulatuk	82.20	15	P	P	22 50 12.3	+0.9
C36M				IAmb	IAmb	22 50 13.1	
	comp=Z,4.9nm,0.7s						
YKA	Yellowknife Ar	90.02	16	P	P	22 50 50.8	+0.7
	comp=Z,0.4nm,0.8s,baz=328,slow=3.9,SNR=6.5						

IDC ***20*** *22:40:54.5±17.0, 11°.39N×87°.61W, h0^{km}, mb3.8/3, mb1 4.1/3, mb1mx3.6/21, mbtmp3.8/3, MS3.5/1, Ms1 3.5/1, ms1mx2.7/28, Error ellipse: s-maj=325.7km s-min=96.3km az=4.0*

SNET ***20*** *22:41:06.5±1.1, 12°.14N×88°.51W, h13^{km}±14^{km}, ML3.2*

UCR ***20*** *22:41:06.1±1.0, 12°.17N×88°.51W, h2^{km}±17^{km}, ML3.2, mb4.1(NEIC)*

INET ***20*** *22:41:07.5, 12°.17N×88°.41W, h12^{km}, MW3.2*

NEIC ***20*** *22:41:08.3±1.6, 12°.13N±0°.07×88°.44W±0°.08, h35^{km}±2^{km}, mb4.1/10, Error ellipse: s-maj=13.3km s-min=10.6km az=56.0*

ISC 20 22:41:04.5±2.6**, 12°.10N**±0°.10×**88°.50W**±0°.06**, h14**^{km}±14^{km}**, n43, σ1^{s}.24**/51**, mb4.0**/8**, 2D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LCY	Lacayo	1.33	9	eP	Pg	22 41 29.6	-0.5
LCY				eS	Sg	22 41 46.7	-0.7
LCY	Lacayo	1.33	9	eP	Pg	22 41 29.6	-0.5
LCY				eS	Sg	22 41 46.7	-0.7
LCND	La Caada	1.34	26	eP	Pg	22 41 29.7	-0.5
LCND				eS	Sg	22 41 47.8	+0.1
LCND				IAML		22 41 57.5	
	comp=Z,450nm,0.5s						
LCND	La Caada	1.34	26	eP	Pg	22 41 29.7	-0.5
LCND				eS	Sg	22 41 47.8	+0.1
LCND				IAML		22 41 57.5	
	comp=Z,450nm,0.5s						
RANC	El Ranchito	1.34	9⇓	eP	Pb	22 41 29.6	+0.1
RANC				eS	Sg	22 41 48.4	+0.6
RANC	El Ranchito	1.34	9⇓	eP	Pb	22 41 29.6	+0.1
RANC				eS	Sg	22 41 48.4	+0.6
PACA	Pacayal	1.37	7	eP	Pg	22 41 30.6	-0.2
PACA				eS	Sg	22 41 48.8	+0.1
PACA	Pacayal	1.37	7	eP	Pg	22 41 30.6	-0.2
PACA				eS	Sg	22 41 48.8	+0.1
TECA	Tecapa	1.38	360	eP	Pb	22 41 30.5	+0.3
TECA				eS	Sg	22 41 50.4	+1.1
TECA	Tecapa	1.38	360	eP	Pb	22 41 30.5	+0.3
TECA				eS	Sg	22 41 50.4	+1.1
CRIN	San Cristobal	1.54	67	Pn	Pb	22 41 32.4	-0.3
COEG	Centro de Oper	1.55	346	eP	Pb	22 41 32.7	-0.4
COEG				IAML		22 41 58.2	
	comp=Z,312nm,0.3s						
COEG	Centro de Oper	1.55	346	eP	Pb	22 41 32.7	-0.4
COEG				IAML		22 41 58.2	
	comp=Z,312nm,0.3s						
LFRS	El Faro	1.61	340	eP	Pb	22 41 33.6	-0.4
LFRS	El Faro	1.61	340	eP	Pb	22 41 33.6	-0.4
PMON	Piamonte	1.79	334	eP	Pn	22 41 36.4	+1.4
PMON	Piamonte	1.79	334	eP	Pn	22 41 36.4	+1.4
JAYA	Jayaque - finc	1.80	329	eP	Pb	22 41 36.9	-0.4
JAYA	Jayaque - finc	1.80	329	eP	Pb	22 41 36.9	-0.4
TGUH	Tegucigalpa,Un	2.28	31		Pn	22 41 42.8	+1.0
MTO3	Montecristo	2.43	340	eP	Pb	22 41 46.4	-1.8
MTO3	Montecristo	2.43	340	eP	Pb	22 41 46.4	-1.8
MTO3	Montecristo	2.43	340	Pn	Pn	22 41 46.2	+2.2
ESQI	Esquipulas	2.58	342	Pn	Pb	22 41 48.8	-1.8
MATN	Matagalpa	2.64	72	Pn	Pn	22 41 48.6	+1.9
BOAB	BOACO BROADBAN	2.79	83	Pn	Pn	22 41 50.1	+1.4
JTS	Las Juntas de	3.92	117	Pn	Pn	22 42 06.3	+2.1
ESPN	Las Esperanzas	4.11	88	Pn	Pn	22 42 06.0	-0.7
TXAR	Lajitas Array	22.21	323	P	P	22 46 04.2	+3.6
	comp=Z,1.1nm,0.7s,baz=147,slow=12,SNR=12						
TX31	Lajitas Ar. Si	22.21	323	P	P	22 46 02.7	+2.0
TX32	Lajitas Array	22.21	323	P	P	22 46 02.6	+1.9
MIAR	Mount Ida	22.82	349	P	P	22 46 08.1	+1.1
MIAR				IAmb	IAmb	22 46 18.5	
	comp=Z,5.5nm,1.1s						
WHAR	Wooly Hollow	23.34	352	P	P	22 46 13.4	+1.1
WHAR				IAmb	IAmb	22 46 27.9	
	comp=Z,6.8nm,1.2s						
X34A	Smith Ranch, M	23.95	341	P	P	22 46 19.2	+0.9
U40A	Yellville	24.47	351	P	P	22 46 24.6	+1.6
U40A				IAmb	IAmb	22 46 26.5	
	comp=Z,5.2nm,1.0s						
S39A	Bolivar	25.84	351	P	P	22 46 36.0	+0.5
S39A				IAmb	IAmb	22 46 36.4	
	comp=Z,5.5nm,0.7s						
CCM	Cathedral Cave	25.96	355	P	P	22 46 34.7	-1.8
CCM				IAmb	IAmb	22 46 38.3	
	comp=Z,5.7nm,0.9s						
KAN13	South Haven SW	26.08	343	P	P	22 46 38.4	+0.7
ULM	Lac du Bonnet	38.52	352	P	P	22 48 25.1	-1.2
	comp=Z,0.9nm,0.5s,baz=171,slow=10,SNR=6.3						
ULM	Lac du Bonnet	38.52	352	IAmb	IAmb	22 48 25.6	
	comp=Z,3.7nm,0.7s						
LRM	Limekiln Ridge	39.29	333	P	P	22 48 31.2	-1.9
RPN	Rapa Nui	43.93	207	LR	LR	23 02 40.4	
	comp=Z,69nm,21.6s,baz=238,slow=30						
YKA	Yellowknife Ar	53.68	345	P	P	22 50 24.6	-0.9
	comp=Z,0.3nm,0.8s,baz=135,slow=8.4,SNR=7.0						

GCG ***20*** *22:50:47.0±0.3, 14°.65N×94°.57W, h50^{km}, MD4.9*

IDC ***20*** *22:50:50.9±0.7, 14°.66N×93°.98W, h0^{km}, mb4.3/17, mb1 4.4/19, mb1mx4.3/31, mbtmp4.3/19, ML4.4/3, MS4.0/24, Ms1 4.0/24, ms1mx3.9/29, Error ellipse: s-maj=26.1km s-min=12.1km az=58.0*

GCMT ***20*** *22:50:55.9±0.5, 14°.82N±0°.03×93°.73W±0°.05, h33^{km}, MW5.0/48, Moment Tensor Solution. s39,c41; s48,c60; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$3.80±.23; M$_{\theta\theta}$-2.07±.15; M$_{\phi\phi}$-1.72±.17; M$_{r\theta}$-0.34±.14; M$_{\theta\phi}$1.15±.09; M$_{\phi r}$0.29±.19; Best double couple: M$_0$3.45800×10^{16} NP1:φ$_s$131.00000°, δ41.00000°, λ90.00000°. NP2: φ$_s$311.00000°, δ49.00000°, λ90.00000°. Principal axes: T 3.8290, Plg86.0000°, Azm220.0000°; N -0.7320, Plg0.0000°, Azm311.0000°; P -3.0870, Plg4.0000°, Azm41.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

MEX ***20*** *22:50:56.6±1.0, 14°.76N×93°.78W, h12^{km}±13^{km}, MD4.8*

NEIC ***20*** *22:50:56.9±3.0, 14°.72N±0°.05×93°.79W±0°.05, h44^{km}±7^{km}, mb4.7/259, Md4.8/26(MEX), Error ellipse: s-maj=8.1km s-min=6.0km az=207.0*

SNET ***20*** *22:50:59.2±1.8, 14°.60N×93°.57W, h30^{km}±999^{km}, ML5.0*

UCR ***20*** *22:50:59.4±1.7, 14°.63N×93°.57W, h71^{km}±386^{km}, ML4.6, mb4.7(NEIC)*

ISC 20 22:50:56.8±1.8**, 14°.77N**±0°.04×**93°.78W**±0°.03**, h35**^{km}±12^{km}**, n511, σ1^{s}.57**/488**, mb4.7**/117**, MS4.0**/24**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		1.08	30	eP	Pn	22 51 14.1	-1.3
PCIG				eS	Sn	22 51 27.3	-1.8
PCIG		1.08	30		Pn	22 51 14.1	-1.3
PCIG					Sn	22 51 27.3	-1.8
THIG		1.47	85	eP	Pn	22 51 19.5	-1.4
THIG				i S	Sn	22 51 37.3	-1.6
THIG		1.47	85		Pn	22 51 19.5	-1.4
THIG					Sn	22 51 37.3	-1.6
RTAL	Retalhuleu	2.04	97		Pn	22 51 27.9	-0.7
RTAL				Sn	Sn	22 51 52.4	-0.4
TGIG		2.09	18	eP	Pn	22 51 30.2	+0.7
TGIG				i S	Sn	22 51 54.3	-0.1
TGIG		2.09	18		Pn	22 51 30.2	+0.7
TGIG					Sn	22 51 56.0	+1.7
TGBT	Tuxtla Gutierr	2.10	18	i P	Pn	22 51 30.5	+1.0
TGBT				i S	Sn	22 51 48.6	-5.9
CCIG	Comitan	2.19	46	eP	Pn	22 51 32.2	+1.4
CCIG				eS	Sn	22 51 57.8	+1.0
CCIG	Comitan	2.19	46		Pn	22 51 31.9	+1.1
CCIG					Sb	22 52 00.2	-2.4
HUEH	Huehuetenango	2.27	76	eS	Sn	22 52 00.3	+1.4
HUEH	Huehuetenango	2.27	76		Pn	22 51 33.0	+1.0
HUIG	Huatulco	2.45	294	eP	Pn	22 51 33.4	-0.9
HUIG				i S	Sn	22 52 02.2	-0.9
HUIG	Huatulco	2.45	294		Pn	22 51 33.1	-1.2
HUIG					Sn	22 52 00.1	-3.0
CMIG	Matias Romero	2.54	335	Pn	Pn	22 51 33.8	-1.7
	48nm,0.3s,baz=146,slow=10,SNR=307						
CMIG				Sn	Sn	22 52 03.1	-2.2
	215nm,0.3s,baz=345,slow=22,SNR=20						
CMIG				LR	LR	22 52 36.8	
	comp=Z,2µm,20.1s,baz=144,slow=41						
CMIG	Matias Romero	2.54	335	eP	Pn	22 51 34.7	-0.8
CMIG				i S	Sn	22 52 03.7	-1.5
CMIG	Matias Romero	2.54	335		Pn	22 51 34.7	-0.8
CMIG					Sn	22 52 03.0	-2.2
FUG	Fuego 3	2.87	96	eP	Pn	22 51 40.2	0.0
FUG				eS	Sb	22 52 23.9	+1.8
PCG	Pacaya	3.10	97	eP	Pn	22 51 45.0	+1.6
TUIG	Tuzandepetl	3.30	349	eP	Pn	22 51 46.8	+0.8
TUIG	Tuzandepetl	3.30	349		Pn	22 51 46.8	+0.8
NBG	Las Nubes	3.33	93	eP	Pn	22 51 49.5	+2.8
PEIG	Puerto Escondi	3.47	291	eP	Pn	22 51 47.9	-0.4
PEIG				i S	Sn	22 52 27.3	-0.9
VHO	Vista Hermosa	3.65	309	eP	Pn	22 51 51.5	+0.6
VHO				i S	Sn	22 52 33.3	+0.5
MRL	Marmol	3.97	85	eP	Pn	22 51 57.3	+1.9
CEVE	Cerro Verde	4.14	103	eP	Pn	22 51 58.2	+0.4
CEVE				IAML		22 53 01.4	
	comp=Z,4µm,0.5s						
CEVE	Cerro Verde	4.14	103	eP	Pn	22 51 58.2	+0.4
CEVE				IAML		22 53 01.4	
	comp=Z,4µm,0.5s						
YOIG	Yosondua	4.17	300	eP	Pn	22 52 00.9	+2.6
YOIG				eS	Sn	22 52 44.8	-1.2
MTO3	Montecristo	4.30	94		Pn	22 51 59.9	0.0
ESQI	Esquipulas	4.30	92		Pn	22 51 59.9	0.0
PETF	Flores	4.33	60	Pn	Pn	22 52 01.2	+1.0
JAYA	Jayaque - finc	4.35	104	eP	Pn	22 52 00.9	+0.3
JAYA				IAML		22 53 00.0	
	comp=Z,1µm,0.7s						
JAYA	Jayaque - finc	4.35	104	eP	Pn	22 52 00.9	+0.3
JAYA				IAML		22 53 00.0	
	comp=Z,1µm,0.7s						
CEDA	San Andres	4.36	102	eS	Sn	22 52 50.2	-0.1
CEDA				IAML		22 53 11.1	
	comp=Z,2µm,0.7s						
CEDA	San Andres	4.36	102	eS	Sn	22 52 50.2	-0.1
CEDA				IAML		22 53 11.1	
	comp=Z,2µm,0.7s						
BOQS	Boqueron	4.49	103	eP	Pn	22 52 02.3	-0.2
BOQS	Boqueron	4.49	103	eP	Pn	22 52 02.3	-0.2
PNIG	Pinotepa	4.49	292	eP	Pn	22 52 02.6	+0.3
PNIG				i S	Sn	22 52 51.9	-1.5
PNIG	Pinotepa	4.49	292		Pn	22 52 02.6	+0.3
LALI	Alcalda de L	4.51	106	eP	Pn	22 52 03.0	+0.4
LALI	Alcalda de L	4.51	106	eP	Pn	22 52 03.0	+0.4
SNET	Serv Nac Est T	4.54	103	Pn	Pn	22 52 03.2	0.0
TOIG	Toxpalan	4.56	317	i P	Pn	22 52 03.8	+0.3
TOIG				i S	Sn	22 52 54.9	-0.6
COEG	Centro de Oper	4.89	103	eS	Sn	22 53 00.7	-2.8
COEG	Centro de Oper	4.89	103	eS	Sn	22 53 00.7	-2.8
TLIG	Tlapa	5.37	302		Pn	22 52 16.5	+2.0
TGUH	Tegucigalpa,Un	6.35	96	Pn	Pn	22 52 28.6	+0.5
TGUH	Tegucigalpa,Un	6.35	96	eP	Pn	22 52 32.6	+4.6
TEIG	Tepich	7.55	43	Pn	Pn	22 52 44.1	-0.3
	comp=Z,50nm,0.3s,baz=307,slow=0.3,SNR=46						
TEIG				Sn	Sn	22 54 08.2	-0.6
	comp=Z,40nm,0.3s,baz=59,slow=21,SNR=6.1						
TEIG	Tepich	7.55	43	Pn	Pn	22 52 44.0	-0.5
TEIG	Tepich	7.55	43	eP	Pn	22 52 44.3	-0.1
MATN	Matagalpa	7.85	103		Pn	22 52 48.8	+0.2
BOAB	BOACO BROADBAN	8.22	105	Pn	Pn	22 52 52.8	-0.9
ACON	Acoyapa	8.83	107	Pn	Pn	22 53 02.1	+0.1
ESPN	Las Esperanzas	9.57	104		Pn	22 53 11.1	-1.1
JTS	Las Juntas de	9.70	116	Pn	Pn	22 53 15.0	+1.0
	comp=Z,0.5nm,0.3s,baz=347,slow=19,SNR=1.7						
JTS	Las Juntas de	9.70	116	Pn	Pn	22 53 13.2	-0.8
ZAIG	Zacatecas	11.51	315	Pn	Pn	22 53 38.5	-0.5
WBCY	West Bay, Gran	12.70	67	Pn	Pn	22 53 54.4	-0.5
833A	Chaparral WMA,	14.46	340	P	Pn	22 54 21.6	+2.7
	baz=158						
HKT	Hockley	15.22	353	Pn	Pn	22 54 29.0	-0.1
HKT				IAmb	IAmb	22 54 56.7	
	comp=Z,51nm,1.5s						
435B	Jarrell	16.32	348	P	P	22 54 45.6	-0.3
	baz=167						
435B	Jarrell	16.32	348		Pn	22 54 44.5	+1.2
435B				IAmb	IAmb	22 54 54.3	
	comp=Z,41nm,0.7s						
HPIG		16.41	319	Pn	Pn	22 54 44.6	-0.1
342A	Flagon Creek P	16.58	4	Pn	Pn	22 54 42.0	-4.6
342A				IAmb	IAmb	22 55 22.7	
	comp=Z,95nm,1.6s						
JCT	Junction City	16.59	342	P	P	22 54 49.9	+1.0
	baz=159,SNR=8.2						
JCT	Junction City	16.59	342		P	22 54 48.2	-0.7
344A	Westbrook Farm	16.84	9		Pn	22 54 50.5	+0.6
344A				IAmb	IAmb	22 54 52.4	
	comp=Z,152nm,1.8s						
H06E1	SOCORRO T-PHAS	16.89	286	T	T	23 12 27.6	
	SNR=22						
NATX	Nacogdoches	16.93	357		Pn	22 54 51.9	+0.9
NATX				IAmb	IAmb	22 55 20.1	
	comp=Z,76nm,1.5s						
346A	Big Creek Wild	17.01	13	Pn	Pn	22 54 50.6	-1.3
346A				IAmb	IAmb	22 55 47.5	
	comp=Z,42nm,0.7s						
TX31	Lajitas Ar. Si	17.13	329	Pn	Pn	22 54 52.5	-1.1
TX32	Lajitas Array	17.13	329	Pn	Pn	22 54 52.5	-1.1
TXAR	Lajitas Array	17.13	329	LR	LR	23 01 27.1	
	comp=Z,78nm,19.1s,baz=0.0,slow=37						
237A	Washetta, Mont	17.25	354	Pn	Pn	22 54 54.2	-0.8
237A				IAmb	IAmb	22 55 16.9	
	comp=Z,87nm,1.2s						
BRAL	Brewton	17.45	20	P	P	22 55 00.5	+2.1
	baz=202						
BRAL	Brewton	17.45	20	Pn	Pn	22 54 55.2	-2.3
WHTX	Lake Whitney,	17.47	350	P	P	22 54 59.6	+1.0
	baz=168						
WHTX	Lake Whitney,	17.47	350	P	Pn	22 54 56.9	-0.8
DWPF	Disney Wildern	17.54	39	P	P	22 55 00.1	+0.6
	baz=223						
DWPF	Disney Wildern	17.54	39	Pn	Pn	22 54 57.3	-1.3
VBMS	Vicksburg	17.62	9	Pn	Pn	22 54 58.8	-0.7
143A	Socs Landing,	17.98	7	P	Pn	22 55 01.7	-2.3
143A				IAmb	IAmb	22 55 08.9	
	comp=Z,68nm,0.9s						
LPIG	La Paz	18.12	303	LR	LR	23 02 09.2	
	comp=Z,515nm,18.0s,baz=118,slow=38						
146A	Union	18.30	13	P	P	22 55 06.0	-1.8
146A				IAmb	IAmb	22 55 50.4	
	comp=Z,92nm,1.4s						
Z41A	Richland Creek	18.43	3	P	Pn	22 55 11.1	+1.7
	baz=183						
Z38A	Mt. Pleasant	18.44	357	P	P	22 55 09.4	+0.1
Z38A				IAmb	IAmb	22 55 19.2	
	comp=Z,35nm,0.8s						
250A	Grady	18.45	21	P	P	22 55 08.5	-1.0
250A				IAmb	IAmb	22 55 29.0	
	comp=Z,105nm,1.5s						
352A	Blakely	18.50	24	P	P	22 55 10.0	0.0
352A				IAmb	IAmb	22 55 17.9	
	comp=Z,36nm,0.9s						
ABTX	Abilene, Hawle	18.56	344	P	Pn	22 55 12.8	+1.7
	baz=162						
ABTX	Abilene, Hawle	18.56	344	P	P	22 55 11.1	+0.4
Z35A	Perchaven, San	18.74	351	P	P	22 55 12.8	+0.1
Z35A				IAmb	IAmb	22 55 31.2	
	comp=Z,49nm,1.0s						
WLAR	White Oak Lake	18.84	2	P	P	22 55 14.3	+0.6
WLAR				IAmb	IAmb	22 55 24.9	
	comp=Z,103nm,1.4s						
DBBC	Dabeiba	18.89	112	eP	Pn	22 55 15.2	-0.1
Z47A	Carrollton	19.07	15	P	P	22 55 16.5	+0.3
Z47A				IAmb	IAmb	22 55 21.9	
	comp=Z,58nm,1.1s						
CCAR	Cane Creek	19.15	5	P	P	22 55 17.8	+0.7
LRAL	Lakeview Retre	19.20	18	P	Pn	22 55 19.5	+0.7
	baz=200,SNR=9.2						
LRAL	Lakeview Retre	19.20	18	P	P	22 55 15.4	-2.3
UREC	San Jos de Ur	19.20	109	eP	P	22 55 14.6	-3.3
456A	Hilliard	19.20	32	P	P	22 55 17.6	-0.1
456A				IAmb	IAmb	22 55 58.9	
	comp=Z,58nm,1.1s						
GR1C	Gorgona, Isla	19.34	126	eP	Pn	22 55 25.2	+4.6
Y45A	Yeager Farm, C	19.39	11	P	P	22 55 19.6	-0.2
MALC	Bahia Malaga	19.41	122	eP	Pn	22 55 22.0	+0.5
152A	Waverly Hall	19.64	23	P	P	22 55 22.5	+0.1
X40A	Basin Creek Fa	19.65	2	P	Pn	22 55 24.7	+0.5
	baz=183						
X40A	Basin Creek Fa	19.65	2	P	P	22 55 21.8	-0.7
MIAR	Mount Ida	19.69	1	P	Pn	22 55 24.6	-0.1
	baz=180,SNR=13						
MIAR	Mount Ida	19.69	1	P	P	22 55 22.3	-0.7
MIAR				IAmb	IAmb	22 55 31.4	
	comp=Z,39nm,0.9s						
X37A	Clayton	19.79	356	P	Pn	22 55 25.8	0.0
X37A				IAmb	IAmb	22 55 32.7	
	comp=Z,41nm,1.0s						
PLMC	San Jos del P	19.82	118	eP	P	22 55 24.0	-0.6
X43A	Marvell	19.84	7	P	Pn	22 55 26.8	+0.5
	baz=188,SNR=8.8						
GDL2	Guadalupe Moun	19.86	333	P	Pn	22 55 28.5	+1.7
MNTX	Cornudas Mount	19.91	330	P	Pn	22 55 27.3	0.0
	baz=145,SNR=8.0						
MNTX	Cornudas Mount	19.91	330		Pn	22 55 27.3	0.0
255A	Hazlehurst	19.96	29	P	Pn	22 55 28.2	+0.4
OXF	Oxford	20.05	11	P	Pn	22 55 28.7	-0.1
	baz=192						
OXF	Oxford	20.05	11	P	Pn	22 55 29.3	+0.5
Z51A	Franklin	20.05	21	P	Pn	22 55 29.3	+0.4
Z51A				IAmb	IAmb	22 56 19.1	
	comp=Z,37nm,1.4s						
X34A	Smith Ranch, M	20.08	350		Pn	22 55 29.7	+0.5
X34A				IAmb	IAmb	22 55 44.2	
	comp=Z,45nm,1.0s						
Y49A	Blount Mountai	20.14	18	P	Pn	22 55 30.8	+0.9
SMLC	San Martn de	20.18	105	eP	Pn	22 55 31.3	+0.7
154A	Montrose	20.25	27	P	P	22 55 29.9	+0.8
YOTC	Yotoco, Valle	20.25	120	eP	Pn	22 55 32.6	+1.0
W39A	Magazine	20.34	360	P	Pn	22 55 31.9	-0.3
	baz=180,SNR=7.8						
W39A	Magazine	20.34	360	P	Pn	22 55 33.1	+0.9
W39A				IAmb	IAmb	22 55 38.0	
	comp=Z,34nm,1.1s						
W41B	Gary Mavity, V	20.36	4	P	P	22 55 31.5	+1.1
	baz=184,SNR=6.2						
WMOK	Wichita Mounta	20.39	348	P	P	22 55 31.8	+1.2
	baz=166,SNR=10						
WMOK	Wichita Mounta	20.39	348	P	P	22 55 30.1	-0.5
GUY2C	Guyana, Caldas	20.45	116	eP	P	22 55 32.5	+0.5
WHAR	Wooly Hollow	20.48	3		P	22 55 32.9	+1.4
WHAR				IAmb	IAmb	22 55 52.6	
	comp=Z,62nm,1.4s						
X48A	Hartselle	20.52	16		Pn	22 55 34.1	-0.2
FNO	Franklin	20.66	352		Pn	22 55 36.4	+0.4
BBAC	Balboa, Cauca	20.66	126	eP	Pn	22 55 35.9	-0.5
PTBC	PUERTO BERRIO,	20.66	111	eP	P	22 55 32.9	-1.0
W45A	Hickory Valley	20.72	11	P	Pn	22 55 37.3	+0.7
NORC	Norcasia	20.73	114	eP	Pn	22 55 36.7	-0.3
PLAL	Pickwick Lake	20.77	13	P	Pn	22 55 36.9	-0.4
PLAL				IAmb	IAmb	22 55 42.2	
	comp=Z,35nm,1.1s						
MSTX	Muleshoe	20.77	339	P	Pn	22 55 36.8	-0.7
	baz=155						
MSTX	Muleshoe	20.77	339	P	Pn	22 55 36.8	-0.7
MSTX				IAmb	IAmb	22 55 41.2	
	comp=Z,68nm,1.2s						
GOGA	Godfrey	20.78	25	P	Pn	22 55 36.8	-0.7
	baz=209						
GOGA	Godfrey	20.78	25		Pn	22 55 37.8	+0.3
GOGA				IAmb	IAmb	22 55 46.9	
	comp=Z,55nm,1.4s						
POPC	Popayan, Colom	20.80	124	eP	Pn	22 55 37.1	-1.0
OKCFA	Oklahoma City	20.82	352	P	P	22 55 36.3	+1.0
OKCFA				IAmb	IAmb	22 55 41.0	
	comp=Z,43nm,0.9s						
HBAR	Harrisburg	20.89	7	P	P	22 55 36.2	+0.2
OTAV	Otavalo	20.94	132	P	P	22 55 35.6	-1.6
OTAV	Otavalo	20.94	132	eP	Pn	22 55 38.9	-1.0
Y52A	Lilburn	20.95	23	P	P	22 55 36.0	-0.7
Y52A				IAmb	IAmb	22 55 50.4	
	comp=Z,52nm,1.1s						
OK025	Westminster Rd	20.97	352	P	P	22 55 36.9	0.0
OK025				IAmb	IAmb	22 55 49.3	
	comp=Z,54nm,1.1s						
LPAR	Lepanto	20.98	8	P	Pn	22 55 40.0	+0.3
FPAL	Fort Paine	21.02	19	P	P	22 55 36.4	-1.1
FPAL				IAmb	IAmb	22 56 14.3	
	comp=Z,40nm,1.2s						
BCOK	Bluff Creek, N	21.08	351	P	P	22 55 39.3	+1.2
GCUF	Volcan Galeras	21.09	128	eP	P	22 55 40.2	+1.3
TUL1	Leonard	21.13	355	P	P	22 55 41.7	+3.1
	baz=174						
TUL1	Leonard	21.13	355	P	P	22 55 42.0	+3.4
TUL1				IAmb	IAmb	22 55 48.2	
	comp=Z,31nm,0.8s						
PCON	Cinco Dias	21.15	124	eP	P	22 55 40.2	+0.6
OK029	Liberty Lake	21.20	352	P	P	22 55 39.8	+0.5
OK029				IAmb	IAmb	22 56 01.9	
	comp=Z,38nm,0.8s						
MARP	Paez Belalcaza	21.21	122	eP	P	22 55 41.3	+1.4
ORTC	Ortega, Tolima	21.21	119	eP	P	22 55 40.6	+0.8
OK030	Cody Creek RV	21.24	353	IAmb	IAmb	22 56 29.1	
	comp=Z,25nm,0.8s						
AMTX	Amarillo	21.25	342	P	P	22 55 41.7	+1.7
	baz=158						
AMTX	Amarillo	21.25	342	P	P	22 55 41.3	+1.3
OK031	S. Brethren Rd	21.27	353	P	P	22 55 42.6	+2.5
OK031				IAmb	IAmb	22 55 55.4	
	comp=Z,23nm,0.6s						
HSIG		21.29	315	P	P	22 55 42.3	+1.9
X51A	Calhoun	21.29	21	P	P	22 55 42.2	+1.8
X51A				IAmb	IAmb	22 56 07.5	
	comp=Z,61nm,1.6s						
LCAR	Lake Charles	21.34	6	IAmb	IAmb	22 56 10.1	
	comp=Z,45nm,1.1s						
GNAR	Gosnell	21.37	8	P	P	22 55 43.0	+1.8
HALT	Halls	21.43	10	P	P	22 55 45.3	+3.5
QUOK	Quay	21.47	354	P	P	22 55 44.8	+2.5
QUOK				IAmb	IAmb	22 55 53.5	
	comp=Z,37nm,0.9s						
U40A	Yellville	21.51	2	P	P	22 55 44.6	+1.9
	baz=182,SNR=7.4						
U40A	Yellville	21.51	2	IAmb	IAmb	22 56 42.6	
	comp=Z,25nm,1.1s						
PEBM	Pemiscott Bayo	21.54	9	P	P	22 55 45.9	+2.9
ROSC	El Rosal	21.55	115	P	P	22 55 45.1	+1.4
	comp=Z,51nm,0.9s,baz=144,slow=4.3,SNR=24						
ROSC	El Rosal	21.55	115	P	P	22 55 45.6	+1.9
ROSC	El Rosal	21.55	115	eP	P	22 55 46.7	+3.0
SWET	Sewanee	21.55	18	P	P	22 55 44.2	+1.0
SWET				IAmb	IAmb	22 56 34.2	
	comp=Z,30nm,1.2s						
LNXT	Lenox	21.59	9	P	P	22 55 42.8	-0.7
U38A	Gravette	21.59	359	P	P	22 55 44.3	+0.8
PRAC	Prado	21.62	119	eP	P	22 55 44.8	+0.7
Z56A	Williston	21.64	29	P	P	22 55 45.2	+1.2
Z56A				IAmb	IAmb	22 56 23.3	
	comp=Z,40nm,0.8s						
BETC	Betania	21.72	122	eP	P	22 55 45.9	+0.7
W50A	Signal Mountai	21.72	19	P	P	22 55 45.8	+0.8
319A	Douglas	21.78	322	P	P	22 55 48.4	+2.6
GLAT	Glass	21.78	10	P	P	22 55 48.6	+3.0
V48A	Smith Brothers	21.80	15	IAmb	IAmb	22 56 02.0	
	comp=Z,33nm,1.2s						
BARC	Barichara	21.80	110	eP	P	22 55 48.6	+2.4
121A	Cookes Peak, D	21.80	327	P	P	22 55 48.7	+2.7
	baz=141,SNR=15						
121A	Cookes Peak, D	21.80	327	P	P	22 55 49.0	+3.0
121A				IAmb	IAmb	22 55 58.4	
	comp=Z,39nm,0.9s						
SDDR	Presa de Saban	21.92	76	eP	P	22 55 45.2	-2.2
WVT	Waverly	21.93	13	P	P	22 55 49.2	+2.1
	baz=195						
WVT	Waverly	21.93	13	P	P	22 55 48.3	+1.1
WVT				IAmb	IAmb	22 56 10.2	
	comp=Z,41nm,1.4s						
PAMC	Pamplona, Colo	21.96	107	eP	P	22 55 47.5	-0.7
HODGE	Hodges	22.00	26	P	P	22 55 48.5	+0.6

HODGE				IAmb	IAmb	22 56 39.3	
	comp=Z,36nm,1.2s						
U32A	Winter Ranch,	22.02	349	P	P	22 55 47.6	-0.6
U32A				IAmb	IAmb	22 56 00.0	
	comp=Z,58nm,1.4s						
NHSC	New Hope	22.04	32	P	P	22 55 51.4	+3.0
	baz=217						
HICK	Hickman	22.06	10	P	P	22 55 50.6	+2.0
PARMO	Parma	22.10	9	P	P	22 55 51.6	+2.6
PBMO	Poplar Bluff	22.12	7	P	P	22 55 51.4	+2.1
PBMO				IAmb	IAmb	22 56 16.5	
	comp=Z,32nm,0.8s						
CHIC	Chingaza	22.16	115	*e*P	P	22 55 52.1	+1.8
RUSC	La Rusia	22.17	111	*e*P	P	22 55 52.1	+1.6
CFLOR	Florencia	22.18	125	*e*P	P	22 55 52.9	+2.7
FLOC	Florencia	22.19	125	*e*P	P	22 55 51.7	+1.5
T35A	Sooner Cattle	22.19	354	P	P	22 55 50.6	+0.7
T35A				IAmb	IAmb	22 56 11.6	
	comp=Z,41nm,1.1s						
CPCT	Cooper Cave	22.21	20	P	P	22 55 51.0	+0.7
CLTN	Cedars of Leba	22.25	16		P	22 55 50.8	+0.1
CLTN				IAmb	IAmb	22 56 04.2	
	comp=Z,25nm,1.1s						
T42A	Van Buren	22.30	6	P	P	22 55 51.4	+0.3
T42A				IAmb	IAmb	22 56 20.2	
	comp=Z,42nm,1.5s						
MGMO	Mountain Grove	22.33	3	IAmb	IAmb	22 56 03.5	
	comp=Z,67nm,1.6s						
BG3	Lake Jocassee	22.38	24	P	P	22 55 52.7	+0.7
BG3				IAmb	IAmb	22 56 08.0	
	comp=Z,28nm,1.1s						
KAN13	South Haven SW	22.39	352	P	P	22 55 52.6	+0.4
KAN13				IAmb	IAmb	22 56 41.6	
	comp=Z,55nm,1.3s						
KAN14	Manchester OK	22.41	351	P	P	22 55 54.0	+1.7
KAN14				IAmb	IAmb	22 56 41.2	
	comp=Z,31nm,1.4s						
JSC	Jenkinsville	22.48	28	P	P	22 55 54.2	+1.1
SC01	Santiago de lo	22.51	75	P	P	22 55 52.2	-1.4
BNM	Barren Site	22.52	331	P	P	22 55 56.8	+2.9
KAN05	Bluff City Nor	22.54	351	P	P	22 55 55.0	+1.2
KAN01	Argonia South	22.57	352	P	P	22 55 52.7	-1.4
KAN01				IAmb	IAmb	22 56 29.6	
	comp=Z,20nm,0.9s						
V51A	Loudon	22.59	20	P	P	22 55 53.8	-0.5
V51A				IAmb	IAmb	22 56 34.8	
	comp=Z,73nm,1.9s						
KAN10	Anthony SW Sta	22.59	351	P	P	22 55 53.2	-1.1
TKL	Tuckaleechee C	22.66	22	P	P	22 55 56.7	+1.7
	comp=Z,5.6nm,0.9s,baz=198,slow=17,SNR=3.1						
TKL				LR	LR	23 06 59.5	
	comp=Z,529nm,18.3s,baz=192,slow=42						
TKL	Tuckaleechee C	22.66	22	P	P	22 55 54.8	-0.2
TKL				IAmb	IAmb	22 56 30.6	
	comp=Z,37nm,1.2s						
KAN08	Anthony NE Sta	22.67	351	P	P	22 55 54.9	-0.2
LENM	Lemitar	22.69	331	P	P	22 55 58.0	+2.4
KAN12	Harper NE Stat	22.75	351	P	P	22 55 56.7	+0.8
U49A	Red Boiling Sp	22.80	17	P	P	22 55 56.1	-0.4
U49A				IAmb	IAmb	22 56 20.8	
	comp=Z,40nm,1.2s						
S39A	Bolivar	22.83	1	IAmb	IAmb	22 56 06.8	
	comp=Z,43nm,1.6s						
T47A	Sharon Grove	22.91	14	P	P	22 55 56.1	-1.5
V53A	Saluda	23.02	23	P	P	22 55 59.8	+0.9
ANMO	Albuquerque	23.10	333	P	P	22 55 59.8	-0.1
	comp=Z,1.0nm,0.4s,baz=118,slow=18,SNR=3.4						
ANMO	Albuquerque	23.10	333	P	P	22 56 01.8	+1.9
	baz=147						
ANMO	Albuquerque	23.10	333	P	P	22 56 02.1	+2.3
BIRD	Birdtown, Kers	23.15	29	P	P	22 56 02.5	+2.4
BIRD				IAmb	IAmb	22 56 47.8	
	comp=Z,25nm,1.0s						
KMSC	Kings Mountain	23.17	27	P	P	22 56 02.2	+1.9
	baz=212						
KMSC	Kings Mountain	23.17	27	P	P	22 56 02.4	+2.1
KMSC				IAmb	IAmb	22 56 26.3	
	comp=Z,22nm,1.0s						
S44A	Carbondale	23.18	9	P	P	22 56 02.7	+2.4
SIUC	Southern Illin	23.21	9	P	P	22 56 05.8	+5.2
CCM	Cathedral Cave	23.30	5	P	P	22 56 02.6	+1.0
	baz=186						
CCM	Cathedral Cave	23.30	5	P	P	22 56 02.0	+0.5
FVM	French Village	23.31	7	P	P	22 56 03.5	+1.9
FVM				IAmb	IAmb	22 56 50.7	
	comp=Z,50nm,1.9s						
MACC	Macarena, Meta	23.34	121	*e*P	P	22 56 04.0	+1.9
TUC	Tucson	23.35	321	P	P	22 56 04.5	+2.3
	baz=134						
TUC	Tucson	23.35	321	P	P	22 56 04.5	+2.3
TUC				IAmb	IAmb	22 56 06.6	
	comp=Z,36nm,1.4s						
SDV	Santo Domingo	23.39	102	P	P	22 56 02.3	-0.6
	comp=Z,6.8nm,0.8s,baz=226,slow=1.0,SNR=6.0						
SDV				LR	LR	23 06 05.5	
	comp=Z,383nm,19.6s,baz=296,slow=39						
SDV	Santo Domingo	23.39	102	P	P	22 56 03.2	+0.3
SDV				IAmb	IAmb	22 56 13.1	
	comp=Z,17nm,0.8s						
SDV	Santo Domingo	23.39	102	*e*P	P	22 56 02.4	-0.5
T50A	Nancy	23.55	18	P	P	22 56 05.1	+1.1
T50A				IAmb	IAmb	22 56 53.7	
	comp=Z,48nm,1.8s						
R32A	Long Quarter,	23.96	350	P	P	22 56 08.1	+0.2
T25A	Trinidad	24.20	339	P	P	22 56 11.3	+0.9
	baz=154,SNR=9.3						
WCI	Wyandotte Cave	24.29	14	P	P	22 56 11.4	+0.5
	baz=198						
WCI	Wyandotte Cave	24.29	14	P	P	22 56 11.2	+0.3
WCI				IAmb	IAmb	22 56 31.3	
	comp=Z,25nm,1.1s						
KSU1	Kansas State U	24.36	355	P	P	22 56 11.8	+0.3
	baz=173						
KSU1	Kansas State U	24.36	355	P	P	22 56 11.0	-0.5
KSU1				IAmb	IAmb	22 57 09.0	
	comp=Z,24nm,1.1s						
214A	Organ Pipe Nat	24.38	318	P	P	22 56 12.4	+0.5
	baz=130,SNR=5.6						
214A	Organ Pipe Nat	24.38	318	P	P	22 56 13.0	+1.1
Q44A	Meyer Farm, Va	24.40	9	P	P	22 56 14.2	+2.3
S51A	Beattyville	24.51	20	P	P	22 56 12.8	-0.1
S51A				IAmb	IAmb	22 56 40.1	
	comp=Z,33nm,1.2s						
CBKS	Cedar Bluff	24.52	349	P	P	22 56 14.2	+1.1
	baz=166						
CBKS	Cedar Bluff	24.52	349	P	P	22 56 12.5	-0.6
CBKS				IAmb	IAmb	22 56 24.2	
	comp=Z,35nm,1.0s						
PIX	Pinacate	24.56	316	P	P	22 56 11.9	-1.5
U56A	King	24.60	27	P	P	22 56 15.8	+2.0
	baz=212						
R49A	Shelbyville	24.64	16	P	P	22 56 13.8	-0.3
R49A				IAmb	IAmb	22 56 45.4	
	comp=Z,31nm,1.3s						
P40A	Paris	24.71	3	P	P	22 56 13.4	-1.3
P40A				IAmb	IAmb	22 56 34.7	
	comp=Z,14nm,0.8s						
P38A	Dawn	24.76	0	P	P	22 56 14.6	-0.5
P38A				IAmb	IAmb	22 56 47.4	
	comp=Z,46nm,1.6s						
R50A	Paris	24.87	18	P	P	22 56 16.2	0.0
R50A				IAmb	IAmb	22 56 41.9	
	comp=Z,25nm,1.0s						
V59A	Middlesex	25.12	31	P	P	22 56 21.5	+3.0
	baz=217						
SDCO	Great Sand Dun	25.13	338	P	P	22 56 20.7	+1.8
	baz=152						
SDCO	Great Sand Dun	25.13	338	P	P	22 56 20.1	+1.2
U57A	Blanch	25.14	28	P	P	22 56 22.0	+3.4
	baz=214						
KSCO	Kaye Shedlock'	25.37	344	P	P	22 56 20.8	0.0
KSCO				IAmb	IAmb	22 56 32.9	
	comp=Z,27nm,0.8s						
P46A	Rosedale	25.42	12	P	P	22 56 20.9	-0.2
P46A				IAmb	IAmb	22 56 36.9	
	comp=Z,23nm,0.9s						
SPX	San Pedro Mart	25.63	313	P	P	22 56 22.5	-1.1
MVCO	Mesa Verde	25.90	332	P	P	22 56 28.8	+3.0
	baz=146						
MVCO	Mesa Verde	25.90	332	P	P	22 56 26.4	+0.6
MVCO				IAmb	IAmb	22 57 10.1	
	comp=Z,24nm,1.6s						
T58A	Grand View Acr	25.93	29	P	P	22 56 28.7	+2.9
	baz=215						
N38A	Joes South For	25.93	1	P	P	22 56 24.6	-1.1
WUAZ	Wupatki	26.00	326	P	P	22 56 28.6	+2.0
	baz=138						
WUAZ	Wupatki	26.00	326	P	P	22 56 25.5	-1.2
WUAZ				IAmb	IAmb	22 56 41.8	
	comp=Z,18nm,1.1s						
N35A	Tabor	26.05	357	P	P	22 56 26.3	-0.5
N35A				IAmb	IAmb	22 56 29.4	
	comp=Z,29nm,1.1s						
Q24A	Divide	26.10	340	P	P	22 56 30.6	+2.9
	baz=154						
U60A	Pendleton	26.22	31	P	P	22 56 30.9	+2.5
	baz=219						
GLA	Glamis	26.39	317	P	P	22 56 32.7	+2.7
	baz=129						
GLA	Glamis	26.39	317	P	P	22 56 32.6	+2.5
ESJX	Sierra Juarez	26.52	314	P	P	22 56 33.6	+2.2
ATAH	Atahualpa	26.58	144	P	P	22 56 31.5	-0.8
	comp=Z,15nm,0.8s,baz=327,slow=5.6,SNR=11						
ATAH				LR	LR	23 05 24.2	
	comp=Z,324nm,19.1s,baz=294,slow=33						
PV01	Paradox Valley	26.70	333	P	P	22 56 35.3	+2.3
SJG	San Juan	26.70	79	LR	LR	23 07 43.6	
	comp=Z,174nm,18.9s,baz=256,slow=38						
PDMCI	Parker Dam,Lak	26.76	320	P	P	22 56 35.9	+2.6
	baz=132						
PV02	Paradox Valley	26.83	333	P	P	22 56 36.4	+2.1
PV15	Paradox Valley	26.83	334	P	P	22 56 36.5	+2.3
PV03	Paradox Valley	26.92	333	P	P	22 56 36.1	+1.1
PV03				IAmb	IAmb	22 57 06.5	
	comp=Z,30nm,1.6s						
PV18	Skein Mesa, Pa	26.94	333	P	P	22 56 37.2	+2.0
SMCO	Snowmass	26.94	337	P	P	22 56 37.5	+2.1
PV12	Saucer Basin,	26.95	333	P	P	22 56 37.9	+2.6
PV12				IAmb	IAmb	22 57 11.9	
	comp=Z,19nm,1.0s						
PV11	David Mesa, Pa	26.97	333	P	P	22 56 35.6	+0.2
PV11				IAmb	IAmb	22 57 31.8	
	comp=Z,13nm,1.0s						
SWSC	Sam W. Stewart	26.97	316	P	P	22 56 37.8	+2.5
	baz=127						
PV07	Paradox Valley	26.98	334	P	P	22 56 33.2	-2.4
PV16	Nyswonger Mesa	27.00	333	P	P	22 56 35.1	-0.5
ISCO	Idaho Springs	27.00	340	P	P	22 56 37.4	+1.6
	baz=154						
ISCO	Idaho Springs	27.00	340	P	P	22 56 34.8	-1.1
IKP	In-Ko-Pah, Jac	27.01	315	P	P	22 56 38.2	+2.5
	baz=126						
SCIA	State Center	27.04	1	P	P	22 56 37.5	+1.7
	baz=181						
OGNE	Ogallala	27.05	346	P	P	22 56 37.7	+1.7
	baz=162						
OGNE	Ogallala	27.05	346	P	P	22 56 36.4	+0.4
PV10	Paradox Valley	27.10	333	P	P	22 56 35.6	-1.1
PV10				IAmb	IAmb	22 57 21.3	
	comp=Z,20nm,1.3s						
W13A	Hualapai Mount	27.14	322	P	P	22 56 37.5	+0.5
PV23	Carpenter Ridg	27.16	333	P	P	22 56 36.0	-1.2
PV23				IAmb	IAmb	22 57 10.9	
	comp=Z,12nm,0.9s						
U15A	North Rim	27.17	326	P	P	22 56 35.9	-1.4
BC3	Big Chuckawall	27.18	318	P	P	22 56 39.0	+1.8
	baz=129,SNR=9.6						
L34A	Svendsen Farm,	27.19	356	P	P	22 56 36.5	-0.7
L34A				IAmb	IAmb	22 56 49.0	
	comp=Z,27nm,1.1s						
CBX	Cerro Bola	27.19	314	P	P	22 56 36.5	-0.9
IRM	Iron Mountain	27.29	319	P	P	22 56 40.9	+2.7
	baz=130,SNR=6.6						
L42A	Oliver, Polo	27.37	7	P	P	22 56 38.1	-0.6
L42A				IAmb	IAmb	22 56 42.7	
	comp=Z,29nm,1.2s						
BELC	Belle Mtn. Jos	27.75	318	P	P	22 56 44.8	+2.4
	baz=128						
PFO	Pinyon Flats O	27.81	316	LR	LR	23 08 17.4	
	comp=Z,499nm,20.0s,baz=134,slow=38						
KNB	Kanab	27.89	326	P	P	22 56 43.8	+0.1
Q58A	Fox Den Farm,	27.94	27	P	P	22 56 46.6	+2.8
	baz=215						
GMRC	Granite Mounta	28.02	319	P	P	22 56 47.6	+2.8
	baz=130						
JFWS	Jewell Farm	28.21	5	P	P	22 56 45.6	-0.6
	baz=187						
O20A	White River Ci	28.26	336	P	P	22 56 47.3	+0.4
	baz=149						
PHWY	Pilot Hill	28.31	341	P	P	22 56 45.7	-1.8
MTPU	Mount Pierson	28.33	328	P	P	22 56 46.7	-1.1
MTPU				IAmb	IAmb	22 57 07.8	
	comp=Z,30nm,2.0s						
SZCU	Shurtz Canyon	28.46	327	P	P	22 56 48.2	-0.7
Q16A	Castle Valley	28.52	331	P	P	22 56 48.6	-0.7
CCUT	Cedar City	28.58	326	P	P	22 56 47.8	-2.1
PCRV	Puerto La Cruz	28.81	96	LR	LR	23 10 10.0	
	comp=Z,328nm,18.4s,slow=40						
SHPR	Sheep Range	28.85	323	P	P	22 56 51.6	-0.6
ECSD	EROS Data Cent	28.97	356	P	P	22 56 52.7	-0.3
	baz=174,SNR=8.4						
ECSD	EROS Data Cent	28.97	356	P	P	22 56 50.4	-2.6
ECSD				IAmb	IAmb	22 57 01.9	
	comp=Z,15nm,0.9s						
RWWY	Rawlins	29.24	339	P	P	22 56 54.2	-1.5
RWWY				IAmb	IAmb	22 56 59.2	
	comp=Z,20nm,1.1s						
PSUT	Pine Spring	29.57	327	P	P	22 56 57.2	-1.4
NLU	North Lily Min	29.76	331	P	P	22 56 59.2	-1.1
TPNV	Topopah Spring	29.80	322	P	P	22 57 03.6	+3.0
	baz=132						
TPNV	Topopah Spring	29.80	322	P	P	22 57 00.0	-0.6
TPNV				IAmb	IAmb	22 57 05.5	
	comp=Z,18nm,1.6s						
MPMC	Manual Prospec	29.98	319	P	P	22 57 04.0	+1.7
	baz=129						
SPMN	Marine on St.	30.37	1	P	P	22 57 04.6	-0.8
	baz=182						
SPMN	Marine on St.	30.37	1	P	P	22 57 04.0	-1.3
SPMN				IAmb	IAmb	22 57 14.5	
	comp=Z,11nm,0.6s						
R11A	Troy Canyon, C	30.37	325	P	P	22 57 06.8	+1.1
	baz=135						
R11A	Troy Canyon, C	30.37	325	P	P	22 57 05.2	-0.5
TCUT	Toone Canyon	30.39	333	P	P	22 57 06.1	+0.1
TCUT				IAmb	IAmb	22 57 10.7	
	comp=Z,36nm,1.7s						
CZSB	Cruzeiro do Su	30.61	136	*e*P	P	22 57 09.3	+1.5
PKM	Mcpherson Peak	30.81	315	P	P	22 57 11.9	+2.3
	baz=124						
BGU	Big Grassy Mou	30.98	331	P	P	22 57 10.8	-0.2
F36A	Milaca	30.99	0	IAmb	IAmb	22 57 11.2	
	comp=Z,25nm,1.4s						
PDAR	Pinedale Array	31.02	337	P	P	22 57 09.8	-1.7
	comp=Z,1.3nm,0.9s,baz=131,slow=11,SNR=2.1						
PDAR				LR	LR	23 10 59.7	
	comp=Z,144nm,19.4s,baz=143,slow=39						
TPH	Tonopah	31.12	323	P	P	22 57 13.1	+0.8
HVU	Hansel Valley	31.54	332	P	P	22 57 14.6	-1.3
HVU				IAmb	IAmb	22 57 19.6	
	comp=Z,30nm,1.9s						
PAGB	Antelope Grade	31.58	316	P	P	22 57 15.9	-0.3
PAGB				IAmb	IAmb	22 57 33.3	
	comp=Z,11nm,1.1s						
AHID	Auburn Hatcher	31.62	335	P	P	22 57 17.8	+1.1
AHID				IAmb	IAmb	22 58 23.9	
	comp=Z,6.1nm,0.7s						
OMMB	Old Mammoth Mi	31.90	320	P	P	22 57 19.1	-0.2
OMMB				IAmb	IAmb	22 57 23.7	
	comp=Z,13nm,1.4s						
NV11	Mina Array Sit	31.91	322	P	P	22 57 20.5	+1.3
NV11				IAmb	IAmb	22 57 32.6	
	comp=Z,16nm,1.1s						
ELK	Elko	31.92	328	P	P	22 57 20.5	+1.1
MDPB	Devils Postpil	31.96	320	P	P	22 57 20.5	+0.7
NVAR	Mina Array Bea	32.00	322	P	P	22 57 17.0	-3.1
	comp=Z,0.5nm,0.4s,baz=134,slow=7.8,SNR=4.5						
NVAR				LR	LR	23 12 03.4	
	comp=Z,670nm,19.2s,baz=126,slow=40						
NVAR	Mina Array Bea	32.00	322	P	P	22 57 19.8	-0.2
LHV	Little Huntoon	32.00	322	P	P	22 57 18.9	-0.9
LHV				IAmb	IAmb	22 57 40.0	
	comp=Z,14nm,1.3s						
REDW	Red Top Meadow	32.03	336	P	P	22 57 20.7	+0.4
SNOW	Snow King Moun	32.08	336	P	P	22 57 20.1	-0.6
LOHW	Long Hollow	32.14	337	P	P	22 57 22.4	+1.1
LOHW				IAmb	IAmb	22 57 24.6	
	comp=Z,10nm,1.1s						
E28A	Huff	32.23	351	P	P	22 57 22.0	+0.2
RYN	Ryan	32.26	322	P	P	22 57 22.2	0.0
RYN				IAmb	IAmb	22 57 34.9	
	comp=Z,10nm,1.2s						
WAKR	Walker	32.73	321	P	P	22 57 24.4	-2.1
WAKR				IAmb	IAmb	22 57 31.8	
	comp=Z,13nm,1.5s						
LKWY	Lake	32.88	338	P	P	22 57 29.9	+2.1
LKWY				IAmb	IAmb	22 57 40.3	
	comp=Z,14nm,1.4s						
YERR	Yerington	32.91	322	P	P	22 57 29.3	+1.2
RLMT	Red Lodge	32.97	340	P	P	22 57 29.6	+1.1
	baz=152						
RLMT	Red Lodge	32.97	340	P	P	22 57 28.2	-0.3
RLMT				IAmb	IAmb	22 57 39.6	
	comp=Z,20nm,1.4s						
CMB	Columbia Colle	33.02	320	P	P	22 57 28.4	-0.5
YNE	Yellowstone No	33.12	339	P	P	22 57 27.7	-2.2
YNE				IAmb	IAmb	22 57 43.7	
	comp=Z,14nm,1.3s						
EYMN	Ely	33.13	3	P	P	22 57 29.1	-0.5
	baz=184						
PNTR	Pine Nut	33.20	322	P	P	22 57 29.2	-1.4
PNTR				IAmb	IAmb	22 57 43.9	
	comp=Z,7.8nm,0.9s						
YHH	Holmes Hill	33.24	338	P	P	22 57 30.9	-0.1
YHH				IAmb	IAmb	22 57 43.5	
	comp=Z,13nm,1.5s						
MDND	Maddock	33.33	353	P	P	22 57 31.5	+0.1
	baz=170,SNR=9.0						
MDND	Maddock	33.33	353	P	P	22 57 30.8	-0.5
YHL	Hebgen Lake	33.42	337	P	P	22 57 30.3	-2.2
YHL				IAmb	IAmb	22 57 44.5	
	comp=Z,26nm,1.7s						
AGMN	Agassiz Nation	33.47	357	P	P	22 57 32.2	-0.4
	baz=176						
AGMN	Agassiz Nation	33.47	357	P	P	22 57 31.5	-1.1
AGMN				IAmb	IAmb	22 57 41.3	
	comp=Z,16nm,1.1s						
B35A	Bob, Littlefor	33.49	0	P	P	22 57 31.2	-1.6
B35A				IAmb	IAmb	22 57 40.5	
	comp=Z,21nm,1.3s						
HLID	Hailey	33.69	332	P	P	22 57 36.7	+2.0
	baz=142						
HLID	Hailey	33.69	332	P	P	22 57 33.5	-1.2
MCMT	McKenzie Canyo	34.04	335	P	P	22 57 40.0	+2.1
BEKR	Beckworth	34.14	322	P	P	22 57 40.1	+1.4
BEKR				IAmb	IAmb	22 57 51.3	
	comp=Z,8.0nm,1.1s						
BOZ	Bozeman (W)	34.22	338	P	P	22 57 39.3	+0.1
BOZ				IAmb	IAmb	22 57 54.0	
	comp=Z,19nm,1.6s						
MFID	Camas Ranch	34.22	331	P	P	22 57 38.1	-1.1
MFID				IAmb	IAmb	22 57 44.2	
	comp=Z,14nm,1.8s						
DLMT	Dillon	34.39	336	P	P	22 57 41.4	+0.7
DLMT				IAmb	IAmb	22 57 53.5	
	comp=Z,19nm,1.3s						
ORV	Oroville	34.64	321	P	P	22 57 41.2	-1.6
DGMT	Dagmar	34.69	348	P	P	22 57 40.9	-2.2
WVOR	Wild Horse Val	34.90	327	P	P	22 57 44.2	-1.0
WVOR				IAmb	IAmb	22 57 57.6	
	comp=Z,11nm,1.1s						
ULM	Lac du Bonnet	35.42	358	P	P	22 57 48.8	-0.6
	comp=Z,5.4nm,0.9s,baz=180,slow=9.7,SNR=8.1						
ULM				LR	LR	23 15 29.6	
	comp=Z,230nm,19.4s,baz=163,slow=42						
ULM	Lac du Bonnet	35.42	358	P	P	22 57 47.9	-1.5
ULM				IAmb	IAmb	22 57 57.5	
	comp=Z,7.2nm,0.9s						
MOD	Modoc Plateau	35.44	325	P	P	22 57 49.7	-0.2
MOD				IAmb	IAmb	22 58 01.9	
	comp=Z,15nm,1.2s						
J08A	Circle Bar Ran	35.47	328	P	P	22 57 51.4	+1.3
J08A				IAmb	IAmb	22 57 53.7	
	comp=Z,15nm,1.2s						
EGMT	Eagleton	35.70	342	P	P	22 57 51.0	-0.9
	baz=153						
EGMT	Eagleton	35.70	342	P	P	22 57 50.1	-1.9
BMO	Blue Mountains	36.00	331	P	P	22 57 53.3	-1.3
BMO				IAmb	IAmb	22 57 58.6	
	comp=Z,12nm,1.6s						
MSO	Missoula	36.12	336	P	P	22 57 57.5	+1.9
	baz=146						
MSO	Missoula	36.12	336	P	P	22 57 54.6	-1.0
MSO				IAmb	IAmb	22 57 58.5	
	comp=Z,8.3nm,1.1s						
ETMB	Extrema	36.66	130	*e*P	P	22 58 00.7	+0.3
F10A	Beach Ranch, E	36.82	332	P	P	22 58 01.4	-0.1
F10A				IAmb	IAmb	22 58 11.7	
	comp=Z,8.8nm,0.9s						
PTGA	Pitinga	36.83	112	P	P	22 57 59.6	-2.3
PTGA	Pitinga	36.83	112	*e*P	P	22 58 02.3	+0.4
JTMT	Jette	37.02	337	P	P	22 58 01.9	-1.3
JTMT				IAmb	IAmb	22 58 14.8	
	comp=Z,8.4nm,1.1s						
PINE	Pine Mountain	37.06	327	P	P	22 58 03.0	-0.7
PINE				IAmb	IAmb	22 58 08.2	
	comp=Z,17nm,1.8s						
J04D	Umpqua Nationa	37.32	325	P	P	22 58 07.7	+1.7
	baz=131						
H04A	Detroit Lake	38.32	327	P	P	22 58 11.1	-3.1
H04A				IAmb	IAmb	22 58 25.4	
	comp=Z,13nm,1.1s						
SAML	Samuel	38.42	126	P	P	22 58 12.5	-2.8
SAML				IAmb	IAmb	22 58 14.9	
	comp=Z,12nm,1.1s						
LTY	Liberty	39.36	331	P	P	22 58 21.9	-1.0
LTY				IAmb	IAmb	22 58 37.5	
	comp=Z,12nm,1.4s						
LON	Longmire	39.54	330	P	P	22 58 21.9	-2.5
LPAZ	La Paz	39.93	140	P	P	22 58 28.5	-0.1
	comp=Z,2.8nm,0.8s,baz=321,slow=8.4,SNR=6.2						
LPAZ				LR	LR	23 13 43.1	
	comp=Z,281nm,21.1s,baz=304,slow=34						
LPAZ	La Paz	39.93	140	P	P	22 58 26.4	-2.2
LPAZ	La Paz	39.93	140	*e*P	P	22 58 28.2	-0.4
FFC	Flin Flon	40.38	353	P	P	22 58 30.5	-0.6
PB16	IPOC Station P	40.68	143	P	P	22 58 33.9	-0.8
PB16				IAmb	IAmb	22 58 37.2	
	comp=Z,28nm,1.5s						
MNMC	Minye Minye	41.26	144	P	P	22 58 37.8	-1.4
ITTB	Itaituba	42.23	114	*e*P	P	22 58 45.4	-1.5
MALB	Monte Alegre	42.46	110	*e*P	P	22 58 48.2	-0.6
VILB	Vilhena	43.18	128	*e*P	P	22 58 53.1	-1.5
NPGB	Novo Progresso	43.84	117	*e*P	P	22 58 58.2	-1.8
FCC	Fort Churchill	43.91	360	P	P	22 58 58.0	-1.9
AC02	Maricunga	47.79	150	P	P	22 59 29.3	-2.2
PRPB	Parauapebas	48.30	112	*e*P	P	22 59 33.2	-1.9
SNDB	Serra Nova Dou	49.77	120	*e*P	P	22 59 45.9	-0.5
YKA	Yellowknife Ar	49.89	348	P	P	22 59 47.1	+0.6
	comp=Z,5.4nm,0.9s,baz=145,slow=8.3,SNR=50						
YKA				LR	LR	23 26 32.3	
	comp=Z,108nm,19.2s,baz=0.0,slow=43						
PP1B	Ponte de Pedra	50.07	129	*e*P	P	22 59 48.9	+0.4
CO03	El Pedregal	50.49	154	P	P	22 59 49.9	-1.8
ARAG	Araguaiana, MT	51.35	124	*e*P	P	22 59 57.7	-0.5
SMTB	Santa Maria do	51.47	114	*e*P	P	22 59 59.1	-0.1
TAOE	Nuku Hiva Isla	51.62	246	*e*LR	LR	23 14 44.6	
	comp=Z,182nm,23.5s						
TAOE	Nuku Hiva Isla	51.62	246	*e*T	T	23 55 19.0	
	comp=Z,33nm,0.2s						
ZON	Zonda	51.98	153	P	P	23 00 00.3	-2.4
PEXB	Peixe	52.37	118	*e*P	P	23 00 05.0	-0.9
CPUP	Villa Florida	54.09	139	P	P	23 00 16.8	-1.5
	comp=Z,4.2nm,0.9s,baz=331,slow=7.6,SNR=4.5						
CPUP				LR	LR	23 23 18.4	
	comp=Z,124nm,18.4s,baz=347,slow=36						
CPUP	Villa Florida	54.09	139	P	P	23 00 15.8	-2.5
CPUP	Villa Florida	54.09	139	*e*P	P	23 00 16.9	-1.5
SDBA	SAO DESIDERIO	55.43	117	*e*P	P	23 00 27.9	-0.4
IPMB	Ipameri, GO	55.48	124	*e*P	P	23 00 27.7	-0.8
HYT	Haines Junctio	55.71	336	P	P	23 00 27.6	-2.1
BB19B	Bebedouro	56.94	128	*e*P	P	23 00 38.6	-0.4
RAGM	Ragged Mountai	58.47	333	P	P	23 00 46.4	-2.7
BCAR	Beaver Creek A	58.65	337	P	P	23 00 50.4	0.0
N25K	Chitina, Valde	59.02	334	P	P	23 00 54.0	+0.9
	baz=119						
INK	Inuvik	59.22	344	P	P	23 00 53.0	-1.1
INK				IAmb	IAmb	23 01 04.8	
	comp=Z,6.1nm,0.7s						
PLCA	Paso Flores	59.28	160	P	P	23 00 52.6	-2.4
	comp=Z,3.9nm,1.1s,baz=288,slow=9.5,SNR=3.2						
PLCA				LR	LR	23 21 27.5	
	comp=Z,126nm,18.0s,baz=342,slow=31						
KLU	Klutina	59.53	334	P	P	23 00 58.1	+1.5
	baz=118						

KLU	**Klutina**	**59.53**	**334**	P	**P**	**23 00 55.6**	**-0.9**
DOT	**Dot Lake**	**59.83**	**337**	P	**P**	**23 00 55.5**	**-2.9**
M24K	**Tolsona, Glenn**	**59.92**	**334**	P	**P**	**23 00 56.6**	**-2.6**
SCRK	**Sand Creek**	**59.97**	**337**	P	**P**	**23 01 01.3**	**+1.8**
	baz=121						
PAX	**Paxson**	**60.04**	**336**	P	**P**	**23 01 01.6**	**+1.6**
	baz=119						
PAX	**Paxson**	**60.04**	**336**	P	**P**	**23 00 57.7**	**-2.3**
PAX				IAmb	IAmb	23 01 02.6	
	comp=Z,9.2nm,1.1s						
WAT6	**Susitna Watana**	**60.79**	**335**	P	**P**	**23 01 05.9**	**+0.7**
	baz=116,SNR=5.3						
RCBR	**Riachuelo**	**60.91**	**105**	*e*P	**P**	**23 01 06.5**	**-0.3**
RC01	**Rabbit Creek A**	**61.01**	**333**	P	**P**	**23 01 07.7**	**+1.1**
	baz=114						
WAT2	**Susitna Watana**	**61.30**	**335**	P	**P**	**23 01 09.3**	**+0.6**
	baz=116,SNR=6.3						
HDA	**Harding Lake**	**61.31**	**337**	P	**P**	**23 01 08.9**	**+0.3**
	baz=118						
HDA	**Harding Lake**	**61.31**	**337**	P	**P**	**23 01 06.2**	**-2.4**
PRP	**Porcupine Dome**	**61.32**	**338**	P	**P**	**23 01 09.7**	**+0.9**
	baz=120						
PRP	**Porcupine Dome**	**61.32**	**338**	P	**P**	**23 01 06.8**	**-2.0**
PRP				IAmb	IAmb	23 01 20.3	
	comp=Z,7.7nm,0.8s						
IL31		**61.46**	**337**	P	**P**	**23 01 09.7**	**+0.3**
ILAR	**Eielson Array**	**61.46**	**337**	P	**P**	**23 01 09.2**	**-0.3**
	comp=Z,3.1nm,0.9s,baz=134,slow=4.2,SNR=24						
ILAR	**Eielson Array**	**61.46**	**337**	P	**P**	**23 01 09.5**	**0.0**
RND	**Reindeer**	**61.60**	**335**	P	**P**	**23 01 10.8**	**+0.1**
SUA	**Susitna One**	**61.61**	**333**	P	**P**	**23 01 11.8**	**+1.0**
	baz=113						
CUT	**Chulitna**	**61.77**	**334**	P	**P**	**23 01 12.9**	**+1.2**
	baz=114						
MCK	**McKinley**	**61.78**	**336**	P	**P**	**23 01 13.1**	**+1.4**
	baz=116						
BSFB	**Barra de Sao F**	**61.91**	**121**	*e*P	**P**	**23 01 12.8**	**-0.4**
BMAR	**Burnt Mountain**	**61.98**	**340**	P	**P**	**23 01 14.4**	**+1.3**
SKT	**Skwentna**	**62.15**	**333**	P	**P**	**23 01 15.1**	**+0.8**
	baz=112						
BWN	**Browne**	**62.18**	**336**	P	**P**	**23 01 14.8**	**+0.4**
NEA2	**Nenana**	**62.21**	**336**	P	**P**	**23 01 15.7**	**+1.1**
	baz=116						
TRF	**Thorofare Moun**	**62.21**	**335**	P	**P**	**23 01 15.9**	**+1.1**
	baz=114						
TRF	**Thorofare Moun**	**62.21**	**335**	P	**P**	**23 01 13.5**	**-1.3**
KTH	**Kantishna Hill**	**62.51**	**335**	P	**P**	**23 01 14.7**	**-2.0**
RIB01	**Linhares ES**	**62.51**	**121**	*e*P	**P**	**23 01 17.8**	**+0.5**
I23K	**Minto, Yukon-K**	**62.57**	**337**	P	**P**	**23 01 17.7**	**+0.8**
	baz=116,SNR=7.1						
I23K	**Minto, Yukon-K**	**62.57**	**337**	P	**P**	**23 01 16.6**	**-0.3**
BPAW	**Bear Paw Mtn.**	**62.76**	**335**	P	**P**	**23 01 18.9**	**+0.6**
	baz=114						
BPAW	**Bear Paw Mtn.**	**62.76**	**335**	P	**P**	**23 01 17.8**	**-0.6**
PPLA	**Purkeypile**	**62.78**	**334**	P	**P**	**23 01 19.4**	**+0.7**
	baz=112						
MLY	**Manley**	**63.04**	**336**	P	**P**	**23 01 21.4**	**+1.2**
	baz=114,SNR=7.3						
CHUM	**Lake Minchumin**	**63.21**	**335**	P	**P**	**23 01 21.8**	**+0.6**
	baz=112						
PPT	**Papeete**	**63.72**	**242**	LR	LR	23 22 59.9	
	comp=Z,105nm,21.2s,baz=2.0,slow=30						
PPT2	**Papeete2**	**63.73**	**242**	*e*S	**S**	**23 10 00.6**	**+2.4**
	comp=Z,54nm,25.5s						
PPT2	**Papeete2**	**63.73**	**242**	*e*LR	LR	23 20 23.9	
	comp=Z,131nm,23.5s						
COLD	**Coldfoot**	**63.79**	**339**	P	**P**	**23 01 26.5**	**+1.5**
	baz=116						
COLD	**Coldfoot**	**63.79**	**339**	P	**P**	**23 01 23.3**	**-1.8**
COLD				IAmb	IAmb	23 01 27.6	
	comp=Z,19nm,1.7s						
ICESG	**Greenland Ices**	**63.90**	**19**	*e*P	**P**	**23 01 26.8**	**+0.6**
TOLK	**Toolik Lake Re**	**64.22**	**340**	P	**P**	**23 01 29.2**	**+1.3**
	baz=117						
EUNU	**Eureka**	**65.40**	**1**	P	**P**	**23 01 34.4**	**-1.1**
SUMG	**Summit**	**65.96**	**16**	*i* P	**P**	**23 01 39.4**	**-0.2**
SUMG	**Summit**	**65.96**	**16**	*i* P	**P**	**23 01 39.4**	**-0.2**
RDOG	**Red Dog Mine**	**68.63**	**338**	P	**P**	**23 01 57.1**	**+1.0**
	baz=104						
RDOG	**Red Dog Mine**	**68.63**	**338**	P	**P**	**23 01 54.3**	**-1.8**
RDOG				IAmb	IAmb	23 02 23.6	
	comp=Z,3.8nm,0.6s						
ANM	**Nome**	**68.87**	**334**	P	**P**	**23 01 58.8**	**+1.1**
	baz=100						
DBG	**Daneborg**	**71.44**	**16**	*i* P	**P**	**23 02 13.6**	**+0.4**
DBG				IAmb	IAmb	23 02 14.8	
	comp=Z,6.4nm,1.0s						
DAG	**Danmarks Havn**	**72.32**	**14**	*i* P	**P**	**23 02 18.0**	**-0.4**
	comp=Z,2.5nm,0.6s						
DAG	**Danmarks Havn**	**72.32**	**14**	*i* P	**P**	**23 02 18.0**	**-0.4**
DAG				IAmb	IAmb	23 02 19.1	
	comp=Z,2.5nm,0.6s						
ESDC	**Sonseca Array**	**80.59**	**51**	P	**P**	**23 03 06.9**	**+0.8**
	comp=Z,1.3nm,1.0s,baz=324,slow=6.3,SNR=5.6						
ESDC				LR	LR	23 33 05.8	
	comp=Z,100nm,21.5s,baz=290,slow=31						
ESDC	**Sonseca Array**	**80.59**	**51**	P	**P**	**23 03 02.4**	**-3.7**
ESDC				IAmb	IAmb	23 05 11.1	
	comp=Z,22nm,1.8s						
NB2	**NORSAR Subarra**	**84.29**	**28**	P	**P**	**23 03 26.6**	**+1.7**
	comp=Z,35nm,2.0s,baz=296,slow=4.6						
NOA	**NORSAR Array B**	**84.29**	**28**	P	**P**	**23 03 25.9**	**+1.0**
	comp=Z,3.1nm,1.0s,baz=292,slow=4.7,SNR=3.9						
NOA				LR	LR	23 40 32.9	
	comp=Z,115nm,18.1s,baz=300,slow=35						
ARCES	**ARCESS Array B**	**85.94**	**18**	P	**P**	**23 03 32.8**	**-0.2**
	comp=Z,1.5nm,0.5s,baz=296,slow=3.6,SNR=11						
ARCES				LR	LR	23 41 46.0	
	comp=Z,105nm,20.9s,baz=235,slow=36						
ARCES	**ARCESS Array B**	**85.94**	**18**	P	**P**	**23 03 30.1**	**-2.9**
DBIC	**Dimbokro**	**87.29**	**84**	LR	LR	23 43 21.0	
	comp=Z,64nm,18.2s,baz=308,slow=36						
FINES	**FINESS Array B**	**90.53**	**25**	P	**P**	**23 03 54.7**	**-0.2**
	comp=Z,1.5nm,0.8s,baz=289,slow=4.3,SNR=5.5						
FINES				LR	LR	23 44 33.7	
	comp=Z,140nm,18.1s,baz=278,slow=36						
TORD	**Torodi Ar. Bea**	**91.87**	**76**	LR	LR	23 41 01.4	
	comp=Z,55nm,22.0s,baz=325,slow=33						
AKASG	**Malin Array Be**	**98.02**	**33**	LR	LR	23 48 20.9	
	comp=Z,36nm,21.3s,baz=310,slow=35						
DZM	**Mont Dzumac**	**104.30**	**251**	*e*LR	LR	23 39 19.0	
	comp=Z,144nm,22.4s						
MKAR	**Makanchi Array**	**118.62**	**3**	PKP	**PKiKP**	**23 09 43.0**	**+1.7**
	comp=Z,0.1nm,0.6s,baz=18,slow=4.6,SNR=1.8						
HHC	**Hu-ho-hao-te**	**119.88**	**338**	*e*P	**PKiKP**	**23 09 46.0**	**+1.9**
WMQ	**Urumqi**	**121.68**	**359**	*e*P	**PKiKP**	**23 09 48.5**	**+1.0**
KSH	**Kashi**	**125.16**	**10**	PKP	**PKiKP**	**23 10 00.9**	**+6.4**
STKA	**Stephens Creek**	**126.92**	**241**	PKP	**PKPdf**	**23 09 57.5**	**0.0**
	comp=Z,0.7nm,0.4s,baz=135,slow=4.3,SNR=5.4						
WRA	**Warramunga Arr**	**133.90**	**256**	PKP	**PKPdf**	**23 10 11.2**	**+0.1**
	comp=Z,0.7nm,0.6s,baz=90,slow=2.8,SNR=8.7						
ASAR	**Alice Springs**	**134.28**	**251**	PKP	**PKPdf**	**23 10 12.3**	**+0.5**
	comp=Z,0.4nm,0.5s,baz=87,slow=1.6,SNR=6.1						
CMAR	**Chiang Mai Arr**	**144.68**	**339**	PKP	PKPbc	23 10 29.8	+0.2
	comp=Z,1.5nm,0.3s,baz=3.8,slow=4.3,SNR=19						

TAP 20 22:52:36.8, 21°.93N×121°.84E, h181km, ML3.6, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LAY	**Lan-yu**	**0.29**	**292**	P	Pn	22 53 00.9	-0.1
	baz=292						
LAY				S	Sn	22 53 18.3	-1.5
	baz=292						
LDUT	**Ludao**	**0.82**	**335**	P	Pn	22 53 03.2	-0.2
	baz=340						
LDUT				S	Sn	22 53 23.5	-0.5
	baz=340						
TSEB	**Hengchuen, Pin**	**0.87**	**268**	P	Pn	22 53 04.5	+0.8
	baz=270						
TSEB				*e*S	Sn	22 53 25.0	+0.5
	baz=270						
TWKBT	**Hengchun**	**0.95**	**271**	P	Pn	22 53 04.7	+0.4
	baz=271						
TWKBT				S	Sn	22 53 25.5	0.0
	baz=271						
TWK1	**Hengchun**	**0.96**	**271**	P	Pn	22 53 04.9	+0.5
	baz=271						
TWK1				S	Sn	22 53 25.2	-0.4
	baz=271						
TAW	**Tawu**	**0.97**	**296**	*e*P	Pn	22 53 04.2	-0.2
	baz=302						
TAW				S	Sn	22 53 24.7	-1.1
	baz=302						
SLIU	**Shizi**	**1.01**	**287**	P	Pn	22 53 05.0	+0.3
	baz=292						
SLIU				S	Sn	22 53 25.6	-0.6
	baz=292						
SNW	**Nanwan**	**1.01**	**272**	*e*P	Pn	22 53 06.0	+1.3
	baz=272						
SNW				*e*S	Sn	22 53 25.0	-1.3
	baz=272						
HEN	**Hengchun**	**1.03**	**274**	*e*P	Pn	22 53 05.3	+0.5
	baz=274						
HEN				*e*S	Sn	22 53 26.3	-0.2
	baz=274						
ECL	**Taimali**	**1.06**	**309**	P	Pn	22 53 04.4	-0.7
	baz=312						
ECL				S	Sn	22 53 25.5	-1.5
	baz=312						
TWGBT	**Beinan**	**1.13**	**322**	*e*P	Pn	22 53 05.1	-0.6
	baz=320						
TWGBT				*e*S	Sn	22 53 26.3	-1.8
	baz=320						
TWG	**Pinlang**	**1.14**	**321**	P	Pn	22 53 05.0	-0.7
	baz=320						
TWG				S	Sn	22 53 26.3	-1.8
	baz=320						
EDH	**Donghe**	**1.15**	**335**	*e*P	Pn	22 53 05.9	+0.1
	baz=331						
EDH				*e*S	Sn	22 53 28.3	-0.1
	baz=331						
LONT	**Longtian**	**1.17**	**326**	*e*P	Pn	22 53 05.6	-0.4
	baz=318						
LONT				S	Sn	22 53 27.5	-1.2
	baz=318						
SCZT	**Fangliau**	**1.22**	**292**	P	Pn	22 53 06.1	-0.2
	baz=295						
SCZT				S	Sn	22 53 28.0	-1.2
	baz=295						
CHKT	**Chengkung**	**1.25**	**339**	*e*P	Pn	22 53 06.2	-0.4
	baz=339						
CHKT				*e*S	Sn	22 53 29.7	-0.1
	baz=339						
SSPT	**Xinbi**	**1.30**	**295**	*e*P	Pn	22 53 07.5	+0.4
	baz=299						
SSPT				*e*S	Sn	22 53 30.2	-0.3
	baz=299						
MASBT	**Mashibuluo**	**1.31**	**301**	P	Pn	22 53 07.0	-0.1
	baz=301						
MASBT				*e*S	Sn	22 53 29.1	-1.5
	baz=301						
TSMG	**Majia**	**1.35**	**305**	*e*P	Pn	22 53 07.4	-0.1
	baz=301						
TSMG				S	Sn	22 53 30.2	-1.1
	baz=301						
FULB	**Fuli**	**1.36**	**338**	P	Pn	22 53 07.7	+0.1
	baz=329						
FULB				*e*S	Sn	22 53 31.3	-0.3
	baz=329						
SSD	**Sandimen**	**1.38**	**306**	P	Pn	22 53 07.8	0.0
	baz=301						
SSD				S	Sn	22 53 30.9	-1.0
	baz=301						
WLCH	**Liuqiu**	**1.42**	**287**	*e*P	Pn	22 53 08.7	+0.6
	baz=280						
WLCH				*e*S	Sn	22 53 32.8	+0.5
	baz=280						
TWP	**Hsiaoliuchiu**	**1.43**	**287**	*e*P	Pn	22 53 09.1	+0.8
	baz=280						
TWP				*e*S	Sn	22 53 32.9	+0.3
	baz=280						
TSPT	**Pingtung City**	**1.45**	**301**	*e*P	Pn	22 53 08.6	+0.2
	baz=302						
TSPT				*e*S	Sn	22 53 32.8	-0.1
	baz=302						
ELDTW	**Lidau**	**1.47**	**329**	*e*P	Pn	22 53 08.8	+0.1
	baz=329						
ELDTW				*e*S	Sn	22 53 33.0	-0.5
	baz=329						
SGLT	**Jiouru**	**1.48**	**303**	*e*P	Pn	22 53 09.4	+0.7
	baz=302						
SGLT				*e*S	Sn	22 53 34.4	+1.0
	baz=302						
EYUL	**Yuli**	**1.49**	**341**	P	Pn	22 53 08.8	0.0
	baz=333						
EYUL				S	Sn	22 53 32.3	-1.5
	baz=333						
TWF1	**Yuli**	**1.50**	**341**	P	Pn	22 53 08.5	-0.4
	baz=333						
TWF1				S	Sn	22 53 32.2	-1.8
	baz=333						
SLGT	**Liugui**	**1.53**	**314**	*e*P	Pn	22 53 09.3	+0.1
	baz=314						
SLGT				S	Sn	22 53 33.4	-0.9
	baz=314						
YULB	**Yu-li**	**1.54**	**341**	*e*P	Pn	22 53 08.7	-0.6
	baz=334						
YULB				S	Sn	22 53 32.9	-1.7
	baz=334						
SCST	**Cishan**	**1.57**	**308**	*e*P	Pn	22 53 08.8	-0.7
	baz=304						
SCST				*e*S	Sn	22 53 33.2	-1.7
	baz=304						
STYH	**Taoyuan**	**1.58**	**322**	*e*P	Pn	22 53 10.1	+0.5
	baz=329						
STYH				*e*S	Sn	22 53 34.4	-0.7
	baz=329						
STYT	**Tauyuan**	**1.58**	**321**	P	Pn	22 53 09.6	-0.1
	baz=328						
STYT				S	Sn	22 53 34.1	-1.3
	baz=328						
TWM1	**Shoushan**	**1.59**	**304**	P	Pn	22 53 10.2	+0.4
	baz=304						
TWM1				*e*S	Sn	22 53 36.2	+0.9
	baz=304						
HGSD	**Ruisui**	**1.60**	**346**	*e*P	Pn	22 53 10.5	+0.6
	baz=350						
HGSD				*e*S	Sn	22 53 34.9	-0.7
	baz=350						
SNJT	**Kaohsiung City**	**1.62**	**301**	*e*P	Pn	22 53 10.1	+0.1
	baz=295						
SNJT				*e*S	Sn	22 53 35.3	-0.4
	baz=295						
SGST	**Jiashian**	**1.63**	**315**	*e*P	Pn	22 53 09.2	-1.0
	baz=322						
SGST				S	Sn	22 53 34.2	-1.9
	baz=322						
EHY	**Hungye**	**1.64**	**343**	P	Pn	22 53 09.7	-0.6
	baz=338						
EHY				S	Sn	22 53 34.1	-2.2
	baz=338						
WTP	**Ta-pu**	**1.73**	**319**	P	Pn	22 53 11.0	-0.2
	baz=325						
WTP				S	Sn	22 53 36.9	-1.1
	baz=325						
CHN1	**Nanshi**	**1.74**	**316**	P	Pn	22 53 11.2	-0.1
	baz=322						
CHN1				S	Sn	22 53 37.2	-0.9
	baz=322						
TPUB	**Ta-pu**	**1.77**	**321**	P	Pn	22 53 11.2	-0.3
	baz=327						
TPUB				S	Sn	22 53 37.3	-1.2
	baz=327						
EGFH	**Guangfu**	**1.77**	**348**	*e*P	Pn	22 53 11.3	-0.3
	baz=341						
EGFH				*e*S	Sn	22 53 37.5	-1.2
	baz=341						
SNST	**Tainan City**	**1.79**	**316**	*e*P	Pn	22 53 11.7	0.0
	baz=322						
SNST				S	Sn	22 53 37.8	-1.0
	baz=322						
CHN4	**Tsaushan**	**1.82**	**321**	P	Pn	22 53 11.9	-0.2
	baz=326						
CHN4				S	Sn	22 53 38.9	-0.7
	baz=326						
TWK	**Hsinying**	**1.83**	**317**	P	Pn	22 53 12.2	0.0
	baz=322						
TWK				S	Sn	22 53 38.5	-1.2
	baz=322						
ALS	**Alishan**	**1.84**	**329**	P	Pn	22 53 12.5	-0.1
	baz=323						
ALS				S	Sn	22 53 39.1	-1.4
	baz=323						
ESL	**Shilin**	**1.91**	**349**	*e*P	Pn	22 53 12.6	-0.4
	baz=344						
ESL				*e*S	Sn	22 53 39.5	-1.8
	baz=344						
VWDT	**VWDT**	**1.93**	**341**	P	Pn	22 53 13.7	+0.5
	baz=344						
VWDT				*e*S	Sn	22 53 40.7	-0.8
	baz=344						
CHN5	**Tsauling**	**1.98**	**327**	*e*P	Pn	22 53 13.6	-0.2
	baz=323						
CHN5				S	Sn	22 53 42.1	-0.6
	baz=323						
WHYT	**Xinyi Township**	**1.98**	**333**	*e*P	Pn	22 53 13.6	-0.2
	baz=333						
WHYT				S	Sn	22 53 41.0	-1.6
	baz=333						
SSLB	**Suanglung**	**2.02**	**336**	*e*P	Pn	22 53 14.1	-0.1
	baz=329						
SSLB				S	Sn	22 53 41.1	-2.3
	baz=329						
ICHU	**Yijhu**	**2.03**	**315**	*e*P	Pn	22 53 13.7	-0.5
	baz=315						
ICHU				S	Sn	22 53 41.9	-1.5
	baz=315						
CHN2	**Minshiung**	**2.03**	**322**	*e*S	Sn	22 53 43.1	-0.4
	baz=322						
CHY	**Chiayi**	**2.04**	**320**	*e*P	Pn	22 53 13.4	-0.9
	baz=326						
CHY				*e*S	Sn	22 53 41.9	-1.7
	baz=326						
CHN8	**Yiju**	**2.06**	**313**	*e*P	Pn	22 53 13.8	-0.8
	baz=319						
CHN8				*e*S	Sn	22 53 43.7	-0.4
	baz=319						
WGK	**Gukeng**	**2.11**	**326**	*e*S	Sn	22 53 44.5	-0.6
	baz=320						
WDLH	**Douliu**	**2.12**	**326**	*e*P	Pn	22 53 15.0	-0.3
	baz=325						
WDLH				*e*S	Sn	22 53 44.0	-1.3
	baz=325						
SMLT	**Sun Moon Lake**	**2.13**	**336**	*e*P	Pn	22 53 15.9	+0.4
	baz=330						
SMLT				*e*S	Sn	22 53 44.6	-1.1
	baz=330						
WJS	**Zhushan**	**2.15**	**332**	*e*P	Pn	22 53 15.9	+0.4
	baz=331						
WJS				*e*S	Sn	22 53 44.9	-0.9
	baz=331						
TWD	**Chiawan**	**2.15**	**354**	*e*P	Pn	22 53 14.7	-0.9
	baz=359						
TWD				*e*S	Sn	22 53 44.7	-1.3
	baz=359						
WTK	**Tuku**	**2.21**	**323**	*e*P	Pn	22 53 15.7	-0.5
	baz=327						
WTK				*e*S	Sn	22 53 44.9	-2.0
	baz=327						
CHGB	**Renai**	**2.21**	**344**	*e*P	Pn	22 53 16.8	+0.3
	baz=344						
CHGB				*e*S	Sn	22 53 46.1	-1.3
	baz=344						
WNT	**Mingjian**	**2.21**	**331**	*e*P	Pn	22 53 16.5	+0.2
	baz=331						
WNT				*e*S	Sn	22 53 46.2	-0.9
	baz=331						
WPL	**Puli Township**	**2.23**	**339**	*e*P	Pn	22 53 16.5	+0.1
	baz=332						
WPL				*e*S	Sn	22 53 46.8	-0.6
	baz=332						
WNT1	**Nantou City**	**2.24**	**332**	*e*P	Pn	22 53 16.6	0.0
	baz=331						
WNT1				*e*S	Sn	22 53 47.2	-0.5
	baz=331						
NACB	**Ninganchiao**	**2.25**	**354**	*e*P	Pn	22 53 16.5	-0.2
	baz=359						
NACB				*e*S	Sn	22 53 45.9	-1.9
	baz=359						
DPDB	**Guoxing**	**2.26**	**338**	*e*P	Pn	22 53 17.1	+0.2
	baz=332						
DPDB				*e*S	Sn	22 53 47.6	-0.6
	baz=332						
WHF	**Hehuan Shan**	**2.27**	**347**	*e*P	Pn	22 53 17.4	0.0
	baz=347						
WHF				*e*S	Sn	22 53 47.1	-1.9
	baz=347						
WCS	**Beigang Elemen**	**2.29**	**338**	*e*P	Pn	22 53 17.2	+0.1
	baz=332						
WCS				*e*S	Sn	22 53 47.5	-1.1
	baz=332						
ETLH	**Xiulin Townshi**	**2.29**	**352**	*e*P	Pn	22 53 17.1	-0.1
	baz=343						
ETLH				*e*S	Sn	22 53 46.4	-2.5
	baz=343						
WWF	**Wufeng**	**2.35**	**334**	*e*P	Pn	22 53 17.6	-0.2
	baz=333						
WWF				*e*S	Sn	22 53 49.2	-0.7
	baz=333						
FUSS	**Fushou**	**2.37**	**347**	*e*P	Pn	22 53 18.8	+0.4
	baz=338						
FUSS				*e*S	Sn	22 53 49.7	-1.1
	baz=338						
WRL	**Guolierlin Hig**	**2.38**	**326**	*e*P	Pn	22 53 18.1	-0.1
	baz=325						
WRL				*e*S	Sn	22 53 48.6	-1.9
	baz=325						
TWT	**Tachien**	**2.39**	**345**	*e*S	Sn	22 53 50.0	-1.1
	baz=338						
TDCB	**Techi**	**2.40**	**345**	*e*P	Pn	22 53 18.9	+0.4
	baz=338						
TDCB				*e*S	Sn	22 53 49.7	-1.5
	baz=338						
WDGT	**Dungji**	**2.41**	**304**	*e*P	Pn	22 53 17.8	-0.8
	baz=303						
WDGT				*e*S	Sn	22 53 49.4	-1.7
	baz=303						
WCHH	**Zhanghua**	**2.44**	**331**	*e*P	Pn	22 53 18.8	-0.1
	baz=331						
WCHH				*e*S	Sn	22 53 51.3	-0.5
	baz=331						
TCU	**Taichung**	**2.46**	**334**	*e*P	Pn	22 53 18.7	-0.3
	baz=330						
TCU				*e*S	Sn	22 53 51.0	-1.1
	baz=330						
WHP	**Taichung City**	**2.48**	**341**	*e*P	Pn	22 53 19.6	+0.2
	baz=341						
WHP				*e*S	Sn	22 53 51.5	-1.2
	baz=341						
ENA	**Nanau**	**2.49**	**358**	*e*P	Pn	22 53 19.9	+0.4
	baz=358						
ENA				*e*S	Sn	22 53 51.5	-1.3
	baz=358						
NNSB	**Datong**	**2.52**	**350**	*e*P	Pn	22 53 20.4	+0.5
	baz=350						
NNSB				*e*S	Sn	22 53 52.7	-0.9
	baz=350						
NNSH	**Datong**	**2.52**	**350**	*e*P	Pn	22 53 20.0	0.0
	baz=350						
NNSH				*e*S	Sn	22 53 52.0	-1.7
	baz=350						
NNS	**Nan Shan**	**2.54**	**350**	*e*P	Pn	22 53 19.9	-0.2
	baz=350						
NNS				*e*S	Sn	22 53 50.7	-3.2
	baz=350						
TWQ1	**Liyutan**	**2.60**	**338**	*e*P	Pn	22 53 20.7	-0.1
	baz=346						
TWQ1				*e*S	Sn	22 53 53.9	-1.2
	baz=346						
PHUB	**P'eng-hu**	**2.62**	**307**	*e*P	Pn	22 53 20.1	-0.9
	baz=307						
PHUB				*e*S	Sn	22 53 53.4	-2.0
	baz=307						
WDJ	**Dajia District**	**2.65**	**336**	*e*P	Pn	22 53 21.2	-0.1
	baz=344						
WDJ				*e*S	Sn	22 53 55.0	-1.1
	baz=344						
NSY	**Sanyi**	**2.67**	**338**	*e*S	Sn	22 53 53.8	-2.8
	baz=346						
PNG	**Penghu**	**2.67**	**308**	*e*P	Pn	22 53 20.7	-0.8
	baz=308						
PNG				*e*S	Sn	22 53 54.5	-1.8
	baz=308						
NDS	**Dongshan**	**2.69**	**358**	*e*P	Pn	22 53 22.4	+0.5
	baz=359						
NDS				*e*S	Sn	22 53 55.8	-1.3
	baz=359						
ENTT	**Nioudou**	**2.71**	**355**	*e*P	Pn	22 53 22.7	+0.6
	baz=355						
ENTT				*e*S	Sn	22 53 56.0	-1.5
	baz=355						
YHNB	**Yeheng**	**2.76**	**351**	*e*P	Pn	22 53 23.2	+0.5
	baz=345						
YHNB				*e*S	Sn	22 53 57.1	-1.5
	baz=345						
NMLH	**Miaoli**	**2.77**	**340**	*e*S	Sn	22 53 57.2	-1.5
	baz=347						
NSK	**Sanguang**	**2.77**	**351**	*e*P	Pn	22 53 23.6	+0.8
	baz=346						
NSK				*e*S	Sn	22 53 57.4	-1.4
	baz=346						

TWE	**Neicheng**	**2.78**	**357**	*e*P	Pn	22 53 22.6	-0.3
	baz=351						
TWE				*e*S	Sn	22 53 57.3	-1.6
	baz=351						
NSTT	**Nanjuang**	**2.80**	**344**	*e*P	Pn	22 53 23.6	+0.6
	baz=344						
NSTT				*e*S	Sn	22 53 57.0	-2.3
	baz=344						
LIOB	**Emei**	**2.81**	**344**	*e*P	Pn	22 53 23.2	0.0
	baz=344						
LIOB				*e*S	Sn	22 53 56.8	-2.8
	baz=344						
NWLT	**Wulai**	**2.85**	**354**	*e*P	Pn	22 53 23.6	-0.1
	baz=347						
NWLT				*e*S	Sn	22 53 59.0	-1.5
	baz=347						
TIPB	**Shuangxi**	**3.03**	**360**	*e*P	Pn	22 53 26.9	+1.0
	baz=6.0						
TIPB				*e*S	Sn	22 54 03.0	-1.3
	baz=6.0						
VWUC	**VWUC**	**3.76**	**325**	*e*P	Pn	22 53 34.9	+0.1
	baz=324						
VWUC				*e*S	Sn	22 54 18.4	-2.0
	baz=324						
PTMZ	**Houxiangcun**	**3.98**	**322**	*e*P	Pn	22 53 38.5	+0.8
	baz=321						
PTMZ				*e*S	Sn	22 54 23.2	-2.2
	baz=321						
PTTC	**Pingtan**	**4.03**	**332**	*e*S	Sn	22 54 23.6	-2.9
	baz=332						
KNMB	**Chin-men Tao**	**4.06**	**309**	*e*P	Pn	22 53 37.2	-1.5
	baz=308						
KNMB				*e*S	Sn	22 54 25.8	-1.3
	baz=308						
ZPLA	**Ao Xicun**	**4.26**	**299**	*e*P	Pn	22 53 41.3	0.0
	baz=298						
ZPLA				*e*S	Sn	22 54 30.8	-1.1
	baz=298						
MATB	**Ma-tsu**	**4.55**	**338**	*e*P	Pn	22 53 44.3	-0.6
	baz=338						
MATB				*e*S	Sn	22 54 34.4	-4.0
	baz=338						
AXDP	**Jialang**	**4.62**	**310**	*e*P	Pn	22 53 44.9	-1.0
	baz=310						
AXDP				*e*S	Sn	22 54 37.8	-2.3
	baz=310						
MHZQ	**Yeshan**	**4.88**	**329**	*e*P	Pn	22 53 50.3	+1.1
	baz=328						
LYJJ	**Jianjiangzhen**	**4.98**	**338**	*e*P	Pn	22 53 51.8	+1.4
	baz=338						

ANF ***20*** *23:43:38.7±0.7, 41°.90N×119°.57W, h0^{km}, ML3.0/11, Error ellipse: s-maj=5.6km s-min=4.3km az=98.0*

REN ***20*** *23:43:39.5±1.4, 41°.91N±0°.02×119°.57W±0°.03, h6^{km}±6^{km}, ML3.0/5, ML3.1/29(SEA), ML2.8/76(NEIC), Error ellipse: s-maj=3.4km s-min=2.5km az=155.0*

SEA ***20*** *23:43:40.4±2.8, 41°.85N±0°.01×119°.54W±0°.03, h5^{km}±1^{km}, Error ellipse: s-maj=3.8km s-min=2.9km az=308.0*

NEIC ***20*** *23:43:40.4±1.7, 41°.92N±0°.02×119°.57W±0°.02, h10^{km}±6^{km}, Error ellipse: s-maj=2.9km s-min=1.2km az=217.0*

ISC 20 23:43:39.8±1.2**, 41°.92N**±0°.03×**119°.59W**±0°.02**, h2**^{km}±12^{km}**, n61, σ1^s.02**/76**, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOD	**Modoc Plateau**	**0.53**	**268**		**Pg**	**23 43 50.3**	**+0.3**
MOD					**Sg**	**23 43 57.7**	**+0.7**
LKVW	**Lakeview**	**0.65**	**298**		**Pg**	**23 43 52.4**	**+0.1**
LKVW					**Sg**	**23 44 01.9**	**+1.2**
WVOR	**Wild Horse Val**	**0.88**	**54**		**Pg**	**23 43 56.1**	**-0.5**
WVOR					**Sg**	**23 44 07.6**	**-0.4**
WVOR				IAML		23 44 15.6	
	233nm,0.7s						
WVOR				IAML		23 44 22.1	
	230nm,0.7s						
K05A	**Summer Lake**	**1.26**	**310**		**Pn**	**23 44 03.5**	**-1.1**
K05A					**Sn**	**23 44 22.1**	**-0.1**
LASM	**Arnica Sink**	**1.52**	**258**		**Pn**	**23 44 07.6**	**-0.7**
LASM					**Sg**	**23 44 29.3**	**+0.6**
HOG	**Hogback Mounta**	**1.61**	**282**		**Pn**	**23 44 09.0**	**-0.4**
J08A	**Circle Bar Ran**	**1.66**	**29**		**Pn**	**23 44 09.1**	**-0.9**
J08A					**Sg**	**23 44 33.7**	**+0.7**
J08A				IAML		23 44 38.0	
	comp=E,138nm,0.7s						
J08A				IAML		23 44 38.5	
	comp=N,150nm,0.6s						
M04C	**Macdoel**	**1.69**	**266**	P	**Pn**	**23 44 09.7**	**-0.7**
	baz=85,SNR=134						
M04C				Sb	**Sg**	**23 44 34.4**	**+0.4**
	baz=85						
LBCM	**Butte Creek Ri**	**1.71**	**231**		**Pn**	**23 44 10.3**	**-0.5**
K04D	**Chiloquin, OR**	**1.75**	**294**	Pb	**Pn**	**23 44 12.0**	**+0.6**
	baz=113,SNR=21						
K04D				Sb	**Sg**	**23 44 36.7**	**+0.6**
	baz=113						
K04D	**Chiloquin, OR**	**1.75**	**294**		**Pn**	**23 44 11.7**	**+0.3**
K04D					**Sg**	**23 44 36.9**	**+0.7**
J05D	**Fort Rock, OR**	**1.82**	**319**	Pb	**Pb**	**23 44 13.5**	**-0.5**
	baz=138,SNR=481						
J05D				Sb	**Sg**	**23 44 38.6**	**+0.1**
	baz=138						
WVA	**Winnemucca Val**	**1.98**	**185**		**Pb**	**23 44 16.2**	**-0.5**
L04D	**Klamath Falls**	**2.04**	**279**	P	**Pn**	**23 44 14.5**	**-0.8**
	baz=98,SNR=39						
L04D				Sb	**Sb**	**23 44 44.7**	**+1.1**
	baz=98						
B040	**Montague**	**2.12**	**269**		**Pn**	**23 44 14.9**	**-1.4**
PINE	**Pine Mountain**	**2.12**	**332**		**Pb**	**23 44 18.3**	**-0.8**
PINE				IAML		23 45 03.7	
	comp=N,63nm,1.1s						
PINE				IAML		23 45 03.8	
	comp=E,63nm,1.0s						
BEKR	**Beckworth**	**2.13**	**196**		**Pb**	**23 44 18.3**	**-1.1**
BEKR				IAML		23 44 49.9	
	comp=E,79nm,0.6s						
BEKR				IAML		23 44 52.1	
	comp=N,51nm,1.0s						
I07A	**Izee**	**2.16**	**2**		**Pb**	**23 44 19.7**	**-0.1**
I07A				IAML		23 44 50.0	
	comp=N,83nm,0.7s						
I07A				IAML		23 44 58.7	
	comp=E,59nm,1.3s						
PAHR	**Pah Rah Range**	**2.22**	**176**		**Pn**	**23 44 17.2**	**-0.6**
PAHR				IAML		23 44 53.6	
	comp=E,36nm,0.8s						
J04D	**Umpqua Nationa**	**2.28**	**306**	Pb	**Pb**	**23 44 21.2**	**-0.7**
	baz=125,SNR=18						
LOY	**Loyalton**	**2.31**	**192**		**Pb**	**23 44 22.0**	**-0.3**
PEAR	**Peavine Mounta**	**2.33**	**187**		**Pb**	**23 44 22.6**	**0.0**
O03E	**Paynes Creek**	**2.33**	**227**	P	**Pn**	**23 44 18.6**	**-0.7**
	baz=45,SNR=14						
O03E				Sb	**Sb**	**23 44 52.9**	**+1.0**
	baz=45						
YBH	**Yreka Blue Hor**	**2.34**	**266**	Pn	**Pn**	**23 44 18.1**	**-1.3**
YBH					**Pb**	**23 44 18.6**	**-4.2**
KBF	**Kyburz Flat**	**2.46**	**191**		**Pb**	**23 44 24.6**	**-0.3**
VPK	**Verdi Peak**	**2.47**	**188**		**Pb**	**23 44 24.9**	**-0.1**
M02C	**Callahan**	**2.50**	**259**	P	**Pn**	**23 44 20.6**	**-1.1**
	baz=77						
M02C				Sb	**Sb**	**23 44 58.9**	**+2.0**
	baz=77						
N02D	**Trinity Center**	**2.52**	**249**	Pb	**Pb**	**23 44 24.4**	**-1.5**
	baz=67,SNR=11						
N02D				Sb	**Sb**	**23 44 59.3**	**+1.8**
	baz=67						
IND	**Independence**	**2.54**	**192**		**Pb**	**23 44 26.4**	**+0.1**
HUMO	**Hull Mountain**	**2.59**	**286**		**Pn**	**23 44 21.4**	**-1.4**
HUMO				IAML		23 45 03.7	
	comp=N,39nm,1.0s						
HUMO				IAML		23 45 07.3	
	comp=E,28nm,0.6s						
WDC	**Whiskeytown Da**	**2.60**	**240**		**Pn**	**23 44 21.9**	**-1.0**
VCNR	**Virginia City**	**2.62**	**181**		**Pn**	**23 44 23.0**	**-0.4**
VCNR				IAML		23 45 14.9	
	comp=N,52nm,0.7s						
I05D	**Terrebonne, OR**	**2.73**	**333**	Pg	**Pg**	**23 44 31.9**	**-0.3**
	baz=151,SNR=7.7						
ORV	**Oroville**	**2.77**	**212**		**Pn**	**23 44 25.1**	**-0.2**
PNTR	**Pine Nut**	**2.83**	**180**		**Pn**	**23 44 24.9**	**-1.4**
PNTR				IAML		23 45 16.1	
	comp=N,42nm,1.1s						
RUBR	**Rubicon Trail**	**2.90**	**189**		**Pn**	**23 44 26.6**	**-0.6**
RUBR				IAML		23 45 22.2	
	comp=E,31nm,0.9s						
RUBR				IAML		23 45 22.6	
	comp=N,34nm,0.7s						
YERR	**Yerington**	**2.94**	**175**		**Pn**	**23 44 27.9**	**0.0**
YERR				IAML		23 45 18.4	
	comp=N,43nm,0.8s						
L02E	**Cave Junction**	**3.00**	**276**	P	**Pn**	**23 44 28.6**	**+0.2**
	baz=93,SNR=14						
K02D	**Willamette Mer**	**3.12**	**286**	P	**Pn**	**23 44 30.4**	**+0.3**
	baz=103,SNR=35						
K02D	**Willamette Mer**	**3.12**	**286**		**Pn**	**23 44 30.4**	**+0.3**
AFDM	**Forest Hills D**	**3.15**	**200**		**Pn**	**23 44 29.8**	**-0.7**
AFDM				IAML		23 44 56.9	
	comp=N,35nm,0.6s						
AFDM				IAML		23 45 31.8	
	comp=E,14nm,0.9s						
MFID	**Camas Ranch**	**3.15**	**60**	Pn	**Pn**	**23 44 30.2**	**-0.4**
KHMM	**Horse Mountain**	**3.29**	**253**		**Pn**	**23 44 33.7**	**+1.2**
KHMM				IAML		23 45 36.1	
	comp=E,31nm,2.1s						
H04A	**Detroit Lake**	**3.35**	**326**		**Pn**	**23 44 33.2**	**0.0**
BMO	**Blue Mountains**	**3.37**	**29**		**Pn**	**23 44 32.9**	**-0.7**
RYN	**Ryan**	**3.39**	**166**		**Pn**	**23 44 33.4**	**-0.5**
RYN				IAML		23 45 33.6	
	comp=N,18nm,0.7s						
RYN				IAML		23 45 35.5	
	comp=E,21nm,0.7s						
G08A	**Pilot Rock**	**3.40**	**8**		**Pn**	**23 44 34.5**	**+0.5**
WAKR	**Walker**	**3.41**	**178**		**Pn**	**23 44 33.3**	**-1.0**
WAKR				IAML		23 45 37.8	
	comp=N,13nm,0.7s						
ELK	**Elko**	**3.48**	**108**	Pn	**Pn**	**23 44 36.4**	**+1.1**
ELK				IAML		23 45 28.5	
	comp=N,20nm,0.3s						
ELK				IAML		23 45 30.0	
	comp=N,14nm,0.3s						
NV11	**Mina Array Sit**	**3.65**	**162**		**Pn**	**23 44 36.9**	**-0.7**
NV11				IAML		23 45 38.8	
	comp=N,12nm,1.3s						
NV11				IAML		23 45 44.0	
	comp=E,12nm,1.1s						
LHV	**Little Huntoon**	**3.76**	**167**		**Pn**	**23 44 38.6**	**-0.2**
CMB	**Columbia Colle**	**3.93**	**189**		**Pn**	**23 44 41.0**	**-0.2**
CMB				IAML		23 45 55.9	
	comp=E,10nm,0.9s						
HLID	**Hailey**	**4.15**	**65**	Pn	**Pn**	**23 44 43.7**	**-0.7**
HLID				IAML		23 45 57.0	
	comp=E,14nm,0.7s						
TPH	**Tonopah**	**4.25**	**154**		**Pn**	**23 44 43.5**	**-2.2**
R11A	**Troy Canyon, C**	**4.71**	**138**	Pn	**Pn**	**23 44 53.0**	**+1.0**
R11A				IAML		23 46 15.1	
	comp=N,8.1nm,0.8s						
R11A				IAML		23 46 18.6	
	comp=E,7.6nm,2.3s						
BGU	**Big Grassy Mou**	**5.03**	**99**		**Pn**	**23 44 53.5**	**-2.9**
HVU	**Hansel Valley**	**5.09**	**89**		**Pn**	**23 44 58.2**	**+0.9**
BCYI	**Bear Canyon**	**5.12**	**60**		**Pn**	**23 44 57.7**	**-0.1**
SPUT	**South Promonto**	**5.39**	**94**	Pn	**Pn**	**23 45 00.7**	**-0.7**
MCMT	**McKenzie Canyo**	**5.71**	**57**	Pn	**Pn**	**23 45 06.4**	**+0.5**
PRN	**Pahroc Range**	**5.71**	**141**	Pn	**Pn**	**23 45 06.2**	**+0.5**

IDC ***20*** *23:56:52.0±0.7, 39°.28N×143°.50E, h0^{km}, mb4.1/22, mb1 4.2/28, mb1mx4.1/48, mbtmp4.1/28, ML3.4/5, MS3.2/6, Ms1 3.2/6, ms1mx2.9/35, Error ellipse: s-maj=17.1km s-min=14.0km az=115.0*

MOS ***20*** *23:56:52.0±1.0, 39°.22N×143°.55E, h10^{km}, mb4.8/22, Error ellipse: s-maj=13.5km s-min=8.6km az=112.5*

NEIC ***20*** *23:56:54±2.0, 39°.23N±0°.07×143°.7E±0°.1, h15^{km}±5^{km}, mb4.7/43, Error ellipse: s-maj=14.7km s-min=7.8km az=117.0*

JMA ***20*** *23:56:54.0±0.3, 39°.37N×143°.70E, h35^{km}, M4.5*

NIED ***20*** *23:56:54.1, 39°.38N×143°.70E, h35^{km}, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}2.52; $M_{\theta\theta}$0.27; $M_{\phi\phi}$-2.79; $M_{r\theta}$-0.12; $M_{\theta\phi}$-0.33; $M_{\phi r}$0.70; Fault plane solution: $M_0$2.76000×10^{15} NP1:ϕ_s1.00000°, δ52.00000°, λ84.00000°. NP2:ϕ_s191.00000°, δ38.00000°, λ98.00000°.*

ISC 20 23:56:53.7±0.5**, 39°.35N**±0°.05×**143°.66E**±0°.06**, h11**^{km}**, n203, σ1^s.94**/210**, mb4.6**/65**, MS3.8**/8**, 5C-4D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MIYJ	**Miyakonagasawa**	**1.44**	**280**	P	**Pn**	**23 57 19.0**	**-0.8**
JTH	**Tanohata**	**1.51**	**293**	P	**Pn**	**23 57 19.8**	**-0.9**
OFUJ	**Ofunato**	**1.57**	**261**	P	**Pn**	**23 57 21.0**	**-0.6**
JOM	**Ohasama**	**1.84**	**275**	P	**Pn**	**23 57 25.1**	**-0.1**
JMK	**Ichinoseki**	**1.94**	**259**	P	**Pn**	**23 57 26.5**	**-0.1**
JANG	**Nango**	**1.94**	**302**	P	**Pn**	**23 57 25.3**	**-1.4**
JIO	**Ouri**	**2.02**	**244**	P	**Pn**	**23 57 27.0**	**-0.6**
JYK	**Kaneyama**	**2.60**	**261**	P	**Pn**	**23 57 36.2**	**+0.4**
ERM	**Erimo**	**2.69**	**352**	P	**Pn**	**23 57 38.2**	**+1.3**
ERM	**Erimo**	**2.69**	**352**	Pn	**Pn**	**23 57 38.2**	**+1.3**
JMM	**Marumori**	**2.69**	**237**	Pn	**Pn**	**23 57 36.3**	**-0.7**
JNBK	**Urakawa-nobuka**	**3.01**	**347**	P	**Pn**	**23 57 41.5**	**+0.2**
JNBK				*e*S	**Sn**	**23 58 16.9**	**-0.4**
JFT	**Otama**	**3.19**	**236**	P	**Pn**	**23 57 43.9**	**+0.1**
JKB	**Kayabe**	**3.23**	**323**	P	**Pn**	**23 57 45.2**	**+0.9**
JCH	**Churui**	**3.27**	**356**	P	**Pn**	**23 57 44.0**	**-0.9**
JCH				*e*S	**Sn**	**23 58 20.3**	**-3.4**
JOMM	**Oshimamatsumae**	**3.53**	**309**	P	**Pn**	**23 57 48.4**	**-0.1**
JAW	**Awa shima**	**3.56**	**257**	P	**Pn**	**23 57 49.6**	**+0.8**
JAK	**Akkeshi**	**3.72**	**12**	P	**Pn**	**23 57 50.1**	**-1.0**
JAK				*e*S	**Sn**	**23 58 31.7**	**-3.2**
JNS	**Sasagawa**	**3.73**	**247**	P	**Pn**	**23 57 51.8**	**+0.5**
JEW	**Eniwo**	**3.87**	**335**		**Pn**	**23 57 55.0**	**+2.0**
JYT	**Yasato**	**4.16**	**222**	Pn	**Pn**	**23 57 55.9**	**-1.1**
NMR	**Nemuro--Hokkai**	**4.30**	**20**	*e*P	**Pn**	**23 57 57.6**	**-1.5**
NMR				*i* S	**Sn**	**23 58 45.0**	**-4.3**
JSD	**Sado**	**4.43**	**254**	Pn	**Pn**	**23 58 01.0**	**+0.2**
GLVR	**Golovnino**	**4.60**	**17**	*e*P	**Pn**	**23 58 02.6**	**-0.5**
GLVR				*i* S	**Sn**	**23 58 52.9**	**-3.6**
GLVR				pmax	pmax		
	comp=Z,65nm,0.4s						
GLVR				smax	smax		
	comp=E,315nm,0.3s						
GLVR				smax	smax		
	comp=N,569nm,0.4s						
JKA	**Kamikawa-asahi**	**4.83**	**351**	Pn	**Pn**	**23 58 07.4**	**+1.1**
ASAJ	**Asahikawa**	**4.83**	**351**	Pn	**Pn**	**23 58 05.8**	**-0.4**
	comp=N,1.5nm,0.3s,baz=229,slow=15,SNR=12						
ASAJ				Sn	**Sn**	**23 58 59.2**	**-2.9**
	comp=N,1.3nm,0.3s,baz=295,slow=24,SNR=4.9						
ASAJ	**Asahikawa**	**4.83**	**351**	P	**Pn**	**23 58 07.4**	**+1.1**
GRPR	**Tuman**	**4.90**	**18**	*e*P	**Pn**	**23 58 06.3**	**-1.0**
GRPR				*i* S	**Sn**	**23 58 59.5**	**-4.4**
GRPR				pmax	pmax		
	comp=Z,141nm,0.4s						
GRPR				pmax	pmax		
	comp=N,65nm,0.2s						
GRPR				pmax	pmax		
	comp=E,56nm,0.2s						
GRPR				smax	smax		
	comp=N,525nm,0.4s						
GRPR				smax	smax		
	comp=E,390nm,0.4s						
MJAR	**Matsushiro Arr**	**5.14**	**239**	Pn	**Pn**	**23 58 11.8**	**+1.2**
	comp=E,1.6nm,0.3s,baz=39,slow=11,SNR=52						
MJAR	**Matsushiro Arr**	**5.14**	**239**	P	**Pn**	**23 58 12.3**	**+1.6**
MJAR	**Matsushiro Arr**	**5.14**	**239**		**Pn**	**23 58 12.3**	**+1.6**
MAJO	**Matsushiro**	**5.14**	**239**	P	**Pn**	**23 58 12.3**	**+1.6**
MAJO	**Matsushiro**	**5.14**	**239**	Pn	**Pn**	**23 58 12.3**	**+1.6**
MAT	**Matsushiro**	**5.14**	**239**	P	**Pn**	**23 58 12.1**	**+1.4**
MAT				S	**Sn**	**23 59 12.6**	**+2.6**
JGF	**Kuroka**	**6.26**	**235**	Pn	**Pn**	**23 58 27.7**	**+1.7**
INU	**Inuyama**	**6.63**	**235**	Pn	**Pn**	**23 58 32.7**	**+1.6**
KUR	**Kuril'sk**	**6.65**	**27**	P	**Pn**	**23 58 28.9**	**-2.4**
JHJ	**Hachijo jima 2**	**6.96**	**208**	Sn	**Sn**	**23 59 48.6**	**-6.2**
	comp=E,27nm,0.3s,baz=71,slow=22,SNR=1.9						
YSS	**Yuzh-Sakhalins**	**7.63**	**355**	⇓*e*P	**Pn**	**23 58 44.3**	**-0.4**
YSS				pmax	pmax		
	comp=Z,10.0nm,1.2s						
JWT	**Wachi**	**7.73**	**241**	Pn	**Pn**	**23 58 48.4**	**+2.1**
JHS	**Saijyo**	**9.47**	**246**	Pn	**Pn**	**23 59 12.4**	**+2.3**
JMN	**Monobe**	**9.66**	**238**	Pn	**Pn**	**23 59 13.6**	**+0.8**
USA0B	**Ussuriysk Arra**	**9.97**	**303**	P	**Pn**	**23 59 19.5**	**+2.6**
USA0B	**Ussuriysk Arra**	**9.97**	**303**	Pn	**Pn**	**23 59 19.5**	**+2.6**
USRK	**Ussuriysk Ar.**	**9.97**	**303**	Pn	**Pn**	**23 59 17.0**	**+0.1**
	baz=112,slow=12,SNR=16						
USRK				LR	LR	00 03 05.3	
	comp=Z,193nm,18.9s,baz=54,slow=38						
USRK	**Ussuriysk Ar.**	**9.97**	**303**	P	**Pn**	**23 59 19.7**	**+2.8**
USRK	**Ussuriysk Ar.**	**9.97**	**303**	Pn	**Pn**	**23 59 19.7**	**+2.8**
MDJ	**Mudanjiang**	**11.71**	**301**	Pn	**Pn**	**23 59 43.4**	**+2.6**
JNU	**Nakatsue**	**12.04**	**243**	Pn	**Pn**	**23 59 43.7**	**-1.7**
	comp=Z,0.6nm,0.3s,baz=32,slow=4.8,SNR=5.6						
JNU	**Nakatsue**	**12.04**	**243**	Pn	**Pn**	**23 59 45.0**	**-0.3**
KSRS	**Korea Array**	**12.49**	**266**	Pn	**Pn**	**23 59 51.3**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=81,slow=13,SNR=7.4						
KSRS				LR	LR	00 03 50.8	
	comp=Z,134nm,19.7s,baz=64,slow=34						
KLR	**Kul'dur**	**13.03**	**323**	Pn	**Pn**	**23 59 58.2**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=137,slow=14,SNR=13						
KLR				LR	LR	00 04 31.3	
	comp=Z,62nm,18.4s,baz=20,slow=35						
PETK	**Petropavlovsk-**	**16.80**	**30**	Pn	**P**	**00 00 51.3**	**+0.4**
	comp=Z,0.0nm,0.3s,baz=202,slow=11,SNR=1.9						
PETK				LR	LR	00 08 23.0	
	comp=Z,40nm,18.7s,baz=202,slow=41						
PETK	**Petropavlovsk-**	**16.80**	**30**	P	**Pn**	**00 00 50.3**	**+1.5**
PETK	**Petropavlovsk-**	**16.80**	**30**	P	**Pn**	**00 00 50.2**	**+1.5**
MA2	**Magadan**	**20.74**	**10**	P	**P**	**00 01 35.5**	**+1.4**
	comp=Z,5.3nm,0.7s,baz=195,slow=10,SNR=5.2						
MA2	**Magadan**	**20.74**	**10**	P	**P**	**00 01 35.5**	**+1.4**
MA2				pmax	pmax		
	comp=Z,13nm,0.7s						
BJI	**Beijing**	**21.14**	**281**	P	**P**	**00 01 36.3**	**-2.2**
BJI				pmax	pmax		
	comp=Z,12nm,0.8s						
BJT	**Baijiatuau**	**21.14**	**281**	P	**P**	**00 01 36.5**	**-2.1**
BJT				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BJT	**Baijiatuau**	**21.14**	**281**	P	**P**	**00 01 36.5**	**-2.1**
NJ2	**Nanjing**	**21.38**	**258**	*e*P	**P**	**00 01 42.3**	**+1.1**
NJ2				pmax	pmax		
	comp=Z,14nm,0.8s						
YHNB	**Yeheng**	**23.82**	**239**	P	**P**	**00 02 05.0**	**-1.9**
YHNB				IAmb	IAmb	00 02 07.5	
	comp=Z,11nm,0.7s						
NACB	**Ninganchiao**	**24.01**	**237**	P	**P**	**00 02 06.1**	**-2.5**
NACB				IAmb	IAmb	00 02 13.4	
	comp=Z,14nm,0.9s						
SEY	**Seymchan**	**24.19**	**10**	P	**P**	**00 02 11.1**	**+1.2**
	comp=Z,2.1nm,0.2s,baz=178,slow=6.2,SNR=16						
SEY	**Seymchan**	**24.19**	**10**	*i* P	**P**	**00 02 11.3**	**+1.4**
YAK	**Yakutsk**	**24.27**	**344**	P	**P**	**00 02 10.1**	**-0.4**
	comp=Z,8.3nm,0.4s,baz=31,slow=1.3,SNR=1.7						
YAK	**Yakutsk**	**24.27**	**344**	P	**P**	**00 02 10.2**	**-0.4**
YAK				pmax	pmax		
	comp=Z,18nm,0.5s						
YAK	**Yakutsk**	**24.27**	**344**	IAmb	IAmb	00 02 11.1	
	comp=Z,18nm,0.5s						
HHC	**Hu-ho-hao-te**	**24.53**	**284**	*e*P	**P**	**00 02 13.5**	**+0.1**
HHC				S	**S**	**00 06 31.3**	**-2.5**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,67nm,5.8s						
HHC				LR	LR		
	comp=N,130nm,11.1s						
HHC				LR	LR		
	comp=E,130nm,11.9s						
HHC				LR	LR		
	comp=Z,330nm,16.2s						
SSLB	**Suanglung**	**24.70**	**238**	P	**P**	**00 02 13.1**	**-1.8**
SSLB				IAmb	IAmb	00 02 14.8	
	comp=Z,19nm,0.8s						
YULB	**Yu-li**	**24.75**	**237**	P	**P**	**00 02 11.6**	**-3.8**
YULB				IAmb	IAmb	00 02 28.6	
	comp=Z,25nm,1.1s						
TPUB	**Ta-pu**	**25.25**	**237**	P	**P**	**00 02 18.5**	**-1.4**
WHN	**Wuhan**	**25.50**	**259**	⇓*i*P	**P**	**00 02 22.4**	**+0.4**
WHN				pP	**pwP**	**00 02 30.8**	**+2.1**
WHN				S	**S**	**00 06 40.8**	**-8.4**
WHN				pmax	pmax		
	comp=Z,100nm,1.0s						
WHN				LR	LR		
	comp=Z,640nm,15.8s						
KNMB	**Chin-men Tao**	**25.97**	**243**	P	**P**	**00 02 26.0**	**-0.4**
ULN	**Ulaanbaatar**	**27.63**	**300**	P	**P**	**00 02 41.7**	**+0.4**
ULN				pmax	pmax		
	comp=Z,8.0nm,0.7s						
ULN	**Ulaanbaatar**	**27.63**	**300**	P	**P**	**00 02 41.7**	**+0.4**
ULN				IAmb	IAmb	00 02 51.4	
	comp=Z,7.8nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**27.98**	**128**	T	T	00 32 01.9	
	baz=323,slow=75						
H11N1	**WAKE ISLAND Hy**	**27.99**	**128**	T	T	00 32 05.8	
	baz=323,slow=75						
H11N3	**WAKE ISLAND Hy**	**28.00**	**128**	T	T	00 32 06.4	
	baz=323,slow=75						
SONM	**Songino Array**	**28.07**	**300**	P	**P**	**00 02 44.8**	**-0.4**
	comp=Z,2.6nm,0.6s,baz=89,slow=10,SNR=2.5						
XAN	**Xi'an**	**28.24**	**270**	P	**P**	**00 02 47.3**	**+0.5**
XAN				pP	pwP	00 03 01.0	+7.5
XAN				pmax	pmax		
	comp=Z,9.0nm,0.9s						
XAN	**Xi'an**	**28.24**	**270**	P	**P**	**00 02 46.9**	**+0.1**
XAN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
XAN	**Xi'an**	**28.24**	**270**	P	**P**	**00 02 46.9**	**+0.1**
H11S1	**WAKE ISLAND Hy**	**28.80**	**130**	T	T	00 33 10.2	
	baz=321,slow=76,SNR=7.4						
H11S3	**WAKE ISLAND Hy**	**28.80**	**130**	T	T	00 33 09.7	
	baz=321,slow=76,SNR=5.5						
H11S2	**WAKE ISLAND Hy**	**28.81**	**130**	T	T	00 33 09.1	
	baz=321,slow=76,SNR=7.0						
ENH	**Enshi**	**29.34**	**263**	P	**P**	**00 02 56.7**	**+0.1**
ENH				IAmb	IAmb	00 03 00.2	
	comp=Z,11nm,0.7s						
TLY	**Talaya**	**30.24**	**307**	*i* P	**P**	**00 03 05.3**	**+0.9**
TLY				pmax	pmax		
	comp=Z,4.0nm,1.0s						
LZH	**Lanzhou**	**31.49**	**277**	*e*P	**P**	**00 03 17.1**	**+1.4**
LZH				pP	pwP	00 03 23.1	+0.7
LZH				sP	sP	00 03 27.0	+7.9
LZH				pmax	pmax		
	comp=Z,14nm,1.1s						
LZH				LR	LR		
	comp=N,340nm,15.2s						
LZH				LR	LR		
	comp=E,310nm,15.2s						
LZH				LR	LR		
	comp=Z,270nm,14.6s						
GYA	**Guiyang**	**33.39**	**259**	⇓P	**P**	**00 03 32.3**	**0.0**
GYA				PP	**PnPn**	**00 04 37.3**	**-5.7**
GYA				S	**S**	**00 08 59.0**	**+5.6**
GYA				SS	**SS**	**00 11 06.9**	**-10**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
GYA				pmax	pmax		
	comp=Z,140nm,4.9s						
GYA				LR	LR		
	comp=Z,190nm,9.7s						
CD2	**Chengdu**	**33.49**	**268**	P	**P**	**00 03 32.6**	**-0.5**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GTA	**Gaotai**	**33.64**	**284**	⇓P	**P**	**00 03 35.8**	**+1.3**
GTA				pP	pwP	00 03 40.0	-1.1
GTA				sP	sP	00 03 43.1	+5.3
GTA				pmax	pmax		
	comp=Z,13nm,1.0s						
GTA				pmax	pmax		
	comp=Z,97nm,7.2s						
GTA				LR	LR		
	comp=N,140nm,16.3s						
GTA				LR	LR		
	comp=E,200nm,15.9s						
GTA				LR	LR		
	comp=Z,290nm,15.5s						
KMI	**Kunming**	**37.09**	**260**	⇑P	**P**	**00 04 04.5**	**+0.1**
KMI				pP	pwP	00 04 17.3	+6.2
KMI				sP	sP	00 04 20.6	+13
KMI				LR	LR		
	comp=N,93nm,6.8s						
KMI				LR	LR		
	comp=E,120nm,6.6s						
KMI				LR	LR		
	comp=Z,140nm,20.5s						
DGZ	**Jazzator, Alta**	**40.52**	**304**	*i* P	**P**	**00 04 34.0**	**+1.2**
DGZ				pmax	pmax		
	comp=Z,13nm,0.8s						
WMQ	**Urumqi**	**41.42**	**295**	*e*P	**P**	**00 04 41.3**	**+1.1**
WMQ				sP	pwP	00 04 50.0	+3.1
WMQ				PP	**PP**	**00 06 13.9**	**-1.8**
WMQ				PcP	**PcP**	**00 06 38.3**	**+0.2**

WMQ				pmax	pmax		
	comp=Z,14nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,200nm,5.5s						
WMQ				LR	LR		
	comp=N,290nm,5.1s						
WMQ				LR	LR		
	comp=E,500nm,6.3s						
WMQ				LR	LR		
	comp=Z,110nm,28.8s						
ZAA0	**Zalesovo Array**	**41.71**	**311**	P	**P**	**00 04 42.8**	**+0.4**
ZALV	**Zalesovo Beam**	**41.71**	**311**	P	**P**	**00 04 42.6**	**+0.2**
	comp=Z,6.2nm,0.5s,baz=83,slow=7.8,SNR=29						
ZALV				PcP	**PcP**	**00 06 38.7**	**0.0**
	comp=Z,2.0nm,0.7s,baz=84,slow=4.6,SNR=3.8						
ZALV	**Zalesovo Beam**	**41.71**	**311**	P	**P**	**00 04 42.8**	**+0.5**
ZALV	**Zalesovo Beam**	**41.71**	**311**	P	**P**	**00 04 42.8**	**+0.5**
ZSN	**Zaisan**	**42.57**	**301**	*e*P	**P**	**00 04 50.0**	**+0.5**
	baz=300						
CMAR	**Chiang Mai Arr**	**43.81**	**255**	P	**P**	**00 04 58.2**	**-1.5**
	comp=Z,1.7nm,0.4s,baz=45,slow=7.4,SNR=5.6						
CMAR				LR	LR	00 24 25.8	
	comp=Z,31nm,18.5s,baz=340,slow=38						
CMAR	**Chiang Mai Arr**	**43.81**	**255⇑**	*e*P	**P**	**00 05 01.0**	**+1.2**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.4s						
MK31	**Makanchi Array**	**44.43**	**301**	*i* P	**P**	**00 05 04.5**	**0.0**
MK31				pmax	pmax		
	comp=Z,9.0nm,0.7s						
MK31	**Makanchi Array**	**44.43**	**301**	IAmb	IAmb	00 05 15.0	
	comp=Z,8.3nm,0.7s						
MKAR	**Makanchi Array**	**44.43**	**301**	P	**P**	**00 05 04.7**	**+0.2**
	comp=Z,5.0nm,0.8s,baz=84,slow=9.2,SNR=54						
MKAR	**Makanchi Array**	**44.43**	**301**	P	**P**	**00 05 04.4**	**-0.1**
MKAR	**Makanchi Array**	**44.43**	**301**	P	**P**	**00 05 04.4**	**-0.1**
MAKZ	**Makanchi**	**44.64**	**301**	P	**P**	**00 05 06.7**	**+0.6**
MAKZ				pmax	pmax		
	comp=Z,13nm,1.1s						
MAKZ	**Makanchi**	**44.64**	**301**	P	**P**	**00 05 06.7**	**+0.6**
MAKZ				IAmb	IAmb	00 05 16.7	
	comp=Z,13nm,1.1s						
SEM	**Semipalatinsk**	**44.98**	**306**	*e*P	**P**	**00 05 07.5**	**-1.5**
	baz=306						
KURK	**Kurchatov**	**45.94**	**307**	P	**P**	**00 05 16.3**	**0.0**
KURK				pmax	pmax		
	comp=Z,17nm,0.7s						
KURK	**Kurchatov**	**45.94**	**307**	P	**P**	**00 05 16.3**	**0.0**
SCM	**Sheep Creek Mo**	**46.55**	**38**	P	**P**	**00 05 22.7**	**+1.6**
SCM				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SCM	**Sheep Creek Mo**	**46.55**	**38**	P	**P**	**00 05 22.7**	**+1.6**
SCM				IAmb	IAmb	00 05 33.2	
	comp=Z,9.9nm,1.0s						
ILAR	**Eielson Array**	**46.59**	**34**	P	**P**	**00 05 22.6**	**+1.4**
	comp=Z,0.5nm,0.7s,baz=258,slow=6.2,SNR=7.0						
SHLS	**Shalkode**	**47.36**	**296**	*e*P	**P**	**00 05 24.9**	**-2.9**
	comp=Z,3.0nm,1.3s,baz=296						
TDK	**Taldyqorghan**	**47.52**	**299**	*e*P	**P**	**00 05 28.8**	**-0.1**
	comp=Z,5.3nm,0.9s,baz=299						
UZB	**Uzynbulak**	**47.67**	**297**	*e*P	**P**	**00 05 29.7**	**-0.6**
	baz=296						
KPKS	**Kokpek**	**47.80**	**297**	*e*P	**P**	**00 05 30.6**	**-0.6**
	baz=297						
SATY	**Saty**	**48.13**	**297**	*e*P	**P**	**00 05 33.5**	**-0.3**
	baz=296						
VRDI	**Verde Repeater**	**48.46**	**38**	P	**P**	**00 05 37.4**	**+1.2**
VRDI				IAmb	IAmb	00 05 49.0	
	comp=Z,5.8nm,1.0s						
MCARA	**McCarthy VSAT**	**48.65**	**38**	P	**P**	**00 05 39.1**	**+1.8**
MCARA				IAmb	IAmb	00 05 49.4	
	comp=Z,6.5nm,0.8s						
CRQM	**Cirque**	**48.68**	**39**	P	**P**	**00 05 40.2**	**+2.3**
TGL	**Tana Glacier**	**48.83**	**39**	P	**P**	**00 05 41.0**	**+2.1**
TGL				IAmb	IAmb	00 05 46.8	
	comp=Z,10nm,1.1s						
BCAR	**Beaver Creek A**	**48.98**	**36**	P	**P**	**00 05 43.8**	**+3.8**
BALM	**Baldy**	**49.02**	**38**	P	**P**	**00 05 42.6**	**+2.2**
BALM				IAmb	IAmb	00 05 53.8	
	comp=Z,9.2nm,1.2s						
MDOK	**Medeo**	**49.03**	**297**	*e*P	**P**	**00 05 40.1**	**-0.6**
	baz=297						
AAA	**Alma-Ata**	**49.11**	**297**	*e*P	**P**	**00 05 40.9**	**-0.3**
	comp=Z,3.2nm,0.4s,baz=297						
TNSS	**Tian-Shan**	**49.14**	**297**	*e*P	**P**	**00 05 42.1**	**+0.2**
	baz=297						
KUU	**Kurty**	**49.27**	**298**	*e*P	**P**	**00 05 41.6**	**-0.8**
	comp=Z,4.0nm,0.8s,baz=298						
BARN	**Barnard Glacie**	**49.35**	**38**	P	**P**	**00 05 44.9**	**+2.0**
CTGM	**Chitina Glacie**	**49.52**	**38**	P	**P**	**00 05 46.8**	**+2.6**
CTGM				IAmb	IAmb	00 05 52.7	
	comp=Z,6.0nm,1.0s						
TABL	**Table Mountain**	**49.71**	**39**	P	**P**	**00 05 48.6**	**+2.9**
BRZS	**Berezniki**	**49.80**	**307**	*e*P	**P**	**00 05 45.7**	**-0.7**
	baz=307						
BRVK	**Borovoye**	**50.40**	**311**	P	**P**	**00 05 51.4**	**+0.6**
BRVK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BRVK	**Borovoye**	**50.40**	**311**	P	**P**	**00 05 51.4**	**+0.6**
BRVK				IAmb	IAmb	00 06 01.2	
	comp=Z,6.7nm,0.8s						
BTLS	**Baital**	**50.44**	**300**	*e*P	**P**	**00 05 50.3**	**-0.9**
	baz=300						
AAK	**Ala-Archa**	**50.97**	**297**	P	**P**	**00 05 55.1**	**-0.4**
	comp=Z,0.4nm,0.4s,baz=124,slow=4.5,SNR=5.6						
AAK	**Ala-Archa**	**50.97**	**297**	P	**P**	**00 05 56.0**	**+0.5**
AAK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
AAK	**Ala-Archa**	**50.97**	**297**	P	**P**	**00 05 56.0**	**+0.5**
KSH	**Kashi**	**51.10**	**293**	P	**P**	**00 06 01.0**	**+4.5**
KSH				PcP	**PcP**	**00 07 12.8**	**+0.7**
KSH				S	**S**	**00 13 19.0**	**+4.8**
KSH	**Kashi**	**51.10**	**293**	SS	SKiKP	00 16 55.3	-32
KSH				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KSH				pmax	pmax		
	comp=Z,440nm,5.6s						
KSH				LR	LR		
	comp=N,480nm,6.1s						
KSH				LR	LR		
	comp=E,540nm,7.9s						
KSH				LR	LR		
	comp=Z,290nm,9.8s						
HYT	**Haines Junctio**	**51.38**	**38**	P	**P**	**00 06 03.1**	**+4.8**
HYT				IAmb	IAmb	00 06 11.6	
	comp=Z,6.7nm,0.8s						
INK	**Inuvik**	**51.51**	**28**	P	**P**	**00 06 01.9**	**+3.0**
INK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
INK	**Inuvik**	**51.51**	**28**	P	**P**	**00 06 01.9**	**+3.0**
DZA	**Taraz**	**53.04**	**299**	*e*P	**P**	**00 06 10.9**	**+0.1**
	baz=298						
KKAR	**Karatay Array**	**53.52**	**299**	P	**P**	**00 06 14.2**	**0.0**
KKAR	**Karatay Array**	**53.52**	**299**	P	**P**	**00 06 14.2**	**0.0**
IUG	**Iuzhnay**	**54.22**	**298**	*e*P	**P**	**00 06 20.1**	**+0.6**
	baz=298						
NIL	**Nilore**	**55.59**	**288**	P	**P**	**00 06 30.5**	**+1.1**
NIL				pmax	pmax		
	comp=Z,13nm,0.9s						
NIL	**Nilore**	**55.59**	**288**	P	**P**	**00 06 30.5**	**+1.1**
ARU	**Arti**	**55.81**	**318**	P	**P**	**00 06 31.0**	**+0.4**
ARU				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ARU	**Arti**	**55.81**	**318**	P	**P**	**00 06 31.0**	**+0.4**
AB06	**Akbulak array**	**57.80**	**310**	P	**P**	**00 06 44.9**	**0.0**
AB05	**Akbulak array**	**57.81**	**310**	P	**P**	**00 06 45.4**	**+0.5**
AB02	**Akbulak array**	**57.81**	**310**	P	**P**	**00 06 45.4**	**+0.5**
AB07	**Akbulak array**	**57.81**	**310**	P	**P**	**00 06 45.4**	**+0.5**
AB01	**Akbulak array**	**57.81**	**310**	P	**P**	**00 06 45.5**	**+0.5**
AB31	**Akbulak array**	**57.81**	**310**	*i* P	**P**	**00 06 45.0**	**+0.1**
AB31				pmax	pmax		
	comp=Z,3.0nm,0.6s						
AB31	**Akbulak array**	**57.81**	**310**	P	**P**	**00 06 45.1**	**+0.2**
AB31				IAmb	IAmb	00 06 55.0	
	comp=Z,5.0nm,0.7s						
ABKAR	**Akbulak array**	**57.81**	**310**	P	**P**	**00 06 45.1**	**+0.2**
ABKAR	**Akbulak array**	**57.81**	**310**	IAmb	IAmb	00 06 55.0	
	comp=Z,5.0nm,0.7s						
AB03	**Akbulak array**	**57.82**	**310**	P	**P**	**00 06 45.6**	**+0.7**
AB04	**Akbulak array**	**57.82**	**310**	P	**P**	**00 06 45.8**	**+0.8**
AB09	**Akbulak array**	**57.83**	**310**	P	**P**	**00 06 45.8**	**+0.8**
AB08	**Akbulak array**	**57.83**	**310**	P	**P**	**00 06 45.4**	**+0.4**
WB0	**Warramunga Arr**	**59.45**	**190**	P	**P**	**00 06 54.5**	**-2.0**
WB0				IAmb	IAmb	00 07 03.9	
	comp=Z,5.0nm,1.0s						
KIRV	**Kirov**	**59.48**	**323⇑**	*e*P	**P**	**00 06 57.0**	**+0.7**
FITZ	**Fitzroy Crossi**	**59.58**	**200**	P	**P**	**00 06 57.4**	**0.0**
	comp=Z,3.2nm,1.0s,baz=348,slow=9.3,SNR=1.8						
FITZ	**Fitzroy Crossi**	**59.58**	**200**	P	**P**	**00 06 53.9**	**-3.6**
FITZ				IAmb	IAmb	00 07 01.2	
	comp=Z,5.3nm,1.1s						
WR0	**Warramunga Arr**	**59.61**	**190**	P	**P**	**00 06 56.4**	**-1.3**
WB2	**Warramunga Arr**	**59.62**	**190**	P	**P**	**00 06 56.5**	**-1.3**
WB2				IAmb	IAmb	00 07 13.3	
	comp=Z,5.4nm,1.1s						
WRA	**Warramunga Arr**	**59.62**	**190**	P	**P**	**00 06 56.8**	**-0.9**
	comp=Z,2.0nm,0.8s,baz=8.4,slow=7.1,SNR=11						
WRA				LR	LR	00 32 56.7	
	comp=Z,21nm,20.3s,baz=210,slow=36						
WRA	**Warramunga Arr**	**59.62**	**190**	IAmb	IAmb	00 06 57.8	
	comp=Z,0.2nm,0.9s						
YKA	**Yellowknife Ar**	**60.91**	**31**	P	**P**	**00 07 07.2**	**+1.0**
	comp=Z,0.4nm,0.7s,baz=303,slow=6.2,SNR=5.6						
ASAR	**Alice Springs**	**63.35**	**190**	P	**P**	**00 07 22.0**	**-0.9**
	comp=Z,0.9nm,0.8s,baz=11,slow=7.3,SNR=5.7						
ASAR	**Alice Springs**	**63.35**	**190**	P	**P**	**00 07 22.2**	**-0.7**
ASAR	**Alice Springs**	**63.35**	**190**	P	**P**	**00 07 22.2**	**-0.7**
FINES	**FINESS Array B**	**67.58**	**333**	P	**P**	**00 07 49.3**	**-0.6**
	comp=Z,3.6nm,0.8s,baz=69,slow=6.3,SNR=6.4						
FINES	**FINESS Array B**	**67.58**	**333**	P	**P**	**00 07 49.6**	**-0.3**
FINES	**FINESS Array B**	**67.58**	**333**	P	**P**	**00 07 49.6**	**-0.3**
BEKR	**Beckworth**	**70.06**	**55**	P	**P**	**00 08 07.8**	**+1.9**
BEKR				IAmb	IAmb	00 08 17.5	
	comp=Z,4.1nm,0.9s						
KIV	**Kislovodsk**	**70.72**	**311**	P	**P**	**00 08 10.7**	**+0.9**
KIV				pmax	pmax		
	comp=Z,16nm,1.0s						
KIV	**Kislovodsk**	**70.72**	**311**	P	**P**	**00 08 10.7**	**+0.9**
KBZ	**Khabaz**	**70.73**	**311**	P	**P**	**00 08 08.8**	**-0.9**
	comp=Z,5.9nm,0.9s,baz=75,slow=3.2,SNR=9.1						
NVAR	**Mina Array Bea**	**72.19**	**55**	P	**P**	**00 08 21.1**	**+2.2**
	comp=Z,0.9nm,0.7s,baz=284,slow=4.4,SNR=2.1						
NB2	**NORSAR Subarra**	**72.72**	**338**	P	**P**	**00 08 21.7**	**+0.2**
	comp=Z,0.9nm,0.7s,baz=38,slow=6.2						
NOA	**NORSAR Array B**	**72.72**	**338**	P	**P**	**00 08 20.9**	**-0.5**
	comp=Z,2.5nm,0.9s,baz=37,slow=6.0,SNR=5.7						
AKASG	**Malin Array Be**	**73.54**	**323**	P	**P**	**00 08 25.4**	**-1.0**
	comp=Z,1.7nm,0.8s,baz=45,slow=6.0,SNR=10						
AKASG	**Malin Array Be**	**73.54**	**323⇑**	*e*P	**P**	**00 08 27.5**	**+1.1**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.8s						
AKBB	**Malin Array Si**	**73.54**	**323**	*e*P	**P**	**00 08 27.4**	**+1.0**
PDAR	**Pinedale Array**	**74.78**	**47**	P	**P**	**00 08 35.3**	**+1.1**
	comp=Z,0.3nm,0.5s,baz=319,slow=4.8,SNR=1.9						
BURAR	**Bucovina Array**	**77.58**	**322**	P	**P**	**00 08 50.3**	**+0.6**
KOLS	**Kolonicke sedl**	**77.97**	**325**	*e*P	**P**	**00 08 54.0**	**+2.2**
CRVS	**Cervenica-Dubn**	**78.35**	**325**	*e*P	P	00 08 59.5	+5.6
BRTR	**Keskin Array B**	**78.62**	**312**	P	**P**	**00 08 56.0**	**+0.2**
	comp=Z,0.9nm,0.8s,baz=35,slow=5.3,SNR=2.6						
KHC	**Kasperske Hory**	**81.47**	**329⇑**	*e*P	**P**	**00 09 13.0**	**+2.1**
KHC				pmax	pmax		
	comp=Z,8.0nm,1.7s						
KHC	**Kasperske Hory**	**81.47**	**329**	*e*P	**P**	**00 09 10.5**	**-0.4**
GERES	**GERESS Array B**	**81.65**	**329**	P	**P**	**00 09 11.3**	**-0.6**
	comp=Z,0.7nm,0.7s,baz=36,slow=5.7,SNR=4.6						
VTS	**Vitosha**	**82.17**	**320**	P	**P**	**00 09 13.2**	**-1.6**
VTS				pmax	pmax		
	comp=Z,4.0nm,0.9s						
VTS	**Vitosha**	**82.17**	**320**	P	**P**	**00 09 13.2**	**-1.6**
TXAR	**Lajitas Array**	**87.31**	**54**	P	**P**	**00 09 41.7**	**+0.8**
	comp=Z,0.2nm,0.6s,baz=309,slow=5.7,SNR=2.6						
TORD	**Torodi Ar. Bea**	**116.88**	**318**	PKP	**PKPdf**	**00 15 37.5**	**-1.4**
	comp=Z,0.4nm,1.0s,baz=4.0,slow=3.4,SNR=1.9						

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*MDD **21** 00:08:37.3±2.0, 36°.09N×17°.13W, h40^{km}, mb4.4/8, Error ellipse: s-maj=26.8km s-min=10.3km az=122.0, PRXIMO*
*IGIL **21** 00:08:37.5, 36°.04N×17°.10W, h12^{km}, ML2.8*
*INMG **21** 00:08:40.8±2.6, 36°.06N×17°.12W, h22^{km}±36^{km}, ML3.0, Error ellipse: s-maj=10.6km s-min=3.4km az=115.0*
ISC 21 00:08:31.7±1.8, **36°.26N**±0°.07×**17°.1W**±0°.1, **h10**^{km}, **n52**, σ**3^{s}.96**/76, **Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMPST	**Porto Santo, M**	**3.23**	**169**	*e*P	**Pn**	**00 09 23.6**	**+1.2**
PMPST				*e*S	**Sn**	**00 09 54.6**	**-6.3**
PMPST				A	A	00 09 54.9	
	74nm,0.2s						
PMPS	**Porto Santo**	**3.25**	**169**	*e*S	**Sn**	**00 09 54.8**	**-6.6**
PMPS				A	A	00 09 55.5	
	55nm,0.6s						
PMOZ	**Porto Moniz, M**	**3.43**	**182**	P	**Pn**	**00 09 25.5**	**+0.2**
	19nm,0.2s,SNR=7.9						
PMOZ				S	**Sn**	**00 10 00.6**	**-5.5**
	194nm,0.3s,SNR=7.9						
PMOZ	**Porto Moniz, M**	**3.43**	**182**	*e*P	**Pn**	**00 09 26.2**	**+0.9**
PMOZ				*e*S	**Sn**	**00 09 59.9**	**-6.2**
PMOZ				A	A	00 10 01.6	
	110nm,0.6s						
PMAR	**Madeira**	**3.53**	**178**	*e*P	**Pn**	**00 09 27.4**	**+0.7**
PMAR				*e*S	Sn	00 10 01.5	-7.1
FUL	**Funchal**	**3.60**	**178**	*e*P	**Pn**	**00 09 28.3**	**+0.7**
FUL				*e*S	Sn	00 10 02.9	-7.3
PFVI	**Vila Bisbo**	**6.66**	**80**	P	**Pn**	**00 10 13.6**	**+3.9**
	2.2nm,0.2s,SNR=7.9						
PFVI				S	**Sn**	**00 11 23.0**	**-2.6**
	8.5nm,0.1s,SNR=7.9						
PFVI	**Vila Bisbo**	**6.66**	**80**	*e*P	**Pn**	**00 10 13.8**	**+4.1**
PFVI				*e*S	**Sn**	**00 11 22.9**	**-2.7**
PFVI				A	A	00 11 30.9	
	9.8nm,0.9s						
PMAFR	**Mafra**	**6.73**	**64**	P	Pn	00 10 15.9	+5.4
	1.6nm,0.2s,SNR=7.9						
PMAFR				S	**Sn**	**00 11 27.0**	**-0.2**
	21nm,0.2s,SNR=13						
PMAFR	**Mafra**	**6.73**	**64**	*e*S	**Sn**	**00 11 26.9**	**-0.3**
PMAFR				A	A	00 11 33.9	
	18nm,0.6s						
PTEO	**Sao Teotonio**	**6.79**	**77**	*e*P	**Pn**	**00 10 15.5**	**+4.1**
PTEO				*e*S	**Sn**	**00 11 27.0**	**-1.8**
MORF	**Marmelete**	**6.82**	**79**	*e*P	**Pn**	**00 10 15.8**	**+4.0**
MORF				*e*S	**Sn**	**00 11 27.4**	**-2.2**
MORF				AML	AML	00 11 31.1	
	comp=E,10nm,0.2s						
MORF	**Marmelete**	**6.82**	**79**	P	**Pn**	**00 10 15.8**	**+4.0**
MORF				S	**Sn**	**00 11 27.4**	**-2.2**
	comp=E,10nm,0.2s						
MORF	**Marmelete**	**6.82**	**79**	*e*P	**Pn**	**00 10 15.9**	**+4.0**
MORF				*e*S	**Sn**	**00 11 27.5**	**-2.1**
MORF				A	A	00 11 29.9	
	comp=E,4.7nm,0.2s						
PNCL	**Nicolau / Gran**	**7.05**	**72**	*e*P	**Pn**	**00 10 19.6**	**+4.7**
PNCL				*e*S	**Sn**	**00 11 33.3**	**-1.8**
PNCL				A	A	00 11 45.1	
	comp=E,6.1nm,0.8s						
MESJ	**Messejana**	**7.24**	**75**	*e*P	**Pn**	**00 10 21.5**	**+4.0**
MESJ				*e*S	**Sn**	**00 11 37.3**	**-2.4**
MESJ				AML	AML	00 11 42.0	
	comp=N,5.2nm,0.2s						
MESJ	**Messejana**	**7.24**	**75**	P	**Pn**	**00 10 21.5**	**+4.0**
MESJ				S	**Sn**	**00 11 37.3**	**-2.4**
	comp=N,5.2nm,0.2s						
MESJ	**Messejana**	**7.24**	**75**	*e*P	**Pn**	**00 10 21.9**	**+4.4**
MESJ				*e*S	**Sn**	**00 11 39.4**	**-0.3**
MESJ				A	A	00 11 40.4	
	comp=N,2.6nm,0.2s						
PSBE	**So Bento**	**7.29**	**61**	*e*P	Pn	00 10 24.5	+6.2
PSBE				*e*S	**Sn**	**00 11 41.1**	**0.0**
PCVE	**Castro Verde**	**7.34**	**77**	*e*P	**Pn**	**00 10 23.0**	**+4.0**
PCVE				*e*S	**Sn**	**00 11 40.5**	**-1.9**
PCVE				A	A	00 11 55.7	
	comp=N,3.0nm,0.5s						
PBDV	**Barranco-do-Ve**	**7.39**	**80**	*e*P	**Pn**	**00 10 23.7**	**+4.1**
PBDV				*e*S	**Sn**	**00 11 42.3**	**-1.2**
PBDV				A	A	00 11 55.4	
	comp=N,4.6nm,0.6s						
PMTG	**Montargil**	**7.54**	**66**	*e*P	Pn	00 10 27.7	+6.0
PMTG				*e*S	**Sn**	**00 11 45.7**	**-1.5**
PMTG				A	A	00 11 56.1	
	comp=N,3.9nm,0.4s						
EVO	**Evora**	**7.54**	**70**	*e*P	**Pn**	**00 10 26.3**	**+4.6**
EVO				*e*S	**Sn**	**00 11 44.8**	**-2.5**
EVO				A	A	00 11 49.0	
	comp=N,5.7nm,0.1s						
PBEJ	**Beja**	**7.54**	**74**	*e*S	**Sn**	**00 11 45.2**	**-2.1**
PBEJ				A	A	00 11 52.3	
	comp=N,2.9nm,0.4s						
PVAQ	**Vaqueiros**	**7.57**	**79**	*e*P	**Pn**	**00 10 26.1**	**+4.0**
PVAQ				*e*S	**Sn**	**00 11 45.1**	**-2.9**
PVAQ				A	A	00 12 00.6	
	comp=N,3.1nm,0.8s						
PCAS	**Casmilo, Conde**	**7.73**	**58**	*e*S	**Sn**	**00 11 48.9**	**-2.9**
PCAS				A	A	00 12 06.5	
	comp=N,3.6nm,0.6s						
EGRO	**El Granado**	**7.77**	**78**	P	**Pn**	**00 10 28.6**	**+3.7**
	comp=N,1.2nm,0.3s,SNR=7.9						
EGRO				S	**Sn**	**00 11 50.4**	**-2.5**
	comp=N,3.2nm,0.2s,SNR=5.0						
PESTR	**Estremoz**	**7.95**	**68**	*e*S	**Sn**	**00 11 55.0**	**-2.3**
PESTR				A	A	00 12 03.5	
	comp=N,3.2nm,0.4s						
CFUE	**Fuerteventura**	**8.03**	**160**	S	Sn	00 11 49.7	-10
	comp=N,14nm,0.3s,SNR=7.9						
PBAR	**Barrancos**	**8.21**	**74**	*e*S	**Sn**	**00 12 01.4**	**-2.3**
PBAR				A	A	00 12 06.9	
	comp=N,1.6nm,0.6s						
PMRV	**Marv??o**	**8.27**	**65**	*e*P	Pn	00 10 38.0	+6.3
PMRV				*e*S	**Sn**	**00 12 02.3**	**-2.9**
PMRV				A	A	00 12 05.5	
	comp=N,4.7nm,0.3s						
PCBR	**Castelo Branco**	**8.35**	**62**	*e*P	Pn	00 10 38.5	+5.7
PCBR				*e*S	**Sn**	**00 12 04.7**	**-2.5**
PCBR				A	A	00 12 09.2	
	comp=N,2.2nm,0.2s						
EMIN	**Mina Concepcio**	**8.44**	**77**	P	**Pn**	**00 10 37.4**	**+3.4**
	comp=N,0.4nm,0.2s,SNR=7.9						
EMIN				S	**Sn**	**00 12 05.9**	**-3.4**
	comp=N,1.9nm,0.2s,SNR=7.9						
PVIS	**Viseu**	**8.44**	**55**	*e*P	**Pn**	**00 10 38.9**	**+4.8**
PVIS				*e*S	**Sn**	**00 12 04.1**	**-5.4**
PVIS				A	A	00 12 06.3	
	comp=N,5.2nm,0.3s						
MTE	**Manteigas**	**8.54**	**58**	*e*S	**Sn**	**00 12 08.6**	**-3.2**
MTE				A	A	00 12 14.2	
	comp=N,4.9nm,0.3s						
EZAM	**Zamans**	**8.75**	**45**	S	**Sn**	**00 12 11.0**	**-6.0**
	comp=N,1.6nm,0.1s,SNR=7.9						
PVRL	**Vila Real**	**8.84**	**53**	*e*S	**Sn**	**00 12 13.8**	**-5.5**
PVRL				A	A	00 12 22.5	
	comp=N,5.0nm,0.3s						
POLO	**Lamas de Olo**	**8.84**	**52**	*e*P	**Pn**	**00 10 44.3**	**+4.6**
POLO				*e*S	**Sn**	**00 12 14.1**	**-5.3**
POLO				A	A	00 12 23.2	
	comp=N,1.7nm,1.0s						
PCAB	**Cabril**	**8.88**	**49**	*e*P	Pn	00 10 45.8	+5.7
PCAB				*e*S	**Sn**	**00 12 14.9**	**-5.4**
PCAB				A	A	00 12 20.5	
	comp=N,5.9nm,0.1s						
PGAV	**Gavieira, Arco**	**8.89**	**47**	*e*P	Pn	00 10 45.4	+5.2
PGAV				*e*S	**Sn**	**00 12 15.1**	**-5.4**
PGAV				A	A	00 12 19.3	
	comp=N,5.8nm,0.3s						
ELOB	**Lobios**	**8.95**	**49**	P	**Pn**	**00 10 45.4**	**+4.2**
	comp=N,2.8nm,0.3s,SNR=7.9						
ELOB				S	**Sn**	**00 12 16.7**	**-5.4**
	comp=N,1.7nm,0.1s,SNR=7.9						
ESPR	**Espera**	**9.03**	**83**	S	**Sn**	**00 12 19.7**	**-4.1**
	comp=N,2.9nm,0.2s,SNR=7.9						
EMAZ	**Mazaricos**	**9.13**	**41**	P	**Pn**	**00 10 47.9**	**+4.4**
	comp=N,2.5nm,0.2s,SNR=7.9						
MVO	**Moncorvo**	**9.23**	**55**	S	**Sn**	**00 12 23.6**	**-5.3**
	comp=N,2.8nm,0.1s,SNR=7.8						
MVO	**Moncorvo**	**9.23**	**55**	*e*S	**Sn**	**00 12 23.2**	**-5.8**
MVO				A	A	00 12 28.6	
	comp=N,3.7nm,0.2s						
EPLA	**Plasencia**	**9.44**	**63**	S	**Sn**	**00 12 29.5**	**-4.3**
	comp=N,1.9nm,0.2s,SNR=6.2						
EAGO	**Agolada(Pontev**	**9.52**	**44**	P	**Pn**	**00 10 53.0**	**+4.2**
	comp=N,2.4nm,0.3s,SNR=7.9						
EAGO				S	**Sn**	**00 12 28.9**	**-6.9**
	comp=N,1.9nm,0.1s,SNR=7.9						
PBRG	**Braganca**	**9.74**	**52**	*e*P	Pn	00 10 57.2	+5.3
PBRG				*e*S	**Sn**	**00 12 35.7**	**-5.7**
PBRG				A	A	00 12 37.4	
	comp=N,2.7nm,0.7s						
ECAL	**Calabor**	**9.82**	**52**	P	**Pn**	**00 10 57.4**	**+4.4**
	comp=N,1.4nm,0.3s,SNR=7.9						
ECAL				S	**Sn**	**00 12 38.3**	**-4.9**
	comp=N,1.5nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**10.13**	**75**	P	**Pn**	**00 11 01.3**	**+4.1**
	comp=N,0.3nm,0.2s,SNR=7.9						
EADA				S	**Sn**	**00 12 46.6**	**-4.3**
	comp=N,0.6nm,0.1s,SNR=7.9						
EPON	**Pontenova**	**10.38**	**44**	S	**Sn**	**00 12 53.5**	**-3.4**
	comp=N,4.7nm,0.1s,SNR=7.9						
PAB	**San Pablo**	**10.56**	**68**	S	**Sn**	**00 12 58.3**	**-3.2**
	comp=N,0.9nm,0.2s,SNR=7.9						

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*IDC **21** 00:10:10.5±3.1, 47°.36S×165°.48E, h0^{km}, mb3.6/2, mb1 3.8/2, mb1mx3.6/14, mbtmp3.6/2, MS3.5/6, Ms1 3.5/6, ms1mx3.3/12, Error ellipse: s-maj=281.7km s-min=61.1km az=30.0*
ISC 21 00:10:10.2±1.5, **49°.0S**±0°.2×**164°.5E**±0°.1, **h18**^{km}, **n29**, σ**1^{s}.26**/27, **MS3.4**/6, **Off west coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WHZ	**Wether Hill Ro**	**3.88**	**39**	P	**Pn**	**00 11 09.1**	**+0.2**
WHZ				S	**Sn**	**00 11 52.9**	**-1.0**
SYZ	**Scrubby Hill**	**3.98**	**54**	P	**Pn**	**00 11 10.8**	**+0.6**
SYZ				S	**Sn**	**00 11 54.9**	**-1.5**
MLZ	**Mavora Lakes**	**4.38**	**36**	P	**Pn**	**00 11 16.6**	**+0.8**
MLZ				S	**Sn**	**00 12 06.8**	**+0.4**
TUZ	**Tuapeka**	**4.62**	**51**	P	**Pn**	**00 11 20.2**	**+1.1**
EAZ	**Earnscleugh**	**4.99**	**43**	P	**Pn**	**00 11 24.8**	**+0.6**
EAZ				S	**Sn**	**00 12 23.2**	**+1.8**
HHSZ	**Highcliff Hill**	**5.18**	**56**	P	**Pn**	**00 11 28.5**	**+1.7**
HHSZ				S	**Sn**	**00 12 26.0**	**0.0**
WKZ	**Wanaka**	**5.18**	**39**	P	**Pn**	**00 11 28.6**	**+1.8**
JCZ	**Jackson Bay**	**5.73**	**33**	P	**Pn**	**00 11 35.3**	**+0.8**
ODZ	**Otahua Downs**	**5.76**	**49**	P	**Pn**	**00 11 34.1**	**-0.7**
LBZ	**Lake Benmore**	**6.04**	**43**	P	**Pn**	**00 11 37.1**	**-1.5**
TMZ	**Timaru**	**6.42**	**47**	P	**Pn**	**00 11 46.5**	**+2.7**
FOZ	**Fox Glacier**	**6.58**	**36**	P	**Pn**	**00 11 47.5**	**+1.5**
FOZ				S	**Sn**	**00 12 59.6**	**-0.9**
ARCZ	**Arundel**	**6.83**	**45**	P	**Pn**	**00 11 50.1**	**+0.6**
RPZ	**Rata Peaks**	**6.95**	**43**	P	**Pn**	**00 11 48.6**	**-2.6**
GCSZ	**Gaunt Creek Bo**	**6.96**	**38**	P	**Pn**	**00 11 51.6**	**+0.3**
RACZ	**Rakaia**	**7.46**	**48**	P	**Pn**	**00 11 57.2**	**-0.8**
OXZ	**Oxford**	**7.71**	**46**	P	**Pn**	**00 12 00.8**	**-0.7**
STKA	**Stephens Creek**	**24.24**	**306**	LR	LR	00 24 00.6	
	comp=Z,103nm,18.3s,baz=204,slow=35						
ASAR	**Alice Springs**	**34.87**	**305**	P	**P**	**00 17 00.5**	**+0.1**
	0.4nm,0.5s,baz=134,slow=8.0,SNR=7.4						
ASAR				LR	LR	00 29 18.8	
	comp=Z,65nm,20.1s,baz=156,slow=33						
WRA	**Warramunga Arr**	**37.70**	**309**	P	**P**	**00 17 23.8**	**-0.8**
	0.7nm,0.8s,baz=144,slow=9.8,SNR=2.4						
H01W1	**Cape Leeuwin H**	**39.26**	**272**	T	T	00 59 13.1	
	baz=127,slow=75,SNR=6.8						
H01W2	**Cape Leeuwin H**	**39.27**	**272**	T	T	00 59 13.0	
	baz=127,slow=75,SNR=5.1						
H01W3	**Cape Leeuwin H**	**39.28**	**272**	T	T	00 59 15.7	
	baz=127,slow=75,SNR=5.3						
FITZ	**Fitzroy Crossi**	**43.90**	**301**	LR	LR	00 35 54.5	
	comp=Z,87nm,18.3s,baz=150,slow=35						
PPT	**Papeete**	**48.50**	**66**	LR	LR	00 35 23.1	
	comp=Z,24nm,21.0s,baz=166,slow=32						
PLCA	**Paso Flores**	**78.36**	**141**	LR	LR	00 50 08.0	
	comp=Z,36nm,19.6s,baz=180,slow=30						
CMAR	**Chiang Mai Arr**	**88.71**	**300**	LR	LR	01 04 58.8	
	comp=Z,15nm,18.7s,baz=285,slow=37						
BRTR	**Keskin Array B**	**144.20**	**274**	PKP	**PKiKP**	**00 29 48.1**	**0.0**
	0.7nm,0.9s,baz=93,slow=2.9,SNR=2.2						
ARCES	**ARCESS Array B**	**151.51**	**331**	PKPbc	**PKiKP**	**00 30 02.2**	**+0.2**
	3.8nm,1.0s,baz=80,slow=2.0,SNR=3.9						

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*IDC **21** 00:28:22.4±1.8, 6°.87S×129°.69E, h129^{km}±21^{km}, mb3.2/1, mb1 3.4/6, mb1mx3.2/29, mbtmp3.8/6, Error ellipse: s-maj=28.7km s-min=14.3km az=112.0*
ISC 21 00:28:20.2±0.9, **7°.08S**±0°.06×**129°.9E**±0°.1, **h104**^{km}, **n6**, σ**3^{s}.00**/11, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**6.31**	**12**	P	**Pn**	**00 29 52.9**	**+2.0**
	0.5nm,0.3s,baz=198,slow=22,SNR=0.7						
SIJI				S	**Sn**	**00 30 59.7**	**-1.9**
	1.2nm,0.3s,baz=236,slow=22,SNR=1.9						
BATI	**Baumata**	**6.91**	**243**	P	**Pn**	**00 30 01.0**	**+1.9**
	5.8nm,0.3s,baz=56,slow=3.6,SNR=2.1						
BATI				S	**Sn**	**00 31 16.4**	**+0.1**

	2.4nm,0.3s,baz=80,slow=21,SNR=1.0						
FITZ	**Fitzroy Crossi**	**11.72**	**200**	P	**Pn**	**00 31 05.9**	**+1.7**
	0.2nm,0.3s,baz=24,slow=13,SNR=11						
FITZ				S	**Sn**	**00 33 08.6**	**-4.5**
	0.3nm,0.3s,baz=217,slow=9.6,SNR=2.3						
WRA	**Warramunga Arr**	**13.49**	**162**	P	**P**	**00 31 30.7**	**-2.4**
	0.1nm,0.3s,baz=343,slow=14,SNR=2.2						
WRA				S	**Sn**	**00 33 57.9**	**+1.7**
	0.5nm,0.3s,baz=335,slow=22,SNR=8.0						
ASAR	**Alice Springs**	**16.94**	**167**	P	**P**	**00 32 15.9**	**+4.6**
	0.1nm,0.3s,baz=346,slow=11,SNR=10.0						
ASAR				S	**Sn**	**00 35 18.4**	**-0.9**
	0.1nm,0.3s,baz=325,slow=16,SNR=4.1						
MKAR	**Makanchi Array**	**68.24**	**327**	P	**P**	**00 39 07.3**	**-2.5**
	0.2nm,0.3s,baz=119,slow=7.7,SNR=9.2						

NEIC ***21*** *00:57:41.5±1.6,20°.9S±0°.1×178°.9W±0°.1,h611^{km}±7^{km}, mb4.7/66,Error ellipse: s-maj=19.6km s-min=16.7km az=95.0*

IDC ***21*** *00:57:43.6±1.3,20°.91S×179°.15W,h616^{km}±15^{km}, mb3.8/24,mb1 3.9/25,mb1mx3.8/38,mbtmp4.7/25,Error ellipse: s-maj=12.6km s-min=9.8km az=146.0*

NOU ***21*** *00:57:43.4,21°.07S×179°.07W,h619^{km},mb4.6,Fiji Islands Region*

BGR ***21*** *00:57:44.8±0.0,21°.59S×178°.22W,h600^{km}*

ISC 21 00:57:42.7±0.4,**21°.07S**±0°.05×**178°.95W**±0°.07,**h619**^{km}, **n267**,σ**1^{s}.26**/284,**mb4.6**/56,**35C-21D,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.36**	**319**	P	**P**	**00 59 11.9**	**-0.4**
MSVF	**Nonsavu**	**4.36**	**319**	P	**P**	**00 59 11.9**	**-0.4**
RIZ	**Raoul Island**	**8.20**	**174**	S	**S**	**01 01 23.2**	**-1.1**
RAO	**Raoul Island**	**8.21**	**174**	S	**S**	**01 01 22.9**	**-1.5**
	138nm,0.3s,baz=90,slow=20,SNR=2.4						
GLKZ	**Green Lake**	**8.21**	**174**	P	**P**	**00 59 43.9**	**-0.7**
GLKZ				S	**S**	**01 01 23.3**	**-1.3**
NIUE	**Niue**	**8.71**	**78**	P	**P**	**00 59 48.1**	**-1.4**
AFI	**Afiamalu**	**9.87**	**45**	P	**P**	**00 59 58.2**	**-2.7**
DZM	**Mont Dzumac**	**13.62**	**263**	P	**P**	**01 00 37.1**	**-0.4**
	2.0nm,0.3s,baz=107,slow=21,SNR=19						
DZM	**Mont Dzumac**	**13.62**	**263**	P	**P**	**01 00 37.5**	**-0.1**
DZM	**Mont Dzumac**	**13.62**	**263**	P	**P**	**01 00 37.8**	**+0.3**
SANVU	**Saraoutou**	**14.28**	**291**	P	**P**	**01 00 43.8**	**0.0**
SANVU	**Saraoutou**	**14.28**	**291**	P	**P**	**01 00 42.9**	**-0.8**
OUZ	**Omahuta**	**15.55**	**203**	P	**P**	**01 00 58.0**	**+3.0**
OUZ	**Omahuta**	**15.55**	**203**	P	**P**	**01 00 58.4**	**+3.4**
GRZ	**Great Barrier**	**15.90**	**197**	P	**P**	**01 01 00.5**	**+2.3**
WCZ	**Waipu Caves**	**15.94**	**200**	P	**P**	**01 01 01.8**	**+3.2**
KUZ	**Kuaotunu**	**16.30**	**195**	P	**P**	**01 01 04.3**	**+2.5**
MXZ	**Matakaoa Point**	**16.61**	**188**	P	**P**	**01 01 04.7**	**+0.1**
MXZ				IAmb	IAmb	01 01 15.5	
	comp=Z,32nm,0.9s						
MXZ	**Matakaoa Point**	**16.61**	**188**	P	**P**	**01 01 04.6**	**-0.1**
ETAZ	**East Tamaki Re**	**16.70**	**197**	P	**P**	**01 01 08.5**	**+3.0**
MKAZ	**Moumakai**	**16.78**	**196**	P	**P**	**01 01 08.8**	**+2.6**
WMGZ	**Waiomatatini S**	**16.85**	**187**	P	**P**	**01 01 08.0**	**+1.1**
HAZ	**Te Kaha**	**16.87**	**189**	P	**P**	**01 01 10.1**	**+3.1**
HAZ				S	**S**	**01 03 52.2**	**-0.9**
PKGZ	**Pakihiroa**	**16.96**	**188**	P	**P**	**01 01 07.6**	**-0.3**
RUGZ	**Raukumara Rang**	**17.09**	**189**	P	**P**	**01 01 08.9**	**-0.3**
RUGZ				S	**S**	**01 03 53.2**	**-3.7**
TGRZ	**Tauranga**	**17.12**	**193**	P	**P**	**01 01 11.6**	**+2.4**
PUZ	**Puketiti**	**17.12**	**187**	P	**P**	**01 01 10.0**	**+0.6**
TWGZ	**Tauwhareparae**	**17.26**	**188**	P	**P**	**01 01 11.5**	**+0.9**
URZ	**Urewera**	**17.47**	**190**	P	**P**	**01 01 10.6**	**-1.8**
	comp=Z,6.0nm,0.3s,baz=269,slow=2.0,SNR=35						
URZ				S	**S**	**01 03 57.9**	**-4.9**
	comp=Z,0.6nm,0.3s,baz=229,slow=20,SNR=2.4						
URZ	**Urewera**	**17.47**	**190**	P	**P**	**01 01 11.4**	**-1.1**
URZ				IAmb	IAmb	01 01 12.6	
	comp=Z,19nm,0.5s						
URZ	**Urewera**	**17.47**	**190**	P	**P**	**01 01 10.8**	**-1.6**
MWZ	**Matawai**	**17.48**	**189**	P	**P**	**01 01 11.8**	**-0.8**
MWZ				S	**S**	**01 04 01.4**	**-1.6**
CNGZ	**Carnagh Statio**	**17.53**	**187**	P	**P**	**01 01 13.6**	**+0.6**
RIGZ	**Rimuhau**	**17.81**	**188**	P	**P**	**01 01 15.9**	**+0.3**
RIGZ				S	**S**	**01 04 08.5**	**+0.1**
SNGZ	**Shannon Statio**	**17.94**	**189**	P	**P**	**01 01 17.4**	**+0.6**
PRGZ	**Paritu Road**	**18.01**	**188**	P	**P**	**01 01 19.3**	**+1.9**
RAHZ	**Arahi**	**18.12**	**190**	P	**P**	**01 01 19.0**	**+0.6**
MRHZ	**Matea Rd**	**18.15**	**192**	P	**P**	**01 01 18.3**	**-0.5**
HIZ	**Hauiti**	**18.19**	**196**	P	**P**	**01 01 20.9**	**+1.9**
HIZ				IAmb	IAmb	01 01 32.7	
	comp=Z,29nm,1.1s						
HIZ	**Hauiti**	**18.19**	**196**	P	**P**	**01 01 20.6**	**+1.6**
BKZ	**Black Stump Fm**	**18.46**	**191**	P	**P**	**01 01 20.4**	**-1.2**
BKZ	**Black Stump Fm**	**18.46**	**191**	P	**P**	**01 01 20.9**	**-0.6**
BKZ				S	**S**	**01 04 17.2**	**-1.6**
TMVZ	**Te Maari**	**18.57**	**193**	P	**P**	**01 01 23.4**	**+0.8**
OTVZ	**Oturere**	**18.62**	**193**	P	**P**	**01 01 22.6**	**-0.5**
KWHZ	**Kaweka Forest**	**18.72**	**191**	P	**P**	**01 01 23.1**	**-0.8**
KWHZ				S	**S**	**01 04 21.6**	**-1.5**
WNVZ	**Wahianoa**	**18.79**	**193**	P	**P**	**01 01 24.8**	**+0.1**
MOVZ	**Moawhango**	**18.84**	**193**	P	**P**	**01 01 25.3**	**+0.3**
BHHZ	**Black Hill Sta**	**18.86**	**192**	P	**P**	**01 01 23.8**	**-1.3**
BHHZ				S	**S**	**01 04 22.6**	**-2.6**
KAHZ	**Kahuranaki**	**19.01**	**190**	P	**P**	**01 01 26.3**	**-0.1**
BFZ	**Birch Farm**	**19.98**	**191**	P	**P**	**01 01 34.9**	**-0.3**
MSWZ	**Moikau Station**	**20.88**	**192**	P	**P**	**01 01 43.4**	**+0.2**
SNZO	**South Karori**	**20.89**	**193**	P	**P**	**01 01 42.6**	**-0.7**
BHW	**Baring Head**	**20.95**	**193**	P	**P**	**01 01 42.8**	**-1.1**
QRZ	**Quartz Range**	**20.99**	**198**	P	**P**	**01 01 45.3**	**+1.1**
QRZ				IAmb	IAmb	01 01 45.6	
	comp=Z,14nm,0.6s						
PLWZ	**Palliser**	**21.02**	**192**	P	**P**	**01 01 43.4**	**-1.2**
NNZ	**Nelson**	**21.12**	**196**	P	**P**	**01 01 45.7**	**+0.3**
NNZ				IAmb	IAmb	01 01 46.3	
	comp=Z,28nm,0.9s						
BSWZ	**Blackbirch Sta**	**21.46**	**195**	P	**P**	**01 01 49.3**	**+0.8**
THZ	**Tophouse**	**21.75**	**197**	P	**P**	**01 01 51.4**	**+0.2**
THZ				IAmb	IAmb	01 01 55.4	
	comp=Z,14nm,0.6s						
KHZ	**Kahutara**	**22.20**	**195**	P	**P**	**01 01 54.8**	**-0.3**
KHZ				IAmb	IAmb	01 01 57.6	
	comp=Z,18nm,1.0s						
LTZ	**Lake Taylor**	**22.87**	**197**	P	**P**	**01 02 00.4**	**-0.6**
LTZ				IAmb	IAmb	01 02 03.4	
	comp=Z,16nm,0.7s						
OXZ	**Oxford**	**23.44**	**197**	P	**P**	**01 02 05.3**	**-0.7**
OXZ				IAmb	IAmb	01 02 06.1	
	comp=Z,12nm,0.8s						
MQZ	**McQueen's Vall**	**23.64**	**195**	P	**P**	**01 02 07.2**	**-0.5**
MQZ				IAmb	IAmb	01 02 08.9	
	comp=Z,20nm,1.0s						
RPZ	**Rata Peaks**	**24.07**	**198**	P	**P**	**01 02 12.6**	**+0.9**
	comp=Z,6.0nm,0.4s,baz=346,slow=0.5,SNR=9.9						
RPZ	**Rata Peaks**	**24.07**	**198**	P	**P**	**01 02 12.1**	**+0.5**
RPZ				IAmb	IAmb	01 02 22.6	
	comp=Z,18nm,1.1s						
FOZ	**Fox Glacier**	**24.29**	**200**	P	**P**	**01 02 13.8**	**+0.3**
FOZ				IAmb	IAmb	01 02 15.7	
	comp=Z,23nm,0.9s						
LBZ	**Lake Benmore**	**24.94**	**199**	P	**P**	**01 02 19.3**	**0.0**
ODZ	**Otahua Downs**	**25.41**	**197**	P	**P**	**01 02 23.2**	**-0.2**
WKZ	**Wanaka**	**25.70**	**200**	P	**P**	**01 02 26.1**	**+0.1**
WKZ				IAmb	IAmb	01 02 45.4	
	comp=Z,28nm,1.2s						
MLZ	**Mavora Lakes**	**26.47**	**201**	P	**P**	**01 02 34.2**	**+1.5**
MLZ				IAmb	IAmb	01 02 36.5	
	comp=Z,19nm,0.9s						
WHZ	**Wether Hill Ro**	**26.99**	**200**	P	**P**	**01 02 38.4**	**+1.2**
EIDS	**Eidsvold**	**27.84**	**255**	P	**P**	**01 02 45.4**	**+0.5**
ARMA	**Armidale**	**28.02**	**245**	P	**P**	**01 02 48.0**	**+1.4**
ARMA				IAmb	IAmb	01 02 48.7	
	comp=Z,19nm,0.8s						
CAN	**Canberra**	**31.46**	**236**	P	**P**	**01 03 16.8**	**+0.9**
CTA	**Charters Tower**	**32.55**	**265**	P	**P**	**01 03 25.5**	**+0.2**
	comp=Z,43nm,0.4s,baz=92,slow=12,SNR=22						
CTAO	**Charters Tower**	**32.55**	**265**	P	**P**	**01 03 25.8**	**+0.5**
PMG	**Port Moresby**	**34.61**	**284**	P	**P**	**01 03 41.6**	**-0.9**
TOO	**Toolangi**	**34.84**	**234**	P	**P**	**01 03 44.6**	**+0.4**
COEN	**Coen**	**36.73**	**275**	P	**P**	**01 03 59.7**	**-0.3**
COEN				IAmb	IAmb	01 04 01.2	
	comp=Z,16nm,0.9s						
STKA	**Stephens Creek**	**36.74**	**245**	P	**P**	**01 04 00.7**	**+0.8**
	comp=Z,12nm,0.7s,baz=92,slow=10,SNR=28						
STKA	**Stephens Creek**	**36.74**	**245**	P	**P**	**01 04 00.5**	**+0.7**
BBOO	**Buckleboo**	**41.50**	**244**	P	**P**	**01 04 37.8**	**0.0**
WR0	**Warramunga Arr**	**43.45**	**263**	P	**P**	**01 04 52.7**	**-0.6**
AS31	**Alice Springs**	**43.52**	**257**	P	**P**	**01 04 53.9**	**+0.1**
ASAR	**Alice Springs**	**43.52**	**257**	P	**P**	**01 04 53.9**	**+0.1**
	comp=Z,40nm,0.7s,baz=96,slow=7.7,SNR=388						
ASAR				PcP	**PcP**	**01 06 27.8**	**+0.4**
	comp=Z,3.1nm,0.7s,baz=102,slow=3.4,SNR=6.0						
ASAR				ScP	**ScP**	**01 09 24.0**	**+3.2**
	comp=Z,2.6nm,0.7s,baz=102,slow=4.1,SNR=9.4						
ASAR				S	**S**	**01 10 37.5**	**-2.1**
	comp=Z,4.7nm,1.0s,baz=94,slow=16,SNR=17						
WB0	**Warramunga Arr**	**43.62**	**263**	P	**P**	**01 04 54.3**	**-0.3**
WRAB	**Tennant Creek**	**43.63**	**263**	P	**P**	**01 04 54.1**	**-0.6**
WRA	**Warramunga Arr**	**43.64**	**263**	P	**P**	**01 04 54.3**	**-0.4**
	comp=Z,14nm,0.3s,baz=96,slow=7.6,SNR=666						
WRA				PcP	**PcP**	**01 06 28.4**	**+0.6**
	comp=Z,1.3nm,0.6s,baz=93,slow=3.3,SNR=2.1						
WRA				ScP	**ScP**	**01 09 23.9**	**+2.6**
	comp=Z,0.6nm,0.8s,baz=106,slow=3.5,SNR=2.8						
WRA				S	**S**	**01 10 37.1**	**-4.2**
	comp=Z,1.9nm,0.8s,baz=97,slow=13,SNR=5.6						
WRA	**Warramunga Arr**	**43.64**	**263**	P	**P**	**01 04 53.2**	**-1.5**
FAKI	**Fak Fak**	**50.76**	**284**	P	**P**	**01 05 47.5**	**-0.5**
FAKI				IAmb	IAmb	01 05 50.4	
	comp=Z,27nm,1.0s						
FITZ	**Fitzroy Crossi**	**52.07**	**263**	P	**P**	**01 05 57.5**	**+0.3**
	comp=Z,6.9nm,0.3s,baz=99,slow=4.0,SNR=77						
SIJI	**Sorong**	**52.53**	**286**	P	**P**	**01 06 00.2**	**-0.3**
	comp=Z,68nm,0.6s,baz=83,slow=6.1,SNR=16						
SWI	**Sorong**	**52.53**	**286**	P	**P**	**01 06 00.6**	**0.0**
SOEI	**Soe**	**55.63**	**272**	P	**P**	**01 06 21.9**	**-0.5**
	comp=Z,141nm,0.8s						
BATI	**Baumata**	**56.05**	**272**	P	**P**	**01 06 25.9**	**+0.8**
	comp=Z,65nm,0.7s,baz=116,slow=3.1,SNR=3.8						
PSAD2	**Pilbara Seismi**	**56.56**	**257**	P	**P**	**01 06 28.0**	**-0.5**
PSAC2	**Pilbara Seismi**	**56.62**	**258**	P	**P**	**01 06 28.4**	**-0.6**
PSAB3	**Pilbara Seismi**	**56.66**	**257**	P	**P**	**01 06 28.1**	**-1.2**
PSAB3				IAmb	IAmb	01 06 29.7	
	comp=Z,42nm,0.9s						
PSAB2	**Pilbara Seismi**	**56.66**	**258**	P	**P**	**01 06 28.4**	**-0.9**
PSAB2				IAmb	IAmb	01 06 29.7	
	comp=Z,32nm,0.8s						
PSAA3	**Pilbara Seismi**	**56.66**	**257**	P	**P**	**01 06 28.7**	**-0.6**
PSAA3				IAmb	IAmb	01 06 29.8	
	comp=Z,32nm,0.9s						
PSA00	**Pilbara Seismi**	**56.67**	**257**	P	**P**	**01 06 29.2**	**-0.1**
PSA00				IAmb	IAmb	01 06 29.8	
	comp=Z,33nm,0.8s						
PSA00	**Pilbara Seismi**	**56.67**	**257**	P	**P**	**01 06 28.2**	**-1.1**
PSA00				IAmb	IAmb	01 06 29.0	
	comp=Z,18nm,0.8s						
PSAA2	**Pilbara Seismi**	**56.67**	**257**	P	**P**	**01 06 29.2**	**-0.1**
PSAA2				IAmb	IAmb	01 06 29.9	
	comp=Z,33nm,0.8s						
PSAC3	**Pilbara Seismi**	**56.68**	**257**	P	**P**	**01 06 29.3**	**-0.1**
PSAC3				IAmb	IAmb	01 06 29.8	
	comp=Z,36nm,0.9s						
PSAA1	**Pilbara Seismi**	**56.68**	**257**	P	**P**	**01 06 28.8**	**-0.6**
PSAA1				IAmb	IAmb	01 06 29.9	
	comp=Z,40nm,0.9s						
PSAB1	**Pilbara Seismi**	**56.70**	**257**	P	**P**	**01 06 28.9**	**-0.6**
PSAB1				IAmb	IAmb	01 06 29.9	
	comp=Z,35nm,0.8s						
PSAD1	**Pilbara Seismi**	**56.71**	**258**	P	**P**	**01 06 29.5**	**-0.1**
PSAD1				IAmb	IAmb	01 06 30.1	
	comp=Z,39nm,0.9s						
PSAC1	**Pilbara Seismi**	**56.72**	**258**	P	**P**	**01 06 29.4**	**-0.3**
PSAC1				IAmb	IAmb	01 06 30.1	
	comp=Z,40nm,0.8s						
PSAD3	**Pilbara Seismi**	**56.72**	**257**	P	**P**	**01 06 28.8**	**-0.9**
PSAD3				IAmb	IAmb	01 06 30.1	
	comp=Z,46nm,1.0s						
VNDA	**Vanda**	**57.27**	**185**	P	**P**	**01 06 35.0**	**+2.5**
	comp=Z,4.2nm,0.7s,baz=20,slow=6.7,SNR=16						
VNDA	**Vanda**	**57.27**	**185**	P	**P**	**01 06 34.9**	**+2.5**
NWAO	**Narrogin (SRO)**	**57.32**	**244**	P	**P**	**01 06 34.6**	**+1.1**
	comp=Z,7.0nm,0.6s,baz=100,slow=8.5,SNR=3.8						
NWAO	**Narrogin (SRO)**	**57.32**	**244**	P	**P**	**01 06 33.8**	**+0.3**
NWAO	**Narrogin (SRO)**	**57.32**	**244**	P	**P**	**01 06 33.2**	**-0.4**
NWAO				IAmb	IAmb	01 06 35.4	
	comp=Z,9.6nm,0.9s						
MORW	**Morawa**	**58.79**	**248**	P	**P**	**01 06 43.2**	**-0.3**
GIRL	**Giralia**	**61.54**	**255**	P	**P**	**01 07 02.8**	**+1.1**
TOLI2	**Tolitoli**	**62.85**	**283**	P	**P**	**01 07 09.9**	**-0.4**
UGM	**Wanagama**	**69.06**	**269**	P	**P**	**01 07 48.7**	**-0.1**
UGM				IAmb	IAmb	01 07 54.2	
	comp=Z,29nm,0.9s						
MJAR	**Matsushiro Arr**	**70.14**	**324**	P	**P**	**01 07 53.9**	**-0.7**
	comp=Z,6.7nm,0.7s,baz=158,slow=5.9,SNR=6.9						
MAT	**Matsushiro**	**70.14**	**324**	P	**P**	**01 07 53.9**	**-0.7**
KSM	**Kuching**	**72.61**	**279**	P	**P**	**01 08 09.5**	**0.0**
KSM				IAmb	IAmb	01 08 10.7	
	comp=Z,20nm,0.9s						
TPUB	**Ta-pu**	**73.54**	**304**	P	**P**	**01 08 13.3**	**-1.2**
SSLB	**Suanglung**	**73.55**	**304**	P	**P**	**01 08 13.3**	**-1.3**
ASAJ	**Asahikawa**	**73.80**	**332**	P	**P**	**01 08 16.2**	**+0.7**
	comp=Z,5.0nm,0.5s,baz=180,slow=5.0,SNR=8.3						
PETK	**Petropavlovsk-**	**76.59**	**346**	P	**P**	**01 08 30.3**	**-0.4**
	comp=Z,5.1nm,0.6s,baz=119,slow=5.4,SNR=16						
KSRS	**Korea Array**	**76.72**	**319**	P	**P**	**01 08 32.4**	**+0.6**
	comp=Z,1.4nm,0.8s,baz=79,slow=27,SNR=4.1						
USRK	**Ussuriysk Ar.**	**78.93**	**326**	P	**P**	**01 08 44.3**	**+0.8**
	comp=Z,9.0nm,0.8s,baz=117,slow=3.9,SNR=13						
NJ2	**Nanjing**	**79.56**	**310**	*e*P	**P**	**01 08 43.8**	**-3.3**
NJ2				pmax	pmax		
	comp=Z,13nm,0.7s						
MDJ	**Mudanjiang**	**80.47**	**326**	P	**P**	**01 08 51.0**	**-0.5**
MDJ				pmax	pmax		
	comp=Z,7.0nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,59nm,3.6s						
NVAR	**Mina Array Bea**	**82.05**	**44**	P	**P**	**01 09 01.3**	**+1.3**
	comp=Z,0.7nm,0.5s,baz=222,slow=7.8,SNR=4.0						
KLR	**Kul'dur**	**82.56**	**330**	P	**P**	**01 09 02.3**	**+0.3**
	comp=Z,2.9nm,0.8s,baz=105,slow=6.1,SNR=12						
SYO	**Syowa Base**	**85.98**	**193**	⇑*e*PcP	**P**	**01 09 19.0**	**+0.6**
SEY	**Seymchan**	**86.72**	**347**	P	**P**	**01 09 21.9**	**0.0**
	comp=Z,3.7nm,0.6s,baz=148,slow=3.4,SNR=14						
RND	**Reindeer**	**87.44**	**13**	P	**P**	**01 09 25.1**	**-0.2**
RND				IAmb	IAmb	01 09 25.7	
	comp=Z,11nm,0.7s						
SNAA	**Sanae**	**87.47**	**179**	P	**P**	**01 09 25.7**	**+0.1**
VNA3	**Neumayer Olymp**	**87.64**	**177**	P	**P**	**01 09 26.6**	**+0.4**
XAN	**Xi'an**	**87.77**	**308**	P	**P**	**01 09 27.9**	**+0.4**
XAN				pP	PcP	01 09 37.0	+8.3
XAN				pmax	pmax		
	comp=Z,13nm,1.3s						
XAN				pmax	pmax		
	comp=Z,3.0nm,2.5s						
VNA2	**Neumayer--Watz**	**88.07**	**177**	P	**P**	**01 09 28.9**	**+0.7**
TXAR	**Lajitas Array**	**88.11**	**58**	P	**P**	**01 09 30.6**	**+1.2**
	comp=Z,0.7nm,0.8s,baz=212,slow=6.8,SNR=8.9						
VNA1	**Neumayer--Stat**	**88.30**	**177**	P	**P**	**01 09 29.3**	**0.0**
WRH	**Wood River Hil**	**88.55**	**13**	P	**P**	**01 09 29.6**	**-0.7**
WRH				IAmb	IAmb	01 09 30.4	
	comp=Z,8.1nm,0.9s						
KMI	**Kunming**	**88.81**	**297**	⇑P	**P**	**01 09 33.6**	**+0.8**
KMI				pP	pP	01 11 44.8	+0.4
KMI				pmax	pmax		
	comp=Z,8.0nm,0.8s						
LAMP	**Lampang**	**88.89**	**290**	P	**P**	**01 09 35.5**	**+2.5**
ILAR	**Eielson Array**	**89.06**	**13**	P	**P**	**01 09 31.9**	**-0.9**
	comp=Z,1.1nm,0.4s,baz=215,slow=5.1,SNR=21						
HHC	**Hu-ho-hao-te**	**89.11**	**315**	*e*P	P	01 09 28.5	-5.2
HHC				pP	pP	01 11 35.5	-10
HHC				sP	sP	01 12 36.9	-10
HHC				PP	**PP**	**01 13 18.1**	**+2.0**
HHC	**Hu-ho-hao-te**	**89.11**	**315**	S	**S**	**01 19 35.6**	**+4.1**
HHC	**Hu-ho-hao-te**	**89.11**	**315**	sS	sS	01 23 11.0	-16
HHC				pmax	pmax		
	comp=Z,6.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,99nm,7.0s						
CM36	**Chiang Mai Arr**	**89.35**	**290**	P	**P**	**01 09 36.0**	**+0.8**
CM35	**Chiang Mai Arr**	**89.36**	**290**	P	**P**	**01 09 36.0**	**+0.8**
CM04	**Chiang Mai Arr**	**89.41**	**290**	P	**P**	**01 09 37.7**	**+2.2**
CM09	**Chiang Mai Arr**	**89.42**	**290**	P	**P**	**01 09 38.0**	**+2.5**
CM34	**Chiang Mai Arr**	**89.43**	**290**	P	**P**	**01 09 37.0**	**+1.4**
CM01	**Chiang Mai Arr**	**89.44**	**290**	P	**P**	**01 09 39.0**	**+3.4**
CM05	**Chiang Mai Arr**	**89.44**	**290**	P	**P**	**01 09 37.7**	**+2.1**
CM02	**Chiang Mai Arr**	**89.45**	**290**	P	**P**	**01 09 38.0**	**+2.3**
CMAR	**Chiang Mai Arr**	**89.47**	**290**	P	**P**	**01 09 37.4**	**+1.7**
	comp=Z,5.0nm,0.9s,baz=129,slow=3.1,SNR=24						
CM13	**Chiang Mai Arr**	**89.48**	**290**	P	**P**	**01 09 38.0**	**+2.2**
PLCA	**Paso Flores**	**89.53**	**134**	P	**P**	**01 09 37.8**	**+2.0**
	comp=Z,2.2nm,0.9s,baz=211,slow=7.2,SNR=5.8						
CMMT	**Chiang Mai**	**89.59**	**290**	P	**P**	**01 09 37.1**	**+0.8**
CM33	**Chiang Mai Arr**	**89.60**	**290**	P	**P**	**01 09 37.0**	**+0.7**
PDAR	**Pinedale Array**	**89.98**	**44**	P	**P**	**01 09 38.7**	**+0.8**
	comp=Z,0.3nm,0.5s,baz=198,slow=3.9,SNR=5.0						
CD2	**Chengdu**	**90.34**	**303**	*e*P	P	01 09 33.6	-6.0
YKA	**Yellowknife Ar**	**97.40**	**25**	P	Pdif	01 10 10.6	-0.1
	comp=Z,0.2nm,0.7s,baz=242,slow=4.2,SNR=2.2						
ZALV	**Zalesovo Beam**	**110.37**	**321**	PKiKP	**PKiKP**	**01 15 03.7**	**-1.8**
	comp=Z,0.7nm,0.5s,baz=82,slow=3.1,SNR=4.1						
MKAR	**Makanchi Array**	**110.94**	**313**	PKiKP	**PKiKP**	**01 15 05.8**	**-1.0**
	comp=Z,0.3nm,0.4s,baz=85,slow=1.5,SNR=15						
ARCES	**ARCESS Array B**	**129.31**	**349**	PKP	**PKPdf**	**01 15 40.9**	**-0.5**
	comp=Z,4.4nm,0.9s,baz=14,slow=1.4,SNR=9.9						
FINES	**FINESS Array B**	**136.06**	**343**	PKhKP	PKPpre	01 15 44.3	
	comp=Z,1.5nm,0.8s,baz=59,slow=3.6,SNR=5.0						
FINES				PKP	**PKPdf**	**01 15 54.8**	**+0.7**
	comp=Z,3.6nm,0.9s,baz=57,slow=5.1,SNR=6.1						
FINES				SKPbc	**SKPbc**	**01 18 30.1**	**+1.2**
	comp=Z,1.0nm,0.5s,baz=64,slow=4.4,SNR=9.0						
NB2	**NORSAR Subarra**	**139.43**	**352**	PKP	**PKPdf**	**01 15 52.9**	**-7.6**
	comp=Z,0.4nm,0.5s,baz=16,slow=3.2						
NOA	**NORSAR Array B**	**139.43**	**352**	PKP	**PKiKP**	**01 16 02.2**	**-0.7**
	comp=Z,0.4nm,0.5s,baz=14,slow=3.7,SNR=1.8						
AKASG	**Malin Array Be**	**143.06**	**330**	PKhKP	PKPpre	01 16 04.4	
	comp=Z,12nm,0.4s,baz=43,slow=4.3,SNR=58						
AKASG				SKPbc	**SKiKP**	**01 18 49.2**	**+0.2**
	comp=Z,0.2nm,0.2s,baz=45,slow=2.8,SNR=6.3						
SORM	**Soroca**	**145.21**	**327**	⇑P	**PKPdf**	**01 16 11.3**	**+0.3**
MILM	**Milestii Mici**	**145.76**	**325**	⇑P	**PKPdf**	**01 16 12.6**	**+0.7**
BSEG	**Bad Segeberg**	**146.43**	**350**	*e*PKPbc	**PKPbc**	**01 16 15.6**	**+0.2**
	baz=18,slow=2.4						
BRTR	**Keskin Array B**	**146.55**	**311**	PKPbc	**PKPbc**	**01 16 16.1**	**-0.3**
	comp=Z,3.6nm,0.6s,baz=127,slow=2.7,SNR=26						
TLCR		**146.83**	**323**	⇑P	**PKPbc**	**01 16 16.7**	**-0.1**
JURR	**Jurilovca**	**147.05**	**322**	⇑P	**PKPbc**	**01 16 17.2**	**-0.2**
GHRR		**147.05**	**325**	⇑P	**PKPbc**	**01 16 18.1**	**+0.8**
BURAR	**Bucovina Array**	**147.10**	**329**	⇓P	**PKPbc**	**01 16 17.8**	**+0.3**
BIZ	**Bicaz**	**147.14**	**328**	⇓P	**PKPbc**	**01 16 18.4**	**+0.9**
TESR	**Tescani**	**147.15**	**327**	⇑P	**PKPbc**	**01 16 17.0**	**-0.6**
CFR	**Carcaliu**	**147.22**	**323**	⇑P	**PKPbc**	**01 16 17.4**	**-0.3**
TPGR	**Topolog**	**147.25**	**323**	⇑P	**PKPbc**	**01 16 17.1**	**-0.8**
KOLS	**Kolonicke sedl**	**147.43**	**334**	*e*PKP	**PKPbc**	**01 16 18.7**	**+0.5**
ODBI	**Odobesti**	**147.43**	**325**	⇑P	**PKPbc**	**01 16 19.2**	**+0.9**
TIRR	**Tirgusor**	**147.50**	**322**	⇓P	**PKPbc**	**01 16 18.0**	**-0.5**
VRI	**Vrincioaia**	**147.54**	**326**	⇑P	**PKPbc**	**01 16 18.5**	**-0.1**
PLOR	**Plostina**	**147.59**	**326**	⇓P	**PKPbc**	**01 16 18.5**	**-0.3**
HARR	**Harsova**	**147.63**	**323**	⇑P	**PKPbc**	**01 16 19.3**	**+0.4**
TLBR	**Topalu**	**147.66**	**323**	⇑P	**PKPbc**	**01 16 19.0**	**+0.1**
BISRR	**Bisoca**	**147.76**	**325**	⇓P	**PKPbc**	**01 16 19.5**	**+0.2**
MANR	**Mangalia**	**147.78**	**321**	⇑P	**PKPbc**	**01 16 19.0**	**-0.3**
CRVS	**Cervenica-Dubn**	**147.79**	**334**	*e*PKP	**PKPbc**	**01 16 19.7**	**+0.5**
OZUR		**147.88**	**327**	⇓P	**PKPbc**	**01 16 19.3**	**-0.2**
ARCR	**ARCALIA**	**147.89**	**329**	⇓P	**PKPdf**	**01 16 17.6**	**+2.1**
ICOR	**Ion Corvin**	**148.06**	**322**	⇑P	**PKPbc**	**01 16 20.3**	**+0.3**
NEHR	**Nehoiu**	**148.06**	**325**	⇑P	**PKPbc**	**01 16 20.2**	**+0.2**
DOPR	**Dopca**	**148.17**	**327**	⇓P	**PKPbc**	**01 16 20.7**	**+0.5**
MLR	**Muntele Rosu**	**148.20**	**326**	⇓P	**PKiKP**	**01 16 21.3**	**-0.3**
OSTC	**Ostas**	**148.23**	**342**	⇑*e*PKP	**PKiKP**	**01 16 21.0**	**-0.4**
UPC	**Upice**	**148.34**	**342**	⇑*e*PKP	**PKPbc**	**01 16 21.0**	**+0.5**
DPC	**Dobruska-Polom**	**148.38**	**341**	⇑*e*PKP	**PKPbc**	**01 16 21.3**	**+0.7**
DPC				*e*PKPAB	**PKPab**	**01 16 26.9**	**+0.5**
CLL	**Collm**	**148.40**	**346**	⇓*i*PKPbc	**PKPbc**	**01 16 20.2**	**-0.3**
	comp=Z,13nm,1.0s						
CLL				*i* PKPab	**PKPab**	**01 16 25.6**	**-0.7**
	comp=Z,11nm,1.2s						
CLL	**Collm**	**148.40**	**346**	*e*PKPbc	**PKPbc**	**01 16 20.6**	**+0.1**
	baz=18,slow=2.4						
SECR		**148.44**	**325**	⇓P	**PKPbc**	**01 16 20.8**	**-0.1**
KRLC	**Kraliky**	**148.48**	**340**	⇑*e*PKP	**PKPbc**	**01 16 21.3**	**+0.4**
KRLC				*e*PKPAB	**PKPab**	**01 16 27.0**	**+0.2**
MORC	**Moravsky Berou**	**148.50**	**339**	⇑P	**PKPbc**	**01 16 20.7**	**-0.3**
MORC	**Moravsky Berou**	**148.50**	**339**	*e*PKP	**PKPbc**	**01 16 21.2**	**+0.3**
MORC				*e*		01 16 27.1	
CJR	**Cluj-Napoca**	**148.52**	**330**	⇓P	**PKPbc**	**01 16 20.8**	**-0.3**
MDB	**Medias**	**148.55**	**328**	⇑P	**PKPbc**	**01 16 21.5**	**+0.3**
BRG	**Berggiesshubel**	**148.57**	**344**	*i* PKP	**PKPbc**	**01 16 21.2**	**+0.2**
BRG				Amp		01 16 22.6	
	comp=Z,19nm,1.6s						
BRG	**Berggiesshubel**	**148.57**	**344**	*e*PKPbc	**PKPbc**	**01 16 21.1**	**+0.2**
	baz=18,slow=2.4						
VOIR		**148.70**	**327**	⇑P	**PKPbc**	**01 16 21.8**	**+0.2**
PVCC	**Panska Ves**	**148.72**	**343**	⇑*e*PKP	**PKPbc**	**01 16 22.0**	**+0.6**
DRGR		**148.87**	**331**	⇑P	**PKPbc**	**01 16 20.6**	**-1.3**
ARR	**Arges**	**148.96**	**327**	⇑P	**PKiKP**	**01 16 23.1**	**0.0**
VRAC	**Vranov**	**149.21**	**340**	⇓P	**PKPbc**	**01 16 23.1**	**+0.4**
VRAC	**Vranov**	**149.21**	**340**	*e*PKP	**PKPbc**	**01 16 23.1**	**+0.4**
VRAC				*e*		01 16 30.2	
PRU	**Pruhonice**	**149.22**	**343**	⇑*e*PKP	**PKPbc**	**01 16 22.8**	**+0.2**
BUG	**Bochum--Univer**	**149.29**	**352**	*e*PKPbc	**PKPbc**	**01 16 22.7**	**0.0**
	baz=18,slow=2.4						
LOT	**Lotru**	**149.34**	**328**	⇑P	**PKPbc**	**01 16 22.6**	**-0.6**
HUMR	**Humele**	**149.35**	**325**	⇑P	**PKPbc**	**01 16 22.3**	**-0.8**
TANN	**Tannenbergstha**	**149.35**	**346**	*e*PKPbc	**PKPbc**	**01 16 23.1**	**+0.1**
	baz=18,slow=2.4						
WERD	**Werda**	**149.36**	**346**	*e*PKPbc	**PKPbc**	**01 16 23.1**	**+0.1**
	baz=18,slow=2.4						
KASTN	**Kahler Asten**	**149.37**	**351**	*e*PKPbc	**PKPbc**	**01 16 23.0**	**0.0**
	baz=18,slow=2.4						
GUNZ	**Gunzen**	**149.43**	**346**	*e*PKPbc	**PKPbc**	**01 16 23.2**	**+0.1**
	baz=18,slow=2.4						
DEV	**Deva**	**149.45**	**329**	⇓P	**PKPbc**	**01 16 23.5**	**+0.2**
KRUC	**Moravsky**	**149.49**	**340**	*e*PKP	**PKPbc**	**01 16 23.6**	**+0.3**
KRUC				*e*		01 16 31.1	
WERN	**Wernitzgruen**	**149.49**	**346**	*e*PKPbc	**PKPbc**	**01 16 23.5**	**+0.2**
	baz=18,slow=2.4						
SMOL	**Smolenice**	**149.62**	**338**	*e*PKP	**PKiKP**	**01 16 24.5**	**+0.2**
MANZ	**Manzenberg**	**149.84**	**346**	*e*PKPbc	**PKPbc**	**01 16 24.3**	**+0.2**
	baz=18,slow=2.4						
GZR	**Gura Zlata**	**149.87**	**329**	⇑P	**PKPbc**	**01 16 24.4**	**0.0**
ROTZ	**Rotzenmuhle**	**150.02**	**345**	*e*PKPbc	**PKPbc**	**01 16 24.6**	**+0.1**
	baz=18,slow=2.4						
BZS	**Buzias**	**150.26**	**330**	⇑P	**PKPbc**	**01 16 25.0**	**-0.2**
MEM	**Membach**	**150.26**	**354**	*d*PKPab	**PKPbc**	**01 16 24.8**	**-0.2**
KHC	**Kasperske Hory**	**150.26**	**343**	⇑*e*PKP	**PKPbc**	**01 16 25.1**	**0.0**
KHC				*e*PKPAB	**PKPab**	**01 16 34.7**	**+0.5**
BTNL	**Ternell**	**150.27**	**353**	*d*PKPab	**PKPbc**	**01 16 25.2**	**+0.1**
PLVB	**Pleven**	**150.30**	**324**	⇓P	**PKPbc**	**01 16 25.0**	**-0.3**
TNS	**Taunus Mts**	**150.32**	**350**	*e*PKPbc	**PKPbc**	**01 16 25.3**	**0.0**
	baz=18,slow=2.4						
BSTI	**Sart Tilman**	**150.33**	**354**	*d*PKPab	**PKPbc**	**01 16 25.4**	**+0.2**
CKRC	**Cesky Krumlov**	**150.34**	**342**	⇑*e*PKP	**PKPbc**	**01 16 25.5**	**+0.2**
HERR	**Herculane**	**150.42**	**328**	⇓P	**PKPbc**	**01 16 25.5**	**-0.1**
GEC2	**GERESS Array S**	**150.49**	**343**	*e*PKPbc	**PKPbc**	**01 16 25.8**	**0.0**
	baz=18,slow=2.4						
GERES	**GERESS Array B**	**150.49**	**343**	PKPbc	**PKPbc**	**01 16 25.7**	**0.0**
	comp=Z,2.3nm,0.6s,baz=46,slow=2.8,SNR=17						
CONA	**Conrad Observa**	**150.66**	**339**	*i* P	**PKPbc**	**01 16 26.4**	**+0.3**
	comp=Z,5.9nm,0.6s						
MORH	**Mrgy, Hungar**	**151.08**	**334**	⇑P	**PKPbc**	**01 16 26.7**	**-0.4**
WLF	**Walferdange**	**151.17**	**353**	*e*PKPbc	**PKiKP**	**01 16 27.7**	**+0.2**
	baz=18,slow=2.4						
MOA	**Molln**	**151.23**	**341**	*i* P	**PKPbc**	**01 16 27.1**	**-0.3**
	comp=Z,1.8nm,0.5s						
ARSA	**Arzberg**	**151.36**	**339**	*i* P	**PKPbc**	**01 16 27.1**	**-0.6**
	comp=Z,0.7nm,0.5s						
FRGS	**Fruska Gora**	**151.43**	**332**	⇓P	**PKPbc**	**01 16 27.9**	**+0.1**
VTS	**Vitosha**	**151.57**	**324**	⇓P	**PKPbc**	**01 16 28.5**	**0.0**
STU	**Stuttgart**	**151.59**	**349**	*e*PKPbc	**PKPbc**	**01 16 28.3**	**+0.2**
	baz=18,slow=2.4						
RJOB	**Jochberg**	**151.75**	**343**	*e*PKPbc	**PKPbc**	**01 16 28.2**	**-0.3**
	baz=18,slow=2.4						
SOKA	**Soboth**	**152.02**	**339**	*i* P	**PKPbc**	**01 16 28.6**	**-0.7**
	comp=Z,1.5nm,0.5s						
BFO	**Black Forest**	**152.17**	**350**	*e*PKPbc	**PKPbc**	**01 16 29.4**	**0.0**
	baz=18,slow=2.4						
KBA	**Koelnbreinsper**	**152.19**	**342**	*i* P	**PKPbc**	**01 16 28.8**	**-0.9**
	comp=Z,1.4nm,0.5s						
OBKA	**Obir**	**152.33**	**340**	*i* P	**PKPbc**	**01 16 28.9**	**-1.1**
	comp=Z,1.7nm,0.6s						
WATA	**Walderalm**	**152.44**	**344**	*i* P	**PKPbc**	**01 16 29.8**	**-0.5**
	comp=Z,2.7nm,0.5s						
UBR	**Ueberruh**	**152.46**	**347**	*e*PKPbc	**PKPbc**	**01 16 30.0**	**-0.2**
	baz=18,slow=2.4						
WTTA	**Wattenberg**	**152.49**	**344**	*i* P	**PKPbc**	**01 16 30.1**	**-0.2**
	comp=Z,4.7nm,0.4s						
MOTA	**Moosalm**	**152.54**	**345**	*i* P	**PKPbc**	**01 16 29.9**	**-0.6**
	comp=Z,3.4nm,0.9s						
SQTA	**Sankt Quirin**	**152.63**	**345**	*i* P	**PKPbc**	**01 16 30.3**	**-0.3**
	comp=Z,3.7nm,0.8s						
VNDS	**Vrh nad Dolski**	**152.64**	**339**	*i* PKPbc	**PKPbc**	**01 16 30.1**	**-0.4**
ABTA	**Abfaltersbach**	**152.73**	**343**	*i* P	**PKPbc**	**01 16 29.9**	**-0.9**
	comp=Z,5.2nm,0.6s,SNR=7.9						
CRNS	**Crni Vrh**	**152.80**	**340**	*i* PKPbc	**PKPbc**	**01 16 30.2**	**-0.8**
FETA	**Feichten**	**152.94**	**345**	*i* P	**PKPbc**	**01 16 29.3**	**-2.1**
	comp=Z,7.3nm,1.3s						
BOJS	**Bojanci**	**152.97**	**338**	*i* PKPbc	**PKPbc**	**01 16 31.2**	**0.0**

ESDC	Sonseca Array	160.96	12	PKPab	PKPab	01 17 20.1	-0.4
	comp=Z,0.3nm,0.8s,baz=347,slow=6.1,SNR=4.1						
DBIC	Dimbokro	164.59	157	PKPab	PKPab	01 17 38.5	+1.5
	comp=Z,1.5nm,0.6s,baz=219,slow=6.5,SNR=2.2						

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*HEL **21** 01:07:06.7±0.1, 67°.82N×20°.19E, h0^{km}, ML1.6, ML2.7(UPP), Explosion*
*UPP **21** 01:07:06.2±0.1, 67°.83N×20°.19E, h0^{km}, ML2.7, Explosion*
ISC 21 01:07:06.5±1.0**, 67°.82N**±0°.03×**20°.23E**±0°.03**, h0^{km}, n20, σ0^{s}.63**/26**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUA	Kurravaara	0.14	17	P	Pg	01 07 09.1	-0.2
KUA				S	Sg	01 07 11.1	0.0
KUA	Kurravaara	0.14	17	iP	Pg	01 07 09.1	-0.2
KUA				iS	Sg	01 07 11.1	0.0
RATU	Laukkuluspa	0.24	272	P	Pg	01 07 10.7	-0.4
RATU	Laukkuluspa	0.24	272	iP	Pg	01 07 10.7	-0.4
KOVU	Salmi	0.41	357	P	Pg	01 07 13.8	-0.5
KOVU				S	Sg	01 07 19.4	-0.2
KOVU	Salmi	0.41	357	iP	Pg	01 07 13.8	-0.5
KOVU				iS	Sg	01 07 19.4	-0.2
NIKU	Nikkaluokta	0.46	277	P	Pg	01 07 14.7	-0.5
NIKU	Nikkaluokta	0.46	277	iP	Pg	01 07 14.7	-0.5
LANU	Lannavaara	0.70	70	eP	Pg	01 07 19.5	-0.5
MASU	Masugnsbyn	0.77	117	P	Pg	01 07 21.0	-0.2
MASU	Masugnsbyn	0.77	117	iP	Pg	01 07 21.0	-0.2
SALU	Saltoluokta	0.79	237	eP	Pg	01 07 21.4	-0.3
KIF	Kilpisjarvi	1.21	10	eP	Pb	01 07 30.0	-0.3
KIF	Kilpisjarvi	1.21	10	eP	Pg	01 07 29.4	-0.3
KIF				eS	Sg	01 07 45.1	-0.3
KIF				MSG		01 07 51.1	
	comp=Z,6.5nm,0.1s						
PAJU	Pajala	1.37	124	P	Pg	01 07 31.4	-1.2
PAJU	Pajala	1.37	124	eP	Pg	01 07 31.4	-1.2
KALU	Kalix	2.32	146	eP	Pn	01 07 46.0	+0.1
TOF	Tornio	2.38	135	ePB	Pn	01 07 48.0	+1.4
TOF				eSG	Sb	01 08 20.4	+0.6
TOF				MSG		01 08 24.0	
	comp=Z,2.0nm,0.2s						
SGF	Sodankyl	2.44	96	eP	Pn	01 07 47.5	0.0
RNF	Rovaniemi	2.56	116	ePB	Pn	01 07 50.4	+1.2

UPP 21 01:07:09.2±0.0**, 67°.83N×20°.20E, h0^{km}, ML2.6, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUA	Kurravaara	0.14	23	P	Pg	01 07 12.0	+0.2
KUA				S	Sg	01 07 13.9	+0.4
RATU	Laukkuluspa	0.23	269	P	Pg	01 07 13.7	+0.1
RATU	Laukkuluspa	0.23	269	iS	Pg	01 07 13.8	+0.2
RATU	Laukkuluspa	0.23	269	S	Pg	01 07 13.8	+0.2
KOVU	Salmi	0.40	358	P	Pg	01 07 16.7	0.0
KOVU				S	Sg	01 07 22.5	+0.6
NIKU	Nikkaluokta	0.44	275	P	Pg	01 07 17.8	+0.1
DUNU	Dundret	0.73	168	P	Pg	01 07 22.7	-0.3
MASU	Masugnsbyn	0.78	118	P	Pg	01 07 24.1	-0.1
PAJU	Pajala	1.39	124	P	Pg	01 07 34.5	-1.2

UPP 21 01:12:24.7±0.2**, 67°.85N×20°.23E, h0^{km}, ML2.1, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUA	Kurravaara	0.11	22	P	Pg	01 12 27.1	+0.3
KUA				S	Sg	01 12 28.6	+0.3
RATU	Laukkuluspa	0.24	264	P	Pg	01 12 29.6	+0.2
KOVU	Salmi	0.37	356	P	Pg	01 12 32.0	+0.1
NIKU	Nikkaluokta	0.45	273	P	Pg	01 12 33.4	0.0

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*HEL **21** 01:12:30.1, 67°.80N×20°.14E, h0^{km}, ML1.9, Explosion*
UPP 21 01:12:31.0±0.5**, 67°.85N×20°.21E, h1**^{km}±3^{km}**, ML2.6, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUA	Kurravaara	0.12	25	P	Pg	01 12 33.3	0.0
KUA				S	Sg	01 12 34.9	+0.1
KUA	Kurravaara	0.12	25	iP	Pg	01 12 33.3	0.0
KUA				iS	Sg	01 12 34.9	+0.1
RATU	Laukkuluspa	0.23	264	P	Pg	01 12 35.5	0.0
RATU	Laukkuluspa	0.23	264	iP	Pg	01 12 35.5	0.0
KOVU	Salmi	0.38	357	P	Pg	01 12 38.0	-0.2
KOVU	Salmi	0.38	357	iP	Pg	01 12 38.0	-0.2
NIKU	Nikkaluokta	0.44	273	P	Pg	01 12 39.3	-0.1
NIKU	Nikkaluokta	0.44	273	iP	Pg	01 12 39.3	-0.1
LANU	Lannavaara	0.70	72	eP	Pg	01 12 43.8	-0.6
LANU				eS	Sg	01 12 53.6	+0.1
DUNU	Dundret	0.74	169	P	Pg	01 12 44.7	-0.5
DUNU	Dundret	0.74	169	iP	Pg	01 12 44.7	-0.5
MASU	Masugnsbyn	0.79	119	P	Pg	01 12 45.7	-0.4
MASU	Masugnsbyn	0.79	119	iP	Pg	01 12 45.7	-0.4
SALU	Saltoluokta	0.80	235	eP	Pg	01 12 45.8	-0.5
KIF	Kilpisjarvi	1.18	10	eP	Pg	01 12 53.1	-0.5
KIF	Kilpisjarvi	1.18	10	ePB	Pg	01 12 53.3	-0.3
KIF				MSG		01 13 08.5	
	comp=Z,10nm,0.2s						
KIF				eSB	Sg	01 13 09.2	+0.2
PAJU	Pajala	1.39	125	P	Pn	01 12 56.3	-1.2
PAJU	Pajala	1.39	125	eP	Pn	01 12 56.3	-1.2
KALU	Kalix	2.35	147	P	Pn	01 13 11.7	+1.0
KALU	Kalix	2.35	147	ePB	Pn	01 13 11.7	+1.0
KALU				eSB	Sb	01 13 42.1	-1.4
TOF	Tornio	2.40	136	ePB	Pn	01 13 12.7	+1.3
TOF				MSG		01 13 40.6	
	comp=Z,5.1nm,0.2s						
TOF				eSG	Sb	01 13 44.5	-0.5
SGF	Sodankyl	2.45	97	ePB	Pn	01 13 13.2	+1.2
	baz=284						
ARA0	ARCESS Array S	2.57	46	eP	Pn	01 13 14.3	+0.6
	baz=228						
ARA0				eSG	Sg	01 13 52.3	-1.2
RNF	Rovaniemi	2.58	116	ePB	Pn	01 13 15.7	+2.0
RNF				eSG	Sb	01 13 49.3	-0.8
VRF	Varrio	3.57	87	ePG	Pb	01 13 33.6	-1.2
OUL	Oulu	3.59	138	eSG	Sb	01 14 19.9	+0.8
MSF	Maaselka	3.99	115	ePG	Pb	01 13 43.2	+1.2
KU6	Riekki	4.23	111	ePG	Pb	01 13 46.4	+0.4

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*NEIC **21** 01:19:01.3±1.9, 20°.07S±0°.05×69°.10W±0°.10, h104^{km}±4^{km}, Error ellipse: s-maj=13.6km s-min=7.2km az=96.0*
*GUC **21** 01:19:02.8±0.7, 20°.06S×69°.17W, h90^{km}±2^{km}, ML4.1*
*IDC **21** 01:19:03.4±0.9, 20°.07S×68°.86W, h122^{km}±10^{km}, mb3.5/9, mb1 3.8/13, mb1mx3.8/32, mbtmp4.0/13, Error ellipse: s-maj=21.8km s-min=8.6km az=97.0*
*VAO **21** 01:19:03.4±0.6, 20°.00S×68°.99W, h108^{km}±8^{km}, mb4.1*
ISC 21 01:19:00.5±0.6**, 20°.00S**±0°.04×**69°.11W**±0°.05**, h92**^{km}±6^{km}**, n66, σ1^{s}.76**/79**, mb3.8**/8**, 5C-5D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB08	IPOC Station P	0.14	196	eP	Pn	01 19 15.8	+1.6
PB08				eS	Sn	01 19 25.9	+1.7
PB08				IAML		01 19 28.7	
	comp=N,8µm,0.1s						
PB08	IPOC Station P	0.14	196		Pn	01 19 15.4	+1.3
HMBC	Humberstone	0.78	249	eP	Pn	01 19 18.8	+0.6
HMBC				iS	Sn	01 19 30.7	-0.6
HMBC				IAML		01 19 33.3	
	comp=E,5µm,0.5s						
MNMC	Minye Minye	0.98	332	⇑eP	Pn	01 19 22.9	+2.4
MNMC				iS	Sn	01 19 38.2	+2.8
MNMC				IAML		01 19 40.1	
	comp=N,8µm,0.2s						
MNMC	Minye Minye	0.98	332		Pn	01 19 22.9	+2.4
TA02	Huaiquique	0.99	254	eP	Pn	01 19 21.1	+0.8
TA02				eS	Sn	01 19 34.9	-0.2
PSGC	Pisagua	1.03	293	⇑iP	Pn	01 19 22.0	+1.2
PSGC				iS	Sn	01 19 36.7	+0.5
PSGCX	Pisagua	1.03	293		Pn	01 19 22.1	+1.2
PB01	IPOC Station P	1.09	199	⇓iP	Pn	01 19 22.2	+0.6
PB01				iS	Sn	01 19 37.7	+0.4
PB01				IAML		01 19 38.4	
	comp=N,7µm,0.4s						
PB01	IPOC Station P	1.09	199		Pn	01 19 22.2	+0.6
TA01	Diego Aracena	1.15	241	⇑iP	Pn	01 19 22.5	+0.4
TA01				eS	Sn	01 19 38.2	-0.1
TA01				IAML		01 19 42.6	
	comp=E,3µm,0.3s						
TA01	Diego Aracena	1.15	241		Pn	01 19 22.5	+0.4
PATCX	Punta Patache	1.27	230	⇑iP	Pn	01 19 24.1	+0.5
PATCX				iS	Sn	01 19 40.5	-0.6
PATCX				IAML		01 19 47.0	
	comp=E,4µm,0.5s						
PATCX	Punta Patache	1.27	230		Pn	01 19 24.1	+0.5
PB16	IPOC Station P	1.70	347	⇓iP	Pn	01 19 32.7	+3.1
PB16	IPOC Station P	1.70	347		Pn	01 19 32.4	+2.8
PB09	IPOC Station P	1.79	184	⇓iP	Pn	01 19 31.3	+1.1
PB09				iS	Sn	01 19 54.0	+1.2
PB09				IAML		01 19 57.6	
	comp=N,2µm,0.4s						
PB09	IPOC Station P	1.79	184		Pn	01 19 31.3	+1.1
PB07	IPOC Station P	1.86	203	⇓iP	Pn	01 19 31.8	+0.6
PB07				iS	Sn	01 19 54.6	+0.2
PB07				IAML		01 19 59.6	
	comp=E,3µm,0.6s						
PB07	IPOC Station P	1.86	203		Pn	01 19 31.9	+0.7
PB04	IPOC Station P	2.51	202	⇑iP	Pn	01 19 40.5	+0.7
PB04				iS	Sn	01 20 09.8	0.0
PB04				IAML		01 20 18.7	
	comp=N,2µm,0.3s						
PB04	IPOC Station P	2.51	202		Pn	01 19 40.5	+0.7
LVC	Limon Verde	2.60	176	P	Pn	01 19 44.1	+3.0
	comp=N,33nm,0.3s,baz=9.8,slow=11,SNR=113						
LVC				S	Sn	01 20 15.6	+3.5
	comp=N,52nm,0.3s,baz=354,slow=12,SNR=9.4						
LVC	Limon Verde	2.60	176	eP	Pn	01 19 42.6	+1.5
LVC				iS	Sn	01 20 14.0	+1.8
LVC	Limon Verde	2.60	176		Pn	01 19 42.8	+1.6
LVC	Limon Verde	2.60	176	eP	Pn	01 19 43.6	+2.5
PB06	IPOC Station P	2.72	189	⇓iP	Pn	01 19 43.4	+0.8
PB06				iS	Sn	01 20 15.9	+1.1
PB06				IAML		01 20 23.5	
	comp=E,1µm,0.1s						
PB06	IPOC Station P	2.72	189		Pn	01 19 43.5	+0.9
PB15	IPOC Station P	3.21	186	eP	Pn	01 19 50.3	+1.2
PB15				iS	Sn	01 20 28.2	+1.7
PB15	IPOC Station P	3.21	186		Pn	01 19 50.3	+1.2
PB10	IPOC Station P	3.74	201	eP	Pn	01 19 55.4	-0.7
PB10	IPOC Station P	3.74	201		Pn	01 19 56.3	+0.2
LPAZ	La Paz	3.81	14	P	Pn	01 20 02.4	+4.8
	comp=E,3.3nm,0.3s,baz=190,slow=6.5,SNR=58						
LPAZ				S	Sn	01 20 46.5	+4.7
	comp=E,1.3nm,0.3s,baz=194,slow=13,SNR=4.6						
LPAZ	La Paz	3.81	14		Pn	01 20 01.6	+4.0
LPAZ	La Paz	3.81	14	eP	Pn	01 20 00.7	+3.0
PB14	IPOC Station P	4.75	194		Pn	01 20 10.1	0.0
AC01	Pan de Azucar	6.27	192	Pn	Pn	01 20 31.1	+0.6
GO03	Copiap	7.62	188	Pn	Pn	01 20 49.6	+0.7
AC04	Llanos de Chal	8.36	192	Pn	Pn	01 20 59.0	+0.2
SIV	San Ignacio	8.63	64	P	Pn	01 21 02.3	-0.4
	comp=E,5.7nm,0.3s,baz=262,slow=11,SNR=183						
SIV				S	Sn	01 22 31.9	-6.5
	baz=7.1,slow=16,SNR=1.1						
AC05	El Transito	8.86	187	Pn	Pn	01 21 05.5	-0.3
VILB	Vilhena	11.05	52	eP	Pn	01 21 36.2	+0.5
CPUP	Villa Florida	12.53	122	P	Pn	01 21 54.5	-1.0
	comp=E,0.3nm,0.3s,baz=309,slow=13,SNR=11						
BO02	Sierra Bellavi	14.80	185	Pn	Pn	01 22 24.9	-0.2
PTGB	Pitanga	16.45	110	eP	P	01 22 47.7	+0.7
NPGB	Novo Progresso	18.55	48	eP	Pn	01 23 11.1	-0.3
SNDB	Serra Nova Dou	18.89	68	eP	Pn	01 23 14.8	-0.6
BB19B	Bebedouro	19.31	97	eP	Pn	01 23 18.6	-1.8
IPMB	Ipameri, GO	19.87	88	eP	Pn	01 23 25.0	-2.0
ITTB	Itaituba	20.28	42	eP	P	01 23 28.7	-0.3
PLCA	Paso Flores	20.70	183	P	P	01 23 33.5	+0.2
	comp=E,3.7nm,0.8s,baz=4.7,slow=12,SNR=12						
PLCA	Paso Flores	20.70	183	IAmb	IAmb	01 23 36.6	
	comp=Z,3.6nm,0.8s						
PLCA	Paso Flores	20.70	183	eP	Pn	01 23 35.1	-1.4
PTGA	Pitinga	21.14	26	P	P	01 23 37.9	-0.4
	comp=Z,1.3nm,0.3s,baz=238,slow=18,SNR=5.1						
JANB	Januaria	24.14	82	eP	P	01 24 08.6	+0.4
TXAR	Lajitas Array	59.30	325	P	P	01 28 52.7	-0.2
	comp=Z,0.1nm,0.3s,baz=131,slow=6.6,SNR=3.3						
DBIC	Dimbokro	68.50	74	P	P	01 29 51.6	-1.9
	comp=Z,2.5nm,0.9s,baz=217,slow=5.2,SNR=4.1						
DBIC	Dimbokro	68.50	74	IAmb	IAmb	01 29 53.0	
	comp=Z,3.0nm,0.9s						
PDAR	Pinedale Array	72.73	330	P	P	01 30 19.8	+0.9
	comp=Z,0.3nm,0.7s,baz=148,slow=7.1,SNR=2.5						
ULM	Lac du Bonnet	73.84	342	P	P	01 30 25.1	+0.2
	comp=Z,1.7nm,0.6s,baz=151,slow=5.6,SNR=5.0						
ULM	Lac du Bonnet	73.84	342	IAmb	IAmb	01 30 35.6	
	comp=Z,2.0nm,1.2s						
NVAR	Mina Array Bea	74.20	322	P	P	01 30 28.9	+1.3
	comp=Z,0.3nm,0.3s,baz=156,slow=4.7,SNR=3.7						
TORD	Torodi Ar. Bea	77.04	71	P	P	01 30 42.9	-1.1
	comp=Z,0.8nm,0.4s,baz=255,slow=5.2,SNR=7.1						
YKA	Yellowknife Ar	89.72	341	P	P	01 31 48.4	+0.4
	comp=Z,2.6nm,0.7s,baz=130,slow=5.2,SNR=48						
ZALV	Zalesovo Beam	140.68	24	PKP	PKPdf	01 38 18.8	-0.4
	comp=Z,0.4nm,0.4s,baz=321,slow=2.1,SNR=4.4						
MKAR	Makanchi Array	144.53	35	PKP	PKPdf	01 38 25.2	-1.0
	comp=Z,0.4nm,0.5s,baz=321,slow=3.0,SNR=12						

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*HEL **21** 01:24:26.6, 67°.20N×20°.89E, h0^{km}, ML1.9, Explosion*
ISC 21 01:24:25.8±0.8**, 67°.20N**±0°.03×**20°.65E**±0°.03**, h0^{km}, n22, σ0^{s}.74**/31**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DUNU	Dundret	0.09	200	iP	Pg	01 24 27.1	-0.3
DUNU				iS	Sg	01 24 28.4	-0.1
MASU	Masugnsbyn	0.58	63	iP	Pg	01 24 36.7	-0.2
MASU				iS	Sg	01 24 44.7	+0.2
RATU	Laukkuluspa	0.74	327	iP	Pg	01 24 39.6	-0.4
RATU				iS	Sg	01 24 49.9	+0.3
KUA	Kurravaara	0.76	351	iP	Pg	01 24 40.0	-0.4
KUA				iS	Sg	01 24 50.6	+0.4
SALU	Saltoluokta	0.85	283	eP	Pg	01 24 42.0	+0.1
NIKU	Nikkaluokta	0.91	318	eP	Pg	01 24 42.6	-0.5
PAJU	Pajala	0.98	99	eP	Pg	01 24 43.3	-1.3
LANU	Lannavaara	0.99	31	eP	Pg	01 24 43.9	-0.9
KOVU	Salmi	1.04	350	eP	Pg	01 24 45.6	-0.1
KALU	Kalix	1.73	140	eP	Pn	01 24 56.4	-0.7
KALU				eSN	Sn	01 25 19.5	-0.3
KIF	Kilpisjarvi	1.81	2	eP	Pb	01 24 59.4	-0.3
KIF	Kilpisjarvi	1.81	2	eP	Pb	01 24 58.7	-1.0
KIF				MSG		01 25 21.8	
	comp=Z,6.6nm,0.2s						
KIF				eSG	Sg	01 25 23.9	0.0
TOF	Tornio	1.85	126	eP	Pn	01 24 58.4	-0.3
TOF				MSG		01 25 19.5	
	comp=Z,9.2nm,0.2s						
TOF				eSN	Sn	01 25 22.7	0.0
RNF	Rovaniemi	2.20	103	eP	Pn	01 25 03.9	+0.4
SGF	Sodankyl	2.29	81	ePB	Pn	01 25 05.8	+1.0
	baz=264						
SGF				eSG	Sb	01 25 35.9	-0.9
BURU	Burvik	2.65	173	eP	Pn	01 25 10.1	+0.4
	baz=357						
OUL	Oulu	3.01	132	eP	Pn	01 25 15.1	+0.5
OUF	Merijarvi	3.31	148	ePG	Pb	01 25 23.9	-1.3
	baz=337						
OLKF	Oulanka, Finla	3.58	100	ePG	Pb	01 25 31.1	+1.2
	baz=288						
MSF	Maaselka	3.60	107	ePG	Pb	01 25 31.0	+0.8
MSF				eSG	Sb	01 26 16.1	+1.8
KU6	Riekki	3.87	103	eP	Pn	01 25 26.3	-0.1
VAF	Ylistaro	4.26	167	eP	Pn	01 25 32.6	+0.8

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*IDC **21** 01:31:57.8±2.3, 7°.30S×129°.54E, h116^{km}±26^{km}, mb3.6/3, mb1 4.0/8, mb1mx3.7/33, mbtmp4.3/8, Error ellipse: s-maj=29.6km s-min=20.2km az=73.0*
*NEIC **21** 01:31:58.6±2.7, 7°.30S±0°.09×129°.50E±0°.09, h127^{km}±10^{km}, mb4.3/9, Error ellipse: s-maj=12.9km s-min=12.5km az=48.0*
ISC 21 01:31:56.6±0.6**, 7°.40S**±0°.06×**129°.53E**±0°.07**, h100^{km}, n29, σ1^{s}.93**/32**, mb4.3**/6**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	Saumlaki	1.85	109		Pn	01 32 32.9	+5.7
FAKI	Fak Fak	5.21	31	Pn	Pn	01 33 13.0	+0.9
SOEI	Soe	5.71	245	Pn	Pn	01 33 20.6	+1.5
BATI	Baumata	6.43	244	P	Pn	01 33 31.9	+3.0
	18nm,0.3s,baz=79,slow=5.3,SNR=9.8						
BATI				S	Sn	01 34 41.2	+0.3
	18nm,0.3s,baz=191,slow=23,SNR=7.3						
SIJI	Sorong	6.71	15	P	Pn	01 33 32.4	-0.2
	2.2nm,0.3s,baz=253,slow=19,SNR=1.4						
SIJI				S	Sn	01 34 35.6	-12
	2.9nm,0.3s,baz=211,slow=22,SNR=1.7						
KNRA	Kununurra	8.27	185	Pn	Pn	01 33 56.9	+3.2
FITZ	Fitzroy Crossi	11.29	199	P	Pn	01 34 35.8	+0.9
	3.2nm,0.3s,baz=16,slow=11,SNR=67						
FITZ				S	Sn	01 36 33.3	-5.8
	3.4nm,0.3s,baz=57,slow=19,SNR=4.3						
FITZ	Fitzroy Crossi	11.29	199	Pn	Pn	01 34 36.1	+1.2
WB0	Warramunga Arr	13.17	159	Pn	Pn	01 35 00.5	+0.7
WRAB	Tennant Creek	13.31	160		Pn	01 35 02.1	+0.5
WRA	Warramunga Arr	13.32	160	P	Pn	01 35 02.4	+0.7
	5.8nm,0.3s,baz=332,slow=14,SNR=76						
WRA				S	Sn	01 37 24.6	-3.7
	5.4nm,0.3s,baz=337,slow=22,SNR=9.2						
WB2	Warramunga Arr	13.32	160	Pn	Pn	01 35 02.8	+1.0
WR0	Warramunga Arr	13.40	159		Pn	01 35 03.7	+0.9
COEN	Coen	14.91	117	Pn	Pn	01 35 22.1	-0.1
JAGI	Jajag, Banyuwa	15.27	265	Pn	Pn	01 35 26.9	+0.1
AS31	Alice Springs	16.71	166		Pn	01 35 45.9	+1.1
ASAR	Alice Springs	16.71	166	P	P	01 35 46.9	+1.5
	1.8nm,0.3s,baz=337,slow=9.6,SNR=54						
ASAR				S	Sn	01 38 48.2	-2.2
	1.0nm,0.3s,baz=350,slow=24,SNR=5.9						
SBUM	Sibu	19.85	299	P	P	01 36 19.6	-0.2
SBUM				IAmb	IAmb	01 36 22.4	
	comp=Z,8.7nm,0.7s						
CTA	Charters Tower	20.54	130	P	P	01 36 28.5	+1.3
	comp=Z,3.0nm,0.7s,baz=308,slow=9.2,SNR=2.5						
FORT	Forrest	23.30	183	P	P	01 36 58.7	+2.9
FORT				IAmb	IAmb	01 37 08.9	
	comp=Z,13nm,0.8s						
MORW	Morawa	25.03	209	P	P	01 37 13.2	+1.8
MORW				IAmb	IAmb	01 37 28.4	
	comp=Z,12nm,1.1s						
BBOO	Buckleboo	26.01	167	P	P	01 37 21.6	+1.4
BBOO				IAmb	IAmb	01 37 33.2	
	comp=Z,18nm,1.4s						
CHTO	Chiang Mai	39.85	311	P	P	01 39 18.8	-1.8
CHTO				IAmb	IAmb	01 39 34.7	
	comp=Z,2.2nm,0.6s						
NIL	Nilore	67.12	311	P	P	01 42 38.5	-1.3
MK31	Makanchi Array	68.30	327	P	P	01 42 46.5	-0.5
MKAR	Makanchi Array	68.30	327	P	P	01 42 46.3	-0.6
	comp=Z,1.8nm,0.4s,baz=128,slow=8.0,SNR=62						
ZALV	Zalesovo Beam	71.73	334	P	P	01 43 06.1	-1.6
	comp=Z,0.5nm,0.5s,baz=121,slow=5.6,SNR=4.1						
KURK	Kurchatov	72.61	329	P	P	01 43 12.2	-0.8
KKAR	Karatay Array	73.33	319	P	P	01 43 16.9	-0.6

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*IDC **21** 01:34:06.2±0.8, 52°.53N×32°.43W, h0^{km}, mb3.9/17, mb1 4.1/19, mb1mx3.9/44, mbtmp3.9/19, ML4.2/2, MS3.5/8, Ms1 3.5/8, ms1mx3.2/34, Error ellipse: s-maj=25.7km s-min=12.9km az=12.0*
*NEIC **21** 01:34:07.5±0.9, 52°.5N±0°.1×32°.5W±0°.2, h10^{km}±1^{km}, mb4.3/17, Error ellipse: s-maj=21.2km s-min=16.7km az=200.0*
ISC 21 01:34:07.5±0.7**, 52°.5N**±0°.1×**32°.48W**±0°.08**, h10^{km}, n51, σ0^{s}.60**/47**, mb4.0**/22**, MS3.4**/7**, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NRS	Narsarsuaq	11.21	326	Pn	Pn	01 36 46.7	-0.9
BORG	Borgarnes	13.59	21	Pn	Pn	01 37 21.9	+2.0
	0.4nm,0.3s,baz=259,slow=19,SNR=1.0						
SFJD	Kangerlussuaq	17.09	335	P	P	01 38 06.4	-1.4
	0.3nm,0.3s,baz=135,slow=12,SNR=4.6						
SFJD				LR	LR	01 43 16.2	
	comp=Z,152nm,21.4s,baz=135,slow=32						
EKA	Eskdalemuir Ar	17.45	69	P	Pn	01 38 10.2	-0.5
	baz=266,slow=10.0,SNR=16						
SUMG	Summit	20.35	355	iP	P	01 38 44.2	+0.2
SUMG	Summit	20.35	355	P	P	01 38 43.8	-0.2
SUMG				IAmb	IAmb	01 38 57.3	
	comp=Z,13nm,1.1s						
SUMG	Summit	20.35	355	iP	P	01 38 44.2	+0.2
FRB	Frobisher Bay	21.81	315	P	P	01 38 59.6	+0.3
	comp=Z,4.8nm,0.9s,baz=92,slow=11,SNR=10						
ESDC	Sonseca Array	23.38	112	P	P	01 39 16.4	+0.3
	comp=Z,1.0nm,0.8s,baz=316,slow=8.6,SNR=4.4						
ESDC				LR	LR	01 46 13.5	
	comp=Z,147nm,18.4s,baz=200,slow=31						
NB2	NORSAR Subarra	25.00	53	P	P	01 39 30.4	-0.7
	comp=Z,4.3nm,0.9s,baz=274,slow=11						
NOA	NORSAR Array B	25.00	53	P	P	01 39 30.6	-0.5
	comp=Z,2.8nm,0.8s,baz=274,slow=10,SNR=4.0						
NOA				LR	LR	01 48 52.5	
	comp=Z,78nm,18.3s,baz=285,slow=36						
CLL	Collm	27.75	74	eP	P	01 39 55.0	-0.9
GERES	GERESS Array B	29.11	78	P	P	01 40 08.2	-0.1
	comp=Z,1.2nm,0.8s,baz=305,slow=9.3,SNR=7.4						
GERES	GERESS Array B	29.11	78	P	P	01 40 07.3	-0.9
ZOU	Zoufplan	29.70	83	P	P	01 40 13.6	0.0
ARCES	ARCESS Array B	31.29	35	P	P	01 40 26.5	-0.7
	comp=Z,1.8nm,0.8s,baz=263,slow=7.9,SNR=3.6						
FINES	FINESS Array B	32.11	50	P	P	01 40 33.7	-0.6
	comp=Z,6.5nm,0.9s,baz=275,slow=9.0,SNR=13						
FINES	FINESS Array B	32.11	50	P	P	01 40 33.6	-0.7
RES	Resolute Bay	33.09	334	P	P	01 40 43.2	+0.4
	comp=Z,1.0nm,0.6s,baz=96,slow=9.3,SNR=6.9						
KEST	Kesra	33.82	103	P	P	01 40 49.8	+0.2
	comp=Z,3.0nm,0.8s,baz=299,slow=10,SNR=2.5						
DIVS	Divibare	35.21	82	P	P	01 41 01.8	+0.2
DIVS				IAmb	IAmb	01 41 02.5	
	comp=Z,6.0nm,1.1s						
BURAR	Bucovina Array	36.52	74	P	P	01 41 13.2	+0.4
AKASG	Malin Array Be	37.35	67	P	P	01 41 18.9	-0.9
	comp=Z,1.9nm,0.7s,baz=301,slow=8.5,SNR=8.4						
AKASG				LR	LR	01 54 56.2	
	comp=Z,65nm,19.5s,baz=295,slow=34						
AKASG	Malin Array Be	37.35	67	IAmb	IAmb	01 41 22.1	
	comp=Z,0.8nm,0.8s						
ULM	Lac du Bonnet	38.52	293	LR	LR	01 55 04.3	
	comp=Z,46nm,19.2s,baz=74,slow=33						
OBN	Obninsk	39.37	58	P	P	01 41 36.0	-0.6
YKA	Yellowknife Ar	42.31	317	P	P	01 42 00.4	-0.4
	comp=Z,1.0nm,0.9s,baz=63,slow=9.3,SNR=7.5						
YKA				PcP	PcP	01 43 53.4	-0.8
	comp=Z,0.3nm,0.8s,baz=64,slow=4.4,SNR=3.8						
BR131	Keskin Array S	46.01	79	P	P	01 42 31.2	+0.2
BRTR	Keskin Array B	46.01	79	P	P	01 42 31.7	+0.8
	comp=Z,4.4nm,0.8s,baz=303,slow=6.7,SNR=16						
BRTR	Keskin Array B	46.01	79	P	P	01 42 31.0	+0.1
KAN01	Argonia South	47.15	278	P	P	01 42 40.0	+0.3
TORD	Torodi Ar. Bea	47.79	132	P	P	01 42 45.2	+0.3
	comp=Z,1.3nm,0.8s,baz=319,slow=6.3,SNR=3.7						
TORD	Torodi Ar. Bea	47.79	132	IAmb	IAmb	01 42 54.5	
	comp=Z,1.3nm,0.8s						
ARU	Arti	49.34	47	P	P	01 42 55.9	-0.5
PD31	Pinedale Array	50.51	292	P	P	01 43 05.7	-0.1
PDAR	Pinedale Array	50.51	292	P	P	01 43 05.8	0.0
	comp=Z,1.0nm,0.6s,baz=68,slow=7.9,SNR=13						
PDAR				LR	LR	02 03 00.6	
	comp=Z,56nm,19.1s,baz=41,slow=34						
PDAR	Pinedale Array	50.51	292	P	P	01 43 05.3	-0.5
DBIC	Dimbokro	50.97	144	LR	LR	02 01 39.8	
	comp=Z,54nm,21.4s,baz=337,slow=32						
ILAR	Eielson Array	52.67	331	PcP	PcP	01 44 31.1	+0.1
	comp=Z,0.9nm,0.8s,baz=20,slow=2.9,SNR=5.9						
PV12	Saucer Basin,	52.97	287	IAmb	IAmb	01 43 44.7	
	comp=Z,5.5nm,1.0s						
ABKAR	Akbulak array	54.51	54	P	P	01 43 35.0	0.0
TIXI	Tiksi	55.48	7	P	P	01 43 41.9	+0.2
TIXI				IAmb	IAmb	01 43 43.2	
	comp=Z,3.1nm,0.8s						
TXAR	Lajitas Array	56.10	275	P	P	01 43 47.5	+0.6
	comp=Z,0.2nm,0.5s,baz=59,slow=6.4,SNR=5.2						
BRVK	Borovoye	56.70	45	P	P	01 43 50.5	-0.2
BRVK				IAmb	IAmb	01 43 51.3	
	comp=Z,2.7nm,1.0s						
NVAR	Mina Array Bea	58.36	293	P	P	01 44 03.5	+0.6
	comp=Z,0.2nm,0.4s,baz=61,slow=7.3,SNR=2.0						
NVAR				LR	LR	02 07 02.2	
	comp=Z,24nm,19.6s,baz=262,slow=34						
ZALV	Zalesovo Beam	61.82	37	P	P	01 44 26.0	-0.1
	comp=Z,0.4nm,0.5s,baz=309,slow=7.3,SNR=1.9						
MK31	Makanchi Array	66.51	43	P	P	01 44 56.6	-0.5
MK31				IAmb	IAmb	01 44 57.7	
	comp=Z,1.7nm,0.7s						

MKAR	Makanchi Array	66.51	43	P	P	01 44 57.1	+0.1
	comp=Z,1.6nm,0.6s,baz=330,slow=5.8,SNR=19						
MKAR	Makanchi Array	66.51	43	P	P	01 44 57.0	-0.1
WRA	Warramunga Arr	145.96	23	PKPbc	PKPbc	01 53 46.9	-0.3
	comp=Z,0.7nm,0.9s,baz=344,slow=2.9,SNR=2.9						
ASAR	Alice Springs	149.42	25	PKPbc	PKPbc	01 53 56.3	-0.3
	comp=Z,0.2nm,0.3s,baz=356,slow=2.5,SNR=2.0						

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*IDC **21** 02:14:10.3±0.5, 6°.77N×72°.94W, h162^{km}±5^{km}, mb3.7/10, mb1 3.9/16, mb1mx3.6/34, mbtmp4.2/16, Error ellipse: s-maj=13.7km s-min=7.9km az=137.0*

*NEIC **21** 02:14:11.0±1.3, 6°.72N±0°.08×72°.99W±0°.05, h173^{km}±6^{km}, mb4.3/19, Error ellipse: s-maj=11.5km s-min=7.1km az=195.0*

*RSNC **21** 02:14:11.3±1.0, 6°.79N×73°.13W, h149^{km}±3^{km}, ML4.1, Mw4.3, Fault plane solution: NP1:φs76.00000°, δ71.00000°, λ-175.00000°.*

ISC 21 02:14:10.0±0.5, **6°.78N**±0°.03×**73°.09W**±0°.04, **h160**^{km}±4^{km}, **n82**, σ1^{s}**97**/118, **mb4.2**/16, **11C-8D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	Barichara	0.21	205	⇓*i*P	Pn	02 14 31.9	0.0
BARC				*e*S	Sn	02 14 46.4	-2.1
BARC				*i*		02 14 48.3	
	comp=Z,2µm,0.4s						
PAMC	Pamplona, Colo	0.68	35	⇓*i*P	Pn	02 14 34.6	+0.6
PAMC				*e*S	Sn	02 14 51.1	-1.3
PAMC				*i*		02 14 54.1	
	comp=Z,3µm,0.6s						
BRRC	Barranca, Sant	0.69	298	⇓*i*P	Pn	02 14 33.7	+0.2
BRRC				*e*S	Sn	02 14 50.7	-0.9
BRRC				*i*		02 14 55.1	
	comp=Z,2µm,0.2s						
RUSC	La Rusia	0.88	179	⇑*i*P	Pn	02 14 35.8	+0.4
RUSC				*e*S	Sn	02 14 53.3	-1.6
RUSC				*i*		02 14 56.0	
	comp=Z,2µm,0.5s						
PTBC	PUERTO BERRIO,	1.38	260	⇑*i*P	Pn	02 14 38.3	-0.8
PTBC				*e*S	Sn	02 14 59.7	-1.7
PTBC				*i*		02 15 05.9	
	comp=Z,2µm,0.2s						
OCAC	Ocana	1.46	351	⇑*e*P	Pn	02 14 39.8	-0.4
OCAC				*e*S	Sn	02 15 02.1	-1.3
OCAC				*i*		02 15 05.8	
	comp=Z,1µm,0.2s						
NORC	Norcasia	2.14	236	⇑*i*P	Pn	02 14 47.4	0.0
NORC				*e*S	Sn	02 15 15.4	-0.9
NORC				*i*		02 15 20.5	
	comp=Z,1µm,0.2s						
SMLC	San Martn de	2.23	334	⇓*e*P	Pn	02 14 47.9	-0.5
SMLC				*e*S	Sn	02 15 16.4	-1.7
SMLC				*i*		02 15 23.5	
	comp=Z,2µm,0.2s						
CHIC	Chingaza	2.23	197	⇑*i*P	Pn	02 14 49.5	+0.6
CHIC				*e*S	Sn	02 15 18.4	-0.5
CHIC				*i*		02 15 29.2	
	comp=Z,735nm,0.4s						
ROSC	El Rosal	2.28	212	P	Pn	02 14 51.4	+2.0
	comp=Z,162nm,0.3s,baz=313,slow=19,SNR=424						
ROSC				S	Sn	02 15 22.4	+2.6
	comp=Z,128nm,0.3s,baz=154,slow=18,SNR=7.9						
ROSC	El Rosal	2.28	212		Pn	02 14 51.2	+1.7
ROSC	El Rosal	2.28	212	⇑*i*P	Pn	02 14 51.2	+1.7
ROSC				*e*S	Sn	02 15 18.8	-1.1
ROSC				*i*		02 15 25.6	
	comp=Z,1µm,0.5s						
GUY2C	Guyana, Caldas	2.74	236	*e*P	Pn	02 14 55.6	+0.6
GUY2C				*e*S	Sn	02 15 28.5	-1.3
GUY2C				*i*		02 15 40.3	
	comp=Z,834nm,0.6s						
PTGC	Puerto Gaitan,	2.74	160	⇓*i*P	Pn	02 14 54.7	+0.1
PTGC				*e*S	Sn	02 15 27.1	-2.0
PTGC				*i*		02 15 31.4	
	comp=Z,590nm,0.2s						
CBOC	Ciudad Bolivar	3.04	253	*e*P	Pn	02 14 58.4	-0.1
CBOC				*e*S	Sn	02 15 35.1	-0.9
CBOC				*i*		02 15 42.0	
	comp=Z,308nm,0.6s						
DBBC	Dabeiba	3.10	274	⇓*i*P	Pn	02 14 59.3	+0.1
DBBC				*e*S	Sn	02 15 35.9	-1.3
SDV	Santo Domingo	3.21	49	P	Pn	02 15 01.1	+0.5
	comp=Z,72nm,0.3s,baz=228,slow=12,SNR=184						
SDV				S	Sn	02 15 38.4	-1.5
	comp=Z,16nm,0.3s,baz=206,slow=23,SNR=3.8						
SDV	Santo Domingo	3.21	49	*e*P	Pn	02 15 00.9	+0.2
SDV				*e*S	Sn	02 15 37.5	-2.5
SDV				*i*		02 15 40.5	
	comp=Z,269nm,0.6s						
MOTC	Monteria, Cord	3.23	308	⇓*i*P	Pn	02 14 58.8	-1.9
MOTC				*e*S	Sn	02 15 39.0	-1.0
MOTC				*i*		02 15 52.9	
	comp=Z,640nm,0.5s						
ARGC	Ariguani, Magd	3.26	340	⇓*i*P	Pn	02 15 01.9	+0.7
ARGC				*e*S	Sn	02 15 39.8	-1.0
ARGC				*i*		02 15 51.0	
	comp=Z,399nm,0.5s						
PRAC	Prado	3.53	210	*e*P	Pn	02 15 04.8	+0.1
PRAC				*e*S	Sn	02 15 47.2	+0.1
PRAC				*i*		02 15 55.5	
	comp=Z,493nm,0.6s						
ORTC	Ortega, Tolima	3.57	217	⇑*i*P	Pn	02 15 05.3	+0.2
ORTC				*e*S	Sn	02 15 47.8	-0.1
ORTC				*i*		02 15 55.5	
	comp=Z,423nm,0.5s						
PLMC	San Jos del P	3.68	240	⇑*i*P	Pn	02 15 07.2	+0.6
PLMC				*e*S	Sn	02 15 45.7	-4.7
PLMC				*i*		02 15 55.8	
	comp=Z,380nm,0.7s						
GUVC	San Jose del G	4.24	174	*e*P	Pn	02 15 13.5	-0.1
GUVC				*e*S	Sn	02 16 03.0	-0.4
GUVC				*i*		02 16 08.5	
	comp=Z,432nm,0.2s						
SOLC	Bahia Solano	4.32	263	*e*P	Pn	02 15 15.4	+0.6
SOLC				*e*S	Sn	02 16 02.6	-2.6
SOLC				*i*		02 16 03.6	
	comp=Z,74nm,0.6s						
SMRC	Santa Marta, M	4.49	346	*e*P	Pn	02 15 17.0	0.0
SMRC				*e*S	Sn	02 16 04.3	-5.0
SMRC				*i*		02 16 08.1	
	comp=Z,201nm,0.6s						
CAPC	Capurgana	4.60	294	*e*P	Pn	02 15 14.6	-3.9
CAPC				*e*S	Sn	02 16 03.5	-8.3
CAPC				*i*		02 16 11.1	
	comp=Z,132nm,0.2s						
PIZC	Pizarro, Choco	4.61	247	*e*S	Sn	02 16 11.0	-1.0
PIZC				*i*		02 16 26.3	
	comp=Z,166nm,0.7s						
MACC	Macarena, Meta	4.67	189	⇑*i*P	Pn	02 15 18.3	-1.0
MACC				*e*S	Sn	02 16 06.6	-6.8
MACC				*i*		02 16 11.6	
	comp=Z,100nm,0.7s						
PTAC	Punta Ardita,	4.69	275	*e*P	Pn	02 15 19.0	-0.6
PTAC				*e*S	Sn	02 16 07.6	-6.4
PTAC				*i*		02 16 23.2	
	comp=Z,247nm,0.2s						
BETC	Betania	4.70	210	*e*P	Pn	02 15 19.4	-0.4
BETC				*e*S	Sn	02 16 05.4	-8.8
MARP	Paez Belalcaza	4.84	216	*e*P	Pn	02 15 22.7	+0.8
MARP				*e*S	Sn	02 16 12.3	-5.6
MALC	Bahia Malaga	5.04	237	*e*P	Pn	02 15 24.4	+0.2
MALC				*e*S	Sn	02 16 21.3	-0.9
MALC				*i*		02 16 34.1	
	comp=Z,58nm,0.6s						
GARC	Garzon, Huila	5.15	208	⇑*e*P	Pn	02 15 25.4	-0.5
GARC				*e*S	Sn	02 16 22.4	-2.9
GARC				*i*		02 16 29.6	
	comp=Z,148nm,0.2s						
PCON	Cinco Dias	5.51	217	*e*P	Pn	02 15 31.9	+0.9
PCON				*e*S	Sn	02 16 24.8	-9.5
PCON				*i*		02 16 55.8	
	comp=Z,90nm,0.9s						
POPC	Popayan, Colom	5.52	220	⇑*e*P	Pn	02 15 31.1	+0.3
POPC				*e*S	Sn	02 16 19.4	-15
FLOC	Florencia	5.76	206	*e*P	Pn	02 15 33.6	-0.2
FLOC				*e*S	Sn	02 16 24.7	-15
FLOC				*i*		02 17 14.6	
	comp=Z,86nm,0.9s						
SOTA	Rioblanco	5.79	217	*e*P	Pn	02 15 37.0	+2.3
SOTA				*e*S	Sn	02 16 33.6	-7.2
BBAC	Balboa, Cauca	6.29	221	*e*P	Pn	02 15 41.3	+0.5
BBAC				*e*S	Sn	02 16 45.1	-7.0
BBAC				*i*		02 16 56.0	
	comp=Z,38nm,0.3s						
PTLC	Puerto Leguiza	6.78	195	*e*P	Pn	02 15 50.2	+2.9
PTLC				*e*S	Sn	02 17 21.9	+18
GCUF	Volcan Galeras	6.96	218	*e*P	Pn	02 15 50.2	+0.1
GCUF				*e*S	Sn	02 17 05.2	-3.4
GCUF				*i*		02 17 15.1	
	comp=Z,12nm,0.3s						
PCRV	Puerto La Cruz	9.02	67	P	Pn	02 16 16.9	-0.1
	comp=Z,1.2nm,0.3s,baz=208,slow=15,SNR=15						
PCRV				S	Sn	02 17 55.2	-2.2
	comp=Z,2.4nm,0.3s,baz=170,slow=16,SNR=5.8						
MTDJ	Mount Denham	12.17	340	Pn	Pn	02 16 59.7	+1.3
JTS	Las Juntas de	12.23	287	P	Pn	02 17 03.2	+4.0
	comp=Z,0.6nm,0.3s,baz=106,slow=18,SNR=2.5						
SDDR	Presa de Saban	12.25	8	Pn	Pn	02 17 00.8	+1.4
SJG	San Juan	13.14	30	P	Pn	02 17 09.8	-0.9
	comp=Z,2.6nm,0.3s,baz=17,slow=20,SNR=8.4						
GTBY	Guantanamo Bay	13.21	352	Pn	Pn	02 17 13.2	+1.5
PTGA	Pitinga	15.08	119	P	Pn	02 17 34.0	-1.1
	comp=Z,0.5nm,0.3s,baz=318,slow=20,SNR=1.8						
MTO3	Montecristo	17.68	297	P	P	02 18 05.9	+0.4
MTO3				IAmb	IAmb	02 18 10.6	
	comp=Z,14nm,1.0s						
SAML	Samuel	18.49	148	P	P	02 18 13.1	-0.9
TEIG	Tepich	19.89	314	P	P	02 18 31.0	+1.9
	comp=Z,11nm,0.6s,baz=55,slow=2.9,SNR=7.4						
WVT	Waverly	32.18	337	P	P	02 20 23.9	+1.1
WVT				IAmb	IAmb	02 20 38.8	
	comp=Z,12nm,1.6s						
U40A	Yellville	34.54	331	P	P	02 20 44.4	+1.1
U40A				IAmb	IAmb	02 20 45.1	
	comp=Z,8.9nm,0.7s						
CCM	Cathedral Cave	35.22	335	P	P	02 20 49.0	-0.1
CCM				IAmb	IAmb	02 20 50.6	
	comp=Z,5.9nm,0.6s						
TXAR	Lajitas Array	36.51	312	P	P	02 21 01.4	+1.1
	comp=Z,1.4nm,0.6s,baz=126,slow=9.4,SNR=20						
TXAR				PcP	PcP	02 23 22.3	+1.6
	comp=Z,0.3nm,0.6s,baz=125,slow=4.3,SNR=3.5						
TXAR	Lajitas Array	36.51	312	P	P	02 21 01.1	+0.7
TX31	Lajitas Ar. Si	36.51	312	P	P	02 21 01.2	+0.8
TX32	Lajitas Array	36.51	312	P	P	02 21 01.1	+0.8
MNTX	Cornudas Mount	39.02	314	P	P	02 21 21.4	+0.1
MNTX				IAmb	IAmb	02 21 23.8	
	comp=Z,4.2nm,0.8s						
PV13	Radium Mtn., P	44.95	319	P	P	02 22 10.4	+0.9
GLA	Glamis	46.68	310	P	P	02 22 23.5	+0.6
GLA				IAmb	IAmb	02 22 25.3	
	comp=Z,4.6nm,0.8s						
ULM	Lac du Bonnet	47.33	340	P	P	02 22 27.8	+0.2
	comp=Z,1.9nm,0.4s,baz=146,slow=8.4,SNR=8.1						
ULM	Lac du Bonnet	47.33	340	IAmb	IAmb	02 22 28.5	
	comp=Z,10nm,1.4s						
PDAR	Pinedale Array	48.12	324	P	P	02 22 34.9	+0.7
	comp=Z,0.5nm,0.6s,baz=129,slow=9.5,SNR=6.0						
DGMT	Dagmar	49.20	333	P	P	02 22 41.5	-0.5
NVAR	Mina Array Bea	51.53	315	P	P	02 23 00.9	+1.0
	comp=Z,0.7nm,0.7s,baz=126,slow=7.6,SNR=4.8						
YKA	Yellowknife Ar	63.31	340	P	P	02 24 22.1	+0.4
	comp=Z,1.4nm,0.5s,baz=128,slow=7.3,SNR=31						
DBIC	Dimbokro	67.71	86	P	P	02 24 50.1	-0.8
	comp=Z,0.9nm,0.4s,baz=255,slow=5.8,SNR=8.5						
DBIC	Dimbokro	67.71	86	IAmb	IAmb	02 25 54.5	
	comp=Z,15nm,1.5s						
SUMG	Summit	69.02	11	*i* P	P	02 24 58.2	-0.2
	comp=Z,3.9nm,0.4s						
SUMG	Summit	69.02	11	P	P	02 24 58.6	+0.2
SUMG	Summit	69.02	11	*i* P	P	02 24 58.2	-0.2
SUMG				IAmb	IAmb	02 25 00.0	
	comp=Z,3.9nm,0.4s						
TORD	Torodi Ar. Bea	73.72	78	P	P	02 25 25.8	-1.3
	comp=Z,0.4nm,0.4s,baz=267,slow=8.4,SNR=1.3						
IL31		77.01	335	P	P	02 25 44.3	-0.6
IL31				IAmb	IAmb	02 26 55.5	
	comp=Z,16nm,1.9s						
ILAR	Eielson Array	77.01	335	P	P	02 25 45.5	+0.5
	comp=Z,0.4nm,0.8s,baz=100,slow=3.8,SNR=2.9						
ILAR				pP	pP	02 26 24.1	-0.1
	comp=Z,0.2nm,0.6s,baz=98,slow=6.5,SNR=1.7						
ARCES	ARCESS Array B	86.70	20	P	P	02 26 35.5	0.0
	comp=Z,4.4nm,1.1s,baz=308,slow=3.3,SNR=7.0						
MK31	Makanchi Array	122.35	20	PKPdf	PKPdf	02 32 45.4	-1.0
MKAR	Makanchi Array	122.35	20	PKP	PKPdf	02 32 46.2	-0.2
	comp=Z,0.4nm,0.4s,baz=302,slow=2.5,SNR=13						
SHL	Shillong	144.68	24		PKPab	02 33 27.1	-0.8
ASAR	Alice Springs	149.11	234	PKPbc	PKPbc	02 33 40.0	-0.4
	comp=Z,1.6nm,0.6s,baz=115,slow=3.6,SNR=19						
ASAR				pPKPbc	pPKPbc	02 34 21.9	-0.7
	comp=Z,0.6nm,0.7s,baz=114,slow=3.7,SNR=2.0						
ASAR	Alice Springs	149.11	234		PKPdf	02 33 38.3	+2.3
WRA	Warramunga Arr	150.34	241	PKPbc	PKPbc	02 33 43.1	-0.3
	comp=Z,1.5nm,0.4s,baz=109,slow=2.6,SNR=42						
WRA				pPKPbc	pPKPbc	02 34 25.6	-0.1
	comp=Z,0.8nm,0.5s,baz=109,slow=2.3,SNR=2.5						

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*IDC **21** 02:44:15.3±1.2, 7°.00S×154°.81E, h0^{km}, mb4.0/7, mb1 4.1/8, mb1mx3.9/29, mbtmp4.0/8, ML2.3/1, MS3.2/5, Ms1 3.2/5, ms1mx2.9/26, Error ellipse: s-maj=49.4km s-min=18.8km az=127.0*

*NEIC **21** 02:44:15.8±1.4, 7°.15S±0°.10×154°.88E±0°.05, h8^{km}±6^{km}, mb4.2/6, Error ellipse: s-maj=14.4km s-min=7.5km az=171.0*

ISC 21 02:44:20.2±0.7, **7°.2S**±0°.1×**154°.90E**±0°.09, **h41**^{km}, **n18**, σ1^{s}**38**/17, **mb4.1**/9, **MS3.1**/3, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	Rabaul	4.00	317	Pn	Pn	02 45 17.2	-2.0
HNR	Honiara	5.49	115	LR	LR	02 47 59.9	
	comp=Z,171nm,20.8s,baz=221,slow=40						
HNR	Honiara	5.49	115	Pn	Pn	02 45 38.1	-1.4
PMG	Port Moresby	7.98	253	Pn	Pn	02 46 12.6	-1.1
	2.1nm,0.3s,baz=106,slow=10,SNR=1.6						
PMG				Sn	Sn	02 47 43.8	+1.0
	1.6nm,0.3s,baz=87,slow=19,SNR=1.3						
PMG				LR	LR	02 48 46.8	
	comp=Z,103nm,21.3s,baz=122,slow=34						
PMG	Port Moresby	7.98	253	Pn	Pn	02 46 10.9	-2.8
WRA	Warramunga Arr	23.65	235	P	P	02 49 28.2	+0.1
	1.2nm,0.9s,baz=60,slow=9.7,SNR=6.6						
WRA				LR	LR	02 58 09.1	
	comp=Z,46nm,18.8s,baz=135,slow=35						
SIJI	Sorong	24.37	284	LR	LR	03 00 50.7	
	comp=Z,144nm,19.9s,baz=110,slow=41						
ASAR	Alice Springs	26.00	229	P	P	02 49 49.9	+0.3
	0.8nm,0.7s,baz=61,slow=9.0,SNR=7.9						
STKA	Stephens Creek	27.56	205	P	P	02 50 05.5	+2.1
	5.0nm,1.2s,baz=352,slow=11,SNR=4.9						
STKA				LR	LR	03 00 40.6	
	comp=Z,50nm,18.1s,baz=26,slow=36						
STKA	Stephens Creek	27.56	205	P	P	02 50 03.2	-0.2
STKA				IAmb	IAmb	02 50 29.4	
	comp=Z,1.6nm,1.1s						
XAN	Xi'an	59.75	316	P	P	02 54 21.0	-0.3
PETK	Petropavlovsk-	60.07	2	P	P	02 54 22.7	-0.3
	comp=Z,2.0nm,0.8s,baz=131,slow=5.8,SNR=5.3						
MK31	Makanchi Array	83.45	319	P	P	02 56 44.7	+1.0
MK31				IAmb	IAmb	02 56 56.4	
	comp=Z,3.2nm,1.4s						
MKAR	Makanchi Array	83.45	319	P	P	02 56 44.7	+1.0
	comp=Z,1.4nm,0.7s,baz=106,slow=5.5,SNR=16						
ILAR	Eielson Array	83.55	22	P	P	02 56 43.8	0.0
	comp=Z,0.4nm,0.5s,baz=235,slow=5.5,SNR=11						
MAKZ	Makanchi	83.67	319	P	P	02 56 45.4	+0.7
MAKZ				IAmb	IAmb	02 56 46.7	
	comp=Z,2.3nm,0.8s						
EPYK	Eagle Plains	88.04	22	P	P	02 57 06.8	+0.9
YKA	Yellowknife Ar	96.52	28	P	P	02 57 46.6	+1.5
	comp=Z,0.6nm,0.7s,baz=266,slow=4.1,SNR=8.3						

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*JMA **21** 03:11:16.6±0.2, 23°.89N×122°.62E, h31^{km}±4^{km}, M2.7*

*TAP **21** 03:11:17.3, 23°.95N×122°.63E, h38^{km}±1^{km}, ML3.3, D*

ISC 21 03:11:15.4±0.9, **23°.83N**±0°.03×**122°.63E**±0°.02, **h20**^{km}±9^{km}, **n81**, σ0^{s}**71**/149, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.68	25	P	Pb	03 11 28.9	+0.3
JYNG				S	Sb	03 11 37.5	-0.1
YOJ	Yonaguni jima	0.72	29	P	Pb	03 11 29.6	+0.4
	baz=33						
YOJ				S	Sb	03 11 39.0	+0.4
	baz=33						
YOJ	Yonaguni jima	0.72	29	P	Pb	03 11 29.6	+0.4
YOJ				*e*S	Sb	03 11 38.4	-0.2
HWA	Hwalien	0.95	279	*e*P	Pn	03 11 33.8	+0.2
	baz=261						
HWA				S	Sn	03 11 46.8	+0.2
	baz=261						
TWD	Chiawan	0.98	285	P	Pn	03 11 33.9	-0.1
	baz=278						
TWD				*i* S	Sb	03 11 45.9	-0.3
	baz=278						
ENA	Nanau	1.01	306	*i* P	Pn	03 11 34.5	+0.1
	baz=301						
ENA				S	Sb	03 11 46.9	-0.2
	baz=301						
NACB	Ninganchiao	1.01	290	P	Pn	03 11 34.3	-0.1
	baz=272						
NACB				S	Sb	03 11 46.6	-0.5
	baz=272						
TWC	Suao	1.06	317	*i* P	Pn	03 11 34.9	-0.2
	baz=304						
TWC				S	Sb	03 11 47.8	-0.6
	baz=304						
HATJ	Hateruma jima	1.09	78	P	Pb	03 11 36.4	+0.8
HATJ				*e*S	Sn	03 11 50.6	+0.5
ESL	Shilin	1.10	269	*i* P	Pn	03 11 35.7	+0.1
	baz=262						
ESL				S	Sb	03 11 48.8	-0.8
	baz=262						
EGFH	Guangfu	1.12	262	P	Pb	03 11 36.8	+0.8
	baz=244						
EGFH				S	Sn	03 11 51.2	+0.6
	baz=244						
ETLH	Xiulin Townshi	1.12	290	*e*P	Pn	03 11 36.2	+0.2
	baz=275						
ETLH				S	Sb	03 11 50.0	-0.2
	baz=275						
IRIF	Iriomote-Funau	1.12	63	P	Pb	03 11 36.3	+0.3
IRIF				*e*S	Sn	03 11 50.5	-0.2
HGSD	Ruisui	1.16	253	P	Pb	03 11 37.0	+0.3
	baz=247						
HGSD				S	Sn	03 11 51.8	+0.1
	baz=247						
EHY	Hungye	1.25	255	*i* P	Pb	03 11 38.4	+0.2
	baz=249						
EHY				*i* S	Sb	03 11 54.1	+0.3
	baz=249						
TWE	Neicheng	1.25	315	*i* P	Pn	03 11 38.1	+0.4
	baz=312						
TWE				S	Sn	03 11 52.7	-1.2
	baz=312						
NTC	Toucheng	1.26	324	*e*P	Pn	03 11 38.0	+0.3
	baz=322						
NTC				*e*S	Sn	03 11 53.6	-0.4
	baz=322						
ENTT	Nioudou	1.27	310	*i* P	Pn	03 11 38.2	+0.3
	baz=294						
ENTT				S	Sn	03 11 54.5	+0.1
	baz=294						
NDT	Datong Townshi	1.28	307	*i* P	Pn	03 11 38.8	+0.6
	baz=292						
NDT				S	Sn	03 11 54.7	0.0
	baz=292						
NNSB	Datong	1.29	298	P	Pn	03 11 38.6	+0.3
	baz=284						
NNSB				S	Sn	03 11 54.3	-0.8
	baz=284						
NNSH	Datong	1.29	298	*e*P	Pn	03 11 38.6	+0.3
	baz=284						
NNSH				S	Sn	03 11 54.3	-0.8
	baz=284						
WHF	Hehuan Shan	1.29	284	*i* P	Pn	03 11 39.0	+0.4
	baz=279						
WHF				*i* S	Sn	03 11 55.0	-0.6
	baz=279						
YULB	Yu-li	1.30	251	P	Pb	03 11 39.5	+0.4
	baz=236						
YULB				S	Sb	03 11 55.9	+0.5
	baz=236						
NNS	Nan Shan	1.30	298	*i* P	Pn	03 11 39.0	+0.4
	baz=284						
NNS				S	Sn	03 11 55.0	-0.4
	baz=284						
TWB1	Santiao Chiao	1.31	333	*e*P	Pn	03 11 37.9	-0.7
	baz=345						
TWB1				S	Sn	03 11 54.1	-1.4
	baz=345						
TWF1	Yuli	1.32	249	*i* P	Pb	03 11 39.8	+0.4
	baz=243						
TWF1				*i* S	Sb	03 11 56.6	+0.8
	baz=243						
JKRS	Kuro-shima	1.32	72	P	Pb	03 11 39.6	+0.1
JKRS				*e*S	Sb	03 11 56.4	+0.4
TIPB	Shuangxi	1.35	327	*e*P	Pn	03 11 38.8	-0.4
	baz=325						
TIPB				*e*S	Sn	03 11 55.2	-1.4
	baz=325						
CHGB	Renai	1.36	280	P	Pb	03 11 40.2	0.0
	baz=265						
CHGB				S	Sn	03 11 56.4	-0.4
	baz=265						
VWDT	VWDT	1.37	267	P	Pb	03 11 40.3	0.0
	baz=261						
VWDT				S	Sn	03 11 57.0	+0.1
	baz=261						
CHKT	Chengkung	1.37	238	P	Pb	03 11 40.0	-0.3
	baz=223						
CHKT				S	Sn	03 11 56.3	-0.7
	baz=223						
FULB	Fuli	1.38	243	*i* P	Pb	03 11 40.2	-0.3
	baz=228						
FULB				S	Sb	03 11 58.0	+0.3
	baz=228						
NWLT	Wulai	1.40	313	*e*P	Pn	03 11 40.2	+0.5
	baz=309						
NWLT				*e*S	Sn	03 11 56.7	-1.0
	baz=309						
TDCB	Techi	1.41	288	*e*P	Pn	03 11 40.2	+0.2
	baz=273						
TDCB				*e*S	Sn	03 11 57.9	-0.3
	baz=273						
YHNB	Yeheng	1.42	306	P	Pn	03 11 40.8	+0.7
	baz=303						
YHNB				*e*S	Sn	03 11 57.6	-0.7
	baz=303						
NSK	Sanguang	1.44	306	*i* P	Pn	03 11 40.8	+0.5
	baz=303						
NSK				S	Sn	03 11 57.5	-1.1
	baz=303						
WFSB	Wu-fen Shan	1.46	328	*e*P	Pn	03 11 41.1	+0.5
	baz=326						
WFSB				*e*S	Sn	03 11 57.4	-1.7
	baz=326						
JIJ	Ishigaki jima	1.48	69	P	Pb	03 11 41.3	-0.8
JIJ				S	Sn	03 11 58.5	-1.0
TWA	Mucha	1.49	320	*e*P	Pn	03 11 40.7	-0.4
	baz=318						
TWA				*e*S	Sn	03 11 58.8	-1.2
	baz=318						
NHDH	Xindian Distri	1.52	318	*e*P	Pn	03 11 42.5	+1.2
	baz=330						
NHDH				*e*S	Sn	03 12 00.0	-0.4
	baz=330						
SSLB	Suanglung	1.54	269	P	Pb	03 11 42.7	-0.5
	baz=263						
SSLB				S	Sn	03 12 00.8	-0.4
	baz=263						
WPL	Puli Township	1.55	277	*e*P	Pb	03 11 43.5	+0.2
	baz=273						
DPDB	Guoxing	1.58	278	*e*P	Pb	03 11 43.6	-0.2
	baz=273						
YUS	Yu-Shan	1.58	258	*i* P	Pb	03 11 44.0	-0.1
	baz=252						
YUS				S	Sn	03 12 02.9	+0.2
	baz=252						
SMLT	Sun Moon Lake	1.59	272	*e*P	Pb	03 11 43.7	-0.4
	baz=267						
SMLT				S	Sn	03 12 03.0	+0.5
	baz=267						
WHP	Taichung City	1.61	286	*e*P	Pb	03 11 44.6	+0.2
	baz=282						
WHP				*e*S	Sn	03 12 02.7	-0.2
	baz=282						
ELDTW	Lidau	1.62	247	*e*P	Pb	03 11 43.6	-0.9
	baz=242						
TYC	Yuchr	1.63	273	P	Pb	03 11 44.2	-0.5
	baz=268						

TYC				S	**Sn**	**03 12 04.3**	**+1.1**
	baz=268						
YM01	**YM01**	**1.63**	**324**	P	**Pn**	**03 11 43.5**	**+0.6**
	baz=322						
YM01				*e*S	**Sn**	**03 12 01.9**	**-1.5**
	baz=322						
LIOB	**Emei**	**1.69**	**299**	*i* P	**Pb**	**03 11 45.5**	**-0.2**
	baz=296						
LIOB				S	**Sn**	**03 12 05.3**	**+0.5**
	baz=296						
NSTT	**Nanjuang**	**1.69**	**298**	*e*P	**Pn**	**03 11 45.0**	**+1.3**
	baz=295						
NSTT				S	**Sn**	**03 12 05.4**	**+0.6**
	baz=295						
JISG	**Ishigakijimahi**	**1.71**	**63**	S	**Sn**	**03 12 03.5**	**-1.7**
ALS	**Alishan**	**1.71**	**260**	*i* P	**Pb**	**03 11 46.2**	**0.0**
	baz=254						
ALS				S	**Sn**	**03 12 06.4**	**+0.8**
	baz=254						
TWY	**Chenhua**	**1.72**	**327**	*e*P	**Pn**	**03 11 44.3**	**+0.1**
	baz=326						
TWY				S	**Sn**	**03 12 04.0**	**-1.5**
	baz=326						
NCU	**National Centr**	**1.74**	**311**	*e*P	**Pn**	**03 11 45.3**	**+0.9**
	baz=309						
NCU				*e*S	**Sn**	**03 12 05.9**	**-0.2**
	baz=309						
WJS	**Zhushan**	**1.75**	**270**	*e*P	**Pb**	**03 11 46.9**	**+0.1**
	baz=265						
WJS				S	**Sb**	**03 12 09.8**	**+1.6**
	baz=265						
TWGBT	**Beinan**	**1.75**	**235**	P	**Pb**	**03 11 45.8**	**-1.0**
	baz=223						
TWGBT				S	**Sb**	**03 12 06.7**	**-1.6**
	baz=223						
TWG	**Pinlang**	**1.75**	**235**	*i* P	**Pb**	**03 11 45.7**	**-1.1**
	baz=223						
TWG				S	**Sb**	**03 12 06.9**	**-1.5**
	baz=223						
WWF	**Wufeng**	**1.78**	**277**	*e*P	**Pb**	**03 11 47.8**	**+0.4**
	baz=272						
WWF				*e*S	**Sb**	**03 12 10.3**	**+1.0**
	baz=272						
WNT	**Mingjian**	**1.79**	**272**	P	**Pb**	**03 11 47.6**	**+0.2**
	baz=267						
WNT				*e*S	**Sb**	**03 12 10.0**	**+0.7**
	baz=267						
WNT1	**Nantou City**	**1.79**	**273**	*e*P	**Pb**	**03 11 48.1**	**+0.7**
	baz=267						
WNT1				*e*S	**Sb**	**03 12 11.1**	**+1.6**
	baz=267						
CHN5	**Tsauling**	**1.81**	**263**	P	**Pb**	**03 11 47.9**	**+0.1**
	baz=249						
CHN5				S	**Sb**	**03 12 09.5**	**-0.6**
	baz=249						
NSY	**Sanyi**	**1.81**	**289**	*e*S	**Sn**	**03 12 09.7**	**+1.9**
	baz=286						
TCU	**Taichung**	**1.82**	**280**	*e*S	**Sb**	**03 12 10.5**	**+0.2**
	baz=276						
NMLH	**Miaoli**	**1.82**	**293**	*e*S	**Sn**	**03 12 10.0**	**+1.9**
	baz=290						
STYT	**Tauyuan**	**1.85**	**249**	P	**Pb**	**03 11 47.4**	**-1.1**
	baz=237						
STYT				S	**Sb**	**03 12 10.3**	**-0.9**
	baz=237						
WDJ	**Dajia District**	**1.89**	**286**	*e*S	**Sb**	**03 12 12.1**	**-0.4**
	baz=282						
TPUB	**Ta-pu**	**1.91**	**254**	*e*P	**Pb**	**03 11 49.7**	**+0.1**
	baz=241						
TPUB				*e*S	**Sb**	**03 12 13.1**	**+0.1**
	baz=241						
WCHH	**Zhanghua**	**1.92**	**278**	S	**Sb**	**03 12 13.9**	**+0.8**
	baz=287						
WDLH	**Douliu**	**1.93**	**266**	*e*P	**Pb**	**03 11 49.9**	**+0.2**
	baz=261						
WDLH				*e*S	**Sb**	**03 12 13.2**	**-0.1**
	baz=261						
CHN4	**Tsaushan**	**1.93**	**256**	P	**Pb**	**03 11 49.7**	**-0.2**
	baz=242						
CHN4				S	**Sb**	**03 12 13.9**	**+0.3**
	baz=242						
WTP	**Ta-pu**	**1.94**	**253**	P	**Pb**	**03 11 49.7**	**-0.4**
	baz=241						
WTP				S	**Sb**	**03 12 14.1**	**+0.2**
	baz=241						
CHN2	**Minshiung**	**2.00**	**262**	*e*S	**Sb**	**03 12 15.9**	**+0.3**
	baz=256						
SLGT	**Liugui**	**2.01**	**246**	*e*P	**Pb**	**03 11 51.0**	**-0.2**
	baz=234						
SGST	**Jiashian**	**2.02**	**249**	*i* P	**Pb**	**03 11 51.5**	**0.0**
	baz=235						
SGST				S	**Sb**	**03 12 16.1**	**-0.2**
	baz=235						
CHN1	**Nanshi**	**2.04**	**252**	P	**Pb**	**03 11 51.5**	**-0.2**
	baz=247						
CHN1				S	**Sb**	**03 12 17.2**	**+0.6**
	baz=247						
TWK	**Hsinying**	**2.05**	**255**	P	**Pb**	**03 11 51.5**	**-0.4**
	baz=249						
TWK				S	**Sb**	**03 12 17.2**	**+0.2**
	baz=249						
CHY	**Chiayi**	**2.05**	**261**	*e*S	**Sb**	**03 12 16.5**	**-0.6**
	baz=255						
JTJ	**Tarama**	**2.05**	**66**	P	**Pn**	**03 11 49.6**	**+0.9**
JTJ				S	**Sn**	**03 12 13.9**	**+0.2**
SNST	**Tainan City**	**2.05**	**253**	*e*P	**Pb**	**03 11 51.0**	**-1.0**
	baz=248						
SNST				*e*S	**Sb**	**03 12 17.5**	**+0.4**
	baz=248						
MASBT	**Mashibuluo**	**2.20**	**237**	P	**Pb**	**03 11 53.2**	**-1.4**
	baz=228						

IDC 21 03:16:51.5±4.0**, 49°.42S×124°.81E, h0^{km}, mb4.0**/3**, mb1 4.2**/3**, mb1mx3.9**/22**, mbtmp4.0**/3**, MS3.5**/4**, Ms1 3.5**/4**, ms1mx3.2**/20**, Error ellipse: s-maj=110.1km s-min=70.2km az=112.0, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H01W1	**Cape Leeuwin H**	**16.50**	**328**	T	T	03 38 04.1	
	baz=153,slow=74						
H01W2	**Cape Leeuwin H**	**16.50**	**328**	T	T	03 38 05.9	
	baz=153,slow=74						
H01W3	**Cape Leeuwin H**	**16.51**	**328**	T	T	03 37 56.8	
	baz=153						
STKA	**Stephens Creek**	**21.58**	**42**	P	P	03 21 42.8	+0.2
	9.4nm,0.8s,baz=202,slow=11,SNR=28						
STKA				LR	LR	03 28 23.5	
	comp=Z,103nm,21.8s,baz=205,slow=32						
ASAR	**Alice Springs**	**26.68**	**19**	P	P	03 22 32.3	0.0
	2.6nm,0.8s,baz=190,slow=9.5,SNR=19						
ASAR				LR	LR	03 31 50.7	
	comp=Z,117nm,21.2s,baz=182,slow=34						
WRA	**Warramunga Arr**	**30.38**	**18**	P	P	03 23 05.0	-0.2
	0.8nm,1.0s,baz=193,slow=12,SNR=2.1						
WRA				LR	LR	03 34 16.0	
	comp=Z,134nm,19.9s,baz=175,slow=34						
FITZ	**Fitzroy Crossi**	**31.25**	**2**	LR	LR	03 34 53.6	
	comp=Z,56nm,18.4s,baz=154,slow=35						
YKA	**Yellowknife Ar**	**145.59**	**45**	PKPbc	PKPdf	03 36 29.8	-0.6
	0.5nm,0.9s,baz=264,slow=2.2,SNR=4.2						

ROM 21 03:19:56.0±0.5**, 42°.587N**±0°.010×**13°.14E**±0°.02**, h8^{km}**±3^{km}**, Md1.2**/3**, ML0.7**/2**, 4C-3D, Error ellipse: s-maj=1.4km s-min=0.8km az=230.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LNSS	**Leonessa**	**0.07**	**283**	P	Pg	03 19 58.5	+0.3
LNSS				S	Sg	03 20 00.3	+0.5
LNSS				AML	AML		
	comp=N,71µm,1.1s						
LNSS				AML	AML		
	comp=E,90µm,0.4s						
LNSS				END			
LNSS	**Leonessa**	**0.07**	**283**	P	Pg	03 19 58.5	+0.3
LNSS				AML	AML		
	comp=E,90µm,0.4s						
LNSS				AML	AML		
	comp=N,71µm,1.1s						
RM33	**Pellescritta (**	**0.10**	**144**	P	Pg	03 19 58.7	+0.2
RM33				S	Sg	03 20 00.5	+0.3
RM33				END			
RM33	**Pellescritta (**	**0.10**	**144**	P	Pg	03 19 58.7	+0.2
RM33	**Pellescritta (**	**0.10**	**144**	P	Pg	03 19 58.7	+0.2
SMA1	**SAN MARTINO**	**0.15**	**73**	⇑P	Pg	03 20 00.1	+0.8
SMA1	**SAN MARTINO**	**0.15**	**73**	⇑P	Pg	03 20 00.1	+0.8
SMA1				END			
SMA1	**SAN MARTINO**	**0.15**	**73**	⇑P	Pg	03 20 00.1	+0.8
SMA1	**SAN MARTINO**	**0.15**	**73**	⇑P	Pg	03 20 00.1	+0.8
NRCA	**Norcia**	**0.25**	**356**	⇓P	Pg	03 20 01.6	+0.5
NRCA				S	Sg	03 20 05.9	+1.4
NRCA				AML	AML		
	comp=N,26µm,0.8s						
NRCA				AML	AML		
	comp=E,27µm,0.1s						
NRCA	**Norcia**	**0.25**	**356**	⇓P	Pg	03 20 01.6	+0.5
NRCA	**Norcia**	**0.25**	**356**	⇓P	Pg	03 20 01.6	+0.5
NRCA				AML	AML		
	comp=E,27µm,0.1s						
NRCA				AML	AML		
	comp=N,26µm,0.8s						
TRI	**Trieste**	**3.15**	**8**	P	Pn	03 20 43.8	-2.2
TRI	**Trieste**	**3.15**	**8**	P	Pn	03 20 43.8	-2.2
TRI	**Trieste**	**3.15**	**8**	P	Pn	03 20 43.8	-2.2

ROM 21 03:20:34.3±0.8**, 38°.40N**±0°.07×**15°.40E**±0°.09**, h74^{km}**±6^{km}**, Md1.8**/4**, Error ellipse: s-maj=7.9km s-min=7.7km az=314.0, Sicily**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MILZ	**Milazzo**	**0.18**	**225**	S	Sn	03 20 46.0	-7.3
MILZ	**Milazzo**	**0.18**	**225**	P	Pn	03 20 45.3	+0.1
MILZ				S	Sn	03 20 53.4	+0.2
MILZ				END			
VPL	**Vulcano Piano**	**0.33**	**266**	S	Sn	03 20 47.0	-7.7
VPL	**Vulcano Piano**	**0.33**	**266**	P	Pn	03 20 46.5	+0.4
VPL				S	Sn	03 20 55.0	+0.3
VPL				END			
NOV	**Novara**	**0.42**	**209**	S	Sn	03 20 48.0	-8.1
NOV	**Novara**	**0.42**	**209**	P	Pn	03 20 47.3	+0.4
NOV				S	Sn	03 20 57.2	+1.1
NOV				END			
MUCR	**Ucria**	**0.55**	**229**	S	Pn	03 20 48.0	0.0
MUCR	**Ucria**	**0.55**	**229**	P	Pn	03 20 47.7	-0.3
MUCR				END			

IDC ***21*** *03:22:58.3±1.0, 39°.26N×143°.72E, h0^{km}, mb3.7/11, mb1 3.8/16, mb1mx3.7/50, mbtmp3.7/16, ML3.0/5, MS2.8/2, Ms1 2.8/2, ms1mx2.4/32, Error ellipse: s-maj=24.0km s-min=19.4km az=142.0*

NIED ***21*** *03:22:58.2, 39°.35N×143°.82E, h23^{km}, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}7.05; $M_{\theta\theta}$0.11; $M_{\phi\phi}$-7.16; $M_{r\theta}$-0.06; $M_{\theta\phi}$-0.77; $M_{\phi r}$1.21; Fault plane solution: $M_0$7.25000×10^{14} NP1:ϕ_s4.00000°, δ50.00000°, λ88.00000°. NP2:ϕ_s188.00000°, δ40.00000°, λ92.00000°.*

JMA ***21*** *03:22:58.1±0.2, 39°.35N×143°.82E, h23^{km}, M4.1*

NEIC ***21*** *03:23:00.1±1.9, 39°.29N±0°.07×143°.5E±0°.1, h10^{km}±1^{km}, mb4.2/7, Error ellipse: s-maj=15.2km s-min=9.8km az=125.0*

ISC 21 03:23:00.2±0.8**, 39°.39N**±0°.06×**143°.69E**±0°.08**, h11^{km}, n49, σ1^s.26**/49**, mb3.8**/14**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MIYJ	**Miyakonagasawa**	**1.46**	**278**	P	**Pn**	**03 23 25.2**	**-1.3**
MIYJ				*e*S	**Sn**	**03 23 44.5**	**-1.1**
JTH	**Tanohata**	**1.51**	**292**	P	**Pn**	**03 23 25.9**	**-1.3**
OFUJ	**Ofunato**	**1.60**	**259**	P	**Pn**	**03 23 27.0**	**-1.4**
JOM	**Ohasama**	**1.85**	**273**	P	**Pn**	**03 23 31.0**	**-1.0**
JANG	**Nango**	**1.94**	**301**	P	**Pn**	**03 23 31.6**	**-1.5**
JMK	**Ichinoseki**	**1.97**	**258**	P	**Pn**	**03 23 32.4**	**-1.1**
JTM	**Tenmabayashi**	**2.44**	**306**		**Pn**	**03 23 39.4**	**-0.7**
JYK	**Kaneyama**	**2.63**	**261**	P	**Pn**	**03 23 42.1**	**-0.5**
ERM	**Erimo**	**2.65**	**351**	Pn	**Pn**	**03 23 42.9**	**-0.1**
JEM	**Erimo**	**2.65**	**351**	Pn	**Sn**	**03 24 10.6**	**-4.5**
JMM	**Marumori**	**2.73**	**237**		**Pn**	**03 23 42.2**	**-1.8**
JNBK	**Urakawa-nobuka**	**2.97**	**347**	P	**Pn**	**03 23 47.5**	**+0.2**
JNBK				*e*S	**Sn**	**03 24 23.1**	**+0.1**
JFT	**Otama**	**3.23**	**236**	P	**Pn**	**03 23 50.0**	**-0.8**
JAK	**Akkeshi**	**3.68**	**12**	P	**Pn**	**03 23 55.9**	**-1.2**
JEW	**Eniwo**	**3.84**	**335**	Pn	**Pn**	**03 23 58.7**	**-0.5**
JAR	**Ashorobuto**	**3.90**	**1**	P	**Pn**	**03 23 59.3**	**-0.8**
JYT	**Yasato**	**4.20**	**222**	Pn	**Pn**	**03 24 02.5**	**-1.7**
JSD	**Sado**	**4.45**	**254**		**Pn**	**03 24 05.0**	**-2.7**
JKA	**Kamikawa-asahi**	**4.79**	**351**		**Pn**	**03 24 12.6**	**+0.2**
ASAJ	**Asahikawa**	**4.79**	**351**	Pn	**Pn**	**03 24 12.6**	**+0.2**
	1.6nm,0.3s,baz=234,slow=14,SNR=8.0						
ASAJ				Sn	**Sn**	**03 25 06.4**	**-1.5**
	1.8nm,0.3s,baz=268,slow=24,SNR=3.5						
MJAR	**Matsushiro Arr**	**5.18**	**238**	Pn	**Pn**	**03 24 18.0**	**+0.3**
	0.5nm,0.3s,baz=40,slow=12,SNR=45						
MAJO	**Matsushiro**	**5.18**	**238**		**Pn**	**03 24 17.5**	**-0.1**
MAT	**Matsushiro**	**5.18**	**238**	P	**Pn**	**03 24 18.1**	**+0.4**
MAT				S	**Sn**	**03 25 18.5**	**+1.1**
JGF	**Kuroka**	**6.29**	**235**		**Pn**	**03 24 31.6**	**-1.4**
JWT	**Wachi**	**7.77**	**241**		**Pn**	**03 24 52.4**	**-0.8**
USRK	**Ussuriysk Ar.**	**9.97**	**303**	Pn	**Pn**	**03 25 25.4**	**+2.1**
	baz=94,slow=12,SNR=5.3						
KSRS	**Korea Array**	**12.51**	**266**	Pn	**Pn**	**03 26 00.1**	**+2.0**
	0.1nm,0.3s,baz=75,slow=14,SNR=3.0						
KSRS				LR	LR	03 30 07.7	
	comp=Z,38nm,18.6s,baz=115,slow=34						
KLR	**Kul'dur**	**13.02**	**323**	Pn	**Pn**	**03 26 05.3**	**+0.4**
	0.0nm,0.3s,baz=133,slow=14,SNR=3.6						
KLR				LR	LR	03 31 00.0	
	comp=Z,42nm,20.9s,baz=328,slow=37						
SEY	**Seymchan**	**24.15**	**10**	P	**P**	**03 28 17.2**	**+1.2**
	0.9nm,0.4s,baz=178,slow=7.6,SNR=7.0						
H11N2	**WAKE ISLAND Hy**	**27.99**	**128**	T	T	03 58 04.9	
	baz=320,slow=74,SNR=6.2						
H11N1	**WAKE ISLAND Hy**	**28.00**	**128**	T	T	03 58 05.0	
	baz=320,slow=74						
H11N3	**WAKE ISLAND Hy**	**28.01**	**128**	T	T	03 58 08.9	
	baz=320						
ZAA0	**Zalesovo Array**	**41.70**	**310**	P	**P**	**03 30 48.4**	**-0.4**
ZALV	**Zalesovo Beam**	**41.70**	**310**	P	**P**	**03 30 48.8**	**0.0**
	2.1nm,0.5s,baz=88,slow=7.4,SNR=9.1						
MK31	**Makanchi Array**	**44.43**	**300**	P	**P**	**03 31 10.6**	**-0.3**
MK31				IAmb	IAmb	03 31 20.9	
	comp=Z,1.9nm,0.8s						
MKAR	**Makanchi Array**	**44.43**	**300**	P	**P**	**03 31 11.1**	**+0.1**
	comp=Z,1.6nm,0.9s,baz=81,slow=9.9,SNR=14						
MKAR	**Makanchi Array**	**44.43**	**300**	P	**P**	**03 31 10.5**	**-0.5**
KURK	**Kurchatov**	**45.93**	**307**	P	**P**	**03 31 22.7**	**-0.1**
KURK				IAmb	IAmb	03 31 32.2	
	comp=Z,3.8nm,0.7s						
IL31		**46.55**	**34**	P	**P**	**03 31 27.9**	**+0.5**
IL31				IAmb	IAmb	03 31 45.3	
	comp=Z,1.8nm,1.1s						
ILAR	**Eielson Array**	**46.55**	**34**	P	**P**	**03 31 28.7**	**+1.2**
	comp=Z,0.5nm,0.9s,baz=260,slow=6.6,SNR=4.1						
INK	**Inuvik**	**51.47**	**28**	P	**P**	**03 32 06.8**	**+1.6**
	comp=Z,0.5nm,0.5s,baz=284,slow=4.0,SNR=4.1						
NIL	**Nilore**	**55.59**	**288**	P	**P**	**03 32 36.4**	**+0.4**
WRA	**Warramunga Arr**	**59.66**	**190**	P	**P**	**03 33 03.0**	**-1.6**
	comp=Z,0.6nm,0.8s,baz=7.8,slow=7.2,SNR=5.6						
YKA	**Yellowknife Ar**	**60.87**	**31**	P	**P**	**03 33 13.3**	**+0.9**
	comp=Z,0.1nm,0.5s,baz=302,slow=5.9,SNR=2.0						
FINES	**FINESS Array B**	**67.56**	**333**	P	**P**	**03 33 56.6**	**+0.3**
	comp=Z,2.8nm,1.0s,baz=39,slow=9.1,SNR=3.5						
NVAR	**Mina Array Bea**	**72.16**	**55**	P	**P**	**03 34 24.7**	**-0.6**
	comp=Z,0.2nm,0.6s,baz=297,slow=6.0,SNR=1.7						
NOA	**NORSAR Array B**	**72.69**	**338**	P	**P**	**03 34 27.9**	**+0.1**
	comp=Z,1.1nm,1.0s,baz=19,slow=5.6,SNR=1.9						
AKASG	**Malin Array Be**	**73.52**	**323**	P	**P**	**03 34 32.9**	**+0.1**
	comp=Z,0.3nm,0.4s,baz=58,slow=3.5,SNR=1.4						
AKASG	**Malin Array Be**	**73.52**	**323**	IAmb	IAmb	03 34 33.5	
	comp=Z,1.1nm,1.1s						

NIED ***21*** *03:26:22.2, 39°.90N×143°.78E, h22^{km}, MW3.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}0.93; $M_{\theta\theta}$0.63; $M_{\phi\phi}$-1.55; $M_{r\theta}$0.91; $M_{\theta\phi}$0.08; $M_{\phi r}$0.60; Fault plane solution: $M_0$1.74000×10^{14} NP1:ϕ_s31.00000°, δ68.00000°, λ129.00000°. NP2:ϕ_s146.00000°, δ44.00000°, λ32.00000°.*

JMA 21 03:26:22.2±0.2**, 39°.90N×143°.78E, h22^{km}, M3.6, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTH	**Tanohata**	**1.47**	**272**	P	Pn	03 26 47.9	+0.5
JTH				*e*S	Sn	03 27 06.5	+0.5
MIYJ	**Miyakonagasawa**	**1.55**	**259**	P	Pn	03 26 49.0	+0.6
JKEN	**Kujiedanarisaw**	**1.62**	**282**	P	Pn	03 26 49.7	+0.3
JKEN				*e*S	Sb	03 27 10.9	-0.4
JANG	**Nango**	**1.80**	**286**	P	Pn	03 26 52.6	+0.7
JOM	**Ohasama**	**1.97**	**258**	P	Pn	03 26 55.6	+1.4
JMK	**Ichinoseki**	**2.20**	**245**	P	Pn	03 26 58.2	+0.8
JMK				*e*S	Sn	03 27 25.0	+1.2
JOT	**Ohata**	**2.55**	**306**	P	Pn	03 27 04.3	+2.1
JCH	**Churui**	**2.73**	**354**	*e*S	Sn	03 27 39.0	+2.0
JYK	**Kaneyama**	**2.83**	**251**	P	Pn	03 27 07.5	+1.5
JKB	**Kayabe**	**2.88**	**315**	*e*S	Sn	03 27 42.9	+2.3
JAK	**Akkeshi**	**3.17**	**12**	*e*S	Sn	03 27 50.3	+2.5
JAR	**Ashorobuto**	**3.39**	**360**	*e*S	Sn	03 27 54.9	+1.5
JFT	**Otama**	**3.59**	**230**	P	Pn	03 27 17.8	+1.2
NEM2	**Nemuro 2**	**3.76**	**22**	P	Pn	03 27 20.9	+2.1
NEM2				*e*S	Sn	03 28 03.3	+0.9

IDC ***21*** *03:34:47.3±1.2, 38°.34N×20°.58E, h0^{km}, mb3.7/5, mb1 3.7/11, mb1mx3.5/50, mbtmp3.6/11, ML3.2/6, Error ellipse: s-maj=22.4km s-min=17.6km az=41.0*

ATH ***21*** *03:34:48.1, 38°.18N×20°.38E, h11^{km}, ML3.2/22, Error ellipse: s-maj=2.3km s-min=1.0km az=247.0*

THE ***21*** *03:34:49.0, 38°.19N×20°.41E, h0^{km}±2^{km}, ML3.3/10, Error ellipse: s-maj=2.3km s-min=0.7km az=267.0*

ISC 21 03:34:47.9±0.7**, 38°.20N**±0°.02×**20°.33E**±0°.03**, h13^{km}**±3^{km}**, n144, σ1^s.67**/184**, mb3.9**/5**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEF3	**Kipouria, Keph**	**0.02**	**65**	P	**Pg**	**03 34 50.2**	**-0.1**
KEF3				S	**Sg**	**03 34 51.5**	**-0.4**
KEF3	**Kipouria, Keph**	**0.02**	**65**	P	**Pg**	**03 34 49.9**	**-0.4**
KEF3				S	**Sg**	**03 34 51.7**	**-0.2**
DMLN	**Damoulianata-K**	**0.06**	**41**	P	**Pg**	**03 34 50.4**	**-0.2**
DMLN				S	**Sg**	**03 34 51.7**	**-0.7**
	82µm,0.5s						
DMLN	**Damoulianata-K**	**0.06**	**41**	P	**Pg**	**03 34 50.3**	**-0.3**
LXRA	**Lixouri, Kepha**	**0.09**	**87**	P	**Pg**	**03 34 50.3**	**-0.5**
LXRA				S	**Sg**	**03 34 51.9**	**-1.0**
KEF4	**Livadi, Kephal**	**0.10**	**51**	P	**Pg**	**03 34 50.6**	**-0.4**
KEF4				S	**Sg**	**03 34 52.4**	**-0.7**
KEF4	**Livadi, Kephal**	**0.10**	**51**	P	**Pg**	**03 34 50.6**	**-0.4**
KEF4				S	**Sg**	**03 34 52.5**	**-0.7**
ARGA	**Argostoli. Kep**	**0.12**	**98**	P	**Pg**	**03 34 50.6**	**-0.6**
ARGA				S	**Sg**	**03 34 52.4**	**-1.1**
KEF5	**Kardakata, Kep**	**0.14**	**54**	P	**Pg**	**03 34 51.0**	**-0.5**
KEF5				S	**Sg**	**03 34 52.9**	**-1.1**
KEF5	**Kardakata, Kep**	**0.14**	**54**	P	**Pg**	**03 34 51.0**	**-0.5**
KEF5				S	**Sg**	**03 34 53.0**	**-1.0**
PSDA	**Pessada-Kefalo**	**0.22**	**112**	P	**Pg**	**03 34 52.2**	**-0.5**
PSDA				S	**Sg**	**03 34 55.2**	**-0.7**
	8µm,0.3s						
PSDA	**Pessada-Kefalo**	**0.22**	**112**	P	**Pg**	**03 34 52.2**	**-0.5**
PSDA				S	**Sg**	**03 34 55.2**	**-0.7**
VSK1	**VASILIKIADES**	**0.28**	**41**	P	**Pg**	**03 34 53.6**	**-0.3**
VSK1				S	**Sg**	**03 34 57.8**	**-0.1**
VLMS	**Volimes, Zakyn**	**0.41**	**140**	P	**Pg**	**03 34 55.8**	**-0.4**
VLMS				S	**Sb**	**03 35 02.4**	**-0.9**
	21µm,0.4s						
VLMS	**Volimes, Zakyn**	**0.41**	**140**	P	**Pg**	**03 34 55.8**	**-0.4**
VLMS				S	**Sg**	**03 35 01.8**	**0.0**
VLMS				AML	AML	03 35 03.1	
	comp=E,40360µm,0.3s						
VLMS				AML	AML	03 35 03.2	
	comp=N,42818µm,0.7s						
EVGI	**Lefkada island**	**0.50**	**31**	P	**Pg**	**03 34 57.4**	**-0.4**
EVGI				S	**Sb**	**03 35 05.3**	**-0.4**
	comp=N,1µm,0.2s						
EVGI	**Lefkada island**	**0.50**	**31**	P	**Pg**	**03 34 57.3**	**-0.4**
EVGI				S	**Sg**	**03 35 05.0**	**+0.6**
NYDR	**Nydri-Lefkada**	**0.59**	**29**	P	**Pg**	**03 34 58.8**	**-0.8**
NYDR				S	**Sg**	**03 35 08.0**	**+0.5**
NYDR	**Nydri-Lefkada**	**0.59**	**29**	P	**Pg**	**03 34 58.8**	**-0.8**
LTHK	**Lithakia**	**0.63**	**140**	P	**Pg**	**03 34 59.4**	**-0.8**
LTHK				S	**Sb**	**03 35 09.0**	**-0.4**
	comp=N,9µm,0.4s						
LTHK	**Lithakia**	**0.63**	**140**	P	**Pg**	**03 34 59.4**	**-0.8**
LTHK				S	**Sb**	**03 35 08.6**	**-0.8**
LTHK				AML	AML	03 35 09.8	
	comp=N,23451µm,0.5s						
LTHK				AML	AML	03 35 13.3	
	comp=E,11547µm,0.4s						
LKD2	**Lefkada island**	**0.65**	**24**	P	**Pg**	**03 34 59.9**	**-0.7**
LKD2	**Lefkada island**	**0.65**	**24**	P	**Pg**	**03 34 59.8**	**-0.7**
LKD2				AML	AML	03 35 16.7	
	comp=E,2325µm,0.3s						
LKD2				AML	AML	03 35 18.4	
	comp=N,4228µm,0.6s						
TSLK	**Tsoukalades, L**	**0.68**	**22**	P	**Pg**	**03 35 00.7**	**-0.5**
TSLK	**Tsoukalades, L**	**0.68**	**22**	P	**Pg**	**03 35 00.7**	**-0.5**
PDO	**Prodromos**	**0.79**	**59**	P	**Pg**	**03 35 02.2**	**-0.9**
PDO				S	**Sb**	**03 35 13.9**	**0.0**
PDO	**Prodromos**	**0.79**	**59**	P	**Pg**	**03 35 02.2**	**-0.9**
PDO				AML	AML	03 35 21.4	
	comp=E,5883µm,0.7s						
PDO				AML	AML	03 35 22.3	
	comp=N,6351µm,0.6s						
AXS	**Araxos**	**0.83**	**90**	P	**Pg**	**03 35 02.9**	**-1.1**
AXS				S	**Sb**	**03 35 14.9**	**-0.2**
	comp=N,1µm,0.4s						
AXS	**Araxos**	**0.83**	**90**	P	**Pg**	**03 35 02.6**	**-1.3**
AXS				AML	AML	03 35 21.7	
	comp=N,2807µm,0.6s						
AXS				AML	AML	03 35 22.1	
	comp=E,2680µm,0.5s						
RLS	**Riolos of Patr**	**0.91**	**98**	P	**Pg**	**03 35 04.4**	**-1.1**
RLS				S	**Sb**	**03 35 17.5**	**0.0**
	comp=E,1µm,0.3s						
RLS	**Riolos of Patr**	**0.91**	**98**	P	**Pg**	**03 35 04.1**	**-1.4**
RLS				AML	AML	03 35 20.1	
	comp=E,2902µm,0.4s						
RLS				AML	AML	03 35 20.7	
	comp=N,2935µm,0.3s						
UPR	**University Cam**	**1.15**	**85**	P	**Pg**	**03 35 08.3**	**-1.8**
EFP	**Efpalio**	**1.27**	**79**	P	**Pg**	**03 35 10.3**	**-2.0**
EFP	**Efpalio**	**1.27**	**79**	P	**Pg**	**03 35 10.2**	**-2.0**
EFP				AML	AML	03 35 38.1	
	comp=E,2795µm,0.6s						
EFP				AML	AML	03 35 39.0	
	comp=N,2203µm,0.8s						
LAKA	**Lakka**	**1.30**	**88**	P	**Pg**	**03 35 11.1**	**-1.9**
LAKA				S	**Sn**	**03 35 30.4**	**+1.3**
	comp=N,3µm,0.5s						
LAKA	**Lakka**	**1.30**	**88**	P	**Pg**	**03 35 11.1**	**-1.9**
LAKA				AML	AML	03 35 31.3	
	comp=E,7151µm,0.4s						
LAKA				AML	AML	03 35 32.8	
	comp=N,6806µm,0.5s						
ANX	**Ano Chora**	**1.31**	**72**	P	**Pg**	**03 35 12.1**	**-1.1**
ANX				S	**Sn**	**03 35 32.3**	**+2.8**
	comp=N,1µm,0.7s						
ANX	**Ano Chora**	**1.31**	**72**	P	**Pg**	**03 35 11.6**	**-1.6**
ANX				AML	AML	03 35 36.7	
	comp=E,2232µm,0.6s						
ANX				AML	AML	03 35 38.7	
	comp=N,3198µm,0.6s						
EVR	**Evrytania**	**1.37**	**58**	P	**Pg**	**03 35 12.3**	**-1.9**
EVR	**Evrytania**	**1.37**	**58**	P	**Pg**	**03 35 12.5**	**-1.8**
EVR				AML	AML	03 35 40.0	
	comp=N,605µm,1.1s						
EVR				AML	AML	03 35 42.6	
	comp=E,887µm,1.0s						
SERG	**Sergoula**	**1.38**	**80**	P	**Pg**	**03 35 12.4**	**-2.0**
SERG	**Sergoula**	**1.38**	**80**	P	**Pg**	**03 35 12.2**	**-2.3**
SERG				AML	AML	03 35 38.0	
	comp=E,2214µm,0.4s						
SERG				AML	AML	03 35 38.7	
	comp=N,2746µm,0.6s						
TRIZ	**Trizonia**	**1.39**	**82**	P	**Pg**	**03 35 12.2**	**-2.3**
TRIZ	**Trizonia**	**1.39**	**82**	P	**Pg**	**03 35 12.2**	**-2.3**
ALIK	**Aliki, Aigiali**	**1.41**	**87**	P	**Pg**	**03 35 13.0**	**-2.0**
ALIK				S	**Sn**	**03 35 34.6**	**+3.0**
KALE	**Kalithea**	**1.44**	**82**	P	**Pg**	**03 35 13.1**	**-2.6**
KALE	**Kalithea**	**1.44**	**82**	P	**Pg**	**03 35 13.0**	**-2.6**
KALE				AML	AML	03 35 41.8	
	comp=N,2175µm,0.3s						
KALE				AML	AML	03 35 42.3	
	comp=E,1173µm,0.5s						
KLV	**Kalavryta, Ach**	**1.45**	**95**	P	**Pg**	**03 35 14.0**	**-1.7**
KLV				S	**Sn**	**03 35 35.3**	**+2.6**

KLV	Kalavryta, Ach	1.45	95	P	Pg	03 35 13.6	-2.2
KLV				AML	AML	03 35 38.4	
	comp=N,1200µm,0.4s						
KLV				AML	AML	03 35 40.0	
	comp=E,1095µm,0.5s						
JAN	Janina	1.52	16	P	Pg	03 35 17.2	+0.1
JAN				S	Sn	03 35 39.4	+5.1
	comp=E,348nm,0.4s						
JAN	Janina	1.52	16	P	Pb	03 35 16.9	+1.0
JAN				AML	AML	03 35 46.2	
	comp=N,749µm,0.4s						
JAN				AML	AML	03 35 48.3	
	comp=E,844µm,0.4s						
KEK	Kerkira	1.57	345	P	Pn	03 35 16.8	+1.3
KEK	Kerkira	1.57	345	P	Pn	03 35 16.7	+1.3
ITM	Ithomi	1.62	128	P	Pn	03 35 17.6	+1.4
ITM	Ithomi	1.62	128	P	Pn	03 35 16.7	+0.5
ITM				AML	AML	03 35 46.6	
	comp=E,760µm,0.4s						
ITM				AML	AML	03 35 47.5	
	comp=N,868µm,0.4s						
MAKR	Makrakomi, Fth	1.63	59	P	Pg	03 35 18.4	-0.9
MAKR	Makrakomi, Fth	1.63	59	P	Pg	03 35 18.7	-0.6
SRN	Sarande	1.70	352	P	Pn	03 35 19.0	+1.8
PYL	PYLOS	1.72	139	P	Pn	03 35 17.9	+0.4
PYL	PYLOS	1.72	139	P	Pn	03 35 17.6	+0.2
PYL				AML	AML	03 35 48.3	
	comp=N,383µm,0.4s						
PYL				AML	AML	03 35 53.5	
	comp=E,687µm,0.7s						
AGG	Agios Georgios	1.77	62	P	Pg	03 35 21.2	-0.8
AGG	Agios Georgios	1.77	62	P	Pg	03 35 21.0	-1.0
AGG				AML	AML	03 35 51.9	
	comp=E,755µm,0.6s						
AGG				AML	AML	03 35 55.3	
	comp=N,577µm,0.5s						
VLX	Vlachokerasia	1.82	116	P	Pb	03 35 21.3	+0.1
VLX	Vlachokerasia	1.82	116	P	Pb	03 35 21.2	+0.1
VLX				AML	AML	03 35 56.9	
	comp=N,1232µm,0.8s						
VLX				AML	AML	03 35 57.1	
	comp=E,1266µm,0.6s						
THAL	Thalero	1.85	94	P	Pb	03 35 21.8	+0.3
THAL	Thalero	1.85	94	P	Pb	03 35 21.1	-0.5
THL	Klokotos Trika	1.90	43	P	Pb	03 35 23.1	+0.7
THL	Klokotos Trika	1.90	43	P	Pb	03 35 22.3	-0.1
THL				AML	AML	03 35 55.1	
	comp=N,647µm,0.5s						
THL				AML	AML	03 35 58.2	
	comp=E,527µm,0.6s						
AXAR	Agios Charalam	1.92	72	P	Pb	03 35 23.3	+0.6
AXAR	Agios Charalam	1.92	72	P	Pb	03 35 23.2	+0.5
AXAR				AML	AML	03 35 58.8	
	comp=N,2390µm,0.6s						
AXAR				AML	AML	03 36 02.7	
	comp=E,2270µm,0.5s						
KPRO	Kipourio	1.93	24	P	Pb	03 35 23.4	+0.4
LSK	Leskovik	1.96	6	P	Pn	03 35 23.4	+2.5
LTK	Loutraki	2.09	94	P	Pn	03 35 24.5	+1.9
LTK	Loutraki	2.09	94	P	Pn	03 35 24.2	+1.6
PENT	Pentalofos	2.10	17	P	Pb	03 35 26.6	+0.7
LKR	Lokris	2.15	77	P	Pn	03 35 25.3	+1.9
LKR	Lokris	2.15	77	P	Pn	03 35 25.3	+1.9
LKR				AML	AML	03 35 54.3	
	comp=E,350µm,0.4s						
LKR				AML	AML	03 35 54.5	
	comp=N,332µm,0.4s						
ATAL	Atalanti	2.17	76	P	Pn	03 35 25.7	+1.9
ATAL	Atalanti	2.17	76	P	Pn	03 35 25.6	+1.8
ATAL				AML	AML	03 36 03.3	
	comp=N,343µm,0.9s						
ATAL				AML	AML	03 36 09.5	
	comp=E,287µm,1.0s						
NEST	Nestorio	2.29	14	P	Pb	03 35 29.1	0.0
VIL2	Platees	2.32	89	P	Pn	03 35 27.8	+2.1
VILL	Villia	2.35	90	P	Pn	03 35 27.7	+1.4
SMIA	Simia	2.36	72	P	Pn	03 35 28.1	+1.7
SMIA	Simia	2.36	72	P	Pn	03 35 28.1	+1.7
KRND	KRANIDI	2.38	109	P	Pn	03 35 27.9	+1.3
KZN	Kozani	2.39	28	P	Pn	03 35 29.6	+2.8
XOR	Xorichti	2.53	62	P	Pn	03 35 30.2	+1.6
XOR	Xorichti	2.53	62	P	Pn	03 35 30.5	+1.9
VLI	Veliai	2.55	125	P	Pn	03 35 31.5	+2.6
FNA	Florina	2.71	17	P	Pn	03 35 33.6	+2.4
ATHU	Athens Univers	2.74	94	P	Pn	03 35 33.0	+1.5
VLY	Voula,Athens	2.76	96	P	Pn	03 35 33.4	+1.6
DION	Dionisos Attik	2.85	91	P	Pn	03 35 34.9	+1.9
OHR	Ohrid	2.94	7	ePn	Pb	03 35 39.3	-0.8
DRME	Dracevica, Mon	4.08	348	ePn	Pn	03 35 50.8	+0.8
PDG	Podgorica	4.31	349	ePn	Pn	03 35 53.7	+0.6
HCY	Herceg Novi	4.47	342	ePn	Pn	03 35 54.7	-0.6
IDI	Anoyia	4.67	127	Pn	Pn	03 35 58.9	+0.7
	comp=E,0.7nm,0.3s,baz=314,slow=12,SNR=9.9						
IDI				Sn	Sn	03 36 52.7	+0.4
	comp=E,2.5nm,0.3s,baz=330,slow=22,SNR=8.8						
VAE	Valguarnera	4.74	263	Pn	Pn	03 36 04.0	+5.0
	comp=E,1.0nm,0.3s,baz=76,slow=4.2,SNR=6.4						
VAE				Sn	Sn	03 36 54.0	+0.2
	comp=E,1.1nm,0.3s,baz=117,slow=6.8,SNR=2.1						
TREB	Trebinje	4.76	342	ePn	Pn	03 35 59.3	0.0
DBRK	Dubrovnik	4.77	340	ePn	Pn	03 35 58.5	-0.9
DBRK				Sn	Sn	03 36 51.6	-2.9
BRY	Bratogost	4.89	344	ePn	Pn	03 36 01.3	0.0
STON	Ston	5.08	338	ePn	Pn	03 36 02.9	-0.7
STON				Sn	Sn	03 36 58.1	-4.1
LSTV	Lastovo	5.26	331	i Pn	Pn	03 36 06.4	+0.2
LSTV				Sn	Sn	03 37 03.5	-3.2
MAKA	Makarska	5.67	335	i Pn	Pn	03 36 12.0	+0.2
MAKA				Sn	Sn	03 37 14.2	-2.5
BBLS	Lazići	5.71	353	ePn	Pn	03 36 13.8	+1.4
HVAR	Hvar	5.78	331	ePn	Pn	03 36 13.2	-0.1
HVAR				Sn	Sn	03 37 17.1	-2.4
RICI	Ricice	5.82	336	i Pn	Pn	03 36 14.4	+0.5
RICI				Sn	Sn	03 37 16.4	-4.0
DIVS	Divibare	5.90	358	ePn	Pn	03 36 14.4	-0.7
HAPS	Han Pijesak,Bl	5.98	350	ePn	Pn	03 36 15.9	-0.2
ZIRJ	Zirje	6.50	328	i Pn	Pn	03 36 23.0	-0.2
ZIRJ				Sn	Sn	03 37 32.4	-4.9
KIJV	Kijevo	6.51	334	ePn	Pn	03 36 24.2	+0.8
MORI	Morici	6.65	330	ePn	Pn	03 36 26.0	+0.7
MGRS	Mrkonjic Grad	6.68	340	ePn	Pn	03 36 27.6	+2.0
AQU	L'Aquila	6.73	310	ePn	Pn	03 36 28.3	+1.9
BLY	Banja Luka	6.96	341	ePn	Pn	03 36 30.1	+0.6
FRGS	Fruska Gora	6.97	357	ePn	Pn	03 36 28.3	-1.3
DUGI	Dugi Otok	7.03	327	ePn	Pn	03 36 30.4	0.0
UDBI	Udbina	7.20	333	i Pn	Pn	03 36 34.5	+1.7
NVLJ	Novalja	7.57	329	ePn	Pn	03 36 38.2	+0.4
MORH	Mrgy, Hungar	8.11	352	ePn	Pn	03 36 44.7	-0.6
RIY	Rijeka	8.35	330	ePn	Pn	03 36 49.5	+0.9
MLR	Muntele Rosu	8.41	28	Pn	Pn	03 36 55.3	+5.8
	comp=E,0.1nm,0.3s,baz=58,slow=4.2,SNR=3.1						
CRES	Cresnjev	8.44	336	ePn	Pn	03 36 49.7	-0.1
CEY	Cerknica	8.72	332	ePn	Pn	03 36 54.3	+0.6
LJU	Ljubljana	8.95	333	ePn	Pn	03 36 57.2	+0.5
SOKA	Soboth	9.33	337	ePn	Pn	03 37 02.2	+0.1
	comp=E,5.8nm,0.6s,SNR=11						
SOKA				eSn	Sn	03 38 42.6	-4.4
	comp=E,2.1nm,0.7s						
OBKA	Obir	9.34	335	i Pn	Pn	03 37 03.3	+1.0
	comp=E,4.9nm,0.7s,SNR=5.7						
OBKA				eSn	Sn	03 38 44.2	-2.9
	comp=E,2.2nm,0.3s						
ARSA	Arzberg	9.71	340	ePn	Pn	03 37 08.5	+1.2
	comp=E,1.5nm,0.3s						
ABTA	Abfaltersbach	10.31	329	ePn	Pn	03 37 16.0	+0.6
	comp=E,1.2nm,0.4s						
ABTA				eSn	Sn	03 39 06.7	-4.1
	comp=E,2.4nm,0.4s						
BRTR	Keskin Array B	10.48	77	Pn	Pn	03 37 20.5	+2.5
	comp=E,0.0nm,0.3s,baz=267,slow=11,SNR=1.5						
MOA	Molln	10.62	337	ePn	Pn	03 37 21.8	+2.2
	comp=E,2.2nm,0.3s						
MOA				i Sn	Sn	03 39 15.3	-3.0
	comp=E,1.5nm,0.5s						
WTTA	Wattenberg	11.08	328	i Pn	Pn	03 37 30.2	+4.1
	comp=E,1.7nm,0.3s						
WATA	Walderalm	11.16	328	ePn	Pn	03 37 30.4	+3.2
	comp=E,3.5nm,0.6s						
SQTA	Sankt Quirin	11.23	326	i Pn	Pn	03 37 32.5	+4.3
	comp=E,2.2nm,0.6s						
SQTA				i Sn	Sn	03 39 30.5	-3.0
	comp=E,1.1nm,0.3s						
MOTA	Moosalm	11.37	326	ePn	Pn	03 37 32.7	+2.6
	comp=E,2.2nm,0.6s						
MOTA				eSn	Sn	03 39 37.5	+0.4
	comp=E,0.9nm,0.3s						
DAVOX	Davos/Dischmat	11.53	321	Pn	Pn	03 37 34.0	+1.7
	comp=E,0.1nm,0.3s,baz=135,slow=18,SNR=1.9						
DAVOX				Sn	Sn	03 39 34.4	-6.4
	baz=331,slow=19						
GERES	GERESS Array B	11.68	338	Pn	Pn	03 37 34.9	+0.7
	comp=E,0.2nm,0.3s,baz=156,slow=15,SNR=5.1						
MMAI	Mount Meron Ar	13.31	108	Pn	Pn	03 37 53.5	-3.0
	comp=E,0.5nm,0.3s,baz=311,slow=12,SNR=5.7						
HFS	Hagfors	22.36	351	P	P	03 39 46.1	+0.7
	comp=E,5.0nm,1.1s,baz=171,slow=10,SNR=2.1						
FINES	FINESS Array B	23.55	7	P	P	03 39 57.2	-0.4
	comp=E,3.5nm,0.8s,baz=175,slow=11,SNR=9.3						
TORD	Torodi Ar. Bea	29.95	219	P	P	03 40 59.2	+3.4
	comp=E,0.4nm,0.6s,baz=34,slow=11,SNR=1.8						
MKAR	Makanchi Array	45.42	58	P	P	03 43 05.7	-0.5
	comp=E,0.3nm,0.4s,baz=274,slow=7.4,SNR=12						
ZALV	Zalesovo Beam	45.79	48	P	P	03 43 08.5	-0.5
	comp=E,0.5nm,0.3s,baz=273,slow=8.0,SNR=3.0						

BJI ***21*** *03:42:47.2±0.0, 39°.97N×143°.69E, h10^{km}, mB4.9/33, mb4.4/49, Ms4.3/27, Ms7 4.1/27*

IDC ***21*** *03:42:47.5±0.5, 39°.75N×143°.67E, h0^{km}, mb4.2/24, mb1 4.4/28, mb1mx4.3/39, mbtmp4.2/28, ML3.2/4, MS3.6/10, Ms1 3.6/10, ms1mx3.2/40, Error ellipse: s-maj=15.6km s-min=13.0km az=113.0*

NEIC ***21*** *03:42:48.9±1.1, 39°.76N±0°.06×143°.6E±0°.1, h10^{km}±1^{km}, mb4.6/81, Error ellipse: s-maj=13.8km s-min=8.8km az=113.0*

JMA ***21*** *03:42:49.9±0.3, 39°.90N×143°.64E, h32^{km}, M4.5*

NIED ***21*** *03:42:49.9, 39°.90N×143°.64E, h32^{km}, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$1.00; M$_{\theta\theta}$1.48; M$_{\phi\phi}$-2.48; M$_{r\theta}$2.13; M$_{\theta\phi}$-0.70; M$_{\phi r}$1.78; Fault plane solution: M$_{0}$3.58000×10^{15} NP1:ϕ_s46.00000°, δ80.00000°, λ124.00000°. NP2:ϕ_s150.00000°, δ35.00000°, λ17.00000°.*

ISC 21 03:42:48.3±0.5**, 39°.82N**±0°.04×**143°.74E**±0°.06**, h6^{km}, n172,** σ1^{s}**50**/160**, mb4.6**/71**, MS4.0**/14**, 1C-2D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	Tanohata	1.45	275	P	Pn	03 43 13.6	-1.4
MIYJ	Miyakonagasawa	1.50	261	P	Pn	03 43 14.6	-1.1
JKEN	Kujiedanarisaw	1.60	284	P	Pn	03 43 15.3	-1.9
JANG	Nango	1.79	289	P	Pn	03 43 18.1	-1.7
JOM	Ohasama	1.92	260	P	Pn	03 43 21.0	-0.5
JMK	Ichinoseki	2.13	247	P	Pn	03 43 24.0	-0.5
ERM	Erimo	2.23	349	Pn	Pn	03 43 25.3	-0.5
JTM	Tenmabayashi	2.26	296	Pn	Pn	03 43 25.9	-0.3
JNBK	Urakawa-nobuka	2.56	343	P	Pn	03 43 30.0	-0.4
JOT	Ohata	2.57	308	P	Pn	03 43 29.7	-0.8
JYK	Kaneyama	2.77	252	P	Pn	03 43 33.1	-0.1
JCH	Churui	2.80	354	P	Pn	03 43 32.5	-1.2
JCH				eS	Sn	03 44 04.5	-3.3
JKB	Kayabe	2.91	316	P	Pn	03 43 34.7	-0.4
JMM	Marumori	3.02	231	Pn	Pn	03 43 35.2	-1.4
JAK	Akkeshi	3.25	13	P	Pn	03 43 38.9	-0.9
JAK				S	Sn	03 44 15.1	-3.7
JAR	Ashorobuto	3.47	0	P	Pn	03 43 41.7	-1.2
JAR				eS	Sn	03 44 19.9	-4.4
JEW	Eniwo	3.47	331	Pn	Pn	03 43 42.8	-0.1
JFT	Otama	3.52	230	P	Pn	03 43 43.0	-0.5
JKA	Kamikawa-asahi	4.37	349	Pn	Pn	03 43 55.3	+0.1
ASAJ	Asahikawa	4.37	349	Pn	Pn	03 43 55.7	+0.5
	4.2nm,0.3s,baz=208,slow=14,SNR=26						
ASAJ				Sn	Sn	03 44 42.8	-3.8
	2.4nm,0.3s,baz=24,slow=20,SNR=1.9						
ASAJ				LR	LR	03 46 02.7	
	comp=Z,325nm,21.2s,baz=250,slow=44						
JYT	Yasato	4.55	219	Pn	Pn	03 43 55.3	-2.3
JSD	Sado	4.63	249	Pn	Pn	03 43 58.4	-0.4
MJAR	Matsushiro Arr	5.45	235	Pn	Pn	03 44 10.4	+0.3
	0.4nm,0.3s,baz=45,slow=12,SNR=44						
MAJO	Matsushiro	5.45	235	Pn	Pn	03 44 10.3	+0.2
MAT	Matsushiro	5.45	235	P	Pn	03 44 10.7	+0.6
MAT				eS	Sn	03 45 16.2	+3.1
JGF	Kuroka	6.58	232		Pn	03 44 25.2	-0.4
INU	Inuyama	6.96	232		Pn	03 44 30.8	0.0
JHJ	Hachijo jima 2	7.41	207	Sn	Sn	03 45 53.5	-7.9
	27nm,0.3s,baz=61,slow=19,SNR=1.5						
JWT	Wachi	8.02	238		Pn	03 44 46.3	+0.9
USRK	Ussuriysk Ar.	9.77	300	Pn	Pn	03 45 11.8	+2.4
	baz=94,slow=14,SNR=19						
USRK				LR	LR	03 48 56.1	
	comp=Z,219nm,21.8s,baz=93,slow=38						
USRK	Ussuriysk Ar.	9.77	300	Pn	Pn	03 45 11.3	+1.9
USA0B	Ussuriysk Arra	9.77	300		Pn	03 45 10.6	+1.2
MDJ	Mudanjiang	11.53	299	P	Pn	03 45 33.3	-0.1
MDJ				pP		03 45 35.6	
MDJ				sP		03 45 37.3	
MDJ				PP	PnPn	03 45 40.9	-0.1
MDJ				S	Sn	03 47 42.3	-0.1
MDJ				SS	SnSn	03 47 55.4	+1.3
MDJ				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,76nm,3.5s						
MDJ				LR	LR		
	comp=N,710nm,13.0s						
MDJ				LR	LR		
	comp=E,760nm,10.9s						
MDJ				LR	LR		
	comp=Z,720nm,13.8s						
KSRS	Korea Array	12.59	264	Pn	Pn	03 45 51.9	+4.0
	0.1nm,0.3s,baz=71,slow=13,SNR=2.9						
KSRS				LR	LR	03 50 20.5	
	comp=Z,327nm,18.5s,baz=72,slow=36						
KLR	Kul'dur	12.70	322	Pn	Pn	03 45 49.9	+0.6
	0.1nm,0.3s,baz=134,slow=15,SNR=4.3						
KLR				LR	LR	03 51 04.0	
	comp=Z,279nm,20.1s,baz=90,slow=39						
PETK	Petropavlovsk-	16.36	31	Pn	P	03 46 41.6	+0.2
	0.1nm,0.3s,baz=190,slow=13,SNR=4.1						
PETK	Petropavlovsk-	16.36	31	Pn	Pn	03 46 40.0	+1.5
MA2	Magadan	20.27	10	P	P	03 47 25.0	+0.7
	10nm,0.7s,baz=190,slow=12,SNR=6.2						
MA2				LR	LR	03 55 46.1	
	comp=Z,114nm,18.3s,baz=196,slow=38						
MA2	Magadan	20.27	10	P	P	03 47 23.0	-1.2
MA2				IAmb	IAmb	03 47 34.8	
	comp=Z,20nm,0.7s						
BJI	Beijing	21.11	279	P	P	03 47 32.4	-1.1
BJI				pmax	pmax		
	comp=Z,5.0nm,0.7s						
BJT	Baijiatuau	21.12	279	P	P	03 47 30.7	-3.0
NJ2	Nanjing	21.54	257	eP	P	03 47 36.4	-1.9
NJ2				pmax	pmax		
	comp=Z,11nm,0.6s						
SEY	Seymchan	23.72	10	P	P	03 48 01.3	+0.5
	comp=Z,7.5nm,0.7s,baz=188,slow=8.0,SNR=24						
HHC	Hu-ho-hao-te	24.48	283	eP	P	03 48 06.8	-1.4
HHC				PP	PnPn	03 48 38.9	+0.3
HHC				S	S	03 52 16.8	-12
HHC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,140nm,4.6s						
HHC				LR	LR		
	comp=Z,220nm,12.1s						
HHC				LR	LR		
	comp=Z,360nm,13.4s						
HHC				LR	LR		
	comp=Z,400nm,15.1s						
SSLB	Suanglung	25.00	237	P	P	03 48 10.9	-2.1
SSLB				IAmb	IAmb	03 48 18.3	
	comp=Z,22nm,1.2s						
YULB	Yu-li	25.06	236	P	P	03 48 11.4	-2.1
YULB				IAmb	IAmb	03 48 17.0	
	comp=Z,28nm,1.3s						
WHN	Wuhan	25.65	258	⇓P	P	03 48 19.0	+0.3
WHN				pP	pwP	03 48 26.3	+2.8
WHN				S	S	03 52 43.6	-3.8
WHN				LR	LR		
	comp=Z,620nm,14.9s						
ULN	Ulaanbaatar	27.44	299	P	P	03 48 34.8	-0.2
SONM	Songino Array	27.88	299	P	P	03 48 39.3	+0.3
	comp=Z,2.8nm,0.5s,baz=82,slow=10,SNR=2.0						
H11N2	WAKE ISLAND Hy	28.23	128	T	T	04 18 17.6	
	baz=320,slow=75,SNR=75						
H11N1	WAKE ISLAND Hy	28.24	128	T	T	04 18 16.9	
	baz=320,slow=75,SNR=60						
H11N3	WAKE ISLAND Hy	28.25	128	T	T	04 18 13.9	
	baz=320,slow=75,SNR=65						
XAN	Xi'an	28.30	269	P	P	03 48 41.0	-1.7
XAN				IAmb	IAmb	03 48 51.1	
	comp=Z,6.5nm,0.7s						
H11S1	WAKE ISLAND Hy	29.06	130	T	T	04 19 13.3	
	baz=322,slow=76,SNR=23						
H11S3	WAKE ISLAND Hy	29.06	130	T	T	04 19 13.5	
	baz=322,slow=76,SNR=17						
H11S2	WAKE ISLAND Hy	29.07	130	T	T	04 19 14.5	
	baz=322,slow=76,SNR=18						
ENH	Enshi	29.46	262	P	P	03 48 52.2	-0.8
LZH	Lanzhou	31.49	276	eP	P	03 49 11.9	+0.8
LZH				pP	pwP	03 49 16.3	+0.4
LZH				sP	sP	03 49 19.6	+7.2
LZH				S	S	03 54 20.6	+0.9
LZH				sS	sS	03 54 28.5	+7.3
LZH				pmax	pmax		
	comp=Z,11nm,1.1s						
LZH				pmax	pmax		
	comp=Z,92nm,6.5s						
LZH				LR	LR		
	comp=Z,280nm,15.7s						
LZH				LR	LR		
	comp=Z,360nm,15.7s						
LZH				LR	LR		
	comp=Z,310nm,14.1s						
GYA	Guiyang	33.54	258	⇓P	P	03 49 36.3	+7.3
GYA				pmax	pmax		
	comp=Z,16nm,0.8s						
CD2	Chengdu	33.56	267	P	P	03 49 28.4	-0.7
CD2				sP	pwP	03 49 35.9	+1.9
CD2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CD2				LR	LR		
	comp=Z,340nm,9.3s						
CD2				LR	LR		
	comp=Z,340nm,10.8s						
CD2				LR	LR		
	comp=Z,460nm,12.7s						
GTA	Gaotai	33.58	284	eP	P	03 49 29.5	+0.2
GTA				pP	pwP	03 49 33.8	-0.3
GTA				sP	sP	03 49 36.9	+6.2
GTA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,51nm,6.4s						
GTA				LR	LR		
	comp=Z,110nm,19.1s						
GTA				LR	LR		
	comp=Z,260nm,14.3s						
GTA				LR	LR		
	comp=Z,340nm,16.3s						
KMI	Kunming	37.23	259	⇑eP	P	03 49 59.6	-1.3
KMI				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KMI				LR	LR		
	comp=Z,220nm,22.6s						
KMI				LR	LR		
	comp=Z,180nm,17.7s						
KMI				LR	LR		
	comp=Z,190nm,13.2s						
WMQ	Urumqi	41.28	294	eP	P	03 50 36.6	+2.2
WMQ				pP	pwP	03 50 38.8	-0.3
WMQ				sP	sP	03 50 42.3	+6.5
WMQ				pmax	pmax		
	comp=Z,7.0nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,100nm,4.7s						
WMQ				LR	LR		
	comp=Z,470nm,28.9s						
WMQ				LR	LR		
	comp=Z,1µm,29.3s						
WMQ				LR	LR		
	comp=Z,140nm,22.7s						
WMQ	Urumqi	41.28	294	P	P	03 50 34.2	-0.2
WMQ				IAmb	IAmb	03 50 44.5	
	comp=Z,12nm,0.9s						
ZALV	Zalesovo Beam	41.45	310	P	P	03 50 35.7	+0.1
	comp=Z,1.5nm,0.4s,baz=94,slow=8.3,SNR=7.3						
ZALV				PcP	PcP	03 52 33.4	+0.1
	comp=Z,1.7nm,0.7s,baz=119,slow=2.4,SNR=3.9						
ZALV				LR	LR	04 08 43.6	
	comp=Z,60nm,19.5s,baz=52,slow=38						
ZSN	Zaisan	42.38	300	eP	P	03 50 43.1	-0.2
	baz=301						
A21K	Barrow	43.18	24	P	P	03 50 49.9	+0.6
A21K				IAmb	IAmb	03 50 59.2	
	comp=Z,11nm,0.8s						
IMAR	Indian Mountai	43.33	32	P	P	03 50 51.5	+0.8
LSA	Lhasa	43.82	274	P	P	03 50 54.8	-0.9
CMAR	Chiang Mai Arr	43.99	254	P	P	03 50 57.0	+0.4
	comp=Z,3.1nm,0.3s,baz=46,slow=7.2,SNR=1.8						
CMAR				LR	LR	04 09 31.1	
	comp=Z,43nm,19.0s,baz=55,slow=36						
MK31	Makanchi Array	44.24	300	P	P	03 50 57.8	-0.5
MKAR	Makanchi Array	44.24	300	P	P	03 50 58.2	-0.2
	comp=Z,2.8nm,0.8s,baz=83,slow=9.0,SNR=14						
MKAR				LR	LR	04 10 29.1	
	comp=Z,102nm,18.3s,baz=82,slow=38						
MKAR	Makanchi Array	44.24	300	P	P	03 50 57.9	-0.5
MAKZ	Makanchi	44.45	300	P	P	03 51 00.2	+0.2
I23K	Minto, Yukon-K	45.11	33	P	P	03 51 05.9	+0.9
I23K				IAmb	IAmb	03 51 08.2	
	comp=Z,11nm,1.4s						
TOLK	Toolik Lake Re	45.16	28	IAmb	IAmb	03 51 16.1	
	comp=Z,5.4nm,0.8s						
MDM	Murphy Dome	45.59	34	P	P	03 51 09.4	+0.5
MDM				IAmb	IAmb	03 51 11.5	
	comp=Z,5.6nm,1.0s						
KURK	Kurchatov	45.70	306	P	P	03 51 09.2	-0.6
KURK				IAmb	IAmb	03 51 18.3	
	comp=Z,8.6nm,0.7s						
IL31		46.16	34	P	P	03 51 13.3	0.0
ILAR	Eielson Array	46.16	34	P	P	03 51 13.9	+0.6
	comp=Z,2.5nm,0.8s,baz=264,slow=6.5,SNR=29						
ILAR	Eielson Array	46.16	34	P	P	03 51 13.2	-0.2
PRP	Porcupine Dome	46.71	33	P	P	03 51 18.1	+0.4
PRP				IAmb	IAmb	03 51 19.9	
	comp=Z,4.1nm,0.8s						
BMAR	Burnt Mountain	47.01	30	P	P	03 51 21.3	+1.3
SHLS	Shalkode	47.20	296	eP	P	03 51 18.6	-3.4
	baz=296						
TDK	Taldyqorghan	47.34	299	eP	P	03 51 22.4	-0.5
	comp=Z,5.7nm,0.5s,baz=299						
KPKS	Kokpek	47.64	297	eP	P	03 51 24.5	-0.8
	baz=297						
SATY	Saty	47.97	296	eP	P	03 51 27.4	-0.5
	baz=296						
BCAR	Beaver Creek A	48.57	36	P	P	03 51 32.8	+0.6
MDOK	Medeo	48.87	297	eP	P	03 51 34.6	-0.3
	baz=297						
TNSS	Tian-Shan	48.98	297	eP	P	03 51 35.9	-0.2
	baz=297						
KUU	Kurty	49.10	298	eP	P	03 51 35.5	-1.0
	comp=Z,3.0nm,0.7s,baz=298						
BRZS	Berezniki	49.57	307	eP	P	03 51 38.9	-1.0
	baz=307						
BRVK	Borovoye	50.14	311	P	P	03 51 44.2	0.0
EPYK	Eagle Plains	50.20	31	P	P	03 51 44.7	+0.2
EPYK				IAmb	IAmb	03 51 55.4	
	comp=Z,11nm,0.9s						
BTLS	Baital	50.26	300	eP	P	03 51 44.7	-0.5
	baz=300						
AAK	Ala-Archa	50.81	297	P	P	03 51 49.2	-0.4
KSH	Kashi	50.97	293	P	P	03 51 55.4	+4.5
KSH				sP	pwP	03 52 02.5	+6.8
KSH				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KSH				pmax	pmax		
	comp=Z,170nm,6.0s						
INK	Inuvik	51.07	28	P	P	03 51 52.0	+1.0
	comp=Z,3.3nm,0.6s,baz=294,slow=7.2,SNR=14						
INK	Inuvik	51.07	28	P	P	03 51 52.1	+1.1
KK31	Karatay Array	53.34	299	P	P	03 52 08.0	-0.3
KKAR	Karatay Array	53.34	299	P	P	03 52 07.6	-0.7
C36M	Paulatuk	54.13	26	P	P	03 52 14.2	+0.6
C36M				IAmb	IAmb	03 52 23.6	
	comp=Z,5.8nm,0.7s						
NIL	Nilore	55.50	287	P	P	03 52 23.8	-0.4
ARU	Arti	55.50	318	P	P	03 52 23.9	+0.1
	comp=Z,1.4nm,0.2s,baz=42,slow=5.3,SNR=3.9						
ARU	Arti	55.50	318	IAmb	IAmb	03 52 32.8	
	comp=Z,17nm,1.4s						
ABKAR	Akbulak array	57.56	309	P	P	03 52 38.2	-0.3

ABKAR				IAmb	IAmb	03 52 47.2	
	comp=Z,4.6nm,0.6s						
KBL	Kabul	58.14	290	P	P	03 52 42.4	-0.8
KBL				IAmb	IAmb	03 52 53.9	
	comp=Z,5.3nm,0.8s						
AKTO	Aktyubinsk	58.19	311	P	P	03 52 42.5	-0.5
	comp=Z,1.7nm,0.7s,baz=73,slow=11,SNR=4.9						
WB0	Warramunga Arr	59.92	190	P	P	03 52 53.8	-1.4
WR0	Warramunga Arr	60.09	190	P	P	03 52 55.2	-1.1
WB2	Warramunga Arr	60.10	190	P	P	03 52 54.9	-1.5
WRA	Warramunga Arr	60.10	190	P	P	03 52 55.3	-1.1
	comp=Z,7.6nm,0.6s,baz=8.5,slow=6.9,SNR=59						
YKA	Yellowknife Ar	60.48	32	P	P	03 52 59.1	+0.5
	comp=Z,1.5nm,0.7s,baz=304,slow=6.0,SNR=25						
ARCES	ARCESS Array B	62.03	339	P	P	03 53 08.8	-0.2
	comp=Z,3.1nm,0.9s,baz=41,slow=8.9,SNR=2.1						
ARCES				LR	LR	04 21 55.6	
	comp=Z,100nm,18.9s,baz=260,slow=38						
KLMR	Klimovskoe	62.38	328	P	P	03 53 17.5	+6.1
KLMR				AMP		03 53 20.4	
	comp=Z,16nm,1.4s						
AS31	Alice Springs	63.82	190	P	P	03 53 21.1	-0.3
ASAR	Alice Springs	63.82	190	P	P	03 53 20.9	-0.5
	comp=Z,3.5nm,0.7s,baz=5.9,slow=5.4,SNR=33						
ASAR	Alice Springs	63.82	190	P	P	03 53 20.6	-0.8
PINE	Pine Mountain	67.16	51	IAmb	IAmb	03 53 54.5	
	comp=Z,8.1nm,1.1s						
FINES	FINESS Array B	67.19	333	P	P	03 53 43.0	+0.2
	comp=Z,2.0nm,0.6s,baz=38,slow=9.6,SNR=9.7						
SUMG	Summit	67.89	1	P	P	03 53 48.2	+0.7
JTMT	Jette	68.73	45	IAmb	IAmb	03 53 55.1	
	comp=Z,3.6nm,0.8s						
BEKR	Beckworth	69.74	55	IAmb	IAmb	03 54 01.4	
	comp=Z,5.5nm,0.9s						
PAHR	Pah Rah Range	70.44	54	IAmb	IAmb	03 54 05.9	
	comp=Z,6.4nm,1.0s						
KIV	Kislovodsk	70.45	311	P	P	03 54 04.5	+0.9
KBZ	Khabaz	70.46	311	P	P	03 54 04.4	+0.9
	comp=Z,3.8nm,0.9s,baz=27,slow=4.5,SNR=7.3						
VCNR	Virginia City	70.52	55	IAmb	IAmb	03 54 06.6	
	comp=Z,4.0nm,0.7s						
CMB	Columbia Colle	70.78	56	IAmb	IAmb	03 54 07.8	
	comp=Z,3.5nm,0.8s						
YERR	Yerington	70.96	55	IAmb	IAmb	03 54 09.3	
	comp=Z,7.0nm,0.8s						
DLMT	Dillon	71.09	46	IAmb	IAmb	03 54 10.2	
	comp=Z,8.3nm,1.1s						
STKA	Stephens Creek	71.37	182	P	P	03 54 08.6	-0.3
	comp=Z,1.8nm,0.6s,baz=338,slow=17,SNR=5.7						
STKA	Stephens Creek	71.37	182	IAmb	IAmb	03 54 17.6	
	comp=Z,2.1nm,1.5s						
NACGM	Naroch	71.39	327	*i* P	P	03 54 09.5	+0.6
NACGM				*i* P	P	03 54 09.5	+0.6
NACGM				*i* P	P	03 54 09.5	+0.6
NACGM				*i* PcP	PcP	03 54 27.7	-0.8
NACGM				*i* PP	PP	03 56 49.3	+2.7
NACGM				*i* PPP	PPP	03 58 33.4	
NACGM				*i* S	S	04 03 29.1	+1.9
NACGM				*i* SS	SS	04 07 49.0	-12
NACGM				*i* SSS	SSS	04 11 21.6	
NACGM				*i* LQ	LQ	04 20 26.6	
NACGM				*i* LR	LR	04 24 27.4	
BOZ	Bozeman (W)	71.48	46	IAmb	IAmb	03 54 11.9	
	comp=Z,4.8nm,0.8s						
NVAR	Mina Array Bea	71.88	55	P	P	03 54 13.9	+1.4
	comp=Z,3.5nm,0.8s,baz=288,slow=6.2,SNR=13						
NVAR	Mina Array Bea	71.88	55	P	P	03 54 13.8	+1.3
NB2	NORSAR Subarra	72.31	338	P	P	03 54 14.6	+0.2
	comp=Z,2.5nm,0.6s,baz=36,slow=6.2						
NOA	NORSAR Array B	72.31	338	P	P	03 54 14.6	+0.2
	comp=Z,1.3nm,0.8s,baz=34,slow=6.0,SNR=4.1						
NOA				LR	LR	04 29 27.3	
	comp=Z,45nm,19.5s,baz=240,slow=39						
H17A	Grant Village	72.82	46	IAmb	IAmb	03 54 22.4	
	comp=Z,6.1nm,1.0s						
AKASG	Malin Array Be	73.19	323	P	P	03 54 19.8	0.0
	comp=Z,1.3nm,0.6s,baz=44,slow=6.0,SNR=11						
AKASG	Malin Array Be	73.19	323	P	P	03 54 19.6	-0.2
TPNV	Topopah Spring	74.07	55	IAmb	IAmb	03 54 27.7	
	comp=Z,5.4nm,0.9s						
DUG	Dugway, Tooele	74.17	51	IAmb	IAmb	03 54 28.4	
	comp=Z,4.3nm,0.9s						
PDAR	Pinedale Array	74.42	47	P	P	03 54 28.1	+0.7
	comp=Z,1.2nm,0.7s,baz=256,slow=1.9,SNR=13						
SHPR	Sheep Range	75.03	55	IAmb	IAmb	03 54 33.6	
	comp=Z,5.7nm,1.0s						
MARD	Mardin	75.68	307	P	P	03 54 34.7	0.0
U15A	North Rim	76.87	53	IAmb	IAmb	03 54 44.4	
	comp=Z,5.6nm,0.9s						
BUR08	Bucovina Ar. S	77.22	322	P	P	03 54 43.3	+0.1
BUR08				IAmb	IAmb	03 54 52.6	
	comp=Z,4.6nm,0.8s						
BURAR	Bucovina Array	77.24	322	P	P	03 54 43.3	+0.1
PV22	Blue Mesa, Par	77.62	50	IAmb	IAmb	03 54 48.0	
	comp=Z,5.1nm,0.9s						
BRTR	Keskin Array B	78.35	312	P	P	03 54 49.8	+0.1
	comp=Z,0.5nm,0.7s,baz=92,slow=4.2,SNR=2.1						
MORC	Moravsky Berou	79.00	328	*e*PG	P	03 55 01.8	+8.9
DPC	Dobruska-Polom	79.05	329	*e*P	P	03 54 56.6	+3.4
DPC				*e*PCP	PcP	03 55 02.4	+0.7
CLL	Collm	79.56	331	*i* PKP	P	03 55 03.7	+7.8
	comp=Z,6.0nm,1.0s						
VRAC	Vranov	79.75	328	*e*PG	P	03 55 06.2	+9.2
KRUC	Moravsky	80.03	328	*e*PG	P	03 55 07.4	+8.9
PRU	Pruhonice	80.03	329	*e*P	P	03 54 59.9	+1.4
PRU				*e*PCP	PcP	03 55 07.4	+1.5
PBCC	Pribram	80.49	330	*e*P	P	03 55 02.1	+1.1
PBCC				*e*x	x	03 55 09.7	
CKRC	Cesky Krumlov	81.06	329	*e*P	P	03 55 03.6	-0.5
CKRC				*e*x	x	03 55 12.7	
KHC	Kasperske Hory	81.10	329	*e*P	P	03 55 05.2	+0.9
KHC				*e*PCP	PcP	03 55 13.1	+2.4
GERES	GERESS Array B	81.28	329	P	P	03 55 05.6	+0.3
	comp=Z,0.5nm,0.7s,baz=41,slow=4.3,SNR=4.4						
GERES	GERESS Array B	81.28	329	P	P	03 55 04.4	-1.0
ANMO	Albuquerque	81.41	51	P	P	03 55 07.6	+1.2
VTS	Vitosha	81.85	320	IAmb	IAmb	03 55 18.4	
	comp=Z,4.6nm,0.7s						
SOKA	Soboth	82.47	327	*e*P	P	03 55 12.2	+0.6
	comp=Z,5.7nm,0.7s						
MOTA	Moosalm	83.51	330	*e*P	P	03 55 18.5	+1.4
	comp=Z,7.7nm,1.3s						
RETA	Reutte	83.53	330	*e*P	P	03 55 18.5	+1.4
	comp=Z,4.5nm,0.8s						
WMOK	Wichita Mounta	86.04	47	IAmb	IAmb	03 55 31.2	
	comp=Z,4.0nm,0.9s						
TX32	Lajitas Array	86.99	54	P	P	03 55 35.0	+0.2
TX32				IAmb	IAmb	03 55 44.4	
	comp=Z,4.9nm,1.4s						
TXAR	Lajitas Array	86.99	54	P	P	03 55 35.5	+0.7
	comp=Z,1.8nm,0.8s,baz=295,slow=3.2,SNR=21						
VAE	Valguarnera	90.10	322	LR	LR	04 38 29.9	
	comp=Z,875nm,20.5s,baz=257,slow=37						
SIV	San Ignacio	147.89	49	PKPbc	PKPbc	04 02 34.4	-0.4
	comp=Z,3.0nm,0.8s,baz=280,slow=2.0,SNR=9.5						

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*NIED **21** 03:56:36.0, 39°.37N×143°.87E, h26^{km}, MW3.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$1.70; M$_{\theta\theta}$0.31; M$_{\phi\phi}$-2.01; M$_{r\theta}$0.08; M$_{\theta\phi}$-0.37; M$_{\phi r}$0.17; Fault plane solution: M$_0$1.89000×10^{14} NP1:φ$_s$11.00000°, δ48.00000°, λ93.00000°. NP2:φ$_s$187.00000°, δ42.00000°, λ87.00000°.*

JMA 21 03:56:35.9±0.2**, 39°.37N**×**143°.87E, h26^{km}, M3.5, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MIYJ	Miyakonagasawa	1.60	278	P	Pn	03 57 03.3	+0.8
MIYJ				*e*S	Sn	03 57 22.9	+0.6
JTH	Tanohata	1.65	291	P	Pn	03 57 04.0	+0.8
OFUJ	Ofunato	1.73	261	P	Pn	03 57 05.2	+0.9
JOM	Ohasama	2.00	274	P	Pn	03 57 09.3	+1.3
JANG	Nango	2.07	300	P	Pn	03 57 09.9	+0.9
JMK	Ichinoseki	2.10	259	P	Pn	03 57 10.7	+1.3
JYK	Kaneyama	2.77	262	P	Pn	03 57 20.1	+1.6
JNBK	Urakawa-nobuka	3.03	344	P	Pn	03 57 24.0	+1.9
JFT	Otama	3.33	237	P	Pn	03 57 28.2	+1.8
JAR	Ashorobuto	3.92	359	P	Pn	03 57 36.9	+2.5
MAT	Matsushiro	5.29	240	P	Pn	03 57 56.5	+3.2
MAT				S	Sn	03 58 58.8	+5.4

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*GCG **21** 04:06:13.0±0.8, 11°.63N×89°.06W, h0^{km}±177^{km}, MD4.5*

*UCR **21** 04:06:14.8±1.7, 12°.50N×87°.93W, h26^{km}±10^{km}, ML4.4, mb4.4(NEIC)*

*INET **21** 04:06:15.4, 12°.52N×87°.83W, h31^{km}, MW3.5*

*NEIC **21** 04:06:15.9±1.7, 12°.58N±0°.05×87°.76W±0°.07, h71^{km}±7^{km}, mb4.4/82, Md4.5(SNET), Error ellipse: s-maj=10.7km s-min=5.6km az=58.0*

*SNET **21** 04:06:15.6±1.4, 12°.53N×87°.98W, h24^{km}±7^{km}, ML4.5*

*IDC **21** 04:06:16.6±1.4, 12°.81N×87°.44W, h74^{km}±12^{km}, mb3.7/10, mb1 4.0/13, mb1mx3.7/39, mbtmp4.0/13, MS3.2/7, Ms1 3.2/7, ms1mx3.0/32, Error ellipse: s-maj=34.1km s-min=10.5km az=52.0*

ISC 21 04:06:15.1±0.8**, 12°.58N**±0°.06×**87°.82W**±0°.04**, h66^{km}**±6^{km}**, n162, σ1^{s}09**/160**, mb4.3**/47**, 6D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	Conchagua	0.69	359	*e*P	Pn	04 06 29.7	0.0
CNCH				*e*S	Sn	04 06 40.4	-0.1
CNCH	Conchagua	0.69	359	*e*P	Pn	04 06 29.7	0.0
CNCH				*e*S	Sn	04 06 40.4	-0.1
LCND	La Caada	0.73	355	⇓*e*P	Pn	04 06 30.1	+0.1
LCND				*e*S	Sn	04 06 41.7	+0.7
LCND				IAML		04 06 43.0	
	comp=Z,29µm,0.5s						
LCND	La Caada	0.73	355	*e*P	Pn	04 06 30.1	+0.1
LCND				⇓*e*P	Pn	04 06 30.1	+0.1
LCND				*e*S	Sn	04 06 41.7	+0.7
LCND				IAML		04 06 43.0	
	comp=Z,29µm,0.5s						
CRIN	San Cristobal	0.76	81		Pn	04 06 30.4	-0.1
CRIN				Sn	Sn	04 06 42.8	+1.0
JUCU	Jucuar¡n	0.79	328	⇓*e*P	Pn	04 06 30.1	-0.8
JUCU				⇓*e*		04 06 30.1	
JUCU				*e*S	Sn	04 06 41.5	-1.0
JUCU	Jucuar¡n	0.79	328	⇓*e*P	Pn	04 06 30.1	-0.8
JUCU				⇓*e*		04 06 30.1	
JUCU				*e*S	Sn	04 06 41.5	-1.0
LCY	Lacayo	0.96	331	*e*P	Pn	04 06 33.0	0.0
LCY	Lacayo	0.96	331	*e*P	Pn	04 06 33.0	0.0
RANC	El Ranchito	0.96	332	*e*P	Pn	04 06 32.9	-0.2
RANC	El Ranchito	0.96	332	*e*P	Pn	04 06 32.9	-0.2
PACA	Pacayal	1.01	331	*e*P	Pn	04 06 34.0	+0.3
PACA				*e*S	Sn	04 06 48.0	+0.6
PACA	Pacayal	1.01	331	*e*P	Pn	04 06 34.0	+0.3
PACA				*e*S	Sn	04 06 48.0	+0.6
TECA	Tecapa	1.13	324	*e*P	Pn	04 06 35.1	-0.1
TECA	Tecapa	1.13	324	*e*P	Pn	04 06 35.1	-0.1
COEB	Comit de Eme	1.15	323	*e*P	Pn	04 06 35.2	-0.2
COEB				IAML		04 06 56.7	
	comp=Z,6µm,0.4s						
COEB	Comit de Eme	1.15	323	*e*P	Pn	04 06 35.2	-0.2
COEB				IAML		04 06 56.7	
	comp=Z,6µm,0.4s						
PQSS	Presa 15 de Se	1.27	325	*e*P	Pn	04 06 37.2	+0.4
PQSS				*e*S	Sn	04 06 53.8	+0.7
COEG	Centro de Oper	1.46	315	*e*P	Pn	04 06 38.9	-0.6
COEG				IAML		04 07 03.1	
	comp=Z,8µm,0.3s						
COEG	Centro de Oper	1.46	315	*e*P	Pn	04 06 38.9	-0.6
COEG				IAML		04 07 03.1	
	comp=Z,8µm,0.3s						
TGUH	Tegucigalpa,Un	1.56	20	Pn	Pn	04 06 41.8	+0.9
TGUH				Sn	Sn	04 07 02.2	+1.8
LFRS	El Faro	1.59	311	*e*P	Pn	04 06 41.3	0.0
LFRS	El Faro	1.59	311	*e*P	Pn	04 06 41.3	0.0
LBRS	Las Brisas	1.66	314	*e*P	Pn	04 06 42.5	+0.3
LBRS	Las Brisas	1.66	314	*e*P	Pn	04 06 42.5	+0.3
AEIL	Aeropuerto Ilo	1.68	311	*e*P	Pn	04 06 43.2	+0.7
AEIL				*e*S	Sn	04 07 05.1	+1.9
AEIL	Aeropuerto Ilo	1.68	311	*e*P	Pn	04 06 43.2	+0.7
AEIL				*e*S	Sn	04 07 05.1	+1.9
LFU	La Fuente	1.71	313	*e*P	Pn	04 06 43.4	+0.5
LFU	La Fuente	1.71	313	*e*P	Pn	04 06 43.4	+0.5
LALI	Alcalda de L	1.72	302	*e*P	Pn	04 06 42.6	-0.3
LALI	Alcalda de L	1.72	302	*e*P	Pn	04 06 42.6	-0.3
IGN	Direccin Gen	1.73	311	*e*P	Pn	04 06 43.3	+0.2
IGN	Direccin Gen	1.73	311	*e*P	Pn	04 06 43.3	+0.2
OPAM	Oficina de Pla	1.75	310	*e*P	Pn	04 06 43.4	0.0
OPAM				IAML		04 07 09.1	
	comp=Z,4µm,0.2s						
OPAM	Oficina de Pla	1.75	310	*e*P	Pn	04 06 43.4	0.0
OPAM				IAML		04 07 09.1	
	comp=Z,4µm,0.2s						
SNET	Serv Nac Est T	1.76	309	*e*P	Pn	04 06 43.1	-0.4
SNET	Serv Nac Est T	1.76	309	*e*P	Pn	04 06 43.1	-0.4
SNET	Serv Nac Est T	1.76	309		Pn	04 06 43.3	-0.2
UEES	Universidad Ev	1.79	309	*e*P	Pn	04 06 44.1	+0.3
UEES				IAML		04 07 07.8	
	comp=Z,4µm,0.1s						
UEES	Universidad Ev	1.79	309	*e*P	Pn	04 06 44.1	+0.3
UEES				IAML		04 07 07.8	
	comp=Z,4µm,0.1s						
BOQS	Boqueron	1.83	309	*e*P	Pn	04 06 45.0	+0.5
BOQS				*e*S	Sn	04 07 06.2	-0.7
BOQS	Boqueron	1.83	309	*e*P	Pn	04 06 45.0	+0.5
BOQS				*e*S	Sn	04 07 06.2	-0.7
PMON	Piamonte	1.84	308	*e*P	Pn	04 06 44.9	+0.3
PMON	Piamonte	1.84	308	*e*P	Pn	04 06 44.9	+0.3
MATN	Matagalpa	1.88	79		Pn	04 06 44.8	-0.3
JAYA	Jayaque - finc	1.91	304	*e*P	Pn	04 06 45.3	-0.4
JAYA	Jayaque - finc	1.91	304	*e*P	Pn	04 06 45.3	-0.4
CEDA	San Andres	1.96	309	*e*P	Pn	04 06 46.4	+0.2
CEDA				IAML		04 07 19.2	
	comp=Z,3µm,0.4s						
CEDA	San Andres	1.96	309	*e*P	Pn	04 06 46.4	+0.2
CEDA				IAML		04 07 19.2	
	comp=Z,3µm,0.4s						
BOAB	BOACO BROADBAN	2.11	93		Pn	04 06 47.4	-0.7
CEVE	Cerro Verde	2.15	305	*e*P	Pn	04 06 49.5	+0.6
CEVE				IAML		04 07 26.2	
	comp=Z,5µm,0.3s						
CEVE	Cerro Verde	2.15	305	*e*P	Pn	04 06 49.5	+0.6
CEVE				IAML		04 07 26.2	
	comp=Z,5µm,0.3s						
MTO3	Montecristo	2.35	321	*e*P	Pn	04 06 52.2	+0.6
MTO3	Montecristo	2.35	321	*e*P	Pn	04 06 52.2	+0.6
MTO3	Montecristo	2.35	321		Pn	04 06 52.1	+0.6
ESQI	Esquipulas	2.46	323	*e*P	Pn	04 06 54.0	+0.9
ESQI	Esquipulas	2.46	323		Pn	04 06 54.2	+1.1
ACON	Acoyapa	2.66	103		Pn	04 06 55.6	0.0
MRL	Marmol	3.08	324	*e*P	Pn	04 07 07.0	+5.5
MRL				*e*S	Sn	04 07 53.4	+16
NBG	Las Nubes	3.17	309	*e*P	Pn	04 07 05.1	+2.3
CUI	Cuipilapa	3.23	126	*e*P	Pn	04 07 04.3	+0.8
PCG	Pacaya	3.26	304	*e*S	Sn	04 07 44.5	+2.8
PLVR	Palo Verde	3.28	132	*e*P	Pn	04 07 03.9	-0.4
GRZA	Playa Garza	3.41	141	*e*P	Pn	04 07 05.5	-0.3
ESPN	Las Esperanzas	3.46	96		Pn	04 07 07.1	+0.6
FUG	Fuego 3	3.48	303	*e*P	Pn	04 07 06.9	0.0
FUG				*e*S	Sn	04 07 48.4	+1.4
INDI	Punta indio, G	3.53	140	*e*P	Pn	04 07 07.6	+0.1
JTS	Las Juntas de	3.62	129	P	Pn	04 07 09.9	+1.2
	comp=Z,4.1nm,0.3s,baz=20,slow=20,SNR=12						
JTS				S	Sn	04 07 49.3	-0.9
	comp=Z,4.0nm,0.3s,baz=91,slow=17,SNR=3.6						
JTS	Las Juntas de	3.62	129	*e*P	Pn	04 07 09.7	+1.0
JTS	Las Juntas de	3.62	129		Pn	04 07 09.1	+0.4
LAFE	Finca La Fe, P	3.97	134	*e*P	Pn	04 07 13.5	0.0
JACO	JACO, Garabito	4.25	133	*e*P	Pn	04 07 21.4	+4.1
HUEH	Huehuetenango	4.49	308	Pn	Pn	04 07 21.8	+0.8
LCR2	La Lucha 2	4.69	127	*e*P	Pn	04 07 26.7	+3.2
PETF	Flores	4.75	336		Pn	04 07 23.9	-0.2
RIMA	Rio Macho	4.78	125	*e*P	Pn	04 07 28.1	+3.3
DRK0	Durika	5.57	126	*e*P	Pn	04 07 37.7	+2.1
CCIG	Comitan	5.57	312		Pn	04 07 36.8	+1.1
RIOS	Rincon, Osa	5.72	132	*e*P	Pn	04 07 39.7	+2.2
LPLA	Las Palmas La	5.90	126	*e*P	Pn	04 07 41.5	+1.4
TEIG	Tepich	7.62	357	P	Pn	04 08 03.2	-0.2
	comp=Z,1.2nm,0.3s,baz=352,slow=5.2,SNR=6.6						
TEIG	Tepich	7.62	357	Pn	Pn	04 08 04.0	+0.6
CMIG	Matias Romero	8.17	304	P	Pn	04 08 13.4	+2.3
	comp=Z,0.6nm,0.3s,baz=137,slow=11,SNR=17						
CMIG				S	Sn	04 09 39.6	-2.3
	comp=Z,0.6nm,0.3s,baz=360,slow=7.1,SNR=2.1						
TLIG	Tlapa	11.50	297		Pn	04 08 59.8	+3.1
MOIG	Morelia	14.65	301	Pn	Pn	04 09 39.3	+0.2
SDV	Santo Domingo	17.28	101	LR	LR	04 16 44.0	
	comp=Z,65nm,21.3s,baz=289,slow=37						
152A	Waverly Hall	20.20	8	P	P	04 10 44.1	-0.4
152A				IAmb	IAmb	04 10 51.1	
	comp=Z,12nm,1.0s						
LRAL	Lakeview Retre	20.38	2	P	Pn	04 10 48.8	-0.2
GOGA	Godfrey	21.11	10	P	P	04 10 56.6	+2.2
GOGA				IAmb	IAmb	04 10 59.0	
	comp=Z,15nm,0.7s						
Y52A	Lilburn	21.46	9	P	P	04 10 59.7	+1.6
Y52A				IAmb	IAmb	04 11 18.9	
	comp=Z,29nm,1.4s						
WLAR	White Oak Lake	21.56	348	P	P	04 11 00.4	+1.3
WLAR				IAmb	IAmb	04 11 04.0	
	comp=Z,12nm,0.8s						
SJG	San Juan	21.60	73	LR	LR	04 18 19.5	
	comp=Z,68nm,21.5s,baz=264,slow=34						
ATAH	Atahualpa	21.71	154	LR	LR	04 18 21.9	
	comp=Z,110nm,18.8s,baz=355,slow=33						
HODGE	Hodges	22.14	12	IAmb	IAmb	04 11 09.9	
	comp=Z,7.5nm,0.7s						
TXAR	Lajitas Array	22.25	321	P	P	04 11 08.3	+1.6
	comp=Z,5.2nm,0.7s,baz=143,slow=8.2,SNR=54						
TXAR				PcP	PcP	04 15 01.8	+1.0
	comp=Z,0.3nm,0.6s,baz=166,slow=3.5,SNR=4.4						
TXAR				ScP	ScP	04 18 33.8	+1.1
	comp=Z,0.2nm,0.7s,baz=111,slow=4.9,SNR=2.8						
TXAR	Lajitas Array	22.25	321	P	P	04 11 08.0	+1.3
TX31	Lajitas Ar. Si	22.25	321	P	P	04 11 07.7	+1.0
TX31				IAmb	IAmb	04 11 10.6	
	comp=Z,17nm,0.8s						
TX32	Lajitas Array	22.25	321	P	P	04 11 07.9	+1.2
MIAR	Mount Ida	22.48	347	P	P	04 11 09.9	+0.8
MIAR				IAmb	IAmb	04 11 12.3	
	comp=Z,11nm,0.8s						
BG3	Lake Jocassee	22.75	10	P	P	04 11 12.7	+0.8
BG3				IAmb	IAmb	04 11 14.8	
	comp=Z,8.2nm,0.6s						
TKL	Tuckaleechee C	23.27	8	P	P	04 11 16.9	-0.1
	comp=Z,4.6nm,0.6s,baz=197,slow=11,SNR=8.9						
TKL				LR	LR	04 19 53.4	
	comp=Z,40nm,21.6s,baz=194,slow=36						
TKL	Tuckaleechee C	23.27	8	IAmb	IAmb	04 11 19.5	
	comp=Z,16nm,1.2s						
V53A	Saluda	23.43	10	P	P	04 11 19.6	+1.0
CLTN	Cedars of Leba	23.45	3	P	P	04 11 19.5	+0.8
FCAR	Ozark Folk Cen	23.53	351	P	P	04 11 19.3	-0.2
LCAR	Lake Charles	23.58	353	P	P	04 11 19.6	-0.3
X34A	Smith Ranch, M	23.74	339	P	P	04 11 22.5	+1.2
U40A	Yellville	24.11	350	P	P	04 11 25.1	+0.5
FNO	Franklin	24.19	341	P	P	04 11 26.2	+0.8
HHAR	Hobbs	24.24	348	P	P	04 11 26.7	+0.9
T47A	Sharon Grove	24.31	1	P	P	04 11 26.2	-0.3
T47A				IAmb	IAmb	04 11 27.8	
	comp=Z,9.6nm,0.6s						
TUL1	Leonard	24.32	344	IAmb	IAmb	04 11 47.7	
	comp=Z,8.7nm,0.8s						
V58A	Windy Hill, Pi	24.41	17	IAmb	IAmb	04 11 29.4	
	comp=Z,11nm,0.6s						
U54A	Nelsons Funny	24.44	12	IAmb	IAmb	04 11 49.0	
	comp=Z,13nm,0.8s						
U38A	Gravette	24.48	347	IAmb	IAmb	04 11 47.4	
	comp=Z,17nm,1.5s						
OK031	S. Brethren Rd	24.66	342	IAmb	IAmb	04 11 31.4	
	comp=Z,8.5nm,0.8s						
OK029	Liberty Lake	24.70	341	IAmb	IAmb	04 11 30.7	
	comp=Z,10nm,0.7s						
QUOK	Quay	24.82	343	P	P	04 11 31.3	+0.2
QUOK				IAmb	IAmb	04 11 32.9	
	comp=Z,12nm,0.8s						
MSTX	Muleshoe	25.28	330	P	P	04 11 36.3	+0.9
MSTX				IAmb	IAmb	04 11 37.3	
	comp=Z,11nm,0.6s						
S39A	Bolivar	25.49	350	P	P	04 11 36.7	-0.5
S39A				IAmb	IAmb	04 11 55.1	
	comp=Z,6.4nm,0.8s						
CCM	Cathedral Cave	25.55	354	P	P	04 11 37.5	-0.3
WCI	Wyandotte Cave	25.58	3	P	P	04 11 38.4	+0.4
WCI				IAmb	IAmb	04 11 40.0	
	comp=Z,7.9nm,0.8s						
P38A	Dawn	27.41	350	P	P	04 11 54.5	+0.1
P38A				IAmb	IAmb	04 11 56.3	
	comp=Z,7.0nm,0.9s						
ANMO	Albuquerque	27.95	326	P	P	04 12 01.3	+1.7
	comp=Z,0.8nm,0.5s,baz=112,slow=8.6,SNR=5.1						
ANMO				LR	LR	04 23 33.2	
	comp=Z,26nm,21.3s,baz=115,slow=37						
ANMO	Albuquerque	27.95	326	IAmb	IAmb	04 12 03.4	
	comp=Z,1.0nm,0.6s						
SDCO	Great Sand Dun	29.62	331	P	P	04 12 15.8	+1.3
PV03	Paradox Valley	31.69	327	P	P	04 12 33.3	+0.6
ECSD	EROS Data Cent	31.96	348	IAmb	IAmb	04 12 35.7	
	comp=Z,4.0nm,0.7s						
SRU	San Rafael Swe	33.21	327	IAmb	IAmb	04 12 48.3	
	comp=Z,3.5nm,0.6s						
P17A	Butcher Ranch,	33.59	327	P	P	04 12 50.1	+0.9
MPU	Maple Canyon	34.46	327	IAmb	IAmb	04 12 59.1	
	comp=Z,2.9nm,0.8s						
LPAZ	La Paz	34.67	145	LR	LR	04 26 39.8	
	comp=Z,53nm,18.2s,baz=354,slow=35						
BW06	Boulder Array	35.49	332	IAmb	IAmb	04 13 11.5	
	comp=Z,4.0nm,1.2s						
PD31	Pinedale Array	35.49	332	IAmb	IAmb	04 13 11.4	
	comp=Z,4.1nm,1.2s						
PDAR	Pinedale Array	35.49	332	P	P	04 13 06.9	+1.2
	comp=Z,1.7nm,0.6s,baz=130,slow=10,SNR=18						
PDAR				PcP	PcP	04 15 32.9	-1.0
	comp=Z,0.3nm,0.7s,baz=130,slow=2.8,SNR=2.3						
PDAR	Pinedale Array	35.49	332	P	P	04 13 06.0	+0.4
SPUT	South Promonto	35.82	328	IAmb	IAmb	04 13 12.0	
	comp=Z,4.7nm,0.9s						
AGMN	Agassiz Nation	36.23	351	P	P	04 13 11.8	+0.1
AGMN				IAmb	IAmb	04 13 13.2	
	comp=Z,5.2nm,0.8s						
HVU	Hansel Valley	36.33	328	IAmb	IAmb	04 13 17.9	
	comp=Z,3.2nm,0.7s						
LOHW	Long Hollow	36.63	332	P	P	04 13 16.2	+0.8
LOHW				IAmb	IAmb	04 13 18.4	
	comp=Z,3.2nm,0.6s						
YPP	Pitchstone Pla	37.23	332	IAmb	IAmb	04 13 25.7	
	comp=Z,5.7nm,1.4s						
NVAR	Mina Array Bea	37.37	319	P	P	04 13 24.1	+2.3
	comp=Z,0.9nm,0.6s,baz=119,slow=7.3,SNR=1.1						
NVAR				PcP	PcP	04 15 40.9	+1.2
	comp=Z,0.8nm,0.6s,baz=124,slow=4.1,SNR=5.8						
NVAR				ScP	ScP	04 19 20.7	-0.6
	comp=Z,0.1nm,0.3s,baz=233,slow=6.7,SNR=1.7						
NVAR				LR	LR	04 30 13.5	
	comp=Z,50nm,18.6s,baz=72,slow=38						
YMR	Madison River	37.61	333	IAmb	IAmb	04 13 27.2	
	comp=Z,5.4nm,0.8s						
YHH	Holmes Hill	37.65	333	IAmb	IAmb	04 13 29.8	
	comp=Z,2.2nm,0.7s						
YHL	Hebgen Lake	37.85	333	IAmb	IAmb	04 13 29.6	
	comp=Z,3.8nm,0.7s						
ULM	Lac du Bonnet	38.14	352	P	P	04 13 26.4	-1.4
	comp=Z,3.6nm,0.7s,baz=162,slow=7.6,SNR=10						
ULM	Lac du Bonnet	38.14	352	IAmb	IAmb	04 13 27.6	
	comp=Z,3.5nm,0.7s						
DGMT	Dagmar	38.29	342	P	P	04 13 29.5	+0.4
BOZ	Bozeman (W)	38.63	333	IAmb	IAmb	04 13 34.5	
	comp=Z,3.8nm,0.7s						
SIV	San Ignacio	38.80	136	P	P	04 13 33.8	0.0
	comp=Z,1.9nm,0.6s,baz=304,slow=10,SNR=11						
DLMT	Dillon	38.88	332	P	P	04 13 35.0	+0.7
DLMT				IAmb	IAmb	04 13 36.8	
	comp=Z,4.0nm,0.7s						
MFID	Camas Ranch	39.08	327	IAmb	IAmb	04 13 51.3	
	comp=Z,5.0nm,1.3s						
WVOR	Wild Horse Val	39.99	324	P	P	04 13 44.8	+1.3
WVOR				IAmb	IAmb	04 13 46.9	
	comp=Z,3.2nm,0.9s						
F10A	Beach Ranch, E	41.56	329	P	P	04 13 57.0	+0.6
F10A				IAmb	IAmb	04 13 59.4	
	comp=Z,3.6nm,0.7s						
C09A	Chrisman Ranch	43.35	330	P	P	04 14 11.0	+0.3
C09A				IAmb	IAmb	04 14 13.0	
	comp=Z,5.1nm,0.6s						
YKA	Yellowknife Ar	53.39	345	P	P	04 15 27.2	-0.5
	comp=Z,0.7nm,0.6s,baz=144,slow=7.4,SNR=23						
YKA				pP	pP	04 15 43.2	-1.6
	comp=Z,1.4nm,0.9s,baz=136,slow=8.2,SNR=9.7						
YKA				PcP	PcP	04 16 34.0	-0.2
	comp=Z,0.4nm,0.7s,baz=139,slow=4.7,SNR=6.4						
YKA				ScP	ScP	04 20 25.7	-0.7
	comp=Z,0.1nm,0.5s,baz=142,slow=4.9,SNR=2.2						
GO07	Milladeo Hill,	56.92	168	P	P	04 15 51.4	-1.9
ILAR	Eielson Array	65.76	336	P	P	04 16 51.9	-0.9
	comp=Z,0.4nm,0.5s,baz=156,slow=5.2,SNR=15						
ESDC	Sonseca Array	77.39	52	P	P	04 18 00.5	-2.8
	comp=Z,0.3nm,0.6s,baz=280,slow=5.3,SNR=1.8						

FINES	FINESS Array B	90.02	26	PKiKP	PKiKP	04 24 01.3	-1.7
	comp=Z,7.0nm,1.2s,baz=309,slow=6.1,SNR=3.4						
WRA	Warramunga Arr	138.96	254	PKP	PKiKP	04 25 37.6	+0.4
	comp=Z,0.6nm,0.6s,baz=88,slow=2.5,SNR=11						
ASAR	Alice Springs	138.98	248	PKP	PKiKP	04 25 36.5	-0.7
	comp=Z,0.6nm,0.7s,baz=92,slow=2.1,SNR=6.5						

JMA ***21*** *04:12:53.9±0.1, 39°.38N×143°.87E, h28^{km}, M4.0*
NIED ***21*** *04:12:53.9, 39°.38N×143°.87E, h28^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$3.91; M$_{\theta\theta}$-0.27; M$_{\phi\phi}$-3.64; M$_{r\theta}$0.52; M$_{\theta\phi}$-0.46; M$_{\phi r}$0.57; Fault plane solution: M$_0$3.88000×10^{14} NP1:φ$_s$14.00000°, δ50.00000°, λ98.00000°. NP2:φ$_s$182.00000°, δ41.00000°, λ81.00000°.*
IDC ***21*** *04:12:54.0±1.3, 39°.22N×143°.74E, h0^{km}, mb3.5/7, mb1 3.7/10, mb1mx3.5/35, mbtmp3.5/10, ML3.3/2 Error ellipse: s-maj=28.4km s-min=22.3km az=130.0*
ISC 21 04:12:56.3±0.9**, 39°.35N**±0°.06×**143°.60E**±0°.07**, h11**^{km}**, n27, σ1**^{s}**.32**/26**, mb3.6**/7**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MIYJ	Miyakonagasawa	1.40	280	P	Pn	04 13 21.1	-0.7
MIYJ				eS	Sg	04 13 40.8	-0.5
JTH	Tanohata	1.47	294	P	Pn	04 13 21.9	-0.8
JTH				eS	Sb	04 13 42.3	0.0
OFUJ	Ofunato	1.52	261	P	Pn	04 13 23.0	-0.5
JOM	Ohasama	1.79	275	P	Pn	04 13 27.0	-0.2
JMK	Ichinoseki	1.89	259	P	Pn	04 13 28.6	0.0
JANG	Nango	1.91	303	P	Pn	04 13 27.5	-1.3
JYK	Kaneyama	2.56	261	P	Pn	04 13 38.2	+0.5
JNBK	Urakawa-nobuka	3.00	348	P	Pn	04 13 43.5	-0.3
JNBK				eS	Sn	04 14 19.1	-0.6
JFT	Otama	3.15	236	P	Pn	04 13 46.1	+0.3
ASAJ	Asahikawa	4.83	351	Pn	Pn	04 14 08.5	-0.4
	1.8nm,0.3s,baz=151,slow=13,SNR=9.5						
ASAJ				Sn	Sn	04 15 02.0	-2.8
	0.7nm,0.3s,baz=159,slow=29,SNR=2.0						
MJAR	Matsushiro Arr	5.10	238	Pn	Pn	04 14 13.8	+1.1
	baz=39,slow=12						
MAT	Matsushiro	5.10	238	P	Pn	04 14 14.1	+1.4
MAT				eS	Sn	04 15 09.5	-2.1
USRK	Ussuriysk Ar.	9.94	303	Pn	Pn	04 15 21.9	+2.9
	baz=108,slow=14,SNR=2.3						
KLR	Kul'dur	13.01	323	Pn	Pn	04 16 03.8	+2.8
	0.1nm,0.3s,baz=147,slow=13,SNR=2.3						
SEY	Seymchan	24.21	10	P	P	04 18 13.2	+0.5
	0.5nm,0.3s,baz=186,slow=12,SNR=3.7						
H11N2	WAKE ISLAND Hy	28.02	128	T	T	04 48 10.0	
	baz=318,slow=75						
H11N1	WAKE ISLAND Hy	28.03	128	T	T	04 48 09.9	
	baz=318,slow=75						
H11N3	WAKE ISLAND Hy	28.04	128	T	T	04 48 14.0	
	baz=318,slow=75						
H11S1	WAKE ISLAND Hy	28.83	129	T	T	04 49 14.7	
	baz=321						
H11S3	WAKE ISLAND Hy	28.83	130	T	T	04 49 12.7	
	baz=321						
H11S2	WAKE ISLAND Hy	28.85	129	T	T	04 49 15.7	
	baz=321						
ZALV	Zalesovo Beam	41.68	311	P	P	04 20 44.5	-0.1
	1.4nm,0.5s,baz=97,slow=8.0,SNR=5.4						
MKAR	Makanchi Array	44.39	301	P	P	04 21 06.9	+0.1
	0.8nm,0.7s,baz=82,slow=9.7,SNR=8.8						
ILAR	Eielson Array	46.62	34	P	P	04 21 24.6	+0.5
	0.2nm,0.7s,baz=271,slow=7.0,SNR=2.2						
INK	Inuvik	51.54	28	P	P	04 22 01.9	+0.2
	0.5nm,0.6s,baz=288,slow=5.8,SNR=2.1						
WRA	Warramunga Arr	59.61	190	P	P	04 22 58.4	-1.9
	0.3nm,0.5s,baz=8.8,slow=6.9,SNR=2.0						
YKA	Yellowknife Ar	60.94	31	P	P	04 23 08.6	-0.3
	0.2nm,0.6s,baz=301,slow=6.3,SNR=2.3						

IDC ***21*** *04:23:53.1±1.1, 39°.26N×143°.74E, h0^{km}, mb3.6/7, mb1 3.8/11, mb1mx3.6/39, mbtmp3.6/11, ML3.0/4, MS3.0/2, Ms1 3.0/2, ms1mx2.5/33, Error ellipse: s-maj=27.0km s-min=21.8km az=146.0*
NIED ***21*** *04:23:53.3, 39°.38N×143°.87E, h38^{km}, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$6.24; M$_{\theta\theta}$0.61; M$_{\phi\phi}$-6.86; M$_{r\theta}$0.89; M$_{\theta\phi}$-0.18; M$_{\phi r}$0.96; Fault plane solution: M$_0$6.69000×10^{14} NP1:φ$_s$10.00000°, δ50.00000°, λ101.00000°. NP2:φ$_s$173.00000°, δ41.00000°, λ77.00000°.*
JMA ***21*** *04:23:53.2±0.2, 39°.38N×143°.87E, h38^{km}, M4.0*
NEIC ***21*** *04:23:54.8±0.9, 39°.23N±0°.07×143°.8E±0°.1, h10^{km}±1^{km}, mb4.1/6, Error ellipse: s-maj=16.4km s-min=10.6km az=117.0*
ISC 21 04:23:55.1±0.8**, 39°.35N**±0°.06×**143°.67E**±0°.08**, h11**^{km}**, n49, σ1**^{s}**.36**/46**, mb3.7**/9**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MIYJ	Miyakonagasawa	1.45	280	P	Pn	04 24 19.9	-1.4
MIYJ				eS	Sn	04 24 39.9	-0.4
JTH	Tanohata	1.52	293	P	Pn	04 24 20.8	-1.3
OFUJ	Ofunato	1.58	261	P	Pn	04 24 21.9	-1.1
OFUJ				eS	Sn	04 24 42.3	-1.1
JOM	Ohasama	1.85	275	P	Pn	04 24 26.0	-0.7
JMK	Ichinoseki	1.95	259	P	Pn	04 24 27.4	-0.7
JANG	Nango	1.95	302	P	Pn	04 24 26.6	-1.5
JYK	Kaneyama	2.61	262	P	Pn	04 24 37.0	-0.2
ERM	Erimo	2.69	352		Pn	04 24 38.8	+0.6
JEM	Erimo	2.69	352	Pn	Sn	04 25 08.7	-2.2
JMM	Marumori	2.70	238		Pn	04 24 37.6	-0.8
JFT	Otama	3.19	236	P	Pn	04 24 45.1	-0.1
JFT				eS	Sn	04 25 22.3	-1.0
JAW	Awa shima	3.56	257	P	Pn	04 24 51.0	+0.7
JEW	Eniwo	3.87	335	Pn	Pn	04 24 56.5	+2.0
JYT	Yasato	4.16	223		Pn	04 24 57.5	-0.9
NEM2	Nemuro 2	4.30	21	P	Pn	04 24 58.1	-2.3
JSD	Sado	4.43	255	Pn	Pn	04 25 03.8	+1.6
ASAJ	Asahikawa	4.83	351	Pn	Pn	04 25 09.7	+2.0
	2.2nm,0.3s,baz=211,slow=18,SNR=8.2						
ASAJ				Sn	Sn	04 26 01.1	-2.5
	1.8nm,0.3s,baz=32,slow=18,SNR=3.9						
JKA	Kamikawa-asahi	4.83	351		Pn	04 25 09.7	+2.0
MJAR	Matsushiro Arr	5.15	239	Pn	Pn	04 25 12.9	+0.8
	0.3nm,0.3s,baz=33,slow=14,SNR=14						
MAJO	Matsushiro	5.15	239		Pn	04 25 13.1	+1.0
MAT	Matsushiro	5.15	239	P	Pn	04 25 12.7	+0.6
MAT				eS	Sn	04 26 08.2	-3.3
JGF	Kuroka	6.26	235		Pn	04 25 27.4	0.0
JWT	Wachi	7.74	241		Pn	04 25 48.1	+0.5
USA0B	Ussuriysk Arra	9.98	303	Pn	Pn	04 26 20.6	+2.3
USRK	Ussuriysk Ar.	9.98	303	Pn	Pn	04 26 17.6	-0.7
	baz=112,slow=10,SNR=2.5						
USRK	Ussuriysk Ar.	9.98	303	Pn	Pn	04 26 20.4	+2.1
JNU	Nakatsue	12.05	243	LR	LR	04 31 57.8	
	comp=Z,92nm,21.9s,baz=90,slow=40						
KSRS	Korea Array	12.50	266	LR	LR	04 31 55.3	
	comp=Z,50nm,18.4s,baz=82,slow=38						
KLR	Kul'dur	13.04	323	Pn	Pn	04 27 01.9	+1.7
	0.1nm,0.3s,baz=151,slow=21,SNR=1.3						
H11N2	WAKE ISLAND Hy	27.97	128	T	T	04 58 58.6	
	baz=319						
H11N1	WAKE ISLAND Hy	27.98	128	T	T	04 59 04.5	
	baz=319						
H11N3	WAKE ISLAND Hy	27.99	128	T	T	04 59 03.9	
	baz=319						
H11S1	WAKE ISLAND Hy	28.79	130	T	T	05 00 03.6	
	baz=321						
H11S3	WAKE ISLAND Hy	28.79	130	T	T	05 00 07.8	
	baz=321						
H11S2	WAKE ISLAND Hy	28.80	130	T	T	05 00 08.2	
	baz=321						
ZAA0	Zalesovo Array	41.72	311	P	P	04 31 45.9	+2.2
ZAA0				IAmb	IAmb	04 31 53.0	
	comp=Z,2.4nm,1.1s						
ZALV	Zalesovo Beam	41.72	311	P	P	04 31 43.5	-0.2
	comp=Z,0.4nm,0.4s,baz=83,slow=6.0,SNR=1.8						
ZALV				PcP	PcP	04 33 40.1	0.0
	comp=Z,0.2nm,0.3s,baz=104,slow=4.6,SNR=1.4						
ZALV	Zalesovo Beam	41.72	311	P	P	04 31 43.7	0.0
MK31	Makanchi Array	44.44	301	P	P	04 32 06.4	+0.5
MKAR	Makanchi Array	44.44	301	P	P	04 32 06.1	+0.2
	comp=Z,0.6nm,0.7s,baz=80,slow=8.7,SNR=6.3						
MAKZ	Makanchi	44.65	301	P	P	04 32 08.7	+1.2
MAKZ				IAmb	IAmb	04 32 16.6	
	comp=Z,2.9nm,1.1s						
KURK	Kurchatov	45.94	307	P	P	04 32 19.0	+1.3
ILAR	Eielson Array	46.59	34	P	P	04 32 22.8	+0.2
	comp=Z,0.6nm,0.8s,baz=268,slow=5.8,SNR=6.4						
INK	Inuvik	51.51	28	P	P	04 33 00.1	-0.1
	comp=Z,1.2nm,0.8s,baz=261,slow=6.4,SNR=3.8						
INK	Inuvik	51.51	28	IAmb	IAmb	04 33 02.8	
	comp=Z,5.2nm,1.3s						
WB2	Warramunga Arr	59.62	190	P	P	04 33 58.4	-0.7
WRA	Warramunga Arr	59.62	190	P	P	04 33 58.2	-0.9
	comp=Z,0.6nm,0.9s,baz=7.5,slow=7.3,SNR=2.4						
YKA	Yellowknife Ar	60.91	31	P	P	04 34 08.0	+0.5
	comp=Z,0.2nm,0.6s,baz=300,slow=5.9,SNR=2.1						
NVAR	Mina Array Bea	72.19	55	P	P	04 35 19.8	-0.4
	comp=Z,0.4nm,0.7s,baz=289,slow=4.8,SNR=3.9						

IDC ***21*** *04:47:05.2±1.2, 36°.61N×97°.04W, h0^{km}, mb1 3.4/5, mb1mx3.3/40, mbtmp3.1/5, ML3.3/5, Error ellipse: s-maj=17.4km s-min=12.7km az=179.0*
NEIC ***21*** *04:47:08.3±0.7, 36°.39N±0°.02×97°.31W±0°.01, h5^{km}±7^{km}, Error ellipse: s-maj=2.7km s-min=1.8km az=181.0*
TUL ***21*** *04:47:08.3±0.8, 36°.40N±0°.02×97°.30W±0°.06, h6^{km}±7^{km}, ML3.1, mb_Lg3.1/77(NEIC), Error ellipse: s-maj=6.6km s-min=2.5km az=71.0*
ANF ***21*** *04:47:08.5±0.8, 36°.39N×97°.27W, h5^{km}, ML3.7/7, Error ellipse: s-maj=9.2km s-min=6.9km az=28.0*
ISC 21 04:47:08.4±1.1**, 36°.39N**±0°.02×**97°.31W**±0°.02**, h5**^{km}±10^{km}**, n92, σ0**^{s}**.55**/79**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QUOK	Quay	0.53	114	Pg	Pg	04 47 18.8	+0.1
QUOK				Sg	Sg	04 47 25.8	+0.2
CROK	Carrier	0.56	282	Pg	Pg	04 47 19.2	+0.1
CROK				Sg	Sg	04 47 27.2	+0.8
OK031	S. Brethren Rd	0.58	139		Pg	04 47 19.6	+0.1
OK031				Sg	Sg	04 47 27.5	+0.5
OK029	Liberty Lake	0.61	192		Pg	04 47 20.1	0.0
OK029				Sg	Sg	04 47 28.6	+0.6
OK030	Cody Creek RV	0.63	138		Pg	04 47 20.6	+0.1
OK030				Sg	Sg	04 47 28.9	+0.3
KAN13	South Haven SW	0.63	347	Pg	Pg	04 47 20.6	0.0
KAN14	Manchester OK	0.77	317	Pg	Pg	04 47 23.0	-0.2
BCOK	Bluff Creek, N	0.78	199		Pg	04 47 23.2	-0.1
OK025	Westminster Rd	0.81	182		Pg	04 47 23.9	-0.1
T35A	Sooner Cattle	0.82	50		Pg	04 47 24.0	-0.2
T35B	Sooner Cattle	0.82	50	P		04 47 23.9	
	baz=231,SNR=213						
T35B				S		04 47 35.1	
	baz=231						
KAN01	Argonia South	0.84	334	Pg	Pg	04 47 24.3	-0.2
KAN05	Bluff City Nor	0.85	328	Pg	Pg	04 47 24.4	-0.2
KAN10	Anthony SW Sta	0.97	319	Pg	Pg	04 47 26.6	-0.3
OKCFA	Oklahoma City	0.98	187		Pg	04 47 26.9	-0.4
KAN08	Anthony NE Sta	0.99	327	Pg	Pg	04 47 27.1	-0.3
OKCSW	OKLAHOMA CITY	0.99	186		Pg	04 47 27.0	-0.4
FNO	Franklin	1.14	184	Pg	Pg	04 47 30.0	-0.2
TUL1	Leonard	1.32	111	P	Pn	04 47 32.6	-0.9
	baz=292						
TUL1				S	Sb	04 47 50.0	-0.8
	baz=292						
TUL1	Leonard	1.32	111		Pn	04 47 32.5	-0.9
TUL1	Leonard	1.32	111	P		04 47 32.5	
	baz=292						
TUL1				S		04 47 50.3	
	baz=292						
U32A	Winter Ranch,	1.37	270		Pn	04 47 33.5	-0.7
U32A	Winter Ranch,	1.37	270	P		04 47 33.6	
	baz=89						
X34A	Smith Ranch, M	1.84	194		Pb	04 47 41.9	-0.7
X34A				IAmb_Lg		04 48 11.3	
	comp=Z,146nm,0.8s						
WMOK	Wichita Mounta	2.04	216	P	Pn	04 47 43.9	+0.4
	baz=36						
WMOK				S	Sn	04 48 10.9	+1.5
	baz=36						
WMOK	Wichita Mounta	2.04	216		Pn	04 47 44.1	+0.6
WMOK				IAmb_Lg		04 48 17.6	
	comp=Z,64nm,0.9s						
WMOK	Wichita Mounta	2.04	216	P		04 47 43.4	
	baz=36,SNR=130						
WMOK				S		04 48 11.3	
	baz=36						
R32A	Long Quarter,	2.31	332	S		04 48 17.2	
	baz=151						
U38A	Gravette	2.36	88	P		04 47 49.0	
	baz=270,SNR=64						
U38A				S		04 48 21.2	
	baz=270						
X37A	Clayton	2.39	138		Pn	04 47 49.0	+0.7
X37A	Clayton	2.39	138	P		04 47 48.4	
	baz=320						
HHAR	Hobbs	2.72	91		Pn	04 47 53.4	+0.6
KSU1	Kansas State U	2.76	11	P	Pn	04 47 53.8	+0.5
	baz=192						
KSU1				S	Sn	04 48 28.1	+1.1
	baz=192						
KSU1	Kansas State U	2.76	11		Pn	04 47 54.3	+1.0
KSU1	Kansas State U	2.76	11	Sb		04 48 33.7	
	baz=192						
CBKS	Cedar Bluff	3.09	322	P	Pn	04 47 58.1	+0.2
	baz=141						
CBKS				S	Sn	04 48 35.6	+0.3
	baz=141						
CBKS	Cedar Bluff	3.09	322		Pn	04 47 58.1	+0.2
W39A	Magazine	3.10	112	P	Pn	04 47 58.9	+0.9
	baz=294						
W39A				S	Sn	04 48 36.6	+1.2
	baz=294						
W39A	Magazine	3.10	112		Pb	04 48 04.2	+0.2
S39A	Bolivar	3.44	67		Pn	04 48 03.2	+0.5
S39A	Bolivar	3.44	67	P		04 48 03.1	
	baz=249,SNR=9.2						
MIAR	Mount Ida	3.56	120	P	Pn	04 48 04.2	-0.1
	baz=302						
MIAR				S	Sn	04 48 46.9	+0.2
	baz=302						
MIAR	Mount Ida	3.56	120	Pn	Pn	04 48 04.0	-0.3
MIAR				IAmb_Lg		04 49 09.0	
	comp=Z,41nm,0.8s						
MIAR	Mount Ida	3.56	120	P		04 48 05.0	
	baz=302,SNR=20						
MIAR				S		04 48 47.1	
	baz=302						
U40A	Yellville	3.59	89	P	Pn	04 48 04.7	-0.1
	baz=272						
U40A				S	Sn	04 48 47.6	0.0
	baz=272						
U40A	Yellville	3.59	89	Pn	Pn	04 48 04.1	-0.6
U40A				IAmb_Lg		04 49 11.1	
	comp=Z,36nm,0.8s						
U40A	Yellville	3.59	89	P		04 48 04.8	
	baz=272,SNR=48						
U40A				P		04 48 04.8	
	baz=272,SNR=48						
Z38A	Mt. Pleasant	3.66	148		Pn	04 48 05.7	0.0
AMTX	Amarillo	3.87	248	Pn	Pn	04 48 08.1	-0.5
AMTX				IAmb_Lg		04 49 21.1	
	comp=Z,32nm,0.7s						
MGMO	Mountain Grove	4.11	78	Pn	Pn	04 48 11.6	-0.3
X40A	Basin Creek Fa	4.12	116	Pn	Pn	04 48 12.3	+0.4
X40A				IAmb_Lg		04 49 29.9	
	comp=Z,48nm,1.0s						
WHAR	Wooly Hollow	4.22	104	Pn	Pn	04 48 13.3	-0.1
WHAR				IAmb_Lg		04 49 28.9	
	comp=Z,45nm,0.9s						
FCAR	Ozark Folk Cen	4.22	95	Pn	Pn	04 48 13.0	-0.4
ABTX	Abilene, Hawle	4.23	208	Pn	Pn	04 48 12.6	-0.9
W41B	Gary Mavity, V	4.29	105	S		04 49 04.6	
	baz=288						
N33B	J Bar K, Exete	4.34	359	P		04 48 14.9	
	baz=178						
N33A	J Bar K, Exete	4.34	359	Pn	Pn	04 48 14.7	-0.3
N33A				IAmb_Lg		04 49 28.8	
	comp=Z,31nm,0.8s						
WLAR	White Oak Lake	4.37	127	Pn	Pn	04 48 14.6	-0.9
WLAR				IAmb_Lg		04 49 36.3	
	comp=Z,34nm,0.7s						
P38A	Dawn	4.39	42	Pn	Pn	04 48 14.9	-0.8
WHTX	Lake Whitney,	4.39	182	Pn	Pn	04 48 15.5	-0.3
WHTX	Lake Whitney,	4.39	182	P		04 48 16.1	
	baz=1.7						
R40A	Maddies Statio	4.44	63	IAmb_Lg		04 49 29.5	
	comp=Z,34nm,0.7s						
R40A	Maddies Statio	4.44	63	P		04 48 16.6	
	baz=246,SNR=21						
237A	Washetta, Mont	4.55	164	Pn	Pn	04 48 17.6	-0.3
237A	Washetta, Mont	4.55	164	P		04 48 18.2	
	baz=345						
N35A	Tabor	4.65	16	Pn	Pn	04 48 19.1	-0.1
KSCO	Kaye Shedlock'	4.96	303	Pn	Pn	04 48 23.6	-0.1
KSCO				IAmb_Lg		04 49 52.2	
	comp=Z,28nm,0.8s						
T42A	Van Buren	5.03	81	Pn	Pn	04 48 24.6	0.0
BGNE	Belgrade	5.05	353	Pn	Pn	04 48 24.1	-0.8
BGNE	Belgrade	5.05	353	P		04 48 24.4	
	baz=172,SNR=8.7						
MSTX	Muleshoe	5.09	243	Pn	Pn	04 48 25.1	-0.4
CCM	Cathedral Cave	5.11	69	Pn	Pn	04 48 26.1	+0.5
CCM				IAmb_Lg		04 49 57.9	
	comp=Z,41nm,0.7s						
P40A	Paris	5.20	51	Pn	Pn	04 48 26.1	-0.8
P40A				IAmb_Lg		04 49 52.2	
	comp=Z,29nm,0.8s						
N38A	Joes South For	5.43	35	Pn	Pn	04 48 29.5	-0.5
PBMO	Poplar Bluff	5.55	84	IAmb_Lg		04 50 10.4	
	comp=Z,30nm,0.8s						
435B	Jarrell	5.60	182	IAmb_Lg		04 50 16.0	
	comp=Z,19nm,0.9s						
L34A	Svendsen Farm,	5.61	7	Pn	Pn	04 48 32.4	-0.1
FVM	French Village	5.72	72	Pn	Pn	04 48 34.3	+0.3
FVM				IAmb_Lg		04 50 09.3	
	comp=Z,27nm,0.8s						
OGNE	Ogallala	5.86	322	Pn	Pn	04 48 36.0	0.0
OGNE				IAmb_Lg		04 50 23.0	
	comp=Z,35nm,0.7s						
PARMO	Parma	6.09	85	IAmb_Lg		04 50 29.9	
	comp=Z,47nm,0.8s						
JCT	Junction City	6.26	200	IAmb_Lg		04 50 32.2	
	comp=Z,30nm,0.9s						
K31A	O'Neill	6.32	350	IAmb_Lg		04 50 40.5	
	comp=Z,32nm,0.8s						
SCIA	State Center	6.36	29	IAmb_Lg		04 50 33.0	
	comp=Z,44nm,0.7s						
S44A	Carbondale	6.57	76	Pn	Pn	04 48 45.8	+0.2
S44A				IAmb_Lg		04 50 37.4	
	comp=Z,25nm,0.7s						
SIUC	Southern Illin	6.60	76	IAmb_Lg		04 50 36.0	
	comp=Z,23nm,0.7s						
N41A	Harden Midland	6.64	48	Pn	Pn	04 48 46.5	-0.1
SDCO	Great Sand Dun	6.69	284	Pn	Pn	04 48 47.2	-0.4
OXF	Oxford	6.71	104	IAmb_Lg		04 50 50.7	
	comp=Z,39nm,1.1s						
W45A	Hickory Valley	6.71	98	IAmb_Lg		04 50 52.5	
	comp=Z,24nm,0.8s						
P43A	Skaggs, Pawnee	6.95	60	IAmb_Lg		04 50 56.5	
	comp=Z,37nm,0.8s						
ISCO	Idaho Springs	7.38	300	Pn	Pn	04 48 56.8	-0.3
HDIL	Hopedale	7.53	54	IAmb_Lg		04 51 22.8	
	comp=Z,35nm,0.8s						
ANMO	Albuquerque	7.59	262	Pn	Pn	04 48 59.8	-0.1
	comp=Z,0.1nm,0.3s,baz=94,slow=13,SNR=1.6						
ANMO				Pg	Pb	04 49 26.1	+5.5
	comp=Z,0.4nm,0.3s,baz=81,slow=17,SNR=3.9						
ANMO				Lg	Lg	04 51 07.6	
	comp=Z,0.3nm,0.3s,baz=64,slow=8.3,SNR=2.5						
OLIL	Olney	7.68	70	IAmb_Lg		04 51 21.0	
	comp=Z,32nm,1.2s						
146A	Union	7.77	116	IAmb_Lg		04 51 36.2	
	comp=Z,14nm,0.8s						
PHWY	Pilot Hill	8.03	310	IAmb_Lg		04 51 30.2	
	comp=Z,17nm,1.0s						
SUSD	Miller	8.14	352	IAmb_Lg		04 51 38.4	
	comp=Z,17nm,0.8s						
L42A	Oliver, Polo	8.16	44	IAmb_Lg		04 51 33.2	
	comp=Z,32nm,0.9s						
I37A	Lemond, Waseca	8.18	20	IAmb_Lg		04 51 37.8	
	comp=Z,16nm,0.8s						
JFWS	Jewell Farm	8.48	38	IAmb_Lg		04 51 44.8	
	comp=Z,20nm,0.8s						
V48A	Smith Brothers	8.52	91	IAmb_Lg		04 51 38.8	
	comp=Z,15nm,1.1s						
X48A	Hartselle	8.60	100	IAmb_Lg		04 51 42.0	
	comp=Z,15nm,1.1s						
TXAR	Lajitas Array	8.84	219	Pn	Pn	04 49 16.6	-0.3
	comp=Z,0.1nm,0.3s,baz=39,slow=11,SNR=8.7						
TXAR				Pg	Pg	04 49 46.7	-11
	comp=Z,0.3nm,0.3s,baz=43,slow=15,SNR=6.6						
TXAR				Lg	Lg	04 51 47.2	
	comp=Z,0.7nm,0.3s,baz=39,slow=29,SNR=9.7						
PV12	Saucer Basin,	9.35	285	IAmb_Lg		04 52 19.0	
	comp=Z,11nm,1.3s						
W50A	Signal Mountai	9.82	93	IAmb_Lg		04 52 23.2	
	comp=Z,13nm,0.9s						
P48A	Milroy	9.87	68	IAmb_Lg		04 52 31.5	
	comp=Z,12nm,0.8s						
TKL	Tuckaleechee C	10.98	90	Pn	Pn	04 49 40.6	-5.6
	comp=Z,0.2nm,0.3s,baz=185,slow=11,SNR=2.0						
TKL				Lg	Lg	04 52 38.5	
	comp=Z,0.2nm,0.3s,baz=126,slow=22,SNR=2.3						
PDAR	Pinedale Array	11.39	308	Pn	Pn	04 49 50.6	-1.4
	comp=Z,0.1nm,0.3s,baz=107,slow=15,SNR=1.2						
PDAR				Pg		04 50 34.9	
	comp=Z,0.1nm,0.3s,baz=113,slow=15,SNR=2.7						
PDAR				Lg	Lg	04 53 01.7	
	comp=Z,0.2nm,0.3s,baz=113,slow=36,SNR=6.4						
NVAR	Mina Array Bea	16.81	283	Pn	Pn	04 51 05.0	+0.3
	comp=Z,0.0nm,0.3s,baz=92,slow=9.9,SNR=2.2						

ISK ***21*** *04:49:16.7, 37°.92N×26°.61E, h13^{km}, ML2.5/13*
DDA ***21*** *04:49:17.7, 37°.95N×26°.65E, h7^{km}±4^{km}, ML2.2*
THE ***21*** *04:49:18.3, 37°.94N×26°.69E, h12^{km}±1^{km}, ML2.3/3, Error ellipse: s-maj=1.3km s-min=0.4km az=93.0*
ISC 21 04:49:17.6±0.9**, 37°.94N**±0°.02×**26°.63E**±0°.03**, h15**^{km}±7^{km}**, n31, σ0**^{s}**.56**/48**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DGB	zmir	0.23	60	i P	Pg	04 49 22.6	-0.2
DGB				i S	Sg	04 49 25.9	-0.3
SMG	Samos	0.28	144	P	Pg	04 49 24.0	+0.4
SMG				S	Sg	04 49 28.1	+0.5
	568nm,0.3s						
ZEYE	Izmir, Urla-Ze	0.32	342	i P	Pb	04 49 24.8	-0.2
ZEYE				i S	Sg	04 49 28.9	+0.1
ZEYE				IAML		04 49 31.0	
	comp=N,291nm,0.4s						
URLA	Izmir	0.43	356	PG	Pg	04 49 25.9	-0.3
URLA				SG	Sb	04 49 32.7	-0.4
URLA	Izmir	0.43	356	i P	Pg	04 49 25.3	-0.9
URLA				i S	Sg	04 49 31.8	-0.3
GCAM	G?zelcaml?	0.53	116	PG	Pg	04 49 27.8	-0.3
GCAM	G?zelcaml?	0.53	116	i P	Pb	04 49 28.6	-0.1
GCAM				i S	Sg	04 49 34.3	-0.9
GCAM				IAML		04 49 36.0	
	comp=N,169nm,0.5s						
BLCB	Balcova	0.56	36	P	Pg	04 49 28.6	0.0
BLCB				S	Sb	04 49 36.2	-0.6
BLCB	Balcova	0.56	36	PG	Pg	04 49 28.5	0.0
BLCB				SG	Sb	04 49 37.1	+0.3
CHOS	Chios island	0.64	315	P	Pb	04 49 31.6	+1.1
CHOS				S	Sb	04 49 41.0	+1.7
	comp=N,302nm,0.3s						
CHOS	Chios island	0.64	315	PG	Pg	04 49 29.7	-0.5
DDIM	Aydin, Didim	0.68	134	i P	Pb	04 49 31.4	+0.3
DDIM				i S	Sb	04 49 40.3	0.0
DDIM				IAML		04 49 42.0	
	comp=N,244nm,0.6s						
DDIM				IAML		04 49 44.0	
	comp=E,112nm,0.4s						
FOCM	Foa	0.78	6	PG	Pb	04 49 33.0	+0.1
AYDB	Zeytinkoy-Aydi	1.00	89	PG	Pb	04 49 36.8	+0.2
BODT	Bodrum	1.03	148	P	Pb	04 49 37.0	-0.1
BODT				S	Sg	04 49 51.0	+0.2
BODT	Bodrum	1.03	148	PG	Pb	04 49 36.9	-0.1
BDRM	Kayabasi	1.08	143	i P	Pb	04 49 38.2	+0.2
BDRM				i S	Sb	04 49 52.1	+0.2
BDRM				IAML		04 49 54.0	
	comp=E,42nm,0.3s						
BDRM				IAML		04 49 56.0	
	comp=N,71nm,0.5s						
ZEDA	zmir-Bergama	1.09	19	i P	Pb	04 49 37.5	-0.6
ZEDA				i S	Sg	04 49 52.7	-0.2
MLSB	Milas	1.11	125	PN	Pb	04 49 38.8	+0.3
DKL	Dikili	1.16	11	PN	Pg	04 49 39.7	-0.2
APE	Apeiranthos	1.23	226	PN	Pn	04 49 39.6	-0.7
PRK	Paraskevi	1.34	348	P	Pn	04 49 41.2	-0.5
PRK				S	Sb	04 49 59.1	-0.2
	comp=N,168nm,0.6s						

AYVA	Ayvalik	1.37	2	iP	Pg	04 49 48.8	+4.7
SIGR	SIGRI	1.41	335	PN	Pn	04 49 42.8	+0.1
MULA	Mugla, Merkez-	1.50	116	iP	Pn	04 49 44.6	+0.5
MULA				iS	Sn	04 50 02.3	-1.2
BUHA	Balikesir, Bur	1.60	12	iP	Pn	04 49 45.9	+0.6
BUHA				iS	Sg	04 50 10.2	+0.9
BUHA				IAML		04 50 14.0	
	comp=E,32nm,0.5s						
MANT	Manisa	1.62	69	iP	Pg	04 49 48.4	-0.3
MANT				iS	Sb	04 50 07.8	+0.2
STEP	BALIKESIR_Sava	1.67	30	iP	Pg	04 49 50.2	+0.5
STEP				iS	Sg	04 50 11.8	+0.3
STEP				IAML		04 50 14.0	
	comp=N,46nm,0.8s						
STEP				IAML		04 50 17.0	
	comp=E,29nm,0.4s						
KULA	Kula-Manisa	1.70	69	PN	Pn	04 49 47.2	+0.4
TURN	Turunc	1.73	131	PN	Pn	04 49 47.3	+0.2
SIMA	Simav-Kutahya	2.17	57	PN	Pn	04 49 54.4	+1.1

IDC 21 04:59:10.0±3.7, 3°.84S×139°.78E, h0^{km}, mb3.5/2, mb1 3.9/4, mb1mx3.7/23, mbtmp3.7/4, ML3.9/2, Error ellipse: s-maj=111.8km s-min=32.3km az=91.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.86	198	Pn	Pn	05 03 06.8	-0.8
	0.6nm,0.3s,baz=19,slow=12,SNR=20						
WRA				Sn	Sn	05 06 02.0	-14
	0.1nm,0.3s,baz=16,slow=22,SNR=2.0						
FITZ	Fitzroy Crossi	19.81	223	P	P	05 03 42.0	-0.3
	0.1nm,0.3s,baz=29,slow=13,SNR=1.1						
FITZ				S	S	05 07 13.2	-13
	0.3nm,0.3s,baz=142,slow=17,SNR=1.5						
ASAR	Alice Springs	20.51	196	P	P	05 03 50.5	+0.5
	4.5nm,0.8s,baz=27,slow=9.1,SNR=40						
ASAR				S	S	05 07 31.5	-8.9
	0.6nm,0.8s,baz=14,slow=27,SNR=2.6						
MKAR	Makanchi Array	71.33	322	P	P	05 10 31.8	0.0
	0.1nm,0.4s,baz=103,slow=6.5,SNR=3.1						

IDC 21 05:22:43.7±0.7, 22°.87S×171°.61E, h0^{km}, mb4.4/16, mb1 4.5/18, mb1mx4.3/43, mbtmp4.3/18, ML3.7/2, MS3.4/10, Ms1 3.4/10, ms1mx3.2/25, Error ellipse: s-maj=25.2km s-min=17.1km az=162.0

NEIC 21 05:22:50.5±1.7, 22°.97S±0°.09×171°.50E±0°.08, h45^{km}±8^{km}, mb4.7/23, Error ellipse: s-maj=13.1km s-min=10.7km az=170.0

NOU 21 05:23:49.0, 22°.25S×166°.96E, h0^{km}, MLv1.8, New Caledonia

ISC 21 05:22:50.6±0.5, 22°.96S±0°.08×171°.48E±0°.06, h49^{km}, n123, σ1ˢ.21/118, mb4.5/25, MS3.4/8, 1C-20D, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OUENC	Ouen Island, N	4.32	276	P	Pn	05 23 52.9	-0.9
YATNC	Mamie plateau,	4.34	281	P	Pn	05 23 53.0	-1.1
ONTNC	Ouen Toro	4.69	277	P	Pn	05 23 58.1	-0.8
DZM	Mont Dzumac	4.74	280	Pn	Pn	05 23 58.5	-1.2
	6.5nm,0.3s,baz=276,slow=16,SNR=80						
DZM				Sn	Sn	05 24 54.2	+0.7
	10.0nm,0.3s,baz=330,slow=23,SNR=2.4						
DZM				LR	LR	05 25 20.7	
	comp=Z,86nm,18.9s,baz=210,slow=32						
DZM	Mont Dzumac	4.74	280	ePn	Pn	05 23 58.4	-1.3
	29nm,0.2s						
DZM				eSn	Sn	05 24 48.8	-4.7
	30nm,0.3s						
DZM				eLR	LR	05 24 56.4	
	comp=Z,183nm,24.9s						
DZM	Mont Dzumac	4.74	280		Pn	05 23 58.9	-0.8
DZM				Sn	Sn	05 24 52.6	-0.9
DZM	Mont Dzumac	4.74	280	P	Pn	05 23 58.8	-0.9
MSVF	Nonsavu	8.06	51	Pn	Pn	05 24 44.6	-0.6
SANVU	Saraoutou	8.50	331	Pn	Pn	05 24 52.3	+1.1
URZ	Urewera	15.99	164	Pn	Pn	05 26 31.7	-0.5
	0.2nm,0.3s,baz=328,slow=9.5,SNR=2.2						
URZ				LR	LR	05 31 13.2	
	comp=Z,281nm,21.6s,baz=31,slow=32						
URZ	Urewera	15.99	164	Pn	Pn	05 26 31.9	-0.4
QRZ	Quartz Range	17.83	177	P	P	05 26 56.4	+1.0
QRZ				IAmb	IAmb	05 26 58.3	
	comp=Z,77nm,1.4s						
AFI	Afiamalu	18.24	63	P	P	05 26 57.2	-2.9
AFI				IAmb	IAmb	05 26 58.8	
	comp=Z,68nm,1.1s						
RPZ	Rata Peaks	20.70	181	P	P	05 27 26.2	-0.5
	comp=Z,15nm,1.0s,baz=71,slow=7.9,SNR=3.1						
RPZ				LR	LR	05 33 48.8	
	comp=Z,254nm,21.8s,baz=312,slow=32						
RAR	Rarotonga	26.67	92	LR	LR	05 38 54.7	
	comp=Z,40nm,18.7s,baz=242,slow=37						
PMG	Port Moresby	26.91	296	P	P	05 28 27.5	+0.2
	comp=Z,6.2nm,0.4s,baz=133,slow=8.5,SNR=3.6						
PMG				LR	LR	05 37 20.2	
	comp=Z,48nm,19.4s,baz=202,slow=32						
STKA	Stephens Creek	27.91	245	P	P	05 28 37.4	+1.2
	comp=Z,2.6nm,0.7s,baz=89,slow=11,SNR=6.0						
STKA				LR	LR	05 38 38.4	
	comp=Z,95nm,18.3s,baz=40,slow=34						
STKA	Stephens Creek	27.91	245	P	P	05 28 38.2	+2.0
BBOO	Buckleboo	32.68	245	P	P	05 29 18.9	+0.6
AS31	Alice Springs	34.45	261	P	P	05 29 34.4	+0.5
ASAR	Alice Springs	34.45	261	P	P	05 29 34.2	+0.3
	comp=Z,2.5nm,0.8s,baz=84,slow=8.2,SNR=19						
WR0	Warramunga Arr	34.45	268	P	P	05 29 33.7	-0.2
WR0				IAmb	IAmb	05 29 50.9	
	comp=Z,7.8nm,1.2s						
WB0	Warramunga Arr	34.63	268	P	P	05 29 35.2	-0.2
WB2	Warramunga Arr	34.63	268	P	P	05 29 35.2	-0.2
WRA	Warramunga Arr	34.64	268	P	P	05 29 34.7	-0.8
	comp=Z,1.7nm,0.8s,baz=99,slow=8.6,SNR=14						
WRA	Warramunga Arr	34.64	268	P	P	05 29 35.4	-0.2
FITZ	Fitzroy Crossi	43.07	268	P	P	05 30 47.3	+1.2
MORW	Morawa	49.82	251	P	P	05 31 38.3	-0.7
VNDA	Vanda	54.81	183	LR	LR	05 52 14.5	
	comp=Z,37nm,20.4s,baz=1.0,slow=32						
KSM	Kuching	64.26	284	P	P	05 33 21.8	+0.6
KSM				IAmb	IAmb	05 33 24.5	
	comp=Z,7.4nm,0.9s						
MJAR	Matsushiro Arr	67.01	331	LR	LR	06 03 12.1	
	comp=Z,11nm,18.7s,baz=10.0,slow=36						
SSLB	Suanglung	67.60	310	P	P	05 33 41.9	-0.7
SSLB				IAmb	IAmb	05 33 46.5	
	comp=Z,7.9nm,0.8s						
JSD	Sado	68.24	332	P	P	05 33 46.6	+0.4
JSD				IAmb	IAmb	05 33 46.6	
	comp=Z,9.9nm,0.9s						
KSRS	Korea Array	72.75	325	P	P	05 34 14.2	+0.5
	comp=Z,2.0nm,0.8s,baz=155,slow=7.0,SNR=5.1						
KSAR	Wonju Array Be	72.76	325	P	P	05 34 15.2	+1.4
PETK	Petropavlovsk-	76.69	352	P	P	05 34 35.3	-0.8
	comp=Z,3.4nm,0.9s,baz=212,slow=5.1,SNR=2.5						
PETK				LR	LR	06 05 37.9	
	comp=Z,32nm,18.5s,baz=120,slow=34						
KLR	Kul'dur	80.11	335	P	P	05 34 56.0	+0.9
	comp=Z,1.1nm,0.7s,baz=89,slow=3.5,SNR=3.2						
SUKH	Sukhothai	80.90	293	P	P	05 35 02.0	+1.9
CM35	Chiang Mai Arr	81.85	294	P	P	05 35 07.0	+1.9
CM04	Chiang Mai Arr	81.87	294	P	P	05 35 08.2	+2.9
CM01	Chiang Mai Arr	81.90	294	P	P	05 35 10.0	+4.6
CM05	Chiang Mai Arr	81.90	294	P	P	05 35 08.2	+2.9
CM02	Chiang Mai Arr	81.92	294	P	P	05 35 10.0	+4.5
CMAR	Chiang Mai Arr	81.93	294	P	P	05 35 07.5	+2.0
	comp=Z,2.6nm,0.3s,baz=130,slow=3.9,SNR=14						
CM13	Chiang Mai Arr	81.94	294	P	P	05 35 08.0	+2.4
SYO	Syowa Base	81.94	196	⇑eP	P	05 35 05.6	+0.9
CMMT	Chiang Mai	82.09	294	P	P	05 35 07.8	+1.4
CHTO	Chiang Mai	82.09	294	P	P	05 35 07.2	+0.8
CHTO				IAmb	IAmb	05 35 09.5	
	comp=Z,8.1nm,0.8s						
CM33	Chiang Mai Arr	82.09	294	P	P	05 35 08.0	+1.6
SEY	Seymchan	86.94	351	P	P	05 35 28.8	-1.0
	comp=Z,1.2nm,0.7s,baz=152,slow=2.6,SNR=5.5						
ISA	Isabella, Lake	88.22	50	P	P	05 35 35.8	-1.0
ISA				IAmb	IAmb	05 36 04.4	
	comp=Z,2.6nm,0.8s						
YBH	Yreka Blue Hor	88.54	43	P	P	05 35 38.1	0.0
	comp=Z,2.7nm,0.7s,baz=272,slow=4.1,SNR=8.7						
SLBS	Sierra La Lagu	89.29	64	P	P	05 35 43.0	+1.0
YERR	Yerington	89.36	47	P	P	05 35 42.5	+0.3
YERR				IAmb	IAmb	05 35 44.4	
	comp=Z,4.0nm,1.0s						
LHV	Little Huntoon	89.49	48	P	P	05 35 41.6	-1.0
LHV				IAmb	IAmb	05 35 58.0	
	comp=Z,4.6nm,1.1s						
PAHR	Pah Rah Range	89.63	46	P	P	05 35 43.4	0.0
PAHR				IAmb	IAmb	05 35 50.7	
	comp=Z,5.7nm,1.1s						
NVAR	Mina Array Bea	89.72	48	P	P	05 35 44.0	0.0
	comp=Z,1.4nm,0.7s,baz=226,slow=7.9,SNR=16						
NVAR	Mina Array Bea	89.72	48	P	P	05 35 44.1	+0.2
NV11	Mina Array Sit	89.82	48	P	P	05 35 44.7	+0.4
NV11				IAmb	IAmb	05 35 46.5	
	comp=Z,2.9nm,0.8s						
PINE	Pine Mountain	90.74	42	P	P	05 35 49.0	+0.5
SONM	Songino Array	91.44	322	P	P	05 35 52.6	+1.0
	comp=Z,1.9nm,0.4s,baz=146,slow=8.0,SNR=3.6						
ELK	Elko	92.91	47	P	P	05 35 58.4	-0.3
	comp=Z,0.8nm,0.5s,baz=221,slow=4.2,SNR=4.2						
ILAR	Eielson Array	93.17	17	P	P	05 35 57.2	-1.8
	comp=Z,0.4nm,0.9s,baz=230,slow=5.3,SNR=5.1						
TXAR	Lajitas Array	96.71	61	P	P	05 36 15.6	-0.6
	comp=Z,0.3nm,0.7s,baz=191,slow=6.0,SNR=4.2						
PDAR	Pinedale Array	97.61	47	LR	LR	06 21 00.0	
	comp=Z,27nm,18.1s,baz=334,slow=36						
ARU	Arti	121.47	323	PKP	PKPdf	05 41 38.0	-0.2
	comp=Z,1.2nm,0.2s,baz=96,slow=1.4,SNR=5.5						
ARCES	ARCESS Array B	129.18	345	PKP	PKPdf	05 41 51.7	-0.9
	comp=Z,4.0nm,1.0s,baz=356,slow=3.6,SNR=5.8						
AKASG	Malin Array Be	139.72	323	PKhKP	PKPpre	05 42 05.3	
	comp=Z,0.4nm,0.4s,baz=53,slow=2.7,SNR=4.0						
BRTR	Keskin Array B	140.71	305	PKP	PKPdf	05 42 15.2	0.0
	comp=Z,0.6nm,0.6s,baz=118,slow=2.1,SNR=4.0						
VRI	Vrincioaia	143.47	317	⇓P	PKPdf	05 42 19.3	-0.5
PLOR	Plostina	143.52	317	⇓P	PKPbc	05 42 18.4	+1.1
BURAR	Bucovina Array	143.54	321	⇓P	PKPdf	05 42 19.2	-0.7
MLR	Muntele Rosu	144.12	317	⇓P	PKPab	05 42 18.7	-0.1
DOPR	Dopca	144.25	318	⇓P	PKPbc	05 42 19.2	-0.2
ARCR	ARCALIA	144.31	321	⇓P	PKPdf	05 42 21.2	0.0
KOLS	Kolonicke sedl	144.47	324	eP	PKPdf	05 42 20.7	-0.7
BMR	Baia Mare	144.50	322	⇓P	PKPbc	05 42 20.3	+0.2
VOIR		144.71	318	⇓P	PKPdf	05 42 21.6	-0.5
CRVS	Cervenica-Dubn	144.92	325	eP	PKPdf	05 42 22.6	+0.4
CJR	Cluj-Napoca	144.95	320	⇓P	PKPdf	05 42 23.0	+0.6
ARR	Arges	145.00	318	⇓P	PKPdf	05 42 23.4	+0.9
HUMR	Humele	145.17	316	⇓P	PKPdf	05 42 22.9	+0.1
DRGR		145.43	321	⇓P	PKPdf	05 42 23.0	-0.2
KECS	Kecovo	145.68	325	eP	PKPab	05 42 24.8	+0.5
LANS	Liptovska Anna	145.79	327	eP	PKiKP	05 42 31.0	+3.2
PLVB	Pleven	145.91	315	⇓P	PKPab	05 42 25.5	+0.2
GZR	Gura Zlata	146.12	319	⇓P	PKPbc	05 42 25.4	0.0
MORC	Moravsky Berou	146.32	329	⇓P	PKPbc	05 42 26.0	+0.1
MORC	Moravsky Berou	146.32	329	ePKP	PKPab	05 42 27.2	+0.5
OSTC	Ostas	146.38	331	ePKP	PKiKP	05 42 28.2	-0.8
CHVC	Chvalec	146.43	331	ePKP	PKPab	05 42 26.6	-0.5
DPC	Dobruska-Polom	146.48	331	ePKP	PKPab	05 42 27.1	-0.2
UPC	Upice	146.51	331	ePKP	PKPab	05 42 27.2	-0.2
HERR	Herculane	146.60	318	⇓P	PKPbc	05 42 27.2	+0.5
BZS	Buzias	146.70	320	⇓P	PKPbc	05 42 27.3	+0.3
JAVC	Velka Javorina	146.88	328	ePKP	PKPab	05 42 29.0	+0.1
VRAC	Vranov	147.09	329	⇓P	PKPdf	05 42 26.9	+1.0
VRAC	Vranov	147.09	329	ePKP	PKPbc	05 42 28.7	+0.7
PVCC	Panska Ves	147.12	333	ePKP	PKiKP	05 42 30.9	+0.4
BRG	Berggiesshubel	147.12	334	iP	PKPbc	05 42 28.7	+0.7
BRG				Amp		05 42 31.2	
	comp=Z,8.4nm,0.8s						
CLL	Collm	147.16	335	iPKPbc	PKPab	05 42 29.9	+0.1
	comp=Z,9.0nm,0.7s						
VTS	Vitosha	147.16	314	⇓P	PKPbc	05 42 28.2	-0.4
KRUC	Moravsky	147.36	329	ePKP	PKPbc	05 42 29.1	+0.3
MODS	Modra-Piesok	147.40	327	eP	PKPab	05 42 30.7	-0.2
PRU	Pruhonice	147.53	332	ePKP	PKPbc	05 42 29.8	+0.6
PBCC	Pribram	147.99	332	ePKP	PKPbc	05 42 30.9	+0.4
FRGS	Fruska Gora	148.01	321	⇓P	PKPbc	05 42 29.7	-1.0
CONA	Conrad Observa	148.40	328	eP	PKPbc	05 42 32.3	+0.6
	comp=Z,4.0nm,0.7s,SNR=4.4						
CKRC	Cesky Krumlov	148.49	331	ePKP	PKPbc	05 42 32.2	+0.3
KHC	Kasperske Hory	148.59	332	ePKP	PKPbc	05 42 32.6	+0.5
GERES	GERESS Array B	148.75	331	PKPbc	PKPbc	05 42 32.9	+0.2
	comp=Z,2.0nm,0.5s,baz=52,slow=2.5,SNR=18						
MOA	Molln	149.22	329	eP	PKPbc	05 42 34.0	+0.3
	comp=Z,5.3nm,1.3s						
SOKA	Soboth	149.66	327	iP	PKPbc	05 42 35.0	+0.1
	comp=Z,7.1nm,0.8s						
KBA	Koelnbreinsper	150.21	329	iP	PKPbc	05 42 36.0	-0.4
	comp=Z,5.4nm,0.7s						
MYKA	Terra Mystica	150.39	328	iP	PKPbc	05 42 36.2	-0.5
	comp=Z,4.2nm,0.6s						
WATA	Walderalm	150.82	331	iP	PKPbc	05 42 37.6	-0.1
	comp=Z,5.3nm,0.6s						
ABTA	Abfaltersbach	150.84	330	iP	PKPbc	05 42 37.3	-0.5
	comp=Z,4.5nm,0.6s,SNR=8.3						
WTTA	Wattenberg	150.85	331	iP	PKPbc	05 42 38.0	+0.1
	comp=Z,5.7nm,0.6s						
MOTA	Moosalm	151.02	332	iP	PKPbc	05 42 38.3	0.0
	comp=Z,4.4nm,0.7s,SNR=4.9						
RETA	Reutte	151.06	332	eP	PKiKP	05 42 38.5	-0.3
	comp=Z,7.8nm,1.3s						
SQTA	Sankt Quirin	151.07	332	eP	PKPbc	05 42 38.5	+0.2
	comp=Z,6.3nm,0.6s,SNR=5.7						
FETA	Feichten	151.44	332	eP	PKiKP	05 42 39.5	-0.2
	comp=Z,2.9nm,0.6s						
DAVA	Damuels	151.59	333	iP	PKPbc	05 42 38.7	-0.8
	comp=Z,9.7nm,1.6s						

IDC 21 05:48:21.0±2.8, 15°.14S×167°.73E, h0^{km}, mb4.0/5, mb1 4.2/5, mb1mx3.9/19, mbtmp4.0/5, Error ellipse: s-maj=112.1km s-min=31.5km az=136.0

NOU 21 05:48:36.2, 15°.33S×167°.63E, h120^{km}, mb4.5, Vanuatu Islands

ISC 21 05:48:35.8±1.4, 15°.3S±0°.1×167°.7E±0°.2, h124^{km}, n12, σ0ˢ.75/11, mb3.9/4, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.46	256	P	Pn	05 48 54.9	+1.0
DVP	Devils Point	2.42	168	P	Pn	05 49 15.7	+0.9
KOUNC	Koumac, New Ca	6.10	211	P	Pn	05 50 04.2	+0.6
YATNC	Mamie plateau,	6.72	186	P	Pn	05 50 11.2	-0.8
DZM	Mont Dzumac	6.80	190	P	Pn	05 50 13.1	0.0
ONTNC	Ouen Toro	7.03	189	P	Pn	05 50 16.8	+0.7
OUENC	Ouen Island, N	7.09	186	P	Pn	05 50 17.5	+0.6
STKA	Stephens Creek	28.90	231	P	P	05 54 23.3	+0.2
	1.2nm,0.3s,baz=60,slow=20,SNR=4.0						
WRA	Warramunga Arr	32.06	257	P	P	05 54 50.5	-0.6
	1.0nm,0.5s,baz=86,slow=8.9,SNR=8.5						
ASAR	Alice Springs	32.82	250	P	P	05 54 57.4	-0.4
	3.2nm,0.6s,baz=79,slow=8.8,SNR=30						
ILAR	Eielson Array	86.98	18	P	P	06 01 06.2	-0.4
	0.2nm,0.8s,baz=222,slow=4.9,SNR=4.6						
MKAR	Makanchi Array	97.91	316	P	Pdif	06 01 59.7	+2.1
	0.1nm,0.3s,baz=84,slow=5.5,SNR=2.8						

TRN 21 06:11:06.5, 16°.39N×61°.66W, h149^{km}, MD4.1

IDC 21 06:11:08.0±3.8, 16°.19N×61°.83W, h159^{km}±27^{km}, mb3.1/6, mb1 3.4/7, mb1mx3.2/38, mbtmp3.5/7, Error ellipse: s-maj=87.1km s-min=26.8km az=18.0

ISC 21 06:11:07.3±0.8, 16°.37N±0°.05×61°.67W±0°.07, h152^{km}±5^{km}, n46, σ0ˢ.69/71, mb3.4/6, 5C, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABD	La Joyeuse, An	0.20	60	eP	Pn	06 11 28.1	+0.3
ABD				eS	Sn	06 11 43.0	-0.4
CBE	Ff, Capester	0.31	168	eP	Pn	06 11 28.5	+0.3
CBE				eS	Sn	06 11 44.2	+0.2
TBG	Guadaloupe-3	0.52	177	eP	Pn	06 11 29.3	+0.2
TBG				eS	Sn	06 11 45.7	+0.2
TDBA	Terre de Bas,	0.52	176	eP	Pn	06 11 29.5	+0.4
TDBA				eS	Sn	06 11 45.6	0.0
MAGL	Barre de l'ile	0.56	138	eP	Pn	06 11 29.5	+0.3
MAGL				eS	Sn	06 11 45.5	-0.4
MLYT	Lee's Yard	0.61	305	eP	Pn	06 11 29.9	+0.4
MLYT				eS	Sn	06 11 46.1	-0.4
ANBD	Bethesda, Anti	0.68	352	eP	Pn	06 11 30.1	+0.2
ANBD				eS	Sn	06 11 45.8	-1.4
BPA	Boggy Peak	0.69	345	iP	Pn	06 11 30.2	+0.1
BPA				eS	Sn	06 11 46.2	-1.2
MDVC	Dominica, Viel	0.80	161	eP	Pn	06 11 31.0	+0.3
MDVC				eS	Sn	06 11 48.0	-0.6
DSLB	Salisbury	0.96	165	eP	Pn	06 11 32.3	+0.3
DSLB				eS	Sn	06 11 50.9	0.0
DLPL	La Plaine	1.11	158	eP	Pn	06 11 33.6	+0.3
DLPL				eS	Sn	06 11 52.9	-0.2
ANWB	Willy Bob	1.29	355	eP	Pn	06 11 34.9	0.0
ANWB				eS	Sn	06 11 54.7	-1.5
SKOC	St. Kitts, UWI	1.37	312	eP	Pn	06 11 36.0	+0.3
SKOC				eS	Sn	06 11 56.7	-0.7
SKI	Saint Kitts	1.40	313	eP	Pn	06 11 36.4	+0.4
SVN	Savane Anatole	1.60	162	eP	Pn	06 11 38.3	+0.1
PCM	Pelee Case Pet	1.61	164	⇑eP	Pn	06 11 38.2	-0.1
PCM	Pelee Case Pet	1.61	164	eP	Pn	06 11 39.8	+1.6
CXM	Morne La Croix	1.62	163	eP	Pn	06 11 39.0	+0.4
BAMF	Morne Balai	1.63	162	⇑eP	Pn	06 11 38.6	+0.1
GBMF	Grand Be	1.64	163	eP	Pn	06 11 38.6	-0.1
PML	Morne Lenard	1.65	163	eP	Pn	06 11 38.7	0.0
SEUS	St. Eustatius	1.68	312	eP	Pn	06 11 39.1	+0.1
SEUS				eS	Sn	06 12 03.5	+0.2
FDF	Fort de France	1.70	163	eP	Pn	06 11 39.3	0.0
FDF				eS	Sn	06 12 03.0	-0.9
ILAM	Ilet Lapin Mar	1.76	154	eP	Pn	06 11 39.6	-0.3
ILAM				eS	Sn	06 12 03.8	-1.2
ZAM	Aeronautique	1.89	161	⇑eP	Pn	06 11 41.2	-0.2
TRMF	Trois Ilets	1.92	162	⇑eP	Pn	06 11 41.8	+0.1
BIM	Bigot	1.93	162	eP	Pn	06 11 42.0	+0.1
BIM				eS	Sn	06 12 08.0	-0.5
SABA	Saba	1.95	310	eP	Pn	06 11 42.0	0.0
SABA				eS	Sn	06 12 07.6	-1.1
MVM	Montagne Vaucl	1.96	157	⇑eP	Pn	06 11 42.0	-0.1
MPOM	Morne Pois Mar	2.07	158	eP	Pn	06 11 43.1	-0.3
MPOM				eS	Sn	06 12 10.1	-1.1
SLBI	Saint Lucia, B	2.43	164	eP	Pn	06 11 47.3	-0.5
SLBI				eS	Sn	06 12 17.4	-1.5
SLW	Petit Monier	2.44	163	eP	Pn	06 11 48.7	+0.7
SLW				eS	Sn	06 12 19.1	-0.1
SLPA	Patience	2.61	164	eP	Pn	06 11 50.7	+0.8
SLPA				eS	Sn	06 12 22.7	-0.1
MCLT	Moule a Chique	2.74	165	eP	Pn	06 11 51.4	-0.1
MCLT				eS	Sn	06 12 25.1	-0.6
SVV	Soufriere Volc	3.07	172	eP	Pn	06 11 55.6	-0.1
SVB	Belmont	3.11	172	eP	Pn	06 11 55.6	-0.7
BCHC	Barbados, Cave	3.78	148	eS	Sn	06 12 48.0	-1.3
BBGH	Gun Hill	3.81	147	eP	Pn	06 12 06.1	+1.0
BBGH				eS	Sn	06 12 48.1	-1.9
BBSP	Saint Philip	3.89	146	eS	Sn	06 12 51.1	-0.9
SJG	San Juan	4.62	293	P	Pn	06 12 15.4	-0.3
	1.3nm,0.3s,baz=214,slow=10,SNR=1.7						
SJG				S	Sn	06 13 08.8	-0.2
	5.0nm,0.3s,baz=301,slow=21,SNR=9.7						
TXAR	Lajitas Array	40.58	296	P	P	06 18 30.9	-1.5
	0.2nm,0.4s,baz=114,slow=6.8,SNR=5.6						
PDAR	Pinedale Array	48.43	313	P	P	06 19 35.0	+0.5
	0.7nm,0.6s,baz=121,slow=9.6,SNR=7.4						
NVAR	Mina Array Bea	53.98	306	P	P	06 20 16.7	+0.7
	0.3nm,0.6s,baz=90,slow=6.3,SNR=2.8						
YKA	Yellowknife Ar	58.89	334	P	P	06 20 50.2	+0.2
	0.5nm,0.6s,baz=107,slow=7.9,SNR=9.2						
TORD	Torodi Ar. Bea	61.15	84	P	P	06 21 07.3	+1.1
	0.6nm,0.5s,baz=295,slow=5.3,SNR=2.8						
ILAR	Eielson Array	73.30	334	P	P	06 22 22.2	+0.3
	0.1nm,0.4s,baz=81,slow=5.7,SNR=2.2						

IDC 21 06:13:15.7±2.6, 15°.12N×93°.70W, h0^{km}, mb3.4/2, mb1 3.9/6, mb1mx3.6/42, mbtmp3.6/6, ML3.7/4, MS3.2/3, Ms1 3.2/3, ms1mx2.7/29, Error ellipse: s-maj=45.7km s-min=26.0km az=30.0

MEX 21 06:13:17.1±0.9, 14°.81N×93°.73W, h54^{km}±47^{km}, MD4.3

GCG 21 06:13:20.7±0.6, 14°.99N×93°.58W, h92^{km}, MD4.2

SNET 21 06:13:21.2±1.3, 14°.73N×93°.42W, h34^{km}±117^{km}, ML3.9

UCR 21 06:13:21.7±1.3, 14°.71N×93°.39W, h48^{km}±93^{km}, ML3.6

ISC 21 06:13:12.9±2.5, 14°.76N±0°.06×93°.79W±0°.05, h7^{km}±15^{km}, n31, σ2ˢ.29/44, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		1.09	30	eP	Pb	06 13 34.0	0.0
PCIG				eS	Sg	06 13 46.8	-1.1
THIG		1.48	84	eP	Pn	06 13 39.5	-0.3
THIG				eS	Sn	06 13 55.0	-4.5
RTAL	Retalhuleu	2.04	96	eP	Pn	06 13 47.8	+0.2
RTAL				eS	Sn	06 14 09.5	-3.8
TGIG		2.11	18	eP	Pb	06 13 50.1	-1.3
TGIG				eS	Sn	06 14 14.8	-0.3
TGBT	Tuxtla Gutierr	2.12	18	iP	Pb	06 13 50.5	-1.1
TGBT				iS	Sn	06 14 13.7	-1.5
CCIG	Comitan	2.20	46	eP	Pb	06 13 52.2	-0.8
CCIG				eS	Sn	06 14 17.1	-0.3
HUEH	Huehuetenango	2.28	76	eP	Pn	06 13 53.0	+2.0
HUEH				eS	Sn	06 14 17.5	-2.0
HUIG	Huatulco	2.46	294	eP	Pn	06 13 53.0	-0.3
CMIG	Matias Romero	2.55	336	Pn	Pn	06 13 55.0	+0.4
	10nm,0.3s,baz=154,slow=13,SNR=133						
CMIG				Sn	Sn	06 14 23.5	-2.4
	23nm,0.3s,baz=138,slow=14,SNR=5.7						
CMIG				LR	LR	06 14 47.5	
	comp=Z,13nm,21.1s,baz=145,slow=40						
CMIG	Matias Romero	2.55	336	iP	Pn	06 13 54.8	+0.2
CMIG				eS	Sn	06 14 22.9	-3.0
PCG	Pacaya	3.10	96	eP	Pb	06 14 07.0	-1.5
PCG				eS	Sn	06 14 42.7	+2.9
NBG	Las Nubes	3.33	92	eP	Pn	06 14 09.2	+3.5
MRL	Marmol	3.98	85	eP	Pn	06 14 18.1	+3.6
CEVE	Cerro Verde	4.14	102	eP	Pn	06 14 19.2	+2.5
CEVE				eS	Sn	06 15 03.0	-2.6
CEVE				IAML		06 15 25.7	
	comp=Z,468nm,0.4s						
CEVE	Cerro Verde	4.14	102	eP	Pn	06 14 19.2	+2.5
CEVE				eS	Sn	06 15 03.0	-2.6
CEVE				IAML		06 15 25.7	
	comp=Z,468nm,0.4s						
PETF	Flores	4.34	60	eP	Pn	06 14 21.9	+2.7
PETF				eS	Sn	06 15 07.5	-2.7
JAYA	Jayaque - finc	4.35	104	eP	Pn	06 14 19.9	+0.3
JAYA				eS	Sn	06 15 06.5	-4.1
JAYA	Jayaque - finc	4.35	104	eP	Pn	06 14 19.9	+0.3
JAYA				eS	Sn	06 15 06.5	-4.1
PMON	Piamonte	4.46	103	eP	Pn	06 14 22.4	+1.4
PMON	Piamonte	4.46	103	eP	Pn	06 14 22.4	+1.4
COEG	Centro de Oper	4.89	103	eP	Pn	06 14 28.3	+1.4
COEG				IAML		06 15 47.9	
	comp=Z,117nm,0.7s						
COEG	Centro de Oper	4.89	103	eP	Pn	06 14 28.3	+1.4
COEG				IAML		06 15 47.9	
	comp=Z,117nm,0.7s						
LCND	La Caada	5.90	103	eP	Pn	06 14 42.7	+1.9
LCND	La Caada	5.90	103	eP	Pn	06 14 42.7	+1.9
TEIG	Tepich	7.56	43	Pn	Pn	06 15 04.2	+0.7
	comp=Z,12nm,0.3s,baz=218,slow=3.0,SNR=49						
TEIG				Sn	Sn	06 16 26.0	-3.5
	comp=Z,4.5nm,0.3s,baz=51,slow=20,SNR=7.4						
TEIG				LR	LR	06 18 30.9	
	comp=Z,144nm,19.0s,baz=270,slow=44						
JTS	Las Juntas de	9.70	116	Pn	Pn	06 15 38.2	+5.3
	comp=Z,0.5nm,0.3s,baz=347,slow=23,SNR=0.9						
TXAR	Lajitas Array	17.14	329	Pn	P	06 17 16.4	+1.7
	comp=Z,0.0nm,0.3s,baz=153,slow=12,SNR=2.8						
TKL	Tuckaleechee C	22.67	22	LR	LR	06 29 18.4	
	comp=Z,38nm,18.1s,baz=188,slow=43						
NVAR	Mina Array Bea	32.00	322	P	P	06 19 42.5	+2.4
	comp=Z,0.3nm,0.5s,baz=124,slow=8.8,SNR=2.9						
BBB	Bella Bella	46.26	331	LR	LR	06 40 48.7	
	comp=Z,44nm,18.3s,baz=256,slow=36						
YKA	Yellowknife Ar	49.91	348	P	P	06 22 07.0	+0.2
	comp=Z,0.5nm,0.7s,baz=149,slow=7.9,SNR=7.8						

IDC 21 06:26:56.2±2.0, 15°.07N×93°.78W, h0^{km}, mb3.8/5, mb1 4.0/9, mb1mx3.7/44, mbtmp3.8/9, ML3.7/4, MS3.0/1, Ms1 3.0/1, ms1mx2.3/40, Error ellipse: s-maj=56.7km s-min=19.7km az=42.0

MEX 21 06:26:57.7±1.2, 14°.70N×93°.73W, h26^{km}±41^{km}, MD4.4

GCG 21 06:27:05.3±0.7, 14°.88N×93°.33W, h35^{km}±999^{km}, MD4.1

ISC 21 06:26:59.0±0.9, 14°.84N±0°.07×93°.78W±0°.04, h33^{km}, n19, σ2ˢ.36/29, mb3.6/5, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		1.01	32	iP	Pn	06 27 15.3	-1.5
PCIG				eS	Sn	06 27 27.8	-2.2
THIG		1.46	87	eP	Pn	06 27 18.3	-4.8

THIG				i S	Sn	06 27 34.7	-6.4
TGIG		2.02	18	eP	Pn	06 27 31.5	+0.7
TGIG				eS	Sn	06 27 56.3	+1.3
CCIG	**Comitan**	2.13	48	eP	Pn	06 27 33.3	+0.8
CCIG				i S	Sn	06 27 59.2	+1.4
HUIG	**Huatulco**	2.43	293	eP	Pn	06 27 34.8	-1.6
HUIG				i S	Sn	06 28 02.9	-2.1
CMIG	**Matias Romero**	2.48	335	Pn	Pn	06 27 36.2	-0.8
	13nm,0.3s,baz=155,slow=12,SNR=114						
CMIG				Sn	Sn	06 28 04.6	-1.5
	27nm,0.3s,baz=142,slow=13,SNR=8.4						
CMIG	**Matias Romero**	2.48	335	i P	Pn	06 27 36.1	-0.8
CMIG				i S	Sn	06 28 05.6	-0.5
FUG	**Fuego 3**	2.87	98	eP	Pn	06 27 43.6	+1.0
FUG				eS	Sn	06 28 13.0	-3.1
PCG	**Pacaya**	3.10	98	eP	Pn	06 27 46.6	+0.7
PCG				eS	Sn	06 28 19.8	-2.1
NBG	**Las Nubes**	3.33	94	eP	Pn	06 27 50.6	+1.6
MRL	**Marmol**	3.96	86	eP	Pn	06 27 58.6	+0.9
TEIG	**Tepich**	7.49	44	Pn	Pn	06 28 45.5	-0.5
	10nm,0.3s,baz=225,slow=5.9,SNR=25						
TEIG				Sn	Sn	06 30 06.5	-3.4
	7.2nm,0.3s,baz=45,slow=21,SNR=7.7						
TEIG				LR	LR	06 32 11.9	
	comp=Z,106nm,20.1s,baz=298,slow=43						
JTS	**Las Juntas de**	9.73	117	Pn	Pn	06 29 20.4	+3.7
	0.6nm,0.3s,baz=38,slow=23,SNR=2.1						
TXAR	**Lajitas Array**	17.07	329	Pn	Pn	06 30 54.1	-1.2
	0.0nm,0.3s,baz=141,slow=12,SNR=1.9						
ROSC	**El Rosal**	21.57	115	P	P	06 31 49.0	+2.6
	7.7nm,0.4s,baz=288,slow=18,SNR=5.7						
NVAR	**Mina Array Bea**	31.94	322	P	P	06 33 24.3	+2.3
	0.3nm,0.6s,baz=136,slow=9.6,SNR=4.7						
YKA	**Yellowknife Ar**	49.82	348	P	P	06 35 48.3	-0.2
	0.5nm,0.8s,baz=151,slow=7.5,SNR=6.2						
ILAR	**Eielson Array**	61.39	337	P	P	06 37 10.8	-0.7
	0.2nm,0.6s,baz=129,slow=7.2,SNR=1.9						
ARCES	**ARCESS Array B**	85.87	18	P	P	06 39 36.1	+1.0
	3.3nm,1.1s,baz=297,slow=6.0,SNR=3.7						

IDC ***21*** *06:29:22.9±3.2, 17°.81S×178°.50W, h551km±36km, mb3.5/8, mb1 3.8/8, mb1mx3.4/36, mbtmp4.4/8, Error ellipse: s-maj=76.1km s-min=15.3km az=150.0*

ISC 21 06:29:25.2±1.4**, 17°.8S**±0°.6×**178°.6W**±0°.4**, h579**km**, n8,** σ**1^{s}.05**/10**, mb3.9**/8**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	38.55	241	P	P	06 35 58.9	-0.5
	4.6nm,0.6s,baz=99,slow=10,SNR=12						
WRA	**Warramunga Arr**	44.50	259	P	P	06 36 46.3	-0.1
	4.3nm,0.5s,baz=98,slow=6.7,SNR=123						
ASAR	**Alice Springs**	44.67	254	P	P	06 36 47.6	-0.1
	23nm,0.5s,baz=88,slow=8.8,SNR=419						
ASAR				PcP	PcP	06 38 17.5	-0.2
	0.3nm,0.4s,baz=101,slow=3.7,SNR=1.9						
ASAR				ScP	ScP	06 41 17.8	+2.5
	0.3nm,0.7s,baz=91,slow=3.7,SNR=2.3						
NVAR	**Mina Array Bea**	79.45	44	P	P	06 40 32.8	+0.2
	1.8nm,0.7s,baz=223,slow=9.0,SNR=21						
ILAR	**Eielson Array**	85.81	13	P	P	06 41 03.6	0.0
	0.5nm,0.5s,baz=221,slow=5.0,SNR=10						
TXAR	**Lajitas Array**	86.07	58	P	P	06 41 06.0	+0.2
	2.7nm,0.8s,baz=222,slow=6.3,SNR=28						
ANMO	**Albuquerque**	86.15	52	P	P	06 41 05.6	-0.7
	0.9nm,0.9s,baz=212,slow=5.8,SNR=3.8						
PDAR	**Pinedale Array**	87.38	43	P	P	06 41 11.2	-0.6
	1.0nm,0.7s,baz=229,slow=2.8,SNR=9.2						

IDC 21 06:41:45.0±9.7**, 14°.82S**×**172°.99W, h0**km**, mb4.2**/4**, mb1 4.4**/4**, mb1mx3.8**/35**, mbtmp4.3**/4**, Error ellipse: s-maj=204.7km s-min=149.4km az=119.0, Samoa Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	20.79	247	P	P	06 46 28.4	+0.4
	7.1nm,0.9s,baz=133,slow=19,SNR=1.9						
STKA	**Stephens Creek**	44.67	240	P	P	06 49 58.7	-1.1
	2.5nm,0.6s,baz=100,slow=9.4,SNR=6.0						
WRA	**Warramunga Arr**	50.36	256	P	P	06 50 44.9	+0.5
	0.5nm,0.4s,baz=88,slow=8.1,SNR=16						
ASAR	**Alice Springs**	50.67	251	P	P	06 50 46.5	-0.1
	8.2nm,0.5s,baz=89,slow=8.2,SNR=173						

IGQ ***21*** *06:46:51±0.7, 4°S±4°×8°0W±°, h12km*

IDC ***21*** *06:46:54.0±2.6, 4°.43S×80°.20W, h89km±29km, mb3.2/6, mb1 3.5/10, mb1mx3.4/41, mbtmp3.6/10, MS2.8/2, Ms1 2.8/2, ms1mx2.5/14, Error ellipse: s-maj=46.2km s-min=19.8km az=59.0*

ISC 21 06:46:50.9±1.1**, 4°.38S**±0°.05×**80°.35W**±0°.09**, h53**km±10km**, n59,** σ**1^{s}.58**/65**, mb3.5**/6**, Peru-Ecuador border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MCRA	**Macar, Loja**	0.39	88	P	Pn	06 47 01.0	-0.2
MCRA				S	Sn	06 47 08.0	-0.6
ARNL	**Arenillas**	0.87	19	P	Pn	06 47 06.0	-1.0
ARNL				S	Sn	06 47 18.0	-0.9
GONZ	**Gonzanam**	0.96	81	P	Pn	06 47 07.0	-1.5
GONZ				S	Sn	06 47 20.0	-1.5
ACH2	**Ecuador-Machal**	1.23	26	P	Pn	06 47 12.0	+0.2
ACH2				S	Sn	06 47 27.0	-0.4
ISPG	**Isla Puna-Puer**	1.41	7	P	Pn	06 47 17.0	+2.6
MORR	**Playas El Morr**	1.73	0	P	Pn	06 47 19.0	+0.4
ACUE	**Ecuador-Cuenca**	2.01	43	P	Pn	06 47 24.0	+1.2
COHC	**Cochancay**	2.19	30	P	Pn	06 47 26.0	+1.1
COHC				S	Sn	06 47 54.0	+3.1
BOSC	**San Juan Bosco**	2.21	57	P	Pn	06 47 26.0	+0.6
MILO	**Milagro-Astudi**	2.23	21	P	Pn	06 47 27.0	+1.5
SALI	**Salinas**	2.27	344	P	Pn	06 47 27.0	+0.9
AMIL	**Milagro (Trans**	2.35	19	P	Pn	06 47 28.0	+0.9
PPLP	**Puerto Lpez**	2.85	351	P	Pn	06 47 34.0	0.0
TAMH	**Tambohuasha Ch**	3.22	29	P	Pn	06 47 41.0	+1.5
CHSH	**Refugio Sur-Vo**	3.23	27	P	Pn	06 47 40.0	+0.4
ATAH	**Atahualpa**	3.35	145	P	Pn	06 47 42.7	+1.5
	4.5nm,0.3s,baz=359,slow=6.9,SNR=41						
ATAH				S	Sn	06 48 21.2	+1.2
	30nm,0.3s,baz=342,slow=21,SNR=12						
BMAS	**Trigal station**	3.41	33	P	Pn	06 47 43.0	+1.0
ARRY	**Arrayan**	3.42	34	P	Pn	06 47 43.0	+0.9
PAT1	**Patacocha**	3.43	34	P	Pn	06 47 43.0	+0.6
RETU	**Refugio**	3.47	33	P	Pn	06 47 45.0	+2.0
JUI6	**Juive**	3.48	33	P	Pn	06 47 44.0	+1.1
BULB	**Ulba Tungurahu**	3.51	34	P	Pn	06 47 45.0	+1.7
RUN5	**Runtun**	3.52	33	P	Pn	06 47 45.0	+1.6
BRUN	**Tungurahua Vol**	3.52	33	P	Pn	06 47 45.0	+1.6
PECV	**Mancha de Ca P**	3.59	5	P	Pn	06 47 47.0	+2.8
ILLI	**Illinizas Sur**	3.98	24	P	Pn	06 47 52.0	+2.0
BMOR	**Cotopaxi Volca**	4.09	28	P	Pn	06 47 54.0	+2.6
CAMI	**Rancho Maria**	4.11	27	P	Pn	06 47 54.0	+2.3
BNAS	**Cotopaxi Volca**	4.13	27	P	Pn	06 47 54.0	+2.0
BREF	**Cotopaxi Volca**	4.15	27	P	Pn	06 47 55.0	+2.7
BTAM	**Cotopaxi Volca**	4.17	28	P	Pn	06 47 54.0	+1.5
VC1	**Cotopaxi 1**	4.19	28	P	Pn	06 47 54.0	+1.2
ANTM	**Antisana-La Mi**	4.37	29	P	Pn	06 47 58.0	+2.7
ANTG	**Antisana-Guama**	4.38	29	P	Pn	06 47 58.0	+2.5
ANTI	**Antisana**	4.47	29	P	Pn	06 47 58.0	+1.2
GGPT	**Toaza - Volcan**	4.47	23	P	Pn	06 47 58.0	+1.4
GGPC	**Guagua Pichinc**	4.53	23	P	Pn	06 47 59.0	+1.5
GGP	**Refugio Guagua**	4.53	23	P	Pn	06 47 59.0	+1.5
PINO	**Pino**	4.54	23	P	Pn	06 47 59.0	+1.3
YANA	**Yana**	4.59	23	P	Pn	06 48 00.0	+1.7
PAC1	**Pacto, Paraso**	4.87	19	P	Pn	06 48 02.0	+0.2
OTAV	**Otavalo**	4.96	22	P	Pn	06 48 05.0	+1.6
CUSE	**Cuicocha Este**	5.04	23	P	Pn	06 48 06.0	+1.5
CUIC	**Cuicocha-Domo**	5.06	23	P	Pn	06 48 06.0	+1.4
URCU	**Urcuqui**	5.22	24	P	Pn	06 48 08.0	+1.1
NNA	**Nana**	8.31	156	P	Pn	06 48 49.8	+0.9
	0.9nm,0.3s,baz=300,slow=14,SNR=1.7						
NNA				S	Sn	06 50 22.3	+0.8
	1.8nm,0.3s,baz=242,slow=15,SNR=3.9						
NNA				LR	LR	06 52 53.1	
	comp=Z,42nm,20.2s,baz=274,slow=44						
SDV	**Santo Domingo**	16.35	36	P	Pn	06 50 38.9	+1.6
	0.5nm,0.3s,baz=250,slow=8.8,SNR=4.0						
LPAZ	**La Paz**	16.85	135	P	Pn	06 50 42.9	-1.0
	0.1nm,0.3s,baz=318,slow=12,SNR=1.5						
PTGA	**Pitinga**	20.68	80	LR	LR	07 01 12.7	
	comp=Z,40nm,18.6s,baz=3.0,slow=42						
SIV	**San Ignacio**	22.17	123	P	P	06 51 42.6	-0.1
	0.7nm,0.6s,baz=328,slow=7.8,SNR=6.3						
TXAR	**Lajitas Array**	40.31	328	P	P	06 54 25.5	+2.1
	0.1nm,0.5s,baz=156,slow=6.9,SNR=1.5						
PDAR	**Pinedale Array**	53.88	334	P	P	06 56 08.9	-0.1
	0.5nm,0.7s,baz=121,slow=7.1,SNR=4.8						
NVAR	**Mina Array Bea**	55.22	324	P	P	06 56 19.8	+0.9
	0.6nm,0.6s,baz=133,slow=8.1,SNR=7.6						
ULM	**Lac du Bonnet**	56.04	348	P	P	06 56 23.2	-1.1
	2.7nm,0.6s,baz=192,slow=4.6,SNR=5.0						
YKA	**Yellowknife Ar**	71.61	344	P	P	06 58 05.1	-1.4
	0.3nm,0.7s,baz=139,slow=5.5,SNR=6.4						
ZALV	**Zalesovo Beam**	129.12	11	PKP	PKPdf	07 05 50.9	-2.1
	0.3nm,0.4s,baz=183,slow=2.9,SNR=3.5						
KURBB	**Kurchatov Arra**	130.61	18	PKP	PKPdf	07 05 55.0	-1.0
	0.5nm,0.6s,baz=320,slow=2.6,SNR=6.1						
MKAR	**Makanchi Array**	135.15	17	PKP	PKPdf	07 06 02.4	-2.3
	0.4nm,0.8s,baz=353,slow=1.9,SNR=4.6						
WRA	**Warramunga Arr**	138.21	233	PKP	PKPdf	07 06 09.5	-1.7
	0.4nm,0.9s,baz=268,slow=0.6,SNR=1.7						

NIED ***21*** *07:01:54.2, 39°.65N×143°.37E, h20km, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}2.86; $M_{\theta\theta}$-0.33; $M_{\phi\phi}$-2.53; $M_{r\theta}$1.84; $M_{\theta\phi}$-0.75; $M_{\phi r}$3.04; Fault plane solution: $M_0$4.53000×10^{14} NP1:ϕ_s28.00000°, δ71.00000°, λ97.00000°. NP2:ϕ_s188.00000°, δ20.00000°, λ71.00000°.*

JMA 21 07:01:54.2±0.2**, 39°.65N**×**143°.37E, h20**km±3km**, M3.7, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTH	**Tanohata**	1.20	284	P	Pn	07 02 15.9	+0.1
JTH				eS	Sn	07 02 31.9	+0.5
MIYJ	**Miyakonagasawa**	1.20	267	P	Pn	07 02 15.7	-0.1
MIYJ				eS	Sn	07 02 31.5	0.0
JKEN	**Kujiedanarisaw**	1.39	294	P	Pn	07 02 18.4	-0.1
JANG	**Nango**	1.60	297	P	Pn	07 02 21.5	+0.2
JOM	**Ohasama**	1.62	264	P	Pb	07 02 22.6	-0.7
JOM				eS	Sb	07 02 43.1	-0.2
JMK	**Ichinoseki**	1.81	248	P	Pn	07 02 24.9	+0.7
JMK				eS	Sb	07 02 47.9	-0.9
JIO	**Ouri**	1.98	233	P	Pn	07 02 26.7	+0.2
JTM	**Tenmabayashi**	2.10	304	P	Pn	07 02 29.3	+1.1
JTM				eS	Sb	07 02 55.6	-1.5
JRG	**Rokugo**	2.13	264	P	Pn	07 02 30.0	+1.4
JRG				eS	Sb	07 02 57.4	-0.7
JAH	**Hinai**	2.17	285	P	Pn	07 02 30.5	+1.3
JAH				eS	Sb	07 02 58.5	-0.7
JEM	**Erimo**	2.37	356	P	Pn	07 02 33.8	+1.9
JEM				eS	Sn	07 03 02.5	+2.1
JYK	**Kaneyama**	2.45	254	P	Pn	07 02 34.2	+1.2
JOT	**Ohata**	2.48	315	P	Pn	07 02 35.0	+1.6
JNBK	**Urakawa-nobuka**	2.67	350	P	Pn	07 02 37.7	+1.7
MAT	**Matsushiro**	5.12	234	P	Pn	07 03 10.8	+1.1

ATH ***21*** *07:19:08.2, 38°.42N×20°.55E, h12km±1km, ML2.5/12, Error ellipse: s-maj=2.0km s-min=0.6km az=267.0*

THE ***21*** *07:19:08.2, 38°.44N×20°.51E, h8km±1km, ML2.8/16, Error ellipse: s-maj=1.6km s-min=0.3km az=247.0*

ISC 21 07:19:07.7±0.8**, 38°.43N**±0°.02×**20°.51E**±0°.03**, h15**km±5km**, n49,** σ**0^{s}.80**/82**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VSK1	**VASILIKIADES**	0.05	122	P	Pg	07 19 09.5	-0.9
VSK1				S	Sg	07 19 10.7	-1.6
	32μm,0.2s						
KEF5	**Kardakata, Kep**	0.16	192	P	Pg	07 19 11.6	-0.1
KEF5				S	Sg	07 19 14.6	+0.2
	21μm,0.2s						
KEF5	**Kardakata, Kep**	0.16	192	P	Pg	07 19 11.6	-0.1
KEF5				S	Sg	07 19 14.5	+0.1
KEF4	**Livadi, Kephal**	0.19	201	P	Pg	07 19 12.2	+0.1
KEF4				S	Sg	07 19 15.7	+0.6
	50μm,0.2s						
KEF4	**Livadi, Kephal**	0.19	201	P	Pg	07 19 12.2	+0.1
KEF4				S	Sg	07 19 15.5	+0.4
EVGI	**Lefkada island**	0.22	31	P	Pg	07 19 12.7	+0.1
EVGI				S	Sg	07 19 16.4	+0.5
	3μm,0.1s						
EVGI	**Lefkada island**	0.22	31	P	Pg	07 19 12.7	+0.1
EVGI				S	Sg	07 19 16.4	+0.5
DMLN	**Damoulianata-K**	0.22	209	P	Pg	07 19 12.8	+0.1
DMLN				S	Sg	07 19 16.9	+0.8
	3μm,0.5s						
DMLN	**Damoulianata-K**	0.22	209	P	Pg	07 19 12.7	+0.1
DMLN				S	Sg	07 19 16.4	+0.4
LXRA	**Lixouri, Kepha**	0.24	194	P	Pg	07 19 13.0	0.0
LXRA				S	Sg	07 19 17.5	+1.0
ARG2	**Argostoli**	0.26	184	P	Pg	07 19 13.2	0.0
ARG2				S	Sg	07 19 17.6	+0.7
	20μm,0.2s						
ARGA	**Argostoli. Kep**	0.26	186	P	Pg	07 19 13.2	0.0
ARGA				S	Sg	07 19 17.6	+0.6
KEF3	**Kipouria, Keph**	0.26	209	P	Pg	07 19 12.9	-0.4
KEF3				S	Sg	07 19 17.3	+0.1
	7μm,0.1s						
KEF3	**Kipouria, Keph**	0.26	209	P	Pg	07 19 12.9	-0.4
KEF3				S	Sg	07 19 17.1	-0.1
NYDR	**Nydri-Lefkada**	0.32	28	P	Pg	07 19 14.3	+0.1
NYDR				S	Sg	07 19 19.4	+0.7
	2μm,0.4s						
NYDR	**Nydri-Lefkada**	0.32	28	P	Pg	07 19 14.3	+0.1
NYDR				S	Sg	07 19 19.1	+0.4
PSDA	**Pessada-Kefalo**	0.33	170	P	Pg	07 19 14.2	-0.2
PSDA				S	Sg	07 19 19.4	+0.5
	1μm,0.3s						
PSDA	**Pessada-Kefalo**	0.33	170	P	Pg	07 19 14.2	-0.2
PSDA				S	Sg	07 19 19.2	+0.3
LKD2	**Lefkada island**	0.37	18	P	Pg	07 19 15.4	+0.1
LKD2				S	Sg	07 19 20.7	+0.3
	882nm,0.4s						
LKD2	**Lefkada island**	0.37	18	P	Pg	07 19 15.5	+0.1
LKD2				S	Sg	07 19 21.4	+0.9
LKD2				AML	AML	07 19 23.3	
	comp=E,1489μm,0.5s						
LKD2				AML	AML	07 19 23.6	
	comp=N,2069μm,0.4s						
TSLK	**Tsoukalades, L**	0.41	16	P	Pg	07 19 16.2	+0.3
TSLK				S	Sg	07 19 21.7	+0.3
	comp=N,1μm,0.3s						
TSLK	**Tsoukalades, L**	0.41	16	P	Pg	07 19 16.2	+0.3
TSLK				S	Sg	07 19 22.3	+0.9
TSLK				AML	AML	07 19 23.7	
	comp=N,2989μm,0.5s						
TSLK				AML	AML	07 19 23.8	
	comp=E,2251μm,0.5s						
AST1	**Astakos**	0.47	77	P	Pg	07 19 16.9	-0.1
AST1				S	Sb	07 19 24.4	0.0
	comp=E,2μm,0.2s						
PDO	**Prodromos**	0.55	72	P	Pg	07 19 18.3	-0.3
PDO				S	Sb	07 19 27.2	+0.3
	comp=E,1μm,0.3s						
PDO	**Prodromos**	0.55	72	P	Pg	07 19 18.3	-0.3
PDO				AML	AML	07 19 31.9	
	comp=E,1434μm,0.3s						
PDO				AML	AML	07 19 32.1	
	comp=N,1930μm,0.4s						
VLMS	**Volimes, Zakyn**	0.57	168	P	Pg	07 19 18.7	-0.2
VLMS				S	Sb	07 19 27.8	+0.4
	comp=N,2μm,0.3s						
VLMS	**Volimes, Zakyn**	0.57	168	P	Pg	07 19 18.6	-0.3
VLMS				S	Sg	07 19 26.9	+0.4
VLMS				AML	AML	07 19 29.7	
	comp=N,4140μm,0.3s						
VLMS				AML	AML	07 19 30.1	
	comp=E,5283μm,0.2s						
AXS	**Araxos**	0.72	109	P	Pg	07 19 21.3	-0.4
AXS				S	Sb	07 19 33.1	+1.4
AXS	**Araxos**	0.72	109	P	Pg	07 19 21.3	-0.4
AXS				AML	AML	07 19 33.6	
	comp=N,814μm,0.6s						
AXS				AML	AML	07 19 34.4	
	comp=E,465μm,0.4s						
LTHK	**Lithakia**	0.77	160	P	Pg	07 19 22.1	-0.5
LTHK				S	Sb	07 19 33.9	+0.9
	comp=E,880nm,0.2s						
LTHK	**Lithakia**	0.77	160	P	Pg	07 19 21.9	-0.8
LTHK				S	Sb	07 19 33.4	+0.4
LTHK				AML	AML	07 19 34.9	
	comp=N,1849μm,0.2s						
LTHK				AML	AML	07 19 35.5	
	comp=E,1678μm,0.2s						
RLS	**Riolos of Patr**	0.84	116	P	Pg	07 19 23.2	-0.8
RLS				AML	AML	07 19 41.3	
	comp=N,408μm,0.4s						
RLS				AML	AML	07 19 41.8	
	comp=E,418μm,0.3s						
EFP	**Efpalio**	1.09	90	P	Pg	07 19 27.8	-1.1
EFP				AML	AML	07 19 50.5	
	comp=E,437μm,0.7s						
EFP				AML	AML	07 19 52.5	
	comp=N,510μm,0.4s						
ANX	**Ano Chora**	1.12	81	P	Pg	07 19 28.6	-0.7
ANX				S	Sn	07 19 46.4	+2.3
	comp=N,290nm,0.5s						
ANX	**Ano Chora**	1.12	81	P	Pg	07 19 28.3	-0.9
ANX				AML	AML	07 19 50.9	
	comp=E,571μm,0.6s						
ANX				AML	AML	07 19 51.7	
	comp=N,602μm,0.5s						
LAKA	**Lakka**	1.17	99	P	Pb	07 19 29.0	-0.7
LAKA				AML	AML	07 19 48.5	
	comp=E,710μm,0.4s						
LAKA				AML	AML	07 19 49.6	
	comp=N,694μm,0.5s						
SERG	**Sergoula**	1.21	91	P	Pb	07 19 29.5	-0.9
SERG				AML	AML	07 19 49.5	
	comp=N,370μm,0.3s						
SERG				AML	AML	07 19 54.1	
	comp=E,312μm,0.3s						
TRIZ	**Trizonia**	1.23	93	P	Pn	07 19 29.9	-0.5
KALE	**Kalithea**	1.28	91	P	Pn	07 19 30.8	-0.4
KALE				AML	AML	07 19 56.5	
	comp=E,220μm,0.6s						
KALE				AML	AML	07 20 00.7	
	comp=N,317μm,0.6s						
KLV	**Kalavryta, Ach**	1.35	106	P	Pn	07 19 31.8	-0.3
KEK	**Kerkira**	1.39	337	P	Pb	07 19 34.7	+1.2
MAKR	**Makrakomi, Fth**	1.39	65	P	Pn	07 19 32.9	+0.2
AGG	**Agios Georgios**	1.54	67	P	Pn	07 19 35.8	+1.1
THL	**Klokotos Trika**	1.63	46	P	Pb	07 19 38.1	+0.7
VLX	**Vlachokerasia**	1.82	125	P	Pb	07 19 41.3	+0.5
PYL	**PYLOS**	1.82	147	P	Pn	07 19 39.8	+1.3
LSTV	**Lastovo**	5.13	329	ePn	Pn	07 20 23.3	-0.7
LSTV				Sn	Sn	07 21 19.7	-3.3
RICI	**Ricice**	5.67	334	ePn	Pn	07 20 31.2	-0.2
RICI				Sn	Sn	07 21 34.0	-2.2
KIJV	**Kijevo**	6.37	332	ePn	Pn	07 20 41.0	-0.1
KIJV				Sn	Sn	07 21 52.0	-1.5

RSPR ***21*** *07:20:23.4, 18°.82N×66°.41W, h93km±1km, MD3.4/14*

NEIC ***21*** *07:20:23.4±0.8, 18°.78N±0°.09×66°.41W±0°.03, h91km±6km, Error ellipse: s-maj=13.1km s-min=3.4km az=174.0*

ISC 21 07:20:23.4±1.7**, 18°.78N**±0°.10×**66°.42W**±0°.04**, h92**km±11km**, n47,** σ**0^{s}.47**/59**, 15C, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EMPR	**Esperanza - Ma**	0.32	200	⇑eP	Pn	07 20 37.3	+0.1
EMPR	**Esperanza - Ma**	0.32	200	eS	Sn	07 20 48.3	+0.9
EMPR	**Esperanza - Ma**	0.32	200		Pn	07 20 37.3	+0.1
EMPR					Sn	07 20 48.1	+0.7
EMPR				IAML		07 20 50.0	
	comp=E,996nm,0.2s						
EMPR				IAML		07 20 51.6	
	comp=N,904nm,0.3s						
AOPR	**Arecibo Observ**	0.54	217	⇑eP	Pn	07 20 38.4	-0.4
AOPR	**Arecibo Observ**	0.54	217	eS	Sn	07 20 50.0	-0.2
AOPR	**Arecibo Observ**	0.54	217		Pn	07 20 38.4	-0.4
AOPR					Sn	07 20 49.7	-0.4
AOPR				IAML		07 20 50.6	
	comp=N,2μm,0.3s						
GCPR	**Guaynabo City**	0.56	146	⇑eP	Pn	07 20 38.7	-0.3
GCPR	**Guaynabo City**	0.56	146	eS	Sn	07 20 51.1	+0.7
GCPR	**Guaynabo City**	0.56	146		Pn	07 20 38.6	-0.3
GCPR					Sn	07 20 50.5	0.0
SJG	**San Juan**	0.71	159		Pn	07 20 40.3	0.0
SJG				IAML		07 20 54.3	
	comp=N,1μm,0.5s						
SJG				IAML		07 20 55.0	
	comp=N,1μm,0.2s						
CELP	**Cerrillos**	0.72	193	⇑eP	Pn	07 20 40.3	0.0
CELP	**Cerrillos**	0.72	193	eS	Sn	07 20 53.3	+0.4
CELP	**Cerrillos**	0.72	193		Pn	07 20 40.3	0.0
CELP					Sn	07 20 53.3	+0.4
AGPR	**Aguadilla, PR**	0.73	245	⇑eP	Pn	07 20 40.2	-0.2
AGPR	**Aguadilla, PR**	0.73	245	eS	Sn	07 20 53.4	+0.3
AGPR	**Aguadilla, PR**	0.73	245		Pn	07 20 40.2	-0.2
AGPR					Sn	07 20 52.8	-0.3
AGPR				IAML		07 20 53.9	
	comp=N,445nm,0.3s						
CBYP	**Canovanas**	0.73	134	⇑eP	Pn	07 20 40.1	-0.5
CBYP	**Canovanas**	0.73	134	eS	Sn	07 20 53.3	0.0
CBYP	**Canovanas**	0.73	134		Pn	07 20 40.0	-0.5
CBYP					Sn	07 20 53.1	-0.1
OBIP	**Obispado Ponce**	0.76	194	⇑eP	Pn	07 20 39.8	-1.0
OBIP	**Obispado Ponce**	0.76	194	eS	Sn	07 20 53.0	-0.6
OBIP	**Obispado Ponce**	0.76	194		Pn	07 20 39.7	-1.0
OBIP					Sn	07 20 52.8	-0.8
OBIP				IAML		07 20 53.5	
	comp=N,1μm,0.3s						
OBIP				IAML		07 20 54.5	
	comp=E,754nm,0.2s						
HUMP	**Col San Antoni**	0.83	140	⇑eP	Pn	07 20 41.4	-0.1
HUMP	**Col San Antoni**	0.83	140	eS	Sn	07 20 55.3	+0.3
HUMP	**Col San Antoni**	0.83	140		Pn	07 20 41.2	-0.2
HUMP					Sn	07 20 55.2	+0.3
HUMP				IAML		07 20 56.2	
	comp=N,1μm,0.2s						
PDPR	**Patillas Dam,**	0.84	154		Pn	07 20 41.8	+0.2
PDPR				IAML		07 20 57.3	
	comp=E,922nm,0.1s						
LSP	**Las Mesas**	0.88	227	⇑eP	Pn	07 20 42.1	+0.1
LSP	**Las Mesas**	0.88	227		Pn	07 20 42.1	+0.1
MPR	**Mayaguez**	0.89	231	⇑eP	Pn	07 20 42.0	0.0
MPR	**Mayaguez**	0.89	231		Pn	07 20 42.1	0.0
MPR				IAML		07 20 56.7	
	comp=E,507nm,0.2s						
ICMP	**Isla Caja de M**	0.90	187		Pn	07 20 42.4	+0.2
ICMP				IAML		07 21 00.4	
	comp=N,635nm,0.5s						
GBPR	**Guanica, Bosqu**	0.92	209	⇑eP	Pn	07 20 42.7	+0.3
GBPR	**Guanica, Bosqu**	0.92	209	eS	Sn	07 20 57.4	+1.0
GBPR	**Guanica, Bosqu**	0.92	209		Pn	07 20 42.7	+0.3
GBPR					Sn	07 20 57.4	+1.0
MLPR	**Magueyes Islan**	1.00	217	⇑eP	Pn	07 20 42.3	-1.0
MLPR	**Magueyes Islan**	1.00	217	eS	Sn	07 20 58.2	0.0
MLPR	**Magueyes Islan**	1.00	217		Pn	07 20 42.5	-0.9
MLPR					Sn	07 20 57.5	-0.7
MTP	**Monte Pirata**	1.06	130	⇑eP	Pn	07 20 43.8	-0.2
MTP	**Monte Pirata**	1.06	130	eS	Sn	07 20 59.8	+0.3
MTP	**Monte Pirata**	1.06	130		Pn	07 20 43.8	-0.2
MTP					Sn	07 20 59.7	+0.3
MTP				IAML		07 21 00.9	
	comp=E,490nm,0.2s						
MTP				IAML		07 21 02.0	
	comp=N,374nm,0.1s						
CUPR	**Culebra, Puert**	1.17	113	⇑eP	Pn	07 20 44.7	-0.6
CUPR	**Culebra, Puert**	1.17	113	eS	Sn	07 21 01.5	-0.2
CUPR	**Culebra, Puert**	1.17	113		Pn	07 20 44.8	-0.4
CUPR					Sn	07 21 01.4	-0.3
CDVI	**St. Croix**	1.87	123	⇑eP	Pn	07 20 54.3	+0.3
CDVI	**St. Croix**	1.87	123		Pn	07 20 54.4	+0.3
CDVI				IAML		07 21 23.1	
	comp=E,336nm,0.5s						
CDVI				IAML		07 21 28.0	
	comp=N,218nm,0.4s						
DR12	**Loma Pena Alta**	2.81	271	Pn	Pn	07 21 06.3	-0.2
SDDR	**Presa de Saban**	4.62	273	Pn	Pn	07 21 31.2	+0.2
SDDR				IAML		07 23 37.1	
	comp=N,50nm,3.1s						

IDC 21 08:50:59.2±3.2**, 5°.41S**×**155°.15E, h0**km**, mb3.8**/4**, mb1 3.9**/5**, mb1mx3.6**/29**, mbtmp3.8**/5**, ML1.9**/1**, Error ellipse: s-maj=82.1km s-min=34.2km az=102.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	8.87	243	Pn	Pn	08 53 07.1	-1.6

	0.7nm,0.3s,baz=41,slow=18,SNR=1.8						
WRA	**Warramunga Arr**	**24.87**	**233**	P	P	08 56 24.6	+0.8
	1.1nm,0.7s,baz=58,slow=9.3,SNR=6.6						
ASAR	**Alice Springs**	**27.36**	**226**	P	P	08 56 46.3	0.0
	0.5nm,0.7s,baz=65,slow=8.7,SNR=7.0						
STKA	**Stephens Creek**	**29.23**	**204**	P	P	08 57 02.8	-0.2
	1.4nm,0.7s,baz=36,slow=14,SNR=4.3						
SONM	**Songino Array**	**68.10**	**327**	P	P	09 02 00.9	-0.1
	0.5nm,0.5s,baz=121,slow=7.2,SNR=2.1						

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*SOME **21** 08:50:53.9, 39°.80N×79°.72E, h0km*
*KRNET **21** 08:50:60.0±0.1, 39°.56N×80°.01E, mb2.9*
ISC 21 08:51:00.9±4.3**, 39°.3N**±0°.2×**79°.6E**±0°.1**, h10km, n13, σ2s.87**/22**, 7C-3D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRZ	**Przheval'sk**	**3.27**	**345**	⇑*i*P	**Pn**	**08 51 50.6**	**-1.8**
	baz=38						
PRZ				⇑*i*S	**Sn**	**08 52 27.1**	**-4.3**
	baz=38						
KDJ	**Kajisay**	**3.33**	**328**	⇑*i*P	**Pn**	**08 51 52.4**	**-0.8**
	baz=21						
KDJ				⇑*i*S	**Sn**	**08 52 31.1**	**-1.9**
	baz=21						
ANVS	**Anan'yevo**	**3.73**	**338**	⇑*i*P	**Pn**	**08 51 57.2**	**-1.6**
	baz=32						
ANVS				⇑*i*S	**Sn**	**08 52 39.3**	**-3.6**
	baz=32						
SHLS	**Shalkode**	**3.82**	**359**	*e*P	**Pn**	**08 51 58.0**	**-1.9**
	2.7nm,0.2s						
SHLS				*e*S	**Sn**	**08 52 43.5**	**-1.4**
	40nm,0.4s						
SATY	**Saty**	**3.82**	**347**	*e*P	**Pn**	**08 51 58.9**	**-1.0**
	2.5nm,0.4s						
SATY				*e*S	**Sn**	**08 52 45.7**	**+0.7**
	14nm,0.4s						
UZB	**Uzynbulak**	**3.83**	**354**	*e*P	**Pn**	**08 51 57.3**	**-2.7**
	3.2nm,0.2s						
UZB				*e*S	**Sn**	**08 52 43.0**	**-2.2**
	12nm,0.4s						
KPKS	**Kokpek**	**4.18**	**351**	*e*P	**Pn**	**08 52 04.0**	**-0.8**
	5.4nm,0.5s						
KPKS				*e*S	**Sn**	**08 52 54.5**	**+0.7**
	15nm,0.3s						
BOOM	**Boomskoye usch**	**4.19**	**320**	⇓*i*P	**Pn**	**08 52 05.0**	**0.0**
	baz=15						
BOOM				⇓*i*S	**Sn**	**08 52 52.9**	**-1.1**
	baz=15						
IZV	**Izvestkoviy**	**4.32**	**330**	*e*P	**Pn**	**08 52 09.0**	**+2.2**
	1.2nm,0.5s						
IZV				*e*S	**Sn**	**08 53 04.1**	**+6.7**
	11nm,0.4s						
MNBS	**Baschi**	**4.82**	**350**	*e*P	**Pn**	**08 52 15.5**	**+1.9**
	1.7nm,0.2s						
MNBS				*e*S	**Sn**	**08 53 14.2**	**+4.6**
	14nm,0.4s						
DJR	**Jarkent**	**5.00**	**2**	*e*P	**Pn**	**08 52 17.6**	**+1.7**
	1.5nm,0.2s						
DJR				*e*S	**Sn**	**08 53 17.8**	**+4.0**
	3.6nm,0.4s						
MAKZ	**Makanchi**	**7.67**	**12**	⇓Lg	Lg	08 54 02.5	
	0.7nm,0.5s						
MK31	**Makanchi Array**	**7.71**	**14**	⇑Pg	Pn	08 52 48.7	-4.5
	0.2nm,0.4s,baz=208,slow=14,SNR=9.5						
MK31				Lg	Lg	08 54 03.6	
	0.3nm,0.2s,baz=205,slow=26,SNR=10						

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*SOME **21** 08:59:43.8, 41°.80N×81°.48E, h0km*
*NNC **21** 08:59:47.4±1.3, 41°.90N×81°.57E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=9.8km s-min=5.4km az=157.0*
ISC 21 08:59:48.8±2.3**, 41°.91N**±0°.09×**81°.35E**±0°.08**, h10km, n28, σ1s.37**/41**, 3C-4D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**1.70**	**335**	*e*P	**Pb**	**09 00 20.0**	**-0.3**
	3.9nm,0.3s						
KTMS				*e*S	**Sg**	**09 00 46.2**	**+2.7**
	48nm,0.3s						
SHLS	**Shalkode**	**1.87**	**312**	*e*P	**Pn**	**09 00 20.5**	**-0.5**
	11nm,0.3s						
SHLS				*e*S	**Sb**	**09 00 46.3**	**-0.4**
	68nm,0.3s						
PDGK	**Podgornoye**	**1.97**	**317**	Pg	**Pg**	**09 00 25.4**	**-1.2**
	3.5nm,0.2s						
PDGK				Lg	Lg	09 00 53.7	
	12nm,0.4s						
PDGK	**Podgornoye**	**1.97**	**317**	⇓Pg	**Pb**	**09 00 24.4**	**-0.5**
	5.0nm,0.5s						
PDGK				⇓Lg	Lg	09 00 55.4	
	24nm,0.7s						
UZB	**Uzynbulak**	**2.12**	**306**	*e*P	**Pg**	**09 00 28.0**	**-1.4**
	3.3nm,0.3s						
UZB				*e*S	**Sg**	**09 01 00.0**	**+3.2**
	37nm,0.4s						
UZB	**Uzynbulak**	**2.12**	**306**	Pg	**Pg**	**09 00 29.1**	**-0.3**
	5.6nm,0.3s						
UZB				Lg	Lg	09 01 00.0	
	37nm,0.4s						
SATY	**Saty**	**2.46**	**299**	*e*P	**Pb**	**09 00 33.8**	**+0.6**
	2.0nm,0.4s						
SATY				*e*S	**Sg**	**09 01 09.5**	**+1.6**
	16nm,0.2s						
SATY	**Saty**	**2.46**	**299**	Pg	**Pg**	**09 00 35.1**	**-0.8**
	2.9nm,0.2s						
SATY				Lg	Lg	09 01 10.4	
	16nm,0.2s						
KPKS	**Kokpek**	**2.50**	**309**	*e*P	**Pb**	**09 00 33.3**	**-0.6**
	3.5nm,0.2s						
KPKS				*e*S	**Sg**	**09 01 09.2**	**-0.1**
	34nm,0.6s						
DJR	**Jarkent**	**2.68**	**335**	*e*P	**Pb**	**09 00 36.6**	**-0.2**
	1.0nm,0.1s						
DJR				*e*S	**Sg**	**09 01 14.5**	**-0.3**
	10.0nm,0.5s						
DJR	**Jarkent**	**2.68**	**335**	Pg	**Pg**	**09 00 38.7**	**-1.4**
	1.4nm,0.1s						
DJR				Lg	Lg	09 01 16.7	
	10.0nm,0.5s						
KURS	**Kuram**	**2.82**	**305**	Pg	**Pg**	**09 00 41.0**	**-1.9**
	4.6nm,0.5s						
KURS				Lg	Lg	09 01 20.7	
	6.4nm,0.5s						
MNBS	**Baschi**	**3.06**	**316**	*e*P	**Pb**	**09 00 44.0**	**+0.6**
	1.3nm,0.2s						
MNBS				*e*S	**Sg**	**09 01 27.2**	**+0.1**
	12nm,0.5s						
MNBS	**Baschi**	**3.06**	**316**	Pg	**Pg**	**09 00 45.7**	**-1.8**
	3.4nm,0.3s						
MNBS				Lg	Lg	09 01 28.5	
	12nm,0.5s						
KOTS	**Kotyrbulak**	**3.40**	**294**	*e*P	**Pb**	**09 00 50.4**	**+1.2**
	3.7nm,0.4s						
KOTS				*e*S	**Sg**	**09 01 37.9**	**0.0**
	8.3nm,0.5s						
KOTS	**Kotyrbulak**	**3.40**	**294**	Pg	**Pg**	**09 00 52.3**	**-1.6**
	7.1nm,0.4s						
KOTS				Lg	Lg	09 01 39.9	
	8.3nm,0.5s						
MDOK	**Medeo**	**3.42**	**293**	Pg	**Pg**	**09 00 52.8**	**-1.5**
	1.6nm,0.2s						
MDOK				Lg	Lg	09 01 40.5	
	5.6nm,0.5s						
TNSS	**Tian-Shan**	**3.44**	**291**	Pg	**Pg**	**09 00 53.6**	**-1.3**
	1.7nm,0.5s						
TNSS				Lg	Lg	09 01 41.8	
	7.0nm,0.5s						
ARXS	**Arharly**	**3.46**	**313**	*e*P	**Pb**	**09 00 50.8**	**+0.6**
	2.3nm,0.6s						
ARXS				*e*S	**Sg**	**09 01 39.5**	**-0.3**
	10nm,0.5s						
ARXS	**Arharly**	**3.46**	**313**	Pg	**Pb**	**09 00 51.9**	**+1.7**
	3.5nm,0.5s						
ARXS				Lg	Lg	09 01 39.5	
	10nm,0.5s						
IZV	**Izvestkoviy**	**3.68**	**289**	*e*P	**Pb**	**09 00 56.0**	**+2.0**
	1.9nm,0.2s						
IZV				*e*S	**Sg**	**09 01 48.7**	**+1.7**
	8.9nm,0.6s						
IZV	**Izvestkoviy**	**3.68**	**289**	Pg	**Pg**	**09 00 57.6**	**-1.7**
	1.9nm,0.2s						
IZV				Lg	Lg	09 01 48.7	
	8.9nm,0.6s						
KTBS	**Karatobe**	**3.88**	**299**	*e*P	**Pb**	**09 00 58.1**	**+0.8**
	0.5nm,0.7s						
KTBS				*e*S	**Sg**	**09 01 51.2**	**-2.1**
	10nm,0.5s						
KTBS	**Karatobe**	**3.88**	**299**	Pg	**Pg**	**09 01 02.0**	**-1.1**
	1.5nm,0.5s						
KTBS				Lg	Lg	09 01 56.6	
	10nm,0.5s						
KST	**Kastek**	**4.14**	**288**	Pg	**Pg**	**09 01 06.0**	**-2.2**
	3.7nm,0.5s						
KST				Lg	Lg	09 02 02.9	
	5.5nm,0.5s						
DGS	**Degeres**	**4.33**	**290**	Pg	**Pg**	**09 01 10.1**	**-1.5**
	1.2nm,0.4s						
DGS				Lg	Lg	09 02 10.2	
	5.0nm,0.6s						
MAKZ	**Makanchi**	**4.92**	**5**	⇓Pn	**Pn**	**09 01 02.9**	**+0.2**
	2.6nm,1.2s						
MAKZ				⇑Sn	**Sn**	**09 02 00.6**	**+0.9**
	0.8nm,0.8s						
MAKZ				⇑Lg	Lg	09 02 23.2	
	1.7nm,0.7s						
MK31	**Makanchi Array**	**4.93**	**8**	⇓Pn	**Pn**	**09 01 03.1**	**+0.2**
	0.1nm,0.2s,baz=184,slow=16,SNR=13						
MK31				⇑Sn	**Sn**	**09 02 01.3**	**+1.3**
	1.3nm,0.7s,baz=176,slow=21,SNR=2.9						
MK31				Lg	Lg	09 02 22.7	
	2.1nm,0.8s,baz=186,slow=30,SNR=5.7						

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*IDC **21** 10:00:52.1±1.0, 57°.13S×25°.18W, h0km, mb4.2/5, mb1 4.5/6, mb1mx4.1/23, mbtmp4.3/6, ML4.5/1, MS3.5/3, Ms1 3.4/3, ms1mx3.2/24, Error ellipse: s-maj=31.6km s-min=23.2km az=69.0*
*NEIC **21** 10:00:53.5±2.0, 57°.1S±0°.1×24°.9W±0°.3, h10km±1km, mb4.6/26, Error ellipse: s-maj=27.9km s-min=20.6km az=40.0*
ISC 21 10:00:55.3±0.7**, 57°.15S**±0°.10×**25°.0W**±0°.1**, h22km, n43, σ0s.85**/41**, mb4.5**/15**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**15.33**	**159**	P	**Pn**	**10 04 29.6**	**-0.3**
VNA3	**Neumayer Olymp**	**15.56**	**161**	P	**Pn**	**10 04 32.1**	**-0.8**
VNA2	**Neumayer--Watz**	**15.72**	**158**	P	**Pn**	**10 04 34.2**	**-0.8**
SNAA	**Sanae**	**17.25**	**156**	P	**P**	**10 04 54.9**	**-1.0**
SNAA	**Sanae**	**17.25**	**156**	P	**P**	**10 04 54.8**	**-1.0**
	1.8nm,0.3s,baz=31,slow=12,SNR=98						
SNAA				S	Sn	10 07 51.6	-14
	0.1nm,0.3s,baz=249,slow=22,SNR=1.4						
SNAA				LR	LR	10 09 29.8	
	comp=Z,47nm,20.9s,baz=3.0,slow=30						
SNAA	**Sanae**	**17.25**	**156**	IAmb	IAmb	10 04 57.8	
	comp=Z,29nm,1.5s						
EFI	**East Falkland**	**19.85**	**272**	P	**Pn**	**10 05 26.0**	**0.0**
EFI				IAmb	IAmb	10 05 38.8	
	comp=Z,83nm,1.4s						
PMSA	**Palmer Station**	**20.11**	**232**	P	**P**	**10 05 26.1**	**-1.0**
	comp=Z,24nm,0.9s,baz=114,slow=7.8,SNR=1.8						
BELA	**Belgrano 2**	**21.08**	**186**	P	**P**	**10 05 37.9**	**+0.3**
GO09	**Cerro Castillo**	**27.81**	**262**	P	**P**	**10 06 41.8**	**-0.6**
QSPA	**South Pole Qui**	**33.09**	**180**	P	**P**	**10 07 29.9**	**+0.7**
	comp=Z,0.6nm,0.4s,baz=207,slow=2.4,SNR=6.9						
QSPA	**South Pole Qui**	**33.09**	**180**	P	**P**	**10 07 29.6**	**+0.5**
PLCA	**Paso Flores**	**33.36**	**280**	P	**P**	**10 07 29.9**	**-1.7**
	comp=Z,1.1nm,0.7s,baz=135,slow=5.4,SNR=4.5						
PLCA				LR	LR	10 21 21.7	
	comp=Z,24nm,19.0s,baz=166,slow=37						
PLCA	**Paso Flores**	**33.36**	**280**	P	**P**	**10 07 31.4**	**-0.3**
PLCA				IAmb	IAmb	10 07 43.4	
	comp=Z,12nm,1.6s						
LC01	**Cunco**	**35.39**	**281**	P	**P**	**10 07 48.9**	**-0.2**
LC01				IAmb	IAmb	10 08 03.5	
	comp=Z,6.9nm,1.2s						
CPUP	**Villa Florida**	**38.43**	**310**	P	**P**	**10 08 14.2**	**-0.8**
	comp=Z,4.1nm,0.7s,baz=141,slow=6.8,SNR=9.5						
CPUP	**Villa Florida**	**38.43**	**310**	P	**P**	**10 08 16.0**	**+0.9**
MT02	**Curacav**	**39.26**	**287**	P	**P**	**10 08 21.1**	**-0.8**
MT02				IAmb	IAmb	10 08 27.7	
	comp=Z,19nm,1.4s						
CO03	**El Pedregal**	**40.94**	**290**	P	**P**	**10 08 35.8**	**-0.3**
CO01	**Juntas del Tor**	**41.34**	**292**	P	**P**	**10 08 40.0**	**+0.5**
AC05	**El Transito**	**42.35**	**292**	P	**P**	**10 08 47.3**	**-0.4**
AC05				IAmb	IAmb	10 08 47.8	
	comp=Z,5.7nm,0.7s						
AC04	**Llanos de Chal**	**43.27**	**292**	P	**P**	**10 08 54.8**	**-0.2**
AC04				IAmb	IAmb	10 09 06.8	
	comp=Z,27nm,1.5s						
AC02	**Maricunga**	**43.43**	**295**	P	**P**	**10 08 57.1**	**+0.3**
AC02				IAmb	IAmb	10 08 57.7	
	comp=Z,5.0nm,0.8s						
GO02	**Mina Guanaco**	**45.05**	**296**	P	**P**	**10 09 09.3**	**-0.3**
GO02				IAmb	IAmb	10 09 09.9	
	comp=Z,7.0nm,0.6s						
VNDA	**Vanda**	**45.52**	**182**	P	**P**	**10 09 14.8**	**+2.5**
VNDA				IAmb	IAmb	10 09 40.3	
	comp=Z,9.8nm,1.5s						
LVC	**Limon Verde**	**46.88**	**299**	P	**P**	**10 09 24.4**	**+0.3**
LVC				IAmb	IAmb	10 09 25.0	
	comp=Z,5.7nm,0.6s						
PB09	**IPOC Station P**	**47.73**	**299**	P	**P**	**10 09 31.7**	**+1.2**
PB07	**IPOC Station P**	**48.10**	**298**	P	**P**	**10 09 33.5**	**+0.1**
PB01	**IPOC Station P**	**48.49**	**299**	P	**P**	**10 09 36.8**	**+0.5**
PB08	**IPOC Station P**	**49.11**	**300**	P	**P**	**10 09 42.0**	**+0.7**
PB08				IAmb	IAmb	10 10 08.7	
	comp=Z,5.9nm,1.0s						
PSGCX	**Pisagua**	**50.04**	**299**	P	**P**	**10 09 47.7**	**-0.4**
MNMC	**Minye Minye**	**50.19**	**300**	P	**P**	**10 09 49.7**	**+0.2**
LPAZ	**La Paz**	**51.98**	**304**	P	**P**	**10 10 04.4**	**+1.0**
	comp=Z,4.5nm,0.5s,baz=110,slow=5.0,SNR=26						
LPAZ	**La Paz**	**51.98**	**304**	P	**P**	**10 10 04.5**	**+1.2**
LPAZ				IAmb	IAmb	10 10 05.8	
	comp=Z,4.9nm,0.9s						
SAML	**Samuel**	**56.43**	**313**	P	**P**	**10 10 36.5**	**+1.5**
LSZ	**Lusaka**	**57.70**	**66**	P	**P**	**10 10 43.8**	**-0.4**
LSZ				IAmb	IAmb	10 10 44.8	
	comp=Z,8.4nm,1.6s						
RPN	**Rapa Nui**	**64.62**	**259**	LR	LR	10 34 36.0	
	comp=Z,310nm,21.2s,baz=356,slow=31						
TORD	**Torodi Ar. Bea**	**73.46**	**27**	P	**P**	**10 12 26.0**	**+0.3**
	comp=Z,0.6nm,0.5s,baz=198,slow=6.7,SNR=6.0						
YKA	**Yellowknife Ar**	**137.79**	**316**	PKP	**PKPdf**	**10 20 15.5**	**-0.7**
	comp=Z,0.6nm,0.6s,baz=120,slow=3.3,SNR=12						
INK	**Inuvik**	**147.42**	**319**	PKPbc	**PKPbc**	**10 20 34.9**	**-0.7**
	comp=Z,2.1nm,0.8s,baz=103,slow=3.9,SNR=5.8						
INK	**Inuvik**	**147.42**	**319**		**PKPab**	**10 20 36.4**	**-1.2**
ILAR	**Eielson Array**	**151.74**	**310**	PKPbc	**PKiKP**	**10 20 46.9**	**+0.1**
	comp=Z,1.6nm,0.4s,baz=134,slow=1.8,SNR=42						
ILAR	**Eielson Array**	**151.74**	**310**		**PKiKP**	**10 20 47.0**	**+0.2**

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*JMA **21** 10:13:51.8±0.2, 39°.89N×143°.61E, h11km±4km, M6.4*
JMA Felt II J1.
*IDC **21** 10:13:51.9±0.4, 39°.84N×143°.51E, h0km, mb5.1/33, mb1 5.2/40, mb1mx5.2/48, mbtmp5.1/40, ML4.4/6, MS5.7/39, Ms1 5.7/39, ms1mx5.6/47, Error ellipse: s-maj=11.4km s-min=9.8km az=97.0*
*NIED **21** 10:13:51.9, 39°.90N×143°.61E, h11km, MW5.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^17Nm; Mrr5.79; Mθθ0.53; Mφφ-6.32; Mrθ3.09; Mθφ-1.55; Mφr4.17; Fault plane solution: M0 8.13000×10^17 NP1:φs28.00000°, δ66.00000°, λ105.00000°. NP2:φs175.00000°, δ29.00000°, λ60.00000°.*
*BJI **21** 10:13:51.5±0.0, 39°.85N×143°.50E, h10km, mB6.2/77, mb5.5/81, Ms6.3/95, Ms7 6.2/87*
*NEIC **21** 10:13:53.3±1.1, 39°.82N±0°.05×143°.49E±0°.09, h7km±1km, mb5.5/562, Ms_20 5.8/772, Mwb6.0/75, Mww6.0, Mwc6.0(GCMT), Error ellipse: s-maj=11.9km s-min=8.6km az=104.0*
*NEIC **21** 10:13:54.1, 39°.84N×143°.47E, h12km, Moment Tensor Solution. Moment tensor: Scale 10^18Nm; Mrr0.59; Mθθ0.11; Mφφ-0.70; Mrθ0.40; Mθφ-0.27; Mφr0.91; Fault plane solution: M0 1.22000×10^18 NP1:φs185.96000°, δ17.93000°, λ73.30000°. NP2:φs23.46000°, δ72.85000°, λ95.31000°. Principal axes: T 1.1202, Plg62.0000°, Azm301.0000°; N 0.1845, Plg5.0000°, Azm202.0000°; P -1.3047, Plg28.0000°, Azm109.0000°;*
*MOS **21** 10:13:55.6±1.1, 39°.95N×143°.45E, h31km, mb5.7/142, MS5.9/92 Error ellipse: s-maj=5.0km s-min=3.3km az=100.6*
*GCMT **21** 10:13:58.3±0.1, 39°.83N×143°.74E, h12km, MW6.0/169, Moment Tensor Solution. s149,c314; s169,c560; Duration: 2s.3 Moment tensor: Scale 10^18Nm; Mrr0.58±.01; Mθθ0.02±.00; Mφφ-0.60±.00; Mrθ0.36±.01; Mθφ-0.17±.00; Mφr0.78±.02; Best double couple: M0 1.05600×10^18 NP1:φs184.00000°, δ19.00000°, λ72.00000°. NP2:φs23.00000°, δ72.00000°, λ96.00000°. Principal axes: T 1.0320, Plg62.0000°, Azm302.0000°; N 0.0480, Plg6.0000°, Azm201.0000°; P -1.0800, Plg27.0000°, Azm109.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
*NEIC **21** 10:13:59, 39°.83N×143°.81E, h12km, Moment Tensor Solution. Moment tensor: Scale 10^18Nm; Mrr0.56; Mθθ0.04; Mφφ-0.60; Mrθ0.47; Mθφ-0.19; Mφr1.04; Fault plane solution: M0 1.29000×10^18 NP1:φs184.00000°, δ15.00000°, λ71.00000°. NP2:φs23.00000°, δ76.00000°, λ95.00000°. Principal axes: T 1.2521, Plg59.0000°, Azm300.0000°; N 0.0780, Plg5.0000°, Azm202.0000°; P -1.3301, Plg31.0000°, Azm109.0000°;*
*NEIC **21** 10:14:02, 39°.86N×143°.69E, h20km, Moment Tensor Solution. Moment tensor: Scale 10^18Nm; Mrr0.51; Mθθ-0.08; Mφφ-0.43; Mrθ0.27; Mθφ-0.10; Mφr1.05; Fault plane solution: M0 1.19000×10^18 NP1:φs194.00000°, δ12.00000°, λ89.00000°. NP2:φs14.00000°, δ78.00000°, λ90.00000°. Principal axes: T 1.2182, Plg57.0000°, Azm285.0000°; N -0.0548, Plg0.0000°, Azm194.0000°; P -1.1634, Plg33.0000°, Azm104.0000°;*
*BGR **21** 10:14:04.9±0.0, 40°.52N×142°.26E, h29km±1km, mb5.0*
ISC 21 10:13:53.9±0.4**, 39°.83N**±0°.03×**143°.52E**±0°.03**, h12km**±2km**, h12km:pP-P, n1886, σ1s.40**/1916**, mb5.5**/465**, MS5.9**/514**, 153C-41D, Fault plane solution: NP1:**φs154.90241°, δ38.04156°**,** λ27.30832°. **NP2:**φs42.77392°**,** δ73.57772°**,** λ124.80897°. **Principal axes:** T Plg49.1830°**,** Azm350.9100°**;** N Plg33.1994°**,** Azm211.6538°**;** P Plg20.9150°**,** Azm107.1719°**; Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	**Tanohata**	**1.28**	**275**	⇑P	**Pn**	**10 14 16.2**	**-1.3**
JTH				*e*S	**Sb**	**10 14 33.9**	**-0.3**
MIYJ	**Miyakonagasawa**	**1.33**	**260**	⇑P	**Pn**	**10 14 17.7**	**-0.6**
MIYJ				*e*S	**Sn**	**10 14 36.1**	**+0.1**
JKEN	**Kujiedanarisaw**	**1.44**	**286**	⇑P	**Pn**	**10 14 18.5**	**-1.2**
JKEN				*e*S	**Sn**	**10 14 38.1**	**-0.4**
JANG	**Nango**	**1.63**	**290**	⇑P	**Pn**	**10 14 21.1**	**-1.3**
JOM	**Ohasama**	**1.75**	**259**	⇑P	**Pn**	**10 14 24.3**	**+0.2**
JOM				*e*S	**Sb**	**10 14 47.9**	**-0.1**
JMK	**Ichinoseki**	**1.98**	**245**	⇑P	**Pn**	**10 14 26.9**	**-0.3**
JMK				*e*S	**Sn**	**10 14 52.8**	**+0.8**
JTM	**Tenmabayashi**	**2.10**	**298**	P	**Pn**	**10 14 28.3**	**-0.6**
JTM				*e*S	**Sn**	**10 14 54.7**	**-0.3**
JTM	**Tenmabayashi**	**2.10**	**298**	Pn	**Pn**	**10 14 28.8**	**-0.1**
JTM	**Tenmabayashi**	**2.10**	**298**	⇑P	**Pn**	**10 14 28.4**	**-0.6**
ERM	**Erimo**	**2.20**	**353**	*ce*P	**Pn**	**10 14 28.9**	**-1.3**
ERM				pmax	pmax		
	comp=Z,2µm,1.7s						
ERM	**Erimo**	**2.20**	**353**	Pn	**Pn**	**10 14 28.5**	**-1.7**
ERM	**Erimo**	**2.20**	**353**	⇑P	**Pn**	**10 14 28.3**	**-2.0**
JEM	**Erimo**	**2.20**	**353**	P	**Pn**	**10 14 29.1**	**-1.1**
JEM				*e*S	**Sn**	**10 14 55.6**	**-1.8**
JOT	**Ohata**	**2.44**	**310**	P	**Pn**	**10 14 32.8**	**-0.7**
JOT				*e*S	**Sn**	**10 15 02.3**	**-0.9**
JNBK	**Urakawa-nobuka**	**2.52**	**347**	P	**Pn**	**10 14 34.1**	**-0.5**
JYK	**Kaneyama**	**2.61**	**251**	P	**Pn**	**10 14 36.2**	**+0.3**
JYK				*e*S	**Sn**	**10 15 08.7**	**+1.2**
JCH	**Churui**	**2.79**	**358**	P	**Pn**	**10 14 36.2**	**-2.1**
JCH				*e*S	**Sn**	**10 15 09.5**	**-2.3**
JKB	**Kayabe**	**2.79**	**318**	P	**Pn**	**10 14 38.3**	**0.0**
JKB				*e*S	**Sn**	**10 15 12.7**	**+0.8**
JMM	**Marumori**	**2.89**	**228**	Pn	**Pn**	**10 14 39.2**	**-0.6**
JMM	**Marumori**	**2.89**	**228**	⇑P	**Pn**	**10 14 38.5**	**-1.3**
JOMM	**Oshimamatsumae**	**3.16**	**304**	P	**Pn**	**10 14 43.8**	**+0.4**
JOMM				*e*S	**Sn**	**10 15 22.1**	**+1.0**
JAK	**Akkeshi**	**3.29**	**15**	P	**Pn**	**10 14 43.5**	**-1.6**
JAK				S	**Sn**	**10 15 21.1**	**-3.0**
JEW	**Eniwo**	**3.39**	**333**	Pn	**Pn**	**10 14 46.4**	**-0.2**
JEW	**Eniwo**	**3.39**	**333**	⇑P	**Pn**	**10 14 46.8**	**+0.2**
NMR	**Nemuro--Hokkai**	**3.91**	**24**	*e*P	**Pn**	**10 14 50.0**	**-3.7**
NMR				*i* S	**Sn**	**10 15 33.0**	**-6.4**
GLVR	**Golovnino**	**4.18**	**20**	*e*P	**Pn**	**10 14 55.3**	**-2.2**
GLVR				*i* S	**Sn**	**10 15 42.7**	**-3.5**
GLVR				pmax	pmax		
	comp=Z,2µm,0.7s						
GLVR				pmax	pmax		
	comp=N,1µm,0.5s						
GLVR				pmax	pmax		
	comp=E,773nm,0.3s						
GLVR				smax	smax		
	comp=N,7µm,0.3s						
GLVR				smax	smax		
	comp=E,12µm,0.4s						
JKA	**Kamikawa-asahi**	**4.34**	**351**	Pn	**Pn**	**10 14 58.9**	**-0.7**
ASAJ	**Asahikawa**	**4.34**	**351**	Pn	**Pn**	**10 14 59.1**	**-0.5**
	comp=E,23nm,0.3s,baz=184,slow=7.8,SNR=170						
ASAJ				Sn	**Sn**	**10 15 45.8**	**-4.3**
	comp=E,59nm,0.3s,baz=215,slow=16,SNR=8.8						
ASAJ				LR	LR	10 17 05.3	
	comp=E,86µm,18.3s,baz=173,slow=45						
JYT	**Yasato**	**4.45**	**217**	Pn	**Pn**	**10 14 60.0**	**-1.2**
JYT	**Yasato**	**4.45**	**217**	⇑P	**Pn**	**10 14 59.7**	**-1.5**
RUSJ	**Misakicho**	**4.46**	**16**	*e*P	**Pn**	**10 15 00.2**	**-1.1**
RUSJ				*i* S	**Sn**	**10 15 52.0**	**-1.1**
JSD	**Sado**	**4.47**	**248**	Pn	**Pn**	**10 15 02.3**	**+0.8**
JSD	**Sado**	**4.47**	**248**	⇑P	**Pn**	**10 15 01.7**	**+0.2**
GRPR	**Tuman**	**4.49**	**21**	*e*P	**Pn**	**10 14 59.1**	**-2.6**
GRPR				*i* S	**Sn**	**10 15 47.8**	**-6.0**
GRPR				pmax	pmax		
	comp=Z,2µm,0.4s						
GRPR				pmax	pmax		
	comp=E,262nm,0.2s						
GRPR				smax	smax		
	comp=N,8µm,0.4s						
GRPR				smax	smax		
	comp=E,10µm,0.4s						
YUK	**Yuzh-Kuril'sk**	**4.55**	**22**	*c i*P	**Pn**	**10 14 59.9**	**-2.6**
MJAR	**Matsushiro Arr**	**5.32**	**234**	Pn	**Pn**	**10 15 13.5**	**+0.4**
	baz=42,slow=11						
MAJO	**Matsushiro**	**5.32**	**234**	P	**Pn**	**10 15 14.1**	**+1.0**
MAJO	**Matsushiro**	**5.32**	**234**	Pn	**Pn**	**10 15 14.1**	**+1.0**
MAJO	**Matsushiro**	**5.32**	**234**	⇑P	**Pn**	**10 15 13.9**	**+0.8**
MAT	**Matsushiro**	**5.32**	**234**	P	**Pn**	**10 15 14.0**	**+0.9**
MAT				*e*S	**Sn**	**10 16 15.0**	**+0.7**
MJB9	**Matsu-Tunnel**	**5.32**	**234**		**Pn**	**10 15 14.8**	**+1.7**
KUR	**Kuril'sk**	**6.28**	**29**	*e*P	**Pn**	**10 15 24.1**	**-2.2**
KUR				pmax	pmax		
	comp=N,229nm,0.6s						
KUR				pmax	pmax		
	comp=Z,758nm,0.6s						
KUR				pmax	pmax		
	comp=E,274nm,0.8s						
KUR				pmax	pmax		
	comp=Z,5µm,3.5s						
JGF	**Kuroka**	**6.45**	**231**		**Pn**	**10 15 30.4**	**+1.7**
JGF	**Kuroka**	**6.45**	**231**	⇑P	**Pn**	**10 15 30.0**	**+1.3**
JSG	**Sagara**	**6.67**	**221**		**Pn**	**10 15 32.0**	**+0.3**
JSG	**Sagara**	**6.67**	**221**	⇑P	**Pn**	**10 15 33.3**	**+1.6**
INU	**Inuyama**	**6.83**	**231**	Pn	**Pn**	**10 15 34.4**	**+0.6**
INU	**Inuyama**	**6.83**	**231**	⇑P	**Pn**	**10 15 34.4**	**+0.6**
YSS	**Yuzh-Sakhalins**	**7.14**	**356**	*c i*P	**Pn**	**10 15 38.6**	**+0.5**
YSS				*e*S	**Sn**	**10 16 56.3**	**-2.8**
YSS				pmax	pmax		
	comp=Z,240nm,0.8s						
YSS				pmax	pmax		
	comp=Z,5µm,7.0s						
YSS				MLR	MLR		
	comp=N,96µm,20.0s						
YSS				MLR	MLR		
	comp=Z,111µm,20.0s						
YSS	**Yuzh-Sakhalins**	**7.14**	**356**	Pn	**Pn**	**10 15 37.0**	**-1.1**
YSS	**Yuzh-Sakhalins**	**7.14**	**356**	⇑P	**Pn**	**10 15 37.3**	**-0.8**
TEY	**Ternei**	**7.29**	**318**	⇑*e*P	**Pn**	**10 15 40.9**	**+0.7**
TEY				pmax	pmax		
	comp=E,50nm,0.7s						
TEY				pmax	pmax		
	comp=Z,50nm,0.8s						
TEY				pmax	pmax		
	comp=N,40nm,0.6s						
TEY				pmax	pmax		
	comp=N,130nm,0.7s						
TEY				pmax	pmax		

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       comp=E,190nm,0.7s
TEY                               pmax      pmax
       comp=Z,270nm,0.7s
TEY                               MLR       MLR
       comp=E,4µm,13.0s
TEY                               MLR       MLR
       comp=N,12µm,14.0s
TEY                               MLR       MLR
       comp=Z,13µm,13.0s
JHJ2   Mitsune            7.34 205          Pn        10 15 38.7  -2.1
JHJ    Hachijo jima 2     7.34 205  Pn      Pn        10 15 39.3  -1.5
       comp=Z,146nm,0.3s,baz=319,slow=22,SNR=10
JHJ                                 Sn      Sn        10 16 58.5  -5.5
       comp=Z,272nm,0.3s,baz=49,slow=23,SNR=2.6
JHJ                                 LR      LR        10 18 40.9
       comp=Z,36µm,21.6s,baz=48,slow=39
JWT    Wachi              7.88 237  Pn      Pn        10 15 50.1  +1.8
JWT    Wachi              7.88 237 ⇑P       Pn        10 15 50.3  +2.0
UGL    Uglegorsk          9.31 354c iP      Pn        10 16 07.0  -0.7
UGL                                 S       Sn        10 17 46.3  -6.0
UGL                                 pmax    pmax
       comp=E,163nm,0.8s
UGL                                 pmax    pmax
       comp=Z,156nm,0.8s
UGL                                 pmax    pmax
       comp=Z,5µm,9.0s
UGL                                 smax    smax
       comp=E,10µm,10.1s
UGL                                 smax    smax
       comp=N,7µm,8.8s
UGL                                 MLR     MLR
       comp=Z,48µm,16.0s
UGL                                 MLR     MLR
       comp=N,60µm,15.0s
UGL                                 MLR     MLR
       comp=E,168µm,19.0s
JHS    Saijyo             9.57 243  Pn      Pn        10 16 13.4  +1.9
JHS    Saijyo             9.57 243 ⇑P       Pn        10 16 13.7  +2.2
USA0B  Ussuriysk Arra     9.63 301c iP      Pn        10 16 14.0  +1.8
USA0B  Ussuriysk Arra     9.63 301          Pn        10 16 14.0  +1.8
USRK   Ussuriysk Ar.      9.63 301  Pn      Pn        10 16 13.2  +1.1
       baz=107,slow=13,SNR=151
USRK                                LR      LR        10 20 00.2
       comp=E,45µm,18.9s,baz=69,slow=38
USRK   Ussuriysk Ar.      9.63 301  Pn      Pn        10 16 13.9  +1.8
MSHR   Mys Shultsa        9.71 290 i P      Pn        10 16 11.6  -1.8
MSHR                                pmax    pmax
       comp=Z,9.0nm,0.1s
MSHR                                MLR     MLR
       comp=Z,84µm,14.0s
JMN    Monobe             9.84 235          Pn        10 16 15.1  -0.1
JMN    Monobe             9.84 235 ⇓P       Pn        10 16 16.2  +1.1
TYV    Tymovskoe         11.05 357 eP       Pn        10 16 30.7  -0.9
TYV                                eS       Sn        10 18 36.0  +0.9
TYV                                 pmax    pmax
       comp=Z,2µm,3.1s
TYV                                 pmax    pmax
       comp=Z,47nm,0.9s
TYV                                 smax    smax
       comp=E,32nm,1.4s
TYV                                 smax    smax
       comp=E,9µm,5.9s
TYV                                 MLR     MLR
       comp=E,99µm,14.0s
TYV                                 MLR     MLR
       comp=Z,105µm,14.0s
MDJ    Mudanjiang        11.38 299  P       Pn        10 16 38.3  +2.2
MDJ                                 pP                10 16 41.8
MDJ                                 PP      PnPn      10 16 46.4  +2.6
MDJ                                 S       Sn        10 18 44.5  +1.4
MDJ                                 SS      SnSn      10 18 57.4  +2.6
MDJ                                 PcP     PcP       10 22 34.4  +5.0
MDJ                                 ScP     ScP       10 26 06.8  +5.0
MDJ                                 pmax    pmax
       comp=Z,39nm,1.2s
MDJ                                 LR      LR
       comp=Z,89µm,14.4s
MDJ                                 LR      LR
       comp=Z,127µm,13.7s
MDJ                                 LR      LR
       comp=Z,142µm,13.4s
MDJ    Mudanjiang        11.38 299          Pn        10 16 38.0  +1.8
GRNR   Gornyy            12.02 338⇓iP       Pn        10 16 46.0  +1.1
GRNR                               eS       Sn        10 19 01.8  +3.0
GRNR                                pmax    pmax
       comp=N,50nm,0.8s
GRNR                                pmax    pmax
       comp=E,40nm,0.8s
GRNR                                pmax    pmax
       comp=Z,60nm,0.7s
GRNR                                smax    smax
       comp=N,3.0nm,0.8s
GRNR                                MLR     MLR
       comp=E,35µm,17.0s
GRNR                                MLR     MLR
       comp=N,40µm,16.0s
GRNR                                MLR     MLR
       comp=Z,38µm,16.0s
JNU    Nakatsue          12.17 241  Pn      Pn        10 16 42.6  -4.5
       comp=Z,2.2nm,0.3s,baz=20,slow=6.6,SNR=24
JNU                                 LR      LR        10 21 59.5
       comp=Z,126µm,18.2s,baz=49,slow=40
JNU    Nakatsue          12.17 241          Pn        10 16 46.8  -0.3
KSRS   Korea Array       12.42 264  Pn      Pn        10 16 51.8  +1.3
       comp=Z,2.1nm,0.3s,baz=84,slow=13,SNR=50
KSRS                                LR      LR        10 21 14.9
       comp=Z,54µm,19.2s,baz=70,slow=36
JTU    Tsushima          12.44 249  Pn      Pn        10 16 50.5  -0.2
JTU    Tsushima          12.44 249 ⇑P       Pn        10 16 53.1  +2.5
KS19   Wonju Array Si    12.45 264          Pn        10 16 50.3  -0.6
KSAR   Wonju Array Be    12.46 264  P       Pn        10 16 50.6  -0.3
KSAR   Wonju Array Be    12.46 264  Pn      Pn        10 16 50.6  -0.3
KLR    Kul'dur           12.59 322  Pn      Pn        10 16 52.8  +0.1
       comp=Z,0.8nm,0.3s,baz=129,slow=12,SNR=73
KLR                                 LR      LR        10 22 07.4
       comp=Z,73µm,18.1s,baz=133,slow=39
KLR    Kul'dur           12.59 322ceP       Pn        10 16 52.6  -0.1
KLR                                 pmax    pmax
       comp=Z,112nm,1.1s
KLR                                 MLR     MLR
       comp=Z,94µm,13.0s
JCJ    Chichijima        12.75 185  Pn      Pn        10 16 50.8  -4.2
       comp=Z,37nm,0.3s,baz=87,slow=23,SNR=9.7
JCJ                                 Sn      Sn        10 19 04.0   -13
       comp=Z,50nm,0.3s,baz=143,slow=20,SNR=9.7
TJN    Taejon            13.18 260 i P      Pn        10 17 02.0  +1.2
INCN   Inchon            13.40 265  P       Pn        10 17 05.3  +1.4
INCN   Inchon            13.40 265          Pn        10 17 05.2  +1.4
NKL    Nikolayevsk       13.47 353 eP       Pn        10 17 03.3  -1.3
NKL                                 pmax    pmax
       comp=E,33nm,0.8s
NKL                                 pmax    pmax
       comp=N,9.0nm,1.1s
NKL                                 pmax    pmax
       comp=Z,106nm,1.2s
NKL                                 MLR     MLR
       comp=N,265nm,17.0s
NKL                                 MLR     MLR
       comp=Z,41µm,15.0s
JSU    Suzuyama          13.47 236  Pn      Pn        10 17 04.2  -0.6
OKH    Okha              13.73 359c iP      Pn        10 17 05.7  -2.5
OKH                                 pmax    pmax
       comp=Z,2µm,12.4s
OKH                                 MLR     MLR
       comp=Z,74µm,18.0s
OKH                                 MLR     MLR
       comp=E,131µm,18.0s
OKH                                 MLR     MLR
       comp=N,109µm,17.0s
SKR    Severo-Kuril's    14.00  35 eP       Pn        10 17 04.6  -7.3
SKR                                 pmax    pmax
       comp=Z,159nm,1.1s
SKR                                 MLR     MLR
       comp=Z,28µm,14.0s
SKR                                 MLR     MLR
       comp=Z,19µm,14.0s
SNY    Shenyang          15.23 284 ⇑P       Pn        10 17 27.4  -1.2
SNY                                 S       Sn        10 20 19.5  +2.4
SNY                                 pmax    pmax
       comp=Z,14µm,13.9s
SNY                                 LR      LR
       comp=Z,42µm,14.1s
SNY                                 LR      LR
       comp=Z,55µm,17.4s
SNY                                 LR      LR
       comp=Z,71µm,17.7s
PEA0B  Petropavlovsk-    16.44  31ceP       P         10 17 46.5  -0.5
PEA0B  Petropavlovsk-    16.44  31  P       Pn        10 17 44.6  +0.3
PETK   Petropavlovsk-    16.44  31  Pn      Pn        10 17 39.6  -4.7
       comp=Z,0.3nm,0.3s,baz=190,slow=10,SNR=8.3
PETK                                LR      LR        10 23 43.0
       comp=Z,19µm,19.0s,baz=219,slow=36
PETK   Petropavlovsk-    16.44  31  P       Pn        10 17 39.3  -5.0
PETK   Petropavlovsk-    16.44  31  Pn      Pn        10 17 39.3  -5.0
PET    Petropavlovsk     16.77  33 eP       P         10 17 51.0  +0.4
PET                                eS       Sn        10 20 58.0  +3.4
PET                                 pmax    pmax
       comp=Z,217nm,0.9s
PET                                 pmax    pmax
       comp=Z,2µm,8.6s
PET                                 pmax    pmax
       comp=Z,4µm,7.2s
PET                                 MLR     MLR
       comp=Z,60µm,15.0s
PET                                 MLR     MLR
       comp=Z,59µm,15.0s
PET    Petropavlovsk     16.77  33  P       P         10 17 51.1  +0.4
PET                                 IAmb    IAmb      10 18 12.6
       comp=Z,453nm,1.5s
PET    Petropavlovsk     16.77  33 ⇓p       P         10 17 51.5  +0.8
DL2    Dalian            16.95 274⇑iP       Pn        10 17 50.4  -0.4
DL2                                 S       Sn        10 20 58.6  -0.4
DL2                                 pmax    pmax
       comp=Z,190nm,0.9s
DL2                                 pmax    pmax
       comp=Z,10µm,8.0s
DL2                                 LR      LR
       comp=Z,32µm,15.3s
DL2                                 LR      LR
       comp=Z,31µm,15.1s
DL2                                 LR      LR
       comp=Z,44µm,15.5s
ZEA    Zeya              17.76 327ceP       Pn        10 17 57.9  -2.9
ZEA                                 pmax    pmax
       comp=Z,250nm,0.7s
ZEA                                 pmax    pmax
       comp=E,3µm,15.2s
ZEA                                 pmax    pmax
       comp=N,3µm,14.8s
ZEA                                 pmax    pmax
       comp=Z,5µm,15.0s
ZEA                                 MLR     MLR
       comp=E,50µm,15.0s
ZEA                                 MLR     MLR
       comp=N,24µm,14.0s
ZEA                                 MLR     MLR
       comp=Z,50µm,15.0s
JOW    Kunigami          18.14 229  P       Pn        10 18 05.4  -0.2
       comp=Z,2.2nm,0.3s,baz=346,slow=16,SNR=4.4
JOW    Kunigami          18.14 229  P       Pn        10 18 01.9  -3.7
SSE    Sheshan           20.13 251  P       P         10 18 25.9  -1.8
SSE                                 S       S         10 22 10.1  -3.4
SSE                                 pmax    pmax
       comp=Z,2µm,7.1s
SSE                                 LR      LR
       comp=Z,6µm,13.1s
SSE                                 LR      LR
       comp=Z,7µm,14.0s
SSE    Sheshan           20.13 251  P       P         10 18 26.1  -1.6
SSE                                 IAmb    IAmb      10 18 54.9
       comp=Z,298nm,1.1s
MA2    Magadan           20.29  11  LR      LR        10 27 08.9
       comp=Z,30µm,19.1s,baz=200,slow=39
MA2    Magadan           20.29  11ceP       P         10 18 28.3  -1.0
MA2                                 pmax    pmax
       comp=Z,244nm,0.8s
MA2                                 MLR     MLR
       comp=Z,28µm,19.0s
MA2    Magadan           20.29  11  P       P         10 18 28.7  -0.6
MA2                                 IAmb    IAmb      10 18 32.1
       comp=Z,225nm,0.7s
MA2    Magadan           20.29  11 ⇑P       P         10 18 26.9  -2.3
BJI    Beijing           20.94 279  P       P         10 18 34.4  -2.0
BJI                                 S       S         10 22 30.5  +1.0
BJI                                 pmax    pmax
       comp=Z,86nm,0.9s
BJI                                 pmax    pmax
       comp=Z,6µm,12.0s
BJI                                 LR      LR
       comp=Z,24µm,13.7s
BJT    Baijiatuau        20.95 279  P       P         10 18 34.7  -1.9
BJT                                 pmax    pmax
       comp=Z,172nm,1.2s
BJT                                 MLR     MLR
       comp=Z,30µm,18.0s
BJT    Baijiatuau        20.95 279  P       P         10 18 34.6  -1.9
BJT    Baijiatuau        20.95 279  IAMs_20 IAMs_20   10 26 36.4
       comp=Z,31µm,18.0s
TIA    Tai'an            21.08 269  P       P         10 18 36.4  -1.6
TIA                                 S       S         10 22 30.8  -1.5
TIA                                 pmax    pmax
       comp=Z,160nm,0.9s
TIA                                 pmax    pmax
       comp=Z,6µm,10.0s
TIA                                 LR      LR
       comp=Z,44µm,14.2s
TIA                                 LR      LR
       comp=Z,72µm,14.8s
TIA                                 LR      LR
       comp=Z,110µm,12.8s
NJ2    Nanjing           21.38 256 ⇑P       P         10 18 39.9  -1.3
NJ2                                 pP      sP        10 18 45.1  -0.3
NJ2                                 sP      pwP       10 18 47.8  +0.8
NJ2                                 PP      PnPn      10 18 59.8  -1.3
NJ2                                 S       S         10 22 35.5  -2.8
NJ2                                 sS      sS        10 22 41.3  -1.6
NJ2                                 pmax    pmax
       comp=Z,41nm,0.8s
NJ2                                 pmax    pmax
       comp=Z,7µm,11.8s
NJ2                                 LR      LR
       comp=Z,38µm,16.6s
NJ2                                 LR      LR
       comp=Z,49µm,15.6s
NJ2                                 LR      LR
       comp=Z,56µm,17.2s
TATO   Taipei            23.69 238  P       P         10 19 04.5  -0.9
TATO                                IAmb    IAmb      10 19 29.9
       comp=Z,217nm,1.0s
SEY    Seymchan          23.74  10  P       P         10 19 04.0  -1.6
       comp=Z,204nm,0.9s,baz=188,slow=7.5,SNR=144
SEY                                 LR      LR        10 29 18.5
       comp=Z,27µm,18.6s,baz=198,slow=39
SEY    Seymchan          23.74  10c iP      P         10 19 03.6  -2.1
YAK    Yakutsk           23.78 344  P       P         10 19 04.7  -1.3
       comp=Z,302nm,0.8s,baz=34,slow=0.7,SNR=36
YAK                                 LR      LR        10 28 58.1
       comp=Z,22µm,18.8s,baz=140,slow=38
YAK    Yakutsk           23.78 344c iP      P         10 19 03.5  -2.4
YAK                                e*PP     pwP       10 19 11.8  +0.2
YAK                                ePPP     PPP       10 19 41.6
YAK                                e                  10 22 44.4
YAK                                eS       S         10 23 18.4  -2.5
YAK                                e*SS     sS        10 23 32.2  +6.1
YAK                                eSS      SnSn      10 24 00.2  +1.0
YAK                                eSSS     SSS       10 24 17.8
YAK                                 pmax    pmax
       comp=Z,441nm,0.9s
YAK                                 pmax    pmax
       comp=N,56nm,1.0s
YAK                                 pmax    pmax
       comp=E,33nm,0.9s
YAK                                 pmax    pmax
       comp=Z,1µm,3.4s
YAK                                 pmax    pmax
       comp=N,913nm,3.4s
YAK                                 pmax    pmax
       comp=E,428nm,3.1s
YAK                                 smax    smax
       comp=N,3µm,3.7s
YAK                                 smax    smax
       comp=E,2µm,3.8s
YAK                                 MLR     MLR
       comp=Z,19µm,18.0s
YAK                                 MLR     MLR
       comp=N,8µm,17.0s
YAK                                 MLR     MLR
       comp=E,19µm,17.0s
YAK    Yakutsk           23.78 344  P       P         10 19 03.6  -2.4
YAK    Yakutsk           23.78 344 ⇑P       P         10 19 03.3  -2.7
CIT    Chita             23.96 311 eP       P         10 19 07.1  -0.8
CIT                                e                  10 19 15.4
CIT                                e                  10 19 23.4
CIT                                e                  10 19 41.4
CIT                                e                  10 19 55.2
CIT                                e                  10 24 08.8
CIT                                 pmax    pmax
       comp=Z,745nm,2.0s
YHNB   Yeheng            23.97 238  P       P         10 19 05.6  -2.7
YHNB                                IAmb    IAmb      10 19 31.2
       comp=Z,83nm,0.8s
YHNB                                IAMs_20 IAMs_20   10 29 57.4
       comp=Z,23µm,19.0s
NACB   Ninganchiao       24.18 236  P       P         10 19 06.5  -3.6
NACB                                IAmb    IAmb      10 19 13.1
       comp=Z,118nm,1.1s
TIY    Taiyuan           24.27 275 eP       P         10 19 08.4  -2.6
TIY                                 S       S         10 23 26.4  -3.1
TIY                                 SS      SnSn      10 24 19.9  +8.1
TIY                                 pmax    pmax
       comp=Z,5µm,7.8s
TIY                                 LR      LR
       comp=Z,22µm,14.1s
TIY                                 LR      LR
       comp=Z,17µm,14.2s
TIY                                 LR      LR
       comp=Z,30µm,16.7s
HHC    Hu-ho-hao-te      24.31 283 eP       P         10 19 09.8  -1.6
HHC                                 PP      PnPn      10 19 40.6  -0.6
HHC                                 S       S         10 23 27.8  -2.4
HHC                                 pmax    pmax
       comp=Z,25nm,0.9s
HHC                                 pmax    pmax
       comp=Z,8µm,6.0s
HHC                                 LR      LR
       comp=Z,22µm,14.0s
HHC                                 LR      LR
       comp=Z,51µm,15.5s
HHC                                 LR      LR
       comp=Z,61µm,15.3s
SSLB   Suanglung         24.87 237  P       P         10 19 14.0  -2.4
SSLB                                IAmb    IAmb      10 19 31.9
       comp=Z,121nm,0.9s
SSLB                                IAMs_20 IAMs_20   10 29 31.0
       comp=Z,35µm,18.0s
YULB   Yu-li             24.93 236  P       P         10 19 13.2  -3.7
YULB                                IAmb    IAmb      10 19 20.0
       comp=Z,115nm,0.8s
YULB                                IAMs_20 IAMs_20   10 29 39.7
       comp=Z,29µm,19.0s
TPUB   Ta-pu             25.42 236  P       P         10 19 19.8  -1.6
WHN    Wuhan             25.48 258 ⇑P       P         10 19 22.0  +0.1
WHN                                 sP      pwP       10 19 32.4  +4.6
WHN                                 S       S         10 23 47.8  -1.0
WHN                                 pmax    pmax
       comp=Z,630nm,1.0s
WHN                                 pmax    pmax
       comp=Z,9µm,5.2s
WHN                                 LR      LR
       comp=Z,161µm,15.2s
WHN                                 LR      LR
       comp=Z,106µm,16.4s
WHN                                 LR      LR
       comp=Z,112µm,17.2s
TWG    Pinlang           25.48 235  P       P         10 19 20.3  -1.6
TWG                                 IAMs_20 IAMs_20   10 30 05.4
       comp=Z,26µm,20.0s
BTO    Baotou            25.51 283 eP       P         10 19 21.6  -0.6
BTO                                 S       S         10 23 38.9   -10
QZH    Quanzhou          25.64 242⇑iP       P         10 19 23.4   0.0
QZH                                 S       S         10 23 50.3  -1.1
QZH                                 pmax    pmax
       comp=Z,140nm,2.2s
QZH                                 pmax    pmax
       comp=Z,7µm,7.6s
QZH                                 LR      LR
       comp=Z,30µm,18.5s
QZH                                 LR      LR
       comp=Z,26µm,20.4s
QZH                                 LR      LR
       comp=Z,28µm,13.7s
KNMB   Chin-men Tao      26.10 242  P       P         10 19 27.1  -0.4
KNMB                                IAmb    IAmb      10 19 54.3
       comp=Z,248nm,1.5s
BOD    Bodaibo           26.16 323 eP       P         10 19 26.7  -1.1
BOD                                 pmax    pmax
       comp=Z,92nm,1.1s
GUMO   Guam              26.16 177  LR      LR        10 28 26.8
       comp=Z,10µm,19.6s,baz=7.5,slow=33
ULN    Ulaanbaatar       27.29 299ceP       P         10 19 38.3   0.0
ULN                                 pmax    pmax
       comp=Z,204nm,1.7s
ULN    Ulaanbaatar       27.29 299  P       P         10 19 38.5  +0.1
ULN                                 IAmb    IAmb      10 19 51.3
       comp=Z,95nm,0.9s
ULN    Ulaanbaatar       27.29 299  IAMs_20 IAMs_20   10 31 01.0
       comp=Z,29µm,22.0s
ULN    Ulaanbaatar       27.29 299 ⇑P       P         10 19 38.1  -0.3
AMKA   Amchitka          27.30  53  P       P         10 19 38.9  +0.8
SONM   Songino Array     27.73 299  P       P         10 19 41.3  -1.0
       comp=Z,30nm,0.6s,baz=102,slow=9.0,SNR=93
SONM                                LR      LR        10 31 35.0
       comp=Z,41µm,18.4s,baz=100,slow=38
SONM   Songino Array     27.73 299  P       P         10 19 41.6  -0.6
SONM                                pmax    pmax
       comp=Z,39nm,0.8s
SONM   Songino Array     27.73 299  P       P         10 19 41.6  -0.6
XAN    Xi'an             28.13 269  P       P         10 19 45.4  -0.4
XAN                                 pP      pwP       10 19 52.9  +1.1
XAN                                 sP      sP        10 19 56.1  +5.9
XAN                                 pmax    pmax
       comp=Z,71nm,1.0s
XAN                                 pmax    pmax
       comp=Z,6µm,4.7s
XAN                                 LR      LR
       comp=Z,36µm,14.2s
XAN                                 LR      LR
       comp=Z,55µm,14.5s
XAN    Xi'an             28.13 269  P       P         10 19 45.3  -0.6
XAN                                 pmax    pmax
       comp=Z,67nm,0.7s
XAN                                 MLR     MLR
       comp=Z,24µm,19.0s
XAN    Xi'an             28.13 269  P       P         10 19 45.3  -0.6
XAN                                 IAmb    IAmb      10 19 57.0
       comp=Z,67nm,0.7s
XAN    Xi'an             28.13 269  IAMs_20 IAMs_20   10 31 14.7
       comp=Z,24µm,19.0s
H11N2  WAKE ISLAND Hy    28.36 128  T       T         10 49 22.3
       SNR=103
H11N1  WAKE ISLAND Hy    28.37 128  T       T         10 49 22.7
       baz=319,slow=74,SNR=373
H11N3  WAKE ISLAND Hy    28.38 128  T       T         10 49 22.7
       baz=194,slow=74,SNR=340
WAKE   Wake Island       28.56 129  IAMs_20 IAMs_20   10 28 25.9
       comp=Z,18µm,19.0s
H11S1  WAKE ISLAND Hy    29.19 130  T       T         10 50 25.6
       SNR=69
H11S3  WAKE ISLAND Hy    29.19 130  T       T         10 50 30.1
       baz=249,slow=74,SNR=73
H11S2  WAKE ISLAND Hy    29.20 130  T       T         10 50 20.5
       baz=320,slow=74,SNR=57
ENH    Enshi             29.30 262  P       P         10 19 54.5  -1.7
ENH                                 IAMs_20 IAMs_20   10 32 05.4
       comp=Z,32µm,20.0s
IRK    Irkutsk           29.56 308 eP       P         10 19 57.3  -1.0
IRK                                 pmax    pmax
       comp=Z,349nm,3.8s
ADK    Adak              29.85  53  IAMs_20 IAMs_20   10 28 14.4
       comp=Z,17µm,18.0s
TLY    Talaya            29.87 307  P       P         10 20 00.7  -0.3
       comp=Z,16nm,0.8s,baz=102,slow=5.4,SNR=30
TLY                                 LR      LR        10 32 36.1
       comp=Z,8µm,19.0s,baz=98,slow=38
TLY    Talaya            29.87 307c iP      P         10 20 01.8  +0.8
TLY                                e                  10 21 07.2
TLY                                eS       S         10 25 03.9  +6.2
TLY                                eSS      ScP       10 26 51.8  +6.2
TLY                                 pmax    pmax
       comp=Z,67nm,1.0s
TLY                                 MLR     MLR
       comp=Z,119µm,16.0s
TLY    Talaya            29.87 307  P       P         10 20 00.4  -0.7
TLY    Talaya            29.87 307 ⇑P       P         10 20 01.9  +0.8
ZAK    Zakamensk         29.95 304 eP       P         10 20 02.3  +0.4
ZAK                                 pmax    pmax
       comp=Z,62nm,1.3s
GZH    Guangzhou         30.48 246  P       P         10 20 02.8  -3.9
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GZH				PP	PnPn	10 20 58.8	-6.6
GZH				S	S	10 24 59.9	-7.8
GZH				PcS	PcS	10 26 49.6	0.0
GZH				pmax	pmax		
	comp=Z,5µm,8.6s						
GZH				LR	LR		
	comp=Z,36µm,13.2s						
LZH	Lanzhou	31.33	276	⇑P	P	10 20 14.6	+0.4
LZH				pP	sP	10 20 18.4	-0.2
LZH				sP	pwP	10 20 21.0	+1.2
LZH				S	S	10 25 17.3	-3.8
LZH				sS	sS	10 25 26.4	0.0
LZH				SS	SnSn	10 27 06.6	+2.4
LZH				pmax	pmax		
	comp=Z,80nm,1.1s						
LZH				pmax	pmax		
	comp=Z,4µm,8.9s						
LZH				LR	LR		
	comp=Z,32µm,15.7s						
LZH				LR	LR		
	comp=Z,44µm,15.7s						
MOY	Mondy	31.51	306	*e*P	P	10 20 16.3	+0.7
MOY				pmax	pmax		
	comp=Z,14nm,1.7s						
TIXI	Tiksi	32.74	351	P	P	10 20 25.2	-0.8
TIXI				pmax	pmax		
	comp=Z,26nm,1.1s						
TIXI				MLR	MLR		
	comp=Z,23µm,19.0s						
TIXI	Tiksi	32.74	351	P	P	10 20 25.2	-0.8
TIXI				IAMs_20	IAMs_20	10 35 13.8	
	comp=Z,23µm,19.0s						
TIXI	Tiksi	32.74	351	⇑P	P	10 20 25.3	-0.8
GYA	Guiyang	33.37	258	⇑P	P	10 20 32.5	+0.3
GYA				PP	PnPn	10 21 44.8	+1.9
GYA				S	S	10 25 51.6	-1.5
GYA				pmax	pmax		
	comp=Z,81nm,1.1s						
GYA				pmax	pmax		
	comp=Z,3µm,5.9s						
GYA				LR	LR		
	comp=Z,15µm,15.1s						
GYA				LR	LR		
	comp=Z,15µm,12.8s						
GYA				LR	LR		
	comp=Z,22µm,15.9s						
CD2	Chengdu	33.40	267	P	P	10 20 31.1	-1.2
CD2				PP	PnPn	10 21 42.8	-0.2
CD2				S	S	10 25 54.1	+0.9
CD2				pmax	pmax		
	comp=Z,120nm,0.9s						
CD2				pmax	pmax		
	comp=Z,5µm,7.5s						
CD2				LR	LR		
	comp=Z,56µm,12.2s						
CD2				LR	LR		
	comp=Z,38µm,15.3s						
CD2				LR	LR		
	comp=Z,83µm,14.7s						
GTA	Gaotai	33.42	284	⇓P	P	10 20 32.8	+0.3
GTA				pP	sP	10 20 37.1	0.0
GTA				sP	pwP	10 20 40.5	+2.4
GTA				S	S	10 25 47.8	-5.8
GTA				sS	sS	10 26 07.3	+8.5
GTA				pmax	pmax		
	comp=Z,33nm,1.0s						
GTA				pmax	pmax		
	comp=Z,4µm,8.0s						
GTA				LR	LR		
	comp=Z,20µm,17.9s						
GTA				LR	LR		
	comp=Z,55µm,17.1s						
GAMB	Gambell	35.47	33	P	P	10 20 53.0	+3.2
	baz=249						
GAMB				S	S	10 26 24.3	-0.1
	baz=249						
GAMB	Gambell	35.47	33	P	P	10 20 49.2	-0.6
GAMB				IAMs_20	IAMs_20	10 36 50.4	
	comp=Z,14µm,19.0s						
QIZ	Qiongzhong	35.61	244	P	P	10 20 51.8	+0.3
QIZ				PP	PP	10 22 13.6	+1.3
QIZ				S	S	10 26 29.1	+1.7
QIZ				pmax	pmax		
	comp=Z,2µm,7.3s						
QIZ				LR	LR		
	comp=Z,23µm,16.2s						
QIZ				LR	LR		
	comp=Z,19µm,19.1s						
QIZ				LR	LR		
	comp=Z,27µm,17.2s						
QIZ	Qiongzhong	35.61	244	P	P	10 20 52.1	+0.6
QIZ	Qiongzhong	35.61	244	IAMs_20	IAMs_20	10 36 22.0	
	comp=Z,27µm,19.0s						
DAV	Davao City (W)	36.38	211	IAMs_20	IAMs_20	10 32 55.6	
	comp=Z,17µm,22.0s						
KMI	Kunming	37.06	259	⇑P	P	10 21 04.8	+0.7
KMI				pP	pP	10 21 07.3	+0.1
KMI				sP	sP	10 21 08.8	+0.3
KMI				PP	PnPn	10 22 28.8	0.0
KMI				S	S	10 26 48.8	-1.2
KMI				sS	sS	10 26 54.9	-0.2
KMI				SS	SnSn	10 29 18.0	-5.6
KMI				ScS	ScS	10 31 20.3	+1.1
KMI				pmax	pmax		
	comp=Z,70nm,1.9s						
KMI				pmax	pmax		
	comp=Z,4µm,7.7s						
KMI				LR	LR		
	comp=Z,21µm,17.6s						
KMI				LR	LR		
	comp=Z,24µm,16.4s						
KMI				LR	LR		
	comp=Z,31µm,16.8s						
KMI	Kunming	37.06	259	P	P	10 21 04.2	+0.1
KMI				pmax	pmax		
	comp=Z,80nm,1.0s						
KMI				MLR	MLR		
	comp=Z,31µm,18.0s						
KMI	Kunming	37.06	259	P	P	10 21 04.2	+0.1
KMI				IAmb	IAmb	10 21 19.3	
	comp=Z,80nm,1.0s						
KWAJ	Kwajalein Atol	37.65	139	IAMs_20	IAMs_20	10 32 06.7	
	comp=Z,16µm,22.0s						
ANM	Nome	38.35	33	P	P	10 21 15.5	+1.1
	baz=255,SNR=24						
ANM				S	S	10 27 09.0	+0.7
	baz=255						
ANM	Nome	38.35	33	P	P	10 21 15.3	+1.0
ANM				pmax	pmax		
	comp=Z,40nm,1.0s						
ANM				MLR	MLR		
	comp=Z,11µm,18.0s						
ANM	Nome	38.35	33	P	P	10 21 15.3	+1.0
ANM				IAMs_20	IAMs_20	10 38 15.6	
	comp=Z,11µm,18.0s						
SLVN	Son La	38.39	253	P	P	10 21 15.4	+0.3
SLVN				IAMs_20	IAMs_20	10 36 27.9	
	comp=Z,13µm,20.0s						
DGZ	Jazzator, Alta	40.17	303	*c i*P	P	10 21 31.2	+1.3
DGZ				pmax	pmax		
	comp=Z,224nm,2.0s						
DGZ				MLR	MLR		
	comp=Z,70µm,15.0s						
RDOG	Red Dog Mine	40.27	28	P	P	10 21 31.5	+1.3
	baz=254						
RDOG				S	S	10 27 35.3	-1.7
	baz=254						
RDOG	Red Dog Mine	40.27	28	P	P	10 21 30.2	-0.1
RDOG				IAMs_20	IAMs_20	10 39 47.2	
	comp=Z,9µm,18.0s						
NONG	Nongkai	41.00	250	P	P	10 21 38.1	+1.2
	comp=Z,134nm,0.7s						
WMQ	Urumqi	41.12	294	P	P	10 21 39.0	+1.3
WMQ				PcP	PcP	10 23 39.3	+2.3
WMQ				ScP	ScP	10 27 25.4	-1.2
WMQ				S	S	10 27 46.9	-3.6
WMQ				sS	sS	10 27 58.0	+2.2
WMQ				pmax	pmax		
	comp=Z,64nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,6µm,7.5s						
WMQ				LR	LR		
	comp=Z,22µm,17.3s						
WMQ				LR	LR		
	comp=Z,11µm,14.7s						
WMQ				LR	LR		
	comp=Z,9µm,24.1s						
WMQ	Urumqi	41.12	294	P	P	10 21 38.8	+1.1
WMQ				pmax	pmax		
	comp=Z,128nm,0.8s						
WMQ				MLR	MLR		
	comp=Z,14µm,18.0s						
WMQ	Urumqi	41.12	294	P	P	10 21 38.8	+1.1
WMQ	Urumqi	41.12	294	IAMs_20	IAMs_20	10 39 08.8	
	comp=Z,14µm,18.0s						
LKP	Lekhapani	41.18	267	*e*P	P	10 21 40.1	+1.8
LKP				IAmb	IAmb	10 21 44.3	
	comp=Z,166nm,0.9s						
UBPT	Khong Chiam	41.21	245	P	P	10 21 39.9	+1.3
	comp=Z,5µmcomp=Z,1µmcomp=Z,20nm,1.9s						
UBPT	Khong Chiam	41.21	245	P	P	10 21 39.5	+0.9
UBPT				IAMs_20	IAMs_20	10 39 31.8	
	comp=Z,19µm,20.0s						
MYLDM	Lahad Datu	41.22	220	P	P	10 21 41.8	+3.1
MYLDM	Lahad Datu	41.22	220	⇑P	P	10 21 41.7	+3.1
ZAA0	Zalesovo Array	41.32	310	P	P	10 21 39.0	-0.1
ZALV	Zalesovo Beam	41.32	310	P	P	10 21 38.5	-0.6
	comp=Z,27nm,0.6s,baz=87,slow=7.6,SNR=94						
ZALV				PcP	PcP	10 23 36.9	-0.5
	comp=Z,10nm,0.6s,baz=80,slow=2.0,SNR=1.9						
ZALV				LR	LR	10 39 39.8	
	comp=Z,15µm,20.3s,baz=81,slow=38						
DLV	T Lat	41.56	238	P	P	10 21 41.8	+0.1
KKM	Kota Kinabalu	41.65	223	P	P	10 21 42.5	+0.2
KKM				IAmb	IAmb	10 21 57.9	
	comp=Z,110nm,1.3s						
KKM	Kota Kinabalu	41.65	223	⇑P	P	10 21 44.1	+1.8
DIBR	DIBRUGARH	41.83	268	*e*P	P	10 21 44.0	+0.4
SIJI	Sorong	42.03	198	P	P	10 21 44.0	-1.2
	comp=Z,12nm,0.8s,baz=352,slow=10,SNR=1.9						
TTA	Tatalina	42.19	36	P	P	10 21 47.0	+0.7
TTA				pmax	pmax		
	comp=Z,60nm,1.4s						
TTA				MLR	MLR		
	comp=Z,6µm,19.0s						
TTA	Tatalina	42.19	36	P	P	10 21 47.0	+0.7
TTA	Tatalina	42.19	36	⇑P	P	10 21 47.6	+1.3
ZSN	Zaisan	42.23	300	⇑*i*P	P	10 21 47.7	+1.0
	comp=Z,420nm,3.2s,baz=300						
ZSN				*i* S	S	10 28 08.8	+2.0
	baz=300						
ZSN				LR	LR	10 40 08.3	
	comp=Z,6µm,12.2s,baz=300						
ZSN	Zaisan	42.23	300	*c i*P	P	10 21 47.7	+1.0
ZSN				*i* S	S	10 28 08.7	+2.0
ZSN				pmax	pmax		
	comp=Z,420nm,3.2s						
ZSN				MLR	MLR		
	comp=Z,6µm,12.0s						
SVW2	Sparrevohn	42.31	39	P	P	10 21 47.8	+0.6
ZIRO	ZIRO	42.62	269	*e*P	P	10 21 48.8	-1.5
JORH	JORHAT	42.70	268	*e*P	P	10 21 52.0	+1.2
MOKO	MOKOCHONG	42.71	267	*e*P	P	10 21 52.2	+1.2
UTTA	Uttaradit	43.09	252	P	P	10 21 54.0	+0.1
	comp=Z,790nmcomp=Z,76nm,1.1s						
SII	Sitkinak Islan	43.16	46	IAMs_20	IAMs_20	10 36 57.1	
	comp=Z,12µm,20.0s						
A21K	Barrow	43.24	24	P	P	10 21 54.8	+0.2
	baz=256,SNR=52						
A21K				S	S	10 28 18.2	-2.7
	baz=256						
A21K	Barrow	43.24	24	P	P	10 21 54.7	+0.2
A21K				IAmb	IAmb	10 21 56.6	
	comp=Z,88nm,0.8s						
A21K				IAMs_20	IAMs_20	10 42 23.0	
	comp=Z,9µm,18.0s						
CHAI	Chaiyaphum	43.25	249	P	P	10 21 56.3	+1.1
	comp=Z,1µmcomp=Z,109nm,0.9s						
LAMP	Lampang	43.28	254	P	P	10 21 56.9	+1.5
	comp=Z,936nmcomp=Z,113nm,0.9s						
KOHI	KOHIMA	43.34	266	*e*P	P	10 21 56.3	+0.2
KOHI				IAmb	IAmb	10 21 58.9	
	comp=Z,172nm,0.7s						
KOHI				IAMs_20	IAMs_20	10 40 49.1	
	comp=Z,25µm,18.9s						
IMAR	Indian Mountai	43.41	32	P	P	10 21 56.0	0.0
CM34	Chiang Mai Arr	43.43	254	P	P	10 21 57.0	+0.3
CM35	Chiang Mai Arr	43.53	254	P	P	10 21 58.0	+0.5
PHIT	Phitsanulok	43.54	251	P	P	10 22 05.0	+7.4
OHAK	Old Harbor	43.60	45	IAMs_20	IAMs_20	10 39 42.6	
	comp=Z,11µm,19.0s						
CM33	Chiang Mai Arr	43.60	255	P	P	10 21 58.0	-0.1
CMMT	Chiang Mai	43.60	255	P	P	10 21 57.0	-1.1
	comp=Z,1µmcomp=Z,40nm,0.9s						
CHTO	Chiang Mai	43.60	255	P	P	10 21 58.8	+0.7
CHTO				pmax	pmax		
	comp=Z,86nm,1.2s						
CHTO				MLR	MLR		
	comp=Z,17µm,18.0s						
CHTO	Chiang Mai	43.60	255	P	P	10 21 58.8	+0.7
CHTO				IAmb	IAmb	10 22 07.8	
	comp=Z,86nm,1.2s						
CHTO	Chiang Mai	43.60	255	IAMs_20	IAMs_20	10 41 54.0	
	comp=Z,17µm,18.0s						
CHTO	Chiang Mai	43.60	255	⇓P	P	10 21 58.8	+0.7
LSA	Lhasa	43.65	273	P	P	10 22 00.0	+1.0
LSA				pmax	pmax		
	comp=Z,82nm,1.0s						
LSA				LR	LR		
	comp=Z,8µm,14.2s						
LSA				LR	LR		
	comp=Z,10µm,12.1s						
LSA				LR	LR		
	comp=Z,17µm,12.1s						
LSA	Lhasa	43.65	273	P	P	10 21 59.9	+1.0
LSA				pmax	pmax		
	comp=Z,142nm,1.4s						
LSA				MLR	MLR		
	comp=Z,28µm,18.0s						
LSA	Lhasa	43.65	273	P	P	10 21 59.9	+1.0
LSA				IAmb	IAmb	10 22 24.8	
	comp=Z,142nm,1.4s						
CM36	Chiang Mai Arr	43.68	254	P	P	10 21 59.0	+0.3
RSO	Redoubt South	43.70	40	P	P	10 21 58.7	+0.1
TOLI2	Tolitoli	43.75	214	P	P	10 21 59.3	+0.1
TOLI2				IAmb	IAmb	10 22 20.9	
	comp=Z,95nm,1.5s						
CM32	Chiang Mai Arr	43.78	254	P	P	10 22 01.0	+1.5
FAKI	Fak Fak	43.78	196	IAMs_20	IAMs_20	10 37 37.7	
	comp=Z,15µm,20.0s						
CM09	Chiang Mai Arr	43.80	254	P	P	10 22 01.0	+1.3
	comp=Z,297nmcomp=Z,28nm,1.1s						
CM31	Chiang Mai Arr	43.83	254	P	P	10 22 03.1	+3.2
	comp=Z,11µmcomp=Z,811nm,1.0s						
CM31	Chiang Mai Arr	43.83	254	P	P	10 22 00.7	+0.8
CMAR	Chiang Mai Arr	43.83	254	P	P	10 21 60.0	0.0
	comp=Z,9.1nm,0.8s,baz=46,slow=6.7,SNR=30						
CMAR				LR	LR	10 42 21.4	
	comp=Z,9µm,18.5s,baz=94,slow=39						
CMAR	Chiang Mai Arr	43.83	254	*i* P	P	10 22 00.8	+0.9
CMAR				pmax	pmax		
	comp=Z,7.0nm,0.6s						
CMAR	Chiang Mai Arr	43.83	254	P	P	10 22 00.6	+0.7
CM04	Chiang Mai Arr	43.84	254	P	P	10 22 01.1	+1.2
	comp=Z,307nmcomp=Z,37nm,0.9s						
CM01	Chiang Mai Arr	43.84	254	P	P	10 22 01.0	+1.0
	comp=Z,313nmcomp=Z,31nm,0.9s						
CM02	Chiang Mai Arr	43.84	254	P	P	10 22 01.0	+1.0
	comp=Z,227nmcomp=Z,31nm,0.9s						
CM15	Chiang Mai Arr	43.84	254	P	P	10 22 01.9	+1.8
	comp=Z,25nm,0.8s						
CM05	Chiang Mai Arr	43.86	254	P	P	10 22 01.2	+1.0
	comp=Z,303nmcomp=Z,30nm,0.9s						
CM13	Chiang Mai Arr	43.88	254	P	P	10 22 01.6	+1.3
	comp=Z,223nmcomp=Z,22nm,1.2s						
CHUM	Lake Minchumin	43.90	35	P	P	10 22 01.0	+1.1
	baz=268,SNR=11						
CHUM				S	S	10 28 31.2	+0.5
	baz=268						
IMP	Imphal	43.93	266	*e*P	P	10 22 00.9	+0.1
IMP				IAmb	IAmb	10 22 14.8	
	comp=Z,60nm,0.8s						
KDAK	Kodiak Island	43.93	44	P	P	10 21 59.6	-0.7
	comp=Z,58nm,1.0s,baz=317,slow=4.5,SNR=7.2						
KDAK	Kodiak Island	43.93	44	P	P	10 21 59.2	-1.0
SUKH	Sukhothai	43.93	252	P	P	10 22 01.9	+1.2
	comp=Z,95nm,0.8s						
PPLA	Purkeypile	43.94	36	P	P	10 22 02.5	+2.0
	baz=270						
PPLA				S	S	10 28 32.6	+1.0
	baz=270						
PPLA	Purkeypile	43.94	36	P	P	10 22 02.5	+2.0
MK31	Makanchi Array	44.09	300	*ce*P	P	10 22 01.4	-0.4
MK31	Makanchi Array	44.09	300	P	P	10 22 01.2	-0.6
MKAR	Makanchi Array	44.09	300	P	P	10 22 01.2	-0.6
	comp=Z,33nm,0.9s,baz=83,slow=8.2,SNR=149						
MKAR				LR	LR	10 41 23.5	
	comp=Z,11µm,18.9s,baz=72,slow=38						
MKAR	Makanchi Array	44.09	300	P	P	10 22 01.5	-0.3
MKAR	Makanchi Array	44.09	300	P	P	10 22 01.5	-0.3
SKT	Skwentna	44.25	38	P	P	10 22 03.8	+1.0
	baz=271						
SKT				S	S	10 28 32.4	-3.5
	baz=271						
MAKZ	Makanchi	44.30	300	P	P	10 22 03.0	-0.4
MAKZ				pmax	pmax		
	comp=Z,61nm,0.9s						
MAKZ				MLR	MLR		
	comp=Z,24µm,18.0s						
MAKZ	Makanchi	44.30	300	P	P	10 22 03.0	-0.4
MAKZ				IAmb	IAmb	10 22 24.6	
	comp=Z,60nm,0.8s						
MAKZ	Makanchi	44.30	300	⇓P	P	10 22 03.0	-0.4
MAKZ				⇑P	pP	10 22 03.5	-3.2
SRAK	Srakaew	44.48	247	P	P	10 22 03.1	-2.1
	comp=Z,11µmcomp=Z,589nm,1.1s						
BPAW	Bear Paw Mtn.	44.49	35	P	P	10 22 05.3	+0.6
	baz=270,SNR=8.4						
BPAW				S	S	10 28 38.7	-0.7
	baz=270						
BPAW	Bear Paw Mtn.	44.49	35	P	P	10 22 05.3	+0.6
KTH	Kantishna Hill	44.51	36	P	P	10 22 05.5	+0.6
KTH				IAmb	IAmb	10 22 29.9	
	comp=Z,66nm,0.9s						
RABL	Rabaul	44.52	168	P	P	10 22 05.5	0.0
MLY	Manley	44.61	33	P	P	10 22 06.6	+0.9
	baz=269,SNR=18						
MLY				S	S	10 28 41.8	+0.7
	baz=269						
SEM	Semipalatinsk	44.61	306	⇑*i*P	P	10 22 06.0	-0.2
	baz=305						
SEM				*e*S	S	10 28 42.5	+0.7
	baz=305						
SEM				LR	LR	10 41 10.0	
	comp=Z,3µm,12.7s,baz=305						
SEM	Semipalatinsk	44.61	306	*c i*P	P	10 22 05.9	-0.2
SEM				*e*S	S	10 28 42.5	+0.7
SEM				MLR	MLR		
	comp=Z,3µm,13.0s						
SUA	Susitna One	44.64	39	P	P	10 22 06.3	+0.3
	baz=272						
SUA	Susitna One	44.64	39	P	P	10 22 06.3	+0.3
SANI	Sanana	44.67	205	⇑P	P	10 22 06.4	-0.2
MHMT	Maesarieng	44.75	255	P	P	10 22 07.8	+0.5
	comp=Z,3µmcomp=Z,83nm,0.9s						
TRF	Thorofare Moun	44.80	36	P	P	10 22 08.6	+1.3
	baz=271						
TRF				S	S	10 28 43.9	-0.3
	baz=271						
TRF	Thorofare Moun	44.80	36	P	P	10 22 08.9	+1.6
SILR	SILCHAR	44.84	266	*e*P	P	10 22 09.5	+1.6
LUWI	Luwuk	44.89	210	P	P	10 22 07.3	-1.0
COLD	Coldfoot	44.91	30	P	P	10 22 08.7	+0.7
	baz=267,SNR=21						
COLD				S	S	10 28 44.7	-0.6
	baz=267						
COLD	Coldfoot	44.91	30	P	P	10 22 08.7	+0.7
GUWA	GUWAHATI	44.95	269	*e*P	P	10 22 06.3	-2.5
GUWA				IAMs_20	IAMs_20	10 42 56.2	
	comp=Z,19µm,15.6s						
SHL	Shillong	45.13	268	P	P	10 22 10.2	-0.3
SHL				pmax	pmax		
	comp=Z,51nm,0.8s						
SHL				MLR	MLR		
	comp=Z,22µm,18.0s						
SHL	Shillong	45.13	268	*e*P	P	10 22 10.0	-0.5
SHL				IAMs_20	IAMs_20	10 43 00.8	
	comp=Z,17µm,14.9s						
SHL	Shillong	45.13	268	P	P	10 22 10.2	-0.3
SHL				IAmb	IAmb	10 22 22.5	
	comp=Z,51nm,0.8s						
RC01	Rabbit Creek A	45.15	39	P	P	10 22 10.3	+0.4
	baz=274,SNR=5.5						
BWN	Browne	45.15	35	P	P	10 22 11.2	+1.3
BWN				IAMs_20	IAMs_20	10 42 35.3	
	comp=Z,10µm,19.0s						
O22K	Cooper Landing	45.19	40	P	P	10 22 11.2	+0.9
	baz=274						
O22K	Cooper Landing	45.19	40	IAMs_20	IAMs_20	10 44 42.6	
	comp=Z,8µm,18.0s						
I23K	Minto, Yukon-K	45.19	33	P	P	10 22 11.0	+0.8
	baz=270,SNR=25						
I23K				S	S	10 28 48.1	-1.3
	baz=270						
I23K	Minto, Yukon-K	45.19	33	P	P	10 22 11.0	+0.8
TOLK	Toolik Lake Re	45.23	28	P	P	10 22 11.3	+0.7
	baz=266,SNR=54						
TOLK				S	S	10 28 49.5	-0.6
	baz=266						
TOLK	Toolik Lake Re	45.23	28	P	P	10 22 11.3	+0.7
TOLK				IAmb	IAmb	10 22 13.4	
	comp=Z,45nm,0.9s						
TOLK				IAMs_20	IAMs_20	10 44 47.2	
	comp=Z,10µm,18.0s						
UTHA	Uthaitani	45.31	251	P	P	10 22 13.7	+2.0
	comp=Z,645nmcomp=Z,56nm,1.0s						
NEA2	Nenana	45.32	34	P	P	10 22 12.2	+0.9
	baz=271,SNR=6.6						
NEA2				S	S	10 28 50.2	-1.2
	baz=271						
SEW	Seward	45.36	40	P	P	10 22 13.2	+1.6
	baz=275						
SEW	Seward	45.36	40	IAMs_20	IAMs_20	10 43 03.0	
	comp=Z,11µm,20.0s						
MCK	McKinley	45.40	35	P	P	10 22 12.0	0.0
	baz=272,SNR=9.5						
MCK				S	S	10 28 50.8	-1.7
	baz=272						
PMR	Palmer	45.41	38	P	P	10 22 11.3	-0.7
PMR				pmax	pmax		
	comp=Z,24nm,0.8s						
PMR				MLR	MLR		
	comp=Z,6µm,18.0s						
PMR	Palmer	45.41	38	P	P	10 22 11.3	-0.7
RND	Reindeer	45.45	36	P	P	10 22 12.0	-0.4
RND				pmax	pmax		
	comp=Z,33nm,0.9s						
RND	Reindeer	45.45	36	P	P	10 22 12.0	-0.4
KURK	Kurchatov	45.56	306	*ce*P	P	10 22 12.9	-0.5
KURK				pmax	pmax		
	comp=Z,180nm,1.7s						
KURK	Kurchatov	45.56	306	P	P	10 22 12.8	-0.5
KURK	Kurchatov	45.56	306	⇓P	P	10 22 12.7	-0.6
KURK				⇑P	P	10 22 12.8	-0.6
WAT2	Susitna Watana	45.58	36	P	P	10 22 13.0	-0.5
	baz=273,SNR=14						
WAT2				S	S	10 28 51.8	-3.7
	baz=273						
MDM	Murphy Dome	45.67	34	P	P	10 22 13.9	-0.2
MDM				IAmb	IAmb	10 22 16.7	
	comp=Z,52nm,1.0s						
MDM				IAMs_20	IAMs_20	10 41 11.1	
	comp=Z,9µm,19.0s						
WRH	Wood River Hil	45.75	34	P	P	10 22 15.1	+0.5
SML	Sawmill	45.77	38	P	P	10 22 15.1	+0.2
	baz=274,SNR=6.6						
SML				S	S	10 28 56.0	-2.0
	baz=274						
SML	Sawmill	45.77	38	P	P	10 22 14.9	-0.1
SML				IAmb	IAmb	10 22 43.0	
	comp=Z,64nm,1.0s						
TCOL	CIGO, UAF Yank	45.83	34	P	P	10 22 16.0	+0.7
	baz=272,SNR=6.2						
TCOL				S	S	10 28 59.7	+1.1
	baz=272						
TCOL	CIGO, UAF Yank	45.83	34	P	P	10 22 16.0	+0.7
TCOL				IAmb	IAmb	10 22 28.5	
	comp=Z,55nm,0.8s						
TCOL				IAMs_20	IAMs_20	10 41 16.8	
	comp=Z,8µm,19.0s						
COLA	College	45.84	34	P	P	10 22 16.2	+0.9
	baz=272						
COLA	College	45.84	34	P	P	10 22 16.0	+0.7
COLA				pmax	pmax		
	comp=Z,55nm,0.8s						
COLA				MLR	MLR		
	comp=Z,8µm,19.0s						
COLA	College	45.84	34	P	P	10 22 16.0	+0.7

COLA				IAmb	IAmb	10 22 28.5	
	comp=Z,55nm,0.8s						
COLA	**College**	**45.84**	**34**	⇓P	**P**	**10 22 16.2**	**+0.9**
CCB	**Clear Creek Bu**	**45.87**	**34**	P	**P**	**10 22 15.2**	**-0.4**
CCB				IAMs_20	IAMs_20	10 41 08.1	
	comp=Z,9μm,20.0s						
SAIH	**SAIHA**	**45.94**	**263**	*e*P	**P**	**10 22 16.6**	**-0.3**
WAT6	**Susitna Watana**	**45.99**	**37**	P	**P**	**10 22 17.2**	**+0.4**
	baz=274,SNR=5.9						
WAT6				S	**S**	**10 28 59.4**	**-2.1**
	baz=274						
POKR	**Poker Plat Res**	**46.01**	**33**	P	**P**	**10 22 17.5**	**+0.8**
	baz=272,SNR=42						
POKR				S	**S**	**10 29 00.0**	**-1.3**
	baz=272						
POKR	**Poker Plat Res**	**46.01**	**33**	P	**P**	**10 22 17.1**	**+0.4**
PATY	**Pattaya**	**46.05**	**247**	P	P	10 22 28.7	+11
HDA	**Harding Lake**	**46.24**	**34**	P	**P**	**10 22 18.5**	**-0.1**
	baz=273,SNR=19						
HDA				S	**S**	**10 29 00.2**	**-4.4**
	baz=273						
HDA				S	**S**	**10 29 00.2**	**-4.4**
	baz=273						
HDA	**Harding Lake**	**46.24**	**34**	P	**P**	**10 22 18.3**	**-0.3**
HDA				IAmb	IAmb	10 22 20.4	
	comp=Z,35nm,0.8s						
HDA				IAMs_20	IAMs_20	10 42 55.2	
	comp=Z,9μm,18.0s						
SCM	**Sheep Creek Mo**	**46.24**	**38**	P	**P**	**10 22 18.7**	**0.0**
SCM				pmax	pmax		
	comp=Z,48nm,0.9s						
SCM				MLR	MLR		
	comp=Z,6μm,18.0s						
SCM	**Sheep Creek Mo**	**46.24**	**38**	P	**P**	**10 22 18.7**	**0.0**
SCM				IAmb	IAmb	10 22 21.1	
	comp=Z,48nm,0.9s						
IL31		**46.25**	**34**	P	**P**	**10 22 18.3**	**-0.3**
IL31					**pP**	**10 22 18.4**	**-3.4**
IL31				IAmb	IAmb	10 22 35.6	
	comp=Z,37nm,0.8s						
ILAR	**Eielson Array**	**46.25**	**34**	P	**P**	**10 22 18.1**	**-0.6**
	comp=Z,24nm,0.8s,baz=262,slow=5.4,SNR=131						
ILAR				LR	LR	10 41 40.6	
	comp=Z,6μm,21.6s,baz=282,slow=36						
ILAR	**Eielson Array**	**46.25**	**34**	P	**P**	**10 22 18.2**	**-0.4**
ILAR	**Eielson Array**	**46.25**	**34**	P	**P**	**10 22 18.2**	**-0.4**
SRDT	**SRDT**	**46.34**	**250**	P	P	10 22 33.1	+13
GLI	**Glacier Island**	**46.45**	**39**	S	**S**	**10 29 06.2**	**-1.4**
	baz=276						
AGT	**Agartala**	**46.51**	**266**	*e*P	**P**	**10 22 20.6**	**-0.5**
JOHN	**Johnston Islan**	**46.67**	**106**	IAMs_20	IAMs_20	10 38 44.7	
	comp=Z,14μm,20.0s						
BELO	**BELONIA**	**46.70**	**265**	*e*P	**P**	**10 22 20.6**	**-2.1**
TARA	**Tarawa**	**46.71**	**138**	IAMs_20	IAMs_20	10 42 44.0	
	comp=Z,11μm,19.0s						
GTK	**Tadong**	**46.76**	**272**	*e*P	**P**	**10 22 23.8**	**+0.5**
M24K	**Tolsona, Glenn**	**46.76**	**37**	P	**P**	**10 22 23.5**	**+0.7**
	baz=276,SNR=5.8						
M24K				S	**S**	**10 29 10.3**	**-1.9**
	baz=276						
M24K	**Tolsona, Glenn**	**46.76**	**37**	P	**P**	**10 22 23.3**	**+0.6**
HIN	**Hinchinbrook I**	**46.79**	**40**	IAMs_20	IAMs_20	10 45 13.9	
	comp=Z,9μm,18.0s						
PRP	**Porcupine Dome**	**46.79**	**33**	P	**P**	**10 22 23.6**	**+0.6**
	baz=273,SNR=30						
PRP				S	**S**	**10 29 12.8**	**0.0**
	baz=273						
PRP	**Porcupine Dome**	**46.79**	**33**	P	**P**	**10 22 23.4**	**+0.4**
SBUM	**Sibu**	**46.80**	**225**	P	**P**	**10 22 23.6**	**+0.1**
SBUM				IAmb	IAmb	10 22 42.5	
	comp=Z,67nm,1.4s						
SBUM				IAMs_20	IAMs_20	10 43 47.7	
	comp=Z,12μm,19.0s						
SBUM	**Sibu**	**46.80**	**225**	P	**P**	**10 22 24.0**	**+0.5**
FYU	**Fort Yukon**	**46.87**	**31**	P	**P**	**10 22 25.0**	**+1.6**
PHET	**Kaeng Krachan**	**46.94**	**248**	P	**P**	**10 22 26.0**	**+1.4**
	comp=Z,1μmcomp=Z,141nm,0.8s						
KLU	**Klutina**	**46.95**	**38**	P	**P**	**10 22 24.6**	**+0.3**
	baz=276,SNR=8.6						
KLU				S	**S**	**10 29 13.4**	**-1.5**
	baz=276						
KLU	**Klutina**	**46.95**	**38**	P	**P**	**10 22 24.6**	**+0.3**
KLU				IAmb	IAmb	10 22 26.9	
	comp=Z,61nm,1.2s						
PDGK	**Podgornoye**	**46.98**	**296**	*i* P	**P**	**10 22 25.1**	**+0.3**
PDGK				pmax	pmax		
	comp=Z,151nm,1.6s						
PAX	**Paxson**	**47.00**	**36**	P	**P**	**10 22 25.7**	**+1.0**
	baz=275						
PAX				S	**S**	**10 29 15.0**	**-0.8**
	baz=275						
PAX	**Paxson**	**47.00**	**36**	P	**P**	**10 22 25.9**	**+1.2**
PAX				pmax	pmax		
	comp=Z,32nm,1.4s						
PAX				MLR	MLR		
	comp=Z,8μm,19.0s						
PAX	**Paxson**	**47.00**	**36**	P	**P**	**10 22 25.9**	**+1.2**
PAX				IAMs_20	IAMs_20	10 43 47.3	
	comp=Z,8μm,19.0s						
SHLS	**Shalkode**	**47.05**	**296**	⇑*i*P	**P**	**10 22 23.4**	**-2.0**
	comp=Z,142nm,1.9s,baz=296						
SHLS	**Shalkode**	**47.05**	**296**	*c i*P	**P**	**10 22 23.3**	**-2.1**
SHLS				pmax	pmax		
	comp=Z,142nm,1.9s						
BMAR	**Burnt Mountain**	**47.09**	**30**	P	**P**	**10 22 26.8**	**+1.6**
EYAK	**Cordova Ski Ar**	**47.14**	**40**	P	**P**	**10 22 27.0**	**+1.4**
	baz=277						
EYAK				S	**S**	**10 29 19.9**	**+2.4**
	baz=277						
EYAK	**Cordova Ski Ar**	**47.14**	**40**	IAMs_20	IAMs_20	10 44 29.1	
	comp=Z,10μm,19.0s						
TDK	**Taldyqorghan**	**47.19**	**299**	*i* P	**P**	**10 22 27.0**	**+0.6**
	comp=Z,330nm,1.8s,baz=298						
TDK				*e*S	**S**	**10 29 20.0**	**+1.2**
	baz=298						
TDK				LR	LR	10 42 28.6	
	comp=Z,10μm,15.5s,baz=298						
TDK	**Taldyqorghan**	**47.19**	**299**	*i* P	**P**	**10 22 26.9**	**+0.6**
TDK				*e*S	**S**	**10 29 20.0**	**+1.2**
TDK				pmax	pmax		
	comp=Z,330nm,1.8s						
TDK				MLR	MLR		
	comp=Z,10μm,15.0s						
UZB	**Uzynbulak**	**47.36**	**296**	⇑*i*P	**P**	**10 22 28.1**	**+0.3**
	comp=Z,108nm,1.9s,baz=296						
UZB				*e*S	**S**	**10 29 22.5**	**+1.1**
	baz=296						
UZB				*e*S	**S**	**10 29 22.5**	**+1.1**
	baz=296						
UZB	**Uzynbulak**	**47.36**	**296**	*c i*P	**P**	**10 22 28.1**	**+0.3**
UZB				*e*S	**S**	**10 29 22.5**	**+1.1**
UZB				pmax	pmax		
	comp=Z,107nm,1.9s						
TAPN	**Taplejung**	**47.43**	**273**	*e*P	**P**	**10 22 29.6**	**+0.9**
	comp=Z,480nm,1.4s						
KPKS	**Kokpek**	**47.49**	**297**	⇑*i*P	**P**	**10 22 29.3**	**+0.5**
	comp=Z,133nm,1.6s,baz=296						
KPKS				*e*S	**S**	**10 29 24.7**	**+1.5**
	baz=296						
KPKS	**Kokpek**	**47.49**	**297**	*c i*P	**P**	**10 22 29.2**	**+0.5**
KPKS				*e*S	**S**	**10 29 24.7**	**+1.5**
KPKS				pmax	pmax		
	comp=Z,133nm,1.6s						
N25K	**Chitina, Valde**	**47.56**	**38**	P	**P**	**10 22 29.7**	**+0.7**
	baz=277						
N25K				S	**S**	**10 29 22.6**	**-1.1**
	baz=277						
DOT	**Dot Lake**	**47.57**	**35**	P	**P**	**10 22 28.4**	**-0.6**
DOT				IAMs_20	IAMs_20	10 44 07.1	
	comp=Z,8μm,19.0s						
SCRK	**Sand Creek**	**47.57**	**35**	P	**P**	**10 22 28.5**	**-0.6**
	baz=276,SNR=22						
SCRK				S	**S**	**10 29 21.5**	**-2.3**
	baz=276						
BKB	**Balikpapan**	**47.60**	**217**	P	**P**	**10 22 29.4**	**-0.2**
BMRM	**Bremner River**	**47.64**	**39**	P	**P**	**10 22 30.3**	**+0.7**
	baz=278						
BMRM				S	**S**	**10 29 23.2**	**-1.6**
	baz=278						
RAGM	**Ragged Mountai**	**47.69**	**40**	P	**P**	**10 22 30.1**	**+0.1**
RAGM				IAMs_20	IAMs_20	10 44 56.7	
	comp=Z,11μm,19.0s						
MENT	**Mentasta**	**47.80**	**36**	P	**P**	**10 22 31.9**	**+1.0**
MENT				IAmb	IAmb	10 22 46.4	
	comp=Z,47nm,1.2s						
SATY	**Saty**	**47.81**	**296**	⇑*i*P	**P**	**10 22 32.0**	**+0.7**
	baz=296						
SATY	**Saty**	**47.81**	**296**	*c i*P	**P**	**10 22 32.0**	**+0.7**
HMT	**Hamilton**	**47.90**	**40**	IAMs_20	IAMs_20	10 45 02.5	
	comp=Z,10μm,19.0s						
ODAN	**Odare**	**47.92**	**272**	*e*P	**P**	**10 22 32.5**	**0.0**
GLB	**Gilahina Butte**	**47.96**	**38**	P	**P**	**10 22 33.1**	**+1.0**
GLB				IAmb	IAmb	10 22 52.0	
	comp=Z,59nm,1.4s						
VRDI	**Verde Repeater**	**48.16**	**38**	P	**P**	**10 22 34.1**	**+0.3**
SUCK	**Suckling Hills**	**48.18**	**40**	IAMs_20	IAMs_20	10 45 14.7	
	comp=Z,10μm,20.0s						
MCARA	**McCarthy VSAT**	**48.34**	**38**	P	**P**	**10 22 35.6**	**+0.6**
	baz=279,SNR=6.5						
MCARA				S	**S**	**10 29 35.2**	**+0.6**
	baz=279						
MCARA	**McCarthy VSAT**	**48.34**	**38**	P	**P**	**10 22 34.7**	**-0.3**
CRQM	**Cirque**	**48.38**	**39**	P	**P**	**10 22 35.9**	**+0.3**
CRQM				IAMs_20	IAMs_20	10 42 22.8	
	comp=Z,8μm,20.0s						
CRQE	**Cirque**	**48.41**	**39**	P	**P**	**10 22 36.9**	**+1.3**
	baz=279,SNR=10						
CRQE				S	**S**	**10 29 36.3**	**+0.5**
	baz=279						
RAMN	**Ramite**	**48.49**	**273**	*e*P	**P**	**10 22 37.4**	**+0.6**
	comp=Z,183nm,0.8s						
TGL	**Tana Glacier**	**48.53**	**39**	P	**P**	**10 22 36.2**	**-0.4**
TGL				IAmb	IAmb	10 22 51.4	
	comp=Z,72nm,1.2s						
GUN	**Gumba**	**48.56**	**274**	*e*P	**P**	**10 22 38.3**	**+0.8**
	comp=Z,447nm,0.7s						
BCAR	**Beaver Creek A**	**48.66**	**36**	P	**P**	**10 22 38.3**	**+0.9**
KSM	**Kuching**	**48.67**	**227**	P	**P**	**10 22 38.4**	**+0.3**
KSM				IAmb	IAmb	10 23 03.6	
	comp=Z,67nm,1.0s						
KSM	**Kuching**	**48.67**	**227**	P	**P**	**10 22 39.0**	**+1.0**
KSM	**Kuching**	**48.67**	**227**	⇑P	**P**	**10 22 39.3**	**+1.3**
EGAK	**Eagle**	**48.70**	**33**	P	**P**	**10 22 37.9**	**+0.2**
	baz=277,SNR=12						
EGAK	**Eagle**	**48.70**	**33**	P	**P**	**10 22 37.2**	**-0.5**
EGAK				IAmb	IAmb	10 22 50.9	
	comp=Z,40nm,0.8s						
MDOK	**Medeo**	**48.72**	**297**	*i* P	**P**	**10 22 39.1**	**+0.8**
	baz=297						
MDOK				*e*S	**S**	**10 29 42.2**	**+1.6**
	baz=297						
MDOK				LR	LR	10 43 51.1	
	comp=Z,13μm,12.4s,baz=297						
MDOK	**Medeo**	**48.72**	**297**	*i* P	**P**	**10 22 39.1**	**+0.8**
MDOK				*e*S	**S**	**10 29 42.2**	**+1.6**
MDOK				MLR	MLR		
	comp=Z,13μm,12.0s						
BALM	**Baldy**	**48.72**	**39**	P	**P**	**10 22 38.5**	**+0.5**
BALM				IAmb	IAmb	10 22 54.4	
	comp=Z,48nm,1.2s						
AAA	**Alma-Ata**	**48.79**	**297**	⇑*i*P	**P**	**10 22 39.8**	**+1.0**
	baz=297						
AAA				*e*S	**S**	**10 29 43.4**	**+1.8**
	baz=297						
AAA				*i* S	S	10 29 43.5	+2.0
	baz=297						
AAA				LR	LR	10 43 22.2	
	comp=Z,10μm,14.0s,baz=297						
AAA	**Alma-Ata**	**48.79**	**297**	*c i*P	**P**	**10 22 39.8**	**+1.0**
AAA				*e*S	**S**	**10 29 43.4**	**+1.8**
AAA				MLR	MLR		
	comp=Z,10μm,14.0s						
KUU	**Kurty**	**48.95**	**298**	*i* P	**P**	**10 22 40.0**	**0.0**
	comp=Z,250nm,2.1s,baz=298						
KUU				*e*S	**S**	**10 29 44.7**	**+1.0**
	baz=298						
KUU				LR	LR	10 43 26.3	
	comp=Z,7μm,12.7s,baz=298						
KUU	**Kurty**	**48.95**	**298**	*i* P	**P**	**10 22 39.9**	**0.0**
KUU				*e*S	**S**	**10 29 44.7**	**+1.0**
KUU				pmax	pmax		
	comp=Z,250nm,2.1s						
KUU				MLR	MLR		
	comp=Z,7μm,13.0s						
BARN	**Barnard Glacie**	**49.05**	**38**	P	**P**	**10 22 40.9**	**+0.3**
BARN				IAmb	IAmb	10 23 09.1	
	comp=Z,83nm,1.4s						
BARN				IAMs_20	IAMs_20	10 46 51.4	
	comp=Z,7μm,18.0s						
KKN	**Kakani**	**49.08**	**275**	*e*P	**P**	**10 22 42.1**	**+0.7**
	comp=Z,288nm,0.7s						
PKI	**Pulchoki**	**49.09**	**274**	*e*P	**P**	**10 22 42.0**	**+0.4**
PKIN	**Phulchoki**	**49.10**	**274**	*e*P	**P**	**10 22 41.7**	**+0.2**
PMG	**Port Moresby**	**49.10**	**175**	P	**P**	**10 22 41.4**	**+0.2**
PMG				pmax	pmax		
	comp=Z,20nm,1.0s						
PMG	**Port Moresby**	**49.10**	**175**	P	**P**	**10 22 41.4**	**+0.2**
CTG	**Chitna Glacier**	**49.22**	**39**	P	**P**	**10 22 42.6**	**+0.7**
	baz=281						
CTG				S	**S**	**10 29 45.7**	**-1.4**
	baz=281						
CTGM	**Chitina Glacie**	**49.22**	**39**	P	**P**	**10 22 41.9**	**0.0**
CTGM				IAmb	IAmb	10 23 09.7	
	comp=Z,82nm,1.4s						
CTGM				IAMs_20	IAMs_20	10 45 02.9	
	comp=Z,7μm,18.0s						
DMN	**Daman**	**49.30**	**274**	*e*P	**P**	**10 22 43.8**	**+0.7**
	comp=Z,134nm,0.9s						
TABL	**Table Mountain**	**49.41**	**39**	P	**P**	**10 22 43.3**	**-0.1**
BRZS	**Berezniki**	**49.43**	**307**	⇑*i*P	**P**	**10 22 43.1**	**-0.4**
	comp=Z,154nm,2.5s,baz=306						
BRZS				*e*S	**S**	**10 29 50.7**	**+0.4**
	baz=306						
BRZS	**Berezniki**	**49.43**	**307**	*c i*P	**P**	**10 22 43.1**	**-0.4**
BRZS				*e*S	**S**	**10 29 50.6**	**+0.4**
BRZS				pmax	pmax		
	comp=Z,154nm,2.5s						
GKN	**Gorkha**	**49.47**	**275**	*e*P	**P**	**10 22 44.8**	**+0.5**
	comp=Z,155nm,0.6s						
ULHL	**Ulahol**	**49.59**	**296**	P	**P**	**10 22 45.2**	**+0.1**
	SNR=21						
KAPI	**Kappang**	**49.70**	**212**	LR	LR	10 45 19.6	
	comp=Z,3μm,18.1s,baz=30,slow=38						
KAPI	**Kappang**	**49.70**	**212**	P	**P**	**10 22 46.1**	**+0.2**
KAPI				pmax	pmax		
	comp=Z,142nm,1.3s						
KAPI	**Kappang**	**49.70**	**212**	P	**P**	**10 22 46.1**	**+0.2**
TKM2	**Tokmak 2**	**49.80**	**297**	P	**P**	**10 22 46.9**	**+0.2**
	SNR=105						
TKM2	**Tokmak 2**	**49.80**	**297**	*i* P	**P**	**10 22 47.6**	**+1.0**
TKM2				pmax	pmax		
	comp=Z,176nm,1.0s						
BRVK	**Borovoye**	**50.01**	**311**	*ce*P	**P**	**10 22 47.9**	**+0.1**
BRVK				pmax	pmax		
	comp=Z,162nm,2.5s						
BRVK	**Borovoye**	**50.01**	**311**	P	**P**	**10 22 48.3**	**+0.5**
BRVK				IAmb	IAmb	10 23 05.0	
	comp=Z,72nm,1.1s						
BRVK	**Borovoye**	**50.01**	**311**	⇑P	**P**	**10 22 47.6**	**-0.2**
BRVK				⇑P	**P**	**10 22 48.0**	**+0.1**
BTLS	**Baital**	**50.11**	**300**	⇑*i*P	**P**	**10 22 48.6**	**-0.1**
	comp=Z,82nm,2.3s,baz=300						
BTLS				*e*S	**S**	**10 30 00.7**	**+0.9**
	baz=300						
BTLS	**Baital**	**50.11**	**300**	*c i*P	**P**	**10 22 48.6**	**-0.1**
BTLS				*e*S	**S**	**10 30 00.6**	**+0.9**
BTLS				pmax	pmax		
	comp=Z,82nm,2.3s						
RNTT	**Ranong**	**50.18**	**245**	P	**P**	**10 22 46.1**	**-3.5**
SURT	**Suratani**	**50.26**	**245**	P	P	10 22 59.6	+9.5
SGDS	**Sogindy**	**50.27**	**298**	⇑*i*P	**P**	**10 22 50.4**	**+0.4**
	comp=Z,97nm,2.2s,baz=298						
SGDS				*e*S	**S**	**10 30 03.5**	**+1.3**
	baz=298						
SGDS	**Sogindy**	**50.27**	**298**	*c i*P	**P**	**10 22 50.4**	**+0.4**
SGDS				*e*S	**S**	**10 30 03.5**	**+1.3**
SGDS				pmax	pmax		
	comp=Z,97nm,2.2s						
EPYK	**Eagle Plains**	**50.28**	**31**	P	**P**	**10 22 50.8**	**+1.0**
	baz=280,SNR=43						
EPYK				S	**S**	**10 30 03.1**	**+1.4**
	baz=280						
EPYK	**Eagle Plains**	**50.28**	**31**	P	**P**	**10 22 50.5**	**+0.8**
KBK	**Karagaybulak**	**50.34**	**297**	P	**P**	**10 22 50.7**	**0.0**
	SNR=63						
CHMS	**Chumysh**	**50.35**	**297**	P	**P**	**10 22 51.2**	**+0.6**
	SNR=11						
USP	**Ospenovka**	**50.42**	**298**	P	**P**	**10 22 50.9**	**-0.3**
	SNR=49						
TRTT	**Trang**	**50.44**	**243**	P	**P**	**10 22 52.7**	**+1.1**
	comp=Z,50nm,1.8s						
AAK	**Ala-Archa**	**50.66**	**297**	P	**P**	**10 22 53.8**	**+0.7**
	SNR=18						
AAK	**Ala-Archa**	**50.66**	**297**	*ce*P	**P**	**10 22 52.8**	**-0.3**
AAK				pmax	pmax		
	comp=Z,154nm,1.7s						
AAK	**Ala-Archa**	**50.66**	**297**	P	**P**	**10 22 52.8**	**-0.3**
BOK	**Bokaro**	**50.69**	**270**	*e*P	**P**	**10 22 53.9**	**+0.6**
BOK				IAmb	IAmb	10 22 58.1	
	comp=Z,108nm,1.6s						
UCH	**Uchtor**	**50.79**	**297**	P	**P**	**10 22 55.6**	**+1.1**
	SNR=16						
KSH	**Kashi**	**50.81**	**293**	P	**P**	**10 22 58.8**	**+4.5**
KSH				sP	pwP	10 23 04.4	+4.4
KSH				PP	**PP**	**10 24 57.1**	**+6.8**
KSH				PcS	**PcS**	**10 28 03.6**	**-5.0**
KSH				S	**S**	**10 30 15.1**	**+5.1**
KSH				ScS	**ScS**	**10 32 47.9**	**+2.9**
KSH				pmax	pmax		
	comp=Z,120nm,1.2s						
KSH				pmax	pmax		
	comp=Z,7μm,9.5s						
KSH				LR	LR		
	comp=Z,35μm,15.5s						
KSH				LR	LR		
	comp=Z,29μm,14.8s						
KSH				LR	LR		
	comp=Z,78μm,15.3s						
HYT	**Haines Junctio**	**51.08**	**38**	P	**P**	**10 22 56.9**	**+0.9**
HYT				IAMs_20	IAMs_20	10 46 36.1	
	comp=Z,6μm,18.0s						
EKS2	**Erkin-Say**	**51.14**	**297**	P	**P**	**10 22 56.3**	**-0.4**
	SNR=38						
INK	**Inuvik**	**51.15**	**28**	P	**P**	**10 22 56.9**	**+0.7**
	comp=Z,51nm,0.8s,baz=292,slow=7.1,SNR=113						
INK	**Inuvik**	**51.15**	**28**	P	**P**	**10 22 56.5**	**+0.4**
INK				IAmb	IAmb	10 23 07.9	
	comp=Z,56nm,0.9s						
INK				IAMs_20	IAMs_20	10 47 46.5	
	comp=Z,9μm,20.0s						
INK	**Inuvik**	**51.15**	**28**	⇑P	**P**	**10 22 55.6**	**-0.6**
HNR	**Honiara**	**51.32**	**159**	LR	LR	10 42 21.6	
	comp=Z,4μm,21.6s,baz=327,slow=33						
HNR	**Honiara**	**51.32**	**159**	IAMs_20	IAMs_20	10 38 43.3	
	comp=Z,8μm,21.0s						
PKDT	**Phuket**	**51.34**	**244**	P	**P**	**10 23 00.0**	**+1.8**
AML	**Almayashu**	**51.40**	**297**	P	**P**	**10 22 59.1**	**+0.1**
	SNR=37						
DGPR	**DIGLIPUR**	**51.63**	**254**	*e*P	**P**	**10 23 00.4**	**-0.1**
DGPR				IAmb	IAmb	10 23 04.1	
	comp=Z,89nm,0.9s						
MMRI	**Maumere**	**52.09**	**207**	P	**P**	**10 23 04.0**	**+0.1**
MYKOM	**Kota Tinggi**	**52.24**	**234**	P	**P**	**10 23 06.2**	**+1.1**
MYKOM				IAMs_20	IAMs_20	10 46 09.7	
	comp=Z,9μm,18.0s						
MYKOM	**Kota Tinggi**	**52.24**	**234**	P	**P**	**10 23 06.0**	**+1.0**
WHY	**Whitehorse**	**52.37**	**38**	⇓P	**P**	**10 23 07.0**	**+1.5**
SOEI	**Soe**	**52.47**	**204**	P	**P**	**10 23 06.2**	**-0.5**
SOEI				IAMs_20	IAMs_20	10 43 36.4	
	comp=Z,7μm,21.0s						
SOEI	**Soe**	**52.47**	**204**	P	**P**	**10 23 04.8**	**-1.9**
	comp=Z,4μmcomp=Z,199nm,1.1s						
KIP	**Kipapa**	**52.63**	**92**	*ce*P	**P**	**10 23 09.5**	**+1.6**
KIP				pmax	pmax		
	comp=Z,182nm,2.5s						
KIP	**Kipapa**	**52.63**	**92**	P	**P**	**10 23 08.5**	**+0.6**
KIP				IAmb	IAmb	10 23 10.0	
	comp=Z,77nm,0.9s						
BWNR	**Bhubaneshwar**	**52.69**	**266**	*e*x	x	10 22 58.7	
DZA	**Taraz**	**52.72**	**298**	⇑*i*P	**P**	**10 23 08.3**	**-0.1**
	baz=298						
DZA	**Taraz**	**52.72**	**298**	*c i*P	**P**	**10 23 08.2**	**-0.1**
BATI	**Baumata**	**53.08**	**205**	LR	LR	10 44 47.4	
	comp=Z,7μm,20.1s,baz=24,slow=35						
BATI	**Baumata**	**53.08**	**205**	P	P	10 23 21.0	+10
KK31	**Karatay Array**	**53.19**	**299**	P	**P**	**10 23 11.9**	**+0.1**
KK31				pmax	pmax		
	comp=Z,36nm,1.0s						
KK31	**Karatay Array**	**53.19**	**299**	P	**P**	**10 23 11.9**	**+0.1**
KKAR	**Karatay Array**	**53.19**	**299**	P	**P**	**10 23 10.4**	**-1.4**
KKAR	**Karatay Array**	**53.19**	**299**	P	**P**	**10 23 10.4**	**-1.4**
KKAR	**Karatay Array**	**53.19**	**299**	P	**P**	**10 23 11.8**	**0.0**
KKAR				IAmb	IAmb	10 23 36.6	
	comp=Z,36nm,0.9s						
JIS	**Juneau Island**	**53.30**	**41**	P	**P**	**10 23 12.8**	**+0.4**
JIS				IAMs_20	IAMs_20	10 48 38.1	
	comp=Z,8μm,19.0s						
DDI	**Dehra Dun**	**53.34**	**281**	*e*P	**P**	**10 23 14.1**	**+0.9**
DDI				IAmb	IAmb	10 23 20.1	
	comp=Z,63nm,1.2s						
COEN	**Coen**	**53.51**	**180**	P	**P**	**10 23 14.1**	**-0.1**
COEN	**Coen**	**53.51**	**180**	⇑P	**P**	**10 23 15.2**	**+0.9**
SMLA	**Simla**	**53.62**	**283**	*e*P	**P**	**10 23 11.6**	**-3.5**
DHRM	**DHARAMSHALA**	**53.74**	**284**	*e*P	**P**	**10 23 15.1**	**-1.1**
IUG	**Iuzhnay**	**53.89**	**298**	⇑*i*P	**P**	**10 23 17.6**	**+0.4**
	comp=Z,138nm,1.8s,baz=298						
IUG	**Iuzhnay**	**53.89**	**298**	*c i*P	**P**	**10 23 17.5**	**+0.4**
IUG				pmax	pmax		
	comp=Z,138nm,1.8s						
PPBI	**Pangkal Pinang**	**54.01**	**229**	P	**P**	**10 23 17.0**	**-1.1**
	comp=Z,26μmcomp=Z,60nm,1.2s						
SVE	**Sverdlovsk**	**54.17**	**318**	*de*P	**P**	**10 23 19.6**	**+0.9**
SVE				*e*		10 25 22.1	
SVE				*e*PPP	PPP	10 26 27.9	
SVE				*e*S	**S**	**10 30 55.1**	**-0.1**
SVE				pmax	pmax		
	comp=Z,219nm,1.3s						
SVE				MLR	MLR		
	comp=N,15μm,15.0s						
SVE				MLR	MLR		
	comp=Z,72μm,14.0s						
SVE				MLR	MLR		
	comp=E,52μm,14.0s						
LHMI	**Lhok Sumawe**	**54.20**	**243**	⇑P	**P**	**10 23 22.1**	**+2.6**
C36M	**Paulatuk**	**54.20**	**26**	P	**P**	**10 23 19.4**	**+0.7**
	baz=288,SNR=37						
C36M	**Paulatuk**	**54.20**	**26**	P	**P**	**10 23 19.1**	**+0.4**
C36M				IAmb	IAmb	10 23 21.1	
	comp=Z,54nm,0.8s						
TWSI	**Taliwang, Sumb**	**54.26**	**213**	P	**P**	**10 23 21.2**	**+1.4**
	comp=Z,2μmcomp=Z,782nmcomp=Z,38nm,1.0s						
PSI	**Prapat**	**54.64**	**239**	LR	LR	10 48 33.2	
	comp=Z,6μm,19.3s,baz=89,slow=38						
PSI	**Prapat**	**54.64**	**239**	P	**P**	**10 23 22.8**	**0.0**
PSI				pmax	pmax		
	comp=Z,39nm,1.1s						
PSI				MLR	MLR		
	comp=Z,8μm,18.0s						
RPSI	**Rantau Prapat**	**54.72**	**239**	P	**P**	**10 23 22.8**	**-0.4**
RPSI				IAMs_20	IAMs_20	10 48 01.1	
	comp=Z,8μm,18.0s						
NDI	**New Delhi**	**54.79**	**280**	*e*P	**P**	**10 23 22.0**	**-1.7**
NDI				*e*S	S	10 31 20.0	+16
NDI				*e*SS	SS	10 35 08.0	+21
WRAK	**Wrangell Islan**	**54.96**	**42**	P	**P**	**10 23 25.5**	**+1.1**
	baz=291						
BKNI	**Bangkinang**	**55.14**	**235**	P	**P**	**10 23 27.0**	**+0.7**
BKNI				IAMs_20	IAMs_20	10 48 34.4	
	comp=Z,8μm,19.0s						
BKNI	**Bangkinang**	**55.14**	**235**	⇑P	**P**	**10 23 27.0**	**+0.7**
BKNI	**Bangkinang**	**55.14**	**235**	P	**P**	**10 23 25.0**	**-1.3**
	comp=Z,8μmcomp=Z,5μmcomp=Z,149nm,1.0s						
NIL	**Nilore**	**55.34**	**287**	P	**P**	**10 23 28.5**	**+0.9**
NIL				pmax	pmax		
	comp=Z,284nm,1.4s						
NIL				MLR	MLR		
	comp=Z,8μm,18.0s						
NIL	**Nilore**	**55.34**	**287**	P	**P**	**10 23 28.5**	**+0.9**
NIL	**Nilore**	**55.34**	**287**	IAMs_20	IAMs_20	10 48 45.1	
	comp=Z,8μm,18.0s						
ARU	**Arti**	**55.38**	**318**	*ce*P	**P**	**10 23 28.0**	**+0.5**
ARU				pmax	pmax		
	comp=Z,154nm,1.8s						
ARU				MLR	MLR		
	comp=Z,58μm,15.0s						
ARU	**Arti**	**55.38**	**318**	P	**P**	**10 23 27.7**	**+0.1**
PMBI	**Palembang**	**55.43**	**229**	⇑P	**P**	**10 23 30.0**	**+1.7**
SDSI	**Sungai Dareh**	**55.87**	**234**	P	**P**	**10 23 33.5**	**+2.0**
	comp=Z,3μmcomp=Z,94nm,1.1s						
UGM	**Wanagama**	**56.46**	**220**	P	**P**	**10 23 37.7**	**+2.0**
	comp=Z,4μmcomp=Z,227nm,1.4s						
PDSI	**Padang**	**56.46**	**235**	P	**P**	**10 23 36.7**	**+0.9**
	comp=Z,1μmcomp=Z,12nm,1.2s						
GSI	**Gunungsitoli**	**56.65**	**239**	P	**P**	**10 23 37.2**	**+0.1**
GSI				IAMs_20	IAMs_20	10 48 13.2	
	comp=Z,12μm,19.0s						
GSI	**Gunungsitoli**	**56.65**	**239**	⇑P	**P**	**10 23 37.8**	**+0.7**

GSI	Gunungsitoli	56.65	239	P	P	10 23 38.3	+1.2
	comp=Z,7µmcomp=Z,5µmcomp=Z,105nm,1.4s						
LHSI	Lahat	56.88	230	P	P	10 23 37.7	-1.0
	comp=Z,4µmcomp=Z,145nm,1.3s						
EUNU	Eureka	57.18	9	P	P	10 23 39.7	-0.4
EUNU				IAmb	IAmb	10 23 59.8	
	comp=Z,40nm,0.8s						
ABKAR	Akbulak array	57.42	309	P	P	10 23 41.4	-0.8
ABKAR				IAmb	IAmb	10 23 44.5	
	comp=Z,48nm,0.7s						
ABKAR	Akbulak array	57.42	309	P	P	10 23 41.7	-0.5
BHPL	Bhopal	57.50	274	eP	P	10 23 41.4	-1.7
BHPL				IAmb	IAmb	10 23 50.8	
	comp=Z,30nm,0.8s						
KASI	Kota Agung	57.69	228	P	P	10 23 44.1	-0.3
	comp=Z,4µmcomp=Z,1µmcomp=Z,53nm,1.2s						
KBL	Kabul	57.98	290	P	P	10 23 46.5	-0.1
KBL				pmax	pmax		
	comp=Z,101nm,1.2s						
KBL				MLR	MLR		
	comp=Z,8µm,21.0s						
KBL	Kabul	57.98	290	P	P	10 23 46.5	-0.1
KBL				IAMs_20	IAMs_20	10 50 50.3	
	comp=Z,8µm,21.0s						
KBS	Kingsbay	58.19	350	ceP	P	10 23 49.5	+2.4
KBS				pmax	pmax		
	comp=Z,76nm,1.3s						
KBS	Kingsbay	58.19	350	P	P	10 23 47.8	+0.6
KBS				IAmb	IAmb	10 24 00.3	
	comp=Z,53nm,0.9s						
KBS	Kingsbay	58.19	350	IAMs_20	IAMs_20	10 52 51.6	
	comp=Z,8µm,18.0s						
KBS	Kingsbay	58.19	350	i P	P	10 23 48.9	+1.8
KBS				IAmb	IAmb	10 23 50.7	
	comp=Z,88nm,0.9s						
KBS				i		10 23 59.5	
KBS				IAMs_20	IAMs_20	10 52 55.1	
	comp=Z,21µm,17.0s						
KBS	Kingsbay	58.19	350	⇑P	P	10 23 49.5	+2.4
KIRV	Kirov	59.03	322	ceP	P	10 23 54.0	+0.8
HSPB	Hornsund (broa	59.06	348	eP	P	10 23 52.7	-0.5
SANVU	Saraoutou	59.26	153	P	P	10 23 55.1	-0.1
SANVU				IAMs_20	IAMs_20	10 44 39.4	
	comp=Z,6µm,18.0s						
CTA	Charters Tower	59.66	177	P	P	10 23 58.4	+0.4
	comp=Z,2.2nm,0.4s,baz=353,slow=4.6,SNR=5.5						
CTAO	Charters Tower	59.66	177	P	P	10 23 57.9	-0.1
CTAO				pmax	pmax		
	comp=Z,24nm,1.3s						
CTAO	Charters Tower	59.66	177	P	P	10 23 57.9	-0.1
WB0	Warramunga Arr	59.89	190	P	P	10 23 59.2	-0.4
HYB	Hyderabad	59.94	268	i P	P	10 23 59.0	-1.2
HYB				ePcP	PcP	10 24 45.0	-1.4
HYB				eS	S	10 32 13.0	+0.7
FITZ	Fitzroy Crossi	59.99	200	P	P	10 24 00.5	+0.2
WR0	Warramunga Arr	60.06	190	P	P	10 24 00.4	-0.4
WRAB	Tennant Creek	60.06	190	ceP	P	10 24 00.5	-0.3
WRAB				pmax	pmax		
	comp=Z,49nm,1.0s						
WRAB	Tennant Creek	60.06	190	P	P	10 24 00.0	-0.7
WB2	Warramunga Arr	60.07	190	P	P	10 24 00.4	-0.4
WRA	Warramunga Arr	60.07	190	P	P	10 23 59.4	-1.5
	comp=Z,30nm,0.7s,baz=7.3,slow=7.3,SNR=122						
WRA				LR	LR	10 50 30.8	
	comp=Z,2µm,19.6s,baz=30,slow=37						
WRA				PKP2bc		10 53 33.7	
	comp=Z,4.3nm,1.1s,baz=197,slow=2.1,SNR=4.8						
YKA	Yellowknife Ar	60.56	31	P	P	10 24 03.6	-0.1
	comp=Z,16nm,0.7s,baz=303,slow=6.0,SNR=187						
YKA				LR	LR	10 52 21.2	
	comp=Z,2µm,19.5s,baz=0.0,slow=38						
APA	Apatity	60.82	336	⇓iP	P	10 24 03.7	-1.7
APA				i		10 24 17.9	
APA				i		10 26 26.2	
APA				i PPP	PPP	10 27 44.1	
APA				i S	S	10 32 18.0	-4.2
APA				i PS	PnS	10 32 35.0	-0.5
APA				i SS	SS	10 36 16.0	-4.4
APA				pmax	pmax		
	comp=Z,21nm,0.7s						
APA				MLR	MLR		
	comp=Z,20µm,15.0s						
TMCR	Tamitsa	61.09	331	eP	P	10 24 06.0	-1.3
TMCR				eS	S	10 32 25.9	+0.2
TMCR				pmax	pmax		
	comp=Z,108nm,1.0s						
MDRS	Chennai	61.26	263	eP	P	10 24 09.7	+0.6
KEV	Kevo	61.42	339	P	P	10 24 09.7	+0.3
KEV				pmax	pmax		
	comp=Z,40nm,0.9s						
KEV				MLR	MLR		
	comp=Z,12µm,20.0s						
KEV	Kevo	61.42	339	P	P	10 24 09.7	+0.3
KEV				IAmb	IAmb	10 24 12.0	
	comp=Z,40nm,0.9s						
ARCES	ARCESS Array B	61.97	339	P	P	10 24 13.9	+0.8
	comp=Z,12nm,0.8s,baz=38,slow=6.1,SNR=24						
ARCES				LR	LR	10 54 11.4	
	comp=Z,11µm,21.4s,baz=55,slow=39						
ARCES	ARCESS Array B	61.97	339	P	P	10 24 13.2	0.0
TULEG	Thule	62.11	8	P	P	10 24 13.5	-0.5
TULEG				IAmb	IAmb	10 24 25.2	
	comp=Z,35nm,0.9s						
TULEG	Thule	62.11	8	i P	P	10 24 13.9	-0.1
TULEG				IAmb	IAmb	10 24 14.7	
	comp=Z,28nm,0.8s						
TULEG				IAMs_20	IAMs_20	10 55 31.8	
	comp=Z,14µm,18.2s						
KLMR	Klimovskoe	62.28	328	eP	P	10 24 13.5	-1.9
KLMR				e		10 26 30.8	
KLMR				eS	S	10 32 39.8	-1.1
KLMR				eSS	SS	10 36 44.2	+0.9
KLMR				pmax	pmax		
	comp=Z,72nm,1.1s						
KLMR				MLR	MLR		
	comp=Z,19µm,16.0s						
KLMR	Klimovskoe	62.28	328	eP	P	10 24 13.5	-1.9
KLMR				AMP		10 24 17.3	
	comp=Z,72nm,1.1s						
KLMR				ePP	PP	10 26 30.9	-1.0
KLMR				eS	S	10 32 39.9	-1.0
KLMR				eS	S	10 32 39.9	-1.0
KLMR				eSS	SS	10 36 44.3	+0.9
KLMR				eSS	SS	10 36 44.3	+0.9
KLMR				LQ	LQ	10 46 48.6	
KLMR				LQ	LQ	10 46 48.6	
KLMR				LR	LR	10 52 10.9	
KLMR				AMP		10 53 58.9	
	comp=Z,19µm,16.2s						
POO	Poona	62.91	272	eP	P	10 24 20.3	0.0
HRA	Herat	62.92	293	P	P	10 24 20.8	+0.4
HRA				IAmb	IAmb	10 24 33.7	
	comp=Z,36nm,1.1s						
DAG	Danmarks Havn	63.13	355	i P	P	10 24 20.5	-0.3
	comp=Z,39nm,0.9s						
	comp=Z,6µm,20.0s						
DAG	Danmarks Havn	63.13	355	i P	P	10 24 20.5	-0.3
DAG				pmax	pmax		
	comp=Z,39nm,0.9s						
DAG				MLR	MLR		
	comp=Z,6µm,20.0s						
DAG	Danmarks Havn	63.13	355	i P	P	10 24 20.6	-0.3
DAG				IAmb	IAmb	10 24 23.2	
	comp=Z,39nm,0.9s						
DAG				IAMs_20	IAMs_20	10 52 30.1	
	comp=Z,6µm,20.5s						
PGC	Sidney	63.23	48	P	P	10 24 23.0	+1.2
PGC				IAmb	IAmb	10 24 33.6	
	comp=Z,37nm,1.3s						
BHUJ	Bhuj	63.43	279	eP	P	10 24 23.7	+0.1
A04D	Lummi Island	63.61	48	P	P	10 24 24.9	+0.5
	baz=301						
NLWA	Neilton Lookou	63.63	49	P	P	10 24 26.3	+1.7
AS31	Alice Springs	63.80	190	P	P	10 24 26.1	+0.2
ASAR	Alice Springs	63.80	190	P	P	10 24 26.1	+0.2
	comp=Z,20nm,0.9s,baz=5.8,slow=5.2,SNR=60						
ASAR				LR	LR	10 50 50.8	
	comp=Z,2µm,21.7s,baz=5.5,slow=35						
ASAR				PKPPKP	P'P'df	10 53 21.6	+10
	comp=Z,1.6nm,1.0s,baz=169,slow=2.8,SNR=6.0						
ASAR	Alice Springs	63.80	190	P	P	10 24 25.3	-0.5
ASAR					P'P'bc	10 53 25.3	+6.9
A05A	Maple Falls	63.82	47	P	P	10 24 25.6	-0.2
A05A				IAmb	IAmb	10 24 37.4	
	comp=Z,33nm,1.2s						
GEYT	Alibeck	63.94	299	P	P	10 24 26.9	0.0
	comp=Z,9.5nm,0.6s,baz=26,slow=3.8,SNR=20						
GEYT				LR	LR	10 53 21.0	
	comp=Z,6µm,18.7s,baz=50,slow=37						
GEYT	Alibeck	63.94	299	P	P	10 24 27.1	+0.3
GYA0B	ALIBECK ARRAY	63.94	299	P	P	10 24 26.5	-0.3
GYA0B				IAmb	IAmb	10 24 42.8	
	comp=Z,39nm,0.9s						
GYA0B				IAMs_20	IAMs_20	10 56 31.7	
	comp=Z,7µm,20.0s						
D03D	Eldon	64.01	49	P	P	10 24 28.3	+1.2
	baz=301,SNR=14						
B05A	Bryant	64.20	48	P	P	10 24 29.2	+0.9
	baz=302,SNR=11						
E03A	Lebam	64.24	50	P	P	10 24 29.2	+0.6
D04E	Lakebay	64.38	49	P	P	10 24 31.5	+2.0
	baz=302						
B06A	Marblemount	64.41	47	P	P	10 24 29.7	0.0
B06A				IAmb	IAmb	10 24 41.3	
	comp=Z,23nm,0.8s						
PALK	Pallekele	64.58	258	P	P	10 24 31.4	+0.1
PALK				pmax	pmax		
	comp=Z,43nm,1.3s						
PALK				MLR	MLR		
	comp=Z,8µm,19.0s						
PALK	Pallekele	64.58	258	P	P	10 24 31.4	+0.1
PALK				IAmb	IAmb	10 24 32.7	
	comp=Z,43nm,1.2s						
PALK	Pallekele	64.58	258	IAMs_20	IAMs_20	10 53 29.7	
	comp=Z,7µm,19.0s						
GOA	Goa	64.72	269	eP	P	10 24 32.6	+0.4
E04D	Cinebar	64.82	50	P	P	10 24 33.7	+1.3
	baz=302,SNR=14						
D05A	Enumclaw	64.83	49	P	P	10 24 33.4	+1.0
D05A				IAmb	IAmb	10 24 35.6	
	comp=Z,32nm,0.9s						
PSAC2	Pilbara Seismi	64.93	204	IAMs_20	IAMs_20	10 52 31.7	
	comp=Z,5µm,20.0s						
PSAB2	Pilbara Seismi	64.94	204	IAMs_20	IAMs_20	10 52 31.9	
	comp=Z,5µm,20.0s						
PSA00	Pilbara Seismi	64.96	204	P	P	10 24 32.1	-1.3
PSA00	Pilbara Seismi	64.96	204	IAMs_20	IAMs_20	10 52 32.4	
	comp=Z,5µm,20.0s						
KULLO	Kullorsuaq	65.04	6	i P	P	10 24 33.5	+0.2
	comp=Z,26nm,0.9s						
	comp=Z,12µm,18.0s						
KULLO	Kullorsuaq	65.04	6	i P	P	10 24 33.5	+0.2
KULLO				pmax	pmax		
	comp=Z,26nm,0.9s						
KULLO				MLR	MLR		
	comp=Z,13µm,18.0s						
KULLO	Kullorsuaq	65.04	6	i P	P	10 24 33.5	+0.2
KULLO				IAmb	IAmb	10 24 34.8	
	comp=Z,26nm,0.9s						
KULLO				IAMs_20	IAMs_20	10 55 51.5	
	comp=Z,13µm,17.5s						
PSAD3	Pilbara Seismi	65.05	204	IAMs_20	IAMs_20	10 52 24.7	
	comp=Z,5µm,20.0s						
C06D	Leavenworth	65.06	48	P	P	10 24 35.1	+1.1
	baz=302						
G03D	McMinnville, O	65.12	51	P	P	10 24 36.4	+2.0
	baz=302						
LON	Longmire	65.16	49	P	P	10 24 35.4	+0.7
LON				pmax	pmax		
	comp=Z,12nm,0.9s						
LON				MLR	MLR		
	comp=Z,3µm,18.0s						
LON	Longmire	65.16	49	P	P	10 24 35.4	+0.7
DZM	Mont Dzumac	65.19	157	P	P	10 24 36.7	+1.6
	comp=Z,55nm,1.1s,baz=42,slow=12,SNR=5.6						
DZM				LR	LR	10 48 22.1	
	comp=Z,5µm,21.3s,baz=340,slow=32						
DZM	Mont Dzumac	65.19	157	eP	P	10 24 38.2	+3.1
	comp=Z,184nm,1.4s						
DZM				eS	S	10 33 20.2	+2.2
	comp=Z,3µm,25.1s						
DZM				eLQ	LQ	10 41 07.9	
	comp=Z,11µm,30.5s						
DZM				eLR	LR	10 44 05.8	
	comp=Z,9µm,22.5s						
DZM	Mont Dzumac	65.19	157	P	P	10 24 35.4	+0.3
DZM				IAMs_20	IAMs_20	10 55 10.7	
	comp=Z,9µm,20.0s						
EIDS	Eidsvold	65.24	172	P	P	10 24 36.0	+0.8
EIDS				IAmb	IAmb	10 24 42.3	
	comp=Z,36nm,0.9s						
EIDS				IAMs_20	IAMs_20	10 49 55.8	
	comp=Z,5µm,22.0s						
XMAS	Kiritimati	65.26	109	P	P	10 24 34.1	-1.5
XMAS				IAmb	IAmb	10 24 48.0	
	comp=Z,39nm,0.9s						
I02D	Swisshome	65.36	52	P	P	10 24 38.4	+2.5
	baz=302						
COR	Corvallis	65.43	52	P	P	10 24 37.3	+0.9
COR				pmax	pmax		
	comp=Z,70nm,1.2s						
COR	Corvallis	65.43	52	P	P	10 24 37.3	+0.9
LTY	Liberty	65.55	48	P	P	10 24 37.1	-0.1
DBG	Daneborg	65.63	355	i P	P	10 24 36.8	-0.4
DBG				IAmb	IAmb	10 24 40.0	
	comp=Z,17nm,1.1s						
DBG				IAMs_20	IAMs_20	11 04 52.0	
	comp=Z,8µm,14.5s						
B08A	Colville Reser	65.71	47	P	P	10 24 38.2	0.0
B08A				IAmb	IAmb	10 25 04.8	
	comp=Z,38nm,1.2s						
KEBM	Edson Butte	65.72	54	P	P	10 24 38.9	+0.5
H04D	Lebanon	65.81	51	P	P	10 24 40.8	+2.0
	baz=303,SNR=6.0						
J01E	Myrtle Point	65.81	53	P	P	10 24 39.8	+1.0
	baz=303						
F05D	White Salmon	65.83	50	P	P	10 24 40.5	+1.5
	baz=303						
I03D	Drain, OR	65.88	53	P	P	10 24 40.6	+1.3
	baz=303,SNR=13						
MOS	Moscow	65.99	323	eP	P	10 24 37.6	-2.2
MOS				e		10 25 07.1	
MOS				e		10 27 03.7	
MOS				eS	S	10 33 24.8	-2.2
MOS				eSS	SS	10 37 42.8	+1.5
MOS				pmax	pmax		
	comp=Z,191nm,1.9s						
MOS				MLR	MLR		
	comp=N,15µm,15.0s						
MOS				MLR	MLR		
	comp=E,20µm,15.0s						
MOS				MLR	MLR		
	comp=Z,26µm,15.0s						
H04A	Detroit Lake	66.05	51	P	P	10 24 41.2	+0.7
H04A				IAmb	IAmb	10 24 43.0	
	comp=Z,36nm,0.8s						
K02D	Willamette Mer	66.23	54	P	P	10 24 42.6	+0.9
	baz=303,SNR=11						
G05D	Wamic, OR	66.27	50	P	P	10 24 42.9	+1.0
	baz=303,SNR=8.1						
E07A	Sunnyside	66.40	48	P	P	10 24 42.8	+0.2
E07A				IAmb	IAmb	10 25 08.9	
	comp=Z,35nm,1.1s						
I04A	Tendick Farm,	66.40	52	P	P	10 24 43.5	+0.7
	baz=303,SNR=22						
L02E	Cave Junction	66.56	54	P	P	10 24 44.8	+1.1
	baz=303,SNR=6.9						
C09A	Chrisman Ranch	66.61	47	P	P	10 24 44.1	+0.2
C09A				IAmb	IAmb	10 24 46.1	
	comp=Z,39nm,0.8s						
C09A				IAMs_20	IAMs_20	10 57 07.3	
	comp=Z,4µm,18.0s						
VRH	Novokhopyorsk	66.62	318	eP	P	10 24 43.4	-0.5
VRH				eS	S	10 33 28.7	-6.0
VRH				pmax	pmax		
	comp=Z,40nm,0.8s						
VRH				smax	smax		
	comp=N,2µm,10.3s						
VRH				MLR	MLR		
	comp=Z,50µm,15.0s						
TRD	Trivandrum	66.62	261	eP	P	10 24 45.5	+1.0
D08A	Wollman Farm,	66.66	48	P	P	10 24 44.8	+0.5
D08A				IAmb	IAmb	10 24 46.4	
	comp=Z,28nm,0.8s						
D08A				IAMs_20	IAMs_20	10 57 26.7	
	comp=Z,4µm,18.0s						
HAWA	Hanford	66.67	48	P	P	10 24 45.1	+0.8
HAWA				IAmb	IAmb	10 25 11.3	
	comp=Z,44nm,1.2s						
HUMO	Hull Mountain	66.71	53	P	P	10 24 46.4	+1.6
F07A	Phinny Hill Vi	66.72	49	P	P	10 24 45.8	+1.1
F07A				IAmb	IAmb	10 24 47.4	
	comp=Z,32nm,0.8s						
I05D	Terrebonne, OR	66.75	51	P	P	10 24 45.7	+0.7
	baz=304,SNR=11						
OBN	Obninsk	66.85	323	ceP	P	10 24 45.5	+0.3
OBN				e		10 25 15.6	
OBN				e		10 27 13.6	
OBN				i S	S	10 33 32.8	-4.6
OBN				i SS	SS	10 37 52.3	-2.3
OBN				pmax	pmax		
	comp=Z,130nm,1.7s						
OBN				MLR	MLR		
	comp=Z,32µm,16.0s						
OBN	Obninsk	66.85	323	P	P	10 24 45.6	+0.3
UPNV	Upernavik	66.86	6	i P	P	10 24 44.8	-0.3
UPNV				IAmb	IAmb	10 24 47.0	
	comp=Z,15nm,0.9s						
UPNV				IAMs_20	IAMs_20	10 57 22.4	
	comp=Z,12µm,18.5s						
J04D	Umpqua Nationa	66.89	52	P	P	10 24 47.2	+1.2
	baz=304,SNR=25						
E08A	Dider Farm, El	66.89	48	P	P	10 24 46.4	+0.7
E08A				IAmb	IAmb	10 24 48.1	
	comp=Z,25nm,0.8s						
NEW	Newport	66.99	46	P	P	10 24 46.7	+0.4
	baz=304,SNR=33						
NEW	Newport	66.99	46	P	P	10 24 46.8	+0.4
NEW				pmax	pmax		
	comp=Z,27nm,0.9s						
NEW				MLR	MLR		
	comp=Z,3µm,19.0s						
NEW	Newport	66.99	46	P	P	10 24 46.8	+0.4
NEW				IAmb	IAmb	10 24 48.6	
	comp=Z,27nm,0.8s						
FIA1	FINESS Array S	67.11	332	P	P	10 24 47.0	+0.2
FINES	FINESS Array B	67.11	332	P	P	10 24 46.6	-0.3
	comp=Z,36nm,0.7s,baz=57,slow=5.7,SNR=118						
FINES				LR	LR	10 57 19.7	
	comp=Z,27µm,18.2s,baz=34,slow=39						
KHMM	Horse Mountain	67.18	55	P	P	10 24 48.8	+0.9
LPSR	Galich'ya Gora	67.22	320	eP	P	10 24 47.6	-0.1
LPSR				eS	S	10 33 38.2	-3.7
LPSR				pmax	pmax		
	comp=Z,60nm,1.0s						
LPSR				smax	smax		
	comp=E,2µm,10.0s						
LPSR				MLR	MLR		
	comp=Z,32µm,14.0s						
PINE	Pine Mountain	67.29	51	P	P	10 24 49.5	+1.0
L04D	Klamath Falls	67.33	53	P	P	10 24 49.3	+0.5
	baz=304,SNR=24						
YBH	Yreka Blue Hor	67.35	54	P	P	10 24 49.0	+0.2
	comp=Z,27nm,0.9s,baz=321,slow=2.2,SNR=39						
YBH	Yreka Blue Hor	67.35	54	P	P	10 24 49.6	+0.7
YBH				pmax	pmax		
	comp=Z,25nm,0.9s						
YBH				MLR	MLR		
	comp=Z,2µm,19.0s						
YBH	Yreka Blue Hor	67.35	54	P	P	10 24 49.6	+0.7
YBH				IAmb	IAmb	10 24 52.0	
	comp=Z,25nm,0.8s						
J05D	Fort Rock, OR	67.39	52	P	P	10 24 50.5	+1.3
	baz=304,SNR=33						
E09A	Wood Farm, Sta	67.40	48	P	P	10 24 49.8	+0.8
E09A				IAmb	IAmb	10 24 51.5	
	comp=Z,41nm,0.9s						
K04D	Chiloquin, OR	67.44	53	P	P	10 24 50.1	+0.6
	baz=304,SNR=6.0						
M02C	Callahan	67.45	54	P	P	10 24 50.6	+1.2
	baz=304,SNR=15						
G08A	Pilot Rock	67.62	49	P	P	10 24 50.9	+0.3
AFI	Afiamalu	67.72	132	IAMs_20	IAMs_20	10 53 33.8	
	comp=Z,6µm,18.0s						
N02D	Trinity Center	67.77	55	P	P	10 24 52.6	+1.0
	baz=304,SNR=15						
M04C	Macdoel	67.86	54	P	P	10 24 53.1	+1.0
	baz=304,SNR=21						
SUMG	Summit	67.89	1	i P	P	10 24 52.3	+0.2
	comp=Z,110nm,0.8s						
	comp=Z,35µm,22.0s						
SUMG	Summit	67.89	1	i P	P	10 24 52.3	+0.2
SUMG				pmax	pmax		
	comp=Z,110nm,0.8s						
SUMG				MLR	MLR		
	comp=Z,35µm,22.0s						
SUMG	Summit	67.89	1	P	P	10 24 52.0	-0.1
SUMG	Summit	67.89	1	i P	P	10 24 52.3	+0.2
SUMG				IAmb	IAmb	10 24 54.9	
	comp=Z,111nm,0.8s						
SUMG				IAMs_20	IAMs_20	10 53 20.3	
	comp=Z,35µm,21.6s						
K05A	Summer Lake	67.91	52	P	P	10 24 53.7	+1.2
VSR	Storozhevoye	67.92	319	eP	P	10 24 51.3	-0.8
VSR				eS	S	10 33 45.8	-4.6
VSR				pmax	pmax		
	comp=Z,70nm,1.2s						
VSR				smax	smax		
	comp=N,2µm,10.8s						
VSR				MLR	MLR		
	comp=Z,13µm,15.0s						
I07A	Izee	67.98	50	P	P	10 24 52.9	+0.1
VORD	Divnogorie	68.00	319	eP	P	10 24 52.8	+0.1
VORD				eS	S	10 33 40.1	-11
VORD				pmax	pmax		
	comp=Z,50nm,1.4s						
VORD				smax	smax		
	comp=N,310nm,5.8s						
VORD				MLR	MLR		
	comp=Z,12µm,14.0s						
MAK	Makhachkala	68.04	308	eP	P	10 24 42.7	-10
MAK				eSSS	SSS	10 41 08.5	
MAK				pmax	pmax		
	comp=Z,214nm,1.5s						
MAK				MLR	MLR		
	comp=Z,13µm,13.0s						
WDC	Whiskeytown Da	68.09	55	P	P	10 24 53.9	+0.4
WDC				pmax	pmax		
	comp=Z,34nm,1.0s						
WDC	Whiskeytown Da	68.09	55	P	P	10 24 53.9	+0.4
WDC				IAmb	IAmb	10 24 56.2	
	comp=Z,34nm,1.0s						
O02D	Mt. Diablo Mer	68.16	55	P	P	10 24 54.4	+0.3
	baz=304,SNR=11						
F10A	Beach Ranch, E	68.23	48	P	P	10 24 54.6	+0.2
WALA	Waterton Lakes	68.27	44	P	P	10 24 55.0	+0.4
WALA				IAmb	IAmb	10 24 56.8	
	comp=Z,22nm,0.8s						
WALA				IAMs_20	IAMs_20	10 54 56.1	
	comp=Z,6µm,20.0s						
NUUG	Nuugaatsiaq	68.30	6	i P	P	10 24 55.4	+1.2
NUUG				IAmb	IAmb	10 24 56.3	
	comp=Z,13nm,0.9s						
NUUG				IAMs_20	IAMs_20	10 57 38.7	
	comp=Z,16µm,18.0s						
HOPS	Hopland Field	68.65	57	IAMs_20	IAMs_20	10 55 46.1	
	comp=Z,4µm,19.0s						
O03E	Paynes Creek	68.72	55	P	P	10 24 57.8	+0.3
	baz=305,SNR=36						
MOD	Modoc Plateau	68.74	53	P	P	10 24 57.8	+0.1
MOD				IAmb	IAmb	10 25 00.3	
	comp=Z,26nm,0.8s						
BMO	Blue Mountains	68.83	49	P	P	10 24 58.4	+0.2
BMO				pmax	pmax		
	comp=Z,21nm,0.8s						
BMO				MLR	MLR		
	comp=Z,2µm,20.0s						
BMO	Blue Mountains	68.83	49	P	P	10 24 58.4	+0.2
BMO				IAmb	IAmb	10 25 00.6	
	comp=Z,21nm,0.8s						
JTMT	Jette	68.84	45	P	P	10 24 58.4	+0.2
JTMT				IAmb	IAmb	10 25 00.7	
	comp=Z,33nm,0.8s						
GDXM	Geysers	68.93	57	P	P	10 24 59.3	+0.5
GDXM				IAmb	IAmb	10 25 03.8	
	comp=Z,43nm,1.3s						
GDXM				IAMs_20	IAMs_20	10 55 55.6	
	comp=Z,5µm,18.0s						
J08A	Circle Bar Ran	69.01	51	P	P	10 25 00.4	+1.1
J08A				IAmb	IAmb	10 25 02.6	
	comp=Z,45nm,1.0s						
ORV	Oroville	69.33	55	P	P	10 25 01.4	+0.2
ORV				pmax	pmax		
	comp=Z,35nm,1.1s						
ORV	Oroville	69.33	55	P	P	10 25 01.4	+0.2
ORV				IAmb	IAmb	10 25 06.7	
	comp=Z,35nm,1.1s						

GOF	Gofitskoye	69.46	312	⇑iP	P	10 25 02.8	+0.9
GOF				pmax	pmax		
	comp=Z,137nm,0.8s						
SCO	Scoresbysund	69.49	355	iP	P	10 25 02.4	+0.8
	comp=Z,41nm,1.3s						
SCO	Scoresbysund	69.49	355	P	P	10 25 02.6	+1.0
SCO				pmax	pmax		
	comp=Z,57nm,1.5s						
SCO	Scoresbysund	69.49	355	P	P	10 25 02.6	+1.0
SCO				IAmb	IAmb	10 25 11.4	
	comp=Z,57nm,1.5s						
SCO	Scoresbysund	69.49	355	iP	P	10 25 02.4	+0.8
SCO				IAmb	IAmb	10 25 04.4	
	comp=Z,41nm,1.3s						
MSO	Missoula	69.58	46	P	P	10 25 02.5	-0.2
	baz=307,SNR=34						
MSO	Missoula	69.58	46	P	P	10 25 02.5	-0.2
MSO				IAmb	IAmb	10 25 04.8	
	comp=Z,27nm,0.9s						
MNCY	Minicoy	69.77	264	eP	P	10 25 03.0	-1.3
MTSE	Matsula	69.81	331	eP	P	10 25 00.9	-2.9
BEKR	Beckworth	69.87	55	P	P	10 25 05.0	+0.2
BEKR				IAmb	IAmb	10 25 07.5	
	comp=Z,49nm,0.9s						
ZEI	Tsey	70.30	310	eP	P	10 25 06.6	-0.8
ZEI				pmax	pmax		
	comp=Z,32nm,0.8s						
KIV	Kislovodsk	70.32	311	⇓P	P	10 25 09.3	+1.9
KIV	Kislovodsk	70.32	311	eP	P	10 25 08.3	+1.0
KIV	Kislovodsk	70.32	311	eP	P	10 25 08.4	+1.1
KIV				e		10 27 43.9	
KIV				eS	S	10 34 20.7	+1.4
KIV				eSS	SS	10 38 52.0	+3.0
KIV				pmax	pmax		
	comp=Z,329nm,1.0s						
KIV				pmax	pmax		
	comp=Z,3µm,4.8s						
KIV	Kislovodsk	70.32	311	P	P	10 25 09.3	+1.9
KBZ	Khabaz	70.33	311	P	P	10 25 07.2	0.0
	comp=Z,55nm,0.8s,baz=47,slow=4.2,SNR=61						
KBZ				LR	LR	10 57 52.5	
	comp=Z,8µm,18.1s,baz=20,slow=38						
KBZ	Khabaz	70.33	311	ceP	P	10 25 07.8	+0.6
KBZ				pmax	pmax		
	comp=Z,89nm,0.9s						
FFC	Flin Flon	70.47	34	P	P	10 25 08.1	+0.2
FFC				pmax	pmax		
	comp=Z,41nm,0.9s						
FFC				MLR	MLR		
	comp=Z,3µm,20.0s						
FFC	Flin Flon	70.47	34	P	P	10 25 08.1	+0.2
FFC				IAmb	IAmb	10 25 09.8	
	comp=Z,41nm,0.8s						
SHA1	Shidzhatmaz	70.47	311	iP	P	10 25 08.7	+0.3
RUBR	Rubicon Trail	70.47	55	P	P	10 25 09.5	+1.0
MFID	Camas Ranch	70.54	49	P	P	10 25 09.0	+0.3
PAHR	Pah Rah Range	70.58	54	P	P	10 25 09.4	+0.4
PAHR				IAmb	IAmb	10 25 11.5	
	comp=Z,39nm,0.9s						
VCNR	Virginia City	70.65	55	P	P	10 25 10.2	+0.6
VCNR				IAmb	IAmb	10 25 20.9	
	comp=Z,34nm,0.8s						
NEY	Neytrino	70.72	311	iP	P	10 25 11.0	+1.1
NEY				pmax	pmax		
	comp=Z,9.0nm,1.0s						
NEY				MLR	MLR		
	comp=Z,2µm,17.0s						
ILULI	Ilulissat	70.74	5	iP	P	10 25 10.1	+0.8
	comp=Z,14µm,19.0s						
ILULI	Ilulissat	70.74	5	iP	P	10 25 10.1	+0.8
ILULI				MLR	MLR		
	comp=Z,14µm,19.0s						
ILULI	Ilulissat	70.74	5	iP	P	10 25 10.1	+0.8
ILULI				IAMs_20	IAMs_20	10 58 22.7	
	comp=Z,14µm,19.1s						
FCC	Fort Churchill	70.76	28	P	P	10 25 09.7	+0.1
FCC				pmax	pmax		
	comp=Z,75nm,1.5s						
FCC	Fort Churchill	70.76	28	P	P	10 25 09.7	+0.1
FCC				IAmb	IAmb	10 25 21.3	
	comp=Z,75nm,1.5s						
FCC				IAMs_20	IAMs_20	11 00 29.2	
	comp=Z,6µm,21.0s						
HRY	Holter Researc	70.80	45	P	P	10 25 11.0	+0.7
PNTR	Pine Nut	70.80	55	P	P	10 25 11.6	+1.1
PNTR				IAmb	IAmb	10 25 13.3	
	comp=Z,39nm,0.9s						
CMB	Columbia Colle	70.92	56	P	P	10 25 11.3	+0.3
CMB				pmax	pmax		
	comp=Z,33nm,0.9s						
CMB	Columbia Colle	70.92	56	P	P	10 25 11.3	+0.3
CMB				IAmb	IAmb	10 25 13.5	
	comp=Z,33nm,0.8s						
SAO	San Andreas Ge	70.98	58	P	P	10 25 12.9	+1.6
SAO				pmax	pmax		
	comp=Z,33nm,1.3s						
SAO	San Andreas Ge	70.98	58	P	P	10 25 12.9	+1.6
LRM	Limekiln Ridge	71.01	46	P	P	10 25 12.3	+0.6
IDID	Didziasalis	71.03	327	eP	P	10 25 12.1	+0.8
YERR	Yerington	71.09	55	P	P	10 25 12.8	+0.6
EGMT	Eagleton	71.09	43	P	P	10 25 12.2	+0.2
	baz=309,SNR=14						
EGMT	Eagleton	71.09	43	P	P	10 25 12.4	+0.5
EGMT				IAmb	IAmb	10 25 14.1	
	comp=Z,41nm,0.8s						
MNK	Minsk	71.10	326	⇓eP	P	10 25 11.0	-0.8
MNK				e		10 25 30.0	
MNK				e		10 27 46.0	
MNK				eS	S	10 34 27.0	-0.8
MNK				e		10 35 12.0	
MNK				eSS	SS	10 39 04.0	+3.8
MNK				pmax	pmax		
	comp=N,140nm,1.5s						
MNK				pmax	pmax		
	comp=Z,810nm,1.5s						
MNK				smax	smax		
	comp=E,3µm,6.0s						
MNK				MLR	MLR		
	comp=E,19µm,16.0s						
MNK				MLR	MLR		
	comp=Z,37µm,16.0s						
MNK				MLR	MLR		
	comp=N,17µm,14.0s						
MNK				MLR	MLR		
	comp=E,26µm,16.0s						
MNK				MLR	MLR		
	comp=Z,49µm,16.0s						
MNK				MLR	MLR		
	comp=N,25µm,14.0s						
MNK	Minsk	71.10	326	iP	P	10 25 09.5	-2.3
	comp=E,8.0nm,1.1s						
MNK				iP	P	10 25 09.5	-2.3
	comp=N,37nm,0.9s						
MNK				iP	P	10 25 09.5	-2.3
	comp=Z,92nm,0.8s						
MNK				iPcP	PcP	10 25 29.2	-2.7
MNK				iPP	PP	10 27 47.4	-1.4
MNK				iPPP	PPP	10 29 34.2	
MNK				iS	S	10 34 26.2	-1.6
MNK				iScS	ScS	10 35 16.6	+1.0
MNK				iSS	SS	10 39 02.0	+1.9
MNK				iSSS	SSS	10 42 21.1	
MNK				iLQ	LQ	10 51 47.1	
MNK				iLR	LR	10 55 54.0	
MNK				iLRM	MLR	10 59 33.0	
	comp=Z,16µm,19.0s						
MNK				iLRM	MLR	10 59 34.8	
	comp=E,2µm,18.1s						
MNK				iLRM	MLR	10 59 36.6	
	comp=N,12µm,16.3s						
ISAL	Salakas	71.10	328	eP	P	10 25 12.3	+0.5
UPP	Uppsala	71.16	334	eP	P	10 25 12.4	+0.4
DLMT	Dillon	71.21	46	P	P	10 25 13.9	+1.1
DLMT				IAmb	IAmb	10 25 15.7	
	comp=Z,49nm,0.9s						
IIGN	Ignalina	71.22	328	eP	P	10 25 13.0	+0.5
WAKR	Walker	71.25	55	P	P	10 25 13.9	+0.7
HLID	Hailey	71.27	49	P	P	10 25 13.8	+0.5
	baz=307,SNR=50						
HLID	Hailey	71.27	49	P	P	10 25 13.6	+0.3
NACGM	Naroch	71.29	327	iP	P	10 25 12.9	0.0
NACGM				iP	P	10 25 12.9	0.0
NACGM				iP	P	10 25 12.9	0.0
NACGM				iPP	PP	10 27 51.8	+1.4
NACGM				iPPP	PPP	10 29 35.6	
NACGM				iS	S	10 34 30.4	+0.5
NACGM				iPS	PnS	10 35 11.7	+14
NACGM				iSS	SS	10 39 05.3	+2.3
NACGM				iSSS	SSS	10 42 25.4	
NACGM				iLQ	LQ	10 51 58.0	
NACGM				iLR	LR	10 55 44.7	
GNI	Garni	71.36	307	eP	P	10 25 14.6	+0.8
GNI	Garni	71.36	307	ceP	P	10 25 14.6	+0.8
GNI				pmax	pmax		
	comp=Z,102nm,1.7s						
GNI				MLR	MLR		
	comp=Z,6µm,14.0s						
GNI	Garni	71.36	307	P	P	10 25 15.6	+1.8
AKH	Akhalkalaki	71.36	309	⇑P	P	10 25 15.6	+1.8
AKH	Akhalkalaki	71.36	309	eP	P	10 25 15.7	+1.8
STKA	Stephens Creek	71.37	182	P	P	10 25 12.9	-0.5
	comp=Z,9.2nm,0.7s,baz=329,slow=8.7,SNR=18						
STKA	Stephens Creek	71.37	182	P	P	10 25 13.9	+0.4
STKA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
STKA	Stephens Creek	71.37	182	P	P	10 25 13.9	+0.4
ICESG	Greenland Ices	71.37	1	iP	P	10 25 14.2	+0.6
ICESG				IAmb	IAmb	10 25 16.2	
	comp=Z,64nm,0.8s						
MCMT	McKenzie Canyo	71.39	47	P	P	10 25 14.6	+0.6
BCYI	Bear Canyon	71.40	48	P	P	10 25 14.7	+0.7
CHVG	Ch'k'valeri	71.42	310	⇑P	P	10 25 16.1	+2.2
BOZ	Bozeman (W)	71.60	46	P	P	10 25 15.2	+0.1
	baz=308,SNR=85						
BOZ	Bozeman (W)	71.60	46	P	P	10 25 15.2	+0.1
BOZ				pmax	pmax		
	comp=Z,47nm,0.8s						
BOZ				MLR	MLR		
	comp=Z,4µm,18.0s						
BOZ	Bozeman (W)	71.60	46	P	P	10 25 15.2	+0.1
BOZ				IAmb	IAmb	10 25 17.5	
	comp=Z,46nm,0.8s						
FORT	Forrest	71.70	194	P	P	10 25 15.4	-0.1
PMPB	Monarch Peak	71.72	58	P	P	10 25 17.1	+1.1
RYN	Ryan	71.75	55	P	P	10 25 15.7	-0.5
RYN				IAmb	IAmb	10 25 18.8	
	comp=Z,28nm,0.8s						
TASB	TASBURUN-IGDIR	71.77	307	eP	P	10 25 17.9	+1.8
LHV	Little Huntoon	71.99	55	P	P	10 25 18.7	+1.3
MDPB	Devils Postpil	71.99	56	P	P	10 25 18.7	+0.9
MDPB				IAmb	IAmb	10 25 29.1	
	comp=Z,32nm,0.8s						
NVAR	Mina Array Bea	72.01	55	P	P	10 25 18.3	+0.5
	comp=Z,38nm,0.8s,baz=297,slow=5.5,SNR=134						
NVAR				LR	LR	10 57 46.8	
	comp=Z,1µm,18.1s,baz=306,slow=36						
NVAR	Mina Array Bea	72.01	55	P	P	10 25 17.9	+0.1
PABE	Paberze	72.03	329	eP	P	10 25 17.8	+0.5
NC405	NORSAR Array S	72.03	338	P	P	10 25 17.2	-0.1
OMMB	Old Mammoth Mi	72.06	56	P	P	10 25 18.7	+0.5
OMMB				IAMs_20	IAMs_20	10 54 11.4	
	comp=Z,4µm,18.0s						
KARS	Kars	72.09	308	eP	P	10 25 19.5	+1.4
NV11	Mina Array Sit	72.10	55	P	P	10 25 18.9	+0.6
NV11				IAmb	IAmb	10 25 22.9	
	comp=Z,38nm,1.1s						
MLAC	Mammoth, Mammo	72.15	56	P	P	10 25 20.0	+1.3
	baz=307,SNR=33						
NC204	NORSAR Array S	72.18	338	P	P	10 25 18.1	-0.2
QLMT	Earthquake Lak	72.19	46	P	P	10 25 19.9	+1.1
NB201	NORSAR Array S	72.21	338	P	P	10 25 18.4	+0.1
NB2	NORSAR Subarra	72.24	338	P	P	10 25 17.7	-0.9
	comp=Z,44nm,0.9s,baz=37,slow=6.2						
NOA	NORSAR Array B	72.24	338	P	P	10 25 18.6	0.0
	comp=Z,26nm,0.9s,baz=37,slow=6.0,SNR=48						
NOA				LR	LR	11 01 17.5	
	comp=Z,12µm,18.0s,baz=25,slow=39						
SOC	Sochi	72.26	312	d iP	P	10 25 17.5	-1.4
SOC				e		10 27 53.8	
SOC				ePPP	PPP	10 29 41.4	
SOC				iS	S	10 34 41.9	+0.4
SOC				eSS	SS	10 39 20.7	+2.3
SOC				pmax	pmax		
	comp=Z,45nm,0.9s						
YHL	Hebgen Lake	72.31	46	P	P	10 25 20.5	+0.9
BATM	Batumi	72.32	310	eP	P	10 25 19.8	+0.4
YHB	Horse Butte	72.36	46	P	P	10 25 20.8	+1.0
PAGB	Antelope Grade	72.37	58	P	P	10 25 20.9	+1.1
PAGB				IAmb	IAmb	10 25 30.8	
	comp=Z,48nm,0.9s						
NBO00	NORSAR Array S	72.37	338	P	P	10 25 19.4	+0.1
PBUR	Paburge	72.45	330	eP	P	10 25 20.4	+0.6
CLDR	Caldiran	72.47	306	eP	P	10 25 21.6	+1.0
NAO01	NORSAR Array S	72.49	338	P	P	10 25 20.1	+0.1
ELK	Elko	72.50	51	P	P	10 25 21.4	+0.7
ELK				pmax	pmax		
	comp=Z,21nm,1.0s						
ELK	Elko	72.50	51	P	P	10 25 21.4	+0.7
UOSS	Minazif	72.52	288	IAMs_20	IAMs_20	11 01 11.5	
	comp=Z,4µm,19.0s						
YHH	Holmes Hill	72.53	46	P	P	10 25 21.8	+0.8
YMR	Madison River	72.55	46	P	P	10 25 22.0	+1.1
GCMT	Greycliff	72.55	45	P	P	10 25 21.1	+0.3
SENK	Senkaya-Erzuru	72.57	308	eP	P	10 25 22.4	+1.3
BBOO	Buckleboo	72.60	187	P	P	10 25 21.3	+0.4
BBOO				IAmb	IAmb	10 25 47.4	
	comp=Z,42nm,1.2s						
BBOO				IAMs_20	IAMs_20	10 56 18.0	
	comp=Z,4µm,20.0s						
YNR	Norris Junctio	72.67	46	P	P	10 25 23.5	+1.8
ANN	Anapa	72.78	314	c iP	P	10 25 21.1	-0.9
ANN				e		10 28 00.9	
ANN				ePPP	PPP	10 29 49.3	
ANN				iS	S	10 34 46.6	-0.7
ANN				eSS	SS	10 39 22.4	-3.8
ANN				pmax	pmax		
	comp=Z,57nm,0.8s						
ANN				pmax	pmax		
	comp=E,39nm,0.9s						
ANN				pmax	pmax		
	comp=N,936nm,5.9s						
ANN				pmax	pmax		
	comp=Z,3µm,8.5s						
ANN				pmax	pmax		
	comp=E,343nm,3.5s						
ANN				MLR	MLR		
	comp=N,13µm,15.0s						
ANN				MLR	MLR		
	comp=Z,11µm,15.0s						
AGRB	Hanur-Agry	72.78	307	eP	P	10 25 24.1	+1.7
SMMC	Simmler	72.78	58	P	P	10 25 24.0	+1.7
	baz=307,SNR=9.1						
YNE	Yellowstone No	72.86	45	P	P	10 25 23.5	+0.7
TIN	Tinemaha, Big	72.88	56	P	P	10 25 24.0	+1.1
	baz=307,SNR=6.1						
YPP	Pitchstone Pla	72.89	46	P	P	10 25 24.9	+1.9
TPH	Tonopah	72.90	55	P	P	10 25 23.7	+0.6
TPH				pmax	pmax		
	comp=Z,194nm,0.9s						
TPH	Tonopah	72.90	55	P	P	10 25 23.7	+0.6
LKWY	Lake	72.92	46	P	P	10 25 25.5	+2.3
LKWY				pmax	pmax		
	comp=Z,34nm,1.1s						
LKWY				MLR	MLR		
	comp=Z,7µm,18.0s						
LKWY	Lake	72.92	46	P	P	10 25 25.5	+2.3
LKWY				IAMs_20	IAMs_20	10 58 43.6	
	comp=Z,7µm,18.0s						
H17A	Grant Village	72.93	46	P	P	10 25 25.6	+2.3
	baz=309,SNR=69						
H17A	Grant Village	72.93	46	P	P	10 25 25.2	+1.9
H17A				IAmb	IAmb	10 25 28.0	
	comp=Z,55nm,0.9s						
H17A				IAMs_20	IAMs_20	10 57 32.9	
	comp=Z,8µm,20.0s						
YMP	Mirror Lake Pl	72.95	46	P	P	10 25 23.9	+0.5
SFJD	Kangerlussuaq	72.95	6	iP	P	10 25 22.8	+0.2
	comp=Z,770nm,20.0s						
SFJD	Kangerlussuaq	72.95	6	P	P	10 25 22.7	+0.2
SFJD				pmax	pmax		
	comp=Z,35nm,0.9s						
SFJD				MLR	MLR		
	comp=Z,11µm,20.0s						
SFJD	Kangerlussuaq	72.95	6	P	P	10 25 22.7	+0.2
SFJD				IAmb	IAmb	10 25 25.3	
	comp=Z,35nm,0.9s						
SFJD	Kangerlussuaq	72.95	6	iP	P	10 25 22.9	+0.2
SFJD				IAMs_20	IAMs_20	11 00 24.3	
	comp=Z,778nm,20.2s						
FLWY	Flagg Ranch	73.06	46	P	P	10 25 25.6	+1.6
FLWY				IAmb	IAmb	10 25 43.7	
	comp=Z,78nm,1.3s						
VES	Vestal, Richgr	73.06	57	P	P	10 25 23.8	-0.1
	baz=307,SNR=25						
AKASG	Malin Array Be	73.09	323	P	P	10 25 23.7	0.0
	comp=Z,24nm,0.6s,baz=44,slow=5.9,SNR=77						
AKASG				LR	LR	10 59 26.5	
	comp=Z,9µm,18.7s,baz=40,slow=37						
AKASG	Malin Array Be	73.09	323	P	P	10 25 23.2	-0.5
AKASG				pmax	pmax		
	comp=Z,15nm,1.0s						
AKASG	Malin Array Be	73.09	323	P	P	10 25 23.2	-0.5
AKBB	Malin Array Si	73.09	323	P	P	10 25 23.5	-0.2
AKBB				pmax	pmax		
	comp=Z,37nm,0.9s						
AKBB				MLR	MLR		
	comp=Z,10µm,18.0s						
AKBB	Malin Array Si	73.09	323	P	P	10 25 23.5	-0.2
AKBB				IAmb	IAmb	10 25 26.1	
	comp=Z,37nm,0.8s						
VANB	Van	73.13	306	eP	P	10 25 25.6	+1.2
MORW	Morawa	73.16	205	P	P	10 25 24.6	+0.3
MORW				IAmb	IAmb	10 25 48.1	
	comp=Z,50nm,1.3s						
PKM	Mcpherson Peak	73.16	59	P	P	10 25 25.7	+1.0
	baz=307,SNR=18						
CHOM	Cayeli-Rize	73.19	310	eP	P	10 25 26.0	+1.5
RLMT	Red Lodge	73.19	45	P	P	10 25 25.9	+1.2
	baz=310,SNR=9.2						
RLMT	Red Lodge	73.19	45	P	P	10 25 25.6	+0.9
RLMT				IAmb	IAmb	10 25 53.9	
	comp=Z,51nm,1.5s						
RLMT				IAMs_20	IAMs_20	11 02 37.6	
	comp=Z,4µm,18.0s						
KOPR	Koprukoy-ERZUR	73.22	308	eP	P	10 25 26.8	+1.9
MLAZ	Malazgirt-MUS	73.31	307	eP	P	10 25 27.7	+2.2
HVU	Hansel Valley	73.32	49	P	P	10 25 26.6	+1.1
HVU				pmax	pmax		
	comp=Z,38nm,0.9s						
HVU	Hansel Valley	73.32	49	P	P	10 25 26.6	+1.1
ECR	Eagle Creek	73.33	48	P	P	10 25 26.5	+0.8
CWC	Cottonwood Cre	73.35	56	P	P	10 25 25.9	+0.2
	baz=308						
LOHW	Long Hollow	73.41	47	P	P	10 25 27.2	+1.1
SUW	Suwalki	73.42	328	eP	P	10 25 26.1	+0.5
SUW	Suwalki	73.42	328	eP	P	10 25 25.9	+0.3
SUW	Suwalki	73.42	328	P	P	10 25 25.4	-0.2
SUW				pmax	pmax		
	comp=Z,119nm,1.2s						
SUW				MLR	MLR		
	comp=Z,14µm,18.0s						
SUW	Suwalki	73.42	328	P	P	10 25 25.4	-0.2
SNOW	Snow King Moun	73.42	47	P	P	10 25 27.4	+1.3
REDW	Red Top Meadow	73.43	47	P	P	10 25 27.4	+1.2
REDW				IAmb	IAmb	10 25 31.2	
	comp=Z,53nm,1.4s						
GRAC	Grapevine Rang	73.47	56	P	P	10 25 27.2	+0.9
	baz=308,SNR=12						
AKDM	Akdamar-Van	73.55	306	eP	P	10 25 27.3	+0.4
ISA	Isabella, Lake	73.56	57	P	P	10 25 26.4	-0.5
	baz=308,SNR=16						
ISA	Isabella, Lake	73.56	57	P	P	10 25 26.5	-0.5
ISA				pmax	pmax		
	comp=Z,33nm,1.3s						
ISA	Isabella, Lake	73.56	57	P	P	10 25 26.5	-0.5
DGMT	Dagmar	73.63	40	P	P	10 25 27.0	0.0
	baz=312,SNR=14						
DGMT	Dagmar	73.63	40	P	P	10 25 27.3	+0.3
DGMT				IAmb	IAmb	10 25 28.9	
	comp=Z,39nm,0.8s						
DGMT	Dagmar	73.63	40	IAMs_20	IAMs_20	11 01 10.9	
	comp=Z,4µm,19.0s						
ARVC	Arvin	73.66	58	P	P	10 25 28.0	+0.6
	baz=307						
AHID	Auburn Hatcher	73.67	48	P	P	10 25 28.3	+0.7
BGU	Big Grassy Mou	73.71	50	P	P	10 25 28.3	+0.5
R11A	Troy Canyon, C	73.76	54	P	P	10 25 28.6	+0.4
	baz=308,SNR=61						
R11A	Troy Canyon, C	73.76	54	P	P	10 25 28.6	+0.4
R11A				IAmb	IAmb	10 25 32.7	
	comp=Z,63nm,1.4s						
LAO	LASA Array	73.79	42	P	P	10 25 28.7	+0.6
	baz=311,SNR=17						
LAO	LASA Array	73.79	42	P	P	10 25 28.9	+0.9
LAO				IAmb	IAmb	10 25 30.6	
	comp=Z,36nm,0.9s						
SPUT	South Promonto	73.81	50	P	P	10 25 28.7	+0.3
CUKT	Cukurca	73.82	305	eP	P	10 25 28.3	-0.1
KONO	Kongsberg	73.84	338	ceP	P	10 25 29.4	+1.4
KONO				pmax	pmax		
	comp=Z,81nm,2.5s						
KONO	Kongsberg	73.84	338	P	P	10 25 28.2	+0.2
KONO				IAmb	IAmb	10 25 29.1	
	comp=Z,47nm,1.2s						
KTUT	Trabzon	73.84	310	eP	P	10 25 27.6	-0.8
MPMC	Manual Prospec	73.96	56	P	P	10 25 29.4	0.0
	baz=308,SNR=73						
VRTB	Varto-Mus	73.97	308	eP	P	10 25 31.4	+2.1
GURO	Guroymak-BITLI	74.00	307	eP	P	10 25 30.8	+1.3
KOPT	Kop Dagi	74.02	309	P	P	10 25 32.1	+2.3
KOPT				IAmb	IAmb	10 25 44.6	
	comp=Z,79nm,1.3s						
OSI	Osito Audit: C	74.04	58	P	P	10 25 30.0	+0.3
OSI				IAmb	IAmb	10 25 40.9	
	comp=Z,37nm,0.8s						
FURC	Furnace Creek,	74.11	56	P	P	10 25 30.4	+0.4
	baz=308,SNR=54						
LRMC	Laurel Mtn Rad	74.19	57	P	P	10 25 30.7	+0.1
	baz=308,SNR=24						
TPNV	Topopah Spring	74.20	55	P	P	10 25 31.1	+0.3
	baz=308,SNR=73						
TPNV	Topopah Spring	74.20	55	P	P	10 25 31.1	+0.3
TPNV				pmax	pmax		
	comp=Z,50nm,1.0s						
TPNV				MLR	MLR		
	comp=Z,3µm,18.0s						
TPNV	Topopah Spring	74.20	55	P	P	10 25 31.1	+0.3
TPNV				IAmb	IAmb	10 25 33.8	
	comp=Z,50nm,0.9s						
DUG	Dugway, Tooele	74.29	51	P	P	10 25 32.0	+0.7
	baz=309,SNR=55						
DUG	Dugway, Tooele	74.29	51	P	P	10 25 31.9	+0.7
DUG				pmax	pmax		
	comp=Z,42nm,1.0s						
DUG	Dugway, Tooele	74.29	51	P	P	10 25 31.9	+0.7
DUG				IAmb	IAmb	10 25 34.1	
	comp=Z,42nm,0.9s						
SNCC	San Nicolas Is	74.34	60	P	P	10 25 32.1	+0.7
	baz=308						
SNCC	San Nicolas Is	74.34	60	P	P	10 25 31.9	+0.5
SNCC				IAmb	IAmb	10 25 35.8	
	comp=Z,92nm,1.2s						
SNCC				IAMs_20	IAMs_20	11 03 38.1	
	comp=Z,3µm,18.0s						
EDW2	Edwards Air Fo	74.35	58	P	P	10 25 32.3	+0.8
	baz=308,SNR=30						
SIRT	Sirnak	74.39	306	eP	P	10 25 32.9	+1.1
ESPY	Espiye-Giresun	74.50	311	eP	P	10 25 32.8	+0.6
DECC	Green Verdugo	74.51	58	P	P	10 25 33.0	+0.5
	baz=308						
TCUT	Toone Canyon	74.54	49	P	P	10 25 33.8	+1.1
BW06	Boulder Array	74.54	47	P	P	10 25 32.7	0.0
	baz=310,SNR=32						
BW06	Boulder Array	74.54	47	P	P	10 25 33.0	+0.3
PD31	Pinedale Array	74.54	47	P	P	10 25 32.3	-0.4
PDAR	Pinedale Array	74.54	47	P	P	10 25 32.9	+0.2
	comp=Z,12nm,0.7s,baz=269,slow=1.8,SNR=95						
PDAR				LR	LR	11 00 19.8	
	comp=Z,744nm,19.6s,baz=344,slow=37						
PDAR	Pinedale Array	74.54	47	P	P	10 25 32.7	0.0
BNGB	Bingl	74.55	308	eP	P	10 25 34.3	+1.6
CTU	Camp Tracy	74.61	50	P	P	10 25 34.0	+0.9
PASC	Pasadena Art C	74.66	58	P	P	10 25 33.7	+0.5
PRN	Pahroc Range	74.67	54	P	P	10 25 34.6	+1.2
PSUT	Pine Spring	74.71	53	P	P	10 25 34.6	+0.8
MWC	Mount Wilson	74.71	58	P	P	10 25 33.9	+0.1
MWC				pmax	pmax		
	comp=Z,86nm,1.4s						
MWC	Mount Wilson	74.71	58	P	P	10 25 33.9	+0.1
MWC				IAmb	IAmb	10 25 37.9	
	comp=Z,86nm,1.4s						
SVAN	Silvan-Diyarba	74.76	307	eP	P	10 25 35.4	+1.6
SHOC	Shoshone, Teco	74.83	56	P	P	10 25 34.7	+0.4
	baz=308,SNR=13						

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JLU   Jordanelle        74.84  50  P         P         10 25 35.6 +1.1
NLU   North Lily Min    74.88  50  P         P         10 25 35.8 +1.0
CAN   Canberra          74.95 175  P         P         10 25 35.4 +0.7
CAN                                pmax      pmax
      comp=Z,62nm,1.4s
CAN                                MLR       MLR
      comp=Z,4µm,18.0s
CAN   Canberra          74.95 175  P         P         10 25 35.4 +0.7
CAN                                IAmb      IAmb      10 26 01.4
      comp=Z,62nm,1.4s
CAN                                IAMs_20   IAMs_20   11 03 10.6
      comp=Z,5µm,18.0s
BFSC  Mount Baldy Ra    74.96  58  P         P         10 25 35.3 +0.1
      baz=308,SNR=32
CIS   Catalina Islan    74.98  59  P         P         10 25 35.5 +0.3
      baz=308,SNR=11
RRX   Edison Barstow    75.00  57  P         P         10 25 36.7 +1.5
      baz=308
MPU   Maple Canyon      75.11  50  P         P         10 25 36.9 +0.9
SCI2  San Clemente I    75.15  59  P         P         10 25 36.2 +0.1
      baz=308
SHPR  Sheep Range       75.16  55  P         P         10 25 37.5 +1.2
SHPR                               IAmb      IAmb      10 25 39.7
      comp=Z,37nm,1.0s
SORM  Soroca            75.27 321 ⇑P         P         10 25 36.3 -0.1
HOMB  Homborsund        75.30 337 i P        P         10 25 38.5 +2.0
BBRC  Big Bear Solar    75.43  58  P         P         10 25 38.4 +0.4
      baz=308,SNR=12
HEC   Hector,Ludlow     75.46  57  P         P         10 25 38.3 +0.3
      baz=309,SNR=13
TCRU  Three Creeks R    75.51  52  P         P         10 25 39.2 +0.7
ILIC  ilic-Erzincan     75.53 309 eP         P         10 25 40.2 +1.9
DYBB  Diyarbakir        75.53 307 eP         P         10 25 46.0 +7.7
MARD  Mardin            75.54 307  P         P         10 25 39.3 +0.9
SNART Snartemo          75.62 338 eP         P         10 25 40.0 +1.7
CCUT  Cedar City        75.63  53  P         P         10 25 39.8 +0.8
NUUK  Nuuk              75.63   7 i P        P         10 25 39.6 +1.3
NUUK                               IAmb      IAmb      10 25 41.1
      comp=Z,41nm,0.8s
RSDY  Resadiye-TOKAT    75.65 311 eP         P         10 25 40.3 +1.4
MURC  Murrieta          75.66  58  P         P         10 25 39.0 -0.1
      baz=308,SNR=14
MVU   Marysvale         75.72  52  P         P         10 25 41.0 +1.3
MSU   Marysvale         75.74  52  P         P         10 25 41.2 +1.5
MSU   Marysvale         75.74  52  P         P         10 25 41.2 +1.5
BSD   Bornholm Skovb    75.75 332 i P        P         10 25 38.7 -0.4
      comp=Z,9µm,17.0s
BSD   Bornholm Skovb    75.75 332 i P        P         10 25 38.7 -0.4
BSD                                MLR       MLR
      comp=Z,9µm,17.0s
BSD   Bornholm Skovb    75.75 332 i P        P         10 25 38.8 -0.4
BSD                                IAMs_20   IAMs_20   11 01 06.4
      comp=Z,9µm,16.6s
SZCU  Shurtz Canyon     75.77  53  P         P         10 25 40.8 +0.9
UMR   Umm Al-Rimmam     75.81 297⇑eP                   10 25 38.2
TMUT  Trail Mountain    75.82  51  P         P         10 25 41.1 +0.9
KIS   Kishinev          75.83 320 i P        P         10 25 40.0 +0.3
      comp=Z,600nm,7.5s
KIS   Kishinev          75.83 320 ePcP       PcP       10 26 01.0 +8.7
KIS   Kishinev          75.83 320 ePP        PP        10 28 31.0 +1.8
KIS   Kishinev          75.83 320 i P        P         10 25 40.0 +0.3
KIS                               e                    10 28 31.0
KIS                               ePPP       PPP       10 30 16.0
KIS                               eS         S         10 35 18.0 -3.5
KIS                                pmax      pmax
      comp=Z,600nm,7.5s
KIS                                MLR       MLR
      comp=Z,7µm,15.0s
KIS                                MLR       MLR
      comp=N,5µm,14.0s
KIS                                MLR       MLR
      comp=E,5µm,14.0s
MIB   Mutribah          75.91 297 eP                   10 25 38.2
GMRC  Granite Mounta    75.92  56  P         P         10 25 41.0 +0.3
      baz=309,SNR=34
KVT   Kavak             75.95 312 eP         P         10 25 42.5 +1.9
P17A  Butcher Ranch,    75.98  50  P         P         10 25 42.0 +1.0
BEL   Belsk             76.00 327 eP         P         10 25 41.8 +1.2
DIKM  Dikmen            76.02 313 eP         P         10 25 41.2 +0.3
MTPU  Mount Pierson     76.03  52  P         P         10 25 42.7 +1.2
LCMT  Little Creek M    76.04  53  P         P         10 25 42.2 +0.8
LVV   L'vov             76.08 324 eP         P         10 25 41.0 -0.1
LVV                               i S        S         10 35 21.0 -3.3
LVV                                pmax      pmax
      comp=Z,200nm,1.6s
GOET  G??ttrup          76.10 336 i P        P         10 25 42.6 +1.5
      comp=Z,87nm,0.9s
      comp=Z,10µm,17.0s
GOET  G??ttrup          76.10 336 i P        P         10 25 42.5 +1.5
GOET                              eP         P         10 25 42.7 +1.5
GOET                               IAmb      IAmb      10 25 44.6
      comp=Z,87nm,0.9s
GOET                               IAMs_20   IAMs_20   11 00 50.4
      comp=Z,10µm,17.0s
PFO   Pinyon Flats O    76.13  58  P         P         10 25 41.7 -0.2
      baz=309,SNR=28
PFO   Pinyon Flats O    76.13  58  P         P         10 25 42.3 +0.4
PFO                                pmax      pmax
      comp=Z,44nm,1.3s
PFO                                MLR       MLR
      comp=Z,3µm,18.0s
PFO   Pinyon Flats O    76.13  58  P         P         10 25 42.3 +0.4
PFO                                IAmb      IAmb      10 25 45.2
      comp=Z,44nm,1.3s
TOKT  Tokat             76.15 311 eP         P         10 25 43.3 +1.5
109C  Camp Elliot, M    76.16  59  P         P         10 25 41.8 -0.1
      baz=309,SNR=8.7
109C  Camp Elliot, M    76.16  59  P         P         10 25 41.9  0.0
109C                               IAmb      IAmb      10 25 45.9
      comp=Z,54nm,1.4s
COP   Copenhagen        76.16 334 i P        P         10 25 42.0 +0.6
      comp=Z,30nm,0.9s
      comp=Z,14µm,16.0s
COP   Copenhagen        76.16 334 i P        P         10 25 42.0 +0.6
COP                                pmax      pmax
      comp=Z,30nm,0.9s
COP                                MLR       MLR
      comp=Z,15µm,16.0s
COP   Copenhagen        76.16 334 i P        P         10 25 42.1 +0.6
COP                                IAmb      IAmb      10 25 47.1
      comp=Z,30nm,0.9s
COP                                IAMs_20   IAMs_20   11 02 34.3
      comp=Z,15µm,16.0s
BELC  Belle Mtn. Jos    76.19  57  P         P         10 25 41.9 -0.3
      baz=309,SNR=19
TOKA  Tokat             76.19 311  P         P         10 25 42.2 +0.2
ULM   Lac du Bonnet     76.27  35  P         P         10 25 41.7 -0.5
      comp=Z,17nm,0.9s,baz=315,slow=6.9,SNR=29
ULM   Lac du Bonnet     76.27  35  P         P         10 25 42.0 -0.2
ULM                                pmax      pmax
      comp=Z,17nm,0.9s
ULM   Lac du Bonnet     76.27  35  P         P         10 25 42.0 -0.2
MDND  Maddock           76.29  38  P         P         10 25 42.9 +0.5
      baz=315,SNR=9.2
MDND  Maddock           76.29  38  P         P         10 25 43.2 +0.9
MDND                               IAMs_20   IAMs_20   10 59 16.1
      comp=Z,4µm,18.0s
KNB   Kanab             76.30  53  P         P         10 25 44.3 +1.5
KNB                                pmax      pmax
      comp=Z,36nm,0.9s
KNB   Kanab             76.30  53  P         P         10 25 44.3 +1.5
RDF   Al-Radifah        76.30 296 eP                   10 25 40.2
K22A  Casper            76.31  46  P         P         10 25 43.2 +0.4
      baz=312,SNR=12
K22A  Casper            76.31  46  P         P         10 25 42.9 +0.1
K22A                               IAmb      IAmb      10 26 01.1
      comp=Z,81nm,1.5s
GKP   Gorka Klasztor    76.33 330 eP         P         10 25 43.4 +0.9
RST   Umm Al-Ruwaisa    76.33 297 eP                   10 25 40.4
MALT  Malatya           76.34 309 eP         P         10 25 44.8 +1.8
PKCU  Pink Cliffs       76.34  53  P         P         10 25 44.9 +1.7
SRU   San Rafael Swe    76.34  50  P         P         10 25 43.6 +0.5
SRU                                pmax      pmax
      comp=Z,47nm,0.8s
SRU   San Rafael Swe    76.34  50  P         P         10 25 43.6 +0.5
NWAO  Narrogin (SRO)    76.38 203  P         P         10 25 42.8  0.0
NWAO                               pmax      pmax
      comp=Z,63nm,1.3s
NWAO  Narrogin (SRO)    76.38 203  P         P         10 25 42.8  0.0
NWAO                               IAmb      IAmb      10 26 09.6
      comp=Z,63nm,1.2s
NWAO  Narrogin (SRO)    76.38 203  P         P         10 25 43.1 +0.3
NWAO                               IAmb      IAmb      10 26 09.6
      comp=Z,50nm,1.2s
LLD   Lille Linde       76.52 334 i P        P         10 25 44.1 +0.7
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LLD   Lille Linde       76.52 334 eP         P         10 25 44.1 +0.7
LLD   Lille Linde       76.52 334 eP         P         10 25 44.2 +0.7
RWWY  Rawlins           76.56  47  P         P         10 25 44.4 +0.1
RWWY                               IAmb      IAmb      10 25 46.5
      comp=Z,29nm,0.9s
BAR   Barrett           76.58  59  P         P         10 25 44.7 +0.4
MUD   Monsted U'grnd    76.60 336 i P        P         10 25 43.9  0.0
      comp=Z,40nm,1.0s
      comp=Z,12µm,15.0s
MUD   Monsted U'grnd    76.60 336 i P        P         10 25 43.9  0.0
MUD                                pmax      pmax
      comp=Z,40nm,1.0s
MUD                                MLR       MLR
      comp=Z,12µm,15.0s
MUD   Monsted U'grnd    76.60 336 i P        P         10 25 43.9  0.0
MUD                                IAmb      IAmb      10 25 46.7
      comp=Z,40nm,1.0s
MUD                                IAMs_20   IAMs_20   11 00 56.0
      comp=Z,12µm,15.1s
MONP2 Monument Peak     76.61  58  P         P         10 25 44.5 -0.2
      baz=309,SNR=11
IRM   Iron Mountain     76.64  57  P         P         10 25 44.9 +0.3
      baz=309,SNR=33
RSSD  Black Hills       76.65  43  P         P         10 25 44.6 -0.2
      baz=313
RSSD  Black Hills       76.65  43  P         P         10 25 44.8  0.0
RSSD                               pmax      pmax
      comp=Z,55nm,1.5s
RSSD                               MLR       MLR
      comp=Z,4µm,20.0s
RSSD  Black Hills       76.65  43  P         P         10 25 44.8  0.0
RSSD                               IAmb      IAmb      10 26 01.9
      comp=Z,55nm,1.4s
RSSD  Black Hills       76.65  43  IAMs_20   IAMs_20   11 02 48.1
      comp=Z,4µm,20.0s
E28A  Huff              76.66  40  P         P         10 25 44.9 +0.4
E28A                               IAmb      IAmb      10 25 46.6
      comp=Z,40nm,1.1s
URFA  Urfa              76.66 308 eP         P         10 25 45.8 +1.0
TKX   Tecate            76.69  59  P         P         10 25 45.3 +0.4
DARE  Darende-Malaty    76.74 309 eP         P         10 25 47.3 +2.1
BC3   Big Chuckawall    76.76  57  P         P         10 25 45.7 +0.3
      baz=309,SNR=26
KWP   Kalwaria Pacla    76.81 325 eP         P         10 25 46.6 +1.3
KWP   Kalwaria Pacla    76.81 325  P         P         10 25 46.0 +0.7
KWP                                pmax      pmax
      comp=Z,126nm,1.1s
KWP                                MLR       MLR
      comp=Z,7µm,20.0s
KWP   Kalwaria Pacla    76.81 325  P         P         10 25 46.0 +0.7
KWP                                IAMs_20   IAMs_20   11 01 52.1
      comp=Z,7µm,20.0s
CBX   Cerro Bola        76.81  59  P         P         10 25 46.4 +0.7
W13A  Hualapai Mount    76.85  55  P         P         10 25 46.1  0.0
IKP   In-Ko-Pah, Jac    76.96  58  P         P         10 25 47.0 +0.4
      baz=309,SNR=14
SWSC  Sam W. Stewart    76.98  58  P         P         10 25 46.9 +0.4
      baz=309,SNR=14
U15A  North Rim         77.00  53  P         P         10 25 47.8 +0.9
U15A                               IAmb      IAmb      10 25 50.0
      comp=Z,45nm,0.9s
O20A  White River Ci    77.01  48  P         P         10 25 47.1 +0.3
      baz=312,SNR=23
O20A  White River Ci    77.01  48  P         P         10 25 47.2 +0.3
TOO   Toolangi          77.05 178  P         P         10 25 47.2 +0.7
TOO                                pmax      pmax
      comp=Z,18nm,0.8s
TOO   Toolangi          77.05 178  P         P         10 25 47.2 +0.7
TLCR                    77.09 319 ⇓P         P         10 25 48.7 +1.8
CCX   Cicese            77.09  59  P         P         10 25 47.4 +0.3
BUR08 Bucovina Ar. S    77.12 322  P         P         10 25 47.1  0.0
BUR08                              IAmb      IAmb      10 25 49.8
      comp=Z,31nm,0.7s
BURAR Bucovina Array    77.13 322 ⇑P         P         10 25 47.1 -0.1
BURAR Bucovina Array    77.13 322  P         P         10 25 47.4 +0.2
BIZ   Bicaz             77.19 321 ⇑P         P         10 25 48.4 +0.9
PDMCI Parker Dam,Lak    77.19  56  P         P         10 25 48.2 +0.5
      baz=310,SNR=20
TESR  Tescani           77.23 321 ⇓P         P         10 25 48.5 +0.8
ILGA  Ilgaz             77.29 313  P         P         10 25 49.5 +1.1
ILGA                               IAmb      IAmb      10 25 52.4
      comp=Z,52nm,1.0s
KURC  Kurucasile-Bar    77.30 314 eP         P         10 25 46.1 -2.0
CFR   Carcaliu          77.44 319 ⇑P         P         10 25 49.3 +0.5
ESJX  Sierra Juarez     77.47  59  P         P         10 25 50.4 +0.8
ESJX                               IAmb      IAmb      10 25 53.2
      comp=Z,49nm,1.2s
SARI  SarD1z-Kayseri    77.48 310 eP         P         10 25 48.9 -0.6
KOLS  Kolonicke sedl    77.52 325 eP         P         10 25 49.8 +0.5
KOLS                               pmax      pmax
      comp=Z,20nm,1.2s
KOLS  Kolonicke sedl    77.52 325 eP         P         10 25 49.8 +0.5
KOLS                              eS         S         10 35 37.4 -2.6
TPGR  Topolog           77.52 319 ⇓P         P         10 25 49.6 +0.2
BNN   Bunyan            77.52 310 eP         P         10 25 50.1 +0.4
GLA   Glamis            77.55  57  P         P         10 25 50.6 +0.9
      baz=310,SNR=11
GLA   Glamis            77.55  57  P         P         10 25 50.7 +0.9
GLA                                pmax      pmax
      comp=Z,84nm,1.5s
GLA   Glamis            77.55  57  P         P         10 25 50.7 +0.9
GLA                                IAmb      IAmb      10 25 54.2
      comp=Z,84nm,1.4s
OJC   Ojcow             77.62 327 eP         P         10 25 50.9 +1.1
OJC                               eS         S         10 35 46.3 +5.2
OJC   Ojcow             77.62 327  P         P         10 25 49.7 -0.1
OJC                                pmax      pmax
      comp=Z,72nm,0.9s
OJC   Ojcow             77.62 327  P         P         10 25 49.7 -0.1
CANT  Cankiri           77.64 313 eP         P         10 25 50.9 +0.7
VRI   Vrincioaia        77.65 320 ⇑P         P         10 25 51.6 +1.5
PV23  Carpenter Ridg    77.67  50  P         P         10 25 51.6 +0.9
PV23                               IAmb      IAmb      10 26 11.6
      comp=Z,63nm,1.0s
PLOR  Plostina          77.70 320 ⇑P         P         10 25 51.2 +0.8
PV10  Paradox Valley    77.70  50  P         P         10 25 51.9 +1.0
AGMN  Agassiz Nation    77.70  36  P         P         10 25 50.0 -0.3
      baz=317
AGMN  Agassiz Nation    77.70  36  P         P         10 25 50.1 -0.2
AGMN                               IAMs_20   IAMs_20   11 00 27.4
      comp=Z,4µm,20.0s
PV14  Lion Creek, Pa    77.71  50  P         P         10 25 51.3 +0.5
UZH   Uzhgorod          77.73 325 eP         P         10 25 50.4  0.0
UZH                               e                    10 26 00.5
UZH                               e                    10 28 40.7
UZH                               ePPP       PPP       10 30 32.9
UZH                               eS         S         10 35 40.5 -1.7
UZH                               e                    10 36 00.7
UZH                               ePS        PnS       10 36 26.6 +4.7
UZH                                MLR       MLR
      comp=N,4µm,15.0s
UZH                                MLR       MLR
      comp=E,6µm,15.0s
UZH                                MLR       MLR
      comp=Z,4µm,15.0s
PV22  Blue Mesa, Par    77.75  50  P         P         10 25 51.9 +0.9
PV22                               IAmb      IAmb      10 25 54.0
      comp=Z,55nm,1.0s
PV04  Paradox Valley    77.77  50  P         P         10 25 52.1 +1.0
PV04                               IAmb      IAmb      10 25 53.8
      comp=Z,48nm,0.9s
PV19  Morning Glory     77.78  50  P         P         10 25 52.1 +0.9
KMRS  Kahramanmaras     77.78 309 eP         P         10 25 52.6 +1.6
PHWY  Pilot Hill        77.80  46  P         P         10 25 51.5 +0.1
TIRR  Tirgusor          77.80 318 ⇑P         P         10 25 52.2 +1.4
N23A  Red Feather La    77.81  47  P         P         10 25 52.1 +0.7
      baz=313,SNR=25
GAZ   Gaziantep         77.81 308 eP         P         10 25 52.9 +1.7
GAZ   Gaziantep         77.81 308  P         P         10 25 53.0 +1.8
GAZ                                IAmb      IAmb      10 25 53.5
      comp=Z,59nm,1.2s
GAZ                                IAMs_20   IAMs_20   11 04 27.5
      comp=Z,6µm,19.0s
PV17  East Wray Mesa    77.81  50  P         P         10 25 51.6 +0.2
PV16  Nyswonger Mesa    77.82  50  P         P         10 25 52.3 +0.9
PV16                               IAmb      IAmb      10 26 02.2
      comp=Z,56nm,1.0s
PV11  David Mesa, Pa    77.85  50  P         P         10 25 52.6 +1.0
PV18  Skein Mesa, Pa    77.86  50  P         P         10 25 52.6 +0.9
PV18                               IAmb      IAmb      10 25 54.3
      comp=Z,47nm,0.9s
PV12  Saucer Basin,     77.88  50  P         P         10 25 53.1 +1.3
PV12                               IAmb      IAmb      10 26 10.6
      comp=Z,75nm,1.1s
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PV07  Paradox Valley    77.89  50  P         P         10 25 52.9 +1.1
PV07                               IAmb      IAmb      10 26 20.3
      comp=Z,44nm,1.2s
PV03  Paradox Valley    77.90  50  P         P         10 25 52.7 +0.9
PV03                               IAmb      IAmb      10 25 54.5
      comp=Z,34nm,0.9s
CRVS  Cervenica-Dubn    77.90 325 eP         P         10 25 52.1 +0.7
CRVS                               pmax      pmax
      comp=Z,267nm,2.2s
CRVS  Cervenica-Dubn    77.90 325 eP         P         10 25 52.1 +0.7
CRVS                              eL         L         11 04 08.0
OZUR                    77.95 321 ⇑P         P         10 25 52.5 +0.8
NIE   Niedzica          78.02 326 eP         P         10 25 53.6 +1.6
D32A  Dogwood Acres,    78.02  37  P         P         10 25 51.9 -0.2
D32A                               IAmb      IAmb      10 26 04.9
      comp=Z,35nm,0.8s
D32A                               IAMs_20   IAMs_20   10 58 34.9
      comp=Z,5µm,21.0s
PV15  Paradox Valley    78.05  50  P         P         10 25 53.2 +0.4
WUAZ  Wupatki           78.16  54  P         P         10 25 54.2 +0.9
      baz=311,SNR=42
WUAZ  Wupatki           78.16  54  P         P         10 25 54.2 +0.9
WUAZ                               IAmb      IAmb      10 25 56.7
      comp=Z,58nm,0.9s
BR131 Keskin Array S    78.22 312  P         P         10 25 52.9 -0.6
BR131                              pmax      pmax
      comp=Z,34nm,1.1s
BR131 Keskin Array S    78.22 312  P         P         10 25 52.9 -0.6
BRTR  Keskin Array B    78.22 312  P         P         10 25 54.0 +0.4
      comp=Z,5.7nm,0.6s,baz=74,slow=3.2,SNR=22
BRTR                               LR        LR        11 05 03.8
      comp=Z,7µm,18.3s,baz=21,slow=39
BRTR  Keskin Array B    78.22 312 eP         P         10 25 53.2 -0.3
BRTR  Keskin Array B    78.22 312  P         P         10 25 52.8 -0.7
BRTR  Keskin Array B    78.22 312  P         P         10 25 52.8 -0.7
DOPR  Dopca             78.23 321 ⇑P         P         10 25 54.7 +1.4
ISR   Istrita           78.28 320 ⇑P         P         10 25 54.1 +0.5
BSEG  Bad Segeberg      78.30 334 eP         P         10 25 54.3 +0.8
      comp=Z,27nm,0.9s,baz=36,slow=5.4
MLR   Muntele Rosu      78.30 320  P         P         10 25 54.2 +0.3
MLR                                pmax      pmax
      comp=Z,36nm,1.3s
MLR                                MLR       MLR
      comp=Z,15µm,20.0s
MLR   Muntele Rosu      78.30 320  P         P         10 25 54.2 +0.3
ICOR  Ion Corvin        78.35 319 ⇓P         P         10 25 55.7 +1.7
SMCO  Snowmass          78.38  48  P         P         10 25 55.4 +0.7
SPX   San Pedro Mart    78.41  59  P         P         10 25 55.6 +0.6
KAMT  Kaman             78.42 312 eP         P         10 25 54.2 -0.4
KOZT  Kozan             78.44 309 eP         P         10 25 56.0 +1.4
KSP   Ksiaz             78.58 329 eP         P         10 25 56.1 +1.0
KSP                               eS         S         10 35 54.6 +3.2
ANTO  Ankara            78.60 313  IAMs_20   IAMs_20   11 06 29.9
      comp=Z,6µm,18.0s
LOD   Lodumlu           78.61 313 eP         P         10 25 54.8 -0.8
OKC   Ostrava-Krasne    78.61 327 eP         P         10 25 55.1 -0.2
OKC                               eS         S         10 35 51.9 +0.2
OKC                                MLR       MLR
      comp=Z,13µm,18.1s
OKC   Ostrava-Krasne    78.61 327 eP         P         10 25 55.1 -0.2
OKC                               eS         S         10 35 51.9 +0.2
OKC                                AMS       AMS       11 03 50.0
      comp=Z,13µm,18.1s
B35A  Bob, Littlefor    78.61  35  P         P         10 25 54.5 -0.8
B35A                               IAMs_20   IAMs_20   11 04 34.3
      comp=Z,4µm,18.0s
BR231 Keskin MP Arra    78.63 313  P         P         10 25 56.2 +0.5
BR231                              IAmb      IAmb      10 26 12.1
      comp=Z,36nm,0.8s
KECS  Kecovo            78.64 325 eP         P         10 25 56.7 +1.2
KECS  Kecovo            78.64 325 eP         P         10 25 56.7 +1.2
YAYX  Yaylak            78.65 312 eP         P         10 25 56.6 +0.7
AFSR  Afar-Bala (An     78.73 312 eP         P         10 25 56.5 +0.2
ISCO  Idaho Springs     78.73  47  P         P         10 25 57.4 +0.9
      baz=313,SNR=27
ISCO  Idaho Springs     78.73  47  P         P         10 25 57.5 +0.9
ISCO                               pmax      pmax
      comp=Z,33nm,1.2s
ISCO                               MLR       MLR
      comp=Z,4µm,19.0s
ISCO  Idaho Springs     78.73  47  P         P         10 25 57.5 +1.0
ISCO                               IAMs_20   IAMs_20   11 01 30.5
      comp=Z,4µm,19.0s
VOIR                    78.78 321 ⇓P         P         10 25 57.7 +1.3
SERE  Sereflikochisa    78.79 312 eP         P         10 25 56.1 -0.5
MVCO  Mesa Verde        78.79  51  P         P         10 25 57.5 +0.6
      baz=312,SNR=36
MVCO  Mesa Verde        78.79  51  P         P         10 25 57.2 +0.3
MVCO                               IAmb      IAmb      10 25 59.4
      comp=Z,31nm,0.8s
MVCO                               IAMs_20   IAMs_20   11 05 09.4
      comp=Z,3µm,18.0s
SFX   San Felipe        78.81  59  P         P         10 25 57.1 +0.4
CMRD  Camardi-Nigde     78.82 310 eP         P         10 25 58.1 +1.3
OSTC  Ostas             78.83 329 eP         P         10 25 57.9 +1.3
OSTC                              eS         S         10 35 56.3 +2.2
OSTC                               AMS       AMS       11 06 00.0
      comp=Z,22µm,15.0s
CHVC  Chvalec           78.87 329 eP         P         10 25 58.0 +1.2
CHVC                               AMS       AMS       11 06 00.0
      comp=Z,21µm,14.8s
DRGR                    78.90 323 ⇑P         P         10 25 57.8 +0.8
MORC  Moravsky Berou    78.90 328 ⇑P         P         10 25 58.2 +1.2
MORC  Moravsky Berou    78.90 328⇑iP         P         10 25 57.7 +0.7
MORC                              eS         S         10 35 51.0 -4.0
MORC  Moravsky Berou    78.90 328  P         P         10 25 57.3 +0.3
MORC                               pmax      pmax
      comp=Z,50nm,1.2s
MORC                               MLR       MLR
      comp=Z,13µm,19.0s
MORC  Moravsky Berou    78.90 328  P         P         10 25 57.3 +0.3
MORC                               IAmb      IAmb      10 25 58.7
      comp=Z,50nm,1.2s
UPC   Upice             78.95 329 eP         P         10 25 57.9 +0.7
UPC                               eS         S         10 35 53.1 -2.3
UPC                                MLR       MLR
      comp=Z,22µm,14.8s
UPC   Upice             78.95 329 eP         P         10 25 57.9 +0.7
UPC                               eS         S         10 35 53.1 -2.3
UPC                                AMS       AMS       11 06 10.0
      comp=Z,22µm,14.8s
ARR   Arges             79.03 321 ⇑P         P         10 25 59.7 +1.9
SUSD  Miller            79.03  40  P         P         10 25 58.3 +0.5
      baz=316,SNR=8.1
SUSD  Miller            79.03  40  P         P         10 25 58.1 +0.4
SUSD                               IAmb      IAmb      10 25 59.9
      comp=Z,60nm,0.9s
SUSD                               IAMs_20   IAMs_20   11 00 24.9
      comp=Z,5µm,20.0s
KARA  Karaisali         79.05 310 eP         P         10 25 59.5 +1.6
MDUB  Mudurnu           79.08 314  P         P         10 25 57.4 -0.8
NRS   Narsarsuaq        79.10   4  IAMs_20   IAMs_20   11 02 20.5
      comp=Z,6µm,20.0s
FLTG  Flechtingen       79.29 332 eP         P         10 25 59.2 +0.2
      comp=Z,27nm,1.0s,baz=36,slow=5.4
FLTG                              epP        PcP       10 26 07.7 +0.5
F33A  5 Mile Ranch,     79.31  38  P         P         10 25 59.5 +0.3
F33A                               IAMs_20   IAMs_20   11 06 19.1
      comp=Z,4µm,18.0s
PSZ   Piszkesteto       79.33 325 ⇓P         P         10 26 00.8 +1.5
PSZ   Piszkesteto       79.33 325  P         P         10 26 00.4 +1.1
PSZ                                pmax      pmax
      comp=Z,47nm,1.0s
PSZ                                MLR       MLR
      comp=Z,10µm,19.0s
PSZ   Piszkesteto       79.33 325  P         P         10 26 00.4 +1.1
PSZ                                IAmb      IAmb      10 26 02.9
      comp=Z,47nm,1.0s
VYHS  Vyhne             79.35 326 eP         P         10 26 01.0 +1.6
VYHS                              eS         S         10 36 02.2 +2.5
VYHS  Vyhne             79.35 326 eP         P         10 26 01.0 +1.6
LOT   Lotru             79.39 322 ⇓P         P         10 26 00.6 +0.8
PIX   Pinacate          79.39  58  P         P         10 26 00.3 +0.4
S22A  4UR Ranch, Cre    79.42  49  P         P         10 26 01.2 +0.8
      baz=313,SNR=32
W18A  Petrified Fore    79.43  53  P         P         10 26 02.3 +2.0
      baz=312
BRG   Berggiesshubel    79.47 330 i P        P         10 26 00.6 +0.6
BRG                                Amp                 10 26 02.4
      comp=Z,32nm,1.2s
BRG                                PP        PP        10 28 57.2 -2.3
BRG                                Amp                 10 29 06.1
      comp=Z,6.8nm,0.9s
BRG                                S         S         10 36 03.0 +2.2
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BRG				Amp		10 36 05.1	
	comp=E,4.5nm,24.5s						
BRG				Amp		11 07 05.0	
	comp=E,26nm,18.4s						
BRG				Amp		11 07 23.0	
	comp=Z,20nm,14.8s						
BRG				Amp		11 07 27.0	
	comp=N,13nm,17.1s						
BRG	**Berggiesshubel**	**79.47**	**330**	eP	**P**	**10 26 00.3**	**+0.3**
	baz=36,slow=5.4						
BRG				epP	**PcP**	**10 26 08.8**	**+0.8**
CLL	**Collm**	**79.48**	**331**	⇑iP	**P**	**10 26 00.1**	**+0.1**
	comp=Z,42nm,1.0s						
CLL				i PcP	**PcP**	**10 26 08.5**	**+0.5**
CLL				ePP	**PP**	**10 28 58.0**	**-1.6**
CLL				ePPP	PPP	10 30 48.0	
CLL				eS	**S**	**10 35 57.0**	**-3.9**
CLL				ePS	**PnS**	**10 36 42.0**	**-1.9**
CLL				ePPS	PPS	10 37 06.0	
CLL				e		10 40 42.0	
CLL				e		10 42 06.0	
CLL				eSSS	SSS	10 44 36.0	
CLL				e		10 45 36.0	
CLL				LmH		10 59 00.0	
	comp=N,18µm,19.5s						
CLL				LmH		10 59 00.0	
	comp=E,25µm,21.4s						
CLL				LmV		11 07 00.0	
	comp=Z,12µm,19.4s						
CLL	**Collm**	**79.48**	**331**	⇑iP	**P**	**10 26 00.1**	**+0.1**
CLL				i		10 26 08.5	
CLL				eS	**S**	**10 35 57.0**	**-3.9**
CLL				pmax	pmax		
	comp=Z,42nm,1.0s						
CLL				MLR	MLR		
	comp=Z,12µm,19.4s						
CLL	**Collm**	**79.48**	**331**	P	**P**	**10 25 59.7**	**-0.3**
CLL	**Collm**	**79.48**	**331**	eP	**P**	**10 26 00.1**	**+0.1**
	comp=Z,25nm,0.8s,baz=36,slow=5.4						
CLL				epP	**PcP**	**10 26 08.9**	**+0.9**
PVCC	**Panska Ves**	**79.50**	**330**	eP	**P**	**10 26 00.7**	**+0.5**
PVCC				eS	**S**	**10 36 00.5**	**-0.7**
PVCC				MLR	MLR		
	comp=Z,21µm,16.8s						
PVCC	**Panska Ves**	**79.50**	**330**	eP	**P**	**10 26 00.7**	**+0.5**
PVCC				eS	**S**	**10 36 00.5**	**-0.7**
PVCC				AMS	AMS	11 05 20.0	
	comp=Z,21µm,16.8s						
214A	**Organ Pipe Nat**	**79.55**	**57**	P	**P**	**10 26 01.5**	**+0.6**
	baz=311,SNR=21						
214A	**Organ Pipe Nat**	**79.55**	**57**	P	**P**	**10 26 01.6**	**+0.7**
NRDL	**Niedersach Rie**	**79.56**	**333**	eP	**P**	**10 26 01.2**	**+0.8**
	comp=Z,8.6nm,0.8s,baz=36,slow=5.4						
NRDL				epP	**PcP**	**10 26 09.2**	**+0.9**
JAVC	**Velka Javorina**	**79.56**	**327**	⇑iP	**P**	**10 26 02.5**	**+1.9**
JAVC	**Velka Javorina**	**79.56**	**327**	eS	**S**	**10 36 05.9**	**+3.9**
Q24A	**Divide**	**79.56**	**48**	P	**P**	**10 26 01.7**	**+0.6**
	baz=313,SNR=11						
AUSIV	**SIVRIHISAR**	**79.60**	**313**	eP	**P**	**10 26 01.8**	**+0.7**
SVRH	**Sivrihisar-ESK**	**79.61**	**313**	eP	**P**	**10 26 01.7**	**+0.6**
VRAC	**Vranov**	**79.66**	**328**	⇑P	**P**	**10 26 02.3**	**+1.2**
VRAC	**Vranov**	**79.66**	**328**	⇑iP	**P**	**10 26 02.1**	**+1.0**
VRAC				eS	**S**	**10 36 00.9**	**-2.0**
ASSE	**Asse, Remlinge**	**79.66**	**333**	eP	**P**	**10 26 01.9**	**+1.0**
	comp=Z,8.7nm,0.8s,baz=36,slow=5.4						
ASSE				epP	**PcP**	**10 26 10.0**	**+1.3**
OUZ	**Omahuta**	**79.67**	**155**	IAMs_20	IAMs_20	11 01 55.0	
	comp=Z,5µm,19.0s						
EYMN	**Ely**	**79.90**	**34**	P	**P**	**10 26 02.2**	**-0.2**
	baz=320,SNR=16						
EYMN	**Ely**	**79.90**	**34**	P	**P**	**10 26 01.9**	**-0.5**
EYMN	**Ely**	**79.90**	**34**	IAMs_20	IAMs_20	11 08 02.3	
	comp=Z,4µm,18.0s						
GZR	**Gura Zlata**	**79.90**	**322**	⇑P	**P**	**10 26 02.9**	**+0.4**
OGNE	**Ogallala**	**79.92**	**44**	P	**P**	**10 26 03.4**	**+0.7**
	baz=315,SNR=20						
OGNE	**Ogallala**	**79.92**	**44**	P	**P**	**10 26 03.1**	**+0.4**
OGNE				IAmb	IAmb	10 26 05.4	
	comp=Z,62nm,0.9s						
OGNE				IAMs_20	IAMs_20	11 04 58.7	
	comp=Z,4µm,19.0s						
PRA	**Prague**	**79.92**	**329**	eP	**P**	**10 26 03.6**	**+1.2**
PRA				eS	**S**	**10 36 05.1**	**-0.5**
PRA				MLR	MLR		
	comp=Z,10µm,17.0s						
PRA	**Prague**	**79.92**	**329**	eP	**P**	**10 26 03.6**	**+1.2**
PRA				eS	**S**	**10 36 05.1**	**-0.5**
PRA				AMS	AMS	11 04 50.0	
	comp=Z,10µm,17.0s						
SMOL	**Smolenice**	**79.93**	**327**	eP	**P**	**10 26 04.7**	**+2.2**
SMOL	**Smolenice**	**79.93**	**327**	eP	**P**	**10 26 04.7**	**+2.2**
KRUC	**Moravsky**	**79.93**	**328**	⇑iP	**P**	**10 26 03.4**	**+0.9**
KRUC	**Moravsky**	**79.93**	**328**	eS	**S**	**10 36 09.6**	**+3.8**
PRU	**Pruhonice**	**79.94**	**329**	eP	**P**	**10 26 02.9**	**+0.3**
PRU				e		10 29 03.1	
PRU				eS	**S**	**10 36 03.3**	**-2.6**
PRU				MLR	MLR		
	comp=Z,20µm,16.7s						
PRU	**Pruhonice**	**79.94**	**329**	eP	**P**	**10 26 02.9**	**+0.3**
PRU				ePP	**PP**	**10 29 03.1**	**-0.4**
PRU				eS	**S**	**10 36 03.3**	**-2.6**
PRU				AMS	AMS	11 04 50.0	
	comp=Z,20µm,16.7s						
LADK	**Ladik-KONYA**	**79.98**	**312**	eP	**P**	**10 26 04.1**	**+0.9**
NEUB	**Neuenburg**	**80.01**	**332**	eP	**P**	**10 26 03.7**	**+0.8**
	comp=Z,40nm,1.1s,baz=36,slow=5.4						
SRO	**Srobarova**	**80.09**	**326**	eP	**P**	**10 26 05.1**	**+1.7**
SRO				pmax	pmax		
	comp=Z,202nm,1.8s						
SRO	**Srobarova**	**80.09**	**326**	eP	**P**	**10 26 05.1**	**+1.7**
SRO2	**Moca**	**80.10**	**326**	eP	**P**	**10 26 04.0**	**+0.6**
SRO2	**Moca**	**80.10**	**326**	eP	**P**	**10 26 04.0**	**+0.6**
KIZK	**Mersin**	**80.11**	**309**	eP	**P**	**10 26 04.6**	**+0.9**
TREC	**Trest**	**80.12**	**328**	eP	**P**	**10 26 03.9**	**+0.3**
TREC				MLR	MLR		
	comp=Z,19µm,15.5s						
TREC	**Trest**	**80.12**	**328**	eP	**P**	**10 26 03.9**	**+0.3**
TREC				AMS	AMS	11 06 50.0	
	comp=Z,19µm,15.5s						
KONT	**Konya--Tatoy**	**80.16**	**312**	eP	**P**	**10 26 04.9**	**+0.9**
SDCO	**Great Sand Dun**	**80.19**	**49**	P	**P**	**10 26 05.0**	**+0.5**
	baz=313,SNR=21						
SDCO	**Great Sand Dun**	**80.19**	**49**	P	**P**	**10 26 04.7**	**+0.1**
SDCO				IAMs_20	IAMs_20	11 08 40.3	
	comp=Z,3µm,18.0s						
BZS	**Buzias**	**80.28**	**323**	⇑P	**P**	**10 26 04.2**	**-0.3**
ZST	**Bratislava**	**80.31**	**327**	eP	**P**	**10 26 06.3**	**+1.7**
ZST				pmax	pmax		
	comp=Z,934nm,2.6s						
ZST	**Bratislava**	**80.31**	**327**	eP	**P**	**10 26 06.3**	**+1.7**
ZST	**Bratislava**	**80.31**	**327**	eS	**S**	**10 36 12.8**	**+3.0**
KEBE	**Keben-Mersin**	**80.39**	**310**	eP	**P**	**10 26 05.2**	**-0.1**
GTTG	**Gottingen**	**80.39**	**333**	eP	**P**	**10 26 06.0**	**+1.0**
	comp=Z,23nm,0.8s,baz=36,slow=5.4						
PBCC	**Pribram**	**80.40**	**329**	eP	**P**	**10 26 05.6**	**+0.5**
TANN	**Tannenbergstha**	**80.40**	**331**	eP	**P**	**10 26 05.7**	**+0.5**
	comp=Z,5.6nm,0.8s,baz=36,slow=5.4						
WERD	**Werda**	**80.43**	**331**	eP	**P**	**10 26 05.7**	**+0.5**
	comp=Z,6.8nm,0.9s,baz=36,slow=5.4						
DGAR	**Diego Garcia**	**80.44**	**252**	IAMs_20	IAMs_20	11 02 51.0	
	comp=Z,4µm,20.0s						
K31A	**O'Neill**	**80.45**	**41**	P	**P**	**10 26 06.0**	**+0.5**
K31A				IAMs_20	IAMs_20	11 05 46.4	
	comp=Z,5µm,19.0s						
HERR	**Herculane**	**80.45**	**322**	⇑P	**P**	**10 26 05.4**	**0.0**
PLVB	**Pleven**	**80.48**	**320**	⇓P	**P**	**10 26 06.5**	**+0.9**
GUNZ	**Gunzen**	**80.49**	**331**	eP	**P**	**10 26 06.0**	**+0.4**
	comp=Z,6.1nm,0.9s,baz=36,slow=5.4						
RAR	**Rarotonga**	**80.51**	**128**	IAMs_20	IAMs_20	11 04 26.6	
	comp=Z,6µm,19.0s						
IBBN	**Ibbenburen**	**80.52**	**334**	eP	**P**	**10 26 06.4**	**+0.8**
	comp=Z,22nm,0.8s,baz=36,slow=5.4						
WERN	**Wernitzgruen**	**80.54**	**331**	eP	**P**	**10 26 06.5**	**+0.7**
	comp=Z,14nm,0.9s,baz=36,slow=5.4						
NKC	**Novy Kostel**	**80.55**	**331**	ePP	PP	10 29 05.7	-2.9
NKC				eS	**S**	**10 36 13.3**	**+0.9**
NKC				AMS	AMS	11 06 50.0	
	comp=Z,16µm,14.2s						
TEVE	**Tevekalti-Mers**	**80.56**	**310**	eP	**P**	**10 26 06.2**	**0.0**
F36A	**Milaca**	**80.58**	**36**	P	**P**	**10 26 05.7**	**-0.4**
F36A				IAMs_20	IAMs_20	11 08 55.6	
	comp=Z,4µm,18.0s						
TUC	**Tucson**	**80.62**	**56**	P	**P**	**10 26 07.3**	**+0.7**
	baz=311						
TUC	**Tucson**	**80.62**	**56**	P	**P**	**10 26 07.2**	**+0.5**
TUC				pmax	pmax		
	comp=Z,44nm,1.4s						
TUC				MLR	MLR		
	comp=Z,2µm,20.0s						
TUC	**Tucson**	**80.62**	**56**	P	**P**	**10 26 07.2**	**+0.5**
ECSD	**EROS Data Cent**	**80.71**	**40**	P	**P**	**10 26 06.7**	**-0.1**
	baz=318,SNR=23						
ECSD	**EROS Data Cent**	**80.71**	**40**	P	**P**	**10 26 06.8**	**-0.1**
ECSD	**EROS Data Cent**	**80.71**	**40**	IAMs_20	IAMs_20	11 07 59.1	
	comp=Z,5µm,19.0s						
BERE	**Bereket-Mersin**	**80.75**	**310**	eP	**P**	**10 26 07.2**	**-0.1**
MDVR	**Moldovita**	**80.86**	**322**	⇑P	**P**	**10 26 07.7**	**0.0**
MANZ	**Manzenberg**	**80.88**	**331**	eP	**P**	**10 26 08.3**	**+0.6**
	comp=Z,7.8nm,0.8s,baz=36,slow=5.4						
E38A	**The Farm, Brul**	**80.90**	**35**	P	**P**	**10 26 07.3**	**-0.5**
E38A				IAMs_20	IAMs_20	11 07 16.9	
	comp=Z,4µm,20.0s						
KSCO	**Kaye Shedlock'**	**80.95**	**46**	P	**P**	**10 26 08.7**	**+0.3**
	baz=315,SNR=13						
KSCO	**Kaye Shedlock'**	**80.95**	**46**	P	**P**	**10 26 09.0**	**+0.6**
KSCO				IAmb	IAmb	10 26 12.4	
	comp=Z,102nm,1.4s						
CKRC	**Cesky Krumlov**	**80.97**	**329**	eP	**P**	**10 26 07.9**	**-0.2**
CKRC				eS	**S**	**10 36 15.7**	**-1.0**
CKRC				AMS	AMS	11 07 30.0	
	comp=Z,12µm,15.3s						
UBBA	**Unterbreizbach**	**80.98**	**332**	eP	**P**	**10 26 08.8**	**+0.8**
	comp=Z,5.4nm,0.8s,baz=36,slow=5.4						
KHC	**Kasperske Hory**	**81.01**	**329**	eP	**P**	**10 26 08.4**	**0.0**
KHC				e		10 26 17.0	
KHC				eS	**S**	**10 36 14.4**	**-2.8**
KHC				MLR	MLR		
	comp=Z,18µm,16.8s						
KHC	**Kasperske Hory**	**81.01**	**329**	eP	**P**	**10 26 08.4**	**0.0**
KHC				ePCP	**PcP**	**10 26 17.0**	**+2.2**
KHC				ePP	**PP**	**10 29 06.6**	**-5.8**
KHC				eS	**S**	**10 36 14.4**	**-2.8**
KHC				AMS	AMS	11 05 10.0	
	comp=Z,18µm,16.8s						
KHC	**Kasperske Hory**	**81.01**	**329**	P	**P**	**10 26 08.6**	**+0.2**
KHC				IAmb	IAmb	10 26 10.0	
	comp=Z,53nm,1.3s						
ROTZ	**Rotzenmuhle**	**81.02**	**330**	eP	**P**	**10 26 09.1**	**+0.7**
	baz=36,slow=5.4						
CONA	**Conrad Observa**	**81.04**	**327**	i P	**P**	**10 26 09.8**	**+1.2**
	comp=Z,49nm,1.2s,SNR=19						
RAYN	**Ar Rayn**	**81.11**	**293**	P	**P**	**10 26 09.7**	**+0.3**
RAYN				pmax	pmax		
	comp=Z,39nm,1.2s						
RAYN				MLR	MLR		
	comp=Z,5µm,18.0s						
RAYN	**Ar Rayn**	**81.11**	**293**	P	**P**	**10 26 09.7**	**+0.3**
RAYN				IAMs_20	IAMs_20	11 06 16.5	
	comp=Z,5µm,18.0s						
MORH	**Mrgy, Hungar**	**81.18**	**325**	⇑P	**P**	**10 26 09.5**	**+0.3**
MORH	**Mrgy, Hungar**	**81.18**	**325**	⇑iP	**P**	**10 26 09.3**	**0.0**
GEC2	**GERESS Array S**	**81.19**	**329**	P	**P**	**10 26 09.6**	**+0.2**
GEC2	**GERESS Array S**	**81.19**	**329**	eP	**P**	**10 26 10.0**	**+0.6**
	comp=Z,7.7nm,0.8s,baz=36,slow=5.4						
GERES	**GERESS Array B**	**81.19**	**329**	P	**P**	**10 26 09.7**	**+0.2**
	comp=Z,6.2nm,0.6s,baz=37,slow=5.4,SNR=33						
GERES				LR	LR	11 06 49.4	
	comp=Z,13µm,18.4s,baz=18,slow=39						
GERES	**GERESS Array B**	**81.19**	**329**	P	**P**	**10 26 09.3**	**-0.1**
GERES	**GERESS Array B**	**81.19**	**329**	P	**P**	**10 26 09.2**	**-0.1**
KASTN	**Kahler Asten**	**81.22**	**333**	eP	**P**	**10 26 10.1**	**+0.6**
	comp=Z,11nm,0.8s,baz=36,slow=5.4						
T25A	**Trinidad**	**81.24**	**49**	P	**P**	**10 26 10.7**	**+0.6**
	baz=314,SNR=24						
WET	**Wettzell**	**81.27**	**330**	eP	**P**	**10 26 10.7**	**+0.9**
	comp=Z,14nm,1.0s,baz=36,slow=5.4						
ISP	**Isparta**	**81.30**	**312**	IAMs_20	IAMs_20	11 06 01.3	
	comp=Z,5µm,20.0s						
SPMN	**Marine on St.**	**81.40**	**36**	P	**P**	**10 26 10.6**	**+0.2**
	baz=320						
SPMN	**Marine on St.**	**81.40**	**36**	P	**P**	**10 26 10.7**	**+0.2**
SPMN				IAMs_20	IAMs_20	11 09 29.2	
	comp=Z,4µm,18.0s						
BUG	**Bochum--Univer**	**81.41**	**334**	eP	**P**	**10 26 10.9**	**+0.5**
	comp=Z,28nm,1.1s,baz=36,slow=5.4						
GRA1	**Grafenberg Arr**	**81.46**	**331**	P	**P**	**10 26 11.7**	**+1.0**
GRA1				IAmb	IAmb	10 26 14.1	
	comp=Z,61nm,1.0s						
GRF	**Grafenberg Arr**	**81.46**	**331**	P	**P**	**10 26 11.7**	**+1.0**
GRF				pmax	pmax		
	comp=Z,61nm,1.0s						
GRF	**Grafenberg Arr**	**81.46**	**331**	eP	**P**	**10 26 11.7**	**+1.0**
	comp=Z,34nm,0.9s,baz=36,slow=5.4						
GRFO	**Grafenberg**	**81.46**	**331**	P	**P**	**10 26 11.5**	**+0.8**
GRFO				pmax	pmax		
	comp=Z,15nm,1.0s						
GRFO	**Grafenberg**	**81.46**	**331**	P	**P**	**10 26 11.5**	**+0.8**
FRGS	**Fruska Gora**	**81.46**	**323**	⇑P	**P**	**10 26 11.3**	**+0.5**
FRGS	**Fruska Gora**	**81.46**	**323**	⇑iP	**P**	**10 26 11.1**	**+0.3**
ANMO	**Albuquerque**	**81.54**	**51**	P	**P**	**10 26 12.8**	**+1.1**
	baz=313						
ANMO	**Albuquerque**	**81.54**	**51**	deP	**P**	**10 26 12.4**	**+0.7**
ANMO				pmax	pmax		
	comp=Z,56nm,1.3s						
ANMO	**Albuquerque**	**81.54**	**51**	P	**P**	**10 26 12.8**	**+1.1**
ANMO				IAmb	IAmb	10 26 15.7	
	comp=Z,45nm,1.1s						
ALN	**Alexandroupoli**	**81.56**	**317**	P	**P**	**10 26 11.9**	**+0.5**
ALN				pmax	pmax		
	comp=Z,23nm,1.0s						
ALN				MLR	MLR		
	comp=Z,14µm,19.0s						
ALN	**Alexandroupoli**	**81.56**	**317**	P	**P**	**10 26 11.9**	**+0.5**
CSS	**Mathiatis**	**81.62**	**309**	IAMs_20	IAMs_20	11 07 02.4	
	comp=Z,3µm,18.0s						
BGNE	**Belgrade**	**81.64**	**42**	P	**P**	**10 26 11.9**	**+0.1**
	baz=317,SNR=9.2						
BGNE	**Belgrade**	**81.64**	**42**	P	**P**	**10 26 12.0**	**+0.1**
BGNE				IAMs_20	IAMs_20	11 06 25.9	
	comp=Z,4µm,18.0s						
ARSA	**Arzberg**	**81.72**	**327**	i P	**P**	**10 26 13.2**	**+1.0**
	comp=Z,30nm,1.2s,SNR=10						
BOVS	**Bovan**	**81.72**	**321**	⇑P	**P**	**10 26 11.8**	**-0.4**
VTS	**Vitosha**	**81.73**	**320**	⇑P	**P**	**10 26 13.6**	**+1.1**
VTS	**Vitosha**	**81.73**	**320**	P	**P**	**10 26 12.5**	**0.0**
VTS				pmax	pmax		
	comp=Z,39nm,0.7s						
VTS				MLR	MLR		
	comp=Z,8µm,18.0s						
VTS	**Vitosha**	**81.73**	**320**	P	**P**	**10 26 12.5**	**0.0**
VTS				IAmb	IAmb	10 26 15.5	
	comp=Z,39nm,0.7s						
LENM	**Lemitar**	**81.76**	**52**	P	**P**	**10 26 13.9**	**+1.1**
MOA	**Molln**	**81.76**	**328**	i P	**P**	**10 26 13.0**	**+0.7**
	comp=Z,31nm,1.6s,SNR=9.1						
Y22D	**IRIS PASSCAL I**	**81.85**	**52**	P	**P**	**10 26 15.0**	**+1.7**
Y22D				IAmb	IAmb	10 26 20.4	
	comp=Z,58nm,1.1s						
MANT	**Manisa**	**81.93**	**314**	P	**P**	**10 26 13.7**	**0.0**
SOCY	**Socotra**	**81.95**	**279**	P	**P**	**10 26 11.8**	**-2.2**
SOCY				IAmb	IAmb	10 26 25.2	
	comp=Z,46nm,0.9s						
BNM	**Barren Site**	**81.98**	**52**	P	**P**	**10 26 15.0**	**+1.0**
TNS	**Taunus Mts**	**82.03**	**333**	eP	**P**	**10 26 14.5**	**+0.7**
	comp=Z,7.0nm,0.8s,baz=36,slow=5.4						
I37A	**Lemond, Waseca**	**82.04**	**38**	P	**P**	**10 26 14.5**	**+0.6**
I37A				IAMs_20	IAMs_20	11 03 14.3	
	comp=Z,4µm,20.0s						
KOGS	**Kog**	**82.04**	**326**	i P	**P**	**10 26 13.9**	**+0.1**
KOGS				eS	**S**	**10 36 27.0**	**-0.9**
L34A	**Svendsen Farm,**	**82.13**	**41**	P	**P**	**10 26 14.6**	**+0.2**
L34A				IAmb	IAmb	10 26 15.8	
	comp=Z,44nm,0.8s						
L34A				IAMs_20	IAMs_20	11 02 19.8	
	comp=Z,4µm,19.0s						
DIVS	**Divibare**	**82.19**	**323**	⇑iP	**P**	**10 26 14.9**	**+0.1**
DIVS	**Divibare**	**82.19**	**323**	P	**P**	**10 26 14.3**	**-0.5**
319A	**Douglas**	**82.20**	**56**	P	**P**	**10 26 16.0**	**+0.9**
319A				IAmb	IAmb	10 26 21.9	
	comp=Z,59nm,1.1s						
AHRW	**Bad Neuenahr-A**	**82.23**	**334**	eP	**P**	**10 26 15.9**	**+1.2**
	comp=Z,8.1nm,0.8s,baz=36,slow=5.4						
COWI	**Conover**	**82.35**	**34**	IAMs_20	IAMs_20	11 09 05.1	
	comp=Z,3µm,19.0s						
121A	**Cookes Peak, D**	**82.36**	**54**	P	**P**	**10 26 16.9**	**+0.9**
	baz=313,SNR=16						
121A	**Cookes Peak, D**	**82.36**	**54**	P	**P**	**10 26 16.9**	**+0.9**
121A				IAmb	IAmb	10 26 19.0	
	comp=Z,30nm,0.9s						
PERS	**Pernice**	**82.37**	**327**	i P	**P**	**10 26 16.1**	**+0.5**
SOKA	**Soboth**	**82.38**	**327**	i P	**P**	**10 26 16.3**	**+0.6**
	comp=Z,70nm,1.0s,SNR=29						
ELL	**Elmali**	**82.40**	**312**	P	**P**	**10 26 16.0**	**-0.1**
ELL				pmax	pmax		
	comp=Z,109nm,0.9s						
ELL	**Elmali**	**82.40**	**312**	P	**P**	**10 26 16.0**	**-0.1**
RJOB	**Jochberg**	**82.44**	**329**	eP	**P**	**10 26 17.0**	**+1.1**
	comp=Z,76nm,0.8s,baz=36,slow=5.4						
N33A	**J Bar K, Exete**	**82.49**	**42**	IAMs_20	IAMs_20	11 07 10.4	
	comp=Z,4µm,18.0s						
BTNL	**Ternell**	**82.52**	**334**	dP	**P**	**10 26 16.4**	**+0.1**
BTNL				dx	x	10 26 28.6	
G40A	**Rib Lake**	**82.54**	**35**	P	**P**	**10 26 16.3**	**-0.2**
G40A				IAMs_20	IAMs_20	11 07 11.2	
	comp=Z,4µm,21.0s						
MEM	**Membach**	**82.54**	**334**	dP	**P**	**10 26 15.3**	**-1.0**
MEM				dx	x	10 26 24.9	
BBLS	**Lazići**	**82.64**	**323**	⇑iP	**P**	**10 26 17.8**	**+0.7**
CBKS	**Cedar Bluff**	**82.67**	**45**	P	**P**	**10 26 17.2**	**-0.2**
	baz=316,SNR=8.6						
CBKS	**Cedar Bluff**	**82.67**	**45**	P	**P**	**10 26 17.2**	**-0.2**
CBKS				pmax	pmax		
	comp=Z,45nm,1.0s						
CBKS				MLR	MLR		
	comp=Z,4µm,19.0s						
CBKS	**Cedar Bluff**	**82.67**	**45**	P	**P**	**10 26 17.2**	**-0.2**
CBKS				IAmb	IAmb	10 26 19.1	
	comp=Z,45nm,1.0s						
CBKS				IAMs_20	IAMs_20	11 06 44.6	
	comp=Z,4µm,19.0s						
HAPS	**Han Pijesak,Bl**	**82.68**	**323**	eP	**P**	**10 26 16.1**	**-1.3**
FUR	**Furstenfeldbru**	**82.69**	**330**	eP	**P**	**10 26 18.5**	**+1.3**
	comp=Z,35nm,0.8s,baz=36,slow=5.4						
HSIG		**82.69**	**58**	P	**P**	**10 26 17.0**	**-0.6**
HSIG				IAmb	IAmb	10 26 21.7	
	comp=Z,46nm,1.4s						
BSTI	**Sart Tilman**	**82.70**	**335**	dP	**P**	**10 26 17.5**	**+0.3**
BSTI				dx	x	10 26 30.2	
OBKA	**Obir**	**82.71**	**327**	i P	**P**	**10 26 17.7**	**+0.2**
	comp=Z,24nm,0.8s,SNR=9.4						
KBA	**Koelnbreinsper**	**82.75**	**328**	i P	**P**	**10 26 18.0**	**+0.3**
	comp=Z,64nm,1.6s,SNR=16						
BHOU	**Houvegnez**	**82.75**	**334**	dP	**P**	**10 26 17.8**	**+0.3**
CRES	**Cresnjev**	**82.87**	**326**	⇑iP	**P**	**10 26 18.1**	**-0.1**
BCLA	**Clavier**	**82.93**	**335**	bP	**P**	**10 26 18.2**	**-0.2**
STIP	**Stip**	**82.94**	**320**	i P	**P**	**10 26 17.6**	**-1.0**
BLY	**Banja Luka**	**82.96**	**325**	⇑iP	**P**	**10 26 18.8**	**+0.1**
STU	**Stuttgart**	**82.97**	**332**	P	**P**	**10 26 18.9**	**+0.3**
STU				pmax	pmax		
	comp=Z,33nm,0.7s						
STU				MLR	MLR		
	comp=Z,10µm,18.0s						
STU	**Stuttgart**	**82.97**	**332**	P	**P**	**10 26 18.9**	**+0.3**
STU				IAmb	IAmb	10 26 21.4	
	comp=Z,33nm,0.7s						
STU	**Stuttgart**	**82.97**	**332**	eP	**P**	**10 26 19.6**	**+1.0**
	comp=Z,30nm,0.8s,baz=36,slow=5.4						
MYKA	**Terra Mystica**	**82.99**	**328**	i P	**P**	**10 26 18.8**	**-0.1**
	comp=Z,25nm,0.8s,SNR=11						
VAY	**Valandovo**	**83.03**	**319**	i P	**P**	**10 26 20.2**	**+1.2**
BGES	**Gesves**	**83.03**	**335**	dP	**P**	**10 26 19.0**	**+0.1**
BGES				dx	x	10 26 27.3	
E43A	**Lone Tree Farm**	**83.03**	**33**	IAMs_20	IAMs_20	11 09 29.1	
	comp=Z,4µm,19.0s						
F42A	**Maple Grove Fa**	**83.05**	**34**	IAMs_20	IAMs_20	11 09 35.6	
	comp=Z,3µm,19.0s						
PLE	**Pljevlja**	**83.05**	**323**	⇑iP	**P**	**10 26 19.6**	**+0.3**
HIZ	**Hauiti**	**83.09**	**156**	IAMs_20	IAMs_20	11 08 21.5	
	comp=Z,3µm,19.0s						
LJU	**Ljubljana**	**83.09**	**327**	i P	**P**	**10 26 19.2**	**-0.2**
LJU				ePP	**PP**	**10 29 28.6**	**-0.9**
LJU				e		10 31 19.6	
LJU				eS	**S**	**10 36 36.8**	**-1.8**
LJU	**Ljubljana**	**83.09**	**327**	⇑iP	**P**	**10 26 19.0**	**-0.3**
SKO	**Skopje**	**83.10**	**320**	i P	**P**	**10 26 22.2**	**+2.8**
IVA	**Berane**	**83.17**	**322**	eP	**P**	**10 26 19.8**	**-0.1**
RCHB	**Rochefort**	**83.18**	**334**	dP	**P**	**10 26 18.9**	**-0.8**
SNF	**Seneffe**	**83.19**	**335**	dP	**P**	**10 26 18.5**	**-1.2**
SNF				dx	x	10 26 27.0	
BMRD	**Maredsous**	**83.21**	**335**	dP	**P**	**10 26 19.8**	**0.0**
BMRD				dx	x	10 26 45.5	
BOJS	**Bojanci**	**83.21**	**326**	eP	**P**	**10 26 19.7**	**-0.3**
BOJS				ePP	**PP**	**10 29 33.2**	**+2.7**
BOJS				e		10 31 20.9	
BOJS				e		10 33 08.1	
BOJS				eS	**S**	**10 36 38.5**	**-1.4**
BOJS				IAML		11 08 51.3	
	comp=Z,21µm,14.2s						
WATA	**Walderalm**	**83.25**	**329**	i P	**P**	**10 26 20.7**	**+0.4**
	comp=Z,50nm,1.4s,SNR=9.7						
MGRS	**Mrkonjic Grad**	**83.27**	**325**	eP	**P**	**10 26 21.1**	**+0.8**
WTTA	**Wattenberg**	**83.28**	**329**	i P	**P**	**10 26 21.0**	**+0.5**
	comp=Z,48nm,1.2s,SNR=11						
WLF	**Walferdange**	**83.29**	**334**	dP	**P**	**10 26 21.0**	**+0.7**
WLF				dx	x	10 26 33.7	
WLF	**Walferdange**	**83.29**	**334**	eP	**P**	**10 26 21.4**	**+1.1**
	baz=36,slow=5.4						
N35A	**Tabor**	**83.32**	**41**	P	**P**	**10 26 21.2**	**+0.6**
N35A				IAMs_20	IAMs_20	11 08 21.4	
	comp=Z,3µm,19.0s						
ZOU	**Zoufplan**	**83.32**	**328**	P	**P**	**10 26 20.1**	**-0.6**
ZOU				IAmb	IAmb	10 26 33.0	
	comp=Z,69nm,1.4s						
ABTA	**Abfaltersbach**	**83.35**	**329**	i P	**P**	**10 26 20.2**	**-0.6**
	comp=Z,36nm,1.7s,SNR=8.8						
KOME	**Kolasin**	**83.36**	**322**	⇑iP	**P**	**10 26 20.5**	**-0.4**
CEY	**Cerknica**	**83.38**	**327**	⇑iP	**P**	**10 26 20.6**	**-0.2**
UPM	**Unac-Piva**	**83.38**	**323**	eP	**P**	**10 26 20.3**	**-0.8**
K38A	**Parkersburg**	**83.38**	**38**	P	**P**	**10 26 20.7**	**-0.2**
K38A				IAmb	IAmb	10 26 40.9	
	comp=Z,43nm,1.4s						
K38A				IAMs_20	IAMs_20	11 10 35.7	
	comp=Z,4µm,20.0s						
MXZ	**Matakaoa Point**	**83.38**	**153**	IAMs_20	IAMs_20	10 59 55.3	
	comp=Z,4µm,19.0s						
I40A	**Norwalk**	**83.42**	**36**	P	**P**	**10 26 20.2**	**-0.9**
I40A				IAMs_20	IAMs_20	11 08 50.7	
	comp=Z,5µm,18.0s						
MOTA	**Moosalm**	**83.42**	**330**	i P	**P**	**10 26 21.7**	**+0.5**
	comp=Z,66nm,1.0s,SNR=19						
RETA	**Reutte**	**83.44**	**330**	i P	**P**	**10 26 21.6**	**+0.4**
	comp=Z,86nm,1.7s,SNR=17						
DOU	**Dourbes**	**83.44**	**335**	dx	P	10 26 28.2	+7.2
SQTA	**Sankt Quirin**	**83.48**	**330**	i P	**P**	**10 26 21.8**	**+0.4**
	comp=Z,57nm,1.5s,SNR=12						
R32A	**Long Quarter,**	**83.51**	**44**	P	**P**	**10 26 20.9**	**-0.8**
UBR	**Ueberruh**	**83.53**	**330**	eP	**P**	**10 26 22.4**	**+0.8**
	baz=36,slow=5.4						
URZ	**Urewera**	**83.59**	**154**	P	**P**	**10 26 20.9**	**-0.8**
	comp=Z,12nm,1.1s,baz=304,slow=3.6,SNR=2.8						
URZ	**Urewera**	**83.59**	**154**	IAMs_20	IAMs_20	11 08 03.9	
	comp=Z,3µm,18.0s						
BFO	**Black Forest**	**83.65**	**332**	P	**P**	**10 26 21.9**	**-0.3**
BFO				pmax	pmax		
	comp=Z,32nm,0.9s						
BFO				MLR	MLR		
	comp=Z,11µm,19.0s						
BFO	**Black Forest**	**83.65**	**332**	P	**P**	**10 26 21.9**	**-0.3**
BFO				IAmb	IAmb	10 26 24.4	
	comp=Z,32nm,0.9s						
BFO	**Black Forest**	**83.65**	**332**	eP	**P**	**10 26 23.1**	**+0.9**
	comp=Z,14nm,0.8s,baz=36,slow=5.4						
STAL	**STALIGIAL**	**83.67**	**328**	P	**P**	**10 26 21.5**	**-0.8**
STAL				IAmb	IAmb	10 26 30.6	
	comp=Z,30nm,1.0s						
TRI	**Trieste**	**83.68**	**327**	P	**P**	**10 26 21.4**	**-0.9**
TRI				pmax	pmax		
	comp=Z,27nm,0.9s						
TRI				MLR	MLR		
	comp=Z,10µm,19.0s						
TRI	**Trieste**	**83.68**	**327**	P	**P**	**10 26 21.4**	**-0.9**
TRI				IAmb	IAmb	10 26 23.9	
	comp=Z,27nm,0.9s						
NKME	**Niksic**	**83.69**	**322**	eP	**P**	**10 26 22.2**	**-0.3**
MATQ	**Matagami**	**83.71**	**25**	P	**P**	**10 26 22.0**	**-0.4**
	baz=329,SNR=7.3						
DSB	**Dublin**	**83.71**	**342**	IAMs_20	IAMs_20	11 08 26.2	
	comp=Z,5µm,18.0s						
SCIA	**State Center**	**83.73**	**39**	P	**P**	**10 26 23.3**	**+0.6**
	baz=320,SNR=14						
SCIA	**State Center**	**83.73**	**39**	P	**P**	**10 26 23.4**	**+0.6**
BRY	**Bratogost**	**83.78**	**323**	eP	**P**	**10 26 22.3**	**-0.8**
BRY	**Bratogost**	**83.78**	**323**	eP	**P**	**10 26 22.6**	**-0.5**
PDG	**Podgorica**	**83.81**	**322**	⇑iP	**P**	**10 26 23.2**	**+0.2**

PDG	**Podgorica**	**83.81**	**322**	P	**P**	**10 26 23.0**	**0.0**
TTG	**Podgorica**	**83.81**	**322**	⇑*i*P	**P**	**10 26 23.2**	**+0.2**
FETA	**Feichten**	**83.84**	**330**	*i* P	**P**	**10 26 23.8**	**+0.4**
	comp=Z,34nm,1.0s,SNR=9.5						
CEME	**Cevo**	**83.88**	**322**	⇑*i*P	**P**	**10 26 23.3**	**-0.2**
KIJV	**Kijevo**	**83.89**	**325**	*i* P	**P**	**10 26 22.6**	**-0.9**
DAVA	**Damuels**	**83.94**	**330**	*i* P	**P**	**10 26 24.5**	**+0.6**
	comp=Z,50nm,1.0s,SNR=12						
RICI	**Ricice**	**83.97**	**324**	P	**P**	**10 26 23.4**	**-0.5**
TREB	**Trebinje**	**84.01**	**323**	*e*P	**P**	**10 26 23.2**	**-0.9**
DRME	**Dracevica, Mon**	**84.03**	**322**	*e*P	**P**	**10 26 22.6**	**-1.6**
DRME	**Dracevica, Mon**	**84.03**	**322**	⇑*i*P	**P**	**10 26 24.6**	**+0.4**
FNA	**Florina**	**84.03**	**320**	P	**P**	**10 26 23.9**	**-0.4**
FNA				pmax	pmax		
	comp=Z,33nm,1.1s						
FNA				MLR	MLR		
	comp=Z,10µm,22.0s						
FNA	**Florina**	**84.03**	**320**	P	**P**	**10 26 23.9**	**-0.4**
FNA				IAmb	IAmb	10 26 33.2	
	comp=Z,33nm,1.1s						
OHR	**Ohrid**	**84.07**	**320**	*i* P	**P**	**10 26 24.8**	**+0.3**
KSU1	**Kansas State U**	**84.13**	**43**	P	**P**	**10 26 24.9**	**+0.1**
	baz=318,SNR=7.5						
KSU1	**Kansas State U**	**84.13**	**43**	P	**P**	**10 26 24.1**	**-0.6**
KSU1				IAmb	IAmb	10 26 27.9	
	comp=Z,37nm,0.9s						
KSU1	**Kansas State U**	**84.13**	**43**	IAMs_20	IAMs_20	11 08 05.0	
	comp=Z,4µm,19.0s						
E46A	**Sault Ste Mari**	**84.13**	**31**	P	**P**	**10 26 24.4**	**-0.2**
E46A				IAmb	IAmb	10 26 43.2	
	comp=Z,44nm,1.4s						
E46A				IAMs_20	IAMs_20	11 08 01.1	
	comp=Z,6µm,20.0s						
HCY	**Herceg Novi**	**84.15**	**322**	*e*P	**P**	**10 26 23.6**	**-1.2**
ECH	**Echery**	**84.17**	**332**	P	**P**	**10 26 25.0**	**+0.2**
ECH				pmax	pmax		
	comp=Z,25nm,1.0s						
ECH				MLR	MLR		
	comp=Z,6µm,22.0s						
ECH	**Echery**	**84.17**	**332**	P	**P**	**10 26 25.0**	**+0.2**
ECH				IAmb	IAmb	10 26 34.2	
	comp=Z,25nm,1.0s						
ECH				IAMs_20	IAMs_20	11 04 34.6	
	comp=Z,6µm,22.0s						
ULC	**Ulcinj**	**84.17**	**322**	⇑*i*P	**P**	**10 26 24.8**	**-0.2**
I42A	**Draeger Farm,**	**84.19**	**35**	P	**P**	**10 26 24.7**	**-0.3**
I42A				IAmb	IAmb	10 26 36.0	
	comp=Z,28nm,0.9s						
I42A				IAMs_20	IAMs_20	11 10 41.9	
	comp=Z,3µm,19.0s						
STON	**Ston**	**84.19**	**323**	*i* P	**P**	**10 26 22.6**	**-2.4**
BKZ	**Black Stump Fm**	**84.21**	**155**	IAMs_20	IAMs_20	11 06 03.2	
	comp=Z,4µm,19.0s						
H43A	**Windswept, Lux**	**84.23**	**34**	IAMs_20	IAMs_20	11 11 17.9	
	comp=Z,4µm,19.0s						
CTI	**Castel Tesino**	**84.27**	**329**	P	**P**	**10 26 24.5**	**-1.0**
CTI				pmax	pmax		
	comp=Z,49nm,1.3s						
CTI	**Castel Tesino**	**84.27**	**329**	P	**P**	**10 26 24.5**	**-1.0**
CTI				IAmb	IAmb	10 26 37.6	
	comp=Z,49nm,1.3s						
MORI	**Morici**	**84.31**	**325**	*i* P	**P**	**10 26 24.6**	**-1.0**
TIR	**Tirane**	**84.34**	**321**	P	**P**	**10 26 25.8**	**0.0**
TIR				pmax	pmax		
	comp=Z,87nm,1.2s						
TIR	**Tirane**	**84.34**	**321**	P	**P**	**10 26 25.8**	**0.0**
JFWS	**Jewell Farm**	**84.35**	**37**	P	**P**	**10 26 26.0**	**+0.2**
	baz=322,SNR=6.2						
JFWS	**Jewell Farm**	**84.35**	**37**	P	**P**	**10 26 26.2**	**+0.4**
JFWS				pmax	pmax		
	comp=Z,17nm,0.9s						
JFWS	**Jewell Farm**	**84.35**	**37**	P	**P**	**10 26 26.2**	**+0.4**
JFWS	**Jewell Farm**	**84.35**	**37**	IAMs_20	IAMs_20	11 09 12.3	
	comp=Z,5µm,19.0s						
AMTX	**Amarillo**	**84.40**	**49**	P	**P**	**10 26 27.0**	**+0.7**
	baz=316						
AMTX	**Amarillo**	**84.40**	**49**	P	**P**	**10 26 27.2**	**+0.9**
AMTX				IAMs_20	IAMs_20	11 11 06.5	
	comp=Z,3µm,19.0s						
MSTX	**Muleshoe**	**84.41**	**50**	P	**P**	**10 26 26.9**	**+0.5**
	baz=315,SNR=28						
MSTX	**Muleshoe**	**84.41**	**50**	P	**P**	**10 26 26.7**	**+0.3**
MSTX				IAMs_20	IAMs_20	11 06 07.9	
	comp=Z,3µm,20.0s						
MNTX	**Cornudas Mount**	**84.42**	**53**	P	**P**	**10 26 26.8**	**+0.4**
	baz=314,SNR=38						
MNTX	**Cornudas Mount**	**84.42**	**53**	P	**P**	**10 26 26.5**	**+0.1**
MNTX				IAmb	IAmb	10 26 28.7	
	comp=Z,23nm,0.8s						
PPT	**Papeete**	**84.45**	**118**	LR	LR	10 58 09.7	
	comp=Z,5µm,20.6s,baz=289,slow=32						
PPT2	**Papeete2**	**84.46**	**118**	*e*S	**S**	**10 36 53.3**	**+0.2**
	comp=Z,2µm,26.5s						
PPT2				*e*SS	**SS**	**10 42 29.2**	**+5.1**
	comp=Z,1µm,24.0s						
PPT2				*e*LQ	LQ	10 48 46.6	
	comp=Z,3µm,27.0s						
PPT2				*e*LR	LR	10 53 03.5	
	comp=Z,11µm,22.8s,baz=316						
PPT2	**Papeete2**	**84.46**	**118**	*e*T	T	11 59 28.9	
	comp=Z,5.7nm,0.3s						
DUGI	**Dugi Otok**	**84.50**	**325**	*i* P	**P**	**10 26 24.1**	**-2.5**
ZIRJ	**Zirje**	**84.51**	**325**	*i* P	**P**	**10 26 24.3**	**-2.3**
QRZ	**Quartz Range**	**84.51**	**158**	IAMs_20	IAMs_20	10 57 46.2	
	comp=Z,4µm,22.0s						
LSQQ	**Lebel-sur-Quev**	**84.53**	**25**	P	**P**	**10 26 26.7**	**+0.1**
	baz=330						
L40A	**Anamosa**	**84.56**	**38**	P	**P**	**10 26 26.8**	**-0.1**
L40A				IAMs_20	IAMs_20	11 04 41.0	
	comp=Z,5µm,20.0s						
N38A	**Joes South For**	**84.57**	**40**	P	**P**	**10 26 27.4**	**+0.4**
N38A				IAMs_20	IAMs_20	11 01 34.3	
	comp=Z,3µm,20.0s						
TIAR	**Tiarei**	**84.60**	**118**	*e*T	T	11 59 38.9	
	comp=Z,4.6nm,0.3s						
G45A	**Suttons Bay**	**84.67**	**33**	P	**P**	**10 26 27.8**	**+0.4**
G45A				IAmb	IAmb	10 26 29.1	
	comp=Z,39nm,1.1s						
G45A				IAMs_20	IAMs_20	11 08 46.3	
	comp=Z,5µm,20.0s						
GDL2	**Guadalupe Moun**	**84.69**	**52**	P	**P**	**10 26 28.7**	**+0.8**
KAN12	**Harper NE Stat**	**84.72**	**45**	P	**P**	**10 26 27.7**	**-0.1**
KAN10	**Anthony SW Sta**	**84.79**	**45**	P	**P**	**10 26 28.5**	**+0.3**
KARP	**Karpathos**	**84.81**	**313**	IAMs_20	IAMs_20	11 10 14.5	
	comp=Z,5µm,18.0s						
TUE	**Stuetta**	**84.82**	**330**	P	**P**	**10 26 28.8**	**+0.3**
U32A	**Winter Ranch,**	**84.84**	**46**	P	**P**	**10 26 28.8**	**+0.4**
U32A				IAmb	IAmb	10 26 32.6	
	comp=Z,56nm,1.2s						
U32A				IAMs_20	IAMs_20	11 06 26.0	
	comp=Z,4µm,19.0s						
AGG	**Agios Georgios**	**84.87**	**318**	P	**P**	**10 26 27.8**	**-0.8**
AGG				pmax	pmax		
	comp=Z,21nm,1.0s						
AGG				MLR	MLR		
	comp=Z,12µm,18.0s						
AGG	**Agios Georgios**	**84.87**	**318**	P	**P**	**10 26 27.8**	**-0.8**
KAN05	**Bluff City Nor**	**84.92**	**45**	P	**P**	**10 26 29.1**	**+0.3**
CLNB	**Carlsbad**	**84.94**	**52**	P	**P**	**10 26 29.0**	**-0.2**
KAN01	**Argonia South**	**84.95**	**45**	P	**P**	**10 26 29.7**	**+0.7**
KAN14	**Manchester OK**	**84.99**	**45**	P	**P**	**10 26 29.4**	**+0.3**
SALO	**Salr**	**85.07**	**329**	P	**P**	**10 26 28.5**	**-1.0**
NNZ	**Nelson**	**85.12**	**158**	IAMs_20	IAMs_20	10 57 54.3	
	comp=Z,4µm,22.0s						
VLDQ	**Val d'Or**	**85.19**	**26**	P	**P**	**10 26 28.3**	**-1.6**
VLDQ				IAmb	IAmb	10 26 30.5	
	comp=Z,27nm,0.9s						
KAN13	**South Haven SW**	**85.21**	**45**	P	**P**	**10 26 31.1**	**+0.8**
I45A	**Fountain**	**85.23**	**34**	IAMs_20	IAMs_20	11 09 07.5	
	comp=Z,4µm,20.0s						
GLMI	**Grayling**	**85.27**	**32**	P	**P**	**10 26 31.5**	**+1.1**
	baz=325,SNR=5.3						
GLMI	**Grayling**	**85.27**	**32**	P	**P**	**10 26 30.8**	**+0.4**
GLMI				IAMs_20	IAMs_20	11 10 12.3	
	comp=Z,5µm,19.0s						
TAOE	**Nuku Hiva Isla**	**85.28**	**106**	*e*S	**S**	**10 36 59.5**	**-2.0**
	comp=Z,4µm,24.9s						
TAOE	**Nuku Hiva Isla**	**85.28**	**106**	*e*LR	LR	10 53 19.3	
	comp=Z,9µm,20.4s,baz=318						
CROK	**Carrier**	**85.31**	**45**	P	**P**	**10 26 31.3**	**+0.5**
CROK				IAMs_20	IAMs_20	11 08 17.4	
	comp=Z,6µm,20.0s						
P38A	**Dawn**	**85.31**	**41**	P	**P**	**10 26 30.8**	**0.0**
P38A				IAmb	IAmb	10 26 32.6	
	comp=Z,32nm,0.8s						
P38A				IAMs_20	IAMs_20	11 10 35.1	
	comp=Z,4µm,18.0s						
L42A	**Oliver, Polo**	**85.33**	**37**	P	**P**	**10 26 29.8**	**-1.0**
L42A				IAmb	IAmb	10 26 32.3	
	comp=Z,25nm,0.8s						
L42A				IAMs_20	IAMs_20	11 10 01.3	
	comp=Z,5µm,18.0s						
K43A	**Burlington**	**85.39**	**36**	P	**P**	**10 26 29.3**	**-1.7**
K43A				IAmb	IAmb	10 26 41.8	
	comp=Z,36nm,1.1s						
K43A				IAMs_20	IAMs_20	11 06 01.6	
	comp=Z,3µm,19.0s						
THZ	**Tophouse**	**85.49**	**158**	IAMs_20	IAMs_20	11 06 11.0	
	comp=Z,3µm,19.0s						
SNZO	**South Karori**	**85.60**	**157**	IAMs_20	IAMs_20	10 59 50.9	
	comp=Z,5µm,21.0s						
SENIN	**Lac Senin/Sane**	**85.69**	**331**	P	**P**	**10 26 33.0**	**+0.2**
SENIN				IAmb	IAmb	10 26 34.8	
	comp=Z,29nm,0.9s						
MEH	**Mehetia**	**85.69**	**117**	*e*T	T	12 01 01.4	
	comp=Z,22nm,0.2s						
N41A	**Harden Midland**	**85.79**	**38**	P	**P**	**10 26 33.5**	**+0.4**
N41A				IAmb	IAmb	10 26 34.7	
	comp=Z,36nm,0.8s						
N41A				IAMs_20	IAMs_20	11 06 09.5	
	comp=Z,3µm,19.0s						
T35A	**Sooner Cattle**	**85.80**	**44**	P	**P**	**10 26 33.9**	**+0.7**
T35A				IAmb	IAmb	10 26 35.4	
	comp=Z,62nm,1.1s						
T35A				IAMs_20	IAMs_20	11 12 27.3	
	comp=Z,5µm,18.0s						
SGRT	**San Giovanni R**	**85.97**	**324**	P	**P**	**10 26 34.1**	**0.0**
SGRT				IAmb	IAmb	10 26 36.0	
	comp=Z,42nm,0.9s						
L44A	**Lake County Fo**	**85.99**	**36**	IAMs_20	IAMs_20	11 03 24.7	
	comp=Z,4µm,20.0s						
OK029	**Liberty Lake**	**86.12**	**45**	P	**P**	**10 26 35.8**	**+1.0**
OK029				IAMs_20	IAMs_20	11 08 44.8	
	comp=Z,3µm,19.0s						
P40A	**Paris**	**86.12**	**40**	P	**P**	**10 26 35.2**	**+0.5**
P40A				IAMs_20	IAMs_20	11 04 54.4	
	comp=Z,3µm,19.0s						
BCOK	**Bluff Creek, N**	**86.14**	**46**	P	**P**	**10 26 35.3**	**+0.4**
WMOK	**Wichita Mounta**	**86.16**	**47**	P	**P**	**10 26 35.3**	**+0.3**
	baz=317,SNR=35						
WMOK	**Wichita Mounta**	**86.16**	**47**	P	**P**	**10 26 35.4**	**+0.3**
WMOK				pmax	pmax		
	comp=Z,30nm,0.8s						
WMOK				MLR	MLR		
	comp=Z,3µm,19.0s						
WMOK	**Wichita Mounta**	**86.16**	**47**	P	**P**	**10 26 35.4**	**+0.3**
WMOK				IAmb	IAmb	10 26 37.0	
	comp=Z,30nm,0.8s						
MURB	**Monte Urbino**	**86.18**	**326**	P	**P**	**10 26 35.8**	**+0.7**
MURB				IAmb	IAmb	10 26 53.6	
	comp=Z,50nm,1.0s						
QUOK	**Quay**	**86.25**	**45**	P	**P**	**10 26 35.8**	**+0.4**
QUOK				IAmb	IAmb	10 26 37.5	
	comp=Z,46nm,1.1s						
IDI	**Anoyia**	**86.27**	**314**	IAMs_20	IAMs_20	11 11 46.0	
	comp=Z,4µm,20.0s						
KHZ	**Kahutara**	**86.27**	**158**	IAMs_20	IAMs_20	10 58 51.8	
	comp=Z,5µm,22.0s						
NRCA	**Norcia**	**86.27**	**326**	P	**P**	**10 26 36.0**	**+0.4**
NRCA				IAmb	IAmb	10 26 38.3	
	comp=Z,37nm,0.9s						
HQIL	**Hanson Quary C**	**86.32**	**36**	P	**P**	**10 26 35.8**	**+0.1**
HQIL				IAmb	IAmb	10 26 37.3	
	comp=Z,38nm,1.0s						
HQIL				IAMs_20	IAMs_20	11 03 44.4	
	comp=Z,4µm,21.0s						
OK031	**S. Brethren Rd**	**86.34**	**45**	P	**P**	**10 26 36.1**	**+0.3**
OK031				IAmb	IAmb	10 26 46.2	
	comp=Z,36nm,1.1s						
OK025	**Westminster Rd**	**86.34**	**46**	P	**P**	**10 26 36.8**	**+0.9**
OK025				IAMs_20	IAMs_20	11 08 51.7	
	comp=Z,4µm,20.0s						
OKCFA	**Oklahoma City**	**86.40**	**46**	P	**P**	**10 26 36.9**	**+0.6**
OKCFA				IAMs_20	IAMs_20	11 07 39.3	
	comp=Z,4µm,21.0s						
ITM	**Ithomi**	**86.46**	**317**	P	**P**	**10 26 35.8**	**-0.7**
ITM				IAmb	IAmb	10 26 55.8	
	comp=Z,48nm,1.0s						
J47A	**Sunmer**	**86.48**	**33**	P	**P**	**10 26 36.2**	**-0.2**
J47A				IAmb	IAmb	10 26 38.7	
	comp=Z,34nm,0.8s						
J47A				IAMs_20	IAMs_20	11 12 56.4	
	comp=Z,4µm,18.0s						
AQU	**L'Aquila**	**86.54**	**325**	⇑*i*P	**P**	**10 26 36.9**	**+0.1**
AQU	**L'Aquila**	**86.54**	**325**	P	**P**	**10 26 37.4**	**+0.6**
AQU				IAmb	IAmb	10 26 39.7	
	comp=Z,26nm,0.8s						
FNO	**Franklin**	**86.54**	**46**	P	**P**	**10 26 37.9**	**+0.9**
M44A	**Midewin, Midew**	**86.56**	**36**	P	**P**	**10 26 36.5**	**-0.3**
M44A				IAmb	IAmb	10 26 38.6	
	comp=Z,40nm,0.8s						
M44A				IAMs_20	IAMs_20	11 03 39.8	
	comp=Z,4µm,20.0s						
INTR	**Introdacqua**	**86.59**	**325**	P	**P**	**10 26 37.0**	**-0.1**
INTR				IAmb	IAmb	10 27 02.6	
	comp=Z,44nm,1.1s						
HDIL	**Hopedale**	**86.64**	**37**	P	**P**	**10 26 38.0**	**+0.7**
	baz=322						
HDIL	**Hopedale**	**86.64**	**37**	P	**P**	**10 26 37.6**	**+0.3**
HDIL				IAMs_20	IAMs_20	11 11 41.0	
	comp=Z,5µm,19.0s						
OXZ	**Oxford**	**86.70**	**160**	IAMs_20	IAMs_20	11 00 26.0	
	comp=Z,3µm,20.0s						
X34A	**Smith Ranch, M**	**86.79**	**46**	P	**P**	**10 26 38.6**	**+0.5**
X34A				IAMs_20	IAMs_20	11 07 58.6	
	comp=Z,4µm,19.0s						
RPZ	**Rata Peaks**	**86.80**	**160**	P	**P**	**10 26 38.1**	**+0.4**
	comp=Z,4.4nm,0.9s,baz=343,slow=17,SNR=1.6						
RPZ	**Rata Peaks**	**86.80**	**160**	IAMs_20	IAMs_20	11 00 54.7	
	comp=Z,4µm,20.0s						
D55A	**Sainte-Anne-du**	**86.81**	**26**	P	**P**	**10 26 37.2**	**-0.8**
	baz=331						
ALGO	**Algonquin Park**	**86.84**	**28**	P	**P**	**10 26 38.0**	**-0.1**
	baz=329						
L46A	**Eue Claire**	**86.84**	**35**	P	**P**	**10 26 38.6**	**+0.3**
L46A				IAmb	IAmb	10 26 39.9	
	comp=Z,32nm,0.8s						
L46A				IAMs_20	IAMs_20	11 10 48.1	
	comp=Z,4µm,19.0s						
S39A	**Bolivar**	**86.89**	**42**	P	**P**	**10 26 37.8**	**-0.7**
S39A				IAmb	IAmb	10 26 40.0	
	comp=Z,34nm,0.8s						
S39A				IAMs_20	IAMs_20	11 05 21.9	
	comp=Z,3µm,19.0s						
SLBS	**Sierra La Lagu**	**86.91**	**62**	P	**P**	**10 26 41.4**	**+2.4**
SLBS				IAmb	IAmb	10 26 44.7	
	comp=Z,36nm,1.4s						
SLBS	**Sierra La Lagu**	**86.91**	**62**	IAMs_20	IAMs_20	11 07 17.3	
	comp=Z,3µm,18.0s						
TUL1	**Leonard**	**86.94**	**44**	P	**P**	**10 26 39.3**	**+0.5**
	baz=319,SNR=8.9						
TUL1	**Leonard**	**86.94**	**44**	P	**P**	**10 26 39.5**	**+0.7**
TUL1				IAmb	IAmb	10 26 51.2	
	comp=Z,30nm,1.1s						
TUL1				IAMs_20	IAMs_20	11 13 13.4	
	comp=Z,5µm,18.0s						
R40A	**Maddies Statio**	**86.97**	**41**	P	**P**	**10 26 38.8**	**-0.1**
R40A				IAMs_20	IAMs_20	11 11 26.8	
	comp=Z,5µm,18.0s						
D56A	**ZEC Mazanza, M**	**87.02**	**25**	P	**P**	**10 26 39.1**	**+0.1**
	baz=332,SNR=8.7						
E55A	**Montcerf-Lytto**	**87.10**	**26**	P	**P**	**10 26 39.4**	**0.0**
	baz=331						
TX31	**Lajitas Ar. Si**	**87.12**	**54**	P	**P**	**10 26 39.8**	**-0.2**
TX32	**Lajitas Array**	**87.12**	**54**	P	**P**	**10 26 39.7**	**-0.3**
TX32				IAmb	IAmb	10 26 50.4	
	comp=Z,23nm,0.9s						
TXAR	**Lajitas Array**	**87.12**	**54**	P	**P**	**10 26 39.9**	**-0.1**
	comp=Z,18nm,0.9s,baz=296,slow=2.4,SNR=105						
TXAR				LR	LR	10 59 59.4	
	comp=Z,1µm,21.7s,baz=0.0,slow=32						
TXAR	**Lajitas Array**	**87.12**	**54**	P	**P**	**10 26 39.8**	**-0.2**
ABTX	**Abilene, Hawle**	**87.20**	**49**	P	**P**	**10 26 41.2**	**+1.0**
	baz=317,SNR=15						
ABTX	**Abilene, Hawle**	**87.20**	**49**	P	**P**	**10 26 41.1**	**+0.9**
ABTX				IAmb	IAmb	10 26 42.5	
	comp=Z,46nm,1.1s						
LBZ	**Lake Benmore**	**87.21**	**161**	IAMs_20	IAMs_20	10 59 37.5	
	comp=Z,3µm,18.0s						
P43A	**Skaggs, Pawnee**	**87.26**	**38**	P	**P**	**10 26 40.6**	**+0.3**
P43A				IAmb	IAmb	10 26 41.6	
	comp=Z,27nm,1.0s						
P43A				IAMs_20	IAMs_20	11 12 31.4	
	comp=Z,3µm,19.0s						
CASP	**Castiglione de**	**87.26**	**327**	IAMs_20	IAMs_20	11 12 48.7	
	comp=Z,6µm,19.0s						
U38A	**Gravette**	**87.29**	**43**	P	**P**	**10 26 40.2**	**-0.3**
U38A				IAmb	IAmb	10 26 42.1	
	comp=Z,18nm,0.8s						
U38A				IAMs_20	IAMs_20	11 10 02.6	
	comp=Z,4µm,18.0s						
G54A	**Lake Saint Pet**	**87.30**	**28**	P	**P**	**10 26 40.4**	**-0.1**
	baz=329						
WKZ	**Wanaka**	**87.34**	**162**	IAMs_20	IAMs_20	10 59 04.0	
	comp=Z,6µm,21.0s						
LATQ	**La Tuque**	**87.35**	**24**	P	**P**	**10 26 41.3**	**+0.7**
	baz=333						
O44A	**Mansfield**	**87.35**	**37**	P	**P**	**10 26 40.6**	**-0.1**
O44A				IAmb	IAmb	10 26 44.2	
	comp=Z,25nm,1.0s						
O44A				IAMs_20	IAMs_20	11 06 26.7	
	comp=Z,5µm,20.0s						
E56A	**St. Veronique**	**87.37**	**26**	P	**P**	**10 26 40.9**	**+0.2**
	baz=331						
HPIG		**87.53**	**57**	P	**P**	**10 26 42.5**	**+0.3**
HPIG				IAmb	IAmb	10 26 46.2	
	comp=Z,36nm,1.2s						
I51A	**Listowel**	**87.56**	**31**	P	**P**	**10 26 42.6**	**+0.9**
	baz=327						
D58A	**Chemin du LacG**	**87.57**	**24**	P	**P**	**10 26 42.0**	**+0.3**
	baz=333						
HHAR	**Hobbs**	**87.64**	**43**	P	**P**	**10 26 42.3**	**0.0**
CCM	**Cathedral Cave**	**87.66**	**40**	P	**P**	**10 26 42.6**	**+0.3**
	baz=321						
CCM	**Cathedral Cave**	**87.66**	**40**	P	**P**	**10 26 41.8**	**-0.5**
CCM				pmax	pmax		
	comp=Z,68nm,0.8s						
CCM	**Cathedral Cave**	**87.66**	**40**	P	**P**	**10 26 41.8**	**-0.5**
CCM	**Cathedral Cave**	**87.66**	**40**	IAMs_20	IAMs_20	11 12 06.1	
	comp=Z,3µm,19.0s						
SLM	**Saint Louis**	**87.70**	**39**	P	**P**	**10 26 42.8**	**+0.4**
SLM				pmax	pmax		
	comp=Z,61nm,0.8s						
SLM				MLR	MLR		
	comp=Z,3µm,19.0s						
SLM	**Saint Louis**	**87.70**	**39**	P	**P**	**10 26 42.8**	**+0.4**
SLM				IAMs_20	IAMs_20	11 06 55.2	
	comp=Z,3µm,19.0s						
L48A	**N Adams**	**87.70**	**34**	P	**P**	**10 26 43.0**	**+0.6**
L48A				IAMs_20	IAMs_20	11 13 18.8	
	comp=Z,4µm,19.0s						
AAM	**Ann Arbor**	**87.74**	**33**	IAMs_20	IAMs_20	11 10 20.7	
	comp=Z,5µm,19.0s						
K50A	**Casco**	**87.78**	**32**	P	**P**	**10 26 42.7**	**-0.1**
K50A				IAmb	IAmb	10 26 44.8	
	comp=Z,34nm,1.0s						
K50A				IAMs_20	IAMs_20	11 12 02.6	
	comp=Z,6µm,19.0s						
SFIN	**Lafayette**	**87.80**	**36**	P	**P**	**10 26 43.5**	**+0.6**
	baz=324,SNR=9.6						
SFIN	**Lafayette**	**87.80**	**36**	P	**P**	**10 26 43.2**	**+0.3**
SFIN				IAmb	IAmb	10 26 44.7	
	comp=Z,32nm,0.8s						
SFIN				IAMs_20	IAMs_20	11 04 27.5	
	comp=Z,4µm,21.0s						
TRQ	**Mont Tremblant**	**87.81**	**25**	P	**P**	**10 26 43.0**	**+0.1**
H53A	**Bobcaygeon**	**87.83**	**29**	P	**P**	**10 26 42.5**	**-0.5**
	baz=329						
MGMO	**Mountain Grove**	**87.84**	**41**	P	**P**	**10 26 42.7**	**-0.5**
MGMO				IAmb	IAmb	10 26 44.5	
	comp=Z,26nm,0.8s						
MGMO				IAMs_20	IAMs_20	11 05 50.0	
	comp=Z,4µm,20.0s						
ODZ	**Otahua Downs**	**87.94**	**161**	IAMs_20	IAMs_20	11 00 08.8	
	comp=Z,5µm,19.0s						
N47A	**Urbana**	**88.02**	**35**	P	**P**	**10 26 44.0**	**+0.1**
N47A				IAMs_20	IAMs_20	11 11 42.4	
	comp=Z,4µm,20.0s						
Z35A	**Perchaven, San**	**88.05**	**47**	P	**P**	**10 26 44.6**	**+0.4**
Z35A				IAMs_20	IAMs_20	11 11 27.1	
	comp=Z,4µm,19.0s						
Q44A	**Meyer Farm, Va**	**88.08**	**38**	P	**P**	**10 26 44.7**	**+0.5**
Q44A				IAMs_20	IAMs_20	11 11 48.1	
	comp=Z,4µm,19.0s						
E58A	**La Victoria**	**88.09**	**25**	P	**P**	**10 26 44.4**	**+0.3**
	baz=333						
FVM	**French Village**	**88.12**	**40**	P	**P**	**10 26 44.3**	**-0.2**
FVM				pmax	pmax		
	comp=Z,27nm,0.8s						
FVM				MLR	MLR		
	comp=Z,3µm,19.0s						
FVM	**French Village**	**88.12**	**40**	P	**P**	**10 26 44.3**	**-0.2**
FVM				IAmb	IAmb	10 26 46.4	
	comp=Z,27nm,0.8s						
FVM				IAMs_20	IAMs_20	11 07 40.3	
	comp=Z,3µm,19.0s						
U40A	**Yellville**	**88.15**	**42**	P	**P**	**10 26 44.5**	**-0.2**
	baz=320,SNR=48						
U40A	**Yellville**	**88.15**	**42**	P	**P**	**10 26 44.5**	**-0.2**
U40A				IAMs_20	IAMs_20	11 13 59.4	
	comp=Z,3µm,19.0s						
X37A	**Clayton**	**88.15**	**45**	P	**P**	**10 26 45.1**	**+0.4**
X37A				IAMs_20	IAMs_20	11 14 14.7	
	comp=Z,5µm,18.0s						
DELO	**Deloro Mine**	**88.23**	**28**	P	**P**	**10 26 44.7**	**-0.2**
D60A	**Saint Jean D'O**	**88.33**	**23**	P	**P**	**10 26 45.1**	**-0.2**
	baz=334,SNR=7.4						
P46A	**Rosedale**	**88.36**	**37**	P	**P**	**10 26 45.4**	**-0.2**
P46A				IAMs_20	IAMs_20	11 11 53.4	
	comp=Z,5µm,18.0s						
T42A	**Van Buren**	**88.53**	**41**	P	**P**	**10 26 46.4**	**-0.1**
T42A				IAmb	IAmb	10 26 48.1	
	comp=Z,22nm,0.8s						
T42A				IAMs_20	IAMs_20	11 12 15.3	
	comp=Z,4µm,18.0s						
W39A	**Magazine**	**88.55**	**44**	P	**P**	**10 26 46.6**	**0.0**
	baz=320,SNR=7.9						
W39A	**Magazine**	**88.55**	**44**	P	**P**	**10 26 46.8**	**+0.3**
W39A				IAmb	IAmb	10 26 48.3	
	comp=Z,32nm,1.2s						
W39A				IAMs_20	IAMs_20	11 12 50.3	
	comp=Z,3µm,19.0s						
TBI	**Tubuai**	**88.57**	**122**	*e*S	**S**	**10 37 31.8**	**-0.9**
	comp=Z,3µm,25.0s						
TBI				*e*SS	**SS**	**10 43 26.6**	**+2.4**
	comp=Z,700nm,25.8s						
TBI				*e*LQ	LQ	10 50 37.6	
	comp=Z,2µm,32.8s						
TBI				*e*LR	LR	10 54 32.4	
	comp=Z,5µm,33.2s,baz=318						
TBI	**Tubuai**	**88.57**	**122**	*e*T	T	12 04 35.4	
	comp=Z,21nm,0.4s						
G57A	**Newington**	**88.65**	**26**	P	**P**	**10 26 46.5**	**-0.3**
	baz=331						
OLIL	**Olney**	**88.65**	**38**	P	**P**	**10 26 47.0**	**0.0**
N49A	**Columbus Grove**	**88.65**	**34**	P	**P**	**10 26 47.4**	**+0.5**
N49A				IAmb	IAmb	10 26 48.8	
	comp=Z,38nm,0.9s						
N49A				IAMs_20	IAMs_20	11 13 31.9	
	comp=Z,3µm,19.0s						
JCT	**Junction City**	**88.66**	**50**	P	**P**	**10 26 47.3**	**+0.1**
	baz=317,SNR=10						
JCT	**Junction City**	**88.66**	**50**	P	**P**	**10 26 47.3**	**+0.1**
JCT				pmax	pmax		
	comp=Z,16nm,0.8s						
JCT				MLR	MLR		
	comp=Z,2µm,20.0s						
JCT	**Junction City**	**88.66**	**50**	P	**P**	**10 26 47.3**	**+0.1**
JCT				IAmb	IAmb	10 26 48.8	
	comp=Z,16nm,0.8s						
E60A	**Ste Agathe de**	**88.67**	**23**	P	**P**	**10 26 47.8**	**+0.9**
	baz=334						
M50A	**Fremont**	**88.74**	**33**	P	**P**	**10 26 47.4**	**0.0**
M50A				IAmb	IAmb	10 26 48.6	
	comp=Z,32nm,1.3s						
M50A				IAMs_20	IAMs_20	11 12 45.2	
	comp=Z,5µm,19.0s						
F60A	**Warwick**	**88.87**	**24**	P	**P**	**10 26 47.7**	**-0.1**
	baz=334						
FCAR	**Ozark Folk Cen**	**88.89**	**42**	P	**P**	**10 26 48.1**	**0.0**
FCAR				IAmb	IAmb	10 26 49.5	
	comp=Z,37nm,0.9s						
FCAR				IAMs_20	IAMs_20	11 08 20.8	
	comp=Z,3µm,20.0s						
E61A	**Lac Etchemin**	**88.90**	**23**	P	**P**	**10 26 49.0**	**+0.9**
	baz=335						
S44A	**Carbondale**	**88.92**	**39**	P	**P**	**10 26 48.6**	**+0.4**
S44A				IAMs_20	IAMs_20	11 14 00.4	

	comp=Z,3µm,18.0s						
G58A	Ormstown	88.92	26	P	P	10 26 48.5	+0.4
	baz=332						
WHTX	Lake Whitney,	88.92	48	P	P	10 26 49.4	+1.1
	baz=318						
WHTX	Lake Whitney,	88.92	48	P	P	10 26 48.8	+0.5
WHTX				IAmb	IAmb	10 26 50.5	
	comp=Z,31nm,1.0s						
SIUC	Southern Illin	88.92	39	P	P	10 26 48.6	+0.3
SIUC				IAMs_20	IAMs_20	11 13 41.3	
	comp=Z,3µm,20.0s						
J54A	Appleton	88.92	29	IAMs_20	IAMs_20	11 10 58.7	
	comp=Z,5µm,20.0s						
D63A	Stockholm	89.03	21	P	P	10 26 49.5	+1.0
	baz=336						
BLO	Bloomington	89.03	37	P	P	10 26 49.0	+0.3
BLO				pmax	pmax		
	comp=Z,26nm,1.1s						
BLO	Bloomington	89.03	37	P	P	10 26 49.0	+0.3
BLO				IAmb	IAmb	10 26 50.2	
	comp=Z,26nm,1.1s						
BLO				IAMs_20	IAMs_20	11 13 49.2	
	comp=Z,5µm,20.0s						
PBMO	Poplar Bluff	89.06	40	P	P	10 26 49.2	+0.3
PBMO				IAMs_20	IAMs_20	11 12 56.2	
	comp=Z,4µm,19.0s						
H57A	Richville	89.07	27	P	P	10 26 49.2	+0.4
	baz=331						
MEDO	Medina	89.09	29	IAMs_20	IAMs_20	11 11 14.0	
	comp=Z,5µm,19.0s						
MIAR	Mount Ida	89.15	44	P	P	10 26 50.0	+0.7
	baz=320,SNR=18						
MIAR	Mount Ida	89.15	44	P	P	10 26 50.1	+0.7
MIAR				pmax	pmax		
	comp=Z,30nm,0.9s						
MIAR	Mount Ida	89.15	44	P	P	10 26 50.1	+0.7
MIAR				IAmb	IAmb	10 26 51.5	
	comp=Z,30nm,0.9s						
MIAR				IAMs_20	IAMs_20	11 11 24.1	
	comp=Z,4µm,19.0s						
F61A	St Evariste	89.16	23	P	P	10 26 50.3	+1.1
	baz=334						
O49A	Covington	89.19	35	P	P	10 26 49.9	+0.4
O49A				IAmb	IAmb	10 26 51.2	
	comp=Z,26nm,0.8s						
O49A				IAMs_20	IAMs_20	11 05 07.1	
	comp=Z,4µm,21.0s						
J55A	Hilton	89.24	29	P	P	10 26 49.4	-0.2
J55A				IAmb	IAmb	10 26 50.9	
	comp=Z,54nm,1.3s						
J55A				IAMs_20	IAMs_20	11 13 12.0	
	comp=Z,5µm,19.0s						
WHAR	Wooly Hollow	89.26	43	P	P	10 26 50.2	+0.3
WHAR				IAMs_20	IAMs_20	11 07 36.8	
	comp=Z,3µm,19.0s						
P48A	Milroy	89.30	36	P	P	10 26 50.1	+0.1
P48A				IAMs_20	IAMs_20	11 12 37.1	
	comp=Z,4µm,20.0s						
M52A	Chesterland	89.32	32	P	P	10 26 50.1	0.0
M52A				IAMs_20	IAMs_20	11 13 32.5	
	comp=Z,5µm,18.0s						
FRNY	Flat Rock	89.35	25	IAMs_20	IAMs_20	11 12 48.8	
	comp=Z,5µm,18.0s						
BATG	Bathurst New B	89.36	20	P	P	10 26 50.2	+0.1
BATG				IAmb	IAmb	10 26 52.8	
	comp=Z,27nm,0.9s						
BATG				IAMs_20	IAMs_20	11 09 50.6	
	comp=Z,5µm,20.0s						
MOQ	Mont Orford	89.36	24	P	P	10 26 50.5	+0.3
Z38A	Mt. Pleasant	89.36	46	P	P	10 26 50.6	+0.2
Z38A				IAMs_20	IAMs_20	11 14 59.7	
	comp=Z,5µm,18.0s						
W41B	Gary Mavity, V	89.37	43	P	P	10 26 50.5	+0.1
	baz=321,SNR=9.9						
ERPA	Erie	89.39	31	P	P	10 26 51.5	+1.1
	baz=328,SNR=7.0						
ERPA	Erie	89.39	31	P	P	10 26 51.2	+0.8
ERPA				IAMs_20	IAMs_20	11 10 55.1	
	comp=Z,6µm,20.0s						
L53A	Girard	89.42	31	P	P	10 26 51.3	+0.8
	baz=328,SNR=20						
N51A	Ashland	89.42	33	P	P	10 26 51.1	+0.5
N51A				IAmb	IAmb	10 26 52.3	
	comp=Z,33nm,1.0s						
N51A				IAMs_20	IAMs_20	11 11 22.2	
	comp=Z,4µm,18.0s						
USIN	University of	89.47	38	P	P	10 26 51.1	+0.3
USIN				IAmb	IAmb	10 26 52.8	
	comp=Z,29nm,1.1s						
USIN				IAMs_20	IAMs_20	11 11 21.8	
	comp=Z,3µm,20.0s						
H59A	Cadyville	89.49	26	P	P	10 26 51.0	+0.3
	baz=332						
PARMO	Parma	89.49	40	IAMs_20	IAMs_20	11 13 49.5	
	comp=Z,3µm,20.0s						
E63A	Oxbow	89.51	21	P	P	10 26 51.8	+1.0
	baz=336						
H58A	Gabriels	89.52	26	P	P	10 26 51.7	+0.7
	baz=332,SNR=5.3						
P49A	Miami Univ. Ec	89.55	35	P	P	10 26 51.5	+0.3
	baz=325,SNR=8.5						
P49A	Miami Univ. Ec	89.55	35	P	P	10 26 51.7	+0.5
P49A				IAMs_20	IAMs_20	11 15 09.9	
	comp=Z,4µm,18.0s						
J56A	Wolcott	89.58	28	P	P	10 26 50.6	-0.6
	baz=330						
J56A	Wolcott	89.58	28	P	P	10 26 50.9	-0.3
J56A				IAmb	IAmb	10 26 52.9	
	comp=Z,28nm,1.0s						
J56A				IAMs_20	IAMs_20	11 13 16.1	
	comp=Z,5µm,19.0s						
HENM	Henderson Moun	89.58	40	IAMs_20	IAMs_20	11 14 08.1	
	comp=Z,3µm,18.0s						
X40A	Basin Creek Fa	89.59	43	P	P	10 26 52.2	+0.7
	baz=320,SNR=8.9						
X40A	Basin Creek Fa	89.59	43	P	P	10 26 52.3	+0.9
X40A				IAMs_20	IAMs_20	11 13 41.6	
	comp=Z,4µm,18.0s						
G61A	St-Isidore-de-	89.61	24	P	P	10 26 51.7	+0.3
	baz=334						
MMNY	Mt. Morris Dam	89.66	29	P	P	10 26 52.2	+0.6
MMNY				IAmb	IAmb	10 26 53.5	
	comp=Z,31nm,0.9s						
MMNY				IAMs_20	IAMs_20	11 11 30.3	
	comp=Z,5µm,19.0s						
E64A	Bridgewater	89.67	21	P	P	10 26 52.2	+0.6
	baz=336						
WVNY	West Valley, N	89.68	30	P	P	10 26 52.8	+1.1
WVNY				IAmb	IAmb	10 26 53.9	
	comp=Z,45nm,1.1s						
M53A	WI Miller and	89.69	32	P	P	10 26 52.1	+0.4
	baz=328,SNR=12						
M53A	WI Miller and	89.69	32	P	P	10 26 52.4	+0.6
M53A				IAmb	IAmb	10 26 54.0	
	comp=Z,44nm,1.1s						
M53A				IAMs_20	IAMs_20	11 13 21.1	
	comp=Z,5µm,18.0s						
PVMO	Portageville	89.71	40	IAMs_20	IAMs_20	11 13 25.4	
	comp=Z,4µm,19.0s						
PENMO	Penman	89.72	40	IAMs_20	IAMs_20	11 13 25.6	
	comp=Z,4µm,20.0s						
ALLY	Alegheny Colle	89.72	31	P	P	10 26 52.4	+0.4
ALLY				IAMs_20	IAMs_20	11 11 09.0	
	comp=Z,5µm,20.0s						
435B	Jarrell	89.74	49	P	P	10 26 52.7	+0.5
	baz=318						
435B	Jarrell	89.74	49	P	P	10 26 52.4	+0.2
435B				IAmb	IAmb	10 26 54.0	
	comp=Z,21nm,0.7s						
435B				IAMs_20	IAMs_20	11 10 04.9	
	comp=Z,3µm,20.0s						
ACSO	Alum Creek Sta	89.74	34	P	P	10 26 52.9	+0.9
	baz=326,SNR=14						
ACSO	Alum Creek Sta	89.74	34	P	P	10 26 52.3	+0.3
ACSO				IAmb	IAmb	10 26 54.0	
	comp=Z,38nm,0.8s						
ACSO				IAMs_20	IAMs_20	11 13 28.6	
	comp=Z,5µm,19.0s						
T45A	Paducah	89.75	39	IAMs_20	IAMs_20	11 12 42.5	
	comp=Z,4µm,20.0s						
HICK	Hickman	89.84	40	IAMs_20	IAMs_20	11 14 23.9	
	comp=Z,3µm,18.0s						
237A	Washetta, Mont	89.85	47	IAMs_20	IAMs_20	11 11 20.7	
	comp=Z,4µm,20.0s						
I58A	Old Forge	89.89	27	P	P	10 26 52.2	-0.6
	baz=332						
HBAR	Harrisburg	89.90	41	P	P	10 26 53.2	+0.4
WCI	Wyandotte Cave	89.90	37	P	P	10 26 53.7	+0.8
	baz=324						
WCI	Wyandotte Cave	89.90	37	P	P	10 26 53.1	+0.3
WCI				pmax	pmax		
	comp=Z,26nm,0.8s						
WCI	Wyandotte Cave	89.90	37	P	P	10 26 53.1	+0.3
WCI				IAmb	IAmb	10 26 54.8	
	comp=Z,26nm,0.8s						
GNAR	Gosnell	89.90	41	P	P	10 26 54.0	+1.1
GNAR				IAmb	IAmb	10 26 57.1	
	comp=Z,49nm,1.1s						
GNAR				IAMs_20	IAMs_20	11 13 15.6	
	comp=Z,3µm,18.0s						
NCB	Newcomb	89.90	26	P	P	10 26 53.2	+0.4
NCB				IAMs_20	IAMs_20	11 11 59.3	
	comp=Z,5µm,20.0s						
K56A	Middlesex	89.91	29	P	P	10 26 53.5	+0.7
	baz=330						
G62A	West of Eustis	89.98	23	P	P	10 26 52.9	-0.2
	baz=335						
M54A	Oil Creek Stat	90.03	31	P	P	10 26 54.7	+1.3
	baz=328,SNR=7.6						
M54A	Oil Creek Stat	90.03	31	P	P	10 26 53.1	-0.3
M54A				IAmb	IAmb	10 26 55.5	
	comp=Z,30nm,0.9s						
F64A	Sherman	90.04	22	P	P	10 26 54.6	+1.3
	baz=336						
LPAR	Lepanto	90.04	41	P	P	10 26 53.8	+0.3
WLAR	White Oak Lake	90.06	44	P	P	10 26 52.9	-0.7
WLAR				IAMs_20	IAMs_20	11 12 04.0	
	comp=Z,3µm,19.0s						
LNXT	Lenox	90.06	40	IAMs_20	IAMs_20	11 13 44.7	
	comp=Z,4µm,20.0s						
VT1	Waterbury	90.07	25	P	P	10 26 53.9	+0.3
VT1				IAmb	IAmb	10 26 56.4	
	comp=Z,31nm,1.2s						
VT1				IAMs_20	IAMs_20	11 13 04.1	
	comp=Z,5µm,20.0s						
N53A	Lisbon	90.15	32	P	P	10 26 54.4	+0.4
N53A				IAmb	IAmb	10 26 56.1	
	comp=Z,24nm,0.9s						
N53A				IAMs_20	IAMs_20	11 14 14.5	
	comp=Z,4µm,19.0s						
H61A	Lyndonville	90.16	25	P	P	10 26 55.2	+1.2
	baz=334,SNR=7.1						
I59A	Olmsteadville	90.18	26	P	P	10 26 54.5	+0.5
	baz=332						
UTMT	University of	90.18	40	P	P	10 26 55.6	+1.4
K57A	Scipio Center	90.18	28	P	P	10 26 54.9	+0.8
	baz=330						
J59A	Piesco	90.25	27	P	P	10 26 54.3	-0.2
	baz=332						
J59A	Piesco	90.25	27	P	P	10 26 54.7	+0.2
J59A				IAmb	IAmb	10 26 55.7	
	comp=Z,23nm,1.0s						
L56A	Greenwood	90.31	29	P	P	10 26 55.8	+1.1
	baz=330,SNR=7.5						
L56A	Greenwood	90.31	29	P	P	10 26 55.4	+0.6
L56A				IAmb	IAmb	10 26 56.7	
	comp=Z,37nm,0.9s						
O52A	Adamsville	90.32	33	P	P	10 26 55.0	+0.3
O52A				IAmb	IAmb	10 26 56.6	
	comp=Z,29nm,0.9s						
O52A				IAMs_20	IAMs_20	11 14 44.3	
	comp=Z,4µm,18.0s						
P51A	Williamsport	90.32	34	P	P	10 26 54.9	+0.1
P51A				IAmb	IAmb	10 26 56.4	
	comp=Z,26nm,0.9s						
P51A				IAMs_20	IAMs_20	11 14 12.2	
	comp=Z,5µm,19.0s						
I60A	Shoreham	90.33	26	P	P	10 26 55.6	+0.9
	baz=333						
R49A	Shelbyville	90.36	36	IAMs_20	IAMs_20	11 13 12.4	
	comp=Z,5µm,19.0s						
N54A	Moraine State	90.36	31	P	P	10 26 55.4	+0.4
	baz=328,SNR=9.5						
N54A	Moraine State	90.36	31	P	P	10 26 55.6	+0.6
N54A				IAmb	IAmb	10 26 57.2	
	comp=Z,30nm,1.0s						
H62A	Milan	90.37	24	P	P	10 26 55.9	+1.0
	baz=334,SNR=5.8						
H62A	Milan	90.37	24	P	P	10 26 56.0	+1.0
M55A	Ridgway	90.42	30	P	P	10 26 56.0	+0.8
M55A				IAmb	IAmb	10 26 57.5	
	comp=Z,33nm,0.8s						
M55A				IAMs_20	IAMs_20	11 11 42.4	
	comp=Z,6µm,20.0s						
833A	Chaparral WMA,	90.46	52	P	P	10 26 56.3	+0.7
	baz=317						
K58A	Earlville	90.47	28	P	P	10 26 56.3	+0.8
	baz=331,SNR=8.1						
K58A	Earlville	90.47	28	P	P	10 26 55.9	+0.4
K58A				IAmb	IAmb	10 26 57.5	
	comp=Z,48nm,1.1s						
O53A	New Philadelph	90.47	33	P	P	10 26 56.3	+0.8
	baz=327,SNR=7.5						
O53A	New Philadelph	90.47	33	P	P	10 26 56.0	+0.5
O53A				IAmb	IAmb	10 26 57.4	
	comp=Z,34nm,1.0s						
O53A				IAMs_20	IAMs_20	11 12 10.8	
	comp=Z,5µm,21.0s						
G64A	Maxfield	90.48	22	P	P	10 26 56.2	+0.9
	baz=336						
T47A	Sharon Grove	90.52	38	P	P	10 26 56.5	+0.7
T47A				IAmb	IAmb	10 26 57.8	
	comp=Z,35nm,0.9s						
T47A				IAMs_20	IAMs_20	11 14 47.6	
	comp=Z,4µm,19.0s						
Z41A	Richland Creek	90.55	44	P	P	10 26 56.5	+0.5
	baz=320						
Q51A	Peebles	90.58	35	P	P	10 26 56.0	0.0
Q51A				IAMs_20	IAMs_20	11 11 01.9	
	comp=Z,4µm,20.0s						
CCAR	Cane Creek	90.59	43	IAMs_20	IAMs_20	11 09 55.1	
	comp=Z,4µm,21.0s						
P52A	Corning	90.59	34	P	P	10 26 56.7	+0.7
	baz=327,SNR=6.7						
P52A	Corning	90.59	34	P	P	10 26 56.3	+0.3
P52A				IAmb	IAmb	10 26 58.8	
	comp=Z,43nm,1.4s						
P52A				IAMs_20	IAMs_20	11 14 01.3	
	comp=Z,4µm,19.0s						
MET	Memphis--Engin	90.60	41	IAMs_20	IAMs_20	11 07 24.2	
	comp=Z,4µm,20.0s						
ACCN	Adirondack Com	90.61	26	P	P	10 26 56.5	+0.4
ACCN				IAMs_20	IAMs_20	11 13 21.1	
	comp=Z,5µm,19.0s						
M56A	Emporium	90.63	30	P	P	10 26 56.6	+0.4
	baz=329,SNR=8.3						
M56A	Emporium	90.63	30	P	P	10 26 56.8	+0.6
M56A				IAmb	IAmb	10 26 58.4	
	comp=Z,36nm,0.9s						
H63A	New Sharon	90.64	23	P	P	10 26 56.6	+0.5
	baz=335						
L57A	Andrews Acres	90.69	29	P	P	10 26 56.8	+0.3
	baz=330,SNR=5.8						
K59A	Cooperstown	90.74	27	P	P	10 26 57.5	+0.8
	baz=332,SNR=8.1						
R50A	Paris	90.75	36	P	P	10 26 57.5	+0.7
R50A				IAMs_20	IAMs_20	11 06 29.7	
	comp=Z,3µm,20.0s						
HNH	Hanover	90.78	25	IAMs_20	IAMs_20	11 08 53.6	
	comp=Z,5µm,20.0s						
BINY	Binghamton	90.83	28	P	P	10 26 58.1	+0.9
	baz=331						
BINY	Binghamton	90.83	28	P	P	10 26 57.8	+0.7
BINY				IAmb	IAmb	10 27 08.7	
	comp=Z,28nm,1.1s						
BINY				IAMs_20	IAMs_20	11 13 33.3	
	comp=Z,5µm,19.0s						
WVT	Waverly	90.85	39	P	P	10 26 57.7	+0.4
	baz=323						
WVT	Waverly	90.85	39	P	P	10 26 58.0	+0.7
WVT				pmax	pmax		
	comp=Z,19nm,0.9s						
WVT	Waverly	90.85	39	P	P	10 26 58.0	+0.7
WVT				IAmb	IAmb	10 26 59.2	
	comp=Z,19nm,0.9s						
WVT	Waverly	90.85	39	IAMs_20	IAMs_20	11 13 42.6	
	comp=Z,4µm,19.0s						
O54A	Avella	90.87	32	P	P	10 26 57.0	-0.3
O54A				IAmb	IAmb	10 26 59.5	
	comp=Z,20nm,0.9s						
O54A				IAMs_20	IAMs_20	11 12 52.4	
	comp=Z,4µm,18.0s						
I62A	Tamworth	90.94	24	IAMs_20	IAMs_20	11 14 59.7	
	comp=Z,5µm,18.0s						
W45A	Hickory Valley	90.95	41	P	P	10 26 58.4	+0.6
W45A				IAMs_20	IAMs_20	11 14 12.4	
	comp=Z,4µm,20.0s						
J61A	Chester	91.02	25	P	P	10 26 59.7	+1.8
	baz=333						
I63A	Otisfield	91.02	24	P	P	10 26 59.8	+1.9
	baz=334						
L58A	Harry Jones Me	91.02	28	P	P	10 26 58.4	+0.4
	baz=331,SNR=8.1						
735A	Kenedy	91.02	50	IAMs_20	IAMs_20	11 14 12.2	
	comp=Z,3µm,19.0s						
P53A	Whipple	91.03	33	P	P	10 26 59.0	+0.9
P53A				IAMs_20	IAMs_20	11 12 12.8	
	comp=Z,6µm,19.0s						
N56A	West Decatur	91.07	30	P	P	10 26 59.3	+1.0
	baz=329						
Q52A	Bidwell	91.10	34	P	P	10 26 58.7	+0.3
Q52A				IAmb	IAmb	10 26 59.5	
	comp=Z,26nm,1.2s						
Q52A				IAMs_20	IAMs_20	11 15 02.6	
	comp=Z,5µm,20.0s						
M57A	Sunshine Farm,	91.16	29	P	P	10 26 58.8	+0.2
	baz=330,SNR=15						
M57A	Sunshine Farm,	91.16	29	P	P	10 26 58.4	-0.3
M57A				IAMs_20	IAMs_20	11 12 46.9	
	comp=Z,5µm,19.0s						
L59A	Walton	91.18	28	P	P	10 26 59.1	+0.3
	baz=331,SNR=8.2						
L59A	Walton	91.18	28	P	P	10 26 58.8	-0.1
TRY	Troy	91.19	26	P	P	10 27 00.0	+1.3
TRY				IAmb	IAmb	10 27 09.9	
	comp=Z,48nm,1.3s						
TRY				IAMs_20	IAMs_20	11 13 19.7	
	comp=Z,5µm,20.0s						
FFD	Franklin Falls	91.20	25	IAMs_20	IAMs_20	11 15 20.6	
	comp=Z,5µm,18.0s						
K60A	Five Rivers En	91.21	27	P	P	10 26 59.8	+1.0
	baz=332						
OXF	Oxford	91.35	41	P	P	10 27 00.3	+0.7
	baz=322						
OXF	Oxford	91.35	41	P	P	10 26 59.9	+0.3
OXF				pmax	pmax		
	comp=Z,66nm,1.0s						
OXF				MLR	MLR		
	comp=Z,4µm,20.0s						
OXF	Oxford	91.35	41	P	P	10 26 59.9	+0.3
OXF				IAMs_20	IAMs_20	11 07 46.0	
	comp=Z,4µm,20.0s						
HKT	Hockley	91.36	48	P	P	10 27 00.2	+0.5
HKT				pmax	pmax		
	comp=Z,13nm,1.1s						
HKT				MLR	MLR		
	comp=Z,4µm,19.0s						
HKT	Hockley	91.36	48	P	P	10 27 00.2	+0.5
HKT	Hockley	91.36	48	IAMs_20	IAMs_20	11 11 15.7	
	comp=Z,4µm,19.0s						
J62A	Henniker	91.37	25	P	P	10 27 00.8	+1.3
	baz=334						
K61A	Williamstown	91.38	26	P	P	10 27 00.3	+0.7
	baz=333						
KSPA	Keystone Colle	91.47	28	P	P	10 27 00.5	+0.4
KSPA				IAmb	IAmb	10 27 02.1	
	comp=Z,16nm,0.8s						
KSPA				IAMs_20	IAMs_20	11 15 19.1	
	comp=Z,5µm,18.0s						
N57A	Milroy	91.50	30	P	P	10 27 00.9	+0.6
	baz=330,SNR=7.7						
Q53A	Leroy	91.50	34	P	P	10 27 00.9	+0.6
	baz=327						
O56A	Blue Knob Stat	91.52	31	P	P	10 26 60.0	-0.4
	baz=329						
O56A	Blue Knob Stat	91.52	31	P	P	10 27 00.2	-0.2
U49A	Red Boiling Sp	91.53	38	P	P	10 27 00.9	+0.5
U49A				IAmb	IAmb	10 27 01.9	
	comp=Z,22nm,1.0s						
U49A				IAMs_20	IAMs_20	11 15 11.3	
	comp=Z,5µm,18.0s						
MCWV	Mont Chateau	91.53	32	P	P	10 27 01.3	+0.9
	baz=328						
MCWV	Mont Chateau	91.53	32	IAMs_20	IAMs_20	11 14 35.9	
	comp=Z,3µm,19.0s						
T50A	Nancy	91.55	37	P	P	10 27 01.0	+0.5
T50A				IAmb	IAmb	10 27 02.4	
	comp=Z,24nm,0.9s						
CLTN	Cedars of Leba	91.61	38	P	P	10 27 01.2	+0.4
CLTN				IAMs_20	IAMs_20	11 15 54.5	
	comp=Z,4µm,20.0s						
M59A	Waymart	91.61	28	P	P	10 27 01.9	+1.1
	baz=331,SNR=5.3						
S51A	Beattyville	91.61	36	P	P	10 27 00.8	0.0
S51A				IAMs_20	IAMs_20	11 06 48.4	
	comp=Z,3µm,20.0s						
PLAL	Pickwick Lake	91.65	40	P	P	10 27 00.9	-0.1
PLAL				IAMs_20	IAMs_20	11 14 37.7	
	comp=Z,3µm,20.0s						
L60A	Shokan	91.65	27	P	P	10 27 01.6	+0.6
	baz=332						
V48A	Smith Brothers	91.65	39	P	P	10 27 01.3	+0.2
V48A				IAmb	IAmb	10 27 02.7	
	comp=Z,18nm,1.0s						
V48A				IAMs_20	IAMs_20	11 13 48.8	
	comp=Z,5µm,20.0s						
Q54A	Coxs Mills	91.69	33	P	P	10 27 00.8	-0.3
L61A	Hillsdale 1, H	91.70	27	P	P	10 27 02.3	+1.2
	baz=332						
143A	Socs Landing,	91.72	44	IAMs_20	IAMs_20	11 12 42.1	
	comp=Z,4µm,19.0s						
N58A	Sunbury	91.75	29	P	P	10 27 01.7	+0.3
	baz=330						
N58A	Sunbury	91.75	29	P	P	10 27 01.6	+0.3
N58A				IAmb	IAmb	10 27 03.5	
	comp=Z,25nm,1.1s						
R53A	Hurricane	91.76	34	IAMs_20	IAMs_20	11 15 41.2	
	comp=Z,6µm,20.0s						
Y45A	Yeager Farm, C	91.79	42	P	P	10 27 02.0	+0.4
Y45A				IAMs_20	IAMs_20	11 10 30.7	
	comp=Z,3µm,20.0s						
KVTX	Kingsville	91.93	51	IAMs_20	IAMs_20	11 13 38.4	
	comp=Z,3µm,20.0s						
TEND	Ethiopian Broa	91.94	287	*e*P	P	10 27 05.0	+2.3
K63A	Dunstable	91.94	25	P	P	10 27 02.9	+0.7
	baz=334						
N59A	State Game Lan	92.03	29	P	P	10 27 03.3	+0.6
	baz=331,SNR=6.6						
N59A	State Game Lan	92.03	29	P	P	10 27 03.4	+0.6
N59A				IAMs_20	IAMs_20	11 10 11.9	
	comp=Z,4µm,22.0s						
QUA2	Belchertown	92.03	26	IAMs_20	IAMs_20	11 14 17.8	
	comp=Z,4µm,20.0s						
P56A	Dayton Farm, R	92.07	31	P	P	10 27 03.7	+0.8
	baz=329,SNR=5.2						
M60A	Port Jervis	92.09	28	P	P	10 27 03.4	+0.4
	baz=332						
HRV	Adam Dziewonsk	92.09	25	P	P	10 27 03.3	+0.4
	baz=334						
KSCT	Kent School, K	92.14	27	IAMs_20	IAMs_20	11 13 30.6	
	comp=Z,6µm,20.0s						
342A	Flagon Creek P	92.25	45	IAMs_20	IAMs_20	11 13 48.2	
	comp=Z,3µm,20.0s						
R54A	Victor	92.30	34	P	P	10 27 04.0	0.0
	baz=327						
Q56A	Snyder Ridge,	92.32	32	P	P	10 27 05.3	+1.2
	baz=329						
Q56A	Snyder Ridge,	92.32	32	IAMs_20	IAMs_20	11 12 41.8	
	comp=Z,5µm,21.0s						
MAHO	Mahon	92.36	330	Pdif	P	10 27 02.7	-1.5
MAHO				S	SKSac	10 37 33.6	-3.8
TRNY	Table Rock, Ra	92.39	28	P	P	10 27 04.8	+0.4
TRNY				IAmb	IAmb	10 27 06.4	
	comp=Z,23nm,1.1s						
M61A	Granite Spring	92.41	27	P	P	10 27 05.8	+1.4
	baz=332,SNR=5.3						
P57A	Homestead Farm	92.41	31	IAMs_20	IAMs_20	11 13 06.2	
	comp=Z,6µm,20.0s						
ZAIG	Zacatecas	92.44	58	P	P	10 27 05.0	-0.3
LUPA	Lehigh Univers	92.46	29	IAMs_20	IAMs_20	11 14 34.2	
	comp=Z,5µm,20.0s						
S54A	Dingess, Beckl	92.48	34	P	P	10 27 05.8	+0.9
	baz=327						
S54A	Dingess, Beckl	92.48	34	IAMs_20	IAMs_20	11 10 32.2	
	comp=Z,3µm,21.0s						
SWET	Sewanee	92.50	39	IAMs_20	IAMs_20	11 15 29.3	
	comp=Z,4µm,19.0s						
UCCT	U. Connecticut	92.51	26	IAMs_20	IAMs_20	11 14 52.4	
	comp=Z,5µm,20.0s						
VBMS	Vicksburg	92.57	43	IAMs_20	IAMs_20	11 11 07.5	
	comp=Z,3µm,18.0s						

X48A	Hartselle	92.58	40	P	P	10 27 05.0	-0.3
X48A				IAMs_20	IAMs_20	11 12 01.4	
	comp=Z,3µm,19.0s						
WSPT	Westport, CT	92.69	27	IAMs_20	IAMs_20	11 14 39.1	
	comp=Z,5µm,20.0s						
V51A	Loudon	92.77	37	P	P	10 27 05.9	-0.3
V51A				IAmb	IAmb	10 27 07.9	
	comp=Z,16nm,0.9s						
V51A				IAMs_20	IAMs_20	11 09 44.3	
	comp=Z,5µm,20.0s						
W50A	Signal Mountai	92.81	38	P	P	10 27 06.6	+0.2
W50A				IAMs_20	IAMs_20	11 16 57.4	
	comp=Z,4µm,18.0s						
M63A	Gales Ferry	92.92	26	IAMs_20	IAMs_20	11 15 34.2	
	comp=Z,5µm,20.0s						
SDMD	Soldier's Deli	92.94	30	IAMs_20	IAMs_20	11 15 43.0	
	comp=Z,3µm,20.0s						
WUPA	West Chester U	92.95	29	IAMs_20	IAMs_20	11 16 37.3	
	comp=Z,3µm,19.0s						
CPCT	Cooper Cave	92.98	37	P	P	10 27 07.4	+0.2
CPCT				IAmb	IAmb	10 27 09.1	
	comp=Z,14nm,0.9s						
CPCT				IAMs_20	IAMs_20	11 14 37.9	
	comp=Z,4µm,20.0s						
146A	Union	93.01	42	P	P	10 27 08.1	+0.7
146A				IAMs_20	IAMs_20	11 15 28.9	
	comp=Z,4µm,20.0s						
Q58A	Fox Den Farm,	93.01	31	P	P	10 27 08.3	+1.1
	baz=330						
PSUB	Penn St. - Bra	93.01	29	IAMs_20	IAMs_20	11 14 35.9	
	comp=Z,5µm,19.0s						
P60A	Greenville	93.05	29	IAMs_20	IAMs_20	11 16 23.8	
	comp=Z,5µm,19.0s						
344A	Westbrook Farm	93.05	44	IAMs_20	IAMs_20	11 16 27.3	
	comp=Z,4µm,18.0s						
Z47A	Carrollton	93.07	41	P	P	10 27 08.2	+0.6
Z47A				IAmb	IAmb	10 27 09.3	
	comp=Z,16nm,0.8s						
Z47A				IAMs_20	IAMs_20	11 14 38.4	
	comp=Z,4µm,20.0s						
V52A	Sevierville	93.09	37	P	P	10 27 08.1	+0.4
V52A				IAmb	IAmb	10 27 18.4	
	comp=Z,28nm,1.2s						
V52A				IAMs_20	IAMs_20	11 07 42.6	
	comp=Z,4µm,19.0s						
TKL	Tuckaleechee C	93.16	37	P	P	10 27 08.4	+0.4
TKL				pmax	pmax		
	comp=Z,14nm,0.8s						
TKL				MLR	MLR		
	comp=Z,5µm,19.0s						
TKL	Tuckaleechee C	93.16	37	P	P	10 27 08.4	+0.4
TKL				IAmb	IAmb	10 27 09.7	
	comp=Z,14nm,0.8s						
TKL				IAMs_20	IAMs_20	11 09 57.5	
	comp=Z,5µm,19.0s						
FPAL	Fort Paine	93.20	39	P	P	10 27 08.0	-0.3
FPAL				IAMs_20	IAMs_20	11 15 50.9	
	comp=Z,3µm,20.0s						
R57A	Stanardsville	93.23	32	P	P	10 27 09.1	+0.8
	baz=329						
S56A	Natural Bridge	93.32	33	P	P	10 27 09.3	+0.6
	baz=328						
U54A	Nelsons Funny	93.33	35	P	P	10 27 09.4	+0.6
	baz=327						
U54A	Nelsons Funny	93.33	35	IAMs_20	IAMs_20	11 16 16.8	
	comp=Z,5µm,20.0s						
BLA	Blacksburg	93.36	34	P	P	10 27 09.3	+0.4
	baz=328						
BLA	Blacksburg	93.36	34	P	P	10 27 09.1	+0.2
BLA				pmax	pmax		
	comp=Z,18nm,1.1s						
BLA	Blacksburg	93.36	34	P	P	10 27 09.1	+0.2
BLA				IAmb	IAmb	10 27 19.1	
	comp=Z,18nm,1.1s						
BLA				IAMs_20	IAMs_20	11 13 36.4	
	comp=Z,4µm,20.0s						
Y49A	Blount Mountai	93.37	40	P	P	10 27 08.9	-0.1
Y49A				IAmb	IAmb	10 27 10.7	
	comp=Z,14nm,0.8s						
Y49A				IAMs_20	IAMs_20	11 16 43.2	
	comp=Z,4µm,19.0s						
DESE	Dese	93.39	287	eP	P	10 27 12.3	+2.6
R58A	Rapidan	93.43	32	P	P	10 27 10.1	+0.9
	baz=329						
Q59A	Harwood	93.48	30	P	P	10 27 10.9	+1.6
	baz=330						
S57A	Dark Hollow, R	93.51	32	P	P	10 27 10.2	+0.6
	baz=329						
S57A	Dark Hollow, R	93.51	32	IAMs_20	IAMs_20	11 17 43.3	
	comp=Z,5µm,19.0s						
X51A	Calhoun	93.55	38	IAMs_20	IAMs_20	11 17 18.8	
	comp=Z,4µm,18.0s						
W52A	Murphy	93.55	37	IAMs_20	IAMs_20	11 10 09.9	
	comp=Z,4µm,19.0s						
V53A	Saluda	93.59	36	IAMs_20	IAMs_20	11 13 29.8	
	comp=Z,4µm,19.0s						
T56A	Rocky Mt	93.68	34	P	P	10 27 11.5	+1.1
	baz=328						
LRAL	Lakeview Retre	93.74	41	P	P	10 27 11.0	+0.3
	baz=324						
LRAL	Lakeview Retre	93.74	41	IAMs_20	IAMs_20	11 17 30.1	
	comp=Z,4µm,19.0s						
KEST	Kesra	93.77	324	LR	LR	11 14 38.2	
	comp=Z,11µm,18.5s,baz=322,slow=39						
346A	Big Creek Wild	93.78	43	IAMs_20	IAMs_20	11 10 33.4	
	comp=Z,2µm,18.0s						
S58A	Poland Farm, P	94.00	32	IAMs_20	IAMs_20	11 13 50.4	
	comp=Z,6µm,20.0s						
T57A	Hurt	94.03	33	P	P	10 27 12.2	+0.3
	baz=328						
T57A	Hurt	94.03	33	P	P	10 27 12.7	+0.7
T57A				IAMs_20	IAMs_20	11 11 34.2	
	comp=Z,4µm,20.0s						
BG3	Lake Jocassee	94.09	37	P	P	10 27 11.2	-1.2
BG3				IAMs_20	IAMs_20	11 15 29.2	
	comp=Z,3µm,18.0s						
U56A	King	94.10	34	IAMs_20	IAMs_20	11 14 24.2	
	comp=Z,4µm,21.0s						
V55A	Taylorsville	94.15	35	IAMs_20	IAMs_20	11 16 58.6	
	comp=Z,5µm,20.0s						
ANKE	Ethiopia-Afar	94.32	286	eP	P	10 27 16.7	+2.6
T58A	Grand View Acr	94.38	33	P	P	10 27 13.4	-0.2
	baz=329						
Z51A	Franklin	94.41	39	P	P	10 27 13.6	-0.2
Z51A				IAmb	IAmb	10 27 15.5	
	comp=Z,15nm,0.8s						
Z51A				IAMs_20	IAMs_20	11 11 04.8	
	comp=Z,3µm,20.0s						
U57A	Blanch	94.48	33	P	P	10 27 13.3	-0.7
	baz=328						
Y52A	Lilburn	94.50	38	P	P	10 27 13.3	-0.9
Y52A				IAMs_20	IAMs_20	11 18 24.0	
	comp=Z,4µm,20.0s						
UCM	Universidad Co	94.67	335	Pdif	P	10 27 15.9	+1.0
UCM				S	SKSac	10 37 52.5	+2.2
KMSC	Kings Mountain	94.69	35	P	P	10 27 15.8	+0.7
	baz=327						
KMSC	Kings Mountain	94.69	35	P	P	10 27 14.8	-0.2
KMSC				IAMs_20	IAMs_20	11 09 05.0	
	comp=Z,5µm,20.0s						
PAULI	Pauline	94.75	36	P	P	10 27 14.7	-0.6
U58A	Oxford	94.84	33	P	P	10 27 16.2	+0.5
	baz=329						
250A	Grady	94.95	41	P	P	10 27 16.5	+0.2
250A				IAMs_20	IAMs_20	11 17 39.3	
	comp=Z,4µm,18.0s						
HODGE	Hodges	95.03	37	P	P	10 27 17.4	+0.8
HODGE				IAMs_20	IAMs_20	11 18 35.1	
	comp=Z,5µm,19.0s						
V58A	Windy Hill, Pi	95.11	34	IAMs_20	IAMs_20	11 14 53.9	
	comp=Z,5µm,20.0s						
GOGA	Godfrey	95.15	38	IAMs_20	IAMs_20	11 17 03.3	
	comp=Z,4µm,18.0s						
152A	Waverly Hall	95.16	39	IAMs_20	IAMs_20	11 15 20.6	
	comp=Z,3µm,19.0s						
BRAL	Brewton	95.20	42	IAMs_20	IAMs_20	11 16 33.1	
	comp=Z,5µm,19.0s						
W57A	Gilead	95.28	35	P	P	10 27 18.1	+0.4
W57A				IAMs_20	IAMs_20	11 15 00.7	
	comp=Z,6µm,21.0s						
JSC	Jenkinsville	95.45	36	IAMs_20	IAMs_20	11 18 16.0	
	comp=Z,3µm,19.0s						
ESDC	Sonseca Array	95.48	335	P	P	10 27 18.1	-0.6
	comp=Z,1.4nm,0.7s,baz=7.5,slow=4.4,SNR=6.1						
ESDC				PP	PP	10 31 03.7	-4.7
	comp=Z,1.4nm,0.8s,baz=19,slow=7.1,SNR=4.1						
ESDC				LR	LR	11 16 05.2	
	comp=Z,6µm,18.3s,baz=45,slow=39						
ESDC	Sonseca Array	95.48	335	P	P	10 27 18.4	-0.3
BIRD	Birdtown, Kers	95.50	35	IAMs_20	IAMs_20	11 15 14.3	
	comp=Z,4µm,21.0s						
V59A	Middlesex	95.51	33	P	P	10 27 19.3	+0.6
	baz=329						
FURI	Furi	95.56	286	IAMs_20	IAMs_20	11 15 25.2	
	comp=Z,4µm,20.0s						
154A	Montrose	95.98	38	IAMs_20	IAMs_20	11 17 27.2	
	comp=Z,4µm,18.0s						
352A	Blakely	96.02	40	IAMs_20	IAMs_20	11 15 42.6	
	comp=Z,3µm,19.0s						
Y57A	Sumter	96.06	35	IAMs_20	IAMs_20	11 09 55.1	
	comp=Z,4µm,19.0s						
X58A	Rowland	96.07	34	IAMs_20	IAMs_20	11 09 20.3	
	comp=Z,5µm,21.0s						
CNNC	Cliffs of the	96.10	33	IAMs_20	IAMs_20	11 15 11.1	
	comp=Z,5µm,18.0s						
CART	Cartagena	96.35	332	Pdif	P	10 27 33.4	+11
CART				S	SKSac	10 37 55.0	-4.1
Y58A	Scranton	96.47	35	IAMs_20	IAMs_20	11 14 51.1	
	comp=Z,5µm,20.0s						
Y59A	Loris	96.75	34	IAMs_20	IAMs_20	11 09 41.4	
	comp=Z,4µm,21.0s						
255A	Hazlehurst	96.84	38	IAMs_20	IAMs_20	11 19 19.2	
	comp=Z,4µm,20.0s						
NHSC	New Hope	96.92	36	IAMs_20	IAMs_20	11 10 11.0	
	comp=Z,5µm,19.0s						
Y60A	Bolivia	97.02	34	IAMs_20	IAMs_20	11 13 27.5	
	comp=Z,4µm,21.0s						
UNM	Universidad Na	97.11	58	IAMs_20	IAMs_20	11 10 22.9	
	comp=Z,2µm,20.0s						
PESTR	Estremoz	97.33	338	IAMs_20	IAMs_20	11 16 44.0	
	comp=Z,4µm,19.0s						
EVO	Evora	97.77	338	Pdif	Pdif	10 27 32.2	+3.2
EVO				S	SKSac	10 38 08.6	+2.2
LIS	Lisbon	97.92	339	ePP	PP	10 31 28.6	+1.6
LIS				AMS	AMS	11 11 48.2	
	comp=E,10µm,17.6s						
EMAL	Malaga-Limoner	98.28	334	Pdif	P	10 27 28.3	-2.9
RKT	Rikitea	98.30	113	eSKSac	SKSac	10 38 09.8	+0.7
	comp=E,2µm,26.8s						
RKT				eSP	SP	10 40 24.0	+0.4
	comp=E,3µm,29.0s						
RKT				eSS	SS	10 45 43.6	+0.1
	comp=E,2µm,27.2s						
RKT	Rikitea	98.30	113	eLR	LR	10 59 18.6	
	comp=E,5µm,22.8s						
MESJ	Messejana	98.47	338	ePP	PP	10 31 32.8	+1.5
MESJ				eSKSac	SKSac	10 38 10.6	+0.7
MESJ				eSS	SS	10 45 47.1	+4.1
MESJ				AMS	AMS	11 13 37.8	
	comp=N,7µm,16.2s						
TLIG	Tlapa	98.78	59	IAMs_20	IAMs_20	11 19 14.3	
	comp=Z,4µm,18.0s						
656A	Willston	98.93	40	IAMs_20	IAMs_20	11 18 06.5	
	comp=Z,4µm,20.0s						
MORF	Marmelete	99.09	338	ePP	PP	10 31 37.7	+1.5
MORF				eSKSac	SKSac	10 38 13.7	+0.5
MORF				eSS	SS	10 45 55.8	+4.0
MORF				AMS	AMS	11 12 59.2	
	comp=E,11µm,23.9s						
CEU	Ceuta	99.38	335	Pdif	Pdif	10 27 38.0	+1.8
CEU				S	SKSac	10 38 10.7	-3.8
IFR	Ifrane	101.46	334	Pdif	Pdif	10 27 41.5	-4.3
IFR				S	SKSac	10 38 25.3	0.0
060A	Indiantown	101.93	39	IAMs_20	IAMs_20	11 19 04.8	
	comp=Z,4µm,20.0s						
061Z	Ochoppi	102.63	40	IAMs_20	IAMs_20	11 20 49.6	
	comp=Z,4µm,20.0s						
TEIG	Tepich	103.18	49	IAMs_20	IAMs_20	11 23 31.0	
	comp=Z,3µm,19.0s						
KMBO	Kilima Mbogo	103.19	280	Pdiff	Pdif	10 27 53.5	-0.3
	comp=Z,0.7nm,0.3s,baz=117,slow=12,SNR=3.9						
KMBO				PP	PP	10 32 07.0	-1.7
	comp=Z,0.8nm,0.3s,baz=56,slow=7.0,SNR=4.6						
CCIG	Comitan	103.86	55	IAMs_20	IAMs_20	11 22 46.5	
	comp=Z,2µm,19.0s						
ABPO	Ambohimpanom	106.65	259	IAMs_20	IAMs_20	11 16 32.4	
	comp=Z,4µm,19.0s						
ESQI	Esquipulas	106.91	54	IAMs_20	IAMs_20	11 27 01.3	
	comp=Z,2µm,20.0s						
MBAR	Mbarara	107.75	285	IAMs_20	IAMs_20	11 20 53.4	
	comp=Z,4µm,21.0s						
TGUH	Tegucigalpa,Un	108.57	52	IAMs_20	IAMs_20	11 27 15.1	
	comp=Z,2µm,20.0s						
GTBY	Guantanamo Bay	110.48	39	IAMs_20	IAMs_20	11 21 04.7	
	comp=Z,4µm,19.0s						
BOAB	BOACO BROADBAN	110.79	52	IAMs_20	IAMs_20	11 28 12.1	
	comp=Z,4µm,20.0s						
HDC	Heredia	113.65	53	IAMs_20	IAMs_20	11 31 35.7	
	comp=Z,2µm,21.0s						
SJG	San Juan	116.06	32	IAMs_20	IAMs_20	11 29 30.5	
	comp=Z,3µm,19.0s						
TORD	Torodi Ar. Bea	116.46	318	PKP	PKiKP	10 32 38.9	+0.8
	comp=Z,1.7nm,0.5s,baz=346,slow=0.6,SNR=5.8						
TORD				PP	PP	10 33 44.7	+1.0
	comp=Z,2.7nm,0.8s,baz=14,slow=6.6,SNR=5.4						
TORD	Torodi Ar. Bea	116.46	318		PKPdf	10 32 37.2	-0.8
BCIP	Isla Barro Col	116.87	49	IAMs_20	IAMs_20	11 30 40.7	
	comp=Z,2µm,20.0s						
SEUS	St. Eustatius	117.85	29	IAMs_20	IAMs_20	11 25 47.6	
	comp=Z,3µm,21.0s						
ANWB	Willy Bob	118.12	28	IAMs_20	IAMs_20	11 24 43.8	
	comp=Z,2µm,21.0s						
LSZ	Lusaka	119.01	274	IAMs_20	IAMs_20	11 26 36.3	
	comp=Z,3µm,18.0s						
DLPL	La Plaine	120.47	28	IAMs_20	IAMs_20	11 27 43.0	
	comp=Z,3µm,20.0s						
FDF	Fort de France	121.05	28	IAMs_20	IAMs_20	11 28 35.6	
	comp=Z,3µm,20.0s						
SDV	Santo Domingo	122.13	41	PKPdf	PKPdf	10 32 48.6	-0.7
SDV	Santo Domingo	122.13	41	IAMs_20	IAMs_20	11 32 31.4	
	comp=Z,3µm,20.0s						
SVB	Belmont	122.36	29	IAMs_20	IAMs_20	11 26 24.3	
	comp=Z,2µm,22.0s						
GRGR	Grenville	123.25	30	IAMs_20	IAMs_20	11 27 45.0	
	comp=Z,3µm,22.0s						
ROSC	El Rosal	123.54	47	IAMs_20	IAMs_20	11 28 19.3	
	comp=Z,2µm,21.0s						
OTAV	Otavalo	124.75	54	IAMs_20	IAMs_20	11 37 19.1	
	comp=Z,2µm,20.0s						
TIC	Toumodi	125.39	321	ePKP1	PKPdf	10 32 54.5	-0.8
KIC	Kosan Boka	125.50	320	ePKP1	PKPdf	10 32 54.1	-1.4
	comp=Z,30nm,1.4s						
LIC	Lamto	125.76	320	ePKP1	PKPdf	10 32 55.2	-0.8
	comp=Z,37nm,1.2s						
BOSA	Boshof	128.65	263	PKP	PKiKP	10 33 01.8	0.0
	comp=Z,5.1nm,1.1s,baz=108,slow=9.6,SNR=2.4						
TSUM	Tsumeb	129.47	278	IAMs_20	IAMs_20	11 41 59.5	
	comp=Z,2µm,19.0s						
QSPA	South Pole Qui	129.57	180	IAMs_20	IAMs_20	11 25 17.0	
	comp=Z,3µm,22.0s						
SYO	Syowa Base	131.44	208⇑	esPdiff	Pdif	10 30 03.0	+5.3
CZSB	Cruzeiro do Su	134.50	55	eP	PKiKP	10 33 13.4	-0.5
NNA	Nana	134.90	63	IAMs_20	IAMs_20	11 42 29.0	
	comp=Z,2µm,20.0s						
PTGA	Pitinga	135.59	35	IAMs_20	IAMs_20	11 38 06.4	
	comp=Z,2µm,20.0s						
PTGA	Pitinga	135.59	35	eP	PKiKP	10 33 16.1	0.0
MACA	Manacapuru-AM	137.42	37	eP	PKiKP	10 33 19.7	-0.2
ETMB	Extrema	140.09	50	eP	PKPdf	10 33 23.7	+0.9
NVL	N'lazarevskaya	140.50	203	ePKIKP	PKiKP	10 33 26.0	+1.7
NVL				eSS	SS	10 54 42.2	-3.1
ITTB	Itaituba	140.64	31	eP	PKPdf	10 33 24.9	+1.0
SAML	Samuel	141.10	45	IAMs_20	IAMs_20	11 38 51.6	
	comp=Z,2µm,22.0s						
TMAB	Tom-Au,PA,Br	141.25	19	eP	PKPdf	10 33 26.1	+1.2
NPGB	Novo Progresso	143.22	32	eP	PKPdf	10 33 29.7	+1.2
LPAZ	La Paz	143.84	59	PKP	PKPbc	10 33 27.6	-0.2
	comp=Z,4.6nm,0.9s,baz=16,slow=8.2,SNR=11						
LPAZ	La Paz	143.84	59	PKIKP	PKPbc	10 33 28.4	+0.6
LPAZ	La Paz	143.84	59	PKPdf	PKPbc	10 33 28.4	+0.6
SNAA	Sanae	143.90	197	P	PKPbc	10 33 26.4	+0.6
SNAA	Sanae	143.90	197	IAMs_20	IAMs_20	11 37 11.7	
	comp=Z,2µm,20.0s						
PRPB	Parauapebas	144.41	23	eP	PKPbc	10 33 29.4	+0.5
NBPS	Pedro II - PI	144.44	9	eP	PKPbc	10 33 29.1	0.0
MNMC	Minye Minye	144.85	64		PKPdf	10 33 31.2	-0.3
VNA2	Neumayer--Watz	145.46	196	P	PKPdf	10 33 30.6	0.0
PATCX	Punta Patache	145.59	67		PKPbc	10 33 32.7	+0.1
H03N2	Juan Fernandez	145.59	93	T	T	13 16 02.5	
	baz=300,slow=76,SNR=5.5						
H03N3	Juan Fernandez	145.60	93	T	T	13 16 02.5	
	baz=300,slow=76,SNR=7.6						
H03N1	Juan Fernandez	145.61	93	T	T	13 16 03.8	
	baz=300,slow=76,SNR=6.9						
VNA3	Neumayer Olymp	145.69	195	P	PKPbc	10 33 31.4	0.0
PB08	IPOC Station P	145.84	65		PKPbc	10 33 33.8	0.0
VNA1	Neumayer--Stat	145.86	196	P	PKPab	10 33 32.2	-0.1
VILB	Vilhena	146.04	45	eP	PKPab	10 33 34.4	-0.2
NBPA	Parau_RN	146.07	1	eP	PKPbc	10 33 34.3	+0.1
RCBR	Riachuelo	146.15	359	PKP2	PKPbc	10 33 34.1	-0.4
RCBR				MLR	MLR		
	comp=Z,2µm,22.0s						
RCBR	Riachuelo	146.15	359		PKPbc	10 33 34.1	-0.4
RCBR	Riachuelo	146.15	359	IAMs_20	IAMs_20	11 35 43.9	
	comp=Z,2µm,22.0s						
RCBR	Riachuelo	146.15	359	eP	PKPbc	10 33 34.3	-0.2
PB01	IPOC Station P	146.20	66		PKPbc	10 33 34.4	-0.1
PB07	IPOC Station P	146.36	68		PKPbc	10 33 35.0	-0.1
PB07				IAMs_20	IAMs_20	11 28 40.1	
	comp=Z,2µm,20.0s						
PB04	IPOC Station P	146.56	69		PKPdf	10 33 32.9	-1.3
PB04				IAMs_20	IAMs_20	11 30 11.4	
	comp=Z,3µm,21.0s						
NBPV	Pedro Velho	146.72	358	eP	PKPbc	10 33 35.6	-0.5
PB09	IPOC Station P	146.86	67		PKPdf	10 33 34.7	+0.1
PB06	IPOC Station P	147.21	69		PKPdf	10 33 35.5	+0.2
PB06				IAMs_20	IAMs_20	11 31 08.6	
	comp=Z,3µm,19.0s						
PB15	IPOC Station P	147.59	69		PKPdf	10 33 35.4	-0.5
SMTB	Santa Maria do	147.61	21	eP	PKPbc	10 33 37.7	-0.9
LVC	Limon Verde	147.62	68	PKIKP	PKPdf	10 33 34.3	-1.9
LVC						10 33 39.9	
LVC				MLR	MLR		
	comp=Z,3µm,19.0s						
LVC	Limon Verde	147.62	68	PKPdf	PKPdf	10 33 34.3	-1.9
LVC					pPKPdf	10 33 39.9	+0.4
LVC	Limon Verde	147.62	68	eP	PKPdf	10 33 36.8	+0.6
PB14	IPOC Station P	147.77	72	IAMs_20	IAMs_20	11 28 48.8	
	comp=Z,1µm,20.0s						
GO02	Mina Guanaco	148.68	72		PKiKP	10 33 42.5	-0.5
NBRF	Rio Formoso -	148.96	357	eP	PKPdf	10 33 39.3	+1.2
AC04	Llanos de Chal	149.25	79		PKiKP	10 33 43.2	-0.4
SNDB	Serra Nova Dou	149.32	29	eP	PKPdf	10 33 39.9	+1.2
LCO	Las Campanas	149.95	80	PKP2	PKPbc	10 33 44.9	+0.4
LCO				MLR	MLR		
	comp=Z,4µm,18.0s						
LCO	Las Campanas	149.95	80		PKPbc	10 33 44.9	+0.4
AC02	Maricunga	149.98	74		PKiKP	10 33 45.9	0.0
AC05	El Transito	150.18	79		PKPbc	10 33 45.2	+0.3
GO04	Tololo Observa	150.44	82		PKPbc	10 33 45.8	+0.1
PEXB	Peixe	150.47	24	eP	PKPdf	10 33 41.1	+0.6
CO02	Combarbal	150.76	84		PKPdf	10 33 41.5	+0.8
CO02				IAMs_20	IAMs_20	11 28 06.6	
	comp=Z,3µm,21.0s						
CO03	El Pedregal	150.83	83		PKPbc	10 33 46.5	+0.2
CO03				IAMs_20	IAMs_20	11 32 12.5	
	comp=Z,2µm,20.0s						
CO01	Juntas del Tor	150.88	81		PKiKP	10 33 47.8	+0.5
AROD	Rodeo	151.44	81	eP	PKiKP	10 33 49.0	+0.4
MT02	Curacav	151.52	88		PKiKP	10 33 48.3	+0.1
VCA	Vinchina	151.69	77	i P	PKiKP	10 33 49.7	+0.8
ACDV	Cuesta del Vie	151.71	80	i P	PKiKP	10 33 49.2	+0.3
VA03	San Esteban	151.77	86		PKPbc	10 33 48.6	+0.1
VA03				IAMs_20	IAMs_20	11 38 13.5	
	comp=Z,3µm,21.0s						
PEL	Peldehue	151.82	87	PKIKP	PKiKP	10 33 49.0	+0.1
PEL	Peldehue	151.82	87		PKiKP	10 33 49.0	+0.1
PEL				IAMs_20	IAMs_20	11 31 58.1	
	comp=Z,2µm,20.0s						
AGUA	GUANDACOL	151.85	78	eP	PKiKP	10 33 49.5	+0.3
MT05	Renca	151.88	88		PKiKP	10 33 49.5	+0.5
MT05				IAMs_20	IAMs_20	11 30 06.4	
	comp=Z,2µm,20.0s						
ACCO	Cerro Coronel	151.95	81	i P	PKiKP	10 33 49.6	0.0
BO02	Sierra Bellavi	152.37	90	PKPdf	PKPdf	10 33 42.7	-0.2
BO02				PKPbc	PKiKP	10 33 50.3	+0.2
BO02				IAMs_20	IAMs_20	11 47 45.4	
	comp=Z,2µm,19.0s						
AUSP	Uspallata	152.44	84	eP	PKiKP	10 33 50.7	+0.2
BI02	San Fabin de	152.60	95		PKiKP	10 33 50.3	-0.1
ZON	Zonda	152.69	82	PKIKP	PKPbc	10 33 50.3	-0.2
ZON	Zonda	152.69	82		PKPbc	10 33 50.3	-0.2
LC01	Cunco	152.72	100	PKPdf	PKPdf	10 33 42.2	-1.1
LC01				IAMs_20	IAMs_20	11 42 33.8	
	comp=Z,2µm,18.0s						
RTCV	Cerro Valdivia	152.93	83	i P	PKPbc	10 33 51.0	-0.1
ACLC	CERRO LA CRUZ	152.98	77	i P	PKPbc	10 33 51.4	-0.1
AVFE	Valle Fertil	153.21	80	i P	PKPbc	10 33 50.8	-0.9
GDU01	Guandu, BA	153.85	7	eP	PKPdf	10 33 44.8	-0.7
PLCA	Paso Flores	154.08	103	PKP	PKPdf	10 33 45.2	0.0
	comp=Z,2.6nm,1.1s,baz=233,slow=11,SNR=3.0						
PLCA				PKPbc	PKiKP	10 33 54.5	+1.2
	comp=Z,4.7nm,1.1s,baz=284,slow=1.5,SNR=4.9						
PLCA	Paso Flores	154.08	103	PKPdf	PKPdf	10 33 45.5	+0.3
AQDB	Aquidauana	154.64	46	eP	PKPdf	10 33 48.3	+1.8
CPUP	Villa Florida	158.01	59	PKP	PKPdf	10 33 51.4	+0.7
	comp=Z,2.9nm,0.9s,baz=144,slow=1.7,SNR=3.1						
CPUP				PKPab	PKPab	10 34 23.4	-0.7
	comp=Z,3.3nm,0.7s,baz=352,slow=5.7,SNR=5.7						

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*IDC **21** 10:22:10.7±0.9, 39.°85N×143.°61E, h0km, mb3.8/11, mb1 4.0/14, mb1mx3.8/42, mbtmp3.9/14, ML3.2/2 Error ellipse: s-maj=23.5km s-min=17.4km az=102.0*

*NEIC **21** 10:22:11.2±2.1, 39.°84N±0.°04×143.°8E±0.°1, h10km±1km, mb4.1/4, Error ellipse: s-maj=17.4km s-min=6.7km az=256.0*

*JMA **21** 10:22:13.6±0.4, 39.°94N×143.°57E, h35km, M4.0*

ISC 21 10:22:11.6±0.8**, 39.°92N**±0.°05×**143.°57E**±0.°07**, h6km, n50, σ1ˢ44**/47**, mb4.0**/11**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	Tanohata	1.31	271	P	Pn	10 22 36.2	-0.3
JTH				eS	Sb	10 22 52.4	-1.4
MIYJ	Miyakonagasawa	1.39	256	P	Pn	10 22 37.9	+0.3
JKEN	Kujiedanarisaw	1.46	282	P	Pn	10 22 38.3	-0.1
JANG	Nango	1.64	287	P	Pn	10 22 40.8	-0.2
JOM	Ohasama	1.81	257	P	Pn	10 22 43.8	+0.4
JOM				eS	Sn	10 23 05.5	-1.2
JMK	Ichinoseki	2.06	243	P	Pn	10 22 46.6	-0.1
JMK				eS	Sn	10 23 10.5	-2.2
JOT	Ohata	2.41	308	eS	Sn	10 23 20.3	-1.1
JNBK	Urakawa-nobuka	2.44	346	eS	Sn	10 23 19.1	-3.0
JYK	Kaneyama	2.68	249	P	Pn	10 22 56.4	+1.1
JKB	Kayabe	2.75	316	P	Pn	10 22 58.0	+1.8
JAK	Akkeshi	3.19	15	eS	Sn	10 23 38.3	-2.3
JFR	Furan	3.32	348	P	Pn	10 23 02.6	-1.5
JFR				eS	Sn	10 23 40.7	-3.3
JAR	Ashorobuto	3.38	2	S	Sn	10 23 43.5	-1.8
JKA	Kamikawa-asahi	4.26	351		Pn	10 23 18.4	+1.5
ASAJ	Asahikawa	4.26	351	Pn	Pn	10 23 17.9	+1.0
	1.7nm,0.3s,baz=177,slow=13,SNR=6.5						
ASAJ				Sn	Sn	10 24 08.8	+1.8
	2.7nm,0.3s,baz=296,slow=14,SNR=3.5						
JSD	Sado	4.54	247	Pn	Pn	10 23 21.8	+0.9
JYT	Yasato	4.55	217	Pn	Pn	10 23 20.0	-0.9
MAJO	Matsushiro	5.40	233		Pn	10 23 33.9	+1.2
JGF	Kuroka	6.54	231	Pn	Pn	10 23 50.2	+1.8
JWT	Wachi	7.96	237	Pn	Pn	10 24 10.8	+2.9
USRK	Ussuriysk Ar.	9.62	300	Pn	Pn	10 24 32.7	+2.2
	baz=108,slow=12,SNR=9.0						
USRK	Ussuriysk Ar.	9.62	300		Pn	10 24 32.3	+1.9
KSRS	Korea Array	12.47	264	Pn	Pn	10 25 12.2	+2.6
	0.1nm,0.3s,baz=212,slow=37,SNR=3.1						
KLR	Kul'dur	12.54	322	Pn	Pn	10 25 17.8	+7.3
	0.0nm,0.3s,baz=275,slow=20,SNR=1.5						
MA2	Magadan	20.20	11	P	P	10 26 47.4	+0.6
	3.0nm,0.4s,baz=206,slow=4.9,SNR=4.9						
SEY	Seymchan	23.65	10	P	P	10 27 23.5	+0.1
	3.5nm,0.8s,baz=198,slow=7.2,SNR=4.7						
YAK	Yakutsk	23.70	344	P	P	10 27 23.1	-0.8
SONM	Songino Array	27.73	299	P	P	10 28 01.0	+0.2
	2.5nm,0.8s,baz=90,slow=8.9,SNR=4.3						
H11N2	WAKE ISLAND Hy	28.39	128	T	T	10 57 41.2	
	baz=320,slow=75,SNR=12						
H11N1	WAKE ISLAND Hy	28.40	128	T	T	10 57 40.7	
	baz=320,slow=75,SNR=13						
H11N3	WAKE ISLAND Hy	28.41	128	T	T	10 57 40.7	
	baz=320,slow=75,SNR=11						
H11S1	WAKE ISLAND Hy	29.21	130	T	T	10 58 41.6	
H11S3	WAKE ISLAND Hy	29.22	130	T	T	10 58 41.6	
H11S2	WAKE ISLAND Hy	29.23	130	T	T	10 58 41.6	
ZALV	Zalesovo Beam	41.29	310	P	P	10 29 57.5	-0.1
	1.8nm,0.7s,baz=86,slow=7.8,SNR=3.8						

ZALV	**Zalesovo Beam**	**41.29**	**310**	P	**P**	**10 29 58.3**	**+0.7**
MK31	**Makanchi Array**	**44.08**	**300**	P	**P**	**10 30 20.3**	**-0.1**
MK31				IAmb	IAmb	10 30 34.3	
	comp=Z,4.0nm,1.2s						
MKAR	**Makanchi Array**	**44.08**	**300**	P	**P**	**10 30 20.5**	**+0.1**
	comp=Z,2.2nm,0.9s,baz=87,slow=9.8,SNR=4.7						
MKAR	**Makanchi Array**	**44.08**	**300**	P	**P**	**10 30 20.2**	**-0.2**
ILAR	**Eielson Array**	**46.16**	**34**	P	**P**	**10 30 37.8**	**+1.2**
	comp=Z,0.6nm,0.7s,baz=262,slow=6.5,SNR=6.5						
ILAR	**Eielson Array**	**46.16**	**34**	P	**P**	**10 30 36.8**	**+0.2**
INK	**Inuvik**	**51.05**	**28**	P	**P**	**10 31 14.3**	**+0.2**
	comp=Z,0.5nm,0.4s,baz=13,slow=27,SNR=1.8						
KKAR	**Karatay Array**	**53.18**	**299**	P	**P**	**10 31 29.8**	**-0.6**
WB2	**Warramunga Arr**	**60.17**	**190**	P	**P**	**10 32 19.4**	**-0.8**
WRA	**Warramunga Arr**	**60.17**	**190**	P	**P**	**10 32 18.5**	**-1.7**
	comp=Z,0.7nm,0.6s,baz=8.2,slow=7.2,SNR=7.3						
WRA	**Warramunga Arr**	**60.17**	**190**	P	P	10 32 17.2	-3.0
YKA	**Yellowknife Ar**	**60.47**	**31**	P	**P**	**10 32 22.2**	**+0.4**
	comp=Z,0.2nm,0.6s,baz=310,slow=6.3,SNR=2.8						
ASAR	**Alice Springs**	**63.90**	**190**	P	**P**	**10 32 46.1**	**+0.9**
	comp=Z,0.4nm,0.5s,baz=6.8,slow=5.4,SNR=4.8						
ASAR	**Alice Springs**	**63.90**	**190**	P	**P**	**10 32 43.8**	**-1.4**
FINES	**FINESS Array B**	**67.05**	**332**	P	**P**	**10 33 05.4**	**+0.2**
	comp=Z,0.6nm,0.5s,baz=104,slow=8.0,SNR=0.8						

IDC ***21*** *10:36:56.9±0.7, 7°.87S×106°.96E, h0^{km}, mb4.4/19, mb1 4.5/19, mb1mx4.3/45, mbtmp4.4/19, Error ellipse: s-maj=27.6km s-min=12.9km az=47.0*

NEIC ***21*** *10:37:00.8±1.6, 8°.19S±0°.06×106°.77E±0°.06, h37^{km}±6^{km}, mb4.7/35, Error ellipse: s-maj=8.9km s-min=7.3km az=138.0*

DJA ***21*** *10:37:00.4±0.9, 8°S±2°×10°7E±°, h23^{km}±8^{km}, M5.0/15, mb5.1/11, mB5.7/6, MLv4.9/15, Mw(mB)5.2/6*

ISC 21 10:36:57.4±0.4, **8°.19S**±0°.05×**106°.64E**±0°.04, **h10**^{km}, **n125**, σ**1^{s}.55**/122, **mb4.5**/44, **5C-2D**, **South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CISI	**Cisompet, Garu**	**1.32**	**62**	Pn	**Pn**	**10 37 21.3**	**-0.7**
CISI				Sn	**Sb**	**10 37 37.0**	**-2.4**
CISI	**Cisompet, Garu**	**1.32**	**62**	P	**Pb**	**10 37 21.6**	**-0.8**
CISI				S	**Sb**	**10 37 37.3**	**-2.1**
DBJI	**Dramaga**	**1.62**	**4**	P	**Pg**	**10 37 30.8**	**+2.2**
DBJI				S	Sg	10 37 56.2	+6.5
LEM	**Lembang**	**1.66**	**36**	Pn	**Pg**	**10 37 28.8**	**-0.5**
	1µm,0.3s,baz=149,slow=21,SNR=149						
LEM				Sn	**Sg**	**10 37 51.0**	**+0.1**
	1µm,0.3s,baz=308,slow=20,SNR=9.3						
LEM	**Lembang**	**1.66**	**36**	S	**Sg**	**10 37 55.2**	**+4.3**
TNG	**Tangerang**	**2.00**	**0**	P	**Pg**	**10 37 36.9**	**+1.1**
TNG				P	Pn	10 37 37.6	+6.3
JCJI	**Jatiwangi**	**2.33**	**44**	P	**Pn**	**10 37 36.7**	**+0.8**
XMIS	**Christmas Isla**	**2.48**	**203**	Pn	**Pn**	**10 37 38.4**	**+0.5**
BLSI	**Bandar Lampung**	**3.12**	**334**	P	**Pb**	**10 37 52.6**	**-0.5**
KASI	**Kota Agung**	**3.39**	**321**	P	**Pb**	**10 37 55.7**	**-2.0**
UGM	**Wanagama**	**3.85**	**86**	Pn	**Pn**	**10 37 56.9**	**0.0**
UGM	**Wanagama**	**3.85**	**86**	P	**Pn**	**10 37 56.4**	**-0.5**
SMRI	**Semarang**	**3.93**	**74**	Pn	**Pn**	**10 37 59.8**	**+1.9**
SMRI	**Semarang**	**3.93**	**74**	P	**Pn**	**10 37 59.6**	**+1.7**
SMRI				S	**Sn**	**10 38 44.5**	**+0.3**
LWLI	**Liwa**	**4.06**	**321**	P	**Pb**	**10 38 05.4**	**-3.7**
LWLI				S	**Sb**	**10 38 54.7**	**-3.6**
MNAI	**Manna**	**5.28**	**316**	Pn	**Pn**	**10 38 19.4**	**+3.0**
MNAI	**Manna**	**5.28**	**316**	P	Pn	10 38 21.8	+5.4
	1.4nm8µm322nm,0.5s						
LHSI	**Lahat**	**5.33**	**324**	P	Pb	10 38 23.6	-7.0
	245nm,0.9s						
PMBI	**Palembang**	**5.54**	**340**	Pn	Pb	10 38 27.7	-6.7
PPBI	**Pangkal Pinang**	**6.00**	**355**	P	Pn	10 38 31.5	+5.1
	2.3nm53µm73nm,0.8s						
JAGI	**Jajag, Banyuwa**	**7.44**	**93**	Pn	**Pn**	**10 38 45.5**	**-0.6**
JAGI	**Jajag, Banyuwa**	**7.44**	**93**	P	**Pn**	**10 38 47.0**	**+0.9**
	0.6nm120nm,0.6s						
DSRI	**Dabo**	**7.93**	**345**	P	Pn	10 38 58.6	+5.8
	26nm,1.0s						
SRBI	**Singaraja**	**8.49**	**90**	P	**Pn**	**10 39 01.4**	**+0.9**
	128nm,0.9s						
PDSI	**Padang**	**9.49**	**319**	P	**Pn**	**10 39 16.8**	**+2.5**
	6µm18nm,0.5s						
SISI	**Saibi**	**10.15**	**312**	P	Pn	10 39 30.1	+6.8
MNSI	**Mandailing Nat**	**11.36**	**321**	P	**Pn**	**10 39 42.2**	**+2.3**
GSI	**Gunungsitoli**	**13.06**	**316**	Pn	**Pn**	**10 40 04.1**	**+1.0**
GSI	**Gunungsitoli**	**13.06**	**316**	P	**Pn**	**10 40 06.1**	**+2.9**
	8µm96nm,0.6s						
TOLI2	**Tolitoli**	**16.86**	**57**	Pn	**Pn**	**10 40 51.2**	**-2.4**
BATI	**Baumata**	**16.93**	**98**	Pn	**P**	**10 40 56.6**	**0.0**
	9.2nm,0.3s,baz=270,slow=20,SNR=2.5						
MRSI	**Marisa**	**17.51**	**61**	P	**P**	**10 41 04.6**	**+1.6**
FITZ	**Fitzroy Crossi**	**20.94**	**120**	P	**P**	**10 41 41.0**	**+0.4**
	11nm,0.8s,baz=305,slow=6.6,SNR=13						
CM31	**Chiang Mai Arr**	**27.54**	**344**	P	**P**	**10 42 44.3**	**-0.3**
CM31				IAmb	IAmb	10 42 51.6	
	comp=Z,9.6nm,0.3s						
CMAR	**Chiang Mai Arr**	**27.54**	**344**	P	**P**	**10 42 43.6**	**-1.0**
	comp=Z,2.3nm,0.4s,baz=179,slow=8.9,SNR=13						
CMAR	**Chiang Mai Arr**	**27.54**	**344**	P	**P**	**10 42 43.0**	**-1.6**
CHTO	**Chiang Mai**	**27.88**	**344**	P	**P**	**10 42 46.3**	**-1.3**
WRA	**Warramunga Arr**	**29.25**	**116**	P	**P**	**10 42 59.2**	**-0.6**
	comp=Z,2.7nm,0.7s,baz=290,slow=10,SNR=18						
PALK	**Pallekele**	**30.07**	**300**	P	**P**	**10 43 07.3**	**0.0**
PALK				IAmb	IAmb	10 43 10.1	
	comp=Z,18nm,1.3s						
ASAR	**Alice Springs**	**30.31**	**124**	P	**P**	**10 43 09.9**	**+0.6**
	comp=Z,1.8nm,0.4s,baz=296,slow=8.1,SNR=40						
ASAR	**Alice Springs**	**30.31**	**124**	P	**P**	**10 43 08.6**	**-0.7**
H08S2	**Diego Garcia H**	**33.82**	**268**	T	T	11 19 15.4	
	baz=94,slow=74,SNR=4.7						
H08S3	**Diego Garcia H**	**33.83**	**269**	T	T	11 19 15.9	
	baz=210,slow=74,SNR=20						
H08S1	**Diego Carcia H**	**33.84**	**268**	T	T	11 19 16.6	
COEN	**Coen**	**36.28**	**102**	P	**P**	**10 44 00.6**	**-0.8**
COEN				IAmb	IAmb	10 44 01.2	
	comp=Z,5.5nm,0.7s						
BBOO	**Buckleboo**	**36.64**	**136**	P	**P**	**10 44 04.2**	**0.0**
BBOO				IAmb	IAmb	10 44 21.4	
	comp=Z,16nm,1.2s						
CTAO	**Charters Tower**	**40.09**	**111**	P	**P**	**10 44 34.4**	**+0.9**
CTAO				IAmb	IAmb	10 44 35.2	
	comp=Z,8.1nm,1.0s						
STKA	**Stephens Creek**	**40.13**	**131**	P	**P**	**10 44 35.1**	**+1.4**
	comp=Z,3.2nm,0.4s,baz=306,slow=7.2,SNR=16						
STKA	**Stephens Creek**	**40.13**	**131**	P	**P**	**10 44 34.5**	**+0.8**
LSA	**Lhasa**	**40.51**	**339**	P	**P**	**10 44 37.2**	**-0.1**
NJ2	**Nanjing**	**41.68**	**16**	*e*P	**P**	**10 44 46.0**	**-0.3**
NJ2				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GTA	**Gaotai**	**47.77**	**353**	*e*P	**P**	**10 45 37.0**	**+2.0**
GTA				pP	pwP	10 45 44.4	+3.2
GTA				sP	sP	10 45 47.4	+9.3
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
HHC	**Hu-ho-hao-te**	**49.00**	**5**	*e*P	**P**	**10 45 46.3**	**+1.8**
HHC				pmax	pmax		
	comp=Z,5.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,2µm,5.3s						
HHC				LR	LR		
	comp=N,2µm,16.8s						
HHC				LR	LR		
	comp=E,4µm,14.7s						
HHC				LR	LR		
	comp=Z,5µm,15.3s						
KSAR	**Wonju Array Be**	**49.55**	**22**	P	**P**	**10 45 48.2**	**-0.4**
KSRS	**Korea Array**	**49.58**	**22**	P	**P**	**10 45 47.0**	**-1.7**
	comp=Z,2.7nm,0.8s,baz=207,slow=7.5,SNR=8.2						
KS19	**Wonju Array Si**	**49.60**	**22**	P	**P**	**10 45 48.3**	**-0.7**
JHS	**Saijyo**	**49.70**	**29**	P	**P**	**10 45 48.5**	**-1.4**
JWT	**Wachi**	**51.05**	**30**	P	**P**	**10 45 58.2**	**-1.7**
JWT				IAmb	IAmb	10 46 12.6	
	comp=Z,15nm,1.2s						
NIL	**Nilore**	**52.30**	**325**	P	**P**	**10 46 09.5**	**0.0**
WMQ	**Urumqi**	**54.54**	**343**	*e*P	**P**	**10 46 26.8**	**+1.1**
KSH	**Kashi**	**55.32**	**331**	P	**P**	**10 46 31.4**	**-0.1**
KSH				sP	pwP	10 46 45.5	+7.8
KSH				pmax	pmax		
	comp=Z,21nm,0.5s						
KSH				pmax	pmax		
	comp=Z,21µm,15.7s						
KBL	**Kabul**	**55.41**	**322**	P	**P**	**10 46 31.2**	**-1.2**
KBL				IAmb	IAmb	10 46 34.8	
	comp=Z,5.9nm,0.9s						
SONM	**Songino Array**	**55.77**	**360**	P	**P**	**10 46 34.0**	**-0.6**
	comp=Z,1.8nm,0.6s,baz=172,slow=8.5,SNR=11						
SONM				PcP	**PcP**	**10 47 33.8**	**+0.1**
	comp=Z,3.3nm,0.7s,baz=174,slow=3.1,SNR=12						
SONM	**Songino Array**	**55.77**	**360**	P	**P**	**10 46 34.1**	**-0.6**
SONM					**PcP**	**10 47 33.7**	**0.0**
ULN	**Ulaanbaatar**	**55.81**	**0**	P	**P**	**10 46 34.4**	**-0.5**
SHLS	**Shalkode**	**56.77**	**336**	*e*P	**P**	**10 46 40.4**	**-1.5**
	comp=Z,4.6nm,0.4s,baz=337						
UZB	**Uzynbulak**	**56.93**	**336**	*e*P	**P**	**10 46 43.1**	**+0.1**
	comp=Z,3.6nm,0.5s,baz=336						
USRK	**Ussuriysk Ar.**	**56.96**	**22**	P	**P**	**10 46 41.4**	**-1.6**
	comp=Z,1.9nm,0.5s,baz=195,slow=6.5,SNR=12						
USRK	**Ussuriysk Ar.**	**56.96**	**22**	P	**P**	**10 46 41.8**	**-1.2**
SATY	**Saty**	**57.11**	**336**	*e*P	**P**	**10 46 43.9**	**-0.4**
	comp=Z,5.1nm,0.6s,baz=336						
KPKS	**Kokpek**	**57.34**	**336**	*e*P	**P**	**10 46 45.1**	**-0.7**
	baz=336						
MDOK	**Medeo**	**57.76**	**335**	*e*P	**P**	**10 46 48.6**	**-0.3**
	baz=335						
AAA	**Alma-Ata**	**57.85**	**335**	*e*P	**P**	**10 46 49.2**	**-0.2**
	baz=335						
AAK	**Ala-Archa**	**58.46**	**333**	P	**P**	**10 46 54.1**	**+0.3**
KUU	**Kurty**	**58.65**	**335**	*e*P	**P**	**10 46 53.9**	**-1.1**
	comp=Z,8.7nm,0.5s,baz=335						
ZSN	**Zaisan**	**58.66**	**343**	*e*P	**P**	**10 46 53.0**	**-1.9**
	baz=343						
TDK	**Taldyqorghan**	**58.73**	**337**	*e*P	**P**	**10 46 55.5**	**0.0**
	comp=Z,10nm,0.6s,baz=337						
MK31	**Makanchi Array**	**58.88**	**341**	P	**P**	**10 46 55.8**	**-0.6**
MK31				IAmb	IAmb	10 46 59.2	
	comp=Z,5.0nm,1.0s						
MKAR	**Makanchi Array**	**58.88**	**341**	P	**P**	**10 46 55.8**	**-0.7**
	comp=Z,4.7nm,0.6s,baz=148,slow=7.2,SNR=60						
MKAR	**Makanchi Array**	**58.88**	**341**	P	**P**	**10 46 55.5**	**-0.9**
MAKZ	**Makanchi**	**58.99**	**340**	P	**P**	**10 46 56.8**	**-0.5**
MAKZ				IAmb	IAmb	10 46 59.0	
	comp=Z,4.4nm,1.2s						
DZM	**Mont Dzumac**	**59.02**	**111**	P	**P**	**10 46 56.7**	**-1.4**
	comp=Z,5.6nm,0.9s,baz=295,slow=20,SNR=9.3						
DZM	**Mont Dzumac**	**59.02**	**111**	P	**P**	**10 46 56.6**	**-1.5**
SGDS	**Sogindy**	**59.04**	**333**	*e*P	**P**	**10 46 57.3**	**-0.5**
	baz=333						
SANVU	**Saraoutou**	**59.56**	**103**	P	**P**	**10 46 59.5**	**-2.3**
IUG	**Iuzhnay**	**60.24**	**329**	*e*P	**P**	**10 47 06.3**	**+0.2**
	comp=Z,3.0nm,0.7s,baz=329						
BTLS	**Baital**	**60.56**	**334**	*e*P	**P**	**10 47 07.5**	**-0.5**
	baz=334						
KK31	**Karatay Array**	**60.70**	**330**	P	**P**	**10 47 09.4**	**+0.3**
KK31				IAmb	IAmb	10 47 10.7	
	comp=Z,2.3nm,0.7s						
KKAR	**Karatay Array**	**60.70**	**330**	P	**P**	**10 47 09.0**	**-0.2**
KKAR				IAmb	IAmb	10 47 10.6	
	comp=Z,2.3nm,0.7s						
KKAR	**Karatay Array**	**60.70**	**330**	P	**P**	**10 47 08.9**	**-0.2**
KURK	**Kurchatov**	**63.49**	**341**	P	**P**	**10 47 27.0**	**-0.6**
KURK				IAmb	IAmb	10 47 29.7	
	comp=Z,11nm,0.9s						
GEYT	**Alibeck**	**64.41**	**319**	P	**P**	**10 47 35.3**	**+1.2**
	comp=Z,1.9nm,0.4s,baz=218,slow=9.3,SNR=3.7						
GEYT	**Alibeck**	**64.41**	**319**	P	**P**	**10 47 33.0**	**-1.1**
ZAA0	**Zalesovo Array**	**64.59**	**346**	P	**P**	**10 47 34.5**	**-0.3**
ZALV	**Zalesovo Beam**	**64.59**	**346**	P	**P**	**10 47 33.5**	**-1.3**
	comp=Z,1.1nm,0.3s,baz=151,slow=6.5,SNR=7.5						
ZALV	**Zalesovo Beam**	**64.59**	**346**	P	**P**	**10 47 34.1**	**-0.6**
BRZS	**Berezniki**	**65.04**	**337**	*e*P	**P**	**10 47 36.9**	**-0.9**
	baz=336						
RAYN	**Ar Rayn**	**67.51**	**300**	P	**P**	**10 47 52.5**	**-1.8**
RAYN				IAmb	IAmb	10 47 57.5	
	comp=Z,10nm,1.4s						
BRVK	**Borovoye**	**68.38**	**337**	P	**P**	**10 47 59.1**	**+0.1**
ABKAR	**Akbulak array**	**70.25**	**330**	P	**P**	**10 48 11.8**	**+1.1**
PEA0B	**Petropavlovsk-**	**74.80**	**29**	P	**P**	**10 48 36.5**	**-1.3**
PETK	**Petropavlovsk-**	**74.80**	**29**	P	**P**	**10 48 36.0**	**-1.8**
	comp=Z,1.1nm,0.5s,baz=153,slow=1.3,SNR=15						
PETK	**Petropavlovsk-**	**74.80**	**29**	P	**P**	**10 48 36.6**	**-1.2**
MATP	**Matopo**	**76.12**	**251**	P	**P**	**10 48 49.3**	**+3.0**
	comp=Z,3.3nm,0.9s,baz=95,slow=9.3,SNR=2.8						
KBZ	**Khabaz**	**77.29**	**318**	P	**P**	**10 48 53.1**	**+1.0**
	comp=Z,4.2nm,0.9s,baz=58,slow=6.1,SNR=6.8						
TIXI	**Tiksi**	**81.02**	**7**	P	**P**	**10 49 11.0**	**-1.0**
TIXI				IAmb	IAmb	10 49 11.4	
	comp=Z,7.3nm,0.6s						
QSPA	**South Pole Qui**	**81.81**	**180**	P	**P**	**10 49 18.2**	**+1.6**
QSPA				IAmb	IAmb	10 49 19.1	
	comp=Z,3.1nm,0.7s						
BR131	**Keskin Array S**	**82.35**	**312**	P	**P**	**10 49 20.1**	**+0.2**
BR131				IAmb	IAmb	10 49 22.3	
	comp=Z,7.5nm,0.7s						
BRTR	**Keskin Array B**	**82.35**	**312**	P	**P**	**10 49 21.4**	**+1.5**
	comp=Z,5.0nm,0.8s,baz=141,slow=6.7,SNR=23						
BRTR	**Keskin Array B**	**82.35**	**312**	P	**P**	**10 49 21.6**	**+1.7**
KLMR	**Klimovskoe**	**86.27**	**333**	*e*P	**P**	**10 49 39.4**	**+0.3**
KLMR				AMP		10 49 41.7	
	comp=Z,19nm,1.4s						
SORM	**Soroca**	**88.31**	**319**	⇑P	**P**	**10 49 48.1**	**-1.2**
AKASG	**Malin Array Be**	**88.40**	**322**	P	**P**	**10 49 52.2**	**+2.6**
	comp=Z,0.5nm,0.4s,baz=87,slow=4.7,SNR=4.6						
VRI	**Vrincioaia**	**88.86**	**317**	⇓P	**P**	**10 49 54.9**	**+2.9**
PLOR	**Plostina**	**88.91**	**316**	⇑P	**P**	**10 49 53.6**	**+1.4**
MLR	**Muntele Rosu**	**89.31**	**316**	⇓P	**P**	**10 49 49.9**	**-4.4**
OZUR		**89.55**	**317**	⇑P	**P**	**10 49 51.8**	**-3.4**
BURAR	**Bucovina Array**	**90.24**	**318**	⇑P	**P**	**10 50 00.8**	**+2.3**
BURAR	**Bucovina Array**	**90.24**	**318**	P	**P**	**10 50 01.5**	**+3.0**
BUR08	**Bucovina Ar. S**	**90.26**	**318**	P	**P**	**10 50 01.8**	**+3.1**
BUR08				IAmb	IAmb	10 50 02.8	
	comp=Z,6.1nm,1.4s						
HERR	**Herculane**	**91.64**	**315**	⇑P	**P**	**10 50 06.9**	**+1.9**
FINES	**FINESS Array B**	**92.64**	**332**	P	**P**	**10 50 10.5**	**+1.3**
	comp=Z,1.8nm,0.8s,baz=92,slow=4.6,SNR=1.8						
ARCES	**ARCESS Array B**	**94.52**	**340**	P	**P**	**10 50 17.6**	**-0.1**
	comp=Z,1.8nm,0.8s,baz=102,slow=3.1,SNR=16						
YKA	**Yellowknife Ar**	**118.09**	**20**	PKP	**PKPdf**	**10 55 43.5**	**-0.8**
	comp=Z,0.2nm,0.7s,baz=323,slow=0.9,SNR=5.3						
TXAR	**Lajitas Array**	**144.61**	**50**	PKP	PKPbc	10 56 34.3	+0.4
	comp=Z,1.0nm,0.6s,baz=234,slow=1.4,SNR=20						

IDC ***21*** *10:38:03.8±1.0, 16°.91S×14°.16W, h0^{km}, mb4.3/9, mb1 4.4/9, mb1mx4.1/40, mbtmp4.3/9, Error ellipse: s-maj=31.1km s-min=21.4km az=152.0*

NEIC ***21*** *10:38:06.0±1.2, 16°.8S±0°.1×14°.2W±0°.1, h10^{km}±1^{km}, mb4.8/21, Error ellipse: s-maj=23.6km s-min=18.8km az=122.0*

ISC 21 10:38:05.9±0.8, **16°.7S**±0°.1×**14°.2W**±0°.1, **h10**^{km}, **n43**, σ**0^{s}.99**/36, **mb4.7**/20, **2C**, **Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H10S2	**ASCENSION HYDR**	**7.72**	**357**	T	T	10 47 58.2	
	baz=176,slow=74,SNR=144						
H10S3	**ASCENSION HYDR**	**7.73**	**357**	T	T	10 47 58.8	
	baz=44,slow=74,SNR=269						
ASCN	**Ascension**	**8.73**	**359**	Pn	**Pn**	**10 40 10.5**	**-1.8**
H10N1	**ASCENSION HYDR**	**8.82**	**358**	T	T	10 49 24.8	
	baz=187,slow=71,SNR=50						
H10N3	**ASCENSION HYDR**	**8.82**	**358**	T	T	10 49 22.5	
	baz=187,slow=71,SNR=102						
H10N2	**ASCENSION HYDR**	**8.84**	**358**	T	T	10 49 26.2	
	baz=187,slow=71,SNR=45						
RCBR	**Riachuelo**	**23.84**	**294**	P	**P**	**10 43 20.2**	**+0.6**
	8.6nm,0.8s,baz=133,slow=5.7,SNR=5.6						
RCBR	**Riachuelo**	**23.84**	**294**	P	**P**	**10 43 19.6**	**0.0**
LIC	**Lamto**	**24.53**	**22**	*e*P	**P**	**10 43 27.4**	**+1.5**
	31nm,1.2s						
KIC	**Kosan Boka**	**24.77**	**23**	*e*P	**P**	**10 43 29.6**	**+1.6**
	24nm,1.2s						
TIC	**Toumodi**	**24.93**	**22**	*e*P	**P**	**10 43 28.4**	**-1.1**
DBIC	**Dimbokro**	**25.01**	**22**	P	**P**	**10 43 31.6**	**+1.4**
	5.0nm,0.9s,baz=219,slow=17,SNR=2.3						
DBIC	**Dimbokro**	**25.01**	**22**	P	**P**	**10 43 30.0**	**-0.2**
KOWA	**Kowa**	**32.60**	**19**	P	**P**	**10 44 38.5**	**+0.6**
	5.2nm,0.8s,baz=215,slow=6.4,SNR=7.7						
KOWA	**Kowa**	**32.60**	**19**	P	**P**	**10 44 39.0**	**+1.0**
KOWA				IAmb	IAmb	10 44 40.2	
	comp=Z,12nm,1.1s						
TOA0	**Torodi Ar. Sit**	**33.58**	**29**	P	**P**	**10 44 47.2**	**+0.8**
TOA0				IAmb	IAmb	10 44 48.7	
	comp=Z,9.1nm,0.9s						
TORD	**Torodi Ar. Bea**	**33.58**	**29**	P	**P**	**10 44 47.1**	**+0.7**
	comp=Z,8.7nm,1.0s,baz=212,slow=8.0,SNR=14						
TORD	**Torodi Ar. Bea**	**33.58**	**29**	P	**P**	**10 44 46.9**	**+0.4**
MATP	**Matopo**	**40.57**	**102**	P	**P**	**10 45 44.8**	**-1.3**
	comp=Z,2.6nm,0.7s,baz=279,slow=7.4,SNR=5.8						
LSZ	**Lusaka**	**40.73**	**94**	P	**P**	**10 45 47.0**	**-0.4**
CPUP	**Villa Florida**	**41.08**	**249**	P	**P**	**10 45 49.0**	**-1.1**
	comp=Z,4.0nm,0.7s,baz=85,slow=6.8,SNR=6.4						
CPUP	**Villa Florida**	**41.08**	**249**	P	**P**	**10 45 50.1**	**0.0**
SAML	**Samuel**	**48.27**	**273**	P	**P**	**10 46 47.4**	**-0.3**
SAML				IAmb	IAmb	10 46 50.7	
	comp=Z,14nm,1.4s						
LPAZ	**La Paz**	**51.56**	**262**	P	**P**	**10 47 11.7**	**-1.7**
LPAZ				IAmb	IAmb	10 47 14.5	
	comp=Z,11nm,1.6s						
AC02	**Maricunga**	**51.65**	**249**	P	**P**	**10 47 13.7**	**-0.1**
AC02				IAmb	IAmb	10 47 16.1	
	comp=Z,13nm,1.3s						
CO01	**Juntas del Tor**	**52.52**	**245**	P	**P**	**10 47 22.1**	**+2.1**
CO01				IAmb	IAmb	10 47 33.2	
	comp=Z,12nm,1.2s						
PB07	**IPOC Station P**	**52.58**	**255**	P	**P**	**10 47 20.9**	**+0.4**
PB07				IAmb	IAmb	10 47 22.2	
	comp=Z,42nm,1.3s						
SYO	**Syowa Base**	**61.93**	**161**	⇑*e*X	P	10 48 16.0	-9.5
GERES	**GERESS Array B**	**69.83**	**19**	P	**P**	**10 49 17.3**	**+0.6**
	comp=Z,0.3nm,0.5s,baz=189,slow=5.8,SNR=5.6						
GERES	**GERESS Array B**	**69.83**	**19**	P	**P**	**10 49 17.5**	**+0.8**
MLR	**Muntele Rosu**	**71.82**	**29**	P	**P**	**10 49 29.8**	**+0.9**
MLR				IAmb	IAmb	10 49 31.4	
	comp=Z,16nm,1.3s						
MORC	**Moravsky Berou**	**71.90**	**21**	P	**P**	**10 49 30.2**	**+1.0**
MORC				IAmb	IAmb	10 49 51.9	
	comp=Z,11nm,1.6s						
CFR	**Carcaliu**	**72.61**	**30**	⇑P	**P**	**10 49 35.0**	**+1.6**
AKASG	**Malin Array Be**	**77.18**	**27**	P	**P**	**10 49 59.7**	**-0.1**
	comp=Z,3.8nm,0.8s,baz=220,slow=5.5,SNR=13						
AKASG	**Malin Array Be**	**77.18**	**27**	P	**P**	**10 49 59.5**	**-0.2**
HICK	**Hickman**	**88.28**	**309**	P	**P**	**10 50 58.2**	**+0.4**
S44A	**Carbondale**	**88.73**	**310**	P	**P**	**10 51 00.2**	**+0.3**
LPAR	**Lepanto**	**88.74**	**308**	P	**P**	**10 51 00.2**	**+0.2**
CCM	**Cathedral Cave**	**90.33**	**310**	P	**P**	**10 51 08.0**	**+0.5**
R40A	**Maddies Statio**	**91.17**	**310**	P	**P**	**10 51 11.6**	**+0.3**
R40A				IAmb	IAmb	10 51 13.8	
	comp=Z,7.0nm,1.0s						
HHAR	**Hobbs**	**91.74**	**307**	P	**P**	**10 51 14.5**	**+0.4**
HHAR				IAmb	IAmb	10 51 15.1	
	comp=Z,6.2nm,1.1s						
TXAR	**Lajitas Array**	**97.55**	**298**	P	Pdif	10 51 41.3	+0.3
	comp=Z,0.4nm,0.7s,baz=126,slow=6.4,SNR=5.1						
ASAR	**Alice Springs**	**129.19**	**141**	PKP	**PKPdf**	**10 57 14.3**	**-1.0**
	comp=Z,1.3nm,1.0s,baz=211,slow=2.6,SNR=4.3						

NEIC ***21*** *11:12:14.0±1.2, 16°.5S±0°.2×14°.51W±0°.09, h10^{km}±1^{km}, mb4.5/8, Error ellipse: s-maj=35.3km s-min=12.4km az=167.0*

IDC ***21*** *11:12:14.3±3.3, 16°.19S×14°.64W, h0^{km}, mb4.1/5, mb1 4.1/5, mb1mx3.9/23, mbtmp4.1/5, Error ellipse: s-maj=181.6km s-min=28.1km az=139.0*

ISC 21 11:12:14.3±0.8, **16°.5S**±0°.2×**14°.5W**±0°.1, **h10**^{km}, **n20**, σ**0^{s}.75**/15, **mb4.3**/9, **Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H10S2	**ASCENSION HYDR**	**7.47**	**359**	T	T	11 22 06.6	
	baz=176,slow=74,SNR=65						
H10S3	**ASCENSION HYDR**	**7.48**	**359**	T	T	11 22 07.1	
	baz=44,slow=74,SNR=136						
SHEL	**Horse Pasture**	**8.42**	**88**	Pn	**Pn**	**11 14 15.9**	**-0.6**
H10N1	**ASCENSION HYDR**	**8.58**	**0**	T	T	11 23 29.6	
	baz=179,slow=79,SNR=30						
H10N3	**ASCENSION HYDR**	**8.58**	**360**	T	T	11 23 29.0	
	baz=179,slow=79,SNR=58						
H10N2	**ASCENSION HYDR**	**8.60**	**0**	T	T	11 23 30.2	
	baz=179,slow=79,SNR=31						
DBIC	**Dimbokro**	**24.90**	**23**	P	**P**	**11 17 37.8**	**+0.3**
	8.1nm,1.1s,baz=190,slow=11,SNR=3.7						
DBIC	**Dimbokro**	**24.90**	**23**	P	**P**	**11 17 37.6**	**+0.1**
TSUM	**Tsumeb**	**30.63**	**100**	P	**P**	**11 18 29.8**	**+0.7**
TSUM				IAmb	IAmb	11 18 51.9	
	comp=Z,14nm,1.6s						
TOA0	**Torodi Ar. Sit**	**33.50**	**29**	P	**P**	**11 18 53.8**	**-0.3**
TOA0				IAmb	IAmb	11 18 56.4	
	comp=Z,9.5nm,1.1s						
TORD	**Torodi Ar. Bea**	**33.50**	**29**	P	**P**	**11 18 54.0**	**-0.2**
	comp=Z,5.9nm,1.1s,baz=218,slow=10.0,SNR=11						
CPUP	**Villa Florida**	**40.91**	**249**	P	**P**	**11 19 58.3**	**+1.3**
	comp=Z,1.7nm,0.8s,baz=89,slow=10,SNR=4.0						
CPUP	**Villa Florida**	**40.91**	**249**	P	**P**	**11 19 56.6**	**-0.5**
LVC	**Limon Verde**	**51.42**	**254**	P	**P**	**11 21 19.1**	**-1.2**
LVC				IAmb	IAmb	11 21 45.9	
	comp=Z,3.9nm,1.0s						
AC02	**Maricunga**	**51.48**	**249**	P	**P**	**11 21 20.9**	**0.0**
RAYN	**Ar Rayn**	**70.82**	**57**	P	**P**	**11 23 30.9**	**-0.8**
RAYN				IAmb	IAmb	11 23 37.3	
	comp=Z,3.9nm,1.2s						
BRTR	**Keskin Array B**	**71.67**	**37**	P	**P**	**11 23 37.9**	**+1.3**
	comp=Z,1.6nm,1.0s,baz=237,slow=6.8,SNR=6.0						
BRTR	**Keskin Array B**	**71.67**	**37**	P	**P**	**11 23 36.6**	**0.0**
AKASG	**Malin Array Be**	**77.09**	**27**	P	**P**	**11 24 07.8**	**+0.2**
	comp=Z,0.7nm,0.6s,baz=220,slow=4.9,SNR=11						
AKASG	**Malin Array Be**	**77.09**	**27**	P	**P**	**11 24 07.7**	**+0.1**

MOS ***21*** *11:34:05.4±0.9, 16°.89S×14°.16W, h10^{km}, mb5.4/49, Error ellipse: s-maj=9.5km s-min=5.9km az=59.3*

IDC ***21*** *11:34:05.3±0.4, 16°.90S×14°.09W, h0^{km}, mb4.7/28, mb1 4.8/28, mb1mx4.8/30, mbtmp4.7/28, MS4.5/7, Ms1 4.5/7, ms1mx4.2/32, Error ellipse: s-maj=13.2km s-min=12.4km az=146.0*

NEIC ***21*** *11:34:06.4±1.5, 16°.85S±0°.10×14°.12W±0°.09, h10^{km}±1^{km}, mb5.3/185, Error ellipse: s-maj=16.8km s-min=13.9km az=168.0*

BJI ***21*** *11:34:07.2±0.0, 16°.80S×14°.10W, h8^{km}, Ms5.2/1, Ms7 5.0/1*

GCMT ***21*** *11:34:08.4±0.3, 16°.59S±0°.04×14°.08W±0°.02, h17^{km}±1^{km}, MW5.1/97, Moment Tensor Solution. s13,c13; s97,c117; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.62±.37; $M_{\theta\theta}$0.59±.21; $M_{\phi\phi}$-4.21±.29; $M_{r\theta}$-4.81±.90; $M_{\theta\phi}$0.99±.14; $M_{\phi r}$1.65±.61; Best double couple: $M_0$6.34500×10^{16} NP1:ϕ_s191.00000°, δ33.00000°, λ145.00000°. NP2: ϕ_s311.00000°, δ72.00000°, λ62.00000°. Principal axes: T 7.1980, Plg54.0000°, Azm187.0000°; N -1.7050, Plg27.0000°, Azm321.0000°; P -5.4910, Plg22.0000°, Azm62.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

BGR ***21*** *11:34:28.8±0.0, 13°.99S×11°.92W, h10^{km}, mb5.0*

ISC 21 11:34:06.9±0.3, **16°.90S**±0°.06×**14°.10W**±0°.05, **h10**^{km}, **n589**, σ**1^{s}.15**/590, **mb5.2**/178, **MS4.6**/11, **36C**, **Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H10S2	**ASCENSION HYDR**	**7.91**	**356**	T	T	11 43 59.6	
	baz=176,slow=74,SNR=192						
H10S3	**ASCENSION HYDR**	**7.92**	**356**	T	T	11 44 01.2	
	baz=44,slow=74,SNR=318						
SHEL	**Horse Pasture**	**8.07**	**85**	P	**Pn**	**11 36 04.2**	**-0.2**
SHEL	**Horse Pasture**	**8.07**	**85**	Pn	**Pn**	**11 36 04.2**	**-0.2**
H10N1	**ASCENSION HYDR**	**9.01**	**358**	T	T	11 45 28.4	
	baz=180,slow=72,SNR=26						
H10N3	**ASCENSION HYDR**	**9.01**	**357**	T	T	11 45 22.9	
	baz=180,slow=72,SNR=112						
H10N2	**ASCENSION HYDR**	**9.03**	**358**	T	T	11 45 28.4	
	baz=180,slow=72,SNR=30						
NBRF	**Rio Formoso -**	**22.05**	**289**	*e*P	**P**	**11 39 01.1**	**-1.1**
RCBR	**Riachuelo**	**24.01**	**295**	P	**P**	**11 39 21.4**	**-0.8**
	25nm,0.9s,baz=108,slow=12,SNR=11						
RCBR	**Riachuelo**	**24.01**	**295**	P	**P**	**11 39 21.4**	**-0.8**
RCBR				IAmb	IAmb	11 39 23.3	
	comp=Z,84nm,1.4s						
RCBR	**Riachuelo**	**24.01**	**295**	*e*P	**P**	**11 39 21.8**	**-0.4**
NBLI	**Livramento-PB**	**24.24**	**290**	*e*P	**P**	**11 39 23.4**	**-1.0**
LIC	**Lamto**	**24.67**	**22**	*e*P	**P**	**11 39 28.2**	**+0.1**
	comp=Z,53nm,1.1s						
GDU01	**Guandu, BA**	**24.77**	**274**	*e*P	**P**	**11 39 29.7**	**+0.6**
KIC	**Kosan Boka**	**24.90**	**23**	*e*P	**P**	**11 39 30.2**	**0.0**
	comp=Z,74nm,1.2s						
TIC	**Toumodi**	**25.06**	**22**	*e*P	**P**	**11 39 30.8**	**-0.9**
RIB01	**Linhares ES**	**25.10**	**260**	*e*P	**P**	**11 39 34.0**	**+1.9**
NBPA	**Parau_RN**	**25.10**	**294**	*e*P	**P**	**11 39 31.3**	**-0.8**
DBIC	**Dimbokro**	**25.14**	**22**	P	**P**	**11 39 31.0**	**-1.4**
	comp=Z,16nm,0.9s,baz=181,slow=10,SNR=9.9						
DBIC	**Dimbokro**	**25.14**	**22**	P	**P**	**11 39 31.0**	**-1.4**
DBIC	**Dimbokro**	**25.14**	**22**	P	**P**	**11 39 30.6**	**-1.8**
DBIC				IAmb	IAmb	11 39 35.5	
	comp=Z,110nm,1.6s						

ALF01	Guarapari-ES	25.47	257	*e*P	P	11 39 37.0	+1.6
BSFB	Barra de Sao F	25.52	262	*e*P	P	11 39 38.0	+2.1
SJMB	Sao Joao De Ma	25.84	262	*e*P	P	11 39 40.4	+1.6
CAM01	Campos-RJ	26.44	255	*e*P	P	11 39 45.9	+1.7
DUB01	Friburgo-RJ	27.12	255	*e*P	P	11 39 51.8	+1.4
VAS01	Vassouras-RJ	28.13	254	*e*P	P	11 39 59.4	0.0
JANB	Januaria	29.09	269	*e*P	P	11 40 07.7	-0.4
BSCB	Bom Sucesso	29.27	257	*e*P	P	11 40 09.7	0.0
SDBA	SAO DESIDERIO	30.11	274	*e*P	P	11 40 17.6	+0.5
TSUM	Tsumeb	30.19	99	P	P	11 40 17.3	-0.6
PARB	Paraibuna	30.24	253	*e*P	P	11 40 19.4	+1.2
VAO	Valinhos	31.44	253	*e*P	P	11 40 28.9	+0.1
PET01	Itanhaem-SP	31.85	251	*e*P	P	11 40 32.8	+0.4
IPMB	Ipameri, GO	32.53	263	*e*P	P	11 40 38.6	+0.1
ROSB	Rosrio	32.61	292	*e*P	P	11 40 38.9	-0.2
KOWA	Kowa	32.75	18	P	P	11 40 40.1	-0.1
KOWA				IAmb	IAmb	11 40 45.2	
	comp=Z,20nm,0.8s						
BB19B	Bebedouro	32.78	257	*e*P	P	11 40 41.4	+0.9
PEXB	Peixe	33.42	274	*e*P	P	11 40 47.4	+1.2
SMTB	Santa Maria do	33.57	280	*e*P	P	11 40 48.3	+0.8
TOA0	Torodi Ar. Sit	33.69	29	P	P	11 40 47.9	-0.6
TOA0				IAmb	IAmb	11 40 50.2	
	comp=Z,38nm,1.0s						
TORD	Torodi Ar. Bea	33.69	29	P	P	11 40 47.9	-0.5
	comp=Z,26nm,0.9s,baz=214,slow=8.1,SNR=39						
TORD				LR	LR	11 52 26.6	
	comp=Z,748nm,18.0s,baz=150,slow=33						
TORD	Torodi Ar. Bea	33.69	29	P	P	11 40 46.0	-2.5
ITRB	Iturama	34.50	260	*e*P	P	11 40 55.6	0.0
SUR	Sutherland	35.09	123	P	P	11 41 00.3	-0.5
	comp=Z,23nm,1.0s,baz=257,slow=12,SNR=4.3						
SUR	Sutherland	35.09	123	P	P	11 40 59.6	-1.1
SUR				IAmb	IAmb	11 41 03.2	
	comp=Z,38nm,1.1s						
PCMB	Pacaembu	35.34	256	*e*P	P	11 41 04.2	+1.5
CNLB	Canela	35.84	243	*e*P	P	11 41 09.1	+2.1
ARAG	Araguaiana, MT	36.18	266	*e*P	P	11 41 11.7	+1.6
PTGB	Pitanga	36.24	251	*e*P	P	11 41 13.0	+2.5
TMAB	Tom-Au,PA,Br	36.40	290	*e*P	P	11 41 12.6	+0.7
PRPB	Parauapebas	36.51	283	*e*P	P	11 41 12.7	-0.2
ITAB	Concordia	36.59	247	*e*P	P	11 41 15.5	+2.1
TRCB	Terra Rica	36.64	254	*e*P	P	11 41 15.7	+1.7
LBTB	Lobatse	37.83	109	P	P	11 41 23.0	-1.2
	comp=Z,6.9nm,0.9s,baz=274,slow=9.5,SNR=6.8						
LBTB	Lobatse	37.83	109	P	P	11 41 23.0	-1.2
LBTB	Lobatse	37.83	109	P	P	11 41 22.9	-1.3
BOSA	Boshof	37.96	115	P	P	11 41 24.2	-1.0
	comp=Z,14nm,1.0s,baz=278,slow=9.8,SNR=9.0						
BOSA	Boshof	37.96	115	P	P	11 41 24.6	-0.6
BOSA				pmax	pmax		
	comp=Z,35nm,1.2s						
BOSA	Boshof	37.96	115	P	P	11 41 24.6	-0.6
CPSB	Cacapava Do Su	38.26	242	*e*P	P	11 41 29.4	+1.8
PLTB	Pedras Altas	38.69	240	*e*P	P	11 41 31.9	+0.8
PP1B	Ponte de Pedra	38.90	263	*e*P	P	11 41 34.9	+1.8
AQDB	Aquidauana	39.49	258	*e*P	P	11 41 39.1	+1.1
MATP	Matopo	40.43	102	P	P	11 41 45.2	-0.8
	comp=Z,12nm,0.9s,baz=267,slow=9.2,SNR=19						
LSZ	Lusaka	40.61	94	P	P	11 41 47.2	-0.2
	comp=Z,9.4nm,0.9s,baz=249,slow=5.9,SNR=12						
LSZ	Lusaka	40.61	94	P	P	11 41 47.3	-0.2
LSZ				pmax	pmax		
	comp=Z,12nm,1.0s						
LSZ	Lusaka	40.61	94	P	P	11 41 47.3	-0.2
MCPB	Macapa, AP	40.83	290	*e*P	P	11 41 49.5	+0.3
ITQB	Itaqui	40.85	244	*e*P	P	11 41 51.6	+2.4
CPUP	Villa Florida	41.11	249	P	P	11 41 51.4	0.0
	comp=Z,10nm,0.8s,baz=88,slow=8.6,SNR=24						
CPUP	Villa Florida	41.11	249	P	P	11 41 50.8	-0.5
CPUP	Villa Florida	41.11	249	*e*P	P	11 41 51.7	+0.4
HOPE	Hope Point	41.14	200	P	P	11 41 52.0	+0.8
HOPE				pmax	pmax		
	comp=Z,148nm,1.5s						
HOPE	Hope Point	41.14	200	P	P	11 41 52.0	+0.8
NPGB	Novo Progresso	41.45	279	*e*P	P	11 41 54.7	+0.4
MALB	Monte Alegre	42.23	286	*e*P	P	11 42 01.6	+0.9
ITTB	Itaituba	42.66	282	*e*P	P	11 42 05.0	+0.8
TAM	Tamanrasset	43.87	27	P	P	11 42 14.2	+0.3
TAM				pmax	pmax		
	comp=Z,10.0nm,1.1s						
TAM	Tamanrasset	43.87	27	P	P	11 42 14.2	+0.3
VILB	Vilhena	44.64	269	*e*P	P	11 42 22.0	+1.9
MBAR	Mbarara	47.01	75	*ce*P	P	11 42 42.9	+3.8
MBAR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MBAR	Mbarara	47.01	75	P	P	11 42 37.5	-1.6
PTGA	Pitinga	47.91	285	P	P	11 42 45.1	-0.8
SAML	Samuel	48.38	273	P	P	11 42 48.8	-0.7
SAML				pmax	pmax		
	comp=Z,25nm,1.4s						
SAML	Samuel	48.38	273	P	P	11 42 48.8	-0.7
SAML	Samuel	48.38	273	*e*P	P	11 42 51.3	+1.7
EFI	East Falkland	49.07	215	*i* P	P	11 42 56.1	+1.9
EFI				pmax	pmax		
	comp=Z,39nm,1.1s						
ETMB	Extrema	51.07	271	*e*P	P	11 43 11.3	+1.3
ZON	Zonda	51.38	243	P	P	11 43 10.9	-1.3
ZON				pmax	pmax		
	comp=Z,17nm,1.2s						
ZON	Zonda	51.38	243	P	P	11 43 10.9	-1.3
LPAZ	La Paz	51.64	262	P	P	11 43 14.5	-0.5
	comp=Z,3.5nm,0.9s,baz=92,slow=6.4,SNR=6.7						
LPAZ	La Paz	51.64	262	P	P	11 43 13.4	-1.6
LPAZ	La Paz	51.64	262	*e*P	P	11 43 14.6	-0.5
AC02	Maricunga	51.68	249	P	P	11 43 13.1	-2.0
PB09	IPOC Station P	52.03	255	P	P	11 43 17.3	-0.1
PB09				IAmb	IAmb	11 43 18.7	
	comp=Z,37nm,1.4s						
PB08	IPOC Station P	52.11	257	P	P	11 43 15.7	-2.5
PB08				IAmb	IAmb	11 43 19.7	
	comp=Z,39nm,1.2s						
GO02	Mina Guanaco	52.14	251	P	P	11 43 16.8	-1.5
PB06	IPOC Station P	52.27	254	P	P	11 43 17.3	-1.8
PB01	IPOC Station P	52.33	256	P	P	11 43 18.0	-1.5
PB01				IAmb	IAmb	11 43 20.4	
	comp=Z,40nm,1.4s						
CO01	Juntas del Tor	52.54	245	P	P	11 43 20.8	-0.3
CO01				IAmb	IAmb	11 43 25.0	
	comp=Z,53nm,1.6s						
PB07	IPOC Station P	52.64	255	P	P	11 43 22.1	+0.3
MNMC	Minye Minye	52.64	259	P	P	11 43 21.0	-1.0
GO03	Copiap	52.66	248	P	P	11 43 22.3	+0.5
GO03				IAmb	IAmb	11 43 23.3	
	comp=Z,43nm,1.4s						
AC05	El Transito	52.68	246	P	P	11 43 21.9	-0.1
AC05				IAmb	IAmb	11 43 36.0	
	comp=Z,47nm,1.3s						
KMBO	Kilima Mbogo	52.89	78	P	P	11 43 24.8	+0.9
	comp=Z,1.8nm,0.5s,baz=237,slow=9.0,SNR=13						
PB14	IPOC Station P	52.91	252	P	P	11 43 23.9	-0.1
PATCX	Punta Patache	52.97	256	P	P	11 43 22.5	-1.7
PATCX				IAmb	IAmb	11 43 27.6	
	comp=Z,42nm,1.2s						
AC01	Pan de Azucar	53.02	250	P	P	11 43 24.7	+0.3
AC01				IAmb	IAmb	11 43 26.7	
	comp=Z,62nm,1.3s						
VA03	San Esteban	53.03	242	P	P	11 43 24.2	-0.3
LCO	Las Campanas	53.06	246	P	P	11 43 24.4	-0.6
LCO				pmax	pmax		
	comp=Z,36nm,1.2s						
LCO	Las Campanas	53.06	246	P	P	11 43 24.4	-0.6
LCO				IAmb	IAmb	11 43 27.4	
	comp=Z,36nm,1.2s						
PSGCX	Pisagua	53.08	258	P	P	11 43 23.9	-1.1
PSGCX				IAmb	IAmb	11 43 53.0	
	comp=Z,49nm,1.3s						
GO04	Tololo Observa	53.15	245	P	P	11 43 25.7	0.0
BO02	Sierra Bellavi	53.35	239	P	P	11 43 24.9	-1.9
PLCA	Paso Flores	53.85	232	P	P	11 43 29.7	-0.7
	comp=Z,4.3nm,1.2s,baz=88,slow=6.4,SNR=3.1						
PLCA				LR	LR	12 04 16.0	
	comp=Z,1µm,21.7s,baz=71,slow=34						
PLCA	Paso Flores	53.85	232	P	P	11 43 29.7	-0.7
VNA1	Neumayer--Stat	53.85	178	P	P	11 43 31.1	+1.3
BI02	San Fabin de	53.91	237	P	P	11 43 30.8	-0.1
BBGH	Gun Hill	53.92	301	P	P	11 43 28.6	-2.5
VNA2	Neumayer--Watz	54.16	177	P	P	11 43 32.0	-0.1
PVAQ	Vaqueiros	54.35	6	*e*P	P	11 43 35.6	+1.8
LC01	Cunco	54.62	234	P	P	11 43 36.0	0.0
PBEJ	Beja	54.95	6	*e*P	P	11 43 39.3	+1.2
SNAA	Sanae	55.17	176	P	P	11 43 39.3	-0.2
SNAA	Sanae	55.17	176	P	P	11 43 39.1	-0.3
	comp=Z,14nm,1.2s,baz=311,slow=8.2,SNR=6.0						
SNAA	Sanae	55.17	176	*ce*P	P	11 43 40.9	+1.4
SNAA				pmax	pmax		
	comp=Z,37nm,1.7s						
SNAA	Sanae	55.17	176	P	P	11 43 38.9	-0.6
SNAA				IAmb	IAmb	11 43 42.0	
	comp=Z,42nm,1.5s						
PBAR	Barrancos	55.18	7	*e*P	P	11 43 41.9	+2.1
LL01	San Ignacio de	55.48	230	P	P	11 43 42.2	+0.1
PESTR	Estremoz	55.81	6	P	P	11 43 44.5	+0.2
NVL	N'lazarevskaya	56.09	170	*e*P	P	11 43 47.0	+1.1
NVL				pmax	pmax		
	comp=Z,37nm,1.2s						
KEST	Kesra	56.87	23	P	P	11 43 52.9	+0.8
	comp=Z,16nm,1.0s,baz=198,slow=4.6,SNR=6.6						
KEST	Kesra	56.87	23	P	P	11 43 51.5	-0.5
ESDC	Sonseca Array	57.07	9	P	P	11 43 53.6	+0.3
	comp=Z,4.8nm,0.9s,baz=186,slow=7.5,SNR=20						
ESDC	Sonseca Array	57.07	9	P	P	11 43 53.9	+0.6
GO09	Cerro Castillo	57.22	219	P	P	11 43 53.9	-0.5
ABPO	Ambohimpanom	58.12	102	P	P	11 43 59.3	-2.1
ABPO				pmax	pmax		
	comp=Z,11nm,1.3s						
ABPO	Ambohimpanom	58.12	102	P	P	11 43 59.3	-2.1
MVO	Moncorvo	58.14	6	*e*P	P	11 44 02.3	+1.4
PVRL	Vila Real	58.18	6	*e*P	P	11 44 02.3	+1.1
POLO	Lamas de Olo	58.27	6	*e*P	P	11 44 02.8	+1.0
PBRG	Braganca	58.80	6	*e*P	P	11 44 08.7	+3.2
MTP	Monte Pirata	61.43	302	P	P	11 44 23.0	-0.9
SDV	Santo Domingo	61.49	290	P	P	11 44 24.2	-0.4
SDV				IAmb	IAmb	11 44 26.9	
	comp=Z,21nm,1.0s						
SDV	Santo Domingo	61.49	290	*e*P	P	11 44 25.8	+1.1
SYO	Syowa Base	61.72	161	⇑*e*pP	P	11 44 26.2	+1.1
SYO	Syowa Base	61.72	161	⇑*e*sP	sP	11 44 29.6	+1.1
CBYP	Canovanas	61.77	302	P	P	11 44 23.9	-2.4
BELA	Belgrano 2	61.84	185	P	P	11 44 26.5	+0.7
ROSC	El Rosal	63.28	284	P	P	11 44 37.7	+0.8
	comp=Z,5.2nm,0.4s,baz=124,slow=6.5,SNR=7.7						
ROSC	El Rosal	63.28	284	P	P	11 44 36.1	-0.8
ROSC				pmax	pmax		
	comp=Z,42nm,1.3s						
ROSC	El Rosal	63.28	284	P	P	11 44 36.1	-0.8
ITM	Ithomi	63.61	32	P	P	11 44 38.5	+0.4
ITM				IAmb	IAmb	11 44 45.2	
	comp=Z,12nm,0.8s						
IDI	Anoyia	63.73	35	LR	LR	12 10 40.0	
	comp=Z,179nm,21.6s,baz=237,slow=34						
INTR	Introdacqua	64.07	23	P	P	11 44 40.4	-0.8
INTR				IAmb	IAmb	11 44 47.5	
	comp=Z,44nm,1.6s						
AQU	L'Aquila	64.18	22	P	P	11 44 42.3	+0.4
AQU				pmax	pmax		
	comp=Z,47nm,1.3s						
AQU	L'Aquila	64.18	22	P	P	11 44 42.3	+0.4
OSSC	Osservatorio P	64.47	20	P	P	11 44 42.8	-0.9
NRCA	Norcia	64.50	22	P	P	11 44 43.6	-0.3
MURB	Monte Urbino	64.67	21	P	P	11 44 43.8	-1.2
MURB				IAmb	IAmb	11 44 58.6	
	comp=Z,38nm,1.3s						
DR12	Loma Pena Alta	64.91	301	P	P	11 44 45.9	-1.2
ZCCA	Zocca	65.11	20	P	P	11 44 47.6	-0.3
PRMA	PARMA	65.28	19	P	P	11 44 47.7	-1.2
OTAV	Otavalo	65.59	278	P	P	11 44 50.9	-1.3
OTAV				pmax	pmax		
	comp=Z,11nm,1.3s						
OTAV	Otavalo	65.59	278	P	P	11 44 50.9	-1.3
OTAV	Otavalo	65.59	278	*e*P	P	11 44 52.4	+0.3
TIR	Tirane	65.94	27	P	P	11 44 53.2	0.0
TIR				pmax	pmax		
	comp=Z,37nm,1.0s						
TIR	Tirane	65.94	27	P	P	11 44 53.2	0.0
SALO	Salr	66.11	19	P	P	11 44 53.5	-0.8
TUE	Stuetta	66.53	17	P	P	11 44 56.6	-0.6
CTI	Castel Tesino	66.84	19	P	P	11 44 58.7	-0.4
CTI				pmax	pmax		
	comp=Z,9.0nm,1.0s						
CTI	Castel Tesino	66.84	19	P	P	11 44 58.7	-0.4
STAL	STALIGIAL	67.37	20	P	P	11 45 04.2	+1.9
DAVA	Damuels	67.43	17	*e*P	P	11 45 02.8	0.0
	comp=Z,18nm,0.8s						
FETA	Feichten	67.44	18	*e*P	P	11 45 02.4	-0.5
	comp=Z,19nm,1.2s						
BOJS	Bojanci	67.58	22	*i* P	P	11 45 05.8	+2.2
ZOU	Zoufplan	67.72	20	P	P	11 45 05.1	+0.4
ZOU				IAmb	IAmb	11 45 06.8	
	comp=Z,26nm,1.3s						
ABTA	Abfaltersbach	67.74	19	*e*P	P	11 45 05.0	+0.3
	comp=Z,25nm,1.6s,SNR=5.2						
SQTA	Sankt Quirin	67.76	18	*e*P	P	11 45 04.8	-0.1
	comp=Z,15nm,1.1s						
LJU	Ljubljana	67.79	21	*i* P	P	11 45 06.8	+1.8
MOTA	Moosalm	67.84	18	*e*P	P	11 45 05.1	-0.4
	comp=Z,17nm,1.7s						
UBR	Ueberruh	67.85	17	*e*P	P	11 45 05.5	+0.2
	comp=Z,18nm,0.9s,baz=204,slow=6.4						
RETA	Reutte	67.86	18	*e*P	P	11 45 05.2	-0.3
	comp=Z,21nm,1.5s,SNR=5.8						
WTTA	Wattenberg	67.93	19	*e*P	P	11 45 06.5	+0.5
	comp=Z,21nm,1.0s,SNR=6.4						
BFO	Black Forest	67.95	16	P	P	11 45 05.5	-0.5
BFO				pmax	pmax		
	comp=Z,18nm,1.2s						
BFO	Black Forest	67.95	16	P	P	11 45 05.5	-0.5
BFO				IAmb	IAmb	11 45 07.5	
	comp=Z,18nm,1.2s						
BFO	Black Forest	67.95	16	*e*P	P	11 45 05.9	0.0
	comp=Z,6.7nm,0.8s,baz=204,slow=6.4						
WATA	Walderalm	67.97	19	*e*P	P	11 45 07.4	+1.1
	comp=Z,9.9nm,1.2s						
MYKA	Terra Mystica	68.00	20	*e*P	P	11 45 07.1	+0.8
	comp=Z,18nm,1.4s						
OBKA	Obir	68.20	21	*e*P	P	11 45 08.4	+0.8
	comp=Z,12nm,1.4s						
DOBS	Dobrina	68.21	22	*i* P	P	11 45 09.7	+2.1
DIVS	Divibare	68.23	26	P	P	11 45 07.4	-0.5
DIVS				IAmb	IAmb	11 45 14.4	
	comp=Z,17nm,1.2s						
KBA	Koelnbreinsper	68.30	20	*e*P	P	11 45 09.1	+0.7
	comp=Z,8.5nm,1.1s						
VTS	Vitosha	68.47	29	P	P	11 45 09.2	-0.3
VTS				pmax	pmax		
	comp=Z,8.0nm,0.9s						
VTS	Vitosha	68.47	29	P	P	11 45 09.2	-0.3
ALN	Alexandroupoli	68.51	32	P	P	11 45 09.1	-0.4
ALN				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ALN	Alexandroupoli	68.51	32	P	P	11 45 09.1	-0.4
SOKA	Soboth	68.52	21	*e*P	P	11 45 10.8	+1.2
	comp=Z,17nm,1.1s,SNR=6.8						
MMAI	Mount Meron Ar	68.55	43	LR	LR	12 13 32.4	
	comp=Z,167nm,19.7s,baz=265,slow=34						
WLF	Walferdange	68.66	14	P	P	11 45 10.1	-0.2
WLF				pmax	pmax		
	comp=Z,71nm,1.6s						
WLF	Walferdange	68.66	14	P	P	11 45 10.1	-0.2
RJOB	Jochberg	68.71	19	*e*P	P	11 45 10.0	-0.8
	comp=Z,16nm,0.8s,baz=204,slow=6.4						
FRGS	Fruska Gora	69.03	25	⇑P	P	11 45 15.0	+2.3
ARSA	Arzberg	69.18	21	*e*P	P	11 45 14.5	+0.9
	comp=Z,18nm,0.9s,SNR=7.8						
MOA	Molln	69.28	20	*e*P	P	11 45 14.0	-0.2
	comp=Z,18nm,1.1s						
MDVR	Moldovita	69.51	26	⇑P	P	11 45 17.3	+1.5
MAW	Mawson	69.54	157	P	P	11 45 15.4	-0.2
	comp=Z,32nm,1.0s,baz=251,slow=6.7,SNR=2.0						
MAW	Mawson	69.54	157	P	P	11 45 15.9	+0.3
MAW				pmax	pmax		
	comp=Z,35nm,1.4s						
MAW	Mawson	69.54	157	P	P	11 45 15.9	+0.3
MAW				IAmb	IAmb	11 45 43.6	
	comp=Z,35nm,1.4s						
AHRW	Bad Neuenahr-A	69.69	14	*e*P	P	11 45 16.7	+0.1
	baz=204,slow=6.4						
CONA	Conrad Observa	69.88	21	*e*P	P	11 45 19.0	+0.9
	comp=Z,24nm,1.5s,SNR=7.9						
GEC2	GERESS Array S	69.97	19	P	P	11 45 18.4	-0.2
GEC2	GERESS Array S	69.97	19	*e*P	P	11 45 18.1	-0.5
	comp=Z,7.4nm,1.1s,baz=204,slow=6.4						
GERES	GERESS Array B	69.97	19	P	P	11 45 18.4	-0.2
	comp=Z,4.1nm,1.0s,baz=204,slow=2.9,SNR=13						
GERES	GERESS Array B	69.97	19	P	P	11 45 18.1	-0.5
WET	Wettzell	69.98	18	*e*P	P	11 45 18.3	-0.2
	comp=Z,7.7nm,1.0s,baz=204,slow=6.4						
BZS	Buzias	70.14	26	⇑P	P	11 45 19.8	+0.2
BZS	Buzias	70.14	26	⇑P	P	11 45 19.8	+0.2
CKRC	Cesky Krumlov	70.14	20	*e*P	P	11 45 19.6	+0.1
KHC	Kasperske Hory	70.18	19	P	P	11 45 18.8	-1.0
KHC				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KHC	Kasperske Hory	70.18	19	*e*P	P	11 45 19.5	-0.3
KHC				*e*x	x	11 45 51.0	
KHC	Kasperske Hory	70.18	19	P	P	11 45 18.8	-1.0
ROTZ	Rotzenmuhle	70.33	18	*e*P	P	11 45 21.0	+0.3
	comp=Z,12nm,1.1s,baz=204,slow=6.4						
MANZ	Manzenberg	70.50	18	*e*P	P	11 45 22.7	+1.0
	comp=Z,10nm,1.1s,baz=204,slow=6.4						
ZST	Bratislava	70.54	22	*e*P	P	11 45 24.4	+2.5
ZST				pmax	pmax		
	comp=Z,109nm,1.5s						
ZST	Bratislava	70.54	22	*e*P	P	11 45 24.4	+2.5
KASTN	Kahler Asten	70.62	15	*e*P	P	11 45 23.1	+0.6
	comp=Z,3.6nm,1.0s,baz=204,slow=6.4						
UBBA	Unterbreizbach	70.67	16	*e*P	P	11 45 23.3	+0.8
	baz=204,slow=6.4						
MODS	Modra-Piesok	70.75	22	*e*P	P	11 45 24.4	+1.1
MODS	Modra-Piesok	70.75	22	*e*P	P	11 45 24.4	+1.1
PBCC	Pribram	70.80	19	*e*P	P	11 45 23.1	-0.4
PBCC				*e*x	x	11 45 27.3	
WERN	Wernitzgruen	70.85	18	*e*P	P	11 45 24.6	+0.8
	comp=Z,14nm,1.1s,baz=204,slow=6.4						
GUNZ	Gunzen	70.91	18	*e*P	P	11 45 24.7	+0.5
	baz=204,slow=6.4						
SMOL	Smolenice	70.93	22	*e*P	P	11 45 26.1	+1.8
SMOL				pmax	pmax		
	comp=Z,11nm,1.2s						
SMOL	Smolenice	70.93	22	*e*P	P	11 45 26.1	+1.8
LOT	Lotru	70.93	27	⇑P	P	11 45 26.2	+1.7
WERD	Werda	70.97	18	*e*P	P	11 45 25.0	+0.5
	comp=Z,7.8nm,1.0s,baz=204,slow=6.4						
TANN	Tannenbergstha	70.99	18	*e*P	P	11 45 25.3	+0.6
	comp=Z,7.6nm,1.0s,baz=204,slow=6.4						
KRUC	Moravsky	71.04	21	*e*P	P	11 45 26.2	+1.2
PRU	Pruhonice	71.24	19	*e*P	P	11 45 26.1	0.0
PRU	Pruhonice	71.24	19	*e*P	P	11 45 26.1	0.0
ARR	Arges	71.25	28	⇑P	P	11 45 27.1	+0.7
JAVC	Velka Javorina	71.30	22	*e*P	P	11 45 29.2	+2.5
VRAC	Vranov	71.32	21	LR	LR	12 15 27.8	
	comp=Z,358nm,21.3s,baz=219,slow=35						
VRAC	Vranov	71.32	21	⇑P	P	11 45 27.2	+0.5
VRAC	Vranov	71.32	21	*e*P	P	11 45 27.8	+1.1
VRAC	Vranov	71.32	21	⇑P	P	11 45 27.2	+0.5
PSZ	Piszkesteto	71.33	23	P	P	11 45 26.8	-0.1
PSZ				pmax	pmax		
	comp=Z,22nm,1.1s						
PSZ	Piszkesteto	71.33	23	P	P	11 45 26.8	-0.1
PSZ				IAmb	IAmb	11 45 29.1	
	comp=Z,22nm,1.1s						
VYHS	Vyhne	71.41	22	*e*P	P	11 45 28.3	+1.0
VYHS	Vyhne	71.41	22	*e*P	P	11 45 28.3	+1.0
VOIR		71.49	28	⇑P	P	11 45 28.2	+0.3
VOIR		71.49	28	⇑P	P	11 45 28.2	+0.3
IBBN	Ibbenburen	71.49	14	*e*P	P	11 45 28.5	+0.9
	comp=Z,9.8nm,0.8s,baz=204,slow=6.4						
NEUB	Neuenburg	71.50	17	*e*P	P	11 45 28.2	+0.5
	comp=Z,14nm,0.7s,baz=204,slow=6.4						
DRGR		71.54	26	⇑P	P	11 45 29.0	+0.9
DRGR		71.54	26	⇑P	P	11 45 29.0	+0.9
BR131	Keskin Array S	71.78	37	P	P	11 45 28.2	-1.7
BR131				pmax	pmax		
	comp=Z,20nm,1.0s						
BR131	Keskin Array S	71.78	37	P	P	11 45 28.2	-1.7
BR131				IAmb	IAmb	11 45 32.6	
	comp=Z,20nm,1.0s						
BRTR	Keskin Array B	71.78	37	P	P	11 45 31.1	+1.2
	comp=Z,5.4nm,0.8s,baz=204,slow=6.3,SNR=24						
BRTR	Keskin Array B	71.78	37	P	P	11 45 29.2	-0.7
BRG	Berggiesshubel	71.83	18	*e*P	P	11 45 29.9	+0.2
BRG				Amp		11 45 32.1	
	comp=Z,13nm,1.3s						
BRG	Berggiesshubel	71.83	18	*e*P	P	11 45 29.9	+0.2
	comp=Z,6.3nm,1.0s,baz=204,slow=6.4						
MLR	Muntele Rosu	71.93	28	LR	LR	12 17 18.5	
	comp=Z,336nm,18.9s,baz=263,slow=36						
MLR	Muntele Rosu	71.93	28	⇑P	P	11 45 31.2	+0.6
MLR	Muntele Rosu	71.93	28	⇑P	P	11 45 31.2	+0.6
MLR	Muntele Rosu	71.93	28	P	P	11 45 30.3	-0.3
CLL	Collm	71.94	18	*e*P	P	11 45 31.0	+0.7
CLL	Collm	71.94	18	P	P	11 45 29.6	-0.8
CLL				pmax	pmax		
	comp=Z,7.0nm,1.1s						
CLL	Collm	71.94	18	P	P	11 45 29.6	-0.8
KECS	Kecovo	72.02	23	*e*P	P	11 45 32.1	+1.2
KECS				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KECS	Kecovo	72.02	23	*e*P	P	11 45 32.1	+1.2
KRLC	Kraliky	72.04	20	*e*P	P	11 45 32.4	+1.4
KRLC	Kraliky	72.04	20	*e*P	P	11 45 32.4	+1.4
MORC	Moravsky Berou	72.04	21	⇑P	P	11 45 32.3	+1.3
MORC	Moravsky Berou	72.04	21	*e*P	P	11 45 32.6	+1.5
MORC	Moravsky Berou	72.04	21	⇑P	P	11 45 32.3	+1.3
MORC	Moravsky Berou	72.04	21	P	P	11 45 30.8	-0.2
MORC				IAmb	IAmb	11 45 33.9	
	comp=Z,26nm,1.3s						
DOPR	Dopca	72.05	28	⇑P	P	11 45 32.5	+1.3
UPC	Upice	72.16	20	*e*P	P	11 45 32.8	+1.1
UPC	Upice	72.16	20	*e*P	P	11 45 32.8	+1.1
NRDL	Niedersach Rie	72.23	15	*e*P	P	11 45 33.6	+1.7
	comp=Z,15nm,1.0s,baz=204,slow=6.4						
CHVC	Chvalec	72.24	20	*e*P	P	11 45 32.8	+0.6
CHVC				*e*x	x	11 45 36.3	
OSTC	Ostas	72.26	20	*e*P	P	11 45 33.2	+0.8
OZUR		72.32	28	⇑P	P	11 45 33.6	+0.8
PLOR	Plostina	72.53	29	⇑P	P	11 45 35.2	+1.1
PLOR	Plostina	72.53	29	⇑P	P	11 45 35.2	+1.1
KSP	Ksiaz	72.54	20	*e*P	P	11 45 35.5	+1.6
VRI	Vrincioaia	72.57	29	⇑P	P	11 45 35.2	+0.9
NIE	Niedzica	72.72	23	*e*P	P	11 45 36.9	+1.8
CRVS	Cervenica-Dubn	72.74	24	*e*P	P	11 45 37.1	+1.9
CRVS				pmax	pmax		
	comp=Z,40nm,1.3s						
CRVS	Cervenica-Dubn	72.74	24	*e*P	P	11 45 37.1	+1.9
UZH	Uzhgorod	72.84	24	*e*P	P	11 45 36.7	+0.9
UZH				*e*		11 45 39.5	
UZH				*e*		11 45 43.1	
UZH				*e*		11 45 51.1	
KOLS	Kolonicke sedl	73.08	24	*e*P	P	11 45 39.1	+1.9
KOLS	Kolonicke sedl	73.08	24	*e*P	P	11 45 39.1	+1.9
BIZ	Bicaz	73.11	28	⇑P	P	11 45 38.5	+1.0
OJC	Ojcow	73.20	22	*e*P	P	11 45 38.4	+0.5
OJC	Ojcow	73.20	22	P	P	11 45 37.6	-0.3
OJC				pmax	pmax		
	comp=Z,23nm,1.1s						
OJC	Ojcow	73.20	22	P	P	11 45 37.6	-0.3
OJC				IAmb	IAmb	11 45 39.9	
	comp=Z,23nm,1.1s						
BURAR	Bucovina Array	73.24	27	⇑P	P	11 45 40.3	+1.9
BURAR	Bucovina Array	73.24	27	⇑P	P	11 45 40.3	+1.9
BURAR	Bucovina Array	73.24	27	P	P	11 45 38.6	+0.3
QSPA	South Pole Qui	73.27	180	P	P	11 45 39.6	+1.2
QSPA	South Pole Qui	73.27	180	P	P	11 45 39.5	+1.1
BSEG	Bad Segeberg	73.59	15	*e*P	P	11 45 41.2	+1.1
	comp=Z,12nm,0.9s,baz=204,slow=6.4						
LVV	L'vov	74.48	25	*e*P	P	11 45 45.3	-0.1
SORM	Soroca	75.01	28	⇑P	P	11 45 48.0	-0.5
SORM	Soroca	75.01	28	⇑P	P	11 45 48.0	-0.5
KOPT	Kop Dagi	76.06	40	P	P	11 45 54.3	-0.8
KOPT				IAmb	IAmb	11 45 58.4	
	comp=Z,24nm,0.9s						
AKASG	Malin Array Be	77.30	27	P	P	11 46 00.8	-0.6
	comp=Z,13nm,0.8s,baz=220,slow=5.2,SNR=42						
AKASG	Malin Array Be	77.30	27	P	P	11 46 01.0	-0.5
AKASG				pmax	pmax		
	comp=Z,12nm,1.0s						
AKASG	Malin Array Be	77.30	27	P	P	11 46 00.9	-0.5
AKBB	Malin Array Si	77.30	27	P	P	11 46 01.2	-0.2
AKBB				pmax	pmax		
	comp=Z,24nm,0.9s						
AKBB	Malin Array Si	77.30	27	P	P	11 46 01.2	-0.2
AKBB				IAmb	IAmb	11 46 02.5	
	comp=Z,24nm,0.9s						
SUW	Suwalki	77.51	21	*e*P	P	11 46 03.9	+1.4
SUW	Suwalki	77.51	21	*e*P	P	11 46 02.9	+0.3
SUW	Suwalki	77.51	21	P	P	11 46 02.8	+0.3
SUW				pmax	pmax		
	comp=Z,82nm,1.2s						
SUW	Suwalki	77.51	21	P	P	11 46 02.8	+0.3
SOC	Sochi	77.75	37	*e*P	P	11 46 04.9	+0.7

SOC				eS	S	11 55 58.5	+1.9
SOC				eSS	SS	12 01 04.1	+6.9
SOC				pmax	pmax		
	comp=Z,30nm,1.0s						
SOC				MLR	MLR		
	comp=Z,548nm,15.0s						
L64A	Middleborough	78.50	320	P	P	11 46 07.3	-1.0
	baz=125						
PBUR	Paburge	78.72	20	eP	P	11 46 09.8	+0.6
GNI	Garni	78.81	42	ceP	P	11 46 11.7	+1.4
GNI				pmax	pmax		
	comp=Z,53nm,1.7s						
PABE	Paberze	78.98	21	eP	P	11 46 11.1	+0.4
U61A	Possum Corner	79.14	313	P	P	11 46 12.5	+0.5
	baz=120						
NEY	Neytrino	79.31	38	i P	P	11 46 14.1	+1.1
NEY				pmax	pmax		
	comp=Z,3.0nm,1.1s						
X60A	Albert Glenn T	79.36	311	P	P	11 46 13.3	+0.1
	baz=119						
F64A	Sherman	79.39	325	P	P	11 46 13.4	+0.3
	baz=128						
J63A	Strafford	79.42	321	P	P	11 46 13.5	+0.2
	baz=125						
V60A	Jim Taylor Roa	79.43	312	P	P	11 46 13.5	-0.2
	baz=120						
V60A	Jim Taylor Roa	79.43	312	P	P	11 46 12.7	-0.9
V60A				IAmb	IAmb	11 46 15.7	
	comp=Z,58nm,1.4s						
E64A	Bridgewater	79.44	325	P	P	11 46 16.1	+2.6
	baz=128						
NACGM	Naroch	79.50	23	i P	P	11 46 14.2	+0.6
NACGM				i P	P	11 46 14.2	+0.6
NACGM				i P	P	11 46 14.2	+0.6
NACGM				i PP	PP	11 49 06.1	-8.2
NACGM				i PPP	PPP	11 50 53.1	
NACGM				i S	S	11 56 00.9	-14
NACGM				i PS	PnS	11 57 07.2	+8.6
NACGM				i SS	SS	12 00 53.8	-29
NACGM				i SSS	SSS	12 04 10.6	
NACGM				i SSS	SSS	12 04 18.3	
NACGM				i LR	LR	12 20 46.1	
SHA1	Shidzhatmaz	79.55	38	i P	P	11 46 15.4	+1.0
MNK	Minsk	79.61	23	i P	P	11 46 13.9	-0.3
	comp=E,3.0nm,0.8s						
MNK				i P	P	11 46 13.9	-0.3
	comp=N,30nm,1.2s						
MNK				i P	P	11 46 13.9	-0.3
	comp=Z,33nm,0.9s						
MNK				i PP	PP	11 49 13.9	-1.3
MNK				i PPP	PPP	11 51 09.4	
MNK				i S	S	11 56 15.6	-0.4
MNK				i ScS	ScS	11 56 37.1	-0.6
MNK				i SS	SS	12 01 24.3	-0.4
MNK				i SSS	SSS	12 04 50.0	
MNK				i LQ	LQ	12 16 12.3	
MNK				i LR	LR	12 20 11.3	
MNK				i LRM	MLR	12 23 18.0	
	comp=Z,162nm,15.2s						
MNK				i LRM	MLR	12 23 21.3	
	comp=N,267nm,16.6s						
MNK				i LRM	MLR	12 23 32.5	
	comp=E,20nm,14.5s						
IIGN	Ignalina	79.65	22	eP	P	11 46 15.0	+0.6
KBZ	Khabaz	79.69	38	P	P	11 46 15.1	+0.2
	comp=E,11nm,0.9s,baz=233,slow=2.4,SNR=20						
KBZ	Khabaz	79.69	38	ceP	P	11 46 16.0	+1.2
KBZ				pmax	pmax		
	comp=Z,13nm,0.9s						
KIV	Kislovodsk	79.70	38	eP	P	11 46 16.6	+1.6
KIV				pmax	pmax		
	comp=Z,69nm,1.1s						
KIV	Kislovodsk	79.70	38	P	P	11 46 14.1	-0.9
KIV				IAmb	IAmb	11 46 18.0	
	comp=Z,40nm,1.3s						
U60A	Pendleton	79.71	313	P	P	11 46 15.8	+0.7
	baz=120						
Y59A	Loris	79.73	310	P	P	11 46 14.5	-0.8
ZEI	Tsey	79.75	39	eP	P	11 46 16.6	+1.1
ZEI				pmax	pmax		
	comp=Z,8.0nm,1.1s						
IDID	Didziasalis	79.81	22	eP	P	11 46 16.3	+1.1
L61B	Northampton	79.92	320	P	P	11 46 17.7	+1.5
	baz=124						
D63A	Stockholm	79.98	326	P	P	11 46 16.9	+0.6
	baz=128						
U59A	Littleton	80.09	313	P	P	11 46 17.7	+0.5
U59A				IAmb	IAmb	11 46 19.4	
	comp=Z,40nm,1.4s						
V59A	Middlesex	80.12	312	P	P	11 46 18.1	+0.7
	baz=119						
T59A	Double "B" Far	80.23	313	P	P	11 46 18.1	+0.2
T59A				IAmb	IAmb	11 46 20.1	
	comp=Z,38nm,1.4s						
NB2	NORSAR Subarra	80.28	12	P	P	11 46 18.1	+0.3
	comp=Z,19nm,1.7s,baz=194,slow=7.9						
NOA	NORSAR Array B	80.28	12	P	P	11 46 17.9	+0.3
	comp=Z,2.3nm,0.9s,baz=204,slow=5.8,SNR=4.7						
NOA	NORSAR Array B	80.28	12	P	P	11 46 18.0	+0.3
PSUB	Penn St. - Bra	80.31	317	P	P	11 46 17.8	-0.6
P60A	Greenville	80.37	317	P	P	11 46 18.6	0.0
	baz=122						
P60A	Greenville	80.37	317	P	P	11 46 18.8	+0.1
P60A				IAmb	IAmb	11 46 31.1	
	comp=Z,42nm,1.6s						
K61A	Williamstown	80.40	320	P	P	11 46 19.7	+0.9
	baz=124						
W58A	Raeford	80.48	311	P	P	11 46 19.7	+0.3
	baz=118						
O60A	Telford	80.49	317	P	P	11 46 19.2	0.0
	baz=122						
D62A	Allapoint, All	80.51	325	P	P	11 46 18.9	-0.4
	baz=128						
D62A	Allapoint, All	80.51	325	P	P	11 46 18.8	-0.4
D62A				IAmb	IAmb	11 46 27.3	
	comp=Z,39nm,1.6s						
M60A	Port Jervis	80.52	318	P	P	11 46 20.3	+0.9
	baz=122						
R59A	King George, V	80.54	315	P	P	11 46 20.9	+1.4
	baz=120						
GOF	Gofitskoye	80.54	37⥣	eP	P	11 46 21.2	+1.8
GOF				pmax	pmax		
	comp=Z,79nm,1.4s						
N60A	Cedar Hill Far	80.58	318	P	P	11 46 20.3	+0.6
	baz=122						
LUPA	Lehigh Univers	80.61	317	P	P	11 46 19.6	-0.3
LUPA				IAmb	IAmb	11 46 22.9	
	comp=Z,49nm,1.6s						
H61A	Lyndonville	80.64	322	P	P	11 46 20.1	+0.1
	baz=125						
U58A	Oxford	80.65	312	P	P	11 46 20.9	+0.7
	baz=119						
UPP	Uppsala	80.71	16	eP	P	11 46 20.4	+0.4
V58A	Windy Hill, Pi	80.76	312	P	P	11 46 20.9	0.0
V58A				IAmb	IAmb	11 46 23.1	
	comp=Z,40nm,1.6s						
P59A	Jarrettsville	80.80	316	P	P	11 46 21.7	+0.8
	baz=121						
J60A	Lant Hill Farm	80.81	320	P	P	11 46 21.9	+0.9
	baz=124						
S58A	Poland Farm, P	80.89	314	P	P	11 46 21.9	+0.4
	baz=120						
R58B	Mineral	80.95	314	P	P	11 46 21.3	-0.4
	baz=120						
R58B	Mineral	80.95	314	P	P	11 46 21.8	+0.1
R58B				IAmb	IAmb	11 46 23.8	
	comp=Z,42nm,1.6s						
O59A	Robesonia	80.99	317	P	P	11 46 21.6	-0.4
	baz=121						
N59A	State Game Lan	81.04	318	P	P	11 46 23.3	+1.1
	baz=122						
H60A	Morristown	81.11	322	P	P	11 46 23.2	+0.7
	baz=124						
M59A	Waymart	81.15	318	P	P	11 46 23.6	+0.8
	baz=122						
R58A	Rapidan	81.20	314	P	P	11 46 23.8	+0.7
	baz=120						
G60A	Masonville	81.20	322	P	P	11 46 23.4	+0.4
	baz=125						
U57A	Blanch	81.22	312	P	P	11 46 23.9	+0.6
	baz=118						
L59A	Walton	81.24	319	P	P	11 46 24.7	+1.4
	baz=122						
L59A	Walton	81.24	319	P	P	11 46 22.9	-0.5
L59A				IAmb	IAmb	11 46 26.8	
	comp=Z,43nm,1.4s						
V57A	Coltrane Farms	81.28	312	P	P	11 46 23.9	+0.3
	baz=118						
Q58A	Fox Den Farm,	81.30	315	P	P	11 46 23.2	-0.4
	baz=120						
O58A	Lewisberry	81.38	316	P	P	11 46 23.7	-0.3
	baz=121						
I59A	Olmsteadville	81.39	321	P	P	11 46 24.1	+0.1
	baz=123						
E60A	Ste Agathe de	81.42	324	P	P	11 46 23.4	-0.7
	baz=126						
T57A	Hurt	81.44	313	P	P	11 46 24.6	+0.3
	baz=119						
T57A	Hurt	81.44	313	P	P	11 46 24.7	+0.3
K59A	Cooperstown	81.44	319	P	P	11 46 24.0	-0.3
	baz=122						
D60A	Saint Jean D'O	81.44	325	P	P	11 46 23.8	-0.3
	baz=126						
W56A	Indian Trail	81.51	311	P	P	11 46 25.7	+0.9
	baz=118						
R57A	Stanardsville	81.55	314	P	P	11 46 24.8	-0.2
	baz=119						
S57A	Dark Hollow, R	81.59	314	P	P	11 46 26.5	+1.3
	baz=119						
J59A	Piesco	81.59	320	P	P	11 46 25.4	+0.3
	baz=123						
N58A	Sunbury	81.61	317	P	P	11 46 24.9	-0.3
	baz=121						
L58A	Harry Jones Me	81.68	318	P	P	11 46 27.0	+1.4
	baz=122						
H59A	Cadyville	81.75	322	P	P	11 46 25.9	+0.1
	baz=124						
V56A	Mocksville	81.76	311	P	P	11 46 27.0	+0.9
	baz=118						
P57A	Homestead Farm	81.79	315	P	P	11 46 26.7	+0.5
	baz=120						
Q57A	Strasburg	81.84	315	P	P	11 46 27.5	+1.0
	baz=119						
O57A	Amberson	81.90	316	P	P	11 46 27.2	+0.5
	baz=120						
K58A	Earlville	81.93	319	P	P	11 46 27.7	+0.8
	baz=122						
U56A	King	81.93	312	P	P	11 46 27.6	+0.6
	baz=118						
S56A	Natural Bridge	81.98	313	P	P	11 46 27.0	-0.2
	baz=118						
T56A	Rocky Mt	82.00	312	P	P	11 46 28.0	+0.6
	baz=118						
KMSC	Kings Mountain	82.06	310	P	P	11 46 29.5	+1.7
	baz=117						
N57A	Milroy	82.11	317	P	P	11 46 29.0	+1.1
	baz=120						
M57A	Sunshine Farm,	82.13	317	P	P	11 46 28.2	+0.2
	baz=121						
VSR	Storozhevoye	82.21	31	eP	P	11 46 27.6	-0.5
VSR				pmax	pmax		
	comp=Z,30nm,1.1s						
G58A	Ormstown	82.24	322	P	P	11 46 27.1	-1.3
	baz=123						
L57A	Andrews Acres	82.29	318	P	P	11 46 27.9	-1.0
	baz=121						
V55A	Taylorsville	82.30	311	P	P	11 46 29.2	+0.2
V55A				IAmb	IAmb	11 46 32.2	
	comp=Z,30nm,1.4s						
HODGE	Hodges	82.34	309	P	P	11 46 28.2	-1.0
HODGE				IAmb	IAmb	11 46 36.3	
	comp=Z,34nm,1.6s						
P56A	Dayton Farm, R	82.36	315	P	P	11 46 30.2	+1.0
	baz=119						
Q56A	Snyder Ridge,	82.37	315	P	P	11 46 29.7	+0.4
	baz=119						
Q56A	Snyder Ridge,	82.37	315	P	P	11 46 28.1	-1.2
Q56A				IAmb	IAmb	11 46 31.9	
	comp=Z,30nm,1.1s						
E58A	La Victoria	82.46	323	P	P	11 46 28.8	-0.7
	baz=124						
O56A	Blue Knob Stat	82.55	316	P	P	11 46 30.9	+0.7
	baz=120						
D58A	Chemin du LacG	82.64	324	P	P	11 46 30.7	+0.1
	baz=124						
H57A	Richville	82.67	321	P	P	11 46 31.3	+0.7
	baz=122						
N56A	West Decatur	82.69	317	P	P	11 46 31.6	+0.7
	baz=120						
G57A	Newington	82.77	321	P	P	11 46 30.1	-1.1
	baz=123						
L56A	Greenwood	82.81	318	P	P	11 46 30.9	-0.7
	baz=120						
L56A	Greenwood	82.81	318	P	P	11 46 31.3	-0.3
M56A	Emporium	82.89	317	P	P	11 46 31.3	-0.7
	baz=120						
K56A	Middlesex	82.95	318	P	P	11 46 32.2	-0.1
	baz=121						
J56A	Wolcott	82.95	319	P	P	11 46 33.6	+1.5
	baz=121						
LPSR	Galich'ya Gora	82.98	29	eP	P	11 46 32.0	-0.1
LPSR				pmax	pmax		
	comp=Z,40nm,1.4s						
U54A	Nelsons Funny	83.04	311	P	P	11 46 32.8	-0.1
	baz=117						
U54A	Nelsons Funny	83.04	311	P	P	11 46 30.9	-2.0
U54A				IAmb	IAmb	11 46 35.8	
	comp=Z,25nm,1.1s						
TRQ	Mont Tremblant	83.12	323	P	P	11 46 29.7	-3.4
BG3	Lake Jocassee	83.17	310	P	P	11 46 32.8	-0.8
S54A	Dingess, Beckl	83.26	313	P	P	11 46 34.2	+0.3
	baz=117						
M55A	Ridgway	83.27	317	P	P	11 46 33.9	0.0
V53A	Saluda	83.38	310	P	P	11 46 33.7	-0.9
V53A				IAmb	IAmb	11 46 36.5	
	comp=Z,19nm,1.2s						
VRH	Novokhopyorsk	83.47	32	eP	P	11 46 35.0	+0.4
VRH				pmax	pmax		
	comp=Z,40nm,1.7s						
152A	Waverly Hall	83.53	307	P	P	11 46 33.8	-1.6
152A				IAmb	IAmb	11 46 52.4	
	comp=Z,30nm,1.6s						
Y52A	Lilburn	83.53	308	P	P	11 46 33.5	-1.9
Y52A				IAmb	IAmb	11 46 38.2	
	comp=Z,22nm,1.2s						
OBN	Obninsk	83.56	27	ceP	P	11 46 36.0	+1.0
OBN				e		11 46 41.9	
OBN				e		11 49 51.7	
OBN				pmax	pmax		
	comp=Z,14nm,1.3s						
OBN				MLR	MLR		
	comp=Z,293nm,16.0s						
E56A	St. Veronique	83.57	323	P	P	11 46 34.8	-0.5
	baz=123						
D56A	ZEC Mazanza, M	83.68	323	P	P	11 46 34.8	-1.1
	baz=123						
O54A	Avella	83.72	315	P	P	11 46 35.8	-0.4
O54A				IAmb	IAmb	11 46 39.2	
	comp=Z,27nm,1.3s						
N54A	Moraine State	83.83	316	P	P	11 46 36.1	-0.8
	baz=119						
N54A	Moraine State	83.83	316	P	P	11 46 36.0	-0.8
N54A				IAmb	IAmb	11 46 39.4	
	comp=Z,18nm,0.9s						
M54A	Oil Creek Stat	83.88	317	P	P	11 46 35.4	-1.6
	baz=119						
Q53A	Leroy	83.89	314	P	P	11 46 35.8	-1.4
	baz=117						
MEDO	Medina	83.90	318	P	P	11 46 35.4	-1.7
MEDO				IAmb	IAmb	11 46 38.5	
	comp=Z,24nm,1.1s						
D55A	Sainte-Anne-du	84.08	323	P	P	11 46 37.1	-0.8
	baz=122						
O53A	New Philadelph	84.32	315	P	P	11 46 39.7	+0.4
	baz=118						
O53A	New Philadelph	84.32	315	P	P	11 46 39.2	-0.1
O53A				IAmb	IAmb	11 46 41.6	
	comp=Z,22nm,1.1s						
N53A	Lisbon	84.32	316	P	P	11 46 37.1	-2.2
N53A				IAmb	IAmb	11 46 41.6	
	comp=Z,19nm,1.1s						
FINES	FINESS Array B	84.37	18	P	P	11 46 38.9	-0.1
	comp=Z,13nm,0.9s,baz=222,slow=2.6,SNR=15						
FINES	FINESS Array B	84.37	18	P	P	11 46 37.8	-1.2
FIA1	FINESS Array S	84.37	18	P	P	11 46 38.2	-0.8
ERPA	Erie	84.38	317	P	P	11 46 38.1	-1.4
MOS	Moscow	84.43	26	eP	P	11 46 38.4	-1.0
MOS				pmax	pmax		
	comp=Z,56nm,1.1s						
L53A	Girard	84.48	317	P	P	11 46 39.9	-0.1
	baz=118						
M53A	WI Miller and	84.51	316	P	P	11 46 40.4	+0.1
	baz=118						
M53A	WI Miller and	84.51	316	P	P	11 46 39.2	-1.0
P52A	Corning	84.66	314	P	P	11 46 41.4	+0.3
	baz=117						
P52A	Corning	84.66	314	P	P	11 46 39.5	-1.5
P52A				IAmb	IAmb	11 46 42.7	
	comp=Z,27nm,1.3s						
O52A	Adamsville	84.68	315	P	P	11 46 40.3	-0.8
O52A				IAmb	IAmb	11 46 44.0	
	comp=Z,26nm,1.1s						
H53A	Bobcaygeon	84.68	320	P	P	11 46 40.4	-0.6
	baz=120						
G54A	Lake Saint Pet	84.79	321	P	P	11 46 41.0	-0.6
	baz=120						
SADO	Sadowa	85.13	320	P	P	11 46 42.7	-0.6
SADO				IAmb	IAmb	11 46 58.6	
	comp=Z,35nm,1.6s						
P51A	Williamsport	85.24	314	P	P	11 46 43.0	-0.9
Y49A	Blount Mountai	85.31	307	P	P	11 46 43.3	-1.1
Y49A				IAmb	IAmb	11 46 52.4	
	comp=Z,16nm,1.1s						
N51A	Ashland	85.41	315	P	P	11 46 43.8	-1.0
N51A				IAmb	IAmb	11 46 46.6	
	comp=Z,41nm,1.6s						
T50A	Nancy	85.44	311	P	P	11 46 43.6	-1.4
ACSO	Alum Creek Sta	85.52	314	P	P	11 46 44.1	-1.2
ACSO				IAmb	IAmb	11 46 46.9	
	comp=Z,16nm,0.9s						
VNDA	Vanda	85.74	179	P	P	11 46 47.7	+1.9
	comp=Z,5.7nm,1.0s,baz=227,slow=3.5,SNR=4.3						
VNDA	Vanda	85.74	179	P	P	11 46 46.0	+0.1
VNDA				pmax	pmax		
	comp=Z,18nm,1.3s						
VNDA	Vanda	85.74	179	P	P	11 46 46.0	+0.1
I51A	Listowel	85.85	318	P	P	11 46 46.2	-0.7
	baz=118						
U49A	Red Boiling Sp	85.91	310	P	P	11 46 46.4	-1.0
U49A				IAmb	IAmb	11 46 48.6	
	comp=Z,33nm,1.6s						
X48A	Hartselle	86.02	308	P	P	11 46 47.6	-0.3
X48A				IAmb	IAmb	11 46 49.2	
	comp=Z,20nm,1.1s						
M50A	Fremont	86.08	315	P	P	11 46 47.2	-0.9
M50A				IAmb	IAmb	11 46 49.5	
	comp=Z,15nm,0.8s						
CLTN	Cedars of Leba	86.15	309	P	P	11 46 47.8	-0.7
V48A	Smith Brothers	86.37	309	P	P	11 46 49.1	-0.6
V48A				IAmb	IAmb	11 46 51.0	
	comp=Z,19nm,1.1s						
K50A	Casco	86.41	317	P	P	11 46 47.6	-2.1
K50A				IAmb	IAmb	11 46 50.9	
	comp=Z,27nm,1.1s						
P49A	Miami Univ. Ec	86.41	313	P	P	11 46 50.9	+1.1
	baz=115						
P48A	Milroy	86.88	313	P	P	11 46 50.7	-1.3
P48A				IAmb	IAmb	11 46 52.5	
	comp=Z,20nm,1.1s						
GEYT	Alibeck	86.89	49	P	P	11 46 53.0	+0.8
	comp=Z,2.6nm,0.7s,baz=232,slow=7.3,SNR=6.6						
GEYT				LR	LR	12 23 27.1	
	comp=Z,287nm,20.4s,baz=215,slow=34						
GEYT	Alibeck	86.89	49	P	P	11 46 52.2	0.0
WCI	Wyandotte Cave	86.99	311	P	P	11 46 51.3	-1.3
WCI				pmax	pmax		
	comp=Z,12nm,0.9s						
WCI	Wyandotte Cave	86.99	311	P	P	11 46 51.3	-1.3
WCI				IAmb	IAmb	11 46 53.5	
	comp=Z,12nm,0.8s						
PLAL	Pickwick Lake	87.01	308	P	P	11 46 52.3	-0.5
PLAL				IAmb	IAmb	11 46 53.5	
	comp=Z,14nm,0.9s						
T47A	Sharon Grove	87.08	310	P	P	11 46 52.3	-0.8
T47A				IAmb	IAmb	11 46 54.1	
	comp=Z,21nm,0.9s						
WVT	Waverly	87.28	309	P	P	11 46 53.1	-1.0
WVT				pmax	pmax		
	comp=Z,21nm,1.1s						
WVT	Waverly	87.28	309	P	P	11 46 53.1	-1.0
WVT				IAmb	IAmb	11 46 54.9	
	comp=Z,21nm,1.1s						
N47A	Urbana	87.66	314	P	P	11 46 53.7	-2.1
N47A				IAmb	IAmb	11 46 56.4	
	comp=Z,18nm,0.9s						
344A	Westbrook Farm	87.76	304	P	P	11 46 54.6	-1.9
OXF	Oxford	87.85	307	P	P	11 46 54.9	-2.0
OXF				pmax	pmax		
	comp=Z,20nm,0.9s						
OXF	Oxford	87.85	307	P	P	11 46 54.9	-2.0
OXF				IAmb	IAmb	11 46 57.2	
	comp=Z,20nm,0.9s						
W45A	Hickory Valley	87.92	308	P	P	11 46 55.2	-2.0
P46A	Rosedale	88.20	312	P	P	11 46 57.0	-1.5
P46A				IAmb	IAmb	11 46 58.3	
	comp=Z,12nm,0.8s						
SFIN	Lafayette	88.43	313	P	P	11 46 58.7	-0.7
	baz=114						
HICK	Hickman	88.47	309	P	P	11 46 56.6	-3.2
OLIL	Olney	88.49	311	P	P	11 46 58.6	-1.2
KLMR	Klimovskoe	88.51	23	eP	P	11 46 59.5	+0.2
KLMR				pmax	pmax		
	comp=Z,45nm,1.5s						
KLMR	Klimovskoe	88.51	23	eP	P	11 46 59.5	+0.2
KLMR				AMP		11 47 01.7	
	comp=Z,45nm,1.5s						
HENM	Henderson Moun	88.72	309	P	P	11 46 58.6	-2.3
143A	Socs Landing,	88.74	305	P	P	11 46 58.7	-2.4
PENMO	Penman	88.74	309	P	P	11 46 59.6	-1.4
GNAR	Gosnell	88.85	308	P	P	11 47 00.6	-1.0
SIUC	Southern Illin	88.91	310	P	P	11 47 01.1	-0.7
SIUC				IAmb	IAmb	11 47 02.7	
	comp=Z,18nm,0.8s						
PARMO	Parma	88.91	309	P	P	11 46 59.8	-2.1
S44A	Carbondale	88.93	310	P	P	11 47 00.9	-0.9
E46A	Sault Ste Mari	89.08	319	P	P	11 47 01.4	-1.0
E46A				IAmb	IAmb	11 47 04.3	
	comp=Z,33nm,1.4s						
PBMO	Poplar Bluff	89.46	309	P	P	11 47 03.6	-0.8
FVM	French Village	89.90	310	P	P	11 47 05.6	-0.8
FVM				pmax	pmax		
	comp=Z,18nm,0.9s						
FVM	French Village	89.90	310	P	P	11 47 05.6	-0.8
FVM				IAmb	IAmb	11 47 07.9	
	comp=Z,18nm,0.9s						
SLM	Saint Louis	90.00	311	P	P	11 47 05.7	-1.2
SLM	Saint Louis	90.00	311	P	P	11 47 05.7	-1.2
HDIL	Hopedale	90.04	313	P	P	11 47 05.6	-1.4
HDIL				IAmb	IAmb	11 47 07.7	
	comp=Z,16nm,0.8s						
T42A	Van Buren	90.05	309	P	P	11 47 06.2	-1.0
TMCR	Tamitsa	90.13	20	eP	P	11 47 07.7	+0.9
TMCR				pmax	pmax		
	comp=Z,14nm,0.5s						
W41B	Gary Mavity, V	90.26	307	P	P	11 47 07.6	-0.6
	baz=110						
WHAR	Wooly Hollow	90.33	307	P	P	11 47 08.2	-0.3
WHAR				IAmb	IAmb	11 47 09.6	
	comp=Z,16nm,0.9s						
FCAR	Ozark Folk Cen	90.42	307	P	P	11 47 08.1	-0.9
FCAR				IAmb	IAmb	11 47 09.6	
	comp=Z,12nm,0.8s						
X40A	Basin Creek Fa	90.48	306	P	P	11 47 09.7	+0.5
	baz=110						
CCM	Cathedral Cave	90.53	310	P	P	11 47 09.3	-0.1
CCM				pmax	pmax		
	comp=Z,22nm,0.9s						
CCM	Cathedral Cave	90.53	310	P	P	11 47 09.2	-0.1
ARCES	ARCESS Array B	90.63	13	P	P	11 47 10.4	+1.3
	comp=Z,5.3nm,0.9s,baz=290,slow=3.5,SNR=4.6						
MGMO	Mountain Grove	90.97	309	P	P	11 47 11.2	-0.3
MGMO				IAmb	IAmb	11 47 12.7	
	comp=Z,14nm,0.8s						
U40A	Yellville	91.13	308	P	P	11 47 11.7	-0.6
	baz=110						
U40A	Yellville	91.13	308	P	P	11 47 11.4	-0.9
U40A				IAmb	IAmb	11 47 13.3	
	comp=Z,12nm,1.1s						
KIRV	Kirov	91.29	28	ceP	P	11 47 13.9	+1.5
R40A	Maddies Statio	91.36	310	P	P	11 47 12.2	-1.1
W39A	Magazine	91.45	306	P	P	11 47 13.8	+0.1
	baz=110						
W39A	Magazine	91.45	306	P	P	11 47 13.6	-0.2
JFWS	Jewell Farm	91.58	314	P	P	11 47 13.5	-0.7
JFWS				pmax	pmax		
	comp=Z,14nm,0.8s						
JFWS	Jewell Farm	91.58	314	P	P	11 47 13.4	-0.7
JFWS				IAmb	IAmb	11 47 15.1	

	comp=Z,14nm,0.8s						
P40A	Paris	91.64	311	P	P	11 47 14.0	-0.5
P40A				IAmb	IAmb	11 47 15.7	
	comp=Z,10nm,0.7s						
HHAR	Hobbs	91.94	307	P	P	11 47 15.0	-1.0
S39A	Bolivar	91.94	309	P	P	11 47 16.0	+0.1
S39A				IAmb	IAmb	11 47 17.0	
	comp=Z,9.9nm,0.8s						
I40A	Norwalk	92.19	315	P	P	11 47 15.8	-1.1
I40A				IAmb	IAmb	11 47 18.2	
	comp=Z,26nm,1.4s						
U38A	Gravette	92.33	307	P	P	11 47 17.7	-0.1
U38A				IAmb	IAmb	11 47 19.5	
	comp=Z,20nm,1.1s						
ABKAR	Akbulak array	92.63	39	P	P	11 47 18.1	-0.7
ABKAR	Akbulak array	92.63	39	P	P	11 47 18.1	-0.7
N38A	Joes South For	92.92	312	P	P	11 47 18.9	-1.5
435B	Jarrell	93.07	301	P	P	11 47 21.9	+0.5
	baz=108						
435B	Jarrell	93.07	301	P	P	11 47 21.8	+0.4
TUL1	Leonard	93.23	306	P	P	11 47 21.4	-0.5
	baz=108						
SCIA	State Center	93.28	313	P	P	11 47 22.1	0.0
WHTX	Lake Whitney,	93.34	302	P	P	11 47 23.1	+0.5
	baz=108						
833A	Chaparral WMA,	93.85	298	P	P	11 47 25.8	+0.8
	baz=107						
OK030	Cody Creek RV	94.00	306	P	P	11 47 24.5	-1.0
OK031	S. Brethren Rd	94.05	306	P	P	11 47 25.5	-0.2
OK031				IAmb	IAmb	11 47 27.1	
	comp=Z,13nm,0.8s						
T35A	Sooner Cattle	94.10	307	P	P	11 47 25.5	-0.5
T35A				IAmb	IAmb	11 47 27.4	
	comp=Z,18nm,1.2s						
I37A	Lemond, Waseca	94.12	315	P	P	11 47 25.3	-0.6
SPMN	Marine on St.	94.12	316	P	P	11 47 24.7	-1.2
	baz=110						
SPMN	Marine on St.	94.12	316	P	P	11 47 24.2	-1.6
SPMN				IAmb	IAmb	11 47 27.5	
	comp=Z,17nm,1.3s						
N35A	Tabor	94.67	311	P	P	11 47 28.0	-0.5
N35A				IAmb	IAmb	11 47 30.3	
	comp=Z,15nm,0.9s						
ARU	Arti	94.69	32	P	P	11 47 28.8	+0.7
ARU						11 51 17.0	
ARU				S	SKSac	11 58 03.8	+0.3
ARU				SP	SP	11 59 54.1	-2.8
JCT	Junction City	94.81	300	P	P	11 47 27.7	-1.7
JCT				pmax	pmax		
	comp=Z,13nm,0.9s						
JCT	Junction City	94.81	300	P	P	11 47 27.7	-1.7
JCT				IAmb	IAmb	11 47 30.9	
	comp=Z,13nm,0.9s						
KSU1	Kansas State U	94.84	309	P	P	11 47 27.8	-1.5
KSU1				IAmb	IAmb	11 47 30.0	
	comp=Z,12nm,0.8s						
CROK	Carrier	95.10	306	P	P	11 47 30.2	-0.4
ULM	Lac du Bonnet	97.68	320	P	P	11 47 41.0	-0.8
	comp=Z,1.5nm,0.8s,baz=27,slow=9.6,SNR=3.1						
TXAR	Lajitas Array	97.73	298	P	P	11 47 42.7	-0.1
	comp=Z,1.7nm,0.9s,baz=118,slow=7.3,SNR=12						
TXAR	Lajitas Array	97.73	298	P	P	11 47 41.9	-0.9
TX31	Lajitas Ar. Si	97.73	298	P	Pdif	11 47 43.3	+0.4
TX32	Lajitas Array	97.73	298	P	Pdif	11 47 43.3	+0.5
MSTX	Muleshoe	98.18	303	P	P	11 47 43.5	-1.2
	baz=105						
WMQ	Urumqi	109.94	49	*e*PKP	PKiKP	11 52 38.6	-0.2
ILAR	Eielson Array	122.67	338	PKP	PKPdf	11 53 01.1	-1.4
	comp=Z,1.1nm,0.8s,baz=353,slow=0.7,SNR=9.3						
ILAR	Eielson Array	122.67	338	PKIKP	PKPdf	11 53 02.0	-0.5
ILAR	Eielson Array	122.67	338		PKPdf	11 53 02.0	-0.5
SONM	Songino Array	122.74	44	PKP	PKPdf	11 53 03.0	-0.3
	comp=Z,0.7nm,0.6s,baz=169,slow=3.0,SNR=3.9						
SONM	Songino Array	122.74	44	PKIKP	PKPdf	11 53 03.0	-0.3
STKA	Stephens Creek	126.19	154	PKP	PKPdf	11 53 10.1	-0.3
	comp=Z,2.9nm,0.8s,baz=183,slow=0.4,SNR=5.3						
STKA	Stephens Creek	126.19	154		PKPdf	11 53 09.7	-0.6
HHC	Hu-ho-hao-te	127.71	51	*e*PKP	PKiKP	11 53 13.6	0.0
HHC				LR	LR		
	comp=Z,280nm,21.8s						
HHC				LR	LR		
	comp=Z,290nm,19.6s						
ASAR	Alice Springs	128.99	141	PKP	PKPdf	11 53 15.4	-0.5
	comp=Z,2.7nm,0.8s,baz=220,slow=1.5,SNR=18						
ASAR	Alice Springs	128.99	141	PKPdf	PKPdf	11 53 14.8	-1.2
AS31	Alice Springs	128.99	141	PKPdf	PKPdf	11 53 14.5	-1.5
WRA	Warramunga Arr	132.03	138	PKP	PKPdf	11 53 20.7	-1.0
	comp=Z,1.9nm,0.7s,baz=237,slow=2.4,SNR=15						
WRA	Warramunga Arr	132.03	138		PKPdf	11 53 20.4	-1.4
NJ2	Nanjing	134.96	61	*e*PKP	PKPdf	11 53 26.0	-0.8
KLR	Kul'dur	137.52	33	*i* PKIKP	PKiKP	11 53 32.5	-0.5
KLR				pmax	pmax		
	comp=Z,10.0nm,2.2s						
YSS	Yuzh-Sakhalins	144.44	28*c*	*i*PKIKP	PKPbc	11 53 41.9	-0.1
YSS				pmax	pmax		
	comp=Z,60nm,1.7s						
YSS	Yuzh-Sakhalins	144.44	28	PKPdf	PKPbc	11 53 41.9	-0.1
JWT	Wachi	147.25	50		PKPdf	11 53 46.5	-2.2
JWT					sPKPdf	11 53 52.2	-0.2
SANVU	Saraoutou	147.83	182	PKPdf	PKPdf	11 53 48.3	-1.9
SANVU					PKPbc	11 53 53.4	+0.3
JSD	Sado	147.88	44		PKPdf	11 53 48.3	-1.4
MAT	Matsushiro	148.65	46	PKP	PKPbc	11 53 54.6	-0.2

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*IDC **21** 12:20:48.2±2.7, 9°.46S×114°.37E, h0km, mb3.3/3, mb1 3.8/4, mb1mx3.5/30, mbtmp3.6/4, ML3.7/1, Error ellipse: s-maj=149.8km s-min=25.0km az=47.0*

*NEIC **21** 12:21:01.0±2.1, 9°.2S±0°.1×115°.21E±0°.08, h104km±10km, mb4.1/5, Error ellipse: s-maj=22.8km s-min=2.9km az=207.0*

*DJA **21** 12:21:02.6±0.8, 9°S±12°×11°5E±°, h61km±16km, M3.9/7, MLv3.9/7*

ISC 21 12:21:01.1±0.7**, 9°.18S**±0°.09×**115°.20E**±0°.07**, h103**km**, n27, σ1ˢ.23**/28**, mb3.3**/5**, South of Bali**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DNP	Denpasar	0.50	2	P	Pn	12 21 16.4	-0.8
SRBI	Singaraja	1.09	1	P	Pn	12 21 22.0	-0.7
JAGI	Jajag, Banyuwa	1.25	304		Pn	12 21 25.5	+0.9
JAGI				Sn	Sn	12 21 42.3	+0.1
JAGI	Jajag, Banyuwa	1.25	304	P	Pn	12 21 25.2	+0.7
ABJI	Asem Bagus	1.67	325	P	Pn	12 21 30.9	+1.3
TWSI	Taliwang, Sumb	1.72	75	P	Pn	12 21 29.0	-1.3
KMMI	Kalianget	2.44	330	P	Pn	12 21 41.8	+2.3
PLAI	Plampang	2.57	82	P	Pn	12 21 40.9	-0.4
UGM	Wanagama	4.79	285	Pn	Pn	12 22 12.3	+1.2
UGM	Wanagama	4.79	285	P	Pn	12 22 13.3	+2.2
CISI	Cisompet, Garu	7.48	282		Pn	12 22 46.9	-0.7
SOEI	Soe	8.97	94	Pn	Pn	12 23 09.1	+1.2
XMIS	Christmas Isla	9.49	261	Pn	Pn	12 23 14.7	-0.3
PSA00	Pilbara Seismi	13.11	161	Pn	Pn	12 24 02.0	-1.4
GIRL	Giralia	13.42	184	Pn	Pn	12 24 07.8	+0.3
FITZ	Fitzroy Crossi	13.47	132	Pn	Pn	12 24 07.5	-0.6
	0.3nm,0.3s,baz=327,slow=9.9,SNR=13						
FITZ				Sn	Sn	12 26 26.5	-10
	0.8nm,0.3s,baz=21,slow=24,SNR=7.0						
FITZ	Fitzroy Crossi	13.47	132		Pn	12 24 08.0	-0.1
WB0	Warramunga Arr	21.34	122	P	P	12 25 40.7	+0.6
WB0				IAmb	IAmb	12 26 07.7	
	comp=Z,18nm,1.5s						
WRA	Warramunga Arr	21.37	122	P	P	12 25 43.7	+3.3
	comp=Z,0.3nm,0.4s,baz=296,slow=12,SNR=7.1						
WR0	Warramunga Arr	21.55	122	P	P	12 25 42.2	-0.1
WR0				IAmb	IAmb	12 26 09.6	
	comp=Z,14nm,1.5s						
ASAR	Alice Springs	22.97	131	P	P	12 25 58.2	+1.2
	comp=Z,0.4nm,0.3s,baz=305,slow=9.0,SNR=6.9						
ASAR	Alice Springs	22.97	131	P	P	12 25 57.5	+0.5
BBOO	Buckleboo	30.41	144	P	P	12 27 02.9	-0.9
MK31	Makanchi Array	62.97	335	P	P	12 31 15.7	-1.2
MKAR	Makanchi Array	62.97	335	P	P	12 31 16.4	-0.5
	comp=Z,0.1nm,0.3s,baz=151,slow=6.5,SNR=5.1						
MKAR	Makanchi Array	62.97	335	P	P	12 31 16.0	-0.9
ABPO	Ambohimpanom	66.31	253	P	P	12 31 39.1	-0.3

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*IDC **21** 12:24:45.7±1.0, 16°.84S×14°.11W, h0km, mb4.2/13, mb1 4.4/13, mb1mx4.2/32, mbtmp4.2/13, MS4.0/7, Ms1 4.0/7, ms1mx3.7/28, Error ellipse: s-maj=31.5km s-min=19.8km az=149.0*

*NEIC **21** 12:24:47.7±0.9, 16°.64S±0°.10×14°.27W±0°.09, h10km±1km, mb4.9/37, Error ellipse: s-maj=18.3km s-min=11.3km az=216.0*

ISC 21 12:24:47.8±0.5**, 16°.7S**±0°.1×**14°.18W**±0°.08**, h10**km**, n96, σ1ˢ.01**/87**, mb4.8**/29**, MS4.0**/7**, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10S2	ASCENSION HYDR	7.70	357	T	T	12 34 40.0	
	baz=44,slow=74,SNR=48						
H10S3	ASCENSION HYDR	7.70	356	T	T	12 34 39.1	
	baz=176,slow=74,SNR=42						
SHEL	Horse Pasture	8.13	86	Pn	Pn	12 26 46.5	+0.5
H10N1	ASCENSION HYDR	8.79	358	T	T	12 36 00.6	
	baz=179,slow=80,SNR=12						
H10N3	ASCENSION HYDR	8.80	358	T	T	12 36 03.7	
	baz=179,slow=80,SNR=30						
H10N2	ASCENSION HYDR	8.81	358	T	T	12 36 05.8	
	baz=179,slow=80,SNR=9.8						
NBRF	Rio Formoso -	21.92	289	*e*P	P	12 29 41.1	-0.4
RCBR	Riachuelo	23.85	294	P	P	12 30 00.9	-0.7
	13nm,0.8s,baz=110,slow=8.7,SNR=8.0						
RCBR				LR	LR	12 36 52.8	
	comp=Z,219nm,20.1s,baz=137,slow=30						
RCBR	Riachuelo	23.85	294	P	P	12 30 00.7	-0.9
RCBR	Riachuelo	23.85	294	*e*P	P	12 30 02.2	+0.7
NBLI	Livramento-PB	24.10	290	*e*P	P	12 30 03.8	-0.2
LIC	Lamto	24.50	22	*e*P	P	12 30 09.9	+2.4
	56nm,1.5s						
GDU01	Guandu, BA	24.68	273	*e*P	P	12 30 10.2	+1.0
KIC	Kosan Boka	24.73	23	*e*P	P	12 30 10.8	+1.2
	23nm,1.1s						
TIC	Toumodi	24.89	22	*e*P	P	12 30 12.3	+1.3
NBPA	Parau_RN	24.95	293	*e*P	P	12 30 13.4	+1.8
DBIC	Dimbokro	24.97	22	P	P	12 30 12.2	+0.5
	7.1nm,1.1s,baz=198,slow=9.7,SNR=3.7						
DBIC				LR	LR	12 37 59.3	
	comp=Z,252nm,18.2s,baz=196,slow=32						
DBIC	Dimbokro	24.97	22	P	P	12 30 10.8	-0.9
RIB01	Linhares ES	25.06	260	*e*P	P	12 30 13.9	+1.3
ALF01	Guarapari-ES	25.44	257	*e*P	P	12 30 17.6	+1.6
BSFB	Barra de Sao F	25.48	261	*e*P	P	12 30 17.3	+0.9
SJMB	Sao Joao De Ma	25.80	261	*e*P	P	12 30 19.1	-0.2
CAM01	Campos-RJ	26.42	254	*e*P	P	12 30 25.4	+0.5
JANB	Januaria	29.02	269	*e*P	P	12 30 48.2	-0.1
ESAR	Angra dos Reis	29.11	253	*e*P	P	12 30 49.0	+0.1
SDBA	SAO DESIDERIO	30.02	274	*e*P	P	12 30 57.3	+0.1
ROSB	Rosrio	32.46	292	*e*P	P	12 31 19.0	+0.4
IPMB	Ipameri, GO	32.49	263	*e*P	P	12 31 18.7	-0.2
KOWA	Kowa	32.57	19	P	P	12 31 20.3	+0.8
	2.8nm,0.6s,baz=214,slow=12,SNR=6.6						
KOWA	Kowa	32.57	19	P	P	12 31 19.4	-0.1
SMTB	Santa Maria do	33.46	279	*e*P	P	12 31 28.9	+1.5
TORD	Torodi Ar. Bea	33.54	29	P	P	12 31 27.2	-0.8
	1.6nm,0.6s,baz=215,slow=12,SNR=8.7						
TORD				LR	LR	12 42 58.9	
	comp=Z,322nm,18.7s,baz=180,slow=32						
PCMB	Pacaembu	35.31	256	*e*P	P	12 31 44.1	+0.7
BOSA	Boshof	38.11	115	LR	LR	12 45 13.2	
	comp=Z,246nm,18.6s,baz=246,slow=32						
AQDB	Aquidauana	39.46	258	*e*P	P	12 32 18.9	+0.3
MATP	Matopo	40.55	102	P	P	12 32 25.8	-2.0
	1.9nm,0.8s,baz=252,slow=9.6,SNR=2.2						
ITQB	Itaqui	40.88	244	*e*P	P	12 32 31.5	+1.2
CPUP	Villa Florida	41.11	249	P	P	12 32 32.2	-0.1
	6.4nm,0.8s,baz=90,slow=8.5,SNR=12						
CPUP				LR	LR	12 47 57.7	
	comp=Z,245nm,18.6s,baz=168,slow=34						
CPUP	Villa Florida	41.11	249	P	P	12 32 32.3	+0.1
CPUP	Villa Florida	41.11	249	*e*P	P	12 32 32.3	+0.1
NPGB	Novo Progresso	41.34	278	*e*P	P	12 32 34.3	0.0
MALB	Monte Alegre	42.09	286	*e*P	P	12 32 41.3	+0.9
ITTB	Itaituba	42.55	282	*e*P	P	12 32 44.8	+0.7
PTGA	Pitinga	47.79	285	*e*P	P	12 33 27.5	+1.7
SAML	Samuel	48.30	273	*e*P	P	12 33 31.4	+1.6
ETMB	Extrema	50.99	271	*e*P	P	12 33 51.1	+0.9
ZON	Zonda	51.41	243	P	P	12 33 52.7	-0.6
ZON				IAmb	IAmb	12 33 58.0	
	comp=Z,19nm,1.6s						
LPAZ	La Paz	51.60	262	LR	LR	12 53 55.1	
	comp=Z,218nm,19.4s,baz=84,slow=34						
LVC	Limon Verde	51.65	254	*e*P	P	12 33 56.3	+0.7
AC02	Maricunga	51.69	249	P	P	12 33 55.4	-0.6
AC02				IAmb	IAmb	12 33 57.4	
	comp=Z,16nm,1.2s						
PB09	IPOC Station P	52.02	255	P	P	12 33 57.4	-0.7
PB08	IPOC Station P	52.08	257	P	P	12 33 57.9	-0.9
PB08				IAmb	IAmb	12 33 59.0	
	comp=Z,16nm,1.0s						
PB15	IPOC Station P	52.13	253	P	P	12 33 57.8	-1.1
PB15				IAmb	IAmb	12 33 59.4	
	comp=Z,13nm,0.9s						
CO01	Juntas del Tor	52.56	245	P	P	12 34 01.6	-0.6
CO01				IAmb	IAmb	12 34 07.7	
	comp=Z,25nm,1.4s						
PB07	IPOC Station P	52.62	255	P	P	12 34 01.8	-0.8
PB16	IPOC Station P	52.62	259	P	P	12 34 01.5	-1.6
GO03	Copiap	52.66	248	P	P	12 34 02.5	-0.2
GO03				IAmb	IAmb	12 34 10.0	
	comp=Z,18nm,1.1s						
AC05	El Transito	52.70	246	P	P	12 34 01.5	-1.5
AC05				IAmb	IAmb	12 34 04.3	
	comp=Z,16nm,1.1s						
PATCX	Punta Patache	52.95	256	P	P	12 34 04.6	-0.3
LCO	Las Campanas	53.08	246	P	P	12 34 05.8	-0.2
GO04	Tololo Observa	53.18	245	P	P	12 34 06.2	-0.4
GO04				IAmb	IAmb	12 34 07.3	
	comp=Z,40nm,1.6s						
PLCA	Paso Flores	53.92	232	LR	LR	12 54 55.2	
	comp=Z,136nm,19.1s,baz=101,slow=34						
ESDC	Sonseca Array	56.87	9	P	P	12 34 33.5	+0.7
	comp=Z,0.5nm,0.5s,baz=180,slow=7.0,SNR=4.9						
CZSB	Cruzeiro do Su	57.72	271	*e*P	P	12 34 39.1	-0.2
PMSA	Palmer Station	58.49	203	*e*P	P	12 34 46.2	+2.3
NNA	Nana	60.69	265	P	P	12 34 59.6	-0.3
SDV	Santo Domingo	61.34	290	P	P	12 35 04.0	-0.5
SDV				IAmb	IAmb	12 35 06.8	
	comp=Z,9.4nm,0.8s						
BANI	BANI	65.35	300	P	P	12 35 28.0	-2.9
GERES	GERESS Array B	69.80	19	P	P	12 35 58.5	+0.1
	comp=Z,0.7nm,0.7s,baz=222,slow=5.4,SNR=3.9						
GERES	GERESS Array B	69.80	19	P	P	12 35 58.7	+0.3
PSZ	Piszkesteto	71.17	23	P	P	12 36 07.3	+0.6
ANTO	Ankara	71.27	36	P	P	12 36 07.8	+0.2
BR131	Keskin Array S	71.66	37	P	P	12 36 10.1	+0.1
BR131				IAmb	IAmb	12 36 29.1	
	comp=Z,13nm,1.4s						
BRTR	Keskin Array B	71.66	37	P	P	12 36 10.8	+0.8
	comp=Z,1.2nm,0.7s,baz=203,slow=9.1,SNR=5.9						
BRTR	Keskin Array B	71.66	37	P	P	12 36 10.1	+0.1
MLR	Muntele Rosu	71.78	29	P	P	12 36 10.3	-0.2
MLR				IAmb	IAmb	12 36 12.8	
	comp=Z,27nm,1.6s						
QSPA	South Pole Qui	73.48	180	P	P	12 36 20.5	0.0
QSPA				IAmb	IAmb	12 36 37.5	
	comp=Z,17nm,1.6s						
MATN	Matagalpa	76.75	288	P	P	12 36 40.2	+0.1
AKASG	Malin Array Be	77.14	27	P	P	12 36 41.5	+0.1
	comp=Z,1.4nm,0.6s,baz=218,slow=5.4,SNR=11						
AKASG	Malin Array Be	77.14	27	P	P	12 36 41.5	+0.1
KBZ	Khabaz	79.57	38	P	P	12 36 55.7	+0.7
	comp=Z,1.7nm,0.8s,baz=127,slow=3.3,SNR=3.7						
FINES	FINESS Array B	84.19	18	P	P	12 37 20.4	+1.5
	comp=Z,4.3nm,0.9s,baz=192,slow=17,SNR=2.6						
AAM	Ann Arbor	86.68	316	P	P	12 37 31.0	-0.9
PLAL	Pickwick Lake	86.82	308	P	P	12 37 32.7	-0.1
PLAL				IAmb	IAmb	12 37 44.1	
	comp=Z,12nm,0.9s						
W45A	Hickory Valley	87.73	308	P	P	12 37 36.2	-0.9
HICK	Hickman	88.28	309	P	P	12 37 39.4	-0.3
OLIL	Olney	88.29	311	P	P	12 37 39.2	-0.5
HDBT	Hernando Brdge	88.39	307	P	P	12 37 37.1	-3.2
PARMO	Parma	88.72	309	P	P	12 37 40.8	-1.0
CCM	Cathedral Cave	90.33	310	P	P	12 37 48.5	-0.8
CCM				IAmb	IAmb	12 37 50.9	
	comp=Z,9.8nm,0.8s						
MGMO	Mountain Grove	90.78	309	P	P	12 37 51.1	-0.4
MGMO				IAmb	IAmb	12 37 53.0	
	comp=Z,5.0nm,0.8s						
HHAR	Hobbs	91.75	307	P	P	12 37 55.5	-0.5
JCT	Junction City	94.64	300	P	P	12 38 08.3	-1.2
JCT				IAmb	IAmb	12 38 10.9	
	comp=Z,6.4nm,0.8s						
TXAR	Lajitas Array	97.56	298	P	Pdif	12 38 23.4	+0.5
	comp=Z,0.8nm,0.9s,baz=117,slow=7.0,SNR=7.0						
TXAR	Lajitas Array	97.56	298	P	P	12 38 22.4	-0.5
ASAR	Alice Springs	129.20	141	PKP	PKPdf	12 43 55.5	-1.7
	comp=Z,0.9nm,0.9s,baz=194,slow=2.6,SNR=5.2						

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*NNC **21** 12:25:24.6±8.6, 36°.80N×70°.56E, h0km, mb4.2, mpv3.9, Error ellipse: s-maj=67.6km s-min=59.8km az=161.0*

ISC 21 12:25:25.5±4.7**, 36°.6N**±0°.3×**70°.7E**±0°.2**, h200**km**, n9, σ1ˢ.43**/12**, 3C-2D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	6.03	22	P	Pn	12 26 52.8	-0.6
	SNR=39						
UCH	Uchtor	6.38	26	P	Pn	12 26 57.2	-0.9
	SNR=11						
EKS2	Erkin-Say	6.54	20	P	Pn	12 27 00.0	+0.3
	SNR=11						
KK31	Karatay Array	6.54	359	Pn	Pn	12 27 00.9	+1.3
	3.2nm,0.3s,baz=176,slow=12,SNR=85						
KK31				⇑Sn	Sn	12 28 12.6	-1.8
	2.0nm,0.3s,baz=184,slow=21,SNR=10						
AAK	Ala-Archa	6.74	25	P	Pn	12 27 02.2	-0.2
	SNR=11						
AAK	Ala-Archa	6.74	25	⇓Pn	Pn	12 27 02.0	-0.3
	4.2nm,0.3s						
AAK				⇓Sn	Sn	12 28 17.9	-1.3
	6.2nm,1.0s						
USP	Ospenovka	7.30	22	P	Pn	12 27 09.9	+0.2
	SNR=5.6						
TKM2	Tokmak 2	7.38	29	P	Pn	12 27 10.4	-0.4
	SNR=7.2						
TKM2	Tokmak 2	7.38	29	⇑Pn	Pn	12 27 10.2	-0.6
	2.9nm,0.5s						
TKM2				⇑Sn	Sn	12 28 37.7	+3.2
	0.9nm,0.4s						

JMA 21 12:40:28.1±0.1**, 24°.09N×123°.22E, h41**km±2km**, M1.4, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.42	333	P	Pn	12 40 37.8	0.0
YOJ				S	Sn	12 40 45.1	+0.5
JYNG	Yonagunijimaku	0.44	325	P	Pn	12 40 37.9	-0.2
JYNG				S	Sn	12 40 45.3	+0.2
IRIF	Iriomote-Funau	0.53	62	P	Pn	12 40 38.9	-0.3
IRIF				S	Sn	12 40 47.3	+0.2
HATJ	Hateruma jima	0.54	93	P	Pn	12 40 39.4	+0.1
HATJ				*e*S	Sn	12 40 47.1	-0.2
JKRS	Kuro-shima	0.74	78	P	Pn	12 40 42.3	+0.3
JKRS				S	Sn	12 40 52.8	+0.7
JIJ	Ishigaki jima	0.89	72	P	Pn	12 40 44.3	+0.2
JIJ				*e*S	Sn	12 40 56.1	+0.3
JISG	Ishigakijimahi	1.11	63	P	Pn	12 40 47.7	+0.5
JISG				*e*S	Sn	12 41 02.5	+1.2
JTJ	Tarama	1.46	68	P	Pn	12 40 53.2	+1.3

TAP 21 12:41:13.8, 24°.22N×121°.70E, h10km**, ML1.9, D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NACB	Ninganchiao	0.10	247	P	Pg	12 41 17.2	+0.9
	baz=246						
NACB				S	Sg	12 41 19.5	+1.3
	baz=246						
TWD	Chiawan	0.16	215	P	Pg	12 41 17.8	+0.5
	baz=212						
TWD				S	Sg	12 41 20.6	+0.9
	baz=212						
ETLH	Xiulin Townshi	0.20	268	P	Pg	12 41 18.8	+0.9
	baz=267						
ETLH				*e*S	Sg	12 41 22.2	+1.4
	baz=267						
ENA	Nanau	0.22	10	P	Pg	12 41 19.1	+0.9
	baz=12						
ENA				*e*S	Sg	12 41 22.7	+1.5
	baz=12						
EWUT	Wuta	0.24	18	P	Pg	12 41 19.1	+0.4
	baz=17						
EWUT				*e*S	Sg	12 41 23.3	+1.3
	baz=17						
NNSH	Datong	0.36	307	*e*P	Pb	12 41 22.0	-0.3
	baz=306						
NNSH				*e*S	Sb	12 41 27.6	-0.5
	baz=306						
NNSB	Datong	0.36	307	P	Pb	12 41 22.1	-0.3
	baz=306						
NNSB				S	Sb	12 41 27.6	-0.6
	baz=306						
NNS	Nan Shan	0.37	307	P	Pb	12 41 22.2	-0.4
	baz=307						
NNS				S	Sb	12 41 28.0	-0.5
	baz=307						
WHF	Hehuan Shan	0.40	260	*e*P	Pb	12 41 22.7	-0.6
	baz=259						
WHF				*e*S	Sb	12 41 28.6	-1.1
	baz=259						
FUSS	Fushou	0.42	275	P	Pb	12 41 23.2	-0.2
	baz=274						
FUSS				*e*S	Sb	12 41 29.1	-0.9
	baz=274						
NDS	Dongshan	0.42	2	P	Pb	12 41 22.9	-0.4
	baz=2.0						
NDS				*e*S	Sb	12 41 29.0	-0.7
	baz=2.0						
NDT	Datong Townshi	0.42	336	*e*P	Pb	12 41 23.3	0.0
	baz=336						
NDT				*e*S	Sb	12 41 29.7	-0.1
	baz=336						
ENTT	Nioudou	0.44	344	P	Pb	12 41 23.7	0.0
	baz=344						
ENTT				*e*S	Sb	12 41 30.2	-0.2
	baz=344						
TDCB	Techi	0.49	275	*e*P	Pb	12 41 24.8	+0.1
	baz=274						
TDCB				*e*S	Sb	12 41 31.6	-0.4
	baz=274						
CHGB	Renai	0.50	252	P	Pb	12 41 24.7	-0.2
	baz=252						
CHGB				*e*S	Sb	12 41 31.6	-0.8
	baz=252						
TWE	Neicheng	0.51	357	P	Pb	12 41 24.8	0.0
	baz=358						
TWE				*e*S	Sb	12 41 32.2	0.0
	baz=358						
YHNB	Yeheng	0.54	327	*e*P	Pb	12 41 25.4	0.0
	baz=326						
YHNB				*e*S	Sb	12 41 33.7	+0.4
	baz=326						
NSK	Sanguang	0.55	326	*e*P	Pb	12 41 26.2	+0.5
	baz=326						
NSK				*e*S	Sb	12 41 33.8	+0.1
	baz=326						
NWLT	Wulai	0.59	342	*e*P	Pb	12 41 26.4	+0.2
	baz=342						
NWLT				*e*S	Sb	12 41 34.4	-0.3
	baz=342						
VWDT	VWDT	0.69	228	*e*P	Pb	12 41 28.3	+0.4
	baz=227						
VWDT				*e*S	Sb	12 41 37.7	+0.3
	baz=227						
WHP	Taichung City	0.69	275	*e*S	Sb	12 41 38.4	+0.8
	baz=275						
LIOB	Emei	0.76	305	*e*P	Pn	12 41 31.8	+1.3
	baz=304						
LIOB				*e*S	Sn	12 41 40.9	-1.2
	baz=304						

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*IDC **21** 12:41:29.4±2.0, 12°.07S×101°.41E, h0km, mb3.7/5, mb1 3.9/5, mb1mx3.6/33, mbtmp3.7/5, ML5.4/1, Error ellipse: s-maj=60.8km s-min=24.4km az=50.0*

ISC 21 12:41:31.6±1.4**, 11°.9S**±0°.1×**101°.6E**±0°.1**, h10**km**, n22, σ1ˢ.23**/17**, mb3.9**/5**, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KASI	Kota Agung	6.96	25	P	Pn	12 43 14.4	+0.6
	3µm164nm,0.6s						
LWLI	Liwa	7.26	20	P	Pn	12 43 18.8	+0.8
DBJI	Dramaga	7.38	45	P	Pn	12 43 21.3	+1.8
	119nm,0.5s						

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BLSI  Bandar Lampung   7.44  30 P          Pn        12 43 21.3 +1.0
      3µm185nm,0.4s
CISI  Cisompet, Garu   7.53  56 P          Pn        12 43 22.2 +0.6
      6µm112nm,0.8s
CBJI  Citeko           7.54  44 P          Pn        12 43 21.7  0.0
      14µm421nm,0.7s
MNAI  Manna            7.61  11 P          Pn        12 43 22.2 -0.4
      137nm,1.2s
LEM   Lembang          7.82  51 Pn         Pn        12 43 28.1 +2.3
      51nm,0.3s,baz=291,slow=3.7,SNR=72
LEM                             Sn         Sn        12 44 52.6 -1.8
      4.8nm,0.3s,baz=296,slow=11,SNR=4.1
LEM   Lembang          7.82  51 P          Pn        12 43 28.0 +2.3
      2µm236nm,0.7s
LHSI  Lahat            8.24  14 P          Pn        12 43 32.0 +0.6
      40nm,0.9s
UGM   Wanagama         9.68  67 P          Pn        12 43 51.4 +0.2
H01W3 Cape Leeuwin H  25.59 155 T          T         13 13 37.2
      SNR=5.0
H01W2 Cape Leeuwin H  25.61 156 T          T         13 13 37.2
      baz=172,slow=74,SNR=5.3
H01W1 Cape Leeuwin H  25.61 155 T          T         13 13 42.0
      baz=331,slow=74,SNR=5.6
H08S2 Diego Garcia H  28.93 276 T          T         13 17 33.6
H08S3 Diego Garcia H  28.94 276 T          T         13 17 41.9
      SNR=15
H08S1 Diego Carcia H  28.95 276 T          T         13 17 33.6
WRA   Warramunga Arr  32.49 108 P          P         12 48 02.4 -0.4
      0.9nm,0.6s,baz=283,slow=9.7,SNR=7.8
ASAR  Alice Springs   32.88 115 P          P         12 48 05.8 -0.3
      1.2nm,0.7s,baz=292,slow=8.0,SNR=17
STKA  Stephens Creek  41.84 125 P          P         12 49 21.6 -0.4
      2.0nm,0.7s,baz=308,slow=8.8,SNR=4.1
MKAR  Makanchi Array  60.91 345 P          P         12 51 44.8 +0.2
      0.2nm,0.7s,baz=146,slow=10,SNR=2.4
ZALV  Zalesovo Beam   67.11 349 P          P         12 52 25.7 +0.5
      0.2nm,0.3s,baz=164,slow=8.3,SNR=2.4
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IDC ***21*** *12:47:18.6±2.3, 12°.97N×90°.65W, h0km, mb3.2/2, mb1 3.8/5, mb1mx3.5/32, mbtmp3.6/5, ML3.7/3, Error ellipse: s-maj=66.1km s-min=29.3km az=36.0*

GCG ***21*** *12:47:27.8±0.3, 13°.57N×90°.79W, h25km±5km, MD3.8*

NEIC ***21*** *12:47:27.7±1.6, 13°.45N±0°.07×90°.74W±0°.04, h35km±2km, mb3.9/8, Md4.0(SNET), Error ellipse: s-maj=11.1km s-min=6.7km az=1.0*

UCR ***21*** *12:47:28.5±1.2, 13°.54N×90°.58W, h20km±4km, ML3.9, mb3.9(NEIC)*

SNET ***21*** *12:47:28.3±1.1, 13°.52N×90°.57W, h17km±4km, ML4.0*

ISC 21 12:47:24.0±1.7**, 13°.43N**±0°.07×**90°.74W**±0°.04**, h10**km±9km**, n79, σ1s.11**/104**, mb3.9**/4**, 2D, Near coast of Guatemala**

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Code  Station Name     Δ°   AZ°   Phase ID             Time      Res
                               Op          ISC        h  m  s    ISC
PCG   Pacaya           0.97   7 eP         Pb        12 47 44.0 +1.0
FUG   Fuego 3          1.02 354 eP         Pg        12 47 44.4 +0.7
CEVE  Cerro Verde      1.15  70⇓eP         Pb        12 47 46.5 +0.3
CEVE                            eS         Sg        12 48 00.5 -0.8
CEVE                             IAML                12 48 02.7
      comp=Z,8µm,0.2s
CEVE  Cerro Verde      1.15  70⇓eP         Pb        12 47 46.5 +0.3
CEVE                            eS         Sg        12 48 00.5 -0.8
CEVE                             IAML                12 48 02.7
      comp=Z,8µm,0.2s
SBLS  San Blas         1.16  69 eP         Pb        12 47 46.6 +0.3
SBLS                            eS         Sg        12 48 00.7 -0.7
SBLS  San Blas         1.16  69 eP         Pb        12 47 46.6 +0.3
SBLS                            eS         Sg        12 48 00.7 -0.7
RTR   El Retiro        1.16  66 eP         Pg        12 47 46.5 +0.2
RTR                             eS         Sb        12 48 00.8 -0.5
RTR   El Retiro        1.16  66 eP         Pg        12 47 46.5 +0.2
RTR                             eS         Sb        12 48 00.8 -0.5
SNJE  San Jose         1.18  68 eP         Pg        12 47 47.0 +0.2
SNJE                            eS         Sg        12 48 01.2 -1.1
SNJE  San Jose         1.18  68 eP         Pg        12 47 47.0 +0.2
SNJE                            eS         Sg        12 48 01.2 -1.1
NBG   Las Nubes        1.22  18 eP         Pn        12 47 48.4 +1.1
NBG                             eS         Sn        12 48 04.4 +0.5
JAYA  Jayaque - finc   1.27  80 eP         Pg        12 47 48.2 -0.3
JAYA                            eS         Sg        12 48 03.1 -2.0
JAYA                             IAML                12 48 04.8
      comp=Z,6µm,0.3s
JAYA  Jayaque - finc   1.27  80 eP         Pg        12 47 48.2 -0.3
JAYA                            eS         Sg        12 48 03.1 -2.0
JAYA                             IAML                12 48 04.8
      comp=Z,6µm,0.3s
CEDA  San Andres       1.35  74 eP         Pn        12 47 49.2 +0.1
CEDA                            eS         Sb        12 48 06.0 -1.0
CEDA                             IAML                12 48 15.6
      comp=Z,3µm,0.3s
CEDA  San Andres       1.35  74 eP         Pn        12 47 49.2 +0.1
CEDA                            eS         Sb        12 48 06.0 -1.0
CEDA                             IAML                12 48 15.6
      comp=Z,3µm,0.3s
RTAL  Retalhuleu       1.44 320  Pn        Pn        12 47 51.2 +1.1
TACO  Tacachico        1.45  68 eP         Pn        12 47 50.5 +0.3
TACO  Tacachico        1.45  68 eP         Pn        12 47 50.5 +0.3
BOQS  Boqueron         1.45  78 eP         Pn        12 47 51.3 +0.8
BOQS                            eS         Sb        12 48 09.5 -0.3
BOQS  Boqueron         1.45  78 eP         Pn        12 47 51.3 +0.8
BOQS                            eS         Sb        12 48 09.5 -0.3
UEES  Universidad Ev   1.48  79 eP         Pn        12 47 51.6 +0.8
UEES                            eS         Sb        12 48 09.4 -1.2
UEES                             IAML                12 48 11.7
      comp=Z,4µm,0.3s
UEES  Universidad Ev   1.48  79 eP         Pn        12 47 51.6 +0.8
UEES                            eS         Sb        12 48 09.4 -1.2
UEES                             IAML                12 48 11.7
      comp=Z,4µm,0.3s
SNET  Serv Nac Est T   1.48  80 eP         Pn        12 47 51.1 +0.2
SNET                            eS         Sb        12 48 09.7 -1.0
SNET                             IAML                12 48 11.0
      comp=Z,3µm,0.3s
SNET  Serv Nac Est T   1.48  80 eP         Pn        12 47 51.1 +0.2
SNET                            eS         Sb        12 48 09.7 -1.0
SNET                             IAML                12 48 11.0
      comp=Z,3µm,0.3s
SNET  Serv Nac Est T   1.48  80  Pn        Pb        12 47 52.2 +0.4
OPAM  Oficina de Pla   1.52  79 eP         Pb        12 47 53.0 +0.6
OPAM                            eS         Sn        12 48 11.1 -0.1
OPAM                             IAML                12 48 15.1
      comp=Z,3µm,0.2s
OPAM  Oficina de Pla   1.52  79 eP         Pb        12 47 53.0 +0.6
OPAM                            eS         Sn        12 48 11.1 -0.1
OPAM                             IAML                12 48 15.1
      comp=Z,3µm,0.2s
LFU   La Fuente        1.61  78 eP         Pb        12 47 54.0 +0.2
LFU                             eS         Sb        12 48 14.0 -0.3
LFU   La Fuente        1.61  78 eP         Pb        12 47 54.0 +0.2
LFU                             eS         Sb        12 48 14.0 -0.3
LFRS  El Faro          1.64  83 eP         Pn        12 47 54.0 +1.0
LFRS                            eS         Sn        12 48 13.6 -0.6
LFRS  El Faro          1.64  83 eP         Pn        12 47 54.0 +1.0
LFRS                            eS         Sn        12 48 13.6 -0.6
MTO3  Montecristo      1.65  54 eP         Pn        12 47 53.6 +0.4
MTO3  Montecristo      1.65  54 eP         Pn        12 47 53.6 +0.4
MTO3  Montecristo      1.65  54  Pn        Pn        12 47 53.8 +0.6
LBRS  Las Brisas       1.67  79 eP         Pn        12 47 54.5 +1.1
LBRS  Las Brisas       1.67  79 eP         Pn        12 47 54.5 +1.1
ESQI  Esquipulas       1.76  50 eP         Pn        12 47 55.3 +0.6
ESQI  Esquipulas       1.76  50  Pn        Pn        12 47 55.4 +0.7
COEG  Centro de Oper   1.81  84 eP         Pn        12 47 56.7 +1.4
COEG                             IAML                12 48 24.0
      comp=Z,1µm,0.3s
COEG  Centro de Oper   1.81  84 eP         Pn        12 47 56.7 +1.4
COEG                             IAML                12 48 24.0
      comp=Z,1µm,0.3s
MRL   Marmol           1.94  32 eP         Pn        12 47 58.6 +1.4
HUEH  Huehuetenango    2.02 339  Pn        Pn        12 48 00.6 +2.1
PQSS  Presa 15 de Se   2.12  84 eP         Pn        12 48 00.3 +0.7
PQSS                            eS         Sn        12 48 26.0  0.0
COEB  Comit de Eme     2.15  88 eP         Pn        12 48 01.2 +1.2
COEB                             IAML                12 48 30.2
      comp=Z,535nm,0.3s
COEB  Comit de Eme     2.15  88 eP         Pn        12 48 01.2 +1.2
COEB                             IAML                12 48 30.2
      comp=Z,535nm,0.3s
TECA  Tecapa           2.17  88 eP         Pn        12 48 01.8 +1.4
TECA  Tecapa           2.17  88 eP         Pn        12 48 01.8 +1.4
PACA  Pacayal          2.35  89 eP         Pn        12 48 04.5 +1.8
PACA  Pacayal          2.35  89 eP         Pn        12 48 04.5 +1.8
VSM   San Miguel       2.39  90 eP         Pn        12 48 05.7 +2.2
VSM   San Miguel       2.39  90 eP         Pn        12 48 05.7 +2.2
LCND  La Caada         2.77  92 eP         Pn        12 48 09.7 +1.2
LCND                             IAML                12 48 52.0
      comp=Z,424nm,0.4s
LCND  La Caada         2.77  92 eP         Pn        12 48 09.7 +1.2
LCND                             IAML                12 48 52.0
      comp=Z,424nm,0.4s
CNCH  Conchagua        2.83  93 eP         Pn        12 48 10.5 +1.2
CNCH  Conchagua        2.83  93 eP         Pn        12 48 10.5 +1.2
CCIG  Comitan          3.15 335  Pn        Pn        12 48 14.2 +0.4
CCIG                             Sn        Sn        12 48 48.4 -3.1
TGUH  Tegucigalpa,Un   3.42  79  Pn        Pn        12 48 19.3 +1.7
PETF  Flores           3.57  13  Pn        Pn        12 48 21.0 +1.5
CRIN  San Cristobal    3.66 101  Pn        Pn        12 48 22.0 +1.1
MATN  Matagalpa        4.71  95            Pn        12 48 36.5 +1.3
BOAB  BOACO BROADBAN5.04 101     Pn        Pn        12 48 40.4 +0.8
CMIG  Matias Romero    5.41 313  Pn        Pn        12 48 45.7 +0.9
      comp=Z,1.5nm,0.3s,baz=154,slow=13,SNR=18
CMIG                             Sn        Sn        12 49 44.6 -2.7
      comp=Z,2.2nm,0.3s,baz=308,slow=20,SNR=6.0
ACON  Acoyapa          5.62 104  Pn        Pn        12 48 49.4 +1.8
JTS   Las Juntas de    6.46 118  Pn        Pn        12 48 51.8 -7.5
      comp=Z,1.4nm,0.3s,baz=42,slow=23,SNR=2.2
TEIG  Tepich           7.16  19  Pn        Pn        12 49 10.0 +1.1
      comp=Z,1.8nm,0.3s,baz=209,slow=22,SNR=2.7
CBCY  The Bluff, Cay  12.25  58  Pn        Pn        12 50 23.6 +5.0
060A  Indiantown      16.66  34  P         P         12 51 21.9 +1.8
TX32  Lajitas Array   19.86 325  P         P         12 51 54.9 -0.5
TXAR  Lajitas Array   19.86 325  P         P         12 51 55.8 +0.3
      comp=Z,0.4nm,0.7s,baz=149,slow=11,SNR=5.3
TXAR  Lajitas Array   19.86 325  P         P         12 51 54.9 -0.5
TX31  Lajitas Ar. Si  19.86 325  P         P         12 51 55.0 -0.5
TX31                             IAmb      IAmb      12 51 56.0
      comp=Z,6.8nm,1.4s
WLAR  White Oak Lake  20.29 354  P         P         12 52 01.3 +1.4
DR12  Loma Pena Alta  21.19  73  P         P         12 52 12.1 +2.2
PLAL  Pickwick Lake   21.60   6  P         P         12 52 14.4 +0.4
PLAL                             IAmb      IAmb      12 52 25.8
      comp=Z,7.2nm,1.2s
HDIL  Hopedale        27.06   2  P         P         12 53 06.2 -0.4
HDIL                             IAmb      IAmb      12 53 23.8
      comp=Z,3.8nm,0.7s
PFO   Pinyon Flats O  30.84 315  P         P         12 53 38.9 -1.6
PFO                              IAmb      IAmb      12 53 57.6
      comp=Z,2.1nm,1.1s
ELK   Elko            34.64 326  P         P         12 54 11.1 -2.8
NVAR  Mina Array Bea  34.89 321  P         P         12 54 16.1 +0.1
      comp=Z,0.6nm,0.7s,baz=133,slow=8.4,SNR=7.1
CMAR  Chiang Mai Arr 146.91 343  PKPbc     PKPdf     13 07 03.8 -2.0
      comp=Z,0.5nm,0.5s,baz=5.9,slow=2.8,SNR=4.3
```

CRAAG ***21*** *12:53:19.1, 36°.45N×3°.03E, Ml3.1*

MDD ***21*** *12:53:21.3±0.5, 36°.54N×3°.18E, h14km±6km, mb4.0/12, Error ellipse: s-maj=10.0km s-min=4.9km az=54.0, PRXIMO*

ISC 21 12:53:19.7±1.0**, 36°.54N**±0°.04×**3°.18E**±0°.04**, h18**km**, n24, σ2s.03**/35**, Northern Algeria**

```
Code  Station Name     Δ°   AZ°   Phase ID             Time      Res
                               Op          ISC        h  m  s    ISC
ABA   Alger-Bouzarea   0.29 337  P         Pg        12 53 26.8 +0.7
ABA   Alger-Bouzarea   0.29 337  P         Pg        12 53 26.8 +0.7
ADJB  Djebel Djouab    0.43 151  P         Pg        12 53 29.0 +0.4
ADJB  Djebel Djouab    0.43 151  P         Pg        12 53 29.0 +0.4
AKET  Djebel Ketaf     0.75 130  P         Pg        12 53 35.9 +1.5
AKET  Djebel Ketaf     0.75 130  P         Pg        12 53 35.9 +1.5
SET   Setif            1.82 100  P         Pn        12 53 50.0 -0.3
SET   Setif            1.82 100  P         Pn        12 53 50.0 -0.3
EIBI  Ibiza            2.88 330  P         Pn        12 54 06.5 +1.8
      7.0nm,0.2s,SNR=11
EIBI                             S         Sn        12 54 37.2 -1.7
      23nm,0.3s,SNR=7.5
ETOS  Mallorca         3.24 355  P         Pn        12 54 11.7 +2.0
      3.8nm,0.2s,SNR=23
ETOS                             S         Sn        12 54 46.1 -1.7
      14nm,0.4s,SNR=7.2
EBEN2 Beniarda presa   3.42 310  P         Pn        12 54 12.5 +0.3
      1.7nm,0.2s,SNR=7.9
EBEN2                            S         Sn        12 54 49.6 -2.7
      7.8nm,0.3s,SNR=7.9
EMUR  La Murta         3.76 292  P         Pn        12 54 17.7 +0.8
      3.3nm,0.4s,SNR=7.9
EMUR                             S         Sn        12 54 58.2 -2.4
      13nm,0.5s,SNR=7.9
ETOB  Tobarra          4.30 301  P         Pn        12 54 25.8 +1.5
      2.9nm,0.2s,SNR=16
ETOB                             S         Sn        12 55 10.9 -3.2
      3.4nm,0.2s,SNR=7.9
ECHE  Chera            4.47 314  P         Pn        12 54 28.5 +1.8
      2.4nm,0.2s,SNR=7.9
EMOS  Mosqueruela      4.78 324  P         Pn        12 54 32.7 +1.8
      3.3nm,0.3s,SNR=12
EMOS                             S         Sn        12 55 22.5 -3.4
      4.9nm,0.3s,SNR=7.9
SESP  Santiago Espad   4.83 291  P         Pn        12 54 33.0 +1.4
      2.9nm,0.2s,SNR=7.9
SESP                             S         Sn        12 55 24.9 -2.2
      7.4nm,0.3s,SNR=7.9
EBER  Berja            4.89 276  S         Sn        12 55 26.7 -2.0
      4.6nm,0.3s,SNR=7.9
ERTA  Horta de San J   4.94 334  S         Sn        12 55 26.5 -3.3
      4.8nm,0.4s,SNR=7.9
EPOB  Poblet           5.08 342  P         Pn        12 54 37.6 +2.6
      1.2nm,0.3s,SNR=7.9
EPOB                             S         Sn        12 55 30.9 -2.4
      0.8nm,0.3s,SNR=7.9
EQES  Quesada          5.15 286  P         Pn        12 54 37.9 +1.9
      4.9nm,0.4s,SNR=7.9
EQES                             S         Sn        12 55 34.1 -0.9
      7.0nm,0.3s,SNR=7.9
CFON  Fontmartina      5.25 354  P         Pn        12 54 39.4 +2.0
      1.5nm,0.1s,SNR=6.8
CFON                             S         Sn        12 55 35.3 -2.2
      9.6nm,0.3s,SNR=7.9
EQUE  Quentar          5.35 279  S         Sn        12 55 39.1 -0.8
      4.3nm,0.5s,SNR=7.9
ELGU  Los Guajares,    5.48 276  S         Sn        12 55 40.5 -2.5
      6.8nm,0.3s,SNR=7.9
EMIR  Miracle          5.52 347  P         Pn        12 54 43.3 +2.2
      4.9nm,0.2s,SNR=7.9
EMIR                             S         Sn        12 55 41.0 -3.1
      15nm,0.4s,SNR=7.9
```

IDC 21 12:56:32.2±2.2**, 2°.24S**×**128°.95E, h0**km**, mb3.1**/2**, mb1 3.3**/3**, mb1mx3.2**/21**, mbtmp3.2**/3**, ML3.3**/1**, Error ellipse: s-maj=119.7km s-min=28.7km az=69.0, Ceram Sea**

```
Code  Station Name     Δ°   AZ°   Phase ID             Time      Res
                               Op          ISC        h  m  s    ISC
WRA   Warramunga Arr  18.37 164  P         P         13 00 49.3 +0.6
      0.1nm,0.3s,baz=343,slow=11,SNR=5.5
ASAR  Alice Springs   21.83 168  P         P         13 01 24.9 -1.6
      0.4nm,0.6s,baz=349,slow=14,SNR=6.9
MKAR  Makanchi Array  63.70 326  P         P         13 07 06.4 +0.7
      0.1nm,0.3s,baz=126,slow=7.3,SNR=1.7
```

IDC ***21*** *13:48:04.8±1.2, 14°.73N×147°.08E, h0km, mb3.6/9, mb1 3.8/10, mb1mx3.7/40, mbtmp3.7/10, ML4.2/1, MS2.5/1, Ms1 2.5/1, ms1mx2.3/42, Error ellipse: s-maj=31.4km s-min=18.8km az=109.0*

NEIC ***21*** *13:48:17.0±1.7, 14°.85N±0°.08×146°.0E±0°.3, h109km±10km, mb3.9/6, Error ellipse: s-maj=37.4km s-min=9.3km az=102.0*

ISC 21 13:48:09.1±1.0**, 14°.70N**±0°.09×**147°.1E**±0°.1**, h35**km**, n25, σ2s.14**/20**, mb3.7**/13**, Mariana Islands region**

```
Code  Station Name     Δ°   AZ°   Phase ID             Time      Res
                               Op          ISC        h  m  s    ISC
ANA2  Anatahan         2.12 321  Pn        Pn        13 48 44.2 +2.2
GUMO  Guam             2.44 243  Pn        Pn        13 48 46.7 +0.2
      57nm,0.3s,baz=116,slow=3.7,SNR=15
GUMO                             Sn        Sn        13 49 16.4 +1.3
      35nm,0.3s,baz=158,slow=19,SNR=5.6
GUMO                             LR        LR        13 49 24.1
      comp=Z,108nm,21.1s,baz=348,slow=33
GUMO  Guam             2.44 243            Pn        13 48 46.4  0.0
JCJ   Chichijima      13.16 340  Pn        Pn        13 51 10.6 -3.0
H11S3 WAKE ISLAND Hy  19.14  76  T         T         14 12 02.6
      SNR=4.9
H11S1 WAKE ISLAND Hy  19.15  76  T         T         14 12 03.7
H11S2 WAKE ISLAND Hy  19.15  76  T         T         14 12 03.7
H11N1 WAKE ISLAND Hy  19.54  72  T         T         14 12 39.6
      baz=257,slow=75,SNR=4.2
H11N2 WAKE ISLAND Hy  19.55  72  T         T         14 12 35.7
      baz=257,slow=75,SNR=2.8
H11N3 WAKE ISLAND Hy  19.56  72  T         T         14 12 40.5
      baz=257,slow=75,SNR=3.8
JGF   Kuroka          22.58 339  P         P         13 53 04.4 -2.1
JGF                              IAmb      IAmb      13 53 17.7
      comp=Z,2.4nm,0.9s
JWT   Wachi           23.04 335  P         P         13 53 07.3 -3.9
JWT                              IAmb      IAmb      13 53 08.4
      comp=Z,6.4nm,1.0s
MJAR  Matsushiro Arr  23.16 342  P         P         13 53 10.8 -1.7
      comp=Z,0.7nm,0.6s,baz=156,slow=5.9,SNR=2.2
JMM   Marumori        23.74 348  P         P         13 53 14.9 -3.2
JMM                              IAmb      IAmb      13 53 29.2
      comp=Z,12nm,1.1s
JSD   Sado            24.53 343  P         P         13 53 22.4 -3.0
JSD                              IAmb      IAmb      13 53 34.9
      comp=Z,6.2nm,0.9s
KSRS  Korea Array     28.36 327  P         P         13 53 60.0 +0.1
      comp=Z,1.1nm,0.7s,baz=146,slow=9.4,SNR=4.4
WRAB  Tennant Creek   36.63 200  P         P         13 55 08.8 -3.5
WRA   Warramunga Arr  36.65 200  P         P         13 55 13.1 +0.6
      comp=Z,0.5nm,0.8s,baz=23,slow=8.2,SNR=2.2
AS31  Alice Springs   40.26 199  P         P         13 55 42.8 -0.1
ASAR  Alice Springs   40.26 199  P         P         13 55 43.2 +0.4
      comp=Z,0.3nm,0.8s,baz=18,slow=6.9,SNR=4.2
SONM  Songino Array   47.12 323  P         P         13 56 38.9 +1.0
      comp=Z,1.0nm,0.6s,baz=134,slow=7.0,SNR=2.0
ZALV  Zalesovo Beam   62.01 324  P         P         13 58 26.4 +0.8
      comp=Z,0.6nm,0.5s,baz=93,slow=7.4,SNR=3.7
MKAR  Makanchi Array  62.22 315  P         P         13 58 28.5 +1.2
      comp=Z,1.1nm,0.4s,baz=89,slow=8.8,SNR=28
ILAR  Eielson Array   66.64  25  P         P         13 58 57.5 +1.6
      comp=Z,0.3nm,0.5s,baz=264,slow=4.5,SNR=4.3
YKA   Yellowknife Ar  80.87  28  P         P         14 00 20.4 +1.0
      comp=Z,0.1nm,0.5s,baz=285,slow=4.4,SNR=2.9
```

NEIC ***21*** *13:57:07.7±2.0, 9°.25N±0°.04×126°.2E±0°.1, h46km±6km, mb4.7/44, Error ellipse: s-maj=16.2km s-min=3.4km az=74.0*

MAN ***21*** *13:57:08.8, 9°.07N×126°.28E, h26km, mb4.9, ML3.8, MS3.7*

IDC ***21*** *13:57:12.1±1.4, 9°.13N×126°.23E, h84km±12km, mb4.2/27, mb1 4.3/31, mb1mx4.2/48, mbtmp4.5/31, MS2.7/1, Ms1 2.7/1, ms1mx2.4/37, Error ellipse: s-maj=16.0km s-min=8.3km az=88.0*

ISC 21 13:57:07.9±0.6**, 9°.19N**±0°.03×**126°.31E**±0°.05**, h48**km±5km**, n135, σ1s.55**/156**, mb4.6**/58**, 2C-1D, Mindanao**

```
Code  Station Name     Δ°   AZ°   Phase ID             Time      Res
                               Op          ISC        h  m  s    ISC
GLSP  General Luna,    0.62 343 eP         Pn        13 57 20.6 +0.1
GLSP                            eS         Sn        13 57 30.3 +0.6
BUTP  Butuan           0.71 252 eP         Pn        13 57 22.1 +0.4
BUTP                            eS         Sn        13 57 33.2 +1.5
MSLP  Maasin           1.71 303 eP         Pn        13 57 37.5 +2.3
MSLP                            eS         Sn        13 57 59.9 +3.9
CGP   Cagayan de Oro   1.75 246⇑eP         Pn        13 57 36.5 +0.7
CGP                             i S        Sn        13 57 58.1 +1.1
BUKP  Musuan           1.79 224 eP         Pn        13 57 38.2 +1.7
BUKP                            eS         Sn        13 58 00.6 +2.6
DAV   Davao City (W)   2.22 199  P         Pn        13 57 45.5 +3.2
      53nm,0.3s,baz=119,slow=0.2,SNR=5.3
DAV                              S         Sn        13 58 13.8 +5.2
      138nm,0.3s,baz=115,slow=20,SNR=3.2
MATI  Mati             2.23 181 eP         Pn        13 57 43.4 +1.1
MATI                            eS         Sn        13 58 09.0 +0.3
KCP   Kidapawan        2.48 209⇑eP         Pn        13 57 49.2 +3.3
KCP                             i S        Sn        13 58 16.3 +1.4
OCLP  Ormoc            2.50 318 eP         Pn        13 57 49.8 +3.8
LLP   Lapu-Lapu        2.57 296⇓eP         Pn        13 57 50.3 +3.3
LLP                             eS         Sn        13 58 21.4 +4.2
DDMP  Don Marcelino,   3.12 191 eP         Pn        13 57 55.6 +1.0
DDMP                            eS         Sn        13 58 31.2 +0.5
SKMP  Bagumbayan, Su   3.17 214 eP         Pn        13 57 55.2 -0.1
SKMP                            eS         Sn        13 58 28.6 -3.4
PAGZ  Pagadian         3.19 246 eP         Pn        13 57 56.1 +0.6
PAGZ                            eS         Sn        13 58 32.9 +0.6
CNOP  Candoni, Negro   3.68 280 eP         Pn        13 58 03.5 +1.3
CNOP                            eS         Sn        13 58 45.0 +0.7
LQP   Lukban           6.77 317 eP         Pn        13 58 49.5 +4.6
TOLI2 Tolitoli         9.73 215  Pn        Pn        13 59 26.5 +1.2
SIJI  Sorong          11.14 153  P         Pn        13 59 46.8 +2.1
      1.6nm,0.3s,baz=152,slow=23,SNR=8.1
FAKI  Fak Fak         13.40 154  Pn        Pn        14 00 16.9 +1.3
YULB  Yu-li           14.92 342  P         P         14 00 39.3 -1.3
TPUB  Ta-pu           15.05 339  P         P         14 00 41.5 -0.6
JMZ   Minamidaito 2   17.19  15  Pn        Pn        14 01 02.2 -2.5
JOW   Kunigami        17.65   6  P         P         14 01 13.5 +2.7
      2.3nm,0.3s,baz=136,slow=30,SNR=3.1
BATI  Baumata         19.44 188  P         P         14 01 30.6 +0.1
      4.6nm,0.3s,baz=0.0,slow=3.0,SNR=2.9
JNU   Nakatsue        24.19   9  P         P         14 02 20.9 +0.9
      6.0nm,0.7s,baz=38,slow=14,SNR=1.9
LEM   Lembang         24.50 230  P         P         14 02 23.4 +0.4
      29nm,0.9s,baz=28,slow=7.4,SNR=5.5
SLVN  Son La          24.72 302  P         P         14 02 23.7 -1.2
JMN   Monobe          25.40  15  P         P         14 02 32.5 +1.6
JMN                              IAmb      IAmb      14 02 35.1
      comp=Z,23nm,0.8s
JHS   Saijyo          26.44  13  P         P         14 02 41.5 +1.2
JHS                              IAmb      IAmb      14 02 45.5
      comp=Z,54nm,1.4s
FITZ  Fitzroy Crossi  27.12 181  P         P         14 02 46.5  0.0
      comp=Z,7.8nm,0.8s,baz=3.1,slow=7.8,SNR=24
FITZ  Fitzroy Crossi  27.12 181  P         P         14 02 46.8 +0.3
FITZ                             IAmb      IAmb      14 03 02.5
      comp=Z,23nm,1.4s
INU   Inuyama         27.82  19  P         P         14 02 52.7  0.0
INU                              IAmb      IAmb      14 02 54.5
      comp=Z,7.3nm,0.7s
PSI   Prapat          27.95 259  P         P         14 02 55.1 +0.9
      comp=Z,12nm,1.0s,baz=1.0,slow=2.9,SNR=4.4
CMAR  Chiang Mai Arr  28.09 292  P         P         14 02 56.4 +1.0
      comp=Z,1.2nm,0.4s,baz=110,slow=7.8,SNR=9.6
CMAR                             PcP       PcP       14 06 09.3 +0.4
      comp=Z,2.2nm,0.6s,baz=80,slow=1.2,SNR=13
JGF   Kuroka          28.16  19  P         P         14 02 56.6 +0.9
JGF                              IAmb      IAmb      14 03 12.9
      comp=Z,15nm,1.4s
KSRS  Korea Array     28.18   3  P         P         14 02 57.0 +1.2
      comp=Z,3.9nm,0.9s,baz=181,slow=9.4,SNR=9.9
KSRS                             LR        LR        14 14 17.8
      comp=Z,17nm,20.4s,baz=235,slow=36
KS19  Wonju Array Si  28.23   3  P         P         14 02 57.3 +1.0
KS19                             IAmb      IAmb      14 02 58.6
      comp=Z,32nm,1.2s
COEN  Coen            28.44 144  P         P         14 02 59.3 +1.0
WB0   Warramunga Arr  29.85 165  P         P         14 03 10.0 -0.9
WB0                              IAmb      IAmb      14 03 10.9
      comp=Z,18nm,1.5s
WRAB  Tennant Creek   30.00 165  P         P         14 03 11.4 -0.7
WRAB                             IAmb      IAmb      14 03 15.9
      comp=Z,13nm,1.4s
WRA   Warramunga Arr  30.00 165  P         P         14 03 11.2 -1.0
      comp=Z,0.3nm,0.3s,baz=284,slow=7.9,SNR=17
WB2   Warramunga Arr  30.01 165  P         P         14 03 10.8 -1.5
WR0   Warramunga Arr  30.07 164  P         P         14 03 12.2 -0.6
JMM   Marumori        31.40  22  P         P         14 03 25.5 +1.1
JMM                              IAmb      IAmb      14 03 42.6
      comp=Z,27nm,1.1s
AS31  Alice Springs   33.48 167  P         P         14 03 42.4 -0.4
ASAR  Alice Springs   33.48 167  P         P         14 03 42.5 -0.3
      comp=Z,1.4nm,0.5s,baz=347,slow=7.4,SNR=36
ASAR                             PcP       PcP       14 06 22.9 -0.2
      comp=Z,1.2nm,0.7s,baz=334,slow=1.9,SNR=9.0
ASAR                             ScP       ScP       14 10 02.0 -1.8
      comp=Z,0.2nm,0.5s,baz=346,slow=2.8,SNR=1.3
ASAR  Alice Springs   33.48 167  P         P         14 03 42.7 -0.1
CTA   Charters Tower  35.09 146  P         P         14 03 57.5 +0.7
      comp=Z,2.7nm,0.7s,baz=332,slow=12,SNR=5.0
CTAO  Charters Tower  35.09 146  P         P         14 03 54.7 -2.1
CTAO                             IAmb      IAmb      14 04 09.2
      comp=Z,15nm,1.4s
USA0B Ussuriysk Arra  35.23   7  P         P         14 03 57.8 +0.2
USRK  Ussuriysk Ar.   35.23   7  P         P         14 03 59.6 +2.0
      comp=Z,14nm,0.7s,baz=195,slow=8.8,SNR=18
USRK  Ussuriysk Ar.   35.23   7  P         P         14 03 59.5 +1.8
ASAJ  Asahikawa       37.57  19  P         P         14 04 19.9 +2.4
      comp=Z,10.0nm,0.8s,baz=230,slow=10,SNR=25
JKA   Kamikawa-asahi  37.57  19  P         P         14 04 19.0 +1.4
JKA                              IAmb      IAmb      14 04 21.1
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	comp=Z,16nm,0.9s						
MORW	**Morawa**	**39.30**	**194**	P	**P**	**14 04 32.8**	**+0.5**
MORW				IAmb	IAmb	14 04 41.2	
	comp=Z,14nm,1.3s						
FORT	**Forrest**	**39.77**	**178**	P	**P**	**14 04 36.7**	**+0.5**
KLR	**Kul'dur**	**40.17**	**6**	P	**P**	**14 04 40.6**	**+1.2**
	comp=Z,6.7nm,0.5s,baz=192,slow=7.0,SNR=54						
H11S3	**WAKE ISLAND Hy**	**40.20**	**72**	T	T	14 47 38.5	
	baz=262,slow=75,SNR=425						
H11S1	**WAKE ISLAND Hy**	**40.22**	**72**	T	T	14 47 36.8	
	baz=262,slow=75,SNR=164						
H11S2	**WAKE ISLAND Hy**	**40.22**	**72**	T	T	14 47 38.1	
	baz=262,slow=75,SNR=208						
TAPN	**Taplejung**	**40.64**	**302**	*e*P	**P**	**14 04 44.3**	**+0.4**
	comp=Z,18nm,0.3s						
ODAN	**Odare**	**40.76**	**301**	*e*P	**P**	**14 04 44.7**	**-0.1**
	comp=Z,15nm,0.4s						
RAMN	**Ramite**	**41.45**	**301**	*e*P	**P**	**14 04 49.4**	**-1.1**
	comp=Z,15nm,0.6s						
ULN	**Ulaanbaatar**	**41.85**	**341**	P	**P**	**14 04 52.9**	**-0.5**
GUN	**Gumba**	**42.36**	**302**	*e*P	**P**	**14 04 58.2**	**+0.2**
	comp=Z,37nm,0.9s						
PKI	**Pulchoki**	**42.65**	**301**	*e*P	**P**	**14 05 00.0**	**-0.4**
	comp=Z,3.4nm,0.3s						
PKIN	**Phulchoki**	**42.66**	**301**	*e*P	**P**	**14 05 00.0**	**-0.4**
	comp=Z,6.7nm,0.4s						
NWAO	**Narrogin (SRO)**	**42.76**	**191**	P	**P**	**14 05 00.2**	**-0.5**
	comp=Z,9.2nm,0.7s,baz=43,slow=8.6,SNR=8.4						
NWAO	**Narrogin (SRO)**	**42.76**	**191**	P	**P**	**14 04 59.5**	**-1.2**
NWAO				IAmb	IAmb	14 05 16.4	
	comp=Z,10nm,1.1s						
NWAO	**Narrogin (SRO)**	**42.76**	**191**	P	**P**	**14 04 59.4**	**-1.3**
NWAO				IAmb	IAmb	14 05 16.4	
	comp=Z,13nm,1.1s						
BBOO	**Buckleboo**	**42.78**	**168**	P	**P**	**14 05 01.6**	**+0.7**
BBOO				IAmb	IAmb	14 05 03.0	
	comp=Z,18nm,0.7s						
KKN	**Kakani**	**42.83**	**301**	*e*P	**P**	**14 05 01.4**	**-0.3**
DMN	**Daman**	**42.92**	**301**	*e*P	**P**	**14 05 02.2**	**-0.3**
	comp=Z,4.9nm,0.4s						
STKA	**Stephens Creek**	**43.37**	**161**	P	**P**	**14 05 05.7**	**+0.1**
	comp=Z,2.5nm,0.5s,baz=334,slow=9.5,SNR=11						
STKA				PcP	**PcP**	**14 06 51.0**	**-2.7**
	comp=Z,1.0nm,0.5s,baz=316,slow=8.4,SNR=2.9						
STKA	**Stephens Creek**	**43.37**	**161**	P	**P**	**14 05 05.8**	**+0.2**
GKN	**Gorkha**	**43.43**	**301**	*e*P	**P**	**14 05 06.2**	**-0.3**
	comp=Z,4.2nm,0.3s						
CAN	**Canberra**	**49.18**	**155**	P	**P**	**14 05 52.4**	**+1.1**
CAN				IAmb	IAmb	14 05 59.1	
	comp=Z,14nm,1.3s						
TOO	**Toolangi**	**49.86**	**160**	P	**P**	**14 05 58.0**	**+1.6**
TOO				IAmb	IAmb	14 06 05.9	
	comp=Z,5.0nm,0.9s						
PEA0B	**Petropavlovsk-**	**50.60**	**24**	P	**P**	**14 06 04.2**	**+2.3**
PETK	**Petropavlovsk-**	**50.60**	**24**	P	**P**	**14 06 04.3**	**+2.4**
ZSN	**Zaisan**	**51.77**	**325**	*e*P	**P**	**14 06 10.6**	**-0.2**
	baz=325						
MK31	**Makanchi Array**	**52.91**	**323**	P	**P**	**14 06 19.0**	**-0.2**
MK31				IAmb	IAmb	14 06 20.2	
	comp=Z,5.8nm,0.6s						
MKAR	**Makanchi Array**	**52.91**	**323**	P	**P**	**14 06 19.2**	**0.0**
	comp=Z,7.0nm,0.5s,baz=118,slow=7.6,SNR=148						
MKAR				PcP	**PcP**	**14 07 27.4**	**-0.3**
	comp=Z,2.1nm,0.6s,baz=188,slow=3.9,SNR=6.7						
MKAR	**Makanchi Array**	**52.91**	**323**	P	**P**	**14 06 19.3**	**+0.1**
SHLS	**Shalkode**	**52.97**	**318**	*e*P	**P**	**14 06 17.1**	**-2.8**
	baz=318						
MAKZ	**Makanchi**	**53.10**	**323**	P	**P**	**14 06 20.7**	**+0.1**
MAKZ					**PcP**	**14 07 28.2**	**-0.3**
UZB	**Uzynbulak**	**53.26**	**318**	*e*P	**P**	**14 06 21.4**	**-0.6**
	comp=Z,2.0nm,0.6s,baz=318						
MA2	**Magadan**	**53.56**	**15**	P	**P**	**14 06 25.1**	**+1.3**
	baz=216,slow=7.3,SNR=4.1						
KPKS	**Kokpek**	**53.62**	**318**	*e*P	**P**	**14 06 23.8**	**-0.7**
	baz=318						
SATY	**Saty**	**53.63**	**318**	*e*P	**P**	**14 06 24.0**	**-0.7**
	baz=318						
NIL	**Nilore**	**54.38**	**305**	P	**P**	**14 06 30.3**	**+0.1**
NIL				IAmb	IAmb	14 06 31.1	
	comp=Z,11nm,0.8s						
TDK	**Taldyqorghan**	**54.45**	**320**	*e*P	**P**	**14 06 30.1**	**-0.4**
	comp=Z,4.4nm,0.6s,baz=320						
MDOK	**Medeo**	**54.58**	**317**	*e*P	**P**	**14 06 31.0**	**-0.6**
	baz=317						
TNSS	**Tian-Shan**	**54.60**	**317**	*e*P	**P**	**14 06 32.0**	**-0.1**
	baz=317						
KUU	**Kurty**	**55.34**	**318**	*e*P	**P**	**14 06 36.5**	**-0.5**
	comp=Z,5.8nm,0.8s,baz=318						
ZALV	**Zalesovo Beam**	**55.59**	**332**	P	**P**	**14 06 37.5**	**-1.0**
	comp=Z,2.9nm,0.5s,baz=116,slow=7.3,SNR=13						
ZALV	**Zalesovo Beam**	**55.59**	**332**	P	**P**	**14 06 37.8**	**-0.7**
SEM	**Semipalatinsk**	**55.93**	**326**	*e*P	**P**	**14 06 39.5**	**-1.8**
	baz=326						
AAK	**Ala-Archa**	**56.12**	**316**		**P**	**14 06 42.9**	**+0.1**
SGDS	**Sogindy**	**56.32**	**317**	*e*P	**P**	**14 06 44.9**	**+0.8**
	baz=317						
KURK	**Kurchatov**	**56.98**	**326**	P	**P**	**14 06 48.2**	**-0.3**
BTLS	**Baital**	**57.30**	**318**	*e*P	**P**	**14 06 49.9**	**-1.0**
	baz=318						
DZA	**Taraz**	**58.40**	**315**	*e*P	**P**	**14 06 58.8**	**+0.1**
	baz=315						
KKAR	**Karatay Array**	**59.04**	**315**	P	**P**	**14 07 02.0**	**-1.1**
IUG	**Iuzhnay**	**59.09**	**314**	*e*P	**P**	**14 07 03.1**	**-0.5**
	baz=314						
BRZS	**Berezniki**	**60.06**	**323**	*e*P	**P**	**14 07 08.8**	**-1.1**
	baz=323						
TIXI	**Tiksi**	**62.43**	**1**	P	**P**	**14 07 24.9**	**-0.6**
BRVK	**Borovoye**	**62.65**	**326**	P	**P**	**14 07 26.7**	**-0.7**
BRVK				IAmb	IAmb	14 07 27.8	
	comp=Z,6.9nm,0.8s						
THZ	**Tophouse**	**66.28**	**144**	P	**P**	**14 07 51.2**	**-0.1**
THZ				IAmb	IAmb	14 08 01.8	
	comp=Z,11nm,0.9s						
BKZ	**Black Stump Fm**	**66.94**	**140**	P	**P**	**14 07 55.3**	**-0.2**
ABKAR	**Akbulak array**	**67.72**	**320**	P	**P**	**14 07 59.1**	**-1.2**
UNV	**Unalaska Valle**	**69.23**	**36**	P	**P**	**14 08 10.7**	**+1.1**
ARU	**Arti**	**70.15**	**327**	P	**P**	**14 08 14.3**	**-1.0**
SOCY	**Socotra**	**70.95**	**280**	P	**P**	**14 08 20.0**	**-1.1**
SOCY				IAmb	IAmb	14 08 31.7	
	comp=Z,19nm,1.3s						
RAYN	**Ar Rayn**	**78.01**	**292**	P	**P**	**14 09 01.8**	**-0.2**
RAYN				IAmb	IAmb	14 09 02.5	
	comp=Z,5.1nm,0.9s						
KBZ	**Khabaz**	**78.97**	**313**	P	**P**	**14 09 05.9**	**-0.8**
	comp=Z,1.9nm,0.7s,baz=102,slow=6.2,SNR=4.7						
I23K	**Minto, Yukon-K**	**79.34**	**25**	P	**P**	**14 09 08.8**	**+0.5**
ILAR	**Eielson Array**	**80.39**	**26**	P	**P**	**14 09 14.4**	**+0.4**
	comp=Z,1.0nm,0.7s,baz=238,slow=4.7,SNR=6.6						
KLMR	**Klimovskoe**	**80.48**	**330**	*e*P	**P**	**14 09 11.5**	**-3.0**
KLMR				AMP		14 09 14.7	
	comp=Z,12nm,0.7s						
SPITS	**Spitsbergen Ar**	**85.08**	**349**	P	**P**	**14 09 38.0**	**-0.1**
	comp=Z,29nm,1.1s,baz=128,slow=12,SNR=30						
ARCES	**ARCESS Array B**	**85.22**	**340**	P	**P**	**14 09 39.0**	**+0.1**
	comp=Z,7.2nm,0.7s,baz=82,slow=6.7,SNR=46						
ARCES	**ARCESS Array B**	**85.22**	**340**	P	**P**	**14 09 39.2**	**+0.2**
BRTR	**Keskin Array B**	**86.25**	**309**	P	**P**	**14 09 43.5**	**-1.3**
	comp=Z,0.9nm,0.5s,baz=83,slow=4.8,SNR=4.7						
FINES	**FINESS Array B**	**86.86**	**332**	P	**P**	**14 09 46.5**	**-0.6**
	comp=Z,2.6nm,0.4s,baz=79,slow=4.7,SNR=34						
AKASG	**Malin Array Be**	**87.42**	**321**	P	**P**	**14 09 49.0**	**-1.1**
	comp=Z,0.5nm,0.3s,baz=64,slow=5.0,SNR=6.1						
MNK	**Minsk**	**87.45**	**325**	*i* P	**P**	**14 09 50.1**	**-0.1**
	comp=E,1.0nm,1.0s						
MNK				*i* P	**P**	**14 09 50.1**	**-0.1**
	comp=N,18nm,0.9s						
MNK				*i* P	**P**	**14 09 50.1**	**-0.1**
	comp=Z,6.0nm,0.7s						
MNK				*i* pP	**sP**	**14 10 07.0**	**-2.8**
MNK				*i* PP	**PP**	**14 13 14.1**	**-0.9**
MNK				*i* PPP	PPP	14 15 08.9	
MNK				*i* S	**SKSac**	**14 20 11.3**	**-2.7**
MNK				*i* sS	**ScS**	**14 20 41.6**	**+7.3**
MNK				*i* SS	**SS**	**14 26 10.6**	**-2.2**
MNK				*i* SSS	SSS	14 29 41.3	
MNK				*i* LR	LR	14 48 10.7	
MNK				*i* LRM	MLR	14 50 17.3	
	comp=N,247nm,17.4s						
MNK				*i* LRM	MLR	14 50 30.4	
	comp=E,29nm,19.5s						
MNK				*i* LRM	MLR	14 50 33.2	
	comp=Z,71nm,15.9s						
VNDA	**Vanda**	**88.86**	**173**	P	**P**	**14 09 56.4**	**+0.1**
	comp=Z,2.4nm,0.6s,baz=325,slow=6.9,SNR=10						
KMBO	**Kilima Mbogo**	**89.25**	**269**	P	**P**	**14 09 59.2**	**-0.6**
	comp=Z,1.2nm,0.5s,baz=59,slow=5.9,SNR=3.2						
BURAR	**Bucovina Array**	**90.67**	**318**	P	**P**	**14 10 03.2**	**-2.5**
YKA	**Yellowknife Ar**	**94.72**	**24**	P	**P**	**14 10 25.0**	**+1.1**
	comp=Z,0.8nm,0.6s,baz=305,slow=3.8,SNR=12						
GERES	**GERESS Array B**	**97.57**	**322**	P	**P**	**14 10 36.5**	**-0.8**
	comp=Z,0.5nm,0.6s,baz=72,slow=4.3,SNR=5.0						
H06S1	**SOCORRO T**	**117.08**	**64**	T	T	16 22 47.9	
	SNR=28						
TORD	**Torodi Ar. Bea**	**120.70**	**291**	PKP	**PKPdf**	**14 15 55.0**	**-0.6**
	comp=Z,2.6nm,0.5s,baz=39,slow=2.0,SNR=6.5						
DBIC	**Dimbokro**	**128.85**	**286**	PKP	**PKPdf**	**14 16 11.5**	**+0.3**
	comp=Z,1.7nm,0.4s,baz=184,slow=2.3,SNR=3.1						
PLCA	**Paso Flores**	**145.20**	**157**	PKPbc	**PKPdf**	**14 16 41.2**	**+0.6**
	comp=Z,6.2nm,0.7s,baz=240,slow=3.1,SNR=24						
PLCA	**Paso Flores**	**145.20**	**157**		**PKPdf**	**14 16 41.5**	**+0.8**

AEIC ***21*** *14:02:01±1.7, 51°.55N±0°.08×173°.82W±0°.07, h42*^{km}*±6*^{km}*,*
Error ellipse: s-maj=11.5km s-min=6.4km az=176.0
NEIC ***21*** *14:02:02.8±1.7, 51°.62N±0°.08×173°.86W±0°.07, h46*^{km}*±8*^{km}*,*
mb4.4/46, ML3.9(AEIC), Error ellipse: s-maj=11.7km
s-min=6.4km az=179.0
IDC ***21*** *14:02:03.5±3.0, 51°.69N×173°.75W, h47*^{km}*±28*^{km}*, mb3.9/27,*
mb1 4.1/30, mb1mx4.0/49, mbtmp4.2/30, ML4.1/3, MS3.4/8,
Ms1 3.5/8, ms1mx3.1/41, Error ellipse: s-maj=21.0km
s-min=9.9km az=173.0
ISC 21 14:02:04.6±0.9**, 51°.71N**±0°.08×**173°.86W**±0°.03**, h56**^{km}±6^{km}**,**
n238, σ1^{s}.**24**/247**, mb4.4**/57**, MS3.6**/8**, 4C-4D, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
ATKA	**Atka Island**	**0.54**	**338**	Pn	**Pn**	**14 02 15.3**	**-1.3**
ATKA	**Atka Island**	**0.54**	**338**		**Sn**	**14 02 25.1**	**-0.3**
KOFP	**Korovin Flat P**	**0.58**	**346**		**Pn**	**14 02 16.3**	**-1.0**
KOWE	**Korovin West**	**0.70**	**340**		**Pn**	**14 02 18.1**	**-0.5**
GSMY	**Great Sitkin M**	**1.40**	**285**		**Pn**	**14 02 25.8**	**-2.1**
GSTR	**Great Sitkin T**	**1.41**	**287**		**Pn**	**14 02 28.0**	**0.0**
GSTD	**Great Sitkin T**	**1.46**	**285**		**Pn**	**14 02 26.8**	**-1.9**
GSTD					**Sn**	**14 02 45.4**	**-1.3**
ADK	**Adak**	**1.76**	**277**		**Pn**	**14 02 30.5**	**-2.2**
KIKV	**Kanaga Island**	**2.06**	**276**		**Pn**	**14 02 35.1**	**-1.7**
KIMD	**Kanaga Island**	**2.10**	**273**		**Pn**	**14 02 35.1**	**-2.2**
TASE	**Tanaga Southea**	**2.60**	**274**		**Pn**	**14 02 42.9**	**-1.3**
NIKH	**Nikolski High**	**3.32**	**66**	P	**Pn**	**14 02 53.2**	**-0.8**
	baz=247,SNR=15						
NIKH	**Nikolski High**	**3.32**	**66**	Pn	**Pn**	**14 02 52.7**	**-1.4**
NIKH	**Nikolski High**	**3.32**	**66**		**Sn**	**14 03 31.1**	**-1.1**
OKSP	**Okmok Steeple**	**3.74**	**63**		**Pn**	**14 02 58.4**	**-1.4**
OKSO	**Okmok South**	**3.85**	**62**		**Pn**	**14 02 59.7**	**-1.6**
CESW	**Semis' Southwe**	**4.08**	**275**		**Pn**	**14 03 03.4**	**-1.1**
AMKA	**Amchitka**	**4.28**	**268**		**Pn**	**14 03 05.7**	**-1.4**
MAPS	**Pakushin South**	**4.70**	**61**		**Pn**	**14 03 11.9**	**-1.0**
MGOD	**Makushin Gods**	**4.73**	**61**		**Pn**	**14 03 12.2**	**-1.2**
MSW	**Makushin Switc**	**4.83**	**60**		**Pn**	**14 03 13.5**	**-1.2**
MNAT	**Makushin Natee**	**4.87**	**61**		**Pn**	**14 03 14.4**	**-0.9**
MTBL	**Makushin Table**	**4.91**	**60**		**Pn**	**14 03 14.3**	**-1.5**
UNV	**Unalaska Valle**	**4.95**	**62**	P	**Pn**	**14 03 17.0**	**+0.7**
	baz=246						
UNV	**Unalaska Valle**	**4.95**	**62**	Pn	**Pn**	**14 03 16.2**	**-0.1**
AKGG	**Akutan Green G**	**5.37**	**59**		**Pn**	**14 03 21.0**	**-1.1**
WESP	**Westdahl Peak**	**6.17**	**60**		**Pn**	**14 03 32.4**	**-0.7**
FALS	**False Pass**	**7.01**	**59**	P	**Pn**	**14 03 47.7**	**+3.2**
	baz=246						
FALS	**False Pass**	**7.01**	**59**	Pn	**Pn**	**14 03 46.2**	**+1.7**
GAMB	**Gambell**	**12.15**	**5**	P	**Pn**	**14 04 57.1**	**+2.4**
	baz=186						
OHAK	**Old Harbor**	**13.15**	**57**	Pn	**Pn**	**14 05 04.9**	**-3.5**
ANM	**Nome**	**13.63**	**16**	P	**P**	**14 05 18.4**	**-3.6**
	baz=203,SNR=5.5						
KDAK	**Kodiak Island**	**13.68**	**55**	P	**Pn**	**14 05 13.0**	**-2.5**
	1.2nm,0.3s,baz=234,slow=7.9,SNR=7.6						
TTA	**Tatalina**	**14.74**	**33**	P	**P**	**14 05 35.0**	**+0.6**
SKT	**Skwentna**	**15.88**	**41**	P	**P**	**14 05 45.5**	**-1.4**
	baz=239						
SKT	**Skwentna**	**15.88**	**41**		**P**	**14 05 46.7**	**-0.2**
SEW	**Seward**	**15.98**	**49**	Pn	**Pn**	**14 05 43.5**	**-1.9**
CHUM	**Lake Minchumin**	**16.64**	**35**	P	**P**	**14 05 56.0**	**+0.8**
	baz=232						
KTH	**Kantishna Hill**	**16.95**	**37**	P	**P**	**14 05 59.5**	**+0.7**
KTH				IAmb	IAmb	14 06 14.7	
	comp=Z,15nm,0.8s						
SML	**Sawmill**	**17.14**	**44**	Pn	**Pn**	**14 05 58.7**	**-1.3**
SML				IAmb	IAmb	14 06 03.5	
	comp=Z,26nm,1.4s						
BPAW	**Bear Paw Mtn.**	**17.24**	**35**	P	**P**	**14 06 02.5**	**+0.5**
	baz=234						
PETK	**Petropavlovsk-**	**17.36**	**286**	P	**P**	**14 06 03.6**	**+0.2**
	comp=Z,1.0nm,0.3s,baz=204,slow=2.7,SNR=34						
PETK				S	**Sn**	**14 09 13.5**	**-1.5**
	comp=Z,0.2nm,0.3s,baz=259,slow=2.9,SNR=1.6						
PETK				LR	LR	14 12 05.2	
	comp=Z,77nm,21.9s,baz=95,slow=34						
WAT2	**Susitna Watana**	**17.55**	**40**	P	**Pn**	**14 06 04.3**	**-0.9**
	baz=241						
IMAR	**Indian Mountai**	**17.56**	**28**	P	**P**	**14 06 06.9**	**+1.4**
FID	**Port Fidalgo**	**17.59**	**48**	Pn	**Pn**	**14 06 02.9**	**-2.5**
FID				IAmb	IAmb	14 06 06.3	
	comp=Z,62nm,1.3s						
SCM	**Sheep Creek Mo**	**17.59**	**45**		**Pn**	**14 06 04.7**	**-0.9**
SCM				IAmb	IAmb	14 06 18.4	
	comp=Z,24nm,0.9s						
RND	**Reindeer**	**17.66**	**39**		**Pn**	**14 06 05.3**	**-1.1**
MCK	**McKinley**	**17.80**	**38**	P	**Pn**	**14 06 07.4**	**-0.6**
	baz=239						
MLY	**Manley**	**17.88**	**33**	P	**P**	**14 06 11.1**	**+2.1**
	baz=232,SNR=9.3						
KLU	**Klutina**	**18.09**	**46**		**P**	**14 06 10.3**	**-1.1**
KLU				IAmb	IAmb	14 06 18.4	
	comp=Z,25nm,1.4s						
M24K	**Tolsona, Glenn**	**18.20**	**44**	P	**Pn**	**14 06 13.4**	**+0.5**
	baz=247						
I23K	**Minto, Yukon-K**	**18.42**	**34**	P	**Pn**	**14 06 15.8**	**+0.3**
	baz=234,SNR=8.9						
I23K	**Minto, Yukon-K**	**18.42**	**34**	P	**Pn**	**14 06 15.8**	**+0.3**
I23K				IAmb	IAmb	14 06 30.7	
	comp=Z,12nm,0.7s						
WRH	**Wood River Hil**	**18.50**	**36**	P	**P**	**14 06 14.2**	**-1.6**
CCB	**Clear Creek Bu**	**18.70**	**36**	P	**P**	**14 06 16.6**	**-1.4**
MDM	**Murphy Dome**	**18.71**	**35**	P	**P**	**14 06 17.2**	**-0.9**
N25K	**Chitina, Valde**	**18.72**	**47**	P	**P**	**14 06 17.3**	**-1.1**
PAX	**Paxson**	**18.84**	**42**	P	**Pn**	**14 06 20.0**	**-0.7**
	baz=246						
HDA	**Harding Lake**	**18.89**	**37**	P	**P**	**14 06 19.7**	**-0.4**
	baz=240,SNR=15						
HDA	**Harding Lake**	**18.89**	**37**	P	**P**	**14 06 19.1**	**-1.0**
HDA				IAmb	IAmb	14 06 34.9	
	comp=Z,19nm,0.5s						
IL31		**19.10**	**36**	P	**P**	**14 06 21.2**	**-1.1**
IL31				IAmb	IAmb	14 06 24.3	
	comp=Z,15nm,1.1s						
ILAR	**Eielson Array**	**19.10**	**36**	P	**P**	**14 06 21.1**	**-1.3**
	comp=Z,1.4nm,0.3s,baz=236,slow=8.6,SNR=79						
ILAR	**Eielson Array**	**19.10**	**36**	P	**P**	**14 06 20.4**	**-2.0**
IL18	**Eielson Array**	**19.13**	**37**	P	**P**	**14 06 22.4**	**-0.4**
COLD	**Coldfoot**	**19.45**	**28**	P	**Pn**	**14 06 27.5**	**-0.3**
	baz=228						
COLD	**Coldfoot**	**19.45**	**28**		**P**	**14 06 25.4**	**-0.7**
MENT	**Mentasta**	**19.56**	**43**	P	**Pn**	**14 06 28.2**	**-1.0**
DOT	**Dot Lake**	**19.69**	**41**	P	**P**	**14 06 29.2**	**+0.3**
SCRK	**Sand Creek**	**19.86**	**40**	P	**P**	**14 06 30.0**	**-0.7**
	baz=246,SNR=16						
PRP	**Porcupine Dome**	**19.97**	**35**	P	**P**	**14 06 31.8**	**-0.2**
	baz=240						
CTGM	**Chitina Glacie**	**20.07**	**50**	P	**P**	**14 06 31.4**	**-1.6**
CTGM				IAmb	IAmb	14 06 49.5	
	comp=Z,17nm,0.9s						
BCAR	**Beaver Creek A**	**20.44**	**44**	P	Pn	14 06 37.8	-1.7
TOLK	**Toolik Lake Re**	**20.58**	**25**	P	**P**	**14 06 39.5**	**+1.1**
	baz=226,SNR=10						
TOLK	**Toolik Lake Re**	**20.58**	**25**	P	**P**	**14 06 37.8**	**-0.7**
TOLK				IAmb	IAmb	14 06 54.3	
	comp=Z,11nm,0.8s						
FYU	**Fort Yukon**	**20.62**	**33**	P	**P**	**14 06 39.5**	**+0.7**
FYU				IAmb	IAmb	14 06 53.9	
	comp=Z,16nm,0.9s						
SEY	**Seymchan**	**21.13**	**315**	P	**P**	**14 06 45.6**	**+1.3**
	comp=Z,2.5nm,0.7s,baz=108,slow=13,SNR=11						
A21K	**Barrow**	**21.16**	**15**	P	**P**	**14 06 45.2**	**+0.6**
	baz=210,SNR=16						
A21K	**Barrow**	**21.16**	**15**	P	**P**	**14 06 45.0**	**+0.4**
A21K				IAmb	IAmb	14 06 50.9	
	comp=Z,19nm,0.8s						
MA2	**Magadan**	**21.24**	**306**	P	**P**	**14 06 46.9**	**+1.3**
	comp=Z,5.4nm,0.7s,baz=95,slow=11,SNR=3.3						
EGAK	**Eagle**	**21.30**	**40**	P	**P**	**14 06 45.8**	**-0.3**
	baz=247,SNR=40						
EGAK	**Eagle**	**21.30**	**40**	P	**P**	**14 06 46.2**	**0.0**
BMAR	**Burnt Mountain**	**21.30**	**31**	P	**P**	**14 06 46.9**	**+0.7**
EPYK	**Eagle Plains**	**23.60**	**37**	P	**P**	**14 07 09.1**	**-0.9**
	baz=250						
EPYK	**Eagle Plains**	**23.60**	**37**	P	**P**	**14 07 09.5**	**-0.5**
EPYK				IAmb	IAmb	14 07 10.3	
	comp=Z,9.5nm,1.0s						
INK	**Inuvik**	**25.44**	**34**	P	**P**	**14 07 25.7**	**-0.9**
	comp=Z,9.1nm,1.1s,baz=226,slow=10.0,SNR=14						
INK	**Inuvik**	**25.44**	**34**	P	**P**	**14 07 26.0**	**-0.6**
INK				IAmb	IAmb	14 07 27.5	
	comp=Z,9.0nm,1.1s						
DLBC	**Dease Lake**	**25.59**	**57**	P	**P**	**14 07 30.1**	**+1.9**
	comp=Z,5.0nm,0.6s,baz=275,slow=5.4,SNR=15						
ASAJ	**Asahikawa**	**29.78**	**273**	P	**P**	**14 08 06.2**	**+0.6**
	comp=Z,4.2nm,0.6s,baz=70,slow=13,SNR=4.7						
YKA	**Yellowknife Ar**	**32.75**	**48**	P	**P**	**14 08 29.7**	**-1.9**
	comp=Z,1.6nm,0.9s,baz=273,slow=7.8,SNR=13						
YKA				PcP	**PcP**	**14 11 16.4**	**+0.9**
	comp=Z,0.6nm,0.6s,baz=289,slow=1.7,SNR=5.9						
YKA				LR	LR	14 22 47.0	
	comp=Z,119nm,18.6s,baz=0.0,slow=38						
KLR	**Kul'dur**	**34.04**	**288**	P	**P**	**14 08 42.5**	**-0.5**
	comp=Z,4.2nm,0.6s,baz=70,slow=8.0,SNR=26						
B08A	**Colville Reser**	**34.50**	**74**	P	**P**	**14 08 46.3**	**-0.8**
B08A				IAmb	IAmb	14 09 02.3	
	comp=Z,6.1nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**35.30**	**212**	T	T	14 46 53.2	
	baz=21,slow=74						
H11N3	**WAKE ISLAND Hy**	**35.31**	**212**	T	T	14 46 55.0	
	baz=21,slow=74						
H11N1	**WAKE ISLAND Hy**	**35.32**	**212**	T	T	14 46 56.3	
	baz=21						
NEW	**Newport**	**35.86**	**73**	P	**P**	**14 08 58.1**	**-0.6**
	comp=Z,2.1nm,0.5s,baz=278,slow=7.4,SNR=5.6						
NEW	**Newport**	**35.86**	**73**	P	**P**	**14 08 58.7**	**0.0**
	baz=297						
NEW	**Newport**	**35.86**	**73**	P	**P**	**14 08 58.2**	**-0.6**
USRK	**Ussuriysk Ar.**	**36.29**	**280**	P	**P**	**14 09 02.2**	**-0.2**
	comp=Z,4.7nm,0.6s,baz=57,slow=7.4,SNR=10						
USRK	**Ussuriysk Ar.**	**36.29**	**280**	P	**P**	**14 09 02.5**	**+0.1**
MJAR	**Matsushiro Arr**	**36.88**	**265**	P	**P**	**14 09 08.1**	**+0.6**
	comp=Z,0.9nm,0.6s,baz=41,slow=7.0,SNR=5.8						
MSO	**Missoula**	**38.44**	**73**	P	**P**	**14 09 21.5**	**+0.8**
	baz=300						
HLID	**Hailey**	**39.87**	**78**	P	**P**	**14 09 33.7**	**+0.9**
	baz=303						
BOZ	**Bozeman (W)**	**40.45**	**73**	P	**P**	**14 09 37.8**	**+0.3**
	baz=302						
BOZ	**Bozeman (W)**	**40.45**	**73**	P	**P**	**14 09 37.3**	**-0.1**
BOZ				IAmb	IAmb	14 09 51.7	
	comp=Z,5.8nm,0.6s						
NVAR	**Mina Array Bea**	**40.45**	**87**	P	**P**	**14 09 37.7**	**+0.1**
	comp=Z,0.6nm,0.7s,baz=294,slow=8.8,SNR=3.5						
NVAR				PcP	**PcP**	**14 11 39.7**	**+0.2**
	comp=Z,0.4nm,0.7s,baz=302,slow=4.1,SNR=2.5						
FFC	**Flin Flon**	**41.42**	**56**	P	**P**	**14 09 45.5**	**+0.4**
FFC				IAmb	IAmb	14 09 45.9	
	comp=Z,4.9nm,0.7s						
H17A	**Grant Village**	**41.73**	**74**	P	**P**	**14 09 50.0**	**+1.9**
	baz=303						
RLMT	**Red Lodge**	**42.11**	**72**	P	**P**	**14 09 52.3**	**+1.1**
	baz=303						
R11A	**Troy Canyon, C**	**42.19**	**85**	P	**P**	**14 09 53.2**	**+1.4**
	baz=308						
TPNV	**Topopah Spring**	**42.65**	**87**	P	**P**	**14 09 55.6**	**+0.1**
	baz=309						
KSRS	**Korea Array**	**42.70**	**274**	P	**P**	**14 09 56.9**	**+1.1**
	comp=Z,6.6nm,0.9s,baz=53,slow=8.0,SNR=14						
KSRS				LR	LR	14 26 20.3	
	comp=Z,21nm,21.0s,baz=40,slow=34						
DUG	**Dugway, Tooele**	**42.78**	**81**	P	**P**	**14 09 57.9**	**+1.3**
	baz=307						
DUG	**Dugway, Tooele**	**42.78**	**81**	P	**P**	**14 09 56.6**	**+0.1**
DUG				IAmb	IAmb	14 10 11.4	
	comp=Z,5.3nm,1.1s						
BW06	**Boulder Array**	**43.26**	**76**	P	**P**	**14 10 00.8**	**+0.3**
	baz=305						
BW06	**Boulder Array**	**43.26**	**76**	P	**P**	**14 10 00.8**	**+0.3**
PD31	**Pinedale Array**	**43.26**	**76**	P	**P**	**14 10 01.2**	**+0.7**
PD31				IAmb	IAmb	14 10 15.1	
	comp=Z,7.5nm,0.6s						
PDAR	**Pinedale Array**	**43.26**	**76**	P	**P**	**14 10 00.2**	**-0.2**
	comp=Z,1.7nm,0.5s,baz=303,slow=4.6,SNR=28						
PDAR	**Pinedale Array**	**43.26**	**76**	P	**P**	**14 10 00.6**	**+0.1**
FCC	**Fort Churchill**	**43.47**	**48**	P	**P**	**14 10 01.4**	**-0.3**
FCC				IAmb	IAmb	14 10 21.0	
	comp=Z,3.4nm,0.8s						
O20A	**White River Ci**	**45.61**	**78**	P	**P**	**14 10 20.8**	**+1.6**
	baz=307						
PV03	**Paradox Valley**	**46.40**	**80**	P	**P**	**14 10 25.1**	**-0.4**
PV03				IAmb	IAmb	14 10 39.4	
	comp=Z,7.6nm,1.1s						
WUAZ	**Wupatki**	**46.59**	**85**	P	**P**	**14 10 28.6**	**+1.6**
	baz=310						
ULM	**Lac du Bonnet**	**46.89**	**59**	P	**P**	**14 10 28.6**	**-0.4**
	comp=Z,2.7nm,0.4s,baz=310,slow=7.2,SNR=9.9						
ULM	**Lac du Bonnet**	**46.89**	**59**	P	**P**	**14 10 29.2**	**+0.2**
MVCO	**Mesa Verde**	**47.27**	**81**	P	**P**	**14 10 35.1**	**+2.7**
	baz=310						
AGMN	**Agassiz Nation**	**48.00**	**62**	P	**P**	**14 10 37.1**	**-0.5**
	baz=305						
SDCO	**Great Sand Dun**	**48.77**	**78**	P	**P**	**14 10 44.9**	**+0.9**
	baz=310						
ULN	**Ulaanbaatar**	**48.84**	**299**	P	**P**	**14 10 45.1**	**+0.8**
ULN				IAmb	IAmb	14 10 45.8	
	comp=Z,5.0nm,1.1s						
B35A	**Bob, Littlefor**	**49.13**	**60**	P	**P**	**14 10 45.8**	**-0.4**
SONM	**Songino Array**	**49.22**	**299**	P	**P**	**14 10 48.2**	**+1.1**
	comp=Z,3.4nm,0.7s,baz=44,slow=8.6,SNR=7.8						
SONM				PcP	**PcP**	**14 12 09.0**	**-0.4**
	comp=Z,1.1nm,0.7s,baz=108,slow=4.7,SNR=2.5						
SONM				LR	LR	14 34 23.6	
	comp=Z,95nm,18.2s,baz=119,slow=39						
SPITS	**Spitsbergen Ar**	**50.23**	**357**	P	**P**	**14 10 54.8**	**+0.6**
	comp=Z,5.9nm,0.9s,baz=169,slow=19,SNR=1.9						
ECSD	**EROS Data Cent**	**50.30**	**67**	P	**P**	**14 10 54.0**	**-1.2**
	baz=308						
HHC	**Hu-ho-hao-te**	**50.53**	**289**	*e*P	**P**	**14 10 59.3**	**+2.2**
HHC				pmax	pmax		
	comp=Z,5.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,64nm,5.6s						
EYMN	**Ely**	**50.57**	**60**	P	**P**	**14 10 57.2**	**0.0**
	baz=307						
EYMN	**Ely**	**50.57**	**60**	P	**P**	**14 10 56.4**	**-0.9**
EYMN				IAmb	IAmb	14 11 12.7	
	comp=Z,8.2nm,1.2s						
LPIG	**La Paz**	**55.17**	**95**	LR	LR	14 32 13.2	
	comp=Z,27nm,18.8s,baz=156,slow=33						
TXAR	**Lajitas Array**	**55.55**	**85**	P	**P**	**14 11 33.1**	**-1.1**
	comp=Z,0.7nm,0.7s,baz=296,slow=5.3,SNR=6.1						
TXAR	**Lajitas Array**	**55.55**	**85**	P	**P**	**14 11 33.0**	**-1.2**
P40A	**Paris**	**55.61**	**68**	P	**P**	**14 11 33.6**	**-0.8**
ZALV	**Zalesovo Beam**	**56.00**	**316**	P	**P**	**14 11 36.9**	**0.0**
	comp=Z,0.4nm,0.3s,baz=56,slow=7.7,SNR=1.8						
ZALV				PcP	**PcP**	**14 12 34.7**	**+0.1**
	comp=Z,1.0nm,0.7s,baz=31,slow=4.2,SNR=4.4						
XAN	**Xi'an**	**56.60**	**284**	P	**P**	**14 11 42.1**	**+0.6**
XAN				pP	pP	14 11 53.5	-2.8
XAN				sP	pwP	14 12 01.0	+4.7
XAN				pmax	pmax		
	comp=Z,8.0nm,1.4s						
LSQQ	**Lebel-sur-Quev**	**57.28**	**51**	P	**P**	**14 11 45.2**	**-0.9**
	baz=313						
LZH	**Lanzhou**	**58.22**	**289**	⇓P	**P**	**14 11 54.6**	**+1.5**
LZH				pP	pwP	14 12 08.1	+0.3
LZH				sP	sP	14 12 12.8	-1.2
LZH				pmax	pmax		
	comp=Z,12nm,1.3s						
ARCES	**ARCESS Array B**	**58.24**	**352**	P	**P**	**14 11 52.5**	**0.0**
	comp=Z,2.4nm,0.7s,baz=28,slow=8.5,SNR=4.7						
ARCES				PcP	**PcP**	**14 12 43.4**	**+0.2**
	comp=Z,2.5nm,0.6s,baz=24,slow=4.9,SNR=7.1						
ARCES				LR	LR	14 40 06.9	
	comp=Z,48nm,18.3s,baz=320,slow=39						
GTA	**Gaotai**	**58.27**	**295**	*e*P	**P**	**14 11 53.9**	**+0.6**
GTA				pP	pP	14 11 58.3	-10
GTA				sP	pwP	14 12 01.3	-9.0
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ALGO	**Algonquin Park**	**58.88**	**54**	P	**P**	**14 11 55.5**	**-1.8**
	baz=314						
SADO	**Sadowa**	**59.14**	**56**	LR	LR	14 39 14.1	
	comp=Z,57nm,18.1s,baz=7.5,slow=38						

G54A	**Lake Saint Pet**	59.24	55	P	P	14 12 00.2	+0.3
	baz=314						
D55A	**Sainte-Anne-du**	59.42	52	P	P	14 12 00.4	-0.6
	baz=314						
H53A	**Bobcaygeon**	59.56	56	P	P	14 12 02.1	+0.1
	baz=314						
D56A	**ZEC Mazanza, M**	59.74	51	P	P	14 12 02.6	-0.6
	baz=315						
E56A	**St. Veronique**	59.96	52	P	P	14 12 04.2	-0.5
	baz=315						
ZSN	**Zaisan**	60.50	310	*e*P	P	14 12 08.2	-0.2
	baz=310						
D58A	**Chemin du LacG**	60.62	50	P	P	14 12 08.7	-0.5
	baz=315						
KURK	**Kurchatov**	60.97	316	P	P	14 12 10.3	-1.2
G57A	**Newington**	61.01	53	P	P	14 12 11.4	-0.5
	baz=315						
H57A	**Richville**	61.26	54	P	P	14 12 13.6	0.0
	baz=315						
K56A	**Middlesex**	61.53	56	P	P	14 12 15.9	+0.4
	baz=315						
F59A	**Saint Guilaume**	61.55	51	P	P	14 12 15.2	-0.3
	baz=316						
WMQ	**Urumqi**	61.70	306	*e*P	P	14 12 19.3	+2.6
L56A	**Greenwood**	61.81	57	P	P	14 12 17.9	+0.6
	baz=315						
L56A	**Greenwood**	61.81	57	P	P	14 12 18.1	+0.8
CD2	**Chengdu**	61.90	285	P	P	14 12 19.1	+0.9
CD2				pP	sP	14 12 32.1	-7.2
CD2				pmax	pmax		
	comp=Z,20nm,0.8s						
K57A	**Scipio Center**	61.92	56	P	P	14 12 18.3	+0.2
	baz=316						
M56A	**Emporium**	61.94	58	P	P	14 12 18.5	+0.2
	baz=315						
H59A	**Cadyville**	61.98	53	P	P	14 12 18.3	-0.2
	baz=316						
MK31	**Makanchi Array**	62.19	311	P	P	14 12 19.1	-0.7
MKAR	**Makanchi Array**	62.19	311	P	P	14 12 19.7	-0.2
	comp=Z,1.4nm,0.6s,baz=48,slow=5.9,SNR=25						
MKAR				PcP	PcP	14 13 01.1	+1.6
	comp=Z,0.9nm,0.8s,baz=28,slow=4.1,SNR=1.5						
MKAR	**Makanchi Array**	62.19	311	P	P	14 12 20.0	+0.1
L57A	**Andrews Acres**	62.27	57	P	P	14 12 21.1	+0.6
	baz=316						
MAKZ	**Makanchi**	62.33	311	P	P	14 12 20.8	0.0
MAKZ				IAmb	IAmb	14 12 22.1	
	comp=Z,6.0nm,1.5s						
J59A	**Piesco**	62.42	54	P	P	14 12 21.4	-0.1
	baz=316						
D62A	**Allapoint, All**	62.43	48	P	P	14 12 21.4	0.0
	baz=317						
BINY	**Binghamton**	62.58	56	P	P	14 12 22.9	+0.4
	baz=316						
K59A	**Cooperstown**	62.74	55	P	P	14 12 23.9	+0.3
	baz=316						
L58A	**Harry Jones Me**	62.76	56	P	P	14 12 24.4	+0.6
	baz=316						
R54A	**Victor**	62.78	62	P	P	14 12 24.3	+0.3
	baz=316						
S54A	**Dingess, Beckl**	62.88	63	P	P	14 12 24.6	0.0
	baz=316						
P56A	**Dayton Farm, R**	63.01	60	P	P	14 12 25.4	0.0
	baz=316						
L59A	**Walton**	63.07	55	P	P	14 12 26.5	+0.7
	baz=316						
L59A	**Walton**	63.07	55	P	P	14 12 26.2	+0.3
G62A	**West of Eustis**	63.10	50	P	P	14 12 26.0	0.0
	baz=317						
J60A	**Lant Hill Farm**	63.13	54	P	P	14 12 26.6	+0.5
	baz=317						
O57A	**Amberson**	63.15	59	P	P	14 12 26.3	0.0
	baz=316						
H62A	**Milan**	63.27	51	P	P	14 12 26.8	-0.3
	baz=317						
M59A	**Waymart**	63.34	56	P	P	14 12 28.2	+0.6
	baz=316						
E64A	**Bridgewater**	63.49	48	P	P	14 12 27.9	-0.5
	baz=318						
N59A	**State Game Lan**	63.62	57	P	P	14 12 30.2	+0.8
	baz=316						
N59A	**State Game Lan**	63.62	57	P	P	14 12 30.4	+0.9
L60A	**Shokan**	63.63	55	P	P	14 12 30.0	+0.5
	baz=317						
M60A	**Port Jervis**	63.91	56	P	P	14 12 31.9	+0.6
	baz=317,SNR=6.3						
N60A	**Cedar Hill Far**	64.00	57	P	P	14 12 32.9	+1.0
	baz=317						
Q58A	**Fox Den Farm,**	64.04	60	P	P	14 12 32.3	+0.2
	baz=316						
R57A	**Stanardsville**	64.05	61	P	P	14 12 32.5	+0.2
	baz=316						
P59A	**Jarrettsville**	64.22	58	P	P	14 12 33.8	+0.5
	baz=317						
PAL	**Palisades**	64.52	56	P	P	14 12 35.4	+0.1
	baz=317						
V56A	**Mocksville**	64.77	64	P	P	14 12 37.2	+0.3
	baz=317						
FINES	**FINESS Array B**	66.08	350	P	P	14 12 44.9	-0.1
	comp=Z,1.0nm,0.8s,baz=15,slow=12,SNR=4.0						
SHLS	**Shalkode**	66.24	310	*e*P	P	14 12 45.8	-0.7
	comp=Z,2.1nm,0.6s,baz=310						
KPKS	**Kokpek**	66.38	311	*e*P	P	14 12 47.6	+0.2
	baz=311						
KMI	**Kunming**	66.71	281⇑	*e*P	P	14 12 50.9	+1.0
KMI				pP	sP	14 13 04.6	-6.7
KMI				pmax	pmax		
	comp=Z,3.0nm,0.8s						
SATY	**Saty**	66.82	311	*e*P	P	14 12 50.9	+0.6
	baz=310						
BTLS	**Baital**	67.28	315	*e*P	P	14 12 53.3	+0.3
	baz=314						
MDOK	**Medeo**	67.37	311	*e*P	P	14 12 53.9	+0.1
	baz=311						
ABKAR	**Akbulak array**	69.47	326	P	P	14 13 07.3	+0.7
LSA	**Lhasa**	70.19	293	P	P	14 13 14.1	+2.2
LSA				pmax	pmax		
	comp=Z,71nm,0.7s						
KKAR	**Karatay Array**	70.37	315	P	P	14 13 13.3	+1.0
KSH	**Kashi**	70.72	310	P	P	14 13 18.8	+4.2
KSH				pP	PcP	14 13 44.0	+8.8
KSH				pmax	pmax		
	comp=Z,5.0nm,0.5s						
KSH				pmax	pmax		
	comp=Z,190nm,5.0s						
IUG	**Iuzhnay**	71.35	315	*e*P	P	14 13 19.2	+0.9
	baz=315						
MNK	**Minsk**	72.61	347	*i* P	P	14 13 22.5	-3.0
	comp=E,1.0nm,0.8s						
MNK				*i* P	P	14 13 22.5	-3.0
	comp=N,10.0nm,0.8s						
MNK				*i* P	P	14 13 22.5	-3.0
	comp=Z,9.0nm,0.7s						
MNK				*i* PcP	pP	14 13 40.2	-0.7
MNK				*i* PP	PP	14 16 03.1	-3.7
MNK				*i* PPP	PPP	14 17 47.2	
MNK				*i* S	S	14 22 41.8	-3.8
MNK				*i* ScS	SKSac	14 23 24.3	-1.0
MNK				*i* SS	SS	14 27 21.0	-3.3
MNK				*i* SSS	SSS	14 30 41.1	
MNK				*i* LR	LR	14 45 46.2	
MNK				*i* LRM	MLR	14 47 32.6	
	comp=Z,39nm,8.6s						
MNK				*i* LRM	MLR	14 47 38.9	
	comp=E,9.0nm,12.7s						
MNK				*i* LRM	MLR	14 47 41.1	
	comp=N,219nm,19.4s						
TAPN	**Taplejung**	73.94	294	*e*P	P	14 13 35.5	+1.4
	comp=N,33nm,0.7s						
CMAR	**Chiang Mai Arr**	74.02	280	P	P	14 13 35.0	+0.7
	comp=N,2.2nm,0.8s,baz=23,slow=6.8,SNR=14						
CMAR				LR	LR	14 50 33.4	
	comp=N,16nm,18.3s,baz=10.0,slow=39						
GUN	**Gumba**	74.55	295	*e*P	P	14 13 39.1	+1.4
	comp=N,40nm,0.5s						
RAMN	**Ramite**	74.88	294	*e*P	P	14 13 41.0	+1.5
	comp=N,56nm,0.6s						
KKN	**Kakani**	74.97	296	*e*P	P	14 13 41.2	+1.2
	comp=N,13nm,0.6s						
PKI	**Pulchoki**	75.07	295	*e*P	P	14 13 41.8	+1.1
	comp=N,36nm,1.0s						
PKIN	**Phulchoki**	75.07	296	*e*P	P	14 13 41.6	+0.9
	comp=N,32nm,1.0s						
GKN	**Gorkha**	75.17	296	*e*P	P	14 13 42.1	+1.0
	comp=N,29nm,0.5s						
DMN	**Daman**	75.21	296	*e*P	P	14 13 42.7	+1.2
AKASG	**Malin Array Be**	76.10	345	P	P	14 13 45.2	-0.6
	comp=N,1.6nm,0.4s,baz=17,slow=6.0,SNR=10						
AKASG	**Malin Array Be**	76.10	345	P	P	14 13 45.3	-0.6
OSTC	**Ostas**	77.75	353	*e*P	P	14 13 56.3	+1.2
DPC	**Dobruska-Polom**	77.95	353	*e*P	P	14 13 57.1	+0.8
KHC	**Kasperske Hory**	79.34	355	*e*P	P	14 14 04.9	+1.0
CKRC	**Cesky Krumlov**	79.61	355	*e*P	P	14 14 06.0	+0.6
GERES	**GERESS Array B**	79.62	355	P	P	14 14 05.7	+0.2
	comp=N,1.6nm,0.9s,baz=20,slow=4.3,SNR=7.4						
GERES	**GERESS Array B**	79.62	355	P	P	14 14 05.0	-0.5
BURAR	**Bucovina Array**	79.71	347	⇓P	P	14 14 06.8	+0.8
KBZ	**Khabaz**	79.75	334	P	P	14 14 06.4	+0.2
	comp=N,2.9nm,0.9s,baz=166,slow=1.4,SNR=5.8						
GEYT	**Alibeck**	79.86	321	P	P	14 14 06.7	-0.2
	comp=N,1.0nm,0.5s,baz=344,slow=9.0,SNR=4.6						
DRGR		80.85	349	⇓P	P	14 14 12.9	+0.8
MLR	**Muntele Rosu**	81.68	346	⇑P	P	14 14 19.0	+2.3
VOIR		81.87	347	⇑P	P	14 14 19.7	+2.1
ARR	**Arges**	81.99	347	⇑P	P	14 14 22.2	+4.0
GZR	**Gura Zlata**	82.22	348	⇓P	P	14 14 20.1	+0.7
WRA	**Warramunga Arr**	84.46	228	P	P	14 14 29.3	-1.7
	comp=N,0.8nm,1.1s,baz=32,slow=5.8,SNR=2.0						
BRTR	**Keskin Array B**	85.83	339	P	P	14 14 38.2	+0.2
	comp=N,1.5nm,0.8s,baz=22,slow=3.6,SNR=7.1						
ASAR	**Alice Springs**	87.88	226	P	P	14 14 47.1	-0.7
	comp=N,1.0nm,0.9s,baz=29,slow=4.9,SNR=6.6						

REN ***21*** *14:21:49.6±1.8, 41°.88N±0°.03×119°.65W±0°.03, h7^{km}±6^{km}, ML3.3/5, ML3.3/40(SEA), ML3.1/48(NEIC), Error ellipse: s-maj=4.9km s-min=2.8km az=175.0*
SEA ***21*** *14:21:50.4±2.4, 41°.77N±0°.03×119°.62W±0°.03, h5^{km}±2^{km}, Error ellipse: s-maj=4.8km s-min=3.6km az=357.0*
ANF ***21*** *14:21:50.3±0.4, 41°.89N×119°.72W, h8^{km}, ML3.3/17, Error ellipse: s-maj=3.5km s-min=2.8km az=84.0*
NEIC 21 14:21:50.2±2.5**, 41°.88N**±0°.03×**119°.63W**±0°.01**, h3**^{km}±7^{km}**, Error ellipse: s-maj=4.5km s-min=1.5km az=175.0, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOD	**Modoc Plateau**	0.51	273		Pg	14 21 59.3	-0.7
MOD					Sg	14 22 06.5	-0.1
MOD	**Modoc Plateau**	0.51	273	IAML		14 22 06.7	
	comp=N,2µm,0.6s						
MOD				IAML		14 22 08.5	
	comp=E,2µm,0.3s						
LKVW	**Lakeview**	0.65	303		Pg	14 22 01.8	-0.9
LKVW					Sg	14 22 11.2	0.0
WVOR	**Wild Horse Val**	0.92	52		Pg	14 22 07.4	-0.6
WVOR					Sg	14 22 20.4	+0.5
WVOR	**Wild Horse Val**	0.92	52	IAML		14 22 23.9	
	comp=E,558nm,0.6s						
WVOR				IAML		14 22 27.4	
	comp=E,472nm,0.9s						
K05A	**Summer Lake**	1.27	313		Pg	14 22 13.3	-1.2
K05A					Sg	14 22 30.9	-0.1
LASM	**Arnica Sink**	1.49	260		Pn	14 22 16.5	-1.6
M04C	**Macdoel**	1.66	268	Pn	Pn	14 22 18.6	-1.7
	baz=86,SNR=415						
M04C				Pb	Pb	14 22 19.8	-1.7
	baz=86						
M04C				Sb	Sn	14 22 42.2	0.0
	baz=86						
J08A	**Circle Bar Ran**	1.71	29		Pn	14 22 20.4	-0.6
J08A				IAML		14 22 45.9	
	comp=N,326nm,0.6s						
J08A				IAML		14 22 50.9	
	comp=E,284nm,0.8s						
K04D	**Chiloquin, OR**	1.75	296	Pn	Pn	14 22 20.0	-1.6
	baz=115,SNR=93						
K04D				Pb	Pb	14 22 21.3	-1.7
	baz=115						
K04D				Sb	Sb	14 22 45.0	-0.5
	baz=115						
J05D	**Fort Rock, OR**	1.84	320	Pb	Pn	14 22 23.3	+0.4
	baz=140,SNR=636						
J05D				Sb	Sb	14 22 48.4	+0.2
	baz=140						
J05D	**Fort Rock, OR**	1.84	320		Pn	14 22 23.3	+0.4
J05D					Sb	14 22 48.6	+0.4
L04D	**Klamath Falls**	2.02	281	Pn	Pn	14 22 23.5	-1.9
	baz=99,SNR=265						
L04D				Pb	Pb	14 22 25.7	-2.0
	baz=99						
L04D				Sb	Sb	14 22 53.4	0.0
	baz=99						
TMBU	**Tom Butte, New**	2.06	328		Pb	14 22 27.3	-1.0
BEKR	**Beckworth**	2.08	196		Pn	14 22 25.4	-0.9
BEKR				IAML		14 22 58.0	
	comp=N,108nm,0.4s						
BEKR				IAML		14 22 58.0	
	comp=E,167nm,0.5s						
SVIC	**Surveyors Ice**	2.14	326		Pb	14 22 28.3	-1.3
NCOR	**Newberry Crate**	2.14	329		Pb	14 22 28.7	-1.1
PINE	**Pine Mountain**	2.15	334		Pn	14 22 27.3	+0.2
PINE				IAML		14 23 07.1	
	comp=N,110nm,0.7s						
PAHR	**Pah Rah Range**	2.17	175		Pn	14 22 26.6	-0.8
PAHR				IAML		14 22 59.6	
	comp=E,100nm,0.7s						
I07A	**Izee**	2.21	2		Pn	14 22 28.7	+0.8
I07A				IAML		14 23 00.8	
	comp=E,96nm,0.6s						
LOY	**Loyalton**	2.26	192		Pb	14 22 30.6	-1.2
PEAR	**Peavine Mounta**	2.28	187		Pn	14 22 28.9	-0.1
O03E	**Paynes Creek**	2.28	227	Pn	Pn	14 22 27.5	-1.3
	baz=45,SNR=67						
O03E				Pb	Pb	14 22 30.6	-1.5
	baz=45						
O03E				Sb	Sb	14 23 00.8	+0.1
	baz=45						
J04D	**Umpqua Nationa**	2.29	307	Pb	Pb	14 22 30.8	-1.4
	baz=126,SNR=56						
YBH	**Yreka Blue Hor**	2.31	267	Pn	Pn	14 22 27.1	-2.2
YBH				IAML		14 23 12.9	
	comp=N,72nm,0.8s						
KBF	**Kyburz Flat**	2.41	191		Pn	14 22 32.0	+1.3
VPK	**Verdi Peak**	2.42	188		Pb	14 22 34.1	-0.5
M02C	**Callahan**	2.47	260	Pn	Pn	14 22 29.6	-1.8
	baz=78,SNR=52						
M02C				Pb	Pb	14 22 33.2	-2.0
	baz=78						
M02C				Sb	Sb	14 23 06.4	+0.3
	baz=78						
N02D	**Trinity Center**	2.48	250	Pb	Pb	14 22 33.8	-1.8
	baz=68,SNR=23						
N02D				Sb	Sb	14 23 07.5	+0.9
	baz=68						
IND	**Independence**	2.49	192		Pb	14 22 33.9	-1.9
WDC	**Whiskeytown Da**	2.55	240		Pn	14 22 31.3	-1.2
WDC				IAML		14 23 11.1	
	comp=N,106nm,0.7s						
HUMO	**Hull Mountain**	2.58	288	Pn	Pn	14 22 30.9	-2.1
HUMO				IAML		14 23 11.7	
	comp=N,59nm,0.5s						
ORV	**Oroville**	2.72	212		Pn	14 22 34.0	-0.8
I05D	**Terrebonne, OR**	2.76	334	Pb	Pb	14 22 39.5	-0.8
	baz=153,SNR=19						
PNTR	**Pine Nut**	2.78	180		Pb	14 22 39.9	-0.9
PNTR				IAML		14 23 24.1	
	comp=N,116nm,0.9s						
I04A	**Tendick Farm,**	2.81	314	Pb	Pb	14 22 40.0	-1.0
	baz=132,SNR=22						
RUBR	**Rubicon Trail**	2.85	188		Pb	14 22 40.9	-0.9
RUBR				IAML		14 22 58.2	
	comp=N,47nm,0.8s						
RUBR				IAML		14 23 39.7	
	comp=E,44nm,1.0s						
YERR	**Yerington**	2.90	174		Pn	14 22 37.1	-0.4
O02D	**Mt. Diablo Mer**	2.93	236	Sb	Sb	14 23 19.6	+0.2
	baz=53						
L02E	**Cave Junction**	2.98	277	P	Pn	14 22 37.8	-0.6
	baz=94,SNR=29						
L02E				Sb	Sb	14 23 20.5	-0.2
	baz=94						
K02D	**Willamette Mer**	3.11	287	P	Pn	14 22 39.3	-1.0
	baz=104,SNR=133						
MFID	**Camas Ranch**	3.20	60	Pn	Pn	14 22 40.7	-0.8
I03D	**Drain, OR**	3.29	305	Pb	Pb	14 22 47.0	-2.2
	baz=123						
RYN	**Ryan**	3.35	165		Pn	14 22 43.6	0.0
RYN				IAML		14 23 42.1	
	comp=N,63nm,0.7s						
RYN				IAML		14 23 42.8	
	comp=E,55nm,0.6s						
ELK	**Elko**	3.49	107	Pn	Pn	14 22 45.4	-0.2
ELK				IAML		14 23 43.9	
	comp=E,28nm,0.4s						
H04D	**Lebanon**	3.49	320	Pb	Pb	14 22 51.8	-0.8
	baz=138						
G05D	**Wamic, OR**	3.58	341	Pb	Pb	14 22 53.2	-1.0
	baz=160						
G05D				Sb	Sb	14 23 40.9	+2.7
	baz=160						
NVAR	**Mina Array Bea**	3.59	163		Pn	14 22 47.4	+0.5
LHV	**Little Huntoon**	3.72	166		Pn	14 22 50.7	+2.1
HLID	**Hailey**	4.19	65	Sb	Sb	14 23 59.1	+3.3
	baz=248						
HLID	**Hailey**	4.19	65	Pn	Pn	14 22 54.1	-1.1
HLID				IAML		14 24 05.7	
	comp=E,33nm,0.8s						
HLID				IAML		14 24 19.4	
	comp=E,24nm,1.1s						
OMMB	**Old Mammoth Mi**	4.28	173	Pn	Pn	14 22 55.9	-0.7
R11A	**Troy Canyon, C**	4.69	137	Sb	Sg	14 24 16.6	-4.3
	baz=320						
BGU	**Big Grassy Mou**	5.05	99	Pn	Pn	14 23 06.5	-0.5
TPNV	**Topopah Spring**	5.57	151	Sb	Sg	14 24 45.4	-3.7
	baz=333						

JMA ***21*** *14:37:19.8±0.4, 21°.69N×122°.68E, h42^{km}, M3.8*
TAP ***21*** *14:37:21.9, 21°.78N×122°.51E, h25^{km}±2^{km}, ML3.6, D*
ISC 21 14:37:16.6±1.6**, 21°.76N**±0°.06×**122°.67E**±0°.03**, h2**^{km}±11^{km}**, n110, σ1^{s}75**/189**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LAY	**Lan-yu**	1.08	285	*i* P	Pn	14 37 38.6	-0.1
	baz=286						
LAY				S	Sg	14 37 51.6	+0.3
	baz=286						
LDUT	**Ludao**	1.44	310	P	Pb	14 37 43.9	-0.2
	baz=313						
LDUT				*i* S	Sn	14 38 01.0	-2.2
	baz=313						
TSEB	**Hengchuen, Pin**	1.65	275	*e*P	Pg	14 37 49.4	+1.2
	baz=274						
TSEB				S	Sg	14 38 10.6	+0.9
	baz=274						
TWKBT	**Hengchun**	1.74	276	*i* P	Pb	14 37 49.1	-0.1
	baz=276						
TWKBT				*e*S	Sb	14 38 11.0	-0.5
	baz=276						
TWK1	**Hengchun**	1.74	277	*i* P	Pg	14 37 49.7	-0.3
	baz=276						
TWK1				*e*S	Sb	14 38 11.5	-0.2
	baz=276						
EDH	**Donghe**	1.75	314	*e*P	Pn	14 37 48.5	+0.6
	baz=317						
EDH				*i* S	Sn	14 38 08.9	-2.0
	baz=317						
TAW	**Tawu**	1.75	290	P	Pg	14 37 49.9	-0.3
	baz=291						
TAW				*e*S	Sn	14 38 08.8	-2.1
	baz=291						
SLIU	**Shizi**	1.80	285	*i* P	Pb	14 37 49.7	-0.5
	baz=285						
SLIU				*e*S	Sn	14 38 11.1	-0.9
	baz=285						
ECL	**Taimali**	1.80	298	*e*P	Pb	14 37 49.6	-0.6
	baz=286						
ECL				*e*S	Sn	14 38 11.4	-0.7
	baz=286						
CHKT	**Chengkung**	1.80	318	*i* P	Pn	14 37 49.2	+0.5
	baz=332						
CHKT				*i* S	Sn	14 38 10.3	-1.8
	baz=332						
HEN	**Hengchun**	1.81	278	P	Pb	14 37 50.6	+0.1
	baz=278						
HEN				*e*S	Sb	14 38 12.9	-0.7
	baz=278						
TWGBT	**Beinan**	1.81	306	*i* P	Pb	14 37 50.7	+0.2
	baz=318						
TWGBT				*e*S	Sn	14 38 11.6	-0.8
	baz=318						
TWG	**Pinlang**	1.82	306	P	Pb	14 37 50.6	-0.1
	baz=318						
TWG				*e*S	Sn	14 38 10.8	-1.8
	baz=318						
LONT	**Longtian**	1.83	309	P	Pb	14 37 51.0	+0.2
	baz=321						
LONT				*e*S	Sn	14 38 12.4	-0.5
	baz=321						
FULB	**Fuli**	1.92	319	*i* P	Pn	14 37 51.2	+0.8
	baz=332						
FULB				*e*S	Sn	14 38 14.8	-0.3
	baz=332						
SCZT	**Fangliau**	2.00	288	*i* P	Pb	14 37 53.0	-0.6
	baz=289						
EYUL	**Yuli**	2.02	322	P	Pn	14 37 52.7	+1.1
	baz=334						
TWF1	**Yuli**	2.03	322	*i* P	Pn	14 37 52.7	+0.8
	baz=325						
TWF1				*e*S	Sn	14 38 18.6	+0.6
	baz=325						
YULB	**Yu-li**	2.07	322	*i* P	Pn	14 37 53.5	+1.1
	baz=325						
YULB				*e*S	Sn	14 38 19.6	+0.9
	baz=325						
MASBT	**Mashibuluo**	2.07	295	*i* P	Pb	14 37 54.2	-0.7
	baz=284						
HGSD	**Ruisui**	2.08	327	*e*S	Sn	14 38 17.5	-1.5
	baz=330						
SSPT	**Xinbi**	2.08	291	*e*P	Pg	14 37 56.3	-0.2
	baz=291						
ELDTW	**Lidau**	2.09	313	P	Pn	14 37 53.6	+0.8
	baz=316						
ELDTW				*e*S	Sn	14 38 18.5	-1.0
	baz=316						
TSMG	**Majia**	2.10	297	P	Pb	14 37 54.7	-0.7
	baz=287						
SSD	**Sandimen**	2.13	298	*e*P	Pb	14 37 55.0	-0.9
	baz=288						
EHY	**Hungye**	2.14	325	P	Pn	14 37 54.6	+1.3
	baz=328						
EHY				*e*S	Sn	14 38 21.4	+0.8
	baz=328						
SLGT	**Liugui**	2.24	304	*e*P	Pb	14 37 58.0	+0.2
	baz=299						
STYT	**Tauyuan**	2.26	309	*e*P	Pb	14 37 57.1	-1.0
	baz=311						
TWM1	**Shoushan**	2.34	297	*e*P	Pg	14 38 00.6	-0.8
	baz=288						
SGST	**Jiashian**	2.34	305	P	Pb	14 37 58.9	-0.6
	baz=307						
SGST				*e*S	Sb	14 38 29.6	+0.7
	baz=307						
ESL	**Shilin**	2.35	331	P	Pn	14 37 57.3	+1.1
	baz=334						
ESL				*e*S	Sn	14 38 25.7	+0.1
	baz=334						
WTP	**Ta-pu**	2.41	308	P	Pb	14 38 00.6	-0.1
	baz=311						
WTP				*e*S	Sb	14 38 31.5	+0.5
	baz=311						
TPUB	**Ta-pu**	2.43	310	P	Pb	14 38 00.8	-0.4
	baz=312						
TPUB				*e*S	Sb	14 38 31.2	-0.5
	baz=312						
VWDT	**VWDT**	2.44	325	P	Pb	14 37 59.5	-1.7
	baz=336						
VWDT				*e*S	Sn	14 38 26.0	-1.9
	baz=336						
CHN1	**Nanshi**	2.44	306	*e*P	Pb	14 38 01.8	+0.6
	baz=308						
ALS	**Alishan**	2.45	316	*i* P	Pb	14 38 00.9	-0.7
	baz=325						
ALS				*e*S	Sb	14 38 31.0	-1.5
	baz=325						
CHN4	**Tsaushan**	2.49	310	*e*P	Pb	14 38 02.0	-0.1
	baz=312						
CHN4				*e*S	Sb	14 38 33.2	0.0
	baz=312						
TWD	**Chiawan**	2.52	337	*e*P	Pn	14 38 00.0	+1.5
	baz=340						
TWD				*e*S	Sn	14 38 30.4	+0.6
	baz=340						
TWK	**Hsinying**	2.52	307	*e*P	Pb	14 38 02.5	0.0
	baz=309						
TWK				*e*S	Sb	14 38 33.8	-0.3
	baz=309						
HATJ	**Hateruma jima**	2.52	24	P	Pn	14 38 00.6	+2.1

HATJ				S	Sn	14 38 30.1	+0.3
WHYT	**Xinyi Township**	**2.56**	**319**	*e*P	**Pb**	**14 38 02.3**	**-0.9**
	baz=329						
WHYT				*e*S	**Sb**	**14 38 33.9**	**-1.3**
	baz=329						
SSLB	**Suanglung**	**2.57**	**322**	*e*P	**Pb**	**14 38 01.6**	**-1.9**
	baz=334						
SSLB				*e*S	**Sn**	**14 38 32.3**	**+1.2**
	baz=334						
CHN5	**Tsauling**	**2.60**	**315**	*i* P	**Pb**	**14 38 03.5**	**-0.5**
	baz=317						
NACB	**Ninganchiao**	**2.60**	**338**	*i* P	**Pn**	**14 38 01.4**	**+1.7**
	baz=341						
NACB				*i* S	**Sn**	**14 38 30.5**	**-1.4**
	baz=341						
ETLH	**Xiulin Townshi**	**2.67**	**336**	P	**Pn**	**14 38 03.1**	**+2.3**
	baz=350						
ETLH				S	**Sn**	**14 38 34.2**	**+0.4**
	baz=350						
SMLT	**Sun Moon Lake**	**2.67**	**323**	*e*P	**Pb**	**14 38 04.0**	**-1.3**
	baz=332						
SMLT				*e*S	**Sb**	**14 38 36.6**	**-2.0**
	baz=332						
CHGB	**Renai**	**2.68**	**329**	P	**Pb**	**14 38 03.3**	**-2.1**
	baz=332						
JYNG	**Yonagunijimaku**	**2.69**	**5**	P	**Pb**	**14 38 03.9**	**-1.7**
JYNG				*e*S	**Sn**	**14 38 35.9**	**+1.7**
CHY	**Chiayi**	**2.71**	**310**	*e*P	**Pb**	**14 38 04.7**	**-1.0**
	baz=296						
CHY				*e*S	**Sb**	**14 38 37.4**	**-2.0**
	baz=296						
WHF	**Hehuan Shan**	**2.71**	**332**	*e*P	**Pn**	**14 38 03.7**	**+2.1**
	baz=335						
WHF				*e*S	**Sn**	**14 38 35.0**	**-0.2**
	baz=335						
YOJ	**Yonaguni jima**	**2.71**	**7**	P	**Pb**	**14 38 04.3**	**-1.5**
	baz=9.0						
YOJ				*e*S	**Sn**	**14 38 36.2**	**+1.6**
	baz=9.0						
YOJ	**Yonaguni jima**	**2.71**	**7**	P	**Pb**	**14 38 04.8**	**-1.0**
YOJ				*e*S	**Sn**	**14 38 36.5**	**+1.9**
TYC	**Yuchr**	**2.71**	**322**	P	**Pb**	**14 38 04.9**	**-1.0**
	baz=331						
TYC				*e*S	**Sb**	**14 38 37.8**	**-1.9**
	baz=331						
WJS	**Zhushan**	**2.73**	**319**	P	**Pb**	**14 38 05.8**	**-0.4**
	baz=322						
WJS				*e*S	**Sb**	**14 38 39.6**	**-0.4**
	baz=322						
IRIF	**Iriomote-Funau**	**2.75**	**21**	P	**Pn**	**14 38 04.1**	**+2.4**
IRIF				*e*S	**Sn**	**14 38 36.7**	**+1.2**
JKRS	**Kuro-shima**	**2.76**	**26**	P	**Pn**	**14 38 04.2**	**+2.3**
JKRS				S	**Sn**	**14 38 36.3**	**+0.5**
DPDB	**Guoxing**	**2.78**	**325**	P	**Pb**	**14 38 05.5**	**-1.5**
	baz=338						
ENA	**Nanau**	**2.79**	**342**	P	**Pn**	**14 38 04.9**	**+2.6**
	baz=346						
ENA				*e*S	**Sn**	**14 38 37.9**	**+1.2**
	baz=346						
EWUT	**Wuta**	**2.80**	**343**	*e*P	**Pb**	**14 38 05.2**	**-2.2**
	baz=346						
EWUT				*e*S	**Sn**	**14 38 37.5**	**+0.7**
	baz=346						
WCS	**Beigang Elemen**	**2.81**	**325**	*e*P	**Pb**	**14 38 05.9**	**-1.6**
	baz=337						
FUSS	**Fushou**	**2.81**	**332**	*e*P	**Pn**	**14 38 05.2**	**+2.5**
	baz=335						
TDCB	**Techi**	**2.85**	**331**	*e*P	**Pb**	**14 38 06.6**	**-1.7**
	baz=334						
NNSB	**Datong**	**2.91**	**336**	*i* P	**Pn**	**14 38 06.8**	**+2.7**
	baz=339						
NNSB				*e*S	**Sn**	**14 38 41.6**	**+1.9**
	baz=339						
NNSH	**Datong**	**2.91**	**336**	*e*P	**Pb**	**14 38 07.1**	**-2.3**
	baz=339						
NNS	**Nan Shan**	**2.93**	**336**	P	**Pb**	**14 38 07.3**	**-2.3**
	baz=339						
NNS				*e*S	**Sn**	**14 38 41.9**	**+1.8**
	baz=339						
JIJ	**Ishigaki jima**	**2.93**	**27**	P	**Pn**	**14 38 05.8**	**+1.6**
JIJ				S	**Sn**	**14 38 39.3**	**-0.7**
WSF	**Szhu**	**2.94**	**310**	*e*S	**Sb**	**14 38 43.3**	**-2.8**
	baz=312						
TWC	**Suao**	**2.94**	**345**	*e*P	**Pb**	**14 38 07.8**	**-1.9**
	baz=360						
TWC				*e*S	**Sn**	**14 38 42.4**	**+2.2**
	baz=360						
WHP	**Taichung City**	**2.97**	**328**	*e*P	**Pb**	**14 38 09.5**	**-0.8**
	baz=338						
NDS	**Dongshan**	**3.00**	**343**	P	**Pb**	**14 38 08.3**	**-2.4**
	baz=346						
NDS				*e*S	**Sn**	**14 38 44.2**	**+2.5**
	baz=346						
NDT	**Datong Townshi**	**3.03**	**340**	*e*P	**Pb**	**14 38 09.7**	**-1.6**
	baz=343						
ENTT	**Nioudou**	**3.05**	**341**	P	**Pb**	**14 38 09.0**	**-2.6**
	baz=343						
TWE	**Neicheng**	**3.09**	**343**	*e*P	**Pb**	**14 38 09.8**	**-2.6**
	baz=338						
TWE				*e*S	**Sn**	**14 38 46.9**	**+2.9**
	baz=338						
TWQ1	**Liyutan**	**3.12**	**326**	P	**Pb**	**14 38 11.6**	**-1.2**
	baz=340						
TWQ1				*e*S	**Sb**	**14 38 48.9**	**-2.4**
	baz=340						
YHNB	**Yeheng**	**3.14**	**338**	*i* P	**Pn**	**14 38 10.2**	**+3.1**
	baz=351						
NSK	**Sanguang**	**3.15**	**338**	*e*P	**Pn**	**14 38 10.2**	**+2.9**
	baz=341						
NSK				*e*S	**Sn**	**14 38 47.5**	**+2.0**
	baz=341						
NSY	**Sanyi**	**3.18**	**327**	*e*P	**Pb**	**14 38 12.2**	**-1.6**
	baz=340						
NSY				*e*S	**Sb**	**14 38 51.1**	**-2.0**
	baz=340						
NTC	**Toucheng**	**3.18**	**346**	*e*P	**Pb**	**14 38 11.1**	**-2.7**
	baz=349						
WDJ	**Dajia District**	**3.19**	**324**	*e*P	**Pb**	**14 38 12.2**	**-1.8**
	baz=311						
WDJ				*e*S	**Sb**	**14 38 52.1**	**-1.1**
	baz=311						
NWLT	**Wulai**	**3.19**	**341**	*e*P	**Pb**	**14 38 11.3**	**-2.8**
	baz=343						
NWLT				*e*S	**Sn**	**14 38 48.5**	**+2.0**
	baz=343						
JISG	**Ishigakijimahi**	**3.20**	**28**	P	**Pn**	**14 38 09.2**	**+1.3**
JISG				*e*S	**Sn**	**14 38 46.0**	**-0.6**
NSTT	**Nanjuang**	**3.25**	**332**	*e*P	**Pb**	**14 38 13.7**	**-1.3**
	baz=347						
LIOB	**Emei**	**3.25**	**332**	*e*P	**Pb**	**14 38 13.3**	**-1.8**
	baz=347						
TIPB	**Shuangxi**	**3.29**	**347**	*e*P	**Pb**	**14 38 12.9**	**-2.9**
	baz=359						
TIPB				*e*S	**Sn**	**14 38 51.3**	**+2.3**
	baz=359						
TWB1	**Santiao Chiao**	**3.30**	**349**	*e*P	**Pb**	**14 38 12.8**	**-3.0**
	baz=4.0						
PHUB	**P'eng-hu**	**3.35**	**302**	*e*S	**Sn**	**14 38 49.6**	**-0.9**
	baz=303						
NHDH	**Xindian Distri**	**3.36**	**342**	*e*P	**Pb**	**14 38 14.7**	**-2.2**
	baz=354						
NHDH				*e*S	**Sn**	**14 38 53.4**	**+2.7**
	baz=354						
TWA	**Mucha**	**3.36**	**343**	*e*P	**Pb**	**14 38 14.5**	**-2.5**
	baz=346						
TWA				*e*S	**Sn**	**14 38 54.0**	**+3.3**
	baz=346						
TATO	**Taipei**	**3.38**	**342**	*e*P	**Pb**	**14 38 14.5**	**-2.8**
	baz=344						
TATO				*e*S	**Sn**	**14 38 52.7**	**+1.5**
	baz=344						
JTJ	**Tarama**	**3.43**	**33**	P	**Pn**	**14 38 12.9**	**+1.9**
JTJ				S	**Sn**	**14 38 51.7**	**-0.5**
YM01	**YM01**	**3.52**	**344**	*e*P	**Pn**	**14 38 15.3**	**+2.9**
	baz=359						
YM01				*e*S	**Sn**	**14 38 56.3**	**+1.5**
	baz=359						
YM10	**YM10**	**3.54**	**343**	*e*P	**Pn**	**14 38 16.2**	**+3.6**
	baz=358						
YM10				*e*S	**Sn**	**14 38 58.4**	**+3.4**
	baz=358						
YM04	**YM04**	**3.54**	**343**	*e*P	**Pb**	**14 38 17.0**	**-3.0**
	baz=358						
YM04				*e*S	**Sn**	**14 38 58.3**	**+3.2**
	baz=358						
YM05	**YM05**	**3.54**	**344**	*e*P	**Pn**	**14 38 16.5**	**+3.8**
	baz=358						
YM05				*e*S	**Sn**	**14 38 58.5**	**+3.3**
	baz=358						
JIRB	**Irabujima**	**3.83**	**36**	P	**Pn**	**14 38 18.7**	**+2.2**
JIRB				*e*S	**Sn**	**14 39 00.7**	**-1.4**
JMJ2	**Miyako jima3**	**3.85**	**39**	P	**Pn**	**14 38 19.0**	**+2.2**
JMJ2				*e*S	**Sn**	**14 39 01.4**	**-1.2**
JOGS	**Gusukube**	**3.91**	**40**	P	**Pn**	**14 38 20.0**	**+2.3**
JOGS				*e*S	**Sn**	**14 39 02.8**	**-1.3**
JIKM	**Ikemajima**	**3.94**	**36**	P	**Pn**	**14 38 20.8**	**+2.7**
JIKM				S	**Sn**	**14 39 03.9**	**-1.1**
VWUC	**VWUC**	**4.37**	**318**	*e*P	**Pn**	**14 38 26.6**	**+2.6**
	baz=309						
VWUC				*e*S	**Sn**	**14 39 14.9**	**-0.7**
	baz=309						
PTTC	**Pingtan**	**4.58**	**325**	*e*P	**Pn**	**14 38 29.3**	**+2.4**
	baz=327						
PTTC				*e*S	**Sn**	**14 39 20.9**	**+0.2**
	baz=327						
PTMZ	**Houxiangcun**	**4.62**	**316**	*e*P	**Pn**	**14 38 29.9**	**+2.5**
	baz=317						
PTMZ				*e*S	**Sn**	**14 39 22.0**	**+0.4**
	baz=317						
KNMB	**Chin-men Tao**	**4.78**	**305**	*e*P	**Pn**	**14 38 32.0**	**+2.4**
	baz=306						
KNMB				*e*S	**Sn**	**14 39 24.6**	**-0.9**
	baz=306						
ZPLA	**Ao Xicun**	**5.03**	**296**	*e*P	**Pn**	**14 38 36.2**	**+3.1**
	baz=297						
ZPLA				*e*S	**Sn**	**14 39 29.9**	**-1.9**
	baz=297						
MATB	**Ma-tsu**	**5.04**	**331**	P	**Pn**	**14 38 35.6**	**+2.4**
	baz=333						
MATB				*e*S	**Sn**	**14 39 30.7**	**-1.3**
	baz=333						
AXDP	**Jialang**	**5.33**	**307**	*e*P	**Pn**	**14 38 39.6**	**+2.4**
	baz=308						
AXDP				*e*S	**Sn**	**14 39 37.8**	**-1.6**
	baz=308						
ZZJH	**Jiuhuzhen**	**5.37**	**301**	*e*P	**Pn**	**14 38 40.5**	**+2.8**
	baz=302						
ZZJH				*e*S	**Sn**	**14 39 38.7**	**-1.5**
	baz=302						
MHZQ	**Yeshan**	**5.46**	**323**	*e*P	**Pn**	**14 38 41.1**	**+2.2**
	baz=314						
LYJJ	**Jianjiangzhen**	**5.46**	**331**	*e*P	**Pn**	**14 38 41.8**	**+2.7**
	baz=334						
XPSS	**Dashiqiu**	**5.63**	**337**	*e*P	**Pn**	**14 38 43.2**	**+2.0**
	baz=350						
JKE	**Kume jima 2**	**5.90**	**39**	P	**Pn**	**14 38 46.8**	**+1.7**
JKE				*e*S	**Sn**	**14 39 50.9**	**-2.5**

IDC 21 15:00:49.7±55.0**, 15°.79S**×**173°.68W, h0**^{km}**, mb3.9**/3**, mb1 4.1**/3**, mb1mx3.6**/31**, mbtmp3.9**/3**, Error ellipse: s-maj=1053.0km s-min=184.7km az=79.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**43.61**	**240**	P	P	15 08 56.5	+0.5
	0.9nm,0.5s,baz=53,slow=5.1,SNR=5.0						
WRA	**Warramunga Arr**	**49.49**	**257**	P	P	15 09 41.6	-0.8
	0.5nm,0.7s,baz=96,slow=7.1,SNR=6.4						
ASAR	**Alice Springs**	**49.73**	**252**	P	P	15 09 44.1	-0.1
	2.5nm,0.4s,baz=89,slow=7.9,SNR=109						

IDC ***21*** *15:12:41.6±1.5, 16°.39S×173°.90W, h0*^{km}*, mb3.9/4, mb1 4.2/4, mb1mx3.7/37, mbtmp4.0/4, Error ellipse: s-maj=53.6km s-min=30.8km az=134.0*

NOU ***21*** *15:13:24.6, 14°.11S×172°.06W, h93*^{km}*, MLv2.9, Samoa Islands*

ISC 21 15:12:55.4±1.4**, 16°.4S**±0°.2×**174°.1W**±0°.3**, h111**^{km}**, n22,** σ**1**^{s}**80**/20**, mb3.8**/4**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.30**	**42**	P	Pn	15 13 39.9	-5.6
RIZ	**Raoul Island**	**13.29**	**195**	P	P	15 16 14.5	+9.2
WMGZ	**Waiomatatini S**	**22.36**	**196**	P	**P**	**15 17 45.4**	**+1.1**
HAZ	**Te Kaha**	**22.48**	**197**	P	**P**	**15 17 45.0**	**-0.4**
PKGZ	**Pakihiroa**	**22.52**	**196**	P	**P**	**15 17 47.1**	**+1.1**
PUZ	**Puketiti**	**22.64**	**196**	P	**P**	**15 17 42.7**	**-4.4**
RUGZ	**Raukumara Rang**	**22.70**	**197**	P	**P**	**15 17 45.1**	**-2.7**
TWGZ	**Tauwhareparae**	**22.82**	**196**	P	**P**	**15 17 49.4**	**+0.5**
MWZ	**Matawai**	**23.09**	**197**	P	**P**	**15 17 50.4**	**-1.1**
TKGZ	**Te Karaka**	**23.10**	**196**	P	**P**	**15 17 51.9**	**+0.4**
URZ	**Urewera**	**23.14**	**198**	P	**P**	**15 17 50.0**	**-1.9**
	11nm,0.5s,baz=31,slow=1.4,SNR=16						
URZ	**Urewera**	**23.14**	**198**	P	**P**	**15 17 50.1**	**-1.9**
MUGZ	**Murupara**	**23.44**	**198**	P	**P**	**15 17 53.5**	**-1.2**
SNGZ	**Shannon Statio**	**23.56**	**197**	P	**P**	**15 17 57.5**	**+1.7**
MTHZ	**Maungataniwha**	**23.77**	**198**	P	**P**	**15 17 58.6**	**+0.9**
MRHZ	**Matea Rd**	**23.88**	**199**	P	**P**	**15 17 58.8**	**+0.1**
BKZ	**Black Stump Fm**	**24.16**	**198**	P	**P**	**15 18 00.7**	**-0.5**
KAHZ	**Kahuranaki**	**24.63**	**197**	P	**P**	**15 18 07.7**	**+2.2**
PXZ	**Pawanui**	**24.85**	**197**	P	**P**	**15 18 09.8**	**+2.4**
WRA	**Warramunga Arr**	**49.01**	**258**	P	**P**	**15 21 30.6**	**-0.7**
	0.4nm,0.9s,baz=97,slow=8.2,SNR=1.4						
ASAR	**Alice Springs**	**49.21**	**253**	P	**P**	**15 21 33.6**	**+0.8**
	1.1nm,0.5s,baz=88,slow=8.3,SNR=35						
PDAR	**Pinedale Array**	**83.42**	**42**	P	**P**	**15 25 10.8**	**0.0**
	0.6nm,0.7s,baz=206,slow=3.2,SNR=6.0						

VAO ***21*** *15:18:55.3±0.7, 23°.26S×67°.07W, h244*^{km}*±8*^{km}*, mb3.9*

IDC ***21*** *15:18:55.9±2.3, 23°.12S×66°.73W, h201*^{km}*±21*^{km}*, mb3.3/3, mb1 3.6/5, mb1mx3.3/27, mbtmp3.8/5, Error ellipse: s-maj=37.7km s-min=24.3km az=111.0*

GUC ***21*** *15:18:57.8±0.6, 23°.15S×66°.97W, h222*^{km}*±8*^{km}*, ML4.3*

ISC 21 15:18:56.5±0.8**, 23°.09S**±0°.06×**66°.90W**±0°.08**, h219**^{km}±9^{km}**, n31,** σ**1**^{s}**02**/48**, mb3.2**/3**, 12C, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.91**	**284**	P	**Pn**	**15 19 36.4**	**+0.4**
	46nm,0.3s,baz=97,slow=6.4,SNR=254						
LVC				S	**S**	**15 20 06.4**	**-0.2**
	14nm,0.3s,baz=14,slow=16,SNR=11						
LVC	**Limon Verde**	**1.91**	**284**	*e*P	**Pn**	**15 19 36.7**	**+0.6**
LVC				*e*S	**S**	**15 20 06.8**	**+0.2**
LVC	**Limon Verde**	**1.91**	**284**	*e*P	**Pn**	**15 19 36.8**	**+0.8**
LVC				*e*S	**S**	**15 20 07.0**	**+0.3**
PB15	**IPOC Station P**	**2.37**	**267**	⇑*i*P	**Pn**	**15 19 41.1**	**+0.7**
PB15				*e*S	**S**	**15 20 14.5**	**0.0**
PB06	**IPOC Station P**	**2.49**	**278**	⇑*i*P	**Pn**	**15 19 42.3**	**+0.6**
PB06				*e*S	**S**	**15 20 16.8**	**0.0**
PB06				IAML		15 20 17.3	
	comp=N,230nm,0.3s						
PB09	**IPOC Station P**	**2.52**	**300**	⇑*i*P	**Pn**	**15 19 43.4**	**+1.3**
PB09				*e*S	**S**	**15 20 18.1**	**+0.7**
PB03	**IPOC Station P**	**2.83**	**291**	⇑*i*P	**Pn**	**15 19 46.0**	**+0.5**
PB03				*i* S	**S**	**15 20 22.8**	**-0.7**
PB03				IAML		15 20 24.9	
	comp=E,553nm,0.7s						
PB07	**IPOC Station P**	**3.08**	**296**	⇑*i*P	**Pn**	**15 19 48.9**	**+0.6**
PB07				*i* S	**S**	**15 20 27.6**	**-1.0**
PB07				IAML		15 20 28.6	
	comp=N,575nm,0.2s						
PB04	**IPOC Station P**	**3.09**	**284**	⇑*i*P	**Pn**	**15 19 48.9**	**+0.5**
PB04				*i* S	**S**	**15 20 27.5**	**-1.4**
PB04				IAML		15 20 33.1	
	comp=N,307nm,0.4s						
PB01	**IPOC Station P**	**3.15**	**310**	⇑*i*P	**Pn**	**15 19 49.6**	**+0.6**
PB01				*e*S	**S**	**15 20 29.6**	**-0.3**
PB01				IAML		15 20 31.4	
	comp=N,438nm,0.2s						
GO02	**Mina Guanaco**	**3.21**	**229**	⇑*i*P	**Pn**	**15 19 49.8**	**0.0**
GO02				*e*S	**S**	**15 20 31.4**	**-0.1**
PB02	**IPOC Station P**	**3.29**	**302**	⇑*i*P	**Pn**	**15 19 51.0**	**+0.4**
PB02				*e*S	**S**	**15 20 31.4**	**-1.5**
PB10	**IPOC Station P**	**3.38**	**262**	⇑*i*P	**Pn**	**15 19 52.2**	**+0.6**
PB10				*e*S	**S**	**15 20 32.9**	**-1.8**
PB08	**IPOC Station P**	**3.61**	**324**	⇑*i*P	**Pn**	**15 19 56.2**	**+1.5**
PB08				*i* S	**S**	**15 20 40.8**	**+0.6**
PATCX	**Punta Patache**	**3.77**	**306**	*e*P	**Pn**	**15 19 56.5**	**+0.1**
PATCX				*i* S	**S**	**15 20 41.5**	**-1.6**
HMBC	**Humberstone**	**3.94**	**315**	⇑*e*P	**Pn**	**15 19 58.2**	**-0.3**
HMBC				*e*S	**S**	**15 20 45.5**	**-1.6**
LPAZ	**La Paz**	**6.87**	**350**	P	**Pn**	**15 20 37.0**	**+1.2**
	comp=N,1.3nm,0.3s,baz=173,slow=11,SNR=22						
LPAZ				S	**S**	**15 21 54.9**	**+0.1**
	comp=N,0.2nm,0.3s,baz=36,slow=14,SNR=6.1						
LPAZ	**La Paz**	**6.87**	**350**	*e*P	**Pn**	**15 20 36.9**	**+1.1**
AQDB	**Aquidauana**	**10.73**	**78**	*e*P	**Pn**	**15 21 25.6**	**+0.8**
SAML	**Samuel**	**14.51**	**15**	*e*P	**Pn**	**15 22 11.9**	**-0.1**
ARAG	**Araguaiana, MT**	**16.01**	**65**	*e*P	**Pn**	**15 22 29.1**	**-1.1**
CZSB	**Cruzeiro do Su**	**16.26**	**339**	*e*P	**P**	**15 22 30.0**	**-2.2**
SNDB	**Serra Nova Dou**	**18.52**	**56**	*e*P	**P**	**15 22 55.7**	**-1.1**
GDU01	**Guandu, BA**	**27.51**	**75**	*e*P	**P**	**15 24 21.0**	**-1.9**
ROSB	**Rosrio**	**29.83**	**51**	*e*P	**P**	**15 24 42.5**	**-0.9**
NBPV	**Pedro Velho**	**34.65**	**66**	*e*P	**P**	**15 25 24.4**	**-1.0**
TORD	**Torodi Ar. Bea**	**76.16**	**69**	P	**P**	**15 30 20.8**	**-0.1**
	comp=N,0.9nm,0.4s,baz=260,slow=5.4,SNR=6.4						
PDAR	**Pinedale Array**	**76.42**	**329**	P	**P**	**15 30 23.6**	**+1.6**
	comp=N,0.2nm,0.5s,baz=110,slow=7.8,SNR=2.6						
YKA	**Yellowknife Ar**	**93.31**	**340**	P	**P**	**15 31 47.7**	**+1.9**
	comp=N,0.1nm,0.4s,baz=128,slow=5.4,SNR=3.9						
WRA	**Warramunga Arr**	**132.47**	**208**	PKP	**PKiKP**	**15 37 47.7**	**+1.0**
	comp=N,0.7nm,1.0s,baz=144,slow=1.8,SNR=2.1						
MKAR	**Makanchi Array**	**145.77**	**39**	PKPbc	**PKPab**	**15 38 10.8**	**+0.4**
	comp=N,0.4nm,0.6s,baz=324,slow=2.1,SNR=6.0						

FUNV ***21*** *15:24:21.6, 5°.54N×74°.69W, h167*^{km}*, MW3.1*

IDC ***21*** *15:24:25.0±2.7, 5°.52N×74°.54W, h50*^{km}*±32*^{km}*, mb3.1/1, mb1 3.6/2, mb1mx3.1/24, mbtmp3.5/2, ML2.6/1, Error ellipse: s-maj=55.0km s-min=13.6km az=118.0*

RSNC ***21*** *15:24:25.3±1.4, 5°.66N×74°.33W, h12*^{km}*±4*^{km}*, ML3.2, Mw3.3*

ISC 21 15:24:24.2±1.0**, 5°.66N**±0°.02×**74°.32W**±0°.02**, h28**^{km}±8^{km}**, n39,** σ**2**^{s}**08**/73**, 4C-1D, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPBC	**San Pablo de B**	**0.25**	**91**	⇑*i*P	**Pn**	**15 24 31.2**	**-1.0**
SPBC				*e*S	**Sb**	**15 24 35.0**	**-0.4**
SPBC				*i*		15 24 36.2	
	comp=Z,6µm,0.2s						
NORC	**Norcasia**	**0.55**	**260**	⇑*e*P	**Pb**	**15 24 35.5**	**0.0**
NORC				*e*S	**Sb**	**15 24 43.2**	**0.0**
NORC				*i*		15 24 44.5	
	comp=Z,481nm,0.2s						
ROSC	**El Rosal**	**0.81**	**180**	P	**Pn**	**15 24 40.1**	**-0.1**
	comp=Z,104nm,0.3s,baz=349,slow=19,SNR=81						
ROSC				S	**Sn**	**15 24 51.0**	**-0.5**
	comp=Z,264nm,0.3s,baz=143,slow=20,SNR=37						
ROSC	**El Rosal**	**0.81**	**180**	⇓*i*P	**Pn**	**15 24 40.2**	**-0.1**
ROSC				*e*S	**Sn**	**15 24 51.6**	**+0.1**
ROSC				*i*		15 24 54.4	
	comp=Z,749nm,0.3s						
PTBC	**PUERTO BERRIO,**	**0.89**	**351**	*e*P	**Pb**	**15 24 40.3**	**-0.8**
PTBC				*e*S	**Sn**	**15 24 53.1**	**+0.2**
PTBC				*i*		15 24 53.9	
	comp=Z,1µm,0.2s						
GUY2C	**Guyana, Caldas**	**1.12**	**248**	⇑*i*P	**Pb**	**15 24 45.5**	**+0.2**
GUY2C				*e*S	**Sn**	**15 24 59.8**	**+0.4**
GUY2C				*i*		15 25 03.6	
	comp=Z,444nm,0.5s						
CHIC	**Chingaza**	**1.18**	**150**	*e*P	**Pb**	**15 24 46.2**	**0.0**
CHIC				*e*S	**Sb**	**15 25 00.8**	**-0.4**
CHIC				*i*		15 25 04.1	
	comp=Z,255nm,0.2s						
RUSC	**La Rusia**	**1.25**	**79**	*e*P	**Pb**	**15 24 46.9**	**-0.6**
RUSC				*e*S	**Sb**	**15 25 03.0**	**-0.5**
BARC	**Barichara**	**1.47**	**51**	*e*P	**Pb**	**15 24 50.5**	**-0.5**
BARC				*i*		15 25 11.6	
	comp=Z,199nm,0.5s						
BRRC	**Barranca, Sant**	**1.56**	**23**	*e*P	**Pb**	**15 24 50.7**	**-1.8**
BRRC				*e*S	**Sb**	**15 25 13.1**	**+1.2**
BRRC				*i*		15 25 17.2	
	comp=Z,136nm,0.2s						
CBOC	**Ciudad Bolivar**	**1.69**	**277**	*e*P	**Pb**	**15 24 54.2**	**-0.7**
CBOC				*e*S	**Sb**	**15 25 15.9**	**+0.1**
CBOC				*i*		15 25 17.6	
	comp=Z,136nm,0.4s						
ZARC	**Zaragoza, Cauc**	**1.90**	**344**	*i* P	**Pn**	**15 24 55.4**	**+0.5**
ZARC				*e*S	**Sn**	**15 25 17.5**	**-0.4**
ZARC				*i*		15 25 28.0	
	comp=Z,117nm,0.3s						
ORTC	**Ortega, Tolima**	**1.97**	**208**	*e*P	**Pn**	**15 24 56.7**	**+0.9**
ORTC				*e*S	**Sn**	**15 25 21.4**	**+1.8**
ORTC				*i*		15 25 27.7	
	comp=Z,204nm,0.2s						
PRAC	**Prado**	**2.01**	**196**	*e*P	**Pn**	**15 24 57.3**	**+0.9**
PRAC				*e*S	**Sb**	**15 25 23.8**	**-1.1**
PRAC				*i*		15 25 30.5	
	comp=Z,214nm,0.2s						
PLMC	**San Jos del P**	**2.09**	**249**	*e*P	**Pb**	**15 25 00.4**	**-1.2**
PLMC				*e*S	**Sn**	**15 25 24.6**	**+1.9**
PLMC				*i*		15 25 36.6	
	comp=Z,84nm,0.6s						
DBBC	**Dabeiba**	**2.31**	**306**	⇑*e*P	**Pb**	**15 25 04.2**	**-1.1**
DBBC				*e*S	**Sb**	**15 25 35.8**	**+2.3**
DBBC				*i*		15 25 42.9	
	comp=Z,224nm,0.2s						
PAMC	**Pamplona, Colo**	**2.32**	**44**	*e*P	**Pb**	**15 25 02.6**	**-3.1**
PAMC				*e*S	**Sb**	**15 25 35.0**	**+0.8**
PAMC				*i*		15 25 43.6	
	comp=Z,111nm,0.4s						
UREC	**San Jos de Ur**	**2.40**	**330**	*e*P	**Pn**	**15 25 03.3**	**+1.5**
UREC				*e*S	**Sb**	**15 25 38.8**	**+2.7**
YOTC	**Yotoco, Valle**	**2.61**	**231**	*e*P	**Pn**	**15 25 05.9**	**+1.1**
YOTC				*e*S	**Sb**	**15 25 41.4**	**-0.8**
PTGC	**Puerto Gaitan,**	**2.62**	**124**	*e*S	**Sb**	**15 25 44.5**	**+2.3**
TAMC	**Tame, Arauca**	**2.63**	**73**	*e*P	**Pb**	**15 25 12.1**	**+1.3**
TAMC				*e*S	**Sb**	**15 25 47.7**	**+5.0**
OCAC	**Ocana**	**2.75**	**21**	*e*P	**Pn**	**15 25 06.2**	**-0.5**
OCAC				*e*S	**Sb**	**15 25 50.9**	**+4.6**
OCAC				*i*		15 25 59.2	
	comp=Z,72nm,0.6s						
CAPV	**Capacho**	**2.96**	**42**	*e*P	**Pn**	**15 25 12.2**	**+2.5**
CAPV				*e*S	**Sb**	**15 25 50.8**	**-1.6**
SMLC	**San Martn de**	**3.13**	**5**	*e*P	**Pn**	**15 25 13.2**	**+1.4**
SMLC				*e*S	**Sn**	**15 25 50.8**	**+2.5**
SMLC				*i*		15 26 08.7	
	comp=Z,52nm,0.7s						
MARP	**Paez Belalcaza**	**3.24**	**210**	*e*P	**Pn**	**15 25 13.2**	**-0.3**
MARP				*e*S	**Sb**	**15 25 57.1**	**-3.2**
MOTC	**Monteria, Cord**	**3.38**	**337**	*e*P	**Pn**	**15 25 14.8**	**-0.3**
MOTC				*e*S	**Sn**	**15 25 56.1**	**+1.8**
MACC	**Macarena, Meta**	**3.52**	**172**	*e*P	**Pb**	**15 25 28.7**	**+2.8**
MACC				*e*S	**Sb**	**15 26 07.0**	**-1.3**
GARC	**Garzon, Huila**	**3.64**	**199**	*e*P	**Pn**	**15 25 19.7**	**+0.7**
GARC				*e*S	**Sb**	**15 26 12.9**	**+1.0**
GARC				*i*		15 26 20.7	
	comp=Z,97nm,0.2s						
PCON	**Cinco Dias**	**3.90**	**212**	*e*P	**Pn**	**15 25 25.1**	**+2.2**
PCON				*e*S	**Sb**	**15 26 21.9**	**+2.2**
FLOC	**Florencia**	**4.26**	**198**	*e*P	**Pn**	**15 25 26.8**	**-0.6**
FLOC				*e*S	**Sb**	**15 26 32.3**	**+2.8**
SOCV	**Socops**	**4.32**	**53**	*e*P	**Pn**	**15 25 29.5**	**+1.4**
SOCV				*e*S	**Sn**	**15 26 18.5**	**+0.9**
SDV	**Santo Domingo**	**4.87**	**49**	P	**Pn**	**15 25 39.3**	**+3.5**
	comp=Z,2.0nm,0.3s,baz=288,slow=9.6,SNR=4.0						
SDV				S	**Sn**	**15 26 38.0**	**+6.7**
	comp=Z,3.9nm,0.3s,baz=268,slow=18,SNR=5.7						
SANV	**Sanarito**	**6.09**	**51**	*e*P	**Pn**	**15 25 53.1**	**+0.5**
SANV				*e*S	**Sn**	**15 26 58.8**	**-2.7**
BAUV	**El Baul**	**7.03**	**62**	*e*P	**Pn**	**15 26 04.2**	**-1.3**
BAUV				*e*S	**Sn**	**15 27 22.3**	**-2.2**
MAPV	**Macapo**	**7.14**	**54**	*e*P	**Pn**	**15 26 05.2**	**-1.7**
MAPV				*e*S	**Sn**	**15 27 23.8**	**-3.4**
MONV	**Montecano**	**7.59**	**34**	*e*P	**Pn**	**15 26 11.9**	**-1.2**
MONV				*e*S	**Sn**	**15 27 31.8**	**-6.5**
YKA	**Yellowknife Ar**	**63.95**	**340**	P	**P**	**15 34 52.7**	**-1.9**
	comp=Z,0.2nm,0.4s,baz=136,slow=6.8,SNR=6.3						
ASAR	**Alice Springs**	**147.47**	**234**	PKPbc	**PKPdf**	**15 44 03.1**	**-1.0**
	comp=Z,0.4nm,1.0s,baz=113,slow=3.4,SNR=5.1						
WRA	**Warramunga Arr**	**148.73**	**240**	PKPbc	**PKPdf**	**15 44 06.5**	**+0.3**
	comp=Z,0.2nm,0.4s,baz=109,slow=2.7,SNR=5.7						

JMA 21 15:38:48.2±0.1**, 38°.66N**×**142°.15E, h38**^{km}±1^{km}**, M2.0, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKMT	**Kesennumamotoy**	**0.55**	**286**	P	Pn	15 38 59.4	-0.2
JKMT				S	Sn	15 39 07.1	-0.5
OFUJ	**Ofunato**	**0.56**	**318**	P	Pn	15 38 59.6	-0.2
OFUJ				S	Sn	15 39 07.6	-0.3
JIKH	**Ishinomakikobu**	**0.64**	**237**	P	Pn	15 39 00.5	-0.4
JIKH				*e*S	Sn	15 39 09.1	-0.7
JIO	**Ouri**	**0.66**	**252**	P	Pn	15 39 00.8	-0.3
JIO				S	Sn	15 39 09.5	-0.7
JMK	**Ichinoseki**	**0.78**	**292**	P	Pn	15 39 02.7	0.0

JMK				S	Sn	15 39 12.9	-0.3
JOM	Ohasama	1.05	321	P	Pn	15 39 06.7	+0.3
JOM				eS	Sn	15 39 20.1	+0.3
JOU	Okura	1.20	256	P	Pn	15 39 09.0	+0.5
JOU				S	Sn	15 39 24.2	+0.7
JRG	Rokugo	1.39	302	P	Pn	15 39 13.1	+2.0
JYK	Kaneyama	1.42	281	P	Pn	15 39 12.1	+0.6
JYK				eS	Sn	15 39 29.7	+0.7

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*MOS **21** 15:38:51.8±0.9, 45°.52N×142°.56E, h323^{km}, mb4.3/2, Error ellipse: s-maj=14.5km s-min=8.7km az=96.9*

*IDC **21** 15:38:52.6±0.7, 45°.55N×142°.59E, h312^{km}±13^{km}, mb3.0/7, mb1 3.3/12, mb1mx3.0/42, mbtmp3.8/12, Error ellipse: s-maj=28.0km s-min=14.9km az=165.0*

*SKHL **21** 15:38:52.9±0.5, 45°.50N×142°.50E, h320^{km}±15^{km}, mb4.4/13, msha4.7/12*

*JMA **21** 15:38:53.2±0.5, 45°.44N×142°.57E, h313^{km}±4^{km}, M3.1*

ISC 21 15:38:52.2±0.6, **45°.46N**±0°.04×**142°.61E**±0°.06, **h314**^{km}±6^{km}, **n54**, σ**1^{s}.43**/74, **mb3.5**/9, **1C-1D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSE	Soyaes	0.50	182	P	Pn	15 39 32.9	+0.5
JSE				eS	S	15 40 03.9	-0.6
JWK2	Keihoku	0.52	254	P	Pn	15 39 33.3	+0.9
JWK2				eS	S	15 40 04.1	-0.3
JYG	Yagishiri	1.33	219	P	Pn	15 39 36.9	+1.1
ASAJ	Asahikawa	1.34	180	P	Pn	15 39 37.0	+1.1
	7.9nm,0.3s,baz=288,slow=6.2,SNR=190						
ASAJ				S	S	15 40 11.6	+0.9
	baz=150,slow=20,SNR=1.2						
YSS	Yuzh-Sakhalins	1.50	4	⇓iPN	Pn	15 39 36.7	+0.1
YSS				eS	S	15 40 10.3	-1.7
YSS				pmax	pmax		
	comp=Z,100nm,0.3s						
YSS				smax	smax		
	comp=N,90nm,0.5s						
YSS				smax	smax		
	comp=E,40nm,0.5s						
YSS	Yuzh-Sakhalins	1.50	4	i P	Pn	15 39 36.7	+0.1
YSS				AMB	AMB	15 39 37.0	
	comp=E,240nm,0.2s						
YSS				i S	S	15 40 10.4	-1.6
YSS				A	A	15 40 11.0	
	comp=E,60nm,0.5s						
YSS				A	A	15 40 11.0	
	comp=E,100nm,0.5s						
JKK2	Kamakawa 2	1.59	176	P	Pn	15 39 38.7	+1.3
KHLM	Kholmsk	1.64	347	eP	Pn	15 39 37.4	-0.1
KHLM				AMB	AMB	15 39 37.9	
	comp=E,100nm,0.5s						
KHLM				eS	S	15 40 12.7	-0.9
KHLM				A	A	15 40 13.8	
	comp=E,70nm,0.5s						
KHLM				A	A	15 40 13.8	
	comp=E,100nm,0.5s						
JTKR	Abashiri--Toko	1.76	148	P	Pn	15 39 39.7	+1.2
JTKR				eS	S	15 40 16.4	+1.1
JHR	Hokuryu	1.83	200	P	Pn	15 39 40.3	+1.3
JFR	Furan	2.30	180	P	Pn	15 39 43.8	+1.1
JAR	Ashorobuto	2.32	158	P	Pn	15 39 44.2	+1.4
RUSJ	Misakicho	2.32	125	ePN	Pn	15 39 44.6	+1.8
JRA	Rausu	2.35	129	P	Pn	15 39 44.8	+1.7
JSK	Shakotan	2.60	217	P	Pn	15 39 46.6	+1.4
GLVR	Golovnino	2.70	129	ePN	Pn	15 39 49.3	+3.2
GLVR				S	S	15 40 30.3	+1.1
JEW	Eniwo	2.75	198	P	Pn	15 39 48.4	+1.8
JAK	Akkeshi	2.89	148	P	Pn	15 39 48.2	+0.3
JAK				eS	S	15 40 30.8	-1.6
JCH	Churui	2.90	169	P	Pn	15 39 47.7	-0.3
JCH				eS	S	15 40 29.5	-3.1
NMR	Nemuro--Hokkai	3.06	132	ePN	Pn	15 39 49.1	-0.4
NMR				eS	S	15 40 32.3	-3.1
NEM2	Nemuro 2	3.07	132	P	Pn	15 39 49.0	-0.6
NEM2				eS	S	15 40 32.6	-3.0
JNBK	Urakawa-nobuka	3.18	178	P	Pn	15 39 50.8	0.0
ERM	Erimo	3.47	173	i PN	Pn	15 39 54.4	+0.8
UGL	Uglegorsk	3.64	354	eP	Pn	15 39 55.3	+0.2
UGL				eS	S	15 40 45.1	-0.5
UGL				A	A	15 40 47.5	
	comp=E,60nm,0.9s						
UGL				A	A	15 40 47.5	
	comp=E,50nm,0.9s						
KUR	Kuril'sk	3.72	92	ePN	Pn	15 39 57.9	+1.8
KUR				S	S	15 40 48.3	+1.0
KUR				pmax	pmax		
	comp=Z,13nm,0.4s						
JKB	Kayabe	3.75	198	P	Pn	15 39 57.0	+0.5
JOSM	Okushiri--Mats	4.07	215	P	Pn	15 40 00.6	+0.7
JOT	Ohata	4.23	196	P	Pn	15 40 01.7	0.0
JOT				eS	S	15 40 56.1	-1.4
JANG	Nango	5.15	189	P	Pn	15 40 11.3	-0.7
TYV	Tymovskoe	5.41	0	ePN	Pn	15 40 14.5	-0.2
TYV				eS	S	15 41 19.6	-1.7
TYV				pmax	pmax		
	comp=Z,16nm,0.7s						
TYV				smax	smax		
	comp=N,11nm,1.0s						
TYV	Tymovskoe	5.41	0	eP	Pn	15 40 14.5	-0.2
TYV				AMB	AMB	15 40 15.5	
	comp=N,16nm,0.7s						
TYV				eS	S	15 41 19.6	-1.7
TYV				A	A	15 41 20.6	
	comp=N,11nm,1.0s						
JOM	Ohasama	6.06	190	P	Pn	15 40 22.5	-0.2
JOM				eS	S	15 41 33.0	-2.8
JMK	Ichinoseki	6.59	189	P	Pn	15 40 28.5	-0.4
JYK	Kaneyama	6.75	195	P	Pn	15 40 30.6	-0.3
USRK	Ussuriysk Ar.	7.65	264	P	Pn	15 40 42.2	+0.6
	baz=75,slow=14,SNR=17						
KLR	Kul'dur	8.28	301	P	Pn	15 40 49.1	0.0
	comp=N,0.3nm,0.3s,baz=121,slow=14,SNR=9.6						
MAJO	Matsushiro	9.51	202	i PN	Pn	15 41 04.7	+0.4
MJAR	Matsushiro Arr	9.51	202	P	Pn	15 41 05.4	+1.1
	comp=N,0.2nm,0.3s,baz=7.6,slow=12,SNR=20						
EKMR	Ekimchan	9.88	324	eP	Pn	15 41 08.0	-0.6
EKMR				AMB	AMB	15 41 09.5	
	comp=N,6.0nm,0.8s						
PETK	Petropavlovsk-	12.46	47	P	P	15 41 41.4	+1.1
	comp=N,0.1nm,0.3s,baz=234,slow=8.8,SNR=5.4						
ZEA	Zeya	12.93	315	ePN	Pn	15 41 45.0	-0.4
YAK	Yakutsk	18.21	340	i P	P	15 42 43.5	+0.5
YAK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SEY	Seymchan	18.38	14	P	P	15 42 43.9	-0.8
	comp=Z,0.8nm,0.3s,baz=179,slow=9.5,SNR=32						
SEY	Seymchan	18.38	14	i P	P	15 42 44.4	-0.3
SONM	Songino Array	24.83	289	P	P	15 43 47.0	+0.3
	comp=Z,0.3nm,0.5s,baz=93,slow=7.2,SNR=1.9						
MKAR	Makanchi Array	40.92	294	P	P	15 46 05.4	+0.9
	comp=Z,0.1nm,0.6s,baz=79,slow=7.5,SNR=1.8						
ILAR	Eielson Array	42.05	37	P	P	15 46 13.2	-0.3
	comp=Z,0.8nm,0.7s,baz=278,slow=7.8,SNR=16						
INK	Inuvik	46.57	31	P	P	15 46 48.4	-0.4
	comp=Z,1.5nm,0.3s,baz=287,slow=5.1,SNR=13						
ARU	Arti	50.85	315	c iP	P	15 47 21.1	-0.2
ARU						15 49 16.3	
ARU				S	S	15 54 14.5	+2.0
ARU				SS	SS	15 57 45.2	-5.8
ARU				pmax	pmax		
	comp=Z,7.0nm,1.7s						
YKA	Yellowknife Ar	56.16	33	P	P	15 47 59.9	+0.5
	comp=Z,0.7nm,0.5s,baz=307,slow=6.3,SNR=17						
FINES	FINESS Array B	61.84	331	P	P	15 48 37.5	-0.7
	comp=Z,2.7nm,0.9s,baz=35,slow=5.1,SNR=4.8						
KIV	Kislovodsk	66.18	309	eP	P	15 49 08.4	+1.7
KIV				pmax	pmax		
	comp=Z,23nm,1.1s						
NB2	NORSAR Subarra	66.79	337	P	P	15 49 09.6	-0.5
	comp=Z,0.5nm,0.4s,baz=45,slow=5.9						
NOA	NORSAR Array B	66.79	337	P	P	15 49 09.8	-0.3
	comp=Z,0.6nm,0.8s,baz=46,slow=5.8,SNR=2.0						

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*IDC **21** 15:43:07.4±1.8, 0°.53N×124°.93E, h0^{km}, mb3.3/3, mb1 3.7/4, mb1mx3.4/34, mbtmp3.5/4, ML3.3/1, Error ellipse: s-maj=125.9km s-min=25.1km az=66.0*

*DJA **21** 15:43:22.6±0.6, 0°N±6°×12°5E±°, h40^{km}±18^{km}, M4.0/8, mb4.4/2, MLv3.9/8*

ISC 21 15:43:17.0±1.5, **0°.7N**±0°.1×**124°.9E**±0°.1, **h87**^{km}, **n10**, σ**2^{s}.53**/12, **mb3.3**/3, **Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMSI	Cibinong	0.92	261	P	Pn	15 43 36.2	+0.6
LUWI	Luwuk	2.75	230	P	Pn	15 43 59.5	+0.4
MRSI	Marisa	2.96	265	P	Pn	15 44 01.7	-0.2
MRSI				S	Sn	15 44 34.3	-2.2
APSI	Ampana	3.62	243	P	Pn	15 44 12.0	+1.1
TTSI	Tana Toraja	6.30	234	P	Pn	15 44 47.8	+0.4
	0.8nm23nm,0.8s						
SPSI	Sidrap Palu	6.92	228	P	Pn	15 44 56.3	+0.5
FITZ	Fitzroy Crossi	18.72	178	P	P	15 47 26.9	-2.0
	0.1nm,0.3s,baz=30,slow=8.1,SNR=1.7						
FITZ				S	Sn	15 51 04.4	+4.8
	0.1nm,0.3s,baz=249,slow=17,SNR=1.6						
WRA	Warramunga Arr	22.53	156	P	P	15 48 06.2	-3.7
	1.2nm,0.9s,baz=332,slow=10,SNR=5.2						
ASAR	Alice Springs	25.78	161	P	P	15 48 38.3	-1.7
	0.7nm,1.0s,baz=338,slow=7.8,SNR=10						
MKAR	Makanchi Array	59.01	327	P	P	15 53 10.4	+2.6
	0.1nm,0.3s,baz=114,slow=7.3,SNR=5.0						

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*IDC **21** 16:00:28.9±3.1, 39°.55S×176°.22E, h0^{km}, mb3.6/2, mb1 3.7/2, mb1mx3.6/14, mbtmp3.6/2, Error ellipse: s-maj=151.3km s-min=43.8km az=168.0*

*NOU **21** 16:00:57.0, 38°.91S×174°.77E, h235^{km}, MLv4.2, North Island, New Zealand*

*WEL **21** 16:01:00.3, 39°S±2°×17°5E±°, h214^{km}±2^{km}, M3.5/61, MLv3.5/61, Error ellipse: s-maj=0.0km s-min=0.0km az=101.7*

ISC 21 16:00:59.2±0.8, **39°.10S**±0°.06×**174°.86E**±0°.05, **h219**^{km}±5^{km}, **n167**, σ**0^{s}.98**/189, **North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VRZ	Vera Road	0.09	252	P	Pn	16 01 27.7	+0.1
VRZ				S	S	16 01 48.6	-1.3
PKVZ	Pokaka	0.42	117	P	Pn	16 01 28.9	+0.6
PKVZ				S	S	16 01 49.8	-1.2
MHEZ	Mangahewa	0.42	273	P	Pn	16 01 29.0	+0.7
TWVZ	Taurewa	0.45	87	P	Pn	16 01 28.7	+0.2
TWVZ				S	S	16 01 49.7	-1.6
LREZ	Lake Rotokare	0.51	225	P	Pn	16 01 29.5	+1.0
MTVZ	Mangateitei	0.55	121	P	Pn	16 01 29.5	+0.8
MTVZ				S	S	16 01 50.5	-1.3
FWVZ	Far West T-bar	0.56	107	P	Pn	16 01 29.5	+0.6
FWVZ				S	S	16 01 50.7	-1.5
WTVZ	West Tongariro	0.56	92	P	Pn	16 01 29.3	+0.5
WTVZ				S	S	16 01 50.6	-1.4
TRVZ	Turoa	0.57	111	P	Pn	16 01 29.7	+0.7
TRVZ				S	S	16 01 50.9	-1.4
DRZ	Dome Shelter	0.57	108	P	Pn	16 01 29.9	+0.7
NGZ	Ngauruhoe	0.58	98	P	Pn	16 01 29.5	+0.5
NGZ				S	S	16 01 50.5	-1.6
HIZ	Hauiti	0.58	359	P	Pn	16 01 28.7	-0.1
HIZ				S	S	16 01 50.3	-1.6
WHVZ	Whangaehu Hut	0.59	108	P	Pn	16 01 29.8	+0.7
WHVZ				S	S	16 01 50.9	-1.5
PREZ	Palmer Road	0.60	246	P	Pn	16 01 29.8	+0.9
KRVZ	Karewarewa	0.60	90	P	Pn	16 01 29.5	+0.5
KRVZ				S	S	16 01 50.9	-1.3
WNVZ	Wahianoa	0.61	112	P	Pn	16 01 29.9	+0.8
WNVZ				S	S	16 01 50.9	-1.5
NEZ	North Egmont	0.62	254	P	Pn	16 01 29.9	+0.9
NEZ				S	S	16 01 52.7	+0.4
OTVZ	Oturere	0.63	96	P	Pn	16 01 29.6	+0.4
OTVZ				S	S	16 01 51.6	-0.9
TUVZ	Tukino	0.64	106	P	Pn	16 01 30.0	+0.8
TMVZ	Te Maari	0.65	92	P	Pn	16 01 29.6	+0.4
KATZ	Kakaramea	0.66	79	P	Pn	16 01 29.6	+0.3
KATZ				S	S	16 01 51.5	-1.1
ETVZ	East Tongariro	0.66	94	P	Pn	16 01 29.6	+0.3
WAZ	Wanganui	0.66	172	P	Pn	16 01 30.4	+1.3
WAZ				S	S	16 01 52.7	0.0
KHEZ	Kahui Hut	0.69	253	P	Pn	16 01 30.0	+0.7
PKE	Pukeiti	0.69	262	P	Pn	16 01 30.0	+0.7
RATZ	Rangitukua	0.74	72	P	Pn	16 01 29.8	+0.3
MOVZ	Moawhango	0.76	114	P	Pn	16 01 30.0	+0.4
MOVZ				S	S	16 01 50.8	-2.5
WATZ	Wairara	0.78	60	P	Pn	16 01 30.2	+0.4
RITZ	Rihia Road	0.78	81	P	Pn	16 01 30.2	+0.5
NBEZ	Newall Road No	0.79	257	P	Pn	16 01 30.6	+0.9
NMEZ	Namu Road	0.83	247	P	Pn	16 01 30.9	+1.1
TLZ	Tolley Road	0.93	35	P	Pn	16 01 30.4	-0.2
WHTZ	Whakaora	0.96	64	P	Pn	16 01 31.2	+0.5
KUTZ	Kaahu Road	0.96	51	P	Pn	16 01 31.2	+0.4
HATZ	Hinemaiaia	0.98	78	P	Pn	16 01 30.9	+0.1
HATZ				S	S	16 01 52.8	-2.6
BHHZ	Black Hill Sta	1.01	113	P	Pn	16 01 31.5	+0.5
BHHZ				S	S	16 01 53.3	-2.5
OHWZ	Ohakea	1.16	163	P	Pn	16 01 33.7	+1.8
WPRZ	Whakapapatarin	1.17	61	P	Pn	16 01 32.1	0.0
GRRZ	Galatos Road	1.23	53	P	Pn	16 01 32.6	+0.1
MRHZ	Matea Rd	1.24	78	P	Pn	16 01 32.4	-0.2
MRHZ				S	S	16 01 55.1	-3.4
KWHZ	Kaweka Forest	1.25	106	P	Pn	16 01 33.7	+1.0
BKZ	Black Stump Fm	1.27	94	P	Pn	16 01 33.0	+0.2
BKZ				S	S	16 01 56.5	-2.4
ALRZ	Allen Road	1.27	66	P	Pn	16 01 32.7	-0.1
TSZ	Takapari Road	1.28	139	P	Pn	16 01 34.1	+1.2
KRHZ	Kereru	1.29	115	P	Pn	16 01 33.8	+0.9
PNHZ	Pukenui	1.31	129	P	Pn	16 01 34.2	+1.1
HRRZ	Handcock Road	1.32	58	P	Pn	16 01 33.4	+0.2
HSRZ	Hossack Road	1.34	54	P	Pn	16 01 33.3	0.0
PRRZ	Plateau Road	1.34	64	P	Pn	16 01 32.9	-0.4
UTU	Utuhina	1.39	49	P	Pn	16 01 33.9	+0.1
NGRZ	Ngongotaha	1.44	47	P	Pn	16 01 34.1	-0.1
HLRZ	Highlands Stat	1.44	55	P	Pn	16 01 35.0	+0.9
MCHZ	McNeill Hill	1.46	104	P	Pn	16 01 35.8	+1.5
POWZ	Post Office Ro	1.47	152	P	Pn	16 01 35.3	+1.0
RRRZ	Republican Roa	1.50	60	P	Pn	16 01 34.5	-0.1
KMRZ	Kaimai	1.51	34	P	Pn	16 01 34.7	0.0
NMHZ	Naumai	1.51	91	P	Pn	16 01 36.0	+1.3
KARZ	Kaharoa	1.53	46	P	Pn	16 01 34.8	-0.1
OMRZ	Omania	1.54	50	P	Pn	16 01 34.8	-0.2
TARZ	Mount Tarawera	1.55	57	P	Pn	16 01 35.2	0.0
WPHZ	Waipukurau	1.55	129	P	Pn	16 01 36.3	+1.3
MTHZ	Maungataniwha	1.56	82	P	Pn	16 01 35.2	+0.1
DVHZ	Dannevirke	1.56	140	P	Pn	16 01 36.1	+1.0
MKRZ	Makatiti	1.58	53	P	Pn	16 01 36.3	+0.9
MUGZ	Murupara	1.61	68	P	Pn	16 01 35.0	-0.6
MRZ	Mangatainoka R	1.65	161	P	Pn	16 01 36.8	+1.0
ARHZ	Aropaoanui	1.67	96	P	Pn	16 01 37.0	+1.0
PRWZ	Pori Road	1.69	150	P	Pn	16 01 37.5	+1.3
KAHZ	Kahuranaki	1.71	115	P	Pn	16 01 37.8	+1.4
RTZ	Ruatahuna	1.72	74	P	Pn	16 01 36.4	-0.2
OGWZ	Otaki Gorge	1.73	172	P	Pn	16 01 37.9	+1.3
RAHZ	Arahi	1.74	85	P	Pn	16 01 37.3	+0.6
TGRZ	Tauranga	1.75	39	P	Pn	16 01 36.6	-0.2
KIW	Kapiti Island	1.76	179	P	Pn	16 01 37.8	+1.0
EDRZ	Edgecumbe	1.77	57	P	Pn	16 01 36.6	-0.4
PRHZ	Porangahau	1.80	131	P	Pn	16 01 38.4	+1.3
MARZ	Manawahe	1.80	53	P	Pn	16 01 37.1	-0.2
PXZ	Pawanui	1.80	122	P	Pn	16 01 38.4	+1.2
CKHZ	Cape Kidnapper	1.80	109	P	Pn	16 01 38.6	+1.3
OPRZ	Ohinepanea	1.82	47	P	Pn	16 01 35.7	-1.8
ANWZ	Angora Road	1.84	138	P	Pn	16 01 38.9	+1.4
WHHZ	Waihua	1.84	90	P	Pn	16 01 38.3	+0.7
DUWZ	D’Urville Isla	1.85	203	P	Pn	16 01 38.6	+0.9
TIWZ	Tintock	1.85	155	P	Pn	16 01 38.7	+1.0
HOWZ	Holdsworth Sta	1.86	165	P	Pn	16 01 38.6	+0.8
URZ	Urewera	1.95	65	P	Pn	16 01 37.7	-0.9
SNGZ	Shannon Statio	1.96	81	P	Pn	16 01 39.1	+0.3
MKAZ	Moumakai	2.00	7	P	Pn	16 01 39.1	-0.1
CAW	Cannon Point	2.01	176	P	Pn	16 01 40.2	+1.0
AWAZ	Awhitu Peninsu	2.04	355	P	Pn	16 01 39.5	-0.1
WHRZ	Whale Island	2.07	54	P	Pn	16 01 38.6	-1.2
CPWZ	Castlepoint	2.08	151	P	Pn	16 01 41.3	+1.5
RAGZ	Rawiri	2.08	74	P	Pn	16 01 40.0	-0.1
MTW	Mount Morrison	2.12	167	P	Pn	16 01 40.8	+0.6
MYRZ	Mayor Island	2.12	31	P	Pn	16 01 40.5	+0.2
ETAZ	East Tamaki Re	2.14	1	P	Pn	16 01 40.5	-0.1
TMWZ	Te Maipa	2.15	159	P	Pn	16 01 41.5	+0.8
TCW	Tory Channel	2.16	192	P	Pn	16 01 41.8	+1.1
WTAZ	Waiatarua	2.17	354	P	Pn	16 01 41.1	+0.2
WEL	Wellington	2.19	182	P	Pn	16 01 41.7	+0.8
KNZ	Kokohu	2.19	89	P	Pn	16 01 41.3	+0.3
MWZ	Matawai	2.22	71	P	Pn	16 01 40.8	-0.5
EPAZ	Eden Park BICE	2.22	358	P	Pn	16 01 41.3	-0.1
HBAZ	Herne Bay Bore	2.25	357	P	Pn	16 01 41.5	-0.1
RIGZ	Rimuhau	2.29	81	P	Pn	16 01 42.3	+0.1
BHW	Baring Head	2.31	180	P	Pn	16 01 42.7	+0.6
WIAZ	Waiheke Island	2.31	5	P	Pn	16 01 42.1	-0.3
PAWZ	Paruwai Farm	2.32	169	P	Pn	16 01 43.0	+0.6
MBAZ	Motutapu North	2.33	1	P	Pn	16 01 42.3	-0.1
MSWZ	Moikau Station	2.33	173	P	Pn	16 01 43.1	+0.6
RVAZ	Riverhead Bore	2.33	354	P	Pn	16 01 42.4	-0.1
PRGZ	Paritu Road	2.36	87	P	Pn	16 01 43.1	+0.3
MHGZ	Mahia Peninsul	2.37	92	P	Pn	16 01 43.5	+0.7
TRWZ	Traveller	2.38	165	P	Pn	16 01 43.7	+0.7
NNZ	Nelson	2.40	208	P	Pn	16 01 43.7	+0.6
TKGZ	Te Karaka	2.42	75	P	Pn	16 01 43.6	+0.1
TUWZ	Tuamarina	2.43	197	P	Pn	16 01 44.2	+0.8
KUZ	Kuaotunu	2.44	16	P	Pn	16 01 43.4	-0.3
RUGZ	Raukumara Rang	2.48	64	P	Pn	16 01 42.7	-1.5
PLWZ	Palliser	2.49	173	P	Pn	16 01 44.6	+0.5
QRZ	Quartz Range	2.49	225	P	Pn	16 01 44.0	-0.1
ABAZ	Army Bay	2.49	359	P	Pn	16 01 44.3	0.0
TWGZ	Tauwhareparae	2.61	70	P	Pn	16 01 45.3	-0.2
HAZ	Te Kaha	2.66	61	P	Pn	16 01 44.5	-1.4
CNGZ	Carnagh Statio	2.68	78	P	Pn	16 01 46.5	+0.3
CMWZ	Cape Campbell	2.69	190	P	Pn	16 01 47.8	+1.5
BSWZ	Blackbirch Sta	2.72	196	P	Pn	16 01 47.6	+1.0
PKGZ	Pakihiroa	2.79	65	P	Pn	16 01 46.7	-0.9
PUZ	Puketiti	2.85	70	P	Pn	16 01 47.3	-0.8
GRZ	Great Barrier	2.88	10	P	Pn	16 01 48.4	-0.1
THZ	Tophouse	3.05	209	P	Pn	16 01 50.5	+0.1
WMGZ	Waiomatatini S	3.07	66	P	Pn	16 01 49.6	-0.9
MXZ	Matakaoa Point	3.11	62	P	Pn	16 01 50.2	-0.9
WCZ	Waipu Caves	3.18	352	P	Pn	16 01 51.8	-0.2
KHZ	Kahutara	3.46	196	P	Pn	16 01 55.6	+0.5
DSZ	Denniston Nort	3.53	220	P	Pn	16 01 55.5	-0.4
OUZ	Omahuta	4.00	345	P	Pn	16 02 01.6	-0.1
GVZ	Greta Valley S	4.11	199	P	Pn	16 02 02.8	-0.1
LTZ	Lake Taylor	4.17	207	P	Pn	16 02 03.1	-0.6
AMCZ	Amberley	4.40	202	P	Pn	16 02 06.5	0.0
INZ	Inchbonnie	4.45	214	P	Pn	16 02 06.1	-1.1
OXZ	Oxford	4.73	206	P	Pn	16 02 09.3	-1.3
OKCZ	Okains Bay	4.82	196	P	Pn	16 02 11.5	-0.2
MQZ	McQueen’s Vall	4.89	199	P	Pn	16 02 11.4	-1.2
WVZ	Waitaha Valley	5.05	217	P	Pn	16 02 14.2	-0.4
RACZ	Rakaia	5.06	203	P	Pn	16 02 13.9	-0.7
WACZ	Wakanui South	5.35	204	P	Pn	16 02 17.7	-0.5
GCSZ	Gaunt Creek Bo	5.43	218	P	Pn	16 02 17.8	-1.6
RPZ	Rata Peaks	5.43	211	P	Pn	16 02 18.3	-1.1
ARCZ	Arundel	5.58	209	P	Pn	16 02 20.2	-1.1
FOZ	Fox Glacier	5.84	219	P	Pn	16 02 22.4	-2.1
TMZ	Timaru	6.02	207	P	Pn	16 02 26.1	-0.8
LBZ	Lake Benmore	6.34	212	P	Pn	16 02 29.3	-1.7
ODZ	Otahua Downs	6.72	206	P	Pn	16 02 35.2	-0.7
JCZ	Jackson Bay	6.74	221	P	Pn	16 02 34.3	-1.9
HHSZ	Highcliff Hill	7.48	204	P	Pn	16 02 46.1	+0.5
MSZ	Milford Sound	7.60	221	P	Pn	16 02 45.3	-1.9
TUZ	Tuapeka	7.86	208	P	Pn	16 02 50.8	+0.3
MLZ	Mavora Lakes	8.02	216	P	Pn	16 02 51.5	-1.0
WHZ	Wether Hill Ro	8.49	215	P	Pn	16 02 56.4	-2.3
SYZ	Scrubby Hill	8.54	208	P	Pn	16 02 59.1	-0.1
APZ	The Paps	9.22	211	P	Pn	16 03 06.2	-1.9
STKA	Stephens Creek	27.92	275	P	P	16 06 30.8	+1.7
	0.4nm,0.4s,baz=150,slow=20,SNR=1.5						
ASAR	Alice Springs	37.86	282	P	P	16 07 56.8	+1.6
	0.5nm,0.7s,baz=122,slow=6.1,SNR=12						
ASAR				PcP	PcP	16 10 06.8	+0.1
	0.2nm,0.3s,baz=119,slow=3.8,SNR=5.8						
ARCES	ARCESS Array B	145.43	342	PKPbc	PKPdf	16 20 10.0	+0.2
	1.2nm,0.4s,baz=68,slow=2.3,SNR=34						
BRTR	Keskin Array B	150.19	284	PKPab	PKPab	16 20 31.7	+0.7
	1.1nm,0.7s,baz=140,slow=5.9,SNR=5.8						
FINES	FINESS Array B	150.53	330	PKPbc	PKPbc	16 20 23.5	-0.4
	3.8nm,1.1s,baz=81,slow=4.4,SNR=5.8						
FINES				PKPab	PKPab	16 20 31.0	-0.5
	2.0nm,0.6s,baz=68,slow=4.2,SNR=15						

IDC 21 16:17:38.2±2.2, **20°.70S**×**177°.75W**, **h0**^{km}, **mb4.2**/4, **mb1 4.6**/4, **mb1mx4.0**/32, **mbtmp4.2**/4, **MS3.8**/15, **Ms1 3.8**/15, **ms1mx3.6**/33, **Error ellipse: s-maj=140.6km s-min=31.1km az=155.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAR	Rarotonga	16.80	95	LR	LR	16 25 34.7	
	comp=Z,261nm,20.5s,baz=262,slow=28						
HNR	Honiara	24.24	294	LR	LR	16 31 49.8	
	comp=Z,131nm,18.4s,baz=134,slow=35						
PPT	Papeete	26.78	88	LR	LR	16 30 26.7	
	comp=Z,142nm,21.5s,baz=251,slow=29						
STKA	Stephens Creek	37.92	244	LR	LR	16 40 16.4	
	comp=Z,158nm,18.3s,baz=32,slow=36						
ASAR	Alice Springs	44.70	257	P	P	16 25 53.1	-0.3
	1.2nm,0.9s,baz=87,slow=8.6,SNR=8.0						
ASAR				LR	LR	16 44 06.8	
	comp=Z,119nm,20.1s,baz=97,slow=36						
WRA	Warramunga Arr	44.81	262	LR	LR	16 44 10.5	
	comp=Z,278nm,20.8s,baz=100,slow=36						
SIJI	Sorong	53.51	285	LR	LR	16 48 30.5	
	comp=Z,51nm,19.2s,baz=76,slow=35						
BATI	Baumata	57.17	271	LR	LR	16 51 27.4	
	comp=Z,122nm,18.8s,baz=87,slow=36						
LEM	Lembang	73.27	269	LR	LR	17 01 12.3	
	comp=Z,62nm,20.2s,baz=169,slow=36						
PETK	Petropavlovsk-	76.52	345	LR	LR	16 55 00.5	
	comp=Z,71nm,21.6s,baz=136,slow=29						
KSRS	Korea Array	77.19	318	LR	LR	16 59 35.8	
	comp=Z,28nm,20.5s,baz=135,slow=33						
NVAR	Mina Array Bea	81.00	43	P	P	16 29 53.7	-1.6
	1.7nm,0.9s,baz=218,slow=8.7,SNR=9.7						
NVAR				LR	LR	16 56 32.2	
	comp=Z,112nm,21.6s,baz=230,slow=29						
TXAR	Lajitas Array	86.96	57	P	P	16 30 26.7	+1.0
	2.1nm,1.0s,baz=236,slow=6.4,SNR=11						
TXAR				LR	LR	17 00 10.9	
	comp=Z,42nm,21.4s,baz=0.0,slow=29						
ILAR	Eielson Array	88.45	13	P	P	16 30 32.8	+0.9
	3.7nm,1.1s,baz=222,slow=5.3,SNR=11						
PDAR	Pinedale Array	88.94	43	LR	LR	17 03 36.1	
	comp=Z,76nm,18.2s,baz=250,slow=31						
SONM	Songino Array	96.05	319	LR	LR	17 08 11.7	
	comp=Z,29nm,19.7s,baz=334,slow=32						

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*SKHL **21** 16:26:16.9±0.5, 46°.60N×147°.60E, h300^{km}±9^{km}, mb4.6/8, msha5.1/6*

*IDC **21** 16:26:17.4±1.2, 46°.76N×147°.41E, h299^{km}±12^{km}, mb3.3/14, mb1 3.5/22, mb1mx3.4/42, mbtmp4.1/22, Error ellipse: s-maj=14.3km s-min=9.3km az=143.0*

*JMA **21** 16:26:17.2±0.6, 46°.05N×147°.72E, h321^{km}, M3.5*

ISC 21 16:26:16.3±0.5, **46°.38N**±0°.07×**147°.64E**±0°.07, **h310**^{km}, **n49**, σ**2^{s}.40**/69, **mb3.5**/14, **Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	1.15	172	eP	Pn	16 26 58.3	-0.2
KUR				AMB	AMB	16 26 58.9	
	320nm,0.4s						
KUR				eS	S	16 27 31.0	-1.2
KUR				A	A	16 27 31.5	
	220nm,0.6s						
KUR				A	A	16 27 31.5	
	140nm,0.6s						
YUK	Yuzh-Kuril'sk	2.66	209	eP	Pn	16 27 10.8	+1.3
YUK				AMB	AMB	16 27 12.0	
	73nm,0.3s						
YUK				eS	S	16 27 52.4	+0.3
YUK				A	A	16 27 56.0	
	67nm,0.4s						
YUK				A	A	16 27 56.0	
	195nm,0.4s						
GRPR	Tuman	2.73	210	eP	Pn	16 27 09.7	-0.5
GRPR				eS	S	16 27 52.0	-1.3
GRPR				A	A	16 27 54.0	
	107nm,0.3s						
GRPR				A	A	16 27 54.0	
	39nm,0.3s						
JRA	Rausu	3.02	217	P	Pn	16 27 13.2	+0.3
GLVR	Golovnino	3.04	210	eP	Pn	16 27 13.0	-0.1
GLVR				eS	S	16 27 57.5	-1.1
GLVR				A	A	16 28 01.0	
	216nm,0.4s						
GLVR				A	A	16 28 01.0	
	157nm,0.4s						
NEM2	Nemuro 2	3.30	205	P	Pn	16 27 14.2	-1.5

NEM2				*e*S	S	16 27 59.1	-4.2
NMR	Nemuro--Hokkai	3.30	205	*e*P	Pn	16 27 13.0	-2.7
YSS	Yuzh-Sakhalins	3.42	281	*e*P	Pn	16 27 16.5	-0.3
YSS				AMB	AMB	16 27 17.5	
	10.0nm,0.3s						
JTKR	Abashiri--Toko	3.57	229	P	Pn	16 27 18.8	+0.3
JTKR				*e*S	S	16 28 07.5	-0.8
JSE	Soyaes	3.82	250	P	Pn	16 27 21.6	+0.6
JAK	Akkeshi	3.98	213	P	Pn	16 27 21.4	-1.4
JAK				*e*S	S	16 28 11.8	-4.4
JAR	Ashorobuto	4.13	223	P	Pn	16 27 24.8	+0.3
JWK2	Keihoku	4.15	257	P	Pn	16 27 25.8	+1.2
ASAJ	Asahikawa	4.22	239	P	Pn	16 27 26.6	+1.2
	7.2nm,0.3s,baz=67,slow=14,SNR=154						
ASAJ				S	S	16 28 20.6	-0.4
	0.1nm,0.3s,baz=336,slow=20,SNR=0.9						
JKK2	Kamakawa 2	4.28	236	P	Pn	16 27 26.7	+0.7
JKK2				*e*S	S	16 28 21.6	-0.5
UGL	Uglegorsk	4.63	308	*e*P	Pn	16 27 30.7	+0.8
JFR	Furan	4.82	230	P	Pn	16 27 33.0	+0.8
JCH	Churui	4.85	221	P	Pn	16 27 31.4	-1.1
JCH				*e*S	S	16 28 29.1	-4.7
JNBK	Urakawa-nobuka	5.39	222	P	Pn	16 27 36.9	-1.8
JNBK				*e*S	S	16 28 38.4	-6.8
JKB	Kayabe	6.54	229	P	Pn	16 27 50.8	-1.5
JKB				*e*S	S	16 29 03.7	-6.1
JOT	Ohata	6.90	226	P	Pn	16 27 54.4	-2.2
JOT				*e*S	S	16 29 10.2	-7.6
SKR	Severo-Kuril's	7.08	49	*e*P	Pn	16 27 58.0	-0.6
SKR				AMB	AMB	16 27 59.0	
	75nm,0.5s						
SKR				*e*S	S	16 29 17.0	-4.5
SKR				A	A	16 29 19.0	
	39nm,0.6s						
SKR				A	A	16 29 19.0	
	58nm,0.6s						
JOSM	Okushiri--Mats	7.27	237	P	Pn	16 28 00.3	-0.7
PAU	Pauzhetka	7.90	46	*e*P	Pn	16 28 07.4	-1.1
PAU				AMB	AMB	16 28 08.3	
	60nm,0.6s						
PAU				*e*S	S	16 29 34.4	-5.2
PAU				A	A	16 29 39.4	
	50nm,0.4s						
PAU				A	A	16 29 39.4	
	50nm,0.4s						
PETK	Petropavlovsk-	9.36	40	P	Pn	16 28 24.7	-1.7
	0.6nm,0.3s,baz=224,slow=10,SNR=23						
PETK				S	S	16 29 53.1	-19
	0.4nm,0.3s,baz=187,slow=3.4,SNR=4.0						
KLR	Kul'dur	11.07	291	P	Pn	16 28 46.2	-0.9
	0.5nm,0.3s,baz=104,slow=11,SNR=15						
USRK	Ussuriysk Ar.	11.24	264	P	Pn	16 28 49.9	+0.5
	baz=69,slow=13,SNR=64						
EKMR	Ekimchan	11.62	311	*e*P	Pn	16 28 52.0	-1.9
EKMR				AMB	AMB	16 28 54.0	
	11nm,1.0s						
MJAR	Matsushiro Arr	12.10	219	P	P	16 29 02.5	+1.7
	0.5nm,0.3s,baz=16,slow=12,SNR=54						
BMKR	Bomnak	14.54	312	*e*P	P	16 29 26.8	-0.7
BMKR				AMB	AMB	16 29 29.9	
	15nm,0.2s						
KROS	Kirovskiy	15.41	309	*e*P	P	16 29 37.0	0.0
KROS				AMB	AMB	16 29 39.8	
	9.0nm,0.4s						
SEY	Seymchan	16.81	8	P	P	16 29 51.1	-1.0
	0.2nm,0.3s,baz=202,slow=12,SNR=9.9						
KSRS	Korea Array	17.14	246	P	Pn	16 29 58.9	-0.3
	0.8nm,0.3s,baz=53,slow=10.0,SNR=27						
JNU	Nakatsue	18.43	230	P	P	16 30 13.2	+3.3
	0.4nm,0.3s,baz=94,slow=6.0,SNR=4.0						
SONM	Songino Array	27.88	288	P	P	16 31 37.6	-0.6
	0.6nm,0.4s,baz=93,slow=7.8,SNR=6.9						
SONM				ScP	ScP	16 37 58.8	+3.3
	0.5nm,0.9s,baz=105,slow=2.0,SNR=6.3						
ILAR	Eielson Array	39.18	38	P	P	16 33 14.9	+0.4
	2.0nm,0.7s,baz=279,slow=9.7,SNR=30						
ILAR				PcP	PcP	16 35 17.0	+0.3
	0.1nm,0.4s,baz=270,slow=2.7,SNR=1.4						
ZALV	Zalesovo Beam	39.74	305	P	P	16 33 17.9	-1.3
	0.7nm,0.3s,baz=70,slow=9.2,SNR=4.3						
ZALV				PcP	PcP	16 35 20.4	+1.7
	0.4nm,0.5s,baz=105,slow=3.4,SNR=2.5						
MKAR	Makanchi Array	43.73	295	P	P	16 33 51.0	-0.3
	1.9nm,0.6s,baz=68,slow=6.4,SNR=34						
MKAR				PcP	PcP	16 35 33.4	+1.4
	0.3nm,0.7s,baz=73,slow=2.0,SNR=2.9						
MKAR				ScP	ScP	16 38 55.7	+2.4
	0.3nm,0.5s,baz=65,slow=3.6,SNR=7.9						
CMAR	Chiang Mai Arr	48.64	252	P	P	16 34 32.1	+2.4
	0.7nm,0.9s,baz=34,slow=6.5,SNR=5.9						
YKA	Yellowknife Ar	53.44	35	P	P	16 35 05.0	+0.6
	1.1nm,0.6s,baz=306,slow=6.5,SNR=22						
FINES	FINESS Array B	62.70	333	P	P	16 36 06.8	-1.4
	1.4nm,0.6s,baz=32,slow=8.8,SNR=11						
GEYT	Alibeck	63.50	298	P	P	16 36 14.0	+0.1
	1.3nm,0.4s,baz=101,slow=2.9,SNR=2.6						
NVAR	Mina Array Bea	65.91	59	P	P	16 36 32.0	+2.4
	1.4nm,0.7s,baz=288,slow=6.9,SNR=13						
WRA	Warramunga Arr	67.10	194	P	P	16 36 39.9	+3.0
	1.2nm,0.7s,baz=10,slow=6.5,SNR=5.2						
NB2	NORSAR Subarra	67.28	339	P	P	16 36 36.4	-1.2
	comp=Z,0.2nm,0.3s,baz=29,slow=6.5						
NOA	NORSAR Array B	67.28	339	P	P	16 36 36.5	-1.2
	comp=Z,1.0nm,0.8s,baz=31,slow=6.6,SNR=6.2						
PDAR	Pinedale Array	67.96	51	P	P	16 36 44.0	+1.6
	comp=Z,0.9nm,0.6s,baz=276,slow=2.2,SNR=10						
ASAR	Alice Springs	70.82	193	P	P	16 37 03.8	+4.2
	comp=Z,0.6nm,0.5s,baz=9.4,slow=6.2,SNR=27						
GERES	GERESS Array B	77.04	331	P	P	16 37 33.5	-1.7
	comp=Z,0.8nm,0.8s,baz=15,slow=4.1,SNR=3.5						

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*IDC **21** 16:38:37.8±1.5, 5°.82S×80°.57W, h0^{km}, mb3.9/5, mb1 4.2/8, mb1mx3.8/44, mbtmp4.0/8, ML3.9/3, MS3.2/7, Ms1 3.3/7, ms1mx3.0/33, Error ellipse: s-maj=49.3km s-min=17.4km az=48.0*

ISC 21 16:38:43.0±1.1**, 5°.8S**±0°.1×**80°.5W**±0°.2**, h35^{km}, n19, σ1^s.05**/10**, mb3.9**/5**, MS3.1**/4**, Near coast of northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATAH	Atahualpa	2.50	122	Pn	Pn	16 39 20.4	-1.2
	27nm,0.3s,baz=289,slow=8.6,SNR=62						
ATAH				Sn	Sn	16 39 52.7	+1.5
	27nm,0.3s,baz=302,slow=16,SNR=4.7						
NNA	Nana	7.14	149	Pn	Pn	16 40 24.5	-0.6
	3.5nm,0.3s,baz=317,slow=12,SNR=6.8						
NNA				Sn	Sn	16 41 46.2	+1.3
	2.0nm,0.3s,baz=241,slow=19,SNR=2.1						
LPAZ	La Paz	16.01	132	Pn	Pn	16 42 25.1	-1.2
	0.2nm,0.3s,baz=321,slow=10,SNR=13						
LPAZ				LR	LR	16 49 10.7	
	comp=Z,73nm,18.8s,baz=313,slow=40						
JTS	Las Juntas de	16.60	345	LR	LR	16 47 56.8	
	comp=Z,69nm,19.6s,baz=217,slow=34						
SDV	Santo Domingo	17.64	34	LR	LR	16 50 57.3	
	comp=Z,126nm,18.5s,baz=234,slow=42						
LVC	Limon Verde	20.12	147	LR	LR	16 50 39.5	
	comp=Z,65nm,21.1s,baz=270,slow=36						
PTGA	Pitinga	21.15	77	P	P	16 43 25.2	-0.1
	3.2nm,0.4s,baz=252,slow=12,SNR=9.2						
PTGA				LR	LR	16 52 37.4	
	comp=Z,106nm,21.8s,baz=216,slow=40						
CMIG	Matias Romero	26.82	328	LR	LR	16 52 37.3	
	comp=Z,59nm,21.3s,baz=164,slow=31						
H03N2	Juan Fernandez	27.52	177	T	T	17 12 06.4	
	baz=356,slow=76						
H03N1	Juan Fernandez	27.52	177	T	T	17 12 07.4	
	baz=356,slow=76						
H03N3	Juan Fernandez	27.54	177	T	T	17 12 06.2	
	baz=356,slow=76						
SJG	San Juan	27.70	31	LR	LR	16 57 20.5	
	comp=Z,54nm,21.1s,baz=114,slow=40						
PDAR	Pinedale Array	55.07	334	P	P	16 48 11.9	+0.1
	0.5nm,0.8s,baz=144,slow=6.7,SNR=5.0						
ULM	Lac du Bonnet	57.40	348	P	P	16 48 28.2	+0.2
	2.2nm,0.7s,baz=169,slow=7.9,SNR=7.4						
YKA	Yellowknife Ar	72.93	344	P	P	16 50 08.2	-0.2
	0.5nm,0.7s,baz=138,slow=5.5,SNR=8.2						
ESDC	Sonseca Array	83.45	49	P	P	16 51 08.0	+0.7
	1.0nm,0.9s,baz=271,slow=6.0,SNR=3.0						
H11S2	WAKE ISLAND Hyl	13.38	288	T	T	19 00 13.3	
	baz=90,slow=75						
H11S1	WAKE ISLAND Hyl	13.39	288	T	T	19 00 12.0	
	baz=90,slow=75						
H11S3	WAKE ISLAND Hyl	13.40	288	T	T	19 00 14.6	
	baz=90,slow=75						

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*IDC **21** 16:48:38.3±2.1, 6°.66S×130°.08E, h122^{km}±23^{km}, mb3.7/8, mb1 3.8/13, mb1mx3.7/31, mbtmp4.1/13, Error ellipse: s-maj=28.2km s-min=18.3km az=104.0*

*NEIC **21** 16:48:39.4±2.8, 6°.51S±0°.07×130°.02E±0°.10, h137^{km}±5^{km}, mb4.2/10, Error ellipse: s-maj=14.5km s-min=9.4km az=72.0*

ISC 21 16:48:39.2±0.5**, 6°.63S**±0°.05×**130°.06E**±0°.07**, h146^{km}, n35, σ2^s.75**/38**, mb4.0**/12**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	Saumlaki	1.82	137		Pn	16 49 13.3	+1.3
FAKI	Fak Fak	4.29	31		Pn	16 49 42.0	-1.1
SIJI	Sorong	5.85	12	P	Pn	16 50 02.9	-1.0
	4.5nm,0.3s,baz=35,slow=4.5,SNR=61						
SIJI				S	Sn	16 51 03.3	-6.8
	8.6nm,0.3s,baz=257,slow=23,SNR=15						
SOEI	Soe	6.52	241	Pn	Pn	16 50 13.4	+0.5
BATI	Baumata	7.25	240	P	Pn	16 50 23.4	+0.7
	13nm,0.3s,baz=126,slow=2.6,SNR=20						
BATI				S	Sn	16 51 36.9	-6.9
	7.1nm,0.3s,baz=253,slow=19,SNR=1.7						
FITZ	Fitzroy Crossi	12.18	200	P	Pn	16 51 25.9	-2.1
	2.6nm,0.3s,baz=32,slow=9.6,SNR=95						
FITZ				S	Sn	16 53 31.8	-11
	3.8nm,0.3s,baz=103,slow=15,SNR=7.3						
WB0	Warramunga Arr	13.72	163	Pn	Pn	16 51 48.1	+0.4
WRAB	Tennant Creek	13.86	163	Pn	Pn	16 51 49.7	+0.1
WRA	Warramunga Arr	13.87	163	P	Pn	16 51 48.0	-1.7
	1.5nm,0.3s,baz=328,slow=14,SNR=48						
WRA				S	Sn	16 54 14.6	-8.7
	3.7nm,0.3s,baz=330,slow=21,SNR=9.3						
WB2	Warramunga Arr	13.87	163	Pn	Pn	16 51 49.7	0.0
WR0	Warramunga Arr	13.94	162	Pn	Pn	16 51 51.1	+0.6
COEN	Coen	14.81	120		P	16 52 04.3	+0.6
JAGI	Jajag, Banyuwa	15.87	262	Pn	Pn	16 52 14.2	-0.5
PMG	Port Moresby	17.16	100	S	S	16 55 35.8	-5.3
	0.2nm,0.3s,baz=274,slow=2.5,SNR=1.8						
AS31	Alice Springs	17.33	168	P	Pn	16 52 34.6	+2.3
ASAR	Alice Springs	17.33	168	P	Pn	16 52 34.0	+1.7
	0.6nm,0.3s,baz=337,slow=8.9,SNR=37						
ASAR				S	S	16 55 36.9	-7.9
	0.7nm,0.3s,baz=352,slow=29,SNR=6.9						
ASAR	Alice Springs	17.33	168	P	Pn	16 52 34.5	+2.2
PSA00	Pilbara Seismi	17.84	213	P	P	16 52 38.2	+1.2
PSA00				IAmb	IAmb	16 52 40.1	
	comp=Z,11nm,0.8s						
TPUB	Ta-pu	31.15	343	P	P	16 54 42.5	-1.8
CMAR	Chiang Mai Arr	39.54	310	P	P	16 55 57.2	+1.1
	comp=Z,0.9nm,0.6s,baz=133,slow=7.0,SNR=12						
MJAR	Matsushiro Arr	43.62	10	P	P	16 56 29.8	+0.7
	comp=Z,2.1nm,0.7s,baz=185,slow=9.3,SNR=9.4						
KSRS	Korea Array	43.90	358	P	P	16 56 33.7	+2.4
	comp=Z,1.1nm,0.8s,baz=175,slow=9.2,SNR=4.9						
USRK	Ussuriysk Ar.	50.63	2	P	P	16 57 25.3	+2.1
	comp=Z,1.1nm,0.5s,baz=178,slow=6.6,SNR=6.7						
USRK	Ussuriysk Ar.	50.63	2	P	P	16 57 24.0	+0.8
SONM	Songino Array	58.12	341	P	P	16 58 19.6	+2.2
	comp=Z,0.3nm,0.4s,baz=163,slow=8.0,SNR=6.5						
SONM	Songino Array	58.12	341	P	P	16 58 17.7	+0.3
PETK	Petropavlovsk-	63.96	18	P	P	16 58 58.8	+2.2
	comp=Z,2.7nm,0.9s,baz=178,slow=5.3,SNR=4.4						
MK31	Makanchi Array	67.95	327	P	P	16 59 24.6	+2.3
MK31				IAmb	IAmb	16 59 25.5	
	comp=Z,2.9nm,0.6s						
MKAR	Makanchi Array	67.95	327	P	P	16 59 24.8	+2.4
	comp=Z,4.1nm,0.5s,baz=114,slow=8.6,SNR=108						
MAKZ	Makanchi	68.13	327	P	P	16 59 25.7	+2.3
MAKZ				IAmb	IAmb	16 59 26.5	
	comp=Z,3.8nm,0.6s						
ZAA0	Zalesovo Array	71.28	334	P	P	16 59 43.6	+1.1
ZALV	Zalesovo Beam	71.28	334	P	P	16 59 43.5	+1.0
	comp=Z,1.0nm,0.3s,baz=53,slow=27,SNR=5.5						
KURK	Kurchatov	72.24	329	P	P	16 59 49.4	+1.2
KURK				IAmb	IAmb	16 59 50.8	
	comp=Z,2.1nm,0.8s						
VNDA	Vanda	72.80	173	P	P	16 59 52.0	+0.7
VNDA				IAmb	IAmb	17 00 10.0	
	comp=Z,5.8nm,1.1s						
QSPA	South Pole Qui	83.34	180	P	P	17 00 52.4	+2.7

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*IDC **21** 17:12:58.9±2.8, 25°.53N×125°.15E, h0^{km}, mb3.3/4, mb1 3.5/4, mb1mx3.3/39, mbtmp3.3/4, MS3.0/1, Ms1 3.0/1, ms1mx2.4/22, Error ellipse: s-maj=193.2km s-min=24.7km az=65.0*

*JMA **21** 17:12:58.2±0.3, 25°.98N×125°.67E, h18^{km}±4^{km}, M3.1*

ISC 21 17:12:57.7±1.9**, 25°.83N**±0°.08×**125°.76E**±0°.07**, h2^{km}**±13^{km}**, n21, σ0^s.67**/27**, mb3.2**/4**, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKM	Ikemajima	1.02	207	P	Pn	17 13 18.8	-0.2
JIKM				S	Sn	17 13 33.2	-0.6
JKE	Kume jima 2	1.05	62	P	Pg	17 13 17.7	-0.1
JKE				S	Sg	17 13 31.3	-0.1
JOGS	Gusukube	1.11	197	P	Pn	17 13 20.6	+0.2
JOGS				*e*S	Sn	17 13 36.1	-0.2
JIRB	Irabujima	1.13	208	P	Pn	17 13 20.2	-0.4
JIRB				*e*S	Sn	17 13 36.2	-0.5
JMJ2	Miyako jima3	1.16	200	P	Pn	17 13 21.1	+0.2
JMJ2				*e*S	Sn	17 13 38.0	+0.7
JTJ	Tarama	1.52	219	P	Pn	17 13 26.0	0.0
JAGN	Aguni-jima	1.53	60	P	Pn	17 13 25.3	-0.8
JAGN				*e*S	Sn	17 13 45.0	-1.6
JISG	Ishigakijimahi	1.81	227	P	Pn	17 13 29.8	-0.1
JJT3	Tamagusuku3	1.85	80	P	Pn	17 13 31.4	+0.9
JJT3				*e*S	Sb	17 13 55.4	-0.5
JIJ	Ishigaki jima	2.07	225	P	Pn	17 13 33.3	-0.2
JNTH	Nagotoyohara	2.15	71	P	Pn	17 13 35.8	+1.3
JKRS	Kuro-shima	2.25	225	P	Pn	17 13 35.9	0.0
JIH	Iheya	2.31	58	P	Pn	17 13 37.7	+0.8
IRIF	Iriomote-Funau	2.37	231	P	Pn	17 13 37.9	+0.3
JOW	Kunigami	2.47	66	P	Pn	17 13 39.5	+0.5
JYRO	Yoronjima	2.69	63	P	Pn	17 13 41.8	-0.2
SONM	Songino Array	26.74	330	P	P	17 18 40.0	+1.3
	0.4nm,0.8s,baz=132,slow=9.8,SNR=5.4						
PETK	Petropavlovsk-	36.21	33	LR	LR	17 34 32.6	
	comp=Z,24nm,20.7s,baz=354,slow=35						
MKAR	Makanchi Array	40.16	313	P	P	17 20 35.1	-0.1
	0.3nm,0.6s,baz=102,slow=9.7,SNR=3.4						
WRA	Warramunga Arr	46.26	169	P	P	17 21 24.2	-0.5
	0.5nm,0.9s,baz=349,slow=9.1,SNR=2.7						
ASAR	Alice Springs	49.84	170	P	P	17 21 52.7	+0.3
	0.2nm,0.8s,baz=354,slow=6.2,SNR=1.8						

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*AEIC **21** 17:19:14±2.2, 56°.69N±0°.05×169°.01W±0°.10, h24^{km}±2^{km}, Error ellipse: s-maj=9.4km s-min=4.0km az=48.0*

*IDC **21** 17:19:15.8±2.3, 56°.73N×169°.24W, h0^{km}, mb3.6/6, mb1 3.8/9, mb1mx3.5/58, mbtmp3.7/9, ML3.2/3, MS3.3/1, Ms1 3.3/1, ms1mx2.5/34, Error ellipse: s-maj=71.2km s-min=19.5km az=173.0*

*NEIC **21** 17:19:16.2±1.9, 56°.67N±0°.05×169°.16W±0°.09, h13^{km}±1^{km}, mb3.8/2, ML3.6/16(AEIC), Error ellipse: s-maj=9.6km s-min=4.4km az=221.0*

ISC 21 17:19:16.3±0.6**, 56°.68N**±0°.06×**169°.11W**±0°.06**, h10^{km}, n38, σ1^s.32**/42**, mb3.6**/5**, Pribilof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPIA	Saint Paul Isl	0.80	309		Pg	17 19 31.7	+0.1
SPIA					Sb	17 19 44.6	+1.6
AKGG	Akutan Green G	3.06	143		Pn	17 20 02.3	-2.3
AKGG					Sn	17 20 40.5	-0.7
MSW	Makushin Switc	3.08	153		Pn	17 20 03.7	-1.2
MSW					Sn	17 20 42.4	+0.7
AKRB	Akutan Reef Bi	3.09	145		Pn	17 20 03.2	-1.9
MNAT	Makushin Natee	3.13	153		Pn	17 20 04.7	-0.9
MNAT					Sn	17 20 44.3	+1.3
MAPS	Pakushin South	3.13	156		Pn	17 20 04.6	-1.1
MGOD	Makushin Gods	3.16	155		Pn	17 20 05.0	-1.1
AKUT	Akutan	3.18	142		Pn	17 20 05.9	-0.4
UNV	Unalaska Valle	3.21	151		Pn	17 20 06.1	-0.5
OKSO	Okmok South	3.37	170		Pn	17 20 09.0	0.0
FALS	False Pass	3.70	117	Pn	Pn	17 20 12.4	-1.0
NIKH	Nikolski High	3.72	178		Pn	17 20 14.0	+0.3
SDPT	Sand Point	5.03	102	Pn	Pn	17 20 31.6	0.0
SDPT					Pb	17 20 31.9	-12
ATKA	Atka Island	5.38	216		Pn	17 20 35.7	-0.8
CHGN	Chignik	5.94	89	Pn	Pn	17 20 43.8	-0.3
ADK	Adak	6.53	226	Pn	Pn	17 20 49.8	-2.6
GAMB	Gambell	7.24	351	Pn	Pn	17 21 02.0	+0.1
ANM	Nome	8.12	12	Pn	Pn	17 21 12.2	-1.9
AMKA	Amchitka	8.64	237	Pn	Pn	17 21 22.6	+1.5
OHAK	Old Harbor	8.67	80	Pn	Pn	17 21 24.5	+2.9
KDAK	Kodiak Island	9.04	76	Pn	Pn	17 21 29.5	+2.9
	0.3nm,0.3s,baz=326,slow=12,SNR=2.1						
TTA	Tatalina	9.09	41	Pn	Pn	17 21 28.4	+0.9
SKT	Skwentna	10.42	52	Pn	Pn	17 21 45.3	-0.2
PPLA	Purkeypile	10.54	47	Pn	Pn	17 21 46.9	-0.4
BPAW	Bear Paw Mtn.	11.61	43	Pn	Pn	17 22 01.3	-0.6
ILAR	Eielson Array	13.49	44	Pn	Pn	17 22 29.4	+1.8
	0.0nm,0.3s,baz=234,slow=12,SNR=3.2						
TOLK	Toolik Lake Re	14.88	29	P	P	17 22 50.9	-1.4
PETK	Petropavlovsk-	19.30	273	P	P	17 23 41.6	+0.5
	0.1nm,0.3s,baz=72,slow=9.5,SNR=3.6						
INK	Inuvik	19.78	40	P	Pn	17 23 47.3	-0.4
	0.1nm,0.3s,baz=252,slow=5.5,SNR=4.5						
INK				LR	LR	17 32 26.1	
	comp=Z,82nm,18.1s,baz=7.5,slow=40						
INK	Inuvik	19.78	40	P	Pn	17 23 47.0	-0.7
INK				IAmb	IAmb	17 23 53.8	
	comp=Z,5.7nm,1.1s						
SEY	Seymchan	20.10	304	P	P	17 23 50.9	+1.2
	comp=Z,2.3nm,0.9s,baz=99,slow=9.9,SNR=6.7						
YKA	Yellowknife Ar	27.46	55	P	P	17 25 04.2	+2.2
	comp=Z,1.3nm,1.0s,baz=287,slow=8.3,SNR=3.5						
SONM	Songino Array	49.31	298	P	P	17 28 06.4	+1.1
	comp=Z,0.2nm,0.6s,baz=58,slow=6.9,SNR=3.5						
SONM	Songino Array	49.31	298	P	P	17 28 04.4	-0.8
SONM				IAmb	IAmb	17 28 27.6	
	comp=Z,1.7nm,1.4s						
MKAR	Makanchi Array	60.99	312	P	P	17 29 30.4	+1.0
	comp=Z,0.4nm,1.0s,baz=28,slow=6.5,SNR=2.4						
AKASG	Malin Array Be	71.91	348	P	P	17 30 38.1	-1.0
	comp=Z,0.3nm,0.4s,baz=15,slow=6.0,SNR=3.4						
CMAR	Chiang Mai Arr	75.84	282	P	P	17 31 02.8	+0.2
	comp=Z,0.4nm,0.7s,baz=31,slow=5.5,SNR=4.2						
CMAR	Chiang Mai Arr	75.84	282	P	P	17 31 02.3	-0.3

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*GCG **21** 17:24:15.6±0.6, 13°.89N×93°.59W, h28^{km}±999^{km}, MD4.4*

*MEX **21** 17:24:16.0±0.8, 15°.04N×93°.59W, h98^{km}±18^{km}, MD4.4*

*NEIC **21** 17:24:16.2±2.2, 14°.90N±0°.07×93°.75W±0°.07, h41^{km}±9^{km}, Error ellipse: s-maj=9.8km s-min=9.0km az=199.0*

*IDC **21** 17:24:26.2±18.0, 15°.39N×93°.22W, h109^{km}±87^{km}, mb3.1/3, mb1 3.5/5, mb1mx3.2/35, mbtmp3.6/5, ML3.9/2, MS3.0/2, Ms1 3.0/2, ms1mx2.6/13, Error ellipse: s-maj=236.0km s-min=61.5km az=5.0*

ISC 21 17:24:12.6±1.1**, 14°.82N**±0°.07×**93°.73W**±0°.04**, h89^{km}**±13^{km}**, n30, σ2^s.80**/34**, mb3.6**/3**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		1.01	29	*e*P	Pn	17 24 32.1	-0.3
PCIG				*e*S	Sn	17 24 45.2	-2.0
PCIG		1.01	29		Pn	17 24 32.1	-0.3
PCIG					Sn	17 24 45.2	-2.0
THIG		1.42	86	*i* P	Pn	17 24 38.3	+1.0
THIG				*e*S	Sn	17 24 55.1	-0.8
RTAL	Retalhuleu	1.99	98		Pn	17 24 46.0	+1.3
TGIG		2.04	17	*e*P	Pn	17 24 48.3	+2.9
TGIG				*i* S	Sn	17 25 10.0	-0.3
TGIG		2.04	17		Pn	17 24 48.3	+2.9
CCIG	Comitan	2.12	46	*e*P	Pn	17 24 50.5	+4.0
CCIG				*i* S	Sn	17 25 13.8	+1.5
CCIG	Comitan	2.12	46		Pn	17 24 50.5	+4.0
HUEH	Huehuetenango	2.21	77		Pn	17 24 50.5	+2.8
HUIG	Huatulco	2.48	293	*e*P	Pn	17 24 51.1	-0.1
HUIG				*i* S	Sn	17 25 20.2	-0.6
CMIG	Matias Romero	2.52	334	S	Sn	17 25 21.6	0.0
	baz=77,slow=19						
CMIG				LR	LR	17 26 14.5	
	comp=Z,112nm,18.6s,baz=150,slow=46						
CMIG	Matias Romero	2.52	334	*e*P	Pn	17 24 53.0	+1.3
CMIG				*e*S	Sn	17 25 21.2	-0.5
CMIG	Matias Romero	2.52	334		Pn	17 24 53.0	+1.3
FUG	Fuego 3	2.82	97	*e*P	Pn	17 24 58.2	+2.4
FUG				*e*S	Sn	17 25 30.4	+1.2
PCG	Pacaya	3.05	98	*e*P	Pn	17 25 01.3	+2.3
PCG				*e*S	Sn	17 25 37.2	+2.3
NBG	Las Nubes	3.28	94	*e*P	Pn	17 25 05.9	+3.7
MRL	Marmol	3.92	86	*e*P	Pn	17 25 15.8	+5.1
MTO3	Montecristo	4.25	95		Pn	17 25 18.7	+3.5
ESQI	Esquipulas	4.25	93	Pn	Pn	17 25 16.4	+1.2
PETF	Flores	4.26	60		Pn	17 25 19.5	+4.2
TLIG	Tlapa	5.39	301	Pn	Pn	17 25 34.7	+4.0
TEIG	Tepich	7.49	43	P	Pn	17 26 02.4	+3.3
	5.3nm,0.3s,baz=242,slow=6.4,SNR=3.9						
TEIG				S	Sn	17 27 15.8	-6.6
	4.6nm,0.3s,baz=153,slow=24,SNR=1.6						
TEIG	Tepich	7.49	43	Pn	Pn	17 26 01.6	+2.6
MOIG	Morelia	8.61	305	Pn	Pn	17 26 17.9	+3.2
ACON	Acoyapa	8.79	108		Pn	17 26 23.5	+6.5
FSCY	Frank Sound, G	12.80	68	Pn	P	17 27 15.5	-3.2
TXAR	Lajitas Array	17.12	329	P	P	17 28 16.5	+10
	0.1nm,0.3s,baz=145,slow=14,SNR=3.7						
NVAR	Mina Array Bea	31.99	322	P	P	17 30 40.8	+10
	0.4nm,0.6s,baz=138,slow=9.5,SNR=4.0						
NVAR				LR	LR	17 45 46.3	
	comp=Z,53nm,18.2s,baz=195,slow=40						
YKA	Yellowknife Ar	49.86	348	P	P	17 33 04.6	+8.1
	0.4nm,0.7s,baz=147,slow=7.8,SNR=5.5						
ILAR	Eielson Array	61.44	337	P	P	17 34 28.7	+9.4
	0.5nm,0.9s,baz=151,slow=4.1,SNR=3.5						

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*NEIC **21** 17:38:19.0±1.5, 16°.36S±0°.08×168°.6E±0°.1, h26^{km}±9^{km}, mb4.6/13, Error ellipse: s-maj=17.5km s-min=8.5km az=60.0*

*NOU **21** 17:38:19.0, 16°.45S×168°.31E, h0^{km}, MLv5.0, Vanuatu Islands*

*IDC **21** 17:38:19.8±14.0, 16°.42S×168°.08E, h0^{km}, mb4.1/3, mb1 4.4/4, mb1mx3.8/24, mbtmp4.2/4, ML4.6/1, MS3.1/2, Ms1 3.1/2, ms1mx2.7/24, Error ellipse: s-maj=238.6km s-min=42.9km az=75.0*

ISC 21 17:38:20.0±0.8**, 16°.36S**±0°.06×**168°.63E**±0°.09**, h35^{km}, n30, σ1^s.40**/32**, mb4.4**/9**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	Devils Point	1.42	197	P	Pn	17 38 41.9	-1.5
SANVU	Saraoutou	1.64	303	Pn	Pn	17 38 45.5	-0.8
SANVU				Sn	Sn	17 39 04.9	-1.3
SANVU	Saraoutou	1.64	303	P	Pn	17 38 45.4	-0.9
KOUNC	Koumac, New Ca	5.86	224	P	Pn	17 39 43.4	-1.0
YATNC	Mamie plateau,	5.90	196	P	Pn	17 39 45.3	+0.3
DZM	Mont Dzumac	6.05	200	Pn	Pn	17 39 47.4	+0.3
	15nm,0.3s,baz=291,slow=4.5,SNR=78						
DZM				Sn	Sn	17 40 54.9	-0.2
	1.9nm,0.3s,baz=314,slow=22,SNR=7.6						
DZM				LR	LR	17 41 36.1	
	comp=Z,157nm,18.9s,baz=76,slow=34						
DZM	Mont Dzumac	6.05	200	*e*P	Pn	17 39 47.6	+0.6
	76nm,0.8s						
DZM	Mont Dzumac	6.05	200		Pn	17 39 46.7	-0.3
DZM				Sn	Sn	17 40 52.2	-2.8
DZM	Mont Dzumac	6.05	200	P	Pn	17 39 47.3	+0.3
OUENC	Ouen Island, N	6.26	195	P	Pn	17 39 50.4	+0.5
ONTNC	Ouen Toro	6.26	199	P	Pn	17 39 51.2	+1.3
HNR	Honiara	10.90	308	LR	LR	17 44 21.9	
	comp=Z,120nm,19.0s,baz=163,slow=34						
FUNA	Funafuti	12.92	54	Pn	Pn	17 41 21.3	0.0
LTZ	Lake Taylor	26.52	174	P	P	17 43 54.2	-0.1
LTZ				IAmb	IAmb	17 44 05.9	
	comp=Z,35nm,1.4s						
ODZ	Otahua Downs	28.65	177	P	P	17 44 13.9	+0.7
ODZ				IAmb	IAmb	17 44 30.8	
	comp=Z,11nm,1.3s						
STKA	Stephens Creek	29.00	233	P	P	17 44 17.8	+1.2
	comp=Z,2.5nm,0.9s,baz=71,slow=10,SNR=4.7						
STKA	Stephens Creek	29.00	233	P	P	17 44 16.2	-0.4
TOO	Toolangi	29.38	220	P	P	17 44 24.1	+4.2
TOO				IAmb	IAmb	17 44 37.1	
	comp=Z,11nm,1.2s						
WB0	Warramunga Arr	32.69	259	P	P	17 44 49.6	+0.3
WB0				IAmb	IAmb	17 45 01.5	
	comp=Z,17nm,1.6s						
WB2	Warramunga Arr	32.73	258	P	P	17 44 49.7	+0.1
WB2				IAmb	IAmb	17 44 50.8	

	comp=Z,13nm,1.5s						
WRA	Warramunga Arr	32.74	258	P	P	17 44 49.5	-0.3
	comp=Z,0.7nm,0.9s,baz=88,slow=8.4,SNR=3.0						
AS31	Alice Springs	33.36	252	P	P	17 44 55.8	+0.6
ASAR	Alice Springs	33.36	252	P	P	17 44 55.6	+0.4
	comp=Z,5.5nm,0.7s,baz=78,slow=8.9,SNR=78						
ASAR	Alice Springs	33.36	252	P	P	17 44 55.1	-0.1
FAKI	Fak Fak	38.17	287	P	P	17 45 38.5	+2.0
FITZ	Fitzroy Crossi	41.03	261	P	P	17 46 02.3	+2.1
NWAO	Narrogin (SRO)	49.06	240	P	P	17 47 04.5	+0.5
NWAO	Narrogin (SRO)	49.06	240	P	P	17 47 04.1	+0.2
NWAO				IAmb	IAmb	17 47 05.2	
	comp=Z,10nm,1.0s						
VNDA	Vanda	61.28	182	P	P	17 48 28.4	-2.9
QSPA	South Pole Qui	73.68	180	P	P	17 49 48.4	-1.6
QSPA				IAmb	IAmb	17 50 00.0	
	comp=Z,5.4nm,1.3s						

NOU ***21*** *17:38:32.4, 19°.87S×178°.16W, h619^{km}, mb4.7, Fiji Islands Region*

NEIC ***21*** *17:38:33.0±1.6, 19°.8S±0°.1×178°.4W±0°.1, h595^{km}±7^{km}, mb4.4/128, Error ellipse: s-maj=17.0km s-min=13.5km az=130.0*

IDC ***21*** *17:38:33.4±2.3, 19°.74S×178°.44W, h601^{km}±27^{km}, mb3.6/16, mb1 3.9/16, mb1mx3.8/21, mbtmp4.5/16, Error ellipse: s-maj=18.0km s-min=15.0km az=139.0*

ISC 21 17:38:33.2±0.7**, 19°.82S**±0°.07×**178°.35W**±0°.06**, h605**^{km}±8^{km}**, n227,** σ1^{s}.**24**/235**, mb4.4**/84**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	3.99	301	P	P	17 40 00.7	+1.6
MSVF	Nonsavu	3.99	301	P	P	17 40 00.4	+1.3
NIUE	Niue	7.99	86	P	P	17 40 33.2	+0.7
	baz=7.9,SNR=4.2						
NIUE	Niue	7.99	86	P	P	17 40 32.8	+0.2
AFI	Afiamalu	8.61	48	P	P	17 40 37.2	-1.5
AFI				S	S	17 42 16.5	-5.0
AFI	Afiamalu	8.61	48	P	P	17 40 37.0	-1.7
DZM	Mont Dzumac	14.38	258	P	P	17 41 37.6	+1.9
	4.0nm,0.3s,baz=112,slow=22,SNR=5.2						
DZM	Mont Dzumac	14.38	258	P	P	17 41 36.9	+1.3
OUZ	Omahuta	16.91	203	P	P	17 42 01.0	+2.5
OUZ				IAmb	IAmb	17 42 01.5	
	comp=Z,14nm,0.7s						
MXZ	Matakaoa Point	17.92	189	P	P	17 42 09.2	+1.6
URZ	Urewera	18.79	191	P	P	17 42 12.9	-2.6
	comp=Z,4.6nm,0.3s,baz=338,slow=3.0,SNR=30						
URZ				S	S	17 45 09.0	-6.8
	comp=Z,0.1nm,0.3s,baz=342,slow=20,SNR=2.0						
URZ	Urewera	18.79	191	P	P	17 42 12.7	-2.9
URZ				IAmb	IAmb	17 42 15.3	
	comp=Z,16nm,0.8s						
BFZ	Birch Farm	21.30	191	P	P	17 42 36.5	-1.7
BFZ				IAmb	IAmb	17 42 45.0	
	comp=Z,25nm,1.0s						
SNZO	South Karori	22.22	194	P	P	17 42 45.0	-1.3
BHW	Baring Head	22.28	194	P	P	17 42 44.3	-2.5
QRZ	Quartz Range	22.34	198	P	P	17 42 47.5	+0.1
QRZ				IAmb	IAmb	17 42 48.3	
	comp=Z,17nm,0.8s						
PLWZ	Palliser	22.35	193	P	P	17 42 46.1	-1.5
TUWZ	Tuamarina	22.52	195	P	P	17 42 47.2	-1.7
THZ	Tophouse	23.10	197	P	P	17 42 52.7	-1.5
KHZ	Kahutara	23.55	195	P	P	17 42 56.6	-1.4
LTZ	Lake Taylor	24.22	197	P	P	17 43 02.4	-1.7
LTZ				IAmb	IAmb	17 43 06.1	
	comp=Z,15nm,0.9s						
RPZ	Rata Peaks	25.42	198	P	P	17 43 15.4	+0.7
	comp=Z,6.9nm,0.6s,baz=5.5,slow=10.0,SNR=6.5						
LBZ	Lake Benmore	26.29	199	P	P	17 43 20.5	-1.8
LBZ				IAmb	IAmb	17 43 37.6	
	comp=Z,29nm,1.5s						
WKZ	Wanaka	27.05	200	P	P	17 43 27.8	-1.2
MLZ	Mavora Lakes	27.83	201	P	P	17 43 36.2	+0.5
DCZ	Deep Cove	28.24	202	P	P	17 43 39.1	-0.1
WHZ	Wether Hill Ro	28.35	200	P	P	17 43 39.9	-0.2
ARMA	Armidale	29.07	243	P	P	17 43 47.4	+0.6
RMQ	Roma	30.90	251	P	P	17 44 03.3	+0.8
	baz=31,SNR=26						
CNB	Canberra Magne	32.34	235	P	P	17 44 15.4	+0.8
	baz=32,SNR=13						
CAN	Canberra	32.62	235	P	P	17 44 17.3	+0.4
CAN				IAmb	IAmb	17 44 18.4	
	comp=Z,12nm,0.9s						
CTAO	Charters Tower	33.23	263	P	P	17 44 22.6	+0.4
CMSA	Cobar Meteorol	34.29	243	P	P	17 44 31.3	+0.4
	baz=34,SNR=20						
PMG	Port Moresby	34.87	282	P	P	17 44 36.0	+0.1
	comp=Z,35nm,0.8s,baz=95,slow=4.5,SNR=14						
PMG	Port Moresby	34.87	282	P	P	17 44 36.3	+0.4
PMG	Port Moresby	34.87	282	P	P	17 44 36.3	+0.4
QLP	Quilpie	34.95	252	P	P	17 44 36.6	+0.2
	baz=35,SNR=34						
MTSU	Mount Surprise	35.30	266	P	P	17 44 39.7	+0.2
	baz=35,SNR=51						
TOO	Toolangi	36.03	233	P	P	17 44 45.6	+0.3
	baz=36,SNR=13						
TOO	Toolangi	36.03	233	P	P	17 44 45.5	+0.3
TAU	Tasmania Unive	36.88	224	P	P	17 44 52.6	+0.6
COEN	Coen	37.21	273	P	P	17 44 55.5	+0.4
STKA	Stephens Creek	37.79	243	P	P	17 45 00.1	+0.5
	comp=Z,11nm,0.5s,baz=99,slow=11,SNR=32						
STKA	Stephens Creek	37.79	243	P	P	17 45 00.3	+0.7
	baz=38,SNR=30						
STKA	Stephens Creek	37.79	243	P	P	17 45 00.3	+0.7
STKA				IAmb	IAmb	17 45 01.3	
	comp=Z,7.2nm,1.1s						
ARPS	Mount Arapiles	38.59	236	P	P	17 45 06.2	+0.2
	baz=39,SNR=16						
QIS	Mount Isa	39.39	261	P	P	17 45 12.1	-0.5
	baz=40,SNR=4.9						
HTT	Hallett	40.25	241	P	P	17 45 19.8	+0.4
	baz=40,SNR=30						
BBOO	Buckleboo	42.55	243	P	P	17 45 37.6	+0.1
	baz=43,SNR=91						
BBOO	Buckleboo	42.55	243	P	P	17 45 37.5	+0.1
GENI	Genyem	43.96	288	P	P	17 45 48.9	+0.3
	comp=Z,56nm,1.0s						
WR0	Warramunga Arr	44.18	261	P	P	17 45 49.4	-0.8
WR0				IAmb	IAmb	17 45 51.1	
	comp=Z,23nm,1.1s						
WB0	Warramunga Arr	44.34	262	P	P	17 45 50.6	-0.9
AS31	Alice Springs	44.35	256	P	P	17 45 51.4	-0.1
AS31				IAmb	IAmb	17 45 53.0	
	comp=Z,14nm,0.9s						
AS31				PcP	PcP	17 47 21.8	-0.3
ASAR	Alice Springs	44.35	256	P	P	17 45 51.5	-0.1
	comp=Z,40nm,0.8s,baz=86,slow=8.1,SNR=154						
ASAR				PcP	PcP	17 47 21.8	-0.3
	comp=Z,3.6nm,0.7s,baz=96,slow=4.7,SNR=6.3						
ASAR				ScP	ScP	17 50 18.7	+1.4
	comp=Z,1.2nm,0.7s,baz=100,slow=4.4,SNR=6.6						
ASAR				S	S	17 51 39.6	-3.7
	comp=Z,0.5nm,0.7s,baz=96,slow=15,SNR=5.2						
ASAR	Alice Springs	44.35	256	P	P	17 45 51.0	-0.5
ASAR					PcP	17 47 21.6	-0.4
WB2	Warramunga Arr	44.36	261	P	P	17 45 51.0	-0.6
WRAB	Tennant Creek	44.36	261	P	P	17 45 50.8	-0.9
WRAB				IAmb	IAmb	17 45 51.7	
	comp=Z,37nm,1.2s						
WRA	Warramunga Arr	44.37	261	P	P	17 45 50.6	-1.1
	comp=Z,13nm,0.5s,baz=97,slow=8.2						
SMPI	Sarmi	45.53	287	P	P	17 46 00.2	-0.4
	comp=Z,11nm,0.8s						
KIP	Kipapa	45.56	27	P	P	17 46 01.7	+1.0
KDU	Kakadu	47.60	271	P	P	17 46 15.5	-0.6
	baz=48,SNR=11						
FORT	Forrest	49.26	246	P	P	17 46 27.6	-0.6
	baz=49,SNR=22						
FORT	Forrest	49.26	246	P	P	17 46 27.4	-0.8
WRKA	Warakurna	49.33	254	P	P	17 46 28.6	-0.3
	baz=49,SNR=32						
SAUI	Saumlaki	50.09	276	P	P	17 46 32.9	-1.6
FAKI	Fak Fak	51.02	283	P	P	17 46 40.9	-0.4
FAKI				IAmb	IAmb	17 47 04.6	
	comp=Z,51nm,1.4s						
SWI	Sorong	52.75	285	P	P	17 46 53.8	+0.2
	comp=Z,52nm,0.9s						
FITZ	Fitzroy Crossi	52.79	262	P	P	17 46 53.9	+0.1
	baz=53,SNR=19						
FITZ	Fitzroy Crossi	52.79	262	P	P	17 46 53.7	-0.1
FITZ				IAmb	IAmb	17 46 55.4	
	comp=Z,27nm,1.4s						
SOEI	Soe	56.15	271	P	P	17 47 17.9	+0.4
SOEI	Soe	56.15	271	P	P	17 47 17.2	-0.3
	comp=Z,68nm,0.7s						
PSA00	Pilbara Seismi	57.50	257	P	P	17 47 25.0	-1.5
PSA00				IAmb	IAmb	17 47 25.7	
	comp=Z,16nm,0.7s						
PSA00	Pilbara Seismi	57.50	257	P	P	17 47 25.9	-0.6
PSA00				IAmb	IAmb	17 47 26.2	
	comp=Z,24nm,0.7s						
PSA00				PcP	PcP	17 48 11.3	-0.2
MEEK	Meekatharra	57.83	250	P	P	17 47 27.7	-1.0
	baz=58,SNR=17						
KLBR	Kellerberrin	58.04	245	P	P	17 47 29.5	-0.4
	baz=58,SNR=22						
NWAO	Narrogin (SRO)	58.38	243	P	P	17 47 32.0	-0.2
	baz=58,SNR=4.3						
NWAO	Narrogin (SRO)	58.38	243	P	P	17 47 32.0	-0.2
NWAO				IAmb	IAmb	17 47 35.7	
	comp=Z,18nm,1.2s						
NWAO	Narrogin (SRO)	58.38	243	P	P	17 47 32.0	-0.2
NWAO				IAmb	IAmb	17 47 35.7	
	comp=Z,25nm,1.2s						
SBA	Scott Base	58.52	184	P	P	17 47 34.9	+2.6
VNDA	Vanda	58.55	185	P	P	17 47 33.7	+1.1
	comp=Z,1.8nm,0.9s,baz=31,slow=5.9,SNR=1.7						
VNDA	Vanda	58.55	185	P	P	17 47 33.6	+1.1
BLDU	Ballidu	59.03	246	P	P	17 47 35.9	-0.7
	baz=59,SNR=28						
MUN	Mundaring	59.32	244	P	P	17 47 38.6	+0.1
	baz=59,SNR=9.0						
MORW	Morawa	59.78	247	P	P	17 47 40.9	-0.6
	baz=60,SNR=3.5						
MORW	Morawa	59.78	247	P	P	17 47 41.0	-0.6
MORW				IAmb	IAmb	17 48 08.1	
	comp=Z,32nm,1.4s						
GIRL	Giralia	62.41	254	P	P	17 47 59.6	+0.7
	baz=62,SNR=3.1						
GIRL	Giralia	62.41	254	P	P	17 47 59.4	+0.6
PLAI	Plampang	62.54	270	P	P	17 47 59.3	-0.5
	comp=Z,42nm,0.8s						
TOLI2	Tolitoli	63.14	282	P	P	17 48 03.0	-0.6
TOLI2				IAmb	IAmb	17 48 04.1	
	comp=Z,18nm,1.0s						
TOLI2				PcP	PcP	17 48 30.6	-3.9
TWSI	Taliwang, Sumb	63.41	270	P	P	17 48 04.8	-0.5
	comp=Z,16nm,0.7s						
JAGI	Jajag, Banyuwa	66.06	269	P	P	17 48 20.6	-1.4
JAGI				IAmb	IAmb	17 48 40.3	
	comp=Z,42nm,1.3s						
MYLDM	Lahad Datu	66.84	285	P	P	17 48 26.4	-0.4
MYLDM				IAmb	IAmb	17 48 46.5	
	comp=Z,16nm,1.0s						
JMM	Marumori	69.05	326	P	P	17 48 39.7	+0.1
KKM	Kota Kinabalu	69.27	285	P	P	17 48 41.9	+0.3
KKM				IAmb	IAmb	17 48 42.4	
	comp=Z,18nm,0.8s						
MJAR	Matsushiro Arr	69.47	324	P	P	17 48 41.5	-0.7
	comp=Z,3.7nm,0.6s,baz=162,slow=6.0,SNR=22						
MAJO	Matsushiro	69.47	324	P	P	17 48 42.1	-0.1
MAJO				IAmb	IAmb	17 48 42.6	
	comp=Z,6.6nm,0.8s						
MAT	Matsushiro	69.47	324	P	P	17 48 42.0	-0.2
UGM	Wanagama	69.64	269	P	P	17 48 43.4	-0.4
JWT	Wachi	70.19	321	P	P	17 48 46.9	+0.4
JWT				IAmb	IAmb	17 49 12.3	
	comp=Z,31nm,1.5s						
QSPA	South Pole Qui	70.24	180	P	P	17 48 47.4	+0.9
QSPA				IAmb	IAmb	17 48 48.1	
	comp=Z,6.3nm,0.9s						
JSD	Sado	70.52	325	P	P	17 48 49.1	+0.8
JSD				IAmb	IAmb	17 48 55.7	
	comp=Z,17nm,1.4s						
JSU	Suzuyama	70.81	315	P	P	17 48 49.1	-1.2
ERM	Erimo	71.07	331	P	P	17 48 52.1	+0.6
ERM				IAmb	IAmb	17 49 10.4	
	comp=Z,29nm,1.2s						
JTM	Tenmabayashi	71.12	329	P	P	17 48 52.3	+0.5
JHS	Saijyo	71.37	320	P	P	17 48 54.1	+0.7
JHS				IAmb	IAmb	17 49 10.7	
	comp=Z,31nm,1.2s						
SBUM	Sibu	71.56	280	P	P	17 48 55.1	+0.1
CISI	Cisompet, Garu	72.30	268	P	P	17 48 58.2	-1.2
CISI				IAmb	IAmb	17 48 58.6	
	comp=Z,17nm,0.6s						
JEW	Eniwo	72.51	330	P	P	17 49 01.0	+1.3
LEM	Lembang	72.72	269	P	P	17 49 01.3	-0.6
	comp=Z,23nm,1.0s						
YULB	Yu-li	72.85	303	P	P	17 49 00.5	-1.7
YULB				IAmb	IAmb	17 49 03.1	
	comp=Z,15nm,1.1s						
KSM	Kuching	72.99	278	P	P	17 49 03.7	+0.4
KSM				IAmb	IAmb	17 49 04.1	
	comp=Z,9.1nm,0.6s						
NACB	Ninganchiao	73.02	304	P	P	17 49 02.5	-0.7
NACB				IAmb	IAmb	17 49 03.1	
	comp=Z,15nm,0.8s						
SSLB	Suanglung	73.32	304	P	P	17 49 03.8	-1.1
SSLB				IAmb	IAmb	17 49 04.2	
	comp=Z,36nm,1.3s						
TPUB	Ta-pu	73.33	303	P	P	17 49 03.6	-1.3
UNV	Unalaska Valle	74.07	7	P	P	17 49 07.8	-0.6
PETK	Petropavlovsk-	75.53	345	P	P	17 49 16.6	0.0
	comp=Z,3.4nm,0.9s,baz=130,slow=8.3,SNR=5.9						
PETK	Petropavlovsk-	75.53	345	P	P	17 49 17.2	+0.6
KASI	Kota Agung	76.07	269	P	P	17 49 19.2	-1.3
	comp=Z,34nm,0.8s						
KSRS	Korea Array	76.16	319	P	P	17 49 20.4	0.0
	comp=Z,0.9nm,0.6s,baz=129,slow=6.5,SNR=5.3						
KSAR	Wonju Array Be	76.18	319	P	P	17 49 18.0	-2.5
PMPB	Monarch Peak	77.86	44	P	P	17 49 31.1	+1.3
PMPB				IAmb	IAmb	17 49 36.8	
	comp=Z,26nm,1.6s						
USRK	Ussuriysk Ar.	78.22	326	P	P	17 49 32.9	+1.5
	comp=Z,3.4nm,0.8s,baz=97,slow=7.8,SNR=5.7						
ESJX	Sierra Juarez	78.89	50	P	P	17 49 36.5	+1.0
ISA	Isabella, Lake	79.10	46	P	P	17 49 37.0	+0.6
CMB	Columbia Colle	79.19	43	P	P	17 49 37.6	+0.8
AFDM	Forest Hills D	79.36	42	P	P	17 49 38.3	+0.7
WDC	Whiskeytown Da	79.37	40	P	P	17 49 38.9	+1.4
WDC				IAmb	IAmb	17 49 47.7	
	comp=Z,11nm,1.4s						
PFO	Pinyon Flats O	79.37	48	P	P	17 49 37.8	-0.1
ORV	Oroville	79.39	41	P	P	17 49 38.0	+0.3
SLBS	Sierra La Lagu	79.46	60		P	17 49 39.5	+1.0
SLBS				IAmb	IAmb	17 49 41.0	
	comp=Z,10nm,1.0s						
MDPB	Devils Postpil	79.81	44	P	P	17 49 41.4	+1.1
OMMB	Old Mammoth Mi	79.85	44	P	P	17 49 41.2	+0.6
WAKR	Walker	80.07	43	P	P	17 49 42.4	+0.8
BEKR	Beckworth	80.28	41	P	P	17 49 43.6	+1.0
PNTR	Pine Nut	80.31	42	P	P	17 49 44.0	+1.2
PNTR				IAmb	IAmb	17 49 45.1	
	comp=Z,11nm,0.8s						
HUMO	Hull Mountain	80.36	38	P	P	17 49 43.6	+0.8
VCNR	Virginia City	80.39	42	P	P	17 49 43.7	+0.5
YERR	Yerington	80.47	43	P	P	17 49 44.6	+0.9
YERR				IAmb	IAmb	17 49 45.7	
	comp=Z,5.7nm,0.8s						
LHV	Little Huntoon	80.53	44	P	P	17 49 45.0	+1.4
RYN	Ryan	80.73	43	P	P	17 49 45.6	+0.7
NVAR	Mina Array Bea	80.76	44	P	P	17 49 46.1	+1.0
	comp=Z,3.2nm,0.8s,baz=224,slow=9.2,SNR=24						
PAHR	Pah Rah Range	80.80	42	P	P	17 49 46.1	+0.9
NV11	Mina Array Sit	80.86	44	P	P	17 49 46.2	+0.6
TPH	Tonopah	81.27	44	P	P	17 49 49.0	+1.2
TPH				IAmb	IAmb	17 49 49.9	
	comp=Z,22nm,0.9s						
TPNV	Topopah Spring	81.31	46	P	P	17 49 48.9	+0.9
TPNV				IAmb	IAmb	17 49 50.1	
	comp=Z,6.3nm,0.9s						
MOD	Modoc Plateau	81.51	40	P	P	17 49 49.9	+1.1
MOD				IAmb	IAmb	17 49 50.8	
	comp=Z,5.5nm,0.7s						
K05A	Summer Lake	81.65	39	P	P	17 49 51.2	+1.7
K05A				IAmb	IAmb	17 49 52.0	
	comp=Z,11nm,0.9s						
SHPR	Sheep Range	81.81	47	P	P	17 49 51.6	+1.1
W13A	Hualapai Mount	81.96	48	P	P	17 49 52.2	+0.8
H04A	Detroit Lake	82.08	37	P	P	17 49 51.8	+0.3
PINE	Pine Mountain	82.26	38	P	P	17 49 53.8	+1.2
PINE				IAmb	IAmb	17 49 55.0	
	comp=Z,7.8nm,0.8s						
PRN	Pahroc Range	82.36	46	P	P	17 49 54.6	+1.4
PRN				IAmb	IAmb	17 49 55.2	
	comp=Z,5.3nm,0.7s						
BRLK	Bradley Lake	82.41	14	P	P	17 49 53.0	+0.3
E03A	Lebam	82.49	35	P	P	17 49 54.6	+1.3
E03A				IAmb	IAmb	17 50 08.6	
	comp=Z,18nm,1.2s						
TUC	Tucson	82.83	52	P	P	17 49 56.1	+0.5
WVOR	Wild Horse Val	82.83	40	P	P	17 49 56.0	+0.6
I07A	Izee	83.26	38	P	P	17 49 58.8	+1.3
LCMT	Little Creek M	83.39	47	P	P	17 49 59.0	+0.7
319A	Douglas	83.51	54	P	P	17 50 00.6	+1.6
319A				IAmb	IAmb	17 50 02.1	
	comp=Z,14nm,1.2s						
CCUT	Cedar City	83.58	46	P	P	17 50 00.4	+1.0
KNB	Kanab	83.68	47	P	P	17 50 00.9	+1.0
U15A	North Rim	83.75	48	P	P	17 50 01.9	+1.6
U15A				IAmb	IAmb	17 50 02.8	
	comp=Z,5.5nm,0.8s						
PSUT	Pine Spring	83.76	45	P	P	17 50 01.5	+1.3
WUAZ	Wupatki	83.95	49	P	P	17 50 01.4	+0.2
SUA	Susitna One	83.97	13	P	P	17 50 00.7	+0.1
SUA				IAmb	IAmb	17 50 20.9	
	comp=Z,30nm,1.4s						
PKCU	Pink Cliffs	84.25	47	P	P	17 50 03.8	+1.0
PKCU				IAmb	IAmb	17 50 05.8	
	comp=Z,4.4nm,0.8s						
G08A	Pilot Rock	84.28	38	P	P	17 50 03.8	+1.3
MTPU	Mount Pierson	84.64	47	P	P	17 50 06.4	+1.7
GSI	Gunungsitoli	84.86	273	P	P	17 50 07.1	+1.1
GSI				IAmb	IAmb	17 50 07.6	
	comp=Z,14nm,0.7s						
MSU	Marysvale	84.88	46	P	P	17 50 08.0	+2.2
F10A	Beach Ranch, E	85.67	38	P	P	17 50 09.6	+0.4
F10A				IAmb	IAmb	17 50 10.7	
	comp=Z,6.6nm,0.8s						
HLID	Hailey	86.03	41	P	P	17 50 12.1	+1.0
HLID				IAmb	IAmb	17 50 13.3	
	comp=Z,4.2nm,0.8s						
MNTX	Cornudas Mount	86.63	55	P	P	17 50 15.0	+1.0
MNTX				IAmb	IAmb	17 50 16.9	
	comp=Z,4.0nm,1.1s						
TX31	Lajitas Ar. Si	86.97	57	P	P	17 50 16.8	+1.1
TX31				IAmb	IAmb	17 50 18.5	
	comp=Z,20nm,1.1s						
TX32	Lajitas Array	86.97	57	P	P	17 50 17.4	+1.6
TX32				IAmb	IAmb	17 50 18.5	
	comp=Z,6.9nm,1.1s						
TXAR	Lajitas Array	86.97	57	P	P	17 50 17.4	+1.6
	comp=Z,3.4nm,0.8s,baz=219,slow=6.8,SNR=36						
TXAR	Lajitas Array	86.97	57	P	P	17 50 16.9	+1.2
ANMO	Albuquerque	87.24	51	P	P	17 50 17.8	+0.8
XAN	Xi'an	87.46	307	P	P	17 50 18.8	+1.0
XAN				pP	PcP	17 50 25.5	+6.4
XAN				pmax	pmax		
	comp=Z,11nm,1.1s						
ILAR	Eielson Array	87.73	13	P	P	17 50 17.4	-0.9
	comp=Z,1.0nm,0.7s,baz=225,slow=5.7,SNR=18						
REDW	Red Top Meadow	88.16	42	P	P	17 50 21.9	+0.8
REDW				IAmb	IAmb	17 50 23.6	
	comp=Z,8.0nm,1.2s						
FLWY	Flagg Ranch	88.61	42	P	P	17 50 23.9	+0.8
FLWY				IAmb	IAmb	17 50 25.1	
	comp=Z,3.7nm,0.8s						
HHC	Hu-ho-hao-te	88.64	314	*e*P	P	17 50 21.8	-1.4
HHC				pmax	pmax		
	comp=Z,4.0nm,1.2s						
HHC				pmax	pmax		
	comp=Z,160nm,8.1s						
YHL	Hebgen Lake	88.69	41	P	P	17 50 25.3	+1.7
YHL				IAmb	IAmb	17 50 26.3	
	comp=Z,5.0nm,1.2s						
BW06	Boulder Array	88.70	43	P	P	17 50 23.9	+0.3
BW06				IAmb	IAmb	17 50 24.9	
	comp=Z,3.1nm,0.8s						
PD31	Pinedale Array	88.70	43	P	P	17 50 23.9	+0.3
PD31				IAmb	IAmb	17 50 24.9	
	comp=Z,2.8nm,0.8s						
PDAR	Pinedale Array	88.70	43	P	P	17 50 23.9	+0.3
	comp=Z,1.9nm,0.6s,baz=206,slow=2.8,SNR=22						
PDAR	Pinedale Array	88.70	43	P	P	17 50 23.7	0.0
VNA3	Neumayer Olymp	88.84	176	P	P	17 50 23.1	-0.4
LAMP	Lampang	88.99	290	P	P	17 50 27.3	+2.1
VNA2	Neumayer--Watz	89.28	177	P	P	17 50 25.5	0.0
CM36	Chiang Mai Arr	89.46	290	P	P	17 50 29.0	+1.6
CM04	Chiang Mai Arr	89.52	290	P	P	17 50 29.0	+1.3
CM09	Chiang Mai Arr	89.53	290	P	P	17 50 30.1	+2.4
CM01	Chiang Mai Arr	89.55	290	P	P	17 50 30.3	+2.5
CM05	Chiang Mai Arr	89.55	290	P	P	17 50 29.6	+1.8
CM02	Chiang Mai Arr	89.56	290	P	P	17 50 29.7	+1.8
CM31	Chiang Mai Arr	89.57	290	P	P	17 50 30.4	+2.4
CM31	Chiang Mai Arr	89.57	290	P	P	17 50 29.0	+1.1
CM31				IAmb	IAmb	17 50 30.1	
	comp=Z,5.6nm,1.1s						
CMAR	Chiang Mai Arr	89.57	290	P	P	17 50 28.9	+0.9
	comp=Z,3.2nm,0.9s,baz=118,slow=2.8,SNR=25						
CMAR	Chiang Mai Arr	89.57	290	P	P	17 50 28.7	+0.8
CM15	Chiang Mai Arr	89.59	290	P	P	17 50 29.0	+1.0
CM13	Chiang Mai Arr	89.59	290	P	P	17 50 29.0	+1.0
CMMT	Chiang Mai	89.70	290	P	P	17 50 28.6	+0.1
CM33	Chiang Mai Arr	89.70	290	P	P	17 50 29.7	+1.2
CHTO	Chiang Mai	89.70	290	P	P	17 50 29.6	+1.0
CHTO				IAmb	IAmb	17 50 30.3	
	comp=Z,5.0nm,0.8s						
LC01	Cunco	89.86	132	P	P	17 50 29.3	+0.4
LC01				IAmb	IAmb	17 50 30.4	
	comp=Z,5.5nm,0.8s						
LZH	Lanzhou	92.09	308	*e*P	P	17 50 40.6	+1.2
LZH				pP	pwP	17 52 53.8	+0.7
LZH				sP	sP	17 53 50.4	+1.8
LZH				pmax	pmax		
	comp=Z,15nm,1.0s						
BO02	Sierra Bellavi	92.44	128	P	P	17 50 42.2	+1.2
SONM	Songino Array	95.03	319	P	P	17 50 52.5	+0.1
	comp=Z,0.3nm,0.7s,baz=144,slow=7.3,SNR=2.8						
MKAR	Makanchi Array	110.49	314	PKiKP	PKiKP	17 55 56.4	-1.5
	comp=Z,0.4nm,0.6s,baz=74,slow=1.0,SNR=6.0						
ARCES	ARCESS Array B	128.20	350	PKP	PKPdf	17 56 30.4	-0.7
	comp=Z,3.6nm,0.9s,baz=19,slow=5.1,SNR=5.3						
FINES	FINESS Array B	135.03	344	PKhKP	PKPpre	17 56 38.2	
	comp=Z,1.7nm,0.9s,baz=106,slow=3.0,SNR=1.9						
FINES				PKP	PKPdf	17 56 44.7	+0.6
	comp=Z,3.3nm,1.0s,baz=105,slow=1.9,SNR=4.6						
AKASG	Malin Array Be	142.26	331	PKhKP	PKPpre	17 56 53.2	
	comp=Z,1.2nm,0.3s,baz=42,slow=4.5,SNR=11						
AKASG				SKPbc	SKPbc	17 59 39.6	+0.5
	comp=Z,0.4nm,0.4s,baz=68,slow=1.2,SNR=5.1						
MBAR	Mbarara	145.00	238		PKPbc	17 57 05.0	+0.4
BR131	Keskin Array S	146.14	313		PKPbc	17 57 06.3	-0.8
BRTR	Keskin Array B	146.14	313	PKPbc	PKPbc	17 57 06.5	-0.6
	comp=Z,1.5nm,0.5s,baz=139,slow=4.3,SNR=11						
BRTR	Keskin Array B	146.14	313		PKPbc	17 57 06.1	-1.0
BUR08	Bucovina Ar. S	146.29	331		PKPbc	17 57 07.7	+0.5
BURAR	Bucovina Array	146.31	331		PKPbc	17 57 07.9	+0.6
KOLS	Kolonicke sedl	146.56	335	*e*PKP	PKPab	17 57 10.4	-0.3
OSTC	Ostas	147.23	343	*e*PKP	PKPbc	17 57 09.9	+0.4
CLL	Collm	147.33	347	*e*PKPbc	PKPbc	17 57 10.0	+0.3
DPC	Dobruska-Polom	147.38	342	*e*PKP	PKPbc	17 57 10.2	+0.2
DPC				*e*x	x	17 57 14.4	
KHC	Kasperske Hory	149.23	345	*e*PKP	PKPbc	17 57 14.5	-0.1
GERES	GERESS Array B	149.46	344	PKPbc	PKPbc	17 57 14.7	-0.5
	comp=Z,1.3nm,0.7s,baz=27,slow=1.5,SNR=9.8						

IDC 21 17:55:08.8±3.6**, 10°.26S**×**118°.62E, h0**^{km}**, mb3.3**/1**, mb1 3.3**/3**, mb1mx3.2**/22**, mbtmp3.1**/3**, ML3.1**/2**, Error ellipse: s-maj=271.2km s-min=31.2km az=48.0, South of Sumbawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	17.96	124	P	Pn	17 59 20.3	+0.1
	0.1nm,0.3s,baz=300,slow=12,SNR=1.5						
WRA				S	Sn	18 02 30.0	-11
	0.0nm,0.3s,baz=287,slow=22,SNR=1.9						
ASAR	Alice Springs	19.76	134	P	P	17 59 40.6	0.0
	0.1nm,0.3s,baz=309,slow=12,SNR=5.0						
MKAR	Makanchi Array	65.40	333	P	P	18 05 53.3	0.0
	0.1nm,0.5s,baz=131,slow=7.0,SNR=2.4						

SOME ***21*** *17:56:58.1, 40°.17N×75°.23E, h0^{km}*

KRNET ***21*** *17:56:58.5±0.1, 39°.82N×75°.38E, mb3.5*

NNC ***21*** *17:57:01.0±1.1, 40°.17N×75°.25E, h0^{km}, mb3.8, mpv3.5,* *Error ellipse: s-maj=7.9km s-min=5.7km az=169.0*

ISC 21 17:56:58.0±1.1**,40°.10N**±0°.05×**75°.27E**±0°.03**,h10**km**,n74,** σ**2ˢ.04**/114**,30C-24D,Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARLS	**Aral** baz=39	1.90	338	⇓*i*P	Pg	17 57 35.3	+0.8
ARLS	baz=39			⇓*i*S	Sg	17 58 02.8	+3.6
OHH	**Osh** baz=90	1.94	284	⇓*i*P	Pb	17 57 34.2	+0.6
OHH	baz=90			⇓*i*S	Sg	17 58 00.1	-0.4
ARSB	**Arslanbob** baz=10.0	2.13	306	⇓*i*P	Pg	17 57 38.2	-0.6
ARSB	baz=10.0			⇓*i*S	Sg	17 58 06.8	+0.4
UCH	**Uchtor** baz=45	2.21	345	⇓*i*P	Pg	17 57 39.7	-0.6
UCH	baz=45			⇓*i*S	Sg	17 58 09.9	+1.0
UCH	**Uchtor** SNR=75	2.21	345	P	Pg	17 57 39.8	-0.6
ULHL	**Ulahol** baz=15	2.27	19	⇓*i*P	Pg	17 57 40.3	-1.3
ULHL	baz=15			⇓*i*S	Sg	17 58 10.7	-0.3
ULHL	**Ulahol** SNR=53	2.27	19	P	Pg	17 57 41.4	-0.2
AML	**Almayashu** baz=32	2.35	330	⇑*e*P	Pg	17 57 42.0	-1.2
AML	baz=32			⇑*i*S	Sg	17 58 13.6	-0.1
AML	**Almayashu** SNR=20	2.35	330	P	Pg	17 57 43.6	+0.4
BOOM	**Boomskoye usch** baz=9.0	2.45	12	⇓*i*P	Pb	17 57 42.8	+0.6
BOOM	baz=9.0			⇓*i*S	Sg	17 58 15.0	-1.6
KDJ	**Kajisay** baz=30	2.50	35	⇑*i*P	Pb	17 57 42.8	-0.2
KDJ	baz=30			⇑*i*S	Sb	17 58 14.8	+0.9
KBK	**Karagaybulak** baz=54	2.57	355	⇑*i*P	Pb	17 57 44.3	0.0
KBK	baz=54			⇑*i*S	Sg	17 58 18.5	-2.1
KBK	**Karagaybulak** SNR=21	2.57	355	P	Pb	17 57 45.1	+0.8
AAK	**Ala-Archa** baz=47	2.61	347	⇓*i*P	Pb	17 57 45.3	+0.4
AAK	baz=47			⇓*i*S	Sg	17 58 19.1	-2.6
AAK	**Ala-Archa** SNR=26	2.61	347	P	Pb	17 57 45.5	+0.6
AAK	**Ala-Archa** 17nm,0.6s	2.61	347	⇑Pg	Pb	17 57 45.7	+0.7
AAK	34nm,0.6s			⇑Lg	Lg	17 58 23.2	
DRK	**Karamyk** baz=64	2.74	258	⇑*i*P	Pn	17 57 44.0	+1.7
DRK	baz=64			⇑*i*S	Sn	17 58 16.4	+0.8
FRU1	**Bishkek** baz=49	2.75	350	⇑*i*P	Pb	17 57 47.1	-0.3
FRU1	baz=49			⇑*i*S	Sb	17 58 22.6	+1.4
EKS2	**Erkin-Say** baz=37	2.80	337	⇑*i*P	Pb	17 57 47.9	-0.3
EKS2	baz=37			⇑*i*S	Sb	17 58 24.0	+1.5
EKS2	**Erkin-Say** SNR=8.1	2.80	337	P	Pg	17 57 51.6	0.0
TKM2	**Tokmak 2** baz=3.0	2.83	5	⇓*e*P	Pb	17 57 48.1	-0.7
TKM2	baz=3.0			⇓*i*S	Sb	17 58 24.6	+0.9
TKM2	**Tokmak 2** SNR=33	2.83	5	P	Pb	17 57 48.6	-0.2
TKM2	**Tokmak 2** 8.7nm,0.3s	2.83	5	⇑Pn	Pb	17 57 48.4	-0.4
TKM2	39nm,0.5s			⇑Lg	Lg	17 58 29.5	
CHMS	**Chumysh** baz=52	2.93	353	⇑*i*P	Pb	17 57 49.2	-1.1
CHMS	baz=52			⇑*i*S	Sb	17 58 26.7	+0.5
CHMS	**Chumysh** SNR=9.3	2.93	353	P	Pb	17 57 49.7	-0.6
KST	**Kastek** 27nm,0.4s	2.99	10	*e*P	Pg	17 57 54.6	-0.7
KST	89nm,0.8s			*e*S	Sg	17 58 34.8	+0.7
KST	**Kastek** 27nm,0.4s	2.99	10	Pg	Pg	17 57 54.4	-1.0
KST	89nm,0.8s			Lg	Lg	17 58 35.4	
MRKS	**Merke** 4.9nm,0.5s	3.06	331	*e*P	Pb	17 57 54.1	+1.5
MRKS	13nm,0.7s			*e*S	Sg	17 58 34.3	-2.0
MRKS	**Merke** 5.0nm,0.4s	3.06	331	Pg	Pb	17 57 54.2	+1.6
MRKS	13nm,0.7s			Lg	Lg	17 58 34.8	
IZV	**Izvestkoviy** 10.0nm,0.5s	3.11	19	*e*P	Pg	17 57 56.7	-0.9
IZV	92nm,0.5s			*e*S	Sg	17 58 38.6	+0.7
IZV	**Izvestkoviy** 10.0nm,0.5s	3.11	19	Pg	Pg	17 57 56.7	-0.9
IZV	92nm,0.5s			Lg	Lg	17 58 38.6	
MTBS	**Maitube** 4.1nm,0.4s	3.15	16	*e*P	Pg	17 57 57.7	-0.8
MTBS	61nm,0.4s			*e*S	Sg	17 58 40.2	+0.9
MTBS	**Maitube** 4.1nm,0.4s	3.15	16	Pg	Pg	17 57 57.7	-0.8
MTBS	61nm,0.4s			Lg	Lg	17 58 40.2	
DGS	**Degeres** 17nm,0.5s	3.17	7	*e*P	Pg	17 57 57.1	-1.6
DGS	38nm,0.6s			*e*S	Sg	17 58 39.4	-0.4
DGS	**Degeres** 17nm,0.5s	3.17	7	Pg	Pg	17 57 57.1	-1.6
DGS	38nm,0.6s			Lg	Lg	17 58 39.3	
MNAS	**Manas** baz=22	3.17	320	⇓*i*P	Pb	17 57 52.7	-1.8
MNAS	baz=22			⇓*i*S	Sb	17 58 32.3	-0.9
TNSS	**Tian-Shan** 14nm,0.3s	3.20	23	*e*P	Pg	17 57 58.2	-1.1
TNSS	33nm,0.8s			*e*S	Sg	17 58 41.2	+0.5
TNSS	**Tian-Shan** 14nm,0.3s	3.20	23	Pg	Pg	17 57 58.2	-1.1
TNSS	33nm,0.8s			Lg	Lg	17 58 41.2	
USP	**Ospenovka** baz=49	3.22	350	⇑*i*P	Pb	17 57 53.7	-1.6
USP	baz=49			⇑*i*S	Sb	17 58 34.0	-0.6
USP	**Ospenovka** SNR=5.4	3.22	350	P	Pb	17 57 53.8	-1.6
ANVS	**Anan'yevo** baz=29	3.24	33	⇑*i*P	Pb	17 57 52.3	-3.4
ANVS	baz=29			⇑*i*S	Sb	17 58 31.6	-3.6
MDOK	**Medeo** 6.8nm,0.8s	3.34	23	*e*P	Pg	17 58 00.3	-1.8
MDOK	51nm,1.1s			*e*S	Sg	17 58 44.6	-0.8
MDOK	**Medeo** 8.3nm,0.5s	3.34	23	⇑Pg	Pg	17 58 00.8	-1.3
MDOK	61nm,0.7s			⇓Lg	Lg	17 58 44.8	
MDOK	**Medeo** 6.8nm,0.8s	3.34	23	Pg	Pg	17 58 00.3	-1.8
MDOK	51nm,1.1s			Lg	Lg	17 58 44.6	
AAA	**Alma-Ata** 30nm,0.3s	3.35	21	*e*P	Pg	17 58 01.8	-0.4
AAA	98nm,0.6s			*e*S	Sg	17 58 47.1	+1.6
AAA	**Alma-Ata** 30nm,0.3s	3.35	21	Pg	Pg	17 58 01.8	-0.4
AAA	98nm,0.6s			Lg	Lg	17 58 47.1	
PRZ	**Przheval'sk** baz=39	3.36	44	⇑*i*P	Pn	17 57 53.8	+3.1
PRZ	baz=39			⇑*i*S	Sn	17 58 34.2	+3.5
KNDC	**Almaty** 28nm,0.7s	3.37	22	⇑Pg	Pg	17 58 02.2	-0.4
KNDC	105nm,0.6s			⇓Lg	Lg	17 58 47.2	
BTK	**Batken** baz=75	3.41	271	⇑*i*P	Pn	17 57 53.4	+2.0
BTK	baz=75			⇑*i*S	Sn	17 58 34.2	+2.3
KOTS	**Kotyrbulak** 20nm,0.5s	3.43	23	*e*P	Pg	17 58 01.6	-2.1
KOTS	81nm,0.9s			*e*S	Sg	17 58 47.0	-1.1
KOTS	**Kotyrbulak** 20nm,0.5s	3.43	23	Pg	Pg	17 58 01.6	-2.1
KOTS	81nm,0.9s			Lg	Lg	17 58 47.0	
TRKS	**Terek-Say** baz=99	3.44	296	⇓*i*P	Pb	17 57 55.7	-3.5
TRKS	baz=99			⇓*i*S	Sb	17 58 37.0	-4.2
KTBS	**Karatobe** 4.4nm,0.4s	3.77	16	*e*P	Pg	17 58 08.3	-1.8
KTBS	73nm,0.5s			*e*S	Sg	17 58 58.4	-0.5
KTBS	**Karatobe** 4.4nm,0.4s	3.77	16	Pg	Pg	17 58 08.3	-1.8
KTBS	73nm,0.5s			Lg	Lg	17 58 58.4	
SATY	**Saty** 4.3nm,0.5s	3.78	37	*e*P	Pg	17 58 08.2	-2.4
SATY	42nm,0.5s			*e*S	Sg	17 58 57.7	-1.9
SATY	**Saty** 6.3nm,0.5s	3.78	37	Pg	Pg	17 58 08.1	-2.4
SATY	42nm,0.5s			Lg	Lg	17 58 59.1	
KUU	**Kurty** 5.3nm,0.6s	3.88	12	*e*P	Pg	17 58 10.5	-1.8
KUU	30nm,0.6s			*e*S	Sg	17 59 01.9	-0.6
KUU	**Kurty** 5.3nm,0.6s	3.88	12	Pg	Pg	17 58 10.5	-1.8
KUU	30nm,0.6s			Lg	Lg	17 59 01.9	
KURS	**Kuram** 2.3nm,0.5s	4.03	32	*e*P	Pg	17 58 12.6	-2.5
KURS	18nm,0.6s			*e*S	Sg	17 59 05.8	-1.5
KURS	**Kuram** 2.3nm,0.5s	4.03	32	Pg	Pg	17 58 12.6	-2.5
KURS	18nm,0.6s			Lg	Lg	17 59 05.8	
UZB	**Uzynbulak** 3.2nm,0.4s	4.15	41	*e*P	Pg	17 58 14.4	-3.1
UZB	26nm,0.8s			*e*S	Sg	17 59 09.3	-2.0
UZB	**Uzynbulak** 3.2nm,0.4s	4.15	41	Pg	Pg	17 58 14.4	-3.1
UZB	26nm,0.8s			Lg	Lg	17 59 09.3	
KPKS	**Kokpek** 4.6nm,0.5s	4.23	36	*e*P	Pg	17 58 15.8	-3.2
KPKS	76nm,0.5s			*e*S	Sg	17 59 11.3	-2.5
SHLS	**Shalkode** 12nm,0.6s	4.39	44	*e*P	Pg	17 58 25.2	+3.2
SHLS	42nm,0.7s			*e*S	Sg	17 59 27.5	+8.6
SHLS	**Shalkode** 12nm,0.6s	4.39	44	Pg	Pg	17 58 25.2	+3.2
SHLS	42nm,0.7s			Lg	Lg	17 59 27.5	
PDGK	**Podgornoye** 2.2nm,0.6s	4.52	43	Pg	Pg	17 58 21.3	-3.3
PDGK	13nm,0.9s			Lg	Lg	17 59 21.0	
PDGK	**Podgornoye** 4.6nm,0.6s	4.52	43	⇓Pg	Pg	17 58 24.1	-0.5
PDGK	32nm,0.8s			⇑Lg	Lg	17 59 22.7	
MNBS	**Baschi** 3.5nm,0.6s	4.61	29	*e*P	Pg	17 58 23.4	-2.9
MNBS	30nm,0.9s			*e*S	Sg	17 59 24.5	-1.6
MNBS	**Baschi** 3.5nm,0.6s	4.61	29	Pg	Pg	17 58 23.4	-2.9
MNBS	30nm,0.9s			Lg	Lg	17 59 24.5	
KK31	**Karatay Array** 1.4nm,0.6s,baz=124,slow=16,SNR=4.5	4.66	312	⇑Pg	Pg	17 58 24.9	-2.4
KK31	1.9nm,0.4s,baz=129,slow=28,SNR=3.7			⇓Lg	Lg	17 59 27.4	
BTLS	**Baital** 2.5nm,0.7s	5.02	350	*e*P	Pg	17 58 31.2	-3.0
BTLS	9.7nm,0.8s			*e*S	Sg	17 59 37.4	-1.9
BTLS	**Baital** 2.5nm,0.7s	5.02	350	Pg	Pg	17 58 31.2	-3.0
BTLS	9.7nm,0.8s			Lg	Lg	17 59 37.4	
DJR	**Jarkent** 1.7nm,0.7s	5.40	37	*e*P	Pg	17 58 37.7	-3.8
DJR	6.4nm,0.6s			*e*S	Sg	17 59 48.5	-3.0
DJR	**Jarkent** 1.7nm,0.7s	5.40	37	Pg	Pg	17 58 37.7	-3.8
DJR	6.4nm,0.6s			Lg	Lg	17 59 48.5	

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*NOU **21** 18:07:14.8, 39°.47S×175°.69E, h0km, MLv3.5, North Island, New Zealand*

WEL 21 18:07:14.6,39°.5S±0°.9×**175°.8E**±0°.6**,h12**km**,M3.3**/31**,ML3.6**/31**,MLv3.3**/31**,Error ellipse: s-maj=0.0km s-min=0.0km az=3.6,North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOVZ	**Moawhango**	0.05	357	P	Pg	18 07 17.6	+0.5
MOVZ				S	Sg	18 07 19.5	+0.6
WNVZ	**Wahianoa**	0.18	317	P	Pb	18 07 19.6	-0.4
WNVZ				S	Sg	18 07 22.6	+0.9
TUVZ	**Tukino**	0.21	337	P	Pb	18 07 20.2	-0.3
TUVZ				S	Sg	18 07 23.4	+1.0
WHVZ	**Whangaehu Hut**	0.22	324	P	Pb	18 07 20.3	-0.4
WHVZ				S	Sg	18 07 23.5	+0.7
TRVZ	**Turoa**	0.23	315	P	Pb	18 07 20.4	-0.5
TRVZ				S	Sg	18 07 23.9	+0.9
MTVZ	**Mangateitei**	0.23	289	P	Pb	18 07 20.4	-0.5
MTVZ				S	Sg	18 07 24.2	+1.2
DRZ	**Dome Shelter**	0.24	321	P	Pb	18 07 20.6	-0.4
DRZ				S	Sg	18 07 24.2	+0.9
BHHZ	**Black Hill Sta**	0.24	97	P	Pg	18 07 20.3	+0.6
BHHZ				S	Sg	18 07 23.8	+0.7
FWVZ	**Far West T-bar**	0.26	322	P	Pb	18 07 20.8	-0.6
OTVZ	**Oturere**	0.30	346	P	Pb	18 07 21.8	-0.4
OTVZ				S	Sg	18 07 25.9	+0.8
NGZ	**Ngauruhoe**	0.31	337	P	Pb	18 07 21.8	-0.4
ETVZ	**East Tongariro**	0.33	354	P	Pb	18 07 22.1	-0.4
TMVZ	**Te Maari**	0.35	353	P	Pb	18 07 22.4	-0.4
PKVZ	**Pokaka**	0.36	298	P	Pg	18 07 22.4	+0.5
WTVZ	**West Tongariro**	0.37	339	P	Pb	18 07 22.8	-0.4
WTVZ				S	Sg	18 07 27.8	+0.8
KRVZ	**Karewarewa**	0.38	346	P	Pb	18 07 22.9	-0.4
TWVZ	**Taurewa**	0.46	327	P	Pg	18 07 24.1	+0.4
KATZ	**Kakaramea**	0.49	354	P	Pb	18 07 24.9	-0.3
RITZ	**Rihia Road**	0.49	9	P	Pb	18 07 24.9	-0.3
KWHZ	**Kaweka Forest**	0.52	86	P	Pb	18 07 25.7	0.0
PNHZ	**Pukenui**	0.57	143	P	Pb	18 07 26.2	-0.3
RATZ	**Rangitukua**	0.59	1	P	Pb	18 07 26.9	0.0
TSZ	**Takapari Road**	0.62	165	P	Pb	18 07 27.1	-0.3
HATZ	**Hinemaiaia**	0.63	25	P	Pg	18 07 26.8	0.0
BKZ	**Black Stump Fm**	0.64	63	P	Pb	18 07 27.6	-0.2
WAZ	**Wanganui**	0.66	244	P	Pg	18 07 27.7	+0.1
MCHZ	**McNeill Hill**	0.73	89	P	Pn	18 07 30.6	-0.2
WATZ	**Wairara**	0.75	359	P	Pb	18 07 29.8	+0.2
WPHZ	**Waipukurau**	0.80	139	P	Pn	18 07 31.2	-0.5
WHTZ	**Whakaora**	0.81	11	P	Pn	18 07 32.0	+0.1
MRHZ	**Matea Rd**	0.81	40	P	Pg	18 07 30.1	-0.2
OHWZ	**Ohakea**	0.82	204	P	Pg	18 07 30.2	-0.2
VRZ	**Vera Road**	0.84	293	P	Pg	18 07 31.0	+0.1
NMHZ	**Naumai**	0.89	66	P	Pn	18 07 33.2	+0.1
DVHZ	**Dannevirke**	0.90	160	P	Pb	18 07 32.4	+0.3
KAHZ	**Kahuranaki**	0.93	111	P	Pn	18 07 34.5	+1.0
POWZ	**Post Office Ro**	0.93	179	P	Pg	18 07 32.6	+0.1
KUTZ	**Kaahu Road**	0.97	3	P	Pn	18 07 34.0	-0.1
ARHZ	**Aropaoanui**	0.98	79	P	Pn	18 07 35.5	+1.4
WPRZ	**Whakapapatarin**	0.99	19	P	Pn	18 07 34.8	+0.4
ALRZ	**Allen Road**	1.01	27	P	Pb	18 07 33.4	-0.5
PXZ	**Pawanui**	1.02	124	P	Pn	18 07 35.6	+0.8
MTHZ	**Maungataniwha**	1.04	55	P	Pg	18 07 34.7	0.0
CKHZ	**Cape Kidnapper**	1.04	101	P	Pn	18 07 36.5	+1.5
LREZ	**Lake Rotokare**	1.05	270	P	Pg	18 07 34.9	+0.1
PRHZ	**Porangahau**	1.05	140	P	Pn	18 07 36.1	+1.0
PRRZ	**Plateau Road**	1.08	27	P	Pb	18 07 35.0	-0.2
PRWZ	**Pori Road**	1.10	172	P	Pn	18 07 36.3	+0.3
ANWZ	**Angora Road**	1.14	151	P	Pg	18 07 37.6	+1.0
TLZ	**Tolley Road**	1.14	351	P	Pb	18 07 35.9	-0.4
GRRZ	**Galatos Road**	1.14	14	P	Pg	18 07 36.8	+0.2
HRRZ	**Handcock Road**	1.15	21	P	Pg	18 07 36.9	+0.3
RAHZ	**Arahi**	1.17	63	P	Pg	18 07 37.9	+0.8
MHEZ	**Mangahewa**	1.18	289	P	Pg	18 07 37.6	+0.3
HIZ	**Hauiti**	1.18	323	P	Pb	18 07 36.8	-0.1
MRZ	**Mangatainoka R**	1.21	186	P	Pn	18 07 37.3	0.0
HSRZ	**Hossack Road**	1.21	19	P	Pg	18 07 38.2	+0.3
WHHZ	**Waihua**	1.21	72	P	Pg	18 07 42.5	+4.6
PREZ	**Palmer Road**	1.24	275	P	Pg	18 07 38.7	+0.2
MUGZ	**Murupara**	1.26	39	P	Pb	18 07 38.4	+0.1
RRRZ	**Republican Roa**	1.27	28	P	Pb	18 07 38.4	0.0
RTZ	**Ruatahuna**	1.27	49	P	Pb	18 07 38.8	+0.2
BFZ	**Birch Farm**	1.28	163	P	Pg	18 07 39.7	+0.5
NEZ	**North Egmont**	1.30	278	P	Pg	18 07 39.4	-0.3
TIWZ	**Tintock**	1.32	176	P	Pg	18 07 40.0	0.0
UTU	**Utuhina**	1.33	15	P	Pg	18 07 42.1	+2.0
TARZ	**Mount Tarawera**	1.36	26	P	Pg	18 07 40.9	+0.2
KHEZ	**Kahui Hut**	1.36	276	P	Pg	18 07 40.6	-0.2
NGRZ	**Ngongotaha**	1.40	14	P	Pg	18 07 41.2	-0.3
PKE	**Pukeiti**	1.40	280	P	Pb	18 07 41.0	+0.3
SNGZ	**Shannon Statio**	1.41	62	P	Pg	18 07 42.1	+0.5
OGWZ	**Otaki Gorge**	1.43	198	P	Pn	18 07 40.5	+0.1
MKRZ	**Makatiti**	1.43	23	P	Pg	18 07 44.1	+2.0
OMRZ	**Omania**	1.44	20	P	Pg	18 07 43.7	+1.5
HOWZ	**Holdsworth Sta**	1.45	187	P	Pb	18 07 41.7	+0.2
NMEZ	**Namu Road**	1.46	271	P	Pb	18 07 41.8	+0.2
NBEZ	**Newall Road No**	1.48	277	P	Pb	18 07 42.1	+0.1
CPWZ	**Castlepoint**	1.49	167	P	Pg	18 07 44.2	+1.1
KIW	**Kapiti Island**	1.54	205	P	Pn	18 07 41.8	-0.1
KNZ	**Kokohu**	1.55	74	P	Pg	18 07 46.9	+2.5
EDRZ	**Edgecumbe**	1.56	30	P	Pg	18 07 44.6	+0.1
URZ	**Urewera**	1.60	42	P	Pb	18 07 44.3	+0.3
RAGZ	**Rawiri**	1.61	54	P	Pg	18 07 45.8	+0.2
KMRZ	**Kaimai**	1.62	5	P	Pb	18 07 44.1	-0.4
MARZ	**Manawahe**	1.64	26	P	Pg	18 07 45.6	-0.4
TMWZ	**Te Maipa**	1.65	176	P	Pb	18 07 44.8	-0.2
MTW	**Mount Morrison**	1.71	186	P	Pn	18 07 44.6	+0.4
CAW	**Cannon Point**	1.73	198	P	Pb	18 07 45.4	-0.9
RIGZ	**Rimuhau**	1.73	65	P	Pg	18 07 49.1	+1.2
PRGZ	**Paritu Road**	1.74	73	P	Pg	18 07 50.9	+2.9
TGRZ	**Tauranga**	1.77	13	P	Pg	18 07 48.2	-0.5
MWZ	**Matawai**	1.78	51	P	Pb	18 07 47.7	+0.5
PAWZ	**Paruwai Farm**	1.94	187	P	Pn	18 07 47.7	+0.3
TRWZ	**Traveller**	1.94	182	P	Pn	18 07 48.0	+0.7
DUWZ	**D'Urville Isla**	1.94	226	P	Pn	18 07 47.8	+0.4
WEL	**Wellington**	1.97	202	P	Pn	18 07 48.7	+0.8
MSWZ	**Moikau Station**	1.99	191	P	Pn	18 07 48.3	+0.2
BHW	**Baring Head**	2.06	199	P	Pn	18 07 49.3	+0.3
TCW	**Tory Channel**	2.08	212	P	Pn	18 07 50.3	+1.0
RUGZ	**Raukumara Rang**	2.12	46	P	Pn	18 07 51.4	+1.4
PLWZ	**Palliser**	2.14	190	P	Pn	18 07 50.3	+0.1
PUZ	**Puketiti**	2.40	55	P	Pg	18 08 00.7	+0.2
MKAZ	**Moumakai**	2.40	349	P	Pn	18 07 55.7	+2.0
PKGZ	**Pakihiroa**	2.40	50	P	Pg	18 07 59.9	-0.8
TUWZ	**Tuamarina**	2.41	215	P	Pn	18 07 54.6	+0.8
NNZ	**Nelson**	2.53	225	P	Pn	18 07 56.6	+1.2
AWAZ	**Awhitu Peninsu**	2.55	340	P	Pn	18 07 57.8	+2.1
CMWZ	**Cape Campbell**	2.57	207	P	Pg	18 08 03.4	-0.4
ETAZ	**East Tamaki Re**	2.59	345	P	Pg	18 08 03.1	-1.1
BSWZ	**Blackbirch Sta**	2.67	212	P	Pn	18 07 58.3	+0.8
WTAZ	**Waiatarua**	2.69	339	P	Pb	18 08 02.3	-0.4
KUZ	**Kuaotunu**	2.71	359	P	Pg	18 08 05.7	-0.8
MXZ	**Matakaoa Point**	2.75	47	P	Pb	18 08 03.4	-0.4
QRZ	**Quartz Range**	2.83	240	P	Pn	18 08 00.4	+0.9
RVAZ	**Riverhead Bore**	2.84	341	P	Pn	18 08 01.0	+1.2
THZ	**Tophouse**	3.16	222	P	Pn	18 08 05.0	+0.8
KHZ	**Kahutara**	3.40	209	P	Pn	18 08 06.9	-0.5
DSZ	**Denniston Nort**	3.78	232	P	Pn	18 08 13.3	+0.7
GVZ	**Greta Valley S**	4.06	209	P	Pn	18 08 15.5	-1.1
LTZ	**Lake Taylor**	4.24	217	P	Pn	18 08 18.6	-0.4
INZ	**Inchbonnie**	4.61	224	P	Pn	18 08 24.7	+0.7
OXZ	**Oxford**	4.77	215	P	Pn	18 08 25.1	-1.2
TMZ	**Timaru**	6.06	214	P	Pn	18 08 42.3	-1.7
JCZ	**Jackson Bay**	6.96	226	P	Pn	18 08 55.6	-0.8

IDC 21 18:09:26.6±5.2**,19°.09S**×**177°.57W,h0**km**,mb3.4**/3**, mb1 3.8**/3**,mb1mx3.5**/37**,mbtmp3.4**/3**,Error ellipse: s-maj=374.9km s-min=35.2km az=154.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.5nm,0.8s,baz=95,slow=8.0,SNR=2.3	45.21	261	P	P	18 17 46.0	+0.1
ASAR	**Alice Springs** 0.4nm,0.8s,baz=97,slow=7.6,SNR=7.4	45.25	255	P	P	18 17 45.9	-0.3
NVAR	**Mina Array Bea** 0.3nm,0.6s,baz=216,slow=7.6,SNR=2.4	79.73	43	P	P	18 21 36.8	+0.1

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*IDC **21** 18:16:30.9±1.9, 29°.72N×130°.77E, h44km±15km, mb3.2/5, mb1 3.3/9, mb1mx3.1/48, mbtmp3.4/9, ML3.1/4, Error ellipse: s-maj=35.4km s-min=8.9km az=112.0*

*JMA **21** 18:16:30.2±0.1, 29°.73N×130°.95E, h49km±1km, M3.2*

ISC 21 18:16:30.8±1.3**,29°.73N**±0°.05×**130°.88E**±0°.09**,h46**km±12km**, n23,**σ**0ˢ.58**/32**,mb3.2**/5**,Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYAK	**Yakushimahirau**	0.60	328	P	Pn	18 16 43.1	0.0
JYAK				S	Sn	18 16 52.6	+0.7
JMTN	**Minamitane**	0.66	1	P	Pn	18 16 43.6	-0.4
JMTN				*e*S	Sn	18 16 53.1	-0.4
JNN	**Nakanoshima**	0.88	277	P	Pn	18 16 47.4	+0.5
JTN	**Tanegashima 3**	0.92	5	P	Pn	18 16 47.0	-0.5
JTN				*e*S	Sn	18 16 59.7	0.0
JKC	**Kuchinoerabu**	0.94	321	P	Pn	18 16 48.0	+0.3
JTSR	**Tashiro 2**	1.43	1	P	Pn	18 16 54.7	+0.3
JTSR				*e*S	Sn	18 17 12.3	+0.2
JTAJ	**Takarajima**	1.57	249	P	Pn	18 16 57.3	+1.0
JAM	**Amami Oshima**	1.73	221	P	Pn	18 16 58.8	+0.4
JAM				*e*S	Sn	18 17 19.8	+0.6
JSU	**Suzuyama**	1.81	348	P	Pn	18 16 59.7	+0.2
JNAR	**Kushima--Naru**	1.82	11	P	Pn	18 17 00.2	+0.5
JNKG	**Nichinankitago**	1.97	12	P	Pn	18 17 02.2	+0.4
JAMN	**Amaminishikomi**	2.10	226	P	Pn	18 17 04.0	+0.4
JAMN				S	Sn	18 17 29.3	+0.8
JTZ	**Takazaki**	2.17	5	P	Pn	18 17 04.8	+0.3
JSJ	**Shimokoshiki**	2.19	333	P	Pn	18 17 04.3	-0.4
JSJ				*e*S	Sn	18 17 30.3	-0.3
JNU	**Nakatsue** 1.7nm,0.3s,baz=188,slow=13,SNR=23	3.38	360	P	Pn	18 17 21.8	+0.7
JNU	2.9nm,0.3s,baz=299,slow=18,SNR=8.3			S	Sn	18 18 00.7	+0.6
JOW	**Kunigami** 4.7nm,0.3s,baz=0.0,slow=15,SNR=19	3.69	219	P	Pn	18 17 25.2	-0.1
JOW	21nm,0.3s,baz=123,slow=29,SNR=20			S	Sn	18 18 06.3	-1.3
MJAR	**Matsushiro Arr** 0.1nm,0.3s,baz=237,slow=14,SNR=7.4	9.15	40	P	Pn	18 18 40.9	+0.5
KLR	**Kul'dur** 0.1nm,0.3s,baz=172,slow=7.1,SNR=4.3	19.49	2	P	Pn	18 20 55.0	-0.4
SONM	**Songino Array** 0.2nm,0.5s,baz=139,slow=11,SNR=4.6	26.11	321	P	P	18 21 59.4	-1.1
MKAR	**Makanchi Array** 0.3nm,0.7s,baz=96,slow=9.4,SNR=4.6	41.08	308	P	P	18 24 10.4	+0.4
KURBB	**Kurchatov Arra** 0.4nm,0.5s,baz=95,slow=9.2,SNR=5.5	44.05	313	P	P	18 24 34.3	+0.3
FINES	**FINESS Array B** 0.4nm,0.5s,baz=54,slow=7.2,SNR=5.0	70.98	331	P	P	18 27 42.8	-0.5
YKA	**Yellowknife Ar**	74.37	26	P	P	18 28 03.9	+0.5

0.2nm,0.6s,baz=312,slow=5.7,SNR=2.9

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*MAN **21** 18:19:28.2, 5°.75N×125°.93E, h115^{km}, mb4.9, ML3.8, MS3.8*
*IDC **21** 18:19:31.1±1.6, 6°.03N×125°.66E, h120^{km}±13^{km}, mb3.9/25, mb1 4.0/26, mb1mx3.9/42, mbtmp4.3/26, MS2.9/3, Ms1 2.9/3, ms1mx2.6/39, Error ellipse: s-maj=18.3km s-min=8.5km az=74.0*
*DJA **21** 18:19:32.6±0.8, 6°N±7°×12°6E±°, h128^{km}±6^{km}, M4.7/20, mB5.2/7, mb4.6/20, MLv4.8/10, Mw(mB)4.6/7*
*NEIC **21** 18:19:32.3±2.3, 6°.06N±0°.06×125°.86E±0°.09, h129^{km}±5^{km}, mb4.7/111, Error ellipse: s-maj=13.5km s-min=8.5km az=72.0*
ISC 21 18:19:31.6±0.5**, 6°.06N**±0°.04×**125°.95E**±0°.05**, h125**^{km}±4^{km}**, n204,** σ1^{s}.**44**/229**, mb4.6**/79**, 2C-2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	0.24	281	*e*P	Pn	18 19 47.3	-1.5
DDMP				*e*S	Sn	18 20 00.2	-1.7
MATI	Mati	0.94	19	*e*P	Pn	18 19 52.0	-1.4
MATI				*e*S	Sn	18 20 09.0	-1.0
DAV	Davao City (W)	1.07	340	S	Sn	18 20 12.6	+0.3
	baz=229,slow=20						
DAV	Davao City (W)	1.07	340		Pn	18 19 55.3	+0.5
KCP	Kidapawan	1.28	318	⇑*i*P	Pn	18 19 57.7	+0.8
KCP				*i* S	Sn	18 20 16.9	+0.7
SKMP	Bagumbayan, Su	1.47	288	*e*P	Pn	18 19 57.2	-1.8
SKMP				*e*S	Sn	18 20 18.5	-1.3
BUKP	Musuan	2.01	334	*e*P	Pn	18 20 06.0	+0.5
BUKP				*e*S	Sn	18 20 33.3	+1.8
SGSI	Sangihe	2.39	190	P	Pn	18 20 11.7	+1.5
CGP	Cagayan de Oro	2.69	332	⇓*e*P	Pn	18 20 14.4	+0.4
CGP				*i* S	Sn	18 20 51.6	+5.0
BUTP	Butuan	2.91	354	*e*P	Pn	18 20 18.4	+1.5
BUTP				*e*S	Sn	18 20 57.0	+5.2
PAGZ	Pagadian	3.11	305	*e*P	Pn	18 20 18.6	-0.9
PAGZ				*e*S	Sn	18 21 11.9	+16
GLSP	General Luna,	3.71	3	*e*P	Pn	18 20 26.4	-1.0
GLSP				*e*S	Sn	18 21 05.6	-5.0
ZCP	Zamboanga City	3.95	283	⇑*e*P	Pn	18 20 30.9	+0.4
MSLP	Maasin	4.19	345	*e*P	Pn	18 20 34.4	+0.5
LLP	Lapu-Lapu	4.67	335	⇓*e*P	Pn	18 20 41.5	+1.3
LLP				*e*S	Sn	18 21 35.5	+2.0
TNTI	Ternate	5.44	165		Pn	18 20 50.5	-0.1
TNTI	Ternate	5.44	165	P	Pn	18 20 50.4	-0.1
	0.9nm3μm213nm,1.1s						
KMSI	Cibinong	5.79	200	P	Pn	18 20 57.3	+2.0
	0.7nm101nm,0.8s						
GTOI	Gorontalo	6.13	209	P	Pn	18 21 00.9	+1.0
	0.3nm654nm68nm,0.7s						
MRSI	Marisa	6.84	216	P	Pn	18 21 11.3	+1.9
	0.9nm2μm189nm,0.6s						
TOLI2	Tolitoli	7.12	227		Pn	18 21 13.1	-0.1
MYLDM	Lahad Datu	7.47	264		Pn	18 21 21.2	+3.4
LUWI	Luwuk	7.73	204	Pn	Pn	18 21 24.0	+2.5
SANI	Sanana	8.05	180	P	Pn	18 21 23.6	-2.2
	4μm76nm,0.9s						
APSI	Ampana	8.14	212	P	Pn	18 21 29.3	+2.2
	490nm44nm,1.0s						
SWI	Sorong	8.68	142	P	Pn	18 21 34.3	0.0
	48nm,1.0s						
SIJI	Sorong	8.69	142	P	Pn	18 21 34.6	+0.2
	3.5nm,0.3s,baz=108,slow=23,SNR=21						
SIJI				S	Sn	18 23 06.5	-4.2
	1.7nm,0.3s,baz=252,slow=20,SNR=2.1						
SIJI				LR	LR	18 24 45.1	
	comp=Z,119nm,20.5s,baz=48,slow=36						
NLAI	Namlea	9.30	173	P	Pn	18 21 41.5	-1.2
	4μm137nm,0.7s						
KKM	Kota Kinabalu	9.68	270	Pn	Pn	18 21 49.6	+1.7
FAKI	Fak Fak	10.91	145	Pn	Pn	18 22 04.8	+0.5
TTSI	Tana Toraja	10.92	214	P	Pn	18 22 06.9	+2.5
	17nm,0.9s						
KAPI	Kappang	12.62	209		P	18 22 32.8	-0.4
SBUM	Sibu	14.15	256	P	P	18 22 48.9	-1.4
SOEI	Soe	15.80	186	P	P	18 23 08.6	0.0
SOEI				IAmb	IAmb	18 23 30.8	
	comp=Z,63nm,1.2s						
SOEI	Soe	15.80	186	P	P	18 23 09.0	+0.4
	comp=Z,52nm,1.1s						
KSM	Kuching	16.25	254	P	P	18 23 14.7	+1.1
BATI	Baumata	16.32	188	P	P	18 23 15.8	+1.5
	comp=Z,3.5nm,0.3s,baz=344,slow=20,SNR=1.8						
BATI	Baumata	16.32	188	P	P	18 23 15.0	+0.7
	comp=Z,67nm,1.3s						
TWG	Pinlang	17.32	345	P	P	18 23 24.1	-1.2
TWG				IAmb	IAmb	18 23 32.1	
	comp=Z,41nm,1.4s						
YULB	Yu-li	17.81	346	P	P	18 23 30.4	-0.2
TPUB	Ta-pu	17.89	344	P	P	18 23 31.0	-0.6
TPUB				IAmb	IAmb	18 23 35.3	
	comp=Z,65nm,1.6s						
DLV	T Lat	18.21	290		Pn	18 23 36.9	+0.2
SSLB	Suanglung	18.27	345	P	P	18 23 35.3	-0.4
SSLB				IAmb	IAmb	18 24 07.6	
	comp=Z,39nm,1.6s						
NACB	Ninganchiao	18.49	347	P	P	18 23 39.3	+1.2
JAGI	Jajag, Banyuwa	18.62	219	P	P	18 23 39.5	-0.1
JAGI				IAmb	IAmb	18 24 12.3	
	comp=Z,52nm,1.3s						
JAGI	Jajag, Banyuwa	18.62	219	P	Pn	18 23 41.3	0.0
	comp=Z,31nm,1.3s						
YHNB	Yeheng	19.02	347	P	P	18 23 43.7	-0.2
YHNB				IAmb	IAmb	18 24 22.2	
	comp=Z,34nm,1.4s						
KNMB	Chin-men Tao	19.69	339	P	P	18 23 52.3	+1.2
GUMO	Guam	20.07	67	LR	LR	18 32 02.3	
	comp=Z,34nm,19.1s,baz=104,slow=37						
QIZ	Qiongzhong	20.31	311	P	P	18 23 58.7	+0.8
JOW	Kunigami	20.78	6	P	Pn	18 24 05.5	-1.0
	comp=Z,28nm,0.9s,baz=162,slow=4.0,SNR=3.8						
JOW	Kunigami	20.78	6	IAmb	IAmb	18 24 39.7	
	comp=Z,60nm,1.3s						
LEM	Lembang	22.33	235	P	P	18 24 20.9	+1.5
	comp=Z,15nm,0.8s,baz=16,slow=6.3,SNR=5.5						
CISI	Cisompet, Garu	22.59	233	P	P	18 24 20.9	-1.1
CISI				IAmb	IAmb	18 24 23.1	
	comp=Z,23nm,1.0s						
CBJI	Citeko	22.74	237	P	P	18 24 25.9	+2.6
JMBI	JAMBI	23.55	252	P	P	18 24 33.4	+2.5
BLSI	Bandar Lampung	23.58	242	P	P	18 24 33.0	+1.8
	comp=Z,53nm,0.4s						
KLSI		23.73	244	P	P	18 24 34.7	+2.2
	comp=Z,6.4nm,0.9s						
FITZ	Fitzroy Crossi	24.00	181	P	P	18 24 35.5	+0.6
	comp=Z,11nm,0.9s,baz=2.4,slow=9.3,SNR=40						
FITZ	Fitzroy Crossi	24.00	181	P	P	18 24 35.8	+0.9
KASI	Kota Agung	24.31	242	P	P	18 24 40.0	+2.2
	comp=Z,33nm,0.9s						
LHSI	Lahat	24.45	247	P	P	18 24 41.0	+1.9
	comp=Z,33nm,0.9s						
JSU	Suzuyama	25.67	9	P	P	18 24 50.4	+0.5
PMG	Port Moresby	26.13	126	P	P	18 24 55.0	+0.7
	comp=Z,32nm,0.8s,baz=323,slow=6.2,SNR=13						
PMG	Port Moresby	26.13	126	P	P	18 24 54.7	+0.5
PMG				IAmb	IAmb	18 24 55.7	
	comp=Z,27nm,0.7s						
PMG	Port Moresby	26.13	126	P	P	18 24 55.3	+1.1
COEN	Coen	26.22	139	P	P	18 24 55.6	+0.5
COEN				IAmb	IAmb	18 25 00.2	
	comp=Z,9.8nm,0.8s						
WB0	Warramunga Arr	26.97	162	P	P	18 25 01.9	+0.2
WRAB	Tennant Creek	27.12	162	P	P	18 25 02.6	-0.5
WRAB				IAmb	IAmb	18 25 38.6	
	comp=Z,12nm,1.1s						
WRA	Warramunga Arr	27.12	162	P	P	18 25 03.0	0.0
	comp=Z,1.0nm,0.4s,baz=338,slow=10,SNR=20						
WRA				PcP	PcP	18 28 21.2	+0.3
	comp=Z,1.9nm,0.8s,baz=350,slow=3.6,SNR=6.2						
WRA				S	S	18 29 29.3	-3.1
	comp=Z,0.8nm,0.7s,baz=346,slow=14,SNR=3.2						
WRA				ScP	ScP	18 31 49.6	-0.3
	comp=Z,0.5nm,0.8s,baz=342,slow=3.0,SNR=1.8						
WRA	Warramunga Arr	27.12	162	P	P	18 25 03.4	+0.3
WB2	Warramunga Arr	27.12	162	P	P	18 25 03.1	-0.1
WB2				IAmb	IAmb	18 25 14.8	
	comp=Z,9.2nm,0.8s						
RPSI	Rantau Prapat	27.15	264	P	P	18 25 04.1	+0.7
WR0	Warramunga Arr	27.20	162	P	P	18 25 03.8	0.0
WR0				IAmb	IAmb	18 25 41.1	
	comp=Z,18nm,1.4s						
PSA00	Pilbara Seismi	28.10	192	P	P	18 25 10.1	-1.7
PSA00				IAmb	IAmb	18 25 13.8	
	comp=Z,58nm,1.6s						
JMN	Monobe	28.50	14	P	P	18 25 14.7	-0.6
ENH	Enshi	28.64	329	P	P	18 25 15.8	-0.7
GSI	Gunungsitoli	28.70	262	P	P	18 25 15.7	-1.5
GSI				IAmb	IAmb	18 25 17.4	
	comp=Z,22nm,0.8s						
GSI	Gunungsitoli	28.70	262	P	P	18 25 15.5	-1.8
CMAR	Chiang Mai Arr	29.07	297	P	P	18 25 19.3	-1.2
	comp=Z,0.6nm,0.7s,baz=118,slow=7.9,SNR=5.9						
CMAR				PcP	PcP	18 28 26.3	+0.5
	comp=Z,0.5nm,0.7s,baz=128,slow=1.5,SNR=5.9						
CMAR				ScP	ScP	18 31 55.7	-0.4
	comp=Z,0.4nm,0.5s,baz=139,slow=1.9,SNR=2.5						
CMAR	Chiang Mai Arr	29.07	297	P	P	18 25 19.1	-1.4
JWT	Wachi	30.36	15	P	P	18 25 32.5	+0.8
JWT				IAmb	IAmb	18 25 53.6	
	comp=Z,59nm,1.8s						
AS31	Alice Springs	30.54	166	P	P	18 25 33.2	-0.3
ASAR	Alice Springs	30.55	166	P	P	18 25 33.9	+0.5
	comp=Z,3.7nm,0.5s,baz=342,slow=7.5,SNR=99						
ASAR				PcP	PcP	18 28 29.6	0.0
	comp=Z,2.9nm,0.7s,baz=352,slow=2.6,SNR=15						
ASAR				S	S	18 30 23.9	-2.3
	comp=Z,0.9nm,0.8s,baz=352,slow=19,SNR=5.0						
ASAR				ScP	ScP	18 32 00.3	-0.4
	comp=Z,0.5nm,0.6s,baz=342,slow=2.8,SNR=5.3						
ASAR	Alice Springs	30.55	166	P	P	18 25 33.2	-0.3
ASAR				PcP	PcP	18 28 29.4	-0.1
INU	Inuyama	30.88	18	P	P	18 25 36.9	+0.6
INU				IAmb	IAmb	18 25 37.8	
	comp=Z,12nm,0.7s						
JGF	Kuroka	31.22	18	P	P	18 25 39.9	+0.7
JGF				IAmb	IAmb	18 26 02.1	
	comp=Z,10.0nm,1.1s						
KSRS	Korea Array	31.30	3	P	P	18 25 40.6	+0.8
	comp=Z,2.1nm,0.6s,baz=189,slow=10,SNR=15						
KSRS				ScP	ScP	18 32 04.7	+1.8
	comp=Z,0.6nm,0.6s,baz=183,slow=3.3,SNR=4.2						
KSRS				LR	LR	18 40 09.3	
	comp=Z,11nm,18.7s,baz=145,slow=40						
KS19	Wonju Array Si	31.35	3	P	P	18 25 41.0	+0.7
XAN	Xi'an	32.01	333	P	P	18 25 45.5	-0.7
MAJO	Matsushiro	32.35	19	P	P	18 25 48.9	-0.3
MJAR	Matsushiro Arr	32.35	19	P	P	18 25 48.8	-0.4
	comp=Z,3.3nm,0.9s,baz=195,slow=9.1,SNR=11						
CTAO	Charters Tower	32.77	143	P	P	18 25 56.3	+3.4
CTAO				IAmb	IAmb	18 26 05.5	
	comp=Z,8.3nm,1.1s						
JSD	Sado	33.74	18	P	P	18 26 01.4	+0.2
JSD				IAmb	IAmb	18 26 12.2	
	comp=Z,39nm,1.8s						
JMM	Marumori	34.42	21	P	P	18 26 08.5	+1.4
BJT	Baijiatuau	34.94	347	P	P	18 26 10.9	-0.6
MORW	Morawa	36.20	195	P	P	18 26 22.5	+0.1
MORW				IAmb	IAmb	18 26 38.4	
	comp=Z,36nm,1.4s						
FORT	Forrest	36.68	177	P	P	18 26 27.1	+0.7
FORT				IAmb	IAmb	18 26 49.8	
	comp=Z,37nm,1.6s						
JTM	Tenmabayashi	37.14	19	P	P	18 26 31.6	+1.4
SHL	Shillong	37.90	305	P	P	18 26 36.7	-0.5
SHL				IAmb	IAmb	18 26 39.4	
	comp=Z,6.6nm,0.7s						
USRK	Ussuriysk Ar.	38.36	7	P	P	18 26 42.0	+1.5
	comp=Z,5.3nm,0.6s,baz=187,slow=6.6,SNR=15						
USRK	Ussuriysk Ar.	38.36	7	P	P	18 26 41.2	+0.8
USA0B	Ussuriysk Arra	38.36	7	P	P	18 26 42.5	+2.1
USA0B				IAmb	IAmb	18 26 43.3	
	comp=Z,6.8nm,0.7s						
MDJ	Mudanjiang	38.54	4	P	P	18 26 43.4	+1.5
MDJ				IAmb	IAmb	18 26 44.9	
	comp=Z,14nm,1.0s						
ERM	Erimo	38.94	21	P	P	18 26 46.5	+1.2
JEW	Eniwo	39.12	18	P	P	18 26 47.8	+1.1
NWAO	Narrogin (SRO)	39.64	192	P	P	18 26 51.9	+0.6
NWAO	Narrogin (SRO)	39.64	192	P	P	18 26 51.7	+0.4
NWAO				IAmb	IAmb	18 26 57.0	
	comp=Z,36nm,1.5s						
BBOO	Buckleboo	39.83	167	P	P	18 26 53.3	+0.5
BBOO				IAmb	IAmb	18 26 54.7	
	comp=Z,16nm,0.8s						
STKA	Stephens Creek	40.57	159	P	P	18 27 00.1	+1.1
	comp=Z,4.1nm,0.4s,baz=332,slow=9.4,SNR=29						
STKA				PcP	PcP	18 28 58.8	-0.1
	comp=Z,2.3nm,0.7s,baz=315,slow=6.1,SNR=3.0						
STKA	Stephens Creek	40.57	159	P	P	18 27 00.0	+1.1
ASAJ	Asahikawa	40.63	18	P	P	18 27 01.2	+2.0
	comp=Z,8.4nm,0.8s,baz=238,slow=8.1,SNR=13						
JKA	Kamikawa-asahi	40.63	18	P	P	18 27 01.8	+2.5
YSS	Yuzh-Sakhalins	43.24	17	P	P	18 27 20.9	+0.5
YSS				IAmb	IAmb	18 27 22.5	
	comp=Z,16nm,1.0s						
KLR	Kul'dur	43.30	6	P	P	18 27 21.2	+0.3
	comp=Z,3.1nm,0.8s,baz=233,slow=7.0,SNR=14						
ARMA	Armidale	43.83	147	P	P	18 27 27.4	+1.9
ULN	Ulaanbaatar	44.68	342	P	P	18 27 32.7	+0.6
ULN					PcP	18 29 12.6	+0.1
SONM	Songino Array	44.86	341	P	P	18 27 33.3	-0.2
	comp=Z,0.9nm,1.1s,baz=154,slow=6.8,SNR=3.1						
SONM				PcP	PcP	18 29 12.9	-0.3
	comp=Z,2.5nm,0.7s,baz=167,slow=3.0,SNR=18						
SONM	Songino Array	44.86	341	P	P	18 27 34.5	+1.0
SONM				PcP	PcP	18 29 12.8	-0.3
SANVU	Saraoutou	46.11	118	P	P	18 27 45.2	+1.5
SANVU				IAmb	IAmb	18 27 46.0	
	comp=Z,49nm,1.6s						
CAN	Canberra	46.53	154	P	P	18 27 48.9	+2.2
CAN				IAmb	IAmb	18 28 21.8	
	comp=Z,19nm,1.3s						
TOO	Toolangi	47.07	159	P	P	18 27 53.6	+2.7
TOO				IAmb	IAmb	18 28 23.8	
	comp=Z,14nm,1.4s						
DZM	Mont Dzumac	48.52	126	P	P	18 28 03.4	+1.0
WMQ	Urumqi	50.39	324	*e*P	P	18 28 18.1	+1.9
PEA0B	Petropavlovsk-	53.60	23	P	P	18 28 41.2	+1.5
PEA0B				IAmb	IAmb	18 28 42.4	
	comp=Z,21nm,1.1s						
PETK	Petropavlovsk-	53.60	23	P	P	18 28 41.6	+1.9
	comp=Z,8.5nm,0.8s,baz=188,slow=5.5,SNR=11						
PETK	Petropavlovsk-	53.60	23	P	P	18 28 41.2	+1.5
MK31	Makanchi Array	55.22	325	P	P	18 28 50.6	-1.0
MK31				PcP	PcP	18 29 49.9	-1.3
MKAR	Makanchi Array	55.22	325	P	P	18 28 50.4	-1.2
	comp=Z,1.2nm,0.5s,baz=118,slow=7.2,SNR=25						
MKAR				pP	pP	18 29 19.4	-1.5
	comp=Z,0.6nm,0.5s,baz=124,slow=7.3,SNR=2.7						
MKAR				PcP	PcP	18 29 49.5	-1.6
	comp=Z,1.4nm,0.5s,baz=117,slow=4.3,SNR=8.7						
MKAR				ScP	ScP	18 33 36.3	-2.2
	comp=Z,0.2nm,0.6s,baz=109,slow=5.7,SNR=2.6						
MKAR	Makanchi Array	55.22	325	P	P	18 28 50.6	-1.0
MAKZ	Makanchi	55.41	325	P	P	18 28 52.8	-0.1
NIL	Nilore	55.91	307	P	P	18 28 57.0	+0.1
NIL				IAmb	IAmb	18 28 57.8	
	comp=Z,7.1nm,0.8s						
YAK	Yakutsk	55.92	2	P	P	18 28 55.4	-0.9
MA2	Magadan	56.66	15	P	P	18 29 02.8	+1.2
AAK	Ala-Archa	58.13	317	P	P	18 29 12.4	-0.1
	comp=Z,0.5nm,0.5s,baz=88,slow=6.7,SNR=2.2						
ZAA0	Zalesovo Array	58.18	333	P	P	18 29 12.0	-0.3
ZALV	Zalesovo Beam	58.18	333	P	P	18 29 10.5	-1.8
	comp=Z,0.7nm,0.4s,baz=115,slow=5.0,SNR=4.7						
ZALV	Zalesovo Beam	58.18	333	P	P	18 29 10.7	-1.6
KURBB	Kurchatov Arra	59.38	327	P	P	18 29 19.0	-1.7
	comp=Z,1.7nm,0.7s,baz=124,slow=6.7,SNR=23						
KURK	Kurchatov	59.38	327	P	P	18 29 20.2	-0.5
KURK				IAmb	IAmb	18 29 21.9	
	comp=Z,2.9nm,0.7s						
KBL	Kabul	59.51	307	P	P	18 29 20.6	-1.6
KBL				IAmb	IAmb	18 29 29.0	
	comp=Z,2.7nm,0.6s						
KK31	Karatay Array	61.02	316	P	P	18 29 30.7	-1.4
KKAR	Karatay Array	61.02	316	P	P	18 29 30.9	-1.2
KKAR	Karatay Array	61.02	316	P	P	18 29 30.7	-1.4
KKAR				IAmb	IAmb	18 29 31.7	
	comp=Z,2.8nm,1.0s						
WKZ	Wanaka	63.68	147	P	P	18 29 49.3	-0.4
TIXI	Tiksi	65.54	1	P	P	18 30 00.6	-0.7
TIXI				IAmb	IAmb	18 30 02.6	
	comp=Z,11nm,0.8s						
ABKAR	Akbulak array	69.87	320	P	P	18 30 27.6	-1.3
ABKAR	Akbulak array	69.87	320	P	P	18 30 28.3	-0.6
ABKAR				IAmb	IAmb	18 30 53.5	
	comp=Z,3.1nm,1.4s						
UNV	Unalaska Valle	71.97	35	P	P	18 30 41.8	+0.3
ARU	Arti	72.57	327	P	P	18 30 43.3	-1.7
ARU				IAmb	IAmb	18 30 58.0	
	comp=Z,19nm,1.7s						
RDOG	Red Dog Mine	77.41	21	P	P	18 31 13.2	+0.5
RDOG				IAmb	IAmb	18 31 16.0	
	comp=Z,20nm,1.7s						
TTA	Tatalina	79.19	27	P	P	18 31 24.1	+1.5
OHAK	Old Harbor	79.93	33	P	P	18 31 28.4	+1.8
A21K	Barrow	80.27	19	P	P	18 31 29.0	+0.8
A21K				IAmb	IAmb	18 31 30.5	
	comp=Z,7.6nm,0.6s						
KDAK	Kodiak Island	80.35	33	P	P	18 31 30.0	+1.1
RSO	Redoubt South	80.47	30	P	P	18 31 29.9	+0.2
IMAR	Indian Mountai	80.55	24	P	P	18 31 30.9	+1.2
PPLA	Purkeypile	80.93	27	P	P	18 31 33.4	+1.4
PPLA				IAmb	IAmb	18 31 46.8	
	comp=Z,37nm,1.6s						
CNPM	China Poot	81.17	31	P	P	18 31 34.1	+0.9
SKT	Skwentna	81.17	28	P	P	18 31 34.2	+1.1
SKT				IAmb	IAmb	18 31 34.7	
	comp=Z,16nm,1.1s						
BRLK	Bradley Lake	81.36	31	P	P	18 31 33.8	-0.4
SUA	Susitna One	81.51	29	P	P	18 31 35.5	+0.4
SUA				IAmb	IAmb	18 31 37.1	
	comp=Z,21nm,0.8s						
KTH	Kantishna Hill	81.55	27	P	P	18 31 36.9	+1.7
KTH				IAmb	IAmb	18 31 51.8	
	comp=Z,16nm,1.3s						
BPAW	Bear Paw Mtn.	81.55	26	P	P	18 31 36.1	+1.0
BPAW				IAmb	IAmb	18 31 38.2	
	comp=Z,26nm,1.2s						
TRF	Thorofare Moun	81.83	27	P	P	18 31 37.9	+1.1
TRF				IAmb	IAmb	18 31 38.7	
	comp=Z,12nm,0.9s						
O22K	Cooper Landing	81.97	30	P	P	18 31 38.0	+0.7
COLD	Coldfoot	82.07	23	P	P	18 31 38.6	+0.8
COLD				IAmb	IAmb	18 31 40.2	
	comp=Z,18nm,1.7s						
SEW	Seward	82.09	30	P	P	18 31 38.6	+0.6
PMR	Palmer	82.29	29	P	P	18 31 40.1	+1.1
PMR				IAmb	IAmb	18 31 40.3	
	comp=Z,31nm,1.2s						
I23K	Minto, Yukon-K	82.31	25	P	P	18 31 40.5	+1.5
I23K				IAmb	IAmb	18 31 41.9	
	comp=Z,17nm,1.4s						
TOLK	Toolik Lake Re	82.38	22	P	P	18 31 41.2	+1.7
RND	Reindeer	82.47	27	P	P	18 31 40.5	+0.5
RND				IAmb	IAmb	18 31 42.8	
	comp=Z,14nm,1.1s						
SML	Sawmill	82.67	29	P	P	18 31 42.2	+1.1
MDM	Murphy Dome	82.78	25	P	P	18 31 42.1	+0.6
WRH	Wood River Hil	82.83	26	P	P	18 31 41.7	-0.1
WRH				IAmb	IAmb	18 31 44.0	
	comp=Z,16nm,1.3s						
CCB	Clear Creek Bu	82.96	26	P	P	18 31 42.5	+0.1
CCB				IAmb	IAmb	18 31 44.5	
	comp=Z,15nm,1.2s						
SCM	Sheep Creek Mo	83.15	28	P	P	18 31 44.5	+0.9
HDA	Harding Lake	83.32	26	P	P	18 31 44.1	-0.2
HDA				IAmb	IAmb	18 31 45.7	
	comp=Z,7.0nm,1.0s						
IL31		83.35	26	P	P	18 31 44.3	-0.1
IL31				IAmb	IAmb	18 31 44.7	
	comp=Z,24nm,1.8s						
ILAR	Eielson Array	83.35	26	P	P	18 31 44.2	-0.2
	comp=Z,1.8nm,0.8s,baz=248,slow=4.7,SNR=16						
ILAR	Eielson Array	83.35	26	P	P	18 31 44.0	-0.5
FID	Port Fidalgo	83.57	30	P	P	18 31 45.4	-0.2
M24K	Tolsona, Glenn	83.69	28	P	P	18 31 47.2	+0.8
KLU	Klutina	83.83	29	P	P	18 31 47.8	+0.8
KLU				IAmb	IAmb	18 32 16.1	
	comp=Z,16nm,1.2s						
PAX	Paxson	84.00	27		P	18 31 49.7	+1.7
PAX				IAmb	IAmb	18 31 50.9	
	comp=Z,16nm,1.4s						
FYU	Fort Yukon	84.02	24	P	P	18 31 49.6	+1.9
BMAR	Burnt Mountain	84.25	23	P	P	18 31 50.9	+1.9
N25K	Chitina, Valde	84.46	29	P	P	18 31 52.3	+2.1
N25K				IAmb	IAmb	18 32 29.3	
	comp=Z,33nm,1.6s						
GLB	Gilahina Butte	84.84	29	P	P	18 31 54.7	+2.5
GLB				IAmb	IAmb	18 32 19.1	
	comp=Z,25nm,1.5s						
VNDA	Vanda	85.82	173	P	P	18 31 56.6	+0.1
	comp=Z,1.4nm,0.7s,baz=280,slow=6.1,SNR=1.6						
BRTR	Keskin Array B	87.95	310	P	P	18 32 05.9	-2.0
	comp=Z,1.0nm,1.0s,baz=36,slow=4.6,SNR=3.8						
ARCES	ARCESS Array B	88.01	340	P	P	18 32 06.2	-1.2
	comp=Z,2.1nm,0.7s,baz=95,slow=9.9,SNR=9.0						
ARCES	ARCESS Array B	88.01	340	IAmb	IAmb	18 32 15.5	
	comp=Z,28nm,1.5s						
ANTO	Ankara	88.58	310	P	P	18 32 13.1	+2.3
ANTO					pP	18 32 44.6	+1.6
FINES	FINESS Array B	89.43	332	P	P	18 32 12.6	-1.5
	comp=Z,1.1nm,0.5s,baz=85,slow=5.8,SNR=13						
AKASG	Malin Array Be	89.61	321	P	P	18 32 13.0	-2.3
	comp=Z,0.4nm,0.4s,baz=68,slow=5.1,SNR=2.5						
NOA	NORSAR Array B	96.37	334	P	P	18 32 44.1	-2.1
	comp=Z,0.8nm,0.7s,baz=66,slow=4.5,SNR=3.7						
YKA	Yellowknife Ar	97.71	24	P	P	18 32 52.0	-0.1
	comp=Z,0.6nm,0.8s,baz=301,slow=4.0,SNR=11						
NVAR	Mina Array Bea	105.93	47	Pdiff	Pdif	18 33 30.1	+0.5
	comp=Z,0.2nm,0.5s,baz=273,slow=5.3,SNR=3.3						
TXAR	Lajitas Array	120.77	51	PKP	PKPdf	18 38 09.9	0.0
	comp=Z,0.1nm,0.4s,baz=263,slow=1.5,SNR=1.8						
TORD	Torodi Ar. Bea	121.44	289	PKP	PKPdf	18 38 10.3	-1.0
	comp=Z,1.7nm,0.8s,baz=27,slow=2.3,SNR=7.8						
TORD	Torodi Ar. Bea	121.44	289		PKPdf	18 38 08.1	-3.2
PLCA	Paso Flores	142.44	159	PKhKP	PKPpre	18 38 47.1	
	comp=Z,1.3nm,0.7s,baz=252,slow=3.2,SNR=2.7						
LPAZ	La Paz	162.86	128	PKP	PKPdf	18 39 21.2	+0.4
	comp=Z,0.9nm,0.8s,baz=315,slow=4.3,SNR=2.1						
LPAZ				PKPab	PKPab	18 40 12.9	+2.5
	comp=Z,1.7nm,0.9s,baz=241,slow=4.4,SNR=4.5						

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*THR **21** 18:27:32.4±0.4, 30°.01N×60°.81E, h14^{km}±6^{km}, ML3.7*
*TEH **21** 18:27:33.8, 30°.12N×60°.84E, h14^{km}, ML3.7*
ISC 21 18:27:33.2±1.5**, 30°.00N**±0°.05×**60°.93E**±0°.09**, h10**^{km}**, n18,** σ1^{s}.**28**/19**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SZD1	Zahaedan-tmp	0.51	187	*e*Pg	Pn	18 27 46.6	-0.1
SZD1				*e*Sg	Sn	18 27 55.5	-0.1
KBAM	BAM	2.33	249	*e*Pn	Pb	18 28 13.4	-1.9
KBAM				*e*		18 28 21.0	
	comp=Z,99nm,0.4s						
BSRN	Basiran	2.50	322	*e*Pg	Pb	18 28 16.4	-1.9
BSRN				*e*Sg	Sb	18 28 48.5	-0.7
BSRN	Basiran	2.50	322	*e*Pn	Pb	18 28 16.4	-1.9
IKOO	Kooshah	2.93	326	*e*Pn	Pn	18 28 19.6	-0.5
IKOO				*e*		18 29 12.5	
	comp=Z,99nm,0.8s						
CHMN	Cheshme madani	2.95	268	*e*	Pg	18 28 32.8	+3.1
	comp=Z,99nm,0.5s						
IMON	Monand	3.36	342	*e*Pn	Pn	18 28 27.8	+1.8
IMON				*e*		18 28 44.8	
	comp=Z,99nm,0.4s						
ITEG	Tejag	3.44	328	*e*	Pg	18 28 44.1	+4.9
	comp=Z,99nm,0.4s						
KRBR	Kerman	3.62	271	*e*Pn	Pn	18 28 28.8	-0.8
KRBR				IAML		18 29 30.4	
	comp=E,119nm,0.5s						
KRBR	Kerman	3.62	271	*e*Pn	Pn	18 28 28.8	-0.8
SHRT	Shahrakht	3.68	352	*e*Pn	Pn	18 28 30.5	+0.3
SHRT	Shahrakht	3.68	352	*e*Pn	Pn	18 28 30.5	+0.3
AFRZ	Afriz	3.79	335	*e*Pn	Pn	18 28 31.3	-0.5
KHGB	Koh Gabri	3.88	277	*e*Pn	Pn	18 28 33.7	+0.6
KHGB				*e*		18 28 48.8	
	comp=Z,99nm,0.8s						
TPRV	Parvadeh(Tabas	4.72	311	*e*Pn	Pn	18 28 44.5	0.0
TPRV				*e*		18 30 16.8	
	comp=Z,99nm,1.0s						
TKDS	Koohdasht(Taba	4.85	319	*e*Pn	Pn	18 28 46.4	+0.1
TKDS				*e*		18 30 22.1	
	comp=Z,99nm,0.8s						
YZKH	Yazd	5.93	295	*e*Pn	Pn	18 29 01.1	-0.1
YZKH	Yazd	5.93	295	*e*Pn	Pn	18 29 01.1	-0.1

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*IDC **21** 18:52:40.2±1.3, 22°.77S×171°.60E, h0^{km}, mb4.1/7,* *mb1 4.3/8, mb1mx4.1/21, mbtmp4.1/8, ML3.7/1, MS3.3/4, Ms1 3.3/4, ms1mx3.0/21, Error ellipse: s-maj=57.1km s-min=23.6km az=158.0*

NEIC ***21*** *18:52:43.2±2.3, 22°.91S±0°.06×171°.54E±0°.08, h22km±4km, mb4.8/36, Error ellipse: s-maj=11.4km s-min=9.1km az=81.0*

ISC 21 18:52:46.4±0.4**, 22°.96S**±0°.07×**171°.57E**±0°.06**, h49**km**, n105, σ1§48**/104**, mb4.6**/23**, 6C, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	4.82	280	Pn	Pn	18 53 54.5	-2.0
	3.2nm,0.3s,baz=76,slow=19,SNR=38						
DZM				Sn	Sn	18 54 50.1	-1.1
	4.0nm,0.3s,baz=30,slow=20,SNR=1.7						
DZM				LR	LR	18 55 39.0	
	comp=Z,251nm,20.3s,baz=170,slow=37						
DZM	Mont Dzumac	4.82	280	*e*Pn	Pn	18 53 55.8	-0.7
	30nm,0.2s						
DZM				*e*Sn	Sn	18 54 51.5	+0.4
	25nm,0.3s						
DZM				*e*LR	LR	18 55 04.4	
	comp=Z,123nm,22.2s						
DZM	Mont Dzumac	4.82	280		Pn	18 53 54.7	-1.8
MSVF	Nonsavu	8.00	51		Pn	18 54 39.6	-0.5
SANVU	Saraoutou	8.53	330	Pn	Pn	18 54 44.4	-2.9
OUZ	Omahuta	12.35	172	Pn	Pn	18 55 35.6	-3.9
URZ	Urewera	15.98	164	LR	LR	19 01 28.1	
	comp=Z,84nm,20.2s,baz=31,slow=33						
TUWZ	Tuamarina	18.53	174	P	P	18 56 57.7	-1.0
MSWZ	Moikau Station	18.67	171	P	P	18 56 58.4	-1.9
ARMA	Armidale	19.29	243	P	Pn	18 57 09.2	+0.5
KHZ	Kahutara	19.48	176	P	Pn	18 57 11.0	+0.3
KHZ				IAmb	IAmb	18 57 28.1	
	comp=Z,99nm,1.6s						
LTZ	Lake Taylor	19.78	178	P	P	18 57 13.3	+0.8
OXZ	Oxford	20.32	179	P	P	18 57 18.2	-0.2
OXZ				IAmb	IAmb	18 57 24.8	
	comp=Z,53nm,1.7s						
FOZ	Fox Glacier	20.57	184		Pn	18 57 22.8	-0.9
FOZ				IAmb	IAmb	18 58 05.2	
	comp=Z,110nm,1.6s						
RABL	Rabaul	26.46	312	P	P	18 58 17.1	-1.9
RABL				IAmb	IAmb	18 58 48.2	
	comp=Z,33nm,1.6s						
TOO	Toolangi	26.71	231	P	P	18 58 20.5	-0.7
TOO				IAmb	IAmb	18 58 32.8	
	comp=Z,31nm,1.8s						
PMG	Port Moresby	26.98	296	P	P	18 58 23.0	-0.7
PMG				IAmb	IAmb	18 59 06.0	
	comp=Z,21nm,1.2s						
STKA	Stephens Creek	27.98	245	P	P	18 58 33.9	+1.3
	comp=Z,1.0nm,0.6s,baz=72,slow=13,SNR=2.8						
STKA				LR	LR	19 08 12.5	
	comp=Z,63nm,20.3s,baz=31,slow=33						
STKA	Stephens Creek	27.98	245	P	P	18 58 33.0	+0.4
COEN	Coen	28.34	283	P	P	18 58 36.3	+0.4
KWAJ	Kwajalein Atol	31.80	353	P	P	18 59 05.7	-0.7
BBOO	Buckleboo	32.76	245	P	P	18 59 14.3	-0.4
BBOO				IAmb	IAmb	18 59 56.1	
	comp=Z,9.8nm,1.1s						
MCQ	Macquarie Isla	32.90	194	P	P	18 59 17.0	+1.4
AS31	Alice Springs	34.53	261	P	P	18 59 29.1	-1.3
ASAR	Alice Springs	34.53	261	P	P	18 59 30.6	+0.2
	comp=Z,1.5nm,0.8s,baz=89,slow=8.3,SNR=15						
ASAR	Alice Springs	34.53	261	P	P	18 59 29.5	-0.9
WR0	Warramunga Arr	34.53	268	P	P	18 59 29.7	-0.7
WR0				IAmb	IAmb	18 59 59.0	
	comp=Z,22nm,1.6s						
WC3	Warramunga Arr	34.69	268	P	P	18 59 29.5	-2.2
WC3				IAmb	IAmb	19 00 13.4	
	comp=Z,30nm,1.8s						
WB0	Warramunga Arr	34.71	268	P	P	18 59 31.6	-0.3
WB0				IAmb	IAmb	18 59 47.4	
	comp=Z,23nm,1.7s						
WB2	Warramunga Arr	34.71	268	P	P	18 59 32.5	+0.6
WB2				IAmb	IAmb	18 59 41.0	
	comp=Z,19nm,1.6s						
WRA	Warramunga Arr	34.72	268	P	P	18 59 31.3	-0.7
	comp=Z,0.8nm,0.6s,baz=97,slow=8.1,SNR=4.5						
PPT	Papeete	36.77	89	P	P	18 59 49.6	0.0
FORT	Forrest	39.39	249	P	P	19 00 12.7	+1.2
FORT				IAmb	IAmb	19 00 45.4	
	comp=Z,16nm,0.9s						
FITZ	Fitzroy Crossi	43.15	268	P	P	19 00 42.4	-0.1
FITZ				IAmb	IAmb	19 00 52.8	
	comp=Z,63nm,1.8s						
PSAD2	Pilbara Seismi	47.57	261	P	P	19 01 17.0	-0.5
PSAC3	Pilbara Seismi	47.69	261	P	P	19 01 18.7	+0.3
PSAD3	Pilbara Seismi	47.73	261	P	P	19 01 19.5	+0.8
VNDA	Vanda	54.82	183	LR	LR	19 22 18.5	
	comp=Z,58nm,18.0s,baz=330,slow=32						
MJAR	Matsushiro Arr	67.04	331	P	P	19 03 33.2	-1.2
	comp=Z,1.1nm,0.9s,baz=174,slow=8.4,SNR=4.9						
QSPA	South Pole Qui	67.12	180	P	P	19 03 34.9	+0.1
QSPA				IAmb	IAmb	19 04 03.0	
	comp=Z,10nm,1.1s						
TPUB	Ta-pu	67.57	309	P	P	19 03 36.6	-1.5
SSLB	Suanglung	67.65	310	P	P	19 03 37.6	-1.0
JSD	Sado	68.26	332	P	P	19 03 42.4	+0.3
NONG	Nongkai	78.29	295	P	P	19 04 45.4	+3.8
ENH	Enshi	79.70	309	P	P	19 04 48.9	-0.2
CM36	Chiang Mai Arr	81.90	294	P	P	19 05 04.0	+2.9
CM35	Chiang Mai Arr	81.92	294	P	P	19 05 03.0	+1.8
CM04	Chiang Mai Arr	81.94	294	P	P	19 05 04.3	+3.0
CM09	Chiang Mai Arr	81.95	294	P	P	19 05 04.5	+3.0
CM01	Chiang Mai Arr	81.97	294	P	P	19 05 04.8	+3.3
CM05	Chiang Mai Arr	81.97	294	P	P	19 05 04.4	+2.9
CM02	Chiang Mai Arr	81.98	294	P	P	19 05 06.0	+4.5
CM31	Chiang Mai Arr	82.00	294	P	P	19 05 04.7	+3.1
CM31	Chiang Mai Arr	82.00	294	P	P	19 05 02.8	+1.2
CMAR	Chiang Mai Arr	82.00	294	P	P	19 05 04.0	+2.4
	comp=Z,3.0nm,0.8s,baz=133,slow=4.1,SNR=26						
CMAR	Chiang Mai Arr	82.00	294	P	P	19 05 03.2	+1.6
CM34	Chiang Mai Arr	82.00	294	P	P	19 05 04.0	+2.3
CM13	Chiang Mai Arr	82.01	294	P	P	19 05 04.6	+2.9
CM15	Chiang Mai Arr	82.01	294	P	P	19 05 04.5	+2.8
CMMT	Chiang Mai	82.16	294	P	P	19 05 03.0	+0.5
CM33	Chiang Mai Arr	82.16	294	P	P	19 05 04.7	+2.2
CHTO	Chiang Mai	82.16	294	P	P	19 05 03.2	+0.7
CHTO				IAmb	IAmb	19 05 05.6	
	comp=Z,4.9nm,0.8s						
CM32	Chiang Mai Arr	82.17	294	P	P	19 05 15.0	+12
PAHR	Pah Rah Range	89.57	46	P	P	19 05 39.1	+0.2
PAHR				IAmb	IAmb	19 05 46.3	
	comp=Z,5.3nm,1.3s						
NVAR	Mina Array Bea	89.65	48	P	P	19 05 39.7	+0.3
	comp=Z,1.0nm,0.7s,baz=225,slow=8.0,SNR=9.9						
NVAR	Mina Array Bea	89.65	48	P	P	19 05 39.4	+0.1
NV11	Mina Array Sit	89.76	48	P	P	19 05 39.2	-0.5
SML	Sawmill	90.37	18	P	P	19 05 42.9	+1.0
PINE	Pine Mountain	90.68	42	P	P	19 05 43.3	-0.7
PINE				IAmb	IAmb	19 05 46.0	
	comp=Z,3.2nm,0.7s						
ULN	Ulaanbaatar	91.13	323	P	P	19 05 45.8	-0.1
ULN				IAmb	IAmb	19 05 49.0	
	comp=Z,11nm,1.8s						
SONM	Songino Array	91.48	322	P	P	19 05 47.7	+0.1
	comp=Z,1.4nm,0.8s,baz=137,slow=5.3,SNR=7.9						
SONM	Songino Array	91.48	322	P	P	19 05 47.2	-0.3
ILAR	Eielson Array	93.14	17	P	P	19 05 57.4	+2.7
	comp=Z,0.7nm,0.9s,baz=232,slow=5.8,SNR=5.6						
WMQ	Urumqi	101.32	313	*e*P	Pdif	19 06 33.3	+1.1
MKAR	Makanchi Array	105.89	314	Pdiff	Pdif	19 06 54.5	+2.1
	comp=Z,0.2nm,0.7s,baz=97,slow=5.3,SNR=2.2						
BVAR	Borovoye Array	114.64	319	PKP	PKPdf	19 11 20.7	-0.3
	comp=Z,0.2nm,0.5s,baz=189,slow=8.3,SNR=2.6						
ARU	Arti	121.50	323	PKP	PKPdf	19 11 34.3	+0.2
	comp=Z,0.5nm,0.4s,baz=104,slow=4.2,SNR=4.5						
AKTO	Aktyubinsk	122.25	316	PKP	PKPdf	19 11 35.8	+0.1
	comp=Z,1.4nm,0.6s,baz=76,slow=12,SNR=4.6						
MORC	Moravsky Berou	146.35	329	*e*PKP	PKPab	19 12 23.7	+1.1
OSTC	Ostas	146.41	331	⇑*e*PKP	PKPbc	19 12 22.5	+0.7
DPC	Dobruska-Polom	146.51	331	⇑*e*PKP	PKPbc	19 12 23.1	+0.9
JAVC	Velka Javorina	146.91	328	*e*PKP	PKPab	19 12 25.4	+0.6
VRAC	Vranov	147.12	329	PKPbc	PKPbc	19 12 24.6	+0.7
	comp=Z,1.1nm,0.3s,baz=105,slow=4.8,SNR=3.8						
VRAC	Vranov	147.12	329	*e*PKP	PKPbc	19 12 24.9	+1.0
CLL	Collm	147.19	335	*e*PKPbc	PKPab	19 12 26.0	+0.3
KRUC	Moravsky	147.39	329	*e*PKP	PKPbc	19 12 25.2	+0.6
EKA	Eskdalemuir Ar	147.43	354	PKPbc	PKPbc	19 12 24.2	-0.3
	comp=Z,1.1nm,0.6s,baz=2.3,slow=3.6,SNR=3.9						
PRU	Pruhonice	147.56	332	⇑*e*PKP	PKPbc	19 12 25.9	+0.8
PBCC	Pribram	148.02	332	⇑*e*PKP	PKPbc	19 12 27.0	+0.7
CONA	Conrad Observa	148.43	328	*e*P	PKPbc	19 12 28.7	+1.1
	comp=Z,4.5nm,1.0s						
CKRC	Cesky Krumlov	148.53	331	⇑*e*PKP	PKPbc	19 12 28.4	+0.7
IDI	Anoyia	148.55	301	PKPbc	PKiKP	19 12 30.1	+0.3
	comp=Z,19nm,1.1s,baz=19,slow=2.4,SNR=6.3						
IDI	Anoyia	148.55	301		PKPbc	19 12 29.2	+0.9
KHC	Kasperske Hory	148.62	332	⇑*e*PKP	PKPbc	19 12 28.3	+0.4
KHC				*e*x	x	19 12 52.3	
GERES	GERESS Array B	148.78	331	PKP	PKPdf	19 12 25.2	+0.6
	comp=Z,1.3nm,0.7s,baz=104,slow=0.4,SNR=7.9						
GERES				PKPbc	PKPbc	19 12 28.9	+0.5
	comp=Z,1.3nm,0.7s,baz=48,slow=1.5,SNR=11						
GERES	GERESS Array B	148.78	331		PKPdf	19 12 23.8	-0.8
GERES				PKPbc	PKPbc	19 12 28.7	+0.3
ARSA	Arzberg	149.06	327	*e*P	PKiKP	19 12 31.2	+0.8
	comp=Z,5.2nm,1.3s						
MOA	Molln	149.25	329	*e*P	PKiKP	19 12 31.3	+0.6
	comp=Z,4.0nm,1.1s						
MYKA	Terra Mystica	150.42	328	*e*P	PKPbc	19 12 32.4	-0.1
	comp=Z,5.7nm,1.0s						
WATA	Walderalm	150.85	331	*e*P	PKPbc	19 12 33.9	+0.3
	comp=Z,12nm,1.8s						
ABTA	Abfaltersbach	150.87	330	*e*P	PKPbc	19 12 33.6	0.0
	comp=Z,3.3nm,0.6s						
WTTA	Wattenberg	150.88	331	*e*P	PKPbc	19 12 34.2	+0.5
	comp=Z,6.1nm,0.8s						
MOTA	Moosalm	151.05	332	*e*P	PKPbc	19 12 34.4	+0.3
	comp=Z,5.0nm,0.7s						
SQTA	Sankt Quirin	151.10	332	*i* P	PKPbc	19 12 34.6	+0.5
	comp=Z,2.9nm,0.6s						
DAVOX	Davos/Dischmat	152.02	333	PKPbc	PKPbc	19 12 36.4	0.0
	comp=Z,4.1nm,0.7s,baz=0.0,slow=1.0,SNR=3.4						

NEIC ***21*** *19:10:12.8±0.7, 45°.74N±0°.05×26°.55E±0°.06, h146km±1km, Error ellipse: s-maj=7.6km s-min=5.9km az=152.0*

SIGU ***21*** *19:10:12.8, 45°.78N×26°.60E, h144km*

IDC ***21*** *19:10:13.1±1.0, 45°.87N×26°.64E, h129km±11km, mb3.1/2, mb1 3.1/6, mb1mx2.8/44, mbtmp3.5/6, Error ellipse: s-maj=27.1km s-min=16.6km az=98.0*

BUC ***21*** *19:10:13.1±0.3, 45°.69N×26°.58E, h141km±2km, ml4.1/63, Error ellipse: s-maj=2.0km s-min=1.5km az=5.0*

SOF ***21*** *19:10:17.9, 45°.20N×26°.45E, h15km, MD3.7*

BEO ***21*** *19:10:24.9±0.7, 45°.27N×25°.21E, h5km±4km, ML3.2/13*

ISC 21 19:10:12.4±0.8**, 45°.72N**±0°.03×**26°.60E**±0°.02**, h149**km±4km**, n283, σ1§07**/398**, 130C-112D, Romania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLOR	Plostina	0.14	15	⇓P	Pn	19 10 32.4	-0.1
PLOR				⇑S	Sn	19 10 47.4	-0.4
PLOR	Plostina	0.14	15	⇓P	Pn	19 10 32.4	-0.1
PLOR				⇑S	Sn	19 10 47.4	-0.4
PLOR	Plostina	0.14	15		Pn	19 10 32.4	-0.1
PLOR					Sn	19 10 47.4	-0.4
VRI	Vrincioaia	0.17	31	⇑P	Pn	19 10 32.5	+0.1
VRI				⇑S	Sn	19 10 47.5	-0.3
VRI	Vrincioaia	0.17	31	⇑P	Pn	19 10 32.5	+0.1
VRI				⇑S	Sn	19 10 47.5	-0.3
VRI	Vrincioaia	0.17	31		Pn	19 10 32.5	+0.1
VRI					Sn	19 10 47.5	-0.3
BISRR	Bisoca	0.19	155	⇓P	Pn	19 10 33.1	+0.5
BISRR	Bisoca	0.19	155	⇓P	Pn	19 10 33.1	+0.5
BISRR	Bisoca	0.19	155		Pn	19 10 33.0	+0.5
ODBI	Odobesti	0.32	82	⇑P	Pn	19 10 33.8	+1.0
ODBI				⇑S	Sn	19 10 47.7	-0.7
ODBI	Odobesti	0.32	82	⇑P	Pn	19 10 33.8	+1.0
ODBI				⇑S	Sn	19 10 47.7	-0.7
ODBI	Odobesti	0.32	82		Sn	19 10 49.2	+0.8
NEHR	Nehoiu	0.36	216	⇓P	Pn	19 10 33.5	+0.4
NEHR				⇑S	Sn	19 10 48.6	-0.1
NEHR	Nehoiu	0.36	216	⇓P	Pn	19 10 33.5	+0.4
NEHR				⇑S	Sn	19 10 48.6	-0.1
NEHR	Nehoiu	0.36	216		Pn	19 10 33.5	+0.4
NEHR					Sn	19 10 48.6	-0.1
GRER		0.43	142	⇑P	Pn	19 10 34.4	+1.1
GRER				⇓S	Sn	19 10 49.0	-0.1
GRER		0.43	142	⇑P	Pn	19 10 34.4	+1.1
GRER				⇓S	Sn	19 10 49.0	-0.1
PETR	Petresti	0.44	89	⇓P	Pn	19 10 33.8	+0.6
PETR				⇓S	Sn	19 10 49.7	+0.6
PETR	Petresti	0.44	89	⇓P	Pn	19 10 33.8	+0.6
PETR				⇓S	Sn	19 10 49.7	+0.6
PETR	Petresti	0.44	89		Pn	19 10 33.8	+0.6
PETR					Sn	19 10 49.7	+0.6
MLR	Muntele Rosu	0.51	244	⇓P	Pn	19 10 34.0	+0.2
MLR				⇑S	Sn	19 10 49.6	-0.5
MLR	Muntele Rosu	0.51	244	P	Pn	19 10 33.6	-0.2
	56nm,0.3s,baz=340,slow=13,SNR=625						
MLR				S	Sn	19 10 49.2	-0.9
	394nm,0.3s,baz=233,slow=20,SNR=61						
MLR	Muntele Rosu	0.51	244	*e*Pg	Pn	19 10 33.9	+0.1
MLR				*e*Sg	Sn	19 10 44.7	-5.4
MLR	Muntele Rosu	0.51	244	⇓P	Pn	19 10 34.0	+0.2
MLR				⇑S	Sn	19 10 49.6	-0.5
MLR	Muntele Rosu	0.51	244		Pn	19 10 33.9	+0.1
MLR					Sn	19 10 48.3	-1.7
ISR	Istrita	0.60	184	⇑P	Pn	19 10 34.7	+0.5
ISR	Istrita	0.60	184	⇑P	Pn	19 10 34.7	+0.5
ISR	Istrita	0.60	184		Pn	19 10 34.7	+0.5
GHRR		0.66	58	⇓P	Pn	19 10 34.9	+0.5
GHRR				⇓S	Sn	19 10 51.5	+0.2
GHRR		0.66	58	⇓P	Pn	19 10 34.9	+0.5
GHRR				⇓S	Sn	19 10 51.5	+0.2
GHRR		0.66	58		Pn	19 10 34.9	+0.5
GHRR					Sn	19 10 51.5	+0.2
OZUR		0.68	304	⇓P	Pn	19 10 34.4	-0.3
OZUR		0.68	304	⇓P	Pn	19 10 34.4	-0.3
OZUR		0.68	304		Pn	19 10 34.4	-0.3
TUDR		0.76	99	⇓P	Pn	19 10 35.5	+0.4
TUDR				⇑S	Sn	19 10 52.6	+0.2
TUDR		0.76	99	⇓P	Pn	19 10 35.5	+0.4
TUDR				⇑S	Sn	19 10 52.6	+0.2
SECR		0.78	209	⇑P	Pn	19 10 36.0	+0.7
SECR		0.78	209	⇑P	Pn	19 10 36.0	+0.7
SECR		0.78	209		Pn	19 10 36.0	+0.7
TESR	Tescani	0.80	3	⇓P	Pn	19 10 35.1	-0.3
TESR				⇑S	Sn	19 10 51.7	-1.4
TESR	Tescani	0.80	3	⇓P	Pn	19 10 35.1	-0.3
TESR				⇑S	Sn	19 10 51.7	-1.4
TESR	Tescani	0.80	3		Pn	19 10 35.1	-0.3
TESR					Sn	19 10 51.4	-1.6
PGOR	Pogoanele	0.85	161	⇓P	Pn	19 10 36.5	+0.7
PGOR	Pogoanele	0.85	161	⇓P	Pn	19 10 36.5	+0.7
DOPR	Dopca	0.88	287	⇓P	Pn	19 10 36.2	+0.1
DOPR	Dopca	0.88	287	⇓P	Pn	19 10 36.2	+0.1
DOPR	Dopca	0.88	287		Pn	19 10 36.2	+0.1
SCHL	Schela	0.89	104	⇑P	Pn	19 10 36.4	+0.3
SCHL				⇑S	Sn	19 10 53.7	-0.4
SCHL	Schela	0.89	104	⇑P	Pn	19 10 36.4	+0.3
SCHL				⇑S	Sn	19 10 53.7	-0.4
VARL	Varlezi	0.89	78	⇓P	Pn	19 10 36.6	+0.5
VARL				⇑S	Sn	19 10 53.4	-0.8
VARL	Varlezi	0.89	78	⇓P	Pn	19 10 36.6	+0.5
VARL				⇑S	Sn	19 10 53.4	-0.8
PLAR	PLOIESTI	0.90	207	⇑P	Pn	19 10 36.9	+0.8
PLAR	PLOIESTI	0.90	207	⇑P	Pn	19 10 36.9	+0.8
PLAR	PLOIESTI	0.90	207		Pn	19 10 36.9	+0.8
BIR	Birlad	0.90	52	⇑P	Pn	19 10 36.6	+0.4
BIR	Birlad	0.90	52	⇑P	Pn	19 10 36.6	+0.4
BIR	Birlad	0.90	52		Pn	19 10 36.6	+0.4
SULR		1.07	193	⇑P	Pn	19 10 38.2	+0.7
SULR		1.07	193	⇑P	Pn	19 10 38.2	+0.7
SULR		1.07	193		Pn	19 10 38.2	+0.7
VOIR		1.12	256	⇓P	Pn	19 10 38.1	-0.1
VOIR				⇓S	Sn	19 10 57.9	0.0
VOIR		1.12	256	⇓P	Pn	19 10 38.1	-0.1
VOIR				⇓S	Sn	19 10 57.9	0.0
VOIR		1.12	256		Pn	19 10 38.1	-0.1
VOIR					Sn	19 10 57.9	0.0
GIUM	Giurgiulesti	1.15	101	⇓P	Pn	19 10 39.1	+0.8
GIUM				⇑S	Sn	19 10 57.9	-0.3
GIUM	Giurgiulesti	1.15	101	⇓P	Pn	19 10 39.1	+0.8
GIUM				⇑S	Sn	19 10 57.9	-0.3
MTUR	Matau	1.19	246	⇑P	Pn	19 10 39.3	+0.6
MTUR	Matau	1.19	246	⇑P	Pn	19 10 39.3	+0.6
CFR	Carcaliu	1.21	116	⇑P	Pn	19 10 39.3	+0.4
CFR				⇓S	Sn	19 10 58.3	-0.8
CFR	Carcaliu	1.21	116	⇑P	Pn	19 10 39.3	+0.4
CFR				⇓S	Sn	19 10 58.3	-0.8
CFR	Carcaliu	1.21	116		Pn	19 10 39.3	+0.4
CFR					Sn	19 10 58.3	-0.8
AMRR	Amara	1.22	155	⇑P	Pn	19 10 39.6	+0.6
AMRR				⇑S	Sn	19 10 59.6	+0.2
AMRR	Amara	1.22	155	⇑P	Pn	19 10 39.6	+0.6
AMRR				⇑S	Sn	19 10 59.6	+0.2
AMRR	Amara	1.22	155		Pn	19 10 39.6	+0.6
AMRR					Sn	19 10 59.6	+0.2
GIRR	Girov	1.24	357	⇓P	Pn	19 10 39.7	+0.5
GIRR	Girov	1.24	357	⇓P	Pn	19 10 39.7	+0.5
JOSR	Joseni	1.24	323	⇓P	Pn	19 10 39.3	0.0
JOSR	Joseni	1.24	323	⇓P	Pn	19 10 39.3	0.0
JOSR	Joseni	1.24	323		Pn	19 10 39.3	0.0
VASR	Vaslui	1.24	41	⇑P	Pn	19 10 39.5	+0.3
VASR				⇓S	Sn	19 10 58.7	-1.0
VASR	Vaslui	1.24	41	⇑P	Pn	19 10 39.5	+0.3
VASR				⇓S	Sn	19 10 58.7	-1.0
VASR	Vaslui	1.24	41		Pn	19 10 39.5	+0.3
VASR					Sn	19 10 58.7	-1.0
LEHL	Lehliu	1.25	173	⇑P	Pn	19 10 39.9	+0.6
LEHL	Lehliu	1.25	173	⇑P	Pn	19 10 39.9	+0.6
LEHL	Lehliu	1.25	173		Pn	19 10 39.9	+0.6
BIZ	Bicaz	1.27	345	⇓P	Pn	19 10 40.4	+0.9
BIZ				⇓S	Sn	19 11 00.2	-0.1
BIZ	Bicaz	1.27	345	⇓P	Pn	19 10 40.4	+0.9
BIZ				⇓S	Sn	19 11 00.2	-0.1
BIZ	Bicaz	1.27	345		Pn	19 10 40.4	+0.9
BIZ					Sn	19 10 58.8	-1.4
HARR	Harsova	1.39	137	⇑P	Pn	19 10 41.0	+0.3
HARR	Harsova	1.39	137	⇑P	Pn	19 10 41.0	+0.3
HARR	Harsova	1.39	137		Pn	19 10 41.0	+0.3
ARR	Arges	1.42	256	⇑P	Pn	19 10 41.7	+0.6
ARR				⇓S	Sn	19 11 02.9	-0.1
ARR	Arges	1.42	256	⇑P	Pn	19 10 41.7	+0.6
ARR				⇓S	Sn	19 11 02.9	-0.1
ARR	Arges	1.42	256		Pn	19 10 42.4	+1.2
ARR					Sn	19 11 04.0	+0.9
BUC1	Bucharest	1.43	197	⇑P	Pn	19 10 41.5	+0.4
BUC1				⇑S	Sn	19 11 02.7	-0.3
BUC1	Bucharest	1.43	197	⇑P	Pn	19 10 41.5	+0.4
BUC1				⇑S	Sn	19 11 02.7	-0.3
BUC1	Bucharest	1.43	197		Pn	19 10 41.5	+0.4
BUC1					Sn	19 11 02.7	-0.3
STFAR	Stefanesti-Arg	1.44	234	⇑P	Pn	19 10 41.8	+0.6
STFAR				⇓S	Sn	19 11 02.3	-0.9
STFAR	Stefanesti-Arg	1.44	234	⇑P	Pn	19 10 41.8	+0.6
STFAR				⇓S	Sn	19 11 02.3	-0.9
TPGR	Topolog	1.55	123	⇑P	Pn	19 10 42.5	+0.1
TPGR				⇓S	Sn	19 11 04.0	-1.3
TPGR	Topolog	1.55	123	⇑P	Pn	19 10 42.5	+0.1
TPGR				⇓S	Sn	19 11 04.0	-1.3
RASA	Rasa	1.55	165	⇑P	Pn	19 10 42.7	+0.3
RASA	Rasa	1.55	165	⇑P	Pn	19 10 42.7	+0.3
TLBR	Topalu	1.56	138	⇑P	Pn	19 10 42.8	+0.4
TLBR				⇑S	Sn	19 11 04.4	-1.0
TLBR	Topalu	1.56	138	⇑P	Pn	19 10 42.8	+0.4
TLBR				⇑S	Sn	19 11 04.4	-1.0
TLBR	Topalu	1.56	138		Pn	19 10 42.8	+0.4
TLBR					Sn	19 11 04.4	-1.0
SGRR	Singureni	1.56	197	⇓P	Pn	19 10 42.9	+0.4
SGRR				⇓S	Sn	19 11 04.7	-0.8
SGRR	Singureni	1.56	197	⇓P	Pn	19 10 42.9	+0.4
SGRR				⇓S	Sn	19 11 04.7	-0.8
MDB	Medias	1.60	286	⇑P	Pn	19 10 43.6	+0.7
MDB	Medias	1.60	286	⇑P	Pn	19 10 43.6	+0.7
IAS	Iasi	1.62	24	⇑P	Pn	19 10 43.2	+0.1
IAS	Iasi	1.62	24	⇑P	Pn	19 10 43.2	+0.1
IAS	Iasi	1.62	24		Pn	19 10 43.2	+0.1
TLCR		1.65	108	⇓P	Pn	19 10 43.8	+0.5
TLCR				⇑S	Sn	19 11 06.7	-0.4
TLCR		1.65	108	⇓P	Pn	19 10 43.8	+0.5
TLCR				⇑S	Sn	19 11 06.7	-0.4
TLCR		1.65	108		Pn	19 10 43.9	+0.5
TLCR					Sn	19 11 06.8	-0.4
HUMR	Humele	1.65	224	⇑P	Pn	19 10 43.5	0.0
HUMR	Humele	1.65	224	⇑P	Pn	19 10 43.5	0.0
HUMR	Humele	1.65	224		Pn	19 10 43.5	0.0
CVDA	Cernavoda	1.72	143	⇑P	Pn	19 10 44.6	+0.4
CVDA				⇓S	Sn	19 11 07.9	-0.6
CVDA	Cernavoda	1.72	143	⇑P	Pn	19 10 44.6	+0.4
CVDA				⇓S	Sn	19 11 07.9	-0.6
CVDA	Cernavoda	1.72	143		Sn	19 11 07.9	-0.6
RMVG	GOVORA	1.77	248	⇑P	Pn	19 10 45.2	+0.5
RMVG				⇓S	Sn	19 11 10.0	+0.5
RMVG	GOVORA	1.77	248	⇑P	Pn	19 10 45.2	+0.5
RMVG				⇓S	Sn	19 11 10.0	+0.5
TIRR	Tirgusor	1.80	134	⇓P	Pn	19 10 45.4	+0.3
TIRR				⇑S	Sn	19 11 08.6	-1.5
TIRR	Tirgusor	1.80	134	⇓P	Pn	19 10 45.4	+0.3
TIRR				⇑S	Sn	19 11 08.6	-1.5
TIRR	Tirgusor	1.80	134		Pn	19 10 45.5	+0.4
TIRR	Tirgusor	1.80	134		Pn	19 10 45.4	+0.3
TIRR					Sn	19 11 08.4	-1.7
ICOR	Ion Corvin	1.81	151	⇑P	Pn	19 10 46.0	+0.7
ICOR	Ion Corvin	1.81	151	⇑P	Pn	19 10 46.0	+0.7
COPA	Copaceanca	1.86	212	⇑P	Pn	19 10 45.9	+0.1
COPA	Copaceanca	1.86	212	⇑P	Pn	19 10 45.9	+0.1
COPA	Copaceanca	1.86	212		Pn	19 10 45.9	+0.1
JURR	Jurilovca	1.87	120	⇑P	Pn	19 10 47.1	+1.2
JURR	Jurilovca	1.87	120	⇑P	Pn	19 10 47.1	+1.2
MILM	Milestii Mici	1.95	51	⇓P	Pn	19 10 47.0	+0.3
MILM	Milestii Mici	1.95	51	⇓P	Pn	19 10 47.0	+0.3
MILM				⇓S	Sn	19 11 11.3	-1.9
MILM	Milestii Mici	1.95	51		Pn	19 10 47.0	+0.3
MILM					Sn	19 11 11.3	-1.9
MILM	Milestii Mici	1.95	51	P	Pn	19 10 47.0	+0.3
KIS	Kishinev	2.00	49	⇑*i*P	Pn	19 10 47.6	+0.3
KIS				*e*S	Sn	19 11 12.0	-2.3
	900nm,0.5s						
KIS	Kishinev	2.00	49	⇑P	Pn	19 10 47.7	+0.3
KIS	Kishinev	2.00	49	⇑P	Pn	19 10 47.7	+0.3
KIS				⇓S	Sn	19 11 12.9	-1.5
KIS	Kishinev	2.00	49		Pn	19 10 47.7	+0.3
KIS					Sn	19 11 12.8	-1.5
KIS	Kishinev	2.00	49	P	Pn	19 10 47.6	+0.3
KIS				Pm		19 10 47.9	
KIS				m		19 11 12.3	
KIS				S	Sn	19 11 12.8	-1.5
KIS				Sm		19 11 13.0	
LOT	Lotru	2.00	263	⇓P	Pn	19 10 47.8	+0.3
LOT				⇑S	Sn	19 11 14.1	-0.4
LOT	Lotru	2.00	263	⇓P	Pn	19 10 47.8	+0.3
LOT				⇑S	Sn	19 11 14.1	-0.4
MFTR	Murfatlar	2.01	139	⇑P	Pn	19 10 47.8	+0.3
MFTR				⇓S	Sn	19 11 13.4	-1.1
MFTR	Murfatlar	2.01	139	⇑P	Pn	19 10 47.8	+0.3
MFTR				⇓S	Sn	19 11 13.4	-1.1
ARCR	ARCALIA	2.07	312	⇓P	Pn	19 10 48.4	+0.2
ARCR	ARCALIA	2.07	312	⇓P	Pn	19 10 48.4	+0.2
ARCR	ARCALIA	2.07	312		Pn	19 10 48.4	+0.2
BURAR	Bucovina Array	2.12	334	⇓P	Pn	19 10 50.4	+1.5
BURAR	Bucovina Array	2.12	334	⇓P	Pn	19 10 50.4	+1.5
BURAR	Bucovina Array	2.12	334		Pn	19 10 49.8	+0.9
BURAR	Bucovina Array	2.12	334		Pn	19 10 50.4	+1.5
TSCT	Constanta Port	2.14	136	⇑S	Sn	19 11 15.9	-1.2
TSCT	Constanta Port	2.14	136	⇑S	Sn	19 11 15.9	-1.2
RAZG	Razgrad	2.15	182	⇑P	Pn	19 10 49.4	+0.2
RAZG	Razgrad	2.15	182	⇑P	Pn	19 10 49.4	+0.2
RAZG	Razgrad	2.15	182		Pn	19 10 49.4	+0.2
BUR08	Bucovina Ar. S	2.15	334		Pn	19 10 50.4	+1.1
EFOR	EFORIE	2.19	138	⇓P	Pn	19 10 51.1	+1.5
EFOR				⇓S	Sn	19 11 18.1	0.0
EFOR	EFORIE	2.19	138	⇓P	Pn	19 10 51.1	+1.5
EFOR				⇓S	Sn	19 11 18.1	0.0
ZIMR		2.24	204	⇑P	Pn	19 10 50.4	+0.2
ZIMR				⇑S	Sn	19 11 17.9	-1.4
ZIMR		2.24	204	⇑P	Pn	19 10 50.4	+0.2
ZIMR				⇑S	Sn	19 11 17.9	-1.4
CJR	Cluj-Napoca	2.31	297	⇓P	Pn	19 10 51.3	+0.2
CJR	Cluj-Napoca	2.31	297	⇓P	Pn	19 10 51.3	+0.2
CJR	Cluj-Napoca	2.31	297		Pn	19 10 51.3	+0.2
VLAD	Vladila	2.32	223	⇑P	Pn	19 10 51.0	-0.2
VLAD	Vladila	2.32	223	⇑P	Pn	19 10 51.0	-0.2
VLAD	Vladila	2.32	223		Pn	19 10 51.0	-0.2
PSN	Preselentsi	2.33	150	P	Pn	19 10 52.2	+0.9
SZH	Strazhica	2.50	191	P	Pn	19 10 53.4	0.0
PRD	Provadia	2.58	167	P	Pn	19 10 55.5	+1.1
DEV	Deva	2.59	275	⇑P	Pn	19 10 55.5	+1.0
DEV				⇓S	Sn	19 11 28.8	+1.9

DEV	Deva	2.59	275	⇑P	Pn	19 10 55.5	+1.0
DEV				⇓S	Sn	19 11 28.8	+1.9
SRE	Strehaia	2.62	247	⇓P	Pn	19 10 55.1	+0.2
SRE	Strehaia	2.62	247	⇓P	Pn	19 10 55.1	+0.2
SRE	Strehaia	2.62	247		Pn	19 10 55.1	+0.2
PVL	Pavlikeni	2.66	200	P	Pn	19 10 57.2	+1.8
SORM	Soroca	2.70	26	⇑P	Pn	19 10 55.6	-0.2
SORM	Soroca	2.70	26	⇑P	Pn	19 10 55.6	-0.2
SORM	Soroca	2.70	26		Pn	19 10 55.6	-0.2
SORM	Soroca	2.70	26	P	Pn	19 10 55.6	-0.2
GZR	Gura Zlata	2.70	264	⇑P	Pn	19 10 56.8	+0.8
GZR	Gura Zlata	2.70	264	⇑P	Pn	19 10 56.8	+0.8
GZR	Gura Zlata	2.70	264		Pn	19 10 56.8	+0.8
PLVB	Pleven	2.73	212	⇑P	Pn	19 10 56.3	+0.1
PLVB	Pleven	2.73	212	⇑P	Pn	19 10 56.3	+0.1
PLVB	Pleven	2.73	212		Pn	19 10 56.3	+0.1
KSV	Kosov	2.80	339	⇑iP	Pn	19 10 57.9	+0.8
KSV				Pm		19 10 58.5	
KSV				eS	Sn	19 11 31.7	-0.1
KSV				Sm		19 11 36.5	
KMPD	K-Podol'skiy	2.85	358	⇓iP	Pn	19 10 56.3	-1.4
KMPD				i S	Sn	19 11 29.3	-3.5
RAKU	Rahkiv	2.85	325	i P	Pn	19 10 58.2	+0.5
RAKU				Pm		19 11 05.9	
RAKU				eS	Sn	19 11 33.1	+0.3
RAKU				Sm		19 11 43.9	
BAIL	Bailesti	2.87	235	⇑P	Pn	19 10 58.1	+0.1
BAIL				⇑S	Sn	19 11 32.8	-0.4
BAIL	Bailesti	2.87	235	⇑P	Pn	19 10 58.1	+0.1
BAIL				⇑S	Sn	19 11 32.8	-0.4
NSLU	Nyzhne Selyshc	2.88	330	i P	Pn	19 11 04.3	+6.2
NSLU				Pm		19 11 14.5	
NSLU				eS	Sn	19 11 44.3	+11
NSLU				Sm		19 11 48.7	
BMR	Baia Mare	2.90	314	⇓P	Pn	19 10 58.9	+0.6
BMR	Baia Mare	2.90	314	⇓P	Pn	19 10 58.9	+0.6
DRGR		2.90	293	⇓P	Pn	19 10 58.1	-0.4
DRGR		2.90	293	⇓P	Pn	19 10 58.1	-0.4
DRGR		2.90	293		Pn	19 10 58.1	-0.4
NDNU	Novodnistrovsk	2.93	10	⇑iP	Pn	19 10 58.4	-0.3
NDNU				Pm		19 10 58.9	
NDNU				i S	Sn	19 11 31.7	-2.8
NDNU				Sm		19 11 32.7	
RMGR	Halanga-Turnu	2.96	250	⇓P	Pn	19 10 59.0	0.0
RMGR				⇓S	Sn	19 11 33.8	-1.3
RMGR	Halanga-Turnu	2.96	250	⇓P	Pn	19 10 59.0	0.0
RMGR				⇓S	Sn	19 11 33.8	-1.3
PUNG	Punghina	2.97	242	⇓P	Pn	19 10 58.6	-0.6
PUNG	Punghina	2.97	242	⇓P	Pn	19 10 58.6	-0.6
HERR	Herculane	3.07	256	⇓P	Pn	19 11 00.3	-0.2
HERR	Herculane	3.07	256	⇓P	Pn	19 11 00.3	-0.2
HERR	Herculane	3.07	256		Pn	19 11 00.3	-0.2
DJES	Djerdap	3.07	251	ePn	Pn	19 10 59.9	-0.6
DJES				eSn	Sn	19 11 23.8	-14
JMB	Yambol	3.25	180	P	Pn	19 11 02.9	0.0
KORU	Korolevo	3.40	317	⇑iP	Pn	19 11 05.2	+0.5
TRSU	Trosnyk	3.45	315	eP	Pn	19 11 05.7	+0.4
BZS	Buzias	3.49	270	⇑P	Pn	19 11 06.3	+0.4
BZS				⇓S	Sn	19 11 46.3	-1.2
BZS	Buzias	3.49	270	ePn	Pn	19 11 06.1	+0.2
BZS				eSn	Sn	19 11 39.5	-8.0
BZS	Buzias	3.49	270	⇑P	Pn	19 11 06.3	+0.4
BZS				⇓S	Sn	19 11 46.3	-1.2
HORU	Horodok	3.50	358	⇓iP	Pn	19 11 06.1	+0.1
HORU				Pm		19 11 06.4	
HORU				i S	Sn	19 11 45.9	-1.8
HORU				Sm		19 11 48.9	
MDVR	Moldovita	3.58	257	⇑P	Pn	19 11 07.4	+0.3
MDVR				⇑S	Sn	19 11 47.9	-1.5
MDVR	Moldovita	3.58	257	⇑P	Pn	19 11 07.4	+0.3
MDVR				⇑S	Sn	19 11 47.9	-1.5
BRIU	Brid	3.59	318	eP	Pn	19 11 07.7	+0.6
ZAGS	Zajecar	3.65	240	ePn	Pn	19 11 06.5	-1.4
ZAGS				eSn	Sn	19 11 39.4	-12
KUBS	Kucevo	3.72	251	ePn	Pn	19 11 08.0	-1.0
KUBS				eSn	Sn	19 11 40.8	-12
ZAPS	Zavoj	3.74	231	ePn	Pn	19 11 09.2	-0.1
ZAPS				eSn	Sn	19 11 44.3	-9.1
MUKU	Mukachevo	3.83	317	i P	Pn	19 11 10.5	+0.3
PLD	Plovdiv	3.86	201	P	Pn	19 11 10.3	-0.5
EDRB	Edirne	3.87	178	P	Pn	19 11 11.8	+0.9
MORS	Morshin	3.88	333	eP	Pn	19 11 12.1	+1.2
VTS	Vitosha	3.93	219	⇑P	Pn	19 11 12.0	+0.2
VTS	Vitosha	3.93	219	⇑P	Pn	19 11 12.0	+0.2
VTS	Vitosha	3.93	219		Pn	19 11 12.1	+0.2
VTS	Vitosha	3.93	219	P	Pn	19 11 11.8	0.0
HOLU	Holmets	4.02	316	eP	Pn	19 11 13.0	+0.2
BOVS	Bovan	4.06	241	⇓P	Pn	19 11 12.8	-0.6
BOVS				⇓S	Sn	19 11 59.7	-1.0
BOVS	Bovan	4.06	241	ePn	Pn	19 11 12.7	-0.6
BOVS	Bovan	4.06	241	⇓P	Pn	19 11 12.8	-0.6
BOVS				⇓S	Sn	19 11 59.7	-1.0
UZH	Uzhgorod	4.14	316	eP	Pn	19 11 14.2	-0.1
KDZ	Kurdzhali	4.16	192	P	Pn	19 11 15.1	+0.5
STZU	Stuzhytsa	4.26	322	eP	Pn	19 11 17.3	+1.3
KOLS	Kolonicke sedl	4.36	319	eP	Pn	19 11 18.1	+0.9
BOSS	Bosilegrad	4.38	224	ePn	Pn	19 11 17.9	+0.4
BOSS				eSn	Sn	19 11 58.3	-10
GRUS	Gruza	4.57	248	⇓P	Pn	19 11 19.9	-0.1
GRUS				⇓S	Sn	19 12 10.9	-1.7
GRUS	Gruza	4.57	248	ePn	Pn	19 11 19.7	-0.3
GRUS				eSn	Sn	19 12 01.4	-11
GRUS	Gruza	4.57	248	⇓P	Pn	19 11 19.9	-0.1
GRUS				⇓S	Sn	19 12 10.9	-1.7
PRVS	Prvonek	4.57	227	ePn	Pn	19 11 20.4	+0.3
PRVS				eSn	Sn	19 12 03.1	-10
RDO	Rodhopi	4.63	190	P	Pn	19 11 22.5	+1.6
TRUS	Trudelj	4.64	253	ePn	Pn	19 11 21.1	+0.1
TRUS				eSn	Sn	19 12 02.6	-12
CRVS	Cervenica-Dubn	4.73	314	eP	Pn	19 11 23.0	+0.9
NVR	Nevrokopi	4.80	205	P	Pn	19 11 23.9	+0.8
FRGS	Fruska Gora	4.81	266	ePn	Pn	19 11 24.2	+1.0
ALN	Alexandroupoli	4.83	185		Pn	19 11 24.1	+0.5
DIVS	Divibare	4.96	253	ePn	Pn	19 11 25.5	+0.2
DIVS				eSn	Sn	19 12 11.8	-10
DIVS	Divibare	4.96	253	Pn	Pn	19 11 25.2	-0.1
KECS	Kecovo	5.01	306	eP	Pn	19 11 25.9	+0.1
IVAS	Ivanjica	5.07	247	ePn	Pn	19 11 26.4	-0.3
IVAS				eSn	Sn	19 12 11.7	-13
SRS	Serrai	5.09	207	P	Pn	19 11 28.8	+1.8
PSZ	Piszkesteto	5.10	298	Pn	Pn	19 11 26.0	-1.1
STIP	Stip	5.14	220	i Pn	Pn	19 11 25.3	-2.2
SEV	Sevastopol'	5.14	101	P	Pn	19 11 27.3	-0.2
SEV				Pm		19 11 27.8	
SEV				S	Sn	19 12 25.4	-0.7
SEV				Sm		19 12 26.3	
AKASG	Malin Array Be	5.29	18	P	Pn	19 11 28.8	-0.7
	18nm,0.3s,baz=202,slow=12,SNR=83						
AKASG				S	Sn	19 12 25.6	-4.0
	5.1nm,0.3s,baz=201,slow=21,SNR=8.5						
AKASG	Malin Array Be	5.29	18	Pn	Pn	19 11 27.9	-1.6
AKBB	Malin Array Si	5.29	18		Pn	19 11 29.1	-0.3
THAS	Thassos island	5.29	196	P	Pn	19 11 32.6	+3.0
BBLS	Lazići	5.44	253	ePn	Pn	19 11 32.2	+0.5
MORH	Mrgy, Hungar	5.57	278	⇑P	Pn	19 11 34.1	+0.9
MORH	Mrgy, Hungar	5.57	278	⇑P	Pn	19 11 34.1	+0.9
ALU	Alushta	5.61	98	P	Pn	19 11 32.2	-1.6
ALU				Pm		19 11 36.0	
ALU				S	Sn	19 12 35.1	-2.3
ALU				Sm		19 12 35.9	
SUDU	Sudak	5.98	95	P	Pn	19 11 38.5	-0.2
SUDU				Pm		19 11 41.8	
SUDU				S	Sn	19 12 46.3	0.0
SUDU				Sm		19 12 46.5	
PAIG	Paliouri	6.17	201	P	Pn	19 11 43.2	+1.9
FNA	Florina	6.23	220	Pn	Pn	19 11 42.1	-0.1
FEO	Feodosiya	6.23	93	S	Sn	19 12 47.5	-4.8
FEO				Sm		19 12 51.7	
LIT	Litokhoron	6.37	210	Pn	Pn	19 11 44.2	+0.2
XOR	Xorichti	6.83	203	P	Pn	19 11 52.3	+2.2
AGG	Agios Georgios	7.40	207	Pn	Pn	19 11 57.9	+0.2
BRTR	Keskin Array B	7.92	137	P	Pn	19 12 05.1	+0.3
	0.0nm,0.3s,baz=334,slow=8.2,SNR=4.2						
NACGM	Naroch	9.20	1	i P	Pn	19 12 21.4	-0.1
NACGM				i P	Pn	19 12 21.4	-0.1
NACGM				i P	Pn	19 12 21.4	-0.1
NACGM				i S	Sn	19 14 08.7	+5.3
ITM	Ithomi	9.22	204	Pn	Pn	19 12 22.8	+0.8
TIP	Timpagrande	9.77	232	Pn	Pn	19 12 28.6	-0.8
BRG	Berggiesshubel	9.88	306	eP	Pn	19 12 26.1	-4.5
BRG				Amp		19 12 27.3	
	comp=Z,5.4nm,0.9s						
NRCA	Norcia	10.09	258	Pn	Pn	19 12 35.8	+2.2
FINES	FINESS Array B	15.76	359	P	Pn	19 13 42.3	-3.5
	comp=Z,0.2nm,0.3s,baz=172,slow=12,SNR=2.1						
HFS	Hagfors	16.35	337	P	Pn	19 13 53.1	0.0
	comp=Z,0.2nm,0.3s,baz=144,slow=12,SNR=5.3						
NOA	NORSAR Array B	17.80	335	P	P	19 14 09.4	+0.1
	comp=Z,0.0nm,0.3s,baz=154,slow=9.3,SNR=1.7						
ARCES	ARCESS Array B	23.89	359	P	P	19 15 12.9	+1.1
	comp=Z,2.4nm,0.8s,baz=173,slow=9.1,SNR=5.4						
MKAR	Makanchi Array	37.84	68	P	P	19 17 16.7	+2.4
	comp=Z,0.1nm,0.4s,baz=271,slow=6.9,SNR=4.9						

JMA 21 19:18:16.0±0.1,24°.09N×123°.58E,h18^{km}±2^{km},M1.5, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HATJ	Hateruma jima	0.21	99	P	Pb	19 18 20.9	-0.1
HATJ				S	Sg	19 18 24.6	+0.1
IRIF	Iriomote-Funau	0.28	29	P	Pg	19 18 22.0	-0.2
IRIF				eS	Sg	19 18 26.4	0.0
JKRS	Kuro-shima	0.42	69	P	Pg	19 18 24.6	0.0
JKRS				S	Sb	19 18 31.0	+0.1
JIJ	Ishigaki jima	0.58	62	P	Pg	19 18 26.9	-0.7
JIJ				S	Sg	19 18 35.0	-0.4
YOJ	Yonaguni jima	0.64	306	P	Pb	19 18 28.6	0.0
YOJ				S	Sb	19 18 37.1	0.0
JISG	Ishigakijimahi	0.83	53	P	Pb	19 18 31.3	-0.6
JISG				eS	Sb	19 18 42.9	+0.2
JTJ	Tarama	1.16	62	S	Sb	19 18 52.3	0.0

TAP 21 19:18:21.4,24°.31N×121°.44E,h8^{km},ML0.7,B,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ETLH	Xiulin Townshi	0.11	157	eP	Pg	19 18 23.9	-0.1
	baz=156						
ETLH				S	Sg	19 18 25.5	-0.2
	baz=156						
NNSB	Datong	0.13	338	eP	Pg	19 18 24.4	0.0
	baz=338						
NNSB				eS	Sg	19 18 26.4	0.0
	baz=338						
NNSH	Datong	0.13	338	P	Pg	19 18 24.4	0.0
	baz=338						
NNSH				S	Sg	19 18 26.4	-0.1
	baz=338						
NNS	Nan Shan	0.14	337	eP	Pg	19 18 24.7	+0.1
	baz=339						
NNS				eS	Sg	19 18 26.7	-0.1
	baz=339						
FUSS	Fushou	0.18	252	eP	Pg	19 18 25.3	0.0
	baz=251						
FUSS				eS	Sg	19 18 28.0	0.0
	baz=251						
NACB	Ninganchiao	0.20	132	eP	Pg	19 18 25.4	0.0
	baz=132						
NACB				eS	Sg	19 18 28.7	+0.6
	baz=132						
WHF	Hehuan Shan	0.22	224	eP	Pg	19 18 25.7	-0.4
	baz=222						
WHF				eS	Sg	19 18 29.0	-0.3
	baz=222						
ENTT	Nioudou	0.35	20	eP	Pg	19 18 28.4	0.0
	baz=20						
ENTT				eS	Sg	19 18 33.3	+0.2
	baz=20						
YHNB	Yeheng	0.37	351	eP	Pg	19 18 28.6	0.0
	baz=351						
YHNB				eS	Sg	19 18 33.6	+0.1
	baz=351						
WHP	Taichung City	0.45	266	eP	Pg	19 18 30.6	+0.4
	baz=266						
WHP				eS	Sg	19 18 36.3	+0.2
	baz=266						
NWLT	Wulai	0.47	7	eP	Pg	19 18 30.7	+0.1
	baz=7.0						
NWLT				eS	Sg	19 18 36.5	-0.4
	baz=7.0						

*IDC **21** 19:18:55.7±2.4,7°.50S×128°.88E,h138^{km}±30^{km},mb2.7/1, mb1 3.0/5,mb1mx2.9/30,mbtmp3.5/5,Error ellipse: s-maj=36.0km s-min=25.4km az=97.0*

ISC 21 19:18:54.1±1.0,7°.81S±0°.07×128°.99E±0°.10,h150^{km},n6, σ1^{s}94/9,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	Baumata	5.77	245	P	Pn	19 20 19.4	+1.6
	baz=37,slow=5.1						
BATI				S	Sn	19 21 21.6	-1.7
	1.9nm,0.3s,baz=99,slow=23,SNR=1.2						
SIJI	Sorong	7.26	18	P	Pn	19 20 36.4	-1.4
	0.2nm,0.3s,baz=233,slow=20,SNR=1.3						
SIJI				S	Sn	19 21 49.3	-10
	0.3nm,0.3s,baz=217,slow=20,SNR=2.0						
FITZ	Fitzroy Crossi	10.73	197	P	Pn	19 21 25.9	+2.0
	0.2nm,0.3s,baz=26,slow=12,SNR=1.5						
FITZ				S	Sn	19 23 19.4	-3.2
	0.2nm,0.3s,baz=175,slow=23,SNR=1.7						
WRA	Warramunga Arr	13.13	157	P	P	19 21 59.8	+0.2
	0.1nm,0.3s,baz=338,slow=13,SNR=2.7						
WRA				S	Sn	19 24 19.9	-0.5
	0.3nm,0.3s,baz=336,slow=23,SNR=2.7						
ASAR	Alice Springs	16.46	164	P	Pn	19 22 44.1	+7.6
	0.0nm,0.3s,baz=330,slow=9.7,SNR=4.2						
ASAR				S	S	19 25 39.5	0.0
	0.1nm,0.3s,baz=348,slow=25,SNR=3.1						
MKAR	Makanchi Array	68.36	327	P	P	19 29 40.1	+0.8
	0.1nm,0.3s,baz=114,slow=7.5,SNR=2.4						

IDC 21 19:21:01.9±1.5,5°.11S×146°.32E,h0^{km},mb3.6/3, mb1 3.8/5,mb1mx3.5/27,mbtmp3.6/5,ML1.6/1,Error ellipse: s-maj=57.9km s-min=25.6km az=117.0,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	4.35	169	Pn	Pn	19 22 08.9	-0.5
	2.3nm,0.3s,baz=0.0,slow=7.1,SNR=11						
PMG				Sn	Sn	19 22 54.1	-6.8
	4.5nm,0.3s,baz=310,slow=22,SNR=2.3						
WRA	Warramunga Arr	18.80	217	P	P	19 25 22.9	-0.3
	baz=42,slow=11,SNR=2.6						
ASAR	Alice Springs	21.99	212	P	P	19 25 58.9	+1.0
	0.4nm,0.7s,baz=48,slow=8.9,SNR=5.5						
FITZ	Fitzroy Crossi	23.98	236	P	P	19 26 17.6	-0.8
	3.5nm,0.9s,baz=61,slow=12,SNR=1.4						
ILAR	Eielson Array	84.93	23	P	P	19 33 38.8	+0.1
	0.8nm,0.6s,baz=252,slow=4.9,SNR=16						

*BGR **21** 19:42:01.1±0.0,0°.00N×150°.50E,h33^{km}*

*BJI **21** 19:42:19.2±0.0,5°.59S×147°.51E,h224^{km},mB5.0/46, mb4.8/78*

*MOS **21** 19:42:20.2±0.7,5°.38S×147°.09E,h206^{km},mb5.0/32,Error ellipse: s-maj=8.5km s-min=4.8km az=106.4*

*IDC **21** 19:42:21.2±0.7,5°.43S×147°.18E,h205^{km}±5^{km},mb4.7/19, mb1 4.9/24,mb1mx4.9/29,mbtmp5.3/24,MS4.8/1, Ms1 4.8/1,ms1mx3.3/26,Error ellipse: s-maj=10.3km s-min=7.2km az=78.0*

*DJA **21** 19:42:22.0±0.3,5°S±2°×14°7E±°,h208^{km}±3^{km},M5.1/49, mb5.2/49,mB5.5/25,MLv6.0/5,Mw(mB)4.9/25, MwMwp5.0/7,Mwp5.3/7*

*NEIC **21** 19:42:22.1,5°.47S×147°.13E,h207^{km},Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.85; $M_{\theta\theta}$-1.03; $M_{\phi\phi}$0.18; $M_{r\theta}$0.46; $M_{\theta\phi}$0.41; $M_{\phi r}$-0.55; Fault plane solution: $M_0$1.26000×10^{17} NP1:ϕ_s128.58000°, δ64.39000°,λ113.91000°. NP2:ϕ_s262.86000°,δ34.48000°, λ49.79000°. Principal axes: T 1.1810, Plg63.0000°, Azm77.0000°; N 0.1502, Plg21.0000°, Azm298.0000°; P -1.3312, Plg16.0000°, Azm201.0000°;*

*NEIC **21** 19:42:22.2±1.6,5°.45S±0°.06×147°.13E±0°.07,h214^{km}±3^{km}, mb5.1/167,Mwb5.3/42 Error ellipse: s-maj=9.7km s-min=8.4km az=91.0*

*GCMT **21** 19:42:25.2±0.1,5°.52S±0°.01×147°.14E±0°.01,h221^{km}, MW5.4/150,Moment Tensor Solution. s106,c175; s150,c276; Duration: 1^{s}3 Moment tensor: Scale 10^{17} Nm; M_{rr}1.08±.02; $M_{\theta\theta}$-1.57±.02; $M_{\phi\phi}$0.48±.02; $M_{r\theta}$0.75±.02; $M_{\theta\phi}$0.59±.02; $M_{\phi r}$-0.73±.02; Best double couple: $M_0$1.80500×10^{17} NP1:ϕ_s256.00000°,δ36.00000°, λ43.00000°. NP2:ϕ_s128.00000°,δ66.00000°,λ118.00000°. Principal axes: T 1.6030, Plg59.0000°, Azm78.0000°; N 0.4010, Plg25.0000°, Azm297.0000°; P -2.0070, Plg17.0000°, Azm198.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 21 19:42:22.0±0.3,5°.53S±0°.03×147°.15E±0°.04,h215^{km}±2^{km}, h216^{km}:pP-P,n910,σ1^{s}23/951,mb5.0/181,38C-26D, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MANU	Manus Island	3.47	4		Pn	19 43 17.6	-0.3
MANU				S	S	19 44 05.8	+4.1
PMG	Port Moresby	3.85	180	P	Pn	19 43 22.0	-0.5
	300nm,0.3s,baz=342,slow=5.8,SNR=1109						
PMG				S	S	19 44 07.0	-2.9
	639nm,0.3s,baz=42,slow=22,SNR=12						
PMG	Port Moresby	3.85	180	ceP	Pn	19 43 22.1	-0.4
PMG				pmax	pmax		
	comp=Z,3µm,1.0s						
PMG	Port Moresby	3.85	180	Pn	Pn	19 43 22.2	-0.3
PMG				S	S	19 44 07.8	-2.1
PMG	Port Moresby	3.85	180	P	Pn	19 43 22.6	+0.1
RABL	Rabaul	5.17	75	Pn	Pn	19 43 37.7	-1.3
RABL	Rabaul	5.17	75	P	Pn	19 43 39.6	+0.6
MMPI	Merauke	7.32	246	P	Pn	19 44 06.6	+0.1
	comp=Z,3.9nmcomp=Z,8µmcomp=Z,675nm,0.7s						
GENI	Genyem	7.55	292	P	Pn	19 44 07.5	-1.9
	comp=Z,3.4nmcomp=Z,3µmcomp=Z,8µmcomp=Z,699nm,1.0s						
COEN	Coen	9.24	205	Pn	Pn	19 44 33.2	+1.9
SRPI	Serui, Papua	11.47	288	P	Pn	19 44 58.3	-1.6
	comp=Z,3µmcomp=Z,312nm,0.6s						
BAKI	Biak	11.83	291	P	Pn	19 45 03.1	-1.3
	comp=Z,226nm,1.2s						
MTSU	Mount Surprise	12.83	192	P	P	19 45 19.6	-0.3
	baz=13,SNR=270						
HNR	Honiara	13.27	108	P	Pn	19 45 22.1	-0.3
	comp=Z,25nm,0.3s,baz=224,slow=3.7,SNR=61						
HNR	Honiara	13.27	108	P	P	19 45 25.0	+0.2
CTA	Charters Tower	14.50	183	P	P	19 45 39.5	+1.1
	comp=Z,14nm,0.3s,baz=359,slow=14,SNR=70						
CTAO	Charters Tower	14.50	183	P	P	19 45 40.2	+1.8
CTAO	Charters Tower	14.50	183		P	19 45 40.2	+1.8
FAKI	Fak Fak	15.08	279		Pn	19 45 43.8	-0.9
FAKI	Fak Fak	15.08	279	P	Pn	19 45 44.2	-0.5
	comp=Z,2µmcomp=Z,170nm,0.8s						
SAUI	Saumlaki	15.93	260		Pn	19 45 56.3	+1.5
SAUI	Saumlaki	15.93	260	P	Pn	19 45 56.0	+1.1
	comp=Z,11µmcomp=Z,1µm,1.0s						
KDU	Kakadu	16.13	243	P	P	19 45 56.6	+0.1
	baz=16,SNR=498						
SIJI	Sorong	16.52	286	P	P	19 46 00.4	-0.4
	comp=Z,13nm,0.3s,baz=82,slow=6.1,SNR=41						
SWI	Sorong	16.52	286	P	P	19 46 01.2	+0.4
	comp=Z,2µmcomp=Z,2µmcomp=Z,263nm,1.1s						
QIS	Mount Isa	16.64	205	P	Pn	19 46 04.0	+0.7
	baz=17,SNR=333						
WB0	Warramunga Arr	18.82	220	P	P	19 46 26.8	+1.0
WR0	Warramunga Arr	18.87	219	P	P	19 46 27.6	+1.2
WRAB	Tennant Creek	18.97	220	deP	P	19 46 28.5	+1.0
WRAB				pmax	pmax		
	comp=Z,297nm,0.8s						
WB2	Warramunga Arr	18.98	220	P	P	19 46 28.7	+1.1
WRA	Warramunga Arr	18.98	220	P	P	19 46 28.5	+0.9
	comp=Z,49nm,0.3s,baz=45,slow=11,SNR=550						
WRA				S	S	19 49 51.5	-0.2
	comp=Z,4.2nm,0.3s,baz=41,slow=19,SNR=21						
WRA				ScP	ScP	19 54 01.6	+2.7
	baz=52,slow=2.9,SNR=1.3						
WRA				LR	LR	19 54 44.2	
	comp=Z,2µm,19.0s,baz=40,slow=39						
WRA	Warramunga Arr	18.98	220	P	P	19 46 27.3	-0.3
EIDS	Eidsvold	20.08	170	P	P	19 46 41.5	+2.2
	baz=20,SNR=8.8						
EIDS	Eidsvold	20.08	170	P	P	19 46 41.2	+1.9
NLAI	Namlea	20.12	276	P	P	19 46 40.6	+0.8
	comp=Z,131nm,1.1s						
KNRA	Kununurra	20.67	239	P	P	19 46 48.0	+2.3
	baz=21,SNR=7.4						
KNRA	Kununurra	20.67	239	P	P	19 46 46.3	+0.6
RMQ	Roma	20.89	176	P	P	19 46 50.1	+2.2
	baz=21,SNR=193						
QLP	Quilpie	21.12	187	P	P	19 46 51.8	+1.6
	baz=21,SNR=77						
SANI	Sanana	21.39	278	P	P	19 46 54.6	+1.4
	comp=Z,1µmcomp=Z,207nm,0.8s						
SANVU	Saraoutou	22.02	118	P	P	19 46 59.0	-0.4
SANVU				IAmb	IAmb	19 47 03.5	
	comp=Z,124nm,1.1s						
AS31	Alice Springs	22.09	214	P	P	19 47 01.3	+1.4
ASAR	Alice Springs	22.09	214	P	P	19 47 01.4	+1.5
	comp=Z,218nm,0.9s,baz=51,slow=8.1,SNR=1004						
ASAR				S	S	19 50 48.5	+0.8
	comp=Z,16nm,0.7s,baz=32,slow=18,SNR=4.0						
ASAR	Alice Springs	22.09	214	P	P	19 47 00.7	+0.8
KOUNC	Koumac, New Ca	22.36	133	P	P	19 47 03.8	+1.4
SOEI	Soe	23.06	258	P	P	19 47 09.6	+0.7
SOEI	Soe	23.06	258	P	P	19 47 09.7	+0.8
	comp=Z,3µmcomp=Z,304nm,0.9s						
BATI	Baumata	23.72	257	P	P	19 47 16.0	+1.2
	comp=Z,180nm,0.7s,baz=89,slow=2.9,SNR=34						
BATI	Baumata	23.72	257	P	P	19 47 16.6	+1.8
	comp=Z,2µmcomp=Z,139nm,1.0s						
DVP	Devils Point	23.87	122	P	P	19 47 18.3	+2.2
FITZ	Fitzroy Crossi	24.44	237	P	P	19 47 21.8	+0.5
	comp=Z,342nm,0.4s,baz=52,slow=10,SNR=475						
FITZ	Fitzroy Crossi	24.44	237	P	P	19 47 21.8	+0.5
	baz=24,SNR=1000						
FITZ	Fitzroy Crossi	24.44	237	P	P	19 47 21.9	+0.6
LIFNC	LIFOU	24.70	130	P	P	19 47 26.0	+2.4
GTOI	Gorontalo	24.87	284	P	P	19 47 28.2	+3.0
	comp=Z,600nmcomp=Z,32nm,0.9s						
DZM	Mont Dzumac	24.88	133	P	P	19 47 25.4	+0.1
	comp=Z,38nm,0.7s,baz=11,slow=3.3,SNR=35						
DZM	Mont Dzumac	24.88	133	P	P	19 47 26.1	+0.7
DZM				IAmb	IAmb	19 47 29.9	
	comp=Z,66nm,1.1s						
DZM	Mont Dzumac	24.88	133	P	P	19 47 25.6	+0.3
ONTNC	Ouen Toro	25.03	134	P	P	19 47 28.5	+1.9
ARMA	Armidale	25.11	171	P	P	19 47 29.3	+2.0
	baz=25,SNR=83						
ARMA	Armidale	25.11	171	P	P	19 47 29.2	+1.8
CMSA	Cobar Meteorol	25.91	183	P	P	19 47 36.2	+1.8
	baz=26,SNR=9.3						
WRKA	Warakurna	26.52	221	P	P	19 47 40.7	+0.7
	baz=27,SNR=324						
BASI	Baing, Sumba	26.72	258	P	P	19 47 43.2	+1.3
	comp=Z,116nm,0.9s						
STKA	Stephens Creek	26.72	191	P	P	19 47 42.5	+0.8
	comp=Z,18nm,0.8s,baz=359,slow=8.0,SNR=59						
STKA	Stephens Creek	26.72	191	P	P	19 47 43.1	+1.4
	baz=27,SNR=17						
STKA	Stephens Creek	26.72	191	d iP	P	19 47 42.6	+0.9
STKA	Stephens Creek	26.72	191	P	P	19 47 42.0	+0.3
WSI	Waingapu	26.92	260	P	P	19 47 43.8	+0.1
	comp=Z,6µmcomp=Z,668nm,0.9s						
BNSI	Bone	26.96	271	P	P	19 48 00.5	+16
TOLI2	Tolitoli	27.14	283	P	P	19 47 45.2	-0.5
TOLI2				IAmb	IAmb	19 48 33.1	
	comp=Z,52nm,1.0s						
MGCD	Mangrove Creek	27.79	173	P	P	19 47 53.5	+2.5
	baz=28,SNR=6.5						
YNG	Young	28.65	178	P	P	19 48 00.7	+2.0
	baz=29,SNR=12						
HTT	Hallett	28.80	194	P	P	19 48 01.2	+1.1
	baz=29,SNR=45						
BBOO	Buckleboo	29.05	199	P	P	19 48 03.4	+1.1
	baz=29,SNR=9.7						
BBOO	Buckleboo	29.05	199	P	P	19 48 02.8	+0.5
BBOO				IAmb	IAmb	19 48 04.9	
	comp=Z,63nm,1.1s						
PLAI	Plampang	29.32	262	P	P	19 48 17.3	+12
CAN	Canberra	29.70	177	P	P	19 48 09.2	+1.2
CAN				pmax	pmax		
	comp=Z,23nm,0.8s						
CAN	Canberra	29.70	177	P	P	19 48 09.2	+1.2
CNB	Canberra Magne	29.71	176	P	P	19 48 10.1	+1.9
	baz=30,SNR=15						

NFK	**Norfolk Island**	**30.56**	**142**	P	**P**	**19 48 15.0**	**-0.7**
	baz=31,SNR=4.7						
FORT	**Forrest**	**30.87**	**213**	P	**P**	**19 48 19.4**	**+1.0**
	baz=31,SNR=109						
FORT	**Forrest**	**30.87**	**213**	P	**P**	**19 48 19.1**	**+0.8**
PSA00	**Pilbara Seismi**	**30.87**	**236**	P	**P**	**19 48 17.9**	**-0.6**
PSA00	**Pilbara Seismi**	**30.87**	**236**	P	**P**	**19 48 18.4**	**-0.1**
PSA00				IAmb	IAmb	19 49 10.0	
	comp=Z,43nm,0.9s						
ARPS	**Mount Arapiles**	**31.47**	**188**	P	**P**	**19 48 25.2**	**+1.7**
	baz=32,SNR=40						
TOO	**Toolangi**	**31.93**	**182**	P	**P**	**19 48 29.5**	**+2.0**
	baz=32,SNR=18						
TOO	**Toolangi**	**31.93**	**182**	P	**P**	**19 48 28.9**	**+1.3**
TOO				pmax	pmax		
	comp=Z,44nm,0.9s						
TOO	**Toolangi**	**31.93**	**182**	P	**P**	**19 48 28.9**	**+1.3**
TOO				IAmb	IAmb	19 48 31.3	
	comp=Z,44nm,0.9s						
MSVF	**Nonsavu**	**32.54**	**114**	P	**P**	**19 48 35.1**	**+1.9**
MSVF				pmax	pmax		
	comp=Z,36nm,1.0s						
MSVF	**Nonsavu**	**32.54**	**114**	P	**P**	**19 48 35.1**	**+1.9**
MSVF				IAmb	IAmb	19 48 38.4	
	comp=Z,36nm,0.9s						
MSVF	**Nonsavu**	**32.54**	**114**	P	**P**	**19 48 35.7**	**+2.5**
JCJ	**Chichijima**	**32.79**	**352**	P	**P**	**19 48 33.9**	**-1.2**
JAGI	**Jajag, Banyuwa**	**32.87**	**263**	P	**P**	**19 48 34.9**	**-1.2**
MEEK	**Meekatharra**	**34.37**	**229**	P	**P**	**19 48 49.5**	**+0.7**
	baz=34,SNR=27						
KMBL	**Kambalda**	**34.95**	**220**	P	**P**	**19 48 54.4**	**+0.7**
	baz=35,SNR=38						
SBUM	**Sibu**	**35.78**	**282**	P	**P**	**19 49 01.6**	**+0.6**
SBUM	**Sibu**	**35.78**	**282**	P	**P**	**19 49 01.0**	**0.0**
GIRL	**Giralia**	**36.04**	**239**	P	**P**	**19 49 05.1**	**+2.0**
	baz=36,SNR=6.1						
GIRL	**Giralia**	**36.04**	**239**	P	**P**	**19 49 04.2**	**+1.2**
UGM	**Wanagama**	**36.44**	**264**	P	**P**	**19 49 06.1**	**-0.5**
JOW	**Kunigami**	**37.00**	**331**	P	**P**	**19 49 11.1**	**0.0**
JOW				IAmb	IAmb	19 49 13.4	
	comp=Z,49nm,0.5s						
TAU	**Tasmania Unive**	**37.23**	**180**	P	**P**	**19 49 14.3**	**+1.5**
TAU				pmax	pmax		
	comp=Z,45nm,1.1s						
TAU	**Tasmania Unive**	**37.23**	**180**	P	**P**	**19 49 14.3**	**+1.5**
TAU				IAmb	IAmb	19 49 16.4	
	comp=Z,45nm,1.1s						
KSM	**Kuching**	**37.45**	**280**	P	**P**	**19 49 15.9**	**+0.8**
MORW	**Morawa**	**37.59**	**228**	P	**P**	**19 49 16.8**	**+0.6**
	baz=38,SNR=16						
MORW	**Morawa**	**37.59**	**228**	P	**P**	**19 49 16.6**	**+0.4**
KLBR	**Kellerberrin**	**37.81**	**223**	P	**P**	**19 49 18.1**	**+0.2**
	baz=38,SNR=42						
BLDU	**Ballidu**	**37.97**	**225**	P	**P**	**19 49 19.6**	**+0.4**
	baz=38,SNR=28						
YOJ	**Yonaguni jima**	**37.97**	**323**	P	**P**	**19 49 19.9**	**+0.7**
YOJ				pmax	pmax		
	comp=Z,149nm,1.2s						
YOJ	**Yonaguni jima**	**37.97**	**323**	P	**P**	**19 49 19.9**	**+0.7**
TWG	**Pinlang**	**38.00**	**319**	P	**P**	**19 49 17.7**	**-1.8**
YULB	**Yu-li**	**38.26**	**320**	P	**P**	**19 49 21.2**	**-0.6**
OUZ	**Omahuta**	**38.31**	**144**	P	**P**	**19 49 24.0**	**+2.0**
OUZ				IAmb	IAmb	19 49 26.1	
	comp=Z,64nm,0.9s						
TPUB	**Ta-pu**	**38.62**	**319**	P	**P**	**19 49 23.6**	**-1.2**
NACB	**Ninganchiao**	**38.63**	**321**	P	**P**	**19 49 24.4**	**-0.4**
SSLB	**Suanglung**	**38.76**	**320**	P	**P**	**19 49 25.2**	**-0.7**
SSLB				IAmb	IAmb	19 49 29.9	
	comp=Z,61nm,0.6s						
NWAO	**Narrogin (SRO)**	**38.98**	**222**	S	**S**	**19 55 10.1**	**-0.1**
	comp=Z,15nm,0.9s,baz=55,slow=12,SNR=3.1						
NWAO	**Narrogin (SRO)**	**38.98**	**222**	P	**P**	**19 49 28.5**	**+0.9**
	baz=39,SNR=6.9						
NWAO	**Narrogin (SRO)**	**38.98**	**222**	P	**P**	**19 49 28.0**	**+0.4**
NWAO				pmax	pmax		
	comp=Z,66nm,1.4s						
NWAO	**Narrogin (SRO)**	**38.98**	**222**	P	**P**	**19 49 28.1**	**+0.5**
NWAO	**Narrogin (SRO)**	**38.98**	**222**	P	**P**	**19 49 28.0**	**+0.4**
NWAO				IAmb	IAmb	19 49 39.4	
	comp=Z,66nm,1.4s						
MUN	**Mundaring**	**39.10**	**224**	P	**P**	**19 49 29.6**	**+0.9**
	baz=39,SNR=9.8						
CISI	**Cisompet, Garu**	**39.12**	**265**	P	**P**	**19 49 27.6**	**-1.5**
CISI				IAmb	IAmb	19 49 39.0	
	comp=Z,40nm,0.6s						
CISI	**Cisompet, Garu**	**39.12**	**265**	P	**P**	**19 49 28.3**	**-0.8**
	comp=Z,976nmcomp=Z,55nm,0.6s						
YHNB	**Yeheng**	**39.12**	**321**	P	**P**	**19 49 29.4**	**+0.4**
TATO	**Taipei**	**39.28**	**322**	P	**P**	**19 49 30.3**	**+0.2**
JSU	**Suzuyama**	**40.13**	**338**	P	**P**	**19 49 37.5**	**+0.4**
KNMB	**Chin-men Tao**	**40.91**	**318**	P	**P**	**19 49 44.0**	**+0.4**
KNMB				IAmb	IAmb	19 49 45.6	
	comp=Z,54nm,0.6s						
QZH	**Quanzhou**	**41.10**	**319**	⇑*i*P	**P**	**19 49 45.4**	**+0.3**
QZH				S	**S**	**19 55 40.9**	**-0.9**
QZH				sS	**sS**	**19 57 05.4**	**+4.2**
QZH				pmax	pmax		
	comp=Z,62nm,0.6s						
KNTN	**Kanton**	**41.11**	**88**	P	**P**	**19 49 45.7**	**+0.3**
KNTN				IAmb	IAmb	19 49 47.3	
	comp=Z,90nm,0.8s						
AFI	**Afiamalu**	**41.28**	**105**	P	**P**	**19 49 47.4**	**+0.6**
AFI				pmax	pmax		
	comp=Z,173nm,0.9s						
AFI	**Afiamalu**	**41.28**	**105**	P	**P**	**19 49 47.4**	**+0.6**
XMI	**Christmas Isla**	**41.32**	**261**	P	**P**	**19 49 48.3**	**+1.2**
	comp=Z,101nm,1.0s						
HIZ	**Hauiti**	**41.35**	**146**	P	**P**	**19 49 48.3**	**+1.3**
HIZ				IAmb	IAmb	19 49 51.6	
	comp=Z,131nm,1.1s						
XMIS	**Christmas Isla**	**41.36**	**260**	P	**P**	**19 49 47.7**	**+0.2**
XMIS				IAmb	IAmb	19 50 04.2	
	comp=Z,40nm,0.8s						
XMIS	**Christmas Isla**	**41.36**	**260**	P	**P**	**19 49 48.8**	**+1.4**
	comp=Z,52nm,0.7s						
INU	**Inuyama**	**41.76**	**348**	P	**P**	**19 49 49.6**	**-0.7**
QRZ	**Quartz Range**	**41.86**	**151**	P	**P**	**19 49 52.5**	**+1.4**
QRZ				IAmb	IAmb	19 49 54.9	
	comp=Z,39nm,0.8s						
JGF	**Kuroka**	**41.94**	**348**	P	**P**	**19 49 50.9**	**-0.9**
JYT	**Yasato**	**42.05**	**352**	P	**P**	**19 49 51.8**	**-0.8**
JYT				IAmb	IAmb	19 49 54.2	
	comp=Z,42nm,0.6s						
JWT	**Wachi**	**42.07**	**346**	P	**P**	**19 49 51.9**	**-0.9**
URZ	**Urewera**	**42.45**	**144**	P	**P**	**19 49 56.9**	**+1.1**
	comp=Z,26nm,0.6s,baz=286,slow=22,SNR=18						
MJAR	**Matsushiro Arr**	**42.68**	**349**	P	**P**	**19 49 57.0**	**-0.8**
	comp=Z,8.6nm,0.5s,baz=176,slow=8.5,SNR=66						
MJAR				PcP	**PcP**	**19 51 45.4**	**-0.1**
	comp=Z,10nm,0.9s,baz=180,slow=4.0,SNR=7.4						
MJAR				ScP	**ScP**	**19 55 15.9**	**-0.1**
	comp=Z,3.3nm,1.0s,baz=180,slow=3.4,SNR=6.8						
MAJO	**Matsushiro**	**42.68**	**349**	P	**P**	**19 49 57.1**	**-0.6**
MAJO				pmax	pmax		
	comp=Z,45nm,0.6s						
MAJO	**Matsushiro**	**42.68**	**349**	P	**P**	**19 49 57.1**	**-0.6**
MAJO				IAmb	IAmb	19 49 59.4	
	comp=Z,45nm,0.6s						
MAT	**Matsushiro**	**42.68**	**349**	P	**P**	**19 49 56.5**	**-1.2**
MAT				S	**S**	**19 56 02.6**	**-2.1**
BKZ	**Black Stump Fm**	**42.71**	**146**	P	**P**	**19 49 58.9**	**+0.8**
BKZ				IAmb	IAmb	19 50 01.2	
	comp=Z,46nm,0.8s						
THZ	**Tophouse**	**42.76**	**151**	P	**P**	**19 49 59.1**	**+0.7**
THZ				IAmb	IAmb	19 50 03.8	
	comp=Z,47nm,0.9s						
TUWZ	**Tuamarina**	**43.01**	**150**	P	**P**	**19 50 01.4**	**+1.1**
BSWZ	**Blackbirch Sta**	**43.19**	**151**	P	**P**	**19 50 02.7**	**+0.9**
BSWZ				PcP	**PP**	**19 51 46.8**	**0.0**
LTZ	**Lake Taylor**	**43.26**	**153**	P	**P**	**19 50 03.9**	**+1.6**
LTZ				PcP	**PP**	**19 51 48.2**	**+0.6**
DCZ	**Deep Cove**	**43.43**	**159**	P	**P**	**19 50 05.3**	**+1.7**
DCZ				IAmb	IAmb	19 50 07.2	
	comp=Z,69nm,0.9s						
DCZ				PcP	**PcP**	**19 51 46.9**	**-0.9**
BHW	**Baring Head**	**43.46**	**149**	P	**P**	**19 50 04.3**	**+0.4**
RPZ	**Rata Peaks**	**43.47**	**155**	P	**P**	**19 50 05.3**	**+1.4**
	comp=Z,52nm,0.9s,baz=36,slow=1.3,SNR=18						
RPZ	**Rata Peaks**	**43.47**	**155**	P	**P**	**19 50 05.2**	**+1.2**
RPZ				IAmb	IAmb	19 50 07.5	
	comp=Z,70nm,1.1s						
KHZ	**Kahutara**	**43.56**	**151**	P	**P**	**19 50 04.7**	**0.0**
KHZ				IAmb	IAmb	19 50 07.8	
	comp=Z,46nm,0.9s						
JMM	**Marumori**	**43.58**	**353**	P	**P**	**19 50 04.8**	**0.0**
JMM				PcP	**PcP**	**19 51 49.2**	**+0.8**
OXZ	**Oxford**	**43.58**	**154**	P	**P**	**19 50 05.5**	**+0.7**
BFZ	**Birch Farm**	**43.65**	**148**	P	**P**	**19 50 06.2**	**+0.8**
BFZ				IAmb	IAmb	19 50 08.7	
	comp=Z,82nm,0.9s						
BFZ				PcP	**PcP**	**19 51 48.4**	**-0.3**
LBZ	**Lake Benmore**	**43.65**	**156**	P	**P**	**19 50 06.4**	**+1.0**
LBZ				IAmb	IAmb	19 50 08.2	
	comp=Z,54nm,1.1s						
LBZ				PcP	**PcP**	**19 51 49.8**	**+1.2**
MSWZ	**Moikau Station**	**43.66**	**149**	P	**P**	**19 50 06.3**	**+0.8**
MLZ	**Mavora Lakes**	**43.69**	**159**	P	**P**	**19 50 07.2**	**+1.5**
MLZ				IAmb	IAmb	19 50 09.2	
	comp=Z,73nm,1.2s						
PLWZ	**Palliser**	**43.77**	**149**	P	**P**	**19 50 07.1**	**+0.7**
PYZ	**Puysegur Point**	**43.88**	**160**	P	**P**	**19 50 09.1**	**+1.9**
PYZ				IAmb	IAmb	19 50 11.3	
	comp=Z,89nm,1.0s						
SSE	**Sheshan**	**44.07**	**327**	P	**P**	**19 50 09.4**	**+0.6**
SSE				S	**S**	**19 56 26.4**	**+1.5**
SSE				pmax	pmax		
	comp=Z,13nm,0.6s						
SSE				LR	LR		
	comp=Z,360nm,19.7s						
SSE				LR	LR		
	comp=Z,340nm,18.6s						
SSE	**Sheshan**	**44.07**	**327**	P	**P**	**19 50 09.1**	**+0.3**
SSE				IAmb	IAmb	19 50 11.2	
	comp=Z,52nm,0.8s						
WHZ	**Wether Hill Ro**	**44.08**	**159**	P	**P**	**19 50 09.7**	**+1.0**
QIZ	**Qiongzhong**	**44.11**	**305**	P	**P**	**19 50 10.1**	**+0.7**
QIZ				sP	**sP**	**19 51 18.5**	**-1.1**
QIZ				S	**S**	**19 56 27.0**	**+1.1**
QIZ				sS	**sS**	**19 57 46.9**	**+0.7**
QIZ				pmax	pmax		
	comp=Z,14nm,0.7s						
QIZ				pmax	pmax		
	comp=Z,150nm,2.8s						
QIZ	**Qiongzhong**	**44.11**	**305**	P	**P**	**19 50 09.8**	**+0.4**
JSD	**Sado**	**44.13**	**350**	P	**P**	**19 50 09.2**	**0.0**
NJ2	**Nanjing**	**46.07**	**326**	⇑P	**P**	**19 50 25.3**	**+0.7**
NJ2				pP	**pP**	**19 51 08.6**	**-1.8**
NJ2				pmax	pmax		
	comp=Z,69nm,0.6s						
KSRS	**Korea Array**	**46.37**	**339**	P	**P**	**19 50 26.9**	**+0.1**
	comp=Z,17nm,0.6s,baz=157,slow=8.3,SNR=58						
KSRS				PcP	**PcP**	**19 51 58.9**	**+0.8**
	comp=Z,5.7nm,0.6s,baz=193,slow=2.4,SNR=9.5						
KSAR	**Wonju Array Be**	**46.37**	**339**	P	**P**	**19 50 27.1**	**+0.2**
KSAR	**Wonju Array Be**	**46.37**	**339**	P	**P**	**19 50 27.1**	**+0.2**
JTM	**Tenmabayashi**	**46.43**	**354**	P	**P**	**19 50 27.2**	**0.0**
JTM				IAmb	IAmb	19 51 20.2	
	comp=Z,140nm,1.5s						
KS19	**Wonju Array Si**	**46.43**	**339**	P	**P**	**19 50 27.1**	**-0.3**
KS19				IAmb	IAmb	19 50 33.7	
	comp=Z,140nm,1.8s						
PDSI	**Padang**	**46.82**	**274**	P	**P**	**19 50 29.9**	**-0.9**
	comp=Z,6.8nm,0.4s						
INCN	**Inchon**	**46.87**	**338**	P	**P**	**19 50 30.9**	**+0.1**
INCN				pmax	pmax		
	comp=Z,309nm,2.0s						
INCN	**Inchon**	**46.87**	**338**	P	**P**	**19 50 30.9**	**+0.1**
INCN				IAmb	IAmb	19 52 02.1	
	comp=Z,309nm,2.0s						
WHN	**Wuhan**	**47.66**	**321**	⇑*i*P	**P**	**19 50 37.8**	**+0.8**
WHN				S	**S**	**19 57 20.8**	**+4.5**
WHN				pmax	pmax		
	comp=Z,60nm,1.0s						
WHN				LR	LR		
	comp=Z,970nm,13.1s						
GSI	**Gunungsitoli**	**49.97**	**276**	P	**P**	**19 50 54.0**	**-0.9**
DL2	**Dalian**	**50.13**	**334**	P	**P**	**19 50 57.3**	**+1.8**
DL2				pmax	pmax		
	comp=Z,50nm,1.0s						
GYA	**Guiyang**	**50.49**	**311**	*e*P	**P**	**19 50 59.3**	**+0.7**
GYA				pP	pP	19 51 50.4	+4.7
GYA				sP	PcP	19 52 14.9	+1.4
GYA				S	**S**	**19 57 57.3**	**+1.3**
GYA				sS	sS	19 59 24.8	+6.8
GYA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
KUR	**Kuril'sk**	**50.54**	**1**	*i* P	**P**	**19 50 58.6**	**+0.2**
ENH	**Enshi**	**50.68**	**317**	P	**P**	**19 50 59.8**	**-0.1**
ENH				IAmb	IAmb	19 51 03.9	
	comp=Z,89nm,1.6s						
TEY	**Ternei**	**51.22**	**350**	*e*P	**P**	**19 51 04.0**	**+0.5**
USA0B	**Ussuriysk Arra**	**51.35**	**346**	*i* P	**P**	**19 51 04.6**	**+0.1**
USA0B	**Ussuriysk Arra**	**51.35**	**346**	P	**P**	**19 51 02.4**	**-2.2**
USRK	**Ussuriysk Ar.**	**51.35**	**346**	P	**P**	**19 51 04.5**	**0.0**
	comp=Z,15nm,0.6s,baz=157,slow=6.7,SNR=42						
USRK				PcP	**PcP**	**19 52 16.9**	**+0.7**
	comp=Z,4.9nm,0.7s,baz=162,slow=3.8,SNR=4.7						
USRK	**Ussuriysk Ar.**	**51.35**	**346**	P	**P**	**19 51 02.5**	**-2.0**
MDJ	**Mudanjiang**	**52.35**	**344**	P	**P**	**19 51 13.4**	**+1.5**
MDJ				pP	pwP	19 52 00.3	-1.0
MDJ				PcP	**PcP**	**19 52 20.5**	**+0.6**
MDJ				sP	sP	19 52 24.1	+1.8
MDJ				PP	**PP**	**19 53 14.1**	**+1.0**
MDJ				ScP	**ScP**	**19 55 57.0**	**+0.5**
MDJ				S	**S**	**19 58 24.1**	**+3.4**
MDJ				sS	sS	19 59 46.0	+2.7
MDJ				pmax	pmax		
	comp=Z,22nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,240nm,4.2s						
MDJ	**Mudanjiang**	**52.35**	**344**	P	**P**	**19 51 11.8**	**-0.1**
YSS	**Yuzh-Sakhalins**	**52.40**	**356**	*ce*P	**P**	**19 51 11.5**	**-0.7**
YSS				pmax	pmax		
	comp=Z,102nm,2.5s						
YSS	**Yuzh-Sakhalins**	**52.40**	**356**	P	**P**	**19 51 12.1**	**-0.1**
YSS				IAmb	IAmb	19 51 14.8	
	comp=Z,46nm,1.1s						
LAMP	**Lampang**	**52.58**	**298**	P	**P**	**19 51 16.2**	**+2.2**
	comp=Z,14nm,0.7s						
KMI	**Kunming**	**52.83**	**307**	⇓P	**P**	**19 51 17.5**	**+1.4**
KMI				pP	pP	19 52 04.8	+1.5
KMI				sP	sP	19 52 29.0	+2.1
KMI				PP	**PP**	**19 53 18.8**	**+0.8**
KMI				S	**S**	**19 58 27.6**	**-0.7**
KMI				sS	sS	19 59 53.6	+2.6
KMI				SS	**SS**	**20 02 10.0**	**-0.4**
KMI				pmax	pmax		
	comp=Z,7.0nm,0.6s						
KMI				pmax	pmax		
	comp=Z,110nm,6.1s						
KMI				LR	LR		
	comp=Z,170nm,16.6s						
KMI				LR	LR		
	comp=Z,260nm,25.4s						
KMI				LR	LR		
	comp=Z,400nm,22.5s						
KMI	**Kunming**	**52.83**	**307**	P	**P**	**19 51 17.1**	**+1.0**
KMI				pmax	pmax		
	comp=Z,29nm,1.6s						
KMI	**Kunming**	**52.83**	**307**	P	**P**	**19 51 17.1**	**+1.0**
CN2	**Changchun**	**52.87**	**340**	*e*P	**P**	**19 51 14.8**	**-0.9**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,170nm,3.7s						
CM36	**Chiang Mai Arr**	**53.05**	**298**	P	**P**	**19 51 18.0**	**+0.5**
CM35	**Chiang Mai Arr**	**53.06**	**298**	P	**P**	**19 51 18.0**	**+0.4**
CM04	**Chiang Mai Arr**	**53.11**	**298**	P	**P**	**19 51 19.2**	**+1.3**
	comp=Z,97nmcomp=Z,7.1nm,0.7s						
CM09	**Chiang Mai Arr**	**53.11**	**298**	P	**P**	**19 51 19.4**	**+1.4**
	comp=Z,100nmcomp=Z,8.3nm,0.7s						
CM01	**Chiang Mai Arr**	**53.13**	**298**	P	**P**	**19 51 19.6**	**+1.5**
	comp=Z,80nmcomp=Z,7.0nm,0.6s						
CM05	**Chiang Mai Arr**	**53.14**	**298**	P	**P**	**19 51 19.4**	**+1.2**
	comp=Z,64nmcomp=Z,4.8nm,0.6s						
CM02	**Chiang Mai Arr**	**53.15**	**298**	P	**P**	**19 51 19.7**	**+1.5**
	comp=Z,82nmcomp=Z,6.2nm,0.7s						
CM31	**Chiang Mai Arr**	**53.16**	**298**	P	**P**	**19 51 19.8**	**+1.4**
	comp=Z,3µmcomp=Z,204nm,0.7s						
CM31	**Chiang Mai Arr**	**53.16**	**298**	P	**P**	**19 51 18.8**	**+0.5**
CMAR	**Chiang Mai Arr**	**53.16**	**298**	P	**P**	**19 51 18.8**	**+0.5**
	comp=Z,3.9nm,0.6s,baz=124,slow=5.8,SNR=39						
CMAR				pP	**pP**	**19 52 04.5**	**-1.1**
	comp=Z,6.5nm,0.8s,baz=124,slow=5.6,SNR=4.4						
CMAR	**Chiang Mai Arr**	**53.16**	**298**	*i* P	**P**	**19 51 19.0**	**+0.7**
CMAR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**53.16**	**298**	P	**P**	**19 51 19.2**	**+0.9**
CM15	**Chiang Mai Arr**	**53.17**	**298**	P	**P**	**19 51 19.0**	**+0.6**
	comp=Z,85nmcomp=Z,6.7nm,0.6s						
CM13	**Chiang Mai Arr**	**53.18**	**298**	P	**P**	**19 51 19.6**	**+1.2**
	comp=Z,85nmcomp=Z,5.8nm,0.7s						
CMMT	**Chiang Mai**	**53.29**	**298**	P	**P**	**19 51 19.0**	**-0.3**
	comp=Z,2.3nm,0.7s						
CHTO	**Chiang Mai**	**53.29**	**298**	P	**P**	**19 51 19.4**	**+0.1**
CHTO				pmax	pmax		
	comp=Z,17nm,0.7s						
CHTO	**Chiang Mai**	**53.29**	**298**	P	**P**	**19 51 19.4**	**+0.1**
XAN	**Xi'an**	**53.42**	**320**	P	**P**	**19 51 19.6**	**-0.4**
XAN				pmax	pmax		
	comp=Z,47nm,0.8s						
XAN				pmax	pmax		
	comp=Z,76nm,4.6s						
XAN	**Xi'an**	**53.42**	**320**	P	**P**	**19 51 19.6**	**-0.4**
XAN				pmax	pmax		
	comp=Z,45nm,0.7s						
XAN	**Xi'an**	**53.42**	**320**	P	**P**	**19 51 19.6**	**-0.4**
XAN				IAmb	IAmb	19 51 21.9	
	comp=Z,45nm,0.7s						
BJT	**Baijiatuau**	**53.55**	**331**	P	**P**	**19 51 20.4**	**-0.4**
BJT				pmax	pmax		
	comp=Z,35nm,1.3s						
BJT	**Baijiatuau**	**53.55**	**331**	P	**P**	**19 51 20.4**	**-0.4**
BJI	**Beijing**	**53.57**	**331**	P	**P**	**19 51 20.6**	**-0.3**
BJI				PcP	**PcP**	**19 52 25.6**	**+1.0**
BJI				pmax	pmax		
	comp=Z,21nm,1.0s						
BJI				LR	LR		
	comp=Z,310nm,21.6s						
BJI				LR	LR		
	comp=Z,370nm,19.0s						
TIY	**Taiyuan**	**53.80**	**326**	*e*P	**P**	**19 51 22.6**	**-0.1**
TIY				sP	**sP**	**19 52 34.8**	**+1.4**
TIY				pmax	pmax		
	comp=Z,8.0nm,0.5s						
TIY				pmax	pmax		
	comp=Z,190nm,5.5s						
CD2	**Chengdu**	**55.05**	**314**	P	**P**	**19 51 32.1**	**+0.2**
CD2				pP	pP	19 52 21.5	+2.0
CD2				S	**S**	**19 58 57.3**	**-0.3**
CD2				pmax	pmax		
	comp=Z,70nm,0.5s						
CD2				pmax	pmax		
	comp=Z,170nm,7.0s						
KLR	**Kul'dur**	**56.16**	**348**	*ce*P	**P**	**19 51 39.4**	**+0.1**
KLR				pmax	pmax		
	comp=Z,42nm,1.2s						
TYV	**Tymovskoe**	**56.30**	**357**	*e*P	**P**	**19 51 40.9**	**+0.7**
TYV				pmax	pmax		
	comp=Z,200nm,2.3s						
TYV				pmax	pmax		
	comp=Z,18nm,0.9s						
HHC	**Hu-ho-hao-te**	**56.51**	**328**	*e*P	**P**	**19 51 42.3**	**+0.2**
HHC				pP	pP	19 52 30.4	+0.7
HHC				S	**S**	**19 59 19.3**	**+2.7**
HHC				sS	sS	20 00 41.8	+1.5
HHC				SS	**SS**	**20 03 10.6**	**+2.9**
HHC				pmax	pmax		
	comp=Z,17nm,0.9s						
HHC				pmax	pmax		
	comp=Z,220nm,5.5s						
GRNR	**Gornyy**	**56.83**	**352**	⇑*i*P	**P**	**19 51 44.6**	**+0.6**
GRNR				pmax	pmax		
	comp=N,4.0nm,0.9s						
GRNR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
GRNR				MLR	MLR		
	comp=E,90nm,13.0s						
GRNR				MLR	MLR		
	comp=N,80nm,18.0s						
GRNR				MLR	MLR		
	comp=Z,90nm,16.0s						
BTO	**Baotou**	**57.17**	**327**	*e*P	**P**	**19 51 46.8**	**+0.1**
LZH	**Lanzhou**	**57.95**	**319**	*e*P	**P**	**19 51 53.3**	**+1.0**
LZH				pP	pP	19 52 39.6	-0.7
LZH				S	**S**	**19 59 39.3**	**+3.6**
LZH				sS	sS	20 01 02.3	+2.4
LZH				pmax	pmax		
	comp=Z,24nm,1.0s						
LZH				pmax	pmax		
	comp=Z,170nm,8.7s						
LZH				LR	LR		
	comp=Z,290nm,17.4s						
LZH				LR	LR		
	comp=Z,220nm,19.5s						
LZH				LR	LR		
	comp=Z,170nm,16.8s						
PEA0B	**Petropavlovsk-**	**59.10**	**7**	*ce*P	**P**	**19 52 00.2**	**+0.6**
PEA0B	**Petropavlovsk-**	**59.10**	**7**	P	**P**	**19 52 00.3**	**+0.6**
PEA0B				IAmb	IAmb	19 52 02.5	
	comp=Z,84nm,1.2s						
PETK	**Petropavlovsk-**	**59.10**	**7**	P	**P**	**19 52 00.2**	**+0.6**
	comp=Z,15nm,0.5s,baz=163,slow=6.1,SNR=90						
PETK				pP	**PcP**	**19 52 45.9**	**0.0**
	comp=Z,8.7nm,0.9s,baz=148,slow=4.4,SNR=1.9						
PET	**Petropavlovsk**	**59.14**	**8**	*e*P	**P**	**19 51 59.9**	**0.0**
PET				*e**SP	**sP**	**19 53 11.7**	**+0.6**
PET				*e*S	**S**	**19 59 50.0**	**0.0**
PET				pmax	pmax		
	comp=Z,28nm,0.9s						
PET				pmax	pmax		
	comp=Z,300nm,16.7s						
PET	**Petropavlovsk**	**59.14**	**8**	P	**P**	**19 52 00.4**	**+0.5**
ZEA	**Zeya**	**61.38**	**347**	*e*P	**P**	**19 52 15.4**	**+0.3**
ZEA				pmax	pmax		
	comp=E,30nm,1.1s						
ZEA				pmax	pmax		
	comp=Z,40nm,0.9s						
KHU	**Kahuku**	**61.47**	**65**	P	**P**	**19 52 17.1**	**+0.4**
KHU				pmax	pmax		
	comp=Z,460nm,1.7s						
KHU	**Kahuku**	**61.47**	**65**	P	**P**	**19 52 17.1**	**+0.4**
SHL	**Shillong**	**61.89**	**303**	P	**P**	**19 52 19.3**	**0.0**
SHL				pmax	pmax		
	comp=Z,21nm,0.7s						
SHL	**Shillong**	**61.89**	**303**	P	**P**	**19 52 19.3**	**0.0**
SHL				IAmb	IAmb	19 52 59.8	
	comp=Z,21nm,0.7s						
GTA	**Gaotai**	**62.48**	**320**	⇑P	**P**	**19 52 23.3**	**+0.4**
GTA				pP	pwP	19 53 14.5	+0.7
GTA				sP	sP	19 53 40.1	+5.5
GTA				pmax	pmax		
	comp=Z,15nm,1.0s						
ULN	**Ulaanbaatar**	**63.77**	**331**	*ce*P	**P**	**19 52 31.7**	**+0.5**
ULN				pmax	pmax		
	comp=Z,55nm,0.7s						
ULN	**Ulaanbaatar**	**63.77**	**331**	P	**P**	**19 52 31.9**	**+0.7**
SONM	**Songino Array**	**64.07**	**331**	P	**P**	**19 52 33.5**	**+0.4**
	comp=Z,26nm,0.7s,baz=154,slow=7.0,SNR=93						
SONM				PKPPKP	**P'P'df**	**20 21 19.7**	**-3.0**
	comp=Z,0.5nm,0.9s,baz=270,slow=1.5,SNR=3.7						
SONM				PKP2bc		20 21 28.8	
	comp=Z,4.9nm,0.9s,baz=300,slow=1.3,SNR=24						
SONM	**Songino Array**	**64.07**	**331**	P	**P**	**19 52 33.2**	**+0.1**
LSA	**Lhasa**	**64.08**	**307**	P	**P**	**19 52 34.4**	**+0.4**
LSA				pmax	pmax		
	comp=Z,36nm,0.7s						
LSA	**Lhasa**	**64.08**	**307**	P	**P**	**19 52 34.7**	**+0.7**
LSA				pmax	pmax		
	comp=Z,8.0nm,0.6s						
LSA	**Lhasa**	**64.08**	**307**	P	**P**	**19 52 34.7**	**+0.7**
CIT	**Chita**	**64.08**	**338**	*e*P	**P**	**19 52 33.0**	**0.0**
CIT				*e*		19 53 24.2	
CIT				pmax	pmax		
	comp=Z,157nm,1.3s						
MA2	**Magadan**	**64.97**	**2**	*ce*P	**P**	**19 52 37.7**	**-0.8**
MA2				pmax	pmax		
	comp=Z,86nm,1.7s						
MA2	**Magadan**	**64.97**	**2**	P	**P**	**19 52 38.6**	**+0.1**
MA2				IAmb	IAmb	19 52 41.1	
	comp=Z,43nm,0.9s						
ADK	**Adak**	**64.98**	**24**	P	**P**	**19 52 38.7**	**-0.1**
ADK				pmax	pmax		
	comp=Z,137nm,1.3s						
ADK	**Adak**	**64.98**	**24**	P	**P**	**19 52 38.6**	**-0.1**
CASY	**Casey**	**65.75**	**195**	P	**P**	**19 52 44.5**	**+1.1**
TAPN	**Taplejung**	**66.02**	**303**	*e*P	**P**	**19 52 47.3**	**+1.0**
	comp=Z,17nm,0.3s						
RAMN	**Ramite**	**66.81**	**302**	*e*P	**P**	**19 52 52.4**	**+1.1**
	comp=Z,28nm,0.5s						
ZAK	**Zakamensk**	**67.30**	**331**	*e*P	**P**	**19 52 53.7**	**0.0**
ZAK				*e*		19 53 43.4	
ZAK				pmax	pmax		
	comp=Z,59nm,1.0s						

ZAK				pmax	pmax		
	comp=Z,11nm,1.0s						
GUN	**Gumba**	67.73	303	*e*P	P	19 52 57.3	+0.1
	comp=Z,53nm,0.4s						
TLY	**Talaya**	68.00	332	*i* P	P	19 52 58.3	+0.4
TLY				pmax	pmax		
	comp=Z,28nm,0.8s						
TLY	**Talaya**	68.00	332	P	P	19 52 58.8	+0.8
TLY				IAmb	IAmb	19 53 00.8	
	comp=Z,25nm,0.8s						
PKI	**Pulchoki**	68.02	303	*e*P	P	19 52 58.6	-0.3
	comp=Z,10nm,0.5s						
PKIN	**Phulchoki**	68.03	303	*e*P	P	19 52 58.5	-0.4
	comp=Z,13nm,0.4s						
IRK	**Irkutsk**	68.10	333	*e*P	P	19 52 56.8	-1.7
IRK				pmax	pmax		
	comp=Z,56nm,1.7s						
KKN	**Kakani**	68.20	303	*e*P	P	19 52 59.8	-0.1
	comp=Z,20nm,0.5s						
DMN	**Daman**	68.28	302	*e*P	P	19 53 00.5	0.0
	comp=Z,37nm,0.4s						
SEY	**Seymchan**	68.39	3	*i* P	P	19 53 00.7	+0.6
BOD	**Bodaibo**	68.58	342	*e*P	P	19 53 00.9	-0.5
BOD				pmax	pmax		
	comp=Z,49nm,0.8s						
YAK	**Yakutsk**	68.70	351	*c i*P	P	19 53 02.1	+0.1
YAK				*e*		19 53 23.9	
YAK				*e**PP	pP	19 53 49.0	-2.5
YAK				*e*		19 55 36.6	
YAK				*e*PPP	PPP	19 57 20.5	
YAK				*e*S	S	20 01 48.7	+1.5
YAK				*e*		20 02 42.1	
YAK				*e*SS	SS	20 06 13.6	-3.0
YAK				*e*SSS	SSS	20 09 24.9	
YAK				pmax	pmax		
	comp=Z,108nm,1.0s						
YAK				pmax	pmax		
	comp=N,41nm,1.3s						
YAK				pmax	pmax		
	comp=E,5.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,51nm,3.0s						
YAK				pmax	pmax		
	comp=N,42nm,2.7s						
YAK				pmax	pmax		
	comp=E,43nm,2.8s						
YAK				smax	smax		
	comp=N,27nm,1.8s						
YAK				smax	smax		
	comp=E,81nm,1.9s						
YAK	**Yakutsk**	68.70	351	P	P	19 53 02.1	+0.1
GKN	**Gorkha**	68.80	303	*e*P	P	19 53 03.3	-0.3
	comp=E,42nm,0.5s						
MOY	**Mondy**	69.23	331	*e*P	P	19 53 06.4	+0.7
MOY				pmax	pmax		
	comp=Z,92nm,2.5s						
AKUT	**Akutan**	71.25	27		P	19 53 18.3	+0.6
TAOE	**Nuku Hiva Isla**	72.12	97	P	P	19 53 24.2	+0.4
VNDA	**Vanda**	72.37	177	P	P	19 53 25.1	+1.1
	comp=Z,38nm,0.8s,baz=333,slow=6.6,SNR=82						
VNDA	**Vanda**	72.37	177	P	P	19 53 25.1	+1.1
VNDA				IAmb	IAmb	19 53 26.9	
	comp=Z,37nm,0.8s						
WMQ	**Urumqi**	72.53	319	*e*P	P	19 53 26.6	+0.9
WMQ				PcP	PcP	19 53 43.1	+1.0
WMQ				pP	pwP	19 54 17.3	-0.8
WMQ				pmax	pmax		
	comp=Z,4.0nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,320nm,4.5s						
WMQ				LR	LR		
	comp=Z,420nm,28.9s						
WMQ				LR	LR		
	comp=Z,670nm,29.1s						
WMQ				LR	LR		
	comp=Z,71nm,29.3s						
WMQ	**Urumqi**	72.53	319	P	P	19 53 25.9	+0.2
WMQ				pmax	pmax		
	comp=Z,23nm,1.0s						
WMQ	**Urumqi**	72.53	319	P	P	19 53 25.9	+0.2
SBA	**Scott Base**	73.01	176	P	P	19 53 29.8	+2.1
SBA				pmax	pmax		
	comp=Z,69nm,1.3s						
SBA	**Scott Base**	73.01	176	P	P	19 53 29.8	+2.1
SBA				IAmb	IAmb	19 53 43.2	
	comp=Z,69nm,1.3s						
MNCI	**Minicoy**	75.14	280	P	P	19 53 41.5	+0.2
DGZ	**Jazzator, Alta**	75.34	325	*c i*P	P	19 53 41.3	-0.6
DGZ				pmax	pmax		
	comp=Z,22nm,0.9s						
GAMB	**Gambell**	75.69	18	P	P	19 53 44.1	+0.8
	baz=222						
GAMB	**Gambell**	75.69	18	P	P	19 53 43.5	+0.2
GAMB				IAmb	IAmb	19 53 46.4	
	comp=Z,60nm,1.6s						
ZSN	**Zaisan**	75.88	322	*e*P	P	19 53 44.7	-0.1
	baz=322						
ZSN	**Zaisan**	75.88	322	*e*P	P	19 53 44.6	-0.2
CHGN	**Chignik**	75.92	28	P	P	19 53 45.1	+0.3
MK31	**Makanchi Array**	77.23	320	*ce*P	P	19 53 52.3	-0.1
MK31	**Makanchi Array**	77.23	320	P	P	19 53 52.2	-0.3
MKAR	**Makanchi Array**	77.23	320	P	P	19 53 52.1	-0.3
	comp=Z,6.0nm,0.3s,baz=97,slow=9.1,SNR=120						
MKAR				pP	pP	19 54 40.9	-2.4
	comp=Z,2.8nm,0.7s,baz=111,slow=6.0,SNR=2.1						
MKAR				PKiKP	PKiKP	19 59 30.9	-0.9
	comp=Z,0.3nm,0.5s,baz=58,slow=3.6,SNR=4.3						
MKAR	**Makanchi Array**	77.23	320	P	P	19 53 52.2	-0.2
MAKZ	**Makanchi**	77.44	320	P	P	19 53 53.2	-0.4
MAKZ				pmax	pmax		
	comp=Z,26nm,0.8s						
MAKZ	**Makanchi**	77.44	320	P	P	19 53 53.2	-0.4
MAKZ				IAmb	IAmb	19 53 56.1	
	comp=Z,26nm,0.8s						
SHLS	**Shalkode**	77.80	316	*e*P	P	19 53 53.2	-2.7
	comp=Z,8.6nm,0.6s,baz=316						
SHLS	**Shalkode**	77.80	316	*e*P	P	19 53 53.1	-2.7
SHLS				pmax	pmax		
	comp=Z,9.0nm,0.6s						
PDGK	**Podgornoye**	77.84	316	*i* P	P	19 53 56.4	+0.4
PDGK				pmax	pmax		
	comp=Z,23nm,0.5s						
TIXI	**Tiksi**	77.96	354	*c i*P	P	19 53 55.5	-0.4
TIXI	**Tiksi**	77.96	354	P	P	19 53 54.8	-1.1
UZB	**Uzynbulak**	78.10	316	*e*P	P	19 53 56.7	-0.9
	comp=Z,8.7nm,0.5s,baz=316						
UZB	**Uzynbulak**	78.10	316	*e*P	P	19 53 56.6	-0.9
UZB				pmax	pmax		
	comp=Z,9.0nm,0.5s						
ANM	**Nome**	78.22	19	P	P	19 53 58.3	+0.9
	baz=229						
ANM	**Nome**	78.22	19	P	P	19 53 58.0	+0.5
ANM				pmax	pmax		
	comp=Z,56nm,1.4s						
ANM	**Nome**	78.22	19	P	P	19 53 58.0	+0.5
ANM				IAmb	IAmb	19 54 00.7	
	comp=Z,56nm,1.4s						
KPKS	**Kokpek**	78.44	316	*e*P	P	19 53 57.7	-1.5
	comp=Z,7.1nm,0.5s,baz=316						
KPKS	**Kokpek**	78.44	316	*e*P	P	19 53 57.7	-1.5
KPKS				pmax	pmax		
	comp=Z,7.0nm,0.5s						
SATY	**Saty**	78.50	316	*e*P	P	19 53 58.5	-1.2
	comp=Z,4.8nm,0.5s,baz=316						
SATY				*e*pP	pP	19 54 49.5	-1.0
	baz=316						
SATY	**Saty**	78.50	316	*e*P	P	19 53 58.4	-1.2
SATY				*e**PP	pP	19 54 49.5	-1.0
SATY				pmax	pmax		
	comp=Z,5.0nm,0.5s						
ZALV	**Zalesovo Beam**	78.69	328	P	P	19 53 59.0	-1.3
	comp=Z,39nm,0.6s,baz=110,slow=5.7,SNR=131						
ZALV				pP	pP	19 54 49.0	-2.3
	comp=Z,8.9nm,0.9s,baz=108,slow=4.8,SNR=1.6						
ZALV	**Zalesovo Beam**	78.69	328	P	P	19 53 59.0	-1.3
ZALV				*PP	pP	19 54 49.0	-2.3
OHAK	**Old Harbor**	78.82	29	P	P	19 54 01.2	+0.4
TDK	**Taldyqorghan**	79.13	318	*e*P	P	19 54 02.3	-0.7
	comp=Z,14nm,0.5s,baz=318						
TDK	**Taldyqorghan**	79.13	318	*e*P	P	19 54 02.2	-0.7
TDK				pmax	pmax		
	comp=Z,14nm,0.5s						
KSH	**Kashi**	79.18	312	P	P	19 54 04.9	+1.5
KSH				PP	PP	19 57 04.8	-1.3
KSH				S	S	20 03 42.6	-2.8
KSH				pmax	pmax		
	comp=Z,13nm,0.9s						
KSH				pmax	pmax		
	comp=Z,410nm,7.9s						
KDAK	**Kodiak Island**	79.42	28	*i* P	P	19 54 04.2	+0.1
KDAK				pmax	pmax		
	comp=Z,6.0nm,0.4s						
MDOK	**Medeo**	79.47	316	*e*P	P	19 54 04.7	-0.3
	baz=316						
MDOK	**Medeo**	79.47	316	*e*P	P	19 54 04.7	-0.3
TNSS	**Tian-Shan**	79.51	315	*e*P	P	19 54 05.8	+0.3
	baz=315						
TNSS	**Tian-Shan**	79.51	315	*e*P	P	19 54 05.8	+0.3
AAA	**Alma-Ata**	79.58	316	*e*P	P	19 54 05.6	+0.2
	comp=Z,5.7nm,0.5s,baz=316						
AAA	**Alma-Ata**	79.58	316	*e*P	P	19 54 05.6	+0.2
AAA				pmax	pmax		
	comp=Z,6.0nm,0.5s						
SVW2	**Sparrevohn**	79.76	25	P	P	19 54 06.5	+0.6
SVW2				IAmb	IAmb	19 54 09.1	
	comp=Z,35nm,0.8s						
ULHL	**Ulahol**	79.77	315	P	P	19 54 07.2	+0.5
	SNR=15						
NIL	**Nilore**	79.78	305	P	P	19 54 06.5	-0.1
NIL				pmax	pmax		
	comp=Z,27nm,0.7s						
NIL	**Nilore**	79.78	305	P	P	19 54 06.5	-0.1
NIL				IAmb	IAmb	19 54 10.4	
	comp=Z,27nm,0.7s						
SEM	**Semipalatinsk**	79.84	323	*e*P	P	19 54 05.2	-1.6
	baz=323						
SEM	**Semipalatinsk**	79.84	323	*e*P	P	19 54 05.2	-1.6
KUU	**Kurty**	80.19	316	*e*P	P	19 54 08.1	-0.5
	comp=Z,28nm,0.7s,baz=316						
KUU	**Kurty**	80.19	316	*e*P	P	19 54 08.1	-0.5
KUU				pmax	pmax		
	comp=Z,28nm,0.7s						
TKM2	**Tokmak 2**	80.42	315	P	P	19 54 10.4	+0.2
	SNR=28						
TKM2	**Tokmak 2**	80.42	315	*i* P	P	19 54 10.3	+0.2
TKM2				pmax	pmax		
	comp=Z,19nm,0.6s						
TTA	**Tatalina**	80.56	23	P	P	19 54 10.5	+0.2
TTA				pmax	pmax		
	comp=Z,32nm,1.4s						
TTA	**Tatalina**	80.56	23	P	P	19 54 10.4	+0.2
KBK	**Karagaybulak**	80.80	315	P	P	19 54 12.6	+0.5
	SNR=7.2						
CNPM	**China Poot**	80.86	27	P	P	19 54 12.3	+0.5
KURK	**Kurchatov**	80.92	323	P	P	19 54 11.7	-0.6
KURK				pmax	pmax		
	comp=Z,26nm,1.1s						
KURK	**Kurchatov**	80.92	323	P	P	19 54 11.7	-0.6
UCH	**Uchtor**	80.99	314	P	P	19 54 14.3	+0.8
	SNR=26						
CHMS	**Chumysh**	81.04	315	P	P	19 54 13.3	+0.2
	SNR=15						
AAK	**Ala-Archa**	81.12	315	P	P	19 54 13.9	+0.1
	SNR=16						
AAK	**Ala-Archa**	81.12	315	*ce*P	P	19 54 14.0	+0.3
AAK				pmax	pmax		
	comp=Z,46nm,0.7s						
AAK	**Ala-Archa**	81.12	315	P	P	19 54 13.9	+0.1
SGDS	**Sogindy**	81.25	315	*e*P	P	19 54 13.8	-0.6
	comp=Z,5.1nm,0.6s,baz=315						
SGDS	**Sogindy**	81.25	315	*e*P	P	19 54 13.7	-0.6
SGDS				pmax	pmax		
	comp=Z,5.0nm,0.6s						
RDOG	**Red Dog Mine**	81.25	17	P	P	19 54 14.5	+0.8
	baz=230						
USP	**Ospenovka**	81.29	315	P	P	19 54 14.6	+0.1
	SNR=24						
AML	**Almayashu**	81.55	314	P	P	19 54 17.1	+0.8
	SNR=39						
EKS2	**Erkin-Say**	81.63	314	P	P	19 54 17.1	+0.7
	SNR=41						
SKT	**Skwentna**	81.88	25	P	P	19 54 16.6	-0.6
	baz=242						
SUA	**Susitna One**	81.97	25	P	P	19 54 17.1	-0.6
	baz=243						
SUA	**Susitna One**	81.97	25	P	P	19 54 17.3	-0.4
SUA				IAmb	IAmb	19 54 19.6	
	comp=Z,30nm,1.1s						
O22K	**Cooper Landing**	81.97	26	P	P	19 54 19.4	+1.9
	baz=244						
PPLA	**Purkeypile**	82.05	24	P	P	19 54 19.4	+1.3
	baz=241						
BTLS	**Baital**	82.09	317	*e*P	P	19 54 18.3	-0.3
	comp=Z,7.1nm,0.6s,baz=317						
BTLS	**Baital**	82.09	317	*e*P	P	19 54 18.2	-0.3
BTLS				pmax	pmax		
	comp=Z,7.0nm,0.6s						
RC01	**Rabbit Creek A**	82.24	26	P	P	19 54 19.8	+0.9
	baz=244						
CHUM	**Lake Minchumin**	82.48	23	P	P	19 54 21.0	+0.8
	baz=241						
CUT	**Chulitna**	82.61	25	P	P	19 54 21.4	+0.7
	baz=243						
PMR	**Palmer**	82.72	26	P	P	19 54 20.7	-0.7
PMR				pmax	pmax		
	comp=Z,45nm,1.2s						
PMR	**Palmer**	82.72	26	P	P	19 54 20.7	-0.7
PMR				IAmb	IAmb	19 54 23.5	
	comp=Z,45nm,1.2s						
MAW	**Mawson**	82.73	203	P	P	19 54 22.7	+1.3
MAW				pmax	pmax		
	comp=Z,140nm,1.8s						
MAW	**Mawson**	82.73	203	P	P	19 54 22.7	+1.3
KTH	**Kantishna Hill**	82.87	23	P	P	19 54 21.7	-0.5
KTH				IAmb	IAmb	19 54 23.5	
	comp=Z,33nm,1.2s						
IMAR	**Indian Mountai**	83.00	21	P	P	19 54 23.0	+0.2
TRF	**Thorofare Moun**	83.07	24	P	P	19 54 23.4	-0.1
	baz=243						
BPAW	**Bear Paw Mtn.**	83.10	23	P	P	19 54 24.0	+0.7
	baz=242,SNR=9.6						
SML	**Sawmill**	83.16	26	P	P	19 54 24.0	+0.2
	baz=245,SNR=6.4						
SML	**Sawmill**	83.16	26	P	P	19 54 23.9	+0.1
SML				IAmb	IAmb	19 54 26.3	
	comp=Z,69nm,1.1s						
KBL	**Kabul**	83.38	306	P	P	19 54 24.8	-0.9
KBL				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KBL	**Kabul**	83.38	306	P	P	19 54 24.8	-0.9
DZA	**Taraz**	83.44	314	*e*P	P	19 54 25.2	-0.4
	comp=Z,16nm,0.8s,baz=314						
DZA	**Taraz**	83.44	314	*e*P	P	19 54 25.1	-0.5
DZA				pmax	pmax		
	comp=Z,16nm,0.8s						
WAT2	**Susitna Watana**	83.55	24	P	P	19 54 25.4	-0.4
	baz=244,SNR=9.2						
MLY	**Manley**	83.63	22	P	P	19 54 26.1	0.0
	baz=242,SNR=25						
WAT6	**Susitna Watana**	83.74	25	P	P	19 54 26.7	-0.1
	baz=245,SNR=5.3						
MCK	**McKinley**	83.74	24	P	P	19 54 26.2	-0.4
	baz=244,SNR=19						
NEA2	**Nenana**	84.07	23	P	P	19 54 28.4	+0.2
	baz=244,SNR=11						
KK31	**Karatay Array**	84.07	314	P	P	19 54 28.5	-0.3
KK31				pmax	pmax		
	comp=Z,37nm,1.2s						
KK31	**Karatay Array**	84.07	314	P	P	19 54 28.5	-0.3
KK31				IAmb	IAmb	19 54 30.5	
	comp=Z,37nm,1.2s						
KKAR	**Karatay Array**	84.07	314	P	P	19 54 28.5	-0.3
KKAR				pmax	pmax		
	comp=Z,37nm,1.2s						
KKAR	**Karatay Array**	84.07	314	P	P	19 54 28.4	-0.4
KKAR	**Karatay Array**	84.07	314	P	P	19 54 28.5	-0.3
KKAR				IAmb	IAmb	19 54 30.5	
	comp=Z,37nm,1.2s						
KLU	**Klutina**	84.08	26	P	P	19 54 30.1	+1.6
	baz=247,SNR=8.1						
IUG	**Iuzhnay**	84.20	313	*e*P	P	19 54 28.8	-0.8
	comp=Z,7.9nm,1.1s,baz=313						
IUG	**Iuzhnay**	84.20	313	*e*P	P	19 54 28.8	-0.8
IUG				pmax	pmax		
	comp=Z,8.0nm,1.1s						
I23K	**Minto, Yukon-K**	84.20	22	P	P	19 54 28.9	0.0
	baz=244,SNR=8.0						
M24K	**Tolsona, Glenn**	84.21	26	P	P	19 54 29.6	+0.5
	baz=247						
BRZS	**Berezniki**	84.32	321	*e*P	P	19 54 29.0	-0.9
	comp=Z,12nm,0.9s,baz=321						
BRZS	**Berezniki**	84.32	321	*e*P	P	19 54 29.0	-0.9
BRZS				pmax	pmax		
	comp=Z,12nm,0.9s						
QSPA	**South Pole Qui**	84.43	180	P	P	19 54 30.4	+0.1
QSPA				IAmb	IAmb	19 54 32.4	
	comp=Z,57nm,0.9s						
BMRM	**Bremner River**	84.47	27	P	P	19 54 31.4	+1.0
	baz=248						
CCB	**Clear Creek Bu**	84.58	23	P	P	19 54 29.7	-1.1
CCB				IAmb	IAmb	19 54 31.8	
	comp=Z,53nm,1.2s						
TCOL	**CIGO, UAF Yank**	84.66	23	P	P	19 54 31.1	-0.1
	baz=245,SNR=6.2						
COLA	**College**	84.66	23	P	P	19 54 31.1	0.0
	baz=245						
COLA	**College**	84.66	23	*i* P	P	19 54 31.4	+0.2
COLA				pmax	pmax		
	comp=Z,55nm,1.3s						
COLA	**College**	84.66	23	P	P	19 54 31.1	0.0
COLA				IAmb	IAmb	19 54 32.2	
	comp=Z,78nm,1.3s						
N25K	**Chitina, Valde**	84.71	26	P	P	19 54 31.8	+0.2
	baz=248						
HDA	**Harding Lake**	84.82	23	P	P	19 54 31.5	-0.6
	baz=246						
COLD	**Coldfoot**	84.85	20	P	P	19 54 32.8	+0.7
	baz=243,SNR=15						
PAX	**Paxson**	84.85	25	P	P	19 54 31.8	-0.5
	baz=247						
POKR	**Poker Plat Res**	84.93	23	P	P	19 54 31.6	-0.9
	baz=245,SNR=6.0						
POKR	**Poker Plat Res**	84.93	23	P	P	19 54 31.9	-0.7
A21K	**Barrow**	84.97	16	P	P	19 54 32.7	+0.2
	baz=236,SNR=11						
IL31		84.99	23	P	P	19 54 31.6	-1.2
IL31				IAmb	IAmb	19 54 34.0	
	comp=Z,39nm,1.1s						
ILAR	**Eielson Array**	84.99	23	P	P	19 54 30.9	-2.0
	comp=Z,22nm,0.9s,baz=251,slow=4.6,SNR=120						
ILAR				PKiKP	PKiKP	19 59 42.7	-0.7
	comp=Z,0.3nm,0.5s,baz=276,slow=3.5,SNR=1.8						
ILAR				PKKPbc	PKKPbc	20 12 40.6	-1.8
	comp=Z,0.2nm,0.4s,baz=55,slow=0.4,SNR=7.9						
ILAR	**Eielson Array**	84.99	23	P	P	19 54 31.8	-1.1
ILAR	**Eielson Array**	84.99	23	P	P	19 54 31.8	-1.1
GLB	**Gilahina Butte**	85.00	27	P	P	19 54 33.3	+0.2
GLB				IAmb	IAmb	19 54 35.3	
	comp=Z,44nm,1.2s						
CRQE	**Cirque**	85.08	28	P	P	19 54 34.2	+0.7
	baz=250						
MCARA	**McCarthy VSAT**	85.33	27	P	P	19 54 36.0	+1.4
	baz=250						
TOLK	**Toolik Lake Re**	85.71	19	P	P	19 54 36.9	+0.5
	baz=243,SNR=13						
TOLK	**Toolik Lake Re**	85.71	19	P	P	19 54 36.9	+0.5
SCRK	**Sand Creek**	85.85	24	P	P	19 54 37.8	+0.5
	baz=249						
CTG	**Chitna Glacier**	85.96	28	P	P	19 54 38.6	+0.7
	baz=251						
CTGM	**Chitina Glacie**	85.97	28	P	P	19 54 38.2	+0.3
CTGM				IAmb	IAmb	19 54 40.7	
	comp=Z,44nm,1.0s						
BCAR	**Beaver Creek A**	86.45	26	P	P	19 54 40.3	+0.2
BRVK	**Borovoye**	86.55	324	*ce*P	P	19 54 39.6	-1.2
BRVK				pmax	pmax		
	comp=Z,17nm,1.0s						
BRVK	**Borovoye**	86.55	324	P	P	19 54 39.5	-1.2
BMAR	**Burnt Mountain**	86.91	21	P	P	19 54 42.7	+0.5
EGAK	**Eagle**	87.28	24	P	P	19 54 44.1	+0.1
	baz=251						
EGAK	**Eagle**	87.28	24	P	P	19 54 44.4	+0.4
EGAK				IAmb	IAmb	19 54 46.9	
	comp=Z,26nm,0.9s						
HYT	**Haines Junctio**	87.71	28	P	P	19 54 46.5	+0.2
HYT				IAmb	IAmb	19 54 51.2	
	comp=Z,40nm,1.1s						
HRA	**Herat**	88.89	305	P	P	19 54 51.7	-0.9
EPYK	**Eagle Plains**	89.51	23	P	P	19 54 54.5	0.0
	baz=255						
SYO	**Syowa Base**	91.08	200	‖*e*P	P	19 55 03.0	+1.3
SYO	**Syowa Base**	91.08	200	‖*e*pP	pP	19 55 55.0	-0.4
INK	**Inuvik**	91.17	21	P	P	19 55 01.3	-0.8
INK				pmax	pmax		
	comp=Z,19nm,1.1s						
INK	**Inuvik**	91.17	21	P	P	19 55 01.3	-0.8
INK				IAmb	IAmb	19 55 04.1	
	comp=Z,19nm,1.1s						
ABKAR	**Akbulak array**	92.32	319	P	P	19 55 06.3	-1.6
ABKAR	**Akbulak array**	92.32	319	P	P	19 55 05.8	-2.1
GEYT	**Alibeck**	92.59	308	P	P	19 55 08.5	-1.0
	comp=Z,2.7nm,0.5s,baz=174,slow=3.0,SNR=8.6						
J01E	**Myrtle Point**	92.95	47	P	P	19 55 12.0	+1.1
	baz=265						
K02D	**Willamette Mer**	93.11	48	P	P	19 55 13.9	+2.1
	baz=265,SNR=5.4						
L02E	**Cave Junction**	93.11	48	P	P	19 55 13.4	+1.7
	baz=266,SNR=6.4						
I03D	**Drain, OR**	93.42	47	P	P	19 55 13.7	+0.7
	baz=266						
O02D	**Mt. Diablo Mer**	93.58	50	P	P	19 55 15.6	+1.6
	baz=266,SNR=20						
M02C	**Callahan**	93.61	49	P	P	19 55 15.6	+1.5
	baz=266,SNR=17						
HUMO	**Hull Mountain**	93.63	48	P	P	19 55 15.4	+1.3
HUMO				IAmb	IAmb	19 55 17.3	
	comp=Z,23nm,1.0s						
N02D	**Trinity Center**	93.70	49	P	P	19 55 15.5	+1.0
	baz=266,SNR=13						
YBH	**Yreka Blue Hor**	93.75	49	P	P	19 55 15.2	+0.4
YBH				pmax	pmax		
	comp=Z,27nm,1.0s						
YBH	**Yreka Blue Hor**	93.75	49	P	P	19 55 15.2	+0.4
YBH				IAmb	IAmb	19 55 17.9	
	comp=Z,27nm,1.0s						
ARU	**Arti**	93.78	326	*d i*P	P	19 55 11.6	-2.8
ARU						19 58 59.8	
ARU				S	SKSac	20 05 25.3	-2.9
ARU				SS	SS	20 12 25.3	-3.5
ARU				pmax	pmax		
	comp=Z,16nm,1.4s						
ARU	**Arti**	93.78	326	P	P	19 55 12.2	-2.2
ARU				IAmb	IAmb	19 55 13.6	
	comp=Z,17nm,1.3s						
WDC	**Whiskeytown Da**	93.79	50	P	P	19 55 14.9	0.0
WDC				pmax	pmax		
	comp=Z,38nm,1.3s						
WDC	**Whiskeytown Da**	93.79	50	P	P	19 55 14.9	0.0
WDC				IAmb	IAmb	19 55 17.3	
	comp=Z,38nm,1.3s						
D03D	**Eldon**	93.88	43	P	P	19 55 17.7	+2.6
	baz=266						
H04D	**Lebanon**	93.92	46	P	P	19 55 16.9	+1.6
	baz=266						
L04D	**Klamath Falls**	94.08	48	P	P	19 55 17.4	+1.1
	baz=266,SNR=7.0						
I04A	**Tendick Farm,**	94.10	47	P	P	19 55 17.5	+1.2
	baz=266						
E04D	**Cinebar**	94.17	44	P	P	19 55 18.8	+2.4
	baz=266						
J04D	**Umpqua Nationa**	94.29	47	P	P	19 55 18.3	+0.9
	baz=266						
O03E	**Paynes Creek**	94.34	50	P	P	19 55 17.9	+0.5
	baz=266,SNR=25						
M04C	**Macdoel**	94.40	49	P	P	19 55 18.9	+1.1
	baz=267,SNR=7.7						
ORV	**Oroville**	94.52	51	P	P	19 55 18.8	+0.5
ORV				pmax	pmax		
	comp=Z,24nm,1.0s						
ORV	**Oroville**	94.52	51	P	P	19 55 18.8	+0.5
ORV				IAmb	IAmb	19 55 20.7	
	comp=Z,24nm,1.0s						
B05A	**Bryant**	94.59	42	P	P	19 55 19.3	+1.0
	baz=267						
C36M	**Paulatuk**	94.70	21	P	P	19 55 18.8	+0.5
	baz=267						
AFDM	**Forest Hills D**	94.90	51	P	P	19 55 20.3	+0.3
AFDM				IAmb	IAmb	19 55 22.1	
	comp=Z,24nm,1.1s						
F05D	**White Salmon**	94.90	44	P	P	19 55 21.7	+1.9
	baz=267						
I05D	**Terrebonne, OR**	94.91	46	P	P	19 55 21.1	+1.2
	baz=267						
J05D	**Fort Rock, OR**	94.93	47	P	P	19 55 20.9	+0.6
	baz=267						
G05D	**Wamic, OR**	94.97	45	P	P	19 55 21.6	+1.4
	baz=267						

CMB	Columbia Colle	95.31	52	P	P	19 55 22.3	+0.4
CMB				pmax	pmax		
	comp=Z,11nm,1.2s						
CMB	Columbia Colle	95.31	52	P	P	19 55 22.3	+0.4
CMB				IAmb	IAmb	19 55 23.8	
	comp=Z,11nm,1.2s						
SMMC	Simmler	95.49	55	P	P	19 55 24.5	+1.6
	baz=267						
MOD	Modoc Plateau	95.55	49	IAmb	IAmb	19 55 25.2	
	comp=Z,23nm,1.2s						
PKM	Mcpherson Peak	95.62	56	P	P	19 55 25.4	+1.8
	baz=267						
SCZ2	Santa Cruz Isl	95.72	56	P	P	19 55 25.2	+1.4
	baz=267						
SNCC	San Nicolas Is	95.78	57	P	P	19 55 25.7	+1.6
	baz=267						
WAKR	Walker	96.08	52	P	P	19 55 26.7	+1.1
I07A	Izee	96.22	46	IAmb	IAmb	19 55 28.7	
	comp=Z,7.6nm,0.9s						
VES	Vestal, Richgr	96.25	55	P	P	19 55 26.4	+0.2
	baz=268						
HAWA	Hanford	96.26	44	IAmb	IAmb	19 55 28.9	
	comp=Z,16nm,0.9s						
G08A	Pilot Rock	96.63	45	P	P	19 55 28.1	+0.3
G08A				IAmb	IAmb	19 55 29.9	
	comp=Z,14nm,1.1s						
BELA	Belgrano 2	96.70	180	P	P	19 55 25.8	-1.6
CIS	Catalina Islan	96.71	57	P	P	19 55 29.7	+1.3
	baz=268						
ISA	Isabella, Lake	96.75	55	P	P	19 55 29.1	+0.6
	baz=268,SNR=6.1						
ISA	Isabella, Lake	96.75	55	IAmb	IAmb	19 55 30.7	
	comp=Z,7.6nm,1.0s						
J08A	Circle Bar Ran	96.94	47	IAmb	IAmb	19 55 31.8	
	comp=Z,14nm,0.9s						
NVAR	Mina Array Bea	96.97	52	P	P	19 55 30.1	+0.4
	comp=Z,10nm,0.9s,baz=259,slow=5.9,SNR=45						
NVAR				PP	PP	19 59 33.6	+5.4
	comp=Z,0.9nm,0.9s,baz=262,slow=7.2,SNR=4.3						
NVAR	Mina Array Bea	96.97	52	P	P	19 55 29.4	-0.3
TIN	Tinemaha, Big	96.98	53	P	P	19 55 31.2	+1.5
	baz=268						
NV11	Mina Array Sit	97.08	52	IAmb	IAmb	19 55 32.2	
	comp=Z,12nm,1.1s						
CWC	Cottonwood Cre	97.09	54	P	Pdif	19 55 30.9	+0.6
	baz=268						
EDW2	Edwards Air Fo	97.11	56	P	Pdif	19 55 31.8	+1.6
	baz=268,SNR=6.8						
BFSC	Mount Baldy Ra	97.37	56	P	Pdif	19 55 32.1	+0.6
	baz=268						
LRMC	Laurel Mtn Rad	97.39	55	P	Pdif	19 55 32.6	+1.0
	baz=269,SNR=12						
MPMC	Manual Prospec	97.56	54	P	Pdif	19 55 33.3	+0.9
	baz=269,SNR=12						
MURC	Murrieta	97.74	57	Pdiff	Pdif	19 55 34.4	+1.4
	baz=269						
BMO	Blue Mountains	97.80	46	IAmb	IAmb	19 55 35.5	
	comp=Z,9.5nm,0.7s						
NEW	Newport	97.91	42	Pdiff	Pdif	19 55 33.8	+0.3
	baz=271						
FURC	Furnace Creek,	98.07	54	Pdiff	Pdif	19 55 35.7	+1.3
	baz=269						
BAR	Barrett	98.15	58	IAmb	IAmb	19 55 37.4	
	comp=Z,6.0nm,0.9s						
PFO	Pinyon Flats O	98.35	57	Pdiff	Pdif	19 55 37.8	+2.0
	baz=269,SNR=6.9						
PFO	Pinyon Flats O	98.35	57	P	Pdif	19 55 35.9	0.0
PFO				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PFO	Pinyon Flats O	98.35	57	P	Pdif	19 55 35.9	0.0
PFO				IAmb	IAmb	19 55 38.7	
	comp=Z,9.5nm,1.0s						
TPFO	Pinon Flats	98.36	57	Pdiff	Pdif	19 55 36.8	+0.9
	baz=269,SNR=6.4						
MONP2	Monument Peak	98.37	58	Pdiff	Pdif	19 55 37.6	+1.5
	baz=269,SNR=12						
HEC	Hector,Ludlow	98.47	56	Pdiff	Pdif	19 55 37.9	+1.5
	baz=269						
SHOC	Shoshone, Teco	98.54	55	Pdiff	Pdif	19 55 38.2	+1.7
	baz=269						
TPNV	Topopah Spring	98.57	54	Pdiff	Pdif	19 55 37.6	+0.8
	baz=270,SNR=7.2						
TPNV	Topopah Spring	98.57	54	IAmb	IAmb	19 55 39.6	
	comp=Z,9.0nm,1.1s						
IKP	In-Ko-Pah, Jac	98.63	58	Pdiff	Pdif	19 55 38.7	+1.6
	baz=269						
YKA	Yellowknife Ar	98.69	28	P	P	19 55 36.1	-0.3
	comp=Z,2.5nm,0.8s,baz=274,slow=4.2,SNR=28						
YKA				PP	PP	19 59 39.2	-1.1
	comp=Z,0.4nm,0.7s,baz=275,slow=7.0,SNR=4.4						
YKA				PKiKP	PKiKP	20 00 05.7	-1.0
	comp=Z,0.6nm,0.5s,baz=266,slow=0.7,SNR=12						
YKA				PKKPbc	PKKPbc	20 12 04.2	-2.9
	comp=Z,1.0nm,0.9s,baz=96,slow=3.4,SNR=10						
BELC	Belle Mtn. Jos	98.74	57	Pdiff	Pdif	19 55 39.4	+1.8
	baz=269,SNR=8.6						
MFID	Camas Ranch	98.87	47	IAmb	IAmb	19 55 40.6	
	comp=Z,12nm,1.1s						
GMRC	Granite Mounta	99.03	56	Pdiff	Pdif	19 55 39.8	+1.0
	baz=270,SNR=5.9						
R11A	Troy Canyon, C	99.10	52	Pdiff	Pdif	19 55 40.4	+1.3
	baz=270						
BC3	Big Chuckawall	99.19	57	Pdiff	Pdif	19 55 41.3	+1.7
	baz=270,SNR=5.5						
ELK	Elko	99.35	50	IAmb	IAmb	19 55 42.8	
	comp=Z,6.3nm,0.8s						
IRM	Iron Mountain	99.45	56	Pdiff	Pdif	19 55 41.7	+1.1
	baz=270						
HLID	Hailey	99.90	47	Pdiff	Pdif	19 55 44.0	+1.4
	baz=272						
PDMCI	Parker Dam,Lak	100.28	56	Pdiff	Pdif	19 55 45.8	+1.5
	baz=270						
DUG	Dugway, Tooele	101.21	50	Pdiff	Pdif	19 55 48.8	+0.3
	baz=272						
214A	Organ Pipe Nat	101.42	59	Pdiff	Pdif	19 55 53.1	+3.7
	baz=271						
BOZ	Bozeman (W)	101.78	45	Pdiff	Pdif	19 55 51.9	+1.0
	baz=274						
GROC	Groznyy	102.04	313	*e*P	Pdif	19 55 49.2	-2.7
GROC				pmax	pmax		
	comp=Z,30nm,1.5s						
EGMT	Eagleton	102.85	42	Pdiff	Pdif	19 55 56.5	+1.0
	baz=276						
KLMR	Klimovskoe	103.36	331	*e*P	Pdif	19 55 54.3	-3.0
KLMR				*e*		20 00 11.9	
KLMR				pmax	pmax		
	comp=Z,15nm,0.9s						
KLMR	Klimovskoe	103.36	331	*e*Pdif	Pdif	19 55 54.3	-3.0
KLMR				AMP		19 55 57.3	
	comp=Z,15nm,0.9s						
KLMR				*e*PP	PKiKP	20 00 11.9	-3.3
KLMR				*e*PKKPbc	PKKPbc	20 11 49.8	-3.7
BW06	Boulder Array	103.49	47	Pdiff	Pdif	19 55 58.7	0.0
	baz=275						
PDAR	Pinedale Array	103.49	47	Pdiff	Pdif	19 55 58.8	+0.1
	comp=Z,13nm,1.1s,baz=228,slow=2.0,SNR=33						
PDAR				PKiKP	PP	20 00 17.0	-0.3
	comp=Z,0.8nm,0.9s,baz=222,slow=1.2,SNR=4.0						
PDAR	Pinedale Array	103.49	47	Pdif	Pdif	19 55 58.6	-0.1
APA	Apatity	104.02	339	⇓*i*P	Pdif	19 56 06.7	+6.6
APA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
APA				MLR	MLR		
	comp=Z,2µm,16.0s						
O20A	White River Ci	104.71	50	Pdiff	Pdif	19 56 04.6	+0.4
	baz=275						
ARCES	ARCESS Array B	105.86	342	Pdiff	Pdif	19 56 07.0	-1.3
	comp=Z,10nm,1.0s,baz=32,slow=3.5,SNR=7.2						
ARCES				PKiKP	PKiKP	20 00 19.1	-0.5
	comp=Z,1.7nm,0.6s,baz=100,slow=1.9,SNR=20						
ARCES				PKKPbc	PKKPbc	20 11 42.3	-4.0
	comp=Z,1.5nm,0.5s,baz=299,slow=0.9,SNR=14						
S22A	4UR Ranch, Cre	106.03	52	Pdiff	Pdif	19 56 11.8	+1.7
	baz=276						
N23A	Red Feather La	106.37	49	Pdiff	Pdif	19 56 12.6	+1.0
	baz=277						
ISCO	Idaho Springs	106.76	50	Pdiff	Pdif	19 56 14.2	+0.9
	baz=277						
SDCO	Great Sand Dun	107.08	52	Pdiff	Pdif	19 56 15.8	+1.0
	baz=276						
MNTX	Cornudas Mount	107.75	59	PKiKP	PKiKP	20 00 24.1	-0.1
	baz=275						
FINES	FINESS Array B	109.32	334	Pdiff	Pdif	19 56 21.7	-2.1
	comp=Z,2.3nm,0.7s,baz=59,slow=6.7,SNR=13						
FINES				PKiKP	PKiKP	20 00 25.2	-1.0
	comp=Z,3.6nm,0.7s,baz=108,slow=2.4,SNR=9.3						
FINES				PKKPbc	PKKPbc	20 11 33.9	-1.3
	comp=Z,4.3nm,1.0s,baz=197,slow=4.4,SNR=4.3						
FINES	FINESS Array B	109.32	334	P	Pdif	19 56 22.3	-1.5
FINES	FINESS Array B	109.32	334	Pdif	Pdif	19 56 22.2	-1.5
TXAR	Lajitas Array	109.41	61	PKiKP	PKiKP	20 00 27.9	+0.4
	comp=Z,0.4nm,0.5s,baz=336,slow=2.0,SNR=5.2						
TXAR				PKKPbc	PKKPbc	20 11 35.5	+1.6
	comp=Z,0.3nm,0.5s,baz=97,slow=6.6,SNR=6.2						
MSTX	Muleshoe	109.71	56	PKiKP	PKiKP	20 00 28.0	0.0
	baz=277						
ULM	Lac du Bonnet	111.30	38	PKiKP	PKiKP	20 00 29.3	-1.0
	comp=Z,1.9nm,0.4s,baz=234,slow=1.1,SNR=7.2						
CBKS	Cedar Bluff	111.41	51	PKiKP	PKiKP	20 00 31.0	0.0
	baz=281						
BRTR	Keskin Array B	111.54	311	PKiKP	PKiKP	20 00 30.2	-1.1
	comp=Z,0.7nm,0.5s,baz=138,slow=4.2,SNR=7.7						
BRTR				PKKPbc	PKKPbc	20 11 27.1	-0.2
	comp=Z,0.9nm,0.8s,baz=195,slow=3.3,SNR=4.2						
AKASG	Malin Array Be	111.73	323	PKiKP	PKiKP	20 00 29.8	-1.3
	comp=Z,1.7nm,0.4s,baz=60,slow=2.5,SNR=9.0						
AKASG				PP	PP	20 01 15.2	-1.4
	comp=Z,0.3nm,0.4s,baz=54,slow=6.6,SNR=6.2						
AKASG				PKKPbc	PKKPbc	20 11 24.0	-2.9
	comp=Z,1.4nm,0.5s,baz=264,slow=3.9,SNR=8.6						
JCT	Junction City	112.63	59	PKiKP	PKiKP	20 00 33.2	-0.4
	baz=277						
ECSD	EROS Data Cent	112.64	45	PKiKP	PKiKP	20 00 31.7	-1.4
	baz=285						
WMOK	Wichita Mounta	112.87	55	PKiKP	PKiKP	20 00 33.0	-0.9
	baz=280						
SORM	Soroca	113.10	320	⇑P	PKiKP	20 00 32.6	-1.2
SORM	Soroca	113.10	320	⇑PKIKP	PKiKP	20 00 32.6	-1.2
HARR	Harsova	114.44	317	⇑P	PKiKP	20 00 36.6	+0.2
HARR	Harsova	114.44	317	⇑PKIKP	PKiKP	20 00 36.6	+0.2
BOSA	Boshof	114.63	235	PKP	PKiKP	20 00 38.1	+0.5
	comp=Z,1.4nm,0.5s,baz=119,slow=1.3,SNR=5.3						
BOSA				PKKPab	PKKPab	20 11 26.0	+2.5
	comp=Z,3.5nm,0.7s,baz=289,slow=9.9,SNR=4.6						
EYMN	Ely	114.78	39	P	PKPdf	20 00 35.8	-1.3
	baz=291						
BIZ	Bicaz	114.93	320	⇓P	PKPdf	20 00 37.4	0.0
TUL1	Leonard	115.06	53	P	PKiKP	20 00 37.6	-0.4
	baz=282						
BUR08	Bucovina Ar. S	115.26	321		PKPdf	20 00 38.6	+0.5
BURAR	Bucovina Array	115.26	321	⇑P	PKKPbc	20 11 14.8	-0.3
BURAR	Bucovina Array	115.26	321		PKPdf	20 00 38.6	+0.4
NEHR	Nehoiu	115.31	318	⇑P	PKiKP	20 00 37.5	-0.7
MLR	Muntele Rosu	115.52	318	⇑P	PKPdf	20 00 37.7	-1.0
MLR	Muntele Rosu	115.52	318	⇑PKIKP	PKPdf	20 00 37.7	-1.0
MLR	Muntele Rosu	115.52	318		PKPdf	20 00 38.0	-0.8
NOA	NORSAR Array B	115.58	338	PKP	PKPdf	20 00 37.3	-1.0
	comp=Z,1.5nm,0.7s,baz=36,slow=1.5,SNR=4.1						
NOA				PKKPbc	PKKPbc	20 11 13.7	-0.7
	comp=Z,0.5nm,0.7s,baz=228,slow=3.5,SNR=3.2						
DOPR	Dopca	115.72	319	⇓P	PKiKP	20 00 39.3	+0.3
VOIR		116.13	318	⇓P	PKiKP	20 00 42.1	+2.2
VOIR		116.13	318	⇓PKIKP	PKiKP	20 00 42.1	+2.2
ARR	Arges	116.43	318	⇑P	PKPdf	20 00 40.3	-0.2
HHAR	Hobbs	116.44	52		PKPdf	20 00 40.0	-0.7
HUMR	Humele	116.48	317	⇑P	PKPdf	20 00 39.6	-0.9
KOLS	Kolonicke sedl	116.57	323	*e*PKIKP	PKPdf	20 00 40.4	-0.1
KOLS	Kolonicke sedl	116.57	323	*e*PKP	PKPdf	20 00 40.4	-0.1
W39A	Magazine	116.81	53	P	PKPdf	20 00 41.0	-0.3
	baz=283						
PLVB	Pleven	117.11	316	⇑P	PKPdf	20 00 40.8	-0.9
MIAR	Mount Ida	117.12	54	P	PKiKP	20 00 42.0	0.0
	baz=283						
MIAR	Mount Ida	117.12	54	PKIKP	PKiKP	20 00 42.2	+0.2
MIAR	Mount Ida	117.12	54		PKiKP	20 00 42.2	+0.2
DRGR		117.15	320	⇓P	PKPdf	20 00 40.8	-1.0
DRGR		117.15	320	⇓P	PKKPbc	20 11 08.0	-0.5
DRGR		117.15	320	⇓PKIKP	PKPdf	20 00 40.8	-1.0
U40A	Yellville	117.28	52	P	PKPdf	20 00 41.2	-1.0
	baz=284,SNR=14						
JFWS	Jewell Farm	117.32	44	P	PKPdf	20 00 40.3	-1.8
	baz=289						
OJC	Ojcow	117.47	325	PKIKP	PKPdf	20 00 41.6	-0.6
OJC	Ojcow	117.47	325		PKPdf	20 00 41.6	-0.6
GZR	Gura Zlata	117.64	319	⇑P	PKPdf	20 00 40.9	-1.9
GZR	Gura Zlata	117.64	319	⇑PKIKP	PKPdf	20 00 40.9	-1.9
W41B	Gary Mavity, V	118.04	53	P	PKPdf	20 00 42.5	-1.2
	baz=284,SNR=6.2						
HERR	Herculane	118.07	319	⇑P	PKPdf	20 00 40.4	-3.0
HERR	Herculane	118.07	319	⇑P	PKKPbc	20 11 05.1	+0.1
CCM	Cathedral Cave	118.07	50	P	PKPdf	20 00 42.4	-1.3
	baz=286						
CCM	Cathedral Cave	118.07	50	PKIKP	PKPdf	20 00 43.3	-0.4
CCM	Cathedral Cave	118.07	50	PKPdf	PKPdf	20 00 43.3	-0.4
BZS	Buzias	118.31	320	⇓P	PKPdf	20 00 43.0	-0.9
BZS	Buzias	118.31	320	⇓PKIKP	PKPdf	20 00 43.0	-0.9
CMIG	Matias Romero	118.32	74	PKP	PKiKP	20 00 45.4	+0.7
	baz=278,slow=3.9						
VTS	Vitosha	118.33	316	⇑P	PKPdf	20 00 43.6	-0.7
VTS	Vitosha	118.33	316	⇑PKIKP	PKPdf	20 00 43.6	-0.7
VTS	Vitosha	118.33	316	PKPdf	PKPdf	20 00 44.1	-0.2
HDIL	Hopedale	118.77	46	P	PKPdf	20 00 43.9	-1.1
	baz=289						
VYHS	Vyhne	118.81	323	*e*PKIKP	PKiKP	20 00 47.1	+2.2
VYHS	Vyhne	118.81	323	*e*PKP	PKiKP	20 00 47.0	+2.2
MORC	Moravsky Berou	118.97	325	⇓P	PKiKP	20 00 45.4	+0.2
MORC	Moravsky Berou	118.97	325	*e*PKP	PKPdf	20 00 44.8	-0.3
MORC	Moravsky Berou	118.97	325	⇓PKIKP	PKiKP	20 00 45.4	+0.2
MORC	Moravsky Berou	118.97	325	PKPdf	PKPdf	20 00 44.5	-0.6
BOVS	Bovan	119.01	317	⇑P	PKPdf	20 00 44.2	-1.1
L44A	Lake County Fo	119.20	44	P	PKPdf	20 00 44.9	-0.8
	baz=291						
KRLC	Kraliky	119.25	326	*e*PKIKP	PKPdf	20 00 45.3	-0.4
KRLC	Kraliky	119.25	326	*e*PKPDF	PKPdf	20 00 45.3	-0.4
OSTC	Ostas	119.32	326	*e*PKPDF	PKPdf	20 00 45.5	-0.3
JAVC	Velka Javorina	119.33	324	*e*PKP	PKiKP	20 00 46.3	+0.4
DPC	Dobruska-Polom	119.37	326	*e*PKIKP	PKPdf	20 00 45.5	-0.4
DPC	Dobruska-Polom	119.37	326	*e*PKPDF	PKPdf	20 00 45.5	-0.4
CHVC	Chvalec	119.39	327	*e*PKPDF	PKPdf	20 00 45.5	-0.4
SMOL	Smolenice	119.63	324	*e*PKIKP	PKiKP	20 00 47.6	+1.1
SMOL	Smolenice	119.63	324	*e*PKP	PKiKP	20 00 47.6	+1.1
VRAC	Vranov	119.73	325	*e*PKP	PKPdf	20 00 45.7	-0.9
MODS	Modra-Piesok	119.79	324	*e*PKIKP	PKPdf	20 00 45.8	-0.9
MODS	Modra-Piesok	119.79	324	*e*PKP	PKPdf	20 00 45.8	-0.9
MORH	Mrgy, Hungar	119.95	321	⇑P	PKPdf	20 00 46.5	-0.5
KRUC	Moravsky	119.97	325	*e*PKP	PKPdf	20 00 46.2	-0.8
DIVS	Divibare	119.97	318	PKPdf	PKPdf	20 00 47.0	-0.3
ZST	Bratislava	119.98	324	*e*PKIKP	PKiKP	20 00 48.1	+0.9
ZST	Bratislava	119.98	324	*e*PKP	PKiKP	20 00 48.0	+0.9
PVCC	Panska Ves	120.23	327	*e*PKIKP	PKPdf	20 00 47.4	-0.1
PVCC	Panska Ves	120.23	327	*e*PKPDF	PKPdf	20 00 47.4	-0.1
FNA	Florina	120.27	314	PKIKP	PKPdf	20 00 47.2	-0.7
FNA	Florina	120.27	314	PKPdf	PKPdf	20 00 47.2	-0.7
GLMI	Grayling	120.38	40	P	PKPdf	20 00 47.5	-0.4
	baz=295						
BRG	Berggiesshubel	120.39	328	*i* PKP	PKPdf	20 00 47.3	-0.4
BRG				Amp		20 00 49.5	
	comp=Z,12nm,0.8s						
BRG	Berggiesshubel	120.39	328	*e*PKPdf	PKPdf	20 00 47.8	0.0
	baz=48,slow=2.0						
SFIN	Lafayette	120.41	46	P	PKPdf	20 00 47.6	-0.5
	baz=291						
BSEG	Bad Segeberg	120.43	332	*e*PKPdf	PKPdf	20 00 47.3	-0.4
	baz=48,slow=2.0						
PRU	Pruhonice	120.53	327	*e*PKIKP	PKPdf	20 00 47.3	-0.8
PRU	Pruhonice	120.53	327	*e*PKPDF	PKPdf	20 00 47.3	-0.8
CLL	Collm	120.64	328	*i* PKPdf	PKPdf	20 00 47.5	-0.8
	comp=Z,17nm,0.7s						
CLL				*e*PPS	PPS	20 13 30.0	
CLL				*e*pPPS		20 14 11.0	
CLL				*e*sSS		20 19 57.0	
CLL				Lm	MLR	21 07 00.0	
	comp=Z,200nm,21.1s						
CLL	Collm	120.64	328	PKIKP	PKPdf	20 00 47.4	-0.8
CLL	Collm	120.64	328	PKPdf	PKPdf	20 00 47.4	-0.8
CLL	Collm	120.64	328	*e*PKPdf	PKPdf	20 00 47.9	-0.3
	baz=48,slow=2.0						
CONA	Conrad Observa	120.83	324	*e*P	PKPdf	20 00 48.4	-0.4
	comp=Z,9.3nm,0.6s,SNR=18						
FLTG	Flechtingen	120.95	330	*e*PKPdf	PKPdf	20 00 48.3	-0.4
	baz=48,slow=2.0						
PBCC	Pribram	121.00	326	*e*PKPDF	PKPdf	20 00 48.4	-0.6
PDG	Podgorica	121.13	317	⇑P	PKPdf	20 00 35.5	-14
WVT	Waverly	121.24	51	P	PKPdf	20 00 48.2	-1.6
	baz=288						
WVT	Waverly	121.24	51	PKIKP	PKPdf	20 00 48.7	-1.1
WVT	Waverly	121.24	51	PKPdf	PKPdf	20 00 48.7	-1.1
CKRC	Cesky Krumlov	121.28	325	*e*PKPDF	PKPdf	20 00 49.0	-0.6
NEUB	Neuenburg	121.34	329	*e*PKPdf	PKPdf	20 00 49.5	-0.1
	baz=48,slow=2.0						
ASSE	Asse, Remlinge	121.35	330	*e*PKPdf	PKPdf	20 00 49.1	-0.3
	baz=48,slow=2.0						
ARSA	Arzberg	121.37	323	*e*P	PKPdf	20 00 49.1	-0.7
	comp=Z,6.0nm,1.1s						
NRDL	Niedersach Rie	121.41	331	*e*PKPdf	PKPdf	20 00 49.3	-0.3
	baz=48,slow=2.0						
TANN	Tannenbergstha	121.43	328	*e*PKPdf	PKPdf	20 00 49.8	-0.1
	baz=48,slow=2.0						
WERD	Werda	121.49	328	*e*PKPdf	PKPdf	20 00 49.8	-0.2
	baz=48,slow=2.0						
KHC	Kasperske Hory	121.52	326	*e*PKIKP	PKPdf	20 00 49.4	-0.6
KHC	Kasperske Hory	121.52	326	*e*PKPDF	PKPdf	20 00 49.4	-0.6
KHC	Kasperske Hory	121.52	326	PKPdf	PKPdf	20 00 49.4	-0.6
GUNZ	Gunzen	121.52	328	*e*PKPdf	PKPdf	20 00 49.9	-0.1
	baz=48,slow=2.0						
NKC	Novy Kostel	121.54	328	*e*PKIKP	PKPdf	20 00 49.5	-0.5
NKC	Novy Kostel	121.54	328	*e*PKPDF	PKPdf	20 00 49.5	-0.5
WERN	Wernitzgruen	121.54	328	*e*PKPdf	PKPdf	20 00 50.0	0.0
	baz=48,slow=2.0						
GEC2	GERESS Array S	121.61	326		PKPdf	20 00 49.8	-0.6
GEC2	GERESS Array S	121.61	326	*e*PKPdf	PKiKP	20 00 50.9	+0.4
	baz=48,slow=2.0						
GERES	GERESS Array B	121.61	326	PKP	PKPdf	20 00 49.5	-0.8
	comp=Z,8.1nm,0.5s,baz=91,slow=1.7,SNR=63						
GERES				PKKPbc	PKKPab	20 10 51.8	+0.1
	comp=Z,0.6nm,0.5s,baz=195,slow=2.6,SNR=7.6						
GERES	GERESS Array B	121.61	326	PKPdf	PKPdf	20 00 49.4	-0.9
L48A	N Adams	121.68	43	PKPdf	PKPdf	20 00 49.4	-1.2
WCI	Wyandotte Cave	121.73	48	P	PKPdf	20 00 49.6	-1.1
	baz=290						
WCI	Wyandotte Cave	121.73	48	PKIKP	PKPdf	20 00 50.4	-0.3
WCI	Wyandotte Cave	121.73	48	PKPdf	PKPdf	20 00 50.4	-0.3
MOA	Molln	121.80	324	*i* P	PKPdf	20 00 49.9	-0.8
	comp=Z,4.2nm,0.5s						
MANZ	Manzenberg	121.86	328	*e*PKPdf	PKiKP	20 00 50.8	-0.1
	baz=48,slow=2.0						
WET	Wettzell	121.90	326	*e*PKPdf	PKiKP	20 00 51.2	+0.3
	baz=48,slow=2.0						
PERS	Pernice	121.91	323	*i* PKPdf	PKPdf	20 00 49.7	-1.2
ROTZ	Rotzenmuhle	121.92	327	*e*PKPdf	PKiKP	20 00 51.1	+0.1
	baz=48,slow=2.0						
SOKA	Soboth	121.94	323	*e*P	PKPdf	20 00 50.3	-0.7
	comp=Z,6.7nm,0.7s,SNR=6.9						
GTTG	Gottingen	122.06	330	*e*PKPdf	PKPdf	20 00 50.6	-0.3
	baz=48,slow=2.0						
MATQ	Matagami	122.08	33	P	PKPdf	20 00 49.3	-1.8
	baz=304						
OBKA	Obir	122.31	323	*e*P	PKPdf	20 00 50.8	-0.9
	comp=Z,5.3nm,0.8s						
BOJS	Bojanci	122.38	322	*i* PKPdf	PKPdf	20 00 51.3	-0.4
P49A	Miami Univ. Ec	122.42	46	P	PKPdf	20 00 51.0	-1.0
	baz=292,SNR=6.3						
PLCA	Paso Flores	122.43	147	PKP	PKiKP	20 00 52.7	+0.3
	comp=Z,6.4nm,0.5s,baz=244,slow=2.1,SNR=27						
GRA1	Grafenberg Arr	122.50	328		PKPdf	20 00 50.6	-1.3
GRF	Grafenberg Arr	122.50	328	PKIKP	PKPdf	20 00 50.6	-1.3
GRF	Grafenberg Arr	122.50	328	*e*PKPdf	PKiKP	20 00 52.3	+0.2
	baz=48,slow=2.0						
GRFO	Grafenberg	122.50	328	PKIKP	PKPdf	20 00 51.4	-0.5
GRFO	Grafenberg	122.50	328		PKPdf	20 00 51.4	-0.5
LJU	Ljubljana	122.56	323	*i* PKPdf	PKPdf	20 00 51.6	-0.5
LJU				*i*		20 00 53.1	
IBBN	Ibbenburen	122.65	332	*e*PKPdf	PKPdf	20 00 51.7	-0.3
	baz=48,slow=2.0						
RJOB	Jochberg	122.71	325	*e*PKPdf	PKiKP	20 00 53.1	+0.5
	baz=48,slow=2.0						
KBA	Koelnbreinsper	122.74	324	*i* P	PKPdf	20 00 51.9	-0.7
	comp=Z,7.2nm,0.6s						
MYKA	Terra Mystica	122.79	324	*i* P	PKPdf	20 00 51.6	-1.1
	comp=Z,11nm,0.7s,SNR=5.7						
LRAL	Lakeview Retre	122.80	54	P	PKPdf	20 00 51.9	-1.0
	baz=286						
LSQQ	Lebel-sur-Quev	122.83	33	P	PKPdf	20 00 51.0	-1.5
	baz=305						
LC01	Cunco	122.93	144	PKPdf	PKPdf	20 00 53.1	+0.1
KASTN	Kahler Asten	123.03	330	*e*PKPdf	PKPdf	20 00 52.6	-0.3
	baz=48,slow=2.0						
I51A	Listowel	123.14	40	P	PKPdf	20 00 52.4	-0.9
	baz=298						
FUR	Furstenfeldbru	123.33	326	*e*PKPdf	PKiKP	20 00 54.1	+0.3
	baz=48,slow=2.0						
ACSO	Alum Creek Sta	123.37	45	P	PKPdf	20 00 53.0	-0.8
	baz=294,SNR=6.5						
ABTA	Abfaltersbach	123.40	324	*e*P	PKPdf	20 00 52.8	-1.0
	comp=Z,12nm,0.6s,SNR=12						
BUG	Bochum--Univer	123.44	331	*e*PKPdf	PKPdf	20 00 53.4	-0.2
	baz=48,slow=2.0						
WATA	Walderalm	123.62	325	*e*P	PKPdf	20 00 53.5	-0.7
	comp=Z,11nm,0.5s,SNR=5.9						
TNS	Taunus Mts	123.62	329	*e*PKPdf	PKPdf	20 00 53.9	-0.2
	baz=48,slow=2.0						
WTTA	Wattenberg	123.62	325	*e*P	PKPdf	20 00 53.6	-0.7
	comp=Z,19nm,0.5s,SNR=29						
SGRT	San Giovanni R	123.79	318		PKPdf	20 00 53.8	-0.9
MOTA	Moosalm	123.88	325	*i* P	PKPdf	20 00 54.2	-0.6
	comp=Z,20nm,0.6s,SNR=21						
SQTA	Sankt Quirin	123.89	325	*e*P	PKPdf	20 00 54.3	-0.4
	comp=Z,15nm,0.7s,SNR=13						
ALGO	Algonquin Park	123.91	37	P	PKPdf	20 00 53.5	-1.2
	baz=302						
RETA	Reutte	124.00	326	*e*P	PKPdf	20 00 54.3	-0.6
	comp=Z,5.5nm,0.6s,SNR=5.2						
STU	Stuttgart	124.11	328	PKIKP	PKPdf	20 00 54.1	-0.9
STU	Stuttgart	124.11	328	PKPdf	PKPdf	20 00 54.0	-0.9
STU	Stuttgart	124.11	328	*e*PKPdf	PKPdf	20 00 55.1	+0.1
	baz=48,slow=2.0						
G54A	Lake Saint Pet	124.18	37	P	PKPdf	20 00 54.0	-1.2
	baz=302						
P52A	Corning	124.21	45	P	PKPdf	20 00 53.6	-1.8
	baz=294,SNR=5.5						
UBR	Ueberruh	124.25	326	*e*PKPdf	PKiKP	20 00 55.9	+0.2
	baz=48,slow=2.0						
CTI	Castel Tesino	124.27	324	PKIKP	PKiKP	20 00 56.2	+0.4
CTI	Castel Tesino	124.27	324	PKPdf	PKiKP	20 00 56.2	+0.4
FETA	Feichten	124.27	325	*e*P	PKPdf	20 00 54.9	-0.6
	comp=Z,15nm,0.8s						
TEIG	Tepich	124.29	69	PKP	PKiKP	20 00 57.0	+0.6
	comp=Z,6.6nm,0.6s,baz=204,slow=3.0,SNR=1.6						
H53A	Bobcaygeon	124.30	38	P	PKPdf	20 00 54.5	-1.0
	baz=300						
M53A	WI Miller and	124.44	43	P	PKPdf	20 00 54.6	-1.3
	baz=297,SNR=6.5						
BTNL	Ternell	124.54	331	*d*PKP	PKPdf	20 00 55.8	0.0
MEM	Membach	124.59	331	*d*PKP	PKPdf	20 00 55.5	-0.3
O53A	New Philadelph	124.60	44	P	PKPdf	20 00 54.8	-1.4
	baz=296,SNR=5.8						
DAVA	Damuels	124.60	326	*i* P	PKPdf	20 00 55.4	-0.8
	comp=Z,16nm,0.6s,SNR=11						
BI02	San Fabin de	124.76	143	PKPdf	PKPdf	20 00 56.9	+0.1
E55A	Montcerf-Lytto	124.81	35	P	PKPdf	20 00 54.3	-2.0
	baz=304						
BSTI	Sart Tilman	124.81	331	*d*PKP	PKPdf	20 00 55.3	-1.0
D55A	Sainte-Anne-du	124.82	34	P	PKPdf	20 00 55.2	-1.2
	baz=305						
BFO	Black Forest	124.84	328	PKIKP	PKPdf	20 00 55.7	-0.8
BFO	Black Forest	124.84	328	PKPdf	PKPdf	20 00 55.6	-0.8
BFO	Black Forest	124.84	328	*e*PKPdf	PKiKP	20 00 56.8	0.0
	baz=48,slow=2.0						
Q53A	Leroy	124.96	46	P	PKPdf	20 00 55.3	-1.6
	baz=294,SNR=5.4						
BCLA	Clavier	125.05	331	*d*PKP	PKiKP	20 00 57.4	+0.4
M54A	Oil Creek Stat	125.09	42	P	PKPdf	20 00 56.2	-0.9
	baz=298,SNR=5.8						
N54A	Moraine State	125.12	43	P	PKPdf	20 00 56.0	-1.2
	baz=297,SNR=5.6						
WLF	Walferdange	125.13	330	*d*PKP	PKPdf	20 00 55.7	-1.2
WLF	Walferdange	125.13	330	*e*PKPdf	PKPdf	20 00 57.0	+0.1
	baz=48,slow=2.0						
BGES	Gesves	125.18	331	*d*PKP	PKPdf	20 00 56.4	-0.5
MURB	Monte Urbino	125.18	320		PKPdf	20 00 57.2	-0.1
D56A	ZEC Mazanza, M	125.20	34	P	PKPdf	20 00 56.1	-1.1
	baz=306						
E56A	St. Veronique	125.34	35	P	PKPdf	20 00 56.3	-1.1
	baz=305						
TUE	Stuetta	125.37	325	PKPdf	PKPdf	20 00 57.5	-0.2
BMRD	Maredsous	125.39	331	*d*PKP	PKPdf	20 00 57.0	-0.3
SNF	Seneffe	125.48	332	*d*PKP	PKPdf	20 00 57.1	-0.4
GOGA	Godfrey	125.50	53	P	PKPdf	20 00 57.8	-0.3
	baz=289						
S54A	Dingess, Beckl	125.54	47	P	PKPdf	20 00 57.3	-0.9
	baz=294						
DOU	Dourbes	125.61	331	*d*PKP	PKPdf	20 00 57.8	0.0
R54A	Victor	125.62	46	P	PKPdf	20 00 57.3	-0.9
	baz=294						
U54A	Nelsons Funny	125.67	48	P	PKiKP	20 00 59.4	+0.5
	baz=293						
J56A	Wolcott	126.04	39	P	PKPdf	20 00 58.2	-0.6
	baz=301,SNR=5.1						

M56A	**Emporium**	**126.08**	**41**	P	**PKPdf**	**20 00 58.2**	**-0.8**
	baz=299						
L56A	**Greenwood**	**126.17**	**40**	P	**PKPdf**	**20 00 58.0**	**-1.2**
	baz=300						
G57A	**Newington**	**126.18**	**36**	P	**PKPdf**	**20 00 57.9**	**-1.1**
	baz=304,SNR=5.7						
D58A	**Chemin du LacG**	**126.20**	**33**	P	**PKPdf**	**20 00 57.5**	**-1.5**
	baz=308						
N56A	**West Decatur**	**126.28**	**42**	P	**PKPdf**	**20 00 58.3**	**-1.1**
	baz=299,SNR=5.3						
BO02	**Sierra Bellavi**	**126.28**	**141**	PKPdf	**PKiKP**	**20 01 00.3**	**+0.1**
H57A	**Richville**	**126.30**	**37**	P	**PKPdf**	**20 00 58.1**	**-1.2**
	baz=304						
O56A	**Blue Knob Stat**	**126.40**	**43**	P	**PKPdf**	**20 00 58.7**	**-1.0**
	baz=298						
E58A	**La Victoria**	**126.42**	**34**	P	**PKPdf**	**20 00 57.7**	**-1.8**
	baz=307						
BLA	**Blacksburg**	**126.43**	**47**	P	**PKPdf**	**20 00 58.8**	**-1.0**
	baz=294						
Q56A	**Snyder Ridge,**	**126.53**	**45**	P	**PKPdf**	**20 00 59.7**	**-0.2**
	baz=296						
K57A	**Scipio Center**	**126.53**	**39**	P	**PKPdf**	**20 00 59.0**	**-0.8**
	baz=301						
KMSC	**Kings Mountain**	**126.56**	**50**	P	**PKPdf**	**20 00 59.5**	**-0.5**
	baz=292						
P56A	**Dayton Farm, R**	**126.57**	**44**	P	**PKPdf**	**20 00 59.2**	**-0.7**
	baz=297						
LONY	**Lake Ozonia**	**126.69**	**36**	P	**PKPdf**	**20 00 58.5**	**-1.6**
	baz=304						
L57A	**Andrews Acres**	**126.69**	**40**	P	**PKPdf**	**20 00 59.1**	**-1.0**
	baz=301,SNR=5.3						
G58A	**Ormstown**	**126.70**	**36**	P	**PKPdf**	**20 00 58.8**	**-1.2**
	baz=305						
T56A	**Rocky Mt**	**126.79**	**47**	P	**PKPdf**	**20 00 59.9**	**-0.6**
	baz=294						
U56A	**King**	**126.81**	**48**	P	**PKPdf**	**20 01 00.3**	**-0.2**
	baz=294						
M57A	**Sunshine Farm,**	**126.85**	**41**	P	**PKPdf**	**20 01 00.2**	**-0.3**
	baz=300						
N57A	**Milroy**	**126.85**	**42**	P	**PKPdf**	**20 00 59.7**	**-0.7**
	baz=299						
S56A	**Natural Bridge**	**126.86**	**46**	P	**PKPdf**	**20 00 60.0**	**-0.6**
	baz=295						
V56A	**Mocksville**	**126.93**	**49**	P	**PKPdf**	**20 00 57.9**	**-2.9**
	baz=293						
I58A	**Old Forge**	**126.98**	**38**	P	**PKPdf**	**20 00 57.6**	**-3.1**
	baz=304						
H58A	**Gabriels**	**127.04**	**36**	P	**PKPdf**	**20 01 00.0**	**-0.8**
	baz=305,SNR=7.4						
O57A	**Amberson**	**127.06**	**43**	P	**PKPdf**	**20 01 00.1**	**-0.8**
	baz=299						
K58A	**Earlville**	**127.06**	**39**	P	**PKPdf**	**20 00 59.2**	**-1.7**
	baz=302						
Q57A	**Strasburg**	**127.08**	**44**	P	**PKPdf**	**20 01 00.3**	**-0.7**
	baz=297						
W56A	**Indian Trail**	**127.13**	**50**	P	**PKPdf**	**20 01 00.6**	**-0.5**
	baz=293						
P57A	**Homestead Farm**	**127.14**	**44**	P	**PKPdf**	**20 01 00.2**	**-0.8**
	baz=298						
BINY	**Binghamton**	**127.14**	**40**	P	**PKPdf**	**20 01 00.1**	**-0.9**
	baz=302						
FRNY	**Flat Rock**	**127.15**	**36**	PKPdf	**PKPdf**	**20 01 00.1**	**-0.8**
MATN	**Matagalpa**	**127.18**	**78**		**PKPdf**	**20 01 01.9**	**0.0**
S57A	**Dark Hollow, R**	**127.26**	**46**	P	**PKPdf**	**20 01 00.0**	**-1.3**
	baz=296						
L58A	**Harry Jones Me**	**127.31**	**40**	P	**PKPdf**	**20 01 01.0**	**-0.3**
	baz=302						
R57A	**Stanardsville**	**127.33**	**45**	P	**PKPdf**	**20 01 01.1**	**-0.4**
	baz=297						
N58A	**Sunbury**	**127.36**	**41**	P	**PKPdf**	**20 01 01.0**	**-0.4**
	baz=300,SNR=5.3						
D60A	**Saint Jean D'O**	**127.37**	**32**	P	**PKPdf**	**20 00 60.0**	**-1.2**
	baz=310						
T57A	**Hurt**	**127.37**	**47**	P	**PKPdf**	**20 01 01.0**	**-0.6**
	baz=295						
J59A	**Piesco**	**127.38**	**38**	P	**PKPdf**	**20 01 00.3**	**-1.2**
	baz=304,SNR=6.4						
F60A	**Warwick**	**127.40**	**34**	P	**PKPdf**	**20 01 00.8**	**-0.5**
	baz=308						
E60A	**Ste Agathe de**	**127.43**	**33**	P	**PKPdf**	**20 01 00.5**	**-0.9**
	baz=309						
V57A	**Coltrane Farms**	**127.44**	**48**	P	**PKPdf**	**20 01 00.7**	**-1.0**
	baz=294						
U57A	**Blanch**	**127.54**	**48**	P	**PKPdf**	**20 01 01.6**	**-0.3**
	baz=295						
K59A	**Cooperstown**	**127.55**	**38**	P	**PKPdf**	**20 01 01.2**	**-0.6**
	baz=303						
D61A	**St Aubert, Com**	**127.57**	**31**	P	**PKPdf**	**20 01 01.1**	**-0.5**
	baz=311						
O58A	**Lewisberry**	**127.58**	**42**	P	**PKPdf**	**20 01 01.0**	**-0.9**
	baz=299						
Q58A	**Fox Den Farm,**	**127.62**	**44**	P	**PKPdf**	**20 01 00.9**	**-1.1**
	baz=298						
R58A	**Rapidan**	**127.69**	**45**	P	**PKPdf**	**20 01 01.4**	**-0.7**
	baz=297						
M59A	**Waymart**	**127.84**	**40**	P	**PKPdf**	**20 01 02.1**	**-0.3**
	baz=302,SNR=5.3						
I60A	**Shoreham**	**127.90**	**36**	P	**PKPdf**	**20 01 02.2**	**-0.1**
	baz=305,SNR=8.7						
E61A	**Lac Etchemin**	**127.90**	**32**	P	**PKPdf**	**20 01 02.3**	**-0.1**
	baz=310,SNR=6.6						
T58A	**Grand View Acr**	**127.91**	**47**	P	**PKPdf**	**20 01 02.0**	**-0.6**
	baz=296						
F61A	**St Evariste**	**127.92**	**33**	P	**PKPdf**	**20 01 02.1**	**-0.3**
	baz=309						
R58B	**Mineral**	**127.93**	**45**	P	**PKPdf**	**20 01 02.0**	**-0.6**
	baz=297						
N59A	**State Game Lan**	**127.94**	**41**	P	**PKPdf**	**20 01 02.1**	**-0.5**
	baz=301						
S58A	**Poland Farm, P**	**127.97**	**46**	P	**PKPdf**	**20 01 01.5**	**-1.2**
	baz=297						
O59A	**Robesonia**	**127.98**	**42**	P	**PKPdf**	**20 01 02.4**	**-0.3**
	baz=300						
U58A	**Oxford**	**128.13**	**47**	P	**PKPdf**	**20 01 02.5**	**-0.6**
	baz=295						
P59A	**Jarrettsville**	**128.16**	**43**	P	**PKPdf**	**20 01 02.6**	**-0.4**
	baz=299						
J60A	**Lant Hill Farm**	**128.16**	**37**	P	**PKPdf**	**20 01 02.0**	**-0.9**
	baz=305						
W58A	**Raeford**	**128.19**	**49**	P	**PKPdf**	**20 01 03.0**	**-0.2**
	baz=294						
D62A	**Allapoint, All**	**128.23**	**31**	P	**PKPdf**	**20 01 02.1**	**-0.7**
	baz=312						
H61A	**Lyndonville**	**128.28**	**35**	P	**PKPdf**	**20 01 03.0**	**-0.1**
	baz=307						
R59A	**King George, V**	**128.36**	**45**	P	**PKPdf**	**20 01 03.6**	**+0.2**
	baz=298						
Q59A	**Harwood**	**128.37**	**44**	P	**PKPdf**	**20 01 03.5**	**+0.1**
	baz=299						
N60A	**Cedar Hill Far**	**128.40**	**41**	P	**PKPdf**	**20 01 03.1**	**-0.3**
	baz=302						
O60A	**Telford**	**128.49**	**41**	P	**PKPdf**	**20 01 02.8**	**-0.8**
	baz=301						
K61A	**Williamstown**	**128.58**	**38**	P	**PKPdf**	**20 01 03.1**	**-0.6**
	baz=304						
P60A	**Greenville**	**128.59**	**42**	P	**PKiKP**	**20 01 04.2**	**-0.2**
	baz=300						
J61A	**Chester**	**128.62**	**37**	P	**PKPdf**	**20 01 03.6**	**-0.2**
	baz=306						
G62A	**West of Eustis**	**128.65**	**34**	P	**PKiKP**	**20 01 04.2**	**-0.3**
	baz=309						
CO03	**El Pedregal**	**128.85**	**137**		**PKiKP**	**20 01 05.1**	**-0.3**
E63A	**Oxbow**	**128.99**	**31**	P	**PKiKP**	**20 01 05.0**	**-0.1**
	baz=312						
M61A	**Granite Spring**	**129.02**	**39**	P	**PKPdf**	**20 01 03.5**	**-1.1**
	baz=303						
L61B	**Northampton**	**129.06**	**38**	P	**PKPdf**	**20 01 03.7**	**-0.9**
	baz=305						
PAL	**Palisades**	**129.10**	**40**	P	**PKPdf**	**20 01 04.9**	**+0.1**
	baz=303						
T60A	**Surry**	**129.12**	**46**	P	**PKiKP**	**20 01 05.4**	**-0.1**
	baz=297						
J62A	**Henniker**	**129.13**	**36**	P	**PKiKP**	**20 01 06.3**	**+0.9**
	baz=306						
K62A	**Royalston**	**129.21**	**37**	P	**PKPdf**	**20 01 04.6**	**-0.3**
	baz=306						
G63A	**Kingsbury**	**129.21**	**33**	P	**PKPdf**	**20 01 04.9**	**+0.1**
	baz=310						
X60A	**Albert Glenn T**	**129.32**	**49**	P	**PKPdf**	**20 01 05.6**	**+0.3**
	baz=294						
CO01	**Juntas del Tor**	**129.79**	**137**		**PKiKP**	**20 01 08.0**	**+0.4**
LCO	**Las Campanas**	**129.96**	**135**	PKIKP	**PKiKP**	**20 01 07.9**	**-0.1**
LCO	**Las Campanas**	**129.96**	**135**		**PKiKP**	**20 01 07.9**	**-0.1**
G65A	**Princeton**	**130.26**	**32**	P	**PKPdf**	**20 01 06.8**	**0.0**
	baz=312						
KEST	**Kesra**	**130.97**	**314**	PKP	**PKiKP**	**20 01 09.5**	**0.0**
	comp=Z,6.9nm,0.8s,baz=333,slow=4.6,SNR=8.2						
ATAH	**Atahualpa**	**132.85**	**105**	PKP	**PKiKP**	**20 01 15.1**	**+0.8**
	comp=Z,8.4nm,0.7s,baz=173,slow=8.1,SNR=6.9						
GO02	**Mina Guanaco**	**133.03**	**132**	PKPdf	**PKiKP**	**20 01 14.7**	**+0.4**
GR1C	**Gorgona, Isla**	**134.75**	**91**	*e*P	**PKiKP**	**20 01 17.1**	**-0.5**
BBAC	**Balboa, Cauca**	**135.58**	**93**	*e*P	**PKPdf**	**20 01 17.8**	**-0.2**
PB08	**IPOC Station P**	**136.14**	**127**		**PKiKP**	**20 01 20.4**	**-0.4**
POPC	**Popayan, Colom**	**136.19**	**92**	*e*P	**PKPdf**	**20 01 18.5**	**-0.7**
PCON	**Cinco Dias**	**136.45**	**92**	*e*P	**PKiKP**	**20 01 21.1**	**-0.7**
YOTC	**Yotoco, Valle**	**136.64**	**90**	*e*P	**PKPdf**	**20 01 19.1**	**-0.7**
PB16	**IPOC Station P**	**136.77**	**124**	PKPdf	**PKiKP**	**20 01 22.1**	**-0.3**
PBRG	**Braganca**	**137.04**	**331**	*e*PKP	**PKiKP**	**20 01 22.3**	**+0.7**
CBOC	**Ciudad Bolivar**	**137.06**	**87**	*e*P	**PKPdf**	**20 01 19.9**	**-0.8**
ESDC	**Sonseca Array**	**137.18**	**327**	PKhKP	PKPpre	20 01 08.4	
	comp=Z,0.7nm,0.7s,baz=13,slow=3.6,SNR=4.9						
ESDC				PKP	**PKPdf**	**20 01 19.8**	**-0.3**
	comp=Z,1.0nm,0.6s,baz=25,slow=2.1,SNR=10.0						
ESDC	**Sonseca Array**	**137.18**	**327**	PKPdf	**PKPdf**	**20 01 19.1**	**-1.0**
UREC	**San Jos de Ur**	**137.56**	**85**	*e*P	**PKPdf**	**20 01 20.4**	**-1.0**
MVO	**Moncorvo**	**137.67**	**331**	*e*PKP	**PKiKP**	**20 01 23.3**	**+0.4**
GUY2C	**Guyana, Caldas**	**137.68**	**88**	*e*P	**PKPdf**	**20 01 20.8**	**-1.4**
ORTC	**Ortega, Tolima**	**137.73**	**90**	*e*P	PKPdf	20 01 13.2	-8.6
POLO	**Lamas de Olo**	**137.88**	**332**	*e*PKP	**PKiKP**	**20 01 25.0**	**+1.6**
PVRL	**Vila Real**	**137.91**	**331**	*e*PKP	**PKiKP**	**20 01 24.9**	**+1.5**
PLTB	**Pedras Altas**	**137.97**	**153**	*e*P	**PKPdf**	**20 01 16.4**	**-5.4**
PRAC	**Prado**	**138.07**	**91**	*e*P	PKPdf	20 01 14.4	-8.0
MTE	**Manteigas**	**138.51**	**330**	*e*PKP	**PKiKP**	**20 01 26.2**	**+1.5**
ROSC	**El Rosal**	**138.70**	**89**	PKP	**PKPdf**	**20 01 24.5**	**+0.5**
	comp=Z,20nm,0.4s,baz=323,slow=20,SNR=6.3						
ROSC	**El Rosal**	**138.70**	**89**	PKPdf	**PKPdf**	**20 01 24.4**	**+0.4**
ROSC	**El Rosal**	**138.70**	**89**	*e*P	**PKiKP**	**20 01 25.6**	**-0.6**
PCBR	**Castelo Branco**	**138.90**	**330**	*e*PKP	**PKiKP**	**20 01 26.9**	**+1.5**
LPAZ	**La Paz**	**138.91**	**122**	PKhKP	PKPpre	20 01 16.6	
	comp=Z,4.8nm,0.5s,baz=288,slow=3.2,SNR=13						
LPAZ	**La Paz**	**138.91**	**122**	PKIKP	**PKPdf**	**20 01 25.5**	**+1.0**
LPAZ	**La Paz**	**138.91**	**122**	PKPdf	**PKPdf**	**20 01 25.5**	**+1.0**
LPAZ	**La Paz**	**138.91**	**122**	*e*P	PKPdf	20 01 15.8	-8.8
SPBC	**San Pablo de B**	**138.98**	**88**	*e*P	**PKPdf**	**20 01 20.4**	**-3.7**
CPSB	**Cacapava Do Su**	**139.19**	**152**	*e*P	**PKPdf**	**20 01 19.0**	**-4.9**
CHIC	**Chingaza**	**139.28**	**89**	*e*P	**PKPdf**	**20 01 17.8**	**-7.3**
OCAC	**Ocana**	**139.75**	**84**	*e*P	**PKPdf**	**20 01 21.2**	**-4.4**
RUSC	**La Rusia**	**139.97**	**87**	*e*P	PKPdf	20 01 16.9	-10
PAMC	**Pamplona, Colo**	**140.37**	**85**	*e*P	**PKPdf**	**20 01 20.8**	**-6.3**
CPUP	**Villa Florida**	**140.43**	**144**	PKhKP	PKPpre	20 01 17.5	
	comp=Z,5.2nm,0.7s,baz=232,slow=3.8,SNR=14						
PBEJ	**Beja**	**140.47**	**328**	*e*PKP	**PKiKP**	**20 01 30.4**	**+1.8**
PNCL	**Nicolau / Gran**	**140.75**	**329**	*e*PKP	**PKiKP**	**20 01 31.2**	**+2.0**
MESJ	**Messejana**	**140.79**	**329**	*e*PKP	**PKiKP**	**20 01 31.0**	**+1.7**
URIC	**Uribia, Colomb**	**140.85**	**78**	*e*P	**PKPdf**	**20 01 22.1**	**-5.2**
PCVE	**Castro Verde**	**140.85**	**328**	*e*PKP	**PKiKP**	**20 01 31.3**	**+1.9**
SDV	**Santo Domingo**	**142.38**	**83**	PKhKP	PKPpre	20 01 26.7	
	comp=Z,29nm,0.6s,baz=294,slow=6.0,SNR=27						
SDV	**Santo Domingo**	**142.38**	**83**	*e*P	**PKPdf**	**20 01 26.9**	**-3.4**
SDV	**Santo Domingo**	**142.38**	**83**	*e*P	**PKPdf**	**20 01 27.1**	**-3.3**
ITAB	**Concordia**	**142.47**	**151**	*e*P	**PKPdf**	**20 01 26.8**	**-3.1**
AOPR	**Arecibo Observ**	**144.55**	**66**		**PKPab**	**20 01 31.9**	**-1.0**
ICMP	**Isla Caja de M**	**144.89**	**67**		PKPbc	20 01 32.9	-1.1
TOA0	**Torodi Ar. Sit**	**145.12**	**285**		**PKPbc**	**20 01 33.3**	**-1.6**
TORD	**Torodi Ar. Bea**	**145.12**	**285**	PKPbc	**PKPbc**	**20 01 33.9**	**-0.9**
	comp=Z,30nm,0.6s,baz=70,slow=2.8,SNR=110						
TORD	**Torodi Ar. Bea**	**145.12**	**285**		**PKPbc**	**20 01 34.3**	**-0.6**
SJG	**San Juan**	**145.17**	**66**	PKPbc	**PKPdf**	**20 01 34.1**	**-0.7**
	comp=Z,89nm,0.8s,baz=313,slow=2.6,SNR=18						
SJG	**San Juan**	**145.17**	**66**	*e*P	**PKPdf**	**20 01 32.2**	**-2.7**
PDPR	**Patillas Dam,**	**145.31**	**66**		**PKPdf**	**20 01 34.5**	**-0.6**
CBYP	**Canovanas**	**145.39**	**66**		**PKPdf**	**20 01 34.1**	**-1.2**
CUPR	**Culebra, Puert**	**145.90**	**65**		**PKPdf**	**20 01 36.5**	**+0.4**
SAML	**Samuel**	**146.52**	**115**	PKIKP	**PKPbc**	**20 01 38.2**	**-0.9**
SAML	**Samuel**	**146.52**	**115**		**PKPbc**	**20 01 38.2**	**-0.9**
SAML	**Samuel**	**146.52**	**115**	*e*P	**PKPdf**	**20 01 37.2**	**-0.1**
PCMB	**Pacaembu**	**147.55**	**147**	*e*P	**PKPdf**	**20 01 40.1**	**+1.3**
SPB	**Sao Paulo**	**147.75**	**154**		**PKPbc**	**20 01 42.1**	**0.0**
PCRV	**Puerto La Cruz**	**148.19**	**80**	PKPbc	**PKPbc**	**20 01 42.2**	**-1.5**
	comp=Z,23nm,0.5s,baz=348,slow=3.6,SNR=11						
BPA	**Boggy Peak**	**149.39**	**66**	*e*	**PKPbc**	**20 01 46.5**	**0.0**
ANBD	**Bethesda, Anti**	**149.48**	**66**	*e*	**PKPbc**	**20 01 46.2**	**-0.5**
KOWA	**Kowa**	**150.27**	**290**	PKPdf	**PKPdf**	**20 01 43.6**	**+0.3**
KOWA				PKPbc	**PKPbc**	**20 01 48.7**	**0.0**
FDF	**Fort de France**	**150.71**	**70**	PKIKP	**PKPbc**	**20 01 49.9**	**+0.1**
FDF	**Fort de France**	**150.71**	**70**		**PKPbc**	**20 01 49.9**	**+0.1**
SVB	**Belmont**	**150.97**	**73**		**PKPbc**	**20 01 49.1**	**-1.2**
TRN	**Trinidad (W)**	**151.29**	**78**	*e*	**PKPbc**	**20 01 50.9**	**-0.2**
ARAG	**Araguaiana, MT**	**151.76**	**139**	*e*P	**PKPdf**	**20 01 47.1**	**+1.5**
KIC	**Kosan Boka**	**152.03**	**273**	*e*PKIKP	**PKiKP**	**20 01 53.0**	**-0.1**
	comp=Z,21nm,0.6s						
DBIC	**Dimbokro**	**152.14**	**274**	PKPbc	**PKPbc**	**20 01 53.0**	**-0.1**
	comp=Z,8.7nm,0.5s,baz=69,slow=2.2,SNR=20						
DBIC				PKPab	**PKPab**	**20 02 04.2**	**+0.6**
	comp=Z,6.5nm,0.6s,baz=91,slow=5.2,SNR=5.8						
DBIC	**Dimbokro**	**152.14**	**274**	PKIKP	**PKPbc**	**20 01 53.0**	**-0.1**
DBIC	**Dimbokro**	**152.14**	**274**		**PKiKP**	**20 01 53.4**	**0.0**
PTGA	**Pitinga**	**152.22**	**102**	PKP	**PKPdf**	**20 01 46.3**	**-0.1**
	comp=Z,2.8nm,0.3s,baz=250,slow=2.1,SNR=7.3						
PTGA				PKPbc	**PKiKP**	**20 01 53.6**	**+0.1**
	comp=Z,22nm,0.3s,baz=258,slow=4.8,SNR=40						
PTGA				PKPab	**PKPab**	**20 02 03.4**	**-0.5**
	comp=Z,20nm,0.9s,baz=228,slow=3.8,SNR=7.4						
PTGA	**Pitinga**	**152.22**	**102**		**PKPdf**	**20 01 47.2**	**+0.8**
PTGA					**PKiKP**	**20 01 53.9**	**+0.4**
PTGA				PKPab	**PKPab**	**20 02 03.3**	**-0.5**
TIC	**Toumodi**	**152.30**	**274**	*e*PKIKP	**PKPbc**	**20 01 53.4**	**-0.1**
LIC	**Lamto**	**152.31**	**273**	*e*PKIKP	**PKPbc**	**20 01 53.5**	**0.0**
	comp=Z,19nm,0.5s						
PEXB	**Peixe**	**156.70**	**139**	*e*P	**PKPab**	**20 02 23.4**	**+0.6**

IDC ***21*** *19:50:55.1±0.5, 8°.95S×158°.54E, h0^{km}, mb4.4/21, mb1 4.5/22, mb1mx4.5/31, mbtmp4.4/22, ML4.3/1, MS4.3/16, Ms1 4.3/16, ms1mx4.2/23, Error ellipse: s-maj=14.8km s-min=13.5km az=44.0*

BJI ***21*** *19:51:00.1±0.0, 8°.77S×158°.27E, h19^{km}, mB5.2/33, mb4.5/42, Ms4.8/22, Ms7 4.5/22*

NEIC ***21*** *19:51:00.3±1.2, 9°.13S±0°.09×158°.56E±0°.04, h34^{km}±4^{km}, mb5.1/75, Error ellipse: s-maj=12.8km s-min=4.7km az=194.0*

GCMT ***21*** *19:51:00.3±0.2, 9°.13S±0°.02×158°.44E±0°.02, h36^{km}, MW5.1/99, Moment Tensor Solution. s41,c49; s99,c147; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.27±.24; $M_{\theta\theta}$-0.10±.15; $M_{\phi\phi}$-4.16±.14; $M_{r\theta}$-0.79±.15; $M_{\theta\phi}$1.53±.09; $M_{\phi r}$-3.34±.12; Best double couple: $M_0$5.64700×10^{16} NP1:ϕ_s324.00000°,δ31.00000°,λ58.00000°. NP2: ϕ_s180.00000°,δ64.00000°,λ108.00000°. Principal axes: T 5.7070, Plg66.0000°, Azm122.0000°; N -0.1160, Plg16.0000°, Azm352.0000°; P -5.5860, Plg17.0000°, Azm257.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 21 19:50:59.8±0.3**, 9°.10S**±0°.05×**158°.60E**±0°.04**, h29^{km}, n186, σ1^{s}29**/190**, mb5.0**/70**, MS4.3**/21**, 1C,**
Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.37**	**104**	Pn	**Pn**	**19 51 22.6**	**-0.3**
	1µm,0.3s,baz=224,slow=6.0,SNR=116						
HNR				Sn	**Sb**	**19 51 44.0**	**+2.1**
	6µm,0.3s,baz=268,slow=16,SNR=13						
HNR				LR	LR	19 52 01.0	
	comp=Z,23µm,18.1s,baz=266,slow=45						
HNR	**Honiara**	**1.37**	**104**		**Pn**	**19 51 22.5**	**-0.5**
HNR					**Sb**	**19 51 43.6**	**+1.7**
RABL	**Rabaul**	**8.04**	**307**		**Pn**	**19 52 57.5**	**+2.8**
SANVU	**Saraoutou**	**10.51**	**128**		**Pn**	**19 53 29.0**	**+0.5**
PMG	**Port Moresby**	**11.30**	**268**	LR	LR	19 57 47.3	
	comp=Z,5µm,20.4s,baz=99,slow=37						
PMG	**Port Moresby**	**11.30**	**268**	Pn	**Pn**	**19 53 40.4**	**+1.0**
DZM	**Mont Dzumac**	**14.94**	**151**	Pn	**P**	**19 54 33.5**	**-0.9**
	0.5nm,0.3s,baz=308,slow=19,SNR=2.2						
DZM				LR	LR	19 59 52.1	
	comp=Z,3µm,18.3s,baz=320,slow=36						
DZM	**Mont Dzumac**	**14.94**	**151**	*e*Pn	**P**	**19 54 37.4**	**+3.0**
	88nm,1.4s						
DZM				*e*LR	LR	19 58 12.4	
	comp=Z,3µm,25.7s						
COEN	**Coen**	**15.87**	**251**	P	**P**	**19 54 44.1**	**-0.5**
CTA	**Charters Tower**	**16.18**	**226**	Pn	**Pn**	**19 54 45.6**	**+0.4**
	0.7nm,0.3s,baz=26,slow=12,SNR=2.6						
CTA				LR	LR	20 00 17.2	
	comp=Z,988nm,19.9s,baz=44,slow=35						
CTAO	**Charters Tower**	**16.18**	**226**	P	**Pn**	**19 54 44.8**	**-0.4**
TARA	**Tarawa**	**17.65**	**55**	P	**P**	**19 55 05.3**	**+0.8**
TARA				IAmb	IAmb	19 55 19.3	
	comp=Z,115nm,0.7s						
EIDS	**Eidsvold**	**17.69**	**203**	P	**Pn**	**19 55 03.2**	**-1.0**
GENI	**Genyem**	**19.43**	**288**	P	**P**	**19 55 24.2**	**+0.1**
	comp=Z,3µmcomp=Z,85nm,0.8s						
RMQ	**Roma**	**19.65**	**207**	P	**Pn**	**19 55 29.5**	**+1.7**
	baz=20,SNR=6.6						
KWAJ	**Kwajalein Atol**	**19.92**	**27**	P	**P**	**19 55 29.2**	**-0.1**
MSVF	**Nonsavu**	**20.76**	**116**	P	**P**	**19 55 38.9**	**+0.3**
QIS	**Mount Isa**	**21.58**	**236**	P	**P**	**19 55 49.6**	**+2.2**
	baz=22,SNR=3.2						
ARMA	**Armidale**	**22.19**	**196**	P	**P**	**19 55 54.6**	**+0.7**
WR0	**Warramunga Arr**	**25.63**	**242**	P	**P**	**19 56 26.0**	**-1.1**
WB0	**Warramunga Arr**	**25.69**	**243**	P	**P**	**19 56 27.3**	**-0.4**
WB0				IAmb	IAmb	19 56 40.7	
	comp=Z,81nm,1.8s						
WRAB	**Tennant Creek**	**25.79**	**243**	P	**P**	**19 56 28.1**	**-0.4**
WRAB				IAmb	IAmb	19 57 05.2	
	comp=Z,52nm,1.4s						
WB2	**Warramunga Arr**	**25.79**	**243**	P	**P**	**19 56 28.2**	**-0.3**
WRA	**Warramunga Arr**	**25.80**	**243**	P	**P**	**19 56 27.6**	**-1.0**
	comp=Z,8.3nm,0.8s,baz=71,slow=9.2,SNR=14						
WRA				LR	LR	20 06 26.3	
	comp=Z,705nm,19.6s,baz=80,slow=36						
KDU	**Kakadu**	**25.90**	**260**	P	**P**	**19 56 28.5**	**-1.0**
	baz=26,SNR=3.5						
GUMO	**Guam**	**26.34**	**329**	LR	LR	20 05 32.6	
	comp=Z,410nm,21.2s,baz=114,slow=34						
CAN	**Canberra**	**27.54**	**197**	P	**P**	**19 56 43.6**	**-0.5**
CAN				IAmb	IAmb	19 56 58.5	
	comp=Z,46nm,1.4s						
STKA	**Stephens Creek**	**27.62**	**212**	P	**P**	**19 56 45.8**	**+0.9**
	comp=Z,4.0nm,0.5s,baz=48,slow=16,SNR=3.3						
STKA				LR	LR	20 07 55.4	
	comp=Z,668nm,18.3s,baz=30,slow=37						
STKA	**Stephens Creek**	**27.62**	**212**	P	**P**	**19 56 45.9**	**+1.1**
	baz=28,SNR=7.6						
STKA	**Stephens Creek**	**27.62**	**212**	P	**P**	**19 56 45.1**	**+0.2**
AS31	**Alice Springs**	**27.70**	**235**	P	**P**	**19 56 44.9**	**-0.8**
ASAR	**Alice Springs**	**27.70**	**235**	P	**P**	**19 56 44.8**	**-1.0**
	comp=Z,2.4nm,0.6s,baz=62,slow=9.9,SNR=8.0						
ASAR				PcP	**PcP**	**20 00 02.7**	**+0.3**
	comp=Z,0.7nm,0.6s,baz=79,slow=3.1,SNR=2.6						
ASAR				ScP	**ScP**	**20 03 43.8**	**+2.5**
	comp=Z,2.3nm,1.2s,baz=48,slow=4.1,SNR=5.0						
ASAR				LR	LR	20 07 35.3	
	comp=Z,771nm,18.5s,baz=44,slow=36						
ASAR	**Alice Springs**	**27.70**	**235**	P	**P**	**19 56 45.5**	**-0.3**
SIJI	**Sorong**	**28.41**	**285**	P	**P**	**19 56 51.4**	**-0.8**
	comp=Z,9.0nm,0.7s,baz=48,slow=17,SNR=2.8						
HTT	**Hallett**	**30.26**	**214**	P	**P**	**19 57 09.2**	**+0.9**
	baz=30,SNR=3.9						
TOO	**Toolangi**	**30.72**	**201**	P	**P**	**19 57 12.9**	**+0.5**
BBOO	**Buckleboo**	**31.48**	**218**	P	**P**	**19 57 19.6**	**+0.5**
	baz=32,SNR=12						
BBOO	**Buckleboo**	**31.48**	**218**	P	**P**	**19 57 19.0**	**-0.1**
BBOO				IAmb	IAmb	19 57 30.0	
	comp=Z,29nm,1.0s						
WRKA	**Warakurna**	**32.91**	**237**	P	**P**	**19 57 30.9**	**-0.9**
	baz=33,SNR=4.2						
FITZ	**Fitzroy Crossi**	**33.21**	**251**	P	**P**	**19 57 33.7**	**-0.8**
	comp=Z,6.8nm,0.6s,baz=64,slow=9.0,SNR=12						
FITZ	**Fitzroy Crossi**	**33.21**	**251**	P	**P**	**19 57 33.9**	**-0.5**
	baz=33,SNR=8.3						
FITZ	**Fitzroy Crossi**	**33.21**	**251**	P	**P**	**19 57 33.8**	**-0.7**
URZ	**Urewera**	**33.48**	**153**	P	**P**	**19 57 38.3**	**+1.8**
	comp=Z,11nm,1.0s,baz=338,slow=4.7,SNR=4.2						
URZ	**Urewera**	**33.48**	**153**	P	**P**	**19 57 37.9**	**+1.4**
SOEI	**Soe**	**33.87**	**266**	P	**P**	**19 57 40.6**	**+0.2**
QRZ	**Quartz Range**	**33.93**	**161**	P	**P**	**19 57 39.6**	**-0.8**
BKZ	**Black Stump Fm**	**33.96**	**155**	P	**P**	**19 57 40.5**	**-0.2**
BKZ				IAmb	IAmb	19 57 49.0	
	comp=Z,18nm,0.8s						
TUWZ	**Tuamarina**	**34.94**	**160**	P	**P**	**19 57 50.2**	**+1.1**
BFZ	**Birch Farm**	**35.14**	**156**	P	**P**	**19 57 50.4**	**-0.5**
BSWZ	**Blackbirch Sta**	**35.17**	**160**	P	**P**	**19 57 50.8**	**-0.4**
MSWZ	**Moikau Station**	**35.39**	**158**	P	**P**	**19 57 52.7**	**-0.4**
PLWZ	**Palliser**	**35.53**	**158**	P	**P**	**19 57 53.3**	**-1.0**
FORT	**Forrest**	**35.70**	**229**	P	**P**	**19 57 55.3**	**-0.6**
FORT				IAmb	IAmb	19 57 59.8	
	comp=Z,22nm,0.8s						
RPZ	**Rata Peaks**	**36.15**	**165**	P	**P**	**19 58 00.2**	**+0.7**
	comp=Z,4.2nm,0.8s,baz=344,slow=7.5,SNR=1.6						
RPZ	**Rata Peaks**	**36.15**	**165**	P	**P**	**19 57 59.6**	**+0.1**
RPZ				IAmb	IAmb	19 58 53.8	
	comp=Z,49nm,1.3s						
WHZ	**Wether Hill Ro**	**37.53**	**169**	P	**P**	**19 58 11.1**	**-0.1**
WHZ				IAmb	IAmb	19 58 26.9	
	comp=Z,63nm,1.6s						
APSI	**Ampana**	**37.66**	**280**	P	**P**	**19 58 12.5**	**-0.3**
	comp=Z,39nm,1.0s						
TOLI2	**Tolitoli**	**39.02**	**283**	P	**P**	**19 58 21.3**	**-2.9**
PSA00	**Pilbara Seismi**	**39.26**	**247**	P	**P**	**19 58 25.0**	**-1.1**
PSA00				IAmb	IAmb	19 58 37.0	
	comp=Z,47nm,1.3s						
MEEK	**Meekatharra**	**41.64**	**240**	P	**P**	**19 58 45.8**	**0.0**
	baz=42,SNR=3.2						
MYLDM	**Lahad Datu**	**42.41**	**288**	P	**P**	**19 58 53.4**	**+1.1**
MYLDM				IAmb	IAmb	19 59 02.5	
	comp=Z,62nm,1.5s						
BBKI	**Banjar Baru**	**43.83**	**274**	P	**P**	**19 59 03.9**	**+0.2**
	comp=Z,31nm,1.0s						
JAGI	**Jajag, Banyuwa**	**43.91**	**267**	P	**P**	**19 59 02.3**	**-2.1**
JAGI				IAmb	IAmb	19 59 15.3	
	comp=Z,34nm,0.8s						
KKM	**Kota Kinabalu**	**44.85**	**288**	P	**P**	**19 59 10.3**	**-1.7**
KKM				IAmb	IAmb	19 59 55.2	
	comp=Z,51nm,1.2s						
JMN	**Monobe**	**48.64**	**332**	P	**P**	**19 59 41.2**	**0.0**
INU	**Inuyama**	**48.68**	**336**	P	**P**	**19 59 41.8**	**+0.3**
INU				IAmb	IAmb	20 00 17.3	
	comp=Z,27nm,1.3s						
YULB	**Yu-li**	**48.72**	**312**	P	**P**	**19 59 41.6**	**-0.4**
YULB				IAmb	IAmb	19 59 56.3	
	comp=Z,37nm,1.3s						
JGF	**Kuroka**	**48.77**	**337**	P	**P**	**19 59 42.0**	**-0.2**
KSM	**Kuching**	**49.24**	**280**	P	**P**	**19 59 44.6**	**-1.6**
KSM				IAmb	IAmb	20 00 21.3	
	comp=Z,20nm,1.1s						
MJAR	**Matsushiro Arr**	**49.28**	**338**	P	**P**	**19 59 43.4**	**-2.7**
	comp=Z,1.9nm,1.0s,baz=169,slow=9.9,SNR=2.1						
MJAR				LR	LR	20 23 03.7	
	comp=Z,92nm,18.1s,baz=155,slow=39						
JWT	**Wachi**	**49.28**	**335**	P	**P**	**19 59 46.8**	**+0.6**
JWT				IAmb	IAmb	20 01 14.3	
	comp=Z,41nm,1.4s						
YHNB	**Yeheng**	**49.44**	**314**	P	**P**	**19 59 48.0**	**+0.4**
CISI	**Cisompet, Garu**	**50.24**	**268**	P	**P**	**19 59 51.9**	**-1.9**
JSD	**Sado**	**50.60**	**339**	P	**P**	**19 59 57.0**	**+1.0**
JSD				IAmb	IAmb	20 00 05.0	
	comp=Z,16nm,1.0s						
PPT	**Papeete**	**50.99**	**105**	LR	LR	20 16 49.8	
	comp=Z,406nm,21.8s,baz=224,slow=30						
PPT2	**Papeete2**	**50.99**	**105**	*e*S	**S**	**20 07 12.8**	**-2.4**
	comp=Z,180nm,26.5s						
PPT2				*e*LR	LR	20 14 30.6	
	comp=Z,927nm,23.2s						
TBI	**Tubuai**	**51.57**	**113**	*e*S	**S**	**20 07 20.8**	**-2.1**
	comp=Z,184nm,31.2s						
TBI				*e*LQ	LQ	20 12 45.8	
	comp=Z,767nm,31.2s						
TBI				*e*LR	LR	20 14 50.4	
	comp=Z,926nm,28.0s						
DLV	**T Lat**	**54.02**	**292**	P	**P**	**20 00 21.7**	**-0.4**
DLV				IAmb	IAmb	20 00 31.1	
	comp=Z,23nm,1.1s						
KSRS	**Korea Array**	**54.49**	**330**	P	**P**	**20 00 24.6**	**-0.3**
	comp=Z,2.7nm,0.7s,baz=145,slow=6.9,SNR=15						
QIZ	**Qiongzhong**	**55.60**	**300**	P	**P**	**20 00 34.9**	**+1.6**
QIZ				S	**S**	**20 08 21.1**	**+3.5**
QIZ				LR	LR		
	comp=Z,230nm,18.2s						
QIZ				LR	LR		
	comp=Z,350nm,21.8s						
QIZ				LR	LR		
	comp=Z,580nm,22.6s						
QIZ	**Qiongzhong**	**55.60**	**300**	P	**P**	**20 00 33.4**	**+0.1**
NJ2	**Nanjing**	**55.82**	**319**	*e*P	**P**	**20 00 36.8**	**+2.2**
NJ2				pmax	pmax		
	comp=Z,10.0nm,1.6s						
USRK	**Ussuriysk Ar.**	**58.27**	**338**	P	**P**	**20 00 50.8**	**-0.9**
	comp=Z,3.0nm,0.8s,baz=153,slow=9.7,SNR=4.0						
USRK				LR	LR	20 24 59.5	
	comp=Z,122nm,19.6s,baz=129,slow=35						
USRK	**Ussuriysk Ar.**	**58.27**	**338**	P	**P**	**20 00 51.0**	**-0.7**
MDJ	**Mudanjiang**	**59.55**	**336**	P	**P**	**20 01 03.3**	**+2.7**
MDJ				pmax	pmax		

	comp=Z,11nm,2.0s						
MDJ				pmax	pmax		
	comp=Z,170nm,3.8s						
TAOE	**Nuku Hiva Isla**	**60.43**	**95**	*e*LR	LR	20 18 50.4	
	comp=Z,630nm,22.9s						
ENH	**Enshi**	**61.29**	**312**	P	**P**	**20 01 13.1**	**+0.2**
ENH				IAmb	IAmb	20 01 52.1	
	comp=Z,38nm,1.8s						
SLVN	**Son La**	**61.62**	**300**	P	**P**	**20 01 15.3**	**0.0**
GSI	**Gunungsitoli**	**61.66**	**276**	P	**P**	**20 01 13.9**	**-1.7**
GSI				IAmb	IAmb	20 02 08.1	
	comp=Z,17nm,1.1s						
PEA0B	**Petropavlovsk-**	**61.97**	**359**	P	**P**	**20 01 16.6**	**-0.3**
PETK	**Petropavlovsk-**	**61.97**	**359**	P	**P**	**20 01 16.5**	**-0.4**
	comp=Z,1.2nm,0.4s,baz=144,slow=6.2,SNR=8.4						
PETK				LR	LR	20 24 13.2	
	comp=Z,218nm,21.7s,baz=173,slow=32						
XAN	**Xi'an**	**63.70**	**315**	P	**P**	**20 01 28.2**	**-0.7**
KMI	**Kunming**	**64.15**	**304**	⇑P	**P**	**20 01 32.5**	**+0.3**
KMI				pP	pP	20 01 40.8	0.0
KMI				sP	sP	20 01 45.5	+1.5
KMI				PcP	**PcP**	**20 02 07.5**	**+0.3**
KMI				PP	**PP**	**20 03 50.5**	**-3.1**
KMI				S	**S**	**20 10 08.5**	**+0.5**
KMI				pmax	pmax		
	comp=Z,4.0nm,1.2s						
KMI				pmax	pmax		
	comp=Z,120nm,5.4s						
KMI				LR	LR		
	comp=Z,170nm,16.6s						
KMI				LR	LR		
	comp=Z,260nm,25.0s						
KMI				LR	LR		
	comp=Z,340nm,20.7s						
ADK	**Adak**	**64.36**	**17**	P	**P**	**20 01 32.6**	**-0.1**
CM31	**Chiang Mai Arr**	**64.91**	**295**	P	**P**	**20 01 37.2**	**+0.1**
CM31				IAmb	IAmb	20 01 46.2	
	comp=Z,33nm,1.5s						
CMAR	**Chiang Mai Arr**	**64.91**	**295**	P	**P**	**20 01 37.0**	**0.0**
	comp=Z,5.1nm,0.9s,baz=124,slow=5.2,SNR=42						
CMAR				LR	LR	20 28 00.8	
	comp=Z,123nm,21.7s,baz=170,slow=34						
CMAR	**Chiang Mai Arr**	**64.91**	**295**	P	**P**	**20 01 36.9**	**-0.2**
CHTO	**Chiang Mai**	**65.03**	**296**	P	**P**	**20 01 37.3**	**-0.5**
CHTO				IAmb	IAmb	20 01 47.4	
	comp=Z,38nm,1.5s						
CD2	**Chengdu**	**65.89**	**310**	*e*P	**P**	**20 01 46.1**	**+2.8**
CD2				pmax	pmax		
	comp=Z,10.0nm,1.3s						
CD2				pmax	pmax		
	comp=Z,240nm,5.4s						
CD2				LR	LR		
	comp=Z,270nm,15.2s						
CD2				LR	LR		
	comp=Z,300nm,16.0s						
CD2				LR	LR		
	comp=Z,340nm,20.6s						
HHC	**Hu-ho-hao-te**	**65.91**	**323**	*e*P	P	20 01 48.4	+5.2
HHC				S	**S**	**20 10 30.6**	**+1.8**
HHC				pmax	pmax		
	comp=Z,8.0nm,1.2s						
HHC				pmax	pmax		
	comp=Z,190nm,6.0s						
HHC				LR	LR		
	comp=Z,190nm,16.8s						
HHC				LR	LR		
	comp=Z,260nm,16.2s						
HHC				LR	LR		
	comp=Z,310nm,16.6s						
LZH	**Lanzhou**	**68.32**	**315**	*e*P	**P**	**20 01 59.8**	**+1.1**
LZH				pP	pP	20 02 07.9	+0.6
LZH				sP	sP	20 02 13.4	+2.9
LZH				pmax	pmax		
	comp=Z,16nm,1.0s						
LZH				LR	LR		
	comp=Z,300nm,17.9s						
LZH				LR	LR		
	comp=Z,290nm,19.0s						
LZH				LR	LR		
	comp=Z,260nm,19.5s						
VNDA	**Vanda**	**68.42**	**179**	P	**P**	**20 02 00.2**	**+1.8**
	comp=Z,2.8nm,0.9s,baz=357,slow=3.0,SNR=2.3						
VNDA				LR	LR	20 27 15.4	
	comp=Z,225nm,19.4s,baz=354,slow=32						
VNDA	**Vanda**	**68.42**	**179**	P	**P**	**20 01 59.3**	**+0.8**
VNDA				IAmb	IAmb	20 02 10.6	
	comp=Z,21nm,1.4s						
MA2	**Magadan**	**68.73**	**356**	P	**P**	**20 02 01.5**	**+0.9**
UNV	**Unalaska Valle**	**69.30**	**21**	P	**P**	**20 02 03.7**	**-0.5**
ULN	**Ulaanbaatar**	**72.70**	**326**	P	**P**	**20 02 25.2**	**0.0**
ULN				IAmb	IAmb	20 02 35.4	
	comp=Z,33nm,1.1s						
SONM	**Songino Array**	**73.04**	**326**	P	**P**	**20 02 27.1**	**-0.1**
	comp=Z,8.4nm,0.7s,baz=138,slow=5.8,SNR=80						
SONM				LR	LR	20 36 15.7	
	comp=Z,125nm,18.1s,baz=122,slow=37						
SONM	**Songino Array**	**73.04**	**326**	P	**P**	**20 02 27.2**	**-0.1**
SHL	**Shillong**	**73.43**	**300**	P	**P**	**20 02 29.6**	**-0.5**
YAK	**Yakutsk**	**74.40**	**346**	P	**P**	**20 02 34.8**	**+0.1**
YAK				IAmb	IAmb	20 02 43.8	
	comp=Z,22nm,0.7s						
LSA	**Lhasa**	**75.40**	**304**	P	**P**	**20 02 45.1**	**+3.3**
LSA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
LSA	**Lhasa**	**75.40**	**304**	P	**P**	**20 02 41.0**	**-0.7**
TLY	**Talaya**	**76.70**	**328**	P	**P**	**20 02 48.0**	**-0.1**
ANM	**Nome**	**78.28**	**15**	P	**P**	**20 02 57.2**	**+0.6**
	baz=216						
ANM	**Nome**	**78.28**	**15**	P	**P**	**20 02 56.9**	**+0.3**
ANM				IAmb	IAmb	20 03 08.1	
	comp=Z,23nm,1.4s						
CNPM	**China Poot**	**79.21**	**23**	P	**P**	**20 03 02.6**	**+0.8**
GUN	**Gumba**	**79.26**	**301**	*e*P	**P**	**20 03 02.5**	**-0.8**
	comp=Z,83nm,1.4s						
PKI	**Pulchoki**	**79.56**	**300**	*e*P	**P**	**20 03 03.9**	**-1.0**
	comp=Z,45nm,1.3s						
PKIN	**Phulchoki**	**79.57**	**300**	*e*P	**P**	**20 03 04.3**	**-0.6**
	comp=Z,65nm,1.5s						
KKN	**Kakani**	**79.73**	**300**	*e*P	**P**	**20 03 05.4**	**-0.3**
	comp=Z,32nm,1.3s						
TTA	**Tatalina**	**79.77**	**19**	P	**P**	**20 03 05.0**	**+0.1**
TTA				IAmb	IAmb	20 03 15.4	
	comp=Z,33nm,1.5s						
DMN	**Daman**	**79.83**	**300**	*e*P	**P**	**20 03 06.1**	**-0.2**
	comp=Z,60nm,1.1s						
GKN	**Gorkha**	**80.34**	**300**	*e*P	**P**	**20 03 08.5**	**-0.4**
	comp=Z,82nm,1.2s						
SUA	**Susitna One**	**80.63**	**22**	P	**P**	**20 03 08.9**	**-0.8**
	baz=231						
QSPA	**South Pole Qui**	**80.89**	**180**	P	**P**	**20 03 12.3**	**+1.2**
QSPA				IAmb	IAmb	20 03 26.5	
	comp=Z,24nm,1.2s						
PPLA	**Purkeypile**	**81.03**	**21**	P	**P**	**20 03 11.7**	**-0.1**
	baz=229						
CHUM	**Lake Minchumin**	**81.64**	**20**	P	**P**	**20 03 14.7**	**-0.1**
	baz=229						
RDOG	**Red Dog Mine**	**81.67**	**14**	P	**P**	**20 03 15.1**	**+0.2**
	baz=218						
RDOG	**Red Dog Mine**	**81.67**	**14**	P	**P**	**20 03 15.2**	**+0.4**
RDOG				IAmb	IAmb	20 03 25.5	
	comp=Z,18nm,0.9s						
SML	**Sawmill**	**81.75**	**23**	P	**P**	**20 03 15.8**	**+0.3**
	baz=233						
TRF	**Thorofare Moun**	**82.05**	**21**	P	**P**	**20 03 16.7**	**-0.5**
	baz=231						
BPAW	**Bear Paw Mtn.**	**82.23**	**20**	P	**P**	**20 03 17.6**	**-0.3**
	baz=230						
WAT2	**Susitna Watana**	**82.36**	**22**	P	**P**	**20 03 18.3**	**-0.5**
	baz=232						
WAT6	**Susitna Watana**	**82.44**	**22**	P	**P**	**20 03 18.7**	**-0.6**
	baz=233						
IMAR	**Indian Mountai**	**82.59**	**18**	P	**P**	**20 03 19.6**	**-0.1**
MCK	**McKinley**	**82.70**	**21**	P	**P**	**20 03 19.0**	**-1.4**
	baz=232						
BMRM	**Bremner River**	**82.72**	**24**	P	**P**	**20 03 19.5**	**-1.2**
	baz=236						
M24K	**Tolsona, Glenn**	**82.75**	**23**	P	**P**	**20 03 21.0**	**+0.2**
	baz=235						
WMQ	**Urumqi**	**82.80**	**316**	*e*Pn	**P**	**20 03 16.9**	**-4.5**
WMQ				smax	smax		
	comp=N,130nm,0.7s						
WMQ				smax	smax		
	comp=E,150nm,0.5s						
MLY	**Manley**	**82.91**	**19**	P	**P**	**20 03 21.3**	**-0.2**
	baz=230						
TIXI	**Tiksi**	**82.96**	**351**	P	**P**	**20 03 21.1**	**-0.4**
TIXI				IAmb	IAmb	20 03 36.4	
	comp=Z,31nm,1.8s						
NEA2	**Nenana**	**83.19**	**20**	P	**P**	**20 03 21.4**	**-1.6**
	baz=232						
I23K	**Minto, Yukon-K**	**83.44**	**20**	P	**P**	**20 03 23.8**	**-0.3**
	baz=232						
I23K	**Minto, Yukon-K**	**83.44**	**20**	P	**P**	**20 03 23.9**	**-0.3**
WRH	**Wood River Hil**	**83.45**	**20**	P	**P**	**20 03 23.5**	**-0.8**
WRH				IAmb	IAmb	20 03 33.6	
	comp=Z,19nm,1.0s						
CCB	**Clear Creek Bu**	**83.65**	**20**	P	**P**	**20 03 24.3**	**-1.0**
CCB				IAmb	IAmb	20 03 34.4	
	comp=Z,9.6nm,0.8s						
TCOL	**CIGO, UAF Yank**	**83.77**	**20**	P	**P**	**20 03 25.4**	**-0.5**
	baz=233						
COLA	**College**	**83.77**	**20**	P	**P**	**20 03 25.1**	**-0.8**
HDA	**Harding Lake**	**83.81**	**21**	P	**P**	**20 03 25.6**	**-0.6**
	baz=234						
ILAR	**Eielson Array**	**84.05**	**21**	P	**P**	**20 03 25.9**	**-1.4**
	comp=Z,1.6nm,0.5s,baz=234,slow=4.8,SNR=26						
POKR	**Poker Plat Res**	**84.06**	**20**	P	**P**	**20 03 26.5**	**-0.9**
	baz=233						
CTG	**Chitna Glacier**	**84.07**	**25**	P	**P**	**20 03 29.0**	**+1.3**
	baz=239						
MENT	**Mentasta**	**84.16**	**23**	P	**P**	**20 03 28.2**	**+0.3**
SCRK	**Sand Creek**	**84.63**	**22**	P	**P**	**20 03 30.3**	**-0.1**
	baz=237						
TOLK	**Toolik Lake Re**	**85.56**	**17**	P	**P**	**20 03 35.2**	**+0.3**
	baz=231						
TOLK	**Toolik Lake Re**	**85.56**	**17**	P	**P**	**20 03 35.2**	**+0.3**
TOLK				IAmb	IAmb	20 03 47.0	
	comp=Z,9.0nm,0.8s						
HYT	**Haines Junctio**	**85.64**	**26**	P	**P**	**20 03 36.0**	**+0.4**
HYT				IAmb	IAmb	20 03 48.1	
	comp=Z,22nm,1.1s						
EGAK	**Eagle**	**86.10**	**22**	P	**P**	**20 03 38.1**	**+0.5**
EGAK				IAmb	IAmb	20 03 47.9	
	comp=Z,11nm,0.9s						
BMAR	**Burnt Mountain**	**86.35**	**19**	P	**P**	**20 03 38.9**	**+0.1**
MKAR	**Makanchi Array**	**87.34**	**318**	LR	LR	20 42 33.3	
	comp=Z,87nm,21.1s,baz=94,slow=36						
ZALV	**Zalesovo Beam**	**87.92**	**325**	P	**P**	**20 03 44.9**	**-1.8**
	comp=Z,0.9nm,0.5s,baz=103,slow=5.3,SNR=4.9						
ZALV				LR	LR	20 41 56.4	
	comp=Z,93nm,21.5s,baz=86,slow=35						
EPYK	**Eagle Plains**	**88.48**	**21**	P	**P**	**20 03 49.5**	**+0.4**
	baz=243						
KSH	**Kashi**	**90.09**	**310**	P	**P**	**20 04 00.6**	**+3.2**
KSH				pP	pwP	20 04 07.4	-0.9
KSH				PP	**PP**	**20 07 37.1**	**+6.0**
KSH				S	**S**	**20 14 53.3**	**+4.1**
KSH				pmax	pmax		
	comp=Z,6.0nm,1.3s						
KSH				pmax	pmax		
	comp=Z,440nm,6.3s						
NVAR	**Mina Array Bea**	**90.23**	**51**	P	**P**	**20 03 57.5**	**-0.7**
	comp=Z,1.1nm,0.9s,baz=243,slow=6.9,SNR=6.9						
NV11	**Mina Array Sit**	**90.34**	**51**	P	**P**	**20 03 58.6**	**0.0**
KURK	**Kurchatov**	**90.69**	**321**	P	**P**	**20 03 59.0**	**-0.7**
KURK				IAmb	IAmb	20 07 20.1	
	comp=Z,6.3nm,0.7s						
KURBB	**Kurchatov Arra**	**90.72**	**321**	P	**P**	**20 03 58.5**	**-1.4**
	comp=Z,0.7nm,0.9s,baz=108,slow=2.6,SNR=5.6						
BELA	**Belgrano 2**	**92.85**	**177**	P	**P**	**20 04 08.7**	**-0.6**
BVAR	**Borovoye Array**	**96.12**	**323**	P	**P**	**20 04 22.5**	**-2.3**
	comp=Z,1.0nm,0.8s,baz=138,slow=7.1,SNR=7.6						
YKA	**Yellowknife Ar**	**96.52**	**28**	P	**P**	**20 04 25.4**	**-0.8**
	comp=Z,0.3nm,0.6s,baz=260,slow=3.9,SNR=3.8						
PDAR	**Pinedale Array**	**97.45**	**48**	P	Pdif	20 04 31.1	-0.3
	comp=Z,0.3nm,0.6s,baz=207,slow=1.7,SNR=3.5						
FINES	**FINESS Array B**	**117.29**	**337**	PKP	**PKPdf**	**20 09 41.0**	**-1.1**
	comp=Z,3.0nm,0.9s,baz=0.0,slow=2.8,SNR=3.6						
AKASG	**Malin Array Be**	**121.31**	**325**	PKP	**PKPdf**	**20 09 49.0**	**-1.2**
	comp=Z,0.7nm,0.5s,baz=60,slow=2.2,SNR=2.0						
AKASG	**Malin Array Be**	**121.31**	**325**		**PKPdf**	**20 09 49.2**	**-1.0**
BOSA	**Boshof**	**121.41**	**229**	PKP	**PKiKP**	**20 09 52.1**	**+0.7**
	comp=Z,4.6nm,1.1s,baz=108,slow=6.1,SNR=3.1						
NOA	**NORSAR Array B**	**122.83**	**342**	PKP	**PKPdf**	**20 09 51.6**	**-1.2**
	comp=Z,0.6nm,0.8s,baz=41,slow=4.6,SNR=1.7						
LPAZ	**La Paz**	**127.32**	**118**	PKP	**PKiKP**	**20 10 03.4**	**-0.6**
	comp=Z,2.1nm,0.6s,baz=320,slow=2.4,SNR=7.0						
LPAZ	**La Paz**	**127.32**	**118**		**PKiKP**	**20 10 03.6**	**-0.4**
LANS	**Liptovska Anna**	**127.51**	**327**	*e*PKP	**PKPdf**	**20 10 01.9**	**-0.3**
CLL	**Collm**	**129.33**	**333**	*e*PKPdf	**PKPdf**	**20 10 04.0**	**-1.5**
CPUP	**Villa Florida**	**130.42**	**136**	PKP	**PKPdf**	**20 10 07.9**	**-0.4**
	comp=Z,3.6nm,1.0s,baz=237,slow=0.6,SNR=3.6						
GERES	**GERESS Array B**	**130.67**	**330**	PKP	**PKPdf**	**20 10 07.8**	**-0.5**
	comp=Z,0.5nm,0.6s,baz=90,slow=2.7,SNR=4.8						
SIV	**San Ignacio**	**133.48**	**122**	PKP	**PKiKP**	**20 10 15.6**	**-0.1**
	comp=Z,1.6nm,0.8s,baz=297,slow=2.3,SNR=4.3						
ESDC	**Sonseca Array**	**145.80**	**336**	PKPbc	**PKPab**	**20 10 36.5**	**-0.4**
	comp=Z,1.7nm,1.0s,baz=18,slow=4.1,SNR=4.0						
ESDC	**Sonseca Array**	**145.80**	**336**	PKPdf	**PKPbc**	**20 10 36.4**	**-0.2**
TORD	**Torodi Ar. Bea**	**156.99**	**282**	PKPab	**PKPab**	**20 11 21.5**	**-2.4**
	comp=Z,1.6nm,0.8s,baz=70,slow=2.4,SNR=3.8						

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*NNC **21** 20:02:23.5±7.0, 42°.58N×84°.53E, h0^{km}, mb3.7, mpv3.3,*
Error ellipse: s-maj=60.9km s-min=26.6km az=146.0
*SOME **21** 20:02:24.2, 41°.93N×83°.62E, h15^{km}*
ISC 21 20:02:23.5±2.9**, 42°.3N**±0°.1×**84°.5E**±0°.1**, h10^{km}, n19,**
σ**2^{s}.16**/37**, 7C-2D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**3.22**	**292**	*e*P	**Pn**	**20 03 15.3**	**+1.1**
	8.8nm,0.4s						
KTMS				*e*S	**Sn**	**20 03 52.7**	**-0.1**
	297nm,0.5s						
SHLS	**Shalkode**	**3.77**	**284**	*e*P	**Pn**	**20 03 20.4**	**-1.4**
	73nm,0.6s						
SHLS				*e*S	**Sn**	**20 04 01.1**	**-5.3**
	164nm,0.9s						
PDGK	**Podgornoye**	**3.79**	**287**	⇑Pg	**Pb**	**20 03 30.1**	**-0.5**
	12nm,0.6s						
PDGK				⇑Sn	**Sn**	**20 04 08.7**	**+1.9**
	90nm,0.5s						
DJR	**Jarkent**	**3.95**	**302**	*e*P	**Pb**	**20 03 32.9**	**-0.5**
	25nm,0.6s						
DJR				*e*S	**Sb**	**20 04 22.5**	**+1.3**
	40nm,0.5s						
UZB	**Uzynbulak**	**4.09**	**283**	*e*P	**Pn**	**20 03 29.1**	**+2.9**
	9.3nm,0.4s						
UZB				*e*S	**Sn**	**20 04 15.9**	**+1.7**
	40nm,0.5s						
KPKS	**Kokpek**	**4.39**	**287**	*e*P	**Pb**	**20 03 38.3**	**-2.6**
	20nm,0.5s						
KPKS				*e*S	**Sb**	**20 04 31.5**	**-2.5**
	110nm,0.6s						
SATY	**Saty**	**4.52**	**281**	*e*P	**Pn**	**20 03 35.4**	**+3.2**
	8.3nm,0.5s						
SATY				*e*S	**Sn**	**20 04 26.7**	**+1.8**
	16nm,0.4s						
MK31	**Makanchi Array**	**4.73**	**342**	⇑Pn	**Pn**	**20 03 33.9**	**-0.9**
	0.4nm,0.2s,baz=158,slow=14,SNR=37						
MK31				Pg	**Pb**	**20 03 46.7**	**+0.2**
	3.4nm,0.5s,baz=158,slow=15,SNR=9.9						
MK31				⇑Lg	Lg	20 04 46.3	
	24nm,0.6s,baz=150,slow=28,SNR=4.4						
MNBS	**Baschi**	**4.76**	**294**	*e*P	**Pb**	**20 03 45.5**	**-1.7**
	21nm,0.8s						
MNBS				*e*S	**Sb**	**20 04 44.0**	**-0.5**
	72nm,0.7s						
KURS	**Kuram**	**4.76**	**286**	*e*P	**Pb**	**20 03 44.7**	**-2.4**
	14nm,0.6s						
KURS				*e*S	**Sb**	**20 04 41.9**	**-2.7**
	16nm,0.6s						
MAKZ	**Makanchi**	**4.82**	**339**	⇓Pn	**Pn**	**20 03 35.3**	**-0.8**
	1.5nm,0.5s						
MAKZ				⇑Pg	**Pb**	**20 03 47.9**	**-0.2**
	2.5nm,0.4s						
MAKZ				⇑Lg	Lg	20 04 49.2	
	14nm,0.8s						
TDK	**Taldyqorghan**	**5.14**	**303**	*e*P	**Pb**	**20 03 53.1**	**-0.4**
	53nm,0.5s						
TDK				*e*S	**Sb**	**20 04 57.0**	**+1.7**
	46nm,0.7s						
KOTS	**Kotyrbulak**	**5.49**	**282**	*e*P	**Pb**	**20 03 58.2**	**-1.2**
	18nm,0.4s						
KOTS				*e*S	**Sb**	**20 05 05.8**	**+0.4**
	34nm,0.6s						
MDOK	**Medeo**	**5.52**	**281**	*e*P	**Pb**	**20 03 56.2**	**-3.9**
	10nm,0.6s						
MDOK				*e*S	**Sb**	**20 05 02.5**	**-3.9**
	7.6nm,0.7s						
AAA	**Alma-Ata**	**5.62**	**282**	*e*P	**Pb**	**20 04 00.7**	**-1.1**
	16nm,0.1s						
AAA				*e*S	**Sb**	**20 05 09.7**	**+0.4**
	5.1nm,0.1s						
IZV	**Izvestkoviy**	**5.83**	**280**	*e*P	**Pb**	**20 04 04.5**	**-0.8**
	4.4nm,0.5s						
IZV				*e*S	**Sb**	**20 05 17.1**	**+1.9**
	50nm,0.6s						
KTBS	**Karatobe**	**5.87**	**286**	*e*P	**Pb**	**20 04 03.9**	**-2.1**
	5.2nm,0.8s						
KTBS				*e*S	**Sb**	**20 05 16.3**	**0.0**
	16nm,0.4s						
KUU	**Kurty**	**6.15**	**287**	*e*P	**Pb**	**20 04 11.0**	**+0.3**
	3.4nm,0.9s						
KUU				*e*S	**Sb**	**20 05 27.7**	**+3.4**
	20nm,0.6s						
TKM2	**Tokmak 2**	**6.57**	**278**	⇓Pn	**Pn**	**20 04 03.4**	**+3.0**
	3.0nm,0.7s						
TKM2				⇑Lg	Lg	20 05 50.7	
	17nm,0.7s						

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*TAP **21** 20:03:02.0, 24°.03N×122°.85E, h20^{km}, ML2.8, D*
*JMA **21** 20:03:02.1±0.1, 24°.03N×122°.89E, h33^{km}±3^{km}, M2.5*
ISC 21 20:03:01.0±1.3**, 23°.98N**±0°.03×**122°.88E**±0°.02**, h19**^{km}±3^{km},
n93, σ**1^{s}.03**/136**, 1D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.47**	**8**	P	**Pb**	**20 03 11.2**	**+0.4**
JYNG				S	**Sb**	**20 03 17.4**	**0.0**
YOJ	**Yonaguni jima**	**0.50**	**14**	⇓*i*P	**Pb**	**20 03 11.6**	**+0.5**
	baz=18						
YOJ				*i* S	**Sb**	**20 03 18.0**	**0.0**
	baz=18						
YOJ	**Yonaguni jima**	**0.50**	**14**	P	**Pb**	**20 03 11.6**	**+0.5**
YOJ				S	**Sb**	**20 03 18.1**	**0.0**
HATJ	**Hateruma jima**	**0.85**	**85**	P	**Pb**	**20 03 17.5**	**+0.3**
IRIF	**Iriomote-Funau**	**0.86**	**65**	P	**Pb**	**20 03 17.2**	**-0.1**
IRIF				*e*S	**Sb**	**20 03 28.8**	**+0.4**
JKRS	**Kuro-shima**	**1.07**	**76**	P	**Pb**	**20 03 20.7**	**-0.2**
JKRS				*e*S	**Sb**	**20 03 34.5**	**0.0**
EWUT	**Wuta**	**1.10**	**295**	*e*P	**Pb**	**20 03 21.4**	**-0.1**
	baz=302						
EWUT				*e*S	**Sg**	**20 03 36.5**	**-0.4**
	baz=302						
TWC	**Suao**	**1.13**	**304**	*e*P	**Pn**	**20 03 22.1**	**+0.4**
	baz=303						
TWC				*e*S	**Sb**	**20 03 35.5**	**-0.6**
	baz=303						
ENA	**Nanau**	**1.13**	**294**	*e*P	**Pn**	**20 03 22.1**	**+0.3**
	baz=300						
TWD	**Chiawan**	**1.17**	**275**	*e*P	**Pg**	**20 03 24.7**	**+1.0**
	baz=273						
TWD				*e*S	**Sn**	**20 03 38.0**	**+0.1**
	baz=273						
NACB	**Ninganchiao**	**1.19**	**280**	*e*P	**Pn**	**20 03 22.5**	**-0.1**
	baz=261						
NACB				*e*S	**Sb**	**20 03 37.9**	**0.0**
	baz=261						
JIJ	**Ishigaki jima**	**1.22**	**71**	P	**Pn**	**20 03 22.8**	**-0.2**
JIJ				*e*S	**Sb**	**20 03 38.4**	**-0.4**
NDS	**Dongshan**	**1.24**	**302**	*e*P	**Pb**	**20 03 24.5**	**+0.7**
	baz=300						
NDS				*e*S	**Sn**	**20 03 40.0**	**+0.4**
	baz=300						
NTC	**Toucheng**	**1.29**	**313**	*e*P	**Pn**	**20 03 23.7**	**-0.3**
	baz=312						
ETLH	**Xiulin Townshi**	**1.29**	**280**	*e*P	**Pn**	**20 03 24.3**	**+0.2**
	baz=263						
ETLH				*e*S	**Sb**	**20 03 40.9**	**-0.1**
	baz=263						
TWB1	**Santiao Chiao**	**1.30**	**322**	*e*P	**Pn**	**20 03 23.6**	**-0.6**
	baz=321						
TWE	**Neicheng**	**1.33**	**304**	*e*P	**Pb**	**20 03 25.7**	**+0.4**
	baz=303						
TWE				*e*S	**Sg**	**20 03 42.5**	**-1.4**
	baz=303						
ESL	**Shilin**	**1.33**	**263**	*e*P	**Pb**	**20 03 26.7**	**+1.3**
	baz=261						
ESL				*e*S	**Sn**	**20 03 41.7**	**-0.1**
	baz=261						
EGFH	**Guangfu**	**1.36**	**257**	*e*P	**Pn**	**20 03 23.1**	**-1.8**
	baz=255						
EGFH				*e*S	**Sb**	**20 03 43.5**	**+0.6**
	baz=255						
ENTT	**Nioudou**	**1.36**	**299**	*e*P	**Pb**	**20 03 26.4**	**+0.5**
	baz=298						
TIPB	**Shuangxi**	**1.38**	**316**	*e*P	**Pn**	**20 03 25.1**	**-0.1**
	baz=315						
TIPB				*e*S	**Sb**	**20 03 43.7**	**+0.3**
	baz=315						
NDT	**Datong Townshi**	**1.39**	**297**	*e*P	**Pg**	**20 03 27.7**	**-0.1**
	baz=280						
HGSD	**Ruisui**	**1.42**	**250**	*e*P	**Pn**	**20 03 26.1**	**+0.3**
	baz=249						
NNSB	**Datong**	**1.43**	**288**	*e*P	**Pn**	**20 03 26.6**	**+0.5**
	baz=287						
NNSH	**Datong**	**1.43**	**288**	*e*P	**Pb**	**20 03 27.1**	**-0.1**
	baz=287						
JISG	**Ishigakijimahi**	**1.44**	**65**	P	**Pn**	**20 03 25.7**	**-0.4**
JISG				S	**Sn**	**20 03 43.1**	**-1.5**
NNS	**Nan Shan**	**1.45**	**289**	*e*P	**Pb**	**20 03 27.3**	**-0.1**
	baz=287						
NWF	**Wu-fen Shan**	**1.47**	**318**	*e*P	**Pn**	**20 03 26.7**	**+0.1**
	baz=317						
NWF				*e*S	**Sb**	**20 03 45.8**	**-0.4**
	baz=317						
WFSB	**Wu-fen Shan**	**1.47**	**318**	*e*P	**Pn**	**20 03 26.8**	**+0.2**
	baz=317						
WFSB				*e*S	**Sb**	**20 03 46.1**	**-0.1**
	baz=317						
NWLT	**Wulai**	**1.48**	**303**	*e*P	**Pb**	**20 03 28.3**	**+0.3**
	baz=317						
NWLT				*e*S	**Sg**	**20 03 47.5**	**-1.5**
	baz=317						
EHY	**Hungye**	**1.50**	**252**	*e*P	**Pn**	**20 03 27.2**	**+0.3**
	baz=250						
EHY				*e*S	**Sn**	**20 03 45.8**	**-0.2**
	baz=250						
FUSS	**Fushou**	**1.51**	**280**	*e*P	**Pn**	**20 03 28.1**	**+0.8**
	baz=279						
YHNB	**Yeheng**	**1.53**	**297**	*e*P	**Pn**	**20 03 28.3**	**+0.9**
	baz=280						
TWA	**Mucha**	**1.54**	**311**	*e*P	**Pn**	**20 03 28.2**	**+0.8**
	baz=323						
NSK	**Sanguang**	**1.55**	**297**	*e*P	**Pn**	**20 03 28.2**	**+0.5**
	baz=281						
CHGB	**Renai**	**1.56**	**273**	*e*P	**Pn**	**20 03 28.5**	**+0.6**
	baz=272						
EYUL	**Yuli**	**1.56**	**246**	*e*P	**Pn**	**20 03 28.6**	**+0.9**
	baz=233						
YULB	**Yu-li**	**1.56**	**248**	*e*P	**Pn**	**20 03 28.1**	**+0.4**
	baz=246						
YULB				*e*S	**Sn**	**20 03 46.8**	**-0.7**
	baz=246						
NHDH	**Xindian Distri**	**1.57**	**309**	*e*P	**Pb**	**20 03 28.9**	**-0.5**
	baz=308						
TWF1	**Yuli**	**1.58**	**247**	*e*P	**Pn**	**20 03 28.5**	**+0.5**
	baz=245						
TWF1				*e*S	**Sn**	**20 03 48.1**	**+0.3**
	baz=245						
TWT	**Tachien**	**1.58**	**280**	*e*P	**Pb**	**20 03 29.7**	**0.0**
	baz=279						
TDCB	**Techi**	**1.59**	**280**	*e*P	**Pn**	**20 03 29.5**	**+1.2**
	baz=266						
VWDT	**VWDT**	**1.60**	**262**	*e*P	**Pn**	**20 03 28.5**	**+0.2**
	baz=261						
FULB	**Fuli**	**1.65**	**242**	*e*P	**Pn**	**20 03 28.8**	**-0.1**
	baz=226						
FULB				*e*S	**Sn**	**20 03 48.6**	**-1.0**
	baz=226						
YM01	**YM01**	**1.66**	**315**	*e*P	**Pn**	**20 03 28.4**	**-0.8**
	baz=314						
YM05	**YM05**	**1.68**	**315**	*e*P	**Pn**	**20 03 29.4**	**0.0**
	baz=314						
YM04	**YM04**	**1.69**	**314**	*e*P	**Pn**	**20 03 30.0**	**+0.5**
	baz=313						
EDH	**Donghe**	**1.76**	**236**	*e*P	**Pn**	**20 03 30.2**	**-0.3**
	baz=234						
EDH				*e*S	**Sn**	**20 03 50.5**	**-1.9**
	baz=234						
SSLB	**Suanglung**	**1.77**	**264**	*e*P	**Pn**	**20 03 31.7**	**+1.0**
	baz=263						
SSLB				*e*S	**Sb**	**20 03 55.0**	**+0.3**
	baz=263						
DPDB	**Guoxing**	**1.78**	**272**	*e*P	**Pn**	**20 03 32.0**	**+1.1**
	baz=271						
WHP	**Taichung City**	**1.79**	**280**	*e*P	**Pb**	**20 03 33.2**	**0.0**
	baz=266						

WHP				eS	Sb	20 03 55.7	+0.4
	baz=266						
JTJ	Tarama	1.79	68	P	Pn	20 03 32.6	+1.7
JTJ				eS	Sn	20 03 53.9	+0.7
WCS	Beigang Elemen	1.80	273	eP	Pn	20 03 32.5	+1.6
	baz=272						
SMLT	Sun Moon Lake	1.81	267	eP	Pn	20 03 33.0	+1.7
	baz=266						
SMLT				eS	Sb	20 03 55.4	-0.6
	baz=266						
LIOB	Emei	1.82	292	eP	Pb	20 03 33.2	-0.6
	baz=291						
YUS	Yu-Shan	1.83	255	eP	Pn	20 03 32.6	+0.7
	baz=254						
LDUT	Ludao	1.83	225	eP	Pn	20 03 31.1	-0.4
	baz=224						
LDUT				eS	Sn	20 03 52.2	-2.0
	baz=224						
WHYT	Xinyi Township	1.87	262	eP	Pb	20 03 34.9	+0.3
	baz=261						
ELDTW	Lidau	1.88	246	eP	Pn	20 03 32.4	+0.2
	baz=244						
LONT	Longtian	1.93	237	eP	Pn	20 03 33.2	+0.5
	baz=225						
ALS	Alishan	1.95	257	eP	Pn	20 03 34.8	+1.4
	baz=244						
TWQ1	Liyutan	1.95	281	eP	Pn	20 03 35.0	+1.9
	baz=280						
WJS	Zhushan	1.97	266	eP	Pb	20 03 36.4	+0.1
	baz=265						
WNT	Mingjian	2.01	268	eP	Pb	20 03 36.4	-0.5
	baz=267						
WNT1	Nantou City	2.01	268	eP	Pn	20 03 35.5	+1.6
	baz=268						
TWGBT	Beinan	2.01	235	eP	Pn	20 03 34.2	+0.3
	baz=224						
TWG	Pinlang	2.02	235	eP	Pn	20 03 34.1	+0.1
	baz=224						
TWG				eS	Sn	20 03 57.9	-0.9
	baz=224						
CHN5	Tsauling	2.05	260	eP	Pn	20 03 36.7	+2.1
	baz=246						
CHN5				eS	Sb	20 04 01.9	-0.9
	baz=246						
STYH	Taoyuan	2.09	248	eP	Pn	20 03 36.7	+1.8
	baz=236						
STYT	Tauyuan	2.11	248	eP	Pn	20 03 37.4	+2.1
	baz=246						
STYT				eS	Sn	20 04 01.4	+0.4
	baz=246						
WGK	Gukeng	2.14	263	eP	Pb	20 03 38.7	-0.4
	baz=262						
WDLH	Douliu	2.16	263	eP	Pb	20 03 39.0	-0.5
	baz=262						
TPUB	Ta-pu	2.17	252	eP	Pn	20 03 37.5	+1.4
	baz=239						
TPUB				eS	Sb	20 04 05.5	-0.6
	baz=239						
CHN4	Tsaushan	2.18	254	eP	Pb	20 03 40.2	+0.3
	baz=240						
CHN4				eS	Sb	20 04 06.8	+0.2
	baz=240						
WTP	Ta-pu	2.20	251	eP	Pn	20 03 38.8	+2.2
	baz=249						
WTP				eS	Sb	20 04 07.2	+0.1
	baz=249						
ECL	Taimali	2.24	232	eP	Pn	20 03 37.0	-0.1
	baz=231						
ECL				eS	Sn	20 04 02.5	-1.7
	baz=231						
SLGT	Liugui	2.27	245	eP	Pb	20 03 41.2	-0.2
	baz=234						
SLGT				eS	Sn	20 04 06.8	+1.8
	baz=234						
SGST	Jiashian	2.29	247	eP	Pn	20 03 40.4	+2.6
	baz=234						
SGST				eS	Sn	20 04 08.0	+2.6
	baz=234						
WRL	Guolierlin Hig	2.29	269	eP	Pb	20 03 40.5	-1.1
	baz=282						
WRL				eS	Sb	20 04 08.6	-1.0
	baz=282						
CHN1	Nanshi	2.29	250	eP	Pb	20 03 40.8	-1.0
	baz=240						
CHN1				eS	Sb	20 04 08.7	-1.1
	baz=240						
WTK	Tuku	2.29	263	eP	Pb	20 03 40.6	-1.2
	baz=263						
TWK	Hsinying	2.30	253	eP	Pn	20 03 40.6	+2.6
	baz=251						
TWK				eS	Sb	20 04 09.1	-1.0
	baz=251						
SSD	Sandimen	2.40	240	eP	Pn	20 03 41.9	+2.6
	baz=230						
TSMG	Majia	2.41	239	eP	Pn	20 03 41.9	+2.5
	baz=230						
SCST	Cishan	2.44	244	eP	Pn	20 03 41.7	+1.9
	baz=236						
MASBT	Mashibuluo	2.47	237	eP	Pn	20 03 41.5	+1.3
	baz=228						
SSPT	Xinbi	2.59	235	eP	Pn	20 03 43.9	+2.0
	baz=227						
SCZT	Fangliau	2.62	233	eP	Pn	20 03 44.0	+1.7
	baz=232						
WDGT	Dungji	3.03	257	eP	Pn	20 03 49.5	+1.4
	baz=256						
WDGT				eS	Sn	20 04 25.1	+1.2
	baz=256						
PNG	Penghu	3.07	263	eP	Pn	20 03 49.8	+1.3
	baz=263						
VWUC	VWUC	3.28	289	eP	Pn	20 03 51.2	-0.2
	baz=288						
PTMZ	Houxiangcun	3.58	288	eP	Pn	20 03 55.6	+0.1
	baz=287						
KNMB	Chin-men Tao	4.12	278	eP	Pn	20 04 03.9	+0.9
	baz=277						

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*BJI **21** 20:05:43.0±0.0, 42°.59N×83°.98E, h10^{km}, mB4.4/4, mb4.2/14, ML4.2/11, Ms4.0/4, Ms7 3.7/4*

*SOME **21** 20:05:44.3, 42°.65N×83°.75E, h15^{km}, MS3.7*

*IDC **21** 20:05:45.7±2.7, 42°.67N×84°.08E, h29^{km}±18^{km}, mb4.0/22, mb1 4.1/29, mb1mx3.9/43, mbtmp4.1/29, ML3.6/7, MS3.4/3, Ms1 3.4/3, ms1mx2.9/36, Error ellipse: s-maj=14.5km s-min=12.0km az=30.0*

*NEIC **21** 20:05:45.9±1.1, 42°.59N±0°.07×83°.96E±0°.08, h29^{km}±5^{km}, mb4.5/48, Error ellipse: s-maj=10.6km s-min=8.6km az=186.0*

*NNC **21** 20:05:47.2±1.7, 42°.85N×83°.78E, h0^{km}, mb4.8, mpv4.5, Error ellipse: s-maj=13.9km s-min=6.8km az=140.0*

ISC 21 20:05:43.2±0.3, **42°.70N**±0°.04×**84°.13E**±0°.02, **h10^{km}, n176,** σ**1^{s}.85**/206, **mb4.3**/53, **21C-8D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMQ	Urumqi	2.83	66	ePn	Pb	20 06 33.8	-0.1
WMQ				Sn	Sb	20 07 11.0	+2.4
WMQ				Sg	Sg	20 07 13.5	-0.6
WMQ				smax	smax		
	comp=N,2µm,0.7s						
WMQ				smax	smax		
	comp=E,2µm,0.9s						
WMQ	Urumqi	2.83	66		Pb	20 06 33.6	-0.2
KTMS	Ketmen	2.87	286	eP	Pb	20 06 33.3	-1.2
	3.1nm,0.3s						
KTMS				eS	Sb	20 07 08.8	-0.9
	2µm,0.7s						
KTMS	Ketmen	2.87	286	Pg	Pb	20 06 33.2	-1.2
	3.1nm,0.3s						
KTMS				Lg	Lg	20 07 10.0	
	2µm,0.7s						
PDGK	Podgornoye	3.46	282	Pg	Pb	20 06 44.0	-0.6
	75nm,0.6s						
PDGK				Lg	Lg	20 07 26.6	
	560nm,0.5s						
PDGK	Podgornoye	3.46	282	⇑Pg	Pb	20 06 46.4	+1.8
	110nm,0.6s						
PDGK				⇑Lg	Lg	20 07 31.3	
	896nm,0.5s						
DJR	Jarkent	3.55	299	eP	Pb	20 06 45.9	-0.3
	195nm,0.7s						
DJR				eS	Sb	20 07 30.3	+1.0
	432nm,0.6s						
DJR	Jarkent	3.55	299	Pg	Pb	20 06 45.9	-0.3
	195nm,0.7s						
DJR				Lg	Lg	20 07 30.3	
	432nm,0.6s						
UZB	Uzynbulak	3.78	278	eP	Pb	20 06 48.1	-1.9
	54nm,0.4s						
UZB				eS	Sb	20 07 33.7	-2.3
	933nm,5.0s						
UZB	Uzynbulak	3.78	278	Pg	Pb	20 06 48.1	-1.9
	54nm,0.4s						
UZB				Lg	Lg	20 07 33.7	
	440nm,0.5s						
KPKS	Kokpek	4.06	283	eP	Pb	20 06 54.8	-0.1
	181nm,0.8s						
KPKS				eS	Sb	20 07 45.3	+1.3
	543nm,0.7s						
SATY	Saty	4.22	277	eP	Pb	20 06 54.4	-3.1
	46nm,0.8s						
SATY				eS	Sb	20 07 44.6	-4.1
	926nm,4.7s						
MK31	Makanchi Array	4.30	343	⇑Pn	Pn	20 06 51.4	+2.9
	5.7nm,0.3s,baz=160,slow=14						
MK31				⇑Pg	Pg	20 07 04.0	-1.5
	12nm,0.3s						
MK31				⇓Sn	Sn	20 07 39.2	+0.5
	33nm,0.4s						
MK31				⇓Lg	Lg	20 07 58.1	
	173nm,0.5s,baz=161,slow=26						
MK31	Makanchi Array	4.30	343	Pn	Pn	20 06 51.5	+2.9
MKAR	Makanchi Array	4.30	343	Pn	Pn	20 06 51.4	+2.8
	4.0nm,0.3s,baz=154,slow=14,SNR=14						
MKAR				Pg	Pg	20 07 04.0	-1.4
	23nm,0.3s,baz=160,slow=15,SNR=14						
MKAR				Sn	Sn	20 07 36.1	-2.6
	21nm,0.3s,baz=161,slow=18,SNR=5.9						
MKAR				Lg	Lg	20 08 04.1	
	83nm,0.3s,baz=165,slow=28,SNR=7.5						
MKAR				LR	LR	20 08 49.8	
	comp=Z,184nm,20.0s,baz=254,slow=43						
MKAR	Makanchi Array	4.30	343	Pn	Pn	20 06 51.0	+2.4
MAKZ	Makanchi	4.38	340	⇓Pn	Pn	20 06 52.3	+2.5
	8.4nm,0.4s						
MAKZ				⇑Pg	Pg	20 07 04.0	-3.1
	31nm,0.5s						
MAKZ				⇑Lg	Lg	20 08 00.7	
	156nm,0.7s						
MAKZ	Makanchi	4.38	340	Pn	Pn	20 06 52.2	+2.4
MNBS	Baschi	4.40	290	eP	Pb	20 07 00.7	+0.1
	184nm,0.8s						
MNBS				eS	Sb	20 07 55.1	+1.4
	713nm,0.7s						
MNBS	Baschi	4.40	290	Pg	Pb	20 07 00.7	+0.1
	184nm,0.8s						
MNBS				Lg	Lg	20 07 55.1	
	713nm,0.7s						
KURS	Kuram	4.44	282	eP	Pb	20 07 01.1	0.0
	148nm,0.7s						
KURS				eS	Sb	20 07 56.8	+2.1
	247nm,0.8s						
KURS	Kuram	4.44	282	Pg	Pb	20 07 01.1	0.0
	148nm,0.7s						
KURS				Lg	Lg	20 07 56.8	
	247nm,0.8s						
TDK	Taldyqorghan	4.74	301	eP	Pb	20 07 09.9	+3.7
	552nm,0.7s						
TDK				eS	Sg	20 08 11.1	-4.1
	309nm,0.6s						
TDK	Taldyqorghan	4.74	301	Pg	Pb	20 07 09.9	+3.7
	552nm,0.7s						
TDK				Lg	Lg	20 08 11.1	
	309nm,0.6s						
ZSN	Zaisan	4.78	6	eP	Pg	20 07 12.5	-2.1
	35nm,0.7s						
ZSN				eS	Sg	20 08 15.5	-1.0
	330nm,0.7s						
ZSN	Zaisan	4.78	6	Pg	Pg	20 07 12.5	-2.1
	35nm,0.7s						
ZSN				Lg	Lg	20 08 15.5	
	330nm,0.7s						
ARXS	Arharly	4.83	290	eP	Pb	20 07 10.6	+2.7
	177nm,0.6s						
ARXS				eS	Sb	20 08 12.1	+5.9
	392nm,0.7s						
ARXS	Arharly	4.83	290	Pg	Pb	20 07 10.6	+2.7
	177nm,0.6s						
ARXS				Lg	Lg	20 08 12.1	
	392nm,0.7s						
KOTS	Kotyrbulak	5.18	278	eP	Pb	20 07 15.2	+1.3
	112nm,0.8s						
KOTS				eS	Sb	20 08 20.6	+4.4
	309nm,0.7s						
KOTS	Kotyrbulak	5.18	278	Pg	Pb	20 07 15.2	+1.3
	112nm,0.8s						
KOTS				Lg	Lg	20 08 20.6	
	309nm,0.7s						
MDOK	Medeo	5.22	277	eP	Pb	20 07 15.5	+0.9
	91nm,0.6s						
MDOK				eS	Sb	20 08 20.9	+3.5
	468nm,0.8s						
MDOK	Medeo	5.22	277	Pg	Pb	20 07 15.5	+0.9
	91nm,0.6s						
MDOK				Lg	Lg	20 08 20.9	
	468nm,0.8s						
KNDC	Almaty	5.28	278	⇑Pn	Pn	20 07 05.3	+3.1
	45nm,0.5s						
KNDC				⇑Pg	Pb	20 07 19.6	+4.0
	127nm,0.6s						
KNDC				⇑Sn	Sn	20 08 07.8	+4.6
	155nm,0.6s						
KNDC				⇓Lg	Lg	20 08 29.9	
	449nm,0.8s						
TNSS	Tian-Shan	5.29	276	eP	Pb	20 07 15.9	0.0
	51nm,0.5s						
TNSS				eS	Sb	20 08 21.4	+1.7
	78nm,0.6s						
TNSS	Tian-Shan	5.29	276	Pg	Pb	20 07 15.9	0.0
	51nm,0.5s						
TNSS				Lg	Lg	20 08 21.4	
	78nm,0.6s						
AAA	Alma-Ata	5.32	278	eP	Pb	20 07 18.9	+2.7
	121nm,0.6s						
AAA				eS	Sb	20 08 26.5	+6.3
	109nm,0.3s						
AAA	Alma-Ata	5.32	278	Pg	Pb	20 07 18.9	+2.7
	121nm,0.6s						
AAA				Lg	Lg	20 08 26.5	
	109nm,0.3s						
IZV	Izvestkoviy	5.54	276	eP	Pb	20 07 19.1	-0.9
	45nm,0.5s						
IZV				eS	Sb	20 08 27.0	+0.6
	343nm,0.9s						
KTBS	Karatobe	5.54	283	eP	Pb	20 07 21.5	+1.6
	31nm,0.6s						
KTBS				eS	Sb	20 08 31.3	+4.9
	303nm,0.6s						
KTBS	Karatobe	5.54	283	Pg	Pb	20 07 21.5	+1.6
	31nm,0.6s						
KTBS				Lg	Lg	20 08 31.3	
	303nm,0.6s						
KUU	Kurty	5.81	284	eP	Pb	20 07 25.3	+0.7
	20nm,0.6s						
KUU				eS	Sb	20 08 38.5	+4.3
	221nm,0.6s						
KUU	Kurty	5.81	284	Pg	Pb	20 07 25.3	+0.7
	20nm,0.6s						
KUU				Lg	Lg	20 08 38.5	
	221nm,0.6s						
DGS	Degeres	6.16	278	Pg	Pb	20 07 33.5	+3.0
	41nm,0.7s						
DGS				Lg	Lg	20 08 51.6	
	137nm,0.7s						
TKM2	Tokmak 2	6.28	275	⇑Pn	Pn	20 07 18.3	+2.3
	19nm,0.7s						
TKM2				⇑Lg	Lg	20 09 02.0	
	187nm,0.7s						
KSH	Kashi	6.93	245	Pn	Pn	20 07 30.1	+5.2
KSH				Sn	Sn	20 08 50.4	+6.5
KSH				smax	smax		
	comp=N,88nm,0.6s						
KSH				smax	smax		
	comp=E,100nm,0.8s						
AAK	Ala-Archa	7.10	273	Pn	Pn	20 07 29.0	+1.7
	0.8nm,0.3s,baz=114,slow=8.7,SNR=2.4						
AAK				Pg	Pg	20 07 53.5	-5.7
	4.0nm,0.3s,baz=109,slow=14,SNR=10						
AAK				Lg	Lg	20 09 24.5	
	3.5nm,0.3s,baz=235,slow=20,SNR=4.3						
AAK				LR	LR	20 10 27.4	
	comp=Z,210nm,20.4s,baz=64,slow=40						
AAK	Ala-Archa	7.10	273	⇑Pn	Pn	20 07 30.2	+2.9
	7.6nm,0.7s						
AAK				⇓Pg	Pg	20 07 53.6	-5.5
	25nm,0.7s						
AAK				⇑Lg	Lg	20 09 29.9	
	119nm,0.7s						
AAK	Ala-Archa	7.10	273		Pn	20 07 28.6	+1.3
KURBB	Kurchatov Arra	8.81	336	Pn	Pn	20 07 51.0	+0.6
	0.4nm,0.3s,baz=151,slow=13,SNR=11						
KURBB				Sn	Sn	20 09 31.8	+2.1
	0.8nm,0.3s,baz=232,slow=22,SNR=2.6						
KURBB				Lg	Lg	20 10 25.1	
	1.1nm,0.3s,baz=168,slow=33,SNR=6.4						
KURBB	Kurchatov Arra	8.81	336	⇓Pn	Pn	20 07 51.8	+1.3
	11nm,0.6s						
KURBB				⇓Lg	Lg	20 10 18.3	
	107nm,0.8s						
KURK	Kurchatov	8.86	337	⇑Pn	Pn	20 07 51.3	+0.1
	6.8nm,0.7s						
KURK				⇓Sn	Sn	20 09 32.4	+1.4
	29nm,0.9s						
KURK				⇑Lg	Lg	20 10 21.6	
	48nm,0.6s						
KURK	Kurchatov	8.86	337	Pn	Pn	20 07 53.2	+2.0
KK31	Karatay Array	10.01	277	⇑Pg	Pn	20 08 47.6	+41
	5.9nm,0.7s,baz=99,slow=14,SNR=4.5						
KK31				⇑Lg	Lg	20 10 59.1	
	16nm,0.7s,baz=77,slow=28,SNR=4.3						
KKAR	Karatay Array	10.01	277	Pn	Pn	20 08 07.7	+0.8
ZALV	Zalesovo Beam	11.26	2	Pn	Pn	20 08 25.2	+1.1
	1.1nm,0.3s,baz=188,slow=14,SNR=16						
ZALV				Sn	Sn	20 10 30.0	+0.1
	2.5nm,0.3s,baz=176,slow=25,SNR=7.7						
GTA	Gaotai	12.29	100	eP	Pn	20 08 38.9	+0.6
GTA				pP		20 08 43.3	
GTA				sP		20 08 46.0	
NIL	Nilore	12.44	227	Pn	Pn	20 08 37.1	-3.1
BVAR	Borovoye Array	13.82	323	Pn	Pn	20 08 58.4	-0.6
	0.2nm,0.3s,baz=125,slow=12,SNR=7.5						
BRVK	Borovoye	13.89	323	⇑Pn	Pn	20 09 01.2	+1.3
	5.8nm,0.7s						
BRVK				⇑Sn	Sn	20 11 34.5	+0.4
	9.6nm,0.9s						
BRVK				⇑Lg	Lg	20 12 59.1	
	61nm,1.1s						
BRVK	Borovoye	13.89	323	Pn	Pn	20 09 01.1	+1.2
LSA	Lhasa	14.15	154	Pn	Pn	20 09 03.9	-0.2
KBL	Kabul	14.32	240		Pn	20 09 03.6	-2.5
GKN	Gorkha	14.67	178	eP	Pn	20 09 09.1	-1.8
	12nm,0.4s						
GUN	Gumba	14.83	174	eP	Pn	20 09 12.7	-0.5
	50nm,0.8s						
KKN	Kakani	14.91	176	eP	Pn	20 09 11.8	-2.4
	19nm,0.6s						
PKIN	Phulchoki	15.13	176	eP	Pn	20 09 13.9	-3.2
	12nm,0.5s						
PKI	Pulchoki	15.13	176	eP	Pn	20 09 13.8	-3.5
	9.8nm,0.6s						
SONM	Songino Array	16.47	64	Pn	Pn	20 09 34.4	+0.1
	0.2nm,0.3s,baz=261,slow=10,SNR=19						
SONM	Songino Array	16.47	64	Pn	P	20 09 37.0	0.0
LZH	Lanzhou	16.59	107	eP	Pn	20 09 35.3	-0.7
LZH				pP	P	20 09 38.6	+0.1
LZH				sP	pP	20 09 42.6	+0.6
LZH				pmax	pmax		
	comp=Z,14nm,1.0s						
ULN	Ulaanbaatar	16.91	64		P	20 09 43.1	+1.1
ABKAR	Akbulak array	18.00	300	Pn	Pn	20 09 51.6	-1.6
ABKAR	Akbulak array	18.00	300		Pn	20 09 52.0	-1.2
ABKAR				IAmb	IAmb	20 09 54.9	
	comp=Z,2.4nm,0.8s						
SHL	Shillong	18.24	157	P	Pn	20 09 54.6	-2.0
SHL				IAmb	IAmb	20 09 56.5	
	comp=Z,18nm,0.9s						
HRA	Herat	18.99	251	P	P	20 10 03.4	-1.6
AKTO	Aktyubinsk	19.48	302	P	P	20 10 09.9	-0.1
	comp=Z,0.5nm,0.3s,baz=113,slow=13,SNR=11						
GEYT	Alibeck	20.37	265	P	P	20 10 19.4	-0.4
	comp=Z,2.8nm,0.7s,baz=79,slow=16,SNR=3.0						
XAN	Xi'an	21.22	106	P	P	20 10 30.9	+1.8
XAN				IAmb	IAmb	20 10 39.0	
	comp=Z,11nm,1.1s						
ARU	Arti	21.37	319	P	P	20 10 30.9	+0.4
	comp=Z,6.8nm,0.8s,baz=125,slow=2.8,SNR=31						
ARU	Arti	21.37	319	P	P	20 10 30.4	0.0
ARU				IAmb	IAmb	20 10 32.0	
	comp=Z,16nm,0.8s						
KMI	Kunming	23.28	133	⇑P	P	20 10 51.5	+0.3
KMI				pP	sP	20 11 02.5	+5.9
KMI				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KMI	Kunming	23.28	133	P	P	20 10 51.5	+0.3
ENH	Enshi	23.76	113	P	P	20 10 56.6	+0.8
ENH				IAmb	IAmb	20 10 57.0	
	comp=Z,11nm,1.1s						
GYA	Guiyang	24.52	124	eP	P	20 11 08.8	+5.9
GYA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KIRV	Kirov	26.75	318	P	P	20 11 23.2	+0.6
	comp=Z,10.0nm,0.6s,baz=123,slow=2.8,SNR=6.2						
CHTO	Chiang Mai	26.92	148	P	P	20 11 23.9	-0.6
CM34	Chiang Mai Arr	26.97	147	P	P	20 11 29.0	+4.0
SLVN	Son La	26.98	136	P	P	20 11 25.1	-0.1
CM32	Chiang Mai Arr	27.02	148	P	P	20 11 27.0	+1.5
MHMT	Maesarieng	27.11	150	P	P	20 11 29.0	+2.7
CM35	Chiang Mai Arr	27.12	147	P	P	20 11 26.0	-0.4
CM15	Chiang Mai Arr	27.24	148	P	P	20 11 28.1	+0.7
	comp=Z,3.4nm,0.8s						
CM31	Chiang Mai Arr	27.24	148	P	P	20 11 27.4	0.0
CM31				IAmb	IAmb	20 11 28.1	
	comp=Z,7.4nm,1.1s						
CMAR	Chiang Mai Arr	27.24	148	P	P	20 11 27.2	-0.3
	comp=Z,2.6nm,0.7s,baz=324,slow=8.8,SNR=25						
CMAR				PcP	PcP	20 14 46.5	-0.9
	comp=Z,0.3nm,0.3s,baz=272,slow=2.4,SNR=4.7						
CM36	Chiang Mai Arr	27.25	148	P	P	20 11 27.0	-0.5
CM13	Chiang Mai Arr	27.26	148	P	P	20 11 28.6	+1.0
	comp=Z,44nmcomp=Z,3.0nm,0.6s						
CM02	Chiang Mai Arr	27.26	148	P	P	20 11 28.0	+0.4
	comp=Z,36nmcomp=Z,4.0nm,0.8s						
CM01	Chiang Mai Arr	27.28	148	P	P	20 11 32.0	+4.2
	comp=Z,4.1nm,0.8s						
CM05	Chiang Mai Arr	27.29	148	P	P	20 11 28.5	+0.6
	comp=Z,36nmcomp=Z,3.6nm,0.8s						
CM04	Chiang Mai Arr	27.31	148	P	P	20 11 28.4	+0.3
	comp=Z,48nmcomp=Z,5.0nm,0.9s						
KBZ	Khabaz	29.85	286	P	P	20 11 50.4	0.0
	comp=Z,1.7nm,0.6s,baz=93,slow=12,SNR=7.6						
UTHA	Uthaitani	30.07	149	P	P	20 11 53.6	+1.0
YAK	Yakutsk	32.94	38	P	P	20 12 17.3	-0.1
	comp=Z,1.1nm,0.3s,baz=237,slow=0.8,SNR=5.3						
YAK	Yakutsk	32.94	38	P	P	20 12 17.8	+0.4
YAK				IAmb	IAmb	20 12 18.4	
	comp=Z,4.9nm,0.7s						
MARD	Mardin	33.36	276	P	P	20 12 21.7	+0.1
MARD				IAmb	IAmb	20 12 26.0	
	comp=Z,5.9nm,0.6s						
KS19	Wonju Array Si	33.57	84	P	P	20 12 25.6	+2.4
KS19				IAmb	IAmb	20 12 32.3	
	comp=Z,15nm,1.1s						
KSAR	Wonju Array Be	33.60	84	P	P	20 12 25.6	+2.0
KSRS	Korea Array	33.63	84	P	P	20 12 24.3	+0.5
	comp=Z,0.8nm,0.6s,baz=279,slow=8.6,SNR=1.7						
TIXI	Tiksi	36.22	22	P	P	20 12 46.4	+0.7
TIXI				IAmb	IAmb	20 12 48.7	
	comp=Z,3.0nm,0.7s						
RAYN	Ar Rayn	37.18	251	P	P	20 12 53.8	-0.7
BR131	Keskin Array S	37.64	283	P	P	20 12 57.5	-0.8
BR131				IAmb	IAmb	20 12 59.7	
	comp=Z,4.7nm,0.8s						
BRTR	Keskin Array B	37.64	283	P	P	20 12 58.5	+0.1
	comp=Z,2.7nm,0.6s,baz=106,slow=9.7,SNR=19						
BRTR	Keskin Array B	37.64	283	P	P	20 12 57.9	-0.5
FIA1	FINESS Array S	38.74	319	P	P	20 13 06.8	-0.4
FIA1				IAmb	IAmb	20 13 20.4	
	comp=Z,21nm,1.5s						
FINES	FINESS Array B	38.74	319	P	P	20 13 06.6	-0.5
	comp=Z,1.0nm,0.4s,baz=105,slow=9.8,SNR=13						
FINES	FINESS Array B	38.74	319	P	P	20 13 07.1	-0.1
KEV	Kevo	39.40	333	P	P	20 13 12.7	+0.1
ARCES	ARCESS Array B	39.87	332	P	P	20 13 16.1	-0.4
	comp=Z,5.1nm,0.7s,baz=92,slow=6.5,SNR=21						
ARCES	ARCESS Array B	39.87	332	P	P	20 13 16.9	+0.4
BURAR	Bucovina Array	40.97	298	P	P	20 13 25.5	-0.5
BUR08	Bucovina Ar. S	40.97	298	P	P	20 13 25.6	-0.4
BUR08				IAmb	IAmb	20 13 31.1	
	comp=Z,7.3nm,1.5s						
MLR	Muntele Rosu	41.09	295	P	P	20 13 26.7	-0.4

ELL	Elmali	41.52	281	P	P	20 13 30.8	+0.1
GSI	Gunungsitoli	42.94	160	P	P	20 13 41.6	-0.7
GSI				IAmb	IAmb	20 13 45.5	
	comp=Z,8.9nm,0.8s						
VTS	Vitosha	43.90	292	P	P	20 13 50.4	+0.4
DIVS	Divibare	45.55	295	P	P	20 14 02.0	-1.0
DIVS				IAmb	IAmb	20 14 06.6	
	comp=Z,8.5nm,1.3s						
DPC	Dobruska-Polom	45.80	304	eP	P	20 14 05.5	+0.6
IDI	Anoyia	45.81	281	P	P	20 14 04.1	-1.1
NB2	NORSAR Subarra	45.92	320	P	P	20 14 05.2	-0.5
	comp=Z,1.3nm,0.6s,baz=78,slow=7.9						
NOA	NORSAR Array B	45.92	320	P	P	20 14 05.5	-0.1
	comp=Z,0.9nm,0.5s,baz=77,slow=7.8,SNR=12						
NOA				PP	PP	20 15 51.0	-2.0
	comp=Z,0.5nm,0.7s,baz=84,slow=10,SNR=3.5						
UPC	Upice	45.94	304	eP	P	20 14 06.4	+0.5
NC204	NORSAR Array S	46.09	320	P	P	20 14 06.7	-0.4
PRU	Pruhonice	47.00	304	eP	P	20 14 14.7	+0.5
SBUM	Sibu	47.28	140	P	P	20 14 17.4	+0.6
SBUM				IAmb	IAmb	20 14 18.3	
	comp=Z,15nm,1.5s						
CLL	Collm	47.49	306	eP	P	20 14 18.0	-0.1
CKRC	Cesky Krumlov	47.53	303	eP	P	20 14 19.4	+0.9
KHC	Kasperske Hory	47.88	303	eP	P	20 14 21.5	+0.3
GERES	GERESS Array B	47.90	303	P	P	20 14 21.8	+0.4
	comp=Z,0.7nm,0.7s,baz=64,slow=9.1,SNR=5.3						
GERES	GERESS Array B	47.90	303	P	P	20 14 21.6	+0.2
MYLDM	Lahad Datu	48.19	131	P	P	20 14 25.1	+1.2
WTTA	Wattenberg	49.77	302	i P	P	20 14 36.0	0.0
	comp=Z,3.8nm,0.5s						
WATA	Walderalm	49.78	302	i P	P	20 14 35.9	0.0
	comp=Z,7.9nm,1.1s						
SQTA	Sankt Quirin	50.06	302	eP	P	20 14 37.2	-0.8
	comp=Z,4.8nm,0.5s						
MOTA	Moosalm	50.08	302	eP	P	20 14 37.7	-0.5
	comp=Z,4.0nm,0.8s						
BNI	Bardonecchia	53.83	301	P	P	20 15 05.9	-0.3
TOLK	Toolik Lake Re	62.04	20	P	P	20 16 03.7	+0.4
TOLK				IAmb	IAmb	20 16 05.0	
	comp=Z,2.5nm,0.8s						
ESBB	Sonseca Array	63.34	300	P	P	20 16 12.0	-0.5
ESDC	Sonseca Array	63.35	300	P	P	20 16 11.8	-0.7
	comp=Z,1.3nm,0.6s,baz=50,slow=6.4,SNR=13						
PAB	San Pablo	63.66	300	P	P	20 16 14.1	-0.5
PAB				IAmb	IAmb	20 16 14.7	
	comp=Z,12nm,1.4s						
BMAR	Burnt Mountain	64.18	19	P	P	20 16 18.4	+0.9
BPAW	Bear Paw Mtn.	65.04	23	P	P	20 16 23.5	+0.3
BPAW				IAmb	IAmb	20 16 38.9	
	comp=Z,7.1nm,1.4s						
PPLA	Purkeypile	65.58	25	P	P	20 16 27.5	+0.7
ILAR	Eielson Array	65.68	21	P	P	20 16 27.0	-0.3
	comp=Z,0.9nm,0.8s,baz=312,slow=5.0,SNR=11						
ILAR	Eielson Array	65.68	21	P	P	20 16 26.9	-0.3
INK	Inuvik	65.78	14	P	P	20 16 27.6	-0.2
C36M	Paulatuk	66.34	11	P	P	20 16 31.1	-0.3
C36M				IAmb	IAmb	20 16 32.1	
	comp=Z,4.0nm,0.6s						
SCM	Sheep Creek Mo	67.86	24	P	P	20 16 41.3	0.0
N25K	Chitina, Valde	68.83	23	P	P	20 16 47.9	+0.5
N25K				IAmb	IAmb	20 17 04.0	
	comp=Z,11nm,1.4s						
FITZ	Fitzroy Crossi	71.55	138	P	P	20 17 04.2	-0.2
FITZ				IAmb	IAmb	20 17 05.2	
	comp=Z,4.8nm,1.0s						
YKA	Yellowknife Ar	74.08	9	P	P	20 17 18.4	-0.5
	comp=Z,0.5nm,0.4s,baz=345,slow=5.5,SNR=12						
TOA0	Torodi Ar. Sit	75.69	275	P	P	20 17 27.8	-1.1
TOA0				IAmb	IAmb	20 17 28.5	
	comp=Z,3.5nm,0.6s						
TORD	Torodi Ar. Bea	75.69	275	P	P	20 17 27.8	-1.2
	comp=Z,3.3nm,0.5s,baz=42,slow=4.8,SNR=40						
WB0	Warramunga Arr	77.49	132	P	P	20 17 38.5	-0.4
WB0				IAmb	IAmb	20 17 52.0	
	comp=Z,12nm,1.3s						
WRA	Warramunga Arr	77.60	132	P	P	20 17 39.3	-0.3
	comp=Z,2.8nm,0.8s,baz=326,slow=5.1,SNR=15						
KOWA	Kowa	78.98	280	P	P	20 17 46.8	-0.6
AS31	Alice Springs	80.40	135	P	P	20 17 53.8	-1.0
ASAR	Alice Springs	80.40	135	P	P	20 17 54.5	-0.4
	comp=Z,1.9nm,0.8s,baz=325,slow=5.2,SNR=22						
ASAR	Alice Springs	80.40	135	P	P	20 17 54.3	-0.6
CTAO	Charters Tower	84.65	123	P	P	20 18 16.6	-0.5
CTAO				IAmb	IAmb	20 18 18.0	
	comp=Z,6.6nm,1.1s						
DBIC	Dimbokro	84.78	274	P	P	20 18 16.9	-1.1
	comp=Z,4.3nm,0.9s,baz=41,slow=9.3,SNR=2.2						
DBIC	Dimbokro	84.78	274	P	P	20 18 16.5	-1.5
ULM	Lac du Bonnet	87.43	0	P	P	20 18 29.6	-0.9
	comp=Z,0.8nm,0.5s,baz=8.1,slow=7.1,SNR=2.1						
BOSA	Boshof	89.25	229	LR	LR	21 02 48.7	
	comp=Z,62nm,18.1s,baz=136,slow=38						
PDAR	Pinedale Array	94.03	10	P	P	20 19 01.3	-0.4
	comp=Z,0.2nm,0.6s,baz=2.9,slow=1.8,SNR=2.1						
NVAR	Mina Array Bea	96.71	18	P	P	20 19 14.9	+0.8
	comp=Z,0.2nm,0.5s,baz=316,slow=2.5,SNR=2.4						
CPUP	Villa Florida	144.64	285	PKP	PKPab	20 25 17.4	-1.3
	comp=Z,1.5nm,0.5s,baz=28,slow=2.0,SNR=3.9						

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*TAP **21** 20:35:16.8, 24°.75N×122°.25E, h90^{km}, ML3.1, B*

*JMA **21** 20:35:16.5±0.2, 24°.73N×122°.23E, h92^{km}±2^{km}, M2.5*

ISC 21 20:35:17.3±1.3**, 24°.77N**±0°.03×**122°.26E**±0°.02**, h86**^{km}±6^{km}**,** **n112, σ0^{s}69**/187**, 17C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.34	314	⇑eP	Pn	20 35 30.8	+0.4
	baz=314						
TWB1				eS	Sn	20 35 40.5	+0.3
	baz=314						
NTC	Toucheng	0.40	283	P	Pn	20 35 30.6	-0.2
	baz=285						
NTC				eS	Sn	20 35 39.8	-1.0
	baz=285						
TWC	Suao	0.41	247	P	Pn	20 35 30.8	0.0
	baz=248						
TWC				eS	Sn	20 35 40.6	-0.3
	baz=248						
TIPB	Shuangxi	0.44	297	⇑iP	Pn	20 35 31.5	+0.3
	baz=299						
TIPB				S	Sn	20 35 41.7	+0.2
	baz=299						
ILA	Ilan	0.47	270	P	Pn	20 35 31.7	+0.4
	baz=272						
ILA				eS	Sn	20 35 41.2	-0.4
	baz=272						
NDS	Dongshan	0.51	255	⇑iP	Pn	20 35 32.0	+0.3
	baz=257						
NDS				eS	Sn	20 35 42.3	-0.1
	baz=257						
NWF	Wu-fen Shan	0.53	305	⇑iP	Pn	20 35 32.2	+0.3
	baz=300						
NWF				eS	Sn	20 35 43.4	+0.6
	baz=300						
WFSB	Wu-fen Shan	0.53	305	⇑iP	Pn	20 35 32.2	+0.4
	baz=301						
TWE	Neicheng	0.54	265	⇑iP	Pn	20 35 32.1	+0.3
	baz=272						
TWE				eS	Sn	20 35 42.8	0.0
	baz=272						
EWUT	Wuta	0.54	234	P	Pn	20 35 31.9	0.0
	baz=235						
EWUT				eS	Sn	20 35 42.6	-0.1
	baz=235						
ENA	Nanau	0.58	234	⇑iP	Pn	20 35 32.5	+0.3
	baz=235						
ENA				eS	Sn	20 35 44.0	+0.6
	baz=235						
TNOU	National Taiwa	0.58	311	eP	Pn	20 35 32.4	+0.1
	baz=304						
TNOU				eS	Sn	20 35 42.5	-0.9
	baz=304						
ENTT	Nioudou	0.64	259	⇑iP	Pn	20 35 33.3	+0.4
	baz=262						
ENTT				eS	Sn	20 35 44.3	-0.1
	baz=262						
TWA	Mucha	0.65	289	⇑iP	Pn	20 35 32.9	0.0
	baz=291						
TWA				eS	Sn	20 35 43.4	-1.1
	baz=291						
NWLT	Wulai	0.69	271	eP	Pn	20 35 33.3	0.0
	baz=278						
NWLT				eS	Sn	20 35 45.9	+0.7
	baz=278						
NHDH	Xindian Distri	0.69	286	⇑P	Pn	20 35 33.3	0.0
	baz=288						
NHDH				eS	Sn	20 35 45.1	-0.2
	baz=288						
JYNG	Yonagunijimaku	0.70	117	P	Pn	20 35 33.5	+0.1
JYNG				eS	Sn	20 35 46.1	+0.7
NDT	Datong Townshi	0.70	257	P	Pn	20 35 33.9	+0.5
	baz=260						
NDT				eS	Sn	20 35 46.6	+1.2
	baz=260						
TATO	Taipei	0.73	287	eP	Pn	20 35 33.1	-0.5
	baz=288						
TATO				eS	Sn	20 35 45.3	-0.6
	baz=288						
YM01	YM01	0.73	301	⇑iP	Pn	20 35 32.9	-0.8
	baz=295						
YM01				eS	Sn	20 35 45.2	-0.8
	baz=295						
TAP	Taipei	0.74	292	eP	Pn	20 35 33.5	-0.2
	baz=293						
YM08	YM08	0.74	305	⇑iP	Pn	20 35 33.7	-0.1
	baz=299						
YM08				eS	Sn	20 35 45.9	-0.3
	baz=299						
YM11	YM11	0.74	303	eP	Pn	20 35 34.0	+0.1
	baz=297						
YM11				eS	Sn	20 35 46.0	-0.2
	baz=297						
YM10	YM10	0.74	301	⇑iP	Pn	20 35 34.0	+0.1
	baz=296						
YM10				eS	Sn	20 35 46.1	-0.1
	baz=296						
YM05	YM05	0.74	302	⇑iP	Pn	20 35 34.0	+0.1
	baz=296						
YM05				eS	Sn	20 35 46.0	-0.3
	baz=296						
YOJ	Yonaguni jima	0.75	114	eP	Pn	20 35 33.6	-0.2
	baz=116						
YOJ	Yonaguni jima	0.75	114	P	Pn	20 35 33.9	0.0
YOJ				eS	Sn	20 35 47.0	+0.8
YM04	YM04	0.76	300	eP	Pn	20 35 34.0	-0.1
	baz=295						
YM04				eS	Sn	20 35 46.3	-0.2
	baz=295						
YM03	YM03	0.77	302	eP	Pn	20 35 34.1	-0.1
	baz=295						
YM03				eS	Sn	20 35 46.8	0.0
	baz=295						
BACT	New Taipei Cit	0.78	287	eP	Pn	20 35 33.9	-0.2
	baz=283						
TWY	Chenhua	0.78	310	eP	Pn	20 35 34.6	+0.4
	baz=311						
TWY				eS	Sn	20 35 48.0	+1.1
	baz=311						
ANP	Anpu	0.79	302	eP	Pn	20 35 34.4	0.0
	baz=295						
ANP				eS	Sn	20 35 47.5	+0.3
	baz=295						
YHNB	Yeheng	0.81	263	⇑iP	Pn	20 35 34.9	+0.3
	baz=271						
YHNB				S	Sn	20 35 48.0	+0.5
	baz=271						
NSK	Sanguang	0.82	264	eP	Pn	20 35 34.9	+0.1
	baz=271						
NSK				eS	Sn	20 35 48.1	+0.3
	baz=271						
TWS1	Kuangyinshan	0.83	294	⇑iP	Pn	20 35 35.0	+0.2
	baz=295						
TWS1				eS	Sn	20 35 48.2	+0.4
	baz=295						
NTST	Danshui	0.83	298	eP	Pn	20 35 34.8	+0.1
	baz=299						
NTST				eS	Sn	20 35 48.2	+0.3
	baz=299						
NACB	Ninganchiao	0.85	226	eP	Pn	20 35 34.2	-0.7
	baz=220						
NACB				eS	Sn	20 35 47.6	-0.5
	baz=220						
NNSB	Datong	0.87	247	⇑iP	Pn	20 35 35.5	+0.3
	baz=242						
NNSB				eS	Sn	20 35 48.8	0.0
	baz=242						
NNSH	Datong	0.87	247	eP	Pn	20 35 35.6	+0.3
	baz=241						
NNSH				eS	Sn	20 35 48.7	0.0
	baz=241						
NNS	Nan Shan	0.87	248	eP	Pn	20 35 35.6	+0.3
	baz=241						
NNS				S	Sn	20 35 48.8	0.0
	baz=241						
PCYT	Pengchaiyu	0.88	349	eP	Pn	20 35 35.6	+0.4
	baz=341						
PCYT				eS	Sn	20 35 49.0	+0.4
	baz=341						
ETLH	Xiulin Townshi	0.90	232	eP	Pn	20 35 35.3	-0.3
	baz=240						
ETLH				eS	Sn	20 35 48.9	-0.5
	baz=240						
NTY	Taoyuan	0.90	285	eP	Pn	20 35 35.8	+0.3
	baz=286						
TWD	Chiawan	0.91	222	eP	Pn	20 35 35.3	-0.4
	baz=216						
TWD				eS	Sn	20 35 48.7	-0.7
	baz=216						
NCUH	Zhongli	1.00	282	eP	Pn	20 35 36.9	+0.3
	baz=290						
NCUH				eS	Sn	20 35 51.3	+0.2
	baz=290						
FUSS	Fushou	1.06	241	P	Pn	20 35 37.9	+0.3
	baz=237						
FUSS				eS	Sn	20 35 53.1	+0.2
	baz=237						
NJD	Zhudong	1.07	269	eP	Pn	20 35 37.9	+0.5
	baz=270						
NJD				eS	Sn	20 35 53.5	+1.0
	baz=270						
WHF	Hehuan Shan	1.10	236	eP	Pn	20 35 38.6	+0.4
	baz=236						
WHF				eS	Sn	20 35 53.9	-0.1
	baz=236						
TWT	Tachien	1.11	243	P	Pn	20 35 38.8	+0.7
	baz=238						
TWT				eS	Sn	20 35 54.5	+0.6
	baz=238						
TDCB	Techi	1.13	243	P	Pn	20 35 38.7	+0.4
	baz=238						
TDCB				eS	Sn	20 35 54.2	+0.1
	baz=238						
HSN1	Hsinchu	1.13	271	eP	Pn	20 35 38.3	+0.1
	baz=272						
HSN1				eS	Sn	20 35 54.5	+0.6
	baz=272						
LIOB	Emei	1.14	264	eP	Pn	20 35 38.6	+0.3
	baz=265						
LIOB				eS	Sn	20 35 54.2	0.0
	baz=265						
NSTT	Nanjuang	1.15	263	eP	Pn	20 35 39.3	+0.9
	baz=264						
NSTT				S	Sn	20 35 54.6	+0.1
	baz=264						
SBCB	Hsinchu	1.16	271	eP	Pn	20 35 38.8	+0.3
	baz=272						
SBCB				eS	Sn	20 35 55.0	+0.5
	baz=272						
HSN	Hsinchu	1.17	272	eP	Pn	20 35 39.5	+0.8
	baz=274						
ESL	Shilin	1.21	219	eP	Pn	20 35 38.1	-1.2
	baz=226						
CHGB	Renai	1.22	235	eP	Pn	20 35 39.7	+0.3
	baz=229						
CHGB				eS	Sn	20 35 55.6	-0.6
	baz=229						
NJN	Zhunan	1.27	266	eP	Pn	20 35 40.4	+0.5
	baz=267						
NJN				eS	Sn	20 35 56.7	-0.1
	baz=267						
WHP	Taichung City	1.29	248	P	Pn	20 35 41.1	+0.8
	baz=249						
WHP				eS	Sn	20 35 58.1	+0.5
	baz=249						
EGFH	Guangfu	1.33	215	eP	Pn	20 35 39.6	-1.1
	baz=224						
NMLH	Miaoli	1.36	261	eP	Pn	20 35 41.0	0.0
	baz=261						
NMLH				eS	Sn	20 35 59.8	+0.9
	baz=261						
WPL	Puli Township	1.41	238	eP	Pn	20 35 42.1	+0.5
	baz=235						
IRIF	Iriomote-Funau	1.41	108	P	Pn	20 35 41.4	-0.2
IRIF				eS	Sn	20 35 59.3	-0.7
NSY	Sanyi	1.41	256	eP	Pn	20 35 42.0	+0.3
	baz=257						
NSY				eS	Sn	20 36 00.6	+0.5
	baz=257						
TWQ1	Liyutan	1.42	253	eP	Pn	20 35 42.3	+0.6
	baz=254						
TWQ1				eS	Sn	20 36 00.5	+0.2
	baz=254						
WCS	Beigang Elemen	1.42	240	eP	Pn	20 35 42.5	+0.7
	baz=250						
WCS				eS	Sn	20 36 01.3	+1.1
	baz=250						
DPDB	Guoxing	1.42	239	eP	Pn	20 35 43.1	+1.2
	baz=249						
DPDB				eS	Sn	20 36 01.2	+0.8
	baz=249						
VWDT	VWDT	1.44	226	eP	Pn	20 35 41.9	-0.1
	baz=220						
VWDT				eS	Sn	20 36 00.0	-0.6
	baz=220						
HGSD	Ruisui	1.48	211	eP	Pn	20 35 41.9	-0.7
	baz=222						
HGSD				eS	Sn	20 36 00.6	-1.1
	baz=222						
EHY	Hungye	1.52	214	eP	Pn	20 35 41.7	-1.4
	baz=221						
SMLT	Sun Moon Lake	1.52	235	eP	Pn	20 35 44.4	+1.2
	baz=235						
SMLT				eS	Sn	20 36 02.7	-0.1
	baz=235						
WDJ	Dajia District	1.53	254	eS	Sn	20 36 03.0	+0.1
	baz=255						
SSLB	Suanglung	1.54	231	eP	Pn	20 35 43.8	+0.4
	baz=227						
SSLB				eS	Sn	20 36 03.3	+0.2
	baz=227						
TYC	Yuchr	1.54	236	P	Pn	20 35 44.2	+0.9
	baz=237						
TYC				eS	Sn	20 36 03.7	+0.6
	baz=237						
HATJ	Hateruma jima	1.58	116	P	Pn	20 35 44.0	+0.2
HATJ				eS	Sn	20 36 04.5	+0.6
YULB	Yu-li	1.63	213	eP	Pn	20 35 42.9	-1.6
	baz=220						
EYUL	Yuli	1.66	211	eP	Pn	20 35 44.5	-0.3
	baz=220						
TWF1	Yuli	1.66	212	eP	Pn	20 35 44.8	-0.1
	baz=219						
WHYT	Xinyi Township	1.67	231	eP	Pn	20 35 46.0	+1.0
	baz=240						
WHYT				eS	Sn	20 36 07.9	+1.8
	baz=240						
JKRS	Kuro-shima	1.68	108	P	Pn	20 35 45.4	+0.3
JKRS				S	Sn	20 36 06.2	0.0
WJS	Zhushan	1.69	236	eP	Pn	20 35 46.8	+1.5
	baz=246						
WNT	Mingjian	1.69	239	eP	Pn	20 35 46.8	+1.6
	baz=249						
WNT				eS	Sn	20 36 06.9	+0.5
	baz=249						
JIJ	Ishigaki jima	1.76	103	P	Pn	20 35 46.0	-0.2
JIJ				S	Sn	20 36 07.5	-0.7
FULB	Fuli	1.79	210	eP	Pn	20 35 46.0	-0.7
	baz=218						
FULB				eS	Sn	20 36 08.4	-0.6
	baz=218						
ALS	Alishan	1.83	227	eP	Pn	20 35 48.3	+1.0
	baz=220						
ALS				eS	Sn	20 36 11.7	+1.6
	baz=220						
CHN5	Tsauling	1.86	231	eP	Pn	20 35 48.2	+0.7
	baz=243						
CHN5				eS	Sn	20 36 11.2	+0.7
	baz=243						
JISG	Ishigakijimahi	1.88	95	P	Pn	20 35 47.7	+0.1
JISG				S	Sn	20 36 10.6	-0.2
WDLH	Douliu	1.90	236	eP	Pn	20 35 48.8	+0.7
	baz=236						
ELDTW	Lidau	1.94	216	eP	Pn	20 35 48.7	0.0
	baz=212						
RLNB	Erlin	1.94	244	eP	Pn	20 35 48.7	+0.2
	baz=244						
EDH	Donghe	1.99	206	eP	Pn	20 35 47.0	-2.2
	baz=215						
WTK	Tuku	2.02	238	eP	Pn	20 35 49.6	0.0
	baz=238						
CHN4	Tsaushan	2.08	228	eP	Pn	20 35 50.9	+0.5
	baz=229						
CHN4				eS	Sn	20 36 16.4	+0.8
	baz=229						
TPUB	Ta-pu	2.09	226	eP	Pn	20 35 50.8	+0.3
	baz=237						
STYH	Taoyuan	2.09	221	eP	Pn	20 35 51.4	+0.9
	baz=221						
STYT	Tauyuan	2.11	221	eP	Pn	20 35 52.0	+1.2
	baz=221						
STYT				eS	Sn	20 36 18.0	+1.6
	baz=221						
WTP	Ta-pu	2.14	225	eP	Pn	20 35 51.7	+0.6
	baz=237						
LDUT	Ludao	2.21	199	eP	Pn	20 35 51.2	-0.9
	baz=198						
JTJ	Tarama	2.23	93	P	Pn	20 35 52.9	+0.6
JTJ				S	Sn	20 36 19.5	+0.4
CHN1	Nanshi	2.23	226	eP	Pn	20 35 54.2	+1.8
	baz=236						
SLGT	Liugui	2.30	220	eP	Pn	20 35 54.8	+1.4
	baz=220						
PTTC	Pingtan	2.37	288	eP	Pn	20 35 53.3	-0.9
	baz=280						
MATB	Ma-tsu	2.50	304	eP	Pn	20 35 55.0	-1.0
	baz=302						
SSD	Sandimen	2.50	217	eP	Pn	20 35 55.8	-0.2
	baz=217						
VWUC	VWUC	2.56	276	eP	Pn	20 35 55.7	-1.1
	baz=275						
MASBT	Mashibuluo	2.61	215	eP	Pn	20 35 58.1	+0.6
	baz=215						
JIRB	Irabujima	2.65	88	eS	Sn	20 36 29.3	+0.1
PNG	Penghu	2.74	245	eP	Pn	20 35 56.8	-2.4
	baz=244						
JMJ2	Miyako jima3	2.79	90	eS	Sn	20 36 33.6	+1.0
PTMZ	Houxiangcun	2.86	276	eP	Pn	20 35 59.8	-1.0
	baz=275						
MHZQ	Yeshan	3.21	295	eP	Pn	20 36 05.1	-0.3
	baz=294						
KNMB	Chin-men Tao	3.54	266	eP	Pn	20 36 08.5	-1.4
	baz=264						

IDC 21 20:39:04.2±9.7**, 6°.50S×130°.61E, h55**^{km}±93^{km}**, mb3.7**/2**,** **mb1 3.9**/4**, mb1mx3.4**/19**, mbtmp4.0**/4**, ML4.1**/2**, Error ellipse: s-maj=137.8km s-min=36.3km az=62.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	13.85	165	P	Pn	20 42 16.7	-1.0
	1.0nm,0.3s,baz=348,slow=13,SNR=38						
WRA				S	Sn	20 44 38.9	-11
	1.2nm,0.3s,baz=341,slow=20,SNR=9.4						
ASAR	Alice Springs	17.36	170	P	P	20 43 03.5	-0.1
	0.7nm,0.3s,baz=346,slow=10.0,SNR=57						
ASAR				S	Sn	20 45 58.6	-17
	0.1nm,0.3s,baz=213,slow=13,SNR=4.4						
STKA	Stephens Creek	27.26	159	P	P	20 44 43.4	+0.1
	1.1nm,0.4s,baz=326,slow=7.8,SNR=6.2						
MKAR	Makanchi Array	68.14	326	P	P	20 49 58.6	0.0
	0.4nm,0.3s,baz=117,slow=7.8,SNR=19						

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*INET **21** 20:46:41.1, 9°.38N×84°.52W, h0^{km}, MW3.8*

*UCR **21** 20:46:41.5±2.0, 9°.41N×84°.56W, h0^{km}±3^{km}, MD3.6, MW4.5*

*UPA **21** 20:46:43.7±2.5, 9°.54N×84°.51W, h10^{km}±14^{km}, MW4.9*

*NEIC **21** 20:46:46.1±2.8, 9°.61N±0°.07×84°.47W±0°.04, h38^{km}±6^{km}, mb4.5/21, ML4.5(UCR), Error ellipse: s-maj=10.0km s-min=6.2km az=186.0*

*IDC **21** 20:46:47.5±2.3, 10°.27N×84°.29W, h30^{km}±18^{km}, mb3.9/15, mb1 4.1/17, mb1mx4.0/38, mbtmp4.1/17, ML3.1/2, MS3.9/4, Ms1 3.9/4, ms1mx3.3/27, Error ellipse: s-maj=27.1km s-min=16.1km az=48.0*

ISC 21 20:46:43.7±0.8**, 9°.51N**±0°.04×**84°.52W**±0°.03**, h26**^{km}±5^{km}**,**

n114,σ1^{s}40/130,mb4.3/25,MS4.0/3,5D,Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JACO	JACO, Garabito	0.21	317	eP	Pb	20 46 48.9	-0.6
JACO				eS	Sb	20 46 54.0	+0.5
LAFE	Finca La Fe, P	0.49	307	eP	Pb	20 46 53.7	-0.1
LCR2	La Lucha 2	0.56	66	eP	Pb	20 46 54.9	-0.1
SRA1	San Ramn	0.57	4	eP	Pn	20 46 55.8	-0.6
SJS	Escuela Geolog	0.62	47	eP	Pn	20 46 56.5	-0.5
HDC	Heredia	0.63	39	⇓iP	Pn	20 46 56.9	-0.3
HDC				eS	Sn	20 47 05.5	-0.9
HDC	Heredia	0.63	39	eP	Pn	20 46 56.8	-0.3
HDC	Heredia	0.63	39		Pn	20 46 56.8	-0.3
HDC				Sn	Sn	20 47 04.9	-1.5
HDC3	Heredia 3	0.63	39	eP	Pn	20 46 56.9	-0.3
RIMA	Rio Macho	0.69	68	eP	Pb	20 46 57.2	-0.2
EDDO	Dominical	0.69	112	eP	Pb	20 46 55.8	-1.4
CDM	Cerro de Muert	0.74	87	eP	Pb	20 46 57.7	-0.6
CDM				eS	Sn	20 47 11.5	+1.8
PEZE	Perez Zeledon,	0.84	99	eP	Pb	20 46 58.6	-1.1
JTS	Las Juntas de	0.89	331	Pg	Pn	20 47 00.1	-0.5
	239nm,0.3s,baz=168,slow=17,SNR=833						
JTS				Lg	Lg	20 47 10.2	
	293nm,0.3s,baz=355,slow=20,SNR=9.0						
JTS	Las Juntas de	0.89	331	eP	Pn	20 47 00.2	-0.5
JTS				eS	Sn	20 47 13.0	+0.4
JTS	Las Juntas de	0.89	331	eP	Pn	20 47 00.0	-0.5
JTS	Las Juntas de	0.89	331		Pn	20 47 00.0	-0.5
JTS				Sn	Sn	20 47 11.5	-1.1
CVTR	Volcan Turrial	0.90	56	eP	Pn	20 47 01.5	+0.3
VTUC	Crater, Volcan	0.90	56	eP	Pn	20 47 01.5	+0.4
CASO	Castillo	0.94	347	⇓iP	Pn	20 47 01.9	+0.5
CASO				iS	Sn	20 47 17.4	+3.4
EDLM	Las Mercedes	0.94	104	eP	Pb	20 47 00.6	-0.9
FORC	Fortuna	0.96	351	⇓iP	Pn	20 47 02.4	+0.8
ARE1	Arenal 1	0.96	348	eP	Pn	20 47 02.7	+1.0
ARE1				eS	Sn	20 47 18.8	+4.2
CEDE	Laguna Cedeo	0.99	349	⇓iP	Pn	20 47 01.9	-0.1
PLVR	Palo Verde	1.17	315	eP	Pn	20 47 03.1	-1.5
EDPN	Palmar Norte	1.18	117	eP	Pn	20 47 03.5	-1.0
COVE	Coope Vega, Sa	1.21	5	eP	Pb	20 47 05.9	0.0
ORTG	Ortega, Santa	1.26	312	eP	Pn	20 47 05.2	-0.6
EDBA	Buenos Aires	1.27	106	eP	Pn	20 47 05.2	-0.7
RIOS	Rincon, Osa	1.28	129	eP	Pn	20 47 06.5	+0.6
DRK0	Durika	1.28	101	eP	Pn	20 47 06.3	+0.2
DRK0				eS	Sb	20 47 24.3	+0.9
DRK0	Durika	1.28	101	eP	Pn	20 47 06.0	-0.1
CUI	Cuipilapa	1.31	331	⇓iP	Pn	20 47 06.2	-0.1
CUI				iS	Sb	20 47 26.1	+2.1
COLC	Colonia	1.33	329	iP	Pb	20 47 07.7	-0.4
COLC				iS	Sb	20 47 26.5	+1.7
HORNC	Hornillas	1.36	331	iP	Pb	20 47 08.1	-0.5
GUAB	Guayabo de Bag	1.38	329	iP	Pb	20 47 08.1	-0.8
GUAB				iP	Pn	20 47 08.3	+0.9
LIM1	Limonal	1.38	328	iP	Pb	20 47 08.5	-0.5
GPS2	Hotel Rincn d	1.48	326	iP	Pb	20 47 09.9	-0.8
LAPC	Finca la Perla	1.54	324	iP	Pn	20 47 09.0	-0.6
GB1A	Borinquen Arri	1.56	326	iP	Pb	20 47 11.2	-0.9
GB1A				iS	Sb	20 47 35.0	+3.5
HZTE	Horizontes, Gu	1.60	318	eP	Pb	20 47 12.1	-0.5
PIRO	Carate, Puerto	1.60	133	eP	Pn	20 47 12.2	+1.8
PIRO				eS	Sb	20 47 36.0	+3.5
PIRO	Carate, Puerto	1.60	133	eP	Pn	20 47 12.2	+1.8
EDSV	San Vito	1.67	114	eP	Pb	20 47 14.0	+0.1
CCOL	Caracol de Cor	1.88	126	eP	Pn	20 47 16.4	+2.2
BRU2	Volcan	1.94	111	eP	Pn	20 47 15.1	-0.1
BRU2	Volcan	1.94	111	eP	Pn	20 47 14.5	-0.7
CNI2	El Empalme, Bo	2.02	92	eP	Pn	20 47 18.3	+2.2
BCO2	Palmira	2.12	112	eP	Pn	20 47 17.1	-0.5
CHGR2	Aguacate	2.41	103	eP	Pn	20 47 21.7	+0.1
CHGR2				eS	Sn	20 47 52.3	+2.1
ACON	Acoyapa	2.53	345	eP	Pn	20 47 24.4	+1.3
ACON	Acoyapa	2.53	345		Pn	20 47 24.3	+1.1
ESPN	Las Esperanzas	2.67	5	eP	Pn	20 47 27.3	+2.1
ESPN	Las Esperanzas	2.67	5		Pn	20 47 27.1	+1.9
BOAB	BOACO BROADBAN	3.13	339		Pn	20 47 32.8	+1.4
MATN	Matagalpa	3.67	338		Pn	20 47 40.4	+1.4
GMAL	Guarumal, Vera	3.68	118	eP	Pn	20 47 39.3	+0.3
CRIN	San Cristobal	4.03	322	eP	Pb	20 47 49.5	-4.6
CRIN	San Cristobal	4.03	322		Pn	20 47 45.0	+1.1
AZU	Azuero	4.53	112	eP	Pb	20 47 59.0	-3.5
BCIP	Isla Barro Col	4.63	94	eP	Pn	20 47 53.7	+1.6
BCIP	Isla Barro Col	4.63	94	eP	Pn	20 47 53.7	+1.6
BCIP	Isla Barro Col	4.63	94		Pn	20 47 53.1	+1.0
TGUH	Tegucigalpa,Un	5.26	329	Pn	Pn	20 48 02.6	+1.7
SNET	Serv Nac Est T	6.21	312	Pn	Pn	20 48 16.9	+3.0
MTO3	Montecristo	6.79	316		Pn	20 48 24.3	+2.3
TEIG	Tepich	11.25	342	LR	LR	20 53 54.0	
	comp=Z,318nm,18.9s,baz=134,slow=40						
CMIG	Matias Romero	12.59	308	Pn	Pn	20 49 41.3	0.0
	0.3nm,0.3s,baz=157,slow=11,SNR=4.5						
SDV	Santo Domingo	13.72	91	Pn	Pn	20 49 56.2	-0.8
	0.4nm,0.3s,baz=351,slow=22,SNR=2.2						
344A	Westbrook Farm	22.58	346	P	P	20 51 41.8	-0.5
VBMS	Vicksburg	23.27	347	P	P	20 51 50.1	+0.7
LRAL	Lakeview Retre	23.52	355	P	P	20 51 51.4	-0.5
LRAL				IAmb	IAmb	20 51 54.4	
	comp=Z,27nm,0.9s						
Z47A	Carrollton	23.80	353	P	P	20 51 53.7	-0.8
435B	Jarrell	24.42	332	P	P	20 52 01.8	+1.5
JSC	Jenkinsville	24.83	6	P	P	20 52 02.8	-1.2
JSC				IAmb	IAmb	20 52 10.0	
	comp=Z,15nm,0.7s						
JCT	Junction City	25.27	328	P	P	20 52 09.0	+0.9
JCT				IAmb	IAmb	20 52 17.9	
	comp=Z,8.9nm,1.1s						
X40A	Basin Creek Fa	26.00	344	P	P	20 52 14.9	+0.3
X40A				IAmb	IAmb	20 52 19.9	
	comp=Z,8.5nm,1.0s						
MIAR	Mount Ida	26.27	343	P	P	20 52 18.0	+1.0
MIAR				IAmb	IAmb	20 52 19.7	
	comp=Z,6.9nm,0.6s						
TX32	Lajitas Array	26.66	320	P	P	20 52 21.6	+0.8
TXAR	Lajitas Array	26.66	320	P	P	20 52 19.9	-0.9
	comp=Z,1.9nm,0.8s,baz=138,slow=9.8,SNR=10						
TXAR				PcP	PcP	20 55 46.1	+1.7
	comp=Z,0.6nm,0.7s,baz=152,slow=5.7,SNR=4.7						
TXAR	Lajitas Array	26.66	320	P	P	20 52 21.2	+0.4
Q51A	Peebles	29.41	2	P	P	20 52 44.9	-0.2
LPAZ	La Paz	30.33	148	P	P	20 53 03.2	+9.0
	comp=Z,0.9nm,0.6s,baz=343,slow=5.6,SNR=3.7						
319A	Douglas	31.66	317	P	P	20 53 07.1	+1.9
319A				IAmb	IAmb	20 53 08.9	
	comp=Z,11nm,1.0s						
W13A	Hualapai Mount	36.98	318	P	P	20 53 53.0	+1.6
W13A				IAmb	IAmb	20 53 55.1	
	comp=Z,4.3nm,0.8s						
TPNV	Topopah Spring	39.61	319	P	P	20 54 15.4	+1.9
PDAR	Pinedale Array	39.72	331	P	P	20 54 12.4	-2.0
	comp=Z,0.2nm,0.5s,baz=140,slow=15,SNR=2.0						
PDAR				PcP	PcP	20 56 21.7	+1.0
	comp=Z,1.5nm,1.1s,baz=115,slow=4.1,SNR=5.2						
ULM	Lac du Bonnet	41.69	349	P	P	20 54 28.1	-2.2
	comp=Z,2.9nm,0.5s,baz=167,slow=7.6,SNR=9.3						
ULM	Lac du Bonnet	41.69	349	P	P	20 54 28.2	-2.0
ULM				IAmb	IAmb	20 54 28.7	
	comp=Z,4.1nm,0.7s						
NV11	Mina Array Sit	41.70	319	P	P	20 54 32.6	+1.8
NVAR	Mina Array Bea	41.80	319	P	P	20 54 31.0	-0.6
	comp=Z,0.8nm,0.3s,baz=134,slow=7.1,SNR=8.8						
NVAR				PcP	PcP	20 56 29.1	+1.6
	comp=Z,0.9nm,0.7s,baz=123,slow=4.0,SNR=4.2						
LHV	Little Huntoon	41.83	319	P	P	20 54 33.5	+2.0
RYN	Ryan	42.05	319	P	P	20 54 34.8	+1.2
LC01	Cunco	49.58	167	P	P	20 55 33.1	+0.3
LC01				IAmb	IAmb	20 55 34.5	
	comp=Z,4.4nm,1.1s						
PLCA	Paso Flores	51.63	166	P	P	20 55 55.6	+7.3
	comp=Z,3.5nm,0.9s,baz=0.0,slow=12,SNR=5.3						
PLCA	Paso Flores	51.63	166	P	P	20 55 49.0	+0.7
PLCA				IAmb	IAmb	20 56 02.2	
	comp=Z,6.3nm,1.1s						
YKA	Yellowknife Ar	57.20	344	P	P	20 56 26.0	-2.3
	comp=Z,0.4nm,0.7s,baz=136,slow=7.2,SNR=11						
YKA				PcP	PcP	20 57 23.9	+1.3
	comp=Z,0.6nm,0.9s,baz=138,slow=4.4,SNR=5.1						
ILAR	Eielson Array	69.86	336	P	P	20 57 50.9	-1.1
	comp=Z,0.5nm,0.6s,baz=124,slow=4.2,SNR=9.8						
ILAR	Eielson Array	69.86	336	P	P	20 57 51.3	-0.7
ESDC	Sonseca Array	76.74	51	P	P	20 58 33.4	+0.2
	comp=Z,5.0nm,1.1s,baz=284,slow=6.7,SNR=12						
EKA	Eskdalemuir Ar	77.32	35	P	P	20 58 35.0	-1.0
	comp=Z,2.5nm,0.6s,baz=265,slow=5.1,SNR=9.2						
DBIC	Dimbokro	78.77	85	LR	LR	21 34 24.2	
	comp=Z,72nm,19.4s,baz=258,slow=36						
TORD	Torodi Ar. Bea	84.23	78	P	P	20 59 13.2	-0.6
	comp=Z,0.9nm,0.9s,baz=275,slow=8.3,SNR=3.8						
TORD				LR	LR	21 36 25.6	
	comp=Z,101nm,19.9s,baz=90,slow=36						
NB2	NORSAR Subarra	84.52	29	P	P	20 59 13.8	-0.6
	comp=Z,1.2nm,0.7s,baz=280,slow=5.1						
NOA	NORSAR Array B	84.52	29	P	P	20 59 13.8	-0.6
	comp=Z,2.1nm,0.8s,baz=277,slow=5.0,SNR=6.0						
NOA				LR	LR	21 36 14.9	
	comp=Z,46nm,18.4s,baz=340,slow=35						
NB201	NORSAR Array S	84.56	29	P	P	20 59 14.7	+0.1
NB201				IAmb	IAmb	20 59 19.7	
	comp=Z,6.3nm,1.0s						
HFS	Hagfors	85.89	30	P	P	20 59 20.2	-1.0
	comp=Z,3.0nm,0.7s,baz=298,slow=3.1,SNR=6.5						
CLL	Collm	87.32	39	iP	P	20 59 28.4	0.0
	comp=Z,8.0nm,1.0s						
GERES	GERESS Array B	88.28	41	P	P	20 59 33.4	+0.2
	comp=Z,0.7nm,0.8s,baz=245,slow=2.8,SNR=4.9						
FINES	FINESS Array B	91.30	27	P	P	20 59 46.1	-0.8
	comp=Z,3.4nm,1.1s,baz=308,slow=5.1,SNR=1.6						
FINES	FINESS Array B	91.30	27	P	P	20 59 45.8	-1.1
ASAR	Alice Springs	140.73	244	PKhKP	PKPpre	21 06 07.7	
	comp=Z,0.5nm,0.8s,baz=113,slow=2.8,SNR=2.7						
ASAR				PKP	PKiKP	21 06 16.4	+1.7
	comp=Z,0.6nm,0.6s,baz=100,slow=2.5,SNR=8.0						
CMAR	Chiang Mai Arr	152.00	353	PKPbc	PKPbc	21 06 37.7	+0.1
	comp=Z,0.8nm,0.6s,baz=341,slow=3.9,SNR=6.9						
CMAR	Chiang Mai Arr	152.00	353		PKPbc	21 06 37.6	-0.1
CMAR				PKPab	pPKPbc	21 06 45.3	-1.0

MOS ***21*** *20:58:07.6±1.0, 42°.96N×144°.42E, h119^{km}, mb4.3/1, Error ellipse: s-maj=20.6km s-min=12.8km az=71.2*

JMA ***21*** *20:58:08.8±0.1, 42°.96N×144°.39E, h107^{km}±1^{km}, M3.5*

IDC ***21*** *20:58:09.4±2.5, 43°.01N×144°.39E, h113^{km}±16^{km}, mb3.3/8, mb1 3.4/9, mb1mx3.1/49, mbtmp3.6/9, Error ellipse: s-maj=25.8km s-min=22.9km az=153.0*

SKHL ***21*** *20:58:09.2±0.3, 43°.00N×144°.40E, h112^{km}±3^{km}, mb4.7/3, msha5.4/4*

ISC 21 20:58:08.3±0.8**, 42°.91N**±0°.05×**144°.41E**±0°.04**, h108**^{km}±6^{km}**, n44, σ0^{s}80**/61**, mb3.4**/7**, 2C, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAK	Akkeshi	0.23	68	P	Pn	20 58 24.1	+0.6
JAK				eS	Sn	20 58 35.4	+0.4
JOB	Onbets	0.42	269	P	Pn	20 58 25.3	+0.9
JOB				eS	Sn	20 58 37.3	+0.7
JKHN	Kushirohamanak	0.58	72	P	Pn	20 58 26.0	+0.5
JKHN				eS	Sn	20 58 38.6	+0.2
JAR	Ashorobuto	0.61	310	P	Pn	20 58 26.0	+0.3
JAR				eS	Sn	20 58 38.4	-0.4
JNK	Nakash	0.71	18	P	Pn	20 58 26.5	-0.1
JNK				eS	Sn	20 58 39.6	-0.7
JCH	Churui	0.83	249	P	Pn	20 58 28.1	+0.5
JCH				eS	Sn	20 58 42.0	-0.1
NMR	Nemuro--Hokkai	1.07	64	⇑iPN	Pn	20 58 30.0	0.0
NMR				iS	Sn	20 58 45.4	-1.0
NMR	Nemuro--Hokkai	1.07	64	iP	Pn	20 58 29.8	-0.2
NMR				iS	Sn	20 58 45.0	-1.4
NEM2	Nemuro 2	1.07	65	P	Pn	20 58 30.0	-0.1
NEM2				S	Sn	20 58 45.4	-1.2
HRK	Horoka	1.09	301	eP	Pn	20 58 30.5	+0.2
HRK				iS	Sn	20 58 46.5	-0.5
JTKR	Abashiri--Toko	1.12	341	P	Pn	20 58 30.9	+0.3
JTKR				eS	Sn	20 58 47.1	-0.4
JRA	Rausu	1.15	27	P	Pn	20 58 31.1	+0.2
JRA				eS	Sn	20 58 48.9	+0.9
GLVR	Golovnino	1.16	44	ePN	Pn	20 58 31.4	+0.4
GLVR				eS	Sn	20 58 48.3	+0.1
GLVR				pmax	pmax		
	comp=Z,150nm,0.1s						
GLVR				smax	smax		
	comp=N,2μm,0.3s						
GLVR				smax	smax		
	comp=E,2μm,0.2s						
GLVR	Golovnino	1.16	44	eP	Pn	20 58 31.0	0.0
GLVR				AMB	AMB	20 58 33.0	
	comp=E,150nm,0.3s						
GLVR				eS	Sn	20 58 47.6	-0.6
GLVR				A	A	20 58 49.0	
	comp=E,2μm,0.5s						
GLVR				A	A	20 58 49.0	
	comp=E,2μm,0.5s						
JEM	Erimo	1.29	226	P	Pn	20 58 32.9	+0.4
JMP	Maruseppu	1.34	325	P	Pn	20 58 33.1	0.0
RUSJ	Misakicho	1.34	27	⇑iPN	Pn	20 58 33.4	+0.3
RUSJ				iS	Sn	20 58 54.1	+2.3
JFR	Furan	1.36	281	P	Pn	20 58 33.2	-0.1
JFR				eS	Sn	20 58 51.9	-0.3
JNBK	Urakawa-nobuka	1.38	243	P	Pn	20 58 33.6	+0.1
JNBK				eS	Sn	20 58 52.1	-0.5
GRPR	Tuman	1.47	42	ePN	Pn	20 58 34.9	+0.3
GRPR				eS	Sn	20 58 53.8	-0.7
GRPR				smax	smax		
	comp=E,614nm,0.2s						
GRPR				smax	smax		
	comp=N,920nm,0.3s						
GRPR	Tuman	1.47	42	eP	Pn	20 58 35.2	+0.6
GRPR				eS	Sn	20 58 54.4	-0.1
GRPR				A	A	20 58 56.0	
	comp=N,920nm,0.4s						
GRPR				A	A	20 58 56.0	
	comp=N,614nm,0.4s						
YUK	Yuzh-Kuril'sk	1.54	43	iP	Pn	20 58 36.0	+0.5
YUK				AMB	AMB	20 58 41.0	
	comp=N,168nm,0.2s						
YUK				iS	Sn	20 58 56.2	+0.1
YUK				A	A	20 58 56.9	
	comp=N,892nm,0.5s						
YUK				A	A	20 58 56.9	
	comp=N,983nm,0.5s						
JKK2	Kamakawa 2	1.55	309	P	Pn	20 58 35.9	+0.3
JKK2				eS	Sn	20 58 55.9	-0.4
JKA	Kamikawa-asahi	1.79	313	eP	Pn	20 58 39.3	+0.8
ASAJ	Asahikawa	1.79	313	P	Pn	20 58 39.3	+0.8
	comp=N,18nm,0.3s,baz=163,slow=13,SNR=467						
ASAJ				S	Sn	20 59 01.6	+0.1
	comp=N,7.4nm,0.3s,baz=263,slow=32,SNR=9.6						
KUR	Kuril'sk	3.40	46	eP	Pn	20 59 01.7	+2.1
KUR				AMB	AMB	20 59 06.8	
	comp=N,41nm,0.5s						
KUR				eS	Sn	20 59 40.0	+0.8
KUR				A	A	20 59 41.7	
	comp=N,40nm,0.5s						
KUR				A	A	20 59 41.7	
	comp=N,50nm,0.5s						
MJAR	Matsushiro Arr	7.95	219	P	Pn	21 00 02.2	+1.0
	comp=N,0.0nm,0.3s,baz=29,slow=13,SNR=4.4						
MJAR	Matsushiro Arr	7.95	219	eP	Pn	21 00 02.2	+1.0
SEY	Seymchan	20.59	10	P	P	21 02 36.3	-2.0
	comp=N,0.4nm,0.3s,baz=51,slow=22,SNR=3.3						
SEY	Seymchan	20.59	10	eP	P	21 02 36.3	-2.0
SONM	Songino Array	26.96	294	P	P	21 03 40.4	+0.7
	comp=N,0.9nm,0.8s,baz=95,slow=8.9,SNR=7.3						
H11N2	WAKE ISLAND Hy	29.87	134	T	T	21 35 28.7	
	baz=327,slow=76,SNR=36						
H11N1	WAKE ISLAND Hy	29.88	134	T	T	21 35 28.5	
	baz=327,slow=76,SNR=22						
H11N3	WAKE ISLAND Hy	29.89	134	T	T	21 35 30.1	
	baz=327,slow=76,SNR=22						
H11S1	WAKE ISLAND Hy	30.78	135	T	T	21 36 35.0	
	baz=329,slow=76,SNR=46						
H11S3	WAKE ISLAND Hy	30.79	135	T	T	21 36 38.0	
	baz=329,slow=76,SNR=24						
H11S2	WAKE ISLAND Hy	30.80	135	T	T	21 36 36.3	
	baz=329,slow=76,SNR=21						
ZALV	Zalesovo Beam	39.91	307	P	P	21 05 31.6	+0.2
	comp=N,0.4nm,0.4s,baz=75,slow=8.3,SNR=2.8						
MKAR	Makanchi Array	43.20	297	P	P	21 05 58.4	0.0
	comp=N,0.3nm,0.5s,baz=82,slow=10,SNR=5.5						
MKAR	Makanchi Array	43.20	297	eP	P	21 05 58.4	0.0
ILAR	Eielson Array	43.34	36	P	P	21 06 00.4	+1.2
	comp=N,0.1nm,0.5s,baz=283,slow=8.2,SNR=4.3						
FINES	FINESS Array B	64.70	332	P	P	21 08 33.7	-0.6
	comp=N,1.8nm,0.9s,baz=28,slow=9.3,SNR=9.1						
HFS	Hagfors	69.67	336	P	P	21 09 05.4	-0.3
	comp=N,4.8nm,1.0s,baz=46,slow=8.5,SNR=5.4						
PDAR	Pinedale Array	71.97	48	P	P	21 09 20.2	-0.1
	comp=N,0.3nm,0.6s,baz=263,slow=1.8,SNR=2.9						

BEO ***21*** *21:21:37.8±0.3, 44°.50N×18°.84E, h5^{km}±2^{km}, ML3.6/16*

KRSZO ***21*** *21:21:37.7±0.8, 44°.46N×18°.87E, h5^{km}±5^{km}, ML3.9/27, Error ellipse: s-maj=2.7km s-min=2.0km az=98.0*

NEIC ***21*** *21:21:37.8±2.0, 44°.53N±0°.04×18°.93E±0°.06, h7^{km}±5^{km}, Error ellipse: s-maj=6.2km s-min=5.6km az=67.0*

PDG ***21*** *21:21:37.8±0.5, 44°.51N×18°.92E, h13^{km}, MD3.5/2, ML3.3/13, Error ellipse: s-maj=0.4km s-min=0.8km az=0.0*

RHSSO ***21*** *21:21:38.4±0.2, 44°.48N×18°.87E, h3^{km}±1^{km}, ML3.6/15*

PRU ***21*** *21:21:38.1±0.0, 44°.62N×19°.02E, h1^{km}*

IDC ***21*** *21:21:38.2±1.1, 44°.64N×18°.95E, h0^{km}, mb3.4/3, mb1 3.6/9, mb1mx3.4/36, mbtmp3.4/9, ML3.3/5, Error ellipse: s-maj=17.8km s-min=10.6km az=30.0*

LDG ***21*** *21:21:40.2±0.1, 44°.41N×18°.85E, h2^{km}, Ml3.0/7, Error ellipse: s-maj=5.2km s-min=2.3km az=29.0*

ISC 21 21:21:37.6±1.0**, 44°.51N**±0°.01×**18°.87E**±0°.01**, h3**^{km}±8^{km}**, n370, σ1^{s}63**/577**, mb3.3**/3**, 32C-15D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HAPS	Han Pijesak,Bl	0.42	172	ePg	Pg	21 21 44.8	-1.0
HAPS				eSg	Sg	21 21 51.1	-0.2
HAPS	Han Pijesak,Bl	0.42	172	⇑iPg	Pg	21 21 44.8	-1.0
HAPS				eSg	Sg	21 21 51.4	+0.1
HAPS	Han Pijesak,Bl	0.42	172	Pg	Pg	21 21 44.0	-1.8
HAPS				Sg	Sg	21 21 51.0	-0.2
HAPS	Han Pijesak,Bl	0.42	172	Pg	Pg	21 21 44.0	-1.8
HAPS				Pb	Pg	21 21 44.8	-1.0
HAPS				Lg	Lg	21 21 51.0	
HAPS				Lg	Lg	21 21 51.1	
HAPS				Sb	Sg	21 21 51.4	+0.1
BBLS	Lazići	0.75	149	ePg	Pg	21 21 51.5	-0.4
BBLS				eSg	Sg	21 22 02.6	+1.0
BBLS	Lazići	0.75	149	⇓iPg	Pg	21 21 51.5	-0.4
BBLS				eSg	Sg	21 22 02.1	+0.4
BBLS	Lazići	0.75	149	Pg	Pg	21 21 51.0	-0.9
BBLS				Sg	Sg	21 22 02.0	+0.4
BBLS	Lazići	0.75	149	Pg	Pg	21 21 51.0	-0.9
BBLS				Pb	Pg	21 21 51.5	-0.4
BBLS				x	x	21 21 51.9	
	comp=Z,40nm,SNR=93						
BBLS				Lg	Lg	21 22 02.0	
BBLS				Lg	Lg	21 22 02.1	
BBLS				Sb	Sg	21 22 02.6	+1.0
DIVS	Divibare	0.90	116	ePg	Pg	21 21 54.5	-0.4
DIVS				eSg	Sb	21 22 07.7	-0.8
DIVS	Divibare	0.90	116	⇓iPg	Pg	21 21 54.2	-0.7
DIVS				eSg	Sg	21 22 07.1	+0.5
DIVS	Divibare	0.90	116		Pg	21 21 54.2	-0.7
DIVS	Divibare	0.90	116	Pg	Pg	21 21 54.2	-0.7
DIVS				Pb	Pg	21 21 54.5	-0.4
DIVS				Pn	Pn	21 21 54.9	-2.4
	comp=Z,9.6nm,SNR=123						
DIVS				Lg	Lg	21 22 07.1	
DIVS				Sb	Sg	21 22 07.2	+0.6
DIVS				Sg	Sb	21 22 07.7	-0.8
FRGS	Fruska Gora	0.94	45	ePg	Pg	21 21 55.8	+0.3
FRGS				eSg	Sb	21 22 09.0	-0.3
FRGS	Fruska Gora	0.94	45	⇑P	Pg	21 21 55.2	-0.3
FRGS				⇑S	Sb	21 22 09.3	-0.1
FRGS	Fruska Gora	0.94	45	ePg	Pg	21 21 55.2	-0.3
FRGS				eSg	Sb	21 22 09.2	-0.1
FRGS	Fruska Gora	0.94	45	Pg	Pg	21 21 55.0	-0.5
FRGS				Sg	Sb	21 22 09.0	-0.3
FRGS	Fruska Gora	0.94	45	Pg	Pg	21 21 55.0	-0.5
FRGS				Pb	Pg	21 21 55.2	-0.3
FRGS				Pb	Pg	21 21 55.2	-0.3
FRGS				Pg	Pg	21 21 55.8	+0.3
FRGS				Lg	Lg	21 22 09.0	
FRGS				Sg	Sb	21 22 09.2	-0.1
FRGS				Sg	Sb	21 22 09.3	-0.1
RUDO	Rudo	0.96	158	⇑iPg	Pg	21 21 54.3	-1.7
RUDO				eSg	Sg	21 22 08.2	-0.2
RUDO	Rudo	0.96	158	Pg	Pg	21 21 54.3	-1.7
RUDO				Lg	Lg	21 22 08.2	
TRUS	Trudelj	1.14	104	ePg	Pg	21 21 59.1	-0.3
TRUS				eSg	Sb	21 22 14.9	-0.2
TRUS	Trudelj	1.14	104	Pg	Pg	21 21 59.1	-0.3
TRUS				Lg	Lg	21 22 14.9	
BEO	Beograd	1.18	75	Pn	Pg	21 21 59.3	-1.0
	comp=Z,3.1nm,SNR=28						
BEO				Lg	Lg	21 22 14.9	
BLY	Banja Luka	1.23	282	ePg	Pg	21 22 00.6	-0.5
BLY				eSg	Sg	21 22 15.2	-1.8
BLY	Banja Luka	1.23	282	⇑iPg	Pg	21 22 00.4	-0.7
BLY				eSg	Sb	21 22 17.5	-0.2
BLY	Banja Luka	1.23	282	Pn	Pg	21 22 00.4	-0.7
BLY				Pg	Pg	21 22 00.6	-0.5
BLY				Pb	Pn	21 22 01.0	-0.7
	comp=Z,4.7nm,SNR=65						
BLY				Sn	Sg	21 22 15.2	-1.8
BLY				Sg	Sb	21 22 16.2	-1.4
BLY				Lg	Lg	21 22 17.5	
PLE	Pljevlja	1.23	162	⇓iPg	Pg	21 22 00.5	-0.8
PLE				iSg	Sn	21 22 19.7	+0.6
MGRS	Mrkonjic Grad	1.28	267	⇑iPg	Pg	21 22 01.0	-1.1
MGRS				eSg	Sb	21 22 19.4	+0.2
MGRS	Mrkonjic Grad	1.28	267	Pn	Pg	21 22 01.0	-1.1
MGRS				Sn	Sb	21 22 19.4	+0.2
UPM	Unac-Piva	1.30	179	ePg	Pg	21 22 01.9	-0.7
UPM				eSg	Sg	21 22 19.6	+0.2
UPM	Unac-Piva	1.30	179	⇓iPg	Pg	21 22 02.1	-0.5
UPM				iSg	Sn	21 22 22.5	+1.6
UPM	Unac-Piva	1.30	179	Pn	Pg	21 22 01.9	-0.7
UPM				Lg	Lg	21 22 19.6	
IVAS	Ivanjica	1.31	135	ePg	Pg	21 22 01.5	-1.2
IVAS				eSg	Sg	21 22 19.0	-0.7
IVAS	Ivanjica	1.31	135	Pn	Pg	21 22 01.5	-1.2
IVAS				Sn	Sg	21 22 19.0	-0.7
GRUS	Gruza	1.47	114	ePg	Pn	21 22 04.9	0.0
GRUS				eSg	Sb	21 22 24.1	-0.4
GRUS	Gruza	1.47	114	⇑P	Pn	21 22 04.2	-0.7
GRUS				⇓S	Sg	21 22 25.1	+0.5
GRUS	Gruza	1.47	114	Pn	Pn	21 22 04.2	-0.7
GRUS				Pg	Pn	21 22 04.9	0.0
GRUS				Sn	Sb	21 22 24.1	-0.4
GRUS				Lg	Lg	21 22 25.1	
PRIJ	Prijedor	1.60	288	ePn	Pn	21 22 07.1	+0.3
PRIJ				eSg	Sg	21 22 29.5	+0.4
PRIJ	Prijedor	1.60	288	Pn	Pn	21 22 07.1	+0.3
PRIJ				Sn	Sg	21 22 29.5	+0.4
RICI	Ricice	1.61	232	ePn	Pn	21 22 06.8	-0.2
RICI				Sn	Sb	21 22 28.8	+0.2
RICI	Ricice	1.61	232	Pn	Pn	21 22 06.8	-0.2
RICI				Sn	Sb	21 22 28.8	+0.2
BRY	Bratogost	1.62	189	ePn	Pn	21 22 06.7	-0.5
BRY				eSn	Sn	21 22 28.5	-0.2
BRY	Bratogost	1.62	189	Pn	Pn	21 22 06.0	-1.2
BRY	Bratogost	1.62	189	ePn	Pn	21 22 07.1	-0.1
BRY				iSn	Sg	21 22 30.5	+0.8
BRY	Bratogost	1.62	189	Pn	Pn	21 22 06.0	-1.2
BRY				Pg	Pn	21 22 06.7	-0.5
BRY				Sn	Sn	21 22 28.5	-0.2
NKY	Niksic	1.69	177	⇑iPn	Pn	21 22 08.1	-0.1
NKY				iSn	Sg	21 22 32.1	+0.1
MORH	Mrgy, Hungar	1.72	355	ePn	Pn	21 22 09.0	+0.6
MORH				eSn	Sb	21 22 31.9	+0.1
MORH	Mrgy, Hungar	1.72	355	Pg	Pn	21 22 06.7	-1.6
	comp=Z,1.4nm,SNR=31						
MORH				Pn	Pn	21 22 09.0	+0.6
MORH				Lg	Lg	21 22 30.7	
MORH				Sn	Sb	21 22 31.9	+0.1
KOME	Kolasin	1.72	164	ePn	Pn	21 22 08.2	-0.3
KOME				iSn	Sb	21 22 32.4	+0.5
NKME	Niksic	1.74	178	ePn	Pn	21 22 08.2	-0.6
NKME				iSn	Sg	21 22 33.2	-0.3
IVA	Berane	1.79	155	⇑iPn	Pn	21 22 09.3	-0.2
IVA				iSn	Sb	21 22 34.1	0.0
MAKA	Makarska	1.81	228	ePn	Pn	21 22 10.2	+0.5
MAKA	Makarska	1.81	228	Pn	Pn	21 22 10.2	+0.5
TREB	Trebinje	1.83	192	ePn	Pb	21 22 11.3	-0.4
TREB				eSn	Sb	21 22 34.5	-0.4
TREB	Trebinje	1.83	192	⇑iPn	Pn	21 22 09.8	-0.1
TREB				eSn	Sn	21 22 34.2	+0.6
TREB	Trebinje	1.83	192	Pn	Pn	21 22 09.8	-0.1
TREB				Pg	Pb	21 22 11.3	-0.4
TREB				Sn	Sn	21 22 34.2	+0.6
TREB				Lg	Lg	21 22 34.5	

BANR	Banloc	1.83	61	⇑P	Pn	21 22 10.3	+0.3
BANR	Banloc	1.83	61	Pn	Pn	21 22 10.3	+0.3
BANR				Pg	Pg	21 22 13.6	+0.8
	comp=Z,1.4nm,SNR=11						
KIJV	Kijevo	1.84	255	*e*Pn	Pn	21 22 10.1	0.0
KIJV	Kijevo	1.84	255	Pn	Pn	21 22 10.1	0.0
STON	Ston	1.84	208	*i* Pn	Pn	21 22 09.6	-0.5
STON				Sn	Sn	21 22 34.2	+0.4
STON	Ston	1.84	208	Pn	Pn	21 22 09.6	-0.5
STON				Sn	Sn	21 22 34.2	+0.4
DBRK	Dubrovnik	1.91	196	*i* Pn	Pn	21 22 11.1	0.0
DBRK				Sn	Sg	21 22 38.3	-0.6
DBRK	Dubrovnik	1.91	196	Pn	Pn	21 22 11.1	0.0
DBRK				Sn	Sg	21 22 38.3	-0.6
CEME	Cevo	1.96	179	*e*Pn	Pn	21 22 11.7	-0.1
CEME				*i* Sn	Sb	21 22 38.3	-0.5
KUBS	Kucevo	2.01	92	*e*Pn	Pn	21 22 12.5	0.0
KUBS	Kucevo	2.01	92	Pn	Pn	21 22 12.5	0.0
MDVR	Moldovita	2.05	81	⇓P	Pn	21 22 11.6	-1.4
MDVR	Moldovita	2.05	81	Pn	Pn	21 22 11.6	-1.4
PVY	Plav	2.07	157	*e*Pn	Pn	21 22 13.1	-0.3
PVY				*i* Sn	Sn	21 22 40.7	+1.0
HCY	Herceg Novi	2.08	188	*e*Pn	Pn	21 22 13.6	+0.3
HCY				*e*Sn	Sn	21 22 39.7	0.0
HCY	Herceg Novi	2.08	188	⇓*i*Pn	Pn	21 22 13.6	+0.3
HCY				*i* Sn	Sb	21 22 41.1	-1.0
HCY	Herceg Novi	2.08	188	Pn	Pn	21 22 13.6	+0.3
HCY				Sn	Sn	21 22 39.7	0.0
PDG	Podgorica	2.09	172	*e*Pn	Pn	21 22 13.3	-0.3
PDG				*e*Sn	Sn	21 22 40.6	+0.5
PDG	Podgorica	2.09	172	⇑P	Pn	21 22 13.1	-0.4
PDG				⇑S	Sn	21 22 39.4	-0.7
PDG	Podgorica	2.09	172	⇑*i*Pn	Pn	21 22 13.5	-0.1
PDG				*e*Sn	Sn	21 22 40.1	0.0
PDG	Podgorica	2.09	172	Pn	Pn	21 22 13.1	-0.4
PDG	Podgorica	2.09	172	Pn	Pn	21 22 13.1	-0.4
PDG				Pn	Pn	21 22 13.1	-0.4
PDG				Pb	Pn	21 22 13.3	-0.3
PDG				Pn	Pn	21 22 13.5	-0.1
PDG				Sn	Sn	21 22 39.4	-0.7
PDG				Lg	Lg	21 22 40.1	
PDG				Sg	Sn	21 22 40.6	+0.5
TTG	Podgorica	2.09	172	*e*Pn	Pn	21 22 13.5	-0.1
TTG				*i* Sn	Sb	21 22 41.6	-1.0
HVAR	Hvar	2.20	234	*i* Pn	Pn	21 22 15.8	+0.8
HVAR	Hvar	2.20	234	Pn	Pn	21 22 15.8	+0.8
BUM	Brajici-Budva	2.20	180	*e*Pn	Pn	21 22 15.6	+0.4
BUM				*i* Sn	Sn	21 22 44.4	+1.4
UDBI	Udbina	2.22	272	*e*Pn	Pn	21 22 16.0	+0.7
UDBI	Udbina	2.22	272	Pn	Pn	21 22 16.0	+0.7
BOVS	Bovan	2.22	112	*e*Pn	Pn	21 22 13.9	-1.4
BOVS				*e*Sn	Sn	21 22 42.9	-0.4
BOVS	Bovan	2.22	112	⇑P	Pn	21 22 14.5	-0.8
BOVS	Bovan	2.22	112	Pn	Pn	21 22 13.9	-1.4
BOVS				Pg	Pn	21 22 14.5	-0.8
BOVS				Sn	Sn	21 22 42.9	-0.4
BZS	Buzias	2.24	59	⇓P	Pn	21 22 13.9	-1.7
BZS	Buzias	2.24	59	Pn	Pn	21 22 13.9	-1.7
BZS				Pn	Pb	21 22 14.4	-4.4
	comp=Z,0.8nm,SNR=28						
BZS				Sn	Sn	21 22 42.4	-1.4
LSTV	Lastovo	2.25	220	*i* Pn	Pn	21 22 15.7	0.0
LSTV				Sn	Sn	21 22 45.6	+1.5
LSTV	Lastovo	2.25	220	Pn	Pn	21 22 15.7	0.0
LSTV				Sn	Sn	21 22 45.6	+1.5
AMBH	Ambrzfalva	2.26	35	⇑P	Pn	21 22 15.3	-0.6
AMBH	Ambrzfalva	2.26	35	Pn	Pn	21 22 15.3	-0.6
AMBH				Pg	Pg	21 22 20.4	-0.6
	comp=Z,1.7nm,SNR=13						
AMBH				Lg	Lg	21 22 51.5	
DRME	Dracevica, Mon	2.33	174	*e*Pn	Pn	21 22 16.6	-0.2
DRME				*e*Sn	Sn	21 22 46.1	+0.1
DRME	Dracevica, Mon	2.33	174	*e*Pn	Pn	21 22 17.1	+0.3
DRME				*i* Sn	Sn	21 22 47.5	+1.5
DRME	Dracevica, Mon	2.33	174	Pn	Pn	21 22 16.6	-0.2
DRME				Sn	Sn	21 22 46.1	+0.1
KALN	Kalnik	2.35	315	*e*Pn	Pn	21 22 15.8	-1.4
KALN	Kalnik	2.35	315	Pn	Pn	21 22 15.8	-1.4
MORI	Morici	2.36	255	*e*Pn	Pn	21 22 17.6	+0.4
MORI				Sn	Sb	21 22 49.0	-1.3
MORI	Morici	2.36	255	Pn	Pn	21 22 17.6	+0.4
MORI				Sn	Sb	21 22 49.0	-1.3
ZAG	Zagreb	2.43	304	*e*Pn	Pn	21 22 17.3	-0.9
ZAG				Sn	Sn	21 22 48.1	-0.3
ZAG	Zagreb	2.43	304	Pn	Pn	21 22 17.3	-0.9
ZAG				Sn	Sn	21 22 48.1	-0.3
BEHE	Becsehely	2.46	324	*e*Pn	Pb	21 22 20.5	-1.9
BEHE				*e*Sn	Sn	21 22 50.8	+1.7
BEHE	Becsehely	2.46	324	Pn	Pb	21 22 20.5	-1.9
BEHE				Pg	Pn	21 22 21.1	+2.6
	comp=Z,2.2nm,SNR=21						
BEHE				Sn	Sn	21 22 50.8	+1.7
ZIRJ	Zirje	2.47	251	*e*Pn	Pn	21 22 19.1	+0.3
ZIRJ				Sn	Sn	21 22 51.0	+1.5
ZIRJ	Zirje	2.47	251	Pn	Pn	21 22 19.1	+0.3
ZIRJ				Sn	Sn	21 22 51.0	+1.5
PTJ	Puntijarka	2.48	305	*e*Pn	Pn	21 22 17.2	-1.8
PTJ	Puntijarka	2.48	305	Pn	Pn	21 22 17.2	-1.8
TIH	Tihany	2.49	344	Pn	Pn	21 22 18.1	-0.9
	comp=Z,6.3nm,SNR=56						
TIH				Sn	Sb	21 22 53.6	-0.4
ZAGS	Zajecar	2.52	105	*e*Pn	Pn	21 22 18.2	-1.2
ZAGS				*e*Sn	Sn	21 22 52.2	+1.6
ZAGS	Zajecar	2.52	105	Pn	Pn	21 22 18.2	-1.2
ZAGS				Sn	Sn	21 22 52.2	+1.6
ULC	Ulcinj	2.56	174	*e*Pn	Pn	21 22 20.6	+0.6
ULC				*i* Sn	Sn	21 22 52.8	+1.2
HERR	Herculane	2.56	80	⇑P	Pn	21 22 18.9	-1.1
HERR	Herculane	2.56	80	Pn	Pn	21 22 18.9	-1.1
DJES	Djerdap	2.61	85	Pn	Pn	21 22 20.1	-0.7
	comp=Z,0.7nm,SNR=5.6						
DJES				Sn	Sn	21 22 51.4	-1.6
SIRR	Siria	2.64	47	⇓P	Pn	21 22 19.6	-1.5
SIRR	Siria	2.64	47	Pn	Pn	21 22 19.7	-1.5
	comp=Z,1.0nm,SNR=20						
CRES	Cresnjev	2.75	300	*e*Pn	Pn	21 22 23.8	+1.2
CRES				*e*Sn	Sn	21 22 58.2	+1.8
CRES	Cresnjev	2.75	300	Pg	Pn	21 22 23.8	+1.2
CRES				Lg	Lg	21 22 58.2	
DUGI	Dugi Otok	2.79	261	*e*Pn	Pn	21 22 23.5	+0.4
DUGI				Sn	Sn	21 22 58.1	+0.9
DUGI	Dugi Otok	2.79	261	Pn	Pn	21 22 23.5	+0.4
DUGI				Sn	Sn	21 22 58.1	+0.9
MPLH	Magyarpolny	2.82	341	Pn	Pn	21 22 22.8	-0.8
	comp=Z,0.6nm,SNR=14						
NVLJ	Novalja	2.86	273	*e*Pn	Pn	21 22 24.0	0.0
NVLJ	Novalja	2.86	273	Pn	Pn	21 22 24.0	0.0
CSKK	Cskako	2.89	352	Pn	Pn	21 22 23.9	-0.6
	comp=Z,0.4nm,SNR=42						
CSKK				Sn	Sn	21 22 59.7	0.0
GZR	Gura Zlata	2.91	71	⇑P	Pn	21 22 23.6	-1.4
GZR	Gura Zlata	2.91	71	Pn	Pn	21 22 23.5	-1.4
	comp=Z,0.4nm,SNR=12						
GZR				Sn	Sn	21 22 59.2	-1.3
BSZH	Besenyszg	2.96	19	⇓P	Pn	21 22 24.8	-0.7
BSZH	Besenyszg	2.96	19	Pg	Pg	21 22 35.3	+1.0
BSZH				Lg	Lg	21 23 17.0	
BUD	Budapest	2.98	2	Pn	Pn	21 22 24.6	-1.2
	comp=Z,0.4nm,SNR=6.7						
ZAPS	Zavoj	2.99	113	*e*Pn	Pn	21 22 25.5	-0.4
ZAPS				*e*Sn	Sn	21 23 01.2	-1.1
ZAPS	Zavoj	2.99	113	Pn	Pn	21 22 25.5	-0.4
ZAPS				Sn	Sn	21 23 01.2	-1.1
PRVS	Prvonek	3.07	129	*e*Pn	Pn	21 22 26.6	-0.5
PRVS				*e*Sn	Sn	21 23 04.2	-0.1
PRVS	Prvonek	3.07	129	Pn	Pn	21 22 26.6	-0.5
PRVS				Sn	Sn	21 23 04.2	-0.1
EGYH	Egyhazaskeszo	3.10	340	Pn	Pn	21 22 22.8	-4.6
SRE	Strehaia	3.10	86	⇓P	Pn	21 22 27.7	+0.3
SRE	Strehaia	3.10	86	Pn	Pn	21 22 27.7	+0.3
DEV	Deva	3.17	63	⇑P	Pn	21 22 27.2	-1.2
DEV	Deva	3.17	63	Pn	Pn	21 22 26.9	-1.4
	comp=Z,0.5nm,SNR=10.0						
DEV				Pg	Pb	21 22 27.2	-7.3
DEV				Sn	Sn	21 23 04.1	-2.6
RIY	Rijeka	3.22	286	*i* Pn	Pn	21 22 29.9	+0.8
RIY	Rijeka	3.22	286	Pn	Pn	21 22 29.9	+0.8
TIR	Tirane	3.24	167	⇑P	Pn	21 22 27.9	-1.5
TIR	Tirane	3.24	167		Pn	21 22 30.2	+0.9
TIR	Tirane	3.24	167	Pn	Pn	21 22 27.9	-1.5
SRO2	Moca	3.27	354	*e*PN	Pn	21 22 27.9	-1.9
SRO2				*e*SN	Sn	21 23 07.9	-1.3
SRO2				*e*LG	Lg	21 23 34.2	
SRO2	Moca	3.27	354	Pn	Pn	21 22 27.9	-1.9
SRO2				Sn	Sn	21 23 07.9	-1.3
SRO2				Lg	Lg	21 23 34.2	
BOSS	Bosilegrad	3.31	126	*e*Pn	Pn	21 22 29.2	-1.1
BOSS				*e*Sn	Sn	21 23 09.3	-0.8
BOSS	Bosilegrad	3.31	126	Pn	Pn	21 22 29.2	-1.1
BOSS				Sn	Sn	21 23 09.3	-0.8
SRO	Srobarova	3.33	354	*e*PN	Pn	21 22 30.0	-0.6
SRO				*e*SN	Sn	21 23 11.2	+0.6
SRO				*e*SG	Sg	21 23 29.9	+5.3
SRO				*e*LG	Lg	21 23 32.6	
SRO	Srobarova	3.33	354	Pg	Pn	21 22 30.0	-0.6
SRO				Pn	Pb	21 22 30.3	-7.0
	comp=Z,1.5nm,SNR=10						
SRO				Lg	Lg	21 23 11.2	
SRO				Sn	Sn	21 23 12.0	+1.4
SRO				Sg	Sg	21 23 29.9	+5.3
SRO				Sb	Sg	21 23 32.6	+8.0
CEY	Cerknica	3.38	293	*e*Pn	Pn	21 22 31.7	+0.4
CEY				*e*Sn	Sn	21 23 12.8	+1.0
CEY	Cerknica	3.38	293	Pn	Pn	21 22 31.7	+0.4
CEY				Sn	Sn	21 23 12.8	+1.0
LJU	Ljubljana	3.43	298	*e*Pn	Pn	21 22 32.8	+0.9
LJU				*e*Sn	Sn	21 23 14.1	+1.0
LJU	Ljubljana	3.43	298	Pn	Pn	21 22 32.8	+0.9
LJU				Sn	Sn	21 23 14.1	+1.0
SOKA	Soboth	3.46	310	*i* Pn	Pn	21 22 31.2	-1.3
	comp=Z,2.0nm,0.2s,SNR=9.4						
SOKA				*e*Sn	Sn	21 23 12.8	-1.2
	comp=Z,10nm,0.3s						
SOKA	Soboth	3.46	310	Pn	Pn	21 22 31.2	-1.3
	comp=Z,2.0nm,0.2s,SNR=9.4						
SOKA				Sn	Sn	21 23 12.8	-1.2
	comp=Z,10nm,0.3s						
PSZ	Piszkesteto	3.49	11	⇑P	Pn	21 22 30.9	-1.9
PSZ	Piszkesteto	3.49	11	Pn	Pn	21 22 30.9	-1.9
PSZ	Piszkesteto	3.49	11	Pn	Pn	21 22 30.9	-1.9
PSZ				Pg	Pn	21 22 30.9	-1.9
PSZ				Pb	Pn	21 22 31.4	-1.4
	comp=Z,0.6nm,SNR=15						
DRGR		3.53	48	⇑P	Pn	21 22 31.8	-1.6
DRGR		3.53	48	Pn	Pn	21 22 31.8	-1.6
DRGR				Pg	Pb	21 22 32.0	-8.8
	comp=Z,0.3nm,SNR=5.8						
DRGR				Sn	Sn	21 23 13.7	-2.1
SOP	Sopron	3.56	334	Pn	Pn	21 22 33.1	-0.6
	comp=Z,0.2nm,SNR=3.6						
SGRT	San Giovanni R	3.58	221	Pn	Pn	21 22 34.2	+0.2
SGRT	San Giovanni R	3.58	221	Pn	Pn	21 22 34.2	+0.2
ARSA	Arzberg	3.60	321	*i* Pn	Pn	21 22 33.2	-1.2
	comp=Z,27nm,0.3s,SNR=68						
ARSA				*i* Sn	Sn	21 23 15.5	-2.0
	comp=Z,20nm,0.5s						
ARSA	Arzberg	3.60	321	Pg	Pn	21 22 33.2	-1.2
	comp=Z,27nm,0.3s,SNR=68						
ARSA				Pn	Pn	21 22 34.0	-0.4
	comp=Z,0.3nm,SNR=5.5						
ARSA				Lg	Lg	21 23 15.5	
	comp=Z,20nm,0.5s						
ARSA				Sn	Sn	21 23 16.4	-1.1
LOT	Lotru	3.60	73	⇑P	Pn	21 22 34.0	-0.5
LOT	Lotru	3.60	73	Pn	Pn	21 22 33.7	-0.8
	comp=Z,0.3nm,SNR=6.2						
LOT				Pg	Pb	21 22 34.0	-8.0
LOT				Sn	Sn	21 23 16.6	-0.9
OBKA	Obir	3.64	305	*i* Pn	Pn	21 22 34.4	-0.5
	comp=Z,1.8nm,0.2s						
OBKA				*e*Sg	Sg	21 23 36.1	+1.7
	comp=Z,65nm,0.7s						
OBKA	Obir	3.64	305	Pn	Pn	21 22 34.4	-0.5
	comp=Z,1.8nm,0.2s						
OBKA				Lg	Lg	21 23 36.1	
	comp=Z,65nm,0.7s						
OHR	Ohrid	3.68	157	*i* Pn	Pn	21 22 37.3	+1.9
VTS	Vitosha	3.69	119	⇑P	Pn	21 22 34.5	-1.2
VTS	Vitosha	3.69	119	Pn	Pn	21 22 34.3	-1.4
VTS	Vitosha	3.69	119	Pn	Pn	21 22 33.9	-1.8
	comp=Z,0.1nm,SNR=2.8						
VTS				Pg	Pn	21 22 34.3	-1.4
VTS				Pb	Pn	21 22 34.5	-1.2
STIP	Stip	3.71	138	*i* Pn	Pn	21 22 37.0	+1.1
TRI	Trieste	3.81	290	Pn	Pn	21 22 37.7	+0.6
TRI	Trieste	3.81	290	Pn	Pn	21 22 37.7	+0.6
ZST	Bratislava	3.89	342	*e*SN	Sn	21 23 20.1	-4.3
ZST	Bratislava	3.89	342	Pn	Pn	21 22 38.9	+0.6
	comp=Z,2.0nm,SNR=1.7						
ZST				Sn	Sn	21 23 20.0	-4.4
ZST				Lg	Lg	21 23 20.1	
CJR	Cluj-Napoca	3.99	55	⇑P	Pn	21 22 38.7	-1.0
CJR	Cluj-Napoca	3.99	55	Pn	Pn	21 22 38.7	-1.0
	comp=Z,0.6nm,SNR=12						
VYHS	Vyhne	3.99	360	*e*PN	Pn	21 22 38.7	-1.0
VYHS	Vyhne	3.99	360	Pn	Pn	21 22 38.7	-1.0
CONA	Conrad Observa	4.01	330	*e*Pn	Pn	21 22 38.9	-1.1
	comp=Z,3.5nm,0.3s,SNR=11						
CONA				*i* Sn	Sn	21 23 28.4	+0.8
	comp=Z,13nm,0.3s						
CONA	Conrad Observa	4.01	330	Pn	Pn	21 22 38.9	-1.1
	comp=Z,3.5nm,0.3s,SNR=11						
CONA				Sn	Sn	21 23 28.4	+0.8
	comp=Z,13nm,0.3s						
MODS	Modra-Piesok	4.02	345	*e*PN	Pn	21 22 38.3	-1.8
MODS				*e*SN	Sn	21 23 22.5	-5.2
MODS	Modra-Piesok	4.02	345	Pn	Pn	21 22 38.3	-1.8
MODS				Sn	Sn	21 23 22.5	-5.2
SMOL	Smolenice	4.13	347	*e*PN	Pn	21 22 41.0	-0.6
SMOL				*e*SN	Sn	21 23 27.4	-3.0
SMOL	Smolenice	4.13	347	Pn	Pn	21 22 41.0	-0.6
SMOL				Sn	Sn	21 23 27.4	-3.0
KECS	Kecovo	4.13	15	*e*PN	Pn	21 22 41.6	0.0
KECS				*e*SN	Sn	21 23 26.6	-3.8
KECS	Kecovo	4.13	15	Pn	Pn	21 22 41.6	0.0
KECS				Sn	Sn	21 23 26.6	-3.8
FNA	Florina	4.15	153	Pn	Pn	21 22 41.6	-0.4
FNA	Florina	4.15	153	Pn	Pn	21 22 41.6	-0.4
ARR	Arges	4.18	76	⇑P	Pn	21 22 42.9	+0.5
ARR	Arges	4.18	76	Pn	Pn	21 22 42.9	+0.5
VAY	Valandovo	4.19	138	*i* Pn	Pn	21 22 42.3	0.0
MYKA	Terra Mystica	4.24	302	*i* Pn	Pn	21 22 43.2	0.0
	comp=Z,2.9nm,0.4s						
MYKA				*i* Sn	Sn	21 23 32.2	-1.0
	comp=Z,6.4nm,0.4s						
MYKA	Terra Mystica	4.24	302	Pn	Pn	21 22 43.2	0.0
	comp=Z,2.9nm,0.4s						
MYKA				Sn	Sn	21 23 32.2	-1.0
	comp=Z,6.4nm,0.4s						
PLVB	Pleven	4.30	103	⇑P	Pn	21 22 43.8	-0.2
PLVB	Pleven	4.30	103	Pn	Pn	21 22 43.8	-0.2
HUMR	Humele	4.37	88	⇓P	Pn	21 22 44.2	-0.7
HUMR	Humele	4.37	88	Pn	Pn	21 22 44.2	-0.7
INTR	Introdacqua	4.40	237	Pn	Pn	21 22 46.2	+0.8
INTR	Introdacqua	4.40	237	Pn	Pn	21 22 46.2	+0.8
JAVC	Velka Javorina	4.43	350	*e*PN	Pn	21 22 45.3	-0.5
JAVC				*e*SN	Sn	21 23 37.9	0.0
JAVC	Velka Javorina	4.43	350	Pn	Pn	21 22 45.3	-0.5
JAVC				Sn	Sn	21 23 37.9	0.0
VOIR		4.49	76	⇑P	Pn	21 22 46.7	+0.2
VOIR		4.49	76	Pn	Pn	21 22 46.7	+0.2
NRCA	Norcia	4.50	250	Pn	Pn	21 22 46.7	0.0
NRCA	Norcia	4.50	250	Pn	Pn	21 22 46.7	0.0
BMR	Baia Mare	4.52	44	⇑P	Pn	21 22 47.1	+0.2
BMR	Baia Mare	4.52	44	Pn	Pn	21 22 47.1	+0.2
ZOU	Zoufplan	4.62	298	Pn	Pn	21 22 49.5	+1.0
ZOU	Zoufplan	4.62	298	Pn	Pn	21 22 49.5	+1.0
MOA	Molln	4.63	318	*i* Pn	Pn	21 22 48.5	+0.1
	comp=Z,5.9nm,0.3s,SNR=13						
MOA				*i* Sn	Sn	21 23 41.2	-1.5
	comp=Z,19nm,0.6s						
MOA	Molln	4.63	318	Pn	Pn	21 22 48.5	+0.1
	comp=Z,5.9nm,0.3s,SNR=13						
MOA				Sn	Sn	21 23 41.2	-1.5
	comp=Z,19nm,0.6s						
KBA	Koelnbreinsper	4.64	306	*i* Pn	Pn	21 22 48.8	0.0
	comp=Z,0.3nm,0.1s						
KBA				*i* Sn	Sn	21 23 41.1	-2.1
	comp=Z,11nm,0.6s						
KBA	Koelnbreinsper	4.64	306	Pn	Pn	21 22 48.8	0.0
	comp=Z,0.3nm,0.1s						
KBA				Sn	Sn	21 23 41.1	-2.1
	comp=Z,11nm,0.6s						
PAOL	Paolisi	4.70	224	Pn	Pn	21 22 50.3	+0.9
PAOL	Paolisi	4.70	224	Pn	Pn	21 22 50.3	+0.9
CRVS	Cervenica-Dubn	4.75	21	*e*PN	Pn	21 22 48.9	-1.1
CRVS				*e*PG	Pg	21 23 13.1	+4.6
CRVS	Cervenica-Dubn	4.75	21	Pn	Pn	21 22 48.9	-1.1
CRVS				Pg	Pg	21 23 13.1	+4.6
MURB	Monte Urbino	4.75	257	Pn	Pn	21 22 51.1	+0.9
MURB	Monte Urbino	4.75	257	Pn	Pn	21 22 51.1	+0.9
DOPR	Dopca	4.83	70	⇓P	Pn	21 22 51.3	0.0
DOPR	Dopca	4.83	70	Pn	Pn	21 22 51.3	0.0
KRUC	Moravsky	4.86	340	*e*PN	Pn	21 22 50.4	-1.2
KRUC				*e*SN	Sn	21 23 44.2	-4.2
KRUC	Moravsky	4.86	340	Pn	Pn	21 22 50.4	-1.2
KRUC				Sn	Sn	21 23 44.2	-4.2
ABTA	Abfaltersbach	4.99	299	*i* Pn	Pn	21 22 54.7	+1.2
	comp=Z,1.5nm,0.3s						
ABTA				*e*Sn	Sn	21 23 53.3	+1.6
	comp=Z,5.7nm,0.5s						
ABTA	Abfaltersbach	4.99	299	Pn	Pn	21 22 54.7	+1.2
	comp=Z,1.5nm,0.3s						
ABTA				Sn	Sn	21 23 53.3	+1.6
	comp=Z,5.7nm,0.5s						
KOLS	Kolonicke sedl	5.01	27	*e*PN	Pn	21 22 53.5	-0.2
KOLS				*e*PG	Pg	21 23 15.1	+1.5
KOLS	Kolonicke sedl	5.01	27	Pn	Pn	21 22 53.5	-0.2
KOLS				Pg	Pg	21 23 15.1	+1.5
NIE	Niedzica	5.01	11	Pn	Pn	21 22 54.4	+0.7
VRAC	Vranov	5.05	343	Pn	Pn	21 22 53.6	-0.6
	comp=Z,0.8nm,0.3s,baz=162,slow=12,SNR=15						
VRAC				Sn	Sn	21 23 50.7	-2.4
	comp=Z,1.5nm,0.3s,baz=47,slow=14,SNR=6.2						
VRAC	Vranov	5.05	343	⇑P	Pn	21 22 52.8	-1.4
VRAC	Vranov	5.05	343	*e*PN	Pn	21 22 52.8	-1.4
VRAC				*e*SN	Sn	21 23 50.3	-2.8
VRAC	Vranov	5.05	343	Pn	Pn	21 22 52.8	-1.4
VRAC				Pg	Pn	21 22 52.8	-1.4
VRAC				Pb	Pn	21 22 53.6	-0.6
	comp=Z,0.8nm,0.3s,SNR=15						
VRAC				Sn	Sn	21 23 50.3	-2.8
VRAC				Lg	Lg	21 23 50.7	
	comp=Z,1.5nm,0.3s,SNR=6.2						
MLR	Muntele Rosu	5.12	76	Pn	Pn	21 22 55.2	-0.1
	baz=283,slow=18						
MLR				Lg	Lg	21 24 17.6	
	baz=98,slow=13,SNR=1.5						
MLR	Muntele Rosu	5.12	76	⇓P	Pn	21 22 55.5	+0.3
MLR	Muntele Rosu	5.12	76	Pn	Pn	21 22 56.6	+1.3
MLR	Muntele Rosu	5.12	76	Pn	Pn	21 22 55.2	-0.1
MLR				Pg	Pn	21 22 55.5	+0.3
MLR				Pb	Pn	21 22 56.6	+1.3
MLR				Lg	Lg	21 24 17.6	
OZUR		5.13	70	⇑P	Pn	21 22 56.0	+0.6
OZUR		5.13	70	Pn	Pn	21 22 56.0	+0.6
TEOL	Teolo	5.18	282	Pn	Pn	21 22 56.0	0.0
TEOL	Teolo	5.18	282	Pn	Pn	21 22 56.0	0.0
CTI	Castel Tesino	5.32	289	Pn	Pn	21 22 58.2	+0.2
CTI	Castel Tesino	5.32	289	Pn	Pn	21 22 58.2	+0.2
MORC	Moravsky Berou	5.35	351	*e*PN	Pn	21 22 58.5	+0.1
MORC				*e*SN	Sn	21 23 58.5	-2.0
MORC	Moravsky Berou	5.35	351	Pn	Pn	21 22 57.5	-0.8
MORC	Moravsky Berou	5.35	351	Pn	Pn	21 22 57.5	-0.8
MORC				Pg	Pn	21 22 58.5	+0.1
MORC				Sn	Sn	21 23 58.5	-2.0
BURAR	Bucovina Array	5.40	53	⇑P	Pn	21 23 00.0	+0.9
BURAR	Bucovina Array	5.40	53	Pn	Pn	21 23 00.3	+1.1
BURAR	Bucovina Array	5.40	53	Pn	Pn	21 23 00.0	+0.9
BURAR				Pg	Pn	21 23 00.3	+1.1
BUR08	Bucovina Ar. S	5.41	52	Pn	Pn	21 22 59.2	0.0
BUR08	Bucovina Ar. S	5.41	52	Pn	Pn	21 22 59.2	0.0
OSSC	Osservatorio P	5.58	263	Pn	Pn	21 23 04.0	+2.5
OSSC	Osservatorio P	5.58	263	Pn	Pn	21 23 04.0	+2.5
GEC2	GERESS Array S	5.61	323	Pn	Pn	21 23 02.0	0.0
GEC2	GERESS Array S	5.61	323	Pn	Pn	21 23 02.0	0.0
GERES	GERESS Array B	5.61	323	Pn	Pn	21 23 02.3	+0.3
	comp=Z,0.5nm,0.3s,baz=143,slow=14,SNR=16						
GERES				Sn	Sn	21 24 05.7	-1.3
	comp=Z,0.5nm,0.3s,baz=132,slow=22,SNR=1.6						
GERES	GERESS Array B	5.61	323	Pn	Pn	21 23 01.9	-0.1
GERES	GERESS Array B	5.61	323	Pn	Pn	21 23 01.9	-0.1
GERES				Pg	Pn	21 23 02.3	+0.3
	comp=Z,0.5nm,0.3s,SNR=16						
GERES				Sn	Sn	21 24 05.7	-1.3
	comp=Z,0.5nm,0.3s,SNR=1.6						
PLOR	Plostina	5.66	74	⇓P	Pn	21 23 02.5	-0.2
PLOR	Plostina	5.66	74	Pn	Pn	21 23 02.5	-0.2
OJC	Ojcow	5.75	6	Pn	Pn	21 23 02.9	-1.0
OJC	Ojcow	5.75	6	Pn	Pn	21 23 02.9	-1.0
WTTA	Wattenberg	5.75	301	*i* Pn	Pn	21 23 05.8	+1.8
	comp=Z,1.8nm,0.2s,SNR=7.5						
WTTA				*i* Sn	Sn	21 24 12.0	+1.4
	comp=Z,8.6nm,0.6s						
WTTA	Wattenberg	5.75	301	Pn	Pn	21 23 05.8	+1.8
	comp=Z,1.8nm,0.2s,SNR=7.5						
WTTA				Sn	Sn	21 24 12.0	+1.4
	comp=Z,8.6nm,0.6s						
WATA	Walderalm	5.82	302	*i* Pn	Pn	21 23 06.7	+1.8
	comp=Z,1.4nm,0.2s						
WATA				*i* Sn	Sn	21 24 12.8	+0.6
	comp=Z,2.6nm,0.3s						
WATA	Walderalm	5.82	302	Pn	Pn	21 23 06.7	+1.8
	comp=Z,1.4nm,0.2s						
WATA				Sn	Sn	21 24 12.8	+0.6
	comp=Z,2.6nm,0.3s						
KHC	Kasperske Hory	5.88	324	*e*PN	Pn	21 23 05.6	0.0
KHC				*e*x	x	21 23 18.0	
KHC				*e*x	x	21 23 25.0	
KHC				*e*x	x	21 24 24.5	
KHC	Kasperske Hory	5.88	324	Pn	Pn	21 23 05.8	+0.2
KHC	Kasperske Hory	5.88	324	Pn	Pn	21 23 05.6	0.0
KHC				Pg	Pn	21 23 05.8	+0.2
KHC				x	x	21 23 18.0	
KHC				x	x	21 23 25.0	
KHC				x	x	21 24 24.5	
SQTA	Sankt Quirin	6.00	300	*i* Pn	Pn	21 23 09.0	+1.7
	comp=Z,2.4nm,0.3s,SNR=6.8						
SQTA				*i* Sn	Sn	21 24 17.1	+0.5
	comp=Z,2.2nm,0.3s						
SQTA	Sankt Quirin	6.00	300	Pn	Pn	21 23 09.0	+1.7
	comp=Z,2.4nm,0.3s,SNR=6.8						
SQTA				Sn	Sn	21 24 17.1	+0.5
	comp=Z,2.2nm,0.3s						
SALO	Salr	6.01	284	Pn	Pn	21 23 06.8	-0.7
SALO	Salr	6.01	284	Pn	Pn	21 23 06.8	-0.7
AGG	Agios Georgios	6.06	154	Pn	Pn	21 23 07.8	-0.4
AGG	Agios Georgios	6.06	154	Pn	Pn	21 23 07.8	-0.4
DPC	Dobruska-Polom	6.10	344	*e*PN	Pn	21 23 07.9	-0.7
DPC				*e*SN	Sn	21 24 13.9	-5.0
DPC	Dobruska-Polom	6.10	344	Pn	Pn	21 23 07.9	-0.7
DPC				Sn	Sn	21 24 13.9	-5.0
MOTA	Moosalm	6.11	300	*i* Pn	Pn	21 23 10.0	+1.0
	comp=Z,2.9nm,0.4s,SNR=4.6						
MOTA				*i* Sn	Sn	21 24 20.2	+0.7
	comp=Z,3.1nm,0.4s						
MOTA	Moosalm	6.11	300	Pn	Pn	21 23 10.0	+1.0
	comp=Z,2.9nm,0.4s,SNR=4.6						
MOTA				Sn	Sn	21 24 20.2	+0.7
	comp=Z,3.1nm,0.4s						
FETA	Feichten	6.22	297	*e*Pn	Pn	21 23 12.2	+1.7
	comp=Z,2.1nm,0.3s						
FETA	Feichten	6.22	297	Pn	Pn	21 23 12.2	+1.7
	comp=Z,2.1nm,0.3s						
PRU	Pruhonice	6.22	333	*e*PN	Pn	21 23 09.0	-1.3
PRU	Pruhonice	6.22	333	Pn	Pn	21 23 09.0	-1.3
UPC	Upice	6.31	343	*e*PN	Pn	21 23 11.0	-0.5
UPC	Upice	6.31	343	Pn	Pn	21 23 11.0	-0.5
OSTC	Ostas	6.31	344	*e*PN	Pn	21 23 10.4	-1.2
OSTC	Ostas	6.31	344	Pn	Pn	21 23 10.4	-1.2
RETA	Reutte	6.38	301	*i* Pn	Pn	21 23 12.8	+0.2
	comp=Z,0.2nm,0.1s						
RETA				*e*Sn	Sn	21 24 26.8	+0.8
	comp=Z,1.0nm,0.2s						
RETA	Reutte	6.38	301	Pn	Pn	21 23 12.8	+0.2
	comp=Z,0.2nm,0.1s						
RETA				Sn	Sn	21 24 26.8	+0.8
	comp=Z,1.0nm,0.2s						
DAVOX	Davos/Dischmat	6.70	293	Pn	Pn	21 23 19.0	+1.9
	comp=Z,0.6nm,0.3s,baz=127,slow=10,SNR=3.8						
DAVOX				Sn	Sn	21 24 32.7	-1.2
	comp=Z,0.3nm,0.3s,baz=154,slow=22,SNR=1.5						
DAVOX	Davos/Dischmat	6.70	293	Pn	Pn	21 23 19.0	+1.9
	comp=Z,0.6nm,0.3s,SNR=3.8						
DAVOX				Sn	Sn	21 24 32.7	-1.2
	comp=Z,0.3nm,0.3s,SNR=1.5						
MSSA	Maissana	6.70	272	Pn	Pn	21 23 18.2	+1.3

MSSA	Maissana	6.70	272	Pn	Pn	21 23 18.2	+1.3
DAVA	Damuels	6.86	297	*i* Pn	Pn	21 23 20.6	+1.4
	comp=Z,1.8nm,0.3s						
DAVA	Damuels	6.86	297	Pn	Pn	21 23 20.6	+1.4
	comp=Z,1.8nm,0.3s						
TUE	Stuetta	6.97	290	Pn	Pn	21 23 22.5	+1.7
TUE	Stuetta	6.97	290	Pn	Pn	21 23 22.5	+1.7
BRG	Berggiesshubel	7.18	334	Pg	Pb	21 23 41.7	-1.2
BRG				x	x	21 24 58.0	
BRG				x	x	21 25 33.7	
	comp=Z,7.9nm,1.2s						
GRA1	Grafenberg Arr	7.36	318	Pn	Pn	21 23 26.1	+0.3
GRA1	Grafenberg Arr	7.36	318	Pn	Pn	21 23 26.1	+0.3
PGF	Pioggiola	7.43	258	*e*Pn	Pn	21 23 27.3	+0.2
PGF	Pioggiola	7.43	258	Pn	Pn	21 23 27.3	+0.2
ITM	Ithomi	7.68	161	Pn	Pn	21 23 29.3	-1.0
ITM	Ithomi	7.68	161	Pn	Pn	21 23 29.3	-1.0
CLL	Collm	7.86	332	*e*Pn	Pn	21 23 38.0	+5.2
CLL				*e*Sn	Sn	21 24 52.0	-10
CLL				*e*Sb	Sb	21 25 24.0	-4.4
CLL				*e*Sg	Sg	21 25 52.0	+2.1
CLL	Collm	7.86	332	Pn	Pn	21 23 38.0	+5.2
CLL				Sn	Sn	21 24 52.0	-10
CLL				Lg	Lg	21 25 24.0	
CLL				Sg	Sg	21 25 52.0	+2.1
BFO	Black Forest	8.22	301	Pn	Pn	21 23 36.9	-0.9
BFO	Black Forest	8.22	301	Pn	Pn	21 23 36.9	-0.9
SENIN	Lac Senin/Sane	8.35	287	Pn	Pn	21 23 40.9	+1.3
SENIN	Lac Senin/Sane	8.35	287	Pn	Pn	21 23 40.9	+1.3
MBDF	Montbardon	8.63	276	*e*Pn	Pn	21 23 41.8	-1.7
MBDF				*e*Sn	Sn	21 25 15.7	-5.8
	comp=Z,1.2nm,0.4s						
MBDF	Montbardon	8.63	276	Pn	Pn	21 23 41.8	-1.7
MBDF				Sn	Sn	21 25 15.7	-5.8
	comp=Z,0.6nm,0.4s						
LPG	La Plagne	8.64	281	*e*Pn	Pn	21 23 44.3	+0.5
LPG	La Plagne	8.64	281	*e*P	Pn	21 23 49.3	+5.5
LPG				*e*Sn	Sn	21 25 16.4	-5.5
	comp=Z,0.6nm,0.3s						
LPG	La Plagne	8.64	281	Pn	Pn	21 23 44.3	+0.5
LPG				Pg	Pg	21 23 49.3	-34
LPG				Sn	Sn	21 25 16.4	-5.5
	comp=Z,0.3nm,0.3s						
LPL	La Plagne	8.66	281	*e*Pn	Pn	21 23 44.5	+0.6
LPL	La Plagne	8.66	281	*e*P	Pn	21 23 50.2	+6.3
LPL				*e*Sn	Sn	21 25 15.0	-7.2
LPL	La Plagne	8.66	281	Pn	Pn	21 23 44.5	+0.6
LPL				Pg	Pg	21 23 50.2	-33
LPL				Sn	Sn	21 25 15.0	-7.2
BNI	Bardonecchia	8.69	278	Pn	Pn	21 23 44.1	-0.2
BNI	Bardonecchia	8.69	278	Pn	Pn	21 23 44.1	-0.2
FRF	La Foret Royal	8.86	268	*e*Pn	Pn	21 23 45.4	-1.1
FRF				*e*Sn	Sn	21 25 20.4	-6.3
	comp=Z,0.2nm,0.2s						
FRF	La Foret Royal	8.86	268	Pn	Pn	21 23 45.4	-1.1
FRF				Sn	Sn	21 25 20.4	-6.3
	comp=Z,0.1nm,0.2s						
CDF	Champ du Feu	8.90	300	*e*Pn	Pn	21 23 47.8	+0.6
CDF	Champ du Feu	8.90	300	Pn	Pn	21 23 47.8	+0.6
ECH	Echery	8.91	299	Pn	Pn	21 23 46.1	-1.0
ECH	Echery	8.91	299	Pn	Pn	21 23 46.1	-1.0
HINF	Hinteralfeld	8.97	296	*e*Pn	Pn	21 23 48.7	+0.6
HINF				*e*Sn	Sn	21 25 23.9	-5.7
	comp=Z,1.2nm,0.3s						
HINF	Hinteralfeld	8.97	296	Pn	Pn	21 23 48.7	+0.6
HINF				Sn	Sn	21 25 23.9	-5.7
	comp=Z,0.6nm,0.3s						
LMR	La Mourre	9.00	267	*e*Pn	Pn	21 23 48.1	-0.3
LMR				*e*Sn	Sn	21 25 23.2	-7.0
	comp=Z,0.3nm,0.4s						
LMR	La Mourre	9.00	267	Pn	Pn	21 23 48.1	-0.3
LMR				Sn	Sn	21 25 23.2	-7.0
	comp=Z,0.1nm,0.4s						
CABF	La Chapelle	9.21	288	*e*Pn	Pn	21 23 51.7	+0.3
CABF	La Chapelle	9.21	288	Pn	Pn	21 23 51.7	+0.3
ORIF	Oris-en-Rattie	9.26	277	*e*Pn	Pn	21 23 51.8	-0.3
ORIF	Oris-en-Rattie	9.26	277	*e*P	Pn	21 23 57.8	+5.7
ORIF				*e*Sn	Sn	21 25 30.6	-6.2
	comp=Z,1.1nm,0.4s						
ORIF	Oris-en-Rattie	9.26	277	Pn	Pn	21 23 51.8	-0.3
ORIF				Pg		21 23 57.8	
ORIF				Sn	Sn	21 25 30.6	-6.2
	comp=Z,0.6nm,0.4s						
HAU	Haudompre	9.35	296	*e*Pn	Pn	21 23 53.7	+0.4
HAU	Haudompre	9.35	296	Pn	Pn	21 23 53.7	+0.4
VIVF	Saint-Julien-l	10.12	277	*e*Pn	Pn	21 24 03.2	-0.6
VIVF	Saint-Julien-l	10.12	277	Pn	Pn	21 24 03.2	-0.6
MEZF	Maizieres J'vi	10.33	298	*e*Pn	Pn	21 24 07.2	+0.6
MEZF	Maizieres J'vi	10.33	298	Pn	Pn	21 24 07.2	+0.6
SMF	Signal de Mont	10.75	287	*e*Pn	Pn	21 24 12.7	+0.3
SMF	Signal de Mont	10.75	287	Pn	Pn	21 24 12.7	+0.3
LOR	Lormes	10.82	290	*e*Pn	Pn	21 24 13.9	+0.5
LOR	Lormes	10.82	290	Pn	Pn	21 24 13.9	+0.5
SSF	Saint Saulge	11.03	289	*e*Pn	Pn	21 24 16.6	+0.4
SSF	Saint Saulge	11.03	289	Pn	Pn	21 24 16.6	+0.4
AVF	Avril sur Loir	11.10	287	*e*Pn	Pn	21 24 17.1	-0.1
AVF	Avril sur Loir	11.10	287	Pn	Pn	21 24 17.1	-0.1
BAIF	Baives	11.39	304	*e*Pn	Pn	21 24 21.6	+0.4
BAIF	Baives	11.39	304	Pn	Pn	21 24 21.6	+0.4
BGF	Bois d'Agland	11.43	286	*e*Pn	Pn	21 24 22.5	+0.9
BGF	Bois d'Agland	11.43	286	Pn	Pn	21 24 22.5	+0.9
LFF	La Frestale	12.90	278	*e*Pn	Pn	21 24 42.0	+0.2
LFF	La Frestale	12.90	278	Pn	Pn	21 24 42.0	+0.2
FINES	FINESS Array B	17.49	12	P	Pn	21 25 42.2	-0.1
	comp=Z,0.1nm,0.3s,baz=200,slow=12,SNR=1.2						
FINES	FINESS Array B	17.49	12	Pn	Pn	21 25 42.2	-0.1
	comp=Z,0.1nm,0.3s,SNR=1.2						
ESDC	Sonseca Array	17.60	262	P	P	21 25 44.9	0.0
	comp=Z,0.1nm,0.3s,baz=66,slow=12,SNR=6.8						
ESDC	Sonseca Array	17.60	262	Pn	P	21 25 44.9	0.0
	comp=Z,0.1nm,0.3s,SNR=6.8						
TORD	Torodi Ar. Bea	34.53	210	P	P	21 28 29.2	+2.0
	comp=Z,0.3nm,0.7s,baz=16,slow=9.9,SNR=4.1						
TORD	Torodi Ar. Bea	34.53	210	P	P	21 28 29.2	+2.0
	comp=Z,0.3nm,0.7s,SNR=4.1						
KKAR	Karatay Array	36.79	74	P	P	21 28 47.2	+0.7
KKAR	Karatay Array	36.79	74	P	P	21 28 47.2	+0.7
MKAR	Makanchi Array	43.32	64	P	P	21 29 40.7	0.0
	comp=Z,0.3nm,0.8s,baz=275,slow=8.4,SNR=2.6						
MKAR	Makanchi Array	43.32	64	P	P	21 29 40.7	0.0
	comp=Z,0.3nm,0.8s,SNR=2.6						
SONM	Songino Array	57.52	53	P	P	21 31 29.1	+0.9
	comp=Z,0.5nm,1.0s,baz=320,slow=3.8,SNR=3.8						
SONM	Songino Array	57.52	53	P	P	21 31 29.1	+0.9
	comp=Z,0.5nm,1.0s,SNR=3.8						

MOS ***21*** *21:28:08.7±0.0, 43°.81N×43°.47E, h22^{km}, MPVA3.9*
NORS ***21*** *21:28:08.6±0.0, 43°.84N×43°.44E, h28^{km}, MPVA4.2*
ISC 21 21:28:09.0±0.9**, 43°.84N**±0°.02×**43°.47E**±0°.02**, h25**^{km}±8^{km}**,**
n72, σ**1^{s}23**/125**, 8C-7D, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYA1	Pyatigorsk	0.35	309	*e*PG	Pb	21 28 16.7	-0.1
PYA1				*e*S	Sb	21 28 22.3	+0.2
PYA1	Pyatigorsk	0.35	309	*e*Pg	Pb	21 28 16.7	-0.1
PYA1				*e*Sg	Sb	21 28 22.5	+0.3
NCK	Nalchik	0.36	165	*d* *i*PG	Pb	21 28 16.8	-0.1
NCK				pmax	pmax		
	comp=Z,875nm,0.2s						
NCK	Nalchik	0.36	165	*i* Pg	Pb	21 28 16.9	-0.1
	comp=Z,875nm,0.2s						
NCK				*e*Sg	Sb	21 28 21.9	-0.4
	comp=Z,3μm,0.5s						
KBZ	Khabaz	0.43	255	⇑ *i*PG	Pb	21 28 17.7	-0.3
KBZ				*i* S	Sb	21 28 24.7	+0.5
KBZ	Khabaz	0.43	255	*i* Pg	Pb	21 28 17.9	-0.1
KBZ				*i* Sg	Sb	21 28 24.6	+0.5
BEYR	Belyy Ugol+	0.50	290	⇑ *e*PG	Pb	21 28 19.0	-0.3
BEYR				*i* S	Sb	21 28 26.8	+0.5
BEYR	Belyy Ugol+	0.50	290	*e*Pg	Pb	21 28 18.9	-0.3
BEYR				*e*Sg	Sb	21 28 26.3	+0.1
KIV0	Kislovodsk Arr	0.57	282	*e*Pg	Pb	21 28 20.1	-0.4
KIV0				*e*Sg	Sb	21 28 28.4	+0.1
KIV	Kislovodsk	0.58	282	*i* PG	Pb	21 28 20.1	-0.5
KIV				*i* S	Sb	21 28 28.4	-0.1
KIV	Kislovodsk	0.58	282	*e*Pg	Pb	21 28 20.2	-0.5
KIV				*e*Sg	Sb	21 28 28.6	+0.1
PRTR	Priterechnaya	0.59	98	⇓ *i*PG	Pb	21 28 20.7	-0.1
PRTR				*e*S	Sn	21 28 30.4	-0.3
PRTR	Priterechnaya	0.59	98	*i* Pg	Pb	21 28 20.7	-0.1
	comp=Z,97nm,0.1s						
PRTR				*e*Sg	Sn	21 28 30.4	-0.3
	comp=Z,1μm,0.2s						
SHA1	Shidzhatmaz	0.60	260	⇑ *i*PG	Pb	21 28 20.5	-0.5
SHA1				*e*S	Sb	21 28 29.7	+0.5
SHA1	Shidzhatmaz	0.60	260	*i* Pg	Pb	21 28 20.5	-0.5
	comp=Z,98nm,0.1s						
SHA1				*e*Sg	Sb	21 28 29.7	+0.5
	comp=Z,428nm,0.4s						
LSNR	Lesken	0.62	155	⇑ *i*PG	Pb	21 28 21.0	-0.2
LSNR				*e*S	Sn	21 28 31.1	-0.3
LSNR	Lesken	0.62	155	*i* Pg	Pb	21 28 21.0	-0.2
	comp=Z,203nm,0.1s						
LSNR				*e*Sg	Sn	21 28 31.1	-0.3
	comp=Z,468nm,0.1s						
STDR	Stavd-Durt	0.64	137	⇑ *i*PG	Pb	21 28 21.7	+0.2
STDR				*e*S	Sn	21 28 32.1	+0.3
STDR	Stavd-Durt	0.64	137	*i* Pg	Pb	21 28 21.7	+0.2
	comp=Z,131nm,0.3s						
STDR				*e*Sg	Sn	21 28 32.1	+0.3
	comp=Z,686nm,0.4s						
NEY	Neytrino	0.81	223	*e*PG	Pn	21 28 23.9	-0.9
NEY				pmax	pmax		
	comp=Z,196nm,0.1s						
NEY	Neytrino	0.81	223	*e*Pg	Pn	21 28 24.0	-0.9
	comp=Z,196nm,0.1s						
NEY				*e*Sg	Sb	21 28 34.8	-0.2
	comp=Z,1μm,0.3s						
KORR	Kora	0.87	150	*i* PG	Pn	21 28 24.9	-0.8
KORR				pmax	pmax		
	comp=Z,49nm,0.4s						
KORR	Kora	0.87	150	*i* Pg	Pn	21 28 24.9	-0.8
	comp=Z,49nm,0.4s						
KORR				*e*Sg	Sn	21 28 37.2	-0.4
BTKR	Batakoyurt	0.91	121	*e*PG	Pn	21 28 25.9	-0.3
BTKR				*e*S	Sb	21 28 39.7	+1.9
BTKR	Batakoyurt	0.91	121	*e*Pg	Pn	21 28 25.9	-0.3
BTKR				*e*Sg	Sb	21 28 39.7	+1.9
TRKR	Terskaya	0.92	97	⇑ *i*PG	Pn	21 28 25.9	-0.4
TRKR				*e*S	Sb	21 28 39.6	+1.5
TRKR	Terskaya	0.92	97	*i* Pg	Pn	21 28 25.9	-0.4
TRKR				*e*Sg	Sb	21 28 39.6	+1.5
DIGR	Digorskoe uzhe	0.94	175	*e*PG	Pn	21 28 25.2	-1.6
DIGR				pmax	pmax		
	comp=Z,173nm,0.3s						
DIGR	Digorskoe uzhe	0.94	175	*e*Pg	Pn	21 28 25.3	-1.6
DIGR				*e*Sg	Sn	21 28 37.2	-2.4
ZEI	Tsey	1.10	163	*i* PG	Pn	21 28 27.3	-1.6
ZEI				pmax	pmax		
	comp=Z,99nm,0.2s						
ZEI	Tsey	1.10	163	*i* Pg	Pn	21 28 27.4	-1.6
ZEI				*e*Sg	Sn	21 28 41.7	-1.7
LACR	Lac	1.18	149	*e*PG	Pn	21 28 28.2	-1.8
LACR				*e*S	Sn	21 28 43.7	-1.6
LACR				pmax	pmax		
	comp=Z,77nm,0.4s						
LACR				smax	smax		
	comp=N,202nm,0.4s						
LACR	Lac	1.18	149	*e*Pg	Pn	21 28 28.2	-1.8
LACR				*e*Sg	Sn	21 28 43.2	-2.1
VLKR	Vladikavkaz	1.19	132	*e*PG	Pn	21 28 30.1	+0.1
VLKR				*e*S	Sb	21 28 47.7	+2.0
VLKR	Vladikavkaz	1.19	132	*e*Pg	Pn	21 28 30.1	+0.1
VLKR				*e*Sg	Sb	21 28 45.9	+0.2
ONI	Oni	1.25	181	P	Pn	21 28 30.6	-0.3
ONI				S	Sn	21 28 47.1	+0.1
ONI	Oni	1.25	181	*e*PG	Pn	21 28 30.8	-0.1
ONI				*e*S	Sb	21 28 48.3	+0.6
ONI	Oni	1.25	181	*e*Pg	Pn	21 28 30.8	-0.1
ONI				*e*Sg	Sb	21 28 48.3	+0.6
GOF	Gofitskoye	1.25	346	⇑ *e*PG	Pn	21 28 31.2	+0.3
GOF				*e*S	Sb	21 28 48.9	+1.3
GOF				pmax	pmax		
	comp=Z,13nm,0.4s						
GOF				smax	smax		
	comp=E,136nm,0.4s						
GOF				smax	smax		
	comp=N,438nm,0.8s						
GOF	Gofitskoye	1.25	346	*e*Pg	Pn	21 28 31.0	+0.1
GOF				*e*Sg	Sb	21 28 49.0	+1.3
KMGR	Komgaron	1.28	127	*e*PG	Pn	21 28 31.5	+0.1
KMGR				*e*S	Sb	21 28 50.5	+1.9
KMGR	Komgaron	1.28	127	*e*Pg	Pn	21 28 31.5	+0.1
KMGR				*e*Sg	Sb	21 28 49.6	+1.0
DOMR	Dombai	1.45	248	*e*Pg	Pb	21 28 36.4	+1.0
DOMR				*e*Sg	Sb	21 28 54.3	+0.8
PNSH	Pansheti	1.47	145	P	Pn	21 28 32.6	-1.4
PNSH				S	Sn	21 28 51.2	-1.3
PNSH	Pansheti	1.47	145	PG	Pn	21 28 32.6	-1.4
GUDG	Gudauri	1.56	152	P	Pn	21 28 35.6	+0.2
GUDG				S	Sb	21 28 56.8	0.0
GUDG	Gudauri	1.56	152	PG	Pn	21 28 35.5	+0.2
GUDG				S	Sb	21 28 56.7	0.0
ARXR	Arkhyz	1.62	261	*i* PN	Pb	21 28 37.5	-0.7
ARXR	Arkhyz	1.62	261	*e*Pg	Pb	21 28 37.8	-0.5
ARXR				*e*Sg	Sb	21 28 59.6	+1.4
AHMR	Akhmetovskaya	1.78	281	*e*Pg	Pb	21 28 41.4	+0.4
AHMR				*e*Sg	Sb	21 29 03.9	+1.0
GROC	Groznyy	1.81	110	*e*PN	Pn	21 28 36.7	-1.8
GROC				pmax	pmax		
	comp=Z,5.0nm,0.2s						
GROC				pmax	pmax		
	comp=Z,9.0nm,0.3s						
GROC	Groznyy	1.81	110	*e*Pg	Pn	21 28 37.8	-0.7
GROC				*e*Sg	Sn	21 28 59.3	-1.4
DVE	Vedeno	2.13	114	*i* PN	Pn	21 28 42.3	-0.7
LABN	Labinsk	2.13	293	*e*Pg	Pb	21 28 47.5	+0.7
LABN				*e*Sg	Sb	21 29 11.8	-1.0
ABS	Abastumani	2.14	193	P	Pn	21 28 43.6	+0.4
ABS				S	Sb	21 29 18.2	+4.9
ABS	Abastumani	2.14	193	PN	Pn	21 28 43.6	+0.4
ABS				S	Sb	21 29 18.2	+4.9
BRNG	Burnasheti	2.23	173	P	Pn	21 28 45.1	+0.5
RPOR	Krasnaya Polya	2.33	268	*e*Pn	Pb	21 28 50.1	-0.1
RPOR				*e*Sn	Sn	21 29 15.2	+1.8
BTLR	Botlikh	2.33	119	⇓ *e*PN	Pn	21 28 44.7	-1.0
BTLR				pmax	pmax		
	comp=Z,6.0nm,0.4s						
BTLR	Botlikh	2.33	119	*e*Pn	Pn	21 28 44.8	-1.0
BTLR				*e*Sn	Sn	21 29 10.8	-2.8
DLMR	Dylym	2.43	107	⇓ *e*PN	Pn	21 28 46.6	-0.4
DLMR				*e*		21 29 14.1	
DLMR				pmax	pmax		
	comp=Z,21nm,0.4s						
DLMR				smax	smax		
	comp=N,169nm,0.3s						
GUZR	Guzeripl'	2.43	275	*i* PN	Pn	21 28 48.4	+1.3
GUZR	Guzeripl'	2.43	275	*e*Pn	Pb	21 28 50.5	-1.5
GUZR				*e*Sn	Sb	21 29 19.3	-2.2
DBC	Dubki	2.58	107	⇓ *e*PN	Pn	21 28 48.0	-1.2
DBC				pmax	pmax		
	comp=Z,9.0nm,0.3s						
DBC	Dubki	2.58	107	*e*Pn	Pn	21 28 47.8	-1.4
DBC				*e*Sn	Sn	21 29 17.1	-2.7
XNZR	Khunzakh	2.70	118	*e*Pn	Pb	21 28 55.7	-1.0
XNZR				*e*Sn	Sn	21 29 22.0	-0.8
KRNR	Karanay	2.71	111	⇓ *e*PN	Pn	21 28 47.5	-3.4
KRNR				pmax	pmax		
	comp=Z,4.0nm,0.3s						
ARKR	Arakani	2.86	114	⇓ *e*PN	Pn	21 28 52.6	-0.4
ARKR				pmax	pmax		
	comp=Z,5.0nm,0.5s						
URKR	Urkarakh	3.48	117	*e*Pn	Pn	21 29 03.2	+1.6
URKR				*e*Sn	Sn	21 29 43.8	+1.6
OBN	Obninsk	12.13	341	⇑ *e*P	Pn	21 31 00.6	+0.6
OBN				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ARU	Arti	15.84	32	*i* P	Pn	21 31 50.6	+0.6
ARU				pmax	pmax		
	comp=Z,36nm,4.9s						
KURK	Kurchatov	24.64	61	*i* P	P	21 33 26.6	-0.7
KURK				pmax	pmax		
	comp=Z,1.0nm,1.1s						

FUNV ***21*** *21:43:49.7, 11°.83N×71°.11W, h22^{km}, MW3.0*
RSNC ***21*** *21:43:49.8±0.8, 11°.95N×71°.25W, h93^{km}±8^{km}, ML3.1*
ISC 21 21:43:47.9±1.7**, 11°.88N**±0°.08×**71°.11W**±0°.03**, h92**^{km}±14^{km}**,**
n16, σ**0^{s}99**/29**, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URIC	Uribia, Colomb	0.88	259	*e*P	Pn	21 44 07.1	+0.7
URIC				*e*S	Sn	21 44 19.6	-0.7
URIC				*i*		21 44 20.4	
	comp=Z,621nm,0.2s						
DABV	Dabajuro	1.06	154	*e*P	Pn	21 44 08.5	+0.1
DABV				*e*S	Sn	21 44 22.6	-1.2
MONV	Montecano	1.12	86	*e*P	Pn	21 44 10.3	+1.2
MONV				*e*S	Sn	21 44 25.2	+0.1
SIQV	Siquisique	1.77	134	*e*P	Pn	21 44 17.7	+0.6
SIQV				*e*S	Sn	21 44 38.7	-0.8
CRJC	Cerrejon, Guaj	1.93	244	*e*P	Pn	21 44 20.0	+0.6
CRJC				*e*S	Sn	21 44 43.3	-0.1
CRJC				*i*		21 44 44.5	
	comp=Z,201nm,0.4s						
MCQV	Machiques	2.29	218	*e*P	Pn	21 44 24.7	+0.7
MCQV				*e*S	Sn	21 44 51.1	-0.5
JACV	Jacura	2.37	109	*e*P	Pn	21 44 25.9	+0.9
JACV				*e*S	Sn	21 44 52.8	-0.8
SANV	Sanarito	2.82	147	*e*P	Pn	21 44 32.2	+1.0
SANV				*e*S	Sn	21 45 04.1	-0.4
SMRC	Santa Marta, M	3.13	257	*e*P	Pn	21 44 34.5	-0.8
SMRC				*e*S	Sn	21 45 10.4	-1.4
SMRC				*i*		21 45 18.4	
	comp=Z,34nm,0.3s						
MAPV	Macapo	3.31	128	*e*P	Pn	21 44 38.1	+0.5
MAPV				*e*S	Sn	21 45 15.0	-1.0
SOCV	Socops	3.58	176	*e*P	Pn	21 44 42.2	+0.9
SOCV				*e*S	Sn	21 45 22.0	-0.6
ARGC	Ariguani, Magd	3.67	237	*e*P	Pn	21 44 43.6	+1.0
ARGC				*e*S	Sn	21 45 24.7	-0.3
ARGC				*i*		21 45 42.2	
	comp=Z,21nm,0.7s						
BAUV	El Baul	4.20	134	*e*P	Pn	21 44 50.6	+1.0
BAUV				*e*S	Sn	21 45 36.0	-1.5
OCAC	Ocana	4.22	211	*e*P	Pn	21 44 50.6	+0.5
OCAC				*i*		21 45 38.5	
	comp=Z,37nm,0.2s						
BIRV	Birongo	4.95	106	*e*S	Sn	21 45 54.0	-1.9
BRRC	Barranca, Sant	5.39	209	*e*P	Pn	21 45 07.5	+1.7

SJA ***21*** *22:00:36.1±4.1, 26°.94S×67°.02W, h10^{km}±36^{km}, ML4.0, MW3.8*
IDC ***21*** *22:00:37.8±1.2, 27°.18S×67°.18W, h0^{km}, mb3.7/2, mb1 3.8/5, mb1mx3.7/24, mbtmp3.7/5, ML3.7/3, MS3.1/5, Ms1 3.1/5, ms1mx2.9/30, Error ellipse: s-maj=39.9km s-min=35.6km az=36.0*
ISC 21 22:00:38.6±2.0**, 27°.17S**±0°.05×**66°.85W**±0°.05**, h5**^{km}±14^{km}**,**
n24, σ**2^{s}07**/30**, Catamarca Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FSA	Cafayete	1.31	37	*e*P	Pn	22 00 59.7	-4.0
FSA				*i* S	Sb	22 01 16.2	-4.7
AHML	Horco Molle	1.40	75	*i* P	Pb	22 01 05.1	-0.3
AHML				*i* S	Sg	22 01 25.3	+1.5
AHML				IAML		22 01 30.4	
	comp=Z,1μm,0.3s						
VCA	Vinchina	1.97	217	*i* P	Pb	22 01 13.8	-1.3
VCA				*i* S	Sg	22 01 41.9	-0.1
VCA				IAML		22 01 47.7	
	comp=Z,3μm,0.6s						
ACLC	CERRO LA CRUZ	2.25	182	*e*P	Pn	22 01 17.3	+0.7
ACLC				*i* S	Sg	22 01 52.0	+1.1
SLA	San Lorenzo	2.72	27	*i* P	Pn	22 01 23.4	+0.3
SLA				*e*S	Sb	22 02 00.9	-0.7
GO03	Copiap	3.04	261	*i* P	Pn	22 01 28.5	+1.1
APLL	PUNTA DE LOS L	3.23	175	*i* P	Pn	22 01 30.4	+0.4
AROD	Rodeo	3.77	217	*e*P	Pn	22 01 39.9	+2.1
AROD				*i* S	Sb	22 02 34.8	+2.7
AROD				IAML		22 02 37.5	
	comp=Z,65nm,0.4s						
ACCO	Cerro Coronel	3.92	209	*e*P	Pn	22 01 41.1	+1.3
ACCO				*e*S	Sb	22 02 31.0	-5.4
ACCO				IAML		22 02 44.3	
	comp=Z,237nm,0.6s						
GO04	Tololo Observa	4.58	228	*i* P	Pn	22 01 49.0	+0.1
LVC	Limon Verde	4.91	337	Pn	Pn	22 01 51.8	-1.6
	comp=Z,1.0nm,0.3s,baz=168,slow=13,SNR=5.9						
LVC				Sn	Sn	22 02 52.2	+1.4
	comp=Z,0.4nm,0.3s,baz=92,slow=18,SNR=1.1						
LVC				LR	LR	22 03 49.3	
	comp=Z,182nm,20.3s,baz=177,slow=40						
MRA	San Martin	5.32	170	*i* P	Pn	22 01 58.8	-0.1
MRA				IAML		22 03 36.5	
	comp=Z,42nm,1.2s						
AUSP	Uspallata	5.50	203	*i* P	Pn	22 02 03.0	+1.5
RFA	San Rafael	7.70	190	*i* P	Pn	22 02 30.7	-0.8
RFA				IAML		22 04 42.0	
	comp=Z,21nm,0.6s						
CPUP	Villa Florida	8.55	87	Pn	Pn	22 02 44.8	+1.7
	comp=Z,0.6nm,0.3s,baz=284,slow=9.8,SNR=3.5						
CPUP				Lg	Lg	22 05 11.6	
	comp=Z,2.4nm,0.3s,baz=178,slow=20,SNR=2.3						
CPUP				LR	LR	22 05 53.4	
	comp=Z,102nm,18.2s,baz=244,slow=36						
LPAZ	La Paz	10.89	353	LR	LR	22 08 15.4	
	comp=Z,104nm,21.7s,baz=92,slow=42						
SIV	San Ignacio	12.35	27	Pn	Pn	22 03 36.6	+1.4
	comp=Z,0.2nm,0.3s,baz=244,slow=9.1,SNR=2.7						
SIV				LR	LR	22 08 56.4	
	comp=Z,57nm,20.3s,baz=202,slow=40						
PLCA	Paso Flores	13.87	192	LR	LR	22 09 37.5	
	comp=Z,162nm,18.4s,baz=340,slow=39						
TORD	Torodi Ar. Bea	77.59	68	P	P	22 12 39.2	+3.0
	comp=Z,0.8nm,0.5s,baz=236,slow=1.6,SNR=2.8						
PDAR	Pinedale Array	79.93	330	P	P	22 12 47.5	-1.3
	comp=Z,0.2nm,0.5s,baz=129,slow=5.3,SNR=2.1						
ASAR	Alice Springs	125.63	204	PKP	PKPdf	22 19 41.1	-0.7
	comp=Z,0.4nm,0.8s,baz=182,slow=3.3,SNR=2.7						
WRA	Warramunga Arr	128.87	206	PKP	PKPdf	22 19 47.6	-0.5
	comp=Z,0.5nm,1.0s,baz=153,slow=1.6,SNR=2.0						
ZALV	Zalesovo Beam	146.09	30	PKPbc	PKPbc	22 20 19.2	0.0
	comp=Z,1.5nm,0.6s,baz=294,slow=4.9,SNR=8.0						
MKAR	Makanchi Array	148.81	43	PKPbc	PKPbc	22 20 26.8	-0.3
	comp=Z,0.4nm,0.7s,baz=310,slow=2.9,SNR=5.9						

DNK ***21*** *22:19:03.5±0.9, 78°.45N×7°.36E, h62^{km}, ML2.6*
BER 21 22:19:01.3±2.9**, 78°.32N×7°.26E, h10**^{km}**, ML1.7,**
ML2.6(DNK)**, Confirmed Earthquake, Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBS	Kingsbay	1.11	55	*e*P	Pb	22 19 22.2	-0.3
KBS				*e*S	Sg	22 19 35.0	-2.0
KBS				IAML		22 19 39.5	
	comp=Z,50nm,0.6s						
KBS	Kingsbay	1.11	55	*i* P	Pb	22 19 22.2	-0.4
KBS				*i* S	Sg	22 19 34.9	-2.2
KBS				IAML		22 19 39.7	
	comp=Z,78nm,0.4s						
SPA0	Spitsbergen Ar	1.87	90	*e*Pg	Pn	22 19 34.1	+0.8
SPA0				*e*S	Sn	22 19 54.9	-2.0
SPA0				*e*Sg	Sb	22 19 57.0	-2.0
SPA0				IAML		22 20 03.9	
	comp=Z,8.9nm,0.7s						
HSPB	Hornsund (broa	2.22	123	*e*P	Pn	22 19 37.6	-0.4
HSPB				*e*S	Sn	22 20 02.9	-2.5
HSPB				IAML		22 20 15.0	
	comp=Z,3.5nm,0.6s						
DAG	Danmarks Havn	5.78	267	*e*S	Sn	22 21 25.5	-7.7
DAG				*e*	Pn	22 20 23.7	-3.2
	baz=64,slow=16						
DAG				*e*P	Pn	22 20 26.0	-1.0
DAG				IAML		22 21 31.7	
	comp=Z,2.5nm,0.4s						
DAG	Danmarks Havn	5.78	267	*i* S	Sn	22 21 25.5	-7.6
DAG				*e*	Pn	22 20 23.7	-3.2
	baz=64,slow=16						
DAG				*i* P	Pn	22 20 26.0	-0.9
DAG				IAML		22 21 31.7	
	comp=Z,2.5nm,0.4s						

BJI ***21*** *22:26:44.0±0.0, 4°.70N×76°.00W, h80^{km}, mB5.4/7, Ms4.9/2, Ms7 4.8/2*
MOS ***21*** *22:26:44.4±1.0, 4°.67N×76°.21W, h107^{km}, mb5.3/8, Error ellipse: s-maj=8.4km s-min=5.0km az=108.2*
UPA ***21*** *22:26:44.5±2.7, 4°.82N×76°.16W, h10^{km}±70^{km}, MW5.2*
RSNC ***21*** *22:26:45.6±1.3, 4°.67N×76°.19W, h96^{km}±4^{km}, ML5.0, Mw5.2, Fault plane solution: NP1:φ$_{s}$90.00000°, δ38.00000°, λ-180.00000°.*
VAO ***21*** *22:26:45.6±0.2, 4°.55N×76°.04W, h111^{km}±1^{km}, mb5.2*

IDC **21** *22:26:45.3±0.4, 4°.61N×76°.23W, h106km±3km, mb4.6/26, mb1 4.7/31, mb1mx4.7/37, mbtmp5.0/31, MS3.7/11, Ms1 3.7/11, ms1mx3.5/25, Error ellipse: s-maj=8.8km s-min=6.1km az=13.0*

NEIC **21** *22:26:46.5±1.8, 4°.64N±0°.06×76°.09W±0°.06, h116km±4km, Error ellipse: s-maj=9.6km s-min=8.9km az=147.0*

GCMT **21** *22:26:48.6±0.2, 4°.80N±0°.01×76°.06W±0°.01, h103km±1km, MW5.2/132, Moment Tensor Solution. s81,c98; s132,c194; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.28±.14; $M_{\theta\theta}$-0.46±.15; $M_{\phi\phi}$0.74±.18; $M_{r\theta}$-0.07±.09; $M_{\theta\phi}$-5.56±.13; $M_{\phi r}$-4.47±.10; Best double couple: $M_0$7.16000×10^{16} NP1:ϕ_s93.00000°, δ51.00000°, λ-179.00000°. NP2:ϕ_s2.00000°, δ89.00000°, λ-39.00000°. Principal axes: T 7.3000, Plg25.0000°, Azm55.0000°; N -0.2800, Plg51.0000°, Azm181.0000°; P -7.0200, Plg27.0000°, Azm311.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

BGR **21** *22:26:52.2±0.0, 5°.70N×75°.37W, h129km±3km, mb5.2*

ISC 21 22:26:44.7±0.3, **4°.66N**±0°.02×**76°.10W**±0°.03, **h104**km±2km, **h104**km**:pP-P, n1081,** σ1.60/1236, **mb5.1**/218, **85C-174D, Fault plane solution: NP1:**ϕ_s199.49718°, δ82.95469°, λ55.39815°. **NP2:**ϕ_s99.41617°, δ35.22403°, λ167.72200°. **Principal axes:** T Plg41.6338°, Azm77.0005°; N Plg34.3039°, Azm204.3340°; P Plg29.4003°, Azm316.9427°; **Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLMC	San Jos del P	0.30	323	⇑iP	Pn	22 26 59.4	-0.5
PLMC				eS	Sn	22 27 10.4	-0.9
PLMC				i		22 27 14.0	
	comp=Z,69µm,0.4s						
YOTC	Yotoco, Valle	0.72	200	⇑iP	Pn	22 27 02.6	-0.3
YOTC				eS	Sn	22 27 15.5	-0.9
YOTC				i		22 27 18.3	
	comp=Z,92µm,0.6s						
GUY2C	Guyana, Caldas	0.92	53	⇓iP	Pn	22 27 05.7	+0.6
GUY2C				eS	Sn	22 27 20.7	+0.3
GUY2C				i		22 27 24.1	
	comp=Z,26µm,0.6s						
ORTC	Ortega, Tolima	1.14	131	⇓iP	Pn	22 27 07.8	+0.8
ORTC				i		22 27 09.1	
	comp=Z,51µm,0.7s						
ORTC				eS	Sn	22 27 23.5	-0.2
CBOC	Ciudad Bolivar	1.20	4	⇑iP	Pn	22 27 07.6	-0.2
CBOC				eS	Sn	22 27 24.8	-0.4
CBOC				i		22 27 33.9	
	comp=Z,12µm,0.5s						
PIZC	Pizarro, Choco	1.29	283	⇑iP	Pn	22 27 09.2	+0.5
PIZC				eS	Sn	22 27 28.4	+1.6
PIZC				i		22 27 37.0	
	comp=Z,69µm,0.5s						
RAC02	Cali,SGC	1.35	198	eP	Pn	22 27 18.1	+8.5
RAC02				eS	Sn	22 27 37.9	+10
MALC	Bahia Malaga	1.39	242	⇑iP	Pn	22 27 10.6	+0.7
MALC				eS	Sn	22 27 29.1	+0.1
MALC				i		22 27 45.3	
	comp=Z,26µm,0.5s						
NORC	Norcasia	1.52	54	⇓iP	Pn	22 27 12.5	+1.0
NORC				eS	Sn	22 27 32.6	+0.8
NORC				i		22 27 36.2	
	comp=Z,12µm,0.6s						
PRAC	Prado	1.54	128	⇓iP	Pn	22 27 12.8	+1.1
PRAC				eS	Sn	22 27 33.6	+1.5
PRAC				i		22 27 36.7	
	comp=Z,19µm,0.8s						
ROSC	El Rosal	1.78	84	P	Pn	22 27 17.9	+2.8
	comp=Z,2µm,0.3s,baz=352,slow=1.1,SNR=3374						
ROSC				S	Sn	22 27 43.7	+5.6
	comp=Z,561nm,0.3s,baz=279,slow=23,SNR=31						
ROSC	El Rosal	1.78	84	⇓iP	Pn	22 27 17.8	+2.8
ROSC				i		22 27 19.0	
	comp=Z,8µm,0.5s						
ROSC				eS	Sn	22 27 39.6	+1.5
MARP	Paez Belalcaza	1.81	175	⇓iP	Pn	22 27 16.4	+1.0
MARP				eS	Sn	22 27 38.9	+0.1
MARP				i		22 27 40.8	
	comp=Z,21µm,0.9s						
SOLC	Bahia Solano	2.03	320	⇓iP	Pn	22 27 17.1	-0.7
SOLC				i		22 27 19.1	
	comp=Z,3µm,0.5s						
SOLC				eS	Sn	22 27 41.1	-2.0
BETC	Betania	2.08	162	⇓iP	Pn	22 27 19.1	+0.6
BETC				eS	Sn	22 27 44.2	-0.1
POPC	Popayan, Colom	2.19	195	⇑iP	Pn	22 27 19.9	-0.3
POPC				eS	Sn	22 27 45.5	-1.6
POPC				i		22 27 55.0	
	comp=Z,6µm,0.4s						
SPBC	San Pablo de B	2.25	64	⇑iP	Pn	22 27 22.4	+1.7
SPBC				eS	Sn	22 27 49.7	+1.4
PCON	Cinco Dias	2.34	187	⇑iP	Pn	22 27 23.4	+1.0
PCON				eS	Sn	22 27 51.7	+0.5
PCON				i		22 27 57.8	
	comp=Z,15µm,0.6s						
DBBC	Dabeiba	2.34	357	⇓eP	Pn	22 27 22.2	+0.2
DBBC				eS	Sn	22 27 50.3	-0.2
DBBC				i		22 27 58.4	
	comp=Z,28µm,0.6s						
CHIC	Chingaza	2.36	91	⇓iP	Pn	22 27 25.5	+2.9
CHIC				i		22 27 26.5	
	comp=Z,5µm,0.7s						
CHIC				eS	Sn	22 27 53.6	+2.2
PTBC	PUERTO BERRIO,	2.48	41	⇑iP	Pn	22 27 25.0	+1.3
PTBC				i		22 27 26.0	
	comp=Z,11µm,0.4s						
PTBC				eS	Sn	22 27 54.7	+1.0
GARC	Garzon, Huila	2.53	166	⇓iP	Pn	22 27 25.4	+0.7
GARC				eS	Sn	22 27 55.6	+0.3
GARC				i		22 27 57.1	
	comp=Z,13µm,0.3s						
SOTA	Rioblanco	2.56	191	eP	Pn	22 27 25.9	+0.6
SOTA				eS	Sn	22 27 56.7	+0.4
GR1C	Gorgona, Isla	2.64	231	⇑iP	Pn	22 27 24.4	-1.4
GR1C				eS	Sn	22 27 55.8	-1.6
BBAC	Balboa, Cauca	2.86	204	⇑iP	Pn	22 27 29.0	0.0
BBAC				eS	Sn	22 28 02.3	-0.7
BBAC				i		22 28 19.2	
	comp=Z,6µm,0.5s						
PTAC	Punta Ardita,	3.00	326	eP	Pn	22 27 30.2	-0.4
PTAC				eS	Sn	22 28 03.2	-2.7
PTAC				i		22 28 05.0	
	comp=Z,16µm,0.3s						
FLOC	Florencia	3.09	172	⇓iP	Pn	22 27 32.6	+0.7
FLOC				eS	Sn	22 28 07.9	-0.3
FLOC				i		22 28 18.7	
	comp=Z,4µm,0.5s						
UREC	San Jos de Ur	3.12	10	⇑eP	Pn	22 27 32.5	+0.2
UREC				i		22 27 34.9	
	comp=Z,2µm,0.6s						
UREC				eS	Sn	22 28 08.6	-0.2
CRUC	La Cruz	3.19	195	eP	Pn	22 27 33.9	+0.4
RUSC	La Rusia	3.24	68	⇑eP	Pn	22 27 36.0	+1.7
RUSC				i		22 27 41.5	
	comp=Z,1µm,0.6s						
MACC	Macarena, Meta	3.36	138	⇓iP	Pn	22 27 36.2	+0.7
MACC				i		22 27 37.0	
	comp=Z,7µm,0.4s						
BRRC	Barranca, Sant	3.40	44	⇑iP	Pn	22 27 36.8	+0.9
BRRC				i		22 27 37.7	
	comp=Z,2µm,0.5s						
BRRC				eS	Sn	22 28 14.7	-0.8
BARC	Barichara	3.48	56	⇑iP	Pn	22 27 39.1	+1.8
BARC				i		22 27 41.0	
	comp=Z,2µm,0.5s						
GCUF	Volcan Galeras	3.63	200	⇑eP	Pn	22 27 39.4	-0.2
GCUF				eS	Sn	22 28 18.4	-3.4
GCUF				i		22 28 23.0	
	comp=Z,2µm,0.3s						
TUMC	Tumaco	3.85	223	⇑eP	Pn	22 27 40.9	-1.2
TUMC				eS	Sn	22 28 25.1	-1.3
TUMC				i		22 28 45.5	
	comp=Z,4µm,0.6s						
PTGC	Puerto Gaitan,	3.98	97	⇓eP	Pn	22 27 44.8	+1.1
PTGC				i		22 27 59.8	
	comp=Z,1µm,0.6s						
GUVC	San Jose del G	4.05	121	⇓iP	Pn	22 27 45.7	+1.0
GUVC				⇓iP	Pn	22 27 45.7	+1.0
GUVC				i		22 27 46.5	
	comp=Z,8µm,0.3s						
GUVC				i		22 27 46.5	
	comp=Z,8µm,0.3s						
CMBC	Cumbal	4.08	205	eP	Pn	22 27 46.0	+0.5
MONA	Monteria	4.10	6	⇑iP	Pn	22 27 45.1	-0.3
MONA				eS	Sn	22 28 28.2	-4.3
MOTC	Monteria, Cord	4.11	6	⇑eP	Pn	22 27 45.1	-0.4
CAPC	Capurgana	4.14	343	eP	Pn	22 27 46.0	+0.1
CAPC				i		22 27 49.3	
	comp=Z,871nm,0.5s						
CAPC				i		22 27 49.3	
	comp=Z,871nm,0.5s						
CAPC				eS	Sn	22 28 32.2	-1.0
CAPC				eS	Sn	22 28 32.2	-1.0
CAP2	Capurgana	4.15	343	eP	Pn	22 27 45.5	-0.6
CAP2				eS	Sn	22 28 35.6	+1.9
PAMC	Pamplona, Colo	4.30	52	⇑iP	Pn	22 27 49.8	+1.3
PAMC				⇑iP	Pn	22 27 49.8	+1.3
PAMC				i		22 28 02.2	
	comp=Z,2µm,0.5s						
PAMC				i		22 28 02.2	
	comp=Z,2µm,0.5s						
UPD2	Meteti	4.30	334	⇓iP	Pn	22 27 48.4	+0.3
UPD2				eS	Sn	22 28 35.0	-2.2
OCAC	Ocana	4.50	38	⇑iP	Pn	22 27 51.5	+0.6
OCAC				⇑iP	Pn	22 27 51.5	+0.6
OCAC				eS	Sn	22 28 42.8	+0.6
OCAC				eS	Sn	22 28 42.8	+0.6
OCAC				i		22 28 48.1	
	comp=Z,2µm,0.7s						
OCAC				i		22 28 48.1	
	comp=Z,2µm,0.7s						
SMLC	San Martn de	4.58	26	⇑eP	Pn	22 27 51.3	-0.5
SMLC				⇑eP	Pn	22 27 51.3	-0.5
SMLC				i		22 28 48.0	
	comp=Z,1µm,0.6s						
SMLC				i		22 28 48.0	
	comp=Z,1µm,0.6s						
TAMC	Tame, Arauca	4.63	67	⇑iP	Pn	22 27 54.3	+1.6
TAMC				⇑iP	Pn	22 27 54.3	+1.6
TAMC				i		22 28 10.1	
	comp=Z,865nm,0.5s						
TAMC				i		22 28 10.1	
	comp=Z,865nm,0.5s						
PTLC	Puerto Leguiza	4.65	164	⇓iP	Pn	22 27 58.3	+5.5
PTLC				⇓iP	Pn	22 27 58.3	+5.5
PTLC				i		22 29 11.2	
	comp=Z,1µm,0.6s						
PTLC				i		22 29 11.2	
	comp=Z,1µm,0.6s						
OTAV	Otavalo	4.99	208	P	Pn	22 27 56.6	-1.2
OTAV	Otavalo	4.99	208	Pn	Pn	22 27 56.6	-1.2
OTAV	Otavalo	4.99	208	⇑eP	Pn	22 27 57.1	-0.6
OTAV				⇑eP	Pn	22 27 57.1	-0.6
OTAV				eS	Sn	22 28 53.3	-1.2
OTAV				eS	Sn	22 28 53.3	-1.2
OTAV				i		22 29 01.1	
	comp=Z,729nm,0.6s						
OTAV				i		22 29 01.1	
	comp=Z,729nm,0.6s						
OTAV	Otavalo	4.99	208	eP	Pn	22 27 57.1	-0.6
AZU	Azuero	5.18	307	⇓iP	Pn	22 27 59.2	-0.8
AZU				eS	Sn	22 28 55.7	-2.9
AZU	Azuero	5.18	307	⇓iP	Pn	22 27 59.0	-1.0
AZU				⇓iP	Pn	22 27 59.0	-1.0
AZU				eS	Sn	22 28 55.1	-3.5
AZU				eS	Sn	22 28 55.1	-3.5
CHPO	Chepo, Panama	5.38	326	eP	Pn	22 28 02.0	-0.8
CHPO				eS	Sn	22 29 00.5	-3.0
CACAO	El Cacao, Vera	5.43	300	⇓iP	Pn	22 28 01.8	-1.6
CACAO				eS	Sn	22 29 01.3	-3.4
ARGC	Ariguani, Magd	5.48	20	eP	Pn	22 28 06.1	+2.1
ARGC				eP	Pn	22 28 06.1	+2.1
ARGC				eS	Sn	22 29 05.6	-0.2
ARGC				eS	Sn	22 29 05.6	-0.2
ARGC				i		22 29 37.3	
	comp=Z,389nm,0.6s						
ARGC				i		22 29 37.3	
	comp=Z,389nm,0.6s						
UPA	Univ. de Panam	5.48	322	⇓iP	Pn	22 28 03.0	-1.1
UPA				eS	Sn	22 29 01.1	-4.7
UPA	Univ. de Panam	5.48	322	⇓iP	Pn	22 28 02.9	-1.1
UPA				⇓iP	Pn	22 28 02.9	-1.1
UPA				eS	Sn	22 29 03.3	-2.5
UPA				eS	Sn	22 29 03.3	-2.5
PNME	Penonome	5.66	312	⇓iP	Pn	22 28 06.5	0.0
PNME	Penonome	5.66	312	⇓iP	Pn	22 28 06.5	0.0
PNME				⇓iP	Pn	22 28 06.5	0.0
PNME				i		22 28 07.6	
	comp=Z,3µm,0.5s						
PNME				i		22 28 07.6	
	comp=Z,3µm,0.5s						
BCIP	Isla Barro Col	5.81	321	⇑iP	Pn	22 28 07.6	-0.9
BCIP				eS	Sn	22 29 11.6	-2.3
BCIP	Isla Barro Col	5.81	321	P	Pn	22 28 07.7	-0.8
BCIP	Isla Barro Col	5.81	321		Pn	22 28 07.7	-0.8
BCIP	Isla Barro Col	5.81	321	⇓iP	Pn	22 28 07.4	-1.1
BCIP				⇓iP	Pn	22 28 07.4	-1.1
BCIP				i		22 28 14.8	
	comp=Z,1µm,0.6s						
BCIP				i		22 28 14.8	
	comp=Z,1µm,0.6s						
BCIP				eS	Sn	22 29 11.8	-2.0
BCIP				eS	Sn	22 29 11.8	-2.0
SDV	Santo Domingo	6.86	52	P	Pn	22 28 23.4	+0.5
	comp=Z,48nm,0.3s,baz=226,slow=13,SNR=161						
SDV				S	Sn	22 29 39.4	-0.3
	comp=Z,28nm,0.3s,baz=84,slow=23,SNR=2.5						
SDV	Santo Domingo	6.86	52		Pn	22 28 23.3	+0.3
SDV	Santo Domingo	6.86	52	⇑iP	Pn	22 28 23.4	+0.5
SDV				⇑iP	Pn	22 28 23.4	+0.5
SDV	Santo Domingo	6.86	52	eP	Pn	22 28 23.5	+0.6
CRJC	Cerrejon, Guaj	7.07	27	⇑iP	Pn	22 28 24.6	-1.2
CRJC				⇑iP	Pn	22 28 24.6	-1.2
CRJC				eS	Sn	22 29 39.9	-4.9
CRJC				eS	Sn	22 29 39.9	-4.9
CRJC				i		22 29 56.6	
	comp=Z,340nm,0.6s						
CRJC				i		22 29 56.6	
	comp=Z,340nm,0.6s						
CHGR2	Aguacate	7.35	306	eP	Pn	22 28 32.5	+3.0
CHGR2				eS	Sn	22 29 50.3	-1.1
BRU2	Volcan	7.72	302	⇓iP	Pn	22 28 34.8	+0.1
BRU2				eS	Sn	22 30 07.4	+6.7
CDITO	Canoas	7.77	300	⇓iP	Pn	22 28 35.2	+0.1
EDSV	San Vito	7.98	302	eP	Pn	22 28 39.2	+1.2
URIC	Uribia, Colomb	8.09	30	eP	Pn	22 28 37.2	-2.2
URIC				eP	Pn	22 28 37.2	-2.2
LPLA	Las Palmas La	8.11	303	⇓eP	Pn	22 28 40.0	0.0
EDPN	Palmar Norte	8.46	301	eP	Pn	22 28 46.4	+1.8
EDLM	Las Mercedes	8.73	302	eP	Pn	22 28 49.1	+0.8
EDDO	Dominical	8.95	301	eP	Pn	22 28 52.5	+1.3
CDM	Cerro de Muert	9.02	303	eP	Pn	22 28 52.9	+0.3
BAUV	El Baul	9.06	62	eP	Pn	22 28 48.5	-4.2
RIMA	Rio Macho	9.22	304	eP	Pn	22 28 54.6	-0.4
CVTR	Volcan Turrial	9.27	305	eP	Pn	22 28 55.6	-0.4
VTUC	Crater, Volcan	9.28	305	eP	Pn	22 28 55.9	-0.1
LCR2	La Lucha 2	9.32	303	eP	Pn	22 28 55.7	-0.8
HDC3	Heredia 3	9.55	304	eP	Pn	22 29 00.3	+0.8
HDC	Heredia	9.55	304	⇓iP	Pn	22 29 00.7	+1.1
HDC				eS	Sn	22 30 50.6	+5.5
HDC	Heredia	9.55	304	eP	Pn	22 29 00.0	+0.5
HDC	Heredia	9.55	304	Pn	Pn	22 29 00.5	+0.9
JACO	JACO, Garabito	9.84	301	eP	Pn	22 29 04.3	+1.0
PRVC	Isla de Provid	10.10	329	⇑eP	Pn	22 29 05.6	-1.2
PRVC				⇑eP	Pn	22 29 05.6	-1.2
LAFE	Finca La Fe, P	10.12	301	eP	Pn	22 29 09.1	+1.9
COVE	Coope Vega, Sa	10.19	307	eP	Pn	22 29 08.1	+0.1
ARE1	Arenal 1	10.30	304	eP	Pn	22 29 11.6	+1.9
JTS	Las Juntas de	10.40	303	P	Pn	22 29 11.5	+0.5
	comp=Z,6.2nm,0.3s,baz=159,slow=7.5,SNR=81						
JTS				S	Sn	22 31 09.2	+3.5
	comp=Z,1.2nm,0.3s,baz=216,slow=23,SNR=1.8						
JTS				LR	LR	22 33 07.5	
	comp=Z,2µm,18.6s,baz=202,slow=37						
JTS	Las Juntas de	10.40	303	eP	Pn	22 29 10.6	-0.4
JTS	Las Juntas de	10.40	303	Pn	Pn	22 29 11.3	+0.3
JTS	Las Juntas de	10.40	303	⇓iP	Pn	22 29 11.2	+0.2
JTS				⇓iP	Pn	22 29 11.2	+0.2
INDI	Punta indio, G	10.66	300	eP	Pn	22 29 13.8	-0.7
PLVR	Palo Verde	10.77	302	eP	Pn	22 29 16.7	+0.6
CUI	Cuipilapa	10.78	304	eP	Pn	22 29 17.2	+1.1
GRZA	Playa Garza	10.80	299	eP	Pn	22 29 15.8	-0.6
ESPN	Las Esperanzas	11.03	313	Pn	Pn	22 29 18.6	-0.9
ACON	Acoyapa	11.54	310	Pn	Pn	22 29 25.5	-0.8
ATAH	Atahualpa	11.94	191	P	Pn	22 29 32.5	+0.4
	comp=Z,0.9nm,0.3s,baz=2.0,slow=8.4,SNR=18						
BOAB	BOACO BROADBAN	12.21	310	Pn	Pn	22 29 35.4	+0.1
PCRV	Puerto La Cruz	12.62	64	P	Pn	22 29 38.8	-1.8
	comp=Z,6.0nm,0.3s,baz=204,slow=9.3,SNR=21						
PCRV				S	Sn	22 31 57.8	-1.7
	comp=Z,1.2nm,0.3s,baz=189,slow=22,SNR=2.3						
MATN	Matagalpa	12.71	311	Pn	Pn	22 29 42.3	+0.4
CZSB	Cruzeiro do Su	12.77	165	eP	Pn	22 29 42.0	-0.5
ORIV	Oritupano	13.34	70	eP	P	22 29 57.2	+1.4
CRIN	San Cristobal	13.44	307		Pn	22 29 51.9	+0.5
MTDJ	Mount Denham	13.55	354	Pn	Pn	22 29 52.5	-0.3
JAKH	Jacmel	13.94	14		Pn	22 29 57.7	-0.1
LGNH	Logne	14.18	14		Pn	22 30 02.4	+1.6
TGUH	Tegucigalpa,Un	14.44	311	Pn	Pn	22 30 04.5	+0.2
TGUH	Tegucigalpa,Un	14.44	311	⇓eP	Pn	22 30 04.3	-0.1
TGUH				⇓eP	Pn	22 30 04.3	-0.1
SDDR	Presa de Saban	14.99	18	Pn	P	22 30 13.5	-0.7
SDDR				IAmb	IAmb	22 30 17.8	
	comp=Z,169nm,1.1s						
SDDR	Presa de Saban	14.99	18	⇓iP	P	22 30 14.3	+0.1
SDDR				⇓iP	P	22 30 14.3	+0.1
PAYG	Puerto Ayora	15.13	250	Pn	Pn	22 30 13.2	0.0
PAYG				IAmb	IAmb	22 30 18.7	
	comp=Z,198nm,0.9s						
GTBY	Guantanamo Bay	15.20	4	Pn	P	22 30 15.3	-1.2
GTBY				IAmb	IAmb	22 30 22.2	
	comp=Z,79nm,0.7s						
FSCY	Frank Sound, G	15.38	342	Pn	Pn	22 30 15.9	-0.3
CBCY	The Bluff, Cay	15.40	347	Pn	Pn	22 30 16.1	-0.3
WBCY	West Bay, Gran	15.51	341	Pn	Pn	22 30 17.3	-0.4
TPP	Pointe-a-Pierr	15.57	68	e	P	22 30 23.6	+2.9
TRN	Trinidad (W)	15.73	67	e	P	22 30 23.0	+0.6
SNET	Serv Nac Est T	15.75	306	Pn	Pn	22 30 20.0	-0.9
SNET				IAmb	IAmb	22 30 22.6	
	comp=Z,216nm,1.0s						
MLPR	Magueyes Islan	15.92	33	Pn	Pn	22 30 20.6	-2.2
TBH	Brigand Hill	15.98	68	e	P	22 30 26.7	+1.5
MPR	Mayaguez	16.06	32		Pn	22 30 22.5	-2.2
GRGR	Grenville	16.09	62	e	Pn	22 30 24.1	-1.1
GRGR	Grenville	16.09	62		Pn	22 30 24.3	-0.8
MTO3	Montecristo	16.25	307		Pn	22 30 27.4	+0.1
MTO3				IAmb	IAmb	22 30 29.1	
	comp=Z,106nm,0.8s						
ESQI	Esquipulas	16.33	308	Pn	Pn	22 30 28.3	+0.2
ESQI				IAmb	IAmb	22 30 33.6	
	comp=Z,201nm,0.8s						
AOPR	Arecibo Observ	16.38	33	Pn	Pn	22 30 27.3	-1.4
GCMP	Grenada, Carri	16.45	61	e	Pn	22 30 27.8	-1.7
SJG	San Juan	16.53	35	P	Pn	22 30 28.1	-2.4
	comp=Z,10nm,0.3s,baz=214,slow=13,SNR=24						
SJG	San Juan	16.53	35	P	Pn	22 30 28.1	-2.4
SJG				pmax	pmax		
	comp=Z,474nm,1.5s						
SJG	San Juan	16.53	35		Pn	22 30 28.1	-2.4
NNA	Nana	16.56	183	P	Pn	22 30 30.4	-0.4
	comp=Z,0.9nm,0.3s,baz=290,slow=17,SNR=2.7						
NNA	Nana	16.56	183	ceP	P	22 30 34.8	+3.2
NNA				pmax	pmax		
	comp=Z,29nm,0.9s						
NNA	Nana	16.56	183	Pn	Pn	22 30 30.6	-0.3
EMPR	Esperanza - Ma	16.61	34		Pn	22 30 31.5	+0.1
GCPR	Guaynabo City	16.73	35		Pn	22 30 30.9	-2.0
HUMP	Col San Antoni	16.73	36		Pn	22 30 31.4	-1.5
SVB	Belmont	16.97	59	e	Pn	22 30 34.4	-1.4
SVB	Belmont	16.97	59		Pn	22 30 34.6	-1.3
PTGA	Pitinga	16.98	108	P	Pn	22 30 35.4	-0.7
	comp=Z,7.1nm,0.3s,baz=294,slow=13,SNR=72						
PTGA	Pitinga	16.98	108	Pn	Pn	22 30 35.5	-0.6
PTGA				IAmb	IAmb	22 30 39.0	
	comp=Z,64nm,0.7s						
PTGA	Pitinga	16.98	108	eP	Pn	22 30 35.0	-1.1
SVV	Soufriere Volc	17.02	59	e	P	22 30 38.4	+1.7
CDVI	St. Croix	17.09	40		Pn	22 30 36.0	-1.4
CUPR	Culebra, Puert	17.20	37		P	22 30 37.8	-0.8
MACA	Manacapuru-AM	17.25	117	eP	P	22 30 38.8	-0.5
SLDE	Delcer	17.39	58	e	Pn	22 30 42.4	+1.3
SLB	Belfond	17.42	57	e	Pn	22 30 42.4	+1.1
ETMB	Extrema	17.43	146	eP	Pn	22 30 41.8	+0.3
MCLT	Moule a Chique	17.44	58	e	P	22 30 40.9	-0.4
SLPA	Patience	17.53	58	e	Pn	22 30 43.4	+0.7
SLBI	Saint Lucia, B	17.57	57	e	P	22 30 41.4	-1.3
SLW	Petit Monier	17.60	57	e	Pn	22 30 44.0	+0.4
BIM	Bigot	17.75	55	e	P	22 30 44.4	-0.3
FDF	Fort de France	17.80	55	e	P	22 30 45.1	-0.2
FDF	Fort de France	17.80	55	P	P	22 30 43.8	-1.5
FDF				pmax	pmax		
	comp=Z,300nm,0.5s						
FDF	Fort de France	17.80	55	P	P	22 30 43.8	-1.5
MPOM	Morne Pois Mar	17.88	56	e	P	22 30 44.1	-2.1
DSLB	Salisbury	17.97	52	e	P	22 30 33.9	-13
SABA	Saba	18.01	43	e	Pn	22 30 48.4	-0.1
SABA	Saba	18.01	43	P	P	22 30 46.1	-1.4
SABA				IAmb	IAmb	22 31 00.8	
	comp=Z,132nm,0.7s						
TDBA	Terre de Bas,	18.04	51	e	P	22 30 46.9	-1.1
ILAM	Ilet Lapin Mar	18.04	55	e	Pn	22 30 48.5	-0.3
SEUS	St. Eustatius	18.10	44	P	P	22 30 47.9	-0.6
SKI	Saint Kitts	18.16	45	P	P	22 30 48.3	-0.9
SKI				pmax	pmax		
	comp=Z,224nm,0.9s						
SKI	Saint Kitts	18.16	45	P	P	22 30 48.3	-0.9
PETF	Flores	18.18	313	P	Pn	22 30 50.7	+0.2
RTAL	Retalhuleu	18.22	304	P	P	22 30 50.2	+0.3
BBGH	Gun Hill	18.37	62	e	P	22 30 50.1	-1.5
MAGL	Barre de l’ile	18.37	51	e	P	22 30 50.6	-0.9
HUEH	Huehuetenango	18.48	306	P	P	22 30 53.0	+0.1
HUEH				IAmb	IAmb	22 30 56.3	
	comp=Z,147nm,0.8s						
SAML	Samuel	18.67	136	P	P	22 30 54.8	0.0
SAML				pmax	pmax		
	comp=Z,49nm,0.7s						
SAML	Samuel	18.67	136	P	P	22 30 54.8	0.0
SAML	Samuel	18.67	136	eP	P	22 30 54.2	-0.6
ANWB	Willy Bob	19.06	46		P	22 30 58.1	-1.0
TEIG	Tepich	19.49	324	P	Pn	22 31 05.0	-0.9
	comp=Z,13nm,0.3s,baz=68,slow=2.1,SNR=52						
TEIG	Tepich	19.49	324	P	P	22 31 04.3	+0.6
TEIG				IAmb	IAmb	22 31 06.5	
	comp=Z,175nm,1.2s						
CCIG	Comitan	19.52	307	P	P	22 31 03.5	-0.8
CMIG	Matias Romero	22.17	305	P	P	22 31 30.4	-2.0
	comp=Z,30nm,0.8s,baz=89,slow=9.2,SNR=27						
ITTB	Itaituba	22.23	114	eP	P	22 31 32.5	-0.7
LPAZ	La Paz	22.26	159	P	P	22 31 33.5	-0.5
	comp=Z,3.7nm,0.4s,baz=350,slow=3.5,SNR=21						
LPAZ				LR	LR	22 41 43.2	
	comp=Z,239nm,18.9s,baz=322,slow=40						
LPAZ	La Paz	22.26	159	P	P	22 31 32.9	-1.1
LPAZ				pmax	pmax		
	comp=Z,12nm,0.8s						
LPAZ	La Paz	22.26	159	P	P	22 31 32.9	-1.1
LPAZ	La Paz	22.26	159	eP	P	22 31 33.9	-0.1
MALB	Monte Alegre	22.76	106	eP	P	22 31 37.5	-1.1
MDP	Montagnes des	23.38	88	P	P	22 31 44.5	+0.1
	comp=Z,72nm,0.4s,baz=276,slow=8.5,SNR=60						
VILB	Vilhena	23.58	138	eP	P	22 31 45.9	-0.4
NPGB	Novo Progresso	23.75	119	eP	P	22 31 47.2	-0.5
PB16	IPOC Station P	23.76	164	P	P	22 31 48.2	-0.2
DWPF	Disney Wildern	23.86	348	P	P	22 31 51.2	+2.5
	baz=167						
MNMC	Minye Minye	24.50	165	P	P	22 31 55.1	+0.3
MCPB	Macapa, AP	24.53	101	eP	P	22 31 53.8	-1.1
PSGCX	Pisagua	24.82	166	P	P	22 31 57.6	+0.2
SIV	San Ignacio	25.34	144	P	P	22 32 01.9	-0.3
	comp=Z,46nm,0.9s,baz=328,slow=9.0,SNR=142						
TLIG	Tlapa	25.46	302	P	P	22 32 03.1	-0.2
TLIG				IAmb	IAmb	22 32 09.8	
	comp=Z,96nm,0.9s						
PB08	IPOC Station P	25.58	165	P	P	22 32 05.0	+0.3
TA01	Diego Aracena	25.74	167	P	P	22 32 06.7	+1.0
PATCX	Punta Patache	25.99	167	P	P	22 32 08.8	+0.7
PB01	IPOC Station P	26.36	166	P	P	22 32 12.0	+0.6
PB07	IPOC Station P	26.93	167	P	P	22 32 17.8	+1.2
LVC	Limon Verde	28.00	166	P	P	22 32 27.1	+0.7
	comp=Z,5.8nm,0.6s,baz=52,slow=18,SNR=7.9						
LVC				pP	pP	22 32 50.9	+0.6
	comp=Z,30nm,0.9s,baz=356,slow=7.8,SNR=11						
LVC	Limon Verde	28.00	166	P	P	22 32 27.4	+0.9
LVC	Limon Verde	28.00	166	eP	P	22 32 26.6	+0.2
PRPB	Parauapebas	28.37	112	eP	P	22 32 28.2	-1.2
PB15	IPOC Station P	28.45	167	P	P	22 32 31.7	+1.5

154A	Montrose	28.57	348	P	P	22 32 32.5	+1.6
154A				IAmb	IAmb	22 32 34.9	
	comp=Z,51nm,0.7s						
SALV	Santo Antonio	28.73	136	*e*P	P	22 32 32.2	-0.4
250A	Grady	28.80	342	P	P	22 32 34.0	+1.1
250A				IAmb	IAmb	22 32 36.7	
	comp=Z,30nm,0.7s						
TMAB	Tom-Au,PA,Br	28.84	103	*e*P	P	22 32 33.6	0.0
152A	Waverly Hall	29.00	345	P	P	22 32 35.4	+0.6
346A	Big Creek Wild	29.40	336	P	P	22 32 39.5	+1.2
346A				IAmb	IAmb	22 32 40.8	
	comp=Z,52nm,0.8s						
GOGA	Godfrey	29.41	347	P	P	22 32 40.4	+2.0
	baz=165,SNR=8.0						
GOGA	Godfrey	29.41	347	P	P	22 32 39.3	+0.9
GOGA				pmax	pmax		
	comp=Z,20nm,0.7s						
GOGA	Godfrey	29.41	347	P	P	22 32 39.3	+0.9
SNDB	Serra Nova Dou	29.69	124	*e*P	P	22 32 40.6	-0.5
Z51A	Franklin	29.74	345	P	P	22 32 42.8	+1.5
JSC	Jenkinsville	29.86	351	P	P	22 32 42.7	+0.4
JSC				pmax	pmax		
	comp=Z,9.0nm,0.7s						
JSC	Jenkinsville	29.86	351	P	P	22 32 42.7	+0.4
HODGE	Hodges	29.97	350	P	P	22 32 44.9	+1.6
HODGE				IAmb	IAmb	22 32 46.8	
	comp=Z,18nm,0.6s						
Y52A	Lilburn	29.98	347	P	P	22 32 44.3	+0.9
Y52A				IAmb	IAmb	22 32 46.8	
	comp=Z,18nm,0.7s						
344A	Westbrook Farm	29.99	334	P	P	22 32 44.8	+1.3
344A				IAmb	IAmb	22 32 46.1	
	comp=Z,38nm,0.8s						
LRAL	Lakeview Retre	30.00	341	P	P	22 32 45.4	+1.8
	baz=158,SNR=11						
LRAL	Lakeview Retre	30.00	341	P	P	22 32 45.0	+1.3
LRAL				IAmb	IAmb	22 32 46.3	
	comp=Z,55nm,1.4s						
BIRD	Birdtown, Kers	30.11	353	P	P	22 32 45.0	+0.5
GO02	Mina Guanaco	30.32	168	P	P	22 32 48.7	+1.9
W58A	Raeford	30.35	355	P	P	22 32 49.0	+2.4
	baz=174						
146A	Union	30.35	338	P	P	22 32 47.1	+0.4
146A				IAmb	IAmb	22 32 50.1	
	comp=Z,52nm,1.3s						
PP1B	Ponte de Pedra	30.47	137	*e*P	P	22 32 47.9	0.0
Z47A	Carrollton	30.51	340	P	P	22 32 49.4	+1.4
VBMS	Vicksburg	30.56	335	P	P	22 32 48.8	+0.3
VBMS				IAmb	IAmb	22 32 50.8	
	comp=Z,51nm,0.8s						
Y49A	Blount Mountai	30.59	343	P	P	22 32 50.0	+1.2
Y49A				IAmb	IAmb	22 32 51.8	
	comp=Z,21nm,0.7s						
W56A	Indian Trail	30.60	353	P	P	22 32 51.2	+2.3
	baz=171						
342A	Flagon Creek P	30.64	332	P	P	22 32 50.3	+1.1
342A				IAmb	IAmb	22 32 51.4	
	comp=Z,37nm,0.8s						
KMSC	Kings Mountain	30.71	352	P	P	22 32 50.4	+0.5
BG3	Lake Jocassee	30.84	349	P	P	22 32 51.8	+0.8
BG3				IAmb	IAmb	22 32 54.8	
	comp=Z,18nm,0.6s						
X51A	Calhoun	30.84	346	P	P	22 32 50.4	-0.6
V60A	Jim Taylor Roa	30.97	358	P	P	22 32 54.8	+2.7
	baz=178						
V60A	Jim Taylor Roa	30.97	358	P	P	22 32 53.1	+1.0
V60A				IAmb	IAmb	22 32 55.5	
	comp=Z,30nm,0.8s						
FPAL	Fort Paine	31.01	345	P	P	22 32 53.0	+0.4
FPAL				IAmb	IAmb	22 32 55.0	
	comp=Z,22nm,0.6s						
V59A	Middlesex	31.01	357	P	P	22 32 55.0	+2.5
	baz=176,SNR=6.3						
V58A	Windy Hill, Pi	31.10	355	P	P	22 32 54.2	+0.9
W52A	Murphy	31.13	348	P	P	22 32 54.3	+0.7
W52A				IAmb	IAmb	22 32 56.5	
	comp=Z,22nm,0.6s						
V57A	Coltrane Farms	31.26	354	P	P	22 32 56.8	+2.2
	baz=173						
V56A	Mocksville	31.26	353	P	P	22 32 56.9	+2.3
	baz=172,SNR=6.8						
ZAIG	Zacatecas	31.28	308	P	P	22 32 57.7	+2.3
HKT	Hockley	31.31	326	*i* P	P	22 32 54.6	-0.5
HKT				pmax	pmax		
	comp=Z,7.0nm,0.6s						
HKT	Hockley	31.31	326	P	P	22 32 55.3	+0.2
X48A	Hartselle	31.33	342	P	P	22 32 56.3	+0.9
143A	Socs Landing,	31.35	335	P	P	22 32 55.3	-0.2
V55A	Taylorsville	31.39	352	P	P	22 32 57.4	+1.6
ARAG	Araguaiana, MT	31.43	131	*e*P	P	22 32 55.4	-1.0
SMTB	Santa Maria do	31.44	115	*e*P	P	22 32 56.0	-0.6
V53A	Saluda	31.47	349	P	P	22 32 57.7	+1.1
V53A				IAmb	IAmb	22 33 00.2	
	comp=Z,20nm,0.7s						
U61A	Possum Corner	31.52	359	P	P	22 32 59.6	+2.7
	baz=180						
U61A	Possum Corner	31.52	359	P	P	22 32 57.3	+0.4
U61A				IAmb	IAmb	22 33 00.1	
	comp=Z,47nm,0.7s						
W50A	Signal Mountai	31.56	345	P	P	22 32 58.5	+1.2
W50A				IAmb	IAmb	22 32 59.8	
	comp=Z,18nm,0.6s						
CPCT	Cooper Cave	31.61	347	P	P	22 32 59.4	+1.6
CPCT				IAmb	IAmb	22 33 00.6	
	comp=Z,20nm,0.6s						
Y45A	Yeager Farm, C	31.63	338	P	P	22 32 59.4	+1.5
TKL	Tuckaleechee C	31.65	348	P	P	22 32 59.4	+1.3
TKL				pmax	pmax		
	comp=Z,32nm,1.5s						
TKL	Tuckaleechee C	31.65	348	P	P	22 32 59.4	+1.3
U58A	Oxford	31.66	356	P	P	22 33 00.4	+2.3
	baz=176						
U60A	Pendleton	31.67	358	P	P	22 33 00.3	+2.0
	baz=178						
U57A	Blanch	31.75	355	P	P	22 33 01.2	+2.2
	baz=174,SNR=8.9						
U56A	King	31.78	353	P	P	22 33 02.3	+3.0
	baz=172,SNR=5.7						
U56A	King	31.78	353	P	P	22 33 01.1	+1.8
U56A				IAmb	IAmb	22 33 03.1	
	comp=Z,20nm,0.7s						
NATX	Nacogdoches	32.09	329	P	P	22 33 03.2	+1.2
	baz=144,SNR=5.7						
NATX	Nacogdoches	32.09	329	P	P	22 33 03.0	+1.0
U54A	Nelsons Funny	32.14	351	P	P	22 33 04.9	+2.5
	baz=169,SNR=11						
OXF	Oxford	32.16	339	P	P	22 33 03.7	+1.1
	baz=155						
T58A	Grand View Acr	32.20	356	P	P	22 33 04.9	+1.9
	baz=176,SNR=6.1						
PEXB	Peixe	32.27	121	*e*P	P	22 33 03.2	-0.7
833A	Chaparral WMA,	32.30	319	P	P	22 33 04.4	+0.5
	baz=133,SNR=18						
T57A	Hurt	32.31	355	P	P	22 33 05.7	+1.8
	baz=174,SNR=5.4						
T60A	Surry	32.33	359	P	P	22 33 06.0	+2.0
	baz=179,SNR=7.3						
T56A	Rocky Mt	32.41	354	P	P	22 33 07.7	+2.9
	baz=173,SNR=8.7						
Z41A	Richland Creek	32.43	333	P	P	22 33 05.7	+0.7
	baz=148						
V48A	Smith Brothers	32.47	344	P	P	22 33 06.8	+1.5
BLA	Blacksburg	32.63	354	P	P	22 33 09.7	+2.9
	baz=172,SNR=6.6						
BLA	Blacksburg	32.63	354	P	P	22 33 07.5	+0.7
BLA				pmax	pmax		
	comp=Z,22nm,0.8s						
BLA	Blacksburg	32.63	354	P	P	22 33 07.5	+0.7
BLA				IAmb	IAmb	22 33 10.7	
	comp=Z,22nm,0.8s						
ROSB	Rosrio	32.82	103	*e*P	P	22 33 07.6	-1.1
S58A	Poland Farm, P	32.84	357	P	P	22 33 09.6	+1.1
	baz=177						
237A	Washetta, Mont	32.88	328	P	P	22 33 09.7	+0.8
S60A	Water View	32.89	359	P	P	22 33 12.0	+3.1
	baz=179,SNR=5.2						
U49A	Red Boiling Sp	32.92	346	P	P	22 33 10.8	+1.6
U49A				IAmb	IAmb	22 33 12.5	
	comp=Z,22nm,0.7s						
435B	Jarrell	32.93	325	P	P	22 33 10.0	+0.6
	baz=138						
S59A	Mechanicsville	32.96	358	P	P	22 33 11.7	+2.2
	baz=178						
S56A	Natural Bridge	33.01	355	P	P	22 33 12.4	+2.3
	baz=174,SNR=6.6						
S57A	Dark Hollow, R	33.04	356	P	P	22 33 12.7	+2.4
	baz=175,SNR=5.5						
S57A	Dark Hollow, R	33.04	356	P	P	22 33 10.7	+0.4
S57A				IAmb	IAmb	22 33 13.6	
	comp=Z,28nm,1.2s						
WVT	Waverly	33.12	342	P	P	22 33 11.4	+0.5
	baz=158						
WVT	Waverly	33.12	342	P	P	22 33 11.5	+0.5
WVT				pmax	pmax		
	comp=Z,15nm,0.7s						
WVT	Waverly	33.12	342	P	P	22 33 11.5	+0.5
R58B	Mineral	33.18	357	P	P	22 33 13.5	+2.0
	baz=177						
T50A	Nancy	33.19	347	P	P	22 33 12.3	+0.8
S54A	Dingess, Beckl	33.32	352	P	P	22 33 15.1	+2.3
	baz=171						
S54A	Dingess, Beckl	33.32	352	P	P	22 33 14.4	+1.7
S54A				IAmb	IAmb	22 33 16.3	
	comp=Z,31nm,1.2s						
R59A	King George, V	33.39	359	P	P	22 33 16.3	+3.0
	baz=178						
HALT	Halls	33.40	340	P	P	22 33 13.7	+0.2
CBN	Corbin Frederi	33.41	358	P	P	22 33 13.2	-0.2
CBN				IAmb	IAmb	22 33 16.8	
	comp=Z,34nm,1.1s						
Z38A	Mt. Pleasant	33.46	331	P	P	22 33 14.1	+0.1
Z38A				IAmb	IAmb	22 33 15.8	
	comp=Z,39nm,0.8s						
LPAR	Lepanto	33.46	339	P	P	22 33 14.3	+0.4
X40A	Basin Creek Fa	33.49	334	P	P	22 33 14.6	+0.4
	baz=149,SNR=13						
R58A	Rapidan	33.52	357	P	P	22 33 16.8	+2.4
	baz=177,SNR=11						
S51A	Beattyville	33.53	349	P	P	22 33 15.8	+1.3
S51A				IAmb	IAmb	22 33 18.7	
	comp=Z,19nm,0.7s						
R57A	Stanardsville	33.55	357	P	P	22 33 17.0	+2.4
	baz=176						
R54A	Victor	33.66	353	P	P	22 33 18.3	+2.6
	baz=171,SNR=5.2						
GNAR	Gosnell	33.69	339	P	P	22 33 16.1	+0.3
GLAT	Glass	33.71	341	P	P	22 33 16.3	+0.2
WHTX	Lake Whitney,	33.76	326	P	P	22 33 17.1	+0.6
	baz=140,SNR=12						
AC05	El Transito	33.77	171	P	P	22 33 18.6	+1.7
AC05				IAmb	IAmb	22 33 26.6	
	comp=Z,32nm,0.8s						
W41B	Gary Mavity, V	33.83	336	P	P	22 33 17.4	+0.2
	baz=150,SNR=8.0						
MIAR	Mount Ida	33.86	334	P	P	22 33 17.6	+0.1
	baz=148,SNR=7.6						
MIAR	Mount Ida	33.86	334	P	P	22 33 17.5	+0.1
MIAR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MIAR	Mount Ida	33.86	334	P	P	22 33 17.5	+0.1
LCO	Las Campanas	33.88	171	P	P	22 33 18.3	+0.4
LCO				pmax	pmax		
	comp=Z,13nm,0.8s						
LCO	Las Campanas	33.88	171	P	P	22 33 18.3	+0.4
HICK	Hickman	33.94	341	P	P	22 33 18.2	+0.1
JCT	Junction City	34.04	322	P	P	22 33 19.1	0.0
	baz=134,SNR=6.6						
JCT	Junction City	34.04	322	P	P	22 33 19.1	0.0
JCT				pmax	pmax		
	comp=Z,21nm,1.0s						
JCT	Junction City	34.04	322	P	P	22 33 19.1	0.0
JCT				IAmb	IAmb	22 33 21.1	
	comp=Z,21nm,1.0s						
Q59A	Harwood	34.05	359	P	P	22 33 21.3	+2.4
	baz=179						
Q58A	Fox Den Farm,	34.15	358	P	P	22 33 22.2	+2.4
	baz=177,SNR=11						
PARMO	Parma	34.23	340	P	P	22 33 21.5	+0.9
Q57A	Strasburg	34.28	357	P	P	22 33 23.7	+2.7
	baz=176,SNR=6.5						
Q56A	Snyder Ridge,	34.33	356	P	P	22 33 24.8	+3.3
	baz=175						
Q53A	Leroy	34.39	352	P	P	22 33 24.3	+2.3
	baz=171,SNR=14						
FCAR	Ozark Folk Cen	34.41	337	P	P	22 33 21.9	-0.3
FCAR				IAmb	IAmb	22 33 23.7	
	comp=Z,16nm,0.7s						
R49A	Shelbyville	34.48	347	P	P	22 33 23.4	+0.7
R49A				IAmb	IAmb	22 33 25.5	
	comp=Z,20nm,0.7s						
W39A	Magazine	34.50	334	P	P	22 33 23.5	+0.6
	baz=148,SNR=14						
PBMO	Poplar Bluff	34.56	339	P	P	22 33 23.7	+0.2
WCI	Wyandotte Cave	34.68	346	P	P	22 33 25.4	+1.0
	baz=162						
WCI	Wyandotte Cave	34.68	346	P	P	22 33 25.6	+1.2
WCI				pmax	pmax		
	comp=Z,29nm,0.8s						
WCI	Wyandotte Cave	34.68	346	P	P	22 33 25.6	+1.2
WCI				IAmb	IAmb	22 33 30.0	
	comp=Z,29nm,0.8s						
P57A	Homestead Farm	34.70	357	P	P	22 33 27.6	+3.0
	baz=177						
P56A	Dayton Farm, R	34.77	356	P	P	22 33 28.6	+3.4
	baz=175,SNR=9.1						
P59A	Jarrettsville	34.79	360	P	P	22 33 27.6	+2.2
	baz=180						
Q51A	Peebles	34.83	350	P	P	22 33 27.6	+1.8
CO01	Juntas del Tor	34.92	171	P	P	22 33 28.2	+1.3
MCWV	Mont Chateau	35.00	355	P	P	22 33 29.6	+2.4
	baz=174						
MCWV	Mont Chateau	35.00	355	P	P	22 33 29.2	+2.0
GO04	Tololo Observa	35.01	172	P	P	22 33 28.6	+1.0
GO04				IAmb	IAmb	22 33 36.4	
	comp=Z,30nm,1.1s						
T42A	Van Buren	35.02	339	P	P	22 33 27.4	0.0
ITRB	Iturama	35.03	135	*e*P	P	22 33 26.9	-0.8
ITRB				*e*pP	pP	22 33 52.5	+0.3
U40A	Yellville	35.10	336	P	P	22 33 28.5	+0.4
	baz=150,SNR=41						
U40A	Yellville	35.10	336	P	P	22 33 28.2	0.0
P52A	Corning	35.24	352	P	P	22 33 31.4	+2.1
	baz=170,SNR=10						
O58A	Lewisberry	35.31	359	P	P	22 33 32.8	+2.9
	baz=179,SNR=8.4						
SDBA	SAO DESIDERIO	35.34	119	*e*P	P	22 33 29.8	-0.7
PAGS	Pennsylvania G	35.41	359	P	P	22 33 31.8	+1.1
PAGS				IAmb	IAmb	22 33 34.4	
	comp=Z,17nm,0.7s						
O57A	Amberson	35.41	358	P	P	22 33 33.6	+2.8
	baz=178,SNR=7.8						
ABTX	Abilene, Hawle	35.47	324	P	P	22 33 31.8	+0.4
	baz=137,SNR=25						
ABTX	Abilene, Hawle	35.47	324	P	P	22 33 31.7	+0.4
HHAR	Hobbs	35.49	335	P	P	22 33 31.4	0.0
HHAR				IAmb	IAmb	22 33 32.2	
	comp=Z,42nm,0.9s						
O59A	Robesonia	35.49	360	P	P	22 33 33.8	+2.5
	baz=180						
O60A	Telford	35.50	1	P	P	22 33 33.8	+2.4
	baz=181						
O56A	Blue Knob Stat	35.52	357	P	P	22 33 34.6	+3.0
	baz=176,SNR=6.3						
O56A	Blue Knob Stat	35.52	357	P	P	22 33 32.8	+1.2
O56A				IAmb	IAmb	22 33 35.8	
	comp=Z,19nm,0.8s						
IPMB	Ipameri, GO	35.54	130	*e*P	P	22 33 31.1	-1.0
IPMB				*e*pP	pP	22 33 54.5	-2.1
MGMO	Mountain Grove	35.57	338	P	P	22 33 32.4	+0.3
MGMO				IAmb	IAmb	22 33 32.7	
	comp=Z,17nm,0.7s						
O54A	Avella	35.57	354	P	P	22 33 33.1	+1.1
O54A				IAmb	IAmb	22 33 36.1	
	comp=Z,34nm,1.4s						
P49A	Miami Univ. Ec	35.58	349	P	P	22 33 33.6	+1.5
	baz=165,SNR=8.4						
FVM	French Village	35.65	340	P	P	22 33 33.1	+0.3
FVM				pmax	pmax		
	comp=Z,52nm,0.7s						
FVM	French Village	35.65	340	P	P	22 33 33.1	+0.3
TRCB	Terra Rica	35.65	141	*e*P	P	22 33 31.3	-1.7
TRCB				*e*pP	pP	22 33 56.2	-1.3
CO03	El Pedregal	35.68	172	P	P	22 33 34.4	+1.2
CO03				IAmb	IAmb	22 33 36.2	
	comp=Z,24nm,1.1s						
PCMB	Pacaembu	35.69	138	*e*P	P	22 33 32.1	-1.3
PCMB				*e*pP	pP	22 33 56.8	-1.0
O53A	New Philadelph	35.73	353	P	P	22 33 35.6	+2.2
	baz=171,SNR=10.0						
CPUP	Villa Florida	35.78	150	P	P	22 33 31.4	-2.5
	comp=Z,8.6nm,0.7s,baz=331,slow=8.8,SNR=24						
CPUP				ScP	ScP	22 39 36.3	-0.3
	comp=Z,2.2nm,0.8s,baz=335,slow=5.9,SNR=4.0						
CPUP				LR	LR	22 50 04.9	
	comp=Z,186nm,19.6s,baz=332,slow=39						
CPUP	Villa Florida	35.78	150	P	P	22 33 31.8	-2.2
CPUP				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CPUP	Villa Florida	35.78	150	P	P	22 33 31.8	-2.2
CPUP	Villa Florida	35.78	150	*e*P	P	22 33 31.5	-2.5
TXAR	Lajitas Array	35.82	316	P	P	22 33 35.3	+0.8
	comp=Z,10.0nm,0.7s,baz=128,slow=8.9,SNR=112						
TXAR				PcP	PcP	22 36 01.5	+1.5
	comp=Z,4.4nm,0.7s,baz=140,slow=6.6,SNR=8.5						
TXAR				ScP	ScP	22 39 37.7	+0.8
	comp=Z,1.2nm,0.8s,baz=144,slow=7.3,SNR=4.3						
TXAR				LR	LR	22 51 13.4	
	comp=Z,49nm,18.3s,baz=0.0,slow=41						
TXAR	Lajitas Array	35.82	316	P	P	22 33 35.1	+0.6
TX32	Lajitas Array	35.82	316	P	P	22 33 35.7	+1.3
TX32				IAmb	IAmb	22 33 36.6	
	comp=Z,15nm,0.8s						
HPIG		35.87	311	P	P	22 33 35.9	+0.9
ACSO	Alum Creek Sta	35.95	351	P	P	22 33 37.1	+1.8
	baz=168						
ACSO	Alum Creek Sta	35.95	351	P	P	22 33 36.7	+1.4
N57A	Milroy	35.96	358	P	P	22 33 37.4	+2.0
	baz=178						
N61A	South Mountain	35.97	2	P	P	22 33 37.7	+2.3
	baz=183						
CCM	Cathedral Cave	35.99	339	P	P	22 33 35.6	-0.1
	baz=154						
CCM	Cathedral Cave	35.99	339	P	P	22 33 35.8	+0.1
CCM				pmax	pmax		
	comp=Z,47nm,0.6s						
CCM	Cathedral Cave	35.99	339	P	P	22 33 35.8	+0.1
CO02	Combarbal	36.00	173	P	P	22 33 37.7	+1.8
CO02				IAmb	IAmb	22 33 38.5	
	comp=Z,25nm,0.8s						
TUL1	Leonard	36.00	332	P	P	22 33 36.1	+0.2
	baz=145,SNR=24						
TUL1	Leonard	36.00	332	P	P	22 33 36.2	+0.4
N58A	Sunbury	36.02	359	P	P	22 33 38.2	+2.3
	baz=179						
N60A	Cedar Hill Far	36.06	1	P	P	22 33 38.4	+2.2
	baz=182						
N59A	State Game Lan	36.09	0	P	P	22 33 39.1	+2.6
	baz=181						
N59A	State Game Lan	36.09	0	P	P	22 33 38.6	+2.1
N56A	West Decatur	36.15	357	P	P	22 33 39.8	+2.8
	baz=176,SNR=8.9						
N53A	Lisbon	36.23	354	P	P	22 33 39.3	+1.5
PAL	Palisades	36.24	3	P	P	22 33 40.1	+2.4
	baz=184						
N54A	Moraine State	36.31	355	P	P	22 33 41.2	+2.8
	baz=174,SNR=9.0						
M57A	Sunshine Farm,	36.52	359	P	P	22 33 43.2	+3.0
	baz=178,SNR=16						
M57A	Sunshine Farm,	36.52	359	P	P	22 33 42.8	+2.6
M60A	Port Jervis	36.53	2	P	P	22 33 42.3	+2.1
	baz=183						
N51A	Ashland	36.53	352	P	P	22 33 41.7	+1.5
M61A	Granite Spring	36.55	3	P	P	22 33 42.8	+2.4
	baz=184						
WMOK	Wichita Mounta	36.56	328	P	P	22 33 40.5	-0.2
	baz=140,SNR=35						
WMOK	Wichita Mounta	36.56	328	P	P	22 33 40.5	-0.2
WMOK				pmax	pmax		
	comp=Z,27nm,0.8s						
WMOK	Wichita Mounta	36.56	328	P	P	22 33 40.5	-0.2
WMOK				IAmb	IAmb	22 33 41.6	
	comp=Z,27nm,0.8s						
ZON	Zonda	36.70	169	P	P	22 33 42.9	+1.1
ZON				pmax	pmax		
	comp=Z,24nm,1.2s						
ZON	Zonda	36.70	169	P	P	22 33 42.9	+1.1
ZON				IAmb	IAmb	22 33 45.5	
	comp=Z,24nm,1.2s						
M56A	Emporium	36.71	357	P	P	22 33 44.2	+2.4
	baz=177,SNR=9.6						
M56A	Emporium	36.71	357	P	P	22 33 43.6	+1.9
M56A				IAmb	IAmb	22 33 45.4	
	comp=Z,36nm,0.8s						
M55A	Ridgway	36.72	357	P	P	22 33 43.6	+1.8
M55A				IAmb	IAmb	22 33 45.0	
	comp=Z,12nm,0.7s						
M59A	Waymart	36.72	1	P	P	22 33 44.3	+2.4
	baz=181						
M62A	Hamden	36.73	4	P	P	22 33 44.4	+2.5
	baz=186						
KSPA	Keystone Colle	36.73	0	P	P	22 33 44.1	+2.2
KSPA				IAmb	IAmb	22 33 45.7	
	comp=Z,24nm,0.8s						
M63A	Gales Ferry	36.76	5	P	P	22 33 44.7	+2.6
	baz=187						
M63A	Gales Ferry	36.76	5	P	P	22 33 44.0	+1.9
M54A	Oil Creek Stat	36.82	356	P	P	22 33 45.6	+2.8
	baz=174,SNR=8.4						
M53A	Wl Miller and	36.84	354	P	P	22 33 45.3	+2.4
	baz=172,SNR=6.3						
SFIN	Lafayette	36.91	346	P	P	22 33 43.8	+0.3
	baz=162,SNR=9.7						
JANB	Januaria	37.09	122	*e*P	P	22 33 44.5	-1.0
T35A	Sooner Cattle	37.16	332	P	P	22 33 45.8	+0.1
L57A	Andrews Acres	37.18	359	P	P	22 33 48.1	+2.3
	baz=179,SNR=7.4						
L60A	Shokan	37.20	2	P	P	22 33 48.3	+2.4
	baz=183						
BB19B	Bebedouro	37.22	134	*e*P	P	22 33 45.0	-1.4
BB19B				*e*pP	pP	22 34 10.8	-0.2
L58A	Harry Jones Me	37.22	0	P	P	22 33 48.6	+2.5
	baz=180,SNR=5.8						
L53A	Girard	37.31	355	P	P	22 33 49.3	+2.4
	baz=173,SNR=9.2						
L56A	Greenwood	37.34	358	P	P	22 33 49.3	+2.2
	baz=178						
BINY	Binghamton	37.38	0	P	P	22 33 49.7	+2.3
	baz=180,SNR=5.1						
BINY	Binghamton	37.38	0	P	P	22 33 49.3	+1.9
BINY				IAmb	IAmb	22 33 50.9	
	comp=Z,30nm,1.1s						
L59A	Walton	37.38	1	P	P	22 33 49.6	+2.1
	baz=182						
PTGB	Pitanga	37.41	142	*e*P	P	22 33 45.9	-2.1
PTGB				*e*pP	pP	22 34 10.2	-2.5
L61A	Hillsdale 1, H	37.44	3	P	P	22 33 50.3	+2.4
	baz=184,SNR=7.1						
ERPA	Erie	37.45	355	P	P	22 33 50.6	+2.6
	baz=174,SNR=6.5						
ERPA	Erie	37.45	355	P	P	22 33 49.8	+1.7
ERPA				IAmb	IAmb	22 33 51.4	
	comp=Z,25nm,0.6s						
VA03	San Esteban	37.59	172	P	P	22 33 50.9	+1.4
VA03				IAmb	IAmb	22 33 52.2	
	comp=Z,34nm,0.8s						
HDIL	Hopedale	37.66	343	P	P	22 33 49.5	-0.3
	baz=158						
HDIL	Hopedale	37.66	343	P	P	22 33 49.5	-0.3
HDIL				IAmb	IAmb	22 33 50.2	
	comp=Z,24nm,0.8s						
SLBS	Sierra La Lagu	37.70	303	P	P	22 33 52.5	+2.0
L61B	Northampton	37.75	4	P	P	22 33 52.6	+2.0
	baz=186						
K56A	Middlesex	37.89	359	P	P	22 33 53.9	+2.2
	baz=178						
HRV	Adam Dziewonsk	37.90	5	P	P	22 33 53.9	+2.2
	baz=188						
K57A	Scipio Center	37.91	360	P	P	22 33 53.8	+1.9
	baz=180,SNR=6.7						
K58A	Earlville	37.94	1	P	P	22 33 54.1	+2.0
	baz=181,SNR=5.8						
K58A	Earlville	37.94	1	P	P	22 33 54.1	+2.0
K58A				IAmb	IAmb	22 33 55.2	
	comp=Z,20nm,1.0s						
PEL	Peldehue	37.95	173	P	P	22 33 53.6	+1.2
PEL				pmax	pmax		
	comp=Z,17nm,0.9s						
PEL	Peldehue	37.95	173	P	P	22 33 53.6	+1.2
PEL				IAmb	IAmb	22 33 54.9	
	comp=Z,17nm,0.9s						
K62A	Royalston	38.00	5	P	P	22 33 54.2	+1.6
	baz=186						
K62A	Royalston	38.00	5	P	P	22 33 54.5	+1.9
K62A				IAmb	IAmb	22 33 56.3	
	comp=Z,41nm,0.9s						
MT02	Curacav	38.01	173	P	P	22 33 54.2	+1.4
AAM	Ann Arbor	38.08	351	P	P	22 33 55.4	+2.1

	baz=168						
MT05	Renca	38.19	173	P	P	22 33 55.2	+0.8
MT05				IAmb	IAmb	22 33 58.4	
	comp=Z,27nm,0.6s						
P38A	Dawn	38.21	338	P	P	22 33 53.9	-0.5
N41A	Harden Midland	38.26	342	P	P	22 33 54.2	-0.6
N41A				IAmb	IAmb	22 33 54.7	
	comp=Z,26nm,0.6s						
MSTX	Muleshoe	38.27	323	P	P	22 33 55.5	+0.3
	baz=134,SNR=46						
MSTX	Muleshoe	38.27	323	P	P	22 33 55.3	+0.1
AMTX	Amarillo	38.27	325	P	P	22 33 55.9	+0.7
	baz=136						
L46A	Eue Claire	38.29	348	P	P	22 33 55.1	+0.1
L46A				IAmb	IAmb	22 33 56.0	
	comp=Z,31nm,0.8s						
MNTX	Cornudas Mount	38.44	318	P	P	22 33 57.5	+1.0
	baz=129,SNR=37						
MNTX	Cornudas Mount	38.44	318	P	P	22 33 57.2	+0.6
J56A	Wolcott	38.46	359	P	P	22 33 58.6	+2.2
	baz=179,SNR=14						
J56A	Wolcott	38.46	359	P	P	22 33 58.3	+1.9
J60A	Lant Hill Farm	38.49	3	P	P	22 33 59.2	+2.4
	baz=184						
J61A	Chester	38.65	4	P	P	22 34 00.7	+2.6
	baz=186						
J59A	Piesco	38.66	2	P	P	22 34 01.0	+2.8
	baz=183,SNR=6.5						
J59A	Piesco	38.66	2	P	P	22 33 59.5	+1.3
J59A				IAmb	IAmb	22 34 01.9	
	comp=Z,36nm,1.1s						
J63A	Strafford	38.71	6	P	P	22 33 59.9	+1.4
	baz=188						
I58A	Old Forge	38.88	1	P	P	22 34 02.1	+2.1
	baz=182,SNR=7.2						
ITQB	Itaqui	38.92	152	*e*P	P	22 33 58.4	-2.0
ITQB				*e*pP	pP	22 34 23.8	-1.5
KSU1	Kansas State U	39.00	334	P	P	22 34 00.7	-0.3
	baz=146,SNR=15						
I60A	Shoreham	39.10	3	P	P	22 34 03.9	+2.2
	baz=185						
I51A	Listowel	39.22	354	P	P	22 34 04.6	+1.8
	baz=172,SNR=18						
ITAB	Concordia	39.27	145	*e*P	P	22 34 01.3	-2.2
ITAB				*e*pP	pP	22 34 26.4	-1.9
R32A	Long Quarter,	39.40	332	P	P	22 34 04.5	0.0
R32A				IAmb	IAmb	22 34 05.5	
	comp=Z,30nm,1.0s						
I63A	Otisfield	39.53	6	P	P	22 34 07.6	+2.2
	baz=189						
BO02	Sierra Bellavi	39.56	173	P	P	22 34 07.0	+1.1
BO02				IAmb	IAmb	22 34 11.7	
	comp=Z,21nm,0.7s						
VAO	Valinhos	39.57	135	*e*P	P	22 34 04.6	-1.5
VAO				*e*pP	pP	22 34 29.3	-1.8
LBNH	Lisbon	39.59	5	P	P	22 34 08.0	+2.1
	baz=187						
LBNH	Lisbon	39.59	5	P	P	22 34 07.8	+1.9
LBNH				pmax	pmax		
	comp=Z,38nm,1.1s						
LBNH	Lisbon	39.59	5	P	P	22 34 07.8	+1.9
LBNH				IAmb	IAmb	22 34 09.2	
	comp=Z,38nm,1.1s						
L40A	Anamosa	39.61	342	P	P	22 34 05.4	-0.7
H58A	Gabriels	39.63	2	P	P	22 34 07.9	+1.7
	baz=183,SNR=6.0						
SPB	Sao Paulo	39.63	136	*e*P	P	22 34 05.0	-1.5
SPB				*e*pP	pP	22 34 29.4	-2.0
H57A	Richville	39.64	1	P	P	22 34 08.1	+1.9
	baz=181						
H53A	Bobcaygeon	39.81	357	P	P	22 34 10.1	+2.4
	baz=176,SNR=5.3						
H60A	Morristown	39.85	4	P	P	22 34 10.3	+2.2
	baz=185						
H59A	Cadyville	39.88	3	P	P	22 34 10.0	+1.8
	baz=184						
H61A	Lyndonville	39.88	5	P	P	22 34 10.2	+1.9
	baz=187						
BSCB	Bom Sucesso	39.93	131	*e*P	P	22 34 08.1	-1.1
SADO	Sadowa	40.03	357	P	P	22 34 11.0	+1.5
SADO				IAmb	IAmb	22 34 12.5	
	comp=Z,26nm,0.7s						
JFWS	Jewell Farm	40.11	344	P	P	22 34 09.8	-0.4
	baz=158,SNR=15						
PET01	Itanhaem-SP	40.20	137	*e*P	P	22 34 09.7	-1.5
CBKS	Cedar Bluff	40.20	331	P	P	22 34 11.6	+0.5
	baz=142,SNR=13						
CBKS	Cedar Bluff	40.20	331	P	P	22 34 11.4	+0.3
CBKS				pmax	pmax		
	comp=Z,50nm,0.9s						
CBKS	Cedar Bluff	40.20	331	P	P	22 34 11.4	+0.3
CBKS				IAmb	IAmb	22 34 12.4	
	comp=Z,50nm,0.9s						
PLVO	Plevna	40.22	359	P	P	22 34 12.5	+1.4
PLVO				IAmb	IAmb	22 34 14.4	
	comp=Z,38nm,0.9s						
NBPA	Parau_RN	40.28	104	*e*P	P	22 34 11.0	-1.0
G57A	Newington	40.29	1	P	P	22 34 13.6	+1.9
	baz=182,SNR=6.2						
G58A	Ormstown	40.36	2	P	P	22 34 14.3	+2.1
	baz=183,SNR=7.5						
G60A	Masonville	40.41	4	P	P	22 34 14.3	+1.7
	baz=186						
121A	Cookes Peak, D	40.56	317	P	P	22 34 16.9	+2.5
	baz=127,SNR=67						
121A	Cookes Peak, D	40.56	317	P	P	22 34 16.7	+2.3
GDU01	Guandu, BA	40.59	117	*e*P	P	22 34 13.5	-1.1
EMMW	East Machias	40.60	9	P	P	22 34 15.9	+1.7
EMMW				IAmb	IAmb	22 34 17.0	
	comp=Z,48nm,1.0s						
G54A	Lake Saint Pet	40.61	358	P	P	22 34 16.3	+2.0
	baz=177,SNR=14						
MOQ	Mont Orford	40.63	4	P	P	22 34 16.1	+1.6
G61A	St-Isidore-de-	40.66	5	P	P	22 34 17.4	+2.7
	baz=187						
G62A	West of Eustis	40.69	6	P	P	22 34 17.4	+2.5
	baz=189						
G62A	West of Eustis	40.69	6	P	P	22 34 17.1	+2.2
G62A				IAmb	IAmb	22 34 18.4	
	comp=Z,62nm,1.2s						
PARB	Paraibuna	40.73	134	*e*P	P	22 34 14.8	-0.9
PARB				*e*pP	pP	22 34 39.3	-1.4
BNM	Barren Site	40.79	320	P	P	22 34 17.6	+1.4
NBLI	Livramento-PB	40.85	107	*e*P	P	22 34 15.5	-1.3
NBLI				*e*pP	pP	22 34 40.5	-1.1
HSIG		40.94	310	P	P	22 34 17.9	+0.6
319A	Douglas	40.94	314	P	P	22 34 19.8	+2.4
G65A	Princeton	41.06	9	P	P	22 34 19.8	+1.8
	baz=193						
CPSB	Cacapava Do Su	41.06	150	*e*P	P	22 34 15.5	-2.7
CPSB				*e*pP	pP	22 34 41.6	-1.4
SRIG	Santa Rosalia	41.15	307	P	P	22 34 20.1	+1.1
SRIG				IAmb	IAmb	22 34 22.0	
	comp=Z,24nm,0.8s						
ALGO	Algonquin Park	41.16	358	P	P	22 34 20.7	+1.9
	baz=177,SNR=24						
ANMO	Albuquerque	41.18	321	P	P	22 34 20.9	+1.5
	baz=130						
ANMO	Albuquerque	41.18	321	*d i*P	P	22 34 20.2	+0.8
ANMO				pmax	pmax		
	comp=Z,49nm,1.0s						
ANMO	Albuquerque	41.18	321	P	P	22 34 20.8	+1.3
ANMO				IAmb	IAmb	22 34 22.1	
	comp=Z,42nm,0.9s						
F60A	Warwick	41.30	4	P	P	22 34 21.9	+1.9
	baz=186,SNR=7.2						
F63A	Nahmakanta, Br	41.33	7	P	P	22 34 21.9	+1.7
	baz=191						
BI02	San Fabin de	41.36	174	P	P	22 34 21.9	+1.2
F61A	St Evariste	41.39	5	P	P	22 34 22.4	+1.7
	baz=188						
ESAR	Angra dos Reis	41.39	133	*e*P	P	22 34 20.2	-0.8
ESAR				*e*pP	pP	22 34 44.9	-1.1
TRQ	Mont Tremblant	41.42	2	P	P	22 34 22.2	+1.2
T25A	Trinidad	41.43	325	P	P	22 34 23.3	+1.9
	baz=135,SNR=21						
RCBR	Riachuelo	41.47	104	P	P	22 34 20.7	-1.2
RCBR				pmax	pmax		
	comp=Z,26nm,0.9s						
RCBR	Riachuelo	41.47	104	P	P	22 34 20.7	-1.2
RCBR				IAmb	IAmb	22 34 22.8	
	comp=Z,26nm,0.9s						
RCBR	Riachuelo	41.47	104	*e*P	P	22 34 21.0	-0.9
RCBR				*e*pP	pP	22 34 44.9	-1.9
SJMB	Sao Joao De Ma	41.50	125	*e*P	P	22 34 21.1	-0.9
SJMB				*e*pP	pP	22 34 45.6	-1.4
BGNE	Belgrade	41.57	335	P	P	22 34 21.8	-0.5
	baz=146,SNR=5.6						
F64A	Sherman	41.59	8	P	P	22 34 24.3	+2.0
	baz=192						
F64A	Sherman	41.59	8	P	P	22 34 23.5	+1.2
F64A				IAmb	IAmb	22 34 25.1	
	comp=Z,30nm,1.1s						
E58A	La Victoria	41.62	3	P	P	22 34 24.5	+2.0
	baz=184,SNR=8.4						
E55A	Montcerf-Lytto	41.63	0	P	P	22 34 24.5	+1.9
	baz=180,SNR=7.3						
VAS01	Vassouras-RJ	41.69	131	*e*P	P	22 34 22.8	-0.7
VAS01				*e*pP	pP	22 34 48.6	+0.1
E56A	St. Veronique	41.73	1	P	P	22 34 25.1	+1.7
	baz=182						
KSCO	Kaye Shedlock'	41.80	329	P	P	22 34 25.4	+1.1
	baz=138,SNR=8.9						
BSFB	Barra de Sao F	41.84	125	*e*P	P	22 34 24.1	-0.6
BSFB				*e*pP	pP	22 34 48.9	-0.8
E61A	Lac Etchemin	41.89	6	P	P	22 34 27.5	+2.7
	baz=188,SNR=6.5						
NAN01	Guarapari, ES	41.95	123	*e*P	P	22 34 25.2	-0.5
NAN01				*e*pP	pP	22 34 51.9	+1.2
PLTB	Pedras Altas	42.09	151	*e*P	P	22 34 24.1	-2.5
PLTB				*e*pP	pP	22 34 50.4	-1.1
E63A	Oxbow	42.13	8	P	P	22 34 28.7	+2.0
	baz=192						
E63A	Oxbow	42.13	8	P	P	22 34 28.1	+1.5
E63A				IAmb	IAmb	22 34 30.0	
	comp=Z,22nm,0.7s						
E46A	Sault Ste Mari	42.15	352	P	P	22 34 27.3	+0.4
E46A				IAmb	IAmb	22 34 28.8	
	comp=Z,19nm,0.7s						
D55A	Sainte-Anne-du	42.20	1	P	P	22 34 29.2	+1.9
	baz=181,SNR=6.4						
E64A	Bridgewater	42.21	9	P	P	22 34 29.2	+1.9
	baz=192,SNR=6.1						
D56A	ZEC Mazanza, M	42.24	1	P	P	22 34 28.9	+1.3
	baz=182						
D60A	Saint Jean D'O	42.33	5	P	P	22 34 30.2	+1.9
	baz=188,SNR=6.2						
D59A	Saint-Raymond	42.34	4	P	P	22 34 30.5	+2.1
	baz=186						
D58A	Chemin du LacG	42.36	3	P	P	22 34 30.6	+2.0
	baz=185,SNR=9.9						
DUB01	Friburgo-RJ	42.38	130	*e*P	P	22 34 28.3	-0.8
DUB01				*e*pP	pP	22 34 54.5	+0.4
PQI	Presque Isle	42.43	8	P	P	22 34 30.8	+1.7
PQI				IAmb	IAmb	22 34 32.0	
	comp=Z,29nm,1.0s						
RIB01	Linhares ES	42.45	125	*e*P	P	22 34 29.0	-0.8
SDCO	Great Sand Dun	42.47	325	P	P	22 34 31.8	+1.8
	baz=134,SNR=61						
SDCO	Great Sand Dun	42.47	325	P	P	22 34 31.4	+1.4
SDCO				IAmb	IAmb	22 34 32.4	
	comp=Z,26nm,0.8s						
TUC	Tucson	42.52	315	P	P	22 34 31.9	+1.6
	baz=123						
TUC	Tucson	42.52	315	P	P	22 34 31.8	+1.6
TUC				pmax	pmax		
	comp=Z,32nm,0.9s						
TUC	Tucson	42.52	315	P	P	22 34 31.8	+1.6
TUC				IAmb	IAmb	22 34 32.5	
	comp=Z,32nm,0.9s						
GBN	Guysborough	42.54	15	P	P	22 34 31.4	+1.4
GBN				IAmb	IAmb	22 34 32.8	
	comp=Z,36nm,1.1s						
LATQ	La Tuque	42.66	3	P	P	22 34 33.1	+2.1
	baz=185,SNR=19						
D61A	St Aubert, Com	42.68	6	P	P	22 34 33.6	+2.5
	baz=189,SNR=16						
D62A	Allapoint, All	42.69	7	P	P	22 34 33.4	+2.2
	baz=190						
D63A	Stockholm	42.77	8	P	P	22 34 33.3	+1.4
	baz=192						
CAM01	Campos-RJ	42.78	129	*e*P	P	22 34 31.6	-0.7
CAM01				*e*pP	pP	22 34 57.5	+0.1
ALF01	Guarapari-ES	42.86	127	*e*P	P	22 34 31.3	-1.7
ECSD	EROS Data Cent	42.92	338	P	P	22 34 32.0	-1.2
	baz=149,SNR=19						
ECSD	EROS Data Cent	42.92	338	P	P	22 34 32.1	-1.1
ECSD				IAmb	IAmb	22 34 33.1	
	comp=Z,21nm,0.8s						
NBRF	Rio Formoso -	42.95	108	*e*P	P	22 34 32.5	-1.4
NBRF				*e*pP	pP	22 34 59.4	+0.5
SPMN	Marine on St.	42.96	343	P	P	22 34 33.2	-0.3
	baz=155,SNR=8.0						
Q24A	Divide	43.12	326	P	P	22 34 36.1	+0.8
	baz=135						
S22A	4UR Ranch, Cre	43.25	324	P	P	22 34 38.0	+1.7
	baz=132,SNR=28						
BATG	Bathurst New B	43.33	10	P	P	22 34 38.1	+1.7
BATG				IAmb	IAmb	22 34 39.6	
	comp=Z,36nm,0.9s						
W18A	Petrified Fore	43.40	319	P	P	22 34 39.5	+2.1
	baz=127,SNR=22						
LC01	Cunco	43.52	175	P	P	22 34 38.7	+0.7
214A	Organ Pipe Nat	43.80	313	P	P	22 34 42.5	+2.0
	baz=121,SNR=33						
214A	Organ Pipe Nat	43.80	313	P	P	22 34 42.2	+1.7
E38A	The Farm, Brul	43.88	345	P	P	22 34 40.6	-0.2
E38A				IAmb	IAmb	22 34 41.5	
	comp=Z,19nm,0.8s						
MVCO	Mesa Verde	43.90	322	P	P	22 34 42.8	+1.3
	baz=130,SNR=26						
MVCO	Mesa Verde	43.90	322	P	P	22 34 42.5	+1.0
MVCO				IAmb	IAmb	22 34 44.1	
	comp=Z,45nm,1.1s						
ISCO	Idaho Springs	43.97	327	P	P	22 34 43.4	+1.4
	baz=135,SNR=29						
ISCO	Idaho Springs	43.97	327	P	P	22 34 43.2	+1.2
ISCO				pmax	pmax		
	comp=Z,13nm,0.8s						
ISCO	Idaho Springs	43.97	327	P	P	22 34 43.2	+1.2
LSQQ	Lebel-sur-Quev	44.24	359	P	P	22 34 45.4	+1.7
	baz=179						
SUSD	Miller	44.42	337	P	P	22 34 44.5	-0.6
	baz=147,SNR=8.5						
F33A	5 Mile Ranch,	44.62	340	P	P	22 34 45.6	-1.2
WUAZ	Wupatki	44.72	318	P	P	22 34 49.9	+2.0
	baz=125,SNR=31						
WUAZ	Wupatki	44.72	318	P	P	22 34 49.3	+1.3
PV11	David Mesa, Pa	44.83	323	P	P	22 34 50.1	+1.3
PV11				IAmb	IAmb	22 34 51.5	
	comp=Z,38nm,1.0s						
N23A	Red Feather La	44.92	328	P	P	22 34 51.2	+1.6
	baz=136,SNR=19						
MATQ	Matagami	44.95	359	P	P	22 34 51.1	+1.8
	baz=178,SNR=19						
PHWY	Pilot Hill	44.96	328	P	P	22 34 50.5	+0.7
PV23	Carpenter Ridg	45.01	323	P	P	22 34 50.8	+0.5
EYMN	Ely	45.10	345	P	P	22 34 50.3	-0.2
	baz=158,SNR=18						
SPX	San Pedro Mart	45.34	310	P	P	22 34 53.9	+0.8
PLCA	Paso Flores	45.46	174	P	P	22 34 54.4	+0.9
	comp=Z,14nm,0.9s,baz=345,slow=9.1,SNR=16						
PLCA				pP	pP	22 35 19.4	+0.9
	comp=Z,6.3nm,0.6s,baz=10.0,slow=8.4,SNR=3.3						
PLCA				sP	sP	22 35 31.4	+0.8
	comp=Z,22nm,0.9s,baz=346,slow=11,SNR=5.6						
PLCA				ScP	ScP	22 40 14.8	+0.5
	comp=Z,1.6nm,0.8s,baz=268,slow=4.4,SNR=3.4						
PLCA	Paso Flores	45.46	174	P	P	22 34 54.2	+0.7
PLCA				IAmb	IAmb	22 34 56.1	
	comp=Z,26nm,1.2s						
PLCA	Paso Flores	45.46	174	*e*pP	pP	22 35 19.5	+0.9
O20A	White River Ci	45.66	325	P	P	22 34 56.8	+1.4
	baz=132,SNR=12						
GLA	Glamis	45.82	313	P	P	22 34 58.3	+1.8
	baz=120,SNR=8.1						
GLA	Glamis	45.82	313	P	P	22 34 57.3	+0.8
GLA				pmax	pmax		
	comp=Z,49nm,1.2s						
GLA	Glamis	45.82	313	P	P	22 34 57.2	+0.8
GLA				IAmb	IAmb	22 34 59.5	
	comp=Z,49nm,1.2s						
PDMCI	Parker Dam,Lak	45.96	315	P	P	22 34 59.1	+1.6
	baz=122,SNR=8.3						
B35A	Bob, Littlefor	46.07	344	P	P	22 34 57.7	-0.5
B35A				IAmb	IAmb	22 34 58.7	
	comp=Z,16nm,0.7s						
ESJX	Sierra Juarez	46.15	311	P	P	22 34 60.0	+0.7
SRU	San Rafael Swe	46.34	323	P	P	22 35 01.4	+0.7
SRU				pmax	pmax		
	comp=Z,87nm,1.5s						
SRU	San Rafael Swe	46.34	323	P	P	22 35 01.4	+0.7
RSSD	Black Hills	46.35	332	P	P	22 35 01.7	+1.0
	baz=140						
RSSD	Black Hills	46.35	332	P	P	22 35 01.4	+0.7
RSSD				pmax	pmax		
	comp=Z,36nm,1.0s						
RSSD	Black Hills	46.35	332	P	P	22 35 01.4	+0.7
RSSD				IAmb	IAmb	22 35 02.7	
	comp=Z,36nm,0.9s						
K22A	Casper	46.48	329	P	P	22 35 02.7	+1.0
	baz=136,SNR=9.0						
SWSC	Sam W. Stewart	46.48	312	P	P	22 35 03.2	+1.5
	baz=119,SNR=7.2						
BC3	Big Chuckawall	46.57	313	P	P	22 35 04.1	+1.6
	baz=120,SNR=18						
IKP	In-Ko-Pah, Jac	46.57	312	P	P	22 35 04.0	+1.5
	baz=118						
IRM	Iron Mountain	46.60	314	P	P	22 35 04.4	+1.8
	baz=120,SNR=31						
AGMN	Agassiz Nation	46.65	342	P	P	22 35 02.2	-0.5
	baz=153,SNR=10						
AGMN	Agassiz Nation	46.65	342	P	P	22 35 02.3	-0.3
LCMT	Little Creek M	46.81	318	P	P	22 35 05.3	+0.9
TMUT	Trail Mountain	46.87	322	P	P	22 35 05.5	+0.5
MONP2	Monument Peak	46.92	312	P	P	22 35 06.8	+1.5
	baz=118,SNR=8.8						
MSU	Marysvale	46.99	321	P	P	22 35 07.2	+1.4
MSU	Marysvale	46.99	321	P	P	22 35 07.2	+1.4
BAR	Barrett	47.01	311	P	P	22 35 06.8	+1.0
BELC	Belle Mtn. Jos	47.14	313	P	P	22 35 08.4	+1.5
	baz=120,SNR=25						
CCUT	Cedar City	47.20	319	P	P	22 35 08.5	+1.1
GMRC	Granite Mounta	47.28	314	P	P	22 35 09.6	+1.6
	baz=120,SNR=11						
PFO	Pinyon Flats O	47.29	313	P	P	22 35 09.4	+1.4
	baz=119						
PFO	Pinyon Flats O	47.29	313	P	P	22 35 09.1	+1.0
PFO				pmax	pmax		
	comp=Z,13nm,1.1s						
PFO	Pinyon Flats O	47.29	313	P	P	22 35 09.1	+1.0
MDND	Maddock	47.52	339	P	P	22 35 09.3	-0.2
	baz=148						
HEC	Hector,Ludlow	47.79	314	P	P	22 35 13.8	+1.9
	baz=120,SNR=10						
MURC	Murrieta	47.82	312	P	P	22 35 13.8	+1.7
	baz=118,SNR=9.0						
SHPR	Sheep Range	47.82	317	P	P	22 35 13.6	+1.4
BW06	Boulder Array	48.16	327	P	P	22 35 15.4	+0.6
	baz=133,SNR=28						
PD31	Pinedale Array	48.16	327	P	P	22 35 15.2	+0.3
PDAR	Pinedale Array	48.16	327	P	P	22 35 15.1	+0.3
	comp=Z,10nm,0.6s,baz=130,slow=9.8,SNR=97						
PDAR				ScP	ScP	22 40 26.3	+0.3
	comp=Z,2.8nm,0.9s,baz=126,slow=5.8,SNR=9.1						
PRN	Pahroc Range	48.23	318	P	P	22 35 16.4	+1.0
SHOC	Shoshone, Teco	48.28	315	P	P	22 35 17.3	+1.7
	baz=121,SNR=7.1						
ULM	Lac du Bonnet	48.39	343	P	P	22 35 15.6	-0.5
	comp=Z,11nm,0.6s,baz=149,slow=8.3,SNR=26						
ULM				ScP	ScP	22 40 26.0	-0.4
	comp=Z,8.6nm,1.0s,baz=199,slow=1.9,SNR=6.0						
ULM				LR	LR	22 56 21.9	
	comp=Z,72nm,20.2s,baz=100,slow=37						
ULM	Lac du Bonnet	48.39	343	P	P	22 35 15.3	-0.8
ULM				pmax	pmax		
	comp=Z,11nm,0.7s						
ULM	Lac du Bonnet	48.39	343	P	P	22 35 15.3	-0.8
DUG	Dugway, Tooele	48.40	322	P	P	22 35 18.0	+1.5
	baz=127,SNR=30						
BFSC	Mount Baldy Ra	48.46	313	P	P	22 35 18.5	+1.4
	baz=118						
CIS	Catalina Islan	48.64	311	P	P	22 35 20.0	+1.6
	baz=117,SNR=5.4						
TPNV	Topopah Spring	48.80	317	P	P	22 35 21.5	+1.8
	baz=122,SNR=11						
TPNV	Topopah Spring	48.80	317	P	P	22 35 21.2	+1.5
TPNV				pmax	pmax		
	comp=Z,11nm,1.0s						
TPNV	Topopah Spring	48.80	317	P	P	22 35 21.2	+1.5
PASC	Pasadena Art C	48.82	312	P	P	22 35 21.0	+1.3
PASC				IAmb	IAmb	22 35 23.2	
	comp=Z,27nm,1.1s						
DECC	Green Verdugo	48.96	312	P	P	22 35 23.1	+2.3
	baz=118						
FURC	Furnace Creek,	48.98	316	P	P	22 35 22.9	+2.1
	baz=121,SNR=8.1						
EDW2	Edwards Air Fo	49.01	313	P	P	22 35 22.5	+1.3
	baz=118,SNR=10						
AHID	Auburn Hatcher	49.01	326	P	P	22 35 21.8	+0.5
AHID				IAmb	IAmb	22 35 22.8	
	comp=Z,18nm,0.8s						
R11A	Troy Canyon, C	49.10	319	P	P	22 35 23.5	+1.5
	baz=123,SNR=15						
MPMC	Manual Prospec	49.21	315	P	P	22 35 24.0	+1.1
	baz=120,SNR=11						
LOHW	Long Hollow	49.30	327	P	P	22 35 24.0	+0.5
LOHW				IAmb	IAmb	22 35 25.4	
	comp=Z,25nm,1.0s						
RLMT	Red Lodge	49.63	329	P	P	22 35 26.5	+0.6
	baz=134,SNR=14						
ISA	Isabella, Lake	49.72	314	P	P	22 35 28.0	+1.4
	baz=118,SNR=6.4						
ISA	Isabella, Lake	49.72	314	P	P	22 35 27.8	+1.2
ISA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ISA	Isabella, Lake	49.72	314	P	P	22 35 27.8	+1.2
DGMT	Dagmar	49.80	336	P	P	22 35 27.5	+0.6
	baz=142,SNR=8.3						
H17A	Grant Village	49.81	328	P	P	22 35 28.8	+1.4
	baz=133						
SCZ2	Santa Cruz Isl	49.81	311	P	P	22 35 28.3	+1.0
	baz=116						
CWC	Cottonwood Cre	49.81	315	P	P	22 35 28.6	+1.1
	baz=119						
TPH	Tonopah	50.05	317	P	P	22 35 30.3	+1.1
TPH				pmax	pmax		
	comp=Z,123nm,1.1s						
TPH	Tonopah	50.05	317	P	P	22 35 30.3	+1.1
ELK	Elko	50.22	321	P	P	22 35 31.3	+0.8
ELK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ELK	Elko	50.22	321	P	P	22 35 31.3	+0.8
TIN	Tinemaha, Big	50.22	316	P	P	22 35 32.0	+1.5
	baz=120,SNR=5.1						
VES	Vestal, Richgr	50.24	314	P	P	22 35 32.4	+1.9
	baz=118,SNR=13						
PKM	Mcpherson Peak	50.34	312	P	P	22 35 33.0	+1.6
	baz=117,SNR=12						
QLMT	Earthquake Lak	50.55	328	P	P	22 35 34.1	+1.2
SMMC	Simmler	50.66	313	P	P	22 35 35.3	+1.6
	baz=117,SNR=11						
NV11	Mina Array Sit	50.86	317	P	P	22 35 36.6	+1.3
NV11				IAmb	IAmb	22 35 38.0	
	comp=Z,32nm,1.1s						
NVAR	Mina Array Bea	50.96	317	P	P	22 35 37.6	+1.5
	comp=Z,19nm,0.7s,baz=130,slow=6.9,SNR=137						
NVAR				pP	pP	22 36 00.5	-0.6
	comp=Z,6.7nm,0.9s,baz=122,slow=7.1,SNR=2.9						
NVAR				sP	sP	22 36 13.3	+0.6
	comp=Z,6.4nm,0.8s,baz=133,slow=6.7,SNR=3.2						
NVAR				PcP	PcP	22 36 52.0	+1.0
	comp=Z,3.5nm,0.6s,baz=124,slow=4.5,SNR=9.3						
NVAR				ScP	ScP	22 40 38.5	+0.5
	comp=Z,2.8nm,0.9s,baz=145,slow=5.1,SNR=5.6						
NVAR				LR	LR	22 59 50.6	
	comp=Z,30nm,21.3s,baz=88,slow=39						
NVAR	Mina Array Bea	50.96	317	P	P	22 35 37.3	+1.2
MDPB	Devils Postpil	51.09	316	P	P	22 35 38.2	+1.0
MDPB				IAmb	IAmb	22 35 39.7	
	comp=Z,15nm,1.0s						
BOZ	Bozeman (W)	51.17	328	P	P	22 35 38.4	+0.9
	baz=132,SNR=34						
BOZ	Bozeman (W)	51.17	328	P	P	22 35 38.5	+1.0
BOZ				pmax	pmax		
	comp=Z,21nm,0.8s						
BOZ	Bozeman (W)	51.17	328	P	P	22 35 38.5	+1.0
BOZ				IAmb	IAmb	22 35 39.4	
	comp=Z,22nm,0.8s						
MCMT	McKenzie Canyo	51.31	327	P	P	22 35 40.1	+1.4
HLID	Hailey	51.39	325	P	P	22 35 40.2	+1.0
	baz=128,SNR=26						
HLID	Hailey	51.39	325	P	P	22 35 39.9	+0.7
HLID				IAmb	IAmb	22 35 40.8	
	comp=Z,13nm,0.8s						
LRM	Limekiln Ridge	51.75	328	P	P	22 35 42.7	+0.8
WAKR	Walker	51.77	317	P	P	22 35 43.6	+1.5

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WAKR                                IAmb    IAmb    22 35 44.4
      comp=Z,17nm,1.0s
YERR  Yerington          51.87 317  P       P       22 35 44.2 +1.3
EGMT  Eagleton           51.91 332  P       P       22 35 43.3 +0.4
      baz=136,SNR=7.0
HRY   Holter Researc     52.02 329  P       P       22 35 44.5 +0.8
RUBR  Rubicon Trail      52.52 317  P       P       22 35 49.0 +1.3
RUBR                                IAmb    IAmb    22 35 53.5
      comp=Z,39nm,1.3s
MSO   Missoula           53.19 328  P       P       22 35 52.8 +0.5
      baz=130,SNR=10
WVOR  Wild Horse Val     53.27 321  P       P       22 35 53.6 +0.5
WVOR                                pmax    pmax
      comp=Z,51nm,1.0s
WVOR  Wild Horse Val     53.27 321  P       P       22 35 53.6 +0.5
O03E  Paynes Creek       54.23 318  P       P       22 36 00.4 +0.4
      baz=119
I07A  Izee               54.70 323  P       P       22 36 04.0 +0.6
I07A                                IAmb    IAmb    22 36 06.3
      comp=Z,23nm,1.2s
WDC   Whiskeytown Da     54.87 318  P       P       22 36 03.3  -1.2
WDC   Whiskeytown Da     54.87 318  P       P       22 36 03.3  -1.2
M04C  Macdoel            54.98 319  P       P       22 36 06.4 +0.9
      baz=120,SNR=9.6
G08A  Pilot Rock         55.04 324  P       P       22 36 06.6 +0.8
N02D  Trinity Center     55.16 318  P       P       22 36 07.0 +0.2
      baz=118
E09A  Wood Farm, Sta     55.28 326  P       P       22 36 07.9 +0.5
J05D  Fort Rock, OR      55.34 321  P       P       22 36 09.3 +1.2
      baz=121,SNR=16
M02C  Callahan           55.46 318  P       P       22 36 08.2  -0.6
      baz=118
L04D  Klamath Falls      55.49 319  P       P       22 36 09.8 +0.6
      baz=119,SNR=9.7
YBH   Yreka Blue Hor     55.52 319  P       P       22 36 08.6  -0.7
      comp=Z,7.9nm,0.7s,baz=125,slow=3.4,SNR=19
NEW   Newport            55.77 328  P       P       22 36 11.1 +0.2
      comp=Z,6.3nm,0.6s,baz=134,slow=7.1,SNR=15
NEW   Newport            55.77 328  P       P       22 36 11.4 +0.5
      baz=128,SNR=8.6
KHMM  Horse Mountain     55.80 317  P       P       22 36 12.7 +1.3
J04D  Umpqua Nationa     55.87 321  P       P       22 36 13.2 +1.2
      baz=120
I05D  Terrebonne, OR     55.95 322  P       P       22 36 14.0 +1.7
      baz=122,SNR=8.6
D08A  Wollman Farm,      56.03 326  P       P       22 36 13.8 +1.0
D08A                                IAmb    IAmb    22 36 14.6
      comp=Z,20nm,0.7s
HUMO  Hull Mountain      56.10 320  P       P       22 36 13.0  -0.4
KRMB  Red Mountain       56.22 318  P       P       22 36 15.5 +1.1
KRMB                                IAmb    IAmb    22 36 16.3
      comp=Z,25nm,0.8s
I04A  Tendick Farm,      56.34 321  P       P       22 36 15.5 +0.4
      baz=120,SNR=6.2
G05D  Wamic, OR          56.41 323  P       P       22 36 17.4 +1.9
      baz=122,SNR=12
K02D  Willamette Mer     56.61 319  P       P       22 36 18.0 +0.9
      baz=118,SNR=6.5
F05D  White Salmon       56.84 324  P       P       22 36 20.2 +1.7
      baz=122
I03D  Drain, OR          56.88 321  P       P       22 36 19.6 +0.8
      baz=119,SNR=7.6
J01E  Myrtle Point       57.00 320  P       P       22 36 21.1 +1.5
      baz=118,SNR=5.8
I02D  Swisshome          57.40 321  P       P       22 36 24.1 +1.7
      baz=119,SNR=5.2
G03D  McMinnville, O     57.58 322  P       P       22 36 24.9 +1.3
      baz=120
E04D  Cinebar            57.85 324  P       P       22 36 26.3 +0.7
      baz=122
EFI   East Falkland      58.20 167  P       P       22 36 28.2 +0.4
EFI                                 pmax    pmax
      comp=Z,86nm,1.5s
EFI   East Falkland      58.20 167  P       P       22 36 28.2 +0.4
B05A  Bryant             58.48 326  P       P       22 36 30.1 +0.2
      baz=123,SNR=8.8
D03D  Eldon              58.66 325  P       P       22 36 32.3 +1.1
      baz=122,SNR=9.4
BBB   Bella Bella        63.81 327  P       P       22 37 07.3 +1.5
      comp=Z,18nm,0.7s,baz=105,slow=5.3,SNR=15
YKA   Yellowknife Ar     64.30 341  P       P       22 37 08.3  -0.5
      comp=Z,14nm,0.6s,baz=132,slow=6.8,SNR=289
YKA                                 pP      pP      22 37 35.9 +0.9
      comp=Z,6.5nm,0.6s,baz=132,slow=6.8,SNR=4.1
YKA                                 ScP             22 41 36.0
      comp=Z,3.6nm,1.0s,baz=129,slow=5.1,SNR=8.2
YKA                                 S       S       22 45 35.2  -3.2
      comp=Z,1.2nm,1.0s,baz=125,slow=15,SNR=8.2
TAOE  Nuku Hiva Isla     65.25 258 eLR      LR      22 57 01.2
      comp=Z,473nm,31.7s
ILULI Ilulissat          66.55   9 i P      P       22 37 23.2   0.0
      comp=Z,50nm,0.9s
ILULI Ilulissat          66.55   9  P       P       22 37 23.6 +0.4
ILULI                               pmax    pmax
      comp=Z,46nm,0.8s
ILULI Ilulissat          66.55   9  P       P       22 37 23.6 +0.4
ILULI Ilulissat          66.55   9 i P      P       22 37 23.2   0.0
ILULI                               IAmb    IAmb    22 37 24.7
      comp=Z,50nm,0.9s
ANGG  Ammassalik, Gr     66.58  16  P       P       22 37 23.6 +0.2
DLBC  Dease Lake         67.83 333  P       P       22 37 32.3 +0.7
      baz=142,slow=6.8
WRAK  Wrangell Islan     67.98 330  P       P       22 37 33.6 +1.1
      baz=117
UPNV  Upernavik          69.14   6 i P      P       22 37 39.9 +0.4
UPNV                                IAmb    IAmb    22 37 40.9
      comp=Z,15nm,0.7s
MORF  Marmelete          69.30  52 eP       P       22 37 41.1  -0.1
MORF                                AMb     AMB     22 37 44.3
      comp=Z,81nm,1.3s
MORF  Marmelete          69.30  52 eP       P       22 37 41.1  -0.1
MORF  Marmelete          69.30  52 eP       P       22 37 42.6 +1.4
PNCL  Nicolau / Gran     69.54  51 eP       P       22 37 44.0 +1.5
      comp=Z,61nm,2.3s
PSBE  So Bento           69.59  50 eP       P       22 37 43.5 +0.6
MESJ  Messejana          69.73  51 eP       P       22 37 43.6  -0.1
MESJ  Messejana          69.73  51 eP       P       22 37 43.6  -0.1
MESJ  Messejana          69.73  51 eP       P       22 37 45.4 +1.7
PCVE  Castro Verde       69.83  52 eP       P       22 37 46.2 +1.8
PMSA  Palmer Station     69.83 175 eP       P       22 37 42.9  -0.8
PMSA                               epP      pP      22 38 11.7 +1.4
PCAS  Casmilo, Conde     69.92  49 eP       P       22 37 45.9 +1.0
PMTG  Montargil          69.94  50 eP       P       22 37 45.8 +0.8
EVO   Evora              70.01  51 eP       P       22 37 46.5 +1.0
COI   Coimbra            70.02  49  P       P       22 37 46.3 +0.8
COI                                 pmax    pmax
      comp=Z,92nm,1.0s
COI   Coimbra            70.02  49  P       P       22 37 46.3 +0.8
COI   Coimbra            70.02  49 eP       P       22 37 46.7 +1.3
      comp=Z,110nm,1.2s
PBEJ  Beja               70.03  51 eP       P       22 37 46.9 +1.3
PVAQ  Vaqueiros          70.05  52 eP       P       22 37 46.5 +0.8
PESTR Estremoz           70.39  50  P       P       22 37 48.3 +0.5
PESTR                               IAmb    IAmb    22 37 49.6
      comp=Z,27nm,0.9s
PGAV  Gavieira, Arco     70.47  47 eP       P       22 37 49.1 +0.8
PVIS  Viseu              70.50  48 eP       P       22 37 49.4 +0.9
PCAB  Cabril             70.60  47 eP       P       22 37 49.7 +0.7
PMRV  Marv??o            70.64  50 eP       P       22 37 49.7 +0.4
PCBR  Castelo Branco     70.65  49 eP       P       22 37 50.0 +0.7
      comp=Z,35nm,1.2s
POLO  Lamas de Olo       70.70  48 eP       P       22 37 50.6 +0.9
      comp=Z,44nm,1.3s
PBAR  Barrancos          70.70  51 eP       P       22 37 50.8 +1.1
      comp=Z,29nm,1.2s
MTE   Manteigas          70.70  49  P       P       22 37 49.7   0.0
MTE                                 IAmb    IAmb    22 37 53.9
      comp=Z,25nm,1.0s
MTE   Manteigas          70.70  49 eP       P       22 37 50.5 +0.8
TIC   Toumodi            70.71  85 eP       P       22 37 49.1  -1.1
KULLO Kullorsuaq         70.72   5 i P      P       22 37 47.7  -1.3
      comp=Z,15nm,0.8s
KULLO Kullorsuaq         70.72   5 i P      P       22 37 47.7  -1.3
KULLO                               pmax    pmax
      comp=Z,15nm,0.8s
KULLO Kullorsuaq         70.72   5 i P      P       22 37 47.8  -1.3
KULLO                               IAmb    IAmb    22 37 48.8
      comp=Z,15nm,0.8s
LIC   Lamto              70.72  85 eP       P       22 37 49.3  -1.0
      comp=Z,116nm,0.7s
PVRL  Vila Real          70.74  48 eP       P       22 37 50.5 +0.6
RES   Resolute Bay       70.81 355  P       P       22 37 49.5  -0.1
      comp=Z,2.1nm,0.7s,baz=196,slow=10.0,SNR=9.6
DBIC  Dimbokro           70.87  85  P       P       22 37 50.6  -0.5
      comp=Z,34nm,0.7s,baz=258,slow=6.3,SNR=51
DBIC                                LR      LR      23 08 27.4
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      comp=Z,23nm,18.0s,baz=252,slow=35
DBIC  Dimbokro           70.87  85  P       P       22 37 50.6  -0.5
KIC   Kosan Boka         71.00  85 eP       P       22 37 51.1  -0.8
      comp=Z,92nm,0.8s
MVO   Moncorvo           71.23  48 eP       P       22 37 53.6 +0.7
KOWA  Kowa               71.51  76  P       P       22 37 55.2 +0.2
PBRG  Braganca           71.56  48 eP       P       22 37 55.6 +0.8
SUMG  Summit             71.65  11⇑iP       P       22 37 56.0 +0.8
      comp=Z,205nm,1.0s
SUMG                               i                22 38 36.2
SUMG  Summit             71.65  11  P       P       22 37 56.1 +0.8
SUMG                                pmax    pmax
      comp=Z,79nm,1.0s
SUMG  Summit             71.65  11  P       P       22 37 56.0 +0.8
SUMG  Summit             71.65  11⇑iP       P       22 37 56.1 +0.8
SUMG                                IAmb    IAmb    22 37 56.8
      comp=Z,205nm,1.0s
SUMG                               i                22 38 36.2
TULEG Thule              71.93   2  P       P       22 37 57.4 +1.0
TULEG Thule              71.93   2 i P      P       22 37 57.4 +1.0
TULEG                               IAmb    IAmb    22 37 58.2
      comp=Z,10nm,0.8s
PAB   San Pablo          72.99  50  P       P       22 38 04.2 +0.7
PAB                                 pmax    pmax
      comp=Z,30nm,1.1s
PAB   San Pablo          72.99  50  P       P       22 38 04.2 +0.7
PAB                                 IAmb    IAmb    22 38 05.3
      comp=Z,30nm,1.1s
ESDC  Sonseca Array      73.30  50  P       P       22 38 06.1 +0.8
      comp=Z,18nm,0.9s,baz=267,slow=5.7,SNR=57
ESDC                                LR      LR      23 06 15.0
      comp=Z,25nm,20.0s,baz=220,slow=32
ESDC  Sonseca Array      73.30  50  P       P       22 38 05.9 +0.6
ESBB  Sonseca Array      73.30  50  P       P       22 38 06.0 +0.7
ESBB                                IAmb    IAmb    22 38 07.3
      comp=Z,29nm,1.1s
INK   Inuvik             74.07 341  P       P       22 38 09.2 +0.1
CTG   Chitna Glacier     74.09 333  P       P       22 38 11.2 +1.6
      baz=110
SCO   Scoresbysund       74.20  16  P       P       22 38 10.2 +0.4
SCO   Scoresbysund       74.20  16  P       P       22 38 10.2 +0.4
DSB   Dublin             74.21  36  P       P       22 38 10.8 +0.6
DSB                                 IAmb    IAmb    22 38 28.7
      comp=Z,32nm,1.1s
EPYK  Eagle Plains       74.27 339  P       P       22 38 11.0 +0.6
      baz=116
BCAR  Beaver Creek A     75.00 335  P       P       22 38 16.1 +1.4
EGAK  Eagle              75.34 336  P       P       22 38 17.1 +0.7
      baz=111
EGAK  Eagle              75.34 336  P       P       22 38 17.0 +0.5
BMRM  Bremner River      75.60 332  P       P       22 38 19.4 +1.3
      baz=107
PPT2  Papeete2           75.75 251 eLR      LR      23 01 52.8
      comp=Z,117nm,31.2s
DOT   Dot Lake           76.16 335  P       P       22 38 21.8 +0.5
DOT                                 IAmb    IAmb    22 38 23.0
      comp=Z,23nm,0.7s
SCRK  Sand Creek         76.23 335  P       P       22 38 22.6 +0.9
      baz=108,SNR=7.6
ESK   Eskdalemuir        76.48  34  P       P       22 38 23.2 +0.1
ESK                                 pmax    pmax
      comp=Z,44nm,1.1s
ESK   Eskdalemuir        76.48  34  P       P       22 38 23.2 +0.1
ESK                                 IAmb    IAmb    22 38 24.5
      comp=Z,44nm,1.1s
PAX   Paxson             76.57 334  P       P       22 38 23.9 +0.3
      baz=106
TBI   Tubuai             76.67 245 eLR      LR      23 02 19.0
      comp=Z,138nm,37.5s
TOA0  Torodi Ar. Sit     77.08  78  P       P       22 38 26.8  -0.6
TOA0                                IAmb    IAmb    22 38 27.4
      comp=Z,20nm,0.6s
TORD  Torodi Ar. Bea     77.08  78  P       P       22 38 26.8  -0.5
      comp=Z,17nm,0.5s,baz=282,slow=6.3,SNR=312
TORD                                pP      pP      22 38 53.2  -1.2
      comp=Z,4.3nm,0.6s,baz=281,slow=5.3,SNR=3.0
TORD                                LR      LR      23 11 26.2
      comp=Z,88nm,19.4s,baz=245,slow=35
TORD  Torodi Ar. Bea     77.08  78  P       P       22 38 26.6  -0.7
BMAR  Burnt Mountain     77.55 338  P       P       22 38 29.7 +0.7
HDA   Harding Lake       77.60 335  P       P       22 38 29.5 +0.3
      baz=106,SNR=18
IL31                     77.67 336  P       P       22 38 29.7 +0.1
ILAR  Eielson Array      77.67 336  P       P       22 38 29.5  -0.1
      comp=Z,6.5nm,0.6s,baz=119,slow=4.1,SNR=136
ILAR                                PP      PP      22 41 29.0 +3.0
      comp=Z,1.3nm,0.7s,baz=105,slow=6.4,SNR=4.2
WAT2  Susitna Watana     77.94 334  P       P       22 38 31.8 +0.4
      baz=104
POKR  Poker Plat Res     77.99 336  P       P       22 38 31.7 +0.3
      baz=105
MDM   Murphy Dome        78.27 336  P       P       22 38 33.5 +0.5
MCK   McKinley           78.27 334  P       P       22 38 32.9  -0.2
      baz=104
DAG   Danmarks Havn      78.34  11 i P      P       22 38 33.0  -0.1
      comp=Z,4.1nm,0.9s
DAG                                i                22 38 59.4
DAG   Danmarks Havn      78.34  11 i P      P       22 38 33.0  -0.1
DAG                                i                22 38 59.4
DAG                                 pmax    pmax
      comp=Z,4.0nm,0.9s
DAG   Danmarks Havn      78.34  11 i P      P       22 38 33.0  -0.1
DAG                                 IAmb    IAmb    22 38 33.8
      comp=Z,4.1nm,0.9s
DAG                                i                22 38 59.4
NEA2  Nenana             78.53 335  P       P       22 38 34.7 +0.2
      baz=104,SNR=14
CUT   Chulitna           78.57 333  P       P       22 38 35.2 +0.6
      baz=102
SUA   Susitna One        78.61 332  P       P       22 38 35.3 +0.3
      baz=101
CLF   Chambon-Foret      78.76  42  P       P       22 38 37.1 +1.1
I23K  Minto, Yukon-K     78.78 336  P       P       22 38 36.4 +0.7
      baz=103,SNR=10
TRF   Thorofare Moun     78.80 334  P       P       22 38 36.4 +0.2
      baz=102
KDAK  Kodiak Island      78.87 328  P       P       22 38 36.4   0.0
      comp=Z,10nm,0.7s,baz=215,slow=23,SNR=1.4
KDAK  Kodiak Island      78.87 328  P       P       22 38 36.7 +0.4
KDAK                                pmax    pmax
      comp=Z,36nm,1.0s
KDAK  Kodiak Island      78.87 328  P       P       22 38 36.7 +0.4
KDAK                                IAmb    IAmb    22 38 56.2
      comp=Z,36nm,1.0s
SKT   Skwentna           79.07 332  P       P       22 38 37.7 +0.2
      baz=101
BPAW  Bear Paw Mtn.      79.24 334  P       P       22 38 38.3   0.0
      baz=102,SNR=15
MLY   Manley             79.33 335  P       P       22 38 38.9 +0.1
      baz=102,SNR=7.8
PPLA  Purkeypile         79.54 333  P       P       22 38 40.1   0.0
      baz=100
COLD  Coldfoot           79.59 338  P       P       22 38 41.1 +1.0
      baz=103
TOLK  Toolik Lake Re     79.69 339  P       P       22 38 41.1 +0.4
      baz=104
CHUM  Lake Minchumin     79.77 334  P       P       22 38 41.1   0.0
      baz=100
SSB   Saint Sauveur      80.12  45  P       P       22 38 43.7 +0.2
SSB                                 pmax    pmax
      comp=Z,20nm,0.9s
SSB   Saint Sauveur      80.12  45  P       P       22 38 43.7 +0.2
SSB                                 IAmb    IAmb    22 38 45.7
      comp=Z,20nm,0.9s
SNF   Seneffe            80.30  40 dP       P       22 38 44.7 +0.5
SNF                                dPcP     PcP     22 38 50.8  -0.3
DOU   Dourbes            80.47  40 dP       P       22 38 45.8 +0.7
BMRD  Maredsous          80.59  40 dP       P       22 38 45.0  -0.8
IMAR  Indian Mountai     80.74 336  P       P       22 38 46.2  -0.1
BGES  Gesves             80.80  40 dP       P       22 38 47.8 +0.8
BSTI  Sart Tilman        81.12  40 dP       P       22 38 49.7 +1.0
BSTI                               dsP      sP      22 39 21.7  -5.5
BHOU  Houvegnez          81.39  40 dP       P       22 38 51.5 +1.4
      comp=Z,32nm,1.5s
MEM   Membach            81.40  40 dP       P       22 38 50.6 +0.4
      comp=Z,17nm,1.5s
MEM                                dsP      pP      22 39 21.1 +3.7
WLF   Walferdange        81.45  41 dP       P       22 38 51.6 +1.2
      comp=Z,42nm,1.3s
WLF                                dsP      sP      22 39 23.5  -5.4
WLF   Walferdange        81.45  41  P       P       22 38 51.2 +0.8
WLF                                 pmax    pmax
      comp=Z,58nm,1.1s
WLF   Walferdange        81.45  41  P       P       22 38 51.2 +0.8
WLF                                 IAmb    IAmb    22 38 52.5
      comp=Z,58nm,1.1s
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WLF   Walferdange        81.45  41 eP       P       22 38 51.6 +1.2
      comp=Z,30nm,0.9s,baz=271,slow=5.1
BTNL  Ternell            81.48  40 dP       P       22 38 51.5 +0.9
BNI   Bardonecchia       81.62  45  P       P       22 38 52.7 +1.1
BNI                                 pmax    pmax
      comp=Z,41nm,1.5s
BNI   Bardonecchia       81.62  45  P       P       22 38 52.7 +1.1
BNI                                 IAmb    IAmb    22 38 54.3
      comp=Z,41nm,1.5s
ECH   Echery             82.05  42  P       P       22 38 54.3 +0.6
ECH                                 pmax    pmax
      comp=Z,37nm,1.2s
ECH   Echery             82.05  42  P       P       22 38 54.2 +0.6
ECH                                 IAmb    IAmb    22 38 55.3
      comp=Z,37nm,1.2s
AHRW  Bad Neuenahr-A     82.08  40 eP       P       22 38 55.0 +1.3
      baz=271,slow=5.1
SENIN Lac Senin/Sane     82.09  44  P       P       22 38 55.1 +1.0
BUG   Bochum--Univer     82.24  39 eP       P       22 38 55.4 +0.9
      comp=Z,18nm,1.0s,baz=271,slow=5.1
BUG                                epP      sP      22 39 28.4  -4.6
A21K  Barrow             82.57 341  P       P       22 38 56.4 +0.6
      baz=98
IBBN  Ibbenburen         82.57  38 eP       P       22 38 57.2 +1.0
      comp=Z,17nm,0.9s,baz=271,slow=5.1
HLG   Helgoland          82.72  36 eP       P       22 38 58.0 +1.1
      baz=271,slow=5.1
HLG                                epP      sP      22 39 30.7  -4.8
BFO   Black Forest       82.83  42  P       P       22 38 57.8 +0.1
BFO                                 pmax    pmax
      comp=Z,10.0nm,1.0s
BFO   Black Forest       82.83  42  P       P       22 38 57.8 +0.1
BFO   Black Forest       82.83  42 eP       P       22 38 58.4 +0.7
      comp=Z,6.6nm,0.9s,baz=271,slow=5.1
TNS   Taunus Mts         82.95  40 eP       P       22 38 59.4 +1.1
      comp=Z,10nm,0.9s,baz=271,slow=5.1
KASTN Kahler Asten       82.95  39 eP       P       22 38 59.2 +1.0
      baz=271,slow=5.1
HOMB  Homborsund         83.22  32 i P      P       22 39 01.0 +1.7
STU   Stuttgart          83.42  42 eP       P       22 39 01.6 +0.9
      baz=271,slow=5.1
TUE   Stuetta            83.51  44  P       P       22 39 02.4 +0.9
TUE                                 IAmb    IAmb    22 39 03.6
      comp=Z,64nm,1.5s
MUD   Monsted U'grnd     83.52  34 i P      P       22 39 02.9 +1.9
MUD   Monsted U'grnd     83.52  34 i P      P       22 39 02.9 +1.9
MUD   Monsted U'grnd     83.52  34 i P      P       22 39 01.0   0.0
MUD                                i P      P       22 39 02.9 +1.9
VSL   Villasalto         83.57  51  P       P       22 39 02.6 +0.9
KEST  Kesra              83.61  55  P       P       22 39 02.9 +0.9
      comp=Z,34nm,1.1s,baz=145,slow=3.2,SNR=15
KEST  Kesra              83.61  55  P       P       22 39 03.1 +1.0
KEST                                IAmb    IAmb    22 39 16.4
      comp=Z,29nm,1.1s
SKMB  Sankelmark Bun     83.64  36 eP       P       22 39 02.5 +0.9
      baz=271,slow=5.1
DAVA  Damuels            83.87  43 eP       P       22 39 04.4 +1.2
      comp=Z,17nm,0.8s,SNR=7.3
DAVA                               eS       pP      22 39 36.5 +5.8
      comp=Z,46nm,0.9s,SNR=8.8
GTTG  Gottingen          83.93  39 eP       P       22 39 04.1 +0.9
      comp=Z,18nm,1.0s,baz=271,slow=5.1
UBBA  Unterbreizbach     83.95  40 eP       P       22 39 04.4 +1.2
      baz=271,slow=5.1
NRDL  Niedersach Rie     84.02  38 eP       P       22 39 04.8 +1.2
      baz=271,slow=5.1
UBR   Ueberruh           84.03  43 eP       P       22 39 04.8 +0.9
      baz=271,slow=5.1
BSEG  Bad Segeberg       84.15  36 eP       P       22 39 05.3 +1.1
      comp=Z,20nm,0.9s,baz=271,slow=5.1
SALO  Salr               84.33  45  P       P       22 39 06.3 +0.8
ASSE  Asse, Remlinge     84.36  38 eP       P       22 39 06.4 +1.1
      comp=Z,12nm,1.0s,baz=271,slow=5.1
NC204 NORSAR Array S     84.43  29  P       P       22 39 06.8 +1.1
NC204                               IAmb    IAmb    22 39 07.3
      comp=Z,16nm,0.8s
FETA  Feichten           84.45  43 eP       P       22 39 07.1 +0.9
      comp=Z,18nm,1.0s
FETA                               eS       pP      22 39 38.7 +5.2
      comp=Z,42nm,1.2s
RETA  Reutte             84.47  43 i P      P       22 39 06.5 +0.3
      comp=Z,15nm,1.3s
RETA                               eS       pP      22 39 39.1 +5.5
      comp=Z,17nm,1.2s
NB2   NORSAR Subarra     84.65  29  P       P       22 39 07.6 +0.9
      comp=Z,75nm,1.7s,baz=270,slow=5.3
NOA   NORSAR Array B     84.65  29  P       P       22 39 07.4 +0.7
      comp=Z,9.1nm,1.0s,baz=273,slow=4.9,SNR=12
NOA                                 pP      pP      22 39 33.8  -0.4
      comp=Z,4.2nm,0.9s,baz=268,slow=5.0,SNR=2.9
ZCCA  Zocca              84.68  46  P       P       22 39 08.2 +1.0
MOTA  Moosalm            84.70  43 eP       P       22 39 08.0 +0.6
      comp=Z,9.9nm,1.1s
MOTA                               eS       pP      22 39 40.1 +5.3
      comp=Z,27nm,1.2s,SNR=5.7
FLTG  Flechtingen        84.71  38 eP       P       22 39 08.1 +1.0
      comp=Z,14nm,0.9s,baz=271,slow=5.1
GRF   Grafenberg Arr     84.74  41 eP       P       22 39 08.3 +0.9
      baz=271,slow=5.1
SQTA  Sankt Quirin       84.78  43 eP       P       22 39 08.5 +0.7
      comp=Z,12nm,1.2s
SQTA                               eS       pP      22 39 40.6 +5.5
      comp=Z,24nm,1.2s
FUR   Furstenfeldbru     84.81  42 eP       P       22 39 08.8 +1.1
      baz=271,slow=5.1
WATA  Walderalm          85.03  43 i P      P       22 39 09.8 +0.8
      comp=Z,11nm,1.4s
WATA                               eS       pP      22 39 42.1 +5.6
      comp=Z,13nm,1.3s
NEUB  Neuenburg          85.06  39 eP       P       22 39 10.2 +1.3
      comp=Z,38nm,1.3s,baz=271,slow=5.1
WTTA  Wattenberg         85.07  43 eP       P       22 39 09.6 +0.3
      comp=Z,15nm,1.4s
WTTA                               eS       pP      22 39 42.2 +5.6
      comp=Z,21nm,0.9s,SNR=8.8
CTI   Castel Tesino      85.11  44  P       P       22 39 10.0 +0.5
CTI                                 pmax    pmax
      comp=Z,47nm,1.5s
CTI   Castel Tesino      85.11  44  P       P       22 39 10.0 +0.5
CTI                                 IAmb    IAmb    22 39 11.2
      comp=Z,47nm,1.5s
MANZ  Manzenberg         85.31  40 eP       P       22 39 11.5 +1.3
      comp=Z,10nm,0.9s,baz=271,slow=5.1
ROTZ  Rotzenmuhle        85.38  41 eP       P       22 39 11.7 +1.2
      comp=Z,5.0nm,1.1s,baz=271,slow=5.1
ROTZ                               epP      sP      22 39 44.4  -4.8
WERD  Werda              85.42  40 eP       P       22 39 11.9 +1.1
      comp=Z,5.8nm,0.9s,baz=271,slow=5.1
GUNZ  Gunzen             85.44  40 eP       P       22 39 12.0 +1.1
      comp=Z,10nm,1.1s,baz=271,slow=5.1
GUNZ                               epP      sP      22 39 44.6  -4.9
WERN  Wernitzgruen       85.47  40 eP       P       22 39 12.6 +1.6
      comp=Z,11nm,1.0s,baz=271,slow=5.1
BELA  Belgrano 2         85.47 172  P       P       22 39 10.9 +0.5
ANM   Nome               85.51 334  P       P       22 39 11.1 +0.2
      baz=89
NKC   Novy Kostel        85.52  40 eP       P       22 39 12.5 +1.2
NKC                                e                22 39 44.9
NKC   Novy Kostel        85.52  40 eP       P       22 39 12.5 +1.2
NKC                                epP      sP      22 39 44.9  -5.0
TANN  Tannenbergstha     85.52  40 eP       P       22 39 12.5 +1.2
      comp=Z,16nm,1.0s,baz=271,slow=5.1
ABTA  Abfaltersbach      85.69  44 eP       P       22 39 13.2 +0.9
      comp=Z,22nm,1.2s
ABTA                               eS       pP      22 39 45.1 +5.4
      comp=Z,27nm,0.9s
CLL   Collm              85.83  39 i P      P       22 39 13.8 +1.1
      comp=Z,29nm,1.0s
CLL   Collm              85.83  39 i P      P       22 39 13.8 +1.1
CLL                                 pmax    pmax
      comp=Z,29nm,1.0s
CLL   Collm              85.83  39  P       P       22 39 13.4 +0.7
CLL                                 IAmb    IAmb    22 39 15.4
      comp=Z,28nm,1.0s
CLL   Collm              85.83  39 eP       P       22 39 14.4 +1.6
      comp=Z,20nm,0.9s,baz=271,slow=5.1
WET   Wettzell           85.84  41 eP       P       22 39 14.4 +1.5
      comp=Z,17nm,1.0s,baz=271,slow=5.1
RJOB  Jochberg           85.84  43 eP       P       22 39 14.4 +1.4
      baz=271,slow=5.1
RJOB                               epP      sP      22 39 46.3  -5.3
RGN   Rugen              85.90  36 eP       P       22 39 14.5 +1.5
      baz=271,slow=5.1
ZOU   Zoufplan           86.01  44  P       P       22 39 14.4 +0.4
ZOU                                 IAmb    IAmb    22 39 15.7
      comp=Z,20nm,1.0s
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KBA	**Koelnbreinsper**	86.24	43	*e*P	P	22 39 16.1	+1.0
	comp=Z,20nm,1.0s,SNR=6.3						
KBA				*e*S	pP	22 39 48.4	+5.8
	comp=Z,26nm,1.0s						
RUE	**Ruedersdorf**	86.26	38	*e*P	P	22 39 16.5	+1.7
	comp=Z,21nm,0.9s,baz=271,slow=5.1						
KHC	**Kasperske Hory**	86.30	41*c*	*e*P	P	22 39 16.1	+0.9
KHC				pmax	pmax		
	comp=Z,54nm,1.2s						
KHC	**Kasperske Hory**	86.30	41	*e*P	P	22 39 15.8	+0.6
KHC				*e*pP	sP	22 39 48.6	-5.2
KHC	**Kasperske Hory**	86.30	41	P	P	22 39 15.9	+0.7
KHC				IAmb	IAmb	22 39 18.1	
	comp=Z,28nm,1.2s						
GEC2	**GERESS Array S**	86.39	41	P	P	22 39 16.5	+0.7
GEC2				IAmb	IAmb	22 39 17.5	
	comp=Z,18nm,1.0s						
GEC2	**GERESS Array S**	86.39	41	*e*P	P	22 39 16.9	+1.2
	comp=Z,288nm,2.3s,baz=271,slow=5.1						
GEC2				*e*pP	sP	22 39 49.6	-4.8
GERES	**GERESS Array B**	86.39	41	P	P	22 39 16.4	+0.7
	comp=Z,9.7nm,0.9s,baz=252,slow=2.7,SNR=48						
GERES				LR	LR	23 13 11.1	
	comp=Z,37nm,21.2s,baz=327,slow=32						
GERES	**GERESS Array B**	86.39	41	P	P	22 39 16.2	+0.4
BRG	**Berggiesshubel**	86.44	39	*i* P	P	22 39 16.9	+1.1
BRG				Amp		22 39 18.2	
	comp=Z,28nm,1.0s						
BRG				*e*x	x	22 39 43.7	
BRG				Amp		22 39 50.8	
	comp=Z,7.5nm,0.9s						
BRG	**Berggiesshubel**	86.44	39	*e*P	P	22 39 17.1	+1.3
	comp=Z,16nm,0.9s,baz=271,slow=5.1						
MYKA	**Terra Mystica**	86.47	44	*e*P	P	22 39 16.7	+0.6
	comp=Z,29nm,1.1s,SNR=5.8						
MYKA				*i* S	pP	22 39 48.9	+5.4
	comp=Z,20nm,0.8s						
LNIZ	**Loecknitz**	86.47	37	*e*P	P	22 39 17.2	+1.4
	comp=Z,30nm,0.9s,baz=271,slow=5.1						
PBCC	**Pribram**	86.54	41	*e*P	P	22 39 17.7	+1.4
CADS	**Cadrg**	86.55	44	*i* P	P	22 39 17.2	+0.7
	comp=Z,69nm,1.2s						
CADS				*i* pP	pP	22 39 49.1	+5.1
CKRC	**Cesky Krumlov**	86.80	41	*e*P	P	22 39 18.4	+0.8
MOA	**Molln**	86.82	42	*e*P	P	22 39 18.5	+0.7
	comp=Z,28nm,1.4s,SNR=11						
MOA				*e*S	pP	22 39 50.5	+5.2
	comp=Z,29nm,1.2s						
PVCC	**Panska Ves**	86.86	40	*e*P	P	22 39 19.3	+1.5
PVCC	**Panska Ves**	86.86	40	*e*P	P	22 39 19.3	+1.5
PRU	**Pruhonice**	86.88	40	*e*P	P	22 39 19.3	+1.4
PRU	**Pruhonice**	86.88	40	*e*P	P	22 39 19.3	+1.4
VNA3	**Neumayer Olymp**	86.99	163	P	P	22 39 18.3	+0.3
LJU	**Ljubljana**	87.11	44	*i* P	P	22 39 20.3	+1.1
	comp=Z,69nm,1.0s						
LJU				*i* pP	pP	22 39 52.3	+5.6
VNA1	**Neumayer--Stat**	87.18	162	P	P	22 39 19.6	+0.8
VNA2	**Neumayer--Watz**	87.55	162	P	P	22 39 20.9	+0.3
ARSA	**Arzberg**	87.71	43	*e*P	P	22 39 22.8	+0.8
	comp=Z,13nm,0.8s,SNR=5.8						
ARSA				*e*S	pP	22 39 55.1	+5.5
	comp=Z,13nm,0.8s						
DOBS	**Dobrina**	87.76	44	*i* P	P	22 39 23.1	+0.9
UPC	**Upice**	87.78	40	*e*P	P	22 39 23.5	+1.2
UPC	**Upice**	87.78	40	*e*P	P	22 39 23.5	+1.2
CHVC	**Chvalec**	87.80	40	*e*P	P	22 39 23.1	+0.7
UPP	**Uppsala**	87.88	30	*e*P	P	22 39 22.9	+0.5
CONA	**Conrad Observa**	87.89	42	*e*P	P	22 39 24.0	+1.0
	comp=Z,19nm,1.3s,SNR=6.9						
CONA				*e*S	pP	22 39 56.1	+5.6
	comp=Z,20nm,1.3s						
OSTC	**Ostas**	87.91	40	*e*P	P	22 39 24.3	+1.4
KSP	**Ksiaz**	87.93	39	*e*P	P	22 39 24.9	+2.0
DPC	**Dobruska-Polom**	87.99	40	*e*P	P	22 39 24.8	+1.5
DPC	**Dobruska-Polom**	87.99	40	*e*P	P	22 39 24.8	+1.5
KRUC	**Moravsky**	88.15	41	*e*P	P	22 39 25.1	+1.1
VRAC	**Vranov**	88.26	41	*e*P	P	22 39 25.6	+1.1
GKP	**Gorka Klasztor**	88.30	37	*e*P	P	22 39 26.5	+1.9
GKP	**Gorka Klasztor**	88.30	37	*e*P	P	22 39 26.2	+1.6
KRLC	**Kraliky**	88.31	40	*e*P	P	22 39 26.8	+2.0
KRLC	**Kraliky**	88.31	40	*e*P	P	22 39 26.8	+2.0
GAMB	**Gambell**	88.33	334	P	P	22 39 25.6	+1.1
	baz=83						
GAMB	**Gambell**	88.33	334	P	P	22 39 25.4	+0.9
GAMB				IAmb	IAmb	22 39 26.4	
	comp=Z,9.7nm,0.7s						
ZST	**Bratislava**	88.69	42	*e*P	P	22 39 28.0	+1.4
ZST				pmax	pmax		
	comp=Z,104nm,1.7s						
ZST	**Bratislava**	88.69	42	*e*P	P	22 39 28.0	+1.4
MODS	**Modra-Piesok**	88.79	42	*e*P	P	22 39 28.0	+0.9
MODS				pmax	pmax		
	comp=Z,28nm,1.3s						
MODS	**Modra-Piesok**	88.79	42	*e*P	P	22 39 28.0	+0.9
MORC	**Moravsky Berou**	88.83	40	⇓P	P	22 39 28.9	+1.6
MORC	**Moravsky Berou**	88.83	40	*e*P	P	22 39 28.8	+1.5
JAVC	**Velka Javorina**	89.00	41	*e*P	P	22 39 30.3	+2.2
SNAA	**Sanae**	89.19	162	P	P	22 39 28.8	+0.3
SNAA	**Sanae**	89.19	162	P	P	22 39 28.8	+0.3
SNAA				pmax	pmax		
	comp=Z,17nm,1.1s						
SNAA	**Sanae**	89.19	162	P	P	22 39 28.8	+0.3
SNAA				IAmb	IAmb	22 39 29.7	
	comp=Z,16nm,1.1s						
ARCES	**ARCESS Array B**	89.71	20	P	P	22 39 31.6	+0.7
	comp=Z,6.9nm,1.0s,baz=358,slow=2.8,SNR=3.8						
VYHS	**Vyhne**	89.81	42	*e*P	P	22 39 36.2	+4.3
VYHS	**Vyhne**	89.81	42	*e*P	P	22 39 36.2	+4.3
OJC	**Ojcow**	90.22	40	*e*P	P	22 39 35.7	+2.0
PSZ	**Piszkesteto**	90.59	42	⇓P	P	22 39 35.3	-0.3
NIE	**Niedzica**	90.65	40	*e*P	P	22 39 38.6	+2.8
CRVS	**Cervenica-Dubn**	91.48	41	*e*P	P	22 39 42.1	+2.5
CRVS				pmax	pmax		
	comp=Z,27nm,1.4s						
CRVS	**Cervenica-Dubn**	91.48	41	*e*P	P	22 39 42.1	+2.5
FINES	**FINESS Array B**	91.73	28	P	P	22 39 40.8	+0.4
	comp=Z,4.8nm,0.9s,baz=345,slow=6.5,SNR=6.0						
FINES				LR	LR	23 16 52.8	
	comp=Z,60nm,18.6s,baz=288,slow=33						
PABE	**Paberze**	91.87	34	*e*P	P	22 39 42.2	+1.0
KOLS	**Kolonicke sedl**	92.00	41	*e*P	P	22 39 44.5	+2.5
KOLS	**Kolonicke sedl**	92.00	41	*e*P	P	22 39 44.5	+2.5
BZS	**Buzias**	92.09	44	⇓P	P	22 39 44.2	+1.8
FNA	**Florina**	92.63	49	P	P	22 39 46.2	+1.0
FNA				pmax	pmax		
	comp=Z,11nm,0.9s						
FNA	**Florina**	92.63	49	P	P	22 39 46.2	+1.0
FNA				IAmb	IAmb	22 39 47.3	
	comp=Z,11nm,0.9s						
DRGR		92.65	43	⇓P	P	22 39 46.5	+1.4
HERR	**Herculane**	92.76	45	⇓P	P	22 39 46.9	+1.3
GZR	**Gura Zlata**	92.93	44	⇓P	P	22 39 47.8	+1.4
LVV	**L'vov**	92.98	40	*e*P	P	22 39 37.6	-8.9
IIGN	**Ignalina**	93.16	34	*e*P	P	22 39 48.2	+1.0
CJR	**Cluj-Napoca**	93.26	43	⇓P	P	22 39 49.7	+1.8
IDID	**Didziasalis**	93.46	34	*e*P	P	22 39 49.5	+1.0
NACGM	**Naroch**	93.58	34	*i* P	P	22 39 49.1	0.0
NACGM				*i* P	P	22 39 49.1	0.0
NACGM				*i* P	P	22 39 49.1	0.0
NACGM				*i* pP	pP	22 40 19.3	+2.4
NACGM				*i* PP	PP	22 43 34.6	-0.2
NACGM				*i* PPP	PPP	22 45 34.0	
NACGM				*i* S	SKSac	22 50 08.5	-5.5
NACGM				*i* sS	pS	22 51 15.9	-8.9
NACGM				*i* SS	SS	22 55 58.5	-70
NACGM				*i* SSS	SSS	22 59 49.5	
ARCR	**ARCALIA**	93.70	42	⇓P	P	22 39 51.3	+1.4
VTS	**Vitosha**	93.72	47	⇓P	P	22 39 51.2	+1.0
VTS	**Vitosha**	93.72	47	P	P	22 39 51.1	+0.8
VTS				pmax	pmax		
	comp=Z,8.0nm,1.3s						
VTS	**Vitosha**	93.72	47	P	P	22 39 51.1	+0.8
VTS				IAmb	IAmb	22 39 52.4	
	comp=Z,8.4nm,1.3s						
BUR08	**Bucovina Ar. S**	94.16	42	P	P	22 39 53.8	+1.7
BUR08				IAmb	IAmb	22 39 54.9	
	comp=Z,6.0nm,1.0s						
BURAR	**Bucovina Array**	94.18	42	⇓P	P	22 39 54.0	+1.8
BURAR	**Bucovina Array**	94.18	42	P	P	22 39 53.8	+1.6
ARR	**Arges**	94.22	44	⇓P	P	22 39 53.6	+1.2
VLAD	**Vladila**	94.31	45	⇓P	P	22 39 53.7	+1.0
VOIR		94.49	44	⇓P	P	22 39 54.9	+1.3
QSPA	**South Pole Qui**	94.69	180	P	P	22 39 56.0	+1.9
QSPA				IAmb	IAmb	22 40 08.6	
	comp=Z,12nm,1.2s						
BIZ	**Bicaz**	94.91	42	⇓P	P	22 39 57.3	+1.9
MLR	**Muntele Rosu**	95.10	44	⇓P	P	22 39 57.9	+1.4
AKASG	**Malin Array Be**	96.04	38	P	P	22 40 00.5	0.0
	comp=Z,0.3nm,0.5s,baz=285,slow=3.5,SNR=4.6						
SORM	**Soroca**	96.12	41	⇓P	P	22 40 01.3	+0.4
OBN	**Obninsk**	98.89	32	⇓*e*P	P	22 40 12.3	-0.9
OBN				*e**PP	pP	22 40 41.2	+0.1
OBN				*e*		22 44 18.5	
OBN				*e*PPP	PPP	22 46 23.4	
OBN				pmax	pmax		
	comp=Z,4.0nm,1.1s						
SYO	**Syowa Base**	103.36	161	⇓*e*PP	PKiKP	22 44 47.2	-4.0
BRZS	**Berezniki**	119.25	23	*e*PKP	PKPdf	22 45 21.6	-0.4
	baz=23						
BRZS	**Berezniki**	119.25	23	*e*PKIKP	PKPdf	22 45 21.5	-0.4
ZALV	**Zalesovo Beam**	119.45	13	PKP	PKPdf	22 45 21.8	-0.3
	comp=Z,0.8nm,0.5s,baz=270,slow=2.5,SNR=6.9						
KURK	**Kurchatov**	120.70	18*c*	*i*PKIKP	PKiKP	22 45 25.6	+0.9
KURK				pmax	pmax		
	comp=Z,2.0nm,1.3s						
KLR	**Kul'dur**	121.11	339	*i* PKIKP	PKiKP	22 45 25.6	0.0
KLR				pmax	pmax		
	comp=Z,2.0nm,1.1s						
USRK	**Ussuriysk Ar.**	125.19	336	PKP	PKPdf	22 45 33.5	+0.1
	comp=Z,3.5nm,0.8s,baz=204,slow=1.7,SNR=11						
MK31	**Makanchi Array**	125.31	18*c*	*i*PKIKP	PKPdf	22 45 33.1	-0.6
MK31	**Makanchi Array**	125.31	18		PKPdf	22 45 32.8	-0.8
MKAR	**Makanchi Array**	125.31	18	PKP	PKPdf	22 45 32.9	-0.8
	comp=Z,0.8nm,0.6s,baz=298,slow=2.4,SNR=14						
MKAR				pPKP	pPKPdf	22 46 02.7	+0.2
	comp=Z,0.9nm,0.7s,baz=8.6,slow=2.1,SNR=3.2						
MKAR	**Makanchi Array**	125.31	18	PKPdf	PKPdf	22 45 32.6	-1.0
KUU	**Kurty**	125.66	24	*e*PKP	PKPdf	22 45 33.6	-0.8
	baz=24						
KUU	**Kurty**	125.66	24	*e*PKIKP	PKPdf	22 45 33.6	-0.8
MDJ	**Mudanjiang**	125.80	338	PKP	PKiKP	22 45 36.8	+1.8
AAK	**Ala-Archa**	125.89	27*c*	*i*PKIKP	PKiKP	22 45 36.1	+0.6
AAK				pmax	pmax		
	comp=Z,17nm,1.7s						
AAK	**Ala-Archa**	125.89	27	PKPdf	PKPdf	22 45 35.3	+0.2
MDOK	**Medeo**	126.56	24	*e*PKP	PKPdf	22 45 35.6	-0.8
	baz=24						
MDOK	**Medeo**	126.56	24	*e*PKIKP	PKPdf	22 45 35.5	-0.8
KPKS	**Kokpek**	126.95	23	*e*PKP	PKPdf	22 45 36.1	-1.0
	baz=23						
KPKS	**Kokpek**	126.95	23	*e*PKIKP	PKPdf	22 45 36.0	-1.0
SATY	**Saty**	127.19	23	*e*PKP	PKPdf	22 45 37.1	-0.4
	baz=23						
SATY	**Saty**	127.19	23	*e*PKIKP	PKPdf	22 45 37.1	-0.4
SHLS	**Shalkode**	127.52	22	*e*PKP	PKPdf	22 45 37.7	-0.4
	baz=22						
SHLS	**Shalkode**	127.52	22	*e*PKIKP	PKPdf	22 45 37.7	-0.4
ULN	**Ulaanbaatar**	127.62	357*c*	*i*PKIKP	PKiKP	22 45 39.0	+0.2
ULN				pmax	pmax		
	comp=Z,8.0nm,2.5s						
ULN	**Ulaanbaatar**	127.62	357	PKPdf	PKPdf	22 45 38.2	0.0
SONM	**Songino Array**	127.68	358	PKP	PKPdf	22 45 38.2	-0.1
	comp=Z,1.3nm,0.9s,baz=313,slow=0.9,SNR=9.9						
SONM				pPKP	pPKPdf	22 46 05.9	-1.4
	comp=Z,1.4nm,0.9s,baz=320,slow=1.2,SNR=4.3						
MJAR	**Matsushiro Arr**	127.96	325	PKP	PKiKP	22 45 39.5	-0.1
	comp=Z,1.7nm,0.8s,baz=61,slow=2.2,SNR=4.4						
MJAR				pPKP	pPKPdf	22 46 07.7	-0.3
	comp=Z,3.3nm,0.8s,baz=73,slow=1.3,SNR=6.1						
MJAR				SKPbc	SKiKP	22 48 49.6	-17
	comp=Z,2.1nm,0.8s,baz=64,slow=3.2,SNR=5.5						
KSH	**Kashi**	129.05	28	PKP	PKiKP	22 45 41.8	-0.1
KSH				PP	PP	22 47 52.4	+3.4
KSH				PKS	PKSdf	22 49 13.4	-4.4
KSH				AMB	AMB		
	comp=Z,160nm,5.4s						
KSH				LR	LR		
	comp=Z,240nm,12.9s						
WMQ	**Urumqi**	129.57	15	*e*PKP	PKiKP	22 45 42.6	-0.1
KSRS	**Korea Array**	132.50	334	PKP	PKiKP	22 45 48.8	+0.1
	comp=Z,3.0nm,0.6s,baz=15,slow=1.7,SNR=14						
KSRS				pPKP	pPKPdf	22 46 16.6	0.0
	comp=Z,2.6nm,0.8s,baz=23,slow=2.5,SNR=3.5						
KSRS				SKPbc	SKPab	22 49 06.2	-0.4
	comp=Z,18nm,1.1s,baz=21,slow=3.9,SNR=19						
KSAR	**Wonju Array Be**	132.53	334	PKIKP	PKiKP	22 45 48.2	-0.5
KSAR	**Wonju Array Be**	132.53	334		PKiKP	22 45 48.2	-0.5
HHC	**Hu-ho-hao-te**	134.17	352	*e*PKP	PKPdf	22 45 49.4	-1.4
HHC				LR	LR		
	comp=Z,100nm,19.0s						
HHC				LR	LR		
	comp=Z,110nm,20.4s						
STKA	**Stephens Creek**	135.52	228	PKP	PKPdf	22 45 53.7	+0.4
	comp=Z,1.9nm,0.7s,baz=105,slow=4.7,SNR=5.0						
STKA				SKPbc	SKPbc	22 49 14.0	-1.3
	comp=Z,1.0nm,0.3s,baz=63,slow=6.8,SNR=3.3						
GTA	**Gaotai**	135.98	5	PKP	PKPdf	22 45 54.1	-0.1
NJ2	**Nanjing**	140.81	340	*e*PKP	PKPdf	22 46 02.4	-0.7
GKN	**Gorkha**	142.59	29	*e*P	PKPdf	22 46 01.8	-4.8
KKN	**Kakani**	143.07	28	*e*P	PKPab	22 46 03.0	0.0
DMN	**Daman**	143.14	28	*e*P	PKPab	22 46 03.1	-0.3
GUN	**Gumba**	143.25	27	*e*P	PKPab	22 46 04.3	+0.4
	comp=Z,50nm,0.9s						
PKIN	**Phulchoki**	143.31	28	*e*P	PKPab	22 46 03.5	-0.6
	comp=Z,15nm,0.7s						
PKI	**Pulchoki**	143.32	28	*e*P	PKPab	22 46 03.9	-0.3
	comp=Z,21nm,0.9s						
JIRN	**Jiri**	143.60	27	*e*P	PKPab	22 46 04.2	-1.1
RAMN	**Ramite**	144.40	27	*e*P	PKPab	22 46 04.0	-4.2
TAPN	**Taplejung**	144.54	25	*e*P	PKPab	22 46 04.5	-4.3
	comp=Z,26nm,0.5s						
CD2	**Chengdu**	144.63	0	PKP	PKPab	22 46 08.8	+0.1
CD2				pPKP	pPKPdf	22 46 37.3	-1.8
CD2				SS	SS	23 08 10.3	+6.3
ENH	**Enshi**	144.85	352		PKPab	22 46 09.5	0.0
AS31	**Alice Springs**	145.45	234	PKPdf	PKPdf	22 46 11.0	-0.6
ASAR	**Alice Springs**	145.45	234	PKPbc	PKPdf	22 46 10.9	-0.7
	comp=Z,13nm,0.8s,baz=122,slow=3.7,SNR=158						
ASAR				pPKPbc	pPKPab	22 46 38.9	-1.4
	comp=Z,29nm,0.9s,baz=116,slow=3.4,SNR=9.8						
FORT	**Forrest**	145.47	218	PKPdf	PKPbc	22 46 11.4	-0.1
WR0	**Warramunga Arr**	146.52	240		PKPdf	22 46 12.6	-0.8
WR0				PKPbc	PKPbc	22 46 14.5	-0.5
NACB	**Ninganchiao**	146.55	330		PKPbc	22 46 15.0	+0.1
WB2	**Warramunga Arr**	146.69	240		PKPdf	22 46 12.8	-0.9
WB2				PKPbc	PKPbc	22 46 15.5	0.0
WRAB	**Tennant Creek**	146.70	240*c*	*i*PKP2	PKPbc	22 46 15.5	0.0
WRAB				pmax	pmax		
	comp=Z,14nm,1.0s						
WRA	**Warramunga Arr**	146.70	240	PKPbc	PKPdf	22 46 13.8	+0.1
	comp=Z,11nm,0.9s,baz=111,slow=3.3,SNR=29						
WRA				pPKPbc	pPKPdf	22 46 41.9	-0.9
	comp=Z,15nm,0.9s,baz=108,slow=2.7,SNR=7.1						
WRA				SKPbc	SKPbc	22 49 43.7	-1.2
	comp=Z,6.4nm,0.9s,baz=109,slow=1.5,SNR=5.9						
HYB	**Hyderabad**	146.72	48	*i* PKP	PKPbc	22 46 15.0	-0.6
HYB				*e*pPKP	pPKPdf	22 46 43.5	+0.7
HYB				*e*sPKP		22 46 55.0	
WB0	**Warramunga Arr**	146.72	241		PKPbc	22 46 15.2	-0.4
SSLB	**Suanglung**	147.19	330	PKPdf	PKPbc	22 46 16.6	-0.2
GYA	**Guiyang**	148.95	355	⇓PKPbc	PKPbc	22 46 21.5	0.0
KMI	**Kunming**	150.37	2	⇑*e*PKPbc	PKPdf	22 46 19.1	-0.7
KMI	**Kunming**	150.37	2	PKIKP	PKPbc	22 46 25.0	-0.2
KMI	**Kunming**	150.37	2		PKPbc	22 46 25.0	-0.2
CHTO	**Chiang Mai**	156.16	12	PKP2	PKPab	22 46 55.5	-0.4
CHTO	**Chiang Mai**	156.16	12		PKPab	22 46 55.5	-0.4
CMAR	**Chiang Mai Arr**	156.51	12	PKP	PKPdf	22 46 29.1	+0.6
	comp=Z,1.0nm,0.5s,baz=297,slow=2.6,SNR=7.1						
CMAR				PKPab	PKPab	22 46 56.9	-0.5
	comp=Z,3.4nm,0.9s,baz=328,slow=5.2,SNR=12						
CMAR	**Chiang Mai Arr**	156.51	12		PKPdf	22 46 28.5	0.0
CMAR					PKPab	22 46 57.3	-0.1

NIED ***21*** *22:28:56.0, 39°.64N×143°.77E, h12^{km}, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}2.33; $M_{\theta\theta}$-0.25; $M_{\phi\phi}$-2.08; $M_{r\theta}$0.61; $M_{\theta\phi}$-0.63; $M_{\phi r}$0.71; Fault plane solution: $M_0$2.48000×10^{14} NP1:ϕ_s26.00000°, δ56.00000°, λ99.00000°. NP2:ϕ_s189.00000°, δ35.00000°, λ77.00000°.*

JMA 21 22:28:56.0±0.2**, 39°.64N**×**143°.77E, h12**^{km}±5^{km}**, M3.5, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	**Tanohata**	1.50	282	P	Pn	22 29 22.8	+0.1
JTH				*e*S	Sb	22 29 42.6	-0.1
MIYJ	**Miyakonagasawa**	1.51	268	P	Pn	22 29 23.3	+0.5
MIYJ				S	Sb	22 29 43.0	0.0
JKEN	**Kujiedanarisaw**	1.68	290	P	Pn	22 29 25.4	+0.2
OFUJ	**Ofunato**	1.72	252	P	Pn	22 29 26.0	+0.2
JANG	**Nango**	1.88	294	P	Pn	22 29 28.2	+0.2
JOM	**Ohasama**	1.92	266	P	Pn	22 29 29.4	+0.9
JOM				*e*S	Sb	22 29 54.0	-0.9
JMK	**Ichinoseki**	2.10	252	P	Pn	22 29 31.7	+0.8
JMK				*e*S	Sn	22 29 57.7	+0.8
JOT	**Ohata**	2.71	311	P	Pn	22 29 40.8	+1.5
JYK	**Kaneyama**	2.74	256	P	Pn	22 29 41.3	+1.5
JNBK	**Urakawa-nobuka**	2.75	344	P	Pb	22 29 43.5	-1.5
JCH	**Churui**	2.99	354	P	Pn	22 29 45.9	+2.7
JFT	**Otama**	3.42	233	P	Pn	22 29 50.4	+1.2
JAK	**Akkeshi**	3.42	11	P	Pn	22 29 52.3	+3.1
JAR	**Ashorobuto**	3.65	360	P	Pn	22 29 54.6	+2.3

AEIC ***21*** *22:41:24±2.1, 56°.58N±0°.05×169°.2W±0°.1, h20^{km}±2^{km}, Error ellipse: s-maj=11.6km s-min=6.1km az=229.0*

IDC ***21*** *22:41:25.5±0.8, 57°.01N×169°.28W, h0^{km}, mb3.9/14, mb1 4.1/18, mb1mx3.9/44, mbtmp3.9/18, ML3.4/4, MS2.9/2, Ms1 2.9/2, ms1mx2.5/34, Error ellipse: s-maj=27.8km s-min=11.1km az=11.0*

NEIC ***21*** *22:41:27.1±2.5, 56°.67N±0°.05×169°.12W±0°.09, h19^{km}±6^{km}, mb4.0/8, ML4.0/21(AEIC), Error ellipse: s-maj=8.5km s-min=6.1km az=211.0*

ISC 21 22:41:26.0±0.5**, 56°.65N**±0°.06×**169°.16W**±0°.05**, h10**^{km}**, n72, σ1^{s}.25**/77**, mb3.8**/14**, Pribilof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPIA	**Saint Paul Isl**	0.80	312		Pg	22 41 40.8	-0.5
SPIA	**Saint Paul Isl**	0.80	312		Sg	22 41 52.4	+0.7
AKGG	**Akutan Green G**	3.05	142		Pn	22 42 13.6	-0.6
AKGG					Sn	22 42 49.8	-0.9
MSW	**Makushin Switc**	3.06	153		Pn	22 42 13.8	-0.6
AKRB	**Akutan Reef Bi**	3.08	144		Sn	22 42 51.3	-0.2
MNAT	**Makushin Natee**	3.12	152		Pn	22 42 14.3	-0.9
MAPS	**Pakushin South**	3.12	155		Pn	22 42 13.9	-1.3
MAPS					Sn	22 42 51.8	-0.7
AKMO	**Akutan Morgan**	3.13	144		Pn	22 42 13.7	-1.7
MGOD	**Makushin Gods**	3.15	154		Pn	22 42 14.9	-0.7
MREP	**Makushin Rep’t**	3.17	153		Pn	22 42 15.2	-0.7
AKUT	**Akutan**	3.18	141		Pn	22 42 15.2	-0.8
UNV	**Unalaska Valle**	3.20	150		Pn	22 42 16.0	-0.2
WEBT	**Westdahl Beart**	3.24	128		Pn	22 42 15.3	-1.6
WESP	**Westdahl Peak**	3.32	129		Pn	22 42 17.1	-0.9
NIKH	**Nikolski High**	3.69	177		Pn	22 42 22.8	-0.3
NIKH	**Nikolski High**	3.69	177		Sn	22 43 05.0	-1.5
SDPT	**Sand Point**	5.05	101		Pn	22 42 41.3	-0.3
ATKA	**Atka Island**	5.34	215		Pn	22 42 45.8	+0.2
CHGN	**Chignik**	5.97	89	Pn	Pn	22 42 52.7	-1.6
ADK	**Adak**	6.50	226	Pn	Pn	22 43 01.0	-0.6
GAMB	**Gambell**	7.26	351		Pn	22 43 11.0	-1.0
ANM	**Nome**	8.15	12	Pn	Pn	22 43 24.3	0.0
AMKA	**Amchitka**	8.60	237		Pn	22 43 32.5	+2.1
OHAK	**Old Harbor**	8.70	80	Pn	Pn	22 43 31.9	+0.1
KDAK	**Kodiak Island**	9.07	76	Pn	Pn	22 43 39.5	+2.7
	0.7nm,0.3s,baz=286,slow=11,SNR=2.3						
KDAK	**Kodiak Island**	9.07	76		Pn	22 43 36.3	-0.4
TTA	**Tatalina**	9.13	41	Pn	Pn	22 43 39.4	+1.8
CNPM	**China Poot**	9.91	66	Pn	Pn	22 43 49.6	+1.2
BRLK	**Bradley Lake**	10.13	64	Pn	Pn	22 43 51.7	+0.4
SKT	**Skwentna**	10.45	52	Pn	Pn	22 43 56.1	+0.3
SUA	**Susitna One**	10.62	55	Pn	Pn	22 43 58.2	0.0
KTH	**Kantishna Hill**	11.40	45	Pn	Pn	22 44 09.9	+1.2
BPAW	**Bear Paw Mtn.**	11.65	43	Pn	Pn	22 44 12.9	+0.8
SML	**Sawmill**	11.82	56	Pn	Pn	22 44 14.6	+0.1
I23K	**Minto, Yukon-K**	12.80	40	Pn	Pn	22 44 29.3	+1.6
WRH	**Wood River Hil**	12.93	44	Pn	Pn	22 44 29.7	+0.1
MDM	**Murphy Dome**	13.11	42	Pn	Pn	22 44 32.7	+0.6
CCB	**Clear Creek Bu**	13.12	44	Pn	Pn	22 44 34.1	+1.9
ILAR	**Eielson Array**	13.53	44	Pn	Pn	22 44 38.6	+0.9
	0.0nm,0.3s,baz=235,slow=11,SNR=7.9						
GLB	**Gilahina Butte**	13.85	59	Pn	Pn	22 44 42.6	+0.4
PRP	**Porcupine Dome**	14.38	42	Pn	Pn	22 44 50.5	+0.9
TOLK	**Toolik Lake Re**	14.92	29		P	22 45 00.6	-1.8
FYU	**Fort Yukon**	14.99	39		Pn	22 44 59.9	+2.3
BCAR	**Beaver Creek A**	15.09	54		Pn	22 44 58.3	-0.7
BMAR	**Burnt Mountain**	15.65	37		Pn	22 45 07.9	+1.5
A21K	**Barrow**	15.66	15		Pn	22 45 07.7	+1.4
A21K				IAmb	IAmb	22 45 14.8	
	comp=Z,14nm,1.0s						
EGAK	**Eagle**	15.81	48	P	P	22 45 12.1	-0.2
EGAK				IAmb	IAmb	22 45 16.1	
	comp=Z,7.2nm,1.0s						
HYT	**Haines Junctio**	16.85	63	P	P	22 45 23.7	-0.2
HYT				IAmb	IAmb	22 45 27.8	
	comp=Z,8.2nm,0.9s						
EPYK	**Eagle Plains**	18.05	44	P	Pn	22 45 36.1	-0.5
PEA0B	**Petropavlovsk-**	19.28	273	Pn	Pn	22 45 52.1	+0.6
PETK	**Petropavlovsk-**	19.28	273	P	Pn	22 45 52.3	+0.7
	comp=Z,0.2nm,0.3s,baz=87,slow=13,SNR=6.3						
PETK	**Petropavlovsk-**	19.28	273		Pn	22 45 52.0	+0.4
INK	**Inuvik**	19.82	40	P	P	22 45 56.3	0.0
	comp=Z,0.2nm,0.3s,baz=230,slow=11,SNR=9.5						
INK				LR	LR	22 53 33.0	
	comp=Z,54nm,18.2s,baz=121,slow=37						
INK	**Inuvik**	19.82	40	P	P	22 45 56.4	+0.1
INK				IAmb	IAmb	22 46 03.7	
	comp=Z,6.7nm,1.0s						
SEY	**Seymchan**	20.09	304	P	P	22 45 59.3	-0.1
	comp=Z,0.1nm,0.3s,baz=98,slow=9.2,SNR=10						
SEY				S	S	22 49 38.1	-6.6
	comp=Z,0.1nm,0.3s,baz=19,slow=23,SNR=0.9						
DLBC	**Dease Lake**	20.88	69	P	P	22 46 08.3	+0.3
	comp=Z,5.3nm,1.1s,baz=285,slow=8.4,SNR=4.0						
C36M	**Paulatuk**	23.40	39	P	P	22 46 33.9	-0.6
C36M				IAmb	IAmb	22 46 44.9	
	comp=Z,12nm,1.4s						
BBB	**Bella Bella**	24.03	83	P	P	22 46 41.7	+1.0
	comp=Z,4.8nm,0.8s,baz=98,slow=13,SNR=3.3						
YKA	**Yellowknife Ar**	27.50	55	P	P	22 47 11.7	-0.3
	comp=Z,1.0nm,1.0s,baz=278,slow=8.8,SNR=7.0						
YKA				PcP	PcP	22 50 28.9	-0.9
	comp=Z,0.4nm,0.8s,baz=294,slow=1.9,SNR=5.2						
NVAR	**Mina Array Bea**	37.83	97	P	P	22 48 43.1	+0.3
	comp=Z,0.4nm,0.5s,baz=294,slow=7.4,SNR=4.1						
NVAR				PcP	PcP	22 51 00.4	+1.4
	comp=Z,0.5nm,0.6s,baz=321,slow=1.3,SNR=3.5						
PDAR	**Pinedale Array**	39.66	84	P	P	22 48 58.2	+0.1
	comp=Z,0.1nm,0.4s,baz=324,slow=4.5,SNR=1.9						
ULM	**Lac du Bonnet**	42.17	66	P	P	22 49 18.4	0.0
	comp=Z,0.8nm,0.5s,baz=306,slow=8.7,SNR=2.5						
KSRS	**Korea Array**	45.18	273	LR	LR	23 09 06.5	
	comp=Z,7.9nm,18.1s,baz=235,slow=37						
SONM	**Songino Array**	49.30	298	P	P	22 50 16.0	+1.1
	comp=Z,1.1nm,0.9s,baz=50,slow=5.9,SNR=5.8						
SONM				PcP	PcP	22 51 37.5	0.0
	comp=Z,0.4nm,0.7s,baz=40,slow=5.6,SNR=2.4						
SONM	**Songino Array**	49.30	298	P	P	22 50 14.8	-0.2
TXAR	**Lajitas Array**	52.67	92	P	P	22 50 40.2	-0.2
	comp=Z,0.5nm,0.7s,baz=318,slow=5.4,SNR=4.3						
MKAR	**Makanchi Array**	60.99	312	P	P	22 51 38.7	-0.4
	comp=Z,0.6nm,1.0s,baz=22,slow=8.2,SNR=2.7						
AKASG	**Malin Array Be**	71.94	348	P	P	22 52 48.0	-1.0
	comp=Z,2.5nm,0.7s,baz=14,slow=6.0,SNR=7.7						
CMAR	**Chiang Mai Arr**	75.82	282	P	P	22 53 13.4	+1.2
	comp=Z,0.8nm,0.3s,baz=14,slow=6.3,SNR=4.7						
BRTR	**Keskin Array B**	82.07	342	P	P	22 53 47.3	+0.9
	comp=Z,0.2nm,0.4s,baz=20,slow=4.5,SNR=2.4						
ESDC	**Sonseca Array**	83.22	11	P	P	22 53 52.4	+0.1
	comp=Z,0.6nm,0.9s,baz=339,slow=4.8,SNR=2.7						
CTA	**Charters Tower**	85.12	221	P	P	22 54 03.4	+1.5
	comp=Z,1.5nm,0.5s,baz=54,slow=8.7,SNR=1.9						

NEIC ***21*** *22:43:47.7±1.3, 52°.4N±0°.4×175°.9W±0°.2, h218^{km}±18^{km}, mb4.3/14, Error ellipse: s-maj=59.5km s-min=7.0km az=166.0*

AEIC ***21*** *22:43:47±3.6, 52°.4N±0°.3×175°.9W±0°.1, h223^{km}±8^{km}, Error ellipse: s-maj=43.3km s-min=6.9km az=168.0*

IDC ***21*** *22:44:47.5±40.0, 54°.48N×168°.61W, h464^{km}±154^{km}, mb2.6/2, mb1 3.0/4, mb1mx2.5/46, mbtmp3.7/4, Error ellipse: s-maj=514.9km s-min=72.0km az=67.0*

ISC 21 22:43:48.0±1.0**, 52°.6N**±0°.2×**176°.00W**±0°.08**, h200**^{km}**, n35, σ0^{s}.79**/35**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSTR	**Great Sitkin T**	0.53	184		Pn	22 44 16.1	+0.8

GSTD	**Great Sitkin T**	**0.57**	**189**		**Pn**	**22 44 16.1**	**+0.5**
GSMY	**Great Sitkin M**	**0.58**	**184**		**Pn**	**22 44 16.1**	**+0.6**
ADK	**Adak**	**0.85**	**210**		**Pn**	**22 44 17.4**	**+0.5**
KIKV	**Kanaga Island**	**1.03**	**225**		**Pn**	**22 44 18.6**	**+0.6**
KIMD	**Kanaga Island**	**1.15**	**222**		**Pn**	**22 44 19.2**	**+0.4**
ATKA	**Atka Island**	**1.18**	**110**		**Pn**	**22 44 20.0**	**+0.9**
TAFP	**Tanaga Falls P**	**1.42**	**240**		**Pn**	**22 44 21.7**	**+0.7**
TASE	**Tanaga Southea**	**1.48**	**239**		**Pn**	**22 44 22.5**	**+0.9**
CERAA	**Semis' Rag'd T**	**2.75**	**257**		**Pn**	**22 44 35.1**	**+0.4**
CESW	**Semis' Southwe**	**2.82**	**257**		**Pn**	**22 44 36.0**	**+0.5**
AMKA	**Amchitka**	**3.16**	**249**		**Pn**	**22 44 39.1**	**-0.4**
LSSE	**Little Sitkin**	**3.41**	**261**		**Pn**	**22 44 43.2**	**+0.7**
OHAK	**Old Harbor**	**13.82**	**62**	Pn	**Pn**	**22 46 54.7**	**-0.8**
KDAK	**Kodiak Island**	**14.30**	**60**	P	**Pn**	**22 47 00.2**	**-1.1**
	1.1nm,0.3s,baz=277,slow=8.1,SNR=12						
KDAK	**Kodiak Island**	**14.30**	**60**	Pn	**Pn**	**22 47 00.3**	**-1.1**
CNPM	**China Poot**	**15.39**	**54**	P	**P**	**22 47 15.5**	**+0.5**
SKT	**Skwentna**	**16.11**	**45**	P	**Pn**	**22 47 25.0**	**+1.7**
SEW	**Seward**	**16.42**	**52**	P	**Pn**	**22 47 27.4**	**+0.4**
SEW				IAmb	IAmb	22 47 30.8	
	comp=Z,44nm,1.3s						
KTH	**Kantishna Hill**	**17.06**	**40**	P	**Pn**	**22 47 34.7**	**0.0**
KTH				IAmb	IAmb	22 47 41.9	
	comp=Z,39nm,1.4s						
BPAW	**Bear Paw Mtn.**	**17.30**	**39**	P	**Pn**	**22 47 37.1**	**-0.4**
BPAW				IAmb	IAmb	22 47 54.1	
	comp=Z,12nm,1.1s						
RND	**Reindeer**	**17.83**	**42**	P	**P**	**22 47 41.6**	**-0.1**
RND				IAmb	IAmb	22 47 49.3	
	comp=Z,22nm,1.4s						
I23K	**Minto, Yukon-K**	**18.43**	**37**	P	**P**	**22 47 49.1**	**+0.9**
I23K				IAmb	IAmb	22 48 05.1	
	comp=Z,6.4nm,1.2s						
M24K	**Tolsona, Glenn**	**18.51**	**47**	P	**P**	**22 47 49.7**	**+0.6**
WRH	**Wood River Hil**	**18.59**	**40**	P	**P**	**22 47 50.2**	**+0.3**
WRH				IAmb	IAmb	22 47 59.9	
	comp=Z,14nm,1.5s						
MDM	**Murphy Dome**	**18.76**	**38**	P	**P**	**22 47 52.5**	**+0.7**
MDM				IAmb	IAmb	22 47 58.7	
	comp=Z,9.3nm,1.2s						
CCB	**Clear Creek Bu**	**18.78**	**39**	P	**P**	**22 47 51.5**	**-0.4**
PAX	**Paxson**	**19.09**	**45**	P	**P**	**22 47 56.9**	**+1.5**
N25K	**Chitina, Valde**	**19.10**	**50**	P	**P**	**22 47 57.2**	**+1.8**
ILAR	**Eielson Array**	**19.19**	**39**	P	**P**	**22 47 56.0**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=240,slow=10,SNR=5.9						
COLD	**Coldfoot**	**19.30**	**31**	P	**P**	**22 47 57.5**	**0.0**
GLB	**Gilahina Butte**	**19.43**	**50**	P	**P**	**22 47 59.3**	**+0.4**
GLB				IAmb	IAmb	22 48 12.2	
	comp=Z,11nm,1.2s						
BMAR	**Burnt Mountain**	**21.25**	**34**	P	**P**	**22 48 18.3**	**+0.1**
YKA	**Yellowknife Ar**	**33.12**	**48**	P	**P**	**22 50 04.0**	**-0.7**
	comp=Z,0.4nm,0.7s,baz=274,slow=9.1,SNR=7.1						
PDAR	**Pinedale Array**	**44.30**	**75**	P	**P**	**22 51 37.5**	**-0.6**
	comp=Z,0.5nm,0.5s,baz=353,slow=2.6,SNR=6.4						

IDC ***21*** *22:52:44.0±4.6, 6°.84S×154°.66E, h179*^{km}*±41*^{km}*, mb3.2/6, mb1 3.4/8, mb1mx3.2/27, mbtmp3.7/8, MS2.7/1, Ms1 2.7/1, ms1mx2.4/9, Error ellipse: s-maj=36.5km s-min=24.5km az=50.0*

ISC 21 22:52:40.3±1.2**, 6°.8S**±0°.2×**154°.8E**±0°.2**, h150**^{km}**, n11,** σ**1^{s}00**/9**, mb3.3**/6**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**8.04**	**251**	P	**Pn**	**22 54 34.6**	**+0.3**
	2.1nm,0.3s,baz=94,slow=12,SNR=7.6						
PMG				LR	LR	22 57 43.4	
	comp=Z,57nm,21.7s,baz=69,slow=38						
DZM	**Mont Dzumac**	**18.88**	**145**	P	**Pn**	**22 56 52.5**	**+0.8**
	0.1nm,0.3s,baz=305,slow=13,SNR=0.9						
WRA	**Warramunga Arr**	**23.81**	**235**	P	**P**	**22 57 39.2**	**-0.5**
	0.6nm,0.7s,baz=60,slow=9.5,SNR=2.6						
SIJI	**Sorong**	**24.23**	**283**	P	**P**	**22 57 43.7**	**+0.1**
	4.8nm,0.5s,baz=140,slow=12,SNR=1.3						
ASAR	**Alice Springs**	**26.20**	**228**	P	**P**	**22 58 00.7**	**-0.6**
	0.4nm,0.8s,baz=57,slow=10,SNR=2.3						
ASAR				PcP	**PcP**	**23 01 22.6**	**-1.9**
	0.3nm,0.6s,baz=64,slow=3.0,SNR=2.2						
H11S3	**WAKE ISLAND Hy**	**27.70**	**25**	T	T	23 26 29.7	
	baz=203,slow=75,SNR=45						
H11S2	**WAKE ISLAND Hy**	**27.71**	**25**	T	T	23 26 25.5	
	baz=203,slow=75,SNR=26						
H11S1	**WAKE ISLAND Hy**	**27.72**	**25**	T	T	23 26 30.5	
	baz=203,slow=75,SNR=14						
CMAR	**Chiang Mai Arr**	**60.55**	**296**	P	**P**	**23 02 36.3**	**+0.9**
	0.8nm,0.3s,baz=139,slow=7.1,SNR=1.3						
SONM	**Songino Array**	**69.08**	**327**	P	**P**	**23 03 29.7**	**-0.4**
	0.2nm,0.4s,baz=143,slow=5.3,SNR=6.5						
MKAR	**Makanchi Array**	**83.14**	**319**	P	**P**	**23 04 49.9**	**+0.3**
	0.1nm,0.4s,baz=100,slow=6.7,SNR=5.9						

IDC ***21*** *23:09:25.3±4.8, 43°.36N×85°.93E, h0*^{km}*, mb1 2.9/3, mb1mx2.8/36, mbtmp2.9/3, ML2.6/3, Error ellipse: s-maj=54.8km s-min=29.5km az=26.0*

NNC ***21*** *23:09:27.0±2.8, 43°.09N×85°.49E, h0*^{km}*, mb3.4, mpv3.0, Error ellipse: s-maj=26.2km s-min=15.6km az=117.0*

ISC 21 23:09:20.4±1.8**, 43°.0N**±0°.1×**85°.9E**±0°.1**, h10**^{km}**, n6,** σ**2^{s}84**/12**, 5C-4D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MK31	**Makanchi Array**	**4.61**	**327**	⇑Pn	**Pn**	**23 10 34.6**	**+4.4**
	0.3nm,0.3s,baz=141,slow=14,SNR=35						
MK31				⇑Pg	**Pg**	**23 10 46.1**	**-2.6**
	0.6nm,0.3s,baz=141,slow=16,SNR=13						
MK31				⇓Lg	Lg	23 11 45.1	
	4.6nm,0.5s,baz=139,slow=29,SNR=7.7						
MKAR	**Makanchi Array**	**4.61**	**327**	Pn	**Pn**	**23 10 33.0**	**+2.8**
	0.4nm,0.3s,baz=142,slow=13,SNR=30						
MKAR				Pg	**Pb**	**23 10 43.1**	**+1.7**
	0.7nm,0.3s,baz=139,slow=15,SNR=9.3						
MKAR				Sn	**Sn**	**23 11 23.3**	**-0.5**
	1.1nm,0.3s,baz=146,slow=21,SNR=4.0						
MKAR				Lg	Lg	23 11 42.9	
	3.8nm,0.3s,baz=142,slow=31,SNR=12						
PDGK	**Podgornoye**	**4.73**	**276**	⇑Pn	**Pn**	**23 10 34.5**	**+2.6**
	1.7nm,0.3s						
PDGK				⇓Pg	**Pg**	**23 10 48.6**	**-2.5**
	1.9nm,0.5s						
PDGK				⇓Lg	Lg	23 11 44.0	
	12nm,0.7s						
MAKZ	**Makanchi**	**4.75**	**325**	⇑Pn	**Pn**	**23 10 35.8**	**+3.7**
	1.9nm,0.6s						
MAKZ				⇑Pg	**Pg**	**23 10 48.9**	**-2.5**
	2.3nm,0.6s						
MAKZ				⇓Lg	Lg	23 11 49.6	
	6.9nm,0.6s						
ZALV	**Zalesovo Beam**	**11.00**	**357**	Pn	**Pn**	**23 11 57.2**	**-0.5**
	0.2nm,0.3s,baz=175,slow=13,SNR=2.2						
ZALV				Sn	**Sn**	**23 13 59.2**	**-1.5**
	0.2nm,0.3s,baz=169,slow=24,SNR=3.6						
SONM	**Songino Array**	**15.15**	**64**	Pn	**P**	**23 13 00.1**	**+0.5**
	0.0nm,0.3s,baz=264,slow=13,SNR=1.3						

JMA ***21*** *23:23:40.9±0.2, 44°.35N×142°.59E, h236*^{km}*±2*^{km}*, M3.2*

IDC ***21*** *23:23:41.2±0.7, 44°.50N×142°.57E, h228*^{km}*±7*^{km}*, mb3.4/10, mb1 3.6/15, mb1mx3.3/43, mbtmp4.0/15, Error ellipse: s-maj=29.0km s-min=12.9km az=170.0*

ISC 21 23:23:40.8±0.7**, 44°.33N**±0°.07×**142°.65E**±0°.06**, h236**^{km}±5^{km}**, n36,** σ**0^{s}90**/50**, mb3.8**/10**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAJ	**Asahikawa**	**0.21**	**191**	P	**Pn**	**23 24 11.8**	**+0.4**
	24nm,0.3s,baz=270,slow=6.4,SNR=318						
ASAJ				S	**S**	**23 24 35.5**	**+0.2**
	2.9nm,0.3s,baz=241,slow=19,SNR=8.7						
ASAJ	**Asahikawa**	**0.21**	**191**	P	**Pn**	**23 24 11.8**	**+0.4**
ASAJ				*e*S	**S**	**23 24 35.6**	**+0.2**
JKK2	**Kamakawa 2**	**0.46**	**171**	P	**Pn**	**23 24 12.5**	**+0.5**
JSS	**Shosan**	**0.58**	**278**	P	**Pn**	**23 24 12.4**	**+0.2**
JSS				*e*S	**S**	**23 24 36.4**	**-0.4**
JMP	**Maruseppu**	**0.60**	**122**	P	**Pn**	**23 24 13.0**	**+0.6**
JMP				*e*S	**S**	**23 24 37.0**	**-0.1**
JSE	**Soyaes**	**0.63**	**356**	P	**Pn**	**23 24 12.5**	**+0.1**
JSE				*e*S	**S**	**23 24 35.8**	**-1.5**
JYG	**Yagishiri**	**0.88**	**277**	P	**Pn**	**23 24 13.4**	**-0.1**
JYG				*e*S	**S**	**23 24 38.0**	**-1.2**
JHR	**Hokuryu**	**0.89**	**229**	P	**Pn**	**23 24 14.1**	**+0.5**
JHR				*e*S	**S**	**23 24 40.1**	**+0.8**
JTKR	**Abashiri--Toko**	**0.97**	**111**	P	**Pn**	**23 24 15.0**	**+0.9**
JTKR				*e*S	**S**	**23 24 40.9**	**+0.8**
JWK2	**Keihoku**	**1.12**	**332**	P	**Pn**	**23 24 14.9**	**0.0**
JWK2				*e*S	**S**	**23 24 40.8**	**-1.0**
JFR	**Furan**	**1.16**	**182**	P	**Pn**	**23 24 15.7**	**+0.3**
JFR				*e*S	**S**	**23 24 43.1**	**+0.7**
JAR	**Ashorobuto**	**1.31**	**141**	P	**Pn**	**23 24 17.2**	**+0.9**
JAR				*e*S	**S**	**23 24 44.7**	**+0.6**
JRBN	**Rebuntou**	**1.57**	**315**	P	**Pn**	**23 24 17.0**	**-1.2**
JEW	**Eniwo**	**1.72**	**211**	P	**Pn**	**23 24 20.3**	**+0.7**
JCH	**Churui**	**1.79**	**163**	P	**Pn**	**23 24 19.6**	**-0.6**
JCH				*e*S	**S**	**23 24 48.3**	**-2.7**
JRA	**Rausu**	**1.82**	**101**	P	**Pn**	**23 24 21.5**	**+1.1**
JSK	**Shakotan**	**1.85**	**239**	P	**Pn**	**23 24 20.7**	**+0.1**
JAK	**Akkeshi**	**1.99**	**131**	P	**Pn**	**23 24 21.5**	**-0.5**
JAK				*e*S	**S**	**23 24 52.4**	**-1.8**
JNBK	**Urakawa-nobuka**	**2.05**	**178**	P	**Pn**	**23 24 22.7**	**+0.2**
NEM2	**Nemuro 2**	**2.44**	**112**	P	**Pn**	**23 24 25.7**	**-0.6**
NEM2				*e*S	**S**	**23 24 59.6**	**-2.4**
JKB	**Kayabe**	**2.71**	**206**	P	**Pn**	**23 24 28.7**	**-0.5**
USRK	**Ussuriysk Ar.**	**7.66**	**273**	P	**Pn**	**23 25 29.2**	**-0.4**
	baz=87,slow=13,SNR=14						
KLR	**Kul'dur**	**8.94**	**307**	P	**Pn**	**23 25 45.2**	**-0.7**
	0.3nm,0.3s,baz=114,slow=15,SNR=12						
PETK	**Petropavlovsk-**	**13.24**	**43**	P	**P**	**23 26 40.9**	**-0.9**
	0.2nm,0.3s,baz=234,slow=12,SNR=6.3						
MA2	**Magadan**	**16.05**	**15**	P	**P**	**23 27 12.6**	**0.0**
	baz=192,slow=13						
SEY	**Seymchan**	**19.47**	**13**	P	**P**	**23 27 49.1**	**-0.6**
	0.5nm,0.3s,baz=202,slow=7.7,SNR=14						
SONM	**Songino Array**	**25.24**	**291**	P	**P**	**23 28 46.2**	**+0.9**
	2.1nm,0.6s,baz=82,slow=9.1,SNR=20						
MKAR	**Makanchi Array**	**41.42**	**296**	P	**P**	**23 31 04.4**	**+0.2**
	0.5nm,0.6s,baz=81,slow=9.6,SNR=8.2						
ILAR	**Eielson Array**	**42.94**	**36**	P	**P**	**23 31 16.7**	**+0.6**
	0.1nm,0.3s,baz=281,slow=9.1,SNR=5.5						
INK	**Inuvik**	**47.53**	**30**	P	**P**	**23 31 51.8**	**-0.2**
	1.5nm,0.4s,baz=277,slow=4.6,SNR=8.4						
YKA	**Yellowknife Ar**	**57.10**	**33**	P	**P**	**23 33 02.6**	**+0.5**
	1.2nm,0.6s,baz=308,slow=6.2,SNR=24						
ARCES	**ARCESS Array B**	**57.54**	**338**	P	**P**	**23 33 05.1**	**-0.1**
	6.0nm,1.1s,baz=62,slow=8.4,SNR=2.1						
FINES	**FINESS Array B**	**62.84**	**331**	P	**P**	**23 33 40.3**	**-0.8**
	1.0nm,0.5s,baz=43,slow=7.0,SNR=13						
HFS	**Hagfors**	**67.85**	**335**	P	**P**	**23 34 12.4**	**-0.8**
	5.6nm,1.1s,baz=67,slow=5.0,SNR=8.8						
PDAR	**Pinedale Array**	**71.96**	**48**	P	**P**	**23 34 39.9**	**+1.1**
	0.7nm,0.8s,baz=299,slow=3.1,SNR=5.2						
TXAR	**Lajitas Array**	**84.97**	**53**	P	**P**	**23 35 50.9**	**+1.1**
	0.1nm,0.6s,baz=2.9,slow=2.5,SNR=4.1						

IDC ***21*** *23:35:45.2±0.9, 51°.59N×16°.10E, h0*^{km}*, mb1 3.3/7, mb1mx3.1/37, mbtmp3.2/7, ML2.8/7, Error ellipse: s-maj=13.9km s-min=8.1km az=109.0*

DNK ***21*** *23:35:46.6±1.4, 51°.44N×16°.16E, h25*^{km}*±60*^{km}*, ML2.1*

PRU ***21*** *23:35:47.5±0.0, 51°.48N×16°.10E, h0*^{km}

VIE ***21*** *23:35:49.1±0.7, 51°.34N×16°.18E, h0*^{km}*, mb2.5/4, ml2.7/10, Error ellipse: s-maj=5.8km s-min=3.6km az=39.0 64 km WNW of Wroclaw Suspected Mining induced.*

ISC 21 23:35:44.6±0.7**, 51°.58N**±0°.03×**16°.14E**±0°.02**, h0**^{km}**, n43,** σ**1^{s}25**/81**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.75**	**172**	*e*Pg	**Pg**	**23 35 59.8**	**+0.8**
KSP				*e*Sg	**Sg**	**23 36 08.1**	**-0.5**
CHVC	**Chvalec**	**1.00**	**183**	*e*PG	**Pg**	**23 36 04.6**	**+0.9**
CHVC				*e*SG	**Sg**	**23 36 16.6**	**0.0**
	comp=Z,58nm,0.5s						
OSTC	**Ostas**	**1.03**	**177**	*e*PG	**Pg**	**23 36 05.2**	**+0.9**
OSTC				*e*SG	**Sg**	**23 36 17.5**	**-0.1**
	comp=Z,68nm,0.4s						
UPC	**Upice**	**1.08**	**184**	*e*PG	**Pg**	**23 36 05.8**	**+0.5**
UPC				*e*SG	**Sg**	**23 36 18.7**	**-0.6**
	comp=Z,111nm,0.4s						
DPC	**Dobruska-Polom**	**1.24**	**174**	*e*PG	**Pg**	**23 36 08.5**	**+0.1**
DPC				*e*SG	**Sg**	**23 36 23.3**	**-1.1**
PVCC	**Panska Ves**	**1.45**	**224**	*e*PG	**Pb**	**23 36 13.3**	**+0.9**
PVCC				*e*SG	**Sg**	**23 36 31.7**	**+0.7**
	comp=Z,191nm,0.2s						
BRG	**Berggiesshubel**	**1.55**	**244**	Pg	**Pg**	**23 36 15.3**	**+1.0**
BRG				Sg	**Sg**	**23 36 35.9**	**+1.5**
BRG				Amp		23 36 36.9	
	comp=Z,112nm,0.4s						
KRLC	**Kraliky**	**1.56**	**165**	*e*PG	**Pn**	**23 36 14.5**	**+0.8**
KRLC				*e*SG	**Sn**	**23 36 33.8**	**-0.9**
	comp=Z,68nm,0.5s						
PRA	**Prague**	**1.86**	**216**	*e*PG	**Pg**	**23 36 20.9**	**+0.7**
PRA				*e*SG	**Sb**	**23 36 44.0**	**+0.8**
PRU	**Pruhonice**	**1.89**	**213**	*e*PN	**Pn**	**23 36 18.3**	**+0.2**
PRU				*e*PG	**Pb**	**23 36 20.4**	**+0.4**
PRU				*e*SG	**Sn**	**23 36 42.6**	**0.0**
	comp=Z,39nm,0.5s						
CLL	**Collm**	**1.98**	**263**	*e*Pn	**Pn**	**23 36 20.0**	**+0.6**
CLL				*e*Pg	**Pg**	**23 36 23.0**	**+0.4**
CLL				*i*		23 36 26.5	
CLL				*e*		23 36 38.0	
CLL				*i* Sg	**Sg**	**23 36 49.4**	**+1.2**
	comp=Z,29nm,0.4s						
MORC	**Moravsky Berou**	**2.02**	**153**	*e*PN	**Pn**	**23 36 20.3**	**+0.3**
MORC				*e*SG	**Sb**	**23 36 47.4**	**-0.4**
VRAC	**Vranov**	**2.30**	**172**	Pn	**Pn**	**23 36 24.5**	**+0.8**
	comp=Z,1.4nm,0.3s,baz=347,slow=17,SNR=10						
VRAC				Pg	**Pg**	**23 36 28.3**	**-0.3**
	comp=Z,2.3nm,0.3s,baz=348,slow=16,SNR=7.2						
VRAC				Lg	Lg	23 36 56.7	
	comp=Z,4.6nm,0.3s,baz=76,slow=19,SNR=9.2						
VRAC	**Vranov**	**2.30**	**172**	*e*PN	**Pn**	**23 36 24.5**	**+0.8**
VRAC				*e*SG	**Sb**	**23 36 56.4**	**+0.6**
PBCC	**Pribram**	**2.34**	**216**	*e*PN	**Pn**	**23 36 24.5**	**+0.2**
KRUC	**Moravsky**	**2.53**	**176**	*e*PN	**Pn**	**23 36 27.6**	**+0.7**
KRUC				*e*SG	**Sb**	**23 37 02.9**	**+0.4**
OJC	**Ojcow**	**2.69**	**119**	*e*Pg	**Pg**	**23 36 36.8**	**+0.6**
OJC				*e*Sg	**Sg**	**23 37 12.5**	**+1.5**
NKC	**Novy Kostel**	**2.70**	**241**	*e*PN	**Pn**	**23 36 30.9**	**+1.6**
NKC				*e*PG	**Pg**	**23 36 37.1**	**+0.8**
NKC				*e*SG	**Sg**	**23 37 12.3**	**+1.1**
	comp=Z,62nm,0.4s						
KHC	**Kasperske Hory**	**2.95**	**215**	*e*PN	**Pn**	**23 36 33.3**	**+0.5**
KHC				*e*PG	**Pb**	**23 36 39.7**	**+1.6**
KHC				*e*SN	**Sn**	**23 37 08.1**	**-0.8**
KHC				*e*SG	**Sg**	**23 37 18.1**	**-1.3**
	comp=Z,25nm,0.6s						
CKRC	**Cesky Krumlov**	**3.00**	**204**	*e*SG	**Sb**	**23 37 19.1**	**+2.9**
	comp=Z,20nm,0.4s						
GERES	**GERESS Array B**	**3.15**	**211**	Pn	**Pn**	**23 36 36.5**	**+0.9**
	comp=Z,1.1nm,0.3s,baz=27,slow=12,SNR=33						
GERES				Pg	**Pb**	**23 36 42.3**	**+0.7**
	comp=Z,3.3nm,0.3s,baz=31,slow=17,SNR=14						
GERES				Sn	**Sn**	**23 37 13.8**	**-0.2**
	comp=Z,2.7nm,0.3s,baz=32,slow=25,SNR=6.9						
GERES				Lg	Lg	23 37 21.6	
	comp=Z,2.9nm,0.3s,baz=30,slow=28,SNR=5.2						
SMOL	**Smolenice**	**3.18**	**164**	*e*PG	**Pg**	**23 36 46.8**	**+1.2**
SMOL				*e*SG	**Sg**	**23 37 26.6**	**-0.2**
MODS	**Modra-Piesok**	**3.30**	**167**	*e*PG	**Pg**	**23 36 47.5**	**-0.3**
MODS				*e*SG	**Sg**	**23 37 29.6**	**-0.9**
NIE	**Niedzica**	**3.43**	**128**	*e*P	**Pg**	**23 36 50.7**	**+0.4**
NIE				*e*S	**Sg**	**23 37 35.7**	**+0.9**
VYHS	**Vyhne**	**3.55**	**150**	*e*PN	**Pn**	**23 36 42.2**	**+1.2**
BSD	**Bornholm Skovb**	**3.61**	**349**	*i* P	**Pn**	**23 36 43.1**	**+1.3**
BSD				*i* S	**Sn**	**23 37 24.9**	**-0.2**
BSD	**Bornholm Skovb**	**3.61**	**349**	*i* P	**Pn**	**23 36 43.2**	**+1.3**
BSD				*i* S	**Sn**	**23 37 24.9**	**-0.2**
BSD				IAML		23 37 32.1	
	comp=Z,2.5nm,0.5s						
CONA	**Conrad Observa**	**3.66**	**183**	*i* Pn	**Pn**	**23 36 44.2**	**+1.6**
	comp=Z,0.9nm,0.2s						
CONA				*e*Pg	**Pg**	**23 36 54.1**	**-0.7**
	comp=Z,3.4nm,0.3s						
CONA				Sg	**Sg**	**23 37 42.3**	**0.0**
	comp=Z,13nm,0.3s						
MOA	**Molln**	**3.93**	**199**	*i* Pn	**Pn**	**23 36 47.4**	**+1.2**
	comp=Z,1.1nm,0.2s						
MOA				Sg	**Sg**	**23 37 49.4**	**-1.4**
	comp=Z,12nm,0.4s						
ARSA	**Arzberg**	**4.35**	**186**	*e*Sg	**Sg**	**23 38 05.0**	**+0.6**
	comp=Z,9.6nm,0.5s						
KOLS	**Kolonicke sedl**	**4.75**	**122**	*e*PN	**Pn**	**23 36 59.5**	**+2.1**
KOLS				*e*SG	**Sg**	**23 38 20.8**	**+3.8**
KBA	**Koelnbreinsper**	**4.86**	**203**	*e*Pn	**Pn**	**23 37 00.8**	**+1.6**
	comp=Z,2.4nm,0.6s						
KBA				Sg	**Sg**	**23 38 19.9**	**-0.9**
	comp=Z,6.1nm,0.5s						
WATA	**Walderalm**	**5.19**	**217**	*i* Pn	**Pn**	**23 37 05.8**	**+2.2**
	comp=Z,0.4nm,0.1s						
WATA				*i* Sn	**Sn**	**23 38 05.0**	**+0.8**
	comp=Z,1.1nm,0.2s						
WTTA	**Wattenberg**	**5.22**	**216**	*i* Pn	**Pn**	**23 37 06.3**	**+2.1**
	comp=Z,0.7nm,0.2s						
WTTA				*e*Sg	**Sg**	**23 38 32.2**	**-0.2**
	comp=Z,8.4nm,0.7s						
MOTA	**Moosalm**	**5.36**	**220**	*i* Pn	**Pn**	**23 37 08.4**	**+2.4**
	comp=Z,0.7nm,0.2s						
MOTA				Sg	**Sg**	**23 38 36.7**	**-0.1**
	comp=Z,5.5nm,0.6s						
RETA	**Reutte**	**5.39**	**223**	*i* Pn	**Pn**	**23 37 07.1**	**+0.8**
	comp=Z,0.4nm,0.1s						
RETA				*e*Sg	**Sg**	**23 38 38.5**	**+0.9**
	comp=Z,2.8nm,0.3s						
SQTA	**Sankt Quirin**	**5.42**	**218**	*i* Pn	**Pn**	**23 37 09.2**	**+2.4**
	comp=Z,1.2nm,0.2s						
DAVOX	**Davos/Dischmat**	**6.32**	**223**	Pn	**Pn**	**23 37 19.8**	**+0.7**
	comp=Z,0.3nm,0.3s,baz=357,slow=18,SNR=1.7						
DAVOX				Lg	Lg	23 39 02.9	
	comp=Z,0.2nm,0.3s,baz=345,slow=20,SNR=2.0						
AKASG	**Malin Array Be**	**8.28**	**91**	Pn	**Pn**	**23 37 43.2**	**-2.7**
	comp=Z,0.8nm,0.3s,baz=282,slow=12,SNR=3.1						
HFS	**Hagfors**	**8.68**	**352**	Pn	**Pn**	**23 37 49.8**	**-1.6**
	comp=Z,0.2nm,0.3s,baz=174,slow=17,SNR=1.1						
FINES	**FINESS Array B**	**11.29**	**25**	Pn	Pn	23 38 22.3	-4.7
	comp=Z,0.1nm,0.3s,baz=216,slow=16,SNR=1.7						
EKA	**Eskdalemuir Ar**	**12.09**	**296**	Pn	**Pn**	**23 38 34.5**	**-3.4**
	baz=104,slow=14,SNR=1.7						
ARCES	**ARCESS Array B**	**18.55**	**10**	P	**P**	**23 40 01.1**	**-1.4**
	baz=187,slow=13,SNR=5.9						

MOS ***22*** *01:19:21.6±0.8, 42°.58N×143°.53E, h81*^{km}*, mb4.1/1, Error ellipse: s-maj=15.6km s-min=7.5km az=67.4*

SKHL ***22*** *01:19:22.4±0.3, 42°.60N×143°.60E, h79*^{km}*±20*^{km}*, mb5.1/4*

JMA ***22*** *01:19:23.0±0.1, 42°.62N×143°.52E, h67*^{km}*±1*^{km}*, M3.7*

JMA Felt I J1.

NIED ***22*** *01:19:23.1, 42°.62N×143°.52E, h67*^{km}*, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale* 10^{14}*Nm;* M_{rr}*-0.68;* $M_{\theta\theta}$*-2.49;* $M_{\phi\phi}$*3.17;* $M_{r\theta}$*2.61;* $M_{\theta\phi}$*-2.26;* $M_{\phi r}$*-1.49; Fault plane solution:* M_0*4.72000×*10^{14} *NP1:* ϕ_s*299.00000°, δ85.00000°, λ-139.00000°. NP2:* ϕ_s*205.00000°, δ49.00000°, λ-6.00000°.*

IDC ***22*** *01:19:24.0±2.0, 42°.67N×143°.58E, h85*^{km}*±15*^{km}*, mb3.2/10, mb1 3.4/12, mb1mx3.3/36, mbtmp3.5/12, MS2.4/1, Ms1 2.4/1, ms1mx2.1/20 Error ellipse: s-maj=23.1km s-min=15.3km az=100.0*

ISC 22 01:19:22.6±0.7**, 42°.61N**±0°.04×**143°.58E**±0°.03**, h68**^{km}±5^{km}**, n70,** σ**1^{s}20**/86**, mb3.5**/10**, 4C-6D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCH	**Churui**	**0.16**	**273**	⇓P	**Pn**	**01 19 33.1**	**+0.3**
JCH				*e*S	**Sn**	**01 19 40.0**	**-0.3**
JOB	**Onbets**	**0.35**	**32**	⇓P	**Pn**	**01 19 34.6**	**+0.7**
JOB				*e*S	**Sn**	**01 19 43.0**	**+0.8**
JTHR	**Tokachihiroo**	**0.38**	**214**	⇑P	**Pn**	**01 19 34.6**	**+0.5**
JTHR				*e*S	**Sn**	**01 19 42.8**	**+0.3**
MYR	**Moyori**	**0.38**	**215**	*e*P	**Pn**	**01 19 34.7**	**+0.5**
MYR				*e*S	**Sn**	**01 19 43.0**	**+0.4**
ERM	**Erimo**	**0.67**	**208**	*i* PN	**Pn**	**01 19 37.8**	**+0.8**
ERM	**Erimo**	**0.67**	**208**	*e*P	**Pn**	**01 19 37.8**	**+0.8**
JEM	**Erimo**	**0.67**	**208**	P	**Pn**	**01 19 37.4**	**+0.4**
JNBK	**Urakawa-nobuka**	**0.69**	**242**	⇑P	**Pn**	**01 19 37.5**	**+0.2**
JAR	**Ashorobuto**	**0.70**	**11**	P	**Pn**	**01 19 37.8**	**+0.4**
JAR				*e*S	**Sn**	**01 19 48.7**	**+0.4**
JAK	**Akkeshi**	**0.91**	**64**	⇓P	**Pn**	**01 19 40.0**	**+0.2**
JBT2	**Biratori 2**	**0.92**	**281**	⇑P	**Pn**	**01 19 39.9**	**0.0**
JFR	**Furan**	**0.92**	**308**	P	**Pn**	**01 19 39.6**	**-0.3**
JFR				*e*S	**Sn**	**01 19 52.1**	**-0.7**
HRK	**Horoka**	**0.92**	**339**	*e*P	**Pn**	**01 19 40.3**	**+0.3**
HRK				*e*S	**Sn**	**01 19 52.5**	**-0.5**
JKHN	**Kushirohamanak**	**1.25**	**67**	P	**Pn**	**01 19 44.4**	**+0.2**
JNK	**Nakash**	**1.28**	**40**	P	**Pn**	**01 19 44.7**	**+0.1**
JNK				*e*S	**Sn**	**01 20 00.3**	**-0.9**
JAB	**Ashibetsu**	**1.34**	**312**	P	**Pn**	**01 19 46.3**	**+1.0**
JTKR	**Abashiri--Toko**	**1.39**	**10**	⇓P	**Pn**	**01 19 46.4**	**+0.5**
JTKR				*e*S	**Sn**	**01 20 03.7**	**+0.2**
JKK2	**Kamakawa 2**	**1.41**	**335**	⇓P	**Pn**	**01 19 46.7**	**+0.5**
JMP	**Maruseppu**	**1.41**	**353**	⇓P	**Pn**	**01 19 46.6**	**+0.3**
JEW	**Eniwo**	**1.59**	**279**	P	**Pn**	**01 19 49.8**	**+1.2**
JKA	**Kamikawa-asahi**	**1.67**	**335**	*e*P	**Pn**	**01 19 50.7**	**+1.0**
ASAJ	**Asahikawa**	**1.67**	**335**	P	**Pn**	**01 19 50.6**	**+0.9**
	37nm,0.3s,baz=193,slow=9.4,SNR=285						
ASAJ				S	**Sn**	**01 20 11.6**	**+1.3**
	24nm,0.3s,baz=214,slow=17,SNR=6.5						
ASAJ				LR	LR	01 20 30.6	
	comp=Z,63nm,20.0s,baz=33,slow=41						
NMR	**Nemuro--Hokkai**	**1.75**	**63**	⇑*i*PN	**Pn**	**01 19 50.5**	**-0.2**
NMR				*i* S	**Sn**	**01 20 10.8**	**-1.3**
NMR	**Nemuro--Hokkai**	**1.75**	**63**	*i* P	**Pn**	**01 19 51.0**	**+0.3**
GLVR	**Golovnino**	**1.81**	**51**	*e*PN	**Pn**	**01 19 52.3**	**+0.7**
GLVR				*e*S	**Sn**	**01 20 14.8**	**+1.1**
GLVR				pmax	pmax		
	comp=Z,413nm,0.2s						
GLVR				smax	smax		
	comp=N,3μm,0.3s						
GLVR				smax	smax		
	comp=E,2μm,0.2s						
GLVR	**Golovnino**	**1.81**	**51**	*e*P	**Pn**	**01 19 52.0**	**+0.4**
GLVR				AMB	AMB	01 19 54.0	
	comp=E,410nm,0.3s						
GLVR				*e*S	**Sn**	**01 20 14.0**	**+0.3**
GLVR				A	A	01 20 16.0	
	comp=E,2μm,0.3s						
GLVR				A	A	01 20 16.0	
	comp=E,2μm,0.3s						
RUSJ	**Misakicho**	**1.93**	**38**	*e*PN	**Pn**	**01 19 54.5**	**+1.4**
RUSJ				*e*S	**Sn**	**01 20 19.7**	**+3.3**
GRPR	**Tuman**	**2.12**	**48**	*e*PN	**Pn**	**01 19 56.6**	**+0.9**
GRPR				*e*S	**Sn**	**01 20 21.8**	**+0.8**
GRPR				pmax	pmax		
	comp=Z,380nm,0.2s						
GRPR				smax	smax		
	comp=N,1μm,0.3s						
GRPR				smax	smax		
	comp=E,1μm,0.3s						
GRPR	**Tuman**	**2.12**	**48**	*e*P	**Pn**	**01 19 56.0**	**+0.3**
GRPR				AMB	AMB	01 19 59.0	
	comp=E,380nm,0.3s						
GRPR				*e*S	**Sn**	**01 20 21.0**	**0.0**
GRPR				A	A	01 20 25.0	
	comp=E,1μm,0.3s						
GRPR				A	A	01 20 25.0	
	comp=E,1μm,0.3s						
YUK	**Yuzh-Kuril'sk**	**2.19**	**49**	*e*PN	**Pn**	**01 19 57.9**	**+1.2**
YUK				*e*S	**Sn**	**01 20 23.9**	**+1.1**
YUK				pmax	pmax		
	comp=Z,461nm,0.2s						
YUK				smax	smax		
	comp=N,1μm,0.3s						
YUK				smax	smax		
	comp=E,431nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**2.19**	**49**	*e*P	**Pn**	**01 19 57.0**	**+0.3**
YUK				AMB	AMB	01 20 00.0	
	comp=E,450nm,0.3s						
YUK				*e*S	**Sn**	**01 20 23.0**	**+0.2**
YUK				A	A	01 20 30.0	
	comp=E,1μm,0.5s						
YUK				A	A	01 20 30.0	
	comp=E,431nm,0.5s						
KUR	**Kuril'sk**	**4.06**	**48**	*e*PN	**Pn**	**01 20 23.4**	**+1.3**
KUR				*e*S	**Sn**	**01 21 12.3**	**+4.0**
KUR				pmax	pmax		
	comp=Z,75nm,0.4s						
KUR				smax	smax		
	comp=N,149nm,0.3s						
KUR				smax	smax		
	comp=E,73nm,0.3s						
KUR	**Kuril'sk**	**4.06**	**48**	*e*P	**Pn**	**01 20 23.7**	**+1.6**
KUR				AMB	AMB	01 20 30.2	
	comp=E,85nm,0.4s						
KUR				*e*S	**Sn**	**01 21 10.0**	**+1.7**
KUR				A	A	01 21 18.0	
	comp=E,127nm,0.3s						
KUR				A	A	01 21 18.0	
	comp=E,73nm,0.3s						
YSS	**Yuzh-Sakhalins**	**4.39**	**353**	*e*PN	**Pn**	**01 20 28.9**	**+2.3**
YSS				*e*S	**Sn**	**01 21 17.5**	**+1.1**
YSS				smax	smax		

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            comp=N,20nm,0.5s
YSS                                     MLR     MLR
            comp=Z,100nm,14.0s
YSS    Yuzh-Sakhalins    4.39 353 eP      Pn       01 20 27.8 +1.2
YSS                               eS      Sn       01 21 16.5 +0.1
MAJO   Matsushiro        7.34 216 i PN    Pn       01 21 07.2 +0.1
MAJO   Matsushiro        7.34 216 eP      Pn       01 21 07.2 +0.1
MJAR   Matsushiro Arr    7.34 216  P      Pn       01 21 09.0 +1.9
            comp=Z,0.1nm,0.3s,baz=36,slow=12,SNR=7.8
MJAR   Matsushiro Arr    7.34 216  PN     Pn       01 21 09.0 +1.9
MJAR   Matsushiro Arr    7.34 216 eP      Pn       01 21 09.0 +1.9
KLR    Kul'dur          10.57 313 i PN    Pn       01 21 48.4 -2.6
KLR                                pmax   pmax
            comp=Z,3.0nm,1.3s
KLR    Kul'dur          10.57 313 eP      Pn       01 21 50.8 -0.2
KSRS   Korea Array      13.05 252  P      Pn       01 22 27.5 +2.6
            comp=Z,0.1nm,0.3s,baz=65,slow=15,SNR=1.2
KSRS                               LR     LR       01 26 44.0
            comp=Z,15nm,18.9s,baz=30,slow=34
KSRS   Korea Array      13.05 252 eP      Pn       01 22 27.5 +2.6
PETK   Petropavlovsk-   14.12  37  P      Pn       01 22 35.8 -3.3
            comp=Z,0.1nm,0.3s,baz=221,slow=11,SNR=3.5
PETK   Petropavlovsk-   14.12  37 eP      Pn       01 22 39.0  0.0
SEY    Seymchan         21.01  11 i P     P        01 23 59.9 -0.2
SEY    Seymchan         21.01  11 eP      P        01 24 01.1 +1.0
SONM   Songino Array    26.53 294  P      P        01 24 52.3 -1.5
            comp=Z,0.2nm,0.6s,baz=86,slow=12,SNR=1.9
H11N2  WAKE ISLAND Hy   30.11 132  T      T        01 56 53.2
            baz=326,slow=75,SNR=138
H11N1  WAKE ISLAND Hy   30.12 132  T      T        01 56 56.4
            baz=326,slow=75,SNR=92
H11N3  WAKE ISLAND Hy   30.13 132  T      T        01 56 57.5
            baz=326,slow=75,SNR=94
H11S1  WAKE ISLAND Hy   31.00 134  T      T        01 58 07.0
            baz=328,slow=75,SNR=175
H11S3  WAKE ISLAND Hy   31.01 134  T      T        01 58 04.0
            baz=328,slow=75,SNR=129
H11S2  WAKE ISLAND Hy   31.02 134  T      T        01 58 03.3
            baz=328,slow=75,SNR=108
ZALV   Zalesovo Beam    39.62 308  P      P        01 26 46.8 -0.3
            comp=Z,0.3nm,0.4s,baz=82,slow=11,SNR=2.5
MKAR   Makanchi Array   42.80 298  P      P        01 27 13.5 +0.1
            comp=Z,0.4nm,0.4s,baz=82,slow=11,SNR=11
MKAR   Makanchi Array   42.80 298 eP      P        01 27 13.4 +0.1
ILAR   Eielson Array    43.94  35  P      P        01 27 22.3  0.0
            comp=Z,0.4nm,0.6s,baz=266,slow=6.1,SNR=8.2
ILAR   Eielson Array    43.94  35 eP      P        01 27 22.6 +0.3
KURK   Kurchatov        44.01 304 i P     P        01 27 22.1 -0.8
KURK   Kurchatov        44.01 304 eP      P        01 27 22.1 -0.8
YKA    Yellowknife Ar   58.18  32  P      P        01 29 07.9 -1.1
            comp=Z,0.2nm,0.5s,baz=305,slow=6.2,SNR=4.4
YKA    Yellowknife Ar   58.18  32 eP      P        01 29 10.1 +1.1
WRA    Warramunga Arr   62.82 190  P      P        01 29 40.0 -0.9
            comp=Z,0.5nm,0.8s,baz=6.2,slow=7.7,SNR=2.0
FINES  FINESS Array B   64.68 332  P      P        01 29 51.9 -0.9
            comp=Z,1.2nm,0.5s,baz=47,slow=8.4,SNR=9.4
FINES  FINESS Array B   64.68 332 eP      P        01 29 52.4 -0.4
FINES                              pmax   pmax
            comp=Z,1.0nm,0.5s
ASAR   Alice Springs    66.54 190  P      P        01 30 06.2 +1.1
            comp=Z,0.5nm,1.0s,baz=18,slow=6.8,SNR=2.1
NOA    NORSAR Array B   69.69 337  P      P        01 30 23.7 -0.8
            comp=Z,0.5nm,0.6s,baz=30,slow=7.8,SNR=1.7
TXAR   Lajitas Array    85.44  54  P      P        01 31 52.0 -0.9
            comp=Z,0.2nm,0.9s,baz=292,slow=2.8,SNR=2.1
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*IDC **22** 01:31:54.6±0.7, 16°.41N×118°.93E, h0km, mb3.8/10, mb1 4.0/11, mb1mx3.7/46, mbtmp3.8/11, ML4.4/1, MS2.9/3, Ms1 3.0/3, ms1mx2.6/39, Error ellipse: s-maj=32.7km s-min=15.5km az=74.0*

*MAN **22** 01:31:57.9, 16°.55N×119°.01E, h23km, mb4.7, ML3.6, MS3.5*

*NEIC **22** 01:31:59.6±1.0, 16°.51N±0°.07×119°.0E±0°.1, h32km±6km, mb4.0/8, Error ellipse: s-maj=16.5km s-min=10.4km az=85.0*

ISC 22 01:31:57.4±3.7, **16°.53N**±0°.05×**119°.02E**±0°.07, **h16**km±23km, **n30**, σ**0s.93**/34, **mb3.8**/11, **1C**, **Luzon**

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Code   Station Name        Δ°  AZ°   Phase ID           Time     Res
                                  Op      ISC       h  m  s    ISC
BOLP   Bolinao           0.87 100 eP      Pb       01 32 14.1 -0.1
BOLP                              eS      Sn       01 32 27.4 -0.1
SCZP   Santa Cruz        1.14 131 eP      Pn       01 32 18.3 -0.4
SCZP                              eS      Sn       01 32 34.1 +0.1
SMPP   San Manuel, Pa    1.64 103 eP      Pn       01 32 25.6 -0.1
SMPP                              eS      Sn       01 32 46.9 +0.4
SZP    Santa             1.71  53  Pn     Pn       01 32 26.6  0.0
SIPP   Brgy, Tapao       1.96  45⇑eP      Pn       01 32 30.3 +0.3
SIPP                              eS      Sn       01 32 51.7 -2.5
APYP   Conner            2.51  58 eP      Pn       01 32 37.8 +0.3
APYP                              eS      Sn       01 33 08.4 +0.5
TGY    Tagaytay City     3.04 142  Pn     Pn       01 32 46.4 +1.4
            32nm,0.3s,baz=211,slow=14,SNR=1.5
CMAR   Chiang Mai Arr   19.24 279  P      P        01 36 19.9 -1.3
            0.5nm,0.3s,baz=94,slow=10.0,SNR=1.5
CMAR                               LR     LR       01 44 02.3
            comp=Z,43nm,18.9s,baz=166,slow=38
KSRS   Korea Array      22.28  19  P      P        01 36 54.0  0.0
            2.5nm,0.8s,baz=200,slow=11,SNR=8.5
KSRS                               LR     LR       01 46 44.9
            comp=Z,14nm,18.1s,baz=150,slow=40
PSI    Prapat           24.01 237  LR     LR       01 45 37.4
            comp=Z,42nm,18.5s,baz=89,slow=34
SONM   Songino Array    32.90 344  P      P        01 38 31.2 +0.2
            0.4nm,0.7s,baz=159,slow=9.4,SNR=3.9
SONM   Songino Array    32.90 344  IAmb   IAmb     01 38 49.7
            comp=Z,1.3nm,1.3s
WRAB   Tennant Creek    39.24 157  P      P        01 39 24.8 -0.5
WRA    Warramunga Arr   39.25 157  P      P        01 39 23.4 -2.1
            comp=Z,0.8nm,0.6s,baz=339,slow=9.3,SNR=9.4
WRA                                PcP    PcP      01 41 34.0 -0.4
            comp=Z,0.6nm,0.5s,baz=340,slow=3.1,SNR=5.9
WR0    Warramunga Arr   39.34 157  P      P        01 39 24.6 -1.5
WR0                                IAmb   IAmb     01 39 41.1
            comp=Z,8.3nm,1.4s
AS31   Alice Springs    42.52 160  P      P        01 39 51.4 -0.9
ASAR   Alice Springs    42.52 160  P      P        01 39 51.2 -1.1
            comp=Z,1.6nm,0.7s,baz=340,slow=7.3,SNR=23
ASAR                               PcP    PcP      01 41 45.0  0.0
            comp=Z,0.4nm,0.5s,baz=345,slow=2.8,SNR=4.6
ASAR   Alice Springs    42.52 160  P      P        01 39 51.4 -1.0
MK31   Makanchi Array   42.80 323  P      P        01 39 54.8 +0.3
MKAR   Makanchi Array   42.80 323  P      P        01 39 54.2 -0.3
            comp=Z,1.0nm,1.1s,baz=126,slow=8.2,SNR=5.3
MKAR                               PcP    PcP      01 41 45.5 -0.2
            comp=Z,0.3nm,0.7s,baz=126,slow=2.0,SNR=3.2
ZALV   Zalesovo Beam    45.81 332  P      P        01 40 18.9 +0.6
            comp=Z,0.4nm,0.6s,baz=132,slow=11,SNR=3.7
KURK   Kurchatov        46.95 326  P      P        01 40 27.5 +0.1
PETK   Petropavlovsk-   47.39  31  P      P        01 40 32.6 +1.8
            comp=Z,3.6nm,0.8s,baz=220,slow=8.3,SNR=2.7
KKAR   Karatay Array    48.85 313  P      P        01 40 42.4 +0.1
STKA   Stephens Creek   52.78 156  P      P        01 41 11.5 -0.4
            comp=Z,2.0nm,0.7s,baz=326,slow=8.9,SNR=5.9
STKA   Stephens Creek   52.78 156  IAmb   IAmb     01 41 16.8
            comp=Z,1.9nm,1.4s
ABKAR  Akbulak array    57.55 318  P      P        01 41 46.9 +0.7
INK    Inuvik           81.06  21  P      P        01 44 12.1 +0.8
            comp=Z,1.4nm,1.0s,baz=241,slow=5.3,SNR=3.3
INK    Inuvik           81.06  21  IAmb   IAmb     01 44 32.7
            comp=Z,3.1nm,1.4s
YKA    Yellowknife Ar   90.79  22  P      P        01 44 59.4 -0.2
            comp=Z,0.3nm,0.7s,baz=321,slow=4.0,SNR=6.5
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*IDC **22** 01:48:30.3±2.4, 48°.29N×153°.09E, h140km±23km, mb3.3/10, mb1 3.6/13, mb1mx3.4/33, mbtmp3.8/13, MS3.0/1, Ms1 3.0/1, ms1mx2.3/24, Error ellipse: s-maj=22.2km s-min=12.6km az=140.0*

ISC 22 01:48:31.2±0.8, **48°.4N**±0°.2×**153°.1E**±0°.1, **h150**km, **n20**, σ**0s.78**/13, **mb3.6**/10, **Kuril Islands**

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Code   Station Name        Δ°  AZ°   Phase ID           Time     Res
                                  Op      ISC       h  m  s    ISC
PETK   Petropavlovsk-    5.58  30  P      Pn       01 49 50.8 -1.5
            1.1nm,0.3s,baz=196,slow=10,SNR=15
ASAJ   Asahikawa         8.42 244  P      Pn       01 50 29.6 -0.4
            0.9nm,0.3s,baz=88,slow=14,SNR=9.3
KLR    Kul'dur          14.09 282  P      Pn       01 51 44.3 +0.2
            0.1nm,0.3s,baz=68,slow=11,SNR=1.5
KSRS   Korea Array      21.32 249  P      P        01 53 06.3 +0.2
            1.3nm,0.8s,baz=45,slow=9.8,SNR=2.6
H11N2  WAKE ISLAND Hy   30.66 154  T      T        02 26 39.9
            baz=342,slow=75,SNR=43
H11N1  WAKE ISLAND Hy   30.68 154  T      T        02 26 54.2
            baz=342,slow=75,SNR=51
H11N3  WAKE ISLAND Hy   30.68 154  T      T        02 26 53.2
            baz=342,slow=75,SNR=29
H11S1  WAKE ISLAND Hy   31.77 155  T      T        02 28 01.8
            baz=342,slow=76,SNR=123
H11S3  WAKE ISLAND Hy   31.77 155  T      T        02 28 01.9
            baz=342,slow=76,SNR=135
H11S2  WAKE ISLAND Hy   31.78 155  T      T        02 28 00.8
            baz=342,slow=76,SNR=102
KDAK   Kodiak Island    33.12  53  LR     LR       02 08 56.3
            comp=Z,23nm,19.6s,baz=93,slow=37
ILAR   Eielson Array    35.31  40  P      P        01 55 11.9 +0.5
            0.4nm,0.6s,baz=260,slow=5.1,SNR=7.9
INK    Inuvik           40.31  33  P      P        01 55 54.4 +1.2
            0.6nm,0.3s,baz=289,slow=6.3,SNR=9.1
MKAR   Makanchi Array   46.20 296  P      P        01 56 41.3 +0.4
            1.4nm,0.7s,baz=66,slow=8.1,SNR=18
NVAR   Mina Array Bea   61.71  63  P      P        01 58 33.9 +0.3
            0.6nm,0.6s,baz=312,slow=6.8,SNR=2.5
FINES  FINESS Array B   62.58 334  P      P        01 58 38.4 -0.3
            0.6nm,0.3s,baz=36,slow=7.0,SNR=12
PDAR   Pinedale Array   63.82  54  P      P        01 58 47.4 -0.1
            0.6nm,0.8s,baz=59,slow=0.9,SNR=5.9
WRA    Warramunga Arr   70.03 199  P      P        01 59 25.5 -1.0
            0.2nm,0.4s,baz=24,slow=6.5,SNR=6.8
ASAR   Alice Springs    73.73 198  P      P        01 59 48.5  0.0
            0.6nm,0.6s,baz=14,slow=5.2,SNR=11
TXAR   Lajitas Array    76.72  61  P      P        02 00 06.7 +0.7
            0.7nm,0.6s,baz=298,slow=4.3,SNR=13
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*IDC **22** 02:14:04.1±3.3, 38°.13N×75°.43E, h124km±27km, mb3.6/16, mb1 3.7/20, mb1mx3.5/44, mbtmp4.0/20, MS2.2/1, Ms1 2.2/1, ms1mx2.0/47, Error ellipse: s-maj=23.5km s-min=12.9km az=0.0*

*BJI **22** 02:14:05.4±0.0, 38°.33N×75°.53E, h130km, mb3.9/7*

*NNC **22** 02:14:11.0±3.5, 38°.74N×75°.37E, h176km±30km, mb3.1, mpv4.2, Error ellipse: s-maj=34.9km s-min=20.6km az=15.0*

ISC 22 02:14:04.5±0.5, **38°.21N**±0°.05×**75°.39E**±0°.06, **h135**km, **n74**, σ**2s.02**/86, **mb3.9**/16, **6C-9D**, **Southern Xinjiang**

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Code   Station Name        Δ°  AZ°   Phase ID           Time     Res
                                  Op      ISC       h  m  s    ISC
KSH    Kashi             1.38  19  P      Pn       02 14 27.4 -4.4
KSH                                S      Sn       02 14 43.4 -9.2
KSH                                smax   smax
            comp=N,2µm,0.3s
KSH                                smax   smax
            comp=E,4µm,0.2s
UCH    Uchtor            4.07 351  P      Pn       02 15 06.2 +0.6
            SNR=262
ULHL   Ulahol            4.08   9  P      Pn       02 15 05.9 +0.3
            SNR=79
AML    Almayashu         4.13 342  P      Pn       02 15 06.6 +0.2
            SNR=167
KBK    Karagaybulak      4.45 356  P      Pn       02 15 11.4 +0.9
            SNR=77
AAK    Ala-Archa         4.47 351  P      Pn       02 15 11.3 +0.5
            15nm,0.3s,baz=154,slow=7.6,SNR=118
AAK                                S      Sn       02 16 00.1 -2.2
            7.1nm,0.3s,baz=359,slow=16,SNR=3.9
AAK                                LR     LR       02 17 09.3
            comp=Z,28nm,19.8s,baz=356,slow=41
AAK    Ala-Archa         4.47 351  P      Pn       02 15 11.7 +1.0
            SNR=36
AAK    Ala-Archa         4.47 351 ⇑P      Pn       02 15 11.5 +0.8
            34nm,0.5s
AAK                               ⇑S      Sn       02 16 01.8 -0.4
            101nm,1.1s
EKS2   Erkin-Say         4.61 345  P      Pn       02 15 13.5 +0.9
            SNR=106
TKM2   Tokmak 2          4.71   2  P      Pn       02 15 14.5 +0.6
            SNR=106
TKM2   Tokmak 2          4.71   2 ⇓P      Pn       02 15 14.7 +0.8
            48nm,0.4s
TKM2                              ⇑S      Sn       02 16 03.3 -4.6
            29nm,0.6s
CHMS   Chumysh           4.81 354  P      Pn       02 15 15.8 +0.7
            SNR=10
TNSS   Tian-Shan         4.96  13 eP      Pn       02 15 17.1 -0.4
            baz=14
TNSS                              eS      Sn       02 16 12.6 -1.7
            baz=14
USP    Ospenovka         5.10 353  P      Pn       02 15 19.5 +0.6
            SNR=11
MDOK   Medeo             5.11  14 eP      Pn       02 15 18.7 -0.4
            baz=15
MDOK                              eS      Sn       02 16 15.7 -1.6
            baz=15
MDOK   Medeo             5.11  14 ⇓P      Pn       02 15 19.2  0.0
            18nm,0.6s
AAA    Alma-Ata          5.13  13 eS      Sn       02 16 15.1 -2.6
            baz=14
CEP    Cherat            5.21 214  P      Pn       02 15 23.4 +2.8
SGDS   Sogindy           5.27 354 eP      Pn       02 15 20.6 -0.6
            3.9nm,1.0s,baz=354
SATY   Saty              5.36  24 eP      Pn       02 15 21.7 -0.8
            3.0nm,0.4s,baz=26
SATY                              eS      Sn       02 16 21.6 -1.7
            baz=26
DZA    Taraz             5.61 328 eP      Pn       02 15 25.2 -0.5
            baz=327
UZB    Uzynbulak         5.65  28 eP      Pn       02 15 26.1 -0.3
            2.0nm,0.5s,baz=29
IUG    Iuzhnay           5.68 315 eP      Pn       02 15 26.3 -0.5
            9.3nm,0.4s,baz=314
KUU    Kurty             5.72   7 eP      Pn       02 15 26.3 -0.9
            6.9nm,0.7s,baz=7.5
KPKS   Kokpek            5.81  24 eP      Pn       02 15 28.2 -0.4
            9.7nm,0.5s,baz=26
SHLS   Shalkode          5.83  31 eP      Pn       02 15 31.1 +2.3
            10nm,0.6s,baz=34
PDGK   Podgornoye        5.99  30 ⇑P      Pn       02 15 30.4 -0.5
            11nm,0.6s
DHRM   DHARAMSHALA       5.99 173 eP      Pn       02 15 32.4 +1.2
DHRM                              eS      Sn       02 16 35.6 -3.2
DHRM                               IAML            02 16 42.1
            comp=N,356nm,0.3s
DHRM                               IAML            02 16 42.1
            comp=E,444nm,0.0s
KK31   Karatay Array     6.13 324  P      Pn       02 15 32.9 +0.1
            comp=E,12nm,0.5s,baz=139,slow=12,SNR=377
KK31                              ⇑S      Sn       02 16 37.4 -4.4
            comp=E,39nm,0.5s,baz=134,slow=24
THW    Thamme Wali       6.17 210  P      Pn       02 15 35.8 +2.4
BRLS   Borolday          6.41 320 eP      Pn       02 15 34.2 -2.2
            comp=E,14nm,0.6s,baz=317
BTLS   Baital            6.90 352 eP      Pn       02 15 42.5 -0.5
            baz=352
TDK    Taldyqorghan      7.15  17 eP      Pn       02 15 46.4 -0.1
            comp=E,3.4nm,0.6s,baz=18
SMLA   Simla             7.21 168 eP      Pn       02 15 48.8 +1.5
SMLA                              eS      Sn       02 17 03.6 -4.3
SMLA                               IAML            02 17 11.6
            comp=E,466nm,0.5s
SMLA                               IAML            02 17 11.9
            comp=N,444nm,0.1s
NDI    New Delhi         9.62 170 eP      Pn       02 16 19.0 -0.7
NDI                               eS      Sn       02 17 59.0 -7.2
MAKZ   Makanchi          9.87  27 ⇓P      Pn       02 16 23.2 +0.3
            comp=N,2.0nm,0.7s
MK31   Makanchi Array    9.97  28 ⇓P      Pn       02 16 24.0 -0.2
            comp=N,2.0nm,0.5s,baz=203,slow=13,SNR=21
MKAR   Makanchi Array    9.97  28  P      Pn       02 16 23.7 -0.5
            comp=N,0.6nm,0.3s,baz=201,slow=15,SNR=27
WMQ    Urumqi           10.85  55 eP      Pn       02 16 36.8 +0.8
BRZS   Berezniki        11.93 351 eP      Pn       02 16 48.9 -1.2
            baz=352
KURBB  Kurchatov Arra   12.61   9  P      Pn       02 16 57.2 -1.7
            comp=N,0.1nm,0.3s,baz=196,slow=12,SNR=4.7
SEM    Semipalatinsk    12.68  14 eP      Pn       02 16 59.2 -0.8
            baz=15
GKN    Gorkha           12.79 140 eP      Pn       02 16 59.4 -2.2
            comp=N,35nm,0.3s
KKN    Kakani           13.29 139 eP      Pn       02 17 06.8 -1.3
            comp=N,25nm,0.5s
DMN    Daman            13.35 140 eP      Pn       02 17 06.8 -2.1
            comp=N,15nm,0.3s
GUN    Gumba            13.51 136 eP      Pn       02 17 09.0 -2.1
            comp=N,34nm,0.6s
PKIN   Phulchoki        13.52 139 eP      Pn       02 17 09.4 -1.8
            comp=N,27nm,0.5s
PKI    Pulchoki         13.53 139 eP      Pn       02 17 09.2 -2.2
            comp=N,16nm,0.4s
RAMN   Ramite           14.66 137 eP      Pn       02 17 22.6 -3.0
            comp=N,73nm,0.8s
BHPL   Bhopal           15.02 173 eP      Pn       02 17 30.7 +0.7
BHPL                              i x     x        02 17 33.4
BHPL                              eS      Sn       02 20 05.2  -11
BRVK   Borovoye         15.27 348 ⇓P      P        02 17 36.3 +1.8
            comp=N,4.9nm,0.7s
AB31   Akbulak array    15.67 320 ⇓P      P        02 17 38.4 -0.5
            comp=N,2.8nm,0.5s,baz=124,slow=13,SNR=61
AB31                              ⇓S      Sn       02 20 26.2 -5.4
            comp=N,5.5nm,1.1s,baz=129,slow=23,SNR=8.3
ZAA0   Zalesovo Array   17.02  19 ⇑P      P        02 17 53.5 -0.3
            comp=N,0.7nm,0.8s
ZALV   Zalesovo Beam    17.02  19  P      P        02 17 53.4 -0.4
            comp=N,1.4nm,0.3s,baz=212,slow=9.7,SNR=26
AKTO   Aktyubinsk       17.38 320  P      Pn       02 17 59.2 +0.6
            comp=N,0.8nm,0.3s,baz=119,slow=9.0,SNR=12
AKTO   Aktyubinsk       17.38 320 ⇓P      Pn       02 17 58.7 +0.2
            comp=N,3.6nm,0.8s
AKTO                              ⇓S      S        02 21 04.2 -7.6
            comp=N,4.0nm,1.0s
GTA    Gaotai           19.06  79 eP      Pn       02 18 18.8 +0.1
GTA                                pmax   pmax
            comp=N,2.0nm,1.0s
ARU    Arti             21.40 334  P      P        02 18 43.1 +1.9
            comp=N,0.6nm,0.3s,baz=155,slow=5.2,SNR=5.1
GNI    Garni            23.78 284  P      P        02 19 04.5 -0.3
            comp=N,1.7nm,0.6s,baz=67,slow=13,SNR=2.0
SONM   Songino Array    24.48  57  P      P        02 19 12.6 +1.6
            comp=N,2.6nm,0.6s,baz=256,slow=9.8,SNR=19
BRTR   Keskin Array B   32.29 286  P      P        02 20 22.5 +2.0
            comp=N,1.3nm,0.8s,baz=82,slow=7.6,SNR=8.1
FINES  FINESS Array B   38.10 324  P      P        02 21 11.4 +1.7
            comp=N,1.9nm,0.4s,baz=115,slow=9.3,SNR=26
ARCES  ARCESS Array B   40.96 336  P      P        02 21 35.5 +2.0
            comp=N,4.3nm,0.5s,baz=108,slow=8.9,SNR=58
ARCES                              PcP    PcP      02 23 31.8 +0.9
            comp=N,4.0nm,1.1s,baz=116,slow=6.2,SNR=1.6
KLR    Kul'dur          41.30  56  P      P        02 21 37.7 +1.3
            comp=N,1.4nm,0.4s,baz=288,slow=7.4,SNR=12
GERES  GERESS Array B   44.83 304  P      P        02 22 06.5 +1.6
            comp=N,0.2nm,0.4s,baz=43,slow=6.0,SNR=3.6
NB2    NORSAR Subarra   45.16 322  P      P        02 22 08.4 +1.1
            comp=Z,1.8nm,0.4s,baz=91,slow=7.9
NOA    NORSAR Array B   45.16 322  P      P        02 22 08.4 +1.1
            comp=Z,1.1nm,0.4s,baz=93,slow=8.2,SNR=9.5
ESDC   Sonseca Array    59.73 299  P      P        02 23 55.5 +0.4
            comp=Z,0.6nm,0.4s,baz=58,slow=6.6,SNR=11
TORD   Torodi Ar. Bea   69.23 271  P      P        02 24 57.9 +0.9
            comp=Z,1.0nm,0.3s,baz=46,slow=5.2,SNR=15
ILAR   Eielson Array    72.14  18  P      P        02 25 14.2 +0.3
            comp=Z,0.9nm,0.8s,baz=303,slow=5.0,SNR=9.9
DBIC   Dimbokro         78.25 269  P      P        02 25 51.4 +1.7
            comp=Z,3.0nm,0.9s,baz=328,slow=6.2,SNR=4.7
YKA    Yellowknife Ar   79.32   5  P      P        02 25 55.7 +1.0
            comp=Z,1.4nm,0.6s,baz=355,slow=5.3,SNR=23
WRA    Warramunga Arr   80.01 125  P      P        02 25 59.8 +0.7
            comp=Z,1.1nm,1.2s,baz=318,slow=4.7,SNR=1.9
ASAR   Alice Springs    82.45 128  P      P        02 26 12.0 +0.1
            comp=Z,0.3nm,0.7s,baz=317,slow=4.3,SNR=4.9
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*NAO **22** 02:44:18.5±6.1, 79°.84N×2°.97E, ML3.9*

*DNK **22** 02:44:20.6±3.5, 79°.61N×4°.30E, h140km±71km, ML3.4*

*BER **22** 02:44:22.6±2.9, 79°.39N×2°.97E, h10km, ML2.8, ML3.4(DNK), Confirmed Earthquake*

*IDC **22** 02:44:22.4±0.6, 79°.48N×3°.31E, h0km, mb3.7/14, mb1 3.9/18, mb1mx3.7/40, mbtmp3.7/18, ML3.3/3, MS3.4/12, Ms1 3.4/12, ms1mx3.2/47, Error ellipse: s-maj=17.8km s-min=10.6km az=35.0*

*NEIC **22** 02:44:23.1±2.6, 79°.5N±0°.1×3°.3E±0°.3, h10km±1km, mb4.2/10, Error ellipse: s-maj=17.9km s-min=9.9km az=197.0*

ISC 22 02:44:22.2±2.4, **79°.47N**±0°.06×**3°.74E**±0°.04, **h6**km±15km, **n87**, σ**2s.06**/82, **mb4.0**/20, **MS3.4**/9, **1C-2D**, **Greenland Sea**

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Code   Station Name        Δ°  AZ°   Phase ID           Time     Res
                                  Op      ISC       h  m  s    ISC
KBS    Kingsbay          1.64 105  Pn     Pn       02 44 50.7 -0.8
KBS                                Sn     Sn       02 45 10.1 -2.7
KBS    Kingsbay          1.64 105         Pn       02 44 50.7 -0.8
KBS    Kingsbay          1.64 105⇑iP      Pn       02 44 50.7 -0.8
KBS                               e                02 45 10.3
KBS                               eSg     Sg       02 45 15.8 +1.0
KBS                                IAML            02 45 20.4
            comp=Z,233nm,0.3s
KBS    Kingsbay          1.64 105 i P     Pn       02 44 50.9 -0.7
KBS                               i S     Sn       02 45 09.6 -3.3
KBS                                IAML            02 45 20.8
            comp=Z,465nm,0.3s
SPA0   Spitsbergen Ar    2.78 111  Pn     Pn       02 45 07.5 +0.3
SPA0                               Sn     Sn       02 45 38.8 -2.1
            baz=320,slow=28
SPA0   Spitsbergen Ar    2.78 111         Pn       02 45 07.3 +0.2
SPA0   Spitsbergen Ar    2.78 111  Pn     Pn       02 45 07.5 +0.3
SPA0                               Sn     Sn       02 45 38.8 -2.1
            baz=320,slow=28
SPITS  Spitsbergen Ar    2.78 111  Pn     Pn       02 45 07.3 +0.2
            baz=254,slow=6.0,SNR=3917
SPITS                              Sn     Sn       02 45 42.1 +1.1
            baz=332,slow=28,SNR=5.6
SPITS                              LR     LR       02 46 22.8
            comp=Z,661nm,20.8s,baz=275,slow=42
HSPB   Hornsund (broa    3.45 130  Pn     Pn       02 45 16.2 -0.2
HSPB                               Sn     Sn       02 45 54.1 -3.5
HSPB   Hornsund (broa    3.45 130 eP      Pn       02 45 16.1 -0.3
HSPB                              eS      Sn       02 45 54.7 -2.9
HSPB                               IAML            02 45 59.3
            comp=Z,84nm,0.6s
HSPB   Hornsund (broa    3.45 130⇓iP      Pn       02 45 15.8 -0.6
HSPB                              eS      Sn       02 45 53.8 -3.7
DAG    Danmarks Havn     5.32 251 i P     Pn       02 45 38.1 -3.9
DAG                               i S     Sn       02 46 33.9  -10
DAG    Danmarks Havn     5.32 251⇓iP      Pn       02 45 38.1 -3.9
DAG                               eS      Sn       02 46 31.3  -12
DAG                                IAML            02 46 37.3
            comp=Z,18nm,0.4s
DAG    Danmarks Havn     5.32 251 e       Pn       02 45 36.9 -5.1
            baz=56,slow=14
DAG                               i P     Pn       02 45 38.2 -3.9
DAG                               i S     Sn       02 46 34.0  -10
DAG                                IAML            02 46 37.3
            comp=Z,18nm,0.4s
BJO1   Bjornoya          6.03 138  Pn     Pn       02 45 53.2 +1.4
BJO1   Bjornoya          6.03 138 eP      Pn       02 45 51.7 -0.1
DBG    Daneborg          7.44 239  Pn     Pn       02 46 08.6 -2.5
DBG                                Sn     Sn       02 47 24.4  -11
DBG    Daneborg          7.44 239  Pn     Pn       02 46 08.6 -2.5
DBG                                Sn     Sn       02 47 24.4  -11
DBG                                IAML            02 47 25.1
            comp=Z,7.7nm,0.4s
DBG    Daneborg          7.44 239 i P     Pn       02 46 07.1 -4.0
DBG                               i S     Sn       02 47 22.5  -13
DBG                                IAML            02 47 25.1
            comp=Z,7.7nm,0.4s
ZFI    Zemlya Franca-    7.50  59 eP      Pn       02 46 11.4 -0.5
ZFI                               eS      Sn       02 47 29.8 -7.2
HAMF   Hammerfest       10.15 140  Pn     Pn       02 46 48.2  0.0
HAMF   Hammerfest       10.15 140 eP      Pn       02 46 45.6 -2.5
SCO    Scoresbysund     11.04 230  Pn     Pn       02 46 59.0 -1.4
KEV    Kevo             11.39 136  Pn     Pn       02 47 06.0 +0.8
KIF    Kilpisjarvi      11.40 148  Pn     Pn       02 47 05.6 +0.3
KIF    Kilpisjarvi      11.40 148 eP      Pn       02 47 01.9 -3.4
ARA0   ARCESS Array S   11.41 139  Pn     Pn       02 47 05.8 +0.3
            baz=350,slow=12
ARA0   ARCESS Array S   11.41 139  Pn     Pn       02 47 05.8 +0.3
            baz=350,slow=12
ARCES  ARCESS Array B   11.41 139  Pn     Pn       02 47 05.6 +0.1
            baz=348,slow=12,SNR=23
ARCES                              Sn     Sn       02 49 08.1 -5.0
            baz=340,slow=24,SNR=1.3
SUMG   Summit           11.95 258 i P     Pn       02 47 07.5 -5.6
SUMG                              i                02 49 14.2
SUMG   Summit           11.95 258         Pn       02 47 10.2 -2.9
SUMG   Summit           11.95 258 i P     Pn       02 47 07.6 -5.6
SUMG                              i                02 49 14.3
SUMG   Summit           11.95 258 i P     Pn       02 47 07.6 -5.6
SUMG                              i                02 49 14.3
KULLO  Kullorsuaq       13.83 282 i P     Pn       02 47 31.1 -7.3
KULLO  Kullorsuaq       13.83 282 i P     Pn       02 47 31.1 -7.3
LVZ    Lovozero         14.17 127  Pn     Pn       02 47 41.9 -1.2
TULEG  Thule            14.42 296  Pn     Pn       02 47 38.2 -8.3
TULEG  Thule            14.42 296 i P     Pn       02 47 38.4 -8.0
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TULEG	**Thule**	**14.42**	**296**	*i* P	Pn	02 47 38.4	-8.0
EUNU	**Eureka**	**14.56**	**316**	Pn	Pn	02 47 43.4	-5.0
UPNV	**Upernavik**	**15.02**	**276**	*i* P	Pn	02 47 45.7	-8.9
UPNV				*i*		02 50 19.2	
UPNV	**Upernavik**	**15.02**	**276**	*i* P	Pn	02 47 45.7	-8.9
UPNV				*i*		02 50 19.2	
NUUG	**Nuugaatsiaq**	**15.49**	**271**	*i* P	Pn	02 47 53.0	-7.7
NUUG				*i*		02 50 29.9	
NUUG	**Nuugaatsiaq**	**15.49**	**271**	*i* P	Pn	02 47 53.0	-7.7
NUUG				*i*		02 50 29.9	
AMDE	**Amderma**	**17.16**	**92**	*e*P	**Pn**	**02 48 18.4**	**-3.7**
	comp=Z,1.7nm,0.6s						
AMDE				*e*S	Sn	02 51 19.4	-13
LSH	**Leshukonskoye**	**18.69**	**117**	*e*P	**P**	**02 48 38.4**	**-2.3**
	comp=Z,99nm,3.8s						
LSH				*i* S	Sn	02 51 57.3	-13
SFJD	**Kangerlussuaq**	**18.92**	**260**	LR	LR	02 56 23.0	
	comp=Z,137nm,19.6s,baz=358,slow=38						
FIA0	**FINESS Array S**	**19.30**	**146**	P	**Pn**	**02 48 49.9**	**+1.5**
	baz=343,slow=10						
FIA0	**FINESS Array S**	**19.30**	**146**	P	**Pn**	**02 48 49.9**	**+1.5**
	baz=343,slow=10						
FIA1	**FINESS Array S**	**19.30**	**146**	P	**P**	**02 48 46.4**	**-1.0**
FIA1				IAmb	IAmb	02 48 58.7	
	comp=Z,26nm,1.4s						
FINES	**FINESS Array B**	**19.30**	**146**	P	**Pn**	**02 48 49.3**	**+0.9**
	comp=Z,0.3nm,0.3s,baz=324,slow=8.0,SNR=12						
FINES				LR	LR	02 55 50.5	
	comp=Z,108nm,21.6s,baz=331,slow=36						
HFS	**Hagfors**	**19.67**	**165**	P	**Pn**	**02 48 53.2**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=3.7,slow=9.2,SNR=6.3						
HFS	**Hagfors**	**19.67**	**165**	P	**Pn**	**02 48 53.6**	**+0.8**
	baz=338,slow=14						
HFS	**Hagfors**	**19.67**	**165**	P	**Pn**	**02 48 53.6**	**+0.8**
	baz=338,slow=14						
RES	**Resolute Bay**	**19.91**	**310**	P	**P**	**02 48 51.2**	**-2.7**
	comp=Z,0.7nm,0.3s,baz=62,slow=11,SNR=20						
RES				LR	LR	02 56 24.7	
	comp=Z,122nm,20.6s,baz=284,slow=36						
KLMR	**Klimovskoe**	**21.54**	**129**	*e*P	**P**	**02 49 12.6**	**+0.9**
	comp=Z,33nm,1.9s						
FRB	**Frobisher Bay**	**25.14**	**274**	P	**P**	**02 49 47.9**	**+0.5**
	comp=Z,3.8nm,0.8s,baz=18,slow=11,SNR=5.3						
FRB				LR	LR	02 59 33.2	
	comp=Z,86nm,20.5s,baz=16,slow=36						
KIRV	**Kirov**	**25.22**	**118**	LR	LR	03 01 13.2	
	comp=Z,66nm,21.6s,baz=1.9,slow=40						
ARU	**Arti**	**28.82**	**110**	LR	LR	03 03 09.7	
	comp=Z,64nm,21.9s,baz=324,slow=39						
AKASG	**Malin Array Be**	**30.21**	**147**	P	**P**	**02 50 35.0**	**+2.1**
	comp=Z,0.7nm,0.5s,baz=350,slow=9.5,SNR=1.6						
AKASG				LR	LR	03 02 20.9	
	comp=Z,112nm,21.7s,baz=325,slow=36						
GERES	**GERESS Array B**	**30.95**	**167**	P	**P**	**02 50 41.1**	**+1.5**
	comp=Z,0.3nm,0.6s,baz=10,slow=6.0,SNR=2.5						
EPYK	**Eagle Plains**	**32.61**	**332**	P	**P**	**02 50 52.7**	**-1.3**
YKA	**Yellowknife Ar**	**33.90**	**313**	P	**P**	**02 51 05.7**	**+0.5**
	comp=Z,0.2nm,0.7s,baz=17,slow=8.8,SNR=2.2						
YKA				PcP	**PcP**	**02 53 42.8**	**-0.5**
	comp=Z,0.3nm,0.8s,baz=22,slow=2.2,SNR=4.2						
YKA				LR	LR	03 04 28.9	
	comp=Z,66nm,19.6s,baz=0.0,slow=36						
ILAR	**Eielson Array**	**34.98**	**338**	P	**P**	**02 51 15.5**	**+0.9**
	comp=Z,0.5nm,1.0s,baz=354,slow=6.7,SNR=3.0						
ILAR				PcP	**PcP**	**02 53 46.2**	**-0.2**
	comp=Z,0.4nm,0.7s,baz=340,slow=3.0,SNR=6.9						
ZALV	**Zalesovo Beam**	**35.94**	**84**	P	**P**	**02 51 24.2**	**+1.4**
	comp=Z,0.4nm,0.3s,baz=328,slow=10,SNR=1.7						
ZALV				PcP	**PcP**	**02 53 50.0**	**+0.7**
	comp=Z,0.5nm,0.4s,baz=347,slow=3.3,SNR=2.2						
ESDC	**Sonseca Array**	**40.02**	**189**	P	**P**	**02 51 58.6**	**+1.0**
	comp=Z,0.6nm,0.6s,baz=5.6,slow=6.7,SNR=2.6						
BRTR	**Keskin Array B**	**41.52**	**145**	LR	LR	03 10 47.4	
	comp=Z,36nm,19.1s,baz=336,slow=38						
MAKZ	**Makanchi**	**42.26**	**90**		**P**	**02 52 16.7**	**+0.9**
MAKZ				IAmb	IAmb	02 52 19.3	
	comp=Z,5.0nm,1.2s						
MK31	**Makanchi Array**	**42.33**	**90**	P	**P**	**02 52 18.1**	**+1.7**
MK31				IAmb	IAmb	02 52 19.5	
	comp=Z,2.9nm,0.6s						
MKAR	**Makanchi Array**	**42.33**	**90**	P	**P**	**02 52 18.5**	**+2.1**
	comp=Z,2.3nm,0.6s,baz=338,slow=7.5,SNR=40						
MKAR	**Makanchi Array**	**42.33**	**90**		**P**	**02 52 17.6**	**+1.3**
ULM	**Lac du Bonnet**	**42.78**	**291**	P	**P**	**02 52 21.6**	**+1.6**
	comp=Z,1.3nm,0.8s,baz=6.0,slow=6.7,SNR=3.2						
ULM				LR	LR	03 09 50.6	
	comp=Z,65nm,18.8s,baz=5.0,slow=36						
ULM	**Lac du Bonnet**	**42.78**	**291**	IAmb	IAmb	02 52 30.0	
	comp=Z,7.6nm,1.5s						
KK31	**Karatay Array**	**43.75**	**103**	P	**P**	**02 52 29.5**	**+1.6**
KKAR	**Karatay Array**	**43.75**	**103**	P	**P**	**02 52 29.7**	**+1.8**
SONM	**Songino Array**	**45.64**	**67**	P	**P**	**02 52 44.6**	**+1.6**
	comp=Z,0.4nm,0.7s,baz=319,slow=5.9,SNR=4.6						
ULN	**Ulaanbaatar**	**45.72**	**66**	P	**P**	**02 52 45.3**	**+1.5**
ULN				IAmb	IAmb	02 52 47.1	
	comp=Z,2.1nm,1.0s						
RLMT	**Red Lodge**	**49.96**	**302**	P	**P**	**02 53 16.7**	**0.0**
PD31	**Pinedale Array**	**52.31**	**301**	P	**P**	**02 53 34.6**	**+0.3**
PDAR	**Pinedale Array**	**52.31**	**301**	P	**P**	**02 53 36.1**	**+1.7**
	comp=Z,0.4nm,0.8s,baz=350,slow=4.5,SNR=4.0						
PDAR	**Pinedale Array**	**52.31**	**301**	P	**P**	**02 53 34.5**	**+0.1**
PV01	**Paradox Valley**	**56.68**	**299**	P	**P**	**02 54 06.4**	**+0.2**
PV01				IAmb	IAmb	02 54 09.9	
	comp=Z,5.6nm,1.2s						
MJAR	**Matsushiro Arr**	**61.39**	**41**	P	**P**	**02 54 40.5**	**+2.0**
	comp=Z,4.2nm,1.1s,baz=8.9,slow=8.6,SNR=5.7						
TXAR	**Lajitas Array**	**64.47**	**293**	P	**P**	**02 54 58.9**	**-0.3**
	comp=Z,0.2nm,0.6s,baz=120,slow=26,SNR=5.1						
TXAR				LR	LR	03 23 52.3	
	comp=Z,59nm,18.1s,baz=0.0,slow=37						
TORD	**Torodi Ar. Bea**	**66.34**	**182**	P	**P**	**02 55 11.9**	**+0.5**
	comp=Z,1.2nm,0.8s,baz=354,slow=5.9,SNR=6.7						
CMAR	**Chiang Mai Arr**	**72.93**	**81**	P	**P**	**02 55 52.9**	**+0.9**
	comp=Z,1.6nm,0.3s,baz=343,slow=6.9,SNR=6.9						
PALK	**Pallekele**	**80.52**	**102**	LR	LR	03 35 10.0	
	comp=Z,383nm,21.3s,baz=79,slow=38						

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*KNET **22** 02:44:39.6±0.5, 42°.55N×76°.02E, h0^{km}±6^{km}, ml2.4, Error ellipse: s-maj=6.8km s-min=1.2km az=44.0*

*NNC **22** 02:44:39.3±0.4, 42°.61N×76°.10E, h2^{km}±3^{km}, mb3.8, mpv3.6, Error ellipse: s-maj=4.2km s-min=1.2km az=169.0*

*SOME **22** 02:44:39.7, 42°.58N×76°.08E, h10^{km}*

*KRNET **22** 02:44:39.2±0.1, 42°.59N×76°.09E, h18^{km}, mb3.4*

ISC 22 02:44:39.0±0.9**, 42°.58N**±0°.02×**76°.08E**±0°.01**, h16**^{km}±7^{km}**, n86, σ1^{s}.30**/154**, 42C-24D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOOM	**Boomskoye usch**	**0.14**	**228**	⇑*i*P	**Pb**	**02 44 42.9**	**-0.5**
	baz=28						
BOOM				⇑*i*S	**Sb**	**02 44 45.3**	**-0.9**
	baz=28						
ULHL	**Ulahol**	**0.36**	**160**	⇓*e*P	**Pg**	**02 44 46.4**	**-0.1**
	baz=61						
ULHL				⇓*i*S	**Sg**	**02 44 51.6**	**0.0**
	baz=61						
ULHL	**Ulahol**	**0.36**	**160**	P	**Pb**	**02 44 46.8**	**-0.3**
	170nm,0.2s,SNR=1074						
ULHL				⇑S	**Sg**	**02 44 51.6**	**0.0**
	55nm,0.1s						
KST	**Kastek**	**0.47**	**350**	*e*P	**Pg**	**02 44 48.5**	**0.0**
	baz=49						
KST				*e*S	**Sg**	**02 44 54.9**	**0.0**
	baz=49						
KST	**Kastek**	**0.47**	**350**	*e*P	**Pg**	**02 44 48.5**	**0.0**
	76nm,0.3s						
KST				*e*S	**Sg**	**02 44 54.9**	**0.0**
	169nm,0.3s						
KST	**Kastek**	**0.47**	**350**	P	**Pg**	**02 44 48.5**	**0.0**
	76nm,0.3s						
KST				S	**Sg**	**02 44 54.9**	**0.0**
	169nm,0.3s						
TKM2	**Tokmak 2**	**0.49**	**314**	⇓*i*P	**Pb**	**02 44 49.3**	**-0.1**
	baz=13						
TKM2				⇓*i*S	**Sb**	**02 44 56.2**	**-0.3**
	baz=13						
TKM2	**Tokmak 2**	**0.49**	**314**	⇓P	**Pb**	**02 44 49.3**	**-0.1**
	39nm,0.1s,SNR=342						
TKM2				⇓S	**Sb**	**02 44 56.4**	**-0.1**
	865nm,0.1s						
TKM2	**Tokmak 2**	**0.49**	**314**	⇑P	**Pb**	**02 44 49.3**	**-0.1**
	11nm,0.2s						
TKM2				⇑S	**Sb**	**02 44 56.2**	**-0.3**
	194nm,0.3s						
IZV	**Izvestkoviy**	**0.60**	**41**	*e*P	**Pg**	**02 44 50.4**	**-0.5**
	baz=41						
IZV				*e*S	**Sg**	**02 44 58.4**	**-0.6**
	baz=41						
IZV	**Izvestkoviy**	**0.60**	**41**	*e*P	**Pg**	**02 44 50.4**	**-0.5**
	81nm,0.1s						
IZV				*e*S	**Sg**	**02 44 58.4**	**-0.6**
	553nm,0.3s						
IZV	**Izvestkoviy**	**0.60**	**41**	P	**Pg**	**02 44 50.4**	**-0.5**
	81nm,0.1s						
IZV				S	**Sg**	**02 44 58.4**	**-0.6**
	553nm,0.3s						
DGS	**Degeres**	**0.70**	**341**	*e*P	**Pg**	**02 44 52.8**	**+0.1**
	baz=41						
DGS				*e*S	**Sg**	**02 45 02.2**	**+0.2**
	baz=41						
DGS	**Degeres**	**0.70**	**341**	*e*P	**Pg**	**02 44 52.8**	**+0.1**
	76nm,0.1s						
DGS				*e*S	**Sg**	**02 45 02.2**	**+0.2**
	47nm,0.1s						
DGS	**Degeres**	**0.70**	**341**	P	**Pg**	**02 44 52.8**	**+0.1**
	76nm,0.1s						
DGS				S	**Sg**	**02 45 02.2**	**+0.2**
	47nm,0.1s						
TNSS	**Tian-Shan**	**0.79**	**54**	*e*P	**Pb**	**02 44 53.9**	**-0.7**
	baz=54						
TNSS				*e*S	**Sb**	**02 45 04.0**	**-1.2**
	baz=54						
TNSS	**Tian-Shan**	**0.79**	**54**	*e*P	**Pb**	**02 44 53.9**	**-0.7**
	23nm,0.2s						
TNSS				*e*S	**Sb**	**02 45 04.0**	**-1.2**
	52nm,0.4s						
TNSS	**Tian-Shan**	**0.79**	**54**	P	**Pb**	**02 44 53.9**	**-0.7**
	31nm,0.1s						
TNSS				S	**Sb**	**02 45 04.0**	**-1.2**
KBK	**Karagaybulak**	**0.84**	**276**	⇓*i*P	**Pb**	**02 44 55.3**	**0.0**
	baz=75						
KBK				⇓*i*S	**Sg**	**02 45 06.9**	**+0.5**
	baz=75						
KBK	**Karagaybulak**	**0.84**	**276**	⇑P	**Pn**	**02 44 55.9**	**-0.4**
	28nm,0.1s,SNR=32						
KBK				⇑S	**Sn**	**02 45 08.4**	**-0.1**
	121nm,0.2s						
AAA	**Alma-Ata**	**0.88**	**44**	*e*P	**Pn**	**02 44 56.2**	**-0.7**
	baz=44						
AAA				*e*S	**Sn**	**02 45 08.0**	**-1.3**
	baz=44						
AAA	**Alma-Ata**	**0.88**	**44**	*e*P	**Pn**	**02 44 56.2**	**-0.7**
	64nm,0.2s						
AAA				*e*S	**Sn**	**02 45 08.0**	**-1.3**
	247nm,0.2s						
AAA	**Alma-Ata**	**0.88**	**44**	P	**Pn**	**02 44 56.2**	**-0.7**
	64nm,0.2s						
AAA				S	**Sn**	**02 45 08.0**	**-1.3**
	247nm,0.2s						
KNDC	**Almaty**	**0.91**	**45**	⇑P	**Pn**	**02 44 56.7**	**-0.6**
	16nm,0.3s						
KNDC				⇓S	**Sg**	**02 45 08.8**	**+0.1**
	81nm,0.5s						
MDOK	**Medeo**	**0.92**	**51**	*e*P	**Pg**	**02 44 56.4**	**-0.5**
MDOK				*e*S	**Sg**	**02 45 08.6**	**-0.4**
	99nm,0.4s						
MDOK	**Medeo**	**0.92**	**51**	⇓P	**Pb**	**02 44 56.3**	**-0.4**
	20nm,0.3s						
MDOK				⇑S	**Sg**	**02 45 08.4**	**-0.6**
	52nm,0.5s						
MDOK	**Medeo**	**0.92**	**51**	Pg	**Pg**	**02 44 56.4**	**-0.5**
MDOK				Lg	Lg	02 45 08.6	
	99nm,0.4s						
KDJ	**Kajisay**	**0.93**	**119**	⇓*i*P	**Pn**	**02 44 56.9**	**-0.8**
	baz=19						
KDJ				⇓*i*S	**Sn**	**02 45 09.5**	**-1.3**
	baz=19						
KOTS	**Kotyrbulak**	**1.00**	**49**	*e*P	**Pg**	**02 44 58.2**	**-0.3**
	baz=49						
KOTS				*e*S	**Sn**	**02 45 11.7**	**-0.8**
	baz=49						
KOTS	**Kotyrbulak**	**1.00**	**49**	*e*P	**Pg**	**02 44 58.2**	**-0.3**
	122nm,0.3s						
KOTS				*e*S	**Sn**	**02 45 11.7**	**-0.8**
	188nm,0.4s						
KOTS	**Kotyrbulak**	**1.00**	**49**	P	**Pg**	**02 44 58.2**	**-0.3**
	122nm,0.3s						
KOTS				S	**Sn**	**02 45 11.7**	**-0.8**
	188nm,0.4s						
CHMS	**Chumysh**	**1.06**	**294**	⇑*i*P	**Pn**	**02 44 59.2**	**-0.1**
	baz=93						
CHMS				⇑*i*S	**Sn**	**02 45 13.4**	**-0.4**
	baz=93						
CHMS	**Chumysh**	**1.06**	**294**	⇑P	**Pn**	**02 44 59.3**	**-0.1**
	5.8nm,0.1s,SNR=8.2						
CHMS				⇑S	**Sg**	**02 45 13.8**	**+0.4**
	42nm,0.1s						
FRU1	**Bishkek**	**1.09**	**283**	⇑*i*P	**Pn**	**02 44 59.8**	**+0.1**
	baz=83						
FRU1				⇑*i*S	**Sn**	**02 45 14.5**	**-0.1**
	baz=83						
AAK	**Ala-Archa**	**1.17**	**273**	⇑*i*P	**Pb**	**02 45 01.2**	**+0.2**
	baz=73						
AAK				⇑*i*S	**Sg**	**02 45 17.1**	**+0.2**
	baz=73						
AAK	**Ala-Archa**	**1.17**	**273**	⇑P	**Pg**	**02 45 01.6**	**0.0**
	21nm,0.2s,SNR=42						
AAK				⇑S	**Sg**	**02 45 17.7**	**+0.7**
	51nm,0.2s						
AAK	**Ala-Archa**	**1.17**	**273**	⇑P	**Pg**	**02 45 01.5**	**-0.2**
	6.2nm,0.3s						
AAK				⇑S	**Sg**	**02 45 17.4**	**+0.5**
	13nm,0.2s						
ANVS	**Anan'yevo**	**1.19**	**80**	⇑*i*P	**Pg**	**02 45 01.2**	**-0.8**
	baz=80						
ANVS				⇑*i*S	**Sg**	**02 45 17.1**	**-0.5**
	baz=80						
UCH	**Uchtor**	**1.21**	**254**	⇑*i*P	**Pb**	**02 45 02.0**	**+0.1**
	baz=53						
UCH				⇑*i*S	**Sg**	**02 45 18.4**	**+0.1**
	baz=53						
UCH	**Uchtor**	**1.21**	**254**	⇑P	**Pg**	**02 45 02.5**	**0.0**
	21nm,0.2s,SNR=65						
KTBS	**Karatobe**	**1.21**	**21**	*e*P	**Pg**	**02 45 01.8**	**-0.6**
	baz=21						
KTBS				*e*S	**Sn**	**02 45 17.4**	**-0.2**
	baz=21						
KTBS	**Karatobe**	**1.21**	**21**	*e*P	**Pg**	**02 45 01.8**	**-0.6**
	22nm,0.3s						
KTBS				*e*S	**Sn**	**02 45 17.4**	**-0.2**
	128nm,0.3s						
KTBS	**Karatobe**	**1.21**	**21**	P	**Pg**	**02 45 01.8**	**-0.6**
	22nm,0.3s						
KTBS				S	**Sn**	**02 45 17.4**	**-0.2**
	128nm,0.3s						
KUU	**Kurty**	**1.32**	**8**	*e*P	**Pg**	**02 45 03.9**	**-0.7**
	baz=8.0						
KUU				*e*S	**Sg**	**02 45 21.0**	**-0.9**
	baz=8.0						
KUU	**Kurty**	**1.32**	**8**	*e*P	**Pg**	**02 45 03.9**	**-0.7**
	53nm,0.2s						
KUU				*e*S	**Sg**	**02 45 20.9**	**-0.9**
	75nm,0.2s						
KUU	**Kurty**	**1.32**	**8**	P	**Pg**	**02 45 03.9**	**-0.7**
	53nm,0.2s						
KUU				S	**Sg**	**02 45 20.9**	**-0.9**
	75nm,0.2s						
USP	**Ospenovka**	**1.35**	**301**	⇓*i*P	**Pb**	**02 45 04.3**	**+0.4**
	baz=1.0						
USP				⇓*i*S	**Sg**	**02 45 22.2**	**-0.3**
	baz=1.0						
USP	**Ospenovka**	**1.35**	**301**	⇑P	**Pg**	**02 45 04.5**	**-0.4**
	4.1nm,0.1s,SNR=41						
SGDS	**Sogindy**	**1.37**	**310**	P	**Pb**	**02 45 04.8**	**+0.4**
	12nm,0.2s						
SGDS				S	**Sb**	**02 45 22.6**	**+0.9**
	84nm,0.2s						
ARLS	**Aral**	**1.49**	**242**	⇓*i*P	**Pb**	**02 45 06.7**	**+0.3**
	baz=41						
ARLS				⇓*i*S	**Sg**	**02 45 26.4**	**-0.7**
	baz=41						
EKS2	**Erkin-Say**	**1.70**	**273**	⇑*i*P	**Pb**	**02 45 10.6**	**+0.6**
	baz=73						
EKS2				⇑*i*S	**Sg**	**02 45 33.3**	**-0.5**
	baz=73						
EKS2	**Erkin-Say**	**1.70**	**273**	P	**Pg**	**02 45 11.7**	**0.0**
	19nm,0.2s,SNR=48						
EKS2				⇓S	**Sg**	**02 45 35.6**	**+1.8**
	40nm,0.2s						
PRZ	**Przheval'sk**	**1.72**	**92**	⇑*i*P	**Pg**	**02 45 10.8**	**-1.3**
	baz=92						
PRZ				⇑*i*S	**Sg**	**02 45 33.6**	**-0.8**
	baz=92						
SATY	**Saty**	**1.78**	**74**	*e*P	**Pg**	**02 45 12.3**	**-0.9**
	baz=74						
SATY				*e*S	**Sg**	**02 45 35.5**	**-0.9**
	baz=74						
SATY	**Saty**	**1.78**	**74**	*e*P	**Pg**	**02 45 12.3**	**-0.9**
	18nm,0.2s						
SATY				*e*S	**Sg**	**02 45 35.4**	**-0.9**
	133nm,0.1s						
SATY	**Saty**	**1.78**	**74**	P	**Pg**	**02 45 12.3**	**-0.9**
	18nm,0.2s						
SATY				S	**Sg**	**02 45 35.4**	**-0.9**
	133nm,0.1s						
KURS	**Kuram**	**1.78**	**59**	*e*P	**Pb**	**02 45 11.8**	**+0.4**
	baz=59						
KURS				*e*S	**Sg**	**02 45 34.6**	**-1.8**
	baz=59						
KURS	**Kuram**	**1.78**	**59**	*e*P	**Pb**	**02 45 11.8**	**+0.4**
	11nm,0.6s						
KURS				*e*S	**Sg**	**02 45 34.6**	**-1.8**
	28nm,0.4s						
KURS	**Kuram**	**1.78**	**59**	P	**Pb**	**02 45 11.8**	**+0.4**
	11nm,0.6s						
KURS				S	**Sg**	**02 45 34.6**	**-1.8**
	28nm,0.4s						
AML	**Almayashu**	**1.82**	**257**	⇑*i*P	**Pb**	**02 45 12.6**	**+0.4**
	baz=56						
AML				⇑*i*S	**Sg**	**02 45 37.2**	**-0.6**
	baz=56						
AML	**Almayashu**	**1.82**	**257**	⇓P	**Pg**	**02 45 13.7**	**-0.3**
	24nm,0.1s,SNR=50						
ARXS	**Arharly**	**2.07**	**37**	*e*P	**Pb**	**02 45 16.9**	**+0.7**
	29nm,0.3s						
ARXS				*e*S	**Sg**	**02 45 43.7**	**-2.0**
	301nm,0.4s						
ARXS	**Arharly**	**2.07**	**37**	Pg	**Pb**	**02 45 16.9**	**+0.7**
	29nm,0.3s						
ARXS				Lg	Lg	02 45 43.7	
	301nm,0.4s						
KPKS	**Kokpek**	**2.11**	**64**	*e*P	**Pg**	**02 45 18.4**	**-1.1**
	75nm,0.2s						
KPKS				*e*S	**Sg**	**02 45 46.2**	**-0.6**
	93nm,0.4s						
MRKS	**Merke**	**2.11**	**275**	*e*P	**Pb**	**02 45 18.2**	**+1.2**
	73nm,0.3s						
MRKS				*e*S	**Sg**	**02 45 46.8**	**0.0**
	129nm,0.3s						
MRKS	**Merke**	**2.11**	**275**	Pg	**Pb**	**02 45 18.2**	**+1.2**
	73nm,0.3s						
MRKS				Lg	Lg	02 45 46.8	
	129nm,0.3s						
UZB	**Uzynbulak**	**2.24**	**74**	*e*P	**Pb**	**02 45 19.9**	**+0.7**
	30nm,0.5s						
UZB				*e*S	**Sg**	**02 45 48.5**	**-2.5**
	64nm,0.4s						
UZB	**Uzynbulak**	**2.24**	**74**	Pg	**Pb**	**02 45 19.9**	**+0.7**
	30nm,0.5s						
UZB				Lg	Lg	02 45 48.5	
	64nm,0.4s						
SHLS	**Shalkode**	**2.55**	**76**	*e*P	**Pg**	**02 45 31.3**	**+3.3**
	38nm,0.6s						
SHLS				*e*S	**Sg**	**02 46 08.1**	**+7.0**
	74nm,0.6s						
SHLS	**Shalkode**	**2.55**	**76**	Pg	**Pg**	**02 45 31.3**	**+3.3**
	38nm,0.6s						
SHLS				Lg	Lg	02 46 08.1	
	74nm,0.6s						
PDGK	**Podgornoye**	**2.61**	**72**	Pg	**Pb**	**02 45 25.6**	**0.0**
PDGK				Lg	Lg	02 45 58.3	
	34nm,0.8s						
PDGK	**Podgornoye**	**2.61**	**72**	⇑Pn	**Pb**	**02 45 25.4**	**-0.2**
	12nm,0.6s						
PDGK				⇑Lg	Lg	02 45 59.5	
	72nm,0.8s						
MNAS	**Manas**	**2.64**	**269**	⇑*i*P	**Pb**	**02 45 24.0**	**-2.1**
	baz=69						
MNAS				⇑*i*S	**Sb**	**02 45 56.4**	**-1.9**
	baz=69						
BTLS	**Baital**	**2.87**	**330**	*e*P	**Pb**	**02 45 31.1**	**+1.4**
	8.5nm,0.3s						
BTLS				*e*S	**Sg**	**02 46 07.9**	**-3.2**
	16nm,0.2s						
BTLS	**Baital**	**2.87**	**330**	Pg	**Pb**	**02 45 31.1**	**+1.4**
	8.5nm,0.3s						
BTLS				Lg	Lg	02 46 07.9	
	16nm,0.2s						
DJR	**Jarkent**	**3.22**	**56**	*e*P	**Pb**	**02 45 36.7**	**+0.9**
	5.9nm,0.4s						
DJR				*e*S	**Sb**	**02 46 17.4**	**+2.6**
	24nm,0.5s						
DJR	**Jarkent**	**3.22**	**56**	Pg	**Pb**	**02 45 36.7**	**+0.9**
	5.9nm,0.4s						
DJR				Lg	Lg	02 46 17.4	
	24nm,0.5s						
KTMS	**Ketmen**	**3.25**	**73**	*e*P	**Pb**	**02 45 37.1**	**+0.7**
	0.5nm,0.1s						
KTMS				*e*S	**Sb**	**02 46 18.1**	**+2.2**
	29nm,0.3s						
KTMS	**Ketmen**	**3.25**	**73**	Pg	**Pb**	**02 45 37.1**	**+0.7**
	0.5nm,0.1s						
KTMS				Lg	Lg	02 46 18.1	
	29nm,0.3s						
TRKS	**Terek-Say**	**3.82**	**256**	⇓*i*P	**Pn**	**02 45 40.6**	**+3.2**
	baz=55						
TRKS				⇓*i*S	**Sn**	**02 46 24.9**	**+2.8**
	baz=55						
KK31	**Karatay Array**	**4.13**	**279**	⇓Pg	**Pg**	**02 45 55.6**	**-2.5**
	0.8nm,0.3s,baz=100,slow=16,SNR=17						
KK31				⇑Lg	Lg	02 46 48.3	
	5.4nm,0.3s,baz=98,slow=30,SNR=23						
IUG	**Iuzhnay**	**4.50**	**267**	*e*P	**Pg**	**02 46 03.1**	**-2.1**
	1.6nm,0.4s						
IUG				*e*S	**Sg**	**02 47 02.5**	**-1.0**
	8.2nm,0.6s						
MAKZ	**Makanchi**	**5.96**	**43**	⇓Pn	**Pn**	**02 46 10.6**	**+4.0**
	0.7nm,0.7s						
MAKZ				⇓Sn	**Sn**	**02 47 17.7**	**+3.2**
	0.5nm,0.6s						
MAKZ				⇑Lg	Lg	02 47 45.4	
	2.8nm,0.8s						
MK31	**Makanchi Array**	**6.11**	**44**	Pn	**Pn**	**02 46 12.5**	**+3.9**
	0.7nm,0.5s,baz=222,slow=15,SNR=25						
MK31				⇑Sn	**Sn**	**02 47 20.2**	**+1.9**
	0.6nm,0.4s,baz=221,slow=24,SNR=5.3						
MK31				⇓Lg	Lg	02 47 50.9	
	1.9nm,0.7s,baz=222,slow=26,SNR=5.2						
KURBB	**Kurchatov Arra**	**8.22**	**11**	⇑Lg	Lg	02 48 59.6	
	11nm,0.8s						
KURK	**Kurchatov**	**8.32**	**11**	⇑Lg	Lg	02 49 01.0	
	4.7nm,0.8s						

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*PDG **22** 02:45:14.6±0.1, 43°.42N×19°.47E, h11^{km}, MD2.9/1, ML2.6/13, Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*

*RHSSO **22** 02:45:15.5±0.3, 43°.44N×19°.42E, h4^{km}±1^{km}, ML2.6/9*

*BEO **22** 02:45:15.6±0.2, 43°.43N×19°.45E, h2^{km}±2^{km}, ML2.6/14*

*PRU **22** 02:45:18.7±0.0, 43°.86N×19°.72E, h0^{km}*

ISC 22 02:45:14.1±1.0**, 43°.39N**±0°.02×**19°.54E**±0°.02**, h5**^{km}±8^{km}**, n76, σ1^{s}.13**/120**, 11C-11D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLE	**Pljevlja**	**0.12**	**242**	⇓*i*Pg	**Pg**	**02 45 17.2**	**+0.5**
PLE				*i* Sg	**Sg**	**02 45 18.9**	**+0.4**
RUDO	**Rudo**	**0.26**	**332**	⇓*i*Pg	**Pg**	**02 45 18.6**	**-0.6**
RUDO				*e*Sg	**Sg**	**02 45 21.5**	**-1.2**
IVAS	**Ivanjica**	**0.48**	**67**	*e*Pg	**Pb**	**02 45 24.7**	**-0.4**
IVAS				*e*Sg	**Sb**	**02 45 31.1**	**-1.4**
BBLS	**Lazići**	**0.49**	**348**	*e*Pg	**Pg**	**02 45 24.0**	**+0.5**
BBLS				*e*Sg	**Sg**	**02 45 30.1**	**+0.2**
BBLS	**Lazići**	**0.49**	**348**	*e*Pg	**Pg**	**02 45 23.8**	**+0.3**
BBLS				*e*Sg	**Sg**	**02 45 30.0**	**+0.2**
UPM	**Unac-Piva**	**0.50**	**248**	⇓*i*Pg	**Pg**	**02 45 24.0**	**+0.3**
UPM				*e*Sg	**Sg**	**02 45 30.4**	**+0.1**
UPM	**Unac-Piva**	**0.50**	**248**	*e*Pg	**Pg**	**02 45 24.0**	**+0.3**
UPM				*i* Sg	**Sg**	**02 45 30.4**	**+0.1**
KOME	**Kolasin**	**0.54**	**182**	*e*Pg	**Pb**	**02 45 25.5**	**-0.5**
KOME				*i* Sg	**Sb**	**02 45 33.2**	**-0.9**
IVA	**Berane**	**0.58**	**153**	*e*Pg	**Pb**	**02 45 26.4**	**-0.3**
IVA				*i* Sg	**Sb**	**02 45 35.4**	**+0.2**
NKY	**Niksic**	**0.70**	**215**	⇓*i*Pg	**Pb**	**02 45 27.7**	**-1.1**
NKY				*i* Sg	**Sb**	**02 45 38.7**	**-0.1**
NKME	**Niksic**	**0.76**	**215**	*e*Pg	**Pb**	**02 45 28.7**	**-1.0**
NKME				*i* Sg	**Sb**	**02 45 40.6**	**+0.3**
DIVS	**Divibare**	**0.78**	**25**	*e*Pg	**Pb**	**02 45 30.0**	**-0.2**
DIVS				*e*Sg	**Sb**	**02 45 40.9**	**-0.2**

DIVS	Divibare	0.78	25	ePg	Pb	02 45 30.0	-0.2
DIVS				eSg	Sg	02 45 40.7	+1.4
HAPS	Han Pijesak,BI	0.82	329	ePg	Pg	02 45 28.6	-1.3
HAPS				eSg	Sg	02 45 38.6	-1.8
HAPS	Han Pijesak,BI	0.82	329	⇓iPg	Pg	02 45 28.5	-1.3
HAPS				eSg	Sg	02 45 38.7	-1.7
PVY	Plav	0.85	159	ePg	Pn	02 45 31.5	-1.3
PVY				i Sg	Sn	02 45 43.5	-2.2
BRY	Bratogost	0.88	237	ePg	Pg	02 45 30.4	-0.6
BRY				eSg	Sg	02 45 42.1	-0.3
BRY	Bratogost	0.88	237	⇑iPg	Pg	02 45 30.7	-0.3
BRY				i Sg	Sb	02 45 44.2	+0.2
CEME	Cevo	0.96	209	⇑iPg	Pg	02 45 32.1	-0.4
CEME				i Sg	Sn	02 45 47.7	-0.5
PDG	Podgorica	0.98	192	ePg	Pb	02 45 32.9	-0.6
PDG				eSg	Sn	02 45 48.6	-0.1
PDG	Podgorica	0.98	192	⇑P	Pn	02 45 34.1	-0.3
PDG				⇑S	Sn	02 45 49.1	+0.5
PDG	Podgorica	0.98	192	ePg	Pb	02 45 32.9	-0.6
PDG				eSg	Sn	02 45 47.2	-1.5
TTG	Podgorica	0.98	192	⇓iPg	Pb	02 45 33.0	-0.6
TTG				i Sg	Sn	02 45 48.9	+0.2
GRUS	Gruza	0.99	59	ePg	Pn	02 45 35.3	+0.7
GRUS				eSg	Sn	02 45 48.3	-0.6
TRUS	Trudelj	1.04	37	ePg	Pn	02 45 35.3	-0.1
TRUS				eSg	Sn	02 45 49.9	-0.4
TREB	Trebinje	1.10	233	ePg	Pg	02 45 34.4	-0.8
TREB				eSg	Sn	02 45 50.4	-1.3
TREB	Trebinje	1.10	233	⇓iPg	Pg	02 45 34.4	-0.8
TREB				eSg	Sb	02 45 50.3	+0.1
BUM	Brajici-Budva	1.19	204	ePg	Pn	02 45 36.7	-0.7
BUM				i Sg	Sn	02 45 55.6	+1.7
HCY	Herceg Novi	1.22	220	ePg	Pb	02 45 37.0	-0.5
HCY				eSg	Sn	02 45 54.1	-0.4
HCY	Herceg Novi	1.22	220	⇓iPg	Pb	02 45 37.1	-0.5
HCY				i Sg	Sn	02 45 56.0	+1.5
DRME	Dracevica, Mon	1.23	192	ePg	Pn	02 45 38.6	+0.7
DRME				eSg	Sn	02 45 56.2	+1.4
DRME	Dracevica, Mon	1.23	192	ePg	Pn	02 45 37.9	0.0
DRME				i Sg	Sn	02 45 57.3	+2.5
DBRK	Dubrovnik	1.25	235	i Pn	Pb	02 45 36.3	-1.8
ULC	Ulcinj	1.44	189	⇑iPg	Pg	02 45 41.7	0.0
ULC				i Sg	Sg	02 46 03.9	+3.5
STON	Ston	1.44	250	ePn	Pn	02 45 39.6	-1.2
BOVS	Bovan	1.59	80	ePn	Pg	02 45 46.5	+1.8
BOVS				eSn	Sg	02 46 07.4	+2.1
RICI	Ricice	1.76	274	ePn	Pb	02 45 46.5	-0.3
RICI				Sn	Sb	02 46 09.7	+0.6
FRGS	Fruska Gora	1.78	6	ePn	Pn	02 45 45.8	+0.3
FRGS				eSn	Sb	02 46 10.0	+0.2
FRGS	Fruska Gora	1.78	6	⇓P	Pn	02 45 45.9	+0.4
FRGS	Fruska Gora	1.78	6	⇑iPn	Pn	02 45 45.7	+0.3
FRGS				eSn	Sn	02 46 09.0	+0.5
MAKA	Makarska	1.84	268	i Pn	Pb	02 45 47.4	-0.8
MAKA				Sn	Sg	02 46 13.2	-0.1
KUBS	Kucevo	1.85	56	ePn	Pb	02 45 47.3	-1.1
SKO	Skopje	1.99	135	ePn	Pg	02 45 51.8	-0.4
ZAGS	Zajecar	2.00	77	ePn	Pb	02 45 50.5	-0.4
ZAGS				eSn	Sg	02 46 17.0	-1.4
LSTV	Lastovo	2.04	253	ePn	Pn	02 45 49.8	+0.9
MGRS	Mrkonjic Grad	2.05	301	ePn	Pn	02 45 49.1	-0.1
MGRS				eSn	Sn	02 46 14.1	-1.1
TIR	Tirane	2.05	173	⇓P	Pg	02 45 52.8	-0.7
PRVS	Prvonek	2.06	114	ePn	Pb	02 45 51.7	-0.3
PRVS				eSn	Sg	02 46 19.0	-1.2
MDVR	Moldovita	2.10	48	⇓P	Pn	02 45 50.8	+0.9
BLY	Banja Luka	2.18	309	ePn	Pn	02 45 50.7	-0.2
BLY				eSn	Sn	02 46 17.3	-0.9
ZAPS	Zavoj	2.26	92	ePn	Pb	02 45 55.4	0.0
ZAPS				eSn	Sg	02 46 24.7	-2.0
HVAR	Hvar	2.27	266	ePn	Pb	02 45 54.8	-0.7
HVAR				Sn	Sb	02 46 24.5	+0.7
BOSS	Bosilegrad	2.34	111	ePn	Pb	02 45 55.3	-1.3
BOSS				eSn	Sb	02 46 25.5	-0.3
KIJV	Kijevo	2.36	286	ePn	Pb	02 45 57.3	+0.3
HERR	Herculane	2.55	53	⇑P	Pn	02 45 57.7	+1.6
BZS	Buzias	2.68	33	⇑P	Pn	02 45 58.3	+0.5
VTS	Vitosha	2.82	105	⇑P	Pb	02 46 03.6	-1.3
MORI	Morici	2.82	281	ePn	Pn	02 46 01.6	+1.8
ZIRJ	Zirje	2.85	277	i Pn	Pn	02 46 02.5	+2.4
MORH	Mrgy, Hungar	2.90	348	ePn	Pn	02 46 00.9	+0.1
MORH				eSn	Sn	02 46 35.9	-0.1
GZR	Gura Zlata	3.06	48	⇑P	Pn	02 46 04.5	+1.3
DUGI	Dugi Otok	3.31	282	ePn	Pn	02 46 09.2	+2.7
KALN	Kalnik	3.51	322	i Pn	Pn	02 46 09.7	+0.4
NVLJ	Novalja	3.57	291	ePn	Pn	02 46 11.8	+1.8
CRES	Cresnjev	3.80	311	ePn	Pn	02 46 13.6	+0.4
CEY	Cerknica	4.34	305	ePn	Pn	02 46 20.5	-0.2
VOIR		4.45	61	⇑P	Pn	02 46 24.0	+1.8
SOKA	Soboth	4.58	317	i Pn	Pn	02 46 24.8	+0.7
	2.1nm,0.3s						
OBKA	Obir	4.72	313	ePn	Pn	02 46 27.8	+1.8
	1.0nm,0.3s						
ARSA	Arzberg	4.79	325	ePn	Pn	02 46 27.7	+0.8
	2.5nm,0.4s						
ZST	Bratislava	5.10	341	ePN	Pb	02 46 37.8	-5.9
VYHS	Vyhne	5.13	355	ePN	Pb	02 46 38.4	-5.8
MOA	Molln	5.79	322	i Pn	Pn	02 46 42.1	+1.5
	0.4nm,0.1s						
WTTA	Wattenberg	6.79	308	i Pn	Pn	02 46 57.1	+2.7
	0.8nm,0.2s						
WATA	Walderalm	6.86	308	ePn	Pn	02 46 58.7	+3.4
	0.8nm,0.3s						
KHC	Kasperske Hory	7.07	326	ePN	Pn	02 46 59.2	+1.0

IDC ***22*** *02:53:40.6±0.5,40°.06N×143°.57E,h0^{km},mb4.7/24,mb1 4.8/31,mb1mx4.8/35,mbtmp4.7/31,ML3.7/7,MS4.1/24,Ms1 4.1/24,ms1mx3.8/46,Error ellipse: s-maj=13.7km s-min=12.5km az=134.0*

BJI ***22*** *02:53:40.7±0.0,40°.08N×143°.38E,h8^{km},mB5.0/60,mb5.0/82,Ms4.8/78,Ms7 4.4/73*

NIED ***22*** *02:53:42.8,40°.12N×143°.54E,h19^{km},MW4.9,Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.81; M$_{\theta\theta}$0.43; M$_{\phi\phi}$-1.24; M$_{r\theta}$1.65; M$_{\theta\phi}$-0.58; M$_{\phi r}$0.76; Fault plane solution: M$_0$2.19000×10^{16} NP1:ϕ_s55.00000°,δ78.00000°,λ118.00000°. NP2:ϕ_s166.00000°,δ30.00000°,λ24.00000°.*

NEIC ***22*** *02:53:42.2±1.3,40°.08N±0°.04×143°.62E±0°.09,h10^{km}±1^{km},mb5.0/250 Error ellipse: s-maj=12.7km s-min=3.8km az=120.0*

JMA ***22*** *02:53:42.7±0.2,40°.12N×143°.54E,h19^{km}±4^{km},M5.0*

JMA Felt I J1.

MOS ***22*** *02:53:44.0±1.0,40°.15N×143°.46E,h30^{km},mb5.3/79,MS4.6/8,Error ellipse: s-maj=5.9km s-min=3.8km az=111.1*

BGR ***22*** *02:53:45.8±0.0,40°.19N×143°.49E,h33^{km},mb4.9*

GCMT ***22*** *02:53:48.2±0.5,40°.09N±0°.03×143°.73E±0°.04,h23^{km}±1^{km},MW4.9/66,Moment Tensor Solution. s13,c15; s66,c90; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$1.84±.18; M$_{\theta\theta}$-0.26±.11; M$_{\phi\phi}$-1.58±.12; M$_{r\theta}$1.40±.19; M$_{\theta\phi}$-0.47±.06; M$_{\phi r}$1.11±.13; Best double couple: M$_0$2.50600×10^{16} NP1:ϕ_s184.00000°,δ27.00000°,λ57.00000°. NP2:ϕ_s39.00000°,δ68.00000°,λ105.00000°. Principal axes: T 2.6920, Plg64.0000°, Azm334.0000°; N -0.3720, Plg14.0000°, Azm214.0000°; P -2.3200, Plg21.0000°, Azm118.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 22 02:53:42.7±0.5**,40°.08N**±0°.03×**143°.55E**±0°.03**,h13**^{km}±2^{km}**,h13**^{km}**:pP-P,n769,**σ**1^s.54**/739**,mb5.0**/285**,MS4.4**/42**,45C-37D,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTH	Tanohata	1.31	264	⇑P	Pn	02 54 06.0	-0.7
JTH				eS	Sb	02 54 22.3	-1.5
JKEN	Kujiedanarisaw	1.42	276	⇑P	Pn	02 54 07.3	-0.9
JKEN				eS	Sn	02 54 25.2	-1.6
MIYJ	Miyakonagasawa	1.43	250	⇑P	Pn	02 54 08.1	-0.3
JANG	Nango	1.59	281	⇑P	Pn	02 54 10.1	-0.5
JOM	Ohasama	1.85	252	⇑P	Pn	02 54 14.7	+0.6
JOM				eS	Sn	02 54 37.9	+0.6
ERM	Erimo	1.96	351	P	Pn	02 54 14.9	-0.7
ERM	Erimo	1.96	351	Pn	Pn	02 54 14.9	-0.7
JEM	Erimo	1.96	351	P	Pn	02 54 15.0	-0.6
JTM	Tenmabayashi	2.02	291	⇑P	Pn	02 54 16.9	+0.3
JTM	Tenmabayashi	2.02	291	Pn	Pn	02 54 16.8	+0.2
JMK	Ichinoseki	2.13	239	P	Pn	02 54 18.0	0.0
JMK				eS	Sn	02 54 44.4	+0.1
JAH	Hinai	2.24	274	⇑P	Pn	02 54 20.3	+0.8
JNBK	Urakawa-nobuka	2.28	345	⇑P	Pn	02 54 20.1	+0.1
JOT	Ohata	2.31	305	⇑P	Pn	02 54 20.6	+0.2
JCH	Churui	2.54	357	P	Pn	02 54 23.0	-0.6
JKB	Kayabe	2.63	314	P	Pn	02 54 25.1	+0.3
JYK	Kaneyama	2.73	246	⇑P	Pn	02 54 27.0	+0.7
JAK	Akkeshi	3.04	16	⇑P	Pn	02 54 29.2	-1.2
JAK				eS	Sn	02 55 05.0	-1.6
JMM	Marumori	3.09	225		Pn	02 54 30.2	-1.0
JEW	Eniwo	3.18	331		Pn	02 54 31.9	-0.5
NMR	Nemuro--Hokkai	3.67	26	⇓iP	Pn	02 54 37.7	-1.4
NMR				i S	Sn	02 55 18.1	-4.1
JKA	Kamikawa-asahi	4.09	350	Pn	Pn	02 54 44.5	-0.5
ASAJ	Asahikawa	4.09	350	Pn	Pn	02 54 45.1	+0.1
	5.1nm,0.3s,baz=216,slow=9.6,SNR=32						
ASAJ				Sn	Sn	02 55 32.4	-0.4
	baz=104,slow=26,SNR=2.9						
ASAJ				LR	LR	02 56 47.6	
	comp=Z,2μm,18.6s,baz=203,slow=45						
GRPR	Tuman	4.24	22	⇓iP	Pn	02 54 45.6	-1.4
GRPR				i S	Sn	02 55 32.0	-4.4
GRPR				pmax	pmax		
	comp=Z,1μm,0.3s						
GRPR				pmax	pmax		
	comp=E,582nm,0.4s						
GRPR				pmax	pmax		
	comp=N,300nm,0.3s						
GRPR				smax	smax		
	comp=N,2μm,0.4s						
GRPR				smax	smax		
	comp=E,846nm,0.5s						
YUK	Yuzh-Kuril'sk	4.31	23	eP	Pn	02 54 46.8	-1.1
YUK				eS	Sn	02 55 34.1	-3.9
YUK				pmax	pmax		
	comp=Z,659nm,0.4s						
YUK				pmax	pmax		
	comp=N,309nm,0.5s						
YUK				pmax	pmax		
	comp=N,183nm,0.2s						
YUK				smax	smax		
	comp=N,2μm,0.5s						
YUK				smax	smax		
	comp=E,1μm,0.3s						
YUK				MLR	MLR		
	comp=N,1μm,12.0s						
YUK				MLR	MLR		
	comp=Z,2μm,12.0s						
JSD	Sado	4.60	245	Pn	Pn	02 54 52.1	+0.2
JYT	Yasato	4.67	216	Pn	Pn	02 54 51.4	-1.5
MJAR	Matsushiro Arr	5.49	232	Pn	Pn	02 55 04.9	+0.6
	comp=Z,1.7nm,0.3s,baz=42,slow=12,SNR=126						
MJAR				LR	LR	02 57 19.5	
	comp=Z,1μm,18.1s,baz=5.0,slow=40						
MJB9	Matsu-Tunnel	5.49	232		Pn	02 55 04.3	0.0
MAJO	Matsushiro	5.49	232	i P	Pn	02 55 04.8	+0.5
MAJO	Matsushiro	5.49	232	Pn	Pn	02 55 04.8	+0.5
MAT	Matsushiro	5.49	232	P	Pn	02 55 05.2	+0.9
MAT				S	Sn	02 56 06.8	-0.5
KUR	Kuril'sk	6.05	30	⇓iP	Pn	02 55 11.4	-0.4
KUR				i S	Sn	02 56 17.7	-3.2
KUR				pmax	pmax		
	comp=E,158nm,0.4s						
KUR				pmax	pmax		
	comp=Z,433nm,0.4s						
KUR				pmax	pmax		
	comp=N,82nm,0.2s						
KUR				smax	smax		
	comp=E,201nm,0.3s						
KUR				smax	smax		
	comp=N,340nm,0.4s						
KUR				MLR	MLR		
	comp=Z,1μm,12.0s						
KUR				MLR	MLR		
	comp=N,724nm,13.0s						
JGF	Kuroka	6.64	230		Pn	02 55 21.2	+1.2
JSG	Sagara	6.88	220	Pn	Pn	02 55 23.3	0.0
YSS	Yuzh-Sakhalins	6.89	355	eP	Pn	02 55 24.9	+1.5
YSS				eS	Sn	02 56 43.3	+1.6
YSS				pmax	pmax		
	comp=Z,50nm,1.0s						
YSS				MLR	MLR		
	comp=Z,2μm,16.0s						
YSS				MLR	MLR		
	comp=N,2μm,12.0s						
YSS				MLR	MLR		
	comp=E,2μm,11.0s						
YSS	Yuzh-Sakhalins	6.89	355	Pn	Pn	02 55 23.1	-0.3
INU	Inuyama	7.01	230	Pn	Pn	02 55 25.6	+0.5
TEY	Ternei	7.13	316	⇓eP	Pn	02 55 28.1	+1.4
TEY				pmax	pmax		
	comp=Z,20nm,0.9s						
TEY				pmax	pmax		
	comp=E,30nm,0.9s						
TEY				pmax	pmax		
	comp=N,30nm,0.6s						
TEY				MLR	MLR		
	comp=E,200nm,13.0s						
TEY				MLR	MLR		
	comp=N,200nm,15.0s						
TEY				MLR	MLR		
	comp=Z,300nm,13.0s						
JHJ2	Mitsune	7.58	205	Pn	Pn	02 55 32.3	-0.5
JHJ	Hachijo jima 2	7.58	205	Pn	Pn	02 55 30.4	-2.5
	comp=Z,32nm,0.3s,baz=66,slow=20,SNR=2.6						
JHJ				Sn	Sn	02 56 50.7	-8.0
	comp=Z,16nm,0.3s,baz=73,slow=21,SNR=1.2						
JHJ				LR	LR	02 58 40.7	
	comp=Z,1μm,19.3s,baz=70,slow=40						
JWT	Wachi	8.04	236		Pn	02 55 41.1	+1.8
UGL	Uglegorsk	9.06	354	eP	Pn	02 55 55.1	+2.0
UGL				S	Sn	02 57 33.3	-1.6
UGL				pmax	pmax		
	comp=Z,70nm,0.7s						
UGL				MLR	MLR		
	comp=Z,2μm,16.0s						
UGL				MLR	MLR		
	comp=N,2μm,15.0s						
UGL				MLR	MLR		
	comp=E,3μm,15.0s						
USA0B	Ussuriysk Arra	9.52	299	c iP	Pn	02 56 01.8	+2.3
USA0B	Ussuriysk Arra	9.52	299		Pn	02 56 00.6	+1.0
USRK	Ussuriysk Ar.	9.52	299	Pn	Pn	02 56 01.3	+1.8
	baz=101,slow=15,SNR=29						
USRK				LR	LR	02 59 36.1	
	comp=E,742nm,19.9s,baz=103,slow=37						
USRK	Ussuriysk Ar.	9.52	299	P	Pn	02 56 01.4	+1.9
MSHR	Mys Shultsa	9.65	289	i P	Pn	02 56 01.5	+0.2
MSHR				pmax	pmax		
	comp=Z,60nm,1.0s						
JHS	Saijyo	9.72	242	Pn	Pn	02 56 03.1	+0.9
TYV	Tymovskoe	10.80	357	eP	Pn	02 56 17.5	+0.5
TYV				pmax	pmax		
	comp=Z,15nm,0.8s						
TYV				pmax	pmax		
	comp=Z,300nm,3.7s						
TYV				MLR	MLR		
	comp=Z,2μm,15.0s						
MDJ	Mudanjiang	11.28	298	P	Pn	02 56 25.8	+2.2
MDJ				pP		02 56 28.0	
MDJ				sP		02 56 29.8	
MDJ				PP	PnPn	02 56 33.4	+2.2
MDJ				S	Sn	02 58 30.5	+1.1
MDJ				SS	SnSn	02 58 42.6	+1.5
MDJ				pmax	pmax		
	comp=Z,28nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,710nm,10.9s						
MDJ				LR	LR		
	comp=Z,3μm,13.7s						
MDJ				LR	LR		
	comp=Z,2μm,14.1s						
MDJ				LR	LR		
	comp=Z,3μm,13.4s						
MDJ	Mudanjiang	11.28	298	Pn	Pn	02 56 24.7	+1.1
GRNR	Gornyy	11.80	337	⇓iP	Pn	02 56 32.2	+1.6
GRNR				eS	Sn	02 58 47.4	+5.3
GRNR				pmax	pmax		
	comp=E,20nm,1.0s						
GRNR				pmax	pmax		
	comp=N,30nm,0.9s						
GRNR				pmax	pmax		
	comp=Z,30nm,1.0s						
GRNR				smax	smax		
	comp=N,2.0nm,0.7s						
GRNR				MLR	MLR		
	comp=E,860nm,17.0s						
GRNR				MLR	MLR		
	comp=N,430nm,16.0s						
GRNR				MLR	MLR		
	comp=Z,840nm,13.0s						
JNU	Nakatsue	12.32	240	Pn	Pn	02 56 37.4	-0.5
	comp=Z,0.5nm,0.3s,baz=46,slow=8.5,SNR=4.4						
JNU				LR	LR	03 01 49.8	
	comp=Z,2μm,18.4s,baz=45,slow=40						
KLR	Kul'dur	12.41	321	Pn	Pn	02 56 38.8	-0.2
	comp=Z,0.2nm,0.3s,baz=128,slow=11,SNR=38						
KLR				LR	LR	03 01 21.8	
	comp=Z,352nm,19.0s,baz=144,slow=37						
KLR	Kul'dur	12.41	321	ceP	Pn	02 56 39.2	+0.2
KLR				pmax	pmax		
	comp=Z,24nm,1.0s						
KSRS	Korea Array	12.48	263	Pn	Pn	02 56 41.9	+1.9
	comp=Z,0.3nm,0.3s,baz=77,slow=12,SNR=27						
KSRS				LR	LR	03 01 04.2	
	comp=Z,733nm,19.4s,baz=66,slow=35						
KS19	Wonju Array Si	12.51	263		Pn	02 56 41.3	+0.9
KSAR	Wonju Array Be	12.51	263	P	Pn	02 56 41.2	+0.8
KSAR	Wonju Array Be	12.51	263		Pn	02 56 41.2	+0.8
JCJ	Chichijima	13.00	185	Pn	Pn	02 56 40.3	-6.9
	comp=Z,10nm,0.3s,baz=211,slow=17,SNR=2.0						
JCJ				Sn	Sn	02 58 57.1	-15
	comp=Z,2.3nm,0.3s,baz=271,slow=19,SNR=1.2						
JCJ				LR	LR	03 01 37.7	
	comp=Z,148nm,21.8s,baz=18,slow=37						
TJN	Taejon	13.26	259	i P	Pn	02 56 50.7	+0.1
SKR	Severo-Kuril's	13.77	36	i P	Pn	02 56 58.0	+0.4
CN2	Changchun	13.98	291	eP	Pn	02 57 01.9	+1.5
CN2				esP	P	02 57 08.3	-0.1
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=Z,1μm,12.0s						
CN2				LR	LR		
	comp=Z,800nm,12.0s						
CN2				LR	LR		
	comp=Z,1μm,13.0s						
PEA0B	Petropavlovsk-	16.21	32	i P	P	02 57 31.5	-1.7
PEA0B	Petropavlovsk-	16.21	32	Pn	Pn	02 57 28.4	-1.7
PETK	Petropavlovsk-	16.21	32	Pn	Pn	02 57 24.0	-6.1
	baz=192,slow=10.0,SNR=2.9						
PETK	Petropavlovsk-	16.21	32	P	Pn	02 57 27.7	-2.4
PETK	Petropavlovsk-	16.21	32	Pn	Pn	02 57 27.7	-2.4
PET	Petropavlovsk	16.55	34	eP	P	02 57 42.4	+5.5
PET				eS	Sn	03 00 42.9	+5.1
PET				MLR	MLR		
	comp=Z,1μm,17.0s						
PET				MLR	MLR		
	comp=Z,1μm,17.0s						
PET	Petropavlovsk	16.55	34	Pn	Pn	02 57 31.9	-2.5
DL2	Dalian	16.96	273	P	P	02 57 41.0	-0.6
DL2				eS	Sn	03 00 52.5	+4.5
DL2				pmax	pmax		
	comp=Z,70nm,1.1s						
DL2				LR	LR		
	comp=Z,930nm,12.7s						
DL2				LR	LR		
	comp=Z,790nm,12.1s						
DL2				LR	LR		
	comp=Z,720nm,15.3s						
ZEA	Zeya	17.57	326	eP	Pn	02 57 44.4	-2.7
ZEA				pmax	pmax		
	comp=N,50nm,0.9s						
ZEA				pmax	pmax		
	comp=E,50nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,90nm,1.0s						
ZEA				MLR	MLR		
	comp=E,1μm,14.0s						
ZEA				MLR	MLR		
	comp=N,1μm,16.0s						
ZEA				MLR	MLR		
	comp=Z,1μm,15.0s						
MA2	Magadan	20.04	11	ceP	P	02 58 14.0	-1.2
MA2				pmax	pmax		
	comp=Z,68nm,1.7s						
MA2	Magadan	20.04	11	P	P	02 58 14.2	-1.0
MA2				IAmb	IAmb	02 58 25.4	
	comp=Z,52nm,0.8s						
SSE	Sheshan	20.24	251	P	P	02 58 18.5	+0.9
SSE				S	S	03 02 02.6	-1.8
SSE				pmax	pmax		
	comp=Z,10.0nm,1.2s						
SSE				pmax	pmax		
	comp=Z,190nm,3.5s						
SSE				LR	LR		
	comp=Z,560nm,16.4s						
SSE				LR	LR		
	comp=Z,410nm,18.5s						
SSE	Sheshan	20.24	251	P	P	02 58 17.1	-0.5
SSE				IAmb	IAmb	02 58 35.2	
	comp=Z,60nm,1.1s						
BJI	Beijing	20.93	279	P	P	02 58 23.0	-2.0
BJI				S	S	03 02 07.6	-10
BJI				pmax	pmax		
	comp=Z,45nm,0.8s						
BJI				LR	LR		
	comp=Z,630nm,13.3s						
BJI				LR	LR		
	comp=Z,470nm,11.6s						
BJT	Baijiatuau	20.94	279	P	P	02 58 23.7	-1.5
BJT				pmax	pmax		
	comp=Z,33nm,0.8s						
BJT	Baijiatuau	20.94	279	P	P	02 58 23.7	-1.5
TIA	Tai'an	21.11	268	P	P	02 58 25.3	-1.8
TIA				pmax	pmax		
	comp=Z,28nm,1.1s						
TIA				pmax	pmax		
	comp=Z,230nm,3.5s						
TIA				LR	LR		
	comp=Z,1μm,13.8s						
TIA				LR	LR		
	comp=Z,770nm,12.4s						
TIA				LR	LR		
	comp=Z,770nm,17.5s						
NJ2	Nanjing	21.47	256	⇓P	P	02 58 29.6	-1.3
NJ2				pP	pP	02 58 33.8	-0.3
NJ2				sP	pwP	02 58 37.3	+1.0
NJ2				PP	PnPn	02 58 52.3	+1.3
NJ2				S	S	03 02 21.4	-7.3
NJ2				sS	sS	03 02 29.4	-4.4
NJ2				pmax	pmax		
	comp=Z,42nm,0.8s						
NJ2				LR	LR		
	comp=Z,720nm,13.7s						
NJ2				LR	LR		
	comp=Z,760nm,15.6s						
NJ2				LR	LR		
	comp=Z,830nm,13.7s						
SEY	Seymchan	23.49	10	P	P	02 58 51.4	-0.6
	comp=Z,35nm,0.9s,baz=190,slow=7.5,SNR=113						
SEY	Seymchan	23.49	10	i P	P	02 58 51.8	-0.1
YAK	Yakutsk	23.54	344	P	P	02 58 51.3	-1.1
	comp=Z,54nm,0.8s,baz=350,slow=3.4,SNR=24						
YAK	Yakutsk	23.54	344	ceP	P	02 58 50.8	-1.6
YAK				pmax	pmax		
	comp=Z,95nm,0.8s						
YAK	Yakutsk	23.54	344	P	P	02 58 51.3	-1.1
CIT	Chita	23.82	310	eP	P	02 58 54.0	-1.3
CIT				e		02 59 10.5	
CIT				e		02 59 30.6	
CIT				e		02 59 37.3	
CIT				pmax	pmax		
	comp=Z,219nm,1.6s						
YHNB	Yeheng	24.13	237	P	P	02 58 57.7	-0.8
TIY	Taiyuan	24.28	274	eP	P	02 59 04.8	+5.1
TIY				sP	pwP	02 59 33.0	+28
TIY				PP	PnPn	02 59 44.3	+15
TIY				S	S	03 03 24.3	+6.1
TIY				sS	sS	03 03 44.4	+21
TIY				pmax	pmax		
	comp=Z,140nm,4.8s						
TIY				LR	LR		
	comp=N,810nm,16.3s						
TIY				LR	LR		
	comp=E,190nm,9.2s						
TIY				LR	LR		

	comp=Z,450nm,15.0s						
HHC	**Hu-ho-hao-te**	**24.28**	**282**	eP	**P**	**02 58 58.3**	**-1.5**
HHC				pP	pP	02 59 01.6	-1.7
HHC				S	**S**	**03 03 15.4**	**-3.0**
HHC				pmax	pmax		
	comp=Z,19nm,0.9s						
HHC				pmax	pmax		
	comp=Z,220nm,6.6s						
HHC				LR	LR		
	comp=Z,630nm,14.0s						
HHC				LR	LR		
	comp=Z,500nm,12.4s						
HHC				LR	LR		
	comp=Z,680nm,12.7s						
NACB	**Ninganchiao**	**24.34**	**236**	P	**P**	**02 58 58.9**	**-1.4**
NACB				IAmb	IAmb	02 58 59.5	
	comp=Z,52nm,1.1s						
YULB	**Yu-li**	**25.09**	**235**	P	**P**	**02 59 06.2**	**-1.0**
YULB				IAmb	IAmb	02 59 18.9	
	comp=Z,48nm,1.1s						
BTO	**Baotou**	**25.48**	**282**	eP	**P**	**02 59 09.9**	**-0.8**
WHN	**Wuhan**	**25.57**	**257**	⇑iP	**P**	**02 59 11.5**	**+0.1**
WHN				pP	**pwP**	**02 59 18.0**	**+1.1**
WHN				pmax	pmax		
	comp=Z,130nm,0.9s						
WHN				LR	LR		
	comp=Z,4µm,14.4s						
WHN				LR	LR		
	comp=Z,2µm,10.7s						
WHN				LR	LR		
	comp=Z,2µm,16.1s						
TWG	**Pinlang**	**25.65**	**235**	P	**P**	**02 59 12.0**	**-0.2**
BOD	**Bodaibo**	**25.98**	**323**	eP	**P**	**02 59 14.9**	**0.0**
BOD				pmax	pmax		
	comp=Z,52nm,1.5s						
ULN	**Ulaanbaatar**	**27.20**	**299**	ceP	**P**	**02 59 26.5**	**+0.3**
ULN				pmax	pmax		
	comp=Z,79nm,1.3s						
ULN	**Ulaanbaatar**	**27.20**	**299**	P	**P**	**02 59 26.7**	**+0.6**
SONM	**Songino Array**	**27.64**	**299**	P	**P**	**02 59 30.8**	**+0.7**
	comp=Z,23nm,0.8s,baz=94,slow=9.2,SNR=156						
SONM				LR	LR	03 11 11.5	
	comp=Z,577nm,18.2s,baz=101,slow=38						
SONM	**Songino Array**	**27.64**	**299**	P	**P**	**02 59 30.3**	**+0.2**
SONM				pmax	pmax		
	comp=Z,22nm,0.8s						
SONM	**Songino Array**	**27.64**	**299**	P	**P**	**02 59 30.3**	**+0.2**
XAN	**Xi'an**	**28.17**	**269**	P	**P**	**02 59 34.0**	**-0.8**
XAN				pP	sP	02 59 40.1	+0.5
XAN				sP	pwP	02 59 43.6	+3.2
XAN				pmax	pmax		
	comp=Z,26nm,1.1s						
XAN				pmax	pmax		
	comp=Z,220nm,6.1s						
XAN				LR	LR		
	comp=Z,640nm,15.0s						
XAN				LR	LR		
	comp=Z,790nm,15.0s						
XAN				LR	LR		
	comp=Z,820nm,14.2s						
XAN	**Xi'an**	**28.17**	**269**	P	**P**	**02 59 34.1**	**-0.8**
XAN				pmax	pmax		
	comp=Z,19nm,0.9s						
XAN	**Xi'an**	**28.17**	**269**	P	**P**	**02 59 34.1**	**-0.7**
XAN				IAmb	IAmb	02 59 42.0	
	comp=Z,19nm,0.9s						
H11N2	**WAKE ISLAND Hy**	**28.50**	**129**	T	T	03 29 20.1	
	baz=321,slow=75,SNR=595						
H11N1	**WAKE ISLAND Hy**	**28.51**	**129**	T	T	03 29 22.3	
	baz=321,slow=75,SNR=547						
H11N3	**WAKE ISLAND Hy**	**28.52**	**129**	T	T	03 29 27.5	
	baz=321,slow=75,SNR=374						
H11S1	**WAKE ISLAND Hy**	**29.33**	**130**	T	T	03 30 24.5	
	baz=322,slow=76,SNR=188						
H11S3	**WAKE ISLAND Hy**	**29.33**	**130**	T	T	03 30 25.7	
	baz=322,slow=76,SNR=137						
H11S2	**WAKE ISLAND Hy**	**29.35**	**130**	T	T	03 30 27.4	
	baz=322,slow=76,SNR=176						
ENH	**Enshi**	**29.36**	**261**	P	**P**	**02 59 45.2**	**-0.3**
IRK	**Irkutsk**	**29.43**	**308**	eP	**P**	**02 59 44.9**	**-1.0**
IRK				pmax	pmax		
	comp=Z,52nm,2.2s						
TLY	**Talaya**	**29.74**	**306**	P	**P**	**02 59 47.0**	**-1.6**
	comp=Z,2.9nm,0.6s,baz=121,slow=8.5,SNR=10						
TLY	**Talaya**	**29.74**	**306**	eP	**P**	**02 59 49.7**	**+1.1**
TLY				pmax	pmax		
	comp=Z,45nm,1.1s						
TLY				MLR	MLR		
	comp=Z,2µm,14.0s						
TLY	**Talaya**	**29.74**	**306**	P	**P**	**02 59 48.5**	**-0.1**
ZAK	**Zakamensk**	**29.84**	**304**	eP	**P**	**02 59 49.7**	**+0.1**
ZAK				pmax	pmax		
	comp=Z,18nm,1.2s						
LZH	**Lanzhou**	**31.33**	**276**	⇓P	**P**	**03 00 04.3**	**+1.3**
LZH				pP	pwP	03 00 09.5	+1.0
LZH				sP	sP	03 00 13.1	+5.4
LZH				S	**S**	**03 05 12.5**	**+2.7**
LZH				sS	sS	03 05 21.8	+6.3
LZH				pmax	pmax		
	comp=Z,18nm,1.0s						
LZH				pmax	pmax		
	comp=Z,120nm,6.0s						
LZH				LR	LR		
	comp=Z,730nm,14.1s						
LZH				LR	LR		
	comp=Z,600nm,14.1s						
LZH				LR	LR		
	comp=Z,330nm,14.1s						
MOY	**Mondy**	**31.38**	**306**	eP	**P**	**03 00 00.1**	**-3.1**
MOY				pmax	pmax		
	comp=Z,47nm,1.8s						
TIXI	**Tiksi**	**32.50**	**351**	d iP	**P**	**03 00 12.5**	**-0.1**
TIXI	**Tiksi**	**32.50**	**351**	P	**P**	**03 00 12.0**	**-0.6**
TIXI				IAmb	IAmb	03 00 21.2	
	comp=Z,16nm,0.9s						
GTA	**Gaotai**	**33.39**	**283**	⇑P	**P**	**03 00 21.4**	**+0.4**
GTA				pP	pwP	03 00 28.8	+2.3
GTA				sP	sP	03 00 33.3	+7.6
GTA				pmax	pmax		
	comp=Z,48nm,1.1s						
GTA				pmax	pmax		
	comp=Z,220nm,7.2s						
GTA				LR	LR		
	comp=Z,280nm,14.7s						
GTA				LR	LR		
	comp=Z,630nm,15.9s						
GTA				LR	LR		
	comp=Z,530nm,16.7s						
CD2	**Chengdu**	**33.44**	**267**	P	**P**	**03 00 20.6**	**-0.8**
CD2				pP	pP	03 00 21.8	-3.1
CD2				S	**S**	**03 05 42.8**	**+0.3**
CD2				pmax	pmax		
	comp=Z,20nm,0.8s						
CD2				pmax	pmax		
	comp=Z,80nm,3.7s						
CD2				LR	LR		
	comp=Z,2µm,16.5s						
CD2				LR	LR		
	comp=Z,890nm,14.8s						
CD2				LR	LR		
	comp=Z,1µm,12.4s						
GYA	**Guiyang**	**33.46**	**257**	⇑P	**P**	**03 00 21.4**	**-0.3**
GYA				pP	pwP	03 00 28.1	+0.9
GYA				PP	**PnPn**	**03 01 28.8**	**-3.9**
GYA				S	**S**	**03 05 38.6**	**-4.4**
GYA				pmax	pmax		
	comp=Z,35nm,1.1s						
GYA				pmax	pmax		
	comp=Z,160nm,4.5s						
GYA				LR	LR		
	comp=Z,1µm,16.8s						
GYA				LR	LR		
	comp=Z,430nm,14.2s						
GYA				LR	LR		
	comp=Z,440nm,15.3s						
QIZ	**Qiongzhong**	**35.74**	**244**	P	**P**	**03 00 40.3**	**-1.1**
QIZ				S	**S**	**03 06 18.8**	**+0.7**
QIZ				LR	LR		
	comp=Z,500nm,15.9s						
QIZ				LR	LR		
	comp=Z,570nm,15.7s						
QIZ				LR	LR		
	comp=Z,400nm,14.1s						
KMI	**Kunming**	**37.14**	**259**	⇓P	**P**	**03 00 54.3**	**+0.8**
KMI				pP	sP	03 00 58.8	+0.6
KMI				sP	pwP	03 01 00.4	+1.3
KMI				PP	**PnPn**	**03 02 19.3**	**+0.8**
KMI				PcP	**PcP**	**03 03 16.3**	**+2.6**
KMI				S	**S**	**03 06 39.8**	**0.0**
KMI				sS	sS	03 06 48.9	+3.3
KMI				ScS	**ScS**	**03 11 07.4**	**-0.9**
KMI				pmax	pmax		
	comp=Z,17nm,1.2s						
KMI				pmax	pmax		
	comp=Z,120nm,3.7s						
KMI				LR	LR		
	comp=Z,870nm,18.0s						
KMI				LR	LR		
	comp=Z,460nm,16.0s						
KMI				LR	LR		
	comp=Z,200nm,17.8s						
KMI	**Kunming**	**37.14**	**259**	P	**P**	**03 00 53.4**	**-0.1**
KMI				pmax	pmax		
	comp=Z,56nm,1.3s						
KMI	**Kunming**	**37.14**	**259**	P	**P**	**03 00 53.4**	**-0.1**
KMI				IAmb	IAmb	03 01 01.2	
	comp=Z,56nm,1.3s						
ANM	**Nome**	**38.13**	**33**	P	**P**	**03 01 02.7**	**+1.6**
	baz=255,SNR=7.1						
ANM	**Nome**	**38.13**	**33**	P	**P**	**03 01 01.9**	**+0.7**
ANM				pmax	pmax		
	comp=Z,23nm,1.1s						
ANM	**Nome**	**38.13**	**33**	P	**P**	**03 01 01.9**	**+0.7**
ANM				IAmb	IAmb	03 01 16.6	
	comp=Z,23nm,1.1s						
SLVN	**Son La**	**38.49**	**253**	P	**P**	**03 01 05.6**	**+0.9**
RDOG	**Red Dog Mine**	**40.03**	**28**	P	**P**	**03 01 18.4**	**+1.4**
	baz=254						
RDOG	**Red Dog Mine**	**40.03**	**28**	P	**P**	**03 01 18.0**	**+0.9**
DGZ	**Jazzator, Alta**	**40.05**	**303**	c iP	**P**	**03 01 19.0**	**+1.4**
DGZ				pmax	pmax		
	comp=Z,66nm,0.8s						
WMQ	**Urumqi**	**41.05**	**294**	eP	**P**	**03 01 26.9**	**+1.1**
WMQ				sP	sP	03 01 34.0	+3.4
WMQ				pmax	pmax		
	comp=Z,33nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,130nm,3.7s						
WMQ				LR	LR		
	comp=Z,380nm,17.1s						
WMQ				LR	LR		
	comp=Z,430nm,14.1s						
WMQ				LR	LR		
	comp=Z,140nm,20.3s						
WMQ	**Urumqi**	**41.05**	**294**	IAmb	IAmb	03 01 35.2	
	comp=Z,37nm,1.0s						
NONG	**Nongkai**	**41.11**	**250**	P	**P**	**03 01 28.2**	**+1.7**
	comp=Z,66nm,0.8s						
ZALV	**Zalesovo Beam**	**41.18**	**310**	P	**P**	**03 01 26.6**	**-0.1**
	comp=Z,30nm,0.7s,baz=89,slow=7.8,SNR=112						
ZALV				PcP	**PcP**	**03 03 25.8**	**+0.2**
	comp=Z,5.0nm,0.7s,baz=89,slow=2.5,SNR=2.8						
ZALV				LR	LR	03 18 48.2	
	comp=Z,93nm,21.9s,baz=72,slow=37						
UBPT	**Khong Chiam**	**41.34**	**244**	P	**P**	**03 01 32.9**	**+4.5**
	comp=Z,9.8nm,1.0s						
UBPT	**Khong Chiam**	**41.34**	**244**	P	**P**	**03 01 29.3**	**+0.9**
MYLDM	**Lahad Datu**	**41.43**	**220**	P	**P**	**03 01 29.6**	**+0.5**
MYLDM				IAmb	IAmb	03 01 41.1	
	comp=Z,51nm,1.0s						
DLV	**T Lat**	**41.72**	**238**	P	**P**	**03 01 32.6**	**+0.9**
TTA	**Tatalina**	**41.97**	**37**	P	**P**	**03 01 33.6**	**+0.4**
TTA				pmax	pmax		
	comp=Z,16nm,1.3s						
TTA	**Tatalina**	**41.97**	**37**	P	**P**	**03 01 33.6**	**+0.4**
SMPI	**Sarmi**	**42.10**	**187**	P	**P**	**03 01 35.9**	**+1.3**
	comp=Z,41nm,1.1s						
ZSN	**Zaisan**	**42.13**	**300**	eP	**P**	**03 01 33.5**	**-1.2**
	comp=Z,22nm,1.5s,baz=300						
ZSN				i S	**S**	**03 07 53.7**	**-0.2**
	baz=300						
ZSN	**Zaisan**	**42.13**	**300**	eP	**P**	**03 01 33.4**	**-1.2**
ZSN				i S	**S**	**03 07 53.6**	**-0.2**
ZSN				pmax	pmax		
	comp=Z,22nm,1.5s						
GENI	**Genyem**	**42.58**	**185**	P	**P**	**03 01 43.1**	**+4.6**
ZIRO	**ZIRO**	**42.65**	**269**	eP	**P**	**03 01 40.0**	**+0.8**
ZIRO				IAmb	IAmb	03 01 43.6	
	comp=Z,38nm,1.1s						
MOKO	**MOKOCHONG**	**42.76**	**267**	eP	**P**	**03 01 40.9**	**+0.8**
A21K	**Barrow**	**43.00**	**24**	P	**P**	**03 01 41.8**	**+0.6**
	baz=257,SNR=19						
IMAR	**Indian Mountai**	**43.18**	**32**	P	**P**	**03 01 42.9**	**+0.1**
UTTA	**Uttaradit**	**43.19**	**252**	P	**P**	**03 01 44.8**	**+1.3**
	comp=Z,374nmcomp=Z,25nm,1.2s						
CHAI	**Chaiyaphum**	**43.37**	**248**	P	**P**	**03 01 46.6**	**+1.6**
	comp=Z,478nmcomp=Z,54nm,0.8s						
LAMP	**Lampang**	**43.38**	**253**	P	**P**	**03 01 46.9**	**+1.9**
	comp=Z,582nmcomp=Z,25nm,1.0s						
KOHI	**KOHIMA**	**43.38**	**266**	eP	**P**	**03 01 45.1**	**-0.1**
CM34	**Chiang Mai Arr**	**43.52**	**254**	P	**P**	**03 01 47.0**	**+0.8**
CM35	**Chiang Mai Arr**	**43.63**	**254**	P	**P**	**03 01 47.0**	**0.0**
LSA	**Lhasa**	**43.66**	**273**	P	**P**	**03 01 49.0**	**+1.2**
LSA				pmax	pmax		
	comp=Z,44nm,0.8s						
LSA	**Lhasa**	**43.66**	**273**	IAmb	IAmb	03 02 13.6	
	comp=Z,26nm,1.3s						
CHUM	**Lake Minchumin**	**43.67**	**35**	P	**P**	**03 01 48.3**	**+1.4**
	baz=269						
CM33	**Chiang Mai Arr**	**43.70**	**254**	P	**P**	**03 01 48.0**	**+0.4**
CMMT	**Chiang Mai**	**43.70**	**254**	P	**P**	**03 01 47.7**	**+0.1**
	comp=Z,255nmcomp=Z,12nm,1.2s						
CHTO	**Chiang Mai**	**43.70**	**254**	P	**P**	**03 01 47.9**	**+0.3**
CHTO				pmax	pmax		
	comp=Z,20nm,1.0s						
CHTO	**Chiang Mai**	**43.70**	**254**	P	**P**	**03 01 47.9**	**+0.3**
CHTO				IAmb	IAmb	03 02 03.9	
	comp=Z,20nm,0.9s						
PPLA	**Purkeypile**	**43.72**	**37**	P	**P**	**03 01 48.8**	**+1.4**
	baz=270						
PPLA	**Purkeypile**	**43.72**	**37**	IAmb	IAmb	03 02 04.2	
	comp=Z,57nm,1.3s						
CM36	**Chiang Mai Arr**	**43.77**	**254**	P	**P**	**03 01 49.0**	**+0.8**
CM32	**Chiang Mai Arr**	**43.87**	**254**	P	**P**	**03 01 51.0**	**+2.0**
CM09	**Chiang Mai Arr**	**43.90**	**254**	P	P	03 02 03.7	+15
CM31	**Chiang Mai Arr**	**43.92**	**254**	P	**P**	**03 01 49.5**	**+0.1**
CMAR	**Chiang Mai Arr**	**43.92**	**254**	P	**P**	**03 01 49.4**	**0.0**
	comp=Z,2.2nm,0.4s,baz=51,slow=6.5,SNR=14						
CMAR				LR	LR	03 19 41.2	
	comp=Z,185nm,20.6s,baz=89,slow=36						
CMAR	**Chiang Mai Arr**	**43.92**	**254**	ceP	**P**	**03 01 50.5**	**+1.1**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.4s						
CM04	**Chiang Mai Arr**	**43.93**	**254**	P	**P**	**03 01 51.8**	**+2.3**
	comp=Z,111nmcomp=Z,9.2nm,0.8s						
CM01	**Chiang Mai Arr**	**43.93**	**254**	P	P	03 01 58.5	+9.0
CM02	**Chiang Mai Arr**	**43.94**	**254**	P	P	03 01 54.3	+4.8
	comp=Z,8.0nm,0.8s						
CM15	**Chiang Mai Arr**	**43.94**	**254**	P	**P**	**03 01 51.0**	**+1.5**
CM05	**Chiang Mai Arr**	**43.96**	**254**	P	**P**	**03 01 53.5**	**+3.8**
	comp=Z,69nmcomp=Z,7.3nm,0.8s						
CM13	**Chiang Mai Arr**	**43.97**	**254**	P	**P**	**03 01 53.8**	**+4.0**
	comp=Z,78nmcomp=Z,9.5nm,0.8s						
TOLI2	**Tolitoli**	**43.97**	**214**	P	**P**	**03 01 50.4**	**+0.6**
IMP	**Imphal**	**43.98**	**265**	eP	**P**	**03 01 49.0**	**-0.9**
IMP				IAmb	IAmb	03 01 52.3	
	comp=Z,18nm,0.8s						
MK31	**Makanchi Array**	**43.99**	**300**	ceP	**P**	**03 01 49.9**	**+0.2**
MK31	**Makanchi Array**	**43.99**	**300**	P	**P**	**03 01 49.6**	**-0.1**
MK31				IAmb	IAmb	03 01 55.7	
	comp=Z,14nm,0.8s						
MKAR	**Makanchi Array**	**43.99**	**300**	P	**P**	**03 01 49.7**	**0.0**
	comp=Z,6.6nm,0.6s,baz=83,slow=9.2,SNR=123						
MKAR				LR	LR	03 19 18.1	
	comp=Z,183nm,18.5s,baz=77,slow=35						
MKAR	**Makanchi Array**	**43.99**	**300**	ceP	**P**	**03 01 50.0**	**+0.3**
MKAR				pmax	pmax		
	comp=Z,13nm,0.6s						
FAKI	**Fak Fak**	**44.03**	**196**	P	**P**	**03 01 51.1**	**+0.9**
FAKI				IAmb	IAmb	03 01 57.2	
	comp=Z,36nm,1.0s						
FAKI	**Fak Fak**	**44.03**	**196**	P	P	03 01 57.9	+7.7
SUKH	**Sukhothai**	**44.03**	**252**	P	**P**	**03 01 51.0**	**+0.7**
	comp=Z,24nm,0.9s						
MRSI	**Marisa**	**44.06**	**212**	P	**P**	**03 01 52.5**	**+2.0**
	comp=Z,44nm,1.2s						
MAKZ	**Makanchi**	**44.20**	**300**	P	**P**	**03 01 51.1**	**-0.2**
MAKZ				pmax	pmax		
	comp=Z,21nm,0.8s						
MAKZ	**Makanchi**	**44.20**	**300**	P	**P**	**03 01 51.1**	**-0.2**
MAKZ				IAmb	IAmb	03 02 07.9	
	comp=Z,21nm,0.8s						
BPAW	**Bear Paw Mtn.**	**44.26**	**35**	P	**P**	**03 01 52.8**	**+1.1**
	baz=270						
KTH	**Kantishna Hill**	**44.29**	**36**	IAmb	IAmb	03 02 14.7	
	comp=Z,31nm,0.9s						
MLY	**Manley**	**44.38**	**34**	P	**P**	**03 01 54.1**	**+1.5**
	baz=269,SNR=9.6						
SEM	**Semipalatinsk**	**44.49**	**305**	eP	**P**	**03 01 52.1**	**-1.7**
	comp=Z,17nm,0.8s,baz=305						
SEM				LR	LR	03 20 46.0	
	comp=Z,96nm,11.6s,baz=305						
SEM	**Semipalatinsk**	**44.49**	**305**	eP	**P**	**03 01 52.1**	**-1.7**
SEM				pmax	pmax		
	comp=Z,17nm,0.8s						
SEM				MLR	MLR		
	comp=Z,96nm,12.0s						
TRF	**Thorofare Moun**	**44.58**	**36**	P	**P**	**03 01 55.9**	**+1.6**
	baz=271						
COLD	**Coldfoot**	**44.68**	**30**	P	**P**	**03 01 56.1**	**+1.3**
	baz=267						
COLD	**Coldfoot**	**44.68**	**30**	IAmb	IAmb	03 02 18.8	
	comp=Z,24nm,1.3s						
RABL	**Rabaul**	**44.76**	**168**	P	**P**	**03 01 55.6**	**-0.4**
MHMT	**Maesarieng**	**44.85**	**254**	P	**P**	**03 01 57.0**	**+0.2**
	comp=Z,24nm,0.8s						
I23K	**Minto, Yukon-K**	**44.97**	**33**	P	**P**	**03 01 58.5**	**+1.3**
	baz=270,SNR=6.7						
I23K	**Minto, Yukon-K**	**44.97**	**33**	IAmb	IAmb	03 02 11.1	
	comp=Z,14nm,0.8s						
GUWA	**GUWAHATI**	**44.99**	**268**	eP	**P**	**03 01 57.2**	**-0.7**
GUWA				IAmb	IAmb	03 02 01.6	
	comp=Z,18nm,0.6s						
TOLK	**Toolik Lake Re**	**45.00**	**28**	P	**P**	**03 01 58.7**	**+1.3**
	baz=266,SNR=9.1						
TOLK	**Toolik Lake Re**	**45.00**	**28**	IAmb	IAmb	03 02 09.4	
	comp=Z,15nm,0.8s						
NEA2	**Nenana**	**45.10**	**34**	P	**P**	**03 01 59.3**	**+1.1**
	baz=271						
SHL	**Shillong**	**45.17**	**268**	P	**P**	**03 01 59.2**	**-0.3**
SHL				pmax	pmax		
	comp=Z,20nm,0.9s						
SHL	**Shillong**	**45.17**	**268**	eP	**P**	**03 01 57.7**	**-1.8**
SHL				IAmb	IAmb	03 02 05.7	
	comp=Z,19nm,0.3s						
SHL	**Shillong**	**45.17**	**268**	P	**P**	**03 01 59.2**	**-0.3**
SHL				IAmb	IAmb	03 02 12.3	
	comp=Z,20nm,0.9s						
MCK	**McKinley**	**45.17**	**35**	P	**P**	**03 01 59.3**	**+0.4**
	baz=272,SNR=6.3						
RND	**Reindeer**	**45.22**	**36**	IAmb	IAmb	03 02 00.8	
	comp=Z,27nm,1.2s						
WAT2	**Susitna Watana**	**45.36**	**37**	P	**P**	**03 02 00.4**	**-0.1**
	baz=273						
UTHA	**Uthaitani**	**45.42**	**250**	P	P	03 02 07.4	+6.1
	comp=Z,15nm,0.9s						
UMPA	**Umpang Tak**	**45.42**	**252**	P	**P**	**03 02 05.0**	**+3.6**
	comp=Z,30nm,0.9s						
KURK	**Kurchatov**	**45.44**	**306**	ceP	**P**	**03 02 01.0**	**-0.1**
KURK				pmax	pmax		
	comp=Z,71nm,0.9s						
KURK	**Kurchatov**	**45.44**	**306**	P	**P**	**03 02 01.2**	**+0.2**
APSI	**Ampana**	**45.44**	**212**	P	**P**	**03 02 05.9**	**+4.4**
MDM	**Murphy Dome**	**45.45**	**34**	IAmb	IAmb	03 02 04.1	
	comp=Z,39nm,1.3s						
WRH	**Wood River Hil**	**45.52**	**34**	IAmb	IAmb	03 02 22.8	
	comp=Z,12nm,0.8s						
TCOL	**CIGO, UAF Yank**	**45.61**	**34**	P	**P**	**03 02 03.6**	**+1.4**
	baz=272						
COLA	**College**	**45.61**	**34**	P	**P**	**03 02 03.8**	**+1.5**
	baz=272						
COLA	**College**	**45.61**	**34**	P	**P**	**03 02 02.2**	**-0.1**
COLA				pmax	pmax		
	comp=Z,30nm,0.7s						
COLA	**College**	**45.61**	**34**	P	**P**	**03 02 02.2**	**-0.1**
CCB	**Clear Creek Bu**	**45.64**	**34**	IAmb	IAmb	03 02 20.2	
	comp=Z,10nm,0.8s						
WAT6	**Susitna Watana**	**45.78**	**37**	P	**P**	**03 02 04.2**	**+0.4**
	baz=274						
POKR	**Poker Plat Res**	**45.78**	**33**	P	**P**	**03 02 05.3**	**+1.6**
	baz=272,SNR=16						
SAIH	**SAIHA**	**46.00**	**263**	eP	**P**	**03 02 06.0**	**-0.1**
SAIH				IAmb	IAmb	03 02 09.6	
	comp=Z,169nm,1.2s						
HDA	**Harding Lake**	**46.02**	**34**	P	**P**	**03 02 05.8**	**+0.3**
	baz=273,SNR=8.0						
HDA	**Harding Lake**	**46.02**	**34**	IAmb	IAmb	03 02 21.6	
	comp=Z,16nm,0.8s						
IL31		**46.03**	**34**	IAmb	IAmb	03 02 21.4	
	comp=Z,18nm,0.8s						
ILAR	**Eielson Array**	**46.03**	**34**	P	**P**	**03 02 05.6**	**0.0**
	comp=Z,8.0nm,0.8s,baz=264,slow=6.1,SNR=78						
M24K	**Tolsona, Glenn**	**46.54**	**38**	P	**P**	**03 02 10.9**	**+1.2**
	baz=276						
PRP	**Porcupine Dome**	**46.57**	**33**	P	**P**	**03 02 11.0**	**+1.0**
	baz=273,SNR=11						
PRP	**Porcupine Dome**	**46.57**	**33**	IAmb	IAmb	03 02 21.2	
	comp=Z,22nm,0.9s						
KLU	**Klutina**	**46.73**	**38**	P	**P**	**03 02 11.4**	**+0.2**
	baz=277						
BMAR	**Burnt Mountain**	**46.86**	**30**	P	**P**	**03 02 12.9**	**+0.7**
PDGK	**Podgornoye**	**46.89**	**296**	i P	**P**	**03 02 12.8**	**0.0**
PDGK				pmax	pmax		
	comp=Z,16nm,0.9s						
SHLS	**Shalkode**	**46.97**	**296**	eP	**P**	**03 02 09.9**	**-3.5**
	comp=Z,13nm,0.9s,baz=295						
SHLS	**Shalkode**	**46.97**	**296**	eP	**P**	**03 02 09.8**	**-3.6**
SHLS				pmax	pmax		
	comp=Z,13nm,0.9s						
SBUM	**Sibu**	**47.00**	**225**	P	**P**	**03 02 14.1**	**+0.3**
SBUM	**Sibu**	**47.00**	**225**	P	**P**	**03 02 15.0**	**+1.2**
SBUM	**Sibu**	**47.00**	**225**	P	**P**	**03 02 15.0**	**+1.2**
PHET	**Kaeng Krachan**	**47.06**	**248**	P	**P**	**03 02 17.0**	**+2.7**
TDK	**Taldyqorghan**	**47.10**	**298**	eP	**P**	**03 02 14.0**	**-0.3**
	comp=Z,26nm,0.7s,baz=298						
TDK	**Taldyqorghan**	**47.10**	**298**	eP	**P**	**03 02 14.0**	**-0.3**
TDK				pmax	pmax		
	comp=Z,26nm,0.7s						
UZB	**Uzynbulak**	**47.27**	**296**	eP	**P**	**03 02 14.7**	**-1.2**
	comp=Z,12nm,0.9s,baz=296						
UZB	**Uzynbulak**	**47.27**	**296**	eP	**P**	**03 02 14.6**	**-1.2**
UZB				pmax	pmax		
	comp=Z,12nm,0.9s						
SCRK	**Sand Creek**	**47.35**	**35**	P	**P**	**03 02 16.3**	**+0.3**
	baz=276,SNR=11						
DOT	**Dot Lake**	**47.35**	**35**	P	**P**	**03 02 16.4**	**+0.5**
DOT				IAmb	IAmb	03 02 41.6	
	comp=Z,12nm,1.0s						
KPKS	**Kokpek**	**47.40**	**296**	eP	**P**	**03 02 15.6**	**-1.2**
	comp=Z,19nm,1.0s,baz=296						
KPKS	**Kokpek**	**47.40**	**296**	eP	**P**	**03 02 15.5**	**-1.2**
KPKS				pmax	pmax		
	comp=Z,19nm,1.0s						
TAPN	**Taplejung**	**47.45**	**272**	eP	**P**	**03 02 19.0**	**+1.4**
	comp=Z,87nm,1.1s						
MENT	**Mentasta**	**47.58**	**36**	IAmb	IAmb	03 02 46.4	
	comp=Z,17nm,0.8s						
SATY	**Saty**	**47.73**	**296**	eP	**P**	**03 02 18.5**	**-0.9**
	comp=Z,19nm,1.7s,baz=296						
SATY	**Saty**	**47.73**	**296**	eP	**P**	**03 02 18.5**	**-0.9**
SATY				pmax	pmax		
	comp=Z,19nm,1.7s						
MCARA	**McCarthy VSAT**	**48.12**	**38**	P	**P**	**03 02 23.7**	**+1.7**
	baz=279						
CRQE	**Cirque**	**48.19**	**39**	P	**P**	**03 02 24.6**	**+1.9**
	baz=280						
BCAR	**Beaver Creek A**	**48.44**	**36**	P	**P**	**03 02 25.3**	**+0.8**
EGAK	**Eagle**	**48.47**	**34**	P	**P**	**03 02 24.8**	**+0.2**
	baz=278						
EGAK	**Eagle**	**48.47**	**34**	IAmb	IAmb	03 02 43.3	
	comp=Z,14nm,0.8s						
RAMN	**Ramite**	**48.50**	**273**	eP	**P**	**03 02 26.2**	**+0.5**
	comp=Z,115nm,0.8s						
GUN	**Gumba**	**48.57**	**274**	eP	**P**	**03 02 27.0**	**+0.7**
	comp=Z,83nm,0.6s						
MDOK	**Medeo**	**48.63**	**297**	eP	**P**	**03 02 24.8**	**-1.5**
	baz=296						
MDOK				LR	LR	03 23 04.0	
	comp=Z,207nm,13.3s,baz=296						
MDOK	**Medeo**	**48.63**	**297**	eP	**P**	**03 02 24.8**	**-1.5**
MDOK				MLR	MLR		
	comp=Z,207nm,13.0s						
AAA	**Alma-Ata**	**48.70**	**297**	eP	**P**	**03 02 26.2**	**-0.7**
	baz=296						
AAA	**Alma-Ata**	**48.70**	**297**	eP	**P**	**03 02 26.1**	**-0.7**
KUU	**Kurty**	**48.86**	**298**	eP	**P**	**03 02 26.3**	**-1.6**
	comp=Z,29nm,0.7s,baz=298						
KUU	**Kurty**	**48.86**	**298**	eP	**P**	**03 02 26.3**	**-1.6**
KUU				pmax	pmax		

	comp=Z,29nm,0.7s						
KSM	**Kuching**	48.86	227	P	P	03 02 29.0	+0.8
KSM				IAmb	IAmb	03 02 34.2	
	comp=Z,20nm,1.0s						
KSM	**Kuching**	48.86	227	P	P	03 02 30.0	+1.8
KSM	**Kuching**	48.86	227	P	P	03 02 30.0	+1.8
CTG	**Chitna Glacier**	49.00	39	P	P	03 02 28.4	-0.5
	baz=281						
KKN	**Kakani**	49.09	274	*e*P	P	03 02 30.7	+0.6
	comp=Z,103nm,0.9s						
PKI	**Pulchoki**	49.10	274	*e*P	P	03 02 30.8	+0.4
	comp=Z,64nm,1.1s						
PKIN	**Phulchoki**	49.11	274	*e*P	P	03 02 30.6	+0.3
	comp=Z,107nm,1.4s						
BNSI	**Bone**	49.23	212	P	P	03 02 42.8	+12
BRZS	**Berezniki**	49.30	306	*e*P	P	03 02 30.1	-1.1
	comp=Z,8.3nm,0.7s,baz=306						
BRZS	**Berezniki**	49.30	306	*e*P	P	03 02 30.1	-1.1
BRZS				pmax	pmax		
	comp=Z,8.0nm,0.7s						
DMN	**Daman**	49.31	274	*e*P	P	03 02 32.6	+0.7
	comp=Z,40nm,0.8s						
GKN	**Gorkha**	49.47	275	*e*P	P	03 02 33.6	+0.6
	comp=Z,166nm,1.2s						
ULHL	**Ulahol**	49.51	296	P	P	03 02 33.7	+0.5
	SNR=18						
TKM2	**Tokmak 2**	49.71	297	P	P	03 02 35.7	+1.0
	SNR=68						
TKM2	**Tokmak 2**	49.71	297	*i* P	P	03 02 35.4	+0.7
TKM2				pmax	pmax		
	comp=Z,49nm,0.8s						
BRVK	**Borovoye**	49.86	311	*ce*P	P	03 02 36.0	+0.6
BRVK				pmax	pmax		
	comp=Z,24nm,1.0s						
BRVK	**Borovoye**	49.86	311	P	P	03 02 36.0	+0.6
BRVK				IAmb	IAmb	03 02 51.2	
	comp=Z,25nm,0.9s						
BTLS	**Baital**	50.01	300	*e*P	P	03 02 35.6	-1.1
	comp=Z,6.4nm,1.2s,baz=300						
BTLS	**Baital**	50.01	300	*e*P	P	03 02 35.5	-1.1
BTLS				pmax	pmax		
	comp=Z,6.0nm,1.2s						
EPYK	**Eagle Plains**	50.05	31	P	P	03 02 38.3	+1.5
	baz=280						
EPYK	**Eagle Plains**	50.05	31	P	P	03 02 38.0	+1.2
EPYK				IAmb	IAmb	03 02 46.6	
	comp=Z,29nm,1.0s						
KBK	**Karagaybulak**	50.25	297	P	P	03 02 39.6	+0.8
	SNR=47						
CHMS	**Chumysh**	50.26	297	P	P	03 02 39.1	+0.5
	SNR=6.0						
USP	**Ospenovka**	50.33	298	P	P	03 02 39.6	+0.4
	SNR=16						
AAK	**Ala-Archa**	50.57	297	P	P	03 02 41.3	+0.2
	SNR=9.2						
AAK	**Ala-Archa**	50.57	297	*ce*P	P	03 02 41.4	+0.2
AAK				pmax	pmax		
	comp=Z,32nm,1.0s						
AAK	**Ala-Archa**	50.57	297	P	P	03 02 41.1	0.0
AAK				IAmb	IAmb	03 02 56.4	
	comp=Z,16nm,0.9s						
UCH	**Uchtor**	50.71	296	P	P	03 02 43.4	+0.8
	SNR=11						
BOK	**Bokaro**	50.72	270	*e*P	P	03 02 42.6	+0.3
BOK				IAmb	IAmb	03 02 51.7	
	comp=Z,11nm,0.8s						
KSH	**Kashi**	50.74	293	P	P	03 02 46.8	+4.3
KSH				pP	pwP	03 02 50.1	+4.0
KSH				S	S	03 10 04.0	+6.3
KSH				SS	SS	03 13 34.4	+2.6
KSH				pmax	pmax		
	comp=Z,16nm,1.0s						
KSH				pmax	pmax		
	comp=Z,250nm,4.5s						
KSH				LR	LR		
	comp=Z,400nm,8.7s						
KSH				LR	LR		
	comp=Z,440nm,12.0s						
KSH				LR	LR		
	comp=Z,2µm,14.7s						
INK	**Inuvik**	50.91	28	IAmb	IAmb	03 02 52.5	
	comp=Z,16nm,0.7s						
EKS2	**Erkin-Say**	51.05	297	P	P	03 02 45.2	+0.5
	SNR=21						
AML	**Almayashu**	51.31	297	P	P	03 02 48.0	+1.0
	SNR=29						
DZA	**Taraz**	52.62	298	*e*P	P	03 02 56.3	-0.1
	comp=Z,18nm,0.8s,baz=298						
DZA	**Taraz**	52.62	298	*e*P	P	03 02 56.2	-0.1
DZA				pmax	pmax		
	comp=Z,18nm,0.8s						
KKAR	**Karatay Array**	53.09	299	P	P	03 02 59.2	-0.6
KKAR	**Karatay Array**	53.09	299	P	P	03 02 59.2	-0.6
SMLA	**Simla**	53.60	283	*e*P	P	03 03 03.6	0.0
SMLA				IAmb	IAmb	03 03 07.8	
DHRM	**DHARAMSHALA**	53.70	284	*e*P	P	03 03 03.0	-1.7
DHRM				IAmb	IAmb	03 03 12.7	
	comp=Z,45nm,0.8s						
COEN	**Coen**	53.76	180	P	P	03 03 04.7	-0.2
COEN				IAmb	IAmb	03 03 05.7	
	comp=Z,14nm,0.8s						
IUG	**Iuzhnay**	53.80	298	*e*P	P	03 03 04.4	-0.7
	comp=Z,8.5nm,1.2s,baz=298						
IUG	**Iuzhnay**	53.80	298	*e*P	P	03 03 04.4	-0.7
IUG				pmax	pmax		
	comp=Z,8.0nm,1.2s						
TPI	**Tanjungpandan**	53.83	227	P	P	03 03 14.1	+8.7
C36M	**Paulatuk**	53.96	26	P	P	03 03 06.2	+0.5
	baz=289,SNR=15						
C36M	**Paulatuk**	53.96	26	IAmb	IAmb	03 03 14.8	
	comp=Z,20nm,0.8s						
SVE	**Sverdlovsk**	54.00	318	*de*P	P	03 03 07.3	+1.1
SVE				pmax	pmax		
	comp=Z,82nm,1.5s						
SVE				MLR	MLR		
	comp=Z,1µm,14.0s						
PPBI	**Pangkal Pinang**	54.20	228	P	P	03 03 17.1	+8.9
PSI	**Prapat**	54.80	239	LR	LR	03 28 06.8	
	comp=Z,176nm,18.1s,baz=349,slow=38						
RPSI	**Rantau Prapat**	54.87	239	IAmb	IAmb	03 03 21.5	
	comp=Z,16nm,0.7s						
RGRI	**Rengat**	55.02	234	P	P	03 03 07.4	-6.7
ARU	**Arti**	55.22	318	P	P	03 03 15.2	+0.1
	comp=Z,5.9nm,0.7s,baz=60,slow=4.7,SNR=29						
ARU				LR	LR	03 27 07.1	
	comp=Z,126nm,18.5s,baz=61,slow=36						
ARU	**Arti**	55.22	318	*c i*P	P	03 03 15.5	+0.5
ARU						03 04 16.2	
ARU				PPP	PPP	03 06 31.6	
ARU				S	S	03 11 02.1	+4.2
ARU				SS	SS	03 14 37.5	-3.9
ARU				pmax	pmax		
	comp=Z,62nm,1.4s						
ARU				MLR	MLR		
	comp=Z,1µm,15.0s						
ARU	**Arti**	55.22	318	P	P	03 03 15.6	+0.6
NIL	**Nilore**	55.29	287	P	P	03 03 16.6	+0.6
NIL				pmax	pmax		
	comp=Z,47nm,0.9s						
NIL	**Nilore**	55.29	287	P	P	03 03 16.6	+0.6
BKNI	**Bangkinang**	55.31	235	P	P	03 03 16.7	+0.5
MNSI	**Mandailing Nat**	55.88	237	P	P	03 03 19.4	-0.9
SDSI	**Sungai Dareh**	56.04	234	P	P	03 03 30.4	+9.0
GSI	**Gunungsitoli**	56.80	239	P	P	03 03 35.0	+8.1
EUNU	**Eureka**	56.92	9	IAmb	IAmb	03 03 42.8	
	comp=Z,16nm,0.7s						
KLSI		57.06	228	P	P	03 03 30.8	+2.1
	comp=Z,6.7nm,0.9s						
LHSI	**Lahat**	57.07	230	P	P	03 03 29.4	+0.7
	comp=Z,5µmcomp=Z,28nm,1.2s						
ABKAR	**Akbulak array**	57.29	309	P	P	03 03 30.2	+0.3
BHPL	**Bhopal**	57.51	274	*e*P	P	03 03 29.7	-2.2
BHPL				IAmb	IAmb	03 03 32.0	
	comp=Z,19nm,1.1s						
KBL	**Kabul**	57.92	290	P	P	03 03 34.4	-0.5
KBL				pmax	pmax		
	comp=Z,28nm,0.8s						
KBL	**Kabul**	57.92	290	P	P	03 03 34.4	-0.5
KBS	**Kingsbay**	57.95	350	*ce*P	P	03 03 35.2	+1.1
KBS				pmax	pmax		
	comp=Z,23nm,1.0s						
KBS	**Kingsbay**	57.95	350	P	P	03 03 34.6	+0.5
KIRV	**Kirov**	58.85	322	LR	LR	03 32 31.8	
	comp=Z,187nm,18.9s,baz=53,slow=40						
KIRV	**Kirov**	58.85	322	*ce*P	P	03 03 40.9	+0.2
SANVU	**Saraoutou**	59.47	153	P	P	03 03 45.4	0.0
HYB	**Hyderabad**	59.98	268	*i* P	P	03 03 49.0	-0.1
FITZ	**Fitzroy Crossi**	60.24	200	P	P	03 03 51.0	+0.4
WRAB	**Tennant Creek**	60.32	190	*ce*P	P	03 03 50.5	-0.7
WRAB				pmax	pmax		
	comp=Z,33nm,1.3s						
WRAB	**Tennant Creek**	60.32	190	P	P	03 03 50.5	-0.7
WB2	**Warramunga Arr**	60.33	190	P	P	03 03 50.3	-1.0
YKA	**Yellowknife Ar**	60.34	32	P	P	03 03 51.1	+0.2
	comp=Z,7.4nm,1.1s,baz=300,slow=6.2,SNR=37						
YKA				LR	LR	03 33 01.8	
	comp=Z,51nm,18.3s,baz=0.0,slow=39						
YKA	**Yellowknife Ar**	60.34	32	*ce*P	P	03 03 51.0	+0.1
YKA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
APA	**Apatity**	60.61	336	⇑*i*P	P	03 03 51.6	-1.1
APA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
APA				MLR	MLR		
	comp=Z,1µm,14.0s						
TMCR	**Tamitsa**	60.89	331	*e*P	P	03 03 54.0	-0.6
TMCR				pmax	pmax		
	comp=Z,50nm,0.9s						
ARCES	**ARCESS Array B**	61.74	339	P	P	03 04 00.5	+0.1
	comp=Z,4.4nm,0.7s,baz=38,slow=6.5,SNR=18						
ARCES				LR	LR	03 33 18.7	
	comp=Z,243nm,20.3s,baz=50,slow=38						
TULEG	**Thule**	61.86	8	P	P	03 04 00.4	-0.7
KLMR	**Klimovskoe**	62.09	327	*e*P	P	03 04 01.8	-1.0
KLMR				*e*		03 06 17.6	
KLMR				pmax	pmax		
	comp=Z,56nm,1.3s						
KLMR	**Klimovskoe**	62.09	327	*e*P	P	03 04 01.8	-1.0
KLMR				AMP		03 04 07.4	
	comp=Z,56nm,1.3s						
KLMR				*e*PP	PP	03 06 17.7	-1.2
HRA	**Herat**	62.84	293	P	P	03 04 08.1	-0.5
HRA				IAmb	IAmb	03 04 17.5	
	comp=Z,11nm,0.9s						
DAG	**Danmarks Havn**	62.88	355	*i* P	P	03 04 07.9	+0.1
	comp=Z,15nm,1.0s						
DAG	**Danmarks Havn**	62.88	355	*i* P	P	03 04 07.9	+0.1
DAG				pmax	pmax		
	comp=Z,15nm,1.0s						
DAG	**Danmarks Havn**	62.88	355	*i* P	P	03 04 08.0	+0.1
DAG				IAmb	IAmb	03 04 09.0	
	comp=Z,15nm,1.0s						
POO	**Poona**	62.93	272	*e*P	P	03 04 09.2	+0.1
POO				IAmb	IAmb	03 04 10.3	
	comp=Z,11nm,0.8s						
D03D	**Eldon**	63.82	49	P	P	03 04 16.0	+1.4
	baz=302,SNR=5.3						
AS31	**Alice Springs**	64.05	190	P	P	03 04 15.7	-0.6
ASAR	**Alice Springs**	64.05	190	P	P	03 04 15.7	-0.5
	comp=Z,4.9nm,0.8s,baz=3.5,slow=4.8,SNR=28						
B06A	**Marblemount**	64.22	47	P	P	03 04 17.0	-0.1
B06A				IAmb	IAmb	03 04 18.9	
	comp=Z,16nm,1.3s						
E04D	**Cinebar**	64.64	50	P	P	03 04 21.3	+1.4
	baz=302,SNR=5.8						
GOA	**Goa**	64.75	269	*e*P	P	03 04 21.4	+0.4
LTY	**Liberty**	65.36	48	IAmb	IAmb	03 04 26.6	
	comp=Z,12nm,1.2s						
DBG	**Daneborg**	65.38	355	*i* P	P	03 04 24.0	-0.3
DBG				IAmb	IAmb	03 04 25.3	
	comp=Z,6.7nm,1.1s						
B08A	**Colville Reser**	65.51	47	P	P	03 04 25.3	-0.3
B08A				IAmb	IAmb	03 04 27.6	
	comp=Z,21nm,1.5s						
I03D	**Drain, OR**	65.70	53	P	P	03 04 26.1	-0.8
	baz=303						
MOS	**Moscow**	65.81	323	*e*P	P	03 04 27.3	0.0
MOS				*e*		03 06 51.6	
MOS				pmax	pmax		
	comp=Z,37nm,1.0s						
MOS				MLR	MLR		
	comp=Z,600nm,15.0s						
H04A	**Detroit Lake**	65.87	51	P	P	03 04 28.2	+0.2
H04A				IAmb	IAmb	03 04 30.3	
	comp=Z,18nm,1.1s						
K02D	**Willamette Mer**	66.05	54	P	P	03 04 29.1	-0.1
	baz=303						
G05D	**Wamic, OR**	66.08	50	P	P	03 04 30.0	+0.7
	baz=303						
I04A	**Tendick Farm,**	66.22	52	P	P	03 04 31.2	+0.9
	baz=303,SNR=5.4						
C09A	**Chrisman Ranch**	66.41	47	IAmb	IAmb	03 04 33.3	
	comp=Z,18nm,1.2s						
PUL	**Pulkovo**	66.42	330	*ce*P	P	03 04 32.4	+1.2
PUL				pmax	pmax		
	comp=Z,90nm,1.3s						
VRH	**Novokhopyorsk**	66.45	318	*e*P	P	03 04 30.9	-0.6
VRH				pmax	pmax		
	comp=Z,30nm,1.2s						
D08A	**Wollman Farm,**	66.46	48	P	P	03 04 32.1	+0.3
D08A				IAmb	IAmb	03 04 33.0	
	comp=Z,11nm,1.1s						
HAWA	**Hanford**	66.49	49	IAmb	IAmb	03 04 34.1	
	comp=Z,22nm,1.5s						
I05D	**Terrebonne, OR**	66.57	51	P	P	03 04 33.2	+0.7
	baz=304						
OBN	**Obninsk**	66.66	323	⇑*i*P	P	03 04 33.0	+0.2
OBN				*i*		03 04 59.1	
OBN				*e*		03 06 57.6	
OBN				*e*S	S	03 13 26.0	+2.2
OBN				*e*SS	SS	03 17 46.2	+5.8
OBN				pmax	pmax		
	comp=Z,41nm,1.1s						
OBN				MLR	MLR		
	comp=Z,533nm,14.0s						
OBN	**Obninsk**	66.66	323	P	P	03 04 32.6	-0.2
NEW	**Newport**	66.79	46	P	P	03 04 34.4	+0.6
	baz=305,SNR=9.1						
NEW	**Newport**	66.79	46	IAmb	IAmb	03 04 35.7	
	comp=Z,14nm,1.1s						
FIA1	**FINESS Array S**	66.90	332	P	P	03 04 34.6	+0.4
FINES	**FINESS Array B**	66.90	332	P	P	03 04 34.2	0.0
	comp=Z,22nm,0.9s,baz=46,slow=8.2,SNR=35						
FINES				LR	LR	03 36 12.4	
	comp=Z,216nm,19.5s,baz=36,slow=38						
FINES	**FINESS Array B**	66.90	332	*ce*P	P	03 04 34.7	+0.5
FINES				pmax	pmax		
	comp=Z,22nm,0.9s						
FINES	**FINESS Array B**	66.90	332	P	P	03 04 33.9	-0.3
LPSR	**Galich'ya Gora**	67.04	320	*e*P	P	03 04 34.3	-1.0
LPSR				pmax	pmax		
	comp=Z,20nm,1.0s						
L04D	**Klamath Falls**	67.16	54	P	P	03 04 37.2	+0.7
	baz=304						
YBH	**Yreka Blue Hor**	67.18	54	IAmb	IAmb	03 04 46.9	
	comp=Z,12nm,1.1s						
J05D	**Fort Rock, OR**	67.22	52	P	P	03 04 37.6	+0.9
	baz=304,SNR=6.8						
M02C	**Callahan**	67.28	54	P	P	03 04 39.0	+1.9
	baz=304						
G08A	**Pilot Rock**	67.44	49	IAmb	IAmb	03 04 50.0	
	comp=Z,12nm,1.5s						
N02D	**Trinity Center**	67.60	55	P	P	03 04 40.4	+1.2
	baz=304						
SUMG	**Summit**	67.63	1	*i* P	P	03 04 39.9	+0.7
	comp=Z,62nm,1.1s						
SUMG	**Summit**	67.63	1	*i* P	P	03 04 39.9	+0.7
SUMG				pmax	pmax		
	comp=Z,62nm,1.1s						
SUMG	**Summit**	67.63	1	P	P	03 04 39.7	+0.5
SUMG	**Summit**	67.63	1	*i* P	P	03 04 40.0	+0.7
SUMG				IAmb	IAmb	03 04 41.2	
	comp=Z,62nm,1.1s						
M04C	**Macdoel**	67.69	54	P	P	03 04 41.5	+1.8
	baz=304						
VSR	**Storozhevoye**	67.75	319	*e*P	P	03 04 39.4	-0.4
VSR				pmax	pmax		
	comp=Z,20nm,1.4s						
VORD	**Divnogorie**	67.83	319	*e*P	P	03 04 40.4	+0.1
VORD				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MAK	**Makhachkala**	67.91	308	*e*P	P	03 04 36.9	-4.0
MAK				*e*S	S	03 13 35.4	-3.7
MAK				*e*SS	SS	03 17 52.8	-7.4
MAK				pmax	pmax		
	comp=Z,171nm,1.2s						
MAK				MLR	MLR		
	comp=Z,349nm,8.0s						
WDC	**Whiskeytown Da**	67.93	55	IAmb	IAmb	03 04 54.6	
	comp=Z,10nm,1.1s						
O02D	**Mt. Diablo Mer**	68.00	56	P	P	03 04 43.2	+1.5
	baz=304						
WALA	**Waterton Lakes**	68.07	44	IAmb	IAmb	03 04 43.4	
	comp=Z,15nm,1.2s						
O03E	**Paynes Creek**	68.55	55	P	P	03 04 45.6	+0.4
	baz=305						
MOD	**Modoc Plateau**	68.56	53	IAmb	IAmb	03 04 47.6	
	comp=Z,7.9nm,0.9s						
GROC	**Groznyy**	68.79	309	*e*P	P	03 04 42.3	-4.2
GROC				*e*		03 05 10.3	
GROC				*e*		03 07 16.9	
GROC				*e*S	S	03 13 43.3	-6.4
GROC				pmax	pmax		
	comp=Z,15nm,1.0s						
J08A	**Circle Bar Ran**	68.83	51	IAmb	IAmb	03 04 49.4	
	comp=Z,14nm,1.0s						
WVOR	**Wild Horse Val**	69.27	52	IAmb	IAmb	03 04 59.6	
	comp=Z,11nm,1.0s						
GOF	**Gofitskoye**	69.31	312	⇑*i*P	P	03 04 50.6	+0.9
GOF				pmax	pmax		
	comp=Z,49nm,0.8s						
MSO	**Missoula**	69.38	46	P	P	03 04 50.8	+0.6
	baz=307,SNR=8.1						
MSO	**Missoula**	69.38	46	IAmb	IAmb	03 04 51.9	
	comp=Z,12nm,1.1s						
MTSE	**Matsula**	69.61	331	*e*P	P	03 04 48.3	-2.9
BEKR	**Beckworth**	69.70	55	IAmb	IAmb	03 04 54.4	
	comp=Z,11nm,0.9s						
AAL	**Aland**	69.91	334	*e*P	P	03 04 53.2	+0.2
NCK	**Nalchik**	69.92	310	*i* P	P	03 04 54.1	+0.6
NCK				pmax	pmax		
	comp=Z,22nm,0.9s						
ZEI	**Tsey**	70.16	310	*e*P	P	03 04 54.8	-0.4
ZEI				pmax	pmax		
	comp=Z,13nm,0.9s						
KIV	**Kislovodsk**	70.18	311	*e*P	P	03 04 56.2	+1.0
KIV				pmax	pmax		
	comp=Z,202nm,1.1s						
KIV	**Kislovodsk**	70.18	311	P	P	03 04 56.0	+0.8
KBZ	**Khabaz**	70.19	311	P	P	03 04 56.1	+1.1
	comp=Z,21nm,0.9s,baz=65,slow=5.9,SNR=47						
KBZ	**Khabaz**	70.19	311	*ce*P	P	03 04 55.9	+0.8
KBZ				pmax	pmax		
	comp=Z,29nm,0.9s						
FFC	**Flin Flon**	70.24	34	P	P	03 04 55.3	0.0
FFC				pmax	pmax		
	comp=Z,10.0nm,0.7s						
FFC	**Flin Flon**	70.24	34	P	P	03 04 55.3	0.0
FFC				IAmb	IAmb	03 05 03.9	
	comp=Z,9.9nm,0.7s						
SHA1	**Shidzhatmaz**	70.32	311	*i* P	P	03 04 56.5	+0.3
PAHR	**Pah Rah Range**	70.41	54	IAmb	IAmb	03 04 58.9	
	comp=Z,12nm,1.2s						
FCC	**Fort Churchill**	70.53	28	IAmb	IAmb	03 05 15.0	
	comp=Z,15nm,1.2s						
NEY	**Neytrino**	70.58	310	*i* P	P	03 04 59.6	+1.9
NEY				pmax	pmax		
	comp=Z,4.0nm,0.9s						
PNTR	**Pine Nut**	70.64	55	IAmb	IAmb	03 05 00.1	
	comp=Z,10nm,0.9s						
IDID	**Didziasalis**	70.83	327	*e*P	P	03 04 59.9	+1.1
EGMT	**Eagleton**	70.89	43	P	P	03 05 00.1	+0.7
	baz=309						
EGMT	**Eagleton**	70.89	43	IAmb	IAmb	03 05 08.5	
	comp=Z,12nm,0.8s						
ISAL	**Salakas**	70.91	328	*e*P	P	03 05 00.6	+1.4
MNK	**Minsk**	70.91	326	⇑*e*P	P	03 05 03.0	+3.7
MNK				pmax	pmax		
	comp=Z,150nm,1.0s						
MNK	**Minsk**	70.91	326	*i* P	P	03 04 59.7	+0.4
	comp=E,2.0nm,0.7s						
MNK				*i* P	P	03 04 59.7	+0.4
	comp=N,17nm,0.8s						
MNK				*i* P	P	03 04 59.7	+0.4
	comp=Z,53nm,0.8s						
MNK				*i* PcP	PcP	03 05 19.6	-0.2
MNK				*i* PP	PP	03 07 37.0	+1.2
MNK				*i* PPP	PPP	03 09 20.0	
MNK				*i* S	S	03 14 15.9	+1.7
MNK				*i* ScS	ScS	03 15 03.8	+1.2
MNK				*i* SS	SS	03 18 51.2	+5.4
MNK				*i* SSS	SSS	03 22 10.2	
MNK				*i* LQ	LQ	03 32 26.6	
MNK				*i* LR	LR	03 37 00.6	
MNK				*i* LRM	MLR	03 39 21.8	
	comp=N,214nm,15.4s						
MNK				*i* LRM	MLR	03 39 36.2	
	comp=E,21nm,14.5s						
MNK				*i* LRM	MLR	03 39 37.1	
	comp=Z,141nm,15.4s						
YERR	**Yerington**	70.92	55	IAmb	IAmb	03 05 02.2	
	comp=Z,14nm,1.0s						
UPP	**Uppsala**	70.94	334	*e*P	P	03 05 00.1	+0.7
DLMT	**Dillon**	71.01	46	IAmb	IAmb	03 05 02.4	
	comp=Z,15nm,1.0s						
IIGN	**Ignalina**	71.02	328	*e*P	P	03 05 01.1	+1.2
HLID	**Hailey**	71.09	49	P	P	03 05 01.9	+1.1
	baz=308,SNR=13						
NACGM	**Naroch**	71.10	327	*i* P	P	03 05 00.8	+0.4
NACGM				*i* P	P	03 05 00.8	+0.4
NACGM				*i* P	P	03 05 00.8	+0.4
NACGM				*i* PP	PP	03 07 36.9	-0.6
NACGM				*i* PPP	PPP	03 09 19.3	
NACGM				*i* S	S	03 14 14.3	-2.0
NACGM				*i* S	S	03 14 14.3	-2.0
NACGM				*i* SS	SS	03 18 47.4	-1.3
NACGM				*i* SSS	SSS	03 23 50.3	
NACGM				*i* LQ	LQ	03 31 07.9	
NACGM				*i* LR	LR	03 36 51.0	
ICESG	**Greenland Ices**	71.12	1	*i* P	P	03 05 02.0	+1.2
ICESG				IAmb	IAmb	03 05 03.0	
	comp=Z,15nm,1.0s						
GNI	**Garni**	71.23	307	*ce*P	P	03 05 02.3	+0.6
GNI				pmax	pmax		
	comp=Z,20nm,1.3s						
GNI	**Garni**	71.23	307	P	P	03 05 01.5	-0.3
BOZ	**Bozeman (W)**	71.40	46	P	P	03 05 03.5	+0.8
	baz=309,SNR=23						
BOZ	**Bozeman (W)**	71.40	46	IAmb	IAmb	03 05 04.7	
	comp=Z,16nm,0.9s						
STKA	**Stephens Creek**	71.62	182	P	P	03 05 03.2	-0.4
	comp=Z,4.2nm,0.6s,baz=338,slow=8.2,SNR=14						
STKA	**Stephens Creek**	71.62	182	*i* P	P	03 05 03.4	-0.3
PABE	**Paberze**	71.83	329	*e*P	P	03 05 05.4	+0.6
NVAR	**Mina Array Bea**	71.84	55	P	P	03 05 06.1	+0.6
	comp=Z,5.1nm,0.8s,baz=290,slow=6.4,SNR=25						
NVAR				LR	LR	03 35 39.6	
	comp=Z,31nm,18.5s,baz=268,slow=35						
NVAR	**Mina Array Bea**	71.84	55	P	P	03 05 05.4	-0.1
MLAC	**Mammoth, Mammo**	71.98	56	P	P	03 05 08.6	+2.2
	baz=307						
NB2	**NORSAR Subarra**	72.02	338	P	P	03 05 06.0	+0.1
	comp=Z,17nm,0.7s,baz=37,slow=6.2						
NOA	**NORSAR Array B**	72.02	338	P	P	03 05 06.2	+0.2
	comp=Z,15nm,0.9s,baz=37,slow=6.0,SNR=21						
NOA				PP	PP	03 07 48.0	+2.7
	comp=Z,1.8nm,0.8s,baz=35,slow=8.7,SNR=3.6						
NOA				LR	LR	03 40 02.5	
	comp=Z,226nm,21.3s,baz=20,slow=39						
PAGB	**Antelope Grade**	72.21	58	IAmb	IAmb	03 05 10.1	
	comp=Z,23nm,1.1s						
PBUR	**Paburge**	72.25	330	*e*P	P	03 05 07.0	-0.4
SMMC	**Simmler**	72.63	58	P	P	03 05 11.1	+1.0
	baz=307						
TIN	**Tinemaha, Big**	72.72	56	P	P	03 05 12.5	+1.8
	baz=308						
H17A	**Grant Village**	72.74	46	P	P	03 05 13.5	+2.6
	baz=310,SNR=13						
H17A	**Grant Village**	72.74	46	IAmb	IAmb	03 05 14.7	
	comp=Z,17nm,0.9s						
VES	**Vestal, Richgr**	72.90	57	P	P	03 05 12.0	+0.4
	baz=307,SNR=6.2						
AKASG	**Malin Array Be**	72.91	323	P	P	03 05 11.1	-0.2
	comp=Z,5.0nm,0.5s,baz=43,slow=6.3,SNR=27						
AKASG	**Malin Array Be**	72.91	323	*c i*P	P	03 05 11.5	+0.2
AKASG				pmax	pmax		
	comp=Z,5.0nm,0.5s						
AKASG	**Malin Array Be**	72.91	323	P	P	03 05 11.3	0.0
AKBB	**Malin Array Si**	72.91	323	*ce*P	P	03 05 10.8	-0.5
AKBB	**Malin Array Si**	72.91	323	IAmb	IAmb	03 05 12.6	
	comp=Z,23nm,1.1s						
RLMT	**Red Lodge**	72.99	45	P	P	03 05 13.2	+0.9
	baz=310						
PKM	**Mcpherson Peak**	73.00	59	P	P	03 05 13.8	+1.3
	baz=307						
CWC	**Cottonwood Cre**	73.19	56	P	P	03 05 14.1	+0.6
	baz=308						

SUW	Suwalki	73.22	328	*e*P	P	03 05 11.9	-1.3
SUW	Suwalki	73.22	328	*e*P	P	03 05 13.1	0.0
SNOW	Snow King Moun	73.23	47	IAmb	IAmb	03 05 16.6	
	comp=Z,19nm,1.4s						
GEVA	Gevas	73.38	306	P	P	03 05 14.0	-0.6
GEVA				IAmb	IAmb	03 05 41.6	
	comp=Z,11nm,1.0s						
ISA	Isabella, Lake	73.41	57	P	P	03 05 14.7	0.0
	baz=308						
DGMT	Dagmar	73.42	40	P	P	03 05 15.0	+0.5
	baz=312						
DGMT	Dagmar	73.42	40	P	P	03 05 14.0	-0.5
DGMT				IAmb	IAmb	03 05 16.0	
	comp=Z,18nm,1.0s						
ARVC	Arvin	73.50	58	P	P	03 05 15.8	+0.7
	baz=308						
LAO	LASA Array	73.58	42	P	P	03 05 16.6	+1.1
	baz=312,SNR=7.2						
LAO	LASA Array	73.58	42	IAmb	IAmb	03 05 17.7	
	comp=Z,17nm,1.1s						
R11A	Troy Canyon, C	73.58	54	P	P	03 05 16.7	+0.9
	baz=308,SNR=11						
MPMC	Manual Prospec	73.80	56	P	P	03 05 17.8	+0.6
	baz=308,SNR=14						
KOPT	Kop Dagi	73.88	309	P	P	03 05 18.8	+1.2
KOPT				IAmb	IAmb	03 05 42.8	
	comp=Z,17nm,1.0s						
FURC	Furnace Creek,	73.94	56	P	P	03 05 19.1	+1.4
	baz=308,SNR=7.6						
TPNV	Topopah Spring	74.03	55	P	P	03 05 19.2	+0.7
	baz=308,SNR=14						
TPNV	Topopah Spring	74.03	55	IAmb	IAmb	03 05 20.2	
	comp=Z,12nm,1.0s						
DUG	Dugway, Tooele	74.11	51	P	P	03 05 20.4	+1.5
	baz=309,SNR=11						
DUG	Dugway, Tooele	74.11	51	IAmb	IAmb	03 05 21.3	
	comp=Z,12nm,1.0s						
SNCC	San Nicolas Is	74.19	60	P	P	03 05 20.5	+1.3
	baz=308						
EDW2	Edwards Air Fo	74.19	58	P	P	03 05 20.5	+1.2
	baz=308,SNR=6.4						
BW06	Boulder Array	74.35	47	P	P	03 05 20.7	+0.4
	baz=310,SNR=7.2						
PDAR	Pinedale Array	74.35	47	P	P	03 05 20.7	+0.4
	comp=Z,3.1nm,0.8s,baz=270,slow=2.3,SNR=28						
PDAR	Pinedale Array	74.35	47	P	P	03 05 20.4	+0.1
DECC	Green Verdugo	74.36	58	P	P	03 05 21.5	+1.3
	baz=308						
SHOC	Shoshone, Teco	74.67	56	P	P	03 05 23.2	+1.2
	baz=309						
BFSC	Mount Baldy Ra	74.81	58	P	P	03 05 24.0	+1.0
	baz=308,SNR=6.5						
SORM	Soroca	75.09	321	⇓P	P	03 05 24.1	0.0
HEC	Hector,Ludlow	75.30	57	P	P	03 05 27.1	+1.4
	baz=309,SNR=5.7						
MARD	Mardin	75.41	307	P	P	03 05 27.2	+0.8
MURC	Murrieta	75.50	58	P	P	03 05 26.9	0.0
	baz=309						
MVU	Marysvale	75.55	52	IAmb	IAmb	03 05 29.6	
	comp=Z,25nm,1.1s						
GMRC	Granite Mounta	75.76	57	P	P	03 05 29.2	+0.8
	baz=309,SNR=8.9						
BEL	Belsk	75.80	327	*e*P	P	03 05 29.9	+1.8
LVV	L'vov	75.89	324	*e*P	P	03 05 29.3	+0.5
LVV				*e*		03 05 37.2	
LVV				*e*S	S	03 15 06.7	-4.1
LVV				MLR	MLR		
	comp=Z,700nm,14.0s						
PFO	Pinyon Flats O	75.98	58	P	P	03 05 29.8	+0.1
PFO				pmax	pmax		
	comp=Z,10.0nm,1.1s						
PFO	Pinyon Flats O	75.98	58	P	P	03 05 29.8	+0.1
109C	Camp Elliot, M	76.00	59	P	P	03 05 30.5	+0.8
	baz=309						
ULM	Lac du Bonnet	76.04	35	P	P	03 05 29.7	+0.1
	comp=Z,2.8nm,0.6s,baz=296,slow=7.5,SNR=7.3						
TOKA	Tokat	76.05	311	P	P	03 05 30.7	+0.8
TOKA				IAmb	IAmb	03 05 35.4	
	comp=Z,16nm,1.2s						
MDND	Maddock	76.07	38	P	P	03 05 30.9	+1.1
	baz=315						
K22A	Casper	76.11	46	P	P	03 05 30.3	0.0
	baz=312						
K22A	Casper	76.11	46	IAmb	IAmb	03 05 31.5	
	comp=Z,14nm,1.3s						
MUD	Monsted U'grnd	76.38	336	*i* P	P	03 05 30.0	-1.4
MUD	Monsted U'grnd	76.38	336	*i* P	P	03 05 30.0	-1.4
MUD	Monsted U'grnd	76.38	336	*i* P	P	03 05 30.0	-1.4
RSSD	Black Hills	76.45	43	P	P	03 05 32.7	+0.4
	baz=313						
RSSD	Black Hills	76.45	43	P	P	03 05 31.6	-0.8
RSSD				pmax	pmax		
	comp=Z,6.0nm,0.7s						
RSSD	Black Hills	76.45	43	P	P	03 05 31.6	-0.8
IRM	Iron Mountain	76.48	57	P	P	03 05 33.3	+0.9
	baz=310,SNR=8.3						
KWP	Kalwaria Pacla	76.62	325	*e*P	P	03 05 34.0	+1.1
KWP	Kalwaria Pacla	76.62	325	P	P	03 05 33.5	+0.6
KWP				pmax	pmax		
	comp=Z,63nm,1.2s						
KWP	Kalwaria Pacla	76.62	325	P	P	03 05 33.5	+0.6
IKP	In-Ko-Pah, Jac	76.81	58	P	P	03 05 35.7	+1.3
	baz=309						
O20A	White River Ci	76.82	48	P	P	03 05 34.6	+0.1
	baz=312						
O20A	White River Ci	76.82	48	IAmb	IAmb	03 05 36.2	
	comp=Z,18nm,1.4s						
U15A	North Rim	76.83	53	IAmb	IAmb	03 05 37.4	
	comp=Z,11nm,1.1s						
BUR08	Bucovina Ar. S	76.93	322	IAmb	IAmb	03 05 36.7	
	comp=Z,9.6nm,0.8s						
BURAR	Bucovina Array	76.95	322	⇓P	P	03 05 36.0	+1.1
BURAR	Bucovina Array	76.95	322	P	P	03 05 35.3	+0.4
BIZ	Bicaz	77.01	321	⇓P	P	03 05 36.4	+1.3
PDMCI	Parker Dam,Lak	77.03	56	P	P	03 05 36.2	+0.7
	baz=310,SNR=7.6						
TESR	Tescani	77.05	321	⇓P	P	03 05 36.3	+0.9
ILGA	Ilgaz	77.13	313	IAmb	IAmb	03 05 42.1	
	comp=Z,20nm,1.0s						
ESJX	Sierra Juarez	77.32	59	IAmb	IAmb	03 05 39.8	
	comp=Z,13nm,1.1s						
KOLS	Kolonicke sedl	77.33	325	*e*P	P	03 05 37.7	+0.8
KOLS				pmax	pmax		
	comp=Z,12nm,1.2s						
KOLS	Kolonicke sedl	77.33	325	*e*P	P	03 05 37.7	+0.8
KOLS				*e*PP	PP	03 08 33.4	+2.9
GLA	Glamis	77.39	57	P	P	03 05 38.6	+1.1
	baz=310						
OJC	Ojcow	77.43	327	*e*P	P	03 05 38.6	+1.1
VRI	Vrincioaia	77.48	320	⇓P	P	03 05 39.8	+2.0
PV23	Carpenter Ridg	77.48	50	IAmb	IAmb	03 05 43.8	
	comp=Z,28nm,1.4s						
UZH	Uzhgorod	77.54	324	⇓*i*P	P	03 05 37.6	-0.5
UZH				*e*		03 05 47.9	
N23A	Red Feather La	77.61	47	P	P	03 05 39.8	+0.8
	baz=313,SNR=5.8						
GAZ	Gaziantep	77.68	308	IAmb	IAmb	03 05 45.0	
	comp=Z,18nm,1.1s						
CRVS	Cervenica-Dubn	77.71	325	*e*P	P	03 05 40.1	+1.1
CRVS				pmax	pmax		
	comp=Z,18nm,1.1s						
CRVS	Cervenica-Dubn	77.71	325	*e*P	P	03 05 40.1	+1.1
OZUR		77.77	321	⇓P	P	03 05 41.4	+1.9
NIE	Niedzica	77.82	326	*e*P	P	03 05 41.3	+1.6
PV01	Paradox Valley	77.96	50	P	P	03 05 41.1	+0.2
WUAZ	Wupatki	77.98	54	P	P	03 05 42.6	+1.6
	baz=311,SNR=8.7						
WUAZ	Wupatki	77.98	54	IAmb	IAmb	03 05 43.6	
	comp=Z,14nm,0.9s						
RUE	Ruedersdorf	78.04	331	*e*P	P	03 05 41.6	+0.9
	comp=Z,11nm,0.8s,baz=34,slow=5.4						
BR131	Keskin Array S	78.07	312	IAmb	IAmb	03 05 50.5	
	comp=Z,13nm,1.1s						
BRTR	Keskin Array B	78.07	312	P	P	03 05 41.7	+0.3
	comp=Z,3.5nm,1.0s,baz=75,slow=5.2,SNR=15						
BRTR				PP	PP	03 08 35.3	-1.9
	comp=Z,1.8nm,0.8s,baz=52,slow=6.6,SNR=4.7						
BRTR				LR	LR	03 45 05.7	
	comp=Z,96nm,19.1s,baz=29,slow=40						
BRTR	Keskin Array B	78.07	312	*ce*P	P	03 05 42.0	+0.6
BRTR				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BRTR	Keskin Array B	78.07	312	P	P	03 05 41.3	-0.1
BSEG	Bad Segeberg	78.09	334	*e*P	P	03 05 41.5	+0.6
	comp=Z,19nm,0.9s,baz=34,slow=5.4						
ISR	Istrita	78.10	320	⇓P	P	03 05 41.4	+0.1
MLR	Muntele Rosu	78.13	320	⇓P	P	03 05 41.7	+0.1
KSP	Ksiaz	78.38	329	*e*P	P	03 05 43.7	+1.0
B35A	Bob, Littlefor	78.39	35	IAmb	IAmb	03 05 50.9	
	comp=Z,10nm,0.8s						
BR231	Keskin MP Arra	78.48	313	P	P	03 05 43.9	+0.2
BR231				IAmb	IAmb	03 05 45.8	
	comp=Z,25nm,1.1s						
ISCO	Idaho Springs	78.54	47	P	P	03 05 45.4	+1.1
	baz=313						
VOIR		78.60	321	⇓P	P	03 05 45.7	+1.5
MVCO	Mesa Verde	78.61	51	P	P	03 05 45.4	+0.8
	baz=312						
OSTC	Ostas	78.63	329	*e*P	P	03 05 45.0	+0.8
OSTC				*e*x	x	03 05 53.5	
CHVC	Chvalec	78.67	329	*e*P	P	03 05 44.5	+0.1
MORC	Moravsky Berou	78.70	328	⇓P	P	03 05 45.9	+1.3
MORC	Moravsky Berou	78.70	328	*e*P	P	03 05 45.5	+0.9
MORC	Moravsky Berou	78.70	328	IAmb	IAmb	03 05 46.8	
	comp=Z,18nm,1.0s						
DRGR		78.71	323	⇓P	P	03 05 45.8	+1.0
DPC	Dobruska-Polom	78.75	329	*e*P	P	03 05 46.0	+1.2
DPC	Dobruska-Polom	78.75	329	*e*P	P	03 05 46.0	+1.2
UPC	Upice	78.75	329	*e*P	P	03 05 46.1	+1.3
UPC	Upice	78.75	329	*e*P	P	03 05 46.1	+1.3
ARR	Arges	78.85	321	⇓P	P	03 05 47.6	+2.1
FLTG	Flechtingen	79.08	332	*e*P	P	03 05 47.0	+0.5
	comp=Z,14nm,0.8s,baz=34,slow=5.4						
F33A	5 Mile Ranch,	79.10	38	IAmb	IAmb	03 05 48.0	
	comp=Z,13nm,1.1s						
PSZ	Piszkesteto	79.14	325	⇓P	P	03 05 48.4	+1.4
PSZ	Piszkesteto	79.14	325	IAmb	IAmb	03 05 52.5	
	comp=Z,23nm,1.1s						
VYHS	Vyhne	79.15	326	*e*P	P	03 05 48.6	+1.6
VYHS	Vyhne	79.15	326	*e*P	P	03 05 48.6	+1.6
S22A	4UR Ranch, Cre	79.24	49	P	P	03 05 49.2	+1.2
	baz=313,SNR=7.0						
BRG	Berggiesshubel	79.27	330	*e*P	P	03 05 48.2	+0.7
BRG				Amp		03 05 50.1	
	comp=Z,9.8nm,1.0s						
BRG	Berggiesshubel	79.27	330	*e*P	P	03 05 48.3	+0.7
	comp=Z,1µm,2.8s,baz=34,slow=5.4						
CLL	Collm	79.27	331	⇑*i*P	P	03 05 48.0	+0.4
	comp=Z,24nm,1.0s						
CLL				*i* (PcP)	pwP	03 05 54.4	+0.6
CLL				*e*PP	PP	03 08 50.0	+3.4
CLL				LmH		03 39 00.0	
	comp=N,300nm,19.3s						
CLL				LmH		03 39 00.0	
	comp=E,400nm,19.6s						
CLL				LmV		03 44 00.0	
	comp=Z,300nm,18.8s						
CLL	Collm	79.27	331	⇑*i*P	P	03 05 48.0	+0.4
CLL				*i*		03 05 54.4	
CLL				pmax	pmax		
	comp=Z,24nm,1.0s						
CLL				MLR	MLR		
	comp=Z,300nm,18.8s						
CLL	Collm	79.27	331	P	P	03 05 48.1	+0.4
CLL				IAmb	IAmb	03 05 49.1	
	comp=Z,18nm,0.9s						
CLL	Collm	79.27	331	*e*P	P	03 05 48.4	+0.8
	comp=Z,13nm,0.9s,baz=34,slow=5.4						
PVCC	Panska Ves	79.30	330	*e*P	P	03 05 48.6	+0.8
PVCC				*e*		03 05 52.2	
PVCC	Panska Ves	79.30	330	*e*P	P	03 05 48.6	+0.8
PVCC				*e*pP	pP	03 05 52.2	+0.8
NRDL	Niedersach Rie	79.34	333	*e*P	P	03 05 48.4	+0.6
	comp=Z,5.3nm,0.9s,baz=34,slow=5.4						
JAVC	Velka Javorina	79.36	327	*e*P	P	03 05 50.2	+2.0
214A	Organ Pipe Nat	79.39	57	P	P	03 05 49.2	+0.5
	baz=311						
214A	Organ Pipe Nat	79.39	57	P	P	03 05 48.4	-0.2
ASSE	Asse, Remlinge	79.45	333	*e*P	P	03 05 49.4	+1.0
	comp=Z,6.8nm,0.9s,baz=34,slow=5.4						
VRAC	Vranov	79.46	328	⇓P	P	03 05 50.3	+1.6
VRAC	Vranov	79.46	328	*e*P	P	03 05 49.9	+1.2
EYMN	Ely	79.67	34	P	P	03 05 49.9	0.0
	baz=320,SNR=7.1						
EYMN	Ely	79.67	34	IAmb	IAmb	03 05 50.9	
	comp=Z,24nm,1.4s						
PRA	Prague	79.72	329	*e*P	P	03 05 51.3	+1.3
PRA	Prague	79.72	329	*e*P	P	03 05 51.3	+1.3
OGNE	Ogallala	79.72	45	P	P	03 05 50.7	+0.3
	baz=315						
GZR	Gura Zlata	79.72	322	⇓P	P	03 05 51.1	+0.8
KRUC	Moravsky	79.73	328	*e*P	P	03 05 51.2	+1.0
SMOL	Smolenice	79.73	327	*e*P	P	03 05 51.8	+1.6
SMOL				pmax	pmax		
	comp=Z,10.0nm,1.3s						
SMOL	Smolenice	79.73	327	*e*P	P	03 05 51.8	+1.6
PRU	Pruhonice	79.74	329	*e*P	P	03 05 50.8	+0.6
PRU				*e*		03 05 54.2	
PRU	Pruhonice	79.74	329	*e*P	P	03 05 50.8	+0.6
PRU				*e*pP	pP	03 05 54.2	+0.4
NEUB	Neuenburg	79.81	332	*e*P	P	03 05 51.6	+1.1
	comp=Z,17nm,0.9s,baz=34,slow=5.4						
SRO	Srobarova	79.90	326	*e*P	P	03 05 53.1	+2.0
SRO				pmax	pmax		
	comp=Z,34nm,1.4s						
SRO	Srobarova	79.90	326	*e*P	P	03 05 53.1	+2.0
MODS	Modra-Piesok	79.91	327	*e*P	P	03 05 51.8	+0.7
MODS				pmax	pmax		
	comp=Z,29nm,1.3s						
MODS	Modra-Piesok	79.91	327	*e*P	P	03 05 51.8	+0.7
SRO2	Moca	79.91	326	*e*P	P	03 05 52.0	+0.9
SRO2	Moca	79.91	326	*e*P	P	03 05 52.0	+0.9
TREC	Trest	79.92	328	*e*P	P	03 05 52.3	+1.1
TREC	Trest	79.92	328	*e*P	P	03 05 52.3	+1.1
SDCO	Great Sand Dun	80.01	49	P	P	03 05 53.1	+0.8
	baz=314						
BZS	Buzias	80.10	323	⇓P	P	03 05 52.8	+0.6
ZST	Bratislava	80.12	327	*e*P	P	03 05 52.8	+0.6
ZST	Bratislava	80.12	327	*e*P	P	03 05 52.8	+0.6
GTTG	Gottingen	80.18	333	*e*P	P	03 05 53.6	+1.1
	comp=Z,9.1nm,0.9s,baz=34,slow=5.4						
PBCC	Pribram	80.20	329	*e*P	P	03 05 53.2	+0.5
PBCC				*e*x	x	03 05 56.7	
TANN	Tannenbergstha	80.20	331	*e*P	P	03 05 53.7	+1.0
	baz=34,slow=5.4						
WERD	Werda	80.23	331	*e*P	P	03 05 53.8	+0.9
	baz=34,slow=5.4						
K31A	O'Neill	80.24	42	IAmb	IAmb	03 05 55.1	
	comp=Z,27nm,1.1s						
HERR	Herculane	80.27	322	⇓P	P	03 05 53.7	+0.5
GUNZ	Gunzen	80.29	331	*e*P	P	03 05 54.2	+1.0
	comp=Z,4.6nm,0.9s,baz=34,slow=5.4						
IBBN	Ibbenburen	80.30	334	*e*P	P	03 05 53.9	+0.7
	comp=Z,14nm,0.9s,baz=34,slow=5.4						
WERN	Wernitzgruen	80.33	331	*e*P	P	03 05 54.6	+1.2
	comp=Z,6.5nm,0.9s,baz=34,slow=5.4						
NKC	Novy Kostel	80.35	331	*e*P	P	03 05 54.1	+0.6
NKC				*e*		03 06 02.8	
NKC	Novy Kostel	80.35	331	*e*P	P	03 05 54.1	+0.6
NKC				*e*x	x	03 06 02.8	
TUC	Tucson	80.46	56	P	P	03 05 55.4	+0.9
	baz=312						
TUC	Tucson	80.46	56	P	P	03 05 54.8	+0.3
TUC				pmax	pmax		
	comp=Z,10.0nm,1.2s						
TUC	Tucson	80.46	56	P	P	03 05 54.8	+0.3
ECSD	EROS Data Cent	80.50	40	P	P	03 05 54.3	-0.1
	baz=318,SNR=5.4						
MANZ	Manzenberg	80.68	331	*e*P	P	03 05 56.3	+1.0
	comp=Z,6.7nm,0.9s,baz=34,slow=5.4						
CKRC	Cesky Krumlov	80.77	329	*e*P	P	03 05 56.3	+0.5
UBBA	Unterbreizbach	80.77	332	*e*P	P	03 05 56.3	+0.8
	baz=34,slow=5.4						
KHC	Kasperske Hory	80.80	329	*e*P	P	03 05 56.4	+0.4
KHC				*e*		03 06 04.0	
KHC	Kasperske Hory	80.80	329	*e*P	P	03 05 56.4	+0.4
KHC				*e*pP	pP	03 05 59.8	+0.2
KHC				*e*x	x	03 06 04.0	
KHC	Kasperske Hory	80.80	329	IAmb	IAmb	03 05 58.2	
	comp=Z,14nm,0.9s						
ROTZ	Rotzenmuhle	80.82	330	*e*P	P	03 05 56.6	+0.6
	comp=Z,6.3nm,0.9s,baz=34,slow=5.4						
CONA	Conrad Observa	80.84	327	*e*P	P	03 05 57.7	+1.4
	comp=Z,11nm,0.9s,SNR=5.3						
GEC2	GERESS Array S	80.99	329	*e*P	P	03 05 57.8	+0.7
	comp=Z,3.5nm,0.9s,baz=34,slow=5.4						
GERES	GERESS Array B	80.99	329	P	P	03 05 57.2	+0.2
	comp=Z,2.5nm,0.6s,baz=44,slow=5.9,SNR=24						
GERES				LR	LR	03 44 14.9	
	comp=Z,222nm,18.1s,baz=21,slow=38						
GERES	GERESS Array B	80.99	329	P	P	03 05 57.1	+0.1
KASTN	Kahler Asten	81.00	333	*e*P	P	03 05 57.8	+0.7
	baz=34,slow=5.4						
RAYN	Ar Rayn	81.03	293	P	P	03 05 57.6	-0.1
RAYN				pmax	pmax		
	comp=Z,13nm,1.2s						
RAYN	Ar Rayn	81.03	293	P	P	03 05 57.6	-0.1
RAYN				IAmb	IAmb	03 06 06.3	
	comp=Z,13nm,1.1s						
T25A	Trinidad	81.05	49	P	P	03 05 58.9	+1.2
	baz=314						
WET	Wettzell	81.07	330	*e*P	P	03 05 58.6	+1.2
	comp=Z,9.8nm,1.0s,baz=34,slow=5.4						
BUG	Bochum--Univer	81.19	334	*e*P	P	03 05 58.8	+0.8
	comp=Z,14nm,1.0s,baz=34,slow=5.4						
GRF	Grafenberg Arr	81.25	331	*e*P	P	03 05 59.4	+1.0
	comp=Z,18nm,0.9s,baz=34,slow=5.4						
GRFO	Grafenberg	81.25	331	P	P	03 05 59.0	+0.7
GRFO				pmax	pmax		
	comp=Z,27nm,1.0s						
GRFO	Grafenberg	81.25	331	P	P	03 05 59.0	+0.7
ANMO	Albuquerque	81.36	51	P	P	03 06 00.6	+1.2
	baz=313						
ANMO	Albuquerque	81.36	51	*ce*P	P	03 06 00.3	+0.9
ANMO				pmax	pmax		
	comp=Z,14nm,1.3s						
ANMO	Albuquerque	81.36	51	P	P	03 05 59.8	+0.4
ARSA	Arzberg	81.52	327	*e*P	P	03 06 00.8	+1.0
	comp=Z,3.4nm,0.7s						
MOA	Molln	81.56	328	*e*P	P	03 06 00.7	+0.7
	comp=Z,3.8nm,1.0s						
VTS	Vitosha	81.56	320	⇓P	P	03 06 01.8	+1.5
VTS	Vitosha	81.56	320	IAmb	IAmb	03 06 10.0	
	comp=Z,15nm,0.8s						
MANT	Manisa	81.77	314	P	P	03 06 01.5	-0.1
TNS	Taunus Mts	81.81	333	*e*P	P	03 06 02.1	+0.8
	comp=Z,4.8nm,0.8s,baz=34,slow=5.4						
SOCY	Socotra	81.94	279	P	P	03 06 01.1	-1.5
SOCY				IAmb	IAmb	03 06 02.1	
	comp=Z,21nm,1.0s						
DIVS	Divibare	82.00	323	IAmb	IAmb	03 06 11.4	
	comp=Z,10nm,0.8s						
AHRW	Bad Neuenahr-A	82.02	334	*e*P	P	03 06 03.5	+1.2
	comp=Z,17nm,1.1s,baz=34,slow=5.4						
GROS	Grobnik	82.15	327	*i* P	P	03 06 03.8	+0.5
BISS	Bistriski jare	82.16	327	*i* P	P	03 06 04.0	+0.8
PERS	Pernice	82.18	327	*i* P	P	03 06 04.1	+0.7
SOKA	Soboth	82.18	327	*e*P	P	03 06 04.1	+0.8
	comp=Z,19nm,0.9s,SNR=7.5						
121A	Cookes Peak, D	82.19	54	P	P	03 06 05.1	+1.3
	baz=313,SNR=5.1						
121A	Cookes Peak, D	82.19	54	IAmb	IAmb	03 06 06.5	
	comp=Z,11nm,1.1s						
RJOB	Jochberg	82.24	329	*e*P	P	03 06 04.8	+1.2
	comp=Z,37nm,0.8s,baz=34,slow=5.4						
BTNL	Ternell	82.30	334	*d*P	P	03 06 02.2	-1.7
MEM	Membach	82.32	334	*d*P	P	03 06 04.0	0.0
FUR	Furstenfeldbru	82.48	330	*e*P	P	03 06 05.8	+0.9
	comp=Z,20nm,0.8s,baz=34,slow=5.4						
OBKA	Obir	82.52	327	*i* P	P	03 06 05.6	+0.5
	comp=Z,7.7nm,0.7s						
KBA	Koelnbreinsper	82.55	328	*e*P	P	03 06 06.5	+1.1
	comp=Z,14nm,0.9s,SNR=10						
STU	Stuttgart	82.76	332	*e*P	P	03 06 07.4	+1.1
	comp=Z,13nm,0.8s,baz=34,slow=5.4						
BGES	Gesves	82.82	335	*d*P	P	03 06 06.8	+0.3
BGES				*d*pP	pP	03 06 08.3	-1.9
BGES				*d*sP	PcP	03 06 09.2	-2.2
BGES				*d*PcP	sP	03 06 11.8	+0.4
SNF	Seneffe	82.97	335	*d*P	P	03 06 07.9	+0.7
BMRD	Maredsous	82.99	335	*d*P	P	03 06 07.5	+0.1
WATA	Walderalm	83.04	329	*e*P	P	03 06 08.5	+0.5
	comp=Z,20nm,1.4s						
WTTA	Wattenberg	83.08	329	*e*P	P	03 06 08.7	+0.5
	comp=Z,15nm,1.2s,SNR=4.7						
ABTA	Abfaltersbach	83.15	329	*i* P	P	03 06 08.9	+0.5
	comp=Z,12nm,1.1s						
MOTA	Moosalm	83.22	330	*e*P	P	03 06 09.5	+0.6
	comp=Z,22nm,1.1s,SNR=11						
RETA	Reutte	83.23	330	*e*P	P	03 06 09.5	+0.7
	comp=Z,18nm,1.1s,SNR=9.7						
SQTA	Sankt Quirin	83.28	330	*e*P	P	03 06 09.8	+0.7
	comp=Z,15nm,1.2s,SNR=4.6						
BFO	Black Forest	83.44	332	P	P	03 06 09.8	0.0
BFO				pmax	pmax		
	comp=Z,8.0nm,0.7s						
BFO	Black Forest	83.44	332	P	P	03 06 09.8	0.0
BFO				IAmb	IAmb	03 06 18.9	
	comp=Z,7.9nm,0.7s						
BFO	Black Forest	83.44	332	*e*P	P	03 06 10.7	+0.9
	comp=Z,4.5nm,0.8s,baz=34,slow=5.4						
MATQ	Matagami	83.47	25	P	P	03 06 09.6	-0.3
	baz=330						
FETA	Feichten	83.63	330	*i* P	P	03 06 12.1	+1.0
	comp=Z,8.8nm,1.0s,SNR=7.7						
DAVA	Damuels	83.74	330	*e*P	P	03 06 11.5	0.0
	comp=Z,20nm,1.2s						
LIT	Litokhoron	83.81	319	IAmb	IAmb	03 06 12.8	
	comp=Z,16nm,1.0s						
ECH	Echery	83.96	332	IAmb	IAmb	03 06 21.4	
	comp=Z,14nm,1.1s						
CTI	Castel Tesino	84.07	329	IAmb	IAmb	03 06 30.3	
	comp=Z,13nm,1.0s						
MSTX	Muleshoe	84.22	50	P	P	03 06 14.7	+0.5
	baz=315						
MSTX	Muleshoe	84.22	50	IAmb	IAmb	03 06 16.0	
	comp=Z,11nm,1.1s						
MNTX	Cornudas Mount	84.24	53	P	P	03 06 15.1	+0.8
	baz=314,SNR=10						
LSQQ	Lebel-sur-Quev	84.29	25	P	P	03 06 13.9	-0.2
	baz=330						
TEOL	Teolo	84.62	328	P	P	03 06 16.0	+0.1
P38A	Dawn	85.10	41	IAmb	IAmb	03 06 29.0	
	comp=Z,13nm,1.1s						
SENIN	Lac Senin/Sane	85.48	331	IAmb	IAmb	03 06 29.2	
	comp=Z,13nm,0.8s						
T35A	Sooner Cattle	85.60	44	IAmb	IAmb	03 06 23.3	
	comp=Z,15nm,1.1s						
P40A	Paris	85.91	40	IAmb	IAmb	03 06 24.0	
	comp=Z,19nm,1.3s						
WMOK	Wichita Mounta	85.96	47	P	P	03 06 23.2	+0.4
	baz=317						
HDIL	Hopedale	86.43	37	P	P	03 06 25.0	+0.1
	baz=322						
S39A	Bolivar	86.68	42	IAmb	IAmb	03 06 26.9	
	comp=Z,6.8nm,0.9s						
R40A	Maddies Statio	86.75	41	IAmb	IAmb	03 06 34.9	
	comp=Z,8.3nm,0.8s						
D56A	ZEC Mazanza, M	86.78	25	P	P	03 06 26.6	0.0
	baz=332						
TX32	Lajitas Array	86.95	54	IAmb	IAmb	03 06 29.2	
	comp=Z,8.5nm,1.1s						
TXAR	Lajitas Array	86.95	54	P	P	03 06 28.2	+0.4
	comp=Z,4.4nm,0.8s,baz=297,slow=3.5,SNR=48						
TXAR				PKKPbc	PKKPbc	03 24 19.1	-0.2
	comp=Z,0.2nm,0.8s,baz=133,slow=6.3,SNR=1.4						
TXAR	Lajitas Array	86.95	54	P	P	03 06 28.0	+0.1
ABTX	Abilene, Hawle	87.01	49	P	P	03 06 28.8	+0.8
	baz=317						
ABTX	Abilene, Hawle	87.01	49	IAmb	IAmb	03 06 29.9	
	comp=Z,18nm,1.1s						
U38A	Gravette	87.08	43	IAmb	IAmb	03 06 28.9	
	comp=Z,8.1nm,1.1s						
HPIG		87.37	57	IAmb	IAmb	03 06 32.8	
	comp=Z,9.2nm,1.1s						
CCM	Cathedral Cave	87.45	40	P	P	03 06 30.1	+0.1
	baz=321						
CCM	Cathedral Cave	87.45	40	P	P	03 06 29.7	-0.2
CCM				pmax	pmax		
	comp=Z,14nm,0.9s						
CCM	Cathedral Cave	87.45	40	P	P	03 06 29.7	-0.2
TRQ	Mont Tremblant	87.57	25	P	P	03 06 30.2	-0.3
MGMO	Mountain Grove	87.63	41	IAmb	IAmb	03 06 39.3	
	comp=Z,7.3nm,0.8s						
U40A	Yellville	87.94	42	P	P	03 06 32.4	0.0
	baz=320						
T42A	Van Buren	88.32	41	IAmb	IAmb	03 06 35.3	
	comp=Z,16nm,1.5s						
JCT	Junction City	88.47	51	P	P	03 06 34.9	-0.1
JCT				pmax	pmax		
	comp=Z,12nm,1.4s						
JCT	Junction City	88.47	51	P	P	03 06 34.9	-0.1
JCT				IAmb	IAmb	03 06 45.4	
	comp=Z,12nm,1.4s						
FCAR	Ozark Folk Cen	88.68	42	IAmb	IAmb	03 06 36.4	
	comp=Z,9.0nm,1.1s						
MIAR	Mount Ida	88.95	44	P	P	03 06 37.8	+0.6

	baz=320						
MIAR	**Mount Ida**	**88.95**	**44**	IAmb	IAmb	03 06 47.3	
	comp=Z,8.5nm,1.0s						
WHAR	**Wooly Hollow**	**89.06**	**43**	IAmb	IAmb	03 06 46.1	
	comp=Z,7.7nm,0.8s						
W41B	**Gary Mavity, V**	**89.17**	**43**	P	**P**	**03 06 38.1**	**-0.1**
	baz=321						
L53A	**Girard**	**89.19**	**31**	P	**P**	**03 06 39.2**	**+1.0**
	baz=328						
P49A	**Miami Univ. Ec**	**89.33**	**35**	P	**P**	**03 06 39.2**	**+0.3**
	baz=325						
H06E1	**SOCORRO T-PHAS**	**89.39**	**66**	T	T	04 45 56.9	
M53A	**WI Miller and**	**89.46**	**32**	P	**P**	**03 06 39.9**	**+0.5**
	baz=328						
WVT	**Waverly**	**90.64**	**39**	P	**P**	**03 06 45.3**	**+0.3**
	baz=323						
M57A	**Sunshine Farm,**	**90.92**	**29**	P	**P**	**03 06 46.6**	**+0.4**
	baz=330						
N57A	**Milroy**	**91.27**	**30**	P	**P**	**03 06 48.3**	**+0.5**
	baz=330						
KEST	**Kesra**	**93.58**	**324**	LR	LR	03 53 38.1	
	comp=Z,101nm,18.0s,baz=292,slow=38						
ESDC	**Sonseca Array**	**95.26**	**335**	P	**P**	**03 07 06.5**	**+0.1**
	comp=Z,1.3nm,0.8s,baz=32,slow=2.9,SNR=4.8						
ESDC				LR	LR	03 54 05.8	
	comp=Z,165nm,19.3s,baz=15,slow=38						
TORD	**Torodi Ar. Bea**	**116.29**	**318**	PKP	**PKPdf**	**03 12 25.9**	**-0.6**
	comp=Z,0.8nm,0.4s,baz=6.5,slow=1.3,SNR=1.8						
TORD				PP	**PP**	**03 13 28.2**	**-3.1**
	comp=Z,3.5nm,1.0s,baz=17,slow=6.5,SNR=7.9						
DBIC	**Dimbokro**	**125.11**	**320**	PKP	**PKPdf**	**03 12 42.7**	**-0.7**
	comp=Z,2.9nm,0.8s,baz=170,slow=6.1,SNR=2.3						
BOSA	**Boshof**	**128.71**	**263**	PKP	**PKPdf**	**03 12 50.0**	**0.0**
	comp=Z,2.0nm,0.8s,baz=6.2,slow=4.6,SNR=1.4						
BOSA	**Boshof**	**128.71**	**263**	PKIKP	**PKPdf**	**03 12 50.0**	**0.0**
LPAZ	**La Paz**	**143.69**	**58**	PKP	**PKPdf**	**03 13 17.7**	**-0.9**
	comp=Z,2.5nm,0.9s,baz=335,slow=2.2,SNR=6.7						
LPAZ	**La Paz**	**143.69**	**58**	PKPdf	**PKPdf**	**03 13 17.4**	**-1.2**
SNAA	**Sanae**	**144.15**	**197**	PKPdf	**PKPab**	**03 13 14.4**	**-0.3**
PATCX	**Punta Patache**	**145.46**	**66**	PKPbc	**PKPbc**	**03 13 20.9**	**0.0**
H03N2	**Juan Fernandez**	**145.57**	**93**	T	T	05 56 12.3	
	baz=300						
H03N3	**Juan Fernandez**	**145.59**	**93**	T	T	05 56 11.5	
	baz=300						
H03N1	**Juan Fernandez**	**145.59**	**93**	T	T	05 56 16.7	
	baz=300						
VNA2	**Neumayer--Watz**	**145.71**	**196**	PKPdf	**PKPbc**	**03 13 20.3**	**+0.2**
VNA3	**Neumayer Olymp**	**145.94**	**195**	PKPdf	**PKPdf**	**03 13 20.2**	**+0.1**
VNA1	**Neumayer--Stat**	**146.11**	**196**	PKPdf	**PKPbc**	**03 13 21.5**	**+0.2**
LVC	**Limon Verde**	**147.50**	**67**	PKP2	**PKPbc**	**03 13 27.7**	**+0.5**
LVC	**Limon Verde**	**147.50**	**67**		**PKPbc**	**03 13 27.7**	**+0.5**
GO02	**Mina Guanaco**	**148.58**	**72**		**PKPbc**	**03 13 30.1**	**+0.2**
GO03	**Copiap**	**149.48**	**76**	PKPbc	**PKPbc**	**03 13 31.6**	**-0.3**
LCO	**Las Campanas**	**149.87**	**79**	PKP2	**PKPbc**	**03 13 33.3**	**+0.2**
LCO	**Las Campanas**	**149.87**	**79**		**PKPbc**	**03 13 33.3**	**+0.2**
AC05	**El Transito**	**150.10**	**79**		**PKPdf**	**03 13 28.3**	**-0.2**
AC05				PKPbc	**PKiKP**	**03 13 34.0**	**-0.3**
BO02	**Sierra Bellavi**	**152.34**	**90**	PKPdf	**PKPdf**	**03 13 31.8**	**+0.3**
BO02				PKPbc	**PKPbc**	**03 13 38.5**	**+0.1**
BO02				PKPab	**sPKPbc**	**03 13 46.0**	**+2.5**
BI02	**San Fabin de**	**152.59**	**94**		**PKPbc**	**03 13 39.0**	**+0.1**
LC01	**Cunco**	**152.74**	**99**		**PKPbc**	**03 13 39.1**	**+0.1**
PLCA	**Paso Flores**	**154.11**	**103**	PKPbc	**PKPbc**	**03 13 42.2**	**+0.1**
	comp=Z,3.1nm,1.1s,baz=244,slow=4.2,SNR=2.8						
CPUP	**Villa Florida**	**157.86**	**58**	PKPab	**PKPab**	**03 14 11.9**	**-0.2**
	comp=Z,1.6nm,0.9s,baz=281,slow=2.3,SNR=3.6						

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*IDC **22** 03:09:10.7±1.1, 64°.68S×177°.41E, h0^{km}, mb4.2/5, mb1 4.4/6, mb1mx4.2/26, mbtmp4.3/6, ML4.5/1, MS4.1/11, Ms1 4.1/11, ms1mx3.9/20, Error ellipse: s-maj=51.2km s-min=28.2km az=56.0*

*GCMT **22** 03:09:14.0±0.2, 64°.78S±0°.02×177°.15E±0°.04, h22^{km}±1^{km}, MW5.1/99, Moment Tensor Solution. s32,c35; s99,c139; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.67±.18; M$_{\theta\theta}$3.39±.16; M$_{\phi\phi}$-2.73±.14; M$_{r\theta}$-4.58±.48; M$_{\theta\phi}$-1.16±.10; M$_{\phi r}$-0.09±.21; Best double couple: M$_0$5.25700×10^{16} NP1:φ$_s$331.00000°, δ29.00000°, λ-14.00000°. NP2: φ$_s$74.00000°, δ83.00000°, λ-118.00000°. Principal axes: T 6.4640, Plg32.0000°, Azm187.0000°; N -2.4230, Plg28.0000°, Azm77.0000°; P -4.0490, Plg45.0000°, Azm316.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 22 03:09:13.1±0.8, **64°.9S**±0°.1×**176°.6E**±0°.2, **h10**^{km}**, n39, σ1^{s}.52**/14, **mb4.0**/5, **MS4.1**/13, **Balleny Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNDA	**Vanda**	**13.50**	**194**	Pn	**Pn**	**03 12 25.6**	**+1.3**
	1.9nm,0.3s,baz=26,slow=16,SNR=59						
VNDA				LR	LR	03 16 22.2	
	comp=Z,2μm,21.5s,baz=22,slow=31						
RPZ	**Rata Peaks**	**21.42**	**349**	LR	LR	03 20 37.1	
	comp=Z,736nm,19.1s,baz=164,slow=32						
URZ	**Urewera**	**26.64**	**1**	LR	LR	03 23 30.0	
	comp=Z,613nm,20.4s,baz=202,slow=32						
STKA	**Stephens Creek**	**39.40**	**310**	P	**P**	**03 16 43.7**	**+1.0**
	2.8nm,1.1s,baz=158,slow=11,SNR=3.5						
STKA				LR	LR	03 29 59.4	
	comp=Z,106nm,18.6s,baz=244,slow=32						
MAW	**Mawson**	**39.72**	**213**	LR	LR	03 33 23.0	
	comp=Z,982nm,18.1s,baz=136,slow=36						
DZM	**Mont Dzumac**	**43.30**	**346**	*e*LR	LR	03 29 27.9	
	comp=Z,676nm,24.2s						
TBI	**Tubuai**	**46.99**	**45**	*e*LQ	LQ	03 28 37.5	
	581nm,29.0s						
TBI				*e*LR	LR	03 30 31.6	
	comp=Z,499nm,28.5s,baz=198						
TBI	**Tubuai**	**46.99**	**45**	*e*T	T	04 07 01.9	
	27nm,0.3s						
H01W1	**Cape Leeuwin H**	**47.38**	**278**	T	T	04 09 25.0	
	baz=149,slow=76,SNR=53						
H01W2	**Cape Leeuwin H**	**47.38**	**278**	T	T	04 09 25.3	
	baz=149,slow=76,SNR=60						
H01W3	**Cape Leeuwin H**	**47.39**	**278**	T	T	04 09 26.3	
	baz=149,slow=76,SNR=59						
ASAR	**Alice Springs**	**49.56**	**305**	P	**P**	**03 18 03.4**	**-0.6**
	0.9nm,0.9s,baz=157,slow=7.6,SNR=4.8						
TVO	**Taravao**	**52.30**	**42**	*e*T	T	04 13 40.9	
	5.8nm,0.3s						
PAE	**Paea**	**52.33**	**42**	*e*T	T	04 13 41.8	
	2.2nm,0.3s						
PPT2	**Papeete2**	**52.40**	**42**	*e*S	**S**	**03 25 54.4**	**+3.3**
	113nm,27.0s						
PPT2				*e*LR	LR	03 33 11.8	
	comp=Z,266nm,22.2s						
PPT2	**Papeete2**	**52.40**	**42**	*e*T	T	04 13 47.0	
	8.7nm,0.3s						
TIAR	**Tiarei**	**52.49**	**42**	*e*T	T	04 13 54.4	
	4.8nm,0.3s						
WRA	**Warramunga Arr**	**52.85**	**307**	LR	LR	03 38 21.5	
	comp=Z,250nm,20.4s,baz=150,slow=33						
VAH	**Vaihoa**	**55.19**	**43**	*e*T	T	04 17 16.6	
	134nm,0.2s						
PLCA	**Paso Flores**	**62.50**	**128**	LR	LR	03 40 36.7	
	comp=Z,69nm,18.1s,baz=200,slow=30						
H03S2	**Juan Fernandez**	**65.64**	**118**	T	T	04 31 31.1	
	baz=205,slow=74,SNR=60						
H03S1	**Juan Fernandez**	**65.64**	**118**	T	T	04 31 33.0	
	baz=205,slow=74,SNR=58						
H03S3	**Juan Fernandez**	**65.66**	**118**	T	T	04 31 36.1	
	baz=205,slow=74,SNR=43						
LEM	**Lembang**	**75.01**	**286**	LR	LR	03 48 43.9	
	comp=Z,64nm,21.8s,baz=246,slow=32						
CPUP	**Villa Florida**	**80.02**	**133**	P	**P**	**03 21 20.8**	**-1.7**
	0.9nm,0.5s,baz=193,slow=8.0,SNR=4.1						
CPUP				LR	LR	03 52 52.3	
	comp=Z,51nm,18.8s,baz=198,slow=33						
BOSA	**Boshof**	**84.20**	**205**	P	**P**	**03 21 46.0**	**+1.4**
	15nm,1.5s,baz=172,slow=7.3,SNR=1.2						
BOSA				LR	LR	03 56 12.4	
	comp=Z,262nm,20.8s,baz=168,slow=33						
LPAZ	**La Paz**	**85.58**	**119**	LR	LR	03 50 39.6	
	comp=Z,27nm,19.3s,baz=290,slow=29						
H08S2	**Diego Garcia H**	**89.08**	**254**	T	T	05 01 49.2	
	baz=153,slow=76,SNR=6.4						
H08S3	**Diego Garcia H**	**89.10**	**254**	T	T	05 01 56.8	
	baz=151,slow=76,SNR=57						
MATP	**Matopo**	**91.52**	**210**	P	**P**	**03 22 20.6**	**+0.7**
	1.5nm,0.9s,baz=57,slow=4.5,SNR=1.9						
H02S1	**DAWSON INLET T**	**124.07**	**34**	T	T	05 43 54.8	
	SNR=79						
H02N1	**VAN INLET T-PH**	**124.09**	**34**	T	T	05 43 50.9	
	SNR=20						
ILAR	**Eielson Array**	**132.04**	**20**	PKP	**PKPdf**	**03 28 23.9**	**-1.1**
	0.4nm,0.9s,baz=210,slow=2.9,SNR=2.4						
MKAR	**Makanchi Array**	**132.78**	**291**	PKP	**PKPdf**	**03 28 26.2**	**-0.8**
	0.4nm,1.0s,baz=103,slow=3.1,SNR=1.8						
YKA	**Yellowknife Ar**	**136.80**	**39**	PKP	**PKPdf**	**03 28 32.1**	**-1.8**
	0.2nm,0.8s,baz=204,slow=1.4,SNR=2.6						
AKTO	**Aktyubinsk**	**145.68**	**275**	PKPbc	**PKPdf**	**03 28 50.0**	**-0.3**
	1.1nm,0.8s,baz=147,slow=5.9,SNR=3.0						
KBZ	**Khabaz**	**146.81**	**253**	PKPbc	**PKPbc**	**03 28 54.4**	**+0.1**
	4.1nm,1.0s,baz=164,slow=3.3,SNR=6.5						
BRTR	**Keskin Array B**	**147.00**	**238**	PKPbc	**PKPbc**	**03 28 55.1**	**-0.1**
	2.9nm,0.9s,baz=164,slow=3.2,SNR=12						
ARU	**Arti**	**149.71**	**284**	PKPbc	**PKPbc**	**03 29 00.6**	**-0.9**
	0.3nm,0.3s,baz=121,slow=23,SNR=2.1						

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*NNC **22** 03:17:56.4±0.7, 46°.11N×79°.05E, h4^{km}±7^{km}, mb3.6, mpv3.4, Error ellipse: s-maj=7.6km s-min=4.0km az=111.0*

*SOME **22** 03:17:57.6, 46°.12N×79°.07E, h20^{km}*

ISC 22 03:17:56.2±0.9, **46°.11N**±0°.03×**79°.28E**±0°.04, **h10**^{km}**, n49, σ1^{s}.39**/70, **3C-9D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TDK	**Taldyqorghan**	**1.26**	**210**	*e*P	**Pg**	**03 18 20.0**	**-0.4**
	149nm,0.1s						
TDK				*e*S	**Sb**	**03 18 35.8**	**-0.6**
	216nm,0.1s						
TDK	**Taldyqorghan**	**1.26**	**210**	P	**Pg**	**03 18 20.0**	**-0.4**
	149nm,0.1s						
TDK				S	**Sb**	**03 18 35.8**	**-0.6**
	216nm,0.1s						
DJR	**Jarkent**	**1.81**	**168**	*e*P	**Pg**	**03 18 30.9**	**0.0**
	25nm,0.3s						
DJR				*e*S	**Sg**	**03 18 55.1**	**+0.8**
	48nm,0.4s						
DJR	**Jarkent**	**1.81**	**168**	P	**Pg**	**03 18 30.9**	**0.0**
	25nm,0.3s						
DJR				S	**Sg**	**03 18 55.1**	**+0.8**
	48nm,0.4s						
MAKZ	**Makanchi**	**1.99**	**68**	⇓Pn	**Pg**	**03 18 32.9**	**-1.4**
	3.8nm,0.2s						
MAKZ				⇑Sn	**Sg**	**03 18 59.9**	**-0.3**
	13nm,0.3s						
MNBS	**Baschi**	**2.12**	**197**	*e*P	**Pb**	**03 18 35.3**	**+0.6**
	19nm,0.1s						
MNBS				*e*S	**Sb**	**03 19 01.9**	**+0.8**
	65nm,0.2s						
MNBS	**Baschi**	**2.12**	**197**	Pg	**Pb**	**03 18 35.3**	**+0.6**
	19nm,0.1s						
MNBS				Lg	Lg	03 19 01.9	
	65nm,0.2s						
ARXS	**Arharly**	**2.15**	**209**	*e*P	**Pb**	**03 18 35.2**	**-0.1**
	22nm,0.3s						
ARXS				*e*S	**Sb**	**03 19 02.4**	**+0.2**
	91nm,0.3s						
ARXS	**Arharly**	**2.15**	**209**	Pg	**Pb**	**03 18 35.2**	**-0.1**
	22nm,0.3s						
ARXS				Lg	Lg	03 19 02.3	
	91nm,0.3s						
MK31	**Makanchi Array**	**2.19**	**71**	Pn	**Pb**	**03 18 36.1**	**+0.2**
	1.0nm,0.2s,baz=251,slow=16,SNR=147						
MK31				⇓Sn	**Sg**	**03 19 05.8**	**-0.8**
	6.4nm,0.3s,baz=252,slow=28,SNR=18						
KPKS	**Kokpek**	**2.67**	**189**	*e*P	**Pg**	**03 18 45.8**	**-1.6**
	27nm,0.4s						
KPKS				*e*S	**Sg**	**03 19 20.0**	**-2.0**
	52nm,0.6s						
KURS	**Kuram**	**2.73**	**197**	*e*P	**Pg**	**03 18 46.9**	**-1.7**
	8.0nm,0.2s						
KURS				*e*S	**Sg**	**03 19 21.8**	**-2.2**
	12nm,0.5s						
KURS	**Kuram**	**2.73**	**197**	Pg	**Pg**	**03 18 46.9**	**-1.7**
	8.0nm,0.2s						
KURS				Lg	Lg	03 19 21.8	
	12nm,0.5s						
PDGK	**Podgornoye**	**2.78**	**177**	Pg	**Pg**	**03 18 48.1**	**-1.3**
	9.7nm,0.2s						
PDGK				Lg	Lg	03 19 23.5	
	5.1nm,0.2s						
PDGK	**Podgornoye**	**2.78**	**177**	⇓Pg	**Pb**	**03 18 47.4**	**+1.4**
	8.6nm,0.4s						
PDGK				⇓Lg	Lg	03 19 23.2	
	7.5nm,0.6s						
SHLS	**Shalkode**	**2.95**	**177**	*e*P	**Pg**	**03 18 51.8**	**-1.0**
	3.7nm,0.2s						
SHLS				*e*S	**Sg**	**03 19 29.9**	**-1.0**
	20nm,0.5s						
SHLS	**Shalkode**	**2.95**	**177**	Pg	**Pg**	**03 18 51.7**	**-1.0**
	3.7nm,0.2s						
SHLS				Lg	Lg	03 19 29.9	
	20nm,0.5s						
UZB	**Uzynbulak**	**2.96**	**184**	*e*P	**Pg**	**03 18 51.5**	**-1.4**
	2.5nm,0.2s						
UZB				*e*S	**Sg**	**03 19 28.6**	**-2.7**
	10nm,0.2s						
UZB	**Uzynbulak**	**2.96**	**184**	Pg	**Pb**	**03 18 50.2**	**+1.0**
	7.7nm,0.3s						
UZB				Lg	Lg	03 19 27.0	
	10nm,0.3s						
KTBS	**Karatobe**	**3.02**	**219**	*e*P	**Pb**	**03 18 51.1**	**+0.9**
	2.2nm,0.2s						
KTBS				*e*S	**Sb**	**03 19 29.0**	**+1.9**
	136nm,0.5s						
KTBS	**Karatobe**	**3.02**	**219**	Pg	**Pb**	**03 18 51.1**	**+0.9**
	2.2nm,0.2s						
KTBS				Lg	Lg	03 19 29.0	
	136nm,0.5s						
KUU	**Kurty**	**3.04**	**224**	*e*P	**Pb**	**03 18 50.4**	**-0.1**
	3.7nm,0.3s						
KUU				*e*S	**Sb**	**03 19 27.7**	**+0.1**
	61nm,0.3s						
KUU	**Kurty**	**3.04**	**224**	Pg	**Pb**	**03 18 50.4**	**-0.1**
	3.7nm,0.3s						
KUU				Lg	Lg	03 19 27.7	
	61nm,0.3s						
SATY	**Saty**	**3.11**	**192**	*e*P	**Pg**	**03 18 54.1**	**-1.6**
	7.1nm,0.1s						
SATY				*e*S	**Sg**	**03 19 33.7**	**-2.4**
	31nm,0.2s						
SATY	**Saty**	**3.11**	**192**	Pg	**Pg**	**03 18 54.2**	**-1.6**
	7.1nm,0.1s						
SATY				Lg	Lg	03 19 33.7	
	31nm,0.2s						
KOTS	**Kotyrbulak**	**3.26**	**209**	*e*P	**Pb**	**03 18 55.1**	**+0.9**
	3.5nm,0.3s						
KOTS				*e*S	**Sb**	**03 19 36.3**	**+2.2**
	65nm,0.6s						
KOTS	**Kotyrbulak**	**3.26**	**209**	Pg	**Pb**	**03 18 55.1**	**+0.9**
	3.5nm,0.3s						
KOTS				Lg	Lg	03 19 36.3	
	65nm,0.6s						
MDOK	**Medeo**	**3.35**	**209**	*e*P	**Pb**	**03 18 56.2**	**+0.5**
	2.3nm,0.3s						
MDOK				*e*S	**Sb**	**03 19 37.7**	**+1.2**
	10nm,0.5s						
MDOK	**Medeo**	**3.35**	**209**	Pg	**Pb**	**03 18 57.2**	**+1.5**
	1.5nm,0.4s						
MDOK				Lg	Lg	03 19 38.2	
	9.9nm,0.6s						
MDOK	**Medeo**	**3.35**	**209**	Pg	**Pb**	**03 18 56.2**	**+0.5**
	2.3nm,0.3s						
MDOK				Lg	Lg	03 19 37.7	
	10nm,0.5s						
TNSS	**Tian-Shan**	**3.49**	**209**	*e*P	**Pb**	**03 19 00.0**	**+1.7**
	2.1nm,0.3s						
TNSS				*e*S	**Sb**	**03 19 44.0**	**+3.1**
	7.2nm,0.4s						
TNSS	**Tian-Shan**	**3.49**	**209**	Pg	**Pb**	**03 19 00.0**	**+1.7**
	2.1nm,0.3s						
TNSS				Lg	Lg	03 19 44.0	
	7.2nm,0.4s						
IZV	**Izvestkoviy**	**3.61**	**213**	*e*P	**Pb**	**03 19 01.2**	**+1.0**
	2.4nm,0.5s						
IZV				*e*S	**Sb**	**03 19 46.8**	**+2.6**
	13nm,0.4s						
IZV	**Izvestkoviy**	**3.61**	**213**	Pg	**Pb**	**03 19 01.2**	**+1.0**
	2.4nm,0.5s						
IZV				Lg	Lg	03 19 46.8	
	13nm,0.4s						
DGS	**Degeres**	**3.80**	**222**	*e*P	**Pb**	**03 19 03.8**	**+0.3**
	3.3nm,0.4s						
DGS				*e*S	**Sb**	**03 19 51.1**	**+1.5**
	18nm,0.6s						
DGS	**Degeres**	**3.80**	**222**	Pg	**Pb**	**03 19 03.8**	**+0.3**
	3.3nm,0.4s						
DGS				Lg	Lg	03 19 51.1	
	18nm,0.6s						
BTLS	**Baital**	**3.83**	**256**	*e*P	**Pb**	**03 19 04.8**	**+1.0**
	3.1nm,0.1s						
BTLS				*e*S	**Sb**	**03 19 52.1**	**+1.9**
	1.6nm,0.1s						
BTLS	**Baital**	**3.83**	**256**	Pg	**Pb**	**03 19 04.9**	**+1.1**
	3.0nm,0.4s						
BTLS				Lg	Lg	03 19 52.7	
	3.1nm,0.4s						
KST	**Kastek**	**3.87**	**219**	*e*P	**Pb**	**03 19 05.5**	**+0.8**
	1.1nm,0.1s						
KST				*e*S	**Sb**	**03 19 53.7**	**+2.1**
	16nm,0.3s						
KST	**Kastek**	**3.87**	**219**	Pg	**Pb**	**03 19 05.5**	**+0.8**
	1.1nm,0.1s						
KST				Lg	Lg	03 19 53.7	
	16nm,0.3s						
ZSN	**Zaisan**	**4.07**	**69**	*e*P	**Pb**	**03 19 09.0**	**+1.1**
	2.3nm,0.2s						
ZSN				*e*S	**Sb**	**03 19 59.9**	**+2.9**
	5.0nm,0.4s						
ZSN	**Zaisan**	**4.07**	**69**	Pg	**Pg**	**03 19 12.0**	**-2.1**
	2.8nm,0.3s						
ZSN				Lg	Lg	03 20 04.5	
	5.9nm,0.5s						
TKM2	**Tokmak 2**	**4.13**	**221**	Pg	**Pb**	**03 19 11.2**	**+2.1**
	1.7nm,0.7s						
TKM2				Lg	Lg	03 20 01.7	
	5.4nm,0.5s						
SGDS	**Sogindy**	**4.24**	**233**	Pg	**Pb**	**03 19 11.3**	**+0.4**
	3.2nm,0.6s						
SGDS				Lg	Lg	03 20 03.4	
	8.3nm,0.4s						
KURBB	**Kurchatov Arra**	**4.55**	**354**	⇓Pg	**Pb**	**03 19 16.0**	**-0.1**
	2.0nm,0.7s						
KURBB				⇓Lg	Lg	03 20 17.2	
	12nm,0.6s						
KURK	**Kurchatov**	**4.63**	**355**	⇑Pg	**Pb**	**03 19 18.6**	**+1.1**
	4.2nm,1.1s						
KURK				⇑Lg	Lg	03 20 19.2	
	5.5nm,0.6s						
AAK	**Ala-Archa**	**4.88**	**226**	⇓Lg	Lg	03 20 26.4	
	5.5nm,0.5s						
MRKS	**Merke**	**5.49**	**234**	Pg	**Pb**	**03 19 34.4**	**+2.3**
	2.2nm,0.9s						
MRKS				Lg	Lg	03 20 43.2	
	5.5nm,0.4s						
KK31	**Karatay Array**	**6.94**	**248**	⇓Pg	Pb	03 20 01.7	+4.8
	0.2nm,0.3s						
KK31				⇓Lg	Lg	03 21 29.0	
	2.7nm,0.6s,baz=60,slow=28,SNR=6.3						

ATH 22 03:40:21.0, 40°.02N×21°.05E, h10^{km}±3^{km}, ML1.9/3, Error ellipse: s-maj=3.6km s-min=0.9km az=12.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PENT	**Pentalofos**	**0.19**	**22**	P	Pg	03 40 24.6	-0.3
PENT				S	Sg	03 40 27.7	0.0
PENT				AML	AML	03 40 28.2	
	comp=E,1196μm,0.4s						
PENT				AML	AML	03 40 28.4	
	comp=N,1205μm,0.3s						
KPRO	**Kipourio**	**0.25**	**106**	P	Pg	03 40 25.8	-0.2
KPRO				S	Sg	03 40 29.9	+0.4
KPRO				AML	AML	03 40 30.4	
	comp=E,1867μm,0.5s						
KPRO				AML	AML	03 40 30.5	
	comp=N,860μm,0.2s						
NEST	**Nestorio**	**0.39**	**360**	P	Pg	03 40 28.8	+0.1
NEST				S	Sg	03 40 33.9	0.0
JAN	**Janina**	**0.40**	**203**	P	Pg	03 40 28.4	-0.4
JAN				S	Sg	03 40 34.6	+0.7
JAN				AML	AML	03 40 37.1	
	comp=E,258μm,0.3s						
JAN				AML	AML	03 40 38.1	
	comp=N,369μm,0.2s						
KZN	**Kozani**	**0.62**	**63**	P	Pg	03 40 32.0	-1.0
FNA	**Florina**	**0.80**	**18**	P	Pg	03 40 35.7	-0.7
FNA				S	Sb	03 40 47.7	-0.3
THL	**Klokotos Trika**	**0.87**	**121**	P	Pg	03 40 37.4	-0.3
KEK	**Kerkira**	**1.01**	**253**	P	Pg	03 40 39.3	-1.1
EVR	**Evrytania**	**1.25**	**152**	P	Pn	03 40 44.0	-0.6
MAKR	**Makrakomi, Fth**	**1.31**	**140**	P	Pn	03 40 45.4	0.0
AGG	**Agios Georgios**	**1.41**	**135**	P	Pn	03 40 46.8	+0.1

THE 22 03:40:22.1, 38°.42N×20°.53E, h7^{km}±1^{km}, ML1.5/8, Error ellipse: s-maj=1.9km s-min=0.4km az=113.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VSK1	**VASILIKIADES**	**0.03**	**117**	P	Pg	03 40 23.1	-0.4
VSK1				S	Sg	03 40 24.3	-0.2
KEF5	**Kardakata, Kep**	**0.15**	**198**	P	Pg	03 40 25.1	-0.2
KEF5				S	Sg	03 40 28.0	+0.6
	1μm,0.1s						
KEF4	**Livadi, Kephal**	**0.18**	**206**	P	Pg	03 40 25.8	0.0
KEF4				S	Sg	03 40 29.2	+0.9
	3μm,0.2s						
DMLN	**Damoulianata-K**	**0.22**	**213**	P	Pg	03 40 26.3	-0.2
DMLN				S	Sg	03 40 30.1	+0.6
	172nm,0.3s						
EVGI	**Lefkada island**	**0.22**	**27**	P	Pg	03 40 26.4	-0.1
EVGI				S	Sg	03 40 30.3	+0.8
	225nm,0.1s						
KEF3	**Kipouria, Keph**	**0.26**	**213**	P	Pg	03 40 26.6	-0.6
KEF3				S	Sg	03 40 30.9	+0.2
	490nm,0.1s						
PSDA	**Pessada-Kefalo**	**0.31**	**172**	P	Pg	03 40 28.1	-0.1
PSDA				S	Sg	03 40 32.9	+0.6
	58nm,0.1s						
NYDR	**Nydri-Lefkada**	**0.32**	**25**	P	Pg	03 40 28.0	-0.4
NYDR				S	Sg	03 40 33.2	+0.6
	95nm,0.3s						
LKD2	**Lefkada island**	**0.38**	**16**	P	Pg	03 40 29.0	-0.5
LKD2				S	Sg	03 40 35.1	+0.6
	62nm,0.3s						

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*SOME **22** 03:45:02.3, 40°.47N×76°.68E, h0^{km}*

*KRNET **22** 03:45:03.5±0.1, 40°.39N×76°.86E, mb3.1*

*NNC **22** 03:45:04.1±1.3, 40°.41N×76°.89E, h0^{km}, mb3.7, mpv3.4, Error ellipse: s-maj=8.7km s-min=6.2km az=169.0*

ISC 22 03:45:05.4±1.4, **40°.30N**±0°.07×**76°.82E**±0°.03, **h10**^{km}**, n66, σ1^{s}.63**/101, **28C-18D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDJ	**Kajisay**	**1.84**	**8**	⇑*i*P	**Pn**	**03 45 36.2**	**-1.1**
	baz=8.0						
KDJ				⇑*i*S	**Sb**	**03 46 00.4**	**-2.1**
	baz=8.0						
ULHL	**Ulahol**	**1.99**	**348**	⇑*i*P	**Pn**	**03 45 38.8**	**-0.5**
	baz=46						
ULHL				⇑*i*S	**Sb**	**03 46 04.7**	**-2.0**
	baz=46						
ULHL	**Ulahol**	**1.99**	**348**	P	**Pn**	**03 45 39.0**	**-0.2**
	SNR=69						
BOOM	**Boomskoye usch**	**2.28**	**343**	⇑*i*P	**Pn**	**03 45 43.4**	**+0.1**
	baz=42						
BOOM				⇑*i*S	**Sb**	**03 46 12.5**	**-2.6**
	baz=42						
ARLS	**Aral**	**2.44**	**310**	⇑*e*P	**Pn**	**03 45 46.3**	**+0.8**
	baz=8.0						
ARLS				⇑*i*S	**Sb**	**03 46 17.5**	**-2.3**
	baz=8.0						
PRZ	**Przheval'sk**	**2.48**	**28**	⇑*i*P	**Pn**	**03 45 46.1**	**+0.1**
	baz=28						
PRZ				⇑*i*S	**Sn**	**03 46 16.6**	**+0.1**
	baz=28						
ANVS	**Anan'yevo**	**2.56**	**14**	⇑*i*P	**Pn**	**03 45 47.3**	**+0.2**
	baz=14						
ANVS				⇑*i*S	**Sn**	**03 46 19.1**	**+0.7**
	baz=14						
SFK	**Sufi-Kurgan**	**2.56**	**265**	⇑*i*P	**Pn**	**03 45 48.7**	**+1.6**
	baz=63						
SFK				⇑*i*S	**Sb**	**03 46 21.6**	**-1.5**
	baz=63						
UCH	**Uchtor**	**2.59**	**319**	⇓*i*P	**Pn**	**03 45 48.3**	**+0.5**
	baz=17						
UCH				⇓*i*S	**Sn**	**03 46 20.8**	**+1.2**
	baz=17						
UCH	**Uchtor**	**2.59**	**319**	P	**Pb**	**03 45 50.6**	**-1.6**
	SNR=7.6						
TNSS	**Tian-Shan**	**2.73**	**2**	*e*P	**Pb**	**03 45 52.1**	**-2.5**
	12nm,0.4s						

TNSS				*e*S	**Sb**	**03 46 28.1**	**-0.2**
	12nm,0.5s						
TNSS	**Tian-Shan**	**2.73**	**2**	Pg	**Pb**	**03 45 52.1**	**-2.5**
	23nm,0.6s						
TNSS				Lg	Lg	03 46 28.1	
	12nm,0.5s						
IZV	**Izvestkoviy**	**2.73**	**357**	*e*P	**Pb**	**03 45 52.5**	**-2.0**
	14nm,0.5s						
IZV				*e*S	**Sb**	**03 46 28.6**	**+0.5**
	14nm,0.6s						
IZV	**Izvestkoviy**	**2.73**	**357**	Pg	**Pb**	**03 45 52.5**	**-2.0**
	14nm,0.5s						
IZV				Lg	Lg	03 46 28.6	
	14nm,0.6s						
KBK	**Karagaybulak**	**2.74**	**330**	⇑*e*P	**Pn**	**03 45 49.9**	**+0.3**
	baz=28						
KBK				⇑*i*S	**Sn**	**03 46 23.8**	**+1.0**
	baz=28						
KBK	**Karagaybulak**	**2.74**	**330**	P	**Pb**	**03 45 53.5**	**-1.1**
	SNR=8.6						
TKM2	**Tokmak 2**	**2.77**	**341**	⇓*i*P	**Pn**	**03 45 50.3**	**+0.2**
	baz=40						
TKM2				⇓*i*S	**Sn**	**03 46 24.5**	**+0.8**
	baz=40						
TKM2	**Tokmak 2**	**2.77**	**341**	P	**Pn**	**03 45 51.2**	**+1.2**
	SNR=13						
TKM2	**Tokmak 2**	**2.77**	**341**	⇑Pg	**Pn**	**03 45 51.6**	**+1.6**
	7.3nm,0.5s						
TKM2				⇓Lg	Lg	03 46 30.2	
	5.9nm,0.4s						
KST	**Kastek**	**2.81**	**347**	*e*P	**Pb**	**03 45 53.7**	**-2.1**
	12nm,0.4s						
KST				*e*S	**Sb**	**03 46 30.3**	**0.0**
	7.8nm,0.8s						
KST	**Kastek**	**2.81**	**347**	Pg	**Pb**	**03 45 53.7**	**-2.1**
	12nm,0.4s						
KST				Lg	Lg	03 46 30.3	
	7.8nm,0.8s						
MDOK	**Medeo**	**2.86**	**3**	*e*P	**Pb**	**03 45 54.2**	**-2.5**
	7.4nm,0.5s						
MDOK				*e*S	**Sb**	**03 46 31.8**	**0.0**
	21nm,0.5s						
MDOK	**Medeo**	**2.86**	**3**	⇑Pg	**Pb**	**03 45 53.9**	**-2.7**
	7.8nm,0.4s						
MDOK				⇓Lg	Lg	03 46 32.0	
	15nm,0.5s						
MDOK	**Medeo**	**2.86**	**3**	Pg	**Pb**	**03 45 54.2**	**-2.5**
	7.4nm,0.5s						
MDOK				Lg	Lg	03 46 31.8	
	21nm,0.5s						
AAK	**Ala-Archa**	**2.91**	**324**	⇓*i*P	**Pn**	**03 45 52.4**	**+0.4**
	baz=22						
AAK				⇓*i*S	**Sn**	**03 46 28.1**	**+1.0**
	baz=22						
AAK	**Ala-Archa**	**2.91**	**324**	P	**Pn**	**03 45 53.6**	**+1.6**
	SNR=9.7						
AAK	**Ala-Archa**	**2.91**	**324**	⇑Pg	**Pb**	**03 45 56.0**	**-1.5**
	7.0nm,0.5s						
AAK				⇓Lg	Lg	03 46 35.1	
	32nm,1.1s						
KNDC	**Almaty**	**2.91**	**2**	⇓Pg	**Pb**	**03 45 57.7**	**+0.3**
	16nm,0.5s						
KNDC				⇓Lg	Lg	03 46 33.3	
	77nm,0.6s						
KOTS	**Kotyrbulak**	**2.94**	**4**	*e*P	**Pb**	**03 45 56.2**	**-1.7**
	18nm,0.4s						
KOTS				*e*S	**Sb**	**03 46 35.0**	**+1.1**
	85nm,0.7s						
KOTS	**Kotyrbulak**	**2.94**	**4**	Pg	**Pb**	**03 45 56.3**	**-1.7**
	18nm,0.4s						
KOTS				Lg	Lg	03 46 35.0	
	85nm,0.7s						
AML	**Almayashu**	**2.98**	**309**	⇓*i*P	**Pn**	**03 45 53.7**	**+0.6**
	baz=7.0						
AML				⇓*i*S	**Sn**	**03 46 30.5**	**+1.4**
	baz=7.0						
AML	**Almayashu**	**2.98**	**309**	P	**Pn**	**03 45 54.8**	**+1.7**
	SNR=12						
FRU1	**Bishkek**	**3.00**	**327**	⇓*i*P	**Pn**	**03 45 53.7**	**+0.7**
	baz=26						
FRU1				⇓*i*S	**Sn**	**03 46 29.7**	**+0.7**
	baz=26						
SATY	**Saty**	**3.00**	**23**	*e*P	**Pb**	**03 45 56.6**	**-2.3**
	11nm,0.8s						
SATY				*e*S	**Sb**	**03 46 35.3**	**-0.4**
	17nm,0.3s						
SATY	**Saty**	**3.00**	**23**	Pg	**Pb**	**03 45 56.6**	**-2.3**
	11nm,0.8s						
SATY				Lg	Lg	03 46 35.3	
	17nm,0.3s						
DGS	**Degeres**	**3.04**	**345**	*e*P	**Pb**	**03 45 58.0**	**-1.6**
	16nm,0.5s						
DGS				*e*S	**Sb**	**03 46 38.4**	**+1.5**
	8.6nm,0.7s						
DGS	**Degeres**	**3.04**	**345**	Pg	**Pb**	**03 45 58.0**	**-1.6**
	16nm,0.5s						
DGS				Lg	Lg	03 46 38.4	
	8.6nm,0.7s						
ARSB	**Arslanbob**	**3.08**	**291**	⇑*i*P	**Pn**	**03 45 55.6**	**+1.3**
	baz=89						
ARSB				⇑*i*S	**Sn**	**03 46 33.6**	**+2.3**
	baz=89						
CHMS	**Chumysh**	**3.11**	**331**	⇑*i*P	**Pn**	**03 45 54.8**	**+0.3**
	baz=30						
CHMS				⇑*i*S	**Sn**	**03 46 32.4**	**+0.7**
	baz=30						
CHMS	**Chumysh**	**3.11**	**331**	P	**Pn**	**03 45 56.2**	**+1.7**
	SNR=6.2						
EKS2	**Erkin-Say**	**3.28**	**317**	⇑*e*P	**Pn**	**03 45 57.4**	**+0.4**
	baz=15						
EKS2				⇑*i*S	**Sn**	**03 46 37.1**	**+0.9**
	baz=15						
UZB	**Uzynbulak**	**3.28**	**29**	*e*P	**Pb**	**03 46 02.1**	**-1.8**
	2.8nm,0.2s						
UZB				*e*S	**Sb**	**03 46 44.6**	**+0.6**
	7.8nm,0.5s						
UZB	**Uzynbulak**	**3.28**	**29**	Pg	**Pb**	**03 46 02.1**	**-1.8**
	3.1nm,0.3s						
UZB				Lg	Lg	03 46 44.6	
	8.0nm,0.5s						
KURS	**Kuram**	**3.34**	**17**	*e*P	**Pb**	**03 46 03.2**	**-1.5**
	8.5nm,0.5s						
KURS				*e*S	**Sb**	**03 46 46.5**	**+1.2**
	11nm,0.6s						
KURS	**Kuram**	**3.34**	**17**	Pg	**Pb**	**03 46 03.2**	**-1.5**
	8.5nm,0.5s						
KURS				Lg	Lg	03 46 46.5	
	11nm,0.6s						
KTBS	**Karatobe**	**3.41**	**358**	*e*P	**Pb**	**03 46 03.5**	**-2.3**
	5.1nm,0.5s						
KTBS				*e*S	**Sb**	**03 46 47.6**	**+0.3**
	18nm,0.6s						
KTBS	**Karatobe**	**3.41**	**358**	Pg	**Pb**	**03 46 03.5**	**-2.3**
	5.1nm,0.5s						
KTBS				Lg	Lg	03 46 47.6	
	18nm,0.6s						
USP	**Ospenovka**	**3.43**	**330**	⇑*i*P	**Pn**	**03 45 59.4**	**+0.4**
	baz=29						
USP				⇑*i*S	**Sn**	**03 46 40.3**	**+0.6**
	baz=29						
USP	**Ospenovka**	**3.43**	**330**	P	**Pg**	**03 46 10.2**	**-1.0**
	SNR=12						
KPKS	**Kokpek**	**3.45**	**23**	*e*P	**Pb**	**03 46 05.0**	**-1.6**
	16nm,0.6s						
KPKS				*e*S	**Sb**	**03 46 49.8**	**+1.0**
	34nm,0.6s						
SHLS	**Shalkode**	**3.47**	**34**	*e*P	**Pg**	**03 46 10.5**	**-1.3**
	1.9nm,0.2s						
SHLS				*e*S	**Sg**	**03 46 59.0**	**+2.2**
	18nm,0.6s						
SHLS	**Shalkode**	**3.47**	**34**	Pg	**Pg**	**03 46 10.6**	**-1.3**
	6.3nm,0.5s						
SHLS				Lg	Lg	03 46 59.2	
	16nm,0.7s						
KUU	**Kurty**	**3.60**	**354**	*e*P	**Pb**	**03 46 07.3**	**-1.9**
	3.8nm,0.4s						
KUU				*e*S	**Sb**	**03 46 54.1**	**+1.1**
	6.4nm,0.4s						
KUU	**Kurty**	**3.60**	**354**	Pg	**Pb**	**03 46 07.3**	**-1.9**
	3.8nm,0.4s						
KUU				Lg	Lg	03 46 54.1	
	6.4nm,0.4s						
PDGK	**Podgornoye**	**3.62**	**33**	⇓Pg	**Pn**	**03 46 04.3**	**+2.6**
	3.7nm,0.7s						
PDGK				⇓Lg	Lg	03 46 53.1	
	17nm,1.2s						
MRKS	**Merke**	**3.64**	**313**	*e*P	**Pb**	**03 46 09.1**	**-0.7**
	7.5nm,0.8s						
MRKS				*e*S	**Sb**	**03 46 57.2**	**+3.2**
	6.6nm,0.4s						
MRKS	**Merke**	**3.64**	**313**	Pg	**Pb**	**03 46 09.1**	**-0.7**
	7.5nm,0.8s						
MRKS				Lg	Lg	03 46 57.2	
	6.6nm,0.4s						
MNBS	**Baschi**	**3.95**	**17**	*e*P	**Pb**	**03 46 13.6**	**-1.6**
	3.3nm,0.6s						
MNBS				*e*S	**Sb**	**03 47 04.9**	**+1.8**
	19nm,0.2s						
MNBS	**Baschi**	**3.95**	**17**	Pg	**Pb**	**03 46 13.6**	**-1.6**
	3.3nm,0.6s						
MNBS				Lg	Lg	03 47 04.9	
	19nm,0.2s						
ARXS	**Arharly**	**3.98**	**11**	*e*P	**Pb**	**03 46 14.4**	**-1.2**
	4.2nm,0.6s						
ARXS				*e*S	**Sb**	**03 47 05.9**	**+2.1**
	5.4nm,0.3s						
ARXS	**Arharly**	**3.98**	**11**	Pg	**Pb**	**03 46 14.4**	**-1.2**
	4.2nm,0.6s						
ARXS				Lg	Lg	03 47 05.9	
	5.4nm,0.3s						
DJR	**Jarkent**	**4.59**	**28**	*e*P	**Pb**	**03 46 25.1**	**-0.8**
	1.3nm,0.2s						
DJR				*e*S	**Sb**	**03 47 24.3**	**+2.9**
	3.1nm,0.6s						
DJR	**Jarkent**	**4.59**	**28**	Pg	**Pb**	**03 46 25.2**	**-0.8**
	0.4nm,0.1s						
DJR				Lg	Lg	03 47 24.4	
	3.7nm,0.4s						
BTLS	**Baital**	**5.16**	**338**	*e*P	**Pb**	**03 46 35.7**	**+0.1**
BTLS				*e*S	**Sb**	**03 47 42.5**	**+4.9**
BTLS	**Baital**	**5.16**	**338**	Pg	**Pb**	**03 46 35.7**	**+0.1**
BTLS				Lg	Lg	03 47 42.5	
KK31	**Karatay Array**	**5.49**	**303**	⇑Pg	**Pg**	**03 46 47.5**	**-2.9**
	1.6nm,0.7s,baz=128,slow=15,SNR=9.3						
KK31				⇓Lg	Lg	03 47 59.2	
	0.4nm,0.3s,baz=119,slow=28,SNR=4.4						

NEIC **22** 03:54:59.9±1.6, 14°.93S±0°.09×167°.5E±0°.1, h116^{km}±4^{km}, mb4.6/44, Error ellipse: s-maj=18.9km s-min=12.8km az=77.0

IDC **22** 03:55:01.3±0.9, 14°.97S×167°.51E, h129^{km}±7^{km}, mb4.2/23, mb1 4.3/25, mb1mx4.2/40, mbtmp4.6/25, Error ellipse: s-maj=13.9km s-min=10.2km az=94.0

NOU **22** 03:55:02.5, 14°.93S×167°.20E, h84^{km}, mb4.6, Vanuatu Islands

ISC 22 03:55:01.1±0.4**, 14°.95S**±0°.05×**167°.49E**±0°.07**, h129**^{km}**, n121,** σ1^{s}.25/128**, mb4.6**/50**, 2C, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**0.57**	**209**	Pn	**Pn**	**03 55 18.4**	**-2.1**
SANVU	**Saraoutou**	**0.57**	**209**	P	**Pn**	**03 55 18.8**	**-1.6**
DVP	**Devils Point**	**2.84**	**166**	P	**Pn**	**03 55 46.8**	**+1.2**
KOUNC	**Koumac, New Ca**	**6.35**	**208**	P	**Pn**	**03 56 32.1**	**-0.2**
DZM	**Mont Dzumac**	**7.15**	**188**	P	**Pn**	**03 56 43.3**	**+0.1**
	13nm,0.3s,baz=105,slow=10,SNR=155						
DZM				S	**Sn**	**03 58 02.7**	**-0.5**
	33nm,0.3s,baz=291,slow=20,SNR=13						
DZM	**Mont Dzumac**	**7.15**	**188**	Pn	**Pn**	**03 56 43.1**	**-0.1**
DZM	**Mont Dzumac**	**7.15**	**188**	P	**Pn**	**03 56 43.5**	**+0.3**
ONTNC	**Ouen Toro**	**7.38**	**187**	P	**Pn**	**03 56 48.1**	**+1.9**
OUENC	**Ouen Island, N**	**7.46**	**185**	P	**Pn**	**03 56 48.6**	**+1.4**
HNR	**Honiara**	**9.19**	**306**	P	**Pn**	**03 57 11.4**	**+0.8**
	16nm,0.3s,baz=209,slow=5.3,SNR=4.3						
HNR				S	**Sn**	**03 58 53.1**	**+0.8**
	8.8nm,0.3s,baz=88,slow=10,SNR=1.1						
HNR	**Honiara**	**9.19**	**306**	Pn	**Pn**	**03 57 10.0**	**-0.6**
MSVF	**Nonsavu**	**10.51**	**107**	P	Pn	03 57 34.5	+6.1
EIDS	**Eidsvold**	**18.55**	**233**		**Pn**	**03 59 09.6**	**-0.1**
EIDS				IAmb	IAmb	03 59 10.7	
	comp=Z,13nm,0.6s						
CTA	**Charters Tower**	**20.88**	**253**	P	**P**	**03 59 34.6**	**+1.5**
	comp=Z,4.3nm,0.6s,baz=84,slow=11,SNR=12						
CTAO	**Charters Tower**	**20.88**	**253**	P	**P**	**03 59 35.1**	**+2.0**
OUZ	**Omahuta**	**20.92**	**166**	P	**P**	**03 59 34.1**	**+0.7**
ARMA	**Armidale**	**21.20**	**221**	P	**P**	**03 59 37.6**	**+1.0**
ARMA				IAmb	IAmb	03 59 40.1	
	comp=Z,32nm,1.1s						
COEN	**Coen**	**23.56**	**269**	P	**P**	**04 00 00.3**	**+0.2**
MANU	**Manus Island**	**23.64**	**301**		**PcP**	**04 03 41.7**	**-0.4**
HIZ	**Hauiti**	**24.36**	**166**	P	**P**	**04 00 09.5**	**+2.4**
HIZ				IAmb	IAmb	04 00 11.3	
	comp=Z,31nm,0.8s						
URZ	**Urewera**	**24.73**	**162**	P	**P**	**04 00 10.4**	**0.0**
	comp=Z,9.5nm,0.8s,baz=18,slow=4.7,SNR=4.8						
BKZ	**Black Stump Fm**	**25.39**	**164**	P	**P**	**04 00 17.1**	**+0.6**
BKZ				IAmb	IAmb	04 00 30.3	
	comp=Z,16nm,1.2s						
QRZ	**Quartz Range**	**26.15**	**171**	P	**P**	**04 00 25.2**	**+1.9**
QRZ				IAmb	IAmb	04 00 41.6	
	comp=Z,20nm,1.2s						
CAN	**Canberra**	**26.21**	**216**	P	**P**	**04 00 24.2**	**+0.2**
BFZ	**Birch Farm**	**26.75**	**165**	P	**P**	**04 00 28.1**	**-0.5**
TUWZ	**Tuamarina**	**26.97**	**169**	P	**P**	**04 00 30.8**	**+0.2**
SNZO	**South Karori**	**27.00**	**168**	P	**P**	**04 00 30.8**	**-0.1**
THZ	**Tophouse**	**27.13**	**171**	P	**P**	**04 00 32.2**	**+0.1**
THZ				IAmb	IAmb	04 00 34.6	
	comp=Z,12nm,1.1s						
MSWZ	**Moikau Station**	**27.22**	**167**	P	**P**	**04 00 31.8**	**-1.1**
KHZ	**Kahutara**	**27.86**	**170**	P	**P**	**04 00 38.2**	**-0.3**
LTZ	**Lake Taylor**	**28.04**	**172**	P	**P**	**04 00 40.3**	**+0.1**
LTZ				IAmb	IAmb	04 00 42.2	
	comp=Z,11nm,0.8s						
FOZ	**Fox Glacier**	**28.56**	**176**	P	**P**	**04 00 44.7**	**+0.1**
FOZ				IAmb	IAmb	04 00 50.9	
	comp=Z,14nm,1.1s						
RPZ	**Rata Peaks**	**28.83**	**175**	P	**P**	**04 00 46.9**	**-0.2**
	comp=Z,7.7nm,0.8s,baz=99,slow=22,SNR=3.8						
RPZ	**Rata Peaks**	**28.83**	**175**	P	**P**	**04 00 46.8**	**-0.4**
RPZ				IAmb	IAmb	04 00 54.1	
	comp=Z,18nm,1.1s						
STKA	**Stephens Creek**	**29.02**	**230**	P	**P**	**04 00 49.5**	**+0.6**
	comp=Z,25nm,0.6s,baz=45,slow=8.2,SNR=76						
STKA				PcP	**PcP**	**04 03 54.8**	**+0.4**
	comp=Z,4.7nm,0.7s,baz=22,slow=3.7,SNR=9.4						
STKA	**Stephens Creek**	**29.02**	**230**	P	**P**	**04 00 49.7**	**+0.8**
STKA					**PcP**	**04 03 55.1**	**+0.7**
LBZ	**Lake Benmore**	**29.43**	**176**	P	**P**	**04 00 52.5**	**0.0**
LBZ				IAmb	IAmb	04 00 53.3	
	comp=Z,8.7nm,1.0s						
TOO	**Toolangi**	**29.80**	**217**	P	**P**	**04 00 56.3**	**+0.4**
ODZ	**Otahua Downs**	**30.12**	**176**	P	**P**	**04 00 58.3**	**-0.2**
MLZ	**Mavora Lakes**	**30.32**	**179**	P	**P**	**04 01 00.7**	**+0.3**
MLZ				IAmb	IAmb	04 01 06.9	
	comp=Z,9.6nm,1.1s						
WRA	**Warramunga Arr**	**31.98**	**256**	PcP	**PcP**	**04 04 02.9**	**+0.5**
	comp=Z,2.3nm,0.8s,baz=88,slow=3.4,SNR=1.2						
AS31	**Alice Springs**	**32.79**	**249**	P	**P**	**04 01 21.7**	**-0.6**
AS31				IAmb	IAmb	04 01 22.7	
	comp=Z,5.9nm,0.8s						
ASAR	**Alice Springs**	**32.80**	**249**	P	**P**	**04 01 21.5**	**-0.8**
	comp=Z,10nm,0.5s,baz=79,slow=9.1,SNR=106						
ASAR				pP	**pP**	**04 01 49.9**	**-0.5**
	comp=Z,3.0nm,0.7s,baz=74,slow=9.1,SNR=3.0						
ASAR				PcP	**PcP**	**04 04 04.4**	**-0.3**
	comp=Z,1.1nm,0.6s,baz=82,slow=3.3,SNR=7.0						
ASAR				ScP	**ScP**	**04 07 37.7**	**+0.8**
	comp=Z,0.8nm,0.9s,baz=98,slow=3.3,SNR=3.9						
BBOO	**Buckleboo**	**33.61**	**232**	P	**P**	**04 01 29.9**	**+0.6**
FAKI	**Fak Fak**	**36.74**	**286**	P	**P**	**04 01 54.2**	**-2.1**
FAKI				IAmb	IAmb	04 01 56.7	
	comp=Z,18nm,1.0s						
FORT	**Forrest**	**39.37**	**240**	P	**P**	**04 02 18.2**	**0.0**
FITZ	**Fitzroy Crossi**	**40.18**	**260**	P	**P**	**04 02 25.0**	**-0.1**
	comp=Z,7.5nm,0.6s,baz=77,slow=8.5,SNR=22						
FITZ	**Fitzroy Crossi**	**40.18**	**260**	P	**P**	**04 02 24.9**	**-0.1**
FITZ				IAmb	IAmb	04 02 25.8	
	comp=Z,11nm,0.9s						
BATI	**Baumata**	**42.98**	**271**	P	**P**	**04 02 49.1**	**+1.2**
	comp=Z,42nm,0.7s,baz=277,slow=21,SNR=1.5						
LUWI	**Luwuk**	**46.26**	**283**	P	**P**	**04 03 10.9**	**-3.1**
KAPI	**Kappang**	**47.95**	**277**	P	**P**	**04 03 27.8**	**+0.8**
	comp=Z,14nm,0.8s,baz=92,slow=15,SNR=4.3						
NWAO	**Narrogin (SRO)**	**48.82**	**239**	P	**P**	**04 03 32.9**	**-0.6**
	comp=Z,11nm,0.6s,baz=91,slow=8.2,SNR=7.7						
NWAO	**Narrogin (SRO)**	**48.82**	**239**	P	**P**	**04 03 33.1**	**-0.4**
NWAO				IAmb	IAmb	04 03 33.9	
	comp=Z,22nm,1.1s						
NWAO	**Narrogin (SRO)**	**48.82**	**239**	P	**P**	**04 03 32.9**	**-0.6**
NWAO				IAmb	IAmb	04 03 33.8	
	comp=Z,17nm,1.1s						
TOLI2	**Tolitoli**	**48.87**	**285**	P	**P**	**04 03 33.7**	**-0.4**
TOLI2				IAmb	IAmb	04 03 34.6	
	comp=Z,8.9nm,0.9s						
TWSI	**Taliwang, Sumb**	**49.83**	**271**	P	**P**	**04 03 43.7**	**+2.3**
	comp=Z,35nm,1.1s						
KKM	**Kota Kinabalu**	**54.93**	**289**	P	**P**	**04 04 20.1**	**+0.9**
JGF	**Kuroka**	**57.81**	**331**	P	**P**	**04 04 39.4**	**+0.2**
JGF				IAmb	IAmb	04 04 53.8	
	comp=Z,14nm,1.1s						
JMN	**Monobe**	**58.05**	**327**	P	**P**	**04 04 42.5**	**+1.7**
MJAR	**Matsushiro Arr**	**58.20**	**332**	P	**P**	**04 04 41.1**	**-0.6**
	comp=Z,5.2nm,1.1s,baz=131,slow=5.5,SNR=5.6						
MAT	**Matsushiro**	**58.20**	**332**	P	**P**	**04 04 41.9**	**+0.1**
KSM	**Kuching**	**58.86**	**281**	P	**P**	**04 04 46.2**	**-0.5**
YULB	**Yu-li**	**59.10**	**309**	P	**P**	**04 04 48.0**	**-0.2**
YULB				IAmb	IAmb	04 05 00.1	
	comp=Z,7.6nm,1.0s						
JNU	**Nakatsue**	**59.22**	**324**	P	**P**	**04 04 49.1**	**+0.2**
JNU				IAmb	IAmb	04 05 03.1	
	comp=Z,9.7nm,1.0s						
JHS	**Saijyo**	**59.43**	**327**	P	**P**	**04 04 50.6**	**+0.3**
SSLB	**Suanglung**	**59.58**	**310**	P	**P**	**04 04 51.5**	**-0.1**
SSLB				IAmb	IAmb	04 05 03.8	
	comp=Z,7.1nm,0.8s						
JTM	**Tenmabayashi**	**60.63**	**337**	P	**P**	**04 04 59.2**	**+0.9**
VNDA	**Vanda**	**62.65**	**181**	P	**P**	**04 05 11.5**	**+0.1**
	comp=Z,3.3nm,0.6s,baz=2.8,slow=7.2,SNR=14						
VNDA	**Vanda**	**62.65**	**181**	P	**P**	**04 05 11.9**	**+0.5**
SBA	**Scott Base**	**62.92**	**180**	P	**P**	**04 05 13.5**	**+0.3**
ASAJ	**Asahikawa**	**63.02**	**340**	P	**P**	**04 05 13.5**	**-0.7**
	comp=Z,8.5nm,0.8s,baz=242,slow=8.3,SNR=7.9						
KSRS	**Korea Array**	**64.04**	**326**	P	**P**	**04 05 22.3**	**+1.2**
	comp=Z,0.7nm,0.6s,baz=142,slow=6.4,SNR=2.4						
NJ2	**Nanjing**	**65.98**	**316**	*e*P	**P**	**04 05 34.8**	**+1.0**
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
PETK	**Petropavlovsk-**	**68.30**	**354**	P	**P**	**04 05 49.4**	**+1.4**
	comp=Z,5.5nm,0.9s,baz=125,slow=7.4,SNR=5.6						
MDJ	**Mudanjiang**	**68.57**	**332**	P	**P**	**04 05 52.8**	**+2.9**
MDJ				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MDJ				pmax	pmax		
	comp=Z,190nm,3.8s						
MNSI	**Mandailing Nat**	**68.91**	**277**	P	**P**	**04 05 53.1**	**+0.5**
CN2	**Changchun**	**69.94**	**329**	*e*P	**P**	**04 06 00.5**	**+2.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PSI	**Prapat**	**70.10**	**279**	P	**P**	**04 05 59.0**	**-1.1**
	comp=Z,5.2nm,0.7s,baz=179,slow=4.0,SNR=4.9						
KLR	**Kul'dur**	**71.29**	**336**	P	**P**	**04 06 06.6**	**+0.2**
	comp=Z,2.5nm,0.7s,baz=115,slow=5.2,SNR=8.6						
GYA	**Guiyang**	**72.01**	**305**	⇑P	**P**	**04 06 12.6**	**+1.2**
GYA				pmax	pmax		
	comp=Z,8.0nm,0.5s						
XAN	**Xi'an**	**74.00**	**313**	P	**P**	**04 06 23.8**	**+1.0**
XAN				pP	PcP	04 06 33.4	-4.0
XAN				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KMI	**Kunming**	**74.60**	**302**	⇑P	**P**	**04 06 28.5**	**+1.8**
KMI				pmax	pmax		
	comp=Z,12nm,0.9s						
CMAR	**Chiang Mai Arr**	**75.23**	**294**	P	**P**	**04 06 31.6**	**+1.4**
	comp=Z,2.5nm,0.5s,baz=132,slow=4.1,SNR=12						
HHC	**Hu-ho-hao-te**	**75.89**	**320**	*e*P	**P**	**04 06 35.1**	**+1.5**
HHC				pmax	pmax		
	comp=Z,5.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,54nm,8.5s						
CD2	**Chengdu**	**76.31**	**308**	P	**P**	**04 06 36.3**	**+0.1**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
LZH	**Lanzhou**	**78.62**	**312**	*e*P	**P**	**04 06 51.3**	**+2.2**
LZH				pP	pP	04 07 18.8	-2.2
LZH				sP	sP	04 07 31.8	-2.8
LZH	**Lanzhou**	**78.62**	**312**	sS	sS	04 17 27.3	-1.6
LZH				pmax	pmax		
	comp=Z,16nm,1.0s						
ULN	**Ulaanbaatar**	**82.44**	**324**	P	**P**	**04 07 10.4**	**+1.3**
SONM	**Songino Array**	**82.80**	**324**	P	**P**	**04 07 11.5**	**+0.5**
	comp=Z,1.7nm,0.8s,baz=152,slow=7.5,SNR=15						
SONM	**Songino Array**	**82.80**	**324**	P	**P**	**04 07 12.0**	**+1.0**
GTA	**Gaotai**	**82.97**	**314**	*e*P	**P**	**04 07 13.4**	**+1.3**
GTA				pP	PcP	04 07 17.9	+1.4
GTA				pmax	pmax		
	comp=Z,6.0nm,1.3s						
TRF	**Thorofare Moun**	**84.68**	**18**	P	**P**	**04 07 21.0**	**+0.7**
TRF				IAmb	IAmb	04 07 34.0	
	comp=Z,8.2nm,1.2s						
ILAR	**Eielson Array**	**86.67**	**18**	P	**P**	**04 07 28.9**	**-0.9**
	comp=Z,1.0nm,0.8s,baz=234,slow=5.0,SNR=16						
ILAR				pP	**pP**	**04 08 02.8**	**+1.0**
	comp=Z,0.5nm,0.6s,baz=240,slow=5.2,SNR=3.0						
WMQ	**Urumqi**	**93.03**	**314**	*e*P	**P**	**04 08 01.4**	**+1.2**
SNAA	**Sanae**	**93.34**	**183**	P	**P**	**04 07 59.8**	**-1.4**
VNA3	**Neumayer Olymp**	**94.00**	**181**	P	**P**	**04 08 03.3**	**-0.9**
VNA2	**Neumayer--Watz**	**94.27**	**182**	P	**P**	**04 08 04.5**	**-0.8**
TXAR	**Lajitas Array**	**96.19**	**61**	P	**P**	**04 08 14.7**	**-0.4**
	comp=Z,0.1nm,0.6s,baz=234,slow=4.3,SNR=2.0						
TXAR				pP	**pwP**	**04 08 50.0**	**-0.4**
	comp=Z,0.1nm,0.6s,baz=237,slow=5.0,SNR=2.3						
MK31	**Makanchi Array**	**97.51**	**316**	P	Pdif	04 08 21.8	+1.2
MK31				IAmb	IAmb	04 08 22.7	
	comp=Z,1.7nm,0.7s						
MKAR	**Makanchi Array**	**97.51**	**316**	P	Pdif	04 08 21.3	+0.7
	comp=Z,2.1nm,0.7s,baz=94,slow=6.5,SNR=33						
MKAR	**Makanchi Array**	**97.51**	**316**	P	Pdif	04 08 21.0	+0.4
YKA	**Yellowknife Ar**	**97.64**	**27**	P	**P**	**04 08 19.9**	**-0.8**
	comp=Z,0.4nm,0.8s,baz=254,slow=3.9,SNR=5.1						
YKA				PKKPbc	**PKKPbc**	**04 24 54.3**	**-4.7**
	comp=Z,0.4nm,0.8s,baz=80,slow=3.1,SNR=5.7						
ZALV	**Zalesovo Beam**	**97.69**	**324**	P	**P**	**04 08 20.8**	**-0.3**
	comp=Z,1.0nm,0.6s,baz=123,slow=5.5,SNR=5.5						
ARCES	**ARCESS Array B**	**120.52**	**345**	PKP	**PKiKP**	**04 13 37.0**	**+0.1**
	comp=Z,3.0nm,0.3s,baz=72,slow=2.0,SNR=91						
BOSA	**Boshof**	**123.34**	**220**	PKP	**PKiKP**	**04 13 43.8**	**-0.2**
	comp=Z,6.0nm,1.1s,baz=124,slow=6.4,SNR=3.9						
FINES	**FINESS Array B**	**126.00**	**338**	PKP	**PKiKP**	**04 13 47.8**	**-0.2**
	comp=Z,1.3nm,0.4s,baz=97,slow=3.7,SNR=27						
KMBO	**Kilima Mbogo**	**128.26**	**256**	PKP	**PKiKP**	**04 13 54.5**	**+0.2**
	comp=Z,1.3nm,0.7s,baz=66,slow=4.5,SNR=4.1						
NOA	**NORSAR Array B**	**130.89**	**345**	PKP	**PKPdf**	**04 13 57.1**	**+0.2**
	comp=Z,1.0nm,0.8s,baz=37,slow=4.5,SNR=1.2						
BRTR	**Keskin Array B**	**132.81**	**311**	PKP	**PKPdf**	**04 14 01.3**	**-0.1**
	comp=Z,0.6nm,0.7s,baz=134,slow=3.6,SNR=3.9						
ANTO	**Ankara**	**133.39**	**311**		**PKPdf**	**04 14 00.8**	**-1.6**
ANTO				pPKPdf	**pPKPdf**	**04 14 30.8**	**-5.5**
GERES	**GERESS Array B**	**139.94**	**333**	PKhKP	PKPpre	04 14 07.8	
	comp=Z,0.3nm,0.5s,baz=57,slow=3.6,SNR=2.0						
GERES				PKP	**PKiKP**	**04 14 16.1**	**-0.6**
	comp=Z,0.6nm,0.6s,baz=70,slow=1.6,SNR=3.8						
WTTA	**Wattenberg**	**142.04**	**333**	*e*P	**PKPdf**	**04 14 15.9**	**-2.3**
	comp=Z,0.1nm,0.2s						
MOTA	**Moosalm**	**142.21**	**334**	*e*P	**PKPdf**	**04 14 15.9**	**-2.5**
	comp=Z,6.3nm,1.7s						
RETA	**Reutte**	**142.24**	**334**	*i* P	**PKPdf**	**04 14 16.2**	**-2.2**
	comp=Z,4.5nm,1.4s						
DAVA	**Damuels**	**142.77**	**335**	*e*P	**PKPdf**	**04 14 17.1**	**-2.4**
	comp=Z,2.4nm,0.6s						
TUE	**Stuetta**	**143.64**	**334**		**PKPdf**	**04 14 20.3**	**-0.8**
SENIN	**Lac Senin/Sane**	**144.56**	**336**		**PKPdf**	**04 14 23.1**	**+0.4**
BNI	**Bardonecchia**	**145.88**	**335**		**PKPab**	**04 14 27.2**	**+0.8**
KEST	**Kesra**	**151.51**	**321**	PKPbc	**PKiKP**	**04 14 40.7**	**-0.2**
	comp=Z,4.6nm,0.6s,baz=174,slow=2.2,SNR=24						
ESDC	**Sonseca Array**	**154.25**	**345**	PKPbc	**PKiKP**	**04 14 47.1**	**+0.7**
	comp=Z,0.2nm,0.4s,baz=360,slow=3.8,SNR=1.6						
TORD	**Torodi Ar. Bea**	**166.10**	**264**	PKP	**PKPdf**	**04 14 51.6**	**-0.2**
	comp=Z,1.5nm,0.6s,baz=36,slow=1.0,SNR=5.1						
TORD				PKPab	**PKPab**	**04 15 52.9**	**-0.2**
	comp=Z,0.9nm,0.9s,baz=104,slow=3.7,SNR=2.3						

IDC **22** 04:38:58.5±0.9, 35°.45N×27°.69E, h0^{km}, mb3.8/12, mb1 3.9/18, mb1mx3.7/38, mbtmp3.8/18, ML3.4/5, MS3.1/2, Ms1 3.1/2, ms1mx2.5/48, Error ellipse: s-maj=20.3km s-min=10.5km az=160.0

NEIC **22** 04:39:01.5±1.6, 35°.28N±0°.06×27°.79E±0°.04, h14^{km}±6^{km}, mb4.0/5, ML4.1(THE), Error ellipse: s-maj=9.1km s-min=2.3km az=206.0

NIC **22** 04:39:01.0±0.0, 35°.24N×27°.79E, h9^{km}±1^{km}, Ml4.1/6

DDA **22** 04:39:01.8, 35°.45N×27°.73E, h24^{km}±3^{km}, MW3.9

HLW **22** 04:39:02.7, 35°.34N×27°.88E, h24^{km}±8^{km}, Md4.0

ISK **22** 04:39:02.5, 35°.43N×27°.75E, h16^{km}, ML3.6/28

ATH **22** 04:39:03.4, 35°.47N×27°.58E, h48^{km}±3^{km}, ML3.6/3, Error

ellipse: s-maj=5.0km s-min=1.8km az=142.0
*THE **22** 04:39:03.4, 35°.41N×27°.71E, h2km±1km, ML3.5/4, Error*
ellipse: s-maj=1.8km s-min=0.7km az=335.0
ISC 22 04:39:02.6±0.9, **35°.32N**±0°.03×**27°.72E**±0°.02, **h31**km±7km,
n177, σ1s54/212, **mb3.7**/14, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	0.51	296	P	Pb	04 39 12.7	-0.6
KARP				S	Sb	04 39 19.9	-0.8
	11µm,0.3s						
KARP	**Karpathos**	0.51	296	PG	Pb	04 39 12.8	-0.6
KARP				SG	Sb	04 39 20.5	-0.2
KARP	**Karpathos**	0.51	296	Pg	Pb	04 39 12.7	-0.6
KARP				Sg	Sb	04 39 20.7	0.0
KARP	**Karpathos**	0.51	296	P	Pb	04 39 12.7	-0.6
KARP				AML	AML	04 39 21.5	
	25nm,0.3s						
KARP				AML	AML	04 39 21.5	
	25nm,0.3s						
KARP				S	Sn	04 39 21.5	0.0
KARP				AML	AML	04 39 23.0	
	19nm,0.7s						
KARP				AML	AML	04 39 23.0	
	19nm,0.7s						
KARP	**Karpathos**	0.51	296	P	Pb	04 39 12.6	-0.7
KARP				S	Sb	04 39 20.4	-0.3
KARP				AML	AML	04 39 21.7	
	comp=E,17661µm,0.4s						
KARP				AML	AML	04 39 21.9	
	comp=N,24666µm,0.3s						
ARG	**Arkhangelos**	0.95	20	P	Pn	04 39 20.1	+0.3
ARG				S	Sb	04 39 34.2	+1.3
	comp=N,3µm,0.6s						
ARG	**Arkhangelos**	0.95	20	PG	Pn	04 39 19.7	-0.1
ARG				SG	Sn	04 39 31.5	-0.8
ARG	**Arkhangelos**	0.95	20	P	Pb	04 39 20.2	-0.3
ARG	**Arkhangelos**	0.95	20	P	Pb	04 39 20.3	-0.3
ARG				S	Sn	04 39 32.3	0.0
ARG				AML	AML	04 39 36.3	
	comp=N,6608µm,0.8s						
ARG				AML	AML	04 39 39.2	
	comp=E,6418µm,0.4s						
ZKR	**Zakros**	1.25	261	P	Pb	04 39 25.7	+0.1
ZKR				S	Sb	04 39 43.6	+2.2
	comp=E,3µm,0.6s						
ZKR	**Zakros**	1.25	261	PN	Pb	04 39 26.1	+0.5
ZKR				SN	Sb	04 39 44.7	+3.3
ZKR	**Zakros**	1.25	261	P	Pb	04 39 25.9	+0.3
ZKR				S	Sb	04 39 44.0	+2.6
ZKR				AML	AML	04 39 48.6	
	comp=E,3.2nm,0.5s						
ZKR				AML	AML	04 39 48.6	
	comp=E,3.2nm,0.5s						
ZKR				AML	AML	04 39 49.6	
	comp=E,6.4nm,0.7s						
ZKR				AML	AML	04 39 49.6	
	comp=E,6.4nm,0.7s						
ZKR	**Zakros**	1.25	261	P	Pb	04 39 25.7	+0.1
ZKR				AML	AML	04 39 49.8	
	comp=N,3348µm,0.5s						
ZKR				AML	AML	04 39 50.4	
	comp=E,6842µm,0.7s						
STIA	**Sitia Lasithi**	1.34	265	P	Pb	04 39 27.2	+0.1
STIA				S	Sb	04 39 46.5	+2.6
NISR	**Nisiros**	1.38	340	P	Pb	04 39 27.4	-0.3
NISR	**Nisiros**	1.38	340	P	Pn	04 39 26.4	+0.8
MRSB	**Marmaris-Mugla**	1.44	15	PN	Pn	04 39 27.1	+0.5
TURN	**Turunc**	1.51	16	PN	Pn	04 39 28.1	+0.6
TURN				SN	Sn	04 39 47.3	+1.2
TURN	**Turunc**	1.51	16	i P	Pb	04 39 29.9	-0.1
KOSK	**Kos Island**	1.55	337	PN	Pn	04 39 28.9	+0.9
KOSK				SN	Sn	04 39 48.3	+1.2
FRMA	**Ierapetra Chan**	1.66	260	P	Pb	04 39 31.3	-1.2
DALY	**Dalyan (Mula)**	1.67	27	PN	Pn	04 39 30.5	+0.8
DALY	**Dalyan (Mula)**	1.67	27	i P	Pn	04 39 30.7	+1.0
FETY	**Fethiye**	1.71	40	PN	Pn	04 39 30.9	+0.6
KSL	**Kastellorizon**	1.73	61	P	Pb	04 39 31.9	-1.7
KSL				S	Sb	04 39 54.6	-0.3
	comp=E,548nm,1.2s						
KSL	**Kastellorizon**	1.73	61	P	Pn	04 39 31.6	+1.2
KSL				S	Sb	04 39 54.6	-0.3
BDRM	**Kayabasi**	1.75	353	i P	Pn	04 39 31.6	+0.7
BDRM				i P	Pn	04 39 31.6	+0.7
BDRM				i S	Sb	04 39 54.2	-1.6
BDRM				IAML		04 40 02.0	
	comp=E,385nm,0.6s						
BDRM				IAML		04 40 03.0	
	comp=N,436nm,0.8s						
BODT	**Bodrum**	1.77	349	P	Pn	04 39 31.1	0.0
BODT	**Bodrum**	1.77	349	PN	Pn	04 39 31.3	+0.2
BODT				SN	Sn	04 39 52.9	+0.4
AKAS	**Kas**	1.78	59	PN	Pn	04 39 31.9	+0.6
AKAS				SN	Sn	04 39 54.4	+1.4
AKAS	**Kas**	1.78	59	i P	Pn	04 39 31.4	+0.1
AKAS				i S	Sb	04 39 55.9	-0.7
AKAS				IAML		04 39 57.0	
	comp=E,319nm,0.4s						
AKAS				IAML		04 40 02.0	
	comp=N,324nm,0.8s						
AKAS	**Kas**	1.78	59		Pn	04 39 31.7	+0.3
LAST	**Lasithi**	1.84	266	P	Pb	04 39 35.6	-0.1
LAST	**Lasithi**	1.84	266	P	Pb	04 39 35.6	-0.1
YER	**Yerkesik**	1.87	14	P	Pn	04 39 34.1	+1.7
YER	**Yerkesik**	1.87	14	PN	Pn	04 39 33.1	+0.7
YER				SN	Sn	04 39 55.4	+0.4
MLSB	**Milas**	1.97	1	PN	Pn	04 39 35.1	+1.2
MLSB				SN	Sn	04 39 58.4	+0.9
MULA	**Mugla, Merkez-**	1.99	14	i P	Pb	04 39 37.5	-0.7
MULA				i S	Sb	04 40 07.5	+4.9
MULA				IAML		04 40 12.0	
	comp=N,276nm,0.8s						
MULA				IAML		04 40 23.0	
	comp=E,373nm,0.9s						
SANT	**Santorini**	2.12	300	PN	Pn	04 39 37.5	+1.6
SANT	**Santorini**	2.12	300	Pn	Pn	04 39 37.8	+2.0
THR8	**Santorini-Mono**	2.12	301	P	Pn	04 39 37.7	+1.8
THR6	**Thira Island,**	2.15	299	P	Pn	04 39 38.2	+1.9
THR6	**Thira Island,**	2.15	299	P	Pn	04 39 38.5	+2.2
SNT1	**Gialos, Santor**	2.16	301	P	Pn	04 39 38.1	+1.7
SNT1	**Gialos, Santor**	2.16	301	P	Pn	04 39 38.6	+2.2
THT2	**Imerovigli**	2.17	301	P	Pn	04 39 38.7	+2.1
THT2	**Imerovigli**	2.17	301	PN	Pn	04 39 38.9	+2.3
THT2	**Imerovigli**	2.17	301	P	Pn	04 39 38.7	+2.1
SNT5	**Nea Kammeni, S**	2.18	300	P	Pn	04 39 38.6	+2.0
SNT5	**Nea Kammeni, S**	2.18	300	P	Pn	04 39 38.7	+2.0
CAEL	**Denizli, Camel**	2.21	35	i P	Pn	04 39 39.3	+2.0
ELL	**Elmali**	2.27	51	PN	Pn	04 39 39.7	+1.6
ELL	**Elmali**	2.27	51		Pn	04 39 40.0	+1.9
ELL	**Elmali**	2.27	51	P	Pn	04 39 40.0	+1.9
IDI	**Anoyia**	2.32	270	Pn	Pn	04 39 36.3	-2.3
	comp=E,0.1nm,0.3s,baz=148,slow=22,SNR=1.1						
IDI				Pg	Pb	04 39 41.5	-2.3
	comp=E,21nm,0.3s,baz=61,slow=14,SNR=127						
IDI				Lg	Lg	04 40 13.7	
	comp=E,26nm,0.3s,baz=309,slow=12,SNR=5.9						
IDI	**Anoyia**	2.32	270	P	Pn	04 39 41.2	+2.6
IDI	**Anoyia**	2.32	270	PN	Pb	04 39 41.8	-1.9
IDI	**Anoyia**	2.32	270	Pn	Pn	04 39 40.9	+2.3
IDI	**Anoyia**	2.32	270	P	Pb	04 39 41.5	-2.3
TAVA	**DENIZLI_Tavas**	2.35	24	i P	Pn	04 39 40.6	+1.6
AKUM	**Antalya-Kumluc**	2.35	64	i P	Pn	04 39 40.7	+1.6
AKUM				i S	Sn	04 40 08.3	+1.4
AKUM				IAML		04 40 11.0	
	comp=E,132nm,1.3s						
AKUM				IAML		04 40 18.0	
	comp=N,86nm,0.9s						
SIVA	**Sivas**	2.41	264	P	Pb	04 39 43.5	-1.7
GCAM	**G?zelcaml?**	2.41	351	PN	Pn	04 39 41.3	+1.5
GOLH	**Golhisar**	2.42	37	i P	Pn	04 39 42.4	+2.3
APE	**Apeiranthos**	2.49	315	P	Pn	04 39 42.4	+1.5
APE	**Apeiranthos**	2.49	315	PN	Pn	04 39 42.8	+1.8
APE	**Apeiranthos**	2.49	315	P	Pn	04 39 42.5	+1.5
SMG	**Samos**	2.49	344	P	Pn	04 39 42.2	+1.3
AYDB	**Zeytinkoy-Aydi**	2.62	3	PN	Pn	04 39 44.0	+1.1
KEMT	**Kemer-ANTALYA**	2.63	60	PN	Pn	04 39 44.7	+1.8
KORT	**Korkueli**	2.71	51	PN	Pn	04 39 45.5	+1.4
KORT	**Korkueli**	2.71	51	i P	Pn	04 39 46.9	+2.8
KORT				i S	Sb	04 40 22.1	-1.1
KORT				IAML		04 40 26.0	
	comp=E,159nm,0.7s						
KORT				IAML		04 40 43.0	
	comp=N,162nm,0.9s						
ANTB	**Antalya**	2.85	56	PN	Pn	04 39 48.1	+2.2
VAM	**Vamos**	2.88	273	P	Pn	04 39 49.5	+3.2
GVDS	**Gavdos**	3.02	262	P	Pn	04 39 51.5	+3.3
GVD	**Gavdhos**	3.02	262	P	Pn	04 39 51.2	+3.0
BRDR	**BURDUR-Merkez**	3.03	38	i P	Pn	04 39 50.3	+1.9
BUCA	**Burdur, Bucak-**	3.04	48	i P	Pn	04 39 49.9	+1.3
BUCA				i S	Sn	04 40 26.5	+2.5
BUCA				IAML		04 40 30.0	
	comp=N,74nm,0.9s						
BUCA				IAML		04 40 53.0	
	comp=E,110nm,1.0s						
IMMV	**Iera Moni Meta**	3.06	274	P	Pn	04 39 51.9	+3.1
IMMV	**Iera Moni Meta**	3.06	274	PN	Pn	04 39 52.3	+3.5
ZEYE	**Izmir, Urla-Ze**	3.07	342	i P	Pn	04 39 50.4	+1.5
BLCB	**Balcova**	3.11	350	P	Pn	04 39 50.4	+1.0
BLCB	**Balcova**	3.11	350	PN	Pn	04 39 50.5	+1.0
BCK	**Bucak**	3.15	46	PN	Pn	04 39 52.0	+1.9
URLA	**Izmir**	3.17	344	PN	Pn	04 39 50.7	+0.4
URLA	**Izmir**	3.17	344	i P	Pn	04 39 50.7	+0.4
BASM	**Basmaki-Afyon**	3.20	35	PN	Pn	04 39 52.3	+1.5
MANT	**Manisa**	3.23	12	i P	Pn	04 39 52.4	+1.0
MANT	**Manisa**	3.23	12	Pn	Pn	04 39 52.0	+0.6
KULA	**Kula-Manisa**	3.27	13	PN	Pn	04 39 53.0	+1.2
CHOS	**Chios island**	3.34	337	PN	Pn	04 39 54.2	+1.5
KHAL	**Karahalli**	3.36	24	i P	Pn	04 39 53.1	+0.1
KHAL				i S	Pb	04 40 04.3	+2.9
KHAL				IAML		04 40 06.0	
	comp=N,48nm,0.8s						
KHAL				IAML		04 40 12.0	
	comp=E,40nm,0.8s						
ISP	**Isparta**	3.36	41	PN	Pn	04 39 54.6	+1.5
ISP	**Isparta**	3.36	41		Pn	04 39 53.4	+0.4
OSC1	**CSNet OBS 1**	3.45	121	P	Pn	04 39 54.5	+0.3
OSC1				S	Sn	04 40 35.6	+1.5
KEPZ	**Antalya-Kepez**	3.52	62	i P	Pn	04 39 57.4	+2.3
KEPZ				i S	Sn	04 40 38.2	+2.6
KEPZ				IAML		04 40 41.0	
	comp=E,64nm,0.5s						
KEPZ				IAML		04 40 45.0	
	comp=N,69nm,0.8s						
USAK	**Uak-Merkez**	3.54	17	i P	Pn	04 39 56.0	+0.6
AKHS	**Akhisar**	3.55	1	i P	Pn	04 39 56.0	+0.5
ZEDA	**zmir-Bergama**	3.67	352	i P	Pn	04 39 58.3	+1.0
AKMS	**Akamas**	3.79	93	P	Pn	04 39 59.1	+0.3
AKMS				S	Sn	04 40 43.9	+1.6
AKMS				AML	AML	04 40 46.0	
	comp=N,0.8nm,0.3s						
AKMS				AML	AML	04 40 46.0	
	comp=N,0.8nm,0.3s						
AKMS				AML	AML	04 40 48.4	
	comp=N,0.8nm,0.3s						
AKMS				AML	AML	04 40 48.4	
	comp=N,0.8nm,0.3s						
DEMI	**Demirci**	3.80	12	i P	Pn	04 39 57.8	-1.2
DKL	**Dikili**	3.80	350	PN	Pn	04 39 59.4	+0.5
GAZI	**Gazipasa**	3.84	75	i P	Pn	04 40 00.2	+0.6
SEDI	**Konya, Seydise**	3.89	56	i P	Pn	04 40 03.8	+3.5
SEDI				i S	Sn	04 40 48.0	+3.1
SEDI				IAML		04 40 52.0	
	comp=N,179nm,0.8s						
SEDI				IAML		04 40 54.0	
	comp=E,243nm,0.8s						
SIMA	**Simav-Kutahya**	3.89	15	PN	Pn	04 39 59.9	-0.4
KTHA	**Kythira Island**	3.90	285	P	Pn	04 40 02.1	+1.7
SHUT	**Suhut-Afyon**	3.94	34	PN	Pn	04 40 02.5	+1.5
KTHR	**Kythira**	3.95	285	P	Pn	04 40 03.2	+2.2
GEDZ	**Gediz**	3.95	19	PN	Pn	04 40 02.5	+1.4
ALFC	**Alefka**	3.99	91	P	Pn	04 40 01.9	+0.2
ALFC				AML	AML	04 40 49.1	
	comp=E,1.4nm,0.7s						
ALFC				AML	AML	04 40 50.9	
	comp=E,1.1nm,0.6s						
NATA	**Nata**	4.01	96	P	Pn	04 40 02.4	+0.5
GDZ	**Gediz**	4.01	20	i P	Pn	04 40 01.1	-0.9
STEP	**BALIKESIR_Sava**	4.05	360	i P	Pn	04 40 03.2	+0.8
YVAC	**Isparta, Yalva**	4.08	43	i P	Pn	04 40 05.2	+2.3
VLI	**Veliai**	4.12	291	P	Pn	04 40 05.3	+1.9
BUHA	**Balikesir, Bur**	4.20	353	i P	Pn	04 40 04.2	-0.4
DOGA	**KONYA_Doganhis**	4.21	48	i P	Pn	04 40 08.2	+3.4
DOGA				i S	Sn	04 40 55.1	+2.0
DOGA				IAML		04 41 00.0	
	comp=N,126nm,0.9s						
SZAC	**Souni**	4.27	96	P	Pn	04 40 05.7	+0.2
SZAC				AML	AML	04 40 55.6	
	comp=N,0.8nm,0.8s						
SZAC				AML	AML	04 40 57.3	
	comp=N,0.8nm,0.5s						
DURS	**Dursunbey**	4.31	8	i P	Pn	04 40 06.5	+0.4
TVSB	**Tavsanli**	4.35	18	PN	Pn	04 40 05.9	-0.7
SLUM	**Salum**	4.36	210	P	Pn	04 40 08.4	+1.8
	baz=211						
SLUM				S	Sn	04 40 56.2	-0.1
	baz=211						
OSC2	**CSNet OBS 4**	4.38	119	P	Pn	04 40 06.6	-0.4
OSC2				S	Sn	04 40 58.2	+1.3
BAYC	**CANAKKALE_Bayr**	4.51	348	i P	Pn	04 40 09.4	+0.7
ASGA	**Asgata**	4.56	95	P	Pn	04 40 09.7	+0.2
ASGA				AML	AML	04 41 03.4	
	comp=N,0.4nm,0.6s						
ASGA				AML	AML	04 41 03.5	
	comp=N,0.5nm,1.0s						
CSS	**Mathiatis**	4.61	93	Pn	Pn	04 40 10.4	+0.3
CSS	**Mathiatis**	4.61	93	P	Pn	04 40 10.1	0.0
KKBE	**Karaman, Kazim**	4.62	64	i P	Pn	04 40 13.7	+3.3
ATHAL	**Athalassa**	4.65	91	P	Pn	04 40 11.8	+1.2
MVOU	**Mavrovouni**	4.85	92	P	Pn	04 40 14.1	+0.7
ITM	**Ithomi**	5.04	293	Pn	Pn	04 40 18.9	+2.9
AGG	**Agios Georgios**	5.67	312	Pn	Pn	04 40 27.9	+3.2
ALN	**Alexandroupoli**	5.72	347	Pn	Pn	04 40 27.0	+1.6
MDUB	**Mudurnu**	5.83	27	Pn	Pn	04 40 27.6	+0.6
HNAT	**Natroun**	6.18	156	P	Pn	04 40 32.3	+0.7
	baz=157						
SWA2		6.36	198	P	Pn	04 40 35.8	+1.7
	baz=200						
SWA2				S	Sn	04 41 43.9	-1.7
	baz=200						
BR131	**Keskin Array S**	6.43	45	Pn	Pn	04 40 36.1	+0.8
BRTR	**Keskin Array B**	6.43	45	Pn	Pn	04 40 36.6	+1.3
	comp=N,0.5nm,0.3s,baz=108,slow=29,SNR=22						
BRTR				Sn	Sn	04 41 49.6	+1.9
	comp=N,0.4nm,0.3s,baz=212,slow=25,SNR=11						
BRTR				LR	LR	04 42 53.8	
	comp=N,94nm,18.1s,baz=232,slow=37						
BRTR	**Keskin Array B**	6.43	45	Pn	Pn	04 40 36.3	+1.0
HSAF	**As Saff**	6.54	149	P	Pn	04 40 37.0	+0.4
	baz=150						
GLL	**Jalalah**	6.64	148	P	Pn	04 40 38.4	+0.3
	baz=149						
MMAI	**Mount Meron Ar**	6.77	108	Pn	Pn	04 40 39.0	-0.8
	comp=N,6.9nm,0.3s,baz=310,slow=12,SNR=21						
MMAI				Sn	Sn	04 41 55.1	-0.7
	comp=N,6.1nm,0.3s,baz=298,slow=24,SNR=7.5						
QRWL	**Qaraoun**	6.81	103	eP	Pn	04 40 39.9	-0.6
RCY	**Rachaya**	6.95	103	eP	Pn	04 40 42.1	-0.3
NBNS	**Bani Suef**	7.33	155	P	Pn	04 40 48.0	+0.4
	baz=155						
GAZ	**Gaziantep**	7.88	74	Pn	Pn	04 40 56.1	+1.0
VTS	**Vitosha**	8.08	336	Pn	Pn	04 41 00.7	+2.8
HKAT	**Jabal Katrina**	8.62	140	P	Pn	04 41 05.5	+0.2
	baz=141						
MLR	**Muntele Rosu**	10.25	353	Pn	Pn	04 41 26.2	-1.4
	comp=N,0.1nm,0.3s,baz=201,slow=20,SNR=2.6						
KBZ	**Khabaz**	14.39	50	Pn	P	04 42 28.6	-1.9
	comp=N,0.1nm,0.3s,baz=90,slow=16,SNR=2.6						
KEST	**Kesra**	14.97	277	Pn	P	04 42 36.7	-0.6
	comp=N,0.3nm,0.3s,baz=271,slow=0.9,SNR=5.8						
KEST	**Kesra**	14.97	277	IAmb	IAmb	04 42 39.1	
	comp=Z,24nm,1.4s						
AKASG	**Malin Array Be**	15.41	4	Pn	P	04 42 40.2	-1.7
	comp=Z,0.7nm,0.3s,baz=197,slow=11,SNR=4.2						
CKRC	**Cesky Krumlov**	16.73	328	eP	P	04 42 57.3	+0.7
GERES	**GERESS Array B**	17.02	327	Pn	Pn	04 42 59.2	+1.0
	comp=Z,0.1nm,0.3s,baz=134,slow=9.6,SNR=6.2						
GERES	**GERESS Array B**	17.02	327	Pn	Pn	04 42 59.1	+0.9
DPC	**Dobruska-Polom**	17.16	335	eP	Pn	04 42 58.9	-1.0
KHC	**Kasperske Hory**	17.28	327	eP	P	04 43 03.1	+0.4
DAVOX	**Davos/Dischmat**	17.62	316	P	Pn	04 43 05.8	0.0
	comp=Z,0.1nm,0.3s,baz=217,slow=20,SNR=1.0						
ESDC	**Sonseca Array**	25.44	289	P	P	04 44 27.9	+0.3
	comp=Z,2.7nm,0.6s,baz=79,slow=9.0,SNR=28						
FINES	**FINESS Array B**	26.16	358	P	P	04 44 31.3	-2.5
	comp=Z,0.8nm,0.5s,baz=166,slow=12,SNR=6.0						
HFS	**Hagfors**	26.44	344	P	P	04 44 34.8	-1.6
	comp=Z,1.0nm,0.4s,baz=157,slow=9.0,SNR=9.2						
AKTO	**Aktyubinsk**	26.61	46	P	P	04 44 38.3	+0.3
	comp=Z,1.4nm,0.7s,baz=215,slow=6.4,SNR=5.5						
AKTO				LR	LR	04 59 09.1	
	comp=Z,69nm,20.6s,baz=326,slow=46						
EKA	**Eskdalemuir Ar**	29.15	323	P	P	04 44 58.8	-1.8
	comp=Z,0.3nm,0.6s,baz=121,slow=11,SNR=0.9						
TORD	**Torodi Ar. Bea**	32.23	233	P	P	04 45 29.7	+1.5
	comp=Z,1.7nm,0.5s,baz=36,slow=8.8,SNR=8.0						
TORD	**Torodi Ar. Bea**	32.23	233	IAmb	IAmb	04 45 30.1	
	comp=Z,1.2nm,0.6s						
ARCES	**ARCESS Array B**	34.29	359	P	P	04 45 44.3	-1.3
	comp=Z,2.8nm,1.0s,baz=165,slow=7.5,SNR=9.1						
DBIC	**Dimbokro**	41.33	234	P	P	04 46 45.4	-0.2
	comp=Z,0.9nm,0.3s,baz=27,slow=10,SNR=6.1						
DBIC	**Dimbokro**	41.33	234	P	P	04 46 45.1	-0.5
DBIC				IAmb	IAmb	04 46 48.5	
	comp=Z,8.8nm,1.2s						
TIC	**Toumodi**	41.46	234	eP	P	04 46 46.6	-0.1
KIC	**Kosan Boka**	41.49	234	eP	P	04 46 47.0	+0.1
	comp=Z,6.7nm,0.7s						
LIC	**Lamto**	41.78	234	eP	P	04 46 43.3	-6.0
	comp=Z,44nm,1.6s						
MK31	**Makanchi Array**	41.93	57	P	P	04 46 51.3	+1.0
MKAR	**Makanchi Array**	41.93	57	P	P	04 46 50.8	+0.5
	comp=Z,0.5nm,0.6s,baz=275,slow=7.8,SNR=6.0						
ZALV	**Zalesovo Beam**	43.38	46	P	P	04 47 01.9	+0.1
	comp=Z,0.5nm,0.4s,baz=271,slow=11,SNR=2.6						
SONM	**Songino Array**	57.75	51	P	P	04 48 52.4	+1.8
	comp=Z,0.1nm,0.4s,baz=308,slow=7.1,SNR=1.3						
SONM	**Songino Array**	57.75	51	IAmb	IAmb	04 49 02.2	
	comp=Z,0.8nm,1.0s						
YKA	**Yellowknife Ar**	77.92	343	P	P	04 50 56.4	-0.7
	comp=Z,0.2nm,0.4s,baz=42,slow=5.5,SNR=5.1						

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*IDC **22** 04:48:05.8±0.8, 35°.97N×24°.78E, h0km, mb3.7/8,*
mb1 3.7/11, mb1mx3.5/40, mbtmp3.6/11, ML3.1/3, Error
ellipse: s-maj=20.5km s-min=7.9km az=84.0
*ATH **22** 04:48:07.6, 35°.88N×24°.83E, h43km±6km, ML3.5/10, Error*
ellipse: s-maj=6.5km s-min=0.9km az=146.0
*ISK **22** 04:48:07.8, 35°.87N×24°.81E, h8km, ML3.3/20*
*DDA **22** 04:48:08.5, 35°.90N×24°.87E, h13km±1km, ML3.1*
*THE **22** 04:48:08.3, 35°.87N×24°.85E, h12km±1km, ML3.4/13, Error*
ellipse: s-maj=1.4km s-min=0.5km az=63.0
ISC 22 04:48:08.0±0.9, **35°.87N**±0°.01×**24°.84E**±0°.02, **h15**km±7km,
n117, σ1s46/163, **mb3.7**/8, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IDI	**Anoyia**	0.58	176	Pg	Pg	04 48 19.4	-0.1
	80nm,0.3s,baz=314,slow=5.7,SNR=367						
IDI				Lg	Lg	04 48 28.8	
	626nm,0.3s,baz=320,slow=22,SNR=57						
IDI	**Anoyia**	0.58	176	P	Pg	04 48 19.4	-0.1
IDI				S	Sb	04 48 28.8	+0.8
	7µm,0.3s						
IDI	**Anoyia**	0.58	176	PG	Pb	04 48 19.8	-0.1
IDI				SG	Sb	04 48 28.4	+0.4
IDI	**Anoyia**	0.58	176	P	Pg	04 48 19.5	+0.1
IDI				S	Sb	04 48 28.7	+0.7
IDI				AML	AML	04 48 30.3	
	comp=E,18450µm,0.4s						
IDI				AML	AML	04 48 30.4	
	comp=N,10849µm,0.2s						
IACM	**Heraklion**	0.59	161	P	Pb	04 48 20.5	+0.5
IACM				S	Sb	04 48 29.8	+1.6
	comp=N,28µm,0.3s						
IACM	**Heraklion**	0.59	161	P	Pb	04 48 20.6	+0.6
KSTL	**Kastelli Herak**	0.59	161	P	Pn	04 48 23.6	+1.7
KSTL				S	Sn	04 48 34.1	+2.9
THR9	**Santorini-Faro**	0.64	41	P	Pg	04 48 20.6	0.0
THR9	**Santorini-Faro**	0.64	41	P	Pb	04 48 21.6	+0.7
THR6	**Thira Island,**	0.66	43	P	Pb	04 48 21.3	0.0
THR6	**Thira Island,**	0.66	43	P	Pb	04 48 21.8	+0.5
THR5	**Thira Island,**	0.69	37	P	Pg	04 48 21.3	-0.1
THR5	**Thira Island,**	0.69	37	P	Pb	04 48 22.0	+0.4
VAM	**Vamos**	0.69	229	P	Pb	04 48 21.6	-0.2
VAM				S	Sb	04 48 31.5	+0.3
	comp=N,6µm,0.4s						
VAM	**Vamos**	0.69	229	P	Pb	04 48 21.6	-0.2
SAP3	**Santorini-Thir**	0.70	36	P	Pb	04 48 21.7	-0.2
SAP3				S	Sb	04 48 31.8	+0.5
SAP3	**Santorini-Thir**	0.70	36	P	Pb	04 48 21.7	-0.2
SNT5	**Nea Kammeni, S**	0.70	40	P	Pg	04 48 21.5	-0.1
SNT5				S	Sb	04 48 32.7	+1.4
SNT5	**Nea Kammeni, S**	0.70	40	P	Pg	04 48 21.5	-0.1
THR3	**Thira Island,**	0.71	40	P	Pg	04 48 21.5	-0.3
THR3	**Thira Island,**	0.71	40	P	Pb	04 48 21.8	-0.2
SANT	**Santorini**	0.71	45	P	Pg	04 48 21.6	-0.3
SANT				S	Sb	04 48 32.7	+1.0
SANT	**Santorini**	0.71	45	PG	Pg	04 48 21.6	-0.3
SANT				SG	Sb	04 48 32.7	+1.0
SANT	**Santorini**	0.71	45	i P	Pg	04 48 21.5	-0.3
SANT				i S	Sg	04 48 31.2	-0.1
SANT	**Santorini**	0.71	45	P	Pg	04 48 21.6	-0.3
SNT1	**Gialos, Santor**	0.72	41	P	Pg	04 48 21.7	-0.5
SNT1				S	Sg	04 48 31.4	-0.3
SNT1	**Gialos, Santor**	0.72	41	P	Pg	04 48 21.9	-0.3
SFIR	**Foira Santorin**	0.73	41	P	Pg	04 48 22.0	-0.3
SFIR				S	Sb	04 48 33.1	+0.9
THR7	**Fira-Santorini**	0.73	41	P	Pg	04 48 22.0	-0.3
THR7	**Fira-Santorini**	0.73	41	P	Pg	04 48 22.1	-0.1
THT2	**Imerovigli**	0.74	40	P	Pg	04 48 22.2	-0.2
THT2				S	Sb	04 48 32.9	+0.5
THT2	**Imerovigli**	0.74	40	PG	Pb	04 48 22.4	-0.1
THT2				SG	Sb	04 48 33.7	+1.3
THT2	**Imerovigli**	0.74	40	P	Pg	04 48 22.2	-0.2
THR8	**Santorini-Mono**	0.75	44	P	Pg	04 48 22.1	-0.4
THR8	**Santorini-Mono**	0.75	44	P	Pg	04 48 22.2	-0.4
TMBK	**Timbaki Herakl**	0.80	184	P	Pn	04 48 24.4	-0.2
TMBK				S	Sb	04 48 35.5	+1.4
	comp=N,4µm,0.5s						
IMMV	**Iera Moni Meta**	0.81	240	P	Pb	04 48 24.1	+0.4
IMMV				S	Sg	04 48 33.9	-0.5
	comp=N,5µm,0.3s						
IMMV	**Iera Moni Meta**	0.81	240	PG	Pb	04 48 23.8	0.0
IMMV				SG	Sb	04 48 34.5	+0.1
IMMV	**Iera Moni Meta**	0.81	240	P	Pb	04 48 23.7	0.0
IMMV				S	Sg	04 48 34.1	-0.3
IMMV				AML	AML	04 48 35.6	
	comp=N,10680µm,0.3s						
IMMV				AML	AML	04 48 39.6	
	comp=E,8167µm,0.4s						
SIVA	**Sivas**	0.85	182	P	Pb	04 48 25.0	+0.6
SIVA				S	Sb	04 48 36.1	+0.5
	comp=E,6µm,0.3s						
SIVA	**Sivas**	0.85	182	P	Pb	04 48 24.8	+0.4
SIVA				S	Sb	04 48 36.4	+0.8
SIVA				AML	AML	04 48 39.9	
	comp=E,13641µm,0.3s						
SIVA				AML	AML	04 48 40.2	
	comp=N,8388µm,0.4s						
NPS	**Neapolis**	0.87	134	P	Pg	04 48 24.8	-0.2
NPS				S	Sg	04 48 36.4	0.0
	comp=N,2µm,0.3s						
NPS	**Neapolis**	0.87	134	P	Pg	04 48 24.9	-0.1
NPS				S	Sg	04 48 36.5	0.0
NPS				AML	AML	04 48 41.0	
	comp=N,3853µm,0.3s						
NPS				AML	AML	04 48 41.1	
	comp=E,5378µm,0.3s						
LAST	**Lasithi**	0.88	143	P	Pg	04 48 25.0	-0.1
LAST				S	Sg	04 48 36.6	0.0
	comp=E,1µm,0.5s						
LAST	**Lasithi**	0.88	143	P	Pg	04 48 25.1	+0.1
LAST				S	Sg	04 48 36.8	+0.2
LAST				AML	AML	04 48 38.1	
	comp=E,3032µm,0.4s						
LAST				AML	AML	04 48 38.9	
	comp=N,2906µm,0.3s						
MHLO	**Agia Marina, M**	0.89	337	P	Pb	04 48 25.2	0.0
MHLO				S	Sb	04 48 37.5	+0.6
	comp=N,6µm,0.6s						
MHLO	**Agia Marina, M**	0.89	337	P	Pb	04 48 25.0	-0.2
MHLO				AML	AML	04 48 39.8	
	comp=E,8839µm,0.6s						
MHLO				AML	AML	04 48 40.1	
	comp=N,13479µm,0.6s						
FRMA	**Ierapetra Chan**	1.12	139	P	Pg	04 48 30.0	+0.3
FRMA				S	Sg	04 48 44.3	0.0
	comp=N,382nm,0.3s						
KNDR	**Palaiochora Ch**	1.13	236	PN	Pg	04 48 30.5	+0.6
KNDR				SN	Sn	04 48 46.9	+2.4

GVDS	Gavdos	1.19	211	P	Pg	04 48 31.1	+0.1
GVDS				S	Sn	04 48 47.1	+1.1
	comp=N,780nm,0.3s						
GVDS	Gavdos	1.19	211	PN	Pg	04 48 31.3	+0.3
GVD	Gavdhos	1.20	211	P	Pb	04 48 30.6	+0.2
GVD	Gavdhos	1.20	211	PN	Pg	04 48 30.9	-0.2
GVD				SN	Sn	04 48 47.9	+1.8
GVD	Gavdhos	1.20	211	P	Pn	04 48 30.4	+0.2
GVD				AML	AML	04 48 53.7	
	comp=N,3334µm,0.4s						
GVD				AML	AML	04 48 57.3	
	comp=E,2583µm,0.5s						
STIA	Sitia Lasithi	1.22	123	P	Pn	04 48 29.9	-0.6
STIA				S	Sb	04 48 47.0	+0.8
ANKY	Antikythira Is	1.25	270	P	Pn	04 48 30.5	-0.4
ANKY				S	Sg	04 48 48.4	0.0
	comp=E,2µm,0.5s						
ANKY	Antikythira Is	1.25	270	P	Pn	04 48 30.7	-0.2
ANKY				S	Sb	04 48 47.1	0.0
ANKY				AML	AML	04 48 50.4	
	comp=N,3200µm,0.4s						
ANKY				AML	AML	04 48 50.4	
	comp=E,3083µm,0.6s						
APE	Apeiranthos	1.32	25	P	Pn	04 48 30.9	-1.1
APE				S	Sg	04 48 50.6	-0.1
	comp=E,370nm,0.4s						
APE	Apeiranthos	1.32	25	PN	Pg	04 48 33.2	-0.3
APE				SN	Sg	04 48 51.9	+1.2
APE	Apeiranthos	1.32	25	*i* P	Pg	04 48 33.0	-0.5
APE				*i* S	Sg	04 48 51.0	+0.3
APE	Apeiranthos	1.32	25	P	Pn	04 48 30.9	-1.1
APE				S	Sb	04 48 48.8	-0.5
APE				AML	AML	04 48 56.7	
	comp=N,756µm,0.4s						
APE				AML	AML	04 49 00.7	
	comp=E,695µm,0.4s						
ZKR	Zakros	1.35	123	P	Pn	04 48 32.0	-0.3
ZKR				S	Sb	04 48 49.9	-0.2
ZKR	Zakros	1.35	123	PN	Pn	04 48 32.7	+0.4
ZKR	Zakros	1.35	123	P	Pn	04 48 32.0	-0.3
ZKR				S	Sb	04 48 50.1	0.0
KTHA	Kythira Island	1.49	286	P	Pn	04 48 33.4	-0.8
KTHA	Kythira Island	1.49	286	PN	Pn	04 48 34.7	+0.5
KTHA				SN	Sg	04 48 55.4	-0.7
KTHA	Kythira Island	1.49	286	P	Pn	04 48 33.5	-0.7
KTHR	Kythira	1.54	285	P	Pn	04 48 34.2	-0.7
VLI	Veliai	1.75	299	P	Pn	04 48 37.1	-0.8
VLI	Veliai	1.75	299	P	Pn	04 48 37.3	-0.5
KARP	Karpathos	1.92	99	P	Pn	04 48 39.8	-0.3
KARP	Karpathos	1.92	99	PN	Pn	04 48 40.5	+0.4
KARP	Karpathos	1.92	99	P	Pn	04 48 39.8	-0.3
KARP				AML	AML	04 49 09.9	
	comp=E,1582µm,0.4s						
KARP				AML	AML	04 49 10.9	
	comp=N,1459µm,0.6s						
KOSK	Kos Island	1.94	62	PN	Pb	04 48 42.4	-0.6
KRND	KRANIDI	2.03	319	P	Pn	04 48 41.9	+0.2
BODT	Bodrum	2.32	58	PN	Pn	04 48 47.7	+2.0
DION	Dionisos Attik	2.32	342	P	Pn	04 48 45.8	+0.1
BDRM	Kayabasi	2.42	60	*i* P	Pb	04 48 49.4	-1.8
GCAM	G?zelcaml?	2.65	46	PN	Pn	04 48 52.5	+2.3
GCAM	G?zelcaml?	2.65	46	*i* P	Pb	04 48 56.4	+1.2
ITM	Ithomi	2.69	300	PN	Pn	04 48 52.4	+1.7
ARG	Arkhangelos	2.69	82	PN	Pn	04 48 52.9	+2.2
CHOS	Chios island	2.69	21	PN	Pn	04 48 52.8	+1.9
MLSB	Milas	2.76	58	PN	Pn	04 48 53.9	+2.2
URLA	Izmir	2.86	29	PN	Pn	04 48 55.2	+2.2
URLA	Izmir	2.86	29	*i* P	Pn	04 48 50.9	-2.2
TURN	Turunc	2.90	71	PN	Pn	04 48 56.1	+2.6
TURN	Turunc	2.90	71	*i* P	Pn	04 48 56.6	+3.1
TURN				*i* S	Sn	04 49 30.1	+2.1
TURN				IAML		04 49 37.0	
	comp=N,54nm,0.4s						
YER	Yerkesik	3.05	65	PN	Pn	04 48 58.2	+2.5
KLV	Kalavryta, Ach	3.06	316	P	Pn	04 48 56.7	+0.9
BLCB	Balcova	3.07	34	PN	Pn	04 48 58.4	+2.5
MULA	Mugla, Merkez-	3.13	63	*i* P	Pb	04 49 02.4	-1.0
AYDB	Zeytinkoy-Aydi	3.21	49	PN	Pn	04 49 00.3	+2.4
DALY	Dalyan (Mula)	3.22	72	PN	Pn	04 49 00.6	+2.6
FETY	Fethiye	3.52	76	PN	Pn	04 49 04.9	+2.8
TAVA	DENIZLI_Tavas	3.64	63	*i* P	Pb	04 49 08.8	-3.3
AGG	Agios Georgios	3.73	328	*i* P	Pn	04 49 05.7	+0.7
CAEL	Denizli, Camel	3.82	70	*i* P	Pb	04 49 11.7	-3.5
CAEL				*i* S	Sn	04 49 55.5	+4.4
AKAS	Kas	3.88	83	PN	Pn	04 49 09.9	+2.7
AKAS	Kas	3.88	83	*i* P	Pn	04 49 07.8	+0.6
AKAS				*i* S	Sn	04 49 49.3	-3.3
GOLH	Golhisar	4.04	69	*i* P	Pn	04 49 12.8	+3.4
GOLH				*i* S	Sn	04 50 00.5	+4.0
ELL	Elmali	4.19	76	PN	Pn	04 49 14.4	+3.0
KHAL	Karahalli	4.48	55	*i* P	Pn	04 49 19.4	+4.0
AKUM	Antalya-Kumluc	4.48	83	*i* P	Pn	04 49 16.6	+1.3
AKUM				*i* S	Sn	04 50 03.2	-3.9
AKUM				IAML		04 50 10.0	
	comp=N,22nm,0.4s						
KORT	Korkueli	4.58	74	PN	Pn	04 49 20.1	+3.2
BRTR	Keskin Array B	7.96	58	Pn	Pn	04 50 06.0	+2.8
	comp=N,0.1nm,0.3s,baz=228,slow=13,SNR=4.4						
MMAI	Mount Meron Ar	9.18	105	Pn	Pn	04 50 18.6	-1.3
	comp=N,0.5nm,0.3s,baz=305,slow=12,SNR=2.4						
MMAI				Sn	Sn	04 51 57.8	-5.2
	comp=N,2.7nm,0.3s,baz=278,slow=39,SNR=5.9						
AKASG	Malin Array Be	15.16	11	Pn	Pn	04 51 41.9	+0.5
	comp=N,0.7nm,0.3s,baz=200,slow=11,SNR=2.5						
GERES	GERESS Array B	15.34	331	Pn	Pn	04 51 45.0	+1.1
	comp=N,0.0nm,0.3s,baz=162,slow=10.0,SNR=2.0						
ESDC	Sonseca Array	23.04	288	P	P	04 53 11.0	-1.7
	comp=N,0.9nm,0.8s,baz=88,slow=9.6,SNR=2.5						
HFS	Hagfors	25.33	347	P	P	04 53 32.3	-1.6
	comp=N,5.0nm,1.2s,baz=173,slow=13,SNR=1.1						
FINES	FINESS Array B	25.61	1	P	P	04 53 34.0	-2.4
	comp=N,2.1nm,0.8s,baz=184,slow=12,SNR=1.5						
EKA	Eskdalemuir Ar	27.31	324	P	P	04 53 51.8	-0.1
	comp=N,3.3nm,1.1s,baz=118,slow=9.0,SNR=2.3						
TORD	Torodi Ar. Bea	30.75	228	P	P	04 54 22.6	-0.2
	comp=N,0.5nm,0.5s,baz=30,slow=8.1,SNR=1.5						
ARCES	ARCESS Array B	33.72	0	P	P	04 54 48.7	+0.3
	comp=N,7.5nm,1.1s,baz=181,slow=6.3,SNR=3.0						
MKAR	Makanchi Array	43.61	57	P	P	04 56 10.7	-0.9
	comp=N,0.2nm,0.3s,baz=266,slow=8.3,SNR=13						
SONM	Songino Array	59.24	51	P	P	04 58 09.9	+1.2
	comp=N,0.1nm,0.4s,baz=306,slow=5.0,SNR=1.8						

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*IDC **22** 04:49:35.9±1.5, 30°.61S×177°.69W, h0^{km}, mb4.0/3, mb1 4.1/4, mb1mx3.9/22, mbtmp4.0/4, ML3.0/1, MS3.3/1, Ms1 3.3/1, ms1mx2.6/30, Error ellipse: s-maj=39.3km s-min=23.4km az=113.0*

ISC 22 04:49:40.3±1.4**, 30°.52S**±0°.08×**177°.7W**±0°.2**, h33^{km}, n19,** σ0^s**98**/11**, mb4.1**/3**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.27	353	Pn	Pb	04 50 03.2	-0.5
	158nm,0.3s,baz=60,slow=23,SNR=2.1						
RAO				Sn	Sn	04 50 16.7	-1.0
	824nm,0.3s,baz=69,slow=23,SNR=13						
URZ	Urewera	8.82	207	Pn	Pn	04 51 44.0	-1.4
	0.2nm,0.3s,baz=152,slow=20,SNR=1.8						
URZ				Sn	Sn	04 53 23.0	-0.7
	1.1nm,0.3s,baz=215,slow=22,SNR=10						
DZM	Mont Dzumac	16.48	297	LR	LR	04 58 43.3	
	comp=Z,105nm,18.2s,baz=126,slow=33						
STKA	Stephens Creek	34.68	257	P	P	04 56 28.6	+1.7
	2.7nm,0.6s,baz=90,slow=9.5,SNR=7.2						
ASAR	Alice Springs	43.34	267	P	P	04 57 39.9	+0.4
	0.6nm,0.6s,baz=105,slow=7.6,SNR=14						
WRA	Warramunga Arr	44.34	272	P	P	04 57 47.5	0.0
	1.0nm,0.3s,baz=111,slow=8.1,SNR=21						
H03S2	Juan Fernandez	80.21	123	T	T	06 31 01.4	
	baz=238,slow=74,SNR=7.5						
H03S1	Juan Fernandez	80.22	123	T	T	06 31 05.1	
	baz=238,slow=74,SNR=8.4						
H03S3	Juan Fernandez	80.22	123	T	T	06 30 59.3	
	baz=238,slow=74,SNR=9.2						
H03N3	Juan Fernandez	80.40	123	T	T	06 31 10.3	
	baz=242,slow=72,SNR=5.5						
H03N2	Juan Fernandez	80.40	123	T	T	06 31 12.6	
	baz=242,slow=72,SNR=6.2						
H03N1	Juan Fernandez	80.42	123	T	T	06 31 11.9	
	baz=242,slow=72,SNR=6.6						
H10N3	ASCENSION HYDR	138.61	154	T	T	07 44 45.0	
	baz=203,slow=75,SNR=9.0						
H10N1	ASCENSION HYDR	138.61	154	T	T	07 44 40.5	
	baz=203,slow=75,SNR=12						
H10N2	ASCENSION HYDR	138.62	154	T	T	07 44 47.1	
	baz=203,slow=75,SNR=11						
FINES	FINESS Array B	145.33	340	PKPbc	PKPdf	05 09 13.9	0.0
	1.9nm,0.3s,baz=48,slow=4.6,SNR=24						
HFS	Hagfors	149.40	349	PKPbc	PKPbc	05 09 25.6	+0.4
	3.1nm,1.0s,baz=88,slow=7.4,SNR=1.4						
AKASG	Malin Array Be	151.53	323	PKPbc	PKiKP	05 09 31.0	0.0
	0.4nm,0.4s,baz=54,slow=2.6,SNR=1.9						
TORD	Torodi Ar. Bea	162.71	178	PKPab	PKPab	05 10 28.9	+1.0
	1.1nm,0.8s,baz=196,slow=5.7,SNR=2.0						

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*HEL **22** 05:06:55.1±0.5, 67°.63N×33°.94E, h0^{km}, ML2.1, Explosion*
*NAO **22** 05:06:56.6±1.1, 67°.69N×33°.70E, ML2.7*
*IDC **22** 05:06:57.1±0.9, 67°.67N×33°.81E, h0^{km}, mb3.2/3, mb1 3.5/9, mb1mx3.2/51, mbtmp3.4/9, ML2.5/5, Error ellipse: s-maj=13.3km s-min=9.4km az=64.0*

ISC 22 05:06:54.6±0.9**, 67°.56N**±0°.04×**33°.81E**±0°.05**, h0^{km}, n39,** σ1^s**69**/59**, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
APZ9	Apatity	0.15	272	Pg	Pg	05 06 59.6	+2.0
APZ9				Lg	Lg	05 07 02.2	
APZ9				Rg	Rg	05 07 03.0	
APZ9	Apatity	0.15	272	Pg	Pg	05 06 59.6	+2.0
APZ9				Sg	Sg	05 07 02.2	+2.7
APA0	Apatity Array	0.32	278	Pg	Pb	05 07 02.0	-1.1
	baz=87,slow=16						
APA0				Lg	Lg	05 07 06.1	
	baz=85,slow=37						
APA0				Rg	Rg	05 07 07.9	
	baz=77,slow=56						
APA0	Apatity Array	0.32	278	Pg	Pb	05 07 02.0	-1.1
	baz=87,slow=16						
APA0				Sg	Sg	05 07 06.1	+1.4
	baz=85,slow=37						
VRF	Varrio	1.61	279	PG	Pn	05 07 24.7	+0.3
VRF				MSG		05 07 44.6	
	comp=Z,16nm,0.2s						
VRF				SG	Sb	05 07 45.6	-0.5
OLKF	Oulanka, Finla	2.14	236	PG	Pb	05 07 34.5	+0.3
OLKF				SG	Sg	05 08 03.9	+0.7
KU6	Riekki	2.19	227	PG	Pb	05 07 35.4	+0.4
KU6				MSG		05 08 02.5	
	comp=Z,9.6nm,0.2s						
KU6				SG	Sg	05 08 05.7	+0.9
MSF	Maaselka	2.52	231	PG	Pb	05 07 40.0	-0.6
MSF				SG	Sg	05 08 15.8	+0.4
SGF	Sodankyl	2.80	271	PN	Pn	05 07 42.3	+1.6
SGF				SB	Sb	05 08 19.6	-0.7
RNF	Rovaniemi	3.20	256	PN	Pn	05 07 47.9	+1.9
	baz=69						
RNF				SN	Sn	05 08 27.4	+2.7
ARA0	ARCESS Array S	3.63	307	Pn	Pn	05 07 52.9	+0.8
	baz=122,slow=16						
ARA0				Sn	Sn	05 08 34.0	-1.6
	baz=120,slow=28						
ARA0				Lg	Lg	05 08 45.0	
	baz=115,slow=37						
ARA0	ARCESS Array S	3.63	307	Pn	Pn	05 07 52.9	+0.8
	baz=122,slow=16						
ARA0				Sn	Sn	05 08 34.0	-1.6
	baz=120,slow=28						
ARA0				Sg	Sb	05 08 45.0	+0.8
	baz=115,slow=37						
ARA0	ARCESS Array S	3.63	307	PN	Pn	05 07 52.7	+0.6
	baz=121						
ARA0				SN	Sn	05 08 34.0	-1.6
ARCES	ARCESS Array B	3.63	307	Pn	Pn	05 07 52.8	+0.7
	baz=122,slow=15,SNR=339						
ARCES				Pg	Pb	05 08 00.8	+1.1
	baz=119,slow=15,SNR=14						
ARCES				Sn	Sn	05 08 33.9	-1.7
	baz=119,slow=25,SNR=13						
ARCES				Lg	Lg	05 08 45.1	
	baz=113,slow=32,SNR=9.0						
TOF	Tornio	4.03	253	PN	Pn	05 07 58.7	+1.2
OUL	Oulu	4.04	236	PB	Pb	05 08 05.2	-1.4
PAJU	Pajala	4.18	268	PN	Pn	05 08 00.0	+0.4
KTK1	Kautokeino	4.19	295	Pn	Pn	05 07 59.4	-0.2
KTK1				Sn	Sn	05 08 48.1	-1.1
KTK1				Lg	Lg	05 09 01.8	
KTK1	Kautokeino	4.19	295	Pn	Pn	05 07 59.4	-0.2
KTK1				Sn	Sn	05 08 48.1	-1.1
KALU	Kalix	4.49	252	PN	Pn	05 08 05.0	+1.2
LANU	Lannavaara	4.51	282	PN	Pn	05 08 04.1	0.0
FIA0	FINESS Array S	6.99	212	Pn	Pn	05 08 39.0	+0.9
	baz=21,slow=14						
FIA0				Sn	Sn	05 09 58.6	+0.6
	baz=30,slow=22						
FIA0				Lg	Lg	05 10 33.8	
	baz=29,slow=28						
FIA0	FINESS Array S	6.99	212	Pn	Pn	05 08 39.0	+0.9
	baz=21,slow=14						
FIA0				Sn	Sn	05 09 58.6	+0.6
	baz=30,slow=22						
FIA0				Sg	Sg	05 10 33.8	-4.9
	baz=29,slow=28						
FINES	FINESS Array B	6.99	212	Pn	Pn	05 08 40.0	+2.0
	comp=Z,0.1nm,0.3s,baz=30,slow=14,SNR=5.1						
FINES				Sn	Sn	05 09 57.1	-1.0
	comp=Z,0.2nm,0.3s,baz=37,slow=19,SNR=1.6						
FINES				Lg	Lg	05 10 34.2	
	comp=Z,1.6nm,0.3s,baz=26,slow=25,SNR=14						
HFS	Hagfors	11.53	239	Pn	Pn	05 09 40.8	+0.5
	comp=Z,0.1nm,0.3s,baz=37,slow=9.8,SNR=1.7						
HFS	Hagfors	11.53	239	Pn	Pn	05 09 39.4	-0.8
	baz=45,slow=8.6						
HFS	Hagfors	11.53	239	Pn	Pn	05 09 39.4	-0.8
	baz=45,slow=8.6						
NB2	NORSAR Subarra	11.72	247	Pn	Pn	05 09 42.5	-0.5
NB2	NORSAR Subarra	11.72	247	Pn	Pn	05 09 42.5	-0.5
NOA	NORSAR Array B	11.72	247	Pn	Pn	05 09 42.2	-0.8
	comp=Z,0.0nm,0.3s,baz=43,slow=11,SNR=1.5						
SPA0	Spitsbergen Ar	11.74	342	Pn	Pn	05 09 40.6	-2.5
	baz=159,slow=28						
SPA0	Spitsbergen Ar	11.74	342	Pn	Pn	05 09 40.6	-2.5
	baz=159,slow=28						
SPITS	Spitsbergen Ar	11.74	342	Pn	Pn	05 09 40.8	-2.4
	baz=152,slow=24,SNR=8.8						
NRA0	NORESS Array S	11.82	245	Pn	Pn	05 09 43.9	-0.4
	baz=43,slow=14						
NRA0	NORESS Array S	11.82	245	Pn	Pn	05 09 43.9	-0.4
	baz=43,slow=14						
AKASG	Malin Array Be	17.07	190	Pn	Pn	05 10 49.1	-5.2
	comp=Z,0.3nm,0.3s,baz=7.5,slow=13,SNR=2.0						
AKTO	Aktyubinsk	20.97	133	P	P	05 11 40.4	+1.5
	comp=Z,0.7nm,0.5s,baz=326,slow=20,SNR=3.9						
KURBB	Kurchatov Arra	27.68	105	P	P	05 12 47.0	+3.1
	comp=Z,0.1nm,0.4s,baz=332,slow=8.1,SNR=5.2						
MKAR	Makanchi Array	32.25	105	P	P	05 13 27.5	+3.1
	comp=Z,0.2nm,0.6s,baz=344,slow=7.1,SNR=2.4						

IDC 22 05:09:32.0±2.4**, 5°.54S**×**151°.91E, h0^{km}, mb3.6**/4**, mb1 3.9**/4**, mb1mx3.5**/40**, mbtmp3.6**/4**, MS2.9**/1**, Ms1 2.9**/1**, ms1mx2.3**/32**, Error ellipse: s-maj=143.9km s-min=29.7km az=129.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	22.29	228	P	P	05 14 32.9	+1.8
	0.7nm,0.9s,baz=53,slow=10,SNR=2.8						
ASAR	Alice Springs	25.01	222	P	P	05 14 56.8	-1.1
	0.8nm,0.9s,baz=59,slow=9.1,SNR=4.0						
ASAR				LR	LR	05 25 05.4	
	comp=Z,29nm,19.5s,baz=124,slow=37						
FITZ	Fitzroy Crossi	28.53	242	P	P	05 15 30.0	+0.5
	3.1nm,0.9s,baz=67,slow=14,SNR=1.9						
ILAR	Eielson Array	83.17	22	P	P	05 22 00.7	+1.0
	0.4nm,0.8s,baz=246,slow=6.8,SNR=4.1						
TORD	Torodi Ar. Bea	149.68	287	PKPbc	PKPbc	05 29 23.0	-1.8
	1.2nm,0.8s,baz=62,slow=3.8,SNR=5.3						

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*IDC **22** 05:10:03.9±1.5, 35°.52N×25°.78E, h0^{km}, mb3.8/6, mb1 3.9/6, mb1mx3.5/50, mbtmp3.8/6, ML2.5/1, Error ellipse: s-maj=62.8km s-min=25.6km az=143.0*
*NIC **22** 05:10:07.9±0.0, 34°.97N×26°.01E, h46^{km}±2^{km}, Ml3.8/4*
*ISK **22** 05:10:10.0, 35°.40N×26°.11E, h11^{km}, ML3.0/18*
*ATH **22** 05:10:10.3, 35°.30N×26°.12E, h36^{km}±4^{km}, ML3.1/8, Error ellipse: s-maj=5.4km s-min=1.4km az=171.0*
*DDA **22** 05:10:10.0, 35°.20N×26°.16E, h78^{km}±86^{km}, ML2.8*
*THE **22** 05:10:12.0, 35°.23N×26°.11E, h28^{km}±1^{km}, ML3.0/7, Error ellipse: s-maj=2.4km s-min=0.9km az=168.0*

ISC 22 05:10:10.1±1.0**, 35°.18N**±0°.04×**26°.12E**±0°.02**, h37^{km}**±1^{km}**, n96,** σ1^s**60**/115**, mb3.8**/6**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STIA	Sitia Lasithi	0.03	308	P	Pn	05 10 16.5	+0.3
STIA				S	Sn	05 10 21.2	+0.9
ZKR	Zakros	0.10	131	P	Pn	05 10 16.7	-6.8
ZKR				S	Sn	05 10 22.0	-15
	11µm,0.5s						
ZKR	Zakros	0.10	131	PG	Pn	05 10 16.6	-6.9
ZKR				SG	Sn	05 10 21.7	-15
ZKR	Zakros	0.10	131	P	Pn	05 10 16.6	-6.9
ZKR				AML	AML	05 10 21.2	
	33nm,0.7s						
ZKR				AML	AML	05 10 21.2	
	33nm,0.7s						
ZKR				AML	AML	05 10 21.4	
	6.8nm,0.4s						
ZKR				AML	AML	05 10 21.4	
	6.8nm,0.4s						
ZKR				S	Sn	05 10 21.9	-15
ZKR	Zakros	0.10	131	P	Pn	05 10 16.7	-6.8
ZKR				S	Sn	05 10 21.6	-15
ZKR				AML	AML	05 10 22.2	
	comp=E,34420µm,0.4s						
ZKR				AML	AML	05 10 22.8	
	comp=N,7598µm,0.4s						
FRMA	Ierapetra Chan	0.36	242	P	Pn	05 10 17.9	-0.7
FRMA				S	Sn	05 10 24.5	-0.9
	comp=N,3µm,0.5s						
NPS	Neapolis	0.42	281	P	Pn	05 10 20.2	+0.7
NPS				S	Sn	05 10 27.6	+1.2
	comp=N,5µm,0.3s						
NPS	Neapolis	0.42	281	P	Pn	05 10 20.3	+0.8
NPS				S	Sn	05 10 27.0	+0.6
NPS				AML	AML	05 10 28.4	
	comp=E,12827µm,0.3s						
NPS				AML	AML	05 10 28.8	
	comp=N,5999µm,0.3s						
LAST	Lasithi	0.53	268	P	Pn	05 10 21.4	+0.2
LAST				S	Sn	05 10 30.5	+1.6
	comp=N,2µm,0.6s						
LAST	Lasithi	0.53	268	P	Pn	05 10 21.6	+0.3
LAST				S	Sn	05 10 29.9	+1.0
LAST				AML	AML	05 10 30.9	
	comp=N,3654µm,0.5s						
LAST				AML	AML	05 10 31.2	
	comp=E,3950µm,0.6s						
KSTL	Kastelli Herak	0.87	278	P	Pn	05 10 23.6	-2.1
KSTL				S	Sn	05 10 33.0	-4.2
KARP	Karpathos	0.93	67	P	Pn	05 10 27.8	+1.2
KARP				S	Sn	05 10 40.9	+2.2
	comp=E,2µm,0.5s						
KARP	Karpathos	0.93	67	PG	Pn	05 10 27.5	+0.9
KARP				SG	Sn	05 10 39.8	+1.1
KARP	Karpathos	0.93	67	P	Pn	05 10 27.8	+1.2
KARP				S	Sn	05 10 41.8	+3.1
KARP				AML	AML	05 10 43.3	
	comp=E,4.4nm,0.6s						
KARP				AML	AML	05 10 43.3	
	comp=E,4.4nm,0.6s						
KARP				AML	AML	05 10 45.1	
	comp=E,3.1nm,0.5s						
KARP				AML	AML	05 10 45.1	
	comp=E,3.1nm,0.5s						
KARP	Karpathos	0.93	67	P	Pn	05 10 27.7	+1.2
KARP				S	Sn	05 10 39.3	+0.6
KARP				AML	AML	05 10 44.0	
	comp=E,4441µm,0.6s						
KARP				AML	AML	05 10 45.5	
	comp=N,3070µm,0.5s						
IDI	Anoyia	1.01	276	P	Pn	05 10 29.1	+1.3
IDI				S	Sn	05 10 43.0	+2.2
	comp=N,502nm,0.6s						
IDI	Anoyia	1.01	276	PG	Pn	05 10 29.3	+1.5
IDI				SG	Sn	05 10 44.1	+3.3
IDI	Anoyia	1.01	276	P	Pn	05 10 29.3	+1.5
IDI				AML	AML	05 10 47.7	
	comp=N,970µm,0.6s						
IDI				AML	AML	05 10 47.8	
	comp=E,992µm,0.7s						
SIVA	Sivas	1.09	262	P	Pn	05 10 30.8	+2.0
SIVA	Sivas	1.09	262	P	Pn	05 10 30.7	+2.0
SIVA				AML	AML	05 10 48.0	
	comp=N,2056µm,0.7s						
SIVA				AML	AML	05 10 53.1	
	comp=E,3003µm,0.7s						
TMBK	Timbaki Herakl	1.12	265	P	Pn	05 10 31.5	+2.4
SANT	Santorini	1.30	336	PN	Pn	05 10 31.6	-0.2
SANT	Santorini	1.30	336	P	Pn	05 10 32.2	+0.4
SANT				AML	AML	05 10 52.5	
	comp=E,1454µm,0.3s						
SANT				AML	AML	05 10 54.0	
	comp=N,436µm,0.3s						
THR6	Thira Island,	1.31	334	P	Pn	05 10 32.4	+0.6
THR8	Santorini-Mono	1.33	337	P	Pn	05 10 32.3	+0.2
SNT1	Gialos, Santor	1.35	336	P	Pn	05 10 32.9	+0.5
SNT5	Nea Kammeni, S	1.35	334	P	Pn	05 10 32.8	+0.4
THR3	Thira Island,	1.36	335	P	Pn	05 10 32.8	+0.4
THT2	Imerovigli	1.37	336	PN	Pn	05 10 33.1	+0.4
THT2				SN	Sn	05 10 49.8	+0.2
THR5	Thira Island,	1.38	333	P	Pn	05 10 33.3	+0.4
SAP3	Santorini-Thir	1.40	333	P	Pn	05 10 33.5	+0.4
VAM	Vamos	1.59	279	P	Pn	05 10 36.9	+1.3
VAM	Vamos	1.59	279	P	Pn	05 10 36.9	+1.3
GVDS	Gavdos	1.70	259	PN	Pn	05 10 41.5	+4.3
GVD	Gavdhos	1.70	259	PN	Pn	05 10 40.9	+3.7
KOSK	Kos Island	1.71	24	PN	Pn	05 10 37.8	+0.5
IMMV	Iera Moni Meta	1.77	280	P	Pn	05 10 39.9	+1.7
IMMV	Iera Moni Meta	1.77	280	PN	Pn	05 10 40.7	+2.5
IMMV	Iera Moni Meta	1.77	280	P	Pn	05 10 40.1	+1.9
IMMV				AML	AML	05 11 15.9	
	comp=E,782µm,1.2s						
IMMV				AML	AML	05 11 18.7	
	comp=N,652µm,0.4s						
ARG	Arkhangelos	1.93	57	PN	Pn	05 10 42.4	+2.0
ARG	Arkhangelos	1.93	57	P	Pn	05 10 41.9	+1.5
ARG	Arkhangelos	1.93	57	P	Pn	05 10 42.7	+2.3
APE	Apeiranthos	1.94	346	P	Pn	05 10 41.1	+0.6
APE				S	Sn	05 11 04.7	+1.0
	comp=N,292nm,0.6s						
APE	Apeiranthos	1.94	346	PN	Pn	05 10 40.7	+0.1
APE				SN	Sn	05 11 03.3	-0.4
APE	Apeiranthos	1.94	346	P	Pn	05 10 41.0	+0.4
APE	Apeiranthos	1.94	346	P	Pn	05 10 41.1	+0.6
KNDR	Palaiochora Ch	1.99	272	PN	Pn	05 10 45.2	+4.0
MHLO	Agia Marina, M	2.05	318	P	Pn	05 10 43.5	+1.5
BODT	Bodrum	2.11	27	PN	Pn	05 10 43.2	+0.4
BDRM	Kayabasi	2.16	29	*i* P	Pn	05 10 44.1	+0.5
BDRM				*i* S	Sn	05 11 10.9	+1.8
TURN	Turunc	2.34	47	PN	Pn	05 10 47.6	+1.6
TURN	Turunc	2.34	47	*i* P	Pn	05 10 46.9	+0.9
TURN				*i* S	Sn	05 11 14.9	+1.3
TURN				IAML		05 11 17.0	
	comp=N,46nm,0.4s						
TURN				IAML		05 11 21.0	
	comp=E,60nm,0.4s						
MLSB	Milas	2.50	32	PN	Pn	05 10 49.2	+1.0
YER	Yerkesik	2.62	41	PN	Pn	05 10 51.3	+1.4
DALY	Dalyan (Mula)	2.62	51	PN	Pn	05 10 51.9	+2.1
DALY	Dalyan (Mula)	2.62	51	*i* P	Pn	05 10 52.5	+2.6
DALY				*i* S	Sn	05 11 20.2	-0.1
GCAM	G?zelcaml?	2.67	19	PN	Pn	05 10 51.5	+1.0
KTHA	Kythira Island	2.71	294	P	Pn	05 10 51.9	+0.8
KTHA	Kythira Island	2.71	294	PN	Pn	05 10 52.9	+1.8
MULA	Mugla, Merkez-	2.73	40	*i* P	Pn	05 10 53.7	+2.3
MULA				*i* S	Sn	05 11 24.9	+1.7
KTHR	Kythira	2.75	294	P	Pn	05 10 53.3	+1.6
DGB	zmir	2.93	12	*i* P	Pn	05 10 53.1	-0.9
VLI	Veliai	3.00	302	P	Pn	05 10 56.1	+1.0
AKAS	Kas	3.02	69	*i* P	Pn	05 10 54.1	-1.4
AYDB	Zeytinkoy-Aydi	3.10	27	PN	Pn	05 10 57.7	+1.1
URLA	Izmir	3.19	7	PN	Pn	05 10 57.7	-0.1
URLA	Izmir	3.19	7	*i* P	Pn	05 10 57.1	-0.7
URLA				*i* S	Sn	05 11 33.9	-0.7
CHOS	Chios island	3.20	359	PN	Pn	05 10 58.3	+0.4
TAVA	DENIZLI_Tavas	3.21	44	*i* P	Pn	05 11 00.6	+2.7
TAVA				*i* S	Sn	05 11 39.1	+4.2
CAEL	Denizli, Camel	3.23	52	*i* P	Pn	05 11 03.9	+5.5

BLCB	Balcova	3.28	13	PN	Pn	05 11 00.2	+1.3
ELL	Elmali	3.45	62	PN	Pn	05 11 04.1	+2.8
GOLH	Golhisar	3.46	53	*i*P	Pn	05 11 02.8	+1.4
GOLH				*i*S	Sn	05 11 44.0	+2.9
GOLH				IAML		05 12 00.0	
	comp=E,22nm,0.6s						
GOLH				IAML		05 12 01.0	
	comp=N,51nm,1.0s						
AKUM	Antalya-Kumluc	3.62	70	*i*P	Pn	05 11 03.6	+0.1
AKUM				*i*S	Sn	05 11 43.7	-1.2
AKUM				IAML		05 11 47.0	
	comp=E,19nm,0.3s						
MANT	Manisa	3.84	30	*i*P	Pn	05 11 06.0	-0.8
ZEDA	zmir-Bergama	3.85	11	*i*P	Pn	05 11 07.1	+0.3
KORT	Korkueli	3.88	61	PN	Pn	05 11 10.2	+3.0
KORT	Korkueli	3.88	61	*i*P	Pn	05 11 08.1	+0.9
KORT				*i*S	Sn	05 11 52.2	+0.7
KORT				IAML		05 12 01.0	
	comp=E,14nm,0.4s						
KULA	Kula-Manisa	3.90	31	PN	Pn	05 11 08.9	+1.4
ITM	Ithomi	3.93	302	PN	Pn	05 11 10.6	+2.7
KHAL	Karahalli	4.18	39	*i*P	Pn	05 11 11.9	+0.6
USAK	Uak-Merkez	4.22	33	*i*P	Pn	05 11 12.8	+0.9
OSC1	CSNet OBS 1	4.58	110	P	Pn	05 11 16.1	-0.8
OSC1				S	Sn	05 12 09.2	+0.4
AKMS	Akamas	5.10	90	P	Pn	05 11 23.6	-0.3
AKMS				AML	AML	05 12 20.2	
	comp=E,0.2nm,0.6s						
AKMS				AML	AML	05 12 21.9	
	comp=E,0.2nm,0.3s						
ALFC	Alefka	5.31	88	P	Pn	05 11 26.2	-0.6
ALFC				AML	AML	05 12 23.5	
	comp=E,0.2nm,0.7s						
ALFC				AML	AML	05 12 23.5	
	comp=E,0.3nm,0.6s						
SZAC	Souni	5.57	92	P	Pn	05 11 30.8	+0.4
ASGA	Asgata	5.87	92	P	Pn	05 11 35.1	+0.7
MVOU	Mavrovouni	6.16	89	P	Pn	05 11 38.6	+0.1
BRTR	Keskin Array B	7.50	51	Pn	Pn	05 11 57.6	+0.5
	comp=E,0.1nm,0.3s,baz=226,slow=15,SNR=1.9						
AKASG	Malin Array Be	15.67	7	Pn	Pn	05 13 49.7	+1.7
	comp=E,0.6nm,0.3s,baz=196,slow=11,SNR=3.4						
TORD	Torodi Ar. Bea	31.11	231	P	P	05 16 24.3	-0.8
	comp=E,0.5nm,0.6s,baz=44,slow=8.5,SNR=2.1						
ARCES	ARCESS Array B	34.41	360	P	P	05 16 49.6	-3.8
	comp=E,2.7nm,1.0s,baz=180,slow=9.7,SNR=1.6						
KURBB	Kurchatov Arra	40.49	51	P	P	05 17 44.5	-0.7
	comp=E,1.0nm,0.5s,baz=274,slow=8.8,SNR=16						
MKAR	Makanchi Array	43.10	57	P	P	05 18 06.0	-0.5
	comp=E,1.0nm,0.5s,baz=270,slow=8.0,SNR=21						
ZALV	Zalesovo Beam	44.42	46	P	P	05 18 15.4	-1.6
	comp=E,0.6nm,0.5s,baz=270,slow=9.2,SNR=2.6						
SONM	Songino Array	58.86	51	P	P	05 20 04.2	-0.8
	comp=E,0.3nm,0.4s,baz=289,slow=7.7,SNR=3.6						

IDC 22 05:15:00.4±3.5**, 30°.12S**×**138°.63E, h0**^{km}**, mb1 2.9**/3**, mb1mx2.9**/31**, mbtmp2.6**/3**, ML2.3**/3**, Error ellipse: s-maj=110.4km s-min=16.0km az=45.0, South Australia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	3.09	125	Pn	Pn	05 15 50.2	-0.3
	0.1nm,0.3s,baz=305,slow=16,SNR=1.7						
STKA				Pg	Pb	05 15 56.7	+0.4
	0.5nm,0.3s,baz=296,slow=13,SNR=2.9						
STKA				Sn	Sn	05 16 28.1	-0.1
	0.5nm,0.3s,baz=279,slow=17,SNR=3.0						
STKA				Lg	Lg	05 16 39.3	
	1.4nm,0.3s,baz=15,slow=24,SNR=6.7						
ASAR	Alice Springs	7.69	326	Pn	Pn	05 16 54.9	+1.2
	0.0nm,0.3s,baz=149,slow=12,SNR=4.5						
ASAR				Sn	Sn	05 18 21.1	-0.5
	0.1nm,0.3s,baz=150,slow=22,SNR=3.0						
WRA	Warramunga Arr	10.85	338	Pn	Pn	05 17 36.6	-0.5
	0.0nm,0.3s,baz=154,slow=12,SNR=1.9						

IDC ***22*** *05:16:34.1±1.0, 39°.94N×143°.66E, h0^{km}, mb3.7/10, mb1 3.8/12, mb1mx3.6/48, mbtmp3.7/12, ML3.1/2, MS3.3/5, Ms1 3.3/5, ms1mx2.8/41, Error ellipse: s-maj=24.8km s-min=19.5km az=107.0*

NEIC ***22*** *05:16:35.4±1.7, 39°.95N±0°.07×143°.8E±0°.2, h10^{km}±2^{km}, mb3.9/8, Error ellipse: s-maj=20.4km s-min=10.0km az=105.0*

JMA ***22*** *05:16:36.6±0.2, 40°.01N×143°.57E, h21^{km}, M3.8*

NIED ***22*** *05:16:36.6, 40°.01N×143°.57E, h21^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}4.42; $M_{\theta\theta}$1.19; $M_{\phi\phi}$-5.61; $M_{r\theta}$1.93; $M_{\theta\phi}$-2.59; $M_{\phi r}$3.02; Fault plane solution: $M_0$6.57000×10^{14} NP1:ϕ_s30.00000°, δ62.00000°, λ104.00000°. NP2:ϕ_s182.00000°, δ31.00000°, λ66.00000°.*

ISC 22 05:16:34.8±0.7**, 39°.97N**±0°.05×**143°.66E**±0°.07**, h6**^{km}**, n58, σ1**^{s}.**10**/52**, mb3.8**/12**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTH	Tanohata	1.38	269	P	Pn	05 16 59.8	-0.7
JTH				*e*S	Sb	05 17 16.9	-1.8
MIYJ	Miyakonagasawa	1.47	255	P	Pn	05 17 01.6	-0.2
JKEN	Kujiedanarisaw	1.51	280	P	Pn	05 17 01.7	-0.6
JOM	Ohasama	1.89	255	P	Pn	05 17 08.2	+0.7
ERM	Erimo	2.08	350		Pn	05 17 10.7	+0.6
JEM	Erimo	2.08	350	P	Pn	05 17 10.5	+0.4
JEM				*e*S	Sn	05 17 35.6	-0.7
JTM	Tenmabayashi	2.14	293	P	Pn	05 17 11.3	+0.3
JTM	Tenmabayashi	2.14	293	Pn	Pn	05 17 11.8	+0.8
JMK	Ichinoseki	2.14	242	P	Pn	05 17 11.2	+0.2
JAH	Hinai	2.33	276	P	Pn	05 17 14.5	+0.9
JNBK	Urakawa-nobuka	2.41	344	P	Pn	05 17 15.9	+1.3
JOT	Ohata	2.43	306	P	Pn	05 17 15.5	+0.5
JCH	Churui	2.65	355	P	Pn	05 17 18.2	+0.2
JCH				S	Sn	05 17 49.2	-1.2
JKB	Kayabe	2.76	315	*e*S	Sn	05 17 52.2	-0.9
JYK	Kaneyama	2.76	249	P	Pn	05 17 20.5	+1.0
JMM	Marumori	3.07	228	Pn	Pn	05 17 23.3	-0.4
JAK	Akkeshi	3.12	14	P	Pn	05 17 24.6	+0.1
JAK				*e*S	Sn	05 18 00.1	-2.0
JEW	Eniwo	3.31	331	Pn	Pn	05 17 29.1	+2.0
JKA	Kamikawa-asahi	4.21	350		Pn	05 17 40.9	+1.3
ASAJ	Asahikawa	4.22	350	Pn	Pn	05 17 40.9	+1.3
	1.4nm,0.3s,baz=352,slow=26,SNR=9.2						
ASAJ				Sn	Sn	05 18 29.4	+0.3
	1.7nm,0.3s,baz=129,slow=21,SNR=3.5						
JSD	Sado	4.62	247	Pn	Pn	05 17 46.1	+1.0
JYT	Yasato	4.63	217	Pn	Pn	05 17 46.4	+1.2
MJAR	Matsushiro Arr	5.49	233	Pn	Pn	05 17 58.6	+1.6
	0.2nm,0.3s,baz=46,slow=10,SNR=12						
MAJO	Matsushiro	5.49	233		Pn	05 17 58.4	+1.4
JGF	Kuroka	6.62	231	Pn	Pn	05 18 13.8	+1.2
JWT	Wachi	8.05	237	Pn	Pn	05 18 34.9	+2.8
USRK	Ussuriysk Ar.	9.64	300	LR	LR	05 22 39.1	
	comp=Z,103nm,18.4s,baz=23,slow=38						
JNU	Nakatsue	12.33	240	LR	LR	05 23 38.8	
	comp=Z,1μm,19.6s,baz=110,slow=34						
KLR	Kul'dur	12.54	321	LR	LR	05 24 16.8	
	comp=Z,44nm,18.4s,baz=9.0,slow=37						
KSRS	Korea Array	12.54	263	LR	LR	05 24 06.9	
	comp=Z,66nm,20.2s,baz=88,slow=36						
SEY	Seymchan	23.58	10	P	P	05 21 45.5	-0.4
	2.4nm,0.8s,baz=74,slow=22,SNR=3.8						
SONM	Songino Array	27.76	299	P	P	05 22 25.2	+1.0
	0.8nm,0.5s,baz=91,slow=9.2,SNR=9.4						
SONM	Songino Array	27.76	299	P	P	05 22 25.4	+1.1
SONM				IAmb	IAmb	05 22 35.1	
	comp=Z,1.5nm,0.8s						
H11N2	WAKE ISLAND Hy	28.37	129	T	T	05 52 16.5	
	baz=322						
H11N1	WAKE ISLAND Hy	28.38	129	T	T	05 52 10.0	
	baz=322,slow=74						
H11N3	WAKE ISLAND Hy	28.39	129	T	T	05 52 14.8	
	baz=322,slow=74						
H11S1	WAKE ISLAND Hy	29.20	130	T	T	05 53 18.1	
	baz=330						
H11S3	WAKE ISLAND Hy	29.20	130	T	T	05 53 15.6	
	baz=330						
H11S2	WAKE ISLAND Hy	29.22	130	T	T	05 53 15.1	
	baz=330						
ZALV	Zalesovo Beam	41.31	310	P	P	05 24 20.2	-0.6
	comp=Z,0.5nm,0.4s,baz=87,slow=9.1,SNR=4.1						
MK31	Makanchi Array	44.11	300	P	P	05 24 43.7	-0.1
MK31				IAmb	IAmb	05 25 06.4	
	comp=Z,1.2nm,0.9s						
MKAR	Makanchi Array	44.11	300	P	P	05 24 43.7	-0.1
	comp=Z,0.7nm,0.9s,baz=79,slow=9.6,SNR=5.1						
MKAR	Makanchi Array	44.11	300	P	P	05 24 43.1	-0.7
KURBB	Kurchatov Arra	45.64	306	P	P	05 24 56.2	+0.4
	comp=Z,0.9nm,0.5s,baz=80,slow=8.4,SNR=8.9						
ILAR	Eielson Array	46.08	34	P	P	05 25 00.0	+0.9
	comp=Z,0.1nm,0.5s,baz=322,slow=34,SNR=1.7						
INK	Inuvik	50.97	28	P	P	05 25 36.9	+0.3
	comp=Z,0.3nm,0.4s,baz=41,slow=8.0,SNR=1.7						
KKAR	Karatay Array	53.21	299	P	P	05 25 54.1	+0.3
KNRA	Kununurra	57.07	197	P	P	05 26 20.2	-1.6
ABKAR	Akbulak array	57.41	309	P	P	05 26 24.6	+0.7
ABKAR				IAmb	IAmb	05 26 38.4	
	comp=Z,2.1nm,1.1s						
KBL	Kabul	58.03	290	P	P	05 26 28.5	-0.2
WB0	Warramunga Arr	60.05	190	P	P	05 26 42.4	-0.1
WR0	Warramunga Arr	60.22	190	P	P	05 26 43.2	-0.5
WRA	Warramunga Arr	60.23	190	P	P	05 26 43.1	-0.7
	comp=Z,0.5nm,0.4s,baz=7.8,slow=7.1,SNR=12						
WRA	Warramunga Arr	60.23	190	P	P	05 26 43.8	0.0
FINES	FINESS Array B	67.03	332	P	P	05 27 29.1	+0.9
	comp=Z,4.3nm,1.1s,baz=47,slow=6.3,SNR=5.7						
LRM	Limekiln Ridge	70.83	46	P	P	05 27 49.6	-2.9
TXAR	Lajitas Array	86.95	54	P	P	05 29 22.4	+1.4
	comp=Z,0.2nm,0.8s,baz=325,slow=1.4,SNR=2.1						
ATD	Arta Tunnel	90.81	286	LR	LR	06 15 03.5	
	comp=Z,17nm,18.6s,baz=338,slow=39						

PAS ***22*** *05:29:39.5±3.3, 34°.30N±0°.01×119°.80W±0°.01, h1^{km}±6^{km}, ML2.9/76, ML2.6/34(NEIC), Error ellipse: s-maj=0.0km s-min=0.0km az=119.0*

SCEDC ***22*** *05:29:39.5, 34°.30N×119°.80W, h1^{km}*

NEIC ***22*** *05:29:39.2±1.3, 34°.29N±0°.01×119°.80W±0°.01, h17^{km}±2^{km}, Error ellipse: s-maj=1.9km s-min=1.6km az=188.0*

ANF ***22*** *05:29:39.3±0.5, 34°.29N×119°.68W, h1^{km}, ML2.9/20, Error ellipse: s-maj=4.9km s-min=2.7km az=78.0*

ISC 22 05:29:38.8±0.9**, 34°.29N**±0°.02×**119°.80W**±0°.02**, h14**^{km}±6^{km}**, n87, σ0**^{s}.**70**/120**, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SBC	Santa Barbara	0.17	25	P	Pg	05 29 42.4	-0.4
	baz=208,SNR=92						
SBC				S	Sg	05 29 45.5	-0.1
	baz=208						
SBC	Santa Barbara	0.17	25		Pg	05 29 42.4	-0.4
SBC					Sg	05 29 45.5	-0.1
SYP	Santa Ynez Pea	0.28	328		Pg	05 29 44.7	-0.1
SYP					Sg	05 29 49.1	+0.3
SCZ2	Santa Cruz Isl	0.32	155	P	Pg	05 29 46.1	+0.7
	baz=336,SNR=29						
SCZ2				S	Sb	05 29 51.8	+0.3
	baz=336						
SCZ2	Santa Cruz Isl	0.32	155		Pg	05 29 46.1	+0.7
SCZ2					Sb	05 29 51.8	+0.3
NJQ	Nojoqui County	0.40	308		Pg	05 29 47.1	+0.3
NJQ					Sb	05 29 53.7	0.0
FIGC	Figueroa Mtn.	0.47	341		Pg	05 29 48.5	+0.5
FIGC					Sb	05 29 55.4	-0.3
STCC	Santa Clara	0.51	88		Pb	05 29 50.4	+0.8
STCC					Sn	05 29 59.9	-0.4
RYS	Reyes Peak	0.51	46		Pg	05 29 49.4	+0.4
BSM	San Miguel Isl	0.52	241		Pg	05 29 49.4	+0.4
BSM					Sb	05 29 58.0	+0.8
PKM	Mcpherson Peak	0.60	359	P	Pg	05 29 50.6	0.0
	baz=179,SNR=78						
PKM	Mcpherson Peak	0.60	359		Pg	05 29 50.7	0.0
PKM					Sg	05 29 59.0	+0.3
GATR	Gnd/Air Tx Cnt	0.64	295		Pg	05 29 51.7	+0.4
GATR					Sn	05 30 02.2	-1.4
BCW	Bitter Crk WRg	0.72	26		Pg	05 29 53.2	+0.2
BCW					Sg	05 30 02.7	+0.2
ABL	Mount Abel	0.74	40		Pg	05 29 53.0	-0.2
MPI	Mount Pinos, F	0.75	46		Pg	05 29 53.5	0.0
PYR	Pyramid	0.92	72		Pb	05 29 56.5	-0.2
BCH	Branch Mountai	0.93	345		Pb	05 29 56.5	-0.2
BLCC	Black Canyon	0.94	92		Pb	05 29 56.3	-0.6
BLCC					Sg	05 30 10.0	+0.9
OSI	Osito Audit: C	0.95	70	P	Pb	05 29 56.8	-0.3
	baz=251,SNR=31						
OSI				S	Sg	05 30 10.3	+0.8
	baz=251						
OSI	Osito Audit: C	0.95	70		Sn	05 30 10.6	-0.6
OSI	Osito Audit: C	0.95	70		Pb	05 29 56.7	-0.4
OSI	Osito Audit: C	0.95	70	IAML		05 30 11.3	
	comp=N,290nm,0.5s						
OSI				IAML		05 30 14.7	
	comp=E,163nm,0.5s						
CRGC	Crocker Grade	0.95	4		Pn	05 29 57.8	-0.2
CRGC					Sn	05 30 11.8	+0.3
OAT	Oat Mountain	0.98	86		Pb	05 29 57.8	0.0
OAT					Sn	05 30 12.3	+0.1
CARC	Carrizo Plain	1.02	358		Pb	05 29 58.5	+0.2
SMMC	Simmler	1.04	351	P	Pb	05 29 58.5	-0.1
	baz=171,SNR=54						
SMMC				S	Sn	05 30 13.2	-0.2
	baz=171						
SNCC	San Nicolas Is	1.06	167	P	Pb	05 29 58.0	-1.0
	baz=348						
SNCC				S	Sg	05 30 13.5	+0.3
	baz=348						
SNCC	San Nicolas Is	1.06	167		Pb	05 29 58.0	-1.0
SNCC				IAML		05 30 15.3	
	comp=N,215nm,0.3s						
SNCC	San Nicolas Is	1.06	167		Sn	05 30 14.1	+0.1
BTPC	Burnt Peak	1.09	68		Sn	05 30 15.1	+0.3
THC	Tehachapi Micr	1.12	56		Pb	05 29 59.9	-0.3
THC					Sg	05 30 15.6	+0.4
DJJ	Donna J Jenkin	1.13	99		Pn	05 29 59.1	-1.2
DJJ					Sb	05 30 14.3	-0.4
TJR	Tejon Ranch	1.14	49		Pn	05 30 00.3	-0.2
ARVC	Arvin	1.16	43	P	Pb	05 30 00.8	+0.1
	baz=224,SNR=5.8						
ARVC				S	Sg	05 30 17.2	+1.0
	baz=224						
ARVC	Arvin	1.16	43		Pg	05 30 01.3	+0.1
DECC	Green Verdugo	1.22	91	P	Pn	05 30 00.7	-0.7
	baz=273,SNR=8.0						
DECC				S	Sn	05 30 17.5	-0.3
	baz=273						
DECC	Green Verdugo	1.22	91		Pn	05 30 00.8	-0.7
DECC					Sn	05 30 17.5	-0.3
LEOC	Leona Valley	1.28	74		Pn	05 30 02.2	-0.3
TEJ	El Tejon	1.31	44		Pn	05 30 02.2	-0.6
PASC	Pasadena Art C	1.34	95		Pn	05 30 02.4	-0.8
PASC				IAML		05 30 22.5	
	comp=E,102nm,0.3s						
PASC				IAML		05 30 22.6	
	comp=N,64nm,0.2s						
PASC	Pasadena Art C	1.34	95		Sn	05 30 20.6	-0.3
FMP	Fort Macarthur	1.38	114	P	Pn	05 30 03.3	-0.3
	baz=296						
TPO	Tropico Hills	1.43	65		Pn	05 30 04.4	0.0
MWC	Mount Wilson	1.45	92		Pn	05 30 04.2	-0.6
MWC	Mount Wilson	1.45	92		Sb	05 30 24.0	0.0
CIS	Catalina Islan	1.45	127	P	Pn	05 30 03.5	-1.3
	baz=308,SNR=7.9						
CIS				S	Sn	05 30 22.3	-1.3
	baz=308						
CHFC	Chilao Flat St	1.47	88		Pn	05 30 04.4	-0.7
CHFC					Sb	05 30 24.4	-0.3
LRRC	Littlerock Res	1.48	80		Pn	05 30 05.4	+0.3
PAGB	Antelope Grade	1.49	346	Pn	Pn	05 30 04.6	-0.6
PAGB				IAML		05 30 33.9	
	comp=N,106nm,0.7s						
WOFM	Oak Flat	1.53	35		Pn	05 30 06.0	+0.1
BLDC	Black Mountain	1.54	324		Pn	05 30 04.8	-1.1
EDW2	Edwards Air Fo	1.60	68	P	Pn	05 30 06.9	0.0
	baz=249,SNR=30						
EDW2				S	Sb	05 30 28.6	+0.2
	baz=249						
PEM	Pine Mountain	1.60	94		Pn	05 30 07.2	+0.5
XTL	Crystal Lake,	1.60	89		Pn	05 30 06.7	-0.3
VES	Vestal, Richgr	1.66	21	P	Pn	05 30 07.3	-0.3
	baz=201,SNR=28						
VES				S	Sb	05 30 30.1	+0.1
	baz=201						
PSRC	Puddingstone R	1.66	96		Pn	05 30 07.9	+0.3
PSRC					Sb	05 30 30.6	+0.4
SCI2	San Clemente I	1.67	141	P	Pb	05 30 08.9	-0.5
	baz=322						
SCI2				S	Sb	05 30 30.3	-0.1
	baz=322						
SBB	Saddle Back Bu	1.68	76		Pn	05 30 08.7	+0.7
SSK	Sunset Peak	1.75	92		Pn	05 30 09.2	+0.3
ISA	Isabella, Lake	1.75	38	P	Pn	05 30 09.2	+0.3
	baz=219,SNR=14						
ISA				S	Sb	05 30 32.6	-0.2
	baz=219						
ISA	Isabella, Lake	1.75	38		Pn	05 30 09.2	+0.3
ISA				IAML		05 30 35.5	
	comp=N,60nm,0.5s						
ISA				IAML		05 30 38.4	
	comp=E,41nm,0.8s						
BFSC	Mount Baldy Ra	1.77	91	P	Pn	05 30 09.4	+0.1
	baz=273,SNR=36						
BFSC				S	Sb	05 30 32.6	-0.9
	baz=273						
WHFM	Hanning Flat	1.84	40		Pn	05 30 11.1	+1.0
SPG2	Springville 2	2.09	24		Pn	05 30 13.5	0.0
PMPB	Monarch Peak	2.09	337	Pn	Pn	05 30 13.0	-0.5
PMPB				IAML		05 30 55.8	
	comp=N,58nm,0.8s						
WLHM	Little Horse	2.22	33		Pn	05 30 16.8	+1.1
MURC	Murrieta	2.27	107	P	Pn	05 30 16.1	+0.1
	baz=289						
MURC				S	Sn	05 30 43.2	-0.7
	baz=289						
BBRC	Big Bear Solar	2.38	90	P	Pn	05 30 18.5	+0.7
	baz=272						
MFS	McCloud Flat S	2.42	41		Pb	05 30 21.4	-0.9
POB	Polly Butte	2.46	103		Pn	05 30 18.4	-0.4
MPMC	Manual Prospec	2.59	46	Pn	Pn	05 30 20.8	+0.2
	baz=228,SNR=26						
MPMC				Pb	Pb	05 30 26.0	+0.8
	baz=228						
109C	Camp Elliot, M	2.65	121	Pn	Pn	05 30 21.6	+0.5
109C				IAML		05 31 05.3	
	comp=E,17nm,0.3s						
SAO	San Andreas Ge	2.81	332	Pn	Pn	05 30 22.3	-1.1
PFO	Pinyon Flats O	2.86	103		Pn	05 30 24.2	0.0
BORC	Borrego Spring	3.00	109		Pn	05 30 26.0	0.0
BAR	Barrett	3.07	121	Pn	Pn	05 30 26.1	-0.8
DSCC	Desert Studies	3.16	73		Pn	05 30 27.7	-0.6
CBX	Cerro Bola	3.28	126	Pn	Pn	05 30 31.7	+1.7
CBX				IAML		05 31 33.7	
	comp=E,9.9nm,0.6s						
OMMB	Old Mammoth Mi	3.38	11	Pn	Pn	05 30 32.7	+1.2
OMMB				IAML		05 31 31.4	
	comp=N,13nm,0.5s						
MDPB	Devils Postpil	3.39	10		Pn	05 30 32.8	+1.2
MDPB				IAML		05 31 33.0	
	comp=E,14nm,0.7s						
MDPB				IAML		05 31 35.5	
	comp=N,11nm,0.8s						
GMRC	Granite Mounta	3.45	81	P	Pn	05 30 32.0	-0.4
	baz=263						
GMRC				S	Sn	05 31 12.4	-0.8
	baz=263						
CMB	Columbia Colle	3.77	353		Pn	05 30 38.4	+1.8
CMB				IAML		05 31 45.6	
	comp=E,6.6nm,3.2s						
TPNV	Topopah Spring	3.93	46	Pg	Pg	05 30 52.3	-1.7
	baz=229						
TPNV	Topopah Spring	3.93	46		Pn	05 30 40.1	+1.2
TPNV				IAML		05 32 09.2	
	comp=E,8.0nm,4.1s						
TPNV				IAML		05 32 22.9	
	comp=E,8.9nm,4.4s						
ESJX	Sierra Juarez	3.95	124	Pn	Pn	05 30 41.9	+2.6
WAKR	Walker	4.22	4		Pn	05 30 44.6	+1.7
WAKR				IAML		05 32 02.6	
	comp=E,8.5nm,2.4s						
WAKR				IAML		05 32 45.6	
	comp=N,8.4nm,4.5s						

NEIC ***22*** *05:37:24.9±0.6, 6°.1S±0°.1×127°.7E±0°.1, h397^{km}±13^{km}, mb4.0/12, Error ellipse: s-maj=19.1km s-min=15.5km az=138.0*

IDC ***22*** *05:37:24.2±1.0, 6°.12S×127°.88E, h391^{km}±12^{km}, mb3.1/5, mb1 3.5/10, mb1mx3.2/32, mbtmp4.2/10, Error ellipse: s-maj=17.5km s-min=9.5km az=81.0*

ISC 22 05:37:24.9±0.6**, 6°.12S**±0°.06×**127°.81E**±0°.08**, h400**^{km}**, n27, σ1**^{s}.**21**/29**, mb3.6**/8**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOEI	Soe	5.04	224		Pn	05 38 46.8	-0.6
FAKI	Fak Fak	5.45	54	Pn	Pn	05 38 52.3	+0.6
BATI	Baumata	5.77	225	P	Pn	05 38 54.5	-0.7
	42nm,0.3s,baz=34,slow=4.4,SNR=23						
BATI				S	S	05 40 06.8	-1.8
	2.7nm,0.3s,baz=229,slow=17,SNR=1.7						
SIJI	Sorong	6.25	34	P	Pn	05 39 00.3	-0.1
	7.3nm,0.3s,baz=94,slow=22,SNR=22						
SIJI				S	S	05 40 14.4	-3.8
	3.2nm,0.3s,baz=117,slow=23,SNR=9.9						
FITZ	Fitzroy Crossi	12.09	190	P	Pn	05 40 05.8	-1.4
	0.8nm,0.3s,baz=355,slow=5.9,SNR=30						
FITZ	Fitzroy Crossi	12.09	190	P	P	05 40 05.6	0.0
WB0	Warramunga Arr	15.00	155	P	P	05 40 38.3	+0.9
WRA	Warramunga Arr	15.13	156	P	P	05 40 39.9	+1.0
	1.4nm,0.3s,baz=333,slow=11,SNR=68						
WRA				S	S	05 43 17.9	-1.6
	0.3nm,0.3s,baz=341,slow=20,SNR=6.0						
WRA	Warramunga Arr	15.13	156	IAmb	IAmb	05 40 40.8	
	comp=Z,0.2nm,0.4s						
WB2	Warramunga Arr	15.14	156	P	P	05 40 39.8	+0.9
WB2				IAmb	IAmb	05 40 41.2	
	comp=Z,21nm,1.5s						
WR0	Warramunga Arr	15.23	155	P	P	05 40 40.8	+0.9
COEN	Coen	17.00	118	P	P	05 41 00.6	+1.6
COEN				IAmb	IAmb	05 41 30.0	
	comp=Z,2.8nm,0.9s						
PSA00	Pilbara Seismi	17.19	206	P	P	05 41 00.3	-0.6
PSA00				IAmb	IAmb	05 41 02.5	
	comp=Z,13nm,1.1s						
AS31	Alice Springs	18.40	162	P	P	05 41 14.4	+0.6
AS31				IAmb	IAmb	05 41 15.4	
	comp=Z,3.7nm,0.3s						
ASAR	Alice Springs	18.40	162	P	P	05 41 14.3	+0.5
	comp=Z,1.9nm,0.3s,baz=346,slow=12,SNR=126						
ASAR				S	S	05 44 22.3	-0.3
	comp=Z,0.2nm,0.3s,baz=332,slow=18,SNR=17						
ASAR	Alice Springs	18.40	162	P	P	05 41 14.2	+0.4
RABL	Rabaul	24.33	87	P	P	05 42 00.1	-8.7
STKA	Stephens Creek	28.68	155	P	P	05 42 47.8	+0.7
	comp=Z,0.8nm,0.3s,baz=352,slow=5.9,SNR=4.4						
STKA	Stephens Creek	28.68	155	P	P	05 42 48.2	+1.0
RPSI	Rantau Prapat	30.15	286	P	P	05 43 00.1	0.0
RPSI				IAmb	IAmb	05 43 00.9	
	comp=Z,5.6nm,0.8s						
CAN	Canberra	35.00	149	P	P	05 43 42.0	+0.3
CAN				IAmb	IAmb	05 44 00.8	
	comp=Z,16nm,1.2s						
CMAR	Chiang Mai Arr	37.51	311	P	P	05 44 05.0	+2.2
	comp=Z,1.1nm,0.4s,baz=155,slow=6.7,SNR=5.3						
SONM	Songino Array	56.95	343	P	P	05 46 30.7	+0.4
	comp=Z,0.1nm,0.4s,baz=151,slow=3.3,SNR=1.9						
MK31	Makanchi Array	66.31	328	P	P	05 47 32.2	+0.2
MKAR	Makanchi Array	66.31	328	P	P	05 47 31.8	-0.2
	comp=Z,0.7nm,0.5s,baz=118,slow=8.2,SNR=24						
ZALV	Zalesovo Beam	69.85	335	P	P	05 47 52.8	-0.7
	comp=Z,0.5nm,0.4s,baz=152,slow=6.5,SNR=2.3						
KURK	Kurchatov	70.65	329	P	P	05 47 58.3	-0.1
KURK				IAmb	IAmb	05 48 11.2	
	comp=Z,1.9nm,1.2s						

IDC ***22*** *05:40:18.3±0.7, 19°.98S×70°.83W, h0^{km}, mb4.1/10, mb1 4.3/13, mb1mx4.2/28, mbtmp4.2/13, ML3.6/3, MS3.8/6, Ms1 3.8/6, ms1mx3.5/23, Error ellipse: s-maj=18.0km s-min=12.9km az=70.0*

NEIC ***22*** *05:40:20.1±1.6, 20°.08S±0°.04×70°.95W±0°.05, h13^{km}±3^{km}, mb4.7/13, Mwr4.6/42, Mww4.6, ML4.5(GUC), Error ellipse: s-maj=7.0km s-min=5.4km az=66.0*

NEIC ***22*** *05:40:20.9, 20°.05S×70°.93W, h14^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}4.73; $M_{\theta\theta}$0.03; $M_{\phi\phi}$-4.76; $M_{r\theta}$2.50; $M_{\theta\phi}$2.78; $M_{\phi r}$-7.25; Fault plane solution: $M_0$9.44000×10^{15} NP1:ϕ_s327.65000°, δ17.87000°, λ77.81000°. NP2:ϕ_s160.44000°, δ72.54000°, λ93.90000°. Principal axes: T 8.7469, Plg62.0000°, Azm76.0000°; N 1.2577, Plg4.0000°, Azm339.0000°; P*

-10.0045, Plg27.0000°, Azm247.0000°;

GUC ***22*** *05:40:21.9±0.7, 20.°04S×70.°94W, h43^{km}±2^{km}, ML4.5*

VAO ***22*** *05:40:23.1±0.5, 19.°90S×70.°51W, h10^{km}, mb4.4*

NEIC ***22*** *05:40:25, 19.°87S×70.°84W, h18^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}0.94; $M_{\theta\theta}$-0.02; $M_{\phi\phi}$-0.92; $M_{r\theta}$0.20; $M_{\theta\phi}$0.26; $M_{\phi r}$-0.48; Fault plane solution: $M_0$1.10000×10^{16} NP1:ϕ_s349.00000°, δ31.00000°, λ97.00000°. NP2:ϕ_s161.00000°, δ59.00000°, λ86.00000°. Principal axes: T 1.0738, Plg75.0000°, Azm60.0000°; N 0.0438, Plg4.0000°, Azm163.0000°; P -1.1176, Plg14.0000°, Azm254.0000°;*

ISC 22 05:40:18.4±1.5**, 20.°04S**±0.°03×**70.°91W**±0.°05**, h2**^{km}±9^{km}**, n106, σ1^{s}38**/123**, mb4.5**/12**, MS4.0**/4**, 24C, Fault plane solution: NP1:**ϕ_s170.38867°**,** δ67.53672°**,** λ82.27740°. **NP2:**ϕ_s9.92881°**,** δ23.68853°**,** λ108.00436°. **Principal axes:** T Plg66.5932°**,** Azm66.5501°**;** N Plg7.1335°**,** Azm173.3548°**;** P Plg22.1696°**,** Azm266.2778°**; Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TA02	Huaiquique	0.77	108	⇑iP	Pn	05 40 36.3	0.0
TA02				i S	Sn	05 40 47.5	-0.9
TA02				IAML		05 40 50.0	
	comp=E,27µm,0.3s						
PSGC	Pisagua	0.86	60	⇑iP	Pn	05 40 37.3	-0.3
PSGC				i S	Sn	05 40 49.9	-1.0
PSGCX	Pisagua	0.86	60		Pn	05 40 37.9	+0.2
TA01	Diego Aracena	0.86	128	⇑iP	Pn	05 40 37.7	+0.1
TA01				i S	Sn	05 40 49.0	-1.7
TA01				IAML		05 40 55.7	
	comp=N,17µm,0.4s						
TA01	Diego Aracena	0.86	128		Pn	05 40 38.1	+0.6
TA01					Sg	05 40 46.2	0.0
TA01					Sn	05 40 50.5	-0.3
HMBC	Humberstone	0.99	104	⇑iP	Pn	05 40 40.2	+0.8
HMBC				i S	Sn	05 40 54.2	+0.1
HMBC				IAML		05 40 56.2	
	comp=N,21µm,0.8s						
PATCX	Punta Patache	1.05	138	⇑iP	Pn	05 40 40.9	+0.6
PATCX				i S	Sn	05 40 55.3	-0.3
PATCX				IAML		05 41 06.0	
	comp=E,14µm,0.5s						
PATCX	Punta Patache	1.05	138		Pn	05 40 40.9	+0.6
PATCX					Pb	05 40 41.4	+2.0
PATCX				Sg	Sn	05 40 55.1	-0.5
MNMC	Minye Minye	1.53	54	⇑iP	Pg	05 40 48.1	+0.3
MNMC				i S	Sg	05 41 09.6	+1.9
MNMC				IAML		05 41 18.2	
	comp=E,17µm,0.5s						
MNMC	Minye Minye	1.53	54		Pg	05 40 48.4	+0.5
PB08	IPOC Station P	1.66	94	⇑iP	Pg	05 40 50.2	0.0
PB08				i S	Sg	05 41 13.2	+1.5
PB08				IAML		05 41 22.7	
	comp=N,5µm,0.8s						
PB08	IPOC Station P	1.66	94		Pg	05 40 50.2	0.0
PB01	IPOC Station P	1.67	127	⇑iP	Pb	05 40 50.1	+0.2
PB01				i S	Sb	05 41 11.4	0.0
PB01				IAML		05 41 19.7	
	comp=N,9µm,0.4s						
PB01	IPOC Station P	1.67	127		Pb	05 40 50.1	+0.2
PB01				Sn	Sb	05 41 10.9	-0.5
AP01	Chacalluta	1.74	18	⇑iP	Pg	05 40 51.0	-0.9
AP01				i S	Sg	05 41 13.2	-1.3
AP01				IAML		05 41 25.9	
	comp=E,8µm,0.5s						
AP01	Chacalluta	1.74	18		Pg	05 40 51.2	-0.6
PB07	IPOC Station P	1.93	150	⇑iP	Pn	05 40 52.9	+0.4
PB07				i S	Sn	05 41 18.5	+1.0
PB07				IAML		05 41 37.7	
	comp=E,5µm,0.8s						
PB07	IPOC Station P	1.93	150		Pn	05 40 52.9	+0.4
PB16	IPOC Station P	2.15	38		Pb	05 40 56.7	-1.8
PB09	IPOC Station P	2.34	139	⇑iP	Pb	05 41 00.0	-1.5
PB09				i S	Sn	05 41 28.7	+1.1
PB09				IAML		05 41 47.7	
	comp=E,7µm,0.7s						
PB09	IPOC Station P	2.34	139		Pb	05 41 00.0	-1.5
PB04	IPOC Station P	2.39	163	IAML		05 41 54.8	
	comp=N,4µm,0.8s						
PB04	IPOC Station P	2.39	163		Pn	05 40 58.6	-0.2
PB06	IPOC Station P	2.93	155		Pn	05 41 06.3	+0.1
LVC	Limon Verde	3.17	144	Pn	Pn	05 41 11.7	+2.0
	comp=N,13nm,0.3s,baz=304,slow=8.9,SNR=122						
LVC				Pg	Pb	05 41 16.5	+0.8
	comp=N,40nm,0.3s,baz=321,slow=10,SNR=48						
LVC				Sn	Sn	05 41 49.2	+1.1
	comp=N,73nm,0.3s,baz=313,slow=7.9,SNR=8.6						
LVC				Lg	Lg	05 42 01.3	
	comp=N,150nm,0.3s,baz=137,slow=8.8,SNR=10.0						
LVC	Limon Verde	3.17	144		Pn	05 41 11.5	+1.9
LVC	Limon Verde	3.17	144	eP	Pn	05 41 11.7	+2.0
PB15	IPOC Station P	3.43	157		Pn	05 41 12.6	-0.5
PB10	IPOC Station P	3.47	175		Pn	05 41 12.6	-1.0
LPAZ	La Paz	4.57	36	Pn	Pn	05 41 30.2	+1.1
	comp=N,0.4nm,0.3s,baz=214,slow=9.9,SNR=15						
LPAZ				Pg	Pb	05 41 39.7	-0.1
	comp=N,4.4nm,0.3s,baz=201,slow=8.2,SNR=36						
LPAZ				Lg	Lg	05 42 43.3	
	comp=N,2.0nm,0.3s,baz=207,slow=11,SNR=1.0						
LPAZ	La Paz	4.57	36	Pn	Pn	05 41 30.9	+1.7
PB14	IPOC Station P	4.59	174		Pn	05 41 27.4	-1.8
GO02	Mina Guanaco	5.24	167		Pn	05 41 37.7	-0.5
AC01	Pan de Azucar	6.09	177	Pn	Pn	05 41 48.0	-1.4
AC02	Maricunga	6.96	167	Pn	Pn	05 42 02.0	+0.1
AC04	Llanos de Chal	8.13	181	Pn	Pn	05 42 16.3	-1.2
AC05	El Transito	8.78	176	Pn	Pn	05 42 26.3	-0.2
NNA	Nana	9.83	324	LR	LR	05 46 12.8	
	comp=N,218nm,19.2s,baz=156,slow=36						
GO04	Tololo Observa	10.09	179	Pn	Pn	05 42 44.1	-0.5
SIV	San Ignacio	10.19	68	Pn	Pn	05 42 44.9	-0.9
	comp=N,2.1nm,0.3s,baz=268,slow=10,SNR=38						
CO03	El Pedregal	10.76	179	Pn	Pn	05 42 54.4	+0.7
ETMB	Extrema	11.13	25	eP	Pn	05 42 59.4	+0.8
CZSB	Cruzeiro do Su	12.36	352	eP	Pn	05 43 19.0	+3.5
CPUP	Villa Florida	13.97	119	Pn	P	05 43 41.4	-4.3
	comp=N,0.1nm,0.3s,baz=300,slow=11,SNR=7.5						
CPUP				LR	LR	05 49 40.3	
	comp=N,308nm,19.3s,baz=298,slow=40						
SALV	Santo Antonio	15.05	77	eP	Pn	05 43 50.7	-1.6
H03N1	Juan Fernandez	15.13	206	Pn	Pn	05 43 50.0	-3.0
	baz=108,slow=14,SNR=10						
H03N1				T	T	05 59 44.6	
	baz=33,slow=72,SNR=162						
H03N2	Juan Fernandez	15.14	207	Pn	Pn	05 43 51.0	-2.1
	baz=108,slow=14,SNR=7.8						
H03N2				T	T	05 59 44.6	
	baz=33,slow=72,SNR=124						
H03N3	Juan Fernandez	15.15	206	Pn	Pn	05 43 50.5	-2.8
	baz=108,slow=14,SNR=15						
H03N3				T	T	05 59 40.2	
	baz=33,slow=72,SNR=111						
PP1B	Ponte de Pedra	15.37	84	eP	Pn	05 43 55.4	-1.2
TRCB	Terra Rica	17.24	102	eP	Pn	05 44 19.8	-0.6
PCMB	Pacaembu	18.44	98	eP	Pn	05 44 33.8	-1.5
ITAB	Concordia	18.63	116	eP	Pn	05 44 38.2	+0.7
ARAG	Araguaiana, MT	18.68	80	eP	P	05 44 36.5	-1.5
CPSB	Cacapava Do Su	18.86	127	eP	Pn	05 44 42.0	+1.7
ITRB	Iturama	19.33	93	eP	Pn	05 44 45.2	-1.0
MACA	Manacapuru-AM	19.52	32	eP	P	05 44 46.3	-0.9
NPGB	Novo Progresso	19.86	52	eP	P	05 44 50.8	-0.2
SNDB	Serra Nova Dou	20.48	70	eP	P	05 44 55.6	-2.1
PLCA	Paso Flores	20.63	179	P	P	05 44 58.5	-0.8
	comp=N,2.4nm,0.9s,baz=254,slow=10,SNR=3.4						
PLCA	Paso Flores	20.63	179	P	P	05 44 58.4	-0.8
BB19B	Bebedouro	20.98	97	eP	P	05 45 03.5	+0.3
OTAV	Otavalo	21.46	339	eP	P	05 45 12.9	+4.2
ITTB	Itaituba	21.48	45	eP	P	05 45 06.6	-1.9
IPMB	Ipameri, GO	21.56	88	eP	P	05 45 08.6	-0.8
PTGA	Pitinga	21.98	30	P	P	05 45 11.7	-2.1
	comp=N,6.9nm,0.5s,baz=209,slow=12,SNR=11						
PTGA				LR	LR	05 54 10.0	
	comp=N,150nm,18.5s,baz=209,slow=38						
PTGA	Pitinga	21.98	30	P	P	05 45 12.0	-1.8
PTGA				IAmb	IAmb	05 45 17.8	
	comp=Z,25nm,1.2s						
PTGA	Pitinga	21.98	30	eP	P	05 45 14.1	+0.3
SPB	Sao Paulo	22.08	103	eP	P	05 45 15.6	+0.7
PEXB	Peixe	23.09	73	eP	P	05 45 25.0	-0.8
BSCB	Bom Sucesso	24.49	97	eP	P	05 45 39.2	-0.1
PRPB	Parauapebas	24.69	59	eP	P	05 45 41.2	+0.1
SMTB	Santa Maria do	25.13	67	eP	P	05 45 45.4	+0.3
JANB	Januaria	25.83	83	eP	P	05 45 50.3	-1.1
SDBA	SAO DESIDERIO	26.07	77	eP	P	05 45 54.0	+0.3
SDV	Santo Domingo	28.74	1	eP	P	05 46 20.7	+3.0
RCBR	Riachuelo	36.82	72	P	P	05 47 27.7	-0.5
	comp=Z,6.5nm,0.8s,baz=241,slow=16,SNR=9.3						
RCBR	Riachuelo	36.82	72	P	P	05 47 28.0	-0.2
RCBR				IAmb	IAmb	05 47 28.2	
	comp=Z,14nm,0.8s						
TXAR	Lajitas Array	58.37	326	P	P	05 50 15.4	-0.1
	comp=Z,0.9nm,1.1s,baz=145,slow=4.6,SNR=3.9						
TXAR	Lajitas Array	58.37	326	P	P	05 50 15.9	+0.4
MIAR	Mount Ida	58.41	338	P	P	05 50 15.2	-0.3
MIAR				IAmb	IAmb	05 50 16.0	
	comp=Z,8.4nm,1.2s						
WHAR	Wooly Hollow	58.65	340	P	P	05 50 17.6	+0.5
WHAR				IAmb	IAmb	05 50 31.8	
	comp=Z,9.8nm,1.2s						
BELA	Belgrano 2	60.45	172	P	P	05 50 29.8	+0.7
MNTX	Cornudas Mount	61.15	327	P	P	05 50 34.0	-0.4
S39A	Bolivar	61.17	340	P	P	05 50 34.0	-0.5
S39A				IAmb	IAmb	05 50 34.9	
	comp=Z,14nm,1.5s						
DBIC	Dimbokro	70.14	75	P	P	05 51 31.8	-1.1
	comp=Z,6.5nm,1.0s,baz=203,slow=8.8,SNR=4.0						
DBIC				LR	LR	06 21 05.5	
	comp=Z,94nm,18.9s,baz=214,slow=35						
QSPA	South Pole Qui	70.14	180	P	P	05 51 33.9	+1.6
PDAR	Pinedale Array	71.92	331	P	P	05 51 44.6	+1.1
	comp=Z,0.1nm,0.5s,baz=129,slow=8.7,SNR=1.7						
NVAR	Mina Array Bea	73.20	323	P	P	05 51 52.6	+1.4
	comp=Z,0.8nm,0.8s,baz=123,slow=6.6,SNR=6.0						
ULM	Lac du Bonnet	73.38	344	LR	LR	06 26 29.4	
	comp=Z,73nm,19.4s,baz=121,slow=38						
TOA0	Torodi Ar. Sit	78.65	71	P	P	05 52 21.4	-1.1
TORD	Torodi Ar. Bea	78.65	71	P	P	05 52 21.2	-1.3
	comp=Z,12nm,0.8s,baz=254,slow=5.0,SNR=50						
TORD				LR	LR	06 25 21.3	
	comp=Z,87nm,21.1s,baz=245,slow=34						
TORD	Torodi Ar. Bea	78.65	71	IAmb	IAmb	05 52 22.3	
	comp=Z,14nm,0.9s						
SUR	Sutherland	80.93	121	P	P	05 52 33.3	-1.7
TAM	Tamanrasset	85.85	64		P	05 53 00.6	+0.3
ESDC	Sonseca Array	86.13	45	P	P	05 53 01.2	0.0
	comp=Z,3.3nm,1.1s,baz=253,slow=7.3,SNR=6.0						
YKA	Yellowknife Ar	89.20	341	P	P	05 53 14.8	-0.4
	comp=Z,1.7nm,1.0s,baz=133,slow=5.5,SNR=16						
ASAR	Alice Springs	130.28	210	PKP	PKPdf	05 59 30.1	-1.1
	comp=Z,0.6nm,1.0s,baz=112,slow=1.7,SNR=3.2						
WRA	Warramunga Arr	133.20	213	PKP	PKiKP	05 59 37.5	-0.4
	comp=Z,0.9nm,1.1s,baz=144,slow=1.6,SNR=3.1						
KURBB	Kurchatov Arra	141.10	31	PKP	PKPdf	05 59 50.8	+0.5
	comp=Z,0.9nm,0.9s,baz=335,slow=16,SNR=4.6						
ZALV	Zalesovo Beam	141.39	23	PKP	PKPdf	05 59 49.5	-1.2
	comp=Z,1.7nm,0.8s,baz=262,slow=3.0,SNR=6.6						
AAK	Ala-Archa	143.23	44	PKP	PKPdf	05 59 53.8	-0.8
	comp=Z,0.8nm,0.4s,baz=204,slow=20,SNR=2.8						
MKAR	Makanchi Array	145.50	33	PKPbc	PKPab	05 59 58.1	-0.4
	comp=Z,5.5nm,0.9s,baz=323,slow=3.1,SNR=39						
KSH	Kashi	145.59	48	PKPbc	PKPab	05 59 59.1	-0.1
KSH				PP	PP	06 03 25.4	+6.1
KSH				AMB	AMB		
	comp=Z,140nm,4.9s						
KLR	Kul'dur	145.69	333	PKPbc	PKPbc	05 59 58.5	-0.2
	comp=Z,6.1nm,1.1s,baz=24,slow=3.6,SNR=8.0						
SONM	Songino Array	152.19	4	PKPbc	PKiKP	06 00 16.2	0.0
	comp=Z,3.2nm,0.9s,baz=345,slow=1.3,SNR=14						
SONM	Songino Array	152.19	4		PKiKP	06 00 16.2	0.0
SONM				PKPab	PKPab	06 00 25.1	-0.3

IDC ***22*** *05:56:54.5±1.2, 2.°02N×127.°06E, h0^{km}, mb3.6/6, mb1 3.8/6, mb1mx3.5/51, mbtmp3.6/6, MS3.5/1, Ms1 3.5/1, ms1mx2.5/41 Error ellipse: s-maj=97.1km s-min=18.6km az=70.0*

ISC 22 05:57:06.3±1.1**, 2.°0N**±0.°2×**127.°2E**±0.°6**, h100**^{km}**, n7, σ0^{s}56**/7**, mb3.5**/5**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGY	Tagaytay City	13.53	333	LR	LR	06 05 42.0	
	comp=Z,198nm,20.4s,baz=142,slow=39						
FITZ	Fitzroy Crossi	19.99	184	P	P	06 01 31.0	0.0
	4.2nm,1.0s,baz=5.8,slow=9.3,SNR=2.6						
WRA	Warramunga Arr	22.89	162	P	P	06 02 00.8	-0.9
	1.4nm,0.6s,baz=340,slow=11,SNR=21						
ASAR	Alice Springs	26.31	166	P	P	06 02 32.7	-0.2
	0.4nm,0.5s,baz=343,slow=7.7,SNR=9.4						
ASAR				PcP	PcP	06 05 56.7	-0.1
	0.2nm,0.3s,baz=358,slow=1.8,SNR=4.3						
STKA	Stephens Creek	36.34	159	P	P	06 04 01.2	+0.5
	0.9nm,0.4s,baz=325,slow=10,SNR=4.2						
SONM	Songino Array	49.09	342	P	P	06 05 44.0	+0.3
	0.1nm,0.3s,baz=152,slow=9.4,SNR=2.1						
MKAR	Makanchi Array	59.24	326	P	P	06 06 57.0	-0.3
	0.2nm,0.3s,baz=118,slow=8.3,SNR=13						

IDC 22 06:01:42.8±2.9**, 19.°57S**×**177.°78W, h0**^{km}**, mb3.6**/4**, mb1 4.0**/4**, mb1mx3.7**/36**, mbtmp3.6**/4**, MS3.3**/1**, Ms1 3.3**/1**, ms1mx2.8**/37**, Error ellipse: s-maj=257.6km s-min=28.9km az=158.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PPT	Papeete	26.80	90	LR	LR	06 17 37.3	
	comp=Z,60nm,18.0s,baz=56,slow=36						
ASAR	Alice Springs	44.94	256	P	P	06 09 59.5	-0.3
	0.7nm,0.5s,baz=98,slow=7.8,SNR=17						
WRA	Warramunga Arr	44.94	261	P	P	06 09 59.9	+0.1
	0.3nm,0.3s,baz=96,slow=7.4,SNR=9.7						
TXAR	Lajitas Array	86.39	57	P	P	06 14 27.8	+0.3
	0.3nm,0.9s,baz=212,slow=3.2,SNR=2.2						
PDAR	Pinedale Array	88.15	43	P	P	06 14 35.5	-0.4
	0.2nm,0.4s,baz=214,slow=4.4,SNR=2.8						

BJI ***22*** *06:10:30.3±0.0, 5.°10S×134.°25E, h15^{km}, mB5.3/60, mb5.0/79, Ms5.0/61, Ms7 4.6/56*

IDC ***22*** *06:10:32.3±0.4, 4.°95S×133.°89E, h0^{km}, mb4.8/22, mb1 4.9/28, mb1mx4.8/32, mbtmp4.8/28, ML4.0/5, MS4.8/25, Ms1 4.8/25, ms1mx4.6/46, Error ellipse: s-maj=14.6km s-min=9.1km az=61.0*

NEIC ***22*** *06:10:33.7±1.4, 4.°97S±0.°05×133.°90E±0.°07, h10^{km}±1^{km}, mb5.5/103, Ms_20 5.1/172, Mwc5.2(GCMT), Error ellipse: s-maj=12.4km s-min=8.0km az=65.0*

GCMT ***22*** *06:10:35.7±0.1, 4.°76S±0.°01×133.°99E±0.°01, h12^{km}, MW5.2/131, Moment Tensor Solution. s97,c132; s131,c194; Duration: 1^{s}0 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.57±.01; $M_{\theta\theta}$-0.15±.01; $M_{\phi\phi}$0.71±.01; $M_{r\theta}$0.36±.04; $M_{\theta\phi}$0.08±.01; $M_{\phi r}$0.21±.03; Best double couple: $M_0$0.77900×10^{17} NP1:ϕ_s340.00000°, δ41.00000°, λ-133.00000°. NP2:ϕ_s211.00000°, δ61.00000°, λ-60.00000°. Principal axes: T 0.7730, Plg11.0000°, Azm280.0000°; N 0.0120, Plg26.0000°, Azm15.0000°; P -0.7850, Plg61.0000°, Azm169.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

DJA ***22*** *06:10:35.5±0.8, 5°S±2°×13°4E±°, h11^{km}±6^{km}, M5.2/67, mb5.4/67, mB5.7/49, MLv5.5/13, Mw(mB)5.2/49, MwMwp5.0/8, Mwp5.3/8*

MOS ***22*** *06:10:35.5±1.0, 5.°00S×133.°90E, h35^{km}, mb5.6/55, MS4.7/11, Error ellipse: s-maj=9.1km s-min=4.7km az=115.7*

NEIC ***22*** *06:10:36, 4.°77S×134.°02E, h12^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-6.27; $M_{\theta\theta}$-1.57; $M_{\phi\phi}$7.85; $M_{r\theta}$2.70; $M_{\theta\phi}$0.75; $M_{\phi r}$1.79; Fault plane solution: $M_0$7.92000×10^{16} NP1:ϕ_s343.00000°, δ42.00000°, λ-125.00000°. NP2:ϕ_s206.00000°, δ57.00000°, λ-63.00000°. Principal axes: T 8.1950, Plg8.0000°, Azm277.0000°; N -0.5777, Plg22.0000°, Azm10.0000°; P -7.6172, Plg66.0000°, Azm168.0000°;*

ISC 22 06:10:36.3±0.5**, 5.°01S**±0.°03×**133.°94E**±0.°04**, h26**^{km}±2^{km}**, h26**^{km}**:pP-P, n646, σ1^{s}85**/602**, mb5.3**/163**, MS5.0**/133**, 16C-9D, Aru Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	Fak Fak	2.67	321	Pn	Pn	06 11 15.6	-2.1
FAKI	Fak Fak	2.67	321	P	Pn	06 11 15.0	-2.7
FAKI				S	Sn	06 11 30.9	-18
RKPI	Ransiki, Papua	3.48	4	P	Pn	06 11 27.7	-1.2
SRPI	Serui, Papua	3.87	36	P	Pn	06 11 34.4	+0.2
SAUI	Saumlaki	3.95	221	Pn	Pn	06 11 35.1	-0.2
SAUI	Saumlaki	3.95	221	P	Pn	06 11 38.4	+3.1
BNDI	Bandanaira	4.05	277	P	Pn	06 11 37.2	+0.6
BNDI				S	Sn	06 12 26.0	+2.8
BAKI	Biak	4.37	30	P	Pn	06 11 38.9	-2.1
WAMI	Wamena	4.89	77	P	Pn	06 11 53.2	+5.0
	61nm84µm11µm,0.8s						
SIJI	Sorong	4.90	327	Pn	Pn	06 11 45.4	-3.0
	10.0nm,0.3s,baz=254,slow=23,SNR=39						
SIJI				Sn	Sn	06 12 40.7	-3.6
	34nm,0.3s,baz=112,slow=22,SNR=6.9						
SIJI				LR	LR	06 13 58.4	
	comp=Z,6µm,20.4s,baz=129,slow=43						
SWI	Sorong	4.91	327	P	Pn	06 11 46.9	-1.6
SWI				S	Sn	06 12 36.6	-7.9
MSAI	Masohi	5.26	288	P	Pn	06 11 53.5	+0.2
	1.0nm3µm195nm,0.6s						
SMPI	Sarmi	5.63	58	P	Pn	06 11 56.9	-1.5
	2.1nm9µm7µm264nm,1.2s						
GENI	Genyem	6.66	69	P	Pn	06 12 13.8	+1.2
	6.7nm10µm16µm1µm,1.1s						
NLAI	Namlea	7.04	284	P	Pn	06 12 19.6	+1.8
	0.9nm5µm218nm,0.5s						
MMPI	Merauke	7.26	119	P	Pn	06 12 30.5	+10
KDU	Kakadu	7.77	191	P	Pn	06 12 28.5	+0.8
	baz=7.9,SNR=172						
KDU				S	Sn	06 13 54.3	-0.6
	baz=7.9						
SANI	Sanana	8.46	290	P	Pn	06 12 34.8	-2.5
	5µm2µm269nm,1.2s						
TNTI	Ternate	8.72	311		Pn	06 12 40.2	-0.6
TNTI	Ternate	8.72	311	P	Pn	06 12 46.6	+5.7
SOEI	Soe	10.69	243	Pn	Pn	06 13 07.4	-0.6
SOEI	Soe	10.69	243	P	Pn	06 13 09.1	+1.2
	5µm5µm423nm,0.7s						
KMSI	Cibinong	11.39	299	P	Pn	06 13 21.7	+4.3
	647nm,1.0s						
BATI	Baumata	11.42	243	Pn	Pn	06 13 15.6	-2.3
	16nm,0.3s,baz=278,slow=2.0,SNR=9.8						
BATI				Sn	Sn	06 15 20.8	-3.9
	13nm,0.3s,baz=46,slow=20,SNR=3.1						
BATI	Baumata	11.42	243	P	Pn	06 13 29.0	+11
KNRA	Kununurra	11.76	205	P	Pn	06 13 22.6	+0.1
	baz=12,SNR=11						
KNRA				S	Sn	06 15 29.6	-3.3
	baz=12						
KNRA	Kununurra	11.76	205		Pn	06 13 22.3	-0.2
LUWI	Luwuk	11.82	289		Pn	06 13 21.8	-1.6
LUWI	Luwuk	11.82	289	P	Pn	06 13 22.7	-0.7
	5µm403nm,1.3s						
COEN	Coen	12.72	135	Pn	Pn	06 13 34.5	-1.3
APSI	Ampana	12.93	288	P	Pn	06 13 39.0	+0.5
	3µm323nm,1.1s						
MRSI	Marisa	13.16	294	P	Pn	06 13 39.7	-2.0
	2µm108nm,1.1s						
BSSI	Bau Bau, Buton	13.43	265	P	P	06 13 54.1	-0.4
MANU	Manus Island	13.72	78	Pn	Pn	06 13 49.3	-0.1
BKSI	Bulukumba	13.76	268	P	Pn	06 13 51.6	+1.7
	7µm2µm141nm,1.1s						
BNSI	Bone	13.80	272	P	P	06 14 01.5	+2.9
PMG	Port Moresby	13.82	109	Pn	Pn	06 13 49.8	-0.9
	4.8nm,0.3s,baz=279,slow=11,SNR=9.6						
PMG				Sn	Sn	06 16 16.6	-6.8
	4.5nm,0.3s,baz=164,slow=21,SNR=2.4						
PMG				LR	LR	06 20 02.4	
	comp=Z,6µm,18.5s,baz=314,slow=41						
PMG	Port Moresby	13.82	109	ceP	Pn	06 13 51.2	+0.5
PMG				pmax	pmax		
	comp=Z,108nm,1.0s						
PMG				MLR	MLR		
	comp=Z,6µm,18.0s						
PMG	Port Moresby	13.82	109	Pn	Pn	06 13 51.3	+0.6
PMG	Port Moresby	13.82	109	P	Pn	06 13 51.7	+1.0
KAPI	Kappang	14.13	269	Pn	Pn	06 13 54.9	-0.1
	comp=Z,0.2nm,0.3s,baz=80,slow=5.9,SNR=8.3						
KAPI				LR	LR	06 21 06.0	
	comp=Z,4µm,18.5s,baz=91,slow=45						
KAPI	Kappang	14.13	269	P	Pn	06 13 56.0	+1.0
KAPI	Kappang	14.13	269		Pn	06 13 56.0	+1.0
SPSI	Sidrap Palu	14.16	274	P	Pn	06 13 56.8	+1.4
	comp=Z,4µmcomp=Z,2µmcomp=Z,171nm,0.8s						
TTSI	Tana Toraja	14.22	277	P	Pn	06 13 58.3	+2.1
	comp=Z,2µmcomp=Z,100nm,1.0s						
TOLI2	Tolitoli	14.48	294		Pn	06 13 59.8	+0.1
WB0	Warramunga Arr	14.68	178	Pn	Pn	06 13 59.8	-2.6
WRAB	Tennant Creek	14.84	178	i P	Pn	06 14 02.6	-2.0
WRAB				pmax	pmax		
	comp=Z,331nm,1.8s						
WRAB	Tennant Creek	14.84	178		Pn	06 14 03.2	-1.4
WRA	Warramunga Arr	14.85	179	Pn	Pn	06 14 02.0	-2.7
	comp=Z,2.5nm,0.3s,baz=356,slow=13,SNR=56						
WRA				Sn	Sn	06 16 44.3	-4.3
	comp=Z,3.5nm,0.3s,baz=0.1,slow=23,SNR=2.8						
WRA				Lg	Lg	06 18 28.4	
	baz=13,slow=29,SNR=2.5						
WRA				LR	LR	06 20 59.5	
	comp=Z,5µm,19.1s,baz=0.0,slow=42						
WB2	Warramunga Arr	14.85	178	Pn	Pn	06 14 02.4	-2.4
WR0	Warramunga Arr	14.87	178	Pn	Pn	06 14 02.5	-2.5
FITZ	Fitzroy Crossi	15.33	211	Pn	Pn	06 14 07.6	-3.5
	comp=Z,2.2nm,0.3s,baz=28,slow=10,SNR=131						
FITZ				Sn	Sn	06 16 50.5	-10
	comp=Z,9.2nm,0.3s,baz=211,slow=19,SNR=6.3						
FITZ	Fitzroy Crossi	15.33	211	Pn	Pn	06 14 07.5	-3.6
PLAI	Plampang	16.48	256	P	Pn	06 14 23.3	-2.7
	comp=Z,2µmcomp=Z,2µmcomp=Z,182nm,0.8s						
TWSI	Taliwang, Sumb	17.33	257	P	P	06 14 41.7	+3.8
	comp=Z,40nm,0.8s						
RABL	Rabaul	18.18	88		Pn	06 14 45.7	-1.5
RABL				IAmb	IAmb	06 15 01.6	
	comp=Z,456nm,1.2s						
RABL	Rabaul	18.18	88	P	P	06 14 52.2	+4.9
MYLDM	Lahad Datu	18.44	303	P	P	06 14 49.3	-0.8
MYLDM				IAmb	IAmb	06 15 36.3	
	comp=Z,369nm,1.2s						
AS31	Alice Springs	18.55	180	P	P	06 14 50.9	-0.4
ASAR	Alice Springs	18.55	180	P	P	06 14 50.5	-0.8
	comp=Z,1.7nm,0.3s,baz=356,slow=9.0,SNR=104						
ASAR				S	Sn	06 18 12.9	-5.5
	comp=Z,1.1nm,0.3s,baz=356,slow=28,SNR=2.0						
ASAR				Lg	Lg	06 20 27.0	
	baz=309,slow=35,SNR=1.6						
ASAR				LR	LR	06 23 06.3	
	comp=Z,4µm,19.6s,baz=358,slow=40						
ASAR				P3KP		06 50 05.4	
	comp=Z,0.1nm,0.3s,baz=183,slow=1.8,SNR=4.3						
SRBI	Singaraja	18.85	260	P	Pn	06 14 55.3	0.0
	comp=Z,2µmcomp=Z,104nm,1.2s						
BBKI	Banjar Baru	19.11	274	P	Pn	06 14 58.8	+0.4
	comp=Z,136nm,1.5s						
CTA	Charters Tower	19.19	142	P	Pn	06 14 59.9	+0.6
	comp=Z,1.5nm,0.3s,baz=329,slow=13,SNR=22						
CTA				S	S	06 18 35.8	+1.4
	comp=Z,0.3nm,0.3s,baz=89,slow=20,SNR=1.4						
CTA				Lg	Lg	06 20 38.7	
	comp=Z,0.4nm,0.3s,baz=239,slow=16,SNR=3.8						
CTA				LR	LR	06 22 52.1	
	comp=Z,3µm,21.4s,baz=325,slow=38						
CTAO	Charters Tower	19.19	142	P	Pn	06 14 59.6	+0.2
CTAO				pmax	pmax		
	comp=Z,675nm,2.0s						
CTAO	Charters Tower	19.19	142		Pn	06 14 59.6	+0.2
CTAO				IAmb	IAmb	06 15 13.5	
	comp=Z,675nm,1.9s						
MTKI	Muara Teweh, K	19.44	281	P	Pn	06 15 05.2	+2.9
	comp=Z,72nm,1.0s						
ABJI	Asem Bagus	19.77	261	P	Pn	06 15 11.0	+4.7
KMMI	Kalianget	19.96	263	P	Pn	06 15 10.0	+1.4
	comp=Z,6µmcomp=Z,403nm,1.3s						
WRKA	Warakurna	20.64	195	P	P	06 15 15.1	+1.0
	baz=21,SNR=100						
KKM	Kota Kinabalu	20.82	302	P	P	06 15 14.8	-1.5
KKM				IAmb	IAmb	06 15 41.6	
	comp=Z,233nm,1.2s						
PSA00	Pilbara Seismi	21.40	218	P	P	06 15 21.8	-0.5
PSA00				IAmb	IAmb	06 15 34.4	
	comp=Z,170nm,0.9s						
PSA00	Pilbara Seismi	21.40	218	P	P	06 15 21.6	-0.6
PSA00				IAmb	IAmb	06 15 33.5	
	comp=Z,50nm,0.8s						
GUMO	Guam	21.43	30	P	P	06 15 22.5	0.0
	comp=Z,82nm,0.6s,baz=208,slow=20,SNR=1.8						
GUMO				LR	LR	06 24 10.6	
	comp=Z,925nm,18.2s,baz=220,slow=38						

GUMO	**Guam**	**21.43**	**30**	P	**P**	**06 15 21.9**	**-0.7**
GUMO				pmax	pmax		
	comp=Z,956nm,1.3s						
GUMO	**Guam**	**21.43**	**30**	P	**P**	**06 15 21.9**	**-0.7**
GUMO	**Guam**	**21.43**	**30**	P	P	06 15 29.9	+7.3
SBUM	**Sibu**	**22.93**	**288**	P	**P**	**06 15 37.8**	**-0.8**
SBUM				IAmb	IAmb	06 16 04.9	
	comp=Z,312nm,1.4s						
SBUM	**Sibu**	**22.93**	**288**	P	**P**	**06 15 40.0**	**+1.3**
SBUM	**Sibu**	**22.93**	**288**	P	**P**	**06 15 40.0**	**+1.3**
TGY	**Tagaytay City**	**22.95**	**326**	P	**P**	**06 15 38.0**	**-0.9**
	comp=Z,132nm,0.3s,baz=249,slow=9.5,SNR=4.4						
QLP	**Quilpie**	**23.60**	**156**	P	**P**	**06 15 47.7**	**+2.5**
	baz=24,SNR=16						
KSM	**Kuching**	**24.47**	**285**	P	**P**	**06 15 53.8**	**+0.3**
KSM				IAmb	IAmb	06 16 04.7	
	comp=Z,140nm,0.9s						
KSM	**Kuching**	**24.47**	**285**	P	**P**	**06 15 55.0**	**+1.5**
KSM	**Kuching**	**24.47**	**285**	P	**P**	**06 15 55.0**	**+1.5**
GIRL	**Giralia**	**25.89**	**226**	P	**P**	**06 16 05.3**	**-0.9**
MEEK	**Meekatharra**	**26.02**	**213**	P	**P**	**06 16 10.2**	**+2.7**
	baz=26,SNR=4.3						
SZP	**Santa**	**26.07**	**330**	P	**P**	**06 16 07.1**	**-0.8**
SZP				IAmb	IAmb	06 16 42.3	
	comp=Z,243nm,1.6s						
EIDS	**Eidsvold**	**26.08**	**143**	P	**P**	**06 16 08.3**	**+0.3**
EIDS				IAmb	IAmb	06 16 28.4	
	comp=Z,214nm,1.8s						
EIDS				IAMs_20	IAMs_20	06 25 35.7	
	comp=Z,6µm,19.0s						
CISI	**Cisompet, Garu**	**26.09**	**263**	P	**P**	**06 16 08.1**	**-0.1**
CISI				IAmb	IAmb	06 16 35.7	
	comp=Z,131nm,1.0s						
CISI	**Cisompet, Garu**	**26.09**	**263**	P	**P**	**06 16 13.6**	**+5.3**
HNR	**Honiara**	**26.17**	**101**	P	**P**	**06 16 09.8**	**+0.9**
	comp=Z,36nm,0.5s,baz=188,slow=12,SNR=1.7						
HNR				LR	LR	06 28 15.0	
	comp=Z,3µm,18.2s,baz=264,slow=40						
HNR	**Honiara**	**26.17**	**101**	P	**P**	**06 16 13.6**	**+4.7**
FORT	**Forrest**	**26.23**	**192**	P	**P**	**06 16 10.5**	**+1.3**
	baz=26,SNR=57						
FORT	**Forrest**	**26.23**	**192**	P	**P**	**06 16 09.6**	**+0.3**
FORT				IAMs_20	IAMs_20	06 27 52.9	
	comp=Z,6µm,19.0s						
LEM	**Lembang**	**26.24**	**265**	P	**P**	**06 16 09.7**	**-0.1**
	comp=Z,40nm,0.6s,baz=77,slow=5.6,SNR=9.5						
LEM				LR	LR	06 28 51.3	
	comp=Z,3µm,21.0s,baz=106,slow=42						
TPI	**Tanjungpandan**	**26.32**	**274**	P	**P**	**06 16 12.9**	**+2.6**
	comp=Z,1µmcomp=Z,68nm,1.4s						
STKA	**Stephens Creek**	**27.68**	**166**	P	**P**	**06 16 23.3**	**+1.0**
	comp=Z,9.6nm,1.0s,baz=335,slow=9.0,SNR=11						
STKA				LR	LR	06 28 28.6	
	comp=Z,3µm,18.6s,baz=338,slow=39						
STKA	**Stephens Creek**	**27.68**	**166**	P	**P**	**06 16 26.0**	**+3.7**
	baz=28,SNR=7.9						
STKA	**Stephens Creek**	**27.68**	**166**	P	**P**	**06 16 22.5**	**+0.2**
STKA				pmax	pmax		
	comp=Z,21nm,1.5s						
STKA				MLR	MLR		
	comp=Z,700nm,18.0s						
STKA	**Stephens Creek**	**27.68**	**166**	P	**P**	**06 16 22.5**	**+0.2**
BBOO	**Buckleboo**	**27.73**	**176**	P	**P**	**06 16 23.8**	**+1.0**
	baz=28,SNR=28						
BBOO	**Buckleboo**	**27.73**	**176**	P	**P**	**06 16 23.8**	**+1.0**
BBOO				IAmb	IAmb	06 16 25.9	
	comp=Z,162nm,1.4s						
PPBI	**Pangkal Pinang**	**27.89**	**275**	P	**P**	**06 16 28.3**	**+3.9**
KMBL	**Kambalda**	**28.56**	**202**	P	**P**	**06 16 32.6**	**+2.4**
	baz=29,SNR=6.7						
HTT	**Hallett**	**28.66**	**171**	P	**P**	**06 16 33.7**	**+2.6**
	baz=29,SNR=14						
KLSI		**29.10**	**269**	P	P	06 16 41.0	+5.7
KASI	**Kota Agung**	**29.32**	**268**	P	**P**	**06 16 40.3**	**+3.1**
	comp=Z,33nm,1.1s						
MORW	**Morawa**	**29.33**	**213**	IAMs_20	IAMs_20	06 30 05.4	
	comp=Z,2µm,18.0s						
LWLI	**Liwa**	**29.76**	**269**	P	P	06 16 47.6	+6.4
BLDU	**Ballidu**	**30.20**	**211**	P	**P**	**06 16 47.3**	**+2.5**
	baz=30,SNR=9.4						
ARMA	**Armidale**	**30.28**	**149**	P	**P**	**06 16 49.0**	**+3.4**
	baz=30,SNR=5.7						
ARMA	**Armidale**	**30.28**	**149**	IAMs_20	IAMs_20	06 28 04.9	
	comp=Z,4µm,18.0s						
LHSI	**Lahat**	**30.35**	**271**	P	**P**	**06 16 50.3**	**+4.1**
	comp=Z,3µmcomp=Z,73nm,1.3s						
KLBR	**Kellerberrin**	**30.50**	**208**	P	**P**	**06 16 49.7**	**+2.4**
	baz=31,SNR=6.5						
MYKOM	**Kota Tinggi**	**30.81**	**282**	P	**P**	**06 16 50.1**	**-0.2**
MYKOM	**Kota Tinggi**	**30.81**	**282**	P	**P**	**06 16 52.0**	**+1.7**
MYKOM	**Kota Tinggi**	**30.81**	**282**	P	**P**	**06 16 52.0**	**+1.7**
SSLB	**Suanglung**	**31.30**	**337**	P	**P**	**06 16 52.2**	**-2.3**
NWAO	**Narrogin (SRO)**	**31.85**	**207**	P	**P**	**06 16 58.4**	**-0.9**
	comp=Z,18nm,0.9s,baz=75,slow=3.9,SNR=4.1						
NWAO	**Narrogin (SRO)**	**31.85**	**207**	P	**P**	**06 17 01.6**	**+2.2**
	baz=32,SNR=3.9						
NWAO	**Narrogin (SRO)**	**31.85**	**207**	P	**P**	**06 16 57.9**	**-1.4**
NWAO				pmax	pmax		
	comp=Z,45nm,1.1s						
NWAO				MLR	MLR		
	comp=Z,2µm,19.0s						
NWAO	**Narrogin (SRO)**	**31.85**	**207**	P	**P**	**06 16 57.9**	**-1.4**
NWAO				IAmb	IAmb	06 17 10.9	
	comp=Z,45nm,1.1s						
NWAO	**Narrogin (SRO)**	**31.85**	**207**	P	**P**	**06 16 58.4**	**-0.9**
NWAO				IAmb	IAmb	06 17 10.9	
	comp=Z,33nm,1.0s						
NWAO	**Narrogin (SRO)**	**31.85**	**207**	IAMs_20	IAMs_20	06 31 21.6	
	comp=Z,2µm,19.0s						
JOW	**Kunigami**	**32.12**	**350**	LR	LR	06 29 22.0	
	comp=Z,2µm,20.2s,baz=123,slow=35						
JOW	**Kunigami**	**32.12**	**350**	IAMs_20	IAMs_20	06 29 00.8	
	comp=Z,2µm,18.0s						
ARPS	**Mount Arapiles**	**32.43**	**168**	P	**P**	**06 17 06.5**	**+2.2**
	baz=33,SNR=11						
KRJI	**Kerinci**	**32.54**	**274**	P	**P**	**06 17 07.4**	**+1.7**
	comp=Z,12µmcomp=Z,282nm,1.0s						
SDSI	**Sungai Dareh**	**32.71**	**276**	P	**P**	**06 17 10.4**	**+3.3**
	comp=Z,3µmcomp=Z,50nm,1.2s						
CAN	**Canberra**	**33.22**	**157**	IAMs_20	IAMs_20	06 31 58.4	
	comp=Z,3µm,18.0s						
QZH	**Quanzhou**	**33.30**	**334**	*e*P	P	06 17 06.4	-5.6
QZH				*e*S	**S**	**06 22 36.6**	**+5.5**
QZH				LR	LR		
	comp=N,350nm,15.2s						
QZH				LR	LR		
	comp=E,810nm,15.5s						
QZH				LR	LR		
	comp=Z,500nm,15.2s						
PDSI	**Padang**	**33.67**	**276**	P	**P**	**06 17 15.3**	**-0.2**
	comp=Z,2µmcomp=Z,23nm,0.9s						
QIZ	**Qiongzhong**	**33.67**	**316**	P	**P**	**06 17 13.8**	**-1.6**
QIZ				S	**S**	**06 22 39.4**	**+2.4**
QIZ				pmax	pmax		
	comp=Z,10.0nm,1.0s						
QIZ				pmax	pmax		
	comp=Z,98nm,4.0s						
QIZ				LR	LR		
	comp=Z,630nm,17.0s						
QIZ				LR	LR		
	comp=Z,620nm,16.5s						
QIZ				LR	LR		
	comp=Z,650nm,16.4s						
QIZ	**Qiongzhong**	**33.67**	**316**	P	**P**	**06 17 14.8**	**-0.6**
TOO	**Toolangi**	**34.09**	**164**	P	**P**	**06 17 22.4**	**+3.6**
	baz=34,SNR=3.5						
TOO	**Toolangi**	**34.09**	**164**	P	**P**	**06 17 18.0**	**-0.8**
TOO				pmax	pmax		
	comp=Z,50nm,1.4s						
TOO				MLR	MLR		
	comp=Z,3µm,20.0s						
TOO	**Toolangi**	**34.09**	**164**	P	**P**	**06 17 18.0**	**-0.8**
TOO				IAMs_20	IAMs_20	06 32 16.4	
	comp=Z,3µm,20.0s						
SANVU	**Saraoutou**	**34.29**	**110**	P	**P**	**06 17 21.1**	**+0.4**
SANVU				IAmb	IAmb	06 17 40.4	
	comp=Z,112nm,1.1s						
SANVU	**Saraoutou**	**34.29**	**110**	P	**P**	**06 17 23.5**	**+2.7**
	comp=Z,93nm,1.1s						
UBPT	**Khong Chiam**	**34.66**	**306**	P	**P**	**06 17 24.0**	**0.0**
	comp=Z,24nm,1.1s						
UBPT	**Khong Chiam**	**34.66**	**306**	P	**P**	**06 17 23.7**	**-0.3**
MNSI	**Mandailing Nat**	**34.80**	**279**	P	**P**	**06 17 26.0**	**+0.7**
	comp=Z,880nmcomp=Z,58nm,0.9s						
SISI	**Saibi**	**34.98**	**275**	P	**P**	**06 17 28.4**	**+1.6**
	comp=Z,36nm,1.2s						
LHI	**Lord Howe Isla**	**35.37**	**141**	IAMs_20	IAMs_20	06 30 04.8	
	comp=Z,4µm,19.0s						
DZM	**Mont Dzumac**	**35.73**	**121**	P	**P**	**06 17 34.2**	**+0.9**
	comp=Z,16nm,1.1s,baz=245,slow=21,SNR=3.0						
DZM	**Mont Dzumac**	**35.73**	**121**	*e*P	**P**	**06 17 33.7**	**+0.4**
	comp=Z,108nm,1.2s						
DZM				*e*S	**S**	**06 23 09.1**	**0.0**
	comp=Z,547nm,27.4s						
DZM				*e*LR	LR	06 27 09.2	
	comp=Z,4µm,24.0s						
DZM	**Mont Dzumac**	**35.73**	**121**	IAMs_20	IAMs_20	06 34 56.7	
	comp=Z,3µm,19.0s						
DZM	**Mont Dzumac**	**35.73**	**121**	P	**P**	**06 17 36.8**	**+3.5**
RPSI	**Rantau Prapat**	**35.81**	**282**	P	**P**	**06 17 33.4**	**-0.5**
RPSI				IAmb	IAmb	06 17 43.2	
	comp=Z,43nm,0.8s						
PSI	**Prapat**	**35.83**	**282**	P	**P**	**06 17 33.2**	**-1.1**
	comp=Z,9.4nm,0.7s,baz=180,slow=3.8,SNR=11						
PSI	**Prapat**	**35.83**	**282**	P	**P**	**06 17 33.4**	**-0.9**
PSI				pmax	pmax		
	comp=Z,43nm,0.8s						
PSI				MLR	MLR		
	comp=Z,1µm,20.0s						
PBSI	**Pulau Batu**	**35.95**	**277**	P	P	06 17 50.5	+15
TSI	**Tuntungan**	**36.34**	**283**	P	P	06 17 47.5	+9.1
SRAK	**Srakaew**	**36.86**	**301**	P	**P**	**06 17 39.7**	**-3.2**
	comp=Z,2µmcomp=Z,172nm,1.3s						
GSI	**Gunungsitoli**	**36.86**	**279**	P	**P**	**06 17 42.0**	**-1.0**
GSI				IAmb	IAmb	06 17 52.0	
	comp=Z,79nm,1.2s						
GSI	**Gunungsitoli**	**36.86**	**279**	P	**P**	**06 17 42.8**	**-0.2**
	comp=Z,63nm,1.2s						
KHON	**Khomkaen**	**37.38**	**305**	P	**P**	**06 17 48.4**	**+1.1**
	comp=Z,4µmcomp=Z,205nm,1.0s						
TPTI		**37.63**	**282**	P	**P**	**06 17 49.8**	**+0.3**
	comp=Z,491nmcomp=Z,19nm,1.2s						
PKDT	**Phuket**	**37.76**	**290**	P	P	06 17 59.5	+9.0
	comp=Z,42nm,1.1s						
CHAI	**Chaiyaphum**	**37.84**	**304**	P	**P**	**06 17 52.2**	**+1.0**
	comp=Z,749nmcomp=Z,101nm,0.9s						
SSE	**Sheshan**	**37.91**	**342**	P	**P**	**06 17 51.1**	**-0.4**
SSE				sP	**pP**	**06 17 59.6**	**+1.0**
SSE				S	**S**	**06 23 46.0**	**+4.3**
SSE				pmax	pmax		
	comp=Z,6.0nm,0.9s						
SSE				pmax	pmax		
	comp=Z,120nm,8.1s						
SSE				LR	LR		
	comp=Z,350nm,16.9s						
JNU	**Nakatsue**	**38.03**	**356**	LR	LR	06 32 15.6	
	comp=Z,841nm,20.1s,baz=175,slow=34						
JNU	**Nakatsue**	**38.03**	**356**	P	**P**	**06 17 52.0**	**-0.6**
JNU				IAmb	IAmb	06 18 01.1	
	comp=Z,122nm,1.1s						
NONG	**Nongkai**	**38.06**	**308**	P	**P**	**06 17 52.0**	**-1.0**
	comp=Z,92nm,0.9s						
LHMI	**Lhok Sumawe**	**38.32**	**285**	P	P	06 18 05.8	+11
PHET	**Kaeng Krachan**	**38.45**	**298**	P	**P**	**06 17 59.1**	**+2.7**
	comp=Z,28nm,0.9s						
MLSI	**Meulaboh, Aceh**	**38.61**	**283**	P	**P**	**06 17 57.1**	**-0.6**
	comp=Z,4µmcomp=Z,281nm,0.9s						
SLVN	**Son La**	**39.40**	**313**	P	**P**	**06 18 04.0**	**-0.3**
TARA	**Tarawa**	**39.45**	**82**	IAMs_20	IAMs_20	06 37 24.4	
	comp=Z,3µm,21.0s						
SRDT	**SRDT**	**39.53**	**300**	P	P	06 18 14.0	+8.7
NJ2	**Nanjing**	**39.55**	**340**	*e*P	**P**	**06 18 05.5**	**+0.2**
NJ2				pP	**pP**	**06 18 10.3**	**-2.1**
NJ2				sP	**sP**	**06 18 14.1**	**-0.8**
NJ2				S	**S**	**06 24 06.3**	**-0.2**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,390nm,4.0s						
NJ2				LR	LR		
	comp=Z,470nm,13.2s						
NJ2				LR	LR		
	comp=Z,720nm,13.7s						
NJ2				LR	LR		
	comp=Z,610nm,18.0s						
PHIT	**Phitsanulok**	**39.79**	**304**	P	**P**	**06 18 09.0**	**+1.5**
	comp=Z,3µmcomp=Z,353nm,0.9s						
JHS	**Saijyo**	**39.80**	**359**	P	**P**	**06 18 06.9**	**-0.5**
UTTA	**Uttaradit**	**39.96**	**305**	P	**P**	**06 18 09.3**	**+0.4**
	comp=Z,541nmcomp=Z,54nm,0.9s						
WHN	**Wuhan**	**40.01**	**333**	⇑*i*P	**P**	**06 18 09.8**	**+0.6**
WHN				pP	**sP**	**06 18 18.4**	**-0.4**
WHN				S	**S**	**06 24 21.4**	**+8.0**
WHN				pmax	pmax		
	comp=Z,86nm,1.1s						
WHN				LR	LR		
	comp=Z,2µm,16.2s						
JWT	**Wachi**	**40.10**	**2**	P	**P**	**06 18 08.8**	**-1.0**
JWT				IAmb	IAmb	06 18 19.7	
	comp=Z,74nm,1.0s						
JGF	**Kuroka**	**40.52**	**4**	IAMs_20	IAMs_20	06 33 00.3	
	comp=Z,2µm,20.0s						
SUKH	**Sukhothai**	**40.58**	**304**	P	**P**	**06 18 15.6**	**+1.6**
	comp=Z,33nm,0.9s						
UMPA	**Umpang Tak**	**40.60**	**302**	P	**P**	**06 18 14.8**	**+0.5**
	comp=Z,4µmcomp=Z,53nm,1.1s						
GYA	**Guiyang**	**40.94**	**321**	⇑P	**P**	**06 18 16.6**	**-0.5**
GYA				pP	sP	06 18 25.8	-1.0
GYA				S	**S**	**06 24 35.8**	**+8.1**
GYA				pmax	pmax		
	comp=Z,22nm,1.1s						
GYA				LR	LR		
	comp=Z,350nm,13.1s						
GYA				LR	LR		
	comp=Z,310nm,14.2s						
GYA				LR	LR		
	comp=Z,540nm,18.2s						
LAMP	**Lampang**	**41.11**	**306**	P	**P**	**06 18 19.0**	**+0.5**
	comp=Z,686nmcomp=Z,89nm,0.9s						
JYT	**Yasato**	**41.44**	**8**	P	**P**	**06 18 20.4**	**-0.4**
MJAR	**Matsushiro Arr**	**41.52**	**5**	P	**P**	**06 18 19.8**	**-1.8**
	comp=Z,4.8nm,1.0s,baz=138,slow=15,SNR=5.6						
MJAR				PcP	**PcP**	**06 20 18.7**	**-0.1**
	comp=Z,1.0nm,0.7s,baz=90,slow=33,SNR=2.6						
MJAR				LR	LR	06 33 42.4	
	comp=Z,1µm,20.3s,baz=185,slow=34						
MAJO	**Matsushiro**	**41.53**	**5**	P	**P**	**06 18 22.2**	**+0.6**
MAJO				pmax	pmax		
	comp=Z,26nm,0.9s						
MAJO	**Matsushiro**	**41.53**	**5**	P	**P**	**06 18 22.2**	**+0.6**
MAJO	**Matsushiro**	**41.53**	**5**	IAMs_20	IAMs_20	06 33 32.9	
	comp=Z,2µm,19.0s						
MAT	**Matsushiro**	**41.53**	**5**	P	**P**	**06 18 21.8**	**+0.2**
MAT				*e*S	**S**	**06 24 38.8**	**+3.0**
TJN	**Taejon**	**41.63**	**352**	*i* P	**P**	**06 18 21.4**	**-1.0**
CM31	**Chiang Mai Arr**	**41.64**	**305**	P	**P**	**06 18 23.0**	**+0.2**
CM31				IAmb	IAmb	06 18 32.6	
	comp=Z,71nm,1.1s						
CMAR	**Chiang Mai Arr**	**41.64**	**305**	P	**P**	**06 18 22.1**	**-0.7**
	comp=Z,12nm,0.8s,baz=131,slow=6.7,SNR=30						
CMAR	**Chiang Mai Arr**	**41.64**	**305**	*ce*P	**P**	**06 18 22.8**	**0.0**
CMAR				pmax	pmax		
	comp=Z,12nm,0.8s						
CMAR	**Chiang Mai Arr**	**41.64**	**305**	P	**P**	**06 18 22.3**	**-0.5**
CMMT	**Chiang Mai**	**41.81**	**305**	P	**P**	**06 18 23.0**	**-1.3**
	comp=Z,407nmcomp=Z,29nm,1.1s						
CHTO	**Chiang Mai**	**41.82**	**305**	P	**P**	**06 18 23.7**	**-0.6**
CHTO				pmax	pmax		
	comp=Z,49nm,1.0s						
CHTO	**Chiang Mai**	**41.82**	**305**	P	**P**	**06 18 23.7**	**-0.6**
ENH	**Enshi**	**42.18**	**328**	P	**P**	**06 18 25.2**	**-1.9**
ENH				IAmb	IAmb	06 18 36.0	
	comp=Z,77nm,0.8s						
KSAR	**Wonju Array Be**	**42.61**	**353**	P	**P**	**06 18 29.6**	**-0.8**
KSAR	**Wonju Array Be**	**42.61**	**353**	P	**P**	**06 18 29.6**	**-0.8**
KSRS	**Korea Array**	**42.61**	**353**	P	**P**	**06 18 29.7**	**-0.7**
	comp=Z,7.1nm,0.9s,baz=175,slow=9.5,SNR=13						
KSRS				PcP	**PcP**	**06 20 23.0**	**+0.6**
	comp=Z,2.5nm,1.0s,baz=219,slow=38,SNR=3.7						
KSRS				LR	LR	06 38 15.4	
	comp=Z,698nm,18.1s,baz=166,slow=39						
KMI	**Kunming**	**42.62**	**316**	⇓P	**P**	**06 18 31.8**	**+0.8**
KMI				pP	pP	06 18 36.6	-1.3
KMI				sP	sP	06 18 39.5	-1.2
KMI				PP	**PP**	**06 20 12.1**	**+2.0**
KMI				S	**S**	**06 24 56.4**	**+3.6**
KMI				sS	sS	06 25 09.5	+5.0
KMI				pmax	pmax		
	comp=Z,32nm,1.4s						
KMI				pmax	pmax		
	comp=Z,240nm,4.8s						
KMI				LR	LR		
	comp=Z,420nm,15.4s						
KMI				LR	LR		
	comp=Z,430nm,16.1s						
KMI				LR	LR		
	comp=Z,690nm,20.6s						
KMI	**Kunming**	**42.62**	**316**	P	**P**	**06 18 30.1**	**-0.9**
KMI				pmax	pmax		
	comp=Z,79nm,1.2s						
KMI	**Kunming**	**42.62**	**316**	P	**P**	**06 18 30.1**	**-0.9**
KMI				IAmb	IAmb	06 18 41.5	
	comp=Z,79nm,1.2s						
JMM	**Marumori**	**43.13**	**8**	IAmb	IAmb	06 18 42.8	
	comp=Z,97nm,1.1s						
TIA	**Tai'an**	**43.93**	**340**	P	**P**	**06 18 40.1**	**-1.0**
TIA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
TIA				pmax	pmax		
	comp=Z,260nm,3.5s						
TIA				LR	LR		
	comp=Z,450nm,18.3s						
TIA				LR	LR		
	comp=Z,490nm,15.1s						
TIA				LR	LR		
	comp=Z,390nm,21.4s						
MSVF	**Nonsavu**	**44.93**	**110**	P	**P**	**06 18 53.3**	**+3.8**
DL2	**Dalian**	**45.16**	**346**	P	P	06 18 59.6	+8.8
DL2				S	S	06 25 42.9	+14
DL2	**Dalian**	**45.16**	**346**	SS	SS	06 29 00.3	+8.3
DL2				pmax	pmax		
	comp=Z,65nm,1.0s						
DL2				pmax	pmax		
	comp=Z,390nm,6.8s						
DL2				LR	LR		
	comp=N,1µm,17.4s						
DL2				LR	LR		
	comp=E,950nm,12.2s						
DL2				LR	LR		
	comp=Z,1µm,19.2s						
XAN	**Xi'an**	**45.47**	**330**	P	**P**	**06 18 52.0**	**-1.5**
XAN				pP	pP	06 19 01.6	+1.0
XAN				sP	pwP	06 19 07.3	+3.1
XAN				S	**S**	**06 25 35.3**	**+1.6**
XAN				sS	sS	06 25 49.1	+3.6
XAN				pmax	pmax		
	comp=Z,49nm,1.0s						
XAN				pmax	pmax		
	comp=Z,190nm,4.6s						
XAN				LR	LR		
	comp=Z,390nm,15.1s						
XAN				LR	LR		
	comp=Z,560nm,20.6s						
XAN				LR	LR		
	comp=Z,620nm,21.7s						
XAN	**Xi'an**	**45.47**	**330**	P	**P**	**06 18 52.6**	**-0.9**
XAN				pmax	pmax		
	comp=Z,93nm,1.0s						
XAN				MLR	MLR		
	comp=Z,500nm,20.0s						
XAN	**Xi'an**	**45.47**	**330**	P	**P**	**06 18 52.6**	**-0.9**
XAN				IAmb	IAmb	06 19 02.2	
	comp=Z,93nm,1.0s						
CD2	**Chengdu**	**45.90**	**323**	P	**P**	**06 18 55.8**	**-1.2**
CD2				PP	**PP**	**06 20 44.4**	**-0.5**
CD2				S	**S**	**06 25 42.4**	**+2.3**
CD2				pmax	pmax		
	comp=Z,60nm,1.0s						
CD2				pmax	pmax		
	comp=Z,150nm,5.8s						
CD2				LR	LR		
	comp=Z,630nm,14.4s						
CD2				LR	LR		
	comp=Z,1µm,14.4s						
CD2				LR	LR		
	comp=Z,770nm,14.5s						
TIY	**Taiyuan**	**46.98**	**337**	*e*P	P	06 19 11.8	+6.5
TIY				sP	pwP	06 19 35.4	+19
TIY				PP	**PP**	**06 21 00.0**	**+3.8**
TIY				S	**S**	**06 25 56.5**	**+1.2**
TIY				sS	sS	06 26 34.9	+28
TIY				SS	**ScS**	**06 29 07.9**	**+10**
TIY				pmax	pmax		
	comp=Z,17nm,0.6s						
TIY				pmax	pmax		
	comp=Z,380nm,3.7s						
TIY				LR	LR		
	comp=N,280nm,12.4s						
TIY				LR	LR		
	comp=E,190nm,12.5s						
TIY				LR	LR		
	comp=Z,450nm,17.8s						
SNY	**Shenyang**	**47.56**	**350**	⇑P	**P**	**06 19 09.1**	**-0.6**
SNY				S	**S**	**06 26 05.5**	**+2.2**
SNY				pmax	pmax		
	comp=Z,18nm,1.4s						
SNY				pmax	pmax		
	comp=Z,450nm,4.8s						
SNY				LR	LR		
	comp=Z,580nm,17.9s						
SNY				LR	LR		
	comp=Z,570nm,24.3s						
SNY				LR	LR		
	comp=Z,750nm,18.0s						
BJT	**Baijiatuau**	**47.70**	**342**	P	**P**	**06 19 10.7**	**-0.1**
BJT				pmax	pmax		
	comp=Z,113nm,1.3s						
BJT	**Baijiatuau**	**47.70**	**342**	P	**P**	**06 19 10.7**	**-0.1**
BJI	**Beijing**	**47.72**	**342**	P	**P**	**06 19 10.6**	**-0.3**
BJI				S	**S**	**06 26 10.9**	**+5.4**
BJI				pmax	pmax		
	comp=Z,23nm,1.1s						
BJI				pmax	pmax		
	comp=Z,510nm,3.5s						
BJI				LR	LR		
	comp=Z,360nm,18.6s						
BJI				LR	LR		
	comp=Z,430nm,21.2s						
USA0B	**Ussuriysk Arra**	**49.01**	**358**	*i* P	**P**	**06 19 20.1**	**-0.8**
USA0B	**Ussuriysk Arra**	**49.01**	**358**	P	**P**	**06 19 21.0**	**+0.2**
USA0B				IAmb	IAmb	06 19 31.5	
	comp=Z,59nm,0.9s						
USRK	**Ussuriysk Ar.**	**49.01**	**358**	P	**P**	**06 19 20.6**	**-0.3**
	comp=Z,3.5nm,0.6s,baz=188,slow=7.7,SNR=8.1						
USRK				LR	LR	06 38 31.0	
	comp=Z,460nm,20.9s,baz=154,slow=34						
USRK	**Ussuriysk Ar.**	**49.01**	**358**	P	**P**	**06 19 20.9**	**0.0**
USRK	**Ussuriysk Ar.**	**49.01**	**358**	P	**P**	**06 19 20.9**	**0.0**
CN2	**Changchun**	**49.19**	**352**	*e*P	**P**	**06 19 21.1**	**-1.1**
CN2				PcP	**PcP**	**06 20 46.4**	**+1.2**
CN2				*e*S	**S**	**06 26 26.9**	**+0.7**
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
CN2				LR	LR		
	comp=Z,600nm,16.0s						
CN2				LR	LR		
	comp=Z,500nm,16.0s						
CN2				LR	LR		
	comp=Z,700nm,19.0s						
ASAJ	**Asahikawa**	**49.52**	**8**	LR	LR	06 39 30.8	
	comp=Z,660nm,20.9s,baz=195,slow=35						
ASAJ	**Asahikawa**	**49.52**	**8**	P	**P**	**06 19 25.4**	**+0.7**
ASAJ				pmax	pmax		
	comp=Z,97nm,1.6s						
JKA	**Kamikawa-asahi**	**49.52**	**8**	P	**P**	**06 19 25.4**	**+0.7**
JKA				IAmb	IAmb	06 19 33.1	
	comp=Z,97nm,1.6s						
MDJ	**Mudanjiang**	**49.55**	**356**	P	**P**	**06 19 24.9**	**-0.1**
DCZ	**Deep Cove**	**49.60**	**150**	IAMs_20	IAMs_20	06 38 12.2	
	comp=Z,2µm,20.0s						
LZH	**Lanzhou**	**49.66**	**328**	⇓P	**P**	**06 19 26.4**	**+0.2**
LZH				pP	pP	06 19 31.6	-1.6
LZH				sP	sP	06 19 35.8	-0.1
LZH				S	**S**	**06 26 33.0**	**-0.5**
LZH				sS	sS	06 26 47.4	+2.4
LZH				SS	**SS**	**06 30 04.3**	**-1.9**
LZH				pmax	pmax		
	comp=Z,50nm,1.0s						
LZH				pmax	pmax		
	comp=Z,430nm,6.0s						
LZH				LR	LR		
	comp=Z,450nm,16.3s						
LZH				LR	LR		
	comp=Z,470nm,16.3s						
LZH				LR	LR		
	comp=Z,280nm,17.3s						
TEY	**Ternei**	**49.88**	**2**	⇓*i*P	P	06 19 35.4	+8.0
TEY				pmax	pmax		

	comp=E,20nm,0.9s						
TEY				pmax	pmax		
	comp=N,60nm,1.0s						
TEY				pmax	pmax		
	comp=Z,100nm,1.0s						
HIZ	**Hauiti**	**49.88**	**138**	IAMs_20	IAMs_20	06 39 39.1	
	comp=Z,2µm,19.0s						
MLZ	**Mavora Lakes**	**50.02**	**149**	P	**P**	**06 19 29.9**	**+1.2**
MLZ				IAmb	IAmb	06 20 22.4	
	comp=Z,107nm,1.9s						
HHC	**Hu-ho-hao-te**	**50.03**	**338**	*e*P	**P**	**06 19 28.6**	**-0.3**
HHC				sP	pP	06 19 37.1	+1.0
HHC				S	**S**	**06 26 38.3**	**-0.1**
HHC				pmax	pmax		
	comp=Z,22nm,1.2s						
HHC				pmax	pmax		
	comp=Z,400nm,7.6s						
HHC				LR	LR		
	comp=Z,400nm,20.2s						
HHC				LR	LR		
	comp=Z,460nm,15.9s						
HHC				LR	LR		
	comp=Z,550nm,16.2s						
BTO	**Baotou**	**50.42**	**336**	*e*P	**P**	**06 19 32.3**	**+0.5**
LBZ	**Lake Benmore**	**50.47**	**147**	P	**P**	**06 19 31.7**	**-0.3**
LBZ				IAmb	IAmb	06 19 44.8	
	comp=Z,81nm,1.2s						
LBZ				IAMs_20	IAMs_20	06 42 31.3	
	comp=Z,2µm,19.0s						
RPZ	**Rata Peaks**	**50.52**	**145**	LR	LR	06 40 19.5	
	comp=Z,2µm,19.1s,baz=307,slow=35						
TUWZ	**Tuamarina**	**50.88**	**141**	P	**P**	**06 19 34.4**	**-0.7**
SHL	**Shillong**	**50.88**	**309**	P	**P**	**06 19 35.0**	**-0.7**
SHL				pmax	pmax		
	comp=Z,47nm,1.0s						
SHL	**Shillong**	**50.88**	**309**	P	**P**	**06 19 35.0**	**-0.7**
SHL				IAmb	IAmb	06 19 44.4	
	comp=Z,47nm,1.0s						
ODZ	**Otahua Downs**	**51.14**	**147**	P	**P**	**06 19 38.2**	**+1.1**
ODZ				IAMs_20	IAMs_20	06 41 38.2	
	comp=Z,2µm,18.0s						
URZ	**Urewera**	**51.29**	**136**	LR	LR	06 41 25.7	
	comp=Z,2µm,19.3s,baz=262,slow=36						
URZ	**Urewera**	**51.29**	**136**	IAMs_20	IAMs_20	06 41 03.9	
	comp=Z,2µm,19.0s						
MQZ	**McQueen's Vall**	**51.43**	**145**	IAMs_20	IAMs_20	06 40 57.9	
	comp=Z,2µm,19.0s						
RAO	**Raoul Island**	**51.46**	**124**	LR	LR	06 39 48.0	
	comp=Z,994nm,20.1s,baz=132,slow=34						
YSS	**Yuzh-Sakhalins**	**52.32**	**8**	*e*P	**P**	**06 19 44.9**	**-0.8**
YSS				*e*		06 19 53.4	
YSS				*e*S	**S**	**06 27 09.3**	**-0.3**
YSS				MLR	MLR		
	comp=Z,300nm,18.0s						
YSS				MLR	MLR		
	comp=N,200nm,17.0s						
YSS				MLR	MLR		
	comp=E,200nm,16.0s						
YSS	**Yuzh-Sakhalins**	**52.32**	**8**	P	**P**	**06 19 44.9**	**-0.8**
YSS				IAmb	IAmb	06 19 56.1	
	comp=Z,55nm,0.8s						
YSS				IAMs_20	IAMs_20	06 40 16.5	
	comp=Z,997nm,20.0s						
LSA	**Lhasa**	**53.60**	**313**	P	**P**	**06 19 56.5**	**+0.4**
LSA				pmax	pmax		
	comp=Z,46nm,1.3s						
LSA	**Lhasa**	**53.60**	**313**	P	**P**	**06 19 56.6**	**+0.4**
LSA				pmax	pmax		
	comp=Z,41nm,1.1s						
LSA	**Lhasa**	**53.60**	**313**	P	**P**	**06 19 56.6**	**+0.4**
LSA				IAmb	IAmb	06 20 06.5	
	comp=Z,41nm,1.1s						
KLR	**Kul'dur**	**54.05**	**358**	*ce*P	**P**	**06 19 57.2**	**-1.2**
KLR				pmax	pmax		
	comp=Z,100nm,1.7s						
KLR				MLR	MLR		
	comp=Z,305nm,18.0s						
GTA	**Gaotai**	**54.26**	**328**	⇓P	**P**	**06 20 00.4**	**0.0**
GTA				pP	pP	06 20 06.1	-1.3
GTA				sP	sP	06 20 08.9	-1.3
GTA				pmax	pmax		
	comp=Z,26nm,1.0s						
GTA				pmax	pmax		
	comp=Z,210nm,7.6s						
GTA				LR	LR		
	comp=Z,310nm,15.1s						
GTA				LR	LR		
	comp=Z,250nm,17.5s						
GTA				LR	LR		
	comp=Z,340nm,17.5s						
TAPN	**Taplejung**	**55.01**	**308**	*e*P	**P**	**06 20 06.6**	**+0.3**
	comp=Z,115nm,1.0s						
ODAN	**Odare**	**55.03**	**308**	*e*P	**P**	**06 20 06.4**	**+0.1**
RAMN	**Ramite**	**55.70**	**307**	*e*P	**P**	**06 20 11.3**	**+0.1**
	comp=Z,83nm,0.8s						
TYV	**Tymovskoe**	**56.15**	**7**	*e*P	P	06 20 18.8	+5.2
TYV				pmax	pmax		
	comp=Z,31nm,1.4s						
TYV				pmax	pmax		
	comp=Z,300nm,2.5s						
GUN	**Gumba**	**56.71**	**308**	*e*P	**P**	**06 20 18.4**	**-0.1**
	comp=Z,72nm,0.8s						
PKI	**Pulchoki**	**56.92**	**307**	*e*P	**P**	**06 20 19.6**	**-0.4**
	comp=Z,72nm,1.3s						
PKIN	**Phulchoki**	**56.94**	**307**	*e*P	**P**	**06 20 20.0**	**0.0**
DMN	**Daman**	**57.18**	**307**	*e*P	**P**	**06 20 21.6**	**-0.1**
	comp=Z,68nm,1.0s						
ULN	**Ulaanbaatar**	**57.71**	**339**	*ce*P	**P**	**06 20 24.8**	**-0.1**
ULN				pmax	pmax		
	comp=Z,15nm,1.3s						
ULN	**Ulaanbaatar**	**57.71**	**339**	P	**P**	**06 20 25.1**	**+0.2**
ULN				IAmb	IAmb	06 20 35.2	
	comp=Z,46nm,1.1s						
GKN	**Gorkha**	**57.73**	**308**	*e*P	**P**	**06 20 25.7**	**+0.2**
	comp=Z,98nm,1.0s						
SONM	**Songino Array**	**57.92**	**338**	P	**P**	**06 20 26.2**	**-0.3**
	comp=Z,13nm,1.3s,baz=154,slow=5.1,SNR=25						
SONM	**Songino Array**	**57.92**	**338**	P	**P**	**06 20 26.1**	**-0.3**
SONM				pmax	pmax		
	comp=Z,27nm,1.3s						
SONM	**Songino Array**	**57.92**	**338**	P	**P**	**06 20 26.1**	**-0.3**
ZEA	**Zeya**	**58.80**	**355**	*e*P	**P**	**06 20 32.0**	**-0.2**
ZEA				pmax	pmax		
	comp=N,20nm,1.3s						
ZEA				pmax	pmax		
	comp=Z,40nm,1.3s						
ZEA				MLR	MLR		
	comp=Z,300nm,16.0s						
HYB	**Hyderabad**	**59.04**	**294**	*i* P	**P**	**06 20 34.0**	**-0.6**
ZAK	**Zakamensk**	**61.18**	**338**	*e*P	**P**	**06 20 47.5**	**-1.3**
ZAK				pmax	pmax		
	comp=Z,22nm,1.6s						
PEA0B	**Petropavlovsk-**	**61.28**	**16**	*i* P	**P**	**06 20 49.3**	**0.0**
PETK	**Petropavlovsk-**	**61.28**	**16**	P	**P**	**06 20 48.6**	**-0.6**
	comp=Z,2.6nm,0.6s,baz=177,slow=2.7,SNR=5.5						
PETK	**Petropavlovsk-**	**61.28**	**16**	P	**P**	**06 20 49.2**	**-0.1**
PETK	**Petropavlovsk-**	**61.28**	**16**	P	**P**	**06 20 49.1**	**-0.1**
PET	**Petropavlovsk**	**61.47**	**17**	*e*P	**P**	**06 20 45.8**	**-4.7**
PET				*e*S	**S**	**06 29 05.1**	**-5.1**
PET				MLR	MLR		
	comp=Z,400nm,17.0s						
PET				MLR	MLR		
	comp=Z,600nm,16.0s						
TLY	**Talaya**	**62.11**	**339**	*e*P	**P**	**06 20 55.5**	**+0.5**
TLY				*e*S	S	06 29 27.9	+9.4
TLY				*e*SSS	SSS	06 35 56.8	
TLY				pmax	pmax		
	comp=Z,74nm,2.0s						
TLY				MLR	MLR		
	comp=Z,15µm,12.0s						
TLY	**Talaya**	**62.11**	**339**	P	**P**	**06 20 54.8**	**-0.2**
TLY				IAMs_20	IAMs_20	06 48 16.3	
	comp=Z,785nm,19.0s						
IRK	**Irkutsk**	**62.36**	**340**	*e*P	**P**	**06 20 54.8**	**-1.8**
IRK				pmax	pmax		
	comp=Z,116nm,2.2s						
MOY	**Mondy**	**63.07**	**338**	*e*P	**P**	**06 21 02.1**	**+0.6**
MOY				pmax	pmax		
	comp=Z,6.0nm,1.3s						
WMQ	**Urumqi**	**63.97**	**324**	*e*P	**P**	**06 21 08.1**	**+0.6**
WMQ				pP	pP	06 21 13.3	-1.4
WMQ				sP	sP	06 21 17.0	-0.4
WMQ				S	**S**	**06 29 38.1**	**-4.0**
WMQ				sS	sS	06 29 56.3	+2.3
WMQ				pmax	pmax		
	comp=Z,70nm,1.7s						
WMQ				pmax	pmax		
	comp=Z,99nm,3.8s						
WMQ				LR	LR		
	comp=Z,680nm,15.9s						
WMQ				LR	LR		
	comp=Z,550nm,13.9s						
WMQ				LR	LR		
	comp=Z,540nm,13.9s						
WMQ	**Urumqi**	**63.97**	**324**	P	**P**	**06 21 08.3**	**+0.8**
WMQ				pmax	pmax		
	comp=Z,199nm,0.9s						
WMQ	**Urumqi**	**63.97**	**324**	P	**P**	**06 21 08.3**	**+0.8**
BOD	**Bodaibo**	**64.66**	**348**	*e*P	**P**	**06 21 11.3**	**-0.3**
BOD				pmax	pmax		
	comp=Z,76nm,1.9s						
MA2	**Magadan**	**65.75**	**9**	P	**P**	**06 21 18.1**	**-0.6**
	comp=Z,2.8nm,0.6s,baz=164,slow=11,SNR=1.4						
MA2	**Magadan**	**65.75**	**9**	*ce*P	**P**	**06 21 19.2**	**+0.5**
MA2				pmax	pmax		
	comp=Z,16nm,1.3s						
MA2	**Magadan**	**65.75**	**9**	P	**P**	**06 21 18.3**	**-0.4**
RAR	**Rarotonga**	**66.11**	**111**	LR	LR	06 49 39.6	
	comp=Z,376nm,20.8s,baz=264,slow=36						
YAK	**Yakutsk**	**66.93**	**358**	*e*P	**P**	**06 21 25.7**	**-0.4**
YAK				*e**PP	**pP**	**06 21 34.0**	**+0.6**
YAK				*e*		06 21 53.2	
YAK				*e*		06 23 55.1	
YAK				*e*PPP	PPP	06 25 29.1	
YAK				*e*S	**S**	**06 30 18.5**	**+1.1**
YAK				*e**SS	**sS**	**06 30 32.7**	**+3.4**
YAK				*e*		06 31 22.5	
YAK				*e*SS	**SS**	**06 34 34.3**	**-2.0**
YAK				pmax	pmax		
	comp=Z,70nm,1.0s						
YAK				pmax	pmax		
	comp=N,21nm,1.1s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,110nm,3.0s						
YAK				pmax	pmax		
	comp=N,61nm,2.7s						
YAK				pmax	pmax		
	comp=E,84nm,2.7s						
YAK				smax	smax		
	comp=E,72nm,2.3s						
YAK				smax	smax		
	comp=N,123nm,2.5s						
YAK				MLR	MLR		
	comp=Z,238nm,17.0s						
YAK				MLR	MLR		
	comp=E,76nm,18.0s						
YAK				MLR	MLR		
	comp=N,212nm,18.0s						
YAK	**Yakutsk**	**66.93**	**358**	P	**P**	**06 21 26.2**	**+0.1**
DGZ	**Jazzator, Alta**	**67.71**	**329**	*d i*P	**P**	**06 21 31.4**	**-0.2**
DGZ				pmax	pmax		
	comp=Z,40nm,1.2s						
ZSN	**Zaisan**	**67.71**	**326**	*e*P	**P**	**06 21 30.8**	**-0.8**
	comp=Z,17nm,1.3s,baz=326						
ZSN	**Zaisan**	**67.71**	**326**	*e*P	**P**	**06 21 30.7**	**-0.8**
ZSN				pmax	pmax		
	comp=Z,17nm,1.3s						
SHLS	**Shalkode**	**68.62**	**320**	*e*P	**P**	**06 21 35.6**	**-1.8**
	comp=Z,29nm,1.2s,baz=320						
SHLS				*e*S	**S**	**06 30 37.1**	**-1.7**
	baz=320						
SHLS	**Shalkode**	**68.62**	**320**	*e*P	**P**	**06 21 35.6**	**-1.8**
SHLS				*e*S	**S**	**06 30 37.0**	**-1.7**
SHLS				pmax	pmax		
	comp=Z,29nm,1.2s						
PDGK	**Podgornoye**	**68.69**	**320**	*i* P	**P**	**06 21 37.2**	**-0.7**
PDGK				pmax	pmax		
	comp=Z,56nm,0.9s						
MK31	**Makanchi Array**	**68.80**	**325**	*ce*P	**P**	**06 21 38.2**	**-0.1**
MK31	**Makanchi Array**	**68.80**	**325**	P	**P**	**06 21 38.2**	**-0.1**
MKAR	**Makanchi Array**	**68.80**	**325**	P	**P**	**06 21 38.1**	**-0.2**
	comp=Z,15nm,0.6s,baz=116,slow=7.0,SNR=133						
UZB	**Uzynbulak**	**68.90**	**320**	*e*P	**P**	**06 21 38.9**	**-0.3**
	comp=Z,23nm,1.2s,baz=320						
UZB	**Uzynbulak**	**68.90**	**320**	*e*P	**P**	**06 21 38.8**	**-0.4**
UZB				pmax	pmax		
	comp=Z,23nm,1.2s						
NIL	**Nilore**	**68.96**	**309**	P	**P**	**06 21 39.9**	**+0.3**
NIL				pmax	pmax		
	comp=Z,76nm,1.5s						
NIL				MLR	MLR		
	comp=Z,4µm,18.0s						
NIL	**Nilore**	**68.96**	**309**	P	**P**	**06 21 39.9**	**+0.3**
NIL				IAmb	IAmb	06 21 49.9	
	comp=Z,76nm,1.4s						
MAKZ	**Makanchi**	**68.98**	**325**	P	**P**	**06 21 39.4**	**-0.1**
MAKZ				pmax	pmax		
	comp=Z,96nm,0.7s						
MAKZ	**Makanchi**	**68.98**	**325**	P	**P**	**06 21 39.4**	**-0.1**
SEY	**Seymchan**	**69.19**	**9**	P	**P**	**06 21 40.1**	**-0.3**
	comp=Z,16nm,1.1s,baz=178,slow=4.5,SNR=29						
SEY	**Seymchan**	**69.19**	**9**	⇑*i*P	**P**	**06 21 40.5**	**+0.1**
SATY	**Saty**	**69.25**	**320**	*e*P	**P**	**06 21 41.4**	**0.0**
	comp=Z,16nm,1.2s,baz=320						
SATY	**Saty**	**69.25**	**320**	*e*P	**P**	**06 21 41.3**	**-0.1**
SATY				pmax	pmax		
	comp=Z,16nm,1.2s						
KPKS	**Kokpek**	**69.27**	**320**	*e*P	**P**	**06 21 40.6**	**-0.8**
	comp=Z,30nm,1.2s,baz=320						
KPKS	**Kokpek**	**69.27**	**320**	*e*P	**P**	**06 21 40.6**	**-0.8**
KPKS				pmax	pmax		
	comp=Z,30nm,1.2s						
KSH	**Kashi**	**69.28**	**315**	P	**P**	**06 21 43.0**	**+1.4**
KSH				pP	pP	06 21 48.3	-0.6
KSH				PP	**PP**	**06 24 19.0**	**+4.0**
KSH				S	**S**	**06 30 46.9**	**+0.2**
KSH				ScS	**ScS**	**06 31 41.9**	**+0.6**
KSH				pmax	pmax		
	comp=Z,27nm,1.2s						
KSH				pmax	pmax		
	comp=Z,230nm,5.9s						
MDOK	**Medeo**	**70.18**	**319**	*e*P	**P**	**06 21 46.5**	**-0.6**
	baz=319						
MDOK	**Medeo**	**70.18**	**319**	*e*P	**P**	**06 21 46.5**	**-0.6**
TNSS	**Tian-Shan**	**70.19**	**319**	*e*P	**P**	**06 21 47.7**	**+0.2**
	baz=319						
TNSS	**Tian-Shan**	**70.19**	**319**	*e*P	**P**	**06 21 47.7**	**+0.2**
TDK	**Taldyqorghan**	**70.19**	**322**	*e*P	**P**	**06 21 47.1**	**+0.1**
	comp=Z,20nm,0.9s,baz=321						
TDK	**Taldyqorghan**	**70.19**	**322**	*e*P	**P**	**06 21 47.1**	**+0.1**
TDK				pmax	pmax		
	comp=Z,20nm,0.9s						
AAA	**Alma-Ata**	**70.29**	**319**	*e*P	**P**	**06 21 47.4**	**-0.3**
	baz=319						
AAA	**Alma-Ata**	**70.29**	**319**	*e*P	**P**	**06 21 47.4**	**-0.3**
ULHL	**Ulahol**	**70.29**	**318**	P	**P**	**06 21 47.9**	**0.0**
	SNR=8.9						
KUU	**Kurty**	**70.97**	**320**	*e*P	**P**	**06 21 50.7**	**-1.0**
	comp=Z,52nm,1.0s,baz=320						
KUU	**Kurty**	**70.97**	**320**	*e*P	**P**	**06 21 50.7**	**-1.0**
KUU				pmax	pmax		
	comp=Z,52nm,1.0s						
TKM2	**Tokmak 2**	**71.02**	**319**	P	**P**	**06 21 52.8**	**+0.5**
	SNR=19						
TKM2	**Tokmak 2**	**71.02**	**319**	*i* P	**P**	**06 21 51.8**	**-0.5**
TKM2				pmax	pmax		
	comp=Z,48nm,0.7s						
UCH	**Uchtor**	**71.44**	**318**	P	**P**	**06 21 55.8**	**+0.6**
	SNR=36						
CHMS	**Chumysh**	**71.61**	**318**	P	**P**	**06 21 56.1**	**+0.4**
	SNR=7.7						
ZAA0	**Zalesovo Array**	**71.61**	**332**	P	**P**	**06 21 54.0**	**-1.4**
ZAA0				IAmb	IAmb	06 22 04.2	
	comp=Z,30nm,0.8s						
ZALV	**Zalesovo Beam**	**71.61**	**332**	P	**P**	**06 21 54.2**	**-1.1**
	comp=Z,10nm,0.9s,baz=110,slow=3.9,SNR=23						
AAK	**Ala-Archa**	**71.63**	**318**	P	**P**	**06 21 56.9**	**+1.0**
	SNR=9.1						
AAK	**Ala-Archa**	**71.63**	**318**	*ce*P	**P**	**06 21 56.3**	**+0.4**
AAK				pmax	pmax		
	comp=Z,64nm,1.2s						
AAK	**Ala-Archa**	**71.63**	**318**	P	**P**	**06 21 56.8**	**+1.0**
AAK				IAmb	IAmb	06 22 07.1	
	comp=Z,27nm,0.9s						
SGDS	**Sogindy**	**71.89**	**319**	*e*P	**P**	**06 21 56.5**	**-0.9**
	baz=319						
SGDS	**Sogindy**	**71.89**	**319**	*e*P	**P**	**06 21 56.4**	**-0.9**
SEM	**Semipalatinsk**	**71.89**	**327**	*e*P	**P**	**06 21 55.8**	**-1.7**
	comp=Z,7.3nm,1.0s,baz=327						
SEM				*e*S	**S**	**06 31 16.8**	**-0.2**
	baz=327						
SEM	**Semipalatinsk**	**71.89**	**327**	*e*P	**P**	**06 21 55.7**	**-1.7**
SEM				*e*S	**S**	**06 31 16.7**	**-0.2**
SEM				pmax	pmax		
	comp=Z,7.0nm,1.0s						
USP	**Ospenovka**	**71.89**	**319**	P	**P**	**06 21 57.6**	**+0.2**
	SNR=31						
AML	**Almayashu**	**71.95**	**317**	P	**P**	**06 21 58.9**	**+0.7**
	SNR=35						
EKS2	**Erkin-Say**	**72.12**	**318**	P	**P**	**06 21 59.5**	**+0.7**
	SNR=19						
KBL	**Kabul**	**72.54**	**308**	P	**P**	**06 22 01.4**	**-0.2**
KBL				pmax	pmax		
	comp=Z,26nm,1.1s						
KBL				MLR	MLR		
	comp=Z,2µm,18.0s						
KBL	**Kabul**	**72.54**	**308**	P	**P**	**06 22 01.4**	**-0.2**
KURK	**Kurchatov**	**72.94**	**327**	*de*P	**P**	**06 22 02.5**	**-0.8**
KURK				pmax	pmax		
	comp=Z,37nm,1.1s						
KURK	**Kurchatov**	**72.94**	**327**	P	**P**	**06 22 03.3**	**-0.1**
KURK				IAmb	IAmb	06 22 13.1	
	comp=Z,63nm,1.0s						
BTLS	**Baital**	**72.95**	**320**	*e*P	**P**	**06 22 02.9**	**-0.7**
	comp=Z,16nm,1.5s,baz=320						
BTLS	**Baital**	**72.95**	**320**	*e*P	**P**	**06 22 02.9**	**-0.7**
BTLS				pmax	pmax		
	comp=Z,16nm,1.5s						
DZA	**Taraz**	**73.86**	**317**	*e*P	**P**	**06 22 08.9**	**-0.2**
	comp=Z,14nm,1.3s,baz=317						
DZA	**Taraz**	**73.86**	**317**	*e*P	**P**	**06 22 08.8**	**-0.2**
DZA				pmax	pmax		
	comp=Z,14nm,1.3s						
VNDA	**Vanda**	**73.97**	**174**	P	**P**	**06 22 09.8**	**+0.8**
	comp=Z,10nm,1.1s,baz=309,slow=7.3,SNR=5.8						
VNDA				LR	LR	06 54 12.1	
	comp=Z,901nm,18.1s,baz=354,slow=35						
VNDA	**Vanda**	**73.97**	**174**	P	**P**	**06 22 08.7**	**-0.3**
VNDA	**Vanda**	**73.97**	**174**	P	**P**	**06 22 08.7**	**-0.3**
IUG	**Iuzhnay**	**74.46**	**316**	*e*P	**P**	**06 22 12.1**	**-0.6**
	comp=Z,14nm,1.3s,baz=316						
IUG	**Iuzhnay**	**74.46**	**316**	*e*P	**P**	**06 22 12.0**	**-0.6**
IUG				pmax	pmax		
	comp=Z,14nm,1.3s						
KK31	**Karatay Array**	**74.49**	**317**	P	**P**	**06 22 12.5**	**-0.2**
KK31				pmax	pmax		
	comp=Z,41nm,0.9s						
KK31	**Karatay Array**	**74.49**	**317**	P	**P**	**06 22 12.5**	**-0.2**
KK31				IAmb	IAmb	06 22 22.7	
	comp=Z,41nm,0.8s						
KKAR	**Karatay Array**	**74.49**	**317**	P	**P**	**06 22 12.4**	**-0.3**
KKAR				pmax	pmax		
	comp=Z,41nm,0.9s						
KKAR	**Karatay Array**	**74.49**	**317**	P	**P**	**06 22 12.5**	**-0.2**
KKAR				IAmb	IAmb	06 22 22.7	
	comp=Z,41nm,0.8s						
KKAR	**Karatay Array**	**74.49**	**317**	P	**P**	**06 22 12.4**	**-0.3**
BRLS	**Borolday**	**74.92**	**317**	*e*P	**P**	**06 22 14.8**	**-0.4**
	baz=316						
BRLS	**Borolday**	**74.92**	**317**	*e*P	**P**	**06 22 14.8**	**-0.4**
PPT2	**Papeete2**	**75.63**	**107**	*e*S	**S**	**06 31 59.2**	**-0.8**
	comp=Z,114nm,28.8s						
PPT2	**Papeete2**	**75.63**	**107**	*e*LQ	LQ	06 42 24.8	
	comp=Z,750nm,32.5s						
PPT2				*e*LR	LR	06 45 37.2	
	comp=Z,617nm,22.8s						
PPT	**Papeete**	**75.64**	**107**	LR	LR	06 52 28.5	
	comp=Z,290nm,21.6s,baz=244,slow=33						
TBI	**Tubuai**	**75.74**	**113**	*e*LQ	LQ	06 42 24.4	
	comp=Z,424nm,33.2s						
TBI				*e*LR	LR	06 45 40.7	
	comp=Z,918nm,24.5s						
BRZS	**Berezniki**	**75.94**	**324**	*e*P	**P**	**06 22 20.0**	**-0.8**
	comp=Z,14nm,1.1s,baz=324						
BRZS	**Berezniki**	**75.94**	**324**	*e*P	**P**	**06 22 20.0**	**-0.8**
BRZS				pmax	pmax		
	comp=Z,13nm,1.1s						
TIXI	**Tiksi**	**76.58**	**358**	P	**P**	**06 22 22.8**	**-1.2**
TIXI				pmax	pmax		
	comp=Z,65nm,0.8s						
TIXI				MLR	MLR		
	comp=Z,700nm,20.0s						
TIXI	**Tiksi**	**76.58**	**358**	P	**P**	**06 22 22.8**	**-1.2**
TIXI				IAMs_20	IAMs_20	06 58 52.2	
	comp=Z,656nm,20.0s						
HRA	**Herat**	**77.88**	**307**	P	**P**	**06 22 32.4**	**0.0**
MAW	**Mawson**	**78.23**	**202**	LR	LR	06 54 42.5	
	comp=Z,987nm,20.3s,baz=62,slow=34						
BRVK	**Borovoye**	**78.60**	**327**	*ce*P	**P**	**06 22 35.5**	**-0.2**
BRVK				pmax	pmax		
	comp=Z,31nm,1.3s						
BRVK	**Borovoye**	**78.60**	**327**	P	**P**	**06 22 35.6**	**0.0**
BRVK				IAmb	IAmb	06 22 45.4	
	comp=Z,60nm,0.8s						
GAMB	**Gambell**	**79.62**	**22**	P	**P**	**06 22 41.5**	**+0.5**
	baz=235						
GAMB	**Gambell**	**79.62**	**22**	P	**P**	**06 22 41.0**	**0.0**
SOCY	**Socotra**	**81.27**	**283**	P	**P**	**06 22 51.1**	**0.0**
SOCY				IAmb	IAmb	06 23 01.1	
	comp=Z,35nm,1.0s						
ASHT	**Ashkhabad**	**81.75**	**309**	IAMs_20	IAMs_20	06 56 45.9	
	comp=Z,951nm,20.0s						
ANM	**Nome**	**82.39**	**22**	P	**P**	**06 22 57.5**	**+1.7**
	baz=241						
ABKAR	**Akbulak array**	**83.43**	**321**	P	**P**	**06 23 01.0**	**-0.5**
ABKAR				IAmb	IAmb	06 23 10.8	
	comp=Z,17nm,0.7s						
ABKAR	**Akbulak array**	**83.43**	**321**	P	**P**	**06 23 00.5**	**-1.0**
RDOG	**Red Dog Mine**	**84.91**	**20**	P	**P**	**06 23 10.1**	**+1.4**
	baz=243						
QSPA	**South Pole Qui**	**84.95**	**180**	P	**P**	**06 23 09.5**	**+0.4**
SVE	**Sverdlovsk**	**85.13**	**328**	*e*P	**P**	**06 23 10.3**	**+0.3**
SVE				pmax	pmax		
	comp=Z,48nm,1.6s						
TAOE	**Nuku Hiva Isla**	**85.22**	**98**	*e*LR	LR	06 50 06.0	
	comp=Z,756nm,21.8s						
KDAK	**Kodiak Island**	**85.50**	**31**	P	**P**	**06 23 11.8**	**0.0**
	comp=Z,9.6nm,0.7s,baz=216,slow=7.9,SNR=4.7						
KDAK				LR	LR	06 58 46.1	
	comp=Z,841nm,19.7s,baz=258,slow=34						
KDAK	**Kodiak Island**	**85.50**	**31**	P	**P**	**06 23 11.8**	**0.0**
KDAK				pmax	pmax		
	comp=Z,303nm,2.0s						
TTA	**Tatalina**	**85.50**	**26**	P	**P**	**06 23 12.2**	**+0.4**
TTA				pmax	pmax		
	comp=Z,68nm,1.3s						
TTA	**Tatalina**	**85.50**	**26**	P	**P**	**06 23 12.2**	**+0.4**
TTA				IAmb	IAmb	06 23 21.9	
	comp=Z,68nm,1.3s						
ARU	**Arti**	**86.12**	**327**	*c i*P	**P**	**06 23 15.7**	**+0.8**
ARU						06 26 33.0	
ARU				S	**S**	**06 33 41.6**	**-6.1**
ARU				pmax	pmax		
	comp=Z,9.0nm,1.1s						
ARU	**Arti**	**86.12**	**327**	P	**P**	**06 23 14.6**	**-0.3**
ARU				IAMs_20	IAMs_20	06 51 48.5	
	comp=Z,485nm,19.0s						
SYO	**Syowa Base**	**86.92**	**201**	⇓*e*PcP	**PcP**	**06 23 21.0**	**+0.2**
PPLA	**Purkeypile**	**87.15**	**26**	P	**P**	**06 23 19.6**	**-0.5**
	baz=253						
PPLA	**Purkeypile**	**87.15**	**26**	P	**P**	**06 23 20.4**	**+0.4**
SKT	**Skwentna**	**87.19**	**27**	P	**P**	**06 23 19.1**	**-0.9**
	baz=254,SNR=5.6						
SKT	**Skwentna**	**87.19**	**27**	P	**P**	**06 23 20.6**	**+0.5**
SKT				IAmb	IAmb	06 23 28.5	
	comp=Z,46nm,1.0s						
CHUM	**Lake Minchumin**	**87.38**	**25**	P	**P**	**06 23 21.3**	**+0.4**
	baz=253,SNR=20						
SUA	**Susitna One**	**87.41**	**28**	P	**P**	**06 23 20.1**	**-1.1**
	baz=255,SNR=5.6						
SUA	**Susitna One**	**87.41**	**28**	P	**P**	**06 23 21.3**	**+0.1**
IMAR	**Indian Mountai**	**87.43**	**23**	P	**P**	**06 23 20.7**	**-0.4**
O22K	**Cooper Landing**	**87.64**	**29**	P	**P**	**06 23 22.6**	**+0.4**
	baz=256						
O22K	**Cooper Landing**	**87.64**	**29**	P	**P**	**06 23 22.5**	**+0.3**
SEW	**Seward**	**87.68**	**29**	P	**P**	**06 23 23.4**	**+1.1**
	baz=256						
RC01	**Rabbit Creek A**	**87.78**	**28**	P	**P**	**06 23 22.4**	**-0.5**
	baz=256,SNR=5.4						
KTH	**Kantishna Hill**	**87.89**	**26**	P	**P**	**06 23 23.3**	**-0.2**
BPAW	**Bear Paw Mtn.**	**88.01**	**25**	P	**P**	**06 23 25.1**	**+1.1**
	baz=254						
BPAW	**Bear Paw Mtn.**	**88.01**	**25**	P	**P**	**06 23 24.6**	**+0.7**
BPAW				IAmb	IAmb	06 23 33.7	
	comp=Z,79nm,2.0s						
PMR	**Palmer**	**88.19**	**28**	P	**P**	**06 23 24.8**	**0.0**

PMR				pmax	pmax		
	comp=Z,52nm,0.9s						
PMR	Palmer	88.19	28	P	P	06 23 24.8	0.0
A21K	Barrow	88.25	18	P	P	06 23 25.5	+0.7
	baz=249						
MLY	Manley	88.36	24	P	P	06 23 25.4	-0.2
	baz=255,SNR=7.6						
SML	Sawmill	88.61	28	P	P	06 23 27.5	+0.6
	baz=257,SNR=5.8						
SML	Sawmill	88.61	28	P	P	06 23 26.8	-0.1
BWN	Browne	88.67	25	P	P	06 23 27.1	+0.1
RND	Reindeer	88.75	26	P	P	06 23 27.2	-0.3
RND				pmax	pmax		
	comp=Z,44nm,0.8s						
RND	Reindeer	88.75	26	P	P	06 23 27.2	-0.3
WAT2	Susitna Watana	88.76	27	P	P	06 23 27.1	-0.6
	baz=257,SNR=5.8						
MCK	McKinley	88.79	26	P	P	06 23 26.9	-0.8
	baz=256,SNR=5.1						
I23K	Minto, Yukon-K	88.95	24	P	P	06 23 27.6	-0.7
	baz=256,SNR=7.2						
I23K	Minto, Yukon-K	88.95	24	P	P	06 23 27.6	-0.7
WAT6	Susitna Watana	89.06	27	P	P	06 23 28.9	-0.3
	baz=257						
RKT	Rikitea	89.06	113	*e*LR	LR	06 51 52.8	
	comp=Z,890nm,24.2s						
SCM	Sheep Creek Mo	89.08	28	P	P	06 23 29.2	0.0
SCM				pmax	pmax		
	comp=Z,69nm,0.9s						
SCM	Sheep Creek Mo	89.08	28	P	P	06 23 29.1	0.0
COLD	Coldfoot	89.15	22	P	P	06 23 29.5	+0.2
	baz=255,SNR=11						
COLD	Coldfoot	89.15	22	P	P	06 23 28.6	-0.6
COLD				IAmb	IAmb	06 23 40.3	
	comp=Z,25nm,0.9s						
WRH	Wood River Hil	89.32	25	P	P	06 23 30.0	-0.1
WRH				IAmb	IAmb	06 23 39.7	
	comp=Z,26nm,1.0s						
CCB	Clear Creek Bu	89.48	25	P	P	06 23 29.6	-1.3
CCB				IAmb	IAmb	06 23 39.7	
	comp=Z,37nm,1.0s						
M24K	Tolsona, Glenn	89.67	28	P	P	06 23 32.7	+0.9
	baz=259						
TOLK	Toolik Lake Re	89.74	21	P	P	06 23 33.0	+1.0
	baz=256,SNR=6.1						
TOLK	Toolik Lake Re	89.74	21	P	P	06 23 31.2	-0.8
HDA	Harding Lake	89.79	25	P	P	06 23 33.9	+1.6
	baz=258,SNR=5.7						
HDA	Harding Lake	89.79	25	P	P	06 23 31.1	-1.2
HDA				IAmb	IAmb	06 23 42.0	
	comp=Z,22nm,0.9s						
IL31		89.89	25	P	P	06 23 30.9	-1.8
ILAR	Eielson Array	89.89	25	P	P	06 23 30.6	-2.2
	comp=Z,4.0nm,1.1s,baz=275,slow=4.1,SNR=14						
RAYN	Ar Rayn	90.54	293	P	P	06 23 37.0	+0.2
RAYN				pmax	pmax		
	comp=Z,35nm,1.2s						
RAYN				MLR	MLR		
	comp=Z,500nm,18.0s						
RAYN	Ar Rayn	90.54	293	P	P	06 23 37.0	+0.2
RAYN				IAmb	IAmb	06 23 47.5	
	comp=Z,35nm,1.1s						
RAYN				IAMs_20	IAMs_20	07 07 33.4	
	comp=Z,466nm,18.0s						
MAK	Makhachkala	90.77	313	*e*P	P	06 23 37.5	+0.2
MAK				*e*		06 27 09.9	
MAK				*e*PPP	PPP	06 29 14.3	
MAK				*e*		06 34 10.5	
MAK				*e*SS	SS	06 40 38.7	+3.8
MAK				pmax	pmax		
	comp=Z,351nm,2.2s						
FYU	Fort Yukon	90.92	23	P	P	06 23 37.7	+0.3
SCRK	Sand Creek	90.99	26	P	P	06 23 39.0	+1.0
	baz=261						
BMAR	Burnt Mountain	91.32	22	P	P	06 23 39.1	-0.3
CTG	Chitna Glacier	91.78	29	P	P	06 23 43.1	+1.3
	baz=263						
BCAR	Beaver Creek A	91.83	27	P	P	06 23 40.7	-1.2
GNI	Garni	92.58	310	IAMs_20	IAMs_20	07 05 54.3	
	comp=Z,451nm,18.0s						
ZEI	Tsey	93.39	312	*e*P	P	06 23 48.8	-1.0
ZEI				pmax	pmax		
	comp=Z,14nm,1.4s						
NCK	Nalchik	93.66	313	*i* P	P	06 23 50.4	-0.3
NCK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KBZ	Khabaz	94.18	313	P	P	06 23 52.9	-0.2
	comp=Z,1.3nm,0.9s,baz=20,slow=11,SNR=2.1						
NEY	Neytrino	94.28	313	*i* P	P	06 23 53.2	-0.6
NEY				pmax	pmax		
	comp=Z,2.0nm,0.9s						
EPYK	Eagle Plains	94.29	24	P	P	06 23 52.9	-0.2
	baz=267						
EPYK	Eagle Plains	94.29	24	P	P	06 23 53.1	0.0
EPYK				IAmb	IAmb	06 24 11.6	
	comp=Z,52nm,1.9s						
KIV	Kislovodsk	94.34	314	*e*P	P	06 23 51.1	-2.9
KIV				pmax	pmax		
	comp=Z,14nm,1.1s						
KIV	Kislovodsk	94.34	314	IAMs_20	IAMs_20	07 06 11.7	
	comp=Z,376nm,19.0s						
VRH	Novokhopyorsk	95.26	321	*e*P	P	06 23 59.8	+2.0
VRH				pmax	pmax		
	comp=Z,9.0nm,0.7s						
INK	Inuvik	95.56	22	P	P	06 23 57.7	-1.0
	comp=Z,6.7nm,1.2s,baz=270,slow=8.5,SNR=4.7						
INK	Inuvik	95.56	22	P	P	06 23 57.8	-1.0
INK				pmax	pmax		
	comp=Z,14nm,1.1s						
INK	Inuvik	95.56	22	P	P	06 23 57.8	-1.0
INK				IAmb	IAmb	06 24 07.5	
	comp=Z,14nm,1.1s						
KOPT	Kop Dagi	95.82	310	P	P	06 23 59.2	-1.9
KLMR	Klimovskoe	96.50	331	*e*P	P	06 23 58.9	-4.4
KLMR				*e*		06 27 52.5	
KLMR				pmax	pmax		
	comp=Z,28nm,1.4s						
KLMR	Klimovskoe	96.50	331	*e*P	P	06 23 58.9	-4.4
KLMR				AMP		06 24 10.8	
	comp=Z,28nm,1.4s						
KLMR				*e*PP	PP	06 27 52.5	-4.9
KMBO	Kilima Mbogo	96.56	268	P	P	06 24 04.6	-0.4
	comp=Z,0.8nm,0.5s,baz=58,slow=13,SNR=2.4						
KMBO				LR	LR	07 04 47.4	
	comp=Z,303nm,21.6s,baz=94,slow=34						
VSR	Storozhevoye	96.86	321	*e*P	P	06 24 03.3	-1.8
VSR				pmax	pmax		
	comp=Z,10.0nm,1.3s						
BELA	Belgrano 2	96.99	182	P	P	06 24 04.3	-0.9
LPSR	Galich'ya Gora	97.00	322	*e*P	P	06 24 06.6	+0.9
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
TMCR	Tamitsa	97.06	334	*e*P	P	06 24 02.2	-3.5
TMCR				pmax	pmax		
	comp=Z,26nm,1.1s						
ANN	Anapa	98.12	314	*e*P	P	06 24 08.1	-2.8
ANN				pmax	pmax		
	comp=Z,33nm,0.9s						
ANN				MLR	MLR		
	comp=Z,1µm,12.0s						
OBN	Obninsk	98.30	325	*e*P	Pdif	06 24 11.4	-0.1
OBN				pmax	pmax		
	comp=Z,12nm,2.0s						
GAZ	Gaziantep	98.36	307	IAMs_20	IAMs_20	07 08 43.6	
	comp=Z,504nm,20.0s						
SNAA	Sanae	98.48	193	P	Pdif	06 24 14.9	+2.7
APA	Apatity	98.62	338⇓	*i*P	Pdif	06 24 14.2	+1.5
APA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
APA				MLR	MLR		
	comp=Z,2µm,21.0s						
C36M	Paulatuk	98.89	21	Pdiff	P	06 24 13.4	-0.4
	baz=280						
C36M	Paulatuk	98.89	21	P	P	06 24 13.1	-0.7
C36M				IAmb	IAmb	06 24 22.1	
	comp=Z,10nm,1.1s						
TOKA	Tokat	98.90	310	IAMs_20	IAMs_20	07 07 14.8	
	comp=Z,565nm,18.0s						
VNA2	Neumayer--Watz	100.01	192	P	Pdif	06 24 21.1	+2.2
VNA3	Neumayer Olymp	100.22	191	P	Pdif	06 24 24.2	+4.4
ARCES	ARCESS Array B	101.07	340	P	Pdif	06 24 23.2	-0.3
	comp=Z,9.9nm,1.1s,baz=64,slow=2.8,SNR=4.8						
BRTR	Keskin Array B	101.10	309	P	Pdif	06 24 24.8	+0.1
	comp=Z,0.7nm,0.9s,baz=155,slow=7.9,SNR=1.9						
CSS	Mathiatis	101.54	305	IAMs_20	IAMs_20	07 10 39.0	
	comp=Z,429nm,20.0s						
PGC	Sidney	102.07	41	IAMs_20	IAMs_20	07 06 40.8	
	comp=Z,526nm,21.0s						
KBO	Bosley Butte	102.11	48	IAMs_20	IAMs_20	06 59 50.6	
	comp=Z,463nm,18.0s						
E03A	Lebam	102.21	44	IAMs_20	IAMs_20	07 06 39.8	
	comp=Z,673nm,20.0s						
AKASG	Malin Array Be	103.17	321	PP	PP	06 28 52.0	+3.7
	comp=Z,0.5nm,0.4s,baz=68,slow=7.0,SNR=4.8						
MNK	Minsk	103.36	325	*i* PP	PP	06 28 45.6	-4.1
MNK				*i* PP	PP	06 28 45.6	-4.1
MNK				*i* PP	PP	06 28 45.6	-4.1
MNK				*i* PPP	PPP	06 30 56.3	
MNK				*i* SP	SP	06 37 54.2	-1.3
MNK				*i* PS	PS	06 37 55.6	-3.9
MNK				*i* SS	SS	06 43 29.3	-2.5
MNK				*i* SSS	SSS	06 47 25.6	
MNK				*i* SKKS	SKKSdf	06 48 07.0	+18
MNK				*i* LQ	LQ	07 02 55.3	
MNK				*i* LR	LR	07 07 24.4	
MNK				*i* LRM	MLR	07 11 34.3	
	comp=N,367nm,18.2s						
MNK				*i* LRM	MLR	07 11 34.3	
	comp=Z,110nm,18.2s						
MNK				*i* LRM	MLR	07 13 07.2	
	comp=E,24nm,18.5s						
H04A	Detroit Lake	103.37	45	IAMs_20	IAMs_20	07 05 38.5	
	comp=Z,491nm,20.0s						
LON	Longmire	103.39	43	IAMs_20	IAMs_20	07 08 43.9	
	comp=Z,539nm,19.0s						
WDC	Whiskeytown Da	103.51	50	IAMs_20	IAMs_20	07 08 37.6	
	comp=Z,560nm,20.0s						
ISP	Isparta	103.65	308	IAMs_20	IAMs_20	07 13 32.8	
	comp=Z,361nm,18.0s						
YKA	Yellowknife Ar	104.24	26	Pdiff	Pdif	06 24 37.4	-0.4
	comp=Z,0.9nm,1.1s,baz=293,slow=4.6,SNR=5.0						
YKA				PP	PP	06 28 57.3	+1.4
	comp=Z,0.8nm,0.9s,baz=286,slow=5.9,SNR=3.6						
YKA				PKKPbc	PKKPbc	06 40 26.9	-1.1
	comp=Z,0.4nm,0.9s,baz=113,slow=3.5,SNR=4.0						
AKAS	Kas	104.50	306	IAMs_20	IAMs_20	07 11 45.3	
	comp=Z,364nm,19.0s						
B08A	Colville Reser	104.83	41	IAMs_20	IAMs_20	07 02 53.6	
	comp=Z,353nm,20.0s						
AFDM	Forest Hills D	104.86	51	IAMs_20	IAMs_20	07 09 39.7	
	comp=Z,479nm,19.0s						
MOD	Modoc Plateau	105.05	48	IAMs_20	IAMs_20	07 09 00.3	
	comp=Z,401nm,20.0s						
BEKR	Beckworth	105.24	50	IAMs_20	IAMs_20	07 09 50.5	
	comp=Z,596nm,20.0s						
CMB	Columbia Colle	105.41	52	IAMs_20	IAMs_20	07 14 07.3	
	comp=Z,381nm,19.0s						
RUBR	Rubicon Trail	105.49	51	IAMs_20	IAMs_20	07 09 22.1	
	comp=Z,715nm,20.0s						
VCNR	Virginia City	105.85	51	IAMs_20	IAMs_20	07 10 02.7	
	comp=Z,544nm,19.0s						
PNTR	Pine Nut	105.91	51	IAMs_20	IAMs_20	07 10 41.4	
	comp=Z,544nm,20.0s						
PAHR	Pah Rah Range	106.01	50	IAMs_20	IAMs_20	07 10 03.8	
	comp=Z,647nm,20.0s						
WAKR	Walker	106.10	51	IAMs_20	IAMs_20	07 08 05.5	
	comp=Z,562nm,20.0s						
MLR	Muntele Rosu	106.15	316	PP	PP	06 29 11.2	+0.4
	comp=Z,5.7nm,1.1s,baz=315,slow=18,SNR=1.6						
YERR	Yerington	106.20	51	IAMs_20	IAMs_20	07 09 46.1	
	comp=Z,640nm,20.0s						
MDPB	Devils Postpil	106.48	52	IAMs_20	IAMs_20	07 10 41.7	
	comp=Z,332nm,18.0s						
KARP	Karpathos	106.54	305	IAMs_20	IAMs_20	07 15 42.3	
	comp=Z,319nm,19.0s						
OMMB	Old Mammoth Mi	106.55	52	IAMs_20	IAMs_20	07 10 22.4	
	comp=Z,462nm,20.0s						
F10A	Beach Ranch, E	106.64	44	IAMs_20	IAMs_20	07 04 29.0	
	comp=Z,463nm,19.0s						
ALN	Alexandroupoli	106.77	311	IAMs_20	IAMs_20	07 14 33.9	
	comp=Z,334nm,20.0s						
RYN	Ryan	106.80	51	IAMs_20	IAMs_20	07 15 20.0	
	comp=Z,522nm,18.0s						
LHV	Little Huntoon	106.86	52	IAMs_20	IAMs_20	07 05 17.6	
	comp=Z,569nm,22.0s						
NVAR	Mina Array Bea	107.00	51	Pdiff	Pdif	06 24 50.5	-0.5
	comp=Z,0.2nm,0.4s,baz=16,slow=34,SNR=1.9						
NVAR				PP	PP	06 29 25.7	+8.3
	comp=Z,0.5nm,0.8s,baz=272,slow=8.0,SNR=2.1						
NVAR				PKKP	PKKPdf	06 40 27.4	-4.4
	comp=Z,0.6nm,0.6s,baz=103,slow=4.0,SNR=6.1						
PASC	Pasadena Art C	107.58	56	IAMs_20	IAMs_20	07 05 32.0	
	comp=Z,480nm,21.0s						
SANT	Santorini	107.82	306	IAMs_20	IAMs_20	07 15 19.1	
	comp=Z,636nm,19.0s						
KOLS	Kolonicke sedl	107.92	320	*e*P	Pdif	06 24 54.7	+0.2
KOLS	Kolonicke sedl	107.92	320	*e*PDIFF	Pdif	06 24 54.7	+0.2
CRVS	Cervenica-Dubn	108.45	320	*e*P	Pdif	06 24 57.5	+0.6
CRVS	Cervenica-Dubn	108.45	320	*e*PDIFF	Pdif	06 24 57.5	+0.6
TPNV	Topopah Spring	108.81	53	IAMs_20	IAMs_20	07 10 38.3	
	comp=Z,476nm,21.0s						
BAR	Barrett	109.00	57	IAMs_20	IAMs_20	07 06 12.7	
	comp=Z,630nm,22.0s						
ESJX	Sierra Juarez	109.68	58	IAMs_20	IAMs_20	07 15 37.9	
	comp=Z,587nm,21.0s						
PRN	Pahroc Range	109.69	52	IAMs_20	IAMs_20	07 17 07.5	
	comp=Z,473nm,19.0s						
SHPR	Sheep Range	109.74	53	IAMs_20	IAMs_20	07 11 35.0	
	comp=Z,628nm,20.0s						
NOA	NORSAR Array B	109.75	334	P4KP		07 01 10.7	
	comp=Z,0.6nm,0.8s,baz=92,slow=5.5,SNR=3.3						
VYHS	Vyhne	110.23	320	*e*P	Pdif	06 25 06.3	+1.5
VYHS	Vyhne	110.23	320	*e*PDIFF	Pdif	06 25 06.3	+1.5
SFX	San Felipe	110.72	59	IAMs_20	IAMs_20	07 09 51.6	
	comp=Z,403nm,18.0s						
DUG	Dugway, Tooele	110.91	49	IAMs_20	IAMs_20	07 13 43.5	
	comp=Z,594nm,20.0s						
PIX	Pinacate	111.84	58	IAMs_20	IAMs_20	07 16 54.1	
	comp=Z,321nm,19.0s						
214A	Organ Pipe Nat	112.33	58	IAMs_20	IAMs_20	07 08 03.0	
	comp=Z,521nm,21.0s						
PDAR	Pinedale Array	112.71	46	PKiKP	PKiKP	06 29 11.8	+0.5
	comp=Z,0.4nm,0.8s,baz=53,slow=0.7,SNR=4.2						
PDAR				PKKPbc	PKKPbc	06 40 00.8	+0.1
	comp=Z,1.0nm,0.9s,baz=84,slow=4.6,SNR=4.7						
PDAR	Pinedale Array	112.71	46		PKiKP	06 29 12.6	+1.4
CLL	Collm	112.89	324	*e*PKiKP	PKiKP	06 29 15.0	+4.0
CLL				*e*PP	PP	06 29 55.0	-4.2
CLL				LmV		07 21 00.0	
	comp=Z,400nm,19.1s						
CLL	Collm	112.89	324	*e*P	Pdif	06 25 14.0	-2.5
WUAZ	Wupatki	112.93	54	IAMs_20	IAMs_20	07 12 57.4	
	comp=Z,540nm,18.0s						
CKRC	Cesky Krumlov	112.99	321	*e*PKP	PKiKP	06 29 20.5	+9.2
KHC	Kasperske Hory	113.34	322*c*	*i*PKIKP	PKiKP	06 29 11.4	-0.6
KHC				pmax	pmax		
	comp=Z,11nm,1.3s						
KHC	Kasperske Hory	113.34	322	*e*PKP	PKiKP	06 29 11.7	-0.3
GERES	GERESS Array B	113.36	322	PKiKP	PKiKP	06 29 12.3	+0.2
	comp=Z,0.6nm,0.8s,baz=90,slow=2.7,SNR=4.4						
TUC	Tucson	113.97	57	IAMs_20	IAMs_20	07 17 55.5	
	comp=Z,564nm,19.0s						
PV16	Nyswonger Mesa	114.27	50	IAMs_20	IAMs_20	07 09 30.7	
	comp=Z,641nm,21.0s						
HSIG		114.34	61	IAMs_20	IAMs_20	07 12 59.5	
	comp=Z,562nm,20.0s						
PV03	Paradox Valley	114.34	50	IAMs_20	IAMs_20	07 06 58.4	
	comp=Z,310nm,19.0s						
PV07	Paradox Valley	114.45	50	IAMs_20	IAMs_20	07 23 22.3	
	comp=Z,520nm,19.0s						
PV15	Paradox Valley	114.60	50	IAMs_20	IAMs_20	07 09 40.3	
	comp=Z,422nm,21.0s						
ABTA	Abfaltersbach	114.84	320	*e*P	PKPdf	06 29 15.8	+0.8
	comp=Z,1.9nm,0.6s						
MVCO	Mesa Verde	114.85	51	P	PKPdf	06 29 15.7	+0.2
	baz=283						
FCC	Fort Churchill	114.91	25	IAMs_20	IAMs_20	07 18 52.8	
	comp=Z,551nm,20.0s						
WTTA	Wattenberg	115.22	320	*e*P	PKPdf	06 29 16.4	+0.6
	comp=Z,4.1nm,0.6s						
319A	Douglas	115.39	58	IAMs_20	IAMs_20	07 09 56.2	
	comp=Z,608nm,22.0s						
MOTA	Moosalm	115.53	321	*e*P	PKiKP	06 29 16.2	-0.2
	comp=Z,1.8nm,0.6s						
S22A	4UR Ranch, Cre	116.01	50	P	PKiKP	06 29 19.7	+1.9
	baz=285						
DAVOX	Davos/Dischmat	116.51	320	PKP	PKPdf	06 29 17.6	-0.8
	comp=Z,2.1nm,0.7s,baz=176,slow=6.0,SNR=2.6						
OSSC	Osservatorio P	116.80	317	IAMs_20	IAMs_20	07 20 28.8	
	comp=Z,554nm,22.0s						
ANMO	Albuquerque	116.98	53	P	PKiKP	06 29 20.2	+0.5
	baz=284						
ANMO	Albuquerque	116.98	53*c*	*i*PKIKP	PKiKP	06 29 20.6	+0.9
ANMO				pmax	pmax		
	comp=Z,3.0nm,1.0s						
SDCO	Great Sand Dun	117.03	50	IAMs_20	IAMs_20	07 11 42.5	
	comp=Z,572nm,20.0s						
CASP	Castiglione de	117.31	316	IAMs_20	IAMs_20	07 19 11.4	
	comp=Z,502nm,20.0s						
T25A	Trinidad	118.03	50	P	PKiKP	06 29 23.1	+1.5
	baz=286						
MNTX	Cornudas Mount	118.60	57	P	PKiKP	06 29 23.3	+0.6
	baz=283						
ULM	Lac du Bonnet	118.63	34	PKP	PKPdf	06 29 20.9	-1.2
	comp=Z,1.8nm,1.0s,baz=337,slow=5.0,SNR=2.9						
ULM				PKKPbc	PKKPab	06 39 47.3	+6.1
	comp=Z,1.5nm,0.8s,baz=75,slow=1.9,SNR=4.2						
EKA	Eskdalemuir Ar	119.22	334	PKP	PKPdf	06 29 22.9	-0.1
	comp=Z,4.9nm,1.2s,baz=36,slow=3.8,SNR=2.7						
F33A	5 Mile Ranch,	120.50	39		PKPdf	06 29 25.1	-0.7
TXAR	Lajitas Array	120.55	59	PKP	PKiKP	06 29 26.7	+0.1
	comp=Z,0.8nm,0.9s,baz=238,slow=1.7,SNR=6.7						
TXAR				PKKPbc	PKKPbc	06 39 32.9	+0.4
	comp=Z,1.5nm,1.1s,baz=132,slow=5.6,SNR=5.0						
TXAR	Lajitas Array	120.55	59	PKIKP	PKPdf	06 29 25.2	-1.4
TXAR	Lajitas Array	120.55	59	PKPdf	PKPdf	06 29 25.1	-1.4
ECSD	EROS Data Cent	121.24	41	P	PKiKP	06 29 28.3	+0.8
	baz=296						
ECSD	EROS Data Cent	121.24	41	PKPdf	PKPdf	06 29 25.6	-1.7
F36A	Milaca	122.19	37	PKPdf	PKPdf	06 29 28.5	-0.5
EYMN	Ely	122.29	35	P	PKiKP	06 29 29.3	-0.1
	baz=303						
SPMN	Marine on St.	122.94	38	P	PKiKP	06 29 31.1	+0.3
	baz=300						
SPMN	Marine on St.	122.94	38	IAMs_20	IAMs_20	07 14 07.6	
	comp=Z,564nm,21.0s						
E38A	The Farm, Brul	122.98	36		PKPdf	06 29 30.4	-0.1
WMOK	Wichita Mounta	123.10	51	P	PKiKP	06 29 32.1	+0.7
	baz=289						
WMOK	Wichita Mounta	123.10	51	PKIKP	PKPdf	06 29 31.1	-0.1
WMOK	Wichita Mounta	123.10	51		PKPdf	06 29 31.1	-0.1
I37A	Lemond, Waseca	123.17	39		PKPdf	06 29 29.6	-1.4
JCT	Junction City	123.53	57	P	PKiKP	06 29 33.5	+1.1
	baz=286,SNR=5.7						
JCT	Junction City	123.53	57	PKIKP	PKiKP	06 29 32.6	+0.2
JCT	Junction City	123.53	57	PKPdf	PKiKP	06 29 32.6	+0.2
OK029	Liberty Lake	123.77	50	IAMs_20	IAMs_20	07 16 25.0	
	comp=Z,509nm,22.0s						
T35A	Sooner Cattle	124.07	48	PKPdf	PKiKP	06 29 33.3	0.0
TUL1	Leonard	124.99	49	P	PKiKP	06 29 36.4	+1.3
	baz=292						
P38A	Dawn	125.11	44	PKPdf	PKPdf	06 29 34.8	0.0
L40A	Anamosa	125.52	40	PKPdf	PKPdf	06 29 35.3	-0.2
E43A	Lone Tree Farm	125.71	34		PKiKP	06 29 36.8	+0.6
JFWS	Jewell Farm	125.71	39	P	PKiKP	06 29 36.3	0.0
	baz=301						
JFWS	Jewell Farm	125.71	39	PKIKP	PKiKP	06 29 36.1	-0.2
JFWS	Jewell Farm	125.71	39		PKiKP	06 29 36.1	-0.2
U38A	Gravette	125.83	48		PKPdf	06 29 35.0	-1.4
S39A	Bolivar	126.10	46	PKPdf	PKiKP	06 29 37.1	-0.1
HHAR	Hobbs	126.23	48	IAMs_20	IAMs_20	07 23 11.8	
	comp=Z,497nm,19.0s						
L42A	Oliver, Polo	126.55	40		PKPdf	06 29 36.3	-1.2
R40A	Maddies Statio	126.59	45		PKiKP	06 29 38.0	-0.1
U40A	Yellville	127.00	47	P	PKPdf	06 29 38.5	0.0
	baz=295						
U40A	Yellville	127.00	47	PKPdf	PKPdf	06 29 38.7	+0.1
MIAR	Mount Ida	127.18	50	P	PKiKP	06 29 40.7	+1.2
	baz=293						
MIAR	Mount Ida	127.18	50	PKIKP	PKiKP	06 29 39.9	+0.4
MIAR	Mount Ida	127.18	50		PKiKP	06 29 39.9	+0.4
T42A	Van Buren	127.98	46		PKiKP	06 29 41.1	+0.2
FVM	French Village	128.02	45	PKIKP	PKPdf	06 29 40.5	0.0
FVM	French Village	128.02	45		PKPdf	06 29 40.5	0.0
ESDC	Sonseca Array	128.73	318	PKP	PKPdf	06 29 41.0	-0.9
	comp=Z,0.4nm,0.8s,baz=95,slow=1.9,SNR=3.2						
ESDC				PP	PP	06 31 48.8	+1.0
	comp=Z,0.6nm,0.9s,baz=57,slow=9.4,SNR=4.7						
PLCA	Paso Flores	129.24	156	PKP	PKiKP	06 29 43.9	+0.3
	comp=Z,7.9nm,1.3s,baz=219,slow=6.5,SNR=3.3						
WCI	Wyandotte Cave	130.72	42	P	PKiKP	06 29 47.9	+1.5
	baz=302						
TORD	Torodi Ar. Bea	132.22	283	PKP	PKPdf	06 29 47.5	-1.6
	comp=Z,1.8nm,0.9s,baz=65,slow=2.4,SNR=4.9						
TORD				PP	PP	06 32 14.7	+3.1
	comp=Z,2.1nm,1.1s,baz=23,slow=5.0,SNR=4.4						
KOWA	Kowa	137.57	286	PKP	PKPdf	06 29 57.2	-1.8
	comp=Z,2.1nm,0.8s,baz=140,slow=9.2,SNR=4.1						
KIC	Kosan Boka	138.87	274	*e*PKIKP	PKiKP	06 30 10.0	+6.3
	comp=Z,6.0nm,0.7s						
DBIC	Dimbokro	138.98	274	PKP	PKPdf	06 30 01.1	-0.6
	comp=Z,3.6nm,0.8s,baz=8.6,slow=17,SNR=2.4						
TIC	Toumodi	139.15	274	*e*PKIKP	PKiKP	06 30 09.8	+5.5
LIC	Lamto	139.15	274	*e*PKIKP	PKiKP	06 30 10.4	+6.1
	comp=Z,26nm,0.9s						
ESPN	Las Esperanzas	141.56	77	IAMs_20	IAMs_20	07 20 29.2	
	comp=Z,502nm,22.0s						
PB06	IPOC Station P	144.12	141		PKPdf	06 30 10.4	-0.5
LVC	Limon Verde	144.61	142	PKIKP	PKPbc	06 30 11.0	+0.3
LVC	Limon Verde	144.61	142	PKPdf	PKPbc	06 30 10.9	+0.3
PB09	IPOC Station P	145.00	140		PKiKP	06 30 15.1	-1.2
NNA	Nana	145.04	119	PKIKP	PKPdf	06 30 13.5	+1.0
NNA	Nana	145.04	119		PKPdf	06 30 13.5	+1.0
PB01	IPOC Station P	145.38	139		PKPab	06 30 13.8	+0.7
ATAH	Atahualpa	145.55	110	PKPbc	PKPab	06 30 15.4	+1.1
	comp=Z,28nm,0.8s,baz=266,slow=3.3,SNR=8.0						
PSGCX	Pisagua	145.97	137		PKPab	06 30 15.6	+0.4
MNMC	Minye Minye	146.65	137		PKiKP	06 30 19.0	-0.9
CPUP	Villa Florida	146.99	161	PKPbc	PKPbc	06 30 17.7	+0.2
	comp=Z,47nm,1.1s,baz=226,slow=3.1,SNR=33						
CPUP	Villa Florida	146.99	161	PKP2	PKPab	06 30 19.0	+0.2
CPUP	Villa Florida	146.99	161		PKPab	06 30 19.0	+0.2
PB16	IPOC Station P	147.25	136	PKPdf	PKPdf	06 30 14.6	-2.2
PB16					PKPab	06 30 20.6	-0.2
OTAV	Otavalo	147.31	97	PKP2	PKPab	06 30 21.3	+0.1
OTAV	Otavalo	147.31	97		PKPab	06 30 21.3	+0.1
OTAV	Otavalo	147.31	97	*e*P	PKPab	06 30 21.1	-0.1
GCUF	Volcan Galeras	148.54	96	*e*P	PKiKP	06 30 25.1	+0.9
CAPC	Capurgana	148.73	82⇓	*e*P	PKPab	06 30 36.1	+10
MALC	Bahia Malaga	148.81	91	*e*P	PKPab	06 30 25.3	-1.3
POPC	Popayan, Colom	149.36	93	*e*P	PKPdf	06 30 21.4	+1.4
LPAZ	La Paz	149.60	135	PKPbc	PKPbc	06 30 25.3	-0.1
	comp=Z,5.5nm,1.0s,baz=39,slow=2.0,SNR=15						
YOTC	Yotoco, Valle	149.79	91	*e*P	PKPbc	06 30 23.5	-1.8
PLMC	San Jos del P	149.89	89	*e*P	PKPbc	06 30 25.6	+0.1
DBBC	Dabeiba	149.96	85	*e*P	PKiKP	06 30 28.5	+1.9
MARP	Paez Belalcaza	150.10	93	*e*P	PKiKP	06 30 27.6	+0.4
FLOC	Florencia	150.27	96	*e*P	PKiKP	06 30 29.7	+2.6
MOTC	Monteria, Cord	150.38	81	*e*P	PKiKP	06 30 27.0	-0.3
BETC	Betania	150.60	93	*e*P	PKiKP	06 30 29.7	+1.8
GUY2C	Guyana, Caldas	150.81	88	*e*P	PKPbc	06 30 27.7	-0.5
PTLC	Puerto Leguiza	150.90	99	*e*P	PKiKP	06 30 28.6	+0.2
NORC	Norcasia	151.31	88	*e*P	PKPbc	06 30 28.7	-0.2
ARGC	Ariguani, Magd	151.65	79	*e*P	PKPab	06 30 34.9	-3.4
ROSC	El Rosal	151.85	89	PKPbc	PKiKP	06 30 31.4	+0.5
	comp=Z,24nm,0.9s,baz=214,slow=5.0,SNR=13						
SMLC	San Martn de	151.95	81	*e*P	PKiKP	06 30 30.3	-0.2
SPBC	San Pablo de B	152.10	87	*e*P	PKPdf	06 30 26.9	+2.8
MACC	Macarena, Meta	152.13	95	*e*P	PKPbc	06 30 30.2	-0.5
CHIC	Chingaza	152.43	90	*e*P	PKiKP	06 30 33.2	+1.1
BRRC	Barranca, Sant	152.43	84⇑	*e*P	PKiKP	06 30 31.9	+0.3
OCAC	Ocana	152.74	82	*e*P	PKiKP	06 30 32.6	+0.2
BARC	Barichara	152.97	85	*e*P	PKPbc	06 30 30.6	-2.2
SDV	Santo Domingo	155.31	80	PKP	PKPdf	06 30 28.2	-0.5
	comp=Z,5.7nm,0.9s,baz=276,slow=7.8,SNR=4.9						
SDV				PKPbc	sPKPdf	06 30 38.4	-0.6
	comp=Z,14nm,1.2s,baz=15,slow=3.8,SNR=5.9						
SDV	Santo Domingo	155.31	80	PKPdf	PKPdf	06 30 26.3	-2.5
SDV					pPKPdf	06 30 37.1	+0.7
SDV	Santo Domingo	155.31	80	*e*P	PKPdf	06 30 38.0	+9.3

IDC 22 06:31:17.5±3.2**, 46°.86S**×**165°.35E, h0**km**, mb3.7**/2**,**
mb1 4.0/4**, mb1mx3.7**/31**, mbtmp3.8**/4**, ML3.6**/2**, Error**
ellipse: s-maj=83.7km s-min=25.4km az=169.0, Off west
coast of South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPZ	Rata Peaks	5.11	54	Pn	Pn	06 32 36.0	+0.6
	2.0nm,0.3s,baz=233,slow=3.2,SNR=7.3						
RPZ				Sn	Sn	06 33 36.9	+1.8
	2.1nm,0.3s,baz=180,slow=20,SNR=1.6						
URZ	Urewera	12.20	49	Pn	Pn	06 34 12.5	0.0
	0.3nm,0.3s,baz=180,slow=2.0,SNR=2.5						
ASAR	Alice Springs	34.20	302	P	P	06 38 05.5	+0.8
	0.9nm,0.6s,baz=132,slow=7.7,SNR=19						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
WRA	**Warramunga Arr**	**36.88**	**306**	P	P	06 38 26.7	-1.1
	0.6nm,0.8s,baz=139,slow=7.7,SNR=4.6						
H01W1	**Cape Leeuwin H**	**39.85**	**269**	T	T	07 20 58.3	
	baz=124,slow=75,SNR=69						
H01W2	**Cape Leeuwin H**	**39.86**	**269**	T	T	07 20 56.8	
	baz=124,slow=75,SNR=67						
H01W3	**Cape Leeuwin H**	**39.87**	**269**	T	T	07 20 56.2	
	baz=124,slow=75,SNR=63						
YKA	**Yellowknife Ar**	**126.10**	**34**	PKP	PKPdf	06 50 19.8	-0.6
	0.1nm,0.6s,baz=219,slow=1.1,SNR=4.2						

MAN 22 06:40:29.3, 9°.17N×122°.35E, h54^{km}, mb4.4, ML3.3, MS3.1, 1D, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNOP	**Candoni, Negro**	**0.72**	**24**	*e*P	Pn	06 40 44.6	+1.2
CNOP				*e*S	Sn	06 40 53.2	-0.5
GUIM	**Jordan**	**1.47**	**9**	*e*P	Pn	06 40 57.1	+3.7
GUIM				*e*S	Sn	06 41 13.1	+1.5
PAGZ	**Pagadian**	**1.66**	**142**	*e*P	Pn	06 41 02.7	+6.6
LLP	**Lapu-Lapu**	**1.96**	**54**	⇓*e*P	Pn	06 41 03.8	+3.7
LLP				*i* S	Sn	06 41 25.3	+1.6
MSLP	**Maasin**	**2.66**	**69**	*e*P	Pn	06 41 15.2	+5.6
MSLP				*e*S	Sn	06 41 29.7	-11

SOME ***22*** *06:42:49.4, 43°.90N×85°.63E, h0^{km}, MS4.8*

IDC ***22*** *06:42:52.3±0.4, 44°.04N×85°.64E, h0^{km}, mb4.7/39, mb1 4.8/46, mb1mx4.8/55, mbtmp4.7/46, ML4.6/7, MS4.4/26, Ms1 4.4/26, ms1mx4.2/43, Error ellipse: s-maj=10.7km s-min=6.8km az=28.0*

MOS ***22*** *06:42:53.7±0.9, 44°.11N×85°.59E, h16^{km}, mb5.2/89, MS4.9/10, Error ellipse: s-maj=5.3km s-min=4.0km az=126.0*

BJI ***22*** *06:42:54.7±0.0, 44°.11N×85°.67E, h10^{km}, mB5.0/46, mb4.7/65, ML5.2/9, Ms5.1/70, Ms7 5.0/65*

NEIC ***22*** *06:42:54.7±1.5, 44°.13N±0°.05×85°.57E±0°.07, h12^{km}±3^{km}, mb5.1/211, Error ellipse: s-maj=8.4km s-min=5.8km az=218.0*

GCMT ***22*** *06:42:55.9±0.2, 44°.11N±0°.01×85°.50E±0°.02, h14^{km}, MW5.0/104, Moment Tensor Solution. s54,c65; s104,c164; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.04±.13; $M_{\theta\theta}$-3.30±.09; $M_{\phi\phi}$0.25±.07; $M_{r\theta}$0.85±.15; $M_{\theta\phi}$0.53±.05; $M_{\phi r}$-1.09±.20; Best double couple: $M_0$3.50600×10^{16} NP1:ϕ_s262.00000°,δ39.00000°, λ64.00000°. NP2:ϕ_s114.00000°,δ56.00000°,λ110.00000°. Principal axes: T 3.4770, Plg71.0000°, Azm73.0000°; N 0.0550, Plg16.0000°, Azm283.0000°; P -3.5360, Plg9.0000°, Azm191.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NNC ***22*** *06:43:01.8±2.3, 44°.33N×84°.94E, h23^{km}±10^{km}, mb5.6, mpv5.3 Error ellipse: s-maj=18.6km s-min=10.1km az=126.0*

BGR ***22*** *06:43:04.9±0.0, 44°.15N×85°.24E, h26^{km}±1^{km}, mb4.8*

ISC 22 06:42:54.5±0.4, **44°.06N**±0°.03×**85°.57E**±0°.02, **h12**^{km}±2^{km}, **h12**^{km}**:pP-P, n843,** σ1^{s}**51**/900, **mb5.0**/254, **MS4.7**/43, **61C-33D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**1.56**	**98**	Pg	**Pb**	**06 43 23.4**	**+0.1**
WMQ				Sg	**Sb**	**06 43 43.8**	**+0.8**
WMQ				smax	smax		
	comp=N,37µm,0.7s						
WMQ				smax	smax		
	comp=E,18µm,0.9s						
WMQ	**Urumqi**	**1.56**	**98**	P*	**Pb**	**06 43 23.3**	**0.0**
WMQ						06 43 44.8	
WMQ	**Urumqi**	**1.56**	**98**		**Pb**	**06 43 23.3**	**0.0**
WMQ				Sn	**Sg**	**06 43 44.8**	**+0.2**
ZSN	**Zaisan**	**3.42**	**352**	*e*P	**Pg**	**06 43 58.1**	**-2.0**
	1µm,0.6s						
ZSN				*e*S	**Sg**	**06 44 49.3**	**+4.8**
	4µm,0.7s						
ZSN	**Zaisan**	**3.42**	**352**	Pg	**Pb**	**06 43 55.4**	**+0.3**
ZSN				Lg	Lg	06 44 46.4	
ZSN	**Zaisan**	**3.42**	**352**	*e*PN	**Pg**	**06 43 58.1**	**-2.0**
ZSN				*e*S	**Sg**	**06 44 49.3**	**+4.8**
MK31	**Makanchi Array**	**3.58**	**321**	⇑Pn	**Pn**	**06 43 51.7**	**+2.0**
	161nm,0.6s,baz=136,slow=13						
MK31				⇓Pg	**Pb**	**06 43 59.5**	**+1.8**
	1µm,0.6s,baz=135,slow=17,SNR=76						
MK31				⇑Lg	Lg	06 44 40.0	
	4µm,0.7s,baz=134,slow=27,SNR=8.0						
MK31	**Makanchi Array**	**3.58**	**321***c*	*i*PN	**Pn**	**06 43 51.5**	**+1.7**
MK31	**Makanchi Array**	**3.58**	**321**		**Pn**	**06 43 51.8**	**+2.0**
MKAR	**Makanchi Array**	**3.58**	**321**	Pn	**Pn**	**06 43 51.7**	**+1.9**
	46nm,0.3s,baz=135,slow=14,SNR=2477						
MKAR				Pg	**Pg**	**06 44 02.3**	**-0.7**
	406nm,0.3s,baz=128,slow=16,SNR=107						
MKAR				Lg	Lg	06 44 45.6	
	408nm,0.3s,baz=131,slow=26,SNR=6.4						
MKAR				LR	LR	06 45 32.5	
	comp=Z,5µm,20.2s,baz=214,slow=44						
MKAR	**Makanchi Array**	**3.58**	**321**	*i* PN	**Pn**	**06 43 51.7**	**+1.9**
MKAR				pmax	pmax		
	comp=Z,215nm,0.6s						
MKAR	**Makanchi Array**	**3.58**	**321**	Pn	**Pn**	**06 43 50.3**	**+0.5**
MAKZ	**Makanchi**	**3.73**	**319**	⇑Pn	**Pn**	**06 43 53.9**	**+2.0**
	comp=Z,261nm,0.6s						
MAKZ				⇓Pg	**Pb**	**06 44 02.3**	**+1.9**
	comp=Z,578nm,0.5s						
MAKZ				⇑Lg	Lg	06 44 43.1	
MAKZ	**Makanchi**	**3.73**	**319**	PN	**Pn**	**06 43 53.3**	**+1.4**
MAKZ	**Makanchi**	**3.73**	**319**	Pn	**Pn**	**06 43 53.3**	**+1.4**
KTMS	**Ketmen**	**3.83**	**263**	*e*P	**Pb**	**06 44 00.7**	**-1.3**
	comp=Z,106nm,0.2s						
KTMS				*e*S	**Sg**	**06 44 54.0**	**-3.4**
	comp=Z,2µm,0.5s						
KTMS	**Ketmen**	**3.83**	**263**	Pg	**Pb**	**06 44 00.7**	**-1.3**
	comp=Z,106nm,0.2s						
KTMS				Lg	Lg	06 44 54.0	
	comp=Z,2µm,0.5s						
DJR	**Jarkent**	**4.16**	**276**	*e*P	**Pb**	**06 44 08.3**	**+0.6**
	comp=Z,90nm,0.6s						
DJR				*e*S	**Sg**	**06 45 06.9**	**-1.2**
	comp=Z,2µm,0.6s						
DJR	**Jarkent**	**4.16**	**276**	Pg	**Pb**	**06 44 07.7**	**0.0**
	comp=Z,575nm,0.5s						
DJR				Lg	Lg	06 45 06.9	
	comp=Z,2µm,0.6s						
PDGK	**Podgornoye**	**4.46**	**263**	Pg	**Pb**	**06 44 13.8**	**+0.9**
	comp=Z,73nm,0.4s						
PDGK				Lg	Lg	06 45 18.0	
	comp=Z,1µm,0.4s						
PDGK	**Podgornoye**	**4.46**	**263**	⇓Pn	**Pn**	**06 44 04.3**	**+2.2**
	comp=Z,1µm,1.1s						
PDGK				⇑Lg	Lg	06 45 07.2	
	comp=Z,6µm,1.0s						
PDGK	**Podgornoye**	**4.46**	**263**	*i* PN	**Pn**	**06 44 04.3**	**+2.2**
PDGK				pmax	pmax		
	comp=Z,1µm,1.0s						
SHLS	**Shalkode**	**4.52**	**261**	*e*P	Pb	06 44 08.5	-5.4
	comp=Z,1µm,0.6s						
SHLS				*e*S	**Sb**	**06 45 06.7**	**-1.6**
	comp=Z,3µm,0.4s						
SHLS	**Shalkode**	**4.52**	**261**	Pg	Pb	06 44 08.7	-5.2
	comp=Z,302nm,0.4s						
SHLS				Lg	Lg	06 45 08.8	
	comp=Z,3µm,0.4s						
UZB	**Uzynbulak**	**4.84**	**261**	*e*P	**Pb**	**06 44 21.8**	**+2.5**
	comp=Z,257nm,0.7s						
UZB				*e*S	**Sg**	**06 45 30.1**	**+0.3**
	comp=Z,2µm,0.5s						
UZB	**Uzynbulak**	**4.84**	**261**	Pg	**Pb**	**06 44 20.5**	**+1.2**
	comp=Z,257nm,0.7s						
UZB				Lg	Lg	06 45 30.1	
	comp=Z,2µm,0.5s						
KPKS	**Kokpek**	**5.02**	**266**	*e*P	**Pb**	**06 44 22.3**	**0.0**
	comp=Z,215nm,0.3s						
KPKS				*e*S	**Sg**	**06 45 31.3**	**-4.4**
	comp=Z,54µm,0.6s						
MNBS	**Baschi**	**5.16**	**273**	*e*P	**Pb**	**06 44 26.0**	**+1.3**
	comp=Z,217nm,0.3s						
MNBS				*e*S	**Sg**	**06 45 37.2**	**-3.0**
	comp=Z,4µm,0.4s						
MNBS	**Baschi**	**5.16**	**273**	Pg	**Pb**	**06 44 26.0**	**+1.3**
	comp=Z,217nm,0.3s						
MNBS				Lg	Lg	06 45 37.3	
	comp=Z,4µm,0.4s						
TDK	**Taldyqorghan**	**5.20**	**283**	*e*P	**Pb**	**06 44 29.3**	**+3.9**
	comp=Z,781nm,0.6s						
TDK				*e*S	**Sg**	**06 45 43.6**	**+2.1**
	comp=Z,8µm,0.7s						
TDK	**Taldyqorghan**	**5.20**	**283**	Pg	**Pb**	**06 44 28.6**	**+3.1**
	comp=Z,781nm,0.6s						
TDK				Lg	Lg	06 45 43.6	
	comp=Z,8µm,0.7s						
SATY	**Saty**	**5.30**	**262**	*e*P	**Pb**	**06 44 29.8**	**+2.7**
	comp=Z,149nm,0.4s						
SATY				*e*S	**Sg**	**06 45 44.4**	**-0.2**
	comp=Z,1µm,0.6s						
SATY	**Saty**	**5.30**	**262**	Pg	**Pb**	**06 44 30.0**	**+2.9**
	comp=Z,149nm,0.4s						
SATY				Lg	Lg	06 45 44.4	
	comp=Z,1µm,0.6s						
KURS	**Kuram**	**5.38**	**266**	Pg	**Pb**	**06 44 31.1**	**+2.6**
	comp=Z,90nm,0.5s						
KURS				Lg	Lg	06 45 47.8	
	comp=Z,2µm,0.7s						
ARXS	**Arharly**	**5.57**	**274**	Pg	**Pb**	**06 44 33.9**	**+2.2**
	comp=Z,245nm,0.4s						
ARXS				Lg	Lg	06 45 52.1	
	comp=Z,3µm,0.5s						
DGZ	**Jazzator, Alta**	**5.79**	**12***c*	*i*PN	**Pn**	**06 44 22.7**	**+2.5**
DGZ				pmax	pmax		
	comp=Z,235nm,0.6s						
KOTS	**Kotyrbulak**	**6.19**	**265**	Pg	**Pb**	**06 44 45.3**	**+3.0**
	comp=Z,191nm,0.3s						
KOTS				Lg	Lg	06 46 11.1	
	comp=Z,3µm,0.6s						
MDOK	**Medeo**	**6.25**	**265**	⇑Pn	**Pn**	**06 44 28.5**	**+1.9**
	comp=Z,151nm,0.6s						
MDOK				⇓Pg	Pg	06 44 49.3	-4.8
	comp=Z,646nm,1.2s						
MDOK				⇑Lg	Lg	06 46 02.9	
	comp=Z,2µm,1.0s						
MDOK	**Medeo**	**6.25**	**265**	Pg	**Pb**	**06 44 46.6**	**+3.3**
	comp=Z,187nm,0.4s						
MDOK				Lg	Lg	06 46 14.4	
	comp=Z,749nm,0.8s						
KNDC	**Almaty**	**6.30**	**265**	⇑Pg	**Pb**	**06 44 46.7**	**+2.6**
	comp=Z,802nm,0.6s						
KNDC				⇓Lg	Lg	06 46 06.7	
	comp=Z,3µm,1.0s						
TNSS	**Tian-Shan**	**6.35**	**264**	Pg	**Pb**	**06 44 49.1**	**+4.0**
	comp=Z,91nm,0.3s						
TNSS				Lg	Lg	06 46 19.4	
	comp=Z,537nm,0.4s						
KTBS	**Karatobe**	**6.43**	**270**	Pg	**Pb**	**06 44 49.0**	**+2.7**
	comp=Z,74nm,0.5s						
KTBS				Lg	Lg	06 46 17.8	
	comp=Z,1µm,0.5s						
IZV	**Izvestkoviy**	**6.58**	**264**	Pg	**Pb**	**06 44 53.3**	**+4.3**
	comp=Z,112nm,0.5s						
IZV				Lg	Lg	06 46 25.4	
	comp=Z,1µm,0.5s						
KUU	**Kurty**	**6.66**	**272**	Pg	**Pb**	**06 44 53.9**	**+3.7**
	comp=Z,42nm,0.2s						
KUU				Lg	Lg	06 46 25.1	
	comp=Z,1µm,0.4s						
KST	**Kastek**	**7.05**	**265**	Pg	Pg	06 45 04.2	-5.3
	comp=Z,287nm,0.7s						
KST				Lg	Lg	06 46 44.5	
	comp=Z,1µm,0.8s						
ULHL	**Ulahol**	**7.05**	**258**	P	**Pn**	**06 44 40.5**	**+2.7**
	SNR=34						
DGS	**Degeres**	**7.15**	**267**	Pg	Pg	06 45 05.6	-5.8
	comp=Z,75nm,0.4s						
DGS				Lg	Lg	06 46 45.8	
	comp=Z,563nm,0.7s						
SEM	**Semipalatinsk**	**7.31**	**332**	Pg	Pb	06 45 07.8	+6.5
	comp=Z,119nm,0.4s						
SEM				Lg	Lg	06 46 49.0	
	comp=Z,1µm,0.7s						
TKM2	**Tokmak 2**	**7.34**	**265**	P	**Pn**	**06 44 46.1**	**+4.5**
	SNR=55						
TKM2	**Tokmak 2**	**7.34**	**265**	⇑Pn	**Pn**	**06 44 43.6**	**+1.9**
	comp=Z,137nm,0.8s						
TKM2				⇑Lg	Lg	06 46 40.0	
	comp=Z,597nm,0.6s						
TKM2	**Tokmak 2**	**7.34**	**265**	*i* P	**Pn**	**06 44 43.5**	**+1.9**
TKM2				pmax	pmax		
	comp=Z,137nm,0.7s						
KBK	**Karagaybulak**	**7.86**	**263**	P	**Pn**	**06 44 51.8**	**+3.0**
	SNR=27						
CHMS	**Chumysh**	**7.93**	**266**	P	**Pn**	**06 44 51.8**	**+2.2**
	SNR=9.7						
USP	**Ospenovka**	**8.06**	**268**	P	**Pn**	**06 44 52.5**	**+1.0**
	SNR=31						
KURBB	**Kurchatov Arra**	**8.12**	**326**	Pn	**Pn**	**06 44 52.2**	**+0.1**
	comp=Z,15nm,0.3s,baz=134,slow=14,SNR=88						
KURBB				Sn	**Sn**	**06 46 23.9**	**+0.3**
	comp=Z,9.1nm,0.3s,baz=132,slow=29,SNR=2.5						
KURBB				Lg	Lg	06 47 12.6	
	comp=Z,14nm,0.3s,baz=115,slow=27,SNR=4.5						
KURBB	**Kurchatov Arra**	**8.12**	**326**	⇑Pn	**Pn**	**06 44 52.1**	**+0.1**
	comp=Z,228nm,0.7s						
KURBB				⇓Lg	Lg	06 47 03.1	
	comp=Z,3µm,0.8s						
KURK	**Kurchatov**	**8.15**	**327**	⇑Pn	**Pn**	**06 44 52.3**	**-0.3**
	comp=Z,156nm,0.6s						
KURK				⇓Lg	Lg	06 47 02.2	
	comp=Z,2µm,1.0s						
KURK	**Kurchatov**	**8.15**	**327***c*	*i*P	**Pn**	**06 44 52.3**	**-0.3**
KURK				pmax	pmax		
	comp=Z,319nm,1.3s						
KURK	**Kurchatov**	**8.15**	**327**	Pn	**Pn**	**06 44 52.1**	**-0.4**
KURK	**Kurchatov**	**8.15**	**327**		**Sn**	**06 46 23.9**	**-0.6**
AAK	**Ala-Archa**	**8.19**	**264**	Pn	**Pn**	**06 44 56.0**	**+2.7**
	comp=Z,2.1nm,0.3s,baz=104,slow=8.0,SNR=28						
AAK				Lg	Lg	06 47 15.4	
	comp=Z,16nm,0.3s,baz=53,slow=20,SNR=2.5						
AAK				LR	LR	06 48 19.4	
	comp=Z,2µm,18.2s,baz=86,slow=40						
AAK	**Ala-Archa**	**8.19**	**264**	P	Pn	06 44 42.0	-11
	SNR=6.2						
AAK	**Ala-Archa**	**8.19**	**264**	⇓Pn	**Pn**	**06 44 55.7**	**+2.5**
	comp=Z,41nm,0.7s						
AAK				⇓Lg	Lg	06 47 06.2	
	comp=Z,626nm,1.0s						
AAK	**Ala-Archa**	**8.19**	**264***c*	*i*P	**Pn**	**06 44 55.8**	**+2.5**
AAK				pmax	pmax		
	comp=Z,66nm,1.3s						
AAK	**Ala-Archa**	**8.19**	**264**	Pn	**Pn**	**06 44 54.5**	**+1.1**
UCH	**Uchtor**	**8.29**	**261**	P	**Pn**	**06 44 57.8**	**+2.9**
	SNR=93						
KSH	**Kashi**	**8.48**	**241**	P	Pn	06 45 06.5	+9.3
KSH				pP	Pb	06 45 11.1	-10
KSH				S	Sb	06 46 49.3	-13
KSH				pmax	pmax		
	comp=Z,54nm,0.6s						
KSH				pmax	pmax		
	comp=Z,890nm,4.8s						
KSH				smax	smax		
	comp=Z,760nm,1.2s						
KSH				smax	smax		
	comp=Z,2µm,1.6s						
KSH				LR	LR		
	comp=Z,8µm,5.1s						
KSH				LR	LR		
	comp=Z,13µm,13.3s						
EKS2	**Erkin-Say**	**8.70**	**265**	P	**Pn**	**06 45 02.5**	**+2.2**
	SNR=17						
AML	**Almayashu**	**8.90**	**262**	P	**Pn**	**06 45 06.4**	**+3.2**
	SNR=15						
ZAA0	**Zalesovo Array**	**9.91**	**357**	⇑Pn	**Pn**	**06 45 16.9**	**+0.3**
	comp=Z,83nm,0.6s						
ZAA0				⇑Sn	**Sn**	**06 47 07.0**	**-0.6**
	comp=Z,58nm,0.7s						
ZAA0	**Zalesovo Array**	**9.91**	**357**	Pn	**Pn**	**06 45 15.5**	**-1.1**
ZALV	**Zalesovo Beam**	**9.91**	**357**	Pn	**Pn**	**06 45 16.0**	**-0.6**
	comp=Z,74nm,0.3s,baz=178,slow=13,SNR=2209						
ZALV				Sn	**Sn**	**06 47 03.8**	**-3.8**
	comp=Z,32nm,0.3s,baz=186,slow=26,SNR=8.5						
ZALV				LR	LR	06 49 28.8	
	comp=Z,4µm,20.9s,baz=178,slow=40						
ZALV	**Zalesovo Beam**	**9.91**	**357**	*i* P	**Pn**	**06 45 15.6**	**-1.0**
ZALV				pmax	pmax		
	comp=Z,555nm,0.6s						
ZALV	**Zalesovo Beam**	**9.91**	**357**	Pn	**Pn**	**06 45 15.8**	**-0.8**
ZALV					**Sn**	**06 47 05.7**	**-1.9**
KK31	**Karatay Array**	**10.97**	**270**	⇓Pn	**Pn**	**06 45 32.5**	**+1.3**
	comp=Z,29nm,0.7s,baz=78,slow=14,SNR=152						
KK31				⇓Lg	Lg	06 48 34.6	
	comp=Z,163nm,0.7s,baz=66,slow=31,SNR=3.6						
KK31	**Karatay Array**	**10.97**	**270**	P	**Pn**	**06 45 32.7**	**+1.5**
KK31	**Karatay Array**	**10.97**	**270**	Pn	**Pn**	**06 45 32.7**	**+1.5**
KKAR	**Karatay Array**	**10.97**	**270**	P	**Pn**	**06 45 32.3**	**+1.1**
KKAR	**Karatay Array**	**10.97**	**270**		**Pn**	**06 45 32.3**	**+1.1**
KKAR	**Karatay Array**	**10.97**	**270**	Pn	**Pn**	**06 45 32.3**	**+1.1**
GTA	**Gaotai**	**11.61**	**109**	*e*P	**Pn**	**06 45 38.8**	**-1.3**
GTA				pP		06 45 47.8	
GTA				sP		06 45 52.8	
GTA				pmax	pmax		
	comp=Z,15nm,0.8s						
GTA				pmax	pmax		
	comp=Z,150nm,9.6s						
GTA				LR	LR		
	comp=Z,3µm,13.1s						
GTA				LR	LR		
	comp=Z,5µm,11.6s						
GTA				LR	LR		
	comp=Z,6µm,10.4s						
MOY	**Mondy**	**12.84**	**48**	*e*P	**Pn**	**06 45 58.7**	**+1.9**
MOY				*e*S	**Sn**	**06 48 20.6**	**+1.1**
BVAR	**Borovoye Array**	**13.45**	**317**	Pn	**Pn**	**06 46 03.6**	**-1.4**
	comp=Z,6.0nm,0.3s,baz=174,slow=16,SNR=65						
BVAR				Sn	**Sn**	**06 48 30.4**	**-3.9**
	comp=Z,4.1nm,0.3s,baz=93,slow=27,SNR=3.0						
BVAR				Lg	Lg	06 50 02.3	
	comp=Z,4.4nm,0.3s,baz=118,slow=36,SNR=2.4						
BRVK	**Borovoye**	**13.52**	**317**	⇑Pn	**Pn**	**06 46 05.0**	**-1.0**
	comp=Z,79nm,1.0s						
BRVK				⇓Lg	Lg	06 49 50.2	
	comp=Z,394nm,1.0s						
BRVK	**Borovoye**	**13.52**	**317***c*	*e*P	**Pn**	**06 46 04.8**	**-1.2**
BRVK				pmax	pmax		
	comp=Z,58nm,1.3s						
BRVK	**Borovoye**	**13.52**	**317**	Pn	**Pn**	**06 46 04.9**	**-1.0**
ZAK	**Zakamensk**	**13.58**	**56**	*e*P	**Pn**	**06 46 07.4**	**+0.4**
ZAK				pmax	pmax		
	comp=Z,11nm,1.2s						
DHRM	**DHARAMSHALA**	**13.85**	**215**	*e*P	**Pn**	**06 46 10.0**	**-0.8**
DHRM				*e*x	x	06 48 35.1	
NIL	**Nilore**	**14.13**	**227**	P	**Pn**	**06 46 14.6**	**+0.2**
NIL	**Nilore**	**14.13**	**227**		**Pn**	**06 46 14.6**	**+0.2**
TLY	**Talaya**	**14.30**	**51**	Pn	**Pn**	**06 46 16.2**	**-0.5**
	comp=Z,0.0nm,0.3s,baz=234,slow=8.5,SNR=7.2						
TLY				Lg	Lg	06 50 26.5	
	comp=Z,0.0nm,0.3s,baz=229,slow=20,SNR=6.5						
TLY	**Talaya**	**14.30**	**51***c*	*i*P	**Pn**	**06 46 17.2**	**+0.5**
TLY				pmax	pmax		
	comp=Z,5.0nm,1.1s						
TLY	**Talaya**	**14.30**	**51**	Pn	**Pn**	**06 46 16.9**	**+0.2**
SMLA	**Simla**	**14.51**	**210**	*e*P	**Pn**	**06 46 18.0**	**-1.7**
CEP	**Cherat**	**14.72**	**231**	P	**Pn**	**06 46 23.6**	**+0.9**
DDI	**Dehra Dun**	**14.95**	**206**	*e*P	**Pn**	**06 46 26.6**	**+0.9**
DDI				IAmb	IAmb	06 46 34.1	
	comp=Z,248nm,0.5s						
SONM	**Songino Array**	**14.96**	**68**	Pn	**Pn**	**06 46 26.4**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=265,slow=12,SNR=101						
SONM				Lg	Lg	06 50 48.1	
	comp=Z,0.9nm,0.3s,baz=271,slow=26,SNR=6.5						
SONM				LR	LR	06 52 29.4	
	comp=Z,461nm,20.9s,baz=262,slow=39						
SONM	**Songino Array**	**14.96**	**68**	P	**Pn**	**06 46 25.8**	**0.0**
SONM	**Songino Array**	**14.96**	**68**	Pn	**Pn**	**06 46 25.8**	**0.0**
LSA	**Lhasa**	**15.01**	**161**	P	**P**	**06 46 30.9**	**-1.4**
LSA				pmax	pmax		
	comp=Z,53nm,1.1s						
LSA				LR	LR		
	comp=Z,2µm,12.8s						
LSA				LR	LR		
	comp=Z,2µm,12.5s						
LSA	**Lhasa**	**15.01**	**161**	P	**P**	**06 46 30.2**	**-2.1**
LSA				pmax	pmax		
	comp=Z,60nm,0.9s						
LSA	**Lhasa**	**15.01**	**161**		**P**	**06 46 30.2**	**-2.1**
LSA				IAmb	IAmb	06 46 46.0	
	comp=Z,60nm,0.9s						
ULN	**Ulaanbaatar**	**15.41**	**68***c*	*e*P	**Pn**	**06 46 32.3**	**+0.6**
ULN				pmax	pmax		
	comp=Z,29nm,1.3s						
ULN	**Ulaanbaatar**	**15.41**	**68**		**Pn**	**06 46 30.9**	**-0.8**
THW	**Thamme Wali**	**15.59**	**228**	P	**Pn**	**06 46 33.5**	**-0.6**
KBL	**Kabul**	**15.91**	**239**	P	**Pn**	**06 46 38.2**	**-0.2**
KBL				pmax	pmax		
	comp=Z,118nm,1.0s						
KBL	**Kabul**	**15.91**	**239**		**Pn**	**06 46 38.2**	**-0.2**
KBL				IAmb	IAmb	06 46 53.9	
	comp=Z,118nm,1.0s						
GKN	**Gorkha**	**16.04**	**183**	*e*P	**P**	**06 46 41.9**	**-1.6**
	comp=Z,46nm,0.4s						
LZH	**Lanzhou**	**16.08**	**113**	*e*P	**P**	**06 46 44.3**	**+0.5**
LZH				pP	pP	06 46 47.8	+0.2
LZH				sP	sP	06 46 50.0	+0.6
LZH				S	**Sn**	**06 49 38.0**	**-0.7**
LZH				sS	S	06 49 49.6	-2.7
LZH				SS	**SnSn**	**06 49 54.4**	**+3.0**
LZH				pmax	pmax		
	comp=Z,53nm,1.0s						
LZH				pmax	pmax		
	comp=Z,420nm,6.5s						
LZH				LR	LR		
	comp=Z,4µm,12.5s						
LZH				LR	LR		
	comp=Z,4µm,11.9s						
LZH				LR	LR		
	comp=Z,2µm,12.5s						
GUN	**Gumba**	**16.12**	**179**	*e*P	**P**	**06 46 43.2**	**-1.3**
	comp=Z,367nm,0.7s						
KKN	**Kakani**	**16.24**	**181**	*e*P	**Pn**	**06 46 43.4**	**+0.8**
	comp=Z,116nm,0.6s						
DMN	**Daman**	**16.42**	**181**	*e*P	**Pn**	**06 46 45.6**	**+0.6**
	comp=Z,109nm,0.7s						
PKIN	**Phulchoki**	**16.45**	**181**	*e*P	**Pn**	**06 46 46.1**	**+0.7**
	comp=Z,192nm,0.6s						
PKI	**Pulchoki**	**16.45**	**180**	*e*P	**Pn**	**06 46 46.2**	**+0.7**
	comp=Z,218nm,0.8s						
TAPN	**Taplejung**	**16.76**	**173**	*e*P	**Pn**	**06 46 50.5**	**+1.1**
	comp=Z,306nm,1.0s						
RAMN	**Ramite**	**17.09**	**177**	*e*P	**Pn**	**06 46 52.8**	**-0.7**
	comp=Z,58nm,0.5s						
ODAN	**Odare**	**17.23**	**174**	*e*P	**Pn**	**06 46 55.5**	**+0.4**
AB31	**Akbulak array**	**18.30**	**296**	⇓Pn	**Pn**	**06 47 07.1**	**-0.8**
	comp=Z,21nm,0.6s,baz=102,slow=7.5,SNR=211						
AB31				⇑Sn	**Sn**	**06 50 24.6**	**-7.5**
	comp=Z,5.1nm,0.6s,baz=91,slow=23,SNR=6.8						
ABKAR	**Akbulak array**	**18.30**	**296**	P	**Pn**	**06 47 06.5**	**-1.5**
ABKAR	**Akbulak array**	**18.30**	**296**	P	**Pn**	**06 47 06.2**	**-1.8**
BTO	**Baotou**	**18.39**	**92**	*e*P	**P**	**06 47 07.8**	**-1.5**
GUWA	**GUWAHATI**	**18.51**	**162**	*e*P	**Pn**	**06 47 11.2**	**+0.5**
GUWA				IAmb	IAmb	06 47 17.5	
	comp=Z,28nm,0.5s						
LKP	**Lekhapani**	**18.64**	**150**	*e*P	**Pn**	**06 47 16.0**	**+3.7**
LKP				IAmb	IAmb	06 47 18.0	
	comp=Z,82nm,0.4s						
MOKO	**MOKOCHONG**	**19.13**	**155**	*e*P	**Pn**	**06 47 19.1**	**+0.8**
MOKO				IAmb	IAmb	06 47 23.6	
	comp=Z,70nm,1.0s						
SHL	**Shillong**	**19.15**	**162**	P	**P**	**06 47 16.9**	**-1.0**
SHL				pmax	pmax		
	comp=Z,65nm,0.8s						
SHL	**Shillong**	**19.15**	**162**	*e*P	**P**	**06 47 17.9**	**0.0**
SHL				IAmb	IAmb	06 47 24.3	
	comp=Z,43nm,0.3s						
SHL	**Shillong**	**19.15**	**162**	P	**P**	**06 47 16.9**	**-1.0**
HHC	**Hu-ho-hao-te**	**19.42**	**90**	*e*P	**Pn**	**06 47 21.3**	**-0.5**
HHC				PP	**PnPn**	**06 47 36.3**	**+1.4**
HHC				S	**S**	**06 51 01.3**	**+1.2**
HHC				pmax	pmax		
	comp=Z,52nm,1.2s						
HHC				pmax	pmax		
	comp=Z,390nm,6.6s						
HHC				LR	LR		
	comp=Z,2µm,13.5s						
HHC				LR	LR		
	comp=Z,4µm,10.9s						
CD2	**Chengdu**	**19.46**	**126**	P	**Pn**	**06 47 22.4**	**+0.2**
CD2				pP	sP	06 47 28.0	+1.4
CD2				S	**Sn**	**06 50 55.3**	**-5.1**
CD2				pmax	pmax		
	comp=Z,50nm,0.8s						
CD2				pmax	pmax		
	comp=Z,630nm,7.4s						
CD2				LR	LR		
	comp=Z,2µm,16.2s						
CD2				LR	LR		
	comp=Z,3µm,12.8s						
CD2				LR	LR		
	comp=Z,3µm,12.9s						

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KOHI  KOHIMA            19.57 156 eP     Pn     06 47 24.3 +0.6
KOHI                               IAmb   IAmb   06 47 26.4
      comp=Z,61nm,0.7s
AKTO  Aktyubinsk        19.69 299  P     Pn     06 47 24.5  -0.3
      comp=Z,2.7nm,0.3s,baz=100,slow=12,SNR=46
AKTO                               S      S      06 50 56.1  -9.0
      comp=Z,0.7nm,0.3s,baz=49,slow=11,SNR=2.1
AKTO                               Lg     Lg     06 53 20.6
      comp=Z,0.5nm,0.3s,baz=162,slow=19,SNR=4.3
AKTO  Aktyubinsk        19.69 299 ⇑Pn    Pn     06 47 24.6  -0.1
      comp=Z,38nm,0.8s
AKTO                              ⇑Sn    S      06 50 55.3  -10
      comp=Z,15nm,0.6s
BOK   Bokaro            20.22 179 eP     Pn     06 47 31.0  -0.2
BOK                                IAmb   IAmb   06 47 38.2
      comp=Z,45nm,0.6s
SVE   Sverdlovsk        20.23 318deP     P      06 47 29.7 +0.5
SVE                               eS     Sn     06 51 18.1  -0.5
SVE                                pmax   pmax
      comp=Z,122nm,1.0s
SVE                                MLR    MLR
      comp=Z,3µm,12.0s
IMP   Imphal            20.37 158 eP     Pn     06 47 32.4  -0.7
IMP                                IAmb   IAmb   06 47 41.4
      comp=Z,34nm,0.8s
HRA   Herat             20.43 250  P      P      06 47 32.3 +0.6
XAN   Xi'an             20.65 111  P      P      06 47 33.8  -0.3
XAN                                pP     sP     06 47 39.5  -0.1
XAN                                S      S      06 51 18.0  -6.6
XAN                                pmax   pmax
      comp=Z,28nm,0.8s
XAN                                pmax   pmax
      comp=Z,190nm,6.1s
XAN                                LR     LR
      comp=Z,2µm,12.6s
XAN                                LR     LR
      comp=Z,3µm,13.0s
XAN   Xi'an             20.65 111  P      P      06 47 33.7  -0.3
XAN                                pmax   pmax
      comp=Z,86nm,1.3s
XAN   Xi'an             20.65 111  P      P      06 47 33.7  -0.3
XAN                                IAmb   IAmb   06 47 43.6
      comp=Z,86nm,1.3s
ARU   Arti              21.08 315  P      P      06 47 38.9 +0.5
      comp=Z,28nm,0.6s,baz=104,slow=5.5,SNR=26
ARU                                Lg     Lg     06 54 03.5
      comp=Z,3.3nm,0.5s,baz=194,slow=20,SNR=1.7
ARU                                LR     LR     06 56 07.2
      comp=Z,2µm,19.3s,baz=106,slow=38
ARU   Arti              21.08 315c iP     P      06 47 38.8 +0.4
ARU                                PPP    PPP    06 48 05.6
ARU                                S      S      06 51 35.2 +2.6
ARU                                SS     SnSn   06 51 57.2 +3.4
ARU                                pmax   pmax
      comp=Z,90nm,0.7s
ARU                                MLR    MLR
      comp=Z,3µm,14.0s
ARU   Arti              21.08 315  P      P      06 47 38.3  -0.1
ARU                                IAmb   IAmb   06 47 43.0
      comp=Z,84nm,0.7s
TIY   Taiyuan           21.23  98 eP     P      06 47 40.8 +0.6
TIY                                S      S      06 51 38.0 +2.1
TIY                                pmax   pmax
      comp=Z,36nm,1.0s
TIY                                LR     LR
      comp=Z,3µm,14.2s
TIY                                LR     LR
      comp=Z,5µm,15.1s
BHPL  Bhopal            21.82 201 eP     P      06 47 46.4  -0.2
BHPL                               IAmb   IAmb   06 47 53.9
      comp=Z,47nm,0.8s
BHPL                              eS     S      06 51 43.2  -4.4
SAIH  SAIHA             22.37 162 eP     P      06 47 54.3 +1.7
SAIH                               IAmb   IAmb   06 48 01.4
      comp=Z,42nm,1.0s
BOD   Bodaibo           22.38  42 eP     P      06 47 51.2  -1.1
BOD                                pmax   pmax
      comp=Z,50nm,1.3s
BJI   Beijing           23.01  89  P      P      06 48 00.8 +1.7
BJI                                pmax   pmax
      comp=Z,19nm,1.0s
BJT   Baijiatuau        23.02  89  P      P      06 48 00.2 +1.0
BJT                                pmax   pmax
      comp=Z,24nm,0.8s
BJT   Baijiatuau        23.02  89  P      P      06 48 00.2 +1.0
ENH   Enshi             23.41 118  P      P      06 48 04.3 +1.0
KMI   Kunming           23.51 138 ⇓P      P      06 48 05.5 +1.0
KMI                                pP     pP     06 48 08.8 +0.3
KMI                                sP     sP     06 48 11.1 +0.9
KMI                                PP     PnPn   06 48 36.5 +5.4
KMI                                S      S      06 52 14.1  -4.2
KMI                                sS     pS     06 52 23.1  -0.2
KMI                                SS     SnSn   06 53 00.3 +6.1
KMI                                pmax   pmax
      comp=Z,12nm,1.4s
KMI                                pmax   pmax
      comp=Z,250nm,3.8s
KMI                                LR     LR
      comp=Z,2µm,12.0s
KMI                                LR     LR
      comp=Z,2µm,13.5s
KMI                                LR     LR
      comp=Z,2µm,12.2s
KMI   Kunming           23.51 138  P      P      06 48 05.6 +1.0
KMI                                pmax   pmax
      comp=Z,22nm,0.7s
KMI   Kunming           23.51 138  P      P      06 48 05.6 +1.1
GYA   Guiyang           24.49 129 ⇓P      P      06 48 14.1 +0.5
GYA                                sP     sP     06 48 28.4 +9.0
GYA                                PcP    PcP    06 51 58.0 +6.0
GYA                                S      S      06 52 38.0 +4.3
GYA                                pmax   pmax
      comp=Z,22nm,0.7s
GYA                                LR     LR
      comp=Z,2µm,13.4s
GYA                                LR     LR
      comp=Z,940nm,15.0s
GYA                                LR     LR
      comp=Z,2µm,13.4s
BHUJ  Bhuj              24.53 217 eP     P      06 48 20.5 +6.6
BHUJ                               IAmb   IAmb   06 48 22.1
      comp=Z,180nm,0.2s
TIA   Tai'an            25.25  97  P      P      06 48 20.9 +0.5
TIA                                pmax   pmax
      comp=Z,21nm,1.0s
TIA                                LR     LR
      comp=Z,2µm,12.8s
TIA                                LR     LR
      comp=Z,3µm,14.7s
WHN   Wuhan             26.42 111 ⇓P      P      06 48 31.5 +0.5
WHN                                pP     sP     06 48 36.1  -0.6
WHN                                LR     LR
      comp=Z,5µm,13.1s
WHN                                LR     LR
      comp=Z,2µm,11.4s
WHN                                LR     LR
      comp=Z,6µm,12.9s
KIRV  Kirov             26.46 316  P      P      06 48 31.5 +0.5
      comp=Z,34nm,0.6s,baz=125,slow=1.6,SNR=14
KIRV                               LR     LR     06 59 34.2
      comp=Z,2µm,18.1s,baz=109,slow=38
KIRV  Kirov             26.46 316c iP     P      06 48 31.3 +0.3
HYB   Hyderabad         27.21 195 i P     P      06 48 41.0 +2.8
HYB   Hyderabad         27.21 195 eP     P      06 48 40.4 +2.2
HYB                                IAmb   IAmb   06 48 55.2
      comp=Z,76nm,1.8s
POO   Poona             27.29 205  IAmb   IAmb   06 48 45.3
      comp=Z,18nm,1.1s
SLVN  Son La            27.30 140  P      P      06 48 38.6  -0.4
CM33  Chiang Mai Arr    27.56 152  P      P      06 48 43.0 +1.7
CHTO  Chiang Mai        27.56 152  P      P      06 48 42.1 +0.8
CHTO                               pmax   pmax
      comp=Z,39nm,1.5s
CHTO  Chiang Mai        27.56 152  P      P      06 48 42.0 +0.8
CMMT  Chiang Mai        27.57 152  P      P      06 48 43.0 +1.7
      comp=Z,8.0nm,1.3s
CM34  Chiang Mai Arr    27.60 151  P      P      06 48 45.0 +3.4
CM32  Chiang Mai Arr    27.68 152  P      P      06 48 50.0 +7.7
CM35  Chiang Mai Arr    27.76 151  P      P      06 48 47.0 +3.9
MHMT  Maesarieng        27.82 154  P      P      06 48 48.0 +4.3
      comp=Z,2µmcomp=Z,52nm,0.9s
CM36  Chiang Mai Arr    27.89 152  P      P      06 48 48.0 +3.8
CM31  Chiang Mai Arr    27.89 152  P      P      06 48 52.0 +7.8
      comp=Z,527nm,0.4s
CM31  Chiang Mai Arr    27.89 152  P      P      06 48 46.6 +2.4
CM31                               IAmb   IAmb   06 48 51.9
      comp=Z,43nm,1.3s
CMAR  Chiang Mai Arr    27.89 152  P      P      06 48 45.0 +0.7
      comp=Z,2.1nm,0.3s,baz=331,slow=9.1,SNR=19
CMAR  Chiang Mai Arr    27.89 152 i P     P      06 48 46.7 +2.4
CMAR                               pmax   pmax
      comp=Z,6.0nm,0.5s
CMAR  Chiang Mai Arr    27.89 152  P      P      06 48 45.7 +1.4
CM13  Chiang Mai Arr    27.91 152  P      P      06 48 48.4 +3.9
      comp=Z,12nm,1.0s
CM02  Chiang Mai Arr    27.92 152  P      P      06 48 47.0 +2.5
      comp=Z,161nmcomp=Z,20nm,1.3s
CM09  Chiang Mai Arr    27.92 152  P      P      06 48 51.0 +6.5
      comp=Z,182nmcomp=Z,18nm,0.8s
CM01  Chiang Mai Arr    27.93 152  P      P      06 48 48.6 +4.0
      comp=Z,172nmcomp=Z,25nm,1.1s
CM05  Chiang Mai Arr    27.95 152  P      P      06 48 47.5 +2.8
      comp=Z,122nmcomp=Z,13nm,0.9s
CM04  Chiang Mai Arr    27.96 152  P      P      06 48 48.0 +3.1
      comp=Z,162nmcomp=Z,19nm,1.0s
LAMP  Lampang           28.07 151  P      P      06 48 53.3 +7.4
      comp=Z,520nmcomp=Z,14nm,0.7s
CN2   Changchun         28.53  76 eP     P      06 48 53.3 +3.5
CN2                                pmax   pmax
      comp=Z,10.0nm,0.6s
CN2                                LR     LR
      comp=Z,2µm,13.0s
CN2                                LR     LR
      comp=Z,5µm,13.0s
CN2                                LR     LR
      comp=Z,6µm,13.0s
NJ2   Nanjing           28.63 103 eP     P      06 48 51.3 +0.6
NJ2                                pmax   pmax
      comp=Z,5.0nm,0.5s
NJ2                                LR     LR
      comp=Z,2µm,11.4s
NJ2                                LR     LR
      comp=Z,2µm,14.2s
NJ2                                LR     LR
      comp=Z,3µm,15.2s
ZEA   Zeya              28.68  55 eP     P      06 48 51.7 +0.7
ZEA                                pmax   pmax
      comp=E,10.0nm,1.1s
ZEA                                pmax   pmax
      comp=Z,10.0nm,1.1s
ZEA                                MLR    MLR
      comp=E,4µm,12.0s
ZEA                                MLR    MLR
      comp=Z,4µm,12.0s
SUKH  Sukhothai         29.03 151  P      P      06 49 02.1 +7.7
      comp=Z,17nm,1.2s
NONG  Nongkai           29.84 145  P      P      06 49 05.7 +4.2
      comp=Z,42nm,0.8s
VRH   Novokhopyorsk     30.03 299 eP     P      06 49 02.7  -0.2
VRH                                pmax   pmax
      comp=Z,40nm,0.6s
ZEI   Tsey              30.06 282 eP     P      06 49 03.7 +0.1
ZEI                                pmax   pmax
      comp=Z,11nm,1.0s
GOF   Gofitskoye        30.06 287⇑eP     P      06 49 04.7 +1.3
GOF                                pmax   pmax
      comp=Z,50nm,0.8s
GNI   Garni             30.32 277ceP     P      06 49 08.4 +2.5
GNI                                pmax   pmax
      comp=Z,28nm,1.0s
GNI   Garni             30.32 277  P      P      06 49 06.0 +0.2
GNI                                IAmb   IAmb   06 49 27.1
      comp=Z,36nm,0.9s
KBZ   Khabaz            30.50 285  P      P      06 49 07.5 +0.3
      comp=Z,8.9nm,0.9s,baz=86,slow=7.3,SNR=15
KBZ                                LR     LR     07 02 20.1
      comp=Z,688nm,19.2s,baz=66,slow=38
KBZ   Khabaz            30.50 285c iP     P      06 49 07.9 +0.7
KBZ                                pmax   pmax
      comp=Z,12nm,1.0s
KIV   Kislovodsk        30.59 285 eP     P      06 49 10.4 +2.3
KIV                                pmax   pmax
      comp=Z,74nm,1.1s
KIV                                MLR    MLR
      comp=Z,6µm,15.0s
KIV   Kislovodsk        30.59 285  P      P      06 49 08.5 +0.4
KIV                                IAmb   IAmb   06 49 33.1
      comp=Z,19nm,0.8s
NEY   Neytrino          30.75 284⇓eP     P      06 49 11.8 +2.1
NEY                                pmax   pmax
      comp=Z,3.0nm,1.0s
UTHA  Uthaitani         30.76 153  P      P      06 49 12.7 +2.9
      comp=Z,312nmcomp=Z,40nm,1.1s
SSE   Sheshan           30.81 103  P      P      06 49 10.8 +0.7
SSE                                S      S      06 54 10.9  -2.3
SSE                                pmax   pmax
      comp=Z,8.0nm,1.2s
SSE                                pmax   pmax
      comp=Z,98nm,4.2s
SSE                                LR     LR
      comp=Z,1µm,17.3s
SSE                                LR     LR
      comp=Z,490nm,16.7s
MDJ   Mudanjiang        31.21  73  P      P      06 49 14.9 +1.4
MDJ                                pP     pP     06 49 17.8 +0.2
MDJ                                S      S      06 54 11.6  -7.7
MDJ                                pmax   pmax
      comp=Z,12nm,1.1s
MDJ                                pmax   pmax
      comp=Z,410nm,4.9s
MDJ                                LR     LR
      comp=Z,5µm,15.1s
MDJ                                LR     LR
      comp=Z,8µm,12.4s
MDJ                                LR     LR
      comp=Z,11µm,12.5s
YAK   Yakutsk           31.22  39  P      P      06 49 12.6  -0.8
      comp=Z,9.3nm,0.6s,baz=159,slow=0.6,SNR=2.2
YAK                                S      S      06 54 23.9 +4.8
      comp=Z,5.9nm,0.5s,baz=306,slow=1.7,SNR=1.8
YAK   Yakutsk           31.22  39 eP     P      06 49 10.3  -3.1
YAK                               e*PP   pP     06 49 13.9  -3.5
YAK                               e             06 50 09.8
YAK                               e             06 52 05.8
YAK                               eS     S      06 54 16.8  -2.3
YAK                               e*SS   sS     06 54 25.3  -0.5
YAK                               eSS    SnSn   06 56 02.2 +1.0
YAK                               e             06 59 45.8
YAK                                pmax   pmax
      comp=Z,22nm,0.8s
YAK                                pmax   pmax
      comp=N,7.0nm,1.0s
YAK                                pmax   pmax
      comp=E,17nm,1.4s
YAK                                pmax   pmax
      comp=Z,25nm,1.1s
YAK                                pmax   pmax
      comp=N,5.0nm,0.9s
YAK                                pmax   pmax
      comp=E,17nm,0.9s
YAK                                smax   smax
      comp=N,47nm,2.8s
YAK                                smax   smax
      comp=E,40nm,2.8s
YAK                                MLR    MLR
      comp=Z,2µm,12.0s
YAK                                MLR    MLR
      comp=N,1µm,12.0s
YAK                                MLR    MLR
      comp=E,1µm,11.0s
YAK   Yakutsk           31.22  39  P      P      06 49 12.6  -0.8
YAK                                IAmb   IAmb   06 49 13.7
      comp=Z,34nm,0.9s
CHAI  Chaiyaphum        31.34 148  P      P      06 49 19.2 +4.4
      comp=Z,2µmcomp=Z,27nm,0.7s
INCN  Inchon            31.54  88  P      P      06 49 14.2  -2.3
INCN                               pmax   pmax
      comp=Z,66nm,1.3s
INCN  Inchon            31.54  88  P      P      06 49 14.2  -2.3
VORD  Divnogorie        31.57 299 eP     P      06 49 17.0 +0.4
VORD                               pmax   pmax
      comp=Z,30nm,0.8s
VSR   Storozhevoye      31.63 300 eP     P      06 49 16.5  -0.6
VSR                                pmax   pmax
      comp=Z,60nm,1.0s
LPSR  Galich'ya Gora    31.67 302 eP     P      06 49 18.2 +0.8
LPSR                               pmax   pmax
      comp=Z,80nm,0.7s
KLR   Kul'dur           31.73  64  P      P      06 49 17.2  -0.9
      comp=Z,11nm,0.8s,baz=279,slow=8.4,SNR=37
KLR                                PcP    PcP    06 52 08.9  -0.3
      comp=Z,3.9nm,0.9s,baz=285,slow=6.1,SNR=3.0
KLR                                LR     LR     07 03 00.2
      comp=Z,662nm,20.5s,baz=274,slow=38
KLR   Kul'dur           31.73  64c iP     P      06 49 18.0   0.0
KLR                                pmax   pmax
      comp=Z,14nm,0.8s
KLMR  Klimovskoe        31.87 318 eP     P      06 49 18.5  -0.6
KLMR                               pmax   pmax
      comp=Z,86nm,1.2s
KLMR  Klimovskoe        31.87 318 eP     P      06 49 18.5  -0.6
KLMR                               AMP           06 49 26.6
      comp=Z,86nm,1.2s
KLMR                               LQ     LQ     06 59 22.6
KLMR                               LQ     LQ     06 59 22.6
KLMR                               LR     LR     07 00 54.7
QIZ   Qiongzhong        32.19 133  P      P      06 49 23.4 +1.1
QIZ                                S      S      06 54 36.9 +2.0
QIZ                                LR     LR
      comp=Z,490nm,15.5s
QIZ                                LR     LR
      comp=Z,820nm,12.0s
QIZ                                LR     LR
      comp=Z,580nm,12.7s
GEVA  Gevas             32.23 275  P      P      06 49 24.2 +1.5
GEVA                               IAmb   IAmb   06 49 34.3
      comp=Z,38nm,0.9s
MOS   Moscow            32.36 308 eP     P      06 49 22.8  -0.7
MOS                                pmax   pmax
      comp=Z,66nm,1.2s
MOS                                MLR    MLR
      comp=Z,1µm,13.0s
KS19  Wonju Array Si    32.42  87  P      P      06 49 24.9 +0.8
KS19                               IAmb   IAmb   06 49 33.5
      comp=Z,28nm,1.2s
KSAR  Wonju Array Be    32.45  87  P      P      06 49 24.1  -0.4
KSAR  Wonju Array Be    32.45  87  P      P      06 49 24.1  -0.4
KSRS  Korea Array       32.48  87  P      P      06 49 23.9  -0.8
      comp=Z,6.3nm,1.0s,baz=283,slow=8.1,SNR=13
KSRS                               LR     LR     07 03 37.4
      comp=Z,125nm,21.8s,baz=297,slow=38
SOC   Sochi             32.75 285 eP     P      06 49 27.0  -0.1
SOC                               e             06 50 33.3
SOC                               eS     S      06 54 45.0 +1.6
SOC                               eSSS   SSS    06 56 59.4
SOC                                pmax   pmax
      comp=Z,31nm,0.8s
SOC                                MLR    MLR
      comp=Z,1µm,14.0s
OBN   Obninsk           32.97 307c iP     P      06 49 28.8 +0.1
OBN                                pmax   pmax
      comp=Z,51nm,1.3s
OBN   Obninsk           32.97 307  P      P      06 49 28.8 +0.1
USA0B Ussuriysk Arra    32.98  73⇓eP     P      06 49 30.2 +1.2
USRK  Ussuriysk Ar.     32.98  73  P      P      06 49 28.3  -0.7
      comp=Z,3.1nm,0.7s,baz=310,slow=5.5,SNR=2.5
USRK  Ussuriysk Ar.     32.98  73  P      P      06 49 28.9  -0.1
USRK  Ussuriysk Ar.     32.98  73  P      P      06 49 28.9  -0.1
TMCR  Tamitsa           33.26 324 eP     P      06 49 31.5 +0.3
TMCR                               pmax   pmax
      comp=Z,81nm,1.4s
PHET  Kaeng Krachan     33.31 154  P      P      06 49 39.0 +6.9
      comp=Z,32nm,1.0s
UBPT  Khong Chiam       33.31 143  P      P      06 49 34.0 +1.9
UBPT  Khong Chiam       33.31 143  P      P      06 49 31.6  -0.5
KOPT  Kop Dagi          33.40 279  P      P      06 49 32.5  -0.6
KOPT                               IAmb   IAmb   06 49 47.4
      comp=Z,23nm,1.0s
ANN   Anapa             33.98 288 eP     P      06 49 36.4  -1.3
ANN                               e*PP   pP     06 49 41.4  -0.5
ANN                               eS     S      06 55 00.8  -1.6
ANN                                pmax   pmax
      comp=Z,58nm,0.9s
MARD  Mardin            34.28 274  P      P      06 49 43.0 +2.4
GRNR  Gornyy            34.48  60⇓iP     P      06 49 43.0 +1.0
GRNR                               pmax   pmax
      comp=N,2.0nm,0.8s
GRNR                               pmax   pmax
      comp=Z,10.0nm,0.9s
GRNR                               MLR    MLR
      comp=E,700nm,11.0s
GRNR                               MLR    MLR
      comp=N,910nm,10.0s
GRNR                               MLR    MLR
      comp=Z,1µm,10.0s
TIXI  Tiksi             34.56  23c iP     P      06 49 41.6  -0.8
TIXI                               pmax   pmax
      comp=Z,96nm,1.0s
TIXI  Tiksi             34.56  23  P      P      06 49 41.5  -1.0
TIXI                               IAmb   IAmb   06 49 50.1
      comp=Z,66nm,1.5s
APA   Apatity           35.94 329⇑iP     P      06 49 53.6  -0.7
APA                                pmax   pmax
      comp=Z,11nm,0.8s
APA                                MLR    MLR
      comp=Z,2µm,18.0s
RNTT  Ranong            36.32 158  P      P      06 50 00.3 +2.3
      comp=Z,380nmcomp=Z,8.8nm,0.9s
JNU   Nakatsue          36.65  92  P      P      06 50 00.1  -0.8
      comp=Z,10.0nm,1.0s,baz=307,slow=10,SNR=1.7
PALK  Pallekele         36.89 188  LR     LR     07 07 00.4
      comp=Z,301nm,20.5s,baz=118,slow=39
PALK  Pallekele         36.89 188⇓eP     P      06 50 03.3 +0.3
PALK                               pmax   pmax
      comp=Z,52nm,2.3s
GAZ   Gaziantep         36.91 276  P      P      06 50 03.5 +0.4
GAZ                                IAmb   IAmb   06 50 14.8
      comp=Z,27nm,0.8s
ILGA  Ilgaz             37.80 284  P      P      06 50 10.6  -0.1
ILGA                               IAmb   IAmb   06 50 21.7
      comp=Z,39nm,1.0s
AKASG Malin Array Be    37.91 301  P      P      06 50 11.5 +0.1
      comp=Z,7.9nm,0.6s,baz=62,slow=8.7,SNR=36
AKASG Malin Array Be    37.91 301 i P     P      06 50 11.6 +0.3
AKASG                              pmax   pmax
      comp=Z,13nm,0.6s
AKASG Malin Array Be    37.91 301  P      P      06 50 11.7 +0.4
AKBB  Malin Array Si    37.91 301ceP     P      06 50 11.5 +0.2
AKBB  Malin Array Si    37.91 301  P      P      06 50 11.6 +0.2
AKBB                               IAmb   IAmb   06 50 12.6
      comp=Z,20nm,0.8s
MNK   Minsk             38.03 307 i P     P      06 50 12.6 +0.3
      comp=E,2.0nm,0.9s
MNK                               i P     P      06 50 12.6 +0.3
      comp=N,19nm,0.9s
MNK                               i P     P      06 50 12.6 +0.3
      comp=Z,11nm,0.9s
MNK                               i PP    PP     06 51 38.0  -1.0
MNK                               i PPP   PPP    06 51 57.9
MNK                               i PcP   PcP    06 52 27.6 +0.2
MNK                               i S     S      06 56 05.0 +0.9
MNK                               i SS    SS     06 58 49.3  -1.6
MNK                               i SSS   SSS    06 59 06.2
MNK                               i ScS   ScS    07 00 24.1 +0.4
MNK                               i LQ    LQ     07 03 03.4
MNK                               i LR    LR     07 04 32.0
MNK                               i LRM   MLR    07 05 57.8
      comp=E,115nm,17.8s
MNK                               i LRM   MLR    07 06 03.7
      comp=Z,843nm,16.9s
MNK                               i LRM   MLR    07 06 05.6
      comp=N,573nm,17.5s
TRTT  Trang             38.13 157  P      P      06 50 19.4 +5.9
JOW   Kunigami          38.33 102  P      P      06 50 13.0  -2.1
      comp=N,12nm,0.4s,baz=18,slow=20,SNR=1.3
JOW                                LR     LR     07 07 38.9
      comp=N,1µm,18.8s,baz=150,slow=39
BR131 Keskin Array S    38.37 282  P      P      06 50 16.5 +0.9
BR131                              pmax   pmax
      comp=Z,19nm,0.6s
BR131 Keskin Array S    38.37 282  P      P      06 50 16.4 +0.9
BR131                              IAmb   IAmb   06 50 25.2
      comp=Z,19nm,0.6s
BRTR  Keskin Array B    38.37 282  P      P      06 50 16.4 +0.9
      comp=Z,5.0nm,0.5s,baz=83,slow=7.3,SNR=26
BRTR  Keskin Array B    38.37 282 i P     P      06 50 16.8 +1.3
BRTR                               pmax   pmax
      comp=Z,5.0nm,0.6s
BRTR  Keskin Array B    38.37 282  P      P      06 50 16.8 +1.3
FINES FINESS Array B    38.41 318  P      P      06 50 15.3   0.0
      comp=Z,9.6nm,0.7s,baz=81,slow=7.8,SNR=44
FINES                              PcP    PcP    06 52 28.1  -0.4
      comp=Z,4.8nm,0.6s,baz=98,slow=6.2,SNR=2.2
FINES                              LR     LR     07 06 45.0
      comp=Z,2µm,18.8s,baz=90,slow=37
FINES FINESS Array B    38.41 318 i P     P      06 50 15.6 +0.3
FINES                              pmax   pmax
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       comp=Z,10.0nm,0.7s
FINES  FINESS Array B  38.41 318  P      P      06 50 15.6 +0.3
IDID   Didziasalis     38.56 308  eP     P      06 50 17.3 +0.6
NACGM  Naroch          38.60 308  i P    P      06 50 17.6 +0.5
NACGM                             i P    P      06 50 17.6 +0.5
NACGM                             i P    P      06 50 17.6 +0.5
NACGM                             i PP   PP     06 51 24.3  -21
NACGM                             i PPP  PPP    06 52 01.3
NACGM                             i S    S      06 56 20.1 +7.4
NACGM                             i SS   SS     06 59 03.8 +1.5
NACGM                             i SSS  SSS    06 59 30.9
NACGM                             i LQ   LQ     07 03 52.8
NACGM                             i LR   LR     07 05 53.2
RAYN   Ar Rayn         38.60 251  P      P      06 50 18.2 +0.7
RAYN                              pmax   pmax
       comp=Z,18nm,0.8s
RAYN   Ar Rayn         38.60 251  P      P      06 50 18.2 +0.7
IIGN   Ignalina        38.85 308  eP     P      06 50 19.7 +0.5
ISAL   Salakas         38.87 309  eP     P      06 50 19.9 +0.6
SORM   Soroca          39.10 297 ⇑P      P      06 50 21.6 +0.3
MILM   Milestii Mici   39.15 295 ⇑P      P      06 50 22.1 +0.4
ARA0   ARCESS Array S  39.17 331  eP     P      06 50 21.7  0.0
ARCES  ARCESS Array B  39.17 331  P      P      06 50 22.1 +0.4
       comp=Z,25nm,0.6s,baz=90,slow=7.9,SNR=119
ARCES                             PcP    PcP    06 52 30.3 -0.5
       comp=Z,9.3nm,1.0s,baz=103,slow=5.5,SNR=1.4
ARCES                             LR     LR     07 07 55.4
       comp=Z,716nm,19.7s,baz=75,slow=38
ARCES  ARCESS Array B  39.17 331  P      P      06 50 22.2 +0.5
ARCES                             pmax   pmax
       comp=Z,25nm,0.7s
ARCES  ARCESS Array B  39.17 331  P      P      06 50 22.2 +0.5
ARCES                             IAmb   IAmb   06 50 22.8
       comp=Z,25nm,0.7s
YSS    Yuzh-Sakhalins  39.42  65  eP     P      06 50 23.8 -0.3
YSS                               pmax   pmax
       comp=Z,10.0nm,0.8s
YSS                               MLR    MLR
       comp=Z,3µm,12.0s
YSS                               MLR    MLR
       comp=N,1µm,11.0s
YSS                               MLR    MLR
       comp=E,2µm,11.0s
YSS    Yuzh-Sakhalins  39.42  65  P      P      06 50 23.6 -0.4
MDUB   Mudurnu         39.78 284  P      P      06 50 27.7 +0.4
KTK1   Kautokeino      39.91 330  eP     P      06 50 28.4 +0.6
HAMF   Hammerfest      39.95 333  eP     P      06 50 28.9 +0.8
PABE   Paberze         40.09 309  eP     P      06 50 30.2 +0.7
ASAJ   Asahikawa       40.24  69  P      P      06 50 30.4 -0.5
       comp=E,12nm,0.8s,baz=262,slow=7.5,SNR=8.4
ASAJ                              PcP    PcP    06 52 34.5 -0.1
       comp=E,1.7nm,0.4s,baz=251,slow=14,SNR=1.1
ASAJ   Asahikawa       40.24  69  P      P      06 50 30.6 -0.3
ASAJ                              pmax   pmax
       comp=Z,49nm,1.3s
JKA    Kamikawa-asahi  40.25  69  P      P      06 50 30.6 -0.4
JKA                               IAmb   IAmb   06 50 31.3
       comp=Z,49nm,1.3s
MAT    Matsushiro      40.26  82  P      P      06 50 29.4 -1.8
MJAR   Matsushiro Arr  40.26  82  P      P      06 50 29.6 -1.6
       comp=Z,4.9nm,0.9s,baz=301,slow=8.0,SNR=10.0
MJAR                              LR     LR     07 08 31.7
       comp=Z,515nm,18.4s,baz=310,slow=38
MJAR   Matsushiro Arr  40.26  82  P      P      06 50 30.9 -0.3
MJAR                              pmax   pmax
       comp=Z,4.0nm,0.9s
MJAR   Matsushiro Arr  40.26  82  P      P      06 50 30.9 -0.3
HARR   Harsova         40.45 292 ⇑P      P      06 50 33.7 +1.1
TESR   Tescani         40.69 295 ⇓P      P      06 50 35.4 +0.8
PRAR   RASCA           40.70 296 ⇓P      P      06 50 35.4 +0.7
CSS    Mathiatis       40.72 276  P      P      06 50 35.1 +0.1
SUW    Suwalki         40.83 307  eP     P      06 50 35.4 -0.2
SUW    Suwalki         40.83 307  P      P      06 50 35.1 -0.5
SUW                               pmax   pmax
       comp=Z,49nm,1.2s
SUW    Suwalki         40.83 307  P      P      06 50 35.1 -0.5
SUW                               IAmb   IAmb   06 50 55.0
       comp=Z,49nm,1.2s
VRI    Vrincioaia      40.85 294 ⇓P      P      06 50 37.2 +1.2
PLOR   Plostina        40.91 294 ⇑P      P      06 50 38.1 +1.7
PLOR                             ⇑P      pP     06 50 38.5 -2.1
BIZ    Bicaz           40.91 296 ⇑P      P      06 50 37.4 +1.0
JETT   Jettan, Norway  40.95 331  eP     P      06 50 37.6 +1.0
LEF    Lefka           40.95 276 ⇑P      P      06 50 39.0 +2.1
ISR    Istrita         41.23 293 ⇑P      P      06 50 41.3 +2.2
BURAR  Bucovina Array  41.27 297 ⇓P      P      06 50 40.3 +0.8
BURAR  Bucovina Array  41.27 297  P      P      06 50 39.7 +0.2
BUR08  Bucovina Ar. S  41.27 297  P      P      06 50 39.8 +0.3
LVV    L'vov           41.36 300  eP     P      06 50 41.0 +0.9
MA2    Magadan         41.37  44 ceP     P      06 50 39.9 -0.2
MA2                               pmax   pmax
       comp=Z,30nm,2.5s
MA2    Magadan         41.37  44  P      P      06 50 39.9 -0.2
MA2                                      PcP    06 52 37.8 -0.2
ISP    Isparta         41.38 281  P      P      06 50 40.6  0.0
ISP                               pmax   pmax
       comp=Z,25nm,0.9s
ISP    Isparta         41.38 281  P      P      06 50 40.5  0.0
ERM    Erimo           41.41  72  P      P      06 50 40.6 +0.1
ERM                               pmax   pmax
       comp=Z,58nm,1.2s
ERM    Erimo           41.41  72  P      P      06 50 40.6 +0.1
ERM                               IAmb   IAmb   06 50 52.6
       comp=Z,58nm,1.2s
TRO    Tromso          41.48 331  eP     P      06 50 41.6 +0.8
MLR    Muntele Rosu    41.49 294 ⇑P      P      06 50 42.2 +0.8
MLR    Muntele Rosu    41.49 294  P      P      06 50 42.2 +0.8
MLR                               pmax   pmax
       comp=Z,11nm,0.7s
MLR    Muntele Rosu    41.49 294  P      P      06 50 42.2 +0.8
DOPR   Dopca           41.70 295 ⇓P      P      06 50 44.7 +1.8
SEY    Seymchan        41.75  39 ⇓eP     P      06 50 43.1  0.0
SOCY   Socotra         41.77 230  P      P      06 50 42.2 -1.6
BJO1   Bjornoya        41.88 338  eP     P      06 50 44.7 +0.7
TPTI                   41.91 162  P      P      06 50 46.4 +1.6
       comp=Z,11nm,1.5s
ARCR   ARCALIA         41.99 296 ⇑P      P      06 50 47.5 +2.2
VOIR                   42.10 294 ⇓P      P      06 50 46.9 +0.6
KWP    Kalwaria Pacla  42.24 301  eP     P      06 50 48.9 +1.6
KWP    Kalwaria Pacla  42.24 301  P      P      06 50 48.5 +1.2
KWP                               pmax   pmax
       comp=Z,46nm,0.8s
KWP    Kalwaria Pacla  42.24 301  P      P      06 50 48.5 +1.2
KWP                               IAmb   IAmb   06 50 49.8
       comp=Z,46nm,0.8s
ARR    Arges           42.40 294 ⇑P      P      06 50 50.0 +1.3
TGY    Tagaytay City   42.42 124  LR     LR     07 07 51.2
       comp=Z,343nm,18.5s,baz=286,slow=35
MANT   Manisa          42.47 283  P      P      06 50 49.8 +0.3
MANT                              IAmb   IAmb   06 51 15.2
       comp=Z,34nm,1.2s
N2IH   Innhavet        42.57 328  eP     P      06 50 50.3 +0.7
UPP    Uppsala         42.70 316  eP     P      06 50 51.3 +0.5
KOLS   Kolonicke sedl  42.72 300  eP     P      06 50 52.0 +0.7
KOLS   Kolonicke sedl  42.72 300  eP     P      06 50 51.9 +0.7
N2ST   Straumen        42.73 328  eP     P      06 50 51.5 +0.5
PSI    Prapat          42.76 160  P      P      06 50 53.2 +1.4
       comp=Z,5.5nm,0.6s,baz=359,slow=5.2,SNR=5.2
PSI    Prapat          42.76 160  P      P      06 50 52.2 +0.3
PSI                               pmax   pmax
       comp=Z,8.0nm,0.6s
FAUS   Fauske          42.85 328  eP     P      06 50 52.5 +0.5
RPSI   Rantau Prapat   42.86 160  P      P      06 50 52.2 -0.4
N2TV   T¥rnvik         42.90 328  eP     P      06 50 53.2 +0.9
SPA0   Spitsbergen Ar  43.04 344  P      P      06 50 52.4 -1.0
SPA0   Spitsbergen Ar  43.04 344  eP     P      06 50 54.1 +0.7
SPITS  Spitsbergen Ar  43.04 344  P      P      06 50 54.4 +0.9
       comp=Z,12nm,0.6s,baz=125,slow=17,SNR=49
SPITS                             PcP    PcP    06 52 43.2 -0.1
       comp=Z,12nm,0.8s,baz=134,slow=4.2,SNR=2.1
NBB08  Skaug oppvekst  43.10 328  eP     P      06 50 54.5 +0.5
DRGR                   43.15 297 ⇑P      P      06 50 55.9 +1.0
CRVS   Cervenica-Dubn  43.24 300  eP     P      06 50 56.1 +0.7
CRVS   Cervenica-Dubn  43.24 300  eP     P      06 50 56.1 +0.7
NBB05  Inndyr          43.36 327  eP     P      06 50 56.8 +0.7
LOF    Lofoten         43.46 329  eP     P      06 50 56.8 -0.1
NBB30  Finnes          43.48 327  eP     P      06 50 57.8 +0.7
GZR    Gura Zlata      43.61 295 ⇑P      P      06 50 59.3 +0.8
N2SV   S¸rv¥gen        43.68 328  eP     P      06 50 58.3 -0.3
KONS   Konsvik         43.78 326  eP     P      06 51 00.1 +0.7
NIE    Niedzica        43.80 301  eP     P      06 51 01.9 +2.0
STOK   Stokkvaagen     43.84 326  eP     P      06 51 00.5 +0.6
OJC    Ojcow           43.85 302  eP     P      06 51 01.3 +1.0
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OJC    Ojcow           43.85 302  P      P      06 51 01.2 +1.0
OJC                               pmax   pmax
       comp=Z,24nm,0.9s
OJC    Ojcow           43.85 302  P      P      06 51 01.2 +1.0
OJC                               IAmb   IAmb   06 51 02.2
       comp=Z,24nm,0.9s
GSI    Gunungsitoli    43.89 163  P      P      06 51 01.5 +0.5
GSI    Gunungsitoli    43.89 163  P      P      06 51 01.4 +0.5
       comp=Z,1µmcomp=Z,85nm,1.0s
KBS    Kingsbay        44.01 345 deP     P      06 51 02.2 +1.0
KBS                               pmax   pmax
       comp=Z,34nm,1.3s
KBS    Kingsbay        44.01 345  P      P      06 51 00.9 -0.3
KBS                               IAmb   IAmb   06 51 03.2
       comp=Z,49nm,1.2s
KBS    Kingsbay        44.01 345  eP     P      06 51 01.7 +0.5
KBS    Kingsbay        44.01 345  i P    P      06 51 01.4 +0.2
KBS                               IAmb   IAmb   06 51 02.1
       comp=Z,47nm,0.7s
HERR   Herculane       44.04 294 ⇑P      P      06 51 02.7 +0.8
VTS    Vitosha         44.38 291 ⇑P      P      06 51 06.5 +1.7
VTS    Vitosha         44.38 291  P      P      06 51 05.6 +0.7
VTS                               pmax   pmax
       comp=Z,10.0nm,0.7s
VTS    Vitosha         44.38 291  P      P      06 51 05.6 +0.7
NSS    Namsos          44.53 324  eP     P      06 51 06.2 +0.7
PSZ    Piszkesteto     44.55 299  P      P      06 51 06.7 +0.6
PSZ                               pmax   pmax
       comp=Z,8.0nm,0.9s
PSZ    Piszkesteto     44.55 299  P      P      06 51 06.7 +0.6
MNSI   Mandailing Nat  44.85 160  P      P      06 51 09.8 +1.2
       comp=Z,35nm,0.5s
VYHS   Vyhne           45.02 300  eP     P      06 51 11.5 +1.8
VYHS   Vyhne           45.02 300  eP     P      06 51 11.5 +1.8
NC405  NORSAR Array S  45.32 319  P      P      06 51 11.9  0.0
MORC   Moravsky Berou  45.37 302 ⇑P      P      06 51 13.4 +0.9
MORC   Moravsky Berou  45.37 302  eP     P      06 51 13.3 +0.8
MORC   Moravsky Berou  45.37 302  P      P      06 51 13.1 +0.6
MORC                              pmax   pmax
       comp=Z,8.0nm,0.8s
MORC   Moravsky Berou  45.37 302  P      P      06 51 13.1 +0.6
VAY    Valandovo       45.38 289  i P    P      06 51 14.3 +1.7
STIP   Stip            45.48 290  i P    P      06 51 13.4  0.0
NC602  NORSAR Array S  45.49 319  P      P      06 51 13.0 -0.2
NC602  NORSAR Array S  45.49 319  eP     P      06 51 13.5 +0.3
NB201  NORSAR Array S  45.53 319  P      P      06 51 13.3 -0.3
SRO2   Moca            45.55 299  eP     P      06 51 15.1 +1.2
SRO2                              pmax   pmax
       comp=Z,21nm,0.7s
SRO2   Moca            45.55 299  eP     P      06 51 15.1 +1.2
NB2    NORSAR Subarra  45.57 319  P      P      06 51 14.0 +0.1
       comp=Z,13nm,0.6s,baz=76,slow=7.9
NOA    NORSAR Array B  45.57 319  P      P      06 51 14.1 +0.1
       comp=Z,11nm,0.5s,baz=76,slow=7.8,SNR=75
NOA                               LR     LR     07 10 57.2
       comp=Z,836nm,18.8s,baz=85,slow=37
SRO    Srobarova       45.59 300  eP     P      06 51 16.9 +2.8
SRO    Srobarova       45.59 300  eP     P      06 51 16.9 +2.8
JAVC   Velka Javorina  45.61 301  eP     P      06 51 16.4 +2.0
KRLC   Kraliky         45.73 303  eP     P      06 51 16.1 +0.8
KRLC   Kraliky         45.73 303  eP     P      06 51 16.1 +0.8
NC204  NORSAR Array S  45.73 319  P      P      06 51 15.5 +0.3
KSP    Ksiaz           45.76 304  eP     P      06 51 16.3 +0.9
NAO01  NORSAR Array S  45.77 319  P      P      06 51 15.4 -0.1
NBO00  NORSAR Array S  45.78 319  P      P      06 51 15.4 -0.1
SMOL   Smolenice       45.88 301  eP     P      06 51 18.2 +1.7
SMOL                              pmax   pmax
       comp=Z,4.0nm,0.8s
SMOL   Smolenice       45.88 301  eP     P      06 51 18.2 +1.7
OSTC   Ostas           45.90 304  eP     P      06 51 16.7  0.0
DPC    Dobruska-Polom  45.91 303  eP     P      06 51 17.8 +1.1
DPC    Dobruska-Polom  45.91 303  eP     P      06 51 17.8 +1.1
DIVS   Divibare        45.94 294  P      P      06 51 17.8 +0.6
DIVS                              IAmb   IAmb   06 51 24.5
       comp=Z,16nm,0.9s
MORH   Mrgy, Hungar    45.98 297 ⇑P      P      06 51 17.8 +0.6
CHVC   Chvalec         45.99 304  eP     P      06 51 18.1 +0.8
MODS   Modra-Piesok    46.03 301  eP     P      06 51 17.7  0.0
MODS                              pmax   pmax
       comp=Z,11nm,1.1s
MODS   Modra-Piesok    46.03 301  eP     P      06 51 17.7  0.0
UPC    Upice           46.04 304  eP     P      06 51 18.7 +1.0
UPC    Upice           46.04 304  eP     P      06 51 18.7 +1.0
OSL    Oslo            46.08 318  eP     P      06 51 18.7 +0.9
VRAC   Vranov          46.11 302  eP     P      06 51 19.5 +1.2
ZST    Bratislava      46.20 300  eP     P      06 51 20.5 +1.5
ZST    Bratislava      46.20 300  eP     P      06 51 20.5 +1.5
KRUC   Moravsky        46.32 302  eP     P      06 51 21.1 +1.2
DOMB   Dombas          46.33 321  eP     P      06 51 20.2 +0.4
AGG    Agios Georgios  46.57 287  P      P      06 51 21.6 -0.5
AGG                               pmax   pmax
       comp=Z,20nm,1.1s
AGG    Agios Georgios  46.57 287  P      P      06 51 21.6 -0.5
AGG                               IAmb   IAmb   06 51 23.9
       comp=Z,20nm,1.1s
IDI    Anoyia          46.58 281 ⇓P      P      06 51 22.3 +0.1
IDI    Anoyia          46.58 281  P      P      06 51 22.2  0.0
IDI                               IAmb   IAmb   06 51 35.1
       comp=Z,21nm,1.0s
PETK   Petropavlovsk-  46.67  52  P      P      06 51 22.7 +0.1
       comp=Z,2.6nm,0.8s,baz=264,slow=4.7,SNR=6.5
PETK                              LR     LR     07 12 24.3
       comp=Z,672nm,18.5s,baz=286,slow=38
PETK   Petropavlovsk-  46.67  52  P      P      06 51 23.0 +0.4
PETK   Petropavlovsk-  46.67  52  P      P      06 51 23.0 +0.4
RUE    Ruedersdorf     46.68 307  eP     P      06 51 23.5 +0.8
       comp=Z,15nm,0.7s,baz=66,slow=7.7
KONO   Kongsberg       46.70 317 ⇑eP     P      06 51 23.7 +0.9
KONO                              pmax   pmax
       comp=Z,33nm,1.3s
KONO   Kongsberg       46.70 317  P      P      06 51 23.7 +0.9
KONO   Kongsberg       46.70 317  eP     P      06 51 23.5 +0.8
PDSI   Padang          46.71 159  P      P      06 51 24.1 +0.8
       comp=Z,1µmcomp=Z,12nm,1.0s
MOL    Molde           46.88 322  eP     P      06 51 24.6 +0.6
PVCC   Panska Ves      46.90 304  eP     P      06 51 25.6 +1.2
PVCC   Panska Ves      46.90 304  eP     P      06 51 25.6 +1.2
SKAR   Skarslia        47.04 319  eP     P      06 51 25.8 +0.3
CONA   Conrad Observa  47.07 301  eP     P      06 51 27.5 +1.6
       comp=Z,11nm,0.9s,SNR=6.3
PRU    Pruhonice       47.11 304  eP     P      06 51 26.8 +0.7
PRU    Pruhonice       47.11 304  eP     P      06 51 26.8 +0.7
BRG    Berggiesshubel  47.14 305  i P    P      06 51 27.3 +1.0
BRG                               Amp           06 51 30.9
       comp=Z,9.9nm,0.9s
BRG                               ex     x      06 53 15.6
BRG                               Amp           06 53 19.8
       comp=Z,6.3nm,0.9s
BRG                               Amp           07 12 27.0
       comp=E,0.6nm,8.1s
BRG                               Amp           07 12 30.0
       comp=Z,2.6nm,13.5s
BRG                               Amp           07 12 33.0
       comp=N,1.9nm,20.4s
BRG                               ex     x      07 44 34.0
BRG                               Amp           07 44 35.7
       comp=Z,21nm,1.7s
BRG    Berggiesshubel  47.14 305  eP     P      06 51 27.3 +1.0
       comp=Z,4.9nm,0.8s,baz=66,slow=7.7
AKN    Aaknes          47.23 321  eP     P      06 51 27.5 +0.6
CLL    Collm           47.54 306 ⇑iP     P      06 51 30.2 +0.8
       comp=Z,19nm,0.6s
CLL                               i sP   sP     06 51 35.3 -0.1
CLL                               i PP   PP     06 53 17.2 -3.4
CLL                               i pPP         06 53 24.6
CLL                               eSS    SS     07 02 12.0  +21
CLL    Collm           47.54 306  P      P      06 51 30.0 +0.6
CLL                               pmax   pmax
       comp=Z,20nm,0.6s
CLL    Collm           47.54 306  P      P      06 51 30.0 +0.6
CLL    Collm           47.54 306  eP     P      06 51 30.4 +1.0
       comp=Z,17nm,0.6s,baz=66,slow=7.7
PBCC   Pribram         47.55 303  eP     P      06 51 29.9 +0.4
ARSA   Arzberg         47.55 300  eP     P      06 51 30.5 +0.9
       comp=Z,7.2nm,0.8s
HOMB   Homborsund      47.65 316  eP     P      06 51 31.3 +1.1
HOMB   Homborsund      47.65 316  i P    P      06 51 32.3 +2.1
CKRC   Cesky Krumlov   47.69 302  eP     P      06 51 31.7 +1.0
SBUM   Sibu            47.69 143  P      P      06 51 32.5 +1.5
SBUM                              IAmb   IAmb   06 51 39.5
       comp=Z,18nm,0.9s
KSM    Kuching         47.76 146  P      P      06 51 31.9 +0.4
HYA    Hoyanger        47.89 320  eP     P      06 51 32.6 +0.6
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KHC    Kasperske Hory  48.01 303 ⇑eP     P      06 51 34.3 +1.1
KHC                               pmax   pmax
       comp=Z,25nm,1.7s
KHC    Kasperske Hory  48.01 303  eP     P      06 51 33.0 -0.2
KHC    Kasperske Hory  48.01 303  P      P      06 51 33.9 +0.7
GEC2   GERESS Array S  48.05 302  P      P      06 51 34.3 +0.7
GEC2   GERESS Array S  48.05 302  eP     P      06 51 34.7 +1.2
       comp=Z,2.2nm,0.8s,baz=66,slow=7.7
GERES  GERESS Array B  48.05 302  P      P      06 51 34.5 +1.0
       comp=Z,2.3nm,0.7s,baz=64,slow=8.7,SNR=21
GERES                             LR     LR     07 13 39.8
       comp=Z,361nm,20.3s,baz=66,slow=38
GERES  GERESS Array B  48.05 302  P      P      06 51 34.3 +0.7
ODD1   Odda            48.06 318  eP     P      06 51 34.6 +1.2
SOKA   Soboth          48.09 299  eP     P      06 51 34.7 +0.8
       comp=Z,5.6nm,0.7s
BSEG   Bad Segeberg    48.13 310  eP     P      06 51 34.3 +0.4
       comp=Z,5.6nm,0.7s,baz=66,slow=7.7
FLTG   Flechtingen     48.19 308  eP     P      06 51 35.0 +0.6
       comp=Z,6.5nm,0.7s,baz=66,slow=7.7
TANN   Tannenbergstha  48.19 305  eP     P      06 51 35.7 +1.2
       comp=Z,5.5nm,0.8s,baz=66,slow=7.7
NKC    Novy Kostel     48.27 305  eP     P      06 51 36.1 +1.0
NKC    Novy Kostel     48.27 305  eP     P      06 51 36.1 +1.0
WERD   Werda           48.27 305  eP     P      06 51 36.5 +1.3
       comp=Z,3.5nm,0.8s,baz=66,slow=7.7
SNART  Snartemo        48.28 316  eP     P      06 51 35.4 +0.3
SNART  Snartemo        48.28 316  i P    P      06 51 33.0 -2.0
SNART                             i P    pP     06 51 36.6 -2.6
FOO    Floro           48.28 321  eP     P      06 51 35.2 +0.2
GUNZ   Gunzen          48.28 305  eP     P      06 51 36.3 +1.0
       comp=Z,8.2nm,0.7s,baz=66,slow=7.7
GUNZ                              epP    sP     06 51 43.6 +2.4
WERN   Wernitzgruen    48.29 305  eP     P      06 51 36.3 +1.0
       comp=Z,5.2nm,0.8s,baz=66,slow=7.7
NEUB   Neuenburg       48.29 306  eP     P      06 51 36.3 +1.1
       comp=Z,14nm,0.7s,baz=66,slow=7.7
NEUB                              epP    sP     06 51 43.2 +2.0
BLS5   Blasjo          48.30 318  eP     P      06 51 35.9 +0.7
MYLDM  Lahad Datu      48.33 134  P      P      06 51 36.6 +0.7
PDKS   Podkum          48.36 299  i P    P      06 51 37.0 +1.0
WET    Wettzell        48.43 303  eP     P      06 51 37.9 +1.5
       comp=Z,3.6nm,0.7s,baz=66,slow=7.7
BOJS   Bojanci         48.43 298  i P    P      06 51 37.7 +1.3
OBKA   Obir            48.46 299  i P    P      06 51 37.8 +1.0
       comp=Z,12nm,0.8s
BER    Bergen          48.53 319  eP     P      06 51 37.5 +0.6
ASK    Askoy           48.56 319  eP     P      06 51 38.0 +0.8
MANZ   Manzenberg      48.56 304  eP     P      06 51 38.7 +1.3
       comp=Z,4.1nm,0.8s,baz=66,slow=7.7
MANZ                              epP    sP     06 51 46.0 +2.6
ROTZ   Rotzenmuhle     48.59 304  eP     P      06 51 39.2 +1.6
       comp=Z,4.5nm,0.8s,baz=66,slow=7.7
NRDL   Niedersach Rie  48.77 308  eP     P      06 51 40.0 +1.2
       comp=Z,8.2nm,0.8s,baz=66,slow=7.7
NRDL                              epP    sP     06 51 47.0 +2.2
KBA    Koelnbreinsper  48.98 300  eP     P      06 51 41.6 +0.8
       comp=Z,14nm,0.8s
RJOB   Jochberg        49.05 301  eP     P      06 51 42.5 +1.3
       baz=66,slow=7.7
GRA1   Grafenberg Arr  49.21 304  P      P      06 51 42.0 -0.4
GRA1                              IAmb   IAmb   06 51 52.5
       comp=Z,17nm,0.8s
GRF    Grafenberg Arr  49.21 304  P      P      06 51 42.0 -0.4
GRF                               pmax   pmax
       comp=Z,17nm,0.8s
GRF    Grafenberg Arr  49.21 304  eP     P      06 51 44.2 +1.8
       comp=Z,11nm,0.7s,baz=66,slow=7.7
GRFO   Grafenberg      49.21 304  P      P      06 51 41.8 -0.5
GRFO                              pmax   pmax
       comp=Z,17nm,0.9s
GRFO   Grafenberg      49.21 304  P      P      06 51 41.8 -0.5
GRFO                              IAmb   IAmb   06 51 52.4
       comp=Z,17nm,0.9s
GTTG   Gottingen       49.21 307  eP     P      06 51 43.9 +1.6
       comp=Z,17nm,0.8s,baz=66,slow=7.7
GTTG                              epP    sP     06 51 50.5 +2.2
UBBA   Unterbreizbach  49.48 306  eP     P      06 51 46.0 +1.8
       baz=66,slow=7.7
ABTA   Abfaltersbach   49.63 300  eP     P      06 51 46.7 +1.0
       comp=Z,1.6nm,0.5s
FUR    Furstenfeldbru  49.80 302  eP     P      06 51 48.3 +1.4
       comp=Z,12nm,0.8s,baz=66,slow=7.7
WTTA   Wattenberg      49.96 301  eP     P      06 51 49.4 +1.1
       comp=Z,30nm,0.7s,SNR=9.3
WATA   Walderalm       49.96 301  i P    P      06 51 49.1 +0.8
       comp=Z,18nm,0.9s,SNR=7.2
IBBN   Ibbenburen      50.17 309  eP     P      06 51 50.9 +1.3
       comp=Z,13nm,0.6s,baz=66,slow=7.7
SQTA   Sankt Quirin    50.24 301  eP     P      06 51 51.3 +0.9
       comp=Z,23nm,0.7s,SNR=10
MOTA   Moosalm         50.25 302  eP     P      06 51 51.1 +0.6
       comp=Z,8.1nm,0.7s
RETA   Reutte          50.40 302  eP     P      06 51 52.5 +1.0
       comp=Z,9.8nm,0.8s
FETA   Feichten        50.62 301  eP     P      06 51 54.0 +0.7
       comp=Z,13nm,0.9s,SNR=6.0
TNS    Taunus Mts      50.63 306  eP     P      06 51 54.4 +1.3
       comp=Z,4.8nm,0.7s,baz=66,slow=7.7
DAG    Danmarks Havn   50.69 343 ⇑iP     P      06 51 53.1  0.0
       comp=Z,31nm,0.7s
DAG    Danmarks Havn   50.69 343 ⇑iP     P      06 51 53.1  0.0
DAG                               pmax   pmax
       comp=Z,31nm,0.7s
DAG    Danmarks Havn   50.69 343 ⇑iP     P      06 51 53.1  0.0
DAG                               IAmb   IAmb   06 51 53.9
       comp=Z,31nm,0.7s
TEOL   Teolo           50.77 299  P      P      06 51 53.8 -0.4
TEOL                              IAmb   IAmb   06 51 57.2
       comp=Z,34nm,1.0s
STU    Stuttgart       50.80 304  eP     P      06 51 55.5 +1.1
       comp=Z,6.3nm,0.7s,baz=66,slow=7.7
DAVA   Damuels         51.03 302  eP     P      06 51 57.2 +0.8
       comp=Z,4.5nm,0.9s
BFO    Black Forest    51.51 304  P      P      06 52 00.5 +0.7
BFO                               pmax   pmax
       comp=Z,18nm,1.3s
BFO    Black Forest    51.51 304  P      P      06 52 00.5 +0.7
BFO    Black Forest    51.51 304  eP     P      06 52 00.7 +0.9
       comp=Z,4.9nm,0.8s,baz=66,slow=7.7
TUE    Stuetta         51.72 301  P      P      06 52 02.1 +0.5
TUE                               IAmb   IAmb   06 52 12.7
       comp=Z,20nm,0.8s
DBG    Daneborg        52.16 341  i P    P      06 52 04.3 +0.1
DBG                               IAmb   IAmb   06 52 05.6
       comp=Z,10nm,0.8s
ECH    Echery          52.26 304  P      P      06 52 05.6 +0.2
ECH                               pmax   pmax
       comp=Z,8.0nm,0.9s
ECH    Echery          52.26 304  P      P      06 52 05.6 +0.2
BCLA   Clavier         52.36 307  dP     P      06 52 06.6 +0.5
MSSA   Maissana        52.61 299  P      P      06 52 08.7 +0.6
SENIN  Lac Senin/Sane  53.02 302  P      P      06 52 12.0 +0.7
BNI    Bardonecchia    54.03 301  P      P      06 52 19.5 +0.9
BNI                               pmax   pmax
       comp=Z,54nm,1.4s
BNI    Bardonecchia    54.03 301  P      P      06 52 19.5 +0.9
MRSI   Marisa          54.11 133  P      P      06 52 26.5 +7.2
PCI    Palu            54.21 136  P      P      06 52 16.2 -3.8
SCO    Scoresbysund    54.57 337  i P    P      06 52 23.0 +1.1
       comp=Z,26nm,1.1s
SCO    Scoresbysund    54.57 337  P      P      06 52 23.3 +1.4
SCO                               pmax   pmax
       comp=Z,21nm,1.1s
SCO    Scoresbysund    54.57 337  P      P      06 52 23.3 +1.4
SCO                               IAmb   IAmb   06 52 24.4
       comp=Z,21nm,1.1s
SCO    Scoresbysund    54.57 337  i P    P      06 52 23.0 +1.1
SCO                               IAmb   IAmb   06 52 24.8
       comp=Z,26nm,1.1s
ESK    Eskdalemuir     54.73 316  P      P      06 52 22.2 -1.1
ESK                               pmax   pmax
       comp=Z,26nm,0.9s
ESK    Eskdalemuir     54.73 316  P      P      06 52 22.2 -1.1
ESK                               IAmb   IAmb   06 52 32.3
       comp=Z,26nm,0.9s
SSB    Saint Sauveur   55.24 302  P      P      06 52 27.8 +0.5
SSB                               pmax   pmax
       comp=Z,11nm,0.9s
SSB    Saint Sauveur   55.24 302  P      P      06 52 27.8 +0.5
TTSI   Tana Toraja     56.05 137  P      P      06 52 39.0 +5.7
EUNU   Eureka          56.06 358  P      P      06 52 33.3 +0.6
EUNU                              IAmb   IAmb   06 52 33.6
       comp=Z,18nm,1.1s
A21K   Barrow          56.79  20  P      P      06 52 37.9  0.0
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             baz=310
A21K  Barrow            56.79  20    P        P        06 52 37.6 -0.3
A21K                                 IAmb     IAmb     06 52 39.1
             comp=Z,32nm,1.4s
SPSI  Sidrap Palu       56.82 138    P        P        06 52 43.7 +4.9
KEST  Kesra             57.14 290    P        P        06 52 40.5 -0.5
             comp=Z,3.5nm,0.6s,baz=318,slow=3.4,SNR=5.7
KEST  Kesra             57.14 290    P        P        06 52 41.9 +0.9
SUMG  Summit            57.37 343  i P        P        06 52 43.0 +0.5
             comp=Z,22nm,0.7s
SUMG  Summit            57.37 343    P        P        06 52 42.9 +0.5
SUMG                                 pmax     pmax
             comp=Z,31nm,1.2s
SUMG  Summit            57.37 343    P        P        06 52 42.9 +0.4
SUMG                                 IAmb     IAmb     06 52 51.9
             comp=Z,31nm,1.2s
SUMG  Summit            57.37 343  i P        P        06 52 43.0 +0.5
SUMG                                 IAmb     IAmb     06 52 46.8
             comp=Z,22nm,0.7s
ANM   Nome              58.44  29    P        P        06 52 50.6 +1.0
             baz=307
ANM   Nome              58.44  29    P        P        06 52 50.5 +0.9
ANM                                  pmax     pmax
             comp=Z,17nm,1.1s
ANM   Nome              58.44  29    P        P        06 52 50.5 +0.9
ANM                                  IAmb     IAmb     06 52 59.3
             comp=Z,17nm,1.1s
TULEG Thule             58.57 353    P        P        06 52 49.8 -0.6
TULEG Thule             58.57 353  i P        P        06 52 48.8 -1.6
TULEG                                IAmb     IAmb     06 52 50.7
             comp=Z,7.2nm,0.6s
ICESG Greenland Ices    60.16 340  i P        P        06 53 02.0 +0.2
ICESG                                IAmb     IAmb     06 53 05.0
             comp=Z,14nm,0.7s
TOLK  Toolik Lake Re    60.41  20    P        P        06 53 02.8 -0.4
             baz=317
TOLK  Toolik Lake Re    60.41  20    P        P        06 53 03.1 -0.1
TOLK                                 IAmb     IAmb     06 53 03.7
             comp=Z,9.7nm,0.8s
SIJI  Sorong            60.46 125    P        P        06 53 03.5 -0.7
             comp=Z,3.7nm,0.4s,baz=310,slow=17
IMAR  Indian Mountai    61.20  24    P        P        06 53 08.3 -0.3
COLD  Coldfoot          61.29  22    P        P        06 53 09.3 +0.1
             baz=317,SNR=16
COLD  Coldfoot          61.29  22    P        P        06 53 08.5 -0.6
COLD                                 IAmb     IAmb     06 53 10.4
             comp=Z,24nm,1.2s
KMBO  Kilima Mbogo      62.23 238    P        P        06 53 16.4 -0.1
             comp=Z,0.5nm,0.3s,baz=66,slow=18,SNR=1.5
KMBO                                 LR       LR       07 23 02.4
             comp=Z,208nm,18.2s,baz=78,slow=39
BMAR  Burnt Mountain    62.55  20    P        P        06 53 17.9 +0.1
ILULI Ilulissat         62.60 344    P        P        06 53 17.6 -0.3
ILULI                                pmax     pmax
             comp=Z,30nm,0.8s
ILULI Ilulissat         62.60 344    P        P        06 53 17.6 -0.3
MLY   Manley            62.76  23    P        P        06 53 19.3 +0.1
             baz=318,SNR=7.7
I23K  Minto, Yukon-K    63.06  23    P        P        06 53 21.4 +0.4
             baz=319
I23K  Minto, Yukon-K    63.06  23    P        P        06 53 21.4 +0.4
I23K                                 IAmb     IAmb     06 53 30.2
             comp=Z,26nm,1.2s
FYU   Fort Yukon        63.07  20    P        P        06 53 21.6 +0.5
FYU                                  IAmb     IAmb     06 53 31.3
             comp=Z,32nm,1.4s
CHUM  Lake Minchumin    63.14  25    P        P        06 53 22.4 +0.8
             baz=317,SNR=5.5
BPAW  Bear Paw Mtn.     63.38  24    P        P        06 53 23.3 +0.1
             baz=318,SNR=7.2
BPAW  Bear Paw Mtn.     63.38  24    P        P        06 53 22.7 -0.5
BPAW                                 IAmb     IAmb     06 53 32.0
             comp=Z,22nm,1.2s
MDM   Murphy Dome       63.52  23    P        P        06 53 23.1 -1.1
MDM                                  IAmb     IAmb     06 53 32.9
             comp=Z,11nm,1.1s
ESBB  Sonseca Array     63.56 300    P        P        06 53 25.8 +0.9
ESBB                                 IAmb     IAmb     06 53 26.0
             comp=Z,15nm,0.8s
ESDC  Sonseca Array     63.56 300    P        P        06 53 24.9  0.0
             comp=Z,8.8nm,0.7s,baz=50,slow=6.8,SNR=66
ESDC                                 LR       LR       07 20 43.2
             comp=Z,134nm,19.0s,baz=5.0,slow=36
ESDC  Sonseca Array     63.56 300    P        P        06 53 25.4 +0.5
NEA2  Nenana            63.56  23    P        P        06 53 24.2 -0.3
             baz=319
POKR  Poker Plat Res    63.62  22    P        P        06 53 25.2 +0.4
             baz=320
TCOL  CIGO, UAF Yank    63.69  22    P        P        06 53 25.6 +0.4
             baz=320
COLA  College           63.69  22    P        P        06 53 25.6 +0.4
             baz=320
COLA  College           63.69  22⇓eP        P        06 53 25.6 +0.4
COLA                                 pmax     pmax
             comp=Z,12nm,1.0s
BWN   Browne            63.77  24    P        P        06 53 26.3 +0.5
KTH   Kantishna Hill    63.81  25    P        P        06 53 26.3 +0.1
PRP   Porcupine Dome    63.82  21    P        P        06 53 26.9 +0.6
             baz=321
PRP   Porcupine Dome    63.82  21    P        P        06 53 27.0 +0.8
PAB   San Pablo         63.88 301    P        P        06 53 28.0 +1.0
PAB                                  pmax     pmax
             comp=Z,17nm,1.0s
PAB   San Pablo         63.88 301    P        P        06 53 28.0 +1.0
PAB                                  IAmb     IAmb     06 53 28.7
             comp=Z,17nm,1.0s
CCB   Clear Creek Bu    63.88  23    P        P        06 53 26.5 +0.1
CCB                                  IAmb     IAmb     06 53 27.3
             comp=Z,14nm,1.2s
PPLA  Purkeypile        63.91  26    P        P        06 53 27.3 +0.4
             baz=317,SNR=5.9
PPLA  Purkeypile        63.91  26    P        P        06 53 27.7 +0.8
PPLA                                 IAmb     IAmb     06 53 39.9
             comp=Z,17nm,0.8s
WRH   Wood River Hil    63.93  23    P        P        06 53 26.4 -0.5
WRH                                  IAmb     IAmb     06 53 27.4
             comp=Z,19nm,1.3s
ILAR  Eielson Array     64.03  22    P        P        06 53 27.0 -0.5
             comp=Z,4.8nm,0.8s,baz=313,slow=4.9,SNR=55
ILAR  Eielson Array     64.03  22    P        P        06 53 27.2 -0.3
ILAR  Eielson Array     64.03  22    P        P        06 53 27.1 -0.3
TRF   Thorofare Moun    64.07  24    P        P        06 53 27.8 -0.2
TRF                                  IAmb     IAmb     06 53 37.3
             comp=Z,9.0nm,0.8s
BATI  Baumata           64.12 138    P        P        06 53 27.6 -1.1
             comp=Z,37nm,0.6s,baz=288,slow=19,SNR=1.3
INK   Inuvik            64.20  15    P        P        06 53 28.4  0.0
             comp=Z,12nm,1.0s,baz=339,slow=8.9,SNR=25
INK   Inuvik            64.20  15    P        P        06 53 28.8 +0.3
INK                                  pmax     pmax
             comp=Z,18nm,1.1s
INK   Inuvik            64.20  15    P        P        06 53 28.8 +0.3
INK                                  IAmb     IAmb     06 53 29.8
             comp=Z,18nm,1.1s
MCK   McKinley          64.26  24    P        P        06 53 29.1  0.0
             baz=319
HDA   Harding Lake      64.30  22    P        P        06 53 28.2 -1.0
             baz=321
SFJD  Kangerlussuaq     64.36 342    P        P        06 53 29.9 +0.4
SFJD                                 pmax     pmax
             comp=Z,20nm,1.0s
SFJD  Kangerlussuaq     64.36 342    P        P        06 53 29.9 +0.4
SFJD                                 IAmb     IAmb     06 53 36.2
             comp=Z,20nm,0.9s
SKT   Skwentna          64.79  26    P        P        06 53 32.2 -0.3
             baz=318
C36M  Paulatuk          64.81  11    P        P        06 53 32.0 -0.4
             baz=337
C36M  Paulatuk          64.81  11    P        P        06 53 32.1 -0.4
WAT2  Susitna Watana    64.95  24    P        P        06 53 32.7 -1.0
             baz=320
EPYK  Eagle Plains      65.22  17    P        P        06 53 34.7 -0.6
             baz=328
EPYK  Eagle Plains      65.22  17    P        P        06 53 35.1 -0.1
EPYK                                 IAmb     IAmb     06 53 35.8
             comp=Z,13nm,1.0s
SCRK  Sand Creek        65.44  22    P        P        06 53 36.4 -0.5
             baz=323
WAT6  Susitna Watana    65.49  24    P        P        06 53 36.4 -0.9
             baz=321
EGAK  Eagle             65.52  20    P        P        06 53 37.1 -0.1
             baz=325
EGAK  Eagle             65.52  20    P        P        06 53 37.3 +0.1
EGAK                                 IAmb     IAmb     06 53 45.0
             comp=Z,36nm,1.4s
PAX   Paxson            65.84  23    P        P        06 53 38.7 -0.7
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             baz=322
PAX   Paxson            65.84  23    P        P        06 53 39.4  0.0
PAX                                  pmax     pmax
             comp=Z,13nm,1.2s
PAX   Paxson            65.84  23    P        P        06 53 39.4  0.0
PAX                                  IAmb     IAmb     06 53 40.9
             comp=Z,12nm,1.2s
SML   Sawmill           65.91  25    P        P        06 53 39.2 -0.7
             baz=320
SML   Sawmill           65.91  25    P        P        06 53 38.1 -1.8
MBAR  Mbarara           65.92 244ceP        P        06 53 41.7 +1.1
MBAR                                 pmax     pmax
             comp=Z,5.0nm,1.0s
SCM   Sheep Creek Mo    66.19  24    P        P        06 53 41.7  0.0
SCM                                  pmax     pmax
             comp=Z,33nm,0.7s
SCM   Sheep Creek Mo    66.19  24    P        P        06 53 41.7  0.0
M24K  Tolsona, Glenn    66.32  24    P        P        06 53 42.9 +0.5
             baz=322
M24K  Tolsona, Glenn    66.32  24    P        P        06 53 43.1 +0.7
BCAR  Beaver Creek A    66.76  21    P        P        06 53 45.7 +0.4
N25K  Chitina, Valde    67.17  23    P        P        06 53 48.4 +0.5
             baz=323
N25K  Chitina, Valde    67.17  23    P        P        06 53 48.6 +0.6
TAM   Tamanrasset       67.54 280    P        P        06 53 51.7 +0.8
TAM                                  pmax     pmax
             comp=Z,7.0nm,0.6s
TAM   Tamanrasset       67.54 280    P        P        06 53 51.7 +0.8
TAM                                  IAmb     IAmb     06 53 53.1
             comp=Z,7.0nm,0.6s
KDAK  Kodiak Island     67.58  29    P        P        06 53 50.1 -0.3
             comp=Z,18nm,1.0s,baz=292,slow=5.8,SNR=8.9
KDAK  Kodiak Island     67.58  29    P        P        06 53 50.8 +0.4
KDAK                                 pmax     pmax
             comp=Z,64nm,1.4s
KDAK  Kodiak Island     67.58  29    P        P        06 53 50.8 +0.4
MCARA McCarthy VSAT     67.80  23    P        P        06 53 52.8 +1.0
             baz=324
MCARA McCarthy VSAT     67.80  23    P        P        06 53 53.2 +1.4
BALM  Baldy             68.28  23    P        P        06 53 55.4 +0.5
HYT   Haines Junctio    69.75  21    P        P        06 54 04.9 +0.8
HYT                                  IAmb     IAmb     06 54 05.5
             comp=Z,14nm,0.8s
FITZ  Fitzroy Crossi    71.90 140    P        P        06 54 17.7 +0.3
FITZ                                 IAmb     IAmb     06 54 23.0
             comp=Z,13nm,0.8s
YKA   Yellowknife Ar    72.57  10    P        P        06 54 20.2 -0.7
             comp=Z,8.7nm,0.8s,baz=344,slow=5.7,SNR=105
YKA                                  LR       LR       07 28 24.7
             comp=Z,183nm,18.5s,baz=0.0,slow=38
TOA0  Torodi Ar. Sit    76.61 275    P        P        06 54 45.1  0.0
TOA0                                 IAmb     IAmb     06 54 52.3
             comp=Z,12nm,0.8s
TORD  Torodi Ar. Bea    76.61 275    P        P        06 54 44.9 -0.3
             comp=Z,12nm,0.8s,baz=37,slow=4.9,SNR=55
TORD                                 S        S        07 04 31.0 -0.5
             comp=Z,1.1nm,1.1s,baz=47,slow=11,SNR=3.9
TORD  Torodi Ar. Bea    76.61 275    P        P        06 54 45.1  0.0
FCC   Fort Churchill    77.54 360    P        P        06 54 49.0 -0.7
FCC                                  pmax     pmax
             comp=Z,43nm,1.5s
FCC   Fort Churchill    77.54 360    P        P        06 54 49.0 -0.7
FCC                                  IAmb     IAmb     06 54 58.3
             comp=Z,43nm,1.5s
WB0   Warramunga Arr    77.64 133    P        P        06 54 50.4 -0.4
WB0                                  IAmb     IAmb     06 54 58.3
             comp=Z,19nm,0.9s
WRAB  Tennant Creek     77.76 134⇓eP        P        06 54 50.5 -0.9
WRAB                                 pmax     pmax
             comp=Z,39nm,1.7s
WRA   Warramunga Arr    77.76 134    P        P        06 54 50.9 -0.5
             comp=Z,13nm,1.0s,baz=332,slow=4.5,SNR=102
WRA                                  LR       LR       07 33 33.1
             comp=Z,27nm,18.0s,baz=65,slow=39
WRA   Warramunga Arr    77.76 134    P        P        06 54 51.4  0.0
WRA                                  pmax     pmax
             comp=Z,2.0nm,1.1s
WRA   Warramunga Arr    77.76 134    P        P        06 54 51.4  0.0
WB2   Warramunga Arr    77.77 134    P        P        06 54 51.4  0.0
WR0   Warramunga Arr    77.88 133    P        P        06 54 51.8 -0.2
WR0                                  IAmb     IAmb     06 54 59.7
             comp=Z,34nm,1.2s
KOWA  Kowa              79.78 280    P        P        06 55 03.1 +0.4
KOWA                                 IAmb     IAmb     06 55 04.1
             comp=Z,19nm,0.7s
AS31  Alice Springs     80.63 136    P        P        06 55 06.8 -0.3
ASAR  Alice Springs     80.63 136    P        P        06 55 06.8 -0.2
             comp=Z,3.0nm,0.5s,baz=326,slow=5.0,SNR=91
FFC   Flin Flon         81.38   4    P        P        06 55 10.1 -0.6
FFC                                  pmax     pmax
             comp=Z,23nm,0.7s
FFC   Flin Flon         81.38   4    P        P        06 55 10.1 -0.6
FFC                                  IAmb     IAmb     06 55 10.9
             comp=Z,23nm,0.7s
B05A  Bryant            84.90  18    P        P        06 55 29.1 +0.1
             baz=340
NLWA  Neilton Lookou    85.30  20    P        P        06 55 30.7 -0.4
NLWA                                 IAmb     IAmb     06 55 40.5
             comp=Z,15nm,1.1s
D03D  Eldon             85.36  19    P        P        06 55 32.2 +0.9
             baz=340
B08A  Colville Reser    85.40  16    P        P        06 55 31.3 -0.3
B08A                                 IAmb     IAmb     06 55 32.9
             comp=Z,14nm,0.8s
MATQ  Matagami          85.42 349    P        P        06 55 31.3 -0.3
             baz=12
BATG  Bathurst New B    85.66 341    P        P        06 55 33.3 +0.5
WALA  Waterton Lakes    85.71  13    P        P        06 55 32.8 -0.4
WALA                                 IAmb     IAmb     06 55 33.7
             comp=Z,9.3nm,0.9s
DBIC  Dimbokro          85.72 275    P        P        06 55 33.3 -0.3
             comp=Z,7.4nm,0.6s,baz=30,slow=5.9,SNR=18
DBIC  Dimbokro          85.72 275    P        P        06 55 33.7 +0.1
DBIC                                 pmax     pmax
             comp=Z,9.0nm,0.7s
DBIC  Dimbokro          85.72 275    P        P        06 55 33.7 +0.1
DBIC                                 IAmb     IAmb     06 55 33.8
             comp=Z,8.8nm,0.7s
KIC   Kosan Boka        85.85 275   ePKIKP    P        06 55 33.9 -0.4
             comp=Z,18nm,0.7s
TIC   Toumodi           85.85 275   ePKIKP    P        06 55 33.8 -0.5
NEW   Newport           85.92  15    P        P        06 55 33.9 -0.2
             baz=344
NEW   Newport           85.92  15    P        P        06 55 34.2  0.0
NEW                                  pmax     pmax
             comp=Z,9.0nm,1.0s
NEW   Newport           85.92  15    P        P        06 55 34.1  0.0
LSQQ  Lebel-sur-Quev    86.01 349    P        P        06 55 34.4 -0.2
             baz=12
ULM   Lac du Bonnet     86.06   1    P        P        06 55 33.1 -1.6
             comp=Z,5.0nm,0.9s,baz=358,slow=6.1,SNR=11
ULM   Lac du Bonnet     86.06   1    P        P        06 55 33.3 -1.4
ULM                                  pmax     pmax
             comp=Z,11nm,1.1s
ULM   Lac du Bonnet     86.06   1    P        P        06 55 33.3 -1.4
C09A  Chrisman Ranch    86.14  16    P        P        06 55 35.6 +0.4
C09A                                 IAmb     IAmb     06 55 36.6
             comp=Z,14nm,0.8s
LIC   Lamto             86.14 275   ePKIKP    P        06 55 34.5 -1.2
             comp=Z,30nm,0.8s
LTY   Liberty           86.17  18    P        P        06 55 35.3 -0.1
E03A  Lebam             86.17  20    P        P        06 55 37.3 +1.9
D63A  Stockholm         86.35 342    P        P        06 55 36.2 -0.1
             baz=19
LON   Longmire          86.39  18    P        P        06 55 37.3 +0.8
LON                                  pmax     pmax
             comp=Z,11nm,1.1s
LON   Longmire          86.39  18    P        P        06 55 37.3 +0.8
LON                                  IAmb     IAmb     06 55 45.5
             comp=Z,11nm,1.1s
D61A  St Aubert, Com    86.64 344    P        P        06 55 37.8 +0.2
             baz=17
PQI   Presque Isle      86.68 342    P        P        06 55 38.1 +0.2
E64A  Bridgewater       86.88 342    P        P        06 55 38.6 -0.2
             baz=19
VLDQ  Val d'Or          87.00 349    P        P        06 55 39.5 +0.1
E07A  Sunnyside         87.00  17    P        P        06 55 39.9 +0.4
E07A                                 IAmb     IAmb     06 55 47.8
             comp=Z,8.4nm,0.8s
E63A  Oxbow             87.01 342    P        P        06 55 39.3 -0.2
             baz=18
E63A  Oxbow             87.01 342    P        P        06 55 39.6 +0.1
E08A  Dider Farm, El    87.24  17    P        P        06 55 39.9 -0.6
E08A                                 IAmb     IAmb     06 55 49.7
             comp=Z,16nm,1.3s
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D58A  Chemin du LacG    87.25 345    P        P        06 55 40.7  0.0
             baz=15
EGMT  Eagleton          87.31  10    P        P        06 55 40.3 -0.8
             baz=349
EGMT  Eagleton          87.31  10    P        P        06 55 40.3 -0.8
DGMT  Dagmar            87.45   6    P        P        06 55 41.7 +0.1
             baz=353,SNR=7.9
DGMT  Dagmar            87.45   6    P        P        06 55 41.5 -0.1
D56A  ZEC Mazanza, M    87.62 347    P        P        06 55 42.4 -0.1
             baz=14
D55A  Sainte-Anne-du    87.77 347    P        P        06 55 43.1 -0.1
             baz=14
MSO   Missoula          87.87  13    P        P        06 55 42.9 -0.8
             baz=346
MSO   Missoula          87.87  13    P        P        06 55 42.8 -1.0
MSO                                  IAmb     IAmb     06 55 51.9
             comp=Z,7.2nm,0.9s
LBTB  Lobatse           87.94 232    P        P        06 55 44.7 +0.5
LBTB                                 pmax     pmax
             comp=Z,21nm,1.1s
LBTB  Lobatse           87.94 232    P        P        06 55 44.7 +0.5
B35A  Bob, Littlefor    87.96 360    P        P        06 55 43.2 -0.8
B35A                                 IAmb     IAmb     06 55 51.4
             comp=Z,12nm,0.9s
F61A  St Evariste       87.97 344    P        P        06 55 44.2 +0.1
             baz=17
AGMN  Agassiz Nation    88.02   1    P        P        06 55 43.0 -1.4
AGMN                                 IAmb     IAmb     06 55 44.0
             comp=Z,13nm,1.2s
E58A  La Victoria       88.02 346    P        P        06 55 44.5 +0.2
             baz=15
F10A  Beach Ranch, E    88.10  16    P        P        06 55 44.9  0.0
F10A                                 IAmb     IAmb     06 55 45.7
             comp=Z,7.0nm,0.8s
E56A  St. Veronique     88.16 347    P        P        06 55 44.8 -0.2
             baz=14
H04A  Detroit Lake      88.25  19    P        P        06 55 45.7 +0.2
H04A                                 IAmb     IAmb     06 55 54.5
             comp=Z,21nm,1.2s
HRY   Holter Researc    88.31  12    P        P        06 55 45.3 -0.6
EYMN  Ely               88.34 358    P        P        06 55 45.2 -0.7
             baz=2.1
EYMN  Ely               88.34 358    P        P        06 55 44.9 -1.0
EYMN                                 IAmb     IAmb     06 55 46.0
             comp=Z,13nm,0.8s
MDND  Maddock           88.36   3    P        P        06 55 45.4 -0.5
             baz=356
MDND  Maddock           88.36   3    P        P        06 55 45.0 -1.0
TRQ   Mont Tremblant    88.39 346    P        P        06 55 45.7 -0.5
E55A  Montcerf-Lytto    88.41 347    P        P        06 55 46.4 +0.2
             baz=13
I05D  Terrebonne, OR    88.78  19    P        P        06 55 49.0 +1.0
             baz=341
I03D  Drain, OR         88.89  21    P        P        06 55 49.7 +1.2
             baz=340
I04A  Tendick Farm,     89.03  20    P        P        06 55 49.8 +0.6
             baz=340
LAO   LASA Array        89.04   8    P        P        06 55 50.0 +0.7
             baz=352,SNR=5.4
LAO   LASA Array        89.04   8    P        P        06 55 49.3 +0.1
LAO                                  IAmb     IAmb     06 55 58.2
             comp=Z,26nm,1.5s
BMO   Blue Mountains    89.16  16    P        P        06 55 48.0 -1.9
BMO                                  pmax     pmax
             comp=Z,3.0nm,0.9s
BMO   Blue Mountains    89.16  16    P        P        06 55 48.0 -1.9
ALGO  Algonquin Park    89.20 349    P        P        06 55 49.6 -0.3
             baz=12
G58A  Ormstown          89.34 346    P        P        06 55 50.5 -0.1
             baz=14
PINE  Pine Mountain     89.39  19    P        P        06 55 51.6 +0.5
PINE                                 IAmb     IAmb     06 55 53.6
             comp=Z,16nm,0.9s
BOZ   Bozeman (W)       89.43  12    P        P        06 55 51.0 -0.3
             baz=348,SNR=9.3
BOZ   Bozeman (W)       89.43  12    P        P        06 55 50.7 -0.5
BOZ                                  pmax     pmax
             comp=Z,18nm,1.5s
BOZ   Bozeman (W)       89.43  12    P        P        06 55 50.7 -0.5
BOZ                                  IAmb     IAmb     06 55 52.0
             comp=Z,18nm,1.4s
I07A  Izee              89.44  18    P        P        06 55 51.9 +0.7
I07A                                 IAmb     IAmb     06 56 01.0
             comp=Z,19nm,1.3s
DLMT  Dillon            89.51  13    P        P        06 55 51.3 -0.4
DLMT                                 IAmb     IAmb     06 56 00.2
             comp=Z,20nm,1.4s
GCMT  Greycliff         89.52  11    P        P        06 55 51.4 -0.2
G57A  Newington         89.55 346    P        P        06 55 51.8 +0.2
             baz=14
E28A  Huff              89.58   4    P        P        06 55 51.6 -0.1
J04D  Umpqua Nationa    89.63  20    P        P        06 55 53.6 +1.3
             baz=340
E38A  The Farm, Brul    89.68 358    P        P        06 55 51.0 -1.2
E38A                                 IAmb     IAmb     06 55 59.1
             comp=Z,8.9nm,0.9s
G54A  Lake Saint Pet    89.75 349    P        P        06 55 52.2 -0.3
             baz=12
J05D  Fort Rock, OR     89.80  19    P        P        06 55 54.6 +1.6
             baz=341,SNR=8.3
LONY  Lake Ozonia       89.95 346    P        P        06 55 53.7 +0.2
             baz=14
LONY  Lake Ozonia       89.95 346    P        P        06 55 53.5  0.0
LONY                                 IAmb     IAmb     06 56 02.1
             comp=Z,19nm,1.1s
MCMT  McKenzie Canyo    89.99  13    P        P        06 55 53.8 -0.2
HUMO  Hull Mountain     90.01  21    P        P        06 55 54.3 +0.4
HUMO                                 IAmb     IAmb     06 55 56.2
             comp=Z,13nm,0.9s
RLMT  Red Lodge         90.23  10    P        P        06 55 55.1  0.0
             baz=349,SNR=8.1
RLMT  Red Lodge         90.23  10    P        P        06 55 54.9 -0.2
RLMT                                 IAmb     IAmb     06 55 56.1
             comp=Z,20nm,1.4s
J08A  Circle Bar Ran    90.35  17    P        P        06 55 55.4 -0.2
J08A                                 IAmb     IAmb     06 55 57.3
             comp=Z,14nm,1.1s
K05A  Summer Lake       90.41  19    P        P        06 55 57.0 +1.1
K05A                                 IAmb     IAmb     06 55 58.4
             comp=Z,22nm,1.1s
F33A  5 Mile Ranch,     90.47   1    P        P        06 55 55.3 -0.6
F33A                                 IAmb     IAmb     06 55 56.9
             comp=Z,8.0nm,0.9s
L04D  Klamath Falls     90.54  20    P        P        06 55 57.1 +0.6
             baz=340
H17A  Grant Village     90.76  11    P        P        06 55 59.4 +1.8
             baz=348,SNR=6.8
H17A  Grant Village     90.76  11    P        P        06 55 59.1 +1.5
H17A                                 IAmb     IAmb     06 56 08.4
             comp=Z,20nm,1.3s
MFID  Camas Ranch       90.83  15    P        P        06 55 57.7 -0.1
YBH   Yreka Blue Hor    90.90  21    LR       LR       07 40 30.5
             comp=Z,101nm,19.2s,baz=348,slow=38
BOSA  Boshof            90.93 230    P        P        06 55 57.8 -0.4
             comp=Z,3.8nm,1.1s,baz=66,slow=12,SNR=1.7
BOSA                                 LR       LR       07 41 01.4
             comp=Z,75nm,18.3s,baz=101,slow=38
HLID  Hailey            90.95  14    P        P        06 55 58.6 +0.2
             baz=346
HLID  Hailey            90.95  14    P        P        06 55 58.3 -0.1
ACCN  Adirondack Com    90.98 345    P        P        06 55 56.7 -1.6
FLWY  Flagg Ranch       91.05  12    P        P        06 55 59.0 +0.1
FLWY                                 IAmb     IAmb     06 56 00.9
             comp=Z,11nm,0.7s
J59A  Piesco            91.06 346    P        P        06 55 59.1 +0.4
             baz=14
M04C  Macdoel           91.07  20    P        P        06 55 59.8 +0.9
             baz=341
M02C  Callahan          91.18  21    P        P        06 56 00.6 +1.2
             baz=340
WVOR  Wild Horse Val    91.20  18    P        P        06 55 59.8 +0.3
WVOR                                 pmax     pmax
             comp=Z,11nm,0.9s
WVOR  Wild Horse Val    91.20  18    P        P        06 55 59.8 +0.3
WVOR                                 IAmb     IAmb     06 56 01.3
             comp=Z,11nm,0.9s
STKA  Stephens Creek    91.23 135    P        P        06 55 58.3 -1.1
             comp=Z,3.8nm,0.5s,baz=333,slow=5.1,SNR=16
STKA  Stephens Creek    91.23 135⇑eP        P        06 55 58.5 -0.9
STKA  Stephens Creek    91.23 135    P        P        06 56 00.2 +0.8
MOD   Modoc Plateau     91.33  19    P        P        06 56 00.8 +0.7
MOD                                  IAmb     IAmb     06 56 09.6
             comp=Z,17nm,1.1s
LOHW  Long Hollow       91.52  12    P        P        06 56 01.1 -0.1
N02D  Trinity Center    91.61  21    P        P        06 56 02.6 +1.3
             baz=340
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J56A	**Wolcott**	**91.64**	**347**	P	**P**	**06 56 01.5**	**+0.2**
	baz=12						
RSSD	**Black Hills**	**91.79**	**7**	P	**P**	**06 56 02.9**	**+0.6**
	baz=353						
RSSD	**Black Hills**	**91.79**	**7**	P	**P**	**06 56 01.7**	**-0.6**
RSSD				pmax	pmax		
	comp=Z,15nm,0.7s						
RSSD	**Black Hills**	**91.79**	**7**	P	**P**	**06 56 01.7**	**-0.6**
SUSD	**Miller**	**91.79**	**3**	P	**P**	**06 56 02.0**	**-0.1**
AHID	**Auburn Hatcher**	**92.28**	**12**	P	**P**	**06 56 04.3**	**-0.3**
BW06	**Boulder Array**	**92.50**	**11**	P	**P**	**06 56 04.8**	**-0.8**
	baz=349						
PD31	**Pinedale Array**	**92.50**	**11**	P	**P**	**06 56 04.6**	**-1.1**
PDAR	**Pinedale Array**	**92.50**	**11**	P	**P**	**06 56 04.5**	**-1.1**
	comp=Z,1.3nm,0.7s,baz=45,slow=2.9,SNR=14						
PDAR				LR	LR	07 40 20.0	
	comp=Z,157nm,20.3s,baz=356,slow=37						
PDAR	**Pinedale Array**	**92.50**	**11**	P	**P**	**06 56 04.8**	**-0.9**
ECSD	**EROS Data Cent**	**92.57**	**2**	P	**P**	**06 56 05.3**	**-0.4**
	baz=358						
ECSD	**EROS Data Cent**	**92.57**	**2**	P	**P**	**06 56 05.2**	**-0.4**
ECSD				IAmb	IAmb	06 56 13.7	
	comp=Z,10nm,0.9s						
L57A	**Andrews Acres**	**92.88**	**347**	P	**P**	**06 56 07.0**	**-0.2**
	baz=12						
BEKR	**Beckworth**	**93.24**	**20**	P	**P**	**06 56 09.0**	**0.0**
BEKR				IAmb	IAmb	06 56 10.4	
	comp=Z,6.9nm,0.8s						
JFWS	**Jewell Farm**	**93.33**	**357**	P	**P**	**06 56 08.2**	**-1.0**
	baz=3.0						
JFWS	**Jewell Farm**	**93.33**	**357**	P	**P**	**06 56 08.1**	**-1.0**
JFWS				pmax	pmax		
	comp=Z,11nm,0.9s						
JFWS	**Jewell Farm**	**93.33**	**357**	P	**P**	**06 56 08.1**	**-1.0**
JFWS				IAmb	IAmb	06 56 16.7	
	comp=Z,11nm,0.8s						
ELK	**Elko**	**93.53**	**16**	P	**P**	**06 56 10.6**	**+0.2**
ELK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ELK	**Elko**	**93.53**	**16**	P	**P**	**06 56 10.6**	**+0.2**
M57A	**Sunshine Farm,**	**93.57**	**347**	P	**P**	**06 56 10.3**	**0.0**
	baz=12						
PAHR	**Pah Rah Range**	**93.63**	**19**	P	**P**	**06 56 11.1**	**+0.3**
PAHR				IAmb	IAmb	06 56 19.6	
	comp=Z,7.3nm,1.2s						
M54A	**Oil Creek Stat**	**93.79**	**349**	P	**P**	**06 56 11.0**	**-0.4**
	baz=11						
M52A	**Chesterland**	**93.98**	**350**	P	**P**	**06 56 11.5**	**-0.7**
M53A	**WI Miller and**	**93.99**	**350**	P	**P**	**06 56 11.7**	**-0.5**
	baz=9.8						
N57A	**Milroy**	**94.21**	**347**	P	**P**	**06 56 13.1**	**-0.1**
	baz=12						
L34A	**Svendsen Farm,**	**94.34**	**1**	P	**P**	**06 56 12.9**	**-0.9**
N54A	**Moraine State**	**94.37**	**349**	P	**P**	**06 56 13.6**	**-0.4**
	baz=10						
DUG	**Dugway, Tooele**	**94.51**	**14**	P	**P**	**06 56 15.4**	**+0.6**
	baz=347						
DUG	**Dugway, Tooele**	**94.51**	**14**	P	**P**	**06 56 15.1**	**+0.3**
DUG				pmax	pmax		
	comp=Z,9.0nm,1.0s						
DUG	**Dugway, Tooele**	**94.51**	**14**	P	**P**	**06 56 15.1**	**+0.3**
DUG				IAmb	IAmb	06 56 23.3	
	comp=Z,8.8nm,1.0s						
N53A	**Lisbon**	**94.63**	**350**	P	**P**	**06 56 14.8**	**-0.4**
N53A				IAmb	IAmb	06 56 17.4	
	comp=Z,9.6nm,0.9s						
O57A	**Amberson**	**94.75**	**347**	P	**P**	**06 56 15.4**	**-0.3**
	baz=12						
O56A	**Blue Knob Stat**	**94.84**	**348**	P	**P**	**06 56 15.0**	**-1.2**
	baz=11						
N49A	**Columbus Grove**	**94.90**	**352**	P	**P**	**06 56 16.0**	**-0.4**
NVAR	**Mina Array Bea**	**95.10**	**19**	P	**P**	**06 56 17.9**	**+0.2**
	comp=Z,2.4nm,0.7s,baz=346,slow=4.4,SNR=19						
NVAR				LR	LR	07 45 32.2	
	comp=Z,142nm,18.1s,baz=302,slow=40						
NVAR	**Mina Array Bea**	**95.10**	**19**	P	**P**	**06 56 18.0**	**+0.4**
NV11	**Mina Array Sit**	**95.13**	**18**	P	**P**	**06 56 18.6**	**+0.8**
O53A	**New Philadelph**	**95.23**	**350**	P	**P**	**06 56 17.3**	**-0.6**
	baz=9.5						
O20A	**White River Ci**	**95.27**	**11**	P	**P**	**06 56 18.5**	**+0.1**
	baz=350						
O20A	**White River Ci**	**95.27**	**11**	P	**P**	**06 56 18.1**	**-0.2**
O20A				IAmb	IAmb	06 56 27.1	
	comp=Z,15nm,1.5s						
ACSO	**Alum Creek Sta**	**95.46**	**351**	P	**P**	**06 56 18.2**	**-0.8**
	baz=8.2						
ACSO	**Alum Creek Sta**	**95.46**	**351**	P	**P**	**06 56 18.4**	**-0.5**
ACSO				IAmb	IAmb	06 56 25.1	
	comp=Z,13nm,1.1s						
P57A	**Homestead Farm**	**95.53**	**347**	P	**P**	**06 56 18.9**	**-0.4**
	baz=12						
O49A	**Covington**	**95.64**	**352**	P	**P**	**06 56 19.2**	**-0.6**
TPH	**Tonopah**	**95.68**	**18**	P	**P**	**06 56 19.2**	**-1.1**
TPH				pmax	pmax		
	comp=Z,15nm,1.0s						
TPH	**Tonopah**	**95.68**	**18**	P	**P**	**06 56 19.2**	**-1.1**
R11A	**Troy Canyon, C**	**95.77**	**17**	P	**P**	**06 56 20.6**	**0.0**
	baz=345						
R11A	**Troy Canyon, C**	**95.77**	**17**	P	**P**	**06 56 21.2**	**+0.6**
ISCO	**Idaho Springs**	**95.91**	**9**	P	**P**	**06 56 21.4**	**-0.1**
	baz=352						
ISCO	**Idaho Springs**	**95.91**	**9**	P	**P**	**06 56 21.8**	**+0.4**
ISCO	**Idaho Springs**	**95.91**	**9**	P	**P**	**06 56 21.8**	**+0.4**
P52A	**Corning**	**95.95**	**350**	P	**P**	**06 56 20.3**	**-0.9**
	baz=8.8						
P49A	**Miami Univ. Ec**	**96.33**	**352**	P	**P**	**06 56 21.9**	**-1.1**
	baz=7.0						
SMCO	**Snowmass**	**96.37**	**10**	P	**P**	**06 56 23.6**	**-0.1**
P48A	**Milroy**	**96.46**	**353**	P	**P**	**06 56 22.8**	**-0.7**
P43A	**Skaggs, Pawnee**	**96.56**	**356**	P	**P**	**06 56 23.1**	**-0.8**
Q53A	**Leroy**	**96.64**	**350**	P	**P**	**06 56 24.0**	**-0.3**
	baz=9.3						
P40A	**Paris**	**96.76**	**358**	P	**P**	**06 56 24.0**	**-0.9**
P40A				IAmb	IAmb	06 56 25.1	
	comp=Z,6.1nm,0.6s						
PV22	**Blue Mesa, Par**	**96.77**	**11**	P	**P**	**06 56 25.0**	**-0.3**
PV22				IAmb	IAmb	06 56 26.0	
	comp=Z,5.6nm,0.9s						
Q24A	**Divide**	**96.79**	**8**	P	**P**	**06 56 24.3**	**-1.1**
	baz=352						
PV15	**Paradox Valley**	**97.00**	**11**	P	**P**	**06 56 25.8**	**-0.6**
PV01	**Paradox Valley**	**97.19**	**11**	P	**P**	**06 56 27.0**	**-0.2**
PV01				IAmb	IAmb	06 56 28.3	
	comp=Z,3.4nm,0.7s						
WCI	**Wyandotte Cave**	**97.76**	**354**	P	**P**	**06 56 29.1**	**-0.4**
	baz=5.9						
S22A	**4UR Ranch, Cre**	**97.80**	**10**	P	Pdif	06 56 30.5	+0.4
	baz=351						
S39A	**Bolivar**	**98.62**	**359**	P	**P**	**06 56 31.8**	**-1.5**
S39A				IAmb	IAmb	06 56 33.1	
	comp=Z,4.8nm,0.7s						
MGMO	**Mountain Grove**	**99.14**	**358**	P	**Pdif**	**06 56 34.9**	**-0.7**
MGMO				IAmb	IAmb	06 56 35.9	
	comp=Z,5.5nm,0.8s						
WMOK	**Wichita Mounta**	**101.47**	**4**	P	**Pdif**	**06 56 46.3**	**+0.1**
	baz=357						
TXAR	**Lajitas Array**	**106.47**	**8**	Pdiff	**Pdif**	**06 57 09.3**	**+0.7**
	comp=Z,0.4nm,1.0s,baz=15,slow=4.3,SNR=3.3						
TXAR				PP	**PP**	**07 01 29.0**	**-3.0**
	comp=Z,0.6nm,0.9s,baz=12,slow=4.6,SNR=2.6						
TXAR				PKKP	**PKKPab**	**07 12 54.3**	**-4.1**
	comp=Z,0.4nm,0.9s,baz=183,slow=5.9,SNR=3.3						
ROSC	**El Rosal**	**128.06**	**334**	PKP	**PKPdf**	**07 02 01.4**	**+0.1**
	comp=Z,8.8nm,0.7s,baz=214,slow=7.3,SNR=5.6						
ROSC	**El Rosal**	**128.06**	**334**	PKIKP	**PKPdf**	**07 02 01.3**	**0.0**
ROSC	**El Rosal**	**128.06**	**334**	PKPdf	**PKPdf**	**07 02 01.2**	**0.0**
VNA2	**Neumayer--Watz**	**131.81**	**206**	PKPdf	**PKiKP**	**07 02 07.5**	**+0.3**
VNA1	**Neumayer--Stat**	**132.02**	**207**	PKPdf	**PKiKP**	**07 02 11.4**	**+3.9**
VNA3	**Neumayer Olymp**	**132.61**	**206**	PKPdf	**PKiKP**	**07 02 08.2**	**-0.5**
OTAV	**Otavalo**	**133.65**	**338**	PKIKP	**PKPdf**	**07 02 11.8**	**-0.2**
OTAV	**Otavalo**	**133.65**	**338**	PKPdf	**PKPdf**	**07 02 11.8**	**-0.2**
SAML	**Samuel**	**135.73**	**313**	PKIKP	**PKPdf**	**07 02 14.5**	**-0.7**
SAML	**Samuel**	**135.73**	**313**		**PKPdf**	**07 02 14.5**	**-0.7**
LPAZ	**La Paz**	**144.47**	**313**	PKP	**PKPab**	**07 02 29.3**	**-0.7**
	comp=Z,4.0nm,0.6s,baz=29,slow=3.0,SNR=16						
LPAZ	**La Paz**	**144.47**	**313**	PKIKP	**PKPab**	**07 02 29.7**	**-0.3**
LPAZ	**La Paz**	**144.47**	**313**	PKPdf	**PKPab**	**07 02 29.7**	**-0.3**
CPUP	**Villa Florida**	**145.26**	**288**	PKPbc	**PKPbc**	**07 02 31.1**	**-0.6**
	comp=Z,6.2nm,0.6s,baz=68,slow=2.0,SNR=17						
PB16	**IPOC Station P**	**146.90**	**313**		**PKPbc**	**07 02 38.2**	**+0.6**
MNMC	**Minye Minye**	**147.60**	**312**		**PKPbc**	**07 02 39.9**	**+0.7**
PB08	**IPOC Station P**	**148.18**	**310**	PKPab	**PKPab**	**07 02 44.5**	**+0.7**
PB01	**IPOC Station P**	**149.09**	**310**		**PKiKP**	**07 02 43.6**	**-0.5**
PB09	**IPOC Station P**	**149.55**	**309**		**PKPab**	**07 02 50.1**	**+1.1**
LVC	**Limon Verde**	**150.00**	**307**	PKP2	**PKiKP**	**07 02 46.6**	**+0.3**
LVC	**Limon Verde**	**150.00**	**307**		**PKiKP**	**07 02 46.6**	**+0.3**
PB15	**IPOC Station P**	**150.79**	**307**		**PKPbc**	**07 02 47.1**	**0.0**
PLCA	**Paso Flores**	**162.06**	**272**	PKP	**PKPdf**	**07 02 54.9**	**-0.5**
	comp=Z,1.2nm,0.8s,baz=82,slow=7.1,SNR=1.4						

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*IDC **22** 06:42:59.4±5.7, 20°.63S×177°.94W, h398^{km}±54^{km}, mb3.0/3, mb1 3.3/4, mb1mx3.0/39, mbtmp3.8/4, Error ellipse: s-maj=38.3km s-min=18.9km az=94.0*

ISC 22 06:42:59.4±1.3**, 20°.6S**±0°.1×**178°.0W**±0°.3**, h400**^{km}**, n7, σ1**^{s}**36**/9**, mb3.1**/3**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**18.10**	**193**	P	**P**	**06 46 44.1**	**-0.8**
	0.5nm,0.3s,baz=0.0,slow=20,SNR=2.4						
URZ				S	**S**	**06 49 52.4**	**+1.1**
	0.1nm,0.3s,baz=18,slow=19,SNR=3.6						
ASAR	**Alice Springs**	**44.51**	**257**	P	**P**	**06 50 34.5**	**+0.9**
	0.7nm,0.7s,baz=88,slow=8.4,SNR=7.9						
ASAR				PcP	**PcP**	**06 52 09.0**	**+0.1**
	0.3nm,0.6s,baz=100,slow=3.9,SNR=6.2						
WRA	**Warramunga Arr**	**44.60**	**262**	P	**P**	**06 50 34.1**	**-0.2**
	0.2nm,0.3s,baz=96,slow=8.1,SNR=5.8						
ILAR	**Eielson Array**	**88.41**	**13**	P	**P**	**06 55 08.6**	**+1.8**
	0.8nm,0.7s,baz=217,slow=5.2,SNR=4.1						
AKASG	**Malin Array Be**	**143.11**	**331**	PKP	**PKPdf**	**07 01 44.3**	**-2.0**
	1.1nm,0.7s,baz=44,slow=4.3,SNR=10						
BRTR	**Keskin Array B**	**146.92**	**312**	PKPbc	**PKPbc**	**07 01 55.3**	**-0.7**
	0.3nm,0.5s,baz=350,slow=4.4,SNR=1.8						
GERES	**GERESS Array B**	**150.30**	**344**	PKPbc	**PKiKP**	**07 02 04.0**	**-0.8**
	0.2nm,0.4s,baz=23,slow=4.4,SNR=3.8						

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*MDD **22** 06:49:16.4±1.0, 36°.60N×5°.52W, h80^{km}±8^{km}, mb2.3/7, Error ellipse: s-maj=8.4km s-min=6.1km az=28.0, PRXIMO*

*IGIL **22** 06:49:16.9, 36°.85N×5°.31W, h1^{km}*

*SFS **22** 06:49:17.0, 36°.62N×5°.49W, h70^{km}, ML2.7, UBRIQUE (CADIZ)*

ISC 22 06:49:19.2±1.2**, 36°.75N**±0°.04×**5°.38W**±0°.03**, h35**^{km}**, n26, σ1**^{s}**49**/43**, 3C, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EJIF	**Jimena Fronter**	**0.31**	**193**	P	**Pn**	**06 49 26.9**	**-0.4**
	SNR=7.9						
EJIF				S	**Sn**	**06 49 36.6**	**+3.8**
	SNR=7.9						
ESPR	**Espera**	**0.40**	**287**	P	**Pn**	**06 49 28.1**	**-0.3**
	3.9nm,0.1s,SNR=10						
ESPR				S	**Sn**	**06 49 38.1**	**+3.3**
	9.8nm,0.6s,SNR=10						
EMAL	**Malaga-Limoner**	**0.77**	**89**	P	**Pn**	**06 49 33.6**	**0.0**
EMAL				S	**Sn**	**06 49 45.2**	**+1.4**
EMAL	**Malaga-Limoner**	**0.77**	**89**	P	**Pn**	**06 49 33.6**	**0.0**
EMAL				S	**Sn**	**06 49 45.2**	**+1.4**
ECEU	**Ceuta**	**0.85**	**180**	P	**Pn**	**06 49 32.6**	**-2.2**
	18nm,0.1s,SNR=7.0						
ECEU				S	**Sn**	**06 49 43.0**	**-3.1**
	31nm,0.2s,SNR=5.5						
ELGU	**Los Guajares,**	**1.41**	**85**	P	**Pn**	**06 49 42.8**	**+0.3**
	1.8nm,0.2s,SNR=7.9						
ELGU				S	**Sn**	**06 50 00.9**	**+0.9**
	1.0nm,0.7s,SNR=7.9						
EMIN	**Mina Concepcio**	**1.44**	**315**	P	**Pn**	**06 49 41.4**	**-1.5**
	4.4nm,0.2s,SNR=34						
EMIN				S	**Sn**	**06 50 00.6**	**+0.1**
	5.3nm,0.5s,SNR=17						
EADA	**Adamuz**	**1.55**	**24**	P	**Pn**	**06 49 42.0**	**-2.4**
	1.6nm,0.1s,SNR=17						
EADA				S	**Sn**	**06 50 01.3**	**-2.0**
	5.4nm,0.2s,SNR=14						
EQUE	**Quentar**	**1.62**	**73**	P	**Pn**	**06 49 44.8**	**-0.6**
	1.1nm,0.2s,SNR=5.1						
EQUE				S	**Sn**	**06 50 06.5**	**+1.4**
	0.3nm,0.3s						
EGRO	**El Granado**	**1.85**	**296**	P	**Pn**	**06 49 48.4**	**-0.1**
	0.8nm,0.1s,SNR=7.9						
EGRO				S	**Sn**	**06 50 09.1**	**-1.5**
	0.7nm,0.6s,SNR=7.9						
PBAR	**Barrancos**	**1.94**	**318**	*e*P	**Pn**	**06 49 48.3**	**-1.4**
PBAR				A	A	06 50 20.4	
	2.4nm,0.4s						
PVAQ	**Vaqueiros**	**1.98**	**290**	*i* P	**Pn**	**06 49 49.9**	**-0.3**
PVAQ				*e*S	**Sn**	**06 50 13.6**	**-0.2**
PVAQ				A	A	06 50 16.1	
	2.2nm,0.1s						
PBDV	**Barranco-do-Ve**	**2.10**	**284**	⇑*i*P	**Pn**	**06 49 52.1**	**+0.2**
PBDV				*e*S	**Sn**	**06 50 17.3**	**+0.5**
PBDV				A	A	06 50 20.1	
	5.1nm,0.5s						
EQES	**Quesada**	**2.12**	**60**	P	**Pn**	**06 49 50.5**	**-1.8**
	0.8nm,0.2s,SNR=7.9						
EQES				S	**Sn**	**06 50 18.3**	**+0.8**
	0.8nm,0.2s,SNR=7.9						
PCVE	**Castro Verde**	**2.29**	**293**	*e*P	**Pn**	**06 49 54.2**	**-0.4**
PCVE				*e*S	**Sn**	**06 50 22.4**	**+0.8**
PBEJ	**Beja**	**2.35**	**303**	*e*P	**Pn**	**06 49 54.5**	**-0.9**
MESJ	**Messejana**	**2.51**	**296**	*e*P	**Pn**	**06 49 57.1**	**-0.4**
MESJ	**Messejana**	**2.51**	**296**	P	**Pn**	**06 49 57.1**	**-0.4**
MESJ	**Messejana**	**2.51**	**296**	⇑*i*P	**Pn**	**06 49 57.1**	**-0.4**
MESJ				*e*S	**Sn**	**06 50 27.9**	**+1.0**
EVO	**Evora**	**2.74**	**311**	*e*P	**Pn**	**06 50 03.8**	**+3.1**
PESTR	**Estremoz**	**2.74**	**321**	*e*P	**Pn**	**06 49 59.4**	**-1.3**
PTEO	**Sao Teotonio**	**2.78**	**287**	*e*P	**Pn**	**06 50 01.6**	**+0.3**
PFVI	**Vila Bisbo**	**2.79**	**279**	*e*S	**Sn**	**06 50 34.1**	**+0.4**
PNCL	**Nicolau / Gran**	**2.85**	**299**	⇑*i*P	**Pn**	**06 50 01.7**	**-0.5**
PNCL				*e*S	**Sn**	**06 50 34.4**	**-0.8**
PAB	**San Pablo**	**2.90**	**16**	P	**Pn**	**06 50 02.8**	**-0.3**
	0.1nm,0.1s,SNR=7.9						
PAB				S	**Sn**	**06 50 39.2**	**+2.4**
	5.7nm,0.8s,SNR=7.9						
PMTG	**Montargil**	**3.22**	**317**	*e*P	**Pn**	**06 50 06.9**	**-0.5**

TAP 22 06:52:45.0, 23°.18N×120°.91E, h8^{km}, ML1.3, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ELDTW	**Lidau**	**0.10**	**84**	P	Pg	06 52 47.8	+0.4
	baz=85						
ELDTW				*i* S	Sg	06 52 49.8	+0.7
	baz=85						
STYH	**Taoyuan**	**0.12**	**266**	P	Pg	06 52 48.0	+0.3
	baz=265						
STYH				S	Sg	06 52 49.8	+0.3
	baz=265						
STYT	**Tauyuan**	**0.14**	**263**	*i* P	Pg	06 52 48.3	+0.3
	baz=253						
STYT				*i* S	Sg	06 52 50.5	+0.4
	baz=253						
WTP	**Ta-pu**	**0.28**	**284**	*i* P	Pb	06 52 51.7	-0.6
	baz=283						
WTP				S	Sb	06 52 56.4	-0.8
	baz=283						
SLGT	**Liugui**	**0.30**	**232**	*i* P	Pb	06 52 51.9	-0.9
	baz=226						
SLGT				*i* S	Sg	06 52 56.4	+1.4
	baz=226						
CHN4	**Tsaushan**	**0.34**	**301**	P	Pb	06 52 53.1	-0.2
	baz=310						
CHN4				S	Sb	06 52 58.4	-0.4
	baz=310						
LONT	**Longtian**	**0.34**	**143**	P	Pb	06 52 52.7	-0.6
	baz=135						
LONT				S	Sg	06 52 57.2	+1.1
	baz=135						
ALS	**Alishan**	**0.34**	**344**	*i* P	Pg	06 52 52.5	+0.6
	baz=347						
ALS				*i* S	Sg	06 52 57.8	+1.4
	baz=347						
CHN1	**Nanshi**	**0.35**	**271**	P	Pb	06 52 53.6	+0.1
	baz=266						
CHN1				*e*S	Sb	06 52 58.6	-0.6
	baz=266						
FULB	**Fuli**	**0.36**	**87**	*i* P	Pb	06 52 53.6	0.0
	baz=79						
FULB				*i* S	Sb	06 52 59.1	-0.3
	baz=79						
TWG	**Pinlang**	**0.39**	**157**	P	Pb	06 52 53.5	-0.6
	baz=156						
TWG				S	Sg	06 52 58.9	+1.2
	baz=156						
TWGBT	**Beinan**	**0.39**	**156**	P	Pb	06 52 53.6	-0.7
	baz=156						
TWGBT				S	Sg	06 52 58.9	+1.0
	baz=156						
TWK	**Hsinying**	**0.40**	**283**	*e*S	Sg	06 52 59.2	+1.2
	baz=282						
TWF1	**Yuli**	**0.40**	**64**	P	Pg	06 52 53.5	+0.7
	baz=65						
TWF1				*i* S	Sg	06 52 58.5	+0.5
	baz=65						
EYUL	**Yuli**	**0.41**	**66**	S	Sg	06 52 59.0	+0.4
	baz=66						
YULB	**Yu-li**	**0.42**	**59**	P	Pg	06 52 53.6	+0.4
	baz=59						
YULB				S	Sg	06 52 58.7	+0.1
	baz=59						
CHN5	**Tsauling**	**0.47**	**333**	*i* P	Pb	06 52 54.9	-0.6
	baz=335						
CHN5				*i* S	Sb	06 53 02.0	-0.7
	baz=335						
SSD	**Sandimen**	**0.50**	**211**	*e*P	Pg	06 52 55.1	+0.4
	baz=207						
SSD				*e*S	Sg	06 53 02.3	+1.1
	baz=207						
TSMG	**Majia**	**0.53**	**207**	P	Pg	06 52 55.5	+0.3
	baz=210						
HGSD	**Ruisui**	**0.57**	**57**	*e*P	Pg	06 52 56.3	+0.3
	baz=52						
HGSD				*e*S	Sg	06 53 04.3	+0.9
	baz=52						
SSLB	**Suanglung**	**0.61**	**4**	*e*P	Pg	06 52 56.9	+0.2
	baz=5.0						
VWDT	**VWDT**	**0.61**	**21**	*e*P	Pb	06 52 57.4	-0.5
	baz=22						
TYC	**Yuchr**	**0.72**	**356**	*e*S	Sb	06 53 10.8	+0.8
	baz=6.0						
WHP	**Taichung City**	**1.09**	**2**	*e*P	Pn	06 53 07.2	+0.4
	baz=12						
WHP				*e*S	Sn	06 53 21.9	-0.3
	baz=12						

TAP 22 06:52:53.5, 22°.30N×120°.68E, h31^{km}, ML1.3, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCZT	**Fangliau**	**0.09**	**319**	*i* P	Pb	06 52 59.2	+0.3
	baz=323						
SCZT				*i* S	Sb	06 53 03.5	+0.9
	baz=323						
SLIU	**Shizi**	**0.14**	**129**	P	Pn	06 52 59.6	+0.1
	baz=137						
SLIU				S	Sn	06 53 04.1	+1.0
	baz=137						
SSPT	**Xinbi**	**0.21**	**329**	P	Pn	06 53 00.5	0.0
	baz=331						
SSPT				S	Sn	06 53 05.7	+0.7
	baz=331						
MASBT	**Mashibuluo**	**0.31**	**351**	P	Pn	06 53 01.9	-0.1
	baz=358						
MASBT				S	Sn	06 53 07.5	+0.1
	baz=358						
ECL	**Taimali**	**0.39**	**40**	*e*S	Sb	06 53 08.4	+0.3
	baz=43						
TSMG	**Majia**	**0.40**	**355**	*e*P	Pn	06 53 03.0	-0.2
	baz=3.0						
TSMG				S	Sn	06 53 09.6	-0.1
	baz=3.0						
TSMG	**Majia**	**0.40**	**355**	S	Pb	06 53 03.0	+0.5
	baz=210						

IDC 22 06:53:50.5±3.1**, 4°.84S**×**133°.47E, h0**^{km}**, mb3.6**/1**, mb1 3.5**/4**, mb1mx3.3**/30**, mbtmp3.4**/4**, ML2.9**/3**, Error ellipse: s-maj=144.0km s-min=26.0km az=73.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**4.52**	**331**	Pn	Pn	06 54 59.8	-0.4
	1.0nm,0.3s,baz=150,slow=23,SNR=1.6						
SIJI				Sn	Sn	06 55 52.8	-0.7
	0.9nm,0.3s,baz=88,slow=23,SNR=1.7						
WRA	**Warramunga Arr**	**15.04**	**177**	Pn	Pn	06 57 22.6	-1.8
	0.0nm,0.3s,baz=355,slow=13,SNR=0.9						
ASAR	**Alice Springs**	**18.72**	**179**	P	Pn	06 58 11.1	-0.1
	0.1nm,0.3s,baz=7.8,slow=11,SNR=2.0						
MKAR	**Makanchi Array**	**68.39**	**325**	P	P	07 04 54.5	+0.4
	0.4nm,0.6s,baz=118,slow=5.7,SNR=3.8						

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*IDC **22** 07:09:45.9±4.1, 44°.19N×85°.43E, h0^{km}, mb1 3.2/3, mb1mx3.1/30, mbtmp3.2/3, ML2.6/3, Error ellipse: s-maj=42.7km s-min=23.8km az=15.0*

*NNC **22** 07:09:53.4±3.0, 44°.36N×85°.19E, h23^{km}±14^{km}, mb4.0, mpv3.6, Error ellipse: s-maj=24.0km s-min=9.5km az=118.0*

*SOME **22** 07:09:53.3, 44°.40N×85°.25E, h20^{km}*

ISC 22 07:09:45.2±1.4**, 44°.16N**±0°.06×**85°.64E**±0°.07**, h10**^{km}**, n34, σ2**^{s}**21**/49**, 10C-3D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZSN	**Zaisan**	**3.33**	**351**	*e*P	**Pg**	**07 10 50.0**	**+1.0**
	18nm,0.4s						
ZSN				*e*S	**Sg**	**07 11 29.2**	**-3.0**
	72nm,0.8s						
ZSN	**Zaisan**	**3.33**	**351**	Pg	**Pg**	**07 10 50.0**	**+1.0**
	18nm,0.4s						
ZSN				Lg	Lg	07 11 29.2	
	72nm,0.8s						
MK31	**Makanchi Array**	**3.53**	**319**	⇓Pn	**Pn**	**07 10 43.6**	**+3.5**
	0.6nm,0.5s,baz=0.0,slow=0.1,SNR=36						
MK31				⇑Pg	**Pg**	**07 10 51.7**	**-1.1**
	5.2nm,0.7s,baz=139,slow=14,SNR=21						
MK31				⇑Lg	Lg	07 11 36.9	
	15nm,0.5s,baz=136,slow=30,SNR=7.9						
MKAR	**Makanchi Array**	**3.53**	**319**	Pn	**Pn**	**07 10 42.1**	**+2.0**
	0.3nm,0.3s,baz=137,slow=15,SNR=6.4						
MKAR				Pg	**Pb**	**07 10 49.4**	**+1.6**
	1.7nm,0.3s,baz=134,slow=17,SNR=15						
MKAR				Lg	Lg	07 11 34.6	
	11nm,0.3s,baz=142,slow=30,SNR=11						
MAKZ	**Makanchi**	**3.69**	**317**	⇓Pn	**Pn**	**07 10 44.3**	**+2.0**
	1.2nm,0.6s						
MAKZ				⇓Pg	**Pb**	**07 10 52.1**	**+1.7**
	2.0nm,0.6s						
MAKZ				⇑Lg	Lg	07 11 40.6	
	12nm,0.5s						
KTMS	**Ketmen**	**3.89**	**261**	*e*P	**Pg**	**07 11 00.5**	**+0.8**
	2.9nm,0.2s						
KTMS				*e*S	**Sg**	**07 11 48.5**	**-1.7**
	49nm,0.3s						
KTMS	**Ketmen**	**3.89**	**261**	Pg	**Pg**	**07 11 00.5**	**+0.8**
	2.9nm,0.2s						
KTMS				Lg	Lg	07 11 48.5	
	49nm,0.3s						
DJR	**Jarkent**	**4.20**	**274**	*e*P	**Pg**	**07 11 05.2**	**-0.5**
	12nm,0.3s						
DJR				*e*S	**Sg**	**07 11 57.6**	**-2.5**
	41nm,0.5s						
DJR	**Jarkent**	**4.20**	**274**	Pg	**Pg**	**07 11 05.2**	**-0.5**
	12nm,0.3s						
DJR				Lg	Lg	07 11 57.6	
	41nm,0.5s						
PDGK	**Podgornoye**	**4.53**	**262**	Pg	**Pg**	**07 11 13.9**	**+2.0**
	5.8nm,0.5s						
PDGK				Lg	Lg	07 12 09.8	
	14nm,0.4s						
PDGK	**Podgornoye**	**4.53**	**262**	⇑Pn	**Pn**	**07 10 54.8**	**+0.8**
	2.1nm,0.8s						
PDGK				⇑Pg	**Pg**	**07 11 10.1**	**-1.8**
	16nm,0.8s						
PDGK				⇑Lg	Lg	07 12 04.5	
	39nm,0.7s						
SHLS	**Shalkode**	**4.59**	**259**	*e*P	**Pb**	**07 11 05.3**	**-0.6**
SHLS				*e*S	**Sb**	**07 11 56.7**	**-4.6**
	58nm,0.5s						
SHLS	**Shalkode**	**4.59**	**259**	Pg	**Pb**	**07 11 05.3**	**-0.6**
SHLS				Lg	Lg	07 11 56.7	
	58nm,0.5s						
UZB	**Uzynbulak**	**4.91**	**260**	*e*P	**Pg**	**07 11 17.4**	**-1.8**
	4.9nm,0.6s						
UZB				*e*S	**Sb**	**07 12 17.0**	**+6.7**
	28nm,0.6s						
UZB	**Uzynbulak**	**4.91**	**260**	Pg	**Pg**	**07 11 18.8**	**-0.3**
	13nm,0.3s						
UZB				Lg	Lg	07 12 18.7	
	28nm,0.6s						
KPKS	**Kokpek**	**5.08**	**265**	*e*P	**Pg**	**07 11 20.2**	**-2.2**
	8.1nm,0.3s						

KPKS	40nm,0.5s			*e*S	Sg	07 12 22.6	-5.6
MNBS	Baschi 5.9nm,0.5s	5.21	272	*e*P	Pg	07 11 25.7	+0.8
MNBS	40nm,0.6s			*e*S	Sg	07 12 31.6	-0.8
MNBS	Baschi 9.6nm,0.4s	5.21	272	Pg	Pg	07 11 26.6	+1.6
MNBS	54nm,0.3s			Lg	Lg	07 12 31.9	
TDK	Taldyqorghan 36nm,0.5s	5.23	282	*e*P	Pg	07 11 25.6	+0.3
TDK	43nm,0.4s			*e*S	Sg	07 12 31.4	-1.7
TDK	Taldyqorghan 28nm,0.3s	5.23	282	Pg	Pg	07 11 28.6	+3.3
TDK	43nm,0.4s			Lg	Lg	07 12 35.2	
SATY	Saty 2.5nm,0.2s	5.36	261	*e*P	Pg	07 11 28.2	+0.3
SATY	52nm,0.5s			*e*S	Sg	07 12 36.1	-1.2
SATY	Saty 2.5nm,0.2s	5.36	261	Pg	Pg	07 11 29.4	+1.4
SATY	52nm,0.5s			Lg	Lg	07 12 36.1	
KURS	Kuram 1.6nm,0.2s	5.44	265	*e*P	Pg	07 11 31.8	+2.3
KURS	17nm,0.6s			*e*S	Sg	07 12 42.5	+2.6
KURS	Kuram 1.6nm,0.2s	5.44	265	Pg	Pg	07 11 33.3	+3.8
KURS	17nm,0.6s			Lg	Lg	07 12 42.5	
ARXS	Arharly 6.9nm,0.3s	5.62	273	Pg	Pg	07 11 31.5	-1.2
ARXS	26nm,0.5s			Lg	Lg	07 12 40.3	
KOTS	Kotyrbulak 6.1nm,0.3s	6.25	264	Pg	Pg	07 11 43.6	-1.2
KOTS	15nm,0.5s			Lg	Lg	07 13 00.7	
MDOK	Medeo 2.7nm,0.6s	6.31	264	Pg	Pb	07 11 35.6	+0.5
MDOK	29nm,1.2s			Lg	Lg	07 13 04.9	
KTBS	Karatobe 3.8nm,0.6s	6.48	269	Pg	Pg	07 11 48.9	-0.4
KTBS	34nm,0.7s			Lg	Lg	07 13 09.2	
IZV	Izvestkoviy 4.8nm,0.5s	6.65	263	Pg	Pg	07 11 54.0	+1.6
IZV	13nm,0.6s			Lg	Lg	07 13 17.6	
KST	Kastek 6.7nm,0.4s	7.11	264	Pg	Pg	07 12 02.0	+0.6
KST	7.5nm,0.5s			Lg	Lg	07 13 31.7	
KURBB	Kurchatov Arra 1.3nm,0.7s	8.06	326	⇑Pn	Pn	07 11 42.9	+0.7
KURBB	22nm,0.8s			⇑Lg	Lg	07 14 02.9	
KURK	Kurchatov 1.3nm,1.1s	8.10	327	⇑Pn	Pn	07 11 42.9	+0.2
KURK	24nm,1.1s			⇑Lg	Lg	07 14 00.6	
ZALV	Zalesovo Beam 0.3nm,0.3s,baz=177,slow=14,SNR=8.3	9.81	357	Pn	Pn	07 12 05.7	-0.5
ZALV	0.5nm,0.3s,baz=183,slow=24,SNR=14			Sn	Sn	07 13 53.5	-2.8
ZALV	0.4nm,0.3s,baz=179,slow=22,SNR=1.5			Lg	Lg	07 14 56.9	
SONM	Songino Array 0.0nm,0.3s,baz=270,slow=10,SNR=4.3	14.88	68	Pn	P	07 13 20.9	-0.6
SONM	baz=264,slow=23,SNR=2.7			Lg	Lg	07 17 42.7	

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*IDC **22** 07:31:42.5±1.1, 37°.04N×105°.26W, h0^{km}, mb3.1/2, mb1 3.6/8, mb1mx3.5/49, mbtmp3.4/8, ML3.3/6, MS3.3/1, Ms1 3.3/1, ms1mx2.6/19, Error ellipse: s-maj=16.7km s-min=9.6km az=85.0*

*NEIC **22** 07:31:48.1±0.9, 37°.16N±0°.04×104°.98W±0°.07, h5^{km}±2^{km}, mb_Lg3.5/92, ML3.6/36, Error ellipse: s-maj=10.0km s-min=4.8km az=237.0*

ISC 22 07:31:43.7±0.7**, 37°.08N**±0°.04×**104°.98W**±0°.04**, h10**^{km}**, n60, σ1^{s}81**/37**, Colorado**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SDCO	Great Sand Dun	0.78	328		Pn	07 32 02.5	+1.4
SDCO				Sg	Sb	07 32 09.8	-0.6
ANMO	Albuquerque 8.8nm,0.3s,baz=32,slow=16,SNR=30	2.44	210	Pn	Pn	07 32 23.8	0.0
ANMO	35nm,0.3s,baz=113,slow=13,SNR=12			Lg	Lg	07 32 55.5	
ANMO	Albuquerque	2.44	210	Pn	Pb	07 32 26.5	-1.3
ANMO				Sn	Sb	07 32 56.6	-1.5
SMCO	Snowmass	2.62	324	Pn	Pb	07 32 29.2	-1.7
SMCO	285nm,0.6s			IAML		07 33 11.0	
SMCO	361nm,0.4s			IAML		07 33 11.4	
KSCO	Kaye Shedlock'	2.67	43	Pn	Pb	07 32 31.3	-0.4
KSCO	comp=Z,255nm,0.9s			IAmb_Lg		07 33 15.8	
ISCO	Idaho Springs	2.76	350	Pn	Pb	07 32 32.4	-0.9
MVCO	Mesa Verde	2.82	274	Pn	Pb	07 32 34.7	+0.5
PV01	Paradox Valley	3.04	291	Pn	Pb	07 32 39.3	+1.3
PV01	comp=E,160nm,0.8s			IAML		07 33 22.5	
PV01	comp=N,143nm,1.6s			IAML		07 33 24.2	
PV15	Paradox Valley	3.05	295	Pn	Pg	07 32 40.2	-1.9
PV15	comp=E,219nm,0.7s			IAML		07 33 23.0	
PV15	comp=N,148nm,0.8s			IAML		07 33 26.5	
PV07	Paradox Valley	3.21	296	Pn	Pb	07 32 39.7	-1.1
PV07	comp=N,117nm,0.9s			IAML		07 33 32.3	
BNM	Barren Site	3.22	205	Pn	Pb	07 32 40.2	-0.8
PV12	Saucer Basin,	3.27	293	Pn	Pb	07 32 41.8	-0.2
PV03	Paradox Valley	3.29	292	Pn	Pb	07 32 43.3	+1.1
PV03	comp=N,122nm,1.6s			IAML		07 33 43.0	
PV03	comp=E,106nm,1.4s			IAML		07 33 43.1	
PV22	Blue Mesa, Par	3.35	297	Pn	Pg	07 32 46.0	-1.8
PV22	comp=E,111nm,0.7s			IAML		07 33 31.1	
PV22	comp=N,206nm,1.0s			IAML		07 33 33.5	
PV04	Paradox Valley	3.38	294	Pn	Pb	07 32 42.3	-1.4
PV04	comp=N,247nm,1.3s			IAML		07 33 44.6	
PV17	East Wray Mesa	3.38	292	Pn	Pb	07 32 41.1	-2.6
PV17	comp=N,135nm,1.4s			IAML		07 33 40.2	
PV17	comp=E,106nm,1.4s			IAML		07 33 48.0	
Y22D	IRIS PASSCAL I	3.39	208	Pn	Pb	07 32 42.5	-1.4
PV14	Lion Creek, Pa	3.46	293	Pn	Pg	07 32 48.5	-1.4
PV14	comp=E,171nm,1.2s			IAML		07 33 45.3	
PV14	comp=N,222nm,1.2s			IAML		07 33 46.8	
AMTX	Amarillo	3.46	128	Pn	Pb	07 32 43.5	-1.6
AMTX	comp=Z,104nm,0.8s			IAmb_Lg		07 33 44.9	
MSTX	Muleshoe	3.59	149	Pn	Pb	07 32 45.1	-2.2
MSTX	comp=Z,102nm,0.9s			IAmb_Lg		07 33 41.2	
OGNE	Ogallala comp=Z,94nm,0.8s	4.49	30	IAmb_Lg		07 34 10.0	
CBKS	Cedar Bluff comp=Z,139nm,0.8s	4.49	66	IAmb_Lg		07 34 08.8	
U32A	Winter Ranch, comp=Z,85nm,0.7s	4.85	97	IAmb_Lg		07 34 29.4	
R32A	Long Quarter, comp=Z,89nm,1.0s	5.14	73	IAmb_Lg		07 34 31.0	
MNTX	Cornudas Mount	5.38	184	Pn	Pb	07 33 18.9	+1.2
WMOK	Wichita Mounta comp=Z,60nm,1.1s	5.55	113	IAmb_Lg		07 34 42.7	
KAN14	Manchester OK comp=Z,86nm,1.2s	5.62	89	IAmb_Lg		07 34 44.3	
CROK	Carrier comp=Z,89nm,0.8s	5.64	94	IAmb_Lg		07 34 52.0	
KS21	Milan North St comp=Z,68nm,0.9s	5.84	86	IAmb_Lg		07 34 56.0	
BCOK	Bluff Creek, N comp=Z,105nm,0.9s	6.11	101	IAmb_Lg		07 35 03.5	
X34A	Smith Ranch, M comp=Z,55nm,0.8s	6.31	111	IAmb_Lg		07 35 08.0	
FNO	Franklin comp=Z,72nm,0.8s	6.39	104	IAmb_Lg		07 35 17.3	
PDAR	Pinedale Array comp=Z,0.2nm,0.3s,baz=134,slow=14,SNR=3.7	6.68	330	Pn	Pn	07 33 23.2	+1.2
PDAR	comp=Z,0.2nm,0.3s,baz=138,slow=14,SNR=3.8			Pg	Pg	07 33 48.2	-3.3
PDAR	comp=Z,0.4nm,0.3s,baz=140,slow=26,SNR=2.9			Lg	Lg	07 35 13.2	
PDAR	Pinedale Array	6.68	330		Pn	07 33 24.9	+2.8
QUOK	Quay comp=Z,46nm,1.0s	6.71	95	IAmb_Lg		07 35 38.1	
TUC	Tucson	6.75	227	Pn	Pn	07 33 24.2	+1.4
TUC	Tucson comp=Z,9.9nm,1.2s	6.75	227	IAmb_Lg		07 35 29.2	
T35A	Sooner Cattle comp=Z,90nm,1.2s	6.78	89	IAmb_Lg		07 35 18.7	
BGNE	Belgrade	6.84	49	Pn	Pn	07 33 27.1	+3.1
KSU1	Kansas State U comp=Z,77nm,1.1s	6.90	70	IAmb_Lg		07 35 31.2	
RSSD	Black Hills	7.07	6	Pn	Pn	07 33 29.6	+2.2
K31A	O'Neill	7.32	39		Pn	07 33 34.5	+4.0
Z35A	Perchaven, San comp=Z,66nm,1.1s	7.35	118	IAmb_Lg		07 35 43.7	
TUL1	Leonard comp=Z,81nm,1.1s	7.49	96	IAmb_Lg		07 35 46.6	
TXAR	Lajitas Array comp=Z,0.2nm,0.3s,baz=358,slow=13,SNR=5.8	7.80	172	Pn	Pn	07 33 39.1	+1.7
TXAR	comp=Z,0.5nm,0.3s,baz=349,slow=13,SNR=7.6			Pg	Pb	07 34 01.7	+2.6
TXAR	comp=Z,1.4nm,0.3s,baz=348,slow=24,SNR=12			Lg	Lg	07 35 43.7	
JCT	Junction City comp=Z,68nm,1.1s	7.87	145	IAmb_Lg		07 36 06.2	
U38A	Gravette comp=Z,40nm,0.9s	8.53	91	IAmb_Lg		07 36 16.0	
SUSD	Miller comp=Z,35nm,0.7s	8.65	30	IAmb_Lg		07 36 21.4	
HHAR	Hobbs comp=Z,36nm,0.9s	8.90	92	IAmb_Lg		07 36 32.9	
S39A	Bolivar comp=Z,34nm,1.0s	9.30	83	IAmb_Lg		07 36 50.7	
P38A	Dawn comp=Z,50nm,0.9s	9.34	71	IAmb_Lg		07 36 38.6	
MIAR	Mount Ida comp=Z,55nm,1.1s	9.60	102	IAmb_Lg		07 37 00.9	
U40A	Yellville comp=Z,46nm,0.8s	9.76	91	IAmb_Lg		07 37 07.3	
PFO	Pinyon Flats O comp=Z,0.6nm,0.3s,baz=72,slow=17,SNR=2.3	10.00	253	Pn	Pn	07 34 06.8	-0.7
PFO	comp=Z,144nm,18.4s,baz=223,slow=40			LR	LR	07 38 17.1	
NVAR	Mina Array Bea comp=Z,0.2nm,0.3s,baz=112,slow=17,SNR=3.7	10.64	281	Pg	Pg	07 34 59.6	
NVAR	comp=Z,0.1nm,0.3s,baz=93,slow=17,SNR=1.9			Lg	Lg	07 37 12.4	
YBH	Yreka Blue Hor comp=Z,0.0nm,0.3s,baz=113,slow=7.7,SNR=2.5	14.47	294	Pn	Pn	07 35 08.5	-0.1
ULM	Lac du Bonnet comp=Z,0.2nm,0.3s,baz=200,slow=13,SNR=2.7	14.70	24	Pn	Pn	07 35 10.2	-1.3
ULM	comp=Z,0.2nm,0.3s,baz=128,slow=19,SNR=2.5			Lg	Lg	07 39 19.2	
TKL	Tuckaleechee C comp=Z,0.1nm,0.3s,baz=300,slow=20,SNR=2.9	17.14	88	Lg	Lg	07 40 36.7	
YKA	Yellowknife Ar comp=Z,0.2nm,0.6s,baz=161,slow=9.3,SNR=4.2	26.13	350	P	P	07 37 18.6	+1.1
ILAR	Eielson Array comp=Z,0.2nm,0.6s,baz=133,slow=8.8,SNR=2.0	37.11	332	P	P	07 38 55.5	+1.5

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*JMA **22** 07:31:48.7±0.2, 27°.48N×129°.51E, h26^{km}, M3.6*

*IDC **22** 07:31:50.5±2.1, 27°.57N×129°.40E, h40^{km}±17^{km}, mb3.5/12, mb1 3.7/13, mb1mx3.6/51, mbtmp3.7/13, ML3.6/1, Error ellipse: s-maj=22.8km s-min=10.6km az=117.0*

ISC 22 07:31:48.3±1.3**, 27°.46N**±0°.03×**129°.54E**±0°.03**, h28**^{km}±9^{km}**, n37, σ0^{s}87**/54**, mb3.7**/12**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTK	Tokunoshima	0.61	302	P	Pb	07 31 59.9	-0.6
JTK				*e*S	Sn	07 32 08.8	-1.3
JAMN	Amaminishikomi	0.84	337	P	Pn	07 32 03.6	-0.7
JAMN				*e*S	Sb	07 32 14.8	-0.5
JOKE	Okinoerabujima	0.87	264	P	Pn	07 32 04.5	-0.1
JOKE				*e*S	Sb	07 32 16.4	+0.4
JZK	Kikaishima	0.93	24	P	Pn	07 32 06.3	+0.8
JZK				*e*S	Sb	07 32 19.9	+2.1
JAM	Amami Oshima	0.95	3	P	Pn	07 32 05.4	-0.3
JAM				*e*S	Sb	07 32 18.1	-0.2
JYRO	Yoronjima	1.06	246	P	Pn	07 32 07.6	+0.3
JYRO				*e*S	Sb	07 32 22.0	+0.4
JOW	Kunigami 85nm,0.3s,baz=107,slow=22,SNR=101	1.29	241	P	Pn	07 32 10.7	+0.3
JOW	121nm,0.3s,baz=111,slow=29,SNR=5.4			S	Sn	07 32 27.1	+0.3
JOW	Kunigami	1.29	241	P	Pn	07 32 10.8	+0.3
JOW				*e*S	Sb	07 32 28.2	+0.1
JIH	Iheya	1.47	253	P	Pn	07 32 13.3	+0.5
JIH				*e*S	Sn	07 32 31.3	+0.2
JNTH	Nagotoyohara	1.65	236	P	Pn	07 32 15.5	+0.1
JNTH				*e*S	Sn	07 32 36.5	+0.9
JTAJ	Takarajima	1.71	350	P	Pn	07 32 16.0	-0.2
JTAJ				*e*S	Sn	07 32 37.5	+0.4
JJT3	Tamagusuku3	2.05	230	*e*S	Sn	07 32 46.8	+1.3
JKDJ	Kitadaitoujima	2.18	133	P	Pn	07 32 22.4	-0.2
JKDJ				*e*S	Sn	07 32 48.1	-0.5
JMZ	Minamidaito 2	2.22	137	P	Pn	07 32 23.0	-0.2
JMZ				*e*S	Sn	07 32 48.3	-1.5
JAGN	Aguni-jima	2.23	248	P	Pn	07 32 23.6	+0.3
JAGN				*e*S	Sn	07 32 51.3	+1.4
JNN	Nakanoshima	2.39	7	P	Pn	07 32 26.9	+1.4
JNN				*e*S	Sn	07 32 55.2	+1.3
JKE	Kume jima 2	2.71	246	P	Pn	07 32 30.0	+0.1
JKE				*e*S	Sn	07 33 02.4	+0.6
JYAK	Yakushimahirau	2.89	17	P	Pn	07 32 32.6	+0.1
JYAK				*e*S	Sn	07 33 06.2	-0.1
JKC	Kuchinoerabu	3.04	11	*e*S	Sn	07 33 09.4	-0.6
JMTN	Minamitane	3.16	22	P	Pn	07 32 36.4	+0.3
JMTN				*e*S	Sn	07 33 13.3	+0.4
JTN	Tanegashima 3	3.42	21	P	Pn	07 32 40.1	+0.4
JTN				*e*S	Sn	07 33 19.5	+0.1
JNU	Nakatsue 1.9nm,0.3s,baz=183,slow=12,SNR=11	5.76	11	P	Pn	07 33 13.7	+1.8
JNU	baz=246,slow=4.2,SNR=1.2			S	Sn	07 34 16.2	-0.9
SONM	Songino Array 0.3nm,0.8s,baz=127,slow=9.6,SNR=2.1	27.19	325	P	P	07 37 29.6	0.0
CMAR	Chiang Mai Arr 1.3nm,0.3s,baz=44,slow=10,SNR=1.4	29.50	259	P	P	07 37 49.9	-0.4
H11N2	WAKE ISLAND Hy baz=290	34.98	95	T	T	08 15 33.8	
H11N1	WAKE ISLAND Hy baz=290	34.99	95	T	T	08 15 33.8	
H11N3	WAKE ISLAND Hy baz=290	35.00	95	T	T	08 15 35.5	
MKAR	Makanchi Array 0.4nm,0.3s,baz=98,slow=9.3,SNR=7.4	41.61	311	P	P	07 39 32.5	-1.3
ZALV	Zalesovo Beam 0.5nm,0.4s,baz=100,slow=7.9,SNR=2.7	41.99	322	P	P	07 39 35.0	-1.8
KURBB	Kurchatov Arra 0.4nm,0.4s,baz=101,slow=8.9,SNR=5.7	44.79	315	P	P	07 39 58.0	-1.4
WRA	Warramunga Arr 0.7nm,0.9s,baz=355,slow=8.6,SNR=2.3	47.35	174	P	P	07 40 20.7	+0.8
ASAR	Alice Springs 0.2nm,0.5s,baz=7.4,slow=14,SNR=5.1	51.01	175	P	P	07 40 49.1	+1.3
KBZ	Khabaz 3.2nm,0.9s,baz=177,slow=2.8,SNR=7.2	69.29	309	P	P	07 42 53.2	+0.3
AKASG	Malin Array Be 0.3nm,0.3s,baz=60,slow=5.6,SNR=1.9	75.36	320	P	P	07 43 27.7	-1.3
YKA	Yellowknife Ar 0.2nm,0.7s,baz=302,slow=5.7,SNR=1.3	76.92	25	P	P	07 43 38.7	+1.0
BRTR	Keskin Array B 1.2nm,0.8s,baz=96,slow=4.4,SNR=6.3	77.20	308	P	P	07 43 40.5	+0.5
GERES	GERESS Array B 0.2nm,0.4s,baz=34,slow=7.1,SNR=3.8	84.92	323	P	P	07 44 21.1	+0.3

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*IDC **22** 07:32:22.7±0.6, 43°.87N×147°.61E, h0^{km}, mb4.2/21, mb1 4.3/26, mb1mx4.2/56, mbtmp4.1/26, ML3.0/4, MS3.5/8, Ms1 3.5/8, ms1mx3.1/41, Error ellipse: s-maj=17.6km s-min=13.0km az=151.0*

*NIED **22** 07:32:27.9, 43°.67N×147°.43E, h10^{km}, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}2.03; $M_{\theta\theta}$-1.32; $M_{\phi\phi}$-0.72; $M_{r\theta}$2.33; $M_{\theta\phi}$-1.41; $M_{\phi r}$2.96; Fault plane solution: $M_0$4.39000×10^{15} NP1:ϕ_s40.00000°, δ75.00000°, λ83.00000°. NP2:ϕ_s246.00000°, δ17.00000°, λ116.00000°.*

*JMA **22** 07:32:27.9±0.3, 43°.67N×147°.43E, h10^{km}, M4.4*

*SKHL **22** 07:32:27.5±0.2, 43°.70N×147°.80E, h54^{km}±6^{km}, mb4.9/16*

*MOS **22** 07:32:28.0±0.8, 43°.83N×147°.63E, h50^{km}, mb4.7/27, Error ellipse: s-maj=7.8km s-min=5.7km az=129.2*

*NEIC **22** 07:32:28.5±1.6, 43°.76N±0°.09×147°.7E±0°.1, h35^{km}±7^{km}, mb4.6/54, Error ellipse: s-maj=14.8km s-min=9.8km az=140.0*

ISC 22 07:32:28.0±0.5**, 43°.74N**±0°.05×**147°.72E**±0°.05**, h35**^{km}±3^{km}**, n303, σ1^{s}20**/317**, mb4.5**/78**, MS3.6**/4**, 19C-26D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YUK	Yuzh-Kuril'sk	1.38	283	*de*PN	Pn	07 32 49.9	-0.7
YUK	Yuzh-Kuril'sk	1.38	283	*i* P	Pn	07 32 50.0	-0.7
YUK	1μm,0.3s			AMB	AMB	07 32 52.9	
YUK				*i* S	Sn	07 33 06.8	-0.8
YUK	4μm,0.3s			A	A	07 33 09.0	
YUK	2μm,0.3s			A	A	07 33 09.0	
GRPR	Tuman	1.43	281	⇓*i*PN	Pn	07 32 50.7	-0.7
GRPR				*i* S	Sn	07 33 08.2	-0.8
GRPR	comp=Z,2μm,0.3s			pmax	pmax		
GRPR	comp=N,954nm,0.4s			pmax	pmax		
GRPR	comp=E,2μm,0.4s			smax	smax		
GRPR	comp=N,5μm,0.3s			smax	smax		
GRPR	Tuman	1.43	281	*i* P	Pn	07 32 51.0	-0.4
GRPR	comp=N,2μm,0.4s			AMB	AMB	07 32 51.0	
GRPR				*i* S	Sn	07 33 08.8	-0.2
GRPR	comp=N,5μm,0.4s			A	A	07 33 10.0	
GRPR	comp=N,2μm,0.4s			A	A	07 33 10.0	
NEM2	Nemuro 2	1.48	256	P	Pn	07 32 51.2	-0.9
NEM2				*e*S	Sn	07 33 08.6	-1.7
NMR	Nemuro--Hokkai	1.49	256	⇑*i*PN	Pn	07 32 51.4	-0.9
NMR				*i* S	Sn	07 33 11.2	+0.7
NMR	Nemuro--Hokkai	1.49	256	*i* P	Pn	07 32 51.5	-0.8
KUR	Kuril'sk	1.50	4	*c i*PN	Pn	07 32 51.8	-0.5
KUR				*i* S	Sn	07 33 09.2	-1.4
KUR	comp=Z,254nm,0.2s			pmax	pmax		
KUR	comp=N,2μm,0.2s			smax	smax		
KUR	comp=E,1μm,0.2s			smax	smax		
KUR	Kuril'sk	1.50	4	*i* P	Pn	07 32 51.0	-1.3
KUR	comp=E,254nm,0.2s			AMB	AMB	07 32 54.0	
KUR				*i* S	Sn	07 33 08.6	-2.0
KUR	comp=E,2μm,0.3s			A	A	07 33 09.0	
KUR	comp=E,1μm,0.3s			A	A	07 33 09.0	
GLVR	Golovnino	1.59	271	⇑*i*PN	Pn	07 32 53.7	+0.1
GLVR				*i* S	Sn	07 33 13.1	+0.1
GLVR	comp=Z,805nm,0.3s			pmax	pmax		
GLVR	comp=N,4μm,0.4s			smax	smax		
GLVR	comp=E,1μm,0.3s			smax	smax		
GLVR	Golovnino	1.59	271	*i* P	Pn	07 32 53.9	+0.3
GLVR	comp=E,805nm,0.3s			AMB	AMB	07 32 54.0	
GLVR				*i* S	Sn	07 33 13.5	+0.5
GLVR	comp=E,4μm,0.4s			A	A	07 33 15.0	
GLVR	comp=E,1μm,0.4s			A	A	07 33 15.0	
RUSJ	Misakicho	1.82	282	⇓*i*PN	Pn	07 32 57.1	+0.3
RUSJ				*i* S	Sn	07 33 21.3	+2.7
JRA	Rausu	1.89	277	P	Pn	07 32 57.7	0.0
JNSB	Nemuroshibetsu	1.97	272	P	Pn	07 32 59.1	+0.3
JKHN	Kushirohamanak	1.98	252	P	Pn	07 32 58.9	0.0
JNK	Nakash	2.18	267	P	Pn	07 33 01.4	-0.3
JNK				*e*S	Sn	07 33 26.3	-1.2
JAK	Akkeshi	2.33	252	P	Pn	07 33 03.6	-0.1
JAK				*e*S	Sn	07 33 29.5	-1.5
JTKR	Abashiri--Toko	2.77	276	P	Pn	07 33 10.7	+0.9
JAR	Ashorobuto	2.91	263	P	Pn	07 33 12.5	+0.8
JOB	Onbets	2.96	255	P	Pn	07 33 12.9	+0.6
JMP	Maruseppu	3.16	276	P	Pn	07 33 16.1	+0.8
HRK	Horoka	3.34	267	*e*P	Pn	07 33 19.7	+1.9
JCH	Churui	3.38	252	P	Pn	07 33 18.9	+0.7
JCH				*e*S	Sn	07 33 57.0	0.0
JKA	Kamikawa-asahi	3.72	278	Pn	Pn	07 33 25.3	+2.5
JKA	Kamikawa-asahi	3.72	278	*e*P	Pn	07 33 25.3	+2.5
ASAJ	Asahikawa comp=E,5.4nm,0.3s,baz=81,slow=13,SNR=37	3.72	278	Pn	Pn	07 33 23.6	+0.7
ASAJ	comp=E,191nm,20.1s,baz=150,slow=30			LR	LR	07 34 11.9	
ASAJ	Asahikawa	3.72	278	PN	Pn	07 33 25.3	+2.4
ERM	Erimo	3.77	244	*ce*PN	Pn	07 33 26.4	+2.9
ERM	comp=Z,121nm,0.7s			pmax	pmax		
ERM	Erimo	3.77	244	Pn	Pn	07 33 26.7	+3.1
ERM	Erimo	3.77	244	*e*P	Pn	07 33 25.3	+1.8
JEM	Erimo	3.77	244		Pn	07 33 26.5	+3.0
JFR	Furan	3.78	263	P	Pn	07 33 25.3	+1.6
JSE	Soyaes	3.88	290	P	Pn	07 33 26.0	+1.0
JNBK	Urakawa-nobuka	3.92	250	P	Pn	07 33 26.5	+0.8
JEW	Eniwo	4.66	261	Pn	Pn	07 33 38.5	+2.7
YSS	Yuzh-Sakhalins	4.75	314	⇑*e*PN	Pn	07 33 38.3	+1.3
YSS				*e*S	Sn	07 34 31.1	+0.3
YSS	comp=Z,50nm,0.6s			pmax	pmax		
YSS	comp=N,50nm,0.9s			smax	smax		
YSS	comp=Z,600nm,13.0s			MLR	MLR		
YSS	comp=N,300nm,16.0s			MLR	MLR		
YSS	comp=E,400nm,15.0s			MLR	MLR		
YSS	Yuzh-Sakhalins	4.75	314	Pn	Pn	07 33 37.1	+0.1
YSS	Yuzh-Sakhalins	4.75	314	*e*P	Pn	07 33 37.6	+0.6
YSS	comp=E,50nm,0.6s			AMB	AMB	07 33 39.6	
YSS				*e*S	Sn	07 34 31.1	+0.3
JTM	Tenmabayashi	5.75	241	Pn	Pn	07 33 51.9	+1.2
JTM				Sn	Sn	07 34 56.0	+0.6
UGL	Uglegorsk	6.62	326	*e*P	Pn	07 34 05.3	+2.7
UGL	comp=E,40nm,0.9s			AMB	AMB	07 34 08.0	
JMM	Marumori	7.87	224	Pn	Pn	07 34 19.6	-0.2
JMM				Sn	Sn	07 35 42.4	-5.3
TYV	Tymovskoe	7.91	336	*e*PN	Pn	07 34 33.9	+14
TYV	comp=Z,7.0nm,1.1s			pmax	pmax		
TYV	comp=Z,600nm,17.0s			MLR	MLR		
TEY	Ternei	8.07	283	*e*P	Pn	07 34 25.0	+2.5
SKR	Severo-Kuril's	8.99	36	*e*P	Pn	07 34 34.1	-1.1
SKR	comp=Z,110nm,0.7s			AMB	AMB	07 34 35.0	
SKR				*e*S	Sn	07 36 13.0	-2.1
JSD	Sado	9.15	235	Pn	Pn	07 34 37.0	-0.4
PAU	Pauzhetka	9.87	35	*e*P	Pn	07 34 49.6	+2.4
PAU	comp=Z,30nm,0.7s			AMB	AMB	07 34 53.8	
MJAR	Matsushiro Arr comp=Z,0.1nm,0.3s,baz=28,slow=15,SNR=5.4	10.22	229	Pn	Pn	07 34 51.4	-0.8
MJB9	Matsu-Tunnel	10.22	229	Pn	Pn	07 34 53.0	+0.8
MAJO	Matsushiro	10.23	229	⇓*e*PN	Pn	07 34 54.9	+2.7
MAJO	Matsushiro	10.23	229	Pn	Pn	07 34 53.0	+0.8

MAJO Matsushiro 10.23 229 eP Pn 07 34 54.9 +2.7
OKH Okha 10.31 344 eP Pn 07 34 57.0 +3.7
OKH AMB AMB 07 34 57.3
comp=Z,65nm,0.4s
USA0B Ussuriysk Arra 11.35 278⇑ePN Pn 07 35 09.8 +2.3
USRK Ussuriysk Ar. 11.35 278 Pn Pn 07 35 04.5 -3.0
baz=105,slow=17,SNR=1.9
USRK LR LR 07 39 36.0
comp=Z,321nm,19.5s,baz=65,slow=38
JGF Kuroka 11.38 228 Pn Pn 07 35 09.4 +1.3
PEA0B Petropavlovsk- 11.47 32 PN Pn 07 35 08.0 -1.1
PEA0B Petropavlovsk- 11.47 32 Pn Pn 07 35 08.0 -1.1
PETK Petropavlovsk- 11.47 32 Pn Pn 07 35 09.9 +0.8
comp=Z,0.4nm,0.3s,baz=202,slow=11,SNR=8.8
KLR Kul'dur 12.29 302 Pn Pn 07 35 22.0 +1.6
baz=0.0,slow=20
KLR LR LR 07 40 30.1
comp=Z,299nm,18.6s,baz=180,slow=40
KLR Kul'dur 12.29 302cePN Pn 07 35 21.3 +0.9
KLR pmax pmax
comp=Z,15nm,1.4s
KLR Kul'dur 12.29 302 eP Pn 07 35 20.3 -0.1
JWT Wachi 12.71 233 Pn Pn 07 35 27.4 +1.3
EKMR Ekimchan 13.52 319 eP Pn 07 35 37.0 -0.1
EKMR AMB AMB 07 35 42.2
comp=Z,11nm,0.8s
MA2 Magadan 15.97 6 Pn Pn 07 36 06.3 -3.4
comp=Z,0.5nm,0.3s,baz=178,slow=9.5,SNR=12
MA2 Sn Sn 07 39 06.3 +0.8
comp=Z,0.5nm,0.3s,baz=133,slow=21,SNR=1.9
MA2 LR LR 07 41 44.1
comp=Z,166nm,19.1s,baz=220,slow=35
MA2 Magadan 15.97 6ceP Pn 07 36 10.0 +0.3
MA2 pmax pmax
comp=Z,5.0nm,0.7s
MA2 Magadan 15.97 6 Pn Pn 07 36 10.3 +0.6
MA2 Magadan 15.97 6 eP Pn 07 36 10.0 +0.3
KSRS Korea Array 16.28 254 Pn Pn 07 36 12.9 -0.9
comp=Z,0.1nm,0.3s,baz=67,slow=12,SNR=3.6
KSRS LR LR 07 42 53.8
comp=Z,122nm,18.1s,baz=58,slow=39
KSRS Korea Array 16.28 254 eP P 07 36 17.6 +1.2
BMKR Bomnak 16.45 318 eP Pn 07 36 14.0 -1.9
BMKR AMB AMB 07 36 19.8
comp=Z,15nm,0.4s
ZEA Zeya 16.75 314 eP P 07 36 25.2 +3.7
ZEA pmax pmax
comp=E,20nm,0.7s
ZEA pmax pmax
comp=N,20nm,1.1s
ZEA pmax pmax
comp=Z,20nm,1.3s
ZEA Zeya 16.75 314 eP Pn 07 36 20.2 +0.6
ZEA AMB AMB 07 36 33.2
comp=Z,20nm,0.8s
KROS Kirovskiy 17.23 316 eP Pn 07 36 23.4 -2.2
KROS AMB AMB 07 36 29.0
comp=Z,8.0nm,0.5s
SEY Seymchan 19.42 6 P P 07 36 48.4 -2.5
comp=Z,0.3nm,0.3s,baz=193,slow=8.2,SNR=9.8
YAK Yakutsk 21.17 336 LR LR 07 45 06.2
comp=Z,140nm,21.6s,baz=156,slow=36
YAK Yakutsk 21.17 336 eP P 07 37 08.0 -1.9
YAK e*PP pP 07 37 21.8 +2.7
YAK e 07 37 28.4
YAK eS S 07 41 00.9 -2.2
YAK e*SS sS 07 41 15.8 +1.5
YAK eSS SnSn 07 41 26.3 +0.3
YAK pmax pmax
comp=Z,24nm,1.0s
YAK pmax pmax
comp=N,7.0nm,1.1s
YAK pmax pmax
comp=E,3.0nm,1.0s
YAK pmax pmax
comp=Z,142nm,4.8s
YAK pmax pmax
comp=N,81nm,3.8s
YAK pmax pmax
comp=E,55nm,4.6s
YAK smax smax
comp=E,74nm,3.2s
YAK smax smax
comp=N,35nm,2.8s
YAK MLR MLR
comp=Z,126nm,17.0s
YAK MLR MLR
comp=E,67nm,17.0s
BJT Baijiatuau 23.71 272 P P 07 37 36.2 -0.3
BJT pmax pmax
comp=Z,8.0nm,0.9s
BJT Baijiatuau 23.71 272 P P 07 37 36.2 -0.3
BJT Baijiatuau 23.71 272 eP P 07 37 36.2 -0.3
ULN Ulaanbaatar 28.41 293⇑eP P 07 38 19.8 +0.6
ULN pmax pmax
comp=Z,3.0nm,0.8s
ULN Ulaanbaatar 28.41 293 P P 07 38 19.4 +0.2
ULN Ulaanbaatar 28.41 293 eP P 07 38 19.8 +0.6
YHNB Yeheng 28.73 237 P P 07 38 21.4 -0.7
YHNB IAmb IAmb 07 38 49.2
comp=Z,21nm,1.1s
H11N2 WAKE ISLAND Hy 28.82 140 T T 08 08 58.9
baz=331,slow=76,SNR=903
H11N1 WAKE ISLAND Hy 28.84 140 T T 08 09 01.4
baz=331,slow=76,SNR=1128
H11N3 WAKE ISLAND Hy 28.84 140 T T 08 09 01.8
baz=331,slow=76,SNR=1032
SONM Songino Array 28.86 293 P P 07 38 22.5 -0.5
comp=Z,1.2nm,0.5s,baz=78,slow=8.8,SNR=11
SONM Songino Array 28.86 293 eP P 07 38 23.1 0.0
SONM pmax pmax
comp=Z,1.0nm,0.5s
SONM Songino Array 28.86 293 P P 07 38 21.8 -1.3
H11S1 WAKE ISLAND Hy 29.80 142 T T 08 10 10.3
baz=332,slow=76,SNR=2604
H11S3 WAKE ISLAND Hy 29.80 142 T T 08 10 14.6
baz=332,slow=76,SNR=1334
H11S2 WAKE ISLAND Hy 29.82 142 T T 08 10 11.5
baz=332,slow=76,SNR=1253
ENH Enshi 33.06 259 P P 07 39 00.1 -0.1
ENH IAmb IAmb 07 39 00.6
comp=Z,6.6nm,0.9s
GTA Gaotai 35.70 280 eP P 07 39 22.3 -0.8
GTA pP pP 07 39 26.5 -6.7
GTA sP sP 07 39 29.4 -8.1
GTA pmax pmax
comp=Z,3.0nm,1.1s
CD2 Chengdu 36.81 265 P P 07 39 32.8 +0.2
CD2 pmax pmax
comp=Z,10.0nm,1.1s
IMAR Indian Mountai 38.42 34 P P 07 39 45.7 0.0
BPAW Bear Paw Mtn. 39.48 37 P P 07 39 56.2 +1.6
KTH Kantishna Hill 39.50 38 P P 07 39 56.1 +1.2
KTH IAmb IAmb 07 39 57.6
comp=Z,13nm,1.0s
COLD Coldfoot 39.94 32 P P 07 39 59.5 +1.1
BWN Browne 40.15 37 P P 07 40 01.3 +1.2
I23K Minto, Yukon-K 40.20 36 P P 07 40 01.5 +1.1
I23K IAmb IAmb 07 40 03.9
comp=Z,12nm,1.4s
TOLK Toolik Lake Re 40.29 30 P P 07 40 01.8 +0.5
MDM Murphy Dome 40.68 36 P P 07 40 05.5 +1.0
WRH Wood River Hil 40.74 37 P P 07 40 06.0 +1.0
SML Sawmill 40.76 41 P P 07 40 06.1 +0.9
SML IAmb IAmb 07 40 08.0
comp=Z,14nm,0.9s
DGZ Jazzator, Alta 40.78 300⇓eP P 07 40 05.6 -0.1
DGZ pmax pmax
comp=Z,1.0nm,0.4s
TCOL CIGO, UAF Yank 40.83 36 P P 07 40 07.1 +1.4
TCOL IAmb IAmb 07 40 07.6
comp=Z,13nm,0.9s
COLA College 40.84 36⇑eP P 07 40 06.6 +0.9
COLA pmax pmax
comp=Z,10.0nm,0.8s
COLA College 40.84 36 P P 07 40 07.1 +1.3
COLA IAmb IAmb 07 40 07.6
comp=Z,13nm,0.9s
CCB Clear Creek Bu 40.86 36 P P 07 40 06.5 +0.5
POKR Poker Plat Res 41.01 36 P P 07 40 07.8 +0.6
POKR IAmb IAmb 07 40 09.3
comp=Z,18nm,0.8s
HDA Harding Lake 41.24 37 P P 07 40 09.9 +0.8
IL31 41.25 36 P P 07 40 09.8 +0.7
IL31 IAmb IAmb 07 40 10.3
comp=Z,16nm,1.4s
ILAR Eielson Array 41.25 36 P P 07 40 09.3 +0.1
comp=Z,3.4nm,0.9s,baz=255,slow=6.5,SNR=24
ILAR Eielson Array 41.25 36 eP P 07 40 09.5 +0.3
ILAR pmax pmax
comp=Z,3.0nm,0.9s
ILAR Eielson Array 41.25 36 P P 07 40 09.7 +0.5
ZALV Zalesovo Beam 41.33 307 P P 07 40 08.6 -1.4
comp=Z,0.4nm,0.3s,baz=30,slow=10.0,SNR=2.4
ZALV PcP PcP 07 42 08.0 +0.2
comp=Z,2.8nm,0.6s,baz=89,slow=2.7,SNR=13
PRP Porcupine Dome 41.80 35 P P 07 40 15.0 +1.1
PRP IAmb IAmb 07 40 16.1
comp=Z,10nm,0.9s
FYU Fort Yukon 41.89 33 P P 07 40 15.2 +0.9
FYU IAmb IAmb 07 40 20.2
comp=Z,24nm,1.3s
BMAR Burnt Mountain 42.12 32 P P 07 40 18.0 +1.6
ZSN Zaisan 43.08 298 eP P 07 40 23.6 -0.7
baz=297
ZSN Zaisan 43.08 298 eP P 07 40 23.6 -0.7
BCAR Beaver Creek A 43.65 38 P P 07 40 30.6 +1.8
EGAK Eagle 43.70 36 P P 07 40 29.7 +0.6
EGAK IAmb IAmb 07 40 30.1
comp=Z,6.7nm,0.8s
MK31 Makanchi Array 44.95 298d iP P 07 40 39.2 -0.2
MK31 Makanchi Array 44.95 298 P P 07 40 39.1 -0.3
MKAR Makanchi Array 44.95 298 P P 07 40 38.6 -0.8
comp=Z,2.7nm,0.8s,baz=74,slow=8.9,SNR=13
MKAR PcP PcP 07 42 20.3 +0.1
comp=Z,1.2nm,0.8s,baz=51,slow=3.9,SNR=3.6
MKAR LR LR 08 00 47.0
comp=Z,118nm,19.3s,baz=39,slow=38
MKAR Makanchi Array 44.95 298 P P 07 40 38.8 -0.6
MKAR Makanchi Array 44.95 298 eP P 07 40 38.7 -0.7
SEM Semipalatinsk 45.00 303 eP P 07 40 38.0 -1.9
baz=303
SEM Semipalatinsk 45.00 303 eP P 07 40 38.0 -1.9
MAKZ Makanchi 45.15 298 P P 07 40 40.4 -0.6
MAKZ pmax pmax
comp=Z,4.0nm,0.9s
MAKZ Makanchi 45.15 298 P P 07 40 40.4 -0.6
EPYK Eagle Plains 45.30 33 P P 07 40 42.6 +0.7
KURK Kurchatov 45.88 304⇓eP P 07 40 46.0 -0.6
KURK pmax pmax
comp=Z,4.0nm,1.3s
KURK Kurchatov 45.88 304 P P 07 40 45.6 -0.9
KURK Kurchatov 45.88 304 eP P 07 40 46.0 -0.6
KURBB Kurchatov Arra 45.96 304 P P 07 40 46.1 -1.2
comp=Z,1.0nm,0.4s,baz=74,slow=8.6,SNR=9.7
KURBB PcP PcP 07 42 23.2 -0.3
comp=Z,2.2nm,0.8s,baz=76,slow=3.9,SNR=12
INK Inuvik 46.20 30 P P 07 40 48.7 -0.2
comp=Z,8.5nm,1.0s,baz=278,slow=5.5,SNR=17
INK Inuvik 46.20 30 P P 07 40 49.3 +0.4
INK pmax pmax
comp=Z,7.0nm,1.0s
INK Inuvik 46.20 30 P P 07 40 49.3 +0.4
INK IAmb IAmb 07 40 50.5
comp=Z,7.1nm,1.0s
LAMP Lampang 47.39 254 P P 07 40 58.9 0.0
CM34 Chiang Mai Arr 47.51 254 P P 07 41 01.0 +1.3
CHAI Chaiyaphum 47.59 249 P P 07 41 02.0 +1.6
comp=Z,13nm,0.9s
CM35 Chiang Mai Arr 47.62 254 P P 07 41 02.0 +1.4
CM33 Chiang Mai Arr 47.67 254 P P 07 41 02.0 +1.0
CMMT Chiang Mai 47.67 254 P P 07 41 01.7 +0.6
comp=Z,4.6nm,1.0s
CM36 Chiang Mai Arr 47.77 254 P P 07 41 03.0 +1.2
CM32 Chiang Mai Arr 47.85 254 P P 07 41 05.2 +2.8
CMAR Chiang Mai Arr 47.92 254 P P 07 41 03.4 +0.5
comp=Z,1.1nm,0.4s,baz=39,slow=7.3,SNR=12
CMAR LR LR 08 03 01.8
comp=Z,44nm,18.6s,baz=65,slow=38
CMAR Chiang Mai Arr 47.92 254 eP P 07 41 04.4 +1.5
CMAR pmax pmax
comp=Z,1.0nm,0.4s
TDK Taldyqorghan 48.15 297 eP P 07 41 04.2 -0.3
comp=Z,6.1nm,0.6s,baz=297
TDK Taldyqorghan 48.15 297 eP P 07 41 04.1 -0.3
TDK pmax pmax
comp=Z,6.0nm,0.6s
SHLS Shalkode 48.24 294 eP P 07 41 02.2 -3.1
comp=Z,2.4nm,0.8s,baz=294
SHLS Shalkode 48.24 294 eP P 07 41 02.1 -3.2
SHLS pmax pmax
comp=Z,2.0nm,0.8s
KPKS Kokpek 48.62 295 eP P 07 41 07.7 -0.5
comp=Z,4.5nm,0.8s,baz=295
KPKS Kokpek 48.62 295 eP P 07 41 07.6 -0.5
KPKS pmax pmax
comp=Z,5.0nm,0.8s
MHMT Maesarieng 48.81 255 P P 07 41 11.6 +1.8
comp=Z,993nmcomp=Z,12nm,0.7s
SATY Saty 48.98 295 eP P 07 41 10.4 -0.6
comp=Z,2.2nm,0.8s,baz=294
SATY Saty 48.98 295 eP P 07 41 10.4 -0.6
SATY pmax pmax
comp=Z,2.0nm,0.8s
C36M Paulatuk 49.30 28 IAmb IAmb 07 41 14.4
comp=Z,8.0nm,1.1s
BRZS Berezniki 49.69 305 eP P 07 41 15.0 -1.2
baz=305
BRZS Berezniki 49.69 305 eP P 07 41 15.0 -1.2
MDOK Medeo 49.82 295 eP P 07 41 17.1 -0.3
baz=295
MDOK Medeo 49.82 295 eP P 07 41 17.1 -0.3
BRVK Borovoye 49.88 310⇑eP P 07 41 17.4 -0.1
BRVK pmax pmax
comp=Z,1.0nm,1.1s
BRVK Borovoye 49.88 310 eP P 07 41 17.4 -0.1
KUU Kurty 49.96 297 eP P 07 41 16.7 -1.6
comp=Z,2.8nm,0.7s,baz=296
KUU Kurty 49.96 297 eP P 07 41 16.7 -1.6
KUU pmax pmax
comp=Z,3.0nm,0.7s
ULHL Ulahol 50.77 295 P P 07 41 24.7 0.0
SNR=9.7
TKM2 Tokmak 2 50.88 296 P P 07 41 26.1 +0.6
SNR=7.2
BTLS Baital 50.93 299 eP P 07 41 23.9 -1.7
baz=298
BTLS Baital 50.93 299 eP P 07 41 23.8 -1.7
SGDS Sogindy 51.27 297 eP P 07 41 27.5 -0.7
comp=Z,2.2nm,0.8s,baz=296
SGDS Sogindy 51.27 297 eP P 07 41 27.5 -0.7
SGDS pmax pmax
comp=Z,2.0nm,0.8s
KBK Karagaybulak 51.43 296 P P 07 41 29.8 +0.2
SNR=7.3
USP Ospenovka 51.44 297 P P 07 41 29.5 0.0
SNR=8.6
AAK Ala-Archa 51.73 296⇓eP P 07 41 31.7 -0.2
AAK pmax pmax
comp=Z,12nm,1.0s
AAK Ala-Archa 51.73 296 P P 07 41 31.1 -0.8
AAK IAmb IAmb 07 41 32.6
comp=Z,7.5nm,1.3s
AAK Ala-Archa 51.73 296 eP P 07 41 31.7 -0.2
EKS2 Erkin-Say 52.19 296 P P 07 41 35.0 -0.2
SNR=5.9
DZA Taraz 53.66 298 eP P 07 41 45.3 -0.7
baz=297
DZA Taraz 53.66 298 eP P 07 41 45.2 -0.7
KK31 Karatay Array 54.08 298 IAmb IAmb 07 41 49.4
comp=Z,4.7nm,0.8s
KKAR Karatay Array 54.08 298 P P 07 41 48.3 -0.7
KKAR Karatay Array 54.08 298 P P 07 41 48.3 -0.7
KKAR Karatay Array 54.08 298 IAmb IAmb 07 41 49.4
comp=Z,4.7nm,0.8s
ARU Arti 54.64 317c iP P 07 41 52.2 -0.6
ARU 07 42 54.9
ARU S S 07 49 29.6 -0.3
ARU SS SS 07 53 09.0 -3.3
ARU pmax pmax
comp=Z,6.0nm,1.2s
ARU Arti 54.64 317 eP P 07 41 52.2 -0.6
IUG Iuzhnay 54.86 297 eP P 07 41 54.3 -0.6
comp=Z,2.1nm,0.9s,baz=297
IUG Iuzhnay 54.86 297 eP P 07 41 54.2 -0.6
IUG pmax pmax
comp=Z,2.0nm,0.9s
YKA Yellowknife Ar 55.58 34 P P 07 41 59.6 +0.1
comp=Z,2.5nm,0.9s,baz=300,slow=6.3,SNR=26
NIL Nilore 57.19 287 P P 07 42 12.0 +0.5
NIL pmax pmax
comp=Z,21nm,1.2s
NIL Nilore 57.19 287 P P 07 42 12.0 +0.5
ABKAR Akbulak array 57.39 309 P P 07 42 11.9 -0.6
ABKAR Akbulak array 57.39 309 IAmb IAmb 07 42 12.9
comp=Z,7.0nm,1.1s
ARCES ARCESS Array B 59.40 340 P P 07 42 24.4 -1.9
comp=Z,4.0nm,1.0s,baz=23,slow=4.0,SNR=6.1
ARCES ARCESS Array B 59.40 340 eP P 07 42 23.7 -2.6
ARCES pmax pmax
comp=Z,4.0nm,0.9s
KBL Kabul 59.58 290 P P 07 42 27.1 -1.3
KBL pmax pmax
comp=Z,8.0nm,0.8s
KBL Kabul 59.58 290 P P 07 42 27.1 -1.3
WRA Warramunga Arr 64.55 194 P P 07 43 00.8 -0.6
comp=Z,1.4nm,0.9s,baz=14,slow=7.4,SNR=4.7
FIA1 FINESS Array S 65.07 333 P P 07 43 03.0 -1.4
FINES FINESS Array B 65.07 333 P P 07 43 02.4 -2.0
comp=Z,2.6nm,0.5s,baz=43,slow=6.6,SNR=27
FINES FINESS Array B 65.07 333 eP P 07 43 02.7 -1.6
FINES pmax pmax
comp=Z,3.0nm,0.5s
FINES FINESS Array B 65.07 333 P P 07 43 03.1 -1.2
FCC Fort Churchill 65.83 30 P P 07 43 09.3 +0.1
FCC pmax pmax
comp=Z,11nm,1.4s
FCC Fort Churchill 65.83 30 P P 07 43 09.3 +0.1
FCC IAmb IAmb 07 43 09.9
comp=Z,11nm,1.4s
BOZ Bozeman (W) 66.64 49 P P 07 43 15.4 +0.5
BOZ pmax pmax
comp=Z,3.0nm,1.0s
BOZ Bozeman (W) 66.64 49 P P 07 43 15.4 +0.5
NVAR Mina Array Bea 67.23 58 P P 07 43 18.9 0.0
comp=Z,1.1nm,0.7s,baz=281,slow=6.2,SNR=5.1
ASAR Alice Springs 68.26 194 P P 07 43 25.6 +0.5
comp=Z,0.6nm,0.8s,baz=16,slow=5.9,SNR=5.2
PDAR Pinedale Array 69.60 50 P P 07 43 33.7 +0.1
comp=Z,0.8nm,0.9s,baz=281,slow=2.4,SNR=5.1
NB2 NORSAR Subarra 69.76 339 P P 07 43 32.9 -1.2
comp=Z,1.1nm,0.5s,baz=31,slow=6.5
NOA NORSAR Array B 69.76 339 P P 07 43 32.7 -1.4
comp=Z,2.0nm,0.4s,baz=32,slow=6.6,SNR=18
KIV Kislovodsk 70.08 312 ⇑P P 07 43 37.4 +1.0
KIV Kislovodsk 70.08 312 eP P 07 43 34.6 -1.8
KIV pmax pmax
comp=Z,92nm,1.1s
KIV MLR MLR
comp=Z,185nm,17.0s
KIV Kislovodsk 70.08 312 eP P 07 43 34.6 -1.8
KBZ Khabaz 70.11 312 P P 07 43 36.9 +0.5
comp=Z,16nm,0.8s,baz=48,slow=4.3,SNR=30
KBZ Khabaz 70.11 312c iP P 07 43 36.5 +0.1
KBZ pmax pmax
comp=Z,18nm,0.9s
KBZ Khabaz 70.11 312 eP P 07 43 36.5 +0.1
ZEI Tsey 70.19 311 eP P 07 43 36.1 -1.2
ZEI pmax pmax
comp=Z,9.0nm,0.8s
ZEI Tsey 70.19 311 eP P 07 43 36.1 -1.2
ULM Lac du Bonnet 71.26 37 P P 07 43 42.4 -0.9
comp=Z,1.8nm,0.7s,baz=2.1,slow=4.9,SNR=3.4
ULM Lac du Bonnet 71.26 37⇓eP P 07 43 42.0 -1.3
ULM Lac du Bonnet 71.26 37 P P 07 43 43.3 0.0
ULM IAmb IAmb 07 44 04.6
comp=Z,10.0nm,1.5s
AKH Akhalkalaki 71.34 310 ⇓P P 07 43 45.8 +1.6
AKASG Malin Array Be 71.83 324 P P 07 43 45.5 -1.2
comp=Z,11nm,0.8s,baz=39,slow=6.2,SNR=22
AKASG Malin Array Be 71.83 324 eP P 07 43 46.1 -0.7
AKASG pmax pmax
comp=Z,11nm,0.8s
AKASG Malin Array Be 71.83 324 P P 07 43 45.0 -1.8
AKBB Malin Array Si 71.83 324deP P 07 43 46.0 -0.8
SORM Soroca 74.13 323 ⇓P P 07 43 59.4 -1.0
SORM Soroca 74.13 323 ⇓P P 07 43 59.4 -1.0
BUR08 Bucovina Ar. S 75.87 324 P P 07 44 11.0 +0.3
BUR08 IAmb IAmb 07 44 11.4
comp=Z,6.7nm,0.8s
BURAR Bucovina Array 75.89 324 ⇓P P 07 44 10.6 -0.1
BURAR Bucovina Array 75.89 324 ⇓P P 07 44 10.6 -0.1
BURAR Bucovina Array 75.89 324 P P 07 44 10.9 +0.2
OJC Ojcow 76.00 329 P P 07 44 11.2 0.0
OJC pmax pmax
comp=Z,15nm,1.0s
OJC Ojcow 76.00 329 P P 07 44 11.2 0.0
BIZ Bicaz 76.03 323 ⇓P P 07 44 11.4 0.0
KOLS Kolonicke sedl 76.07 326 eP P 07 44 11.4 -0.2
KOLS Kolonicke sedl 76.07 326 eP P 07 44 11.4 -0.2
TESR Tescani 76.12 322 ⇓P P 07 44 12.1 +0.1
CRVS Cervenica-Dubn 76.42 327 eP P 07 44 14.0 +0.4
CRVS Cervenica-Dubn 76.42 327 eP P 07 44 14.0 +0.4
VRI Vrincioaia 76.58 322 ⇓P P 07 44 15.0 +0.4
VRI Vrincioaia 76.58 322 ⇓P P 07 44 15.0 +0.4
OSTC Ostas 77.04 331 eP P 07 44 16.4 -0.7
CHVC Chvalec 77.07 331 eP P 07 44 16.9 -0.4
UPC Upice 77.16 331 eP P 07 44 17.7 0.0
UPC Upice 77.16 331 eP P 07 44 17.7 0.0
DPC Dobruska-Polom 77.18 330 eP P 07 44 17.7 -0.2
DPC Dobruska-Polom 77.18 330 eP P 07 44 17.7 -0.2
MORC Moravsky Berou 77.21 329 ⇑P P 07 44 18.2 +0.1
MORC Moravsky Berou 77.21 329 eP P 07 44 17.9 -0.2
MORC Moravsky Berou 77.21 329 ⇑P P 07 44 18.2 +0.1
MORC Moravsky Berou 77.21 329 P P 07 44 18.7 +0.6
MORC IAmb IAmb 07 44 19.5
comp=Z,6.7nm,0.9s
CLL Collm 77.51 333⇓iP P 07 44 19.2 -0.5
comp=Z,19nm,1.0s
CLL Collm 77.51 333⇓iP P 07 44 19.2 -0.5
CLL pmax pmax
comp=Z,19nm,1.0s
DRGR 77.59 325 ⇓P P 07 44 20.3 0.0
DRGR 77.59 325 ⇓P P 07 44 20.3 0.0
VOIR 77.66 323 ⇓P P 07 44 21.3 +0.6
VOIR 77.66 323 ⇓P P 07 44 21.3 +0.6
BR131 Keskin Array S 77.85 314⇑eP P 07 44 22.0 0.0
BRTR Keskin Array B 77.85 314 P P 07 44 20.5 -1.5
comp=Z,1.2nm,0.8s,baz=62,slow=4.5,SNR=4.6
BRTR Keskin Array B 77.85 314 P P 07 44 21.8 -0.2
JAVC Velka Javorina 77.92 329 eP P 07 44 23.1 +1.0
VRAC Vranov 77.94 330 ⇑P P 07 44 22.5 +0.4
VRAC Vranov 77.94 330 eP P 07 44 22.3 +0.2
VRAC Vranov 77.94 330 ⇑P P 07 44 22.5 +0.4
PRU Pruhonice 78.11 331 eP P 07 44 22.6 -0.4
PRU Pruhonice 78.11 331 eP P 07 44 22.6 -0.4
KRUC Moravsky 78.22 330 eP P 07 44 23.5 -0.2
MODS Modra-Piesok 78.47 329 eP P 07 44 24.9 -0.2
MODS Modra-Piesok 78.47 329 eP P 07 44 24.9 -0.2
KHC Kasperske Hory 79.17 331deP P 07 44 29.1 +0.1
KHC pmax pmax
comp=Z,22nm,2.5s
KHC Kasperske Hory 79.17 331 eP P 07 44 28.4 -0.5
KHC epP pP 07 44 40.8 +1.0
KHC Kasperske Hory 79.17 331 P P 07 44 29.0 +0.1
KHC IAmb IAmb 07 44 29.9
comp=Z,5.3nm,0.7s
CKRC Cesky Krumlov 79.18 331 eP P 07 44 28.6 -0.4
CONA Conrad Observa 79.36 329 eP P 07 44 29.8 -0.2
comp=Z,6.0nm,1.0s
GERES GERESS Array B 79.37 331 P P 07 44 29.4 -0.7
comp=Z,1.1nm,0.6s,baz=44,slow=5.9,SNR=9.0
GERES GERESS Array B 79.37 331 P P 07 44 29.8 -0.3
GERES GERESS Array B 79.37 331 P P 07 44 29.8 -0.3
SOKA Soboth 80.72 329 eP P 07 44 36.9 -0.6
comp=Z,5.6nm,0.9s
KBA Koelnbreinsper 81.00 330 eP P 07 44 39.2 +0.2
comp=Z,6.5nm,1.1s
WATA Walderalm 81.40 332 eP P 07 44 41.0 -0.1
comp=Z,5.0nm,0.7s
WTTA Wattenberg 81.44 331 eP P 07 44 41.4 0.0
comp=Z,2.8nm,0.7s
MOTA Moosalm 81.55 332 eP P 07 44 41.7 -0.2
comp=Z,5.8nm,0.8s
SQTA Sankt Quirin 81.62 332 eP P 07 44 41.3 -1.0
comp=Z,2.6nm,0.8s
TX31 Lajitas Ar. Si 82.31 57 P P 07 44 46.4 +0.2
TX31 IAmb IAmb 07 45 01.9
comp=Z,7.2nm,1.1s
TXAR Lajitas Array 82.31 57 P P 07 44 46.7 +0.5
comp=Z,1.0nm,0.8s,baz=292,slow=4.0,SNR=10
CCM Cathedral Cave 82.65 43 P P 07 44 47.7 +0.1
CCM pmax pmax
comp=Z,5.0nm,1.0s

CCM	Cathedral Cave	82.65	43	P	P	07 44 47.7	+0.1
CCM				IAmb	IAmb	07 45 03.9	
	comp=Z,5.2nm,0.9s						
KARP	Karpathos	84.36	315	P	P	07 44 56.5	0.0
T50A	Nancy	86.54	40	P	P	07 45 07.8	+0.4
O56A	Blue Knob Stat	86.54	34	P	P	07 45 07.9	+0.5
TKL	Tuckaleechee C	88.15	40	P	P	07 45 15.0	-0.1
	comp=Z,4.3nm,0.8s,baz=220,slow=7.9,SNR=4.6						
TKL	Tuckaleechee C	88.15	40	P	P	07 45 15.2	+0.1
TKL				pmax	pmax		
	comp=Z,7.0nm,1.0s						
TKL	Tuckaleechee C	88.15	40	P	P	07 45 15.2	+0.1
H03N2	Juan Fernandez	142.55	90	T	T	10 31 04.5	
	baz=304,slow=77,SNR=42						
H03N3	Juan Fernandez	142.56	90	T	T	10 31 05.3	
	baz=304,slow=77,SNR=53						
H03N1	Juan Fernandez	142.57	90	T	T	10 31 06.1	
	baz=304,slow=77,SNR=58						
PLCA	Paso Flores	151.67	97	PKPbc	PKiKP	07 52 19.1	+0.5
	comp=Z,2.4nm,0.9s,baz=294,slow=2.1,SNR=5.0						
PLCA	Paso Flores	151.67	97		PKiKP	07 52 19.5	+0.8

ROM 22 07:42:16.3±0.1**,44°.127N**±0°.005×**11°.149E**±0°.006**, h9^{km},ML1.5**/1**,1C-1D,Error ellipse: s-maj=0.6km s-min=0.4km az=3.0,Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FNVD	Fontana Vidola	0.04	336	P	Pg	07 42 18.3	0.0
FNVD				S	Sg	07 42 19.8	0.0
MTCR	Monte La Croce	0.15	228	⇑*i*P	Pg	07 42 20.2	+0.6
MTCR				S	Sg	07 42 22.9	+1.0
PTF	Prato	0.18	199	⇓P	Pg	07 42 20.7	+0.6
PTF				S	Sg	07 42 23.7	+1.0
ZCCA	Zocca	0.26	331	P	Pb	07 42 22.7	-0.5
POPM	Popiglio	0.29	254	P	Pg	07 42 22.7	+0.5
POPM				S	Sb	07 42 27.5	-1.2
POPM				AML	AML		
	comp=N,172µm,1.5s						
POPM				AML	AML		
	comp=E,107µm,0.1s						
MTRZ	Monterenzio	0.34	42	P	Pg	07 42 22.8	-0.3
CRMI	Carmignano	0.36	201	P	Pg	07 42 23.8	+0.3
CRMI				S	Sb	07 42 29.6	-1.0
RUFI	Rufina	0.39	138	P	Pb	07 42 25.4	0.0
RUFI				S	Sg	07 42 30.2	+1.2
BDI	Bagni Di Lucca	0.40	261	P	Pg	07 42 24.6	+0.4
BDI				S	Sb	07 42 31.2	-0.7
LMD	Lutirano	0.41	97	P	Pg	07 42 24.6	+0.3
LMD				S	Sb	07 42 30.9	-1.0
CARD	Cardoso	0.49	258	S	Sb	07 42 34.0	-0.4
SARO	Sassorosso	0.54	276	P	Pg	07 42 27.1	+0.3
SARO				S	Sb	07 42 35.6	-0.4
ASQU	Asqua	0.57	125	P	Pb	07 42 28.0	-0.5
ASQU				S	Sb	07 42 36.2	-0.4
ERBM	Eremo	0.60	299	S	Sb	07 42 38.0	+0.3

IDC 22 07:52:10.3±3.2**,5°.09S**×**133°.36E,h0^{km},mb3.2**/1**, mb1 3.5**/5**,mb1mx3.4**/28**,mbtmp3.3**/5**,ML3.0**/4**,Error ellipse: s-maj=123.6km s-min=24.6km az=78.0,Aru Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	4.69	333	Pn	Pn	07 53 23.9	+1.5
	0.6nm,0.3s,baz=225,slow=22,SNR=1.4						
SIJI				Sn	Sn	07 54 16.5	-1.1
	1.0nm,0.3s,baz=298,slow=23,SNR=1.7						
WRA	Warramunga Arr	14.79	176	Pn	Pn	07 55 40.2	-0.8
	0.1nm,0.3s,baz=353,slow=13,SNR=1.7						
WRA				Sn	Sn	07 58 21.7	-4.0
	0.1nm,0.3s,baz=355,slow=23,SNR=2.2						
FITZ	Fitzroy Crossi	14.97	210	Pn	Pn	07 55 44.8	+1.4
	0.1nm,0.3s,baz=29,slow=10,SNR=2.0						
FITZ				Sn	Sn	07 58 27.4	-2.5
	0.1nm,0.3s,baz=84,slow=16,SNR=1.8						
ASAR	Alice Springs	18.47	178	P	P	07 56 27.6	-0.4
	0.0nm,0.3s,baz=352,slow=13,SNR=2.5						
ASAR				S	Sn	07 59 45.9	-9.3
	0.0nm,0.3s,baz=2.0,slow=29,SNR=1.1						
MKAR	Makanchi Array	68.53	325	P	P	08 03 14.5	-0.3
	0.2nm,0.6s,baz=124,slow=7.1,SNR=2.2						

IDC 22 08:09:19.1±3.8**,20°.82S**×**175°.42W,h0^{km},mb4.0**/2**, mb1 4.1**/2**,mb1mx3.6**/35**,mbtmp4.0**/2**,Error ellipse: s-maj=243.9km s-min=42.7km az=146.0,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	39.84	245	P	P	08 16 56.1	+1.6
	1.0nm,0.8s,baz=93,slow=12,SNR=5.3						
ASAR	Alice Springs	46.80	257	P	P	08 17 50.0	-1.0
	3.3nm,0.8s,baz=97,slow=7.9,SNR=32						
ASAR				PcP	PcP	08 19 22.1	-2.1
	0.3nm,0.5s,baz=100,slow=4.7,SNR=4.6						
AKASG	Malin Array Be	144.43	333	PKP	PKPdf	08 28 56.5	-0.7
	0.2nm,0.3s,baz=40,slow=4.2,SNR=5.9						
GERES	GERESS Array B	151.10	347	PKPbc	PKiKP	08 29 14.8	-0.1
	0.2nm,0.5s,baz=32,slow=2.4,SNR=2.4						

*ECX **22** 08:14:05.5±0.6, 31°.52N×115°.66W, h6^{km}±3^{km}, MD2.0, ML2.3*
*MEX **22** 08:14:06.3±0.4, 31°.26N×115°.93W, h11^{km}±12^{km}, MD3.6*
ISC 22 08:14:04.0±1.3**,31°.51N**±0°.04×**115°.63W**±0°.04**, h17^{km}**±11^{km}**,n13,σ0^{s}.47**/25**,4C-3D,Baja California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VTX	Valle De La Tr	0.17	228	⇑*i*P	Pb	08 14 08.8	0.0
VTX				*e*S	Sb	08 14 11.4	-0.6
VTX				IAML		08 14 12.1	
	comp=N,1µm,0.1s						
VTX				⇑*e*		08 14 12.1	
SJX	San Joaquin	0.38	312	*e*P	Pn	08 14 15.0	+0.3
SJX				*e*S	Sn	08 14 22.4	+0.8
SPIG	San Pedro Mart	0.48	163	⇓*i*P	Pb	08 14 14.7	+0.4
	baz=298,slow=7.9						
SPIG				*i* S	Sb	08 14 21.5	+0.4
SPIG	San Pedro Mart	0.48	163	⇓*i*P	Pb	08 14 14.7	+0.4
SPIG				*e*S	Sb	08 14 21.5	+0.4
SPX	San Pedro Mart	0.49	163	⇓*i*P	Pb	08 14 14.7	+0.3
SPX				*e*S	Sb	08 14 21.4	0.0
ECBX	El Chinero	0.50	94	⇑*i*P	Pg	08 14 13.8	-0.2
ECBX				*e*S	Sb	08 14 20.5	-0.7
SVX	San Vicente	0.56	251	*e*P	Pb	08 14 15.0	-0.4
SVX				*e*S	Sb	08 14 22.6	-0.5
SFX	San Felipe	0.82	125	*e*P	Pn	08 14 20.6	-0.1
SFX				*e*S	Sn	08 14 31.6	-0.8
SQX	San Quintin	0.95	193	*e*P	Pb	08 14 22.4	+0.4
SQX				*e*S	Sg	08 14 35.1	+0.1
CBX	Cerro Bola	1.19	313	*e*P	Pn	08 14 26.0	0.0
CBX				*e*S	Sb	08 14 41.5	+0.2
CBX				IAML		08 14 42.8	
	comp=E,73nm,0.2s						
CBX				⇑*e*		08 14 42.8	
TJIG	Tijuana	1.28	316	*e*P	Pn	08 14 27.4	+0.3
TJIG				*e*S	Sn	08 14 43.4	-0.5
TJIG	Tijuana	1.28	316	*e*P	Pn	08 14 27.1	0.0
TJIG				*e*S	Sn	08 14 43.5	-0.4
BAR	Barrett	1.47	323	*e*P	Pn	08 14 30.4	+0.8

*NNC **22** 08:14:25.8±4.1, 44°.26N×85°.74E, h0^{km}±19^{km}, mb3.5, mpv3.2, Error ellipse: s-maj=30.7km s-min=13.4km az=118.0*
*SOME **22** 08:14:32.1, 44°.45N×85°.17E, h5^{km}*
ISC 22 08:14:28.6±2.6**,44°.30N**±0°.10×**85°.4E**±0°.1**,h10^{km},n15, σ1^{s}.72**/21**,8C-6D,Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZSN	Zaisan	3.17	354	*e*P	Pg	08 15 29.9	+0.5
	2.7nm,0.3s						
ZSN				*e*S	Sg	08 16 09.9	-0.6
	33nm,0.7s						
ZSN	Zaisan	3.17	354	Pg	Pb	08 15 25.4	+0.3
	1.9nm,0.2s						
ZSN				Lg	Lg	08 16 09.9	
	33nm,0.7s						
MK31	Makanchi Array	3.30	320	⇑Pn	Pn	08 15 22.3	+1.9
	0.5nm,0.5s,baz=136,slow=14,SNR=49						
MK31				⇑Pg	Pg	08 15 32.0	+0.1
	2.3nm,0.4s,baz=125,slow=17,SNR=40						
MK31				⇓Lg	Lg	08 16 19.0	
	24nm,0.8s,baz=133,slow=27,SNR=10						
MAKZ	Makanchi	3.46	318	⇑Pn	Pn	08 15 24.0	+1.5
	1.2nm,0.6s						
MAKZ				⇓Pg	Pb	08 15 32.1	+2.1
	3.4nm,0.8s						
MAKZ				⇑Lg	Lg	08 16 24.0	
	22nm,1.1s						
KTMS	Ketmen	3.72	259	*e*P	Pg	08 15 39.4	-0.5
	0.8nm,0.3s						
KTMS				*e*S	Sg	08 16 26.3	-1.8
	13nm,0.5s						
KTMS	Ketmen	3.72	259	Pg	Pb	08 15 36.5	+2.0
	0.9nm,0.1s						
KTMS				Lg	Lg	08 16 28.4	
	13nm,0.5s						
DJR	Jarkent	4.00	272	*e*P	Pg	08 15 45.1	-0.1
	4.1nm,0.6s						
DJR				*e*S	Sg	08 16 36.9	-0.1
	7.3nm,0.3s						
DJR	Jarkent	4.00	272	Pg	Pb	08 15 41.3	+2.1
	7.0nm,0.3s						
DJR				Lg	Lg	08 16 36.9	
	7.3nm,0.3s						
PDGK	Podgornoye	4.36	259	Pg	Pb	08 15 48.3	+3.0
	1.3nm,0.4s						
PDGK				Lg	Lg	08 16 49.8	
	7.0nm,0.8s						
PDGK	Podgornoye	4.36	259	⇑Pg	Pg	08 15 52.5	+0.4
	5.2nm,0.8s						
PDGK				⇓Lg	Lg	08 16 55.2	
	17nm,0.8s						
SHLS	Shalkode	4.42	257	*e*P	Pb	08 15 46.1	-0.4
	12nm,0.7s						
SHLS				*e*S	Sb	08 16 37.4	-2.6
	32nm,0.7s						
MDOK	Medeo	6.13	262	Pg	Pg	08 16 27.2	+1.3
	4.4nm,1.0s						
MDOK				Lg	Lg	08 17 53.2	
	5.5nm,0.7s						
TKM2	Tokmak 2	7.22	262	⇑Pg	Pg	08 16 46.7	-0.2
	1.0nm,0.7s						
TKM2				⇓Lg	Lg	08 18 26.5	
	1.5nm,0.6s						
KURBB	Kurchatov Arra	7.84	326	⇓Pn	Pn	08 16 20.8	-1.8
	3.3nm,1.2s						
KURBB				⇑Lg	Lg	08 18 42.6	
	24nm,0.8s						
KURK	Kurchatov	7.88	327	⇓Pn	Pn	08 16 20.1	-3.1
	3.8nm,1.4s						
KURK				⇑Lg	Lg	08 18 41.6	
	9.3nm,1.0s						

*TEH **22** 08:18:22.3, 36°.79N×50°.96E, h13^{km}, ML3.7*
*THR **22** 08:18:22.7±0.4, 36°.83N×51°.00E, h18^{km}±3^{km}, ML3.9*
ISC 22 08:18:22.4±1.7**,36°.83N**±0°.05×**50°.95E**±0°.03**,h4^{km}**±15^{km}**, n38,σ1^{s}.05**/43**,Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QALM	Alamut, Qazvin	0.46	211	*e*Pg	Pg	08 18 30.4	-1.0
QALM				*e*Sg	Sg	08 18 37.2	-0.2
IGZV	Ghazvin	0.73	233	*e*Pg	Pg	08 18 36.7	+0.2
IGZV				*e*Sg	Sb	08 18 47.4	-1.0
THKV	Tehran--Karaj	0.91	183	*e*Pg	Pg	08 18 40.4	+0.4
THKV				IAML		08 18 54.4	
	comp=N,4µm,0.3s						
THKV	Tehran--Karaj	0.91	183	*e*Pg	Pg	08 18 40.4	+0.4
TEH	Tehran	1.15	162	*e*	Sg	08 19 01.2	+2.0
	comp=Z,99nm,0.6s						
IMHD	Mahdasht	1.16	191	*e*Pg	Pb	08 18 44.4	-0.8
IMHD				*e*		08 19 02.7	
	comp=Z,99nm,0.2s						
IPRN	Peran	1.27	117	*e*Pg	Pn	08 18 45.8	-1.2
IHSB	Hasanabad	1.41	169	*e*Pg	Pn	08 18 48.7	-0.3
DAMV	Damavand	1.46	145	*e*Pg	Pn	08 18 49.2	-0.6
DAMV				*e*Sg	Sb	08 19 08.5	-0.7
DAMV				IAML		08 19 15.0	
	comp=E,2µm,1.0s						
DAMV	Damavand	1.46	145	*e*Pg	Pn	08 18 49.2	-0.6
QABG	Abgarm-Qazvin	1.57	225	*e*Pg	Pn	08 18 49.7	-1.6
IRAZ	Razeghan	1.64	210	*e*Pg	Pn	08 18 52.2	-0.1
IRAZ				*e*Sg	Sg	08 19 14.8	-0.4
IRAZ				*e*		08 19 16.6	
	comp=Z,99nm,0.4s						
ZNJK	Zanjan	1.82	266	*e*Pn	Pb	08 18 56.1	-0.4
ZNJK				*e*Sg	Sg	08 19 21.7	+0.7
ZNJK	Zanjan	1.82	266	*e*Pn	Pb	08 18 56.1	-0.4
IFIR	Firoozkooh	1.88	128	*e*Pg	Pb	08 18 56.9	-0.6
IVRN	Varamin	1.94	161	*e*Pg	Pb	08 18 57.6	-0.7
IVRN				*e*		08 19 28.2	
	comp=Z,99nm,0.4s						
IQOM	Qom	1.98	177	*e*Pn	Pn	08 18 57.4	+0.4
IQOM				*e*		08 18 59.4	
	comp=Z,99nm,0.2s						
ILAS	Lasjerd	2.18	131	*e*Pn	Pb	08 19 01.3	-1.3
ILAS				*e*		08 19 34.4	
	comp=Z,99nm,0.2s						
IGLO	Ghaloghah	2.34	97	*e*Pn	Pn	08 19 02.3	+0.4
IGLO				*e*		08 19 45.0	
	comp=Z,99nm,0.4s						
GHVR	GHOM	2.36	173	*e*Pn	Pn	08 19 02.5	+0.5
GHVR	GHOM	2.36	173	*e*Pn	Pn	08 19 02.5	+0.5
ASAO	Ashtian	2.40	198	*e*Pn	Pn	08 19 03.4	+0.7
ASAO				IAML		08 19 38.3	
	comp=N,267nm,0.3s						
ASAO	Ashtian	2.40	198	*e*Pn	Pn	08 19 03.4	+0.7
HAGD	Aghdareh	2.48	217	*e*		08 19 43.1	
	comp=Z,99nm,0.3s						
HAGD				*e*Pn	Pn	08 19 05.5	+1.6
IANJ	Anjilo	2.76	119	*e*		08 19 56.3	
	comp=Z,99nm,0.3s						
IANJ				*e*Pn	Pn	08 19 09.0	+1.3
ISRB	Sarab	2.80	292	*e*		08 19 16.3	
	comp=Z,99nm,0.4s						
ISRB				*e*Pn	Pn	08 19 09.3	+1.2
IALM	Almabolaq	2.99	230	*e*Pn	Pn	08 19 12.3	+1.4
KRSH	Karshahi	3.01	161	*e*Pn	Pn	08 19 12.1	+1.0
KRSH				*e*		08 19 58.3	
	comp=Z,99nm,1.1s						
IHRS	Heris	3.44	297	*e*Pn	Pn	08 19 18.3	+1.3
IKLH	Kolahrood	3.54	171	*e*Pn	Pn	08 19 19.0	+0.6
IKLH				*e*		08 19 31.2	
	comp=Z,99nm,0.4s						
IDOB	Doab	3.79	218	*e*Pn	Pn	08 19 23.9	+2.1
IZEF	Zefreh	4.08	163	*e*Pn	Pn	08 19 26.7	+0.8
IKFM	Kafar-mosalman	4.16	218	*e*Pn	Pn	08 19 28.5	+1.8
ANAR	Anarak	4.29	147	*e*Pn	Pn	08 19 30.0	+1.4
IGHG	Ghaleghazi	4.35	236	*e*Pn	Pn	08 19 30.7	+1.1
ISFR	Sfrayin	5.66	86	*e*Pn	Pn	08 19 48.3	+0.8
TPRV	Parvadeh(Tabas	6.05	127	*e*Pn	Pn	08 19 52.8	0.0
AFRZ	Afriz	7.43	115	*e*Pn	Pn	08 20 13.5	+1.7

*IDC **22** 08:20:33.6±1.0, 37°.03N×105°.26W, h0^{km}, mb3.1/1, mb1 3.5/5, mb1mx3.3/43, mbtmp3.2/5, ML3.2/4, MS2.7/2, Ms1 2.8/2, ms1mx2.4/19, Error ellipse: s-maj=23.0km s-min=9.5km az=87.0*
*ANF **22** 08:20:33.7±0.6, 37°.10N×104°.95W, h2^{km}±5^{km}, ML3.8/16, Error ellipse: s-maj=3.9km s-min=2.7km az=37.0*
*NEIC **22** 08:20:34.8±1.5, 37°.05N±0°.03×104°.95W±0°.03, h5^{km}±1^{km}, mb_Lg3.6/90, ML3.6/62, Error ellipse: s-maj=4.8km s-min=3.1km az=332.0*
ISC 22 08:20:34.7±0.6**,37°.09N**±0°.03×**104°.90W**±0°.02**,h10^{km}, n133,σ1^{s}.70**/146**,Colorado**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T25A	Trinidad	0.40	82	P	Pg	08 20 42.0	-0.6
	baz=256						
T25A				S	Sg	08 20 48.4	+0.6
	baz=256						
SDCO	Great Sand Dun	0.81	324	P	Pg	08 20 48.7	-1.7
	baz=148,SNR=33						
SDCO				S	Sg	08 21 00.0	-1.1
	baz=148						
SDCO	Great Sand Dun	0.81	324	Pg	Pg	08 20 48.7	-1.7
SDCO				Sg	Sg	08 21 00.0	-1.1
SDCO	Great Sand Dun	0.81	324	P		08 20 48.8	
	baz=148						
S22A	4UR Ranch, Cre	1.67	294	P	Pn	08 21 04.0	-0.3
	baz=115,SNR=749						
S22A				S	Sn	08 21 25.8	-0.1
	baz=115						
Q24A	Divide	1.89	354	Pb	Pb	08 21 08.9	-0.5
	baz=175,SNR=65						
Q24A				Sb	Sb	08 21 34.1	+0.9
	baz=175						
ANMO	Albuquerque	2.48	211	Pn	Pn	08 21 14.8	-0.5
	8.4nm,0.3s,baz=30,slow=16,SNR=90						
ANMO				LR	LR	08 21 39.7	
	comp=Z,78nm,18.7s,baz=68,slow=29						
ANMO				Lg	Lg	08 21 45.7	
	26nm,0.3s,baz=216,slow=7.2,SNR=12						
ANMO	Albuquerque	2.48	211	P	Pn	08 21 14.6	-0.7
	baz=30						
ANMO				S	Sn	08 21 47.0	+1.2
	baz=30						
ANMO	Albuquerque	2.48	211	Pn	Pn	08 21 14.6	-0.7
ANMO	Albuquerque	2.48	211	P		08 21 14.8	
	baz=30,SNR=133						
ANMO				S		08 21 46.3	
	baz=30						
KSCO	Kaye Shedlock’	2.63	42	Pb	Pb	08 21 21.2	-0.8
	baz=223						
KSCO				Sb	Sb	08 21 56.9	+2.5
	baz=223						
KSCO	Kaye Shedlock’	2.63	42		Pn	08 21 19.4	+2.0
KSCO					Sb	08 21 56.8	+2.5
KSCO	Kaye Shedlock’	2.63	42	S		08 21 56.8	
	baz=223						
SMCO	Snowmass	2.65	323	Pn	Pn	08 21 18.6	+0.8
ISCO	Idaho Springs	2.77	349	Pb	Pn	08 21 21.9	+2.6
	baz=169,SNR=92						
ISCO				Sb	Sb	08 22 00.3	+1.8
	baz=169						
ISCO	Idaho Springs	2.77	349	Pn	Pn	08 21 20.6	+1.2
ISCO	Idaho Springs	2.77	349	P		08 21 21.9	
	baz=169,SNR=92						
MVCO	Mesa Verde	2.88	274	Pb	Pb	08 21 25.5	-0.8
	baz=93,SNR=526						
MVCO				Sb	Sb	08 22 01.8	+0.2
	baz=93						
MVCO	Mesa Verde	2.88	274	Pn	Pn	08 21 20.9	+0.1
MVCO					Sb	08 22 01.6	-0.1
PV01	Paradox Valley	3.10	291		Pn	08 21 24.6	+0.8
PV01				IAML		08 22 13.1	
	comp=E,135nm,0.8s						
PV15	Paradox Valley	3.10	295		Pn	08 21 24.5	+0.6
PV15				IAML		08 22 17.1	
	comp=N,137nm,0.9s						
PV15				IAML		08 22 19.6	
	comp=E,225nm,0.8s						
BNM	Barren Site	3.25	206	Pn	Pn	08 21 25.4	-0.6
PV07	Paradox Valley	3.26	296		Pn	08 21 27.1	+1.0
PV07				IAML		08 22 17.7	
	comp=E,108nm,0.7s						
PV12	Saucer Basin,	3.33	293		Pn	08 21 29.1	+2.0
PV03	Paradox Valley	3.34	292		Pn	08 21 28.2	+1.0
LENM	Lemitar	3.37	211		Pn	08 21 30.3	+2.8
PV11	David Mesa, Pa	3.38	292		Pn	08 21 27.4	-0.2
PV18	Skein Mesa, Pa	3.38	291		Pn	08 21 28.0	+0.2
PV18				IAML		08 22 28.9	
	comp=N,119nm,1.2s						
PV22	Blue Mesa, Par	3.40	296	Pn	Pn	08 21 28.5	+0.5
PV22				IAML		08 22 21.7	
	comp=E,95nm,0.7s						
PV22				IAML		08 22 24.1	
	comp=N,143nm,0.8s						
PV16	Nyswonger Mesa	3.41	292		Pn	08 21 29.5	+1.4
PV16				IAML		08 22 29.9	
	comp=E,160nm,1.4s						
AMTX	Amarillo	3.41	129	Pn	Pn	08 21 28.3	+0.2
	baz=310						
AMTX				Pb	Pb	08 21 36.1	+0.8
	baz=310						
AMTX				Sb	Sb	08 22 17.5	+0.6
	baz=310						
AMTX	Amarillo	3.41	129	Pn	Pn	08 21 28.3	+0.2
AMTX				IAmb_Lg		08 22 25.2	
	comp=Z,169nm,1.1s						
AMTX	Amarillo	3.41	129	P		08 21 28.4	
	baz=310						
Y22D	IRIS PASSCAL I	3.43	209	IAmb_Lg		08 22 25.4	
	comp=Z,150nm,0.9s						
PV04	Paradox Valley	3.43	294		Pn	08 21 29.7	+1.3
PV04				IAML		08 22 32.9	
	comp=E,181nm,1.6s						
PV04				IAML		08 22 32.9	
	comp=N,168nm,1.3s						
PV17	East Wray Mesa	3.43	292		Pn	08 21 29.4	+1.0
PV17				IAML		08 22 30.6	
	comp=N,100nm,1.4s						
PV17				IAML		08 22 34.9	
	comp=E,88nm,1.1s						
PV20	West Nyswonger	3.46	292		Pn	08 21 29.4	+0.6
PV20				IAML		08 22 33.7	
	comp=N,161nm,0.8s						
PV20				IAML		08 22 41.2	
	comp=E,168nm,1.0s						
PV19	Morning Glory	3.46	292		Pn	08 21 30.3	+1.5
PV19				IAML		08 22 30.3	
	comp=N,108nm,1.2s						
PV14	Lion Creek, Pa	3.51	293		Pn	08 21 31.3	+1.8
PV14				IAML		08 22 30.1	
	comp=N,150nm,1.1s						
PV14				IAML		08 22 35.8	
	comp=E,108nm,1.6s						
PV23	Carpenter Ridg	3.53	294		Pn	08 21 31.3	+1.5
PV23				IAML		08 22 47.0	
	comp=N,171nm,1.1s						
MSTX	Muleshoe	3.56	150	Pb	Pb	08 21 38.7	+0.9
	baz=331,SNR=59						
MSTX				Sb	Sb	08 22 22.2	+1.1
	baz=331						
MSTX	Muleshoe	3.56	150		Pn	08 21 29.9	-0.2
MSTX				IAmb_Lg		08 22 30.0	
	comp=Z,131nm,1.0s						
MSTX	Muleshoe	3.56	150	S		08 22 22.4	
	baz=331						
N23A	Red Feather La	3.89	348	Pb	Pb	08 21 45.6	+2.1
	baz=168,SNR=24						
N23A				Sb	Sg	08 22 37.7	-1.9
	baz=168						
O20A	White River Ci	4.01	320	P	Pn	08 21 39.1	+2.7
	baz=139,SNR=9.4						
O20A				S	Sn	08 22 27.6	+4.0
	baz=139						
O20A	White River Ci	4.01	320		Pn	08 21 37.3	+0.9
O20A				IAML		08 22 28.7	
	comp=E,63nm,0.7s						
O20A				IAML		08 22 28.8	
	comp=N,73nm,0.9s						
W18A	Petrified Fore	4.38	245	Pb	Pb	08 21 51.6	-0.2
	baz=62,SNR=47						
W18A				Sb	Sb	08 22 46.9	+2.1
	baz=62						
CBKS	Cedar Bluff	4.43	66	Pn	Pn	08 21 43.3	+1.3
	baz=248,SNR=12						
CBKS				Pb	Pb	08 21 54.9	+2.3
	baz=248						
CBKS				Sb	Sb	08 22 51.4	+5.3
	baz=248						
CBKS	Cedar Bluff	4.43	66	Pn	Pn	08 21 43.0	+1.1
CBKS	Cedar Bluff	4.43	66	P		08 21 43.0	
	baz=248						
CBKS				S		08 22 36.3	
	baz=248						
OGNE	Ogallala	4.45	29	Pb	Pb	08 21 55.6	+2.6
	baz=211,SNR=12						
OGNE	Ogallala	4.45	29	Pn	Pn	08 21 44.6	+2.2
OGNE				IAmb_Lg		08 23 00.4	
	comp=Z,127nm,0.8s						
OGNE	Ogallala	4.45	29	P		08 21 44.8	
	baz=211,SNR=12						
U32A	Winter Ranch,	4.79	97		Pn	08 21 47.5	+0.6
U32A				IAmb_Lg		08 23 15.6	
	comp=Z,95nm,0.8s						
RWWY	Rawlins	4.93	339		Pg	08 22 06.9	-2.2
RWWY				IAML		08 23 15.3	
	comp=Z,33nm,0.6s						
RWWY				IAML		08 23 16.1	
	comp=Z,42nm,0.9s						
R32A	Long Quarter,	5.08	73		Pg	08 22 09.0	-3.0
R32A				IAmb_Lg		08 23 18.7	
	comp=Z,80nm,0.8s						
121A	Cookes Peak, D	5.12	208	P	Pn	08 21 51.1	-0.5

	baz=27						
121A	**Cookes Peak, D**	5.12	208		Pn	08 21 51.0	-0.7
121A				IAML		08 23 20.6	
	comp=E,34nm,0.8s						
121A				IAML		08 23 31.5	
	comp=N,26nm,0.7s						
121A	**Cookes Peak, D**	5.12	208	P		08 21 51.1	
	baz=27,SNR=12						
MNTX	**Cornudas Mount**	5.39	184	Pb	Pb	08 22 09.2	+0.2
	baz=3.8,SNR=72						
MNTX				Sb	Sb	08 23 17.7	+4.0
	baz=3.8						
MNTX	**Cornudas Mount**	5.39	184	Pg	Pb	08 22 09.4	+0.5
MNTX				IAML		08 23 24.5	
	comp=N,35nm,0.7s						
MNTX				IAML		08 23 33.5	
	comp=N,24nm,0.8s						
WUAZ	**Wupatki**	5.46	255	Pn	Pn	08 21 56.7	+0.5
	baz=72						
WUAZ				Pb	Pb	08 22 09.9	-0.3
	baz=72						
WUAZ				Sb	Sb	08 23 19.5	+3.7
	baz=72						
WUAZ	**Wupatki**	5.46	255		Pn	08 21 56.5	+0.3
WMOK	**Wichita Mounta**	5.49	113	Pb	Pb	08 22 11.3	+0.6
	baz=296						
WMOK				Sb	Sg	08 23 24.8	-6.2
	baz=296						
WMOK	**Wichita Mounta**	5.49	113	Pn	Pn	08 21 57.6	+1.0
KAN12	**Harper NE Stat**	5.51	86	IAmb_Lg		08 23 33.3	
	comp=Z,98nm,1.0s						
CROK	**Carrier**	5.58	94	IAmb_Lg		08 23 40.5	
	comp=Z,88nm,0.7s						
K22A	**Casper**	5.70	348		Pg	08 22 21.9	-1.9
KS21	**Milan North St**	5.78	86	IAmb_Lg		08 23 46.0	
	comp=Z,76nm,0.9s						
MVU	**Marysvale**	5.96	286		Pn	08 22 03.0	-0.3
U15A	**North Rim**	5.97	266		Pn	08 22 04.2	+0.8
BCOK	**Bluff Creek, N**	6.05	101	Pn	Pn	08 22 04.7	+0.4
BCOK				IAmb_Lg		08 23 59.3	
	comp=Z,116nm,0.9s						
ABTX	**Abilene, Hawle**	6.20	134	Pb	Pb	08 22 27.1	+4.2
	baz=317,SNR=12						
ABTX	**Abilene, Hawle**	6.20	134	IAmb_Lg		08 24 04.9	
	comp=Z,83nm,1.2s						
OKCFA	**Oklahoma City**	6.25	103	IAmb_Lg		08 24 00.7	
	comp=Z,63nm,0.8s						
X34A	**Smith Ranch, M**	6.25	111	Pn	Pn	08 22 07.0	0.0
OK025	**Westminster Rd**	6.29	102		Pn	08 22 07.4	-0.1
FNO	**Franklin**	6.33	105	IAmb_Lg		08 24 13.3	
	comp=Z,59nm,0.8s						
OK031	**S. Brethren Rd**	6.59	97		Pn	08 22 12.2	+0.5
BW06	**Boulder Array**	6.71	329	Pg	Pg	08 22 40.2	-2.9
	baz=147						
BW06	**Boulder Array**	6.71	329	Pn	Pn	08 22 14.1	+0.7
PD31	**Pinedale Array**	6.71	329	Pn	Pn	08 22 14.2	+0.8
PDAR	**Pinedale Array**	6.71	329	Pn	Pn	08 22 14.9	+1.5
	comp=Z,0.3nm,0.3s,baz=145,slow=16,SNR=8.7						
PDAR				Pg	Pb	08 22 36.5	+5.1
	comp=Z,1.3nm,0.3s,baz=137,slow=16,SNR=24						
PDAR				Lg	Lg	08 24 03.5	
	comp=Z,0.3nm,0.3s,baz=128,slow=23,SNR=2.1						
PDAR	**Pinedale Array**	6.71	329		Pn	08 22 14.7	+1.2
T35A	**Sooner Cattle**	6.71	89	Pn	Pn	08 22 14.7	+1.4
T35A				IAmb_Lg		08 24 13.4	
	comp=Z,82nm,1.1s						
319A	**Douglas**	6.75	214	Pn	Pn	08 22 13.2	-0.8
TUC	**Tucson**	6.79	227	Pb	Pb	08 22 36.4	+3.5
	baz=44						
KSU1	**Kansas State U**	6.84	70	Pn	Pn	08 22 16.7	+1.6
KSU1				IAmb_Lg		08 24 14.1	
	comp=Z,88nm,0.9s						
RSSD	**Black Hills**	7.06	5	P	Pn	08 22 19.1	+0.9
	baz=186						
RSSD	**Black Hills**	7.06	5	Pn	Pn	08 22 19.4	+1.1
RSSD	**Black Hills**	7.06	5	P		08 22 19.5	
	baz=186						
K31A	**O'Neill**	7.27	39		Pn	08 22 23.9	+2.8
Z35A	**Perchaven, San**	7.29	119	Pn	Pn	08 22 22.6	+1.3
Z35A				IAmb_Lg		08 24 34.1	
	comp=Z,53nm,1.0s						
Z35A	**Perchaven, San**	7.29	119	P		08 22 22.6	
	baz=303,SNR=8.0						
TUL1	**Leonard**	7.43	96	Sb	Sg	08 24 24.9	-8.2
	baz=281						
TUL1	**Leonard**	7.43	96	Pn	Pn	08 22 23.6	+0.4
TUL1				IAmb_Lg		08 24 32.6	
	comp=Z,61nm,0.9s						
TX31	**Lajitas Ar. Si**	7.80	172		Pn	08 22 29.9	+1.6
TX32	**Lajitas Array**	7.80	172		Pn	08 22 29.9	+1.6
TXAR	**Lajitas Array**	7.80	172	Pn	Pn	08 22 29.4	+1.1
	comp=Z,0.2nm,0.3s,baz=359,slow=11,SNR=12						
TXAR				Pg	Pb	08 22 49.0	-1.1
	comp=Z,0.5nm,0.3s,baz=5.6,slow=11,SNR=7.4						
TXAR				Lg	Lg	08 24 31.6	
	comp=Z,1.6nm,0.3s,baz=4.4,slow=24,SNR=8.7						
TXAR	**Lajitas Array**	7.80	172		Pn	08 22 29.9	+1.6
JCT	**Junction City**	7.84	146	Pn	Pn	08 22 28.6	-0.2
JCT				IAmb_Lg		08 24 57.2	
	comp=Z,96nm,1.1s						
LOHW	**Long Hollow**	7.84	328	Pn	Pn	08 22 28.9	0.0
WHTX	**Lake Whitney,**	7.97	127	IAmb_Lg		08 25 05.9	
	comp=Z,54nm,1.3s						
X37A	**Clayton**	8.13	105	Pn	Pn	08 22 32.4	-0.4
U38A	**Gravette**	8.46	91		Pn	08 22 37.5	+0.2
R11A	**Troy Canyon, C**	8.56	282	Pn	Pn	08 22 38.3	-0.6
SUSD	**Miller**	8.62	30	IAmb_Lg		08 25 26.7	
	comp=Z,49nm,0.8s						
HHAR	**Hobbs**	8.84	92	Pn	Pn	08 22 42.7	+0.2
HHAR				IAmb_Lg		08 25 25.9	
	comp=Z,36nm,0.8s						
ECSD	**EROS Data Cent**	9.16	41	P	Pn	08 22 49.5	+2.5
	baz=226,SNR=6.2						
ECSD	**EROS Data Cent**	9.16	41	Pn	Pn	08 22 48.3	+1.4
ECSD				IAmb_Lg		08 25 32.1	
	comp=Z,39nm,1.1s						
ECSD	**EROS Data Cent**	9.16	41	P		08 22 48.2	
	baz=226,SNR=6.2						
W39A	**Magazine**	9.19	99		Pn	08 22 47.0	-0.3
W39A				IAmb_Lg		08 25 31.6	
	comp=Z,45nm,0.8s						
W39A	**Magazine**	9.19	99	P		08 22 47.3	
	baz=285,SNR=6.6						
S39A	**Bolivar**	9.24	83	Pn	Pn	08 22 48.3	+0.4
S39A				IAmb_Lg		08 25 28.2	
	comp=Z,40nm,0.9s						
P38A	**Dawn**	9.28	71	Pn	Pn	08 22 47.9	-0.7
P38A				IAmb_Lg		08 25 29.5	
	comp=Z,66nm,0.8s						
MIAR	**Mount Ida**	9.54	102	P	Pn	08 22 51.4	-0.7
	baz=288						
MIAR	**Mount Ida**	9.54	102		Pn	08 22 51.4	-0.7
MIAR				IAmb_Lg		08 25 57.4	
	comp=Z,60nm,1.1s						
U40A	**Yellville**	9.70	91	Pn	Pn	08 22 54.2	-0.1
U40A				IAmb_Lg		08 25 50.3	
	comp=Z,44nm,1.0s						
MGMO	**Mountain Grove**	10.09	86		Pn	08 23 00.4	+0.7
WHAR	**Wooly Hollow**	10.35	96	Pn	Pn	08 23 04.4	+1.2
FCAR	**Ozark Folk Cen**	10.36	93	Pn	Pn	08 23 03.5	+0.2
P40A	**Paris**	10.39	73		Pn	08 23 03.3	-0.4
NVAR	**Mina Array Bea**	10.70	281	Pg	Pg	08 23 50.8	
	comp=Z,0.2nm,0.3s,baz=102,slow=17,SNR=6.5						
NVAR				LR	LR	08 26 29.9	
	comp=Z,88nm,19.0s,baz=110,slow=35						
F33A	**5 Mile Ranch,**	10.87	34		Pn	08 23 09.2	-1.0
T42A	**Van Buren**	11.04	86	Pn	Pn	08 23 12.8	+0.2
LCAR	**Lake Charles**	11.10	91	Pn	Pn	08 23 15.0	+1.5
N41A	**Harden Midland**	11.53	67	Pn	Pn	08 23 18.8	-0.5
PBMO	**Poplar Bluff**	11.59	87	Pn	Pn	08 23 20.2	+0.1
SPMN	**Marine on St.**	12.21	44		Pn	08 23 27.9	-0.7
F36A	**Milaca**	12.22	41	Pn	Pn	08 23 28.6	-0.1
P43A	**Skaggs, Pawnee**	12.34	73	Pn	Pn	08 23 31.0	+0.6
JFWS	**Jewell Farm**	12.65	58		Pn	08 23 33.7	-0.9
I40A	**Norwalk**	12.81	54	Pn	Pn	08 23 37.6	+0.7
OXF	**Oxford**	12.84	97	Pn	Pn	08 23 36.5	-0.7
G40A	**Rib Lake**	13.75	49	Pn	Pn	08 23 50.9	+1.3
B35A	**Bob, Littlefor**	13.93	32	Pn	Pn	08 23 50.2	-1.8
I42A	**Draeger Farm,**	13.93	56	Pn	Pn	08 23 50.3	-1.7
T47A	**Sharon Grove**	14.22	85	Pn	Pn	08 23 56.0	-0.1
EYMN	**Ely**	14.66	38	Pn	Pn	08 24 01.5	-0.5
ULM	**Lac du Bonnet**	14.67	23	Pn	Pn	08 24 03.0	+0.8
	comp=Z,0.2nm,0.3s,baz=208,slow=13,SNR=3.3						
ULM				Lg	Lg	08 28 11.2	
	comp=Z,0.1nm,0.3s,baz=266,slow=14,SNR=2.3						
ULM	**Lac du Bonnet**	14.67	23		Pn	08 24 03.4	+1.2
WCI	**Wyandotte Cave**	14.79	80	Pn	Pn	08 24 04.5	+0.7
COWI	**Conover**	14.82	48	Pn	Pn	08 24 03.9	-0.3
E43A	**Lone Tree Farm**	16.24	50	Pn	Pn	08 24 22.5	-0.4
TKL	**Tuckaleechee C**	17.07	88	Lg	Lg	08 29 25.3	
	comp=Z,0.0nm,0.3s,baz=100,slow=12,SNR=1.7						
YKA	**Yellowknife Ar**	26.13	350	P	P	08 26 08.6	0.0
	comp=Z,0.2nm,0.6s,baz=160,slow=8.7,SNR=3.7						

IDC 22 08:26:52.9±1.7**,6°.71S**×**130°.04E,h0**^{km}**,mb3.9**/2**,mb1 4.5**/4**,mb1mx3.9**/21**,mbtmp4.3**/4**,ML4.8**/2**,Error ellipse: s-maj=122.4km s-min=24.9km az=66.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	13.80	163	Pn	Pn	08 30 10.0	+0.1
	5.9nm,0.3s,baz=346,slow=13,SNR=167						
WRA				Sn	Sn	08 32 34.3	-10
	3.2nm,0.3s,baz=338,slow=22,SNR=7.4						
ASAR	**Alice Springs**	17.26	168	P	P	08 30 56.9	-0.3
	2.7nm,0.3s,baz=341,slow=8.6,SNR=148						
ASAR				S	Sn	08 33 58.8	-10
	0.7nm,0.3s,baz=354,slow=25,SNR=6.7						
STKA	**Stephens Creek**	27.27	158	P	P	08 32 38.5	-0.6
	0.7nm,0.5s,baz=337,slow=10,SNR=4.1						
MKAR	**Makanchi Array**	68.01	327	P	P	08 37 54.1	+0.1
	0.5nm,0.4s,baz=115,slow=7.8,SNR=12						

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*IDC **22** 08:36:26.8±1.6,4°.82S×152°.24E,h0^{km},mb3.5/6,mb1 3.7/6,mb1mx3.6/26,mbtmp3.5/6,Error ellipse: s-maj=62.1km s-min=24.9km az=122.0*

ISC 22 08:36:36.2±1.6**,4°.9S**±0°.3×**152°.1E**±0°.4**,h70**^{km}**,n7,**σ**1**^{s}.**37**/7**,mb3.3**/6**,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	22.87	228	P	P	08 41 32.7	-1.4
	0.2nm,0.3s,baz=51,slow=9.9,SNR=4.1						
ASAR	**Alice Springs**	25.62	221	P	P	08 42 01.2	+1.9
	0.2nm,0.3s,baz=56,slow=9.0,SNR=1.6						
SONM	**Songino Array**	66.04	328	P	P	08 47 16.3	+0.5
	0.2nm,0.4s,baz=136,slow=4.2,SNR=2.8						
MKAR	**Makanchi Array**	79.94	319	P	P	08 48 38.0	+0.2
	0.2nm,0.6s,baz=91,slow=7.6,SNR=3.4						
ILAR	**Eielson Array**	82.51	22	P	P	08 48 50.2	-0.8
	1.0nm,0.7s,baz=246,slow=5.4,SNR=14						
YKA	**Yellowknife Ar**	95.83	28	P	P	08 49 55.1	+0.4
	0.2nm,0.6s,baz=266,slow=5.1,SNR=5.0						
TORD	**Torodi Ar. Bea**	149.68	288	PKPbc	PKPbc	08 56 18.2	-0.9
	0.3nm,0.3s,baz=60,slow=5.7,SNR=6.2						

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*IDC **22** 08:48:06.9±1.3,2°.64N×126°.55E,h0^{km},mb3.6/6,mb1 3.7/6,mb1mx3.6/41,mbtmp3.6/6,Error ellipse: s-maj=208.3km s-min=17.9km az=68.0*

ISC 22 08:48:13.7±1.2**,2°.7N**±0°.5×**12°7E**±°**,h53**^{km}**,n6,**σ**0**^{s}.**62**/6**,mb3.8**/6**,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	23.68	162	P	P	08 53 20.6	-0.1
	0.8nm,0.8s,baz=343,slow=9.2,SNR=8.3						
ASAR	**Alice Springs**	27.10	166	P	P	08 53 52.0	+0.3
	0.3nm,0.7s,baz=343,slow=7.7,SNR=4.7						
STKA	**Stephens Creek**	37.14	159	P	P	08 55 19.5	0.0
	1.1nm,0.8s,baz=342,slow=17,SNR=3.1						
SONM	**Songino Array**	48.29	342	P	P	08 56 50.4	+0.6
	1.4nm,1.0s,baz=152,slow=7.7,SNR=6.8						
MKAR	**Makanchi Array**	58.45	326	P	P	08 58 04.2	0.0
	0.3nm,0.4s,baz=116,slow=8.2,SNR=11						
ZALV	**Zalesovo Beam**	61.54	333	P	P	08 58 24.3	-0.9
	0.9nm,0.8s,baz=117,slow=8.3,SNR=3.4						

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*ATH **22** 09:08:47.3,34°.22N×25°.72E,h11^{km}±5^{km},ML3.9/5,Error ellipse: s-maj=5.7km s-min=2.2km az=22.0*

*HLW **22** 09:08:48.7,34°.40N×25°.81E,h32^{km}±45^{km},Md4.1,Ml4.4*

*IDC **22** 09:08:49.8±2.2,34°.39N×25°.73E,h38^{km}±20^{km},mb3.7/10,mb1 3.8/17,mb1mx3.6/43,mbtmp3.8/17,ML3.8/7,MS2.8/1,Ms1 2.8/1,ms1mx2.2/38,Error ellipse: s-maj=20.3km s-min=14.9km az=179.0*

*THE **22** 09:08:49.1,34°.34N×25°.66E,h0^{km}±2^{km},ML3.9/6,Error ellipse: s-maj=4.4km s-min=0.9km az=165.0*

*ISK **22** 09:08:50.3,34°.49N×25°.69E,h25^{km},ML3.7/19*

*DDA **22** 09:09:02.0,35°.32N×25°.95E,h37^{km}±236^{km},MW3.9*

ISC 22 09:08:48.3±1.2**,34°.26N**±0°.04×**25°.75E**±0°.03**,h32**^{km}±9^{km}**,n111,**σ**1**^{s}.**75**/137**,mb3.8**/10**,4C-4D,Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FRMA	**Ierapetra Chan**	0.75	359	P	Pn	09 09 02.7	0.0
FRMA				S	Sn	09 09 14.4	+1.4
LAST	**Lasithi**	0.92	346	P	Pn	09 09 05.2	+0.1
LAST				S	Sn	09 09 17.9	+0.5
	7µm,0.7s						
LAST	**Lasithi**	0.92	346	P	Pn	09 09 05.2	+0.1
LAST				S	Sn	09 09 18.9	+1.5
LAST				AML	AML	09 09 21.3	
	comp=N,15655µm,0.8s						
LAST				AML	AML	09 09 21.6	
	comp=E,12951µm,0.6s						
ZKR	**Zakros**	0.94	24	P	Pn	09 09 06.4	+1.1
ZKR				S	Sn	09 09 21.2	+3.6
	comp=E,7µm,0.7s						
ZKR	**Zakros**	0.94	24	PG	Pn	09 09 06.6	+1.3
ZKR				SG	Sb	09 09 17.5	-0.7
ZKR	**Zakros**	0.94	24	P	Pn	09 09 06.3	+1.1
ZKR				S	Sn	09 09 19.3	+1.8
ZKR				AML	AML	09 09 22.9	
	comp=E,17902µm,0.8s						
ZKR				AML	AML	09 09 24.4	
	comp=N,6696µm,0.8s						
NPS	**Neapolis**	1.00	354	P	Pb	09 09 06.7	-0.5
NPS				S	Sn	09 09 20.6	+1.4
	comp=N,5µm,0.8s						
NPS	**Neapolis**	1.00	354	P	Pn	09 09 06.3	+0.1
NPS				S	Sn	09 09 20.7	+1.4
NPS				AML	AML	09 09 22.3	
	comp=N,6715µm,0.7s						
NPS				AML	AML	09 09 22.5	
	comp=E,12768µm,1.0s						
SIVA	**Sivas**	1.08	315	P	Pb	09 09 08.1	-0.3
SIVA				S	Sn	09 09 23.2	+2.2
	comp=E,14µm,0.7s						
SIVA	**Sivas**	1.08	315	P	Pb	09 09 08.2	-0.3
SIVA				S	Sn	09 09 23.3	+2.2
SIVA				AML	AML	09 09 29.8	
	comp=N,22296µm,0.8s						
SIVA				AML	AML	09 09 30.7	
	comp=E,31771µm,0.7s						
HRKL	**Herakleio**	1.17	333	P	Pb	09 09 10.4	+0.3
HRKL				S	Sb	09 09 26.0	+1.1
HRKL	**Herakleio**	1.17	333	PG	Pb	09 09 09.0	-1.1
HRKL				SG	Sn	09 09 21.7	-1.7
KSTL	**Kastelli Herak**	1.18	332	P	Pn	09 09 07.1	-1.5
KSTL				S	Sn	09 09 20.1	-3.4
IACM	**Heraklion**	1.18	332	P	Pb	09 09 10.3	+0.1
IACM				S	Sb	09 09 26.3	+1.2
	comp=E,26µm,0.8s						
IDI	**Anoyia**	1.24	326	Pn	Pb	09 09 10.6	-0.7
	comp=E,24nm,0.3s,baz=144,slow=17,SNR=121						
IDI				Sn	Sb	09 09 29.5	+2.5
	comp=E,136nm,0.3s,baz=72,slow=20,SNR=28						
IDI	**Anoyia**	1.24	326	P	Pb	09 09 10.9	-0.4
IDI				S	Sb	09 09 27.1	+0.1
IDI	**Anoyia**	1.24	326	PG	Pn	09 09 09.9	+0.4
IDI				SG	Sn	09 09 23.5	-1.7
IDI	**Anoyia**	1.24	326	P	Pb	09 09 10.8	-0.4
GVDS	**Gavdos**	1.48	293	P	Pb	09 09 14.8	-0.5
GVDS				S	Sb	09 09 35.0	+1.2
GVDS	**Gavdos**	1.48	293	PN	Pb	09 09 14.8	-0.5
GVD	**Gavdhos**	1.48	293	P	Pb	09 09 14.5	-0.8
GVD				S	Sb	09 09 34.4	+0.6
GVD	**Gavdhos**	1.48	293	PN	Pb	09 09 14.6	-0.8
GVD				SN	Sn	09 09 32.1	+1.0
GVD	**Gavdhos**	1.48	293	P	Pb	09 09 14.4	-0.8
VAM	**Vamos**	1.71	312	P	Pn	09 09 17.1	+1.2
VAM				S	Sb	09 09 39.5	-0.7
	comp=E,2µm,0.7s						
VAM	**Vamos**	1.71	312	P	Pb	09 09 17.6	-1.6
VAM				AML	AML	09 09 48.4	
	comp=N,3243µm,0.5s						
VAM				AML	AML	09 09 52.8	
	comp=E,3900µm,0.9s						
KARP	**Karpathos**	1.73	42	P	Pb	09 09 19.1	-0.4
KARP	**Karpathos**	1.73	42	PN	Pb	09 09 18.0	-1.5
KARP	**Karpathos**	1.73	42	P	Pb	09 09 19.2	-0.3
IMMV	**Iera Moni Meta**	1.88	310	P	Pb	09 09 19.8	-2.2
IMMV	**Iera Moni Meta**	1.88	310	PN	Pn	09 09 19.6	+1.4
IMMV	**Iera Moni Meta**	1.88	310	P	Pb	09 09 19.9	-2.2
KNDR	**Palaiochora Ch**	1.95	300	PN	Pb	09 09 21.4	-1.9
SANT	**Santorini**	2.12	354	PN	Pn	09 09 21.6	0.0
SANT	**Santorini**	2.12	354	*i* P	Pn	09 09 21.5	0.0
SANT				*i* S	Sn	09 09 41.9	-4.9
THT2	**Imerovigli**	2.18	353	PN	Pn	09 09 22.5	+0.1
ANKY	**Antikythira Is**	2.57	309	P	Pn	09 09 29.5	+1.8
ARG	**Arkhangelos**	2.76	44	PN	Pn	09 09 32.6	+2.3
SLUM	**Salum**	2.80	189	P	Pn	09 09 33.5	+2.6
	baz=191						
SLUM				AMP		09 10 00.0	
	baz=191						
APE	**Apeiranthos**	2.81	356	⇓S	Sn	09 10 00.5	-3.2
APE	**Apeiranthos**	2.81	356	PN	Pn	09 09 31.3	+0.3
APE	**Apeiranthos**	2.81	356	*i* P	Pn	09 09 31.2	+0.1
APE				*i* S	Sn	09 09 52.5	-11
KTHA	**Kythira Island**	2.96	313	PN	Pn	09 09 34.2	+1.0
BODT	**Bodrum**	3.07	24	PN	Pn	09 09 34.9	+0.3
BDRM	**Kayabasi**	3.12	26	*i* P	Pn	09 09 32.1	-3.2
BDRM				*i* S	Sn	09 09 57.7	-14
TURN	**Turunc**	3.23	38	PN	Pn	09 09 38.7	+1.9
TURN	**Turunc**	3.23	38	*i* P	Pn	09 09 38.0	+1.2
TURN				*i* S	Sn	09 09 59.9	-14
TURN				IAML		09 10 20.0	
	comp=E,70nm,0.6s						
TURN				IAML		09 10 53.0	
	comp=N,74nm,1.3s						
MLSB	**Milas**	3.45	28	PN	Pn	09 09 41.1	+1.3
DALY	**Dalyan (Mula)**	3.48	42	PN	Pn	09 09 42.5	+2.3
YER	**Yerkesik**	3.53	35	PN	Pn	09 09 42.7	+1.7
FETY	**Fethiye**	3.61	48	PN	Pn	09 09 42.8	+0.8
MULA	**Mugla, Merkez-**	3.65	34	*i* P	Pn	09 09 43.8	+1.2
MULA				*i* S	Sn	09 10 12.2	-12
MULA				IAML		09 10 21.0	
	comp=E,53nm,0.7s						
MULA				IAML		09 10 42.0	
	comp=N,39nm,0.8s						
AKAS	**Kas**	3.72	57	PN	Pn	09 09 46.7	+3.0
AKAS	**Kas**	3.72	57	*i* P	Pn	09 09 45.3	+1.6
AKAS				*i* S	Sn	09 10 12.6	-14
EPID	**Epidavros**	3.97	328	P	Pn	09 09 48.1	+1.2
AYDB	**Zeytinkoy-Aydi**	4.07	25	PN	Pn	09 09 49.9	+1.5
CAEL	**Denizli, Camel**	4.08	45	*i* P	Pn	09 09 51.1	+2.6
CAEL				*i* S	Sn	09 10 22.0	-13
CAEL				IAML		09 10 44.0	
	comp=E,174nm,0.6s						
CAEL				IAML		09 11 09.0	
	comp=N,164nm,1.3s						
TAVA	**DENIZLI_Tavas**	4.10	38	*i* P	Pn	09 09 49.8	+0.9
TAVA				*i* S	Sn	09 10 22.6	-13
TAVA				IAML		09 10 52.0	
	comp=N,39nm,0.6s						
TAVA				IAML		09 11 16.0	
	comp=E,29nm,1.3s						
CHOS	**Chios island**	4.12	3	PN	Pn	09 09 49.9	+0.7
URLA	**Izmir**	4.15	9	PN	Pn	09 09 50.5	+1.1
ELL	**Elmali**	4.21	53	PN	Pn	09 09 53.4	+3.1
BLCB	**Balcova**	4.25	14	PN	Pn	09 09 51.2	+0.5
AKUM	**Antalya-Kumluc**	4.29	60	*i* P	Pn	09 09 52.3	+1.0
AKUM				*i* S	Sn	09 10 25.0	-15
GOLH	**Golhisar**	4.29	45	*i* P	Pn	09 09 53.6	+2.1
GOLH				*i* S	Sn	09 10 22.6	-18
GOLH				IAML		09 10 45.0	
	comp=E,44nm,0.7s						
GOLH				IAML		09 11 24.0	
	comp=N,70nm,1.3s						
KORT	**Korkueli**	4.64	53	*i* P	Pn	09 10 01.2	+4.9
KORT				IAML		09 10 56.0	
	comp=E,79nm,0.5s						
KORT				IAML		09 10 58.0	
	comp=N,54nm,0.4s						
MANT	**Manisa**	4.79	27	*i* P	Pn	09 09 58.7	+0.2
MANT				*i* S	Sn	09 10 30.0	-23
MANT				IAML		09 11 03.0	
	comp=E,13nm,0.6s						
MANT				IAML		09 11 31.0	
	comp=N,13nm,1.1s						
ZEDA	**zmir-Bergama**	4.81	12	*i* P	Pn	09 09 59.1	+0.6
ZEDA				*i* S	Sn	09 10 22.1	-31
ZEDA				IAML		09 11 57.0	
	comp=N,15nm,1.1s						
ZEDA				IAML		09 11 59.0	
	comp=E,15nm,1.2s						
SWA2		5.01	183	P	Pn	09 10 03.7	+2.4
	baz=184						
SWA2				S	Sn	09 10 57.5	-0.6
	baz=184						
KHAL	**Karahalli**	5.09	35	*i* P	Pn	09 10 03.0	+0.5
KHAL				*i* S	Sn	09 10 36.7	-24
KHAL				IAML		09 11 02.0	
	comp=E,14nm,0.4s						
KHAL				IAML		09 11 07.0	
	comp=N,11nm,0.4s						
USAK	**Uak-Merkez**	5.17	30	*i* P	Pn	09 10 04.6	+1.1
USAK				*i* S	Sn	09 10 46.5	-15
USAK				IAML		09 10 50.0	
	comp=N,45nm,1.1s						
USAK				IAML		09 10 51.0	
	comp=E,63nm,4.5s						
AGG	**Agios Georgios**	5.49	331	*i* P	Pn	09 10 10.2	+2.3
AGG				*i* S	Sn	09 10 49.8	-20
AGG				IAML		09 11 16.0	
	comp=E,16nm,0.2s						
AGG				IAML		09 11 28.0	
	comp=N,16nm,0.5s						
DURS	**Dursunbey**	5.76	22	*i* P	Pn	09 10 12.3	+0.7
DURS				IAML		09 12 28.0	
	comp=E,5.4nm,1.6s						
DURS				IAML		09 12 30.0	
	comp=N,5.1nm,1.5s						
LEF	**Lefka**	5.95	80	⇓P	Pn	09 10 15.3	+1.2
LEF				⇑S	Sn	09 11 13.1	-8.1
HMYD	**Mayadein**	6.18	135	P	Pn	09 10 19.5	+2.1
	baz=135						
HNAT	**Natroun**	6.20	137	P	Pn	09 10 19.5	+1.9
	baz=138						
HNAT				AMP		09 11 00.0	
	baz=138						
RYAN	**Fayoum**	6.45	142	P	Pn	09 10 22.8	+1.8
	baz=143						
RYAN				AMP		09 11 00.0	
	baz=143						
KOT	**Kottamia**	6.73	128	P	Pn	09 10 25.4	+0.4
	baz=129						
KOT				AMP		09 11 00.0	
	baz=129						
KOT				S	Sn	09 11 38.0	-2.6
	baz=129						
HSAF	**As Saff**	6.77	132	P	Pn	09 10 26.7	+1.2
	baz=132						
GLL	**Jalalah**	6.89	131	P	Pn	09 10 28.1	+0.9
	baz=132						
HHAG	**Hagoal**	6.89	127	P	Pn	09 10 27.8	+0.7
	baz=128						
HHAG				S	Sn	09 11 41.1	-3.4
	baz=128						
NBNS	**Bani Suef**	7.35	138	P	Pn	09 10 35.9	+2.4
	baz=139						
HFRF	**Wahat Farafira**	7.43	162	P	Pn	09 10 36.2	+1.7
	baz=162						
ZAF	**Zafarana**	7.63	129	P	Pn	09 10 38.4	+1.1
	baz=129						
TAMRE	**El Minia**	7.92	145	P	Pn	09 10 43.5	+2.3
	baz=145						
MMAI	**Mount Meron Ar**	8.15	96	Pn	Pn	09 10 44.5	+0.1
	comp=N,3.3nm,0.3s,baz=266,slow=12,SNR=5.8						
MMAI				Sn	Sn	09 12 11.2	-4.3
	comp=N,4.9nm,0.3s,baz=270,slow=10,SNR=4.1						
BRTR	**Keskin Array B**	8.34	47	Pn	Pn	09 10 49.0	+1.9
	comp=N,0.1nm,0.3s,baz=222,slow=17,SNR=2.0						
BRTR				Sn	Sn	09 12 16.5	-3.7
	comp=N,0.1nm,0.3s,baz=220,slow=22,SNR=3.2						
BRTR				LR	LR	09 15 10.3	
	comp=N,70nm,20.7s,baz=228,slow=46						
ASUT		8.47	142	P	Pn	09 10 51.1	+2.2
	baz=143						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
VTS	Vitosha	8.57	347	⇓P	Pn	09 10 53.9	+3.7
EIL	Elat	9.06	118	Pn	Pn	09 10 57.2	+0.3
	comp=N,1.8nm,0.3s,baz=261,slow=1.4,SNR=18						
EIL				Sn	Sn	09 12 29.3	-8.5
	comp=N,0.9nm,0.3s,baz=310,slow=16,SNR=2.8						
CFR	Carcaliu	11.05	9	⇓P	Pn	09 11 22.4	-1.7
VOIR		11.17	357	⇑P	Pn	09 11 25.6	-0.3
MLR	Muntele Rosu	11.22	1	⇑P	Pn	09 11 25.4	-1.1
GZR	Gura Zlata	11.35	349	⇑P	Pn	09 11 29.6	+1.4
RICI	Ricice	11.39	327	*e*Pn	Pn	09 11 25.7	-3.2
RICI				Sn	Sn	09 13 22.9	-12
KIJV	Kijevo	12.12	326	*i* Pn	Pn	09 11 35.1	-3.7
MORI	Morici	12.35	324	*i* Pn	Pn	09 11 38.2	-3.7
DUGI	Dugi Otok	12.77	323	*e*Pn	Pn	09 11 45.9	-1.6
UDBI	Udbina	12.82	326	*e*Pn	Pn	09 11 45.2	-3.1
KBZ	Khabaz	16.32	50	Pn	P	09 12 38.1	+0.5
	comp=N,0.3nm,0.3s,baz=238,slow=9.8,SNR=14						
AKASG	Malin Array Be	16.62	8	Pn	Pn	09 12 38.9	+0.1
	comp=N,1.9nm,0.3s,baz=198,slow=11,SNR=6.0						
GERES	GERESS Array B	17.10	332	Pn	Pn	09 12 45.1	+0.3
	comp=N,0.1nm,0.3s,baz=146,slow=12,SNR=2.8						
DAVOX	Davos/Dischmat	17.33	321	P	Pn	09 12 48.7	+0.8
	comp=N,0.1nm,0.3s,baz=170,slow=18,SNR=1.8						
ESDC	Sonseca Array	24.28	292	P	P	09 14 02.7	-0.1
	comp=N,1.5nm,0.9s,baz=85,slow=9.5,SNR=6.0						
HFS	Hagfors	27.06	347	P	P	09 14 25.9	-1.7
	comp=N,7.3nm,1.2s,baz=157,slow=7.8,SNR=1.2						
FINES	FINESS Array B	27.20	0	P	P	09 14 26.8	-2.0
	comp=N,1.5nm,0.6s,baz=168,slow=10,SNR=8.2						
AKTO	Aktyubinsk	28.52	46	P	P	09 14 40.5	-0.2
	comp=N,0.9nm,0.5s,baz=234,slow=9.7,SNR=2.5						
TORD	Torodi Ar. Bea	30.30	232	P	P	09 14 58.0	+1.2
	comp=N,7.2nm,0.6s,baz=32,slow=8.7,SNR=11						
ARCES	ARCESS Array B	35.33	360	P	P	09 15 38.1	-2.0
	comp=N,0.7nm,0.5s,baz=165,slow=9.7,SNR=8.6						
MKAR	Makanchi Array	43.87	56	P	P	09 16 53.1	+1.4
	comp=N,1.7nm,0.6s,baz=267,slow=7.5,SNR=25						
ZALV	Zalesovo Beam	45.28	46	P	P	09 17 03.1	+0.4
	comp=N,0.8nm,0.4s,baz=265,slow=8.6,SNR=5.1						
SONM	Songino Array	59.68	50	P	P	09 18 51.5	+1.8
	comp=N,0.2nm,0.4s,baz=285,slow=6.3,SNR=2.4						
YKA	Yellowknife Ar	78.45	342	P	P	09 20 46.3	+0.7
	comp=N,0.2nm,0.4s,baz=39,slow=5.8,SNR=5.5						

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*DRS **22** 09:46:12.5±0.0, 42°.67N×45°.88E, h16^{km}, ML3.3/7*
*MOS **22** 09:46:12.8±0.0, 43°.03N×46°.12E, h52^{km}, MPVA3.7*
*NORS **22** 09:46:12.9±0.0, 42°.93N×46°.11E, h65^{km}±3^{km}, MPVA3.7*
*DDA **22** 09:46:22.4, 42°.32N×45°.69E, h7^{km}±5^{km}, ML1.5*
ISC 22 09:46:15.3±1.0**, 43°.00N**±0°.03×**46°.12E**±0°.02**, h61**^{km}±7^{km}**,**
n66, σ1^{s}77/116**, 21C-6D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTLR	Botlikh	0.34	168	*i* PG	Pn	09 46 25.1	-0.9
BTLR				*e*S	Sn	09 46 34.0	+0.3
BTLR				pmax	pmax		
	comp=Z,168nm,0.3s						
BTLR	Botlikh	0.34	168	⇑*i*Pg	Pn	09 46 25.3	-0.7
	comp=Z,168nm,0.3s						
BTLR				⇑*e*Sg	Sn	09 46 34.1	+0.3
	comp=Z,296nm,0.3s						
DLMR	Dylym	0.38	79	⇓*i*PG	Pn	09 46 25.3	-0.9
DLMR				*e*S	Sn	09 46 34.0	-0.1
DLMR				pmax	pmax		
	comp=Z,281nm,0.2s						
DLMR	Dylym	0.38	79	⇓*i*Pg	Pn	09 46 25.3	-0.9
	comp=Z,281nm,0.2s						
DLMR				⇓*e*Sg	Sn	09 46 34.1	-0.1
	comp=Z,6µm,0.5s						
DBC	Dubki	0.52	88	⇓*i*PG	Pn	09 46 26.5	-1.2
DBC				*e*S	Sn	09 46 36.4	-0.3
DBC	Dubki	0.52	88	⇑*e*Pg	Pn	09 46 26.5	-1.2
	comp=Z,326nm,0.2s						
DBC				⇑*i*Sg	Sn	09 46 36.2	-0.5
	comp=Z,2µm,0.3s						
KRNR	Karanay	0.60	106	⇑*i*PG	Pn	09 46 26.6	-2.0
KRNR				*e*		09 46 36.9	
KRNR				pmax	pmax		
	comp=Z,81nm,0.5s						
KRNR				smax	smax		
	comp=E,551nm,0.5s						
KRNR	Karanay	0.60	106	⇑*i*Pg	Pn	09 46 26.7	-1.9
	comp=E,80nm,0.5s						
KRNR				⇑*e*Sg	Sn	09 46 36.9	-1.4
	comp=E,551nm,0.5s						
XNZR	Khunzakh	0.63	137	*e*Pg	Pn	09 46 28.1	-0.9
XNZR				*e*Sg	Sn	09 46 38.7	-0.3
BUJR	Buynaksk	0.75	103	*e*PG	Pn	09 46 29.1	-1.1
BUJR				*e*S	Sn	09 46 40.9	-0.2
BUJR				pmax	pmax		
	comp=Z,122nm,0.4s						
BUJR	Buynaksk	0.75	103	⇑*e*Pg	Pn	09 46 29.1	-1.1
	comp=Z,122nm,0.4s						
BUJR				⇑*e*Sg	Sn	09 46 40.9	-0.2
	comp=Z,958nm,0.3s						
ARKR	Arakani	0.76	121	*e*PG	Pn	09 46 29.1	-1.3
ARKR				*e*S	Sn	09 46 40.9	-0.5
ARKR				pmax	pmax		
	comp=Z,188nm,0.5s						
ARKR	Arakani	0.76	121	⇑*e*Pg	Pn	09 46 29.1	-1.3
	comp=Z,188nm,0.5s						
ARKR				⇑*e*Sg	Sn	09 46 40.9	-0.5
	comp=Z,600nm,0.3s						
KMGR	Komgaron	0.92	274	*e*Pg	Pn	09 46 32.7	+0.2
KMGR				*e*Sg	Sn	09 46 47.0	+1.9
MAK	Makhachkala	1.02	92	*e*PG	Pn	09 46 32.8	-0.8
MAK				*e*		09 46 46.8	
MAK				pmax	pmax		
	comp=Z,120nm,0.3s						
MAK				smax	smax		
	comp=N,948nm,0.5s						
MAK				smax	smax		
	comp=N,715nm,0.3s						
MAK	Makhachkala	1.02	92	*e*Pg	Pn	09 46 32.2	-1.3
MAK				*e*Sg	Sn	09 46 46.6	-0.5
KANR	Karaman	1.02	78	*e*Pg	Pn	09 46 32.8	-0.8
KANR				*e*Sg	Sn	09 46 49.0	+1.8
PNSH	Pansheti	1.17	252	P	Pn	09 46 34.9	-0.9
PNSH				S	Sn	09 46 51.2	+0.2
PNSH	Pansheti	1.17	252	PG	Pn	09 46 34.9	-0.9
PNSH				S	Sn	09 46 51.1	+0.2
LGD	Lagodekhi	1.17	176	P	Pn	09 46 34.7	-0.9
LGD				S	Sn	09 46 51.0	+0.2
LGD	Lagodekhi	1.17	176	PG	Pn	09 46 34.7	-0.9
LGD				S	Sn	09 46 50.9	+0.2
BTKR	Batakoyurt	1.21	288	*e*PG	Pn	09 46 36.6	+0.3
BTKR				*e*S	Sn	09 46 55.1	+3.2
BTKR	Batakoyurt	1.21	288	*e*Pg	Pn	09 46 36.4	+0.1
BTKR				*e*Sg	Sn	09 46 53.4	+1.5
TRKR	Terskaya	1.25	306	*e*PG	Pn	09 46 36.7	+0.1
TRKR				*e*S	Sn	09 46 54.9	+2.4
TRKR	Terskaya	1.25	306	*e*Pg	Pn	09 46 36.5	-0.1
TRKR				*e*Sg	Sn	09 46 53.2	+0.7
SGKR	Sergokala	1.25	115	*e*PG	Pn	09 46 36.3	-0.5
SGKR				*e*S	Sn	09 46 53.9	+1.1
SGKR				pmax	pmax		
	comp=Z,41nm,0.1s						
SGKR	Sergokala	1.25	115	⇑*e*Pg	Pn	09 46 36.3	-0.5
	comp=Z,40nm,0.1s						
SGKR				⇑*e*Sg	Sn	09 46 53.9	+1.1
	comp=Z,216nm,0.4s						
LACR	Lac	1.35	263	*e*PG	Pn	09 46 36.7	-1.4
LACR				*e*S	Sn	09 46 54.9	-0.4
LACR				pmax	pmax		
	comp=Z,16nm,0.3s						
LACR				smax	smax		
	comp=N,97nm,0.3s						
LACR	Lac	1.35	263	*e*Pg	Pn	09 46 36.8	-1.4
LACR				*e*Sg	Sn	09 46 54.9	-0.4
PRTR	Priterechnaya	1.54	300	*e*PG	Pn	09 46 40.5	0.0
PRTR				*e*S	Sn	09 47 01.1	+1.6
PRTR	Priterechnaya	1.54	300	*e*Pg	Pn	09 46 43.0	+2.5
PRTR				*e*Sg	Sn	09 47 01.1	+1.6
STDR	Stavd-Durt	1.55	284	*e*PG	Pn	09 46 40.8	+0.1
STDR				*e*S	Sn	09 46 59.8	-0.1
STDR	Stavd-Durt	1.55	284	*e*Pg	Pn	09 46 40.5	-0.3
STDR				*e*Sg	Sn	09 47 00.6	+0.7
DDFL	Dedoflistskaro	1.55	180	P	Pn	09 46 40.9	+0.1
DDFL				S	Sn	09 47 04.1	+4.0
DDFL	Dedoflistskaro	1.55	180	*i* P	Pn	09 46 40.5	-0.3
DDFL				*i* S	Sn	09 46 53.6	-6.4
DDFL	Dedoflistskaro	1.55	180	PN	Pn	09 46 40.9	+0.1
DDFL				S	Sn	09 47 04.0	+4.0
BTNK	Botanikuri	1.64	217	*i* P	Pn	09 46 45.5	+3.5
BTNK				*i* S	Sn	09 46 54.4	-7.7
BTNK				IAML		09 47 09.0	
	comp=Z,15nm,0.7s						
BTNK				IAML		09 47 14.0	
	comp=E,21nm,0.3s						
ZEI	Tsey	1.65	263	*e*PN	Pn	09 46 40.5	-1.7
ZEI	Tsey	1.65	263	*e*Pg	Pn	09 46 40.3	-1.9
ZEI				*e*Sg	Sn	09 47 01.0	-1.4
LSNR	Lesken	1.70	280	*e*PN	Pn	09 46 42.5	-0.3
LSNR				*e*S	Sn	09 47 04.3	+0.6
LSNR	Lesken	1.70	280	*e*Pg	Pn	09 46 42.5	-0.3
LSNR				*e*Sg	Sn	09 47 04.2	+0.6
DIGR	Digorskoe uzhe	1.87	268	*e*PN	Pn	09 46 43.6	-1.6
DIGR				pmax	pmax		
	comp=Z,4.0nm,0.2s						
DIGR	Digorskoe uzhe	1.87	268	*e*Pg	Pn	09 46 43.6	-1.6
DIGR				*e*Sg	Sn	09 47 05.9	-2.0
NCK	Nalchik	1.91	286	*e*Pg	Pn	09 46 44.5	-1.1
NCK				*e*Sg	Sn	09 47 08.6	0.0
AKT	Akhty	1.93	141	*e*PN	Pn	09 46 45.1	-0.9
AKT				pmax	pmax		
	comp=Z,33nm,0.3s						
AKT	Akhty	1.93	141	⇑*e*Pg	Pn	09 46 45.2	-0.9
	comp=Z,33nm,0.3s						
AKT				⇑*e*Sg	Sn	09 47 07.7	-1.5
	comp=Z,146nm,0.5s						
ONI	Oni	2.01	259	P	Pn	09 46 47.9	+0.9
ONI	Oni	2.01	259	PN	Pn	09 46 47.9	+0.9
ONI	Oni	2.01	259	*e*Pg	Pn	09 46 46.5	-0.5
ONI				*e*Sg	Sn	09 47 12.1	+1.1
BRNG	Burnasheti	2.19	232	P	Pn	09 46 51.1	+1.6
PYA1	Pyatigorsk	2.44	297	*ce*PN	Pn	09 46 51.3	-1.5
PYA1	Pyatigorsk	2.44	297	*e*Pn	Pn	09 46 51.3	-1.5
PYA1				*e*Sn	Sn	09 47 18.9	-2.7
KBZ	Khabaz	2.46	288	*d i*PN	Pn	09 46 51.1	-1.9
KBZ	Khabaz	2.46	288	*e*Pn	Pn	09 46 51.3	-1.7
KBZ				*e*Sn	Sn	09 47 19.1	-2.9
NEY	Neytrino	2.50	277	⇑*e*PN	Pn	09 46 52.7	-1.1
NEY	Neytrino	2.50	277	*e*Pn	Pn	09 46 52.5	-1.2
NEY				*e*Sn	Sn	09 47 20.7	-2.5
BEYR	Belyy Ugol+	2.61	294	*e*Pn	Pn	09 46 53.5	-1.6
BEYR				*e*Sn	Sn	09 47 22.6	-3.0
SHA1	Shidzhatmaz	2.63	287	*c i*PN	Pn	09 46 53.9	-1.7
SHA1				pmax	pmax		
	comp=Z,10.0nm,0.4s						
SHA1	Shidzhatmaz	2.63	287	*e*Pn	Pn	09 46 54.0	-1.7
SHA1				*e*Sn	Sn	09 47 23.5	-3.0
KIV0	Kislovodsk Arr	2.67	292	*e*Pn	Pn	09 46 54.4	-1.6
KIV0				*e*Sn	Sn	09 47 24.4	-2.9
KIV	Kislovodsk	2.68	292	*e*Pn	Pn	09 46 54.8	-1.3
KIV				*e*Sn	Sn	09 47 24.4	-2.9
GOF	Gofitskoye	3.03	314	⇑*e*PN	Pn	09 46 59.2	-1.6
GOF				*e*S	Sn	09 47 34.7	-1.1
GOF				pmax	pmax		
	comp=Z,13nm,0.6s						
GOF				smax	smax		
	comp=E,34nm,0.3s						
GOF				smax	smax		
	comp=N,36nm,0.4s						
GOF	Gofitskoye	3.03	314	*e*Pn	Pn	09 46 59.8	-1.0
GOF				*e*Sn	Sn	09 47 34.8	-1.0
BRVK	Borovoye	18.95	50	⇑*e*P	Pn	09 50 32.4	-0.1
BRVK				pmax	pmax		
	comp=Z,1.0nm,1.2s						
AAK	Ala-Archa	20.78	81	⇓*e*P	Pn	09 50 54.6	+0.2
AAK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KURK	Kurchatov	23.38	59	⇑*e*P	P	09 51 21.6	+3.2

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*SOME **22** 09:48:01.5, 42°.12N×84°.02E, h10^{km}*
*NNC **22** 09:48:03.8±2.5, 42°.18N×83°.89E, h0^{km}, mb3.7, mpv3.3,*
Error ellipse: s-maj=21.1km s-min=10.6km az=156.0
ISC 22 09:48:06.8±2.3**, 42°.3N**±0°.1×**83°.81E**±0°.08**, h10**^{km}**, n27,**
σ2^{s}22/37**, 10C-4D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTMS	Ketmen	2.77	295	*e*P	Pb	09 48 56.3	-0.2
	2.7nm,0.2s						
KTMS				*e*S	Sg	09 49 36.7	+0.8
	55nm,0.3s						
KTMS	Ketmen	2.77	295	Pg	Pb	09 48 55.9	-0.6
	9.3nm,0.1s						
KTMS				Lg	Lg	09 49 36.6	
	56nm,0.3s						
SHLS	Shalkode	3.31	286	*e*P	Pn	09 49 01.1	+2.4
	11nm,0.3s						
SHLS				*e*S	Sb	09 49 45.2	-0.7
	100nm,0.4s						
SHLS	Shalkode	3.31	286	Pg	Pn	09 49 01.1	+2.4
	16nm,0.3s						
SHLS				Lg	Lg	09 49 45.2	
	100nm,0.4s						
PDGK	Podgornoye	3.33	289	Pg	Pb	09 49 04.6	-1.4
	1.3nm,0.3s						
PDGK				Lg	Lg	09 49 51.2	
	10nm,0.6s						
PDGK	Podgornoye	3.33	289	⇑Pg	Pb	09 49 05.0	-1.0
	4.8nm,0.7s						
PDGK				⇓Lg	Lg	09 49 52.9	
	27nm,0.6s						
DJR	Jarkent	3.55	306	*e*P	Pg	09 49 11.6	-3.1
	5.9nm,0.4s						
DJR				*e*S	Sg	09 50 03.6	+2.9
	14nm,0.4s						
DJR	Jarkent	3.55	306	Pg	Pb	09 49 09.8	+0.1
	7.2nm,0.4s						
DJR				Lg	Lg	09 50 00.3	
	16nm,0.2s						
UZB	Uzynbulak	3.62	285	*e*P	Pb	09 49 10.1	-0.9
	5.0nm,0.3s						
UZB				*e*S	Sg	09 50 01.0	-2.0
	14nm,0.4s						
UZB	Uzynbulak	3.62	285	Pg	Pb	09 49 10.0	-0.9
UZB				Lg	Lg	09 50 01.0	
	14nm,0.4s						
KPKS	Kokpek	3.93	288	*e*P	Pg	09 49 18.6	-3.5
	8.1nm,0.2s						
KPKS				*e*S	Sg	09 50 15.7	+2.7
	36nm,0.4s						
SATY	Saty	4.05	282	*e*P	Pb	09 49 19.4	+1.1
	2.7nm,0.3s						
SATY				*e*S	Sg	09 50 16.6	-0.1
	18nm,0.3s						
KURS	Kuram	4.30	287	*e*P	Pg	09 49 26.0	-3.1
	5.9nm,0.8s						
KURS				*e*S	Sg	09 50 28.2	+3.4
	9.7nm,0.9s						
MNBS	Baschi	4.32	296	*e*P	Pb	09 49 24.2	+1.3
	2.6nm,0.5s						
MNBS				*e*S	Sg	09 50 24.9	-0.6
	23nm,0.3s						
MNBS	Baschi	4.32	296	Pg	Pb	09 49 24.6	+1.7
	3.7nm,0.3s						
MNBS				Lg	Lg	09 50 26.6	
	23nm,0.3s						
MK31	Makanchi Array	4.59	347	⇑Pn	Pn	09 49 17.8	+1.6
	0.1nm,0.4s,baz=175,slow=14,SNR=34						
MK31				⇓Pg	Pg	09 49 32.5	-2.2
	0.6nm,0.3s,baz=158,slow=16,SNR=28						
MK31				⇓Lg	Lg	09 50 31.4	
	28nm,0.6s,baz=169,slow=27,SNR=14						
MAKZ	Makanchi	4.66	344	⇑Pn	Pn	09 49 19.1	+1.8
	0.3nm,0.6s						
MAKZ				⇑Pg	Pg	09 49 33.1	-2.9
	6.5nm,1.0s						
MAKZ				⇑Lg	Lg	09 50 34.6	
	5.4nm,0.4s						
KOTS	Kotyrbulak	5.01	283	*e*P	Pb	09 49 37.3	+2.7
	3.6nm,0.2s						
KOTS				*e*S	Sg	09 50 48.4	+0.8
	27nm,0.5s						
MDOK	Medeo	5.05	282	Pg	Pb	09 49 38.3	+3.1
	2.5nm,0.7s						
MDOK				Lg	Lg	09 50 49.4	
	19nm,0.8s						
TNSS	Tian-Shan	5.11	280	*e*P	Pg	09 49 40.3	-4.3
	1.8nm,0.3s						
TNSS				*e*S	Sg	09 50 53.1	+2.4
	4.3nm,0.5s						
ZSN	Zaisan	5.17	8	*e*P	Pg	09 49 40.2	-5.6
	1.8nm,0.2s						
ZSN				*e*S	Sg	09 50 53.2	+0.4
	17nm,0.7s						
ZSN	Zaisan	5.17	8	Pg	Pb	09 49 37.5	+0.2
	3.6nm,0.2s						
ZSN				Lg	Lg	09 50 48.7	
	14nm,0.4s						
KST	Kastek	5.83	280	Pg	Pg	09 49 54.4	-3.9
	3.3nm,0.4s						
KST				Lg	Lg	09 51 17.5	
	6.5nm,0.5s						
TKM2	Tokmak 2	6.09	278	⇓Pg	Pb	09 49 54.0	+1.0
	1.6nm,0.6s						
TKM2				⇑Lg	Lg	09 51 18.8	
	3.4nm,0.6s						
AAK	Ala-Archa	6.89	276	⇑Pg	Pb	09 50 08.6	+1.9
	1.9nm,0.8s						
AAK				⇑Lg	Lg	09 51 44.1	
	3.6nm,0.9s						
KURBB	Kurchatov Arra	9.05	338	⇑Lg	Lg	09 52 53.5	
	8.3nm,0.6s						
KURK	Kurchatov	9.11	339	⇑Lg	Lg	09 52 55.8	
	4.3nm,0.7s						

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*SOME **22** 09:58:41.4, 44°.05N×86°.08E, h10^{km}*
*NNC **22** 09:58:47.3±2.4, 44°.12N×85°.62E, h0^{km}, mb3.7, mpv3.5,*
Error ellipse: s-maj=19.6km s-min=9.4km az=122.0
*IDC **22** 09:58:50.5±3.8, 44°.30N×85°.45E, h0^{km}, mb1 3.3/4,*
mb1mx3.1/41, mbtmp3.3/4, ML2.9/4, Error ellipse:
s-maj=56.5km s-min=25.0km az=33.0
ISC 22 09:58:49.2±1.4**, 44°.26N**±0°.06×**85°.72E**±0°.06**, h10**^{km}**, n32,**
σ2^{s}25/45**, 10C-9D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZSN	Zaisan	3.24	350	*e*P	Pb	09 59 45.8	-1.1
	6.4nm,0.2s						
ZSN				*e*S	Sg	10 00 32.2	-1.2
	46nm,0.3s						
ZSN	Zaisan	3.24	350	Pg	Pb	09 59 44.9	-2.1
	6.4nm,0.2s						
ZSN				Lg	Lg	10 00 32.3	
	46nm,0.3s						
MK31	Makanchi Array	3.50	318	⇑Pn	Pn	09 59 45.7	+2.0
	0.2nm,0.2s,baz=139,slow=14,SNR=509						
MK31				⇑Pg	Pg	09 59 55.6	-0.5
	1.8nm,0.3s,baz=136,slow=16,SNR=53						
MK31				⇑Lg	Lg	10 00 41.5	
	20nm,0.6s,baz=137,slow=32,SNR=11						
MKAR	Makanchi Array	3.50	318	Pn	Pn	09 59 45.6	+2.0
	0.5nm,0.3s,baz=140,slow=15,SNR=41						
MKAR				Pg	Pb	09 59 52.5	+1.3
	4.6nm,0.3s,baz=134,slow=17,SNR=39						
MKAR				Lg	Lg	10 00 36.3	
	10nm,0.3s,baz=122,slow=28,SNR=6.4						
MAKZ	Makanchi	3.66	315	⇓Pn	Pn	09 59 47.3	+1.4
	0.7nm,0.6s						
MAKZ				⇓Pg	Pb	09 59 55.5	+1.5
	3.4nm,0.5s						
MAKZ				⇓Lg	Lg	10 00 48.6	
	22nm,0.6s						
KTMS	Ketmen	3.97	260	*e*P	Pb	10 00 01.4	+2.1
	4.4nm,0.3s						
KTMS				*e*S	Sg	10 00 59.0	+2.5
	31nm,0.5s						
KTMS	Ketmen	3.97	260	Pg	Pb	09 59 55.7	-3.6
KTMS				Lg	Lg	10 00 51.4	
	26nm,0.3s						
DJR	Jarkent	4.26	273	*e*P	Pb	10 00 06.9	+2.7
	9.3nm,0.6s						
DJR				*e*S	Sg	10 01 08.6	+2.7
	25nm,0.6s						
DJR	Jarkent	4.26	273	Pg	Pb	10 00 01.0	-3.2
	1.4nm,0.1s						
DJR				Lg	Lg	10 00 59.7	
	24nm,0.4s						
PDGK	Podgornoye	4.60	260	Pg	Pb	10 00 07.4	-2.8
	3.1nm,0.3s						
PDGK				Lg	Lg	10 01 10.5	
	7.8nm,0.4s						
PDGK	Podgornoye	4.60	260	⇑Pn	Pn	09 59 58.1	-0.9
	1.1nm,0.5s						
PDGK				⇓Pg	Pb	10 00 10.6	+0.4
	4.4nm,0.5s						
PDGK				⇑Lg	Lg	10 01 09.0	
	20nm,0.7s						
SHLS	Shalkode	4.67	258	*e*P	Pn	10 00 03.4	+3.5
	15nm,0.1s						
SHLS				*e*S	Sb	10 01 02.2	-5.3
	85nm,0.3s						
SHLS	Shalkode	4.67	258	Pg	Pn	10 00 03.4	+3.5
	16nm,0.3s						
SHLS				Lg	Lg	10 01 02.3	
	85nm,0.3s						
UZB	Uzynbulak	4.98	259	*e*P	Pb	10 00 17.3	+0.7
	2.1nm,0.1s						
UZB				*e*S	Sg	10 01 26.3	-2.8
	19nm,0.5s						
UZB	Uzynbulak	4.98	259	Pg	Pb	10 00 15.1	-1.5
	2.1nm,0.1s						
UZB				Lg	Lg	10 01 24.2	
	19nm,0.5s						
MNBS	Baschi	5.27	271	*e*P	Pb	10 00 21.9	+0.5
	2.6nm,0.3s						
MNBS				*e*S	Sg	10 01 34.8	-3.5
	26nm,0.4s						
MNBS	Baschi	5.27	271	Pg	Pb	10 00 20.8	-0.6
	2.6nm,0.3s						
MNBS				Lg	Lg	10 01 34.9	
	26nm,0.4s						
TDK	Taldyqorghan	5.27	281	*e*P	Pb	10 00 25.6	+4.1
	15nm,0.2s						
TDK				*e*S	Sg	10 01 40.4	+1.9
	101nm,0.5s						
TDK	Taldyqorghan	5.27	281	Pg	Pb	10 00 19.7	-1.8
	12nm,0.1s						
TDK				Lg	Lg	10 01 32.8	
	71nm,0.8s						
SATY	Saty	5.44	260	*e*P	Pb	10 00 25.9	+1.5
	2.3nm,0.4s						
SATY				*e*S	Sg	10 01 41.1	-2.7
	13nm,0.4s						
SATY	Saty	5.44	260	Pg	Pb	10 00 22.5	-1.9
	1.4nm,0.2s						
SATY				Lg	Lg	10 01 36.4	
	9.8nm,0.5s						
MDOK	Medeo	6.38	263	Pg	Pb	10 00 42.2	+1.8
	3.4nm,0.7s						
MDOK				Lg	Lg	10 02 11.3	
	19nm,1.0s						
TNSS	Tian-Shan	6.48	262	Pg	Pb	10 00 44.7	+2.4
	2.1nm,0.5s						
TNSS				Lg	Lg	10 02 12.6	
	2.7nm,0.8s						
KTBS	Karatobe	6.54	268	Pg	Pb	10 00 44.7	+1.6
	0.9nm,0.6s						
KTBS				Lg	Lg	10 02 13.4	
	13nm,0.6s						
TKM2	Tokmak 2	7.47	263	⇑Pg	Pb	10 01 04.9	+5.9
	1.9nm,0.7s						
TKM2				⇑Lg	Lg	10 02 40.4	
	3.7nm,0.6s						
KURBB	Kurchatov Arra	8.01	325	Pn	Pn	10 00 46.7	+1.1
	0.2nm,0.3s,baz=135,slow=14,SNR=20						
KURBB				Sn	Sn	10 02 15.3	-0.9
	0.2nm,0.3s,baz=116,slow=15,SNR=6.6						
KURBB				Lg	Lg	10 03 02.6	
	0.1nm,0.3s,baz=128,slow=18,SNR=4.9						
KURBB	Kurchatov Arra	8.01	325	⇑Pn	Pn	10 00 46.9	+1.3
	2.0nm,0.6s						
KURBB				⇑Sn	Sn	10 02 18.3	+2.1
	7.1nm,0.7s						
KURBB				⇑Lg	Lg	10 03 04.7	
	18nm,0.6s						
KURK	Kurchatov	8.05	326	⇓Pn	Pn	10 00 46.9	+0.8
	1.0nm,0.5s						
KURK				⇓Sn	Sn	10 02 16.9	-0.2
	2.8nm,0.6s						
KURK				⇓Lg	Lg	10 03 06.9	
	7.4nm,0.6s						
AAK	Ala-Archa	8.33	263	Lg	Lg	10 03 13.9	
	0.2nm,0.3s,baz=195,slow=20,SNR=2.8						
AAK	Ala-Archa	8.33	263	⇓Pg	Pb	10 01 21.4	+7.9
	1.1nm,0.6s						
AAK				⇓Lg	Lg	10 03 12.4	
	9.2nm,1.1s						
ZALV	Zalesovo Beam	9.71	357	Pn	Pn	10 01 09.5	+0.6
	0.8nm,0.3s,baz=177,slow=13,SNR=19						
ZALV				Sn	Sn	10 02 57.4	-0.6

	0.7nm,0.3s,baz=194,slow=26,SNR=8.8						
SONM	**Songino Array**	**14.79**	**69**	Pn	**P**	**10 02 25.2**	**+0.7**
	0.1nm,0.3s,baz=267,slow=11,SNR=3.2						

DDA 22 10:02:27.7,37°.94N×28°.79E,h8^{km}±2^{km},ML1.9,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAVA	**DENIZLI_Tavas**	**0.48**	**168**	*i* P	Pg	10 02 37.4	+0.4
TAVA				*i* S	Sg	10 02 42.5	-0.7
MANT	**Manisa**	**0.58**	**342**	*i* P	Pg	10 02 39.2	+0.1
MANT				*i* S	Sg	10 02 45.4	-1.3
KHAL	**Karahalli**	**0.70**	**52**	*i* P	Pg	10 02 41.2	-0.1
KHAL				*i* S	Sg	10 02 49.3	-1.1
MULA	**Mugla, Merkez-**	**0.78**	**209**	*i* P	Pg	10 02 42.1	-0.5
MULA				*i* S	Sg	10 02 50.6	-2.1
MULA				IAML		10 02 55.0	
	comp=E,39nm,0.7s						
USAK	**Uak-Merkez**	**0.80**	**13**	*i* P	Pb	10 02 43.9	0.0
USAK				*i* S	Sg	10 02 52.3	-1.1
USAK				IAML		10 03 16.0	
	comp=E,60nm,0.9s						
CAEL	**Denizli, Camel**	**0.91**	**153**	*i* P	Pn	10 02 46.9	-0.1
CAEL				*i* S	Sg	10 02 57.1	0.0
CAEL				IAML		10 03 05.0	
	comp=N,51nm,1.6s						
CAEL				IAML		10 03 10.0	
	comp=E,64nm,1.5s						
GOLH	**Golhisar**	**0.93**	**139**	*i* P	Pb	10 02 46.1	0.0
GOLH				*i* S	Sg	10 02 56.4	-1.2
DEMI	**Demirci**	**1.11**	**357**	*i* P	Pg	10 02 48.2	-0.8
DEMI				*i* S	Sg	10 02 59.1	-4.3
GDZ	**Gediz**	**1.27**	**25**	*i* P	Pn	10 02 51.5	-0.5
GDZ				*i* S	Sg	10 03 02.2	-6.5

ISK 22 10:03:20.7,37°.15N×27°.87E,h0^{km}±1^{km},ML2.0/5, Suspected Mining explosion.,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MLSB	**Milas**	**0.17**	**334**	PG	Pg	10 03 25.8	+1.9
MLSB				SG	Sg	10 03 29.1	+3.0
YER	**Yerkesik**	**0.33**	**92**	PG	Pb	10 03 28.4	-1.2
YER				SG	Sg	10 03 33.4	+2.0
BODT	**Bodrum**	**0.45**	**260**	PG	Pg	10 03 30.2	+0.8
BODT				SG	Sb	10 03 37.3	-1.6
TURN	**Turunc**	**0.48**	**141**	PG	Pg	10 03 30.9	+1.1
AYDB	**Zeytinkoy-Aydi**	**0.80**	**1**	PG	Pg	10 03 36.6	+0.5

IDC 22 10:05:07.4±1.6**,0°.73N×122°.52E,h0^{km},mb3.1**/3**, mb1 3.3**/3**,mb1mx3.1**/24**,mbtmp3.1**/3**,Error ellipse: s-maj=246.5km s-min=25.3km az=61.0,Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.59**	**151**	P	P	10 10 20.0	-0.1
	0.3nm,0.6s,baz=327,slow=11,SNR=5.4						
ASAR	**Alice Springs**	**26.66**	**156**	P	P	10 10 48.3	+0.1
	0.4nm,0.9s,baz=342,slow=13,SNR=5.0						
MKAR	**Makanchi Array**	**57.74**	**328**	P	P	10 15 00.2	-0.1
	0.1nm,0.6s,baz=115,slow=5.4,SNR=2.3						

IDC 22 10:13:23.5±6.7**,6°.54S×147°.86E,h0^{km},mb3.8**/2**, mb1 3.9**/3**,mb1mx3.4**/26**,mbtmp3.7**/3**,ML3.7**/1**,Error ellipse: s-maj=106.8km s-min=72.8km az=171.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.71**	**223**	P	P	10 17 43.1	-0.7
	0.2nm,0.3s,baz=49,slow=11,SNR=9.4						
ASAR	**Alice Springs**	**21.68**	**217**	P	P	10 18 16.0	-0.1
	1.4nm,0.5s,baz=53,slow=8.8,SNR=35						
STKA	**Stephens Creek**	**25.88**	**192**	P	P	10 18 57.5	+0.4
	1.3nm,0.5s,baz=8.1,slow=14,SNR=4.1						

IDC 22 10:28:19.1±45.0**,15°.69S×171°.81W,h0^{km},mb4.3**/3**, mb1 4.5**/3**,mb1mx3.7**/30**,mbtmp4.3**/3**,Error ellipse: s-maj=878.3km s-min=180.0km az=79.0,Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**45.22**	**241**	P	P	10 36 38.8	+0.5
	0.8nm,0.4s,baz=96,slow=12,SNR=5.1						
WRA	**Warramunga Arr**	**51.27**	**257**	P	P	10 37 24.5	-0.7
	0.8nm,0.5s,baz=96,slow=6.9,SNR=21						
ASAR	**Alice Springs**	**51.48**	**252**	P	P	10 37 26.8	0.0
	8.7nm,0.6s,baz=88,slow=8.3,SNR=184						

KRSC **22** *10:58:04.9±2.0,52°.05N×161°.99E,h80^{km}±25^{km},ML4.0*
IDC **22** *10:58:04.1±3.0,52°.03N×161°.95E,h0^{km},mb3.6/5, mb1 3.9/6,mb1mx3.4/53,mbtmp3.6/6,ML2.8/1,MS2.4/2, Ms1 2.4/2,ms1mx2.2/46,Error ellipse: s-maj=104.2km s-min=20.2km az=5.0*
ISC 22 10:58:05.3±1.0**,52°.11N**±0°.06×**161°.89E**±0°.05**,h10^{km},n37,** σ**1^{s}.39**/55**,mb3.6**/5**,Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**1.51**	**312**	*e*P	**Pn**	**10 58 31.8**	**-0.6**
SPN				*e*S	**Sn**	**10 58 50.6**	**-1.5**
NLC	**Nalytchevo**	**1.88**	**306**	*e*P	**Pn**	**10 58 37.7**	**+0.2**
NLC				*e*S	**Sn**	**10 59 01.5**	**+0.3**
RUS	**Russkaya**	**2.10**	**280**	*e*P	**Pn**	**10 58 41.1**	**+0.6**
RUS				*e*S	**Sn**	**10 59 06.1**	**-0.5**
DALK	**Dalny**	**2.12**	**297**	*e*P	**Pn**	**10 58 41.4**	**+0.6**
DALK				*e*S	**Sn**	**10 59 07.8**	**+0.5**
UGLR	**Uglovaya**	**2.17**	**302**	*e*P	**Pb**	**10 58 42.8**	**-1.9**
UGLR				*e*S	**Sb**	**10 59 11.8**	**+0.1**
SDLR	**Sedlovina**	**2.17**	**304**	*e*P	**Pn**	**10 58 42.2**	**+0.6**
SDLR				*e*S	**Sn**	**10 59 09.4**	**+0.8**
PET	**Petropavlovsk**	**2.18**	**296**	*e*P	**Pb**	**10 58 42.6**	**-2.2**
PET				*e*S	**Sn**	**10 59 09.2**	**+0.6**
SMAR	**Somma**	**2.21**	**303**	*e*P	**Pb**	**10 58 43.3**	**-2.1**
SMAR				*e*S	**Sn**	**10 59 11.3**	**+1.7**
AVH	**Avacha**	**2.24**	**302**	*e*P	**Pb**	**10 58 43.8**	**-2.1**
AVH				*e*S	**Sn**	**10 59 11.1**	**+0.8**
KRER	**Koryakskii**	**2.25**	**303**	*e*P	**Pb**	**10 58 44.1**	**-2.1**
KRER				*e*S	**Sb**	**10 59 12.6**	**-1.6**
MTVR	**Mutnovka**	**2.31**	**281**	*e*P	**Pn**	**10 58 44.6**	**+1.1**
MTVR				*e*S	**Sn**	**10 59 12.2**	**+0.2**
KOK	**Koryaka**	**2.31**	**302**	*e*P	**Pb**	**10 58 45.1**	**-2.0**
KRX	**Arik**	**2.33**	**304**	*e*P	**Pn**	**10 58 44.8**	**+0.9**
KRX				*e*S	**Sn**	**10 59 12.6**	**-0.1**
KDTR	**Khodutka, Kamc**	**2.38**	**264**	*e*P	**Pn**	**10 58 44.4**	**+0.1**
KDTR				*e*S	**Sn**	**10 59 11.9**	**-1.5**
GRL	**Gorelyy**	**2.38**	**282**	*e*P	**Pb**	**10 58 46.2**	**-2.2**
KRMR	**Karymshinskiy**	**2.41**	**289**	*e*P	**Pb**	**10 58 46.6**	**-2.1**
KRMR				*e*S	**Sn**	**10 59 16.0**	**+1.7**
KII	**Karymskiy**	**2.43**	**324**	*e*P	**Pn**	**10 58 45.7**	**+0.6**
MKZ	**Mys Kozlova**	**2.46**	**358**	*e*P	**Pn**	**10 58 45.4**	**0.0**
MKZ				*e*S	**Sn**	**10 59 13.3**	**-2.1**
PETK	**Petropavlovsk-**	**2.74**	**293**	Pn	**Pn**	**10 58 51.0**	**+1.6**
	7.2nm,0.3s,baz=98,slow=17,SNR=161						
PETK				Sn	**Sn**	**10 59 24.4**	**+1.8**
	5.0nm,0.3s,baz=146,slow=1.1,SNR=3.9						
GNL	**Ganaly**	**2.87**	**305**	*e*P	**Pn**	**10 58 53.3**	**+2.1**
APC	**Apacha**	**3.00**	**288**	*e*P	**Pn**	**10 58 55.1**	**+2.2**
APC				*e*S	**Sn**	**10 59 30.8**	**+1.9**
KZV	**Kizimen**	**3.16**	**343**	*e*P	**Pn**	**10 58 56.1**	**+0.9**
KZV				*e*S	**Sn**	**10 59 32.9**	**-0.1**
PAU	**Pauzhetka**	**3.22**	**261**	*e*P	**Pn**	**10 58 57.2**	**+1.4**
TUMD	**Tumrok D**	**3.23**	**345**	*e*P	**Pn**	**10 58 56.1**	**+0.1**
TUMD				*e*S	**Sn**	**10 59 34.1**	**-0.4**
TUMR	**Tumrok**	**3.35**	**343**	*e*P	**Pn**	**10 58 59.0**	**+1.2**
TUMR				*e*S	**Sn**	**10 59 38.9**	**+1.3**
SKR	**Severo-Kuril's**	**3.88**	**251**	*e*S	**Sn**	**10 59 48.3**	**-2.3**
KBTR	**Krutoberegovo**	**4.15**	**7**	*e*P	**Pn**	**10 59 07.8**	**-0.8**
SRDR	**Sredinnyy**	**4.41**	**344**	*e*P	**Pn**	**10 59 13.7**	**+1.4**
SMKR	**Semkarok**	**4.49**	**357**	*e*P	**Pn**	**10 59 15.5**	**+2.1**
SRKR	**Sorokina**	**4.58**	**355**	*e*P	**Pn**	**10 59 16.4**	**+1.8**
MA2	**Magadan**	**9.74**	**325**	LR	LR	11 04 56.7	
	comp=Z,8.0nm,19.2s,baz=322,slow=42						
YKA	**Yellowknife Ar**	**43.15**	**42**	P	**P**	**11 06 06.0**	**+0.5**
	0.4nm,0.8s,baz=298,slow=7.5,SNR=6.4						
ZALV	**Zalesovo Beam**	**44.23**	**304**	LR	LR	11 24 06.7	
	comp=Z,13nm,20.3s,baz=284,slow=35						
KURBB	**Kurchatov Arra**	**49.29**	**303**	P	**P**	**11 06 54.9**	**+0.9**
	1.0nm,0.2s,baz=59,slow=7.7,SNR=2.2						
MKAR	**Makanchi Array**	**49.58**	**297**	P	**P**	**11 06 56.9**	**+0.7**
	0.1nm,0.4s,baz=45,slow=8.4,SNR=4.2						
PDAR	**Pinedale Array**	**57.04**	**61**	P	**P**	**11 07 52.0**	**+0.6**
	0.4nm,0.6s,baz=296,slow=4.3,SNR=5.1						
TXAR	**Lajitas Array**	**70.01**	**68**	P	**P**	**11 09 17.3**	**+0.1**
	0.4nm,0.5s,baz=303,slow=5.1,SNR=9.7						

IDC **22** *11:02:08.8±2.1,28°.31N×81°.20E,h0^{km},mb3.8/4, mb1 3.7/5,mb1mx3.3/46,mbtmp3.7/5,ML3.2/1,Error ellipse: s-maj=89.2km s-min=26.7km az=68.0*
ISC 22 11:02:14.5±1.6**,28°.4N**±0°.2×**81°.4E**±0°.2**,h35^{km},n6,**σ**0^{s}.68**/6**, mb3.7**/4**,Nepal-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	**Cherat**	**9.73**	**306**	P	**Pn**	**11 04 32.3**	**+0.2**
MKAR	**Makanchi Array**	**18.35**	**2**	P	**P**	**11 06 25.7**	**-0.2**
	0.1nm,0.3s,baz=184,slow=12,SNR=5.4						
KURBB	**Kurchatov Arra**	**22.27**	**355**	P	**P**	**11 07 09.4**	**+1.0**
	1.1nm,0.2s,baz=178,slow=10.0,SNR=6.0						
ZALV	**Zalesovo Beam**	**25.63**	**5**	P	**P**	**11 07 40.3**	**-0.2**
	0.3nm,0.3s,baz=195,slow=10,SNR=4.2						
FINES	**FINESS Array B**	**48.99**	**328**	P	**P**	**11 10 56.8**	**-0.5**
	3.9nm,1.1s,baz=120,slow=13,SNR=1.3						
ASAR	**Alice Springs**	**72.40**	**130**	P	**P**	**11 13 37.5**	**+0.2**
	0.3nm,0.7s,baz=316,slow=6.0,SNR=6.0						

IDC **22** *11:10:01.3±1.1,44°.10N×85°.73E,h0^{km},mb3.8/5, mb1 3.9/8,mb1mx3.6/40,mbtmp3.8/8,ML3.1/3,Error ellipse: s-maj=76.7km s-min=12.1km az=51.0*
SOME **22** *11:10:02.2,43°.98N×85°.67E,h15^{km}*
NNC **22** *11:10:07.7±2.0,44°.17N×85°.34E,h13^{km}±9^{km},mb4.0, mpv3.7,Error ellipse: s-maj=14.4km s-min=8.3km az=114.0*
ISC 22 11:10:02.0±0.9**,43°.89N**±0°.06×**85°.57E**±0°.05**,h10^{km},n46,** σ**2^{s}.26**/59**,mb3.6**/6**,8C-9D,Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**3.71**	**323**	⇑Pn	**Pn**	**11 11 01.7**	**+2.3**
	0.9nm,0.3s,baz=138,slow=14,SNR=541						
MK31				⇑Pg	**Pg**	**11 11 11.3**	**-1.7**
	3.1nm,0.2s,baz=136,slow=17,SNR=27						
MK31				⇑Lg	Lg	11 11 55.1	
	14nm,0.4s,baz=135,slow=30,SNR=5.9						
MKAR	**Makanchi Array**	**3.71**	**323**	Pn	**Pn**	**11 11 00.8**	**+1.4**
	1.6nm,0.3s,baz=139,slow=14,SNR=82						
MKAR				Pg	**Pb**	**11 11 08.1**	**+0.4**
	6.1nm,0.3s,baz=130,slow=16,SNR=42						
MKAR				Lg	Lg	11 11 55.8	
	13nm,0.3s,baz=133,slow=30,SNR=9.3						
KTMS	**Ketmen**	**3.81**	**265**	*e*P	**Pg**	**11 11 12.9**	**-2.2**
	2.4nm,0.2s						
KTMS				*e*S	**Sg**	**11 12 04.0**	**-0.4**
	48nm,0.4s						
KTMS	**Ketmen**	**3.81**	**265**	Pg	**Pg**	**11 11 12.9**	**-2.2**
	2.4nm,0.2s						
KTMS				Lg	Lg	11 12 04.0	
	48nm,0.4s						
MAKZ	**Makanchi**	**3.86**	**320**	⇓Pn	**Pn**	**11 11 03.3**	**+1.8**
	1.5nm,0.3s						
MAKZ				⇑Pg	**Pb**	**11 11 11.9**	**+1.7**
	6.0nm,0.3s						
MAKZ				⇑Lg	Lg	11 11 59.4	
	9.7nm,0.5s						
DJR	**Jarkent**	**4.19**	**278**	*e*P	**Pg**	**11 11 20.9**	**-1.3**
	20nm,0.5s						
DJR				*e*S	**Sg**	**11 12 18.0**	**+1.6**
	35nm,0.4s						
DJR	**Jarkent**	**4.19**	**278**	Pg	**Pg**	**11 11 20.9**	**-1.3**
	20nm,0.5s						
DJR				Lg	Lg	11 12 18.0	
	35nm,0.4s						
PDGK	**Podgornoye**	**4.45**	**265**	Pg	**Pg**	**11 11 24.6**	**-2.6**
	2.2nm,0.4s						
PDGK				Lg	Lg	11 12 23.9	
	17nm,0.4s						
PDGK	**Podgornoye**	**4.45**	**265**	⇑Pn	Pn	11 11 13.9	+4.2
	2.4nm,0.6s						
PDGK				⇓Pg	**Pg**	**11 11 28.7**	**+1.4**
	13nm,0.9s						
PDGK				⇑Lg	Lg	11 12 26.2	
	21nm,0.5s						
SHLS	**Shalkode**	**4.50**	**263**	*e*P	**Pb**	**11 11 19.4**	**-1.8**
	11nm,0.3s						
SHLS				*e*S	**Sb**	**11 12 15.0**	**-0.5**
	36nm,0.5s						
SHLS	**Shalkode**	**4.50**	**263**	Pg	**Pb**	**11 11 19.4**	**-1.8**
	11nm,0.3s						
SHLS				Lg	Lg	11 12 15.0	
	36nm,0.5s						
UZB	**Uzynbulak**	**4.82**	**263**	*e*P	**Pg**	**11 11 32.1**	**-2.2**
	7.2nm,0.4s						
UZB				*e*S	**Sg**	**11 12 37.6**	**+0.8**
	32nm,0.7s						
UZB	**Uzynbulak**	**4.82**	**263**	Pg	**Pg**	**11 11 32.1**	**-2.2**
	7.2nm,0.4s						
UZB				Lg	Lg	11 12 37.6	
	32nm,0.7s						
KPKS	**Kokpek**	**5.01**	**268**	*e*P	**Pg**	**11 11 37.1**	**-0.9**
	9.0nm,0.4s						
KPKS				*e*S	**Sg**	**11 12 45.9**	**+3.0**
	2μm,0.3s						
MNBS	**Baschi**	**5.18**	**275**	*e*P	**Pg**	**11 11 40.1**	**-1.0**
	5.6nm,0.5s						
MNBS				*e*S	**Sg**	**11 12 51.2**	**+3.0**
	49nm,0.5s						
MNBS	**Baschi**	**5.18**	**275**	Pg	**Pg**	**11 11 40.1**	**-1.0**
	5.6nm,0.5s						
MNBS				Lg	Lg	11 12 51.2	
	49nm,0.5s						
TDK	**Taldyqorghan**	**5.25**	**285**	*e*P	**Pg**	**11 11 42.6**	**+0.2**
	28nm,0.4s						
TDK				*e*S	**Sg**	**11 12 54.6**	**+4.2**
	42nm,0.6s						
TDK	**Taldyqorghan**	**5.25**	**285**	Pg	**Pg**	**11 11 42.6**	**+0.2**
	28nm,0.4s						
TDK				Lg	Lg	11 12 54.6	
	42nm,0.6s						
SATY	**Saty**	**5.28**	**263**	*e*P	**Pg**	**11 11 42.1**	**-1.0**
	3.8nm,0.3s						
SATY				*e*S	**Sg**	**11 12 54.0**	**+2.5**
	18nm,0.6s						
SATY	**Saty**	**5.28**	**263**	Pg	**Pg**	**11 11 42.1**	**-1.0**
	3.8nm,0.3s						
SATY				Lg	Lg	11 12 54.0	
	18nm,0.6s						
ARXS	**Arharly**	**5.59**	**276**	*e*P	**Pg**	**11 11 45.7**	**-3.3**
	6.2nm,0.4s						
ARXS				*e*S	**Sg**	**11 13 00.6**	**-0.9**
	20nm,0.3s						
ARXS	**Arharly**	**5.59**	**276**	Pg	**Pg**	**11 11 45.7**	**-3.3**
	6.2nm,0.4s						
ARXS				Lg	Lg	11 13 00.6	
	20nm,0.3s						
KOTS	**Kotyrbulak**	**6.18**	**267**	Pg	**Pg**	**11 11 57.8**	**-2.5**
	9.4nm,0.7s						
KOTS				Lg	Lg	11 13 21.7	
	83nm,0.6s						
MDOK	**Medeo**	**6.24**	**266**	Pg	**Pg**	**11 12 03.1**	**+1.7**
	9.0nm,1.0s						
MDOK				Lg	Lg	11 13 22.4	
	24nm,0.8s						
MDOK	**Medeo**	**6.24**	**266**	Pg	Pg	11 11 56.2	-5.3
	2.6nm,0.4s						
MDOK				Lg	Lg	11 13 18.8	
	11nm,0.6s						
TNSS	**Tian-Shan**	**6.33**	**265**	Pg	**Pg**	**11 12 02.2**	**-1.1**
	1.8nm,0.3s						
TNSS				Lg	Lg	11 13 28.6	
	5.1nm,0.8s						
KTBS	**Karatobe**	**6.44**	**271**	Pg	**Pg**	**11 12 00.8**	**-4.4**
	1.6nm,0.5s						
KTBS				Lg	Lg	11 13 26.9	
	14nm,0.6s						
KUU	**Kurty**	**6.67**	**273**	Pg	**Pg**	**11 12 06.7**	**-3.0**
	1.8nm,0.1s						
KUU				Lg	Lg	11 13 36.1	
	17nm,0.6s						
KST	**Kastek**	**7.04**	**266**	Pg	**Pg**	**11 12 13.9**	**-2.9**
	2.7nm,0.2s						
KST				Lg	Lg	11 13 48.9	
	10nm,0.4s						
TKM2	**Tokmak 2**	**7.33**	**266**	⇓Pg	**Pg**	**11 12 18.7**	**-3.6**
	6.3nm,1.1s						
TKM2				⇓Lg	Lg	11 13 59.1	
	6.8nm,0.8s						
AAK	**Ala-Archa**	**8.18**	**265**	Lg	Lg	11 14 27.7	
	0.3nm,0.3s,baz=252,slow=20,SNR=2.5						
AAK	**Ala-Archa**	**8.18**	**265**	Pg	**Pg**	**11 12 35.5**	**-3.1**
	2.2nm,0.7s						
AAK				Lg	Lg	11 14 20.6	
	9.0nm,1.1s						
KURBB	**Kurchatov Arra**	**8.26**	**327**	Pn	**Pn**	**11 11 59.5**	**-2.2**
	0.3nm,0.3s,baz=133,slow=13,SNR=19						
KURBB				Sn	**Sn**	**11 13 32.5**	**-2.5**
	0.2nm,0.3s,baz=143,slow=19,SNR=4.8						
KURBB				Lg	Lg	11 14 21.8	
	0.4nm,0.3s,baz=144,slow=33,SNR=7.1						
KURBB	**Kurchatov Arra**	**8.26**	**327**	⇓Pn	**Pn**	**11 12 01.8**	**+0.1**
	2.5nm,0.6s						
KURBB				⇓Sn	**Sn**	**11 13 32.5**	**-2.5**
	7.9nm,0.6s						
KURBB				⇓Lg	Lg	11 14 20.7	
	46nm,0.8s						
KURK	**Kurchatov**	**8.30**	**328**	⇓Pn	**Pn**	**11 12 00.6**	**-1.6**
	1.4nm,0.5s						
KURK				⇑Sn	**Sn**	**11 13 32.2**	**-3.8**
	4.7nm,0.5s						
KURK				⇓Lg	Lg	11 14 19.7	
	22nm,0.7s						
ZALV	**Zalesovo Beam**	**10.08**	**357**	Pn	**Pn**	**11 12 24.6**	**-2.0**
	0.9nm,0.3s,baz=179,slow=13,SNR=26						
ZALV				Sn	**Sn**	**11 14 13.8**	**-5.8**
	1.1nm,0.3s,baz=182,slow=24,SNR=15						
ZALV				Lg	Lg	11 15 19.5	
	0.2nm,0.3s,baz=182,slow=29,SNR=1.7						
BVAR	**Borovoye Array**	**13.58**	**318**	Pn	Pn	11 13 08.4	-6.1
	0.1nm,0.3s,baz=188,slow=9.7,SNR=2.5						
SONM	**Songino Array**	**15.02**	**68**	Pn	**P**	**11 13 40.2**	**+0.4**
	0.1nm,0.3s,baz=269,slow=10,SNR=11						
AKTO	**Aktyubinsk**	**19.77**	**299**	P	**Pn**	**11 14 35.6**	**+2.0**
	0.1nm,0.3s,baz=103,slow=12,SNR=4.1						
ARU	**Arti**	**21.20**	**316**	P	**P**	**11 14 50.5**	**+2.9**
	1.0nm,0.4s,baz=267,slow=23,SNR=5.3						
FINES	**FINESS Array B**	**38.53**	**318**	P	**P**	**11 17 24.6**	**+0.4**
	4.1nm,1.0s,baz=41,slow=6.1,SNR=6.0						
ARCES	**ARCESS Array B**	**39.32**	**331**	P	**P**	**11 17 31.3**	**+0.5**
	1.4nm,0.6s,baz=82,slow=8.7,SNR=11						
NB2	**NORSAR Subarra**	**45.70**	**319**	P	**P**	**11 18 23.1**	**+0.3**
	comp=Z,0.4nm,0.4s,baz=76,slow=7.9						
NOA	**NORSAR Array B**	**45.70**	**319**	P	**P**	**11 18 23.2**	**+0.5**
	comp=Z,0.4nm,0.4s,baz=77,slow=7.9,SNR=4.1						
WRA	**Warramunga Arr**	**77.64**	**134**	P	**P**	**11 21 59.9**	**+1.3**
	comp=Z,0.3nm,0.7s,baz=338,slow=4.9,SNR=3.2						
ASAR	**Alice Springs**	**80.51**	**136**	P	**P**	**11 22 15.3**	**+1.1**
	comp=Z,0.2nm,0.8s,baz=325,slow=5.1,SNR=3.8						

SOME **22** *11:25:26.8,44°.30N×85°.47E,h10^{km}*
NNC **22** *11:25:27.6±2.0,44°.22N×85°.45E,h6^{km}±11^{km},mb3.7, mpv3.5,Error ellipse: s-maj=15.1km s-min=7.0km az=121.0*
ISC 22 11:25:24.4±2.4**,44°.03N**±0°.08×**85°.5E**±0°.1**,h10^{km},n30,** σ**1^{s}.54**/40**,9C-2D,Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZSN	**Zaisan**	**3.45**	**353**	*e*P	**Pb**	**11 26 25.7**	**0.0**
	1.8nm,0.2s						
ZSN				*e*S	**Sb**	**11 27 08.0**	**+0.4**
	37nm,0.6s						
ZSN	**Zaisan**	**3.45**	**353**	Pg	**Pb**	**11 26 25.7**	**0.0**
	4.2nm,0.2s						
ZSN				Lg	Lg	11 27 08.0	
	37nm,0.6s						
MK31	**Makanchi Array**	**3.57**	**322**	Pn	**Pn**	**11 26 21.1**	**+1.3**
	0.1nm,0.3s,baz=242,slow=16,SNR=22						
MK31				⇑Pg	**Pg**	**11 26 31.3**	**-1.4**
	0.6nm,0.2s,baz=141,slow=15,SNR=22						
MK31				⇓Lg	Lg	11 27 16.7	
	3.3nm,0.3s,baz=135,slow=28,SNR=11						
MAKZ	**Makanchi**	**3.72**	**320**	⇑Pn	**Pn**	**11 26 23.3**	**+1.3**
	0.6nm,0.5s						
MAKZ				⇑Pg	**Pg**	**11 26 33.6**	**-2.0**
	2.4nm,0.5s						
MAKZ				⇑Lg	Lg	11 27 20.2	
	2.2nm,0.3s						
KTMS	**Ketmen**	**3.77**	**263**	*e*P	**Pg**	**11 26 35.5**	**-1.0**
	1.2nm,0.2s						
KTMS				*e*S	**Sg**	**11 27 24.8**	**-0.5**
	16nm,0.4s						
KTMS	**Ketmen**	**3.77**	**263**	Pg	**Pg**	**11 26 35.6**	**-1.0**
	1.6nm,0.2s						
KTMS				Lg	Lg	11 27 24.8	
	16nm,0.4s						
DJR	**Jarkent**	**4.11**	**276**	*e*P	**Pg**	**11 26 41.7**	**-1.4**
	4.7nm,0.3s						
DJR				*e*S	**Sg**	**11 27 36.0**	**-0.3**
	14nm,0.6s						
DJR	**Jarkent**	**4.11**	**276**	Pg	**Pg**	**11 26 41.7**	**-1.4**
	4.7nm,0.3s						
DJR				Lg	Lg	11 27 36.0	
	14nm,0.6s						
PDGK	**Podgornoye**	**4.41**	**263**	Pg	**Pg**	**11 26 47.2**	**-1.6**
	1.6nm,0.4s						
PDGK				Lg	Lg	11 27 45.5	
	6.8nm,0.6s						
PDGK	**Podgornoye**	**4.41**	**263**	⇑Pg	**Pg**	**11 26 46.8**	**-2.0**
	7.1nm,0.6s						
PDGK				⇑Lg	Lg	11 27 44.2	
	11nm,0.6s						
SHLS	**Shalkode**	**4.46**	**261**	*e*P	**Pb**	**11 26 42.9**	**0.0**
	17nm,0.4s						
SHLS				*e*S	**Sb**	**11 27 38.0**	**+1.2**
	58nm,0.5s						
SHLS	**Shalkode**	**4.46**	**261**	Pg	**Pb**	**11 26 42.9**	**0.0**
	17nm,0.4s						
SHLS				Lg	Lg	11 27 38.0	
	58nm,0.5s						
UZB	**Uzynbulak**	**4.78**	**262**	*e*P	**Pg**	**11 26 55.5**	**-0.4**
	4.4nm,0.3s						
UZB				*e*S	**Sg**	**11 27 59.3**	**+1.5**
	13nm,0.6s						
UZB	**Uzynbulak**	**4.78**	**262**	Pg	**Pg**	**11 26 55.5**	**-0.4**
	4.4nm,0.3s						
UZB				Lg	Lg	11 27 59.3	
	13nm,0.6s						
KPKS	**Kokpek**	**4.96**	**266**	*e*P	**Pg**	**11 26 59.4**	**0.0**
	5.4nm,0.3s						
KPKS				*e*S	**Sg**	**11 28 06.0**	**+2.4**
	24nm,0.4s						
MNBS	**Baschi**	**5.11**	**273**	*e*P	**Pg**	**11 26 59.9**	**-2.3**
	1.9nm,0.3s						
MNBS				*e*S	**Sg**	**11 28 07.0**	**-1.3**
	17nm,0.5s						
MNBS	**Baschi**	**5.11**	**273**	Pg	**Pg**	**11 26 59.9**	**-2.3**
	1.9nm,0.3s						
MNBS				Lg	Lg	11 28 07.0	
	17nm,0.5s						
TDK	**Taldyqorghan**	**5.16**	**283**	*e*P	**Pg**	**11 27 02.8**	**-0.3**
	12nm,0.1s						
TDK				*e*S	**Sg**	**11 28 11.8**	**+1.9**
	14nm,0.3s						
TDK	**Taldyqorghan**	**5.16**	**283**	Pg	**Pg**	**11 27 02.8**	**-0.3**
	12nm,0.1s						
TDK				Lg	Lg	11 28 11.8	
	14nm,0.3s						
SATY	**Saty**	**5.24**	**262**	*e*P	**Pg**	**11 27 02.4**	**-2.3**
	1.8nm,0.1s						
SATY				*e*S	**Sg**	**11 28 11.5**	**-1.0**
	3.7nm,0.2s						
SATY	**Saty**	**5.24**	**262**	Pg	**Pg**	**11 27 02.4**	**-2.3**
	1.8nm,0.1s						
SATY				Lg	Lg	11 28 11.5	
	3.7nm,0.2s						
ARXS	**Arharly**	**5.52**	**275**	*e*P	**Pg**	**11 27 07.8**	**-2.3**
	3.1nm,0.4s						
ARXS				*e*S	**Sg**	**11 28 20.4**	**-1.0**
	15nm,0.6s						
ARXS	**Arharly**	**5.52**	**275**	Pg	**Pg**	**11 27 07.8**	**-2.3**
	3.1nm,0.4s						
ARXS				Lg	Lg	11 28 20.4	
	15nm,0.6s						
KOTS	**Kotyrbulak**	**6.13**	**265**	Pg	**Pg**	**11 27 19.7**	**-2.1**
	3.7nm,0.1s						
KOTS				Lg	Lg	11 28 41.4	
	26nm,0.6s						

MDOK	Medeo	6.19	265	Pg	Pg	11 27 20.6	-2.2
	4.2nm,1.0s						
MDOK				Lg	Lg	11 28 47.2	
	10nm,1.0s						
TNSS	Tian-Shan	6.29	264	Pg	Pg	11 27 25.1	+0.3
	0.4nm,0.1s						
TNSS				Lg	Lg	11 28 50.1	
	2.8nm,0.4s						
KTBS	Karatobe	6.37	270	Pg	Pg	11 27 25.3	-1.1
	1.3nm,0.5s						
KTBS				Lg	Lg	11 28 50.4	
	8.3nm,0.6s						
TKM2	Tokmak 2	7.28	265	⇑Pg	Pg	11 27 41.5	-2.3
	1.3nm,0.5s						
TKM2				⇑Lg	Lg	11 29 19.0	
	3.7nm,0.8s						
KURBB	Kurchatov Arra	8.11	327	⇓Lg	Lg	11 29 43.4	
	34nm,0.8s						
KURK	Kurchatov	8.15	328	⇑Lg	Lg	11 29 42.6	
	13nm,1.1s						

IDC 22 11:46:14.3±3.2**, 5°.05S×133°.93E, h0^{km}, mb3.2**/1**, mb1 3.6**/4**, mb1mx3.3**/30**, mbtmp3.4**/4**, ML3.2**/3**, MS3.3**/1**, Ms1 3.3**/1**, ms1mx2.6**/19**, Error ellipse: s-maj=134.1km s-min=29.4km az=82.0, Aru Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.81	178	Pn	Pn	11 49 43.5	-1.6
	0.1nm,0.3s,baz=354,slow=13,SNR=3.2						
FITZ	Fitzroy Crossi	15.29	211	Pn	Pn	11 49 52.2	+0.6
	0.3nm,0.3s,baz=39,slow=14,SNR=2.3						
FITZ				Sn	Sn	11 52 32.3	-10
	0.1nm,0.3s,baz=158,slow=8.1,SNR=3.1						
ASAR	Alice Springs	18.51	180	P	Pn	11 50 32.6	+0.2
	0.1nm,0.3s,baz=2.0,slow=10,SNR=9.2						
LEM	Lembang	26.23	265	LR	LR	12 03 24.7	
	comp=Z,78nm,21.7s,baz=194,slow=39						
MKAR	Makanchi Array	68.83	325	P	P	11 57 20.6	0.0
	0.2nm,0.6s,baz=123,slow=7.4,SNR=2.4						

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*BJI **22** 11:48:23.0±0.0, 29°.10S×3°.90W, h3^{km}, Ms5.3/1*

*IDC **22** 11:48:23.4±0.5, 29°.17S×3°.89W, h0^{km}, mb4.8/27, mb1 4.9/27, mb1mx4.8/34, mbtmp4.8/27, MS4.3/22, Ms1 4.3/22, ms1mx4.1/30, Error ellipse: s-maj=14.9km s-min=11.6km az=168.0*

*NEIC **22** 11:48:24.9±1.6, 29°.05S±0°.10×3°.9W±0°.1, h10^{km}±1^{km}, mb5.1/70, Error ellipse: s-maj=18.5km s-min=16.1km az=111.0*

*BGR **22** 11:48:24.5±0.0, 28°.90S×3°.19W, h10^{km}, mb4.8*

*GCMT **22** 11:48:27.9±0.2, 29°.01S±0°.01×3°.81W±0°.02, h17^{km}, MW5.1/116, Moment Tensor Solution. s52,c64; s116,c175; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$4.33±.19; M$_{\theta\theta}$-4.47±.14; M$_{\phi\phi}$0.13±.12; M$_{r\theta}$0.28±.27; M$_{\theta\phi}$-2.12±.08; M$_{\phi r}$2.45±.35; Best double couple: M$_0$5.47200×10^{16} NP1:φ$_s$272.00000°, δ44.00000°, λ128.00000°. NP2:φ$_s$45.00000°, δ57.00000°, λ60.00000°. Principal axes: T 5.5000, Plg64.0000°, Azm261.0000°; N -0.0640, Plg25.0000°, Azm63.0000°; P -5.4440, Plg7.0000°, Azm156.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 22 11:48:25.0±0.3**, 29°.15S**±0°.06×**3°.90W**±0°.06**, h10^{km}, n317,** σ**1^{s}.31**/316**, mb5.0**/94**, MS4.3**/24**, 19C-6D, South Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H09W1	TRISTAN DA CUN	10.62	220	T	T	12 01 46.5	
	SNR=9.8						
SHEL	Horse Pasture	13.23	352	Pn	Pn	11 51 29.7	-3.4
SUR	Sutherland	21.47	105	P	P	11 53 13.8	-0.1
	68nm,1.1s,baz=265,slow=11,SNR=19						
SUR				LR	LR	12 00 24.3	
	comp=Z,2μm,18.0s,baz=262,slow=34						
SUR	Sutherland	21.47	105	P	P	11 53 13.9	+0.1
SUR				IAmb	IAmb	11 53 37.2	
	comp=Z,92nm,1.1s						
TSUM	Tsumeb	21.93	68	P	P	11 53 16.7	-2.1
	comp=Z,35nm,0.7s,baz=229,slow=8.5,SNR=28						
TSUM				LR	LR	12 00 51.5	
	comp=Z,2μm,18.3s,baz=266,slow=34						
TSUM	Tsumeb	21.93	68	P	P	11 53 16.8	-2.1
BOSA	Boshof	25.51	96	P	P	11 53 51.9	-1.9
	comp=Z,36nm,0.6s,baz=256,slow=8.8,SNR=70						
BOSA				LR	LR	12 02 52.3	
	comp=Z,1μm,18.2s,baz=260,slow=34						
BOSA	Boshof	25.51	96	P	P	11 53 52.4	-1.5
LBTB	Lobatse	26.55	88	P	P	11 54 01.3	-2.0
	comp=Z,6.5nm,0.6s,baz=241,slow=10,SNR=9.5						
LBTB				LR	LR	12 03 17.4	
	comp=Z,660nm,19.3s,baz=234,slow=34						
LBTB	Lobatse	26.55	88	P	P	11 54 01.9	-1.4
LBTB				IAmb	IAmb	11 54 17.2	
	comp=Z,117nm,1.9s						
LSZ	Lusaka	32.63	72	P	P	11 54 57.6	+0.3
	comp=Z,24nm,0.9s,baz=233,slow=9.1,SNR=20						
LSZ				LR	LR	12 07 25.1	
	comp=Z,1μm,18.4s,baz=220,slow=35						
LSZ	Lusaka	32.63	72	P	P	11 54 57.4	+0.1
RIB01	Linhares ES	34.57	278	eP	P	11 55 14.5	+0.4
CAM01	Campos-RJ	34.74	273	eP	P	11 55 16.1	+0.6
NAN01	Guarapari, ES	34.94	281	eP	P	11 55 17.6	+0.4
BSFB	Barra de Sao F	35.15	279	eP	P	11 55 19.4	+0.3
LIC	Lamto	35.18	358	eP	P	11 55 18.6	-0.7
	comp=Z,61nm,0.7s						
DUB01	Friburgo-RJ	35.28	272	eP	P	11 55 21.5	+1.3
KIC	Kosan Boka	35.31	359	eP	P	11 55 19.3	-1.1
	comp=Z,18nm,0.8s						
SJMB	Sao Joao De Ma	35.50	279	eP	P	11 55 21.6	-0.4
TIC	Toumodi	35.60	358	eP	P	11 55 22.2	-0.7
DBIC	Dimbokro	35.62	358	P	P	11 55 22.8	-0.3
	comp=Z,9.7nm,0.6s,baz=156,slow=10,SNR=25						
DBIC				LR	LR	12 05 56.5	
	comp=Z,398nm,21.8s,baz=148,slow=30						
DBIC	Dimbokro	35.62	358	P	P	11 55 22.9	-0.2
GDU01	Guandu, BA	36.41	287	eP	P	11 55 30.3	+0.4
NBPV	Pedro Velho	37.26	301	eP	P	11 55 37.3	+0.1
BSCB	Bom Sucesso	37.75	273	eP	P	11 55 41.1	-0.3
DIAM	Diamantina, MG	37.82	278	eP	P	11 55 41.3	-0.8
NBLI	Livramento-PB	37.91	298	eP	P	11 55 42.6	-0.2
RCBR	Riachuelo	38.10	301	P	P	11 55 44.6	+0.3
	comp=Z,28nm,0.8s,baz=137,slow=8.4,SNR=18						
RCBR	Riachuelo	38.10	301	P	P	11 55 44.6	+0.3
RCBR				IAmb	IAmb	11 55 49.3	
	comp=Z,37nm,1.0s						
RCBR	Riachuelo	38.10	301	eP	P	11 55 44.5	+0.1
PET01	Itanhaem-SP	38.88	267	eP	P	11 55 51.2	+0.4
VAO	Valinhos	39.00	269	eP	P	11 55 52.3	+0.4
NBPA	Parau_RN	39.06	300	eP	P	11 55 52.5	+0.2
SPB	Sao Paulo	39.23	268	eP	P	11 55 54.2	+0.6
JANB	Januaria	39.77	282	eP	P	11 55 57.8	-0.6
CNLB	Canela	40.75	258	eP	P	11 56 08.0	+1.6
BB19B	Bebedouro	41.01	271	eP	P	11 56 08.9	+0.4
SDBA	SAO DESIDERIO	41.55	285	eP	P	11 56 13.0	0.0
VNA2	Neumayer--Watz	41.87	182	P	P	11 56 15.9	+0.9
IPMB	Ipameri, GO	41.89	275	eP	P	11 56 15.1	-0.7
VNA3	Neumayer Olymp	42.26	183	P	P	11 56 18.4	+0.3
ITAB	Concordia	42.32	261	eP	P	11 56 19.9	+0.7
TOA0	Torodi Ar. Sit	42.39	8	P	P	11 56 19.1	-0.6
TORD	Torodi Ar. Bea	42.39	8	P	P	11 56 19.5	-0.2
	comp=Z,14nm,0.8s,baz=196,slow=9.8,SNR=26						
TORD				PcP	PcP	11 58 13.8	+0.7
	comp=Z,3.4nm,0.9s,baz=178,slow=3.7,SNR=2.7						
TORD				LR	LR	12 10 15.9	
	comp=Z,285nm,20.7s,baz=175,slow=31						
TORD	Torodi Ar. Bea	42.39	8	P	P	11 56 19.3	-0.4
SNAA	Sanae	42.58	180	P	P	11 56 21.2	+0.4
SNAA	Sanae	42.58	180	P	P	11 56 21.1	+0.4
	comp=Z,4.7nm,0.9s,baz=311,slow=10,SNR=3.7						
SNAA	Sanae	42.58	180	P	P	11 56 21.9	+1.1
PLTB	Pedras Altas	42.63	254	eP	P	11 56 23.0	+1.3
CPSB	Cacapava Do Su	42.74	256	eP	P	11 56 23.5	+0.9
PTGB	Pitanga	42.94	264	eP	P	11 56 25.3	+0.9
ITRB	Iturama	43.10	272	eP	P	11 56 26.3	+0.6
PCMB	Pacaembu	43.21	269	eP	P	11 56 27.1	+0.5
NBPS	Pedro II - PI	43.24	298	eP	P	11 56 27.4	+0.5
KOWA	Kowa	43.39	360	P	P	11 56 27.4	-0.4
	comp=Z,20nm,0.9s,baz=177,slow=8.3,SNR=19						
KOWA	Kowa	43.39	360	P	P	11 56 28.3	+0.5
KOWA				IAmb	IAmb	11 56 32.5	
	comp=Z,28nm,0.9s						
TRCB	Terra Rica	44.02	267	eP	P	11 56 34.1	+1.1
PEXB	Peixe	44.58	283	eP	P	11 56 37.7	+0.1
ITQB	Itaqui	45.59	256	eP	P	11 56 46.2	+0.7
SMTB	Santa Maria do	45.63	287	eP	P	11 56 45.8	-0.2
EFI	East Falkland	45.73	225	P	P	11 56 45.5	-0.7
ARAG	Araguaiana, MT	45.97	276	eP	P	11 56 49.0	+0.4
ROSB	Rosrio	46.26	297	eP	P	11 56 50.5	-0.4
CPUP	Villa Florida	47.04	260	P	P	11 56 56.8	-0.1
	comp=Z,5.4nm,0.8s,baz=109,slow=7.6,SNR=14						
CPUP				LR	LR	12 13 41.4	
	comp=Z,765nm,18.5s,baz=113,slow=32						
CPUP	Villa Florida	47.04	260	P	P	11 56 56.4	-0.4
CPUP				IAmb	IAmb	11 56 57.2	
	comp=Z,14nm,1.1s						
SYO	Syowa Base	47.10	160	⇑eP	P	11 56 53.0	-3.7
SYO	Syowa Base	47.10	160	⇓epP	P	11 56 56.0	-0.7
SNDB	Serra Nova Dou	47.21	281	eP	P	11 56 58.5	+0.2
AQDB	Aquidauana	47.49	268	eP	P	11 57 01.0	+0.6
PP1B	Ponte de Pedra	47.86	272	eP	P	11 57 04.2	+0.8
KMBO	Kilima Mbogo	48.09	62	P	P	11 57 06.8	+1.4
	comp=Z,1.0nm,0.4s,baz=187,slow=10,SNR=6.2						
KMBO				LR	LR	12 16 58.7	
	comp=Z,798nm,18.8s,baz=258,slow=36						
PRPB	Parauapebas	48.94	289	eP	P	11 57 11.7	0.0
SALV	Santo Antonio	49.27	274	eP	P	11 57 14.8	+0.6
TMAB	Tom-Au,PA,Br	49.72	294	eP	P	11 57 18.1	+0.5
BELA	Belgrano 2	50.76	188	P	P	11 57 24.8	+0.1
TAM	Tamanrasset	52.43	11	P	P	11 57 37.2	-0.7
NPGB	Novo Progresso	53.13	284	eP	P	11 57 43.5	+0.3
GO10	Punta Arenas	53.74	223	P	P	11 57 49.0	+1.7
MCPB	Macapa, AP	54.09	293	eP	P	11 57 50.7	+0.4
VILB	Vilhena	54.47	275	eP	P	11 57 54.1	+1.0
MAW	Mawson	54.57	154	LR	LR	12 16 02.0	
	comp=Z,531nm,21.5s,baz=260,slow=30						
PLCA	Paso Flores	54.66	239	P	P	11 57 53.8	-0.4
	comp=Z,7.0nm,1.1s,baz=68,slow=5.0,SNR=7.3						
PLCA				LR	LR	12 20 22.7	
	comp=Z,224nm,18.1s,baz=90,slow=35						
PLCA	Paso Flores	54.66	239	P	P	11 57 54.0	-0.3
PLCA				IAmb	IAmb	11 59 02.0	
	comp=Z,25nm,1.6s						
ITTB	Itaituba	54.85	287	eP	P	11 57 56.1	+0.3
MALB	Monte Alegre	55.02	290	eP	P	11 57 57.6	+0.6
ZON	Zonda	55.21	250	P	P	11 57 57.8	-0.6
ZON				IAmb	IAmb	11 57 59.0	
	comp=Z,14nm,0.8s						
LC01	Cunco	56.01	241	P	P	11 58 02.5	-1.4
BI02	San Fabin de	56.03	243	P	P	11 58 03.2	-1.0
BO02	Sierra Bellavi	56.09	246	P	P	11 58 04.3	-0.3
VA03	San Esteban	56.42	248	P	P	11 58 06.4	-0.6
MT02	Curacav	56.76	247	P	P	11 58 08.6	-0.7
MT02				IAmb	IAmb	11 58 09.8	
	comp=Z,68nm,1.8s						
CO01	Juntas del Tor	56.82	252	P	P	11 58 10.2	+0.1
CO01				IAmb	IAmb	11 58 12.2	
	comp=Z,59nm,1.6s						
AC02	Maricunga	56.97	255	P	P	11 58 11.1	-0.4
AC02				IAmb	IAmb	11 58 14.7	
	comp=Z,20nm,1.3s						
CO03	El Pedregal	57.06	250	P	P	11 58 10.5	-1.1
AC05	El Transito	57.31	253	P	P	11 58 13.2	-0.3
AC05				IAmb	IAmb	11 58 13.9	
	comp=Z,17nm,1.1s						
GO04	Tololo Observa	57.35	251	P	P	11 58 13.1	-0.7
GO04				IAmb	IAmb	11 58 15.2	
	comp=Z,23nm,0.8s						
LCO	Las Campanas	57.61	252	P	P	11 58 14.8	-0.9
LCO				IAmb	IAmb	11 58 15.6	
	comp=Z,14nm,0.9s						
MDP	Montagnes des	57.87	298	P	P	11 58 17.3	0.0
	comp=Z,41nm,1.2s,baz=152,slow=8.3,SNR=5.0						
GO02	Mina Guanaco	57.91	257	P	P	11 58 17.8	-0.1
LVC	Limon Verde	58.22	260	P	P	11 58 20.0	-0.2
LVC	Limon Verde	58.22	260	eP	P	11 58 20.2	+0.1
PB15	IPOC Station P	58.48	259	P	P	11 58 20.8	-1.1
PB15				IAmb	IAmb	11 58 22.6	
	comp=Z,22nm,0.8s						
PB06	IPOC Station P	58.75	260	P	P	11 58 22.8	-0.9
PB06				IAmb	IAmb	11 58 24.4	
	comp=Z,26nm,0.9s						
SAML	Samuel	58.91	277	P	P	11 58 24.3	-0.3
SAML				IAmb	IAmb	11 58 25.7	
	comp=Z,21nm,1.0s						
SAML	Samuel	58.91	277	eP	P	11 58 25.0	+0.3
MACA	Manacapuru-AM	59.67	285	eP	P	11 58 30.5	+0.6
LPAZ	La Paz	59.98	267	P	P	11 58 31.1	-1.6
	comp=Z,8.2nm,0.6s,baz=124,slow=4.4,SNR=42						
LPAZ				LR	LR	12 21 15.2	
	comp=Z,258nm,22.0s,baz=114,slow=33						
LPAZ	La Paz	59.98	267	P	P	11 58 30.9	-1.8
LPAZ				IAmb	IAmb	11 58 32.9	
	comp=Z,8.4nm,0.7s						
MNMC	Minye Minye	60.12	264	P	P	11 58 32.2	-1.1
MNMC				IAmb	IAmb	11 58 49.1	
	comp=Z,14nm,1.0s						
PTGA	Pitinga	60.37	287	P	P	11 58 35.1	+0.4
	comp=Z,15nm,0.8s,baz=120,slow=9.4,SNR=17						
PTGA	Pitinga	60.37	287	P	P	11 58 34.6	-0.1
PTGA				IAmb	IAmb	11 58 35.7	
	comp=Z,28nm,1.1s						
PTGA	Pitinga	60.37	287	eP	P	11 58 35.2	+0.6
QSPA	South Pole Qui	61.08	180	P	P	11 58 40.5	+1.5
ETMB	Extrema	61.14	275	eP	P	11 58 39.9	0.0
KEST	Kesra	65.73	12	P	P	11 59 11.8	+1.9
	comp=Z,20nm,1.0s,baz=11,slow=1.7,SNR=7.8						
KEST	Kesra	65.73	12	P	P	11 59 10.1	+0.2
KEST				IAmb	IAmb	11 59 16.7	
	comp=Z,29nm,1.1s						
PVAQ	Vaqueiros	66.30	357	eLR	LR	12 25 35.4	
	comp=Z,314nm,20.0s						
PTEO	Sao Teotonio	66.50	356	eP	P	11 59 16.1	+1.4
	comp=Z,104nm,1.4s						
MESJ	Messejana	66.76	356	eP	P	11 59 17.8	+1.5
PBAR	Barrancos	67.04	357	eP	P	11 59 19.3	+1.2
	comp=Z,29nm,1.6s						
PNCL	Nicolau / Gran	67.05	356	eP	P	11 59 19.3	+1.1
	comp=Z,45nm,2.3s						
EVO	Evora	67.44	357	eP	P	11 59 21.6	+1.0
	comp=Z,43nm,2.1s						
PESTR	Estremoz	67.75	357	P	P	11 59 22.6	0.0
PESTR				IAmb	IAmb	11 59 24.7	
	comp=Z,8.0nm,0.7s						
CZSB	Cruzeiro do Su	67.78	274	eP	P	11 59 22.8	-0.6
PMTG	Montargil	67.98	356	eP	P	11 59 25.4	+1.3
PMRV	Marv??o	68.30	357	eP	P	11 59 27.3	+1.2
	comp=Z,44nm,1.8s						
PMRV	Marv??o	68.30	357	eLR	LR	12 25 21.1	
	comp=Z,271nm,20.0s						
PAB	San Pablo	68.34	360	P	P	11 59 25.1	-1.3
PAB				IAmb	IAmb	11 59 26.9	
	comp=Z,27nm,1.4s						
ESDC	Sonseca Array	68.47	360	P	P	11 59 26.9	-0.3
	comp=Z,7.3nm,0.7s,baz=184,slow=6.1,SNR=52						
ESDC				LR	LR	12 26 51.0	
	comp=Z,150nm,21.0s,baz=180,slow=34						
ESDC	Sonseca Array	68.47	360	P	P	11 59 26.3	-0.9
ESBB	Sonseca Array	68.47	360	P	P	11 59 26.8	-0.4
ESBB				IAmb	IAmb	11 59 28.3	
	comp=Z,9.5nm,0.8s						
MTE	Manteigas	69.28	357	eP	P	11 59 33.0	+0.8
	comp=Z,35nm,2.2s						
MTE	Manteigas	69.28	357	eLR	LR	12 25 37.0	
	comp=Z,282nm,20.0s						
IDI	Anoyia	69.61	25	P	P	11 59 34.3	0.0
	comp=Z,16nm,0.7s,baz=210,slow=11,SNR=7.7						
PVIS	Viseu	69.61	357	eP	P	11 59 34.6	+0.4
	comp=Z,24nm,1.5s						
MVO	Moncorvo	70.02	357	eP	P	11 59 38.1	+1.3
	comp=Z,24nm,1.3s						
MVO	Moncorvo	70.02	357	eLR	LR	12 26 09.6	
	comp=Z,335nm,20.0s						
PVRL	Vila Real	70.16	357	eP	P	11 59 38.1	+0.5
	comp=Z,63nm,1.6s						
POLO	Lamas de Olo	70.26	357	eP	P	11 59 39.4	+1.1
	comp=Z,19nm,1.7s						
PBRG	Braganca	70.64	358	eP	P	11 59 41.7	+1.1
	comp=Z,39nm,1.6s						
RAYN	Ar Rayn	70.72	48	P	P	11 59 41.9	+0.4
RAYN				IAmb	IAmb	11 59 46.6	
	comp=Z,15nm,1.2s						
PGAV	Gavieira, Arco	70.87	357	eP	P	11 59 43.0	+1.0
	comp=Z,52nm,1.7s						
MMAI	Mount Meron Ar	72.19	34	LR	LR	12 33 25.5	
	comp=Z,84nm,18.8s,baz=175,slow=37						
VNDA	Vanda	73.23	177	P	P	11 59 57.7	+2.0
	comp=Z,6.8nm,1.1s,baz=220,slow=6.1,SNR=6.2						
VNDA				LR	LR	12 29 41.3	
	comp=Z,319nm,18.2s,baz=190,slow=34						
VNDA	Vanda	73.23	177	P	P	11 59 56.5	+0.8
VNDA				IAmb	IAmb	12 00 00.3	
	comp=Z,56nm,1.8s						
FNA	Florina	73.42	20	P	P	11 59 57.6	+0.3
FNA				IAmb	IAmb	11 59 58.8	
	comp=Z,18nm,0.8s						
MACC	Macarena, Meta	73.64	282	eP	P	11 59 57.1	-2.0
MANT	Manisa	73.81	26	P	P	11 59 59.5	-0.3
SDV	Santo Domingo	74.51	290	P	P	12 00 04.0	-0.4
SDV	Santo Domingo	74.51	290	eP	P	12 00 03.8	-0.6
SDV	Santo Domingo	74.51	290	eP	P	12 00 05.1	+0.7
CHIC	Chingaza	74.82	284	eP	P	12 00 05.7	-0.9
RUSC	La Rusia	74.94	286	eP	P	12 00 06.7	-0.6
BETC	Betania	75.28	282	eP	P	12 00 07.8	-0.9
PRAC	Prado	75.33	283	eP	P	12 00 05.8	-3.3
PAMC	Pamplona, Colo	75.39	287	eP	P	12 00 08.6	-1.2
BARC	Barichara	75.39	286	eP	P	12 00 02.1	-7.5
ROSC	El Rosal	75.43	284	P	P	12 00 10.4	+0.3
	comp=Z,17nm,0.6s,baz=53,slow=11,SNR=6.7						
ROSC	El Rosal	75.43	284	P	P	12 00 10.1	+0.1
ROSC	El Rosal	75.43	284	eP	P	12 00 07.7	-2.4
SPBC	San Pablo de B	75.65	285	eP	P	12 00 10.6	-0.3
VTS	Vitosha	75.66	20	⇑P	P	12 00 11.5	+1.2
ORTC	Ortega, Tolima	75.74	283	eP	P	12 00 09.6	-1.8
MARP	Paez Belalcaza	75.80	281	eP	P	12 00 10.6	-1.5
PCON	Cinco Dias	75.92	281	eP	P	12 00 10.6	-2.5
DIVS	Divibare	76.10	17	P	P	12 00 12.0	-0.7
DIVS				IAmb	IAmb	12 00 14.5	
	comp=Z,12nm,0.9s						
CBYP	Canovanas	76.13	300	P	P	12 00 13.1	-0.3
CTI	Castel Tesino	76.16	11	P	P	12 00 13.2	+0.2
CTI				IAmb	IAmb	12 00 14.4	
	comp=Z,11nm,0.8s						
TUE	Stuetta	76.21	9	P	P	12 00 12.7	-0.8
TUE				IAmb	IAmb	12 00 18.1	
	comp=Z,21nm,1.0s						
SJG	San Juan	76.25	300	eP	P	12 00 11.5	-2.5
POPC	Popayan, Colom	76.26	281	eP	P	12 00 13.4	-1.2
NORC	Norcasia	76.28	284	eP	P	12 00 12.5	-2.0
OCAC	Ocana	76.39	288	eP	P	12 00 13.4	-1.7
GAZ	Gaziantep	76.41	33	P	P	12 00 14.8	+0.1
PTBC	PUERTO BERRIO,	76.44	285	eP	P	12 00 12.5	-2.8
BBAC	Balboa, Cauca	76.49	280	eP	P	12 00 14.4	-1.5
GUY2C	Guyana, Caldas	76.52	284	eP	P	12 00 14.4	-1.9
OTAV	Otavalo	76.64	278	P	P	12 00 17.8	+0.8
OTAV	Otavalo	76.64	278	eP	P	12 00 18.6	+1.5
BRTR	Keskin Array B	76.91	29	P	P	12 00 18.4	+0.9
	comp=Z,1.9nm,0.7s,baz=185,slow=7.4,SNR=12						
BRTR				LR	LR	12 33 42.1	
	comp=Z,42nm,20.9s,baz=193,slow=35						
BRTR	Keskin Array B	76.91	29	P	P	12 00 16.8	-0.8
BR131	Keskin Array S	76.91	29	P	P	12 00 16.9	-0.6
FETA	Feichten	76.96	10	eP	P	12 00 17.6	0.0
	comp=Z,10.0nm,0.9s,SNR=11						
ABTA	Abfaltersbach	76.98	12	eP	P	12 00 18.7	+1.0
	comp=Z,8.9nm,0.8s						
CLF	Chambon-Foret	77.02	4	P	P	12 00 18.1	+0.4
DAVA	Damuels	77.09	10	eP	P	12 00 18.1	-0.2
	comp=Z,14nm,0.8s						
PLMC	San Jos del P	77.14	283	eP	P	12 00 16.3	-3.0
SQTA	Sankt Quirin	77.23	10	eP	P	12 00 18.5	-0.6
	comp=Z,23nm,1.2s,SNR=7.3						
SMLC	San Martn de	77.31	288	eP	P	12 00 16.3	-3.9
MOTA	Moosalm	77.33	10	eP	P	12 00 19.2	-0.6
	comp=Z,12nm,1.4s						
WTTA	Wattenberg	77.34	11	eP	P	12 00 19.3	-0.5
	comp=Z,18nm,1.0s,SNR=7.8						
SOKA	Soboth	77.39	13	eP	P	12 00 20.7	+0.7
	comp=Z,16nm,0.9s,SNR=10						
WATA	Walderalm	77.40	11	eP	P	12 00 20.0	-0.1
	comp=Z,7.8nm,0.8s,SNR=5.6						
RETA	Reutte	77.42	10	i P	P	12 00 19.8	-0.3
	comp=Z,9.0nm,1.3s						
KBA	Koelnbreinsper	77.45	12	eP	P	12 00 21.0	+0.5
	comp=Z,23nm,1.6s,SNR=4.2						
HERR	Herculane	77.49	19	⇑P	P	12 00 21.6	+1.2
UBR	Ueberruh	77.51	10	eP	P	12 00 21.0	+0.4
	comp=Z,14nm,0.8s,baz=193,slow=5.4						
ECH	Echery	77.65	8	P	P	12 00 20.5	-0.8
ECH				IAmb	IAmb	12 00 27.2	
	comp=Z,18nm,1.3s						
MORH	Mrgy, Hungar	77.74	16	⇑P	P	12 00 22.9	+1.1
BFO	Black Forest	77.90	8	P	P	12 00 21.1	-1.6
BFO				IAmb	IAmb	12 00 26.9	
	comp=Z,32nm,1.5s						
BFO	Black Forest	77.90	8	eP	P	12 00 22.7	-0.1
	comp=Z,7.4nm,0.9s,baz=193,slow=5.4						
BZS	Buzias	77.94	18	⇑P	P	12 00 23.7	+0.7
UREC	San Jos de Ur	77.98	286	eP	P	12 00 22.1	-1.9
RJOB	Jochberg	77.99	11	eP	P	12 00 23.2	0.0
	comp=Z,20nm,0.9s,baz=193,slow=5.4						
ARSA	Arzberg	78.04	13	eP	P	12 00 24.4	+0.9
	comp=Z,9.2nm,0.9s						
GZR	Gura Zlata	78.06	19	⇑P	P	12 00 24.4	+0.7
FUR	Furstenfeldbru	78.16	10	eP	P	12 00 24.4	+0.3
	comp=Z,16nm,0.9s,baz=193,slow=5.4						
DBBC	Dabeiba	78.17	285	eP	P	12 00 23.0	-2.1
MOA	Molln	78.36	12	eP	P	12 00 24.8	-0.5
	comp=Z,18nm,1.7s,SNR=4.4						
LOT	Lotru	78.39	19	⇑P	P	12 00 26.6	+1.0
STU	Stuttgart	78.45	9	P	P	12 00 25.4	-0.3
STU				IAmb	IAmb	12 00 30.7	
	comp=Z,20nm,0.9s						
STU	Stuttgart	78.45	9	eP	P	12 00 25.8	+0.1
	comp=Z,14nm,0.9s,baz=193,slow=5.4						
ICOR	Ion Corvin	78.47	23	⇑P	P	12 00 26.6	+0.7
ARR	Arges	78.58	20	⇑P	P	12 00 27.7	+1.1
CONA	Conrad Observa	78.75	13	eP	P	12 00 28.6	+1.1
	comp=Z,8.6nm,0.8s,SNR=7.7						
VOIR		78.76	20	⇑P	P	12 00 27.9	+0.3
WLF	Walferdange	78.97	7	dP	P	12 00 28.8	+0.3
WLF	Walferdange	78.97	7	eP	P	12 00 28.5	-0.1
	baz=193,slow=5.4						
MLR	Muntele Rosu	79.09	21	LR	LR	12 35 41.2	
	comp=Z,55nm,18.0s,baz=170,slow=36						
MLR	Muntele Rosu	79.09	21	⇓P	P	12 00 30.5	+1.0
MLR	Muntele Rosu	79.09	21	P	P	12 00 29.4	-0.1
GERES	GERESS Array B	79.22	12	P	P	12 00 30.0	-0.1
	comp=Z,1.1nm,0.7s,baz=174,slow=4.0,SNR=8.5						
GERES				LR	LR	12 33 37.8	
	comp=Z,88nm,21.3s,baz=236,slow=34						
GERES	GERESS Array B	79.22	12	P	P	12 00 27.4	-2.6
CKRC	Cesky Krumlov	79.31	12	eP	P	12 00 30.2	-0.2
CKRC				epP	sP	12 00 35.0	+2.1
DRGR		79.32	18	⇑P	P	12 00 30.8	+0.2
TPGR	Topolog	79.33	23	⇑P	P	12 00 31.6	+0.9
DOPR	Dopca	79.34	20	⇓P	P	12 00 31.8	+1.0
WET	Wettzell	79.37	11	eP	P	12 00 30.8	+0.1
	comp=Z,6.4nm,1.0s,baz=193,slow=5.4						
MODS	Modra-Piesok	79.47	14	eP	P	12 00 31.1	-0.3
KHC	Kasperske Hory	79.47	12	eP	P	12 00 30.0	-1.4
KHC				ex	x	12 00 46.6	
WSAR	Wadi Sarin	79.57	56	LR	LR	12 35 17.2	
	comp=Z,161nm,20.0s,baz=232,slow=35						
OZUR		79.58	21	⇑P	P	12 00 32.1	0.0
GRFO	Grafenberg	79.63	10	P	P	12 00 32.0	-0.2
BCLA	Clavier	79.63	6	dP	P	12 00 30.5	-1.6
GRA1	Grafenberg Arr	79.63	10	P	P	12 00 32.1	-0.1
GRA1				IAmb	IAmb	12 00 33.5	
	comp=Z,26nm,1.0s						
GRF	Grafenberg Arr	79.63	10	eP	P	12 00 32.2	0.0
	comp=Z,17nm,0.9s,baz=193,slow=5.4						
PSZ	Piszkesteto	79.64	16	⇑P	P	12 00 33.0	+0.7
PSZ	Piszkesteto	79.64	16	P	P	12 00 31.9	-0.5
PSZ				IAmb	IAmb	12 00 38.4	
	comp=Z,22nm,1.1s						
VRI	Vrincioaia	79.67	21	⇑P	P	12 00 31.1	-1.4
ROTZ	Rotzenmuhle	79.86	11	eP	P	12 00 33.4	0.0
	comp=Z,9.5nm,1.0s,baz=193,slow=5.4						
VYHS	Vyhne	79.93	15	eP	P	12 00 34.6	+0.8
KRUC	Moravsky	79.94	13	eP	P	12 00 34.3	+0.4
JAVC	Velka Javorina	80.02	14	eP	P	12 00 34.7	+0.4
ARCR	ARCALIA	80.05	19	⇑P	P	12 00 35.1	+0.5
MANZ	Manzenberg	80.06	10	eP	P	12 00 34.4	-0.1
	comp=Z,6.2nm,1.0s,baz=193,slow=5.4						
PBCC	Pribram	80.08	12	eP	P	12 00 34.7	+0.1
PBCC				ex	x	12 00 38.9	
GEVA	Gevas	80.18	36	P	P	12 00 34.6	-1.1
VRAC	Vranov	80.22	13	LR	LR	12 34 53.6	

	comp=Z,91nm,18.6s,baz=222,slow=35						
VRAC	Vranov	80.22	13	eP	P	12 00 34.6	-0.8
WERN	Wernitzgruen	80.39	11	eP	P	12 00 36.4	0.0
	comp=Z,6.9nm,1.1s,baz=193,slow=5.4						
BIZ	Bicaz	80.44	20	⇑P	P	12 00 38.4	+1.8
GUNZ	Gunzen	80.46	10	eP	P	12 00 37.2	+0.5
	comp=Z,3.2nm,0.9s,baz=193,slow=5.4						
PRU	Pruhonice	80.47	12	eP	P	12 00 36.0	-0.7
TANN	Tannenbergstha	80.53	11	eP	P	12 00 37.7	+0.6
	comp=Z,2.5nm,0.9s,baz=193,slow=5.4						
WERD	Werda	80.53	10	eP	P	12 00 38.0	+0.9
	baz=193,slow=5.4						
KASTN	Kahler Asten	80.73	8	eP	P	12 00 38.3	+0.2
	baz=193,slow=5.4						
BURAR	Bucovina Array	80.78	19	⇑P	P	12 00 39.8	+1.2
BURAR	Bucovina Array	80.78	19	P	P	12 00 38.2	-0.3
BUR08	Bucovina Ar. S	80.80	19	P	P	12 00 39.1	+0.5
BUG	Bochum--Univer	80.84	7	eP	P	12 00 38.4	-0.2
	comp=Z,5.7nm,0.8s,baz=193,slow=5.4						
MORC	Moravsky Berou	80.86	14	⇓P	P	12 00 39.0	+0.2
MORC	Moravsky Berou	80.86	14	eP	P	12 00 38.4	-0.4
MORC	Moravsky Berou	80.86	14	P	P	12 00 38.5	-0.4
CRVS	Cervenica-Dubn	80.94	17	eP	P	12 00 40.3	+1.0
KRLC	Kraliky	80.98	13	eP	P	12 00 39.3	-0.2
KRLC				epP	PcP	12 00 44.7	-1.2
DPC	Dobruska-Polom	81.15	13	eP	P	12 00 39.7	-0.7
KOLS	Kolonicke sedl	81.17	17	eP	P	12 00 43.4	+2.9
BRG	Berggiesshubel	81.22	11	eP	P	12 00 40.6	0.0
BRG				Amp		12 00 46.8	
	comp=Z,5.4nm,1.1s						
BRG	Berggiesshubel	81.22	11	eP	P	12 00 40.7	0.0
	comp=Z,2.7nm,0.9s,baz=193,slow=5.4						
UPC	Upice	81.24	13	eP	P	12 00 41.1	+0.3
UPC				epP	sP	12 00 44.9	+1.6
GTTG	Gottingen	81.27	9	eP	P	12 00 41.1	+0.2
	comp=Z,9.0nm,0.9s,baz=193,slow=5.4						
OSTC	Ostas	81.33	13	eP	P	12 00 41.3	0.0
OSTC				epP	PcP	12 00 45.9	-1.5
CLL	Collm	81.48	11	eP	P	12 00 42.0	0.0
	comp=Z,37nm,1.9s						
CLL				eS	S	12 11 00.0	+6.7
CLL				eSS	SS	12 16 15.0	+4.3
CLL				eSSSS		12 22 00.0	
SORM	Soroca	82.20	21	⇑P	P	12 00 46.3	+0.5
NRDL	Niedersach Rie	82.21	9	eP	P	12 00 46.0	+0.3
	comp=Z,8.2nm,0.9s,baz=193,slow=5.4						
BSEG	Bad Segeberg	83.65	8	eP	P	12 00 53.7	+0.5
	comp=Z,13nm,1.0s,baz=193,slow=5.4						
KBZ	Khabaz	84.24	32	P	P	12 00 57.8	+1.2
	comp=Z,5.8nm,1.0s,baz=235,slow=6.6,SNR=9.2						
AKASG	Malin Array Be	84.73	20	P	P	12 00 59.2	+0.3
	comp=Z,3.9nm,0.7s,baz=212,slow=5.0,SNR=15						
AKASG				LR	LR	12 39 54.7	
	comp=Z,14nm,19.7s,baz=15,slow=36						
AKASG	Malin Array Be	84.73	20	P	P	12 00 57.6	-1.2
AKBB	Malin Array Si	84.73	20	P	P	12 00 57.9	-0.9
SUW	Suwalki	86.07	16	P	P	12 01 05.0	-0.5
MNK	Minsk	87.70	18	i P	P	12 01 14.0	+0.6
	comp=E,3.0nm,0.9s						
MNK				i P	P	12 01 14.0	+0.6
	comp=N,15nm,0.9s						
MNK				i P	P	12 01 14.0	+0.6
	comp=Z,6.0nm,0.9s						
MNK				i PP	PP	12 04 41.0	+1.7
MNK				i PPP	PPP	12 06 34.2	
MNK				i ScS	S	12 12 02.7	+7.5
MNK				i SS	SS	12 17 33.2	-9.2
MNK				i SSS	SSS	12 21 46.5	
MNK				i LQ	LQ	12 35 32.3	
MNK				i LR	LR	12 38 25.9	
MNK				i LRM	MLR	12 43 16.1	
	comp=N,106nm,18.8s						
MNK				i LRM	MLR	12 43 18.3	
	comp=Z,109nm,18.9s						
MNK				i LRM	MLR	12 43 27.0	
	comp=E,14nm,18.8s						
NOA	NORSAR Array B	90.70	7	P	P	12 01 29.3	+1.9
	comp=E,2.2nm,1.0s,baz=213,slow=6.9,SNR=3.4						
NOA				LR	LR	12 40 51.2	
	comp=E,102nm,20.9s,baz=205,slow=35						
FINES	FINESS Array B	93.49	14	P	P	12 01 41.5	+1.2
	comp=E,6.6nm,0.9s,baz=176,slow=29,SNR=3.9						
FINES				LR	LR	12 42 22.1	
	comp=E,45nm,22.0s,baz=262,slow=35						
MKAR	Makanchi Array	108.19	46	PKKPbc	PKKPbc	12 18 03.9	-1.6
	comp=E,0.3nm,0.7s,baz=58,slow=4.5,SNR=4.5						
MKAR				PKKPab	PKKPab	12 18 16.6	+0.4
	comp=E,0.7nm,0.8s,baz=61,slow=5.3,SNR=7.2						
WMQ	Urumqi	110.61	51	ePKP	PKiKP	12 06 57.8	0.0
TXAR	Lajitas Array	111.45	292	PKiKP	PKiKP	12 06 59.9	0.0
	comp=E,0.2nm,0.8s,baz=101,slow=1.3,SNR=3.5						
ZALV	Zalesovo Beam	112.29	40	PKKPbc	PKKPbc	12 17 51.7	-0.5
	comp=E,0.5nm,0.5s,baz=270,slow=0.3,SNR=3.5						
ASAR	Alice Springs	113.63	138	PKKPbc	PKKPbc	12 17 46.7	-0.4
	comp=E,0.4nm,0.6s,baz=49,slow=2.8,SNR=9.6						
WRA	Warramunga Arr	116.72	135	PKP	PKPdf	12 07 09.5	-0.7
	comp=E,0.3nm,0.7s,baz=242,slow=1.9,SNR=4.4						
CD2	Chengdu	118.41	69	ePKP	PKPdf	12 07 12.3	-0.8
LZH	Lanzhou	120.01	63	ePKP	PKPdf	12 07 12.3	-3.9
PDAR	Pinedale Array	120.11	305	PKP	PKPdf	12 07 15.0	-1.3
	comp=E,0.6nm,0.8s,baz=124,slow=4.7,SNR=5.5						
CTA	Charters Tower	123.21	146	PKP	PKiKP	12 07 23.4	+0.4
	comp=E,1.5nm,0.7s,baz=180,slow=1.0,SNR=1.7						
SONM	Songino Array	124.23	50	PKP	PKPdf	12 07 23.7	-0.1
	comp=E,0.7nm,0.8s,baz=218,slow=4.1,SNR=7.8						
SONM	Songino Array	124.23	50	PKPdf	PKPdf	12 07 22.7	-1.2
YKA	Yellowknife Ar	124.94	328	PKP	PKPdf	12 07 23.9	-0.7
	comp=E,2.1nm,0.7s,baz=84,slow=2.2,SNR=25						
ISA	Isabella, Lake	125.27	295		PKPdf	12 07 26.1	-0.1
NVAR	Mina Array Bea	125.72	298	PKP	PKPdf	12 07 27.0	-0.1
	comp=E,0.9nm,0.7s,baz=176,slow=2.3,SNR=6.0						
NVAR	Mina Array Bea	125.72	298	PKPdf	PKPdf	12 07 27.2	0.0
BMO	Blue Mountains	126.00	306	PKPdf	PKPdf	12 07 26.5	-0.9
WVOR	Wild Horse Val	126.64	303		PKiKP	12 07 29.4	+0.3
HHC	Hu-ho-hao-te	126.94	59	ePKP	PKiKP	12 07 31.0	+1.2
B08A	Colville Reser	127.70	310	PKPdf	PKPdf	12 07 29.9	-0.4
INK	Inuvik	131.09	338	PKPdf	PKPdf	12 07 36.0	-0.1
NJ2	Nanjing	131.13	71	ePKP	PKPdf	12 07 36.8	-0.5
EPYK	Eagle Plains	133.09	336		PKPdf	12 07 40.1	0.0
BMAR	Burnt Mountain	135.09	340		PKPdf	12 07 42.9	-0.9
TOLK	Toolik Lake Re	135.69	343	PKPdf	PKPdf	12 07 45.4	+0.5
BCAR	Beaver Creek A	136.63	334		PKPdf	12 07 46.7	-0.1
ILAR	Eielson Array	137.49	338	PKhKP	PKPpre	12 07 37.3	
	comp=E,0.4nm,0.6s,baz=8.9,slow=2.7,SNR=8.2						
ILAR				PKP	PKPdf	12 07 47.9	-0.4
	comp=E,1.6nm,0.8s,baz=355,slow=2.9,SNR=12						
ILAR	Eielson Array	137.49	338		PKPdf	12 07 48.0	-0.2
MA2	Magadan	145.03	22		PKPdf	12 08 01.8	-0.2
MAT	Matsushiro	147.48	67	PKP	PKPbc	12 08 09.3	-0.1
MJAR	Matsushiro Arr	147.48	67	PKPbc	PKPbc	12 08 09.6	+0.1
	comp=E,8.2nm,1.0s,baz=282,slow=1.8,SNR=14						
PETK	Petropavlovsk-	152.50	24	PKPbc	PKiKP	12 08 21.4	0.0
	comp=E,4.2nm,0.6s,baz=75,slow=3.2,SNR=8.6						

IDC ***22*** *11:54:55.7±2.3, 36.°39N×141.°30E, h0^{km}, mb3.6/5, mb1 3.7/6, mb1mx3.4/40, mbtmp3.5/6, ML2.8/1, Error ellipse: s-maj=69.5km s-min=22.0km az=59.0*

JMA ***22*** *11:55:01.0±0.1, 36.°36N×141.°03E, h43^{km}±2^{km}, M3.5*

JMA Felt I J1.

ISC 22 11:54:59.7±1.8**, 36.°36N**±0.°04×**141.°13E**±0.°08**, h24**^{km}±12^{km}**, n23,** σ**0^{s}72**/26**, mb3.5**/5**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHYU	Hitachinakayam	0.44	267	P	Pn	11 55 10.2	-0.3
JHYU				S	Sb	11 55 16.0	+0.9
JHO	Hitachi	0.52	299	P	Pn	11 55 11.0	-0.6
JHO				S	Sb	11 55 17.6	+0.3
JIHU	Itakohorinouch	0.63	231	P	Pn	11 55 13.3	+0.2
JIHU				S	Sn	11 55 21.8	-0.6
CHOJ	Chosi	0.69	199	P	Pn	11 55 13.6	-0.4
JYT	Yasato	0.77	260	P	Pb	11 55 14.3	-0.1
JYT				S	Sb	11 55 23.3	-1.1
ONAJ	Iwakimizuishiy	0.78	340	P	Pn	11 55 15.0	-0.3
ONAJ				S	Sb	11 55 24.4	-0.6
JSMT	Sammumatsuo	0.91	218	P	Pn	11 55 17.0	+0.1
JSMT				S	Sn	11 55 28.8	-0.4
JFK	Kawauchi	1.02	348	P	Pn	11 55 18.4	-0.2
JFT	Otama	1.32	331	P	Pb	11 55 23.8	0.0
JFT				S	Sn	11 55 39.5	+0.1
JAG	Ashikaga	1.35	273	P	Pn	11 55 22.8	-0.3
JAG				S	Sn	11 55 38.1	-2.2
MJAR	Matsushiro Arr	2.36	275	Pn	Pn	11 55 37.4	+0.4
	2.2nm,0.3s,baz=110,slow=8.9,SNR=172						
MAT	Matsushiro	2.36	275	P	Pn	11 55 37.9	+0.9
MAT				S	Sn	11 56 06.3	+1.0
SONM	Songino Array	27.98	305	P	P	12 00 48.7	+0.2
	0.4nm,0.7s,baz=110,slow=8.3,SNR=3.7						
H11N2	WAKE ISLAND Hy	28.01	119	T	T	12 30 09.3	
	baz=312,SNR=4.9						
H11N1	WAKE ISLAND Hy	28.02	119	T	T	12 30 02.2	
	baz=312						
H11N3	WAKE ISLAND Hy	28.03	119	T	T	12 30 07.3	
	baz=312						
H11S1	WAKE ISLAND Hy	28.70	121	T	T	12 31 02.1	
	baz=313,slow=74,SNR=13						
H11S3	WAKE ISLAND Hy	28.70	122	T	T	12 31 02.7	
	baz=313,slow=74,SNR=9.0						
H11S2	WAKE ISLAND Hy	28.71	121	T	T	12 31 02.9	
	baz=313,SNR=6.9						
MKAR	Makanchi Array	44.28	303	P	P	12 03 07.6	+0.2
	0.6nm,0.9s,baz=75,slow=6.7,SNR=6.0						
KURBB	Kurchatov Arra	46.24	308	P	P	12 03 23.3	+0.6
	1.0nm,0.6s,baz=83,slow=7.6,SNR=21						
WRA	Warramunga Arr	56.37	188	P	P	12 04 38.9	-0.1
	0.3nm,0.4s,baz=5.6,slow=7.5,SNR=9.9						
ASAR	Alice Springs	60.09	188	P	P	12 05 05.2	+0.2
	0.3nm,0.7s,baz=16,slow=7.4,SNR=3.7						

IDC ***22*** *12:17:19.0±2.3, 1.°90S×139.°99E, h0^{km}, mb3.8/4, mb1 4.3/6, mb1mx3.7/52, mbtmp4.1/6, ML4.5/2, Error ellipse: s-maj=70.6km s-min=22.1km az=95.0*

ISC 22 12:17:24.3±2.3**, 2.°0S**±0.°2×**140.°0E**±0.°4**, h35**^{km}**, n9,** σ**1^{s}17**/6**, mb3.7**/4**, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	18.14	243	P	Pn	12 21 34.5	+0.9
	5.8nm,0.3s,baz=61,slow=7.5,SNR=4.1						
WRA	Warramunga Arr	18.67	197	P	Pn	12 21 40.0	0.0
	1.0nm,0.3s,baz=20,slow=11,SNR=30						
FITZ	Fitzroy Crossi	21.30	220	P	P	12 22 06.5	-1.6
	2.2nm,0.8s,baz=32,slow=9.5,SNR=4.7						
ASAR	Alice Springs	22.33	195	P	P	12 22 20.0	+0.8
	4.7nm,0.7s,baz=24,slow=11,SNR=31						
H11S3	WAKE ISLAND Hy	33.25	51	T	T	12 59 44.5	
	baz=236,slow=75,SNR=43						
H11S2	WAKE ISLAND Hy	33.26	51	T	T	12 59 44.7	
	baz=236,slow=75,SNR=38						
H11S1	WAKE ISLAND Hy	33.27	51	T	T	12 59 44.7	
	baz=236,slow=75,SNR=32						
MKAR	Makanchi Array	70.00	322	P	P	12 28 32.2	-0.3
	0.5nm,0.6s,baz=114,slow=7.9,SNR=7.3						
ZALV	Zalesovo Beam	71.95	329	P	P	12 28 44.3	+0.2
	0.4nm,0.4s,baz=123,slow=7.1,SNR=2.2						

DJA ***22*** *12:19:31.3±1.1, 1°N±3°×12°6E±°, h19^{km}±9^{km}, M4.7/13, mB5.3/4, mb4.8/13, MLv4.6/10, Mw(mB)4.7/4*

NEIC ***22*** *12:19:32.6±1.4, 0.°79N±0.°10×126.°26E±0.°06, h37^{km}±7^{km}, mb4.7/27, Error ellipse: s-maj=13.9km s-min=9.4km az=174.0*

IDC ***22*** *12:19:33.0±5.3, 0.°73N×126.°14E, h33^{km}±42^{km}, mb4.3/31, mb1 4.3/34, mb1mx4.2/58, mbtmp4.4/34, ML4.2/3, MS3.5/4, Ms1 3.5/4, ms1mx3.0/49, Error ellipse: s-maj=17.5km s-min=12.3km az=90.0*

ISC 22 12:19:33.5±0.4**, 0.°78N**±0.°05×**126.°29E**±0.°06**, h39**^{km}**, n117,** σ**1^{s}23**/115**, mb4.6**/51**, 2C-1D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.08	91		Pn	12 19 51.2	-1.0
TNTI	Ternate	1.08	91	P	Pn	12 19 51.1	-1.1
TNTI				S	Sn	12 20 06.6	+0.7
KMSI	Cibinong	2.31	265	P	Pn	12 20 07.7	-1.4
SANI	Sanana	2.83	186	P	Pn	12 20 15.9	-0.3
GTOI	Gorontalo	3.28	267	P	Pn	12 20 22.6	+0.2
LUWI	Luwuk	3.95	243	Pn	Pn	12 20 30.6	-1.1
LUWI	Luwuk	3.95	243	P	Pn	12 20 32.7	+1.0
MRSI	Marisa	4.36	266	P	Pn	12 20 37.4	+0.2
APSI	Ampana	4.93	250	P	Pn	12 20 46.1	+0.9
SIJI	Sorong	5.24	108	Pn	Pn	12 20 51.0	+1.5
	1.9nm,0.3s,baz=170,slow=20,SNR=5.0						
SIJI				LR	LR	12 23 19.1	
	comp=Z,842nm,18.1s,baz=316,slow=42						
DDMP	Don Marcelino,	5.32	354	eP	Pn	12 20 51.3	+0.9
TOLI2	Tolitoli	5.51	273	Pn	Pn	12 20 51.1	-2.0
SKMP	Bagumbayan, Su	5.96	343	eP	Pn	12 20 57.7	-1.5
SKMP				eS	Sn	12 22 05.2	-1.0
MATI	Mati	6.12	360	eP	Pn	12 21 10.3	+8.8
KCP	Kidapawan	6.30	349	⇑eP	Pn	12 21 08.4	+4.4
BUKP	Musuan	7.15	350	eP	Pn	12 21 25.6	+10
TTSI	Tana Toraja	7.50	240	P	Pn	12 21 20.4	0.0
	0.3nm982nm95nm,0.6s						
BNSI	Bone	8.04	230	P	Pn	12 21 29.6	+1.8
	38nm,0.9s						
SPSI	Sidrap Palu	8.04	234	P	Pn	12 21 29.5	+1.6
BKSI	Bulukumba	8.64	225	P	Pn	12 21 37.7	+1.6
	783nm43nm,0.5s						
KAPI	Kappang	8.70	229	Pn	Pn	12 21 38.4	+1.4
	6.7nm,0.3s,baz=123,slow=6.0,SNR=24						
KAPI	Kappang	8.70	229		Pn	12 21 37.0	0.0
BATI	Baumata	11.22	193	LR	LR	12 26 09.5	
	comp=Z,91nm,21.5s,baz=320,slow=36						
FITZ	Fitzroy Crossi	18.77	182	P	P	12 23 49.6	+0.1
	0.3nm,0.3s,baz=6.2,slow=11,SNR=4.9						
LEM	Lembang	20.10	248	P	P	12 24 03.8	-0.5
	6.5nm,0.3s,baz=145,slow=23,SNR=4.1						
LEM				LR	LR	12 32 15.7	
	comp=Z,123nm,21.2s,baz=76,slow=38						
WB0	Warramunga Arr	21.92	159	P	P	12 24 21.9	-1.7
WB0				IAmb	IAmb	12 24 34.0	
	comp=Z,30nm,1.0s						
WRAB	Tennant Creek	22.05	159	P	P	12 24 24.4	-0.7
WRAB				IAmb	IAmb	12 24 33.3	
	comp=Z,22nm,0.7s						
WRA	Warramunga Arr	22.06	159	P	P	12 24 23.6	-1.5
	comp=Z,16nm,0.6s,baz=339,slow=11,SNR=47						
WRA	Warramunga Arr	22.06	159	P	P	12 24 24.2	-1.0
WB2	Warramunga Arr	22.06	159	P	P	12 24 24.5	-0.8
WB2				IAmb	IAmb	12 24 36.2	
	comp=Z,21nm,0.8s						
WR0	Warramunga Arr	22.15	159	P	P	12 24 24.9	-1.2
WR0				IAmb	IAmb	12 24 34.9	
	comp=Z,16nm,0.8s						
TPUB	Ta-pu	23.05	347	P	P	12 24 35.3	-0.3
TPUB				IAmb	IAmb	12 24 39.0	
	comp=Z,35nm,0.9s						
UBPT	Khong Chiam	25.10	306	P	P	12 24 55.1	+0.3
	comp=Z,4.3nm,0.5s						
AS31	Alice Springs	25.41	164	P	P	12 24 58.0	+0.5
ASAR	Alice Springs	25.41	164	P	P	12 24 58.6	+1.0
	comp=Z,9.5nm,0.6s,baz=345,slow=12,SNR=38						
ASAR	Alice Springs	25.41	164	P	P	12 24 58.0	+0.4
PDSI	Padang	25.88	266	P	P	12 25 02.8	+0.8
	comp=Z,16nm,1.0s						
JOW	Kunigami	25.97	4	P	P	12 25 04.7	+2.1
	comp=Z,42nm,0.9s,baz=132,slow=12,SNR=3.3						
KHON	Khomkaen	27.82	305	P	P	12 25 19.7	+0.3
	comp=Z,2µmcomp=Z,30nm,0.8s						
NONG	Nongkai	28.49	308	P	P	12 25 24.4	-1.0
	comp=Z,9.3nm,0.9s						
SUKH	Sukhothai	31.03	304	P	P	12 25 48.1	+0.2
	comp=Z,12nm,0.7s						
FORT	Forrest	31.43	177	P	P	12 25 50.8	-0.4
CMAR	Chiang Mai Arr	32.08	305	P	P	12 25 56.6	-0.5
	comp=Z,0.9nm,0.3s,baz=138,slow=8.4,SNR=6.0						
CM34	Chiang Mai Arr	32.11	306	P	P	12 25 59.0	+1.6
CMMT	Chiang Mai	32.25	305	P	P	12 25 58.9	+0.3
	comp=Z,2.4nm,0.8s						
CM33	Chiang Mai Arr	32.26	305	P	P	12 25 58.0	-0.7
BBOO	Buckleboo	34.66	165	P	P	12 26 17.6	-1.9
STKA	Stephens Creek	35.57	157	P	P	12 26 26.8	-0.5
	comp=Z,12nm,0.7s,baz=330,slow=8.4,SNR=25						
STKA	Stephens Creek	35.57	157	P	P	12 26 27.1	-0.2
KSRS	Korea Array	36.52	2	P	P	12 26 37.0	+1.7
	comp=Z,2.9nm,0.6s,baz=180,slow=10.0,SNR=15						
CD2	Chengdu	36.80	327	P	P	12 26 37.9	+0.1
MJAR	Matsushiro Arr	37.26	16	P	P	12 26 40.9	-0.7
	comp=Z,3.4nm,0.7s,baz=191,slow=9.4,SNR=10						
SHL	Shillong	41.32	309	P	P	12 27 15.2	-0.8
SHL				IAmb	IAmb	12 27 17.5	
	comp=Z,9.6nm,0.7s						
USRK	Ussuriysk Ar.	43.53	6	P	P	12 27 34.0	+0.6
	comp=Z,5.9nm,0.7s,baz=186,slow=7.0,SNR=14						
USRK	Ussuriysk Ar.	43.53	6	P	P	12 27 33.0	-0.3
GTA	Gaotai	45.41	331	eP	P	12 27 47.9	-0.8
GTA				pP	pP	12 27 52.3	-7.2
GTA				sP	sP	12 27 55.1	-8.6
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ASAJ	Asahikawa	45.52	16	P	P	12 27 50.9	+1.6
	comp=Z,5.5nm,0.8s,baz=229,slow=8.9,SNR=5.8						
PALK	Pallekele	45.90	279	P	P	12 27 53.3	+0.5
	comp=Z,3.0nm,0.6s,baz=172,slow=18,SNR=3.0						
KLR	Kul'dur	48.49	5	P	P	12 28 13.0	+0.6
	comp=Z,2.0nm,0.6s,baz=214,slow=4.7,SNR=8.9						
ULN	Ulaanbaatar	49.78	343	P	P	12 28 22.6	+0.2
ULN				IAmb	IAmb	12 28 25.4	
	comp=Z,3.9nm,0.6s						
SONM	Songino Array	49.95	343	P	P	12 28 23.9	+0.2
	comp=Z,1.8nm,0.6s,baz=163,slow=8.0,SNR=9.3						
SONM				PcP	PcP	12 29 44.1	+0.6
	comp=Z,0.3nm,0.4s,baz=163,slow=3.9,SNR=3.6						
SONM	Songino Array	49.95	343	P	P	12 28 23.7	+0.1
TLY	Talaya	54.18	343	P	P	12 28 56.7	+1.7
	baz=202,slow=11						
PETK	Petropavlovsk-	58.31	22	P	P	12 29 26.7	+2.3
	comp=Z,4.1nm,0.8s,baz=180,slow=4.3,SNR=11						
PETK	Petropavlovsk-	58.31	22	P	P	12 29 24.1	-0.4
ZSN	Zaisan	58.74	328	eP	P	12 29 25.8	-1.8
	baz=328						
SHLS	Shalkode	59.34	322	eP	P	12 29 28.3	-3.6
	baz=322						
MK31	Makanchi Array	59.73	326	P	P	12 29 32.9	-1.6
MK31				IAmb	IAmb	12 29 35.2	
	comp=Z,4.0nm,0.8s						
MKAR	Makanchi Array	59.73	326	P	P	12 29 32.7	-1.7
	comp=Z,5.7nm,0.3s,baz=121,slow=7.6,SNR=116						
MKAR				PcP	PcP	12 30 21.7	+0.7
	comp=Z,1.0nm,0.5s,baz=121,slow=4.1,SNR=1.1						
MKAR	Makanchi Array	59.73	326	P	P	12 29 32.9	-1.5
MAKZ	Makanchi	59.91	326	P	P	12 29 34.2	-1.5
SATY	Saty	59.95	321	eP	P	12 29 34.3	-1.8
	baz=321						
KPKS	Kokpek	59.99	322	eP	P	12 29 35.2	-1.1
	comp=Z,2.3nm,0.6s,baz=321						
MDOK	Medeo	60.86	321	eP	P	12 29 40.2	-2.1
	baz=320						
YAK	Yakutsk	61.15	2	P	P	12 29 44.0	+0.3
	comp=Z,3.5nm,0.4s,baz=210,slow=1.1,SNR=5.5						
MA2	Magadan	61.65	14	P	P	12 29 47.6	+0.4
	comp=Z,4.2nm,0.7s,baz=169,slow=12,SNR=3.9						
KUU	Kurty	61.67	321	eP	P	12 29 46.3	-1.4
	comp=Z,4.7nm,0.8s,baz=321						
AAK	Ala-Archa	62.26	319	P	P	12 29 51.4	-0.4
	comp=Z,0.6nm,0.4s,baz=48,slow=4.6,SNR=3.8						
ZAA0	Zalesovo Array	63.01	334	P	P	12 29 55.5	-0.8
ZALV	Zalesovo Beam	63.01	334	P	P	12 29 55.2	-1.1
	comp=Z,2.3nm,0.4s,baz=129,slow=6.5,SNR=14						
ZALV	Zalesovo Beam	63.01	334	P	P	12 29 54.3	-2.0
BTLS	Baital	63.66	321	eP	P	12 29 59.5	-1.4
	baz=321						
KURBB	Kurchatov Arra	63.98	328	P	P	12 30 01.5	-1.4
	comp=Z,8.0nm,0.6s,baz=131,slow=6.1,SNR=43						
KURK	Kurchatov	63.99	328	P	P	12 30 01.8	-1.2
SEY	Seymchan	64.98	13	P	P	12 30 09.4	+0.3
	comp=Z,1.5nm,1.0s,baz=37,slow=20,SNR=2.5						
IUG	Iuzhnay	65.03	317	eP	P	12 30 09.6	-0.5
	baz=317						
KK31	Karatay Array	65.09	318	P	P	12 30 09.3	-1.1
KKAR	Karatay Array	65.09	318	P	P	12 30 09.8	-0.6
KKAR	Karatay Array	65.09	318	P	P	12 30 09.5	-0.8
BRZS	Berezniki	66.84	326	eP	P	12 30 19.4	-2.0
	baz=326						
BVAR	Borovoye Array	69.55	328	P	P	12 30 38.4	+0.1
	comp=Z,2.0nm,0.5s,baz=108,slow=9.0,SNR=19						
BRVK	Borovoye	69.62	328	P	P	12 30 36.8	-1.9
BRVK				IAmb	IAmb	12 30 47.7	
	comp=Z,4.6nm,0.8s						
TIXI	Tiksi	70.78	1	P	P	12 30 45.3	-0.1
TIXI				IAmb	IAmb	12 30 47.9	
	comp=Z,4.8nm,1.1s						
ABKAR	Akbulak array	74.15	321	P	P	12 31 05.0	-1.0
ABKAR	Akbulak array	74.15	321	P	P	12 31 04.7	-1.3
AKTO	Aktyubinsk	75.69	322	P	P	12 31 15.1	+0.2
	comp=Z,4.6nm,0.6s,baz=98,slow=7.8,SNR=12						
ARU	Arti	77.18	328	P	P	12 31 22.2	-1.0
	comp=Z,1.1nm,0.3s,baz=112,slow=2.4,SNR=12						
ARU	Arti	77.18	328	P	P	12 31 22.2	-1.0
ARU				IAmb	IAmb	12 31 25.2	
	comp=Z,6.7nm,0.7s						
KIRV	Kirov	82.50	329	P	P	12 31 51.2	-0.7
	comp=Z,9.5nm,0.7s,baz=135,slow=1.4,SNR=2.2						
GEVA	Gevas	84.19	308	P	P	12 32 00.7	-0.7
KBZ	Khabaz	84.67	314	P	P	12 32 02.8	-0.6
	comp=Z,1.6nm,0.6s,baz=187,slow=5.1,SNR=4.6						
IMAR	Indian Mountai	85.20	24	P	P	12 32 05.0	-0.6
ILAR	Eielson Array	87.94	25	P	P	12 32 18.2	-0.8
	comp=Z,0.2nm,0.4s,baz=252,slow=4.4,SNR=11						
KMBO	Kilima Mbogo	89.05	269	P	P	12 32 25.3	-0.4
	comp=Z,1.3nm,0.7s,baz=101,slow=7.0,SNR=3.2						
SYO	Syowa Base	89.53	201	⇓eP	P	12 32 27.0	+0.6
SYO	Syowa Base	89.53	201	⇑epP	pP	12 32 39.0	+1.3
QSPA	South Pole Qui	90.71	180	P	P	12 32 31.9	-0.2
BRTR	Keskin Array B	91.55	310	P	P	12 32 35.6	-1.1
	comp=Z,0.8nm,0.9s,baz=70,slow=6.4,SNR=3.2						
ARCES	ARCESS Array B	93.04	340	P	P	12 32 42.8	0.0
	comp=Z,3.2nm,0.8s,baz=52,slow=4.8,SNR=6.5						
INK	Inuvik	93.05	21	LR	LR	13 17 36.0	
	comp=Z,40nm,19.0s,baz=62,slow=37						
AKASG	Malin Array Be	93.88	321	P	P	12 32 48.7	+1.7
	comp=Z,0.2nm,0.2s,baz=76,slow=4.0,SNR=4.3						
FINES	FINESS Array B	94.20	332	P	P	12 32 49.6	+1.4
	comp=Z,3.9nm,0.9s,baz=122,slow=2.5,SNR=4.1						
C36M	Paulatuk	96.12	20	P	P	12 32 56.8	0.0
C36M				IAmb	IAmb	12 33 00.1	
	comp=Z,2.7nm,0.8s						
KOLS	Kolonicke sedl	98.59	320	ePDIFF	Pdif	12 33 09.8	+1.3
CRVS	Cervenica-Dubn	99.13	320	ePDIFF	Pdif	12 33 12.4	+1.5
TXAR	Lajitas Array	123.72	53	PKP	PKiKP	12 38 29.6	+1.3
	comp=Z,0.2nm,0.6s,baz=35,slow=1.6,SNR=3.7						
TXAR	Lajitas Array	123.72	53		PKPdf	12 38 27.9	-0.1

SOME ***22*** *12:43:33.5, 44.°23N×85.°55E, h10^{km}*

IDC ***22*** *12:43:35.9±3.9, 44.°46N×85.°49E, h0^{km}, mb3.7/2, mb1 3.6/5, mb1mx3.3/37, mbtmp3.6/5, ML2.8/4, Error ellipse: s-maj=54.4km s-min=31.8km az=14.0*

NNC ***22*** *12:43:35.2±1.9, 44.°11N×85.°60E, h15^{km}±9^{km}, mb3.8, mpv3.5, Error ellipse: s-maj=13.5km s-min=8.4km az=113.0*

ISC 22 12:43:31.5±1.4**, 43.°96N**±0.°06×**85.°62E**±0.°07**, h10**^{km}**, n41,** σ**1^{s}86**/58**, 8C-9D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZSN	Zaisan	3.53	352	eP	Pb	12 44 33.6	-0.4
	4.0nm,0.2s						
ZSN				eS	Sb	12 45 17.2	+0.2
	58nm,0.8s						
ZSN	Zaisan	3.53	352	Pg	Pb	12 44 33.6	-0.4
	4.0nm,0.2s						
ZSN				Lg	Lg	12 45 17.2	
	58nm,0.8s						
MK31	Makanchi Array	3.68	322	⇓Pn	Pn	12 44 30.0	+1.5
	1.0nm,0.6s,baz=135,slow=13,SNR=212						
MK31				⇑Pg	Pb	12 44 40.3	+3.8
	3.5nm,0.3s,baz=132,slow=16,SNR=44						
MK31				⇓Lg	Lg	12 45 27.0	
	12nm,0.3s,baz=131,slow=26,SNR=8.9						
MKAR	Makanchi Array	3.68	322	Pn	Pn	12 44 30.2	+1.8
	0.5nm,0.3s,baz=138,slow=15,SNR=25						
MKAR				Pg	Pb	12 44 36.4	-0.2
	1.5nm,0.3s,baz=132,slow=15,SNR=13						
MKAR				Lg	Lg	12 45 24.6	
	8.2nm,0.3s,baz=129,slow=27,SNR=9.8						
MAKZ	Makanchi	3.83	319	⇑Pn	Pn	12 44 32.4	+1.8
	1.2nm,0.6s						
MAKZ				⇓Pg	Pg	12 44 43.3	-1.6
	5.3nm,0.6s						
MAKZ				⇓Lg	Lg	12 45 34.4	
	33nm,0.7s						
KTMS	Ketmen	3.85	264	eP	Pg	12 44 43.3	-2.0
	0.2nm,0.1s						
KTMS				eS	Sg	12 45 33.9	-1.3
	18nm,0.2s						
KTMS	Ketmen	3.85	264	Pg	Pg	12 44 43.5	-1.8
	0.2nm,0.1s						
KTMS				Lg	Lg	12 45 34.0	
	18nm,0.2s						
DJR	Jarkent	4.21	277	eP	Pg	12 44 50.3	-1.8

	13nm,0.6s						
DJR				eS	Sg	12 45 46.0	-0.7
	26nm,0.5s						
DJR	Jarkent	4.21	277	Pg	Pg	12 44 50.3	-1.8
	13nm,0.6s						
DJR				Lg	Lg	12 45 46.0	
	26nm,0.5s						
PDGK	Podgornoye	4.49	264	Pg	Pg	12 44 57.4	-0.2
	3.2nm,0.6s						
PDGK				Lg	Lg	12 45 57.8	
	13nm,0.6s						
PDGK	Podgornoye	4.49	264	⇓Pn	Pn	12 44 43.2	+3.5
	1.4nm,0.5s						
PDGK				⇑Pg	Pg	12 44 57.8	+0.3
	5.3nm,0.6s						
PDGK				⇑Lg	Lg	12 45 56.6	
	19nm,0.5s						
SHLS	Shalkode	4.55	262	eP	Pb	12 44 50.1	-1.3
	7.2nm,0.4s						
SHLS				eS	Sb	12 45 45.3	-1.0
	81nm,0.7s						
SHLS	Shalkode	4.55	262	Pg	Pb	12 44 50.1	-1.3
	7.2nm,0.4s						
SHLS				Lg	Lg	12 45 45.3	
	81nm,0.7s						
UZB	Uzynbulak	4.86	263	eP	Pg	12 45 02.5	-2.1
	5.5nm,0.2s						
UZB				eS	Sg	12 46 06.6	-1.0
	18nm,0.9s						
UZB	Uzynbulak	4.86	263	Pg	Pg	12 45 02.5	-2.1
	5.5nm,0.2s						
UZB				Lg	Lg	12 46 06.6	
	18nm,0.9s						
KPKS	Kokpek	5.05	267	eP	Pg	12 45 06.3	-2.0
	5.6nm,0.3s						
KPKS				eS	Sg	12 46 13.3	-0.3
	992nm,0.3s						
MNBS	Baschi	5.21	274	eP	Pg	12 45 08.0	-3.2
	2.9nm,0.3s						
MNBS				eS	Sg	12 46 16.1	-2.5
	35nm,0.5s						
MNBS	Baschi	5.21	274	Pg	Pg	12 45 08.0	-3.2
	2.9nm,0.3s						
MNBS				Lg	Lg	12 46 16.1	
	35nm,0.5s						
TDK	Taldyqorghan	5.27	284	eP	Pg	12 45 11.1	-1.2
	14nm,0.2s						
TDK				eS	Sg	12 46 21.2	+0.7
	29nm,0.6s						
TDK	Taldyqorghan	5.27	284	Pg	Pg	12 45 12.4	+0.1
	14nm,0.2s						
TDK				Lg	Lg	12 46 23.7	
	29nm,0.6s						
SATY	Saty	5.32	263	eP	Pg	12 45 12.0	-1.4
	3.3nm,0.5s						
SATY				eS	Sg	12 46 23.0	+0.7
	12nm,0.6s						
SATY	Saty	5.32	263	Pg	Pg	12 45 12.0	-1.4
	3.3nm,0.5s						
SATY				Lg	Lg	12 46 23.0	
	12nm,0.6s						
KURS	Kuram	5.42	268	eP	Pg	12 45 15.1	-0.1
	2.0nm,0.3s						
KURS				eS	Sg	12 46 28.3	+2.9
	9.3nm,0.9s						
KURS	Kuram	5.42	268	Pg	Pg	12 45 15.1	-0.1
	2.0nm,0.3s						
KURS				Lg	Lg	12 46 28.3	
	9.3nm,0.9s						
ARXS	Arharly	5.62	275	eP	Pg	12 45 16.2	-2.9
	3.3nm,0.5s						
ARXS				eS	Sg	12 46 30.1	-1.7
	22nm,0.7s						
ARXS	Arharly	5.62	275	Pg	Pg	12 45 15.7	-3.4
	3.3nm,0.5s						
ARXS				Lg	Lg	12 46 30.1	
	22nm,0.7s						
KOTS	Kotyrbulak	6.22	266	Pg	Pg	12 45 30.7	+0.1
	3.0nm,0.4s						
KOTS				Lg	Lg	12 46 54.8	
	41nm,0.8s						
MDOK	Medeo	6.28	266	Pg	Pg	12 45 34.0	+2.3
	5.5nm,0.9s						
MDOK				Lg	Lg	12 47 00.5	
	11nm,0.6s						
MDOK	Medeo	6.28	266	Pg	Pg	12 45 31.5	-0.2
	1.4nm,0.4s						
MDOK				Lg	Lg	12 46 56.2	
	5.0nm,0.6s						
TNSS	Tian-Shan	6.38	265	Pg	Pg	12 45 32.4	-1.2
	0.5nm,0.1s						
TNSS				Lg	Lg	12 46 57.9	
	4.1nm,0.5s						
KTBS	Karatobe	6.47	271	Pg	Pg	12 45 34.6	-0.7
	2.1nm,0.6s						
KTBS				Lg	Lg	12 47 01.8	
	16nm,0.6s						
IZV	Izvestkoviy	6.62	265	Pg	Pg	12 45 37.4	-0.7
	1.3nm,0.2s						
IZV				Lg	Lg	12 47 06.7	
	8.4nm,0.5s						
TKM2	Tokmak 2	7.37	265	⇓Pg	Pg	12 45 50.6	-1.9
	3.6nm,1.0s						
TKM2				⇑Lg	Lg	12 47 34.6	
	6.8nm,0.9s						
KURBB	Kurchatov Arra	8.22	327	Pn	Pn	12 45 30.4	-0.3
	0.1nm,0.3s,baz=133,slow=14,SNR=18						
KURBB				Lg	Lg	12 47 49.6	
	0.2nm,0.3s,baz=145,slow=32,SNR=6.1						
KURBB	Kurchatov Arra	8.22	327	⇓Pn	Pn	12 45 31.0	+0.3
	3.1nm,0.9s						
KURBB				⇑Sn	Sn	12 47 05.2	+1.6
	4.1nm,0.6s						
KURBB				⇓Lg	Lg	12 47 49.9	
	28nm,0.7s						
AAK	Ala-Archa	8.22	265	Lg	Lg	12 48 01.4	
	0.2nm,0.3s,baz=225,slow=19,SNR=3.1						
KURK	Kurchatov	8.26	327	⇑Pn	Pn	12 45 29.7	-1.5
	2.9nm,1.0s						
KURK				⇑Sn	Sn	12 47 06.0	+1.5
	1.9nm,0.5s						
KURK				⇓Lg	Lg	12 47 51.5	
	11nm,0.9s						
ZALV	Zalesovo Beam	10.01	357	Pn	Pn	12 45 54.0	-1.3
	0.4nm,0.3s,baz=177,slow=13,SNR=18						
ZALV				Sn	Sn	12 47 42.5	-5.0
	0.6nm,0.3s,baz=182,slow=23,SNR=9.1						
SONM	Songino Array	14.97	68	Pn	P	12 47 09.4	+0.7
	0.1nm,0.3s,baz=268,slow=12,SNR=5.8						
ARU	Arti	21.18	316	P	P	12 48 19.5	+2.8
	0.3nm,0.3s,baz=288,slow=20,SNR=3.3						
ARCES	ARCESS Array B	39.28	331	P	P	12 51 00.4	+0.5
	4.7nm,1.0s,baz=90,slow=9.3,SNR=4.0						

*BGR **22** 12:56:10.5±0.0, 1°.65N×79°.74W, h248^{km}±1^{km}, mb5.1*

*BJI **22** 12:56:22.0±0.0, 2°.70N×76°.50W, h140^{km}, mB5.4/16*

*VAO **22** 12:56:23.9±0.5, 2°.63N×76°.41W, h145^{km}±4^{km}, mb4.9*

*RSNC **22** 12:56:24.9±1.1, 2°.79N×76°.53W, h139^{km}±3^{km}, ML4.6, Mw5.7, Fault plane solution: NP1:ϕ_s32.00000°, δ85.00000°, λ-42.00000°.*

*IDC **22** 12:56:24.5±1.0, 2°.86N×76°.28W, h150^{km}±8^{km}, mb4.7/37, mb1 4.8/42, mb1mx4.7/53, mbtmp5.1/42, MS4.2/13, Ms1 4.2/13, ms1mx4.0/28, Error ellipse: s-maj=9.5km s-min=7.0km az=45.0*

*UPA **22** 12:56:24.0±1.9, 2°.77N×76°.62W, h10^{km}±127^{km}, MW5.4*

*NEIC **22** 12:56:24.4±1.9, 2°.73N±0°.07×76°.50W±0°.07, h149^{km}±1^{km}, mb5.6/519, Mwb5.5/37, Mww5.5, Mwc5.6(GCMT), Error ellipse: s-maj=13.7km s-min=9.5km az=126.0*

*MOS **22** 12:56:24.4±0.9, 2°.83N×76°.56W, h160^{km}, mb5.5/54, Error ellipse: s-maj=8.6km s-min=4.5km az=107.7*

*NEIC **22** 12:56:25.2, 2°.72N×76°.49W, h153^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-0.95; $M_{\theta\theta}$-0.12; $M_{\phi\phi}$1.07; $M_{r\theta}$-0.82; $M_{\theta\phi}$-0.78; $M_{\phi r}$-1.70; Fault plane solution: $M_0$2.29000×10^{17} NP1:ϕ_s11.91000°, δ77.05000°, λ-62.82000°. NP2:ϕ_s125.49000°, δ29.89000°, λ-153.27000°. Principal axes: T 2.0811, Plg27.0000°, Azm81.0000°; N 0.3653, Plg26.0000°, Azm185.0000°; P -2.4464, Plg50.0000°, Azm312.0000°;*

*NEIC **22** 12:56:25, 2°.67N×76°.39W, h150^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-1.01; $M_{\theta\theta}$-0.61; $M_{\phi\phi}$1.62; $M_{r\theta}$-1.07; $M_{\theta\phi}$-0.95; $M_{\phi r}$-1.17; Fault plane solution: $M_0$2.33000×10^{17} NP1:ϕ_s126.00000°, δ45.00000°, λ-153.00000°. NP2:ϕ_s16.00000°, δ71.00000°, λ-48.00000°. Principal axes: T 2.1759, Plg16.0000°, Azm77.0000°; N 0.2776, Plg39.0000°, Azm180.0000°; P -2.4535, Plg46.0000°, Azm330.0000°;*

*NEIC **22** 12:56:27, 2°.75N×76°.46W, h163^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-1.02; $M_{\theta\theta}$-0.52; $M_{\phi\phi}$1.55; $M_{r\theta}$-1.08; $M_{\theta\phi}$-1.36; $M_{\phi r}$-1.64; Fault plane solution: $M_0$2.75000×10^{17} NP1:ϕ_s119.00000°, δ43.00000°, λ-157.00000°. NP2:ϕ_s12.00000°, δ75.00000°, λ-49.00000°. Principal axes: T 2.5676, Plg19.0000°, Azm73.0000°; N 0.3344, Plg39.0000°, Azm179.0000°; P -2.9019, Plg45.0000°, Azm323.0000°;*

*GCMT **22** 12:56:27.4±0.1, 2°.73N±0°.01×76°.46W±0°.01, h161^{km}, MW5.5/158, Moment Tensor Solution. s128,c208; s158,c306; Duration: 1^s.5 Moment tensor: Scale 10^{17} Nm; M_{rr}-1.05±.03; $M_{\theta\theta}$-0.55±.03; $M_{\phi\phi}$1.60±.04; $M_{r\theta}$-1.03±.02; $M_{\theta\phi}$-1.39±.03; $M_{\phi r}$-1.55±.03; Best double couple: $M_0$2.70700×10^{17} NP1:ϕ_s119.00000°, δ45.00000°, λ-156.00000°. NP2:ϕ_s12.00000°, δ74.00000°, λ-48.00000°. Principal axes: T 2.5800, Plg17.0000°, Azm71.0000°; N 0.2540, Plg40.0000°, Azm177.0000°; P -2.8350, Plg44.0000°, Azm324.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 22 12:56:24.4±0.3, **2°.74N**±0°.02×**76°.45W**±0°.03, **h155**^{km}±2^{km}, **h155**^{km}**:pP-P, n1337,** σ**1**^{s}**.54**/1511, **mb5.5**/350, **35C-46D, Fault plane solution: NP1:**ϕ_s22.34059°, δ84.25732°, λ-34.45825°. **NP2:**ϕ_s116.26850°, δ55.73883°, λ-173.04622°. **Principal axes:** T Plg19.1064°, Azm74.2412°; N Plg55.1249°, Azm194.0444°; P Plg27.9584°, Azm333.6462°; **Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
POPC	Popayan, Colom	0.30	229	⇓iP	Pn	12 56 44.0	-1.9
POPC				eS	Sn	12 56 58.4	-3.9
POPC				i		12 57 02.8	
	comp=Z,10µm,0.3s						
PCON	Cinco Dias	0.42	173	⇓iP	Pn	12 56 46.0	-0.7
PCON				eS	Sn	12 57 00.9	-2.8
PCON				i		12 57 07.0	
	comp=Z,11µm,0.4s						
MARP	Paez Belalcaza	0.50	79	⇓iP	Pn	12 56 46.1	-0.6
MARP				eS	Sn	12 57 00.6	-3.0
SOTA	Rioblanco	0.63	195	⇑iP	Pn	12 56 46.9	-0.7
SOTA				eS	Sn	12 57 02.9	-2.5
RAC02	Cali,SGC	0.63	352	eP	Pn	12 56 54.3	+7.1
RAC02				eS	Sn	12 57 11.5	+6.9
BETC	Betania	1.01	94	⇓iP	Pn	12 56 49.8	0.0
BETC				eS	Sn	12 57 08.9	-0.2
BBAC	Balboa, Cauca	1.07	228	⇑iP	Pn	12 56 48.7	-1.9
BBAC				eS	Sn	12 57 07.4	-3.1
GARC	Garzon, Huila	1.10	120	⇓iP	Pn	12 56 50.1	-0.7
GARC				eS	Sn	12 57 09.3	-1.6
GARC				i		12 57 13.1	
	comp=Z,4µm,0.7s						
YOTC	Yotoco, Valle	1.24	5	⇓iP	Pn	12 56 50.3	-1.6
YOTC				eS	Sn	12 57 10.1	-3.0
YOTC				i		12 57 13.6	
	comp=Z,8µm,0.3s						
FLOC	Florencia	1.40	145	⇓iP	Pn	12 56 52.8	-0.6
FLOC				eS	Sn	12 57 13.9	-1.7
FLOC				i		12 57 18.5	
	comp=Z,3µm,0.4s						
MALC	Bahia Malaga	1.54	325	⇑iP	Pn	12 56 54.4	-0.4
MALC				eS	Sn	12 57 18.5	+0.3
MALC				i		12 57 24.3	
	comp=Z,14µm,0.4s						
ORTC	Ortega, Tolima	1.67	46	⇑iP	Pn	12 56 56.1	-0.1
ORTC				eS	Sn	12 57 18.9	-1.7
ORTC				i		12 57 25.1	
	comp=Z,4µm,0.6s						
CPAS2	Pasto	1.71	208	eP	Pn	12 56 56.6	-0.4
CPAS2	Pasto	1.71	208	eS	Sn	12 57 20.1	-1.9
GR1C	Gorgona, Isla	1.74	279	⇑iP	Pn	12 56 54.5	-2.4
GR1C				eS	Sn	12 57 17.8	-4.0
CCUFI	Cufio, Nario	1.75	211	eP	Pn	12 56 56.2	-1.4
CCUFI				eS	Sn	12 57 21.1	-2.0
GCUF	Volcan Galeras	1.75	211	⇑iP	Pn	12 56 56.3	-1.4
GCUF				eS	Sn	12 57 21.0	-2.1
GCUF				i		12 57 27.1	
	comp=Z,7µm,0.3s						
CPAS1	Pasto	1.77	210	eP	Pn	12 56 56.9	-0.9
CPAS1	Pasto	1.77	210	eS	Sn	12 57 21.2	-2.1
PRAC	Prado	1.83	58	⇑iP	Pn	12 56 58.4	+0.4
PRAC				eS	Sn	12 57 22.9	-0.9
PRAC				i		12 57 33.4	
	comp=Z,2µm,0.4s						
PLMC	San Jos del P	2.15	4	⇓iP	Pn	12 57 00.2	-1.5
PLMC				eS	Sn	12 57 27.5	-3.1
CMBC	Cumbal	2.26	218	eP	Pn	12 57 03.0	-0.4
CMBC				eS	Sn	12 57 32.3	-1.1
CMBC				i		12 57 40.4	
	comp=Z,6µm,0.6s						
PIZC	Pizarro, Choco	2.39	338	⇓eP	Pn	12 57 03.9	-0.6
PIZC				eS	Sn	12 57 33.2	-2.1
PIZC				i		12 57 49.3	
	comp=Z,5µm,0.6s						
TUMC	Tumaco	2.46	248	⇑iP	Pn	12 57 03.3	-1.9
TUMC				eS	Sn	12 57 33.5	-3.2
TUMC				i		12 57 57.2	
	comp=Z,8µm,0.5s						
CMAN1	Manizales, Cal	2.49	22	eP	Pn	12 57 05.6	-0.4
CMAN1				eS	Sn	12 57 38.1	0.0
MACC	Macarena, Meta	2.66	103	⇑iP	Pn	12 57 08.0	+0.1
MACC				eS	Sn	12 57 38.0	-3.4
MACC				i		12 57 59.4	
	comp=Z,1µm,0.6s						
GUY2C	Guyana, Caldas	2.69	24	⇓eP	Pn	12 57 07.8	-0.9
GUY2C				eS	Sn	12 57 41.5	-1.2
GUY2C				i		12 57 46.6	
	comp=Z,5µm,0.6s						
ROSC	El Rosal	2.97	45	P	Pn	12 57 13.4	+1.3
	comp=Z,653nm,0.3s,baz=34,slow=1.9,SNR=389						
ROSC				S	Sn	12 57 43.7	-5.2
	comp=Z,131nm,0.3s,baz=212,slow=8.8,SNR=4.1						
ROSC				LR	LR	12 58 17.8	
	comp=Z,23µm,19.6s,baz=74,slow=41						
ROSC	El Rosal	2.97	45	P	Pn	12 57 13.4	+1.3
ROSC						12 57 52.0	
ROSC	El Rosal	2.97	45	Pn	Pn	12 57 13.4	+1.3
ROSC				Sn	Sn	12 57 52.0	+3.1
ROSC	El Rosal	2.97	45	⇑iP	Pn	12 57 13.4	+1.3
ROSC				eS	Sn	12 57 48.1	-0.7
ROSC				i		12 57 56.3	
	comp=Z,933nm,0.5s						
PTLC	Puerto Leguiza	3.04	147	⇓iP	Pn	12 57 16.1	+3.5
PTLC				i		12 57 56.9	
	comp=Z,493nm,0.5s						
OTAV	Otavalo	3.19	219	ceP	Pn	12 57 13.7	-1.2
OTAV	Otavalo	3.19	219		Pn	12 57 14.3	-0.7
OTAV				Sn	Sn	12 57 51.2	-2.8
OTAV	Otavalo	3.19	219	⇑iP	Pn	12 57 14.1	-0.8
OTAV				eS	Sn	12 57 51.9	-2.1
OTAV				i		12 58 00.6	
	comp=Z,2µm,0.6s						
OTAV	Otavalo	3.19	219	eP	Pn	12 57 14.4	-0.5
NORC	Norcasia	3.21	29	⇓iP	Pn	12 57 14.6	-0.2
NORC				eS	Sn	12 57 52.5	-1.3
NORC				i		12 57 56.8	
	comp=Z,934nm,0.4s						
CHIC	Chingaza	3.29	55	⇑iP	Pn	12 57 16.8	+0.7
CHIC				eS	Sn	12 57 56.3	+0.1
CHIC				i		12 58 04.4	
	comp=Z,696nm,0.6s						
SOLC	Bahia Solano	3.59	345	eP	Pn	12 57 18.5	-1.1
SOLC				eS	Sn	12 57 59.1	-3.2
SOLC				i		12 58 03.4	
	comp=Z,1µm,0.3s						
SPBC	San Pablo de B	3.74	39	⇑iP	Pn	12 57 21.8	+0.3
SPBC				eS	Sn	12 58 04.6	-1.3
SPBC				i		12 58 17.7	
	comp=Z,310nm,0.6s						
GUVC	San Jose del G	3.82	93	eP	Pn	12 57 22.9	+0.3
DBBC	Dabeiba	4.25	3	eP	Pn	12 57 27.2	-1.1
DBBC				eS	Sn	12 58 17.2	-0.7
PTBC	PUERTO BERRIO,	4.26	28	⇓eP	Pn	12 57 27.4	-0.8
PTBC				eS	Sn	12 58 05.0	-13
PTBC				i		12 58 25.7	
	comp=Z,540nm,0.4s						
PTGC	Puerto Gaitan,	4.54	71	eP	Pn	12 57 32.0	0.0
PTAC	Punta Ardita,	4.58	343	eP	Pn	12 57 31.3	-1.1
PTAC				eS	Sn	12 58 21.4	-4.1
RUSC	La Rusia	4.59	47	⇑iP	Pn	12 57 33.4	+0.4
RUSC				eS	Sn	12 58 18.1	-8.2
BARC	Barichara	5.02	40	eP	Pn	12 57 38.7	+0.2
BARC				eS	Sn	12 58 35.1	-1.2
BARC				i		12 58 43.8	
	comp=Z,316nm,0.4s						
UREC	San Jos de Ur	5.06	10	⇓eP	Pn	12 57 37.1	-1.6
UREC				eS	Sn	12 58 34.9	-1.9
UREC				i		12 58 40.4	
	comp=Z,502nm,0.6s						
BRRC	Barranca, Sant	5.12	32	⇑iP	Pn	12 57 38.7	-0.9
BRRC				eS	Sn	12 58 36.8	-1.5
PAMC	Pamplona, Colo	5.90	39	eP	Pn	12 57 49.8	-0.6
PAMC				eP	Pn	12 57 49.8	-0.6
PAMC				eS	Sn	12 58 56.2	-1.2
PAMC				eS	Sn	12 58 56.2	-1.2
PAMC				i		12 59 05.4	
	comp=Z,288nm,0.7s						
PAMC				i		12 59 05.4	
	comp=Z,288nm,0.7s						
TAMC	Tame, Arauca	5.91	52	eP	Pn	12 57 50.4	+0.3
TAMC				eP	Pn	12 57 50.4	+0.3
TAMC				eS	Sn	12 58 51.5	-5.7
TAMC				eS	Sn	12 58 51.5	-5.7
CAPC	Capurgana	5.92	351	eP	Pn	12 57 48.8	-1.4
CAPC				eP	Pn	12 57 48.8	-1.4
CAPC				eS	Sn	12 58 55.1	-2.2
CAPC				eS	Sn	12 58 55.1	-2.2
CAPC				i		12 59 02.9	
	comp=Z,168nm,0.4s						
CAPC				i		12 59 02.9	
	comp=Z,168nm,0.4s						
CAP2	Capurgana	5.94	351	⇓iP	Pn	12 57 51.4	+1.0
CAP2				eS	Sn	12 58 56.5	-1.3
UPD2	Meteti	5.97	345	⇓iP	Pn	12 57 51.3	+0.5
UPD2				eS	Sn	12 58 59.0	+0.5
MOTC	Monteria, Cord	6.04	7	eP	Pn	12 57 50.3	-1.6
MOTC				eP	Pn	12 57 50.3	-1.6
MOTC				eS	Sn	12 58 50.0	-10
MOTC				eS	Sn	12 58 50.0	-10
MOTC				i		12 59 06.9	
	comp=Z,162nm,0.8s						
MOTC				i		12 59 06.9	
	comp=Z,162nm,0.8s						
OCAC	Ocana	6.28	30	eP	Pn	12 57 54.1	-1.1
OCAC				eP	Pn	12 57 54.1	-1.1
OCAC				eS	Sn	12 59 02.0	-4.2
OCAC				eS	Sn	12 59 02.0	-4.2
OCAC				i		12 59 13.3	
	comp=Z,337nm,0.6s						
OCAC				i		12 59 13.3	
	comp=Z,337nm,0.6s						
AZU	Azuero	6.30	323	⇓iP	Pn	12 57 54.9	-0.3
AZU				eS	Sn	12 59 04.0	-2.4
SMLC	San Martn de	6.46	21	⇑eP	Pn	12 57 55.3	-2.2
SMLC				⇑eP	Pn	12 57 55.3	-2.2
SMLC				eS	Sn	12 59 00.7	-10
SMLC				eS	Sn	12 59 00.7	-10
SMLC				i		12 59 10.3	
	comp=Z,485nm,0.9s						
SMLC				i		12 59 10.3	
	comp=Z,485nm,0.9s						
TABO3	Taboga, Panama	6.76	333	⇓iP	Pn	12 58 01.0	-0.3
TABO3				eS	Sn	12 59 16.2	-1.2
CNTA3	Canitas, Panam	6.88	339	⇑iP	Pn	12 58 02.5	-0.4
CNTA3				eS	Sn	12 59 14.6	-5.7
GMAL	Guarumal, Vera	6.90	316	⇓iP	Pn	12 58 03.8	+0.6
GMAL				eS	Sn	12 59 17.3	-3.4
CHPO	Chepo, Panama	6.91	338	⇑iP	Pn	12 58 03.2	-0.2
CHPO				eS	Sn	12 59 18.4	-2.7
UPA	Univ. de Panam	6.92	334	⇓iP	Pn	12 58 03.0	-0.5
UPA				eS	Sn	12 59 20.6	-0.5
STIA3	Santiago, Vera	6.97	320	⇓iP	Pn	12 58 04.6	+0.4
STIA3				eS	Sn	12 59 19.5	-3.0
ZANG	Zanguenga, Cho	7.05	331	⇓iP	Pn	12 58 04.9	-0.3
ZANG				eS	Sn	12 59 21.7	-2.6
BCIP	Isla Barro Col	7.22	332	⇑iP	Pn	12 58 07.0	-0.4
BCIP				eS	Sn	12 59 25.5	-2.8
BCIP	Isla Barro Col	7.22	332	P	Pn	12 58 07.3	-0.2
BCIP	Isla Barro Col	7.22	332	Pn	Pn	12 58 07.3	-0.2
BCIP	Isla Barro Col	7.22	332	⇓iP	Pn	12 58 07.2	-0.2
BCIP				⇓iP	Pn	12 58 07.2	-0.2
BCIP				eS	Sn	12 59 24.6	-3.8
BCIP				eS	Sn	12 59 24.6	-3.8
BCIP				i		12 59 37.1	
	comp=Z,304nm,0.7s						
BCIP				i		12 59 37.1	
	comp=Z,304nm,0.7s						
ARGC	Ariguani, Magd	7.40	17	eP	Pn	12 58 09.2	-0.7
ARGC				eP	Pn	12 58 09.2	-0.7
ARGC				eS	Sn	12 59 31.2	-1.6
ARGC				eS	Sn	12 59 31.2	-1.6
ARGC				i		13 00 00.8	
	comp=Z,104nm,0.5s						
ARGC				i		13 00 00.8	
	comp=Z,104nm,0.5s						
SDV	Santo Domingo	8.41	43	P	Pn	12 58 20.4	-3.1
	comp=Z,7.6nm,0.3s,baz=223,slow=12,SNR=139						
SDV				S	Sn	12 59 52.4	-4.8
	comp=Z,28nm,0.3s,baz=93,slow=19,SNR=8.2						
SDV				LR	LR	13 01 32.8	
	comp=Z,2µm,19.9s,baz=238,slow=38						
SDV	Santo Domingo	8.41	43	Pn	Pn	12 58 22.7	-0.8
SDV	Santo Domingo	8.41	43	⇑iP	Pn	12 58 22.1	-1.4
SDV				⇑iP	Pn	12 58 22.1	-1.4
SDV				eS	Sn	12 59 43.4	-14
SDV				eS	Sn	12 59 43.4	-14
SDV				i		12 59 59.5	
	comp=Z,89nm,0.6s						
SDV				i		12 59 59.5	
	comp=Z,89nm,0.6s						
SDV	Santo Domingo	8.41	43	eP	Pn	12 58 22.3	-1.2
SMRC	Santa Marta, M	8.65	15	eP	Pn	12 58 20.8	-5.7
SMRC				eP	Pn	12 58 20.8	-5.7
URIC	Uribia, Colomb	9.94	26	eP	Pn	12 58 40.2	-3.3
URIC				eP	Pn	12 58 40.2	-3.3
URIC				i		13 01 06.2	
	comp=Z,32nm,0.6s						
URIC				i		13 01 06.2	
	comp=Z,32nm,0.6s						
ATAH	Atahualpa	10.00	191	P	Pn	12 58 42.3	-2.6
	comp=Z,1.4nm,0.3s,baz=14,slow=7.7,SNR=23						
ATAH				LR	LR	13 03 18.4	
	comp=Z,2µm,18.5s,baz=21,slow=41						
HDC	Heredia	10.49	314	⇓iP	Pn	12 58 51.4	+0.3
HDC				eS	S	13 00 51.0	+2.6
HDC	Heredia	10.49	314		Pn	12 58 50.7	-0.3
CZSB	Cruzeiro do Su	11.05	160	eP	Pn	12 58 55.6	-2.7
JTS	Las Juntas de	11.29	312	P	Pn	12 59 01.3	-0.2
	comp=Z,1.1nm,0.3s,baz=178,slow=9.2,SNR=20						
JTS				S	Sn	13 01 09.7	+3.2
	comp=Z,1.7nm,0.3s,baz=17,slow=19,SNR=3.8						
JTS				LR	LR	13 03 30.6	
	comp=Z,656nm,19.4s,baz=206,slow=38						
JTS	Las Juntas de	11.29	312	d iP	Pn	12 59 01.0	-0.5
JTS				pmax	pmax		
	comp=Z,93nm,1.1s						
JTS	Las Juntas de	11.29	312		Pn	12 59 01.8	+0.2
PRVC	Isla de Provid	11.63	336	eP	Pn	12 59 04.8	-1.0
PRVC				eP	Pn	12 59 04.8	-1.0
ESPN	Las Esperanzas	12.19	321		Pn	12 59 12.7	-0.5
ACON	Acoyapa	12.60	317		Pn	12 59 18.8	+0.4
BOAB	BOACO BROADBAN	13.28	317	Pn	Pn	12 59 27.2	0.0
MATN	Matagalpa	13.80	318		Pn	12 59 34.1	+0.3
PCRV	Puerto La Cruz	13.86	57	P	Pn	12 59 32.8	-1.8
	comp=Z,2.1nm,0.3s,baz=222,slow=13,SNR=5.1						
PAYG	Puerto Ayora	14.24	256	Pn	Pn	12 59 37.9	-1.5
CRIN	San Cristobal	14.42	314		Pn	12 59 41.7	+0.1
NNA	Nana	14.64	182	P	Pn	12 59 43.1	-1.2
	comp=Z,2.9nm,0.3s,baz=1.8,slow=8.4,SNR=10						
NNA				S	Sn	13 02 29.0	+1.9
	comp=Z,1.2nm,0.3s,baz=180,slow=18,SNR=2.0						
NNA	Nana	14.64	182	c iP	P	12 59 47.3	+0.8
NNA				pmax	pmax		
	comp=Z,306nm,1.0s						
PCJ	Portland Cotta	14.92	357	i P	P	12 59 59.0	+9.5
MCJ	Malvern	15.14	355	⇑iP	P	12 59 52.0	0.0
STH	Stony Hill	15.24	359	⇑iP	P	12 59 53.4	+0.3
MTDJ	Mount Denham	15.42	356		Pn	12 59 54.6	+0.6

TGUH	Tegucigalpa,Un	15.52	317		Pn	12 59 55.1	-0.1
NEJ	Negril	15.52	353	iP	P	12 59 59.5	+3.3
BBJ	Bamboo Saint A	15.56	357	iP	P	12 59 58.9	+2.2
ETMB	Extrema	16.11	141	eP	Pn	13 00 01.9	-0.5
LGNH	Logne	16.11	13		Pn	13 00 01.8	-0.6
LGNH				IAmb	IAmb	13 00 06.5	
	comp=Z,165nm,0.8s						
SNET	Serv Nac Est T	16.67	311	P	Pn	13 00 10.0	+0.7
MACA	Manacapuru-AM	16.81	110	eP	P	13 00 10.5	0.0
PTGA	Pitinga	16.83	102	P	P	13 00 10.5	-0.2
	comp=Z,28nm,0.3s,baz=292,slow=14,SNR=92						
PTGA	Pitinga	16.83	102	P	Pn	13 00 11.8	+0.6
PTGA				IAmb	IAmb	13 00 15.5	
	comp=Z,145nm,0.7s						
SDDR	Presa de Saban	16.91	17	P	Pn	13 00 14.0	+1.9
FSCY	Frank Sound, G	17.11	345		Pn	13 00 14.8	+0.4
GTBY	Guantanamo Bay	17.13	4		P	13 00 14.2	+0.4
LCCY	Blossom Villag	17.19	348	P	Pn	13 00 15.2	-0.2
CBCY	The Bluff, Cay	17.20	349		Pn	13 00 15.7	+0.2
CBCY				IAmb	IAmb	13 00 18.0	
	comp=Z,381nm,1.0s						
MTO3	Montecristo	17.22	313	P	Pn	13 00 15.7	-0.4
MTO3				IAmb	IAmb	13 00 19.0	
	comp=Z,468nm,1.1s						
WBCY	West Bay, Gran	17.23	344		Pn	13 00 16.4	+0.6
ESQI	Esquipulas	17.31	313	P	Pn	13 00 17.0	-0.1
GRGR	Grenville	17.37	57	eP	P	13 00 13.0	-3.7
SAML	Samuel	17.60	131	P	P	13 00 18.7	-0.4
SAML				pmax	pmax		
	comp=Z,45nm,0.7s						
SAML	Samuel	17.60	131	P	P	13 00 18.7	-0.4
SAML	Samuel	17.60	131	eP	P	13 00 19.5	+0.4
MLPR	Magueyes Islan	17.72	31	P	Pn	13 00 22.3	+0.5
GCMP	Grenada, Carri	17.74	56	eP	P	13 00 18.3	-2.4
AOPR	Arecibo Observ	18.18	31	P	Pn	13 00 27.9	+0.6
AOPR				IAmb	IAmb	13 00 30.1	
	comp=Z,211nm,0.6s						
PDPR	Patillas Dam,	18.30	33	P	Pn	13 00 28.8	+0.2
SJG	San Juan	18.31	33	P	P	13 00 25.9	-0.9
	comp=Z,26nm,0.3s,baz=187,slow=6.9,SNR=50						
SJG				S	S	13 03 45.1	-3.1
	comp=Z,0.6nm,0.3s,baz=352,slow=19,SNR=2.4						
SJG	San Juan	18.31	33	P	Pn	13 00 28.9	+0.2
SJG				pmax	pmax		
	comp=Z,133nm,1.0s						
SJG	San Juan	18.31	33	P	Pn	13 00 28.9	+0.2
SJG	San Juan	18.31	33	eP	P	13 00 25.9	-0.9
SJG				eP	P	13 00 25.9	-0.9
SJG				eS	S	13 03 41.2	-7.0
SJG				eS	S	13 03 41.2	-7.0
SVB	Belmont	18.31	54	eP	P	13 00 22.0	-4.9
EMPR	Esperanza - Ma	18.41	31	P	Pn	13 00 30.5	+0.6
HUMP	Col San Antoni	18.50	33		P	13 00 29.5	+0.6
GCPR	Guaynabo City	18.50	33	P	Pn	13 00 30.3	-0.7
GCPR				IAmb	IAmb	13 00 32.1	
	comp=Z,554nm,1.4s						
CBYP	Canovanas	18.60	33	P	Pn	13 00 31.5	-0.6
CBYP				IAmb	IAmb	13 00 34.5	
	comp=Z,272nm,0.6s						
MTP	Monte Pirata	18.62	34	P	P	13 00 31.1	+0.8
MTP				IAmb	IAmb	13 00 33.1	
	comp=Z,330nm,1.4s						
CDVI	St. Croix	18.81	37		Pn	13 00 33.7	-0.9
CUPR	Culebra, Puert	18.95	35		Pn	13 00 35.4	-0.8
SLBI	Saint Lucia, B	18.95	53	eP	P	13 00 28.7	-5.2
RTAL	Retalhuleu	19.07	309	P	Pn	13 00 36.5	-1.1
BIM	Bigot	19.16	51	eP	P	13 00 34.0	-2.1
FDF	Fort de France	19.23	51	eP	P	13 00 35.0	-1.9
MPOM	Morne Pois Mar	19.29	52	eP	P	13 00 35.0	-2.4
PETF	Flores	19.30	318	P	P	13 00 37.9	+0.3
HUEH	Huehuetenango	19.40	311	P	Pn	13 00 40.5	-1.2
ILAM	Ilet Lapin Mar	19.47	51	eP	Pn	13 00 48.0	+5.7
TDBA	Terre de Bas,	19.55	47	eP	P	13 00 40.3	-0.1
SABA	Saba	19.66	40	eP	Pn	13 00 49.2	+4.7
SEUS	St. Eustatius	19.74	41	eP	Pn	13 00 46.2	+0.8
SKI	Saint Kitts	19.78	42	eP	P	13 00 40.3	-2.6
MAGL	Barre de l’ile	19.88	48	eP	P	13 00 41.6	-2.3
ABD	La Joyeuse, An	20.07	46	eP	P	13 00 46.2	+0.4
LPAZ	La Paz	20.62	157	P	P	13 00 52.0	-0.5
	comp=Z,27nm,0.9s,baz=338,slow=11,SNR=48						
LPAZ				ScP	ScP	13 08 20.6	+1.3
	comp=Z,18nm,1.1s,baz=180,slow=4.0,SNR=4.5						
LPAZ				LR	LR	13 10 08.9	
	comp=Z,2µm,18.9s,baz=328,slow=40						
LPAZ	La Paz	20.62	157	P	P	13 00 52.1	-0.3
LPAZ				pmax	pmax		
	comp=Z,46nm,1.0s						
LPAZ	La Paz	20.62	157	P	P	13 00 52.1	-0.3
ANWB	Willy Bob	20.66	43	eP	P	13 00 52.2	0.0
TEIG	Tepich	20.86	327	P	P	13 00 54.5	+0.1
	comp=Z,228nm,0.9s,baz=116,slow=2.7,SNR=28						
TEIG	Tepich	20.86	327	P	P	13 00 54.3	-0.1
TEIG				IAmb	IAmb	13 00 58.6	
	comp=Z,443nm,1.2s						
ITTB	Itaituba	21.87	109	eP	P	13 01 04.2	-0.9
PB16	IPOC Station P	22.03	162	P	P	13 01 07.5	+0.1
VILB	Vilhena	22.44	134	eP	P	13 01 10.7	0.0
MALB	Monte Alegre	22.64	101	eP	P	13 01 13.3	+0.7
MNMC	Minye Minye	22.76	163	P	P	13 01 14.2	+0.2
MNMC				IAmb	IAmb	13 01 16.9	
	comp=Z,216nm,1.0s						
CMIG	Matias Romero	23.05	309	P	P	13 01 15.6	-0.8
	comp=Z,45nm,0.8s,baz=99,slow=7.8,SNR=35						
CMIG				PcP	PcP	13 05 02.1	+1.1
	comp=Z,4.3nm,0.6s,baz=88,slow=2.7,SNR=7.3						
CMIG				ScP	ScP	13 08 25.5	+0.9
	comp=Z,1.3nm,0.4s,baz=106,slow=1.4,SNR=6.8						
PSGCX	Pisagua	23.05	165	P	P	13 01 16.4	-0.1
NPGB	Novo Progresso	23.19	115	eP	P	13 01 17.5	-0.2
061Z	Ochoppi	23.39	350	P	P	13 01 21.3	+1.9
061Z				IAmb	IAmb	13 01 23.1	
	comp=Z,258nm,1.1s						
MDP	Montagnes des	23.86	84	P	P	13 01 21.4	-2.4
	comp=Z,29nm,0.6s,baz=251,slow=8.8,SNR=18						
TA01	Diego Aracena	23.97	165	P	P	13 01 26.4	+1.7
TA01				IAmb	IAmb	13 01 30.0	
	comp=Z,142nm,0.9s						
SIV	San Ignacio	24.03	141	P	P	13 01 25.2	-0.2
	comp=Z,12nm,0.7s,baz=330,slow=10.0,SNR=58						
PATCX	Punta Patache	24.22	166	P	P	13 01 28.7	+1.7
PATCX				IAmb	IAmb	13 02 01.3	
	comp=Z,326nm,1.6s						
MCPB	Macapa, AP	24.58	97	eP	P	13 01 30.3	-0.1
PB01	IPOC Station P	24.60	164	P	P	13 01 31.8	+1.3
PB07	IPOC Station P	25.15	166	P	P	13 01 37.9	+2.3
PB07				IAmb	IAmb	13 01 42.3	
	comp=Z,237nm,1.3s						
DWPF	Disney Wildern	25.67	350	P	P	13 01 42.6	+2.6
	baz=169						
DWPF	Disney Wildern	25.67	350	P	P	13 01 41.2	+1.1
DWPF				IAmb	IAmb	13 01 43.4	
	comp=Z,175nm,1.1s						
TLIG	Tlapa	26.23	306	P	P	13 01 47.4	+2.0
TLIG				IAmb	IAmb	13 02 17.5	
	comp=Z,199nm,1.3s						
LVC	Limon Verde	26.25	164	P	P	13 01 46.4	+0.7
	comp=Z,5.4nm,0.4s,baz=358,slow=7.8,SNR=5.7						
LVC	Limon Verde	26.25	164	ceP	P	13 01 49.1	+3.3
LVC				pmax	pmax		
	comp=Z,68nm,1.0s						
LVC	Limon Verde	26.25	164	P	P	13 01 47.0	+1.3
LVC	Limon Verde	26.25	164	eP	P	13 01 46.7	+1.0
PB15	IPOC Station P	26.68	166	P	P	13 01 50.7	+1.3
656A	Willston	27.10	348	P	P	13 01 54.1	+1.2
656A				IAmb	IAmb	13 01 56.2	
	comp=Z,176nm,1.1s						
SALV	Santo Antonio	27.65	133	eP	P	13 01 56.2	-1.7
PRPB	Parauapebas	28.03	108	eP	P	13 02 01.1	-0.3
553A	Crawfordville	28.33	345	P	P	13 02 05.4	+1.6
GO02	Mina Guanaco	28.53	167	P	P	13 02 07.5	+1.6
TMAB	Tom-Au,PA,Br	28.79	100	eP	P	13 02 09.4	+1.3
SNDB	Serra Nova Dou	28.96	121	eP	P	13 02 09.8	+0.1
MOIG	Morelia	29.45	307	P	P	13 02 15.6	+1.4
MOIG				IAmb	IAmb	13 02 18.2	
	comp=Z,204nm,1.0s						
255A	Hazlehurst	29.58	350	P	P	13 02 15.8	+1.0
255A				IAmb	IAmb	13 02 18.2	
	comp=Z,196nm,1.2s						
352A	Blakely	29.68	345	P	P	13 02 17.0	+1.2
BRAL	Brewton	29.99	342	P	P	13 02 19.8	+1.3
	baz=159,SNR=8.6						
BRAL	Brewton	29.99	342	P	P	13 02 20.0	+1.5
AC02	Maricunga	30.24	167	P	P	13 02 23.9	+2.6
154A	Montrose	30.36	349	P	P	13 02 23.2	+1.5
NHSC	New Hope	30.41	354	P	P	13 02 23.9	+1.8
	baz=173						
NHSC	New Hope	30.41	354	P	P	13 02 23.4	+1.3
ARAG	Araguaiana, MT	30.49	128	eP	P	13 02 22.4	-0.7
250A	Grady	30.51	343	P	P	13 02 24.1	+1.0
152A	Waverly Hall	30.77	346	P	P	13 02 26.3	+1.0
152A				IAmb	IAmb	13 02 28.2	
	comp=Z,144nm,0.8s						
AQDB	Aquidauana	30.77	140	eP	P	13 02 24.2	-1.2
Z56A	Williston	30.77	352	P	P	13 02 25.9	+0.5
SMTB	Santa Maria do	30.99	112	eP	P	13 02 27.8	+0.2
346A	Big Creek Wild	31.03	338	P	P	13 02 28.6	+1.0
GOGA	Godfrey	31.21	349	P	P	13 02 30.6	+1.5
	baz=166,SNR=30						
GOGA	Godfrey	31.21	349	P	P	13 02 30.7	+1.5
GOGA				pmax	pmax		
	comp=Z,134nm,1.0s						
GOGA	Godfrey	31.21	349	P	P	13 02 30.7	+1.5
GOGA				IAmb	IAmb	13 02 32.2	
	comp=Z,134nm,1.0s						
Y57A	Sumter	31.33	354	P	P	13 02 31.3	+1.0
Y57A				IAmb	IAmb	13 02 33.8	
	comp=Z,131nm,1.1s						
Z51A	Franklin	31.49	346	P	P	13 02 33.1	+1.4
Z51A				IAmb	IAmb	13 02 34.6	
	comp=Z,158nm,0.9s						
344A	Westbrook Farm	31.57	336	P	P	13 02 33.6	+1.2
PEXB	Peixe	31.62	118	eP	P	13 02 33.0	-0.1
JSC	Jenkinsville	31.70	352	P	P	13 02 34.5	+1.0
JSC				pmax	pmax		
	comp=Z,69nm,1.3s						
JSC	Jenkinsville	31.70	352	P	P	13 02 34.5	+1.0
X60A	Albert Glenn T	31.70	358	P	P	13 02 35.0	+1.5
	baz=177						
X60A				S	S	13 07 35.0	+3.3
	baz=177						
LRAL	Lakeview Retre	31.71	343	P	P	13 02 34.7	+1.0
	baz=160,SNR=43						
LRAL	Lakeview Retre	31.71	343	P	P	13 02 33.6	0.0
X59A	McDuffie Farm,	31.73	357	P	P	13 02 36.2	+2.5
	baz=176						
X59A				S	S	13 07 34.9	+2.8
	baz=176						
X57A	Johnson Farm,	31.74	354	P	P	13 02 35.0	+1.1
	baz=173						
X58A	Rowland	31.76	355	P	P	13 02 35.1	+1.1
X58A				IAmb	IAmb	13 02 37.0	
	comp=Z,70nm,0.8s						
Y52A	Lilburn	31.77	348	P	P	13 02 35.3	+1.2
Y52A				IAmb	IAmb	13 02 37.0	
	comp=Z,138nm,1.0s						
HODGE	Hodges	31.79	351	P	P	13 02 35.1	+0.8
HODGE				IAmb	IAmb	13 02 37.4	
	comp=Z,97nm,1.0s						
AC05	El Transito	31.95	170	P	P	13 02 36.3	+0.4
BIRD	Birdtown, Kers	31.96	354	P	P	13 02 36.5	+0.8
BIRD				IAmb	IAmb	13 02 38.6	
	comp=Z,81nm,1.1s						
146A	Union	32.01	340	P	P	13 02 36.7	+0.5
441A	DeRidder	32.04	332	P	P	13 02 37.8	+1.3
KVTX	Kingsville	32.07	322	P	P	13 02 37.7	+0.9
VBMS	Vicksburg	32.17	337	P	P	13 02 38.4	+0.8
	baz=153,SNR=8.9						
VBMS	Vicksburg	32.17	337	P	P	13 02 38.1	+0.5
342A	Flagon Creek P	32.18	334	P	P	13 02 38.4	+0.7
Z47A	Carrollton	32.19	342	P	P	13 02 37.9	+0.1
ZAIG	Zacatecas	32.21	310	P	P	13 02 40.1	+1.6
ZAIG				IAmb	IAmb	13 02 42.6	
	comp=Z,126nm,1.1s						
W58A	Raeford	32.22	356	P	P	13 02 39.4	+1.4
	baz=175,SNR=9.3						
W58A				S	S	13 07 42.4	+2.7
	baz=175						
PAULI	Pauline	32.30	352	P	P	13 02 40.3	+1.5
Y49A	Blount Mountai	32.32	344	P	P	13 02 39.5	+0.5
Y49A				IAmb	IAmb	13 02 41.3	
	comp=Z,97nm,0.9s						
CNNC	Cliffs of the	32.36	358	P	P	13 02 41.7	+2.5
	baz=177						
W57A	Gilead	32.41	355	P	P	13 02 40.7	+1.0
W56A	Indian Trail	32.46	354	P	P	13 02 41.2	+1.1
	baz=172,SNR=6.8						
W56A				S	S	13 07 47.0	+3.6
	baz=172						
KMSC	Kings Mountain	32.55	353	P	P	13 02 42.4	+1.5
	baz=171,SNR=7.8						
KMSC	Kings Mountain	32.55	353	P	P	13 02 41.7	+0.8
BG3	Lake Jocassee	32.65	350	P	P	13 02 43.3	+1.5
BG3				IAmb	IAmb	13 02 45.2	
	comp=Z,126nm,1.2s						
HKT	Hockley	32.71	328	d iP	P	13 02 41.8	-0.5
HKT				i *PP	pP	13 03 17.9	+2.7
HKT				pmax	pmax		
	comp=Z,67nm,1.4s						
HKT	Hockley	32.71	328	P	P	13 02 42.4	+0.1
HKT				IAmb	IAmb	13 02 44.2	
	comp=Z,233nm,1.6s						
FPAL	Fort Paine	32.77	346	P	P	13 02 43.5	+0.7
ROSB	Rosrio	32.79	100	eP	P	13 02 43.1	-0.2
V60A	Jim Taylor Roa	32.87	359	P	P	13 02 44.9	+1.3
	baz=179,SNR=5.3						
V60A	Jim Taylor Roa	32.87	359	P	P	13 02 45.2	+1.6
V59A	Middlesex	32.90	357	P	P	13 02 45.1	+1.2
	baz=177,SNR=11						
W52A	Murphy	32.93	349	P	P	13 02 45.2	+1.0
W52A				IAmb	IAmb	13 02 47.3	
	comp=Z,124nm,0.8s						
143A	Socs Landing,	32.94	336	P	P	13 02 44.4	0.0
143A				IAmb	IAmb	13 02 45.9	
	comp=Z,254nm,1.4s						
V58A	Windy Hill, Pi	32.98	356	P	P	13 02 45.4	+0.8
V58A				IAmb	IAmb	13 02 47.3	
	comp=Z,105nm,1.2s						
735A	Kenedy	32.98	324	P	P	13 02 45.1	+0.4
735A				IAmb	IAmb	13 02 46.5	
	comp=Z,187nm,0.9s						
X48A	Hartselle	33.06	344	P	P	13 02 45.1	-0.2
X48A				IAmb	IAmb	13 02 47.5	
	comp=Z,103nm,0.8s						
V56A	Mocksville	33.12	354	P	P	13 02 47.3	+1.5
	baz=173,SNR=16						
V57A	Coltrane Farms	33.12	355	P	P	13 02 47.1	+1.2
	baz=174,SNR=21						
V57A				S	S	13 07 56.4	+2.7
	baz=174						
V55A	Taylorsville	33.24	353	P	P	13 02 47.5	+0.6
V55A				IAmb	IAmb	13 02 50.2	
	comp=Z,102nm,1.3s						
V53A	Saluda	33.29	351	P	P	13 02 48.6	+1.2
V53A				IAmb	IAmb	13 02 50.5	
	comp=Z,74nm,0.9s						
Y45A	Yeager Farm, C	33.29	340	P	P	13 02 48.5	+1.1
W50A	Signal Mountai	33.33	347	P	P	13 02 48.9	+1.2
W50A				IAmb	IAmb	13 02 50.5	
	comp=Z,171nm,0.9s						
CPCT	Cooper Cave	33.39	348	P	P	13 02 49.2	+1.0
CPCT				IAmb	IAmb	13 02 51.2	
	comp=Z,119nm,0.9s						
U61A	Possum Corner	33.42	0	P	P	13 02 50.0	+1.5
	baz=180,SNR=6.4						
U61A	Possum Corner	33.42	0	P	P	13 02 49.6	+1.1
U61A				IAmb	IAmb	13 02 51.5	
	comp=Z,136nm,0.9s						
TKL	Tuckaleechee C	33.45	349	P	P	13 02 49.9	+1.2
	comp=Z,34nm,0.8s,baz=162,slow=11,SNR=25						
TKL	Tuckaleechee C	33.45	349	P	P	13 02 49.4	+0.7
TKL				IAmb	IAmb	13 02 51.5	
	comp=Z,102nm,1.1s						
U59A	Littleton	33.47	358	P	P	13 02 49.2	+0.3
SWET	Sewanee	33.49	346	P	P	13 02 49.8	+0.7
SWET				IAmb	IAmb	13 02 51.5	
	comp=Z,161nm,1.1s						
U58A	Oxford	33.54	357	P	P	13 02 50.7	+1.2
	baz=176,SNR=9.9						
U58A				S	S	13 08 02.6	+2.4
	baz=176						
833A	Chaparral WMA,	33.55	322	P	P	13 02 49.7	0.0
	baz=135,SNR=19						
U60A	Pendleton	33.57	359	P	P	13 02 50.8	+1.1
	baz=179						
NATX	Nacogdoches	33.58	331	P	P	13 02 50.5	+0.6
	baz=146,SNR=42						
NATX	Nacogdoches	33.58	331	P	P	13 02 50.4	+0.5
V52A	Sevierville	33.59	349	P	P	13 02 50.5	+0.5
U57A	Blanch	33.63	356	P	P	13 02 51.2	+1.0
	baz=175,SNR=20						
U56A	King	33.64	354	P	P	13 02 52.3	+1.9
	baz=173,SNR=32						
U56A				S	S	13 08 05.3	+3.7
	baz=173						
U56A	King	33.64	354	P	P	13 02 51.8	+1.5
U56A				IAmb	IAmb	13 02 54.4	
	comp=Z,164nm,0.9s						
V51A	Loudon	33.70	348	P	P	13 02 52.1	+1.2
V51A				IAmb	IAmb	13 02 53.8	
	comp=Z,136nm,0.8s						
OXF	Oxford	33.84	341	P	P	13 02 51.6	-0.5
	baz=156,SNR=19						
OXF	Oxford	33.84	341	P	P	13 02 51.9	-0.1
OXF				pmax	pmax		
	comp=Z,194nm,1.1s						
OXF	Oxford	33.84	341	P	P	13 02 51.9	-0.1
OXF				IAmb	IAmb	13 02 54.5	
	comp=Z,194nm,1.1s						
PLAL	Pickwick Lake	33.85	343	P	P	13 02 51.4	-0.8
ITRB	Iturama	33.98	132	eP	P	13 02 52.6	-0.9
U54A	Nelsons Funny	33.98	352	P	P	13 02 54.9	+1.5
	baz=170,SNR=23						
U54A				S	S	13 08 10.1	+3.1
	baz=170						
U54A	Nelsons Funny	33.98	352	P	P	13 02 54.0	+0.7
U54A				IAmb	IAmb	13 02 56.5	
	comp=Z,107nm,0.8s						
Z41A	Richland Creek	34.00	335	P	P	13 02 53.6	+0.1
	baz=150,SNR=18						
T59A	Double "B" Far	34.08	358	P	P	13 02 54.7	+0.6
T59A				IAmb	IAmb	13 02 57.1	
	comp=Z,81nm,0.8s						
T58A	Grand View Acr	34.09	357	P	P	13 02 55.5	+1.3
	baz=176,SNR=16						
T58A				S	S	13 08 11.2	+2.6
	baz=176						
CCAR	Cane Creek	34.16	337	P	P	13 02 55.0	+0.1
T57A	Hurt	34.19	356	P	P	13 02 56.3	+1.3
	baz=175,SNR=21						
T57A				S	S	13 08 13.0	+2.9
	baz=175						
T57A	Hurt	34.19	356	P	P	13 02 56.1	+1.0
T57A				IAmb	IAmb	13 02 58.4	
	comp=Z,118nm,1.1s						
V48A	Smith Brothers	34.21	345	P	P	13 02 56.0	+0.7
T60A	Surry	34.23	360	P	P	13 02 56.8	+1.4
	baz=180,SNR=10						
T60A	Surry	34.23	360	P	P	13 02 56.5	+1.1
T60A				IAmb	IAmb	13 02 58.9	
	comp=Z,136nm,0.8s						
T56A	Rocky Mt	34.28	355	P	P	13 02 57.6	+1.7
	baz=174,SNR=18						
435B	Jarrell	34.31	327	P	P	13 02 56.2	0.0
	baz=140,SNR=17						
435B	Jarrell	34.31	327	P	P	13 02 56.1	-0.1
435B				IAmb	IAmb	13 02 57.7	
	comp=Z,212nm,1.3s						
CPUP	Villa Florida	34.31	149	P	P	13 02 54.2	-2.1
	comp=Z,1.3nm,0.5s,baz=336,slow=6.7,SNR=4.9						
CPUP				PcP	PcP	13 05 29.2	+0.2
	comp=Z,1.4nm,0.7s,baz=31,slow=5.9,SNR=3.8						
237A	Washetta, Mont	34.34	330	P	P	13 02 57.0	+0.6
W45A	Hickory Valley	34.35	341	P	P	13 02 56.2	-0.3
X43A	Marvell	34.35	339	P	P	13 02 56.8	+0.3
	baz=154,SNR=6.7						
TRCB	Terra Rica	34.41	139	eP	P	13 02 55.6	-1.7
CLTN	Cedars of Leba	34.42	346	P	P	13 02 57.3	+0.2
CLTN				IAmb	IAmb	13 02 59.4	
	comp=Z,206nm,1.2s						
BLA	Blacksburg	34.49	354	P	P	13 02 59.5	+1.7
	baz=173,SNR=12						
BLA	Blacksburg	34.49	354	P	P	13 02 59.0	+1.2
BLA				pmax	pmax		
	comp=Z,358nm,1.7s						
BLA	Blacksburg	34.49	354	P	P	13 02 59.0	+1.2
WLAR	White Oak Lake	34.50	335	P	P	13 02 58.2	+0.4
PCMB	Pacaembu	34.54	136	eP	P	13 02 57.5	-0.8
MET	Memphis--Engin	34.57	340	P	P	13 02 58.3	0.0
IPMB	Ipameri, GO	34.62	128	eP	P	13 02 58.1	-1.0
U49A	Red Boiling Sp	34.69	347	P	P	13 02 60.0	+0.6
U49A				IAmb	IAmb	13 03 01.6	
	comp=Z,89nm,0.9s						
S58A	Poland Farm, P	34.73	358	P	P	13 03 00.8	+1.1
	baz=177,SNR=7.4						
S58A	Poland Farm, P	34.73	358	P	P	13 03 00.3	+0.6
SDBA	SAO DESIDERIO	34.77	116	eP	P	13 03 00.3	-0.1
S60A	Water View	34.80	360	P	P	13 03 02.0	+1.7
	baz=180,SNR=8.4						
WVT	Waverly	34.85	344	P	P	13 03 00.4	-0.3
	baz=160						
WVT	Waverly	34.85	344	P	P	13 03 00.0	-0.8
WVT				pmax	pmax		
	comp=Z,100nm,0.9s						
WVT	Waverly	34.85	344	P	P	13 03 00.0	-0.8
WVT				IAmb	IAmb	13 03 02.0	
	comp=Z,100nm,0.8s						
S59A	Mechanicsville	34.86	359	P	P	13 03 02.2	+1.4
	baz=179,SNR=11						
S59A				S	S	13 08 23.9	+3.6
	baz=179						
S56A	Natural Bridge	34.88	356	P	P	13 03 02.5	+1.4
	baz=175,SNR=12						
S56A				S	S	13 08 24.4	+3.6
	baz=175						
ZON	Zonda	34.89	168	P	P	13 03 03.2	+1.9
ZON				pmax	pmax		
	comp=Z,34nm,1.2s						
ZON	Zonda	34.89	168	P	P	13 03 03.1	+1.9
S57A	Dark Hollow, R	34.92	357	P	P	13 03 02.6	+1.2
	baz=176,SNR=9.4						
S57A				S	S	13 08 25.1	+3.7
	baz=176						
S57A	Dark Hollow, R	34.92	357	P	P	13 03 02.8	+1.4
Z38A	Mt. Pleasant	34.97	332	P	P	13 03 01.5	-0.4
T50A	Nancy	34.98	348	P	P	13 03 02.3	+0.5
T50A				IAmb	IAmb	13 03 04.2	
	comp=Z,180nm,1.3s						
R58B	Mineral	35.08	358	P	P	13 03 04.1	+1.4
	baz=178,SNR=6.4						
R58B	Mineral	35.08	358	P	P	13 03 04.0	+1.4
X40A	Basin Creek Fa	35.08	336	P	P	13 03 02.4	-0.4
	baz=151,SNR=34						
X40A	Basin Creek Fa	35.08	336	P	P	13 03 03.1	+0.4
X40A				IAmb	IAmb	13 03 03.9	
	comp=Z,147nm,1.3s						
LPAR	Lepanto	35.13	340	P	P	13 03 03.1	0.0
S54A	Dingess, Beckl	35.17	353	P	P	13 03 05.1	+1.5
	baz=172,SNR=17						
S54A				S	S	13 08 28.2	+2.9
	baz=172						
S54A	Dingess, Beckl	35.17	353	P	P	13 03 04.9	+1.3
S54A				IAmb	IAmb	13 03 06.7	
	comp=Z,187nm,1.2s						
WHTX	Lake Whitney,	35.17	328	P	P	13 03 03.7	+0.1
	baz=142,SNR=20						
WHTX	Lake Whitney,	35.17	328	P	P	13 03 03.4	-0.2
HBAR	Harrisburg	35.21	340	P	P	13 03 04.0	+0.2
R59A	King George, V	35.29	359	P	P	13 03 06.3	+1.8
	baz=179,SNR=12						
R59A				S	S	13 08 31.8	+4.9
	baz=179						
CBN	Corbin Frederi	35.30	359	P	P	13 03 06.2	+1.6
	baz=178						
CBN	Corbin Frederi	35.30	359	P	P	13 03 05.9	+1.3
LNXT	Lenox	35.32	342	P	P	13 03 04.5	-0.3
S51A	Beattyville	35.34	350	P	P	13 03 05.9	+0.9
S51A				IAmb	IAmb	13 03 07.7	
	comp=Z,252nm,1.3s						
JCT	Junction City	35.35	324	P	P	13 03 05.1	-0.1
	baz=137,SNR=27						
JCT	Junction City	35.35	324	P	P	13 03 04.4	-0.8
JCT				pmax	pmax		
	comp=Z,214nm,1.6s						
JCT	Junction City	35.35	324	P	P	13 03 04.4	-0.8
JCT				IAmb	IAmb	13 03 06.7	
	comp=Z,214nm,1.6s						
UTMT	University of	35.35	343	P	P	13 03 04.6	-0.4
R60A	Leonardtown, M	35.36	360	P	P	13 03 06.8	+1.8
	baz=180						
R60A				S	S	13 08 32.7	+4.8
	baz=180						
GNAR	Gosnell	35.36	341	P	P	13 03 04.9	-0.3
GLAT	Glass	35.41	342	P	P	13 03 06.0	+0.5
R58A	Rapidan	35.41	358	P	P	13 03 07.5	+1.9

	baz=177,SNR=23						
R58A				S	S	13 08 33.5	+4.6
	baz=177						
MIAR	Mount Ida	35.43	335	P	P	13 03 05.3	-0.6
	baz=150,SNR=31						
MIAR	Mount Ida	35.43	335	P	P	13 03 04.7	-1.1
MIAR				pmax	pmax		
	comp=Z,42nm,0.9s						
MIAR	Mount Ida	35.43	335	P	P	13 03 04.7	-1.1
R57A	Stanardsville	35.44	357	P	P	13 03 07.4	+1.6
	baz=176,SNR=5.5						
R57A				S	S	13 08 34.0	+4.8
	baz=176						
PEBM	Pemiscott Bayo	35.45	341	P	P	13 03 06.2	+0.3
W41B	Gary Mavity, V	35.45	337	P	P	13 03 05.6	-0.3
	baz=152,SNR=35						
T47A	Sharon Grove	35.46	345	P	P	13 03 05.8	-0.2
R54A	Victor	35.51	354	P	P	13 03 08.1	+1.7
	baz=172,SNR=12						
R54A				S	S	13 08 33.7	+3.3
	baz=172						
WHAR	Wooly Hollow	35.57	337	P	P	13 03 05.6	-1.3
WHAR				IAmb	IAmb	13 03 08.1	
	comp=Z,137nm,1.0s						
HICK	Hickman	35.64	342	P	P	13 03 07.5	0.0
PENMO	Penman	35.68	342	P	P	13 03 08.2	+0.3
VA03	San Esteban	35.75	171	P	P	13 03 09.1	+0.4
R53A	Hurricane	35.77	353	P	P	13 03 09.2	+0.5
R53A				IAmb	IAmb	13 03 11.5	
	comp=Z,68nm,0.7s						
LCAR	Lake Charles	35.84	339	P	P	13 03 08.7	-0.5
HENM	Henderson Moun	35.88	342	P	P	13 03 09.5	0.0
HENM				IAmb	IAmb	13 03 10.7	
	comp=Z,204nm,1.1s						
T45A	Paducah	35.91	343	P	P	13 03 09.1	-0.7
PARMO	Parma	35.92	342	P	P	13 03 09.4	-0.5
Q59A	Harwood	35.95	360	P	P	13 03 11.9	+1.8
	baz=180,SNR=6.4						
Q59A				S	S	13 08 41.2	+4.2
	baz=180						
Q61A	Milford	35.98	1	P	P	13 03 12.5	+2.1
	baz=182						
FCAR	Ozark Folk Cen	36.03	338	P	P	13 03 10.3	-0.5
FCAR				IAmb	IAmb	13 03 11.7	
	comp=Z,153nm,1.1s						
Q58A	Fox Den Farm,	36.05	358	P	P	13 03 12.7	+1.7
	baz=178,SNR=21						
Q58A				S	S	13 08 42.6	+4.1
	baz=178						
W39A	Magazine	36.08	336	P	P	13 03 11.5	+0.1
	baz=150,SNR=52						
W39A	Magazine	36.08	336	P	P	13 03 11.4	+0.1
W39A				IAmb	IAmb	13 03 12.9	
	comp=Z,145nm,1.1s						
R50A	Paris	36.10	349	P	P	13 03 11.9	+0.5
R50A				IAmb	IAmb	13 03 14.0	
	comp=Z,128nm,0.9s						
Z35A	Perchaven, San	36.13	330	P	P	13 03 11.6	-0.2
PTGB	Pitanga	36.13	140	*e*P	P	13 03 10.1	-1.9
BB19B	Bebedouro	36.16	132	*e*P	P	13 03 10.9	-1.3
Q57A	Strasburg	36.17	357	P	P	13 03 14.0	+2.0
	baz=177,SNR=12						
Q57A				S	S	13 08 45.1	+4.7
	baz=177						
Q56A	Snyder Ridge,	36.21	356	P	P	13 03 14.5	+2.1
	baz=175,SNR=13						
Q56A				S	S	13 08 46.1	+5.0
	baz=175						
Q56A	Snyder Ridge,	36.21	356	P	P	13 03 14.4	+2.0
Q56A				IAmb	IAmb	13 03 16.1	
	comp=Z,245nm,1.6s						
PBMO	Poplar Bluff	36.24	341	P	P	13 03 11.6	-1.0
PBMO				IAmb	IAmb	13 03 13.8	
	comp=Z,112nm,0.8s						
Q53A	Leroy	36.24	353	P	P	13 03 14.2	+1.6
	baz=172,SNR=25						
Q53A				S	S	13 08 43.9	+2.4
	baz=172						
X37A	Clayton	36.25	333	P	P	13 03 12.4	-0.4
X37A				IAmb	IAmb	13 03 14.6	
	comp=Z,143nm,0.9s						
R49A	Shelbyville	36.27	348	P	P	13 03 13.1	+0.3
R49A				IAmb	IAmb	13 03 14.9	
	comp=Z,165nm,1.1s						
Q54A	Coxs Mills	36.29	354	P	P	13 03 14.4	+1.3
Q54A				IAmb	IAmb	13 03 16.1	
	comp=Z,134nm,1.1s						
JANB	Januaria	36.40	120	*e*P	P	13 03 13.8	-0.6
Q52A	Bidwell	36.44	352	P	P	13 03 15.1	+0.8
WCI	Wyandotte Cave	36.45	347	P	P	13 03 14.5	+0.1
	baz=163						
WCI	Wyandotte Cave	36.45	347	P	P	13 03 14.2	-0.2
WCI				pmax	pmax		
	comp=Z,80nm,0.8s						
WCI	Wyandotte Cave	36.45	347	P	P	13 03 14.2	-0.2
WCI				IAmb	IAmb	13 03 17.4	
	comp=Z,80nm,0.8s						
SDMD	Soldier’s Deli	36.50	359	P	P	13 03 15.9	+1.1
USIN	University of	36.53	345	P	P	13 03 14.2	-0.9
P57A	Homestead Farm	36.60	358	P	P	13 03 17.7	+2.1
	baz=178,SNR=10.0						
P57A				S	S	13 08 51.0	+4.2
	baz=178						
P57A	Homestead Farm	36.60	358	P	P	13 03 17.4	+1.8
P57A				IAmb	IAmb	13 03 19.6	
	comp=Z,205nm,1.6s						
P56A	Dayton Farm, R	36.66	357	P	P	13 03 18.2	+2.1
	baz=176,SNR=12						
Q51A	Peebles	36.66	351	P	P	13 03 16.9	+0.8
T42A	Van Buren	36.69	340	P	P	13 03 15.7	-0.8
T42A				IAmb	IAmb	13 03 17.2	
	comp=Z,146nm,0.9s						
P59A	Jarrettsville	36.70	0	P	P	13 03 18.2	+1.7
	baz=180						
S44A	Carbondale	36.72	343	P	P	13 03 16.2	-0.5
U40A	Yellville	36.72	338	P	P	13 03 16.7	-0.1
	baz=152,SNR=200						
U40A	Yellville	36.72	338	P	P	13 03 16.4	-0.3
SIUC	Southern Illin	36.73	343	P	P	13 03 16.2	-0.5
ABTX	Abilene, Hawle	36.84	326	P	P	13 03 17.9	0.0
	baz=139,SNR=55						
ABTX	Abilene, Hawle	36.84	326	P	P	13 03 17.6	-0.2
ABTX				IAmb	IAmb	13 03 19.4	
	comp=Z,234nm,1.2s						
P53A	Whipple	36.85	354	P	P	13 03 19.2	+1.5
P53A				IAmb	IAmb	13 03 20.9	
	comp=Z,139nm,0.8s						
MCWV	Mont Chateau	36.87	356	P	P	13 03 19.7	+1.7
	baz=174,SNR=9.5						
MCWV	Mont Chateau	36.87	356	P	P	13 03 18.8	+0.8
HPIG		36.90	313	P	P	13 03 19.5	+0.8
HPIG				IAmb	IAmb	13 03 21.6	
	comp=Z,89nm,1.1s						
P60A	Greenville	36.90	1	P	P	13 03 19.0	+0.8
	baz=181						
TX31	Lajitas Ar. Si	36.99	318	P	P	13 03 20.3	+1.0
TX32	Lajitas Array	36.99	318	P	P	13 03 19.8	+0.5
TX32				IAmb	IAmb	13 03 22.0	
	comp=Z,166nm,1.1s						
TXAR	Lajitas Array	36.99	318	P	P	13 03 20.4	+1.2
	comp=Z,72nm,0.9s,baz=144,slow=8.7,SNR=391						
TXAR				PP	PnPn	13 04 49.6	+0.5
	comp=Z,7.4nm,1.0s,baz=139,slow=8.4,SNR=2.6						
TXAR				PcP	PcP	13 05 38.6	+1.6
	comp=Z,3.9nm,0.7s,baz=145,slow=6.6,SNR=10						
TXAR				ScP	ScP	13 09 10.6	+0.8
	comp=Z,4.0nm,1.2s,baz=108,slow=4.1,SNR=4.9						
TXAR	Lajitas Array	36.99	318	P	P	13 03 20.6	+1.4
PSUB	Penn St. - Bra	37.02	1	P	P	13 03 20.6	+1.4
WUPA	West Chester U	37.03	1	P	P	13 03 20.4	+1.1
P51A	Williamsport	37.06	351	P	P	13 03 20.3	+0.8
P51A				IAmb	IAmb	13 03 21.9	
	comp=Z,86nm,1.1s						
HHAR	Hobbs	37.08	336	P	P	13 03 19.0	-0.8
P52A	Corning	37.08	353	P	P	13 03 20.8	+1.1
	baz=171,SNR=40						
P52A				S	S	13 08 55.6	+1.4
	baz=171						
P52A	Corning	37.08	353	P	P	13 03 20.7	+1.0
MVL	Millersville	37.08	0	P	P	13 03 21.3	+1.6
MGMO	Mountain Grove	37.21	339	P	P	13 03 20.1	-0.8
O58A	Lewisberry	37.21	359	P	P	13 03 22.7	+1.9
	baz=179,SNR=11						
O58A				S	S	13 09 01.0	+4.9
	baz=179						
O61A	Allentown	37.22	2	P	P	13 03 22.1	+1.3
	baz=183						
O57A	Amberson	37.31	358	P	P	13 03 23.5	+1.9
	baz=178,SNR=7.6						
O57A				S	S	13 09 01.9	+4.2
	baz=178						
PAGS	Pennsylvania G	37.31	360	P	P	13 03 22.5	+0.9
FVM	French Village	37.34	342	P	P	13 03 21.7	-0.3
FVM				pmax	pmax		
	comp=Z,464nm,1.3s						
FVM	French Village	37.34	342	P	P	13 03 21.6	-0.3
OLIL	Olney	37.37	345	P	P	13 03 22.0	-0.1
P49A	Miami Univ. Ec	37.38	349	P	P	13 03 22.2	-0.1
	baz=166,SNR=30						
P49A	Miami Univ. Ec	37.38	349	P	P	13 03 21.9	-0.4
P49A				IAmb	IAmb	13 03 23.8	
	comp=Z,148nm,1.0s						
O59A	Robesonia	37.40	0	P	P	13 03 24.2	+1.8
	baz=180,SNR=5.2						
U38A	Gravette	37.40	336	P	P	13 03 21.6	-0.8
U38A				IAmb	IAmb	13 03 23.2	
	comp=Z,198nm,1.1s						
BLO	Bloomington	37.40	347	P	P	13 03 22.5	+0.1
BLO				pmax	pmax		
	comp=Z,219nm,0.8s						
BLO	Bloomington	37.40	347	P	P	13 03 22.5	+0.1
O56A	Blue Knob Stat	37.40	357	P	P	13 03 24.5	+2.0
	baz=177,SNR=12						
O56A				S	S	13 09 03.4	+4.2
	baz=177						
O56A	Blue Knob Stat	37.40	357	P	P	13 03 24.3	+1.8
O60A	Telford	37.41	1	P	P	13 03 25.1	+2.6
	baz=182						
X34A	Smith Ranch, M	37.43	330	P	P	13 03 22.8	+0.1
X34A				IAmb	IAmb	13 03 24.4	
	comp=Z,179nm,1.1s						
O54A	Avella	37.44	355	P	P	13 03 23.8	+1.1
O54A				IAmb	IAmb	13 03 25.7	
	comp=Z,166nm,1.4s						
P48A	Milroy	37.45	349	P	P	13 03 22.4	-0.4
P48A				IAmb	IAmb	13 03 24.1	
	comp=Z,163nm,1.0s						
O52A	Adamsville	37.52	353	P	P	13 03 24.0	+0.6
TUL1	Leonard	37.55	334	P	P	13 03 23.6	-0.1
	baz=147,SNR=68						
TUL1				S	S	13 09 00.2	-1.2
	baz=147						
TUL1	Leonard	37.55	334	P	P	13 03 23.4	-0.3
O53A	New Philadelph	37.58	354	P	P	13 03 25.2	+1.3
	baz=172,SNR=28						
O53A				S	S	13 09 04.4	+2.6
	baz=172						
O53A	New Philadelph	37.58	354	P	P	13 03 25.0	+1.1
CCM	Cathedral Cave	37.67	341	P	P	13 03 23.9	-0.8
	baz=156						
CCM	Cathedral Cave	37.67	341	P	P	13 03 23.7	-1.0
CCM				pmax	pmax		
	comp=Z,136nm,0.9s						
CCM	Cathedral Cave	37.67	341	P	P	13 03 23.7	-1.0
CCM				IAmb	IAmb	13 03 25.4	
	comp=Z,136nm,0.9s						
LUPA	Lehigh Univers	37.70	1	P	P	13 03 27.1	+2.2
BO02	Sierra Bellavi	37.72	172	P	P	13 03 26.2	+1.0
FNO	Franklin	37.75	331	P	P	13 03 25.5	+0.1
Q44A	Meyer Farm, Va	37.77	344	P	P	13 03 24.6	-0.9
ACSO	Alum Creek Sta	37.78	352	P	P	13 03 26.6	+0.9
	baz=169,SNR=15						
ACSO	Alum Creek Sta	37.78	352	P	P	13 03 26.2	+0.6
ACSO				IAmb	IAmb	13 03 28.1	
	comp=Z,168nm,1.4s						
BRNJ	Basking Ridge	37.80	2	P	P	13 03 27.4	+1.6
BRNJ				IAmb	IAmb	13 03 29.3	
	comp=Z,105nm,1.2s						
N57A	Milroy	37.85	359	P	P	13 03 27.8	+1.6
	baz=178,SNR=6.2						
N57A				S	S	13 09 09.4	+3.6
	baz=178						
SLM	Saint Louis	37.88	342	P	P	13 03 26.0	-0.5
SLM				pmax	pmax		
	comp=Z,125nm,0.9s						
SLM	Saint Louis	37.88	342	P	P	13 03 26.0	-0.5
SLM				IAmb	IAmb	13 03 27.4	
	comp=Z,125nm,0.9s						
OKCSW	OKLAHOMA CITY	37.88	332	P	P	13 03 25.9	-0.6
N61A	South Mountain	37.89	3	P	P	13 03 29.1	+2.7
	baz=184						
OKCFA	Oklahoma City	37.90	332	P	P	13 03 25.8	-0.9
ITAB	Concordia	37.92	143	*e*P	P	13 03 25.4	-1.6
N58A	Sunbury	37.92	360	P	P	13 03 28.5	+1.7
	baz=180,SNR=8.1						
N58A				S	S	13 09 11.0	+4.0
	baz=180						
N58A	Sunbury	37.92	360	P	P	13 03 28.7	+1.9
O49A	Covington	37.95	350	P	P	13 03 26.6	-0.4
O49A				IAmb	IAmb	13 03 28.8	
	comp=Z,128nm,1.1s						
N60A	Cedar Hill Far	37.97	2	P	P	13 03 28.8	+1.6
	baz=182,SNR=5.4						
OK025	Westminster Rd	37.98	332	P	P	13 03 26.7	-0.6
P46A	Rosedale	37.98	346	P	P	13 03 26.7	-0.7
P46A				IAmb	IAmb	13 03 28.4	
	comp=Z,87nm,0.8s						
N59A	State Game Lan	38.01	1	P	P	13 03 29.6	+2.1
	baz=181,SNR=10						
N59A				S	S	13 09 12.7	+4.5
	baz=181						
N59A	State Game Lan	38.01	1	P	P	13 03 29.3	+1.8
N59A				IAmb	IAmb	13 03 31.1	
	comp=Z,313nm,2.0s						
OK030	Cody Creek RV	38.01	333	P	P	13 03 27.2	-0.4
WMOK	Wichita Mounta	38.01	329	P	P	13 03 27.3	-0.4
	baz=142,SNR=72						
WMOK	Wichita Mounta	38.01	329	P	P	13 03 27.0	-0.7
WMOK				pmax	pmax		
	comp=Z,144nm,1.2s						
WMOK	Wichita Mounta	38.01	329	P	P	13 03 27.0	-0.7
WMOK				IAmb	IAmb	13 03 28.7	
	comp=Z,144nm,1.1s						
N56A	West Decatur	38.04	358	P	P	13 03 29.6	+1.8
	baz=177,SNR=17						
N56A				S	S	13 09 12.6	+3.9
	baz=177						
OK031	S. Brethren Rd	38.05	333	P	P	13 03 27.4	-0.6
S39A	Bolivar	38.07	338	P	P	13 03 27.6	-0.6
S39A				IAmb	IAmb	13 03 28.8	
	comp=Z,217nm,1.1s						
N53A	Lisbon	38.10	355	P	P	13 03 28.8	+0.6
N53A				IAmb	IAmb	13 03 31.1	
	comp=Z,92nm,0.7s						
PAL	Palisades	38.16	3	P	P	13 03 31.3	+2.6
	baz=184						
PAL	Palisades	38.16	3	P	P	13 03 29.6	+0.9
PAL				pmax	pmax		
	comp=Z,42nm,0.8s						
PAL	Palisades	38.16	3	P	P	13 03 29.6	+0.9
BCOK	Bluff Creek, N	38.17	332	P	P	13 03 28.4	-0.5
QUOK	Quay	38.17	333	P	P	13 03 28.4	-0.6
N54A	Moraine State	38.18	356	P	P	13 03 30.7	+1.8
	baz=174,SNR=25						
N54A				S	S	13 09 13.7	+2.8
	baz=174						
N54A	Moraine State	38.18	356	P	P	13 03 30.5	+1.5
N54A				IAmb	IAmb	13 03 32.3	
	comp=Z,134nm,0.9s						
OK029	Liberty Lake	38.21	332	P	P	13 03 28.7	-0.6
TRNY	Table Rock, Ra	38.28	3	P	P	13 03 30.4	+0.6
TRNY				IAmb	IAmb	13 03 33.5	
	comp=Z,86nm,0.9s						
WSPT	Westport, CT	38.36	4	P	P	13 03 32.0	+1.7
WSPT				IAmb	IAmb	13 03 33.4	
	comp=Z,62nm,0.8s						
N51A	Ashland	38.38	353	P	P	13 03 30.7	+0.1
N51A				IAmb	IAmb	13 03 33.4	
	comp=Z,107nm,0.9s						
M57A	Sunshine Farm,	38.43	359	P	P	13 03 33.1	+2.1
	baz=179,SNR=19						
M57A				S	S	13 09 18.8	+4.3
	baz=179						
M57A	Sunshine Farm,	38.43	359	P	P	13 03 32.6	+1.6
M57A				IAmb	IAmb	13 03 34.7	
	comp=Z,91nm,0.8s						
M58A	Price’s Panora	38.46	360	S	S	13 09 18.6	+3.6
	baz=180						
M61A	Granite Spring	38.47	3	S	S	13 09 18.4	+3.3
	baz=184						
VAO	Valinhos	38.49	133	*e*P	P	13 03 30.2	-1.7
SLBS	Sierra La Lagu	38.50	306	P	P	13 03 34.1	+2.1
M56A	Emporium	38.60	358	P	P	13 03 34.2	+1.8
	baz=177,SNR=23						
M56A				S	S	13 09 20.5	+3.4
	baz=177						
M56A	Emporium	38.60	358	P	P	13 03 33.3	+0.8
P43A	Skaggs, Pawnee	38.60	344	P	P	13 03 31.3	-1.2
M55A	Ridgway	38.61	357	P	P	13 03 33.5	+1.0
M55A				IAmb	IAmb	13 03 35.6	
	comp=Z,86nm,1.1s						
M59A	Waymart	38.64	1	P	P	13 03 34.0	+1.2
	baz=182,SNR=7.9						
M59A				S	S	13 09 21.1	+3.5
	baz=182						
N49A	Columbus Grove	38.64	351	P	P	13 03 32.9	+0.1
N49A				IAmb	IAmb	13 03 34.6	
	comp=Z,116nm,0.9s						
KSPA	Keystone Colle	38.65	1	P	P	13 03 33.9	+1.1
M62A	Hamden	38.66	4	P	P	13 03 35.5	+2.6
	baz=186						
M62A				S	S	13 09 20.6	+2.7
	baz=186						
SFIN	Lafayette	38.69	347	P	P	13 03 32.6	-0.6
	baz=163,SNR=22						
SFIN	Lafayette	38.69	347	P	P	13 03 32.2	-0.9
SFIN				IAmb	IAmb	13 03 33.9	
	comp=Z,65nm,0.7s						
M63A	Gales Ferry	38.69	5	P	P	13 03 35.2	+2.0
	baz=187,SNR=5.8						
M63A	Gales Ferry	38.69	5	P	P	13 03 34.3	+1.1
M63A				IAmb	IAmb	13 03 36.6	
	comp=Z,71nm,0.8s						
M54A	Oil Creek Stat	38.70	356	P	P	13 03 35.0	+1.7
	baz=175,SNR=21						
M54A				S	S	13 09 21.9	+3.3
	baz=175						
M54A	Oil Creek Stat	38.70	356	P	P	13 03 34.4	+1.1
T35A	Sooner Cattle	38.70	334	P	P	13 03 32.6	-0.8
M53A	WI Miller and	38.71	355	P	P	13 03 34.8	+1.4
	baz=173,SNR=24						
M53A				S	S	13 09 20.3	+1.6
	baz=173						
M53A	WI Miller and	38.71	355	P	P	13 03 34.4	+1.1
M53A				IAmb	IAmb	13 03 36.3	
	comp=Z,196nm,1.2s						
O44A	Mansfield	38.80	345	P	P	13 03 32.9	-1.2
O44A				IAmb	IAmb	13 03 34.7	
	comp=Z,135nm,0.9s						
N47A	Urbana	38.87	349	P	P	13 03 34.5	-0.2
N47A				IAmb	IAmb	13 03 35.9	
	comp=Z,138nm,0.8s						
ALLY	Alegheny Colle	38.88	356	P	P	13 03 35.8	+1.1
M52A	Chesterland	38.88	354	P	P	13 03 35.3	+0.6
M52A				IAmb	IAmb	13 03 37.2	
	comp=Z,126nm,1.1s						
M50A	Fremont	38.94	352	P	P	13 03 35.6	+0.4
M50A				IAmb	IAmb	13 03 37.9	
	comp=Z,119nm,1.1s						
BSCB	Bom Sucesso	38.98	129	*e*P	P	13 03 35.5	-0.5
LPIG	La Paz	38.99	306	P	P	13 03 37.8	+1.9
	comp=Z,193nm,1.0s,baz=328,slow=0.9,SNR=25						
CROK	Carrier	39.03	332	P	P	13 03 35.0	-1.1
PET01	Itanhaem-SP	39.07	135	*e*P	P	13 03 34.3	-2.3
CLNB	Carlsbad	39.07	322	P	P	13 03 37.5	+0.8
L57A	Andrews Acres	39.09	360	P	P	13 03 38.1	+1.6
	baz=179,SNR=9.4						
L57A				S	S	13 09 28.2	+3.8
	baz=179						
L60A	Shokan	39.12	3	P	P	13 03 38.7	+1.9
	baz=184						
L58A	Harry Jones Me	39.13	1	P	P	13 03 38.4	+1.5
	baz=181,SNR=10						
L58A				S	S	13 09 28.7	+3.6
	baz=181						
L53A	Girard	39.19	355	P	P	13 03 38.5	+1.2
	baz=174,SNR=47						
L53A				S	S	13 09 28.2	+2.3
	baz=174						
KAN13	South Haven SW	39.22	333	P	P	13 03 37.9	+0.3
L56A	Greenwood	39.23	359	P	P	13 03 39.2	+1.5
	baz=178,SNR=11						
L56A				S	S	13 09 30.3	+3.6
	baz=178						
L56A	Greenwood	39.23	359	P	P	13 03 38.8	+1.1
L56A				IAmb	IAmb	13 03 40.8	
	comp=Z,112nm,1.2s						
L62A	Suffield	39.26	4	P	P	13 03 39.9	+2.0
	baz=186						
P40A	Paris	39.27	341	P	P	13 03 36.8	-1.2
P40A				IAmb	IAmb	13 03 38.5	
	comp=Z,108nm,1.1s						
BINY	Binghamton	39.28	1	P	P	13 03 40.0	+1.9
	baz=181,SNR=12						
BINY	Binghamton	39.28	1	P	P	13 03 39.4	+1.2
BINY				IAmb	IAmb	13 03 41.6	
	comp=Z,88nm,1.0s						
L59A	Walton	39.29	2	P	P	13 03 39.5	+1.3
	baz=182						
L59A				S	S	13 09 30.1	+2.5
	baz=182						
L59A	Walton	39.29	2	P	P	13 03 39.6	+1.3
ERPA	Erie	39.33	356	P	P	13 03 39.8	+1.3
	baz=174,SNR=16						
ERPA	Erie	39.33	356	P	P	13 03 39.3	+0.8
ERPA				IAmb	IAmb	13 03 41.3	
	comp=Z,114nm,0.9s						
GDL2	Guadalupe Moun	39.33	321	P	P	13 03 38.9	+0.1
L61A	Hillsdale 1, H	39.36	3	P	P	13 03 39.8	+1.1
	baz=185,SNR=5.9						
KAN14	Manchester OK	39.39	332	P	P	13 03 38.8	-0.3
HDIL	Hopedale	39.39	345	P	P	13 03 38.0	-1.0
	baz=160						
HDIL	Hopedale	39.39	345	P	P	13 03 38.0	-1.0
HDIL				IAmb	IAmb	13 03 39.4	
	comp=Z,129nm,0.7s						
U32A	Winter Ranch,	39.42	331	P	P	13 03 39.0	-0.3
BI02	San Fabin de	39.50	173	P	P	13 03 41.2	+1.1
WVNY	West Valley, N	39.54	357	P	P	13 03 41.7	+1.5
WVNY				IAmb	IAmb	13 03 43.4	
	comp=Z,96nm,0.8s						
MSTX	Muleshoe	39.60	325	P	P	13 03 41.4	+0.3
	baz=136,SNR=131						
MSTX	Muleshoe	39.60	325	P	P	13 03 41.3	+0.3
MNTX	Cornudas Mount	39.65	320	P	P	13 03 42.4	+1.0
	baz=131,SNR=471						
MNTX	Cornudas Mount	39.65	320	P	P	13 03 42.3	+1.0
AMTX	Amarillo	39.66	327	P	P	13 03 41.7	+0.2
	baz=138						
AMTX	Amarillo	39.66	327	P	P	13 03 41.5	0.0
AMTX				IAmb	IAmb	13 03 43.1	
	comp=Z,197nm,1.3s						
PARB	Paraibuna	39.67	132	*e*P	P	13 03 40.5	-1.2
L48A	N Adams	39.68	351	P	P	13 03 41.2	-0.2
L48A				IAmb	IAmb	13 03 43.0	
	comp=Z,223nm,1.5s						
KAN12	Harper NE Stat	39.69	333	P	P	13 03 41.5	0.0
K56A	Middlesex	39.79	359	P	P	13 03 43.6	+1.3
	baz=179,SNR=8.1						
K57A	Scipio Center	39.81	360	P	P	13 03 44.1	+1.6
	baz=180,SNR=16						
K57A				S	S	13 09 37.4	+2.1
	baz=180						
MMNY	Mt. Morris Dam	39.84	358	P	P	13 03 43.5	+0.8
MMNY				IAmb	IAmb	13 03 45.5	
	comp=Z,69nm,0.9s						
K58A	Earlville	39.85	1	P	P	13 03 44.3	+1.5
	baz=181,SNR=7.2						
K58A				S	S	13 09 39.2	+3.4
	baz=181						
K58A	Earlville	39.85	1	P	P	13 03 43.6	+0.8
P38A	Dawn	39.86	339	P	P	13 03 41.8	-1.1
P38A				IAmb	IAmb	13 03 43.4	
	comp=Z,83nm,0.8s						
M44A	Midewin, Midew	39.86	346	P	P	13 03 41.1	-1.8
M44A				IAmb	IAmb	13 03 43.0	
	comp=Z,182nm,1.4s						
K59A	Cooperstown	39.88	2	P	P	13 03 43.3	+0.2
	baz=182						
TRY	Troy	39.89	3	P	P	13 03 45.0	+1.8
TRY				IAmb	IAmb	13 03 46.3	
	comp=Z,168nm,1.8s						
AAM	Ann Arbor	39.91	352	P	P	13 03 43.9	+0.6
	baz=169,SNR=6.5						
AAM	Ann Arbor	39.91	352	P	P	13 03 43.3	0.0
AAM				pmax	pmax		
	comp=Z,329nm,2.0s						
AAM	Ann Arbor	39.91	352	P	P	13 03 43.3	0.0

AAM				IAmb	IAmb	13 03 45.3	
	comp=Z,329nm,2.0s						
N41A	Harden Midland	39.97	343	P	P	13 03 42.6	-1.2
N41A				IAmb	IAmb	13 03 44.1	
	comp=Z,98nm,0.6s						
GDU01	Guandu, BA	40.06	115	eP	P	13 03 44.5	-0.5
L46A	Eue Claire	40.08	349	P	P	13 03 44.0	-0.7
L46A				IAmb	IAmb	13 03 45.4	
	comp=Z,159nm,1.0s						
NBPA	Parau_RN	40.18	102	eP	P	13 03 46.2	+0.2
HQIL	Hanson Quary C	40.21	347	P	P	13 03 44.3	-1.5
HQIL				IAmb	IAmb	13 03 46.5	
	comp=Z,111nm,0.8s						
CNLB	Canela	40.22	144	eP	P	13 03 45.0	-1.1
K50A	Casco	40.24	353	P	P	13 03 45.8	-0.2
K50A				IAmb	IAmb	13 03 47.7	
	comp=Z,149nm,1.2s						
MEDO	Medina	40.29	358	P	P	13 03 46.9	+0.6
MEDO				IAmb	IAmb	13 03 49.2	
	comp=Z,300nm,1.7s						
J56A	Wolcott	40.36	360	P	P	13 03 48.4	+1.4
	baz=179,SNR=38						
J56A				S	S	13 09 45.6	+2.4
	baz=179						
J56A	Wolcott	40.36	360	P	P	13 03 47.6	+0.6
J56A				IAmb	IAmb	13 03 49.8	
	comp=Z,119nm,0.7s						
J55A	Hilton	40.37	358	P	P	13 03 47.9	+0.8
J55A				IAmb	IAmb	13 03 50.3	
	comp=Z,74nm,0.8s						
ESAR	Angra dos Reis	40.37	131	eP	P	13 03 47.2	-0.2
J54A	Appleton	40.40	358	P	P	13 03 48.4	+1.1
J54A				IAmb	IAmb	13 03 50.2	
	comp=Z,142nm,1.6s						
J60A	Lant Hill Farm	40.42	3	P	P	13 03 49.6	+2.1
	baz=185						
KSU1	Kansas State U	40.58	336	P	P	13 03 48.4	-0.6
	baz=148,SNR=88						
KSU1	Kansas State U	40.58	336	P	P	13 03 48.3	-0.6
J59A	Piesco	40.58	2	P	P	13 03 50.8	+1.9
	baz=183,SNR=9.9						
J59A				S	S	13 09 50.8	+4.1
	baz=183						
J59A	Piesco	40.58	2	P	P	13 03 50.1	+1.3
L44A	Lake County Fo	40.58	347	P	P	13 03 48.7	-0.1
	baz=162,SNR=5.2						
L44A	Lake County Fo	40.58	347	P	P	13 03 47.6	-1.2
PLTB	Pedras Altas	40.61	149	eP	P	13 03 47.0	-2.2
MAN01	Angra dos Reis	40.64	130	eP	P	13 03 49.4	-0.2
NBLI	Livramento-PB	40.67	105	eP	P	13 03 49.6	-0.5
VAS01	Vassouras-RJ	40.72	129	eP	P	13 03 50.0	-0.2
SJMB	Sao Joao De Ma	40.72	123	eP	P	13 03 50.0	-0.3
I58A	Old Forge	40.79	2	P	P	13 03 52.2	+1.6
	baz=182,SNR=18						
I58A				S	S	13 09 52.5	+2.7
	baz=182						
N38A	Joes South For	40.80	340	P	P	13 03 49.5	-1.1
N38A				IAmb	IAmb	13 03 51.1	
	comp=Z,142nm,0.8s						
L42A	Oliver, Polo	40.85	345	P	P	13 03 49.5	-1.5
L42A				IAmb	IAmb	13 03 51.2	
	comp=Z,139nm,1.2s						
R32A	Long Quarter,	40.93	333	P	P	13 03 51.3	-0.5
R32A				IAmb	IAmb	13 03 53.0	
	comp=Z,102nm,1.1s						
I59A	Olmsteadville	40.94	3	P	P	13 03 53.6	+1.9
	baz=184						
I59A				S	S	13 09 55.5	+3.6
	baz=184						
J47A	Sunmer	41.01	351	P	P	13 03 51.6	-0.7
J47A				IAmb	IAmb	13 03 53.7	
	comp=Z,339nm,1.5s						
PECO	Prince Edward	41.02	359	P	P	13 03 52.0	-0.3
PECO				IAmb	IAmb	13 03 54.9	
	comp=Z,323nm,1.9s						
I60A	Shoreham	41.02	3	P	P	13 03 54.4	+2.1
	baz=185						
I60A				S	S	13 09 57.7	+4.7
	baz=185						
BSFB	Barra de Sao F	41.06	123	eP	P	13 03 52.9	-0.2
I51A	Listowel	41.09	355	P	P	13 03 53.8	+0.8
	baz=173,SNR=41						
NCB	Newcomb	41.10	2	P	P	13 03 53.9	+0.9
K43A	Burlington	41.18	347	P	P	13 03 52.5	-1.2
K43A				IAmb	IAmb	13 03 53.9	
	comp=Z,90nm,0.9s						
NAN01	Guarapari, ES	41.23	121	eP	P	13 03 54.7	+0.2
L40A	Anamosa	41.33	343	P	P	13 03 53.9	-1.0
L40A				IAmb	IAmb	13 03 55.4	
	comp=Z,105nm,0.8s						
RCBR	Riachuelo	41.38	102	P	P	13 03 56.2	+0.3
	comp=Z,14nm,0.5s,baz=335,slow=5.6,SNR=13						
RCBR	Riachuelo	41.38	102	ceP	P	13 03 57.5	+1.7
RCBR				pmax	pmax		
	comp=Z,47nm,1.7s						
RCBR	Riachuelo	41.38	102	P	P	13 03 55.9	+0.1
RCBR	Riachuelo	41.38	102	eP	P	13 03 55.4	-0.4
DUB01	Friburgo-RJ	41.44	128	eP	P	13 03 55.6	-0.6
LBNH	Lisbon	41.52	5	P	P	13 03 58.3	+1.8
	baz=187						
LBNH	Lisbon	41.52	5	P	P	13 03 57.6	+1.1
LBNH				pmax	pmax		
	comp=Z,47nm,0.9s						
LBNH	Lisbon	41.52	5	P	P	13 03 57.5	+1.1
H58A	Gabriels	41.55	2	P	P	13 03 58.0	+1.3
	baz=184,SNR=12						
H57A	Richville	41.55	1	P	P	13 03 58.0	+1.3
	baz=182,SNR=11						
DELO	Deloro Mine	41.61	359	P	P	13 03 57.9	+0.7
LC01	Cunco	41.65	175	P	P	13 03 58.0	+0.4
RIB01	Linhares ES	41.66	123	eP	P	13 03 57.0	-1.0
H53A	Bobcaygeon	41.70	358	P	P	13 03 58.8	+0.9
	baz=177,SNR=21						
H53A				S	S	13 10 05.0	+1.9
	baz=177						
N35A	Tabor	41.71	338	P	P	13 03 57.0	-1.1
N35A				IAmb	IAmb	13 03 58.8	
	comp=Z,197nm,0.9s						
CBKS	Cedar Bluff	41.72	332	P	P	13 03 58.6	+0.4
	baz=144,SNR=33						
CBKS	Cedar Bluff	41.72	332	P	P	13 03 57.9	-0.3
CBKS				pmax	pmax		
	comp=Z,193nm,1.0s						
CBKS	Cedar Bluff	41.72	332	P	P	13 03 57.9	-0.3
CBKS				IAmb	IAmb	13 03 59.8	
	comp=Z,193nm,0.9s						
LONY	Lake Ozonia	41.73	2	P	P	13 03 59.4	+1.2
	baz=183,SNR=6.6						
LONY	Lake Ozonia	41.73	2	P	P	13 03 58.8	+0.6
121A	Cookes Peak, D	41.74	319	P	P	13 04 01.0	+2.2
	baz=129,SNR=176						
121A	Cookes Peak, D	41.74	319	P	P	13 04 00.9	+2.2
SCIA	State Center	41.79	341	P	P	13 03 58.0	-0.8
	baz=154,SNR=5.8						
SCIA	State Center	41.79	341	P	P	13 03 57.9	-0.8
H59A	Cadyville	41.80	3	P	P	13 04 00.5	+1.8
	baz=184,SNR=7.5						
H61A	Lyndonville	41.81	5	P	P	13 04 01.3	+2.4
	baz=187						
JFWS	Jewell Farm	41.85	345	P	P	13 03 58.5	-0.7
	baz=159,SNR=45						
JFWS	Jewell Farm	41.85	345	P	P	13 03 58.2	-1.0
JFWS				pmax	pmax		
	comp=Z,144nm,0.7s						
JFWS	Jewell Farm	41.85	345	P	P	13 03 58.1	-1.0
JFWS				IAmb	IAmb	13 03 59.8	
	comp=Z,144nm,0.7s						
CAM01	Campos-RJ	41.87	127	eP	P	13 03 58.7	-0.9
HSIG		41.94	312	P	P	13 04 00.2	+0.1
FRNY	Flat Rock	41.99	3	P	P	13 04 00.9	+0.6
ALF01	Guarapari-ES	42.01	125	eP	P	13 03 60.0	-0.8
BNM	Barren Site	42.04	321	P	P	13 04 02.1	+1.0
SRIG	Santa Rosalia	42.05	309	P	P	13 04 01.3	+0.3
SRIG				IAmb	IAmb	13 04 04.3	
	comp=Z,136nm,1.0s						
319A	Douglas	42.05	316	P	P	13 04 02.7	+1.5
319A				IAmb	IAmb	13 04 04.5	
	comp=Z,292nm,1.1s						
PLVO	Plevna	42.12	359	P	P	13 04 02.3	+0.9
Y22D	IRIS PASSCAL I	42.17	321	P	P	13 04 04.5	+2.4
	baz=131,SNR=23						
Y22D	IRIS PASSCAL I	42.17	321	P	P	13 04 03.7	+1.6
Y22D				IAmb	IAmb	13 04 07.9	
	comp=Z,282nm,1.1s						
G57A	Newington	42.20	2	P	P	13 04 03.0	+1.0
	baz=182,SNR=12						
LENM	Lemitar	42.27	321	P	P	13 04 03.7	+0.8
G58A	Ormstown	42.28	3	P	P	13 04 04.1	+1.5
	baz=184,SNR=7.8						
G58A				S	S	13 10 15.0	+3.5
	baz=184						
N33A	J Bar K, Exete	42.31	336	P	P	13 04 01.6	-1.4
K38A	Parkersburg	42.32	342	P	P	13 04 01.8	-1.2
K38A				IAmb	IAmb	13 04 03.4	
	comp=Z,204nm,0.9s						
G60A	Masonville	42.34	4	S	S	13 10 16.5	+4.1
	baz=186						
I42A	Draeger Farm,	42.44	347	P	P	13 04 03.4	-0.5
I42A				IAmb	IAmb	13 04 04.9	
	comp=Z,173nm,0.8s						
ANMO	Albuquerque	42.47	323	P	P	13 04 06.0	+1.5
	comp=Z,189nm,0.9s,baz=137,slow=9.2,SNR=297						
ANMO				ScP	ScP	13 09 31.8	+0.8
	comp=Z,5.0nm,1.3s,baz=144,slow=11,SNR=3.6						
ANMO	Albuquerque	42.47	323	P	P	13 04 06.2	+1.6
	baz=132						
ANMO	Albuquerque	42.47	323	d iP	P	13 04 05.7	+1.2
ANMO				pmax	pmax		
	comp=Z,270nm,1.1s						
ANMO	Albuquerque	42.47	323	P	P	13 04 05.6	+1.1
G54A	Lake Saint Pet	42.51	358	P	P	13 04 05.5	+1.1
	baz=178,SNR=30						
G54A				S	S	13 10 16.3	+1.4
	baz=178						
GLMI	Grayling	42.52	351	P	P	13 04 04.8	+0.2
	baz=168						
GLMI	Grayling	42.52	351	P	P	13 04 04.1	-0.5
GLMI				IAmb	IAmb	13 04 05.9	
	comp=Z,296nm,1.9s						
MOQ	Mont Orford	42.55	4	P	P	13 04 06.4	+1.5
G61A	St-Isidore-de-	42.59	5	S	S	13 10 19.9	+3.8
	baz=187						
G62A	West of Eustis	42.62	6	P	P	13 04 06.5	+1.1
NBRF	Rio Formoso -	42.73	106	eP	P	13 04 06.0	-0.8
H43A	Windswept, Lux	42.74	348	P	P	13 04 06.1	-0.2
H43A				IAmb	IAmb	13 04 07.2	
	comp=Z,104nm,0.7s						
T25A	Trinidad	42.81	327	P	P	13 04 09.1	+1.8
	baz=137,SNR=70						
I40A	Norwalk	42.86	345	P	P	13 04 06.1	-1.2
I40A				IAmb	IAmb	13 04 07.9	
	comp=Z,106nm,0.8s						
G45A	Suttons Bay	42.90	350	P	P	13 04 06.7	-0.9
F57A	Harrington	42.92	2	P	P	13 04 09.8	+2.0
	baz=183						
L34A	Svendsen Farm,	42.95	338	P	P	13 04 06.9	-1.1
L34A				IAmb	IAmb	13 04 08.6	
	comp=Z,167nm,1.0s						
ALGO	Algonquin Park	43.06	358	P	P	13 04 09.8	+0.9
	baz=178,SNR=31						
BGNE	Belgrade	43.16	336	P	P	13 04 09.5	-0.3
	baz=148,SNR=13						
BGNE	Belgrade	43.16	336	P	P	13 04 09.3	-0.5
KSCO	Kaye Shedlock’	43.27	330	P	P	13 04 11.7	+0.8
	baz=140,SNR=17						
KSCO	Kaye Shedlock’	43.27	330	P	P	13 04 11.1	+0.3
KSCO				IAmb	IAmb	13 04 13.1	
	comp=Z,190nm,1.2s						
F61A	St Evariste	43.32	6	P	P	13 04 12.2	+1.3
	baz=188						
TRQ	Mont Tremblant	43.34	2	P	P	13 04 11.0	-0.2
E55A	Montcerf-Lytto	43.54	0	P	P	13 04 13.8	+1.1
	baz=181,SNR=20						
E58A	La Victoria	43.54	3	P	P	13 04 14.3	+1.6
	baz=185,SNR=8.3						
PLCA	Paso Flores	43.60	174	P	P	13 04 15.1	+1.7
	comp=Z,17nm,1.0s,baz=347,slow=9.4,SNR=28						
PLCA	Paso Flores	43.60	174	P	P	13 04 13.5	+0.1
PLCA				pmax	pmax		
	comp=Z,31nm,1.1s						
PLCA	Paso Flores	43.60	174	P	P	13 04 13.4	+0.1
TUC	Tucson	43.64	316	P	P	13 04 15.2	+1.4
	baz=126						
TUC	Tucson	43.64	316	P	P	13 04 15.0	+1.1
TUC				pmax	pmax		
	comp=Z,182nm,1.2s						
TUC	Tucson	43.64	316	P	P	13 04 14.9	+1.1
TUC				IAmb	IAmb	13 04 16.7	
	comp=Z,182nm,1.1s						
E56A	St. Veronique	43.64	1	P	P	13 04 14.8	+1.2
	baz=182,SNR=11						
E59A	St. Maurice	43.70	4	P	P	13 04 15.7	+1.8
	baz=186						
I37A	Lemond, Waseca	43.76	342	P	P	13 04 13.0	-1.5
I37A				IAmb	IAmb	13 04 14.6	
	comp=Z,120nm,0.8s						
E61A	Lac Etchemin	43.82	6	P	P	13 04 17.5	+2.4
	baz=189						
SDCO	Great Sand Dun	43.85	326	P	P	13 04 17.5	+1.8
	baz=136,SNR=84						
SDCO	Great Sand Dun	43.85	326	P	P	13 04 17.4	+1.8
SDCO				IAmb	IAmb	13 04 18.8	
	comp=Z,213nm,1.0s						
E46A	Sault Ste Mari	43.99	352	P	P	13 04 15.6	-0.7
G40A	Rib Lake	44.04	346	P	P	13 04 15.6	-1.2
G40A				IAmb	IAmb	13 04 17.9	
	comp=Z,207nm,1.1s						
F42A	Maple Grove Fa	44.05	348	P	P	13 04 16.1	-0.7
F42A				IAmb	IAmb	13 04 17.9	
	comp=Z,164nm,1.2s						
E63A	Oxbow	44.06	8	P	P	13 04 19.1	+2.2
	baz=192						
D55A	Sainte-Anne-du	44.11	1	P	P	13 04 18.3	+1.1
	baz=181,SNR=16						
D56A	ZEC Mazanza, M	44.16	2	P	P	13 04 19.0	+1.4
	baz=182,SNR=14						
D60A	Saint Jean D’O	44.26	5	P	P	13 04 20.1	+1.7
	baz=188						
D59A	Saint-Raymond	44.27	5	P	P	13 04 20.8	+2.2
	baz=187						
D58A	Chemin du LacG	44.29	3	P	P	13 04 20.1	+1.4
	baz=185,SNR=13						
E43A	Lone Tree Farm	44.42	350	P	P	13 04 19.1	-0.7
K31A	O'Neill	44.43	336	P	P	13 04 19.1	-0.8
OGNE	Ogallala	44.48	332	P	P	13 04 21.1	+0.6
	baz=142,SNR=29						
OGNE	Ogallala	44.48	332	P	P	13 04 20.6	+0.2
Q24A	Divide	44.54	328	P	P	13 04 22.1	+0.9
	baz=137,SNR=30						
ECSD	EROS Data Cent	44.57	339	P	P	13 04 19.8	-1.3
	baz=151,SNR=68						
ECSD	EROS Data Cent	44.57	339	P	P	13 04 19.7	-1.3
ECSD				IAmb	IAmb	13 04 21.1	
	comp=Z,179nm,1.3s						
LATQ	La Tuque	44.58	4	P	P	13 04 22.5	+1.6
	baz=185,SNR=24						
LATQ	La Tuque	44.58	4	P	P	13 04 21.9	+0.9
COWI	Conover	44.59	347	P	P	13 04 20.4	-0.7
COWI				IAmb	IAmb	13 04 22.4	
	comp=Z,122nm,0.9s						
S22A	4UR Ranch, Cre	44.60	325	P	P	13 04 23.2	+1.6
	baz=134,SNR=196						
D61A	St Aubert, Com	44.62	6	P	P	13 04 23.2	+2.0
	baz=189,SNR=12						
W18A	Petrified Fore	44.62	320	P	P	13 04 23.6	+1.7
	baz=129,SNR=59						
W18A	Petrified Fore	44.62	320	P	P	13 04 23.1	+1.3
SPMN	Marine on St.	44.69	344	P	P	13 04 20.8	-1.1
	baz=157,SNR=25						
SPMN	Marine on St.	44.69	344	P	P	13 04 21.0	-0.9
SPMN				IAmb	IAmb	13 04 22.3	
	comp=Z,277nm,1.3s						
214A	Organ Pipe Nat	44.87	314	P	P	13 04 25.1	+1.6
	baz=123,SNR=35						
214A	Organ Pipe Nat	44.87	314	P	P	13 04 24.4	+0.9
214A				IAmb	IAmb	13 04 26.7	
	comp=Z,185nm,1.1s						
PIX	Pinacate	45.12	314	P	P	13 04 26.7	+1.2
MVCO	Mesa Verde	45.21	323	P	P	13 04 27.5	+1.1
	baz=132,SNR=80						
MVCO	Mesa Verde	45.21	323	P	P	13 04 26.7	+0.3
MVCO				IAmb	IAmb	13 04 29.1	
	comp=Z,361nm,1.6s						
BATG	Bathurst New B	45.27	10	P	P	13 04 27.2	+0.8
ISCO	Idaho Springs	45.39	328	P	P	13 04 29.1	+1.2
	baz=137						
ISCO	Idaho Springs	45.39	328	P	P	13 04 28.7	+0.8
ISCO				pmax	pmax		
	comp=Z,376nm,1.9s						
ISCO	Idaho Springs	45.39	328	P	P	13 04 28.7	+0.8
ISCO				IAmb	IAmb	13 04 30.7	
	comp=Z,376nm,1.9s						
F36A	Milaca	45.47	343	P	P	13 04 27.1	-1.0
F36A				IAmb	IAmb	13 04 28.5	
	comp=Z,254nm,1.4s						
E38A	The Farm, Brul	45.63	345	P	P	13 04 28.8	-0.5
E38A				IAmb	IAmb	13 04 30.6	
	comp=Z,156nm,0.9s						
SMCO	Snowmass	45.68	327	P	P	13 04 31.2	+0.9
PV01	Paradox Valley	45.87	324	P	P	13 04 32.8	+1.2
PV01				IAmb	IAmb	13 04 34.6	
	comp=Z,186nm,1.2s						
WUAZ	Wupatki	45.93	319	P	P	13 04 33.6	+1.5
	baz=127,SNR=35						
WUAZ	Wupatki	45.93	319	P	P	13 04 33.1	+1.1
WUAZ				IAmb	IAmb	13 04 35.0	
	comp=Z,119nm,1.1s						
PV15	Paradox Valley	45.95	325	P	P	13 04 33.3	+1.0
PV15				IAmb	IAmb	13 04 35.3	
	comp=Z,239nm,1.1s						
SUSD	Miller	46.04	338	P	P	13 04 31.3	-1.2
	baz=148,SNR=18						
SUSD	Miller	46.04	338	P	P	13 04 31.7	-0.9
SUSD				IAmb	IAmb	13 04 33.2	
	comp=Z,218nm,0.9s						
LSQQ	Lebel-sur-Quev	46.14	360	P	P	13 04 33.9	+0.6
	baz=179						
F33A	5 Mile Ranch,	46.31	341	P	P	13 04 33.1	-1.5
SPX	San Pedro Mart	46.33	312	P	P	13 04 36.2	+0.7
N23A	Red Feather La	46.36	329	P	P	13 04 36.6	+1.1
	baz=137,SNR=53						
MATQ	Matagami	46.85	359	P	P	13 04 39.2	+0.4
	baz=178,SNR=31						
EYMN	Ely	46.87	346	P	P	13 04 38.1	-0.8
	baz=159,SNR=62						
EYMN	Ely	46.87	346	P	P	13 04 37.7	-1.2
EYMN				IAmb	IAmb	13 04 39.6	
	comp=Z,82nm,0.8s						
GLA	Glamis	46.89	314	P	P	13 04 40.9	+1.4
	baz=122,SNR=8.3						
GLA	Glamis	46.89	314	P	P	13 04 41.1	+1.7
GLA				pmax	pmax		
	comp=Z,161nm,1.4s						
GLA	Glamis	46.89	314	P	P	13 04 41.1	+1.7
GLA				IAmb	IAmb	13 04 42.3	
	comp=Z,161nm,1.4s						
O20A	White River Ci	47.05	327	P	P	13 04 41.9	+1.1
	baz=134,SNR=37						
O20A	White River Ci	47.05	327	P	P	13 04 41.1	+0.4
O20A				IAmb	IAmb	13 04 44.6	
	comp=Z,162nm,1.4s						
U15A	North Rim	47.07	320	P	P	13 04 41.7	+0.7
U15A				IAmb	IAmb	13 04 44.2	
	comp=Z,194nm,1.6s						
PDMCI	Parker Dam,Lak	47.08	316	P	P	13 04 42.2	+1.3
	baz=124,SNR=31						
ESJX	Sierra Juarez	47.16	313	P	P	13 04 42.8	+1.0
W13A	Hualapai Mount	47.35	317	P	P	13 04 44.1	+1.0
SWSC	Sam W. Stewart	47.53	314	P	P	13 04 45.7	+1.4
	baz=121,SNR=12						
RWWY	Rawlins	47.59	329	P	P	13 04 45.6	+0.6
RWWY				IAmb	IAmb	13 04 47.6	
	comp=Z,265nm,1.2s						
RWWY				PcP	PcP	13 06 13.5	+1.2
IKP	In-Ko-Pah, Jac	47.61	313	P	P	13 04 46.6	+1.6
	baz=120,SNR=13						
CCX	Cicese	47.63	312	P	P	13 04 46.7	+1.6
BC3	Big Chuckawall	47.65	315	P	P	13 04 46.7	+1.3
	baz=122,SNR=38						
NEE2	Needles Airpor	47.66	317	P	P	13 04 46.7	+1.3
	baz=124						
D32A	Dogwood Acres,	47.68	341	P	P	13 04 43.9	-1.3
IRM	Iron Mountain	47.70	315	P	P	13 04 47.3	+1.6
	baz=123,SNR=104						
B35A	Bob, Littlefor	47.81	344	P	P	13 04 45.5	-0.8
B35A				IAmb	IAmb	13 04 47.4	
	comp=Z,122nm,0.9s						
CBX	Cerro Bola	47.84	312	P	P	13 04 47.7	+0.7
RSSD	Black Hills	47.89	333	P	P	13 04 48.1	+0.9
	baz=142						
RSSD	Black Hills	47.89	333	P	P	13 04 47.7	+0.5
RSSD				pmax	pmax		
	comp=Z,432nm,1.3s						
RSSD	Black Hills	47.89	333	P	P	13 04 47.7	+0.5
TKX	Tecate	47.93	313	P	P	13 04 48.6	+1.2
K22A	Casper	47.95	330	P	P	13 04 48.3	+0.7
	baz=138,SNR=35						
K22A	Casper	47.95	330	P	P	13 04 48.1	+0.5
K22A				IAmb	IAmb	13 04 49.8	
	comp=Z,127nm,1.1s						
MONP2	Monument Peak	47.95	313	P	P	13 04 49.1	+1.2
	baz=120						
BAR	Barrett	48.03	313	P	P	13 04 48.9	+0.6
BELC	Belle Mtn. Jos	48.22	315	P	P	13 04 51.2	+1.4
	baz=122,SNR=88						
TJX	Tijuana	48.23	312	P	P	13 04 51.4	+1.7
MVU	Marysvale	48.29	322	P	P	13 04 51.1	+0.8
PFO	Pinyon Flats O	48.35	314	P	P	13 04 51.7	+1.0
	comp=Z,34nm,1.1s,baz=116,slow=6.8,SNR=39						
PFO				PcP	PcP	13 06 15.9	+0.9
	comp=Z,4.9nm,0.9s,baz=140,slow=5.6,SNR=3.7						
PFO				ScP	ScP	13 09 56.4	+1.0
	comp=Z,3.0nm,0.7s,baz=111,slow=2.5,SNR=7.6						
PFO	Pinyon Flats O	48.35	314	P	P	13 04 52.2	+1.4
	baz=121,SNR=9.9						
PFO	Pinyon Flats O	48.35	314	P	P	13 04 51.4	+0.6
AGMN	Agassiz Nation	48.36	343	P	P	13 04 49.7	-0.8
	baz=154						
AGMN	Agassiz Nation	48.36	343	P	P	13 04 49.5	-0.9
AGMN				IAmb	IAmb	13 04 51.2	
	comp=Z,237nm,1.2s						
GMRC	Granite Mounta	48.39	316	P	P	13 04 52.4	+1.3
	baz=122,SNR=17						
109C	Camp Elliot, M	48.45	313	P	P	13 04 52.6	+1.2
	baz=120,SNR=16						
109C	Camp Elliot, M	48.45	313	P	P	13 04 52.3	+0.9
109C				IAmb	IAmb	13 04 54.2	
	comp=Z,123nm,1.4s						
E28A	Huff	48.49	338	P	P	13 04 51.1	-0.5
MURC	Murrieta	48.87	314	P	P	13 04 56.2	+1.5
	baz=120,SNR=34						
HEC	Hector,Ludlow	48.89	316	P	P	13 04 56.5	+1.7
	baz=122,SNR=12						
SHPR	Sheep Range	48.99	318	P	P	13 04 56.5	+0.8
SHPR				IAmb	IAmb	13 04 58.6	
	comp=Z,100nm,1.2s						
BBRC	Big Bear Solar	49.01	315	P	P	13 04 57.9	+1.9
	baz=121,SNR=7.5						
MDND	Maddock	49.17	340	P	P	13 04 56.2	-0.5
	baz=149,SNR=26						
MDND	Maddock	49.17	340	P	P	13 04 56.2	-0.5
MDND				IAmb	IAmb	13 04 57.7	
	comp=Z,182nm,1.1s						
SHOC	Shoshone, Teco	49.41	317	P	P	13 05 00.2	+1.4
	baz=123,SNR=28						
BFSC	Mount Baldy Ra	49.52	314	P	P	13 05 00.9	+1.1
	baz=120,SNR=22						
SCI2	San Clemente I	49.56	312	P	P	13 05 01.5	+1.7
	baz=118,SNR=6.2						
BW06	Boulder Array	49.59	328	P	P	13 05 00.5	+0.3
	baz=134,SNR=103						
BW06	Boulder Array	49.59	328	P	P	13 05 00.1	-0.1
BW06				IAmb	IAmb	13 05 02.1	
	comp=Z,233nm,1.5s						
PD31	Pinedale Array	49.59	328	P	P	13 05 00.1	-0.1
PD31				IAmb	IAmb	13 05 02.1	
	comp=Z,212nm,1.5s						
PDAR	Pinedale Array	49.59	328	P	P	13 05 00.3	+0.1
	comp=Z,26nm,0.8s,baz=124,slow=10,SNR=145						
PDAR				ScP	ScP	13 10 01.2	+0.7
	comp=Z,2.2nm,1.1s,baz=128,slow=2.4,SNR=4.3						
PDAR				LR	LR	13 30 08.7	
	comp=Z,135nm,18.7s,baz=142,slow=41						
CIS	Catalina Islan	49.66	313	P	P	13 05 02.2	+1.5
	baz=119,SNR=18						
DUG	Dugway, Tooele	49.71	323	P	P	13 05 02.1	+1.1
	baz=129,SNR=9.8						
FMP	Fort Macarthur	49.72	313	P	P	13 05 02.6	+1.5
	baz=119						
MWC	Mount Wilson	49.80	314	P	P	13 05 02.6	+0.7
MWC				pmax	pmax		
	comp=Z,306nm,1.9s						
MWC	Mount Wilson	49.80	314	P	P	13 05 02.6	+0.7
MWC				IAmb	IAmb	13 05 04.8	
	comp=Z,306nm,1.9s						
PASC	Pasadena Art C	49.87	314	P	P	13 05 03.4	+1.2
PASC				IAmb	IAmb	13 05 05.2	

	comp=Z,347nm,1.8s						
TPNV	**Topopah Spring**	**49.97**	**318**	P	**P**	**13 05 04.7**	**+1.5**
	baz=124,SNR=5.5						
TPNV	**Topopah Spring**	**49.97**	**318**	P	**P**	**13 05 04.6**	**+1.5**
TPNV				pmax	pmax		
	comp=Z,78nm,1.1s						
TPNV	**Topopah Spring**	**49.97**	**318**	P	**P**	**13 05 04.6**	**+1.5**
DECC	**Green Verdugo**	**50.02**	**314**	P	**P**	**13 05 04.9**	**+1.5**
	baz=120,SNR=26						
EDW2	**Edwards Air Fo**	**50.08**	**315**	P	**P**	**13 05 05.0**	**+1.1**
	baz=120,SNR=67						
ULM	**Lac du Bonnet**	**50.12**	**344**	P	**P**	**13 05 02.5**	**-1.2**
	comp=Z,42nm,0.7s,baz=151,slow=6.9,SNR=75						
ULM				PcP	**PcP**	**13 06 21.1**	**+0.1**
	comp=Z,12nm,0.8s,baz=202,slow=6.7,SNR=3.9						
ULM				ScP	**ScP**	**13 10 02.5**	**+0.1**
	comp=Z,5.1nm,1.0s,baz=200,slow=7.1,SNR=4.0						
ULM				S	**S**	**13 11 58.4**	**-4.9**
	comp=Z,1.8nm,0.7s,baz=259,slow=22,SNR=10						
ULM				LR	LR	13 26 32.3	
	comp=Z,180nm,21.1s,baz=156,slow=36						
ULM	**Lac du Bonnet**	**50.12**	**344**	*de*P	**P**	**13 05 02.6**	**-1.2**
ULM				*i* *PP	**pP**	**13 05 37.4**	**-2.0**
ULM	**Lac du Bonnet**	**50.12**	**344**	P	**P**	**13 05 02.8**	**-1.0**
ULM				IAmb	IAmb	13 05 04.0	
	comp=Z,138nm,1.1s						
FURC	**Furnace Creek,**	**50.12**	**317**	P	**P**	**13 05 05.6**	**+1.6**
	baz=123,SNR=10.0						
LRMC	**Laurel Mtn Rad**	**50.17**	**316**	P	**P**	**13 05 05.8**	**+1.2**
	baz=121,SNR=45						
R11A	**Troy Canyon, C**	**50.32**	**320**	P	**P**	**13 05 07.1**	**+1.4**
	baz=125,SNR=21						
MPMC	**Manual Prospec**	**50.33**	**316**	P	**P**	**13 05 06.7**	**+0.8**
	baz=122,SNR=13						
SNCC	**San Nicolas Is**	**50.41**	**312**	P	**P**	**13 05 07.6**	**+1.3**
	baz=118,SNR=6.0						
SNCC	**San Nicolas Is**	**50.41**	**312**	P	**P**	**13 05 07.1**	**+0.9**
SNCC				IAmb	IAmb	13 05 09.0	
	comp=Z,181nm,1.1s						
AHID	**Auburn Hatcher**	**50.41**	**327**	P	**P**	**13 05 06.3**	**0.0**
AHID				IAmb	IAmb	13 05 08.1	
	comp=Z,136nm,1.1s						
OSI	**Osito Audit: C**	**50.47**	**314**	P	**P**	**13 05 07.7**	**+0.9**
	baz=120,SNR=11						
OSI	**Osito Audit: C**	**50.47**	**314**	P	**P**	**13 05 07.4**	**+0.6**
SNOW	**Snow King Moun**	**50.70**	**328**	P	**P**	**13 05 09.0**	**+0.4**
SNOW				IAmb	IAmb	13 05 10.8	
	comp=Z,163nm,1.0s						
LOHW	**Long Hollow**	**50.73**	**328**	P	**P**	**13 05 08.9**	**+0.2**
LOHW				IAmb	IAmb	13 05 10.9	
	comp=Z,222nm,1.2s						
GRAC	**Grapevine Rang**	**50.74**	**317**	P	**P**	**13 05 10.4**	**+1.6**
	baz=122,SNR=7.0						
ECR	**Eagle Creek**	**50.75**	**327**	P	**P**	**13 05 09.1**	**+0.2**
ARVC	**Arvin**	**50.80**	**315**	P	**P**	**13 05 10.5**	**+1.3**
	baz=120,SNR=24						
ISA	**Isabella, Lake**	**50.82**	**315**	P	**P**	**13 05 10.8**	**+1.4**
	baz=120,SNR=11						
ISA	**Isabella, Lake**	**50.82**	**315**	P	**P**	**13 05 10.5**	**+1.1**
ISA				pmax	pmax		
	comp=Z,83nm,1.2s						
ISA	**Isabella, Lake**	**50.82**	**315**	P	**P**	**13 05 10.5**	**+1.1**
SCZ2	**Santa Cruz Isl**	**50.84**	**313**	P	**P**	**13 05 10.8**	**+1.3**
	baz=118,SNR=14						
LAO	**LASA Array**	**50.85**	**334**	P	**P**	**13 05 09.3**	**-0.1**
	baz=140,SNR=20						
LAO	**LASA Array**	**50.85**	**334**	P	**P**	**13 05 09.2**	**-0.1**
CWC	**Cottonwood Cre**	**50.94**	**316**	P	**P**	**13 05 11.5**	**+1.1**
	baz=121						
FLWY	**Flagg Ranch**	**51.10**	**329**	P	**P**	**13 05 12.3**	**+0.8**
FLWY				IAmb	IAmb	13 05 13.9	
	comp=Z,207nm,1.2s						
SBC	**Santa Barbara**	**51.10**	**313**	P	**P**	**13 05 12.7**	**+1.2**
	baz=119,SNR=5.1						
RLMT	**Red Lodge**	**51.11**	**330**	P	**P**	**13 05 11.8**	**+0.2**
	baz=136,SNR=73						
RLMT	**Red Lodge**	**51.11**	**330**	P	**P**	**13 05 12.1**	**+0.6**
RLMT				IAmb	IAmb	13 05 13.4	
	comp=Z,109nm,1.1s						
H17A	**Grant Village**	**51.25**	**329**	P	**P**	**13 05 14.2**	**+1.5**
	baz=134,SNR=20						
H17A	**Grant Village**	**51.25**	**329**	P	**P**	**13 05 13.3**	**+0.7**
H17A				IAmb	IAmb	13 05 17.3	
	comp=Z,133nm,1.7s						
LKWY	**Lake**	**51.28**	**329**	P	**P**	**13 05 14.0**	**+1.1**
LKWY				pmax	pmax		
	comp=Z,59nm,1.3s						
LKWY	**Lake**	**51.28**	**329**	P	**P**	**13 05 14.0**	**+1.1**
VES	**Vestal, Richgr**	**51.34**	**315**	P	**P**	**13 05 14.6**	**+1.5**
	baz=120,SNR=44						
TIN	**Tinemaha, Big**	**51.36**	**317**	P	**P**	**13 05 15.0**	**+1.5**
	baz=122						
PKM	**Mcpherson Peak**	**51.39**	**314**	P	**P**	**13 05 15.3**	**+1.5**
	baz=119,SNR=18						
DGMT	**Dagmar**	**51.41**	**337**	P	**P**	**13 05 13.9**	**+0.5**
	baz=144,SNR=15						
DGMT	**Dagmar**	**51.41**	**337**	P	**P**	**13 05 13.7**	**+0.2**
DGMT				IAmb	IAmb	13 05 15.4	
	comp=Z,173nm,1.2s						
ELK	**Elko**	**51.51**	**323**	P	**P**	**13 05 15.2**	**+0.6**
	comp=Z,13nm,1.0s,baz=112,slow=5.4,SNR=8.1						
ELK				PcP	**PcP**	**13 06 27.1**	**+0.4**
	comp=Z,6.0nm,0.9s,baz=129,slow=3.2,SNR=4.4						
ELK				ScP	**ScP**	**13 10 09.6**	**+0.7**
	comp=Z,6.0nm,1.1s,baz=131,slow=2.5,SNR=7.2						
ELK	**Elko**	**51.51**	**323**	P	**P**	**13 05 14.9**	**+0.3**
SMMC	**Simmler**	**51.73**	**314**	P	**P**	**13 05 17.7**	**+1.6**
	baz=119,SNR=40						
GCMT	**Greycliff**	**51.78**	**331**	P	**P**	**13 05 17.6**	**+1.2**
VOG	**Valley Oaks Go**	**51.78**	**316**	P	**P**	**13 05 16.9**	**+0.4**
	baz=120						
QLMT	**Earthquake Lak**	**51.99**	**329**	P	**P**	**13 05 19.6**	**+1.4**
NV11	**Mina Array Sit**	**52.04**	**318**	P	**P**	**13 05 18.9**	**+0.3**
NV11				IAmb	IAmb	13 05 21.4	
	comp=Z,149nm,1.2s						
MLAC	**Mammoth, Mammo**	**52.07**	**317**	P	**P**	**13 05 20.3**	**+1.4**
	baz=122						
PAGB	**Antelope Grade**	**52.11**	**314**	P	**P**	**13 05 20.0**	**+1.1**
PAGB				IAmb	IAmb	13 05 21.6	
	comp=Z,148nm,1.1s						
NVAR	**Mina Array Bea**	**52.14**	**318**	P	**P**	**13 05 20.6**	**+1.3**
	comp=Z,49nm,1.0s,baz=129,slow=6.5,SNR=27						
NVAR				PcP	**PcP**	**13 06 30.4**	**+1.3**
	comp=Z,3.0nm,0.6s,baz=123,slow=4.4,SNR=4.9						
NVAR				ScP	**ScP**	**13 10 12.5**	**+0.9**
	comp=Z,5.2nm,1.1s,baz=143,slow=3.8,SNR=7.9						
NVAR				LR	LR	13 30 47.3	
	comp=Z,191nm,18.5s,baz=118,slow=40						
LHV	**Little Huntoon**	**52.18**	**318**	P	**P**	**13 05 21.1**	**+1.8**
LHV				IAmb	IAmb	13 05 22.7	
	comp=Z,173nm,1.3s						
OMMB	**Old Mammoth Mi**	**52.18**	**317**	P	**P**	**13 05 21.1**	**+1.3**
OMMB				IAmb	IAmb	13 05 22.5	
	comp=Z,166nm,1.6s						
OMMB				PcP	**PcP**	**13 06 30.5**	**+1.1**
MDPB	**Devils Postpil**	**52.24**	**317**	P	**P**	**13 05 21.3**	**+1.2**
RYN	**Ryan**	**52.39**	**319**	P	**P**	**13 05 22.5**	**+1.4**
RYN				IAmb	IAmb	13 05 23.7	
	comp=Z,115nm,1.3s						
BOZ	**Bozeman (W)**	**52.62**	**329**	P	**P**	**13 05 23.7**	**+1.0**
	baz=134,SNR=88						
BOZ	**Bozeman (W)**	**52.62**	**329**	P	**P**	**13 05 23.4**	**+0.7**
BOZ				pmax	pmax		
	comp=Z,199nm,1.1s						
BOZ	**Bozeman (W)**	**52.62**	**329**	P	**P**	**13 05 23.4**	**+0.7**
BCYI	**Bear Canyon**	**52.69**	**327**	P	**P**	**13 05 24.0**	**+0.7**
PMPB	**Monarch Peak**	**52.73**	**315**	P	**P**	**13 05 24.4**	**+0.9**
PMPB				IAmb	IAmb	13 05 25.9	
	comp=Z,155nm,1.2s						
HLID	**Hailey**	**52.77**	**326**	P	**P**	**13 05 24.7**	**+0.9**
	baz=130,SNR=19						
WAKR	**Walker**	**52.93**	**318**	P	**P**	**13 05 26.7**	**+1.5**
WAKR				IAmb	IAmb	13 05 28.2	
	comp=Z,141nm,1.5s						
DLMT	**Dillon**	**52.96**	**329**	P	**P**	**13 05 26.2**	**+1.0**
DLMT				IAmb	IAmb	13 05 27.7	
	comp=Z,183nm,1.6s						
YERR	**Yerington**	**53.05**	**319**	P	**P**	**13 05 27.3**	**+1.3**
YERR				IAmb	IAmb	13 05 28.7	
	comp=Z,114nm,1.3s						
LRM	**Limekiln Ridge**	**53.20**	**329**	P	**P**	**13 05 27.4**	**+0.4**
PNTR	**Pine Nut**	**53.35**	**318**	P	**P**	**13 05 29.9**	**+1.7**
EGMT	**Eagleton**	**53.44**	**333**	P	**P**	**13 05 29.0**	**+0.4**
	baz=137,SNR=24						
EGMT	**Eagleton**	**53.44**	**333**	P	**P**	**13 05 28.8**	**+0.2**
EGMT				IAmb	IAmb	13 05 30.4	
	comp=Z,131nm,1.4s						
SAO	**San Andreas Ge**	**53.45**	**315**	P	**P**	**13 05 29.2**	**+0.5**
SAO				pmax	pmax		
	comp=Z,146nm,1.7s						
SAO	**San Andreas Ge**	**53.45**	**315**	P	**P**	**13 05 29.2**	**+0.5**
SAO				IAmb	IAmb	13 05 31.2	
	comp=Z,146nm,1.6s						
MFID	**Camas Ranch**	**53.48**	**325**	P	**P**	**13 05 29.2**	**+0.3**
MFID				IAmb	IAmb	13 05 31.4	
	comp=Z,209nm,1.3s						
VCNR	**Virginia City**	**53.49**	**319**	P	**P**	**13 05 30.2**	**+1.0**
VCNR				IAmb	IAmb	13 05 32.0	
	comp=Z,174nm,1.9s						
HRY	**Holter Researc**	**53.50**	**330**	P	**P**	**13 05 30.1**	**+1.1**
PAHR	**Pah Rah Range**	**53.53**	**319**	P	**P**	**13 05 29.8**	**+0.4**
PAHR				IAmb	IAmb	13 05 32.0	
	comp=Z,120nm,1.4s						
AFDM	**Forest Hills D**	**54.19**	**318**	P	**P**	**13 05 34.3**	**+0.2**
BEKR	**Beckworth**	**54.26**	**319**	P	**P**	**13 05 35.3**	**+0.6**
WVOR	**Wild Horse Val**	**54.56**	**322**	P	**P**	**13 05 37.5**	**+0.7**
WVOR				pmax	pmax		
	comp=Z,262nm,1.3s						
WVOR	**Wild Horse Val**	**54.56**	**322**	P	**P**	**13 05 37.5**	**+0.7**
MSO	**Missoula**	**54.64**	**329**	P	**P**	**13 05 37.9**	**+0.7**
	baz=132,SNR=24						
MSO	**Missoula**	**54.64**	**329**	P	**P**	**13 05 38.4**	**+1.1**
MSO				IAmb	IAmb	13 05 39.4	
	comp=Z,126nm,1.3s						
ORV	**Oroville**	**54.85**	**318**	P	**P**	**13 05 39.8**	**+1.0**
ORV				pmax	pmax		
	comp=Z,198nm,1.3s						
ORV	**Oroville**	**54.85**	**318**	P	**P**	**13 05 39.8**	**+1.0**
ORV				IAmb	IAmb	13 05 41.7	
	comp=Z,198nm,1.2s						
J08A	**Circle Bar Ran**	**54.99**	**323**	P	**P**	**13 05 39.9**	**0.0**
J08A				IAmb	IAmb	13 05 41.7	
	comp=Z,111nm,1.2s						
BMO	**Blue Mountains**	**55.20**	**325**	P	**P**	**13 05 40.7**	**-0.6**
BMO				pmax	pmax		
	comp=Z,47nm,1.3s						
BMO	**Blue Mountains**	**55.20**	**325**	P	**P**	**13 05 40.7**	**-0.6**
MOD	**Modoc Plateau**	**55.30**	**321**	P	**P**	**13 05 42.2**	**0.0**
O03E	**Paynes Creek**	**55.42**	**319**	P	**P**	**13 05 42.8**	**-0.2**
	baz=120,SNR=18						
JTMT	**Jette**	**55.42**	**330**	P	**P**	**13 05 43.5**	**+0.6**
JTMT				IAmb	IAmb	13 05 45.4	
	comp=Z,151nm,1.2s						
HOPS	**Hopland Field**	**55.64**	**317**	P	**P**	**13 05 45.5**	**+1.0**
HOPS				IAmb	IAmb	13 06 02.3	
	comp=Z,103nm,1.4s						
FFC	**Flin Flon**	**55.84**	**342**	P	**P**	**13 05 45.3**	**-0.2**
FFC				pmax	pmax		
	comp=Z,125nm,1.2s						
FFC	**Flin Flon**	**55.84**	**342**	P	**P**	**13 05 45.3**	**-0.2**
FFC				IAmb	IAmb	13 05 46.6	
	comp=Z,126nm,1.2s						
F10A	**Beach Ranch, E**	**55.84**	**327**	P	**P**	**13 05 45.7**	**-0.1**
F10A				IAmb	IAmb	13 05 49.1	
	comp=Z,161nm,1.8s						
I07A	**Izee**	**56.02**	**324**	P	**P**	**13 05 48.0**	**+0.8**
I07A				IAmb	IAmb	13 05 49.4	
	comp=Z,232nm,1.9s						
O02D	**Mt. Diablo Mer**	**56.02**	**318**	P	**P**	**13 05 46.6**	**-0.6**
	baz=120,SNR=6.9						
WDC	**Whiskeytown Da**	**56.05**	**319**	P	**P**	**13 05 45.8**	**-1.6**
WDC				pmax	pmax		
	comp=Z,28nm,1.1s						
WDC	**Whiskeytown Da**	**56.05**	**319**	P	**P**	**13 05 45.8**	**-1.6**
K05A	**Summer Lake**	**56.11**	**322**	P	**P**	**13 05 49.8**	**+1.8**
K05A				IAmb	IAmb	13 05 50.8	
	comp=Z,169nm,1.6s						
WALA	**Waterton Lakes**	**56.13**	**331**	P	**P**	**13 05 47.6**	**-0.3**
WALA				IAmb	IAmb	13 05 49.7	
	comp=Z,77nm,1.2s						
M04C	**Macdoel**	**56.21**	**320**	P	**P**	**13 05 49.3**	**+0.7**
	baz=121,SNR=24						
KCPM	**Cahto Peak**	**56.32**	**317**	P	**P**	**13 05 50.6**	**+1.2**
N02D	**Trinity Center**	**56.36**	**319**	P	**P**	**13 05 48.5**	**-1.1**
	baz=120,SNR=11						
G08A	**Pilot Rock**	**56.40**	**325**	P	**P**	**13 05 49.9**	**+0.1**
K04D	**Chiloquin, OR**	**56.59**	**321**	P	**P**	**13 05 52.1**	**+0.8**
	baz=122,SNR=8.7						
J05D	**Fort Rock, OR**	**56.62**	**322**	P	**P**	**13 05 52.5**	**+1.0**
	baz=123,SNR=49						
M02C	**Callahan**	**56.66**	**319**	P	**P**	**13 05 51.3**	**-0.5**
	baz=120,SNR=7.1						
E09A	**Wood Farm, Sta**	**56.67**	**327**	P	**P**	**13 05 52.0**	**+0.4**
E09A				IAmb	IAmb	13 05 53.7	
	comp=Z,136nm,1.3s						
PINE	**Pine Mountain**	**56.72**	**323**	P	**P**	**13 05 53.4**	**+1.1**
L04D	**Klamath Falls**	**56.73**	**320**	P	**P**	**13 05 52.6**	**+0.3**
	baz=121,SNR=21						
YBH	**Yreka Blue Hor**	**56.74**	**320**	P	**P**	**13 05 51.5**	**-0.8**
	comp=Z,23nm,0.9s,baz=145,slow=5.1,SNR=11						
YBH	**Yreka Blue Hor**	**56.74**	**320**	P	**P**	**13 05 51.6**	**-0.8**
YBH				pmax	pmax		
	comp=Z,41nm,1.1s						
YBH	**Yreka Blue Hor**	**56.74**	**320**	P	**P**	**13 05 51.6**	**-0.8**
KHMM	**Horse Mountain**	**56.99**	**318**	P	**P**	**13 05 55.3**	**+1.1**
JCC	**Jacoby Creek,**	**57.16**	**318**	P	**P**	**13 05 56.2**	**+1.1**
E08A	**Dider Farm, El**	**57.16**	**326**	P	**P**	**13 05 55.5**	**+0.4**
NEW	**Newport**	**57.21**	**329**	P	**P**	**13 05 55.6**	**+0.2**
	comp=Z,29nm,1.0s,baz=143,slow=6.8,SNR=35						
NEW				PcP	**PcP**	**13 06 48.3**	**+0.1**
	comp=Z,5.5nm,0.8s,baz=129,slow=6.5,SNR=3.3						
NEW	**Newport**	**57.21**	**329**	P	**P**	**13 05 55.6**	**+0.2**
	baz=129,SNR=23						
NEW	**Newport**	**57.21**	**329**	P	**P**	**13 05 55.5**	**0.0**
NEW				IAmb	IAmb	13 05 57.1	
	comp=Z,67nm,1.1s						
I05D	**Terrebonne, OR**	**57.26**	**323**	P	**P**	**13 05 57.1**	**+1.3**
	baz=123,SNR=30						
F07A	**Phinny Hill Vi**	**57.30**	**325**	P	**P**	**13 05 56.3**	**+0.3**
HUMO	**Hull Mountain**	**57.34**	**320**	P	**P**	**13 05 55.6**	**-0.9**
HAWA	**Hanford**	**57.37**	**326**	P	**P**	**13 05 56.8**	**+0.2**
KRMB	**Red Mountain**	**57.42**	**319**	P	**P**	**13 05 57.9**	**+0.8**
D08A	**Wollman Farm,**	**57.42**	**327**	P	**P**	**13 05 57.4**	**+0.5**
D08A				IAmb	IAmb	13 05 59.2	
	comp=Z,76nm,1.2s						
C09A	**Chrisman Ranch**	**57.52**	**328**	P	**P**	**13 05 57.9**	**+0.3**
L02E	**Cave Junction**	**57.53**	**320**	P	**P**	**13 05 58.0**	**+0.2**
	baz=120,SNR=9.0						
FCC	**Fort Churchill**	**57.54**	**349**	P	**P**	**13 05 56.5**	**-1.0**
FCC				pmax	pmax		
	comp=Z,211nm,1.7s						
FCC	**Fort Churchill**	**57.54**	**349**	P	**P**	**13 05 56.5**	**-1.0**
FCC				IAmb	IAmb	13 05 57.8	
	comp=Z,211nm,1.6s						
I04A	**Tendick Farm,**	**57.62**	**322**	P	**P**	**13 05 58.5**	**+0.1**
	baz=122,SNR=26						
E07A	**Sunnyside**	**57.65**	**326**	P	**P**	**13 05 59.2**	**+0.7**
G05D	**Wamic, OR**	**57.74**	**324**	P	**P**	**13 06 00.9**	**+1.7**
	baz=124,SNR=22						
K02D	**Willamette Mer**	**57.84**	**320**	P	**P**	**13 06 00.5**	**+0.5**
	baz=120,SNR=22						
H04A	**Detroit Lake**	**57.95**	**323**	P	**P**	**13 06 01.0**	**+0.3**
H04A				IAmb	IAmb	13 06 02.6	
	comp=Z,104nm,1.2s						
KBO	**Bosley Butte**	**57.96**	**320**	P	**P**	**13 06 02.6**	**+1.7**
I03D	**Drain, OR**	**58.15**	**321**	P	**P**	**13 06 02.3**	**+0.3**
	baz=121,SNR=12						
F05D	**White Salmon**	**58.18**	**324**	P	**P**	**13 06 03.5**	**+1.3**
	baz=124,SNR=7.9						
H04D	**Lebanon**	**58.20**	**323**	P	**P**	**13 06 02.4**	**0.0**
	baz=122,SNR=6.5						
J01E	**Myrtle Point**	**58.24**	**321**	P	**P**	**13 06 03.9**	**+1.3**
	baz=120,SNR=22						
KEBM	**Edson Butte**	**58.35**	**320**	P	**P**	**13 06 04.8**	**+1.3**
B08A	**Colville Reser**	**58.43**	**328**	P	**P**	**13 06 03.9**	**0.0**
B08A				IAmb	IAmb	13 06 05.9	
	comp=Z,107nm,1.1s						
LTY	**Liberty**	**58.51**	**326**	P	**P**	**13 06 05.0**	**+0.5**
LTY				IAmb	IAmb	13 06 06.9	
	comp=Z,85nm,1.2s						
COR	**Corvallis**	**58.58**	**322**	P	**P**	**13 06 05.9**	**+0.9**
COR				pmax	pmax		
	comp=Z,282nm,1.4s						
COR	**Corvallis**	**58.58**	**322**	P	**P**	**13 06 05.9**	**+0.9**
I02D	**Swisshome**	**58.66**	**322**	P	**P**	**13 06 06.8**	**+1.3**
	baz=121,SNR=18						
LON	**Longmire**	**58.86**	**325**	P	**P**	**13 06 07.2**	**+0.2**
LON				pmax	pmax		
	comp=Z,75nm,1.2s						
LON	**Longmire**	**58.86**	**325**	P	**P**	**13 06 07.2**	**+0.2**
LON				IAmb	IAmb	13 06 09.0	
	comp=Z,75nm,1.1s						
G03D	**McMinnville, O**	**58.88**	**323**	P	**P**	**13 06 08.0**	**+1.0**
	baz=122,SNR=7.3						
C06D	**Leavenworth**	**59.02**	**327**	P	**P**	**13 06 08.7**	**+0.7**
	baz=126,SNR=7.0						
E04D	**Cinebar**	**59.19**	**325**	P	**P**	**13 06 09.6**	**+0.4**
	baz=123,SNR=12						
F04D	**Rainier, OR**	**59.19**	**324**	P	**P**	**13 06 10.5**	**+1.3**
	baz=122						
D05A	**Enumclaw**	**59.21**	**325**	P	**P**	**13 06 09.9**	**+0.7**
D04E	**Lakebay**	**59.65**	**325**	P	**P**	**13 06 13.3**	**+1.1**
	baz=123						
B06A	**Marblemount**	**59.68**	**327**	P	**P**	**13 06 12.3**	**-0.1**
E03A	**Lebam**	**59.76**	**324**	P	**P**	**13 06 13.8**	**+0.8**
B05A	**Bryant**	**59.87**	**326**	P	**P**	**13 06 13.5**	**-0.3**
	baz=124,SNR=25						
D03D	**Eldon**	**60.02**	**325**	P	**P**	**13 06 15.4**	**+0.6**
	baz=123,SNR=18						
NLWA	**Neilton Lookou**	**60.39**	**325**	P	**P**	**13 06 18.6**	**+1.2**
A04D	**Lummi Island**	**60.46**	**327**	P	**P**	**13 06 18.5**	**+0.7**
	baz=124,SNR=8.8						
PGC	**Sidney**	**60.84**	**326**	P	**P**	**13 06 21.6**	**+1.3**
FRB	**Frobisher Bay**	**61.14**	**4**	S	**S**	**13 14 25.1**	**-3.9**
	comp=Z,1.2nm,0.8s,baz=60,slow=16,SNR=5.8						
BBB	**Bella Bella**	**65.23**	**328**	P	**P**	**13 06 50.0**	**+0.8**
	comp=Z,51nm,1.0s,baz=165,slow=6.0,SNR=19						
BBB	**Bella Bella**	**65.23**	**328**	P	**P**	**13 06 49.9**	**+0.7**
BBB				IAmb	IAmb	13 06 52.1	
	comp=Z,107nm,1.1s						
YKA	**Yellowknife Ar**	**66.00**	**342**	P	**P**	**13 06 53.3**	**-0.7**
	comp=Z,16nm,0.7s,baz=132,slow=6.6,SNR=218						
YKA				S	**S**	**13 15 27.9**	**-1.2**
	comp=Z,3.5nm,1.1s,baz=130,slow=13,SNR=6.9						
YKA				LR	LR	13 36 46.5	
	comp=Z,157nm,19.7s,baz=0.0,slow=37						
DIB	**Dawson Inlet,**	**68.05**	**327**	P	**P**	**13 07 07.8**	**+0.7**
DLBC	**Dease Lake**	**69.37**	**333**	P	**P**	**13 07 16.4**	**+1.2**
	comp=Z,60nm,1.1s,baz=120,slow=4.5,SNR=37						
WRAK	**Wrangell Islan**	**69.47**	**331**	P	**P**	**13 07 16.1**	**+0.3**
	baz=118						
WRAK	**Wrangell Islan**	**69.47**	**331**	P	**P**	**13 07 16.2**	**+0.4**
WRAK				IAmb	IAmb	13 07 18.1	
	comp=Z,124nm,1.6s						
MORF	**Marmelete**	**70.75**	**51**	*e*P	**P**	**13 07 25.2**	**+1.0**
MORF				AMb	AMB	13 07 27.6	
	comp=Z,153nm,1.5s						
MORF	**Marmelete**	**70.75**	**51**	*e*P	**P**	**13 07 25.1**	**+1.0**
MORF	**Marmelete**	**70.75**	**51**	*e*P	**P**	**13 07 26.2**	**+2.1**
	comp=Z,157nm,2.0s						
PNCL	**Nicolau / Gran**	**71.01**	**51**	*e*P	**P**	**13 07 27.2**	**+1.6**
	comp=Z,88nm,1.4s						
MESJ	**Messejana**	**71.19**	**51**	*e*P	**P**	**13 07 27.8**	**+1.1**
MESJ	**Messejana**	**71.19**	**51**	*e*P	**P**	**13 07 27.8**	**+1.1**
LIC	**Lamto**	**71.24**	**84**	*e*PKP1	pP	13 08 08.6	+2.7
	comp=Z,24nm,0.7s						
LIC	**Lamto**	**71.24**	**84**	*e*P	**P**	**13 07 26.6**	**-0.9**
	comp=Z,181nm,1.5s						
TIC	**Toumodi**	**71.25**	**84**	*e*PKP1	pP	13 08 07.9	+2.0
TIC	**Toumodi**	**71.25**	**84**	*e*P	**P**	**13 07 26.9**	**-0.6**
JIS	**Juneau Island**	**71.30**	**332**	P	**P**	**13 07 28.3**	**+1.4**
JIS				IAmb	IAmb	13 07 29.6	
	comp=Z,164nm,1.3s						
DBIC	**Dimbokro**	**71.41**	**84**	P	**P**	**13 07 28.0**	**-0.5**
	comp=Z,24nm,0.7s,baz=244,slow=6.7,SNR=23						
DBIC				LR	LR	13 38 20.8	
	comp=Z,106nm,18.6s,baz=260,slow=35						
DBIC	**Dimbokro**	**71.41**	**84**	P	**P**	**13 07 27.9**	**-0.5**
DBIC				pmax	pmax		
	comp=Z,68nm,1.1s						
DBIC	**Dimbokro**	**71.41**	**84**	P	**P**	**13 07 27.9**	**-0.5**
PCAS	**Casmilo, Conde**	**71.44**	**49**	*e*P	**P**	**13 07 29.8**	**+1.6**
	comp=Z,77nm,1.2s						
EVO	**Evora**	**71.49**	**50**	*e*P	**P**	**13 07 30.0**	**+1.5**
	comp=Z,47nm,1.3s						
KIC	**Kosan Boka**	**71.53**	**84**	*e*PKP1	pP	13 08 07.9	+0.3
	comp=Z,24nm,0.8s						
KIC	**Kosan Boka**	**71.53**	**84**	*e*P	**P**	**13 07 28.5**	**-0.7**
	comp=Z,202nm,1.3s						
COI	**Coimbra**	**71.54**	**48**	P	**P**	**13 07 29.9**	**+1.2**
COI				pmax	pmax		
	comp=Z,105nm,1.2s						
COI	**Coimbra**	**71.54**	**48**	P	**P**	**13 07 29.9**	**+1.2**
COI				IAmb	IAmb	13 07 31.6	
	comp=Z,105nm,1.1s						
COI	**Coimbra**	**71.54**	**48**	*e*P	**P**	**13 07 30.5**	**+1.8**
	comp=Z,180nm,1.6s						
BESE	**Bessie Mountai**	**71.66**	**332**	P	**P**	**13 07 30.2**	**+1.0**
BESE				IAmb	IAmb	13 07 31.9	
	comp=Z,194nm,1.3s						
PESTR	**Estremoz**	**71.88**	**50**	P	**P**	**13 07 31.5**	**+0.6**
PVIS	**Viseu**	**72.03**	**48**	*e*P	**P**	**13 07 32.7**	**+0.9**
	comp=Z,67nm,1.5s						
PCBR	**Castelo Branco**	**72.16**	**49**	*e*P	**P**	**13 07 33.6**	**+1.1**
	comp=Z,48nm,1.6s						
PBAR	**Barrancos**	**72.17**	**51**	*e*P	**P**	**13 07 33.9**	**+1.3**
	comp=Z,58nm,1.5s						
POLO	**Lamas de Olo**	**72.24**	**47**	*e*P	**P**	**13 07 34.0**	**+0.9**
	comp=Z,39nm,1.7s						
PVRL	**Vila Real**	**72.28**	**48**	*e*P	**P**	**13 07 34.3**	**+1.1**
KOWA	**Kowa**	**72.31**	**76**	P	**P**	**13 07 33.6**	**-0.2**
RES	**Resolute Bay**	**72.68**	**355**	P	**P**	**13 07 33.9**	**-1.0**
	comp=Z,3.5nm,0.9s,baz=184,slow=9.4,SNR=12						
MVO	**Moncorvo**	**72.76**	**48**	*e*P	**P**	**13 07 37.3**	**+1.2**
	comp=Z,67nm,1.4s						
MDT	**Midelt**	**73.27**	**57**	LR	LR	13 35 46.8	
	comp=Z,51nm,19.5s,baz=324,slow=32						
C36M	**Paulatuk**	**73.54**	**344**	P	**P**	**13 07 38.2**	**-1.8**
	baz=130,SNR=7.8						
C36M	**Paulatuk**	**73.54**	**344**	P	**P**	**13 07 38.7**	**-1.2**
SUMG	**Summit**	**73.59**	**11**	*i* P	**P**	**13 07 40.9**	**+0.2**
	comp=Z,60nm,0.7s						
SUMG	**Summit**	**73.59**	**11**	P	**P**	**13 07 40.2**	**-0.5**
SUMG				pmax	pmax		
	comp=Z,132nm,1.6s						
SUMG	**Summit**	**73.59**	**11**	P	**P**	**13 07 40.2**	**-0.5**
SUMG				IAmb	IAmb	13 07 42.8	
	comp=Z,132nm,1.6s						
SUMG	**Summit**	**73.59**	**11**	*i* P	**P**	**13 07 40.9**	**+0.2**
SUMG				IAmb	IAmb	13 07 42.6	
	comp=Z,60nm,0.7s						
HYT	**Haines Junctio**	**73.84**	**333**	P	**P**	**13 07 42.9**	**+0.8**
TULEG	**Thule**	**73.85**	**2**	P	**P**	**13 07 41.6**	**0.0**
PAB	**San Pablo**	**74.48**	**50**	P	**P**	**13 07 47.1**	**+0.9**
PAB				pmax	pmax		
	comp=Z,41nm,1.3s						
PAB	**San Pablo**	**74.48**	**50**	P	**P**	**13 07 47.1**	**+0.9**
ESDC	**Sonseca Array**	**74.80**	**50**	P	**P**	**13 07 47.4**	**-0.5**
	comp=Z,15nm,1.1s,baz=262,slow=5.3,SNR=30						
ESDC	**Sonseca Array**	**74.80**	**50**	P	**P**	**13 07 47.8**	**-0.2**
PPT	**Papeete**	**74.80**	**251**	LR	LR	13 32 36.6	
	comp=Z,137nm,22.0s,baz=64,slow=29						
CTGM	**Chitina Glacie**	**75.62**	**333**	P	**P**	**13 07 53.5**	**+1.1**
CTGM				IAmb	IAmb	13 07 55.3	
	comp=Z,163nm,1.4s						
CTG	**Chitna Glacier**	**75.62**	**333**	P	**P**	**13 07 53.9**	**+1.6**
	baz=111,SNR=9.7						
INK	**Inuvik**	**75.76**	**341**	P	**P**	**13 07 53.0**	**+0.2**
	comp=Z,27nm,0.9s,baz=106,slow=6.2,SNR=56						
INK	**Inuvik**	**75.76**	**341**	P	**P**	**13 07 53.0**	**+0.2**
INK				IAmb	IAmb	13 07 54.7	
	comp=Z,164nm,1.4s						
BARN	**Barnard Glacie**	**75.81**	**333**	P	**P**	**13 07 54.1**	**+0.7**
BARN				IAmb	IAmb	13 07 56.3	
	comp=Z,146nm,1.3s						
EPYK	**Eagle Plains**	**75.93**	**339**	P	**P**	**13 07 54.3**	**+0.5**
	baz=117,SNR=37						
EPYK	**Eagle Plains**	**75.93**	**339**	P	**P**	**13 07 53.9**	**+0.1**
EPYK				IAmb	IAmb	13 07 55.9	
	comp=Z,104nm,1.2s						
BALM	**Baldy**	**76.11**	**333**	P	**P**	**13 07 55.4**	**+0.3**
BALM				IAmb	IAmb	13 07 57.7	
	comp=Z,112nm,1.3s						
TGL	**Tana Glacier**	**76.24**	**332**	P	**P**	**13 07 56.6**	**+0.8**
TGL				IAmb	IAmb	13 07 58.3	
	comp=Z,166nm,1.3s						
CRQE	**Cirque**	**76.36**	**332**	P	**P**	**13 07 58.1**	**+1.6**
	baz=109						
CRQM	**Cirque**	**76.38**	**332**	P	**P**	**13 07 57.5**	**+0.8**
CRQM				IAmb	IAmb	13 07 59.0	
	comp=Z,142nm,1.3s						
MCARA	**McCarthy VSAT**	**76.54**	**333**	P	**P**	**13 07 58.9**	**+1.5**
	baz=110,SNR=12						
MCARA	**McCarthy VSAT**	**76.54**	**333**	P	**P**	**13 07 59.0**	**+1.7**
MCARA				IAmb	IAmb	13 08 00.3	
	comp=Z,148nm,1.3s						
BCAR	**Beaver Creek A**	**76.58**	**335**	P	**P**	**13 07 59.0**	**+1.4**

VRDI	**Verde Repeater**	**76.68**	**333**	P	**P**	**13 07 58.6**	**+0.2**
VRDI				IAmb	IAmb	13 08 00.8	
	comp=Z,151nm,1.3s						
GLB	**Gilahina Butte**	**76.91**	**333**	P	**P**	**13 08 00.1**	**+0.6**
GLB				IAmb	IAmb	13 08 02.0	
	comp=Z,133nm,1.3s						
EGAK	**Eagle**	**76.95**	**337**	P	**P**	**13 08 00.3**	**+0.7**
	baz=112,SNR=74						
EGAK	**Eagle**	**76.95**	**337**	P	**P**	**13 08 00.1**	**+0.6**
EGAK				IAmb	IAmb	13 08 01.7	
	comp=Z,253nm,1.4s						
BMRM	**Bremner River**	**77.13**	**332**	P	**P**	**13 08 01.6**	**+0.9**
	baz=108,SNR=11						
N25K	**Chitina, Valde**	**77.32**	**333**	P	**P**	**13 08 02.7**	**+0.9**
	baz=108,SNR=6.2						
N25K	**Chitina, Valde**	**77.32**	**333**	P	**P**	**13 08 02.9**	**+1.1**
MENT	**Mentasta**	**77.36**	**334**	P	**P**	**13 08 02.6**	**+0.7**
EUNU	**Eureka**	**77.42**	**358**	P	**P**	**13 08 02.4**	**+0.4**
DOT	**Dot Lake**	**77.74**	**335**	P	**P**	**13 08 04.5**	**+0.5**
DOT				IAmb	IAmb	13 08 06.4	
	comp=Z,222nm,1.5s						
SCRK	**Sand Creek**	**77.82**	**335**	P	**P**	**13 08 05.5**	**+0.9**
	baz=109,SNR=29						
TOA0	**Torodi Ar. Sit**	**77.84**	**77**	P	**P**	**13 08 05.2**	**-0.3**
TORD	**Torodi Ar. Bea**	**77.84**	**77**	P	**P**	**13 08 04.3**	**-1.2**
	comp=Z,11nm,1.0s,baz=282,slow=5.8,SNR=26						
TORD				LR	LR	13 41 27.8	
	comp=Z,195nm,22.0s,baz=255,slow=35						
TORD	**Torodi Ar. Bea**	**77.84**	**77**	P	**P**	**13 08 03.9**	**-1.6**
KLU	**Klutina**	**77.89**	**333**	P	**P**	**13 08 05.6**	**+0.6**
	baz=107,SNR=8.0						
KLU	**Klutina**	**77.89**	**333**	P	**P**	**13 08 04.8**	**-0.1**
KLU				IAmb	IAmb	13 08 07.1	
	comp=Z,113nm,1.4s						
PAX	**Paxson**	**78.13**	**334**	P	**P**	**13 08 06.7**	**+0.4**
	baz=108,SNR=26						
PAX	**Paxson**	**78.13**	**334**	P	**P**	**13 08 05.9**	**-0.4**
PAX				pmax	pmax		
	comp=Z,116nm,1.4s						
PAX	**Paxson**	**78.13**	**334**	P	**P**	**13 08 05.9**	**-0.4**
PAX				IAmb	IAmb	13 08 08.1	
	comp=Z,116nm,1.4s						
M24K	**Tolsona, Glenn**	**78.19**	**333**	P	**P**	**13 08 08.1**	**+1.5**
	baz=107,SNR=9.7						
M24K	**Tolsona, Glenn**	**78.19**	**333**	P	**P**	**13 08 07.4**	**+0.9**
M24K				IAmb	IAmb	13 08 09.0	
	comp=Z,286nm,1.4s						
SCM	**Sheep Creek Mo**	**78.63**	**333**	P	**P**	**13 08 09.4**	**+0.3**
SCM				pmax	pmax		
	comp=Z,203nm,1.3s						
SCM	**Sheep Creek Mo**	**78.63**	**333**	P	**P**	**13 08 09.4**	**+0.3**
SCM				IAmb	IAmb	13 08 11.0	
	comp=Z,202nm,1.3s						
PRP	**Porcupine Dome**	**78.94**	**337**	P	**P**	**13 08 11.1**	**+0.4**
	baz=108,SNR=31						
PRP	**Porcupine Dome**	**78.94**	**337**	P	**P**	**13 08 10.8**	**0.0**
WAT6	**Susitna Watana**	**79.02**	**333**	P	**P**	**13 08 11.6**	**+0.3**
	baz=106,SNR=23						
SML	**Sawmill**	**79.09**	**333**	P	**P**	**13 08 12.0**	**+0.5**
	baz=105,SNR=9.4						
SML	**Sawmill**	**79.09**	**333**	P	**P**	**13 08 10.9**	**-0.6**
SML				IAmb	IAmb	13 08 13.3	
	comp=Z,194nm,1.4s						
FYU	**Fort Yukon**	**79.16**	**338**	P	**P**	**13 08 12.2**	**+0.5**
FYU				IAmb	IAmb	13 08 14.0	
	comp=Z,208nm,1.4s						
HDA	**Harding Lake**	**79.19**	**335**	P	**P**	**13 08 12.1**	**+0.2**
	baz=107,SNR=54						
HDA	**Harding Lake**	**79.19**	**335**	P	**P**	**13 08 11.9**	**0.0**
HDA				IAmb	IAmb	13 08 13.5	
	comp=Z,274nm,1.6s						
BMAR	**Burnt Mountain**	**79.19**	**339**	P	**P**	**13 08 12.3**	**+0.3**
SEW	**Seward**	**79.20**	**331**	P	**P**	**13 08 12.6**	**+0.6**
	baz=104,SNR=6.7						
SEW	**Seward**	**79.20**	**331**	P	**P**	**13 08 12.2**	**+0.2**
SEW				IAmb	IAmb	13 08 13.4	
	comp=Z,145nm,1.3s						
IL31		**79.26**	**336**	P	**P**	**13 08 11.5**	**-0.7**
ILAR	**Eielson Array**	**79.26**	**336**	P	**P**	**13 08 12.2**	**-0.1**
	comp=Z,16nm,0.8s,baz=109,slow=4.0,SNR=142						
ILAR				PP	**PP**	**13 11 12.9**	**-1.1**
	comp=Z,13nm,1.2s,baz=110,slow=7.1,SNR=7.9						
PMR	**Palmer**	**79.40**	**332**	P	**P**	**13 08 12.4**	**-0.7**
PMR	**Palmer**	**79.40**	**332**	P	**P**	**13 08 12.4**	**-0.7**
O22K	**Cooper Landing**	**79.42**	**331**	P	**P**	**13 08 13.8**	**+0.6**
	baz=103						
WAT2	**Susitna Watana**	**79.50**	**334**	P	**P**	**13 08 14.0**	**+0.2**
	baz=105,SNR=22						
RC01	**Rabbit Creek A**	**79.56**	**332**	P	**P**	**13 08 14.3**	**+0.3**
	baz=104,SNR=8.8						
POKR	**Poker Plat Res**	**79.59**	**336**	P	**P**	**13 08 14.4**	**+0.4**
	baz=106,SNR=18						
POKR	**Poker Plat Res**	**79.59**	**336**	P	**P**	**13 08 14.7**	**+0.6**
POKR				IAmb	IAmb	13 08 16.1	
	comp=Z,112nm,1.4s						
CCB	**Clear Creek Bu**	**79.61**	**335**	P	**P**	**13 08 13.5**	**-0.6**
WRH	**Wood River Hil**	**79.68**	**335**	P	**P**	**13 08 14.4**	**-0.2**
COLA	**College**	**79.69**	**336**	P	**P**	**13 08 14.6**	**+0.1**
	baz=106						
COLA	**College**	**79.69**	**336**	deP	**P**	**13 08 14.8**	**+0.2**
COLA				pmax	pmax		
	comp=Z,39nm,1.2s						
COLA	**College**	**79.69**	**336**	P	**P**	**13 08 14.4**	**-0.1**
TCOL	**CIGO, UAF Yank**	**79.69**	**336**	P	**P**	**13 08 14.6**	**+0.1**
	baz=106,SNR=13						
TCOL	**CIGO, UAF Yank**	**79.69**	**336**	P	**P**	**13 08 14.7**	**+0.1**
RND	**Reindeer**	**79.73**	**334**	P	**P**	**13 08 15.4**	**+0.4**
RND				pmax	pmax		
	comp=Z,154nm,1.3s						
RND	**Reindeer**	**79.73**	**334**	P	**P**	**13 08 15.4**	**+0.4**
RND				IAmb	IAmb	13 08 17.2	
	comp=Z,154nm,1.3s						
BRSE	**Bradley Lake S**	**79.75**	**330**	P	**P**	**13 08 15.2**	**+0.1**
	baz=102,SNR=6.4						
BRLK	**Bradley Lake**	**79.83**	**330**	P	**P**	**13 08 15.2**	**-0.3**
BRLK				IAmb	IAmb	13 08 17.1	
	comp=Z,221nm,1.4s						
MCK	**McKinley**	**79.84**	**334**	P	**P**	**13 08 15.8**	**+0.3**
	baz=105,SNR=15						
MDM	**Murphy Dome**	**79.87**	**336**	P	**P**	**13 08 15.2**	**-0.5**
MDM				IAmb	IAmb	13 08 17.4	
	comp=Z,173nm,1.4s						
CUT	**Chulitna**	**80.11**	**333**	P	**P**	**13 08 17.0**	**0.0**
	baz=103,SNR=12						
NEA2	**Nenana**	**80.12**	**335**	P	**P**	**13 08 17.2**	**+0.3**
	baz=105,SNR=66						
SUA	**Susitna One**	**80.12**	**332**	P	**P**	**13 08 17.4**	**+0.3**
	baz=103,SNR=13						
SUA	**Susitna One**	**80.12**	**332**	P	**P**	**13 08 17.5**	**+0.3**
SUA				IAmb	IAmb	13 08 19.2	
	comp=Z,89nm,1.1s						
BWN	**Browne**	**80.18**	**335**	P	**P**	**13 08 16.6**	**-0.7**
DAG	**Danmarks Havn**	**80.28**	**11**	iP	**P**	**13 08 17.0**	**-0.5**
DAG	**Danmarks Havn**	**80.28**	**11**	iP	**P**	**13 08 17.0**	**-0.5**
DAG	**Danmarks Havn**	**80.28**	**11**	iP	**P**	**13 08 17.0**	**-0.5**
KDAK	**Kodiak Island**	**80.31**	**328**	⇓eP	**P**	**13 08 15.1**	**-2.9**
KDAK				pmax	pmax		
	comp=Z,208nm,2.3s						
TRF	**Thorofare Moun**	**80.36**	**334**	P	**P**	**13 08 18.6**	**+0.1**
	baz=103,SNR=11						
TRF	**Thorofare Moun**	**80.36**	**334**	P	**P**	**13 08 18.5**	**0.0**
I23K	**Minto, Yukon-K**	**80.38**	**336**	P	**P**	**13 08 18.7**	**+0.4**
	baz=104,SNR=34						
I23K	**Minto, Yukon-K**	**80.38**	**336**	P	**P**	**13 08 18.4**	**+0.1**
I23K				IAmb	IAmb	13 08 20.3	
	comp=Z,139nm,1.4s						
CLF	**Chambon-Foret**	**80.41**	**42**	P	**P**	**13 08 19.4**	**+0.5**
SKT	**Skwentna**	**80.60**	**332**	P	**P**	**13 08 19.7**	**+0.1**
	baz=102,SNR=22						
SKT	**Skwentna**	**80.60**	**332**	P	**P**	**13 08 18.8**	**-0.8**
SKT				IAmb	IAmb	13 08 21.3	
	comp=Z,134nm,1.2s						
KTH	**Kantishna Hill**	**80.66**	**334**	P	**P**	**13 08 19.6**	**-0.3**
BPAW	**Bear Paw Mtn.**	**80.81**	**335**	P	**P**	**13 08 20.8**	**+0.1**
	baz=103,SNR=38						
BPAW	**Bear Paw Mtn.**	**80.81**	**335**	P	**P**	**13 08 20.2**	**-0.5**
BPAW				IAmb	IAmb	13 08 22.3	
	comp=Z,295nm,1.7s						
RSO	**Redoubt South**	**80.88**	**331**	P	**P**	**13 08 21.0**	**-0.3**
MLY	**Manley**	**80.92**	**336**	P	**P**	**13 08 21.2**	**-0.1**
	baz=103,SNR=44						
PPLA	**Purkeypile**	**81.09**	**333**	P	**P**	**13 08 22.2**	**-0.1**
	baz=102,SNR=17						
PPLA	**Purkeypile**	**81.09**	**333**	P	**P**	**13 08 22.2**	**-0.1**
PPLA				IAmb	IAmb	13 08 23.9	
	comp=Z,126nm,1.1s						
KIP	**Kipapa**	**81.16**	**291**	⇑eP	**P**	**13 08 24.9**	**+1.6**
KIP				pmax	pmax		
	comp=Z,390nm,3.0s						
COLD	**Coldfoot**	**81.22**	**338**	P	**P**	**13 08 23.8**	**+1.1**
	baz=104,SNR=36						
COLD	**Coldfoot**	**81.22**	**338**	P	**P**	**13 08 23.4**	**+0.7**
CHUM	**Lake Minchumin**	**81.34**	**334**	P	**P**	**13 08 23.3**	**-0.1**
	baz=102,SNR=14						
TOLK	**Toolik Lake Re**	**81.35**	**339**	P	**P**	**13 08 23.7**	**+0.2**
	baz=105,SNR=18						
TOLK	**Toolik Lake Re**	**81.35**	**339**	P	**P**	**13 08 23.0**	**-0.4**
TAM	**Tamanrasset**	**81.54**	**67**	P	**P**	**13 08 26.6**	**+1.0**
TAM				pmax	pmax		
	comp=Z,50nm,1.6s						
TAM	**Tamanrasset**	**81.54**	**67**	P	**P**	**13 08 26.6**	**+1.0**
DOU	**Dourbes**	**82.15**	**40**	dP	**P**	**13 08 27.9**	**-0.1**
DOU				dPcP	**PcP**	**13 08 32.0**	**-0.9**
DOU				dx	x	13 08 38.4	
IMAR	**Indian Mountai**	**82.34**	**336**	P	**P**	**13 08 28.4**	**-0.3**
SVW2	**Sparrevohn**	**82.36**	**331**	P	**P**	**13 08 27.9**	**-0.9**
SVW2				IAmb	IAmb	13 08 29.8	
	comp=Z,158nm,1.5s						
TTA	**Tatalina**	**82.82**	**333**	P	**P**	**13 08 30.9**	**-0.3**
TTA				pmax	pmax		
	comp=Z,78nm,1.5s						
TTA	**Tatalina**	**82.82**	**333**	P	**P**	**13 08 30.9**	**-0.3**
MEM	**Membach**	**83.09**	**40**	dP	**P**	**13 08 34.2**	**+1.4**
WLF	**Walferdange**	**83.12**	**40**	dP	**P**	**13 08 33.3**	**+0.3**
WLF				dx	x	13 08 50.0	
BELA	**Belgrano 2**	**83.63**	**172**	P	**P**	**13 08 36.0**	**+0.9**
ECH	**Echery**	**83.70**	**42**	P	**P**	**13 08 35.8**	**-0.3**
ECH				pmax	pmax		
	comp=Z,38nm,1.3s						
ECH	**Echery**	**83.70**	**42**	P	**P**	**13 08 35.8**	**-0.3**
A21K	**Barrow**	**84.26**	**341**	P	**P**	**13 08 38.5**	**+0.2**
	baz=98,SNR=7.9						
A21K	**Barrow**	**84.26**	**341**	P	**P**	**13 08 38.6**	**+0.2**
A21K				IAmb	IAmb	13 08 40.3	
	comp=Z,147nm,1.8s						
KEST	**Kesra**	**84.99**	**55**	P	**P**	**13 08 42.3**	**-0.6**
	comp=Z,13nm,1.0s,baz=282,slow=3.6,SNR=4.7						
TUE	**Stuetta**	**85.12**	**44**	P	**P**	**13 08 44.1**	**+0.6**
DAVOX	**Davos/Dischmat**	**85.50**	**43**	P	**P**	**13 08 45.1**	**-0.1**
	comp=Z,19nm,1.0s,baz=265,slow=6.3,SNR=22						
DAVA	**Damuels**	**85.50**	**43**	iP	**P**	**13 08 46.7**	**+1.5**
	comp=Z,20nm,0.8s,SNR=6.6						
GTTG	**Gottingen**	**85.63**	**39**	eP	**P**	**13 08 47.2**	**+1.6**
	comp=Z,24nm,1.1s,baz=272,slow=4.7						
UBR	**Ueberruh**	**85.66**	**43**	eP	**P**	**13 08 47.6**	**+1.6**
	comp=Z,19nm,1.0s,baz=272,slow=4.7						
NRDL	**Niedersach Rie**	**85.74**	**38**	eP	**P**	**13 08 47.3**	**+1.4**
	comp=Z,10nm,1.0s,baz=272,slow=4.7						
BSEG	**Bad Segeberg**	**85.89**	**36**	eP	**P**	**13 08 47.8**	**+1.0**
	comp=Z,12nm,0.9s,baz=272,slow=4.7						
ASSE	**Asse, Remlinge**	**86.08**	**38**	eP	**P**	**13 08 48.9**	**+1.2**
	comp=Z,13nm,1.0s,baz=272,slow=4.7						
FETA	**Feichten**	**86.08**	**43**	iP	**P**	**13 08 49.4**	**+1.3**
	comp=Z,35nm,1.1s,SNR=11						
RETA	**Reutte**	**86.11**	**43**	iP	**P**	**13 08 49.2**	**+1.0**
	comp=Z,13nm,1.2s						
RDOG	**Red Dog Mine**	**86.14**	**338**	P	**P**	**13 08 48.1**	**+0.3**
	baz=92						
RDOG	**Red Dog Mine**	**86.14**	**338**	P	**P**	**13 08 47.9**	**+0.1**
MOTA	**Moosalm**	**86.34**	**43**	iP	**P**	**13 08 50.4**	**+1.0**
	comp=Z,27nm,1.3s,SNR=5.1						
SQTA	**Sankt Quirin**	**86.41**	**43**	eP	**P**	**13 08 50.8**	**+1.1**
	comp=Z,13nm,0.8s,SNR=5.5						
GRF	**Grafenberg Arr**	**86.41**	**41**	eP	**P**	**13 08 51.1**	**+1.6**
	comp=Z,5.1nm,0.9s,baz=272,slow=4.7						
FLTG	**Flechtingen**	**86.43**	**38**	eP	**P**	**13 08 50.5**	**+1.1**
	comp=Z,8.7nm,0.9s,baz=272,slow=4.7						
NB2	**NORSAR Subarra**	**86.48**	**29**	P	**P**	**13 08 50.2**	**+0.6**
	comp=Z,14nm,0.9s,baz=272,slow=5.1						
NOA	**NORSAR Array B**	**86.48**	**29**	P	**P**	**13 08 50.5**	**+0.9**
	comp=Z,13nm,1.0s,baz=269,slow=4.9,SNR=14						
WATA	**Walderalm**	**86.66**	**43**	iP	**P**	**13 08 51.5**	**+0.6**
	comp=Z,20nm,1.3s						
WTTA	**Wattenberg**	**86.70**	**43**	iP	**P**	**13 08 52.1**	**+0.9**
	comp=Z,33nm,1.8s						
CTI	**Castel Tesino**	**86.72**	**44**	P	**P**	**13 08 51.9**	**+0.7**
CTI				pmax	pmax		
	comp=Z,32nm,1.2s						
CTI	**Castel Tesino**	**86.72**	**44**	P	**P**	**13 08 51.9**	**+0.7**
MANZ	**Manzenberg**	**86.99**	**40**	eP	**P**	**13 08 53.7**	**+1.4**
	comp=Z,7.8nm,1.0s,baz=272,slow=4.7						
ROTZ	**Rotzenmuhle**	**87.05**	**40**	eP	**P**	**13 08 54.0**	**+1.4**
	comp=Z,9.6nm,1.1s,baz=272,slow=4.7						
ANM	**Nome**	**87.08**	**334**	P	**P**	**13 08 53.2**	**+0.8**
	baz=90,SNR=10						
ANM	**Nome**	**87.08**	**334**	P	**P**	**13 08 53.2**	**+0.8**
ANM				pmax	pmax		
	comp=Z,63nm,1.4s						
ANM	**Nome**	**87.08**	**334**	P	**P**	**13 08 53.1**	**+0.8**
WERD	**Werda**	**87.11**	**40**	eP	**P**	**13 08 54.3**	**+1.4**
	comp=Z,5.9nm,1.1s,baz=272,slow=4.7						
GUNZ	**Gunzen**	**87.12**	**40**	eP	**P**	**13 08 54.2**	**+1.3**
	comp=Z,5.7nm,1.0s,baz=272,slow=4.7						
WERN	**Wernitzgruen**	**87.16**	**40**	eP	**P**	**13 08 54.6**	**+1.5**
	comp=Z,14nm,1.2s,baz=272,slow=4.7						
NKC	**Novy Kostel**	**87.20**	**40**	eP	**P**	**13 08 54.2**	**+0.9**
NKC	**Novy Kostel**	**87.20**	**40**	eP	**P**	**13 08 54.2**	**+0.9**
TANN	**Tannenbergstha**	**87.21**	**40**	eP	**P**	**13 08 55.0**	**+1.6**
	comp=Z,17nm,1.1s,baz=272,slow=4.7						
TANN				epP	**sP**	**13 09 54.6**	**+4.6**
ABTA	**Abfaltersbach**	**87.31**	**43**	eP	**P**	**13 08 55.0**	**+1.0**
	comp=Z,36nm,1.1s,SNR=7.0						
SNAA	**Sanae**	**87.47**	**162**	⇑eP	**P**	**13 08 55.9**	**+1.7**
SNAA				i *PP	**pP**	**13 09 34.9**	**+0.6**
SNAA				pmax	pmax		
	comp=Z,13nm,1.0s						
RJOB	**Jochberg**	**87.48**	**43**	eP	**P**	**13 08 56.4**	**+1.6**
	comp=Z,55nm,0.9s,baz=272,slow=4.7						
WET	**Wettzell**	**87.50**	**41**	eP	**P**	**13 08 56.1**	**+1.3**
	comp=Z,16nm,1.0s,baz=272,slow=4.7						
WET				epP	**sP**	**13 09 56.5**	**+5.1**
CLL	**Collm**	**87.53**	**39**	iP	**P**	**13 08 55.8**	**+1.0**
	comp=Z,22nm,1.3s						
CLL				i (pP)	**pP**	**13 09 35.0**	**+0.1**
CLL				ePP	**PP**	**13 12 21.0**	**-0.8**
CLL				eSKSac	**SKSac**	**13 19 09.0**	**+0.8**
CLL				eS	**ScS**	**13 19 28.0**	**-1.4**
CLL				eSP	S	13 20 21.0	+58
CLL				ePS	PS	13 20 53.0	+7.8
CLL				ePPS	PPS	13 21 12.0	
CLL				eSS	**SS**	**13 25 12.0**	**0.0**
CLL	**Collm**	**87.53**	**39**	P	**P**	**13 08 55.4**	**+0.6**
CLL				pmax	pmax		
	comp=Z,17nm,1.2s						
CLL	**Collm**	**87.53**	**39**	P	**P**	**13 08 55.4**	**+0.6**
CLL	**Collm**	**87.53**	**39**	eP	**P**	**13 08 56.0**	**+1.2**
	comp=Z,12nm,1.1s,baz=272,slow=4.7						
HFS	**Hagfors**	**87.71**	**30**	P	**P**	**13 08 55.9**	**+0.4**
	comp=Z,5.8nm,0.7s,baz=198,slow=0.9,SNR=9.2						
KBA	**Koelnbreinsper**	**87.87**	**43**	eP	**P**	**13 08 57.6**	**+0.8**
	comp=Z,14nm,1.1s						
SPITS	**Spitsbergen Ar**	**87.91**	**12**	P	**P**	**13 08 55.8**	**-0.3**
	comp=Z,4.8nm,0.6s,baz=168,slow=8.5,SNR=15						
KHC	**Kasperske Hory**	**87.96**	**41**	deP	**P**	**13 08 58.5**	**+1.5**
KHC				pmax	pmax		
	comp=Z,36nm,1.2s						
KHC	**Kasperske Hory**	**87.96**	**41**	eP	**P**	**13 08 57.8**	**+0.8**
KHC				ex	x	13 09 58.1	
KHC	**Kasperske Hory**	**87.96**	**41**	P	**P**	**13 08 57.8**	**+0.8**
GEC2	**GERESS Array S**	**88.05**	**41**	eP	**P**	**13 08 58.9**	**+1.4**
	comp=Z,8.6nm,1.0s,baz=272,slow=4.7						
GERES	**GERESS Array B**	**88.05**	**41**	P	**P**	**13 08 58.6**	**+1.1**
	comp=Z,6.4nm,1.0s,baz=222,slow=1.8,SNR=20						
GERES	**GERESS Array B**	**88.05**	**41**	P	**P**	**13 08 57.6**	**+0.1**
GERES	**GERESS Array B**	**88.05**	**41**	P	**P**	**13 08 57.6**	**+0.1**
MYKA	**Terra Mystica**	**88.09**	**44**	iP	**P**	**13 08 58.5**	**+0.9**
	comp=Z,12nm,1.0s						
BRG	**Berggiesshubel**	**88.14**	**39**	iP	**P**	**13 08 59.0**	**+1.3**
BRG				Amp		13 09 00.8	
	comp=Z,22nm,1.3s						
BRG				ex	x	13 09 06.0	
BRG				Amp		13 09 08.6	
	comp=Z,9.5nm,1.5s						
BRG				ex	x	13 09 59.2	
BRG				Amp		13 10 01.2	
	comp=Z,12nm,1.3s						
BRG	**Berggiesshubel**	**88.14**	**39**	eP	**P**	**13 08 59.0**	**+1.3**
	comp=Z,11nm,1.1s,baz=272,slow=4.7						
PBCC	**Pribram**	**88.22**	**41**	eP	**P**	**13 09 00.0**	**+1.9**
MOA	**Molln**	**88.47**	**42**	eP	**P**	**13 09 00.4**	**+1.1**
	comp=Z,19nm,1.3s						
PRU	**Pruhonice**	**88.56**	**40**	eP	**P**	**13 09 01.1**	**+1.4**
PRU	**Pruhonice**	**88.56**	**40**	eP	**P**	**13 09 01.1**	**+1.4**
CHVC	**Chvalec**	**89.49**	**40**	eP	**P**	**13 09 06.1**	**+2.0**
CONA	**Conrad Observa**	**89.53**	**42**	iP	**P**	**13 09 05.8**	**+1.4**
	comp=Z,12nm,1.2s						
OSTC	**Ostas**	**89.60**	**40**	eP	**P**	**13 09 06.9**	**+2.3**
DPC	**Dobruska-Polom**	**89.68**	**40**	eP	**P**	**13 09 06.1**	**+1.1**
DPC	**Dobruska-Polom**	**89.68**	**40**	eP	**P**	**13 09 06.1**	**+1.1**
KRUC	**Moravsky**	**89.81**	**41**	eP	**P**	**13 09 06.9**	**+1.3**
VRAC	**Vranov**	**89.93**	**41**	P	**P**	**13 09 07.4**	**+1.2**
	comp=Z,5.0nm,1.0s,baz=289,slow=5.9,SNR=5.1						
VRAC	**Vranov**	**89.93**	**41**	P	**P**	**13 09 07.9**	**+1.7**
VRAC	**Vranov**	**89.93**	**41**	eP	**P**	**13 09 07.7**	**+1.5**
KRLC	**Kraliky**	**89.99**	**40**	eP	**P**	**13 09 08.3**	**+1.8**
KRLC	**Kraliky**	**89.99**	**40**	eP	**P**	**13 09 08.3**	**+1.8**
MODS	**Modra-Piesok**	**90.45**	**42**	eP	**P**	**13 09 09.4**	**+0.8**
MODS	**Modra-Piesok**	**90.45**	**42**	eP	**P**	**13 09 09.4**	**+0.8**
MORC	**Moravsky Berou**	**90.51**	**40**	⇑P	**P**	**13 09 11.0**	**+2.1**
MORC	**Moravsky Berou**	**90.51**	**40**	eP	**P**	**13 09 10.5**	**+1.6**
JAVC	**Velka Javorina**	**90.67**	**41**	eP	**P**	**13 09 12.4**	**+2.7**
VYHS	**Vyhne**	**91.47**	**41**	eP	**P**	**13 09 17.4**	**+4.0**
VYHS	**Vyhne**	**91.47**	**41**	eP	**P**	**13 09 17.4**	**+4.0**
MORH	**Mrgy, Hungar**	**91.56**	**44**	⇑P	**P**	**13 09 15.6**	**+1.8**
ARCES	**ARCESS Array B**	**91.62**	**20**	P	**P**	**13 09 13.4**	**-0.2**
	comp=Z,6.9nm,1.1s,baz=350,slow=4.9,SNR=5.4						
PSZ	**Piszkesteto**	**92.24**	**42**	P	**P**	**13 09 18.8**	**+1.8**
QSPA	**South Pole Qui**	**92.78**	**180**	P	**P**	**13 09 19.9**	**+0.8**
QSPA				IAmb	IAmb	13 12 43.2	
	comp=Z,49nm,0.9s						
CRVS	**Cervenica-Dubn**	**93.15**	**41**	eP	**P**	**13 09 23.6**	**+2.5**
CRVS	**Cervenica-Dubn**	**93.15**	**41**	eP	**P**	**13 09 23.6**	**+2.5**
GRUS	**Gruza**	**93.28**	**46**	P	**P**	**13 09 23.4**	**+1.6**
FINES	**FINESS Array B**	**93.58**	**28**	P	**P**	**13 09 23.4**	**+0.7**
	comp=Z,10nm,1.0s,baz=318,slow=5.4,SNR=7.2						
FINES	**FINESS Array B**	**93.58**	**28**	P	**P**	**13 09 22.5**	**-0.2**
BZS	**Buzias**	**93.70**	**44**	P	**P**	**13 09 25.1**	**+1.4**
DRGR		**94.28**	**43**	⇓P	**P**	**13 09 27.8**	**+1.4**
APA	**Apatity**	**94.95**	**21**	⇓iP	**P**	**13 09 32.2**	**+3.3**
APA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
ARR	**Arges**	**95.83**	**44**	⇑P	**P**	**13 09 34.4**	**+0.9**
BURAR	**Bucovina Array**	**95.83**	**42**	⇓P	**P**	**13 09 34.7**	**+1.1**
MNK	**Minsk**	**96.06**	**35**	iP	**P**	**13 09 34.0**	**-0.2**
	comp=E,2.0nm,0.9s						
MNK				iP	**P**	**13 09 34.0**	**-0.2**
	comp=N,10.0nm,0.9s						
MNK				iP	**P**	**13 09 34.0**	**-0.2**
	comp=Z,10.0nm,0.9s						
MNK				i pP	**pP**	**13 10 12.1**	**-2.0**
MNK				i sP	**sP**	**13 10 28.0**	**-2.5**
MNK				i PP	**PP**	**13 13 28.1**	**-0.5**
MNK				i PPP	PPP	13 15 31.8	
MNK				i S	**SKSac**	**13 19 55.7**	**-0.3**
MNK				i sS	**sSKSac**	**13 21 05.3**	**-3.6**
MNK				i SP	**SP**	**13 21 49.3**	**-10**
MNK				i PS	PS	13 22 18.9	-0.2
MNK				i SS	**SS**	**13 27 09.3**	**-4.7**
MNK				i SSS	SSS	13 31 00.0	
MNK				i SKKS	**SKKSdf**	**13 33 17.2**	**-3.2**
MNK				i LRM	MLR	13 54 08.1	
	comp=E,15nm,18.5s						
MNK				i LRM	MLR	13 54 21.2	
	comp=Z,71nm,18.2s						
MNK				i LRM	MLR	13 54 45.1	
	comp=N,213nm,19.2s						
MLR	**Muntele Rosu**	**96.72**	**44**	P	**P**	**13 09 39.5**	**+1.9**
AKASG	**Malin Array Be**	**97.75**	**38**	iP	**P**	**13 09 39.4**	**-2.5**
SORM	**Soroca**	**97.79**	**41**	⇓P	Pdif	13 09 43.0	+0.8
TMCR	**Tamitsa**	**97.97**	**24**	eP	**P**	**13 09 42.4**	**-0.2**
TMCR				pmax	pmax		
	comp=Z,13nm,0.6s						
SYO	**Syowa Base**	**101.67**	**161**	⇑eX	**Pdif**	**13 09 55.8**	**-3.2**
SYO	**Syowa Base**	**101.67**	**161**	⇓epPdiff	pPdif	13 10 32.4	-6.9
BRTR	**Keskin Array B**	**103.55**	**48**	PP	**PKiKP**	**13 14 19.4**	**-6.7**
	comp=Z,0.5nm,0.9s,baz=332,slow=8.1,SNR=3.3						
ABKAR	**Akbulak array**	**115.97**	**30**		**PKiKP**	**13 14 49.4**	**+0.4**
ABKAR	**Akbulak array**	**115.97**	**30**		**PKiKP**	**13 14 50.0**	**+1.0**
YSS	**Yuzh-Sakhalins**	**119.71**	**330**	eP	**Pdif**	**13 11 17.0**	**-2.7**
ZAA0	**Zalesovo Array**	**121.39**	**13**	PKPdf	**PKPdf**	**13 14 58.8**	**-0.5**
ZALV	**Zalesovo Beam**	**121.39**	**13**	PKP	**PKPdf**	**13 14 59.1**	**-0.2**
	comp=Z,4.6nm,0.6s,baz=249,slow=3.3,SNR=22						
ZALV				SKP		13 18 21.1	
	comp=Z,0.8nm,0.6s,baz=336,slow=3.2,SNR=4.0						
KURK	**Kurchatov**	**122.62**	**19**	⇑iPKIKP	**PKiKP**	**13 15 02.1**	**+0.1**
KURK	**Kurchatov**	**122.62**	**19**	PKPdf	**PKiKP**	**13 15 01.9**	**0.0**
KLR	**Kul'dur**	**122.76**	**338**	PKP	**PKPdf**	**13 15 02.2**	**+0.1**
	comp=Z,4.1nm,0.6s,baz=13,slow=2.6,SNR=2.4						
KLR				PP	**PP**	**13 16 39.8**	**-1.4**
	comp=Z,7.4nm,1.1s,baz=36,slow=6.2,SNR=9.3						
SEM	**Semipalatinsk**	**123.40**	**18**	ePKP	**PKPdf**	**13 15 02.9**	**-0.7**
	baz=18						
SEM	**Semipalatinsk**	**123.40**	**18**	ePKIKP	**PKPdf**	**13 15 02.9**	**-0.7**
KKAR	**Karatay Array**	**125.51**	**29**	PKIKP	**PKPdf**	**13 15 07.4**	**-0.2**
KKAR	**Karatay Array**	**125.51**	**29**	PKPdf	**PKPdf**	**13 15 07.4**	**-0.2**
BTLS	**Baital**	**125.65**	**25**	ePKP	**PKPdf**	**13 15 07.9**	**+0.1**
	baz=25						
BTLS	**Baital**	**125.65**	**25**	ePKIKP	**PKPdf**	**13 15 07.9**	**+0.1**
DGZ	**Jazzator, Alta**	**125.94**	**13**	⇓iPKIKP	**PKiKP**	**13 15 08.9**	**+0.1**
IUG	**Iuzhnay**	**125.98**	**30**	ePKP	**PKPdf**	**13 15 08.4**	**-0.2**
	baz=30						
IUG	**Iuzhnay**	**125.98**	**30**	ePKIKP	**PKPdf**	**13 15 08.4**	**-0.2**
DZA	**Taraz**	**126.07**	**29**	ePKP	**PKPdf**	**13 15 08.6**	**-0.2**
	baz=29						
DZA	**Taraz**	**126.07**	**29**	ePKIKP	**PKPdf**	**13 15 08.5**	**-0.2**
HRA	**Herat**	**126.42**	**43**	PKPdf	**PKiKP**	**13 15 10.2**	**-0.1**
USRK	**Ussuriysk Ar.**	**126.78**	**335**	PKP	**PKPdf**	**13 15 10.0**	**+0.1**
	comp=Z,4.8nm,0.8s,baz=353,slow=4.1,SNR=5.0						
USRK	**Ussuriysk Ar.**	**126.78**	**335**	pP	**PKPdf**	**13 15 09.7**	**-0.2**
MAKZ	**Makanchi**	**127.12**	**18**	PKIKP	**PKPdf**	**13 15 10.3**	**-0.3**
MAKZ	**Makanchi**	**127.12**	**18**	PKPdf	**PKPdf**	**13 15 10.3**	**-0.3**
SGDS	**Sogindy**	**127.17**	**26**	ePKP	**PKPdf**	**13 15 10.8**	**0.0**
	baz=26						
SGDS	**Sogindy**	**127.17**	**26**	ePKIKP	**PKPdf**	**13 15 10.8**	**0.0**
MK31	**Makanchi Array**	**127.23**	**18**	d iPKIKP	**PKPdf**	**13 15 10.3**	**-0.5**
MK31	**Makanchi Array**	**127.23**	**18**		**PKPdf**	**13 15 10.0**	**-0.8**
MKAR	**Makanchi Array**	**127.23**	**18**	PKP	**PKPdf**	**13 15 10.8**	**0.0**
	comp=Z,3.7nm,0.6s,baz=360,slow=2.2,SNR=50						
USP	**Ospenovka**	**127.25**	**26**	P	**PKiKP**	**13 15 12.0**	**+0.5**
	SNR=9.1						
EKS2	**Erkin-Say**	**127.40**	**27**	P	**PKiKP**	**13 15 12.9**	**+1.0**
	SNR=14						
MDJ	**Mudanjiang**	**127.42**	**337**	PKP	**PKPdf**	**13 15 11.0**	**-0.2**
TDK	**Taldyqorghan**	**127.44**	**22**	ePKP	**PKPdf**	**13 15 11.3**	**+0.1**
	baz=22						
TDK	**Taldyqorghan**	**127.44**	**22**	ePKIKP	**PKPdf**	**13 15 11.3**	**+0.1**
KUU	**Kurty**	**127.54**	**25**	ePKP	**PKPdf**	**13 15 11.3**	**-0.2**
	baz=24						
KUU	**Kurty**	**127.54**	**25**	ePKIKP	**PKPdf**	**13 15 11.3**	**-0.2**
AAK	**Ala-Archa**	**127.75**	**27**	PKP	**PKiKP**	**13 15 13.7**	**+1.0**
	comp=Z,7.6nm,0.8s,baz=168,slow=2.0,SNR=33						
AAK	**Ala-Archa**	**127.75**	**27**	P	**PKiKP**	**13 15 13.9**	**+1.2**
	SNR=8.3						
AAK	**Ala-Archa**	**127.75**	**27**	d iPKIKP	**PKiKP**	**13 15 13.1**	**+0.4**
AAK	**Ala-Archa**	**127.75**	**27**	PKPdf	**PKiKP**	**13 15 13.5**	**+0.8**
AML	**Almayashu**	**127.78**	**28**	P	**PKiKP**	**13 15 13.8**	**+0.8**
	SNR=13						
TKM2	**Tokmak 2**	**128.01**	**26**	P	**PKiKP**	**13 15 13.7**	**+0.4**
	SNR=7.5						
UCH	**Uchtor**	**128.08**	**27**	P	**PKiKP**	**13 15 14.7**	**+1.0**
	SNR=18						
AAA	**Alma-Ata**	**128.34**	**25**	ePKP	**PKiKP**	**13 15 13.5**	**-0.2**
	baz=25						
AAA	**Alma-Ata**	**128.34**	**25**	ePKIKP	**PKiKP**	**13 15 13.5**	**-0.2**
MDOK	**Medeo**	**128.44**	**25**	ePKP	**PKPdf**	**13 15 13.2**	**-0.2**
	baz=24						
MDOK	**Medeo**	**128.44**	**25**	ePKIKP	**PKPdf**	**13 15 13.1**	**-0.2**
TNSS	**Tian-Shan**	**128.50**	**25**	ePKP	**PKPdf**	**13 15 13.4**	**-0.4**
	baz=25						
TNSS	**Tian-Shan**	**128.50**	**25**	ePKIKP	**PKPdf**	**13 15 13.4**	**-0.4**
ULHL	**Ulahol**	**128.84**	**26**	P	**PKiKP**	**13 15 15.7**	**+0.8**
	SNR=19						
KPKS	**Kokpek**	**128.85**	**23**	ePKP	**PKPdf**	**13 15 13.2**	**-0.8**
	baz=23						
KPKS	**Kokpek**	**128.85**	**23**	ePKIKP	**PKPdf**	**13 15 13.2**	**-0.8**
SATY	**Saty**	**129.08**	**24**	ePKP	**PKPdf**	**13 15 14.6**	**0.0**
	baz=24						
SATY	**Saty**	**129.08**	**24**	ePKIKP	**PKPdf**	**13 15 14.6**	**0.0**
UZB	**Uzynbulak**	**129.25**	**23**	ePKP	**PKPdf**	**13 15 15.0**	**0.0**
	baz=23						
UZB	**Uzynbulak**	**129.25**	**23**	ePKIKP	**PKPdf**	**13 15 14.9**	**0.0**
MAT	**Matsushiro**	**129.31**	**324**	PKP	**PKPdf**	**13 15 14.9**	**-0.1**
MJAR	**Matsushiro Arr**	**129.31**	**324**	PKP	**PKPdf**	**13 15 15.0**	**-0.1**
	comp=Z,2.0nm,0.6s,baz=103,slow=1.0,SNR=5.0						
MJAR	**Matsushiro Arr**	**129.31**	**324**	PKIKP	**PKPdf**	**13 15 15.0**	**-0.1**

SHLS	Shalkode	129.41	23	ePKP	PKPdf	13 15 15.4	+0.2
	baz=22						
SHLS	Shalkode	129.41	23	ePKIKP	PKPdf	13 15 15.4	+0.2
SONM	Songino Array	129.57	358	PKP	PKiKP	13 15 16.1	0.0
	comp=Z,3.0nm,0.9s,baz=264,slow=1.3,SNR=5.1						
KBL	Kabul	130.74	38	PKIKP	PKiKP	13 15 18.7	-0.3
KBL	Kabul	130.74	38	PKPdf	PKiKP	13 15 18.6	-0.3
KSH	Kashi	130.90	28	PKP	PKiKP	13 15 21.9	+2.9
KSH				PP	PP	13 17 40.9	+5.7
KSH				PKS		13 18 57.4	
KSH				AMB	AMB		
	comp=Z,160nm,6.0s						
KSH				LR	LR		
	comp=Z,130nm,7.9s						
KSH				LR	LR		
	comp=Z,180nm,5.3s						
KSH				LR	LR		
	comp=Z,680nm,5.9s						
WMQ	Urumqi	131.50	15	ePKP	PKiKP	13 15 21.8	+1.7
WMQ				AMB	AMB		
	comp=Z,260nm,4.3s						
WMQ				LR	LR		
	comp=Z,570nm,29.2s						
WMQ				LR	LR		
	comp=Z,1µm,28.9s						
WMQ				LR	LR		
	comp=Z,26nm,25.1s						
STKA	Stephens Creek	133.97	227	PKP	PKPdf	13 15 24.6	+0.6
	comp=Z,6.5nm,0.7s,baz=317,slow=1.5,SNR=8.2						
STKA	Stephens Creek	133.97	227	PKIKP	PKPdf	13 15 24.3	+0.4
STKA	Stephens Creek	133.97	227	PKPdf	PKPdf	13 15 24.3	+0.4
KSRS	Korea Array	134.05	333	PKP	PKPdf	13 15 24.5	+0.6
	comp=Z,4.9nm,0.7s,baz=0.1,slow=1.9,SNR=11						
KSAR	Wonju Array Be	134.08	333	PKIKP	PKPdf	13 15 24.1	+0.1
KSAR	Wonju Array Be	134.08	333		PKPdf	13 15 24.1	+0.1
HHC	Hu-ho-hao-te	136.00	351	ePKP	PKiKP	13 15 28.8	-0.5
SMLA	Simla	137.98	35	i PP	PKPdf	13 15 32.4	+1.0
LZH	Lanzhou	141.37	360	ePKP	PKiKP	13 15 40.3	-0.2
NJ2	Nanjing	142.47	338	ePKP	PKPdf	13 15 38.8	-0.7
BHPL	Bhopal	143.73	43	i PP	PKPab	13 15 38.6	-0.5
BHPL				IAmb	IAmb	13 15 40.8	
	comp=Z,7.9nm,0.7s						
ASAR	Alice Springs	144.03	232	PKP	PKPab	13 15 40.6	+0.3
	comp=Z,43nm,0.5s,baz=118,slow=3.8,SNR=70						
GKN	Gorkha	144.42	30	eP	PKPbc	13 15 42.2	+0.1
	comp=Z,107nm,1.0s						
KKN	Kakani	144.91	29	eP	PKPbc	13 15 43.6	-0.1
	comp=Z,118nm,0.8s						
DMN	Daman	144.98	29	eP	PKPbc	13 15 44.0	0.0
	comp=Z,143nm,0.8s						
GUN	Gumba	145.10	28	eP	PKPdf	13 15 44.7	0.0
	comp=Z,521nm,1.1s						
PKIN	Phulchoki	145.15	29	eP	PKPbc	13 15 44.2	-0.3
	comp=Z,75nm,0.8s						
PKI	Pulchoki	145.16	29	eP	PKPbc	13 15 44.0	-0.6
	comp=Z,83nm,0.8s						
WR0	Warramunga Arr	145.25	238		PKPdf	13 15 44.6	-0.1
WRA	Warramunga Arr	145.43	238	PKPbc	PKPbc	13 15 45.3	0.0
	comp=Z,27nm,0.6s,baz=122,slow=2.9,SNR=8.7						
WRA	Warramunga Arr	145.43	238			13 15 45.3	
LSA	Lhasa	145.62	19	PKPbc	PKPab	13 15 46.6	-0.1
LSA	Lhasa	145.62	19	PKP2	PKPab	13 15 46.5	-0.1
LSA	Lhasa	145.62	19		PKPab	13 15 46.5	-0.1
RAMN	Ramite	146.25	28	eP	PKPdf	13 15 47.2	+0.6
TAPN	Taplejung	146.41	26	eP	PKPab	13 15 49.0	-0.5
CD2	Chengdu	146.53	360	PKPbc	PKPdf	13 15 47.1	+0.4
CD2				sPKP		13 16 42.6	
CD2				SS	SS	13 37 54.4	-1.1
ODAN	Odare	146.69	27	eP	PKPdf	13 15 47.7	+0.4
GTK	Tadong	146.82	25	i x	PKPab	13 15 50.2	-0.7
NWAO	Narrogin (SRO)	147.35	202	PKPbc	PKPbc	13 15 50.2	-0.3
	comp=Z,18nm,0.6s,baz=172,slow=3.5,SNR=12						
NWAO	Narrogin (SRO)	147.35	202	PKP2	PKPbc	13 15 50.7	+0.2
NWAO	Narrogin (SRO)	147.35	202		PKPbc	13 15 50.7	+0.2
MNCY	Minicoy	147.66	70	i PP	PKPdf	13 15 46.7	-2.1
NACB	Ninganchiao	148.00	328		PKPbc	13 15 52.8	+0.3
ZIRO	ZIRO	148.49	17	i PP	PKPdf	13 15 50.6	+0.5
BOK	Bokaro	148.51	32	i PP	PKPdf	13 15 50.0	-0.1
SSLB	Suanglung	148.66	328		PKPbc	13 15 53.6	-0.6
TPUB	Ta-pu	149.22	328		PKPbc	13 15 55.5	-0.1
SHL	Shillong	149.67	21	PKHKP	PKPpre	13 15 52.9	
SHL	Shillong	149.67	21	i PP	PKPbc	13 15 56.5	-0.4
SHL	Shillong	149.67	21	PKPdf	PKPdf	13 15 52.9	+0.8
MOKO	MOKOCHONG	149.81	16	i PP	PKPdf	13 15 54.0	+1.8
MOKO				i PP	PKiKP	13 15 57.7	-0.4
MOKO				i x	x	13 15 58.3	
KOHI	KOHIMA	150.26	17	i x	x	13 15 53.9	
KOHI				i PP	PKiKP	13 15 59.3	+0.3
TRD	Trivandrum	151.22	67	i PP	PKiKP	13 16 02.1	+0.9
BWNR	Bhubaneshwar	151.23	36	i PP	PKPbc	13 15 58.9	-1.6
MDRS	Chennai	152.03	55	i x	x	13 16 03.4	
SIJI	Sorong	152.24	273	PKP	PKPdf	13 15 57.5	+1.3
	comp=Z,9.8nm,0.9s,baz=19,slow=5.3,SNR=3.7						
SIJI				PKPbc	PKiKP	13 16 03.2	-0.1
	comp=Z,8.3nm,0.5s,baz=23,slow=9.4,SNR=7.0						
KMI	Kunming	152.29	2	PKPbc	PKPdf	13 15 56.9	+0.7
KMI				AMB	AMB		
	comp=Z,150nm,5.0s						
SAIH	SAIHA	152.88	22	i PP	PKPdf	13 15 58.5	+1.4
FITZ	Fitzroy Crossi	153.51	233	PKPbc	PKiKP	13 16 05.8	+0.1
	comp=Z,7.7nm,0.7s,baz=32,slow=1.8,SNR=8.0						
FITZ	Fitzroy Crossi	153.51	233	PKPdf	PKPdf	13 15 59.3	+1.5
FITZ					PKPbc	13 16 05.6	0.0
FITZ				PKPab	PKPab	13 16 19.9	+1.4
QIZ	Qiongzhong	157.50	344	PKP	PKPdf	13 16 01.5	-1.7
QIZ				PP	PP	13 20 14.6	+1.2
QIZ				SS	SS	13 39 52.8	-3.3
QIZ				LR	LR		
	comp=Z,190nm,15.7s						
QIZ				LR	LR		
	comp=Z,170nm,16.7s						
QIZ				LR	LR		
	comp=Z,170nm,46.1s						
CHTO	Chiang Mai	158.10	12	PKIKP	PKPdf	13 16 03.6	-0.3
CHTO						13 16 37.2	
CHTO	Chiang Mai	158.10	12	PKPdf	PKPdf	13 16 03.6	-0.3
CHTO					PKPab	13 16 37.2	-0.8
CMAR	Chiang Mai Arr	158.45	12	PKP	PKPdf	13 16 05.6	+1.3
	comp=Z,3.7nm,1.1s,baz=316,slow=1.3,SNR=3.1						
CMAR				PKPab	PKPab	13 16 39.0	-0.5
	comp=Z,4.2nm,0.8s,baz=326,slow=4.9,SNR=8.3						
CMAR	Chiang Mai Arr	158.45	12	PKPdf	PKPdf	13 16 04.7	+0.4
CMAR				PKPab	PKPab	13 16 39.8	+0.3
TOLI2	Tolitoli	162.36	282	PKPab	PKPab	13 16 57.1	+0.1

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*REN **22** 13:01:27.6±1.1, 41°.91N±0°.04×119°.56W±0°.06, h4^{km}±7^{km}, ML3.4/6, ML3.2/39(SEA), ML3.1/68(NEIC) Error ellipse: s-maj=6.5km s-min=5.9km az=106.0*

*ANF **22** 13:01:28.4±0.4, 41°.89N×119°.59W, h5^{km}, ML3.3/16, Error ellipse: s-maj=4.3km s-min=3.7km az=26.0*

*NEIC **22** 13:01:28.6±1.2, 41°.93N±0°.04×119°.55W±0°.05, h15^{km}±7^{km}, Error ellipse: s-maj=5.4km s-min=5.0km az=143.0*

*SEA **22** 13:01:28.2±2.3, 41°.84N±0°.04×119°.53W±0°.06, h0^{km}±7^{km}, Error ellipse: s-maj=6.4km s-min=5.4km az=98.0*

ISC 22 13:01:27.9±0.8**, 41°.94N**±0°.03×**119°.54W**±0°.02**, h10**^{km}**, n71, σ1**^{s}**03**/82**, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOD	Modoc Plateau	0.57	267		Sg	13 01 46.8	+0.2
MOD	Modoc Plateau	0.57	267	Pg	Pg	13 01 38.4	-0.6
MOD	Modoc Plateau	0.57	267	IAML		13 01 48.7	
	comp=N,2µm,0.5s						
MOD				IAML		13 01 50.3	
	comp=E,3µm,0.7s						
WVOR	Wild Horse Val	0.83	53		Sb	13 01 56.7	+0.9
WVOR	Wild Horse Val	0.83	53	Pg	Pg	13 01 44.1	+0.2
WVOR	Wild Horse Val	0.83	53	IAML		13 02 02.3	
	comp=E,453nm,0.6s						
WVOR				IAML		13 02 04.7	
	comp=E,442nm,0.8s						
K05A	Summer Lake	1.28	309	Pn	Pn	13 01 51.5	-0.5
LASM	Arnica Sink	1.56	258		Pn	13 01 55.8	-0.2
J08A	Circle Bar Ran	1.62	29	Pn	Pn	13 01 57.0	+0.3
J08A				IAML		13 02 24.2	
	comp=N,239nm,1.0s						
J08A				IAML		13 02 25.2	
	comp=E,190nm,0.5s						
LTIM	Timbered Crate	1.65	243		Pn	13 01 57.2	+0.2
M04C	Macdoel	1.73	266	P	Pn	13 01 57.9	-0.2
	baz=85,SNR=79						
M04C				S	Sb	13 02 21.7	+0.1
	baz=85						
M04C	Macdoel	1.73	266		Pn	13 01 57.9	-0.2
M04C					Sg	13 02 23.5	+0.1
LBCM	Butte Creek Ri	1.75	232		Pn	13 01 58.4	0.0
K04D	Chiloquin, OR	1.78	293	P	Pb	13 02 00.1	-0.6
	baz=113,SNR=37						
K04D				S	Sb	13 02 23.5	+0.3
	baz=113						
K04D	Chiloquin, OR	1.78	293		Pb	13 02 00.3	-0.4
J05D	Fort Rock, OR	1.84	318	P	Pb	13 02 01.7	0.0
	baz=138,SNR=808						
J05D				S	Sb	13 02 25.9	+1.0
	baz=138						
J05D	Fort Rock, OR	1.84	318		Pb	13 02 01.9	+0.1
WVA	Winnemucca Val	2.00	186		Pb	13 02 04.3	-0.2
L04D	Klamath Falls	2.08	279	P	Pn	13 02 02.6	-0.3
	baz=98,SNR=76						
L04D				Sb	Sb	13 02 33.1	+1.4
	baz=98						
PINE	Pine Mountain	2.12	331	Pn	Pn	13 02 02.9	-0.7
PINE				IAML		13 02 47.3	
	comp=N,139nm,0.8s						
I07A	Izee	2.15	1	Pn	Pn	13 02 04.2	+0.3
I07A	Izee	2.15	1		LR	13 02 37.4	
I07A	Izee	2.15	1	IAML		13 02 38.3	
	comp=N,157nm,0.7s						
I07A				IAML		13 02 42.6	
	comp=E,95nm,1.1s						
BEKR	Beckworth	2.16	197	Pn	Pn	13 02 03.7	-0.4
BEKR				IAML		13 02 40.5	
	comp=N,101nm,0.7s						
BEKR				IAML		13 02 50.5	
	comp=E,116nm,1.0s						
PAHR	Pah Rah Range	2.23	177	Pn	Pn	13 02 05.1	0.0
LOY	Loyalton	2.34	193		Pb	13 02 09.9	-0.3
PEAR	Peavine Mounta	2.35	188		Pb	13 02 10.5	+0.1
O03E	Paynes Creek	2.37	227	P	Pn	13 02 06.8	-0.1
	baz=46,SNR=42						
O03E				Sb	Sb	13 02 41.0	+0.9
	baz=46						
YBH	Yreka Blue Hor	2.38	266		Pn	13 02 06.1	-0.9
YBH				IAML		13 02 51.7	
	comp=N,64nm,1.1s						
KBF	Kyburz Flat	2.48	192		Pb	13 02 12.6	-0.1
VPK	Verdi Peak	2.49	189		Pb	13 02 13.0	+0.2
M02C	Callahan	2.54	259	P	Pn	13 02 08.5	-0.8
	baz=77,SNR=14						
M02C				Sb	Sb	13 02 47.4	+2.4
	baz=77						
IND	Independence	2.56	193		Pb	13 02 14.8	+0.7
N02D	Trinity Center	2.57	249	P	Pn	13 02 09.7	+0.1
	baz=67,SNR=19						
N02D				Sb	Sg	13 02 48.2	-2.2
	baz=67						
HUMO	Hull Mountain	2.62	286		Pn	13 02 09.8	-0.6
HUMO				IAML		13 02 50.2	
	comp=N,65nm,0.7s						
VCNR	Virginia City	2.64	182	Pn	Pn	13 02 10.6	-0.1
VCNR				IAML		13 03 04.5	
	comp=E,131nm,1.0s						
WDC	Whiskeytown Da	2.64	240		Pn	13 02 09.9	-0.6
WDC				IAML		13 02 53.9	
	comp=N,63nm,0.8s						
I05D	Terrebonne, OR	2.74	332	Pb	Pb	13 02 17.6	+0.5
	baz=151,SNR=25						
ORV	Oroville	2.81	213		Pn	13 02 12.4	-0.5
I04A	Tendick Farm,	2.81	312	Pb	Pb	13 02 18.7	+0.5
	baz=131,SNR=16						
I04A				Sb	Sg	13 02 56.7	-1.5
	baz=131						
PNTR	Pine Nut	2.84	181	Pn	Pn	13 02 13.5	-0.1
PNTR				IAML		13 03 02.6	
	comp=E,96nm,0.9s						
YERR	Yerington	2.96	176	Pn	Pn	13 02 15.0	-0.1
O02D	Mt. Diablo Mer	3.02	236	Pn	Pn	13 02 16.6	+0.8
	baz=54						
O02D				Pb	Pb	13 02 21.8	-0.1
	baz=54,SNR=12						
O02D				Sb	Sb	13 03 00.3	+1.5
	baz=54						
L02E	Cave Junction	3.04	276	P	Pn	13 02 17.1	+1.1
	baz=93,SNR=27						
MFID	Camas Ranch	3.11	60	Pn	Pn	13 02 17.1	0.0
MFID				IAML		13 03 17.8	
	comp=E,81nm,0.8s						
MFID				IAML		13 03 18.2	
	comp=E,76nm,0.7s						
K02D	Willamette Mer	3.15	285	P	Pn	13 02 19.8	+2.1
	baz=103,SNR=47						
KRMB	Red Mountain	3.30	264	Pn	Pn	13 02 20.1	+0.4
I03D	Drain, OR	3.31	303	Pb	Pb	13 02 26.8	+0.1
	baz=122,SNR=5.6						
I03D				Sb	Sb	13 03 10.7	+3.7
	baz=122						
BMO	Blue Mountains	3.34	28	Pn	Pn	13 02 21.1	+0.9
G08A	Pilot Rock	3.38	7	Pn	Pn	13 02 21.8	+1.0
WAKR	Walker	3.43	179	Pn	Pn	13 02 21.4	-0.2
WAKR				IAML		13 03 25.7	
	comp=N,25nm,0.8s						
ELK	Elko	3.45	109	Pn	Pn	13 02 22.4	+0.6
ELK				IAML		13 03 16.0	
	comp=N,32nm,0.3s						
ELK				IAML		13 03 23.9	
	comp=N,31nm,0.4s						
H04D	Lebanon	3.49	319	Pg	Pg	13 02 33.8	-0.8
	baz=137						
JCC	Jacoby Creek,	3.56	253	Pn	Pn	13 02 23.5	+0.3
JCC				IAML		13 03 35.7	
	comp=N,35nm,1.7s						
JCC				IAML		13 03 38.8	
	comp=E,45nm,3.5s						
NVAR	Mina Array Bea	3.63	165		Pn	13 02 24.8	+0.5
NV11	Mina Array Sit	3.66	163		Pn	13 02 25.4	+0.7
NV11				IAML		13 03 30.9	
	comp=N,24nm,1.0s						
NV11				IAML		13 03 58.4	
	comp=E,21nm,2.3s						
KEBM	Edson Butte	3.67	286	Pn	Pn	13 02 25.4	+0.6
COR	Corvallis	3.82	315	Pn	Pn	13 02 27.3	+0.6
COR				IAML		13 04 05.2	
	comp=E,26nm,2.4s						
COR				IAML		13 04 23.8	
	comp=E,29nm,3.1s						
CMB	Columbia Colle	3.95	190		Pn	13 02 28.4	-0.2
CMB				IAML		13 03 44.8	
	comp=E,23nm,0.9s						
HLID	Hailey	4.11	65	Pn	Pn	13 02 32.7	+1.8
	baz=248						
HLID				Pb	Pb	13 02 39.7	-0.7
	baz=248						
HLID				Sb	Sg	13 03 36.3	-3.5
	baz=248						
HLID	Hailey	4.11	65	Pn	Pn	13 02 31.3	+0.5
HLID				IAML		13 03 43.5	
	comp=E,19nm,0.6s						
HLID				IAML		13 03 48.0	
	comp=E,23nm,1.1s						
TPH	Tonopah	4.25	155		Pn	13 02 32.6	-0.2
F10A	Beach Ranch, E	4.37	22	Pn	Pn	13 02 35.0	+0.6
F10A				IAML		13 04 00.9	
	comp=E,17nm,1.8s						
F10A				IAML		13 04 03.9	
	comp=N,13nm,1.4s						
R11A	Troy Canyon, C	4.69	139	Pn	Pn	13 02 42.4	+3.5
	baz=321						
R11A				Pg	Pg	13 02 56.9	-0.9
	baz=321						
BCYI	Bear Canyon	5.08	60	Pn	Pn	13 02 45.5	+1.3
DUG	Dugway, Tooele	5.37	107	Pn	Pn	13 02 49.1	+0.9
TPNV	Topopah Spring	5.59	152	Pn	Pn	13 02 50.9	-0.3
SNOW	Snow King Moun	6.65	74	Pn	Pn	13 03 06.1	+0.3
BOZ	Bozeman (W)	6.79	55	Pn	Pn	13 03 08.1	+0.4
FLWY	Flagg Ranch	6.82	69	Pn	Pn	13 03 08.9	+0.7
PASC	Pasadena Art C	7.83	172	Pn	Pn	13 03 21.1	-0.7

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*BJI **22** 13:02:13.8±0.0, 17°.75S×177°.96W, h578^{km}, mB5.1/38, mb5.3/71*

*MOS **22** 13:02:13.7±0.8, 17°.97S×178°.30W, h572^{km}, mb5.2/56, MS6.4/4, Error ellipse: s-maj=7.7km s-min=7.0km az=67.4*

*NOU **22** 13:02:15.5, 18°.01S×178°.22W, h582^{km}, mb5.2, Fiji Islands Region*

*NEIC **22** 13:02:16.3±1.5, 18°.00S±0°.09×178°.32W±0°.09, h594^{km}±5^{km}, mb5.1/338, Error ellipse: s-maj=13.0km s-min=12.0km az=146.0*

*IDC **22** 13:02:16.5±0.6, 18°.21S×178°.31W, h595^{km}±6^{km}, mb4.6/34, mb1 4.7/36, mb1mx4.6/43, mbtmp5.5/36, Error ellipse: s-maj=8.3km s-min=6.4km az=138.0*

*GCMT **22** 13:02:17.3±0.3, 17°.86S±0°.03×178°.27W±0°.02, h588^{km}±2^{km}, MW5.3/92, Moment Tensor Solution. s92,c125; Duration: 1^{s}1 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-1.02±.04; M$_{\theta\theta}$0.05±.07; M$_{\phi\phi}$0.97±.06; M$_{r\theta}$-0.46±.07; M$_{\theta\phi}$-0.48±.06; M$_{\phi r}$-0.65±.07; Best double couple: M$_0$1.35400×10^{17} NP1:ϕ$_s$134.00000°, δ40.00000°, λ-132.00000°. NP2:ϕ$_s$4.00000°, δ62.00000°, λ-60.00000°. Principal axes: T 1.2670, Plg12.0000°, Azm73.0000°; N 0.1790, Plg26.0000°, Azm169.0000°; P -1.4410, Plg61.0000°, Azm320.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

*BGR **22** 13:02:20.5±0.0, 16°.47S×177°.80W, h581^{km}*

ISC 22 13:02:15.4±0.4**, 18°.06S**±0°.04×**178°.26W**±0°.04**, h585**^{km}±4^{km}**, h586**^{km}**:pP-P, n1629, σ1**^{s}**17**/1642**, mb5.2**/297**, 95C-254D, Fault plane solution: NP1:**ϕ$_s$186.55428°, δ36.59058°**,** λ-92.17232°. **NP2:**ϕ$_s$9.25910°**,** δ53.43998°**,** λ-88.38806°. **Principal axes:** T Plg8.4270°**,** Azm98.1069°**;** N Plg1.2947°**,** Azm188.2988°**;** P Plg81.4727°**,** Azm286.9682°**; Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	3.53	275c	iP	P	13 03 38.3	+1.6
MSVF				pmax	pmax		
	comp=Z,3µm,0.8s						
MSVF	Nonsavu	3.53	275	P	P	13 03 38.6	+1.9
MSVF	Nonsavu	3.53	275	P	P	13 03 39.0	+2.3
AFI	Afiamalu	7.47	57	P	P	13 04 07.3	-2.1
AFI	Afiamalu	7.47	57	P	P	13 04 07.2	-2.1
AFI	Afiamalu	7.47	57	P	P	13 04 07.9	-1.5
NIUE	Niue	7.97	99	P	P	13 04 14.6	+0.7
	baz=7.9,SNR=32						
NIUE	Niue	7.97	99	P	P	13 04 13.3	-0.6
NIUE	Niue	7.97	99	P	P	13 04 14.7	+0.8
FUNA	Funafuti	9.79	345	P	P	13 04 30.8	-1.2
RAO	Raoul Island	11.15	178	S	S	13 06 47.4	-1.1
	comp=Z,76nm,0.3s,baz=96,slow=23,SNR=1.4						
DVP	Devils Point	12.91	269	P	P	13 05 04.1	+0.7
	comp=Z,268µm,0.7s						
PINNC	Pines Island,	14.15	249	P	P	13 05 15.7	-0.3
SANVU	Saraoutou	14.16	278	P	P	13 05 14.0	-2.2
SANVU	Saraoutou	14.16	278	P	P	13 05 15.4	-0.8
YATNC	Mamie plateau,	14.51	252	P	P	13 05 18.6	-0.9
OUENC	Ouen Island, N	14.64	250	P	P	13 05 20.3	-0.4
DZM	Mont Dzumac	14.92	252	P	P	13 05 23.0	-0.4
	comp=Z,23nm,0.3s,baz=120,slow=1.3,SNR=125						
DZM				S	S	13 07 57.5	+0.2
	comp=Z,0.1nm,0.3s,baz=80,slow=17,SNR=3.7						
DZM	Mont Dzumac	14.92	252	eP	P	13 05 21.7	-1.7
	comp=Z,440nm,1.2s						
DZM	Mont Dzumac	14.92	252	P	P	13 05 22.5	-0.9
DZM	Mont Dzumac	14.92	252	P	P	13 05 23.1	-0.3
ONTNC	Ouen Toro	14.96	251	P	P	13 05 23.9	+0.2
KNTN	Kanton	16.48	24	P	P	13 05 35.3	-2.7
KNTN				IAmb	IAmb	13 05 39.0	
	comp=Z,139nm,0.9s						
KOUNC	Koumac, New Ca	16.66	259	P	P	13 05 41.0	+1.4
NFK	Norfolk Island	16.71	227	P	P	13 05 42.7	+2.8
	baz=17,SNR=16						
NFK	Norfolk Island	16.71	227	P	P	13 05 41.9	+2.0
RAR	Rarotonga	17.69	103	P	P	13 05 49.4	+0.5
	comp=Z,2.9nm,0.3s,baz=239,slow=6.4,SNR=16						
RAR	Rarotonga	17.69	103	P	P	13 05 49.7	+0.8
RAR	Rarotonga	17.69	103	P	P	13 05 50.2	+1.3
OUZ	Omahuta	18.57	201	P	P	13 05 58.3	+1.6
RUGZ	Raukumara Rang	20.15	189	P	P	13 06 09.8	-1.4
PUZ	Puketiti	20.17	188	P	P	13 06 11.8	+0.6
TGRZ	Tauranga	20.18	193	P	P	13 06 13.4	+2.1
OPRZ	Ohinepanea	20.23	192	P	P	13 06 13.0	+1.3
TWGZ	Tauwhareparae	20.32	189	P	P	13 06 12.5	-0.1
MARZ	Manawahe	20.34	192	P	P	13 06 13.7	+0.9
KMRZ	Kaimai	20.36	193	P	P	13 06 15.2	+2.2
EDRZ	Edgecumbe	20.45	191	P	P	13 06 14.2	+0.4
OMRZ	Omania	20.52	192	P	P	13 06 15.5	+1.1
URZ	Urewera	20.53	190	P	P	13 06 12.2	-2.3
	comp=Z,85nm,0.7s,baz=322,slow=1.5,SNR=84						
URZ				S	S	13 09 25.5	-1.9
	comp=Z,19nm,0.9s,baz=38,slow=23,SNR=3.7						
URZ	Urewera	20.53	190	P	P	13 06 12.1	-2.3
NGRZ	Ngongotaha	20.55	193	P	P	13 06 17.0	+2.2
CNGZ	Carnagh Statio	20.59	188	P	P	13 06 14.9	0.0
TKGZ	Te Karaka	20.59	189	P	P	13 06 15.5	+0.5
TARZ	Mount Tarawera	20.62	192	P	P	13 06 15.9	+0.5
UTU	Utuhina	20.62	192	P	P	13 06 20.1	+4.8
RAGZ	Rawiri	20.71	190	P	P	13 06 15.1	-1.0
RRRZ	Republican Roa	20.72	192	P	P	13 06 16.1	0.0
HSRZ	Hossack Road	20.75	192	P	P	13 06 19.2	+2.8
MUGZ	Murupara	20.80	191	P	P	13 06 16.1	-0.8
GRRZ	Galatos Road	20.81	193	P	P	13 06 19.0	+2.0
HRRZ	Handcock Road	20.81	192	P	P	13 06 17.6	+0.5
RIGZ	Rimuhau	20.86	189	P	P	13 06 16.1	-1.4
PRRZ	Plateau Road	20.90	192	P	P	13 06 17.5	-0.2
WPRZ	Whakapapatarin	20.96	192	P	P	13 06 18.4	0.0
SNGZ	Shannon Statio	21.00	190	P	P	13 06 17.8	-0.9
PRGZ	Paritu Road	21.06	188	P	P	13 06 20.6	+1.4
TARA	Tarawa	21.15	335	P	P	13 06 19.4	-1.0
TARA	Tarawa	21.15	335	P	P	13 06 19.7	-0.7
MTHZ	Maungataniwha	21.16	191	P	P	13 06 19.4	-0.7
RAHZ	Arahi	21.18	190	P	P	13 06 19.4	-0.9
KNZ	Kokohu	21.19	189	P	P	13 06 20.4	+0.1
MRHZ	Matea Rd	21.22	192	P	P	13 06 19.5	-1.1
WATZ	Wairara	21.23	193	P	P	13 06 21.3	+0.5
HIZ	Hauiti	21.25	195	P	P	13 06 21.2	+0.3
HIZ				IAmb	IAmb	13 06 39.9	
	comp=Z,98nm,1.2s						
HIZ	Hauiti	21.25	195	P	P	13 06 23.5	+2.6
MHGZ	Mahia Peninsul	21.28	188	P	P	13 06 22.2	+1.0
WHHZ	Waihua	21.31	190	P	P	13 06 20.8	-0.7
RATZ	Rangitukua	21.38	193	P	P	13 06 23.0	+0.9
NMHZ	Naumai	21.40	191	P	P	13 06 21.6	-0.8
RITZ	Rihia Road	21.47	193	P	P	13 06 22.9	0.0
BKZ	Black Stump Fm	21.52	191	P	P	13 06 21.2	-2.2
BKZ				IAmb	IAmb	13 06 35.3	
	comp=Z,29nm,0.6s						
BKZ	Black Stump Fm	21.52	191	P	P	13 06 21.7	-1.7
KRVZ	Karewarewa	21.62	193	P	P	13 06 24.4	0.0
TMVZ	Te Maari	21.63	193	P	P	13 06 23.6	-0.8
TWVZ	Taurewa	21.65	193	P	P	13 06 23.8	-0.8
ETVZ	East Tongariro	21.65	193	P	P	13 06 24.4	-0.2
OTVZ	Oturere	21.68	193	P	P	13 06 23.5	-1.4
NGZ	Ngauruhoe	21.71	193	P	P	13 06 25.1	-0.1
MCHZ	McNeill Hill	21.76	191	P	P	13 06 24.3	-1.2
KWHZ	Kaweka Forest	21.79	191	P	P	13 06 24.2	-1.6
TUVZ	Tukino	21.79	193	P	P	13 06 24.9	-1.0
FWVZ	Far West T-bar	21.80	193	P	P	13 06 25.7	-0.4
VRZ	Vera Road	21.85	195	P	P	13 06 27.7	+1.4
WNVZ	Wahianoa	21.86	193	P	P	13 06 25.7	-0.8
PKVZ	Pokaka	21.88	193	P	P	13 06 26.7	+0.1
MOVZ	Moawhango	21.90	193	P	P	13 06 25.6	-1.2
CKHZ	Cape Kidnapper	21.90	190	P	P	13 06 25.9	-0.8
BHHZ	Black Hill Sta	21.92	192	P	P	13 06 24.7	-2.3
KRHZ	Kereru	22.01	191	P	P	13 06 25.7	-2.0
KAHZ	Kahuranaki	22.07	190	P	P	13 06 27.5	-0.8
NEZ	North Egmont	22.16	196	P	P	13 06 32.2	+3.1
KHEZ	Kahui Hut	22.20	196	P	P	13 06 32.7	+3.2
NBEZ	Newall Road No	22.22	196	P	P	13 06 32.4	+2.9
PNHZ	Pukenui	22.30	191	P	P	13 06 29.3	-1.0
WPHZ	Waipukurau	22.41	191	P	P	13 06 31.0	-0.3
HNR	Honiara	22.82	289	P	P	13 06 34.0	-1.3
HNR				pmax	pmax		
	comp=Z,175nm,1.1s						
HNR	Honiara	22.82	289	P	P	13 06 34.0	-1.3
POWZ	Post Office Ro	22.85	192	P	P	13 06 28.0	-7.2
MSWZ	Moikau Station	23.94	192	P	P	13 06 43.1	-1.7
SNZO	South Karori	23.95	193	P	P	13 06 43.8	-1.1
BHW	Baring Head	24.01	193	P	P	13 06 43.9	-1.5
QRZ	Quartz Range	24.04	197	P	P	13 06 45.4	-0.3
QRZ				IAmb	IAmb	13 06 47.4	
	comp=Z,50nm,0.7s						
PLWZ	Palliser	24.09	192	P	P	13 06 44.4	-1.8
NNZ	Nelson	24.17	196	P	P	13 06 45.8	-1.0
NNZ				IAmb	IAmb	13 06 50.8	
	comp=Z,29nm,0.7s						
TUWZ	Tuamarina	24.24	194	P	P	13 06 45.7	-1.7
CMWZ	Cape Campbell	24.48	194	P	P	13 06 48.6	-1.0

BSWZ	Blackbirch Sta	24.52	194	P	P	13 06 47.7	-2.2
KHZ	Kahutara	25.27	194	P	P	13 06 54.7	-1.8
KHZ				IAmb	IAmb	13 06 57.5	
	comp=Z,51nm,0.7s						
LTZ	Lake Taylor	25.93	196	P	P	13 07 00.9	-1.5
RPZ	Rata Peaks	27.12	197	P	P	13 07 10.8	-2.1
	comp=Z,19nm,0.5s,baz=356,slow=1.7,SNR=35						
RPZ				S	S	13 11 06.2	-4.7
	comp=Z,17nm,0.9s,baz=189,slow=15,SNR=3.4						
RPZ	Rata Peaks	27.12	197	P	P	13 07 11.5	-1.3
RPZ				IAmb	IAmb	13 07 19.6	
	comp=Z,35nm,0.5s						
PAE	Paea	27.29	94	eP	P	13 07 14.6	0.0
	comp=Z,47nm,1.2s						
PPT2	Papeete2	27.30	93	eP	P	13 07 15.0	+0.2
	comp=Z,254nm,1.3s						
PPT	Papeete	27.30	93	P	P	13 07 14.3	-0.5
	comp=Z,139nm,0.7s,baz=72,slow=4.3,SNR=26						
PPTF	Pamatai, Papee	27.31	93	P	P	13 07 15.3	+0.4
FOZ	Fox Glacier	27.32	199	P	P	13 07 13.6	-1.0
TIAR	Tiarei	27.52	93	eP	P	13 07 16.9	+0.2
	comp=Z,33nm,0.7s						
TVO	Taravao	27.59	94	eP	P	13 07 17.4	+0.1
	comp=Z,36nm,0.8s						
LBZ	Lake Benmore	27.99	198	P	P	13 07 18.5	-1.9
LBZ				IAmb	IAmb	13 07 24.1	
	comp=Z,76nm,0.9s						
ODZ	Otahua Downs	28.46	197	P	P	13 07 23.3	-1.1
XMAS	Kiritimati	28.62	48	P	P	13 07 25.4	-0.9
WKZ	Wanaka	28.74	199	P	P	13 07 25.8	-1.1
EIDS	Eidsvold	29.35	250	P	P	13 07 32.7	+0.3
	baz=30,SNR=9.3						
EIDS	Eidsvold	29.35	250	P	P	13 07 31.2	-1.3
EIDS				IAmb	IAmb	13 07 33.6	
	comp=Z,60nm,0.7s						
VAH	Vaihoa	29.46	89	eP	P	13 07 33.4	-0.1
	comp=Z,180nm,0.9s						
DCZ	Deep Cove	29.91	201	P	P	13 07 36.7	-0.2
DCZ				IAmb	IAmb	13 07 45.0	
	comp=Z,39nm,0.7s						
ARMA	Armidale	29.99	240	P	P	13 07 39.5	+1.5
	baz=30,SNR=80						
ARMA	Armidale	29.99	240	P	P	13 07 38.8	+0.8
WHZ	Wether Hill Ro	30.03	199	P	P	13 07 38.1	+0.1
KWAJ	Kwajalein Atol	30.11	331	P	P	13 07 38.9	-0.2
KWAJ				pmax	pmax		
	comp=Z,621nm,0.7s						
KWAJ	Kwajalein Atol	30.11	331	P	P	13 07 38.9	-0.2
KWAJ	Kwajalein Atol	30.11	331	P	P	13 07 39.4	+0.3
PYZ	Puysegur Point	30.68	201	P	P	13 07 43.8	+0.2
PYZ				IAmb	IAmb	13 07 57.5	
	comp=Z,135nm,1.4s						
MGCD	Mangrove Creek	31.33	235	P	P	13 07 50.8	+1.5
	baz=32,SNR=16						
RMQ	Roma	31.58	249	P	P	13 07 52.7	+1.2
	baz=32,SNR=103						
RABL	Rabaul	32.05	292	P	P	13 07 54.1	-1.6
RABL					PcP	13 10 27.4	+0.2
RABL	Rabaul	32.05	292	P	P	13 07 55.2	-0.5
CNB	Canberra Magne	33.45	233	P	P	13 08 08.8	+1.5
	baz=34,SNR=232						
CTAO	Charters Tower	33.56	261	P	P	13 08 08.3	-0.1
CTAO						13 10 30.9	
CTAO				pmax	pmax		
	comp=Z,32nm,0.6s						
CTAO	Charters Tower	33.56	261	P	P	13 08 08.3	-0.1
CTAO				IAmb	IAmb	13 08 13.6	
	comp=Z,32nm,0.6s						
CTAO					PcP	13 10 30.9	-0.6
CAN	Canberra	33.73	233	P	P	13 08 10.4	+0.8
CAN				pmax	pmax		
	comp=Z,96nm,0.7s						
CAN	Canberra	33.73	233	P	P	13 08 10.3	+0.8
YNG	Young	33.83	235	P	P	13 08 11.6	+1.3
	baz=34,SNR=13						
PMG	Port Moresby	34.62	280	d iP	P	13 08 18.3	+1.0
PMG				pmax	pmax		
	comp=Z,100nm,1.3s						
PMG	Port Moresby	34.62	280	P	P	13 08 17.9	+0.6
PMG				IAmb	IAmb	13 08 20.1	
	comp=Z,74nm,0.9s						
PMG	Port Moresby	34.62	280	P	P	13 08 18.9	+1.6
CMSA	Cobar Meteorol	35.20	241	P	P	13 08 22.8	+0.9
	baz=35,SNR=148						
MTSU	Mount Surprise	35.53	264	P	P	13 08 25.2	+0.3
	baz=36,SNR=52						
QLP	Quilpie	35.62	249	P	P	13 08 25.9	+0.5
	baz=36,SNR=64						
TOO	Toolangi	37.19	231	P	P	13 08 39.4	+1.3
	baz=37,SNR=22						
TOO	Toolangi	37.19	231	P	P	13 08 39.1	+0.9
TOO				pmax	pmax		
	comp=Z,133nm,0.9s						
TOO	Toolangi	37.19	231	P	P	13 08 39.0	+0.9
COEN	Coen	37.25	271	P	P	13 08 39.6	+0.7
COEN				IAmb	IAmb	13 08 40.6	
	comp=Z,25nm,0.6s						
MANU	Manus Island	37.29	291	P	P	13 08 39.8	+0.5
MANU				IAmb	IAmb	13 08 41.3	
	comp=Z,86nm,1.1s						
TAOE	Nuku Hiva Isla	38.11	81	eP	P	13 08 45.6	-0.4
	comp=Z,329nm,0.8s						
TAOE	Nuku Hiva Isla	38.11	81	P	P	13 08 46.4	+0.5
TAU	Tasmania Unive	38.23	222	P	P	13 08 46.9	+0.5
TAU				pmax	pmax		
	comp=Z,34nm,0.9s						
TAU	Tasmania Unive	38.23	222	P	P	13 08 46.9	+0.5
TAU				IAmb	IAmb	13 08 48.4	
	comp=Z,34nm,0.8s						
STKA	Stephens Creek	38.69	241	P	P	13 08 51.3	+1.0
	comp=Z,82nm,0.7s,baz=90,slow=9.5,SNR=153						
STKA				PKiKP	PKiKP	13 17 57.8	-1.0
	comp=Z,1.3nm,0.6s,baz=74,slow=4.7,SNR=3.2						
STKA	Stephens Creek	38.69	241	P	P	13 08 51.6	+1.2
	baz=39,SNR=111						
STKA	Stephens Creek	38.69	241	c iP	P	13 08 51.5	+1.2
STKA	Stephens Creek	38.69	241	P	P	13 08 50.8	+0.5
ARPS	Mount Arapiles	39.68	234	P	P	13 08 59.0	+0.8
	baz=40,SNR=34						
QIS	Mount Isa	39.77	259	P	P	13 08 59.8	+0.6
	baz=40,SNR=6.0						
WAKE	Wake Island	39.96	337	P	P	13 09 00.1	-0.4
HTT	Hallett	41.19	240	P	P	13 09 11.5	+1.1
	baz=41,SNR=71						
JAY	Jayapura	43.09	286	P	P	13 09 26.2	+0.8
	comp=Z,1µmcomp=Z,125nm,0.8s						
KHLU	Kahalu`u	43.38	31	P	P	13 09 27.6	0.0
KHLU				IAmb	IAmb	13 09 37.6	
	comp=Z,95nm,1.1s						
BBOO	Buckleboo	43.46	241	P	P	13 09 28.9	+0.8
	baz=44,SNR=81						
BBOO	Buckleboo	43.46	241	P	P	13 09 28.5	+0.5
BBOO				IAmb	IAmb	13 09 29.3	
	comp=Z,44nm,0.5s						
GENI	Genyem	43.55	286	P	P	13 09 30.4	+1.5
	comp=Z,3µmcomp=Z,258nm,0.8s						
MLH	Mauna Loa	43.55	32	P	P	13 09 29.3	+0.2
MLH				IAmb	IAmb	13 09 43.2	
	comp=Z,122nm,1.2s						
HMH	Humu‘ula Sheep	43.60	32	P	P	13 09 30.1	+0.6
HMH				IAmb	IAmb	13 09 49.4	
	comp=Z,104nm,1.2s						
POHA	Pohakuloa	43.70	32	P	P	13 09 30.5	+0.2
POHA				IAmb	IAmb	13 09 42.2	
	comp=Z,68nm,1.1s						
KIP	Kipapa	43.96	28	P	P	13 09 32.5	+0.5
KIP				pmax	pmax		
	comp=Z,39nm,1.2s						
KIP	Kipapa	43.96	28	P	P	13 09 32.5	+0.5
HLK	Haleakala	44.20	30	P	P	13 09 34.3	+0.2
HLK				IAmb	IAmb	13 09 49.9	
	comp=Z,127nm,1.1s						
WR0	Warramunga Arr	44.56	260	P	P	13 09 36.1	-0.6
WB0	Warramunga Arr	44.71	260	P	P	13 09 37.3	-0.6
WB0				IAmb	IAmb	13 09 38.6	
	comp=Z,21nm,0.6s						
WC3	Warramunga Arr	44.71	260	P	P	13 09 37.3	-0.5
WC3				IAmb	IAmb	13 09 38.6	
	comp=Z,21nm,0.6s						
WB2	Warramunga Arr	44.73	260	P	P	13 09 37.4	-0.6
WB2				IAmb	IAmb	13 09 38.8	
	comp=Z,23nm,0.6s						
WRAB	Tennant Creek	44.74	260	deP	P	13 09 37.7	-0.4
WRAB				pmax	pmax		
	comp=Z,15nm,0.8s						
WRAB	Tennant Creek	44.74	260	P	P	13 09 37.3	-0.8
WRA	Warramunga Arr	44.75	260	P	P	13 09 37.9	-0.3
	comp=Z,15nm,0.5s,baz=95,slow=7.1,SNR=348						
WRA				PcP	PcP	13 11 08.2	+0.6
	comp=Z,25nm,0.8s,baz=90,slow=3.6,SNR=15						
WRA				pP	pP	13 11 22.2	+1.1
	comp=Z,3.1nm,0.8s,baz=80,slow=6.9,SNR=1.1						
WRA				S	S	13 15 28.8	-4.7
	comp=Z,7.8nm,0.8s,baz=94,slow=13,SNR=6.5						
WRA	Warramunga Arr	44.75	260	P	P	13 09 37.4	-0.8
AS31	Alice Springs	44.89	254	P	P	13 09 39.4	+0.2
ASAR	Alice Springs	44.89	254	P	P	13 09 39.5	+0.3
	comp=Z,53nm,0.6s,baz=88,slow=8.9,SNR=790						
ASAR				PcP	PcP	13 11 08.5	+0.4
	comp=Z,31nm,0.6s,baz=98,slow=4.0,SNR=20						
ASAR				pP	pP	13 11 23.0	+0.7
	comp=Z,13nm,0.8s,baz=81,slow=8.9,SNR=2.4						
ASAR				PP	PP	13 11 33.2	-1.4
	comp=Z,20nm,0.8s,baz=81,slow=8.7,SNR=4.1						
ASAR				S	S	13 15 33.5	-2.1
	comp=Z,39nm,1.2s,baz=88,slow=15,SNR=36						
ASAR				P3KPbc		13 38 18.1	
	comp=Z,0.4nm,1.1s,baz=287,slow=3.4,SNR=4.3						
ASAR				P4KPbc		13 47 23.6	
	comp=Z,0.4nm,1.0s,baz=99,slow=4.5,SNR=5.1						
ASAR	Alice Springs	44.89	254	P	P	13 09 38.9	-0.3
SMPI	Sarmi	45.12	286	P	P	13 09 41.7	+0.7
	comp=Z,76nm,0.8s						
KDU	Kakadu	47.70	269	P	P	13 10 00.4	-0.1
	baz=48,SNR=31						
GUMO	Guam	48.08	308	P	P	13 10 03.2	0.0
GUMO				pmax	pmax		
	comp=Z,371nm,0.8s						
GUMO	Guam	48.08	308	P	P	13 10 03.2	0.0
ANA2	Anatahan	49.27	312	P	P	13 10 11.7	-0.3
WRKA	Warakurna	49.94	252	P	P	13 10 16.7	-0.2
	baz=50,SNR=72						
FORT	Forrest	50.07	245	P	P	13 10 17.9	+0.1
	baz=50,SNR=10						
FORT	Forrest	50.07	245	P	P	13 10 17.5	-0.3
FORT				IAmb	IAmb	13 10 21.0	
	comp=Z,22nm,0.6s						
FAKI	Fak Fak	50.75	281	P	P	13 10 22.5	-0.4
SWI	Sorong	52.42	283	P	P	13 10 35.3	+0.4
	comp=Z,4µmcomp=Z,485nm,0.8s						
FITZ	Fitzroy Crossi	53.15	261	P	P	13 10 40.5	+0.4
	baz=53,SNR=21						
FITZ	Fitzroy Crossi	53.15	261	P	P	13 10 40.2	+0.2
SOEI	Soe	56.22	270	P	P	13 11 02.7	+1.0
SOEI	Soe	56.22	270	P	P	13 11 03.3	+1.6
	comp=Z,2µmcomp=Z,268nm,0.9s						
TNTI	Ternate	56.63	283	P	P	13 11 04.7	+0.3
TNTI				IAmb	IAmb	13 11 05.8	
	comp=Z,117nm,0.9s						
TNTI	Ternate	56.63	283	P	P	13 11 05.5	+1.1
	comp=Z,1µmcomp=Z,146nm,0.9s						
SANI	Sanana	56.91	280	P	P	13 11 06.2	-0.1
	comp=Z,1µmcomp=Z,187nm,1.0s						
PSA00	Pilbara Seismi	58.01	255	P	P	13 11 12.6	-1.1
PSA00	Pilbara Seismi	58.01	255	P	P	13 11 13.5	-0.2
PSA00				IAmb	IAmb	13 11 14.5	
	comp=Z,60nm,0.8s						
MMRI	Maumere	58.44	271	P	P	13 11 15.4	-1.3
MMRI				IAmb	IAmb	13 11 16.9	
	comp=Z,70nm,0.6s						
MEEK	Meekatharra	58.52	249	P	P	13 11 16.7	-0.3
	baz=59,SNR=15						
KLBR	Kellerberrin	58.89	244	P	P	13 11 19.6	+0.2
	baz=59,SNR=13						
JCJ	Chichijima	59.05	319	P	P	13 11 19.5	-0.9
NWAO	Narrogin (SRO)	59.27	242	P	P	13 11 21.0	-0.9
NWAO				pmax	pmax		
	comp=Z,23nm,1.1s						
NWAO	Narrogin (SRO)	59.27	242	P	P	13 11 21.0	-0.9
NWAO	Narrogin (SRO)	59.27	242	P	P	13 11 21.6	-0.3
NWAO				IAmb	IAmb	13 11 24.7	
	comp=Z,23nm,1.1s						
KMSI	Cibinong	59.71	282	P	P	13 11 25.5	+0.4
	comp=Z,217nm,0.8s						
BLDU	Ballidu	59.85	245	P	P	13 11 26.0	+0.2
	baz=60,SNR=7.7						
MUN	Mundaring	60.18	243	P	P	13 11 28.6	+0.6
	baz=60,SNR=6.3						
LUWI	Luwuk	60.27	279	P	P	13 11 27.8	-1.0
LUWI				IAmb	IAmb	13 11 30.7	
	comp=Z,239nm,1.1s						
LUWI	Luwuk	60.27	279	P	P	13 11 30.5	+1.7
	comp=Z,2µmcomp=Z,231nm,1.1s						
SBA	Scott Base	60.28	184	P	P	13 11 30.0	+2.2
SBA				pmax	pmax		
	comp=Z,47nm,1.4s						
SBA	Scott Base	60.28	184	P	P	13 11 30.0	+2.2
VNDA	Vanda	60.31	185	P	P	13 11 29.0	+1.0
	comp=Z,2.8nm,0.6s,baz=6.7,slow=8.7,SNR=15						
VNDA	Vanda	60.31	185	P	P	13 11 29.6	+1.6
VNDA				pmax	pmax		
	comp=Z,11nm,1.3s						
VNDA	Vanda	60.31	185	P	P	13 11 29.6	+1.6
MORW	Morawa	60.55	246	P	P	13 11 30.6	+0.1
	baz=61,SNR=3.6						
MORW	Morawa	60.55	246	P	P	13 11 30.4	0.0
KCP	Kidapawan	61.20	289	⇑iP	P	13 11 35.6	+0.6
APSI	Ampana	61.37	279	P	P	13 11 37.5	+1.5
	comp=Z,1µmcomp=Z,149nm,1.2s						
BKSI	Bulukumba	61.40	274	P	P	13 11 37.4	+1.2
	comp=Z,578nmcomp=Z,38nm,0.8s						
BUTP	Butuan	61.56	291	eP	P	13 11 37.0	-0.3
MRSI	Marisa	61.58	281	P	P	13 11 37.8	+0.4
	comp=Z,689nmcomp=Z,85nm,0.9s						
BNSI	Bone	61.70	275	P	P	13 11 38.9	+0.8
	comp=Z,1µmcomp=Z,99nm,1.1s						
KAPI	Kappang	61.85	274	P	P	13 11 39.0	-0.1
	comp=Z,19nm,0.6s,baz=172,slow=5.5,SNR=7.3						
KAPI	Kappang	61.85	274	P	P	13 11 39.0	-0.1
SPSI	Sidrap Palu	62.15	275	P	P	13 11 40.7	-0.4
	comp=Z,66nm,1.0s						
CGP	Cagayan de Oro	62.16	290	⇓eP	P	13 11 41.8	+0.7
TTSI	Tana Toraja	62.39	276	P	P	13 11 54.5	+12
PLAI	Plampang	62.64	269	P	P	13 11 44.3	+0.1
	comp=Z,1µmcomp=Z,134nm,0.8s						
MSLP	Maasin	62.75	292	eP	P	13 11 44.9	0.0
TOLI2	Tolitoli	62.88	281	P	P	13 11 45.9	+0.1
TOLI2				IAmb	IAmb	13 11 46.9	
	comp=Z,48nm,0.8s						
GIRL	Giralia	62.99	253	P	P	13 11 47.9	+1.6
	baz=63,SNR=7.6						
GIRL	Giralia	62.99	253	P	P	13 11 47.1	+0.8
GIRL				IAmb	IAmb	13 11 48.2	
	comp=Z,125nm,0.8s						
TWSI	Taliwang, Sumb	63.51	269	P	P	13 11 49.9	+0.1
	comp=Z,981nmcomp=Z,116nm,0.9s						
JHJ2	Mitsune	64.75	322	P	P	13 11 57.5	+0.2
JHJ	Hachijo jima 2	64.78	322	P	P	13 11 57.6	+0.3
	comp=Z,296nm,0.4s						
SRBI	Singaraja	65.28	269	P	P	13 12 01.0	0.0
	comp=Z,2µmcomp=Z,119nm,1.1s						
KBKI	Kotabaru	65.77	275	P	P	13 12 04.5	+0.4
	comp=Z,60nm,0.9s						
CASY	Casey	66.06	205	P	P	13 12 05.7	+0.8
CASY				IAmb	IAmb	13 12 34.1	
	comp=Z,82nm,1.5s						
JAGI	Jajag, Banyuwa	66.18	269	P	P	13 12 05.5	-1.1
JAGI	Jajag, Banyuwa	66.18	269	P	P	13 12 05.5	-1.1
	comp=Z,2µmcomp=Z,232nm,0.8s						
ABJI	Asem Bagus	66.29	269	P	P	13 12 07.6	+0.4
	comp=Z,132nm,1.1s						
JYT	Yasato	66.77	324	P	P	13 12 09.4	-0.3
JSG	Sagara	66.81	322	P	P	13 12 10.8	+0.8
BBKI	Banjar Baru	66.98	274	P	P	13 12 12.9	+1.4
	comp=Z,80nm,1.1s						
SJMP	San Jose	67.06	292	eP	P	13 12 11.4	-0.5
JMM	Marumori	67.64	326	P	P	13 12 14.9	-0.1
JMM				IAmb	IAmb	13 12 16.2	
	comp=Z,85nm,0.9s						
MTKI	Muara Teweh, K	67.72	277	P	P	13 12 16.9	+0.8
TGY	Tagaytay City	67.94	294	P	P	13 12 18.7	+1.3
	comp=Z,111nm,0.3s,baz=140,slow=4.9,SNR=4.4						
JGF	Kuroka	67.94	322	P	P	13 12 17.0	0.0
JGF				IAmb	IAmb	13 12 17.9	
	comp=Z,58nm,0.7s						
INU	Inuyama	67.97	322	P	P	13 12 17.0	0.0
INU				IAmb	IAmb	13 12 18.3	
	comp=Z,62nm,1.2s						
MAJO	Matsushiro	68.11	323	d iP	P	13 12 17.8	-0.1
MAJO				pmax	pmax		
	comp=Z,76nm,0.9s						
MAJO	Matsushiro	68.11	323	P	P	13 12 18.1	+0.1
MAT	Matsushiro	68.11	323	P	P	13 12 17.8	-0.1
BALP	Baler	68.12	296	eP	P	13 12 17.7	-0.6
JOW	Kunigami	68.42	309	P	P	13 12 20.9	+0.9
JOW				IAmb	IAmb	13 12 22.2	
	comp=Z,135nm,1.1s						
CAUP	Cauayan	68.46	297	eP	P	13 12 21.9	+1.5
JMN	Monobe	68.80	318	P	P	13 12 23.0	+0.8
JWT	Wachi	68.89	321	P	P	13 12 23.0	+0.4
JWT				IAmb	IAmb	13 12 24.1	
	comp=Z,69nm,0.7s						
SMPP	San Manuel, Pa	69.07	296	eP	P	13 12 23.3	-0.8
JSD	Sado	69.14	324	P	P	13 12 24.5	+0.4
AMKA	Amchitka	69.17	358	P	P	13 12 23.4	-0.5
APYP	Conner	69.38	298	eP	P	13 12 25.9	0.0
ERM	Erimo	69.59	330	P	P	13 12 27.5	+0.9
ERM				pmax	pmax		
	comp=Z,52nm,0.9s						
ERM	Erimo	69.59	330	P	P	13 12 27.5	+0.9
ERM				IAmb	IAmb	13 12 32.3	
	comp=Z,52nm,0.9s						
JSU	Suzuyama	69.64	315	P	P	13 12 27.5	+0.3
JSU				IAmb	IAmb	13 12 28.3	
	comp=Z,58nm,0.8s						
ADK	Adak	69.65	1	P	P	13 12 26.2	-0.6
ADK				pmax	pmax		
	comp=Z,128nm,0.7s						
ADK	Adak	69.65	1	P	P	13 12 26.2	-0.6
JTM	Tenmabayashi	69.67	328	P	P	13 12 27.5	+0.4
JTM				IAmb	IAmb	13 12 29.5	
	comp=Z,58nm,0.7s						
UGM	Wanagama	69.78	268	P	P	13 12 28.4	-0.1
UGM	Wanagama	69.78	268	P	P	13 12 30.3	+1.8
	comp=Z,321nm,0.6s						
GSTR	Great Sitkin T	69.88	1	P	P	13 12 28.1	-0.1
ATKA	Atka Island	70.05	3	P	P	13 12 28.5	-0.6
JHS	Saijyo	70.10	319	P	P	13 12 30.6	+0.7
SMRI	Semarang	70.11	269	P	P	13 12 30.8	+0.4
KUR	Kuril'sk	70.12	335	deP	P	13 12 30.3	+0.6
KUR				pmax	pmax		
	comp=Z,176nm,1.0s						
PBKI	Pangkalan Bun	70.22	274	P	P	13 12 33.0	+1.9
	comp=Z,6µmcomp=Z,303nm,1.1s						
JNU	Nakatsue	70.34	316	P	P	13 12 31.6	+0.2
JNU				IAmb	IAmb	13 12 32.2	
	comp=Z,70nm,1.0s						
SMY	Shemya	70.80	355	P	P	13 12 33.0	-0.5
SMY				pmax	pmax		
	comp=Z,204nm,1.0s						
SMY	Shemya	70.80	355	P	P	13 12 33.0	-0.5
JEW	Eniwo	71.03	330	P	P	13 12 35.9	+0.8
YOJ	Yonaguni jima	71.15	305	P	P	13 12 36.3	+0.1
YOJ				pmax	pmax		
	comp=Z,98nm,0.7s						
YOJ	Yonaguni jima	71.15	305	P	P	13 12 36.3	+0.1
NIKH	Nikolski High	71.20	6	P	P	13 12 34.9	-1.0
	baz=190						
NIKH	Nikolski High	71.20	6		P	13 12 35.5	-0.3
STKI	Sintang	71.28	276	P	P	13 12 39.1	+1.8
JKA	Kamikawa-asahi	71.47	331	P	P	13 12 39.0	+1.3
ASAJ	Asahikawa	71.48	331	P	P	13 12 39.4	+1.7
	comp=Z,68nm,0.7s,baz=222,slow=4.9,SNR=92						
TWG	Pinlang	71.87	302	P	P	13 12 39.2	-1.2
TWG				IAmb	IAmb	13 12 39.9	
	comp=Z,61nm,0.6s						
YULB	Yu-li	71.97	303	P	P	13 12 39.8	-1.2
YULB				IAmb	IAmb	13 12 41.2	
	comp=Z,41nm,0.6s						
QSPA	South Pole Qui	72.00	180	P	P	13 12 41.7	+1.1
QSPA				pP	pP	13 14 41.8	+1.9
SKR	Severo-Kuril’s	72.06	343	eP	P	13 12 39.8	-1.1
SKR				pmax	pmax		
	comp=Z,91nm,1.2s						
SKR				pmax	pmax		
	comp=Z,200nm,7.2s						
SKR				pmax	pmax		
	comp=Z,100nm,3.8s						
NACB	Ninganchiao	72.12	304	P	P	13 12 40.7	-1.2
JTU	Tsushima	72.18	317	P	P	13 12 41.5	-0.5
JTU				IAmb	IAmb	13 13 06.4	
	comp=Z,75nm,1.2s						
UNV	Unalaska Valle	72.32	7	P	P	13 12 41.2	-1.0
	baz=192						
UNV	Unalaska Valle	72.32	7	P	P	13 12 41.3	-1.0
UNV				IAmb	IAmb	13 12 42.3	
	comp=Z,82nm,0.8s						
SSLB	Suanglung	72.44	303	P	P	13 12 42.5	-1.2
CISI	Cisompet, Garu	72.46	268	P	P	13 12 43.2	-1.0
CISI	Cisompet, Garu	72.46	268	P	P	13 12 43.7	-0.5
	comp=Z,2µmcomp=Z,154nm,0.6s						
TPUB	Ta-pu	72.46	302	P	P	13 12 42.9	-1.0
YHNB	Yeheng	72.54	304	P	P	13 12 43.4	-1.0
YHNB				IAmb	IAmb	13 12 45.5	
	comp=Z,106nm,0.9s						
TATO	Taipei	72.60	304	P	P	13 12 44.0	-0.6
TATO				IAmb	IAmb	13 12 46.4	
	comp=Z,64nm,0.8s						
AKUT	Akutan	72.69	8	P	P	13 12 43.5	-0.9
LEM	Lembang	72.86	268	P	P	13 12 47.0	+0.5
	comp=Z,214nm,0.8s,baz=45,slow=5.0,SNR=49						
LEM				S	S	13 21 26.4	-0.8
	comp=Z,7.9nm,0.4s,baz=287,slow=20,SNR=3.9						
PET	Petropavlovsk	73.55	346	deP	P	13 12 48.7	-0.7
PET				pmax	pmax		
	comp=Z,581nm,1.7s						
PET	Petropavlovsk	73.55	346	P	P	13 12 48.9	-0.5
PET				IAmb	IAmb	13 12 49.6	
	comp=Z,51nm,0.7s						
YSS	Yuzh-Sakhalins	73.61	333	d iP	P	13 12 50.6	+0.7
YSS				i *PP	pwP	13 14 51.8	-1.2
YSS				pmax	pmax		
	comp=Z,148nm,1.0s						
YSS	Yuzh-Sakhalins	73.61	333	P	P	13 12 50.0	+0.1
YSS				IAmb	IAmb	13 12 52.1	
	comp=Z,112nm,0.9s						
CBJI	Citeko	73.70	268	P	P	13 12 50.4	-0.8
	comp=Z,218nm,0.8s						
DBJI	Dramaga	73.76	268	P	P	13 12 51.6	+0.1
	comp=Z,140nm,0.9s						
PEA0B	Petropavlovsk-	73.86	345	P	P	13 12 51.2	0.0
PEA0B				pmax	pmax		
	comp=Z,124nm,0.8s						
PEA0B	Petropavlovsk-	73.86	345	P	P	13 12 51.2	0.0
PETK	Petropavlovsk-	73.86	345	P	P	13 12 51.2	+0.1
	comp=Z,92nm,0.6s,baz=104,slow=7.6,SNR=220						
PETK				PKiKP	PKiKP	13 18 39.0	-0.3
	comp=Z,2.3nm,0.7s,baz=75,slow=4.6,SNR=4.1						
PETK	Petropavlovsk-	73.86	345	P	P	13 12 51.1	-0.1
TPI	Tanjungpandan	74.02	272	P	P	13 12 54.4	+1.4
	comp=Z,864nmcomp=Z,71nm,1.1s						
TJN	Taejon	74.62	317	⇑eP	P	13 12 56.5	+0.7
SDPT	Sand Point	74.66	10	P	P	13 12 54.9	-0.6
KNMB	Chin-men Tao	74.81	302	P	P	13 12 57.1	0.0
KNMB				IAmb	IAmb	13 12 58.9	
	comp=Z,78nm,0.9s						
QZH	Quanzhou	74.88	303	⇓iP	P	13 12 58.3	+0.8
QZH				pmax	pmax		
	comp=Z,79nm,0.7s						
KSRS	Korea Array	74.91	318	P	P	13 12 58.5	+1.1
	comp=Z,17nm,0.7s,baz=130,slow=6.3,SNR=62						
KSRS				PKiKP	PKiKP	13 18 40.1	-1.2
	comp=Z,4.6nm,1.1s,baz=20,slow=4.0,SNR=5.4						
KSAR	Wonju Array Be	74.92	318	P	P	13 12 58.3	+0.8
KSAR	Wonju Array Be	74.92	318	P	P	13 12 58.3	+0.8
KS19	Wonju Array Si	74.97	318	P	P	13 12 57.2	-0.6
KS19				IAmb	IAmb	13 13 00.8	
	comp=Z,63nm,1.2s						
SPIA	Saint Paul Isl	75.24	5	P	P	13 12 58.8	-0.1
	baz=188						
SPIA	Saint Paul Isl	75.24	5	P	P	13 12 58.7	-0.1
BLSI	Bandar Lampung	75.53	269	P	P	13 13 01.2	-0.3
	comp=Z,152nm,0.9s						
PPBI	Pangkal Pinang	75.65	272	P	P	13 13 03.1	+1.0
	comp=Z,123nm,0.8s						
INCN	Inchon	75.75	318	P	P	13 13 02.2	+0.1
INCN				pmax	pmax		
	comp=Z,33nm,0.8s						
INCN	Inchon	75.75	318	P	P	13 13 02.2	+0.1
INCN				IAmb	IAmb	13 13 06.2	
	comp=Z,33nm,0.8s						
SNCC	San Nicolas Is	75.78	48	P	P	13 13 02.5	+0.2
CHGN	Chignik	75.94	11	P	P	13 13 02.2	-0.4
CHGN				IAmb	IAmb	13 13 03.0	
	comp=Z,96nm,0.8s						
SSE	Sheshan	75.94	310	P	P	13 13 03.6	+0.3

SSE				pmax	pmax		
	comp=Z,19nm,0.9s						
SSE	Sheshan	75.94	310	P	P	13 13 02.6	-0.7
SSE				IAmb	IAmb	13 13 04.6	
	comp=Z,35nm,0.9s						
SCZ2	Santa Cruz Isl	76.11	47	P	P	13 13 05.3	+1.2
	baz=237,SNR=6.0						
KASI	Kota Agung	76.20	269	P	P	13 13 04.3	-0.8
	comp=Z,2µmcomp=Z,212nm,0.9s						
MSHR	Mys Shultsa	76.20	324	*d i*P	P	13 13 05.9	+1.5
MSHR				pmax	pmax		
	comp=Z,238nm,1.3s						
KLSI		76.22	270	P	P	13 13 04.8	-0.5
	comp=Z,7.3nm,0.9s						
MCCM	Marconi Confer	76.31	42	P	P	13 13 06.3	+1.2
MCCM				IAmb	IAmb	13 13 19.5	
	comp=Z,105nm,1.3s						
SCI2	San Clemente I	76.33	48	P	P	13 13 06.8	+1.4
	baz=238						
SAO	San Andreas Ge	76.43	44	P	P	13 13 06.6	+0.7
SAO				pmax	pmax		
	comp=Z,40nm,0.8s						
SAO	San Andreas Ge	76.43	44	P	P	13 13 06.6	+0.7
SAO				IAmb	IAmb	13 13 08.5	
	comp=Z,40nm,0.8s						
PKM	Mcpherson Peak	76.47	46	P	P	13 13 08.2	+1.8
	baz=236						
PMPB	Monarch Peak	76.55	45	P	P	13 13 07.6	+1.0
SMMC	Simmler	76.59	46	P	P	13 13 09.0	+2.2
	baz=236,SNR=12						
CIS	Catalina Islan	76.64	48	P	P	13 13 08.3	+1.1
	baz=238						
PAGB	Antelope Grade	76.64	45	P	P	13 13 07.9	+0.8
HOPS	Hopland Field	76.69	41	P	P	13 13 07.9	+0.7
HOPS				IAmb	IAmb	13 13 09.8	
	comp=Z,57nm,1.1s						
TYV	Tymovskoe	76.72	336	*e*P	P	13 13 07.7	+0.6
TYV				pmax	pmax		
	comp=Z,114nm,1.4s						
LWLI	Liwa	76.77	269	P	P	13 13 07.8	-0.6
	comp=Z,5µmcomp=Z,102nm,0.6s						
USA0B	Ussuriysk Arra	76.82	326	*de*P	P	13 13 08.4	+0.6
USA0B	Ussuriysk Arra	76.82	326	P	P	13 13 08.1	+0.4
USRK	Ussuriysk Ar.	76.82	326	P	P	13 13 08.8	+1.0
	comp=Z,14nm,0.5s,baz=117,slow=4.4,SNR=41						
USRK	Ussuriysk Ar.	76.82	326	P	P	13 13 08.2	+0.4
FMP	Fort Macarthur	76.89	48	P	P	13 13 10.0	+1.6
	baz=238						
SII	Sitkinak Islan	77.03	13	P	P	13 13 08.9	+0.2
	baz=204						
SII	Sitkinak Islan	77.03	13	P	P	13 13 08.6	-0.1
KMRM	Mail Ridge	77.04	40	P	P	13 13 11.0	+1.8
KMRM				IAmb	IAmb	13 13 12.1	
	comp=Z,109nm,0.9s						
OSI	Osito Audit: C	77.08	47	P	P	13 13 11.8	+2.3
	baz=237						
DECC	Green Verdugo	77.16	47	P	P	13 13 11.3	+1.3
	baz=238						
JCC	Jacoby Creek,	77.20	39	P	P	13 13 11.2	+1.2
PASC	Pasadena Art C	77.22	47	P	P	13 13 11.0	+0.8
ARVC	Arvin	77.28	46	P	P	13 13 12.2	+1.7
	baz=237,SNR=5.8						
109C	Camp Elliot, M	77.31	49	P	P	13 13 12.3	+1.6
	baz=239,SNR=6.1						
109C	Camp Elliot, M	77.31	49	P	P	13 13 11.6	+0.9
CBX	Cerro Bola	77.33	50	P	P	13 13 11.5	+0.5
MWC	Mount Wilson	77.33	47	P	P	13 13 11.8	+0.7
MWC				pmax	pmax		
	comp=Z,36nm,0.7s						
MWC	Mount Wilson	77.33	47	P	P	13 13 11.8	+0.7
MWC				IAmb	IAmb	13 13 13.2	
	comp=Z,36nm,0.7s						
VES	Vestal, Richgr	77.50	46	P	P	13 13 12.9	+1.2
	baz=237,SNR=22						
BAR	Barrett	77.51	49	P	P	13 13 12.6	+0.7
VOG	Valley Oaks Go	77.56	45	P	P	13 13 13.3	+1.4
	baz=236						
O02D	Mt. Diablo Mer	77.57	40	P	P	13 13 14.2	+2.1
	baz=233,SNR=10						
MURC	Murrieta	77.61	48	P	P	13 13 13.9	+1.5
	baz=238,SNR=11						
BFSC	Mount Baldy Ra	77.62	48	P	P	13 13 13.8	+1.2
	baz=238,SNR=22						
LHSI	Lahat	77.63	270	P	P	13 13 13.1	+0.2
	comp=Z,7µmcomp=Z,42nm,1.1s						
ESJX	Sierra Juarez	77.69	50	P	P	13 13 13.7	+0.6
KRMB	Red Mountain	77.71	39	P	P	13 13 13.7	+0.9
EDW2	Edwards Air Fo	77.73	47	P	P	13 13 14.6	+1.6
	baz=238,SNR=40						
MONP2	Monument Peak	77.80	49	P	P	13 13 15.6	+1.9
	baz=239,SNR=12						
ISA	Isabella, Lake	77.81	46	P	P	13 13 15.3	+1.8
	baz=237,SNR=34						
ISA	Isabella, Lake	77.81	46	P	P	13 13 13.2	-0.3
ISA				pmax	pmax		
	comp=Z,37nm,0.9s						
ISA	Isabella, Lake	77.81	46	P	P	13 13 13.2	-0.3
OHAK	Old Harbor	77.84	14	P	P	13 13 13.1	+0.2
OHAK				IAmb	IAmb	13 13 14.3	
	comp=Z,101nm,0.8s						
CMB	Columbia Colle	77.85	43	P	P	13 13 13.7	+0.1
CMB				pmax	pmax		
	comp=Z,29nm,0.9s						
CMB	Columbia Colle	77.85	43	P	P	13 13 13.7	+0.1
IKP	In-Ko-Pah, Jac	77.91	50	P	P	13 13 16.0	+1.9
	baz=239,SNR=15						
WDC	Whiskeytown Da	77.96	40	P	P	13 13 14.3	+0.2
WDC				pmax	pmax		
	comp=Z,42nm,1.4s						
WDC	Whiskeytown Da	77.96	40	P	P	13 13 14.3	+0.2
AFDM	Forest Hills D	77.99	42	P	P	13 13 14.7	+0.4
ORV	Oroville	78.01	41	P	P	13 13 14.5	+0.2
ORV				pmax	pmax		
	comp=Z,23nm,1.0s						
ORV	Oroville	78.01	41	P	P	13 13 14.5	+0.2
MNAI	Manna	78.01	269	P	P	13 13 13.9	-1.1
N02D	Trinity Center	78.10	40	P	P	13 13 17.0	+2.1
	baz=233,SNR=10						
NJ2	Nanjing	78.14	309	⇓*i*P	P	13 13 16.4	+1.2
NJ2				pmax	pmax		
	comp=Z,78nm,0.9s						
PFO	Pinyon Flats O	78.14	49	P	P	13 13 17.2	+1.8
	baz=239						
PFO	Pinyon Flats O	78.14	49	P	P	13 13 15.7	+0.3
PFO				pmax	pmax		
	comp=Z,11nm,0.9s						
PFO	Pinyon Flats O	78.14	49	P	P	13 13 15.7	+0.3
JMBI	JAMBI	78.18	272	P	P	13 13 16.3	+0.4
	comp=Z,2µmcomp=Z,141nm,1.3s						
O03E	Paynes Creek	78.25	41	P	P	13 13 16.9	+1.2
	baz=234,SNR=8.5						
M02C	Callahan	78.26	39	P	P	13 13 17.8	+2.1
	baz=233,SNR=14						
LRMC	Laurel Mtn Rad	78.26	47	P	P	13 13 17.4	+1.4
	baz=238,SNR=18						
L02E	Cave Junction	78.28	38	P	P	13 13 17.7	+1.9
	baz=232,SNR=6.0						
SWSC	Sam W. Stewart	78.28	50	P	P	13 13 17.4	+1.5
	baz=239,SNR=5.4						
MDJ	Mudanjiang	78.39	325	P	P	13 13 17.6	+1.4
MDJ				pP	pP	13 15 20.8	+2.4
MDJ				PP	PP	13 16 24.1	-0.7
MDJ				S	S	13 22 28.3	+3.5
MDJ				ScS	ScS	13 22 45.0	+1.5
MDJ				SS	SS	13 27 52.8	+7.2
MDJ				pmax	pmax		
	comp=Z,200nm,0.7s						
MDJ	Mudanjiang	78.39	325	P	P	13 13 16.7	+0.5
MDPB	Devils Postpil	78.48	44	P	P	13 13 17.5	+0.2
MDPB				IAmb	IAmb	13 13 19.7	
	comp=Z,38nm,0.8s						
CWC	Cottonwood Cre	78.50	46	P	P	13 13 18.7	+1.5
	baz=237						
KDAK	Kodiak Island	78.51	14	P	P	13 13 17.0	+0.4
	comp=Z,52nm,0.7s,baz=225,slow=5.0,SNR=22						
KDAK	Kodiak Island	78.51	14	⇓*e*P	P	13 13 17.1	+0.6
KDAK				pmax	pmax		
	comp=Z,118nm,1.0s						
KDAK	Kodiak Island	78.51	14	P	P	13 13 16.8	+0.3
KDAK				IAmb	IAmb	13 13 18.7	
	comp=Z,81nm,0.9s						
OMMB	Old Mammoth Mi	78.52	44	P	P	13 13 18.0	+0.5
YBH	Yreka Blue Hor	78.55	39	P	P	13 13 18.3	+1.0
YBH				pmax	pmax		
	comp=Z,31nm,0.8s						
YBH	Yreka Blue Hor	78.55	39	P	P	13 13 18.3	+1.0
K02D	Willamette Mer	78.57	38	P	P	13 13 18.9	+1.6
	baz=232,SNR=10						
MLAC	Mammoth, Mammo	78.64	44	P	P	13 13 20.1	+2.0
	baz=237,SNR=8.6						
BELC	Belle Mtn. Jos	78.67	49	P	P	13 13 19.9	+1.7
	baz=239,SNR=28						
J01E	Myrtle Point	78.70	37	P	P	13 13 19.5	+1.6
	baz=232						
MPMC	Manual Prospec	78.70	46	P	P	13 13 20.0	+1.6
	baz=238,SNR=20						
WAKR	Walker	78.73	43	P	P	13 13 18.9	+0.4
WAKR				IAmb	IAmb	13 13 21.2	
	comp=Z,44nm,0.9s						
HEC	Hector,Ludlow	78.86	48	P	P	13 13 20.6	+1.5
	baz=239						
BC3	Big Chuckawall	78.89	49	P	P	13 13 21.2	+1.9
	baz=240,SNR=10						
BEKR	Beckworth	78.91	42	P	P	13 13 19.4	+0.1
HUMO	Hull Mountain	78.93	38	P	P	13 13 19.9	+0.7
PNTR	Pine Nut	78.95	43	P	P	13 13 20.6	+0.9
PNTR				IAmb	IAmb	13 13 22.3	
	comp=Z,70nm,0.9s						
VCNR	Virginia City	79.03	42	P	P	13 13 21.0	+0.9
GLA	Glamis	79.04	50	P	P	13 13 22.5	+2.5
	baz=240						
GLA	Glamis	79.04	50	P	P	13 13 21.2	+1.1
GLA				pmax	pmax		
	comp=Z,28nm,0.9s						
GLA	Glamis	79.04	50	P	P	13 13 21.2	+1.1
L04D	Klamath Falls	79.08	39	P	P	13 13 21.7	+1.6
	baz=233,SNR=14						
M04C	Macdoel	79.10	39	P	P	13 13 21.9	+1.6
	baz=234,SNR=11						
YERR	Yerington	79.12	43	P	P	13 13 20.9	+0.3
YERR				IAmb	IAmb	13 13 22.9	
	comp=Z,53nm,1.0s						
LHV	Little Huntoon	79.20	44	P	P	13 13 21.3	+0.6
LHV				IAmb	IAmb	13 13 23.6	
	comp=Z,48nm,0.9s						
GRNR	Gornyy	79.23	333	⇓*i*P	P	13 13 21.8	+1.2
GRNR				pmax	pmax		
	comp=N,20nm,1.2s						
GRNR				pmax	pmax		
	comp=E,20nm,1.2s						
GRNR				pmax	pmax		
	comp=Z,80nm,1.1s						
GRNR				MLR	MLR		
	comp=N,110nm,16.0s						
GRNR				MLR	MLR		
	comp=E,300nm,16.0s						
GRNR				MLR	MLR		
	comp=Z,90nm,11.0s						
GRAC	Grapevine Rang	79.28	45	P	P	13 13 23.3	+2.1
	baz=238,SNR=8.4						
GMRC	Granite Mounta	79.31	48	P	P	13 13 23.1	+1.6
	baz=239,SNR=6.0						
PIX	Pinacate	79.32	52	P	P	13 13 22.4	+1.0
I02D	Swisshome	79.33	37	P	P	13 13 23.2	+2.0
	baz=232						
FURC	Furnace Creek,	79.35	46	P	P	13 13 23.3	+1.8
	baz=238,SNR=5.6						
I03D	Drain, OR	79.36	37	P	P	13 13 23.0	+1.6
	baz=232,SNR=11						
IRM	Iron Mountain	79.36	49	P	P	13 13 23.8	+2.1
	baz=240,SNR=13						
RYN	Ryan	79.39	43	P	P	13 13 22.6	+0.7
NVAR	Mina Array Bea	79.43	44	P	P	13 13 23.6	+1.4
	comp=Z,22nm,0.7s,baz=224,slow=8.6,SNR=140						
NVAR				PKKPbc	PKKPbc	13 32 08.6	+1.3
	comp=Z,0.3nm,0.5s,baz=74,slow=5.5,SNR=3.7						
NVAR	Mina Array Bea	79.43	44	P	P	13 13 22.9	+0.7
PAHR	Pah Rah Range	79.44	42	P	P	13 13 22.5	+0.4
SHOC	Shoshone, Teco	79.46	47	P	P	13 13 23.8	+1.6
	baz=239,SNR=12						
NV11	Mina Array Sit	79.53	44	P	P	13 13 23.2	+0.6
QIZ	Qiongzhong	79.64	294	P	P	13 13 23.5	+0.1
K04D	Chiloquin, OR	79.65	39	P	P	13 13 24.9	+1.7
	baz=234						
DL2	Dalian	79.80	317	P	P	13 13 24.6	+0.8
DL2				pmax	pmax		
	comp=Z,70nm,0.9s						
J04D	Umpqua Nationa	79.81	38	P	P	13 13 25.9	+1.8
	baz=233						
COR	Corvallis	79.93	36	P	P	13 13 25.1	+0.8
COR				pmax	pmax		
	comp=Z,18nm,0.7s						
COR	Corvallis	79.93	36	P	P	13 13 25.1	+0.8
TPH	Tonopah	79.96	45	P	P	13 13 25.7	+0.7
TPH				pmax	pmax		
	comp=Z,127nm,1.0s						
TPH	Tonopah	79.96	45	P	P	13 13 25.6	+0.7
I04A	Tendick Farm,	79.96	37	P	P	13 13 25.7	+1.1
	baz=233,SNR=13						
214A	Organ Pipe Nat	79.99	52	P	P	13 13 27.4	+2.3
	baz=241,SNR=5.6						
TPNV	Topopah Spring	80.02	46	P	P	13 13 26.9	+1.7
	baz=238,SNR=18						
TPNV	Topopah Spring	80.02	46	P	P	13 13 26.3	+1.1
TPNV				pmax	pmax		
	comp=Z,19nm,0.9s						
TPNV	Topopah Spring	80.02	46	P	P	13 13 26.3	+1.1
HSIG		80.05	55	P	P	13 13 26.0	+0.6
MOD	Modoc Plateau	80.11	40	P	P	13 13 26.1	+0.6
MOD				IAmb	IAmb	13 13 27.9	
	comp=Z,48nm,0.7s						
PDMCI	Parker Dam,Lak	80.16	49	P	P	13 13 27.8	+2.0
	baz=240,SNR=8.5						
SNY	Shenyang	80.19	320	⇓P	P	13 13 26.4	+0.6
SNY				pmax	pmax		
	comp=Z,31nm,1.6s						
H04D	Lebanon	80.21	37	P	P	13 13 27.5	+1.6
	baz=233,SNR=6.4						
K05A	Summer Lake	80.22	39	P	P	13 13 26.9	+0.7
K05A				IAmb	IAmb	13 13 29.0	
	comp=Z,95nm,1.0s						
CN2	Changchun	80.23	322	⇓*i*P	P	13 13 26.5	+0.6
CN2				pmax	pmax		
	comp=Z,120nm,1.1s						
KLR	Kul'dur	80.31	329	P	P	13 13 27.2	+1.0
	comp=Z,20nm,0.8s,baz=98,slow=3.6,SNR=56						
KLR	Kul'dur	80.31	329	*d i*P	P	13 13 26.9	+0.7
KLR				pmax	pmax		
	comp=Z,31nm,0.9s						
G03D	McMinnville, O	80.34	36	P	P	13 13 28.0	+1.5
	baz=232,SNR=6.4						
J05D	Fort Rock, OR	80.35	38	P	P	13 13 28.5	+1.7
	baz=234,SNR=68						
CNPM	China Poot	80.39	14	P	P	13 13 26.1	-0.3
CNPM				IAmb	IAmb	13 13 27.7	
	comp=Z,85nm,1.0s						
SDSI	Sungai Dareh	80.50	272	P	P	13 13 28.0	-0.1
	comp=Z,3µmcomp=Z,55nm,0.9s						
SHPR	Sheep Range	80.54	47	P	P	13 13 28.4	+0.5
H04A	Detroit Lake	80.62	37	P	P	13 13 28.3	+0.3
H04A				IAmb	IAmb	13 13 29.8	
	comp=Z,39nm,0.6s						
BRLK	Bradley Lake	80.69	14	P	P	13 13 28.0	0.0
BRLK				IAmb	IAmb	13 13 29.0	
	comp=Z,91nm,0.8s						
BRSE	Bradley Lake S	80.70	14	P	P	13 13 28.4	+0.4
	baz=206,SNR=11						
W13A	Hualapai Mount	80.73	49	P	P	13 13 29.4	+0.4
WHN	Wuhan	80.81	306	⇓*i*P	P	13 13 30.3	+1.1
WHN				pmax	pmax		
	comp=Z,110nm,1.0s						
PINE	Pine Mountain	80.82	38	P	P	13 13 30.1	+0.8
PINE				IAmb	IAmb	13 13 32.0	
	comp=Z,87nm,0.9s						
I05D	Terrebonne, OR	80.91	38	P	P	13 13 30.8	+1.3
	baz=234,SNR=15						
RSO	Redoubt South	80.92	12	P	P	13 13 28.8	-0.6
SVW2	Sparrevohn	80.96	11	P	P	13 13 28.6	-0.7
E03A	Lebam	80.99	35	P	P	13 13 30.4	+0.6
E03A				IAmb	IAmb	13 13 32.2	
	comp=Z,70nm,0.9s						
F04D	Rainier, OR	81.01	35	P	P	13 13 31.9	+2.0
	baz=232						
PRN	Pahroc Range	81.08	46	P	P	13 13 31.7	+1.1
PRN				IAmb	IAmb	13 13 33.6	
	comp=Z,50nm,0.9s						
R11A	Troy Canyon, C	81.20	45	P	P	13 13 32.5	+1.1
	baz=239,SNR=26						
R11A	Troy Canyon, C	81.20	45	P	P	13 13 31.5	+0.2
DIB	Dawson Inlet,	81.20	26	P	P	13 13 31.3	+0.6
DIB				IAmb	IAmb	13 13 32.5	
	comp=Z,39nm,0.9s						
BKNI	Bangkinang	81.26	273	P	P	13 13 34.0	+2.0
	comp=Z,2µmcomp=Z,171nm,1.3s						
SEW	Seward	81.32	14	P	P	13 13 31.0	-0.2
	baz=208						
NLWA	Neilton Lookou	81.35	34	P	P	13 13 32.4	+0.7
NLWA				IAmb	IAmb	13 13 34.2	
	comp=Z,52nm,1.1s						
MA2	Magadan	81.38	345	*d i*P	P	13 13 30.7	-0.8
MA2				pmax	pmax		
	comp=Z,90nm,1.3s						
MA2	Magadan	81.38	345	P	P	13 13 30.5	-1.0
MA2				IAmb	IAmb	13 13 32.0	
	comp=Z,67nm,0.9s						
PDSI	Padang	81.43	272	P	P	13 13 32.2	-0.7
	comp=Z,421nmcomp=Z,45nm,0.9s						
WVOR	Wild Horse Val	81.43	40	P	P	13 13 32.9	+0.6
WVOR				pmax	pmax		
	comp=Z,60nm,1.0s						
WVOR	Wild Horse Val	81.43	40	P	P	13 13 32.9	+0.6
WVOR				IAmb	IAmb	13 13 34.9	
	comp=Z,60nm,0.9s						
G05D	Wamic, OR	81.45	37	P	P	13 13 33.6	+1.3
	baz=234,SNR=9.8						
TIA	Tai'an	81.45	312	P	P	13 13 32.8	+0.3
TIA				pmax	pmax		
	comp=Z,32nm,0.9s						
CAPN	Captain Cook N	81.53	13	P	P	13 13 33.5	+1.3
	baz=206						
COCO	West Island	81.53	260	*i* P	P	13 13 36.2	+2.9
E04D	Cinebar	81.54	35	P	P	13 13 34.2	+1.6
	baz=233,SNR=12						
O22K	Cooper Landing	81.59	14	P	P	13 13 32.6	+0.1
	baz=207,SNR=9.3						
O22K	Cooper Landing	81.59	14	P	P	13 13 32.1	-0.4
TUC	Tucson	81.68	52	P	P	13 13 36.1	+2.4
	baz=243						
TUC	Tucson	81.68	52	P	P	13 13 35.1	+1.3
TUC				pmax	pmax		
	comp=Z,34nm,1.0s						
TUC	Tucson	81.68	52	P	P	13 13 35.1	+1.3
F05D	White Salmon	81.75	36	P	P	13 13 35.0	+1.2
	baz=234,SNR=11						
D04E	Lakebay	81.81	35	P	P	13 13 35.4	+1.4
	baz=232						
I07A	Izee	81.83	38	P	P	13 13 35.3	+0.9
I07A				IAmb	IAmb	13 13 36.9	
	comp=Z,63nm,0.8s						
D03D	Eldon	81.86	34	P	P	13 13 35.8	+1.6
	baz=232,SNR=18						
BELA	Belgrano 2	82.00	173	P	P	13 13 34.8	+0.2
J08A	Circle Bar Ran	82.04	40	P	P	13 13 35.4	0.0
J08A				IAmb	IAmb	13 13 37.8	
	comp=Z,71nm,1.1s						
LON	Longmire	82.08	35	P	P	13 13 35.7	+0.3
LON				pmax	pmax		
	comp=Z,15nm,0.8s						
LON	Longmire	82.08	35	P	P	13 13 35.7	+0.3
UBPT	Khong Chiam	82.11	289	P	P	13 13 36.4	+0.2
UBPT				IAmb	IAmb	13 13 38.2	
	comp=Z,63nm,1.2s						
RC01	Rabbit Creek A	82.13	14	P	P	13 13 35.3	0.0
	baz=207,SNR=9.6						
D05A	Enumclaw	82.24	35	P	P	13 13 37.0	+0.8
D05A				IAmb	IAmb	13 13 38.9	
	comp=Z,134nm,1.3s						
SUA	Susitna One	82.25	13	P	P	13 13 35.8	-0.2
	baz=206,SNR=33						
SUA	Susitna One	82.25	13	P	P	13 13 35.4	-0.6
PGC	Sidney	82.36	33	P	P	13 13 37.5	+0.9
SPR3	Spring Creek 3	82.37	45	P	P	13 13 37.7	+0.2
BBB	Bella Bella	82.38	28	P	P	13 13 37.5	+0.8
	comp=Z,23nm,0.7s,baz=279,slow=3.4,SNR=19						
BBB	Bella Bella	82.38	28	P	P	13 13 37.0	+0.3
319A	Douglas	82.40	54	P	P	13 13 39.2	+1.7
319A				IAmb	IAmb	13 13 41.0	
	comp=Z,54nm,0.9s						
U15A	North Rim	82.51	48	P	P	13 13 39.2	+1.0
U15A				IAmb	IAmb	13 13 41.2	
	comp=Z,63nm,0.8s						
SKT	Skwentna	82.55	12	P	P	13 13 36.3	-1.1
	baz=206,SNR=12						
SKT	Skwentna	82.55	12	P	P	13 13 35.2	-2.2
TTA	Tatalina	82.59	10	P	P	13 13 37.6	-0.1
TTA				pmax	pmax		
	comp=Z,90nm,1.0s						
TTA	Tatalina	82.59	10	P	P	13 13 37.5	-0.1
TTA				IAmb	IAmb	13 13 39.4	
	comp=Z,90nm,1.0s						
EYAK	Cordova Ski Ar	82.61	16	P	P	13 13 38.0	+0.3
	baz=211						
F07A	Phinny Hill Vi	82.63	37	P	P	13 13 38.8	+0.6
F07A				IAmb	IAmb	13 13 40.3	
	comp=Z,36nm,0.8s						
ELK	Elko	82.67	43	P	P	13 13 40.1	+1.3
	comp=Z,24nm,0.9s,baz=243,slow=4.6,SNR=75						
ELK	Elko	82.67	43	P	P	13 13 38.8	0.0
PMR	Palmer	82.71	14	P	P	13 13 37.6	-0.6
PMR				pmax	pmax		
	comp=Z,128nm,1.4s						
PMR	Palmer	82.71	14	P	P	13 13 37.6	-0.6
PMR				IAmb	IAmb	13 13 39.0	
	comp=Z,128nm,1.4s						
WUAZ	Wupatki	82.73	49	P	P	13 13 41.0	+1.8
	baz=242,SNR=18						
WUAZ	Wupatki	82.73	49	P	P	13 13 40.1	+0.9
A04D	Lummi Island	82.79	33	P	P	13 13 40.5	+1.7
	baz=232,SNR=7.9						
MNSI	Mandailing Nat	82.79	273	P	P	13 13 39.4	-0.3
	comp=Z,1µmcomp=Z,41nm,0.5s						
B05A	Bryant	82.83	34	P	P	13 13 40.4	+1.3
	baz=233,SNR=26						
G08A	Pilot Rock	82.84	38	P	P	13 13 39.9	+0.5
G08A				IAmb	IAmb	13 13 41.7	
	comp=Z,87nm,1.3s						
ANM	Nome	82.96	6	P	P	13 13 40.0	+0.7
	baz=192,SNR=6.2						
ANM	Nome	82.96	6	P	P	13 13 39.5	+0.1
ANM				pmax	pmax		
	comp=Z,13nm,0.7s						
ANM	Nome	82.96	6	P	P	13 13 39.5	+0.1
LTY	Liberty	83.00	35	P	P	13 13 40.3	+0.2
LTY				IAmb	IAmb	13 13 42.0	
	comp=Z,37nm,1.0s						
E07A	Sunnyside	83.05	36	P	P	13 13 40.9	+0.6
E07A				IAmb	IAmb	13 13 42.6	
	comp=Z,53nm,0.9s						
SML	Sawmill	83.08	14	P	P	13 13 39.8	-0.3
	baz=209,SNR=7.1						
SML	Sawmill	83.08	14	P	P	13 13 39.4	-0.7
SML				IAmb	IAmb	13 13 50.4	
	comp=Z,36nm,0.9s						
HAWA	Hanford	83.14	37	P	P	13 13 41.0	+0.3
HAWA				IAmb	IAmb	13 13 43.1	
	comp=Z,59nm,0.9s						
CUT	Chulitna	83.19	13	P	P	13 13 40.5	-0.1
	baz=207,SNR=29						
PPLA	Purkeypile	83.25	12	P	P	13 13 39.6	-1.5
	baz=205,SNR=7.0						
PPLA	Purkeypile	83.25	12	P	P	13 13 39.4	-1.6
PPLA				IAmb	IAmb	13 13 40.7	
	comp=Z,71nm,1.5s						
BMRM	Bremner River	83.26	16	P	P	13 13 41.3	+0.2
	baz=212,SNR=11						
C06D	Leavenworth	83.27	35	P	P	13 13 42.4	+1.0
	baz=234						
B06A	Marblemount	83.31	34	P	P	13 13 40.1	-1.3
B06A				IAmb	IAmb	13 13 43.1	
	comp=Z,35nm,1.0s						
SCM	Sheep Creek Mo	83.34	14	P	P	13 13 40.8	-0.6
SCM				pmax	pmax		
	comp=Z,154nm,0.6s						
SCM	Sheep Creek Mo	83.34	14	P	P	13 13 40.8	-0.6
KLU	Klutina	83.38	15	P	P	13 13 41.6	0.0
	baz=211,SNR=7.5						
KLU	Klutina	83.38	15	P	P	13 13 40.9	-0.8
KLU				IAmb	IAmb	13 13 42.8	
	comp=Z,38nm,1.0s						
HPIG		83.38	59	P	P	13 13 43.2	+0.6
E08A	Dider Farm, El	83.46	37	P	P	13 13 43.0	+0.8
E08A				IAmb	IAmb	13 13 44.5	
	comp=Z,38nm,0.7s						
CRQE	Cirque	83.48	17	P	P	13 13 42.7	+0.5
	baz=214						
MVU	Marysvale	83.57	46	P	P	13 13 44.2	+0.9
BMO	Blue Mountains	83.57	39	P	P	13 13 43.1	+0.1
BMO				pmax	pmax		

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      comp=Z,17nm,0.9s
BMO   Blue Mountains   83.57  39   P       P       13 13 43.1 +0.1
WRAK  Wrangell Islan   83.59  24   P       P       13 13 43.8 +1.2
      baz=224,SNR=10
WRAK  Wrangell Islan   83.59  24   P       P       13 13 43.1 +0.5
WRAK                               IAmb    IAmb    13 13 44.7
      comp=Z,46nm,0.8s
MFID  Camas Ranch      83.69  41   P       P       13 13 44.3 +0.7
MFID                               IAmb    IAmb    13 13 46.0
      comp=Z,37nm,1.0s
VRDI  Verde Repeater   83.78  16   P       P       13 13 43.3 -0.5
VRDI                               IAmb    IAmb    13 13 45.0
      comp=Z,83nm,1.0s
N25K  Chitina, Valde   83.81  15   P       P       13 13 44.2 +0.4
      baz=212,SNR=32
N25K  Chitina, Valde   83.81  15   P       P       13 13 43.3 -0.5
M24K  Tolsona, Glenn   83.85  15   P       P       13 13 44.7 +0.8
      baz=211,SNR=19
M24K  Tolsona, Glenn   83.85  15   P       P       13 13 43.8 -0.2
D08A  Wollman Farm,    83.86  36   P       P       13 13 44.9 +0.6
D08A                               IAmb    IAmb    13 13 46.5
      comp=Z,47nm,0.9s
GLB   Gilahina Butte   83.87  16   P       P       13 13 43.7 -0.3
GLB                                IAmb    IAmb    13 13 45.1
      comp=Z,68nm,0.7s
WAT6  Susitna Watana   83.90  14   P       P       13 13 44.1 -0.2
      baz=209,SNR=36
BALM  Baldy            83.92  17   P       P       13 13 44.1 -0.2
BALM                               IAmb    IAmb    13 13 45.6
      comp=Z,84nm,0.9s
SEY   Seymchan         83.95 347   P       P       13 13 44.5 +0.2
      comp=Z,92nm,0.6s,baz=152,slow=5.5,SNR=510
SEY                                pP      pwP     13 15 51.4 -0.3
      comp=Z,3.6nm,0.3s,baz=176,slow=1.7,SNR=3.0
BJT   Baijiatuau       83.98 315   P       P       13 13 44.7 -0.3
BJT                                pmax    pmax
      comp=Z,98nm,1.2s
BJT   Baijiatuau       83.98 315   P       P       13 13 44.7 -0.3
BJT                                IAmb    IAmb    13 13 47.1
      comp=Z,98nm,1.2s
DUG   Dugway, Tooele   83.98  44   P       P       13 13 46.1 +0.9
      baz=240
DUG   Dugway, Tooele   83.98  44   P       P       13 13 44.0 -1.3
DUG                                pmax    pmax
      comp=Z,7.0nm,0.9s
DUG   Dugway, Tooele   83.98  44   P       P       13 13 44.0 -1.3
BJI   Beijing          83.99 315   P       P       13 13 45.9 +0.9
BJI                                pmax    pmax
      comp=Z,60nm,1.0s
E09A  Wood Farm, Sta   84.00  37   P       P       13 13 44.6 -0.4
E09A                               IAmb    IAmb    13 13 46.9
      comp=Z,56nm,1.4s
RPSI  Rantau Prapat    84.01 275   P       P       13 13 44.8 -0.9
MCARA McCarthy VSAT    84.03  16   P       P       13 13 45.1 +0.3
      baz=214,SNR=11
MCARA McCarthy VSAT    84.03  16   P       P       13 13 44.0 -0.7
MCARA                              IAmb    IAmb    13 13 46.2
      comp=Z,82nm,1.1s
PSI   Prapat           84.04 275   P       P       13 13 45.8 -0.2
      comp=Z,88nm,0.8s,baz=180,slow=2.9,SNR=47
PSI   Prapat           84.04 275   P       P       13 13 44.8 -1.3
PSI                                pmax    pmax
      comp=Z,104nm,0.9s
121A  Cookes Peak, D   84.05  53   P       P       13 13 47.9 +2.2
      baz=244,SNR=16
121A  Cookes Peak, D   84.05  53   P       P       13 13 46.3 +0.5
WAT2  Susitna Watana   84.05  13   P       P       13 13 44.7 -0.3
      baz=208,SNR=31
KTH   Kantishna Hill   84.09  12   P       P       13 13 43.4 -1.7
KTH                                IAmb    IAmb    13 13 46.3
      comp=Z,83nm,0.8s
CHUM  Lake Minchumin   84.12  11   P       P       13 13 44.5 -0.6
      baz=205,SNR=30
TRF   Thorofare Moun   84.12  12   P       P       13 13 44.8 -0.6
      baz=207,SNR=109
TRF   Thorofare Moun   84.12  12   P       P       13 13 44.2 -1.2
BARN  Barnard Glacie   84.13  17   P       P       13 13 45.2 -0.2
CTG   Chitna Glacier   84.14  17   P       P       13 13 45.9 +0.4
      baz=215,SNR=13
CTGM  Chitina Glacie   84.14  17   P       P       13 13 45.1 -0.4
CTGM                               IAmb    IAmb    13 13 46.9
      comp=Z,74nm,0.8s
JIS   Juneau Island    84.22  22   P       P       13 13 46.1 +0.4
JIS                                IAmb    IAmb    13 13 47.6
      comp=Z,29nm,1.0s
F10A  Beach Ranch, E   84.23  38   P       P       13 13 46.1 -0.1
F10A                               IAmb    IAmb    13 13 48.6
      comp=Z,69nm,0.9s
BESE  Bessie Mountai   84.28  21   P       P       13 13 46.3 +0.2
BESE                               IAmb    IAmb    13 13 48.2
      comp=Z,73nm,1.0s
ZAIG  Zacatecas        84.35  64   P       P       13 13 47.0 -0.6
B08A  Colville Reser   84.38  35   P       P       13 13 46.8  0.0
B08A                               IAmb    IAmb    13 13 48.3
      comp=Z,42nm,0.8s
RND   Reindeer         84.38  13   P       P       13 13 46.1 -0.4
RND                                pmax    pmax
      comp=Z,166nm,0.8s
RND   Reindeer         84.38  13   P       P       13 13 46.1 -0.4
ENH   Enshi            84.47 304   P       P       13 13 48.0 +0.3
BPAW  Bear Paw Mtn.    84.57  12   P       P       13 13 46.2 -1.2
      baz=206,SNR=15
BPAW  Bear Paw Mtn.    84.57  12   P       P       13 13 46.1 -1.2
BPAW                               IAmb    IAmb    13 13 49.1
      comp=Z,21nm,0.7s
TSI   Tuntungan        84.60 275   P       P       13 13 49.3 +0.7
      comp=Z,3μmcomp=Z,158nm,0.9s
C09A  Chrisman Ranch   84.64  36   P       P       13 13 48.1  0.0
C09A                               IAmb    IAmb    13 13 50.0
      comp=Z,40nm,0.9s
HLID  Hailey           84.65  41   P       P       13 13 50.0 +1.6
      baz=239,SNR=47
HLID  Hailey           84.65  41   P       P       13 13 48.8 +0.4
HLID                               IAmb    IAmb    13 13 51.0
      comp=Z,29nm,0.8s
MCK   McKinley         84.65  13   P       P       13 13 47.4 -0.4
      baz=208,SNR=47
PAX   Paxson           84.76  14   P       P       13 13 47.9 -0.5
      baz=211,SNR=18
PAX   Paxson           84.76  14   P       P       13 13 47.4 -1.0
PAX                                pmax    pmax
      comp=Z,36nm,0.9s
PAX   Paxson           84.76  14   P       P       13 13 47.4 -1.0
PAX                                IAmb    IAmb    13 13 49.0
      comp=Z,36nm,0.9s
SKAG  Skagway          84.79  20   P       P       13 13 48.6 +0.1
SKAG                               IAmb    IAmb    13 13 51.0
      comp=Z,77nm,1.4s
GSI   Gunungsitoli     84.85 273   P       P       13 13 49.9  0.0
GSI   Gunungsitoli     84.85 273   P       P       13 13 51.2 +1.3
      comp=Z,204nm,0.9s
BWN   Browne           84.94  12   P       P       13 13 48.2 -0.9
HYT   Haines Junctio   85.15  19   P       P       13 13 50.0 -0.4
HYT                                IAmb    IAmb    13 13 52.2
      comp=Z,41nm,0.9s
MENT  Mentasta         85.15  15   P       P       13 13 49.9 -0.3
MENT                               IAmb    IAmb    13 13 51.7
      comp=Z,50nm,1.0s
GYA   Guiyang          85.23 300 ⇓P        P       13 13 52.3 +0.7
GYA                                pP      pP      13 15 59.6 +2.5
GYA                                S       S       13 23 36.3 +2.1
GYA                                pmax    pmax
      comp=Z,47nm,1.0s
GYA                                pmax    pmax
      comp=Z,260nm,5.9s
LENM  Lemitar          85.36  52   P       P       13 13 51.8 -0.4
ZEA   Zeya             85.39 331  eP       P       13 13 52.4 +0.9
ZEA                                pmax    pmax
      comp=E,20nm,0.8s
ZEA                                pmax    pmax
      comp=N,50nm,0.7s
ZEA                                pmax    pmax
      comp=Z,100nm,0.8s
NEA2  Nenana           85.39  12   P       P       13 13 50.2 -1.1
      baz=208,SNR=12
MLY   Manley           85.46  11   P       P       13 13 50.8 -0.9
      baz=206,SNR=26
WRH   Wood River Hil   85.48  13   P       P       13 13 50.7 -1.0
MNTX  Cornudas Mount   85.54  55   P       P       13 13 54.6 +1.8
      baz=246,SNR=30
MNTX  Cornudas Mount   85.54  55   P       P       13 13 53.5 +0.7
NEW   Newport          85.55  36   P       P       13 13 53.0 +0.5
      comp=Z,18nm,0.7s,baz=238,slow=4.3,SNR=35
NEW   Newport          85.55  36   P       P       13 13 53.0 +0.5
      baz=237,SNR=18
NEW   Newport          85.55  36   P       P       13 13 51.6 -0.9
NEW                                pmax    pmax
      comp=Z,22nm,0.8s
NEW   Newport          85.55  36   P       P       13 13 51.6 -0.9
NEW                                IAmb    IAmb    13 13 54.0
      comp=Z,22nm,0.8s
MVCO  Mesa Verde       85.57  49   P       P       13 13 54.1 +1.0
      baz=244
MVCO  Mesa Verde       85.57  49   P       P       13 13 52.6 -0.5
BNM   Barren Site      85.61  52   P       P       13 13 51.7 -1.7
BCYI  Bear Canyon      85.66  41   P       P       13 13 53.0 -0.4
HDA   Harding Lake     85.67  13   P       P       13 13 52.3 -0.4
      baz=210,SNR=51
HDA   Harding Lake     85.67  13   P       P       13 13 51.5 -1.2
HDA                                IAmb    IAmb    13 13 53.3
      comp=Z,51nm,0.8s
DOT   Dot Lake         85.67  15   P       P       13 13 51.7 -1.0
DOT                                IAmb    IAmb    13 13 53.8
      comp=Z,54nm,0.9s
SLVN  Son La           85.67 294   P       P       13 13 52.1 -1.6
SLVN                               IAmb    IAmb    13 13 56.4
      comp=Z,35nm,1.2s
CCB   Clear Creek Bu   85.70  13   P       P       13 13 51.3 -1.4
PV14  Lion Creek, Pa   85.72  47   P       P       13 13 52.6 -1.2
PV19  Morning Glory    85.72  48   P       P       13 13 53.0 -0.8
PV17  East Wray Mesa   85.72  48   P       P       13 13 52.6 -1.2
PV18  Skein Mesa, Pa   85.74  48   P       P       13 13 53.8 -0.1
PV20  West Nyswonger   85.74  48   P       P       13 13 53.6 -0.2
PV23  Carpenter Ridg   85.76  47   P       P       13 13 54.6 +0.6
PV23                               IAmb    IAmb    13 13 56.2
      comp=Z,20nm,0.8s
PV16  Nyswonger Mesa   85.77  48   P       P       13 13 54.4 +0.4
PV03  Paradox Valley   85.79  48   P       P       13 13 53.9 -0.2
PV11  David Mesa, Pa   85.79  48   P       P       13 13 53.5 -0.6
PV04  Paradox Valley   85.81  48   P       P       13 13 54.1 -0.1
I23K  Minto, Yukon-K   85.83  12   P       P       13 13 52.5 -0.8
      baz=208,SNR=22
I23K  Minto, Yukon-K   85.83  12   P       P       13 13 52.3 -1.0
I23K                               IAmb    IAmb    13 13 53.9
      comp=Z,37nm,1.2s
TPTI                   85.84 275   P       P       13 13 55.1 +0.5
      comp=Z,446nmcomp=Z,61nm,0.8s
PV12  Saucer Basin,    85.85  48   P       P       13 13 54.3 -0.1
MDM   Murphy Dome      85.88  12   P       P       13 13 52.3 -1.4
MDM                                IAmb    IAmb    13 13 54.1
      comp=Z,77nm,1.0s
TCOL  CIGO, UAF Yank   85.88  13   P       P       13 13 53.0 -0.6
      baz=209,SNR=41
TCOL  CIGO, UAF Yank   85.88  13   P       P       13 13 52.2 -1.4
COLA  College          85.89  13   P       P       13 13 53.0 -0.5
      baz=209
COLA  College          85.89  13di P       P       13 13 52.8 -0.8
COLA                               pmax    pmax
      comp=Z,79nm,1.1s
COLA  College          85.89  13   P       P       13 13 52.2 -1.4
DLBC  Dease Lake       85.91  23   P       P       13 13 55.0 +1.0
      comp=Z,16nm,0.7s,baz=228,slow=4.3,SNR=37
PV01  Paradox Valley   85.93  48   P       P       13 13 54.6 -0.2
TX31  Lajitas Ar. Si   85.95  58   P       P       13 13 56.7 +1.8
TX32  Lajitas Array    85.95  58   P       P       13 13 56.7 +1.8
TX32                               IAmb    IAmb    13 13 58.4
      comp=Z,47nm,0.9s
TXAR  Lajitas Array    85.95  58   P       P       13 13 57.0 +2.1
      comp=Z,32nm,0.8s,baz=220,slow=6.1,SNR=295
TXAR                               PKKPbc  PKKPbc  13 31 52.4 +0.7
      comp=Z,0.1nm,0.4s,baz=145,slow=3.9,SNR=5.5
TXAR                               PKPPKP  P'P'df  13 40 04.4 +6.6
      comp=Z,0.1nm,0.5s,baz=11,slow=1.3,SNR=3.9
TXAR  Lajitas Array    85.95  58   P       P       13 13 56.6 +1.6
SCRK  Sand Creek       85.97  14   P       P       13 13 54.4 +0.2
      baz=212,SNR=22
IL31                   86.00  13   P       P       13 13 53.1 -1.0
IL31                               IAmb    IAmb    13 13 54.8
      comp=Z,44nm,0.8s
ILAR  Eielson Array    86.00  13   P       P       13 13 53.5 -0.7
      comp=Z,32nm,0.7s,baz=221,slow=4.9,SNR=458
ILAR                               PKiKP   PKiKP   13 18 57.1 -0.8
      comp=Z,0.7nm,0.6s,baz=260,slow=2.4,SNR=9.4
ILAR                               PKKPbc  PKKPbc  13 31 50.0 -3.1
      comp=Z,0.5nm,0.6s,baz=350,slow=2.2,SNR=12
PV07  Paradox Valley   86.01  48   P       P       13 13 55.6 +0.5
ANMO  Albuquerque      86.08  51   P       P       13 13 55.2 -0.4
      comp=Z,18nm,1.0s,baz=213,slow=5.5,SNR=41
ANMO                               pP      pwP     13 16 04.0 +0.1
      comp=Z,3.0nm,1.0s,baz=232,slow=4.4,SNR=3.9
ANMO  Albuquerque      86.08  51   P       P       13 13 56.8 +1.3
      baz=245
ANMO  Albuquerque      86.08  51   P       P       13 13 56.0 +0.5
PV15  Paradox Valley   86.08  48   P       P       13 13 56.0 +0.4
POKR  Poker Plat Res   86.19  13   P       P       13 13 54.5 -0.6
      baz=209,SNR=35
POKR  Poker Plat Res   86.19  13   P       P       13 13 53.8 -1.2
POKR                               IAmb    IAmb    13 13 55.3
      comp=Z,47nm,0.7s
MCMT  McKenzie Canyo   86.26  40   P       P       13 13 57.0 +0.7
AHID  Auburn Hatcher   86.36  43   P       P       13 13 56.4 -0.3
AHID                               IAmb    IAmb    13 13 59.2
      comp=Z,43nm,1.4s
XAN   Xi'an            86.46 307   P       P       13 13 57.8 +0.6
XAN                                pmax    pmax
      comp=Z,200nm,1.0s
XAN   Xi'an            86.46 307   P       P       13 13 56.5 -0.7
XAN                                pmax    pmax
      comp=Z,170nm,1.0s
XAN   Xi'an            86.46 307   P       P       13 13 56.5 -0.7
GDL2  Guadalupe Moun   86.54  55   P       P       13 13 58.0 +0.3
RDOG  Red Dog Mine     86.60   6   P       P       13 13 57.4 +0.4
      baz=195
MSO   Missoula         86.61  38   P       P       13 13 58.0 +0.4
      baz=239,SNR=15
MSO   Missoula         86.61  38   P       P       13 13 56.6 -1.0
DLMT  Dillon           86.68  40   P       P       13 13 57.4 -0.7
DLMT                               IAmb    IAmb    13 14 00.5
      comp=Z,36nm,0.8s
REDW  Red Top Meadow   86.80  42   P       P       13 13 58.7 -0.1
REDW                               IAmb    IAmb    13 14 01.3
      comp=Z,57nm,1.1s
SNOW  Snow King Moun   86.91  42   P       P       13 13 59.5 +0.2
SNOW                               IAmb    IAmb    13 14 01.9
      comp=Z,61nm,1.1s
PRP   Porcupine Dome   86.94  13   P       P       13 13 58.3 -0.4
      baz=211,SNR=22
PRP   Porcupine Dome   86.94  13   P       P       13 13 57.6 -1.2
PRP                                IAmb    IAmb    13 14 05.5
      comp=Z,18nm,0.7s
LRM   Limekiln Ridge   87.00  40   P       P       13 13 59.6 -0.1
S22A  4UR Ranch, Cre   87.00  49   P       P       13 14 01.5 +1.6
      baz=245
O20A  White River Ci   87.05  46   P       P       13 14 01.4 +1.4
      baz=244
O20A  White River Ci   87.05  46   P       P       13 13 59.8 -0.2
O20A                               IAmb    IAmb    13 14 02.4
      comp=Z,28nm,1.1s
LOHW  Long Hollow      87.08  42   P       P       13 14 00.3 +0.2
LOHW                               IAmb    IAmb    13 14 02.4
      comp=Z,19nm,0.8s
QLMT  Earthquake Lak   87.14  41   P       P       13 14 01.2 +0.9
FLWY  Flagg Ranch      87.24  42   P       P       13 14 01.8 +1.0
FLWY                               IAmb    IAmb    13 14 03.7
      comp=Z,50nm,0.9s
EGAK  Eagle            87.32  15   P       P       13 14 00.7 +0.3
      baz=215,SNR=30
EGAK  Eagle            87.32  15   P       P       13 14 00.2 -0.2
EGAK                               IAmb    IAmb    13 14 01.7
      comp=Z,44nm,0.9s
BW06  Boulder Array    87.36  43   P       P       13 14 02.3 +0.9
      baz=242
BW06  Boulder Array    87.36  43   P       P       13 14 01.2 -0.3
BW06                               IAmb    IAmb    13 14 03.2
      comp=Z,26nm,0.8s
PDAR  Pinedale Array   87.36  43   P       P       13 14 02.1 +0.7
      comp=Z,19nm,0.7s,baz=219,slow=3.0,SNR=183
PDAR                               PKKPbc  PKKPbc  13 31 48.6 -0.6
      comp=Z,0.8nm,0.8s,baz=100,slow=3.6,SNR=7.1
PDAR  Pinedale Array   87.36  43   P       P       13 14 01.5 +0.1
BOZ   Bozeman (W)      87.39  40   P       P       13 14 02.7 +1.4
      baz=241,SNR=33
BOZ   Bozeman (W)      87.39  40   P       P       13 14 02.1 +0.7
BOZ                                pmax    pmax
      comp=Z,39nm,1.3s
BOZ   Bozeman (W)      87.39  40   P       P       13 14 02.1 +0.7
BOZ                                IAmb    IAmb    13 14 03.9
      comp=Z,39nm,1.2s
H17A  Grant Village    87.47  42   P       P       13 14 04.8 +2.9
      baz=242,SNR=18
H17A  Grant Village    87.47  42   P       P       13 14 03.6 +1.7
H17A                               IAmb    IAmb    13 14 05.5
      comp=Z,37nm,0.8s
HHC   Hu-ho-hao-te     87.48 314  eP       P       13 14 03.0 +1.1
HHC                                pmax    pmax
      comp=Z,58nm,1.1s
SMCO  Snowmass         87.51  47   P       P       13 14 02.4  0.0
COLD  Coldfoot         87.53  11   P       P       13 14 02.0 +0.7
      baz=207,SNR=67
COLD  Coldfoot         87.53  11   P       P       13 14 01.4 +0.1
COLD                               IAmb    IAmb    13 14 03.0
      comp=Z,58nm,0.9s
LKWY  Lake             87.66  42   P       P       13 14 03.3 +0.5
LKWY                               pmax    pmax
      comp=Z,34nm,0.9s
LKWY  Lake             87.66  42   P       P       13 14 03.2 +0.5
LKWY                               IAmb    IAmb    13 14 06.6
      comp=Z,34nm,0.8s
WALA  Waterton Lakes   87.77  36   P       P       13 14 02.9 -0.1
WALA                               IAmb    IAmb    13 14 04.9
      comp=Z,23nm,0.8s
HRY   Holter Researc   87.81  39   P       P       13 14 03.5 +0.2
FYU   Fort Yukon       87.90  13   P       P       13 14 02.2 -0.8
FYU                                IAmb    IAmb    13 14 04.1
      comp=Z,24nm,0.6s
KMI   Kunming          88.03 297 ⇓P        P       13 14 06.1 +1.2
KMI                                pmax    pmax
      comp=Z,50nm,1.2s
KMI                                pmax    pmax
      comp=Z,130nm,5.0s
BTO   Baotou           88.43 314  eP       P       13 14 07.9 +1.6
RWWY  Rawlins          88.44  45   P       P       13 14 06.4 -0.1
RWWY                               IAmb    IAmb    13 14 08.5
      comp=Z,55nm,1.2s
MSTX  Muleshoe         88.46  54   P       P       13 14 07.8 +1.2
      baz=247
MSTX  Muleshoe         88.46  54   P       P       13 14 07.0 +0.4
MSTX                               IAmb    IAmb    13 14 08.6
      comp=Z,36nm,0.9s
T25A  Trinidad         88.49  50   P       P       13 14 07.8 +1.0
      baz=246
RLMT  Red Lodge        88.63  41   P       P       13 14 08.9 +1.6
      baz=243,SNR=23
RLMT  Red Lodge        88.63  41   P       P       13 14 08.1 +0.8
RLMT                               IAmb    IAmb    13 14 09.9
      comp=Z,28nm,0.9s
GCMT  Greycliff        88.69  41   P       P       13 14 08.1 +0.7
Q24A  Divide           88.71  48   P       P       13 14 09.2 +1.3
      baz=246
ISCO  Idaho Springs    88.73  47   P       P       13 14 09.5 +1.6
      baz=245
TOLK  Toolik Lake Re   88.91  10   P       P       13 14 08.1 +0.3
      baz=207,SNR=20
TOLK  Toolik Lake Re   88.91  10   P       P       13 14 07.3 -0.5
TOLK                               IAmb    IAmb    13 14 09.1
      comp=Z,26nm,0.9s
N23A  Red Feather La   88.96  46   P       P       13 14 10.5 +1.6
      baz=245
SYO   Syowa Base       89.04 193⇑iP        P       13 14 08.8 +0.3
SYO   Syowa Base       89.04 193⇓epP       pP      13 16 15.2 +0.5
833A  Chaparral WMA,   89.05  60   P       P       13 14 10.7 +1.4
      baz=249
CM31  Chiang Mai Arr   89.07 290   P       P       13 14 09.2 -0.4
CMAR  Chiang Mai Arr   89.07 290   P       P       13 14 11.2 +1.5
      comp=Z,32nm,0.9s,baz=110,slow=2.8,SNR=200
CMAR                               PKKPbc  PKKPbc  13 31 45.1 +1.4
      comp=Z,1.4nm,0.6s,baz=289,slow=4.5,SNR=8.3
CMAR  Chiang Mai Arr   89.07 290   P       P       13 14 10.0 +0.4
CMIG  Matias Romero    89.14  72   P       P       13 14 11.3 +1.4
      comp=Z,5.8nm,0.8s,baz=252,slow=3.7,SNR=11
CHTO  Chiang Mai       89.19 290   P       P       13 14 10.6 +0.4
CHTO                               pmax    pmax
      comp=Z,43nm,0.8s
CHTO  Chiang Mai       89.19 290   P       P       13 14 10.6 +0.4
CD2   Chengdu          89.27 303 ⇓P        P       13 14 11.4 +1.0
CD2                                pmax    pmax
      comp=Z,30nm,1.1s
K22A  Casper           89.31  44   P       P       13 14 11.4 +1.0
      baz=245
JCT   Junction City    89.49  58   P       P       13 14 12.6 +1.3
      baz=249
JCT   Junction City    89.49  58   P       P       13 14 11.3 -0.1
JCT                                pmax    pmax
      comp=Z,19nm,0.8s
JCT   Junction City    89.49  58   P       P       13 14 11.3 -0.1
JCT                                IAmb    IAmb    13 14 13.4
      comp=Z,19nm,0.8s
AMTX  Amarillo         89.65  53   P       P       13 14 13.4 +1.3
      baz=248
EGMT  Eagleton         89.67  39   P       P       13 14 12.8 +0.9
      baz=242
EGMT  Eagleton         89.67  39   P       P       13 14 11.9 +0.1
EPYK  Eagle Plains     89.71  16   P       P       13 14 11.8 +0.2
      baz=219,SNR=37
EPYK  Eagle Plains     89.71  16   P       P       13 14 11.0 -0.6
YAK   Yakutsk          89.77 338   P       P       13 14 11.3 -0.4
      comp=Z,19nm,0.6s,baz=351,slow=0.2,SNR=7.2
YAK   Yakutsk          89.77 338di P       P       13 14 11.0 -0.8
YAK                               e                13 17 51.1
YAK                               eS       SKSac   13 23 45.1 -1.4
YAK                               eSS      SS      13 30 36.8 +6.6
YAK                                pmax    pmax
      comp=Z,40nm,0.9s
YAK                                pmax    pmax
      comp=N,5.0nm,1.1s
YAK                                pmax    pmax
      comp=E,12nm,1.3s
YAK                                pmax    pmax
      comp=Z,99nm,3.3s
YAK                                pmax    pmax
      comp=E,76nm,3.3s
YAK                                smax    smax
      comp=N,146nm,5.3s
YAK                                smax    smax
      comp=E,113nm,4.4s
YAK   Yakutsk          89.77 338   P       P       13 14 10.1 -1.7
A21K  Barrow           90.39   7   P       P       13 14 14.7 +0.2
      baz=201
ABTX  Abilene, Hawle   90.39  56   P       P       13 14 16.7 +1.2
      baz=249,SNR=19
ABTX  Abilene, Hawle   90.39  56   P       P       13 14 14.6 -0.8
ABTX                               IAmb    IAmb    13 14 17.6
      comp=Z,37nm,0.8s
SNAA  Sanae            90.45 179   P       P       13 14 15.2 +0.1
SNAA  Sanae            90.45 179deP        P       13 14 15.1 +0.1
SNAA                               pmax    pmax
      comp=Z,41nm,1.3s
SNAA  Sanae            90.45 179   P       P       13 14 14.8 -0.3
SNAA                               IAmb    IAmb    13 14 16.3
      comp=Z,56nm,1.4s
KSCO  Kaye Shedlock’   90.53  49   P       P       13 14 17.5 +1.4
      baz=247
KSCO  Kaye Shedlock’   90.53  49   P       P       13 14 16.4 +0.3
KSCO                               IAmb    IAmb    13 14 19.4
      comp=Z,41nm,1.2s
VNA3  Neumayer Olymp   90.58 176   P       P       13 14 15.9 +0.3
LC01  Cunco            90.96 132   P       P       13 14 19.0 +1.0
LC01                               IAmb    IAmb    13 14 20.4
      comp=Z,11nm,0.9s
VNA2  Neumayer--Watz   91.02 177   P       P       13 14 18.3 +0.6
LZH   Lanzhou          91.09 308 ⇓P        P       13 14 20.3 +1.5
LZH                                pP      pP      13 16 30.0 +4.0
LZH                                pmax    pmax
      comp=Z,98nm,1.1s
PLCA  Paso Flores      91.12 134   P       P       13 14 19.7 +0.8
      comp=Z,4.6nm,0.9s,baz=228,slow=5.3,SNR=13
PLCA                               PKKPbc  PKKPbc  13 31 38.7 -0.8
      comp=Z,1.7nm,0.8s,baz=133,slow=3.1,SNR=5.7
PLCA  Paso Flores      91.12 134   IAmb    IAmb    13 14 21.7
      comp=Z,9.2nm,1.2s
NVL   N'lazarevskaya   91.13 183  eP       P       13 14 17.6 -0.5
NVL                                pmax    pmax
      comp=Z,19nm,0.9s
LAO   LASA Array       91.23  41   P       P       13 14 21.0 +1.9
      baz=245,SNR=28
LAO   LASA Array       91.23  41   P       P       13 14 20.2 +1.1
VNA1  Neumayer--Stat   91.25 177   P       P       13 14 19.2 +0.5
435B  Jarrell          91.39  58   P       P       13 14 21.6 +1.5
      baz=250
435B  Jarrell          91.39  58   P       P       13 14 20.9 +0.8
435B                               IAmb    IAmb    13 14 22.4
      comp=Z,16nm,0.7s
RSSD  Black Hills      91.57  44   P       P       13 14 21.8 +0.9
      baz=246
RSSD  Black Hills      91.57  44   P       P       13 14 19.9 -1.0
RSSD                               pmax    pmax
      comp=Z,26nm,0.9s
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RSSD	Black Hills	91.57	44	P	P	13 14 19.9	-1.0
RSSD				IAmb	IAmb	13 14 22.5	
	comp=Z,26nm,0.8s						
WHTX	Lake Whitney,	91.90	57	P	P	13 14 23.8	+1.3
	baz=250						
INK	Inuvik	91.99	15	P	P	13 14 21.7	-0.2
	comp=Z,48nm,0.9s,baz=217,slow=4.0,SNR=91						
INK	Inuvik	91.99	15	P	P	13 14 21.0	-0.9
INK				pmax	pmax		
	comp=Z,51nm,0.9s						
INK	Inuvik	91.99	15	P	P	13 14 21.0	-0.9
U32A	Winter Ranch,	92.22	53	P	P	13 14 24.1	+0.3
HKT	Hockley	92.53	59	⇑eP	P	13 14 27.0	+1.8
HKT				pmax	pmax		
	comp=Z,7.0nm,1.2s						
CBKS	Cedar Bluff	92.54	50	P	P	13 14 26.6	+1.3
	baz=249						
CBKS	Cedar Bluff	92.54	50	P	P	13 14 25.8	+0.5
CBKS				pmax	pmax		
	comp=Z,32nm,1.0s						
CBKS	Cedar Bluff	92.54	50	P	P	13 14 25.8	+0.5
CBKS				IAmb	IAmb	13 14 27.3	
	comp=Z,32nm,0.9s						
DGPR	DIGLIPUR	92.90	283	i PP	P	13 14 27.7	+0.3
R32A	Long Quarter,	93.16	51	P	P	13 14 28.5	+0.4
DGMT	Dagmar	93.22	40	P	P	13 14 29.5	+1.5
	baz=246						
DGMT	Dagmar	93.22	40	P	P	13 14 28.3	+0.2
ULN	Ulaanbaatar	93.36	319	d iP	P	13 14 28.7	-0.2
ULN				pmax	pmax		
	comp=Z,30nm,0.9s						
ULN	Ulaanbaatar	93.36	319	P	P	13 14 28.4	-0.5
ULN				IAmb	IAmb	13 14 30.3	
	comp=Z,27nm,0.9s						
SONM	Songino Array	93.76	319	P	P	13 14 30.5	-0.2
	comp=Z,5.5nm,0.6s,baz=119,slow=3.6,SNR=42						
SONM				PP	PP	13 18 25.0	-1.8
	comp=Z,6.2nm,1.1s,baz=347,slow=0.8,SNR=11						
SONM				PKKPbc	PKKPdf	13 31 30.8	-1.0
	comp=Z,1.2nm,0.9s,baz=250,slow=3.0,SNR=6.5						
SONM	Songino Array	93.76	319	P	P	13 14 29.4	-1.3
BOD	Bodaibo	93.86	330	eP	P	13 14 30.1	-0.6
BOD				pmax	pmax		
	comp=Z,12nm,1.8s						
YKA	Yellowknife Ar	94.41	25	P	P	13 14 33.0	0.0
	comp=Z,17nm,0.9s,baz=234,slow=4.0,SNR=129						
YKA				PKiKP	PKiKP	13 19 11.7	-0.5
	comp=Z,0.5nm,0.6s,baz=255,slow=0.8,SNR=11						
YKA				PKKPbc	PKKPdf	13 31 28.4	-2.5
	comp=Z,0.7nm,0.7s,baz=49,slow=3.0,SNR=6.7						
YKA				PKPPKP		13 39 44.2	
	comp=Z,0.4nm,0.8s,baz=57,slow=3.1,SNR=6.9						
K31A	O'Neill	94.58	47	P	P	13 14 34.3	-0.1
BGNE	Belgrade	94.59	48	P	P	13 14 35.9	+1.4
	baz=250						
BGNE	Belgrade	94.59	48	P	P	13 14 35.0	+0.4
KSU1	Kansas State U	94.93	51	P	P	13 14 37.8	+1.7
	baz=251						
KSU1	Kansas State U	94.93	51	P	P	13 14 36.5	+0.4
C36M	Paulatuk	95.19	17	P	P	13 14 36.3	-0.2
	baz=231						
C36M	Paulatuk	95.19	17	P	P	13 14 35.9	-0.6
GTA	Gaotai	95.24	310	⇓P	P	13 14 37.8	+0.2
GTA				pmax	pmax		
	comp=Z,17nm,1.0s						
TIXI	Tiksi	96.33	345	⇓eP	P	13 14 40.6	-1.0
TIXI				pmax	pmax		
	comp=Z,61nm,0.8s						
TIXI	Tiksi	96.33	345	P	P	13 14 39.8	-1.8
TIXI				IAmb	IAmb	13 14 41.8	
	comp=Z,14nm,0.8s						
ECSD	EROS Data Cent	96.43	46	Pdiff	P	13 14 43.1	+0.3
	baz=251						
ECSD	EROS Data Cent	96.43	46	P	P	13 14 43.0	+0.3
ECSD				IAmb	IAmb	13 14 44.0	
	comp=Z,9.0nm,0.9s						
ZAK	Zakamensk	96.59	321	eP	P	13 14 42.7	-0.7
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.3s						
TLY	Talaya	96.83	322	⇑eP	P	13 14 44.4	+0.1
TLY				pmax	pmax		
	comp=Z,5.0nm,0.8s						
U40A	Yellville	96.91	54	Pdiff	P	13 14 46.1	+1.0
	baz=253						
NNA	Nana	96.93	105	PKKPbc	PKKPbc	13 31 24.5	+1.0
	comp=Z,3.3nm,0.4s,baz=51,slow=2.7,SNR=3.5						
S39A	Bolivar	96.95	53	P	P	13 14 45.5	+0.4
S39A				IAmb	IAmb	13 14 47.6	
	comp=Z,6.8nm,0.8s						
F33A	5 Mile Ranch,	97.31	44	P	Pdif	13 14 46.2	-0.4
F33A				IAmb	IAmb	13 14 47.7	
	comp=Z,11nm,1.2s						
SHL	Shillong	97.48	294	P	Pdif	13 14 47.5	-0.5
SHL				pmax	pmax		
	comp=Z,9.0nm,0.9s						
SHL	Shillong	97.48	294	P	Pdif	13 14 47.5	-0.5
SHL				IAmb	IAmb	13 14 55.0	
	comp=Z,9.3nm,0.9s						
CCM	Cathedral Cave	98.63	53	Pdiff	P	13 14 54.5	+1.8
	baz=254						
ULM	Lac du Bonnet	98.93	40	P	Pdif	13 14 53.0	-0.6
	comp=Z,1.7nm,0.7s,baz=261,slow=6.0,SNR=4.6						
ULM	Lac du Bonnet	98.93	40	⇑eP	Pdif	13 14 52.6	-1.1
F36A	Milaca	99.17	45	Pdif	Pdif	13 14 55.3	+0.4
F36A				IAmb	IAmb	13 14 56.3	
	comp=Z,8.5nm,1.0s						
JFWS	Jewell Farm	100.65	48	Pdiff	Pdif	13 15 03.3	+1.8
	baz=255						
TAPN	Taplejung	101.55	295	eP	PKiKP	13 19 26.8	+0.4
	comp=Z,6.6nm,0.4s						
ODAN	Odare	101.71	295	eP	PKiKP	13 19 27.1	+0.5
	comp=Z,13nm,0.5s						
RAMN	Ramite	102.42	294	eP	PKiKP	13 19 28.1	+0.2
	comp=Z,20nm,0.7s						
LPAZ	La Paz	103.21	112	PKKPbc	PKKPbc	13 31 06.5	-0.4
	comp=Z,1.3nm,0.5s,baz=46,slow=2.1,SNR=6.4						
GUN	Gumba	103.27	295	eP	PKiKP	13 19 29.4	-0.2
	comp=Z,127nm,1.8s						
PKI	Pulchoki	103.59	295	eP	PKiKP	13 19 29.5	-0.7
	comp=Z,8.8nm,0.5s						
PKIN	Phulchoki	103.60	295	eP	PKiKP	13 19 29.4	-0.7
	comp=Z,12nm,0.5s						
KKN	Kakani	103.75	295	eP	PKiKP	13 19 30.1	-0.2
DMN	Daman	103.86	295	eP	PKiKP	13 19 30.4	-0.2
GKN	Gorkha	104.36	295	eP	PKiKP	13 19 30.2	-1.1
	comp=Z,5.3nm,0.4s						
DANN	Dangsing	105.19	295	eP	PKiKP	13 19 31.1	-1.9
RES	Resolute Bay	105.53	16	Pdiff	Pdif	13 15 22.6	+0.1
	comp=Z,1.8nm,0.8s,baz=238,slow=6.1,SNR=6.7						
RES				PKiKP	PKiKP	13 19 31.1	-0.7
	comp=Z,1.5nm,0.6s,baz=228,slow=4.5,SNR=6.2						
ZSN	Zaisan	107.67	315	ePKiKP	PKiKP	13 19 35.7	-1.0
	baz=315						
ZALV	Zalesovo Beam	108.44	322	Pdiff	Pdif	13 15 34.9	-0.9
	comp=Z,0.8nm,0.4s,baz=48,slow=2.2,SNR=4.3						
ZALV				PKiKP	PKiKP	13 19 37.2	-0.7
	comp=Z,7.0nm,0.6s,baz=121,slow=0.4,SNR=27						
ZALV				PP	PP	13 20 17.8	+2.7
	comp=Z,2.3nm,0.8s,baz=111,slow=8.3,SNR=3.8						
MKAR	Makanchi Array	109.34	314	PKiKP	PKiKP	13 19 39.1	-0.7
	comp=Z,9.1nm,0.5s,baz=190,slow=0.6,SNR=124						
MKAR				PKKPbc	PKKPbc	13 30 47.0	-1.2
	comp=Z,1.5nm,0.8s,baz=266,slow=3.3,SNR=11						
MKAR	Makanchi Array	109.34	314	PKKPbc	PKKPbc	13 30 47.4	-0.8
SDV	Santo Domingo	109.39	87	PKiKP	PKiKP	13 19 41.1	0.0
	comp=Z,6.3nm,0.2s,baz=10,slow=22,SNR=4.0						
SIV	San Ignacio	109.49	115	PKKPbc	PKKPbc	13 30 47.4	+0.1
	comp=Z,3.8nm,0.6s,baz=99,slow=5.8,SNR=19						
LSQQ	Lebel-sur-Quev	110.76	44	P	PKiKP	13 19 41.5	-0.9
	baz=266						
SEM	Semipalatinsk	110.98	318	ePKiKP	PKiKP	13 19 41.3	-1.9
	baz=318						
SEM	Semipalatinsk	110.98	318	i PKIKP	PKiKP	13 19 41.2	-1.9
E55A	Montcerf-Lytto	111.20	46	P	PKiKP	13 19 42.9	-0.4
	baz=266						
UZB	Uzynbulak	111.30	310	ePKiKP	PKiKP	13 19 42.8	-1.1
	baz=310						
UZB	Uzynbulak	111.30	310	i PKIKP	PKiKP	13 19 42.7	-1.1
KPKS	Kokpek	111.57	310	ePKiKP	PKiKP	13 19 43.3	-1.0
	baz=310						
KPKS	Kokpek	111.57	310	i PKIKP	PKiKP	13 19 43.3	-1.0
SATY	Saty	111.74	310	ePKiKP	PKiKP	13 19 43.6	-1.1
	baz=310						
SATY	Saty	111.74	310	i PKIKP	PKiKP	13 19 43.6	-1.1
TDK	Taldyqorghan	111.89	312	ePKiKP	PKiKP	13 19 43.4	-1.4
	baz=312						
TDK	Taldyqorghan	111.89	312	i PKIKP	PKiKP	13 19 43.4	-1.4
KURK	Kurchatov	112.03	318	d iPKIKP	PKiKP	13 19 43.9	-0.9
KURK				pmax	pmax		
	comp=Z,19nm,0.8s						
D56A	ZEC Mazanza, M	112.13	46	P	PKiKP	13 19 44.7	-0.4
	baz=267						
MDOK	Medeo	112.74	310	ePKiKP	PKiKP	13 19 45.2	-1.5
	baz=310						
MDOK	Medeo	112.74	310	i PKIKP	PKiKP	13 19 45.1	-1.5
TNSS	Tian-Shan	112.81	310	ePKiKP	PKiKP	13 19 45.9	-1.2
	baz=310						
TNSS	Tian-Shan	112.81	310	i PKIKP	PKiKP	13 19 45.9	-1.2
AAA	Alma-Ata	112.84	310	ePKiKP	PKiKP	13 19 46.1	-0.7
	baz=310						
AAA	Alma-Ata	112.84	310	i PKIKP	PKiKP	13 19 46.0	-0.7
E58A	La Victoria	113.11	47	P	PKiKP	13 19 46.8	-0.2
	baz=268						
ULHL	Ulahol	113.28	309	P	PKiKP	13 19 47.5	-0.3
	SNR=14						
KSH	Kashi	113.28	306	PKP	PKiKP	13 19 48.9	+1.2
KSH				sPKP		13 22 59.3	
KSH				AMB	AMB		
	comp=Z,630nm,6.5s						
KUU	Kurty	113.30	311	ePKiKP	PKiKP	13 19 45.7	-1.8
	baz=311						
KUU	Kurty	113.30	311	i PKIKP	PKiKP	13 19 45.7	-1.8
D58A	Chemin du LacG	113.41	46	P	PKiKP	13 19 47.1	-0.5
	baz=268						
TKM2	Tokmak 2	113.79	310	P	PKiKP	13 19 48.2	-0.5
	SNR=15						
F60A	Warwick	114.02	47	P	PKPdf	13 19 48.6	-0.2
	baz=269						
KBK	Karagaybulak	114.25	309	P	PKiKP	13 19 49.7	+0.1
	SNR=8.6						
E60A	Ste Agathe de	114.38	47	P	PKPdf	13 19 49.3	-0.2
	baz=269						
CHMS	Chumysh	114.41	310	P	PKPdf	13 19 49.3	-0.3
	SNR=13						
SGDS	Sogindy	114.52	310	ePKP	PKPdf	13 19 48.9	-1.1
	baz=310						
SGDS	Sogindy	114.52	310	ePKIKP	PKPdf	13 19 48.8	-1.1
UCH	Uchtor	114.56	309	P	PKiKP	13 19 50.8	+0.2
	SNR=12						
AAK	Ala-Archa	114.59	309	PKP	PKPdf	13 19 49.7	-0.5
	comp=Z,7.6nm,0.8s,baz=158,slow=2.6,SNR=20						
AAK	Ala-Archa	114.59	309	P	PKPdf	13 19 49.9	-0.3
	SNR=6.3						
AAK	Ala-Archa	114.59	309	d iPKIKP	PKPdf	13 19 49.8	-0.4
AAK				pmax	pmax		
	comp=Z,35nm,1.3s						
AAK	Ala-Archa	114.59	309		PKPdf	13 19 49.4	-0.9
USP	Ospenovka	114.61	310	P	PKPdf	13 19 49.8	-0.3
	SNR=17						
FRB	Frobisher Bay	114.75	27	PKP	PKPdf	13 19 49.1	-0.5
	comp=Z,3.4nm,0.6s,baz=322,slow=1.8,SNR=18						
BTLS	Baital	114.98	312	ePKP	PKPdf	13 19 49.8	-0.9
	baz=312						
BTLS	Baital	114.98	312	ePKIKP	PKPdf	13 19 49.7	-1.0
E61A	Lac Etchemin	115.04	47	P	PKiKP	13 19 51.0	+0.2
	baz=270						
EKS2	Erkin-Say	115.12	309	P	PKPdf	13 19 51.1	0.0
	SNR=13						
AML	Almayashu	115.16	309	P	PKPdf	13 19 40.0	-12
	SNR=5.9						
D61A	St Aubert, Com	115.25	46	P	PKPdf	13 19 51.0	-0.1
	baz=270						
BRZS	Berezniki	115.84	317	ePKP	PKPdf	13 19 50.7	-1.5
	baz=317						
BRZS	Berezniki	115.84	317	ePKIKP	PKPdf	13 19 50.7	-1.5
PTGA	Pitinga	116.55	100	PKKPbc	PKKPbc	13 30 24.3	+0.6
	comp=Z,4.2nm,0.7s,baz=20,slow=5.8,SNR=6.4						
D63A	Stockholm	116.67	46	P	PKPdf	13 19 53.4	-0.5
	baz=272						
E64A	Bridgewater	116.88	47	P	PKPdf	13 19 54.0	-0.3
	baz=272						
DZA	Taraz	116.92	309	ePKP	PKPdf	13 19 53.7	-0.8
	baz=309						
DZA	Taraz	116.92	309	ePKIKP	PKPdf	13 19 53.7	-0.8
BVAR	Borovoye Array	117.05	321	PKP	PKPdf	13 19 53.6	-0.8
	comp=Z,11nm,0.6s,baz=178,slow=10,SNR=72						
BRVK	Borovoye	117.11	321	d iPKIKP	PKPdf	13 19 53.8	-0.7
BRVK				pmax	pmax		
	comp=Z,20nm,0.7s						
BRVK	Borovoye	117.11	321	PKPdf	PKPdf	13 19 53.8	-0.7
KK31	Karatay Array	117.52	310	PKIKP	PKPdf	13 19 54.6	-1.0
KK31	Karatay Array	117.52	310	PKPdf	PKPdf	13 19 54.6	-1.0
KKAR	Karatay Array	117.52	310	PKIKP	PKPdf	13 19 54.6	-1.1
KKAR	Karatay Array	117.52	310	PKPdf	PKPdf	13 19 54.6	-1.1
KKAR	Karatay Array	117.52	310	PKPdf	PKPdf	13 19 54.5	-1.1
NUUG	Nuugaatsiaq	117.78	17	i P	PKPdf	13 19 54.3	-1.0
IUG	Iuzhnay	117.89	309	ePKP	PKPdf	13 19 55.7	-0.9
	baz=309						
IUG	Iuzhnay	117.89	309	ePKIKP	PKPdf	13 19 55.6	-0.9
BRLS	Borolday	118.02	310	ePKP	PKPdf	13 19 55.6	-1.0
	baz=309						
BRLS	Borolday	118.02	310	ePKIKP	PKPdf	13 19 55.6	-1.0
BATG	Bathurst New B	118.06	46		PKPdf	13 19 55.9	-0.6
KBL	Kabul	118.49	300	PKIKP	PKPdf	13 19 57.2	-0.8
KBL	Kabul	118.49	300	PKPdf	PKPdf	13 19 57.2	-0.8
LMN	Caledonia Moun	119.01	47		PKPdf	13 19 57.9	-0.5
SPA0	Spitsbergen Ar	119.42	357		PKPdf	13 19 58.1	-0.3
SPA0	Spitsbergen Ar	119.42	357	ePKPdf	PKPdf	13 19 58.2	-0.1
SPITS	Spitsbergen Ar	119.42	357	PKP	PKPdf	13 19 58.4	0.0
	comp=Z,23nm,0.8s,baz=146,slow=9.1,SNR=36						
DAG	Danmarks Havn	120.34	5	i P	PKPdf	13 19 58.9	-1.2
	comp=Z,8.7nm,0.6s						
DAG	Danmarks Havn	120.34	5	i PKIKP	PKPdf	13 19 58.9	-1.2
DAG				pmax	pmax		
	comp=Z,9.0nm,0.6s						
DAG	Danmarks Havn	120.34	5	i P	PKPdf	13 19 58.9	-1.2
DAG				IAmb	IAmb	13 19 59.7	
	comp=Z,8.7nm,0.6s						
SUMG	Summit	120.84	13	i P	PKiKP	13 20 02.0	+0.2
SUMG	Summit	120.84	13	i PKIKP	PKiKP	13 20 02.0	+0.2
SUMG	Summit	120.84	13	PKPdf	PKPdf	13 20 01.7	0.0
SUMG	Summit	120.84	13	i P	PKiKP	13 20 02.0	+0.2
OPO	Ambohidratompo	122.39	233	PKP	PKiKP	13 20 06.5	+0.3
	comp=Z,14nm,0.8s,baz=161,slow=1.2,SNR=14						
ARU	Arti	123.05	326	PKP	PKPdf	13 20 05.9	+0.1
	comp=Z,18nm,0.6s,baz=83,slow=0.7,SNR=87						
ARU				PP	PP	13 21 51.5	-3.9
	comp=Z,1.8nm,0.7s,baz=64,slow=3.1,SNR=4.3						
ARU	Arti	123.05	326	i PKIKP	PKPdf	13 20 05.7	-0.1
ARU						13 21 55.1	
ARU						13 26 21.3	
ARU	Arti	123.05	326	PKPdf	PKPdf	13 20 05.4	-0.4
HRA	Herat	124.10	300	PKPdf	PKPdf	13 20 07.9	-1.0
ABKAR	Akbulak array	124.14	318	PKPdf	PKPdf	13 20 07.4	-0.7
ABKAR	Akbulak array	124.14	318	PKPdf	PKPdf	13 20 07.6	-0.5
AKTO	Aktyubinsk	125.08	319	PKP	PKPdf	13 20 10.1	+0.2
	comp=Z,20nm,0.7s,baz=80,slow=3.1,SNR=66						
SCO	Scoresbysund	125.66	10	i P	PKiKP	13 20 11.1	+0.3
	comp=Z,15nm,0.7s						
SCO	Scoresbysund	125.66	10	i PKIKP	PKiKP	13 20 11.1	+0.3
SCO				pmax	pmax		
	comp=Z,15nm,0.7s						
SCO	Scoresbysund	125.66	10	PKPdf	PKiKP	13 20 10.9	+0.1
SCO	Scoresbysund	125.66	10	i P	PKiKP	13 20 11.1	+0.3
SCO				IAmb	IAmb	13 20 11.9	
	comp=Z,15nm,0.7s						
HAMF	Hammerfest	125.78	351	ePKPdf	PKPdf	13 20 10.6	0.0
ANGG	Ammassalik, Gr	125.84	19	i P	PKPdf	13 20 09.9	-1.0
ARA0	ARCESS Array S	126.49	350	ePKPdf	PKPdf	13 20 11.8	-0.2
ARCES	ARCESS Array B	126.49	350	PKP	PKPdf	13 20 11.8	-0.2
	comp=Z,35nm,0.8s,baz=53,slow=1.4,SNR=34						
ARCES				PKKPbc	PKKPab	13 29 45.2	0.0
	comp=Z,4.7nm,1.0s,baz=76,slow=0.5,SNR=4.7						
KIRV	Kirov	126.72	331	PKP	PKPdf	13 20 12.7	0.0
	comp=Z,41nm,0.6s,baz=62,slow=0.4,SNR=18						
KIRV	Kirov	126.72	331	d iPKIKP	PKPdf	13 20 12.5	-0.2
WSAR	Wadi Sarin	126.79	286	PKP	PKiKP	13 20 15.1	+0.5
	comp=Z,6.8nm,0.6s,baz=212,slow=6.4,SNR=4.0						
KTK1	Kautokeino	127.32	350	ePKPdf	PKPdf	13 20 13.6	-0.1
KTK1				ePP	PP	13 22 23.2	+0.5
TRO	Tromso	127.36	353	ePKPdf	PKPdf	13 20 13.3	-0.4
TRO				ePP	PP	13 22 22.6	-0.3
TMCR	Tamitsa	127.80	341	ePKIKP	PKPdf	13 20 13.9	-0.7
TMCR				pmax	pmax		
	comp=Z,26nm,0.9s						
BOSA	Boshof	128.33	207	PKP	PKiKP	13 20 17.7	-0.1
	comp=Z,10nm,0.8s,baz=158,slow=4.1,SNR=11						
SOCY	Socotra	129.36	271	PKPdf	PKPdf	13 20 18.2	-0.9
LOF	Lofoten	129.38	354	ePKPdf	PKPdf	13 20 15.7	-1.8
KLMR	Klimovskoe	129.55	337	ePKIKP	PKPdf	13 20 15.7	-2.4
KLMR				e		13 22 41.5	
KLMR				pmax	pmax		
	comp=Z,44nm,0.9s						
KLMR	Klimovskoe	129.55	337	ePKPdf	PKPdf	13 20 15.7	-2.4
KLMR				AMP		13 20 19.0	
	comp=Z,44nm,0.9s						
KLMR				ePP	PP	13 22 41.5	+4.2
FAUS	Fauske	129.93	353	ePKPdf	PKPdf	13 20 17.0	-1.6
KONS	Konsvik	131.01	354	ePKPdf	PKPdf	13 20 20.5	-0.2
NSS	Namsos	133.05	354	e	PKPdf	13 20 23.2	-1.4
NSS				i		13 20 29.5	
FINES	FINESS Array B	133.37	344	PKhKP	PKPpre	13 20 08.2	
	comp=Z,1.4nm,0.6s,baz=201,slow=10,SNR=8.9						
FINES				PKKPbc	PKKPbc	13 29 25.2	
	comp=Z,3.0nm,0.9s,baz=235,slow=6.7,SNR=3.9						
MATP	Matopo	133.62	216	PKhKP	PKPpre	13 20 14.5	
	comp=Z,1.6nm,0.8s,baz=221,slow=4.0,SNR=4.1						
MATP				PKP	PKPdf	13 20 26.5	-0.7
	comp=Z,9.1nm,0.7s,baz=152,slow=1.3,SNR=19						
MATP				PP	PP	13 23 03.0	-0.3
	comp=Z,5.6nm,0.8s,baz=173,slow=5.3,SNR=6.5						
MOS	Moscow	133.63	333	i PKIKP	PKPdf	13 20 26.5	+0.6
MOS				e		13 23 04.8	
MOS				pmax	pmax		
	comp=Z,54nm,0.8s						
VRH	Novokhopyorsk	134.28	326	ePKIKP	PKPdf	13 20 27.2	-0.1
VRH				pmax	pmax		
	comp=Z,40nm,0.6s						
OBN	Obninsk	134.50	333	⇑P	PKPdf	13 20 27.6	+0.1
OBN	Obninsk	134.50	333	⇓iPKIKP	PKPdf	13 20 28.1	+0.6
OBN				i		13 23 04.4	
OBN				pmax	pmax		
	comp=Z,32nm,0.6s						
OBN	Obninsk	134.50	333	PKPdf	PKPdf	13 20 27.9	+0.4
LPSR	Galich'ya Gora	134.94	329	ePKIKP	PKPdf	13 20 28.1	-0.4
LPSR				pmax	pmax		
	comp=Z,30nm,1.0s						
MOL	Molde	135.35	356	ePKPdf	PKPdf	13 20 28.5	-0.4
VSR	Storozhevoye	135.62	327	ePKIKP	PKPdf	13 20 29.2	-0.6
VSR				pmax	pmax		
	comp=Z,40nm,1.1s						
VORD	Divnogorie	135.69	327	ePKIKP	PKPdf	13 20 29.9	0.0
VORD				pmax	pmax		
	comp=Z,30nm,0.7s						
DOMB	Dombas	135.76	355	e	PKPpre	13 20 21.0	
AKN	Aaknes	135.77	356	ePKPdf	PKPdf	13 20 28.2	-1.5
GOF	Gofitskoye	136.38	317	⇑ePKIKP	PKPdf	13 20 32.0	+0.6
FOO	Floro	136.44	358	ePKPdf	PKPdf	13 20 28.7	-2.3
NB2	NORSAR Subarra	136.54	353	PKP	PKPpre	13 20 18.9	
	comp=Z,12nm,1.2s,baz=16,slow=3.2						
NOA	NORSAR Array B	136.54	353	PKhKP	PKPpre	13 20 20.3	
	comp=Z,5.7nm,0.7s,baz=12,slow=2.3,SNR=14						
NOA				PKP	PKPdf	13 20 31.2	0.0
	comp=Z,6.5nm,0.8s,baz=16,slow=4.0,SNR=12						
NBO00	NORSAR Array S	136.59	354	PKPdf	PKiKP	13 20 32.6	-0.7
ZEI	Tsey	136.69	314	i PKIKP	PKPdf	13 20 32.4	+0.1
ZEI				pmax	pmax		
	comp=Z,10.0nm,0.9s						
UPP	Uppsala	136.70	348	eP	PKPdf	13 20 23.6	-7.9
NAO01	NORSAR Array S	136.77	353	PKPdf	PKiKP	13 20 32.9	-0.6
NC602	NORSAR Array S	136.80	353	e	PKPpre	13 20 20.7	
HYA	Hoyanger	136.82	357	ePKPdf	PKPdf	13 20 30.6	-1.1
GNI	Garni	136.99	310	PKP	PKPdf	13 20 32.4	-0.5
	comp=Z,16nm,0.8s,baz=155,slow=5.1,SNR=9.3						
GNI	Garni	136.99	310	dePKIKP	PKPdf	13 20 33.1	+0.1
GNI	Garni	136.99	310	PKPdf	PKPdf	13 20 33.0	+0.1
KBZ	Khabaz	137.01	316	PKhKP	PKPpre	13 20 22.5	
	comp=Z,2.5nm,0.8s,baz=104,slow=2.3,SNR=7.5						
KBZ				PKP	PKPdf	13 20 33.4	+0.8
	comp=Z,8.5nm,0.9s,baz=120,slow=1.7,SNR=15						
KBZ				PP	PP	13 23 20.5	-4.2
	comp=Z,3.7nm,0.9s,baz=89,slow=7.2,SNR=3.5						
KBZ	Khabaz	137.01	316	⇓ePKIKP	PKiKP	13 20 33.7	-0.9
KIV	Kislovodsk	137.06	316	ePKIKP	PKPdf	13 20 32.4	-0.4
KIV				e		13 23 20.4	
KIV				pmax	pmax		
	comp=Z,44nm,1.0s						
KIV	Kislovodsk	137.06	316		PKPdf	13 20 32.7	-0.1
SKAR	Skarslia	137.17	355	e	PKPpre	13 20 23.5	
ASK	Askoy	137.55	357	ePKPdf	PKPdf	13 20 33.6	+0.6
OSL	Oslo	137.67	353	e	PKPpre	13 20 25.3	
LSZ	Lusaka	137.85	220	PKhKP	PKPpre	13 20 25.9	
	comp=Z,1.7nm,0.5s,baz=183,slow=7.4,SNR=2.5						
LSZ				PKP	PKPdf	13 20 35.6	+0.4
	comp=Z,8.6nm,0.6s,baz=154,slow=2.7,SNR=14						
LSZ				PP	PP	13 23 27.9	-1.8
	comp=Z,6.1nm,1.1s,baz=199,slow=6.5,SNR=4.4						
CLDR	Caldiran	137.90	309	P	PKPdf	13 20 34.6	-0.1
ODD1	Odda	138.05	356	e	PKPpre	13 20 25.4	
KONO	Kongsberg	138.07	354	e	PKPpre	13 20 24.9	
IDID	Didziasalis	138.22	339	eP	PKPpre	13 20 26.9	
ISAL	Salakas	138.22	339	eP	PKPpre	13 20 27.4	
IIGN	Ignalina	138.37	339	eP	PKPdf	13 20 28.1	-6.7
MNK	Minsk	138.45	337	i PKP	PKPdf	13 20 34.0	-0.9
	comp=E,3.0nm,1.0s						
MNK				i PKP	PKPdf	13 20 34.0	-0.9
	comp=N,5.0nm,1.0s						
MNK				i PKP	PKPdf	13 20 34.0	-0.9
	comp=Z,15nm,1.0s						
MNK				i pPKP	pPKPdf	13 22 36.6	-14
MNK				i SKP		13 22 59.5	
MNK				i sPKP		13 23 27.6	
MNK				i PP	PP	13 23 31.6	-1.2
MNK				i PKS	PKSdf	13 24 10.0	-0.7
MNK				i PPP	PPP	13 26 55.4	
MNK				i SKS		13 27 58.5	
MNK				i SKKS	SKKSdf	13 36 27.0	+1.8
MNK				i SS	SS	13 40 29.5	-31
MNK				i SSS	SSS	13 46 24.3	
MNK				i LRM	MLR	14 19 22.6	
	comp=E,17nm,19.4s						
MNK				i LRM	MLR	14 20 25.6	
	comp=Z,57nm,19.4s						
MNK				i LRM	MLR	14 20 32.8	
	comp=N,146nm,19.3s						
NACGM	Naroch	138.53	338	i PKP	PKPdf	13 20 27.9	-7.1
NACGM	Naroch	138.53	338	i PKP	PKPdf	13 20 27.9	-7.1
NACGM	Naroch	138.53	338	i PKP	PKPdf	13 20 27.9	-7.1
NACGM	Naroch	138.53	338	i PPP	PPP	13 24 24.9	
BLS5	Blasjo	138.55	356	ePKPdf	PKPdf	13 20 30.4	-4.6
GEVA	Gevas	138.79	308	PKPdf	PKPdf	13 20 36.2	-0.1
KMY	Karmoy	138.82	357	ePKPdf	PKPdf	13 20 35.5	+0.1
RAYN	Ar Rayn	138.85	285	PKIKP	PKPdf	13 20 36.1	-0.5
RAYN	Ar Rayn	138.85	285	PKPdf	PKPdf	13 20 36.1	-0.5
PABE	Paberze	138.97	341	eP	PKPdf	13 20 27.9	-7.9
SOC	Sochi	139.17	317	i PKIKP	PKPdf	13 20 37.6	+1.0
SOC				e		13 23 38.6	
SOC				ePPP	PPP	13 26 46.7	
SOC				eSS	SS	13 41 04.2	-5.5
SOC				eSSS	SSS	13 46 27.4	
HOMB	Homborsund	139.54	354	e	PKPdf	13 20 28.4	-8.3
SNART	Snartemo	139.57	356	e	PKPdf	13 20 27.6	-9.2
TSUM	Tsumeb	139.84	204	PKP	PKPdf	13 20 39.5	+0.8
	comp=N,8.2nm,0.8s,baz=164,slow=2.9,SNR=6.7						
KOPT	Kop Dagi	140.09	311	PKPdf	PKPdf	13 20 38.4	-0.3
KMBO	Kilima Mbogo	140.20	245	PKhKP	PKPpre	13 20 33.9	
	comp=N,3.7nm,0.8s,baz=46,slow=4.9,SNR=13						
KAC	Achnashellach	140.27	6	eP	PKPdf	13 20 32.1	-6.0
BNGB	Bingl	140.33	310	P	PKPdf	13 20 33.9	-5.1
KPL	Plockton	140.39	6	eP	PKPdf	13 20 32.3	-6.0
SUW	Suwalki	140.47	340	ePKP	PKPdf	13 20 36.1	-2.4
SUW	Suwalki	140.47	340	eP	PKPdf	13 20 32.3	-6.2
AKASG	Malin Array Be	140.76	332	PKhKP	PKPpre	13 20 32.9	
	comp=N,11nm,0.6s,baz=42,slow=4.3,SNR=48						
AKASG				SKP		13 23 20.3	
	comp=N,2.6nm,0.7s,baz=48,slow=3.0,SNR=5.2						
AKASG	Malin Array Be	140.76	332	PKHKP	PKPpre	13 20 29.7	
AKASG	Malin Array Be	140.76	332		PKPpre	13 20 29.7	
AKBB	Malin Array Si	140.76	332	PKHKP	PKPpre	13 20 32.5	
AKBB	Malin Array Si	140.76	332		PKPpre	13 20 32.5	
MARD	Mardin	140.82	307		PKPpre	13 20 33.9	
MUD	Monsted U'grnd	141.26	353	i P	PKPdf	13 20 36.2	-3.7
MUD	Monsted U'grnd	141.26	353	ePKHKP	PKPpre	13 20 36.2	
MUD	Monsted U'grnd	141.26	353	eP	PKPdf	13 20 36.2	-3.7
LAWE	Loch Awe, Argy	141.48	6	eP	PKPdf	13 20 35.5	-4.8
BSD	Bornholm Skovb	141.66	348	i P	PKPdf	13 20 36.1	-4.5
	comp=N,22nm,0.7s						
BSD	Bornholm Skovb	141.66	348	eP	PKPdf	13 20 35.5	-5.1
BSD	Bornholm Skovb	141.66	348	i PKHKP	PKPpre	13 20 36.1	
BSD				pmax	pmax		
	comp=Z,22nm,0.7s						
BSD	Bornholm Skovb	141.66	348	i P	PKPdf	13 20 36.1	-4.5
BSD				IAmb	IAmb	13 20 36.8	
	comp=Z,22nm,0.7s						

LLD	Lille Linde	141.94	350	*i* P	PKPdf	13 20 37.3	-3.8
LLD	Lille Linde	141.94	350	*i* PKHKP	PKPpre	13 20 37.3	
LLD	Lille Linde	141.94	350	*i* P	PKPdf	13 20 37.4	-3.8
PGBU	Gleniffebraes	142.01	6	*e*P	PKPdf	13 20 36.8	-4.5
RSDY	Resadiye-TOKAT	142.16	314	P	PKPdf	13 20 39.8	-2.3
MALT	Malatya	142.22	310	P	PKPdf	13 20 40.2	-2.2
EKA	Eskdalemuir Ar	142.60	5	PKhKP	PKPpre	13 20 39.2	
	comp=Z,15nm,0.7s,baz=341,slow=2.8,SNR=29						
NEWG	New Galloway	142.72	6	*e*P	PKPdf	13 20 39.7	-2.8
KVT	Kavak	142.73	315	P	PKPdf	13 20 41.9	-1.2
TOKT	Tokat	142.74	314	P	PKPdf	13 20 41.6	-1.5
TOKA	Tokat	142.78	314		PKPdf	13 20 41.3	-1.9
DARE	Darende-Malaty	142.81	311	P	PKPdf	13 20 42.0	-1.4
SNOP	Sinop	142.83	317	P	PKPdf	13 20 41.8	-1.4
GKP	Gorka Klasztor	142.84	345	*e*PKP	PKPdf	13 20 41.0	-1.8
GKP	Gorka Klasztor	142.84	345	*e*P	PKPdf	13 20 40.5	-2.3
GAL1	Galloway	142.93	6	*e*P	PKPdf	13 20 39.7	-3.2
SKMB	Sankelmark Bun	142.93	353	*e*PKPbc	PKPdf	13 20 41.9	-1.0
	baz=16,slow=2.9						
DIKM	Dikmen	142.98	317	⇑P	PKPdf	13 20 42.4	-1.0
DIKM	Dikmen	142.98	317	P	PKPdf	13 20 42.1	-1.3
SORM	Soroca	142.99	330	⇓P	PKPdf	13 20 41.2	-2.0
SORM	Soroca	142.99	330	⇓PKIKP	PKPdf	13 20 41.2	-2.0
BEL	Belsk	143.09	340	*e*PKP	PKPbc	13 20 42.2	+0.6
EDMD	Edmundbyers	143.18	4	*e*P	PKPab	13 20 40.3	-1.1
KESW	Keswick, Cumbr	143.35	5	*e*P	PKPab	13 20 42.1	+0.1
GAZ	Gaziantep	143.54	309	P	PKPdf	13 20 44.3	-0.4
GAZ	Gaziantep	143.54	309	PKPdf	PKPbc	13 20 44.0	+0.4
IOMK	Kirk Michael	143.54	6	*e*P	PKPab	13 20 41.8	-1.0
KIS	Kishinev	143.55	328	⇓*i*PKP	PKPab	13 20 43.0	-0.1
	comp=Z,200nm,0.9s						
KIS	Kishinev	143.55	328	d *i*PKIKP	PKPab	13 20 43.0	-0.1
KIS				*i*		13 22 48.0	
KIS				pmax	pmax		
	comp=Z,200nm,0.9s						
ILTH	Belurgan, Co L	143.56	8	*e*P	PKPab	13 20 41.8	-1.0
BSEG	Bad Segeberg	143.58	351	*e*PKPbc	PKPbc	13 20 43.3	+0.3
	baz=16,slow=2.9						
LVV	L'vov	143.60	336	*e*PKIKP	PKPbc	13 20 43.3	+0.1
MILM	Milestii Mici	143.61	328	⇑P	PKPbc	13 20 43.5	+0.2
HLG	Helgoland	143.63	354	*e*PKPbc	PKPdf	13 20 44.0	-0.1
	baz=16,slow=2.9						
SARI	SarD1z-Kayseri	143.64	311	P	PKPbc	13 20 43.9	-0.1
KMRS	Kahramanmaras	143.64	309	P	PKPab	13 20 44.3	+0.5
GDLE	Glaisdale, N Y	143.65	3	*e*P	PKPab	13 20 43.2	0.0
BNN	Bunyan	143.86	312	P	PKPbc	13 20 44.3	-0.3
IAS	Iasi	144.03	330	⇑P	PKPab	13 20 44.9	0.0
IAS	Iasi	144.03	330	⇑PKIKP	PKPab	13 20 44.9	0.0
HPK	Haverah Park	144.07	3	*e*P	PKPbc	13 20 44.5	0.0
CORM	Corum	144.10	315	P	PKPab	13 20 45.5	-0.1
KWP	Kalwaria Pacla	144.26	337	*e*PKP	PKPab	13 20 45.9	+0.1
KWP	Kalwaria Pacla	144.26	337	PKIKP	PKPdf	13 20 45.4	0.0
KWP	Kalwaria Pacla	144.26	337		PKPdf	13 20 45.4	0.0
ILGA	Ilgaz	144.28	317		PKPdf	13 20 46.2	+0.1
VASR	Vaslui	144.31	329	⇑P	PKPab	13 20 46.3	+0.3
DSB	Dublin	144.32	8		PKPbc	13 20 45.3	-0.1
RUE	Ruedersdorf	144.37	347	*e*PKPbc	PKPab	13 20 46.0	0.0
	baz=16,slow=2.9						
KOZT	Kozan	144.44	310	P	PKPab	13 20 46.6	-0.2
KURC	Kurucasile-Bar	144.49	319	P	PKPdf	13 20 45.0	-1.0
PRAR	RASCA	144.54	331	⇑P	PKPab	13 20 46.6	-0.3
CANT	Cankiri	144.57	316	P	PKPab	13 20 47.5	+0.2
LBWR	Ladybower, Pea	144.62	4	*e*P	PKPdf	13 20 46.0	+0.1
LMK	Market Rasen	144.63	2	*e*P	PKPdf	13 20 45.6	-0.3
BIR	Birlad	144.65	328	⇓P	PKPab	13 20 47.8	+0.5
BIR	Birlad	144.65	328	⇓PKIKP	PKPab	13 20 47.8	+0.5
CEYT	Ceyhan	144.68	309	P	PKPab	13 20 47.4	-0.3
TLCR		144.78	326	⇓P	PKPab	13 20 47.6	-0.2
TLCR		144.78	326	⇓PKIKP	PKPab	13 20 47.6	-0.2
VARL	Varlezi	144.79	328	⇓P	PKPab	13 20 48.3	+0.4
BUR08	Bucovina Ar. S	144.80	332		PKPbc	13 20 47.2	+0.1
OJC	Ojcow	144.80	340	*e*PKP	PKPab	13 20 47.4	-0.3
OJC	Ojcow	144.80	340	PKIKP	PKPdf	13 20 46.5	+0.2
OJC	Ojcow	144.80	340	PKPdf	PKPdf	13 20 46.5	+0.2
BURAR	Bucovina Array	144.81	332	⇑P	PKPab	13 20 48.2	+0.2
BURAR	Bucovina Array	144.81	332	⇑PKIKP	PKPab	13 20 48.2	+0.2
BURAR	Bucovina Array	144.81	332	PKPdf	PKPdf	13 20 46.6	+0.1
GHRR		144.91	328	⇓P	PKPab	13 20 49.1	+0.8
BIZ	Bicaz	144.91	331	⇑P	PKPbc	13 20 47.6	+0.2
TESR	Tescani	144.96	330	⇑P	PKPbc	13 20 47.5	0.0
BR131	Keskin Array S	144.99	315	c*e*PKIKP	PKPdf	13 20 46.9	-0.3
BR131	Keskin Array S	144.99	315	PKPdf	PKPdf	13 20 46.7	-0.5
BRTR	Keskin Array B	144.99	315	PKPbc	PKPbc	13 20 48.2	+0.2
	comp=Z,71nm,0.8s,baz=138,slow=4.2,SNR=260						
FLTG	Flechtingen	144.99	350	*e*PKPbc	PKPbc	13 20 47.7	+0.3
	baz=16,slow=2.9						
KOLS	Kolonicke sedl	145.00	336	*e*PKIKP	PKPbc	13 20 47.6	0.0
KOLS	Kolonicke sedl	145.00	336	*e*PKP	PKPbc	13 20 47.6	0.0
SBD1	Bryn Du	145.00	5	*e*P	PKiKP	13 20 53.2	+2.5
NRDL	Niedersach Rie	145.01	351	*e*PKPbc	PKPab	13 20 47.9	-0.4
	baz=16,slow=2.9						
JURR	Jurilovca	145.02	325	⇑P	PKPab	13 20 48.6	-0.2
LLW	Llanuwychllyn	145.02	6	*e*P	PKPdf	13 20 47.0	+0.3
SCHL	Schela	145.08	327	⇓P	PKPab	13 20 49.7	+0.8
KARA	Karaisali	145.09	310	P	PKPbc	13 20 47.9	-0.3
IWEX	Carrickbyrne,	145.11	9	*e*P	PKPbc	13 20 47.6	-0.2
KAMT	Kaman	145.11	314	P	PKPbc	13 20 48.5	+0.1
CFR	Carcaliu	145.14	327	⇓P	PKPab	13 20 48.8	-0.4
CFR	Carcaliu	145.14	327	⇓PKP2	PKPab	13 20 48.8	-0.4
TPGR	Topolog	145.20	326	⇓P	PKPab	13 20 49.3	-0.3
PETR	Petresti	145.23	328	⇓P	PKPab	13 20 49.7	+0.1
UZH	Uzhgorod	145.24	336	*e*PKIKP	PKPdf	13 20 46.4	-0.7
UZH				*i*		13 20 48.4	
YAYX	Yaylak	145.24	313	P	PKPbc	13 20 48.7	-0.1
ASSE	Asse, Remlinge	145.28	350	*e*PKPbc	PKPab	13 20 48.9	-0.6
	baz=16,slow=2.9						
ODBI	Odobesti	145.29	328	⇓P	PKPab	13 20 50.3	+0.5
KSP	Ksiaz	145.29	344	*e*PKP	PKPab	13 20 49.3	-0.4
CWF	Charnwood Fore	145.31	3	*e*P	PKPdf	13 20 46.8	-0.2
NIE	Niedzica	145.31	339	*e*PKP	PKPab	13 20 49.7	-0.2
CRVS	Cervenica-Dubn	145.33	337	*e*PKHKP	PKPpre	13 20 45.3	
CRVS				*e*		13 20 48.2	
CRVS	Cervenica-Dubn	145.33	337	*e*PKP	PKPdf	13 20 45.3	-2.0
CRVS				*e*		13 20 48.2	
VRI	Vrincioaia	145.38	329	⇑P	PKPbc	13 20 49.4	+0.6
VRI	Vrincioaia	145.38	329	⇑PKP2	PKPbc	13 20 49.4	+0.6
WACR	West Acre	145.39	1	*e*P	PKPbc	13 20 48.3	-0.3
SERE	Sereflikochisa	145.41	314	P	PKPbc	13 20 49.4	+0.1
HLM1	Long Mynd	145.42	5	*e*P	PKPdf	13 20 47.6	+0.2
PLOR	Plostina	145.43	329	⇑P	PKPbc	13 20 49.5	+0.5
PLOR				⇑P	PKPbc	13 20 49.6	+0.6
PLOR	Plostina	145.43	329	⇑PKP2	PKPbc	13 20 49.6	+0.6
TIRR	Tirgusor	145.47	325	⇑P	PKPab	13 20 49.8	-0.7
TIRR	Tirgusor	145.47	325	⇑P	PKPab	13 20 49.8	-0.7
TIRR	Tirgusor	145.47	325	⇑PKP2	PKPab	13 20 49.8	-0.7
TIRR	Tirgusor	145.47	325	PKPdf	PKPdf	13 20 48.1	+0.5
LOD	Lodumlu	145.50	316	P	PKPdf	13 20 48.0	0.0
IBBN	Ibbenburen	145.50	353	*e*PKPbc	PKPab	13 20 49.8	-0.5
	baz=16,slow=2.9						
AFSR	Afar-Bala (An	145.51	315	P	PKPdf	13 20 47.9	-0.1
BMR	Baia Mare	145.51	334	⇓P	PKPab	13 20 50.1	-0.5
BMR	Baia Mare	145.51	334	⇓PKP2	PKPab	13 20 50.1	-0.5
BR231	Keskin MP Arra	145.51	315		PKPdf	13 20 47.9	-0.1
OSTC	Ostas	145.57	344	*e*PKP	PKPdf	13 20 48.4	+0.7
OSTC				*e*x	x	13 20 50.2	
HARR	Harsova	145.57	326	⇓P	PKPab	13 20 50.2	-0.8
HARR	Harsova	145.57	326	⇓PKP2	PKPab	13 20 50.2	-0.8
CHVC	Chvalec	145.59	344	*e*PKP	PKPdf	13 20 48.4	+0.7
CHVC				*e*x	x	13 20 50.4	
ARCR	ARCALIA	145.60	332	⇓P	PKPab	13 20 50.7	-0.3
TLBR	Topalu	145.61	326	⇓P	PKPbc	13 20 50.2	+0.7
BISRR	Bisoca	145.61	328	⇓P	PKPab	13 20 50.7	-0.5
CLL	Collm	145.64	347	*e*PKPdf	PKPdf	13 20 48.0	+0.3
CLL				⇓*i*PKPbc	PKPbc	13 20 49.8	+0.5
	comp=Z,287nm,0.9s						
CLL				*e*SKPbc	SKiKP	13 23 35.0	+1.7
CLL				*e*PP	PP	13 24 12.0	-3.4
CLL	Collm	145.64	347	⇓*i*PKP2	PKPbc	13 20 49.8	+0.5
CLL				pmax	pmax		
	comp=Z,287nm,0.9s						
CLL	Collm	145.64	347	PKPdf	PKPdf	13 20 48.0	+0.3
CLL	Collm	145.64	347	*e*PKPbc	PKPab	13 20 50.3	-0.7
	baz=16,slow=2.9						
MFTR	Murfatlar	145.65	325	⇑P	PKPab	13 20 50.4	-0.8
OKC	Ostrava-Krasne	145.66	341	*e*PKP2	PKPbc	13 20 50.1	+0.7
OKC	Ostrava-Krasne	145.66	341	*e*PKP	PKPbc	13 20 50.1	+0.7
UPC	Upice	145.67	344	*e*PKIKP	PKPdf	13 20 48.2	+0.4
UPC				*e*		13 20 50.3	
UPC	Upice	145.67	344	*e*PKP	PKPdf	13 20 48.2	+0.4
UPC				*e*x	x	13 20 50.3	
OZUR		145.67	330	⇓P	PKPab	13 20 50.8	-0.6
DPC	Dobruska-Polom	145.73	343	*e*PKIKP	PKPdf	13 20 48.6	+0.6
DPC				*e*		13 20 50.9	
DPC	Dobruska-Polom	145.73	343	*e*PKP	PKPdf	13 20 48.6	+0.6
DPC				*e*x	x	13 20 50.9	
CVDA	Cernavoda	145.75	326	⇑P	PKPab	13 20 51.0	-0.7
MANR	Mangalia	145.79	324	⇑P	PKPbc	13 20 50.8	+0.8
BRG	Berggiesshubel	145.84	346	*i* PKP	PKPbc	13 20 49.0	-0.9
BRG				Amp		13 20 49.8	
	comp=Z,30nm,1.2s						
BRG				*i* x	x	13 20 50.7	
BRG				Amp		13 20 53.0	
	comp=Z,181nm,1.2s						
BRG	Berggiesshubel	145.84	346	*e*PKPbc	PKPbc	13 20 50.9	+0.9
	baz=16,slow=2.9						
KRLC	Kraliky	145.85	343	*e*PKIKP	PKPdf	13 20 48.7	+0.5
KRLC				*e*		13 20 50.9	
KRLC	Kraliky	145.85	343	*e*PKP	PKPdf	13 20 48.7	+0.5
KRLC				*e*x	x	13 20 50.9	
BHL	Bhannes	145.86	304	*e*P	PKPdf	13 20 48.8	0.0
MORC	Moravsky Berou	145.90	342	⇑P	PKPbc	13 20 49.2	-1.0
MORC	Moravsky Berou	145.90	342	*e*PKP	PKPdf	13 20 48.1	-0.2
MORC				*e*		13 20 50.6	
MORC	Moravsky Berou	145.90	342	⇑PKIKP	PKPbc	13 20 49.2	-1.0
MORC	Moravsky Berou	145.90	342	PKPdf	PKPdf	13 20 48.3	0.0
NEHR	Nehoiu	145.91	329	⇓P	PKPbc	13 20 50.8	+0.5
MCH1	Michaelchurch	145.93	5	*e*P	PKPbc	13 20 49.9	-0.2
DOPR	Dopca	145.96	330	⇑P	PKPab	13 20 51.9	-0.6
GTTG	Gottingen	145.96	351	*e*PKPbc	PKPbc	13 20 50.9	+0.7
	baz=16,slow=2.9						
QRWL	Qaraoun	145.96	304	*e*P	PKPdf	13 20 49.5	+0.6
SHBL	Chebaa	145.97	303	*e*P	PKPdf	13 20 49.5	+0.5
NEUB	Neuenburg	145.97	349	*e*PKPbc	PKPbc	13 20 50.9	+0.7
	baz=16,slow=2.9						
MBAR	Mbarara	145.98	240	PKPbc	PKPdf	13 20 50.6	+0.9
	comp=Z,63nm,0.9s,baz=167,slow=0.9,SNR=87						
MBAR				pPKPbc	pPKPdf	13 23 06.7	+1.5
	comp=Z,1.9nm,0.2s,baz=152,slow=20,SNR=1.2						
MBAR	Mbarara	145.98	240	PKPbc	PKPdf	13 20 50.1	+0.4
ISR	Istrita	146.00	328	⇑P	PKPab	13 20 51.7	-1.0
ISR	Istrita	146.00	328	⇑PKP2	PKPab	13 20 51.7	-1.0
PVCC	Panska Ves	146.02	345	*e*PKIKP	PKPdf	13 20 49.3	+0.9
PVCC				*e*		13 20 51.6	
PVCC				MLR	MLR		
	comp=Z,10µm,18.6s						
PVCC	Panska Ves	146.02	345	*e*PKP	PKPdf	13 20 49.3	+0.9
PVCC				*e*x	x	13 20 51.6	
ICOR	Ion Corvin	146.03	326	⇓P	PKPbc	13 20 51.6	+0.9
MLR	Muntele Rosu	146.03	329	PKPbc	PKPdf	13 20 48.9	+0.2
	comp=Z,80nm,0.8s,baz=344,slow=4.9,SNR=73						
MLR	Muntele Rosu	146.03	329	⇑P	PKPbc	13 20 51.0	+0.2
MLR	Muntele Rosu	146.03	329	⇑PKP2	PKPbc	13 20 51.0	+0.2
MLR	Muntele Rosu	146.03	329	PKPdf	PKPdf	13 20 47.5	-1.3
KECS	Kecovo	146.04	338	*e*PKP2	PKPbc	13 20 51.3	+0.8
KECS	Kecovo	146.04	338	*e*PKP	PKPbc	13 20 51.3	+0.8
CHBY	Cihanbeyli	146.04	313	P	PKPbc	13 20 50.9	-0.1
KIZK	Mersin	146.07	309	P	PKPbc	13 20 51.1	+0.1
STRD	Stroud	146.21	4	*e*P	PKPbc	13 20 50.8	-0.1
CJR	Cluj-Napoca	146.21	333	⇓P	PKPbc	13 20 52.1	+0.9
CJR	Cluj-Napoca	146.21	333	⇓PKP2	PKPbc	13 20 52.1	+0.9
MDUB	Mudurnu	146.22	318	P	PKPbc	13 20 50.9	-0.6
MDUB	Mudurnu	146.22	318	PKPdf	PKPdf	13 20 47.8	-1.4
SILI	Silifke-Mersin	146.28	309	P	PKPbc	13 20 52.0	+0.4
SECR		146.30	328	⇓P	PKPbc	13 20 52.1	+0.8
MDB	Medias	146.30	331	⇑P	PKiKP	13 20 52.5	-1.1
MDB	Medias	146.30	331	⇑PKP2	PKiKP	13 20 52.5	-1.1
LEHL	Lehliu	146.30	327	⇑P	PKPbc	13 20 51.7	+0.4
MMAI	Mount Meron Ar	146.34	303	PKPbc	PKPbc	13 20 52.8	+0.8
	comp=Z,107nm,0.6s,baz=65,slow=5.0,SNR=146						
LTVH	Ltavrtes, Hu	146.40	335	⇓P	PKiKP	13 20 52.8	-0.9
PLAR	PLOIESTI	146.40	328	⇑P	PKPbc	13 20 52.4	+0.8
BUG	Bochum--Univer	146.40	354	*e*PKPbc	PKPbc	13 20 52.0	+0.6
	baz=16,slow=2.9						
KEBE	Keben-Mersin	146.40	310	P	PKPbc	13 20 52.6	+0.6
EREN	Erenkoy	146.43	308	P	PKPbc	13 20 52.6	+0.6
SULR		146.45	328	⇑P	PKPbc	13 20 52.4	+0.7
PRA	Prague	146.48	345	*e*PKP2	PKPbc	13 20 52.3	+0.6
PRA				MLR	MLR		
	comp=Z,4µm,17.5s						
PRA	Prague	146.48	345	*e*PKP	PKPbc	13 20 52.3	+0.6
PRA				*e*x	x	13 20 55.1	
KASTN	Kahler Asten	146.51	352	*e*PKPbc	PKPbc	13 20 52.6	+0.8
	baz=16,slow=2.9						
VOIR		146.51	330	⇑P	PKPbc	13 20 52.6	+0.6
VOIR		146.51	330	⇑PKP2	PKPbc	13 20 52.6	+0.6
PRU	Pruhonice	146.53	345	*e*PKIKP	PKPdf	13 20 49.7	+0.5
PRU				*e*		13 20 52.3	
PRU	Pruhonice	146.53	345	*e*PKP	PKPdf	13 20 49.7	+0.5
PRU				*e*x	x	13 20 52.3	
BATH	Bath	146.53	5	*e*P	PKPbc	13 20 51.5	-0.2
DRGR		146.53	334	⇓P	PKPbc	13 20 52.9	+0.8
DRGR		146.53	334	⇓PKP2	PKPbc	13 20 52.9	+0.8
SVRH	Sivrihisar-ESK	146.54	316	P	PKPbc	13 20 52.5	+0.1
LADK	Ladik-KONYA	146.59	313	P	PKPbc	13 20 52.6	0.0
VRAC	Vranov	146.59	342	PKP	PKPdf	13 20 49.5	+0.1
	comp=Z,42nm,0.9s,baz=55,slow=1.6,SNR=42						
VRAC				PKPbc	PKPbc	13 20 52.9	+0.8
	comp=Z,48nm,0.6s,baz=50,slow=1.4,SNR=34						
VRAC	Vranov	146.59	342	⇓P	PKiKP	13 20 53.2	-0.9
VRAC	Vranov	146.59	342	*e*PKP	PKPdf	13 20 50.0	+0.6
VRAC				*e*		13 20 52.8	
VRAC	Vranov	146.59	342	⇓PKP2	PKiKP	13 20 53.2	-0.9
TANN	Tannenbergstha	146.60	348	*e*PKPbc	PKPbc	13 20 52.9	+0.8
	baz=16,slow=2.9						
WERD	Werda	146.60	348	*e*PKPbc	PKPbc	13 20 52.6	+0.6
	baz=16,slow=2.9						
TEVE	Tevekalti-Mers	146.61	310	P	PKPbc	13 20 53.1	+0.5
VYHS	Vyhne	146.61	339	*e*PKP2	PKiKP	13 20 53.2	-1.0
VYHS	Vyhne	146.61	339	*e*PKP	PKiKP	13 20 53.2	-1.0
AKKU	Akkuyu-Mersin	146.64	309	P	PKPbc	13 20 52.6	0.0
MTUR	Matau	146.65	329	⇑P	PKPbc	13 20 52.6	+0.2
MTUR	Matau	146.65	329	⇑PKP2	PKPbc	13 20 52.7	+0.2
UBBA	Unterbreizbach	146.66	350	*e*PKPbc	PKPbc	13 20 52.8	+0.8
	baz=16,slow=2.9						
SPNC	Sapanca-Adapaz	146.66	319	P	PKPbc	13 20 52.7	+0.2
JAVC	Velka Javorina	146.67	341	*e*PKP	PKPbc	13 20 51.2	-1.1
JAVC				*e*		13 20 54.1	
GUNZ	Gunzen	146.67	348	*e*PKPbc	PKPbc	13 20 53.0	+0.7
	baz=16,slow=2.9						
GULT	Gulveren	146.67	318	P	PKPbc	13 20 52.9	+0.2
PSZ	Piszkesteto	146.73	338	⇓P	PKPbc	13 20 53.3	+0.8
PSZ	Piszkesteto	146.73	338	⇓PKP2	PKPbc	13 20 53.3	+0.8
PSZ	Piszkesteto	146.73	338	PKPdf	PKPdf	13 20 49.2	-0.5
WERN	Wernitzgruen	146.73	348	*e*PKPbc	PKPbc	13 20 53.1	+0.7
	baz=16,slow=2.9						
WOL	Wolverton	146.74	3	*e*P	PKPbc	13 20 52.3	-0.1
ARR	Arges	146.76	330	⇑P	PKiKP	13 20 54.2	-0.4
NKC	Novy Kostel	146.77	347	*e*PKIKP	PKPdf	13 20 50.6	+0.9
NKC				*e*		13 20 53.5	
NKC				MLR	MLR		
	comp=Z,11µm,16.1s						
NKC	Novy Kostel	146.77	347	*e*PKP	PKPdf	13 20 50.6	+0.9
NKC				*e*x	x	13 20 53.5	
BERE	Bereket-Mersin	146.81	310	P	PKPbc	13 20 53.6	+0.4
SILT	Sile	146.81	320	P	PKPbc	13 20 53.4	+0.5
SRCK	Saricakaya, Es	146.82	317	P	PKPbc	13 20 53.2	+0.2
KRUC	Moravsky	146.87	342	*e*PKP	PKPdf	13 20 50.3	+0.4
KRUC				*e*		13 20 53.4	
CIFT	Cifteler, Eski	146.89	316	P	PKPbc	13 20 53.2	-0.1
SGRR	Singureni	146.91	327	⇑P	PKPbc	13 20 52.9	-0.1
TREC	Trest	146.92	343	*e*PKIKP	PKPdf	13 20 50.4	+0.4
TREC				*e*		13 20 53.3	
TREC				MLR	MLR		
	comp=Z,9µm,18.5s						
TREC	Trest	146.92	343	*e*PKP	PKPdf	13 20 50.4	+0.4
TREC				*e*x	x	13 20 53.3	
PBCC	Pribram	146.94	345	*e*PKP	PKPdf	13 20 50.3	+0.3
PBCC				*e*x	x	13 20 53.1	
TEKE	Tekeli-Mersin	146.97	309	P	PKPbc	13 20 53.3	-0.2
ELSH	Elham, Standar	146.98	1	*e*P	PKPbc	13 20 53.9	+0.9
HRT	Hereke	146.99	319	P	PKPbc	13 20 53.6	+0.2
SMOL	Smolenice	147.05	341	*e*PKP2	PKiKP	13 20 54.7	-0.4
SMOL	Smolenice	147.05	341	*e*PKP	PKiKP	13 20 54.7	-0.4
MANZ	Manzenberg	147.07	348	*e*PKPbc	PKPbc	13 20 54.1	+0.7
	baz=16,slow=2.9						
RAZG	Razgrad	147.09	326	⇓P	PKPbc	13 20 53.9	+0.3
LOT	Lotru	147.10	331	⇑P	PKPbc	13 20 53.3	-0.4
BSZH	Besenyszg	147.11	337	⇑P	PKPbc	13 20 54.3	+0.9
DEV	Deva	147.16	332	⇓P	PKPbc	13 20 54.4	+0.7
DEV	Deva	147.16	332	⇓PKP2	PKPbc	13 20 54.4	+0.7
ADVT	Abdulvahap	147.16	319	P	PKPbc	13 20 53.5	-0.3
BEBN	Eben Emael	147.19	355	*d*PKiKP	PKPbc	13 20 53.8	+0.3
HUMR	Humele	147.20	329	⇑P	PKPbc	13 20 52.7	-1.0
MODS	Modra-Piesok	147.22	341	*e*PKP2	PKPbc	13 20 54.0	+0.2
MODS	Modra-Piesok	147.22	341	*e*PKP	PKPbc	13 20 54.0	+0.2
CAVI	Cavuskoy	147.23	318	P	PKPbc	13 20 54.5	+0.4
ROTZ	Rotzenmuhle	147.26	347	*e*PKPbc	PKiKP	13 20 54.8	-0.7
	baz=16,slow=2.9						
UCC	Uccle	147.27	357	*d*PKiKP	PKPbc	13 20 54.2	+0.5
UCC				*d*x	x	13 20 57.4	
UCC	Uccle	147.27	357	PKP2	PKPbc	13 20 53.9	+0.2
UCC	Uccle	147.27	357		PKPbc	13 20 53.9	+0.2
CSS	Mathiatis	147.28	307		PKPdf	13 20 50.5	-0.5
AHRW	Bad Neuenahr-A	147.31	354	*e*PKPbc	PKiKP	13 20 54.8	-0.8
	baz=16,slow=2.9						
YLV	Yalova	147.32	319	P	PKPbc	13 20 54.2	-0.1
MEM	Membach	147.34	355	*d*PKPdf	PKPdf	13 20 51.1	+0.5
MEM				*d*PKiKP	PKPbc	13 20 54.5	+0.5
MEM				*d*PKPab	PKiKP	13 20 56.6	+1.0
BTNL	Ternell	147.36	355	*d*PKPdf	PKPdf	13 20 51.1	+0.5
BTNL				*d*PKiKP	PKPbc	13 20 54.4	+0.4
BTNL				*d*PKPab	PKiKP	13 20 56.2	+0.5
COPA	Copaceanca	147.36	328	⇓P	PKPbc	13 20 54.3	+0.1
SRO	Srobarova	147.37	339	*e*PKP2	PKiKP	13 20 55.4	-0.3
SRO	Srobarova	147.37	339	*e*PKP	PKiKP	13 20 55.4	-0.3
DYA	Yadsworthy	147.38	7	*e*P	PKPbc	13 20 53.2	-0.8
SRO2	Moca	147.39	339	*e*PKP2	PKPbc	13 20 54.0	-0.1
SRO2	Moca	147.39	339	*e*PKP	PKPbc	13 20 54.0	-0.1
SIRR	Siria	147.39	334	⇓P	PKiKP	13 20 55.2	-0.7
BSTI	Sart Tilman	147.41	355	*d*PKiKP	PKPbc	13 20 54.6	+0.5
ZST	Bratislava	147.43	341	*e*PKP2	PKiKP	13 20 55.4	-0.4
ZST	Bratislava	147.43	341	*e*PKP	PKiKP	13 20 55.3	-0.5
CTYL	Yalikoy Yolu	147.44	321	P	PKPbc	13 20 54.8	+0.3
CTKS	Kestanelik-??a	147.45	321	P	PKPbc	13 20 54.9	+0.4
TNS	Taunus Mts	147.46	352	*e*PKPbc	PKPbc	13 20 55.0	+0.6
	baz=16,slow=2.9						
GEMT	Gemlik	147.51	319	P	PKPbc	13 20 54.9	+0.2
GAZI	Gazipasa	147.52	310	P	PKPbc	13 20 53.7	-1.2
GRA1	Grafenberg Arr	147.53	349		PKPdf	13 20 51.0	0.0
GRA1				PKPbc	PKPbc	13 20 54.9	+0.4
GRF	Grafenberg Arr	147.53	349	PKIKP	PKPdf	13 20 51.0	0.0
GRF						13 20 54.9	
GRF	Grafenberg Arr	147.53	349	*e*PKPbc	PKPbc	13 20 55.1	+0.6
	baz=16,slow=2.9						
GRFO	Grafenberg	147.53	349	PKIKP	PKPdf	13 20 50.8	-0.1
GRFO						13 20 54.9	
GRFO	Grafenberg	147.53	349		PKPdf	13 20 50.8	-0.1
GRFO				PKPbc	PKPbc	13 20 54.9	+0.4
LEF	Lefka	147.55	308	⇓P	PKPbc	13 20 55.0	0.0
LEF	Lefka	147.55	308	P	PKPbc	13 20 54.7	-0.3
KHC	Kasperske Hory	147.56	345	*e*PKIKP	PKPdf	13 20 51.4	+0.4
KHC				*e*		13 20 55.1	
KHC	Kasperske Hory	147.56	345	*e*PKP	PKPdf	13 20 51.4	+0.4
KHC				*e*x	x	13 20 55.1	
KHC	Kasperske Hory	147.56	345	PKPdf	PKPdf	13 20 50.9	-0.2
KHC				PKPbc	PKPbc	13 20 54.8	+0.2
SNF	Seneffe	147.56	357	*d*PKiKP	PKPbc	13 20 55.1	+0.6
SNF				*d*x	x	13 20 58.9	
BCLA	Clavier	147.59	356	*d*PKiKP	PKPbc	13 20 54.6	0.0
BCLA				*d*PKPab	PKiKP	13 20 57.0	+0.9
GZR	Gura Zlata	147.60	332	⇓P	PKPbc	13 20 55.1	+0.2
GZR	Gura Zlata	147.60	332	⇓PKHKP	PKPpre	13 20 55.1	
BHOU	Houvegnez	147.60	355	*d*PKPdf	PKPdf	13 20 50.3	-0.8
BHOU				*d*PKiKP	PKPbc	13 20 55.3	+0.7
BHOU				*d*x	x	13 20 58.9	
EIL	Elat	147.62	297	PKP	PKPdf	13 20 51.9	+0.2
	comp=Z,52nm,0.9s,baz=1.0,slow=5.4,SNR=7.8						
EIL				PKPbc	PKPbc	13 20 55.9	+0.6
	comp=Z,58nm,0.9s,baz=12,slow=2.6,SNR=34						
ZIMR		147.62	327	⇑P	PKPbc	13 20 55.1	+0.2
ZIMR		147.62	327	⇑PKP2	PKPbc	13 20 55.1	+0.2
SLVT	Silivri	147.63	321	P	PKiKP	13 20 56.2	-0.3
BGES	Gesves	147.64	356	*d*PKiKP	PKPbc	13 20 54.9	+0.2
BGES				*d*PKPab	PKPab	13 20 57.9	-1.2
SHUT	Suhut-Afyon	147.65	315	P	PKPdf	13 20 52.5	+0.8
CKRC	Cesky Krumlov	147.66	344	*e*PKP	PKPdf	13 20 51.8	+0.6
CKRC				*e*x	x	13 20 55.3	
WET	Wettzell	147.71	346	*e*PKPbc	PKiKP	13 20 55.7	-0.7
	baz=16,slow=2.9						
AMBH	Ambrzfalva	147.71	335	⇓P	PKiKP	13 20 57.0	+0.6
MDNY	Mudanya-Bursa	147.74	319	P	PKPbc	13 20 55.7	+0.4
BMRD	Maredsous	147.74	356	*d*PKPdf	PKPdf	13 20 51.3	0.0
BMRD				*d*PKiKP	PKPbc	13 20 55.5	+0.5
GEC2	GERESS Array S	147.79	345		PKPdf	13 20 50.8	-0.7
GEC2				PKPbc	PKPbc	13 20 55.2	-0.1
GEC2	GERESS Array S	147.79	345	*e*PKPbc	PKiKP	13 20 56.1	-0.6
	baz=16,slow=2.9						
GERES	GERESS Array B	147.79	345	PKP	PKPdf	13 20 51.9	+0.4
	comp=Z,76nm,0.7s,baz=56,slow=1.5,SNR=264						
GERES				PKPbc	PKPbc	13 20 56.0	+0.7
	comp=Z,76nm,0.7s,baz=31,slow=3.3,SNR=204						
GERES	GERESS Array B	147.79	345	PKPdf	PKPdf	13 20 51.0	-0.5
GERES				PKPbc	PKPbc	13 20 55.4	0.0
RCHB	Rochefort	147.85	356	*d*PKiKP	PKPbc	13 20 55.7	+0.4
VLAD	Vladila	147.87	328	⇓P	PKiKP	13 20 56.5	-0.3
TVSB	Tavsanli	147.89	317	P	PKPbc	13 20 55.4	-0.5
BZS	Buzias	147.93	333	⇓P	PKPdf	13 20 52.4	+0.7
BZS	Buzias	147.93	333	⇓PKHKP	PKPpre	13 20 52.4	
DOU	Dourbes	147.96	357	*d*PKiKP	PKiKP	13 20 56.2	-0.6
SRE	Strehaia	147.96	331	⇑P	PKiKP	13 20 56.9	-0.2
SRE	Strehaia	147.96	331	⇑PKP2	PKiKP	13 20 56.9	-0.2
ISP	Isparta	148.04	314	PKHKP	PKPpre	13 20 55.2	
ISP	Isparta	148.04	314		PKPbc	13 20 55.2	-1.1
CONA	Conrad Observa	148.05	342	*i* P	PKiKP	13 20 56.8	-0.5
	comp=Z,56nm,0.7s,SNR=32						
EDRB	Edirne	148.10	323	P	PKPbc	13 20 55.9	-0.3
KCTX	Karacabey (Bur	148.12	320	P	PKPbc	13 20 56.5	+0.2
HERR	Herculane	148.15	332	⇓P	PKPbc	13 20 56.8	+0.6
BCK	Bucak	148.18	313	P	PKPbc	13 20 56.1	-0.5
PLVB	Pleven	148.20	327	⇓P	PKiKP	13 20 57.3	-0.3
WLF	Walferdange	148.27	355	*d*PKiKP	PKiKP	13 20 57.4	-0.1
WLF	Walferdange	148.27	355	PKP2	PKPbc	13 20 56.6	+0.3
WLF	Walferdange	148.27	355		PKPbc	13 20 56.6	+0.3
WLF	Walferdange	148.27	355	*e*PKPbc	PKiKP	13 20 57.6	+0.1
	baz=16,slow=2.9						
BANR	Banloc	148.32	334	⇓P	PKiKP	13 20 57.9	+0.2
MRMT	Marmara Adasi	148.38	321	P	PKPbc	13 20 57.1	+0.1
SIMA	Simav-Kutahya	148.40	317	P	PKPbc	13 20 55.9	-1.3
MDVR	Moldovita	148.55	332	⇑P	PKPbc	13 20 56.8	-0.5
KORT	Korkueli	148.57	313	P	PKPbc	13 20 56.9	-0.8
MOA	Molln	148.57	344	*e*P	PKPbc	13 20 57.5	+0.3
	comp=Z,63nm,1.2s,SNR=12						
RKY	Sarkoy-Tekirda	148.58	321	P	PKPbc	13 20 57.5	0.0
MORH	Mrgy, Hungar	148.62	337	⇓*i*P	PKPbc	13 20 57.1	-0.2
KRBG	Karabiga-Canak	148.69	321	P	PKPbc	13 20 57.9	+0.2
ARSA	Arzberg	148.76	342	*e*P	PKPbc	13 20 56.9	-0.8
	comp=Z,52nm,1.3s,SNR=12						
STU	Stuttgart	148.77	350	PKIKP	PKPdf	13 20 52.6	-0.4
STU						13 20 58.1	
STU	Stuttgart	148.77	350		PKPdf	13 20 52.6	-0.4
STU				PKPbc	PKPbc	13 20 58.1	+0.5
JSA	Saint Aubin	148.78	5	*e*P	PKPbc	13 20 56.7	-0.9
KULA	Kula-Manisa	148.93	317	P	PKiKP	13 20 59.3	-0.1
FUR	Furstenfeldbru	148.98	348	*e*PKPbc	PKiKP	13 20 59.0	-0.1
	baz=16,slow=2.9						
ELL	Elmali	149.00	313	PKHKP	PKPpre	13 20 58.5	
ELL	Elmali	149.00	313		PKPbc	13 20 58.5	-0.3
MANT	Manisa	149.01	317	PKPbc	PKPbc	13 20 58.5	-0.3
RJOB	Jochberg	149.04	345	*e*PKPbc	PKiKP	13 20 59.1	-0.2
	baz=16,slow=2.9						
FRGS	Fruska Gora	149.05	335	⇓P	PKiKP	13 20 58.9	-0.4
FRGS	Fruska Gora	149.05	335	⇓*i*P	PKPbc	13 20 58.7	+0.3
BEHE	Becsehely	149.06	340	⇓*i*P	PKiKP	13 21 01.6	+2.3
ALN	Alexandroupoli	149.12	323	P	PKPbc	13 20 58.2	-0.5
ALN	Alexandroupoli	149.12	323	PKHKP	PKPpre	13 20 57.9	
ALN	Alexandroupoli	149.12	323	PKPbc	PKPbc	13 20 57.9	-0.8
ENEZ	Enez	149.16	322	P	PKiKP	13 20 59.6	0.0
ENEZ	Enez	149.16	322	P	PKPbc	13 20 57.7	-1.1
GELI	Tayfur-Gelibol	149.18	321	P	PKPbc	13 20 58.9	0.0
RDO	Rodhopi	149.24	323	P	PKPbc	13 20 59.0	0.0
KOGS	Kog	149.25	340	*i* PKPbc	PKPbc	13 20 58.8	0.0
KOGS				*e*PKPab	PKPab	13 21 06.1	+0.3
BFO	Black Forest	149.33	351	PKHKP	PKPpre	13 20 58.8	
BFO	Black Forest	149.33	351	PKPbc	PKPbc	13 20 58.8	-0.2
BFO	Black Forest	149.33	351	*e*PKPbc	PKiKP	13 20 59.7	-0.1
	baz=16,slow=2.9						
SOKA	Soboth	149.42	342	*e*P	PKPbc	13 20 59.1	-0.3
	comp=Z,76nm,0.9s,SNR=15						
BOVS	Bovan	149.44	331	⇓P	PKPbc	13 20 59.3	-0.1
VTS	Vitosha	149.46	328	PKHKP	PKPpre	13 20 59.3	
VTS	Vitosha	149.46	328	PKPbc	PKPbc	13 20 59.3	-0.4
KALN	Kalnik	149.46	340	*i* P	PKPbc	13 20 59.3	-0.1
AKAS	Kas	149.46	312	P	PKPbc	13 20 58.8	-1.1
AKAS	Kas	149.46	312		PKPbc	13 20 58.4	-1.5

KBA	Koelnbreinsper	149.52	344	eP	PKPbc	13 20 59.3	-0.4
	comp=Z,102nm,1.0s,SNR=19						
ECH	Echery	149.60	353	PKIKP	PKPdf	13 20 54.1	-0.2
ECH						13 20 59.5	
ECH	Echery	149.60	353	PKPdf	PKPdf	13 20 54.1	-0.2
ECH				PKPbc	PKPbc	13 20 59.5	-0.1
EZN	Ezine	149.63	321	P	PKiKP	13 21 00.5	-0.1
FETY	Fethiye	149.63	313	P	PKPbc	13 20 58.5	-1.6
GADA	Gvkgeada	149.65	322	P	PKPbc	13 20 59.8	-0.2
GADA	Gvkgeada	149.65	322	P	PKPbc	13 20 59.5	-0.5
UBR	Ueberruh	149.67	349	ePKPbc	PKiKP	13 21 00.4	-0.2
	baz=16,slow=2.9						
ASCN	Ascension	149.67	147		PKPbc	13 21 00.9	+0.1
SMTH	Samothraki Isl	149.69	322	P	PKPbc	13 20 59.6	-0.5
WATA	Walderalm	149.70	347	eP	PKPbc	13 21 00.2	+0.1
	comp=Z,48nm,0.7s,SNR=41						
OBKA	Obir	149.72	342	eP	PKPbc	13 20 59.7	-0.4
	comp=Z,35nm,0.8s						
RETA	Reutte	149.73	348	eP	PKPbc	13 21 00.2	+0.2
	comp=Z,29nm,0.7s,SNR=12						
AYDB	Zeytinkoy-Aydi	149.75	316	P	PKiKP	13 21 01.1	0.0
WTTA	Wattenberg	149.76	347	eP	PKPbc	13 21 00.5	+0.2
	comp=Z,94nm,0.7s,SNR=23						
BOZC	Bozcaada	149.78	321	P	PKPbc	13 21 00.1	-0.2
MOTA	Moosalm	149.79	347	eP	PKPbc	13 21 00.4	+0.1
	comp=Z,119nm,0.9s,SNR=14						
MOSL	Moslavina	149.81	339	i P	PKPbc	13 20 59.6	-0.7
PTJ	Puntijarka	149.82	340	P	PKPbc	13 20 59.8	-0.6
DIVS	Divibare	149.84	333	⇓iP	PKPbc	13 21 00.6	+0.2
DIVS	Divibare	149.84	333	PKPbc	PKPbc	13 21 00.3	-0.1
MYKA	Terra Mystica	149.86	344	eP	PKPbc	13 20 59.9	-0.5
	comp=Z,81nm,0.6s,SNR=20						
ZAG	Zagreb	149.88	340	P	PKPbc	13 21 00.1	-0.3
SQTA	Sankt Quirin	149.89	347	eP	PKPbc	13 21 00.6	+0.1
	comp=Z,123nm,0.7s,SNR=34						
KAVA	Kavala	149.92	324	P	PKPbc	13 21 00.5	-0.1
YER	Yerkesik	149.92	315	P	PKiKP	13 21 01.2	-0.2
PDKS	Podkum	149.99	341	i PKPbc	PKPbc	13 21 00.8	+0.2
PRK	Paraskevi	150.02	320	P	PKiKP	13 21 01.7	+0.2
NVR	Nevrokopi	150.03	325	P	PKPbc	13 21 00.8	-0.1
ABTA	Abfaltersbach	150.04	345	eP	PKPbc	13 21 00.4	-0.5
	comp=Z,159nm,0.7s,SNR=50						
BLCB	Balcova	150.05	318	P	PKPbc	13 21 00.8	-0.2
CRES	Cresnjev	150.06	341	⇓iP	PKPbc	13 21 00.9	+0.1
THAS	Thassos island	150.06	323	P	PKPbc	13 21 00.5	-0.4
DAVA	Damuels	150.09	349	eP	PKiKP	13 21 01.3	-0.3
	comp=Z,112nm,1.1s,SNR=21						
ZOU	Zoufplan	150.10	344	PKPdf	PKPdf	13 20 54.7	-0.7
ZOU				PKPbc	PKPbc	13 21 00.5	-0.7
CLF	Chambon-Foret	150.11	359	PKPbc	PKiKP	13 21 01.2	-0.1
LJU	Ljubljana	150.14	342	i PKPbc	PKPbc	13 21 01.2	+0.1
LJU				i PKPab	PKPab	13 21 09.6	+0.1
LJU	Ljubljana	150.14	342	⇓iP	PKPbc	13 21 01.1	+0.1
MLSB	Milas	150.18	315	P	PKiKP	13 21 02.7	+0.8
FETA	Feichten	150.18	348	i P	PKiKP	13 21 01.5	-0.3
	comp=Z,154nm,1.0s,SNR=17						
OZLJ	Ozalj	150.24	340	i P	PKPbc	13 21 01.3	+0.1
LIA	Limnos Island	150.26	322	P	PKPbc	13 21 01.2	-0.2
BBLS	Lazići	150.28	334	⇓iP	PKiKP	13 21 01.8	-0.2
HAPS	Han Pijesak,BI	150.28	335	eP	PKPbc	13 21 01.2	-0.3
SIGR	SIGRI	150.29	320	P	PKPbc	13 21 01.4	-0.1
GCAM	G?zelcaml?	150.32	316	P	PKPbc	13 21 00.8	-0.8
SRS	Serrai	150.34	325	P	PKPbc	13 21 00.5	-1.1
URLA	Izmir	150.35	318	P	PKPbc	13 21 00.9	-0.8
BLY	Banja Luka	150.41	337	⇓iP	PKiKP	13 21 02.0	-0.1
JAVS	Javornik	150.41	342	i PKPbc	PKPbc	13 21 01.6	-0.1
JAVS				i PKPab	PKPab	13 21 10.5	-0.3
STAL	STALIGIAL	150.44	344		PKPdf	13 20 55.1	-0.7
STAL				PKPbc	PKPbc	13 21 01.1	-0.7
CEY	Cerknica	150.45	342	⇓iP	PKPbc	13 21 01.4	-0.3
RUDO	Rudo	150.49	333	eP	PKPbc	13 21 01.8	-0.1
SMG	Samos	150.57	317	P	PKPbc	13 21 02.2	0.0
DAVOX	Davos/Dischmat	150.58	349	PKP	PKPdf	13 20 56.6	+0.5
	comp=Z,21nm,0.8s,baz=326,slow=0.6,SNR=32						
DAVOX				PKPbc	PKiKP	13 21 02.9	+0.2
	comp=Z,175nm,0.7s,baz=264,slow=1.7,SNR=152						
BODT	Bodrum	150.62	315	P	PKPbc	13 21 01.4	-1.0
OUR	Ouranopolis	150.66	324	P	PKPbc	13 21 01.9	-0.4
STIP	Stip	150.66	328	i P	PKPbc	13 21 01.7	-0.7
CHOS	Chios island	150.67	319	P	PKPbc	13 21 02.4	-0.1
MGRS	Mrkonjic Grad	150.73	337	eP	PKiKP	13 21 02.7	-0.1
VAY	Valandovo	150.74	327	i P	PKPbc	13 21 02.1	-0.4
RIY	Rijeka	150.81	341	P	PKPbc	13 21 01.9	-0.6
SKO	Skopje	150.83	329	i P	PKiKP	13 21 03.2	+0.1
PLG	Polygyros	150.94	324	P	PKPbc	13 21 02.2	-0.8
HORT	Hortiatis	150.97	325	P	PKPbc	13 21 02.4	-0.8
TUE	Stuetta	150.97	349	PKPdf	PKPdf	13 20 56.3	-0.4
TUE				PKPbc	PKPbc	13 21 03.0	-0.2
THE	Thessaloniki	151.02	325	P	PKPbc	13 21 02.0	-1.1
UPM	Unac-Piva	151.03	334	eP	PKPbc	13 21 03.0	-0.3
GRG	Griva	151.09	326	P	PKPbc	13 21 02.8	-0.6
UDBI	Udbina	151.10	339	i P	PKPbc	13 21 03.3	0.0
PAIG	Paliouri	151.11	324	P	PKPbc	13 21 01.8	-1.6
KIJV	Kijevo	151.34	338	i P	PKPbc	13 21 03.8	0.0
NVLJ	Novalja	151.37	340	i P	PKPbc	13 21 03.2	-0.6
SENIN	Lac Senin/Sane	151.40	352	PKPbc	PKiKP	13 21 04.3	-0.1
BRY	Bratogost	151.43	334	eP	PKPbc	13 21 03.8	-0.4
PDG	Podgorica	151.50	332	⇓P	PKPbc	13 21 04.2	+0.1
PDG	Podgorica	151.50	332	⇓iP	PKPbc	13 21 03.5	-0.6
PDG	Podgorica	151.50	332		PKPbc	13 21 03.9	-0.3
RICI	Ricice	151.50	336	P	PKPbc	13 21 03.9	-0.2
KARP	Karpathos	151.53	313	P	PKPbc	13 21 04.5	0.0
KARP	Karpathos	151.53	313		PKPbc	13 21 04.0	-0.5
PHP	Peshkopia	151.53	330	P	PKPbc	13 21 04.1	-0.3
TEOL	Teolo	151.54	345		PKPdf	13 20 57.0	-0.4
TEOL					PKPbc	13 21 03.6	-0.6
SALO	Salr	151.56	347		PKPbc	13 21 03.4	-0.9
LIT	Litokhoron	151.65	325	P	PKPbc	13 21 04.1	-0.5
TREB	Trebinje	151.66	334	eP	PKPbc	13 21 04.1	-0.4
MORI	Morici	151.70	338	i P	PKPbc	13 21 04.1	-0.5
KYMI	Kymi, Euboea I	151.72	321	P	PKPbc	13 21 04.0	-0.8
DRME	Dracevica, Mon	151.72	332	eP	PKPbc	13 21 04.3	-0.4
FNA	Florina	151.75	327	P	PKPbc	13 21 04.6	-0.3
FNA	Florina	151.75	327	PKIKP	PKPbc	13 21 04.0	-0.9
FNA	Florina	151.75	327	PKPbc	PKPbc	13 21 04.0	-0.9
XOR	Xorichti	151.77	323	P	PKPbc	13 21 04.2	-0.7
NEO	Neokhori	151.79	323	P	PKPbc	13 21 04.2	-0.8
OHR	Ohrid	151.79	329	i P	PKPbc	13 21 04.7	-0.2
KZN	Kozani	151.89	326	P	PKPbc	13 21 04.5	-0.7
KARY	Karystos	151.90	320	P	PKPbc	13 21 04.7	-0.5
EREA	Eretria	151.96	321	P	PKPbc	13 21 04.6	-0.8
TIR	Tirane	152.07	330	⇓P	PKiKP	13 21 05.9	+0.3
TIR	Tirane	152.07	330	⇓PKIKP	PKiKP	13 21 05.9	+0.3
TIR	Tirane	152.07	330		PKPbc	13 21 04.7	-0.7
SMIA	Simia	152.09	322	P	PKPbc	13 21 05.2	-0.4
DION	Dionisos Attik	152.18	320	P	PKPbc	13 21 05.2	-0.7
NEST	Nestorio	152.19	327	P	PKiKP	13 21 06.1	0.0
THR8	Santorini-Mono	152.20	316	P	PKPbc	13 21 04.9	-1.0
SFIR	Foira Santorin	152.23	316	P	PKPbc	13 21 05.3	-0.7
THR7	Fira-Santorini	152.23	316	P	PKPbc	13 21 05.3	-0.7
PTL	Penteli	152.24	320	P	PKPbc	13 21 05.1	-0.9
SANT	Santorini	152.24	316	P	PKPbc	13 21 05.0	-1.1
SANT	Santorini	152.24	316	⇑P	PKPbc	13 21 05.3	-0.7
THR3	Thira Island,	152.25	316	P	PKPbc	13 21 05.3	-0.7
THR5	Thira Island,	152.28	316	P	PKPbc	13 21 05.3	-0.8
THR6	Thira Island,	152.29	316	P	PKPbc	13 21 05.2	-0.9
THL	Klokotos Trika	152.29	325	P	PKPbc	13 21 05.0	-1.0
PENT	Pentalofos	152.30	327	P	PKPbc	13 21 05.7	-0.5
ATAL	Atalanti	152.32	322	P	PKPbc	13 21 05.3	-0.8
ATHU	Athens Univers	152.34	320	P	PKPbc	13 21 05.5	-0.7
LKR	Lokris	152.36	322	P	PKPbc	13 21 05.3	-0.9
KPRO	Kipourio	152.36	326	P	PKiKP	13 21 06.5	+0.1
ATH	Athens Observa	152.38	320	P	PKPbc	13 21 05.6	-0.6
VLY	Voula,Athens	152.41	320	P	PKPbc	13 21 05.1	-1.2
ZKR	Zakros	152.41	313	P	PKiKP	13 21 06.8	+0.2
STIA	Sitia Lasithi	152.45	313	P	PKiKP	13 21 07.0	+0.4
AXAR	Agios Charalam	152.48	323	P	PKPbc	13 21 06.2	-0.3
AGG	Agios Georgios	152.49	324	P	PKPbc	13 21 05.8	-0.7
AGG	Agios Georgios	152.49	324	PKIKP	PKPbc	13 21 05.3	-1.2
AGG	Agios Georgios	152.49	324		PKPbc	13 21 05.3	-1.2
VILL	Villia	152.50	321	P	PKPbc	13 21 05.8	-0.8
MAKR	Makrakomi, Fth	152.61	324	P	PKPbc	13 21 06.7	-0.1
LSK	Leskovik	152.62	327	P	PKiKP	13 21 07.2	+0.3
ZCCA	Zocca	152.66	345		PKiKP	13 21 07.4	+0.5
NPS	Neapolis	152.75	314	P	PKiKP	13 21 07.5	+0.2
SSB	Saint Sauveur	152.76	356	PKIKP	PKPdf	13 20 59.9	+0.7
SSB						13 21 07.2	
SSB	Saint Sauveur	152.76	356	PKPdf	PKPdf	13 20 59.9	+0.7
SSB				PKPbc	PKiKP	13 21 07.2	+0.1
BNI	Bardonecchia	152.77	352	PKIKP	PKiKP	13 21 07.7	+0.5
BNI	Bardonecchia	152.77	352	PKPbc	PKiKP	13 21 07.7	+0.5
DSF	Desfina	152.79	322	P	PKPbc	13 21 06.8	-0.4
LTK	Loutraki	152.79	321	P	PKPbc	13 21 06.3	-0.9
FRMA	Ierapetra Chan	152.80	313	P	PKiKP	13 21 07.3	0.0
LOUT	Loutraki	152.81	321	P	PKPbc	13 21 06.1	-1.1
JAN	Janina	152.85	326	P	PKPbc	13 21 07.3	0.0
EVR	Evrytania	152.86	324	P	PKiKP	13 21 07.7	+0.2
LAST	Lasithi	152.90	314	P	PKiKP	13 21 08.0	+0.3
THAL	Thalero	152.96	322	P	PKPbc	13 21 07.0	-0.5
EPID	Epidavros	152.97	320	P	PKPbc	13 21 07.0	-0.6
ANX	Ano Chora	153.02	323	P	PKiKP	13 21 08.6	+0.8
KALE	Kalithea	153.03	323	P	PKPbc	13 21 07.6	-0.1
SERG	Sergoula	153.06	323	P	PKiKP	13 21 07.9	+0.1
TRIZ	Trizonia	153.09	323	P	PKiKP	13 21 07.8	0.0
KRND	KRANIDI	153.10	320	P	PKPbc	13 21 07.3	-0.5
ALIK	Aliki, Aigiali	153.14	323	P	PKiKP	13 21 08.7	+0.8
EFP	Efpalio	153.14	323	P	PKiKP	13 21 08.3	+0.4
LAKA	Lakka	153.23	323	P	PKiKP	13 21 09.0	+0.8
IDI	Anoyia	153.23	314	PKP	PKPdf	13 21 00.6	+0.4
	comp=Z,6.4nm,0.8s,baz=32,slow=11,SNR=2.0						
IDI				PKPbc	PKPbc	13 21 07.8	-0.4
	comp=Z,32nm,0.6s,baz=350,slow=7.3,SNR=26						
IDI	Anoyia	153.23	314	P	PKPbc	13 21 07.7	-0.6
IDI	Anoyia	153.23	314	⇓P	PKPbc	13 21 08.1	-0.2
KLV	Kalavryta, Ach	153.26	322	P	PKPbc	13 21 08.2	-0.1
MURB	Monte Urbino	153.26	342	PKPbc	PKPbc	13 21 07.1	-1.0
OSSC	Osservatorio P	153.37	344		PKPbc	13 21 07.0	-1.2
PDO	Prodromos	153.43	324	P	PKiKP	13 21 08.8	+0.3
PRNS	Prines Rethymn	153.45	315	P	PKiKP	13 21 09.3	+0.6
NRCA	Norcia	153.48	341		PKPab	13 21 24.2	+0.3
LKD2	Lefkada island	153.58	325	P	PKiKP	13 21 09.1	+0.2
NYDR	Nydri-Lefkada	153.61	325	P	PKiKP	13 21 08.9	0.0
RLS	Riolos of Patr	153.65	323	P	PKiKP	13 21 09.5	+0.5
EVGI	Lefkada island	153.70	325	P	PKiKP	13 21 09.6	+0.5
IMMV	Iera Moni Meta	153.74	316	P	PKiKP	13 21 09.3	0.0
AQU	L'Aquila	153.82	340	PKP2	PKPab	13 21 25.2	-0.2
AQU	L'Aquila	153.82	340	⇓iP	PKPab	13 21 24.9	-0.5
AQU	L'Aquila	153.82	340	PKPab	PKPab	13 21 25.2	-0.2
ITM	Ithomi	153.97	321	P	PKPbc	13 21 09.4	-0.3
LATE	Laterza	154.07	343	PKPab	PKPab	13 21 25.8	-0.6
CASP	Castiglione de	154.16	344		PKPbc	13 21 09.3	-0.6
PBRG	Braganca	155.24	15	ePKPab	PKPab	13 21 32.1	+0.7
POLO	Lamas de Olo	155.36	17	ePKPdf	PKPdf	13 21 03.8	+0.8
POLO				i -		13 21 13.1	
POLO	Lamas de Olo	155.36	17	ePKPab	PKPab	13 21 32.7	+0.7
PVRL	Vila Real	155.48	17	ePKPdf	PKPdf	13 21 04.0	+0.9
PVRL	Vila Real	155.48	17	ePKPab	PKPab	13 21 33.3	+0.8
MVO	Moncorvo	155.77	16	ePKPdf	PKPdf	13 21 04.8	+1.3
MVO				i -		13 21 14.4	
MVO	Moncorvo	155.77	16	ePKPab	PKPab	13 21 34.7	+0.9
PVIS	Viseu	155.94	18	ePKPdf	PKPdf	13 21 04.7	+1.0
PVIS	Viseu	155.94	18	ePKPab	PKPab	13 21 35.0	+0.5
COI	Coimbra	156.25	20	ePKPdf	PKPdf	13 21 04.7	+0.7
COI	Coimbra	156.25	20	ePKPab	PKPab	13 21 36.2	+0.5
MTE	Manteigas	156.34	18	PKPab	PKPab	13 21 36.3	+0.1
MTE	Manteigas	156.34	18	ePKPdf	PKPdf	13 21 05.1	+0.8
MTE	Manteigas	156.34	18	ePKPab	PKPab	13 21 36.8	+0.6
PCAS	Casmilo, Conde	156.36	20	ePKPdf	PKPdf	13 21 05.2	+1.0
PCAS	Casmilo, Conde	156.36	20	ePKPab	PKPab	13 21 36.6	+0.3
PSBE	So Bento	156.75	21	ePKPab	PKPab	13 21 38.6	+0.6
PCBR	Castelo Branco	156.87	18	ePKPdf	PKPdf	13 21 05.8	+1.0
PCBR				i -		13 21 24.8	
PCBR	Castelo Branco	156.87	18	ePKPab	PKPab	13 21 38.4	-0.1
PMAFR	Mafra	157.07	23	ePKPab	PKPab	13 21 40.1	+0.7
PMRV	Marv??o	157.28	19	ePKPdf	PKPdf	13 21 06.3	+0.9
PMRV	Marv??o	157.28	19	ePKPab	PKPab	13 21 40.8	+0.5
PMTG	Montargil	157.34	20	ePKPdf	PKPdf	13 21 05.9	+0.4
PMTG	Montargil	157.34	20	ePKPab	PKPab	13 21 38.6	-1.9
PESTR	Estremoz	157.73	20	PKPab	PKPab	13 21 41.9	-0.3
EVO	Evora	157.89	21	i -		13 21 30.4	
EVO	Evora	157.89	21	ePKPab	PKPab	13 21 43.1	+0.1
ESBB	Sonseca Array	157.90	12	PKPab	PKPab	13 21 42.9	-0.1
ESDC	Sonseca Array	157.90	12	PKP	PKPdf	13 21 05.8	-0.4
	comp=Z,4.5nm,1.0s,baz=347,slow=3.7,SNR=13						
ESDC				PKPab	PKPab	13 21 43.2	+0.2
	comp=Z,14nm,0.9s,baz=338,slow=3.8,SNR=21						
ESDC				PP	PP	13 25 28.5	+4.4
	comp=Z,3.1nm,1.2s,baz=352,slow=5.2,SNR=5.1						
ESDC	Sonseca Array	157.90	12		PKPdf	13 21 06.1	-0.1
ESDC					PKPab	13 21 42.7	-0.3
PAB	San Pablo	157.94	13	PKIKP	PKPdf	13 21 06.2	-0.1
PAB						13 21 43.3	
PAB	San Pablo	157.94	13	PKPdf	PKPdf	13 21 06.2	-0.1
PAB				PKPab	PKPab	13 21 43.2	0.0
PNCL	Nicolau / Gran	158.09	22	ePKPdf	PKPdf	13 21 07.8	+1.4
PNCL	Nicolau / Gran	158.09	22	ePKPab	PKPab	13 21 44.1	+0.3
PBEJ	Beja	158.40	21	ePKPdf	PKPdf	13 21 08.3	+1.5
MESJ	Messejana	158.44	22	ePKPdf	PKPdf	13 21 05.6	-1.3
MESJ	Messejana	158.44	22	ePKPdf	PKPdf	13 21 08.0	+1.2
MESJ	Messejana	158.44	22	ePKPab	PKPab	13 21 45.8	+0.4
PBAR	Barrancos	158.53	19	ePKPdf	PKPdf	13 21 08.0	+1.1
PBAR	Barrancos	158.53	19	ePKPab	PKPab	13 21 46.1	+0.3
PCVE	Castro Verde	158.69	22	ePKPdf	PKPdf	13 21 07.9	+0.8
PCVE	Castro Verde	158.69	22	ePKPab	PKPab	13 21 47.0	+0.5
MORF	Marmelete	158.76	23	ePKPdf	PKPdf	13 21 06.0	-1.3
MORF	Marmelete	158.76	23	ePKPdf	PKPdf	13 21 08.9	+1.6
PVAQ	Vaqueiros	159.01	21	ePKPab	PKPab	13 21 48.7	+0.8
KEST	Kesra	161.15	341	PKP	PKPdf	13 21 10.2	+0.2
	comp=Z,12nm,1.0s,baz=32,slow=2.5,SNR=4.8						
KEST				PKPab	PKPab	13 21 57.8	+0.4
	comp=Z,23nm,0.7s,baz=332,slow=1.6,SNR=17						
MDT	Midelt	164.23	20	PKP	PKPdf	13 21 13.4	+0.3
	comp=Z,22nm,1.0s,baz=35,slow=1.2,SNR=7.4						
MDT				PKPab	PKPab	13 22 11.9	+0.9
	comp=Z,18nm,0.9s,baz=2.9,slow=4.9,SNR=6.3						
LIC	Lamto	166.51	150	ePKIKP	PKPdf	13 21 14.6	-0.7
	comp=Z,93nm,1.3s						
KIC	Kosan Boka	166.76	151	ePKIKP	PKPdf	13 21 14.2	-1.3
	comp=Z,40nm,0.9s						
TIC	Toumodi	166.88	149	ePKIKP	PKPdf	13 21 14.9	-0.7
DBIC	Dimbokro	166.98	150	PKP	PKPdf	13 21 15.3	-0.3
	comp=Z,9.6nm,0.7s,baz=177,slow=2.2,SNR=12						
DBIC				PKPab	PKPab	13 22 24.4	+0.9
	comp=Z,4.3nm,0.8s,baz=173,slow=7.4,SNR=3.3						
DBIC	Dimbokro	166.98	150		PKPdf	13 21 15.1	-0.6
KOWA	Kowa	173.43	122	PKP	PKPdf	13 21 18.6	-0.5
	comp=Z,15nm,0.9s,baz=284,slow=0.4,SNR=23						
KOWA				PKPab	PKPab	13 22 52.1	-0.2
	comp=Z,5.6nm,0.9s,baz=218,slow=4.7,SNR=4.3						
KOWA	Kowa	173.43	122		PKPdf	13 21 18.2	-1.0
TOA0	Torodi Ar. Sit	175.12	179		PKPdf	13 21 18.6	-1.1
TORD	Torodi Ar. Bea	175.12	179	PKP	PKPdf	13 21 19.1	-0.7
	comp=Z,13nm,1.0s,baz=242,slow=3.2,SNR=14						
TORD				PKPab	PKPab	13 22 57.5	-1.9
	comp=Z,2.0nm,0.8s,baz=103,slow=4.7,SNR=4.6						
TORD				PP	PP	13 26 51.7	+0.8
	comp=Z,10nm,1.2s,baz=108,slow=4.8,SNR=5.0						
TORD	Torodi Ar. Bea	175.12	179		PKPdf	13 21 18.5	-1.3

ROM 22 13:07:09.6±0.1**, 42°.981N**±0°.005×**12°.997E**±0°.006**, h14^{km}, ML1.3**/3 **Error ellipse: s-maj=0.5km s-min=0.4km az=27.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FEMA	Monte Fema	0.04	116	P	Pg	13 07 12.7	+0.3
FEMA				S	Sg	13 07 14.7	+0.3
CESI	CESI - Serrava	0.07	289	P	Pg	13 07 13.0	+0.4
CESI				S	Sg	13 07 15.2	+0.6
CESI				AML	AML		
	comp=E,106µm,1.6s						
CESI				AML	AML		
	comp=N,83µm,0.1s						
CESI				AML	AML		
	comp=N,83µm,0.1s						
FDMO	Fiordimonte	0.09	50	P	Pg	13 07 12.8	+0.1
FDMO				S	Sg	13 07 14.8	+0.1
FDMO				AML	AML		
	comp=E,228µm,0.2s						
FDMO				AML	AML		
	comp=N,277µm,1.3s						
FDMO				AML	AML		
	comp=E,228µm,0.2s						
NRCA	Norcia	0.17	150	P	Pb	13 07 14.2	-0.4
NRCA				S	Sb	13 07 17.3	-0.5
NRCA				AML	AML		
	comp=E,144µm,0.1s						
NRCA				AML	AML		
	comp=N,188µm,0.4s						
CSP1	Cessapalombo	0.19	54	P	Pg	13 07 14.3	+0.2
CSP1				S	Sg	13 07 17.5	+0.4
ASSB	Assisi San Ben	0.26	284	P	Pg	13 07 15.1	0.0
ASSB				S	Sg	13 07 19.1	+0.2
SNTG	Esanatoglia	0.28	351	P	Pg	13 07 15.7	+0.3
SNTG				S	Sg	13 07 20.1	+0.6
ATCC	AVT- Casa Cast	0.33	308	P	Pb	13 07 17.0	-0.2
ATCC				S	Sb	13 07 22.3	-0.2
EL6	Elcito	0.36	12	P	Pg	13 07 17.1	+0.2
EL6				S	Sb	13 07 22.7	-0.5
ATFO	Monte Foce - G	0.49	321	S	Sb	13 07 27.0	-0.2

NNC 22 13:19:22.1±4.1**, 37°.27N**×**71°.23E, h0^{km}, mb3.6, mpv3.2, 1C-5D, Error ellipse: s-maj=31.2km s-min=29.1km az=157.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	5.85	355	⇓P	Pn	13 20 50.6	+0.5
	0.6nm,0.3s,baz=184,slow=14,SNR=22						
KK31				⇓S	Sn	13 21 59.0	+1.1
	3.6nm,0.5s,baz=185,slow=24,SNR=14						
AAK	Ala-Archa	5.91	24	⇓P	Pn	13 20 51.5	+0.3
	2.4nm,0.8s						
AAK				⇑S	Sn	13 22 00.6	+1.0
	1.2nm,0.5s						
TKM2	Tokmak 2	6.56	29	⇓P	Pn	13 20 59.1	-0.9
	2.8nm,0.9s						
TKM2				⇓S	Sn	13 22 16.9	+1.3
	0.9nm,0.6s						

IDC 22 13:47:30.0±2.3**, 3°.44N**×**127°.99E, h0^{km}, mb3.3**/3**, mb1 3.5**/3**, mb1mx3.3**/23**, mbtmp3.3**/3**, Error ellipse: s-maj=163.5km s-min=26.3km az=67.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.06	165	P	P	13 52 46.9	-0.3
	0.6nm,0.7s,baz=345,slow=10,SNR=8.1						
ASAR	Alice Springs	27.55	168	P	P	13 53 19.2	+0.4
	0.2nm,0.8s,baz=352,slow=12,SNR=1.3						
MKAR	Makanchi Array	58.51	325	P	P	13 57 28.2	-0.1
	0.4nm,0.6s,baz=115,slow=7.6,SNR=6.5						

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*IDC **22** 14:03:36.6±1.2, 23°.22S×177°.43W, h0^{km}, mb4.0/6, mb1 4.3/6, mb1mx3.9/36, mbtmp4.0/6, MS3.0/1, Ms1 3.0/1, ms1mx2.6/37, Error ellipse: s-maj=46.4km s-min=28.5km az=160.0*

*NEIC **22** 14:03:50.0±2.0, 23°.4S±0°.2×177°.63W±0°.06, h105^{km}±8^{km}, mb4.3/6, Error ellipse: s-maj=32.3km s-min=7.9km az=186.0*

ISC 22 14:03:48.3±0.9**, 23°.2S**±0°.1×**177°.4W**±0°.1**, h100^{km}, n20, σ1^{s}.41**/18**, mb4.2**/8**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	6.89	321	Pn	Pn	14 05 28.7	+1.8
AFI	Afiamalu	10.66	31	Pn	Pn	14 06 15.5	-2.8
DZM	Mont Dzumac	14.95	271	Pn	Pn	14 07 12.6	-1.9
RAR	Rarotonga	16.46	87	LR	LR	14 11 53.0	
	comp=Z,57nm,19.9s,baz=317,slow=30						
CTA	Charters Tower	33.86	268	P	P	14 10 21.7	+0.2
	2.3nm,0.7s,baz=83,slow=11,SNR=2.8						
CTAO	Charters Tower	33.86	268	P	P	14 10 22.0	+0.5
CTAO				IAmb	IAmb	14 10 50.6	
	comp=Z,9.7nm,1.2s						
STKA	Stephens Creek	37.18	247	P	P	14 10 51.1	+1.2
	comp=Z,0.7nm,0.6s,baz=104,slow=4.2,SNR=3.0						
STKA	Stephens Creek	37.18	247	IAmb	IAmb	14 11 20.0	
	comp=Z,1.7nm,1.4s						
AS31	Alice Springs	44.49	259	P	P	14 11 49.3	-0.8
ASAR	Alice Springs	44.49	259	P	P	14 11 49.6	-0.4
	comp=Z,3.0nm,0.9s,baz=94,slow=8.4,SNR=16						
WB2	Warramunga Arr	44.81	265	P	P	14 11 51.5	-1.1
WB2				IAmb	IAmb	14 11 57.4	
	comp=Z,8.8nm,1.1s						
WB0	Warramunga Arr	44.82	265	P	P	14 11 52.1	-0.6
WB0				IAmb	IAmb	14 11 55.2	
	comp=Z,8.1nm,1.2s						
WRA	Warramunga Arr	44.83	265	P	P	14 11 51.5	-1.2
	comp=Z,2.4nm,0.9s,baz=99,slow=7.8,SNR=9.1						
VNDA	Vanda	55.29	185	P	P	14 13 10.6	-0.3
	comp=Z,5.8nm,1.2s,baz=45,slow=2.9,SNR=2.0						
MORW	Morawa	59.34	249	P	P	14 13 38.7	-1.5
TXAR	Lajitas Array	88.05	57	P	P	14 16 30.0	+2.1
	comp=Z,0.5nm,0.9s,baz=224,slow=5.0,SNR=4.1						
AKASG	Malin Array Be	145.61	330	PKPbc	PKPbc	14 23 16.1	+1.1
	comp=Z,0.7nm,0.5s,baz=40,slow=3.9,SNR=5.2						
AKASG	Malin Array Be	145.61	330		PKPab	14 23 16.5	+1.0
BRTR	Keskin Array B	149.00	309	PKPbc	PKPbc	14 23 25.6	+0.5
	comp=Z,1.7nm,1.1s,baz=216,slow=6.1,SNR=4.2						
MMAI	Mount Meron Ar	149.55	296	PKPbc	PKiKP	14 23 28.3	+0.7
	comp=Z,3.9nm,0.8s,baz=90,slow=5.1,SNR=4.2						

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*INET **22** 14:22:38.8, 17°.44N×109°.68W, h15^{km}, mb6.4*

*NEIC **22** 14:23:12.7±1.4, 18°.68N±0°.07×106°.85W±0°.07, h5^{km}±1^{km}, mb5.8/612, Ms_20 6.1/742, Mwb6.2/43, Mwc6.2/63, Mww6.2, Md6.3/27(MEX), Mwc6.2(GCMT), Error ellipse: s-maj=13.0km s-min=9.7km az=228.0*

*IDC **22** 14:23:12.4±0.5, 18°.67N×106°.87W, h0^{km}, mb5.1/32, mb1 5.2/36, mb1mx5.1/46, mbtmp5.1/36, ML4.7/6, MS6.0/33, Ms1 6.1/33, ms1mx5.9/37, Error ellipse: s-maj=18.8km s-min=10.1km az=55.0*

*NEIC **22** 14:23:13.5, 18°.68N×106°.84W, h3^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M$_{rr}$-0.23; M$_{\theta\theta}$-1.16; M$_{\phi\phi}$1.38; M$_{r\theta}$-0.07; M$_{\theta\phi}$-2.14; M$_{\phi r}$-0.23; Fault plane solution: M$_0$2.51000×10^{18} NP1:ϕ_s105.38000°, δ84.35000°, λ-179.03000°. NP2:ϕ_s15.29000°, δ89.04000°, λ-5.65000°. Principal axes: T 2.6112, Plg3.0000°, Azm60.0000°; N -0.2224, Plg84.0000°, Azm186.0000°; P -2.3888, Plg5.0000°, Azm330.0000°;*

*MEX **22** 14:23:13.4±3.9, 18°.64N×106°.96W, h16^{km}, MD6.2*

*MOS **22** 14:23:14.5±1.1, 18°.72N×106°.79W, h23^{km}, mb6.0/74, MS6.1/56, Error ellipse: s-maj=6.2km s-min=3.8km az=90.6*

*BJI **22** 14:23:14.1±0.0, 18°.75N×106°.85W, h10^{km}, mB6.1/42, mb5.5/7, Ms6.3/47, Ms7 6.1/45*

*GCMT **22** 14:23:15.7±0.1, 18°.82N×106°.85W, h15^{km}, MW6.2/170, Moment Tensor Solution. s166,c371; s170,c654; Duration: 3^{s}.2 Moment tensor: Scale 10^{18}Nm; M$_{rr}$-0.21±.01; M$_{\theta\theta}$-1.44±.01; M$_{\phi\phi}$1.65±.01; M$_{r\theta}$0.01±.02; M$_{\theta\phi}$-2.42±.01; M$_{\phi r}$0.05±.02; Best double couple: M$_0$2.87200×10^{18} NP1:ϕ_s286.00000°, δ89.00000°, λ-180.00000°. NP2:ϕ_s196.00000°, δ90.00000°, λ-1.00000°. Principal axes: T 2.9770, Plg1.0000°, Azm241.0000°; N -0.2120, Plg89.0000°, Azm13.0000°; P -2.7670, Plg1.0000°, Azm151.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*NEIC **22** 14:23:17, 18°.78N×106°.86W, h12^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M$_{rr}$-0.29; M$_{\theta\theta}$-1.40; M$_{\phi\phi}$1.69; M$_{r\theta}$-0.16; M$_{\theta\phi}$-2.46; M$_{\phi r}$0.27; Fault plane solution: M$_0$2.93000×10^{18} NP1:ϕ_s16.00000°, δ86.00000°, λ4.00000°. NP2:ϕ_s286.00000°, δ86.00000°, λ176.00000°. Principal axes: T 3.0802, Plg5.0000°, Azm241.0000°; N -0.3208, Plg85.0000°, Azm64.0000°; P -2.7593, Plg0.0000°, Azm331.0000°;*

*BGR **22** 14:23:18.7±0.0, 18°.78N×106°.80W, h33^{km}, mb5.9, Ms6.2*

*NEIC **22** 14:23:21, 18°.72N×106°.81W, h14^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M$_{rr}$-0.06; M$_{\theta\theta}$-1.34; M$_{\phi\phi}$1.41; M$_{r\theta}$-0.47; M$_{\theta\phi}$-2.18; M$_{\phi r}$-0.61; Fault plane solution: M$_0$2.69000×10^{18} NP1:ϕ_s107.00000°, δ75.00000°, λ-174.00000°. NP2:ϕ_s15.00000°, δ84.00000°, λ-15.00000°. Principal axes: T 2.6452, Plg7.0000°, Azm62.0000°; N 0.0884, Plg74.0000°, Azm175.0000°; P -2.7336, Plg15.0000°, Azm330.0000°;*

*NEIC **22** 14:23:36, 18°.66N×106°.64W, h10^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M$_{rr}$-0.31; M$_{\theta\theta}$-1.42; M$_{\phi\phi}$1.73; M$_{r\theta}$-0.63; M$_{\theta\phi}$-2.24; M$_{\phi r}$0.10; Fault plane solution: M$_0$2.82000×10^{18} NP1:ϕ_s108.13000°, δ86.13000°, λ-166.49000°. NP2:ϕ_s17.20000°, δ76.52000°, λ-3.98000°. Principal axes: T 2.9385, Plg7.0000°, Azm242.0000°; N -0.2423, Plg76.0000°, Azm124.0000°; P -2.6961, Plg12.0000°, Azm333.0000°;*

ISC 22 14:23:13.7±0.2**, 18°.56N**±0°.03×**106°.94W**±0°.02**, h10**km**,**
n1823, σ**2s06**/1965**, mb5.8**/380**, MS6.1**/474**, 18C-36D, Fault plane solution: NP1:** ϕ_s188.58153°, δ84.39859°, λ-22.17164°. **NP2:** ϕ_s280.85934°, δ67.93980°, λ-173.95453°. **Principal axes:** T Plg11.3357°, Azm236.6802°; N Plg67.1664°, Azm355.1119°; P Plg19.5479°, Azm142.5986°; **Off coast of Jalisco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PUVA	Puert Vallarta	2.62	38	*i* P	Pn	14 23 52.2	-3.8
PUVA				*e*S	Sn	14 24 20.5	-7.4
R15V		2.87	77	*e*P	Pn	14 23 55.5	-4.1
R15V				*e*S	Sn	14 24 26.3	-7.9
COIG	Colima	3.14	78	*e*P	Pn	14 23 59.5	-3.9
COIG				*i* S	Sn	14 24 34.3	-6.6
EZ5V		3.29	73	*e*P	Pn	14 24 03.0	-2.5
EZ5V				*e*S	Sn	14 24 39.1	-5.8
ANIG	Ahuacatlan	3.37	42	*e*P	Pn	14 24 03.3	-3.2
ANIG				*e*S	Sn	14 24 40.5	-6.1
MMIG	Aquila	3.43	94	*e*P	Pn	14 24 03.5	-3.6
MMIG				*e*S	Sn	14 24 43.4	-4.5
H06E		3.78	274	*e*P	Pn	14 24 07.5	-4.5
H06E				*e*S	Sn	14 24 48.1	-8.4
H06E1	SOCORRO T-PHAS	3.78	274	T	T	14 27 56.8	
H06S1	SOCORRO T	3.81	273	T	T	14 28 05.1	
	SNR=569						
H06S		3.81	273	*e*P	Pn	14 24 07.5	-4.9
H06S				*e*S	Sn	14 24 56.2	-1.1
H06N1	SOCORRO T-PHAS	3.84	275	T	T	14 27 59.0	
	SNR=7055						
H06N	Isla Socorro	3.85	275	*e*P	Pn	14 24 08.4	-4.5
H06N				*e*S	Sn	14 24 51.4	-6.9
URUA	Uruapan	4.69	79	*e*P	Pn	14 24 23.1	-1.6
ZIIG	Zihuatanejo	5.30	99	*e*P	Pn	14 24 30.6	-2.3
ZIIG				*e*S	Sn	14 25 25.7	-8.3
AAIG	Aguscalientes	5.46	51	*i* P	Pn	14 24 33.9	-1.5
AAIG				*e*S	Sn	14 25 38.1	-0.3
MOIG	Morelia	5.55	78	*i* P	Pn	14 24 34.8	-1.8
MOIG				*e*S	Sn	14 25 35.4	-5.3
MOIG	Morelia	5.55	78		Pn	14 24 34.4	-2.2
IGIG	Irapuato, Guan	5.72	67	*i* P	Pn	14 24 37.8	-1.2
IGIG				*e*S	Sb	14 25 56.9	-5.6
SLBS	Sierra La Lagu	5.82	332	Pn	Pn	14 24 39.1	-1.0
ZAIG	Zacatecas	5.86	44	*i* P	Pn	14 24 39.0	-1.9
ZAIG				*e*S	Sn	14 25 49.7	+1.4
ZAIG	Zacatecas	5.86	44	Pn	Pn	14 24 38.7	-2.2
ARIG	Puente Sto Nin	6.27	92	*i* P	Pn	14 24 44.7	-1.6
ARIG				*e*S	Sn	14 25 51.8	-6.2
LPIG	La Paz	6.34	331	Pn	Pn	14 24 48.4	+1.1
	7.6nm,0.3s,baz=189,slow=2.7,SNR=22						
LPIG				Sn	Sn	14 26 06.2	+6.4
	12nm,0.3s,baz=97,slow=0.2,SNR=4.2						
LPIG				LR	LR	14 26 43.1	
	comp=Z,467µm,18.3s,baz=172,slow=34						
CAIG	El Cayaco	6.54	102	*i* P	Pn	14 24 48.6	-1.3
CAIG				*e*S	Sn	14 25 56.0	-8.6
ATVM	ATLACOMULCO	6.82	79	*e*P	Pn	14 24 53.4	-0.7
ACIG	Acambay	6.82	77	*e*P	Pn	14 24 54.0	0.0
TOVM	TOLUCA	6.92	83	*e*P	Pn	14 24 54.6	-0.8
PLIG	Platanillo	7.06	90	*i* P	Pn	14 24 56.2	-1.0
PLIG				*e*S	Sn	14 26 13.3	-4.4
MAVM	Malinalco, Edo	7.07	86	*e*P	Pn	14 24 56.8	-0.6
UNM	Universidad Na	7.39	83	P	Pn	14 25 01.3	-0.6
UNM	Universidad Na	7.39	83		Pn	14 25 01.2	-0.6
CVM	Colonia del Va	7.39	82	*e*P	Pn	14 25 01.8	+0.1
YAIG	Yautepec	7.47	86	*i* P	Pn	14 25 02.3	-0.6
PTVM	Pico Tres Padr	7.48	81	*e*P	Pn	14 25 04.4	+1.3
PBVM	Pinon	7.49	82	*e*P	Pn	14 25 00.3	-2.7
PPM	Popocatepetl	7.89	85	*i* P	Pn	14 25 08.8	-0.3
PPM				*e*S	Sn	14 26 35.5	-3.2
HMTT	Tlapaneco	8.01	94	*e*P	Pn	14 25 10.8	+0.6
TLIG	Tlapa	8.03	96	*i* P	Pn	14 25 10.4	-0.1
TLIG				*e*S	Sn	14 26 38.1	-3.5
TLIG	Tlapa	8.03	96	Pn	Pn	14 25 10.3	-0.2
HPIG		8.42	8		Pn	14 25 15.1	-0.8
PNIG	Pinotepa	8.69	103	*e*P	Pn	14 25 19.6	+0.1
PNIG				*e*S	Sn	14 27 01.8	+4.2
HLIG	Huajuapan de L	8.72	93	*i* P	Pn	14 25 19.6	-0.5
HLIG				*e*S	Sn	14 27 03.4	+4.7
BCIG	La Boquilla	9.05	9	*e*P	Pn	14 25 24.4	-0.2
BCIG				*e*P	Pn	14 25 24.4	-0.2
MNIG	Monterrey	9.34	40	*e*P	Pn	14 25 28.2	-0.3
MNIG				*e*P	Pn	14 25 28.2	-0.3
VHO	Vista Hermosa	9.84	97	*i* P	Pn	14 25 36.2	+0.8
VHO				*i* P	Pn	14 25 36.2	+0.8
OXBJ	Oaxaca	9.85	97	*e*P	Pn	14 25 35.8	+0.3
GUYB	Guaymas	9.97	339	*e*P	Pn	14 25 24.8	-12
GUYB				*e*P	Pn	14 25 24.8	-12
SRIG	Santa Rosalia	9.99	332		Pn	14 25 37.4	0.0
MCIG	Muzquiz	10.54	27	*e*P	Pn	14 25 44.7	-0.2
MCIG				*e*S	Sn	14 27 36.2	-7.0
HUIG	Huatulco	10.72	103	*i* P	Pn	14 25 48.7	+1.3
HUIG				*e*S	Sn	14 27 46.5	-1.1
HSIG		11.04	341	Pn	Pn	14 25 52.3	+0.6
TX31	Lajitas Ar. Si	11.13	15		Pn	14 25 52.8	-0.3
TX32	Lajitas Array	11.13	15		Pn	14 25 52.6	-0.5
TXAR	Lajitas Array	11.13	15	Pn	Pn	14 25 52.9	-0.2
	1.4nm,0.3s,baz=191,slow=14,SNR=88						
TXAR	Lajitas Array	11.13	15	Pn	Pn	14 25 53.3	+0.2
CMIG	Matias Romero	11.58	95	Pn	Pn	14 25 59.0	-0.1
	17nm,0.3s,baz=280,slow=11,SNR=204						
CMIG				LR	LR	14 30 22.0	
	comp=Z,116µm,20.1s,baz=276,slow=37						
CMIG	Matias Romero	11.58	95	*i* P	Pn	14 25 58.7	-0.4
CMIG				*e*P	Pn	14 25 59.1	-0.1
833A	Chaparral WMA,	11.93	34	P	Pn	14 26 03.2	-0.7
	baz=217,SNR=119						
NZIG	Nacozari, Sono	12.00	349	*i* P	Pn	14 26 07.0	+2.0
NZIG				*e*P	P	14 26 07.2	+2.2
NZIG				*e*P	P	14 26 07.2	+2.2
NZIG				*e*S	Sn	14 28 13.9	-5.1
KVTX	Kingsville	12.22	41		Pn	14 26 08.2	+0.4
319A	Douglas	12.94	351		Pn	14 26 18.9	+1.2
MNTX	Cornudas Mount	13.16	6	P	Pn	14 26 21.7	+1.0
	baz=186,SNR=160						
MNTX				S	Sn	14 28 49.4	+2.3
	baz=186						
MNTX	Cornudas Mount	13.16	6	Pn	Pn	14 26 21.0	+0.3
735A	Kenedy	13.22	38		Pn	14 26 21.9	+0.3
JCT	Junction City	13.52	27	P	Pn	14 26 27.7	+2.0
	baz=210,SNR=298						
JCT				S	Sn	14 28 59.2	+3.1
	baz=210						
JCT	Junction City	13.52	27	P	Pn	14 26 27.1	+1.4
JCT	Junction City	13.52	27	Pn	Pn	14 26 27.1	+1.4
GDL2	Guadalupe Moun	13.78	9		Pn	14 26 30.2	+1.0
CLNB	Carlsbad	13.92	11	Pn	Pn	14 26 32.6	+1.4
121A	Cookes Peak, D	13.94	357	P	Pn	14 26 32.8	+1.3
	baz=176,SNR=65						
121A				S	Sn	14 29 07.5	+1.2
	baz=176						
121A	Cookes Peak, D	13.94	357		Pn	14 26 32.5	+1.1
TUC	Tucson	14.12	347	P	Pn	14 26 34.9	+1.0
	baz=164						
TUC				S	Sn	14 29 16.2	+5.4
	baz=164						
TUC	Tucson	14.12	347	P	Pn	14 26 34.7	+0.8
TUC	Tucson	14.12	347	*e*P	Pn	14 26 35.1	+1.2
TUC				*e*P	Pn	14 26 35.1	+1.2
TUC	Tucson	14.12	347	Pn	Pn	14 26 34.7	+0.8
PIX	Pinacate	14.22	337	Pn	Pn	14 26 35.4	+0.2
CCIG	Comitan	14.31	97		Pn	14 26 36.5	-0.2
SFX	San Felipe	14.34	332	Pn	Pn	14 26 35.0	-1.8
214A	Organ Pipe Nat	14.35	339	P	Pn	14 26 38.2	+1.2
	baz=157,SNR=87						
214A				S	Sn	14 29 23.4	+7.1
	baz=157						
214A	Organ Pipe Nat	14.35	339		Pn	14 26 37.1	+0.1
THIG		14.52	102	*e*P	Pn	14 26 39.8	+0.5
THIG				*e*P	Pn	14 26 39.8	+0.5
THIG		14.52	102		Pn	14 26 39.8	+0.5
SPX	San Pedro Mart	14.63	330	Pn	Pn	14 26 40.9	-0.2
435B	Jarrell	14.84	33	P	Pn	14 26 43.2	-0.4
	baz=217,SNR=61						
435B				S	Sn	14 29 28.2	+0.1
	baz=217						
435B	Jarrell	14.84	33	Pn	Pn	14 26 41.9	-1.7
HUEH	Huehuetenango	15.12	100	Pn	Pn	14 26 46.3	-1.4
RTAL	Retalhuleu	15.16	103	Pn	Pn	14 26 47.2	-0.8
RTAL				P	P	14 26 52.4	-0.8
HKT	Hockley	15.19	40	*ce*P	Pn	14 26 46.6	-1.7
HKT				pmax	pmax		
	comp=Z,317nm,1.8s						
HKT	Hockley	15.19	40	Pn	Pn	14 26 46.5	-1.8
Y22D	IRIS PASSCAL I	15.45	0	P	P	14 26 53.0	-3.5
	baz=180						
Y22D	IRIS PASSCAL I	15.45	0	Pn	Pn	14 26 50.2	-1.7
Y22D				IAmb	IAmb	14 27 06.6	
	comp=Z,495nm,1.2s						
ABTX	Abilene, Hawle	15.47	24	P	Pn	14 26 51.1	-1.0
	baz=207,SNR=36						
ABTX				S	Sn	14 29 46.1	+2.6
	baz=207						
ABTX	Abilene, Hawle	15.47	24		Pn	14 26 50.0	-2.0
ABTX				IAmb	IAmb	14 27 09.8	
	comp=Z,648nm,1.4s						
BNM	Barren Site	15.53	1	Pn	Pn	14 26 52.2	-0.8
ESJX	Sierra Juarez	15.66	330		Pn	14 26 53.5	-1.1
MBIG	Mexicali	15.66	333	*e*P	Pn	14 26 52.5	-2.0
MBIG				*e*P	Pn	14 26 52.5	-2.0
MBIG				*e*P	P	14 26 52.6	-6.0
MBIG	Mexicali	15.66	333		Pn	14 26 52.5	-2.0
CPBX	Cerro Prieto	15.72	333	Pn	Pn	14 26 55.4	+0.1
CPBX				IAmb	IAmb	14 27 17.9	
	comp=Z,870nm,1.4s						
MSTX	Muleshoe	15.79	13	P	Pn	14 26 56.6	+0.2
	baz=194,SNR=71						
MSTX				S	Sn	14 29 53.9	+2.4
	baz=194						
MSTX	Muleshoe	15.79	13	Pn	Pn	14 26 56.0	-0.3
WHTX	Lake Whitney,	15.88	31	P	Pn	14 26 56.5	-0.8
	baz=215,SNR=58						
WHTX				S	Sn	14 29 53.9	+0.5
	baz=215						
WHTX	Lake Whitney,	15.88	31	Pn	Pn	14 26 55.9	-1.4
WHTX				IAmb	IAmb	14 27 01.8	
	comp=Z,634nm,1.1s						
CCX	Cicese	15.89	328		Pn	14 26 56.9	-0.6
UABX	UABC, Campus M	15.96	333	Pn	Pn	14 26 57.1	-1.3
UABX				IAmb	IAmb	14 27 09.1	
	comp=Z,1µm,1.3s						
GLA	Glamis	16.07	335	P	P	14 27 01.0	-2.3
	baz=152,SNR=77						
GLA				S	S	14 30 06.8	-5.1
	baz=152						
GLA	Glamis	16.07	335	P	Pn	14 26 59.7	-0.2
GLA				pmax	pmax		
	comp=Z,536nm,1.2s						
GLA	Glamis	16.07	335	Pn	Pn	14 26 59.7	-0.2
RMX	La Rumorosa	16.22	331	P	P	14 27 02.7	-2.3
CBX	Cerro Bola	16.25	329	Pn	Pn	14 27 01.4	-0.9
IKP	In-Ko-Pah, Jac	16.27	331	P	P	14 27 03.7	-1.8
	baz=147,SNR=127						
ANMO	Albuquerque	16.33	1	Pn	P	14 27 03.5	-2.7
	comp=Z,0.3nm,0.3s,baz=172,slow=13,SNR=23						
ANMO				LR	LR	14 32 59.7	
	comp=Z,68µm,19.6s,baz=186,slow=36						
ANMO	Albuquerque	16.33	1	P	P	14 27 04.2	-2.0
	baz=181						
ANMO				S	S	14 30 13.6	-3.8
	baz=181						
ANMO	Albuquerque	16.33	1	*de*P	P	14 27 04.1	-2.1
ANMO				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ANMO	Albuquerque	16.33	1		Pn	14 27 02.2	-1.1
PETF	Flores	16.35	93		Pn	14 27 02.4	-1.1
PETF				IAmb	IAmb	14 27 14.9	
	comp=Z,934nm,1.0s						
SWSC	Sam W. Stewart	16.38	333	P	P	14 27 05.0	-1.6
	baz=148,SNR=58						
TKX	Tecate	16.44	330	P	P	14 27 05.7	-1.6
BAR	Barrett	16.56	330		P	14 27 06.5	-2.1
TJX	Tijuana	16.60	329	P	P	14 27 07.8	-1.3
MONP2	Monument Peak	16.62	331	P	P	14 27 08.4	-1.0
	baz=146,SNR=59						
W18A	Petrified Fore	16.68	352	P	P	14 27 08.2	-1.9
	baz=170,SNR=24						
W18A				S	S	14 30 22.2	-2.3
	baz=170						
W18A	Petrified Fore	16.68	352	P	P	14 27 08.2	-1.9
237A	Washetta, Mont	16.73	35	Pn	Pn	14 27 06.7	-1.5
BC3	Big Chuckawall	16.85	335	P	P	14 27 11.0	-1.0
	baz=151,SNR=135						
BC3				S	S	14 30 29.9	+2.0
	baz=151						
AMTX	Amarillo	16.92	15	P	P	14 27 10.5	-2.2
	baz=197						
AMTX				S	S	14 30 22.8	-6.5
	baz=197						
AMTX	Amarillo	16.92	15	P	P	14 27 11.1	-1.6
AMTX				IAmb	IAmb	14 27 20.8	
	comp=Z,2µm,1.4s						
109C	Camp Elliot, M	16.94	329	P	P	14 27 11.5	-1.3
	baz=145,SNR=100						
109C	Camp Elliot, M	16.94	329	P	P	14 27 12.5	-0.3
PDMCI	Parker Dam,Lak	16.94	339	P	P	14 27 11.8	-1.0
	baz=156,SNR=66						
PDMCI				S	S	14 30 28.4	-1.2
	baz=156						
Z35A	Perchaven, San	17.08	29	Pn	Pn	14 27 10.9	-1.7
IRM	Iron Mountain	17.17	336	P	P	14 27 14.3	-1.2
	baz=152,SNR=157						
IRM				S	S	14 30 34.6	+0.3
	baz=152						
NATX	Nacogdoches	17.20	38	P	Pn	14 27 12.8	-1.3
	baz=223,SNR=122						
NATX				S	S	14 30 31.6	-3.1
	baz=223						
NATX	Nacogdoches	17.20	38	Pn	Pn	14 27 12.4	-1.7
TPFO	Pinon Flats	17.23	332	S	S	14 30 38.7	+3.0
	baz=148						
XPFO	Pion Flat	17.24	332	P	P	14 27 15.9	-0.4
XPFO				IAmb	IAmb	14 27 29.2	
	comp=Z,994nm,1.4s						
PFO	Pinyon Flats O	17.24	332	P	P	14 27 15.9	-0.4
	comp=Z,1.5nm,0.3s,baz=149,slow=12,SNR=111						
PFO				LR	LR	14 33 05.4	
	comp=Z,106µm,20.7s,baz=144,slow=34						
PFO	Pinyon Flats O	17.24	332	P	P	14 27 15.9	-0.4
	baz=148,SNR=234						
PFO	Pinyon Flats O	17.24	332	P	P	14 27 15.7	-0.6
PFO				pmax	pmax		
	comp=Z,991nm,1.4s						
PFO	Pinyon Flats O	17.24	332	P	P	14 27 15.7	-0.6
PFO				IAmb	IAmb	14 27 29.2	
	comp=Z,991nm,1.4s						
ESQI	Esquipulas	17.33	101	P	P	14 27 16.9	-0.5
WUAZ	Wupatki	17.34	348	P	P	14 27 17.0	-0.5
	baz=165,SNR=41						
WUAZ				S	S	14 30 38.5	+0.5
	baz=165						
WUAZ	Wupatki	17.34	348	P	P	14 27 16.3	-1.1
MTO3	Montecristo	17.36	101	P	Pn	14 27 16.9	+0.5
MTO3				IAmb	IAmb	14 27 36.5	
	comp=Z,946nm,1.4s						
BELC	Belle Mtn. Jos	17.37	334	P	P	14 27 18.0	+0.2
	baz=150,SNR=167						
BELC				S	S	14 30 40.4	+1.8
	baz=150						
441A	DeRidder	17.40	43		Pn	14 27 15.1	-1.5
NEE2	Needles Airpor	17.53	339	P	P	14 27 19.2	-0.1
	baz=155,SNR=21						
NEE2				S	S	14 30 42.3	+0.8
	baz=155						
MURC	Murrieta	17.56	331	P	P	14 27 19.8	0.0
	baz=146,SNR=97						
W13A	Hualapai Mount	17.59	341		P	14 27 19.4	-0.8
WMOK	Wichita Mounta	17.67	23	P	Pn	14 27 18.4	-1.6
	baz=206,SNR=48						
WMOK				S	Sn	14 30 35.3	-1.7
	baz=206						
WMOK	Wichita Mounta	17.67	23	P	Pn	14 27 18.1	-2.0
WMOK				pmax	pmax		
	comp=Z,478nm,1.3s						
WMOK	Wichita Mounta	17.67	23		Pn	14 27 18.1	-2.0
TEIG	Tepich	17.69	82	P	Pn	14 27 18.6	-1.6
	comp=Z,3.2nm,0.3s,baz=283,slow=11,SNR=30						
TEIG				LR	LR	14 34 27.6	
	comp=Z,55µm,22.0s,baz=272,slow=38						
TEIG	Tepich	17.69	82	*e*P	Pn	14 27 15.2	-5.1
TEIG				*e*P	Pn	14 27 15.2	-5.1
TEIG	Tepich	17.69	82	Pn	Pn	14 27 18.7	-1.6
TEIG				IAmb	IAmb	14 27 26.0	
	comp=Z,908nm,1.4s						
TEIG	Tepich	17.69	82		Pn	14 27 18.8	-1.5
SCI2	San Clemente I	17.74	326	P	P	14 27 22.0	+0.4
	baz=141,SNR=66						
GMRC	Granite Mounta	17.92	336	P	P	14 27 24.4	+0.5
	baz=152,SNR=93						
GMRC				S	S	14 30 44.6	-5.2
	baz=152						
BBRC	Big Bear Solar	17.99	332	P	P	14 27 26.1	+1.4
	baz=148,SNR=12						
BBRC				S	S	14 30 58.7	+7.3
	baz=148						
CIS	Catalina Islan	18.00	327	P	P	14 27 24.8	+0.2
	baz=142,SNR=111						
CIS				S	S	14 30 56.2	+5.0
	baz=142						
Z38A	Mt. Pleasant	18.14	34		Pn	14 27 24.4	-1.4
Z38A				IAmb	IAmb	14 27 44.6	
	comp=Z,1µm,1.1s						
FMP	Fort Macarthur	18.19	328	P	P	14 27 27.2	+0.6
	baz=143						
HEC	Hector,Ludlow	18.23	335	P	P	14 27 28.1	+1.0
	baz=150,SNR=29						
HEC				S	S	14 31 00.9	+5.0
	baz=150						
BFSC	Mount Baldy Ra	18.31	331	P	P	14 27 28.7	+0.6
	baz=146,SNR=83						
BFSC				S	S	14 31 08.5	+11
	baz=146						
342A	Flagon Creek P	18.37	43		Pn	14 27 26.8	-1.8
SNCC	San Nicolas Is	18.47	325	P	P	14 27 30.3	+0.6
	baz=139,SNR=12						
SNCC				S	S	14 31 12.4	+12
	baz=139						
SNCC	San Nicolas Is	18.47	325		P	14 27 29.6	-0.1
SNCC				IAmb	IAmb	14 27 44.9	
	comp=Z,818nm,1.5s						
MWC	Mount Wilson	18.48	330	P	P	14 27 30.1	0.0
MWC				pmax	pmax		
	comp=Z,721nm,1.4s						
MWC	Mount Wilson	18.48	330	P	P	14 27 30.1	0.0
MWC				IAmb	IAmb	14 27 40.7	
	comp=Z,721nm,1.4s						
PASC	Pasadena Art C	18.50	329	P	Pn	14 27 29.8	-0.5
RRX	Edison Barstow	18.55	333	P	Pn	14 27 31.4	+0.7
	baz=148						
RRX				S	S	14 31 07.9	+5.7
	baz=148						
MVCO	Mesa Verde	18.63	356	P	Pn	14 27 32.0	0.0
	baz=175,SNR=46						
MVCO				S	S	14 31 09.2	+4.9
	baz=175						
MVCO	Mesa Verde	18.63	356	P	Pn	14 27 30.9	-1.1
DECC	Green Verdugo	18.64	329	P	Pn	14 27 32.4	+0.5
	baz=144,SNR=75						
DECC				S	S	14 31 20.1	+16
	baz=144						
T25A	Trinidad	18.64	6	P	Pn	14 27 31.7	-0.4
	baz=187,SNR=50						
T25A				S	S	14 31 07.8	+3.3
	baz=187						
FNO	Franklin	18.66	25		P	14 27 30.3	-1.5
OKCSW	OKLAHOMA CITY	18.78	25	P	P	14 27 31.8	-1.3
OKCFA	Oklahoma City	18.78	25	P	P	14 27 31.8	-1.4
OKCFA				IAmb	IAmb	14 27 47.6	
	comp=Z,621nm,1.3s						
545A	Edgard	18.83	50	P	P	14 27 32.6	-1.1
BCOK	Bluff Creek, N	18.93	24	P	P	14 27 33.8	-0.9
OK025	Westminster Rd	18.97	25	P	P	14 27 34.2	-1.0
OK025				IAmb	IAmb	14 27 52.6	
	comp=Z,683nm,1.3s						
EDW2	Edwards Air Fo	18.99	331	P	Pn	14 27 35.6	-0.6
	baz=146,SNR=58						
EDW2				S	S	14 31 27.3	+16
	baz=146						
X37A	Clayton	19.00	31		P	14 27 34.6	-0.9
X37A				IAmb	IAmb	14 27 56.4	
	comp=Z,595nm,1.2s						
U32A	Winter Ranch,	19.08	20	P	Pn	14 27 36.0	-1.3
U32A				IAmb	IAmb	14 27 48.5	
	comp=Z,994nm,1.4s						
SCZ2	Santa Cruz Isl	19.10	326	P	Pn	14 27 37.8	+0.3
	baz=140,SNR=19						
OK029	Liberty Lake	19.11	24	P	P	14 27 35.9	-0.9
OK029				IAmb	IAmb	14 27 48.5	
	comp=Z,422nm,0.9s						
S22A	4UR Ranch, Cre	19.12	0	P	Pn	14 27 37.9	0.0
	baz=180,SNR=52						
S22A				S	S	14 31 20.3	+6.2
	baz=180						
OSI	Osito Audit: C	19.12	329	P	Pn	14 27 37.7	-0.1
	baz=144,SNR=22						
OSI				S	S	14 31 26.1	+12
	baz=144						
OSI	Osito Audit: C	19.12	329	P	Pn	14 27 36.7	-1.1
SHOC	Shoshone, Teco	19.14	336	P	Pn	14 27 37.9	0.0
	baz=152,SNR=20						
SHOC				S	S	14 31 21.0	+6.8
	baz=152						
SDCO	Great Sand Dun	19.16	3	P	Pn	14 27 38.2	-0.2
	baz=184,SNR=22						
SDCO				S	S	14 31 20.7	+5.8
	baz=184						
SDCO	Great Sand Dun	19.16	3		P	14 27 36.5	-1.0
SHPR	Sheep Range	19.29	340	P	Pn	14 27 38.3	-1.5
LRMC	Laurel Mtn Rad	19.35	333	P	Pn	14 27 39.9	-0.8
	baz=148,SNR=36						
LRMC				S	S	14 31 27.9	+9.3
	baz=148						
Z41A	Richland Creek	19.36	38	P	P	14 27 39.1	-0.4
	baz=224,SNR=178						
Z41A				S	S	14 31 18.3	-0.3
	baz=224						
TGUH	Tegucigalpa,Un	19.40	100		P	14 27 40.0	-0.1
TGUH				IAmb	IAmb	14 27 55.2	
	comp=Z,1µm,1.4s						
344A	Westbrook Farm	19.48	46		P	14 27 40.0	-0.8
SBC	Santa Barbara	19.48	327	P	Pn	14 27 41.5	-0.5
	baz=141,SNR=14						
SBC				S	S	14 31 37.3	+16
	baz=141						
WLAR	White Oak Lake	19.49	37	P	P	14 27 39.7	-1.2
OK031	S. Brethren Rd	19.49	25	P	P	14 27 39.5	-1.4
OK031				IAmb	IAmb	14 27 52.4	
	comp=Z,470nm,0.9s						
OK030	Cody Creek RV	19.49	25	P	P	14 27 39.7	-1.2
OK030				IAmb	IAmb	14 27 54.9	
	comp=Z,371nm,0.9s						
CROK	Carrier	19.54	22	P	P	14 27 39.8	-1.7
CROK				IAmb	IAmb	14 27 51.5	
	comp=Z,680nm,1.0s						
ARVC	Arvin	19.59	330	P	Pn	14 27 42.4	-0.9
	baz=144,SNR=47						
ARVC				S	S	14 31 33.2	+10
	baz=144						
PV18	Skein Mesa, Pa	19.69	355	P	P	14 27 41.9	-1.4
PV03	Paradox Valley	19.69	356	P	P	14 27 42.8	-0.6
PV17	East Wray Mesa	19.73	355	P	P	14 27 42.8	-0.9
QUOK	Quay	19.73	25		P	14 27 42.4	-1.2
QUOK				IAmb	IAmb	14 27 51.5	
	comp=Z,493nm,0.9s						
PV11	David Mesa, Pa	19.74	356	P	P	14 27 42.9	-0.9
PV12	Saucer Basin,	19.75	356	P	Pn	14 27 43.6	-1.8
PV16	Nyswonger Mesa	19.75	355	P	P	14 27 43.4	-0.6
PV15	Paradox Valley	19.76	356	P	P	14 27 43.3	-0.7
PV19	Morning Glory	19.76	355	P	P	14 27 43.0	-1.1
MPMC	Manual Prospec	19.76	334	P	Pn	14 27 44.6	-1.0
	baz=149,SNR=241						
MPMC				S	Sn	14 31 41.0	+13
	baz=149						
PV20	West Nyswonger	19.79	355	P	P	14 27 42.9	-1.4
PV14	Lion Creek, Pa	19.82	355		Pn	14 27 44.4	-1.9
143A	Socs Landing,	19.83	42	P	P	14 27 43.5	-1.1
PV04	Paradox Valley	19.84	355		Pn	14 27 44.8	-1.6
ISA	Isabella, Lake	19.86	331	P	Pn	14 27 45.5	-1.1
	baz=146,SNR=35						
ISA				S	Sn	14 31 38.1	+8.2
	baz=146						
ISA	Isabella, Lake	19.86	331	P	P	14 27 44.6	-0.4
ISA				pmax	pmax		
	comp=Z,316nm,1.4s						
ISA	Isabella, Lake	19.86	331	P	P	14 27 44.6	-0.4
PV07	Paradox Valley	19.86	356		P	14 27 44.1	-1.1
FURC	Furnace Creek,	19.87	336	P	Pn	14 27 45.7	-0.9
	baz=151,SNR=97						
MIAR	Mount Ida	19.88	34	P	P	14 27 44.1	-1.0
	baz=220,SNR=110						
MIAR				S	Sn	14 31 29.9	-0.3
	baz=220						
MIAR	Mount Ida	19.88	34	P	P	14 27 43.4	-1.7

MIAR				pmax	pmax		
	comp=Z,480nm,1.4s						
MIAR	**Mount Ida**	**19.88**	**34**	P	**P**	**14 27 43.4**	**-1.7**
MIAR				IAmb	IAmb	14 27 57.9	
	comp=Z,480nm,1.4s						
PKM	**Mcpherson Peak**	**19.88**	**327**	P	**Pn**	**14 27 47.1**	**+0.1**
	baz=141,SNR=46						
PKM				S	Sn	14 31 41.7	+11
	baz=141						
TUL1	**Leonard**	**19.90**	**27**	P	**P**	**14 27 44.3**	**-1.0**
	baz=212,SNR=156						
TUL1				S	**S**	**14 31 26.4**	**-3.0**
	baz=212						
TUL1	**Leonard**	**19.90**	**27**	P	**P**	**14 27 44.1**	**-1.3**
KAN14	**Manchester OK**	**19.96**	**21**	P	**P**	**14 27 44.8**	**-1.2**
KAN14				IAmb	IAmb	14 27 53.3	
	comp=Z,1µm,1.5s						
CRIN	**San Cristobal**	**20.02**	**104**	Pn	Pn	14 27 47.9	-0.7
KAN10	**Anthony SW Sta**	**20.06**	**21**	Pn	**Pn**	**14 27 47.3**	**-1.6**
KAN10				IAmb	IAmb	14 27 52.7	
	comp=Z,679nm,1.0s						
TPNV	**Topopah Spring**	**20.06**	**338**	P	**Pn**	**14 27 48.4**	**-0.7**
	baz=153,SNR=258						
TPNV				S	**Sn**	**14 31 40.9**	**+5.9**
	baz=153						
TPNV	**Topopah Spring**	**20.06**	**338**	P	**Pn**	**14 27 47.9**	**-1.2**
TPNV				pmax	pmax		
	comp=Z,520nm,1.3s						
TPNV	**Topopah Spring**	**20.06**	**338**	P	**Pn**	**14 27 47.9**	**-1.2**
TPNV				IAmb	IAmb	14 27 57.9	
	comp=Z,520nm,1.3s						
PRN	**Pahroc Range**	**20.08**	**341**	Pn	**Pn**	**14 27 48.0**	**-1.3**
VBMS	**Vicksburg**	**20.09**	**44**	P	Pn	14 27 47.6	-1.7
	baz=231,SNR=35						
VBMS				S	**S**	**14 31 29.5**	**-3.8**
	baz=231						
VBMS	**Vicksburg**	**20.09**	**44**	P	**P**	**14 27 46.1**	**-1.4**
X40A	**Basin Creek Fa**	**20.24**	**36**	P	**P**	**14 27 48.0**	**-1.1**
	baz=222,SNR=295						
X40A				S	**S**	**14 31 33.2**	**-2.9**
	baz=222						
X40A	**Basin Creek Fa**	**20.24**	**36**	P	**P**	**14 27 47.8**	**-1.3**
X40A				IAmb	IAmb	14 28 03.0	
	comp=Z,1µm,1.5s						
W39A	**Magazine**	**20.27**	**33**	P	**P**	**14 27 49.2**	**-0.2**
	baz=218,SNR=241						
W39A				S	Sn	14 31 36.9	-2.8
	baz=218						
W39A	**Magazine**	**20.27**	**33**	P	**P**	**14 27 48.1**	**-1.3**
VES	**Vestal, Richgr**	**20.29**	**330**	P	Pn	14 27 50.4	-1.2
	baz=145,SNR=123						
VES				S	Sn	14 31 47.4	+7.3
	baz=145						
SMMC	**Simmler**	**20.31**	**328**	P	Pn	14 27 50.4	-1.5
	baz=142,SNR=83						
SMMC				S	Sn	14 31 49.6	+8.9
	baz=142						
346A	**Big Creek Wild**	**20.32**	**48**	P	**P**	**14 27 48.5**	**-1.4**
CWC	**Cottonwood Cre**	**20.34**	**333**	P	Pn	14 27 51.1	-1.2
	baz=148						
Q24A	**Divide**	**20.39**	**4**	P	Pn	14 27 51.3	-1.8
	baz=185,SNR=24						
Q24A				S	Sn	14 31 46.1	+3.0
	baz=185						
MVU	**Marysvale**	**20.40**	**348**		Pn	14 27 51.5	-1.6
CCAR	**Cane Creek**	**20.43**	**39**	Pn	Pn	14 27 51.4	-1.9
T35A	**Sooner Cattle**	**20.46**	**25**	P	**P**	**14 27 49.5**	**-1.9**
T35A				IAmb	IAmb	14 28 01.9	
	comp=Z,675nm,1.1s						
T35A				IAMs_20	IAMs_20	14 35 38.5	
	comp=Z,67µm,20.0s						
GRAC	**Grapevine Rang**	**20.52**	**336**	P	Pn	14 27 53.4	-1.0
	baz=150,SNR=63						
GRAC				S	Sn	14 31 55.8	+10
	baz=150						
SMCO	**Snowmass**	**20.55**	**360**	Pn	Pn	14 27 53.1	-1.9
KSCO	**Kaye Shedlock’**	**20.72**	**10**	P	Pn	14 27 56.2	-0.5
	baz=191,SNR=28						
KSCO				S	Sn	14 31 50.2	-0.5
	baz=191						
KSCO	**Kaye Shedlock’**	**20.72**	**10**	P	**P**	**14 27 53.5**	**-0.9**
KSCO				IAmb	IAmb	14 28 02.3	
	comp=Z,614nm,1.4s						
KSCO				IAMs_20	IAMs_20	14 35 47.9	
	comp=Z,91µm,19.0s						
PAGB	**Antelope Grade**	**20.76**	**328**	P	Pn	14 27 54.9	-2.3
PAGB				IAmb	IAmb	14 28 05.0	
	comp=Z,636nm,1.5s						
PAGB				IAMs_20	IAMs_20	14 34 46.5	
	comp=Z,100µm,19.0s						
VOG	**Valley Oaks Go**	**20.82**	**331**	P	Pn	14 27 55.7	-2.1
	baz=145						
TIN	**Tinemaha, Big**	**20.92**	**334**	P	Pn	14 27 57.8	-1.3
	baz=148,SNR=34						
TIN				S	Sn	14 32 05.4	+10
	baz=148						
U38A	**Gravette**	**20.97**	**29**	P	**P**	**14 27 55.5**	**-1.5**
U38A				IAmb	IAmb	14 28 09.1	
	comp=Z,360nm,1.1s						
R32A	**Long Quarter,**	**21.05**	**18**	P	**P**	**14 27 57.2**	**-0.7**
R32A				IAmb	IAmb	14 28 18.1	
	comp=Z,1µm,1.5s						
R32A				IAMs_20	IAMs_20	14 35 49.4	
	comp=Z,59µm,19.0s						
HHAR	**Hobbs**	**21.05**	**30**	P	**P**	**14 27 56.6**	**-1.3**
HHAR				IAmb	IAmb	14 28 10.0	
	comp=Z,1µm,1.5s						
W41B	**Gary Mavity, V**	**21.07**	**35**	P	**P**	**14 27 57.5**	**-0.5**
	baz=222,SNR=133						
W41B				S	**S**	**14 31 50.1**	**-2.5**
	baz=222						
R11A	**Troy Canyon, C**	**21.11**	**341**	P	**P**	**14 27 59.4**	**+0.7**
	baz=156,SNR=325						
R11A				S	Sn	14 31 58.8	-1.3
	baz=156						
R11A	**Troy Canyon, C**	**21.11**	**341**	P	**P**	**14 27 58.6**	**0.0**
R11A				IAmb	IAmb	14 28 07.9	
	comp=Z,507nm,1.5s						
WHAR	**Wooly Hollow**	**21.13**	**35**	P	**P**	**14 27 58.0**	**-0.7**
CBKS	**Cedar Bluff**	**21.13**	**16**	P	**P**	**14 27 58.1**	**-0.6**
	baz=199,SNR=86						
CBKS				S	Sn	14 31 55.8	-4.6
	baz=199						
CBKS	**Cedar Bluff**	**21.13**	**16**	P	**P**	**14 27 58.3**	**-0.5**
CBKS				pmax	pmax		
	comp=Z,907nm,1.2s						
CBKS				MLR	MLR		
	comp=Z,98µm,19.0s						
CBKS	**Cedar Bluff**	**21.13**	**16**	P	**P**	**14 27 58.3**	**-0.5**
CBKS				IAmb	IAmb	14 28 04.8	
	comp=Z,907nm,1.2s						
CBKS				IAMs_20	IAMs_20	14 36 18.6	
	comp=Z,98µm,19.0s						
ISCO	**Idaho Springs**	**21.20**	**3**	P	**P**	**14 28 00.1**	**+0.3**
	baz=183						
ISCO				S	Sn	14 32 02.0	-0.4
	baz=183						
146A	**Union**	**21.32**	**45**	P	**P**	**14 28 00.4**	**-0.4**
146A				IAmb	IAmb	14 28 15.8	
	comp=Z,519nm,1.1s						
SPR3	**Spring Creek 3**	**21.35**	**344**	P	**P**	**14 28 00.6**	**-0.8**
SPR3				IAMs_20	IAMs_20	14 35 16.0	
	comp=Z,85µm,20.0s						
BOAB	**BOACO BROADBAN**	**21.37**	**103**	P	**P**	**14 28 01.9**	**+0.4**
X43A	**Marvell**	**21.38**	**39**	P	**P**	**14 28 01.4**	**0.0**
	baz=226,SNR=46						
X43A				S	Sn	14 32 03.3	-3.1
	baz=226						
TPH	**Tonopah**	**21.42**	**337**	P	**P**	**14 28 02.0**	**0.0**
TPH				pmax	pmax		
	comp=Z,2µm,1.2s						
TPH	**Tonopah**	**21.42**	**337**	P	**P**	**14 28 02.0**	**0.0**
PMPB	**Monarch Peak**	**21.42**	**328**	P	**P**	**14 28 02.1**	**+0.2**
PMPB				IAmb	IAmb	14 28 17.4	
	comp=Z,864nm,1.3s						
PMPB				IAMs_20	IAMs_20	14 35 05.9	
	comp=Z,91µm,19.0s						
O20A	**White River Ci**	**21.53**	**357**	P	**P**	**14 28 03.5**	**+0.3**
	baz=176,SNR=93						
O20A				S	Sn	14 32 08.4	-1.9
	baz=176						
O20A	**White River Ci**	**21.53**	**357**	P	**P**	**14 28 03.0**	**-0.2**
O20A				IAmb	IAmb	14 28 12.7	
	comp=Z,407nm,1.2s						
U40A	**Yellville**	**21.65**	**32**	P	**P**	**14 28 03.3**	**-1.0**
	baz=219,SNR=118						
U40A				S	**S**	**14 32 03.0**	**-1.1**
	baz=219						
U40A	**Yellville**	**21.65**	**32**	P	**P**	**14 28 02.8**	**-1.5**
U40A				IAmb	IAmb	14 28 29.6	
	comp=Z,354nm,1.1s						
U40A				IAMs_20	IAMs_20	14 37 19.0	
	comp=Z,52µm,18.0s						
MLAC	**Mammoth, Mammo**	**21.67**	**334**	P	**P**	**14 28 05.5**	**+0.8**
	baz=148,SNR=36						
MLAC				S	Sn	14 32 14.7	+1.1
	baz=148						
FCAR	**Ozark Folk Cen**	**21.67**	**34**	P	**P**	**14 28 03.3**	**-1.2**
OMMB	**Old Mammoth Mi**	**21.72**	**333**	P	**P**	**14 28 05.3**	**-0.1**
OMMB				IAmb	IAmb	14 28 24.5	
	comp=Z,519nm,1.5s						
Y45A	**Yeager Farm, C**	**21.77**	**42**	P	**P**	**14 28 04.6**	**-1.0**
Y45A				IAMs_20	IAMs_20	14 37 48.2	
	comp=Z,93µm,19.0s						
MDPB	**Devils Postpil**	**21.77**	**333**	P	**P**	**14 28 05.9**	**0.0**
MDPB				IAmb	IAmb	14 28 15.4	
	comp=Z,281nm,1.1s						
BRAL	**Brewton**	**21.94**	**51**	P	**P**	**14 28 07.7**	**+0.2**
	baz=240,SNR=30						
BRAL				S	**S**	**14 32 09.8**	**-0.1**
	baz=240						
BRAL	**Brewton**	**21.94**	**51**	P	**P**	**14 28 06.7**	**-0.8**
ACON	**Acoyapa**	**21.99**	**104**	P	**P**	**14 28 08.3**	**+0.2**
ACON				IAmb	IAmb	14 28 26.2	
	comp=Z,748nm,1.3s						
LHV	**Little Huntoon**	**22.06**	**335**	P	**P**	**14 28 08.6**	**-0.1**
LHV				IAmb	IAmb	14 28 19.3	
	comp=Z,445nm,1.4s						
LHV				IAMs_20	IAMs_20	14 35 44.3	
	comp=Z,93µm,21.0s						
NV11	**Mina Array Sit**	**22.08**	**336**	P	**P**	**14 28 09.0**	**-0.1**
NV11				IAmb	IAmb	14 28 16.4	
	comp=Z,309nm,1.2s						
NV11				IAMs_20	IAMs_20	14 35 46.8	
	comp=Z,59µm,20.0s						
NVAR	**Mina Array Bea**	**22.14**	**336**	P	**P**	**14 28 10.3**	**+0.6**
	comp=Z,117nm,1.1s,baz=155,slow=11,SNR=98						
NVAR				LR	LR	14 35 58.4	
	comp=Z,57µm,20.2s,baz=157,slow=35						
NVAR	**Mina Array Bea**	**22.14**	**336**	P	**P**	**14 28 09.8**	**+0.1**
DUG	**Dugway, Tooele**	**22.15**	**348**	P	**P**	**14 28 10.2**	**+0.4**
	baz=165,SNR=105						
DUG				S	Sn	14 32 21.7	-3.3
	baz=165						
DUG	**Dugway, Tooele**	**22.15**	**348**	P	**P**	**14 28 09.5**	**-0.3**
DUG				pmax	pmax		
	comp=Z,454nm,1.4s						
DUG				MLR	MLR		
	comp=Z,61µm,18.0s						
DUG	**Dugway, Tooele**	**22.15**	**348**	P	**P**	**14 28 09.5**	**-0.3**
DUG				IAmb	IAmb	14 28 17.8	
	comp=Z,454nm,1.4s						
DUG				IAMs_20	IAMs_20	14 36 01.7	
	comp=Z,61µm,18.0s						
SAO	**San Andreas Ge**	**22.17**	**328**	P	**P**	**14 28 09.1**	**-0.9**
SAO				pmax	pmax		
	comp=Z,322nm,1.5s						
SAO				MLR	MLR		
	comp=Z,68µm,20.0s						
SAO	**San Andreas Ge**	**22.17**	**328**	P	**P**	**14 28 09.1**	**-0.9**
SAO				IAMs_20	IAMs_20	14 35 17.8	
	comp=Z,68µm,20.0s						
HBAR	**Harrisburg**	**22.24**	**37**	P	**P**	**14 28 09.9**	**-0.7**
OXF	**Oxford**	**22.27**	**41**	P	**P**	**14 28 09.6**	**-1.3**
	baz=229,SNR=43						
OXF				S	**S**	**14 32 18.0**	**+2.0**
	baz=229						
OXF	**Oxford**	**22.27**	**41**	P	**P**	**14 28 08.9**	**-2.1**
OXF				pmax	pmax		
	comp=Z,1µm,1.4s						
OXF				MLR	MLR		
	comp=Z,32µm,18.0s						
OXF	**Oxford**	**22.27**	**41**	P	**P**	**14 28 08.9**	**-2.1**
N23A	**Red Feather La**	**22.28**	**2**	P	**P**	**14 28 11.1**	**-0.2**
	baz=182,SNR=106						
N23A				S	Sn	14 32 21.5	-6.7
	baz=182						
Z47A	**Carrollton**	**22.33**	**46**	P	**P**	**14 28 10.6**	**-1.0**
LCAR	**Lake Charles**	**22.33**	**35**	P	**P**	**14 28 10.9**	**-0.7**
KSU1	**Kansas State U**	**22.35**	**22**	P	**P**	**14 28 10.8**	**-1.0**
	baz=206,SNR=63						
KSU1				S	**S**	**14 32 18.6**	**+1.1**
	baz=206						
KSU1	**Kansas State U**	**22.35**	**22**	P	**P**	**14 28 10.8**	**-1.0**
KSU1				IAmb	IAmb	14 28 19.4	
	comp=Z,361nm,1.0s						
MET	**Memphis--Engin**	**22.36**	**39**	P	**P**	**14 28 10.8**	**-1.1**
RYN	**Ryan**	**22.39**	**336**	P	**P**	**14 28 12.0**	**-0.4**
RYN				IAMs_20	IAMs_20	14 35 56.1	
	comp=Z,81µm,21.0s						
LPAR	**Lepanto**	**22.48**	**38**	P	**P**	**14 28 12.1**	**-1.1**
S39A	**Bolivar**	**22.48**	**29**	P	**P**	**14 28 11.7**	**-1.5**
S39A				IAmb	IAmb	14 28 22.2	
	comp=Z,489nm,1.1s						
MGMO	**Mountain Grove**	**22.56**	**32**	P	**P**	**14 28 12.7**	**-1.4**
WAKR	**Walker**	**22.66**	**334**	P	**P**	**14 28 15.0**	**-0.3**
WAKR				IAmb	IAmb	14 28 23.3	
	comp=Z,622nm,1.2s						
451A	**Vernon**	**22.66**	**54**	P	**P**	**14 28 13.9**	**-1.3**
CMB	**Columbia Colle**	**22.68**	**332**	P	**P**	**14 28 14.3**	**-1.1**
CMB				pmax	pmax		
	comp=Z,241nm,1.3s						
CMB				MLR	MLR		
	comp=Z,63µm,21.0s						
CMB	**Columbia Colle**	**22.68**	**332**	P	**P**	**14 28 14.3**	**-1.1**
CMB				IAMs_20	IAMs_20	14 35 58.9	
	comp=Z,63µm,21.0s						
OGNE	**Ogallala**	**22.71**	**10**	P	**P**	**14 28 16.8**	**+1.1**
	baz=192,SNR=34						
OGNE				S	**S**	**14 32 26.6**	**+2.4**
	baz=192						
OGNE	**Ogallala**	**22.71**	**10**	P	**P**	**14 28 14.9**	**-0.8**
OGNE				IAmb	IAmb	14 28 23.9	
	comp=Z,289nm,1.1s						
ESPN	**Las Esperanzas**	**22.72**	**103**	P	**P**	**14 28 16.1**	**+0.2**
ESPN				IAmb	IAmb	14 28 22.3	
	comp=Z,379nm,1.4s						
JTS	**Las Juntas de**	**22.81**	**108**	P	**P**	**14 28 16.9**	**0.0**
	comp=Z,65nm,1.3s,baz=8.6,slow=8.4,SNR=22						
JTS	**Las Juntas de**	**22.81**	**108***de*	P	**P**	**14 28 19.4**	**+2.5**
JTS				pmax	pmax		
	comp=Z,755nm,2.0s						
JTS	**Las Juntas de**	**22.81**	**108**	P	**P**	**14 28 16.7**	**-0.2**
JTS				IAmb	IAmb	14 28 32.2	
	comp=Z,548nm,1.5s						
W45A	**Hickory Valley**	**22.84**	**40**	P	**P**	**14 28 15.6**	**-1.4**
W45A				IAMs_20	IAMs_20	14 38 01.4	
	comp=Z,47µm,20.0s						
GNAR	**Gosnell**	**22.89**	**37**	P	**P**	**14 28 16.3**	**-1.3**
250A	**Grady**	**22.93**	**50**	P	**P**	**14 28 16.7**	**-1.3**
LRAL	**Lakeview Retre**	**22.97**	**47**	P	**P**	**14 28 17.5**	**-0.9**
	baz=236,SNR=118						
LRAL				S	**S**	**14 32 28.0**	**-0.8**
	baz=236						
LRAL	**Lakeview Retre**	**22.97**	**47**	P	**P**	**14 28 16.6**	**-1.7**
YERR	**Yerington**	**22.99**	**335**	P	**P**	**14 28 18.4**	**-0.3**
T42A	**Van Buren**	**23.07**	**34**	P	**P**	**14 28 17.9**	**-1.5**
T42A				IAmb	IAmb	14 28 32.8	
	comp=Z,662nm,1.4s						
PEBM	**Pemiscott Bayo**	**23.09**	**37**	P	**P**	**14 28 17.9**	**-1.6**
PNTR	**Pine Nut**	**23.22**	**334**	P	**P**	**14 28 20.6**	**-0.6**
PNTR				IAmb	IAmb	14 28 36.3	
	comp=Z,464nm,1.3s						
ELK	**Elko**	**23.23**	**344**	P	**P**	**14 28 20.6**	**-0.8**
	comp=Z,55nm,1.1s,baz=176,slow=7.4,SNR=31						
ELK				LR	LR	14 36 58.7	
	comp=Z,62µm,18.1s,baz=166,slow=36						
ELK	**Elko**	**23.23**	**344**	P	**P**	**14 28 20.5**	**-0.8**
ELK				pmax	pmax		
	comp=Z,159nm,1.5s						
ELK				MLR	MLR		
	comp=Z,66µm,20.0s						
ELK	**Elko**	**23.23**	**344**	P	**P**	**14 28 20.5**	**-0.8**
ELK				IAMs_20	IAMs_20	14 36 28.7	
	comp=Z,66µm,20.0s						
PBMO	**Poplar Bluff**	**23.25**	**35**	P	**P**	**14 28 19.5**	**-1.7**
PBMO				IAmb	IAmb	14 28 40.6	
	comp=Z,206nm,1.0s						
PBMO				IAMs_20	IAMs_20	14 37 23.2	
	comp=Z,47µm,19.0s						
HALT	**Halls**	**23.25**	**38**	P	**P**	**14 28 20.2**	**-1.0**
LNXT	**Lenox**	**23.29**	**38**	P	**P**	**14 28 20.4**	**-1.2**
PLAL	**Pickwick Lake**	**23.41**	**42**	P	**P**	**14 28 21.0**	**-1.9**
PLAL				IAmb	IAmb	14 28 31.4	
	comp=Z,255nm,1.2s						
PLAL				IAMs_20	IAMs_20	14 38 14.7	
	comp=Z,47µm,20.0s						
VCNR	**Virginia City**	**23.42**	**335**	P	**P**	**14 28 22.7**	**-0.5**
VCNR				IAmb	IAmb	14 28 29.8	
	comp=Z,304nm,1.3s						
RUBR	**Rubicon Trail**	**23.42**	**333**	IAMs_20	IAMs_20	14 36 27.4	
	comp=Z,76µm,22.0s						
553A	**Crawfordville**	**23.50**	**56**	P	**P**	**14 28 22.4**	**-1.4**
GLAT	**Glass**	**23.53**	**38**	P	**P**	**14 28 22.7**	**-1.3**
GLAT				IAmb	IAmb	14 28 29.7	
	comp=Z,310nm,0.9s						
GLAT				IAMs_20	IAMs_20	14 38 20.8	
	comp=Z,53µm,20.0s						
PARMO	**Parma**	**23.54**	**37**	P	**P**	**14 28 23.0**	**-1.1**
N33A	**J Bar K, Exete**	**23.56**	**18**	P	**P**	**14 28 23.4**	**-0.9**
PAHR	**Pah Rah Range**	**23.66**	**336**	P	**P**	**14 28 25.2**	**-0.2**
PAHR				IAmb	IAmb	14 28 32.2	
	comp=Z,337nm,1.3s						
352A	**Blakely**	**23.68**	**53**	P	**P**	**14 28 24.8**	**-0.8**
HDC	**Heredia**	**23.68**	**108**	P	**P**	**14 28 25.4**	**-0.5**
HDC				IAmb	IAmb	14 28 52.8	
	comp=Z,357nm,1.2s						
AFDM	**Forest Hills D**	**23.69**	**332**	P	**P**	**14 28 24.6**	**-1.0**
AFDM				IAMs_20	IAMs_20	14 36 51.6	
	comp=Z,47µm,20.0s						
HENM	**Henderson Moun**	**23.73**	**37**	P	**P**	**14 28 25.4**	**-0.6**
HICK	**Hickman**	**23.75**	**37**	P	**P**	**14 28 25.4**	**-0.8**
X48A	**Hartselle**	**23.75**	**44**	P	**P**	**14 28 23.8**	**-2.5**
X48A				IAmb	IAmb	14 28 50.3	
	comp=Z,262nm,1.1s						
CCM	**Cathedral Cave**	**23.77**	**32**	P	**P**	**14 28 25.1**	**-1.4**
	baz=219						
CCM				S	**S**	**14 32 43.1**	**+1.2**
	baz=219						
CCM	**Cathedral Cave**	**23.77**	**32**	P	**P**	**14 28 24.6**	**-1.8**
CCM				pmax	pmax		
	comp=Z,384nm,1.2s						
CCM				MLR	MLR		
	comp=Z,46µm,18.0s						
CCM	**Cathedral Cave**	**23.77**	**32**	P	**P**	**14 28 24.6**	**-1.8**
CCM				IAmb	IAmb	14 28 38.7	
	comp=Z,384nm,1.1s						
CCM	**Cathedral Cave**	**23.77**	**32**	IAMs_20	IAMs_20	14 38 36.2	
	comp=Z,46µm,18.0s						
UTMT	**University of**	**23.83**	**38**	P	**P**	**14 28 25.7**	**-1.3**
Y49A	**Blount Mountai**	**23.84**	**46**	P	**P**	**14 28 25.4**	**-1.7**
Y49A				IAmb	IAmb	14 28 39.6	
	comp=Z,288nm,1.1s						
MCCM	**Marconi Confer**	**23.96**	**328**	P	**P**	**14 28 28.4**	**+0.2**
MCCM				IAMs_20	IAMs_20	14 35 58.2	
	comp=Z,52µm,21.0s						
BGNE	**Belgrade**	**23.98**	**16**	P	**P**	**14 28 27.3**	**-1.1**
	baz=201,SNR=11						
BGNE				S	**S**	**14 32 45.4**	**+0.1**
	baz=201						
BGNE	**Belgrade**	**23.98**	**16**	P	**P**	**14 28 27.9**	**-0.5**
BGNE				IAmb	IAmb	14 28 43.4	
	comp=Z,277nm,0.9s						
BGNE				IAMs_20	IAMs_20	14 37 44.0	
	comp=Z,74µm,18.0s						
P38A	**Dawn**	**23.98**	**26**	P	**P**	**14 28 27.0**	**-1.5**
P38A				IAmb	IAmb	14 28 34.0	
	comp=Z,401nm,1.0s						
K22A	**Casper**	**24.02**	**1**	P	**P**	**14 28 28.3**	**-0.5**
	baz=181,SNR=63						
K22A				S	**S**	**14 32 48.6**	**+2.5**
	baz=181						
K22A	**Casper**	**24.02**	**1**	P	**P**	**14 28 28.4**	**-0.5**
K22A				IAmb	IAmb	14 28 35.9	
	comp=Z,411nm,1.4s						
FVM	**French Village**	**24.14**	**33**	P	**P**	**14 28 28.4**	**-1.5**
FVM				pmax	pmax		
	comp=Z,420nm,1.3s						
FVM				MLR	MLR		
	comp=Z,30µm,18.0s						
FVM	**French Village**	**24.14**	**33**	P	**P**	**14 28 28.4**	**-1.5**
FVM				IAmb	IAmb	14 28 45.7	
	comp=Z,420nm,1.2s						
WBCY	**West Bay, Gran**	**24.17**	**84**	P	**P**	**14 28 29.3**	**-1.0**
BEKR	**Beckworth**	**24.19**	**334**	P	**P**	**14 28 29.9**	**-0.7**
BEKR				IAmb	IAmb	14 28 41.1	
	comp=Z,208nm,1.2s						
BEKR				IAMs_20	IAMs_20	14 37 28.7	
	comp=Z,46µm,19.0s						
BW06	**Boulder Array**	**24.23**	**355**	P	**P**	**14 28 30.0**	**-1.0**
	baz=174,SNR=42						
BW06				S	**S**	**14 32 53.2**	**+3.6**
	baz=174						
BW06	**Boulder Array**	**24.23**	**355**	P	**P**	**14 28 29.2**	**-1.8**
BW06				IAMs_20	IAMs_20	14 37 41.5	
	comp=Z,66µm,20.0s						
PD31	**Pinedale Array**	**24.23**	**355**	P	**P**	**14 28 29.2**	**-1.8**
PDAR	**Pinedale Array**	**24.23**	**355**	P	**P**	**14 28 29.8**	**-1.2**
	comp=Z,19nm,0.9s,baz=164,slow=9.2,SNR=35						
PDAR				PcP	**PcP**	**14 32 12.4**	**+1.1**
	comp=Z,2.9nm,0.8s,baz=154,slow=5.8,SNR=3.2						
PDAR				LR	LR	14 37 38.4	
	comp=Z,39µm,21.9s,baz=185,slow=36						
PDAR	**Pinedale Array**	**24.23**	**355**	P	**P**	**14 28 29.1**	**-1.9**
N35A	**Tabor**	**24.25**	**21**	P	**P**	**14 28 29.8**	**-1.1**
N35A				IAMs_20	IAMs_20	14 38 04.0	
	comp=Z,40µm,18.0s						
WVT	**Waverly**	**24.30**	**40**	P	**P**	**14 28 30.1**	**-1.3**
	baz=229						
WVT				S	**S**	**14 32 51.8**	**+1.3**
	baz=229						
WVT	**Waverly**	**24.30**	**40**	P	**P**	**14 28 29.6**	**-1.8**
WVT				pmax	pmax		
	comp=Z,113nm,1.1s						
WVT	**Waverly**	**24.30**	**40**	P	**P**	**14 28 29.6**	**-1.8**
FSCY	**Frank Sound, G**	**24.37**	**84**	P	**P**	**14 28 32.1**	**-0.1**
AHID	**Auburn Hatcher**	**24.39**	**353**	P	**P**	**14 28 31.3**	**-1.1**
AHID				IAMs_20	IAMs_20	14 37 17.7	
	comp=Z,50µm,21.0s						
152A	**Waverly Hall**	**24.41**	**51**	P	**P**	**14 28 31.2**	**-1.2**
152A				IAmb	IAmb	14 28 57.5	
	comp=Z,468nm,1.2s						
Z51A	**Franklin**	**24.41**	**49**	P	**P**	**14 28 31.2**	**-1.2**
Z51A				IAmb	IAmb	14 28 50.6	
	comp=Z,535nm,1.4s						
T45A	**Paducah**	**24.42**	**37**	P	**P**	**14 28 31.2**	**-1.2**
ORV	**Oroville**	**24.42**	**332**	P	**P**	**14 28 32.5**	**0.0**
ORV				pmax	pmax		
	comp=Z,361nm,1.2s						
ORV				MLR	MLR		
	comp=Z,63µm,19.0s						
ORV	**Oroville**	**24.42**	**332**	P	**P**	**14 28 32.5**	**0.0**
ORV				IAmb	IAmb	14 28 39.9	
	comp=Z,361nm,1.2s						
ORV				IAMs_20	IAMs_20	14 37 23.0	
	comp=Z,63µm,19.0s						
GDXM	**Geysers**	**24.43**	**329**	P	**P**	**14 28 32.8**	**+0.2**
S44A	**Carbondale**	**24.55**	**35**	P	**P**	**14 28 32.4**	**-1.3**
S44A				IAmb	IAmb	14 28 44.2	
	comp=Z,450nm,1.3s						
S44A				IAMs_20	IAMs_20	14 37 59.9	
	comp=Z,49µm,20.0s						
P40A	**Paris**	**24.55**	**29**	P	**P**	**14 28 32.3**	**-1.4**
SIUC	**Southern Illin**	**24.59**	**35**	P	**P**	**14 28 32.5**	**-1.5**
SIUC				IAmb	IAmb	14 28 44.4	
	comp=Z,533nm,1.4s						
SIUC				IAMs_20	IAMs_20	14 37 52.4	
	comp=Z,37µm,18.0s						
V48A	**Smith Brothers**	**24.68**	**42**	P	**P**	**14 28 33.7**	**-1.2**
V48A				IAMs_20	IAMs_20	14 39 26.4	
	comp=Z,59µm,19.0s						
ECR	**Eagle Creek**	**24.70**	**352**	P	**P**	**14 28 33.9**	**-1.3**
656A	**Willston**	**24.71**	**60**	P	**P**	**14 28 33.5**	**-1.7**
656A				IAmb	IAmb	14 28 56.6	
	comp=Z,307nm,1.1s						
SLM	**Saint Louis**	**24.73**	**33**	P	**P**	**14 28 33.6**	**-1.6**
SLM				pmax	pmax		
	comp=Z,571nm,1.0s						
SLM	**Saint Louis**	**24.73**	**33**	P	**P**	**14 28 33.6**	**-1.6**
FPAL	**Fort Paine**	**24.77**	**46**	P	**P**	**14 28 34.7**	**-1.0**
SWET	**Sewanee**	**24.94**	**44**	P	**P**	**14 28 35.9**	**-1.4**
SWET				IAmb	IAmb	14 28 47.2	
	comp=Z,330nm,1.3s						
REDW	**Red Top Meadow**	**24.95**	**353**	P	**P**	**14 28 36.5**	**-1.0**
REDW				IAmb	IAmb	14 28 44.9	
	comp=Z,356nm,1.4s						
REDW				IAMs_20	IAMs_20	14 37 47.9	
	comp=Z,42µm,20.0s						
K31A	**O'Neill**	**24.97**	**14**	P	**P**	**14 28 36.4**	**-1.1**

K31A				IAmb	IAmb	14 28 48.1	
	comp=Z,307nm,1.1s						
K31A				IAMs_20	IAMs_20	14 38 03.3	
	comp=Z,81µm,21.0s						
L34A	Svendsen Farm,	25.01	19	P	P	14 28 35.4	-2.4
L34A				IAmb	IAmb	14 28 46.1	
	comp=Z,198nm,1.1s						
SNOW	Snow King Moun	25.03	353	P	P	14 28 37.5	-0.8
N38A	Joes South For	25.09	25	P	P	14 28 37.2	-1.3
N38A				IAMs_20	IAMs_20	14 39 18.2	
	comp=Z,36µm,18.0s						
061Z	Ochoppi	25.15	69	P	P	14 28 39.2	+0.1
O03E	Paynes Creek	25.16	333	P	P	14 28 38.9	-0.3
	baz=145,SNR=102						
O03E				S	S	14 33 05.2	+0.9
	baz=145						
LOHW	Long Hollow	25.17	354	P	P	14 28 38.7	-0.7
LOHW				IAmb	IAmb	14 28 46.9	
	comp=Z,361nm,1.3s						
LOHW				IAMs_20	IAMs_20	14 37 59.4	
	comp=Z,49µm,20.0s						
PAYG	Puerto Ayora	25.17	138	P	P	14 28 39.9	+0.4
PAYG				IAmb	IAmb	14 28 46.6	
	comp=Z,501nm,1.5s						
PAYG	Puerto Ayora	25.17	138	IAMs_20	IAMs_20	14 35 42.1	
	comp=Z,51µm,19.0s						
CLTN	Cedars of Leba	25.21	42	P	P	14 28 38.7	-1.0
CLTN				IAMs_20	IAMs_20	14 39 41.4	
	comp=Z,50µm,21.0s						
DWPF	Disney Wildern	25.23	63	P	P	14 28 39.7	-0.2
	baz=253						
DWPF				S	S	14 33 05.9	+0.4
	baz=253						
DWPF	Disney Wildern	25.23	63	P	P	14 28 39.5	-0.4
X51A	Calhoun	25.30	47	P	P	14 28 39.5	-1.0
T47A	Sharon Grove	25.31	39	P	P	14 28 39.3	-1.2
T47A				IAMs_20	IAMs_20	14 39 26.9	
	comp=Z,48µm,21.0s						
W50A	Signal Mountai	25.35	45	P	P	14 28 39.7	-1.2
LCCY	Blossom Villag	25.40	83	P	P	14 28 40.4	-1.1
Y52A	Lilburn	25.48	49	P	P	14 28 40.4	-1.7
Y52A				IAmb	IAmb	14 28 48.7	
	comp=Z,212nm,1.1s						
Y52A				IAMs_20	IAMs_20	14 39 38.7	
	comp=Z,43µm,19.0s						
KCPM	Cahto Peak	25.50	329	P	P	14 28 42.1	-0.2
KCPM				IAmb	IAmb	14 29 08.8	
	comp=Z,253nm,1.3s						
KCPM				IAMs_20	IAMs_20	14 37 43.0	
	comp=Z,50µm,19.0s						
O02D	Mt. Diablo Mer	25.51	331	P	P	14 28 42.1	-0.3
	baz=143,SNR=9.0						
O02D				S	S	14 33 15.6	+5.8
	baz=143						
Q44A	Meyer Farm, Va	25.56	34	P	P	14 28 41.8	-0.9
154A	Montrose	25.57	52	P	P	14 28 42.4	-0.6
RSSD	Black Hills	25.60	5	P	P	14 28 44.0	+0.6
	baz=186						
RSSD				S	S	14 33 11.5	0.0
	baz=186						
RSSD	Black Hills	25.60	5	P	P	14 28 42.0	-1.4
RSSD				pmax	pmax		
	comp=Z,101nm,1.3s						
RSSD				MLR	MLR		
	comp=Z,100µm,20.0s						
RSSD	Black Hills	25.60	5	P	P	14 28 42.0	-1.4
456A	Hilliard	25.62	57	P	P	14 28 43.0	-0.4
USIN	University of	25.64	37	P	P	14 28 42.0	-1.4
FLWY	Flagg Ranch	25.64	354	P	P	14 28 43.2	-0.5
FLWY				IAmb	IAmb	14 28 53.4	
	comp=Z,322nm,1.5s						
GOGA	Godfrey	25.69	50	P	P	14 28 43.2	-0.8
	baz=241,SNR=97						
GOGA				S	S	14 33 17.4	+4.7
	baz=241						
GOGA	Godfrey	25.69	50	P	P	14 28 42.5	-1.5
GOGA				pmax	pmax		
	comp=Z,380nm,1.1s						
GOGA				MLR	MLR		
	comp=Z,38µm,21.0s						
GOGA	Godfrey	25.69	50	P	P	14 28 42.5	-1.5
CBCY	The Bluff, Cay	25.70	83	P	P	14 28 44.2	0.0
HLID	Hailey	25.71	347	P	P	14 28 44.4	+0.1
	baz=163,SNR=61						
HLID				S	S	14 33 14.7	+1.5
	baz=163						
HLID	Hailey	25.71	347	P	P	14 28 43.8	-0.6
HLID				IAMs_20	IAMs_20	14 37 53.2	
	comp=Z,47µm,22.0s						
WDC	Whiskeytown Da	25.72	332	P	P	14 28 42.1	-2.1
WDC				pmax	pmax		
	comp=Z,92nm,1.2s						
WDC				MLR	MLR		
	comp=Z,52µm,19.0s						
WDC	Whiskeytown Da	25.72	332	P	P	14 28 42.1	-2.1
WDC				IAMs_20	IAMs_20	14 38 01.6	
	comp=Z,52µm,19.0s						
255A	Hazlehurst	25.75	54	P	P	14 28 44.0	-0.6
WVOR	Wild Horse Val	25.79	340	P	P	14 28 43.8	-1.2
WVOR				pmax	pmax		
	comp=Z,227nm,1.3s						
WVOR				MLR	MLR		
	comp=Z,54µm,18.0s						
WVOR	Wild Horse Val	25.79	340	P	P	14 28 43.8	-1.2
WVOR				IAmb	IAmb	14 28 50.7	
	comp=Z,227nm,1.2s						
WVOR				IAMs_20	IAMs_20	14 39 20.8	
	comp=Z,54µm,18.0s						
U49A	Red Boiling Sp	25.82	42	P	P	14 28 44.2	-1.0
U49A				IAMs_20	IAMs_20	14 40 12.6	
	comp=Z,52µm,19.0s						
P43A	Skaggs, Pawnee	25.85	32	P	P	14 28 43.8	-1.6
MFID	Camas Ranch	25.89	345	P	P	14 28 44.9	-1.0
MFID				IAmb	IAmb	14 29 13.2	
	comp=Z,186nm,1.5s						
MFID				IAMs_20	IAMs_20	14 38 16.1	
	comp=Z,56µm,20.0s						
MOD	Modoc Plateau	25.91	337	P	P	14 28 45.1	-1.0
MOD				IAmb	IAmb	14 28 52.9	
	comp=Z,266nm,1.3s						
OLIL	Olney	25.93	35	P	P	14 28 44.3	-1.8
OLIL				IAmb	IAmb	14 29 06.0	
	comp=Z,396nm,1.2s						
H17A	Grant Village	25.94	354	P	P	14 28 47.1	+0.7
	baz=172,SNR=32						
H17A				S	S	14 33 21.3	+4.4
	baz=172						
H17A	Grant Village	25.94	354	P	P	14 28 45.2	-1.3
H17A				IAMs_20	IAMs_20	14 38 12.8	
	comp=Z,81µm,20.0s						
KMRM	Mail Ridge	25.98	330	P	P	14 28 46.4	-0.3
KMRM				IAmb	IAmb	14 28 53.7	
	comp=Z,349nm,1.2s						
CPCT	Cooper Cave	26.02	45	P	P	14 28 45.5	-1.5
CPCT				IAmb	IAmb	14 29 09.4	
	comp=Z,291nm,1.4s						
N41A	Harden Midland	26.04	29	P	P	14 28 45.6	-1.5
N41A				IAMs_20	IAMs_20	14 38 35.2	
	comp=Z,46µm,20.0s						
SCIA	State Center	26.05	24	S	S	14 33 17.8	-0.4
	baz=211						
SCIA	State Center	26.05	24	P	P	14 28 46.4	-0.8
SCIA				IAmb	IAmb	14 28 58.6	
	comp=Z,235nm,1.2s						
LKWY	Lake	26.09	354	P	P	14 28 47.1	-0.7
LKWY				pmax	pmax		
	comp=Z,92nm,1.2s						
LKWY				MLR	MLR		
	comp=Z,53µm,20.0s						
LKWY	Lake	26.09	354	P	P	14 28 47.1	-0.7
LKWY				IAMs_20	IAMs_20	14 39 27.8	
	comp=Z,53µm,20.0s						
N02D	Trinity Center	26.11	332	P	P	14 28 46.3	-1.5
	baz=144,SNR=22						
N02D				S	S	14 33 24.4	+5.0
	baz=144						
W52A	Murphy	26.23	47	P	P	14 28 48.0	-1.0
W52A				IAmb	IAmb	14 28 54.6	
	comp=Z,247nm,1.2s						
BCYI	Bear Canyon	26.24	349	P	P	14 28 48.5	-0.7
V51A	Loudon	26.33	45	P	P	14 28 48.2	-1.6
V51A				IAmb	IAmb	14 29 01.6	
	comp=Z,411nm,1.5s						
V51A				IAMs_20	IAMs_20	14 40 42.9	
	comp=Z,37µm,19.0s						
M04C	Macdoel	26.41	334	P	P	14 28 50.0	-0.5
	baz=147,SNR=67						
QLMT	Earthquake Lak	26.46	353	P	P	14 28 49.9	-1.2
KHMM	Horse Mountain	26.50	331	P	P	14 28 50.5	-1.0
KHMM				IAmb	IAmb	14 29 03.0	
	comp=Z,181nm,1.2s						
M02C	Callahan	26.52	332	P	P	14 28 49.8	-1.7
	baz=144						
M02C				S	S	14 33 26.0	+0.3
	baz=144						
RLMT	Red Lodge	26.56	356	P	P	14 28 52.3	+0.3
	baz=175,SNR=24						
RLMT				S	S	14 33 28.1	+1.6
	baz=175						
RLMT	Red Lodge	26.56	356	P	P	14 28 50.5	-1.5
RLMT				IAMs_20	IAMs_20	14 38 56.0	
	comp=Z,41µm,21.0s						
ECSD	EROS Data Cent	26.56	17	P	P	14 28 51.7	-0.1
	baz=202,SNR=20						
ECSD				S	S	14 33 26.5	+0.2
	baz=202						
ECSD	EROS Data Cent	26.56	17	P	P	14 28 50.8	-1.0
ECSD	EROS Data Cent	26.56	17	IAMs_20	IAMs_20	14 39 31.3	
	comp=Z,54µm,18.0s						
J08A	Circle Bar Ran	26.57	341	P	P	14 28 51.0	-1.1
J08A				IAmb	IAmb	14 28 57.9	
	comp=Z,197nm,1.4s						
J08A				IAMs_20	IAMs_20	14 39 52.4	
	comp=Z,58µm,19.0s						
JCC	Jacoby Creek,	26.59	330	P	P	14 28 52.1	0.0
JCC				IAmb	IAmb	14 29 03.1	
	comp=Z,226nm,1.4s						
JCC				IAMs_20	IAMs_20	14 38 42.0	
	comp=Z,65µm,20.0s						
WCI	Wyandotte Cave	26.61	38	P	P	14 28 51.6	-0.7
	baz=228						
WCI				S	S	14 33 29.2	+2.0
	baz=228						
WCI	Wyandotte Cave	26.61	38	P	P	14 28 50.8	-1.5
WCI				pmax	pmax		
	comp=Z,199nm,1.1s						
WCI	Wyandotte Cave	26.61	38	P	P	14 28 50.8	-1.5
WCI				IAmb	IAmb	14 29 08.1	
	comp=Z,199nm,1.1s						
TKL	Tuckaleechee C	26.64	46	P	P	14 28 51.5	-1.1
	comp=Z,15nm,0.7s,baz=201,slow=12,SNR=8.6						
TKL	Tuckaleechee C	26.64	46	P	P	14 28 51.3	-1.3
TKL				pmax	pmax		
	comp=Z,81nm,1.0s						
TKL				MLR	MLR		
	comp=Z,37µm,21.0s						
TKL	Tuckaleechee C	26.64	46	P	P	14 28 51.3	-1.3
MCMT	McKenzie Canyo	26.65	351	P	P	14 28 52.7	-0.2
SUSD	Miller	26.66	13	P	P	14 28 55.3	+2.6
	baz=197						
SUSD				S	S	14 33 36.1	+8.2
	baz=197						
SUSD	Miller	26.66	13	P	P	14 28 51.7	-1.0
SUSD				IAMs_20	IAMs_20	14 39 17.0	
	comp=Z,64µm,20.0s						
HDIL	Hopedale	26.66	31	P	P	14 28 51.7	-1.1
	baz=220,SNR=19						
HDIL				S	S	14 33 30.5	+2.5
	baz=220						
HDIL	Hopedale	26.66	31	P	P	14 28 49.6	-3.2
YBH	Yreka Blue Hor	26.73	333	P	P	14 28 51.9	-1.5
	comp=Z,33nm,1.1s,baz=170,slow=6.2,SNR=17						
YBH				LR	LR	14 39 08.2	
	comp=Z,46µm,20.5s,baz=160,slow=36						
YBH	Yreka Blue Hor	26.73	333	P	P	14 28 51.7	-1.8
YBH				pmax	pmax		
	comp=Z,47nm,1.2s						
YBH	Yreka Blue Hor	26.73	333	P	P	14 28 51.7	-1.8
YBH				IAMs_20	IAMs_20	14 38 47.4	
	comp=Z,47µm,20.0s						
T50A	Nancy	26.73	42	P	P	14 28 51.5	-1.9
T50A				IAmb	IAmb	14 29 02.1	
	comp=Z,348nm,1.5s						
T50A				IAMs_20	IAMs_20	14 40 40.5	
	comp=Z,59µm,19.0s						
O44A	Mansfield	26.77	33	P	P	14 28 51.4	-2.3
O44A				IAmb	IAmb	14 29 02.9	
	comp=Z,195nm,1.1s						
K05A	Summer Lake	26.84	337	P	P	14 28 53.8	-0.7
K05A				IAmb	IAmb	14 29 12.0	
	comp=Z,248nm,1.3s						
K38A	Parkersburg	26.85	24	P	P	14 28 52.6	-1.9
K38A				IAmb	IAmb	14 28 59.4	
	comp=Z,417nm,1.4s						
K38A				IAMs_20	IAMs_20	14 38 15.7	
	comp=Z,39µm,18.0s						
V52A	Sevierville	26.86	45	P	P	14 28 52.5	-2.1
V52A				IAmb	IAmb	14 29 14.4	
	comp=Z,244nm,1.4s						
V52A				IAMs_20	IAMs_20	14 41 12.0	
	comp=Z,38µm,20.0s						
BG3	Lake Jocassee	26.87	48	P	P	14 28 53.4	-1.3
BG3				IAmb	IAmb	14 29 10.4	
	comp=Z,188nm,1.2s						
257A	Skidaway Islan	26.89	55	P	P	14 28 53.1	-1.8
L04D	Klamath Falls	26.96	334	P	P	14 28 55.3	-0.3
	baz=146,SNR=54						
L04D				S	S	14 33 35.3	+2.4
	baz=146						
HODGE	Hodges	26.96	50	P	P	14 28 54.3	-1.2
L40A	Anamosa	26.98	26	P	P	14 28 54.4	-1.2
L40A				IAmb	IAmb	14 29 08.5	
	comp=Z,207nm,1.1s						
P46A	Rosedale	27.05	35	P	P	14 28 54.9	-1.3
P46A				IAmb	IAmb	14 29 08.9	
	comp=Z,371nm,1.4s						
K04D	Chiloquin, OR	27.08	336	P	P	14 28 56.8	+0.2
	baz=148,SNR=22						
K04D				S	S	14 33 40.3	+5.6
	baz=148						
KRMB	Red Mountain	27.09	331	P	P	14 28 56.6	-0.1
KRMB				IAmb	IAmb	14 29 08.7	
	comp=Z,278nm,1.3s						
BLO	Bloomington	27.12	37	P	P	14 28 55.8	-1.1
BLO				pmax	pmax		
	comp=Z,79nm,0.8s						
BLO				MLR	MLR		
	comp=Z,43µm,18.0s						
BLO	Bloomington	27.12	37	P	P	14 28 55.8	-1.1
BLO				IAMs_20	IAMs_20	14 39 41.6	
	comp=Z,43µm,18.0s						
DLMT	Dillon	27.14	351	P	P	14 28 56.2	-0.9
DLMT				IAmb	IAmb	14 29 03.7	
	comp=Z,201nm,1.4s						
DLMT				IAMs_20	IAMs_20	14 39 08.7	
	comp=Z,60µm,19.0s						
NEJ	Negril	27.14	86	⇑iP	P	14 29 02.7	+5.5
Z56A	Williston	27.20	52	P	P	14 28 57.1	-0.5
BOZ	Bozeman (W)	27.24	353	P	P	14 28 58.2	+0.1
	baz=170,SNR=99						
BOZ				S	S	14 33 40.3	+3.0
	baz=170						
BOZ	Bozeman (W)	27.24	353	P	P	14 28 57.6	-0.5
BOZ				pmax	pmax		
	comp=Z,156nm,1.5s						
BOZ				MLR	MLR		
	comp=Z,41µm,19.0s						
BOZ	Bozeman (W)	27.24	353	P	P	14 28 57.6	-0.5
BOZ				IAMs_20	IAMs_20	14 39 15.3	
	comp=Z,41µm,19.0s						
GCMT	Greycliff	27.25	356	P	P	14 28 57.2	-1.0
V53A	Saluda	27.30	47	P	P	14 28 57.1	-1.6
R49A	Shelbyville	27.32	39	P	P	14 28 57.0	-1.7
R49A				IAmb	IAmb	14 29 07.8	
	comp=Z,184nm,1.3s						
J05D	Fort Rock, OR	27.45	337	P	P	14 29 00.2	+0.2
	baz=149,SNR=97						
J05D				S	S	14 33 46.2	+5.7
	baz=149						
L02E	Cave Junction	27.46	332	P	P	14 29 00.1	+0.1
	baz=144,SNR=26						
L02E				S	S	14 33 41.8	+1.2
	baz=144						
I07A	Izee	27.55	340	P	P	14 28 59.7	-1.1
I07A				IAMs_20	IAMs_20	14 40 35.4	
	comp=Z,50µm,18.0s						
HUMO	Hull Mountain	27.55	334	P	P	14 28 59.9	-0.9
HUMO				IAMs_20	IAMs_20	14 39 35.1	
	comp=Z,58µm,20.0s						
LRM	Limekiln Ridge	27.57	352	P	P	14 29 00.3	-0.8
PAULI	Pauline	27.57	49	P	P	14 28 59.2	-1.8
PAULI				IAmb	IAmb	14 29 12.3	
	comp=Z,397nm,1.5s						
PAULI				IAMs_20	IAMs_20	14 41 46.8	
	comp=Z,38µm,19.0s						
BMO	Blue Mountains	27.61	344	P	P	14 28 59.6	-1.7
BMO				pmax	pmax		
	comp=Z,103nm,1.4s						
BMO				MLR	MLR		
	comp=Z,43µm,19.0s						
BMO	Blue Mountains	27.61	344	P	P	14 28 59.6	-1.7
BMO				IAMs_20	IAMs_20	14 39 17.7	
	comp=Z,43µm,19.0s						
L42A	Oliver, Polo	27.62	29	P	P	14 28 59.3	-2.0
SFIN	Lafayette	27.65	34	P	P	14 29 00.8	-0.8
	baz=224,SNR=11						
SFIN				S	S	14 33 43.2	-0.3
	baz=224						
SFIN	Lafayette	27.65	34	P	P	14 28 59.4	-2.2
SFIN				IAmb	IAmb	14 29 15.0	
	comp=Z,134nm,0.9s						
JSC	Jenkinsville	27.71	51	P	P	14 29 00.0	-2.2
JSC				pmax	pmax		
	comp=Z,153nm,1.3s						
JSC				MLR	MLR		
	comp=Z,24µm,22.0s						
JSC	Jenkinsville	27.71	51	P	P	14 29 00.0	-2.2
JSC				IAmb	IAmb	14 29 10.9	
	comp=Z,153nm,1.3s						
J04D	Umpqua Nationa	27.74	336	P	P	14 29 05.5	+2.9
	baz=148						
PINE	Pine Mountain	27.78	338	P	P	14 29 01.9	-1.0
PINE				IAMs_20	IAMs_20	14 39 34.7	
	comp=Z,72µm,21.0s						
MCJ	Malvern	27.78	87	⇓iP	P	14 29 09.2	+6.0
KBO	Bosley Butte	27.79	332	P	P	14 29 01.4	-1.5
KBO				IAMs_20	IAMs_20	14 39 12.4	
	comp=Z,73µm,21.0s						
I37A	Lemond, Waseca	27.81	21	P	P	14 29 01.3	-1.8
I37A				IAmb	IAmb	14 29 09.1	
	comp=Z,307nm,1.2s						
I37A				IAMs_20	IAMs_20	14 39 18.2	
	comp=Z,41µm,18.0s						
R50A	Paris	27.83	40	P	P	14 29 01.4	-1.9
R50A				IAmb	IAmb	14 29 21.6	
	comp=Z,148nm,1.4s						
R50A				IAMs_20	IAMs_20	14 41 03.4	
	comp=Z,61µm,22.0s						
MTDJ	Mount Denham	27.90	86	P	P	14 29 02.7	-1.5
S51A	Beattyville	27.90	42	P	P	14 29 01.1	-2.8
M44A	Midewin, Midew	27.91	31	P	P	14 29 01.6	-2.3
M44A				IAmb	IAmb	14 29 14.6	
	comp=Z,220nm,1.4s						
K02D	Willamette Mer	27.93	333	P	P	14 29 04.6	+0.4
	baz=144,SNR=58						
K02D				S	S	14 33 52.5	+4.5
	baz=144						
P48A	Milroy	27.94	37	P	P	14 29 02.7	-1.5
P48A				IAMs_20	IAMs_20	14 40 09.3	
	comp=Z,30µm,18.0s						
NHSC	New Hope	28.01	54	P	P	14 29 07.7	+2.9
	baz=245						
NHSC				S	S	14 33 55.3	+6.1
	baz=245						
NHSC	New Hope	28.01	54	P	P	14 29 03.3	-1.6
CSU	Charleston Sou	28.04	54	P	P	14 29 03.4	-1.7
LAO	LASA Array	28.06	1	P	P	14 29 06.4	+1.1
	baz=181,SNR=22						
LAO				S	S	14 33 48.8	-1.1
	baz=181						
LAO	LASA Array	28.06	1	P	P	14 29 04.0	-1.2
KMSC	Kings Mountain	28.07	49	P	P	14 29 04.7	-0.7
	baz=241,SNR=13						
KMSC				S	S	14 33 49.4	-0.9
	baz=241						
KMSC	Kings Mountain	28.07	49	P	P	14 29 04.2	-1.3
KMSC				IAmb	IAmb	14 29 25.0	
	comp=Z,145nm,1.1s						
KMSC				IAMs_20	IAMs_20	14 42 01.0	
	comp=Z,35µm,18.0s						
JFWS	Jewell Farm	28.09	27	P	P	14 29 04.3	-1.3
	baz=215,SNR=54						
JFWS	Jewell Farm	28.09	27	P	P	14 29 03.8	-1.8
JFWS				pmax	pmax		
	comp=Z,315nm,1.2s						
JFWS				MLR	MLR		
	comp=Z,25µm,21.0s						
JFWS	Jewell Farm	28.09	27	P	P	14 29 03.8	-1.8
JFWS				IAmb	IAmb	14 29 10.8	
	comp=Z,315nm,1.1s						
BBJ	Bamboo Saint A	28.14	86	⇓iP	P	14 29 10.5	+4.2
Y57A	Sumter	28.23	52	P	P	14 29 05.0	-1.9
Y57A				IAmb	IAmb	14 29 16.9	
	comp=Z,246nm,1.2s						
PCJ	Portland Cotta	28.30	87	⇓iP	P	14 29 10.6	+2.9
HQIL	Hanson Quary C	28.31	31	P	P	14 29 06.1	-1.4
HQIL				IAmb	IAmb	14 29 17.2	
	comp=Z,335nm,1.3s						
HQIL				IAMs_20	IAMs_20	14 39 13.3	
	comp=Z,34µm,18.0s						
I04A	Tendick Farm,	28.33	336	P	P	14 29 07.0	-0.7
	baz=148,SNR=30						
I04A				S	S	14 33 57.4	+3.2
	baz=148						
KEBM	Edson Butte	28.36	332	P	P	14 29 07.9	-0.1
KEBM				IAMs_20	IAMs_20	14 39 41.5	
	comp=Z,52µm,19.0s						
HRY	Holter Researc	28.36	353	P	P	14 29 07.4	-0.7
I05D	Terrebonne, OR	28.40	338	P	P	14 29 08.5	+0.2
	baz=150,SNR=20						
I05D				S	S	14 33 54.0	-1.3
	baz=150						
P49A	Miami Univ. Ec	28.40	38	P	P	14 29 07.3	-1.0
	baz=229,SNR=47						
P49A				S	S	14 33 57.0	+1.7
	baz=229						
P49A	Miami Univ. Ec	28.40	38	P	P	14 29 06.7	-1.6
P49A				IAMs_20	IAMs_20	14 40 32.4	
	comp=Z,37µm,18.0s						
E28A	Huff	28.41	9	P	P	14 29 07.5	-0.9
E28A				IAmb	IAmb	14 29 14.8	
	comp=Z,273nm,1.3s						
J01E	Myrtle Point	28.42	333	P	P	14 29 08.8	+0.4
	baz=144,SNR=30						
J01E				S	S	14 34 01.5	+6.0
	baz=144						
U54A	Nelsons Funny	28.44	46	P	P	14 29 07.9	-0.9
	baz=238,SNR=13						
U54A				S	S	14 33 56.0	-0.2
	baz=238						
U54A	Nelsons Funny	28.44	46	P	P	14 29 07.5	-1.3
U54A				IAmb	IAmb	14 29 22.3	
	comp=Z,137nm,1.2s						
U54A				IAMs_20	IAMs_20	14 41 59.6	
	comp=Z,32µm,20.0s						
BIRD	Birdtown, Kers	28.47	50	P	P	14 29 07.7	-1.2
BIRD				IAmb	IAmb	14 29 26.4	
	comp=Z,136nm,1.2s						
G08A	Pilot Rock	28.47	342	P	P	14 29 08.2	-0.9
V55A	Taylorsville	28.51	48	P	P	14 29 08.4	-0.9
V55A				IAmb	IAmb	14 29 27.1	
	comp=Z,177nm,1.2s						
L44A	Lake County Fo	28.57	30	P	P	14 29 08.7	-1.2
	baz=220						
L44A				S	S	14 33 58.1	+0.1
	baz=220						
L44A	Lake County Fo	28.57	30	P	P	14 29 08.5	-1.3
L44A				IAmb	IAmb	14 29 18.8	
	comp=Z,209nm,1.2s						
STH	Stony Hill	28.60	86	⇑iP	P	14 29 15.6	+5.3
F33A	5 Mile Ranch,	28.60	16	P	P	14 29 08.5	-1.5
F33A				IAMs_20	IAMs_20	14 40 24.2	
	comp=Z,58µm,19.0s						
W56A	Indian Trail	28.61	49	P	P	14 29 09.1	-1.1
	baz=242,SNR=9.4						
W56A				S	S	14 33 58.7	0.0
	baz=242						
I03D	Drain, OR	28.62	335	P	P	14 29 10.0	-0.2
	baz=146,SNR=24						
I03D				S	S	14 34 03.3	+4.6
	baz=146						
F10A	Beach Ranch, E	28.64	345	P	P	14 29 09.3	-1.1
F10A				IAMs_20	IAMs_20	14 40 00.8	
	comp=Z,43µm,19.0s						
X57A	Johnson Farm,	28.66	51	P	P	14 29 09.2	-1.5
	baz=243						
X57A				S	S	14 33 59.8	+0.3
	baz=243						

Y58A	**Scranton**	**28.73**	**52**	P	**P**	**14 29 10.6**	**-0.7**
Y58A				IAmb	IAmb	14 29 20.3	
	comp=Z,192nm,0.9s						
I40A	**Norwalk**	**28.75**	**25**	P	**P**	**14 29 09.4**	**-2.0**
I40A				IAmb	IAmb	14 29 16.7	
	comp=Z,243nm,1.1s						
N47A	**Urbana**	**28.76**	**35**	P	**P**	**14 29 09.3**	**-2.2**
N47A				IAmb	IAmb	14 29 21.9	
	comp=Z,204nm,1.4s						
MSO	**Missoula**	**28.78**	**350**	P	**P**	**14 29 11.1**	**-0.7**
	baz=166,SNR=152						
MSO				S	**S**	**14 34 02.6**	**+1.2**
	baz=166						
MSO	**Missoula**	**28.78**	**350**	P	**P**	**14 29 10.4**	**-1.3**
MSO				IAMs_20	IAMs_20	14 39 58.1	
	comp=Z,43µm,21.0s						
K43A	**Burlington**	**28.78**	**29**	P	**P**	**14 29 09.7**	**-2.0**
K43A				IAmb	IAmb	14 29 22.5	
	comp=Z,139nm,1.2s						
K43A				IAMs_20	IAMs_20	14 39 29.6	
	comp=Z,34µm,21.0s						
Q51A	**Peebles**	**28.89**	**40**	P	**P**	**14 29 11.0**	**-1.7**
Q51A				IAmb	IAmb	14 29 18.1	
	comp=Z,300nm,1.5s						
Q51A				IAMs_20	IAMs_20	14 41 36.6	
	comp=Z,39µm,22.0s						
V56A	**Mocksville**	**28.99**	**48**	P	**P**	**14 29 12.9**	**-0.8**
	baz=241,SNR=17						
V56A				S	**S**	**14 34 05.5**	**+0.7**
	baz=241						
H04A	**Detroit Lake**	**29.00**	**337**	P	**P**	**14 29 12.7**	**-1.0**
H04A				IAmb	IAmb	14 29 19.6	
	comp=Z,185nm,1.3s						
CMJ	**Castle Mountai**	**29.00**	**86**⇓	*i*P	P	14 29 20.5	+6.5
W57A	**Gilead**	**29.04**	**50**	P	**P**	**14 29 12.3**	**-1.7**
W57A				IAmb	IAmb	14 29 19.5	
	comp=Z,215nm,1.3s						
W57A				IAMs_20	IAMs_20	14 42 40.7	
	comp=Z,36µm,18.0s						
O49A	**Covington**	**29.05**	**37**	P	**P**	**14 29 12.4**	**-1.7**
O49A				IAmb	IAmb	14 29 19.7	
	comp=Z,261nm,1.1s						
H04D	**Lebanon**	**29.07**	**336**	P	**P**	**14 29 14.0**	**-0.2**
	baz=148,SNR=17						
H04D				S	**S**	**14 34 07.3**	**+1.5**
	baz=148						
SPMN	**Marine on St.**	**29.08**	**21**	P	**P**	**14 29 13.8**	**-0.5**
	baz=208						
SPMN				S	**S**	**14 34 04.8**	**-1.1**
	baz=208						
SPMN	**Marine on St.**	**29.08**	**21**	P	**P**	**14 29 12.7**	**-1.6**
SPMN				IAMs_20	IAMs_20	14 40 45.7	
	comp=Z,57µm,18.0s						
I02D	**Swisshome**	**29.16**	**335**	P	**P**	**14 29 15.5**	**+0.5**
	baz=145,SNR=14						
I02D				S	**S**	**14 34 12.0**	**+4.9**
	baz=145						
G05D	**Wamic, OR**	**29.18**	**339**	P	**P**	**14 29 15.6**	**+0.4**
	baz=151,SNR=11						
G05D				S	**S**	**14 34 14.1**	**+6.6**
	baz=151						
L46A	**Eue Claire**	**29.25**	**33**	P	**P**	**14 29 14.2**	**-1.6**
L46A				IAmb	IAmb	14 29 25.9	
	comp=Z,320nm,1.5s						
L46A				IAMs_20	IAMs_20	14 40 59.0	
	comp=Z,43µm,19.0s						
X58A	**Rowland**	**29.25**	**52**	P	**P**	**14 29 14.8**	**-1.1**
X58A				IAmb	IAmb	14 29 40.1	
	comp=Z,181nm,1.3s						
F07A	**Phinny Hill Vi**	**29.31**	**341**	P	**P**	**14 29 16.2**	**-0.1**
F07A				IAMs_20	IAMs_20	14 41 36.9	
	comp=Z,53µm,18.0s						
COR	**Corvallis**	**29.34**	**336**	P	**P**	**14 29 16.2**	**-0.4**
COR				pmax	pmax		
	comp=Z,282nm,1.4s						
COR				MLR	MLR		
	comp=Z,60µm,18.0s						
COR	**Corvallis**	**29.34**	**336**	P	**P**	**14 29 16.2**	**-0.4**
COR				IAmb	IAmb	14 29 25.7	
	comp=Z,282nm,1.4s						
U56A	**King**	**29.34**	**47**	P	**P**	**14 29 15.7**	**-1.1**
	baz=240,SNR=7.1						
U56A				S	**S**	**14 34 13.2**	**+2.9**
	baz=240						
U56A	**King**	**29.34**	**47**	P	**P**	**14 29 15.4**	**-1.3**
U56A				IAmb	IAmb	14 29 37.2	
	comp=Z,271nm,1.5s						
P51A	**Williamsport**	**29.35**	**40**	P	**P**	**14 29 15.2**	**-1.5**
P51A				IAmb	IAmb	14 29 22.4	
	comp=Z,210nm,1.1s						
P51A				IAMs_20	IAMs_20	14 41 59.7	
	comp=Z,47µm,21.0s						
R53A	**Hurricane**	**29.35**	**43**	P	**P**	**14 29 14.8**	**-2.1**
R53A				IAmb	IAmb	14 29 23.7	
	comp=Z,370nm,1.4s						
R53A				IAMs_20	IAMs_20	14 42 11.8	
	comp=Z,46µm,18.0s						
Y59A	**Loris**	**29.36**	**53**	P	**P**	**14 29 16.5**	**-0.5**
Y59A				IAMs_20	IAMs_20	14 42 57.3	
	comp=Z,39µm,22.0s						
E09A	**Wood Farm, Sta**	**29.37**	**344**	P	**P**	**14 29 15.2**	**-1.7**
E09A				IAMs_20	IAMs_20	14 40 33.3	
	comp=Z,38µm,18.0s						
F36A	**Milaca**	**29.41**	**19**	P	**P**	**14 29 15.9**	**-1.4**
F36A				IAMs_20	IAMs_20	14 40 12.8	
	comp=Z,37µm,19.0s						
I42A	**Draeger Farm,**	**29.45**	**27**	P	**P**	**14 29 15.8**	**-1.9**
I42A				IAmb	IAmb	14 29 22.9	
	comp=Z,247nm,1.1s						
S54A	**Dingess, Beckl**	**29.47**	**44**	P	**P**	**14 29 17.1**	**-0.9**
	baz=236,SNR=5.4						
S54A				S	**S**	**14 34 13.7**	**+1.4**
	baz=236						
S54A	**Dingess, Beckl**	**29.47**	**44**	P	**P**	**14 29 15.9**	**-2.1**
S54A				IAmb	IAmb	14 29 30.1	
	comp=Z,170nm,1.3s						
S54A				IAMs_20	IAMs_20	14 42 29.0	
	comp=Z,44µm,22.0s						
EGMT	**Eagleton**	**29.48**	**356**	P	**P**	**14 29 17.3**	**-0.6**
	baz=174,SNR=35						
EGMT				S	**S**	**14 34 14.6**	**+2.4**
	baz=174						
EGMT	**Eagleton**	**29.48**	**356**	P	**P**	**14 29 16.4**	**-1.5**
EGMT				IAmb	IAmb	14 29 29.0	
	comp=Z,143nm,1.2s						
Q52A	**Bidwell**	**29.52**	**41**	P	**P**	**14 29 16.3**	**-2.0**
Q52A				IAmb	IAmb	14 29 32.1	
	comp=Z,158nm,1.1s						
W58A	**Raeford**	**29.54**	**51**	P	**P**	**14 29 17.6**	**-0.9**
	baz=243						
W58A				S	**S**	**14 34 13.6**	**+0.2**
	baz=243						
V57A	**Coltrane Farms**	**29.54**	**49**	P	**P**	**14 29 17.1**	**-1.4**
	baz=241,SNR=18						
V57A				S	**S**	**14 34 11.7**	**-1.8**
	baz=241						
E08A	**Dider Farm, El**	**29.60**	**343**	P	**P**	**14 29 17.7**	**-1.2**
E08A				IAMs_20	IAMs_20	14 40 30.4	
	comp=Z,35µm,22.0s						
N49A	**Columbus Grove**	**29.62**	**36**	P	**P**	**14 29 17.3**	**-1.9**
N49A				IAmb	IAmb	14 29 24.8	
	comp=Z,248nm,1.4s						
HAWA	**Hanford**	**29.64**	**342**	P	**P**	**14 29 18.1**	**-1.2**
HAWA				IAMs_20	IAMs_20	14 40 39.6	
	comp=Z,43µm,21.0s						
D32A	**Dogwood Acres,**	**29.64**	**14**	P	**P**	**14 29 17.8**	**-1.5**
JTMT	**Jette**	**29.72**	**350**	P	**P**	**14 29 18.6**	**-1.6**
JTMT				IAMs_20	IAMs_20	14 40 26.2	
	comp=Z,43µm,22.0s						
BLA	**Blacksburg**	**29.75**	**46**	P	**P**	**14 29 19.2**	**-1.2**
	baz=238,SNR=5.9						
BLA				S	**S**	**14 34 19.5**	**+2.7**
	baz=238						
BLA	**Blacksburg**	**29.75**	**46**	P	**P**	**14 29 18.3**	**-2.2**
BLA				pmax	pmax		
	comp=Z,186nm,1.5s						
BLA				MLR	MLR		
	comp=Z,37µm,18.0s						
BLA	**Blacksburg**	**29.75**	**46**	P	**P**	**14 29 18.3**	**-2.2**
BLA				IAmb	IAmb	14 29 25.2	
	comp=Z,186nm,1.5s						
BLA				IAMs_20	IAMs_20	14 43 14.5	
	comp=Z,37µm,18.0s						
F05D	**White Salmon**	**29.79**	**339**	P	**P**	**14 29 20.9**	**+0.3**
	baz=151,SNR=11						
F05D				S	**S**	**14 34 21.5**	**+4.4**
	baz=151						
X59A	**McDuffie Farm,**	**29.81**	**52**	P	**P**	**14 29 20.2**	**-0.7**
	baz=245						
X59A				S	**S**	**14 34 20.6**	**+3.0**
	baz=245						
MDND	**Maddock**	**29.82**	**10**	P	**P**	**14 29 21.1**	**+0.2**
	baz=194						
MDND				S	**S**	**14 34 16.8**	**-0.7**
	baz=194						
MDND	**Maddock**	**29.82**	**10**	P	**P**	**14 29 19.0**	**-1.9**
MDND				IAmb	IAmb	14 29 27.1	
	comp=Z,224nm,1.4s						
MDND				IAMs_20	IAMs_20	14 41 25.7	
	comp=Z,47µm,19.0s						
G03D	**McMinnville, O**	**29.85**	**336**	P	**P**	**14 29 21.0**	**-0.1**
	baz=147,SNR=30						
G03D				S	**S**	**14 34 23.4**	**+5.4**
	baz=147						
ACSO	**Alum Creek Sta**	**29.86**	**39**	P	**P**	**14 29 20.2**	**-1.1**
	baz=231,SNR=18						
ACSO				S	**S**	**14 34 16.0**	**-2.4**
	baz=231						
ACSO	**Alum Creek Sta**	**29.86**	**39**	P	**P**	**14 29 19.3**	**-2.0**
ACSO				IAmb	IAmb	14 29 26.9	
	comp=Z,237nm,1.4s						
Y60A	**Bolivia**	**29.87**	**53**	IAMs_20	IAMs_20	14 42 34.7	
	comp=Z,44µm,22.0s						
E07A	**Sunnyside**	**29.88**	**342**	P	**P**	**14 29 20.9**	**-0.6**
E07A				IAMs_20	IAMs_20	14 41 05.1	
	comp=Z,41µm,20.0s						
R54A	**Victor**	**29.89**	**44**	P	**P**	**14 29 20.7**	**-1.0**
	baz=236,SNR=15						
R54A				S	**S**	**14 34 21.5**	**+2.5**
	baz=236						
DGMT	**Dagmar**	**29.92**	**4**	P	**P**	**14 29 22.6**	**+0.9**
	baz=185,SNR=12						
DGMT				S	**S**	**14 34 21.1**	**+2.0**
	baz=185						
DGMT	**Dagmar**	**29.92**	**4**	P	**P**	**14 29 20.5**	**-1.2**
DGMT				IAmb	IAmb	14 29 29.0	
	comp=Z,236nm,1.4s						
DGMT	**Dagmar**	**29.92**	**4**	IAMs_20	IAMs_20	14 41 41.5	
	comp=Z,60µm,20.0s						
T56A	**Rocky Mt**	**29.93**	**47**	P	**P**	**14 29 20.8**	**-1.2**
	baz=239,SNR=9.0						
T56A				S	**S**	**14 34 19.7**	**+0.2**
	baz=239						
Q53A	**Leroy**	**29.93**	**42**	P	**P**	**14 29 20.7**	**-1.2**
	baz=235						
Q53A				S	**S**	**14 34 18.5**	**-1.0**
	baz=235						
V58A	**Windy Hill, Pi**	**29.97**	**49**	P	**P**	**14 29 20.9**	**-1.4**
V58A				IAMs_20	IAMs_20	14 41 50.4	
	comp=Z,38µm,22.0s						
P52A	**Corning**	**30.01**	**40**	P	**P**	**14 29 21.1**	**-1.5**
	baz=233,SNR=17						
P52A				S	**S**	**14 34 19.9**	**-0.8**
	baz=233						
P52A	**Corning**	**30.01**	**40**	P	**P**	**14 29 20.8**	**-1.8**
P52A				IAmb	IAmb	14 29 27.7	
	comp=Z,293nm,1.5s						
P52A				IAMs_20	IAMs_20	14 42 21.1	
	comp=Z,51µm,21.0s						
G40A	**Rib Lake**	**30.06**	**24**	P	**P**	**14 29 21.0**	**-2.0**
G40A				IAMs_20	IAMs_20	14 40 53.6	
	comp=Z,28µm,18.0s						
GTBY	**Guantanamo Bay**	**30.06**	**82**	IAMs_20	IAMs_20	14 41 27.3	
	comp=Z,40µm,21.0s						
D08A	**Wollman Farm,**	**30.08**	**344**	P	**P**	**14 29 21.4**	**-1.7**
D08A				IAMs_20	IAMs_20	14 40 46.1	
	comp=Z,40µm,21.0s						
U57A	**Blanch**	**30.12**	**48**	P	**P**	**14 29 22.9**	**-0.7**
	baz=241,SNR=7.3						
U57A				S	**S**	**14 34 22.7**	**+0.3**
	baz=241						
L48A	**N Adams**	**30.18**	**35**	P	**P**	**14 29 21.9**	**-2.2**
L48A				IAmb	IAmb	14 29 29.4	
	comp=Z,244nm,1.3s						
X60A	**Albert Glenn T**	**30.28**	**52**	P	**P**	**14 29 24.1**	**-0.9**
	baz=246						
X60A				S	**S**	**14 34 26.7**	**+1.7**
	baz=246						
CAPC	**Capurgana**	**30.36**	**105**	*e*P	**P**	**14 29 25.1**	**-0.9**
P53A	**Whipple**	**30.38**	**41**	P	**P**	**14 29 23.6**	**-2.3**
P53A				IAmb	IAmb	14 29 31.2	
	comp=Z,227nm,1.4s						
P53A				IAMs_20	IAMs_20	14 42 43.0	
	comp=Z,36µm,18.0s						
H43A	**Windswept, Lux**	**30.41**	**28**	P	**P**	**14 29 24.0**	**-2.2**
H43A				IAmb	IAmb	14 29 31.4	
	comp=Z,185nm,1.1s						
H43A				IAMs_20	IAMs_20	14 40 45.9	
	comp=Z,36µm,20.0s						
Q54A	**Coxs Mills**	**30.44**	**43**	P	**P**	**14 29 24.0**	**-2.5**
Q54A				IAMs_20	IAMs_20	14 42 55.7	
	comp=Z,42µm,18.0s						
T57A	**Hurt**	**30.45**	**47**	P	**P**	**14 29 25.5**	**-1.1**
	baz=240,SNR=21						
T57A				S	**S**	**14 34 28.9**	**+1.3**
	baz=240						
T57A	**Hurt**	**30.45**	**47**	P	**P**	**14 29 25.2**	**-1.4**
T57A				IAmb	IAmb	14 29 45.6	
	comp=Z,190nm,1.3s						
T57A				IAMs_20	IAMs_20	14 43 21.0	
	comp=Z,31µm,19.0s						
O52A	**Adamsville**	**30.48**	**40**	P	**P**	**14 29 24.6**	**-2.2**
O52A				IAmb	IAmb	14 29 31.6	
	comp=Z,164nm,1.1s						
O52A				IAMs_20	IAMs_20	14 43 13.7	
	comp=Z,32µm,19.0s						
F04D	**Rainier, OR**	**30.50**	**338**	P	**P**	**14 29 27.1**	**+0.3**
	baz=149						
F04D				S	S	14 34 37.7	+10
	baz=149						
S56A	**Natural Bridge**	**30.58**	**46**	P	**P**	**14 29 26.6**	**-1.1**
	baz=239						
S56A				S	**S**	**14 34 32.0**	**+2.4**
	baz=239						
M50A	**Fremont**	**30.58**	**37**	P	**P**	**14 29 25.9**	**-1.7**
M50A				IAMs_20	IAMs_20	14 42 59.2	
	comp=Z,28µm,18.0s						
V59A	**Middlesex**	**30.59**	**50**	P	**P**	**14 29 27.3**	**-0.5**
	baz=244,SNR=7.7						
V59A				S	**S**	**14 34 30.1**	**+0.3**
	baz=244						
C09A	**Chrisman Ranch**	**30.60**	**345**	P	**P**	**14 29 27.1**	**-0.7**
C09A				IAMs_20	IAMs_20	14 41 29.7	
	comp=Z,36µm,19.0s						
CNNC	**Cliffs of the**	**30.62**	**51**	P	**P**	**14 29 27.6**	**-0.4**
	baz=245						
CNNC	**Cliffs of the**	**30.62**	**51**	P	**P**	**14 29 26.9**	**-1.2**
CNNC				IAmb	IAmb	14 29 33.0	
	comp=Z,108nm,1.1s						
CNNC				IAMs_20	IAMs_20	14 42 57.6	
	comp=Z,39µm,22.0s						
N51A	**Ashland**	**30.66**	**38**	P	**P**	**14 29 26.2**	**-2.1**
U58A	**Oxford**	**30.66**	**49**	P	**P**	**14 29 27.9**	**-0.5**
	baz=242,SNR=6.5						
U58A				S	**S**	**14 34 32.7**	**+1.8**
	baz=242						
LON	**Longmire**	**30.66**	**340**	P	**P**	**14 29 27.5**	**-0.9**
LON				pmax	pmax		
	comp=Z,78nm,1.2s						
LON				MLR	MLR		
	comp=Z,43µm,19.0s						
LON	**Longmire**	**30.66**	**340**	P	**P**	**14 29 27.5**	**-0.9**
LON				IAMs_20	IAMs_20	14 41 45.9	
	comp=Z,43µm,19.0s						
E38A	**The Farm, Brul**	**30.71**	**21**	P	**P**	**14 29 27.2**	**-1.6**
E04D	**Cinebar**	**30.75**	**339**	P	**P**	**14 29 29.3**	**+0.3**
	baz=150,SNR=27						
E04D				S	S	14 34 40.5	+8.5
	baz=150						
LTY	**Liberty**	**30.76**	**342**	P	**P**	**14 29 28.2**	**-1.0**
LTY				IAmb	IAmb	14 29 35.1	
	comp=Z,168nm,1.5s						
LTY				IAMs_20	IAMs_20	14 42 01.1	
	comp=Z,50µm,19.0s						
NEW	**Newport**	**30.77**	**347**	P	**P**	**14 29 28.4**	**-0.9**
	comp=Z,12nm,0.9s,baz=155,slow=10,SNR=11						
NEW	**Newport**	**30.77**	**347**	P	**P**	**14 29 28.8**	**-0.5**
	baz=161,SNR=41						
NEW				S	**S**	**14 34 34.7**	**+2.3**
	baz=161						
NEW	**Newport**	**30.77**	**347**	P	**P**	**14 29 27.7**	**-1.5**
NEW				pmax	pmax		
	comp=Z,80nm,1.3s						
NEW				MLR	MLR		
	comp=Z,35µm,19.0s						
NEW	**Newport**	**30.77**	**347**	P	**P**	**14 29 27.7**	**-1.5**
NEW	**Newport**	**30.77**	**347**	IAMs_20	IAMs_20	14 41 00.0	
	comp=Z,35µm,19.0s						
I45A	**Fountain**	**30.78**	**30**	P	**P**	**14 29 27.8**	**-1.6**
I45A				IAMs_20	IAMs_20	14 40 40.6	
	comp=Z,44µm,20.0s						
AAM	**Ann Arbor**	**30.84**	**35**	P	**P**	**14 29 29.0**	**-0.9**
	baz=227,SNR=12						
AAM				S	**S**	**14 34 32.6**	**-1.1**
	baz=227						
AAM	**Ann Arbor**	**30.84**	**35**	P	**P**	**14 29 28.1**	**-1.9**
AAM				pmax	pmax		
	comp=Z,307nm,1.2s						
AAM				MLR	MLR		
	comp=Z,22µm,20.0s						
AAM	**Ann Arbor**	**30.84**	**35**	P	**P**	**14 29 28.1**	**-1.9**
J47A	**Sunmer**	**30.89**	**32**	P	**P**	**14 29 28.7**	**-1.6**
J47A				IAmb	IAmb	14 29 35.7	
	comp=Z,328nm,1.5s						
J47A				IAMs_20	IAMs_20	14 42 32.2	
	comp=Z,38µm,18.0s						
T58A	**Grand View Acr**	**30.93**	**48**	P	**P**	**14 29 29.9**	**-0.9**
	baz=241,SNR=20						
T58A				S	**S**	**14 34 36.4**	**+1.3**
	baz=241						
O53A	**New Philadelph**	**30.94**	**40**	P	**P**	**14 29 29.5**	**-1.4**
	baz=233,SNR=34						
O53A				S	**S**	**14 34 32.7**	**-2.6**
	baz=233						
O53A	**New Philadelph**	**30.94**	**40**	P	**P**	**14 29 27.7**	**-3.2**
O53A				IAmb	IAmb	14 29 35.9	
	comp=Z,243nm,1.3s						
O53A				IAMs_20	IAMs_20	14 42 21.7	
	comp=Z,35µm,21.0s						
WALA	**Waterton Lakes**	**30.94**	**351**	P	**P**	**14 29 29.9**	**-0.9**
WALA				IAMs_20	IAMs_20	14 41 28.3	
	comp=Z,57µm,19.0s						
AGMN	**Agassiz Nation**	**31.00**	**14**	P	**P**	**14 29 30.4**	**-0.9**
	baz=201						
AGMN				S	**S**	**14 34 33.7**	**-2.3**
	baz=201						
AGMN	**Agassiz Nation**	**31.00**	**14**	P	**P**	**14 29 29.8**	**-1.5**
AGMN				IAmb	IAmb	14 29 40.7	
	comp=Z,103nm,1.1s						
S57A	**Dark Hollow, R**	**31.04**	**46**	P	**P**	**14 29 30.4**	**-1.3**
	baz=240,SNR=5.7						
S57A				S	**S**	**14 34 39.4**	**+2.5**
	baz=240						
S57A	**Dark Hollow, R**	**31.04**	**46**	P	**P**	**14 29 30.2**	**-1.5**
S57A				IAMs_20	IAMs_20	14 43 39.5	
	comp=Z,42µm,22.0s						
E03A	**Lebam**	**31.09**	**338**	P	**P**	**14 29 31.4**	**-0.7**
D05A	**Enumclaw**	**31.11**	**340**	P	**P**	**14 29 31.2**	**-1.0**
D05A				IAmb	IAmb	14 29 40.4	
	comp=Z,284nm,1.4s						
D05A				IAMs_20	IAMs_20	14 42 08.6	
	comp=Z,44µm,18.0s						
COWI	**Conover**	**31.16**	**24**	P	**P**	**14 29 30.9**	**-1.8**
COWI				IAmb	IAmb	14 29 44.8	
	comp=Z,98nm,0.9s						
U59A	**Littleton**	**31.18**	**49**	IAMs_20	IAMs_20	14 44 05.2	
	comp=Z,31µm,20.0s						
W61A	**Ground Anchor**	**31.27**	**52**	P	**P**	**14 29 33.3**	**-0.5**
	baz=246						
SOLC	**Bahia Solano**	**31.28**	**109**	*e*P	**P**	**14 29 35.5**	**+1.4**
F42A	**Maple Grove Fa**	**31.29**	**26**	P	**P**	**14 29 32.1**	**-1.7**
F42A				IAmb	IAmb	14 29 38.8	
	comp=Z,170nm,1.4s						
V60A	**Jim Taylor Roa**	**31.31**	**51**	P	**P**	**14 29 33.3**	**-0.8**
	baz=245						
V60A				S	**S**	**14 34 41.7**	**+0.6**
	baz=245						
V60A	**Jim Taylor Roa**	**31.31**	**51**	P	**P**	**14 29 31.0**	**-3.1**
V60A				IAmb	IAmb	14 29 53.8	
	comp=Z,232nm,1.4s						
V60A				IAMs_20	IAMs_20	14 42 52.8	
	comp=Z,46µm,21.0s						
B08A	**Colville Reser**	**31.38**	**344**	P	**P**	**14 29 33.0**	**-1.6**
B08A				IAmb	IAmb	14 29 40.3	
	comp=Z,204nm,1.4s						
B08A				IAMs_20	IAMs_20	14 41 35.6	
	comp=Z,53µm,21.0s						
O54A	**Avella**	**31.42**	**41**	P	**P**	**14 29 32.9**	**-2.2**
O54A				IAmb	IAmb	14 29 40.2	
	comp=Z,238nm,1.4s						
O54A				IAMs_20	IAMs_20	14 43 15.3	
	comp=Z,40µm,18.0s						
C06D	**Leavenworth**	**31.42**	**342**	P	**P**	**14 29 34.6**	**-0.4**
	baz=154						
C06D				S	**S**	**14 34 47.1**	**+4.4**
	baz=154						
MCWV	**Mont Chateau**	**31.46**	**42**	P	**P**	**14 29 34.3**	**-1.2**
	baz=236						
MCWV				S	**S**	**14 34 43.1**	**-0.2**
	baz=236						
MCWV	**Mont Chateau**	**31.46**	**42**	P	**P**	**14 29 33.5**	**-1.9**
N53A	**Lisbon**	**31.50**	**40**	P	**P**	**14 29 33.7**	**-2.1**
N53A				IAmb	IAmb	14 29 40.8	
	comp=Z,130nm,1.1s						
N53A				IAMs_20	IAMs_20	14 43 15.6	
	comp=Z,45µm,18.0s						
Q56A	**Snyder Ridge,**	**31.55**	**44**	P	**P**	**14 29 35.2**	**-1.1**
	baz=238,SNR=11						
Q56A				S	**S**	**14 34 47.2**	**+2.4**
	baz=238						
Q56A	**Snyder Ridge,**	**31.55**	**44**	P	**P**	**14 29 34.2**	**-2.0**
Q56A				IAmb	IAmb	14 29 44.5	
	comp=Z,62nm,0.8s						
S58A	**Poland Farm, P**	**31.59**	**47**	P	**P**	**14 29 35.6**	**-1.0**
	baz=241						
S58A				S	**S**	**14 34 44.8**	**-0.6**
	baz=241						
S58A	**Poland Farm, P**	**31.59**	**47**	P	**P**	**14 29 34.4**	**-2.1**
S58A				IAmb	IAmb	14 29 59.4	
	comp=Z,126nm,1.5s						
S58A				IAMs_20	IAMs_20	14 44 08.0	
	comp=Z,28µm,20.0s						
R57A	**Stanardsville**	**31.60**	**46**	P	**P**	**14 29 35.7**	**-0.9**
	baz=239						
R57A				S	**S**	**14 34 48.3**	**+2.6**
	baz=239						
B35A	**Bob, Littlefor**	**31.61**	**17**	P	**P**	**14 29 34.4**	**-2.2**
B35A				IAmb	IAmb	14 29 44.3	
	comp=Z,89nm,1.1s						
T59A	**Double "B" Far**	**31.63**	**49**	P	**P**	**14 29 35.8**	**-1.2**
T59A				IAmb	IAmb	14 29 59.4	
	comp=Z,104nm,1.2s						
M52A	**Chesterland**	**31.64**	**38**	P	**P**	**14 29 35.2**	**-1.9**
M52A				IAMs_20	IAMs_20	14 43 08.2	
	comp=Z,45µm,19.0s						
U60A	**Pendleton**	**31.69**	**50**	P	**P**	**14 29 37.0**	**-0.4**
	baz=244,SNR=6.1						
U60A				S	**S**	**14 34 49.7**	**+2.6**
	baz=244						
K50A	**Casco**	**31.73**	**35**	P	**P**	**14 29 36.1**	**-1.6**
K50A				IAmb	IAmb	14 29 43.1	
	comp=Z,154nm,0.8s						
JSRW	**J. Sargeant Re**	**31.75**	**47**	P	**P**	**14 29 36.5**	**-1.4**
D03D	**Eldon**	**31.78**	**339**	P	**P**	**14 29 39.1**	**+1.0**
	baz=150,SNR=34						
D03D				S	**S**	**14 34 52.2**	**+4.1**
	baz=150						
G45A	**Suttons Bay**	**31.81**	**29**	P	**P**	**14 29 36.5**	**-2.0**
G45A				IAmb	IAmb	14 29 43.6	
	comp=Z,203nm,1.0s						
V61A	**Roper**	**31.83**	**51**	P	**P**	**14 29 36.9**	**-1.8**
V61A				IAMs_20	IAMs_20	14 43 10.3	
	comp=Z,35µm,22.0s						
MOTC	**Monteria, Cord**	**31.86**	**104**	*e*P	**P**	**14 29 38.7**	**-0.5**
R58B	**Mineral**	**31.88**	**47**	P	**P**	**14 29 38.2**	**-0.9**
	baz=241						
R58B				S	**S**	**14 34 52.6**	**+2.7**
	baz=241						
R58B	**Mineral**	**31.88**	**47**	P	**P**	**14 29 37.6**	**-1.5**
R58B				IAMs_20	IAMs_20	14 44 30.5	
	comp=Z,31µm,20.0s						
PIZC	**Pizarro, Choco**	**31.89**	**111**	*e*P	**P**	**14 29 38.1**	**-1.3**
EYMN	**Ely**	**31.90**	**20**	P	**P**	**14 29 38.8**	**-0.5**
	baz=208,SNR=69						
EYMN				S	**S**	**14 34 45.5**	**-4.7**
	baz=208						
EYMN	**Ely**	**31.90**	**20**	P	**P**	**14 29 36.3**	**-2.9**
EYMN				IAmb	IAmb	14 29 45.0	
	comp=Z,131nm,1.2s						
EYMN	**Ely**	**31.90**	**20**	IAMs_20	IAMs_20	14 41 40.3	
	comp=Z,47µm,18.0s						

NLWA	Neilton Lookou	31.92	338	P	P	14 29 37.8	-1.7
NLWA				IAmb	IAmb	14 29 46.3	
	comp=Z,137nm,1.2s						
R58A	Rapidan	31.96	46	P	P	14 29 39.0	-0.8
	baz=240,SNR=6.6						
R58A				S	S	14 34 54.0	+2.8
	baz=240						
M53A	WI Miller and	31.99	39	P	P	14 29 38.7	-1.4
	baz=232,SNR=23						
M53A				S	S	14 34 50.4	-1.1
	baz=232						
M53A	WI Miller and	31.99	39	P	P	14 29 37.2	-2.9
M53A				IAmb	IAmb	14 29 45.1	
	comp=Z,184nm,1.1s						
M53A				IAMs_20	IAMs_20	14 43 20.3	
	comp=Z,43µm,21.0s						
P56A	Dayton Farm, R	32.02	43	P	P	14 29 39.2	-1.1
	baz=237,SNR=28						
P56A				S	S	14 34 53.3	+1.1
	baz=237						
DBBC	Dabeiba	32.03	107	*e*P	P	14 29 42.1	+1.3
Q57A	Strasburg	32.06	45	P	P	14 29 39.9	-0.8
	baz=238,SNR=9.5						
Q57A				S	S	14 34 54.3	+1.5
	baz=238						
B05A	Bryant	32.09	341	P	P	14 29 40.5	-0.3
	baz=152,SNR=21						
B05A				S	S	14 34 55.6	+2.6
	baz=152						
N54A	Moraine State	32.12	40	P	P	14 29 39.9	-1.3
	baz=234,SNR=32						
N54A				S	S	14 34 52.2	-1.4
	baz=234						
N54A	Moraine State	32.12	40	P	P	14 29 38.7	-2.5
N54A				IAmb	IAmb	14 29 46.3	
	comp=Z,221nm,1.1s						
N54A				IAMs_20	IAMs_20	14 44 02.7	
	comp=Z,26µm,18.0s						
B06A	Marblemount	32.13	342	P	P	14 29 40.0	-1.1
B06A				IAMs_20	IAMs_20	14 42 16.5	
	comp=Z,32µm,22.0s						
GR1C	Gorgona, Isla	32.13	115	*e*P	P	14 29 42.8	+1.2
GLMI	Grayling	32.14	31	P	P	14 29 39.9	-1.4
	baz=222,SNR=15						
GLMI				S	S	14 34 55.2	+1.3
	baz=222						
GLMI	Grayling	32.14	31	P	P	14 29 38.5	-2.8
GLMI				IAMs_20	IAMs_20	14 41 32.4	
	comp=Z,34µm,22.0s						
U61A	Possum Corner	32.15	50	P	P	14 29 41.2	-0.3
	baz=245						
U61A	Possum Corner	32.15	50	P	P	14 29 39.0	-2.5
U61A				IAMs_20	IAMs_20	14 43 40.8	
	comp=Z,30µm,21.0s						
S59A	Mechanicsville	32.19	47	P	P	14 29 40.7	-1.1
	baz=242,SNR=8.4						
S59A				S	S	14 34 57.3	+2.6
	baz=242						
V62A	Hyde County Ai	32.19	52	IAMs_20	IAMs_20	14 44 44.4	
	comp=Z,45µm,20.0s						
E43A	Lone Tree Farm	32.26	26	P	P	14 29 40.5	-1.9
E43A				IAmb	IAmb	14 29 47.3	
	comp=Z,178nm,1.2s						
TUMC	Tumaco	32.28	118	*e*P	P	14 29 42.7	-0.2
T60A	Surry	32.29	49	P	P	14 29 41.9	-0.9
	baz=243,SNR=7.5						
T60A				S	S	14 34 56.9	+0.5
	baz=243						
T60A	Surry	32.29	49	P	P	14 29 41.8	-0.9
T60A				IAmb	IAmb	14 29 49.9	
	comp=Z,111nm,0.8s						
T60A				IAMs_20	IAMs_20	14 44 27.6	
	comp=Z,33µm,20.0s						
CBN	Corbin Frederi	32.34	47	P	P	14 29 42.7	-0.5
	baz=241						
CBN				S	S	14 35 00.0	+2.9
	baz=241						
CBN	Corbin Frederi	32.34	47	P	P	14 29 42.0	-1.2
MALC	Bahia Malaga	32.35	113	*e*P	P	14 29 44.8	+1.3
UREC	San Jos de Ur	32.36	105	*e*P	P	14 29 42.7	-0.9
SMRC	Santa Marta, M	32.43	98	*e*P	P	14 29 41.6	-2.6
ALLY	Alegheny Colle	32.43	39	P	P	14 29 42.0	-2.0
ALLY				IAMs_20	IAMs_20	14 43 35.0	
	comp=Z,49µm,21.0s						
Q58A	Fox Den Farm,	32.49	45	P	P	14 29 43.9	-0.6
	baz=240,SNR=5.2						
Q58A				S	S	14 35 00.7	+1.2
	baz=240						
R59A	King George, V	32.52	47	P	P	14 29 44.2	-0.5
	baz=241						
R59A				S	S	14 35 02.9	+3.0
	baz=241						
LGNH	Logne	32.53	85	P	P	14 29 43.0	-2.1
L53A	Girard	32.55	39	P	P	14 29 43.5	-1.5
	baz=232,SNR=32						
L53A				S	S	14 34 58.6	-1.7
	baz=232						
P57A	Homestead Farm	32.55	44	P	P	14 29 44.5	-0.5
	baz=238						
P57A				S	S	14 35 02.6	+2.1
	baz=238						
P57A	Homestead Farm	32.55	44	P	P	14 29 43.4	-1.6
P57A				IAMs_20	IAMs_20	14 44 13.8	
	comp=Z,49µm,18.0s						
S60A	Water View	32.61	48	P	P	14 29 44.8	-0.7
	baz=242,SNR=7.6						
S60A				S	S	14 35 03.0	+1.7
	baz=242						
O56A	Blue Knob Stat	32.61	42	P	P	14 29 44.2	-1.4
	baz=237						
O56A				S	S	14 35 01.1	-0.4
	baz=237						
O56A	Blue Knob Stat	32.61	42	P	P	14 29 42.9	-2.7
O56A				IAMs_20	IAMs_20	14 44 41.4	
	comp=Z,29µm,18.0s						
M54A	Oil Creek Stat	32.63	40	P	P	14 29 44.4	-1.3
	baz=234,SNR=42						
M54A				S	S	14 34 58.7	-3.0
	baz=234						
M54A	Oil Creek Stat	32.63	40	P	P	14 29 43.4	-2.4
M54A				IAMs_20	IAMs_20	14 43 50.9	
	comp=Z,40µm,19.0s						
A04D	Lummi Island	32.69	341	P	P	14 29 45.8	-0.2
	baz=151						
A04D				S	S	14 35 06.0	+3.8
	baz=151						
ERPA	Erie	32.81	38	P	P	14 29 45.5	-1.7
	baz=232,SNR=18						
ERPA				S	S	14 35 06.8	+2.5
	baz=232						
ERPA	Erie	32.81	38	P	P	14 29 44.0	-3.2
ERPA				IAmb	IAmb	14 29 52.1	
	comp=Z,126nm,0.9s						
ERPA				IAMs_20	IAMs_20	14 43 08.0	
	comp=Z,31µm,19.0s						
ARGC	Ariguani, Magd	32.81	101	*e*P	P	14 29 37.5	-10
ULM	Lac du Bonnet	32.83	13	P	P	14 29 46.3	-1.1
	comp=Z,45nm,0.9s,baz=202,slow=9.2,SNR=80						
ULM				LR	LR	14 43 16.0	
	comp=Z,48µm,19.0s,baz=198,slow=37						
ULM	Lac du Bonnet	32.83	13	P	P	14 29 44.6	-2.8
ULM				pmax	pmax		
	comp=Z,261nm,1.5s						
ULM				MLR	MLR		
	comp=Z,54µm,18.0s						
ULM	Lac du Bonnet	32.83	13	P	P	14 29 44.6	-2.8
ULM				IAmb	IAmb	14 29 52.3	
	comp=Z,261nm,1.4s						
PGC	Sidney	32.86	340	P	P	14 29 46.2	-1.4
PLMC	San Jos del P	32.87	111	*e*P	P	14 29 45.7	-2.5
R60A	Leonardtown, M	32.92	47	S	S	14 35 09.7	+3.5
	baz=242						
N56A	West Decatur	33.14	42	P	P	14 29 48.7	-1.5
	baz=236,SNR=24						
N56A				S	S	14 35 09.0	-0.6
	baz=236						
Q59A	Harwood	33.15	46	P	P	14 29 49.5	-0.7
	baz=241						
Q59A				S	S	14 35 11.7	+1.9
	baz=241						
O57A	Amberson	33.18	43	P	P	14 29 49.4	-1.2
	baz=238,SNR=20						
O57A				S	S	14 35 10.7	+0.4
	baz=238						
YOTC	Yotoco, Valle	33.23	112	*e*P	P	14 29 52.0	+0.6
I51A	Listowel	33.28	35	P	P	14 29 50.4	-0.9
	baz=229,SNR=34						
I51A				S	S	14 35 11.0	-0.7
	baz=229						
SDMD	Soldier's Deli	33.30	45	P	P	14 29 48.9	-2.6
SMLC	San Martn de	33.32	102	*e*P	P	14 29 51.3	-0.7
OTAV	Otavalo	33.38	120	P	P	14 29 53.7	+0.7
OTAV				pmax	pmax		
	comp=Z,483nm,1.5s						
OTAV	Otavalo	33.38	120	P	P	14 29 53.7	+0.7
OTAV	Otavalo	33.38	120	*e*P	P	14 29 54.8	+1.7
OTAV	Otavalo	33.38	120	*e*P	P	14 29 55.4	+2.4
BBAC	Balboa, Cauca	33.42	116	*e*P	P	14 29 52.9	-0.3
E46A	Sault Ste Mari	33.43	29	P	P	14 29 50.2	-2.4
E46A				IAmb	IAmb	14 29 57.8	
	comp=Z,110nm,1.2s						
N57A	Milroy	33.53	42	P	P	14 29 52.2	-1.4
	baz=237,SNR=18						
N57A				S	S	14 35 16.3	+0.7
	baz=237						
M56A	Emporium	33.53	41	P	P	14 29 51.4	-2.2
	baz=236,SNR=5.4						
M56A				S	S	14 35 15.7	+0.1
	baz=236						
M56A	Emporium	33.53	41	P	P	14 29 51.6	-2.0
M56A				IAmb	IAmb	14 29 58.4	
	comp=Z,173nm,1.3s						
M56A				IAMs_20	IAMs_20	14 44 56.6	
	comp=Z,31µm,19.0s						
GUY2C	Guyana, Caldas	33.54	109	*e*P	P	14 29 54.9	+0.4
O58A	Lewisberry	33.60	44	P	P	14 29 52.7	-1.5
	baz=239						
O58A				S	S	14 35 17.6	+0.8
	baz=239						
POPC	Popayan, Colom	33.65	115	*e*P	P	14 29 56.3	+1.1
P59A	Jarrettsville	33.67	45	P	P	14 29 54.2	-0.6
	baz=240						
P59A				S	S	14 35 18.8	+1.1
	baz=240						
GRTK	Grand Turk	33.73	79	IAMs_20	IAMs_20	14 45 46.2	
	comp=Z,28µm,18.0s						
SDDR	Presa de Saban	33.73	83	P	P	14 29 54.0	-1.6
SDDR				IAmb	IAmb	14 30 10.2	
	comp=Z,131nm,1.1s						
GCUF	Volcan Galeras	33.76	117	*e*P	P	14 29 58.3	+1.9
PAGS	Pennsylvania G	33.79	44	P	P	14 29 53.5	-2.3
PAGS				IAmb	IAmb	14 30 07.6	
	comp=Z,105nm,1.2s						
WVNY	West Valley, N	33.80	39	P	P	14 29 53.7	-2.3
WVNY				IAmb	IAmb	14 30 00.9	
	comp=Z,166nm,0.9s						
WVNY				IAMs_20	IAMs_20	14 43 37.8	
	comp=Z,26µm,19.0s						
PTBC	PUERTO BERRIO,	33.81	106	*e*P	P	14 29 55.2	-1.1
NORC	Norcasia	33.84	108	*e*P	P	14 29 57.2	+0.6
MVL	Millersville	33.92	44	P	P	14 29 53.9	-3.0
PCON	Cinco Dias	33.99	115	*e*P	P	14 29 58.3	-0.3
Q61A	Milford	34.08	47	P	P	14 29 58.2	-0.1
	baz=242						
Q61A				S	S	14 35 28.2	+4.2
	baz=242						
N58A	Sunbury	34.11	43	P	P	14 29 57.1	-1.5
	baz=238,SNR=6.2						
N58A				S	S	14 35 25.3	+0.7
	baz=238						
N58A	Sunbury	34.11	43	P	P	14 29 56.7	-1.9
N58A				IAmb	IAmb	14 30 03.7	
	comp=Z,182nm,1.4s						
N58A				IAMs_20	IAMs_20	14 45 01.0	
	comp=Z,41µm,18.0s						
M57A	Sunshine Farm,	34.11	42	P	P	14 29 57.2	-1.4
	baz=237,SNR=7.6						
M57A				S	S	14 35 23.4	-1.2
	baz=237						
M57A	Sunshine Farm,	34.11	42	P	P	14 29 56.6	-2.0
M57A				IAmb	IAmb	14 30 03.9	
	comp=Z,116nm,1.1s						
O59A	Robesonia	34.18	44	P	P	14 29 58.2	-1.1
	baz=240,SNR=16						
O59A				S	S	14 35 25.9	+0.2
	baz=240						
OCAC	Ocana	34.22	103	*e*P	P	14 30 00.6	+0.6
ORTC	Ortega, Tolima	34.24	111	*e*P	P	14 30 00.9	+0.9
BRRC	Barranca, Sant	34.27	105	*e*P	P	14 30 00.1	-0.2
L56A	Greenwood	34.28	40	P	P	14 29 58.8	-1.3
	baz=236,SNR=16						
L56A				S	S	14 35 25.5	-1.8
	baz=236						
L56A	Greenwood	34.28	40	P	P	14 29 57.6	-2.6
L56A				IAmb	IAmb	14 30 05.3	
	comp=Z,154nm,1.1s						
J54A	Appleton	34.30	38	P	P	14 29 57.1	-3.1
J54A				IAmb	IAmb	14 30 05.0	
	comp=Z,156nm,0.9s						
J54A				IAMs_20	IAMs_20	14 45 12.9	
	comp=Z,41µm,19.0s						
P60A	Greenville	34.30	45	P	P	14 29 59.4	-0.9
	baz=241						
P60A				S	S	14 35 29.6	+2.0
	baz=241						
P60A	Greenville	34.30	45	P	P	14 29 58.3	-2.0
P60A				IAmb	IAmb	14 30 12.6	
	comp=Z,90nm,1.1s						
MEDO	Medina	34.34	38	P	P	14 29 58.0	-2.6
MEDO				IAmb	IAmb	14 30 05.4	
	comp=Z,164nm,1.0s						
URIC	Uribia, Colomb	34.38	96	*e*P	P	14 29 58.5	-2.7
WUPA	West Chester U	34.38	45	P	P	14 29 58.0	-2.9
MMNY	Mt. Morris Dam	34.41	39	P	P	14 29 58.1	-3.0
MMNY				IAmb	IAmb	14 30 06.1	
	comp=Z,214nm,1.1s						
MMNY				IAMs_20	IAMs_20	14 45 24.9	
	comp=Z,24µm,20.0s						
PSUB	Penn St. - Bra	34.48	45	P	P	14 30 00.0	-1.8
PSUB				IAmb	IAmb	14 30 11.3	
	comp=Z,82nm,0.8s						
PSUB				IAMs_20	IAMs_20	14 43 35.9	
	comp=Z,30µm,19.0s						
SPBC	San Pablo de B	34.52	108	*e*P	P	14 30 02.8	+0.2
M58A	Price's Panora	34.55	42	S	S	14 35 31.1	-0.4
	baz=238						
L57A	Andrews Acres	34.65	41	P	P	14 30 01.9	-1.4
	baz=237,SNR=18						
L57A				S	S	14 35 31.3	-1.6
	baz=237						
PRAC	Prado	34.65	111	*e*P	P	14 30 02.8	-0.8
ROSC	El Rosal	34.65	109	P	P	14 30 03.9	-0.1
	comp=Z,5.9nm,0.4s,baz=257,slow=11,SNR=25						
ROSC	El Rosal	34.65	109	*e*P	P	14 30 01.3	-2.7
BETC	Betania	34.65	113	*e*P	P	14 30 06.5	+2.8
O60A	Telford	34.70	45	P	P	14 30 02.9	-0.9
	baz=241,SNR=13						
O60A				S	S	14 35 36.3	+2.6
	baz=241						
K56A	Middlesex	34.74	40	P	P	14 30 02.6	-1.5
	baz=235,SNR=53						
K56A				S	S	14 35 31.5	-2.9
	baz=235						
N59A	State Game Lan	34.76	43	P	P	14 30 03.4	-0.9
	baz=239						
N59A				S	S	14 35 35.5	+0.8
	baz=239						
N59A	State Game Lan	34.76	43	P	P	14 30 01.9	-2.4
N59A				IAmb	IAmb	14 30 16.4	
	comp=Z,102nm,1.2s						
N59A				IAMs_20	IAMs_20	14 45 31.3	
	comp=Z,44µm,18.0s						
J55A	Hilton	34.77	39	P	P	14 30 02.0	-2.3
J55A				IAmb	IAmb	14 30 09.1	
	comp=Z,157nm,1.1s						
J55A				IAMs_20	IAMs_20	14 44 48.6	
	comp=Z,41µm,20.0s						
GARC	Garzon, Huila	34.85	114	*e*P	P	14 30 07.0	+1.4
LUPA	Lehigh Univers	34.87	44	P	P	14 30 02.0	-3.2
SADO	Sadowa	34.94	35	P	P	14 30 04.1	-1.6
	comp=Z,103nm,1.2s,baz=248,slow=9.2,SNR=20						
SADO				PcP	PcP	14 32 40.2	+2.0
	comp=Z,13nm,0.7s,baz=263,slow=3.1,SNR=5.0						
SADO				LR	LR	14 44 21.6	
	comp=Z,21µm,20.4s,baz=248,slow=36						
SADO	Sadowa	34.94	35	P	P	14 30 03.2	-2.5
SADO				IAmb	IAmb	14 30 10.7	
	comp=Z,234nm,1.3s						
SADO	Sadowa	34.94	35	IAMs_20	IAMs_20	14 45 19.9	
	comp=Z,29µm,18.0s						
BARC	Barichara	34.96	106	*e*P	P	14 30 06.8	+0.3
FLOC	Florencia	35.01	115	*e*P	P	14 30 08.0	+1.3
KSPA	Keystone Colle	35.09	43	P	P	14 30 04.3	-2.8
KSPA				IAMs_20	IAMs_20	14 45 32.0	
	comp=Z,48µm,21.0s						
PAMC	Pamplona, Colo	35.12	104	*e*P	P	14 30 09.4	+1.2
H53A	Bobcaygeon	35.12	36	P	P	14 30 06.3	-1.1
	baz=231,SNR=17						
H53A				S	S	14 35 39.4	-0.7
	baz=231						
O61A	Allentown	35.17	46	P	P	14 30 07.2	-0.5
	baz=242						
O61A				S	S	14 35 43.6	+2.7
	baz=242						
N60A	Cedar Hill Far	35.18	44	P	P	14 30 06.9	-0.9
	baz=240						
N60A				S	S	14 35 43.7	+2.7
	baz=240						
K57A	Scipio Center	35.25	40	P	P	14 30 06.9	-1.6
	baz=236						
K57A				S	S	14 35 43.1	+0.9
	baz=236						
CHIC	Chingaza	35.27	109	*e*P	P	14 30 09.8	+0.4
BINY	Binghamton	35.29	41	P	P	14 30 07.8	-1.1
	baz=238,SNR=18						
BINY				S	S	14 35 43.4	+0.6
	baz=238						
BINY	Binghamton	35.29	41	P	P	14 30 07.0	-1.9
BINY				IAmb	IAmb	14 30 14.2	
	comp=Z,149nm,1.0s						
L58A	Harry Jones Me	35.30	42	P	P	14 30 07.8	-1.1
	baz=238,SNR=16						
L58A				S	S	14 35 43.5	+0.5
	baz=238						
M59A	Waymart	35.30	43	P	P	14 30 07.6	-1.4
	baz=239,SNR=5.8						
M59A				S	S	14 35 43.5	+0.5
	baz=239						
RUSC	La Rusia	35.32	107	*e*P	P	14 30 09.9	-0.1
J56A	Wolcott	35.35	39	P	P	14 30 07.6	-1.7
	baz=235,SNR=30						
J56A				S	S	14 35 41.4	-2.3
	baz=235						
J56A	Wolcott	35.35	39	P	P	14 30 07.1	-2.2
J56A				IAmb	IAmb	14 30 14.3	
	comp=Z,141nm,0.9s						
J56A				IAMs_20	IAMs_20	14 45 22.8	
	comp=Z,41µm,18.0s						
BRNJ	Basking Ridge	35.44	45	P	P	14 30 08.6	-1.4
BRNJ				IAmb	IAmb	14 30 17.1	
	comp=Z,92nm,0.9s						
BRNJ				IAMs_20	IAMs_20	14 45 23.3	
	comp=Z,20µm,18.0s						
ODNJ	Ogdensburg	35.61	44	P	P	14 30 09.8	-1.7
ODNJ				IAMs_20	IAMs_20	14 46 23.7	
	comp=Z,31µm,19.0s						
DELO	Deloro Mine	35.64	37	P	P	14 30 09.7	-2.0
DELO				IAmb	IAmb	14 30 16.7	
	comp=Z,127nm,1.2s						
PECO	Prince Edward	35.65	38	P	P	14 30 09.1	-2.7
PECO				IAmb	IAmb	14 30 16.9	
	comp=Z,153nm,0.9s						
PECO				IAMs_20	IAMs_20	14 45 08.7	
	comp=Z,37µm,21.0s						
N61A	South Mountain	35.65	45	P	P	14 30 11.5	-0.4
	baz=241,SNR=14						
N61A				S	S	14 35 50.4	+2.1
	baz=241						
M60A	Port Jervis	35.72	44	P	P	14 30 11.1	-1.3
	baz=240						
M60A				S	S	14 35 51.0	+1.6
	baz=240						
K58A	Earlville	35.81	41	P	P	14 30 11.8	-1.4
	baz=237,SNR=17						
K58A				S	S	14 35 51.8	+1.0
	baz=237						
K58A	Earlville	35.81	41	P	P	14 30 11.2	-2.1
K58A				IAmb	IAmb	14 30 18.4	
	comp=Z,261nm,1.4s						
K58A				IAMs_20	IAMs_20	14 46 26.9	
	comp=Z,27µm,20.0s						
L59A	Walton	35.88	42	P	P	14 30 13.1	-0.9
	baz=239,SNR=6.8						
L59A				S	S	14 35 52.4	+0.4
	baz=239						
L59A	Walton	35.88	42	P	P	14 30 12.7	-1.3
L59A				IAmb	IAmb	14 30 19.6	
	comp=Z,211nm,1.2s						
L59A				IAMs_20	IAMs_20	14 45 27.9	
	comp=Z,37µm,21.0s						
TRNY	Table Rock, Ra	35.89	44	P	P	14 30 12.0	-2.0
CPNY	Central Park	35.90	45	P	P	14 30 11.7	-2.3
CPNY				IAMs_20	IAMs_20	14 46 17.3	
	comp=Z,42µm,18.0s						
G54A	Lake Saint Pet	35.91	35	P	P	14 30 12.6	-1.5
	baz=231,SNR=33						
G54A				S	S	14 35 52.1	-0.1
	baz=231						
PAL	Palisades	36.03	45	P	P	14 30 14.1	-1.0
	baz=242,SNR=9.4						
PAL				S	S	14 35 55.0	+0.8
	baz=242						
PAL	Palisades	36.03	45	P	P	14 30 13.6	-1.6
PAL				pmax	pmax		
	comp=Z,141nm,1.2s						
PAL				MLR	MLR		
	comp=Z,47µm,18.0s						
PAL	Palisades	36.03	45	P	P	14 30 13.6	-1.6
PAL				IAmb	IAmb	14 30 27.5	
	comp=Z,141nm,1.1s						
PLVO	Plevna	36.26	37	P	P	14 30 14.7	-2.4
PLVO				IAmb	IAmb	14 30 22.2	
	comp=Z,198nm,1.2s						
PLVO				IAMs_20	IAMs_20	14 46 49.8	
	comp=Z,21µm,18.0s						
M61A	Granite Spring	36.27	44	P	P	14 30 16.7	-0.6
	baz=241						
M61A				S	S	14 35 59.7	+1.8
	baz=241						
ALGO	Algonquin Park	36.28	35	P	P	14 30 16.1	-1.1
	baz=231,SNR=50						
ALGO				S	S	14 35 57.3	-0.6
	baz=231						
TAMC	Tame, Arauca	36.29	105	*e*P	P	14 30 18.6	+0.9
N62A	Caumsett State	36.29	45	P	P	14 30 15.7	-1.7
	baz=242						
N62A				S	S	14 35 59.8	+1.7
	baz=242						
FFC	Flin Flon	36.30	5	P	P	14 30 15.3	-2.0
FFC				pmax	pmax		
	comp=Z,239nm,1.4s						
FFC				MLR	MLR		
	comp=Z,22µm,21.0s						
FFC	Flin Flon	36.30	5	P	P	14 30 15.2	-2.0
FFC				IAmb	IAmb	14 30 23.7	
	comp=Z,239nm,1.4s						
L60A	Shokan	36.31	43	P	P	14 30 16.2	-1.4
	baz=240,SNR=6.4						
L60A				S	S	14 35 58.7	+0.3
	baz=240						
K59A	Cooperstown	36.31	41	P	P	14 30 16.6	-1.0
	baz=238,SNR=5.2						
K59A				S	S	14 35 56.7	-1.7
	baz=238						
PTLC	Puerto Leguiza	36.47	116	*e*P	P	14 30 20.9	+1.7
SDV	Santo Domingo	36.49	100	P	P	14 30 18.6	-1.1
SDV				IAmb	IAmb	14 30 42.9	
	comp=Z,295nm,1.2s						
SDV	Santo Domingo	36.49	100	*e*P	P	14 30 19.0	-0.7
SDV	Santo Domingo	36.49	100	*e*P	P	14 30 20.4	+0.8
WSPT	Westport, CT	36.50	45	P	P	14 30 17.1	-2.0
WSPT				IAmb	IAmb	14 30 25.6	
	comp=Z,116nm,1.0s						
WSPT				IAMs_20	IAMs_20	14 47 12.2	
	comp=Z,30µm,22.0s						
KSCT	Kent School, K	36.66	44	P	P	14 30 17.8	-2.7
KSCT				IAmb	IAmb	14 30 27.2	
	comp=Z,95nm,0.9s						
KSCT				IAMs_20	IAMs_20	14 47 18.5	
	comp=Z,32µm,21.0s						
I58A	Old Forge	36.72	40	P	P	14 30 19.6	-1.6
	baz=237,SNR=20						
I58A				S	S	14 36 02.3	-2.5
	baz=237						
YLE	Yale	36.83	45	P	P	14 30 19.5	-2.4
YLE				IAMs_20	IAMs_20	14 45 14.9	
	comp=Z,30µm,22.0s						
K60A	Five Rivers En	36.84	42	P	P	14 30 21.1	-1.0
	baz=240						
K60A				S	S	14 36 08.4	+2.1

	baz=240						
L61A	Hillsdale 1, H	36.84	43	P	P	14 30 20.8	-1.2
	baz=240						
L61A				S	S	14 36 08.5	+2.0
	baz=240						
J59A	Piesco	36.89	41	P	P	14 30 21.0	-1.6
	baz=238,SNR=6.0						
J59A				S	S	14 36 06.3	-1.0
	baz=238						
J59A	Piesco	36.89	41	P	P	14 30 19.7	-2.8
J59A				IAMs_20	IAMs_20	14 46 22.5	
	comp=Z,37µm,18.0s						
H57A	Richville	36.90	39	P	P	14 30 21.1	-1.4
	baz=236,SNR=26						
H57A				S	S	14 36 06.4	-0.9
	baz=236						
M62A	Hamden	36.91	44	P	P	14 30 21.3	-1.3
	baz=242						
M62A				S	S	14 36 10.4	+2.8
	baz=242						
K61A	Williamstown	37.26	42	P	P	14 30 25.2	-0.5
	baz=240						
K61A				S	S	14 36 12.7	-0.2
	baz=240						
NCB	Newcomb	37.33	40	P	P	14 30 23.9	-2.3
NCB				IAMs_20	IAMs_20	14 46 28.3	
	comp=Z,33µm,18.0s						
L62A	Suffield	37.34	44	S	S	14 36 12.7	-1.4
	baz=242						
L62A	Suffield	37.34	44	P	P	14 30 25.0	-1.3
L62A				IAmb	IAmb	14 30 34.3	
	comp=Z,125nm,0.8s						
L62A				IAMs_20	IAMs_20	14 47 01.2	
	comp=Z,40µm,20.0s						
ACCN	Adirondack Com	37.37	41	P	P	14 30 24.8	-1.8
BBB	Bella Bella	37.44	339	P	P	14 30 26.6	-0.4
	comp=Z,39nm,1.0s,baz=163,slow=7.9,SNR=12						
BBB	Bella Bella	37.44	339	P	P	14 30 25.9	-1.1
BBB				IAMs_20	IAMs_20	14 45 30.5	
	comp=Z,32µm,20.0s						
J60A	Lant Hill Farm	37.45	42	P	P	14 30 27.3	0.0
	baz=239,SNR=5.0						
J60A				S	S	14 36 16.3	+0.5
	baz=239						
I59A	Olmsteadville	37.45	41	P	P	14 30 25.6	-1.7
	baz=238						
I59A				S	S	14 36 17.0	+1.2
	baz=238						
M63A	Gales Ferry	37.46	45	P	P	14 30 26.5	-0.8
	baz=243						
M63A				S	S	14 36 17.7	+1.7
	baz=243						
M63A	Gales Ferry	37.46	45	P	P	14 30 25.1	-2.3
M63A				IAmb	IAmb	14 30 43.8	
	comp=Z,194nm,1.1s						
M63A				IAMs_20	IAMs_20	14 47 14.4	
	comp=Z,34µm,18.0s						
LONY	Lake Ozonia	37.47	39	P	P	14 30 25.8	-1.6
	baz=236						
LONY				S	S	14 36 15.8	-0.2
	baz=236						
LONY	Lake Ozonia	37.47	39	P	P	14 30 24.9	-2.5
LONY				IAMs_20	IAMs_20	14 46 38.8	
	comp=Z,29µm,19.0s						
G57A	Newington	37.50	38	P	P	14 30 26.4	-1.2
	baz=236,SNR=33						
G57A				S	S	14 36 14.8	-1.6
	baz=236						
L61B	Northampton	37.53	43	P	P	14 30 26.7	-1.2
	baz=241						
L61B				S	S	14 36 18.3	+1.2
	baz=241						
H58A	Gabriels	37.60	39	P	P	14 30 27.1	-1.4
	baz=237,SNR=5.3						
H58A				S	S	14 36 18.2	+0.2
	baz=237						
QUA2	Belchertown	37.66	44	P	P	14 30 27.4	-1.7
QUA2				IAMs_20	IAMs_20	14 47 10.7	
	comp=Z,40µm,22.0s						
E55A	Montcerf-Lytto	37.68	35	P	P	14 30 27.9	-1.3
	baz=233,SNR=5.6						
E55A				S	S	14 36 19.0	-0.2
	baz=233						
I60A	Shoreham	37.84	41	P	P	14 30 29.9	-0.5
	baz=239						
I60A				S	S	14 36 23.5	+1.9
	baz=239						
MLPR	Magueyes Islan	37.84	84	P	P	14 30 28.9	-1.9
MLPR				IAmb	IAmb	14 30 38.9	
	comp=Z,218nm,1.4s						
K62A	Royalston	37.92	43	P	P	14 30 30.6	-0.7
	baz=241						
K62A				S	S	14 36 26.8	+3.9
	baz=241						
K62A	Royalston	37.92	43	P	P	14 30 29.3	-2.0
L63A	North Scituate	37.96	45	P	P	14 30 30.2	-1.4
	baz=243						
L63A				S	S	14 36 25.2	+1.6
	baz=243						
L63A	North Scituate	37.96	45	IAMs_20	IAMs_20	14 47 29.6	
	comp=Z,41µm,20.0s						
VLDQ	Val d'Or	37.98	32	P	P	14 30 28.8	-2.9
ATAH	Atahualpa	38.01	130	LR	LR	14 42 50.9	
	comp=Z,52µm,21.8s,baz=312,slow=31						
H59A	Cadyville	38.02	39	P	P	14 30 30.9	-1.1
	baz=238,SNR=6.9						
H59A				S	S	14 36 27.0	+2.7
	baz=238						
BRYW	Bryant College	38.03	45	P	P	14 30 30.6	-1.6
J61A	Chester	38.05	42	P	P	14 30 32.6	+0.3
	baz=240						
J61A				S	S	14 36 27.3	+2.4
	baz=240						
AOPR	Arecibo Observ	38.07	84	P	P	14 30 30.3	-2.5
AOPR				IAmb	IAmb	14 30 47.5	
	comp=Z,247nm,1.4s						
F57A	Harrington	38.07	37	P	P	14 30 31.5	-1.0
	baz=235,SNR=5.4						
F57A				S	S	14 36 25.5	+0.5
	baz=235						
G58A	Ormstown	38.07	39	P	P	14 30 31.6	-0.9
	baz=237,SNR=20						
G58A				S	S	14 36 26.8	+1.8
	baz=237						
M64A	Tiverton	38.09	45	P	P	14 30 32.1	-0.6
	baz=244						
M64A				S	S	14 36 27.6	+2.1
	baz=244						
M64A	Tiverton	38.09	45	P	P	14 30 30.9	-1.7
M64A				IAMs_20	IAMs_20	14 48 09.0	
	comp=Z,29µm,21.0s						
FRNY	Flat Rock	38.18	39	P	P	14 30 31.0	-2.3
OBIP	Obispado Ponce	38.24	84	P	P	14 30 31.9	-2.3
OBIP				IAmb	IAmb	14 30 47.3	
	comp=Z,160nm,1.1s						
OBIP				IAMs_20	IAMs_20	14 48 42.2	
	comp=Z,25µm,20.0s						
EMPR	Esperanza - Ma	38.26	83	P	P	14 30 31.8	-2.6
EMPR				IAmb	IAmb	14 30 50.6	
	comp=Z,395nm,1.2s						
HRV	Adam Dziewonsk	38.29	44	P	P	14 30 33.8	-0.6
	baz=242						
HRV				S	S	14 36 29.9	+1.4
	baz=242						
HRV	Adam Dziewonsk	38.29	44	P	P	14 30 32.2	-2.1
HRV				pmax	pmax		
	comp=Z,91nm,1.2s						
HRV				MLR	MLR		
	comp=Z,36µm,19.0s						
HRV	Adam Dziewonsk	38.29	44	P	P	14 30 32.2	-2.1
HRV	Adam Dziewonsk	38.29	44	IAMs_20	IAMs_20	14 47 37.3	
	comp=Z,35µm,19.0s						
E56A	St. Veronique	38.30	36	P	P	14 30 34.2	-0.2
	baz=234,SNR=28						
E56A				S	S	14 36 28.8	+0.2
	baz=234						
ICMP	Isla Caja de M	38.34	84	P	P	14 30 34.4	-0.7
ICMP				IAmb	IAmb	14 30 49.1	
	comp=Z,342nm,1.1s						
D55A	Sainte-Anne-du	38.34	35	P	P	14 30 33.6	-1.1
	baz=233,SNR=37						
D55A				S	S	14 36 27.9	-1.3
	baz=233						
TRQ	Mont Tremblant	38.38	37	P	P	14 30 33.3	-1.9
WES	Weston	38.39	44	IAMs_20	IAMs_20	14 47 31.9	
	comp=Z,36µm,21.0s						
K63A	Dunstable	38.39	43	P	P	14 30 34.7	-0.6
	baz=242						
K63A				S	S	14 36 32.1	+2.1
	baz=242						
K63A	Dunstable	38.39	43	P	P	14 30 34.6	-0.6
HNH	Hanover	38.40	42	P	P	14 30 34.2	-1.1
VT1	Waterbury	38.42	40	IAMs_20	IAMs_20	14 47 01.5	
	comp=Z,37µm,19.0s						
J62A	Henniker	38.46	43	P	P	14 30 35.9	+0.1
	baz=241						
J62A				S	S	14 36 31.4	+0.3
	baz=241						
BCX	Boston College	38.47	44	IAMs_20	IAMs_20	14 48 09.9	
	comp=Z,31µm,21.0s						
M65A	Busby, Falmout	38.48	46	P	P	14 30 35.6	-0.3
	baz=244						
M65A				S	S	14 36 32.1	+0.8
	baz=244						
M65A	Busby, Falmout	38.48	46	IAMs_20	IAMs_20	14 48 38.2	
	comp=Z,27µm,18.0s						
L64A	Middleborough	38.51	45	P	P	14 30 36.0	-0.1
	baz=244						
L64A				S	S	14 36 33.1	+1.3
	baz=244						
L64A	Middleborough	38.51	45	P	P	14 30 35.0	-1.2
L64A				IAmb	IAmb	14 30 42.2	
	comp=Z,172nm,1.1s						
L64A				IAMs_20	IAMs_20	14 48 34.1	
	comp=Z,30µm,20.0s						
G59A	Clarenceville	38.55	39	P	P	14 30 38.2	+1.7
	baz=238						
G59A				S	S	14 36 34.2	+1.8
	baz=238						
H60A	Morristown	38.57	40	P	P	14 30 35.7	-1.0
	baz=239						
H60A				S	S	14 36 35.6	+2.8
	baz=239						
F58A	St-Lin Laurent	38.61	38	P	P	14 30 37.9	+0.9
	baz=236						
F58A				S	S	14 36 34.0	+0.8
	baz=236						
SJG	San Juan	38.67	84	P	P	14 30 36.2	-1.6
SJG				pmax	pmax		
	comp=Z,233nm,1.2s						
SJG				MLR	MLR		
	comp=Z,16µm,19.0s						
SJG	San Juan	38.67	84	P	P	14 30 36.2	-1.6
SJG				IAmb	IAmb	14 30 44.7	
	comp=Z,233nm,1.2s						
SJG	San Juan	38.67	84	*e*P	P	14 30 35.9	-1.9
FFD	Franklin Falls	38.68	42	IAMs_20	IAMs_20	14 48 09.0	
	comp=Z,34µm,21.0s						
GCPR	Guaynabo City	38.70	84	P	P	14 30 36.6	-1.5
D56A	ZEC Mazanza, M	38.75	36	P	P	14 30 36.4	-1.8
	baz=234,SNR=8.7						
D56A				S	S	14 36 34.6	-0.8
	baz=234						
PDPR	Patillas Dam,	38.80	84	P	P	14 30 37.2	-1.7
PDPR				IAmb	IAmb	14 30 48.1	
	comp=Z,256nm,1.4s						
LSQQ	Lebel-sur-Quev	38.84	32	P	P	14 30 37.7	-1.1
	baz=229						
LSQQ				S	S	14 36 36.0	-0.6
	baz=229						
LBNH	Lisbon	38.89	41	P	P	14 30 38.5	-0.9
	baz=240,SNR=5.2						
LBNH				S	S	14 36 38.3	+0.7
	baz=240						
LBNH	Lisbon	38.89	41	P	P	14 30 38.2	-1.2
LBNH				pmax	pmax		
	comp=Z,156nm,1.3s						
LBNH				MLR	MLR		
	comp=Z,54µm,21.0s						
LBNH	Lisbon	38.89	41	P	P	14 30 38.2	-1.2
CBYP	Canovanas	38.92	84	P	P	14 30 38.6	-1.4
CBYP				IAmb	IAmb	14 30 55.2	
	comp=Z,178nm,1.3s						
HUMP	Col San Antoni	38.95	84	P	P	14 30 38.8	-1.4
HUMP				IAmb	IAmb	14 30 54.4	
	comp=Z,257nm,1.4s						
J63A	Strafford	38.96	43	P	P	14 30 39.5	-0.4
	baz=242						
J63A				S	S	14 36 42.1	+3.5
	baz=242						
MATQ	Matagami	38.98	30	P	P	14 30 38.9	-1.2
	baz=227,SNR=8.0						
MATQ				S	S	14 36 37.9	-0.9
	baz=227						
H61A	Lyndonville	39.03	41	P	P	14 30 40.3	-0.3
	baz=240,SNR=5.6						
H61A				S	S	14 36 43.4	+3.7
	baz=240						
G60A	Masonville	39.07	40	P	P	14 30 40.2	-0.7
	baz=239,SNR=8.5						
G60A				S	S	14 36 41.8	+1.5
	baz=239						
I62A	Tamworth	39.08	42	P	P	14 30 40.9	-0.1
	baz=241						
I62A				S	S	14 36 43.8	+3.4
	baz=241						
I62A	Tamworth	39.08	42	P	P	14 30 39.3	-1.7
I62A				IAmb	IAmb	14 30 47.2	
	comp=Z,204nm,1.4s						
E58A	La Victoria	39.20	37	P	P	14 30 40.6	-1.4
	baz=236,SNR=8.7						
E58A				S	S	14 36 42.9	+0.8
	baz=236						
F59A	Saint Guilaume	39.20	38	P	P	14 30 40.8	-1.1
	baz=237,SNR=5.3						
F59A				S	S	14 36 43.6	+1.4
	baz=237						
MTP	Monte Pirata	39.23	84	P	P	14 30 41.0	-1.6
MTP				IAmb	IAmb	14 30 47.1	
	comp=Z,449nm,1.3s						
MOQ	Mont Orford	39.23	39	P	P	14 30 40.8	-1.5
CUPR	Culebra, Puert	39.46	84	P	P	14 30 43.3	-1.2
CUPR				IAmb	IAmb	14 31 00.1	
	comp=Z,265nm,1.4s						
H62A	Milan	39.53	41	P	P	14 30 44.4	-0.4
	baz=241						
H62A				S	S	14 36 48.9	+1.7
	baz=241						
H62A	Milan	39.53	41	P	P	14 30 42.1	-2.6
I63A	Otisfield	39.64	42	P	P	14 30 46.2	+0.6
	baz=242						
I63A				S	S	14 36 52.4	+3.6
	baz=242						
I63A	Otisfield	39.64	42	IAMs_20	IAMs_20	14 47 44.0	
	comp=Z,31µm,19.0s						
G61A	St-Isidore-de-	39.66	40	P	P	14 30 44.9	-0.9
	baz=239,SNR=6.4						
G61A				S	S	14 36 52.6	+3.5
	baz=239						
E59A	St. Maurice	39.70	38	S	S	14 36 49.7	+0.1
	baz=237						
F60A	Warwick	39.76	39	P	P	14 30 45.0	-1.6
	baz=238,SNR=18						
F60A				S	S	14 36 53.4	+2.9
	baz=238						
D58A	Chemin du LacG	39.83	37	P	P	14 30 46.0	-1.1
	baz=236,SNR=8.9						
D58A				S	S	14 36 53.4	+1.8
	baz=236						
DIB	Dawson Inlet,	39.86	336	P	P	14 30 46.8	-0.5
DIB				IAMs_20	IAMs_20	14 45 43.5	
	comp=Z,18µm,20.0s						
CDVI	St. Croix	40.02	84	P	P	14 30 47.6	-1.5
CDVI				IAmb	IAmb	14 30 52.0	
	comp=Z,196nm,1.0s						
LATQ	La Tuque	40.05	36	P	P	14 30 48.3	-0.6
	baz=236,SNR=12						
LATQ				S	S	14 36 55.9	+1.1
	baz=236						
LATQ	La Tuque	40.05	36	P	P	14 30 47.3	-1.6
I64A	Boothbay	40.19	43	P	P	14 30 49.7	-0.4
	baz=243						
I64A				S	S	14 37 00.2	+3.3
	baz=243						
G62A	West of Eustis	40.23	41	P	P	14 30 50.5	-0.1
	baz=241						
G62A				S	S	14 37 00.7	+2.9
	baz=241						
G62A	West of Eustis	40.23	41	P	P	14 30 49.6	-1.0
E60A	Ste Agathe de	40.27	38	P	P	14 30 50.1	-0.7
	baz=238,SNR=6.3						
H63A	New Sharon	40.28	42	P	P	14 30 50.8	-0.1
	baz=242						
H63A				S	S	14 37 02.3	+4.0
	baz=242						
BBSR	BB Station	40.29	62	P	P	14 30 50.0	-1.2
BBSR				IAmb	IAmb	14 31 02.3	
	comp=Z,366nm,1.5s						
F61A	St Evariste	40.33	39	P	P	14 30 51.0	-0.4
	baz=239						
F61A				S	S	14 37 00.8	+1.7
	baz=239						
D59A	Saint-Raymond	40.38	37	S	S	14 36 59.3	-0.5
	baz=237						
G63A	Kingsbury	40.75	41	P	P	14 30 54.2	-0.7
	baz=242						
G63A				S	S	14 37 07.5	+2.1
	baz=242						
H64A	Troy	40.78	42	P	P	14 30 55.5	+0.4
	baz=243						
H64A				S	S	14 37 08.4	+2.6
	baz=243						
D60A	Saint Jean D'O	40.86	38	P	P	14 30 55.9	+0.3
	baz=238,SNR=6.7						
D60A				S	S	14 37 09.1	+2.2
	baz=238						
E61A	Lac Etchemin	40.87	39	P	P	14 30 56.2	+0.4
	baz=239						
E61A				S	S	14 37 07.2	+0.1
	baz=239						
PKME	Peaks-Kenny Pk	41.03	41	S	S	14 37 10.5	+1.0
	baz=242						
PKME	Peaks-Kenny Pk	41.03	41	P	P	14 30 55.0	-2.1
FCC	Fort Churchill	41.24	10	P	P	14 30 57.3	-1.3
FCC				pmax	pmax		
	comp=Z,163nm,1.1s						
FCC	Fort Churchill	41.24	10	P	P	14 30 57.3	-1.3
FCC				IAmb	IAmb	14 31 05.6	
	comp=Z,163nm,1.1s						
F63A	Nahmakanta, Br	41.35	41	P	P	14 30 59.4	-0.3
	baz=242,SNR=5.8						
F63A				S	S	14 37 17.1	+2.7
	baz=242						
F63A	Nahmakanta, Br	41.35	41	P	P	14 30 57.9	-1.8
F63A				IAmb	IAmb	14 31 05.6	
	comp=Z,198nm,1.3s						
G64A	Maxfield	41.36	41	P	P	14 30 59.4	-0.4
	baz=242						
G64A				S	S	14 37 15.1	+0.8
	baz=242						
H65A	Eastbrook	41.43	42	S	S	14 37 13.7	-1.7
	baz=244						
D61A	St Aubert, Com	41.44	38	P	P	14 31 00.4	-0.1
	baz=239,SNR=5.8						
D61A				S	S	14 37 15.2	-0.3
	baz=239						
SABA	Saba	41.48	84	*e*P	P	14 31 03.2	+2.1
SABA	Saba	41.48	84	P	P	14 30 58.9	-2.3
SEUS	St. Eustatius	41.74	84	*e*P	P	14 31 05.6	+2.3
CRAG	Craig	41.85	338	P	P	14 31 02.9	-0.8
CRAG				IAmb	IAmb	14 31 10.2	
	comp=Z,330nm,1.3s						
CRAG				IAMs_20	IAMs_20	14 47 23.2	
	comp=Z,19µm,19.0s						
F64A	Sherman	41.89	41	P	P	14 31 04.0	-0.1
	baz=242						
F64A				S	S	14 37 23.5	+1.2
	baz=242						
F64A	Sherman	41.89	41	P	P	14 31 02.7	-1.5
F64A				IAMs_20	IAMs_20	14 48 52.4	
	comp=Z,35µm,21.0s						
SKI	Saint Kitts	41.99	84	*e*P	P	14 31 06.9	+1.5
SKI	Saint Kitts	41.99	84	P	P	14 31 03.7	-1.7
SKI				pmax	pmax		
	comp=Z,1µm,1.3s						
SKI				MLR	MLR		
	comp=Z,18µm,19.0s						
SKI	Saint Kitts	41.99	84	P	P	14 31 03.7	-1.7
SKI				IAMs_20	IAMs_20	14 51 48.6	
	comp=Z,18µm,19.0s						
D62A	Allapoint, All	42.05	39	P	P	14 31 04.8	-0.7
	baz=240						
D62A				S	S	14 37 24.8	+0.2
	baz=240						
D62A	Allapoint, All	42.05	39	IAMs_20	IAMs_20	14 48 22.6	
	comp=Z,29µm,20.0s						
H66A	Whiting	42.06	43	S	S	14 37 26.2	+1.3
	baz=244						
G65A	Princeton	42.08	42	P	P	14 31 05.3	-0.4
	baz=244						
G65A				S	S	14 37 27.0	+1.9
	baz=244						
G65A	Princeton	42.08	42	P	P	14 31 04.0	-1.7
G65A				IAMs_20	IAMs_20	14 50 11.6	
	comp=Z,33µm,19.0s						
E63A	Oxbow	42.11	40	P	P	14 31 06.0	0.0
	baz=242,SNR=8.2						
E63A				S	S	14 37 23.3	-2.2
	baz=242						
E63A	Oxbow	42.11	40	P	P	14 31 04.8	-1.2
E63A				IAmb	IAmb	14 31 11.7	
	comp=Z,176nm,1.2s						
WRAK	Wrangell Islan	42.34	339	P	P	14 31 08.8	+1.2
	baz=143,SNR=14						
WRAK				S	S	14 37 33.9	+5.4
	baz=143						
WRAK	Wrangell Islan	42.34	339	P	P	14 31 07.3	-0.3
WRAK				IAmb	IAmb	14 31 17.0	
	comp=Z,147nm,1.2s						
WRAK	Wrangell Islan	42.34	339	IAMs_20	IAMs_20	14 47 25.8	
	comp=Z,24µm,21.0s						
NNA	Nana	42.46	133⇑	*e*P	P	14 31 09.9	+0.7
NNA				pmax	pmax		
	comp=Z,632nm,2.1s						
NNA	Nana	42.46	133	P	P	14 31 09.6	+0.4
NNA	Nana	42.46	133	IAMs_20	IAMs_20	14 44 53.8	
	comp=Z,24µm,20.0s						
E64A	Bridgewater	42.47	40	P	P	14 31 08.9	0.0
	baz=242						
E64A				S	S	14 37 31.5	+0.7
	baz=242						
PQI	Presque Isle	42.47	40	P	P	14 31 07.2	-1.7
PQI				IAMs_20	IAMs_20	14 49 34.8	
	comp=Z,30µm,19.0s						
GGN	Saint George	42.51	42	IAMs_20	IAMs_20	14 50 24.6	
	comp=Z,31µm,20.0s						
D63A	Stockholm	42.59	39	P	P	14 31 09.8	-0.1
	baz=241,SNR=8.5						
D63A				S	S	14 37 34.4	+1.8
	baz=241						
MLYT	Lee's Yard	42.61	85	*e*P	P	14 31 11.1	+0.7
TAOE	Nuku Hiva Isla	42.61	233	*e*S	S	14 37 37.0	+3.3
	comp=Z,6µm,25.3s						
TAOE				*e*LQ	LQ	14 41 15.8	
	comp=Z,18µm,27.0s						
TAOE				*e*LR	LR	14 42 50.6	
	comp=Z,86µm,26.3s						
TAOE	Nuku Hiva Isla	42.61	233	*e*T	T	15 16 18.8	
	comp=Z,282nm,0.2s						
CZSB	Cruzeiro do Su	42.70	125	*e*P	P	14 31 12.7	+1.5
ANWB	Willy Bob	42.84	84	*e*P	P	14 31 12.4	+0.1
ANWB	Willy Bob	42.84	84	P	P	14 31 11.2	-1.1
BPA	Boggy Peak	42.87	85	*e*P	P	14 31 10.1	-2.5
CBE	Ff, Capester	43.27	86	*e*P	P	14 31 16.9	+1.1
DLBC	Dease Lake	43.27	342	P	P	14 31 15.4	+0.1
	comp=Z,158nm,1.1s,baz=163,slow=4.4,SNR=33						
TDBA	Terre de Bas,	43.28	86	*e*P	P	14 31 18.3	+2.4
ABD	La Joyeuse, An	43.31	85	*e*P	P	14 31 15.8	-0.3
MAGL	Barre de l'ile	43.60	86	*e*P	P	14 31 19.1	+0.7
DLPL	La Plaine	43.74	87	*e*P	P	14 31 21.7	+2.1
BATG	Bathurst New B	43.94	40	P	P	14 31 19.7	-1.1
BATG				IAmb	IAmb	14 31 26.4	
	comp=Z,186nm,1.3s						
FDF	Fort de France	43.95	88	*e*P	P	14 31 17.2	-4.1
FDF	Fort de France	43.95	88	*e*P	P	14 31 22.4	+1.1
FDF	Fort de France	43.95	88	P	P	14 31 20.0	-1.4
FDF				pmax	pmax		
	comp=Z,273nm,1.2s						
FDF	Fort de France	43.95	88	P	P	14 31 20.0	-1.4
FDF				IAmb	IAmb	14 31 32.9	
	comp=Z,273nm,1.2s						
GRGR	Grenville	44.05	92	*e*P	P	14 31 20.8	-1.3
GRGR	Grenville	44.05	92	P	P	14 31 21.1	-1.0
BIM	Bigot	44.07	88	*e*P	P	14 31 22.9	+0.6
LMN	Caledonia Moun	44.12	42	P	P	14 31 20.5	-1.8
LMN				IAmb	IAmb	14 31 27.9	
	comp=Z,222nm,1.2s						
SVB	Belmont	44.16	90	*e*P	P	14 31 19.3	-3.7
GCMP	Grenada, Carri	44.18	91	*e*P	P	14 31 20.8	-2.3
SVV	Soufriere Volc	44.19	90	*e*	P	14 31 30.0	+6.8

ILAM	**Ilet Lapin Mar**	**44.21**	**88**	*e*P	**P**	**14 31 21.0**	**-2.3**
YKA	**Yellowknife Ar**	**44.22**	**355**	P	**P**	**14 31 21.1**	**-1.6**
	comp=Z,20nm,1.0s,baz=166,slow=7.7,SNR=53						
YKA				PcP	**PcP**	**14 33 09.1**	**+1.9**
	comp=Z,3.9nm,0.8s,baz=156,slow=3.1,SNR=4.9						
YKA				LR	LR	14 50 01.8	
	comp=Z,35µm,18.6s,baz=0.0,slow=36						
YKA				PKPPKP	**P'P'df**	**15 03 07.0**	**-5.6**
	comp=Z,0.5nm,1.1s,baz=47,slow=1.8,SNR=3.5						
SLBI	**Saint Lucia, B**	**44.27**	**89**	*e*P	**P**	**14 31 26.8**	**+3.0**
MPOM	**Morne Pois Mar**	**44.29**	**88**	*e*P	**P**	**14 31 25.5**	**+1.6**
MCLT	**Moule a Chique**	**44.36**	**89**	*e*P	P	14 31 14.2	-10
MCLT	**Moule a Chique**	**44.36**	**89**	P	**P**	**14 31 26.4**	**+1.8**
JIS	**Juneau Island**	**44.48**	**340**	P	**P**	**14 31 24.5**	**-0.4**
JIS				IAMs_20	IAMs_20	14 48 40.6	
	comp=Z,22µm,20.0s						
TRN	**Trinidad (W)**	**44.67**	**94**	*e*P	**P**	**14 31 25.3**	**-1.7**
BESE	**Bessie Mountai**	**44.88**	**340**	P	**P**	**14 31 26.9**	**-1.3**
BESE				IAmb	IAmb	14 31 37.8	
	comp=Z,107nm,1.1s						
BESE				IAMs_20	IAMs_20	14 48 53.0	
	comp=Z,17µm,21.0s						
RPN	**Rapa Nui**	**45.47**	**183**	P	**P**	**14 31 34.4**	**+1.3**
RPN				pmax	pmax		
	comp=Z,278nm,1.2s						
RPN	**Rapa Nui**	**45.47**	**183**	P	**P**	**14 31 34.4**	**+1.3**
HATHI	**Halema‘uma‘u T**	**45.58**	**279**	P	**P**	**14 31 34.6**	**+0.3**
HATHI				IAmb	IAmb	14 31 45.9	
	comp=Z,140nm,1.1s						
BYL	**Byron's Ledge**	**45.58**	**279**	P	**P**	**14 31 34.5**	**+0.1**
BYL				IAmb	IAmb	14 31 45.8	
	comp=Z,129nm,1.1s						
SKAG	**Skagway**	**45.72**	**340**	P	**P**	**14 31 34.9**	**+0.1**
HMH	**Humu‘ula Sheep**	**45.76**	**280**	P	**P**	**14 31 36.2**	**+0.1**
HMH				IAmb	IAmb	14 31 46.6	
	comp=Z,165nm,1.1s						
AIN	**Ainahou**	**45.77**	**279**	P	**P**	**14 31 36.5**	**+0.5**
POHA	**Pohakuloa**	**45.79**	**280**	IAMs_20	IAMs_20	14 44 15.4	
	comp=Z,21µm,20.0s						
BBGH	**Gun Hill**	**45.80**	**90**	*e*P	**P**	**14 31 39.5**	**+3.4**
BBGH	**Gun Hill**	**45.80**	**90**	IAMs_20	IAMs_20	14 52 34.8	
	comp=Z,16µm,22.0s						
MLOA	**Mauna Loa Obse**	**45.86**	**279**	P	**P**	**14 31 36.8**	**-0.2**
MWH	**Moku‘aweowe**	**45.88**	**279**	P	**P**	**14 31 37.1**	**-0.1**
KHU	**Kahuku**	**45.93**	**279**	P	**P**	**14 31 37.4**	**+0.1**
KHU				pmax	pmax		
	comp=Z,330nm,1.4s						
KHU	**Kahuku**	**45.93**	**279**	P	**P**	**14 31 37.4**	**+0.1**
HUH	**Hualalai**	**46.08**	**280**	P	**P**	**14 31 38.7**	**+0.2**
GBN	**Guysborough**	**46.09**	**44**	P	**P**	**14 31 37.2**	**-0.7**
HYT	**Haines Junctio**	**47.47**	**340**	IAMs_20	IAMs_20	14 51 35.4	
	comp=Z,21µm,19.0s						
KIP	**Kipapa**	**47.91**	**282**⇑	*e*P	**P**	**14 31 50.7**	**-1.8**
KIP				pmax	pmax		
	comp=Z,295nm,2.5s						
CTGM	**Chitina Glacie**	**48.85**	**339**	P	**P**	**14 31 58.9**	**-0.4**
CTGM				IAmb	IAmb	14 32 16.2	
	comp=Z,150nm,1.5s						
CTG	**Chitna Glacier**	**48.85**	**339**	P	**P**	**14 32 00.2**	**+0.9**
	baz=134,SNR=11						
CTG				S	**S**	**14 39 08.0**	**+5.3**
	baz=134						
BARN	**Barnard Glacie**	**49.03**	**338**	P	**P**	**14 32 01.4**	**+0.7**
BARN				IAmb	IAmb	14 32 10.1	
	comp=Z,166nm,1.4s						
ETMB	**Extrema**	**49.09**	**122**	*e*P	**P**	**14 32 01.9**	**+0.3**
BALM	**Baldy**	**49.25**	**338**	P	**P**	**14 32 02.7**	**+0.3**
BALM				IAmb	IAmb	14 32 11.6	
	comp=Z,149nm,1.3s						
RKT	**Rikitea**	**49.66**	**215**	*e*S	**S**	**14 39 17.4**	**+2.9**
	comp=Z,3µm,33.2s						
RKT				*e*LQ	LQ	14 43 57.4	
	comp=Z,14µm,27.1s						
RKT				*e*LR	LR	14 46 18.4	
	comp=Z,39µm,26.5s						
RAGM	**Ragged Mountai**	**49.67**	**337**	IAMs_20	IAMs_20	14 50 12.9	
	comp=Z,15µm,19.0s						
MCARA	**McCarthy VSAT**	**49.73**	**338**	P	**P**	**14 32 08.1**	**+2.2**
	baz=133,SNR=25						
MCARA				S	**S**	**14 39 20.0**	**+5.2**
	baz=133						
MCARA	**McCarthy VSAT**	**49.73**	**338**	P	**P**	**14 32 05.7**	**-0.1**
MCARA				IAmb	IAmb	14 32 12.5	
	comp=Z,208nm,1.2s						
VRDI	**Verde Repeater**	**49.78**	**338**	P	**P**	**14 32 05.8**	**-0.7**
VRDI				IAmb	IAmb	14 32 15.5	
	comp=Z,136nm,1.2s						
PTGA	**Pitinga**	**49.97**	**107**	P	**P**	**14 32 08.2**	**-0.2**
PTGA				IAmb	IAmb	14 32 14.5	
	comp=Z,93nm,1.1s						
PTGA	**Pitinga**	**49.97**	**107**	*e*P	**P**	**14 32 09.2**	**+0.8**
DRLN	**Deer Lake**	**49.97**	**41**	P	**P**	**14 32 05.7**	**-2.3**
DRLN				IAmb	IAmb	14 32 14.2	
	comp=Z,283nm,1.5s						
BMRM	**Bremner River**	**50.02**	**337**	P	**P**	**14 32 10.0**	**+1.9**
	baz=131,SNR=14						
BMRM				S	**S**	**14 39 24.9**	**+5.9**
	baz=131						
GLB	**Gilahina Butte**	**50.05**	**338**	P	**P**	**14 32 07.6**	**-0.8**
GLB				IAmb	IAmb	14 32 18.3	
	comp=Z,196nm,1.2s						
GLB				IAMs_20	IAMs_20	14 52 56.8	
	comp=Z,12µm,18.0s						
EYAK	**Cordova Ski Ar**	**50.18**	**336**	P	**P**	**14 32 10.6**	**+1.3**
	baz=129,SNR=9.3						
EYAK				S	**S**	**14 39 24.1**	**+3.1**
	baz=129						
EYAK	**Cordova Ski Ar**	**50.18**	**336**	P	**P**	**14 32 08.4**	**-0.9**
EYAK				IAmb	IAmb	14 32 18.9	
	comp=Z,234nm,1.3s						
EYAK				IAMs_20	IAMs_20	14 50 26.5	
	comp=Z,13µm,19.0s						
HIN	**Hinchinbrook I**	**50.38**	**336**	IAMs_20	IAMs_20	14 50 26.7	
	comp=Z,14µm,19.0s						
MACA	**Manacapuru-AM**	**50.39**	**111**	*e*P	**P**	**14 32 12.8**	**+1.2**
N25K	**Chitina, Valde**	**50.44**	**338**	P	**P**	**14 32 12.6**	**+1.2**
	baz=131,SNR=21						
N25K				S	**S**	**14 39 30.7**	**+5.8**
	baz=131						
N25K	**Chitina, Valde**	**50.44**	**338**	P	**P**	**14 32 09.8**	**-1.6**
N25K				IAmb	IAmb	14 32 20.8	
	comp=Z,138nm,1.2s						
N25K				IAMs_20	IAMs_20	14 54 29.2	
	comp=Z,12µm,18.0s						
KLU	**Klutina**	**50.85**	**337**	P	**P**	**14 32 15.7**	**+1.2**
	baz=130,SNR=22						
KLU				S	**S**	**14 39 35.0**	**+4.5**
	baz=130						
KLU	**Klutina**	**50.85**	**337**	P	**P**	**14 32 14.2**	**-0.3**
KLU				IAmb	IAmb	14 32 23.7	
	comp=Z,230nm,1.3s						
KLU				IAMs_20	IAMs_20	14 51 04.0	
	comp=Z,15µm,22.0s						
SAML	**Samuel**	**51.10**	**119**	P	**P**	**14 32 15.9**	**-1.0**
SAML				pmax	pmax		
	comp=Z,113nm,1.4s						
SAML	**Samuel**	**51.10**	**119**	P	**P**	**14 32 15.9**	**-1.0**
SAML				IAmb	IAmb	14 32 23.5	
	comp=Z,113nm,1.4s						
SAML	**Samuel**	**51.10**	**119**	*e*P	**P**	**14 32 17.4**	**+0.5**
M24K	**Tolsona, Glenn**	**51.33**	**338**	P	**P**	**14 32 20.4**	**+2.3**
	baz=130,SNR=10						
M24K	**Tolsona, Glenn**	**51.33**	**338**	P	**P**	**14 32 16.6**	**-1.4**
AP01	**Chacalluta**	**51.38**	**134**	IAMs_20	IAMs_20	14 49 31.3	
	comp=Z,16µm,21.0s						
SEW	**Seward**	**51.38**	**334**	P	**P**	**14 32 19.8**	**+1.4**
	baz=125,SNR=11						
SEW				S	**S**	**14 39 43.0**	**+5.3**
	baz=125						
SEW	**Seward**	**51.38**	**334**	P	**P**	**14 32 17.9**	**-0.5**
SEW				IAmb	IAmb	14 32 26.8	
	comp=Z,128nm,1.2s						
SEW				IAMs_20	IAMs_20	14 50 30.4	
	comp=Z,13µm,21.0s						
KDAK	**Kodiak Island**	**51.51**	**331**⇓	*e*P	**P**	**14 32 18.6**	**-0.7**
KDAK				pmax	pmax		
	comp=Z,408nm,1.4s						
KDAK	**Kodiak Island**	**51.51**	**331**	P	**P**	**14 32 19.2**	**-0.1**
KDAK				IAmb	IAmb	14 32 28.4	
	comp=Z,262nm,1.4s						
KDAK	**Kodiak Island**	**51.51**	**331**	IAMs_20	IAMs_20	14 51 00.0	
	comp=Z,17µm,21.0s						
EGAK	**Eagle**	**51.54**	**342**	P	**P**	**14 32 19.4**	**-0.1**
	baz=137,SNR=25						
EGAK				S	**S**	**14 39 41.5**	**+1.7**
	baz=137						
EGAK	**Eagle**	**51.54**	**342**	P	**P**	**14 32 19.1**	**-0.3**
EGAK				IAMs_20	IAMs_20	14 52 57.7	
	comp=Z,25µm,22.0s						
LPAZ	**La Paz**	**51.56**	**130**	P	**P**	**14 32 20.8**	**-0.2**
	comp=Z,8.6nm,1.0s,baz=334,slow=8.6,SNR=30						
LPAZ				LR	LR	14 52 46.7	
	comp=Z,16µm,18.5s,baz=312,slow=34						
LPAZ	**La Paz**	**51.56**	**130**	P	**P**	**14 32 20.3**	**-0.7**
LPAZ				pmax	pmax		
	comp=Z,37nm,1.1s						
LPAZ	**La Paz**	**51.56**	**130**	P	**P**	**14 32 20.3**	**-0.7**
OHAK	**Old Harbor**	**51.56**	**330**	P	**P**	**14 32 19.2**	**-0.5**
OHAK				IAMs_20	IAMs_20	14 50 49.6	
	comp=Z,17µm,20.0s						
EPYK	**Eagle Plains**	**51.58**	**345**	P	**P**	**14 32 19.6**	**-0.3**
	baz=143,SNR=24						
EPYK				S	**S**	**14 39 40.4**	**+0.1**
	baz=143						
EPYK	**Eagle Plains**	**51.58**	**345**	P	**P**	**14 32 19.0**	**-0.9**
EPYK				IAmb	IAmb	14 32 28.1	
	comp=Z,130nm,1.3s						
SCM	**Sheep Creek Mo**	**51.58**	**337**	IAMs_20	IAMs_20	14 51 25.5	
	comp=Z,14µm,22.0s						
DOT	**Dot Lake**	**51.63**	**340**	P	**P**	**14 32 18.9**	**-1.4**
DOT				IAmb	IAmb	14 32 31.6	
	comp=Z,163nm,1.5s						
PAX	**Paxson**	**51.65**	**339**	P	**P**	**14 32 20.5**	**0.0**
	baz=131,SNR=28						
PAX				S	**S**	**14 39 42.3**	**+0.8**
	baz=131						
PAX	**Paxson**	**51.65**	**339**	P	**P**	**14 32 18.6**	**-1.8**
PAX				pmax	pmax		
	comp=Z,125nm,1.2s						
PAX	**Paxson**	**51.65**	**339**	P	**P**	**14 32 18.6**	**-1.8**
PAX				IAmb	IAmb	14 32 28.1	
	comp=Z,125nm,1.2s						
SII	**Sitkinak Islan**	**51.68**	**329**	IAMs_20	IAMs_20	14 50 31.9	
	comp=Z,18µm,21.0s						
O22K	**Cooper Landing**	**51.71**	**335**	P	**P**	**14 32 23.2**	**+2.4**
	baz=125						
O22K	**Cooper Landing**	**51.71**	**335**	P	**P**	**14 32 21.1**	**+0.3**
O22K				IAMs_20	IAMs_20	14 50 52.0	
	comp=Z,13µm,20.0s						
BRSE	**Bradley Lake S**	**51.72**	**333**	P	**P**	**14 32 22.3**	**+1.4**
	baz=123,SNR=11						
BRSE				S	**S**	**14 39 48.1**	**+5.7**
	baz=123						
BRLK	**Bradley Lake**	**51.79**	**333**	P	**P**	**14 32 20.9**	**-0.6**
SCRK	**Sand Creek**	**51.83**	**340**	P	**P**	**14 32 22.3**	**+0.5**
	baz=133,SNR=40						
SCRK				S	**S**	**14 39 48.3**	**+4.2**
	baz=133						
C36M	**Paulatuk**	**51.87**	**352**	P	**P**	**14 32 21.2**	**-0.7**
	baz=159,SNR=56						
C36M				S	**S**	**14 39 44.5**	**+0.4**
	baz=159						
C36M	**Paulatuk**	**51.87**	**352**	P	**P**	**14 32 20.1**	**-1.7**
PB16	**IPOC Station P**	**51.94**	**133**	P	**P**	**14 32 23.9**	**+0.2**
PB16				IAMs_20	IAMs_20	14 50 05.9	
	comp=Z,15µm,20.0s						
SML	**Sawmill**	**51.95**	**336**	P	**P**	**14 32 23.2**	**+0.6**
	baz=127,SNR=16						
SML				S	**S**	**14 39 46.5**	**+1.0**
	baz=127						
SML	**Sawmill**	**51.95**	**336**	P	**P**	**14 32 21.6**	**-1.0**
SML				IAmb	IAmb	14 32 31.4	
	comp=Z,179nm,1.2s						
RC01	**Rabbit Creek A**	**52.06**	**335**	P	**P**	**14 32 24.2**	**+0.8**
	baz=125,SNR=8.2						
RC01				S	**S**	**14 39 52.0**	**+4.9**
	baz=125						
PMR	**Palmer**	**52.12**	**336**	P	**P**	**14 32 23.9**	**0.0**
PMR				pmax	pmax		
	comp=Z,126nm,1.2s						
PMR	**Palmer**	**52.12**	**336**	P	**P**	**14 32 23.9**	**0.0**
PMR				IAmb	IAmb	14 32 30.0	
	comp=Z,126nm,1.2s						
WAT6	**Susitna Watana**	**52.20**	**337**	P	**P**	**14 32 25.7**	**+1.0**
	baz=128,SNR=30						
WAT6				S	**S**	**14 39 50.4**	**+1.1**
	baz=128						
PSGCX	**Pisagua**	**52.38**	**134**	P	**P**	**14 32 26.5**	**+0.1**
PSGCX				IAMs_20	IAMs_20	14 50 34.8	
	comp=Z,13µm,20.0s						
MNMC	**Minye Minye**	**52.42**	**134**	P	**P**	**14 32 26.9**	**0.0**
MNMC				IAMs_20	IAMs_20	14 50 03.7	
	comp=Z,13µm,22.0s						
INK	**Inuvik**	**52.48**	**348**	P	**P**	**14 32 25.4**	**-0.9**
	comp=Z,135nm,1.1s,baz=142,slow=7.8,SNR=69						
INK	**Inuvik**	**52.48**	**348**	P	**P**	**14 32 25.1**	**-1.3**
INK				pmax	pmax		
	comp=Z,260nm,1.3s						
INK	**Inuvik**	**52.48**	**348**	P	**P**	**14 32 25.1**	**-1.3**
SUA	**Susitna One**	**52.68**	**335**	P	**P**	**14 32 28.0**	**-0.2**
	baz=124,SNR=31						
SUA	**Susitna One**	**52.68**	**335**	P	**P**	**14 32 27.8**	**-0.4**
SUA				IAmb	IAmb	14 32 33.7	
	comp=Z,199nm,1.2s						
WAT2	**Susitna Watana**	**52.74**	**338**	P	**P**	**14 32 28.2**	**-0.4**
	baz=128,SNR=50						
WAT2				S	**S**	**14 39 57.0**	**+0.4**
	baz=128						
TA02	**Huaiquique**	**52.84**	**135**	*e*P	**P**	**14 32 31.0**	**+1.3**
RSO	**Redoubt South**	**52.95**	**334**	P	**P**	**14 32 30.4**	**+0.1**
TA01	**Diego Aracena**	**53.01**	**135**	*e*P	**P**	**14 32 31.9**	**+0.9**
TA01	**Diego Aracena**	**53.01**	**135**	P	**P**	**14 32 30.5**	**-0.5**
TA01				IAMs_20	IAMs_20	14 50 09.7	
	comp=Z,12µm,20.0s						
CUT	**Chulitna**	**53.03**	**336**	P	**P**	**14 32 30.9**	**+0.3**
	baz=125,SNR=29						
HDA	**Harding Lake**	**53.09**	**340**	P	**P**	**14 32 31.5**	**+0.5**
	baz=130,SNR=35						
HDA				S	**S**	**14 40 02.2**	**+1.1**
	baz=130						
HDA				S	**S**	**14 40 02.2**	**+1.1**
	baz=130						
HDA	**Harding Lake**	**53.09**	**340**	P	**P**	**14 32 31.1**	**0.0**
HDA				IAmb	IAmb	14 32 38.8	
	comp=Z,111nm,1.4s						
RND	**Reindeer**	**53.11**	**338**	P	**P**	**14 32 30.8**	**-0.5**
RND				pmax	pmax		
	comp=Z,160nm,1.2s						
RND				MLR	MLR		
	comp=Z,12µm,21.0s						
RND	**Reindeer**	**53.11**	**338**	P	**P**	**14 32 30.8**	**-0.5**
RND				IAmb	IAmb	14 32 39.0	
	comp=Z,160nm,1.2s						
RND				IAMs_20	IAMs_20	14 54 38.7	
	comp=Z,12µm,21.0s						
PATCX	**Punta Patache**	**53.21**	**136**	IAMs_20	IAMs_20	14 49 35.9	
	comp=Z,12µm,20.0s						
IL18	**Eielson Array**	**53.26**	**340**	P	**P**	**14 32 31.6**	**-0.7**
SKT	**Skwentna**	**53.28**	**336**	P	**P**	**14 32 32.1**	**-0.4**
	baz=124,SNR=25						
SKT				S	**S**	**14 40 05.6**	**+1.9**
	baz=124						
SKT	**Skwentna**	**53.28**	**336**	P	**P**	**14 32 31.5**	**-1.0**
SKT				IAmb	IAmb	14 32 40.8	
	comp=Z,260nm,1.4s						
SKT				IAMs_20	IAMs_20	14 52 16.4	
	comp=Z,12µm,20.0s						
IL31		**53.30**	**340**	P	**P**	**14 32 31.4**	**-1.2**
IL31				IAmb	IAmb	14 32 40.5	
	comp=Z,185nm,1.3s						
ILAR	**Eielson Array**	**53.30**	**340**	P	**P**	**14 32 31.6**	**-1.0**
	comp=Z,81nm,1.1s,baz=153,slow=6.0,SNR=69						
ILAR				LR	LR	14 56 51.7	
	comp=Z,9µm,18.6s,baz=130,slow=38						
ILAR				PKP2bc		15 03 08.6	
	comp=Z,1.0nm,1.1s,baz=287,slow=1.8,SNR=4.5						
ILAR	**Eielson Array**	**53.30**	**340**	P	**P**	**14 32 31.4**	**-1.2**
MCK	**McKinley**	**53.34**	**338**	P	**P**	**14 32 32.3**	**-0.6**
	baz=128,SNR=31						
MCK				S	**S**	**14 40 07.3**	**+2.8**
	baz=128						
PRP	**Porcupine Dome**	**53.37**	**341**	P	**P**	**14 32 32.9**	**-0.3**
	baz=132,SNR=66						
PRP				S	**S**	**14 40 08.9**	**+3.7**
	baz=132						
PRP	**Porcupine Dome**	**53.37**	**341**	P	**P**	**14 32 31.9**	**-1.3**
PRP				IAmb	IAmb	14 32 41.5	
	comp=Z,108nm,1.2s						
PRP				IAMs_20	IAMs_20	14 53 38.2	
	comp=Z,19µm,20.0s						
PB08	**IPOC Station P**	**53.41**	**134**	*e*P	**P**	**14 32 36.0**	**+1.7**
PB08	**IPOC Station P**	**53.41**	**134**	P	**P**	**14 32 33.9**	**-0.5**
PB08				IAmb	IAmb	14 32 46.5	
	comp=Z,94nm,1.4s						
PB08				IAMs_20	IAMs_20	14 53 12.1	
	comp=Z,14µm,19.0s						
WRH	**Wood River Hil**	**53.51**	**339**	P	**P**	**14 32 32.8**	**-1.3**
WRH				IAmb	IAmb	14 32 42.8	
	comp=Z,93nm,1.1s						
CCB	**Clear Creek Bu**	**53.53**	**339**	P	**P**	**14 32 33.0**	**-1.2**
CCB				IAMs_20	IAMs_20	14 55 34.4	
	comp=Z,13µm,19.0s						
TRF	**Thorofare Moun**	**53.66**	**337**	P	**P**	**14 32 34.7**	**-0.7**
	baz=126,SNR=43						
TRF	**Thorofare Moun**	**53.66**	**337**	P	**P**	**14 32 34.4**	**-1.0**
TRF				IAMs_20	IAMs_20	14 55 06.0	
	comp=Z,12µm,18.0s						
COLA	**College**	**53.69**	**340**	P	**P**	**14 32 36.0**	**+0.6**
	baz=129						
COLA	**College**	**53.69**	**340**	*de*P	**P**	**14 32 36.2**	**+0.9**
COLA				pmax	pmax		
	comp=Z,67nm,1.5s						
COLA				MLR	MLR		
	comp=Z,11µm,18.0s						
COLA	**College**	**53.69**	**340**	P	**P**	**14 32 33.9**	**-1.5**
COLA	**College**	**53.69**	**340**	IAMs_20	IAMs_20	14 55 37.8	
	comp=Z,11µm,19.0s						
TCOL	**CIGO, UAF Yank**	**53.69**	**340**	P	**P**	**14 32 36.5**	**+1.1**
	baz=129,SNR=16						
TCOL	**CIGO, UAF Yank**	**53.69**	**340**	P	**P**	**14 32 34.0**	**-1.4**
TCOL				IAMs_20	IAMs_20	14 55 37.8	
	comp=Z,12µm,19.0s						
CHGN	**Chignik**	**53.70**	**327**	P	**P**	**14 32 35.1**	**-0.4**
POKR	**Poker Plat Res**	**53.71**	**340**	P	**P**	**14 32 36.2**	**+0.7**
	baz=130,SNR=25						
POKR	**Poker Plat Res**	**53.71**	**340**	P	**P**	**14 32 34.7**	**-0.9**
POKR				IAmb	IAmb	14 32 43.4	
	comp=Z,108nm,1.2s						
POKR				IAMs_20	IAMs_20	14 55 41.2	
	comp=Z,13µm,20.0s						
PB02	**IPOC Station P**	**53.73**	**136**	*e*P	**P**	**14 32 38.7**	**+2.3**
BWN	**Browne**	**53.80**	**338**	P	**P**	**14 32 35.5**	**-0.7**
BWN				IAMs_20	IAMs_20	14 52 52.1	
	comp=Z,12µm,21.0s						
PB01	**IPOC Station P**	**53.81**	**135**	*e*P	**P**	**14 32 39.0**	**+2.0**
PB01	**IPOC Station P**	**53.81**	**135**	P	**P**	**14 32 35.7**	**-1.2**
PB01				IAmb	IAmb	14 32 44.3	
	comp=Z,113nm,1.4s						
PB01				IAMs_20	IAMs_20	14 50 42.8	
	comp=Z,11µm,20.0s						
MDM	**Murphy Dome**	**53.87**	**340**	P	**P**	**14 32 35.9**	**-0.8**
MDM				IAmb	IAmb	14 32 44.7	
	comp=Z,72nm,1.2s						
MDM				IAMs_20	IAMs_20	14 55 44.4	
	comp=Z,14µm,19.0s						
NEA2	**Nenana**	**53.92**	**339**	P	**P**	**14 32 36.5**	**-0.6**
	baz=128,SNR=81						
KTH	**Kantishna Hill**	**53.95**	**337**	P	**P**	**14 32 36.3**	**-1.1**
KTH				IAmb	IAmb	14 32 45.2	
	comp=Z,210nm,1.3s						
KTH				IAMs_20	IAMs_20	14 59 14.7	
	comp=Z,12µm,19.0s						
FYU	**Fort Yukon**	**54.00**	**342**	P	**P**	**14 32 36.2**	**-1.4**
FYU				IAMs_20	IAMs_20	14 54 24.8	
	comp=Z,16µm,20.0s						
PB07	**IPOC Station P**	**54.02**	**136**	*e*P	**P**	**14 32 40.4**	**+1.8**
PB07	**IPOC Station P**	**54.02**	**136**	P	**P**	**14 32 37.1**	**-1.6**
PB07				IAmb	IAmb	14 32 41.6	
	comp=Z,78nm,1.2s						
PB07				IAMs_20	IAMs_20	14 50 26.5	
	comp=Z,13µm,21.0s						
PPLA	**Purkeypile**	**54.05**	**336**	P	**P**	**14 32 38.1**	**-0.2**
	baz=124,SNR=42						
PPLA				S	**S**	**14 40 15.8**	**+1.5**
	baz=124						
PPLA	**Purkeypile**	**54.05**	**336**	P	**P**	**14 32 37.4**	**-0.8**
PPLA				IAMs_20	IAMs_20	14 52 36.6	
	comp=Z,13µm,22.0s						
PB04	**IPOC Station P**	**54.28**	**137**	*e*P	**P**	**14 32 43.4**	**+2.9**
PB04	**IPOC Station P**	**54.28**	**137**	P	**P**	**14 32 39.2**	**-1.3**
PB04				IAmb	IAmb	14 32 48.7	
	comp=Z,118nm,1.4s						
PB04				IAMs_20	IAMs_20	14 50 01.4	
	comp=Z,17µm,21.0s						
BPAW	**Bear Paw Mtn.**	**54.29**	**338**	P	**P**	**14 32 39.5**	**-0.3**
	baz=126,SNR=23						
BPAW				S	**S**	**14 40 14.3**	**-3.1**
	baz=126						
BPAW	**Bear Paw Mtn.**	**54.29**	**338**	P	**P**	**14 32 38.3**	**-1.6**
BPAW				IAmb	IAmb	14 32 46.8	
	comp=Z,78nm,1.2s						
PB03	**IPOC Station P**	**54.34**	**136**	*e*P	**P**	**14 32 42.9**	**+2.0**
I23K	**Minto, Yukon-K**	**54.36**	**339**	P	**P**	**14 32 40.1**	**-0.2**
	baz=128,SNR=110						
I23K				S	**S**	**14 40 17.4**	**-0.8**
	baz=128						
I23K	**Minto, Yukon-K**	**54.36**	**339**	P	**P**	**14 32 39.2**	**-1.1**
SDPT	**Sand Point**	**54.43**	**326**	P	**P**	**14 32 40.4**	**-0.6**
SVW2	**Sparrevohn**	**54.47**	**333**	P	**P**	**14 32 40.0**	**-1.2**
SVW2				IAmb	IAmb	14 32 49.4	
	comp=Z,167nm,1.2s						
PB09	**IPOC Station P**	**54.50**	**136**	*e*P	**P**	**14 32 41.5**	**-0.6**
PB09	**IPOC Station P**	**54.50**	**136**	P	**P**	**14 32 41.0**	**-1.1**
PB09				IAmb	IAmb	14 32 52.0	
	comp=Z,150nm,1.4s						
PB09				IAMs_20	IAMs_20	14 50 52.0	
	comp=Z,12µm,21.0s						
PB05	**IPOC Station P**	**54.62**	**137**	*e*P	**P**	**14 32 43.9**	**+1.0**
CHUM	**Lake Minchumin**	**54.64**	**337**	P	**P**	**14 32 41.9**	**-0.5**
	baz=124,SNR=16						
MLY	**Manley**	**54.75**	**339**	P	**P**	**14 32 42.7**	**-0.5**
	baz=126,SNR=35						
MLY				S	**S**	**14 40 26.2**	**+2.5**
	baz=126						
PB10	**IPOC Station P**	**54.87**	**138**	*e*P	**P**	**14 32 46.9**	**+2.3**
PB10	**IPOC Station P**	**54.87**	**138**	P	**P**	**14 32 44.6**	**0.0**
PB10				IAMs_20	IAMs_20	14 50 36.0	
	comp=Z,21µm,22.0s						
PB06	**IPOC Station P**	**54.92**	**137**	*e*P	**P**	**14 32 47.6**	**+2.5**
PB06	**IPOC Station P**	**54.92**	**137**	P	**P**	**14 32 44.6**	**-0.5**
PB06				IAMs_20	IAMs_20	14 50 21.3	
	comp=Z,18µm,22.0s						
PPT	**Papeete**	**55.19**	**232**	LR	LR	14 49 46.3	
	comp=Z,15µm,18.7s,baz=46,slow=29						
PPTF	**Pamatai, Papee**	**55.20**	**232**	IAMs_20	IAMs_20	14 49 46.0	
	comp=Z,17µm,22.0s						
PPT2	**Papeete2**	**55.20**	**232**	*e*S	**S**	**14 40 31.5**	**+0.6**
	comp=Z,14µm,26.8s						
PPT2				*e*LR	LR	14 48 42.9	
	comp=Z,84µm,26.5s						
LVC	**Limon Verde**	**55.28**	**136**	P	**P**	**14 32 47.3**	**-0.7**
LVC				pmax	pmax		
	comp=Z,88nm,1.5s						
LVC	**Limon Verde**	**55.28**	**136**	P	**P**	**14 32 47.3**	**-0.7**
LVC	**Limon Verde**	**55.28**	**136**	IAMs_20	IAMs_20	14 51 04.9	
	comp=Z,15µm,20.0s						
LVC	**Limon Verde**	**55.28**	**136**	*e*P	**P**	**14 32 49.4**	**+1.4**
PB15	**IPOC Station P**	**55.34**	**137**	*e*P	**P**	**14 32 50.4**	**+2.2**
PB15	**IPOC Station P**	**55.34**	**137**	IAMs_20	IAMs_20	14 50 32.5	
	comp=Z,19µm,22.0s						
ITTB	**Itaituba**	**55.34**	**109**	*e*P	**P**	**14 32 48.3**	**+0.1**
TTA	**Tatalina**	**55.55**	**335**	P	**P**	**14 32 47.3**	**-1.7**
TTA				pmax	pmax		
	comp=Z,107nm,1.3s						
TTA	**Tatalina**	**55.55**	**335**	P	**P**	**14 32 47.3**	**-1.7**
TTA				IAmb	IAmb	14 32 56.2	
	comp=Z,106nm,1.3s						
MALB	**Monte Alegre**	**55.62**	**106**	*e*P	**P**	**14 32 52.6**	**+2.4**
VILB	**Vilhena**	**55.72**	**121**	*e*P	**P**	**14 32 51.6**	**+0.8**
PB14	**IPOC Station P**	**55.77**	**139**	*e*P	**P**	**14 32 52.4**	**+1.0**
PB14	**IPOC Station P**	**55.77**	**139**	P	**P**	**14 32 51.6**	**+0.2**
FALS	**False Pass**	**55.87**	**324**	P	**P**	**14 32 50.8**	**-0.5**
FALS				IAMs_20	IAMs_20	14 50 38.1	
	comp=Z,11µm,22.0s						
COLD	**Coldfoot**	**55.92**	**341**	P	**P**	**14 32 51.7**	**+0.1**
	baz=128,SNR=50						
COLD				S	**S**	**14 40 42.4**	**+3.3**
	baz=128						
COLD	**Coldfoot**	**55.92**	**341**	P	**P**	**14 32 50.5**	**-1.0**
COLD				IAmb	IAmb	14 32 59.3	
	comp=Z,96nm,1.2s						
RES	**Resolute Bay**	**56.53**	**4**	P	**P**	**14 32 54.1**	**-1.7**
	comp=Z,10nm,0.9s,baz=194,slow=9.3,SNR=26						
TOLK	**Toolik Lake Re**	**56.63**	**343**	P	**P**	**14 32 56.4**	**-0.3**
	baz=130,SNR=35						
TOLK				S	**S**	**14 40 48.8**	**+0.2**
	baz=130						
TOLK	**Toolik Lake Re**	**56.63**	**343**	P	**P**	**14 32 55.5**	**-1.1**

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TOLK                                IAmb     IAmb     14 33 07.7
       comp=Z,151nm,1.4s
GO02   Mina Guanaco      56.66 139  P        P        14 32 58.1 +0.4
GO02                                IAmb     IAmb     14 33 05.4
       comp=Z,127nm,1.2s
GO02                                IAMs_20  IAMs_20  14 51 21.6
       comp=Z,14µm,20.0s
AC01   Pan de Azucar     56.76 140  P        P        14 32 59.1 +1.0
NPGB   Novo Progresso    56.87 112 eP        P        14 32 59.9 +0.7
AKUT   Akutan            56.99 323  P        P        14 32 59.3  0.0
AKUT                                IAMs_20  IAMs_20  14 51 29.9
       comp=Z,11µm,20.0s
MCPB   Macapa, AP        57.07 103 eP        P        14 33 01.4 +0.8
UNV    Unalaska Valle    57.34 323  P        P        14 33 01.5 -0.3
       baz=104
UNV    Unalaska Valle    57.34 323  IAMs_20  IAMs_20  14 51 25.2
       comp=Z,12µm,22.0s
AC04   Llanos de Chal    58.01 142  P        P        14 33 07.3 +0.4
AC04                                IAMs_20  IAMs_20  14 52 02.3
       comp=Z,13µm,22.0s
GO03   Copiap            58.05 141  P        P        14 33 07.5 +0.3
AC02   Maricunga         58.16 140  P        P        14 33 09.5 +0.9
AC02                                IAmb     IAmb     14 33 12.4
       comp=Z,116nm,1.4s
AC02                                IAMs_20  IAMs_20  14 52 07.3
       comp=Z,20µm,20.0s
H03N2  Juan Fernandez    58.21 152  T        T        15 36 07.2
       baz=330,slow=78,SNR=1815
H03N1  Juan Fernandez    58.22 152  T        T        15 36 09.6
       baz=330,slow=78,SNR=1644
H03N3  Juan Fernandez    58.23 152  T        T        15 36 07.6
       baz=330,slow=78,SNR=1642
NIKH   Nikolski High     58.53 321  P        P        14 33 11.4 +1.2
       baz=101
NIKH   Nikolski High     58.53 321  P        P        14 33 10.5 +0.3
NIKH                                IAMs_20  IAMs_20  14 51 37.7
       comp=Z,11µm,21.0s
H03S3  Juan Fernandez    58.55 153  T        T        15 36 31.1
       baz=269,slow=74,SNR=3.5
H03S2  Juan Fernandez    58.55 153  T        T        15 36 31.1
       baz=31,slow=74,SNR=4.3
H03S1  Juan Fernandez    58.57 153  T        T        15 36 29.4
TBI    Tubuai            58.81 227 eS        S        14 41 20.8 +2.7
       comp=Z,9µm,28.5s
TBI                                eLR       LR       14 50 16.0
       comp=Z,68µm,28.0s
TBI    Tubuai            58.81 227 eT        T        15 36 43.1
       comp=Z,12nm,0.2s
LCO    Las Campanas      58.84 143  P        P        14 33 13.6 +0.7
LCO                                 pmax     pmax
       comp=Z,132nm,1.5s
LCO    Las Campanas      58.84 143  P        P        14 33 13.6 +0.7
LCO                                 IAmb     IAmb     14 33 29.1
       comp=Z,132nm,1.4s
LCO                                 IAMs_20  IAMs_20  14 53 10.5
       comp=Z,12µm,20.0s
AC05   El Transito       58.95 142  P        P        14 33 14.5 +0.9
AC05                                IAMs_20  IAMs_20  14 52 15.5
       comp=Z,14µm,19.0s
SLA    San Lorenzo       58.99 135 eP        P        14 33 12.6 -1.4
JOHN   Johnston Islan    59.40 279  IAMs_20  IAMs_20  14 51 36.1
       comp=Z,16µm,22.0s
GO04   Tololo Observa    59.66 144  P        P        14 33 18.5 -0.1
GO04                                IAMs_20  IAMs_20  14 53 36.3
       comp=Z,13µm,20.0s
CO01   Juntas del Tor    59.91 143  P        P        14 33 21.1 +0.8
CO01                                IAmb     IAmb     14 33 28.9
       comp=Z,72nm,1.3s
CO01                                IAMs_20  IAMs_20  14 53 54.9
       comp=Z,15µm,20.0s
ANM    Nome              60.01 335  P        P        14 33 20.2 -0.1
       baz=111,SNR=31
ANM                                 S        S        14 41 36.1 +3.4
       baz=111
ANM    Nome              60.01 335  P        P        14 33 19.4 -0.9
ANM                                 pmax     pmax
       comp=Z,143nm,1.4s
ANM    Nome              60.01 335  P        P        14 33 19.4 -0.9
ANM                                 IAmb     IAmb     14 33 28.5
       comp=Z,143nm,1.4s
VCA    Vinchina          60.10 141 eP        P        14 33 23.2 +1.6
SFJD   Kangerlussuaq     60.15  22  P        P        14 33 21.7 +0.5
       comp=Z,11nm,0.6s,baz=247,slow=3.1,SNR=6.7
SFJD   Kangerlussuaq     60.15  22 i P       P        14 33 23.4 +2.2
       comp=Z,2µm,16.0s
SFJD   Kangerlussuaq     60.15  22  P        P        14 33 21.0 -0.2
SFJD                                pmax     pmax
       comp=Z,139nm,1.5s
SFJD   Kangerlussuaq     60.15  22  P        P        14 33 21.0 -0.2
SFJD                                IAmb     IAmb     14 33 30.6
       comp=Z,139nm,1.5s
SFJD   Kangerlussuaq     60.15  22 i P       P        14 33 23.4 +2.2
SFJD                                IAMs_20  IAMs_20  14 58 43.1
       comp=Z,2µm,16.0s
A21K   Barrow            60.18 344  P        P        14 33 21.4 +0.1
       baz=123,SNR=12
A21K                                S        S        14 41 33.9 -0.7
       baz=123
A21K   Barrow            60.18 344  P        P        14 33 21.1 -0.2
A21K                                IAmb     IAmb     14 33 25.3
       comp=Z,94nm,1.3s
A21K                                IAMs_20  IAMs_20  15 00 36.9
       comp=Z,16µm,18.0s
CO03   El Pedregal       60.23 144  P        P        14 33 22.4 +0.1
CO03                                IAMs_20  IAMs_20  14 53 54.4
       comp=Z,13µm,20.0s
RDOG   Red Dog Mine      60.48 339  P        P        14 33 23.0 -0.5
       baz=115
RDOG                                S        S        14 41 37.9 -0.7
       baz=115
RDOG   Red Dog Mine      60.48 339  IAMs_20  IAMs_20  15 03 51.2
       comp=Z,10µm,19.0s
ILULI  Ilulissat         60.94  20 i P       P        14 33 28.5 +2.0
ILULI  Ilulissat         60.94  20 i P       P        14 33 28.5 +2.0
ILULI  Ilulissat         60.94  20 i P       P        14 33 28.5 +2.0
TULEG  Thule             61.16  10  P        P        14 33 27.3 -0.6
TULEG                               IAmb     IAmb     14 33 35.3
       comp=Z,99nm,1.5s
TULEG  Thule             61.16  10 i P       P        14 33 31.6 +3.7
TULEG                               IAmb     IAmb     14 33 33.8
       comp=Z,55nm,1.2s
TULEG                               IAMs_20  IAMs_20  15 00 36.5
       comp=Z,49µm,12.8s
UPNV   Upernavik         61.28  15 eP        P        14 33 29.7 +0.9
UPNV                                IAMs_20  IAMs_20  15 00 59.0
       comp=Z,22µm,14.0s
NUUG   Nuugaatsiaq       61.40  17 eP        P        14 33 29.2 -0.5
NUUG                                IAMs_20  IAMs_20  15 00 00.4
       comp=Z,36µm,18.0s
PRPB   Parauapebas       61.44 108 eP        P        14 33 32.9 +2.0
TMAB   Tom-Au,PA,Br      61.49 103 eP        P        14 33 32.8 +1.6
ATKA   Atka Island       61.63 320  IAMs_20  IAMs_20  14 53 16.1
       comp=Z,11µm,21.0s
VA03   San Esteban       61.77 145 eP        P        14 33 34.9 +2.1
VA03   San Esteban       61.77 145  P        P        14 33 33.2 +0.4
MT02   Curacav           61.84 146  P        P        14 33 33.3 +0.1
ZON    Zonda             61.89 143  P        P        14 33 34.4 +0.9
ZON                                 pmax     pmax
       comp=Z,192nm,1.2s
ZON    Zonda             61.89 143  P        P        14 33 34.4 +0.9
ZON                                 IAMs_20  IAMs_20  14 55 01.2
       comp=Z,14µm,21.0s
VA05   Santo Domingo     61.90 147 eP        P        14 33 33.5  0.0
PEL    Peldehue          61.99 146 eP        P        14 33 34.3 +0.1
PEL    Peldehue          61.99 146  P        P        14 33 34.6 +0.4
PEL                                 pmax     pmax
       comp=Z,302nm,1.5s
PEL    Peldehue          61.99 146  P        P        14 33 34.6 +0.4
PEL                                 IAMs_20  IAMs_20  14 54 12.4
       comp=Z,17µm,20.0s
KULLO  Kullorsuaq        62.04  13 i P       P        14 33 33.9 +0.1
       comp=Z,38µm,15.0s
KULLO  Kullorsuaq        62.04  13 eP        P        14 33 33.9 +0.1
KULLO                               MLR      MLR
       comp=Z,39µm,15.0s
KULLO  Kullorsuaq        62.04  13 eP        P        14 33 33.9 +0.1
KULLO                               IAMs_20  IAMs_20  15 00 50.9
       comp=Z,39µm,15.3s
MT05   Renca             62.15 146  P        P        14 33 36.0 +0.7
EUNU   Eureka            62.22   4  P        P        14 33 33.7 -1.5
EUNU                                IAmb     IAmb     14 33 57.1
       comp=Z,106nm,1.4s
PP1B   Ponte de Pedra    62.54 122 eP        P        14 33 39.0 +0.9
SNDB   Serra Nova Dou    62.71 115 eP        P        14 33 40.3 +1.0
ADK    Adak              63.14 319  P        P        14 33 41.2 -0.4
ADK                                 pmax     pmax
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       comp=Z,264nm,1.4s
ADK    Adak              63.14 319  P        P        14 33 41.1 -0.4
ADK    Adak              63.14 319  IAMs_20  IAMs_20  14 53 43.8
       comp=Z,12µm,22.0s
BO02   Sierra Bellavi    63.22 147  P        P        14 33 42.5 +0.2
AQDB   Aquidauana        63.46 125 eP        P        14 33 45.0 +0.9
BI03   Tigo              63.73 150  P        P        14 33 46.2 +0.6
ARAG   Araguaiana, MT    64.07 119 eP        P        14 33 49.1 +0.8
BI02   San Fabin de      64.43 149  P        P        14 33 50.2 -0.1
SMTB   Santa Maria do    64.57 110 eP        P        14 33 53.4 +1.7
ANGG   Ammassalik, Gr    64.72  25  P        P        14 33 50.8 -0.9
ANGG   Ammassalik, Gr    64.72  25 i P       P        14 33 55.0 +3.3
RAR    Rarotonga         65.10 235  LR       LR       14 55 23.8
       comp=Z,21µm,18.1s,baz=102,slow=30
ROSB   Rosrio            65.36 102 eP        P        14 33 57.9 +1.1
PEXB   Peixe             65.36 113 eP        P        14 33 58.9 +2.1
CPUP   Villa Florida     65.67 131  P        P        14 33 58.6 +0.2
       comp=Z,15nm,0.9s,baz=328,slow=7.7,SNR=24
CPUP                                LR       LR       15 02 15.2
       comp=Z,11µm,18.8s,baz=328,slow=36
CPUP   Villa Florida     65.67 131  P        P        14 33 58.0 -0.5
CPUP                                IAmb     IAmb     14 34 02.4
       comp=Z,138nm,1.5s
LC01   Cunco             65.92 151  P        P        14 34 00.3 +0.4
SUMG   Summit            66.02  18 i P       P        14 33 59.8 -0.7
       comp=Z,361nm,1.1s
       comp=Z,74µm,18.0s
SUMG   Summit            66.02  18 i P       P        14 33 59.8 -0.7
SUMG                                pmax     pmax
       comp=Z,360nm,1.1s
SUMG                                MLR      MLR
       comp=Z,74µm,18.0s
SUMG   Summit            66.02  18  P        P        14 33 59.0 -1.5
SUMG   Summit            66.02  18 i P       P        14 33 59.9 -0.7
SUMG                                IAmb     IAmb     14 34 07.5
       comp=Z,361nm,1.1s
SUMG                                IAMs_20  IAMs_20  15 00 18.6
       comp=Z,74µm,17.6s
TRCB   Terra Rica        67.12 126 eP        P        14 34 09.1 +1.1
KNTN   Kanton            67.13 259  IAMs_20  IAMs_20  14 55 54.6
       comp=Z,15µm,19.0s
ITRB   Iturama           67.28 122 eP        P        14 34 10.6 +1.6
PCMB   Pacaembu          67.55 124 eP        P        14 34 12.0 +1.3
PLCA   Paso Flores       68.00 151  P        P        14 34 14.8 +1.7
       comp=Z,43nm,1.0s,baz=330,slow=6.9,SNR=36
PLCA                                LR       LR       14 58 05.6
       comp=Z,26µm,18.3s,baz=332,slow=31
PLCA   Paso Flores       68.00 151  P        P        14 34 13.9 +0.7
IPMB   Ipameri, GO       68.19 119 eP        P        14 34 15.8 +0.9
ITQB   Itaqui            68.20 134 eP        P        14 34 16.4 +1.8
SDBA   SAO DESIDERIO     68.47 112 eP        P        14 34 18.5 +1.8
LL01   San Ignacio de    68.49 153  P        P        14 34 17.4 +1.3
GO07   Milladeo Hill,    68.57 154  P        P        14 34 17.1 +0.5
PTGB   Pitanga           68.61 127 eP        P        14 34 18.9 +1.5
NBMO   Morrinhos-CE      69.31 101 eP        P        14 34 23.8 +2.0
BB19B  Bebedouro         69.45 122 eP        P        14 34 24.5 +1.9
ITAB   Concordia         69.96 129 eP        P        14 34 26.6 +1.1
ROSA   Rosais            69.97  55  P        P        14 34 23.5 -2.1
ROSA                                IAmb     IAmb     14 34 41.3
       comp=Z,92nm,1.0s
ROSA                                IAMs_20  IAMs_20  15 06 14.4
       comp=Z,9µm,19.0s
JANB   Januaria          70.15 114 eP        P        14 34 28.5 +1.5
CPSB   Cacapava Do Su    70.84 133 eP        P        14 34 32.3 +1.4
SCO    Scoresbysund      70.99  21 i P       P        14 34 33.5 +2.4
       comp=Z,26µm,17.0s
SCO    Scoresbysund      70.99  21 i P       P        14 34 33.5 +2.4
SCO                                 MLR      MLR
       comp=Z,26µm,17.0s
SCO    Scoresbysund      70.99  21 i P       P        14 34 33.5 +2.4
SCO                                 IAMs_20  IAMs_20  15 01 57.8
       comp=Z,26µm,16.7s
PLTB   Pedras Altas      71.53 134 eP        P        14 34 36.7 +1.6
SPB    Sao Paulo         71.60 124  P        P        14 34 35.3 -0.3
SPB                                 IAmb     IAmb     14 34 42.2
       comp=Z,66nm,1.0s
SPB                                 IAMs_20  IAMs_20  15 05 12.3
       comp=Z,8µm,20.0s
SPB    Sao Paulo         71.60 124 eP        P        14 34 37.6 +2.0
VAO    Valinhos          71.67 123 eP        P        14 34 38.2 +2.0
DAG    Danmarks Havn     71.68  14 i P       P        14 34 34.2 -1.0
       comp=Z,88nm,1.2s
       comp=Z,26µm,18.0s
DAG    Danmarks Havn     71.68  14 eP        P        14 34 34.2 -1.0
DAG                                 pmax     pmax
       comp=Z,88nm,1.2s
DAG                                 MLR      MLR
       comp=Z,26µm,18.0s
DAG    Danmarks Havn     71.68  14 eP        P        14 34 34.2 -1.0
DAG                                 IAmb     IAmb     14 34 41.1
       comp=Z,88nm,1.2s
DAG                                 IAMs_20  IAMs_20  15 06 37.7
       comp=Z,26µm,17.7s
CNLB   Canela            72.06 130 eP        P        14 34 40.4 +2.0
PET01  Itanhaem-SP       72.08 124 eP        P        14 34 40.8 +2.3
CMLA   Cha da Macela     72.23  55  P        P        14 34 36.7 -2.7
CMLA                                pmax     pmax
       comp=Z,270nm,1.4s
CMLA   Cha da Macela     72.23  55  P        P        14 34 36.7 -2.7
BSCB   Bom Sucesso       72.47 120 eP        P        14 34 43.0 +1.9
NBPA   Parau_RN          72.91 102 eP        P        14 34 45.9 +2.2
PARB   Paraibuna         72.91 122 eP        P        14 34 46.2 +2.6
NBLI   Livramento-PB     73.64 104 eP        P        14 34 50.6 +2.5
GDU01  Guandu, BA        73.73 111 eP        P        14 34 51.0 +2.5
MAN01  Angra dos Reis    74.02 121 eP        P        14 34 52.1 +2.0
RCBR   Riachuelo         74.06 102  P        P        14 34 49.5 -1.0
RCBR                                pmax     pmax
       comp=Z,76nm,1.3s
RCBR   Riachuelo         74.06 102  P        P        14 34 49.5 -1.0
RCBR                                IAmb     IAmb     14 34 57.0
       comp=Z,76nm,1.2s
RCBR   Riachuelo         74.06 102  IAMs_20  IAMs_20  15 06 34.7
       comp=Z,8µm,20.0s
RCBR   Riachuelo         74.06 102 eP        P        14 34 53.4 +2.9
SJMB   Sao Joao De Ma    74.44 116 eP        P        14 34 54.4 +1.9
BSFB   Barra de Sao F    74.78 116 eP        P        14 34 56.1 +1.6
NBPV   Pedro Velho       74.83 102 eP        P        14 34 57.0 +2.0
DUB01  Friburgo-RJ       74.95 120 eP        P        14 34 58.1 +2.5
NAN01  Guarapari, ES     74.97 115 eP        P        14 34 57.6 +2.0
RIB01  Linhares ES       75.37 116 eP        P        14 34 58.5 +0.5
CAM01  Campos-RJ         75.43 119 eP        P        14 35 00.3 +2.1
ALF01  Guarapari-ES      75.67 118 eP        P        14 35 01.9 +2.4
NBRF   Rio Formoso -     75.80 104 eP        P        14 35 02.5 +2.0
KBS    Kingsbay          77.18  10deP        P        14 35 09.0 +1.7
KBS                                 pmax     pmax
       comp=Z,157nm,1.7s
KBS                                 MLR      MLR
       comp=Z,22µm,17.0s
KBS    Kingsbay          77.18  10  IAMs_20  IAMs_20  15 15 16.9
       comp=Z,12µm,19.0s
KBS    Kingsbay          77.18  10 eP        P        14 35 10.6 +3.4
KBS                                 IAMs_20  IAMs_20  15 10 12.4
       comp=Z,55µm,16.7s
PET    Petropavlovsk     77.99 322 eP        P        14 35 13.4 +1.2
PET                                eS        S        14 45 04.1 -1.6
PET                                 pmax     pmax
       comp=Z,1µm,17.1s
PET                                 pmax     pmax
       comp=Z,117nm,1.2s
PET                                 pmax     pmax
       comp=Z,2µm,6.1s
PET                                 MLR      MLR
       comp=Z,3µm,20.0s
PET                                 MLR      MLR
       comp=Z,3µm,20.0s
PET    Petropavlovsk     77.99 322  P        P        14 35 11.8 -0.4
PET                                 IAmb     IAmb     14 35 24.1
       comp=Z,118nm,1.2s
SPB4   Spitsbergen Ar    78.33  10  P        P        14 35 12.9 -0.8
SPB5   Spitsbergen Ar    78.33  10  P        P        14 35 12.7 -1.1
SPB5                                IAmb     IAmb     14 35 24.0
       comp=Z,120nm,1.2s
SPA3   Spitsbergen Ar    78.34  10  P        P        14 35 12.9 -0.8
SPA3                                IAmb     IAmb     14 35 22.2
       comp=Z,136nm,1.4s
SPA0   Spitsbergen Ar    78.34  10  P        P        14 35 13.5 -0.2
SPA0                                IAmb     IAmb     14 35 22.2
       comp=Z,147nm,1.4s
SPA2   Spitsbergen Ar    78.34  10  P        P        14 35 13.6 -0.2
SPA2                                IAmb     IAmb     14 35 22.2
       comp=Z,164nm,1.5s
SPB1   Spitsbergen Ar    78.34  10  P        P        14 35 13.7 -0.1
SPB1                                IAmb     IAmb     14 35 22.2
       comp=Z,101nm,1.1s
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SEY    Seymchan          78.41 333  P        P        14 35 14.1 -0.3
       comp=Z,27nm,1.0s,baz=80,slow=6.0,SNR=48
SEY    Seymchan          78.41 333⇑eP        P        14 35 14.2 -0.1
PEA0B  Petropavlovsk-    78.52 322deP        P        14 35 16.9 +1.7
PEA0B  Petropavlovsk-    78.52 322  P        P        14 35 14.6 -0.6
PETK   Petropavlovsk-    78.52 322  P        P        14 35 15.7 +0.6
       comp=Z,44nm,1.1s,baz=74,slow=11,SNR=15
PETK                                LR       LR       15 03 04.1
       comp=Z,6µm,21.6s,baz=77,slow=30
SACV   Santiago Islan    79.19  78  IAMs_20  IAMs_20  15 05 15.6
       comp=Z,8µm,22.0s
PMOZ   Porto Moniz, M    79.97  59 eS        S        14 45 42.1  +14
PMOZ   Porto Moniz, M    79.97  59 eLR       LR       15 01 13.6
SKR    Severo-Kuril's    80.14 320 eP        P        14 35 19.8 -4.2
SKR                                eS        S        14 45 25.0 -3.8
SKR                                 pmax     pmax
       comp=Z,70nm,1.0s
SKR                                 pmax     pmax
       comp=Z,500nm,7.5s
SKR                                 pmax     pmax
       comp=Z,700nm,7.1s
SKR                                 MLR      MLR
       comp=Z,1µm,23.0s
SKR                                 MLR      MLR
       comp=Z,1µm,22.0s
TARA   Tarawa            80.22 268  IAMs_20  IAMs_20  15 02 28.7
       comp=Z,9µm,20.0s
TARA   Tarawa            80.22 268  P        P        14 35 31.3 +6.2
MA2    Magadan           80.24 330  P        P        14 35 25.0 +0.6
       comp=Z,41nm,1.2s,baz=64,slow=5.2,SNR=15
MA2    Magadan           80.24 330ceP        P        14 35 25.4 +1.0
MA2                                 pmax     pmax
       comp=Z,114nm,1.3s
MA2    Magadan           80.24 330  P        P        14 35 23.8 -0.6
MA2                                 IAmb     IAmb     14 35 32.8
       comp=Z,145nm,1.3s
H11N3  WAKE ISLAND Hy    80.44 288  T        T        16 04 48.4
       SNR=39
H11N2  WAKE ISLAND Hy    80.44 288  T        T        16 04 52.3
       baz=332,slow=74,SNR=54
H11N1  WAKE ISLAND Hy    80.45 288  T        T        16 04 48.4
       baz=62,slow=74,SNR=26
KPL    Plockton          80.50  33 eP        P        14 35 26.6 +0.8
KPL                                 IAMs_20  IAMs_20  15 12 28.9
       comp=Z,22µm,14.0s
H11S1  WAKE ISLAND Hy    80.97 286  T        T        16 05 24.6
       baz=54,slow=75,SNR=12
H11S2  WAKE ISLAND Hy    80.97 286  T        T        16 05 24.6
       baz=54,slow=75,SNR=18
H11S3  WAKE ISLAND Hy    80.98 286  T        T        16 05 24.6
       baz=54,slow=75,SNR=11
LAWE   Loch Awe, Argy    80.99  34 eP        P        14 35 29.2 +0.7
LAWE                                IAMs_20  IAMs_20  15 10 06.6
       comp=Z,23µm,19.5s
DSB    Dublin            81.47  37  IAMs_20  IAMs_20  15 11 01.6
       comp=Z,11µm,20.0s
EAB    Aberfoyle         81.57  33 eP        P        14 35 32.4 +0.9
EFI    East Falkland     81.90 152⇓eP        P        14 35 35.0 +1.9
EFI                                 pmax     pmax
       comp=Z,118nm,1.5s
EFI                                 MLR      MLR
       comp=Z,9µm,14.0s
EFI    East Falkland     81.90 152  P        P        14 35 33.8 +0.7
EFI                                 IAmb     IAmb     14 35 38.4
       comp=Z,142nm,1.4s
MSVF   Nonsavu           82.06 248  P        P        14 35 41.1 +6.2
DRUM   Mains of Drumt    82.26  32  IAMs_20  IAMs_20  15 12 57.1
       comp=Z,18µm,19.4s
EDI    Edinburgh         82.27  33 eP        P        14 35 36.4 +1.1
EDI                                 IAMs_20  IAMs_20  15 10 14.8
       comp=Z,21µm,30.8s
TIXI   Tiksi             82.46 345ceP        P        14 35 34.7 -1.2
TIXI                                pmax     pmax
       comp=Z,178nm,1.0s
TIXI                                MLR      MLR
       comp=Z,32µm,18.0s
TIXI   Tiksi             82.46 345  P        P        14 35 34.7 -1.2
TIXI                                IAmb     IAmb     14 35 42.4
       comp=Z,134nm,1.2s
TIXI                                IAMs_20  IAMs_20  15 15 52.9
       comp=Z,8µm,19.0s
ESY    Stoneypath        82.57  33 eP        P        14 35 38.6 +1.7
KWAJ   Kwajalein Atol    82.96 277  IAMs_20  IAMs_20  15 02 29.6
       comp=Z,10µm,22.0s
EDMD   Edmundbyers       83.33  34 eP        P        14 35 42.8 +2.0
EDMD                                IAMs_20  IAMs_20  15 14 54.9
       comp=Z,15µm,16.1s
PGAV   Gavieira, Arco    84.03  48 eS        S        14 46 14.5 +5.1
PGAV   Gavieira, Arco    84.03  48 eLR       LR       15 03 12.8
       comp=Z,7µm,22.0s
PMAFR  Mafra             84.29  51 eP        P        14 35 51.7 +5.6
       comp=Z,280nm,1.7s
PSBE   So Bento          84.46  50 eP        P        14 35 52.7 +5.7
       comp=Z,335nm,2.2s
LIS    Lisbon            84.47  51 eP        P        14 35 45.9 -1.0
LIS                                eSKSac    SKSac    14 46 08.6 -2.6
LIS                                 AMS      AMS      15 12 30.7
       comp=Z,11µm,18.2s
LIS    Lisbon            84.47  51 eP        P        14 35 45.9 -1.0
LIS                                e                  14 46 08.5
LIS    Lisbon            84.47  51 eP        P        14 35 52.5 +5.6
       comp=Z,457nm,1.7s
PCAS   Casmilo, Conde    84.50  50 eP        P        14 35 52.8 +5.7
       comp=Z,359nm,1.4s
CWF    Charnwood Fore    84.51  36 eP        P        14 35 46.6 -0.2
CWF                                 IAMs_20  IAMs_20  15 07 13.2
       comp=Z,23µm,30.0s
COI    Coimbra           84.51  50 eP        P        14 35 52.5 +5.4
       comp=Z,217nm,1.7s
POLO   Lamas de Olo      84.56  48 eP        P        14 35 52.7 +5.2
       comp=Z,126nm,1.6s
PVRL   Vila Real         84.65  48 eP        P        14 35 52.9 +5.0
       comp=Z,235nm,1.7s
PVIS   Viseu             84.71  49 eP        P        14 35 53.2 +5.0
       comp=Z,174nm,1.9s
PMTG   Montargil         85.03  51 eP        P        14 35 54.7 +4.9
       comp=Z,253nm,1.6s
MTE    Manteigas         85.07  49  P        P        14 35 48.4 -1.6
MTE                                 IAmb     IAmb     14 35 55.8
       comp=Z,126nm,1.3s
MTE                                 IAMs_20  IAMs_20  15 16 04.7
       comp=Z,7µm,19.0s
MTE    Manteigas         85.07  49 eP        P        14 35 54.8 +4.8
       comp=Z,214nm,1.1s
MTE    Manteigas         85.07  49 eS        S        14 46 19.0 -0.8
MTE    Manteigas         85.07  49 eLR       LR       15 03 52.8
       comp=Z,6µm,18.0s
PNCL   Nicolau / Gran    85.13  52 eP        P        14 35 55.7 +5.4
       comp=Z,118nm,2.3s
PBRG   Braganca          85.15  48 eP        P        14 35 55.2 +4.8
       comp=Z,106nm,1.6s
PTEO   Sao Teotonio      85.17  52 eP        P        14 35 56.1 +5.6
       comp=Z,247nm,1.6s
MVO    Moncorvo          85.17  48 eP        P        14 35 56.1 +5.5
       comp=Z,258nm,1.7s
MVO    Moncorvo          85.17  48 eS        S        14 46 24.5 +3.7
MVO    Moncorvo          85.17  48 eLR       LR       15 03 44.3
       comp=Z,5µm,18.0s
PFVI   Vila Bisbo        85.23  53  IAMs_20  IAMs_20  15 14 08.3
       comp=Z,8µm,19.0s
PFVI   Vila Bisbo        85.23  53 eP        P        14 35 56.6 +5.8
       comp=Z,254nm,1.8s
MORF   Marmelete         85.31  52 eP        P        14 35 50.3 -1.0
MORF                               eSKSac    SKSac    14 46 14.0 -2.7
MORF                                AMS      AMS      15 10 38.9
       comp=Z,6µm,20.8s
MORF   Marmelete         85.31  52 eP        P        14 35 50.3 -1.0
MORF                               e                  14 46 14.0
MORF   Marmelete         85.31  52 eP        P        14 35 57.0 +5.7
       comp=Z,112nm,2.0s
PCBR   Castelo Branco    85.31  50 eP        P        14 35 56.3 +5.1
       comp=Z,173nm,1.8s
EVO    Evora             85.37  51  P        P        14 35 54.4 +2.9
EVO                                 S        S        14 46 35.1  +12
EVO                                 S        S        14 46 35.1  +12
EVO    Evora             85.37  51⇓eP        P        14 35 56.7 +5.2
       comp=Z,206nm,2.2s
MESJ   Messejana         85.45  52 eP        P        14 35 51.0 -0.9
MESJ                               eS        SKSac    14 46 14.8 -2.6
MESJ                                AMS      AMS      15 13 20.5
       comp=Z,7µm,19.5s
MESJ   Messejana         85.45  52 eP        P        14 35 50.9 -0.9
MESJ                               eS        SKSac    14 46 14.8 -2.6
MESJ   Messejana         85.45  52  A        A        14 35 59.6
       comp=Z,122nm,1.8s
PMRV   Marv??o           85.51  50 eP        P        14 35 57.4 +5.2
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	comp=Z,241nm,2.0s						
PMRV	Marv??o	85.51	50	eS	S	14 46 26.8	+2.7
PMRV	Marv??o	85.51	50	eLR	LR	15 03 48.1	
	comp=Z,8µm,18.0s						
PESTR	Estremoz	85.56	51	IAMs_20	IAMs_20	15 13 17.9	
	comp=Z,7µm,18.0s						
PBEJ	Beja	85.65	51	eP	P	14 35 58.1	+5.2
	comp=Z,91nm,2.0s						
PCVE	Castro Verde	85.65	52	eP	P	14 35 58.5	+5.6
	comp=Z,138nm,1.5s						
PBDV	Barranco-do-Ve	85.87	52	eP	P	14 36 00.0	+6.0
	comp=Z,143nm,2.0s						
ARCES	ARCESS Array B	85.93	15	P	P	14 35 53.3	-0.4
	comp=Z,4.7nm,0.9s,baz=43,slow=7.3,SNR=2.1						
ARCES				LR	LR	15 15 14.2	
	comp=Z,9µm,19.6s,baz=315,slow=36						
PVAQ	Vaqueiros	85.97	52	IAMs_20	IAMs_20	15 14 03.8	
	comp=Z,7µm,20.0s						
PVAQ	Vaqueiros	85.97	52	eP	P	14 36 00.0	+5.5
	comp=Z,117nm,1.5s						
PVAQ	Vaqueiros	85.97	52	eS	S	14 46 33.0	+4.4
PVAQ	Vaqueiros	85.97	52	eLR	LR	15 03 49.6	
	comp=Z,6µm,20.0s						
PBAR	Barrancos	86.21	51	eP	P	14 36 00.8	+5.1
	comp=Z,86nm,1.9s						
NB2	NORSAR Subarra	86.65	25	P	P	14 35 56.9	-0.5
	comp=Z,230nm,2.5s,baz=307,slow=4.8						
NOA	NORSAR Array B	86.65	25	P	P	14 35 57.6	+0.2
	comp=Z,15nm,1.2s,baz=303,slow=4.8,SNR=8.1						
NOA				LR	LR	15 16 30.1	
	comp=Z,5µm,18.7s,baz=295,slow=37						
KONO	Kongsberg	86.72	27	ceP	P	14 35 58.1	+0.4
KONO				pmax	pmax		
	comp=Z,102nm,1.7s						
KONO				MLR	MLR		
	comp=Z,11µm,17.0s						
KONO	Kongsberg	86.72	27	P	P	14 35 56.4	-1.3
KONO				IAmb	IAmb	14 36 07.7	
	comp=Z,118nm,1.2s						
KUR	Kuril'sk	87.23	317	eP	P	14 36 02.6	+2.1
KUR				i S	SKSac	14 46 31.9	+3.7
KUR				pmax	pmax		
	comp=Z,227nm,1.4s						
KUR				pmax	pmax		
	comp=Z,1µm,6.1s						
SFS	San Fernando	87.44	52	P	P	14 36 09.4	+7.7
SFS				S	S	14 46 57.4	+15
AVE	Averroes	87.63	56	P	P	14 36 06.9	+4.2
AVE				S	S	14 46 48.5	+3.6
PAB	San Pablo	87.67	49	IAMs_20	IAMs_20	15 13 18.5	
	comp=Z,7µm,19.0s						
ES16	SONSECA Array	87.87	49	IAMs_20	IAMs_20	15 13 10.7	
	comp=Z,7µm,20.0s						
ES15	SONSECA Array	87.87	49	IAMs_20	IAMs_20	15 13 11.9	
	comp=Z,8µm,20.0s						
ES17	SONSECA Array	87.88	49	IAMs_20	IAMs_20	15 13 12.0	
	comp=Z,7µm,20.0s						
ESDC	Sonseca Array	87.89	49	P	P	14 36 03.1	-0.8
	comp=Z,2.9nm,0.8s,baz=302,slow=5.0,SNR=12						
ESDC				LR	LR	15 13 47.7	
	comp=Z,5µm,21.0s,baz=295,slow=35						
ESDC	Sonseca Array	87.89	49	P	P	14 36 02.3	-1.6
ESBB	Sonseca Array	87.90	49	IAMs_20	IAMs_20	15 13 15.5	
	comp=Z,6µm,19.0s						
ES07	SONSECA Array	87.90	49	IAMs_20	IAMs_20	15 13 12.5	
	comp=Z,6µm,19.0s						
ES02	SONSECA Array	87.91	49	IAMs_20	IAMs_20	15 13 13.9	
	comp=Z,6µm,20.0s						
ES08	SONSECA Array	87.92	49	IAMs_20	IAMs_20	15 13 15.0	
	comp=Z,7µm,20.0s						
ES03	SONSECA Array	87.92	49	IAMs_20	IAMs_20	15 13 14.1	
	comp=Z,7µm,19.0s						
ES12	SONSECA Array	87.92	49	IAMs_20	IAMs_20	15 13 14.2	
	comp=Z,6µm,19.0s						
ES19	SONSECA Array	87.93	49	IAMs_20	IAMs_20	15 13 27.4	
	comp=Z,6µm,20.0s						
ES11	SONSECA Array	87.94	49	IAMs_20	IAMs_20	15 13 15.5	
	comp=Z,7µm,19.0s						
ES09	SONSECA Array	87.94	49	IAMs_20	IAMs_20	15 13 14.6	
	comp=Z,6µm,19.0s						
ES10	SONSECA Array	87.94	49	IAMs_20	IAMs_20	15 13 14.8	
	comp=Z,7µm,19.0s						
NKL	Nikolayevsk	87.99	326	eP	P	14 36 01.5	-2.5
NKL				pmax	pmax		
	comp=E,68nm,0.9s						
NKL				pmax	pmax		
	comp=N,11nm,0.7s						
NKL				pmax	pmax		
	comp=Z,14nm,1.4s						
YAK	Yakutsk	88.11	337	P	P	14 36 04.7	+0.3
	comp=Z,29nm,0.8s,baz=351,slow=0.8,SNR=16						
YAK				LR	LR	15 16 32.0	
	comp=Z,4µm,19.3s,baz=26,slow=36						
YAK	Yakutsk	88.11	337	eP	P	14 36 04.2	-0.1
YAK				e*PP	pwP	14 36 09.0	-2.2
YAK				ePPP	PPP	14 41 24.2	
YAK				eS	SKSac	14 46 31.5	-1.4
YAK				e		14 46 49.7	
YAK				eSS	SS	14 52 40.5	+5.0
YAK				eSSS	SSS	14 56 13.8	
YAK				pmax	pmax		
	comp=Z,47nm,1.1s						
YAK				pmax	pmax		
	comp=E,14nm,1.1s						
YAK				pmax	pmax		
	comp=N,10.0nm,1.3s						
YAK				pmax	pmax		
	comp=Z,466nm,4.4s						
YAK				pmax	pmax		
	comp=E,229nm,4.6s						
YAK				pmax	pmax		
	comp=N,137nm,4.5s						
YAK				smax	smax		
	comp=E,2µm,9.5s						
YAK				smax	smax		
	comp=N,1µm,7.4s						
YAK				MLR	MLR		
	comp=Z,7µm,19.0s						
YAK				MLR	MLR		
	comp=E,4µm,17.0s						
YAK	Yakutsk	88.11	337	P	P	14 36 03.6	-0.7
YAK				IAMs_20	IAMs_20	15 19 33.9	
	comp=Z,6µm,18.0s						
UCM	Universidad Co	88.16	48	P	P	14 36 08.8	+3.7
UCM				S	S	14 46 53.6	+3.9
CEU	Ceuta	88.27	53	P	P	14 36 11.0	+5.3
CEU				S	S	14 47 00.6	+10
SNF	Seneffe	88.61	37	dx	x	14 36 10.8	
EMAL	Malaga-Limoner	88.66	52	P	P	14 36 10.5	+3.0
EMAL				S	S	14 46 58.8	+4.3
BMRD	Maredsous	88.98	37	dx	x	14 36 13.5	
DOU	Dourbes	88.98	37	dx	x	14 36 11.8	
YUK	Yuzh-Kuril'sk	89.03	316	eP	P	14 36 08.7	-0.4
YUK				e		14 39 45.9	
YUK				eS	SKSac	14 46 38.5	-0.6
YUK				eSS	SS	14 52 51.9	+1.9
YUK				eSSS	SSS	14 56 24.7	
BGES	Gesves	89.13	36	dx	x	14 36 14.0	
BEBN	Eben Emael	89.26	36	dx	x	14 36 14.5	
BSTI	Sart Tilman	89.30	36	dx	x	14 36 13.8	
RCHB	Rochefort	89.31	37	dx	x	14 36 14.1	
APA	Apatity	89.32	14	⇓iP	P	14 36 12.9	+2.9
APA				i		14 46 39.0	
APA				i S	S	14 47 03.0	+3.5
APA				pmax	pmax		
	comp=Z,14nm,0.9s						
APA				MLR	MLR		
	comp=Z,20µm,20.0s						
IFR	Ifrane	89.34	55	P	P	14 36 14.4	+3.4
IFR				S	S	14 47 06.1	+4.7
PVLZ	Peæn de	89.35	53	P	P	14 36 11.1	+0.3
PVLZ				S	S	14 47 03.5	+2.5
MEM	Membach	89.53	36	dx	P	14 36 14.3	+3.0
BTNL	Ternell	89.61	36	dx	P	14 36 16.4	+4.7
IBBN	Ibbenburen	89.64	34	eP	P	14 36 15.5	+3.8
	comp=Z,79nm,1.6s,baz=306,slow=4.7						
MXZ	Matakaoa Point	89.64	230	IAMs_20	IAMs_20	15 05 34.0	
	comp=Z,10µm,22.0s						
YSS	Yuzh-Sakhalins	89.71	320	eP	P	14 36 11.7	-0.5
YSS				e*SP	pwP	14 36 19.4	+0.4
YSS				e		14 39 44.9	
YSS				ePPP	PPP	14 41 48.8	
YSS				e		14 46 43.2	
YSS				eS	S	14 46 57.3	-6.7
YSS				ePS	PS	14 48 13.4	+3.2
YSS				eSS	SS	14 53 06.4	+6.7
YSS				pmax	pmax		
	comp=Z,30nm,1.2s						
YSS				MLR	MLR		
	comp=Z,3µm,21.0s						
YSS				MLR	MLR		
	comp=N,2µm,17.0s						
BUG	Bochum--Univer	89.81	35	eP	P	14 36 16.6	+4.1
	baz=306,slow=4.7						
WLF	Walferdange	90.08	37	dx	P	14 36 18.5	+4.6
WLF	Walferdange	90.08	37	P	P	14 36 12.6	-1.3
WLF				pmax	pmax		
	comp=Z,84nm,1.3s						
WLF				MLR	MLR		
	comp=Z,11µm,20.0s						
WLF	Walferdange	90.08	37	P	P	14 36 12.6	-1.3
WLF				IAmb	IAmb	14 36 22.5	
	comp=Z,84nm,1.3s						
WLF	Walferdange	90.08	37	eP	P	14 36 18.5	+4.7
	comp=Z,95nm,1.4s,baz=306,slow=4.7						
BSEG	Bad Segeberg	90.10	32	eP	P	14 36 17.4	+3.6
	baz=306,slow=4.7						
AHRW	Bad Neuenahr-A	90.16	36	eP	P	14 36 18.6	+4.4
	comp=Z,39nm,1.2s,baz=306,slow=4.7						
MELI	Melilla	90.34	53	P	P	14 36 18.5	+3.1
MELI				S	S	14 47 15.5	+5.3
KASTN	Kahler Asten	90.56	35	eP	P	14 36 20.3	+4.2
	baz=306,slow=4.7						
NRDL	Niedersach Rie	90.77	33	eP	P	14 36 21.0	+4.0
	baz=306,slow=4.7						
CART	Cartagena	90.85	50	P	P	14 36 20.3	+2.6
CART				S	S	14 47 18.2	+3.4
CART	Cartagena	90.85	50	IAMs_20	IAMs_20	15 17 35.8	
	comp=Z,7µm,19.0s						
SANVU	Saraoutou	91.01	254	IAMs_20	IAMs_20	15 10 00.5	
	comp=Z,9µm,19.0s						
TNS	Taunus Mts	91.08	35	eP	P	14 36 22.9	+4.3
	comp=Z,256nm,2.0s,baz=306,slow=4.7						
SSB	Saint Sauveur	91.22	41	IAMs_20	IAMs_20	15 14 59.7	
	comp=Z,8µm,20.0s						
ASSE	Asse, Remlinge	91.26	33	eP	P	14 36 23.3	+4.0
	comp=Z,208nm,2.0s,baz=306,slow=4.7						
FLTG	Flechtingen	91.44	33	eP	P	14 36 24.2	+4.0
	comp=Z,76nm,1.6s,baz=306,slow=4.7						
UBBA	Unterbreizbach	91.61	34	eP	P	14 36 25.0	+4.2
	comp=Z,128nm,2.0s,baz=306,slow=4.7						
ERM	Erimo	91.70	315	⇓eP	P	14 36 21.7	+0.1
ERM				pmax	pmax		
	comp=Z,67nm,1.2s						
ERM	Erimo	91.70	315	IAMs_20	IAMs_20	15 10 35.6	
	comp=Z,6µm,19.0s						
FINES	FINESS Array B	91.92	21	P	P	14 36 22.4	+0.2
	comp=Z,4.5nm,0.9s,baz=169,slow=21,SNR=2.0						
FINES				LR	LR	15 17 21.4	
	comp=Z,9µm,19.0s,baz=316,slow=35						
BFO	Black Forest	91.98	37	eP	P	14 36 27.0	+4.2
	baz=306,slow=4.7						
STU	Stuttgart	92.25	36	P	P	14 36 21.7	-2.3
STU				pmax	pmax		
	comp=Z,62nm,1.2s						
STU				MLR	MLR		
	comp=Z,9µm,18.0s						
STU	Stuttgart	92.25	36	P	P	14 36 21.6	-2.3
STU				IAmb	IAmb	14 36 33.5	
	comp=Z,62nm,1.2s						
HIZ	Hauiti	92.52	230	IAMs_20	IAMs_20	15 07 38.5	
	comp=Z,10µm,21.0s						
GRF	Grafenberg Arr	92.88	35	eP	P	14 36 31.0	+4.1
	baz=306,slow=4.7						
GRF				eL	L	15 16 01.9	
	comp=Z,10µm,21.9s						
CLL	Collm	92.92	33	e(P)	P	14 36 29.0	+2.0
	comp=Z,36nm,1.6s						
CLL				e		14 36 52.0	
CLL				e		14 37 38.0	
CLL				ePP	PP	14 40 06.0	-3.0
CLL				eSKSac	SKSac	14 47 01.0	-0.1
CLL				eS	ScS	14 47 34.0	-0.9
CLL				ePS	PS	14 48 45.0	-0.5
CLL				ePPS	PPS	14 49 24.0	
CLL				eSS	SS	14 53 47.0	+1.4
CLL				eSSSS		15 00 42.0	
CLL				e		15 02 12.0	
CLL				LmV		15 17 00.0	
	comp=Z,13µm,21.1s						
CLL	Collm	92.92	33	eP	P	14 36 29.0	+2.0
CLL				e		14 47 01.0	
CLL				eS	ScS	14 47 34.0	-0.9
CLL				pmax	pmax		
	comp=Z,36nm,1.6s						
CLL				MLR	MLR		
	comp=Z,13µm,21.1s						
CLL	Collm	92.92	33	eP	P	14 36 30.6	+3.6
	baz=306,slow=4.7						
PLN	Plauen	92.94	34	eP	P	14 36 31.4	+4.2
	baz=306,slow=4.7						
WERD	Werda	93.04	34	eP	P	14 36 32.0	+4.4
	baz=306,slow=4.7						
GUNZ	Gunzen	93.10	34	eP	P	14 36 32.4	+4.5
	baz=306,slow=4.7						
TANN	Tannenbergstha	93.14	34	eP	P	14 36 32.4	+4.2
	baz=306,slow=4.7						
WERN	Wernitzgruen	93.17	34	eP	P	14 36 32.4	+4.1
	baz=306,slow=4.7						
TMCR	Tamitsa	93.21	15	eP	P	14 36 28.3	+0.2
TMCR				pmax	pmax		
	comp=Z,11nm,0.8s						
NKC	Novy Kostel	93.24	34	ePP	PP	14 40 05.3	-6.2
NKC				eSKS	SKSac	14 47 08.2	+5.2
NKC				AMS	AMS	15 21 40.0	
	comp=Z,11µm,16.1s						
DAVA	Damuels	93.42	37	eP	P	14 36 29.9	+0.3
	comp=Z,48nm,1.4s,SNR=8.5						
BRG	Berggiesshubel	93.66	33	eP	P	14 36 31.5	+1.1
BRG				Amp		14 36 38.0	
	comp=Z,37nm,1.6s						
BRG				PP	PP	14 40 19.1	+4.3
BRG				Amp		14 40 22.2	
	comp=Z,78nm,2.1s						
BRG	Berggiesshubel	93.66	33	PS	PS	14 48 58.0	+4.3
BRG	Berggiesshubel	93.66	33	Amp		15 18 18.0	
	comp=Z,12nm,18.4s						
BRG	Berggiesshubel	93.66	33	SS	SS	14 53 59.0	+2.9
BRG	Berggiesshubel	93.66	33	Amp		15 17 45.0	
	comp=E,10.0nm,18.8s						
BRG	Berggiesshubel	93.66	33	Amp		15 18 12.0	
	comp=N,5.2nm,33.8s						
FUR	Furstenfeldbru	93.74	36	eP	P	14 36 35.6	+4.7
	baz=306,slow=4.7						
DZM	Mont Dzumac	93.80	248	ePP	PP	14 40 13.5	-3.9
	comp=N,503nm,24.9s						
DZM				eSKSac	SKSac	14 47 06.6	-0.4
	comp=N,2µm,29.8s						
DZM				eSP	SP	14 48 57.3	+1.9
	comp=N,2µm,27.1s						
DZM				eSS	SS	14 54 02.5	+1.6
	comp=N,7µm,27.8s						
DZM				eLQ	LQ	15 02 49.5	
	comp=N,6µm,29.9s						
DZM				eLR	LR	15 06 45.1	
	comp=N,57µm,26.9s						
RETA	Reutte	93.82	37	eP	P	14 36 32.6	+1.3
	comp=N,37nm,1.7s,SNR=8.2						
FETA	Feichten	94.05	37	eP	P	14 36 34.8	+2.2
	comp=N,37nm,1.4s,SNR=13						
MOTA	Moosalm	94.09	37	eP	P	14 36 33.4	+0.6
	comp=N,78nm,1.3s,SNR=16						
PVCC	Panska Ves	94.18	33	ePP	PP	14 40 12.1	-6.7
PVCC				AMS	AMS	15 17 30.0	
	comp=N,10µm,18.6s						
SQTA	Sankt Quirin	94.22	37	eP	P	14 36 33.8	+0.5
	comp=N,86nm,1.4s,SNR=13						
ZEA	Zeya	94.31	331	eP	P	14 36 36.7	+3.3
ZEA				e		14 40 15.5	
ZEA				pmax	pmax		
	comp=Z,300nm,7.0s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.7s						
WATA	Walderalm	94.37	37	eP	P	14 36 34.5	+0.5
	comp=Z,84nm,1.4s,SNR=16						
PRA	Prague	94.38	33	ePP	PP	14 40 23.9	+3.5
PRA				ex	x	14 47 22.8	
PRA				AMS	AMS	15 21 10.0	
	comp=Z,4µm,17.5s						
WTTA	Wattenberg	94.44	37	eP	P	14 36 34.9	+0.5
	comp=Z,66nm,1.2s,SNR=8.8						
KHC	Kasperske Hory	94.47	35	eP	P	14 36 35.6	+1.3
KHC				e		14 40 21.3	
KHC				eS	S	14 47 45.5	-1.3
KHC				MLR	MLR		
	comp=Z,11µm,18.1s						
KHC	Kasperske Hory	94.47	35	eP	P	14 36 35.6	+1.3
KHC				ePP	PP	14 40 21.3	+0.1
KHC				eS	S	14 47 45.5	-1.3
KHC				AMS	AMS	15 20 20.0	
	comp=Z,11µm,18.1s						
PRU	Pruhonice	94.48	34	eP	P	14 36 35.0	+0.8
PRU				e		14 40 17.1	
PRU				MLR	MLR		
	comp=Z,9µm,21.4s						
PRU	Pruhonice	94.48	34	eP	P	14 36 35.0	+0.8
PRU				ePP	PP	14 40 17.1	-4.1
PRU				ex	x	14 47 17.2	
PRU				AMS	AMS	15 15 30.0	
	comp=Z,9µm,21.4s						
NNZ	Nelson	94.56	228	IAMs_20	IAMs_20	15 12 06.3	
	comp=Z,9µm,19.0s						
GEC2	GERESS Array S	94.70	35	P	P	14 36 33.6	-1.8
GEC2	GERESS Array S	94.70	35	eP	P	14 36 39.9	+4.5
	baz=306,slow=4.7						
GERES	GERESS Array B	94.70	35	P	P	14 36 35.6	+0.2
	comp=Z,1.0nm,0.8s,baz=349,slow=4.1,SNR=8.0						
GERES				PP	PP	14 40 28.0	+4.9
	comp=Z,1.7nm,1.0s,baz=325,slow=6.5,SNR=4.4						
GERES				LR	LR	15 18 51.8	
	comp=Z,7µm,18.9s,baz=308,slow=35						
GERES	GERESS Array B	94.70	35	P	P	14 36 34.3	-1.1
MSSA	Maissana	94.77	40	IAMs_20	IAMs_20	15 18 34.6	
	comp=Z,6µm,20.0s						
KLR	Kul'dur	94.83	326	LR	LR	15 13 25.9	
	comp=Z,5µm,21.3s,baz=30,slow=32						
KLR	Kul'dur	94.83	326	⇑eP	P	14 36 35.4	-0.5
KLR				pmax	pmax		
	comp=Z,33nm,3.2s						
RJOB	Jochberg	94.83	36	eP	P	14 36 40.8	+4.8
	baz=306,slow=4.7						
CHVC	Chvalec	94.91	32	ePP	PP	14 40 25.6	+1.1
CHVC				AMS	AMS	15 18 50.0	
	comp=Z,13µm,18.2s						
UPC	Upice	94.94	33	eP	P	14 36 41.3	+5.0
UPC				e		14 40 25.6	
UPC				eS	SKSac	14 47 03.6	-8.6
UPC				MLR	MLR		
	comp=Z,13µm,18.7s						
UPC	Upice	94.94	33	eP	P	14 36 41.3	+5.0
UPC				ePP	PP	14 40 25.6	+0.9
UPC				ex	x	14 47 03.6	
UPC				AMS	AMS	15 18 50.0	
	comp=Z,13µm,18.7s						
OSTC	Ostas	95.01	32	eP	P	14 36 42.1	+5.4
OSTC				ePP	PP	14 40 20.5	-4.8
OSTC				eS	S	14 47 48.7	-2.7
OSTC				AMS	AMS	15 18 50.0	
	comp=Z,13µm,18.2s						
QRZ	Quartz Range	95.02	229	IAMs_20	IAMs_20	15 11 22.7	
	comp=Z,9µm,20.0s						
CKRC	Cesky Krumlov	95.04	35	eP	P	14 36 39.6	+2.7
CKRC				ePP	PP	14 40 20.5	-5.1
CKRC				ex	x	14 47 20.9	
DPC	Dobruska-Polom	95.19	33	eP	P	14 36 37.3	-0.2
DPC				e		14 40 23.9	
DPC				MLR	MLR		
	comp=Z,14µm,18.9s						
DPC	Dobruska-Polom	95.19	33	eP	P	14 36 37.3	-0.2
DPC				ePP	PP	14 40 23.9	-2.8
DPC				AMS	AMS	15 19 00.0	
	comp=Z,14µm,18.9s						
ABTA	Abfaltersbach	95.23	37	eP	P	14 36 38.5	+0.7
	comp=Z,61nm,1.1s,SNR=13						
VLC	Villacollemand	95.38	40	IAMs_20	IAMs_20	15 21 29.9	
	comp=Z,8µm,19.0s						
TREC	Trest	95.39	34	ePP	PP	14 40 25.6	-2.7
TREC				eS	S	14 47 50.6	-4.1
TREC				AMS	AMS	15 21 50.0	
	comp=Z,9µm,18.5s						
KBA	Koelnbreinsper	95.51	36	eP	P	14 36 40.4	+1.1
	comp=Z,38nm,1.2s,SNR=6.3						
MOA	Molln	95.58	35	eP	P	14 36 42.4	+3.1
	comp=Z,61nm,2.1s,SNR=9.7						
KRLC	Kraliky	95.59	33	eP	P	14 36 41.5	+2.1
KRLC				e		14 40 27.3	
KRLC				MLR	MLR		
	comp=Z,13µm,18.1s						
KRLC	Kraliky	95.59	33	eP	P	14 36 41.5	+2.1
KRLC				ePP	PP	14 40 27.3	-2.5
KRLC				ex	x	14 47 03.3	
KRLC				AMS	AMS	15 19 20.0	
	comp=Z,13µm,18.1s						
STAL	STALIGIAL	95.61	37	P	P	14 36 38.6	-0.9
HNR	Honiara	95.87	262	IAMs_20	IAMs_20	15 11 21.0	
	comp=Z,7µm,21.0s						
MQZ	McQueen's Vall	95.92	226	IAMs_20	IAMs_20	15 11 47.1	
	comp=Z,9µm,20.0s						
MYKA	Terra Mystica	95.93	37	eP	P	14 36 43.0	+2.0
	comp=Z,55nm,1.7s,SNR=7.1						
VRAC	Vranov	95.96	33	eP	P	14 36 42.9	+1.9
KRUC	Moravsky	96.00	34	eP	P	14 36 42.7	+1.5
MORC	Moravsky Berou	96.16	33	⇓P	P	14 36 45.0	+3.0
MORC	Moravsky Berou	96.16	33	eP	P	14 36 43.2	+1.2
MORC	Moravsky Berou	96.16	33	⇓P	P	14 36 45.0	+3.0
MORC	Moravsky Berou	96.16	33	P	P	14 36 40.1	-1.9
OXZ	Oxford	96.21	226	IAMs_20	IAMs_20	15 10 43.9	
	comp=Z,9µm,22.0s						
KLMR	Klimovskoe	96.39	16	eP	P	14 36 40.5	-2.2
KLMR				e		14 40 31.8	
KLMR				eS	SKSac	14 47 16.5	-2.8
KLMR				eSS	SS	14 54 29.1	-5.0
KLMR				pmax	pmax		
	comp=Z,52nm,1.4s						
KLMR				MLR	MLR		
	comp=Z,10µm,18.0s						
KLMR	Klimovskoe	96.39	16	eP	P	14 36 40.5	-2.2
KLMR				AMP		14 36 48.1	
	comp=Z,52nm,1.4s						
KLMR				ePP	PP	14 40 31.9	-3.6
KLMR				eS	SKSac	14 47 16.6	-2.8
KLMR				eS	SKSac	14 47 16.6	-2.8
KLMR				eSS	SS	14 54 29.1	-5.0
KLMR				eSS	SS	14 54 29.1	-5.0
KLMR				LQ	LQ	15 09 21.2	
KLMR				LQ	LQ	15 09 21.2	
KLMR				LR	LR	15 14 43.5	
KLMR				AMP		15 22 21.5	
	comp=Z,10µm,17.7s						
CONA	Conrad Observa	96.40	35	eP	P	14 36 44.7	+1.6
	comp=Z,36nm,2.0s						
CASP	Castiglione de	96.41	41	IAMs_20	IAMs_20	15 18 10.1	
	comp=Z,9µm,22.0s						
OKC	Ostrava-Krasne	96.43	32	AMS	AMS	15 23 00.0	
	comp=Z,10µm,20.8s						
OBKA	Obir	96.52	36	eP	P	14 36 43.7	-0.1
	comp=Z,30nm,1.0s						
TRI	Trieste	96.53	37	IAMs_20	IAMs_20	15 22 49.0	
	comp=Z,8µm,18.0s						
ARSA	Arzberg	96.62	35	eP	P	14 36 44.1	0.0
	comp=Z,30nm,2.3s						
BOD	Bodaibo	96.67	339	eP	P	14 36 44.3	+0.3
BOD				pmax	pmax		
	comp=Z,20nm,1.4s						
SOKA	Soboth	96.69	36	eP	P	14 36 43.9	-0.6
	comp=Z,27nm,1.2s,SNR=7.4						
JAVC	Velka Javorina	96.80	33	eP	P	14 36 44.0	-0.9
MODS	Modra-Piesok	96.89	34	eP	P	14 36 48.8	+3.5
MODS	Modra-Piesok	96.89	34	ePDIFF	P	14 36 48.8	+3.5
NACGM	Naroch	96.92	25	i P	P	14 36 43.5	-1.7
NACGM				i P	P	14 36 43.5	-1.7
NACGM				i P	P	14 36 43.5	-1.7
NACGM				i PP	PP	14 40 43.8	+4.0
NACGM				i PPP	PPP	14 42 47.3	
NACGM				i SKS	SKSac	14 47 26.0	+3.7
NACGM				i SKKS	SKKSac	14 47 47.1	-1.6
NACGM				i PS	PS	14 49 37.9	+8.8
NACGM				i SS	SS	14 54 49.0	+7.0
NACGM				i SSS	SSS	14 58 12.4	
NACGM				i LQ	LQ	15 11 16.5	
NACGM				i LR	LR	15 14 59.8	
VSL	Villasalto	97.18	44	IAMs_20	IAMs_20	15 19 38.9	
	comp=Z,5µm,19.0s						
USRK	Ussuriysk Ar.	97.60	322	P	Pdif	14 36 48.9	+0.3
	comp=Z,1.6nm,0.7s,baz=85,slow=6.2,SNR=4.2						

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USRK                              LR        LR        15 15 05.3
       comp=Z,4µm,21.6s,baz=37,slow=32
MNK    Minsk              97.65  25 eP      Pdif      14 36 48.0  -0.6
MNK                                 e                 14 40 50.0
MNK                                 e                 14 47 26.0
MNK                                 eS      S         14 48 05.0  -8.9
MNK                                 eSS     SS        14 54 50.0  -2.3
MNK                                  MLR    MLR
       comp=Z,15µm,20.0s
MNK                                  MLR    MLR
       comp=N,8µm,18.0s
MNK                                  MLR    MLR
       comp=Z,12µm,18.0s
MNK                                  MLR    MLR
       comp=E,6µm,20.0s
MNK    Minsk              97.65  25 i P     P         14 36 40.5  -8.1
       comp=E,2.0nm,1.0s
MNK                                 i P     P         14 36 40.5  -8.1
       comp=N,8.0nm,1.0s
MNK                                 i P     P         14 36 40.5  -8.1
       comp=Z,4.0nm,1.0s
MNK                                 i PP    PP        14 40 50.4  +5.0
MNK                                 i PPP   PPP       14 42 41.9
MNK                                 i PS    PS        14 49 29.6  -7.5
MNK                                 i SS    SS        14 54 45.9  -6.4
MNK                                 i SS    SS        14 54 45.9  -6.4
MNK                                 i SSS   SSS       14 58 31.9
MNK                                 i SKKS            15 02 03.0
MNK                                 i LQ    LQ        15 10 01.4
MNK                                 i LR    LR        15 15 11.4
MNK                                 i LRM   MLR       15 22 39.2
       comp=N,4µm,17.7s
MNK                                 i LRM   MLR       15 22 45.4
       comp=E,503nm,17.7s
MNK                                 i LRM   MLR       15 22 46.3
       comp=Z,4µm,17.7s
MJAR   Matsushiro Arr     97.67 312  LR     LR        15 11 52.5
       comp=Z,6µm,21.9s,baz=65,slow=30
MAJO   Matsushiro         97.67 312  IAMs_20 IAMs_20  15 10 36.2
       comp=Z,7µm,21.0s
MAT    Matsushiro         97.67 312  P      Pdif      14 36 49.1   0.0
MAT                                  S      S         14 48 13.6  -1.3
JHJ    Hachijo jima 2     98.19 309  LR     LR        15 15 55.9
       comp=Z,9µm,19.4s,baz=97,slow=32
PSZ    Piszkesteto        98.54  33 ⇓P      Pdif      14 36 52.5  -0.3
PSZ    Piszkesteto        98.54  33  P      P         14 36 52.0  -0.8
PSZ                                  pmax   pmax
       comp=Z,41nm,1.5s
PSZ                                  MLR    MLR
       comp=Z,12µm,19.0s
PSZ    Piszkesteto        98.54  33  P      P         14 36 52.0  -0.8
PSZ                                  IAmb   IAmb      14 37 02.2
       comp=Z,41nm,1.5s
CRVS   Cervenica-Dubn     98.69  32 eP      Pdif      14 36 58.7  +5.3
CRVS   Cervenica-Dubn     98.69  32 ePDIFF  Pdif      14 36 58.7  +5.3
JGF    Kuroka             98.74 312  IAMs_20 IAMs_20  15 17 45.9
       comp=Z,4µm,20.0s
MDJ    Mudanjiang         98.75 323  P      Pdif      14 36 56.0  +2.3
MDJ                                  sP     pwP       14 37 01.3  +0.8
MDJ                                  PP     PP        14 40 54.0  -0.3
MDJ                                  S      S         14 48 20.8  -2.9
MDJ                                  pmax   pmax
       comp=Z,12nm,1.8s
MDJ                                  pmax   pmax
       comp=Z,610nm,5.2s
MDJ                                  LR     LR
       comp=Z,2µm,18.1s
MDJ                                  LR     LR
       comp=Z,3µm,18.1s
MDJ                                  LR     LR
       comp=Z,4µm,24.1s
KWP    Kalwaria Pacla     98.81  30  IAMs_20 IAMs_20  15 24 19.9
       comp=Z,5µm,19.0s
MORH   Mrgy, Hungar       98.95  35  P      Pdif      14 36 56.4  +1.8
KOLS   Kolonicke sedl     99.07  31 eP      Pdif      14 37 00.1  +5.0
KOLS   Kolonicke sedl     99.07  31 ePDIFF  Pdif      14 37 00.1  +5.0
KEST   Kesra              99.08  48  P      Pdif      14 36 55.6  +0.1
       comp=Z,12nm,1.1s,baz=249,slow=7.3,SNR=3.6
KEST                                 LR     LR        15 22 06.3
       comp=Z,5µm,19.7s,baz=254,slow=36
JCJ    Chichijima         99.09 302  LR     LR        15 11 59.7
       comp=Z,3µm,21.4s,baz=60,slow=30
TIC    Toumodi            99.11  80 eP      Pdif      14 36 59.2  +3.3
TIC    Toumodi            99.11  80 eP      PP        14 40 59.7  +1.4
LIC    Lamto              99.25  80 eP      Pdif      14 36 58.3  +1.8
       comp=Z,143nm,2.2s
LIC    Lamto              99.25  80 eP      PP        14 40 58.8  -0.5
       comp=Z,149nm,2.1s
DBIC   Dimbokro           99.25  80  P      Pdif      14 36 56.6  +0.1
       comp=Z,4.1nm,0.8s,baz=331,slow=6.5,SNR=6.1
DBIC                                 PP     PP        14 40 57.6  -1.7
       comp=Z,3.4nm,0.9s,baz=265,slow=9.1,SNR=5.7
DBIC                                 LR     LR        15 19 16.2
       comp=Z,3µm,20.2s,baz=266,slow=34
DBIC   Dimbokro           99.25  80  P      Pdif      14 36 54.4  -2.1
DBIC                                 pmax   pmax
       comp=Z,24nm,1.3s
DBIC   Dimbokro           99.25  80         Pdif      14 36 54.4  -2.1
DBIC                                 IAmb   IAmb      14 37 02.5
       comp=Z,24nm,1.2s
UZH    Uzhgorod           99.28  31 eP      Pdif      14 36 57.0  +1.0
UZH                                 e                 14 41 02.4
UZH                                 ePPP    PPP       14 43 13.5
UZH                                 e                 14 47 25.9
UZH                                 eS      S         14 48 24.0  -4.0
UZH                                  MLR    MLR
       comp=N,1µm,16.0s
UZH                                  MLR    MLR
       comp=E,2µm,16.0s
UZH                                  MLR    MLR
       comp=Z,1µm,16.0s
LVV    L'vov              99.32  30 eP      Pdif      14 36 58.8  +2.7
LVV                                 e                 14 41 06.8
LVV                                 eS      S         14 48 25.2  -3.0
LVV                                 eSS     SS        14 55 11.2  -4.8
KIC    Kosan Boka         99.47  80 eP      Pdif      14 37 00.3  +2.8
       comp=Z,52nm,1.5s
KIC    Kosan Boka         99.47  80 eP      PP        14 41 00.5  -0.5
       comp=Z,149nm,1.9s
PAOL   Paolisi            99.68  41  IAMs_20 IAMs_20  15 18 49.7
       comp=Z,6µm,22.0s
MOS    Moscow            100.15  19 eP      Pdif      14 37 04.6  +4.9
MOS                                 e                 14 41 11.9
DCZ    Deep Cove         100.20 225  IAMs_20 IAMs_20  15 15 18.5
       comp=Z,6µm,20.0s
FRGS   Fruska Gora       100.26  35  P      Pdif      14 37 03.8  +3.4
OBN    Obninsk           100.33  20⇑eP      Pdif      14 37 00.7  +0.3
OBN                                 i                 14 41 04.9
OBN                                 ePS     PS        14 50 11.5  +5.7
OBN                                 eSS     SS        14 55 26.3  -3.3
OBN                                  pmax   pmax
       comp=Z,61nm,2.1s
OBN                                  MLR    MLR
       comp=Z,10µm,17.0s
SIRR   Siria             100.53  33 ⇓P      Pdif      14 37 06.4  +4.8
BZS    Buzias            100.93  34 ⇑P      Pdif      14 37 07.8  +4.4
BZS    Buzias            100.93  34 ⇑P      Pdif      14 37 07.8  +4.4
AKASG  Malin Array Be    101.01  27  P      Pdif      14 37 01.0  -2.6
       comp=Z,1.5nm,0.7s,baz=310,slow=3.6,SNR=13
AKASG                                PP     PP        14 41 11.5  +0.4
       comp=Z,17nm,1.1s,baz=315,slow=6.4,SNR=11
AKASG  Malin Array Be    101.01  27 i P     Pdif      14 37 03.2  -0.4
AKASG                                pmax   pmax
       comp=Z,3.0nm,0.8s
AKASG  Malin Array Be    101.01  27         Pdif      14 37 00.5  -3.1
DIVS   Divibare          101.03  36  IAMs_20 IAMs_20  15 23 56.9
       comp=Z,8µm,20.0s
BURAR  Bucovina Array    101.41  31 ⇑P      Pdif      14 37 10.2  +4.6
BURAR  Bucovina Array    101.41  31 ⇑P      Pdif      14 37 10.2  +4.6
GRUS   Gruza             101.56  36  P      Pdif      14 37 11.3  +5.1
CN2    Changchun         101.59 324 eP      Pdif      14 37 08.8  +2.4
CN2                                  PP     PP        14 41 21.4  +5.6
CN2                                  SS     SS        14 55 50.5  +2.4
CN2                                  pmax   pmax
       comp=Z,10.0nm,0.7s
CN2                                  pmax   pmax
       comp=Z,200nm,4.0s
CN2                                  LR     LR
       comp=Z,2µm,18.0s
CN2                                  LR     LR
       comp=Z,3µm,18.0s
CN2                                  LR     LR
       comp=Z,4µm,23.0s
RAFF   Raffo Rosso       101.71  44  IAMs_20 IAMs_20  15 28 25.6
       comp=Z,7µm,19.0s
TIP    Timpagrande       102.13  41  IAMs_20 IAMs_20  15 23 43.2
       comp=Z,6µm,22.0s
TAM    Tamanrasset       102.28  61  IAMs_20 IAMs_20  15 19 50.7
       comp=Z,8µm,22.0s
SORM   Soroca            102.52  29 ⇓P      Pdif      14 37 10.3  -0.1
SORM   Soroca            102.52  29 ⇓P      Pdif      14 37 10.3  -0.1
DOPR   Dopca             102.64  32  P      Pdif      14 37 13.9  +2.9
LHI    Lord Howe Isla    102.77 241  IAMs_20 IAMs_20  15 12 25.2
       comp=Z,8µm,22.0s
VOIR                     102.84  32  P      Pdif      14 37 15.3  +3.3
VOIR                     102.84  32  P      Pdif      14 37 15.3  +3.3
TORD   Torodi Ar. Bea    102.93  71  PP     PKiKP     14 41 29.9  -3.3
       comp=Z,5.6nm,1.2s,baz=297,slow=1.4,SNR=7.2
LPSR   Galich'ya Gora    103.19  21 eP      Pdif      14 37 10.4  -2.9
LPSR                                 pmax   pmax
       comp=Z,10.0nm,1.2s
LPSR                                 MLR    MLR
       comp=Z,10µm,17.0s
MLR    Muntele Rosu      103.25  32  P      Pdif      14 37 17.3  +3.4
MLR    Muntele Rosu      103.25  32  P      Pdif      14 37 17.3  +3.4
KIS    Kishinev          103.56  29 eP      Pdif      14 37 15.0  -0.1
SNY    Shenyang          103.92 324 ⇓PKP    PKiKP     14 41 33.0  -1.4
ARU    Arti              104.31   8  PP     PKiKP     14 41 38.5  +3.8
       comp=Z,0.3nm,0.3s,baz=345,slow=6.0,SNR=7.1
VSR    Storozhevoye      104.44  21 eP      Pdif      14 37 18.5  -0.3
VSR                                  pmax   pmax
       comp=Z,8.0nm,0.9s
VSR                                  MLR    MLR
       comp=Z,6µm,16.0s
JTU    Tsushima          104.81 315  IAMs_20 IAMs_20  15 18 51.2
       comp=Z,5µm,20.0s
TLY    Talaya            105.12 341 i P     Pdif      14 37 29.3  +7.3
TLY                                 e                 14 41 45.6
TLY                                 ePPP    PPP       14 44 03.4
TLY                                 eS      SP        14 50 51.4  -3.5
TLY                                 eSS     SKKPbc    14 56 42.0  -2.9
TLY                                  pmax   pmax
       comp=Z,16nm,1.5s
TLY    Talaya            105.12 341  IAMs_20 IAMs_20  15 27 02.2
       comp=Z,4µm,20.0s
VRH    Novokhopyorsk     105.30  20 eP      Pdif      14 37 22.8  +0.1
VRH                                  pmax   pmax
       comp=Z,6.0nm,0.5s
VRH                                  MLR    MLR
       comp=Z,11µm,18.0s
JSU    Suzuyama          105.79 312  IAMs_20 IAMs_20  15 16 25.6
       comp=Z,5µm,22.0s
ITM    Ithomi            106.56  40  IAMs_20 IAMs_20  15 30 39.8
       comp=Z,7µm,20.0s
DL2    Dalian            106.97 322 ePdif   Pdif      14 37 26.9  -3.5
DL2                                  PP     PP        14 41 55.3  -0.6
DL2                                  SS     SS        14 57 01.8  -0.1
DL2                                  AMB    AMB
       comp=Z,360nm,6.6s
DL2                                  LR     LR
       comp=Z,3µm,18.1s
DL2                                  LR     LR
       comp=Z,3µm,16.6s
DL2                                  LR     LR
       comp=Z,4µm,18.6s
ZALV   Zalesovo Beam     107.08 353  Pdiff  Pdif      14 37 33.7  +3.1
       comp=Z,0.3nm,0.3s,baz=108,slow=39,SNR=2.3
ZALV                                 PP     PKiKP     14 41 37.5  -2.4
       comp=Z,0.8nm,0.7s,baz=17,slow=11,SNR=5.0
ULN    Ulaanbaatar       107.20 337  IAMs_20 IAMs_20  15 30 16.7
       comp=Z,7µm,20.0s
SONM   Songino Array     107.47 337  Pdiff  Pdif      14 37 36.5  +3.9
       comp=Z,1.1nm,1.0s,baz=92,slow=0.7,SNR=8.0
SONM                                 PP     PP        14 41 50.4  -8.8
       comp=Z,2.6nm,1.2s,baz=30,slow=4.3,SNR=4.5
SONM                                 PKKPbc PKKPbc    14 52 56.5  -0.7
       comp=Z,0.6nm,0.8s,baz=156,slow=2.6,SNR=5.0
SONM   Songino Array     107.47 337         PKKPbc    14 52 53.7  -3.5
PMG    Port Moresby      107.92 266  IAMs_20 IAMs_20  15 18 57.4
       comp=Z,7µm,20.0s
VNDA   Vanda             108.25 193  Pdiff  Pdif      14 37 39.4  +4.3
       comp=Z,1.5nm,0.5s,baz=315,slow=2.1,SNR=6.6
ARMA   Armidale          108.77 243  IAMs_20 IAMs_20  15 15 48.1
       comp=Z,6µm,22.0s
BJT    Baijiatuau        109.22 326  IAMs_20 IAMs_20  15 20 51.9
       comp=Z,6µm,22.0s
SANT   Santorini         109.24  39  IAMs_20 IAMs_20  15 29 26.5
       comp=Z,3µm,19.0s
ILGA   Ilgaz             110.36  31  IAMs_20 IAMs_20  15 32 07.4
       comp=Z,6µm,20.0s
ANTO   Ankara            110.80  32  IAMs_20 IAMs_20  15 29 34.3
       comp=Z,6µm,21.0s
HHC    Hu-ho-hao-te      110.92 330 ePKP    PKiKP     14 41 47.8  +0.2
HHC                                  PP     PP        14 42 26.0  +1.5
HHC                                  SKKS             14 49 19.1
HHC                                  SS     SS        14 57 58.1  +3.1
HHC                                  AMB    AMB
       comp=Z,550nm,6.6s
HHC                                  LR     LR
       comp=Z,3µm,20.8s
HHC                                  LR     LR
       comp=Z,3µm,17.8s
HHC                                  LR     LR
       comp=Z,5µm,23.7s
SOC    Sochi             111.01  25 i PKIKP PKiKP     14 41 46.4  -1.2
SOC                                 ePPP    PPP       14 44 47.0
SOC                                 e                 14 48 26.2
SOC                                 ePS     PKKPbc    14 51 54.3   -51
SOC                                  MLR    MLR
       comp=Z,10µm,17.0s
SEM    Semipalatinsk     111.04 355 ePP     PP        14 42 25.4  +0.4
       baz=355
ISP    Isparta           111.12  35  IAMs_20 IAMs_20  15 29 37.4
       comp=Z,7µm,20.0s
BRTR   Keskin Array B    111.33  32  PP     PP        14 42 27.9  +0.3
       comp=Z,2.2nm,1.1s,baz=308,slow=4.2,SNR=4.4
CTAO   Charters Tower    111.45 255  IAMs_20 IAMs_20  15 17 40.5
       comp=Z,6µm,22.0s
CAN    Canberra          111.75 239  IAMs_20 IAMs_20  15 19 24.3
       comp=Z,7µm,20.0s
AKAS   Kas               111.75  37  IAMs_20 IAMs_20  15 34 01.8
       comp=Z,3µm,19.0s
KIV    Kislovodsk        111.86  23 i PKIKP PKiKP     14 41 49.7  +0.4
KIV                                 e                 14 42 32.2
KIV                                 ePS     PKKPbc    14 52 04.6   -38
KIV                                 eSS     SS        14 58 09.0  +1.9
KIV                                  pmax   pmax
       comp=Z,13nm,1.1s
KIV    Kislovodsk        111.86  23  IAMs_20 IAMs_20  15 32 46.5
       comp=Z,4µm,19.0s
SNAA   Sanae             111.92 161  IAMs_20 IAMs_20  15 21 17.3
       comp=Z,5µm,21.0s
TOKA   Tokat             112.24  29  IAMs_20 IAMs_20  15 34 29.1
       comp=Z,6µm,19.0s
SSE    Sheshan           112.37 316  PKP    PKiKP     14 41 46.0  -4.5
SSE                                  AMB    AMB
       comp=Z,150nm,7.9s
SSE                                  LR     LR
       comp=Z,1µm,17.0s
SSE                                  LR     LR
       comp=Z,600nm,19.3s
TIY    Taiyuan           112.88 327  PKP    PKiKP     14 42 02.6   +11
TIY                                  PP     PP        14 42 44.3  +5.7
TIY    Taiyuan           112.88 327  SS     SS        14 58 31.4   +10
TIY                                  AMB    AMB
       comp=Z,440nm,8.1s
TIY                                  LR     LR
       comp=N,4µm,16.6s
TIY                                  LR     LR
       comp=E,2µm,16.3s
TIY                                  LR     LR
       comp=Z,5µm,17.5s
NJ2    Nanjing           113.24 319 ePdif   Pdif      14 37 56.3  -2.1
NJ2                                  SS     SS        14 58 29.6  +3.3
NJ2                                  AMB    AMB
       comp=Z,480nm,7.6s
NJ2                                  LR     LR
       comp=Z,2µm,18.9s
NJ2                                  LR     LR
       comp=Z,2µm,17.1s
NJ2                                  LR     LR
       comp=Z,3µm,20.8s
MK31   Makanchi Array    114.42 353⇓i PKIKP PKPdf     14 41 54.5  +0.5
MKAR   Makanchi Array    114.42 353  PKP    PKiKP     14 41 53.4  -0.7
       comp=Z,0.9nm,0.7s,baz=22,slow=2.1,SNR=7.1
MKAR                                 PP     PP        14 42 49.1  +0.2
       comp=Z,4.7nm,1.1s,baz=18,slow=4.3,SNR=5.6
MKAR                                 PKKPbc PKKPbc    14 52 36.5  +2.1
       comp=Z,1.5nm,1.0s,baz=194,slow=4.5,SNR=7.8
MKAR   Makanchi Array    114.42 353 i PKIKP PKiKP     14 41 52.5  -1.5
MKAR                                                  14 52 32.0
MKAR   Makanchi Array    114.42 353         PKiKP     14 41 52.5  -1.5
MKAR                                 PKKPbc PKKPbc    14 52 32.0  -2.4
CSS    Mathiatis         114.76  35  IAMs_20 IAMs_20  15 32 58.2
       comp=Z,5µm,20.0s
GAZ    Gaziantep         115.08  31  IAMs_20 IAMs_20  15 35 12.4
       comp=Z,5µm,21.0s
TATO   Taipei            116.00 311  IAMs_20 IAMs_20  15 21 46.2
       comp=Z,6µm,22.0s
YHNB   Yeheng            116.27 311  IAMs_20 IAMs_20  15 21 53.5
       comp=Z,5µm,22.0s
WMQ    Urumqi            116.49 348  PKP    PKiKP     14 41 57.3  -0.9
WMQ                                  PP     PP        14 43 06.1  +2.5
WMQ                                  AMB    AMB
       comp=Z,290nm,8.1s
WMQ                                  LR     LR
       comp=Z,8µm,23.9s
WMQ                                  LR     LR
       comp=Z,4µm,20.5s
WMQ                                  LR     LR
       comp=Z,6µm,24.9s
TDK    Taldyqorghan      116.56 356 ePKP    PKiKP     14 41 57.5  -0.7
       baz=356
TDK    Taldyqorghan      116.56 356 ePKIKP  PKiKP     14 41 57.5  -0.7
MARD   Mardin            116.65  28  IAMs_20 IAMs_20  15 36 13.7
       comp=Z,5µm,22.0s
BTLS   Baital            116.70 359 ePKP    PKPdf     14 41 57.9  -0.6
       baz=359
BTLS                                ePP     PP        14 43 05.2  +0.4
       baz=359
BTLS   Baital            116.70 359 ePKIKP  PKPdf     14 41 57.8  -0.6
BTLS                                e                 14 43 05.2
GEVA   Gevas             116.81  26  IAMs_20 IAMs_20  15 33 52.7
       comp=Z,7µm,22.0s
YULB   Yu-li             117.10 310  IAMs_20 IAMs_20  15 28 30.7
       comp=Z,3µm,20.0s
SSLB   Suanglung         117.11 310  IAMs_20 IAMs_20  15 29 01.9
       comp=Z,5µm,21.0s
GTA    Gaotai            117.14 337  PKP    PKiKP     14 42 04.6  +5.0
GTA                                  PP     PP        14 43 13.4  +5.0
GTA                                  SKKS             14 50 10.1
GTA    Gaotai            117.14 337  SS     SS        14 59 18.8  +2.0
GTA                                  AMB    AMB
       comp=Z,590nm,15.9s
GTA                                  LR     LR
       comp=N,4µm,20.3s
GTA                                  LR     LR
       comp=E,3µm,21.9s
GTA                                  LR     LR
       comp=Z,5µm,21.9s
STKA   Stephens Creek    117.49 243  PKP    PKiKP     14 42 00.6  +0.4
       comp=Z,2.3nm,0.7s,baz=222,slow=2.1,SNR=6.4
STKA                                 PKKPbc PKKPab    14 52 28.4  +2.9
       comp=Z,3.5nm,1.0s,baz=286,slow=5.8,SNR=3.9
STKA   Stephens Creek    117.49 243⇑i PKIKP PKPdf     14 41 59.9  -0.3
XAN    Xi'an             117.52 327  IAMs_20 IAMs_20  15 42 41.7
       comp=Z,5µm,20.0s
TPUB   Ta-pu             117.64 310  IAMs_20 IAMs_20  15 22 03.0
       comp=Z,4µm,22.0s
KPKS   Kokpek            118.07 355 ePKP    PKPdf     14 42 00.2  -1.0
       baz=356
KPKS   Kokpek            118.07 355 ePKIKP  PKPdf     14 42 00.2  -1.0
SGDS   Sogindy           118.28 359 ePKP    PKPdf     14 42 00.5  -1.1
       baz=359
SGDS   Sogindy           118.28 359 ePKIKP  PKPdf     14 42 00.5  -1.1
SHLS   Shalkode          118.31 355 ePKP    PKPdf     14 42 01.3  -0.5
       baz=355
SHLS   Shalkode          118.31 355 ePKIKP  PKPdf     14 42 01.3  -0.5
LZH    Lanzhou           118.33 332 ePKP    PKiKP     14 42 03.8  +1.7
LZH                                  PP     PP        14 43 21.3  +4.4
LZH                                  SKKS             14 50 14.9
LZH                                  SS     SS        14 59 32.1  -0.5
LZH                                  AMB    AMB
       comp=Z,450nm,10.8s
LZH                                  LR     LR
       comp=Z,5µm,21.1s
LZH                                  LR     LR
       comp=Z,5µm,20.6s
LZH                                  LR     LR
       comp=Z,3µm,20.1s
MDOK   Medeo             118.47 357 ePKP    PKPdf     14 42 01.0  -1.1
       baz=357
MDOK   Medeo             118.47 357 ePKIKP  PKPdf     14 42 01.0  -1.1
KNMB   Chin-men Tao      118.52 312  IAMs_20 IAMs_20  15 42 46.6
       comp=Z,3µm,19.0s
AAK    Ala-Archa         119.10 359⇓i PKIKP PKiKP     14 42 04.0  +0.6
IUG    Iuzhnay           119.54   3 ePKP    PKPdf     14 42 03.2  -0.9
       baz=2.8
IUG    Iuzhnay           119.54   3 ePKIKP  PKPdf     14 42 03.2  -0.9
ENH    Enshi             120.11 324         PKPdf     14 42 04.9  -0.6
ENH                                  IAMs_20 IAMs_20  15 41 04.4
       comp=Z,6µm,21.0s
SZP    Santa             121.18 305  IAMs_20 IAMs_20  15 23 07.8
       comp=Z,3µm,22.0s
KSH    Kashi             122.16 357  PKP    PKiKP     14 42 11.6  +2.1
KSH                                  PP     PP        14 43 51.5  +8.8
KSH                                  PKS              14 45 48.9
KSH                                  SKKS             14 50 41.0
KSH                                  AMB    AMB
       comp=Z,290nm,6.0s
KSH                                  LR     LR
       comp=Z,940nm,13.1s
KSH                                  LR     LR
       comp=Z,19µm,23.8s
WRAB   Tennant Creek     122.41 258⇓i PKIKP PKPdf     14 42 07.7  -2.3
WRA    Warramunga Arr    122.42 258  PKP    PKPdf     14 42 08.2  -1.8
       comp=Z,1.9nm,0.6s,baz=80,slow=2.2,SNR=18
WRA                                  PP     PP        14 43 49.9  +3.4
       comp=Z,3.5nm,1.2s,baz=67,slow=6.4,SNR=3.2
WRA    Warramunga Arr    122.42 258  PKIKP  PKPdf     14 42 08.8  -1.3
WRA                                                   14 43 49.9
WRA    Warramunga Arr    122.42 258         PKPdf     14 42 08.8  -1.3
SAUI   Saumlaki          122.56 272  IAMs_20 IAMs_20  15 25 36.7
       comp=Z,6µm,22.0s
CD2    Chengdu           122.64 329  PKP    PKPdf     14 42 08.1  -2.2
CD2                                  SKKS             14 50 38.8
CD2                                  SS     SS        15 00 31.4  +3.5
CD2                                  AMB    AMB
       comp=Z,740nm,8.1s
CD2                                  LR     LR
       comp=Z,4µm,17.3s
CD2                                  LR     LR
       comp=Z,7µm,17.8s
CD2                                  LR     LR
       comp=Z,5µm,19.6s
GZH    Guangzhou         122.89 315  PKP    PKPdf     14 42 09.8  -1.1
GZH                                  PP     PP        14 43 46.4  -2.1
GZH                                  SS     SS        15 00 24.1  -7.8
GZH                                  LR     LR
       comp=Z,2µm,19.6s
GZH                                  LR     LR
       comp=Z,2µm,21.2s
ASAR   Alice Springs     123.37 253  PKhKP  PKPpre    14 42 07.4
       comp=Z,0.8nm,0.7s,baz=76,slow=3.0,SNR=7.9
ASAR                                 PKP    PKiKP     14 42 11.9  -0.1
       comp=Z,1.7nm,0.7s,baz=82,slow=2.3,SNR=9.1
ASAR                                 PKKPbc PKKPbc    14 52 00.9   0.0
       comp=Z,0.9nm,0.8s,baz=258,slow=3.9,SNR=7.9
ASAR   Alice Springs     123.37 253  PKPdf  PKPdf     14 42 09.8  -2.0
GYA    Guiyang           124.61 323  PKP    PKiKP     14 42 15.4  +0.8
GYA                                  PP     PP        14 44 05.3  +5.3
GYA                                  SKKS             14 50 56.8
GYA                                  SS     SS        15 00 52.8  -0.7
GYA                                  AMB    AMB
       comp=Z,320nm,9.3s
GYA                                  LR     LR
       comp=Z,3µm,19.5s
GYA                                  LR     LR
       comp=Z,3µm,20.6s
GYA                                  LR     LR
       comp=Z,4µm,22.8s
SYO    Syowa Base        125.47 166⇑eX      Pdif      14 38 48.2  -3.6
SYO    Syowa Base        125.47 166⇓epPdiff pPdif     14 38 53.2  -0.9
CASY   Casey             126.43 198  IAMs_20 IAMs_20  15 29 07.9
       comp=Z,4µm,20.0s
TSUM   Tsumeb            127.70 100  IAMs_20 IAMs_20  15 33 40.3
       comp=Z,5µm,22.0s
KMI    Kunming           127.84 325 ⇑PKP    PKPdf     14 42 19.6  -1.1
KMI                                  sPKP             14 42 25.4
KMI                                  PP     PP        14 44 24.1  +2.6
KMI                                  PKS              14 45 52.6
KMI                                  SKKS             14 51 13.4
KMI                                  SS     SS        15 01 29.4  -4.5
KMI                                  AMB    AMB
       comp=Z,420nm,6.6s
KMI                                  LR     LR
       comp=Z,3µm,16.8s
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KMI				LR	LR		
	comp=Z,3µm,17.5s						
KMI				LR	LR		
	comp=Z,4µm,16.4s						
KMI	Kunming	127.84	325	IAMs_20	IAMs_20	15 47 49.1	
	comp=Z,4µm,18.0s						
QIZ	Qiongzhong	128.04	314	PKP	PKPdf	14 42 18.3	-2.6
QIZ				SS	SS	15 01 34.6	-2.1
QIZ				AMB	AMB		
	comp=Z,440nm,6.9s						
QIZ				LR	LR		
	comp=Z,2µm,18.2s						
QIZ				LR	LR		
	comp=Z,2µm,18.0s						
QIZ				LR	LR		
	comp=Z,4µm,36.3s						
QIZ	Qiongzhong	128.04	314	IAMs_20	IAMs_20	15 50 21.5	
	comp=Z,5µm,19.0s						
LSA	Lhasa	128.95	340	PKP	PKiKP	14 42 25.0	+1.3
LSA				PP	PP	14 44 32.4	+3.8
LSA				LR	LR		
	comp=Z,3µm,20.6s						
LSA				LR	LR		
	comp=Z,3µm,22.1s						
LSA				LR	LR		
	comp=Z,5µm,22.8s						
LSA	Lhasa	128.95	340	IAMs_20	IAMs_20	15 45 35.9	
	comp=Z,4µm,21.0s						
LKP	Lekhapani	129.31	334	eP	PKiKP	14 42 26.7	+2.9
DHRM	DHARAMSHALA	129.38	356	i x	PP	14 44 34.8	+3.9
SOEI	Soe	129.72	273	IAMs_20	IAMs_20	15 36 32.4	
	comp=Z,5µm,19.0s						
ZIRO	ZIRO	129.95	336	eP	PKiKP	14 42 26.6	+1.2
ZIRO				i x	x	14 44 32.3	
SLVN	Son La	130.16	321	IAMs_20	IAMs_20	15 49 29.3	
	comp=Z,3µm,18.0s						
RAYN	Ar Rayn	130.27	34	IAMs_20	IAMs_20	15 51 13.9	
	comp=Z,3µm,21.0s						
SMLA	Simla	130.44	355	eP	PKiKP	14 42 25.6	-0.3
SMLA				i x	x	14 44 44.7	
MOKO	MOKOCHONG	130.76	334	eP	PKiKP	14 42 28.4	+1.5
DDI	Dehra Dun	131.16	354	eP	PKiKP	14 42 29.8	+2.3
DDI				i x	x	14 44 48.4	
SUR	Sutherland	131.31	117	IAMs_20	IAMs_20	15 37 23.1	
	comp=Z,4µm,20.0s						
KOHI	KOHIMA	131.46	334	ex	PKiKP	14 42 34.0	+5.6
GTK	Tadong	131.97	341	eP	PKiKP	14 42 29.9	+0.5
GUN	Gumba	132.16	345	eP	PKiKP	14 42 31.2	+1.2
	comp=Z,243nm,1.9s						
TAPN	Taplejung	132.20	342	eP	PKiKP	14 42 30.3	+0.2
	comp=Z,133nm,1.7s						
GKN	Gorkha	132.37	346	eP	PKiKP	14 42 29.9	-0.3
KKN	Kakani	132.43	345	eP	PKiKP	14 42 29.6	-0.8
	comp=Z,11nm,0.6s						
SHL	Shillong	132.47	337	eP	PKiKP	14 42 32.1	+1.6
SHL				i x	x	14 44 52.1	
PKIN	Phulchoki	132.60	345	eP	PKiKP	14 42 30.0	-0.8
PKI	Pulchoki	132.61	345	eP	PKiKP	14 42 30.8	-0.1
	comp=Z,18nm,1.0s						
DMN	Daman	132.64	345	eP	PKiKP	14 42 30.8	-0.1
	comp=Z,24nm,1.0s						
ODAN	Odare	132.76	342	eP	PKiKP	14 42 31.1	0.0
	comp=Z,70nm,1.7s						
RAMN	Ramite	132.89	343	eP	PKiKP	14 42 31.6	+0.2
	comp=Z,27nm,0.9s						
DLV	T Lat	133.74	308	IAMs_20	IAMs_20	15 54 43.8	
	comp=Z,2µm,20.0s						
UOSS	Minazif	133.75	21	IAMs_20	IAMs_20	15 48 35.0	
	comp=Z,4µm,21.0s						
AGT	Agartala	134.23	336	i x	PP	14 45 05.8	+3.6
BELO	BELONIA	134.73	336	eP	PKiKP	14 42 35.8	+1.0
BELO				i x	x	14 45 08.2	
MBAR	Mbarara	134.81	72	⇓iPKIKP	PKPdf	14 42 33.0	-1.0
CHTO	Chiang Mai	134.99	324	IAMs_20	IAMs_20	15 51 57.7	
	comp=Z,3µm,19.0s						
CMAR	Chiang Mai Arr	135.28	324	PKP	PKiKP	14 42 35.5	-0.6
	comp=Z,2.7nm,0.9s,baz=344,slow=2.1,SNR=19						
CMAR				PP	PP	14 44 56.2	-13
	comp=Z,3.2nm,1.1s,baz=19,slow=5.2,SNR=5.9						
BOSA	Boshof	135.31	112	PKhKP	PKPpre	14 42 31.8	
	comp=Z,3.3nm,0.8s,baz=241,slow=7.5,SNR=3.7						
BOSA	Boshof	135.31	112	PKIKP	PKPdf	14 42 32.0	-2.5
BOSA	Boshof	135.31	112		PKPdf	14 42 32.0	-2.5
DESE	Dese	135.76	51	eP	PKPdf	14 42 33.7	-2.3
BOK	Bokaro	136.08	343	eP	PKiKP	14 42 37.1	-0.5
TEND	Ethiopian Broa	136.31	49	eP	PKPdf	14 42 32.5	-4.1
FURI	Furi	136.47	54	IAMs_20	IAMs_20	15 43 16.8	
	comp=Z,3µm,21.0s						
DAMY	Dhamar	136.62	43	IAMs_20	IAMs_20	15 46 06.2	
	comp=Z,4µm,21.0s						
ANKE	Ethiopia-Afar	136.83	52	eP	PKiKP	14 42 40.8	+0.9
LSZ	Lusaka	137.03	93	IAMs_20	IAMs_20	15 48 24.0	
	comp=Z,4µm,19.0s						
ATD	Arta Tunnel	137.79	47	IAMs_20	IAMs_20	15 42 23.6	
	comp=Z,3µm,21.0s						
BHPL	Bhopal	138.24	354	eP	PKPdf	14 42 40.3	+0.3
BHUJ	Bhuj	138.31	5	eP	PKPdf	14 42 39.8	-0.2
JAGI	Jajag, Banyuwa	138.90	278	IAMs_20	IAMs_20	15 43 46.9	
	comp=Z,3µm,20.0s						
KMBO	Kilima Mbogo	140.84	68	PKP	PKPdf	14 42 44.4	-0.9
	comp=Z,0.7nm,0.4s,baz=252,slow=1.8,SNR=3.8						
KMBO				PP	PP	14 45 47.5	+2.1
	comp=Z,0.5nm,0.4s,baz=294,slow=2.6,SNR=5.5						
DGPR	DIGLIPUR	142.87	327	ex	PKPdf	14 42 43.8	-4.7
POO	Poona	143.13	359	eP	PKPdf	14 42 48.5	-0.5
HYB	Hyderabad	143.84	351	i PKP	PKPbc	14 42 47.0	-0.7
HYB	Hyderabad	143.84	351	eP	PKPdf	14 42 51.0	+0.7
SOCY	Socotra	144.12	33		PKPab	14 42 47.6	-0.7
CISI	Cisompet, Garu	144.49	283	IAMs_20	IAMs_20	15 49 22.0	
	comp=Z,2µm,20.0s						
PMBI	Palembang	145.28	293	IAMs_20	IAMs_20	15 59 45.0	
	comp=Z,3µm,19.0s						
GOA	Goa	146.16	359	eP	PKPab	14 42 54.9	-0.7
LHMI	Lhok Sumawe	146.63	313	IAMs_20	IAMs_20	15 57 25.5	
	comp=Z,4µm,21.0s						
BKNI	Bangkinang	146.71	301	IAMs_20	IAMs_20	16 02 57.0	
	comp=Z,3µm,22.0s						
PSI	Prapat	146.85	307	PKIKP	PKPdf	14 42 54.2	-1.4
RPSI	Rantau Prapat	146.92	307	PKPdf	PKPdf	14 42 54.2	-1.3
CRZF	Crozet Islands	147.17	153	IAMs_20	IAMs_20	15 45 03.2	
	comp=Z,3µm,22.0s						
MNAI	Manna	147.56	292	IAMs_20	IAMs_20	15 50 31.0	
	comp=Z,2µm,20.0s						
MDRS	Chennai	147.78	347	eP	PKPbc	14 42 58.3	-1.4
GSI	Gunungsitoli	148.84	307	PKPbc	PKPbc	14 43 00.7	-1.9
GSI				IAMs_20	IAMs_20	16 02 49.4	
	comp=Z,4µm,22.0s						
TRD	Trivandrum	152.83	352	eP	PKPdf	14 43 07.6	+2.8
MNCY	Minicoy	153.34	0	eP	PKPdf	14 43 07.1	+1.5

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*IDC **22** 14:36:18.2±0.9, 18.°56N×106.°98W, h0^{km}, mb4.1/11, mb1 4.4/15, mb1mx4.2/43, mbtmp4.2/15, ML3.8/4 Error ellipse: s-maj=40.8km s-min=14.7km az=62.0*

*NEIC **22** 14:36:20.5±1.7, 18.°59N±0.°09×106.°93W±0.°08, h10^{km}±1^{km}, mb4.5/110, Md4.4/18(MEX), Error ellipse: s-maj=17.2km s-min=11.4km az=213.0*

*MEX **22** 14:36:21.9±1.0, 18.°64N×106.°85W, h10^{km}±217^{km}, MD4.4*

ISC 22 14:36:20.4±0.7**, 18.°61N**±0.°08×**106.°92W**±0.°08**, h10**^{km}**, n206,** σ1^{s}**01**/193**, mb4.5**/51**, Off coast of Jalisco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
R15V		2.84	78	eP	Pn	14 37 02.9	-3.0
R15V		2.84	78		Pn	14 37 02.8	-3.1
EZ5V		3.26	74	eP	Pn	14 37 10.4	-1.4
EZ5V		3.26	74		Pn	14 37 10.4	-1.4
ANIG	Ahuacatlan	3.32	42	eP	Pn	14 37 10.8	-1.8
ANIG	Ahuacatlan	3.32	42		Pn	14 37 10.8	-1.8
H06E1	SOCORRO T-PHAS	3.80	273	T	T	14 41 02.2	
	SNR=110						
H06S1	SOCORRO T	3.83	273	T	T	14 41 02.8	
	SNR=88						
H06S		3.83	272	eP	Pn	14 37 14.7	-4.7
H06S		3.83	272		Pn	14 37 14.7	-4.7
H06N1	SOCORRO T-PHAS	3.86	274	T	T	14 41 06.3	
	SNR=65						
MAIG	Mazatlaan	4.58	6	i P	Pn	14 37 27.3	-2.5
MAIG	Mazatlaan	4.58	6		Pn	14 37 27.3	-2.5
AAIG	Aguscalientes	5.42	51	eP	Pn	14 37 39.8	-1.8
MOIG	Morelia	5.53	78		Pn	14 37 41.9	-1.1
SLBS	Sierra La Lagu	5.79	331	Pn	Pn	14 37 45.8	-0.6
ZAIG	Zacatecas	5.81	44	Pn	Pn	14 37 46.4	-0.6
LPIG	La Paz	6.31	331	Pn	Pn	14 37 53.3	-0.3
	1.6nm,0.3s,baz=98,slow=4.0,SNR=6.3						
TLIG	Tlapa	8.02	96	Pn	Pn	14 38 17.7	+0.6
HPIG		8.37	8		Pn	14 38 23.2	+1.1
SRIG	Santa Rosalia	9.96	332		Pn	14 38 45.9	+2.2
HSIG		11.00	341	Pn	Pn	14 38 59.3	+1.4
TX31	Lajitas Ar. Si	11.09	15		Pn	14 38 59.4	+0.3
TX32	Lajitas Array	11.09	15		Pn	14 39 00.0	+0.9
TXAR	Lajitas Array	11.09	15	Pn	Pn	14 38 59.1	0.0
	0.5nm,0.3s,baz=193,slow=15,SNR=30						
TXAR	Lajitas Array	11.09	15	Pn	Pn	14 38 59.5	+0.3
CMIG	Matias Romero	11.56	96	Pn	Pn	14 39 06.5	+0.8
	1.5nm,0.3s,baz=286,slow=9.2,SNR=14						
KVTX	Kingsville	12.17	41	Pn	Pn	14 39 14.9	+1.0
MNTX	Cornudas Mount	13.11	6	Pn	Pn	14 39 27.1	+0.3
JCT	Junction City	13.47	27	Pn	Pn	14 39 34.6	+2.9
CLNB	Carlsbad	13.88	11	Pn	Pn	14 39 39.5	+2.2
121A	Cookes Peak, D	13.89	357	Pn	Pn	14 39 39.6	+2.0
TUC	Tucson	14.08	346	Pn	Pn	14 39 42.2	+2.1
214A	Organ Pipe Nat	14.31	339	Pn	Pn	14 39 45.7	+2.4
SPX	San Pedro Mart	14.60	330	Pn	Pn	14 39 48.7	+1.3
LENM	Lemitar	15.50	360	Pn	Pn	14 40 00.3	+1.0
ESJX	Sierra Juarez	15.63	330		Pn	14 40 02.6	+1.6
MSTX	Muleshoe	15.74	13	P	P	14 40 07.7	+1.2
MSTX				IAmb	IAmb	14 40 13.8	
	comp=Z,37nm,1.4s						
WHTX	Lake Whitney,	15.83	31	Pn	Pn	14 40 03.8	+0.4
BAR	Barrett	16.53	330		Pn	14 40 13.5	+1.1
TJX	Tijuana	16.57	329	Pn	Pn	14 40 13.2	+0.2
237A	Washetta, Mont	16.68	35	Pn	Pn	14 40 14.7	+0.3
237A				IAmb	IAmb	14 40 20.0	
	comp=Z,37nm,1.0s						
109C	Camp Elliot, M	16.91	329	P	P	14 40 19.9	+0.7
Z35A	Perchaven, San	17.03	29		Pn	14 40 19.3	+0.5
Z35A				IAmb	IAmb	14 40 25.0	
	comp=Z,34nm,1.1s						
NATX	Nacogdoches	17.15	38	P	P	14 40 23.5	+1.6
PFO	Pinyon Flats O	17.21	332	P	Pn	14 40 21.7	+0.6
	comp=Z,0.0nm,0.3s,baz=165,slow=10,SNR=10						
PFO	Pinyon Flats O	17.21	332	P	P	14 40 23.4	+0.8
PFO				IAmb	IAmb	14 40 32.3	
	comp=Z,49nm,1.4s						
WUAZ	Wupatki	17.30	348	P	P	14 40 25.1	+1.4
MTO3	Montecristo	17.35	101	P	P	14 40 26.1	+1.6
441A	DeRidder	17.36	43	Pn	Pn	14 40 23.2	+0.4
441A				IAmb	IAmb	14 40 25.6	
	comp=Z,88nm,1.2s						
W13A	Hualapai Mount	17.55	341	P	P	14 40 27.2	+0.6
TEIG	Tepich	17.66	82	P	P	14 40 28.2	+0.5
TEIG				IAmb	IAmb	14 40 38.4	
	comp=Z,59nm,1.5s						
Z38A	Mt. Pleasant	18.09	34	P	P	14 40 32.6	+0.3
Z38A				IAmb	IAmb	14 40 36.0	
	comp=Z,43nm,0.9s						
342A	Flagon Creek P	18.32	43	P	P	14 40 35.0	+0.2
342A				IAmb	IAmb	14 40 46.5	
	comp=Z,53nm,1.1s						
MWC	Mount Wilson	18.45	330	P	Pn	14 40 37.6	+1.1
MWC				IAmb	IAmb	14 40 41.1	
	comp=Z,35nm,1.2s						
FNO	Franklin	18.61	25	P	Pn	14 40 38.7	+0.4
X37A	Clayton	18.95	31	P	Pn	14 40 42.9	+0.5
SHPR	Sheep Range	19.25	340	P	Pn	14 40 46.7	+0.5
PV03	Paradox Valley	19.65	355	P	P	14 40 50.4	+0.8
PV17	East Wray Mesa	19.68	355	P	P	14 40 50.3	+0.3
QUOK	Quay	19.68	25	P	P	14 40 50.3	+0.5
QUOK				IAmb	IAmb	14 41 10.7	
	comp=Z,50nm,1.4s						
PV11	David Mesa, Pa	19.70	355	P	P	14 40 50.9	+0.8
PV12	Saucer Basin,	19.71	356	P	Pn	14 40 51.5	-0.2
PV14	Lion Creek, Pa	19.78	355	P	P	14 40 51.9	+0.8
PV04	Paradox Valley	19.79	355	P	P	14 40 51.9	+0.8
PV07	Paradox Valley	19.82	356	P	P	14 40 52.5	+1.0
ISA	Isabella, Lake	19.83	331	P	P	14 40 52.6	+1.2
MIAR	Mount Ida	19.83	34	P	P	14 40 52.0	+0.6
TUL1	Leonard	19.85	27	P	P	14 40 52.1	+0.6
TUL1				IAmb	IAmb	14 41 01.0	
	comp=Z,25nm,0.9s						
TPNV	Topopah Spring	20.03	338	P	P	14 40 53.9	+0.2
X40A	Basin Creek Fa	20.19	36	P	P	14 40 56.1	+0.8
W39A	Magazine	20.22	33	P	P	14 40 56.6	+1.0
346A	Big Creek Wild	20.27	48	P	P	14 40 56.7	+0.5
346A				IAmb	IAmb	14 41 03.7	
	comp=Z,35nm,1.1s						
PAGB	Antelope Grade	20.73	328	P	P	14 41 02.1	+0.9
U38A	Gravette	20.92	29	P	P	14 41 03.5	+0.2
HHAR	Hobbs	21.00	30	P	P	14 41 04.0	-0.1
HHAR				IAmb	IAmb	14 41 12.1	
	comp=Z,40nm,1.3s						
R11A	Troy Canyon, C	21.07	341	P	P	14 41 06.2	+1.1
WHAR	Wooly Hollow	21.08	35	P	P	14 41 06.2	+1.2
WHAR				IAmb	IAmb	14 41 09.1	
	comp=Z,48nm,1.2s						
SPR3	Spring Creek 3	21.32	344	P	P	14 41 08.0	+0.2
TPH	Tonopah	21.38	337	P	P	14 41 09.0	+0.6
PMPB	Monarch Peak	21.39	328	P	P	14 41 09.3	+0.9
PMPB				IAmb	IAmb	14 41 10.9	
	comp=Z,18nm,0.9s						
O20A	White River Ci	21.49	357	P	P	14 41 10.6	+1.1
U40A	Yellville	21.60	32	P	P	14 41 11.3	+0.8
FCAR	Ozark Folk Cen	21.62	34	P	P	14 41 11.7	+0.9
FCAR				IAmb	IAmb	14 41 22.6	
	comp=Z,36nm,1.4s						
MDPB	Devils Postpil	21.74	333	P	P	14 41 13.6	+1.3
MDPB				IAmb	IAmb	14 41 14.8	
	comp=Z,19nm,1.1s						
LHV	Little Huntoon	22.03	335	P	P	14 41 16.1	+1.0
LHV				IAmb	IAmb	14 41 17.9	
	comp=Z,17nm,1.2s						
NV11	Mina Array Sit	22.05	336	P	P	14 41 16.5	+1.0
NVAR	Mina Array Bea	22.10	336	P	P	14 41 16.8	+0.6
	comp=Z,6.9nm,0.9s,baz=156,slow=12,SNR=27						
NVAR	Mina Array Bea	22.10	336	P	P	14 41 17.0	+0.8
LCAR	Lake Charles	22.28	36	P	P	14 41 19.3	+1.5
Z47A	Carrollton	22.28	46	P	P	14 41 19.4	+1.5
RYN	Ryan	22.36	336	P	P	14 41 20.1	+1.3
S39A	Bolivar	22.43	29	P	P	14 41 18.3	-1.2
S39A				IAmb	IAmb	14 41 39.3	
	comp=Z,11nm,1.1s						
MGMO	Mountain Grove	22.51	32	P	P	14 41 20.9	+0.6
WAKR	Walker	22.62	334	P	P	14 41 21.1	-0.6
CMB	Columbia Colle	22.65	331	P	P	14 41 22.1	+0.3
W45A	Hickory Valley	22.79	40	P	P	14 41 23.0	-0.2
250A	Grady	22.88	50	P	P	14 41 24.0	-0.3
LRAL	Lakeview Retre	22.92	47	P	P	14 41 24.7	0.0
LRAL				IAmb	IAmb	14 41 26.9	
	comp=Z,10.0nm,0.8s						
YERR	Yerington	22.95	335	P	P	14 41 26.2	+1.0
YERR				IAmb	IAmb	14 41 28.6	
	comp=Z,27nm,1.5s						
T42A	Van Buren	23.02	34	P	P	14 41 26.0	+0.3
PNTR	Pine Nut	23.19	334	P	P	14 41 28.4	+0.7
ELK	Elko	23.19	344	P	P	14 41 28.2	+0.5
	comp=Z,5.1nm,0.9s,baz=168,slow=6.8,SNR=5.8						
ELK	Elko	23.19	344	P	P	14 41 28.5	+0.9
ELK				IAmb	IAmb	14 41 30.2	
	comp=Z,10nm,1.1s						
VCNR	Virginia City	23.38	334	P	P	14 41 30.8	+1.2
VCNR				IAmb	IAmb	14 41 31.7	
	comp=Z,20nm,1.3s						
R40A	Maddies Statio	23.41	30	P	P	14 41 29.2	-0.3
352A	Blakely	23.64	53	P	P	14 41 31.7	-0.3
X48A	Hartselle	23.71	44	P	P	14 41 32.5	-0.1
X48A				IAmb	IAmb	14 41 38.0	
	comp=Z,11nm,1.1s						
CCM	Cathedral Cave	23.73	32	P	P	14 41 32.5	-0.2
Y49A	Blount Mountai	23.79	46	P	P	14 41 33.0	-0.4
Y49A				IAmb	IAmb	14 41 50.2	
	comp=Z,22nm,1.1s						
FVM	French Village	24.09	33	P	P	14 41 36.1	0.0
BEKR	Beckworth	24.16	334	P	P	14 41 37.5	+0.4
BW06	Boulder Array	24.19	355	P	P	14 41 37.0	-0.4
PDAR	Pinedale Array	24.19	355	P	P	14 41 36.2	-1.1
	comp=Z,2.1nm,0.9s,baz=172,slow=9.9,SNR=7.2						
PDAR	Pinedale Array	24.19	355	P	P	14 41 37.4	+0.1
WVT	Waverly	24.26	40	P	P	14 41 37.1	-0.6
WVT				IAmb	IAmb	14 41 59.1	
	comp=Z,17nm,1.3s						
ORV	Oroville	24.39	332	P	P	14 41 39.2	+0.3
P40A	Paris	24.50	29	P	P	14 41 39.6	-0.4
P40A				IAmb	IAmb	14 41 56.6	
	comp=Z,15nm,1.1s						
ECR	Eagle Creek	24.66	352	P	P	14 41 41.3	-0.3
FPAL	Fort Paine	24.72	46	P	P	14 41 42.1	+0.1
FPAL				IAmb	IAmb	14 41 59.3	
	comp=Z,9.1nm,1.3s						
REDW	Red Top Meadow	24.90	353	P	P	14 41 44.0	+0.2
LOHW	Long Hollow	25.12	354	P	P	14 41 46.1	+0.3
LOHW				IAmb	IAmb	14 41 49.1	
	comp=Z,18nm,1.1s						
CLTN	Cedars of Leba	25.17	42	P	P	14 41 47.8	+1.8
CLTN				IAmb	IAmb	14 41 48.3	
	comp=Z,10nm,1.2s						
T47A	Sharon Grove	25.26	40	P	P	14 41 47.3	+0.5
T47A				IAmb	IAmb	14 41 50.6	
	comp=Z,20nm,1.4s						
W50A	Signal Mountai	25.30	45	P	P	14 41 47.3	0.0
W50A				IAmb	IAmb	14 41 57.4	
	comp=Z,9.8nm,0.8s						
Q44A	Meyer Farm, Va	25.51	34	P	P	14 41 49.7	+0.6
154A	Montrose	25.53	52	P	P	14 41 49.2	-0.2
GOGA	Godfrey	25.64	50	P	P	14 41 51.1	+0.7
GOGA				IAmb	IAmb	14 41 54.4	
	comp=Z,8.3nm,0.9s						
HLID	Hailey	25.67	347	P	P	14 41 51.1	+0.5
255A	Hazlehurst	25.71	54	P	P	14 41 52.4	+1.5
WVOR	Wild Horse Val	25.75	340	P	P	14 41 52.4	+0.9
WVOR				IAmb	IAmb	14 41 54.9	
	comp=Z,25nm,1.4s						
MOD	Modoc Plateau	25.87	337	P	P	14 41 52.7	+0.2
CPCT	Cooper Cave	25.97	45	P	P	14 41 53.1	-0.2
CPCT				IAmb	IAmb	14 42 17.6	
	comp=Z,27nm,1.5s						
W52A	Murphy	26.18	47	P	P	14 41 55.6	+0.3
W52A				IAmb	IAmb	14 42 18.1	
	comp=Z,22nm,1.4s						
BCYI	Bear Canyon	26.20	349	P	P	14 41 55.8	+0.3
V51A	Loudon	26.29	45	P	P	14 41 56.0	-0.2
LRM	Limekiln Ridge	27.52	352	P	P	14 42 07.7	+0.2
PAULI	Pauline	27.53	49	P	P	14 42 06.7	-0.7
PAULI				IAmb	IAmb	14 42 07.3	
	comp=Z,17nm,1.3s						
HRY	Holter Researc	28.32	353	P	P	14 42 14.7	+0.2
P49A	Miami Univ. Ec	28.35	38	P	P	14 42 14.6	-0.1
U54A	Nelsons Funny	28.39	46	P	P	14 42 15.2	0.0
V55A	Taylorsville	28.46	48	P	P	14 42 14.9	-0.8
V55A				IAmb	IAmb	14 42 23.6	
	comp=Z,11nm,1.1s						
N51A	Ashland	30.61	38	P	P	14 42 34.5	-0.2
LON	Longmire	30.63	340	P	P	14 42 34.7	-0.1
LTY	Liberty	30.72	342	P	P	14 42 35.7	+0.1
NEW	Newport	30.73	347	P	P	14 42 36.3	+0.6
WALA	Waterton Lakes	30.90	351	P	P	14 42 38.5	+1.3
B08A	Colville Reser	31.35	344	P	P	14 42 40.4	-0.7
Q56A	Snyder Ridge,	31.50	44	P	P	14 42 42.4	-0.2
B35A	Bob, Littlefor	31.56	17	P	P	14 42 43.1	+0.1
T59A	Double "B" Far	31.59	49	P	P	14 42 43.8	+0.5
EYMN	Ely	31.86	20	P	P	14 42 45.0	-0.5
NLWA	Neilton Lookou	31.89	338	P	P	14 42 45.6	-0.3
NLWA				IAmb	IAmb	14 43 12.6	
	comp=Z,8.1nm,1.2s						
M54A	Oil Creek Stat	32.59	40	P	P	14 42 51.4	-0.7
M54A				IAmb	IAmb	14 43 03.9	
	comp=Z,6.6nm,0.9s						
ULM	Lac du Bonnet	32.78	13	P	P	14 42 52.5	-1.2
M55A	Ridgway	33.11	40	P	P	14 42 56.4	-0.3
WVNY	West Valley, N	33.76	39	P	P	14 43 01.6	-0.7
WVNY				IAmb	IAmb	14 43 22.9	
	comp=Z,10nm,1.2s						
M57A	Sunshine Farm,	34.06	42	P	P	14 43 04.0	-1.0
L56A	Greenwood	34.23	40	P	P	14 43 05.8	-0.7
L56A				IAmb	IAmb	14 43 22.0	
	comp=Z,12nm,1.1s						
PSUB	Penn St. - Bra	34.44	45	P	P	14 43 08.2	0.0
PSUB				IAmb	IAmb	14 43 35.1	
	comp=Z,6.2nm,0.9s						
PECO	Prince Edward	35.60	38	P	P	14 43 17.2	-1.0
SDV	Santo Domingo	36.48	100	P	P	14 43 27.3	+1.0
ANWB	Willy Bob	42.82	84	P	P	14 44 18.6	-0.3
DLBC	Dease Lake	43.23	342	P	P	14 44 21.1	-0.7
	comp=Z,5.4nm,1.0s,baz=174,slow=6.0,SNR=4.6						
YKA	Yellowknife Ar	44.17	355	P	P	14 44 28.1	-1.1
	comp=Z,1.6nm,0.8s,baz=164,slow=7.7,SNR=18						
EGAK	Eagle	51.50	342	P	P	14 45 26.2	+0.3
EGAK				IAmb	IAmb	14 45 26.9	
	comp=Z,3.5nm,0.8s						
LPAZ	La Paz	51.57	130	P	P	14 45 27.6	-0.3
	comp=Z,0.8nm,0.6s,baz=321,slow=7.4,SNR=3.6						
DOT	Dot Lake	51.60	340	P	P	14 45 27.0	+0.3
DOT				IAmb	IAmb	14 45 54.4	
	comp=Z,7.8nm,1.4s						
PAX	Paxson	51.61	339	P	P	14 45 26.9	0.0
PAX				IAmb	IAmb	14 45 31.1	
	comp=Z,3.6nm,0.9s						
C36M	Paulatuk	51.83	352	P	P	14 45 27.8	-0.5
SML	Sawmill	51.91	336	P	P	14 45 28.9	-0.2
INK	Inuvik	52.43	348	P	P	14 45 32.9	0.0
	comp=Z,6.4nm,0.9s,baz=139,slow=7.8,SNR=19						
INK	Inuvik	52.43	348	P	P	14 45 32.4	-0.4
INK				IAmb	IAmb	14 45 33.6	
	comp=Z,6.5nm,0.8s						
SUA	Susitna One	52.65	335	P	P	14 45 34.6	0.0
RSO	Redoubt South	52.92	334	P	P	14 45 39.7	+2.8
RND	Reindeer	53.08	338	P	P	14 45 37.9	+0.1
RND				IAmb	IAmb	14 45 42.3	
	comp=Z,17nm,1.5s						
ILAR	Eielson Array	53.27	340	P	P	14 45 38.6	-0.4
	comp=Z,2.3nm,0.8s,baz=151,slow=6.6,SNR=18						
PRP	Porcupine Dome	53.33	341	P	P	14 45 39.7	0.0
PRP				IAmb	IAmb	14 45 40.7	
	comp=Z,3.7nm,0.8s						
CCB	Clear Creek Bu	53.49	339	P	P	14 45 40.3	-0.4
TRF	Thorofare Moun	53.62	337	P	P	14 45 42.0	+0.1
POKR	Poker Plat Res	53.67	340	P	P	14 45 42.0	-0.1
POKR				IAmb	IAmb	14 46 06.7	
	comp=Z,4.7nm,0.6s						
BWN	Browne	53.76	338	P	P	14 45 41.4	-1.3
FYU	Fort Yukon	53.96	342	P	P	14 45 43.7	-0.4
PPLA	Purkeypile	54.01	336	P	P	14 45 44.6	-0.1
BPAW	Bear Paw Mtn.	54.25	338	P	P	14 45 45.9	-0.5
I23K	Minto, Yukon-K	54.32	339	P	P	14 45 46.5	-0.2
I23K				IAmb	IAmb	14 45 47.8	
	comp=Z,10nm,1.2s						
TTA	Tatalina	55.52	335	P	P	14 45 54.4	-1.1
TTA				IAmb	IAmb	14 45 56.0	
	comp=Z,12nm,1.5s						
COLD	Coldfoot	55.88	341	P	P	14 45 57.4	-0.6
TOLK	Toolik Lake Re	56.59	343	P	P	14 46 02.7	-0.4
TOLK				IAmb	IAmb	14 46 03.9	
	comp=Z,4.3nm,0.9s						
H03N2	Juan Fernandez	58.24	153	T	T	15 49 28.4	
	baz=330,slow=78,SNR=16						
H03N1	Juan Fernandez	58.26	152	T	T	15 49 27.5	
	baz=330,slow=78,SNR=55						
H03N3	Juan Fernandez	58.26	153	T	T	15 49 26.6	
	baz=330,slow=78,SNR=38						
AC05	El Transito	58.98	142	P	P	14 46 21.7	+1.2
AC05				IAmb	IAmb	14 46 27.9	
	comp=Z,5.6nm,0.9s						
CO03	El Pedregal	60.25	144	P	P	14 46 29.9	+0.6
EUNU	Eureka	62.18	4	P	P	14 46 41.3	-0.3
CPUP	Villa Florida	65.68	131	P	P	14 47 04.0	-1.3
	comp=Z,1.3nm,0.5s,baz=325,slow=10,SNR=3.2						
CPUP	Villa Florida	65.68	131	IAmb	IAmb	14 47 19.9	
	comp=Z,7.0nm,1.3s						
PLCA	Paso Flores	68.03	151	P	P	14 47 20.6	+0.5
	comp=Z,2.9nm,1.0s,baz=327,slow=9.0,SNR=4.4						
PLCA	Paso Flores	68.03	151	IAmb	IAmb	14 47 24.6	
	comp=Z,12nm,1.3s						
SEY	Seymchan	78.38	333	P	P	14 48 20.1	-0.7
	comp=Z,2.3nm,0.8s,baz=109,slow=6.0,SNR=12						
H11N3	WAKE ISLAND Hy	80.44	288	T	T	16 17 49.0	
	SNR=4.0						
H11N2	WAKE ISLAND Hy	80.45	288	T	T	16 17 42.7	
H11N1	WAKE ISLAND Hy	80.46	288	T	T	16 17 42.7	
KSH	Kashi	122.12	357	PKP	PKiKP	14 55 18.8	+2.7
ASAR	Alice Springs	123.40	254	PKP	PKPdf	14 55 16.9	-1.7
	comp=Z,0.7nm,1.1s,baz=97,slow=2.9,SNR=2.5						
MAW	Mawson	130.59	175	PKP	PKPdf	14 55 28.7	-2.2
	comp=Z,30nm,0.9s,baz=201,slow=8.6,SNR=2.4						

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*DDA **22** 14:44:00.8, 36.°95N×36.°60E, h7^{km}±3^{km}, ML2.5*

*ISK **22** 14:44:01.5, 37.°02N×36.°66E, h6^{km}, ML2.1/8*

ISC 22 14:44:00.4±1.0**, 37.°00N**±0.°04×**36.°67E**±0.°03**, h8**^{km}**, n19,** σ1^{s}**87**/32**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAMA	Osmaniye	0.18	359	*i* P	Pg	14 44 05.7	+1.4
KAMA				*i* S	Sg	14 44 08.1	+1.2
HCB	Kahramanmara	0.39	29	*i* P	Pg	14 44 09.7	+1.6
HCB				*i* S	Sg	14 44 13.4	+0.2
KUZU	Kuzuini	0.40	125	*i* P	Pg	14 44 09.5	+1.3
KUZU				*i* S	Sg	14 44 13.6	+0.1
KUZU				IAML		14 44 17.0	
	comp=N,910nm,0.3s						
KUZU				IAML		14 44 17.0	
	comp=E,822nm,0.4s						
GAZ	Gaziantep	0.46	68	PG	Pg	14 44 11.1	+1.6
GAZ				SG	Sg	14 44 17.5	+1.9
KMRS	Kahramanmaras	0.53	20	PG	Pg	14 44 12.5	+1.7
KMRS				SG	Sg	14 44 19.5	+1.7
KHMN	Narli-Kahraman	0.55	45	PG	Pg	14 44 12.9	+1.8
KHMN				SG	Sb	14 44 21.6	+1.2
KAHM	Kahramanmaras,	0.57	26	*i* P	Pg	14 44 13.2	+1.7
KAHM				*i* S	Sg	14 44 18.1	-0.9
ANDN	Andirin	0.63	336	*i* P	Pg	14 44 13.7	+1.1
ANDN				*i* S	Sg	14 44 19.4	-1.5
CEYT	Ceyhan	0.74	271	PG	Pb	14 44 15.8	+0.2
GZT	Gaziantep	0.80	63	*i* P	Pg	14 44 17.1	+1.3
GZT				*i* S	Sg	14 44 25.1	-1.0
KOZT	Kozan	0.83	306	PG	Pb	14 44 17.5	+0.4
ELBS	KAHRAMANMARAS	1.37	15	*i* P	Pg	14 44 29.0	+2.2
ELBS				*i* S	Sb	14 44 41.6	-2.5
ATAB	Bozova	1.38	70	*i* P	Pg	14 44 28.3	+1.4
ATAB				*i* S	Sb	14 44 40.9	-3.3
SARI	SarD1z-Kayseri	1.42	352	PN	Pb	14 44 28.5	+1.3
CMRD	Camardi-Nigde	1.49	297	PN	Pn	14 44 28.6	+0.9
SURC	SANLIURFA_SURC	1.56	94	*i* P	Pb	14 44 30.9	+1.3
SURC				*i* S	Sn	14 44 45.7	-3.3
AKCD	Akcadag	1.63	37	*i* P	Pg	14 44 33.2	+1.5
AKCD				*i* S	Sn	14 44 45.9	-4.9
AKCD				IAML		14 44 58.0	
	comp=N,61nm,0.3s						
DARE	Darende-Malaty	1.69	22	PN	Pb	14 44 32.5	+0.6
MALT	Malatya	1.91	46	PN	Pb	14 44 36.2	+0.6

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*IDC **22** 15:00:36.9±0.8, 10°.69N×124°.91E, h0^{km}, mb3.6/11, mb1 3.7/11, mb1mx3.6/40, mbtmp3.6/11, Error ellipse: s-maj=36.0km s-min=15.8km az=71.0*

*MAN **22** 15:00:38.2, 10°.92N×125°.17E, h4^{km}, mb4.9, ML3.8, MS3.8*

ISC 22 15:00:39.1±1.5**, 10°.88N**±0°.05×**125°.17E**±0°.05**, h11**^{km}±10^{km}**, n26,** σ**1ˢ.32**/30**, mb3.7**/11**, 3C-1D, Leyte**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OCLP	Ormoc	0.58	287	*e*P	Pg	15 00 49.6	-0.7
OCLP				*e*S	Sb	15 00 59.4	+0.1
MSLP	Maasin	0.80	202	*e*P	Pb	15 00 54.8	-0.2
MSLP				*e*S	Sn	15 01 08.1	-0.2
LLP	Lapu-Lapu	1.31	245	⇑*e*P	Pn	15 01 02.9	-0.4
LLP				*i* S	Sn	15 01 22.1	+1.3
GLSP	General Luna,	1.44	139	*e*P	Pn	15 01 03.5	-1.6
GLSP				*e*S	Sg	15 01 27.8	+2.3
BUTP	Butuan	1.95	167	*e*P	Pb	15 01 13.2	-1.4
BUTP				*e*S	Sg	15 01 50.1	+8.2
CGP	Cagayan de Oro	2.46	191	⇓*e*P	Pn	15 01 20.0	+0.9
CGP				*e*S	Sn	15 01 50.5	+1.4
GUIM	Jordan	2.55	265	*e*P	Pn	15 01 20.3	-0.1
GUIM				*e*S	Sn	15 01 50.0	-1.3
CNOP	Candoni, Negro	2.70	247	*e*P	Pn	15 01 22.6	+0.1
BUKP	Musuan	2.99	182	*e*P	Pn	15 01 28.3	+1.9
BUKP				*e*S	Sb	15 02 09.3	+0.4
JAP	San Jose, Anti	3.17	268	⇑*e*P	Pn	15 01 31.0	+2.1
KCP	Kidapawan	3.85	181	⇑*e*P	Pb	15 01 46.6	-0.4
SJMP	San Jose	4.27	292	*e*P	Pn	15 01 44.6	+0.6
CMAR	Chiang Mai Arr	26.44	290	P	P	15 06 14.1	-2.1
	0.2nm,0.3s,baz=0.9,slow=7.9,SNR=2.1						
KSRS	Korea Array	26.57	5	P	P	15 06 17.6	+0.5
	1.2nm,0.7s,baz=183,slow=9.7,SNR=4.2						
WRA	Warramunga Arr	31.93	164	P	P	15 07 03.2	-1.8
	0.6nm,0.6s,baz=344,slow=9.4,SNR=7.8						
ASAR	Alice Springs	35.38	166	P	P	15 07 33.5	-1.6
	0.3nm,0.7s,baz=353,slow=6.9,SNR=14						
SONM	Songino Array	40.08	340	P	P	15 08 16.0	+1.3
	0.3nm,0.5s,baz=165,slow=8.5,SNR=3.2						
H11N1	WAKE ISLAND Hy	41.10	73	T	T	15 51 41.4	
	baz=265,slow=75,SNR=12						
H11N2	WAKE ISLAND Hy	41.10	72	T	T	15 51 41.2	
	baz=265,slow=75,SNR=11						
H11N3	WAKE ISLAND Hy	41.12	73	T	T	15 51 42.6	
	baz=265,slow=75,SNR=12						
STKA	Stephens Creek	45.33	160	P	P	15 08 56.5	-0.7
	1.9nm,0.7s,baz=342,slow=8.2,SNR=6.8						
PETK	Petropavlovsk-	49.54	25	P	P	15 09 31.8	+2.0
	1.4nm,0.7s,baz=284,slow=2.7,SNR=1.7						
MKAR	Makanchi Array	50.89	323	P	P	15 09 39.9	-0.3
	0.7nm,0.7s,baz=124,slow=8.2,SNR=7.2						
KURBB	Kurchatov Arra	54.96	326	P	P	15 10 09.0	-1.1
	0.7nm,0.6s,baz=127,slow=6.5,SNR=4.2						
AKTO	Aktyubinsk	67.17	320	P	P	15 11 32.8	-0.2
	0.9nm,0.8s,baz=60,slow=4.2,SNR=3.6						
ILAR	Eielson Array	79.36	26	P	P	15 12 46.0	+1.2
	0.2nm,0.7s,baz=259,slow=4.4,SNR=1.3						

IDC 22 15:36:54.9±44.0**, 16°.61S**×**171°.59W, h0**^{km}**, mb3.7**/3**, mb1 3.9**/3**, mb1mx3.6**/32**, mbtmp3.7**/3**, Error ellipse: s-maj=852.1km s-min=199.8km az=80.0, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	44.97	241	P	P	15 45 12.9	+0.8
	0.7nm,0.6s,baz=100,slow=11,SNR=3.5						
WRA	Warramunga Arr	51.27	258	P	P	15 46 01.2	+0.2
	0.2nm,0.6s,baz=97,slow=6.6,SNR=5.0						
ASAR	Alice Springs	51.40	253	P	P	15 46 01.2	-0.9
	1.2nm,0.6s,baz=89,slow=8.5,SNR=33						

MAN 22 16:24:36.8, 9°.95N×**126°.04E, h11**^{km}**, mb4.1, ML2.8, MS2.5, 2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLSP	General Luna,	0.18	153	*e*P	Pg	16 24 41.5	+0.6
GLSP				*e*S	Sg	16 24 46.6	+3.0
BUTP	Butuan	1.06	203	*e*P	Pb	16 24 55.9	-1.3
BUTP				*e*S	Sn	16 25 12.4	0.0
MSLP	Maasin	1.18	279	*e*P	Pb	16 24 58.4	-0.8
MSLP				*e*S	Sn	16 25 15.2	-0.1
OCLP	Ormoc	1.78	308	*e*P	Pn	16 25 06.8	-0.8
CGP	Cagayan de Oro	1.99	222	⇓*e*P	Pn	16 25 11.0	+0.5
CGP				*i* S	Sn	16 25 36.5	+1.0
LLP	Lapu-Lapu	2.08	280	⇓*e*P	Pn	16 25 12.4	+0.8
LLP				*e*S	Sb	16 25 40.2	-0.2
BUKP	Musuan	2.27	205	*e*P	Pn	16 25 15.4	+1.0
BUKP				*e*S	Sb	16 25 45.6	-0.6

ASRS 22 16:25:29.6±0.3**, 52°N**±2°×**9°6E**±°**, h10**^{km}**, MLh3.3**/7**, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/iasp91 confirmed, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KZLR	Kyzyl	1.02	262	Pg	Pn	16 25 52.8	+2.8
KZLR				Sg	Sn	16 26 04.1	-0.3
KNGR	Kungurtug, Tuv	1.55	144	Pg	Pg	16 26 00.4	+1.1
KNGR				Sg	Sg	16 26 19.0	-0.3
ARDR	Aradan	1.78	295	Pg	Pg	16 26 07.5	+3.8
ARDR				Sg	Sg	16 26 28.8	+2.0
BLRR	Bol’shaya Rech	2.53	299	Pg	Pg	16 26 19.8	+1.8
BLRR				Sg	Sg	16 26 53.5	+2.8
DJOS	Djoyskaya Sosn	3.02	290	Pg	Pg	16 26 28.7	+1.2
DJOS				Sg	Sg	16 27 08.4	+1.8
CERR	Cheremushki	3.03	291	Pg	Pg	16 26 28.8	+1.3
CERR				Sg	Sg	16 27 08.2	+1.5
MOY	Mondy	3.06	92	Pg	Pg	16 26 28.3	+0.1
MOY				Sg	Sg	16 27 07.8	0.0
DJO	Djoy, Khakassi	3.12	289	Pg	Pg	16 26 30.3	+0.9
DJO				Sg	Sg	16 27 10.4	+0.6
ORY	Orie	3.20	350	Pg	Pg	16 26 31.8	+0.8
ORY				Sg	Sg	16 27 14.5	+2.2
KTRR	Kuturchin	3.28	341	Pg	Pg	16 26 33.0	+0.7
KTRR				Sg	Sg	16 27 18.5	+3.7
ABNR	Abakan	3.38	305	Sg	Sg	16 27 19.1	+1.0
TBTR	Tabat	3.45	290	Pg	Pg	16 26 37.2	+1.5
TBTR				Sg	Sg	16 27 20.7	+0.3
TEL	Teeli	3.77	259	Pg	Pg	16 26 43.0	+1.2
TEL				Sg	Sg	16 27 30.7	+0.1
SHRR	Shira	4.43	309	Sg	Sg	16 27 52.9	+1.2

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*IDC **22** 16:37:56.9±3.1, 5°.07S×133°.54E, h0^{km}, mb3.4/1, mb1 3.7/4, mb1mx3.5/26, mbtmp3.5/4, ML3.6/3, MS3.8/1, Ms1 3.8/1, ms1mx3.3/18, Error ellipse: s-maj=127.7km s-min=30.5km az=82.0*

*NEIC **22** 16:37:58.8±1.5, 5°.33S±0°.07×133°.0E±0°.2, h10^{km}±2^{km}, mb4.0/2, Error ellipse: s-maj=40.8km s-min=11.5km az=82.0*

ISC 22 16:37:58.9±1.3**, 5°.40S**±0°.10×**133°.0E**±0°.3**, h10**^{km}**, n12,** σ**2ˢ.24**/12**, Aru Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	Fak Fak	2.57	344		Pn	16 38 39.3	-1.3
TNTI	Ternate	8.30	318	Pn	Pn	16 39 58.5	-0.9
WB0	Warramunga Arr	14.35	175	Pn	Pn	16 41 22.5	+0.3
FITZ	Fitzroy Crossi	14.50	209	Pn	P	16 41 31.8	+0.7
	0.4nm,0.3s,baz=37,slow=11,SNR=16						
WRA	Warramunga Arr	14.52	175	Pn	Pn	16 41 25.4	+0.9
	0.1nm,0.3s,baz=352,slow=13,SNR=6.2						
WRA				Sn	Sn	16 44 00.9	-4.8
	0.1nm,0.3s,baz=349,slow=23,SNR=2.8						
WB2	Warramunga Arr	14.52	175	Pn	Pn	16 41 24.7	+0.1
WR0	Warramunga Arr	14.55	174	Pn	Pn	16 41 25.1	+0.1
AS31	Alice Springs	18.18	177	P	P	16 42 14.5	+2.6
AS31				IAmb	IAmb	16 42 29.9	
	comp=Z,0.8nm,0.7s						
ASAR	Alice Springs	18.18	177	P	P	16 42 15.3	+3.4
	comp=Z,0.3nm,0.3s,baz=4.6,slow=12,SNR=23						
QIZ	Qiongzhong	33.29	317	P	P	16 44 37.0	+0.1
QIZ				IAmb	IAmb	16 45 05.7	
	comp=Z,30nm,1.5s						
JCJ	Chichijima	33.52	15	LR	LR	16 58 08.9	
	comp=Z,148nm,18.3s,baz=216,slow=37						
MKAR	Makanchi Array	68.56	325	P	P	16 49 01.9	0.0
	comp=Z,0.2nm,0.4s,baz=109,slow=7.7,SNR=4.2						

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*SOME **22** 16:54:59.8, 44°.37N×85°.27E, h5^{km}*

*NNC **22** 16:54:59.2±2.4, 44°.26N×85°.39E, h1^{km}±15^{km}, mb3.5, mpv3.1, Error ellipse: s-maj=18.4km s-min=8.0km az=119.0*

ISC 22 16:54:57.1±2.5**, 44°.19N**±0°.09×**85°.4E**±0°.1**, h10**^{km}**, n21,** σ**1ˢ.36**/27**, 4C-5D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZSN	Zaisan	3.29	353	*e*P	Pg	16 55 58.9	-1.1
	2.4nm,0.4s						
ZSN				*e*S	Sg	16 56 40.4	-2.2
	16nm,0.8s						
ZSN	Zaisan	3.29	353	Pg	Pg	16 55 58.9	-1.1
	2.4nm,0.4s						
ZSN				Lg	Lg	16 56 40.4	
	16nm,0.8s						
MK31	Makanchi Array	3.41	321	⇑Pn	Pn	16 55 52.7	+2.4
	0.1nm,0.3s,baz=148,slow=17,SNR=56						
MK31				⇑Pg	Pg	16 56 01.0	-1.4
	1.0nm,0.3s,baz=131,slow=17,SNR=26						
MK31				⇓Lg	Lg	16 56 45.8	
	1.9nm,0.4s,baz=133,slow=29,SNR=5.5						
MAKZ	Makanchi	3.56	319	⇑Pg	Pb	16 56 01.7	+1.5
	2.0nm,0.8s						
MAKZ				⇑Lg	Lg	16 56 52.2	
	3.5nm,0.9s						
KTMS	Ketmen	3.74	260	*e*P	Pg	16 56 07.9	-0.8
	0.2nm,0.0s						
KTMS				*e*S	Sg	16 56 56.3	-0.8
	9.0nm,0.3s						
KTMS	Ketmen	3.74	260	Pg	Pg	16 56 07.9	-0.8
	0.2nm,0.0s						
KTMS				Lg	Lg	16 56 56.3	
	9.0nm,0.3s						
DJR	Jarkent	4.04	274	*e*P	Pg	16 56 14.4	-0.1
	4.6nm,0.4s						
DJR				*e*S	Sg	16 57 07.3	+0.5
	6.7nm,0.5s						
DJR	Jarkent	4.04	274	Pg	Pg	16 56 14.4	-0.1
	4.6nm,0.4s						
DJR				Lg	Lg	16 57 07.3	
	6.7nm,0.5s						
PDGK	Podgornoye	4.38	261	⇓Pg	Pb	16 56 17.0	+2.9
	1.8nm,0.9s						
PDGK				⇓Lg	Lg	16 57 17.6	
	4.9nm,0.7s						
SHLS	Shalkode	4.44	259	*e*P	Pb	16 56 14.2	-1.0
	3.9nm,0.4s						
SHLS				*e*S	Sb	16 57 07.0	-1.8
	18nm,0.9s						
SHLS	Shalkode	4.44	259	Pg	Pb	16 56 14.2	-1.0
	3.9nm,0.4s						
SHLS				Lg	Lg	16 57 07.0	
	18nm,0.9s						
UZB	Uzynbulak	4.75	260	*e*P	Pg	16 56 27.3	-0.7
	4.2nm,0.3s						
UZB				*e*S	Sg	16 57 29.6	0.0
	4.0nm,0.5s						
UZB	Uzynbulak	4.75	260	Pg	Pg	16 56 27.3	-0.7
	4.2nm,0.3s						
UZB				Lg	Lg	16 57 29.6	
	4.0nm,0.5s						
KPKS	Kokpek	4.92	264	*e*P	Pg	16 56 29.4	-2.0
	2.4nm,0.3s						
KPKS				*e*S	Sg	16 57 33.1	-2.0
	9.3nm,0.7s						
MNBS	Baschi	5.05	271	*e*P	Pg	16 56 32.9	-0.9
	1.0nm,0.3s						
MNBS				*e*S	Sg	16 57 39.1	0.0
	8.2nm,0.5s						
MNBS	Baschi	5.05	271	Pg	Pg	16 56 32.9	-0.9
	1.0nm,0.3s						
MNBS				Lg	Lg	16 57 39.1	
	8.2nm,0.5s						
ARXS	Arharly	5.46	273	*e*P	Pg	16 56 40.6	-0.9
	3.6nm,0.5s						
ARXS				*e*S	Sg	16 57 52.4	+0.3
	5.1nm,0.6s						
ARXS	Arharly	5.46	273	Pg	Pg	16 56 40.6	-0.9
	3.6nm,0.5s						
ARXS				Lg	Lg	16 57 52.4	
	5.1nm,0.6s						
MDOK	Medeo	6.15	263	Pg	Pg	16 56 49.7	-5.2
	1.4nm,0.6s						
MDOK				Lg	Lg	16 58 16.3	
	3.2nm,0.9s						
KURBB	Kurchatov Arra	7.95	326	⇓Lg	Lg	16 59 14.7	
	6.7nm,0.7s						
KURK	Kurchatov	7.99	327	⇓Lg	Lg	16 59 11.8	
	2.6nm,0.6s						

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*DJA **22** 16:57:54.2±0.5, 12°S±5°×11°8E±°, h46^{km}±40^{km}, M4.5/12, mb4.5/7, MLv4.4/12*

*NEIC **22** 16:57:54.0±2.5, 11°.46S±0°.04×118°.15E±0°.07, h41^{km}±9^{km}, mb4.0/16, Error ellipse: s-maj=10.8km s-min=3.3km az=121.0*

*IDC **22** 16:58:00.9±3.3, 11°.19S×118°.47E, h95^{km}±33^{km}, mb3.8/4, mb1 3.7/7, mb1mx3.3/39, mbtmp4.0/7, Error ellipse: s-maj=31.0km s-min=15.1km az=74.0*

ISC 22 16:57:53.9±0.6**, 11°.48S**±0°.05×**118°.20E**±0°.05**, h36**^{km}**, n49,** σ**1ˢ.69**/53**, mb4.0**/10**, South of Sumbawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BASI	Baing, Sumba	2.65	62	P	Pn	16 58 35.1	+1.0
BASI				S	Sn	16 59 06.9	+1.9
PLAI	Plampang	2.67	351	P	Pn	16 58 35.2	+0.8
PLAI				S	Sn	16 59 03.8	-1.8
WSI	Waingapu	2.74	49	P	Pn	16 58 36.4	+1.1
TWSI	Taliwang, Sumb	3.02	334	P	Pn	16 58 39.6	+0.4
SRBI	Singaraja	4.48	319	P	Pn	16 59 00.6	+1.3
MMRI	Maumere	4.88	55	Pn	Pn	16 59 05.1	+0.3
MMRI	Maumere	4.88	55	P	Pn	16 59 06.1	+1.3
JAGI	Jajag, Banyuwa	4.99	307	Pn	Pn	16 59 04.9	-1.4
BATI	Baumata	5.51	77	P	Pn	16 59 15.2	+1.7
	14nm,0.3s,baz=286,slow=7.4,SNR=20						
BATI				S	Sn	17 00 16.4	+0.7
	18nm,0.3s,baz=28,slow=23,SNR=7.1						
BATI	Baumata	5.51	77	P	Pn	16 59 15.3	+1.7
	0.3nm76nm,1.3s						
BSSI	Bau Bau, Buton	5.77	23	P	Pn	16 59 19.0	+2.0
	0.3nm35nm,0.7s						
SOEI	Soe	6.20	75	Pn	Pn	16 59 24.8	+1.6
SOEI	Soe	6.20	75	P	Pn	16 59 24.9	+1.8
	0.2nm43nm,0.8s						
BKSI	Bulukumba	6.41	17	P	Pn	16 59 27.4	+1.6
	0.4nm25nm,0.6s						
KAPI	Kappang	6.61	14	P	Pn	16 59 31.4	+2.9
	1.6nm,0.3s,baz=202,slow=11,SNR=7.6						
KAPI				S	Sn	17 00 41.2	-1.5
	7.3nm,0.3s,baz=78,slow=23,SNR=14						
KAPI	Kappang	6.61	14	Pn	Pn	16 59 31.1	+2.6
BNSI	Bone	7.28	15	P	Pn	16 59 39.1	+1.2
	0.1nm24nm,1.1s						
UGM	Wanagama	8.36	294	Pn	Pn	16 59 53.1	+0.4
UGM	Wanagama	8.36	294	P	Pn	16 59 53.2	+0.5
	148nm,1.7s						
FITZ	Fitzroy Crossi	9.74	133	P	Pn	17 00 11.8	+0.2
	0.6nm,0.3s,baz=330,slow=9.7,SNR=60						
FITZ				S	Sn	17 01 54.4	-5.5
	2.0nm,0.3s,baz=176,slow=22,SNR=9.2						
FITZ	Fitzroy Crossi	9.74	133		Pn	17 00 11.7	+0.1
PSA00	Pilbara Seismi	10.16	171	Pn	Pn	17 00 16.4	-0.9
CISI	Cisompet, Garu	10.96	290	Pn	Pn	17 00 27.0	-1.4
GIRL	Giralia	11.73	198	Pn	Pn	17 00 39.3	+0.6
FAKI	Fak Fak	16.32	60	Pn	Pn	17 01 38.7	-1.7
WB0	Warramunga Arr	17.62	120	P	Pn	17 01 56.5	-0.3
WRA	Warramunga Arr	17.65	120	P	Pn	17 01 56.6	-0.5
	0.1nm,0.3s,baz=300,slow=13,SNR=5.4						
WRA				S	Sn	17 04 59.6	-13
	0.1nm,0.3s,baz=294,slow=24,SNR=2.3						
WRAB	Tennant Creek	17.66	120	P	Pn	17 01 57.4	+0.2
WRAB				IAmb	IAmb	17 02 00.3	
	comp=Z,12nm,1.4s						
WB2	Warramunga Arr	17.66	120	P	Pn	17 01 57.1	-0.2
WB2				IAmb	IAmb	17 02 14.3	
	comp=Z,14nm,1.4s						
WR0	Warramunga Arr	17.83	120	P	P	17 01 59.6	-0.2
AS31	Alice Springs	19.23	131	P	Pn	17 02 16.8	+0.3
ASAR	Alice Springs	19.23	131	P	Pn	17 02 16.9	+0.5
	comp=Z,0.1nm,0.3s,baz=301,slow=10,SNR=16						
ASAR				S	Sn	17 05 39.6	-11
	comp=Z,0.1nm,0.3s,baz=303,slow=22,SNR=5.5						
NWAO	Narrogin (SRO)	21.36	182	P	P	17 02 44.5	+6.3
	comp=Z,8.7nm,0.6s,baz=15,slow=11,SNR=10						
NWAO				S	S	17 06 22.9	-11
	comp=Z,6.3nm,0.5s,baz=153,slow=21,SNR=7.6						
NWAO	Narrogin (SRO)	21.36	182	P	P	17 02 37.9	-0.3
NWAO				IAmb	IAmb	17 02 54.4	
	comp=Z,19nm,1.1s						
ULN	Ulaanbaatar	59.91	351	P	P	17 07 55.7	-0.7
ULN				IAmb	IAmb	17 08 13.6	
	comp=Z,1.3nm,1.1s						
SONM	Songino Array	59.98	351	P	P	17 07 56.4	-0.4
	comp=Z,1.0nm,0.7s,baz=166,slow=8.4,SNR=9.7						
SONM	Songino Array	59.98	351	IAmb	IAmb	17 07 57.5	
	comp=Z,0.9nm,0.9s						
KBL	Kabul	65.32	317	P	P	17 08 32.4	-0.4
KBL				IAmb	IAmb	17 08 32.8	
	comp=Z,2.1nm,0.6s						
MK31	Makanchi Array	66.31	334	P	P	17 08 37.9	-0.9
MK31				IAmb	IAmb	17 08 39.2	
	comp=Z,1.5nm,0.9s						
MKAR	Makanchi Array	66.31	334	P	P	17 08 38.6	-0.1
	comp=Z,1.0nm,0.4s,baz=148,slow=7.0,SNR=28						
MKAR	Makanchi Array	66.31	334	P	P	17 08 38.1	-0.6
MAKZ	Makanchi	66.46	334	P	P	17 08 39.0	-0.6
MAKZ				IAmb	IAmb	17 08 58.9	
	comp=Z,1.9nm,1.4s						
MAW	Mawson	66.65	200	P	P	17 08 42.3	+1.8
AAK	Ala-Archa	67.08	326	P	P	17 08 42.3	-1.6
AAK				IAmb	IAmb	17 08 45.1	
	comp=Z,1.2nm,0.9s						
ABPO	Ambohimpanom	68.51	254	P	P	17 08 53.8	+0.4
ZAA0	Zalesovo Array	71.08	340	P	P	17 09 07.8	-0.4
ZAA0				IAmb	IAmb	17 09 11.4	
	comp=Z,2.0nm,1.1s						
ZALV	Zalesovo Beam	71.08	340	P	P	17 09 06.7	-1.5
	comp=Z,1.2nm,0.5s,baz=143,slow=5.3,SNR=7.3						
ZALV	Zalesovo Beam	71.08	340	P	P	17 09 06.6	-1.6
ABKAR	Akbulak array	79.14	325	P	P	17 09 54.4	-0.4

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*BJI **22** 17:10:51.5±0.0, 20°.04N×45°.85W, h19^{km}, mB5.8/3, mb5.4/2, Ms5.2/1, Ms7 4.7/1*

*IDC **22** 17:10:53.1±0.5, 20°.06N×45°.78W, h0^{km}, mb4.1/20, mb1 4.3/20, mb1mx4.1/40, mbtmp4.1/20, MS4.3/19, Ms1 4.3/19, ms1mx4.0/38, Error ellipse: s-maj=17.9km s-min=13.6km az=170.0*

*NEIC **22** 17:10:54.4±1.7, 20°.0N±0°.1×45°.7W±0°.1, h10^{km}±1^{km}, mb4.8/40, Error ellipse: s-maj=22.0km s-min=19.8km az=144.0*

*GCMT **22** 17:10:55.4±0.3, 20°.26N±0°.04×45°.63W±0°.02, h12^{km}, MW5.0/99, Moment Tensor Solution. s14,c14; s99,c120; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.39±.13; $M_{\theta\theta}$0.22±.16; $M_{\phi\phi}$3.17±.11; $M_{r\theta}$0.28±.75; $M_{\theta\phi}$0.65±.11; $M_{\phi r}$-0.86±.57; Best double couple: $M_0$3.46600×10^{16} NP1:ϕ_s199.00000°, δ39.00000°, λ-79.00000°. NP2: ϕ_s5.00000°, δ52.00000°, λ-99.00000°. Principal axes: T 3.3980, Plg7.0000°, Azm101.0000°; N 0.1390, Plg7.0000°, Azm10.0000°; P -3.5340, Plg80.0000°, Azm235.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 22 17:10:54.8±0.5**, 20°.0N**±0°.1×**45°.77W**±0°.08**, h10**^{km}**, n107,** σ**0ˢ.94**/100**, mb4.7**/51**, MS4.4**/17**, 6C-1D, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MDP	Montagnes des	16.26	205	LR	LR	17 19 39.6	
	comp=Z,377nm,21.3s,baz=11,slow=32						
SJG	San Juan	19.36	268	LR	LR	17 21 25.0	
	comp=Z,766nm,21.6s,baz=100,slow=33						
SDV	Santo Domingo	26.45	249	P	P	17 16 33.3	+0.9
	1.6nm,0.3s,baz=110,slow=5.9,SNR=3.8						
SDV				LR	LR	17 26 05.3	
	comp=Z,408nm,21.9s,baz=48,slow=34						
ROSC	El Rosal	31.61	245	LR	LR	17 29 01.5	
	comp=Z,530nm,21.4s,baz=148,slow=34						
OTAV	Otavalo	37.54	242	P	P	17 18 10.9	+0.9
FPAL	Fort Paine	38.00	301	P	P	17 18 14.8	+1.7
FPAL				IAmb	IAmb	17 18 15.7	
	comp=Z,17nm,1.0s						
R49A	Shelbyville	38.58	307	P	P	17 18 19.3	+1.3
R49A				IAmb	IAmb	17 18 26.0	
	comp=Z,26nm,1.3s						
PLAL	Pickwick Lake	40.07	301	P	P	17 18 31.4	+0.9
PLAL				IAmb	IAmb	17 18 33.4	
	comp=Z,17nm,1.1s						
WVT	Waverly	40.10	303	P	P	17 18 29.5	-1.2
KOWA	Kowa	40.17	91	P	P	17 18 31.2	-0.3
	comp=Z,2.1nm,0.7s,baz=280,slow=6.4,SNR=4.7						
SFIN	Lafayette	40.63	309	P	P	17 18 36.3	+1.3
SFIN				IAmb	IAmb	17 18 50.2	
	comp=Z,29nm,1.3s						
ESDC	Sonseca Array	40.77	52	P	P	17 18 35.0	-1.3
	comp=Z,0.8nm,0.8s,baz=247,slow=10,SNR=4.3						
ESDC				PcP	PcP	17 20 37.8	+0.3
	comp=Z,1.5nm,0.8s,baz=259,slow=3.7,SNR=5.3						
ESDC				LR	LR	17 32 02.2	
	comp=Z,304nm,19.2s,baz=310,slow=31						
H10N3	ASCENSION HYDR	41.39	129	T	T	18 02 40.5	
	baz=312,slow=75,SNR=167						
H10N2	ASCENSION HYDR	41.39	129	T	T	18 02 39.4	
	baz=312,slow=75,SNR=163						
H10N1	ASCENSION HYDR	41.41	129	T	T	18 02 41.7	
	baz=312,slow=75,SNR=164						
DBIC	Dimbokro	41.83	103	P	P	17 18 44.9	-0.3
	comp=Z,4.9nm,0.8s,baz=285,slow=9.0,SNR=6.2						
DBIC				LR	LR	17 32 46.9	
	comp=Z,627nm,21.5s,baz=264,slow=31						
LPAZ	La Paz	42.23	213	P	P	17 18 49.0	-0.1
	comp=Z,1.5nm,0.8s,baz=16,slow=11,SNR=5.8						
LPAZ				LR	LR	17 36 15.6	
	comp=Z,216nm,19.5s,baz=86,slow=36						
LPAZ	La Paz	42.23	213	P	P	17 18 49.2	+0.2
FVM	French Village	42.52	305	P	P	17 18 51.6	+1.1
FVM				IAmb	IAmb	17 18 52.6	
	comp=Z,16nm,1.0s						

CCM	**Cathedral Cave**	**43.17**	**305**	P	**P**	**17 18 57.1**	**+1.3**
CCM				IAmb	IAmb	17 18 58.4	
	comp=Z,26nm,1.3s						
FCAR	**Ozark Folk Cen**	**43.48**	**301**	P	**P**	**17 18 58.9**	**+0.5**
R40A	**Maddies Statio**	**44.01**	**305**	P	**P**	**17 19 01.7**	**-0.8**
R40A				IAmb	IAmb	17 19 03.9	
	comp=Z,14nm,1.1s						
P40A	**Paris**	**44.09**	**307**	P	**P**	**17 19 03.0**	**-0.1**
P40A				IAmb	IAmb	17 19 05.2	
	comp=Z,26nm,1.4s						
G40A	**Rib Lake**	**44.35**	**315**	P	**P**	**17 19 05.0**	**-0.3**
TOA0	**Torodi Ar. Sit**	**45.88**	**91**	P	**P**	**17 19 17.2**	**-0.6**
TOA0				IAmb	IAmb	17 19 18.7	
	comp=Z,14nm,1.2s						
TORD	**Torodi Ar. Bea**	**45.88**	**91**	P	**P**	**17 19 17.3**	**-0.4**
	comp=Z,4.1nm,0.8s,baz=296,slow=8.1,SNR=5.5						
TORD				LR	LR	17 36 39.2	
	comp=Z,719nm,18.6s,baz=275,slow=34						
I37A	**Lemond, Waseca**	**46.15**	**312**	P	**P**	**17 19 18.4**	**-1.2**
CPUP	**Villa Florida**	**47.41**	**194**	P	**P**	**17 19 28.9**	**-0.6**
	comp=Z,2.8nm,0.8s,baz=21,slow=8.2,SNR=6.2						
CPUP	**Villa Florida**	**47.41**	**194**	P	**P**	**17 19 28.4**	**-1.1**
CPUP				IAmb	IAmb	17 19 36.3	
	comp=Z,9.1nm,1.2s						
KSU1	**Kansas State U**	**47.49**	**305**	P	**P**	**17 19 28.5**	**-1.6**
AGMN	**Agassiz Nation**	**49.00**	**317**	P	**P**	**17 19 41.7**	**+0.1**
ULM	**Lac du Bonnet**	**49.61**	**320**	P	**P**	**17 19 45.6**	**-0.6**
	comp=Z,2.1nm,0.9s,baz=120,slow=9.3,SNR=3.8						
ULM				LR	LR	17 39 28.8	
	comp=Z,402nm,18.8s,baz=106,slow=35						
KEST	**Kesra**	**50.55**	**60**	P	**P**	**17 19 53.8**	**0.0**
	comp=Z,11nm,1.0s,baz=301,slow=5.9,SNR=4.1						
KEST				LR	LR	17 39 35.4	
	comp=Z,349nm,20.1s,baz=228,slow=34						
FCC	**Fort Churchill**	**51.96**	**330**	P	**P**	**17 20 02.6**	**-1.2**
FCC				IAmb	IAmb	17 20 05.2	
	comp=Z,15nm,1.2s						
FETA	**Feichten**	**52.90**	**46**	*e*P	**P**	**17 20 11.7**	**+0.5**
	comp=Z,16nm,1.1s						
TXAR	**Lajitas Array**	**52.98**	**292**	P	**P**	**17 20 11.7**	**-0.2**
	comp=Z,0.9nm,1.1s,baz=99,slow=7.7,SNR=4.3						
TXAR				PcP	**PcP**	**17 21 21.9**	**+1.1**
	comp=Z,0.5nm,1.0s,baz=114,slow=6.0,SNR=4.1						
MOTA	**Moosalm**	**53.21**	**45**	*e*P	**P**	**17 20 13.8**	**+0.3**
	comp=Z,8.9nm,1.2s						
SQTA	**Sankt Quirin**	**53.26**	**45**	*e*P	**P**	**17 20 14.2**	**+0.4**
	comp=Z,15nm,1.0s						
CTI	**Castel Tesino**	**53.36**	**47**	P	**P**	**17 20 13.7**	**-0.9**
WATA	**Walderalm**	**53.53**	**45**	*i* P	**P**	**17 20 16.1**	**+0.3**
	comp=Z,19nm,1.4s						
WTTA	**Wattenberg**	**53.55**	**46**	*e*P	**P**	**17 20 16.2**	**+0.2**
	comp=Z,9.4nm,1.0s						
ABTA	**Abfaltersbach**	**54.06**	**46**	*e*P	**P**	**17 20 19.2**	**-0.5**
	comp=Z,8.4nm,1.1s						
FFC	**Flin Flon**	**54.52**	**324**	P	**P**	**17 20 22.7**	**0.0**
MYKA	**Terra Mystica**	**54.81**	**47**	*e*P	**P**	**17 20 25.7**	**+0.6**
	comp=Z,12nm,1.0s						
GERES	**GERESS Array B**	**55.19**	**44**	P	**P**	**17 20 26.1**	**-1.6**
	comp=Z,1.6nm,1.0s,baz=263,slow=5.2,SNR=8.4						
GERES	**GERESS Array B**	**55.19**	**44**	P	**P**	**17 20 26.6**	**-1.2**
CLL	**Collm**	**55.19**	**41**	*e*P	**P**	**17 20 27.0**	**-0.6**
MOA	**Molln**	**55.41**	**45**	*e*P	**P**	**17 20 29.8**	**+0.6**
	comp=Z,6.7nm,1.1s						
OBKA	**Obir**	**55.42**	**47**	*e*P	**P**	**17 20 31.1**	**+1.7**
	comp=Z,7.4nm,1.1s						
ARSA	**Arzberg**	**56.17**	**46**	*e*P	**P**	**17 20 33.2**	**-1.6**
	comp=Z,9.5nm,1.6s						
CONA	**Conrad Observa**	**56.48**	**45**	*e*P	**P**	**17 20 37.5**	**+0.4**
	comp=Z,5.9nm,1.0s						
NOA	**NORSAR Array B**	**56.87**	**29**	LR	LR	17 41 13.1	
	comp=Z,123nm,19.1s,baz=255,slow=32						
ZST	**Bratislava**	**57.34**	**45**	*e*P	**P**	**17 20 43.6**	**+0.6**
PDAR	**Pinedale Array**	**57.59**	**309**	P	**P**	**17 20 45.7**	**+0.5**
	comp=Z,3.3nm,0.9s,baz=104,slow=11,SNR=5.8						
PDAR				LR	LR	17 44 26.9	
	comp=Z,404nm,18.4s,baz=123,slow=35						
PDAR	**Pinedale Array**	**57.59**	**309**	P	**P**	**17 20 45.1**	**-0.1**
MORH	**Mrgy, Hungar**	**58.21**	**47**	⇓P	**P**	**17 20 49.4**	**+0.2**
VYHS	**Vyhne**	**58.52**	**45**	*e*P	**P**	**17 20 53.3**	**+2.0**
WUAZ	**Wupatki**	**59.10**	**300**	P	**P**	**17 20 56.5**	**+0.7**
BZS	**Buzias**	**60.26**	**48**	⇑P	**P**	**17 21 04.6**	**+1.2**
KOLS	**Kolonicke sedl**	**60.82**	**44**	*e*P	**P**	**17 21 09.0**	**+1.8**
DRGR		**61.04**	**47**	⇑P	**P**	**17 21 09.2**	**+0.4**
GZR	**Gura Zlata**	**61.07**	**49**	⇑P	**P**	**17 21 09.9**	**+0.9**
HLID	**Hailey**	**61.15**	**309**	P	**P**	**17 21 09.3**	**-0.4**
SPR3	**Spring Creek 3**	**61.25**	**304**	P	**P**	**17 21 10.5**	**-0.2**
SPR3				IAmb	IAmb	17 21 18.2	
	comp=Z,16nm,1.4s						
BI02	**San Fabin de**	**61.30**	**203**	P	**P**	**17 21 09.9**	**-0.6**
BI02				IAmb	IAmb	17 21 18.3	
	comp=Z,9.3nm,1.1s						
VTS	**Vitosha**	**61.43**	**52**	⇑P	**P**	**17 21 13.5**	**+1.9**
ELK	**Elko**	**61.85**	**306**	P	**P**	**17 21 14.2**	**-0.4**
ELK				IAmb	IAmb	17 21 16.0	
	comp=Z,5.6nm,0.9s						
MFID	**Camas Ranch**	**62.18**	**309**	P	**P**	**17 21 15.9**	**-0.8**
MFID				IAmb	IAmb	17 21 18.0	
	comp=Z,9.8nm,1.1s						
R11A	**Troy Canyon, C**	**62.27**	**304**	P	**P**	**17 21 17.8**	**+0.4**
ARR	**Arges**	**62.38**	**49**	⇑P	**P**	**17 21 18.8**	**+1.0**
PLVB	**Pleven**	**62.43**	**51**	P	**P**	**17 21 18.0**	**-0.1**
VOIR		**62.67**	**48**	P	**P**	**17 21 19.5**	**-0.4**
YKA	**Yellowknife Ar**	**62.68**	**331**	P	**P**	**17 21 18.5**	**-1.0**
	comp=Z,2.1nm,1.0s,baz=101,slow=8.1,SNR=19						
YKA				LR	LR	17 46 59.9	
	comp=Z,300nm,19.2s,baz=0.0,slow=35						
BURAR	**Bucovina Array**	**62.76**	**46**	P	**P**	**17 21 20.3**	**-0.1**
NEW	**Newport**	**63.00**	**315**	P	**P**	**17 21 21.1**	**-0.8**
NEW				IAmb	IAmb	17 21 23.1	
	comp=Z,9.2nm,0.9s						
OZUR		**63.17**	**48**	P	**P**	**17 21 24.3**	**+1.2**
MLR	**Muntele Rosu**	**63.30**	**48**	⇑P	**P**	**17 21 25.3**	**+1.2**
MLR	**Muntele Rosu**	**63.30**	**48**	P	**P**	**17 21 24.5**	**+0.4**
E09A	**Wood Farm, Sta**	**63.73**	**313**	P	**P**	**17 21 26.3**	**-0.4**
FINES	**FINESS Array B**	**63.95**	**31**	LR	LR	17 44 49.3	
	comp=Z,149nm,19.3s,baz=269,slow=32						
G08A	**Pilot Rock**	**64.35**	**311**	P	**P**	**17 21 30.0**	**-1.0**
NVAR	**Mina Array Bea**	**64.39**	**304**	P	**P**	**17 21 30.2**	**-1.3**
	comp=Z,0.4nm,0.6s,baz=75,slow=6.8,SNR=4.2						
PLCA	**Paso Flores**	**64.68**	**201**	P	**P**	**17 21 32.5**	**-0.4**
	comp=Z,1.9nm,0.9s,baz=13,slow=4.4,SNR=3.8						
ISA	**Isabella, Lake**	**64.84**	**301**	P	**P**	**17 21 33.4**	**-0.9**
AKASG	**Malin Array Be**	**65.33**	**43**	P	**P**	**17 21 37.1**	**0.0**
	comp=Z,0.2nm,0.3s,baz=274,slow=6.0,SNR=5.4						
K05A	**Summer Lake**	**65.93**	**309**	P	**P**	**17 21 41.5**	**+0.2**
MDUB	**Mudurnu**	**67.56**	**54**	P	**P**	**17 21 51.1**	**-0.7**
BR131	**Keskin Array S**	**69.52**	**54**	P	**P**	**17 22 03.9**	**-0.2**
BRTR	**Keskin Array B**	**69.52**	**54**	P	**P**	**17 22 04.3**	**+0.2**
	comp=Z,5.4nm,0.9s,baz=255,slow=5.1,SNR=28						
BRTR				LR	LR	17 49 24.5	
	comp=Z,88nm,21.2s,baz=302,slow=33						
BRTR	**Keskin Array B**	**69.52**	**54**	P	**P**	**17 22 04.0**	**-0.1**
CSS	**Mathiatis**	**70.12**	**59**	P	**P**	**17 22 06.1**	**-1.6**
CSS				IAmb	IAmb	17 22 21.2	
	comp=Z,8.4nm,1.1s						
BCAR	**Beaver Creek A**	**75.05**	**332**	P	**P**	**17 22 36.0**	**-0.6**
MARD	**Mardin**	**75.50**	**55**	P	**P**	**17 22 39.9**	**+0.2**
MARD				IAmb	IAmb	17 22 41.2	
	comp=Z,8.8nm,0.9s						
KBZ	**Khabaz**	**75.51**	**48**	P	**P**	**17 22 40.2**	**+0.8**
	comp=Z,4.1nm,0.9s,baz=340,slow=3.9,SNR=11						
TOLK	**Toolik Lake Re**	**76.45**	**339**	P	**P**	**17 22 45.4**	**+1.0**
TOLK				IAmb	IAmb	17 22 55.4	
	comp=Z,14nm,1.5s						
ILAR	**Eielson Array**	**76.72**	**334**	P	**P**	**17 22 45.5**	**-0.5**
	comp=Z,4.1nm,0.9s,baz=72,slow=4.6,SNR=35						
ILAR				LR	LR	17 55 49.9	
	comp=Z,214nm,19.9s,baz=96,slow=35						
ILAR	**Eielson Array**	**76.72**	**334**	P	**P**	**17 22 45.4**	**-0.6**
IMAR	**Indian Mountai**	**78.96**	**337**	P	**P**	**17 22 57.7**	**-0.7**
KMBO	**Kilima Mbogo**	**83.83**	**93**	P	**P**	**17 23 27.6**	**+2.1**
	comp=Z,1.5nm,0.7s,baz=246,slow=7.9,SNR=4.2						
KMBO				LR	LR	18 01 03.4	
	comp=Z,206nm,18.1s,baz=279,slow=36						
BOSA	**Boshof**	**83.87**	**123**	LR	LR	17 53 43.5	
	comp=Z,188nm,19.4s,baz=314,slow=31						
ABKAR	**Akbulak array**	**84.83**	**39**	P	**P**	**17 23 29.6**	**-0.1**
ABKAR				IAmb	IAmb	17 23 31.5	
	comp=Z,6.5nm,1.1s						
ABKAR	**Akbulak array**	**84.83**	**39**	P	**P**	**17 23 30.2**	**+0.6**
ZALV	**Zalesovo Beam**	**95.01**	**27**	LR	LR	18 04 24.3	
	comp=Z,73nm,18.7s,baz=336,slow=34						
KSH	**Kashi**	**99.62**	**42**	P	**Pdif**	**17 24 39.3**	**+0.3**
KSH				sP	pwP	17 24 45.9	+1.0
KSH				PP	**PP**	**17 28 44.8**	**+2.5**
KSH				pmax	pmax		
	comp=Z,6.0nm,1.2s						
HHC	**Hu-ho-hao-te**	**115.89**	**19**	*e*PKP	**PKPdf**	**17 29 38.8**	**+0.6**
NJ2	**Nanjing**	**126.18**	**16**	*e*PKP	**PKPdf**	**17 29 55.8**	**-2.3**
CMAR	**Chiang Mai Arr**	**128.43**	**44**	PKP	**PKiKP**	**17 30 03.1**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=298,slow=2.8,SNR=6.1						

IDC ***22*** *17:16:18.0±1.5, 1°.37N×125°.94E, h0^{km}, mb3.5/4, mb1 3.8/5, mb1mx3.4/37, mbtmp3.6/5, ML3.1/1, Error ellipse: s-maj=121.3km s-min=19.8km az=68.0*

DJA ***22*** *17:16:23.1±0.3, 1°N±3°×12°6E±°, h10^{km}, M3.5/7, MLv3.5/7*

ISC 22 17:16:24.5±1.2, **1°.5N**±0°.1×**126°.37E**±0°.07, **h47^{km}, n9, σ1ˢ.56**/11, **mb3.4**/4, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.21**	**124**	P	**Pn**	**17 16 45.3**	**+0.3**
TNTI				S	**Sn**	**17 17 03.0**	**+2.8**
KMSI	**Cibinong**	**2.55**	**250**	P	**Pn**	**17 17 03.9**	**+0.6**
GTOI	**Gorontalo**	**3.46**	**256**	P	**Pn**	**17 17 17.7**	**+1.9**
SANI	**Sanana**	**3.51**	**186**	P	**Pn**	**17 17 16.2**	**-0.3**
SANI				S	**Sn**	**17 17 57.5**	**+0.7**
FITZ	**Fitzroy Crossi**	**19.45**	**182**	P	**P**	**17 20 45.1**	**-2.1**
	0.0nm,0.3s,baz=354,slow=9.2,SNR=1.9						
WRA	**Warramunga Arr**	**22.66**	**160**	P	**P**	**17 21 21.3**	**-0.6**
	1.1nm,0.5s,baz=338,slow=11,SNR=20						
ASAR	**Alice Springs**	**26.03**	**164**	P	**P**	**17 21 53.9**	**+0.5**
	0.4nm,0.5s,baz=347,slow=9.9,SNR=14						
MKAR	**Makanchi Array**	**59.22**	**326**	P	**P**	**17 26 20.1**	**-0.9**
	0.3nm,0.7s,baz=120,slow=7.3,SNR=5.4						
KURBB	**Kurchatov Arra**	**63.45**	**328**	P	**P**	**17 26 48.5**	**-1.0**
	0.1nm,0.3s,baz=124,slow=6.3,SNR=6.2						

ASRS ***22*** *17:25:12.9±0.2, 52°N±2°×96°.1E±1°.0, h10^{km}, MLh3.6/18, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/tab confirmed*

IDC ***22*** *17:25:13.5±1.8, 51°.62N×96°.17E, h0^{km}, mb1 2.7/2, mb1mx2.6/42, mbtmp2.7/2, ML1.9/2, Error ellipse: s-maj=46.5km s-min=12.7km az=175.0*

ISC 22 17:25:13.0±0.7, **51°.71N**±0°.04×**95°.87E**±0°.03, **h10^{km}, n30, σ1ˢ.99**/52, **Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KZLR	**Kyzyl**	**0.88**	**270**	Pg	**Pn**	**17 25 31.4**	**-0.1**
KZLR				Sg	**Sn**	**17 25 44.3**	**-0.1**
KNGR	**Kungurtug, Tuv**	**1.52**	**136**	Pg	**Pn**	**17 25 39.5**	**-0.8**
KNGR				Sg	**Sn**	**17 25 58.8**	**-1.4**
ARDR	**Aradan**	**1.74**	**301**	Pg	**Pg**	**17 25 45.8**	**-0.5**
ARDR				Sg	**Sg**	**17 26 09.3**	**+0.5**
BLRR	**Bol'shaya Rech**	**2.49**	**304**	Pg	**Pg**	**17 25 59.0**	**-1.8**
BLRR				Sg	**Sg**	**17 26 32.1**	**-0.9**
DJOS	**Djoyskaya Sosn**	**2.95**	**293**	Pg	**Pg**	**17 26 09.9**	**+0.3**
DJOS				Sg	**Sg**	**17 26 47.0**	**-0.8**
CERR	**Cheremushki**	**2.96**	**294**	Pg	**Pg**	**17 26 08.5**	**-1.3**
CERR				Sg	**Sg**	**17 26 47.6**	**-0.6**
DJO	**Djoy, Khakassi**	**3.05**	**292**	Pn	**Pb**	**17 26 04.1**	**-3.3**
DJO				Sg	**Sg**	**17 26 49.1**	**-1.9**
MOY	**Mondy**	**3.19**	**89**	Pg	**Pb**	**17 26 07.3**	**-2.4**
MOY				Sg	**Sb**	**17 26 48.3**	**-0.4**
ORY	**Orie**	**3.33**	**352**	Sg	**Sb**	**17 26 53.3**	**+0.7**
KTRR	**Kuturchin**	**3.38**	**344**	Pg	**Pb**	**17 26 14.2**	**+1.3**
KTRR				Sg	**Sb**	**17 26 54.9**	**+0.8**
TEL	**Teeli**	**3.62**	**261**	Pg	**Pg**	**17 26 20.7**	**-1.7**
TEL				Sg	**Sg**	**17 27 09.7**	**+0.5**
SHRR	**Shira**	**4.42**	**311**	Pn	**Pn**	**17 26 22.6**	**+2.5**
SHRR				Pg	**Pg**	**17 26 34.2**	**-3.5**
SHRR				Sg	**Sg**	**17 27 33.0**	**-2.0**
LUZB	**Luzhba, Kemero**	**4.67**	**297**	Pg	**Pb**	**17 26 37.9**	**+3.0**
LUZB				Sg	**Sg**	**17 27 40.7**	**-2.1**
SHTK	**Zheleznogorsk-**	**4.82**	**345**	Pg	**Pb**	**17 26 35.1**	**-2.3**
SHTK				Sg	**Sb**	**17 27 34.6**	**-0.8**
TLY	**Talaya**	**4.84**	**87**	Pg	**Pb**	**17 26 36.7**	**-1.1**
	0.0nm,0.3s,baz=286,slow=18,SNR=3.5						
TLY				Lg	Lg	17 27 37.9	
	0.0nm,0.3s,baz=34,slow=9.0,SNR=14						
TLY	**Talaya**	**4.84**	**87**	Pg	**Pb**	**17 26 37.7**	**-0.1**
TLY				Sg	**Sb**	**17 27 38.6**	**+2.6**
ZAK	**Zakamensk**	**4.86**	**103**	Pg	**Pb**	**17 26 39.0**	**+0.7**
ZAK				Sg	**Sg**	**17 27 44.2**	**-4.8**
TASR	**Tashtagol**	**5.02**	**285**	Sg	**Sg**	**17 27 53.5**	**-0.6**
CUR	**Chagan-Uzun**	**5.03**	**254**	Pg	**Pg**	**17 26 47.5**	**-1.7**
CUR				Sg	**Sg**	**17 27 52.7**	**-1.5**
ULGR	**Ulagan, Altay**	**5.10**	**261**	Pg	**Pg**	**17 26 50.4**	**-0.1**
ULGR				Sg	**Sg**	**17 27 56.7**	**+0.2**
ARTR	**Artybash**	**5.34**	**274**	Pg	**Pg**	**17 26 52.5**	**-2.7**
ARTR				Sg	**Sg**	**17 28 06.1**	**+1.9**
CHBI	**Chibit, Altay**	**5.46**	**258**	Pn	Pn	17 26 40.6	+6.1
CHBI				Pg	**Pg**	**17 26 55.4**	**-2.2**
CHBI				Sg	**Sg**	**17 28 08.5**	**+0.1**
DGZ	**Jazzator, Alta**	**5.73**	**253**	Pn	**Pn**	**17 26 41.1**	**+2.9**
DGZ				Pg	**Pg**	**17 27 02.6**	**0.0**
DGZ				Sg	**Sg**	**17 28 13.9**	**-2.8**
BRCR	**Berchikul'**	**5.96**	**314**	Pg	Pg	17 27 02.0	-5.2
BRCR				Sg	**Sg**	**17 28 25.5**	**+1.2**
ELT	**Eltsovka**	**6.08**	**289**	Pg	**Pg**	**17 27 07.9**	**-1.5**
ELT				Sg	**Sg**	**17 28 25.7**	**-2.5**
SALR	**Pechorkino, Sa**	**6.70**	**298**	Sg	**Sg**	**17 28 45.3**	**-2.6**
UKR	**Ust'-Kan**	**7.00**	**268**	Sg	Sg	17 29 07.4	+10
ZALV	**Zalesovo Beam**	**7.06**	**293**	Pn	**Pn**	**17 26 59.8**	**+3.5**
	0.1nm,0.3s,baz=105,slow=11,SNR=2.6						
ZALV				Lg	Lg	17 28 56.0	
	0.4nm,0.3s,baz=113,slow=26,SNR=7.4						
SONM	**Songino Array**	**7.84**	**116**	Pg	**Pb**	**17 27 31.3**	**+2.3**
	0.2nm,0.3s,baz=301,slow=15,SNR=5.2						
SONM				Lg	Lg	17 29 15.5	
	0.5nm,0.3s,baz=314,slow=26,SNR=8.9						
MKAR	**Makanchi Array**	**10.15**	**246**	Pn	**Pn**	**17 27 42.3**	**+3.6**
	0.0nm,0.3s,baz=56,slow=16,SNR=1.6						
MKAR				Pg		17 28 24.3	
	0.1nm,0.3s,baz=55,slow=18,SNR=2.6						
MKAR				Lg	Lg	17 30 41.6	
	0.1nm,0.3s,baz=57,slow=28,SNR=5.6						

NEIC ***22*** *17:36:32.0±2.4, 20°.1N±0°.1×46°.0W±0°.1, h10^{km}±1^{km}, mb4.7/14, Error ellipse: s-maj=25.1km s-min=21.6km az=139.0*

IDC ***22*** *17:36:31.3±0.6, 20°.09N×45°.99W, h0^{km}, mb3.9/19, mb1 4.1/19, mb1mx4.0/48, mbtmp3.9/19, MS3.9/5, Ms1 3.9/5, ms1mx3.4/44, Error ellipse: s-maj=16.3km s-min=15.8km az=174.0*

GCMT ***22*** *17:36:35.0±0.4, 20°.23N±0°.06×45°.74W±0°.03, h16^{km}±1^{km}, MW4.9/83, Moment Tensor Solution. s11,c11; s83,c95; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.34±.36; $M_{\theta\theta}$0.72±.19; $M_{\phi\phi}$2.62±.22; $M_{r\theta}$-0.85±.90; $M_{\theta\phi}$0.06±.12; $M_{\phi r}$0.70±.53; Best double couple: $M_0$3.14600×10^{16} NP1:ϕ_s11.00000°, δ39.00000°, λ-73.00000°. NP2: ϕ_s169.00000°, δ53.00000°, λ-104.00000°. Principal axes: T 2.7020, Plg7.0000°, Azm269.0000°; N 0.8850, Plg11.0000°, Azm178.0000°; P -3.5890, Plg77.0000°, Azm30.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 22 17:36:32.5±0.5, **20°.05N**±0°.10×**46°.07W**±0°.09, **h10^{km}, n43, σ1ˢ.08**/38, **mb4.1**/24, **MS3.8**/4, **Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANWB	**Willy Bob**	**15.06**	**264**	Pn	**Pn**	**17 40 04.0**	**-1.5**
SJG	**San Juan**	**19.08**	**268**	LR	LR	17 47 03.9	
	comp=Z,484nm,21.8s,baz=74,slow=33						
OBIP	**Obispado Ponce**	**19.52**	**268**	P	**P**	**17 40 57.4**	**-2.7**
OBIP				IAmb	IAmb	17 41 14.6	
	comp=Z,42nm,1.2s						
PTGA	**Pitinga**	**24.73**	**215**	P	**P**	**17 41 55.5**	**+1.2**
	comp=Z,1.2nm,0.2s,baz=26,slow=17,SNR=2.2						
PTGA				LR	LR	17 50 12.4	
	comp=Z,299nm,21.0s,baz=344,slow=33						
PTGA	**Pitinga**	**24.73**	**215**	P	**P**	**17 41 52.9**	**-1.3**
SDV	**Santo Domingo**	**26.20**	**248**	P	**P**	**17 42 08.5**	**+0.7**
	comp=Z,1.5nm,0.3s,baz=80,slow=6.1,SNR=1.9						
SDV				LR	LR	17 51 45.4	
	comp=Z,230nm,21.9s,baz=61,slow=35						
KOWA	**Kowa**	**40.46**	**91**	P	**P**	**17 44 12.2**	**+0.7**
	comp=Z,0.6nm,0.3s,baz=247,slow=7.7,SNR=1.7						
ESDC	**Sonseca Array**	**40.98**	**52**	P	**P**	**17 44 15.2**	**-0.5**
	comp=Z,0.7nm,0.9s,baz=263,slow=8.9,SNR=2.8						
H10N3	**ASCENSION HYDR**	**41.63**	**129**	T	T	18 28 25.5	
	baz=312,slow=75,SNR=144						
H10N2	**ASCENSION HYDR**	**41.63**	**129**	T	T	18 28 25.8	
	baz=312,slow=75,SNR=115						
H10N1	**ASCENSION HYDR**	**41.65**	**129**	T	T	18 28 26.9	
	baz=312,slow=75,SNR=123						
DBIC	**Dimbokro**	**42.11**	**103**	P	**P**	**17 44 23.9**	**-1.2**
	comp=Z,2.0nm,0.8s,baz=267,slow=8.6,SNR=1.6						
LPAZ	**La Paz**	**42.11**	**213**	P	**P**	**17 44 27.0**	**+1.2**
	comp=Z,2.2nm,0.8s,baz=35,slow=9.7,SNR=7.8						
LPAZ	**La Paz**	**42.11**	**213**	P	**P**	**17 44 25.8**	**0.0**
TORD	**Torodi Ar. Bea**	**46.16**	**91**	P	**P**	**17 44 58.1**	**+0.4**
	comp=Z,2.6nm,1.0s,baz=301,slow=8.9,SNR=7.3						
FRB	**Frobisher Bay**	**46.25**	**346**	P	**P**	**17 44 58.3**	**+0.7**
	comp=Z,4.3nm,0.8s,baz=153,slow=8.4,SNR=6.7						
FRB				LR	LR	18 00 57.7	
	comp=Z,180nm,20.4s,baz=179,slow=32						
SFJD	**Kangerlussuaq**	**47.03**	**358**	LR	LR	18 00 48.4	
	comp=Z,112nm,21.3s,baz=208,slow=31						
CPUP	**Villa Florida**	**47.38**	**194**	P	**P**	**17 45 08.0**	**+1.1**
	comp=Z,3.7nm,0.9s,baz=28,slow=8.2,SNR=7.0						
CPUP	**Villa Florida**	**47.38**	**194**	P	**P**	**17 45 06.2**	**-0.7**
CPUP				IAmb	IAmb	17 45 23.4	
	comp=Z,11nm,1.3s						
ULM	**Lac du Bonnet**	**49.40**	**320**	P	**P**	**17 45 22.6**	**+0.3**
	comp=Z,1.3nm,0.8s,baz=88,slow=8.1,SNR=2.2						
TXAR	**Lajitas Array**	**52.70**	**292**	P	**P**	**17 45 48.1**	**+0.5**
	comp=Z,0.3nm,0.8s,baz=92,slow=8.1,SNR=2.4						
ISCO	**Idaho Springs**	**54.24**	**305**	P	**P**	**17 46 00.0**	**+0.9**
ISCO				IAmb	IAmb	17 46 12.2	
	comp=Z,7.0nm,1.4s						
FFC	**Flin Flon**	**54.32**	**324**	P	**P**	**17 45 59.5**	**+0.6**
RWWY	**Rawlins**	**55.55**	**307**	P	**P**	**17 46 10.2**	**+1.7**
RWWY				IAmb	IAmb	17 46 20.2	
	comp=Z,9.9nm,1.1s						
BW06	**Boulder Array**	**57.35**	**308**	P	**P**	**17 46 21.7**	**+0.5**
BW06				IAmb	IAmb	17 46 31.0	
	comp=Z,7.0nm,1.0s						
PD31	**Pinedale Array**	**57.35**	**308**	P	**P**	**17 46 20.9**	**-0.3**
PD31				IAmb	IAmb	17 46 31.9	
	comp=Z,8.4nm,1.1s						
PDAR	**Pinedale Array**	**57.35**	**308**	P	**P**	**17 46 22.3**	**+1.1**
	comp=Z,2.0nm,0.9s,baz=96,slow=9.1,SNR=8.4						
PDAR	**Pinedale Array**	**57.35**	**308**	P	**P**	**17 46 20.8**	**-0.4**
RES	**Resolute Bay**	**60.47**	**347**	P	**P**	**17 46 42.9**	**+0.9**
	comp=Z,1.1nm,0.9s,baz=71,slow=4.7,SNR=4.7						
SPR3	**Spring Creek 3**	**60.99**	**304**	P	**P**	**17 46 48.2**	**+1.6**
SPR3				IAmb	IAmb	17 46 59.4	
	comp=Z,8.8nm,1.3s						
ELK	**Elko**	**61.60**	**306**	P	**P**	**17 46 51.4**	**+0.7**
ELK				IAmb	IAmb	17 47 01.7	
	comp=Z,6.1nm,1.2s						
YKA	**Yellowknife Ar**	**62.52**	**331**	P	**P**	**17 46 55.8**	**-0.2**
	comp=Z,0.8nm,0.8s,baz=102,slow=8.1,SNR=9.0						
NEW	**Newport**	**62.78**	**315**	P	**P**	**17 46 58.6**	**+0.5**
MLR	**Muntele Rosu**	**63.49**	**48**	P	**P**	**17 47 01.7**	**-1.3**
NVAR	**Mina Array Bea**	**64.14**	**304**	P	**P**	**17 47 09.0**	**+1.5**
	comp=Z,0.3nm,0.6s,baz=86,slow=5.5,SNR=2.4						
PLCA	**Paso Flores**	**64.61**	**200**	P	**P**	**17 47 10.3**	**+0.1**
	comp=Z,1.2nm,0.6s,baz=2.6,slow=7.8,SNR=3.5						
BRTR	**Keskin Array B**	**69.73**	**54**	P	**P**	**17 47 41.6**	**-1.5**
	comp=Z,1.5nm,0.7s,baz=253,slow=5.8,SNR=7.0						
BRTR	**Keskin Array B**	**69.73**	**54**	P	**P**	**17 47 41.7**	**-1.4**
ILAR	**Eielson Array**	**76.57**	**334**	P	**P**	**17 48 23.1**	**+0.2**
	comp=Z,1.4nm,0.9s,baz=76,slow=4.9,SNR=11						
ILAR	**Eielson Array**	**76.57**	**334**	P	**P**	**17 48 22.2**	**-0.6**
IMAR	**Indian Mountai**	**78.81**	**337**	P	**P**	**17 48 35.4**	**+0.1**
KMBO	**Kilima Mbogo**	**84.11**	**93**	P	**P**	**17 49 05.8**	**+1.1**
	comp=Z,0.4nm,0.3s,baz=285,slow=5.2,SNR=1.5						
ABKAR	**Akbulak array**	**84.98**	**39**	P	**P**	**17 49 07.0**	**-1.1**

IDC ***22*** *17:49:21.8±0.9, 19°.68N×45°.89W, h0^{km}, mb3.9/17, mb1 4.1/17, mb1mx3.9/46, mbtmp3.9/17, MS4.1/24, Ms1 4.1/24, ms1mx4.0/33, Error ellipse: s-maj=27.7km s-min=17.3km az=10.0*

NEIC ***22*** *17:49:22.9±2.6, 19°.66N±0°.07×45°.8W±0°.1, h10^{km}±1^{km}, mb4.7/22, Error ellipse: s-maj=19.2km s-min=11.4km az=103.0*

GCMT ***22*** *17:49:25.9±0.3, 20°.07N±0°.04×45°.67W±0°.02, h18^{km}±1^{km}, MW5.0/108, Moment Tensor Solution. s18,c20; s108,c136; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-4.26±.29; $M_{\theta\theta}$0.89±.17; $M_{\phi\phi}$3.38±.19; $M_{r\theta}$-0.48±.51; $M_{\theta\phi}$0.96±.10; $M_{\phi r}$-0.07±.38; Best double couple: $M_0$4.00800×10^{16} NP1:ϕ_s194.00000°, δ44.00000°, λ-97.00000°. NP2:ϕ_s24.00000°, δ47.00000°, λ-83.00000°. Principal axes: T 3.7110, Plg2.0000°, Azm109.0000°; N 0.5980, Plg5.0000°, Azm199.0000°; P -4.3050, Plg85.0000°, Azm2.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 22 17:49:23.2±0.6, **19°.7N**±0°.1×**45°.85W**±0°.08, **h10^{km}, n60, σ1ˢ.06**/46, **mb4.2**/27, **MS4.1**/22, **Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBGH	**Gun Hill**	**14.67**	**246**	Pn	**Pn**	**17 52 51.0**	**0.0**
MDP	**Montagnes des**	**15.94**	**205**	LR	LR	17 58 08.3	
	comp=Z,285nm,18.6s,baz=324,slow=33						
SVB	**Belmont**	**16.09**	**249**	Pn	**Pn**	**17 53 09.5**	**-0.1**
SJG	**San Juan**	**19.28**	**269**	LR	LR	17 59 44.8	
	comp=Z,754nm,21.1s,baz=83,slow=32						
OBIP	**Obispado Ponce**	**19.71**	**269**	P	**P**	**17 53 51.6**	**-1.3**
OBIP				IAmb	IAmb	17 53 58.3	
	comp=Z,41nm,1.4s						
SACV	**Santiago Islan**	**21.73**	**99**	P	**P**	**17 54 11.8**	**-3.1**
PTGA	**Pitinga**	**24.57**	**216**	LR	LR	18 03 44.5	
	comp=Z,281nm,18.1s,baz=28,slow=35						
SDV	**Santo Domingo**	**26.27**	**249**	LR	LR	18 05 25.5	
	comp=Z,216nm,21.5s,baz=54,slow=37						
RCBR	**Riachuelo**	**27.18**	**158**	LR	LR	18 03 25.3	
	comp=Z,398nm,18.0s,baz=318,slow=31						
ROSC	**El Rosal**	**31.41**	**246**	LR	LR	18 10 29.8	
	comp=Z,275nm,18.4s,baz=81,slow=40						
ESDC	**Sonseca Array**	**41.03**	**52**	P	**P**	**17 57 07.1**	**+0.3**
	comp=Z,1.0nm,1.0s,baz=268,slow=7.4,SNR=2.8						
ESDC				PcP	**PcP**	**17 59 06.3**	**-0.4**
	comp=Z,0.9nm,0.9s,baz=276,slow=2.8,SNR=3.2						
ESDC				LR	LR	18 10 05.1	
	comp=Z,188nm,21.6s,baz=225,slow=30						
ESDC	**Sonseca Array**	**41.03**	**52**	P	**P**	**17 57 07.7**	**+1.0**
H10N3	**ASCENSION HYDR**	**41.24**	**129**	T	T	18 41 13.1	
	baz=312,slow=75,SNR=109						
H10N2	**ASCENSION HYDR**	**41.24**	**129**	T	T	18 41 13.2	
	baz=312,slow=75,SNR=108						
H10N1	**ASCENSION HYDR**	**41.26**	**129**	T	T	18 41 14.5	
	baz=312,slow=75,SNR=135						
DBIC	**Dimbokro**	**41.83**	**102**	P	**P**	**17 57 14.3**	**+0.7**
	comp=Z,2.6nm,0.8s,baz=166,slow=15,SNR=2.1						
DBIC				LR	LR	18 11 17.9	
	comp=Z,530nm,21.4s,baz=264,slow=31						
LPAZ	**La Paz**	**41.93**	**213**	P	**P**	**17 57 14.5**	**-0.5**
	comp=Z,1.0nm,0.7s,baz=23,slow=13,SNR=1.9						
LPAZ				LR	LR	18 13 53.9	
	comp=Z,166nm,21.6s,baz=2.5,slow=35						
CCM	**Cathedral Cave**	**43.29**	**305**	P	**P**	**17 57 26.5**	**+1.3**
CCM				IAmb	IAmb	17 57 29.2	
	comp=Z,23nm,1.5s						
TORD	**Torodi Ar. Bea**	**45.95**	**91**	P	**P**	**17 57 47.5**	**+0.8**
	comp=Z,2.0nm,0.9s,baz=286,slow=5.8,SNR=2.1						
TORD				LR	LR	18 15 01.3	
	comp=Z,439nm,19.6s,baz=290,slow=34						
FRB	**Frobisher Bay**	**46.64**	**346**	P	**P**	**17 57 51.4**	**0.0**
	comp=Z,4.6nm,0.9s,baz=155,slow=8.3,SNR=7.1						
ULM	**Lac du Bonnet**	**49.80**	**320**	P	**P**	**17 58 15.6**	**-0.6**
	comp=Z,1.3nm,0.7s,baz=127,slow=6.0,SNR=3.1						
ULM				LR	LR	18 16 06.4	
	comp=Z,311nm,21.5s,baz=114,slow=32						
KEST	**Kesra**	**50.78**	**60**	LR	LR	18 18 46.2	
	comp=Z,161nm,19.3s,baz=294,slow=35						
FCC	**Fort Churchill**	**52.20**	**331**	P	**P**	**17 58 33.2**	**-0.8**
FCC				IAmb	IAmb	17 58 43.0	
	comp=Z,10nm,1.4s						
TXAR	**Lajitas Array**	**53.03**	**292**	P	**P**	**17 58 40.8**	**+0.1**
	comp=Z,0.2nm,0.8s,baz=89,slow=7.3,SNR=1.7						
TXAR				LR	LR	18 20 38.2	
	comp=Z,156nm,20.3s,baz=0.0,slow=35						
ISCO	**Idaho Springs**	**54.62**	**305**	P	**P**	**17 58 51.5**	**-1.0**
FFC	**Flin Flon**	**54.73**	**324**	P	**P**	**17 58 51.7**	**-1.0**
FFC				IAmb	IAmb	17 58 54.4	
	comp=Z,9.1nm,1.2s						
GO04	**Tololo Observa**	**55.09**	**206**	P	**P**	**17 58 57.1**	**+1.3**

GERES	GERESS Array B	55.46	44	P	P	17 58 58.9	+0.7
	comp=Z,0.8nm,0.8s,baz=249,slow=7.0,SNR=4.5						
GERES	GERESS Array B	55.46	44	P	P	17 58 57.6	-0.6
NOA	NORSAR Array B	57.18	29	LR	LR	18 19 54.2	
	comp=Z,136nm,18.8s,baz=260,slow=32						
BW06	Boulder Array	57.73	309	P	P	17 59 14.1	-0.5
PD31	Pinedale Array	57.73	309	P	P	17 59 14.9	+0.3
PDAR	Pinedale Array	57.73	309	P	P	17 59 14.6	-0.1
	comp=Z,1.7nm,1.0s,baz=104,slow=6.3,SNR=6.5						
PDAR				LR	LR	18 21 01.7	
	comp=Z,281nm,22.0s,baz=112,slow=33						
PDAR	Pinedale Array	57.73	309	P	P	17 59 13.7	-0.9
REDW	Red Top Meadow	58.70	309	P	P	17 59 19.3	-2.1
REDW				IAmb	IAmb	17 59 29.9	
	comp=Z,7.3nm,1.1s						
RES	Resolute Bay	60.86	347	P	P	17 59 37.1	+1.7
	comp=Z,0.9nm,0.9s,baz=71,slow=12,SNR=5.0						
SPR3	Spring Creek 3	61.37	304	P	P	17 59 41.4	+1.5
SPR3				IAmb	IAmb	18 00 00.1	
	comp=Z,6.0nm,1.3s						
ELK	Elko	61.98	306	P	P	17 59 44.2	+0.3
ELK				IAmb	IAmb	17 59 45.6	
	comp=Z,5.9nm,1.4s						
MFID	Camas Ranch	62.33	309	P	P	17 59 44.7	-1.3
MFID				IAmb	IAmb	17 59 56.0	
	comp=Z,5.6nm,1.1s						
R11A	Troy Canyon, C	62.39	304	P	P	17 59 48.6	+2.0
YKA	Yellowknife Ar	62.93	331	P	P	17 59 48.7	-0.8
	comp=Z,0.7nm,0.8s,baz=101,slow=8.2,SNR=8.5						
YKA				LR	LR	18 23 50.7	
	comp=Z,202nm,22.0s,baz=0.0,slow=33						
NEW	Newport	63.17	315	P	P	17 59 49.9	-1.6
NEW				IAmb	IAmb	18 00 01.3	
	comp=Z,12nm,1.4s						
MLR	Muntele Rosu	63.56	48	P	P	17 59 54.0	-0.2
E09A	Wood Farm, Sta	63.89	313	P	P	17 59 55.5	-0.8
E09A				IAmb	IAmb	17 59 57.5	
	comp=Z,6.2nm,1.0s						
FINES	FINESS Array B	64.26	30	LR	LR	18 23 31.0	
	comp=Z,126nm,19.6s,baz=298,slow=32						
G08A	Pilot Rock	64.50	312	P	P	18 00 00.4	0.0
NVAR	Mina Array Bea	64.51	304	P	P	18 00 01.9	+1.2
	comp=Z,0.3nm,0.6s,baz=58,slow=5.4,SNR=2.2						
NVAR				LR	LR	18 28 33.4	
	comp=Z,117nm,18.1s,baz=98,slow=36						
HAWA	Hanford	64.85	313	P	P	18 00 02.8	+0.3
HAWA				IAmb	IAmb	18 00 10.6	
	comp=Z,8.3nm,1.4s						
ARCES	ARCESS Array B	65.20	22	LR	LR	18 22 50.8	
	comp=Z,69nm,21.6s,baz=330,slow=31						
AKASG	Malin Array Be	65.61	42	P	P	18 00 06.2	-1.1
	comp=Z,0.8nm,0.6s,baz=275,slow=5.5,SNR=2.5						
BR131	Keskin Array S	69.77	54	P	P	18 00 33.9	-0.1
BRTR	Keskin Array B	69.77	54	P	P	18 00 34.8	+0.8
	comp=Z,1.4nm,0.7s,baz=268,slow=5.2,SNR=8.1						
BRTR				LR	LR	18 28 27.0	
	comp=Z,57nm,20.7s,baz=294,slow=34						
INK	Inuvik	71.03	337	P	P	18 00 40.5	-0.4
	comp=Z,1.3nm,0.9s,baz=37,slow=1.7,SNR=2.2						
KBZ	Khabaz	75.78	48	P	P	18 01 10.8	+1.4
	comp=Z,2.1nm,0.9s,baz=310,slow=4.4,SNR=5.0						
KBZ				LR	LR	18 35 13.7	
	comp=Z,29nm,18.7s,baz=336,slow=36						
ILAR	Eielson Array	76.98	334	P	P	18 01 16.4	+0.5
	comp=Z,1.6nm,0.8s,baz=80,slow=3.8,SNR=13						
ILAR				LR	LR	18 34 20.5	
	comp=Z,154nm,19.9s,baz=88,slow=35						
ILAR	Eielson Array	76.98	334	P	P	18 01 15.8	0.0
IMAR	Indian Mountai	79.22	337	P	P	18 01 28.8	+0.5
BOSA	Boshof	83.76	123	LR	LR	18 32 03.0	
	comp=Z,163nm,20.6s,baz=328,slow=31						
KMBO	Kilima Mbogo	83.88	93	LR	LR	18 39 52.9	
	comp=Z,123nm,18.3s,baz=278,slow=36						
ABKAR	Akbulak array	85.12	39	P	P	18 01 58.7	-0.8

IDC 22 18:01:06.4±4.0**, 12°.10S×117°.43E, h0^{km}, mb3.1**/1**, mb1 3.4**/4**, mb1mx3.2**/38**, mbtmp3.2**/4**, ML3.0**/3**, Error ellipse: s-maj=245.1km s-min=28.6km az=45.0, South of Sumbawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	9.92	128	Pn	Pn	18 03 29.0	-1.3
	0.2nm,0.3s,baz=311,slow=8.4,SNR=9.4						
FITZ				Sn	Sn	18 05 18.3	-4.1
	0.3nm,0.3s,baz=347,slow=10,SNR=8.6						
WRA	Warramunga Arr	18.02	118	P	Pn	18 05 17.5	-1.0
	0.0nm,0.3s,baz=285,slow=14,SNR=2.0						
ASAR	Alice Springs	19.42	129	P	Pn	18 05 36.3	+0.7
	0.0nm,0.3s,baz=309,slow=13,SNR=1.7						
ASAR				S	Sn	18 09 07.7	-6.4
	0.1nm,0.3s,baz=302,slow=22,SNR=1.9						
MKAR	Makanchi Array	66.54	334	P	P	18 11 58.1	-0.1
	0.1nm,0.4s,baz=134,slow=8.3,SNR=1.7						

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*IDC **22** 18:05:52.8±2.0, 43°.80N×105°.36W, h0^{km}, mb1 3.3/2, mb1mx3.1/37, mbtmp3.1/2, ML2.9/2, Error ellipse: s-maj=52.1km s-min=10.0km az=149.0*

*NEIC **22** 18:05:53.5±2.0, 43°.81N±0°.06×105°.27W±0°.06, h0^{km}±2^{km}, ML2.8/22, Error ellipse: s-maj=11.5km s-min=5.6km az=150.0*

ISC 22 18:05:48.9±1.1**, 43°.83N**±0°.05×**105°.49W**±0°.05**, h0^{km}, n17, σ1ˢ.64**/14**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	1.09	74	Pg	Pn	18 06 12.4	+0.8
K22A	Casper	1.40	213		Pb	18 06 22.8	+6.8
K22A				IAML		18 06 50.9	
	comp=E,110nm,0.6s						
K22A				IAML		18 06 52.3	
	comp=N,113nm,0.3s						
RWWY	Rawlins	2.48	211	Pn	Pb	18 06 33.7	-0.9
RWWY				IAML		18 07 23.9	
	comp=N,39nm,0.5s						
LAO	LASA Array	2.91	350	Pn	Pb	18 06 41.3	-0.4
LAO				IAML		18 07 21.7	
	comp=N,51nm,0.7s						
LAO				IAML		18 07 25.1	
	comp=N,52nm,0.6s						
RLMT	Red Lodge	3.00	297	Pn	Pb	18 06 43.9	+0.5
RLMT				IAML		18 07 35.3	
	comp=N,20nm,1.0s						
RLMT				IAML		18 07 40.3	
	comp=N,23nm,0.6s						
PD31	Pinedale Array	3.16	252		Pg	18 06 47.1	-2.3
PDAR	Pinedale Array	3.16	252	Pn	Pg	18 06 48.0	-1.4
	comp=N,0.8nm,0.3s,baz=73,slow=18,SNR=27						
PDAR				Lg	Lg	18 07 34.3	
	comp=N,5.4nm,0.3s,baz=71,slow=33,SNR=3.0						
PDAR	Pinedale Array	3.16	252		Pb	18 06 46.9	+0.8
BW06	Boulder Array	3.16	252		Pg	18 06 48.2	-1.2
BW06				IAML		18 07 38.8	
	comp=N,20nm,0.6s						
BW06				IAML		18 07 39.7	
	comp=N,24nm,0.7s						
GCMT	Greycliff	3.57	305	Pn	Pb	18 06 51.6	-1.3
H17A	Grant Village	3.71	281		Pb	18 06 52.5	-2.9
H17A				IAML		18 08 29.1	
	comp=E,14nm,4.5s						
LOHW	Long Hollow	3.72	268		Pg	18 07 04.7	+4.6
LOHW				IAML		18 08 13.3	
	comp=E,13nm,4.8s						
FLWY	Flagg Ranch	3.77	276		Pn	18 06 51.1	+2.5
FLWY				IAML		18 08 05.4	
	comp=E,28nm,2.2s						
OGNE	Ogallala	3.85	137		Pb	18 06 57.2	-0.6
DGMT	Dagmar	4.73	10		Pn	18 07 01.7	+0.2
I10CA	LAC DU BONNET	9.07	42	*i*		19 01 50.0	
	baz=222,slow=344,SNR=2.3						
ULM	Lac du Bonnet	9.18	42	Pn	Pn	18 08 03.5	+1.1
	comp=E,0.4nm,0.3s,baz=229,slow=13,SNR=6.5						
ULM				Lg	Lg	18 10 35.0	
	comp=E,0.2nm,0.3s,baz=139,slow=23,SNR=4.0						

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*IDC **22** 18:12:12.3±1.2, 20°.88S×174°.19W, h0^{km}, mb3.9/6, mb1 4.1/7, mb1mx3.9/43, mbtmp3.9/7, ML3.9/1, MS3.7/3, Ms1 3.7/3, ms1mx3.1/38, Error ellipse: s-maj=49.9km s-min=25.4km az=142.0*

ISC 22 18:12:16.4±1.1**, 20°.9S**±0°.2×**174°.2W**±0°.2**, h26^{km}, n18, σ0ˢ.78**/16**, mb3.9**/6**, 4D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAR	Rarotonga	13.52	94	Pn	Pn	18 15 16.8	-10
	3.4nm,0.3s,baz=255,slow=8.2,SNR=26						
RAR				LR	LR	18 19 13.0	
	comp=Z,88nm,20.9s,baz=326,slow=31						
URZ	Urewera	18.87	201	P	Pn	18 16 35.4	+0.1
	0.4nm,0.3s,baz=57,slow=4.1,SNR=2.8						
CTA	Charters Tower	36.95	264	P	P	18 19 23.4	-0.3
	2.0nm,0.8s,baz=42,slow=0.2,SNR=1.8						
PMG	Port Moresby	38.86	281	LR	LR	18 33 19.3	
	comp=Z,356nm,18.4s,baz=86,slow=33						
ASAR	Alice Springs	47.86	257	P	P	18 20 52.5	+0.1
	0.7nm,0.8s,baz=98,slow=7.9,SNR=11						
ASAR				PcP	PcP	18 22 22.2	+1.3
	0.9nm,0.9s,baz=111,slow=4.1,SNR=4.8						
WRA	Warramunga Arr	48.03	262	P	P	18 20 52.4	-1.4
	0.9nm,0.9s,baz=93,slow=7.7,SNR=5.3						
GUMO	Guam	52.79	307	LR	LR	18 42 26.9	
	comp=Z,50nm,18.0s,baz=95,slow=34						
MJAR	Matsushiro Arr	72.64	321	P	P	18 23 42.0	+0.3
	1.2nm,0.6s,baz=165,slow=5.8,SNR=4.7						
NVAR	Mina Array Bea	78.92	42	P	P	18 24 17.5	-0.4
	0.7nm,0.7s,baz=226,slow=8.6,SNR=5.8						
CMAR	Chiang Mai Arr	93.56	288	P	P	18 25 31.8	+1.1
	0.5nm,0.9s,baz=94,slow=2.8,SNR=5.0						
MKAR	Makanchi Array	114.02	313	PKP	PKiKP	18 30 52.8	-0.4
	0.4nm,0.7s,baz=48,slow=1.8,SNR=5.8						
AKASG	Malin Array Be	144.97	334	PKPbc	PKPdf	18 31 50.5	-0.6
	2.1nm,0.6s,baz=40,slow=4.4,SNR=9.0						
BRTR	Keskin Array B	149.65	314	PKPbc	PKiKP	18 32 04.9	-0.2
	1.3nm,0.8s,baz=137,slow=3.6,SNR=7.6						
MLR	Muntele Rosu	150.36	331	⇓P	PKPab	18 32 12.1	+0.1
DRGR		150.69	336	⇓P	PKiKP	18 32 07.1	+0.2
ARR	Arges	151.04	332	⇓P	PKiKP	18 32 09.1	+1.4
GERES	GERESS Array B	151.37	349	PKPbc	PKiKP	18 32 08.0	-0.3
	0.4nm,0.6s,baz=48,slow=2.0,SNR=4.8						
HERR	Herculane	152.38	334	⇓P	PKiKP	18 32 10.7	+0.3

IDC 22 18:14:06.8±2.1**, 2°.81N×127°.13E, h0^{km}, mb3.2**/3**, mb1 3.4**/3**, mb1mx3.1**/39**, mbtmp3.2**/3**, Error ellipse: s-maj=162.2km s-min=26.1km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.69	163	P	P	18 19 20.6	+0.2
	0.3nm,0.4s,baz=342,slow=10,SNR=5.3						
ASAR	Alice Springs	27.13	166	P	P	18 19 51.4	-0.5
	0.3nm,1.0s,baz=347,slow=7.8,SNR=4.7						
MKAR	Makanchi Array	58.53	325	P	P	18 24 05.3	+0.2
	0.1nm,0.4s,baz=119,slow=7.6,SNR=6.3						

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*BJI **22** 18:21:54.0±0.0, 14°.60S×167°.30E, h120^{km}, mB5.0/22, mb4.7/40*

*IDC **22** 18:21:55.3±0.8, 14°.65S×167°.30E, h112^{km}±5^{km}, mb4.5/26, mb1 4.6/28, mb1mx4.4/46, mbtmp4.9/28, MS3.8/7, Ms1 3.8/7, ms1mx3.3/35, Error ellipse: s-maj=14.1km s-min=10.8km az=119.0*

*NEIC **22** 18:21:55.5±1.6, 14°.59S±0°.08×167°.3E±0°.1, h114^{km}±7^{km}, mb4.8/47, Error ellipse: s-maj=16.8km s-min=12.1km az=83.0*

*GCMT **22** 18:21:56.5±0.3, 14°.55S±0°.03×167°.03E±0°.02, h108^{km}±4^{km}, MW5.0/87, Moment Tensor Solution. s19,c21; s87,c102; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.52±.15; $M_{\theta\theta}$0.14±.23; $M_{\phi\phi}$-2.66±.19; $M_{r\theta}$1.75±.12; $M_{\theta\phi}$1.34±.18; $M_{\phi r}$-1.50±.12; Best double couple: $M_0$3.70700×10^{16} NP1: ϕ_s359.00000°, δ31.00000°, λ126.00000°. NP2: ϕ_s140.00000°, δ65.00000°, λ71.00000°. Principal axes: T 3.5370, Plg64.0000°, Azm17.0000°; N 0.3420, Plg17.0000°, Azm148.0000°; P -3.8770, Plg18.0000°, Azm244.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NOU **22** 18:21:56.3, 14°.54S×167°.26E, h120^{km}, mb4.9, Vanuatu Islands*

ISC 22 18:21:55.5±0.3**, 14°.60S**±0°.05×**167°.25E**±0°.06**, h112^{km}, n187, σ1ˢ.10**/197**, mb4.8**/73**, 2C-1D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.85	183	Pn	Pn	18 22 15.8	+0.4
SANVU	Saraoutou	0.85	183	P	Pn	18 22 16.8	+1.4
DVP	Devils Point	3.24	164	P	Pn	18 22 47.2	+2.5
LIFNC	LIFOU	6.15	180	P	Pn	18 23 24.2	+0.3
KOUNC	Koumac, New Ca	6.56	205	P	Pn	18 23 30.9	+1.4
YATNC	Mamie plateau,	7.43	183	P	Pn	18 23 41.9	+0.6
DZM	Mont Dzumac	7.47	186	P	Pn	18 23 42.3	+0.4
	14nm,0.3s,baz=334,slow=7.1,SNR=58						
DZM				S	Sn	18 25 04.6	-0.7
	18nm,0.3s,baz=291,slow=18,SNR=5.5						
DZM	Mont Dzumac	7.47	186	*e*Pn	Pn	18 23 43.8	+1.8
	97nm,0.3s						
DZM				*e*Sn	Sn	18 25 04.7	-0.5
	86nm,0.3s						
DZM	Mont Dzumac	7.47	186	Pn	Pn	18 23 42.7	+0.7
ONTNC	Ouen Toro	7.71	186	P	Pn	18 23 47.1	+2.1
PINNC	Pines Island,	7.98	179	P	Pn	18 23 50.9	+2.2
HNR	Honiara	8.79	305	P	Pn	18 24 00.1	+0.3
	34nm,0.3s,baz=202,slow=3.3,SNR=45						
HNR				S	Sn	18 25 37.5	+0.3
	53nm,0.3s,baz=198,slow=23,SNR=6.5						
HNR	Honiara	8.79	305	Pn	Pn	18 24 00.8	+1.0
HNR	Honiara	8.79	305	P	Pn	18 24 01.0	+1.2
MSVF	Nonsavu	10.84	108	P	Pn	18 24 28.6	+1.1
EIDS	Eidsvold	18.57	232	P	Pn	18 26 06.2	+0.7
	baz=19,SNR=11						
EIDS	Eidsvold	18.57	232	Pn	Pn	18 26 06.3	+0.9
EIDS				IAmb	IAmb	18 26 06.7	
	comp=Z,63nm,0.8s						
RAO	Raoul Island	20.02	139	LR	LR	18 32 26.1	
	comp=Z,471nm,20.1s,baz=138,slow=32						
PMG	Port Moresby	20.31	282	P	P	18 26 23.8	+1.0
	comp=Z,25nm,0.8s,baz=96,slow=8.0,SNR=11						
PMG	Port Moresby	20.31	282	P	P	18 26 23.8	+1.0
PMG				IAmb	IAmb	18 26 39.1	
	comp=Z,51nm,1.1s						
PMG	Port Moresby	20.31	282	P	P	18 26 24.2	+1.4
CTA	Charters Tower	20.77	252	P	P	18 26 28.8	+1.1
	comp=Z,45nm,0.8s,baz=78,slow=12,SNR=52						
CTAO	Charters Tower	20.77	252	P	P	18 26 29.0	+1.3
CTAO				IAmb	IAmb	18 26 29.8	
	comp=Z,67nm,0.9s						
RMQ	Roma	20.94	233	P	P	18 26 31.2	+1.7
	baz=21,SNR=96						
ARMA	Armidale	21.32	220	P	P	18 26 35.3	+1.7
	baz=22,SNR=5.9						
ARMA	Armidale	21.32	220	P	P	18 26 34.0	+0.4
ARMA				IAmb	IAmb	18 26 36.5	
	comp=Z,35nm,1.1s						
MTSU	Mount Surprise	22.28	258	P	P	18 26 44.1	+0.4
	baz=22,SNR=68						
COEN	Coen	23.34	269	P	P	18 26 54.5	+0.4
COEN				IAmb	IAmb	18 26 56.7	
	comp=Z,26nm,1.1s						
MGCD	Mangrove Creek	23.63	216	P	P	18 26 58.6	+2.1
	baz=24,SNR=7.4						
QLP	Quilpie	24.58	237	P	P	18 27 05.9	+0.7
	baz=25,SNR=12						
BKZ	Black Stump Fm	25.79	163	P	P	18 27 16.6	+0.5
CMSA	Cobar Meteorol	25.95	226	P	P	18 27 18.1	+0.5
	baz=26,SNR=23						
QIS	Mount Isa	26.99	253	P	P	18 27 26.7	-0.4
	baz=27,SNR=4.8						
STKA	Stephens Creek	29.07	229	P	P	18 27 46.4	+1.0
	comp=Z,17nm,0.5s,baz=57,slow=8.8,SNR=56						
STKA				PcP	PcP	18 30 50.4	-0.6
	comp=Z,6.3nm,0.9s,baz=8.1,slow=5.8,SNR=5.5						
STKA				ScP	ScP	18 34 23.2	+0.7
	comp=Z,3.9nm,0.9s,baz=60,slow=4.0,SNR=5.9						
STKA				LR	LR	18 39 26.8	
	comp=Z,210nm,19.8s,baz=92,slow=36						
STKA	Stephens Creek	29.07	229	P	P	18 27 46.5	+1.0
	baz=29,SNR=56						
STKA	Stephens Creek	29.07	229	P	P	18 27 46.4	+1.0
RPZ	Rata Peaks	29.20	174	P	P	18 27 46.1	-0.3
	comp=Z,7.7nm,0.6s,baz=125,slow=13,SNR=3.6						
RPZ	Rata Peaks	29.20	174	P	P	18 27 47.1	+0.6
RPZ				IAmb	IAmb	18 27 47.8	
	comp=Z,10nm,0.7s						
DCZ	Deep Cove	30.77	180	P	P	18 28 00.8	+0.5
DCZ				IAmb	IAmb	18 28 02.4	
	comp=Z,16nm,1.0s						
WR0	Warramunga Arr	31.65	256	P	P	18 28 07.2	-1.2
WB0	Warramunga Arr	31.78	256	P	P	18 28 08.1	-1.4
WB0				IAmb	IAmb	18 28 08.4	
	comp=Z,8.4nm,0.6s						
HTT	Hallett	31.79	229	P	P	18 28 10.2	+0.7
	baz=32,SNR=12						
WB2	Warramunga Arr	31.83	256	P	P	18 28 08.4	-1.5
WRAB	Tennant Creek	31.83	256	P	P	18 28 08.5	-1.4
WRAB				IAmb	IAmb	18 28 08.8	
	comp=Z,8.5nm,0.8s						
WRA	Warramunga Arr	31.84	256	P	P	18 28 08.3	-1.7
	comp=Z,6.4nm,0.8s,baz=84,slow=8.9,SNR=51						
WRA				PP	PP	18 29 26.1	+2.0
	comp=Z,4.4nm,1.0s,baz=85,slow=10,SNR=4.6						
WRA				ScP	ScP	18 34 32.2	+0.5
	comp=Z,2.0nm,1.0s,baz=78,slow=3.5,SNR=6.6						
WRA	Warramunga Arr	31.84	256	P	P	18 28 07.8	-2.2
AS31	Alice Springs	32.70	249	P	P	18 28 16.3	-1.2
ASAR	Alice Springs	32.70	249	P	P	18 28 16.2	-1.3
	comp=Z,13nm,0.9s,baz=76,slow=9.5,SNR=196						
ASAR				pP	pP	18 28 42.1	-0.3
	comp=Z,1.2nm,0.4s,baz=73,slow=9.6,SNR=1.8						
ASAR				PcP	PcP	18 30 57.5	-3.4
	comp=Z,2.0nm,0.9s,baz=97,slow=5.4,SNR=6.0						
ASAR				S	S	18 33 21.1	-4.9
	comp=Z,1.2nm,0.9s,baz=76,slow=17,SNR=5.1						
ASAR				ScP	ScP	18 34 34.7	0.0
	comp=Z,2.1nm,0.8s,baz=86,slow=3.1,SNR=12						
ASAR	Alice Springs	32.70	249	P	P	18 28 16.0	-1.6
SRPI	Serui, Papua	33.13	290	P	P	18 28 23.8	+2.5
BBOO	Buckleboo	33.65	232	P	P	18 28 26.1	+0.5
	baz=34,SNR=32						
BBOO	Buckleboo	33.65	232	P	P	18 28 26.2	+0.5
KDU	Kakadu	33.83	269	P	P	18 28 26.8	-0.6
	baz=34,SNR=3.9						
FAKI	Fak Fak	36.42	285	P	P	18 28 47.7	-1.9
WRKA	Warakurna	37.97	248	P	P	18 29 01.7	-1.0
	baz=38,SNR=31						
SIJI	Sorong	38.09	288	P	P	18 29 03.3	-0.5
	comp=Z,14nm,0.8s,baz=249,slow=23,SNR=4.9						
FORT	Forrest	39.35	239	P	P	18 29 14.0	-0.1
	baz=40,SNR=14						
FORT	Forrest	39.35	239	P	P	18 29 14.0	-0.1
FITZ	Fitzroy Crossi	40.02	259	P	P	18 29 18.4	-1.4
	comp=Z,10.0nm,0.6s,baz=74,slow=8.9,SNR=35						
FITZ	Fitzroy Crossi	40.02	259	P	P	18 29 18.9	-0.9
	baz=40,SNR=5.7						
FITZ	Fitzroy Crossi	40.02	259	P	P	18 29 19.4	-0.3
PPT2	Papeete2	41.53	100	*e*LR	LR	18 41 03.6	
	comp=Z,308nm,30.0s						
PPT	Papeete	41.53	100	LR	LR	18 42 42.4	
	comp=Z,192nm,21.8s,baz=329,slow=30						
TBI	Tubuai	41.72	109	*e*LR	LR	18 41 11.3	
	comp=Z,160nm,32.2s						
BATI	Baumata	42.74	271	P	P	18 29 42.8	+0.6
	comp=Z,63nm,0.7s,baz=157,slow=3.7,SNR=6.0						
KMBL	Kambalda	44.64	240	P	P	18 29 56.5	-0.6
	baz=45,SNR=7.0						
PSA00	Pilbara Seismi	45.46	254	P	P	18 30 03.6	-0.1
PSA00				IAmb	IAmb	18 30 04.5	
	comp=Z,18nm,1.0s						
MEEK	Meekatharra	46.82	247	P	P	18 30 14.0	-0.3
	baz=47,SNR=18						
KAPI	Kappang	47.67	277	P	P	18 30 21.8	+0.7
	comp=Z,8.1nm,0.8s,baz=254,slow=9.4,SNR=2.3						
KAPI	Kappang	47.67	277	P	P	18 30 21.5	+0.4
KAPI				IAmb	IAmb	18 30 25.1	
	comp=Z,20nm,1.1s						
TOLI2	Tolitoli	48.56	285	P	P	18 30 26.3	-1.6
NWAO	Narrogin (SRO)	48.80	239	P	P	18 30 28.7	-0.8
NWAO				IAmb	IAmb	18 30 32.6	
	comp=Z,22nm,1.1s						
MORW	Morawa	49.31	244	P	P	18 30 33.3	-0.2
MORW				IAmb	IAmb	18 30 40.2	
	comp=Z,9.9nm,0.9s						
TWSI	Taliwang, Sumb	49.59	271	P	P	18 30 36.9	+1.1
	comp=Z,26nm,0.8s						
TGY	Tagaytay City	53.97	300	P	P	18 31 09.6	+1.2
	comp=Z,51nm,0.3s,baz=334,slow=13,SNR=2.0						
JGF	Kuroka	57.39	331	P	P	18 31 32.5	+0.1
JGF				IAmb	IAmb	18 31 43.2	
	comp=Z,14nm,1.0s						
MJAR	Matsushiro Arr	57.78	332	P	P	18 31 34.6	-0.5
	comp=Z,9.0nm,0.8s,baz=167,slow=8.6,SNR=18						
MAJO	Matsushiro	57.78	332	P	P	18 31 35.4	+0.4
MAT	Matsushiro	57.78	332	P	P	18 31 34.3	-0.8
CISI	Cisompet, Garu	58.61	270	P	P	18 31 40.2	-1.2
JNU	Nakatsue	58.80	324	P	P	18 31 42.0	-0.3
	comp=Z,15nm,0.8s,baz=198,slow=2.6,SNR=4.9						
LEM	Lembang	58.96	271	P	P	18 31 44.8	+0.8
	comp=Z,24nm,0.7s,baz=122,slow=21,SNR=7.9						
TPUB	Ta-pu	59.14	309	P	P	18 31 44.4	-0.4
SSLB	Suanglung	59.18	310	P	P	18 31 44.2	-0.8
YHNB	Yeheng	59.38	311	P	P	18 31 47.1	+0.6
JTM	Tenmabayashi	60.21	337	P	P	18 31 52.1	+0.4
ASAJ	Asahikawa	62.61	340	P	P	18 32 07.7	-0.1
	comp=Z,7.2nm,0.5s,baz=225,slow=6.1,SNR=19						
VNDA	Vanda	62.99	181	P	P	18 32 09.4	-0.5
	comp=Z,7.5nm,1.0s,baz=348,slow=9.1,SNR=9.7						
VNDA	Vanda	62.99	181	P	P	18 32 10.0	+0.1
VNDA				IAmb	IAmb	18 32 12.6	
	comp=Z,12nm,1.1s						
KSRS	Korea Array	63.62	326	P	P	18 32 15.0	+0.4
	comp=Z,5.7nm,0.9s,baz=135,slow=6.9,SNR=12						
KSAR	Wonju Array Be	63.63	326	P	P	18 32 14.2	-0.4
USA0B	Ussuriysk Arra	66.76	333	P	P	18 32 34.8	0.0
USA0B				IAmb	IAmb	18 32 36.2	
	comp=Z,6.3nm,0.8s						
USRK	Ussuriysk Ar.	66.76	333	P	P	18 32 35.8	+1.1
	comp=Z,5.5nm,0.9s,baz=148,slow=4.3,SNR=7.2						
PETK	Petropavlovsk-	67.93	354	P	P	18 32 42.7	+0.8
	comp=Z,23nm,1.0s,baz=131,slow=6.1,SNR=13						
MNSI	Mandailing Nat	68.63	277	P	P	18 32 46.9	-0.3
	comp=Z,1μmcomp=Z,20nm,1.1s						
CN2	Changchun	69.52	329	*e*P	P	18 32 52.3	+0.3
CN2				*e*pP	pwP	18 33 21.8	+0.2
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PSI	Prapat	69.82	279	P	P	18 32 53.7	-1.0
	comp=Z,2.8nm,0.4s,baz=181,slow=18,SNR=5.4						
GSI	Gunungsitoli	70.70	277	P	P	18 33 00.0	+0.1
	comp=Z,23nm,1.0s						
ENH	Enshi	71.27	309	P	P	18 33 03.0	0.0
ENH				IAmb	IAmb	18 33 03.7	
	comp=Z,22nm,0.9s						
GYA	Guiyang	71.62	305	⇓P	P	18 33 06.0	+0.6
GYA				pP	pwP	18 33 38.1	+3.1
GYA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
UTTA	Uttaradit	73.19	294	P	P	18 33 16.1	+1.4
UTHA	Uthaitani	73.40	291	P	P	18 33 18.1	+2.2
	comp=Z,14nm,1.0s						
XAN	Xi'an	73.58	313	P	P	18 33 17.3	+0.6
XAN				pmax	pmax		
	comp=Z,17nm,1.1s						
SUKH	Sukhothai	73.92	293	P	P	18 33 20.8	+1.9
KMI	Kunming	74.22	302	⇑P	P	18 33 22.0	+1.2
KMI				pmax	pmax		
	comp=Z,21nm,1.0s						
LAMP	Lampang	74.29	294	P	P	18 33 22.6	+1.5
	comp=Z,395nmcomp=Z,53nm,0.9s						
CM36	Chiang Mai Arr	74.77	294	P	P	18 33 25.0	+1.2
CM35	Chiang Mai Arr	74.77	294	P	P	18 33 25.0	+1.1
CM04	Chiang Mai Arr	74.83	294	P	P	18 33 25.7	+1.5
	comp=Z,97nmcomp=Z,12nm,1.1s						
CM09	Chiang Mai Arr	74.83	294	P	P	18 33 26.1	+1.8
	comp=Z,98nmcomp=Z,13nm,1.0s						
CM34	Chiang Mai Arr	74.84	294	P	P	18 33 25.0	+0.7
CM01	Chiang Mai Arr	74.85	294	P	P	18 33 25.9	+1.6
	comp=Z,93nmcomp=Z,12nm,1.0s						
CM05	Chiang Mai Arr	74.86	294	P	P	18 33 25.8	+1.4
	comp=Z,74nmcomp=Z,7.9nm,1.0s						
CM02	Chiang Mai Arr	74.87	294	P	P	18 33 25.9	+1.5
	comp=Z,86nmcomp=Z,12nm,1.1s						
CM31	Chiang Mai Arr	74.88	294	P	P	18 33 26.0	+1.5
	comp=Z,3μmcomp=Z,321nm,1.0s						
CM31	Chiang Mai Arr	74.88	294	P	P	18 33 24.4	-0.1
CM31				IAmb	IAmb	18 33 26.8	
	comp=Z,14nm,0.9s						
CMAR	Chiang Mai Arr	74.88	294	P	P	18 33 25.9	+1.5
	comp=Z,8.3nm,1.0s,baz=117,slow=4.3,SNR=54						
CMAR				pP	pwP	18 33 54.4	+2.0
	comp=Z,4.6nm,1.0s,baz=114,slow=4.4,SNR=3.6						
CMAR	Chiang Mai Arr	74.88	294	P	P	18 33 24.5	0.0

CM15	**Chiang Mai Arr**	**74.89**	**294**	P	**P**	**18 33 26.0**	**+1.4**
	comp=Z,76nmcomp=Z,10nm,1.1s						
CM13	**Chiang Mai Arr**	**74.90**	**294**	P	**P**	**18 33 26.0**	**+1.4**
	comp=Z,74nmcomp=Z,9.5nm,1.1s						
CMMT	**Chiang Mai**	**75.00**	**294**	P	**P**	**18 33 25.0**	**-0.2**
	comp=Z,140nmcomp=Z,6.5nm,1.0s						
CM33	**Chiang Mai Arr**	**75.00**	**294**	P	**P**	**18 33 26.0**	**+0.8**
CHTO	**Chiang Mai**	**75.01**	**294**	P	**P**	**18 33 25.5**	**+0.3**
CHTO				IAmb	IAmb	18 33 27.1	
	comp=Z,12nm,1.0s						
CM32	**Chiang Mai Arr**	**75.03**	**294**	P	**P**	**18 33 26.0**	**+0.6**
QSPA	**South Pole Qui**	**75.43**	**180**	P	**P**	**18 33 26.9**	**-0.1**
QSPA				IAmb	IAmb	18 33 27.8	
	comp=Z,24nm,1.1s						
CD2	**Chengdu**	**75.91**	**308**	P	**P**	**18 33 30.6**	**+0.4**
CD2				pmax	pmax		
	comp=Z,20nm,1.0s						
SEY	**Seymchan**	**78.15**	**353**	P	**P**	**18 33 41.6**	**-0.3**
YAK	**Yakutsk**	**81.90**	**343**	P	**P**	**18 34 02.3**	**+0.2**
ULN	**Ulaanbaatar**	**82.02**	**324**	P	**P**	**18 34 02.7**	**-0.6**
ULN				IAmb	IAmb	18 34 04.7	
	comp=Z,8.1nm,0.9s						
SONM	**Songino Array**	**82.38**	**324**	P	**P**	**18 34 05.6**	**+0.4**
	comp=Z,4.4nm,0.9s,baz=150,slow=6.3,SNR=24						
SONM	**Songino Array**	**82.38**	**324**	P	**P**	**18 34 04.1**	**-1.1**
GTA	**Gaotai**	**82.56**	**314**	*e*P	**P**	**18 34 06.8**	**+0.5**
GTA				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KTH	**Kantishna Hill**	**84.31**	**17**	P	**P**	**18 34 13.7**	**-1.0**
KTH				IAmb	IAmb	18 34 15.1	
	comp=Z,11nm,0.9s						
RND	**Reindeer**	**84.81**	**18**	P	**P**	**18 34 16.7**	**-0.5**
RND				IAmb	IAmb	18 34 18.9	
	comp=Z,21nm,1.2s						
BWN	**Browne**	**85.20**	**18**	P	**P**	**18 34 18.6**	**-0.4**
IMAR	**Indian Mountai**	**85.44**	**15**	P	**P**	**18 34 20.6**	**+0.5**
LSA	**Lhasa**	**85.47**	**302**	P	**P**	**18 34 22.3**	**+0.6**
LSA				pmax	pmax		
	comp=Z,27nm,1.0s						
WRH	**Wood River Hil**	**85.83**	**18**	P	**P**	**18 34 21.4**	**-0.7**
CCB	**Clear Creek Bu**	**86.04**	**18**	P	**P**	**18 34 22.3**	**-0.8**
MDM	**Murphy Dome**	**86.15**	**17**	P	**P**	**18 34 22.5**	**-1.2**
ILAR	**Eielson Array**	**86.41**	**18**	P	**P**	**18 34 23.4**	**-1.5**
	comp=Z,5.8nm,0.8s,baz=235,slow=5.5,SNR=56						
ILAR				pP	**pP**	**18 34 55.8**	**+2.1**
	comp=Z,0.9nm,0.6s,baz=241,slow=4.6,SNR=1.8						
ILAR	**Eielson Array**	**86.41**	**18**	P	**P**	**18 34 23.6**	**-1.3**
PFO	**Pinyon Flats O**	**86.93**	**54**	LR	LR	19 10 48.6	
	comp=Z,32nm,18.8s,baz=66,slow=34						
NVAR	**Mina Array Bea**	**87.20**	**49**	P	**P**	**18 34 29.0**	**-0.7**
	comp=Z,1.6nm,0.9s,baz=218,slow=5.5,SNR=7.2						
NVAR				LR	LR	19 05 05.5	
	comp=Z,30nm,21.3s,baz=285,slow=30						
TAPN	**Taplejung**	**87.60**	**299**	*e*P	**P**	**18 34 31.8**	**-0.1**
	comp=Z,28nm,1.0s						
ODAN	**Odare**	**87.72**	**298**	*e*P	**P**	**18 34 32.4**	**-0.1**
	comp=Z,36nm,0.9s						
RAMN	**Ramite**	**88.42**	**298**	*e*P	**P**	**18 34 35.4**	**-0.4**
	comp=Z,8.2nm,0.8s						
SYO	**Syowa Base**	**88.83**	**197**	⇑*e*PcP	**PcP**	**18 34 37.8**	**-0.2**
GUN	**Gumba**	**89.31**	**299**	*e*P	**P**	**18 34 39.8**	**-0.3**
	comp=Z,23nm,0.9s						
PKI	**Pulchoki**	**89.62**	**299**	*e*P	**P**	**18 34 40.9**	**-0.6**
	comp=Z,27nm,1.0s						
PKIN	**Phulchoki**	**89.63**	**299**	*e*P	**P**	**18 34 40.8**	**-0.7**
	comp=Z,24nm,0.9s						
KKN	**Kakani**	**89.79**	**299**	*e*P	**P**	**18 34 41.7**	**-0.4**
	comp=Z,22nm,1.0s						
TIXI	**Tiksi**	**89.83**	**349**	P	**P**	**18 34 42.2**	**+1.2**
DMN	**Daman**	**89.89**	**298**	*e*P	**P**	**18 34 42.2**	**-0.5**
	comp=Z,40nm,0.9s						
ELK	**Elko**	**90.21**	**48**	LR	LR	19 06 00.2	
	comp=Z,51nm,21.9s,baz=280,slow=29						
GKN	**Gorkha**	**90.39**	**299**	*e*P	**P**	**18 34 43.9**	**-1.0**
	comp=Z,24nm,1.0s						
NEW	**Newport**	**91.47**	**40**	P	**P**	**18 34 48.4**	**-0.9**
SNAA	**Sanae**	**93.68**	**183**	P	**P**	**18 34 58.1**	**-1.1**
VNA3	**Neumayer Olymp**	**94.35**	**181**	P	**P**	**18 35 00.8**	**-1.3**
VNA2	**Neumayer--Watz**	**94.61**	**182**	P	**P**	**18 35 02.4**	**-1.0**
PDAR	**Pinedale Array**	**94.87**	**47**	LR	LR	19 11 19.1	
	comp=Z,27nm,19.1s,baz=348,slow=31						
ZSN	**Zaisan**	**95.56**	**317**	*e*P	**P**	**18 35 07.2**	**-0.8**
	comp=Z,3.9nm,0.8s,baz=317						
MK31	**Makanchi Array**	**97.09**	**316**	P	Pdif	18 35 15.2	0.0
MK31				IAmb	IAmb	18 35 16.4	
	comp=Z,4.8nm,1.0s						
MKAR	**Makanchi Array**	**97.09**	**316**	P	Pdif	18 35 15.2	0.0
	comp=Z,4.0nm,0.8s,baz=101,slow=6.0,SNR=44						
MKAR				pP	pP	18 35 45.2	+1.4
	comp=Z,1.0nm,0.8s,baz=117,slow=7.2,SNR=2.7						
MKAR				S	**SKSac**	**18 45 40.3**	**-1.6**
	comp=Z,0.6nm,0.9s,baz=98,slow=9.1,SNR=5.5						
MKAR	**Makanchi Array**	**97.09**	**316**	P	**P**	**18 35 14.9**	**-0.1**
ZALV	**Zalesovo Beam**	**97.27**	**324**	P	**P**	**18 35 14.7**	**-0.9**
	comp=Z,4.5nm,0.8s,baz=108,slow=4.8,SNR=20						
YKA	**Yellowknife Ar**	**97.44**	**27**	P	**P**	**18 35 15.0**	**-1.1**
	comp=Z,1.8nm,1.0s,baz=250,slow=4.0,SNR=11						
SATY	**Saty**	**98.98**	**312**	*e*P	**Pdif**	**18 35 22.7**	**-1.0**
	baz=312						
SEM	**Semipalatinsk**	**99.21**	**320**	*e*P	**Pdif**	**18 35 22.6**	**-2.1**
	baz=320						
TDK	**Taldyqorghan**	**99.36**	**314**	*e*P	**Pdif**	**18 35 24.2**	**-1.0**
	baz=314						
ARCES	**ARCESS Array B**	**120.12**	**345**	PKP	**PKPdf**	**18 40 32.1**	**-0.4**
	comp=Z,2.9nm,0.4s,baz=81,slow=2.4,SNR=72						
BOSA	**Boshof**	**123.46**	**220**	PKP	**PKPdf**	**18 40 39.8**	**-0.7**
	comp=Z,3.9nm,0.9s,baz=175,slow=5.4,SNR=3.0						
FINES	**FINESS Array B**	**125.59**	**338**	PKP	**PKPdf**	**18 40 42.9**	**-0.3**
	comp=Z,3.7nm,0.8s,baz=90,slow=0.8,SNR=7.9						
NB2	**NORSAR Subarra**	**130.49**	**345**	PKPdf	**PKPdf**	**18 40 52.6**	**-0.1**
	comp=Z,1.2nm,0.7s,baz=31,slow=1.9						
NOA	**NORSAR Array B**	**130.49**	**345**	PKP	**PKPdf**	**18 40 52.4**	**-0.3**
	comp=Z,0.9nm,0.7s,baz=39,slow=2.3,SNR=3.3						
NOA				SKPbc	**SKPbc**	**18 44 07.0**	**+0.9**
	comp=Z,15nm,1.0s,baz=31,slow=3.0,SNR=25						
AKASG	**Malin Array Be**	**130.61**	**326**	PKP	**PKPdf**	**18 40 52.7**	**-0.5**
	comp=Z,0.3nm,0.2s,baz=46,slow=2.8,SNR=5.4						
AKASG				SKPbc	**SKPab**	**18 44 07.3**	**+0.4**
	comp=Z,6.3nm,0.8s,baz=46,slow=4.6,SNR=21						
BRTR	**Keskin Array B**	**132.41**	**311**	PKP	**PKiKP**	**18 40 57.8**	**-0.4**
	comp=Z,1.1nm,0.8s,baz=90,slow=1.2,SNR=6.7						
BRTR				SKPbc	**SKPbc**	**18 44 13.9**	**+0.1**
	comp=Z,1.8nm,0.8s,baz=105,slow=2.7,SNR=8.6						
CLL	**Collm**	**137.93**	**336**	*e*PKPdf	**PKPdf**	**18 41 05.0**	**-1.8**
CLL				*i* PKiKP	**PKiKP**	**18 41 08.8**	**-0.1**
CONA	**Conrad Observa**	**139.19**	**330**	*e*P	**PKiKP**	**18 41 12.0**	**+0.3**
	comp=Z,5.9nm,1.0s						
GERES	**GERESS Array B**	**139.52**	**333**	PKP	**PKPdf**	**18 41 10.2**	**+0.2**
	comp=Z,1.0nm,0.7s,baz=207,slow=2.7,SNR=7.3						
GERES				SKPbc	**SKPbc**	**18 44 36.4**	**+1.0**
	comp=Z,1.3nm,0.9s,baz=113,slow=3.5,SNR=5.0						
KBA	**Koelnbreinsper**	**140.99**	**331**	*e*P	**PKiKP**	**18 41 14.9**	**-0.6**
	comp=Z,6.1nm,1.1s						
ABTA	**Abfaltersbach**	**141.62**	**332**	*e*P	**PKPdf**	**18 41 14.0**	**+0.2**
	comp=Z,8.5nm,1.2s						
SQTA	**Sankt Quirin**	**141.84**	**333**	*e*P	**PKPdf**	**18 41 13.2**	**-1.1**
	comp=Z,11nm,1.9s						
FETA	**Feichten**	**142.20**	**334**	*e*P	**PKPdf**	**18 41 14.9**	**-0.1**
	comp=Z,8.3nm,1.2s						
KEST	**Kesra**	**151.09**	**321**	PKPbc	**PKPbc**	**18 41 35.8**	**-0.3**
	comp=Z,16nm,0.8s,baz=264,slow=3.3,SNR=8.3						
ESDC	**Sonseca Array**	**153.85**	**344**	PKPbc	**PKiKP**	**18 41 41.8**	**-0.3**
	comp=Z,1.6nm,0.9s,baz=1.3,slow=2.4,SNR=4.2						
TORD	**Torodi Ar. Bea**	**165.90**	**266**	PKPab	**PKPab**	**18 42 47.8**	**-0.7**
	comp=Z,3.8nm,1.0s,baz=86,slow=3.7,SNR=8.3						

AEIC ***22*** *18:24:15±1.6, 61°.58N±0°.02×151°.62W±0°.05, h11^{km}±4^{km}, ML3.3, ML3.5/62(NEIC), Error ellipse: s-maj=4.4km s-min=1.8km az=124.0*

NEIC ***22*** *18:24:16.0±2.0, 61°.56N±0°.01×151°.54W±0°.05, h13^{km}±4^{km}, Error ellipse: s-maj=3.3km s-min=1.3km az=109.0*

ISC 22 18:24:14.0±1.1**, 61°.51N**±0°.02×**151°.51W**±0°.02**, h4**^{km}±10^{km}**, n134, σ1^{s}.25**/129**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STLK	**Strandline Lak**	**0.15**	**266**		**Pg**	**18 24 18.4**	**+1.4**
SPCG	**Spurr Capps Gl**	**0.33**	**228**		**Pb**	**18 24 22.2**	**-0.2**
SPCG					**Sb**	**18 24 27.3**	**-0.8**
SUA	**Susitna One**	**0.37**	**97**	P	**Pb**	**18 24 23.2**	**0.0**
	baz=286,SNR=223						
SUA	**Susitna One**	**0.37**	**97**		**Pb**	**18 24 23.1**	**0.0**
SUA					**Sb**	**18 24 29.2**	**-0.1**
SUA	**Susitna One**	**0.37**	**97**	IAML		18 24 29.5	
	comp=N,989nm,0.6s						
SUA				IAML		18 24 29.6	
	comp=E,898nm,0.6s						
SPCP	**Crater Peak Br**	**0.39**	**232**		**Pb**	**18 24 23.3**	**-0.2**
SPCP					**Sb**	**18 24 29.4**	**-0.6**
SPCN	**Chakachatna No**	**0.43**	**229**		**Pb**	**18 24 24.2**	**+0.1**
SPCN					**Sb**	**18 24 31.6**	**+0.6**
SKT	**Skwentna**	**0.47**	**359**	P	**Pg**	**18 24 22.7**	**-0.3**
	baz=186,SNR=1000						
SKT	**Skwentna**	**0.47**	**359**		**Pg**	**18 24 22.7**	**-0.3**
SKT					**Sg**	**18 24 28.4**	**-0.8**
SKT	**Skwentna**	**0.47**	**359**	IAML		18 24 28.5	
	comp=N,8µm,0.2s						
SKT				IAML		18 24 28.5	
	comp=E,19µm,0.5s						
FIS	**Fire Island**	**0.72**	**120**		**Pn**	**18 24 31.2**	**+0.4**
CAPN	**Captain Cook N**	**0.76**	**167**	P	**Pn**	**18 24 33.0**	**+1.6**
	baz=345,SNR=13						
CAPN	**Captain Cook N**	**0.76**	**167**		**Pn**	**18 24 32.9**	**+1.5**
RC01	**Rabbit Creek A**	**0.95**	**115**	P	**Pn**	**18 24 33.8**	**-0.3**
	baz=299,SNR=24						
RC01	**Rabbit Creek A**	**0.95**	**115**		**Pn**	**18 24 33.8**	**-0.3**
CUT	**Chulitna**	**1.07**	**33**	P	**Pg**	**18 24 34.0**	**-0.5**
	baz=218,SNR=144						
CUT	**Chulitna**	**1.07**	**33**		**Pg**	**18 24 34.0**	**-0.5**
DFR	**Drift River**	**1.08**	**212**		**Pn**	**18 24 35.5**	**-0.4**
DFR					**Sn**	**18 24 50.6**	**-0.8**
PMR	**Palmer**	**1.14**	**85**		**Pg**	**18 24 36.2**	**+0.4**
PMR	**Palmer**	**1.14**	**85**	IAML		18 24 51.7	
	comp=N,858nm,0.5s						
PMR				IAML		18 24 52.4	
	comp=E,872nm,0.5s						
NCT	**North Crescent**	**1.17**	**217**		**Pn**	**18 24 37.2**	**0.0**
NCT					**Sn**	**18 24 53.5**	**-0.2**
REF	**Redoubt East F**	**1.18**	**210**		**Pn**	**18 24 37.2**	**-0.1**
SLKM	**Skilak Lake**	**1.19**	**147**		**Pn**	**18 24 37.7**	**+0.4**
RSO	**Redoubt South**	**1.21**	**210**		**Pn**	**18 24 37.6**	**-0.2**
RED	**Redoubt Volcan**	**1.25**	**210**		**Pn**	**18 24 38.3**	**0.0**
RED					**Sn**	**18 24 55.5**	**-0.2**
O22K	**Cooper Landing**	**1.35**	**139**		**Pg**	**18 24 40.6**	**+0.8**
PPLA	**Purkeypile**	**1.43**	**347**	P	**Pn**	**18 24 40.3**	**-0.4**
	baz=168,SNR=104						
PPLA	**Purkeypile**	**1.43**	**347**		**Pn**	**18 24 40.4**	**-0.4**
PPLA					**Sb**	**18 24 59.0**	**-0.8**
SML	**Sawmill**	**1.55**	**77**	P	**Pb**	**18 24 43.1**	**-0.1**
	baz=263,SNR=28						
SML	**Sawmill**	**1.55**	**77**		**Pn**	**18 24 42.9**	**+0.6**
SML					**Sg**	**18 25 04.1**	**+0.5**
SML	**Sawmill**	**1.55**	**77**	IAML		18 25 04.4	
	comp=E,956nm,0.8s						
SML				IAML		18 25 05.2	
	comp=N,733nm,0.8s						
IVE	**Iliamna Volcan**	**1.67**	**207**		**Pg**	**18 24 45.4**	**-0.5**
PWL	**Port Wells**	**1.67**	**112**		**Pg**	**18 24 45.6**	**-0.3**
HUR	**Hurricane**	**1.72**	**30**		**Pn**	**18 24 44.9**	**+0.3**
ILS	**Iliamna Low So**	**1.73**	**207**		**Pg**	**18 24 46.7**	**-0.5**
SEW	**Seward**	**1.73**	**143**	P	**Pg**	**18 24 47.1**	**0.0**
	baz=325,SNR=16						
SEW	**Seward**	**1.73**	**143**		**Pg**	**18 24 46.7**	**-0.4**
BRLK	**Bradley Lake**	**1.78**	**170**		**Pg**	**18 24 47.7**	**-0.3**
BRLK	**Bradley Lake**	**1.78**	**170**	IAML		18 25 13.1	
	comp=N,592nm,0.4s						
BRLK				IAML		18 25 13.5	
	comp=E,671nm,0.4s						
BRSE	**Bradley Lake S**	**1.81**	**168**	P	**Pg**	**18 24 48.4**	**-0.2**
	baz=347,SNR=15						
BRSE	**Bradley Lake S**	**1.81**	**168**		**Pg**	**18 24 47.8**	**-0.9**
HOM	**Homer**	**1.86**	**182**	P	**Pg**	**18 24 50.1**	**+0.6**
	baz=0.5,SNR=5.6						
HOM	**Homer**	**1.86**	**182**		**Sg**	**18 25 15.3**	**+1.8**
WAT1	**Susitna Watana**	**1.92**	**45**		**Pn**	**18 24 47.2**	**-0.2**
CNPM	**China Poot**	**2.00**	**176**		**Pb**	**18 24 50.8**	**0.0**
CNPM					**Sg**	**18 25 16.9**	**-1.0**
CNPM	**China Poot**	**2.00**	**176**	IAML		18 25 18.3	
	comp=E,554nm,0.7s						
CNPM				IAML		18 25 22.9	
	comp=N,290nm,0.4s						
WAT2	**Susitna Watana**	**2.00**	**42**	P	**Pn**	**18 24 49.0**	**+0.4**
	baz=227,SNR=164						
WAT2	**Susitna Watana**	**2.00**	**42**		**Pn**	**18 24 48.7**	**+0.1**
SVW2	**Sparrevohn**	**2.01**	**260**		**Pn**	**18 24 49.2**	**+0.7**
SVW2	**Sparrevohn**	**2.01**	**260**	IAML		18 25 18.8	
	comp=E,380nm,0.6s						
SVW2				IAML		18 25 19.1	
	comp=N,618nm,0.6s						
SCM	**Sheep Creek Mo**	**2.02**	**79**		**Pb**	**18 24 50.9**	**-0.4**
SCM	**Sheep Creek Mo**	**2.02**	**79**	IAML		18 25 20.3	
	comp=E,453nm,0.8s						
SCM				IAML		18 25 21.9	
	comp=N,410nm,0.8s						
TRF	**Thorofare Moun**	**2.03**	**16**	P	**Pn**	**18 24 50.0**	**+1.0**
	baz=199,SNR=99						
TRF	**Thorofare Moun**	**2.03**	**16**		**Pn**	**18 24 49.6**	**+0.5**
TRF					**Sn**	**18 25 16.4**	**+1.5**
TRF	**Thorofare Moun**	**2.03**	**16**	IAML		18 25 19.8	
	comp=N,573nm,0.3s						
OPT	**Oil Point**	**2.05**	**205**		**Pg**	**18 24 52.3**	**-0.9**
KTH	**Kantishna Hill**	**2.07**	**7**		**Pn**	**18 24 50.1**	**+0.6**
KTH					**Sn**	**18 25 16.4**	**+0.7**
KTH	**Kantishna Hill**	**2.07**	**7**	IAML		18 25 19.0	
	comp=E,560nm,0.9s						
WAT6	**Susitna Watana**	**2.08**	**57**	P	**Pn**	**18 24 50.6**	**+1.0**
	baz=243,SNR=38						
WAT6	**Susitna Watana**	**2.08**	**57**		**Pn**	**18 24 50.2**	**+0.5**
RND	**Reindeer**	**2.27**	**32**		**Pn**	**18 24 52.6**	**+0.4**
AUW	**Augustine West**	**2.35**	**205**		**Pg**	**18 24 57.6**	**-1.4**
AUCH	**Augustine Cone**	**2.36**	**205**		**Pg**	**18 24 57.6**	**-1.5**
CHUM	**Lake Minchumin**	**2.41**	**352**	P	**Pn**	**18 24 54.6**	**+0.5**
	baz=172,SNR=26						
CHUM	**Lake Minchumin**	**2.41**	**352**		**Pn**	**18 24 54.9**	**+0.8**
MCK	**McKinley**	**2.53**	**27**	P	**Pn**	**18 24 57.4**	**+1.6**
	baz=211,SNR=28						
MCK	**McKinley**	**2.53**	**27**		**Pn**	**18 24 55.9**	**+0.2**
TT01	**Tatalina**	**2.54**	**306**		**Pn**	**18 24 56.1**	**+0.3**
TTA	**Tatalina**	**2.54**	**306**		**Pn**	**18 24 56.1**	**+0.1**
M24K	**Tolsona, Glenn**	**2.60**	**74**	P	**Pb**	**18 25 00.8**	**-0.4**
	baz=261,SNR=63						
M24K	**Tolsona, Glenn**	**2.60**	**74**		**Pb**	**18 25 00.6**	**-0.5**
BPAW	**Bear Paw Mtn.**	**2.61**	**5**	P	**Pn**	**18 24 56.9**	**0.0**
	baz=187,SNR=39						
BPAW	**Bear Paw Mtn.**	**2.61**	**5**		**Pn**	**18 24 56.7**	**-0.2**
BPAW	**Bear Paw Mtn.**	**2.61**	**5**	IAML		18 25 36.8	
	comp=E,319nm,0.5s						
BPAW				IAML		18 25 41.3	
	comp=N,184nm,0.4s						
KLU	**Klutina**	**2.68**	**88**	P	**Pb**	**18 25 01.1**	**-1.3**
	baz=274,SNR=13						
KLU	**Klutina**	**2.68**	**88**		**Pb**	**18 25 00.6**	**-1.9**
KLU	**Klutina**	**2.68**	**88**	IAML		18 25 39.4	
	comp=E,163nm,0.4s						
KLU				IAML		18 25 43.7	
	comp=N,228nm,0.8s						
DIV	**Divide**	**2.79**	**95**		**Pb**	**18 25 02.1**	**-2.3**
BWN	**Browne**	**2.83**	**18**		**Pn**	**18 25 00.8**	**+0.9**
BWN	**Browne**	**2.83**	**18**	IAML		18 25 57.3	
	comp=N,259nm,1.0s						
PS11	**TAPS Pump St11**	**2.92**	**76**		**Pb**	**18 25 04.3**	**-2.3**
EYAK	**Cordova Ski Ar**	**2.96**	**106**		**Pn**	**18 25 04.0**	**+2.3**
PAX	**Paxson**	**3.19**	**60**	P	**Pb**	**18 25 08.6**	**-2.5**
	baz=247,SNR=28						
PAX	**Paxson**	**3.19**	**60**		**Pb**	**18 25 08.6**	**-2.5**
NEA2	**Nenana**	**3.29**	**19**	P	**Pb**	**18 25 14.3**	**+1.5**
	baz=202,SNR=6.9						
NEA2	**Nenana**	**3.29**	**19**		**Pn**	**18 25 06.2**	**+0.1**
N25K	**Chitina, Valde**	**3.31**	**85**	P	**Pb**	**18 25 11.7**	**-1.5**
	baz=273,SNR=9.5						
N25K	**Chitina, Valde**	**3.31**	**85**		**Pn**	**18 25 09.3**	**+2.8**
N25K	**Chitina, Valde**	**3.31**	**85**	IAML		18 25 58.0	
	comp=N,104nm,0.7s						
N25K				IAML		18 26 03.5	
	comp=E,90nm,0.5s						
WRH	**Wood River Hil**	**3.36**	**26**		**Pn**	**18 25 07.5**	**+0.4**
BMRM	**Bremner River**	**3.38**	**96**	P	**Pb**	**18 25 13.9**	**-0.5**
	baz=283,SNR=7.4						
BMRM	**Bremner River**	**3.38**	**96**		**Pn**	**18 25 10.0**	**+2.5**
MLY	**Manley**	**3.55**	**5**	P	**Pn**	**18 25 10.1**	**+0.2**
	baz=187,SNR=17						
MLY	**Manley**	**3.55**	**5**		**Pn**	**18 25 09.8**	**0.0**
CCB	**Clear Creek Bu**	**3.57**	**27**		**Pn**	**18 25 10.5**	**+0.5**
HDA	**Harding Lake**	**3.58**	**34**	P	**Pn**	**18 25 11.4**	**+1.2**
	baz=219,SNR=30						
HDA	**Harding Lake**	**3.58**	**34**		**Pn**	**18 25 10.2**	**0.0**
HDA	**Harding Lake**	**3.58**	**34**	IAML		18 26 14.8	
	comp=E,77nm,0.6s						
HDA				IAML		18 26 19.4	
	comp=N,98nm,0.5s						
GLB	**Gilahina Butte**	**3.70**	**88**		**Pn**	**18 25 13.6**	**+1.8**
GLB	**Gilahina Butte**	**3.70**	**88**	IAML		18 26 17.0	
	comp=N,71nm,0.7s						
PS08	**TAPS Pump Stn8**	**3.72**	**33**		**Pn**	**18 25 12.7**	**+0.6**
TCOL	**CIGO, UAF Yank**	**3.76**	**24**	P	**Pn**	**18 25 13.3**	**+0.7**
	baz=209,SNR=17						
TCOL	**CIGO, UAF Yank**	**3.76**	**24**		**Pn**	**18 25 13.5**	**+0.8**
COLA	**College**	**3.76**	**25**		**Pn**	**18 25 13.0**	**+0.4**
MDM	**Murphy Dome**	**3.77**	**22**		**Pn**	**18 25 12.9**	**+0.2**
KDAK	**Kodiak Island**	**3.78**	**189**		**Pn**	**18 25 14.8**	**+1.9**
KDAK	**Kodiak Island**	**3.78**	**189**	IAML		18 26 16.5	
	comp=N,66nm,3.0s						
KDAK				IAML		18 26 23.9	
	comp=N,55nm,3.0s						
I23K	**Minto, Yukon-K**	**3.78**	**14**	P	**Pn**	**18 25 13.3**	**+0.4**
	baz=197,SNR=16						
I23K	**Minto, Yukon-K**	**3.78**	**14**		**Pn**	**18 25 13.1**	**+0.2**
I23K	**Minto, Yukon-K**	**3.78**	**14**	IAML		18 26 12.5	
	comp=E,60nm,0.8s						
I23K				IAML		18 26 25.8	
	comp=N,67nm,1.0s						
IL31		**3.89**	**31**		**Pn**	**18 25 15.1**	**+0.7**
ILAR	**Eielson Array**	**3.89**	**31**	Pn	**Pn**	**18 25 15.6**	**+1.2**
BERG	**Berg Lake**	**3.97**	**103**		**Pn**	**18 25 16.8**	**+1.3**
POKR	**Poker Plat Res**	**4.06**	**25**		**Pn**	**18 25 17.4**	**+0.6**
MCARA	**McCarthy VSAT**	**4.08**	**88**		**Pn**	**18 25 20.1**	**+3.1**
SCRK	**Sand Creek**	**4.26**	**51**	P	**Pn**	**18 25 23.7**	**+4.1**
	baz=239,SNR=18						
SCRK	**Sand Creek**	**4.26**	**51**		**Pn**	**18 25 21.7**	**+2.1**
PTPK	**Patty Peak**	**4.37**	**90**		**Pn**	**18 25 23.6**	**+2.4**
PS06	**TAPS Pump Stn6**	**4.43**	**10**		**Pn**	**18 25 22.4**	**+0.5**
KIAG	**Kiagna River**	**4.47**	**94**		**Pn**	**18 25 24.5**	**+2.0**
IM03		**4.60**	**349**		**Pn**	**18 25 24.2**	**+0.1**
GRNC	**Granite Creek**	**4.80**	**95**		**Pn**	**18 25 29.1**	**+2.1**
BC03		**4.80**	**67**		**Pn**	**18 25 29.1**	**+2.2**
BCAR	**Beaver Creek A**	**4.80**	**67**		**Pn**	**18 25 29.5**	**+2.5**
PRP	**Porcupine Dome**	**4.83**	**31**		**Pn**	**18 25 27.3**	**-0.2**
PRP				IAML		18 26 53.3	
	comp=N,29nm,0.5s						
BVCY	**Beaver Creek**	**5.11**	**75**		**Pn**	**18 25 32.6**	**+1.4**
EGAK	**Eagle**	**5.72**	**51**	P	**Pn**	**18 25 43.5**	**+4.0**
	baz=241,SNR=7.4						
COLD	**Coldfoot**	**5.77**	**5**		**Pn**	**18 25 40.1**	**-0.1**
DAWY	**Dawson**	**6.12**	**60**		**Pn**	**18 25 47.4**	**+2.3**
BM03	**Burnt Mountain**	**6.64**	**24**		**Pn**	**18 25 52.6**	**+0.4**
BMAR	**Burnt Mountain**	**6.65**	**24**		**Pn**	**18 25 53.0**	**+0.7**
ANM	**Nome**	**7.00**	**302**		**Pn**	**18 25 58.4**	**+1.3**
TOLK	**Toolik Lake Re**	**7.21**	**6**	P	**Pn**	**18 26 02.6**	**+2.6**
	baz=188,SNR=6.5						
TOLK	**Toolik Lake Re**	**7.21**	**6**		**Pn**	**18 26 02.3**	**+2.3**

NEIC ***22*** *18:26:52.4±2.2, 24°.21S±0°.06×67°.05W±0°.09, h167^{km}±3^{km}, mb5.0/274, Mww4.8, Error ellipse: s-maj=11.7km s-min=9.0km az=97.0*

IDC ***22*** *18:26:52.4±1.0, 24°.13S×66°.91W, h161^{km}±7^{km}, mb4.3/16, mb1 4.5/22, mb1mx4.4/30, mbtmp4.8/22, Error ellipse: s-maj=15.5km s-min=10.4km az=32.0*

BJI ***22*** *18:26:52.5±0.0, 24°.98S×66°.72W, h176^{km}, mB5.3/14*

SJA ***22*** *18:26:53.0±0.5, 24°.44S×66°.97W, h212^{km}±7^{km}, ML4.4, MW4.1*

VAO ***22*** *18:26:53.2±0.6, 24°.22S×67°.50W, h216^{km}±5^{km}*

GUC ***22*** *18:26:55.4±0.7, 24°.17S×67°.35W, h190^{km}±8^{km}, ML5.3*

GCMT ***22*** *18:26:59.4±0.5, 24°.08S±0°.03×67°.10W±0°.03, h219^{km}±4^{km}, MW5.0/75, Moment Tensor Solution. s15,c19; s75,c90; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-2.98±.19; M$_{\theta\theta}$-0.38±.23; M$_{\phi\phi}$3.36±.27; M$_{r\theta}$-1.69±.15; M$_{\theta\phi}$-2.12±.20; M$_{\phi r}$-2.24±.18; Best double couple: M$_0$4.74000×10^{16} NP1:φ$_s$126.00000°, δ44.00000°, λ-141.00000°. NP2: φ$_s$6.00000°, δ64.00000°, λ-53.00000°. Principal axes: T 4.5930, Plg12.0000°, Azm71.0000°; N 0.2900, Plg33.0000°, Azm168.0000°; P -4.8860, Plg55.0000°, Azm324.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***22*** *18:26:59, 24°.03S×66°.93W, h180^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.69; M$_{\theta\theta}$0.26; M$_{\phi\phi}$1.43; M$_{r\theta}$-0.66; M$_{\theta\phi}$0.28; M$_{\phi r}$-1.13; Fault plane solution: M$_0$2.07000×10^{16} NP1:φ$_s$185.00000°, δ26.00000°, λ-105.00000°. NP2:φ$_s$23.00000°, δ65.00000°, λ-82.00000°. Principal axes: T 1.9336, Plg19.0000°, Azm107.0000°; N 0.2476, Plg7.0000°, Azm200.0000°; P -2.1812, Plg69.0000°, Azm309.0000°;*

ISC 22 18:26:52.4±0.6**, 24°.24S**±0°.03×**67°.16W**±0°.04**, h168**^{km}±5^{km}**, n543, σ1^{s}.46**/444**, mb5.0**/150**, 34C-97D, Fault plane solution: NP1:**φ$_s$195.18948°, δ31.38712°, λ-77.35105°. **NP2:**φ$_s$0.46010°, δ59.45749°, λ-97.60946°. **Principal axes:** T Plg14.1404°, Azm96.0013°**;** N Plg6.5487°, Azm4.3440°**;** P Plg74.3591°, Azm250.1378°**;**

Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SLA	**San Lorenzo**	**1.58**	**108**	⇓*i*P	**Pn**	**18 27 23.4**	**-1.0**
SLA				*e*S	**Sn**	**18 27 52.8**	**+3.9**
SLA	**San Lorenzo**	**1.58**	**108**	*e*P	**Pn**	**18 27 27.0**	**+2.7**
SLA				*e*S	**Sn**	**18 27 53.2**	**+4.3**
SLA				IAML		18 27 54.3	
	comp=Z,3µm,1.5s						
FSA	**Cafayete**	**2.15**	**150**	*e*P	**Pn**	**18 27 32.2**	**+1.7**
FSA				*e*S	**Sn**	**18 28 01.2**	**+1.1**
LVC	**Limon Verde**	**2.29**	**315**	P	**Pn**	**18 27 33.7**	**+1.3**
	comp=Z,34nm,0.3s,baz=109,slow=8.6,SNR=306						
LVC				S	**Sn**	**18 28 04.5**	**+1.3**
	comp=Z,558nm,0.3s,baz=19,slow=22,SNR=34						
LVC	**Limon Verde**	**2.29**	**315**	*e*P	**Pn**	**18 27 34.4**	**+2.0**
LVC				*i* S	**Sn**	**18 28 04.1**	**+1.0**
LVC	**Limon Verde**	**2.29**	**315**	Pn	**Pn**	**18 27 34.3**	**+2.0**
LVC	**Limon Verde**	**2.29**	**315**	*e*P	**Pn**	**18 27 34.4**	**+2.0**
LVC				*e*S	**Sn**	**18 28 04.5**	**+1.3**
PB15	**IPOC Station P**	**2.36**	**295**	*e*P	**Pn**	**18 27 34.8**	**+1.8**
PB15				*i* S	**Sn**	**18 28 05.2**	**+0.9**
PB15	**IPOC Station P**	**2.36**	**295**		**Pn**	**18 27 34.8**	**+1.8**
GO02	**Mina Guanaco**	**2.40**	**247**	*e*P	**Pn**	**18 27 35.2**	**+1.7**
GO02				*i* S	**Sn**	**18 28 06.4**	**+1.0**
GO02				IAML		18 28 08.4	
	comp=N,11µm,0.5s						
GO02	**Mina Guanaco**	**2.40**	**247**	Pn	**Pn**	**18 27 35.2**	**+1.7**
YJA	**Yavi**	**2.55**	**37**	*e*P	**Pn**	**18 27 38.0**	**+2.5**
PB06	**IPOC Station P**	**2.69**	**304**	*e*P	**Pn**	**18 27 38.6**	**+1.6**
PB06				*i* S	**Sn**	**18 28 11.4**	**0.0**
PB06				IAML		18 28 13.6	
	comp=N,12µm,0.5s						
PB06	**IPOC Station P**	**2.69**	**304**		**Pn**	**18 27 38.6**	**+1.6**
PB14	**IPOC Station P**	**2.98**	**262**	⇑*i*P	**Pn**	**18 27 41.4**	**+0.8**
PB14				*i* S	**Sn**	**18 28 17.2**	**-0.9**
PB14				IAML		18 28 19.0	
	comp=E,3µm,0.4s						
PB14	**IPOC Station P**	**2.98**	**262**		**Pn**	**18 27 41.4**	**+0.8**
AHML	**Horco Molle**	**3.02**	**147**	*e*P	**Pn**	**18 27 41.0**	**+0.2**
AHML				*e*S	**Sn**	**18 28 16.8**	**-1.7**
PB09	**IPOC Station P**	**3.10**	**321**	*e*P	**Pn**	**18 27 43.8**	**+1.9**
PB09				*e*S	**Sn**	**18 28 21.1**	**+0.7**
PB09				IAML		18 28 22.6	
	comp=N,9µm,0.4s						
PB09	**IPOC Station P**	**3.10**	**321**		**Pn**	**18 27 43.9**	**+1.9**
AC02	**Maricunga**	**3.14**	**214**	⇑*i*P	**Pn**	**18 27 44.6**	**+1.8**
AC02				*i* S	**Sn**	**18 28 23.9**	**+2.0**
AC02	**Maricunga**	**3.14**	**214**		**Pn**	**18 27 44.4**	**+1.6**
PB10	**IPOC Station P**	**3.19**	**282**	⇑*i*P	**Pn**	**18 27 44.1**	**+1.1**
PB10				*i* S	**Sn**	**18 28 21.1**	**-1.1**
PB10				IAML		18 28 31.5	
	comp=E,2µm,0.4s						
PB10	**IPOC Station P**	**3.19**	**282**	Pn	**Pn**	**18 27 44.1**	**+1.1**
PB03	**IPOC Station P**	**3.24**	**312**	*e*P	**Pn**	**18 27 44.7**	**+1.1**
PB03				*i* S	**Sn**	**18 28 22.6**	**-0.9**
PB03				IAML		18 28 23.7	
	comp=E,9µm,0.3s						
PB04	**IPOC Station P**	**3.34**	**304**	*e*P	**Pn**	**18 27 45.8**	**+0.8**
PB04				*e*S	**Sn**	**18 28 24.3**	**-1.6**
PB04	**IPOC Station P**	**3.34**	**304**		**Pn**	**18 27 45.8**	**+0.8**
PB07	**IPOC Station P**	**3.55**	**314**	⇑*i*P	**Pn**	**18 27 48.5**	**+0.9**
PB07				*i* S	**Sn**	**18 28 28.9**	**-1.6**
PB07	**IPOC Station P**	**3.55**	**314**		**Pn**	**18 27 48.4**	**+0.9**
AC01	**Pan de Azucar**	**3.65**	**238**	⇑*i*P	**Pn**	**18 27 48.6**	**-0.1**
AC01				*i* S	**Sn**	**18 28 30.4**	**-2.2**
AC01	**Pan de Azucar**	**3.65**	**238**	Pn	**Pn**	**18 27 48.5**	**-0.2**
PB01	**IPOC Station P**	**3.84**	**325**	⇑*i*P	**Pn**	**18 27 51.8**	**+0.5**

PB01				iS	Sn	18 28 35.4	-1.7
PB01	IPOC Station P	3.84	325		Pn	18 27 51.7	+0.4
PB02	IPOC Station P	3.85	318	⇑iP	Pn	18 27 51.9	+0.4
PB02				iS	Sn	18 28 35.0	-2.4
GO03	Copiap	4.34	219	⇑iP	Pn	18 27 57.1	-0.5
GO03				iS	Sn	18 28 46.3	-2.3
GO03	Copiap	4.34	219		Pn	18 27 57.1	-0.5
PATCX	Punta Patache	4.39	320	eP	Pn	18 27 58.8	+0.4
PATCX				iS	Sn	18 28 46.9	-2.9
PATCX	Punta Patache	4.39	320	Pn	Pn	18 27 58.1	-0.2
PB08	IPOC Station P	4.48	335	⇑iP	Pn	18 28 00.9	+1.1
PB08				iS	Sn	18 28 51.6	-0.7
PB08	IPOC Station P	4.48	335		Pn	18 28 00.6	+0.8
VCA	Vinchina	4.58	192	eP	Pn	18 28 01.4	+0.6
VCA				IAML		18 30 03.3	
	comp=Z,133nm,1.8s						
TA01	Diego Aracena	4.61	322	⇓eP	Pn	18 28 01.3	+0.3
TA01				eS	Sn	18 28 51.6	-3.0
TA01	Diego Aracena	4.61	322		Pn	18 28 01.4	+0.3
HMBC	Humberstone	4.69	327	eP	Pn	18 28 01.1	-1.1
TA02	Huaiquique	4.82	325	eP	Pn	18 28 02.6	-1.2
ACLC	CERRO LA CRUZ	5.17	178	eP	Pn	18 28 06.5	-2.0
AC04	Llanos de Chal	5.29	221	eP	Pn	18 28 08.0	-1.9
AC04	Llanos de Chal	5.29	221	Pn	Pn	18 28 08.9	-1.0
AGUA	GUANDACOL	5.36	193	eP	Pn	18 28 09.4	-1.6
AGUA				IAML		18 29 29.0	
	comp=Z,161nm,0.9s						
AC05	El Transito	5.36	211	eP	Pn	18 28 10.7	-0.3
AC05	El Transito	5.36	211		Pn	18 28 10.4	-0.6
PSGC	Pisagua	5.38	329	eP	Pn	18 28 09.5	-1.7
PSGC				eS	Sn	18 29 07.6	-5.5
PSGCX	Pisagua	5.38	329		Pn	18 28 09.6	-1.7
MNMC	Minye Minye	5.57	335		Pn	18 28 13.2	-0.7
APLL	PUNTA DE LOS L	6.16	175	eP	Pn	18 28 20.7	-0.7
APLL				IAML		18 29 29.6	
	comp=Z,120nm,0.6s						
ACDV	Cuesta del Vie	6.16	196	eP	Pn	18 28 11.3	-10
ACDV				IAML		18 29 33.2	
	comp=Z,113nm,0.8s						
AROD	Rodeo	6.25	199	eP	Pn	18 28 20.0	-2.9
AROD				eS	Sn	18 29 36.0	+2.0
PB16	IPOC Station P	6.27	339		Pn	18 28 23.2	-0.2
CO01	Juntas del Tor	6.29	204		Pn	18 28 23.9	+0.7
AVFE	Valle Fertil	6.40	182	eP	Pn	18 28 23.7	-0.9
ACCO	Cerro Coronel	6.55	195	eP	Pn	18 28 27.4	+0.6
ACCO				eS	Sn	18 29 36.5	-4.5
ACCO				IAML		18 29 44.0	
	comp=Z,94nm,0.7s						
GO04	Tololo Observa	6.74	208	Pn	Pn	18 28 28.4	-0.9
ACHE	Chepes	6.91	176	eP	Pn	18 28 30.4	-1.0
ACHE				eS	Sn	18 29 42.6	-6.8
RTLL	Cerro Villicun	7.16	189	eP	Pn	18 28 35.5	+0.9
RTLL				eS	Sn	18 29 51.6	-3.6
RTLL				IAML		18 29 55.8	
	comp=Z,82nm,0.6s						
CO03	El Pedregal	7.28	205		Pn	18 28 36.0	-0.3
RTCV	Cerro Valdivia	7.69	189	eP	Pn	18 28 41.0	-0.7
RTCV				IAML		18 30 10.2	
	comp=Z,44nm,1.1s						
LPAZ	La Paz	7.96	353	P	Pn	18 28 43.2	-2.7
	comp=Z,3.6nm,0.3s,baz=164,slow=7.8,SNR=33						
LPAZ	La Paz	7.96	353	Pn	Pn	18 28 46.8	+0.8
AUSP	Uspallata	8.19	193	eP	Pn	18 28 48.1	-0.5
MRA	San Martin	8.25	171	eP	Pn	18 28 47.7	-1.4
VA03	San Esteban	9.00	199		Pn	18 28 58.3	-0.8
CPUP	Villa Florida	9.13	105	P	Pn	18 28 57.7	-3.1
	comp=Z,0.7nm,0.3s,baz=282,slow=11,SNR=54						
CPUP	Villa Florida	9.13	105	Pn	Pn	18 28 58.8	-2.0
MT02	Curacav	9.64	200		Pn	18 29 04.1	-3.3
SIV	San Ignacio	10.00	36	P	Pn	18 29 09.3	-3.0
	comp=Z,2.4nm,0.3s,baz=269,slow=12,SNR=32						
SIV				S	Sn	18 30 49.8	-14
	baz=232,slow=17,SNR=6.9						
RFA	San Rafael	10.56	186	eP	Pn	18 29 15.7	-3.8
BO02	Sierra Bellavi	10.98	196	Pn	Pn	18 29 24.6	-0.4
AQDB	Aquidauana	11.24	73	eP	Pn	18 29 30.6	+2.1
BI02	San Fabin de	12.88	195	Pn	Pn	18 29 49.5	0.0
TRCB	Terra Rica	13.40	87	eP	P	18 30 01.0	+1.2
CPSB	Cacapava Do Su	13.65	120	eP	P	18 30 02.6	+0.3
ITAB	Concordia	13.87	106	eP	P	18 30 04.7	-0.1
PLTB	Pedras Altas	14.12	125	eP	P	18 30 07.2	-0.4
PCMB	Pacaembu	14.88	83	eP	P	18 30 17.8	+1.6
LC01	Cunco	15.15	194		P	18 30 18.7	-0.3
NNA	Nana	15.26	321	P	P	18 30 20.6	+0.2
	comp=Z,2.1nm,0.3s,baz=163,slow=11,SNR=11						
NNA				S	S	18 33 14.0	+2.1
	comp=Z,0.6nm,0.3s,baz=266,slow=9.9,SNR=3.6						
NNA	Nana	15.26	321	P	Pn	18 30 17.6	-1.9
NNA				IAmb	IAmb	18 30 23.6	
	comp=Z,38nm,0.9s						
SAML	Samuel	15.67	15		Pn	18 30 23.9	-0.6
SAML	Samuel	15.67	15	eP	Pn	18 30 23.3	-1.1
ITRB	Iturama	16.22	77	eP	Pn	18 30 32.9	+1.8
PLCA	Paso Flores	16.69	189	P	Pn	18 30 37.2	+0.6
	comp=Z,0.5nm,0.3s,baz=12,slow=13,SNR=24						
PLCA				ScP	ScP	18 38 34.9	+0.5
	comp=Z,0.2nm,0.3s,baz=36,slow=3.4,SNR=6.1						
PLCA	Paso Flores	16.69	189		Pn	18 30 37.2	+0.6
ARAG	Araguaiana, MT	16.72	62	eP	Pn	18 30 38.2	+1.1
VAO	Valinhos	18.54	90	eP	P	18 30 56.1	-0.4
IPMB	Ipameri, GO	18.73	74	eP	P	18 30 58.5	-0.1
SNDB	Serra Nova Dou	19.37	54	eP	P	18 31 04.7	-0.8
GO07	Milladeo Hill,	19.58	194	P	P	18 31 07.7	+0.3
PARB	Paraibuna	19.73	92	eP	Pn	18 31 11.5	-1.2
ATAH	Atahualpa	20.13	326	P	P	18 31 15.6	+1.5
	comp=Z,14nm,0.8s,baz=168,slow=14,SNR=9.0						
PEXB	Peixe	21.57	59	eP	P	18 31 27.1	-1.8
VAS01	Vassouras-RJ	21.87	90	eP	P	18 31 31.1	-0.9
ITTB	Itaituba	22.62	31	eP	P	18 31 37.5	-1.8
DUB01	Friburgo-RJ	22.88	90	eP	P	18 31 40.5	-1.1
JANB	Januaria	23.34	71	eP	P	18 31 44.5	-1.4
CAM01	Campos-RJ	23.58	89	eP	P	18 31 47.1	-0.9
SDBA	SAO DESIDERIO	24.14	65	eP	P	18 31 51.9	-1.3
SMTB	Santa Maria do	24.15	54	eP	P	18 31 52.2	-1.0
PTGA	Pitinga	24.39	18	P	P	18 31 53.3	-2.0
	comp=Z,5.1nm,0.5s,baz=197,slow=16,SNR=9.6						
PTGA				S	S	18 36 00.6	-2.2
	comp=Z,2.1nm,0.3s,baz=311,slow=19,SNR=3.0						
PTGA	Pitinga	24.39	18	eP	P	18 31 54.7	-0.6
PRPB	Parauapebas	24.50	46	eP	P	18 31 54.4	-2.0
ALF01	Guarapari-ES	24.68	87	eP	P	18 31 57.1	-0.9
SJMB	Sao Joao De Ma	24.77	82	eP	P	18 31 57.5	-1.4
BSFB	Barra de Sao F	25.04	83	eP	P	18 31 59.8	-1.5
RIB01	Linhares ES	25.31	84	eP	P	18 32 02.4	-1.3
MALB	Monte Alegre	25.51	31	eP	P	18 32 04.6	-0.9
NAN01	Guarapari, ES	25.99	81	eP	P	18 32 08.2	-1.7
OTAV	Otavalo	26.68	334	eP	P	18 32 18.2	+1.7
FLOC	Florencia	26.96	341	eP	P	18 32 18.6	0.0
GCUF	Volcan Galeras	27.18	337	eP	P	18 32 26.2	+5.2
GARC	Garzon, Huila	27.49	342	eP	P	18 32 24.2	+0.7
SOTA	Rioblanco	27.78	339	eP	P	18 32 28.7	+2.3
BBAC	Balboa, Cauca	27.89	338	eP	P	18 32 28.5	+1.5
PCON	Cinco Dias	27.89	340	eP	P	18 32 28.9	+1.4
GDU01	Guandu, BA	28.05	73	eP	P	18 32 26.5	-1.7
POPC	Popayan, Colom	28.18	340	eP	P	18 32 31.3	+1.6
MARP	Paez Belalcaza	28.25	341	eP	P	18 32 30.8	+0.5
PRAC	Prado	28.79	344	eP	P	18 32 33.5	-1.3
ORTC	Ortega, Tolima	29.07	343	eP	P	18 32 37.2	-0.1
GR1C	Gorgona, Isla	29.12	337	eP	P	18 32 38.7	+1.0
CHIC	Chingaza	29.40	347	eP	P	18 32 39.7	-0.9
YOTC	Yotoco, Valle	29.45	341	eP	P	18 32 37.4	-3.3
ROSC	El Rosal	29.73	345	P	P	18 32 44.1	+0.5
	comp=Z,9.6nm,0.4s,baz=170,slow=6.7,SNR=4.4						
MALC	Bahia Malaga	29.78	339	eP	P	18 32 45.1	+1.6
PLMC	San Jos del P	30.30	342	eP	P	18 32 47.0	-1.3
GUY2C	Guyana, Caldas	30.36	344	eP	P	18 32 48.6	-0.6
RUSC	La Rusia	30.50	348	eP	P	18 32 49.1	-1.3
NORC	Norcasia	30.56	345	eP	P	18 32 48.3	-2.2
CBOC	Ciudad Bolivar	31.14	343	eP	P	18 32 53.0	-2.7
BARC	Barichara	31.20	348	eP	P	18 32 53.6	-2.7
PTBC	PUERTO BERRIO,	31.41	346	eP	P	18 32 54.5	-3.4
PAMC	Pamplona, Colo	31.85	350	eP	P	18 32 57.5	-4.8
NBMO	Morrinhos-CE	33.42	56	eP	P	18 33 13.8	-1.6
NBLI	Livramento-PB	33.44	65	eP	P	18 33 13.9	-1.8
SMLC	San Martn de	33.53	348	eP	P	18 33 12.9	-3.4
MOTC	Monteria, Cord	33.85	345	eP	P	18 33 16.5	-2.6
NBPA	Parau_RN	34.22	62	eP	P	18 33 20.8	-1.5
NBRF	Rio Formoso -	34.27	69	eP	P	18 33 21.0	-1.8
RCBR	Riachuelo	35.16	64	P	P	18 33 29.7	-0.7
RCBR				IAmb	IAmb	18 33 31.4	
	comp=Z,45nm,1.1s						
RCBR	Riachuelo	35.16	64	eP	P	18 33 29.8	-0.7
OBIP	Obispado Ponce	42.03	1	P	P	18 34 24.6	-2.9
SJG	San Juan	42.11	1	P	P	18 34 25.9	-2.2
SJG				IAmb	IAmb	18 34 26.4	
	comp=Z,27nm,0.8s						
TEIG	Tepich	48.75	333	P	P	18 35 20.7	+0.4
TEIG				IAmb	IAmb	18 35 21.0	
	comp=Z,24nm,0.6s						
BELA	Belgrano 2	55.82	172	P	P	18 36 12.6	+0.8
VNA3	Neumayer Olymp	56.97	161	P	P	18 36 20.9	+1.0
VNA2	Neumayer--Watz	57.54	160	P	P	18 36 24.9	+1.0
352A	Blakely	57.96	342	P	P	18 36 27.4	+0.1
NHSC	New Hope	58.36	347	P	P	18 36 31.3	+1.3
	baz=166,SNR=6.5						
250A	Grady	58.81	341	P	P	18 36 31.6	-1.5
250A				IAmb	IAmb	18 36 34.7	
	comp=Z,29nm,0.8s						
152A	Waverly Hall	59.02	343	IAmb	IAmb	18 36 34.7	
	comp=Z,17nm,0.6s						
SNAA	Sanae	59.17	161	P	P	18 36 36.1	+0.8
X60A	Albert Glenn T	59.39	350	P	P	18 36 37.6	+0.5
	baz=168						
GOGA	Godfrey	59.40	344	P	P	18 36 37.1	-0.1
	baz=163						
GOGA	Godfrey	59.40	344	IAmb	IAmb	18 36 37.5	
	comp=Z,15nm,0.8s						
X59A	McDuffie Farm,	59.49	349	P	P	18 36 38.0	+0.3
	baz=168						
X57A	Johnson Farm,	59.66	348	P	P	18 36 39.7	+0.8
	baz=166						
JSC	Jenkinsville	59.72	346	P	P	18 36 40.0	+0.6
JSC				IAmb	IAmb	18 36 40.8	
	comp=Z,23nm,0.9s						
Y52A	Lilburn	59.98	344	IAmb	IAmb	18 36 42.0	
	comp=Z,28nm,0.9s						
LRAL	Lakeview Retre	60.02	341	P	P	18 36 41.1	-0.3
	baz=159,SNR=6.2						
W58A	Raeford	60.04	349	P	P	18 36 42.1	+0.6
	baz=167,SNR=9.8						
PAULI	Pauline	60.36	346	IAmb	IAmb	18 36 45.1	
	comp=Z,19nm,0.8s						
W56A	Indian Trail	60.41	347	P	P	18 36 44.5	+0.4
	baz=166,SNR=9.3						
Z47A	Carrollton	60.50	340	IAmb	IAmb	18 36 44.8	
	comp=Z,23nm,0.7s						
KMSC	Kings Mountain	60.57	347	P	P	18 36 45.7	+0.6
	baz=165,SNR=7.3						
KMSC	Kings Mountain	60.57	347	IAmb	IAmb	18 36 46.6	
	comp=Z,35nm,0.9s						
Y49A	Blount Mountai	60.61	342	IAmb	IAmb	18 36 46.0	
	comp=Z,12nm,0.9s						
BG3	Lake Jocassee	60.78	345	IAmb	IAmb	18 36 47.9	
	comp=Z,11nm,0.8s						
833A	Chaparral WMA,	60.79	327	P	P	18 36 48.0	+1.2
	baz=146,SNR=15						
V57A	Coltrane Farms	60.98	348	P	P	18 36 48.0	+0.1
	baz=167						
FPAL	Fort Paine	61.03	343	IAmb	IAmb	18 36 48.9	
	comp=Z,16nm,0.9s						
V56A	Mocksville	61.04	348	P	P	18 36 49.2	+0.8
	baz=166,SNR=10						
W52A	Murphy	61.11	344	IAmb	IAmb	18 36 49.9	
	comp=Z,16nm,0.8s						
143A	Socs Landing,	61.17	337	IAmb	IAmb	18 36 51.5	
	comp=Z,32nm,0.8s						
U58A	Oxford	61.26	350	P	P	18 36 50.3	+0.5
	baz=168						
V53A	Saluda	61.40	346	IAmb	IAmb	18 36 51.8	
	comp=Z,18nm,0.9s						
U57A	Blanch	61.43	349	P	P	18 36 51.2	+0.4
	baz=167,SNR=5.8						
U56A	King	61.54	348	P	P	18 36 52.7	+1.1
	baz=166,SNR=5.1						
W50A	Signal Mountai	61.57	343	IAmb	IAmb	18 36 52.9	
	comp=Z,36nm,0.9s						
NATX	Nacogdoches	61.58	333	P	P	18 36 53.7	+1.6
	baz=151						
CPCT	Cooper Cave	61.60	344	IAmb	IAmb	18 36 52.5	
	comp=Z,16nm,0.8s						
TKL	Tuckaleechee C	61.61	345	IAmb	IAmb	18 36 52.8	
	comp=Z,33nm,1.1s						
V52A	Sevierville	61.75	345	IAmb	IAmb	18 36 53.7	
	comp=Z,22nm,0.9s						
T58A	Grand View Acr	61.80	350	P	P	18 36 54.0	+0.7
	baz=168						
V51A	Loudon	61.89	344	IAmb	IAmb	18 36 54.6	
	comp=Z,15nm,0.8s						
T57A	Hurt	61.97	349	P	P	18 36 55.2	+0.7
	baz=167						
435B	Jarrell	62.00	330	P	P	18 36 55.4	+0.6
	baz=148						
U54A	Nelsons Funny	62.00	347	P	P	18 36 55.4	+0.6
	baz=165,SNR=8.5						
OXF	Oxford	62.13	339	P	P	18 36 55.4	-0.2
	baz=157						
T56A	Rocky Mt	62.14	348	P	P	18 36 56.6	+1.0
	baz=167						
PLAL	Pickwick Lake	62.15	341	IAmb	IAmb	18 36 56.1	
	comp=Z,27nm,1.1s						
Z41A	Richland Creek	62.18	336	P	P	18 36 56.9	+0.9
	baz=154						
BLA	Blacksburg	62.39	348	P	P	18 36 58.4	+1.1
	baz=166						
V48A	Smith Brothers	62.49	342	IAmb	IAmb	18 36 58.3	
	comp=Z,24nm,0.8s						
X43A	Marvell	62.63	338	P	P	18 36 59.5	+0.6
	baz=156						
S57A	Dark Hollow, R	62.66	349	P	P	18 36 59.7	+0.6
	baz=168						
CLTN	Cedars of Leba	62.68	343	IAmb	IAmb	18 36 60.0	
	comp=Z,25nm,0.7s						
S56A	Natural Bridge	62.68	349	P	P	18 36 59.8	+0.5
	baz=167						
R58B	Mineral	62.69	350	P	P	18 36 59.8	+0.6
	baz=169						
JCT	Junction City	62.77	328	P	P	18 37 00.8	+0.8
	baz=146,SNR=18						
U49A	Red Boiling Sp	62.93	343	IAmb	IAmb	18 37 00.9	
	comp=Z,14nm,0.7s						
WHTX	Lake Whitney,	62.97	331	P	P	18 37 01.7	+0.4
	baz=149,SNR=5.3						
HPIG		63.02	321	IAmb	IAmb	18 37 03.9	
	comp=Z,14nm,0.6s						
R58A	Rapidan	63.04	350	P	P	18 37 02.0	+0.5
	baz=169						
R57A	Stanardsville	63.12	350	P	P	18 37 02.9	+0.8
	baz=168						
S54A	Dingess, Beckl	63.13	347	P	P	18 37 02.5	+0.3
	baz=165,SNR=10						
WVT	Waverly	63.14	341	P	P	18 37 01.8	-0.5
	baz=159						
WVT	Waverly	63.14	341	P	P	18 37 01.7	-0.6
T50A	Nancy	63.17	344	IAmb	IAmb	18 37 02.8	
	comp=Z,17nm,0.7s						
SLBS	Sierra La Lagu	63.19	316	P	P	18 37 05.3	+2.3
SLBS				IAmb	IAmb	18 37 05.8	
	comp=Z,13nm,0.9s						
X40A	Basin Creek Fa	63.29	336	P	P	18 37 03.6	+0.3
	baz=154						
R54A	Victor	63.44	348	P	P	18 37 04.8	+0.5
	baz=166,SNR=8.3						
S51A	Beattyville	63.46	345	IAmb	IAmb	18 37 05.5	
	comp=Z,15nm,1.1s						
MIAR	Mount Ida	63.62	336	P	P	18 37 05.8	+0.4
	baz=153,SNR=15						
MIAR	Mount Ida	63.62	336	IAmb	IAmb	18 37 06.7	
	comp=Z,23nm,0.8s						
Q58A	Fox Den Farm,	63.62	351	P	P	18 37 05.9	+0.5
	baz=169						
W41B	Gary Mavity, V	63.70	337	P	P	18 37 06.0	0.0
	baz=154,SNR=6.3						
TXAR	Lajitas Array	63.79	325	P	P	18 37 07.8	+0.9
	comp=Z,6.7nm,0.8s,baz=149,slow=8.7,SNR=28						
TXAR	Lajitas Array	63.79	325	P	P	18 37 07.6	+0.8
WHAR	Wooly Hollow	63.81	337	IAmb	IAmb	18 37 07.6	
	comp=Z,10nm,0.8s						
Q57A	Strasburg	63.82	350	P	P	18 37 07.5	+0.9
	baz=168						
Q56A	Snyder Ridge,	63.95	350	P	P	18 37 08.2	+0.6
	baz=168						
P59A	Jarrettsville	64.11	352	P	P	18 37 09.5	+1.0
	baz=170						
LCAR	Lake Charles	64.13	339	IAmb	IAmb	18 37 09.5	
	comp=Z,16nm,1.1s						
Q54A	Coxs Mills	64.18	348	IAmb	IAmb	18 37 09.7	
	comp=Z,19nm,0.6s						
Q53A	Leroy	64.19	348	P	P	18 37 09.7	+0.5
	baz=165,SNR=8.3						
P57A	Homestead Farm	64.20	351	P	P	18 37 10.1	+1.0
	baz=169						
R50A	Paris	64.25	345	IAmb	IAmb	18 37 09.5	
	comp=Z,8.6nm,0.7s						
W39A	Magazine	64.27	336	P	P	18 37 10.8	+1.1
	baz=153,SNR=32						
FCAR	Ozark Folk Cen	64.30	338	IAmb	IAmb	18 37 09.9	
	comp=Z,11nm,0.7s						
P56A	Dayton Farm, R	64.34	350	P	P	18 37 11.2	+1.1
	baz=168						
Q52A	Bidwell	64.44	347	IAmb	IAmb	18 37 11.5	
	comp=Z,24nm,0.8s						
R49A	Shelbyville	64.46	344	IAmb	IAmb	18 37 11.1	
	comp=Z,12nm,0.7s						
ABTX	Abilene, Hawle	64.49	330	P	P	18 37 11.6	+0.4
	baz=147,SNR=8.0						
ABTX	Abilene, Hawle	64.49	330	IAmb	IAmb	18 37 13.4	
	comp=Z,18nm,0.7s						
WCI	Wyandotte Cave	64.68	343	P	P	18 37 11.7	-0.6
	baz=161						
WCI	Wyandotte Cave	64.68	343	P	P	18 37 11.6	-0.6
Q51A	Peebles	64.73	346	IAmb	IAmb	18 37 13.8	
	comp=Z,17nm,0.7s						
U40A	Yellville	64.97	337	P	P	18 37 14.2	0.0
	baz=154,SNR=12						
U40A	Yellville	64.97	337	IAmb	IAmb	18 37 15.3	
	comp=Z,22nm,0.8s						
S44A	Carbondale	65.02	341	IAmb	IAmb	18 37 16.4	
	comp=Z,23nm,1.1s						
SIUC	Southern Illin	65.02	341	IAmb	IAmb	18 37 15.6	
	comp=Z,20nm,1.0s						
O56A	Blue Knob Stat	65.05	350	P	P	18 37 15.5	+0.8
	baz=168						
P52A	Corning	65.06	347	P	P	18 37 14.6	-0.1
	baz=165,SNR=9.3						
P51A	Williamsport	65.11	346	IAmb	IAmb	18 37 15.1	
	comp=Z,18nm,0.7s						
O54A	Avella	65.26	349	IAmb	IAmb	18 37 17.0	
	comp=Z,16nm,0.8s						
N58A	Sunbury	65.35	352	P	P	18 37 17.6	+1.0
	baz=170						
X34A	Smith Ranch, M	65.36	332	IAmb	IAmb	18 37 17.9	
	comp=Z,24nm,0.7s						
N57A	Milroy	65.38	351	P	P	18 37 17.4	+0.6
	baz=170						
O53A	New Philadelph	65.48	348	P	P	18 37 17.6	+0.2
	baz=166,SNR=6.8						
O53A	New Philadelph	65.48	348	IAmb	IAmb	18 37 18.1	
	comp=Z,19nm,0.6s						
MGMO	Mountain Grove	65.49	338	IAmb	IAmb	18 37 18.7	
	comp=Z,30nm,1.1s						
P49A	Miami Univ. Ec	65.53	345	P	P	18 37 17.2	-0.6
	baz=162,SNR=10						
U38A	Gravette	65.60	336	IAmb	IAmb	18 37 19.3	
	comp=Z,19nm,0.7s						
FVM	French Village	65.64	340	IAmb	IAmb	18 37 19.9	
	comp=Z,35nm,0.9s						
N56A	West Decatur	65.64	351	P	P	18 37 18.9	+0.4
	baz=169						
TUL1	Leonard	65.67	335	P	P	18 37 19.1	+0.3
	baz=151,SNR=8.7						
TUL1	Leonard	65.67	335	IAmb	IAmb	18 37 20.6	
	comp=Z,22nm,0.8s						
ACSO	Alum Creek Sta	65.81	347	P	P	18 37 19.4	-0.1
	baz=164,SNR=10						
M59A	Waymart	65.89	353	P	P	18 37 20.8	+0.8
	baz=172,SNR=5.5						
M57A	Sunshine Farm,	65.90	352	P	P	18 37 21.0	+0.9
	baz=170						
L63A	North Scituate	65.90	356	P	P	18 37 20.6	+0.6
	baz=175						
N54A	Moraine State	65.96	349	P	P	18 37 21.1	+0.7
	baz=167						
N54A	Moraine State	65.96	349	IAmb	IAmb	18 37 22.1	
	comp=Z,30nm,1.1s						
QSPA	South Pole Qui	65.97	180	P	P	18 37 21.8	+1.4
QSPA				IAmb	IAmb	18 37 22.2	
	comp=Z,9.8nm,0.6s						
CCM	Cathedral Cave	65.97	339	P	P	18 37 20.6	0.0
	baz=156						
CCM	Cathedral Cave	65.97	339	P	P	18 37 20.1	-0.5
CCM				IAmb	IAmb	18 37 21.0	
	comp=Z,27nm,0.7s						
O49A	Covington	66.07	346	IAmb	IAmb	18 37 21.6	
	comp=Z,34nm,1.1s						
M56A	Emporium	66.18	351	P	P	18 37 22.4	+0.5
	baz=169						
L60A	Shokan	66.22	354	P	P	18 37 23.1	+1.0
	baz=173						
M55A	Ridgway	66.25	350	IAmb	IAmb	18 37 23.4	
	comp=Z,15nm,0.7s						
M54A	Oil Creek Stat	66.43	350	P	P	18 37 24.0	+0.5
	baz=168,SNR=6.4						
M54A	Oil Creek Stat	66.43	350	IAmb	IAmb	18 37 25.2	
	comp=Z,22nm,0.8s						
L58A	Harry Jones Me	66.44	353	P	P	18 37 24.6	+1.1
	baz=171,SNR=6.0						
L59A	Walton	66.50	354	P	P	18 37 25.0	+1.1
	baz=172						
L59A	Walton	66.50	354	IAmb	IAmb	18 37 25.9	
	comp=Z,25nm,0.8s						
L57A	Andrews Acres	66.51	352	P	P	18 37 24.2	+0.2
	baz=170						
M53A	WI Miller and	66.54	349	P	P	18 37 24.6	+0.5
	baz=166,SNR=5.3						
M53A	WI Miller and	66.54	349	IAmb	IAmb	18 37 25.3	
	comp=Z,24nm,0.9s						
MNTX	Cornudas Mount	66.56	325	P	P	18 37 24.8	+0.3
	baz=142,SNR=15						
MNTX	Cornudas Mount	66.56	325	IAmb	IAmb	18 37 25.8	
	comp=Z,19nm,1.0s						
BINY	Binghamton	66.61	353	P	P	18 37 25.6	+1.0
	baz=171,SNR=5.3						
BINY	Binghamton	66.61	353	IAmb	IAmb	18 37 27.0	
	comp=Z,31nm,0.9s						
ALLY	Alegheny Colle	66.65	349	IAmb	IAmb	18 37 26.0	
	comp=Z,28nm,0.8s						
L56A	Greenwood	66.74	352	P	P	18 37 26.2	+0.7
	baz=170						
M52A	Chesterland	66.76	348	IAmb	IAmb	18 37 26.5	
	comp=Z,19nm,0.8s						
T35A	Sooner Cattle	66.83	335	IAmb	IAmb	18 37 28.1	
	comp=Z,20nm,0.9s						
P43A	Skaggs, Pawnee	66.89	341	IAmb	IAmb	18 37 26.2	
	comp=Z,30nm,0.9s						
SFIN	Lafayette	66.92	344	P	P	18 37 25.6	-1.0
	baz=160,SNR=7.4						
SFIN	Lafayette	66.92	344	IAmb	IAmb	18 37 25.9	
	comp=Z,20nm,0.7s						
M50A	Fremont	66.95	347	IAmb	IAmb	18 37 27.3	
	comp=Z,21nm,0.9s						
L53A	Girard	66.97	349	P	P	18 37 27.2	+0.4
	baz=167,SNR=5.4						
N47A	Urbana	67.04	345	IAmb	IAmb	18 37 27.5	
	comp=Z,44nm,1.1s						
K59A	Cooperstown	67.06	354	P	P	18 37 28.5	+1.0
	baz=172,SNR=5.3						
MSTX	Muleshoe	67.07	328	P	P	18 37 28.4	+0.6
	baz=145,SNR=22						
ERPA	Erie	67.08	350	P	P	18 37 28.2	+0.6
	baz=167,SNR=10						
K58A	Earlville	67.13	353	P	P	18 37 28.8	+0.9
	baz=172,SNR=6.0						
K58A	Earlville	67.13	353	IAmb	IAmb	18 37 29.6	
	comp=Z,32nm,0.8s						
WVNY	West Valley, N	67.15	351	IAmb	IAmb	18 37 29.7	
	comp=Z,34nm,0.9s						
K57A	Scipio Center	67.19	353	P	P	18 37 28.6	+0.3
	baz=171						
K56A	Middlesex	67.26	352	P	P	18 37 29.2	+0.5
	baz=170,SNR=5.6						
AMTX	Amarillo	67.30	330	P	P	18 37 29.4	+0.2
	baz=146						
U32A	Winter Ranch,	67.38	333	IAmb	IAmb	18 37 31.1	
	comp=Z,26nm,0.8s						
P40A	Paris	67.57	339	IAmb	IAmb	18 37 31.6	
	comp=Z,26nm,0.7s						
LIC	Lamto	67.65	72	ePKP2	P	18 37 33.3	+1.5
	comp=Z,8.0nm,0.5s						
J59A	Piesco	67.71	354	P	P	18 37 32.7	+1.2
	baz=173,SNR=6.2						
J59A	Piesco	67.71	354	IAmb	IAmb	18 37 33.4	
	comp=Z,31nm,0.9s						
J56A	Wolcott	67.77	352	P	P	18 37 32.2	+0.3
	baz=170,SNR=9.3						
TIC	Toumodi	67.86	71	ePKP2	P	18 37 31.7	-1.4
KIC	Kosan Boka	67.96	72	ePKP2	P	18 37 32.6	-1.1
	comp=Z,14nm,0.7s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
I58A	Old Forge	67.97	354	P	P	18 37 33.9	+0.7
	baz=172						
DBIC	Dimbokro	68.01	72	P	P	18 37 33.2	-0.9
	comp=Z,6.9nm,0.7s,baz=232,slow=3.7,SNR=9.5						
DBIC	Dimbokro	68.01	72	P	P	18 37 33.1	-0.9
PECO	Prince Edward	68.44	352	IAmb	IAmb	18 37 37.3	
	comp=Z,24nm,0.9s						
121A	Cookes Peak, D	68.49	324	P	P	18 37 39.0	+2.2
	baz=140,SNR=20						
121A	Cookes Peak, D	68.49	324	IAmb	IAmb	18 37 39.9	
	comp=Z,38nm,1.1s						
H58A	Gabriels	68.62	355	P	P	18 37 37.9	+0.7
	baz=173						
KSU1	Kansas State U	68.77	336	P	P	18 37 38.4	+0.2
	baz=151,SNR=5.7						
H57A	Richville	68.78	354	P	P	18 37 38.7	+0.6
	baz=172						
L44A	Lake County Fo	68.81	344	P	P	18 37 38.5	+0.2
	baz=160						
I51A	Listowel	68.89	349	P	P	18 37 39.1	+0.2
	baz=166,SNR=18						
J47A	Sunmer	69.08	346	IAmb	IAmb	18 37 41.0	
	comp=Z,24nm,0.7s						
L42A	Oliver, Polo	69.12	342	IAmb	IAmb	18 37 40.7	
	comp=Z,20nm,0.8s						
H53A	Bobcaygeon	69.27	351	P	P	18 37 41.4	+0.2
	baz=169,SNR=6.2						
G57A	Newington	69.38	354	P	P	18 37 42.2	+0.5
	baz=172						
SADO	Sadowa	69.54	351	IAmb	IAmb	18 37 43.3	
	comp=Z,16nm,0.6s						
ANMO	Albuquerque	69.67	326	P	P	18 37 45.8	+1.8
	baz=142						
ANMO	Albuquerque	69.67	326	P	P	18 37 45.7	+1.6
ANMO				IAmb	IAmb	18 37 46.8	
	comp=Z,29nm,1.0s						
CBKS	Cedar Bluff	69.75	333	P	P	18 37 45.5	+1.2
	baz=148,SNR=9.0						
TUC	Tucson	69.98	322	P	P	18 37 47.5	+1.6
	baz=138						
G54A	Lake Saint Pet	70.02	352	P	P	18 37 46.1	+0.4
	baz=169,SNR=5.8						
JFWS	Jewell Farm	70.13	342	P	P	18 37 46.6	+0.1
	baz=158,SNR=16						
T25A	Trinidad	70.42	329	P	P	18 37 50.4	+1.8
	baz=144,SNR=16						
ALGO	Algonquin Park	70.56	352	P	P	18 37 49.1	+0.2
	baz=169,SNR=7.3						
GLMI	Grayling	70.56	347	P	P	18 37 49.5	+0.5
	baz=163						
E56A	St. Veronique	70.81	354	P	P	18 37 50.6	+0.2
	baz=172						
E55A	Montcerf-Lytto	70.82	353	P	P	18 37 50.9	+0.4
	baz=171						
214A	Organ Pipe Nat	70.89	320	P	P	18 37 53.6	+2.2
	baz=136,SNR=5.9						
214A	Organ Pipe Nat	70.89	320	IAmb	IAmb	18 37 54.0	
	comp=Z,13nm,0.8s						
D62A	Allapoint, All	71.01	359	P	P	18 37 52.3	+0.7
	baz=178						
KSCO	Kaye Shedlock'	71.14	331	P	P	18 37 54.5	+1.6
	baz=146,SNR=8.9						
D58A	Chemin du LacG	71.19	356	P	P	18 37 53.2	+0.5
	baz=174						
D56A	ZEC Mazanza, M	71.28	355	P	P	18 37 53.4	+0.1
	baz=173						
D55A	Sainte-Anne-du	71.32	354	P	P	18 37 53.7	+0.2
	baz=172,SNR=5.7						
BGNE	Belgrade	71.36	336	P	P	18 37 54.8	+0.9
	baz=150,SNR=14						
SDCO	Great Sand Dun	71.42	329	P	P	18 37 56.7	+2.0
	baz=143,SNR=11						
W18A	Petrified Fore	71.50	324	P	P	18 37 57.2	+2.0
	baz=139,SNR=5.0						
S22A	4UR Ranch, Cre	72.06	328	P	P	18 38 00.2	+1.7
	baz=142,SNR=9.9						
Q24A	Divide	72.23	330	P	P	18 38 01.3	+1.7
	baz=144,SNR=13						
MVCO	Mesa Verde	72.46	326	P	P	18 38 02.7	+1.9
	baz=141						
MVCO	Mesa Verde	72.46	326	IAmb	IAmb	18 38 03.1	
	comp=Z,20nm,0.9s						
OGNE	Ogallala	72.50	333	P	P	18 38 02.2	+1.4
	baz=147,SNR=5.5						
OGNE	Ogallala	72.50	333	IAmb	IAmb	18 38 03.0	
	comp=Z,26nm,0.7s						
E43A	Lone Tree Farm	72.55	346	IAmb	IAmb	18 38 01.7	
	comp=Z,34nm,0.7s						
WUAZ	Wupatki	72.69	323	P	P	18 38 04.3	+2.2
	baz=138,SNR=11						
WUAZ	Wupatki	72.69	323	IAmb	IAmb	18 38 05.4	
	comp=Z,30nm,0.9s						
COWI	Conover	72.80	344	IAmb	IAmb	18 38 03.0	
	comp=Z,14nm,0.8s						
ECSD	EROS Data Cent	72.85	338	P	P	18 38 03.0	+0.3
	baz=152,SNR=19						
GLA	Glamis	72.86	319	P	P	18 38 05.1	+2.0
	baz=135						
SPMN	Marine on St.	72.98	341	P	P	18 38 03.3	-0.1
	baz=156,SNR=12						
SPMN	Marine on St.	72.98	341	IAmb	IAmb	18 38 04.2	
	comp=Z,38nm,1.1s						
ISCO	Idaho Springs	73.12	330	P	P	18 38 06.4	+1.7
	baz=144,SNR=20						
SMCO	Snowmass	73.25	329	IAmb	IAmb	18 38 08.3	
	comp=Z,18nm,0.7s						
PV15	Paradox Valley	73.33	327	IAmb	IAmb	18 38 09.1	
	comp=Z,26nm,1.0s						
IKP	In-Ko-Pah, Jac	73.35	318	P	P	18 38 08.3	+2.3
	baz=134						
PDMCI	Parker Dam,Lak	73.35	321	P	P	18 38 07.8	+1.9
	baz=136						
SYO	Syowa Base	73.38	159	⇓*i*pP	pP	18 38 41.4	-6.0
LSQQ	Lebel-sur-Quev	73.49	353	P	P	18 38 06.3	0.0
	baz=171						
TKX	Tecate	73.60	318	IAmb	IAmb	18 38 10.4	
	comp=Z,20nm,1.0s						
PV14	Lion Creek, Pa	73.62	327	IAmb	IAmb	18 38 10.3	
	comp=Z,19nm,1.1s						
PV22	Blue Mesa, Par	73.63	327	IAmb	IAmb	18 38 10.5	
	comp=Z,29nm,1.1s						
PV10	Paradox Valley	73.64	327	IAmb	IAmb	18 38 09.9	
	comp=Z,22nm,0.9s						
BC3	Big Chuckawall	73.66	320	P	P	18 38 09.8	+2.0
	baz=135,SNR=13						
MONP2	Monument Peak	73.71	318	P	P	18 38 10.3	+2.0
	baz=134						
BAR	Barrett	73.72	318	IAmb	IAmb	18 38 10.9	
	comp=Z,16nm,0.9s						
F36A	Milaca	73.77	341	IAmb	IAmb	18 38 08.8	
	comp=Z,26nm,0.8s						
IRM	Iron Mountain	73.83	320	P	P	18 38 10.8	+2.1
	baz=135,SNR=15						
U15A	North Rim	73.86	323	IAmb	IAmb	18 38 12.6	
	comp=Z,23nm,0.9s						
E38A	The Farm, Brul	73.89	343	IAmb	IAmb	18 38 09.7	
	comp=Z,21nm,0.8s						
N23A	Red Feather La	74.15	330	P	P	18 38 12.7	+2.0
	baz=144,SNR=13						
TPFO	Pinon Flats	74.22	319	P	P	18 38 13.1	+2.0
	baz=134,SNR=6.5						
BELC	Belle Mtn. Jos	74.22	319	P	P	18 38 13.0	+1.8
	baz=134,SNR=8.2						
PFO	Pinyon Flats O	74.23	319	P	P	18 38 13.2	+2.1
	baz=134,SNR=8.1						
PFO	Pinyon Flats O	74.23	319	P	P	18 38 13.4	+2.3
MATQ	Matagami	74.25	353	P	P	18 38 10.4	-0.3
	baz=170						
SUSD	Miller	74.29	337	P	P	18 38 11.5	+0.4
	baz=150						
VNDA	Vanda	74.44	190	P	P	18 38 13.4	+1.8
	comp=Z,5.8nm,0.9s,baz=193,slow=4.5,SNR=3.7						
VNDA	Vanda	74.44	190	IAmb	IAmb	18 38 14.7	
	comp=Z,4.8nm,0.9s						
GMRC	Granite Mounta	74.58	320	P	P	18 38 15.4	+2.3
	baz=135,SNR=32						
O20A	White River Ci	74.61	328	P	P	18 38 15.2	+1.9
	baz=142,SNR=26						
O20A	White River Ci	74.61	328	IAmb	IAmb	18 38 16.1	
	comp=Z,34nm,0.8s						
MURC	Murrieta	74.67	318	P	P	18 38 15.6	+2.0
	baz=134						
HEC	Hector,Ludlow	75.00	320	P	P	18 38 18.1	+2.5
	baz=134						
EYMN	Ely	75.11	343	P	P	18 38 15.6	-0.2
	baz=157,SNR=12						
EYMN	Ely	75.11	343	IAmb	IAmb	18 38 16.6	
	comp=Z,14nm,0.7s						
RWWY	Rawlins	75.36	330	IAmb	IAmb	18 38 20.3	
	comp=Z,34nm,1.1s						
BFSC	Mount Baldy Ra	75.38	319	P	P	18 38 19.6	+1.8
	baz=133,SNR=8.4						
DECC	Green Verdugo	75.80	318	P	P	18 38 22.7	+2.6
	baz=133						
K22A	Casper	75.81	331	P	P	18 38 22.1	+2.0
	baz=143,SNR=5.9						
K22A	Casper	75.81	331	IAmb	IAmb	18 38 22.8	
	comp=Z,21nm,1.1s						
RSSD	Black Hills	75.96	334	P	P	18 38 22.4	+1.5
	baz=146						
RSSD	Black Hills	75.96	334	P	P	18 38 21.2	+0.3
EDW2	Edwards Air Fo	76.02	319	P	P	18 38 22.7	+1.4
	baz=133,SNR=5.6						
B35A	Bob, Littlefor	76.09	342	IAmb	IAmb	18 38 22.3	
	comp=Z,31nm,0.7s						
LRMC	Laurel Mtn Rad	76.25	320	P	P	18 38 24.5	+1.8
	baz=134,SNR=9.5						
SCZ2	Santa Cruz Isl	76.43	317	P	P	18 38 25.7	+2.1
	baz=132,SNR=6.4						
TPNV	Topopah Spring	76.44	321	P	P	18 38 26.1	+2.4
	baz=135,SNR=23						
TPNV	Topopah Spring	76.44	321	IAmb	IAmb	18 38 27.1	
	comp=Z,29nm,1.1s						
FURC	Furnace Creek,	76.45	321	P	P	18 38 25.6	+2.1
	baz=134,SNR=6.0						
MPMC	Manual Prospec	76.53	320	P	P	18 38 26.0	+1.7
	baz=134,SNR=10						
AGMN	Agassiz Nation	76.66	341	P	P	18 38 24.9	+0.4
	baz=153,SNR=16						
AGMN	Agassiz Nation	76.66	341	IAmb	IAmb	18 38 25.7	
	comp=Z,18nm,0.8s						
TOA0	Torodi Ar. Sit	76.79	69	P	P	18 38 25.3	-0.6
TORD	Torodi Ar. Bea	76.79	69	P	P	18 38 25.4	-0.6
	comp=Z,5.3nm,0.4s,baz=259,slow=5.3,SNR=66						
TORD	Torodi Ar. Bea	76.79	69	IAmb	IAmb	18 38 26.4	
	comp=Z,8.2nm,0.9s						
SPR3	Spring Creek 3	76.84	324	IAmb	IAmb	18 38 28.8	
	comp=Z,17nm,0.8s						
ISA	Isabella, Lake	76.84	319	P	P	18 38 28.2	+2.2
	baz=133,SNR=13						
ISA	Isabella, Lake	76.84	319	IAmb	IAmb	18 38 29.0	
	comp=Z,22nm,1.0s						
DUG	Dugway, Tooele	76.92	326	P	P	18 38 28.3	+1.9
	baz=138,SNR=10.0						
R11A	Troy Canyon, C	77.06	323	P	P	18 38 29.5	+2.3
	baz=136,SNR=17						
GRAC	Grapevine Rang	77.11	321	P	P	18 38 29.8	+2.5
	baz=134						
PKM	Mcpherson Peak	77.13	318	P	P	18 38 29.7	+2.0
	baz=132,SNR=18						
CWC	Cottonwood Cre	77.14	320	P	P	18 38 29.6	+1.9
	baz=133						
BW06	Boulder Array	77.28	329	P	P	18 38 29.4	+1.0
	baz=141,SNR=9.3						
PDAR	Pinedale Array	77.28	329	P	P	18 38 29.4	+0.9
	comp=Z,3.6nm,0.5s,baz=133,slow=7.9,SNR=48						
VES	Vestal, Richgr	77.33	319	P	P	18 38 30.5	+2.0
	baz=133,SNR=16						
MDND	Maddock	77.46	338	P	P	18 38 30.3	+1.3
	baz=150,SNR=11						
SMMC	Simmler	77.53	318	P	P	18 38 32.1	+2.4
	baz=132,SNR=8.6						
PAGB	Antelope Grade	77.96	318	IAmb	IAmb	18 38 35.1	
	comp=Z,22nm,0.9s						
AHID	Auburn Hatcher	78.01	329	IAmb	IAmb	18 38 34.7	
	comp=Z,36nm,0.9s						
REDW	Red Top Meadow	78.34	329	IAmb	IAmb	18 38 36.8	
	comp=Z,18nm,0.9s						
SNOW	Snow King Moun	78.38	329	IAmb	IAmb	18 38 37.1	
	comp=Z,15nm,0.8s						
MLAC	Mammoth, Mammo	78.39	321	P	P	18 38 36.6	+1.9
	baz=133						
ULM	Lac du Bonnet	78.41	342	P	P	18 38 34.3	+0.2
	comp=Z,23nm,0.7s,baz=151,slow=6.1,SNR=59						
ULM	Lac du Bonnet	78.41	342	IAmb	IAmb	18 38 35.2	
	comp=Z,24nm,0.8s						
OMMB	Old Mammoth Mi	78.48	320	IAmb	IAmb	18 38 37.9	
	comp=Z,22nm,0.8s						
PMPB	Monarch Peak	78.61	318	P	P	18 38 38.7	+3.0
PMPB				IAmb	IAmb	18 38 38.9	
	comp=Z,16nm,0.9s						
NVAR	Mina Array Bea	78.64	321	P	P	18 38 37.6	+1.7
	comp=Z,3.7nm,0.6s,baz=152,slow=6.2,SNR=25						
NVAR	Mina Array Bea	78.64	321	P	P	18 38 37.5	+1.5
FLWY	Flagg Ranch	78.83	330	IAmb	IAmb	18 38 39.9	
	comp=Z,28nm,1.0s						
LAO	LASA Array	78.94	334	P	P	18 38 38.4	+1.2
	baz=144,SNR=11						
LAO	LASA Array	78.94	334	IAmb	IAmb	18 38 39.4	
	comp=Z,27nm,0.9s						
RLMT	Red Lodge	78.98	331	P	P	18 38 39.3	+1.6
	baz=141,SNR=14						
RLMT	Red Lodge	78.98	331	IAmb	IAmb	18 38 39.7	
	comp=Z,14nm,0.7s						
H17A	Grant Village	79.01	330	P	P	18 38 40.2	+2.3
	baz=140,SNR=5.3						
DGMT	Dagmar	79.62	336	P	P	18 38 42.5	+1.7
	baz=146,SNR=19						
PNTR	Pine Nut	79.83	321	IAmb	IAmb	18 38 45.5	
	comp=Z,33nm,0.8s						
PAHR	Pah Rah Range	80.12	322	IAmb	IAmb	18 38 46.9	
	comp=Z,32nm,0.9s						
HLID	Hailey	80.21	327	P	P	18 38 46.5	+2.1
	baz=137,SNR=43						
HLID	Hailey	80.21	327	IAmb	IAmb	18 38 47.5	
	comp=Z,32nm,0.8s						
BOZ	Bozeman (W)	80.41	330	P	P	18 38 46.5	+1.2
	baz=140,SNR=9.4						
BOSA	Boshof	80.75	117	P	P	18 38 47.4	-0.3
	comp=Z,6.6nm,0.7s,baz=244,slow=2.7,SNR=22						
ORV	Oroville	81.23	321	IAmb	IAmb	18 38 52.4	
	comp=Z,23nm,1.1s						
EGMT	Eagleton	81.46	333	P	P	18 38 51.5	+0.8
	baz=141,SNR=15						
EGMT	Eagleton	81.46	333	IAmb	IAmb	18 38 52.5	
	comp=Z,22nm,0.9s						
O03E	Paynes Creek	81.89	321	P	P	18 38 53.8	+0.6
	baz=131,SNR=5.9						
J08A	Circle Bar Ran	82.14	325	IAmb	IAmb	18 38 57.0	
	comp=Z,21nm,0.7s						
MSO	Missoula	82.39	330	P	P	18 38 57.1	+1.5
	baz=138,SNR=6.2						
N02D	Trinity Center	82.86	321	P	P	18 38 58.5	+0.4
	baz=131						
M04C	Macdoel	82.90	322	P	P	18 38 59.5	+1.1
	baz=131,SNR=6.5						
K05A	Summer Lake	83.00	323	IAmb	IAmb	18 39 01.8	
	comp=Z,37nm,1.0s						
M02C	Callahan	83.22	321	P	P	18 39 00.6	+0.6
	baz=131						
JTMT	Jette	83.23	330	IAmb	IAmb	18 39 02.1	
	comp=Z,17nm,0.9s						
F10A	Beach Ranch, E	83.34	327	IAmb	IAmb	18 39 06.8	
	comp=Z,12nm,0.7s						
YBH	Yreka Blue Hor	83.36	322	P	P	18 39 00.5	-0.2
	comp=Z,3.3nm,0.7s,baz=39,slow=2.7,SNR=9.8						
L04D	Klamath Falls	83.44	322	P	P	18 39 01.9	+0.7
	baz=131						
J05D	Fort Rock, OR	83.56	323	P	P	18 39 03.2	+1.4
	baz=132,SNR=11						
PINE	Pine Mountain	83.74	324	IAmb	IAmb	18 39 05.5	
	comp=Z,22nm,0.8s						
FFC	Flin Flon	84.14	341	P	P	18 39 04.8	+0.6
I05D	Terrebonne, OR	84.32	324	P	P	18 39 07.1	+1.6
	baz=132						
K02D	Willamette Mer	84.52	322	P	P	18 39 08.4	+1.8
	baz=130						
I04A	Tendick Farm,	84.54	323	P	P	18 39 07.3	+0.8
	baz=131						
TAM	Tamanrasset	84.63	62	P	P	18 39 08.6	+1.0
HAWA	Hanford	84.78	327	IAmb	IAmb	18 39 10.0	
	comp=Z,16nm,0.9s						
G05D	Wamic, OR	84.91	325	P	P	18 39 10.4	+2.0
	baz=132						
NEW	Newport	84.92	329	P	P	18 39 08.5	+0.2
	comp=Z,4.0nm,0.6s,baz=216,slow=2.7,SNR=10						
NEW	Newport	84.92	329	P	P	18 39 08.5	+0.2
	baz=135						
I03D	Drain, OR	84.99	323	P	P	18 39 09.9	+1.2
	baz=130						
C09A	Chrisman Ranch	85.14	328	IAmb	IAmb	18 39 11.5	
	comp=Z,35nm,0.8s						
I02D	Swisshome	85.53	323	P	P	18 39 13.1	+1.7
	baz=130						
COR	Corvallis	85.54	323	P	P	18 39 12.0	+0.6
COR				IAmb	IAmb	18 39 14.1	
	comp=Z,35nm,0.9s						
LTY	Liberty	85.94	327	IAmb	IAmb	18 39 15.2	
	comp=Z,11nm,0.8s						
D05A	Enumclaw	86.56	326	IAmb	IAmb	18 39 18.1	
	comp=Z,22nm,0.9s						
ESDC	Sonseca Array	86.67	44	P	P	18 39 17.6	+0.3
	comp=Z,1.9nm,0.8s,baz=233,slow=4.2,SNR=8.4						
ESDC	Sonseca Array	86.67	44	IAmb	IAmb	18 39 22.4	
	comp=Z,4.9nm,1.0s						
E03A	Lebam	86.95	325	IAmb	IAmb	18 39 20.4	
	comp=Z,31nm,1.0s						
D04E	Lakebay	86.95	326	P	P	18 39 19.9	+1.6
	baz=131						
B06A	Marblemount	87.19	327	IAmb	IAmb	18 39 20.5	
	comp=Z,21nm,0.7s						
B05A	Bryant	87.33	327	P	P	18 39 20.3	+0.3
	baz=132,SNR=9.8						
D03D	Eldon	87.35	326	P	P	18 39 21.4	+1.2
	baz=131,SNR=6.5						
PGC	Sidney	88.26	326	IAmb	IAmb	18 39 26.6	
	comp=Z,19nm,0.9s						
LSZ	Lusaka	88.58	106	P	P	18 39 25.1	-1.9
LSZ				IAmb	IAmb	18 39 30.2	
	comp=Z,13nm,1.0s						
YKA	Yellowknife Ar	94.30	340	P	P	18 39 52.6	+0.5
	comp=Z,12nm,0.8s,baz=127,slow=5.1,SNR=112						
DLBC	Dease Lake	97.37	332	P	Pdif	18 40 07.0	+0.7
	comp=Z,4.0nm,0.7s,baz=153,slow=2.0,SNR=10						
DLBC				pP	pP	18 40 48.5	-1.7
	comp=Z,3.4nm,0.7s,baz=233,slow=8.5,SNR=7.1						
RES	Resolute Bay	100.31	353	P	Pdif	18 40 18.8	-0.2
	comp=Z,0.8nm,0.7s,baz=182,slow=13,SNR=4.4						
ILAR	Eielson Array	107.41	334	Pdiff	Pdif	18 40 50.9	+0.1
	comp=Z,0.2nm,0.7s,baz=107,slow=2.5,SNR=4.4						
ILAR				PP	PP	18 45 18.2	-2.3
	comp=Z,1.1nm,1.0s,baz=123,slow=7.2,SNR=4.5						
TOLK	Toolik Lake Re	109.62	337	P	PKiKP	18 45 03.2	+0.8
	baz=106						
AKASG	Malin Array Be	112.31	43	PKiKP	PKiKP	18 45 07.5	-0.5
	comp=Z,0.6nm,0.4s,baz=263,slow=2.8,SNR=6.2						
BRTR	Keskin Array B	113.06	55	PKKPbc	PKKPbc	18 56 06.0	+8.6
	comp=Z,0.7nm,0.7s,baz=113,slow=4.5,SNR=6.3						
ARCES	ARCESS Array B	113.40	23	PKKPbc	PKKPbc	18 55 55.9	-1.1
	comp=Z,1.7nm,0.7s,baz=17,slow=4.3,SNR=5.7						
KBZ	Khabaz	120.54	52	PKP	PKiKP	18 45 24.6	+0.5
	comp=Z,2.7nm,0.7s,baz=176,slow=5.9,SNR=8.9						
CTA	Charters Tower	125.23	219	PKP	PKiKP	18 45 34.2	0.0
	comp=Z,4.9nm,0.7s,baz=141,slow=4.2,SNR=9.9						
ASAR	Alice Springs	128.18	205	PKhKP	PKPpre	18 45 26.0	
	comp=Z,0.6nm,1.0s,baz=134,slow=1.7,SNR=4.3						
ASAR				PKP	PKPdf	18 45 39.6	+0.1
	comp=Z,6.8nm,0.7s,baz=136,slow=1.8,SNR=65						
WRA	Warramunga Arr	131.35	207	PKP	PKPdf	18 45 46.0	+0.4
	comp=Z,4.4nm,0.5s,baz=162,slow=1.6,SNR=46						
WRA				SKPbc	SKPbc	18 48 54.7	-0.3
	comp=Z,2.0nm,0.6s,baz=148,slow=3.4,SNR=16						
PETK	Petropavlovsk-	135.72	322	PKhKP	PKPpre	18 45 46.1	
	comp=Z,2.0nm,0.8s,baz=64,slow=4.2,SNR=7.5						
PETK				PKP	PKiKP	18 45 53.9	-0.3
	comp=Z,5.5nm,0.8s,baz=82,slow=2.4,SNR=13						
DZA	Taraz	141.19	51	*e*PKP	PKPdf	18 46 03.5	+0.5
	baz=51						
BTLS	Baital	142.40	47	*e*PKP	PKPdf	18 46 04.9	-0.1
	baz=47						
SGDS	Sogindy	143.33	49	*e*PKP	PKPdf	18 46 07.3	+0.4
	baz=49						
ZALV	Zalesovo Beam	143.67	28	PKP	PKPbc	18 46 05.5	+0.5
	comp=Z,12nm,0.5s,baz=303,slow=4.3,SNR=74						
ZALV				SKPbc	SKPbc	18 49 30.6	+0.7
	comp=Z,1.1nm,0.6s,baz=316,slow=3.6,SNR=4.5						
ZALV	Zalesovo Beam	143.67	28	PKPdf	PKPbc	18 46 05.2	+0.2
SEM	Semipalatinsk	143.69	36	*e*PKP	PKPbc	18 46 05.3	-0.2
	baz=36						
KUU	Kurty	144.35	48	*e*PKP	PKPbc	18 46 07.4	0.0
	baz=48						
AAA	Alma-Ata	144.98	48	*e*PKP	PKPdf	18 46 10.1	+0.3
	baz=48						
TNSS	Tian-Shan	145.07	49	*e*PKP	PKPbc	18 46 10.2	0.0
	baz=49						
MDOK	Medeo	145.09	48	*e*PKP	PKPbc	18 46 09.8	0.0
	baz=48						
TDK	Taldyqorghan	145.27	45	*e*PKP	PKPab	18 46 10.9	+0.4
	baz=45						
KSH	Kashi	145.45	55	PKPbc	PKPbc	18 46 11.4	+0.3
KSH				sPKP		18 47 17.0	
KSH				AMB	AMB		
	comp=Z,430nm,7.1s						
SATY	Saty	146.05	48	*e*PKP	PKPdf	18 46 12.1	+0.4
	baz=48						
KPKS	Kokpek	146.08	47	*e*PKP	PKPdf	18 46 12.3	+0.7
	baz=47						
UZB	Uzynbulak	146.43	47	*e*PKP	PKPdf	18 46 12.6	+0.3
	baz=48						
SHLS	Shalkode	146.73	47	*e*PKP	PKPbc	18 46 14.2	-0.5
	baz=47						
MKAR	Makanchi Array	146.80	40	PKPbc	PKPdf	18 46 13.5	+0.8
	comp=Z,17nm,0.6s,baz=290,slow=1.7,SNR=165						
ZSN	Zaisan	147.88	37	*e*PKP	PKPdf	18 46 15.0	+0.5
	baz=37						
ASAJ	Asahikawa	148.65	317	PKPbc	PKPbc	18 46 20.3	+0.6
	comp=Z,24nm,0.8s,baz=250,slow=5.9,SNR=17						
ASAJ				PKPab	PKPab	18 46 24.6	+0.9
	comp=Z,22nm,0.8s,baz=78,slow=24,SNR=9.9						
LEM	Lembang	148.70	170	PKPbc	PKiKP	18 46 22.1	-0.2
	comp=Z,56nm,0.7s,baz=34,slow=3.6,SNR=2.4						
WMQ	Urumqi	151.62	40	*e*PKPbc	PKPdf	18 46 19.5	-1.0
WMQ				AMB	AMB		
	comp=Z,230nm,6.3s						
WMQ				LR	LR		
	comp=Z,500nm,29.2s						
WMQ				LR	LR		
	comp=Z,970nm,29.1s						
WMQ				LR	LR		
	comp=Z,92nm,29.0s						
USRK	Ussuriysk Ar.	154.68	327	PKPbc	PKPbc	18 46 32.8	-0.6
	comp=Z,2.0nm,0.6s,baz=117,slow=0.9,SNR=5.6						
MJAR	Matsushiro Arr	155.00	305	PKPbc	PKPbc	18 46 35.4	
	comp=Z,1.8nm,0.5s,baz=70,slow=1.7,SNR=8.7						
MJAR				PKPab	PKPab	18 46 51.8	+1.1
	comp=Z,11nm,0.9s,baz=80,slow=2.7,SNR=14						
MAT	Matsushiro	155.00	305	PKP	PKPbc	18 46 34.3	
MDJ	Mudanjiang	155.51	330	PKP	PKPdf	18 46 25.8	-0.1
MDJ				AMB	AMB		
	comp=Z,180nm,4.0s						
SONM	Songino Array	155.90	11	PKP	PKPdf	18 46 28.0	+1.4
	comp=Z,1.5nm,0.8s,baz=301,slow=0.5,SNR=10						
SONM				PKPbc	PKPbc	18 46 36.6	
	comp=Z,1.6nm,0.7s,baz=300,slow=2.0,SNR=7.6						
SONM				PKPab	PKPbc	18 46 54.3	
	comp=Z,3.0nm,0.7s,baz=320,slow=4.5,SNR=13						
KSRS	Korea Array	161.56	319	PKPab	PKPab	18 47 20.6	+1.6
	comp=Z,3.2nm,0.9s,baz=43,slow=4.5,SNR=5.7						
HHC	Hu-ho-hao-te	163.40	3	*e*PKP	PKPdf	18 46 34.9	-0.3
CMAR	Chiang Mai Arr	165.83	111	PKP	PKPdf	18 46 38.4	+0.5
	comp=Z,0.6nm,0.9s,baz=272,slow=3.1,SNR=6.7						
CMAR				PKPab	PKPab	18 47 38.7	+0.3
	comp=Z,1.3nm,0.7s,baz=251,slow=5.2,SNR=14						
LZH	Lanzhou	165.87	31	*e*PKP	PKPdf	18 46 39.4	+1.8
LZH				pPKP	pPKPdf	18 47 20.6	-2.7
LZH				sPKP		18 47 39.4	
NJ2	Nanjing	170.59	327	*e*PKP	PKPdf	18 46 39.9	-0.7

SKHL ***22*** *18:34:26.8±0.4, 51°.80N×143°.00E, h15^{km}, mb4.7/6*

IDC ***22*** *18:34:27.5±0.9, 51°.79N×142°.91E, h0^{km}, mb3.6/9, mb1 3.9/12, mb1mx3.7/50, mbtmp3.6/12, ML2.8/3, MS3.5/2, Ms1 3.6/2, ms1mx2.9/44, Error ellipse: s-maj=34.6km s-min=16.6km az=151.0*

MOS ***22*** *18:34:28.0±1.9, 51°.77N×143°.01E, h18^{km}, mb4.0/1, Error ellipse: s-maj=21.4km s-min=9.9km az=81.8*

MOS Felt (II-III) at Nogliki.

ISC 22 18:34:27.6±1.3, **51°.71N**±0°.03×**143°.15E**±0°.05, **h2**^{km}±9^{km}, **n24**, σ**1^{s}39**/40, **mb3.6**/9, **2D, Sakhalin Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TYV	Tymovskoe	0.90	200	*e*PN	Pg	18 34 45.5	+0.6
TYV				*e*S	Sb	18 34 59.0	+0.6
TYV				pmax	pmax		
	comp=Z,467nm,0.8s						
TYV				smax	smax		
	comp=E,2μm,0.7s						
TYV	Tymovskoe	0.90	200	*e*P	Pg	18 34 45.5	+0.6
TYV				P	Pb	18 34 46.0	0.0
	comp=E,467nm,0.6s						
TYV				*e*Sg	Sb	18 34 59.0	+0.6

TYV				A	A	18 34 59.8	
	comp=E,2μm,0.7s						
OKH	**Okha**	**1.85**	**356**	⇓*e*PN	**Pn**	**18 35 00.1**	**-0.2**
OKH				*e*S	**Sg**	**18 35 26.2**	**-0.8**
OKH				smax	smax		
	comp=E,976nm,0.5s						
OKH				smax	smax		
	comp=N,784nm,0.8s						
OKH	**Okha**	**1.85**	**356**	*e*P	**Pn**	**18 35 00.2**	**-0.1**
OKH				P	**Pg**	**18 35 02.3**	**-0.8**
	comp=N,200nm,0.4s						
OKH				*e*S	**Sn**	**18 35 22.1**	**-2.1**
OKH				S	**Sg**	**18 35 28.7**	**+1.7**
	comp=N,800nm,0.5s						
OKH				S	**Sg**	**18 35 28.7**	**+1.7**
	comp=N,100nm,0.5s						
NKL	**Nikolayevsk**	**2.09**	**315**	*d i*PN	**Pn**	**18 35 01.6**	**-2.0**
NKL				pmax	pmax		
	comp=E,26nm,0.3s						
NKL				pmax	pmax		
	comp=N,3.0nm,0.4s						
NKL				pmax	pmax		
	comp=Z,18nm,0.4s						
NKL	**Nikolayevsk**	**2.09**	**315**	*e*P	**Pn**	**18 35 00.2**	**-3.4**
NKL				AMB	AMB	18 35 02.7	
	comp=Z,3.0nm,0.4s						
NKL				AMB	AMB	18 35 02.7	
	comp=Z,18nm,0.4s						
NKL				*e*Sg	**Sg**	**18 35 33.3**	**-1.4**
UGL	**Uglegorsk**	**2.72**	**195**	PN	**Pb**	**18 35 16.4**	**-0.6**
UGL				S	**Sb**	**18 35 52.7**	**+1.9**
UGL				pmax	pmax		
	comp=Z,75nm,1.1s						
UGL				smax	smax		
	comp=E,238nm,0.9s						
UGL				MLR	MLR		
	comp=Z,2μm,4.0s						
UGL				MLR	MLR		
	comp=N,2μm,5.0s						
UGL				MLR	MLR		
	comp=E,1μm,5.0s						
UGL	**Uglegorsk**	**2.72**	**195**	*e*P	**Pb**	**18 35 17.1**	**+0.1**
UGL				P	**Pg**	**18 35 18.3**	**-1.5**
	comp=E,50nm,0.9s						
UGL				*e*S	**Sb**	**18 35 49.6**	**-1.2**
UGL				S	**Sg**	**18 35 53.7**	**-1.4**
	comp=E,210nm,0.6s						
UGL				S	**Sg**	**18 35 53.7**	**-1.4**
	comp=E,200nm,0.6s						
YSS	**Yuzh-Sakhalins**	**4.77**	**183**	*e*P	**Pn**	**18 35 41.1**	**+0.7**
YSS				AMB	AMB	18 35 42.1	
	comp=E,30nm,0.4s						
YSS				*e*S	**Sn**	**18 36 37.3**	**+1.1**
YSS				A	A	18 36 46.0	
	comp=E,60nm,0.9s						
YSS				A	A	18 36 46.0	
	comp=E,90nm,0.9s						
EKMR	**Ekimchan**	**6.39**	**286**	*e*Pg	**Pg**	**18 36 31.0**	**+1.0**
EKMR				AMB	AMB	18 36 35.1	
	comp=E,7.0nm,0.7s						
EKMR				*e*Sg	**Sg**	**18 37 56.0**	**+3.3**
EKMR				A	A	18 37 58.0	
	comp=E,40nm,0.5s						
EKMR				A	A	18 37 58.0	
	comp=E,20nm,0.5s						
ASAJ	**Asahikawa**	**7.61**	**183**	Pn	**Pn**	**18 36 19.9**	**+0.4**
	comp=E,0.6nm,0.3s,baz=348,slow=26,SNR=9.9						
PETK	**Petropavlovsk-**	**9.01**	**75**	Pn	**Pn**	**18 36 38.3**	**-0.3**
	comp=E,0.1nm,0.3s,baz=342,slow=18,SNR=1.8						
BMKR	**Bomnak**	**9.10**	**295**	*e*P	**Pn**	**18 36 39.0**	**-0.8**
KROS	**Kirovskiy**	**10.11**	**292**	*e*P	**Pn**	**18 36 54.5**	**+0.8**
KROS				AMB	AMB	18 36 56.8	
	comp=E,4.0nm,0.5s						
USRK	**Ussuriysk Ar.**	**10.59**	**229**	Pn	**Pn**	**18 37 00.0**	**-0.3**
	baz=99,slow=15,SNR=1.5						
USRK				LR	LR	18 41 26.6	
	comp=E,215nm,20.5s,baz=7.9,slow=40						
SONM	**Songino Array**	**23.88**	**275**	P	**P**	**18 39 40.3**	**-2.2**
	comp=E,0.3nm,0.8s,baz=65,slow=8.1,SNR=2.0						
ILAR	**Eielson Array**	**37.00**	**42**	P	**P**	**18 41 38.5**	**+0.4**
	comp=E,1.3nm,1.1s,baz=274,slow=6.8,SNR=7.0						
MKAR	**Makanchi Array**	**39.01**	**288**	P	**P**	**18 41 53.6**	**-1.7**
	comp=E,0.7nm,0.8s,baz=58,slow=8.6,SNR=6.4						
CMAR	**Chiang Mai Arr**	**47.95**	**243**	P	**P**	**18 43 07.6**	**0.0**
	comp=E,0.2nm,0.4s,baz=56,slow=11,SNR=4.3						
CMAR				LR	LR	19 04 56.0	
	comp=E,48nm,18.5s,baz=22,slow=38						
YKA	**Yellowknife Ar**	**50.80**	**36**	P	**P**	**18 43 29.6**	**+0.7**
	comp=E,0.7nm,0.9s,baz=310,slow=6.3,SNR=8.3						
NVAR	**Mina Array Bea**	**65.67**	**58**	P	**P**	**18 45 14.5**	**+0.9**
	comp=E,0.4nm,0.7s,baz=280,slow=5.4,SNR=2.7						
ULM	**Lac du Bonnet**	**66.76**	**37**	P	**P**	**18 45 19.7**	**-0.3**
	comp=E,4.2nm,1.1s,baz=317,slow=5.9,SNR=3.8						
PDAR	**Pinedale Array**	**66.83**	**50**	P	**P**	**18 45 21.2**	**+0.3**
	comp=E,0.8nm,0.9s,baz=5.7,slow=3.0,SNR=4.6						
TXAR	**Lajitas Array**	**80.35**	**55**	P	**P**	**18 46 42.2**	**+1.8**
	comp=E,0.2nm,0.4s,baz=309,slow=4.0,SNR=4.3						

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*IDC **22** 18:37:33.6±1.1, 6°.01S×127°.73E, h395^{km}±15^{km}, mb3.4/2, mb1 3.3/7, mb1mx3.1/38, mbtmp4.1/7, Error ellipse: s-maj=22.7km s-min=13.0km az=110.0*

ISC 22 18:37:33.7±0.9**, 6°.05S**±0°.09×**127°.8E**±0°.1**, h400**^{km}**, n7, σ1ˢ.23**/10**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**5.80**	**224**	P	**Pn**	**18 39 05.2**	**+0.9**
	8.7nm,0.3s,baz=32,slow=4.5,SNR=11						
BATI				S	**S**	**18 40 16.4**	**-1.6**
	5.8nm,0.3s,baz=113,slow=20,SNR=7.6						
SIJI	**Sorong**	**6.21**	**34**	P	**Pn**	**18 39 09.2**	**+0.5**
	4.5nm,0.3s,baz=175,slow=22,SNR=28						
SIJI				S	**S**	**18 40 24.9**	**-1.2**
	2.6nm,0.3s,baz=245,slow=21,SNR=9.1						
FITZ	**Fitzroy Crossi**	**12.15**	**190**	P	**P**	**18 40 15.4**	**+0.2**
	0.1nm,0.3s,baz=9.0,slow=8.4,SNR=8.2						
WRA	**Warramunga Arr**	**15.21**	**156**	P	**P**	**18 40 49.5**	**+1.0**
	0.8nm,0.3s,baz=332,slow=11,SNR=57						
WRA				S	**S**	**18 43 27.9**	**-1.9**
	0.1nm,0.3s,baz=334,slow=21,SNR=2.9						
ASAR	**Alice Springs**	**18.48**	**162**	P	**P**	**18 41 24.2**	**+0.8**
	0.7nm,0.3s,baz=347,slow=12,SNR=84						
MKAR	**Makanchi Array**	**66.24**	**328**	P	**P**	**18 47 40.5**	**+0.1**
	0.9nm,0.4s,baz=120,slow=8.7,SNR=5.6						
ZALV	**Zalesovo Beam**	**69.78**	**335**	P	**P**	**18 48 01.4**	**-0.5**
	1.3nm,0.5s,baz=140,slow=5.3,SNR=2.5						

IDC 22 18:46:33.6±7.2**, 18°.23S**×**177°.64W, h0**^{km}**, mb3.5**/3**, mb1 3.8**/3**, mb1mx3.5**/23**, mbtmp3.5**/3**, MS3.7**/2**, Ms1 3.7**/2**, ms1mx3.0**/25**, Error ellipse: s-maj=316.9km s-min=38.0km az=143.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPZ	**Rata Peaks**	**27.14**	**198**	LR	LR	19 02 26.9	
	comp=Z,101nm,19.3s,baz=142,slow=35						
WRA	**Warramunga Arr**	**45.29**	**260**	P	P	18 54 53.0	-0.5
	0.2nm,0.4s,baz=95,slow=8.3,SNR=6.6						
ASAR	**Alice Springs**	**45.41**	**254**	P	P	18 54 54.6	+0.2
	0.7nm,0.5s,baz=88,slow=8.5,SNR=20						
BATI	**Baumata**	**57.26**	**269**	LR	LR	19 18 15.0	
	comp=Z,108nm,20.9s,baz=301,slow=33						
ILAR	**Eielson Array**	**86.03**	**13**	P	P	18 59 15.6	0.0
	0.2nm,0.5s,baz=223,slow=4.9,SNR=5.1						

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*IDC **22** 19:08:49.5±1.8, 3°.99S×135°.11E, h0^{km}, mb3.4/2, mb1 3.9/7, mb1mx3.7/24, mbtmp3.8/7, ML3.8/5, MS3.3/1, Ms1 3.3/1, ms1mx2.7/25, Error ellipse: s-maj=52.4km s-min=21.2km az=63.0*

ISC 22 19:08:52.0±1.3**, 4°.29S**±0°.08×**134°.6E**±0°.2**, h10**^{km}**, n8, σ1ˢ.81**/11**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**4.79**	**315**	Pn	**Pn**	**19 10 03.9**	**-0.4**
	9.5nm,0.3s,baz=258,slow=22,SNR=110						
SIJI				Sn	**Sn**	**19 10 58.4**	**-1.4**
	4.2nm,0.3s,baz=136,slow=24,SNR=5.7						
WRA	**Warramunga Arr**	**15.56**	**181**	Pn	**Pn**	**19 12 32.9**	**+1.3**
	0.2nm,0.3s,baz=5.7,slow=13,SNR=7.4						
WRA				Sn	**Sn**	**19 15 21.4**	**-2.8**
	0.2nm,0.3s,baz=9.8,slow=22,SNR=4.7						
FITZ	**Fitzroy Crossi**	**16.30**	**212**	Pn	**P**	**19 12 44.9**	**+0.7**
	0.3nm,0.3s,baz=37,slow=9.8,SNR=14						
FITZ				Sn	**Sn**	**19 15 42.5**	**+0.3**
	0.3nm,0.3s,baz=131,slow=19,SNR=2.9						
ASAR	**Alice Springs**	**19.27**	**182**	P	**Pn**	**19 13 20.1**	**+2.2**
	0.6nm,0.3s,baz=5.9,slow=11,SNR=55						
ASAR				S	**Sn**	**19 16 51.9**	**-2.4**
	0.1nm,0.3s,baz=5.7,slow=26,SNR=4.1						
CTA	**Charters Tower**	**19.35**	**145**	P	**P**	**19 13 17.3**	**-0.5**
	0.3nm,0.3s,baz=324,slow=11,SNR=14						
LEM	**Lembang**	**27.01**	**263**	LR	LR	19 25 56.7	
	comp=Z,54nm,18.8s,baz=47,slow=37						
CMAR	**Chiang Mai Arr**	**41.81**	**304**	P	**P**	**19 16 43.9**	**+1.6**
	0.5nm,0.8s,baz=128,slow=7.2,SNR=4.8						
MKAR	**Makanchi Array**	**68.62**	**324**	P	**P**	**19 19 54.4**	**-1.0**
	0.2nm,0.6s,baz=118,slow=6.6,SNR=3.8						

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*GCG **22** 19:20:11.5±0.5, 14°.05N×91°.62W, h54^{km}±28^{km}, MD3.6*

*SNET **22** 19:20:14.5±0.5, 14°.30N×91°.14W, h13^{km}±4^{km}, ML3.4*

ISC 22 19:20:10.5±3.2**, 13°.8N**±0°.1×**91°.5W**±0°.1**, h16**^{km}±22^{km}**, n9, σ0ˢ.90**/16**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RTAL	**Retalhuleu**	**0.74**	**346**	*e*P	**Pb**	**19 20 25.2**	**+0.1**
RTAL				*e*S	**Sg**	**19 20 34.3**	**-0.6**
FUG	**Fuego 3**	**0.91**	**45**	*e*P	**Pb**	**19 20 27.9**	**-0.2**
PCG	**Pacaya**	**1.05**	**56**	*e*P	**Pb**	**19 20 30.5**	**-0.1**
PCG				*e*S	**Sb**	**19 20 45.8**	**+1.6**
NBG	**Las Nubes**	**1.37**	**55**	*e*P	**Pn**	**19 20 35.2**	**-0.1**
NBG				*e*S	**Sn**	**19 20 53.1**	**-0.2**
CEVE	**Cerro Verde**	**1.83**	**89**	*e*P	**Pn**	**19 20 42.1**	**+0.5**
CEVE				*e*S	**Sn**	**19 21 03.9**	**-0.7**
CEVE				IAML		19 21 11.8	
	comp=Z,430nm,0.3s						
SBLS	**San Blas**	**1.83**	**89**	*e*P	**Pn**	**19 20 42.3**	**+0.7**
SBLS				*e*S	**Sn**	**19 21 03.5**	**-1.1**
TACO	**Tacachico**	**2.10**	**85**	*e*P	**Pn**	**19 20 44.3**	**-0.8**
PMON	**Piamonte**	**2.13**	**92**	*e*P	**Pn**	**19 20 46.1**	**+0.5**
PMON				*e*S	**Sn**	**19 21 10.7**	**-1.2**
LFRS	**El Faro**	**2.38**	**94**	*e*P	**Pn**	**19 20 50.1**	**+1.0**
LFRS				*e*S	**Sn**	**19 21 17.1**	**-0.9**

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*IDC **22** 19:26:01.0±0.9, 59°.65N×152°.35W, h138^{km}±18^{km}, mb3.3/4, mb1 3.3/5, mb1mx3.0/40, mbtmp3.7/5, MS3.1/1, Ms1 3.1/1, ms1mx2.4/24, Error ellipse: s-maj=36.9km s-min=12.0km az=114.0*

*NEIC **22** 19:26:01.5±1.4, 59°.75N±0°.04×153°.3W±0°.1, h131^{km}±4^{km}, Error ellipse: s-maj=7.5km s-min=5.6km az=110.0*

*AEIC **22** 19:26:03±1.3, 59°.76N±0°.04×153°.26W±0°.10, h121^{km}±4^{km}, ML3.1, ML3.5/38(NEIC), Error ellipse: s-maj=7.2km s-min=5.4km az=106.0*

ISC 22 19:26:01.5±0.9**, 59°.74N**±0°.04×**153°.23W**±0°.04**, h129**^{km}±5^{km}**, n136, σ0ˢ.83**/137**, mb3.8**/4**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OPT	**Oil Point**	**0.09**	**182**		**Pn**	**19 26 19.2**	**+0.1**
ILS	**Iliamna Low So**	**0.23**	**20**		**Pn**	**19 26 19.6**	**+0.1**
IVE	**Iliamna Volcan**	**0.29**	**21**		**Pn**	**19 26 19.6**	**0.0**
IVE					**Sn**	**19 26 32.8**	**-0.6**
AUL	**Augustine Lava**	**0.38**	**197**		**Pn**	**19 26 20.2**	**+0.4**
AUL					**Sn**	**19 26 33.7**	**0.0**
AU22	**Augustine Moun**	**0.38**	**190**		**Pn**	**19 26 20.1**	**+0.3**
AU22					**Sn**	**19 26 33.5**	**-0.1**
AUW	**Augustine West**	**0.39**	**199**		**Pn**	**19 26 20.2**	**+0.3**
AUCH	**Augustine Cone**	**0.40**	**196**		**Pn**	**19 26 20.3**	**+0.2**
RED	**Redoubt Volcan**	**0.72**	**18**		**Pn**	**19 26 22.1**	**+0.1**
RED					**Sn**	**19 26 36.8**	**-0.7**
RSO	**Redoubt South**	**0.76**	**18**		**Pn**	**19 26 22.7**	**+0.2**
REF	**Redoubt East F**	**0.79**	**19**		**Pn**	**19 26 23.0**	**+0.3**
REF					**Sn**	**19 26 38.4**	**-0.4**
HOM	**Homer**	**0.81**	**95**		**Pn**	**19 26 23.1**	**+0.5**
HOM					**Sn**	**19 26 39.0**	**+0.5**
DFR	**Drift River**	**0.89**	**17**		**Pn**	**19 26 23.7**	**+0.2**
DFR					**Sn**	**19 26 39.7**	**-0.4**
CNPM	**China Poot**	**1.03**	**101**		**Pn**	**19 26 25.0**	**+0.4**
CNPM					**Sn**	**19 26 41.6**	**-0.6**
CNPM	**China Poot**	**1.03**	**101**	IAML		19 26 43.2	
	comp=N,582nm,0.4s						
CNPM				IAML		19 26 43.2	
	comp=E,870nm,0.4s						
BRLK	**Bradley Lake**	**1.18**	**88**		**Pn**	**19 26 26.3**	**+0.2**
BRLK					**Sn**	**19 26 44.4**	**-0.5**
BRLK	**Bradley Lake**	**1.18**	**88**	IAML		19 26 44.4	
	comp=N,475nm,0.6s						
BRLK				IAML		19 26 45.4	
	comp=E,726nm,0.3s						
BRSE	**Bradley Lake S**	**1.26**	**89**	P	**Pn**	**19 26 27.3**	**+0.4**
	baz=272,SNR=10						
BRSE	**Bradley Lake S**	**1.26**	**89**		**Pn**	**19 26 27.1**	**+0.2**
KAHG	**Katmai Hook Gl**	**1.43**	**209**		**Pn**	**19 26 29.4**	**+0.6**
KAHC	**Katmai Hardscr**	**1.43**	**221**		**Pn**	**19 26 29.1**	**+0.2**
CAPN	**Captain Cook N**	**1.46**	**44**		**Pn**	**19 26 31.1**	**+2.1**
KARR	**Katmai Rainbow**	**1.46**	**212**		**Pn**	**19 26 29.8**	**+0.7**
SPCR	**Spurr Chakacha**	**1.55**	**19**		**Pn**	**19 26 30.6**	**+0.5**
SPWE	**Spurr West**	**1.57**	**12**		**Pn**	**19 26 31.5**	**+1.0**
SPCN	**Chakachatna No**	**1.57**	**19**		**Pn**	**19 26 31.1**	**+0.7**
SPBG	**Spurr Blockage**	**1.58**	**15**		**Pn**	**19 26 30.3**	**-0.2**
SPCP	**Crater Peak Br**	**1.62**	**19**		**Pn**	**19 26 31.7**	**+0.7**
CRP	**Crater Peak**	**1.62**	**19**		**Pn**	**19 26 31.8**	**+0.8**
SPCG	**Spurr Capps Gl**	**1.67**	**20**		**Pn**	**19 26 32.1**	**+0.6**
SLKM	**Skilak Lake**	**1.69**	**62**		**Pn**	**19 26 32.3**	**+0.6**
KVTA	**Katmai Vly 10**	**1.73**	**219**		**Pn**	**19 26 32.8**	**+0.5**
KCG	**Knife Ck. Glac**	**1.74**	**215**		**Pn**	**19 26 32.8**	**+0.5**
KBM	**Katmai Bkd Mtn**	**1.79**	**216**		**Pn**	**19 26 33.6**	**+0.6**
SVW2	**Sparrevohn**	**1.79**	**320**		**Pn**	**19 26 32.8**	**-0.1**
KABR	**Katmai Barrier**	**1.85**	**210**		**Pn**	**19 26 34.0**	**+0.3**
STLK	**Strandline Lak**	**1.89**	**21**		**Pn**	**19 26 34.9**	**+0.8**
O22K	**Cooper Landing**	**1.90**	**66**		**Pn**	**19 26 35.0**	**+0.8**
SEW	**Seward**	**1.93**	**78**		**Pn**	**19 26 34.8**	**+0.2**
KDAK	**Kodiak Island**	**1.99**	**170**	P	**Pn**	**19 26 34.7**	**-0.7**
	comp=E,2.4nm,0.3s,baz=56,slow=9.4,SNR=44						
KDAK				S	**Sn**	**19 26 59.1**	**-2.1**
	comp=E,28nm,0.3s,baz=327,slow=23,SNR=10						
KDAK	**Kodiak Island**	**1.99**	**170**		**Pn**	**19 26 34.6**	**-0.7**
KDAK				IAML		19 27 01.4	
	comp=E,311nm,0.3s						
KDAK				IAML		19 27 01.5	
	comp=E,221nm,0.3s						
SUA	**Susitna One**	**2.12**	**34**	P	**Pn**	**19 26 37.7**	**+0.8**
	baz=217,SNR=39						
SUA	**Susitna One**	**2.12**	**34**		**Pn**	**19 26 37.9**	**+1.0**
SUA	**Susitna One**	**2.12**	**34**	IAML		19 27 05.4	
	comp=N,123nm,0.8s						
SUA				IAML		19 27 06.2	
	comp=E,212nm,0.8s						
RC01	**Rabbit Creek A**	**2.20**	**51**		**Pn**	**19 26 38.2**	**+0.4**
SKT	**Skwentna**	**2.39**	**20**	P	**Pn**	**19 26 40.8**	**+0.5**
	baz=202,SNR=5.5						
SKT	**Skwentna**	**2.39**	**20**		**Pn**	**19 26 40.6**	**+0.3**
OHAK	**Old Harbor**	**2.53**	**181**		**Pn**	**19 26 40.9**	**-1.1**
PLK3	**Peulik 3**	**2.60**	**219**		**Pn**	**19 26 43.8**	**+0.8**
PWL	**Port Wells**	**2.68**	**63**		**Pn**	**19 26 44.5**	**+0.6**
PMR	**Palmer**	**2.74**	**46**		**Pn**	**19 26 44.2**	**-0.5**
CUT	**Chulitna**	**3.03**	**27**	P	**Pn**	**19 26 49.4**	**+1.0**
	baz=210,SNR=7.5						
SML	**Sawmill**	**3.17**	**47**		**Pn**	**19 26 49.8**	**-0.5**
SML	**Sawmill**	**3.17**	**47**	IAML		19 27 32.9	
	comp=N,67nm,0.6s						
SML				IAML		19 27 33.8	
	comp=E,50nm,0.6s						
PPLA	**Purkeypile**	**3.20**	**9**		**Pn**	**19 26 51.8**	**+1.0**
HIN	**Hinchinbrook I**	**3.43**	**76**	Pn	**Pn**	**19 26 54.6**	**+0.9**
HIN				IAML		19 27 25.7	
	comp=N,119nm,2.6s						
TT01	**Tatalina**	**3.45**	**338**		**Pn**	**19 26 53.8**	**-0.1**
TTA	**Tatalina**	**3.47**	**338**		**Pn**	**19 26 54.0**	**-0.2**
JPK	**Jack Peak**	**3.54**	**65**		**Pn**	**19 26 55.4**	**+0.2**
SCM	**Sheep Creek Mo**	**3.57**	**52**		**Pn**	**19 26 55.5**	**-0.1**
SCM	**Sheep Creek Mo**	**3.57**	**52**	IAML		19 27 39.0	
	comp=E,76nm,0.5s						
SCM				IAML		19 27 39.1	
	comp=N,62nm,0.5s						
HUR	**Hurricane**	**3.68**	**26**		**Pn**	**19 26 57.4**	**+0.5**
EYAK	**Cordova Ski Ar**	**3.82**	**75**		**Pn**	**19 26 59.1**	**+0.3**
WAT1	**Susitna Watana**	**3.83**	**34**		**Pn**	**19 26 59.0**	**0.0**
WAT6	**Susitna Watana**	**3.89**	**41**	P	**Pn**	**19 27 00.0**	**+0.1**
	baz=226,SNR=8.1						
WAT6	**Susitna Watana**	**3.89**	**41**		**Pn**	**19 26 59.5**	**-0.4**
WAT2	**Susitna Watana**	**3.93**	**33**	P	**Pn**	**19 27 00.5**	**+0.2**
	baz=217,SNR=10						
WAT2	**Susitna Watana**	**3.93**	**33**		**Pn**	**19 27 00.1**	**-0.3**
DIV	**Divide**	**3.95**	**66**		**Pn**	**19 27 01.2**	**+0.7**
TRF	**Thorofare Moun**	**3.98**	**19**		**Pn**	**19 27 01.0**	**0.0**
TRF	**Thorofare Moun**	**3.98**	**19**	IAML		19 27 52.2	
	comp=E,39nm,3.5s						
KTH	**Kantishna Hill**	**3.98**	**15**		**Pn**	**19 26 59.2**	**-1.7**
KLU	**Klutina**	**4.00**	**61**		**Pn**	**19 27 01.2**	**-0.1**
CHUM	**Lake Minchumin**	**4.18**	**6**	P	**Pn**	**19 27 04.3**	**+0.8**
	baz=187,SNR=5.2						
CHUM	**Lake Minchumin**	**4.18**	**6**		**Pn**	**19 27 03.9**	**+0.4**
M24K	**Tolsona, Glenn**	**4.18**	**52**	P	**Pn**	**19 27 04.2**	**+0.6**
	baz=239,SNR=6.7						
M24K	**Tolsona, Glenn**	**4.18**	**52**		**Pn**	**19 27 04.1**	**+0.6**
M24K	**Tolsona, Glenn**	**4.18**	**52**	IAML		19 27 53.5	
	comp=N,53nm,1.1s						
RND	**Reindeer**	**4.23**	**28**		**Pn**	**19 27 04.2**	**0.0**
GOAT	**Goat Mountain**	**4.33**	**75**		**Pn**	**19 27 06.4**	**+0.8**
PS12	**TAPS Pump St12**	**4.34**	**63**		**Pn**	**19 27 06.8**	**+1.1**
PS11	**TAPS Pump St11**	**4.45**	**55**		**Pn**	**19 27 07.1**	**0.0**
BMRM	**Bremner River**	**4.45**	**70**		**Pn**	**19 27 07.6**	**+0.3**
MCK	**McKinley**	**4.49**	**25**		**Pn**	**19 27 07.7**	**0.0**
BPAW	**Bear Paw Mtn.**	**4.50**	**13**		**Pn**	**19 27 07.7**	**-0.1**
N25K	**Chitina, Valde**	**4.64**	**63**	P	**Pn**	**19 27 11.5**	**+1.8**
	baz=250,SNR=7.3						
N25K	**Chitina, Valde**	**4.64**	**63**		**Pn**	**19 27 10.9**	**+1.2**
N25K	**Chitina, Valde**	**4.64**	**63**	IAML		19 28 03.8	
	comp=E,43nm,0.4s						
BWN	**Browne**	**4.79**	**20**		**Pn**	**19 27 11.9**	**+0.3**
BWN				IAML		19 28 41.2	
	comp=E,44nm,4.2s						
BWN				IAML		19 30 04.9	
	comp=N,35nm,3.1s						
BERG	**Berg Lake**	**4.82**	**78**		**Pn**	**19 27 12.7**	**+0.7**
PAX	**Paxson**	**4.94**	**46**		**Pn**	**19 27 13.9**	**+0.2**
GLB	**Gilahina Butte**	**4.94**	**66**		**Pn**	**19 27 14.5**	**+0.7**
GLB	**Gilahina Butte**	**4.94**	**66**	IAML		19 28 10.6	
	comp=E,25nm,0.5s						
VRDI	**Verde Repeater**	**5.06**	**69**		**Pn**	**19 27 16.1**	**+0.7**
VRDI	**Verde Repeater**	**5.06**	**69**	IAML		19 28 12.4	
	comp=E,27nm,0.4s						
NEA2	**Nenana**	**5.24**	**20**	P	**Pn**	**19 27 17.4**	**-0.3**
	baz=204,SNR=7.4						
NEA2	**Nenana**	**5.24**	**20**		**Pn**	**19 27 17.4**	**-0.3**
MCARA	**McCarthy VSAT**	**5.29**	**68**		**Pn**	**19 27 19.5**	**+1.1**
WRH	**Wood River Hil**	**5.32**	**25**		**Pn**	**19 27 18.3**	**-0.4**
MLY	**Manley**	**5.43**	**11**	P	**Pn**	**19 27 21.0**	**+0.7**
	baz=194,SNR=5.6						
MLY	**Manley**	**5.43**	**11**		**Pn**	**19 27 20.1**	**-0.2**
PTPK	**Patty Peak**	**5.52**	**70**		**Pn**	**19 27 22.9**	**+1.3**
KIAG	**Kiagna River**	**5.53**	**73**		**Pn**	**19 27 22.8**	**+1.1**
HDA	**Harding Lake**	**5.53**	**30**	P	**Pn**	**19 27 21.1**	**-0.5**
	baz=215,SNR=5.7						
HDA	**Harding Lake**	**5.53**	**30**		**Pn**	**19 27 21.2**	**-0.4**
CCB	**Clear Creek Bu**	**5.54**	**25**		**Pn**	**19 27 20.8**	**-0.8**
BALM	**Baldy**	**5.55**	**72**		**Pn**	**19 27 22.8**	**+0.9**
PS08	**TAPS Pump Stn8**	**5.67**	**29**		**Pn**	**19 27 22.9**	**-0.5**
I23K	**Minto, Yukon-K**	**5.71**	**17**	P	**Pn**	**19 27 24.0**	**0.0**
	baz=200,SNR=6.3						
I23K	**Minto, Yukon-K**	**5.71**	**17**		**Pn**	**19 27 23.5**	**-0.5**
TCOL	**CIGO, UAF Yank**	**5.72**	**24**	P	**Pn**	**19 27 23.9**	**-0.2**
	baz=208,SNR=6.0						
TCOL	**CIGO, UAF Yank**	**5.72**	**24**		**Pn**	**19 27 24.0**	**-0.2**
COLA	**College**	**5.72**	**24**		**Pn**	**19 27 23.7**	**-0.4**
MDM	**Murphy Dome**	**5.73**	**22**		**Pn**	**19 27 24.0**	**-0.2**
GRNC	**Granite Creek**	**5.80**	**75**		**Pn**	**19 27 26.4**	**+0.9**
IL31		**5.85**	**28**		**Pn**	**19 27 25.3**	**-0.5**
ILAR	**Eielson Array**	**5.85**	**28**	P	**Pn**	**19 27 25.1**	**-0.7**
	comp=E,1.6nm,0.3s,baz=216,slow=14,SNR=126						
ILAR				S	**Sn**	**19 28 29.1**	**-2.6**
	comp=E,1.3nm,0.3s,baz=210,slow=26,SNR=11						
ILAR	**Eielson Array**	**5.85**	**28**		**Pn**	**19 27 24.5**	**-1.3**
BARN	**Barnard Glacie**	**5.88**	**72**		**Pn**	**19 27 27.6**	**+1.1**
POKR	**Poker Plat Res**	**6.03**	**24**	P	**Pn**	**19 27 28.4**	**+0.2**
	baz=209,SNR=5.8						
POKR	**Poker Plat Res**	**6.03**	**24**		**Pn**	**19 27 27.9**	**-0.3**
CTGM	**Chitina Glacie**	**6.03**	**73**		**Pn**	**19 27 29.7**	**+1.3**
SCRK	**Sand Creek**	**6.09**	**42**		**Pn**	**19 27 28.5**	**-0.7**
LOGN	**Logan Glacier**	**6.18**	**75**		**Pn**	**19 27 31.4**	**+0.9**
IM03		**6.27**	**358**		**Pn**	**19 27 32.1**	**+0.7**
IMAR	**Indian Mountai**	**6.27**	**358**		**Pn**	**19 27 32.0**	**+0.6**
PS06	**TAPS Pump Stn6**	**6.34**	**13**		**Pn**	**19 27 32.7**	**+0.3**
YUK2	**White River**	**6.40**	**66**		**Pn**	**19 27 34.7**	**+1.3**
BC03		**6.42**	**54**		**Pn**	**19 27 34.3**	**+0.8**
BCAR	**Beaver Creek A**	**6.42**	**54**	Pn	**Pn**	**19 27 34.1**	**+0.5**
YUK3	**Moose Creek**	**6.58**	**66**		**Pn**	**19 27 37.4**	**+1.6**
PRP	**Porcupine Dome**	**6.79**	**28**	P	**Pn**	**19 27 40.0**	**+1.4**
	baz=215,SNR=5.6						
PRP	**Porcupine Dome**	**6.79**	**28**		**Pn**	**19 27 38.3**	**-0.3**
RES	**Resolute Bay**	**25.58**	**32**	P	**P**	**19 31 14.2**	**-3.8**
	comp=E,1.2nm,0.3s,baz=269,slow=16,SNR=17						
RES				LR	LR	19 41 27.4	
	comp=E,44nm,19.5s,baz=129,slow=36						
SONM	**Songino Array**	**54.85**	**306**	P	**P**	**19 35 20.0**	**+1.9**
	comp=E,0.4nm,0.5s,baz=47,slow=4.5,SNR=6.6						
ZALV	**Zalesovo Beam**	**57.51**	**324**	P	**P**	**19 35 37.9**	**+1.1**
	comp=E,0.7nm,0.5s,baz=40,slow=5.8,SNR=4.7						
MKAR	**Makanchi Array**	**64.56**	**321**	P	**P**	**19 36 25.1**	**+0.7**
	comp=E,0.1nm,0.4s,baz=34,slow=10,SNR=2.3						

IDC 22 19:33:09.8±3.3**, 28°.36S**×**63°.00E, h0**^{km}**, mb3.7**/3**, mb1 4.0**/3**, mb1mx3.5**/40**, mbtmp3.7**/3**, Error ellipse: s-maj=94.0km s-min=47.7km az=57.0, Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**58.09**	**41**	P	P	19 43 05.0	-0.2
	0.9nm,0.7s,baz=228,slow=7.6,SNR=13						
ASAR	**Alice Springs**	**63.06**	**104**	P	P	19 43 39.4	+0.1
	0.7nm,0.8s,baz=241,slow=6.4,SNR=7.2						
WRA	**Warramunga Arr**	**64.82**	**100**	P	P	19 43 50.8	-0.1
	0.6nm,0.9s,baz=247,slow=5.5,SNR=2.5						
YKA	**Yellowknife Ar**	**145.83**	**358**	PKPbc	PKPdf	19 52 49.5	-0.2
	0.2nm,0.6s,baz=352,slow=3.3,SNR=4.2						

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*BJI **22** 19:43:30.9±0.0, 39°.72N×143°.26E, h11^{km}, mB5.1/65, mb5.1/85, Ms5.0/85, Ms7 4.8/78*

*IDC **22** 19:43:31.6±0.5, 39°.79N×143°.40E, h0^{km}, mb4.8/25, mb1 4.9/32, mb1mx4.9/38, mbtmp4.8/32, ML4.1/6, MS4.4/32, Ms1 4.4/32, ms1mx4.2/46, Error ellipse: s-maj=13.9km s-min=11.9km az=109.0*

*NIED **22** 19:43:31.6, 39°.85N×143°.55E, h18^{km}, MW5.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.14; M$_{\theta\theta}$0.16; M$_{\phi\phi}$-2.30; M$_{r\theta}$1.18; M$_{\theta\phi}$-1.11; M$_{\phi r}$1.50; Fault plane solution: M$_0$3.11000×10^{16} NP1:φ$_s$33.00000°, δ65.00000°, λ103.00000°. NP2:φ$_s$185.00000°, δ28.00000°, λ65.00000°.*

*JMA **22** 19:43:31.6±0.2, 39°.85N×143°.55E, h18^{km}±4^{km}, M5.1*

JMA Felt II J1.

*NEIC **22** 19:43:32.7±1.3, 39°.76N±0°.06×143°.28E±0°.09, h10^{km}±1^{km}, mb5.1/104, Error ellipse: s-maj=12.4km s-min=8.2km az=121.0*

*MOS **22** 19:43:35.4±1.0, 39°.92N×143°.28E, h33^{km}, mb5.4/57, MS4.3/10, Error ellipse: s-maj=6.1km s-min=3.7km az=104.7*

*GCMT **22** 19:43:39.7±0.3, 39°.88N±0°.02×143°.51E±0°.03, h31^{km}±1^{km}, MW5.0/89, Moment Tensor Solution. s39,c50; s89,c134; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.43±.16; M$_{\theta\theta}$-0.03±.10; M$_{\phi\phi}$-2.41±.10; M$_{r\theta}$1.73±.15; M$_{\theta\phi}$-0.78±.06; M$_{\phi r}$2.25±.13; Best double couple: M$_0$3.81000×10^{16} NP1:φ$_s$181.00000°, δ23.00000°, λ61.00000°. NP2: φ$_s$32.00000°, δ70.00000°, λ102.00000°. Principal axes: T 3.8070, Plg63.0000°, Azm321.0000°; N 0.0010, Plg11.0000°, Azm208.0000°; P -3.8130, Plg24.0000°, Azm113.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BGR **22** 19:43:47.3±0.0, 41°.02N×142°.93E, h47^{km}, mb5.0*

ISC 22 19:43:32.9±0.6**, 39°.78N**±0°.03×**143°.38E**±0°.03**, h10**^{km}±3^{km}**, n658, σ1ˢ.40**/690**, mb5.2**/212**, MS4.6**/52**, 84C-30D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTH	**Tanohata**	**1.17**	**278**	⇑P	**Pn**	**19 43 54.9**	**-0.4**
JTH				*e*S	**Sn**	**19 44 11.8**	**+0.5**

MIYJ	Miyakonagasawa	1.22	261	⇑P	Pg	19 43 56.0	-0.3
MIYJ				*e*S	Sn	19 44 13.5	+1.1
JKEN	Kujiedanarisaw	1.35	289	⇑P	Pn	19 43 57.0	-0.7
JKEN				*e*S	Sg	19 44 15.5	-0.7
JANG	Nango	1.54	293	⇑P	Pn	19 44 00.0	-0.4
JANG				*e*S	Sb	19 44 20.6	-0.5
JOM	Ohasama	1.64	260	⇑P	Pb	19 44 02.7	-0.4
JOM				*e*S	Sg	19 44 25.6	+0.1
JMK	Ichinoseki	1.86	244	⇑P	Pn	19 44 05.3	+0.5
JMK				*e*S	Sb	19 44 30.3	-0.1
JTM	Tenmabayashi	2.03	300	⇑P	Pn	19 44 07.6	+0.5
JTM				*e*S	Sb	19 44 33.7	-1.4
JTM	Tenmabayashi	2.03	300	Pn	Pn	19 44 07.7	+0.5
ERM	Erimo	2.23	356	*ce*P	Pn	19 44 09.5	-0.4
ERM	Erimo	2.23	356	Pn	Pn	19 44 09.0	-0.9
JEM	Erimo	2.24	356	P	Pn	19 44 11.0	+1.1
JEM				*e*S	Sn	19 44 36.3	-1.2
JOT	Ohata	2.38	313	P	Pn	19 44 12.4	+0.4
JOT				*e*S	Sb	19 44 42.6	-2.7
JYK	Kaneyama	2.49	251	⇑P	Pn	19 44 14.6	+1.1
JYK				*e*S	Sb	19 44 46.4	-2.0
JNBK	Urakawa-nobuka	2.54	350	P	Pn	19 44 14.5	+0.4
JNBK				*e*S	Sn	19 44 43.8	-1.2
JKB	Kayabe	2.75	321	P	Pn	19 44 18.6	+1.6
JKB				*e*S	Sb	19 44 53.3	-2.6
JMM	Marumori	2.78	227		Pn	19 44 16.7	-0.7
JCH	Churui	2.83	360	P	Pn	19 44 18.0	-0.1
JCH				*e*S	Sn	19 44 50.3	-1.9
JAK	Akkeshi	3.36	17	P	Pn	19 44 24.6	-0.8
JAK				*e*S	Sn	19 45 02.6	-2.7
JEW	Eniwo	3.38	335	Pn	Pn	19 44 25.9	+0.3
NMR	Nemuro--Hokkai	3.99	25	⇑*i*P	Pn	19 44 32.7	-1.4
NMR				*i* S	Sn	19 45 15.1	-5.8
GLVR	Golovnino	4.26	21	*e*P	Pn	19 44 37.0	-0.8
GLVR				*e*S	Sn	19 45 22.8	-4.8
GLVR				pmax	pmax		
	comp=Z,657nm,0.8s						
GLVR				pmax	pmax		
	comp=N,248nm,0.3s						
GLVR				pmax	pmax		
	comp=E,351nm,0.3s						
GLVR				smax	smax		
	comp=E,2µm,0.3s						
GLVR				smax	smax		
	comp=N,4µm,0.4s						
GLVR				MLR	MLR		
	comp=Z,14µm,16.0s						
JYT	Yasato	4.35	216	Pn	Pn	19 44 37.1	-1.9
JSD	Sado	4.35	248	Pn	Pn	19 44 39.1	+0.1
ASAJ	Asahikawa	4.37	353	Pn	Pn	19 44 40.3	+1.0
	comp=Z,16nm,0.3s,baz=210,slow=15,SNR=139						
ASAJ				Sn	Sn	19 45 31.5	+1.3
	comp=Z,16nm,0.3s,baz=166,slow=20,SNR=4.7						
JKA	Kamikawa-asahi	4.37	353	Pn	Pn	19 44 39.1	-0.2
RUSJ	Misakicho	4.54	17	⇓*i*P	Pn	19 44 41.2	-0.3
RUSJ				*e*S	Sn	19 45 31.9	-2.4
GRPR	Tuman	4.57	22	*e*P	Pn	19 44 40.8	-1.2
GRPR				*e*S	Sn	19 45 29.2	-5.9
GRPR				pmax	pmax		
	comp=Z,665nm,0.4s						
GRPR				pmax	pmax		
	comp=N,333nm,0.3s						
GRPR				pmax	pmax		
	comp=E,263nm,0.4s						
GRPR				smax	smax		
	comp=N,6µm,0.4s						
GRPR				smax	smax		
	comp=E,4µm,0.4s						
GRPR				MLR	MLR		
	comp=Z,2µm,11.0s						
YUK	Yuzh-Kuril'sk	4.63	23	*i* P	Pn	19 44 42.2	-0.7
YUK				*i* S	Sn	19 45 30.6	-6.1
YUK				pmax	pmax		
	comp=Z,657nm,0.2s						
YUK				pmax	pmax		
	comp=N,85nm,0.3s						
YUK				smax	smax		
	comp=E,5µm,0.5s						
YUK				smax	smax		
	comp=N,2µm,0.4s						
YUK				MLR	MLR		
	comp=Z,2µm,14.0s						
MAJO	Matsushiro	5.20	233	*c i*P	Pn	19 44 52.2	+1.5
MAJO	Matsushiro	5.20	233	Pn	Pn	19 44 51.6	+0.9
MAT	Matsushiro	5.20	233	P	Pn	19 44 52.5	+1.8
MAT				*e*S	Sn	19 45 51.4	+0.7
MJAR	Matsushiro Arr	5.20	233	Pn	Pn	19 44 52.5	+1.8
	comp=Z,2.3nm,0.3s,baz=36,slow=12,SNR=177						
MJAR				LR	LR	19 47 05.7	
	comp=Z,3µm,19.0s,baz=45,slow=41						
JGF	Kuroka	6.34	231		Pn	19 45 05.3	-1.1
KUR	Kuril'sk	6.38	30	*e*P	Pn	19 45 06.6	-0.2
KUR				*e*S	Sn	19 46 14.5	-5.1
KUR				pmax	pmax		
	comp=Z,301nm,0.5s						
KUR				pmax	pmax		
	comp=E,114nm,0.4s						
KUR				pmax	pmax		
	comp=N,91nm,0.3s						
KUR				pmax	pmax		
	comp=Z,1µm,1.9s						
KUR				smax	smax		
	comp=E,890nm,0.4s						
KUR				smax	smax		
	comp=N,508nm,0.5s						
KUR				smax	smax		
	comp=N,2µm,3.4s						
KUR				smax	smax		
	comp=E,2µm,3.8s						
KUR				MLR	MLR		
	comp=Z,2µm,15.0s						
KUR				MLR	MLR		
	comp=E,2µm,11.0s						
INU	Inuyama	6.71	231	Pn	Pn	19 45 11.3	-0.1
YSS	Yuzh-Sakhalins	7.18	357	*e*P	Pn	19 45 19.3	+1.5
YSS				*e*S	Sn	19 46 35.4	-4.0
YSS				pmax	pmax		
	comp=Z,100nm,0.9s						
YSS				MLR	MLR		
	comp=N,3µm,13.0s						
YSS				MLR	MLR		
	comp=Z,5µm,13.0s						
YSS	Yuzh-Sakhalins	7.18	357	Pn	Pn	19 45 18.7	+0.8
JHJ2	Mitsune	7.25	204	Pn	Pn	19 45 19.0	+0.2
JHJ	Hachijo jima 2	7.25	205	Pn	Pn	19 45 19.7	+0.9
	comp=Z,44nm,0.3s,baz=56,slow=9.7,SNR=5.5						
JHJ				Sn	Sn	19 46 32.7	-8.5
	comp=Z,29nm,0.3s,baz=39,slow=8.6,SNR=1.8						
JHJ				LR	LR	19 48 15.8	
	comp=Z,1µm,19.7s,baz=108,slow=39						
TEY	Ternei	7.25	319	⇑*e*P	Pn	19 45 22.1	+3.3
TEY				pmax	pmax		
	comp=E,120nm,0.8s						
TEY				pmax	pmax		
	comp=N,130nm,0.7s						
TEY				pmax	pmax		
	comp=Z,170nm,0.8s						
TEY				MLR	MLR		
	comp=E,200nm,14.0s						
TEY				MLR	MLR		
	comp=N,200nm,18.0s						
TEY				MLR	MLR		
	comp=Z,400nm,11.0s						
JWT	Wachi	7.76	237		Pn	19 45 28.4	+2.5
UGL	Uglegorsk	9.34	355	*e*P	Pn	19 45 46.7	-0.7
UGL				S	Sn	19 47 27.3	-5.1
UGL				pmax	pmax		
	comp=Z,121nm,1.0s						
UGL				smax	smax		
	comp=E,101nm,0.8s						
UGL				smax	smax		
	comp=N,100nm,1.2s						
UGL				MLR	MLR		
	comp=Z,4µm,16.0s						
UGL				MLR	MLR		
	comp=N,8µm,20.0s						
JHS	Saijyo	9.46	243		Pn	19 45 49.4	+0.3
USA0B	Ussuriysk Arra	9.55	301	*de*P	Pn	19 45 51.4	+1.0
USA0B	Ussuriysk Arra	9.55	301		Pn	19 45 51.1	+0.7
USRK	Ussuriysk Ar.	9.55	301	Pn	Pn	19 45 52.5	+2.1
	baz=109,slow=9.0,SNR=85						
USRK				LR	LR	19 49 34.0	
	comp=N,3µm,18.2s,baz=90,slow=38						
USRK	Ussuriysk Ar.	9.55	301	P	Pn	19 45 51.5	+1.1
USRK	Ussuriysk Ar.	9.55	301		Pn	19 45 51.5	+1.1
MSHR	Mys Shultsa	9.63	291	⇓*e*P	Pn	19 45 56.4	+5.0
MSHR				pmax	pmax		
	comp=Z,62nm,0.9s						
TYV	Tymovskoe	11.09	358	*e*P	Pn	19 46 11.5	+0.1
TYV				*e*S	Sn	19 48 17.7	+2.3
TYV				pmax	pmax		
	comp=Z,300nm,3.6s						
TYV				pmax	pmax		
	comp=Z,34nm,0.7s						
TYV				smax	smax		
	comp=E,15nm,0.9s						
TYV				MLR	MLR		
	comp=Z,4µm,16.0s						
TYV				MLR	MLR		
	comp=E,2µm,16.0s						
MDJ	Mudanjiang	11.30	300	P	Pn	19 46 16.8	+2.5
MDJ				pP		19 46 19.3	
MDJ				sP		19 46 20.5	
MDJ				PP	PnPn	19 46 24.5	+2.5
MDJ				S	Sn	19 48 20.0	-0.6
MDJ				SS	SnSn	19 48 31.8	-0.6
MDJ				pmax	pmax		
	comp=E,42nm,0.9s						
MDJ				pmax	pmax		
	comp=E,510nm,13.3s						
MDJ				LR	LR		
	comp=E,3µm,12.4s						
MDJ				LR	LR		
	comp=E,4µm,18.6s						
MDJ				LR	LR		
	comp=E,5µm,18.1s						
MDJ	Mudanjiang	11.30	300		Pn	19 46 14.1	-0.3
GRNR	Gornyy	12.02	338	⇓*i*P	Pn	19 46 25.2	+1.1
GRNR				*e*S	Sn	19 48 42.5	+4.3
GRNR				pmax	pmax		
	comp=E,20nm,1.0s						
GRNR				pmax	pmax		
	comp=N,40nm,0.9s						
GRNR				pmax	pmax		
	comp=Z,40nm,1.0s						
GRNR				smax	smax		
	comp=N,3.0nm,0.6s						
GRNR				MLR	MLR		
	comp=N,930nm,17.0s						
GRNR				MLR	MLR		
	comp=E,2µm,17.0s						
GRNR				MLR	MLR		
	comp=Z,2µm,15.0s						
JNU	Nakatsue	12.05	240		Pn	19 46 22.2	-2.4
KSRS	Korea Array	12.31	264	Pn	Pn	19 46 30.3	+2.2
	comp=Z,0.6nm,0.3s,baz=85,slow=13,SNR=30						
KSRS				Sn	Sn	19 48 54.7	+9.4
	comp=Z,0.3nm,0.3s,baz=73,slow=22,SNR=4.5						
KSRS				LR	LR	19 50 56.9	
	comp=Z,3µm,18.3s,baz=76,slow=36						
KS19	Wonju Array Si	12.34	264		Pn	19 46 27.3	-1.3
KSAR	Wonju Array Be	12.34	264	P	Pn	19 46 28.0	-0.6
KSAR	Wonju Array Be	12.34	264		Pn	19 46 28.0	-0.6
KLR	Kul'dur	12.56	323	Pn	Pn	19 46 32.3	+0.9
	comp=Z,0.9nm,0.3s,baz=131,slow=13,SNR=26						
KLR				LR	LR	19 51 34.3	
	comp=Z,3µm,20.4s,baz=137,slow=38						
KLR	Kul'dur	12.56	323	*c i*P	Pn	19 46 31.5	0.0
JCJ	Chichijima	12.69	185	LR	LR	19 51 13.2	
	comp=Z,281nm,21.9s,baz=9.0,slow=36						
TJN	Taejon	13.06	260	⇓*e*P	Pn	19 46 39.4	+1.0
CN2	Changchun	13.96	293	*e*P	Pn	19 46 52.8	+2.1
CN2				*e*sP	P	19 47 00.0	+1.2
CN2				*e*S	Sn	19 49 29.0	+3.4
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=Z,2µm,15.0s						
CN2				LR	LR		
	comp=Z,2µm,15.0s						
CN2				LR	LR		
	comp=Z,3µm,17.0s						
SNY	Shenyang	15.13	284	⇑P	Pn	19 47 08.3	+1.7
SNY				S	Sn	19 49 54.3	+0.2
SNY				pmax	pmax		
	comp=Z,16nm,0.8s						
SNY				pmax	pmax		
	comp=Z,320nm,7.8s						
SNY				LR	LR		
	comp=Z,1µm,14.7s						
SNY				LR	LR		
	comp=Z,3µm,17.2s						
SNY				LR	LR		
	comp=Z,4µm,17.1s						
PEA0B	Petropavlovsk-	16.54	32	P	Pn	19 47 25.7	+0.9
PEA0B				pmax	pmax		
	comp=Z,34nm,1.0s						
PEA0B	Petropavlovsk-	16.54	32	Pn	Pn	19 47 25.7	+0.9
PETK	Petropavlovsk-	16.54	32	Pn	Pn	19 47 22.8	-2.0
	comp=Z,0.1nm,0.3s,baz=202,slow=6.9,SNR=4.6						
PETK				LR	LR	19 54 50.2	
	comp=Z,729nm,18.6s,baz=215,slow=41						
PETK	Petropavlovsk-	16.54	32		Pn	19 47 22.6	-2.1
DL2	Dalian	16.84	274	P	Pn	19 47 28.3	-0.4
DL2				*e*S	Sn	19 50 38.8	+3.0
DL2				pmax	pmax		
	comp=Z,71nm,1.1s						
DL2				pmax	pmax		
	comp=Z,450nm,5.1s						
DL2				LR	LR		
	comp=Z,800nm,15.6s						
DL2				LR	LR		
	comp=Z,1µm,16.4s						
DL2				LR	LR		
	comp=Z,2µm,16.8s						
PET	Petropavlovsk	16.87	33	*e*P	P	19 47 31.9	+0.9
PET				*e*S	Sn	19 50 35.3	-1.0
PET				pmax	pmax		
	comp=Z,36nm,0.3s						
PET				MLR	MLR		
	comp=Z,1µm,16.0s						
PET				MLR	MLR		
	comp=Z,1µm,13.0s						
PET	Petropavlovsk	16.87	33	P	P	19 47 31.4	+0.4
ZEA	Zeya	17.74	327	*e*P	Pn	19 47 37.0	-2.7
ZEA				pmax	pmax		
	comp=N,70nm,0.8s						
ZEA				pmax	pmax		
	comp=E,50nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,100nm,0.8s						
ZEA				MLR	MLR		
	comp=E,1µm,15.0s						
ZEA				MLR	MLR		
	comp=Z,1µm,16.0s						
SSE	Sheshan	20.01	251	P	P	19 48 06.0	+0.4
SSE				S	S	19 51 48.8	-1.8
SSE				pmax	pmax		
	comp=Z,16nm,1.1s						
SSE				pmax	pmax		
	comp=Z,190nm,7.4s						
SSE				LR	LR		
	comp=Z,640nm,16.0s						
SSE				LR	LR		
	comp=Z,370nm,14.0s						
MA2	Magadan	20.36	11	LR	LR	19 56 41.3	
	comp=Z,467nm,18.8s,baz=196,slow=39						
MA2	Magadan	20.36	11	*de*P	P	19 48 09.7	+0.5
MA2				pmax	pmax		
	comp=Z,111nm,0.8s						
MA2	Magadan	20.36	11	P	P	19 48 09.2	0.0
MA2				IAmb	IAmb	19 48 11.3	
	comp=Z,110nm,0.8s						
BJI	Beijing	20.84	279	P	P	19 48 12.3	-2.3
BJI				S	S	19 52 04.5	-2.4
BJI				pmax	pmax		
	comp=Z,40nm,0.8s						
BJI				LR	LR		
	comp=Z,340nm,9.8s						
BJI				LR	LR		
	comp=Z,2µm,17.7s						
BJI				LR	LR		
	comp=Z,930nm,19.4s						
BJT	Baijiatuau	20.85	279	P	P	19 48 12.4	-2.3
BJT				pmax	pmax		
	comp=Z,33nm,0.9s						
BJT	Baijiatuau	20.85	279	P	P	19 48 12.4	-2.3
TIA	Tai'an	20.97	269	P	P	19 48 14.4	-1.6
TIA				pmax	pmax		
	comp=Z,100nm,1.0s						
TIA				pmax	pmax		
	comp=Z,250nm,3.7s						
TIA				LR	LR		
	comp=Z,1µm,13.8s						
TIA				LR	LR		
	comp=Z,3µm,15.3s						
TIA				LR	LR		
	comp=Z,4µm,14.1s						
NJ2	Nanjing	21.26	256	⇓P	P	19 48 17.3	-1.9
NJ2				pP	pP	19 48 21.5	-0.1
NJ2				sP	pwP	19 48 24.1	0.0
NJ2				pmax	pmax		
	comp=Z,14nm,1.3s						
NJ2				LR	LR		
	comp=Z,2µm,14.2s						
NJ2				LR	LR		
	comp=Z,1µm,15.2s						
NJ2				LR	LR		
	comp=Z,2µm,17.1s						
YAK	Yakutsk	23.79	344	P	P	19 48 43.7	-1.6
	comp=Z,69nm,0.7s,baz=349,slow=0.9,SNR=45						
YAK				LR	LR	19 58 24.7	
	comp=Z,681nm,21.8s,baz=148,slow=38						
YAK	Yakutsk	23.79	344	*c i*P	P	19 48 43.0	-2.3
YAK				*e**PP	sP	19 48 49.0	+0.2
YAK				*e*PPP	PPP	19 49 15.5	
YAK				*e*		19 52 26.9	
YAK				*e*S	S	19 52 57.3	-3.3
YAK				*e*		19 59 49.6	
YAK				pmax	pmax		
	comp=Z,104nm,0.8s						
YAK				pmax	pmax		
	comp=N,15nm,1.0s						
YAK				pmax	pmax		
	comp=E,6.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,64nm,0.9s						
YAK				pmax	pmax		
	comp=N,47nm,0.9s						
YAK				pmax	pmax		
	comp=E,44nm,1.2s						
YAK				smax	smax		
	comp=N,171nm,2.3s						
YAK				smax	smax		
	comp=E,133nm,2.9s						
YAK				MLR	MLR		
	comp=Z,979nm,15.0s						
YAK				MLR	MLR		
	comp=E,471nm,13.0s						
YAK				MLR	MLR		
	comp=N,654nm,14.0s						
YAK	Yakutsk	23.79	344	P	P	19 48 42.3	-3.1
SEY	Seymchan	23.81	10	P	P	19 48 44.5	-1.0
	comp=N,100nm,1.0s,baz=188,slow=8.0,SNR=90						
SEY	Seymchan	23.81	10	⇑*e*P	P	19 48 45.9	+0.4
CIT	Chita	23.91	311	*e*P	P	19 48 44.3	-2.4
CIT				*e*		19 48 50.5	
CIT				*e*		19 49 16.3	
CIT				*e*		19 49 26.8	
CIT				pmax	pmax		
	comp=Z,252nm,1.7s						
NACB	Ninganchiao	24.06	236	P	P	19 48 44.9	-3.4
NACB				IAmb	IAmb	19 48 47.3	
	comp=Z,34nm,0.8s						
HHC	Hu-ho-hao-te	24.21	283	*e*P	P	19 48 47.3	-2.4
HHC				sP	pwP	19 48 56.5	+1.6
HHC				pmax	pmax		
	comp=Z,20nm,1.0s						
HHC				pmax	pmax		
	comp=Z,170nm,8.5s						
HHC				LR	LR		
	comp=Z,630nm,11.4s						
HHC				LR	LR		
	comp=Z,3µm,18.0s						
HHC				LR	LR		
	comp=Z,3µm,16.3s						
SSLB	Suanglung	24.75	237	P	P	19 48 52.9	-1.7
SSLB				IAmb	IAmb	19 49 12.3	
	comp=Z,54nm,1.0s						
YULB	Yu-li	24.81	235	P	P	19 48 54.1	-1.1
YULB				IAmb	IAmb	19 49 12.0	
	comp=Z,40nm,0.8s						
TPUB	Ta-pu	25.30	236	P	P	19 48 57.9	-1.7
TPUB				IAmb	IAmb	19 49 24.3	
	comp=Z,62nm,1.0s						
WHN	Wuhan	25.37	258	⇑*i*P	P	19 49 00.1	0.0
WHN				S	S	19 53 22.1	-4.3
WHN				pmax	pmax		
	comp=Z,270nm,0.8s						
WHN				LR	LR		
	comp=Z,3µm,14.2s						
WHN				LR	LR		
	comp=Z,2µm,16.8s						
WHN				LR	LR		
	comp=Z,4µm,18.1s						
TWG	Pinlang	25.37	235	P	P	19 48 59.5	-0.6
BTO	Baotou	25.41	283	*e*P	P	19 49 00.0	-0.6
QZH	Quanzhou	25.52	242	*e*P	P	19 49 01.5	0.0
QZH				S	S	19 53 32.5	+3.5
QZH				LR	LR		
	comp=Z,930nm,15.2s						
QZH				LR	LR		
	comp=Z,480nm,12.8s						
QZH				LR	LR		
	comp=Z,880nm,14.3s						
GUMO	Guam	26.13	177	LR	LR	19 58 15.4	
	comp=Z,423nm,20.4s,baz=322,slow=34						
BOD	Bodaibo	26.13	323	*e*P	P	19 49 06.5	-0.3
BOD				pmax	pmax		
	comp=Z,109nm,0.9s						
ULN	Ulaanbaatar	27.22	299	*c i*P	P	19 49 17.4	+0.5
ULN				pmax	pmax		
	comp=Z,96nm,1.3s						
ULN	Ulaanbaatar	27.22	299	P	P	19 49 17.0	+0.1
SONM	Songino Array	27.66	299	P	P	19 49 21.5	+0.6
	comp=Z,36nm,0.9s,baz=90,slow=8.6,SNR=229						
SONM				LR	LR	20 00 59.6	
	comp=Z,2µm,18.8s,baz=102,slow=38						
SONM	Songino Array	27.66	299	P	P	19 49 21.1	+0.3
SONM				pmax	pmax		
	comp=Z,31nm,1.0s						
SONM	Songino Array	27.66	299	P	P	19 49 21.1	+0.3
SONM				IAmb	IAmb	19 49 22.2	
	comp=Z,31nm,1.0s						
XAN	Xi'an	28.02	269	P	P	19 49 23.5	-0.6
XAN				pmax	pmax		
	comp=Z,33nm,0.9s						
XAN	Xi'an	28.02	269	P	P	19 49 23.5	-0.6
XAN				IAmb	IAmb	19 49 25.6	
	comp=Z,33nm,0.9s						
H11N2	WAKE ISLAND Hy	28.42	128	T	T	20 20 34.5	
	baz=318,slow=75,SNR=70						
H11N1	WAKE ISLAND Hy	28.43	128	T	T	20 20 35.6	
	baz=318,slow=75,SNR=359						
H11N3	WAKE ISLAND Hy	28.44	128	T	T	20 20 29.8	
	baz=318,slow=75,SNR=519						
IRK	Irkutsk	29.51	308	*e*P	P	19 49 35.4	-1.7
IRK				pmax	pmax		
	comp=Z,44nm,2.8s						
TLY	Talaya	29.81	307	P	P	19 49 40.7	+1.0
	comp=Z,7.9nm,0.6s,baz=97,slow=4.8,SNR=8.0						
TLY				LR	LR	20 02 18.9	
	comp=Z,734nm,18.4s,baz=93,slow=38						
TLY	Talaya	29.81	307	*e*P	P	19 49 40.8	+1.0
TLY				*e*		19 50 47.0	
TLY				pmax	pmax		
	comp=Z,54nm,1.1s						
TLY				MLR	MLR		
	comp=Z,2µm,12.0s						
ZAK	Zakamensk	29.89	304	*e*P	P	19 49 40.5	-0.1
ZAK				pmax	pmax		
	comp=Z,24nm,1.3s						
ZAK				pmax	pmax		
	comp=Z,15nm,1.3s						
LZH	Lanzhou	31.22	276	⇓P	P	19 49 52.8	+0.2
LZH				pP	sP	19 49 56.8	+0.6
LZH				sP	pwP	19 49 59.9	+2.1
LZH				PP	PnPn	19 50 54.8	+0.5
LZH				sS	sS	19 55 11.4	+8.2
LZH				pmax	pmax		
	comp=Z,57nm,1.0s						
LZH				LR	LR		
	comp=Z,840nm,13.6s						
LZH				LR	LR		
	comp=Z,2µm,13.6s						

LZH				LR	LR		
	comp=Z,2µm,13.6s						
MOY	**Mondy**	**31.44**	**306**	eP	**P**	**19 49 54.2**	**-0.1**
MOY				pmax	pmax		
	comp=Z,43nm,1.4s						
TIXI	**Tiksi**	**32.77**	**352**	⇑eP	**P**	**19 50 05.0**	**-0.6**
TIXI				pmax	pmax		
	comp=Z,55nm,1.7s						
TIXI	**Tiksi**	**32.77**	**352**	P	**P**	**19 50 04.8**	**-0.8**
GYA	**Guiyang**	**33.26**	**258**	⇑P	**P**	**19 50 09.8**	**-0.7**
GYA				sP	pwP	19 50 19.8	+4.2
GYA				S	**S**	**19 55 31.5**	**+0.8**
GYA				SS	**SnSn**	**19 57 25.8**	**-4.8**
GYA				pmax	pmax		
	comp=Z,59nm,0.9s						
GYA				LR	LR		
	comp=Z,470nm,12.5s						
GYA				LR	LR		
	comp=Z,800nm,14.9s						
GYA				LR	LR		
	comp=Z,1µm,13.9s						
CD2	**Chengdu**	**33.28**	**267**	P	**P**	**19 50 09.8**	**-0.8**
CD2				S	**S**	**19 55 28.4**	**-2.5**
CD2				pmax	pmax		
	comp=Z,70nm,0.9s						
CD2				pmax	pmax		
	comp=Z,180nm,8.0s						
CD2				LR	LR		
	comp=Z,3µm,13.5s						
CD2				LR	LR		
	comp=Z,2µm,13.9s						
CD2				LR	LR		
	comp=Z,3µm,14.3s						
GTA	**Gaotai**	**33.32**	**284**	⇓P	**P**	**19 50 12.0**	**+1.1**
GTA				pP	pwP	19 50 19.0	+2.9
GTA				sP	sP	19 50 22.8	+8.2
GTA				pmax	pmax		
	comp=Z,50nm,1.0s						
GTA				pmax	pmax		
	comp=Z,250nm,7.6s						
GTA				LR	LR		
	comp=Z,740nm,19.1s						
GTA				LR	LR		
	comp=Z,2µm,17.5s						
GTA				LR	LR		
	comp=Z,3µm,18.3s						
QIZ	**Qiongzhong**	**35.49**	**244**	P	**P**	**19 50 28.1**	**-1.6**
QIZ				S	**S**	**19 56 03.8**	**-1.2**
QIZ				LR	LR		
	comp=Z,720nm,12.1s						
QIZ				LR	LR		
	comp=Z,630nm,15.3s						
QIZ				LR	LR		
	comp=Z,710nm,16.2s						
KMI	**Kunming**	**36.95**	**259**	⇑P	**P**	**19 50 42.6**	**+0.2**
KMI				pP	pwP	19 50 48.8	+1.2
KMI				sP	sP	19 50 52.3	+6.2
KMI				PP	**PP**	**19 52 06.0**	**-0.5**
KMI				S	**S**	**19 56 24.5**	**-3.2**
KMI				pmax	pmax		
	comp=Z,30nm,1.0s						
KMI				pmax	pmax		
	comp=Z,320nm,3.5s						
KMI				LR	LR		
	comp=Z,880nm,14.4s						
KMI				LR	LR		
	comp=Z,1µm,16.2s						
KMI				LR	LR		
	comp=Z,1µm,16.6s						
KMI	**Kunming**	**36.95**	**259**	P	**P**	**19 50 41.0**	**-1.4**
KMI				pmax	pmax		
	comp=Z,53nm,1.0s						
KMI	**Kunming**	**36.95**	**259**	P	**P**	**19 50 41.0**	**-1.4**
SLVN	**Son La**	**38.27**	**253**	P	**P**	**19 50 52.9**	**-0.5**
ANM	**Nome**	**38.45**	**33**	P	**P**	**19 50 56.3**	**+1.9**
	baz=255,SNR=5.6						
ANM	**Nome**	**38.45**	**33**	P	**P**	**19 50 55.2**	**+0.8**
ANM				pmax	pmax		
	comp=Z,13nm,1.1s						
ANM	**Nome**	**38.45**	**33**	P	**P**	**19 50 55.2**	**+0.8**
DGZ	**Jazzator, Alta**	**40.10**	**303**	c iP	**P**	**19 51 09.7**	**+1.1**
DGZ				pmax	pmax		
	comp=Z,46nm,0.8s						
RDOG	**Red Dog Mine**	**40.36**	**28**	P	**P**	**19 51 11.9**	**+1.6**
	baz=254						
NONG	**Nongkai**	**40.88**	**250**	P	**P**	**19 51 16.2**	**+1.1**
	comp=Z,53nm,0.8s						
WMQ	**Urumqi**	**41.04**	**294**	eP	**P**	**19 51 17.3**	**+1.0**
WMQ				pP	pwP	19 51 21.3	-0.3
WMQ				sP	sP	19 51 25.3	+5.3
WMQ				PcP	**PcP**	**19 53 15.8**	**-0.3**
WMQ				pmax	pmax		
	comp=Z,110nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,170nm,3.6s						
WMQ				LR	LR		
	comp=Z,900nm,13.3s						
WMQ				LR	LR		
	comp=Z,440nm,14.1s						
WMQ				LR	LR		
	comp=Z,220nm,18.5s						
UBPT	**Khong Chiam**	**41.09**	**244**	P	**P**	**19 51 18.2**	**+1.3**
	comp=Z,5.9nm,1.8s						
ZAA0	**Zalesovo Array**	**41.26**	**310**	P	**P**	**19 51 17.4**	**-0.5**
ZAA0				IAmb	IAmb	19 51 19.1	
	comp=Z,37nm,0.7s						
ZALV	**Zalesovo Beam**	**41.26**	**310**	P	**P**	**19 51 17.9**	**0.0**
	comp=Z,40nm,0.6s,baz=92,slow=8.0,SNR=176						
ZALV				PcP	**PcP**	**19 53 17.1**	**+0.6**
	comp=Z,12nm,0.8s,baz=85,slow=2.7,SNR=4.9						
ZALV				LR	LR	20 09 12.4	
	comp=Z,668nm,20.3s,baz=72,slow=37						
ZALV	**Zalesovo Beam**	**41.26**	**310**	P	**P**	**19 51 17.5**	**-0.4**
DLV	**T Lat**	**41.44**	**238**	P	**P**	**19 51 19.4**	**-0.6**
ZSN	**Zaisan**	**42.16**	**300**	⇑iP	**P**	**19 51 26.2**	**+0.8**
	comp=Z,36nm,1.4s,baz=300						
ZSN	**Zaisan**	**42.16**	**300**	c iP	**P**	**19 51 26.2**	**+0.8**
ZSN				pmax	pmax		
	comp=Z,36nm,1.4s						
UTTA	**Uttaradit**	**42.97**	**252**	P	**P**	**19 51 32.9**	**+0.7**
	comp=Z,250nmcomp=Z,32nm,0.9s						
CHAI	**Chaiyaphum**	**43.13**	**249**	P	**P**	**19 51 34.7**	**+1.1**
	comp=Z,458nmcomp=Z,45nm,0.9s						
LAMP	**Lampang**	**43.16**	**254**	P	**P**	**19 51 35.0**	**+1.2**
	comp=Z,374nmcomp=Z,36nm,0.7s						
CM34	**Chiang Mai Arr**	**43.31**	**254**	P	**P**	**19 51 35.0**	**0.0**
A21K	**Barrow**	**43.33**	**24**	P	**P**	**19 51 35.5**	**+1.0**
	baz=257						
CM35	**Chiang Mai Arr**	**43.41**	**254**	P	**P**	**19 51 36.0**	**+0.1**
CM33	**Chiang Mai Arr**	**43.48**	**254**	P	**P**	**19 51 36.0**	**-0.4**
CMMT	**Chiang Mai**	**43.48**	**254**	P	**P**	**19 51 35.8**	**-0.6**
	comp=Z,16nm,0.9s						
CHTO	**Chiang Mai**	**43.49**	**254**	P	**P**	**19 51 36.0**	**-0.4**
CHTO				pmax	pmax		
	comp=Z,21nm,0.8s						
CHTO	**Chiang Mai**	**43.49**	**254**	P	**P**	**19 51 36.0**	**-0.4**
CHTO				IAmb	IAmb	19 51 47.1	
	comp=Z,21nm,0.8s						
IMAR	**Indian Mountai**	**43.51**	**32**	P	**P**	**19 51 35.6**	**-0.4**
LSA	**Lhasa**	**43.54**	**273**	P	**P**	**19 51 38.4**	**+1.1**
LSA				pmax	pmax		
	comp=Z,59nm,0.8s						
CM32	**Chiang Mai Arr**	**43.66**	**254**	P	**P**	**19 51 38.0**	**+0.2**
CM09	**Chiang Mai Arr**	**43.68**	**254**	P	**P**	**19 51 39.0**	**+1.0**
	comp=Z,100nmcomp=Z,13nm,0.8s						
CM31	**Chiang Mai Arr**	**43.71**	**254**	P	**P**	**19 51 39.4**	**+1.2**
	comp=Z,267nm,1.1s						
CMAR	**Chiang Mai Arr**	**43.71**	**254**	P	**P**	**19 51 38.8**	**+0.6**
	comp=Z,4.7nm,0.8s,baz=48,slow=6.7,SNR=39						
CMAR				LR	LR	20 11 28.0	
	comp=Z,260nm,18.5s,baz=94,slow=38						
CMAR	**Chiang Mai Arr**	**43.71**	**254**	P	**P**	**19 51 38.0**	**-0.2**
CMAR	**Chiang Mai Arr**	**43.71**	**254**	P	**P**	**19 51 38.0**	**-0.2**
CM04	**Chiang Mai Arr**	**43.72**	**254**	P	**P**	**19 51 39.1**	**+0.8**
	comp=Z,105nmcomp=Z,15nm,0.9s						
CM01	**Chiang Mai Arr**	**43.72**	**254**	P	**P**	**19 51 39.5**	**+1.2**
	comp=Z,95nmcomp=Z,11nm,1.1s						
CM02	**Chiang Mai Arr**	**43.72**	**254**	P	**P**	**19 51 39.1**	**+0.8**
	comp=Z,77nmcomp=Z,9.5nm,0.9s						
CM15	**Chiang Mai Arr**	**43.73**	**254**	P	**P**	**19 51 39.0**	**+0.6**
	comp=Z,62nmcomp=Z,8.5nm,0.8s						
MRSI	**Marisa**	**43.74**	**212**	P	**P**	**19 51 38.9**	**+0.5**
	comp=Z,640nmcomp=Z,36nm,1.2s						
CM05	**Chiang Mai Arr**	**43.74**	**254**	P	**P**	**19 51 39.0**	**+0.5**
	comp=Z,86nmcomp=Z,11nm,0.9s						
CM13	**Chiang Mai Arr**	**43.76**	**254**	P	**P**	**19 51 39.5**	**+0.8**
	comp=Z,80nmcomp=Z,9.4nm,1.0s						
SUKH	**Sukhothai**	**43.81**	**252**	P	**P**	**19 51 39.9**	**+0.9**
	comp=Z,59nm,1.0s						
CHUM	**Lake Minchumin**	**44.00**	**35**	P	**P**	**19 51 42.2**	**+2.2**
	baz=269						
MK31	**Makanchi Array**	**44.02**	**300**	c iP	**P**	**19 51 40.6**	**+0.1**
MK31	**Makanchi Array**	**44.02**	**300**	IAmb	IAmb	19 51 41.8	
	comp=Z,33nm,0.8s						
MKAR	**Makanchi Array**	**44.02**	**300**	P	**P**	**19 51 40.6**	**+0.1**
	comp=Z,31nm,0.8s,baz=83,slow=9.3,SNR=268						
MKAR				LR	LR	20 11 06.2	
	comp=Z,1µm,18.4s,baz=67,slow=38						
MKAR	**Makanchi Array**	**44.02**	**300**	i P	**P**	**19 51 40.5**	**0.0**
MKAR				pmax	pmax		
	comp=Z,31nm,0.8s						
MKAR	**Makanchi Array**	**44.02**	**300**	P	**P**	**19 51 40.0**	**-0.5**
PPLA	**Purkeypile**	**44.04**	**36**	P	**P**	**19 51 42.3**	**+1.7**
	baz=270						
MAKZ	**Makanchi**	**44.23**	**300**	P	**P**	**19 51 41.8**	**-0.3**
MAKZ				pmax	pmax		
	comp=Z,44nm,1.0s						
MAKZ	**Makanchi**	**44.23**	**300**	P	**P**	**19 51 41.8**	**-0.3**
MAKZ				IAmb	IAmb	19 51 43.6	
	comp=Z,44nm,1.0s						
SRAK	**Srakaew**	**44.36**	**246**	P	**P**	**19 51 41.0**	**-2.4**
	comp=Z,3µmcomp=Z,262nm,0.9s						
SEM	**Semipalatinsk**	**44.55**	**306**	⇑iP	**P**	**19 51 44.4**	**-0.5**
	comp=Z,22nm,0.9s,baz=306						
SEM	**Semipalatinsk**	**44.55**	**306**	c iP	**P**	**19 51 44.3**	**-0.5**
SEM				pmax	pmax		
	comp=Z,22nm,0.9s						
BPAW	**Bear Paw Mtn.**	**44.59**	**35**	P	**P**	**19 51 46.2**	**+1.5**
	baz=270						
KTH	**Kantishna Hill**	**44.61**	**36**	IAmb	IAmb	19 51 58.7	
	comp=Z,31nm,0.9s						
MHMT	**Maesarieng**	**44.63**	**255**	P	**P**	**19 51 45.0**	**-0.6**
	comp=Z,41nm,0.8s						
MLY	**Manley**	**44.71**	**33**	P	**P**	**19 51 47.6**	**+1.9**
	baz=269,SNR=11						
SUA	**Susitna One**	**44.74**	**39**	P	**P**	**19 51 46.8**	**+0.6**
	baz=272						
TRF	**Thorofare Moun**	**44.90**	**36**	P	**P**	**19 51 48.4**	**+0.9**
	baz=271						
COLD	**Coldfoot**	**45.01**	**30**	P	**P**	**19 51 48.8**	**+0.8**
	baz=267						
UTHA	**Uthaitani**	**45.19**	**250**	P	**P**	**19 51 51.9**	**+1.8**
	comp=Z,187nmcomp=Z,18nm,0.9s						
UMPA	**Umpang Tak**	**45.20**	**252**	P	**P**	**19 51 52.0**	**+1.9**
	comp=Z,1µmcomp=Z,33nm,0.8s						
I23K	**Minto, Yukon-K**	**45.29**	**33**	P	**P**	**19 51 51.9**	**+1.6**
	baz=270						
I23K	**Minto, Yukon-K**	**45.29**	**33**	P	**P**	**19 51 51.0**	**+0.7**
TOLK	**Toolik Lake Re**	**45.32**	**28**	P	**P**	**19 51 52.0**	**+1.4**
	baz=266						
TOLK	**Toolik Lake Re**	**45.32**	**28**	IAmb	IAmb	19 52 04.1	
	comp=Z,15nm,0.8s						
NEA2	**Nenana**	**45.42**	**34**	P	**P**	**19 51 52.9**	**+1.5**
	baz=271,SNR=5.9						
MCK	**McKinley**	**45.50**	**35**	P	**P**	**19 51 53.0**	**+1.0**
	baz=272						
KURK	**Kurchatov**	**45.50**	**306**	c iP	**P**	**19 51 52.0**	**-0.1**
KURK				pmax	pmax		
	comp=Z,80nm,0.8s						
KURK	**Kurchatov**	**45.50**	**306**	P	**P**	**19 51 51.6**	**-0.5**
RND	**Reindeer**	**45.55**	**36**	IAmb	IAmb	19 52 04.6	
	comp=Z,14nm,0.8s						
WAT2	**Susitna Watana**	**45.69**	**36**	P	**P**	**19 51 54.1**	**+0.5**
	baz=273						
MDM	**Murphy Dome**	**45.77**	**34**	P	**P**	**19 51 54.8**	**+0.7**
MDM				IAmb	IAmb	19 52 07.7	
	comp=Z,25nm,1.0s						
WRH	**Wood River Hil**	**45.85**	**34**	IAmb	IAmb	19 52 08.8	
	comp=Z,16nm,1.0s						
SML	**Sawmill**	**45.87**	**38**	P	**P**	**19 51 55.6**	**+0.6**
	baz=274						
TCOL	**CIGO, UAF Yank**	**45.93**	**34**	P	**P**	**19 51 57.2**	**+1.8**
	baz=272						
COLA	**College**	**45.94**	**34**	P	**P**	**19 51 56.9**	**+1.5**
	baz=272						
COLA	**College**	**45.94**	**34**	⇓eP	**P**	**19 51 56.9**	**+1.5**
COLA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
WAT6	**Susitna Watana**	**46.10**	**37**	P	**P**	**19 51 57.8**	**+0.9**
	baz=274						
POKR	**Poker Plat Res**	**46.11**	**33**	P	**P**	**19 51 58.4**	**+1.6**
	baz=272,SNR=17						
POKR	**Poker Plat Res**	**46.11**	**33**	IAmb	IAmb	19 52 10.6	
	comp=Z,27nm,0.9s						
SRDT	**SRDT**	**46.22**	**250**	P	P	19 52 07.6	+9.4
HDA	**Harding Lake**	**46.34**	**34**	P	**P**	**19 51 59.6**	**+0.9**
	baz=273,SNR=7.0						
HDA	**Harding Lake**	**46.34**	**34**	IAmb	IAmb	19 52 11.4	
	comp=Z,16nm,0.8s						
IL31		**46.35**	**34**	IAmb	IAmb	19 52 11.6	
	comp=Z,14nm,0.8s						
ILAR	**Eielson Array**	**46.35**	**34**	P	**P**	**19 51 58.9**	**+0.2**
	comp=Z,8.5nm,0.7s,baz=263,slow=6.3,SNR=103						
ILAR				LR	LR	20 14 25.5	
	comp=Z,129nm,18.0s,baz=310,slow=40						
ILAR	**Eielson Array**	**46.35**	**34**	P	**P**	**19 51 58.4**	**-0.3**
PHET	**Kaeng Krachan**	**46.82**	**248**	P	**P**	**19 52 04.4**	**+1.5**
	comp=Z,416nmcomp=Z,54nm,0.8s						
PRP	**Porcupine Dome**	**46.89**	**33**	P	**P**	**19 52 04.7**	**+1.6**
	baz=273,SNR=12						
FYU	**Fort Yukon**	**46.96**	**31**	IAmb	IAmb	19 52 15.9	
	comp=Z,23nm,0.9s						
SHLS	**Shalkode**	**46.97**	**296**	⇑iP	**P**	**19 52 01.8**	**-2.3**
	comp=Z,58nm,2.1s,baz=296						
SHLS	**Shalkode**	**46.97**	**296**	c iP	**P**	**19 52 01.7**	**-2.3**
SHLS				pmax	pmax		
	comp=Z,58nm,2.1s						
KLU	**Klutina**	**47.05**	**38**	P	**P**	**19 52 05.3**	**+1.0**
	baz=276						
KLU	**Klutina**	**47.05**	**38**	IAmb	IAmb	19 52 19.5	
	comp=Z,26nm,1.0s						
PAX	**Paxson**	**47.10**	**36**	P	**P**	**19 52 06.8**	**+2.1**
	baz=276						
TDK	**Taldyqorghan**	**47.12**	**299**	i P	**P**	**19 52 05.7**	**+0.7**
	comp=Z,60nm,0.9s,baz=299						
TDK				LR	LR	20 11 54.7	
	comp=Z,464nm,15.2s,baz=299						
TDK	**Taldyqorghan**	**47.12**	**299**	i P	**P**	**19 52 05.7**	**+0.7**
TDK				pmax	pmax		
	comp=Z,60nm,0.9s						
TDK				MLR	MLR		
	comp=Z,464nm,15.0s						
UZB	**Uzynbulak**	**47.28**	**296**	eP	**P**	**19 52 06.6**	**+0.1**
	comp=Z,25nm,1.2s,baz=296						
UZB	**Uzynbulak**	**47.28**	**296**	eP	**P**	**19 52 06.6**	**+0.1**
UZB				pmax	pmax		
	comp=Z,25nm,1.2s						
TAPN	**Taplejung**	**47.32**	**273**	eP	**P**	**19 52 07.8**	**+0.6**
	comp=Z,141nm,1.1s						
KPKS	**Kokpek**	**47.41**	**297**	⇑iP	**P**	**19 52 07.5**	**+0.1**
	comp=Z,39nm,1.2s,baz=297						
KPKS	**Kokpek**	**47.41**	**297**	c iP	**P**	**19 52 07.5**	**+0.1**
KPKS				pmax	pmax		
	comp=Z,39nm,1.2s						
SCRK	**Sand Creek**	**47.67**	**35**	P	**P**	**19 52 09.9**	**+0.7**
	baz=276,SNR=11						
SATY	**Saty**	**47.73**	**296**	⇑iP	**P**	**19 52 10.4**	**+0.4**
	comp=Z,36nm,2.0s,baz=296						
SATY	**Saty**	**47.73**	**296**	c iP	**P**	**19 52 10.4**	**+0.4**
SATY				pmax	pmax		
	comp=Z,36nm,2.0s						
BMRM	**Bremner River**	**47.75**	**39**	P	**P**	**19 52 11.0**	**+1.3**
	baz=278						
ODAN	**Odare**	**47.82**	**272**	eP	**P**	**19 52 11.3**	**+0.4**
	comp=Z,61nm,0.6s						
MTKI	**Muara Teweh, K**	**48.18**	**220**	P	**P**	**19 52 13.5**	**0.0**
	comp=Z,19nm,1.0s						
RAMN	**Ramite**	**48.38**	**273**	eP	**P**	**19 52 15.9**	**+0.6**
	comp=Z,149nm,0.7s						
MCARA	**McCarthy VSAT**	**48.44**	**38**	P	**P**	**19 52 16.9**	**+1.9**
	baz=279						
GUN	**Gumba**	**48.45**	**274**	eP	**P**	**19 52 16.5**	**+0.5**
	comp=Z,178nm,0.7s						
MDOK	**Medeo**	**48.64**	**297**	i P	**P**	**19 52 17.6**	**+0.6**
	baz=297						
MDOK	**Medeo**	**48.64**	**297**	i P	**P**	**19 52 17.5**	**+0.6**
AAA	**Alma-Ata**	**48.71**	**297**	⇑eP	**P**	**19 52 18.3**	**+0.8**
	comp=Z,13nm,0.6s,baz=297						
AAA	**Alma-Ata**	**48.71**	**297**	ceP	**P**	**19 52 18.2**	**+0.8**
AAA				pmax	pmax		
	comp=Z,13nm,0.6s						
TNSS	**Tian-Shan**	**48.75**	**297**	⇑iP	**P**	**19 52 18.9**	**+0.8**
	baz=297						
TNSS	**Tian-Shan**	**48.75**	**297**	⇑iP	**P**	**19 52 18.9**	**+0.8**
BCAR	**Beaver Creek A**	**48.76**	**36**	P	**P**	**19 52 18.8**	**+1.3**
EGAK	**Eagle**	**48.80**	**33**	P	**P**	**19 52 18.4**	**+0.7**
	baz=278						
KUU	**Kurty**	**48.88**	**298**	⇑iP	**P**	**19 52 18.5**	**-0.2**
	comp=Z,57nm,0.8s,baz=298						
KUU	**Kurty**	**48.88**	**298**	c iP	**P**	**19 52 18.4**	**-0.2**
KUU				pmax	pmax		
	comp=Z,57nm,0.8s						
KKN	**Kakani**	**48.97**	**274**	eP	**P**	**19 52 20.1**	**+0.3**
	comp=Z,172nm,0.8s						
PKI	**Pulchoki**	**48.98**	**274**	eP	**P**	**19 52 20.1**	**+0.1**
	comp=Z,59nm,0.9s						
PKIN	**Phulchoki**	**48.99**	**274**	eP	**P**	**19 52 20.3**	**+0.3**
	comp=Z,41nm,0.7s						
DMN	**Daman**	**49.20**	**274**	eP	**P**	**19 52 21.9**	**+0.3**
	comp=Z,63nm,0.8s						
CTG	**Chitna Glacier**	**49.32**	**38**	P	**P**	**19 52 23.2**	**+1.3**
	baz=281						
GKN	**Gorkha**	**49.36**	**275**	eP	**P**	**19 52 22.8**	**+0.1**
	comp=Z,68nm,0.8s						
BRZS	**Berezniki**	**49.37**	**307**	⇑iP	**P**	**19 52 22.3**	**-0.1**
	comp=Z,20nm,1.2s,baz=307						
BRZS	**Berezniki**	**49.37**	**307**	c iP	**P**	**19 52 22.2**	**-0.1**
BRZS				pmax	pmax		
	comp=Z,20nm,1.2s						
ULHL	**Ulahol**	**49.51**	**296**	P	**P**	**19 52 24.2**	**+0.5**
	SNR=18						
TKM2	**Tokmak 2**	**49.72**	**297**	P	**P**	**19 52 26.3**	**+1.0**
	SNR=103						
BRVK	**Borovoye**	**49.95**	**311**	c iP	**P**	**19 52 27.1**	**+0.4**
BRVK				pmax	pmax		
	comp=Z,35nm,0.8s						
BRVK	**Borovoye**	**49.95**	**311**	P	**P**	**19 52 26.1**	**-0.6**
BTLS	**Baital**	**50.03**	**300**	⇑iP	**P**	**19 52 27.2**	**-0.3**
	comp=Z,12nm,1.1s,baz=300						
BTLS	**Baital**	**50.03**	**300**	c iP	**P**	**19 52 27.1**	**-0.3**
BTLS				pmax	pmax		
	comp=Z,12nm,1.1s						
RNTT	**Ranong**	**50.06**	**245**	P	P	19 52 23.0	-4.9
SURT	**Suratani**	**50.15**	**245**	P	**P**	**19 52 32.9**	**+4.4**
	comp=Z,0.9nm,1.1s						
SGDS	**Sogindy**	**50.19**	**298**	⇑iP	**P**	**19 52 29.0**	**+0.2**
	comp=Z,15nm,1.1s,baz=298						
SGDS	**Sogindy**	**50.19**	**298**	c iP	**P**	**19 52 28.9**	**+0.2**
SGDS				pmax	pmax		
	comp=Z,15nm,1.1s						
KBK	**Karagaybulak**	**50.26**	**297**	P	**P**	**19 52 30.1**	**+0.7**
	SNR=80						
CHMS	**Chumysh**	**50.27**	**297**	P	**P**	**19 52 29.6**	**+0.3**
	SNR=19						
TRTT	**Trang**	**50.32**	**243**	P	**P**	**19 52 30.8**	**+0.9**
	comp=Z,20nm,1.3s						
USP	**Ospenovka**	**50.35**	**298**	P	**P**	**19 52 30.2**	**+0.3**
	SNR=42						
EPYK	**Eagle Plains**	**50.38**	**31**	P	**P**	**19 52 31.6**	**+1.8**
	baz=280						
EPYK	**Eagle Plains**	**50.38**	**31**	P	**P**	**19 52 30.1**	**+0.4**
EPYK				IAmb	IAmb	19 52 43.5	
	comp=Z,24nm,0.8s						
AAK	**Ala-Archa**	**50.58**	**297**	P	**P**	**19 52 32.2**	**+0.4**
	SNR=16						
AAK	**Ala-Archa**	**50.58**	**297**	c iP	**P**	**19 52 31.9**	**+0.1**
AAK				pmax	pmax		
	comp=Z,99nm,1.7s						
AAK	**Ala-Archa**	**50.58**	**297**	P	**P**	**19 52 31.5**	**-0.3**
AAK				IAmb	IAmb	19 52 42.2	
	comp=Z,21nm,0.8s						
UCH	**Uchtor**	**50.72**	**296**	P	**P**	**19 52 33.9**	**+0.7**
	SNR=15						
KSH	**Kashi**	**50.73**	**293**	P	**P**	**19 52 37.0**	**+4.1**
KSH				pP	pwP	19 52 42.0	+3.8
KSH				PP	**PP**	**19 54 30.8**	**+2.0**
KSH				S	**S**	**19 59 52.8**	**+4.5**
KSH				pmax	pmax		
	comp=Z,24nm,1.0s						
KSH				pmax	pmax		
	comp=Z,310nm,5.3s						
KSH				LR	LR		
	comp=Z,500nm,11.1s						
KSH				LR	LR		
	comp=Z,720nm,11.6s						
KSH				LR	LR		
	comp=Z,2µm,17.2s						
EKS2	**Erkin-Say**	**51.06**	**297**	P	**P**	**19 52 35.8**	**+0.4**
	SNR=42						
PKDT	**Phuket**	**51.22**	**244**	P	**P**	**19 52 37.3**	**+0.6**
INK	**Inuvik**	**51.24**	**28**	LR	LR	20 17 38.8	
	comp=Z,181nm,18.1s,baz=272,slow=40						
INK	**Inuvik**	**51.24**	**28**	IAmb	IAmb	19 52 47.8	
	comp=Z,14nm,0.8s						
AML	**Almayashu**	**51.32**	**297**	P	**P**	**19 52 38.5**	**+0.9**
	SNR=47						
DZA	**Taraz**	**52.64**	**298**	⇑iP	**P**	**19 52 47.4**	**+0.3**
	comp=Z,21nm,0.8s,baz=298						
DZA	**Taraz**	**52.64**	**298**	c iP	**P**	**19 52 47.3**	**+0.3**
DZA				pmax	pmax		
	comp=Z,21nm,0.8s						
KK31	**Karatay Array**	**53.11**	**299**	IAmb	IAmb	19 52 51.5	
	comp=Z,22nm,0.8s						
KKAR	**Karatay Array**	**53.11**	**299**	P	**P**	**19 52 49.4**	**-1.1**
KKAR				pmax	pmax		
	comp=Z,22nm,0.9s						
KKAR	**Karatay Array**	**53.11**	**299**	P	**P**	**19 52 49.4**	**-1.1**
KKAR	**Karatay Array**	**53.11**	**299**	P	**P**	**19 52 49.8**	**-0.7**
KKAR				IAmb	IAmb	19 52 51.5	
	comp=Z,22nm,0.8s						
IUG	**Iuzhnay**	**53.82**	**298**	eP	**P**	**19 52 56.1**	**+0.2**
	comp=Z,12nm,1.2s,baz=298						
IUG	**Iuzhnay**	**53.82**	**298**	eP	**P**	**19 52 56.0**	**+0.2**
IUG				pmax	pmax		
	comp=Z,12nm,1.2s						
SVE	**Sverdlovsk**	**54.13**	**318**	d iP	**P**	**19 52 58.6**	**+0.9**
SVE				pmax	pmax		
	comp=Z,42nm,0.8s						
SVE				MLR	MLR		
	comp=Z,2µm,14.0s						
C36M	**Paulatuk**	**54.29**	**26**	P	**P**	**19 52 59.3**	**+0.7**
	baz=289						
NIL	**Nilore**	**55.24**	**287**	P	**P**	**19 53 05.8**	**-0.4**
NIL				pmax	pmax		
	comp=Z,64nm,0.9s						
NIL	**Nilore**	**55.24**	**287**	P	**P**	**19 53 05.8**	**-0.4**
ARU	**Arti**	**55.34**	**318**	c iP	**P**	**19 53 06.8**	**+0.3**
ARU						19 54 00.6	
ARU						19 55 06.2	
ARU				S	**S**	**20 00 52.7**	**+2.3**
ARU				SS	**SS**	**20 04 33.2**	**-1.0**
ARU				pmax	pmax		
	comp=Z,76nm,1.4s						
ARU				MLR	MLR		
	comp=Z,2µm,15.0s						
ARU	**Arti**	**55.34**	**318**	P	**P**	**19 53 06.5**	**-0.1**
PDSI	**Padang**	**56.34**	**235**	P	**P**	**19 53 13.9**	**-0.3**
	comp=Z,5.7nm,0.4s						
GSI	**Gunungsitoli**	**56.53**	**239**	P	**P**	**19 53 14.5**	**-1.0**
LHSI	**Lahat**	**56.77**	**230**	P	**P**	**19 53 17.0**	**-0.2**
	comp=Z,42nm,1.2s						
LWLI	**Liwa**	**57.41**	**229**	P	**P**	**19 53 20.6**	**-1.3**
	comp=Z,25nm,0.9s						
SPITS	**Spitsbergen Ar**	**58.13**	**349**	LR	LR	20 21 16.1	
	comp=Z,359nm,20.0s,baz=65,slow=39						
KBS	**Kingsbay**	**58.22**	**350**	deP	**P**	**19 53 28.2**	**+1.6**
KBS				pmax	pmax		
	comp=Z,32nm,1.0s						
KBS	**Kingsbay**	**58.22**	**350**	i P	**P**	**19 53 27.9**	**+1.3**
KBS				IAmb	IAmb	19 53 28.7	
	comp=Z,64nm,0.9s						
KIRV	**Kirov**	**59.00**	**322**	c iP	**P**	**19 53 32.3**	**0.0**
HSPB	**Hornsund (broa**	**59.08**	**348**	eP	**P**	**19 53 34.2**	**+1.6**
HYB	**Hyderabad**	**59.83**	**268**	i P	**P**	**19 53 38.0**	**-0.7**
WB0	**Warramunga Arr**	**59.83**	**190**	P	**P**	**19 53 37.2**	**-1.2**
WB0				IAmb	IAmb	19 53 56.1	
	comp=Z,19nm,0.8s						
FITZ	**Fitzroy Crossi**	**59.91**	**200**	P	**P**	**19 53 39.2**	**+0.2**
FITZ				IAmb	IAmb	19 53 55.1	
	comp=Z,20nm,1.0s						
WRAB	**Tennant Creek**	**60.00**	**190**	⇓eP	**P**	**19 53 38.1**	**-1.5**
WRAB				pmax	pmax		
	comp=Z,8.0nm,0.7s						
WRAB	**Tennant Creek**	**60.00**	**190**	P	**P**	**19 53 38.9**	**-0.7**
WRAB				IAmb	IAmb	19 53 49.4	
	comp=Z,17nm,1.0s						
WR0	**Warramunga Arr**	**60.00**	**190**	P	**P**	**19 53 38.5**	**-1.1**
WB2	**Warramunga Arr**	**60.01**	**190**	P	**P**	**19 53 38.6**	**-1.1**
WB2				IAmb	IAmb	19 53 49.5	

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       comp=Z,20nm,1.0s
WRA    Warramunga Arr    60.01 190   P      P       19 53 39.3  -0.4
       comp=Z,8.7nm,0.7s,baz=8.3,slow=7.0,SNR=61
WRA    Warramunga Arr    60.01 190   P      P       19 53 38.5  -1.2
WRA                                  pmax   pmax
       comp=Z,1.0nm,1.1s
WRA    Warramunga Arr    60.01 190   P      P       19 53 38.5  -1.2
YKA    Yellowknife Ar    60.66  31   P      P       19 53 44.4  +0.7
       comp=Z,2.5nm,0.8s,baz=300,slow=6.1,SNR=25
YKA                                  LR     LR      20 23 19.9
       comp=Z,126nm,19.2s,baz=0.0,slow=39
TMCR   Tamitsa           61.08 331  eP      P       19 53 45.8  -0.7
TMCR                                 pmax   pmax
       comp=Z,25nm,0.6s
ARCES  ARCESS Array B    61.97 339   P      P       19 53 52.7  +0.3
       comp=Z,5.7nm,0.8s,baz=46,slow=6.9,SNR=8.6
ARCES                                LR     LR      20 23 28.2
       comp=Z,466nm,21.6s,baz=45,slow=39
ARCES  ARCESS Array B    61.97 339   P      P       19 53 52.5  +0.1
ARCES                                pmax   pmax
       comp=Z,19nm,1.3s
ARCES  ARCESS Array B    61.97 339   P      P       19 53 52.5  +0.1
ARCES                                IAmb   IAmb    19 54 06.6
       comp=Z,19nm,1.2s
TULEG  Thule             62.17   8  i P     P       19 53 52.9  -0.8
TULEG                                IAmb   IAmb    19 53 54.2
       comp=Z,12nm,0.8s
KLMR   Klimovskoe        62.26 328  eP      P       19 53 53.5  -1.0
KLMR                                e               19 56 09.8
KLMR                                 pmax   pmax
       comp=Z,48nm,1.5s
KLMR   Klimovskoe        62.26 328  eP      P       19 53 53.6  -1.0
KLMR                                 AMP            19 53 55.8
       comp=Z,48nm,1.5s
KLMR                                ePP     PP      19 56 09.9  -1.1
KLMR                                 LQ     LQ      20 16 27.1
KLMR                                 LQ     LQ      20 16 27.1
KLMR                                 LR     LR      20 19 14.0
DAG    Danmarks Havn     63.17 355  i P     P       19 54 00.0  -0.3
       comp=Z,14nm,0.8s
DAG    Danmarks Havn     63.17 355  i P     P       19 54 00.0  -0.3
DAG                                  pmax   pmax
       comp=Z,14nm,0.8s
DAG    Danmarks Havn     63.17 355  i P     P       19 54 00.0  -0.3
DAG                                  IAmb   IAmb    19 54 01.4
       comp=Z,14nm,0.8s
ASAR   Alice Springs     63.74 190   P      P       19 54 04.8  +0.1
       comp=Z,4.0nm,0.6s,baz=7.0,slow=5.4,SNR=63
ASAR                                 LR     LR      20 21 03.8
       comp=Z,99nm,20.9s,baz=13,slow=35
ASAR   Alice Springs     63.74 190   P      P       19 54 03.9  -0.8
B05A   Bryant            64.31  48   P      P       19 54 09.8  +1.6
       baz=302
E04D   Cinebar           64.94  49   P      P       19 54 15.0  +2.5
       baz=302
KULLO  Kullorsuaq        65.09   6  i P     P       19 54 13.2  +0.2
       comp=Z,16nm,0.9s
KULLO  Kullorsuaq        65.09   6  i P     P       19 54 13.2  +0.2
KULLO                                pmax   pmax
       comp=Z,16nm,0.9s
KULLO  Kullorsuaq        65.09   6  i P     P       19 54 13.2  +0.2
KULLO                                IAmb   IAmb    19 54 14.2
       comp=Z,16nm,0.9s
DZM    Mont Dzumac       65.20 156  eLR     LR      20 13 50.7
       comp=Z,418nm,22.1s
MOS    Moscow            65.96 323  eP      P       19 54 18.1  -0.8
MOS                                 e               19 54 33.5
MOS                                  pmax   pmax
       comp=Z,61nm,1.3s
I03D   Drain, OR         66.00  52   P      P       19 54 20.8  +1.5
       baz=303
VRH    Novokhopyorsk     66.58 318  eP      P       19 54 21.0  -1.9
VRH                                  pmax   pmax
       comp=Z,40nm,1.0s
D08A   Wollman Farm,     66.77  48   P      P       19 54 25.0  +0.8
OBN    Obninsk           66.82 323⇓eP      P       19 54 24.8  +0.4
OBN                                 i               19 54 34.6
OBN                                 e               19 56 59.0
OBN                                 eS      S       20 03 21.4  +4.9
OBN                                  pmax   pmax
       comp=Z,45nm,1.7s
OBN                                  MLR    MLR
       comp=Z,1µm,15.0s
UPNV   Upernavik         66.91   6  i P     P       19 54 24.9  +0.2
NEW    Newport           67.10  46   P      P       19 54 26.9  +0.5
       baz=304
FINES  FINESS Array B    67.10 332   P      P       19 54 26.4  +0.4
       comp=Z,18nm,0.7s,baz=47,slow=7.7,SNR=52
FINES                                LR     LR      20 26 38.4
       comp=Z,1µm,18.1s,baz=36,slow=39
LPSR   Galich'ya Gora    67.18 320  eP      P       19 54 25.1  -1.6
LPSR                                 pmax   pmax
       comp=Z,30nm,1.0s
L04D   Klamath Falls     67.45  53   P      P       19 54 30.8  +2.0
       baz=304
J05D   Fort Rock, OR     67.51  52   P      P       19 54 31.3  +2.1
       baz=304
M02C   Callahan          67.56  54   P      P       19 54 30.9  +1.4
       baz=304
VSR    Storozhevoye      67.88 319  eP      P       19 54 29.5  -1.7
VSR                                  pmax   pmax
       comp=Z,30nm,1.1s
N02D   Trinity Center    67.89  55   P      P       19 54 33.6  +2.0
       baz=304
SUMG   Summit            67.93   1  i P     P       19 54 32.9  +1.2
       comp=Z,104nm,0.9s
SUMG   Summit            67.93   1   P      P       19 54 31.7   0.0
SUMG                                 pmax   pmax
       comp=Z,7.0nm,0.5s
SUMG   Summit            67.93   1   P      P       19 54 31.7   0.0
SUMG                                 IAmb   IAmb    19 54 45.0
       comp=Z,7.4nm,0.5s
SUMG   Summit            67.93   1  i P     P       19 54 32.9  +1.2
SUMG                                 IAmb   IAmb    19 54 33.7
       comp=Z,105nm,0.9s
M04C   Macdoel           67.98  54   P      P       19 54 34.5  +2.3
       baz=304
MAK    Makhachkala       67.98 308c iP      P       19 54 29.9  -2.0
MAK                                 e               19 57 01.4
MAK                                 ePPP    PPP     19 58 41.0
MAK                                  pmax   pmax
       comp=Z,254nm,1.4s
MAK                                  MLR    MLR
       comp=Z,468nm,8.0s
O02D   Mt. Diablo Mer    68.28  55   P      P       19 54 36.1  +2.0
       baz=304
O03E   Paynes Creek      68.84  55   P      P       19 54 38.9  +1.4
       baz=305
GROC   Groznyy           68.87 309  eP      P       19 54 36.1  -1.5
GROC                                e               19 55 01.3
GROC                                e               19 57 14.2
GROC                                eS      S       20 03 39.7  -1.8
GROC                                 pmax   pmax
       comp=Z,12nm,0.6s
J08A   Circle Bar Ran    69.12  51   IAmb   IAmb    19 54 52.5
       comp=Z,10nm,0.9s
GOF    Gofitskoye        69.41 312⇑eP      P       19 54 41.0  +0.1
GOF                                  pmax   pmax
       comp=Z,86nm,0.9s
MSO    Missoula          69.69  46   P      P       19 54 43.8  +1.1
       baz=307
ZEI    Tsey              70.24 310  eP      P       19 54 45.6  -0.7
ZEI                                  pmax   pmax
       comp=Z,20nm,0.9s
KIV    Kislovodsk        70.27 311  ⇑P      P       19 54 48.0  +1.7
KIV    Kislovodsk        70.27 311  eP      P       19 54 46.8  +0.5
KIV                                  pmax   pmax
       comp=Z,311nm,1.1s
KIV                                  MLR    MLR
       comp=Z,2µm,18.0s
KIV    Kislovodsk        70.27 311   P      P       19 54 46.4  +0.1
KBZ    Khabaz            70.28 311   P      P       19 54 47.1  +0.9
       comp=Z,34nm,0.9s,baz=60,slow=5.1,SNR=79
KBZ    Khabaz            70.28 311c iP      P       19 54 47.0  +0.8
KBZ                                  pmax   pmax
       comp=Z,51nm,0.9s
FFC    Flin Flon         70.56  34   P      P       19 54 48.8  +1.0
FFC                                  pmax   pmax
       comp=Z,8.0nm,0.8s
FFC    Flin Flon         70.56  34   P      P       19 54 48.8  +1.0
IDID   Didziasalis       71.01 327  eP      P       19 54 50.8  +0.3
MNK    Minsk             71.08 326  i P     P       19 54 51.5  +0.6
       comp=E,3.0nm,0.8s
MNK                                 i P     P       19 54 51.5  +0.6
       comp=N,14nm,0.8s
MNK                                 i P     P       19 54 51.5  +0.6
       comp=Z,42nm,0.8s
MNK                                 i PcP   PcP     19 55 08.5  -2.6
MNK                                 i PP    PP      19 57 33.1  +5.2
MNK                                 i PPP   PPP     19 58 56.2
MNK                                 i S     S       20 04 10.2  +3.2
MNK                                 i ScS   ScS     20 05 51.6  +57
MNK                                 i SS    SS      20 09 28.2  +49
MNK                                 i SSS   SSS     20 12 17.6
MNK                                 i LQ    LQ      20 19 57.9
MNK                                 i LR    LR      20 23 03.5
MNK                                 i LRM   MLR     20 28 36.5
       comp=N,615nm,18.3s
MNK                                 i LRM   MLR     20 28 40.6
       comp=E,40nm,18.3s
MNK                                 i LRM   MLR     20 28 40.8
       comp=Z,480nm,18.3s
ISAL   Salakas           71.08 328  eP      P       19 54 51.2  +0.3
UPP    Uppsala           71.15 334  eP      P       19 54 52.1  +0.8
IIGN   Ignalina          71.20 328  eP      P       19 54 52.1  +0.5
EGMT   Eagleton          71.20  43   P      P       19 54 52.9  +1.0
       baz=309,SNR=7.7
EGMT   Eagleton          71.20  43   IAmb   IAmb    19 55 05.1
       comp=Z,12nm,1.0s
NACGM  Naroch            71.27 327  i P     P       19 54 53.0  +1.0
NACGM                               i P     P       19 54 53.0  +1.0
NACGM                               i P     P       19 54 53.0  +1.0
NACGM                               i Pb    pP      19 54 54.6  -0.2
       comp=Z,89nm,1.1s
NACGM                               i PcP   PcP     19 55 14.6  +2.7
NACGM                               i PP    PP      19 57 31.7  +2.2
NACGM                               i PPP   PPP     19 59 17.5
NACGM                               i S     S       20 04 10.1  +0.9
NACGM                               i PS    PnS     20 05 29.1  +52
NACGM                               i SS    SS      20 08 53.9  +12
NACGM                               i SSS   SSS     20 12 09.8
NACGM                               i LQ    LQ      20 21 35.1
NACGM                               i LR    LR      20 26 07.6
GNI    Garni             71.30 307deP      P       19 54 54.6  +1.9
GNI                                  pmax   pmax
       comp=Z,31nm,1.3s
AKH    Akhalkalaki       71.31 309  ⇑P      P       19 54 54.2  +1.5
STKA   Stephens Creek    71.32 182   P      P       19 54 52.5   0.0
       comp=Z,1.7nm,0.5s,baz=10,slow=7.7,SNR=10
STKA   Stephens Creek    71.32 182   P      P       19 54 51.3  -1.1
STKA                                 pmax   pmax
       comp=Z,2.0nm,1.0s
STKA   Stephens Creek    71.32 182   P      P       19 54 51.3  -1.1
CHVG   Ch'k'valeri       71.36 310  ⇑P      P       19 54 54.1  +1.2
HLID   Hailey            71.39  49   P      P       19 54 54.4  +1.2
       baz=308,SNR=6.2
BOZ    Bozeman (W)       71.71  46   P      P       19 54 56.5  +1.4
       baz=308,SNR=11
PABE   Paberze           72.01 329  eP      P       19 54 56.8  +0.3
NVAR   Mina Array Bea    72.13  55   P      P       19 54 59.8  +1.9
       comp=Z,4.7nm,0.8s,baz=285,slow=6.1,SNR=20
NVAR                                 LR     LR      20 23 40.1
       comp=Z,56nm,20.0s,baz=292,slow=33
NVAR   Mina Array Bea    72.13  55   P      P       19 54 58.2  +0.4
NC204  NORSAR Array S    72.18 338   P      P       19 54 57.5   0.0
SOC    Sochi             72.20 312  eP      P       19 54 56.8  -1.1
SOC                                 e               19 57 33.2
SOC                                 ePPP    PPP     19 59 19.2
SOC                                 eS      S       20 04 19.6  -0.8
SOC                                 eSS     SS      20 08 55.3  -1.8
SOC                                  pmax   pmax
       comp=Z,21nm,0.8s
SOC                                  MLR    MLR
       comp=Z,233nm,14.0s
NB201  NORSAR Array S    72.21 338   P      P       19 54 57.7  +0.1
NB2    NORSAR Subarra    72.24 338   P      P       19 54 57.9  +0.1
       comp=Z,27nm,0.8s,baz=37,slow=6.2
NOA    NORSAR Array B    72.24 338   P      P       19 54 58.0  +0.1
       comp=Z,19nm,0.8s,baz=37,slow=6.0,SNR=58
NOA                                  LR     LR      20 30 54.4
       comp=Z,357nm,18.2s,baz=30,slow=39
ANN    Anapa             72.73 314   P      P       19 55 00.9  -0.1
ANN                                  pmax   pmax
       comp=Z,43nm,1.4s
SFJD   Kangerlussuaq     73.01   6  i P     P       19 55 02.4  +0.2
SFJD   Kangerlussuaq     73.01   6  i P     P       19 55 02.4  +0.2
SFJD   Kangerlussuaq     73.01   6  i P     P       19 55 02.4  +0.2
H17A   Grant Village     73.04  46   P      P       19 55 06.4  +3.1
       baz=309,SNR=6.6
AKASG  Malin Array Be    73.06 323   P      P       19 55 02.8  -0.1
       comp=Z,9.0nm,0.6s,baz=43,slow=6.5,SNR=33
AKASG                                LR     LR      20 32 16.6
       comp=Z,169nm,19.4s,baz=65,slow=40
AKASG  Malin Array Be    73.06 323ceP      P       19 55 02.7  -0.1
AKASG                                pmax   pmax
       comp=Z,8.0nm,0.6s
AKASG  Malin Array Be    73.06 323   P      P       19 55 01.9  -0.9
AKBB   Malin Array Si    73.06 323   P      P       19 55 02.3  -0.5
AKBB                                 pmax   pmax
       comp=Z,30nm,1.3s
AKBB   Malin Array Si    73.06 323   P      P       19 55 02.3  -0.5
AKBB                                 IAmb   IAmb    19 55 03.9
       comp=Z,30nm,1.2s
VES    Vestal, Richgr    73.18  57   P      P       19 55 05.1  +1.2
       baz=307
RLMT   Red Lodge         73.30  45   P      P       19 55 06.1  +1.4
       baz=310
SUW    Suwalki           73.39 328  eP      P       19 55 04.7   0.0
SUW    Suwalki           73.39 328  eP      P       19 55 04.8   0.0
CWC    Cottonwood Cre    73.47  56   P      P       19 55 07.2  +1.4
       baz=308
GRAC   Grapevine Rang    73.58  55   P      P       19 55 08.4  +2.1
       baz=308
ISA    Isabella, Lake    73.68  57   P      P       19 55 07.6  +0.7
       baz=308
KONO   Kongsberg         73.84 338⇓eP      P       19 55 08.1  +0.8
KONO                                 pmax   pmax
       comp=Z,116nm,2.5s
R11A   Troy Canyon, C    73.87  53   P      P       19 55 10.2  +2.1
       baz=308
LAO    LASA Array        73.90  42   P      P       19 55 08.2  +0.2
       baz=311
MPMC   Manual Prospec    74.08  56   P      P       19 55 10.7  +1.4
       baz=308
FURC   Furnace Creek,    74.23  56   P      P       19 55 12.1  +2.2
       baz=308,SNR=5.7
LRMC   Laurel Mtn Rad    74.31  57   P      P       19 55 11.9  +1.3
       baz=308
TPNV   Topopah Spring    74.32  55   P      P       19 55 12.3  +1.6
       baz=308,SNR=25
TPNV   Topopah Spring    74.32  55   P      P       19 55 10.3  -0.4
TPNV                                 pmax   pmax
       comp=Z,16nm,1.0s
TPNV   Topopah Spring    74.32  55   P      P       19 55 10.3  -0.4
TPNV                                 IAmb   IAmb    19 55 22.6
       comp=Z,16nm,0.9s
DUG    Dugway, Tooele    74.41  51   P      P       19 55 13.0  +1.8
       baz=309,SNR=5.9
EDW2   Edwards Air Fo    74.47  58   P      P       19 55 13.3  +1.8
       baz=308
BW06   Boulder Array     74.65  47   P      P       19 55 13.4  +0.7
       baz=310,SNR=5.3
PDAR   Pinedale Array    74.65  47   P      P       19 55 13.6  +0.9
       comp=Z,2.5nm,0.7s,baz=272,slow=2.4,SNR=24
PDAR   Pinedale Array    74.65  47   P      P       19 55 12.4  -0.2
BFSC   Mount Baldy Ra    75.08  58   P      P       19 55 16.8  +1.6
       baz=308
SORM   Soroca            75.23 321  ⇓P      P       19 55 15.7  +0.2
HEC    Hector,Ludlow     75.57  57   P      P       19 55 19.7  +1.8
       baz=309
MIB    Mutribah          75.83 297  eP              19 55 17.8
DIKM   Dikmen            75.97 313  ⇑P      P       19 55 20.8  +0.9
GMRC   Granite Mounta    76.04  56   P      P       19 55 21.7  +1.1
       baz=309
LVV    L'vov             76.06 324  eP      P       19 55 20.6  +0.3
LVV                                 e               19 58 19.5
LVV                                 eS      S       20 04 59.2  -4.3
LVV                                  MLR    MLR
       comp=Z,1µm,16.0s
RST    Umm Al-Ruwaisa    76.25 297  eP              19 55 20.4
TPFO   Pinon Flats       76.26  58   P      P       19 55 22.7  +0.8
       baz=309
ULM    Lac du Bonnet     76.36  35   P      P       19 55 22.1   0.0
       comp=Z,2.8nm,0.7s,baz=321,slow=8.6,SNR=8.5
ULM    Lac du Bonnet     76.36  35⇓eP      P       19 55 21.0  -1.0
ULM    Lac du Bonnet     76.36  35   P      P       19 55 21.0  -1.0
MDND   Maddock           76.39  38   P      P       19 55 23.2  +0.9
       baz=315
K22A   Casper            76.42  45   P      P       19 55 23.6  +1.0
       baz=312
IRM    Iron Mountain     76.76  57   P      P       19 55 25.7  +1.1
       baz=309
RSSD   Black Hills       76.76  43   P      P       19 55 25.4  +0.7
       baz=313
RSSD   Black Hills       76.76  43   P      P       19 55 23.6  -1.1
RSSD                                 pmax   pmax
       comp=Z,9.0nm,1.2s
RSSD   Black Hills       76.76  43   P      P       19 55 23.6  -1.1
KWP    Kalwaria Pacla    76.78 325  eP      P       19 55 25.6  +1.2
BC3    Big Chuckawall    76.88  57   P      P       19 55 26.7  +1.4
       baz=309
BUR08  Bucovina Ar. S    77.08 322   IAmb   IAmb    19 55 28.0
       comp=Z,14nm,0.8s
BURAR  Bucovina Array    77.10 322  ⇑P      P       19 55 26.8  +0.5
BURAR  Bucovina Array    77.10 322   P      P       19 55 26.2  -0.1
O20A   White River Ci    77.12  48   P      P       19 55 27.7  +0.9
       baz=312
BIZ    Bicaz             77.16 321  ⇓P      P       19 55 27.7  +1.1
TESR   Tescani           77.20 321  ⇑P      P       19 55 27.0  +0.2
PDMCI  Parker Dam,Lak    77.31  56   P      P       19 55 28.4  +0.8
       baz=310
TPGR   Topolog           77.48 319  ⇓P      P       19 55 28.7  +0.3
KOLS   Kolonicke sedl    77.49 325  eP      P       19 55 29.0  +0.6
KOLS                                 pmax   pmax
       comp=Z,10.0nm,1.0s
KOLS   Kolonicke sedl    77.49 325  eP      P       19 55 29.0  +0.6
ODBI   Odobesti          77.53 320  ⇓P      P       19 55 30.1  +1.4
OJC    Ojcow             77.60 327  eP      P       19 55 29.9  +0.9
VRI    Vrincioaia        77.62 320  ⇑P      P       19 55 29.0  -0.2
UZH    Uzhgorod          77.70 324  eP      P       19 55 29.7  +0.2
UZH                                 e               19 55 37.9
CRVS   Cervenica-Dubn    77.87 325  eP      P       19 55 31.5  +1.0
CRVS                                 pmax   pmax
       comp=Z,26nm,1.1s
CRVS   Cervenica-Dubn    77.87 325  eP      P       19 55 31.5  +1.0
ARCR   ARCALIA           77.89 322  ⇑P      P       19 55 31.7  +1.1
OZUR                     77.91 321  ⇑P      P       19 55 32.5  +1.6
N23A   Red Feather La    77.92  46   P      P       19 55 32.6  +1.3
       baz=313
NIE    Niedzica          77.99 326  eP      P       19 55 32.9  +1.7
BR131  Keskin Array S    78.17 312⇑eP      P       19 55 32.8  +0.3
BR131  Keskin Array S    78.17 312   IAmb   IAmb    19 55 34.3
       comp=Z,38nm,1.5s
BRTR   Keskin Array B    78.17 312   P      P       19 55 33.0  +0.4
       comp=Z,6.4nm,1.0s,baz=72,slow=4.0,SNR=24
BRTR                                 PP     PP      19 58 34.6  +6.1
       comp=Z,2.9nm,1.0s,baz=65,slow=5.9,SNR=5.5
BRTR                                 LR     LR      20 35 42.3
       comp=Z,329nm,18.8s,baz=40,slow=40
BRTR   Keskin Array B    78.17 312   P      P       19 55 33.0  +0.4
BRTR   Keskin Array B    78.17 312   P      P       19 55 30.9  -1.6
DOPR   Dopca             78.20 321  ⇓P      P       19 55 33.7  +1.3
RUE    Ruedersdorf       78.24 331  eP      P       19 55 33.0  +0.6
       comp=Z,39nm,1.1s,baz=35,slow=5.4
ISR    Istrita           78.24 320  ⇑P      P       19 55 33.5  +0.8
WUAZ   Wupatki           78.27  53   P      P       19 55 34.3  +1.1
       baz=311
BSEG   Bad Segeberg      78.29 334  eP      P       19 55 33.2  +0.5
       comp=Z,20nm,0.9s,baz=35,slow=5.4
ICOR   Ion Corvin        78.31 318  ⇓P      P       19 55 33.8  +0.8
KSP    Ksiaz             78.56 329  eP      P       19 55 35.3  +1.0
VOIR                     78.75 321  ⇓P      P       19 55 36.5  +1.0
OSTC   Ostas             78.82 329  eP      P       19 55 36.8  +1.1
ISCO   Idaho Springs     78.84  47   P      P       19 55 37.8  +1.3
       baz=313
CHVC   Chvalec           78.86 329  eP      P       19 55 36.0   0.0
DRGR                     78.87 323  ⇑P      P       19 55 36.0  -0.1
MORC   Moravsky Berou    78.88 328  ⇓P      P       19 55 37.1  +0.9
MORC   Moravsky Berou    78.88 328  eP      P       19 55 37.0  +0.9
MVCO   Mesa Verde        78.91  51   P      P       19 55 38.3  +1.5
       baz=312
DPC    Dobruska-Polom    78.93 329  eP      P       19 55 36.8  +0.4
DPC                                 e               19 55 54.0
DPC    Dobruska-Polom    78.93 329  eP      P       19 55 36.8  +0.4
DPC                                 ex      x       19 55 54.0
UPC    Upice             78.94 329  eP      P       19 55 37.1  +0.7
UPC    Upice             78.94 329  eP      P       19 55 37.1  +0.7
KRLC   Kraliky           78.96 328  eP      P       19 55 36.9  +0.3
KRLC   Kraliky           78.96 328  eP      P       19 55 36.9  +0.3
ARR    Arges             79.00 321  ⇑P      P       19 55 38.4  +1.5
SUSD   Miller            79.14  40   P      P       19 55 38.2  +0.6
       baz=316
FLTG   Flechtingen       79.28 332  eP      P       19 55 38.5  +0.3
       comp=Z,20nm,0.9s,baz=35,slow=5.4
PSZ    Piszkesteto       79.30 325  ⇑P      P       19 55 39.7  +1.1
VYHS   Vyhne             79.32 326  eP      P       19 55 39.8  +1.3
VYHS   Vyhne             79.32 326  eP      P       19 55 39.8  +1.3
LOT    Lotru             79.36 321  ⇑P      P       19 55 40.0  +1.1
BRG    Berggiesshubel    79.46 330  i P     P       19 55 40.0  +0.8
BRG                                  Amp            19 55 40.9
       comp=Z,18nm,1.0s
BRG                                 ex      x       19 55 49.2
BRG                                  Amp            19 55 52.9
       comp=Z,5.8nm,0.9s
BRG                                 ex      x       19 55 57.1
BRG                                  Amp            19 55 59.4
       comp=Z,20nm,1.1s
BRG                                  Amp            20 36 42.0
       comp=Z,1.0nm,8.3s
BRG                                  Amp            20 36 45.0
       comp=N,0.9nm,7.5s
BRG                                  Amp            20 36 45.0
       comp=E,0.6nm,9.3s
BRG    Berggiesshubel    79.46 330  eP      P       19 55 39.8  +0.6
       comp=E,8.6nm,0.9s,baz=35,slow=5.4
CLL    Collm             79.47 331⇑iP      P       19 55 39.4  +0.2
       comp=Z,26nm,0.9s
CLL                                 ePcP    PcP     19 55 48.0  +0.7
CLL                                 i               19 55 56.6
CLL                                  LmH            20 29 00.0
       comp=N,300nm,19.3s
CLL                                  LmH            20 29 00.0
       comp=E,700nm,21.7s
CLL                                  LmV            20 33 00.0
       comp=Z,600nm,19.2s
CLL    Collm             79.47 331⇑iP      P       19 55 39.4  +0.2
CLL                                 e               19 55 48.0
CLL                                  pmax   pmax
       comp=Z,26nm,0.9s
CLL                                  MLR    MLR
       comp=Z,600nm,19.2s
CLL    Collm             79.47 331   IAmb   IAmb    19 55 40.5
       comp=Z,21nm,0.8s
CLL    Collm             79.47 331  eP      P       19 55 39.7  +0.5
       comp=Z,17nm,0.8s,baz=35,slow=5.4
PVCC   Panska Ves        79.49 330  eP      P       19 55 39.9  +0.5
PVCC   Panska Ves        79.49 330  eP      P       19 55 39.9  +0.5
S22A   4UR Ranch, Cre    79.53  49   P      P       19 55 42.0  +1.7
       baz=313
JAVC   Velka Javorina    79.54 327  eP      P       19 55 41.6  +1.8
NRDL   Niedersach Rie    79.55 333  eP      P       19 55 40.4  +0.8
       comp=Z,6.6nm,0.8s,baz=35,slow=5.4
NRDL                                esP     PcP     19 55 59.3  +12
VRAC   Vranov            79.64 328  ⇑P      P       19 55 41.4  +1.1
VRAC   Vranov            79.64 328  eP      P       19 55 41.2  +1.0
ASSE   Asse, Remlinge    79.65 333  eP      P       19 55 41.1  +1.0
       comp=Z,10nm,0.9s,baz=35,slow=5.4
GZR    Gura Zlata        79.87 322  ⇓P      P       19 55 42.4  +0.7
SMOL   Smolenice         79.91 327  eP      P       19 55 43.0  +1.3
SMOL                                 pmax   pmax
       comp=Z,10.0nm,1.0s
SMOL   Smolenice         79.91 327  eP      P       19 55 43.0  +1.3
KRUC   Moravsky          79.91 328  eP      P       19 55 42.5  +0.8
PRU    Pruhonice         79.93 329  eP      P       19 55 42.4  +0.6
PRU                                 e               19 56 00.4
PRU    Pruhonice         79.93 329  eP      P       19 55 42.4  +0.6
PRU                                 ex      x       19 56 00.4
EYMN   Ely               80.00  34   P      P       19 55 42.3  +0.1
       baz=320
EYMN   Ely               80.00  34   P      P       19 55 41.6  -0.6
NEUB   Neuenburg         80.00 331  eP      P       19 55 42.9  +0.8
       comp=Z,16nm,0.8s,baz=35,slow=5.4
OGNE   Ogallala          80.03  44   P      P       19 55 43.8  +1.1
       baz=315
SRO    Srobarova         80.07 326  eP      P       19 55 44.0  +1.4
SRO                                  pmax   pmax
       comp=Z,32nm,1.2s
SRO    Srobarova         80.07 326  eP      P       19 55 44.0  +1.4
SRO2   Moca              80.07 326  eP      P       19 55 43.2  +0.6
SRO2                                 pmax   pmax
       comp=Z,16nm,0.8s
SRO2   Moca              80.07 326  eP      P       19 55 43.2  +0.6
MODS   Modra-Piesok      80.08 327  eP      P       19 55 43.0  +0.3
MODS                                 pmax   pmax
       comp=Z,28nm,1.2s
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MODS	**Modra-Piesok**	**80.08**	**327**	*e*P	**P**	**19 55 43.0**	**+0.3**
TREC	**Trest**	**80.10**	**328**	*e*P	**P**	**19 55 43.1**	**+0.3**
TREC				*e*		19 56 00.8	
TREC	**Trest**	**80.10**	**328**	*e*P	**P**	**19 55 43.1**	**+0.3**
TREC				*e*x	x	19 56 00.8	
VLAD	**Vladila**	**80.11**	**320**	⇑P	**P**	**19 55 43.0**	**+0.2**
BZS	**Buzias**	**80.25**	**323**	⇑P	**P**	**19 55 43.5**	**-0.1**
ZST	**Bratislava**	**80.29**	**327**	*e*P	**P**	**19 55 45.5**	**+1.7**
ZST	**Bratislava**	**80.29**	**327**	*e*P	**P**	**19 55 45.5**	**+1.7**
GTTG	**Gottingen**	**80.38**	**333**	*e*P	**P**	**19 55 44.7**	**+0.5**
	comp=Z,13nm,0.9s,baz=35,slow=5.4						
PBCC	**Pribram**	**80.38**	**329**	*e*P	**P**	**19 55 43.9**	**-0.4**
PBCC				*e*x	x	19 56 00.0	
TANN	**Tannenbergstha**	**80.39**	**331**	*e*P	**P**	**19 55 45.2**	**+0.9**
	comp=Z,4.4nm,0.9s,baz=35,slow=5.4						
HERR	**Herculane**	**80.42**	**322**	⇓P	**P**	**19 55 44.9**	**+0.4**
PLVB	**Pleven**	**80.44**	**320**	⇑P	**P**	**19 55 44.8**	**+0.1**
GUNZ	**Gunzen**	**80.48**	**331**	*e*P	**P**	**19 55 45.7**	**+0.9**
	comp=Z,7.2nm,0.8s,baz=35,slow=5.4						
IBBN	**Ibbenburen**	**80.51**	**334**	*e*P	**P**	**19 55 45.6**	**+0.8**
	comp=Z,17nm,0.8s,baz=35,slow=5.4						
WERN	**Wernitzgruen**	**80.52**	**331**	*e*P	**P**	**19 55 46.1**	**+1.0**
	comp=Z,11nm,0.9s,baz=35,slow=5.4						
NKC	**Novy Kostel**	**80.54**	**331**	*e*P	**P**	**19 55 45.4**	**+0.3**
NKC	**Novy Kostel**	**80.54**	**331**	*e*P	**P**	**19 55 45.4**	**+0.3**
K31A	**O'Neill**	**80.55**	**41**	P	**P**	**19 55 45.8**	**+0.5**
K31A				IAmb	IAmb	19 55 47.2	
	comp=Z,22nm,0.8s						
TUC	**Tucson**	**80.74**	**56**	P	**P**	**19 55 47.9**	**+1.3**
	baz=312						
ECSD	**EROS Data Cent**	**80.81**	**39**	P	**P**	**19 55 46.8**	**+0.1**
	baz=318						
MANZ	**Manzenberg**	**80.87**	**331**	*e*P	**P**	**19 55 47.9**	**+1.0**
	comp=Z,8.6nm,0.9s,baz=35,slow=5.4						
CKRC	**Cesky Krumlov**	**80.95**	**329**	*e*P	**P**	**19 55 46.8**	**-0.5**
CKRC				*e*x	x	19 56 03.7	
UBBA	**Unterbreizbach**	**80.97**	**332**	*e*P	**P**	**19 55 48.0**	**+0.8**
	baz=35,slow=5.4						
UBBA				*e*sP	PcP	19 56 07.1	+13
KHC	**Kasperske Hory**	**80.99**	**329***c*	*i*P	**P**	**19 55 48.0**	**+0.4**
KHC				pmax	pmax		
	comp=Z,64nm,1.3s						
KHC	**Kasperske Hory**	**80.99**	**329**	*e*P	**P**	**19 55 47.0**	**-0.6**
KHC				*e*x	x	19 56 05.3	
KHC	**Kasperske Hory**	**80.99**	**329**	IAmb	IAmb	19 55 49.5	
	comp=Z,20nm,0.9s						
ROTZ	**Rotzenmuhle**	**81.01**	**330**	*e*P	**P**	**19 55 48.2**	**+0.6**
	comp=Z,8.0nm,0.9s,baz=35,slow=5.4						
CONA	**Conrad Observa**	**81.02**	**327**	*i* P	**P**	**19 55 49.0**	**+1.2**
	comp=Z,18nm,1.0s						
RAYN	**Ar Rayn**	**81.02**	**293**	P	**P**	**19 55 47.4**	**-0.8**
RAYN				pmax	pmax		
	comp=Z,22nm,1.3s						
RAYN	**Ar Rayn**	**81.02**	**293**	P	**P**	**19 55 47.4**	**-0.8**
RAYN				IAmb	IAmb	19 56 05.1	
	comp=Z,22nm,1.2s						
MORH	**Mrgy, Hungar**	**81.15**	**325**	⇑P	**P**	**19 55 48.0**	**-0.4**
GEC2	**GERESS Array S**	**81.17**	**329**	P	**P**	**19 55 48.6**	**0.0**
GEC2	**GERESS Array S**	**81.17**	**329**	*e*P	**P**	**19 55 49.1**	**+0.5**
	comp=Z,5.6nm,0.8s,baz=35,slow=5.4						
GERES	**GERESS Array B**	**81.17**	**329**	P	**P**	**19 55 49.2**	**+0.5**
	comp=Z,6.0nm,0.8s,baz=37,slow=5.5,SNR=36						
GERES				LR	LR	20 36 30.4	
	comp=Z,482nm,18.2s,baz=14,slow=39						
GERES	**GERESS Array B**	**81.17**	**329**	P	**P**	**19 55 47.9**	**-0.7**
KASTN	**Kahler Asten**	**81.21**	**333**	*e*P	**P**	**19 55 49.2**	**+0.5**
	comp=Z,7.5nm,0.9s,baz=35,slow=5.4						
WET	**Wettzell**	**81.25**	**330**	*e*P	**P**	**19 55 49.7**	**+0.7**
	comp=Z,12nm,1.0s,baz=35,slow=5.4						
WET				*e*sP	PcP	19 56 08.7	+14
T25A	**Trinidad**	**81.35**	**48**	P	**P**	**19 55 51.2**	**+1.2**
	baz=314						
BUG	**Bochum--Univer**	**81.40**	**334**	*e*P	**P**	**19 55 50.5**	**+0.9**
	comp=Z,16nm,1.0s,baz=35,slow=5.4						
FRGS	**Fruska Gora**	**81.43**	**323**	⇓P	**P**	**19 55 50.0**	**0.0**
GRA1	**Grafenberg Arr**	**81.44**	**331**	P	**P**	**19 55 50.0**	**+0.1**
GRF	**Grafenberg Arr**	**81.44**	**331**	P	**P**	**19 55 50.0**	**+0.1**
GRF				pmax	pmax		
	comp=Z,40nm,0.9s						
GRF	**Grafenberg Arr**	**81.44**	**331**	*e*P	**P**	**19 55 50.9**	**+1.0**
	comp=Z,27nm,0.8s,baz=35,slow=5.4						
GRFO	**Grafenberg**	**81.44**	**331**	P	**P**	**19 55 49.9**	**0.0**
GRFO				pmax	pmax		
	comp=Z,38nm,0.9s						
GRFO	**Grafenberg**	**81.44**	**331**	P	**P**	**19 55 49.9**	**0.0**
CSS	**Mathiatis**	**81.57**	**309**	IAmb	IAmb	19 55 53.8	
	comp=Z,13nm,0.8s						
ANMO	**Albuquerque**	**81.65**	**51**	LR	LR	20 26 46.6	
	comp=Z,69nm,21.8s,baz=338,slow=32						
ANMO	**Albuquerque**	**81.65**	**51**	P	**P**	**19 55 52.9**	**+1.3**
	baz=313						
ANMO	**Albuquerque**	**81.65**	**51**	⇓*e*P	**P**	**19 55 53.5**	**+1.9**
ANMO				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ANMO	**Albuquerque**	**81.65**	**51**	P	**P**	**19 55 51.7**	**+0.2**
BOVS	**Bovan**	**81.69**	**321**	⇑P	**P**	**19 55 50.9**	**-0.4**
ARSA	**Arzberg**	**81.69**	**327**	*i* P	**P**	**19 55 52.0**	**+0.7**
	comp=Z,6.1nm,0.8s						
VTS	**Vitosha**	**81.70**	**320**	⇑P	**P**	**19 55 52.5**	**+0.9**
VTS	**Vitosha**	**81.70**	**320**	P	**P**	**19 55 52.2**	**+0.6**
VTS				pmax	pmax		
	comp=Z,22nm,0.9s						
VTS	**Vitosha**	**81.70**	**320**	P	**P**	**19 55 52.2**	**+0.6**
VTS				IAmb	IAmb	19 56 11.0	
	comp=Z,22nm,0.9s						
MOA	**Molln**	**81.74**	**328**	*e*P	**P**	**19 55 52.5**	**+1.0**
	comp=Z,7.1nm,1.0s						
SOCY	**Socotra**	**81.85**	**279**	P	**P**	**19 55 50.3**	**-2.4**
SOCY				IAmb	IAmb	19 55 52.0	
	comp=Z,25nm,0.9s						
TNS	**Taunus Mts**	**82.02**	**333**	*e*P	**P**	**19 55 54.0**	**+1.0**
	baz=35,slow=5.4						
AHRW	**Bad Neuenahr-A**	**82.22**	**334**	*e*P	**P**	**19 55 55.1**	**+1.1**
	baz=35,slow=5.4						
SOKA	**Soboth**	**82.35**	**327**	*i* P	**P**	**19 55 55.5**	**+0.7**
	comp=Z,29nm,0.8s,SNR=5.7						
RJOB	**Jochberg**	**82.42**	**329**	*e*P	**P**	**19 55 56.2**	**+1.1**
	comp=Z,53nm,0.8s,baz=35,slow=5.4						
121A	**Cookes Peak, D**	**82.48**	**54**	P	**P**	**19 55 57.9**	**+2.0**
	baz=313						
FUR	**Furstenfeldbru**	**82.67**	**330**	*e*P	**P**	**19 55 57.3**	**+0.8**
	comp=Z,26nm,0.8s,baz=35,slow=5.4						
OBKA	**Obir**	**82.69**	**327**	*i* P	**P**	**19 55 56.0**	**-0.6**
	comp=Z,11nm,0.9s						
KBA	**Koelnbreinsper**	**82.73**	**328**	*i* P	**P**	**19 55 58.0**	**+1.1**
	comp=Z,15nm,0.8s						
STU	**Stuttgart**	**82.95**	**331**	*e*P	**P**	**19 55 58.8**	**+0.9**
	comp=Z,21nm,0.8s,baz=35,slow=5.4						
MYKA	**Terra Mystica**	**82.97**	**328**	*i* P	**P**	**19 55 57.9**	**-0.1**
	comp=Z,11nm,0.8s						
BGES	**Gesves**	**83.03**	**335**	*d*P	**P**	**19 55 58.4**	**+0.2**
WATA	**Walderalm**	**83.23**	**329**	*i* P	**P**	**19 55 59.9**	**+0.4**
	comp=Z,24nm,1.5s						
WTTA	**Wattenberg**	**83.27**	**329**	*i* P	**P**	**19 56 00.2**	**+0.5**
	comp=Z,19nm,1.2s						
ABTA	**Abfaltersbach**	**83.33**	**328**	*i* P	**P**	**19 55 59.1**	**-0.9**
	comp=Z,16nm,1.1s						
MOTA	**Moosalm**	**83.41**	**330**	*e*P	**P**	**19 56 00.7**	**+0.3**
	comp=Z,38nm,1.0s,SNR=8.8						
RETA	**Reutte**	**83.42**	**330**	*i* P	**P**	**19 56 01.1**	**+0.7**
	comp=Z,25nm,1.2s						
SQTA	**Sankt Quirin**	**83.47**	**329**	*e*P	**P**	**19 56 01.1**	**+0.4**
	comp=Z,16nm,1.2s						
BFO	**Black Forest**	**83.64**	**332**	P	**P**	**19 56 01.1**	**-0.3**
BFO				pmax	pmax		
	comp=Z,11nm,0.9s						
BFO	**Black Forest**	**83.64**	**332**	P	**P**	**19 56 01.1**	**-0.3**
BFO				IAmb	IAmb	19 56 02.4	
	comp=Z,11nm,0.9s						
BFO	**Black Forest**	**83.64**	**332**	*e*P	**P**	**19 56 02.3**	**+0.9**
	comp=Z,6.7nm,0.8s,baz=35,slow=5.4						
STAL	**STALIGIAL**	**83.65**	**328**	P	**P**	**19 56 00.6**	**-1.0**
PDG	**Podgorica**	**83.78**	**322**	⇑P	**P**	**19 56 01.8**	**-0.3**
MATQ	**Matagami**	**83.80**	**25**	P	**P**	**19 56 02.1**	**-0.1**
	baz=330						
FETA	**Feichten**	**83.82**	**330**	*i* P	**P**	**19 56 02.9**	**+0.4**
	comp=Z,17nm,1.0s						
DAVA	**Damuels**	**83.93**	**330**	*e*P	**P**	**19 56 03.3**	**+0.2**
	comp=Z,33nm,0.9s,SNR=5.4						
ECH	**Echery**	**84.16**	**332**	P	**P**	**19 56 03.2**	**-0.9**
ECH	**Echery**	**84.16**	**332**	P	**P**	**19 56 03.2**	**-0.9**
ECH				IAmb	IAmb	19 56 05.5	
	comp=Z,16nm,1.0s						
KSU1	**Kansas State U**	**84.24**	**43**	P	**P**	**19 56 04.7**	**+0.1**
	baz=318						
DAVOX	**Davos/Dischmat**	**84.35**	**330**	P	**P**	**19 56 05.5**	**+0.2**
	comp=Z,16nm,0.9s,baz=15,slow=3.0,SNR=22						
AMTX	**Amarillo**	**84.51**	**48**	P	**P**	**19 56 07.6**	**+1.4**
	baz=316						
MSTX	**Muleshoe**	**84.52**	**50**	P	**P**	**19 56 08.0**	**+1.7**
	baz=315						
PPT	**Papeete**	**84.52**	**118**	LR	LR	20 26 22.1	
	comp=Z,235nm,20.2s,baz=353,slow=30						
MNTX	**Cornudas Mount**	**84.53**	**53**	P	**P**	**19 56 07.7**	**+1.4**
	baz=314						
PPT2	**Papeete2**	**84.54**	**118**	*e*LR	LR	20 22 52.2	
	comp=Z,423nm,22.2s						
PPT2	**Papeete2**	**84.54**	**118**	*e*T	T	21 28 25.8	
	comp=Z,3.1nm,0.3s						
LSQQ	**Lebel-sur-Quev**	**84.62**	**25**	P	**P**	**19 56 06.0**	**-0.4**
	baz=330						
SENIN	**Lac Senin/Sane**	**85.67**	**331**	IAmb	IAmb	19 56 33.4	
	comp=Z,16nm,1.0s						
HDIL	**Hopedale**	**86.75**	**37**	P	**P**	**19 56 18.3**	**+1.2**
	baz=322						
D56A	**ZEC Mazanza, M**	**87.10**	**25**	P	**P**	**19 56 18.4**	**-0.4**
	baz=332						
TXAR	**Lajitas Array**	**87.24**	**54**	P	**P**	**19 56 20.4**	**+0.6**
	comp=Z,1.6nm,0.7s,baz=295,slow=3.7,SNR=18						
TXAR	**Lajitas Array**	**87.24**	**54**	P	**P**	**19 56 19.8**	**0.0**
E56A	**St. Veronique**	**87.45**	**25**	P	**P**	**19 56 20.5**	**+0.1**
	baz=332						
D58A	**Chemin du LacG**	**87.66**	**24**	P	**P**	**19 56 21.5**	**+0.1**
	baz=333						
CCM	**Cathedral Cave**	**87.76**	**40**	P	**P**	**19 56 22.6**	**+0.5**
	baz=321						
CCM	**Cathedral Cave**	**87.76**	**40**	P	**P**	**19 56 21.8**	**-0.3**
CCM				pmax	pmax		
	comp=Z,19nm,1.1s						
CCM	**Cathedral Cave**	**87.76**	**40**	P	**P**	**19 56 21.8**	**-0.3**
H53A	**Bobcaygeon**	**87.92**	**29**	P	**P**	**19 56 22.7**	**0.0**
	baz=329						
U40A	**Yellville**	**88.26**	**42**	P	**P**	**19 56 24.8**	**+0.3**
	baz=320						
D60A	**Saint Jean D'O**	**88.42**	**23**	P	**P**	**19 56 25.3**	**+0.3**
	baz=334						
TBI	**Tubuai**	**88.64**	**122**	*e*LR	LR	20 24 22.7	
	comp=Z,211nm,29.0s						
TBI	**Tubuai**	**88.64**	**122**	*e*T	T	21 33 32.8	
	comp=Z,7.8nm,0.4s						
MIAR	**Mount Ida**	**89.26**	**44**	P	**P**	**19 56 30.0**	**+0.8**
	baz=320						
L53A	**Girard**	**89.51**	**31**	P	**P**	**19 56 31.3**	**+1.0**
	baz=328						
P49A	**Miami Univ. Ec**	**89.65**	**35**	P	**P**	**19 56 31.5**	**+0.5**
	baz=325						
ACSO	**Alum Creek Sta**	**89.83**	**34**	P	**P**	**19 56 31.9**	**+0.1**
	baz=326						
M54A	**Oil Creek Stat**	**90.13**	**31**	P	**P**	**19 56 33.9**	**+0.7**
	baz=328						
H61A	**Lyndonville**	**90.25**	**24**	P	**P**	**19 56 34.4**	**+0.7**
	baz=334						
L56A	**Greenwood**	**90.40**	**29**	P	**P**	**19 56 35.0**	**+0.6**
	baz=330						
K58A	**Earlville**	**90.56**	**28**	P	**P**	**19 56 35.6**	**+0.4**
	baz=331						
ATD	**Arta Tunnel**	**90.65**	**285**	LR	LR	20 42 08.2	
	comp=Z,87nm,18.1s,baz=38,slow=39						
M56A	**Emporium**	**90.72**	**30**	P	**P**	**19 56 36.7**	**+0.8**
	baz=329						
K59A	**Cooperstown**	**90.83**	**27**	P	**P**	**19 56 37.1**	**+0.7**
	baz=332						
BINY	**Binghamton**	**90.93**	**28**	P	**P**	**19 56 37.6**	**+0.7**
	baz=331						
L58A	**Harry Jones Me**	**91.11**	**28**	P	**P**	**19 56 38.3**	**+0.6**
	baz=331						
M57A	**Sunshine Farm,**	**91.25**	**29**	P	**P**	**19 56 39.6**	**+1.2**
	baz=330						
L59A	**Walton**	**91.27**	**28**	P	**P**	**19 56 39.1**	**+0.6**
	baz=332						
KEST	**Kesra**	**93.74**	**324**	LR	LR	20 44 05.8	
	comp=Z,378nm,18.2s,baz=336,slow=39						
ESDC	**Sonseca Array**	**95.47**	**335**	P	**P**	**19 56 57.9**	**0.0**
	comp=Z,1.4nm,0.8s,baz=24,slow=3.8,SNR=7.2						
ESDC				LR	LR	20 45 43.0	
	comp=Z,431nm,18.4s,baz=0.0,slow=39						
ESDC	**Sonseca Array**	**95.47**	**335**	P	**P**	**19 56 57.4**	**-0.5**
MATP	**Matopo**	**121.68**	**269**	PKP	**PKiKP**	**20 02 27.4**	**0.0**
	comp=Z,1.6nm,0.5s,baz=52,slow=3.1,SNR=7.4						
LBTB	**Lobatse**	**126.43**	**266**	PKP	**PKPdf**	**20 02 35.4**	**-0.9**
	comp=Z,2.3nm,1.0s,baz=55,slow=6.1,SNR=3.7						
SYO	**Syowa Base**	**131.35**	**208**	⇑*i*pPdiff	pPdif	19 59 41.0	+1.6
SNAA	**Sanae**	**143.83**	**197**	PKPdf	**PKPdf**	**20 03 06.2**	**-0.9**
SNAA	**Sanae**	**143.83**	**197***c*	*i*PKIKP	**PKiKP**	**20 03 15.9**	**+5.3**
SNAA				pmax	pmax		
	comp=Z,15nm,1.3s						
SNAA	**Sanae**	**143.83**	**197**		**PKPdf**	**20 03 06.5**	**-0.7**
LPAZ	**La Paz**	**143.96**	**59**	PKP	PKPbc	20 03 08.3	+0.9
	comp=Z,1.6nm,1.1s,baz=89,slow=2.2,SNR=4.1						
VNA2	**Neumayer--Watz**	**145.39**	**196**	PKPdf	**PKPab**	**20 03 10.8**	**+0.9**
VNA3	**Neumayer Olymp**	**145.62**	**195**	PKPdf	**PKPab**	**20 03 10.8**	**0.0**
VNA1	**Neumayer--Stat**	**145.78**	**196**	PKPdf	**PKPab**	**20 03 11.7**	**+0.4**
PB08	**IPOC Station P**	**145.96**	**64**		**PKPdf**	**20 03 12.5**	**-0.2**
AC05	**El Transito**	**150.30**	**79**		**PKPbc**	**20 03 24.5**	**0.0**
BI02	**San Fabin de**	**152.70**	**95**		**PKiKP**	**20 03 29.9**	**-0.1**

IDC ***22*** *20:01:26.4±4.1, 24.°98N×106.°85W, h0^{km}, mb1 3.6/4, mb1mx3.3/38, mbtmp3.2/4, ML3.5/4, Error ellipse: s-maj=63.5km s-min=18.7km az=139.0*
MEX ***22*** *20:01:27.3±0.8, 24.°85N×106.°94W, h5^{km}±12^{km}, MD4.3*
ISC 22 20:01:24.0±1.2**, 24.°73N**±0.°04×**106.°82W**±0.°03**, h7**^{km}±10^{km}**,**
n14, σ**2**^{s}**44**/24**, 1C, Central Mexico**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SSIG	**Sanalona**	**0.31**	**287**	⇑*i*P	**Pg**	**20 01 30.4**	**+0.4**
	baz=79,slow=16						
SSIG				*i* S	**Sg**	**20 01 34.0**	**-0.1**
PDIG	**Papasquiaro**	**1.33**	**76**	*i* P	**Pg**	**20 01 50.6**	**+1.1**
PDIG				*i* S	**Sn**	**20 02 08.5**	**+1.3**
MAIG	**Mazatlaan**	**1.58**	**167**	*i* P	**Pg**	**20 01 54.0**	**-0.3**
MAIG				*i* S	**Sg**	**20 02 15.2**	**+0.4**
TSIG	**Topolobambo**	**2.19**	**294**	*e*P	**Pn**	**20 01 58.5**	**-2.3**
TSIG				*i* PG	**Pg**	**20 02 05.3**	**-0.8**
TSIG				*e*SN	**Sn**	**20 02 24.1**	**-4.1**
HPIG		**2.43**	**25**	*e*P	**Pn**	**20 02 05.8**	**+1.4**
HPIG				*i* PG	**Pg**	**20 02 10.9**	**+0.3**
HPIG				*i* S	**Sn**	**20 02 32.4**	**-2.0**
CSIG	**Choix**	**2.52**	**327**	*i* P	**Pn**	**20 02 03.8**	**-1.6**
CSIG				*e*S	**Sn**	**20 02 32.2**	**-4.1**
BCIG	**La Boquilla**	**3.07**	**24**	*e*P	**Pn**	**20 02 13.1**	**-0.1**
BCIG				*i* S	**Sn**	**20 02 48.6**	**-1.6**
LPIG	**La Paz**	**3.24**	**260**	Pn	**Pn**	**20 02 17.5**	**+2.2**
	8.4nm,0.3s,baz=56,slow=3.6,SNR=8.7						
GUYB	**Guaymas**	**4.82**	**312**	*e*P	Pn	20 02 18.9	-18
GUYB				*e*S	**Sn**	**20 03 37.3**	**+4.3**
TXAR	**Lajitas Array**	**5.38**	**31**	Pn	**Pn**	**20 02 44.9**	**+0.1**
	0.6nm,0.3s,baz=208,slow=14,SNR=9.9						
TXAR				Pg	**Pb**	**20 03 01.6**	**+3.2**
	1.5nm,0.3s,baz=211,slow=14,SNR=11						
TXAR				Lg	Lg	20 04 08.6	
	20nm,0.3s,baz=218,slow=28,SNR=21						
MNIG	**Monterrey**	**5.98**	**80**	*e*P	**Pb**	**20 03 06.3**	**-2.4**
MNIG				*i* S	**Sg**	**20 04 31.8**	**-4.3**
ANMO	**Albuquerque**	**10.19**	**2**	Lg	Lg	20 06 46.1	
	0.3nm,0.3s,baz=288,slow=21,SNR=3.9						
NVAR	**Mina Array Bea**	**16.78**	**327**	Pn	**P**	**20 05 24.5**	**+2.4**
	0.2nm,0.3s,baz=151,slow=13,SNR=2.7						
PDAR	**Pinedale Array**	**18.13**	**354**	P	**P**	**20 05 38.2**	**+1.3**
	0.0nm,0.3s,baz=164,slow=10,SNR=3.1						

JMA ***22*** *20:25:09.9±0.1, 24.°21N×121.°78E, h13^{km}±2^{km}, M2.6*
TAP ***22*** *20:25:10.1, 24.°25N×121.°80E, h15^{km}, ML3.3, B*
ISC 22 20:25:10.0±0.9**, 24.°24N**±0.°01×**121.°81E**±0.°02**, h14**^{km}±6^{km}**,**
n131, σ**0**^{s}**67**/211**, 20D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENA	**Nanau**	**0.20**	**342**	⇓*i*P	**Pg**	**20 25 14.6**	**+0.1**
	baz=344						
ENA				S	**Sg**	**20 25 17.8**	**+0.2**
	baz=344						
NACB	**Ninganchiao**	**0.20**	**252**	⇓*i*P	**Pg**	**20 25 14.6**	**0.0**
	baz=244						
NACB				*i* S	**Sb**	**20 25 18.1**	**-1.2**
	baz=244						
EWUT	**Wuta**	**0.21**	**352**	⇓*i*P	**Pg**	**20 25 14.5**	**-0.1**
	baz=353						
EWUT				*e*S	**Sg**	**20 25 18.0**	**+0.2**
	baz=353						
TWD	**Chiawan**	**0.25**	**231**	⇓*i*P	**Pg**	**20 25 15.5**	**+0.2**
	baz=233						
TWD				S	**Sb**	**20 25 19.8**	**-0.7**
	baz=233						
ETLH	**Xiulin Townshi**	**0.30**	**264**	⇓*i*P	**Pg**	**20 25 16.3**	**0.0**
	baz=263						
ETLH				*e*S	**Sb**	**20 25 21.1**	**-1.0**
	baz=263						
HWA	**Hwalien**	**0.32**	**216**	*e*P	**Pb**	**20 25 17.6**	**+0.1**
	baz=222						
HWA				*e*S	**Sb**	**20 25 23.9**	**+1.4**
	baz=222						
TWC	**Suao**	**0.37**	**6**	⇓*i*P	**Pg**	**20 25 17.7**	**+0.2**
	baz=7.0						
TWC				*e*S	**Sg**	**20 25 22.8**	**+0.2**
	baz=7.0						
NDS	**Dongshan**	**0.40**	**348**	⇓*i*P	**Pg**	**20 25 18.4**	**+0.3**
	baz=347						
NDS				*e*S	**Sg**	**20 25 24.2**	**+0.6**
	baz=347						
NNSH	**Datong**	**0.43**	**296**	⇓*i*P	**Pg**	**20 25 18.9**	**+0.2**
	baz=295						
NNSH				S	**Sb**	**20 25 24.9**	**-1.0**
	baz=295						
NNSB	**Datong**	**0.43**	**296**	⇓*i*P	**Pg**	**20 25 18.9**	**+0.2**
	baz=295						
NNSB				S	**Sg**	**20 25 24.7**	**+0.2**
	baz=295						
NNS	**Nan Shan**	**0.45**	**297**	⇓*i*P	**Pg**	**20 25 19.1**	**+0.1**
	baz=296						
NNS				S	**Sg**	**20 25 25.1**	**+0.2**
	baz=296						
NDT	**Datong Townshi**	**0.45**	**324**	⇓*i*P	**Pg**	**20 25 19.3**	**+0.3**
	baz=322						
NDT				*e*S	**Sb**	**20 25 25.8**	**-0.7**
	baz=322						
ENTT	**Nioudou**	**0.46**	**331**	⇓*i*P	**Pg**	**20 25 19.4**	**+0.3**
	baz=330						
ENTT				*e*S	**Sg**	**20 25 25.7**	**+0.4**
	baz=330						
TWE	**Neicheng**	**0.50**	**345**	⇓*i*P	**Pg**	**20 25 20.1**	**+0.2**
	baz=345						
TWE				*e*S	**Sg**	**20 25 27.1**	**+0.5**
	baz=345						
WHF	**Hehuan Shan**	**0.51**	**260**	⇓*i*P	**Pg**	**20 25 20.1**	**0.0**
	baz=259						
WHF				S	**Sg**	**20 25 26.9**	**0.0**
	baz=259						
FUSS	**Fushou**	**0.52**	**271**	⇓P	**Pb**	**20 25 20.6**	**-0.4**
	baz=271						
FUSS				S	**Sb**	**20 25 27.9**	**-0.6**
	baz=271						
ILA	**Ilan**	**0.53**	**354**	*e*P	**Pg**	**20 25 20.8**	**+0.4**
	baz=348						
ILA				*e*S	**Sg**	**20 25 27.5**	**0.0**
	baz=348						
ESL	**Shilin**	**0.54**	**219**	*i* P	**Pb**	**20 25 20.8**	**-0.6**
	baz=225						
ESL				*e*S	**Sb**	**20 25 29.4**	**+0.4**
	baz=225						
TWT	**Tachien**	**0.58**	**272**	⇓*i*P	**Pb**	**20 25 22.0**	**0.0**
	baz=271						
TWT				*e*S	**Sb**	**20 25 30.3**	**+0.1**
	baz=271						
YHNB	**Yeheng**	**0.58**	**318**	⇓P	**Pg**	**20 25 21.7**	**+0.2**
	baz=317						
YHNB				S	**Sg**	**20 25 29.4**	**+0.1**
	baz=317						
TDCB	**Techi**	**0.59**	**272**	P	**Pb**	**20 25 22.1**	**-0.2**
	baz=271						
TDCB				S	**Sb**	**20 25 29.7**	**-0.9**
	baz=271						
NSK	**Sanguang**	**0.60**	**317**	⇓P	**Pg**	**20 25 21.9**	**+0.1**
	baz=316						
NSK				*e*S	**Sg**	**20 25 29.9**	**+0.1**
	baz=316						
CHGB	**Renai**	**0.61**	**253**	⇓*i*P	**Pb**	**20 25 22.2**	**-0.4**
	baz=248						
CHGB				*e*S	**Sb**	**20 25 30.0**	**-1.0**
	baz=248						
NWLT	**Wulai**	**0.61**	**333**	*e*P	**Pb**	**20 25 22.3**	**-0.2**
	baz=332						
NWLT				*e*S	**Sg**	**20 25 30.2**	**+0.2**
	baz=332						
NTC	**Toucheng**	**0.61**	**2**	P	**Pg**	**20 25 22.3**	**+0.2**
	baz=1.0						
NTC				*e*S	**Sg**	**20 25 30.3**	**+0.1**
	baz=1.0						
EGFH	**Guangfu**	**0.66**	**212**	P	**Pb**	**20 25 23.3**	**-0.1**
	baz=217						
EGFH				*e*S	**Sn**	**20 25 34.7**	**-0.6**
	baz=217						
TIPB	**Shuangxi**	**0.73**	**1**	⇓P	**Pg**	**20 25 24.5**	**+0.2**
TIPB				*e*S	**Sg**	**20 25 34.0**	**+0.1**
NHDH	**Xindian Distri**	**0.77**	**340**	*e*P	**Pb**	**20 25 25.2**	**0.0**
	baz=331						
NHDH				*e*S	**Sb**	**20 25 35.3**	**-0.2**
	baz=331						
TWA	**Mucha**	**0.77**	**345**	*e*P	**Pb**	**20 25 25.3**	**+0.1**
	baz=334						
TWA				*e*S	**Sb**	**20 25 35.5**	**-0.1**
	baz=334						
VWDT	**VWDT**	**0.78**	**232**	*e*P	**Pb**	**20 25 25.2**	**-0.1**
	baz=238						
VWDT				*e*S	**Sn**	**20 25 36.6**	**-1.5**
	baz=238						
TWB1	**Santiao Chiao**	**0.79**	**12**	*e*P	**Pg**	**20 25 25.4**	**+0.1**
	baz=11						
TWB1				*e*S	**Sg**	**20 25 35.3**	**-0.2**
	baz=11						
WHP	**Taichung City**	**0.79**	**273**	*e*P	**Pb**	**20 25 25.8**	**+0.2**
	baz=273						
WHP				*e*S	**Sb**	**20 25 36.3**	**+0.1**
	baz=273						
TATO	**Taipei**	**0.79**	**338**	*e*P	**Pb**	**20 25 25.5**	**-0.1**
	baz=337						
TATO				*e*S	**Sg**	**20 25 35.9**	**+0.1**
	baz=337						
WPL	**Puli Township**	**0.81**	**254**	*e*P	**Pb**	**20 25 25.6**	**-0.3**
	baz=255						
WPL				*e*S	**Sb**	**20 25 37.1**	**+0.4**
	baz=255						
HGSD	**Ruisui**	**0.82**	**205**	*e*P	**Pn**	**20 25 26.6**	**-0.6**
	baz=197						
HGSD				*e*S	**Sn**	**20 25 39.2**	**0.0**
	baz=197						
NJD	**Zhudong**	**0.82**	**307**	*e*P	**Pn**	**20 25 26.9**	**-0.3**
	baz=312						
NJD				*e*S	**Sn**	**20 25 38.4**	**-0.8**
	baz=312						
BACT	**New Taipei Cit**	**0.83**	**336**	*e*P	**Pb**	**20 25 26.1**	**-0.1**
	baz=336						
LIOB	**Emei**	**0.83**	**300**	*e*P	**Pn**	**20 25 27.0**	**-0.4**
	baz=299						
LIOB				*e*S	**Sn**	**20 25 38.2**	**-1.3**
	baz=299						
DPDB	**Guoxing**	**0.83**	**256**	*e*P	**Pb**	**20 25 26.4**	**+0.1**
	baz=257						
DPDB				*e*S	**Sn**	**20 25 37.9**	**-1.6**
	baz=257						
NWF	**Wu-fen Shan**	**0.83**	**358**	*e*P	**Pb**	**20 25 26.5**	**+0.2**
	baz=358						
WFSB	**Wu-fen Shan**	**0.83**	**358**	*e*P	**Pb**	**20 25 26.6**	**+0.4**
	baz=350						
WFSB				*e*S	**Sg**	**20 25 36.3**	**-0.7**
	baz=350						
NSTT	**Nanjuang**	**0.83**	**298**	*e*P	**Pn**	**20 25 26.7**	**-0.7**
	baz=298						
NSTT				*e*S	**Sb**	**20 25 37.6**	**+0.2**
	baz=298						
WCS	**Beigang Elemen**	**0.84**	**258**	P	**Pb**	**20 25 26.5**	**+0.1**
	baz=258						
WCS				*e*S	**Sb**	**20 25 38.0**	**+0.5**
	baz=258						
TAP1	**Taipei**	**0.84**	**342**	*e*P	**Pn**	**20 25 27.2**	**-0.2**
	baz=333						
TAP1				*e*S	**Sb**	**20 25 38.4**	**+0.8**
	baz=333						
TAP	**Taipei**	**0.84**	**341**	*e*P	**Pn**	**20 25 27.9**	**+0.4**
	baz=333						
TAP				*e*S	**Sn**	**20 25 38.8**	**-1.0**
	baz=333						
EHY	**Hungye**	**0.85**	**212**	*e*P	**Pg**	**20 25 26.1**	**-0.4**
	baz=225						
EHY				*e*S	**Sn**	**20 25 40.3**	**+0.3**
	baz=225						
NTY	**Taoyuan**	**0.89**	**329**	*e*P	**Pn**	**20 25 27.7**	**-0.4**
	baz=328						

NTY				eS	Sn	20 25 40.2	-0.7
	baz=328						
HSN1	Hsinchu	0.90	307	eP	Pn	20 25 28.4	+0.1
	baz=298						
HSN1				eS	Sn	20 25 40.7	-0.5
	baz=298						
SSLB	Suanglung	0.90	240	P	Pb	20 25 27.3	-0.1
	baz=250						
SSLB				eS	Sb	20 25 38.9	-0.5
	baz=250						
SMLT	Sun Moon Lake	0.90	247	P	Pn	20 25 27.7	-0.7
	baz=241						
SMLT				eS	Sb	20 25 39.3	-0.1
	baz=241						
TNOU	National Taiwa	0.91	358	eP	Pg	20 25 28.0	+0.4
	baz=351						
TNOU				eS	Sb	20 25 38.7	-0.9
	baz=351						
NCU	National Centr	0.92	322	eP	Pn	20 25 29.1	+0.4
	baz=317						
NCU				eS	Sn	20 25 43.0	+1.3
	baz=317						
NCUH	Zhongli	0.92	322	eP	Pn	20 25 29.0	+0.3
	baz=316						
NCUH				eS	Sn	20 25 42.1	+0.3
	baz=316						
TWS1	Kuangyinshan	0.93	338	eP	Pn	20 25 28.8	+0.1
	baz=337						
TWS1				eS	Sn	20 25 41.3	-0.6
	baz=337						
TYC	Yuchr	0.93	249	P	Pg	20 25 27.8	-0.2
	baz=244						
TYC				eS	Sg	20 25 39.7	-0.5
	baz=244						
YM01	YM01	0.93	347	eP	Pb	20 25 27.4	-0.6
	baz=345						
YM01				eS	Sn	20 25 41.2	-0.8
	baz=345						
SBCB	Hsinchu	0.93	307	eP	Pn	20 25 29.3	+0.6
	baz=306						
YM10	YM10	0.94	346	eP	Pg	20 25 28.6	+0.4
	baz=345						
YM10				eS	Sg	20 25 40.9	+0.4
	baz=345						
YM04	YM04	0.95	345	eP	Pg	20 25 28.5	+0.2
	baz=343						
YM04				eS	Sg	20 25 41.1	+0.4
	baz=343						
HSN	Hsinchu	0.95	307	eP	Pn	20 25 29.4	+0.4
	baz=301						
HSN				eS	Sn	20 25 42.9	+0.5
	baz=301						
YM05	YM05	0.95	347	eP	Pg	20 25 28.6	+0.2
	baz=345						
YM05				eS	Sg	20 25 41.5	+0.7
	baz=345						
YM11	YM11	0.95	347	eP	Pn	20 25 29.0	-0.1
	baz=346						
TWQ1	Liyutan	0.95	277	eP	Pn	20 25 29.5	+0.4
	baz=277						
TWQ1				eS	Sn	20 25 42.2	-0.2
	baz=277						
YULB	Yu-li	0.96	209	eP	Pb	20 25 27.9	-0.6
	baz=222						
YULB				eS	Sg	20 25 41.3	+0.1
	baz=222						
NJN	Zhunan	0.96	298	eP	Pn	20 25 29.0	-0.2
	baz=297						
NJN				eS	Sn	20 25 43.1	+0.4
	baz=297						
YM08	YM08	0.97	348	eP	Pb	20 25 28.4	-0.2
	baz=347						
YM03	YM03	0.97	345	P	Pn	20 25 29.3	0.0
	baz=344						
YM03				eS	Sg	20 25 41.7	+0.3
	baz=344						
NSY	Sanyi	0.97	281	eP	Pn	20 25 30.1	+0.8
	baz=281						
NSY				eS	Sn	20 25 43.4	+0.4
	baz=281						
NMLH	Miaoli	0.97	288	eP	Pn	20 25 30.4	+1.0
	baz=288						
NTST	Danshui	0.98	341	eP	Pn	20 25 29.7	+0.3
	baz=339						
NTST				eS	Sn	20 25 44.0	+0.9
	baz=339						
ANP	Anpu	0.98	345	eP	Pn	20 25 29.6	+0.1
	baz=344						
EYUL	Yuli	0.99	207	eP	Pn	20 25 29.8	+0.2
	baz=224						
TWF1	Yuli	1.00	208	eP	Pb	20 25 28.7	-0.4
	baz=213						
TWF1				eS	Sn	20 25 43.1	-0.5
	baz=213						
WHYT	Xinyi Township	1.03	239	eP	Pn	20 25 30.2	+0.1
	baz=240						
WWF	Wufeng	1.03	259	eP	Pn	20 25 31.7	+1.6
	baz=256						
WWF				eS	Sn	20 25 45.1	+0.7
	baz=256						
TCU	Taichung	1.04	265	eP	Pn	20 25 31.5	+1.3
	baz=266						
TCU				eS	Sn	20 25 46.2	+1.6
	baz=266						
TWY	Chenhua	1.05	350	eP	Pb	20 25 29.1	-0.9
	baz=349						
JYNG	Yonagunijimaku	1.06	78	P	Pn	20 25 30.7	+0.2
JYNG				S	Sn	20 25 45.2	+0.2
WJS	Zhushan	1.07	248	eP	Pn	20 25 31.1	+0.5
	baz=244						
WJS				eS	Sn	20 25 47.6	+2.2
	baz=244						
WDJ	Dajia District	1.07	276	eP	Pg	20 25 31.7	+1.0
	baz=276						
WNT1	Nantou City	1.08	253	eP	Pg	20 25 31.1	+0.2
	baz=251						
WNT1				eS	Sn	20 25 47.3	+1.7
	baz=251						
WNT	Mingjian	1.09	251	eP	Pg	20 25 31.9	+0.9
	baz=249						
WNT				eS	Sn	20 25 48.6	+2.8
	baz=249						
YOJ	Yonaguni jima	1.12	78	eP	Pb	20 25 30.9	-0.3
	baz=67						
YOJ	Yonaguni jima	1.12	78	P	Pb	20 25 31.4	+0.2
YOJ				eS	Sg	20 25 46.6	+0.4
FULB	Fuli	1.14	205	eP	Pn	20 25 31.4	-0.2
	baz=224						
WCHH	Zhanghua	1.15	262	eP	Pg	20 25 32.9	+0.7
	baz=264						
ALS	Alishan	1.17	232	eP	Pn	20 25 32.1	-0.2
	baz=234						
ALS				eS	Sn	20 25 49.9	+1.7
	baz=234						
CHKT	Chengkung	1.20	200	eP	Pg	20 25 33.7	+0.6
	baz=202						
CHN5	Tsauling	1.22	239	eP	Pg	20 25 33.6	+0.2
	baz=242						
CHN5				eS	Sg	20 25 51.6	+2.4
	baz=242						
WGK	Gukeng	1.27	245	eP	Pg	20 25 34.6	+0.3
	baz=247						
ELDTW	Lidau	1.27	215	eP	Pn	20 25 32.6	-0.9
	baz=206						
ELDTW				eS	Sg	20 25 51.9	+0.9
	baz=206						
WDLH	Douliu	1.28	245	eP	Pg	20 25 34.7	0.0
	baz=248						
EDH	Donghe	1.34	200	eP	Pn	20 25 34.4	0.0
	baz=187						
RLNB	Erlin	1.37	256	eP	Pg	20 25 36.1	-0.3
	baz=258						
PCYT	Pengchaiyu	1.41	10	eP	Pn	20 25 35.8	+0.5
	baz=7.0						
CHN2	Minshiung	1.41	240	eP	Pb	20 25 36.2	+0.1
	baz=243						
WTK	Tuku	1.41	247	eP	Pb	20 25 35.9	-0.2
	baz=251						
CHN4	Tsaushan	1.42	232	eP	Pg	20 25 36.8	-0.5
	baz=237						
CHN4				eS	Sg	20 25 55.6	-0.2
	baz=237						
STYH	Taoyuan	1.42	222	eP	Pg	20 25 36.7	-0.7
	baz=225						
TPUB	Ta-pu	1.43	229	eP	Pb	20 25 36.6	+0.1
	baz=234						
TPUB				eS	Sg	20 25 57.7	+1.7
	baz=234						
STYT	Tauyuan	1.44	222	eP	Pg	20 25 37.0	-0.7
	baz=226						
STYT				eS	Sg	20 25 56.6	+0.2
	baz=226						
LONT	Longtian	1.46	205	eP	Pn	20 25 34.4	-1.7
	baz=209						
CHY	Chiayi	1.47	240	eP	Pb	20 25 37.1	0.0
	baz=243						
WTP	Ta-pu	1.47	228	eP	Pb	20 25 37.5	+0.2
	baz=232						
TWK	Hsinying	1.55	232	eP	Pb	20 25 38.4	-0.2
	baz=235						
TWG	Pinlang	1.56	206	eP	Pn	20 25 37.5	0.0
	baz=195						
TWGBT	Beinan	1.56	205	eP	Pb	20 25 38.2	-0.5
	baz=195						
WSF	Szhu	1.57	248	eP	Pb	20 25 38.6	-0.2
	baz=251						
CHN1	Nanshi	1.57	229	eP	Pb	20 25 38.9	-0.1
	baz=233						
SGST	Jiashian	1.61	225	eP	Pb	20 25 38.5	-1.0
	baz=228						
SLGT	Liugui	1.63	221	eP	Pb	20 25 40.0	+0.1
	baz=225						
IRIF	Iriomote-Funau	1.76	86	P	Pb	20 25 41.4	-0.6
SCST	Cishan	1.81	222	eP	Pn	20 25 40.9	+0.2
	baz=226						
ECL	Taimali	1.81	206	eP	Pn	20 25 40.6	-0.2
	baz=198						
SSD	Sandimen	1.83	216	eP	Pb	20 25 42.9	-0.5
	baz=231						
TSMG	Majia	1.86	215	eP	Pb	20 25 43.4	-0.4
	baz=208						
TWM1	Shoushan	1.90	222	eP	Pb	20 25 45.1	+0.6
	baz=226						
MASBT	Mashibuluo	1.94	214	eP	Pb	20 25 43.8	-1.4
	baz=218						
JKRS	Kuro-shima	2.01	90	P	Pn	20 25 44.4	+0.9
JIJ	Ishigaki jima	2.13	86	P	Pn	20 25 45.2	-0.1
JIJ				S	Sn	20 26 11.7	+0.1
SCZT	Fangliau	2.15	211	eP	Pb	20 25 47.6	-1.2
	baz=200						
PNG	Penghu	2.17	253	eP	Pn	20 25 45.5	-0.2
	baz=256						
PHUB	P'eng-hu	2.17	251	eP	Pb	20 25 47.4	-1.7
	baz=255						
PTTC	Pingtan	2.24	305	eP	Pn	20 25 45.9	-0.8
	baz=303						
VWUC	VWUC	2.27	290	eP	Pn	20 25 46.9	-0.3
	baz=289						
JISG	Ishigakijimahi	2.31	81	P	Pn	20 25 48.1	+0.4
JISG				S	Sn	20 26 16.9	+1.0
MATB	Ma-tsu	2.55	319	eP	Pn	20 25 50.5	-0.5
	baz=316						
PTMZ	Houxiangcun	2.57	289	eP	Pn	20 25 51.1	-0.3
	baz=288						
XPSS	Dashiqiu	3.05	332	eP	Pn	20 25 57.1	-0.8
	baz=328						
KNMB	Chin-men Tao	3.13	275	eP	Pn	20 25 58.5	-0.4
	baz=275						
MHZQ	Yeshan	3.13	307	eP	Pn	20 25 58.6	-0.3
	baz=305						

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*UCR **22** 20:25:18.9±2.0, 13°.81N×90°.41W, h89^{km}±9^{km}, ML3.9, mb4.6(NEIC)*
*SNET **22** 20:25:18.9±2.0, 13°.82N×90°.41W, h88^{km}±10^{km}, ML4.0*
*NEIC **22** 20:25:19.2±1.9, 13°.73N±0°.08×90°.40W±0°.06, h109^{km}±13^{km}, Error ellipse: s-maj=12.2km s-min=7.6km az=159.0*
*IDC **22** 20:25:19.9±2.0, 13°.90N×90°.28W, h109^{km}±16^{km}, mb3.5/6, mb1 3.7/11, mb1mx3.5/32, mbtmp3.9/11, Error ellipse: s-maj=30.2km s-min=14.5km az=32.0*
*INET **22** 20:25:19.5, 13°.71N×90°.40W, h15^{km}, MW4.0*
*GCG **22** 20:25:21.1±0.8, 14°.09N×90°.57W, h99^{km}±16^{km}, MD4.1*
ISC 22 20:25:18.6±0.7**, 13°.78N**±0°.06×**90°.41W**±0°.05**, h99**^{km}±6^{km}**, n89,** σ**1^{s}.04**/120**, mb4.3**/11**, 5C-16D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCG	Pacaya	0.64	342	⇓eP	Pn	20 25 35.9	+0.2
RTR	El Retiro	0.75	81	eP	Pn	20 25 36.1	-0.5
RTR	El Retiro	0.75	81	eP	Pn	20 25 36.1	-0.5
CEVE	Cerro Verde	0.76	86	⇓iP	Pn	20 25 36.2	-0.6
CEVE				eS	Sn	20 25 50.3	-0.1
CEVE				IAML		20 25 53.1	
	comp=Z,11µm,0.3s						
CEVE	Cerro Verde	0.76	86	⇓iP	Pn	20 25 36.2	-0.6
CEVE				eS	Sn	20 25 50.3	-0.1
CEVE				IAML		20 25 53.1	
	comp=Z,11µm,0.3s						
SBLS	San Blas	0.77	85	⇓iP	Pn	20 25 36.1	-0.7
SBLS	San Blas	0.77	85	⇓iP	Pn	20 25 36.1	-0.7
SNJE	San Jose	0.79	83	⇓iP	Pn	20 25 36.3	-0.6
SNJE	San Jose	0.79	83	⇓iP	Pn	20 25 36.3	-0.6
FUG	Fuego 3	0.79	328	⇓eP	Pn	20 25 37.0	+0.1
NBG	Las Nubes	0.81	4	⇓iP	Pn	20 25 38.2	+1.0
NBG				eS	Sn	20 25 51.6	+0.4
JAYA	Jayaque - finc	0.94	98	⇓iP	Pn	20 25 37.8	-0.7
JAYA				eS	Sn	20 25 53.0	-0.5
JAYA				IAML		20 25 54.4	
	comp=Z,9µm,0.4s						
JAYA	Jayaque - finc	0.94	98	⇓iP	Pn	20 25 37.8	-0.7
JAYA				eS	Sn	20 25 53.0	-0.5
JAYA				IAML		20 25 54.4	
	comp=Z,9µm,0.4s						
CEDA	San Andres	0.98	89	eP	Pn	20 25 37.8	-1.1
CEDA				eS	Sn	20 25 53.8	-0.2
CEDA				IAML		20 25 58.7	
	comp=Z,3µm,0.5s						
CEDA	San Andres	0.98	89	eP	Pn	20 25 37.8	-1.1
CEDA				eS	Sn	20 25 53.8	-0.2
CEDA				IAML		20 25 58.7	
	comp=Z,3µm,0.5s						
TACO	Tacachico	1.04	79	i P	Pn	20 25 38.7	-0.7
TACO				eS	Sn	20 25 54.5	-0.6
TACO	Tacachico	1.04	79	i P	Pn	20 25 38.7	-0.7
TACO				eS	Sn	20 25 54.5	-0.6
LALI	Alcalda de L	1.10	105	eP	Pn	20 25 39.9	-0.1
LALI				eS	Sn	20 25 56.2	0.0
LALI				IAML		20 26 08.5	
	comp=Z,2µm,0.7s						
LALI	Alcalda de L	1.10	105	eP	Pn	20 25 39.9	-0.1
LALI				eS	Sn	20 25 56.2	0.0
LALI				IAML		20 26 08.5	
	comp=Z,2µm,0.7s						
BOQS	Boqueron	1.10	92	⇓iP	Pn	20 25 39.7	-0.5
BOQS				eS	Sn	20 25 59.0	+2.5
BOQS	Boqueron	1.10	92	⇓iP	Pn	20 25 39.7	-0.5
BOQS				eS	Sn	20 25 59.0	+2.5
UEES	Universidad Ev	1.14	93	eP	Pn	20 25 40.1	-0.5
UEES				eS	Sn	20 25 58.7	+1.5
UEES				IAML		20 26 01.0	
	comp=Z,3µm,0.4s						
UEES	Universidad Ev	1.14	93	eP	Pn	20 25 40.1	-0.5
UEES				eS	Sn	20 25 58.7	+1.5
UEES				IAML		20 26 01.0	
	comp=Z,3µm,0.4s						
SNET	Serv Nac Est T	1.15	94	eP	Pn	20 25 40.2	-0.4
SNET				eS	Sn	20 25 56.5	-0.8
SNET				IAML		20 25 59.7	
	comp=Z,4µm,0.4s						
SNET	Serv Nac Est T	1.15	94	eP	Pn	20 25 40.2	-0.4
SNET				eS	Sn	20 25 56.5	-0.8
SNET				IAML		20 25 59.7	
	comp=Z,4µm,0.4s						
OPAM	Oficina de Pla	1.18	93	eP	Pn	20 25 40.9	-0.1
OPAM				eS	Sn	20 25 59.1	+1.1
OPAM				IAML		20 26 00.2	
	comp=Z,3µm,0.3s						
OPAM	Oficina de Pla	1.18	93	eP	Pn	20 25 40.9	-0.1
OPAM				eS	Sn	20 25 59.1	+1.1
OPAM				IAML		20 26 00.2	
	comp=Z,3µm,0.3s						
MTO3	Montecristo	1.19	59	⇓iP	Pn	20 25 41.0	-0.3
MTO3				eS	Sn	20 25 58.0	-0.4
MTO3	Montecristo	1.19	59	⇓iP	Pn	20 25 41.0	-0.3
MTO3				eS	Sn	20 25 58.0	-0.4
LFU	La Fuente	1.26	91	eP	Pn	20 25 42.0	0.0
LFU	La Fuente	1.26	91	eP	Pn	20 25 42.0	0.0
ESQI	Esquipulas	1.29	53	⇓iP	Pn	20 25 42.7	+0.3
ESQI				eS	Sn	20 26 00.9	+0.5
ESQI				IAML		20 26 02.4	
	comp=Z,1µm,0.6s						
LFRS	El Faro	1.32	97	i P	Pn	20 25 42.3	-0.4
LFRS	El Faro	1.32	97	i P	Pn	20 25 42.3	-0.4
LBRS	Las Brisas	1.33	92	eP	Pn	20 25 42.6	-0.1
LBRS	Las Brisas	1.33	92	eP	Pn	20 25 42.6	-0.1
RTAL	Retalhuleu	1.45	301	eP	Pn	20 25 44.4	+0.2
RTAL				eS	Sn	20 26 04.1	+0.5
RTAL				IAML		20 26 05.4	
	comp=Z,1µm,0.2s						
MRL	Marmol	1.47	28	⇑eP	Pn	20 25 46.2	+1.5
MRL				eS	Sn	20 26 04.9	+0.4
COEG	Centro de Oper	1.49	96	⇑iP	Pn	20 25 44.9	+0.1
COEG				eS	Sn	20 26 07.4	+2.7
COEG				IAML		20 26 09.9	
	comp=Z,2µm,0.4s						
COEG	Centro de Oper	1.49	96	⇑iP	Pn	20 25 44.9	+0.1
COEG				eS	Sn	20 26 07.4	+2.7
COEG				IAML		20 26 09.9	
	comp=Z,2µm,0.4s						
PQSS	Presa 15 de Se	1.80	95	i P	Pn	20 25 48.6	0.0
PQSS				IAML		20 26 13.4	
	comp=Z,158nm,0.4s						
COEB	Comit de Eme	1.85	99	⇑iP	Pn	20 25 49.5	+0.2
COEB				eS	Sn	20 26 12.6	-0.1
COEB				IAML		20 26 16.8	
	comp=Z,979nm,0.5s						
COEB	Comit de Eme	1.85	99	⇑iP	Pn	20 25 49.5	+0.2
COEB				eS	Sn	20 26 12.6	-0.1
COEB				IAML		20 26 16.8	
	comp=Z,979nm,0.5s						
PACA	Pacayal	2.05	98	eP	Pn	20 25 54.2	+2.3
PACA				IAML		20 26 24.1	
	comp=Z,156nm,0.3s						
PACA	Pacayal	2.05	98	eP	Pn	20 25 54.2	+2.3
PACA				IAML		20 26 24.1	
	comp=Z,156nm,0.3s						
THIG		2.12	302		Pn	20 25 53.1	+0.4
TGUH	Tegucigalpa,Un	3.06	84		Pn	20 26 05.5	+0.2
PCIG		3.32	305		Pn	20 26 09.9	+1.3
CMIG	Matias Romero	5.43	308	P	Pn	20 26 38.3	+1.1
	comp=Z,4.1nm,0.3s,baz=144,slow=9.0,SNR=41						
CMIG				S	Sn	20 27 39.3	+0.9
	comp=Z,3.9nm,0.3s,baz=116,slow=19,SNR=1.9						
PLVR	Palo Verde	6.01	124	eP	Pn	20 26 46.1	+0.8
GRZA	Playa Garza	6.05	129	eP	Pn	20 26 47.1	+1.5
INDI	Punta indio, G	6.18	128	eP	Pn	20 26 49.0	+1.6
JTS	Las Juntas de	6.37	122	P	Pn	20 26 51.4	+1.5
	comp=Z,5.9nm,0.3s,baz=19,slow=18,SNR=14						
JTS				S	Sn	20 28 01.3	0.0
	comp=Z,3.9nm,0.3s,baz=288,slow=22,SNR=4.3						
JTS	Las Juntas de	6.37	122	eP	Pn	20 26 51.1	+1.2
JTS	Las Juntas de	6.37	122		Pn	20 26 51.2	+1.3
LAFE	Finca La Fe, P	6.68	126	eP	Pn	20 26 55.5	+1.4
TEIG	Tepich	6.73	17	P	Pn	20 26 55.3	+0.5
	comp=Z,11nm,0.3s,baz=207,slow=3.1,SNR=38						
TEIG	Tepich	6.73	17		Pn	20 26 56.5	+1.7
JACO	JACO, Garabito	6.96	125	eP	Pn	20 27 00.1	+2.1
LCR2	La Lucha 2	7.45	122	eP	Pn	20 27 07.8	+3.0
TLIG	Tlapa	8.71	297		Pn	20 27 23.9	+2.0
LRAL	Lakeview Retre	19.42	9		Pn	20 29 39.8	+0.6
LRAL				IAmb	IAmb	20 29 44.0	
	comp=Z,10nm,0.6s						
TXAR	Lajitas Array	19.76	324	P	Pn	20 29 42.9	-0.4
	comp=Z,0.2nm,0.3s,baz=142,slow=10,SNR=10						
TXAR	Lajitas Array	19.76	324		Pn	20 29 43.7	+0.4
SDV	Santo Domingo	19.99	102	P	P	20 29 42.3	-1.3
	comp=Z,1.0nm,0.3s,baz=339,slow=10,SNR=4.7						
X48A	Hartselle	20.80	8	P	Pn	20 29 53.6	-1.7
SWET	Sewanee	21.72	10	P	P	20 30 03.6	+1.7
V48A	Smith Brothers	22.10	8	P	P	20 30 07.1	+1.3
V48A				IAmb	IAmb	20 30 08.0	
	comp=Z,9.6nm,0.6s						
FNO	Franklin	22.30	345	P	P	20 30 08.5	+0.6
OK025	Westminster Rd	22.59	345	P	P	20 30 10.6	-0.3
TKL	Tuckaleechee C	22.59	14	P	P	20 30 11.2	+0.2
	comp=Z,6.9nm,0.6s,baz=180,slow=12,SNR=16						
TKL	Tuckaleechee C	22.59	14	P	P	20 30 10.9	0.0
TKL				IAmb	IAmb	20 30 12.1	
	comp=Z,10nm,0.8s						
OK029	Liberty Lake	22.82	345	P	P	20 30 12.6	-0.7
OK029				IAmb	IAmb	20 30 13.1	
	comp=Z,30nm,0.6s						
T47A	Sharon Grove	23.30	7	P	P	20 30 18.4	+0.6
T50A	Nancy	23.67	11	P	P	20 30 20.9	-0.3
U54A	Nelsons Funny	23.92	17	P	P	20 30 23.6	+0.2
U54A				IAmb	IAmb	20 30 25.7	
	comp=Z,16nm,0.6s						
WCI	Wyandotte Cave	24.62	8	P	P	20 30 30.2	+0.4
WCI				IAmb	IAmb	20 30 32.4	
	comp=Z,20nm,0.6s						
SPMN	Marine on St.	31.41	357	P	P	20 31 29.6	-0.6
E43A	Lone Tree Farm	32.62	4	P	P	20 31 40.2	-0.6
E43A				IAmb	IAmb	20 31 40.6	
	comp=Z,8.7nm,0.5s						
PDAR	Pinedale Array	33.28	334	PcP	PcP	20 34 27.4	+0.3
	comp=Z,0.2nm,0.4s,baz=104,slow=3.8,SNR=4.0						
NVAR	Mina Array Bea	34.82	320	P	P	20 32 02.1	+1.7
	comp=Z,1.1nm,0.6s,baz=134,slow=7.8,SNR=7.7						
NVAR				PcP	PcP	20 34 32.6	+1.1
	comp=Z,0.9nm,0.7s,baz=154,slow=4.4,SNR=5.1						
ULM	Lac du Bonnet	36.64	354	P	P	20 32 13.9	-1.5
	comp=Z,4.0nm,0.6s,baz=167,slow=10,SNR=11						
ULM	Lac du Bonnet	36.64	354	P	P	20 32 14.2	-1.3
ULM				IAmb	IAmb	20 32 14.5	
	comp=Z,3.5nm,0.6s						
YKA	Yellowknife Ar	51.60	346	P	P	20 34 13.8	-0.7
	comp=Z,0.3nm,0.5s,baz=142,slow=7.1,SNR=7.9						
YKA				pP	pP	20 34 39.6	+0.9
	comp=Z,0.3nm,0.7s,baz=136,slow=8.9,SNR=4.4						
ILAR	Eielson Array	63.65	337	P	P	20 35 38.0	-1.1
	comp=Z,0.2nm,0.5s,baz=117,slow=4.8,SNR=5.9						
ESDC	Sonseca Array	78.64	52	P	P	20 37 07.5	-2.5
	comp=Z,0.2nm,0.4s,baz=294,slow=4.5,SNR=1.5						
MKAR	Makanchi Array	119.35	6	PKP	PKPdf	20 43 56.0	-0.6
	comp=Z,0.3nm,0.7s,baz=323,slow=3.4,SNR=2.4						
ASAR	Alice Springs	137.05	250	PKP	PKPdf	20 44 31.1	+0.2
	comp=Z,0.4nm,0.7s,baz=108,slow=3.0,SNR=2.4						
CMAR	Chiang Mai Arr	146.67	344	PKPbc	PKPdf	20 44 49.1	+1.0
	comp=Z,1.8nm,0.6s,baz=339,slow=3.1,SNR=16						

IDC 22 20:37:11.3±2.1**, 2°.14N**×**125°.79E, h0**^{km}**, mb3.1**/3**, mb1 3.3**/3**, mb1mx3.1**/42**, mbtmp3.1**/3**, Error ellipse: s-maj=197.0km s-min=26.9km az=65.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	23.49	159	P	P	20 42 22.9	-0.2
	0.2nm,0.5s,baz=338,slow=11,SNR=5.2						
ASAR	Alice Springs	26.84	163	P	P	20 42 54.0	+0.3
	0.1nm,0.5s,baz=342,slow=7.9,SNR=1.4						
MKAR	Makanchi Array	58.33	326	P	P	20 47 08.2	-0.1
	0.2nm,0.6s,baz=121,slow=7.6,SNR=5.3						

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*VIE **22** 20:48:37.6±0.8, 51°.53N×16°.10E, h0^{km}, mb2.5/5, ml2.8/9, Error ellipse: s-maj=8.1km s-min=5.4km az=53.0 80 km NW of Wroclaw Suspected Mining induced.*
*PRU **22** 20:48:38.4±0.0, 51°.52N×16°.02E, h0^{km}*
*IDC **22** 20:48:39.2±0.9, 51°.43N×16°.04E, h0^{km}, mb1 3.3/6, mb1mx3.0/44, mbtmp3.2/6, ML2.7/6, Error ellipse: s-maj=14.7km s-min=8.6km az=112.0*
*DNK **22** 20:49:14.7±0.3, 54°.06N×15°.16E, h72^{km}±15^{km}*
ISC 22 20:48:37.1±0.9**, 51°.57N**±0°.04×**16°.07E**±0°.03**, h0**^{km}**, n40,** σ**0^{s}.82**/72**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	Ksiaz	0.74	169	i Pg	Pg	20 48 51.8	+0.4
KSP				eSg	Sg	20 49 01.2	+0.2
CHVC	Chvalec	0.99	181	ePG	Pg	20 48 56.2	+0.2
CHVC				eSG	Sg	20 49 08.6	-0.2
	comp=Z,44nm,0.8s						
OSTC	Ostas	1.02	175	ePG	Pg	20 48 57.1	+0.4
OSTC				eSG	Sg	20 49 10.0	+0.1
	comp=Z,55nm,0.8s						
UPC	Upice	1.07	182	ePG	Pg	20 48 57.7	+0.1
UPC				eSG	Sg	20 49 11.7	+0.3
	comp=Z,81nm,0.7s						
DPC	Dobruska-Polom	1.23	173	ePG	Pg	20 49 00.6	-0.2
DPC				eSG	Sg	20 49 15.5	-1.2
	comp=Z,26nm,0.4s						
PVCC	Panska Ves	1.41	223	ePG	Pg	20 49 04.2	0.0

PVCC				*e*SG	Sg	20 49 22.4	-0.1
	comp=Z,134nm,0.2s						
BRG	**Berggiesshubel**	1.51	243	Pg	Pg	20 49 06.1	0.0
BRG				Sg	Sn	20 49 26.1	+0.3
BRG				Amp		20 49 27.1	
	comp=Z,33nm,0.5s						
KRLC	**Kraliky**	1.57	163	*e*PG	Pn	20 49 06.0	-0.2
KRLC				*e*SG	Sn	20 49 26.7	-0.5
	comp=Z,78nm,1.1s						
PRA	**Prague**	1.83	215	*e*PG	Pn	20 49 09.7	-0.1
PRA				*e*SG	Sb	20 49 35.1	+0.3
	comp=Z,35nm,1.2s						
PRU	**Pruhonice**	1.86	212	*e*PG	Pn	20 49 10.2	0.0
PRU				*e*SG	Sb	20 49 35.8	0.0
	comp=Z,32nm,0.3s						
CLL	**Collm**	1.94	263	*e*Pn	Pn	20 49 11.0	-0.3
CLL				*e*Pg	Pg	20 49 14.0	-0.3
CLL				*e*		20 49 18.0	
CLL				*e*Sg	Sg	20 49 39.0	-0.4
	comp=Z,22nm,0.5s						
MORC	**Moravsky Berou**	2.03	152	*e*PN	Pn	20 49 12.1	-0.5
MORC				*e*SG	Sb	20 49 40.8	+0.2
OKC	**Ostrava-Krasne**	2.18	142	*e*SG	Sg	20 49 47.4	+0.2
	comp=Z,34nm,0.7s						
VRAC	**Vranov**	2.29	171	Pn	Pn	20 49 15.4	-0.8
	comp=Z,1.0nm,0.3s,baz=337,slow=15,SNR=11						
VRAC				Lg	Lg	20 49 48.2	
	comp=Z,1.9nm,0.3s,baz=75,slow=22,SNR=11						
VRAC	**Vranov**	2.29	171	*e*PN	Pn	20 49 16.1	-0.1
VRAC				*e*SG	Sb	20 49 48.0	-0.2
PBCC	**Pribram**	2.31	216	*e*PG	Pb	20 49 19.7	+0.1
PBCC				*e*SG	Sb	20 49 49.5	+0.9
TREC	**Trest**	2.31	190	*e*PN	Pn	20 49 17.2	+0.7
TREC				*e*PG	Pb	20 49 19.6	-0.1
TREC				*e*SG	Sb	20 49 49.6	+0.8
	comp=Z,13nm,0.4s						
KRUC	**Moravsky**	2.52	175	*e*PN	Pn	20 49 19.7	+0.4
KRUC				*e*SG	Sb	20 49 56.5	+1.7
NKC	**Novy Kostel**	2.66	241	*e*PN	Pn	20 49 21.5	+0.3
NKC				*e*PG	Pb	20 49 26.1	+0.5
NKC				*e*SG	Sg	20 50 02.3	-0.2
	comp=Z,40nm,0.5s						
OJC	**Ojcow**	2.72	118	*e*Pg	Pg	20 49 29.4	+0.1
OJC				*e*Sg	Sg	20 50 05.1	+0.7
JAVC	**Velka Javorina**	2.91	159	*e*PN	Pn	20 49 24.5	-0.1
KHC	**Kasperske Hory**	2.92	214	*e*PN	Pn	20 49 24.9	+0.1
KHC				*e*PG	Pb	20 49 30.2	+0.1
KHC				*e*SN	Sn	20 49 58.0	-2.6
KHC				*e*SG	Sg	20 50 09.8	-1.1
	comp=Z,38nm,1.4s						
CKRC	**Cesky Krumlov**	2.98	203	*e*PN	Pn	20 49 26.2	+0.6
CKRC				*e*PG	Pb	20 49 31.9	+0.8
CKRC				*e*SG	Sg	20 50 10.6	-2.2
GERES	**GERESS Array B**	3.13	210	Pn	Pn	20 49 27.4	-0.3
	comp=Z,1.3nm,0.3s,baz=30,slow=13,SNR=43						
GERES				Pg	Pb	20 49 34.2	+0.6
	comp=Z,2.4nm,0.3s,baz=28,slow=18,SNR=27						
GERES				Lg	Lg	20 50 14.7	
	comp=Z,3.2nm,0.3s,baz=33,slow=27,SNR=11						
SMOL	**Smolenice**	3.19	164	*e*SG	Sg	20 50 19.7	+0.3
MODS	**Modra-Piesok**	3.30	166	*e*PN	Pn	20 49 30.8	+0.8
MODS				*e*SG	Sg	20 50 22.4	-0.6
NIE	**Niedzica**	3.46	127	*e*P	Pg	20 49 43.0	-0.3
NIE				*e*S	Sg	20 50 28.5	+0.5
VYHS	**Vyhne**	3.56	149	*e*SG	Sg	20 50 29.5	-1.9
BSD	**Bornholm Skovb**	3.62	349	*i* P	Pn	20 49 33.9	-0.4
BSD	**Bornholm Skovb**	3.62	349	*e*P	Pn	20 49 33.9	-0.4
CONA	**Conrad Observa**	3.65	182	*e*Pn	Pn	20 49 34.9	-0.1
	comp=Z,1.4nm,0.3s						
CONA				Sg	Sg	20 50 36.6	+2.2
	comp=Z,12nm,0.4s						
MOA	**Molln**	3.91	198	*i* Pn	Pn	20 49 38.4	0.0
	comp=Z,2.7nm,0.4s,SNR=7.9						
MOA				Sg	Sg	20 50 43.2	+0.6
	comp=Z,7.0nm,0.6s						
ARSA	**Arzberg**	4.34	185	Pg	Pg	20 49 58.8	-1.5
	comp=Z,1.2nm,0.3s						
KBA	**Koelnbreinsper**	4.84	203	*e*Pn	Pn	20 49 52.0	+0.7
	comp=Z,2.7nm,0.5s,SNR=4.8						
KBA				Sg	Sg	20 51 12.4	-0.1
	comp=Z,2.0nm,0.5s						
WTTA	**Wattenberg**	5.19	216	*e*Pn	Pn	20 49 57.8	+1.6
	comp=Z,0.2nm,0.2s						
RETA	**Reutte**	5.35	222	*e*Pn	Pn	20 49 58.1	-0.2
	comp=Z,0.5nm,0.2s						
DAVOX	**Davos/Dischmat**	6.28	223	Pn	Pn	20 50 12.1	+0.9
	comp=Z,0.2nm,0.3s,baz=13,slow=18,SNR=1.2						
AKASG	**Malin Array Be**	8.32	91	Pn	Pn	20 50 38.8	-0.1
	comp=Z,0.7nm,0.3s,baz=279,slow=12,SNR=3.9						
HFS	**Hagfors**	8.68	352	Pn	Pn	20 50 45.6	+1.7
	comp=Z,0.1nm,0.3s,baz=151,slow=18,SNR=1.8						
FINES	**FINESS Array B**	11.32	25	Pn	Pn	20 51 18.2	-1.6
	comp=Z,0.1nm,0.3s,baz=218,slow=12,SNR=5.2						

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*VAO **22** 21:06:48.5±1.3, 18°.92S×70°.28W, h54^{km}±8^{km}, mb4.6*
*NEIC **22** 21:07:04.5±0.7, 18°.86S±0°.04×69°.26W±0°.07, h123^{km}±2^{km}, Error ellipse: s-maj=9.4km s-min=5.5km az=68.0*
*IDC **22** 21:07:05.6±0.5, 18°.88S×68°.97W, h127^{km}±4^{km}, mb3.9/15, mb1 4.0/19, mb1mx3.9/33, mbtmp4.3/19, MS3.2/2, Ms1 3.2/2, ms1mx2.6/32, Error ellipse: s-maj=13.5km s-min=9.2km az=85.0*
*GUC **22** 21:07:05.9±0.8, 18°.87S×69°.27W, h122^{km}±4^{km}, ML4.3*
ISC 22 21:07:04.3±0.4**, 18°.85S**±0°.03×**69°.17W**±0°.05**, h123**^{km}±4^{km}**, n148, σ1^{s}06**/177**, mb4.5**/32**, 9C, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNMC	**Minye Minye**	0.49	235	⇑*i*P	Pn	21 07 23.2	+0.4
MNMC				*i* S	Sn	21 07 37.1	+0.3
MNMC				IAML		21 07 38.4	
	comp=E,30μm,0.2s						
MNMC	**Minye Minye**	0.49	235		Pn	21 07 22.3	-0.6
MNMC				Sn	Sn	21 07 37.0	+0.2
PB16	**IPOC Station P**	0.60	328		Pn	21 07 23.6	-0.4
PB16				Sn	Sn	21 07 37.9	-0.8
PSGC	**Pisagua**	1.17	230	⇑*i*P	Pn	21 07 28.4	0.0
PSGC				*i* S	Sn	21 07 45.9	-0.7
PSGC				IAML		21 07 50.7	
	comp=E,4μm,0.7s						
PSGCX	**Pisagua**	1.17	230		Pn	21 07 27.6	-0.8
PSGCX				Sn	Sn	21 07 45.4	-1.3
AP01	**Chacalluta**	1.21	293	⇑*i*P	Pn	21 07 28.7	+0.1
AP01				*i* S	Sn	21 07 46.5	-0.7
AP01				IAML		21 07 48.5	
	comp=N,14μm,0.4s						
AP01	**Chacalluta**	1.21	293		Pn	21 07 28.5	-0.2
AP01				Sn	Sn	21 07 46.2	-0.9
PB08	**IPOC Station P**	1.28	179	⇑*i*P	Pn	21 07 31.3	+1.4
PB08				*i* S	Sn	21 07 50.9	+1.6
PB08				IAML		21 07 53.0	
	comp=E,3μm,0.2s						
PB08	**IPOC Station P**	1.28	179		Pn	21 07 30.6	+0.6
PB08				Sn	Sn	21 07 49.4	0.0
HMBC	**Humberstone**	1.57	205	⇑*i*P	Pn	21 07 33.0	+0.1
HMBC				*i* S	Sn	21 07 54.4	-0.4
HMBC				IAML		21 07 55.8	
	comp=E,4μm,0.4s						
TA02	**Huaiquique**	1.68	213	*e*P	Pn	21 07 34.1	0.0
TA02				*i* S	Sn	21 07 55.9	-0.7
TA01	**Diego Aracena**	1.96	209	*e*P	Pn	21 07 37.0	-0.4
TA01				*i* S	Sn	21 08 01.2	-1.4
TA01				IAML		21 08 08.9	
	comp=N,2μm,0.3s						
TA01	**Diego Aracena**	1.96	209		Pn	21 07 37.1	-0.2
TA01				Sn	Sn	21 08 01.6	-1.0
PATCX	**Punta Patache**	2.17	205	*e*P	Pn	21 07 40.0	-0.1
PATCX				*i* S	Sn	21 08 05.2	-2.3
PATCX				IAML		21 08 16.2	
	comp=E,1μm,0.5s						
PATCX	**Punta Patache**	2.17	205	Pn	Pn	21 07 39.9	-0.2
PATCX				Sn	Sn	21 08 06.2	-1.4
PB01	**IPOC Station P**	2.20	188	⇑*e*P	Pn	21 07 41.3	+0.7
PB01				*i* S	Sn	21 08 07.9	-0.5
PB01				IAML		21 08 09.6	
	comp=E,2μm,0.5s						
PB01	**IPOC Station P**	2.20	188		Pn	21 07 40.9	+0.3
PB01				Sn	Sn	21 08 08.2	-0.1
PB02	**IPOC Station P**	2.55	195	*e*P	Pn	21 07 45.7	+0.8
PB02				*i* S	Sn	21 08 14.1	-2.2
PB02				IAML		21 08 26.1	
	comp=N,2μm,0.3s						
LPAZ	**La Paz**	2.73	21	P	Pn	21 07 50.0	+2.1
	comp=N,31nm,0.3s,baz=186,slow=2.7,SNR=751						
LPAZ				S	Sn	21 08 19.3	-1.9
	comp=N,4.6nm,0.3s,baz=43,slow=25,SNR=4.0						
LPAZ	**La Paz**	2.73	21		Pn	21 07 49.4	+1.5
PB09	**IPOC Station P**	2.93	181	⇑*i*P	Pn	21 07 51.1	+1.1
PB09				*i* S	Sn	21 08 25.3	+0.1
PB09				IAML		21 08 28.3	
	comp=N,661nm,0.4s						
PB09	**IPOC Station P**	2.93	181		Pn	21 07 50.4	+0.4
PB07	**IPOC Station P**	2.94	193	*e*P	Pn	21 07 50.8	+0.7
PB07				IAML		21 08 32.9	
	comp=E,816nm,0.5s						
PB07	**IPOC Station P**	2.94	193		Pn	21 07 50.3	+0.2
PB03	**IPOC Station P**	3.23	190	⇑*i*P	Pn	21 07 53.8	0.0
PB03				*i* S	Sn	21 08 28.6	-3.5
PB04	**IPOC Station P**	3.59	195	⇑*i*P	Pn	21 07 56.8	-1.8
PB04	**IPOC Station P**	3.59	195		Pn	21 07 56.8	-1.8
LVC	**Limon Verde**	3.75	176	P	Pn	21 08 03.2	+2.2
	comp=E,14nm,0.3s,baz=351,slow=7.6,SNR=38						
LVC				S	Sn	21 08 44.2	-0.5
	comp=E,78nm,0.3s,baz=248,slow=22,SNR=26						
LVC	**Limon Verde**	3.75	176		Pn	21 08 01.2	+0.2
LVC					Sn	21 08 44.5	-0.3
GO02	**Mina Guanaco**	6.29	183	Pn	Pn	21 08 34.4	-0.6
SIV	**San Ignacio**	8.23	71	P	Pn	21 08 59.4	-1.6
	comp=E,10nm,0.3s,baz=264,slow=12,SNR=142						
SIV				S	Sn	21 10 28.1	-4.4
	baz=278,slow=23,SNR=7.5						
AC05	**El Transito**	9.99	186		Pn	21 09 24.1	-0.7
NNA	**Nana**	10.06	312	P	Pn	21 09 24.3	-1.4
	comp=E,4.9nm,0.3s,baz=129,slow=14,SNR=9.2						
NNA	**Nana**	10.06	312		Pn	21 09 24.4	-1.3
VILB	**Vilhena**	10.43	57	*e*P	Pn	21 09 28.8	-1.9
CO03	**El Pedregal**	12.02	186		Pn	21 09 52.2	+0.5
CO02	**Combarbal**	12.41	187	Pn	Pn	21 09 57.7	+0.8
AQDB	**Aquidauana**	12.79	99	*e*P	Pn	21 10 00.9	-0.9
CPUP	**Villa Florida**	13.22	126	P	Pn	21 10 05.8	-1.6
	comp=E,0.4nm,0.3s,baz=302,slow=12,SNR=12						
CPUP	**Villa Florida**	13.22	126	Pn	Pn	21 10 06.4	-1.0
VA03	**San Esteban**	13.91	185	Pn	Pn	21 10 16.3	0.0
MT02	**Curacav**	14.46	187	P	Pn	21 10 23.1	-0.1
MT05	**Renca**	14.55	185		Pn	21 10 24.3	-0.1
BO02	**Sierra Bellavi**	15.95	185	P	Pn	21 10 41.8	0.0
BO02				IAmb	IAmb	21 10 47.1	
	comp=Z,12nm,0.7s						
TRCB	**Terra Rica**	15.95	107	*e*P	P	21 10 43.0	-0.1
ARAG	**Araguaiana, MT**	16.87	82	*e*P	P	21 10 53.6	+0.4
PTGB	**Pitanga**	16.92	113	*e*P	Pn	21 10 54.2	+0.3
PCMB	**Pacaembu**	17.03	102	*e*P	Pn	21 10 55.8	+0.6
ITRB	**Iturama**	17.78	96	*e*P	Pn	21 11 04.5	+0.3
NPGB	**Novo Progresso**	17.84	51	*e*P	P	21 11 03.1	-0.8
BI02	**San Fabin de**	17.84	186	P	P	21 11 03.9	0.0
CPSB	**Cacapava Do Su**	18.33	132	*e*P	P	21 11 09.2	0.0
SNDB	**Serra Nova Dou**	18.53	71	*e*P	P	21 11 11.6	+0.1
ITTB	**Itaituba**	19.48	44	*e*P	P	21 11 20.7	-1.1
BB19B	**Bebedouro**	19.53	100	*e*P	P	21 11 22.2	-0.1
CNLB	**Canela**	19.68	125	*e*P	P	21 11 22.3	-1.6
IPMB	**Ipameri, GO**	19.91	91	*e*P	P	21 11 25.9	-0.6
LC01	**Cunco**	20.12	186	P	P	21 11 28.5	0.0
PTGA	**Pitinga**	20.14	28	P	P	21 11 29.9	+1.0
	comp=Z,3.5nm,0.2s,baz=228,slow=18,SNR=6.9						
OTAV	**Otavalo**	21.04	333	P	P	21 11 39.1	0.0
OTAV	**Otavalo**	21.04	333	*e*P	P	21 11 40.5	+1.4
VAO	**Valinhos**	21.14	105	*e*P	P	21 11 38.5	-1.3
PEXB	**Peixe**	21.19	75	*e*P	P	21 11 39.7	-0.6
GCUF	**Volcan Galeras**	21.51	337	*e*P	P	21 11 46.3	+2.2
PLCA	**Paso Flores**	21.84	183	P	P	21 11 48.4	+1.3
	comp=Z,9.7nm,0.9s,baz=355,slow=11,SNR=18						
PLCA				LR	LR	21 20 18.9	
	comp=Z,66nm,18.2s,baz=133,slow=36						
PLCA	**Paso Flores**	21.84	183	P	P	21 11 46.9	-0.1
PLCA				IAmb	IAmb	21 11 50.5	
	comp=Z,16nm,0.9s						
BBAC	**Balboa, Cauca**	22.21	338	*e*P	P	21 11 50.1	-1.0
MALB	**Monte Alegre**	22.33	43	*e*P	P	21 11 50.2	-2.0
PARB	**Paraibuna**	22.41	106	*e*P	P	21 11 51.8	-1.2
PRPB	**Parauapebas**	22.68	59	*e*P	P	21 11 54.0	-1.6
BSCB	**Bom Sucesso**	23.03	99	*e*P	P	21 11 58.8	-0.3
LL01	**San Ignacio de**	23.62	186	P	P	21 12 03.1	-0.9
JANB	**Januaria**	24.07	85	*e*P	P	21 12 07.3	-1.2
DIAM	**Diamantina, MG**	24.17	93	*e*P	P	21 12 09.3	-0.3
SDBA	**SAO DESIDERIO**	24.21	78	*e*P	P	21 12 09.7	-0.2
GUY2C	**Guyana, Caldas**	24.69	345	*e*P	P	21 12 14.1	-0.4
RUSC	**La Rusia**	24.89	351	*e*P	P	21 12 16.5	+0.1
DUB01	**Friburgo-RJ**	25.30	102	*e*P	P	21 12 20.3	+0.7
CBOC	**Ciudad Bolivar**	25.47	344	*e*P	P	21 12 21.1	-0.2
BARC	**Barichara**	25.59	351	*e*P	P	21 12 22.0	-0.5
PTBC	**PUERTO BERRIO,**	25.76	348	*e*P	P	21 12 20.1	-3.7
PAMC	**Pamplona, Colo**	26.25	352	*e*P	P	21 12 27.1	-1.6
SMLC	**San Martn de**	27.90	350	*e*P	P	21 12 39.6	-3.3
GDU01	**Guandu, BA**	28.84	84	*e*P	P	21 12 51.5	+0.1
PLCV	**Puerto La Cruz**	29.18	9	P	P	21 12 53.3	-1.0
PCRV	**Puerto La Cruz**	29.19	9	P	P	21 12 53.3	-1.1
	comp=Z,4.5nm,0.5s,baz=127,slow=5.1,SNR=1.1						
RCBR	**Riachuelo**	34.90	73	P	P	21 13 44.5	0.0
	comp=Z,3.2nm,0.6s,baz=289,slow=3.6,SNR=4.6						
RCBR	**Riachuelo**	34.90	73	P	P	21 13 45.1	+0.7
RCBR				IAmb	IAmb	21 13 47.8	
	comp=Z,11nm,1.1s						
TEIG	**Tepich**	43.12	333	P	P	21 14 54.3	+1.7
	comp=Z,7.7nm,0.7s						
CMIG	**Matias Romero**	43.76	323	P	P	21 14 59.7	+1.9
	comp=Z,1.3nm,0.7s,baz=93,slow=4.3,SNR=3.7						
152A	**Waverly Hall**	53.34	344	P	P	21 16 11.1	+0.1
152A				IAmb	IAmb	21 16 13.7	
	comp=Z,7.3nm,0.9s						
X48A	**Hartselle**	55.67	342	P	P	21 16 27.9	+0.2
X48A				IAmb	IAmb	21 16 28.4	
	comp=Z,10nm,0.8s						
TKL	**Tuckaleechee C**	55.95	346	LR	LR	21 42 36.0	
	comp=Z,22nm,19.4s,baz=313,slow=38						
SWET	**Sewanee**	56.07	343	P	P	21 16 30.9	+0.2
V48A	**Smith Brothers**	56.81	343	P	P	21 16 36.2	+0.3
V48A				IAmb	IAmb	21 16 36.6	
	comp=Z,12nm,0.8s						
WVT	**Waverly**	57.46	342	P	P	21 16 39.8	-0.6
WVT				IAmb	IAmb	21 16 40.6	
	comp=Z,10nm,0.7s						
T47A	**Sharon Grove**	58.06	343	P	P	21 16 44.9	+0.3
T47A				IAmb	IAmb	21 16 45.2	
	comp=Z,15nm,0.8s						
TXAR	**Lajitas Array**	58.33	324	P	P	21 16 47.1	+0.3
	comp=Z,0.3nm,0.5s,baz=154,slow=8.4,SNR=5.3						
T45A	**Paducah**	58.53	342	P	P	21 16 48.1	+0.3
PBMO	**Poplar Bluff**	58.86	340	P	P	21 16 50.2	0.0
PBMO				IAmb	IAmb	21 16 50.8	
	comp=Z,5.9nm,0.6s						
S44A	**Carbondale**	59.33	342	P	P	21 16 53.6	+0.2
SIUC	**Southern Illin**	59.34	342	P	P	21 16 53.6	+0.2
FVM	**French Village**	59.96	341	P	P	21 16 57.8	+0.1
S39A	**Bolivar**	60.66	338	P	P	21 17 02.6	+0.1
S39A				IAmb	IAmb	21 17 02.9	
	comp=Z,3.5nm,0.6s						
N49A	**Columbus Grove**	61.08	347	P	P	21 17 05.4	+0.2
P43A	**Skaggs, Pawnee**	61.21	342	P	P	21 17 06.1	-0.1
SFIN	**Lafayette**	61.24	344	P	P	21 17 05.6	-0.7
N47A	**Urbana**	61.38	346	P	P	21 17 06.6	-0.6
N47A				IAmb	IAmb	21 17 07.3	
	comp=Z,12nm,0.7s						
L48A	**N Adams**	62.11	347	P	P	21 17 11.9	-0.3
P38A	**Dawn**	62.46	339	P	P	21 17 14.8	+0.2
P38A				IAmb	IAmb	21 17 15.6	
	comp=Z,6.9nm,0.4s						
ANMO	**Albuquerque**	64.16	326	P	P	21 17 27.4	+1.3
	comp=Z,0.9nm,0.6s,baz=142,slow=14,SNR=3.9						
ANMO	**Albuquerque**	64.16	326	P	P	21 17 25.8	-0.3
JFWS	**Jewell Farm**	64.45	343	P	P	21 17 27.9	+0.4
JFWS				IAmb	IAmb	21 17 28.3	
	comp=Z,8.4nm,0.7s						
LIC	**Lamto**	67.91	75	*e*P	P	21 17 49.3	-1.0
	comp=Z,8.4nm,0.4s						
TIC	**Toumodi**	68.08	74	*e*P	P	21 17 54.0	+2.6
KIC	**Kosan Boka**	68.23	75	*e*P	P	21 17 51.5	-0.8
	comp=Z,6.1nm,0.3s						
DBIC	**Dimbokro**	68.24	75	P	P	21 17 52.0	-0.4
	comp=Z,2.3nm,0.5s,baz=215,slow=3.3,SNR=14						
U15A	**North Rim**	68.43	324	P	P	21 17 53.1	-0.3
SHPR	**Sheep Range**	70.13	322	P	P	21 18 03.4	-0.4
SHPR				IAmb	IAmb	21 18 07.1	
	comp=Z,4.9nm,1.2s						
B35A	**Bob, Littlefor**	70.42	343	P	P	21 18 05.4	+0.4
B35A				IAmb	IAmb	21 18 05.6	
	comp=Z,6.2nm,0.5s						
PDAR	**Pinedale Array**	71.70	330	P	P	21 18 14.2	+0.9
	comp=Z,0.2nm,0.3s,baz=124,slow=8.9,SNR=4.6						
PDAR	**Pinedale Array**	71.70	330	P	P	21 18 13.0	-0.2
KOWA	**Kowa**	72.21	67	P	P	21 18 16.7	+0.2
KOWA				IAmb	IAmb	21 18 17.7	
	comp=Z,3.6nm,0.7s						
ULM	**Lac du Bonnet**	72.73	342	P	P	21 18 18.9	+0.1
	comp=Z,3.8nm,0.5s,baz=155,slow=5.9,SNR=12						
ULM	**Lac du Bonnet**	72.73	342	P	P	21 18 19.2	+0.4
ULM				IAmb	IAmb	21 18 19.5	
	comp=Z,4.4nm,0.6s						
FLWY	**Flagg Ranch**	73.25	330	P	P	21 18 22.2	-0.1
FLWY				IAmb	IAmb	21 18 25.3	
	comp=Z,5.1nm,0.9s						
NVAR	**Mina Array Bea**	73.27	322	P	P	21 18 24.5	+2.0
	comp=Z,0.9nm,0.8s,baz=154,slow=8.2,SNR=4.7						
NVAR				sP	sP	21 19 09.7	+1.3
	comp=Z,1.5nm,0.9s,baz=140,slow=7.1,SNR=4.6						
NVAR	**Mina Array Bea**	73.27	322	P	P	21 18 22.3	-0.3
HLID	**Hailey**	74.68	328	P	P	21 18 30.6	-0.1
PAHR	**Pah Rah Range**	74.74	322	P	P	21 18 30.8	-0.2
PAHR				IAmb	IAmb	21 18 34.4	
	comp=Z,4.6nm,0.8s						
MFID	**Camas Ranch**	75.30	327	P	P	21 18 34.1	0.0
TOA0	**Torodi Ar. Sit**	76.71	71	P	P	21 18 42.9	+0.4
TORD	**Torodi Ar. Bea**	76.71	71	P	P	21 18 41.8	-0.7
	comp=Z,1.9nm,0.4s,baz=261,slow=4.4,SNR=7.1						
BMO	**Blue Mountains**	77.07	327	P	P	21 18 44.1	+0.1
BMO				IAmb	IAmb	21 18 46.7	
	comp=Z,3.5nm,0.8s						
I07A	**Izee**	77.70	325	P	P	21 18 47.5	-0.1
ESDC	**Sonseca Array**	84.13	45	P	P	21 19 22.1	+0.3
	comp=Z,1.2nm,0.8s,baz=251,slow=5.7,SNR=6.1						
ESDC	**Sonseca Array**	84.13	45	P	P	21 19 22.5	+0.7
YKA	**Yellowknife Ar**	88.62	341	P	P	21 19 44.0	+1.0
	comp=Z,11nm,1.0s,baz=130,slow=5.2,SNR=49						
YKA				pP	pP	21 20 16.3	+0.2
	comp=Z,1.9nm,0.6s,baz=129,slow=5.4,SNR=5.4						
YKA				sP	sP	21 20 30.8	+1.2
	comp=Z,2.3nm,0.8s,baz=132,slow=5.4,SNR=6.1						
ARU	**Arti**	126.08	33	PKP	PKiKP	21 25 52.2	0.0
	comp=Z,0.7nm,0.5s,baz=347,slow=4.1,SNR=4.5						
ARU	**Arti**	126.08	33		PKiKP	21 25 52.6	+0.4
ASAR	**Alice Springs**	132.12	209	PKP	PKPdf	21 26 04.5	+0.1
	comp=Z,0.5nm,0.4s,baz=138,slow=1.9,SNR=9.6						
ASAR	**Alice Springs**	132.12	209	PKPdf	PKPdf	21 26 03.7	-0.7
WRA	**Warramunga Arr**	135.08	212	PKP	PKiKP	21 26 11.3	-0.2
	comp=Z,1.5nm,0.9s,baz=139,slow=1.4,SNR=9.5						
ZALV	**Zalesovo Beam**	139.65	24	PKhKP	PKPpre	21 26 13.1	
	comp=Z,0.6nm,0.4s,baz=314,slow=2.3,SNR=4.0						
ZALV				PKP	PKiKP	21 26 18.8	-0.9
	comp=Z,1.9nm,0.4s,baz=305,slow=1.6,SNR=8.8						
USRK	**Ussuriysk Ar.**	149.13	330	PKPbc	PKiKP	21 26 39.6	+0.1
	comp=Z,4.6nm,0.6s,baz=31,slow=0.8,SNR=11						
MJAR	**Matsushiro Arr**	150.18	312	PKPbc	PKiKP	21 26 42.8	+0.8
	comp=Z,5.2nm,0.7s,baz=111,slow=1.3,SNR=13						
SONM	**Songino Array**	150.86	6	PKP	PKPdf	21 26 38.6	+1.7
	comp=Z,1.5nm,1.2s,baz=299,slow=2.5,SNR=5.2						
SONM				PKPbc	PKiKP	21 26 43.9	+0.7
	comp=Z,7.4nm,0.6s,baz=302,slow=1.2,SNR=91						
SONM				pPKPbc	pPKPbc	21 27 18.0	+1.0
	comp=Z,2.1nm,0.8s,baz=306,slow=1.6,SNR=5.1						
SONM	**Songino Array**	150.86	6		PKPdf	21 26 36.8	-0.1
SONM				PKPbc	PKiKP	21 26 43.7	+0.6

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*IDC **22** 21:09:30.1±2.2, 6°.17S×130°.72E, h137^{km}±22^{km}, mb3.4/5, mb1 3.5/10, mb1mx3.2/33, mbtmp3.9/10, Error ellipse: s-maj=36.8km s-min=16.4km az=83.0*
ISC 22 21:09:28.2±0.8**, 6°.23S**±0°.06×**130°.7E**±0°.1**, h124**^{km}**, n10, σ3^{s}13**/14**, mb3.7**/5**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	5.36	6	P	Pn	21 10 47.3	+1.3
	3.3nm,0.3s,baz=47,slow=4.5,SNR=40						
SIJI				S	Sn	21 11 41.6	-5.0
	10nm,0.3s,baz=84,slow=24,SNR=17						
BATI	**Baumata**	8.02	240	P	Pn	21 11 24.3	+2.3
	4.1nm,0.3s,baz=320,slow=4.0,SNR=6.3						
FITZ	**Fitzroy Crossi**	12.79	202	P	Pn	21 12 26.8	+1.2
	0.5nm,0.3s,baz=34,slow=9.9,SNR=49						
FITZ				S	Sn	21 14 40.4	-6.3
	1.8nm,0.3s,baz=298,slow=23,SNR=9.7						
WRA	**Warramunga Arr**	14.08	166	P	Pn	21 12 45.5	+3.3
	0.2nm,0.3s,baz=348,slow=11,SNR=10.0						
WRA				S	Sn	21 15 14.0	-3.7
	0.5nm,0.3s,baz=336,slow=22,SNR=5.7						
ASAR	**Alice Springs**	17.60	170	P	Pn	21 13 28.6	+2.8
	0.2nm,0.3s,baz=350,slow=11,SNR=7.8						
ASAR				S	S	21 16 41.3	-0.6
	0.2nm,0.3s,baz=207,slow=26,SNR=4.6						
STKA	**Stephens Creek**	27.47	160	P	P	21 15 03.0	+0.3
	0.5nm,0.3s,baz=348,slow=14,SNR=1.3						
SONM	**Songino Array**	57.95	341	P	P	21 19 07.1	-0.5
	0.2nm,0.5s,baz=167,slow=6.1,SNR=4.5						
MKAR	**Makanchi Array**	67.98	326	P	P	21 20 14.8	+0.8
	1.3nm,0.4s,baz=115,slow=7.5,SNR=45						
ZALV	**Zalesovo Beam**	71.22	333	P	P	21 20 33.2	-0.3
	0.2nm,0.3s,baz=90,slow=2.9,SNR=2.3						
KURBB	**Kurchatov Arra**	72.23	328	P	P	21 20 40.2	+0.5
	0.8nm,0.6s,baz=129,slow=5.4,SNR=4.8						

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*NEIC **22** 21:14:34±2.1, 4°.7S±0°.2×105°.0W±0°.1, h10^{km}±2^{km}, mb4.7/9, Error ellipse: s-maj=34.9km s-min=5.6km az=221.0*
*IDC **22** 21:14:34.2±1.2, 4°.60S×105°.16W, h0^{km}, mb3.9/10, mb1 4.1/10, mb1mx3.9/29, mbtmp3.9/10, MS3.6/13, Ms1 3.6/13, ms1mx3.4/25, Error ellipse: s-maj=45.0km s-min=23.2km az=58.0*
ISC 22 21:14:36.8±1.0**, 4°.5S**±0°.2×**105°.0W**±0°.2**, h13**^{km}**, n48, σ1^{s}32**/27**, mb4.1**/13**, MS3.5**/13**, Central East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	23.61	25	P	P	21 19 49.9	+2.2
	1.2nm,0.3s,baz=225,slow=12,SNR=4.3						
H06E1	**SOCORRO T-PHAS**	23.83	346	T	T	21 44 30.5	
	SNR=7.9						
ATAH	**Atahualpa**	26.56	97	LR	LR	21 28 02.9	
	comp=Z,311nm,20.4s,baz=256,slow=30						
NNA	**Nana**	28.79	107	LR	LR	21 28 57.4	
	comp=Z,171nm,20.1s,baz=270,slow=30						
LPIG	**La Paz**	28.86	350	LR	LR	21 29 08.0	
	comp=Z,78nm,20.1s,baz=58,slow=30						
ROSC	**El Rosal**	31.97	74	LR	LR	21 31 05.4	
	comp=Z,110nm,20.2s,baz=92,slow=31						
TX31	**Lajitas Ar. Si**	33.62	2	P	P	21 21 15.7	-1.5
TXAR	**Lajitas Array**	33.62	2	P	P	21 21 19.8	+2.5
	0.2nm,0.3s,baz=191,slow=12,SNR=3.5						
TXAR				LR	LR	21 32 03.4	
	comp=Z,45nm,19.1s,baz=0.0,slow=31						
TXAR	**Lajitas Array**	33.62	2	P	P	21 21 17.3	+0.1
CBCY	**The Bluff, Cay**	34.52	45	P	P	21 21 24.7	-0.5
JCT	**Junction City**	35.09	8	P	P	21 21 29.0	-0.9
JCT				IAmb	IAmb	21 21 34.2	
	comp=Z,23nm,1.9s						
H03N2	**Juan Fernandez**	37.68	143	T	T	22 01 57.0	
	baz=317,slow=77,SNR=5.9						
H03N1	**Juan Fernandez**	37.69	143	T	T	22 01 57.8	
	baz=317,slow=77,SNR=19						
H03N3	**Juan Fernandez**	37.69	143	T	T	22 01 57.7	
	baz=317,slow=77,SNR=16						
PB14	**IPOC Station P**	38.80	125	P	P	21 21 57.7	-4.3
SAML	**Samuel**	41.71	98	P	P	21 22 25.1	-0.7
SAML				IAmb	IAmb	21 22 34.1	
	comp=Z,10nm,1.0s						
PLAL	**Pickwick Lake**	42.32	21	P	P	21 22 31.2	+0.7
SJG	**San Juan**	44.35	58	LR	LR	21 37 48.3	
	comp=Z,19nm,18.4s,baz=112,slow=31						
NVAR	**Mina Array Bea**	44.43	345	LR	LR	21 37 18.5	
	comp=Z,64nm,19.9s,baz=88,slow=31						
SIV	**San Ignacio**	44.58	108	P	P	21 22 48.9	-0.2
	comp=Z,0.9nm,0.8s,baz=305,slow=11,SNR=2.4						
PPT	**Papeete**	45.56	250	LR	LR	21 35 08.3	
	comp=Z,45nm,18.9s,baz=298,slow=27						
ELK	**Elko**	45.96	349	LR	LR	21 39 36.4	
	comp=Z,47nm,18.1s,baz=150,slow=33						
PDAR	**Pinedale Array**	47.19	355	P	P	21 23 09.8	+0.3
	comp=Z,0.8nm,0.6s,baz=163,slow=6.2,SNR=3.7						
PDAR	**Pinedale Array**	47.19	355	P	P	21 23 09.1	-0.4
PLCA	**Paso Flores**	47.53	144	LR	LR	21 37 56.9	
	comp=Z,120nm,20.0s,baz=341,slow=30						
YBH	**Yreka Blue Hor**	48.73	342	P	P	21 23 21.0	-0.4
	comp=Z,1.1nm,0.6s,baz=318,slow=7.4,SNR=3.0						

YBH				LR	LR	21 39 37.0	
	comp=Z,48nm,19.7s,baz=159,slow=31						
YBH	**Yreka Blue Hor**	**48.73**	**342**	P	**P**	**21 23 20.7**	**-0.7**
YBH				IAmb	IAmb	21 23 23.7	
	comp=Z,21nm,1.9s						
CPUP	**Villa Florida**	**50.43**	**121**	P	**P**	**21 23 34.7**	**+0.2**
	comp=Z,0.8nm,0.3s,baz=298,slow=8.9,SNR=4.5						
ULM	**Lac du Bonnet**	**55.05**	**7**	P	**P**	**21 24 07.9**	**-0.2**
	comp=Z,1.5nm,0.7s,baz=333,slow=14,SNR=3.2						
FCC	**Fort Churchill**	**63.61**	**6**	P	**P**	**21 25 07.5**	**+0.3**
FCC				IAmb	IAmb	21 25 22.6	
	comp=Z,7.4nm,1.2s						
YKA	**Yellowknife Ar**	**67.17**	**355**	P	**P**	**21 25 28.9**	**-1.3**
	comp=Z,0.5nm,0.7s,baz=159,slow=6.3,SNR=8.6						
INK	**Inuvik**	**75.29**	**349**	P	**P**	**21 26 19.2**	**0.0**
	comp=Z,1.2nm,0.8s,baz=118,slow=5.8,SNR=4.0						
INK	**Inuvik**	**75.29**	**349**	P	**P**	**21 26 19.0**	**-0.2**
INK				IAmb	IAmb	21 26 20.6	
	comp=Z,18nm,1.9s						
ILAR	**Eielson Array**	**75.63**	**343**	P	**P**	**21 26 21.2**	**-0.1**
	comp=Z,1.2nm,0.8s,baz=156,slow=5.4,SNR=12						
ILAR				LR	LR	21 54 30.5	
	comp=Z,36nm,21.5s,baz=320,slow=32						
H11N3	**WAKE ISLAND Hy**	**89.73**	**290**	T	T	23 06 52.3	
	baz=96,slow=74,SNR=63						
H11N2	**WAKE ISLAND Hy**	**89.74**	**290**	T	T	23 06 54.4	
	baz=96,slow=74,SNR=77						
H11N1	**WAKE ISLAND Hy**	**89.75**	**290**	T	T	23 06 41.9	
	baz=96,slow=74,SNR=36						
H11S2	**WAKE ISLAND Hy**	**89.82**	**288**	T	T	23 06 56.2	
	baz=94,slow=74,SNR=76						
H11S1	**WAKE ISLAND Hy**	**89.83**	**288**	T	T	23 07 00.4	
	baz=94,slow=74,SNR=40						
H11S3	**WAKE ISLAND Hy**	**89.84**	**288**	T	T	23 06 59.0	
	baz=94,slow=74,SNR=33						
PETK	**Petropavlovsk-**	**97.95**	**323**	LR	LR	22 04 29.2	
	comp=Z,29nm,19.2s,baz=90,slow=31						
SONM	**Songino Array**	**129.10**	**333**	PKP	**PKPdf**	**21 33 44.9**	**-0.2**
	comp=Z,0.4nm,0.8s,baz=93,slow=0.8,SNR=4.2						
SONM	**Songino Array**	**129.10**	**333**		**PKPdf**	**21 33 43.4**	**-1.7**
BVAR	**Borovoye Array**	**131.43**	**4**	PKP	**PKPdf**	**21 33 49.3**	**+0.2**
	comp=Z,0.4nm,0.7s,baz=222,slow=3.5,SNR=3.0						
MKAR	**Makanchi Array**	**137.36**	**353**	PKP	**PKPdf**	**21 33 59.6**	**-0.9**
	comp=Z,0.3nm,0.7s,baz=27,slow=2.5,SNR=3.5						
MKAR	**Makanchi Array**	**137.36**	**353**		**PKPdf**	**21 33 59.1**	**-1.4**
CMAR	**Chiang Mai Arr**	**152.81**	**303**	PKPbc	**PKPbc**	**21 34 34.5**	**-0.2**
	comp=Z,0.9nm,0.7s,baz=15,slow=1.1,SNR=9.4						
CMAR	**Chiang Mai Arr**	**152.81**	**303**		**PKPdf**	**21 34 31.8**	**+4.2**

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*SOME **22** 21:23:57.0, 49°.00N×78°.67E, h10^{km}*
*NNC **22** 21:23:57.7±1.4, 48°.95N×78°.95E, h4^{km}±17^{km}, mb3.5, mpv3.1, Error ellipse: s-maj=11.2km s-min=8.3km az=167.0*
ISC 22 21:23:56.7±0.9**, 48°.91N**±0°.03×**78°.59E**±0°.05**, h10**^{km}**, n28, **σ1.^{s}**27**/41**, 3C-5D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KURBB	**Kurchatov Arra**	**1.72**	**359**	⇓Pn	**Pb**	**21 24 28.6**	**+0.2**
	12nm,0.3s						
KURBB				⇓Sn	**Sb**	**21 24 50.2**	**+0.2**
	56nm,0.7s						
KURK	**Kurchatov**	**1.81**	**1**	⇑Pn	**Pb**	**21 24 29.2**	**-0.7**
	11nm,0.6s						
KURK				⇓Sn	**Sb**	**21 24 53.3**	**+0.6**
	14nm,0.5s						
SEM	**Semipalatinsk**	**1.85**	**35**	*e*P	**Pb**	**21 24 29.8**	**-1.0**
	2.2nm,0.1s						
SEM				*e*S	**Sn**	**21 24 51.8**	**-0.5**
	46nm,0.1s						
SEM	**Semipalatinsk**	**1.85**	**35**	P	**Pb**	**21 24 29.8**	**-1.0**
SEM				S	**Sn**	**21 24 51.8**	**-0.5**
MAKZ	**Makanchi**	**3.10**	**131**	⇑Pg	**Pb**	**21 24 49.7**	**-2.2**
	3.6nm,0.7s						
MAKZ				⇑Lg	Lg	21 25 29.2	
	5.6nm,0.4s						
MK31	**Makanchi Array**	**3.27**	**129**	⇓Pg	**Pb**	**21 24 52.8**	**-1.9**
	1.8nm,0.4s,baz=317,slow=14,SNR=159						
MK31				⇓Lg	Lg	21 25 33.7	
	5.2nm,0.5s,baz=317,slow=29,SNR=21						
BRZS	**Berezniki**	**4.01**	**288**	*e*P	**Pg**	**21 25 12.9**	**-0.6**
	2.4nm,0.3s						
BRZS				*e*S	**Sg**	**21 26 06.7**	**+1.4**
	5.5nm,0.2s						
BRZS	**Berezniki**	**4.01**	**288**	Pg	**Pg**	**21 25 12.8**	**-0.6**
	1.5nm,0.3s						
BRZS				Lg	Lg	21 26 06.7	
	7.9nm,0.3s						
ZSN	**Zaisan**	**4.44**	**107**	*e*P	**Pb**	**21 25 15.4**	**+0.6**
	2.0nm,0.3s						
ZSN				*e*S	**Sb**	**21 26 10.2**	**+1.8**
	4.9nm,0.5s						
ZSN	**Zaisan**	**4.44**	**107**	Pg	**Pb**	**21 25 16.4**	**+1.6**
	1.8nm,0.5s						
ZSN				Lg	Lg	21 26 12.4	
	6.4nm,0.7s						
DJR	**Jarkent**	**4.65**	**169**	*e*P	**Pg**	**21 25 24.9**	**-0.9**
	0.9nm,0.2s						
DJR				*e*S	**Sg**	**21 26 26.9**	**+0.9**
	6.0nm,0.4s						
DJR	**Jarkent**	**4.65**	**169**	Pg	**Pg**	**21 25 24.8**	**-0.9**
	0.7nm,0.4s						
DJR				Lg	Lg	21 26 26.8	
	7.8nm,0.4s						
ARXS	**Arharly**	**4.72**	**187**	*e*P	**Pg**	**21 25 27.3**	**+0.1**
	3.7nm,0.7s						
ARXS				*e*S	**Sg**	**21 26 30.6**	**+2.3**
	14nm,0.4s						
ARXS	**Arharly**	**4.72**	**187**	Pg	**Pg**	**21 25 27.3**	**+0.1**
	3.7nm,0.7s						
ARXS				Lg	Lg	21 26 30.6	
	14nm,0.4s						
MNBS	**Baschi**	**4.83**	**182**	*e*P	**Pg**	**21 25 28.0**	**-1.2**
	4.0nm,0.5s						
MNBS				*e*S	**Sg**	**21 26 31.9**	**+0.2**
	24nm,0.5s						
MNBS	**Baschi**	**4.83**	**182**	Pg	**Pg**	**21 25 28.0**	**-1.2**
	4.0nm,0.5s						
MNBS				Lg	Lg	21 26 31.9	
	24nm,0.5s						
KUU	**Kurty**	**5.25**	**198**	*e*P	**Pg**	**21 25 36.0**	**-1.2**
	1.1nm,0.1s						
KUU				*e*S	**Sg**	**21 26 46.0**	**+0.9**
	6.8nm,0.6s						
KUU	**Kurty**	**5.25**	**198**	Pg	**Pg**	**21 25 36.0**	**-1.2**
	1.7nm,0.6s						
KUU				Lg	Lg	21 26 46.1	
	7.6nm,0.5s						
KTBS	**Karatobe**	**5.36**	**195**	*e*P	**Pg**	**21 25 37.5**	**-1.8**
	0.9nm,1.1s						
KTBS				*e*S	**Sg**	**21 26 49.3**	**+0.5**
	10nm,0.7s						
KTBS	**Karatobe**	**5.36**	**195**	Pg	**Pg**	**21 25 37.5**	**-1.8**
	0.9nm,1.1s						
KTBS				Lg	Lg	21 26 49.3	
	10nm,0.7s						
KURS	**Kuram**	**5.43**	**183**	*e*P	**Pg**	**21 25 41.0**	**+0.4**
	0.7nm,0.3s						
KURS				*e*S	**Sg**	**21 26 53.9**	**+3.0**
	4.8nm,0.6s						
KURS	**Kuram**	**5.43**	**183**	Pg	**Pg**	**21 25 41.0**	**+0.4**
	1.1nm,0.2s						
KURS				Lg	Lg	21 26 53.9	
	4.1nm,0.7s						
KPKS	**Kokpek**	**5.44**	**179**	*e*P	**Pg**	**21 25 39.8**	**-1.1**
	2.2nm,0.6s						
KPKS				*e*S	**Sg**	**21 26 52.8**	**+1.4**
	8.6nm,0.6s						
PDGK	**Podgornoye**	**5.61**	**173**	Pg	**Pg**	**21 25 42.1**	**-2.1**
	0.2nm,0.5s						
PDGK				Lg	Lg	21 26 55.6	
	1.5nm,0.4s						
KOTS	**Kotyrbulak**	**5.76**	**191**	Pg	**Pg**	**21 25 45.8**	**-1.3**
	1.6nm,0.3s						
KOTS				Lg	Lg	21 27 03.2	
	13nm,0.7s						
DGS	**Degeres**	**5.99**	**200**	Pg	**Pg**	**21 25 51.1**	**-0.3**
	1.5nm,0.4s						
DGS				Lg	Lg	21 27 10.7	
	8.6nm,0.6s						
IZV	**Izvestkoviy**	**6.03**	**194**	Pg	**Pg**	**21 25 52.0**	**-0.1**
	0.7nm,0.5s						
IZV				Lg	Lg	21 27 13.3	
	4.7nm,1.0s						
KST	**Kastek**	**6.14**	**198**	Pg	**Pg**	**21 25 53.3**	**-1.0**
	0.7nm,0.4s						
KST				Lg	Lg	21 27 15.0	
	2.8nm,0.6s						

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*NEIC **22** 21:38:31.9±1.3, 39°.28N±0°.04×142°.6E±0°.1, h10^{km}±6^{km}, mb4.0/10, Error ellipse: s-maj=13.7km s-min=2.0km az=115.0*
*JMA **22** 21:38:31.2±0.2, 39°.13N×142°.94E, h20^{km}±2^{km}, M4.0*
*NIED **22** 21:38:31.3, 39°.13N×142°.94E, h20^{km}, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$3.28; M$_{\theta\theta}$0.19; M$_{\phi\phi}$-3.47; M$_{r\theta}$2.72; M$_{\theta\phi}$-1.07; M$_{\phi r}$5.22; Fault plane solution: M$_0$6.86000×10^{14} NP1:ϕ_s26.00000°, δ75.00000°, λ97.00000°. NP2:ϕ_s182.00000°, δ17.00000°, λ67.00000°.*
*IDC **22** 21:38:37.1±1.4, 39°.43N×142°.60E, h37^{km}±7^{km}, mb3.6/12, mb1 3.7/15, mb1mx3.5/34, mbtmp3.8/15, ML3.0/3, MS3.0/5, Ms1 3.0/5, ms1mx2.7/36 Error ellipse: s-maj=24.3km s-min=20.6km az=138.0*
ISC 22 21:38:35.6±0.8**, 39°.25N**±0°.05×**142°.79E**±0°.07**, h37**^{km}±1^{km}**, n50, **σ1.^{s}**56**/58**, mb3.9**/17**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MIYJ	**Miyakonagasawa**	**0.82**	**294**	P	**Pn**	**21 38 49.1**	**-1.5**
OFUJ	**Ofunato**	**0.89**	**260**	P	**Pn**	**21 38 49.5**	**-2.0**
OFUJ				S	**Sn**	**21 39 02.5**	**-0.7**
JTH	**Tanohata**	**1.00**	**314**	P	**Pn**	**21 38 52.2**	**-0.8**
JTH				*e*S	**Sn**	**21 39 07.4**	**+1.6**
JKMT	**Kesennumamotoy**	**1.11**	**248**	P	**Pn**	**21 38 52.5**	**-2.1**
JOM	**Ohasama**	**1.18**	**282**	P	**Pn**	**21 38 54.7**	**-0.9**
JOM				*e*S	**Sn**	**21 39 12.1**	**+1.7**
JMK	**Ichinoseki**	**1.26**	**257**	P	**Pn**	**21 38 55.2**	**-1.4**
JIO	**Ouri**	**1.37**	**235**	P	**Pn**	**21 38 55.8**	**-2.4**
JANG	**Nango**	**1.50**	**319**	P	**Pn**	**21 38 59.3**	**-0.6**
JRG	**Rokugo**	**1.68**	**276**	P	**Pn**	**21 39 02.8**	**+0.4**
JYK	**Kaneyama**	**1.92**	**261**	P	**Pn**	**21 39 06.0**	**+0.3**
JTM	**Tenmabayashi**	**2.03**	**320**		**Pn**	**21 39 07.2**	**0.0**
JTM				Sn	**Sn**	**21 39 33.0**	**+1.7**
JMM	**Marumori**	**2.08**	**229**		**Pn**	**21 39 05.5**	**-2.5**
JMM				Sn	**Sn**	**21 39 31.1**	**-1.6**
ERM	**Erimo**	**2.78**	**6**	Pn	**Pn**	**21 39 16.2**	**-1.3**
ERM				Sn	**Sn**	**21 39 50.2**	**+0.4**
JEM	**Erimo**	**2.78**	**6**	Pn	**Pn**	**21 39 15.8**	**-1.7**
JYT	**Yasato**	**3.65**	**215**		**Pn**	**21 39 28.0**	**-1.5**
JEW	**Eniwo**	**3.73**	**345**	Pn	**Pn**	**21 39 28.9**	**-1.7**
MJAR	**Matsushiro Arr**	**4.52**	**235**	Pn	**Pn**	**21 39 42.3**	**+0.9**
	0.7nm,0.3s,baz=35,slow=14,SNR=48						
MJAR				LR	LR	21 41 42.8	
	comp=Z,150nm,19.4s,baz=50,slow=41						
MAJO	**Matsushiro**	**4.52**	**235**		**Pn**	**21 39 38.6**	**-2.9**
MAT	**Matsushiro**	**4.52**	**235**	P	**Pn**	**21 39 42.1**	**+0.7**
MAT				*e*S	**Sn**	**21 40 37.8**	**+5.1**
JKA	**Kamikawa-asahi**	**4.87**	**358**		**Pn**	**21 39 44.6**	**-1.6**
ASAJ	**Asahikawa**	**4.87**	**358**	Pn	**Pn**	**21 39 45.7**	**-0.5**
	1.3nm,0.3s,baz=208,slow=11,SNR=13						
ASAJ				LR	LR	21 42 04.4	
	comp=Z,152nm,20.9s,baz=200,slow=44						
JGF	**Kuroka**	**5.65**	**232**	Pn	**Pn**	**21 39 55.2**	**-1.8**
USRK	**Ussuriysk Ar.**	**9.47**	**305**	Pn	**Pn**	**21 40 49.6**	**+0.3**
	baz=102,slow=13,SNR=2.8						
KSRS	**Korea Array**	**11.81**	**266**	LR	LR	21 45 41.0	
	comp=Z,55nm,19.1s,baz=109,slow=36						
YAK	**Yakutsk**	**24.19**	**345**	P	**P**	**21 43 47.8**	**-0.4**
	6.9nm,0.5s,baz=284,slow=1.8,SNR=4.3						
SEY	**Seymchan**	**24.42**	**11**	P	**P**	**21 43 50.7**	**+0.4**
	1.5nm,0.6s,baz=210,slow=12,SNR=11						
SONM	**Songino Array**	**27.53**	**300**	P	**P**	**21 44 19.1**	**+0.3**
	0.6nm,0.7s,baz=93,slow=8.3,SNR=5.5						
SONM				LR	LR	21 54 36.2	
	comp=Z,33nm,18.5s,baz=90,slow=35						
SONM	**Songino Array**	**27.53**	**300**	P	**P**	**21 44 16.9**	**-1.9**
SLVN	**Son La**	**37.68**	**253**	P	**P**	**21 45 45.9**	**-1.6**
ZAA0	**Zalesovo Array**	**41.27**	**311**	P	**P**	**21 46 15.4**	**-1.6**
ZALV	**Zalesovo Beam**	**41.27**	**311**	P	**P**	**21 46 16.7**	**-0.2**
	0.9nm,0.4s,baz=88,slow=8.7,SNR=6.1						
ZALV				pP	**pP**	**21 46 28.2**	**+1.0**
	1.0nm,0.5s,baz=91,slow=7.9,SNR=4.5						
ZALV	**Zalesovo Beam**	**41.27**	**311**	P	**P**	**21 46 16.2**	**-0.7**
MK31	**Makanchi Array**	**43.90**	**300**	P	**P**	**21 46 37.9**	**-0.6**
MK31				IAmb	IAmb	21 46 50.2	
	comp=Z,2.7nm,1.1s						
MKAR	**Makanchi Array**	**43.90**	**300**	P	**P**	**21 46 38.2**	**-0.2**
	comp=Z,1.3nm,0.8s,baz=86,slow=9.0,SNR=16						
MAKZ	**Makanchi**	**44.11**	**301**	P	**P**	**21 46 39.2**	**-1.0**
MAKZ				IAmb	IAmb	21 46 42.1	
	comp=Z,2.3nm,1.1s						
IMAR	**Indian Mountai**	**44.20**	**32**	P	**P**	**21 46 40.9**	**+0.3**
SKT	**Skwentna**	**45.05**	**37**	P	**P**	**21 46 49.2**	**+1.8**
SKT				IAmb	IAmb	21 47 07.9	
	comp=Z,3.3nm,1.0s						
SUA	**Susitna One**	**45.45**	**38**	P	**P**	**21 46 50.7**	**0.0**
KURK	**Kurchatov**	**45.45**	**307**	P	**P**	**21 46 49.9**	**-0.8**
KURBB	**Kurchatov Arra**	**45.53**	**306**	P	**P**	**21 46 50.7**	**-0.6**
	comp=Z,2.8nm,0.4s,baz=80,slow=8.4,SNR=11						
BVAR	**Borovoye Array**	**49.91**	**311**	P	**P**	**21 47 24.4**	**-0.9**
	comp=Z,0.5nm,0.7s,baz=121,slow=11,SNR=5.3						
BVAR				pP	**pP**	**21 47 35.5**	**-0.2**
	comp=Z,0.6nm,0.8s,baz=274,slow=5.8,SNR=3.6						
AAK	**Ala-Archa**	**50.42**	**297**	P	**P**	**21 47 28.9**	**-0.6**
	comp=Z,0.5nm,0.5s,baz=22,slow=15,SNR=3.7						
KK31	**Karatay Array**	**52.98**	**299**	P	**P**	**21 47 46.5**	**-1.9**
KK31				IAmb	IAmb	21 47 59.0	
	comp=Z,1.6nm,0.8s						
ABKAR	**Akbulak array**	**57.36**	**309**	P	**P**	**21 48 18.9**	**-1.0**
ABKAR	**Akbulak array**	**57.36**	**309**	P	**P**	**21 48 18.5**	**-1.4**
ABKAR				IAmb	IAmb	21 48 19.8	
	comp=Z,0.9nm,0.6s						
WRA	**Warramunga Arr**	**59.41**	**189**	P	**P**	**21 48 37.1**	**+2.7**
	comp=Z,0.6nm,0.8s,baz=9.0,slow=7.1,SNR=3.0						
YKA	**Yellowknife Ar**	**61.36**	**31**	P	**P**	**21 48 47.0**	**-0.2**
	comp=Z,0.1nm,0.4s,baz=309,slow=6.5,SNR=2.0						
ASAR	**Alice Springs**	**63.13**	**189**	LR	LR	22 17 56.7	
	comp=Z,25nm,18.0s,baz=62,slow=37						
FINES	**FINESS Array B**	**67.36**	**332**	P	**P**	**21 49 25.9**	**-0.7**
	comp=Z,5.0nm,1.1s,baz=46,slow=12,SNR=2.2						
FINES				pP	**pP**	**21 49 36.9**	**-0.4**
	comp=Z,4.9nm,1.1s,baz=90,slow=8.3,SNR=2.2						
NVAR	**Mina Array Bea**	**72.81**	**54**	P	**P**	**21 50 03.7**	**+3.1**
	comp=Z,0.2nm,0.3s,baz=282,slow=9.1,SNR=2.0						

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*DDA **22** 21:51:47.6, 36°.59N×30°.38E, h48^{km}, ML3.0*
*ISK **22** 21:51:47.7, 36°.59N×30°.34E, h55^{km}, ML3.2/37*
*NIC **22** 21:51:48.1±0.0, 36°.63N×30°.46E, h32^{km}±22^{km}, Ml3.2/4*
*HLW **22** 21:51:52.9, 36°.13N×30°.11E, h26^{km}±21^{km}, Ml3.9*
ISC 22 21:51:48.1±1.2**, 36°.54N**±0°.03×**30°.37E**±0°.03**, h53**^{km}±6^{km}**, n89, **σ1.^{s}**37**/114**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEMT	**Kemer-ANTALYA**	**0.16**	**65**	PG	**Pn**	**21 51 56.5**	**0.0**
KEMT				SG	**Sn**	**21 52 03.4**	**+0.8**
AKUM	**Antalya-Kumluc**	**0.21**	**187**	*i* P	**Pn**	**21 51 56.9**	**0.0**
AKUM				*i* S	**Sn**	**21 52 03.8**	**+0.7**
AKUM				IAML		21 52 05.0	
	comp=N,762nm,0.3s						
AKUM				IAML		21 52 05.0	
	comp=E,2µm,0.3s						
ANTB	**Antalya**	**0.43**	**32**	PG	**Pn**	**21 51 58.3**	**-0.5**
ANTB				SG	**Sn**	**21 52 06.8**	**+0.4**
ELL	**Elmali**	**0.43**	**300**	PG	**Pn**	**21 51 58.7**	**-0.3**
ELL	**Elmali**	**0.43**	**300**	P	**Pn**	**21 51 58.4**	**-0.6**
ELL				S	**Sn**	**21 52 06.0**	**-0.7**
KORT	**Korkueli**	**0.47**	**358**	PG	**Pn**	**21 51 58.6**	**-0.8**
KORT				SG	**Sn**	**21 52 06.9**	**-0.5**
KORT	**Korkueli**	**0.47**	**358**	*i* P	**Pn**	**21 51 58.6**	**-0.8**
KORT				*i* S	**Sn**	**21 52 06.6**	**-0.8**
KORT				IAML		21 52 07.0	
	comp=N,569nm,0.6s						
KORT				IAML		21 52 08.0	
	comp=E,622nm,0.3s						
DEMR	**Demre-Antalya**	**0.48**	**232**	PG	**Pn**	**21 51 59.8**	**+0.4**
AKAS	**Kas**	**0.69**	**244**	PG	**Pn**	**21 52 02.4**	**+0.4**
AKAS	**Kas**	**0.69**	**244**	*i* P	**Pn**	**21 52 01.9**	**-0.1**
AKAS				*i* S	**Sn**	**21 52 14.4**	**+2.4**
AKAS				IAML		21 52 15.0	
	comp=E,1µm,0.5s						
AKAS				IAML		21 52 15.0	
	comp=N,2µm,0.4s						
KSL	**Kastellorizon**	**0.75**	**239**	P	**Pn**	**21 52 04.0**	**+1.4**
KSL				S	**Sn**	**21 52 15.7**	**+2.6**
BUCA	**Burdur, Bucak-**	**0.81**	**11**	*i* P	**Pn**	**21 52 02.8**	**-0.6**
BUCA				*i* S	**Sn**	**21 52 13.2**	**-1.4**
BCK	**Bucak**	**0.94**	**10**	PG	**Pn**	**21 52 04.8**	**-0.4**
BCK				SG	**Sn**	**21 52 17.3**	**-0.5**
GOLH	**Golhisar**	**0.96**	**317**	*i* P	**Pn**	**21 52 06.0**	**+0.6**
GOLH				*i* S	**Sn**	**21 52 19.2**	**+1.0**
CAEL	**Denizli, Camel**	**1.03**	**305**	*i* P	**Pn**	**21 52 07.3**	**+0.8**
FETY	**Fethiye**	**1.04**	**276**	PG	**Pn**	**21 52 06.4**	**-0.1**
FETY				SG	**Sn**	**21 52 20.0**	**-0.1**
KEPZ	**Antalya-Kepez**	**1.05**	**69**	*i* P	**Pn**	**21 52 07.3**	**+0.7**
KEPZ				*i* S	**Sn**	**21 52 22.1**	**+1.7**
BRDR	**BURDUR-Merkez**	**1.19**	**348**	*i* P	**Pn**	**21 52 08.8**	**+0.3**
BRDR				*i* S	**Sn**	**21 52 23.6**	**-0.1**
ISP	**Isparta**	**1.29**	**5**	PN	**Pn**	**21 52 09.6**	**-0.3**
ALAN	**Alanya-ANTALYA**	**1.33**	**89**	PN	**Pn**	**21 52 11.2**	**+0.8**
BASM	**Basmaki-Afyon**	**1.41**	**349**	PN	**Pn**	**21 52 11.0**	**-0.5**
DALY	**Dalyan (Mula)**	**1.41**	**282**	PN	**Pn**	**21 52 11.6**	**+0.2**
DALY	**Dalyan (Mula)**	**1.41**	**282**	*i* P	**Pn**	**21 52 12.2**	**+0.7**
DALY				*i* S	**Sn**	**21 52 29.5**	**+0.5**
DALY				IAML		21 52 34.0	
	comp=E,326nm,0.4s						
DALY				IAML		21 52 34.0	
	comp=N,248nm,0.4s						
SEDI	**Konya, Seydise**	**1.43**	**50**	*i* P	**Pn**	**21 52 12.7**	**+0.7**
SEDI				*i* S	**Sn**	**21 52 31.2**	**+1.5**
SEDI				IAML		21 52 33.0	
	comp=E,216nm,0.6s						
SEDI				IAML		21 52 36.0	
	comp=N,164nm,0.4s						
BAGO	**Egridir - ISPA**	**1.49**	**13**	*i* P	**Pn**	**21 52 12.3**	**-0.3**
TAVA	**DENIZLI_Tavas**	**1.49**	**309**	*i* P	**Pn**	**21 52 13.2**	**+0.5**
TAVA				IAML		21 52 36.0	
	comp=N,159nm,0.1s						
TAVA				IAML		21 52 37.0	
	comp=E,193nm,0.5s						
GAZI	**Gazipasa**	**1.59**	**100**	PN	**Pn**	**21 52 14.8**	**+0.8**
GAZI	**Gazipasa**	**1.59**	**100**	*i* P	**Pn**	**21 52 14.4**	**+0.4**
KZIL	**AFYON_Kizioren**	**1.73**	**354**	*i* P	**Pn**	**21 52 15.3**	**-0.6**
KZIL				*i* S	**Sn**	**21 52 36.3**	**-0.6**
TURN	**Turunc**	**1.73**	**279**	PN	**Pn**	**21 52 15.9**	**+0.1**
TURN	**Turunc**	**1.73**	**279**	*i* P	**Pn**	**21 52 16.9**	**+1.1**
TURN				*i* S	**Sn**	**21 52 37.9**	**+1.2**
TURN				IAML		21 52 42.0	
	comp=E,175nm,0.4s						
TURN				IAML		21 52 43.0	
	comp=N,177nm,0.3s						
MRSB	**Marmaris-Mugla**	**1.76**	**277**	PN	**Pn**	**21 52 16.4**	**+0.2**
YER	**Yerkesik**	**1.78**	**290**	PN	**Pn**	**21 52 16.7**	**+0.1**
MULA	**Mugla, Merkez-**	**1.80**	**294**	*i* P	**Pn**	**21 52 17.2**	**+0.5**
ARG	**Arkhangelos**	**1.84**	**261**	PN	**Pn**	**21 52 17.8**	**+0.5**
ARG	**Arkhangelos**	**1.84**	**261**	P	**Pn**	**21 52 18.2**	**+0.9**
ARG				S	**Sn**	**21 52 41.7**	**+2.2**
YVAC	**Isparta, Yalva**	**1.86**	**21**	*i* P	**Pn**	**21 52 17.7**	**-0.1**
DOGA	**KONYA_Doganhis**	**1.88**	**33**	*i* P	**Pn**	**21 52 18.9**	**+0.9**
DOGA				*i* S	**Sn**	**21 52 40.5**	**0.0**
KHL	**Karahalli**	**1.91**	**339**	PN	**Pn**	**21 52 17.9**	**-0.4**
KHAL	**Karahalli**	**1.96**	**339**	*i* P	**Pn**	**21 52 19.1**	**0.0**
KHAL				*i* S	**Sn**	**21 52 41.9**	**-0.7**
KHAL				IAML		21 52 43.0	
	comp=E,153nm,0.3s						
KHAL				IAML		21 52 44.0	
	comp=N,121nm,0.3s						
KMER	**Konya-Meram**	**2.01**	**52**	*i* P	**Pn**	**21 52 20.7**	**+0.9**
SHUT	**Suhut-Afyon**	**2.02**	**4**	PN	**Pn**	**21 52 19.9**	**0.0**
KONT	**Konya--Tatoy**	**2.12**	**48**	PN	**Pn**	**21 52 22.1**	**+0.9**
KONT	**Konya--Tatoy**	**2.12**	**48**	*i* P	**Pn**	**21 52 22.3**	**+1.1**
KONT				*i* S	**Sn**	**21 52 47.5**	**+1.1**
AKMS	**Akamas**	**2.20**	**133**	P	**Pn**	**21 52 23.1**	**+0.9**
AKMS				AML	AML	21 52 58.3	
	comp=N,0.3nm,0.3s						
AKMS				AML	AML	21 53 01.6	
	comp=N,0.3nm,0.7s						
MLSB	**Milas**	**2.22**	**291**	PN	**Pn**	**21 52 22.7**	**+0.2**
TEKE	**Tekeli-Mersin**	**2.25**	**99**	PN	**Pn**	**21 52 24.5**	**+1.7**
AFYO	**Afyonkarahisar**	**2.25**	**358**	*i* P	**Pn**	**21 52 23.6**	**+0.6**
ALFC	**Alefka**	**2.27**	**127**	P	**Pn**	**21 52 23.3**	**+0.1**
ALFC				AML	AML	21 52 51.2	
	comp=N,0.5nm,0.2s						
ALFC				AML	AML	21 52 51.2	
	comp=N,0.5nm,0.2s						
ALFC				S	**Sn**	**21 52 51.5**	**+1.4**
ALFC				AML	AML	21 52 51.5	
	comp=N,0.4nm,0.2s						
ALFC				AML	AML	21 52 51.5	
	comp=N,0.4nm,0.2s						
LADK	**Ladik-KONYA**	**2.30**	**43**	PN	**Pn**	**21 52 24.2**	**+0.5**
BERE	**Bereket-Mersin**	**2.30**	**94**	PN	**Pn**	**21 52 25.4**	**+1.6**
KULA	**Kula-Manisa**	**2.40**	**326**	PN	**Pn**	**21 52 24.9**	**-0.1**
AYDB	**Zeytinkoy-Aydi**	**2.43**	**306**	PN	**Pn**	**21 52 25.6**	**+0.1**
LEF	**Lefka**	**2.48**	**124**	PN	**Pn**	**21 52 25.9**	**-0.2**
NATA	**Nata**	**2.50**	**134**	P	**Pn**	**21 52 27.1**	**+0.7**
NATA				AML	AML	21 52 56.9	
	comp=N,0.3nm,0.3s						
NATA				AML	AML	21 52 59.0	
	comp=N,0.4nm,0.3s						
BODT	**Bodrum**	**2.52**	**283**	PN	**Pn**	**21 52 26.2**	**-0.3**
AKK1	**Akkuyu-Mersin**	**2.59**	**98**	PN	**Pn**	**21 52 29.3**	**+1.8**
AKKU	**Akkuyu-Mersin**	**2.59**	**97**	PN	**Pn**	**21 52 29.2**	**+1.6**
AKK2	**Akkuyu-Mersin**	**2.59**	**98**	PN	**Pn**	**21 52 28.9**	**+1.3**
GEDZ	**Gediz**	**2.62**	**343**	PN	**Pn**	**21 52 28.2**	**+0.2**
SHAP	**Saphane-Kutahy**	**2.65**	**340**	PN	**Pn**	**21 52 28.7**	**+0.3**
KEBE	**Keben-Mersin**	**2.69**	**91**	PN	**Pn**	**21 52 30.5**	**+1.5**
TISA	**Tisan-Mersin**	**2.69**	**97**	PN	**Pn**	**21 52 30.5**	**+1.5**
SZAC	**Souni**	**2.71**	**130**	P	**Pn**	**21 52 30.1**	**+0.9**
SZAC				AML	AML	21 53 07.0	
	comp=N,0.3nm,0.4s						
SZAC				AML	AML	21 53 09.5	
	comp=N,0.2nm,0.2s						
KARG	**Kargicak-Mersi**	**2.71**	**96**	PN	**Pn**	**21 52 30.8**	**+1.6**
GCAM	**G?zelcaml?**	**2.77**	**296**	PN	**Pn**	**21 52 30.0**	**0.0**
SIMA	**Simav-Kutahya**	**2.77**	**337**	PN	**Pn**	**21 52 29.4**	**-0.7**
KARP	**Karpathos**	**2.79**	**250**	PN	**Pn**	**21 52 31.3**	**+1.0**
KARP	**Karpathos**	**2.79**	**250**	P	**Pn**	**21 52 31.5**	**+1.3**
CSS	**Mathiatis**	**2.87**	**122**	P	**Pn**	**21 52 31.4**	**0.0**
CIFT	**Cifteler, Eski**	**2.87**	**11**	PN	**Pn**	**21 52 32.1**	**+0.6**
ASGA	**Asgata**	**2.92**	**126**	P	**Pn**	**21 52 32.4**	**+0.4**
TVSB	**Tavsanli**	**3.00**	**346**	PN	**Pn**	**21 52 32.3**	**-0.9**
SVRH	**Sivrihisar-ESK**	**3.04**	**17**	PN	**Pn**	**21 52 34.2**	**+0.3**
MVOU	**Mavrovouni**	**3.05**	**119**	P	**Pn**	**21 52 33.6**	**-0.3**
OSC1	**CSNet OBS 1**	**3.12**	**166**	P	**Pn**	**21 52 36.1**	**+1.3**
BLCB	**Balcova**	**3.23**	**306**	PN	**Pn**	**21 52 35.9**	**-0.4**
ZKR	**Zakros**	**3.66**	**248**	P	**Pn**	**21 52 44.3**	**+2.0**
OSC2	**CSNet OBS 4**	**3.79**	**155**	P	**Pn**	**21 52 45.7**	**+1.7**
MATC	**Matruh**	**5.80**	**208**	P	**Pn**	**21 53 11.5**	**0.0**
	baz=208						
SLUM	**Salum**	**6.61**	**222**	P	**Pn**	**21 53 22.0**	**-0.7**
	baz=223						
SLUM				AMP		21 54 00.0	
	baz=223						
KOT	**Kottamia**	**6.70**	**169**	P	**Pn**	**21 53 25.4**	**+1.4**
	baz=166						
KOT				AMP		21 54 00.0	
	baz=166						
KOT				S	**Sn**	**21 54 31.6**	**-7.4**
	baz=166						
HMYD	**Mayadein**	**6.73**	**177**	P	**Pn**	**21 53 25.3**	**+0.9**
	baz=174						
HNAT	**Natroun**	**6.89**	**178**	P	**Pn**	**21 53 27.3**	**+0.8**
	baz=176						
HNAT				AMP		21 54 00.0	
	baz=176						
HNAT				S	**Sn**	**21 54 36.0**	**-7.5**
	baz=176						
HSAF	**As Saff**	**6.97**	**172**	P	**Pn**	**21 53 28.4**	**+0.7**
	baz=169						
SUZ	**Suez**	**6.99**	**162**	P	**Pn**	**21 53 28.9**	**+1.1**
	baz=159						
GLL	**Jalalah**	**7.03**	**170**	P	**Pn**	**21 53 29.2**	**+0.7**
	baz=167						
RYAN	**Fayoum**	**7.43**	**181**	P	**Pn**	**21 53 34.2**	**+0.3**
	baz=178						
SWA2		**8.36**	**211**	P	**Pn**	**21 53 46.2**	**-0.5**
	baz=211						
SWA2				AMP		21 55 00.0	
	baz=211						

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*VAO **22** 21:56:00.5±3.2, 34°.69S×71°.92W, h10^{km}, mb4.5*
*NEIC **22** 21:56:21.3±1.4, 34°.47S±0°.04×70°.61W±0°.09, h108^{km}±4^{km}, Error ellipse: s-maj=11.2km s-min=4.8km az=107.0*
*IDC **22** 21:56:21.9±3.2, 34°.48S×70°.39W, h108^{km}±32^{km}, mb3.7/6, mb1 3.7/8, mb1mx3.6/41, mbtmp4.0/8, Error ellipse:*

s-maj=34.8km s-min=24.3km az=74.0
*GUC **22** 21:56:21.4±0.7, 34°.45S×70°.61W, h99^{km}±3^{km}, ML4.2*
ISC 22 21:56:21.3±0.6**, 34°.47S**±0°.03×**70°.60W**±0°.06**, h108**^{km}±5^{km}**,**
n66, σ**0**^{s}**.73**/82**, mb4.0**/9**, 9C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BO02	**Sierra Bellavi**	**0.36**	**205**	⇑*i*P	**Pn**	**21 56 37.2**	**0.0**
BO02				*i* S	**Sn**	**21 56 49.0**	**-0.1**
BO02				IAML		21 56 49.8	
	comp=E,31µm,0.3s						
BO02	**Sierra Bellavi**	**0.36**	**205**	Pn	**Pn**	**21 56 36.9**	**-0.3**
BO02				Sn	**Sn**	**21 56 49.0**	**-0.1**
LMEL	**Las Melosas**	**0.70**	**28**	⇓*i*P	**Pn**	**21 56 39.7**	**0.0**
LMEL				*i* S	**Sn**	**21 56 53.7**	**+0.2**
LMEL				IAML		21 56 56.9	
	comp=N,5µm,0.6s						
MT09	**Talagante**	**0.76**	**335**	⇑*i*P	**Pn**	**21 56 40.4**	**+0.2**
MT09				*i* S	**Sn**	**21 56 54.3**	**-0.1**
MT03	**Universidad Ad**	**0.98**	**4**	⇑*i*P	**Pn**	**21 56 42.4**	**+0.2**
MT03				*i* S	**Sn**	**21 56 57.9**	**-0.1**
MT03				IAML		21 57 00.7	
	comp=N,10µm,0.4s						
FSR	**Penalolen**	**0.99**	**3**	*e*P	**Pn**	**21 56 43.6**	**+1.3**
FSR				*i* S	**Sn**	**21 56 59.2**	**+1.0**
MT05	**Renca**	**1.08**	**354**	⇑*i*P	**Pn**	**21 56 43.5**	**+0.3**
MT05				*i* S	**Sn**	**21 57 00.2**	**+0.4**
MT05				IAML		21 57 02.1	
	comp=E,12µm,0.1s						
MT05	**Renca**	**1.08**	**354**	Pn	**Pn**	**21 56 43.4**	**+0.1**
MT05				Sn	**Sn**	**21 56 60.0**	**+0.1**
BO03	**Pichilemu**	**1.13**	**268**	⇑*i*P	**Pn**	**21 56 44.0**	**+0.4**
BO03				*i* S	**Sn**	**21 57 00.6**	**0.0**
BO03				IAML		21 57 03.2	
	comp=E,3µm,0.2s						
VA05	**Santo Domingo**	**1.17**	**314**	⇑*i*P	**Pn**	**21 56 44.3**	**+0.2**
VA05				*e*S	**Sn**	**21 57 01.4**	**0.0**
VA05				IAML		21 57 04.6	
	comp=N,10µm,0.4s						
MT02	**Curacav**	**1.29**	**339**	⇑*i*P	**Pn**	**21 56 45.7**	**+0.1**
MT02				*i* S	**Sn**	**21 57 03.2**	**-0.6**
MT02				IAML		21 57 04.2	
	comp=E,4µm,0.3s						
MT02	**Curacav**	**1.29**	**339**		**Pn**	**21 56 45.5**	**-0.1**
MT02				Sn	**Sn**	**21 57 03.5**	**-0.4**
PEL	**Peldehue**	**1.32**	**357**	⇑*i*P	**Pn**	**21 56 46.2**	**+0.2**
PEL				*i* S	**Sn**	**21 57 04.9**	**+0.2**
PEL				IAML		21 57 08.2	
	comp=N,3µm,0.2s						
PEL	**Peldehue**	**1.32**	**357**		**Pn**	**21 56 46.2**	**+0.2**
VA03	**San Esteban**	**1.70**	**1**	⇑*i*P	**Pn**	**21 56 51.0**	**+0.4**
VA03				*i* S	**Sn**	**21 57 13.5**	**+0.7**
VA03				IAML		21 57 16.9	
	comp=E,5µm,0.4s						
VA03	**San Esteban**	**1.70**	**1**		**Pn**	**21 56 50.8**	**+0.2**
VA03				Sn	**Sn**	**21 57 13.3**	**+0.5**
BI02	**San Fabin de**	**2.26**	**194**	*e*P	**Pn**	**21 56 58.3**	**+0.7**
BI02				*e*S	**Sn**	**21 57 26.4**	**+1.0**
BI02	**San Fabin de**	**2.26**	**194**	Pn	**Pn**	**21 56 57.8**	**+0.3**
BI03	**Tigo**	**3.08**	**219**	*e*P	**Pn**	**21 57 07.3**	**-1.1**
BI03	**Tigo**	**3.08**	**219**		**Pn**	**21 57 07.5**	**-0.9**
CO02	**Combarbal**	**3.27**	**354**		**Pn**	**21 57 10.2**	**-0.8**
ZON	**Zonda**	**3.33**	**29**	Pn	**Pn**	**21 57 11.9**	**+0.2**
CO03	**El Pedregal**	**3.62**	**359**		**Pn**	**21 57 15.6**	**0.0**
GO04	**Tololo Observa**	**4.29**	**358**	Pn	**Pn**	**21 57 23.9**	**-0.8**
CO01	**Juntas del Tor**	**4.50**	**6**		**Pn**	**21 57 27.8**	**+0.2**
LC01	**Cunco**	**4.54**	**193**	Pn	**Pn**	**21 57 26.4**	**-1.4**
LCO	**Las Campanas**	**5.44**	**359**	Pn	**Pn**	**21 57 38.5**	**-1.9**
AC05	**El Transito**	**5.62**	**3**		**Pn**	**21 57 42.0**	**-0.7**
PLCA	**Paso Flores**	**6.25**	**180**	P	**Pn**	**21 57 51.4**	**+0.3**
	comp=E,0.5nm,0.3s,baz=340,slow=11,SNR=10						
PLCA	**Paso Flores**	**6.25**	**180**		**Pn**	**21 57 50.6**	**-0.4**
AC04	**Llanos de Chal**	**6.26**	**356**	Pn	**Pn**	**21 57 51.7**	**+0.6**
VA04	**Juan Fernndez**	**6.88**	**275**	Pn	**Pn**	**21 57 59.9**	**+0.4**
PB01	**IPOC Station P**	**13.41**	**4**	Pn	**Pn**	**21 59 27.8**	**+0.4**
MNMC	**Minye Minye**	**15.30**	**4**	Pn	**Pn**	**21 59 51.2**	**-0.5**
ITAB	**Concordia**	**17.41**	**71**	*e*P	**Pn**	**22 00 17.5**	**+0.1**
LPAZ	**La Paz**	**18.24**	**8**	P	**Pn**	**22 00 28.6**	**+0.6**
	comp=E,0.2nm,0.3s,baz=174,slow=5.6,SNR=3.9						
LPAZ	**La Paz**	**18.24**	**8**	P	**P**	**22 00 26.3**	**-0.6**
PTGB	**Pitanga**	**18.80**	**64**	*e*P	**P**	**22 00 31.9**	**-0.5**
EFI	**East Falkland**	**19.43**	**156**	P	**P**	**22 00 38.3**	**-0.6**
EFI				IAmb	IAmb	22 00 39.5	
	comp=Z,22nm,0.6s						
TRCB	**Terra Rica**	**19.56**	**58**	*e*P	**P**	**22 00 40.4**	**-0.2**
SIV	**San Ignacio**	**20.30**	**27**	P	**P**	**22 00 48.1**	**-0.5**
	comp=Z,2.0nm,0.7s,baz=208,slow=11,SNR=10						
PCMB	**Pacaembu**	**21.30**	**58**	*e*P	**P**	**22 00 57.5**	**-1.8**
ITRB	**Iturama**	**23.20**	**56**	*e*P	**P**	**22 01 18.2**	**-0.5**
BB19B	**Bebedouro**	**23.59**	**61**	*e*P	**P**	**22 01 21.3**	**-1.1**
VAO	**Valinhos**	**23.60**	**67**	*e*P	**P**	**22 01 21.3**	**-1.3**
BSCB	**Bom Sucesso**	**26.42**	**66**	*e*P	**P**	**22 01 47.1**	**-0.9**
JANB	**Januaria**	**30.56**	**57**	*e*P	**P**	**22 02 23.9**	**-1.0**
PMSA	**Palmer Station**	**30.60**	**174**	P	**P**	**22 02 24.6**	**0.0**
NAN01	**Guarapari, ES**	**31.81**	**66**	*e*P	**P**	**22 02 35.0**	**-0.7**
VNA3	**Neumayer Olymp**	**48.48**	**158**	P	**P**	**22 04 55.1**	**+2.7**
VNA2	**Neumayer--Watz**	**49.12**	**157**	P	**P**	**22 04 58.0**	**+0.6**
SNAA	**Sanae**	**50.70**	**158**	P	**P**	**22 05 10.6**	**+1.2**
SNAA	**Sanae**	**50.70**	**158**	P	**P**	**22 05 10.0**	**+0.6**
SNAA				IAmb	IAmb	22 05 17.3	
	comp=Z,3.6nm,1.0s						
QSPA	**South Pole Qui**	**55.77**	**180**	P	**P**	**22 05 46.9**	**+0.2**
GOGA	**Godfrey**	**68.60**	**348**	P	**P**	**22 07 11.8**	**-0.6**
GOGA				IAmb	IAmb	22 07 18.9	
	comp=Z,2.6nm,1.0s						
HPIG		**69.52**	**327**	P	**P**	**22 07 19.1**	**+0.5**
TXAR	**Lajitas Array**	**70.73**	**330**	P	**P**	**22 07 27.1**	**+1.4**
	comp=Z,0.8nm,0.6s,baz=152,slow=9.2,SNR=7.2						
TXAR	**Lajitas Array**	**70.73**	**330**	P	**P**	**22 07 25.6**	**-0.1**
V52A	**Sevierville**	**71.00**	**349**	P	**P**	**22 07 27.0**	**0.0**
V52A				IAmb	IAmb	22 07 30.9	
	comp=Z,6.0nm,1.1s						
DBIC	**Dimbokro**	**74.21**	**70**	P	**P**	**22 07 45.5**	**-1.1**
	comp=Z,1.7nm,0.7s,baz=212,slow=6.1,SNR=2.3						
DBIC	**Dimbokro**	**74.21**	**70**	P	**P**	**22 07 45.7**	**-0.9**
DBIC				IAmb	IAmb	22 08 01.8	
	comp=Z,4.4nm,1.1s						
BOSA	**Boshof**	**78.80**	**117**	P	**P**	**22 08 12.8**	**+0.3**
	comp=Z,2.2nm,0.5s,baz=257,slow=3.2,SNR=4.1						
BOSA	**Boshof**	**78.80**	**117**	P	**P**	**22 08 12.6**	**0.0**
BOSA				IAmb	IAmb	22 08 13.8	
	comp=Z,5.0nm,0.9s						
TOA0	**Torodi Ar. Sit**	**83.26**	**69**	P	**P**	**22 08 36.1**	**0.0**
TOA0				IAmb	IAmb	22 08 36.8	
	comp=Z,2.0nm,1.1s						
TORD	**Torodi Ar. Bea**	**83.26**	**69**	P	**P**	**22 08 36.5**	**+0.4**
	comp=Z,1.6nm,0.7s,baz=292,slow=4.6,SNR=2.9						
PDAR	**Pinedale Array**	**84.72**	**332**	P	**P**	**22 08 44.0**	**+0.8**
	comp=Z,0.5nm,0.7s,baz=131,slow=5.2,SNR=5.0						

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*DDA **22** 21:57:29.9, 38°.28N×26°.54E, h3^{km}±1^{km}, ML2.2*
*ISK **22** 21:57:29.3, 38°.25N×26°.58E, h5^{km}, ML2.6/22*
ISC 22 21:57:29.7±0.9**, 38°.28N**±0°.02×**26°.56E**±0°.03**, h7**^{km}±6^{km}**,**
n34, σ**0**^{s}**.96**/49**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZEYE	**Izmir, Urla-Ze**	**0.06**	**229**	*i* P	**Pg**	**21 57 31.7**	**+0.4**
ZEYE				*i* S	**Sg**	**21 57 32.3**	**-0.1**
ZEYE				IAML		21 57 33.0	
	comp=E,9µm,0.3s						
ZEYE				IAML		21 57 33.0	
	comp=N,4µm,0.3s						
URLA	**Izmir**	**0.09**	**19**	PG	**Pg**	**21 57 31.9**	**+0.1**
URLA				SG	**Sg**	**21 57 33.8**	**+0.6**
URLA	**Izmir**	**0.09**	**19**	*i* P	**Pg**	**21 57 31.6**	**-0.2**
URLA				*i* S	**Sg**	**21 57 32.5**	**-0.7**
BLCB	**Balcova**	**0.39**	**74**	PG	**Pb**	**21 57 38.3**	**-0.7**
BLCB				SG	**Sb**	**21 57 44.1**	**-1.2**
CHOS	**Chios island**	**0.41**	**285**	PG	**Pg**	**21 57 38.4**	**+0.7**
FOCM	**Foa**	**0.46**	**17**	PG	**Pb**	**21 57 39.7**	**-0.3**
GCAM	**G?zelcaml?**	**0.78**	**137**	PG	**Pb**	**21 57 45.2**	**-0.4**
GCAM				SG	**Sb**	**21 57 55.8**	**-0.7**
GCAM	**G?zelcaml?**	**0.78**	**137**	*i* P	**Pb**	**21 57 45.2**	**-0.4**
GCAM				*i* S	**Sg**	**21 57 54.1**	**-0.8**
ZEDA	**zmir-Bergama**	**0.80**	**30**	*i* P	**Pg**	**21 57 45.6**	**+0.5**
ZEDA				*i* S	**Sb**	**21 57 57.6**	**+0.6**
ZEDA				IAML		21 58 01.0	
	comp=E,68nm,0.2s						
ZEDA				IAML		21 58 02.0	
	comp=N,78nm,0.2s						
DKL	**Dikili**	**0.84**	**19**	PG	**Pg**	**21 57 46.2**	**+0.4**
DKL				SG	**Sn**	**21 58 00.1**	**-0.4**
AYVA	**Ayvalik**	**1.03**	**6**	*i* P	**Pb**	**21 57 50.3**	**+0.4**
AYVA				*i* S	**Sb**	**21 58 04.1**	**+0.3**
AYVA				IAML		21 58 06.0	
	comp=E,53nm,0.6s						
SIGR	**SIGRI**	**1.08**	**330**	PN	**Pn**	**21 57 51.6**	**+0.3**
AYDB	**Zeytinkoy-Aydi**	**1.10**	**107**	PG	**Pb**	**21 57 51.2**	**+0.1**
AYDB				SG	**Sn**	**21 58 06.9**	**-0.3**
GOMA	**Golmarmara-Man**	**1.15**	**68**	PN	**Pn**	**21 57 52.6**	**+0.4**
KOCA	**Canakkale, Ayv**	**1.27**	**345**	*i* P	**Pn**	**21 57 54.9**	**+1.0**
KOCA				*i* S	**Sg**	**21 58 09.5**	**-0.9**
KOCA				IAML		21 58 18.0	
	comp=N,102nm,1.2s						
BUHA	**Balikesir, Bur**	**1.29**	**18**	*i* P	**Pg**	**21 57 53.6**	**-0.8**
BUHA				*i* S	**Sg**	**21 58 11.4**	**+0.3**
BUHA				IAML		21 58 16.0	
	comp=E,54nm,0.5s						
BUHA				IAML		21 58 17.0	
	comp=N,59nm,0.4s						
MLSB	**Milas**	**1.38**	**135**	PN	**Pg**	**21 57 56.4**	**+0.4**
BDRM	**Kayabasi**	**1.40**	**150**	*i* P	**Pg**	**21 57 57.1**	**+0.6**
BDRM				*i* S	**Sg**	**21 58 13.1**	**-1.6**
BDRM				IAML		21 58 18.0	
	comp=E,37nm,0.9s						
STEP	**BALIKESIR_Sava**	**1.42**	**39**	*i* P	**Pn**	**21 57 56.2**	**+0.1**
STEP				*i* S	**Sn**	**21 58 15.9**	**+0.8**
STEP				IAML		21 58 19.0	
	comp=N,39nm,0.4s						
STEP				IAML		21 58 24.0	
	comp=E,58nm,0.6s						
BAYC	**CANAKKALE_Bayr**	**1.46**	**360**	*i* P	**Pn**	**21 57 55.1**	**-1.4**
BAYC				*i* S	**Sb**	**21 58 14.5**	**-1.6**
BAYC				IAML		21 58 16.0	
	comp=N,27nm,0.7s						
EZN	**Ezine**	**1.56**	**353**	PN	**Pg**	**21 57 59.7**	**+0.2**
BOZC	**Bozcaada**	**1.61**	**346**	PN	**Pg**	**21 58 00.6**	**0.0**
KULA	**Kula-Manisa**	**1.67**	**81**	PN	**Pb**	**21 58 01.1**	**+0.3**
YER	**Yerkesik**	**1.78**	**129**	PN	**Pb**	**21 58 02.2**	**-0.5**
GADA	**Gvkgeada**	**1.98**	**345**	PN	**Pb**	**21 58 05.9**	**-0.1**
SIMA	**Simav-Kutahya**	**2.06**	**66**	PN	**Pb**	**21 58 06.5**	**-1.0**
GELI	**Tayfur-Gelibol**	**2.12**	**358**	PN	**Pb**	**21 58 08.3**	**-0.1**
KRBG	**Karabiga-Canak**	**2.19**	**15**	PN	**Pb**	**21 58 08.9**	**-0.7**
ERIK	**Erikli-Kesan**	**2.39**	**359**	PN	**Pb**	**21 58 11.9**	**-1.1**
KCTX	**Karacabey (Bur**	**2.43**	**35**	PN	**Pn**	**21 58 11.7**	**+1.9**
MAR3	**Marsite Statio**	**2.53**	**13**	PN	**Pn**	**21 58 13.5**	**+2.3**
TVSB	**Tavsanli**	**2.55**	**62**	PN	**Pn**	**21 58 13.4**	**+1.8**
MAR4	**Marsite Statio**	**2.57**	**13**	PN	**Pn**	**21 58 14.2**	**+2.3**
ALN	**Alexandroupoli**	**2.65**	**352**	PN	**Pb**	**21 58 15.6**	**-1.8**

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*GCG **22** 22:03:05.8±0.7, 14°.66N×89°.05W, h0^{km}±15^{km}, MD3.7*
*SNET **22** 22:03:06.6±1.8, 14°.53N×89°.19W, h0^{km}±4^{km}, ML3.4*
*INET **22** 22:03:07.9, 14°.51N×89°.23W, h3^{km}, MW3.7*
ISC 22 22:03:06.9±1.5**, 14°.54N**±0°.05×**89°.12W**±0°.04**, h4**^{km}±10^{km}**,**
n23, σ**1**^{s}**.01**/34**, 4C-1D, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESQI	**Esquipulas**	**0.22**	**274**	⇑*i*P	**Pg**	**22 03 11.2**	**0.0**
ESQI				*e*S	**Sg**	**22 03 14.6**	**+0.5**
ESQI				IAML		22 03 16.6	
	comp=Z,7µm,0.3s						
MTO3	**Montecristo**	**0.28**	**239**	⇑*i*P	**Pg**	**22 03 12.1**	**-0.2**
MTO3				*e*S	**Sg**	**22 03 16.1**	**+0.2**
TACO	**Tacachico**	**0.61**	**202**	*e*P	**Pg**	**22 03 18.6**	**-0.1**
MRL	**Marmol**	**0.77**	**314**	⇓*i*P	**Pb**	**22 03 21.8**	**-1.1**
CEDA	**San Andres**	**0.78**	**200**	*e*P	**Pb**	**22 03 22.0**	**-1.1**
CEDA				IAML		22 03 42.8	
	comp=Z,2µm,0.5s						
LBRS	**Las Brisas**	**0.80**	**175**	*e*P	**Pg**	**22 03 22.6**	**+0.3**
BOQS	**Boqueron**	**0.82**	**191**	*e*P	**Pb**	**22 03 24.3**	**+0.4**
RTR	**El Retiro**	**0.82**	**219**	*e*P	**Pb**	**22 03 23.1**	**-0.7**
SNJE	**San Jose**	**0.82**	**215**	*e*P	**Pb**	**22 03 23.0**	**-0.8**
UEES	**Universidad Ev**	**0.83**	**188**	*e*P	**Pb**	**22 03 23.1**	**-0.8**
UEES				*e*S	**Sb**	**22 03 35.6**	**+0.1**
UEES				IAML		22 03 40.8	
	comp=Z,2µm,0.2s						
SBLS	**San Blas**	**0.85**	**215**	*e*P	**Pb**	**22 03 23.2**	**-1.2**
CEVE	**Cerro Verde**	**0.86**	**215**	*e*P	**Pb**	**22 03 24.0**	**-0.6**
CEVE				*e*S	**Sb**	**22 03 36.3**	**-0.3**
CEVE				IAML		22 03 40.7	
	comp=Z,2µm,0.3s						
LFRS	**El Faro**	**0.92**	**177**	*e*P	**Pg**	**22 03 24.5**	**0.0**
JAYA	**Jayaque - finc**	**0.94**	**200**	*e*P	**Pb**	**22 03 24.9**	**-1.0**
JAYA				*e*S	**Sn**	**22 03 40.3**	**-0.7**
JAYA				IAML		22 03 42.6	
	comp=Z,2µm,0.5s						
COEG	**Centro de Oper**	**0.95**	**166**	*e*P	**Pg**	**22 03 25.1**	**+0.1**
PQSS	**Presa 15 de Se**	**1.06**	**149**	*e*P	**Pg**	**22 03 26.9**	**-0.3**
PQSS				*e*S	**Sn**	**22 03 44.5**	**+0.8**
PQSS				IAML		22 03 45.6	
	comp=Z,1µm,0.2s						
LALI	**Alcalda de L**	**1.07**	**191**	*e*P	**Pb**	**22 03 27.4**	**-0.5**
LALI				*e*S	**Sn**	**22 03 43.1**	**-0.8**
COEB	**Comit de Eme**	**1.18**	**151**	*e*P	**Pg**	**22 03 29.3**	**-0.3**
COEB				*e*S	**Sn**	**22 03 48.2**	**+1.2**
NBG	**Las Nubes**	**1.19**	**272**	⇑*e*P	**Pn**	**22 03 29.8**	**-0.8**
NBG				*e*S	**Sn**	**22 03 49.5**	**+2.1**
TECA	**Tecapa**	**1.20**	**150**	*e*P	**Pg**	**22 03 29.6**	**-0.3**
PACA	**Pacayal**	**1.32**	**144**	*e*P	**Pg**	**22 03 32.0**	**-0.2**
PACA				*e*S	**Sn**	**22 03 52.1**	**+1.8**
PACA				IAML		22 03 52.6	
	comp=Z,666nm,0.2s						
PCG	**Pacaya**	**1.45**	**264**	⇑*e*P	**Pb**	**22 03 34.7**	**+0.1**
FUG	**Fuego 3**	**1.67**	**267**	*e*P	**Pg**	**22 03 38.2**	**-0.8**
FUG				*e*S	**Sg**	**22 04 03.8**	**+3.1**

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*TAP **22** 22:10:35.7, 23°.95N×121°.66E, h56^{km}, ML3.5, C*
*JMA **22** 22:10:35.4, 23°.92N×121°.64E, h51^{km}±1^{km}, M2.7*
ISC 22 22:10:36.8±1.2**, 23°.94N**±0°.02×**121°.71E**±0°.02**, h46**^{km}±5^{km}**,**
n119, σ**0**^{s}**.88**/227**, 2D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.10**	**291**	*i* P	**Pn**	**22 10 44.8**	**+0.7**
	baz=278						
HWA				S	**Sn**	**22 10 52.1**	**+2.9**
	baz=278						
TWD	**Chiawan**	**0.17**	**323**	*i* P	**Pn**	**22 10 44.5**	**0.0**
	baz=320						
TWD				*i* S	**Sn**	**22 10 50.7**	**+0.8**
	baz=320						
NACB	**Ninganchiao**	**0.26**	**336**	P	**Pn**	**22 10 44.7**	**-0.4**
	baz=332						
NACB				S	**Sn**	**22 10 50.8**	**-0.3**
	baz=332						
ESL	**Shilin**	**0.28**	**244**	⇓*i*P	**Pn**	**22 10 44.8**	**-0.6**
	baz=244						
ESL				*i* S	**Sn**	**22 10 51.0**	**-0.5**
	baz=244						
ETLH	**Xiulin Townshi**	**0.34**	**322**	P	**Pn**	**22 10 45.4**	**-0.7**
	baz=322						
ETLH				S	**Sn**	**22 10 53.0**	**+0.4**
	baz=322						
EGFH	**Guangfu**	**0.37**	**224**	P	**Pn**	**22 10 45.5**	**-0.8**
	baz=225						
EGFH				*e*S	**Sn**	**22 10 52.9**	**-0.1**
	baz=225						
WHF	**Hehuan Shan**	**0.45**	**297**	*i* P	**Pn**	**22 10 47.0**	**-0.7**
	baz=294						
WHF				*i* S	**Sn**	**22 10 54.8**	**-0.6**
	baz=294						
ENA	**Nanau**	**0.49**	**3**	P	**Pn**	**22 10 47.2**	**-0.4**
	baz=1.0						
ENA				S	**Sn**	**22 10 55.3**	**0.0**
	baz=1.0						
CHGB	**Renai**	**0.50**	**284**	⇓P	**Pn**	**22 10 47.6**	**-0.5**
	baz=283						
CHGB				S	**Sn**	**22 10 55.9**	**-0.2**
	baz=283						
EWUT	**Wuta**	**0.51**	**7**	P	**Pn**	**22 10 47.4**	**-0.6**
	baz=14						
EWUT				S	**Sn**	**22 10 55.7**	**-0.1**
	baz=14						
HGSD	**Ruisui**	**0.52**	**210**	P	**Pn**	**22 10 48.0**	**-0.1**
	baz=216						
HGSD				*e*S	**Sn**	**22 10 56.6**	**+0.6**
	baz=216						
FUSS	**Fushou**	**0.52**	**306**	P	**Pn**	**22 10 48.1**	**-0.3**
	baz=306						
FUSS				S	**Sn**	**22 10 56.5**	**0.0**
	baz=306						
VWDT	**VWDT**	**0.55**	**250**	P	**Pn**	**22 10 48.1**	**-0.4**
	baz=248						
VWDT				S	**Sn**	**22 10 56.7**	**0.0**
	baz=248						
EHY	**Hungye**	**0.56**	**219**	*i* P	**Pn**	**22 10 47.0**	**-1.6**
	baz=215						
EHY				*i* S	**Sn**	**22 10 55.8**	**-1.2**
	baz=215						
NNSB	**Datong**	**0.57**	**329**	P	**Pn**	**22 10 48.3**	**-0.5**
	baz=336						
NNSB				S	**Sn**	**22 10 56.6**	**-0.8**
	baz=336						
NNSH	**Datong**	**0.57**	**329**	*i* P	**Pn**	**22 10 48.2**	**-0.7**
	baz=336						
NNSH				*i* S	**Sn**	**22 10 56.8**	**-0.7**
	baz=336						
NNS	**Nan Shan**	**0.58**	**328**	*i* P	**Pn**	**22 10 48.4**	**-0.6**
	baz=337						
NNS				*i* S	**Sn**	**22 10 57.0**	**-0.8**
	baz=337						
TDCB	**Techi**	**0.59**	**302**	P	**Pn**	**22 10 48.9**	**-0.2**
	baz=303						
TDCB				S	**Sn**	**22 10 57.3**	**-0.7**
	baz=303						
YULB	**Yu-li**	**0.66**	**215**	P	**Pn**	**22 10 48.2**	**-1.7**
	baz=218						
TWC	**Suao**	**0.68**	**11**	*i* P	**Pn**	**22 10 50.2**	**+0.1**
	baz=22						
TWC				*i* S	**Sn**	**22 11 00.1**	**+0.4**
	baz=22						
NDT	**Datong Townshi**	**0.68**	**345**	*i* P	**Pn**	**22 10 49.6**	**-0.6**
	baz=350						
NDT				*i* S	**Sn**	**22 10 59.2**	**-0.7**
	baz=350						
EYUL	**Yuli**	**0.69**	**211**	*e*P	**Pn**	**22 10 50.2**	**-0.1**
	baz=214						
NDS	**Dongshan**	**0.69**	**1**	P	**Pn**	**22 10 49.6**	**-0.7**
	baz=354						
NDS				S	**Sn**	**22 10 59.5**	**-0.5**
	baz=354						
WPL	**Puli Township**	**0.69**	**276**	P	**Pn**	**22 10 49.7**	**-0.5**
	baz=275						
WPL				S	**Sn**	**22 11 00.4**	**+0.4**
	baz=275						
TWF1	**Yuli**	**0.70**	**213**	P	**Pn**	**22 10 49.1**	**-1.3**
	baz=216						
TWF1				S	**Sn**	**22 11 00.4**	**+0.2**
	baz=216						
SSLB	**Suanglung**	**0.71**	**258**	P	**Pn**	**22 10 49.8**	**-0.8**
	baz=256						
SSLB				S	**Sn**	**22 11 00.1**	**-0.4**
	baz=256						
ENTT	**Nioudou**	**0.71**	**349**	*i* P	**Pn**	**22 10 49.9**	**-0.6**
	baz=351						
ENTT				*i* S	**Sn**	**22 10 60.0**	**-0.5**
	baz=351						
DPDB	**Guoxing**	**0.72**	**278**	P	**Pn**	**22 10 50.2**	**-0.5**
	baz=277						
DPDB				*e*S	**Sn**	**22 11 01.1**	**+0.3**
	baz=277						
WCS	**Beigang Elemen**	**0.74**	**279**	P	**Pn**	**22 10 50.6**	**-0.2**
	baz=276						
WCS				S	**Sn**	**22 11 01.9**	**+0.7**
	baz=276						
SMLT	**Sun Moon Lake**	**0.74**	**266**	P	**Pn**	**22 10 50.7**	**-0.4**
	baz=264						
SMLT				*i* S	**Sn**	**22 11 01.4**	**0.0**
	baz=264						
WHP	**Taichung City**	**0.77**	**296**	*i* P	**Pn**	**22 10 51.4**	**-0.1**
	baz=298						
WHP				S	**Sn**	**22 11 02.0**	**-0.1**
	baz=298						
TWE	**Neicheng**	**0.78**	**357**	*i* P	**Pn**	**22 10 50.8**	**-0.6**
	baz=354						
TWE				*i* S	**Sn**	**22 11 01.4**	**-0.7**
	baz=354						
TYC	**Yuchr**	**0.78**	**268**	*i* P	**Pn**	**22 10 51.4**	**-0.1**
	baz=266						
TYC				S	**Sn**	**22 11 01.9**	**-0.2**
	baz=266						
YHNB	**Yeheng**	**0.79**	**337**	P	**Pn**	**22 10 51.2**	**-0.5**
	baz=343						
YHNB				S	**Sn**	**22 11 01.4**	**-1.0**
	baz=343						
NSK	**Sanguang**	**0.80**	**336**	*i* P	**Pn**	**22 10 51.2**	**-0.6**
	baz=343						
NSK				*i* S	**Sn**	**22 11 01.6**	**-1.1**
	baz=343						
WHYT	**Xinyi Township**	**0.82**	**253**	*i* P	**Pn**	**22 10 51.9**	**-0.1**
	baz=246						
WHYT				*i* S	**Sn**	**22 11 03.5**	**+0.3**
	baz=246						
ILA	**Ilan**	**0.82**	**2**	*e*P	**Pn**	**22 10 52.7**	**+0.6**
	baz=356						
ILA				*e*S	**Sn**	**22 11 04.2**	**+1.1**
	baz=356						
FULB	**Fuli**	**0.83**	**207**	*i* P	**Pn**	**22 10 52.2**	**0.0**
	baz=214						
FULB				*e*S	**Sn**	**22 11 03.9**	**+0.6**
	baz=214						
NWLT	**Wulai**	**0.85**	**347**	P	**Pn**	**22 10 51.8**	**-0.7**
	baz=348						
NWLT				S	**Sn**	**22 11 03.5**	**-0.5**
	baz=348						
CHKT	**Chengkung**	**0.90**	**201**	P	**Pn**	**22 10 52.5**	**-0.5**
	baz=199						
CHKT				S	**Sn**	**22 11 05.1**	**+0.2**
	baz=199						
WJS	**Zhushan**	**0.91**	**263**	P	**Pn**	**22 10 53.4**	**+0.2**
	baz=262						
WJS				S	**Sn**	**22 11 05.8**	**+0.6**
	baz=262						
NTC	**Toucheng**	**0.92**	**7**	*e*P	**Pn**	**22 10 53.1**	**-0.2**
	baz=357						
NTC				*e*S	**Sn**	**22 11 07.0**	**+1.7**
	baz=357						
WWF	**Wufeng**	**0.93**	**276**	P	**Pn**	**22 10 53.7**	**+0.3**
	baz=275						
WWF				S	**Sn**	**22 11 07.3**	**+1.6**
	baz=275						
ALS	**Alishan**	**0.93**	**243**	*i* P	**Pn**	**22 10 53.6**	**-0.2**
	baz=237						
ALS				*i* S	**Sn**	**22 11 06.2**	**0.0**
	baz=237						
WNT	**Mingjian**	**0.94**	**266**	*i* P	**Pn**	**22 10 53.9**	**+0.2**
	baz=258						
WNT				S	**Sn**	**22 11 07.1**	**+1.1**
	baz=258						
WNT1	**Nantou City**	**0.94**	**268**	P	**Pn**	**22 10 54.1**	**+0.4**
	baz=260						
WNT1				S	**Sn**	**22 11 07.4**	**+1.3**
	baz=260						
NSTT	**Nanjuang**	**0.94**	**317**	*i* P	**Pn**	**22 10 53.4**	**-0.2**
	baz=306						
NSTT				*i* S	**Sn**	**22 11 06.3**	**+0.3**
	baz=306						
LIOB	**Emei**	**0.94**	**318**	P	**Pn**	**22 10 53.2**	**-0.5**
	baz=307						
LIOB				S	**Sn**	**22 11 06.9**	**+0.8**
	baz=307						
TWQ1	**Liyutan**	**0.95**	**296**	*i* P	**Pn**	**22 10 53.0**	**-0.8**
	baz=295						
TWQ1				*i* S	**Sn**	**22 11 05.8**	**-0.3**
	baz=295						
TCU	**Taichung**	**0.97**	**283**	P	**Pn**	**22 10 54.0**	**0.0**
	baz=281						
TCU				S	**Sn**	**22 11 07.7**	**+1.1**
	baz=281						
NJD	**Zhudong**	**0.97**	**325**	P	**Pn**	**22 10 54.4**	**+0.3**
	baz=324						
NJD				S	**Sn**	**22 11 08.1**	**+1.3**
	baz=324						
ELDTW	**Lidau**	**0.98**	**220**	*i* P	**Pn**	**22 10 52.9**	**-1.4**
	baz=219						
ELDTW				S	**Sn**	**22 11 05.4**	**-1.7**
	baz=219						
NSY	**Sanyi**	**0.99**	**299**	*i* P	**Pn**	**22 10 53.8**	**-0.5**
	baz=298						
NSY				S	**Sn**	**22 11 07.1**	**0.0**
	baz=298						
CHN5	**Tsauling**	**1.00**	**250**	*i* P	**Pn**	**22 10 55.0**	**+0.5**
	baz=244						
CHN5				S	**Sn**	**22 11 08.3**	**+0.7**
	baz=244						
NMLH	**Miaoli**	**1.03**	**306**	P	**Pn**	**22 10 54.0**	**-0.8**
	baz=305						
NMLH				S	**Sn**	**22 11 07.0**	**-1.2**
	baz=305						

NHDH	Xindian Distri	1.03	351	eP	Pn	22 10 54.3	-0.5
	baz=351						
NHDH				eS	Sn	22 11 07.9	-0.3
	baz=351						
TIPB	Shuangxi	1.03	6	iP	Pn	22 10 55.0	+0.1
	baz=359						
TIPB				S	Sn	22 11 08.8	+0.5
	baz=359						
EDH	Donghe	1.03	201	eP	Pn	22 10 54.0	-0.9
	baz=201						
EDH				S	Sn	22 11 09.0	+0.8
	baz=201						
TWA	Mucha	1.04	354	P	Pn	22 10 54.5	-0.5
	baz=344						
TWA				S	Sn	22 11 08.2	-0.2
	baz=344						
HSN1	Hsinchu	1.04	323	eP	Pn	22 10 54.9	-0.2
	baz=323						
HSN1				eS	Sn	22 11 10.4	+1.9
	baz=323						
TATO	Taipei	1.05	349	P	Pn	22 10 54.7	-0.4
	baz=349						
TATO				S	Sn	22 11 08.2	-0.4
	baz=349						
WDJ	Dajia District	1.06	293	P	Pn	22 10 54.8	-0.5
	baz=292						
WDJ				S	Sn	22 11 08.6	-0.2
	baz=292						
WCHH	Zhanghua	1.06	278	P	Pn	22 10 54.8	-0.5
	baz=286						
WCHH				S	Sn	22 11 10.3	+1.4
	baz=286						
NJN	Zhunan	1.06	314	eP	Pn	22 10 55.5	+0.2
	baz=303						
NJN				eS	Sn	22 11 10.7	+1.7
	baz=303						
SBCB	Hsinchu	1.07	322	P	Pn	22 10 55.0	-0.5
	baz=332						
SBCB				eS	Sn	22 11 11.7	+2.4
	baz=332						
BACT	New Taipei Cit	1.08	347	eP	Pn	22 10 55.1	-0.4
	baz=360						
WGK	Gukeng	1.08	257	P	Pn	22 10 56.1	+0.6
	baz=247						
WGK				eS	Sn	22 11 11.3	+1.9
	baz=247						
HSN	Hsinchu	1.09	322	P	Pn	22 10 55.3	-0.3
	baz=335						
HSN				S	Sn	22 11 11.4	+1.8
	baz=335						
TWB1	Santiao Chiao	1.09	13	iP	Pn	22 10 55.6	-0.1
	baz=23						
TWB1				S	Sn	22 11 11.1	+1.4
	baz=23						
WDLH	Douliu	1.10	257	P	Pn	22 10 56.1	+0.3
	baz=249						
WDLH				eS	Sn	22 11 11.3	+1.4
	baz=249						
NTY	Taoyuan	1.12	341	P	Pn	22 10 55.8	-0.2
	baz=349						
NTY				eS	Sn	22 11 10.5	+0.2
	baz=349						
NWF	Wu-fen Shan	1.13	3	P	Pn	22 10 55.7	-0.6
	baz=351						
NWF				S	Sn	22 11 10.9	+0.2
	baz=351						
WFSB	Wu-fen Shan	1.13	3	P	Pn	22 10 55.8	-0.4
	baz=351						
WFSB				eS	Sn	22 11 10.8	+0.3
	baz=351						
NCUH	Zhongli	1.13	335	eP	Pn	22 10 55.7	-0.5
	baz=334						
NCUH				eS	Sn	22 11 11.7	+1.1
	baz=334						
NCU	National Centr	1.13	335	eP	Pn	22 10 56.3	+0.1
	baz=335						
NCU				eS	Sn	22 11 11.4	+0.8
	baz=335						
STYH	Taoyuan	1.15	228	P	Pn	22 10 56.4	0.0
	baz=228						
STYH				S	Sn	22 11 11.6	+0.5
	baz=228						
LONT	Longtian	1.16	207	P	Pn	22 10 56.8	+0.2
	baz=198						
LONT				eS	Sn	22 11 11.8	+0.5
	baz=198						
STYT	Tauyuan	1.17	229	P	Pn	22 10 56.9	+0.1
	baz=228						
STYT				eS	Sn	22 11 12.8	+1.2
	baz=228						
TPUB	Ta-pu	1.18	237	P	Pn	22 10 56.8	0.0
	baz=230						
TPUB				eS	Sn	22 11 12.4	+0.6
	baz=230						
CHN4	Tsaushan	1.18	240	P	Pn	22 10 57.1	+0.2
	baz=240						
CHN4				eS	Sn	22 11 13.3	+1.5
	baz=240						
TWS1	Kuangyinshan	1.19	347	P	Pn	22 10 56.3	-0.7
	baz=357						
TWS1				eS	Sn	22 11 12.2	+0.3
	baz=357						
TNOU	National Taiwa	1.21	3	eS	Sn	22 11 11.8	-0.6
	baz=349						
YM01	YM01	1.21	354	eP	Pn	22 10 55.3	-2.0
	baz=353						
YM01				eS	Sn	22 11 10.1	-2.4
	baz=353						
YM10	YM10	1.22	354	eP	Pn	22 10 56.8	-0.7
	baz=353						
YM10				eS	Sn	22 11 12.0	-0.8
	baz=353						
YM04	YM04	1.22	353	eP	Pn	22 10 56.3	-1.2
	baz=353						
YM04				eS	Sn	22 11 13.2	+0.4
	baz=353						
WRL	Guolierlin Hig	1.22	268	eS	Sn	22 11 12.4	-0.4
	baz=280						
WTP	Ta-pu	1.22	236	P	Pn	22 10 57.7	+0.2
	baz=235						
WTP				eS	Sn	22 11 13.2	+0.3
	baz=235						
YM05	YM05	1.23	354	eP	Pn	22 10 56.7	-0.9
	baz=354						
YM05				eS	Sn	22 11 11.8	-1.2
	baz=354						
YM11	YM11	1.23	354	eP	Pn	22 10 56.5	-1.1
	baz=353						
YM11				eS	Sn	22 11 10.9	-2.2
	baz=353						
WTK	Tuku	1.23	259	P	Pn	22 10 57.6	0.0
	baz=258						
WTK				eS	Sn	22 11 15.1	+1.9
	baz=258						
RLNB	Erlin	1.24	268	eP	Pn	22 10 57.3	-0.3
	baz=279						
RLNB				eS	Sn	22 11 14.9	+1.7
	baz=279						
JYNG	Yonagunijimaku	1.24	65	P	Pn	22 10 57.8	+0.1
JYNG				eS	Sn	22 11 14.1	+0.9
NTST	Danshui	1.24	349	eP	Pn	22 10 57.2	-0.5
	baz=350						
YM03	YM03	1.24	353	eP	Pn	22 10 56.9	-1.0
	baz=354						
YM08	YM08	1.25	355	eP	Pn	22 10 56.5	-1.4
	baz=344						
YM08				eS	Sn	22 11 11.4	-2.0
	baz=344						
ANP	Anpu	1.25	352	eP	Pn	22 10 56.5	-1.5
	baz=352						
ANP				eS	Sn	22 11 12.4	-1.3
	baz=352						
CHY	Chiayi	1.26	250	P	Pn	22 10 58.0	+0.1
	baz=249						
CHY				eS	Sn	22 11 15.1	+1.4
	baz=249						
TWGBT	Beinan	1.26	207	eP	Pn	22 10 56.7	-1.3
	baz=199						
TWGBT				eS	Sn	22 11 12.4	-1.3
	baz=199						
TWG	Pinlang	1.26	208	eP	Pn	22 10 57.0	-0.9
	baz=199						
TWG				S	Sn	22 11 11.3	-2.5
	baz=199						
LDUT	Ludao	1.28	190	eP	Pn	22 10 56.5	-1.8
	baz=184						
LDUT				eS	Sn	22 11 13.6	-0.7
	baz=184						
YOJ	Yonaguni jima	1.30	66	P	Pn	22 10 58.7	+0.2
YOJ				eS	Sn	22 11 15.1	+0.4
TWK	Hsinying	1.31	239	P	Pn	22 10 58.6	-0.1
	baz=239						
TWK				S	Sn	22 11 15.2	+0.3
	baz=239						
CHN1	Nanshi	1.32	235	eP	Pn	22 10 58.9	0.0
	baz=235						
CHN1				eS	Sn	22 11 15.6	+0.4
	baz=235						
SNST	Tainan City	1.32	237	eS	Sn	22 11 16.2	+0.9
	baz=237						
SGST	Jiashian	1.34	231	P	Pn	22 10 58.2	-0.9
	baz=224						
SGST				S	Sn	22 11 16.0	+0.2
	baz=224						
SLGT	Liugui	1.36	226	eP	Pn	22 11 00.3	+0.9
	baz=226						
SLGT				eS	Sn	22 11 17.9	+1.7
	baz=226						
WSF	Szhu	1.40	258	eS	Sn	22 11 17.7	+0.7
	baz=248						
ICHU	Yijhu	1.43	247	P	Pn	22 11 00.1	-0.2
	baz=236						
ICHU				eS	Sn	22 11 18.4	+0.4
	baz=236						
CHN8	Yiju	1.50	247	eS	Sn	22 11 19.6	+0.1
	baz=246						
ECL	Taimali	1.51	208	eP	Pn	22 10 59.5	-1.8
	baz=202						
ECL				eS	Sn	22 11 18.5	-1.3
	baz=202						
SSD	Sandimen	1.55	220	eP	Pn	22 11 02.2	+0.2
	baz=220						
SSD				eS	Sn	22 11 21.9	+1.1
	baz=220						
TSMG	Majia	1.57	219	eP	Pn	22 11 02.4	+0.1
	baz=219						
TSMG				eS	Sn	22 11 21.7	+0.3
	baz=219						
MASBT	Mashibuluo	1.65	217	eP	Pn	22 11 03.5	+0.1
	baz=216						
IRIF	Iriomote-Funau	1.89	78	P	Pn	22 11 07.0	+0.4
IRIF				eS	Sn	22 11 29.9	+0.7
HATJ	Hateruma jima	1.92	86	P	Pn	22 11 07.4	+0.4
HATJ				eS	Sn	22 11 30.7	+0.7
JKRS	Kuro-shima	2.12	82	P	Pn	22 11 10.3	+0.5
JKRS				eS	Sn	22 11 36.1	+1.2
JIJ	Ishigaki jima	2.26	79	P	Pn	22 11 11.5	-0.2
JIJ				eS	Sn	22 11 37.7	-0.7
JISG	Ishigakijimahi	2.46	74	P	Pn	22 11 14.2	-0.2
JISG				S	Sn	22 11 42.5	-0.8
JTJ	Tarama	2.82	75	P	Pn	22 11 19.9	+0.6
JTJ				eS	Sn	22 11 53.0	+0.9

*NEIC **22** 22:17:07.6±1.2, 19°.2S±0°.1×177°.5W±0°.1, h576^{km}±7^{km}, mb4.7/66, Error ellipse: s-maj=17.5km s-min=14.7km az=127.0*

*NOU **22** 22:17:08.2, 19°.18S×177°.26W, h598^{km}, mb4.8, Fiji Islands Region*

*IDC **22** 22:17:09.8±1.9, 19°.35S×177°.54W, h591^{km}±25^{km}, mb3.7/12, mb1 4.0/14, mb1mx3.7/26, mbtmp4.7/14, Error ellipse: s-maj=20.5km s-min=11.3km az=150.0*

ISC 22 22:17:09.6±0.4**, 19°.31S**±0°.07×**177°.47W**±0°.07**, h600**^{km}**, n131,** σ1^{s}25/138**, mb4.6**/42**, 1D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	4.54	290	P	P	22 18 36.4	-2.7
MSVF				S	S	22 19 50.9	-1.1
NIUE	Niue	7.13	89	P	P	22 18 58.4	-2.4
	baz=6.9,SNR=6.3						
NIUE	Niue	7.13	89	P	P	22 18 58.0	-2.8
NIUE	Niue	7.13	89	P	P	22 18 58.2	-2.6
AFI	Afiamalu	7.65	46	P	P	22 19 00.4	-5.5
AFI	Afiamalu	7.65	46	P	P	22 19 01.6	-4.3
SANVU	Saraoutou	15.13	282	P	P	22 20 17.9	-1.1
SANVU				IAmb	IAmb	22 20 29.8	
	comp=Z,30nm,0.7s						
DZM	Mont Dzumac	15.30	257	P	P	22 20 20.6	-0.2
	comp=Z,2.9nm,0.3s,baz=81,slow=16,SNR=26						
DZM	Mont Dzumac	15.30	257	P	P	22 20 20.0	-0.8
DZM				IAmb	IAmb	22 20 22.8	
	comp=Z,26nm,0.7s						
KNTN	Kanton	17.37	20	P	P	22 20 37.1	-2.6
OUZ	Omahuta	17.71	205	P	P	22 20 43.6	+1.2
OUZ				IAmb	IAmb	22 20 45.7	
	comp=Z,32nm,1.0s						
URZ	Urewera	19.46	193	P	P	22 20 56.6	-1.7
	comp=Z,7.9nm,0.3s,baz=277,slow=2.0,SNR=24						
URZ				S	S	22 23 56.6	-6.7
	comp=Z,0.6nm,0.3s,baz=47,slow=22,SNR=6.2						
BKZ	Black Stump Fm	20.46	194	P	P	22 21 05.7	-1.8
BFZ	Birch Farm	21.97	193	P	P	22 21 20.1	-0.7
BFZ				IAmb	IAmb	22 21 32.7	
	comp=Z,30nm,1.1s						
QRZ	Quartz Range	23.09	200	P	P	22 21 30.8	0.0
QRZ				IAmb	IAmb	22 21 44.0	
	comp=Z,28nm,1.1s						
NNZ	Nelson	23.19	198	P	P	22 21 30.0	-1.7
TUWZ	Tuamarina	23.23	197	P	P	22 21 29.9	-2.1
THZ	Tophouse	23.83	198	P	P	22 21 37.1	-0.3
THZ				IAmb	IAmb	22 21 41.1	
	comp=Z,16nm,0.9s						
KHZ	Kahutara	24.26	196	P	P	22 21 39.9	-1.2
KHZ				IAmb	IAmb	22 21 43.2	
	comp=Z,10nm,0.8s						
LTZ	Lake Taylor	24.95	198	P	P	22 21 45.4	-1.9
LTZ				IAmb	IAmb	22 21 49.6	
	comp=Z,18nm,0.9s						
OXZ	Oxford	25.52	198	P	P	22 21 51.0	-1.3
RPZ	Rata Peaks	26.17	199	P	P	22 21 58.8	+0.9
	comp=Z,7.4nm,0.5s,baz=311,slow=1.7,SNR=7.0						
RPZ	Rata Peaks	26.17	199	P	P	22 21 56.7	-1.3
RPZ				IAmb	IAmb	22 21 59.4	
	comp=Z,12nm,1.0s						
FOZ	Fox Glacier	26.41	201	P	P	22 21 59.1	-0.9
LBZ	Lake Benmore	27.05	200	P	P	22 22 04.2	-1.5
MLZ	Mavora Lakes	28.60	202	P	P	22 22 19.1	0.0
DCZ	Deep Cove	29.03	203	P	P	22 22 21.9	-0.9
WHZ	Wether Hill Ro	29.12	201	P	P	22 22 23.1	-0.5
PYZ	Puysegur Point	29.80	202	P	P	22 22 27.8	-1.6
PYZ				IAmb	IAmb	22 22 28.6	
	comp=Z,34nm,1.1s						
ARMA	Armidale	30.05	242	P	P	22 22 32.7	+0.7
	baz=30,SNR=8.9						
ARMA	Armidale	30.05	242	P	P	22 22 31.3	-0.6
RMQ	Roma	31.86	251	P	P	22 22 48.3	+1.0
	baz=32,SNR=5.0						
CNB	Canberra Magne	33.31	235	P	P	22 23 00.6	+1.1
	baz=34,SNR=11						
CAN	Canberra	33.60	235	P	P	22 23 02.4	+0.5
CAN				IAmb	IAmb	22 23 03.0	
	comp=Z,14nm,0.7s						
CTA	Charters Tower	34.12	262	P	P	22 23 06.8	+0.3
	comp=Z,22nm,0.7s,baz=92,slow=11,SNR=11						
CTAO	Charters Tower	34.12	262	P	P	22 23 06.4	0.0
CTAO				IAmb	IAmb	22 23 07.6	
	comp=Z,28nm,0.8s						
CMSA	Cobar Meteorol	35.27	242	P	P	22 23 16.3	+0.6
	baz=36,SNR=66						
PMG	Port Moresby	35.59	281	P	P	22 23 18.7	+0.1
QLP	Quilpie	35.90	251	P	P	22 23 21.3	+0.2
	baz=36,SNR=7.5						
MTSU	Mount Surprise	36.17	265	P	P	22 23 23.5	+0.2
	baz=36,SNR=13						
TOO	Toolangi	37.01	233	P	P	22 23 30.9	+0.9
	baz=37,SNR=18						
TOO	Toolangi	37.01	233	P	P	22 23 29.6	-0.4
TAU	Tasmania Unive	37.82	224	P	P	22 23 36.2	-0.3
TAU				IAmb	IAmb	22 23 50.3	
	comp=Z,25nm,1.0s						
COEN	Coen	38.03	272	P	P	22 23 37.6	-0.9
COEN				IAmb	IAmb	22 23 40.0	
	comp=Z,15nm,0.7s						
STKA	Stephens Creek	38.77	243	P	P	22 23 45.3	+1.1
	comp=Z,24nm,0.5s,baz=90,slow=10.0,SNR=84						
STKA	Stephens Creek	38.77	243	P	P	22 23 45.4	+1.1
	baz=39,SNR=45						
STKA	Stephens Creek	38.77	243	P	P	22 23 43.7	-0.5
ARPS	Mount Arapiles	39.57	235	P	P	22 23 51.3	+0.7
	baz=40,SNR=9.5						
QIS	Mount Isa	40.29	261	P	P	22 23 56.0	-0.7
	baz=40,SNR=5.0						
HTT	Hallett	41.23	241	P	P	22 24 04.8	+0.8
	baz=42,SNR=29						
BBOO	Buckleboo	43.53	242	P	P	22 24 22.4	+0.6
	baz=44,SNR=126						
BBOO	Buckleboo	43.53	242	P	P	22 24 21.5	-0.3
WR0	Warramunga Arr	45.08	261	P	P	22 24 33.1	-0.8
WR0				IAmb	IAmb	22 24 35.7	
	comp=Z,15nm,0.5s						
WB0	Warramunga Arr	45.25	261	P	P	22 24 34.7	-0.5
WB0				IAmb	IAmb	22 24 35.2	
	comp=Z,22nm,0.7s						
WB2	Warramunga Arr	45.26	261	P	P	22 24 34.8	-0.5
WB2				PcP	PcP	22 26 02.7	+0.5
WRAB	Tennant Creek	45.27	261	P	P	22 24 34.7	-0.6
WRAB				IAmb	IAmb	22 24 36.4	
	comp=Z,22nm,0.6s						
WRA	Warramunga Arr	45.27	261	P	P	22 24 35.0	-0.4
	comp=Z,14nm,0.4s,baz=98,slow=7.4,SNR=278						
WRA				PcP	PcP	22 26 03.4	+1.1
	comp=Z,4.4nm,1.0s,baz=91,slow=3.7,SNR=5.1						
WRA				S	S	22 30 32.3	-1.1
	comp=Z,1.0nm,0.6s,baz=100,slow=12,SNR=5.0						
WRA	Warramunga Arr	45.27	261	P	P	22 24 34.3	-1.1
AS31	Alice Springs	45.29	256	P	P	22 24 35.0	-0.4
AS31				IAmb	IAmb	22 24 37.0	
	comp=Z,13nm,0.9s						
ASAR	Alice Springs	45.29	256	P	P	22 24 35.8	+0.2
	comp=Z,42nm,0.7s,baz=87,slow=7.9,SNR=450						
ASAR				PcP	PcP	22 26 03.2	+1.0
	comp=Z,4.6nm,0.7s,baz=102,slow=4.2,SNR=7.3						
ASAR				S	S	22 30 33.9	+0.3
	comp=Z,2.8nm,0.7s,baz=92,slow=16,SNR=12						
ASAR	Alice Springs	45.29	256	P	P	22 24 35.2	-0.3
ASAR					PcP	22 26 02.4	+0.1
KDU	Kakadu	48.44	270	P	P	22 24 59.1	-0.1
	baz=49,SNR=12						
FORT	Forrest	50.23	246	P	P	22 25 12.0	0.0
	baz=50,SNR=41						
FORT	Forrest	50.23	246	P	P	22 25 11.9	-0.2
WRKA	Warakurna	50.28	253	P	P	22 25 12.9	+0.3
	baz=50,SNR=304						
FAKI	Fak Fak	51.73	282	P	P	22 25 23.0	-0.2
FITZ	Fitzroy Crossi	53.69	261	P	P	22 25 37.5	+0.5
	baz=54,SNR=16						
FITZ	Fitzroy Crossi	53.69	261	P	P	22 25 36.9	-0.1
FITZ				IAmb	IAmb	22 25 38.0	
	comp=Z,16nm,0.6s						
KMBL	Kambalda	55.51	245	P	P	22 25 49.5	-0.1
	baz=56,SNR=7.3						
SOEI	Soe	56.98	271	P	P	22 25 59.1	-0.9
PSA00	Pilbara Seismi	58.43	256	P	P	22 26 09.3	-0.2
PSA00				IAmb	IAmb	22 26 10.8	
	comp=Z,38nm,0.8s						
MEEK	Meekatharra	58.79	250	P	P	22 26 11.8	-0.1
	baz=59,SNR=20						
KLBR	Kellerberrin	59.02	244	P	P	22 26 13.9	+0.5
	baz=59,SNR=16						
VNDA	Vanda	59.13	185	P	P	22 26 14.1	+0.8
NWAO	Narrogin (SRO)	59.35	243	P	P	22 26 14.7	-0.9
NWAO	Narrogin (SRO)	59.35	243	P	P	22 26 15.1	-0.4
NWAO				IAmb	IAmb	22 26 18.0	
	comp=Z,11nm,0.8s						
BLDU	Ballidu	60.00	245	P	P	22 26 20.1	+0.2
	baz=60,SNR=7.3						
MUN	Mundaring	60.30	244	P	P	22 26 22.8	+1.0
	baz=60,SNR=6.4						
GIRL	Giralia	63.36	254	P	P	22 26 42.9	+1.1
TOLI2	Tolitoli	63.86	281	P	P	22 26 44.2	-0.8
CASY	Casey	65.25	205	P	P	22 26 53.6	+0.8
CASY				IAmb	IAmb	22 27 01.3	
	comp=Z,29nm,1.1s						
JAGI	Jajag, Banyuwa	66.90	269	P	P	22 27 03.6	-0.5
JAGI				IAmb	IAmb	22 27 04.2	
	comp=Z,22nm,0.6s						
MJAR	Matsushiro Arr	69.56	323	P	P	22 27 20.0	+0.3
	comp=Z,2.8nm,0.5s,baz=162,slow=5.9,SNR=8.5						
MAT	Matsushiro	69.56	323	P	P	22 27 19.8	+0.2
UGM	Wanagama	70.50	268	P	P	22 27 26.1	+0.4
QSPA	South Pole Qui	70.75	180	P	P	22 27 28.1	+1.8
QSPA				IAmb	IAmb	22 27 29.2	
	comp=Z,14nm,0.9s						
ADK	Adak	70.89	1	P	P	22 27 26.8	-0.2
ADK				IAmb	IAmb	22 27 38.5	
	comp=Z,25nm,0.9s						
ATKA	Atka Island	71.27	2	P	P	22 27 28.8	-0.4
CISI	Cisompet, Garu	73.16	268	P	P	22 27 40.7	-0.4
CISI				IAmb	IAmb	22 27 55.3	
	comp=Z,32nm,1.1s						
PEA0B	Petropavlovsk-	75.26	345	P	P	22 27 51.3	-0.6
PETK	Petropavlovsk-	75.26	345	P	P	22 27 52.3	+0.3
	comp=Z,8.1nm,0.9s,baz=113,slow=6.9,SNR=6.4						
PETK	Petropavlovsk-	75.26	345	P	P	22 27 52.2	+0.2
NJ2	Nanjing	79.52	309	eP	P	22 28 16.8	+1.4
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
NVAR	Mina Array Bea	79.82	43	P	P	22 28 19.1	+1.9
	comp=Z,1.2nm,0.6s,baz=220,slow=8.6,SNR=9.6						
NVAR	Mina Array Bea	79.82	43	P	P	22 28 17.1	-0.1
BELA	Belgrano 2	80.67	173	P	P	22 28 21.7	+1.0
PINE	Pine Mountain	81.34	38	P	P	22 28 24.8	-0.1
I07A	Izee	82.35	38	P	P	22 28 29.7	-0.2
U15A	North Rim	82.79	48	P	P	22 28 32.4	-0.1
SUA	Susitna One	83.30	13	P	P	22 28 34.4	+0.2
SUA				IAmb	IAmb	22 28 35.3	
	comp=Z,15nm,0.9s						
G08A	Pilot Rock	83.37	37	P	P	22 28 34.7	-0.2
F10A	Beach Ranch, E	84.76	37	P	P	22 28 41.9	+0.2
GSI	Gunungsitoli	85.67	273	P	P	22 28 46.2	-0.5
GSI				IAmb	IAmb	22 28 49.5	
	comp=Z,10nm,0.9s						
TXAR	Lajitas Array	85.99	57	P	P	22 28 50.6	+2.6
	comp=Z,1.3nm,0.8s,baz=243,slow=5.5,SNR=4.5						
MCMT	McKenzie Canyo	86.72	40	P	P	22 28 51.4	+0.1
CCB	Clear Creek Bu	86.75	12	P	P	22 28 50.3	-0.3
CCB				IAmb	IAmb	22 28 50.9	
	comp=Z,5.6nm,0.4s						
TCOL	CIGO, UAF Yank	86.94	12	P	P	22 28 51.6	+0.1
TCOL				IAmb	IAmb	22 28 52.5	
	comp=Z,6.9nm,0.7s						
COLA	College	86.94	12	P	P	22 28 51.7	+0.2
COLA				IAmb	IAmb	22 28 52.2	
	comp=Z,7.1nm,0.6s						
ILAR	Eielson Array	87.05	13	P	P	22 28 51.9	-0.2
	comp=Z,0.7nm,0.4s,baz=232,slow=5.1,SNR=32						
BW06	Boulder Array	87.75	43	P	P	22 28 56.2	0.0
BW06				IAmb	IAmb	22 28 58.5	
	comp=Z,6.3nm,0.7s						
PD31	Pinedale Array	87.75	43	P	P	22 28 56.1	0.0
PD31				IAmb	IAmb	22 28 58.5	
	comp=Z,5.8nm,0.7s						
PDAR	Pinedale Array	87.75	43	P	P	22 28 56.3	+0.1
COLD	Coldfoot	88.62	10	P	P	22 28 59.8	+0.5
HHC	Hu-ho-hao-te	88.89	314	eP	P	22 29 05.1	+3.8
HHC				pmax	pmax		
	comp=Z,3.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,260nm,7.6s						
SNAA	Sanae	89.18	178	P	P	22 29 03.0	+0.9
VNA3	Neumayer Olymp	89.29	176	P	P	22 29 03.6	+1.1
VNA2	Neumayer--Watz	89.74	177	P	P	22 29 05.8	+1.2
VNA1	Neumayer--Stat	89.96	176	P	P	22 29 06.9	+1.3
CMAR	Chiang Mai Arr	90.19	289	P	P	22 29 09.9	+2.2
	comp=Z,1.7nm,0.9s,baz=122,slow=3.2,SNR=13						
CMAR	Chiang Mai Arr	90.19	289	P	P	22 29 07.3	-0.4
LZH	Lanzhou	92.45	307	eP	P	22 29 20.3	+2.4
LZH				pP	sP	22 32 15.4	-11
LZH				sP	PP	22 33 13.8	+3.5
LZH				pmax	pmax		
	comp=Z,16nm,1.1s						
YKA	Yellowknife Ar	95.23	25	P	P	22 29 29.9	+0.3
	comp=Z,0.2nm,0.6s,baz=234,slow=4.0,SNR=4.2						
MKAR	Makanchi Array	110.75	314	PKiKP	PKiKP	22 34 35.5	+0.3
	comp=Z,0.2nm,0.5s,baz=130,slow=2.3,SNR=2.5						
KKAR	Karatay Array	118.89	309		PKiKP	22 34 51.5	+0.4
FINES	FINESS Array B	134.77	344	SKPbc	SKPab	22 37 58.9	-1.2
	comp=Z,2.3nm,0.8s,baz=119,slow=2.4,SNR=4.3						
MBAR	Mbarara	145.98	238	PKPdf	PKPdf	22 35 42.1	-0.3
BRTR	Keskin Array B	146.40	314	PKPbc	PKPbc	22 35 45.5	+0.8
	comp=Z,1.5nm,0.8s,baz=117,slow=0.6,SNR=5.9						
CLL	Collm	147.02	348	ePKPbc	PKiKP	22 35 47.0	-0.6
MEM	Membach	148.65	356	dPKPab	PKPab	22 35 56.3	+0.2
GERES	GERESS Array B	149.19	346	PKPbc	PKiKP	22 35 52.5	+0.2
	comp=Z,0.3nm,0.3s,baz=3.8,slow=1.5,SNR=2.0						
GERES	GERESS Array B	149.19	346		PKiKP	22 35 52.1	-0.2

SOME ***22*** *22:39:26.0, 47°.43N×81°.22E, h10^{km}*
NNC ***22*** *22:39:28.7±0.7, 47°.39N×81°.94E, h5^{km}±9^{km}, mb3.3, mpv2.7, Error ellipse: s-maj=5.8km s-min=3.7km az=163.0*
ISC 22 22:39:27.0±1.0**, 47°.29N**±0°.04×**81°.50E**±0°.03**, h13**^{km}**, n19, σ1**^{s}**85**/31**, 6C-4D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAKZ	**Makanchi**	**0.58**	**145**	⇓P	**Pn**	**22 39 40.4**	**-0.6**
	4.0nm,0.4s						
MAKZ				⇑S	**Sb**	**22 39 48.6**	**+1.4**
	6.4nm,0.3s						
MK31	**Makanchi Array**	**0.73**	**132**	⇑P	**Pg**	**22 39 41.9**	**+0.7**
	2.9nm,0.2s,baz=341,slow=17,SNR=1365						
MK31				⇑S	**Sg**	**22 39 50.9**	**0.0**
	4.6nm,0.2s,baz=339,slow=28,SNR=52						
ZSN	**Zaisan**	**2.30**	**85**	*e*P	**Pb**	**22 40 07.4**	**-0.9**
	3.9nm,0.3s						
ZSN				*e*S	**Sb**	**22 40 37.1**	**+0.5**
	39nm,0.4s						
TDK	**Taldyqorghan**	**3.14**	**224**	*e*P	**Pg**	**22 40 26.2**	**-0.9**
	3.0nm,0.1s						
TDK				*e*S	**Sg**	**22 41 09.7**	**+2.0**
	14nm,0.2s						
DJR	**Jarkent**	**3.19**	**203**	*e*P	**Pb**	**22 40 25.2**	**+1.7**
	0.6nm,0.3s						
DJR				*e*S	**Sg**	**22 41 08.4**	**-1.0**
	2.3nm,0.4s						
KURBB	**Kurchatov Arra**	**3.87**	**331**	⇓Pg	**Pg**	**22 40 40.7**	**-0.3**
	0.8nm,0.3s						
KURBB				⇑Lg	Lg	22 41 33.1	
	24nm,0.6s						
MNBS	**Baschi**	**3.87**	**215**	*e*P	**Pg**	**22 40 39.7**	**-1.5**
	0.5nm,0.1s						
MNBS				*e*S	**Sg**	**22 41 33.1**	**+1.8**
	7.0nm,0.3s						
KURK	**Kurchatov**	**3.92**	**332**	⇑Pg	**Pg**	**22 40 41.7**	**-0.4**
	1.6nm,0.7s						
KURK				⇑Lg	Lg	22 41 32.8	
	14nm,0.7s						
KTMS	**Ketmen**	**3.92**	**192**	*e*P	**Pg**	**22 40 41.3**	**-0.9**
	0.7nm,0.0s						
KTMS				*e*S	**Sg**	**22 41 35.4**	**+2.4**
	4.0nm,0.2s						
ARXS	**Arharly**	**4.01**	**221**	*e*P	**Pb**	**22 40 37.4**	**-0.1**
	1.9nm,0.2s						
ARXS				*e*S	**Sb**	**22 41 28.8**	**+3.0**
	2.3nm,0.2s						
PDGK	**Podgornoye**	**4.20**	**200**	⇓Pn	Pn	22 40 35.4	+4.5
	1.6nm,1.0s						
PDGK				⇓Lg	Lg	22 41 49.2	
	3.4nm,0.6s						
KPKS	**Kokpek**	**4.30**	**208**	*e*P	**Pg**	**22 40 47.3**	**-2.1**
	1.0nm,0.1s						
KPKS				*e*S	**Sg**	**22 41 46.0**	**+0.8**
	8.1nm,0.3s						
SHLS	**Shalkode**	**4.37**	**200**	*e*P	**Pb**	**22 40 45.8**	**+2.0**
	2.2nm,0.6s						
SHLS				*e*S	**Sg**	**22 41 43.6**	**-3.8**
	3.7nm,0.3s						
KURS	**Kuram**	**4.46**	**213**	*e*P	**Pg**	**22 40 49.2**	**-3.3**
	1.2nm,0.8s						
KURS				*e*S	**Sg**	**22 41 49.7**	**-0.6**
	3.0nm,0.2s						
UZB	**Uzynbulak**	**4.49**	**204**	*e*P	**Pg**	**22 40 50.8**	**-2.3**
	4.8nm,0.2s						
UZB				*e*S	**Sg**	**22 41 51.6**	**+0.3**
	4.1nm,0.3s						
SATY	**Saty**	**4.76**	**208**	*e*P	**Pg**	**22 40 55.7**	**-2.5**
	2.6nm,1.1s						
SATY				*e*S	**Sg**	**22 42 00.0**	**+0.2**
	9.1nm,0.3s						
KOTS	**Kotyrbulak**	**5.10**	**219**	*e*P	Pg	22 40 59.7	-4.9
	1.0nm,0.2s						
KOTS				*e*S	**Sg**	**22 42 07.6**	**-3.1**
	2.5nm,0.7s						
MDOK	**Medeo**	**5.18**	**219**	Pn	Pn	22 40 50.0	+5.6
	3.4nm,1.0s						
MDOK				Lg	Lg	22 42 23.3	
	3.4nm,0.7s						
TNSS	**Tian-Shan**	**5.33**	**219**	*e*P	**Pg**	**22 41 06.8**	**-2.3**
	0.9nm,0.3s						
TNSS				*e*S	**Sg**	**22 42 19.5**	**+1.5**
	1.5nm,0.3s						

NEIC ***22*** *22:39:35.2±0.9, 0°.05S±0°.09×123°.89E±0°.06, h110^{km}±8^{km}, mb4.2/16, Error ellipse: s-maj=13.0km s-min=8.2km az=160.0*
DJA ***22*** *22:39:37.7±0.4, 0°S±4°×12°4E±°, h90^{km}±9^{km}, M4.7/13, mb4.9/5, mB5.1/4, MLv4.7/13, Mw(mB)4.5/4, MwMwp5.1/1, Mwp5.3/1*
IDC ***22*** *22:39:38.6±0.8, 0°.03S×123°.93E, h135^{km}±8^{km}, mb3.8/10, mb1 4.0/13, mb1mx3.8/30, mbtmp4.3/13, MS2.9/2, Ms1 3.0/2, ms1mx2.6/31, Error ellipse: s-maj=19.9km s-min=10.2km az=70.0*
ISC 22 22:39:36.0±0.5**, 0°.13S**±0°.05×**123°.94E**±0°.05**, h110**^{km}**, n64, σ1**^{s}**84**/73**, mb4.2**/21**, 1D, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**0.70**	**3**	P	**Pn**	**22 39 55.3**	**+0.9**
KMSI				S	**Sn**	**22 40 09.6**	**+1.4**
LUWI	**Luwuk**	**1.48**	**232**	Pn	**Pn**	**22 40 01.8**	**-0.8**
LUWI				Sn	**Sn**	**22 40 21.8**	**-0.9**
LUWI	**Luwuk**	**1.48**	**232**	P	**Pn**	**22 40 02.0**	**-0.6**
MRSI	**Marisa**	**2.09**	**287**	P	**Pn**	**22 40 09.0**	**-1.2**
APSI	**Ampana**	**2.42**	**251**	P	**Pn**	**22 40 14.5**	**+0.1**
SANI	**Sanana**	**2.79**	**133**	P	**Pn**	**22 40 18.2**	**-1.1**
SANI				S	**Sn**	**22 40 49.6**	**-3.0**
TOLI2	**Tolitoli**	**3.40**	**291**	Pn	**Pn**	**22 40 25.6**	**-1.7**
TNTI	**Ternate**	**3.54**	**75**	Pn	**Pn**	**22 40 28.2**	**-1.0**
TNTI				Sn	**Sn**	**22 41 10.2**	**-0.1**
TNTI	**Ternate**	**3.54**	**75**	P	**Pn**	**22 40 30.1**	**+0.9**
NLAI	**Namlea**	**4.41**	**134**	P	**Pn**	**22 40 42.3**	**+1.4**
TTSI	**Tana Toraja**	**5.04**	**235**	P	**Pn**	**22 40 49.9**	**+0.6**
SPSI	**Sidrap Palu**	**5.65**	**228**	P	**Pn**	**22 40 59.2**	**+1.6**
	1.2nm4μm257nm,0.5s						
BNSI	**Bone**	**5.71**	**222**	P	**Pn**	**22 41 00.3**	**+1.8**
	0.4nm10μm1μm85nm,0.7s						
KAPI	**Kappang**	**6.41**	**221**	P	**Pn**	**22 41 09.9**	**+2.0**
	20nm,0.3s,baz=64,slow=2.4,SNR=48						
KAPI				S	**Sn**	**22 42 17.8**	**-1.9**
	5.8nm,0.3s,baz=28,slow=24,SNR=8.8						
KAPI				LR	LR	22 44 01.4	
	comp=Z,151nm,18.4s,baz=78,slow=41						
KAPI	**Kappang**	**6.41**	**221**	Pn	**Pn**	**22 41 07.1**	**-0.8**
DDMP	**Don Marcelino,**	**6.44**	**16**	*e*P	**Pn**	**22 41 11.0**	**+2.6**
SKMP	**Bagumbayan, Su**	**6.64**	**5**	*e*P	**Pn**	**22 41 11.5**	**+0.5**
KCP	**Kidapawan**	**7.19**	**9**	⇓*i*P	**Pn**	**22 41 22.8**	**+4.2**
SWI	**Sorong**	**7.35**	**96**	P	Pn	22 41 26.7	+6.0
SIJI	**Sorong**	**7.36**	**96**	P	**Pn**	**22 41 22.0**	**+1.1**
	14nm,0.3s,baz=224,slow=19,SNR=21						
PAGZ	**Pagadian**	**7.95**	**356**	*e*P	**Pn**	**22 41 32.1**	**+3.3**
BBKI	**Banjar Baru**	**9.68**	**250**	P	**Pn**	**22 41 55.0**	**+2.7**
FITZ	**Fitzroy Crossi**	**17.93**	**175**	P	**Pn**	**22 43 38.8**	**+0.4**
	0.3nm,0.3s,baz=11,slow=10,SNR=14						
FITZ	**Fitzroy Crossi**	**17.93**	**175**	P	**P**	**22 43 37.4**	**-0.1**
WB0	**Warramunga Arr**	**22.04**	**153**	P	**P**	**22 44 22.0**	**+0.2**
WB0				IAmb	IAmb	22 44 39.7	
	comp=Z,8.0nm,0.9s						
WRA	**Warramunga Arr**	**22.16**	**153**	P	**P**	**22 44 23.6**	**+0.4**
	comp=Z,4.6nm,0.4s,baz=336,slow=10,SNR=87						
WRA	**Warramunga Arr**	**22.16**	**153**	P	**P**	**22 44 22.9**	**-0.3**
WB2	**Warramunga Arr**	**22.17**	**153**	P	**P**	**22 44 23.6**	**+0.4**
WB2				IAmb	IAmb	22 44 27.0	
	comp=Z,9.0nm,0.8s						
WR0	**Warramunga Arr**	**22.27**	**153**	P	**P**	**22 44 24.9**	**+0.6**
WR0				IAmb	IAmb	22 44 28.0	
	comp=Z,9.0nm,1.1s						
AS31	**Alice Springs**	**25.31**	**158**	P	**P**	**22 44 53.2**	**+0.6**
ASAR	**Alice Springs**	**25.31**	**158**	P	**P**	**22 44 54.1**	**+1.5**
	comp=Z,1.4nm,0.4s,baz=342,slow=15,SNR=23						
ASAR				pP	**pwP**	**22 45 23.1**	**+6.9**
	comp=Z,5.3nm,0.9s,baz=350,slow=14,SNR=7.3						
ASAR				PcP	**PcP**	**22 48 23.8**	**+0.9**
	comp=Z,0.3nm,0.4s,baz=342,slow=2.0,SNR=5.4						
ASAR				pPcP		22 48 56.9	
	comp=Z,1.1nm,0.8s,baz=345,slow=1.8,SNR=5.5						
ASAR	**Alice Springs**	**25.31**	**158**	P	**P**	**22 44 53.1**	**+0.5**
CMAR	**Chiang Mai Arr**	**30.74**	**308**	P	**P**	**22 45 41.4**	**+0.4**
	comp=Z,0.8nm,0.4s,baz=141,slow=8.0,SNR=13						
CMAR				pP	**pP**	**22 46 10.2**	**+4.6**
	comp=Z,0.7nm,0.4s,baz=142,slow=9.1,SNR=2.0						
CMAR				LR	LR	22 58 55.2	
	comp=Z,16nm,18.4s,baz=160,slow=38						
CMAR	**Chiang Mai Arr**	**30.74**	**308**	P	**P**	**22 45 39.5**	**-1.5**
CHTO	**Chiang Mai**	**30.94**	**309**	P	**P**	**22 45 40.4**	**-2.3**
CHTO				IAmb	IAmb	22 45 45.5	
	comp=Z,4.2nm,1.0s						
STKA	**Stephens Creek**	**35.72**	**154**	P	**P**	**22 46 25.8**	**+1.7**
	comp=Z,4.1nm,0.4s,baz=330,slow=7.8,SNR=18						
STKA	**Stephens Creek**	**35.72**	**154**	P	**P**	**22 46 24.3**	**+0.2**
STKA				IAmb	IAmb	22 46 27.0	
	comp=Z,1.1nm,0.4s						
CD2	**Chengdu**	**36.34**	**330**	P	**P**	**22 46 29.4**	**-0.1**
CD2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MJAR	**Matsushiro Arr**	**38.82**	**18**	P	**P**	**22 46 49.5**	**-0.7**
	comp=Z,6.8nm,0.7s,baz=189,slow=9.2,SNR=14						
MAT	**Matsushiro**	**38.82**	**18**	P	**P**	**22 46 48.8**	**-1.5**
HHC	**Hu-ho-hao-te**	**42.31**	**346**	*e*P	**P**	**22 47 18.4**	**-0.7**
HHC				pmax	pmax		
	comp=Z,5.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,280nm,8.5s						
LSA	**Lhasa**	**43.09**	**316**	P	**P**	**22 47 24.4**	**-1.6**
USRK	**Ussuriysk Ar.**	**44.72**	**8**	P	**P**	**22 47 38.2**	**0.0**
	comp=Z,2.6nm,0.3s,baz=185,slow=5.9,SNR=34						
USRK	**Ussuriysk Ar.**	**44.72**	**8**	P	**P**	**22 47 37.3**	**-0.8**
GTA	**Gaotai**	**45.13**	**333**	*e*P	**P**	**22 47 42.3**	**+0.6**
GTA				pmax	pmax		
	comp=Z,3.0nm,1.4s						
SONM	**Songino Array**	**50.16**	**345**	P	**P**	**22 48 18.9**	**-1.5**
	comp=Z,1.3nm,0.7s,baz=162,slow=9.5,SNR=13						
SONM				pP	**pP**	**22 48 51.1**	**+4.4**
	comp=Z,0.5nm,0.6s,baz=157,slow=9.1,SNR=2.9						
SONM	**Songino Array**	**50.16**	**345**	P	**P**	**22 48 19.2**	**-1.2**
WMQ	**Urumqi**	**54.40**	**328**	*e*P	**P**	**22 48 52.3**	**+0.5**
SHLS	**Shalkode**	**58.63**	**323**	*e*P	**P**	**22 49 19.2**	**-2.7**
	baz=323						
SATY	**Saty**	**59.22**	**322**	*e*P	**P**	**22 49 24.8**	**-1.1**
	baz=322						
MK31	**Makanchi Array**	**59.22**	**328**	P	**P**	**22 49 24.3**	**-1.4**
MK31				IAmb	IAmb	22 49 26.3	
	comp=Z,1.6nm,0.7s						
MKAR	**Makanchi Array**	**59.22**	**328**	P	**P**	**22 49 24.3**	**-1.4**
	comp=Z,2.3nm,0.7s,baz=123,slow=8.4,SNR=32						
MKAR				PcP	**PcP**	**22 50 12.0**	**-1.0**
	comp=Z,1.8nm,0.8s,baz=139,slow=4.9,SNR=7.8						
KPKS	**Kokpek**	**59.28**	**323**	*e*P	**P**	**22 49 24.2**	**-2.1**
	baz=323						
PETK	**Petropavlovsk-**	**60.04**	**23**	P	**P**	**22 49 30.5**	**-0.7**
	comp=Z,3.6nm,0.8s,baz=162,slow=6.2,SNR=4.0						
TDK	**Taldyqorghan**	**60.31**	**324**	*e*P	**P**	**22 49 30.9**	**-2.4**
	baz=324						
KUU	**Kurty**	**60.93**	**322**	*e*P	**P**	**22 49 35.8**	**-1.6**
	comp=Z,2.6nm,0.8s,baz=322						
KBL	**Kabul**	**61.75**	**310**	P	**P**	**22 49 41.3**	**-2.1**
KBL				IAmb	IAmb	22 49 42.7	
	comp=Z,2.8nm,0.7s						
YAK	**Yakutsk**	**62.16**	**3**	P	**P**	**22 49 44.7**	**-0.5**
ZALV	**Zalesovo Beam**	**62.83**	**335**	P	**P**	**22 49 48.4**	**-1.5**
	comp=Z,0.5nm,0.4s,baz=132,slow=6.2,SNR=4.6						
MA2	**Magadan**	**63.12**	**15**	P	**P**	**22 49 51.1**	**-0.6**
KURK	**Kurchatov**	**63.56**	**330**	P	**P**	**22 49 53.5**	**-1.3**
KURK				IAmb	IAmb	22 49 55.4	
	comp=Z,6.7nm,0.8s						
IUG	**Iuzhnay**	**64.12**	**318**	*e*P	**P**	**22 49 57.3**	**-1.5**
	baz=318						
TORD	**Torodi Ar. Bea**	**121.35**	**285**	PKP	**PKPdf**	**22 58 17.1**	**-0.2**
	comp=Z,11nm,0.3s,baz=86,slow=1.7,SNR=5.3						
TORD	**Torodi Ar. Bea**	**121.35**	**285**		**PKPdf**	**22 58 15.9**	**-1.5**

IDC 22 22:56:35.8±3.0**, 14°.75S**×**174°.16W, h0**^{km}**, mb3.8**/6**, mb1 4.2**/6**, mb1mx3.9**/41**, mbtmp3.8**/6**, MS3.6**/1**, Ms1 3.6**/1**, ms1mx2.7**/31**, Error ellipse: s-maj=166.2km s-min=27.3km az=148.0, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**24.66**	**197**	LR	LR	23 09 55.2	
	comp=Z,122nm,18.2s,baz=31,slow=32						
WRA	**Warramunga Arr**	**49.28**	**256**	P	P	23 05 27.1	+0.3
	0.8nm,0.4s,baz=85,slow=6.5,SNR=1.2						
ASAR	**Alice Springs**	**49.62**	**251**	P	P	23 05 28.7	-0.7
	2.0nm,0.6s,baz=91,slow=8.3,SNR=4.3						
NVAR	**Mina Array Bea**	**74.34**	**42**	P	P	23 08 16.1	+0.4
	0.1nm,0.3s,baz=251,slow=4.5,SNR=3.6						
ILAR	**Eielson Array**	**81.95**	**11**	P	P	23 08 57.0	+0.1
	0.3nm,0.6s,baz=212,slow=4.9,SNR=2.0						
PDAR	**Pinedale Array**	**82.27**	**42**	P	P	23 08 60.0	+0.5
	0.4nm,0.8s,baz=210,slow=3.1,SNR=2.9						
YKA	**Yellowknife Ar**	**89.79**	**24**	P	P	23 09 34.1	-1.7
	0.4nm,1.0s,baz=231,slow=4.0,SNR=5.1						
BRTR	**Keskin Array B**	**145.19**	**321**	PKPbc	PKPbc	23 16 15.3	-0.2
	2.1nm,0.8s,baz=59,slow=2.7,SNR=8.9						
GERES	**GERESS Array B**	**145.39**	**351**	PKPbc	PKPbc	23 16 15.2	-0.5
	2.0nm,1.1s,baz=355,slow=4.3,SNR=4.8						

IDC ***22*** *22:57:51.0±2.4, 6°.89S×130°.86E, h72^{km}±29^{km}, mb3.3/1, mb1 4.2/7, mb1mx3.7/35, mbtmp4.3/7, MS3.0/1, Ms1 3.0/1, ms1mx2.2/20, Error ellipse: s-maj=33.4km s-min=21.2km az=76.0*
ISC 22 22:57:48.4±0.9**, 6°.99S**±0°.06×**130°.98E**±0°.10**, h47**^{km}**, n7, σ3**^{s}**45**/12**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**6.09**	**3**	P	**Pn**	**22 59 17.0**	**+1.1**
	26nm,0.3s,baz=123,slow=3.6,SNR=66						
SIJI				S	**Sn**	**23 00 19.6**	**-4.7**
	17nm,0.3s,baz=221,slow=23,SNR=21						
BATI	**Baumata**	**7.91**	**246**	P	**Pn**	**22 59 44.5**	**+3.5**
	9.4nm,0.3s,baz=97,slow=3.4,SNR=4.2						
BATI				S	**Sn**	**23 01 07.5**	**-1.8**
	14nm,0.3s,baz=47,slow=18,SNR=8.2						
FITZ	**Fitzroy Crossi**	**12.21**	**205**	P	**Pn**	**23 00 40.8**	**+1.0**
	4.2nm,0.3s,baz=35,slow=8.6,SNR=82						
FITZ				S	**Sn**	**23 02 49.6**	**-4.9**
	2.1nm,0.3s,baz=151,slow=10,SNR=3.8						
FITZ				LR	LR	23 07 01.5	
	comp=Z,61nm,19.3s,baz=351,slow=45						
WRA	**Warramunga Arr**	**13.28**	**166**	P	**Pn**	**23 00 56.5**	**+2.0**
	1.6nm,0.3s,baz=349,slow=13,SNR=56						
WRA				S	**Sn**	**23 03 16.5**	**-4.2**
	3.5nm,0.3s,baz=348,slow=20,SNR=14						
ASAR	**Alice Springs**	**16.82**	**171**	P	**P**	**23 01 44.1**	**+1.8**
	1.4nm,0.3s,baz=340,slow=9.1,SNR=44						
ASAR				S	**Sn**	**23 04 43.2**	**-3.6**
	0.9nm,0.3s,baz=336,slow=16,SNR=7.5						
CTA	**Charters Tower**	**19.72**	**133**	P	**Pn**	**23 02 17.9**	**+1.8**
	0.2nm,0.3s,baz=298,slow=9.4,SNR=3.6						
MKAR	**Makanchi Array**	**68.75**	**326**	P	**P**	**23 08 46.3**	**-1.2**
	0.3nm,0.5s,baz=122,slow=7.6,SNR=8.1						

IDC 22 23:00:56.8±2.0**, 9°.33S**×**75°.93W, h130**^{km}±22^{km}**, mb3.8**/1**, mb1 3.5**/5**, mb1mx3.3**/26**, mbtmp3.9**/5**, Error ellipse: s-maj=60.5km s-min=17.2km az=40.0, Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**3.27**	**312**	P	Pn	23 01 47.6	+0.2
	14nm,0.3s,baz=164,slow=5.4,SNR=137						
ATAH				S	Sn	23 02 26.9	+0.5
	8.1nm,0.3s,baz=317,slow=16,SNR=5.9						
LPAZ	**La Paz**	**10.28**	**133**	P	Pn	23 03 21.9	+0.3
	0.2nm,0.3s,baz=288,slow=7.1,SNR=4.9						
SIV	**San Ignacio**	**15.93**	**116**	P	Pn	23 04 32.7	-1.2
	0.3nm,0.3s,baz=295,slow=12,SNR=7.8						
PTGA	**Pitinga**	**18.04**	**63**	P	P	23 04 58.6	+0.5
	0.6nm,0.3s,baz=286,slow=20,SNR=2.2						
ULM	**Lac du Bonnet**	**61.83**	**346**	P	P	23 11 01.6	-0.3
	1.5nm,0.6s,baz=170,slow=6.8,SNR=4.2						
MKAR	**Makanchi Array**	**138.31**	**23**	PKP	PKPdf	23 20 07.4	+0.5
	0.4nm,0.8s,baz=350,slow=3.5,SNR=4.2						
WRA	**Warramunga Arr**	**138.35**	**226**	PKP	PKPdf	23 20 07.8	0.0
	0.5nm,0.8s,baz=121,slow=2.0,SNR=2.5						

NNC ***22*** *23:08:31.0±13.0, 36°.98N×70°.04E, h0^{km}, mb4.2, mpv3.9, Error ellipse: s-maj=105.6km s-min=93.2km az=168.0*
ISC 22 23:08:32.8±4.8**, 36°.6N**±0°.3×**70°.5E**±0°.2**, h35**^{km}**, n11, σ0**^{s}**85**/14**, 4C-1D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	**Almayashu**	**6.03**	**24**	P	**Pn**	**23 10 00.4**	**+0.6**
	SNR=48						
UCH	**Uchtor**	**6.40**	**28**	P	**Pn**	**23 10 05.1**	**+0.2**
	SNR=20						
KK31	**Karatay Array**	**6.45**	**0**	⇓P	**Pn**	**23 10 06.2**	**+0.9**
	2.0nm,0.2s,baz=188,slow=11,SNR=62						
KK31				S	**Sn**	**23 11 16.2**	**-1.4**
	1.2nm,0.3s,baz=192,slow=24,SNR=9.6						
EKS2	**Erkin-Say**	**6.53**	**22**	P	**Pn**	**23 10 06.9**	**+0.5**
	SNR=9.4						
AAK	**Ala-Archa**	**6.75**	**26**	P	**Pn**	**23 10 09.6**	**+0.2**
	SNR=9.1						
AAK	**Ala-Archa**	**6.75**	**26**	⇑P	**Pn**	**23 10 08.4**	**-1.1**
	1.7nm,0.3s						
AAK				⇑S	**Sn**	**23 11 25.5**	**+0.4**
	6.4nm,0.8s						
KBK	**Karagaybulak**	**6.93**	**29**	P	**Pn**	**23 10 12.2**	**+0.2**
	SNR=7.3						
CHMS	**Chumysh**	**7.16**	**26**	P	**Pn**	**23 10 14.1**	**-0.8**
	SNR=8.4						
USP	**Ospenovka**	**7.31**	**24**	P	**Pn**	**23 10 16.1**	**-0.9**
	SNR=7.4						
TKM2	**Tokmak 2**	**7.41**	**31**	P	**Pn**	**23 10 18.2**	**-0.4**
	SNR=5.4						
TKM2	**Tokmak 2**	**7.41**	**31**	⇑P	**Pn**	**23 10 17.9**	**-0.7**
	7.9nm,0.5s						
TKM2				⇑S	**Sn**	**23 11 42.6**	**+1.1**
	2.2nm,0.9s						

NEIC ***22*** *23:09:26.2±1.2, 36°.91N±0°.08×135°.4E±0°.1, h364^{km}±9^{km}, mb4.0/19, Error ellipse: s-maj=13.3km s-min=10.8km az=135.0*
NIED ***22*** *23:09:26.2, 36°.96N×135°.31E, h362^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-3.19; $M_{\theta\theta}$8.43; $M_{\phi\phi}$-5.24; $M_{r\theta}$-1.58; $M_{\theta\phi}$1.86; $M_{\phi r}$-5.39; Fault plane solution: $M_0$9.45000×10^{14} NP1:ϕ_s44.00000°, δ73.00000°, λ-141.00000°. NP2:ϕ_s300.00000°, δ53.00000°, λ-22.00000°.*
JMA ***22*** *23:09:26.2±0.2, 36°.96N×135°.31E, h362^{km}±2^{km}, M3.6*
IDC ***22*** *23:09:26.3±1.1, 36°.92N×135°.39E, h368^{km}±13^{km}, mb3.2/7, mb1 3.4/11, mb1mx3.1/36, mbtmp4.0/11, Error ellipse: s-maj=26.1km s-min=13.0km az=64.0*
ISC 22 23:09:26.1±0.5**, 36°.91N**±0°.07×**135°.34E**±0°.07**, h362**^{km}**, n65, σ0**^{s}**81**/67**, mb3.8**/19**, Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKG	**Kaga**	**1.02**	**128**	P	**Pn**	**23 10 13.7**	**+0.5**
JWT	**Wachi**	**1.62**	**178**	P	**Pn**	**23 10 16.8**	**+0.5**
JWT				S	**S**	**23 10 56.1**	**-0.4**
JWT	**Wachi**	**1.62**	**178**	Pn	**Pn**	**23 10 16.8**	**+0.5**
JYTA	**Yamagatataniai**	**1.73**	**139**	P	**Pn**	**23 10 17.3**	**+0.5**
JYTA				S	**S**	**23 10 57.2**	**-0.4**
INU	**Inuyama**	**2.07**	**138**		**Pn**	**23 10 19.2**	**+0.2**
JGF	**Kuroka**	**2.09**	**128**		**Pn**	**23 10 19.5**	**+0.3**
MAJO	**Matsushiro**	**2.33**	**98**		**Pn**	**23 10 21.5**	**+0.6**
MAT	**Matsushiro**	**2.33**	**98**	P	**Pn**	**23 10 21.2**	**+0.3**
MAT	**Matsushiro**	**2.33**	**98**	P	**Pn**	**23 10 21.2**	**+0.3**
MJAR	**Matsushiro Arr**	**2.34**	**98**	P	**Pn**	**23 10 21.7**	**+0.8**
	1.1nm,0.3s,baz=279,slow=9.6,SNR=131						
MJAR	**Matsushiro Arr**	**2.34**	**98**	Pn	**Pn**	**23 10 21.4**	**+0.4**
JSD	**Sado**	**2.58**	**63**	P	**Pn**	**23 10 23.2**	**+0.4**
JSD	**Sado**	**2.58**	**63**	Pn	**Pn**	**23 10 23.2**	**+0.4**
JHS	**Saijyo**	**2.62**	**224**		**Pn**	**23 10 24.6**	**+1.3**
JRY	**Ryogami san**	**3.01**	**106**	P	**Pn**	**23 10 27.1**	**+0.6**
JMN	**Monobe**	**3.39**	**201**	Pn	**Pn**	**23 10 32.2**	**+2.1**
JOD2	**Odawara 2**	**3.45**	**117**	S	**S**	**23 11 22.8**	**+0.3**
JYT	**Yasato**	**3.97**	**98**		**Pn**	**23 10 35.6**	**+0.2**
JMM	**Marumori**	**4.45**	**76**		**Pn**	**23 10 40.4**	**+0.1**
JTU	**Tsushima**	**5.38**	**246**	Pn	**Pn**	**23 10 50.5**	**0.0**
JTM	**Tenmabayashi**	**5.92**	**47**	Pn	**Pn**	**23 10 55.9**	**-0.3**
KSRS	**Korea Array**	**5.95**	**277**	P	**Pn**	**23 10 58.0**	**+1.3**
	0.4nm,0.3s,baz=101,slow=12,SNR=8.8						
USA0B	**Ussuriysk Arra**	**7.71**	**342**	Pn	**P**	**23 11 18.5**	**+0.5**
USRK	**Ussuriysk Ar.**	**7.71**	**342**	P	**P**	**23 11 18.1**	**+0.1**
	baz=152,slow=11,SNR=72						
USRK	**Ussuriysk Ar.**	**7.71**	**342**	Pn	**P**	**23 11 17.9**	**-0.1**
ERM	**Erimo**	**7.91**	**47**	Pn	**Pn**	**23 11 19.1**	**-0.1**
MDJ	**Mudanjiang**	**8.85**	**332**		**Pn**	**23 11 31.2**	**+1.0**
ASAJ	**Asahikawa**	**9.07**	**35**	P	**Pn**	**23 11 32.1**	**-0.8**
	3.4nm,0.3s,baz=229,slow=8.4,SNR=16						
JKA	**Kamikawa-asahi**	**9.07**	**35**		**Pn**	**23 11 32.7**	**-0.2**
CN2	**Changchun**	**10.21**	**315**	*e*P	**P**	**23 11 47.0**	**-0.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
YSS	**Yuzh-Sakhalins**	**11.45**	**26**	P	**P**	**23 12 00.6**	**-0.3**
HHC	**Hu-ho-hao-te**	**18.91**	**289**	*e*P	**P**	**23 13 21.1**	**-0.9**
HHC				pmax	pmax		
	comp=Z,4.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,140nm,8.5s						
XAN	**Xi'an**	**21.68**	**270**	P	**P**	**23 13 47.3**	**-1.2**
XAN				pmax	pmax		
	comp=Z,6.0nm,0.4s						
XAN	**Xi'an**	**21.68**	**270**	P	**P**	**23 13 48.0**	**-0.5**
XAN				IAmb	IAmb	23 13 48.7	
	comp=Z,4.2nm,0.4s						
ENH	**Enshi**	**22.49**	**260**	P	**P**	**23 13 55.4**	**-0.6**
ENH				IAmb	IAmb	23 13 56.6	
	comp=Z,13nm,0.9s						
SONM	**Songino Array**	**23.87**	**306**	P	**P**	**23 14 07.7**	**-0.6**
	comp=Z,0.5nm,0.5s,baz=112,slow=9.4,SNR=7.4						
SONM	**Songino Array**	**23.87**	**306**	P	**P**	**23 14 08.2**	**-0.1**
GTA	**Gaotai**	**27.93**	**286**	*e*P	**P**	**23 14 44.6**	**0.0**
GTA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WMQ	**Urumqi**	**36.54**	**296**	*e*P	**P**	**23 15 59.6**	**+1.1**
TOLI2	**Tolitoli**	**38.08**	**204**	P	**P**	**23 16 12.0**	**+0.5**
TOLI2				IAmb	IAmb	23 17 16.5	
	comp=Z,10nm,0.9s						
SHL	**Shillong**	**38.54**	**266**	P	**P**	**23 16 14.7**	**-0.7**
SHL				IAmb	IAmb	23 16 15.4	
	comp=Z,3.5nm,0.8s						
FAKI	**Fak Fak**	**39.73**	**185**	P	**P**	**23 16 25.3**	**+0.3**
MK31	**Makanchi Array**	**40.05**	**301**	P	**P**	**23 16 27.4**	**+0.1**
MKAR	**Makanchi Array**	**40.05**	**301**	P	**P**	**23 16 27.1**	**-0.3**
	comp=Z,1.0nm,0.5s,baz=86,slow=10,SNR=24						
MKAR	**Makanchi Array**	**40.05**	**301**	P	**P**	**23 16 27.2**	**-0.1**
MAKZ	**Makanchi**	**40.26**	**301**	P	**P**	**23 16 28.8**	**-0.2**
KURK	**Kurchatov**	**42.17**	**308**	P	**P**	**23 16 44.1**	**-0.2**
SRIT	**Nakonsritamara**	**42.93**	**238**	P	**P**	**23 16 49.8**	**-1.1**
KSH	**Kashi**	**45.98**	**292**	P	**P**	**23 17 18.9**	**+4.3**
KSH				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KSH				pmax	pmax		
	comp=Z,200nm,7.2s						
AAK	**Ala-Archa**	**46.23**	**297**	P	**P**	**23 17 17.0**	**+0.4**
BRVK	**Borovoye**	**47.09**	**312**	P	**P**	**23 17 22.9**	**+0.2**
BRVK				IAmb	IAmb	23 17 23.6	
	comp=Z,2.8nm,0.6s						
KKAR	**Karatay Array**	**48.94**	**298**	P	**P**	**23 17 38.0**	**+1.1**
SII	**Sitkinak Islan**	**49.74**	**43**	P	**P**	**23 17 43.1**	**+0.4**
NIL	**Nilore**	**50.00**	**286**	P	**P**	**23 17 44.5**	**-0.5**
NIL				IAmb	IAmb	23 17 46.5	
	comp=Z,7.8nm,1.1s						
ARU	**Arti**	**53.20**	**318**	P	**P**	**23 18 08.0**	**0.0**
ARU				IAmb	IAmb	23 18 08.2	
	comp=Z,3.3nm,0.6s						
ABKAR	**Akbulak array**	**54.26**	**309**	P	**P**	**23 18 15.6**	**-0.1**
ABKAR				IAmb	IAmb	23 18 16.0	
	comp=Z,2.4nm,0.6s						
ABKAR	**Akbulak array**	**54.26**	**309**	P	**P**	**23 18 15.6**	**-0.1**
WB0	**Warramunga Arr**	**56.38**	**181**	P	**P**	**23 18 30.4**	**-0.5**
WB0				IAmb	IAmb	23 18 50.3	
	comp=Z,22nm,1.6s						
WB2	**Warramunga Arr**	**56.55**	**181**	P	**P**	**23 18 31.9**	**-0.3**
WB2				IAmb	IAmb	23 19 48.6	
	comp=Z,26nm,1.7s						
WRA	**Warramunga Arr**	**56.55**	**181**	P	**P**	**23 18 31.7**	**-0.4**
	comp=Z,1.5nm,0.5s,baz=357,slow=7.6,SNR=23						
WR0	**Warramunga Arr**	**56.57**	**181**	P	**P**	**23 18 31.7**	**-0.5**
ASAR	**Alice Springs**	**60.27**	**182**	P	**P**	**23 18 57.4**	**-0.2**
	comp=Z,0.4nm,0.5s,baz=14,slow=12,SNR=5.9						
FINES	**FINESS Array B**	**66.59**	**330**	P	**P**	**23 19 37.7**	**-0.3**
	comp=Z,3.0nm,0.9s,baz=58,slow=5.8,SNR=12						
AKASG	**Malin Array Be**	**71.33**	**320**	P	**P**	**23 20 07.4**	**+0.2**
	comp=Z,1.0nm,0.4s,baz=52,slow=6.2,SNR=2.4						
BRTR	**Keskin Array B**	**75.21**	**309**	P	**P**	**23 20 30.4**	**+0.4**
	comp=Z,1.5nm,1.0s,baz=104,slow=3.7,SNR=5.4						

IDC ***22*** *23:25:34.7±3.7, 2°.10S×79°.08W, h146^{km}±40^{km}, mb3.0/3,*

mb1 3.4/5, mb1mx3.2/28, mbtmp3.7/5, MS2.4/1, Ms1 2.4/1, ms1mx2.2/15, Error ellipse: s-maj=37.4km s-min=27.4km az=27.0

ISC 22 23:25:18.0±0.8**, 2°.54S**±0°.05×**79°.3W**±0°.1**, h14**^{km}**, n23,** σ**2ˢ.16**/25**, mb3.5**/4**, Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OTAV	Otavalo	2.89	18	*e*P	Pb	23 26 09.1	-0.6
OTAV				*e*S	Sn	23 26 37.4	-1.6
GCUF	Volcan Galeras	4.23	28	*e*P	Pn	23 26 26.1	+3.5
ATAH	Atahualpa	4.66	168	P	Pg	23 26 48.9	+1.4
	2.1nm,0.3s,baz=4.5,slow=5.3,SNR=14						
ATAH				S	Sg	23 27 47.7	-0.3
	2.4nm,0.3s,baz=166,slow=20,SNR=18						
ATAH				LR	LR	23 29 13.4	
	comp=Z,40nm,18.7s,baz=188,slow=43						
BBAC	Balboa, Cauca	4.98	25	*e*P	Pn	23 26 35.3	+2.6
PTLC	Puerto Leguiza	5.27	59	*e*P	Pn	23 26 37.0	+0.5
FLOC	Florencia	5.50	42	*e*P	Pn	23 26 40.5	+0.8
GR1C	Gorgona, Isla	5.62	12	*e*P	Pn	23 26 45.0	+3.7
PCON	Cinco Dias	5.65	31	*e*P	Pn	23 26 45.6	+3.4
POPC	Popayan, Colom	5.70	28	*e*P	Pn	23 26 47.0	+4.4
GARC	Garzon, Huila	6.06	39	*e*P	Pn	23 26 49.0	+1.5
MARP	Paez Belalcaza	6.32	32	*e*P	Pn	23 26 53.0	+1.9
YOTC	Yotoco, Valle	7.13	25	*e*P	Pn	23 27 01.8	-0.4
MACC	Macarena, Meta	7.19	50	*e*P	Pn	23 27 04.6	+1.7
ORTC	Ortega, Tolima	7.59	33	*e*P	Pn	23 27 10.7	+2.3
PRAC	Prado	7.63	36	*e*P	Pn	23 27 10.1	+1.1
PTGA	Pitinga	19.44	85	P	Pn	23 29 48.0	+2.4
	0.9nm,0.3s,baz=318,slow=22,SNR=8.0						
PDAR	Pinedale Array	52.70	332	P	P	23 34 33.3	+0.8
	0.4nm,0.7s,baz=124,slow=7.7,SNR=3.1						
YKA	Yellowknife Ar	70.14	343	P	P	23 36 28.1	-1.6
	0.1nm,0.4s,baz=135,slow=6.6,SNR=4.8						
TORD	Torodi Ar. Bea	81.85	76	P	P	23 37 35.5	-2.1
	1.9nm,0.4s,baz=281,slow=4.9,SNR=6.6						
ILAR	Eielson Array	82.89	336	P	P	23 37 41.0	-1.0
	0.4nm,0.8s,baz=126,slow=3.7,SNR=5.6						
ZALV	Zalesovo Beam	127.12	12	PKP	PKPdf	23 44 20.4	-1.5
	0.5nm,0.3s,baz=349,slow=1.1,SNR=3.6						
KURBB	Kurchatov Arra	128.56	18	PKP	PKPdf	23 44 24.3	-0.5
	0.6nm,0.6s,baz=336,slow=2.8,SNR=7.8						
MKAR	Makanchi Array	133.10	17	PKP	PKPdf	23 44 32.5	-1.0
	0.1nm,0.4s,baz=312,slow=2.2,SNR=5.2						

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*GCG **23** 00:00:43.9±0.3, 13°.78N×90°.81W, h82^{km}±24^{km}, MD3.3*
*SNET **23** 00:00:44.0±0.8, 13°.39N×90°.70W, h20^{km}±9^{km}, ML3.0*
ISC 23 00:00:43.4±3.0**, 13°.6N**±0°.1×**90°.8W**±0°.1**, h29**^{km}**, n8,** σ**0ˢ.26**/12**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCG	Pacaya	0.84	15	*e*P	Pb	00 01 00.1	+0.4
PCG				*e*S	Sb	00 01 10.7	0.0
FUG	Fuego 3	0.87	359	*e*P	Pb	00 01 00.0	-0.1
NBG	Las Nubes	1.11	25	*e*P	Pn	00 01 03.2	-0.1
NBG				*e*S	Sb	00 01 18.2	-0.2
CEVE	Cerro Verde	1.20	78	*e*P	Pn	00 01 04.4	-0.1
CEVE				*e*S	Sb	00 01 20.8	-0.1
JAYA	Jayaque - finc	1.34	87	*e*P	Pn	00 01 06.1	-0.3
JAYA				*e*S	Sn	00 01 23.1	-0.2
JAYA				IAML		00 01 25.4	
	comp=Z,650nm,0.2s						
TACO	Tacachico	1.48	75	*e*P	Pn	00 01 08.6	+0.3
UEES	Universidad Ev	1.55	85	*e*P	Pn	00 01 09.4	+0.2
COEG	Centro de Oper	1.89	88	*e*P	Pn	00 01 13.9	0.0

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*BJI **23** 00:09:34.1±0.0, 3°.50S×139°.37E, h98^{km}, mB5.3/35, mb4.8/55*
*IDC **23** 00:09:35.8±2.3, 3°.37S×138°.97E, h75^{km}±21^{km}, mb4.3/15, mb1 4.5/20, mb1mx4.4/28, mbtmp4.7/20, MS3.7/25, Ms1 3.8/25, ms1mx3.7/31, Error ellipse: s-maj=17.6km s-min=11.6km az=69.0*
*NEIC **23** 00:09:36.8±1.4, 3°.47S±0°.09×138°.89E±0°.09, h86^{km}±6^{km}, mb4.9/74, Error ellipse: s-maj=13.9km s-min=10.9km az=46.0*
*DJA **23** 00:09:36.2±0.2, 3°S±3°×13°9E±°, h80^{km}±3^{km}, M5.0/45, mb5.1/45, mB5.5/29, MLv5.6/8, Mw(mB)4.9/29, MwMwp5.1/1, Mwp5.3/1*
*GCMT **23** 00:09:37.8±0.2, 3°.44S±0°.01×138°.93E±0°.02, h90^{km}±2^{km}, MW5.1/83, Moment Tensor Solution. s52,c60; s83,c116; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.69±.13; M$_{\theta\theta}$-4.29±.14; M$_{\phi\phi}$4.98±.14; M$_{r\theta}$2.03±.09; M$_{\theta\phi}$-1.44±.14; M$_{\phi r}$-0.11±.11; Best double couple: M$_0$5.29500×10^{16} NP1:φ$_s$214.00000°, δ71.00000°, λ-14.00000°. NP2: φ$_s$309.00000°, δ77.00000°, λ-160.00000°. Principal axes: T 5.2300, Plg4.0000°, Azm80.0000°; N 0.1280, Plg66.0000°, Azm341.0000°; P -5.3600, Plg23.0000°, Azm172.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 23 00:09:37.9±0.3**, 3°.59S**±0°.04×**138°.83E**±0°.05**, h100**^{km}**, n249,** σ**1ˢ.67**/244**, mb4.8**/96**, 1C-1D, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WAMI	Wamena	0.32	202	P	Pn	00 09 52.7	+0.1
GENI	Genyem	1.66	54	P	Pn	00 09 59.7	-6.4
SRPI	Serui, Papua	3.10	303	P	Pn	00 10 22.6	-2.4
BAKI	Biak	3.62	311	P	Pn	00 10 28.5	-3.4
BAKI				S	Sn	00 11 11.5	-2.2
RKPI	Ransiki, Papua	5.09	294	P	Pn	00 10 51.6	-0.2
	2.3nm7µm236nm,0.6s						
RKPI				S	Sn	00 11 43.0	-6.3
	2.3nm7µm236nm,0.6s						
MMPI	Merauke	5.09	162	P	Pn	00 10 51.8	0.0
	21nm74µm4µm,0.5s						
KMPI	Kaimana, Papua	5.12	269	P	Pn	00 10 52.8	+0.6
	3.1nm9µm866nm,0.9s						
FAKI	Fak Fak	6.61	276	Pn	Pn	00 11 13.1	+0.7
FAKI	Fak Fak	6.61	276	P	Pn	00 11 13.1	+0.7
	0.8nm2µm186nm,0.7s						
SIJI	Sorong	8.03	289	P	Pn	00 11 30.5	-1.3
	8.7nm,0.3s,baz=137,slow=4.1,SNR=20						
SIJI				S	Sn	00 12 56.5	-4.5
	3.5nm,0.3s,baz=285,slow=20,SNR=0.9						
SIJI				LR	LR	00 15 44.2	
	comp=Z,794nm,20.8s,baz=120,slow=46						
SWI	Sorong	8.03	289	P	Pn	00 11 31.6	-0.3
	2µm144nm,0.6s						
SAUI	Saumlaki	8.67	239	Pn	Pn	00 11 41.7	+1.1
SAUI	Saumlaki	8.67	239	P	Pn	00 11 42.2	+1.6
	15µm1µm,1.0s						
PMG	Port Moresby	10.09	125	P	Pn	00 11 59.1	-0.7
	6.4nm,0.3s,baz=310,slow=10.0,SNR=22						
PMG				S	Sn	00 13 45.0	-6.2
	2.7nm,0.3s,baz=310,slow=16,SNR=1.4						
PMG				LR	LR	00 17 12.3	
	comp=Z,610nm,20.3s,baz=296,slow=45						
PMG	Port Moresby	10.09	125	Pn	Pn	00 11 59.5	-0.3
KDU	Kakadu	11.02	214	P	Pn	00 12 11.1	-1.3
	baz=11,SNR=540						
KDU				S	Sn	00 14 09.4	-4.2
	baz=11						
COEN	Coen	11.16	158	Pn	Pn	00 12 13.1	-1.3
SANI	Sanana	12.92	276	P	Pn	00 12 40.4	+2.6
	53nm,0.8s						
KMSI	Cibinong	15.41	285	P	Pn	00 13 11.3	+1.4
	315nm,1.1s						
MTSU	Mount Surprise	15.43	160	P	Pn	00 13 09.6	-0.5
	baz=16,SNR=106						
MTSU				S	Sn	00 15 53.0	-7.7
	baz=16						
KNRA	Kununurra	15.57	219	P	Pn	00 13 12.1	+0.2
KNRA				IAmb	IAmb	00 13 18.1	
	comp=Z,74nm,0.6s						
SOEI	Soe	15.71	246	Pn	Pn	00 13 14.7	+1.0
SOEI	Soe	15.71	246	P	Pn	00 13 14.6	+0.9
	comp=Z,3µmcomp=Z,4µmcomp=Z,353nm,1.0s						
LUWI	Luwuk	16.24	279	Pn	Pn	00 13 20.0	-0.3
LUWI	Luwuk	16.24	279	P	Pn	00 13 20.3	0.0
	comp=Z,4µmcomp=Z,319nm,1.1s						
BATI	Baumata	16.43	246	P	P	00 13 24.8	+1.2
	comp=Z,19nm,0.3s,baz=135,slow=3.9,SNR=9.8						
BATI				S	Sn	00 16 20.6	-4.2
	comp=Z,3.9nm,0.3s,baz=338,slow=19,SNR=2.0						
BATI	Baumata	16.43	246	P	P	00 13 25.6	+2.0
	comp=Z,2µmcomp=Z,143nm,1.1s						
WB0	Warramunga Arr	16.66	195	Pn	Pn	00 13 23.6	-1.7
WB0				IAmb	IAmb	00 13 34.6	
	comp=Z,126nm,1.1s						
WR0	Warramunga Arr	16.80	194	Pn	Pn	00 13 25.7	-1.5
WRAB	Tennant Creek	16.83	195	Pn	Pn	00 13 26.2	-1.2
WB2	Warramunga Arr	16.84	195	Pn	Pn	00 13 26.7	-0.8
WB2				IAmb	IAmb	00 13 36.4	
	comp=Z,87nm,0.7s						
WRA	Warramunga Arr	16.84	195	P	Pn	00 13 26.3	-1.3
	comp=Z,9.2nm,0.3s,baz=20,slow=12,SNR=92						
WRA				S	Sn	00 16 24.6	-10
	comp=Z,6.7nm,0.3s,baz=9.8,slow=22,SNR=8.3						
WRA				LR	LR	00 20 56.6	
	comp=Z,620nm,18.3s,baz=15,slow=40						
QIS	Mount Isa	16.89	178	P	Pn	00 13 26.8	-1.3
	baz=17,SNR=88						
DAV	Davao City (W)	16.94	309	LR	LR	00 21 01.4	
	comp=Z,168nm,19.1s,baz=114,slow=40						
MRSI	Marisa	17.36	283	P	Pn	00 13 35.2	+1.2
	comp=Z,930nmcomp=Z,117nm,0.8s						
APSI	Ampana	17.37	278	P	Pn	00 13 36.7	+2.6
	comp=Z,1µmcomp=Z,144nm,1.0s						
CTA	Charters Tower	17.93	157	P	Pn	00 13 41.9	+1.0
	comp=Z,1.7nm,0.3s,baz=332,slow=13,SNR=29						
CTAO	Charters Tower	17.93	157		Pn	00 13 43.0	+2.1
GUMO	Guam	18.09	19	LR	LR	00 19 33.6	
	comp=Z,245nm,19.3s,baz=198,slow=34						
BSSI	Bau Bau, Buton	18.45	261	P	Pn	00 13 48.8	+1.7
	comp=Z,839nmcomp=Z,52nm,0.8s						
TOLI2	Tolitoli	18.63	284	P	P	00 13 49.1	+1.3
TOLI2				IAmb	IAmb	00 13 55.2	
	comp=Z,49nm,0.7s						
BNSI	Bone	18.70	267	P	Pn	00 13 52.4	+2.3
	comp=Z,1µmcomp=Z,87nm,1.3s						
TTSI	Tana Toraja	18.99	271	P	Pn	00 13 55.3	+1.8
	comp=Z,2µmcomp=Z,80nm,1.0s						
SPSI	Sidrap Palu	19.02	268	P	Pn	00 13 54.6	+0.7
	comp=Z,1µmcomp=Z,54nm,1.9s						
KAPI	Kappang	19.08	265	P	Pn	00 13 54.8	+0.3
	comp=Z,0.3nm,0.3s,baz=78,slow=19,SNR=2.4						
KAPI				LR	LR	00 23 11.8	
	comp=Z,93nm,20.1s,baz=96,slow=42						
KAPI	Kappang	19.08	265	P	P	00 13 53.8	+1.1
FITZ	Fitzroy Crossi	19.36	221	P	P	00 13 57.7	+2.0
	comp=Z,2.6nm,0.3s,baz=44,slow=9.2,SNR=63						
FITZ				S	S	00 17 22.9	-6.7
	comp=Z,11nm,0.3s,baz=120,slow=11,SNR=20						
FITZ				LR	LR	00 23 06.0	
	comp=Z,216nm,18.6s,baz=42,slow=41						
FITZ	Fitzroy Crossi	19.36	221	P	P	00 13 57.8	+2.0
	baz=20,SNR=63						
FITZ	Fitzroy Crossi	19.36	221	P	P	00 13 57.8	+2.0
FITZ				IAmb	IAmb	00 14 17.3	
	comp=Z,32nm,0.7s						
WSI	Waingapu	19.37	251	P	P	00 13 52.9	-3.0
AS31	Alice Springs	20.52	193	P	P	00 14 09.9	+1.6
AS31				IAmb	IAmb	00 14 17.4	
	comp=Z,33nm,0.6s						
ASAR	Alice Springs	20.52	193	P	P	00 14 09.6	+1.2
	comp=Z,38nm,0.5s,baz=24,slow=9.3,SNR=132						
ASAR				S	S	00 17 53.6	+1.1
	comp=Z,27nm,1.0s,baz=12,slow=30,SNR=5.4						
ASAR				LR	LR	00 23 03.3	
	comp=Z,688nm,20.0s,baz=10.0,slow=39						
ASAR	Alice Springs	20.52	193	P	P	00 14 10.0	+1.7
HNR	Honiara	21.76	107	P	P	00 14 21.3	-0.3
	comp=Z,58nm,0.3s,baz=240,slow=9.6,SNR=1.8						
HNR				LR	LR	00 22 53.0	
	comp=Z,132nm,20.0s,baz=290,slow=37						
HNR	Honiara	21.76	107	P	P	00 14 21.6	0.0
BKB	Balikpapan	22.04	275	P	P	00 14 25.6	+1.1
KBKI	Kotabaru	22.62	270	P	P	00 14 32.0	+1.3
	comp=Z,71nm,0.8s						
QLP	Quilpie	23.45	168	P	P	00 14 39.1	+0.7
	baz=24,SNR=7.2						
WRKA	Warakurna	23.62	204	P	P	00 14 39.8	-0.2
	baz=24,SNR=19						
BBKI	Banjar Baru	23.95	270	P	P	00 14 45.7	+2.6
	comp=Z,2µmcomp=Z,89nm,1.5s						
MTKI	Muara Teweh, K	24.06	276	P	P	00 14 46.5	+2.4
	comp=Z,8µmcomp=Z,33nm,0.5s						
EIDS	Eidsvold	24.66	153	P	P	00 14 49.9	+0.5
	baz=25,SNR=5.0						
EIDS	Eidsvold	24.66	153	P	P	00 14 49.3	-0.1
RMQ	Roma	24.68	158	P	P	00 14 50.1	+0.5
	baz=25,SNR=4.0						
TGY	Tagaytay City	24.98	315	LR	LR	00 25 50.8	
	comp=Z,204nm,19.5s,baz=97,slow=39						
KMMI	Kalianget	24.99	261	P	P	00 14 56.1	+3.5
	comp=Z,130nm,1.3s						
PSA00	Pilbara Seismi	25.69	224	P	P	00 15 00.5	+1.7
STKI	Sintang	27.58	277	P	P	00 15 20.7	+4.8
STKA	Stephens Creek	28.26	175	P	P	00 15 23.3	+1.6
	comp=Z,2.7nm,0.4s,baz=355,slow=9.0,SNR=8.4						
STKA				LR	LR	00 27 47.9	
	comp=Z,682nm,18.3s,baz=352,slow=38						
STKA	Stephens Creek	28.26	175	P	P	00 15 23.6	+1.8
	baz=28,SNR=4.5						
STKA	Stephens Creek	28.26	175	P	P	00 15 22.8	+1.1
FORT	Forrest	28.90	199	P	P	00 15 28.1	+0.8
FORT				IAmb	IAmb	00 15 46.7	
	comp=Z,34nm,0.8s						
BBOO	Buckleboo	29.19	185	P	P	00 15 31.3	+1.3
ARMA	Armidale	29.30	157	P	P	00 15 31.2	+0.1
HTT	Hallett	29.69	180	P	P	00 15 36.3	+1.8
	baz=30,SNR=4.8						
KOUNC	Koumac, New Ca	29.98	126	P	P	00 15 42.1	+5.0
	comp=Z,18nm,2.0s						
MEEK	Meekatharra	30.00	218	P	P	00 15 38.4	+1.2
	baz=30,SNR=5.7						
GIRL	Giralia	30.44	229	P	P	00 15 42.2	+1.0
KMBL	Kambalda	31.91	208	P	P	00 15 54.9	+0.9
	baz=32,SNR=4.6						
SSLB	Suanglung	32.30	328	P	P	00 15 57.4	-0.2
SSLB				IAmb	IAmb	00 16 03.3	
	comp=Z,16nm,1.0s						
DZM	Mont Dzumac	32.48	127	P	P	00 16 00.1	+0.9
DZM				IAmb	IAmb	00 16 07.2	
	comp=Z,16nm,1.1s						
YHNB	Yeheng	32.81	330	P	P	00 16 03.6	+1.6
YHNB				IAmb	IAmb	00 16 07.0	
	comp=Z,31nm,1.1s						
MORW	Morawa	33.33	218	P	P	00 16 07.6	+1.2
MORW				IAmb	IAmb	00 16 13.8	
	comp=Z,27nm,1.1s						
BLDU	Ballidu	34.05	215	P	P	00 16 13.6	+1.0
	baz=34,SNR=12						
KNMB	Chin-men Tao	34.24	326	P	P	00 16 13.3	-1.0
KNMB				IAmb	IAmb	00 16 32.8	
	comp=Z,30nm,1.1s						
MDSI	Maura Dua	34.58	267	P	P	00 16 18.6	+1.2
	comp=Z,28nm,1.2s						
QIZ	Qiongzhong	36.31	309	P	P	00 16 33.1	+0.9
QIZ				S	S	00 22 08.8	+2.8
QIZ				LR	LR		
	comp=Z,190nm,16.9s						
QIZ				LR	LR		
	comp=Z,170nm,13.5s						
QIZ				LR	LR		
	comp=Z,180nm,28.4s						
QIZ	Qiongzhong	36.31	309	P	P	00 16 32.0	-0.2
QIZ				IAmb	IAmb	00 16 49.9	
	comp=Z,11nm,1.0s						
NFK	Norfolk Island	37.48	136	P	P	00 16 40.0	-1.9
	baz=38,SNR=3.5						
PDSI	Padang	38.43	273	P	P	00 16 51.4	+1.2
	comp=Z,9.5nm,0.7s						
JHS	Saijyo	38.75	352	P	P	00 16 52.0	-0.6
JHS				IAmb	IAmb	00 17 11.1	
	comp=Z,16nm,1.1s						
JWT	Wachi	38.80	356	P	P	00 16 51.8	-1.1
MNSI	Mandailing Nat	39.47	276	P	P	00 17 01.5	+2.6
MJAR	Matsushiro Arr	39.92	359	P	P	00 16 59.6	-2.7
	comp=Z,2.5nm,0.7s,baz=182,slow=9.7,SNR=5.4						
MJAR				LR	LR	00 32 52.7	
	comp=Z,71nm,18.3s,baz=170,slow=35						
NJ2	Nanjing	40.21	333	*e*P	P	00 17 06.0	+1.4
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.7s						
SRAK	Srakaew	40.46	296	P	P	00 17 04.2	-2.8
	comp=Z,84nm,0.8s						
TRTT	Trang	40.66	286	P	P	00 17 09.8	+1.0
	comp=Z,30nm,1.4s						
NONG	Nongkai	41.23	303	P	P	00 17 14.0	+0.7
	comp=Z,14µmcomp=Z,26nm,0.9s						
CHAI	Chaiyaphum	41.27	299	P	P	00 17 15.0	+1.3
	comp=Z,21nm,0.6s						
JSD	Sado	41.41	359	P	P	00 17 12.4	-2.1
GSI	Gunungsitoli	41.52	276	P	P	00 17 16.4	+0.6
GSI	Gunungsitoli	41.52	276	P	P	00 17 16.3	+0.6
	comp=Z,35nm,1.1s						
KSRS	Korea Array	42.07	347	P	P	00 17 19.1	-0.7
	comp=Z,3.1nm,0.7s,baz=157,slow=8.7,SNR=9.5						
KSRS				PcP	PcP	00 19 14.3	+1.4
	comp=Z,3.6nm,0.9s,baz=169,slow=4.3,SNR=6.0						
KSRS				LR	LR	00 34 48.4	
	comp=Z,114nm,19.4s,baz=170,slow=36						
TPTI		42.18	279	P	P	00 17 21.0	-0.1
	comp=Z,13nm,1.3s						
SLVN	Son La	42.23	307	P	P	00 17 22.1	+0.6
PHET	Kaeng Krachan	42.24	294	P	P	00 17 23.7	+2.1
	comp=Z,30nm,0.8s						
GYA	Guiyang	43.13	316	⇓P	P	00 17 29.4	+0.7
GYA				pmax	pmax		
	comp=Z,5.0nm,1.4s						
GYA				pmax	pmax		
	comp=Z,100nm,4.5s						
UTTA	Uttaradit	43.29	301	P	P	00 17 31.2	+1.2
	comp=Z,15nm,0.8s						
UTHA	Uthaitani	43.37	297	P	P	00 17 32.0	+1.3
	comp=Z,16nm,0.8s						
LAMP	Lampang	44.42	301	P	P	00 17 41.2	+2.1
	comp=Z,291nmcomp=Z,13nm,0.6s						
CM36	Chiang Mai Arr	44.88	301	P	P	00 17 43.0	+0.3
CM35	Chiang Mai Arr	44.89	301	P	P	00 17 43.0	+0.2
CM04	Chiang Mai Arr	44.92	301	P	P	00 17 44.9	+1.8
	comp=Z,84nmcomp=Z,12nm,0.9s						
CM09	Chiang Mai Arr	44.93	301	P	P	00 17 45.4	+2.2
	comp=Z,13nm,0.9s						
CM01	Chiang Mai Arr	44.95	301	P	P	00 17 45.0	+1.7
	comp=Z,9.6nm,0.8s						
CM05	Chiang Mai Arr	44.95	300	P	P	00 17 44.0	+0.7
	comp=Z,7.1nm,0.9s						
CM02	Chiang Mai Arr	44.97	301	P	P	00 17 45.4	+1.9
	comp=Z,103nmcomp=Z,8.2nm,1.1s						
CM34	Chiang Mai Arr	44.97	301	P	P	00 17 44.0	+0.5
CMAR	Chiang Mai Arr	44.98	301	P	P	00 17 44.5	+1.0
	comp=Z,3.6nm,0.5s,baz=120,slow=6.1,SNR=17						
CMAR				LR	LR	00 36 46.5	
	comp=Z,27nm,20.3s,baz=174,slow=36						
CM13	Chiang Mai Arr	45.00	300	P	P	00 17 45.4	+1.7
	comp=Z,97nmcomp=Z,8.9nm,0.8s						
CMMT	Chiang Mai	45.13	301	P	P	00 17 44.5	-0.2
	comp=Z,286nmcomp=Z,4.9nm,1.3s						
CHTO	Chiang Mai	45.13	301	P	P	00 17 45.5	+0.8
CM33	Chiang Mai Arr	45.13	301	P	P	00 17 45.0	+0.3
CM32	Chiang Mai Arr	45.15	301	P	P	00 17 46.0	+1.2
KMI	Kunming	45.18	311	⇑P	P	00 17 47.4	+2.1
KMI				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ASAJ	Asahikawa	47.61	4	P	P	00 18 02.2	-1.5
	comp=Z,15nm,0.9s,baz=248,slow=30,SNR=3.6						
QRZ	Quartz Range	47.89	145	P	P	00 18 07.4	+1.4
QRZ				IAmb	IAmb	00 18 15.7	
	comp=Z,32nm,1.2s						
CD2	Chengdu	47.91	318	P	P	00 18 06.9	+0.6
CD2				pmax	pmax		
	comp=Z,20nm,0.8s						
USRK	Ussuriysk Ar.	47.97	353	P	P	00 18 05.1	-1.3
	comp=Z,4.5nm,0.8s,baz=184,slow=9.3,SNR=7.2						
USRK				LR	LR	00 36 13.0	
	comp=Z,78nm,19.3s,baz=161,slow=33						
BJT	Baijiatuau	48.12	337	P	P	00 18 06.7	-1.0
BJI	Beijing	48.14	337	P	P	00 18 06.6	-1.2
BJI				pmax	pmax		
	comp=Z,7.0nm,0.8s						
DCZ	Deep Cove	48.51	154	P	P	00 18 13.0	+2.4
DCZ				IAmb	IAmb	00 18 17.1	
	comp=Z,20nm,1.2s						
NNZ	Nelson	48.63	145	P	P	00 18 12.6	+1.0
CN2	Changchun	48.69	347	*e*P	P	00 18 10.5	-1.5
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
THZ	Tophouse	48.72	146	P	P	00 18 13.7	+1.3
MLZ	Mavora Lakes	48.87	153	P	P	00 18 14.8	+1.3
MLZ				IAmb	IAmb	00 18 19.4	
	comp=Z,14nm,1.1s						
WKZ	Wanaka	48.89	152	P	P	00 18 15.2	+1.6
WKZ				IAmb	IAmb	00 18 16.0	
	comp=Z,8.1nm,0.9s						
LTZ	Lake Taylor	49.06	148	P	P	00 18 15.9	+0.9
LTZ				IAmb	IAmb	00 18 17.8	
	comp=Z,15nm,0.9s						
URZ	Urewera	49.07	140	P	P	00 18 16.0	+1.0
URZ				IAmb	IAmb	00 18 19.6	
	comp=Z,15nm,1.2s						
RPZ	Rata Peaks	49.08	149	P	P	00 18 16.7	+1.6
TUWZ	Tuamarina	49.09	145	P	P	00 18 15.6	+0.4
LBZ	Lake Benmore	49.12	150	P	P	00 18 16.4	+1.0
LBZ				IAmb	IAmb	00 18 17.9	
	comp=Z,10.0nm,0.9s						
WHZ	Wether Hill Ro	49.20	153	P	P	00 18 16.1	+0.2
BKZ	Black Stump Fm	49.21	141	P	P	00 18 17.5	+1.4
BKZ				IAmb	IAmb	00 18 18.9	
	comp=Z,6.9nm,0.7s						
BSWZ	Blackbirch Sta	49.24	145	P	P	00 18 16.4	+0.1
OXZ	Oxford	49.32	148	P	P	00 18 18.0	+1.1
OXZ				IAmb	IAmb	00 18 20.2	
	comp=Z,9.5nm,0.9s						
SNZO	South Karori	49.45	144	P	P	00 18 17.4	-0.5
KHZ	Kahutara	49.51	146	P	P	00 18 18.6	+0.3
KHZ				IAmb	IAmb	00 18 18.9	
	comp=Z,8.1nm,0.5s						
MSWZ	Moikau Station	49.83	144	P	P	00 18 21.6	+0.8
MQZ	McQueen's Vall	49.90	148	P	P	00 18 21.4	+0.2
MQZ				IAmb	IAmb	00 18 29.0	
	comp=Z,15nm,1.1s						
PLWZ	Palliser	49.93	144	P	P	00 18 21.6	-0.1
BFZ	Birch Farm	49.97	143	P	P	00 18 21.3	-0.5
BFZ				IAmb	IAmb	00 18 32.0	
	comp=Z,15nm,1.0s						
YSS	Yuzh-Sakhalins	50.44	3	P	P	00 18 23.5	-1.7
HHC	Hu-ho-hao-te	50.76	333	*e*P	P	00 18 30.0	+2.1
HHC				pmax	pmax		
	comp=Z,4.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,290nm,5.5s						
LZH	Lanzhou	51.25	323	*e*P	P	00 18 35.8	+4.1
LZH				pP	pP	00 18 55.8	0.0
LZH				PP	PP	00 20 26.1	-3.6
LZH				pmax	pmax		
	comp=Z,15nm,1.1s						
LZH				pmax	pmax		
	comp=Z,95nm,5.4s						
GTA	Gaotai	55.84	324	*e*P	P	00 19 05.3	+0.1
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s						
TAPN	Taplejung	58.07	305	*e*P	P	00 19 21.7	+0.3
	comp=Z,18nm,1.2s						
ODAN	Odare	58.14	305	*e*P	P	00 19 22.3	+0.5
	comp=Z,9.2nm,0.7s						
ULN	Ulaanbaatar	58.31	335	P	P	00 19 22.6	+0.1
ULN				IAmb	IAmb	00 19 23.0	
	comp=Z,3.7nm,0.6s						
SONM	Songino Array	58.56	335	P	P	00 19 24.2	0.0
	comp=Z,1.9nm,0.6s,baz=154,slow=7.7,SNR=20						
SONM				LR	LR	00 44 52.6	
	comp=Z,78nm,20.5s,baz=166,slow=36						
SONM				PKP2bc		00 49 15.3	
	comp=Z,1.0nm,1.0s,baz=309,slow=0.9,SNR=3.9						
SONM	Songino Array	58.56	335	P	P	00 19 24.3	+0.2
PEA0B	Petropavlovsk-	58.68	13	P	P	00 19 24.3	-0.5
PETK	Petropavlovsk-	58.68	13	P	P	00 19 24.1	-0.7
	comp=Z,4.2nm,0.7s,baz=126,slow=3.7,SNR=8.3						
PETK	Petropavlovsk-	58.68	13	P	P	00 19 24.3	-0.4
RAMN	Ramite	58.83	304	*e*P	P	00 19 27.3	+0.7
	comp=Z,10nm,0.8s						
PALK	Pallekele	59.00	281	P	P	00 19 28.9	+1.1
PALK				IAmb	IAmb	00 19 30.5	
	comp=Z,13nm,1.0s						
GUN	Gumba	59.79	305	*e*P	P	00 19 33.9	+0.6
	comp=Z,15nm,0.8s						
PKI	Pulchoki	60.04	305	*e*P	P	00 19 36.5	+1.5
PKIN	Phulchoki	60.05	305	*e*P	P	00 19 36.1	+1.1
	comp=Z,5.0nm,0.6s						
KKN	Kakani	60.23	305	*e*P	P	00 19 37.5	+1.3
	comp=Z,11nm,0.6s						
DMN	Daman	60.30	305	*e*P	P	00 19 38.5	+1.8
	comp=Z,7.4nm,0.4s						
GKN	Gorkha	60.84	305	*e*P	P	00 19 40.9	+0.7
	comp=Z,20nm,0.7s						
TLY	Talaya	62.66	336	P	P	00 19 52.0	+0.1
WMQ	Urumqi	65.77	322	*e*P	P	00 20 14.6	+2.2
ZSN	Zaisan	69.34	324	*e*P	P	00 20 34.3	-0.4

	baz=324						
MK31	Makanchi Array	70.55	323	P	P	00 20 43.1	+0.9
MK31				IAmb	IAmb	00 20 43.9	
	comp=Z,12nm,0.9s						
MKAR	Makanchi Array	70.55	323	P	P	00 20 42.9	+0.7
	comp=Z,14nm,0.6s,baz=113,slow=8.0,SNR=211						
MKAR				LR	LR	00 53 01.9	
	comp=Z,26nm,21.5s,baz=198,slow=37						
SHLS	Shalkode	70.75	318	eP	P	00 20 41.5	-2.0
	comp=Z,12nm,0.8s,baz=318						
MAKZ	Makanchi	70.75	322	P	P	00 20 43.9	+0.6
UZB	Uzynbulak	71.03	318	eP	P	00 20 45.3	0.0
	comp=Z,13nm,0.7s,baz=318						
PPT	Papeete	71.38	107	LR	LR	00 48 34.0	
	comp=Z,61nm,19.9s,baz=158,slow=33						
KPKS	Kokpek	71.39	318	eP	P	00 20 46.9	-0.5
	comp=Z,13nm,1.2s,baz=318						
SATY	Saty	71.41	318	eP	P	00 20 47.1	-0.4
	comp=Z,18nm,1.1s,baz=318						
KSH	Kashi	71.77	314	P	P	00 20 51.9	+2.1
KSH				pP	pP	00 21 14.4	-0.9
KSH				S	S	00 29 59.0	-3.4
KSH				pmax	pmax		
	comp=Z,18nm,1.2s						
KSH				pmax	pmax		
	comp=Z,460nm,6.5s						
TDK	Taldyqorghan	72.20	320	eP	P	00 20 52.0	-0.1
	comp=Z,12nm,0.8s,baz=320						
MDOK	Medeo	72.37	317	eP	P	00 20 53.0	-0.3
	baz=317						
TNSS	Tian-Shan	72.39	317	eP	P	00 20 54.0	+0.2
	baz=317						
AAA	Alma-Ata	72.47	317	eP	P	00 20 54.0	+0.2
	comp=Z,13nm,0.6s,baz=317						
ULHL	Ulahol	72.57	316	P	P	00 20 55.7	+1.0
	SNR=10.0						
ZAA0	Zalesovo Array	72.75	330	P	P	00 20 54.8	-0.3
ZALV	Zalesovo Beam	72.75	330	P	P	00 20 54.4	-0.7
	comp=Z,4.8nm,0.6s,baz=111,slow=6.1,SNR=27						
ZALV				LR	LR	00 54 02.6	
	comp=Z,33nm,19.6s,baz=82,slow=37						
KUU	Kurty	73.12	318	eP	P	00 20 56.9	-0.7
	comp=Z,17nm,0.7s,baz=318						
TKM2	Tokmak 2	73.26	317	P	P	00 20 59.9	+1.2
	SNR=25						
SEM	Semipalatinsk	73.43	325	eP	P	00 20 58.1	-1.4
	baz=325						
KBK	Karagaybulak	73.61	316	P	P	00 21 02.0	+1.3
	SNR=14						
UCH	Uchtor	73.76	316	P	P	00 21 03.6	+1.7
	SNR=25						
CHMS	Chumysh	73.87	317	P	P	00 21 02.8	+0.7
	SNR=11						
AAK	Ala-Archa	73.92	316	LR	LR	00 54 54.4	
	comp=Z,50nm,21.3s,baz=108,slow=37						
AAK	Ala-Archa	73.92	316	P	P	00 21 03.7	+1.2
	SNR=7.6						
AAK	Ala-Archa	73.92	316	P	P	00 21 03.7	+1.2
SGDS	Sogindy	74.11	317	eP	P	00 21 03.5	0.0
	comp=Z,4.6nm,0.7s,baz=317						
USP	Ospenovka	74.14	317	P	P	00 21 04.6	+1.0
	SNR=57						
AML	Almayashu	74.30	315	P	P	00 21 06.6	+1.6
	SNR=33						
EKS2	Erkin-Say	74.42	316	P	P	00 21 06.8	+1.4
	SNR=23						
KURK	Kurchatov	74.50	325	P	P	00 21 05.8	+0.4
KURK				IAmb	IAmb	00 21 06.6	
	comp=Z,13nm,0.8s						
VNDA	Vanda	74.90	175	P	P	00 21 09.4	+2.1
	comp=Z,7.3nm,1.1s,baz=342,slow=6.4,SNR=2.4						
VNDA				LR	LR	00 53 47.8	
	comp=Z,175nm,18.2s,baz=334,slow=35						
BTLS	Baital	75.07	318	eP	P	00 21 08.3	-0.6
	comp=Z,6.3nm,0.7s,baz=318						
KBL	Kabul	75.55	307	P	P	00 21 12.4	+0.3
DZA	Taraz	76.20	316	eP	P	00 21 15.4	0.0
	baz=316						
KK31	Karatay Array	76.83	316	IAmb	IAmb	00 21 20.3	
	comp=Z,8.6nm,0.7s						
KKAR	Karatay Array	76.83	316	P	P	00 21 19.8	+0.8
KKAR	Karatay Array	76.83	316	IAmb	IAmb	00 21 20.3	
	comp=Z,8.6nm,0.7s						
IUG	Iuzhnay	76.89	315	eP	P	00 21 18.9	-0.6
	baz=315						
BRZS	Berezniki	77.70	323	eP	P	00 21 22.9	-0.7
	baz=323						
ANM	Nome	79.27	21	P	P	00 21 31.7	-0.2
BRVK	Borovoye	80.17	325	P	P	00 21 37.7	+0.7
MAW	Mawson	81.36	202	LR	LR	00 55 44.0	
	comp=Z,108nm,19.6s,baz=66,slow=34						
TTA	Tatalina	82.15	25	P	P	00 21 46.6	-0.8
GEYT	Alibeck	84.88	308	LR	LR	01 02 44.5	
	comp=Z,31nm,20.6s,baz=350,slow=38						
SML	Sawmill	85.11	27	P	P	00 22 02.1	-0.5
SML				IAmb	IAmb	00 22 11.7	
	comp=Z,15nm,1.1s						
ABKAR	Akbulak array	85.46	320	P	P	00 22 04.7	+0.2
ABKAR	Akbulak array	85.46	320	IAmb	IAmb	00 22 05.9	
	comp=Z,21nm,0.7s						
SCM	Sheep Creek Mo	85.58	27	P	P	00 22 05.1	+0.2
SCM				IAmb	IAmb	00 22 06.8	
	comp=Z,17nm,1.2s						
CCB	Clear Creek Bu	86.16	24	IAmb	IAmb	00 22 06.6	
	comp=Z,5.4nm,0.7s						
ILAR	Eielson Array	86.57	24	P	P	00 22 07.5	-2.2
	comp=Z,2.9nm,0.6s,baz=264,slow=4.4,SNR=52						
AKTO	Aktyubinsk	86.90	321	LR	LR	01 03 58.9	
	comp=Z,12nm,20.0s,baz=91,slow=38						
FYU	Fort Yukon	87.70	23	P	P	00 22 15.1	+0.1
FYU				IAmb	IAmb	00 22 15.7	
	comp=Z,18nm,1.2s						
HYT	Haines Junctio	90.01	29	P	P	00 22 26.1	-0.1
HYT				IAmb	IAmb	00 22 40.0	
	comp=Z,8.8nm,1.1s						
KIRV	Kirov	92.73	328	LR	LR	01 05 00.3	
	comp=Z,48nm,18.5s,baz=90,slow=36						
KBZ	Khabaz	96.75	313	P	P	00 22 57.5	+0.1
	comp=Z,1.1nm,0.8s,baz=98,slow=7.1,SNR=2.8						
YKA	Yellowknife Ar	100.78	27	PKiKP	PKiKP	00 27 40.7	+0.4
	comp=Z,0.4nm,0.8s,baz=295,slow=0.6,SNR=5.4						
ARCES	ARCESS Array B	101.37	341	P	Pdif	00 23 16.5	-1.0
	comp=Z,3.1nm,0.6s,baz=70,slow=6.5,SNR=16						
FINES	FINESS Array B	103.89	333	Pdiff	Pdif	00 23 28.2	-0.6
	comp=Z,2.7nm,0.9s,baz=52,slow=9.0,SNR=2.0						
BRTR	Keskin Array B	103.96	310	Pdiff	Pdif	00 23 28.6	-1.3
	comp=Z,0.1nm,0.3s,baz=119,slow=7.4,SNR=1.8						
AKASG	Malin Array Be	105.12	322	Pdiff	Pdif	00 23 33.6	-1.0
	comp=Z,0.4nm,0.5s,baz=80,slow=4.2,SNR=2.1						
GERES	GERESS Array B	115.22	323	PKP	PKPdf	00 28 08.2	+0.4
	comp=Z,0.5nm,0.5s,baz=51,slow=0.9,SNR=5.3						
PLCA	Paso Flores	128.35	152	PKP	PKiKP	00 28 35.7	+1.7
	comp=Z,2.4nm,0.8s,baz=165,slow=0.4,SNR=7.7						
ESDC	Sonseca Array	130.77	322	PKP	PKiKP	00 28 38.5	-0.3
	comp=Z,0.7nm,0.8s,baz=51,slow=1.4,SNR=3.1						
TORD	Torodi Ar. Bea	136.61	285	PKP	PKiKP	00 28 50.7	-0.5
	comp=Z,1.4nm,0.6s,baz=64,slow=3.4,SNR=1.3						
KIC	Kosan Boka	143.61	276	ePKP1	PKPdf	00 29 02.1	-0.1
	comp=Z,9.3nm,0.8s						
DBIC	Dimbokro	143.71	276	PKP	PKPbc	00 29 00.5	+0.4
	comp=Z,5.2nm,0.7s,baz=72,slow=2.1,SNR=8.1						
DBIC	Dimbokro	143.71	276		PKPdf	00 29 01.7	-0.6
TIC	Toumodi	143.88	276	ePKP1	PKPbc	00 29 01.3	+0.7
LIC	Lamto	143.90	276	ePKP1	PKPbc	00 29 01.2	+0.5
	comp=Z,34nm,1.5s						
CPUP	Villa Florida	146.40	153	PKPbc	PKPab	00 29 09.0	0.0
	comp=Z,3.9nm,0.7s,baz=222,slow=2.0,SNR=11						
CPUP	Villa Florida	146.40	153		PKPab	00 29 09.3	+0.4
LPAZ	La Paz	146.83	127	PKPbc	PKPbc	00 29 10.7	+0.4
	comp=Z,16nm,0.8s,baz=270,slow=1.2,SNR=45						
LPAZ	La Paz	146.83	127		PKPab	00 29 12.0	+0.3
ROSC	El Rosal	146.92	87	PKPbc	PKPbc	00 29 09.8	-0.6
	comp=Z,17nm,0.6s,baz=328,slow=21,SNR=8.9						

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*NEIC **23** 00:21:58.8±2.1, 56°77N±0°03×156°90W±0°07, h71^{km}±17^{km}, Error ellipse: s-maj=6.1km s-min=5.1km az=95.0*

*AEIC **23** 00:22:00±2.1, 56°76N±0°04×156°84W±0°07, h56^{km}±9^{km}, ML3.1, ML3.4/16(NEIC), Error ellipse: s-maj=5.8km s-min=5.1km az=141.0*

*IDC **23** 00:22:02.7±5.0, 56°97N×155°99W, h0^{km}, mb3.1/2, mb1 3.7/3, mb1mx3.3/29, mbtmp3.2/3, ML3.2/1, Error ellipse: s-maj=88.1km s-min=26.4km az=90.0*

ISC 23 00:21:59.7±1.1, **56°81N**±0°07×**156°88W**±0°06, **h79^{km}, n59, σ1^{s}26**/59, **Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLK3	Peulik 3	0.94	21		Pn	00 22 17.5	-0.5
PLK3					Sn	00 22 30.8	-0.8
CHGN	Chignik	0.99	240		Pn	00 22 17.1	-1.4
CHGN					Sn	00 22 30.4	-2.1
CHGN				IAML		00 22 33.1	
	comp=N,805nm,0.1s						
CHGN				IAML		00 22 33.6	
	comp=E,828nm,0.1s						
PLK2	Peulik 2	1.00	17		Pn	00 22 18.3	-0.4
PLK1	Peulik 1	1.00	8		Pn	00 22 17.8	-0.9
SII	Sitkinak Islan	1.51	98		Pn	00 22 24.2	-0.9
SII				IAML		00 22 56.2	
	comp=E,624nm,0.4s						
KCG	Knife Ck. Glac	1.78	32		Pn	00 22 27.8	-0.8
OHAK	Old Harbor	2.01	77		Pn	00 22 30.6	-0.9
OHAK					Sn	00 22 53.9	-2.0
SDPT	Sand Point	2.49	235		Pn	00 22 37.3	-0.7
SDPT					Sn	00 23 07.8	+0.3
SDPT	Sand Point	2.49	235	IAML		00 23 18.1	
	comp=E,144nm,0.7s						
SDPT				IAML		00 23 19.8	
	comp=N,138nm,0.6s						
KDAK	Kodiak Island	2.53	66		Pn	00 22 38.3	-0.3
PS4A	Pavlof South-4	3.15	244		Pn	00 22 46.7	-0.3
HAG	Hague Volcano	3.19	244		Pn	00 22 47.6	0.0
IVE	Iliamna Volcan	3.80	31		Pn	00 22 56.3	+0.4
CNPM	China Poot	4.04	45		Pn	00 22 59.4	+0.3
CNPM				IAML		00 23 39.8	
	comp=N,56nm,2.6s						
CNPM				IAML		00 23 57.1	
	comp=E,52nm,3.5s						
RSO	Redoubt South	4.25	29		Pn	00 23 02.8	+0.7
BRLK	Bradley Lake	4.33	44		Pn	00 23 02.5	-0.6
BRLK	Bradley Lake	4.33	44	IAML		00 24 01.8	
	comp=E,45nm,2.3s						
SVW2	Sparrevohn	4.35	8	Pn	Pn	00 23 01.9	-1.4
BRSE	Bradley Lake S	4.38	45		Pn	00 23 03.0	-0.6
SLKM	Skilak Lake	5.08	40		Pn	00 23 13.6	+0.3
SEW	Seward	5.11	47	Pn	Pn	00 23 12.5	-1.1
O22K	Cooper Landing	5.25	42	Pn	Pn	00 23 16.6	+1.1
SUA	Susitna One	5.63	32	Pn	Pn	00 23 21.4	+0.6
AKUT	Akutan	5.72	246	Pn	Pn	00 23 23.4	+1.5
SKT	Skwentna	5.86	26	Pn	Pn	00 23 24.9	+1.0
TTA	Tatalina	6.16	4	Pn	Pn	00 23 26.9	-1.0
PMR	Palmer	6.23	36	Pn	Pn	00 23 28.3	-0.6
UNV	Unalaska Valle	6.24	246	Pn	Pn	00 23 28.1	-1.0
GLI	Glacier Island	6.51	47	Pn	Pn	00 23 31.1	-1.6
PPLA	Purkeypile	6.54	19	Pn	Pn	00 23 34.2	+0.9
SML	Sawmill	6.65	38	Pn	Pn	00 23 35.1	+0.5
FID	Port Fidalgo	6.69	50	Pn	Pn	00 23 33.9	-1.3
EYAK	Cordova Ski Ar	6.91	53	Pn	Pn	00 23 36.5	-1.6
SCM	Sheep Creek Mo	7.01	40	Pn	Pn	00 23 39.2	-0.4
KLU	Klutina	7.33	46		Pn	00 23 43.5	-0.4
KTH	Kantishna Hill	7.38	21	Pn	Pn	00 23 44.5	-0.2
M24K	Tolsona, Glenn	7.61	41	Pn	Pn	00 23 47.8	+0.1
RND	Reindeer	7.73	28	Pn	Pn	00 23 48.7	-0.7
BPAW	Bear Paw Mtn.	7.87	19	Pn	Pn	00 23 52.0	+0.8
N25K	Chitina, Valde	7.92	48	Pn	Pn	00 23 52.0	0.0
GLB	Gilahina Butte	8.16	50	Pn	Pn	00 23 54.7	-0.6
VRDI	Verde Repeater	8.22	52	Pn	Pn	00 23 55.4	-0.7
PAX	Paxson	8.42	38	Pn	Pn	00 23 58.4	-0.4
MCARA	McCarthy VSAT	8.47	52	Pn	Pn	00 23 59.6	+0.2
BALM	Baldy	8.62	55		Pn	00 24 01.5	-0.1
WRH	Wood River Hil	8.81	26	Pn	Pn	00 24 01.4	-2.6
BARN	Barnard Glacie	8.94	55	Pn	Pn	00 24 05.2	-0.9
CCB	Clear Creek Bu	9.02	26	Pn	Pn	00 24 05.0	-1.9
CTGM	Chitina Glacie	9.05	56	Pn	Pn	00 24 07.1	-0.4
I23K	Minto, Yukon-K	9.12	20	Pn	Pn	00 24 06.7	-1.5
MDM	Murphy Dome	9.19	24	Pn	Pn	00 24 07.0	-2.2
IMAR	Indian Mountai	9.33	8	Pn	Pn	00 24 10.3	-0.7
IL31		9.35	27	Pn	Pn	00 24 08.9	-2.4
ILAR	Eielson Array	9.35	27	Pn	Pn	00 24 08.4	-2.9
	comp=E,0.3nm,0.3s,baz=216,slow=13,SNR=12						
ILAR				Sn	Sn	00 25 45.2	-9.5
	comp=E,0.1nm,0.3s,baz=213,slow=23,SNR=1.9						
ILAR	Eielson Array	9.35	27		Pn	00 24 10.2	-1.2
BCAR	Beaver Creek A	9.81	44	Pn	Pn	00 24 16.7	-1.1
ATKA	Atka Island	11.06	253	Pn	Pn	00 24 30.0	-4.7
YKA	Yellowknife Ar	21.78	57	P	P	00 26 48.6	+4.0
	comp=E,0.1nm,0.6s,baz=278,slow=9.0,SNR=1.7						
TXAR	Lajitas Array	46.00	104	P	P	00 30 24.4	+9.3
	comp=E,0.9nm,0.6s,baz=322,slow=7.9,SNR=3.6						

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*IDC **23** 00:47:21.4±0.9, 44°15N×85°60E, h0^{km}, mb3.9/11, mb1 3.9/18, mb1mx3.7/64, mbtmp3.8/18, ML3.3/7, MS2.4/1, Ms1 2.4/1, ms1mx2.2/44, Error ellipse: s-maj=17.8km s-min=12.2km az=31.0*

*SOME **23** 00:47:23.1, 44°28N×85°48E, h10^{km}*

*NNC **23** 00:47:24.9±1.0, 44°23N×85°47E, h4^{km}±5^{km}, mb4.6, mpv4.3, Error ellipse: s-maj=7.6km s-min=3.5km az=120.0*

*BJI **23** 00:47:24.9±0.0, 44°12N×85°60E, h12^{km}, mb4.0/4, ML3.9/10*

ISC 23 00:47:22.6±0.6, **44°27N**±0°04×**85°91E**±0°05, **h10^{km}, n71, σ2^{s}21**/77, **mb3.9**/12, **15C-2D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMQ	Urumqi	1.36	108	Pg	Pg	00 47 52.1	+3.3
WMQ				Sg	Sg	00 48 13.8	+7.3
WMQ				smax	smax		
	comp=N,2μm,0.5s						
WMQ				smax	smax		
	comp=E,950nm,0.5s						
ZSN	Zaisan	3.27	348	eP	Pg	00 48 23.7	-1.4
	31nm,0.4s						
ZSN				eS	Sg	00 49 07.3	-0.2
	241nm,0.7s						
ZSN	Zaisan	3.27	348	Pg	Pg	00 48 23.7	-1.4
	31nm,0.4s						
ZSN				Lg	Lg	00 49 07.3	
	241nm,0.7s						
MK31	Makanchi Array	3.58	316	⇑Pn	Pn	00 48 19.4	+1.1
	5.1nm,0.5s,baz=138,slow=13,SNR=707						
MK31				⇓Pg	Pb	00 48 28.2	+2.2
	31nm,0.5s,baz=138,slow=17,SNR=48						
MK31				⇑Lg	Lg	00 49 12.9	
	256nm,0.6s,baz=133,slow=26,SNR=13						
MKAR	Makanchi Array	3.58	316	Pn	Pn	00 48 19.8	+1.6
	2.3nm,0.3s,baz=134,slow=14,SNR=136						
MKAR				Pg	Pg	00 48 29.7	-1.6
	18nm,0.3s,baz=129,slow=16,SNR=77						
MKAR				Lg	Lg	00 49 12.7	
	16nm,0.3s,baz=128,slow=13,SNR=4.3						
MAKZ	Makanchi	3.75	314	⇑Pn	Pn	00 48 21.5	+1.0
	27nm,0.6s						
MAKZ				⇑Lg	Lg	00 49 20.3	
	190nm,1.0s						
KTMS	Ketmen	4.10	260	eP	Pb	00 48 33.8	-1.1
	0.2nm,0.1s						
KTMS				eS	Sb	00 49 25.1	+0.5
	73nm,0.4s						
KTMS	Ketmen	4.10	260	Pg	Pb	00 48 33.8	-1.1
	0.2nm,0.1s						
KTMS				Lg	Lg	00 49 25.1	
	73nm,0.4s						
DJR	Jarkent	4.39	273	eP	Pb	00 48 39.4	-0.4
	56nm,0.3s						
DJR				eS	Sb	00 49 34.7	+1.8
	77nm,1.0s						
DJR	Jarkent	4.39	273	Pg	Pb	00 48 39.4	-0.4
	56nm,0.3s						
DJR				Lg	Lg	00 49 34.7	
	77nm,1.0s						
PDGK	Podgornoye	4.74	261	Pg	Pb	00 48 44.1	-1.7
	20nm,0.3s						
PDGK				Lg	Lg	00 49 42.3	
	60nm,0.6s						
PDGK	Podgornoye	4.74	261	⇑Pn	Pn	00 48 32.1	-2.2
	15nm,0.8s						
PDGK				⇑Pg	Pb	00 48 46.0	+0.1
	30nm,0.6s						
PDGK				⇑Lg	Lg	00 49 46.2	
	126nm,0.7s						
SHLS	Shalkode	4.80	259	eP	Pb	00 48 42.7	-4.2
	104nm,0.4s						
SHLS				eS	Sb	00 49 40.2	-4.5
	221nm,0.8s						
SHLS	Shalkode	4.80	259	Pg	Pb	00 48 42.7	-4.2
	104nm,0.4s						
SHLS				Lg	Lg	00 49 40.6	
UZB	Uzynbulak	5.12	260	eP	Pb	00 48 52.7	+0.4
	31nm,0.4s						
UZB				eS	Sb	00 49 57.3	+3.5
	78nm,0.9s						
UZB	Uzynbulak	5.12	260	Pg	Pb	00 48 52.7	+0.4
	31nm,0.4s						
UZB				Lg	Lg	00 49 56.8	
	78nm,0.9s						
KPKS	Kokpek	5.28	264	eP	Pb	00 48 55.8	+0.7
	38nm,0.3s						
KPKS				eS	Sb	00 50 02.6	+4.0
	5μm,0.3s						
MNBS	Baschi	5.40	271	eP	Pb	00 48 57.4	+0.3
	23nm,0.3s						
MNBS				eS	Sb	00 50 05.3	+3.3
	69nm,0.4s						
MNBS	Baschi	5.40	271	Pg	Pb	00 48 57.4	+0.3
	23nm,0.3s						
MNBS				Lg	Lg	00 50 05.3	
	69nm,0.4s						
TDK	Taldyqorghan	5.40	280	eP	Pb	00 48 58.0	+0.9
	160nm,0.8s						
TDK				eS	Sb	00 50 06.6	+4.7
	108nm,0.8s						
TDK	Taldyqorghan	5.40	280	Pg	Pb	00 48 58.0	+0.9
	160nm,0.8s						
TDK				Lg	Lg	00 50 06.6	
	108nm,0.8s						
SATY	Saty	5.57	260	eP	Pb	00 49 00.8	+0.8
	32nm,0.5s						
SATY				eS	Sb	00 50 11.2	+4.3
	64nm,0.4s						
SATY	Saty	5.57	260	Pg	Pb	00 49 00.8	+0.8
	32nm,0.5s						
SATY				Lg	Lg	00 50 11.2	
	64nm,0.4s						
KURS	Kuram	5.65	265	eP	Pb	00 49 02.2	+0.9
	11nm,0.6s						
KURS				eS	Sb	00 50 14.1	+5.1
	51nm,0.4s						
KURS	Kuram	5.65	265	Pg	Pb	00 49 02.2	+0.9
	11nm,0.6s						
KURS				Lg	Lg	00 50 14.0	
	51nm,0.4s						
ARXS	Arharly	5.80	272	eP	Pb	00 49 05.4	+1.5
	35nm,0.4s						
ARXS				eS	Sb	00 50 19.5	+5.9
	71nm,0.6s						
ARXS	Arharly	5.80	272	Pg	Pb	00 49 05.4	+1.5
	35nm,0.4s						
ARXS				Lg	Lg	00 50 19.5	
	71nm,0.6s						
KOTS	Kotyrbulak	6.45	264	Pg	Pb	00 49 17.0	+1.9
	45nm,0.4s						
KOTS				Lg	Lg	00 50 39.1	
	143nm,0.4s						
MDOK	Medeo	6.51	263	⇑Pn	Pn	00 48 56.4	-2.3
	8.4nm,0.6s						
MDOK				⇓Lg	Lg	00 50 43.1	
	55nm,0.8s						
MDOK	Medeo	6.51	263	Pg	Pb	00 49 18.5	+2.4
	19nm,0.4s						
MDOK				Lg	Lg	00 50 41.4	
	32nm,0.3s						
TNSS	Tian-Shan	6.62	262	Pg	Pb	00 49 20.3	+2.4
	15nm,0.4s						
TNSS				Lg	Lg	00 50 44.3	
	24nm,0.6s						
KTBS	Karatobe	6.68	268	Pg	Pb	00 49 21.1	+2.3
	9.6nm,0.6s						
KTBS				Lg	Lg	00 50 45.8	
	52nm,0.5s						
IZV	Izvestkoviy	6.85	263	Pg	Pb	00 49 24.0	+2.1
	13nm,0.5s						
IZV				Lg	Lg	00 50 51.2	
	38nm,0.4s						
KUU	Kurty	6.90	270	Pg	Pb	00 49 25.1	+2.6
	6.4nm,0.7s						
KUU				Lg	Lg	00 50 53.6	
	44nm,0.5s						
MTBS	Maitube	6.96	264	Pg	Pb	00 49 26.6	+3.0
	11nm,0.5s						
MTBS				Lg	Lg	00 50 55.6	
	20nm,0.4s						
SEM	Semipalatinsk	7.25	330	Pg	Pb	00 49 34.0	+5.5
	7.2nm,0.3s						
SEM				Lg	Lg	00 51 08.4	
	41nm,0.4s						
DGS	Degeres	7.41	266	Pg	Pb	00 49 34.9	+3.6
	14nm,0.4s						
DGS				Lg	Lg	00 51 09.8	
	23nm,0.6s						
TKM2	Tokmak 2	7.61	263	⇑Pn	Pn	00 49 12.9	-0.7
	7.3nm,0.8s						
TKM2				⇑Pg	Pb	00 49 38.1	+3.4
	12nm,0.7s						
TKM2				⇑Lg	Lg	00 51 17.1	
	29nm,0.8s						
KURBB	Kurchatov Arra	8.09	324	Pn	Pn	00 49 20.2	+0.2
	0.6nm,0.3s,baz=134,slow=13,SNR=78						
KURBB				Lg	Lg	00 51 36.8	
	0.4nm,0.3s,baz=332,slow=30,SNR=5.1						
KURBB	Kurchatov Arra	8.09	324	⇑Pn	Pn	00 49 20.2	+0.2
	7.8nm,0.5s						
KURBB				⇑Lg	Lg	00 51 38.1	
	198nm,0.9s						
SGDS	Sogindy	8.19	268	Pg	Pb	00 49 49.4	+4.9
	4.1nm,0.5s						
SGDS				Lg	Lg	00 51 34.3	
	18nm,0.5s						
AAK	Ala-Archa	8.46	263	Pn	Pn	00 49 24.1	-1.3
	0.1nm,0.3s,baz=76,slow=8.3,SNR=3.5						
AAK				Lg	Lg	00 51 42.1	
	0.3nm,0.3s,baz=232,slow=19,SNR=2.1						
AAK	Ala-Archa	8.46	263	⇑Pg	Pg	00 49 54.3	-10
	5.9nm,0.7s						
AAK				⇑Lg	Lg	00 51 43.7	
	23nm,1.0s						
BTLS	Baital	8.49	279	Pg	Pg	00 49 54.8	-10
	5.1nm,0.6s						
BTLS				Lg	Lg	00 51 44.1	
	9.9nm,0.4s						
MRKS	Merke	9.34	265	Pg	Pn	00 50 10.6	+33
	5.5nm,0.4s						
MRKS				Lg	Lg	00 52 11.5	
	8.0nm,0.4s						
ZALV	Zalesovo Beam	9.72	356	Pn	Pn	00 49 44.0	+1.7
	2.6nm,0.3s,baz=178,slow=13,SNR=124						
ZALV				Sn	Sn	00 51 30.6	-0.9
	2.5nm,0.3s,baz=158,slow=27,SNR=11						
ZALV				Lg	Lg	00 52 34.8	
	0.4nm,0.3s,baz=167,slow=28,SNR=1.7						
BRZS	Berezniki	10.67	307	Pg	Pn	00 50 36.6	+41
	2.7nm,0.4s						
BRZS				Lg	Lg	00 52 56.2	
	11nm,0.6s						
GTA	Gaotai	11.45	110	eP	Pn	00 50 05.4	-0.8
GTA				pP		00 50 10.0	
GTA				sP		00 50 12.6	
GTA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
GTA				smax	smax		
	comp=N,23nm,1.0s						
GTA				smax	smax		
	comp=E,22nm,1.1s						
BVAR	Borovoye Array	13.47	316	Pn	Pn	00 50 31.8	-1.8
	comp=E,0.3nm,0.3s,baz=180,slow=16,SNR=8.1						
BVAR				Sn	Sn	00 52 55.8	-7.5
	comp=E,0.3nm,0.3s,baz=119,slow=23,SNR=3.0						
BVAR				Lg	Lg	00 54 28.8	
	baz=120,slow=32,SNR=2.9						
TLY	Talaya	13.98	52	Lg	Lg	00 54 49.3	
	comp=E,0.0nm,0.3s,baz=233,slow=20,SNR=1.3						
SONM	Songino Array	14.66	69	Pn	P	00 50 54.8	-1.6
	comp=E,0.1nm,0.3s,baz=268,slow=13,SNR=10						
SONM				Lg	Lg	00 55 13.1	
	comp=E,0.1nm,0.3s,baz=268,slow=28,SNR=5.1						
GUN	Gumba	16.32	180	eP	P	00 51 14.7	-0.5
	comp=E,80nm,1.0s						
KKN	Kakani	16.45	182	eP	P	00 51 17.9	+1.4
	comp=E,11nm,0.5s						
PKIN	Phulchoki	16.66	182	eP	P	00 51 19.5	+0.7
TAPN	Taplejung	16.94	174	eP	Pn	00 51 19.6	-0.4
	comp=E,22nm,0.8s						
RAMN	Ramite	17.29	178	eP	Pn	00 51 24.3	0.0
	comp=E,15nm,0.7s						
AKTO	Aktyubinsk	19.81	298	P	P	00 51 52.5	-0.6

	comp=E,0.3nm,0.3s,baz=104,slow=15,SNR=6.0						
ARU	Arti	21.11	315	P	P	00 52 06.9	-0.2
	comp=E,2.2nm,0.5s,baz=123,slow=7.2,SNR=14						
CMAR	Chiang Mai Arr	27.96	153	P	P	00 53 14.9	+1.6
	comp=E,1.1nm,0.4s,baz=230,slow=37,SNR=1.4						
KLR	Kul'dur	31.42	64	P	P	00 53 46.6	+2.9
	comp=E,1.4nm,0.6s,baz=269,slow=7.9,SNR=6.6						
KSRS	Korea Array	32.22	87	LR	LR	01 08 28.9	
	comp=E,6.6nm,18.9s,baz=155,slow=39						
AKASG	Malin Array Be	38.02	300	P	P	00 54 39.6	-1.0
	comp=E,0.3nm,0.3s,baz=63,slow=8.4,SNR=3.1						
FINES	FINESS Array B	38.42	318	P	P	00 54 43.8	-0.1
	comp=E,1.3nm,0.6s,baz=86,slow=7.8,SNR=5.2						
ARCES	ARCESS Array B	39.11	331	P	P	00 54 50.1	+0.4
	comp=E,4.0nm,1.0s,baz=78,slow=8.0,SNR=9.1						
HFS	Hagfors	44.60	317	P	P	00 55 34.4	-0.2
	comp=E,3.2nm,0.7s,baz=129,slow=14,SNR=5.0						
NB2	NORSAR Subarra	45.58	319	P	P	00 55 41.7	-0.7
	comp=Z,0.6nm,0.5s,baz=74,slow=7.9						
NOA	NORSAR Array B	45.58	319	P	P	00 55 41.3	-1.1
	comp=Z,0.7nm,0.5s,baz=76,slow=7.8,SNR=5.0						
ESDC	Sonseca Array	63.67	301	P	P	00 57 53.6	-0.4
	comp=Z,0.5nm,0.7s,baz=43,slow=6.2,SNR=5.2						
ILAR	Eielson Array	63.75	22	P	P	00 57 55.2	+1.1
	comp=Z,0.5nm,0.7s,baz=314,slow=6.6,SNR=6.6						
YKA	Yellowknife Ar	72.32	10	P	P	00 58 48.4	+0.5
	comp=Z,0.7nm,0.7s,baz=344,slow=5.5,SNR=14						
TORD	Torodi Ar. Bea	76.83	276	P	P	00 59 13.4	-1.5
	comp=Z,1.6nm,0.9s,baz=44,slow=4.4,SNR=6.6						

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*IDC **23** 00:48:45.8±0.5, 4°.46S×126°.29E, h359^{km}±5^{km}, mb4.2/31, mb1 4.3/37, mb1mx4.1/52, mbtmp5.0/37, Error ellipse: s-maj=8.3km s-min=5.4km az=69.0*

*DJA **23** 00:48:47.2±0.1, 4°S±2°×12°6E±°, h368^{km}±2^{km}, M4.8/56, mb5.0/56, mB5.3/29, MLv5.3/26, Mw(mB)4.7/29, MwMwp7.2/2, Mwp6.9/2*

*NEIC **23** 00:48:47.2±1.6, 4°.45S±0°.05×126°.34E±0°.07, h374^{km}±5^{km}, mb4.6/101, Error ellipse: s-maj=10.7km s-min=7.0km az=68.0*

ISC 23 00:48:46.6±0.4**, 4°.44S**±0°.04**×126°.34E**±0°.04**, h370**^{km}±4^{km}**, h372**^{km}**:pP-P, n340, σ1.^{s}22**/374**, mb4.6**/122**, 6C, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NLAI	Namlea	1.41	33	P	Pn	00 49 36.0	-0.3
NLAI				S	S	00 50 15.1	-1.1
SANI	Sanana	2.40	352	P	Pn	00 49 42.9	+0.3
SANI				S	S	00 50 27.0	-0.7
BNDI	Bandanaira	3.56	91	P	Pn	00 50 05.0	+12
KDI	Kendari	3.74	277	P	Pn	00 49 55.2	+0.9
LUWI	Luwuk	4.91	313	Pn	Pn	00 50 07.1	+0.9
LUWI	Luwuk	4.91	313	P	Pn	00 50 07.3	+1.1
TNTI	Ternate	5.28	11	Pn	Pn	00 50 10.4	+0.3
TNTI					S	00 51 17.1	-0.9
TNTI	Ternate	5.28	11	P	Pn	00 50 10.9	+0.7
	1.4nm2µm191nm,0.8s						
KMSI	Cibinong	5.51	335	P	Pn	00 50 14.0	+1.3
	4.4nm6µm732nm,0.7s						
SOEI	Soe	5.67	201	Pn	Pn	00 50 15.7	+1.1
SOEI	Soe	5.67	201	P	Pn	00 50 15.7	+1.1
	5.2nm13µm2µm,0.8s						
MMRI	Maumere	5.83	224	Pn	Pn	00 50 17.5	+1.2
MMRI	Maumere	5.83	224	P	Pn	00 50 18.0	+1.8
	1.7nm480nm,0.7s						
APSI	Ampana	5.85	307	P	Pn	00 50 18.6	+2.1
	0.6nm2µm172nm,0.9s						
GTOI	Gorontalo	6.04	327	P	Pn	00 50 21.9	+3.3
	2.2nm6µm526nm,0.5s						
SAUI	Saumlaki	6.06	126	Pn	Pn	00 50 19.0	+0.2
SAUI	Saumlaki	6.06	126	P	Pn	00 50 18.8	0.0
	11nm30µm4µm,0.8s						
BSSI	Bau Bau, Buton	6.06	254	P	Pn	00 50 21.6	+2.7
	0.3nm908nm87nm,0.8s						
SWI	Sorong	6.07	54	P	Pn	00 50 19.8	+0.9
	2.4nm6µm673nm,0.8s						
SIJI	Sorong	6.07	54	P	Pn	00 50 20.0	+1.1
	59nm,0.3s,baz=228,slow=6.9,SNR=122						
SIJI				S	S	00 51 32.8	-1.1
	32nm,0.3s,baz=232,slow=23,SNR=12						
FAKI	Fak Fak	6.09	76	Pn	Pn	00 50 18.9	-0.3
FAKI				S	S	00 51 29.4	-5.0
FAKI	Fak Fak	6.09	76	P	Pn	00 50 18.7	-0.5
	2.2nm5µm408nm,0.7s						
BNSI	Bone	6.21	270	P	Pn	00 50 22.1	+1.6
	1.2nm3µm338nm,0.7s						
BATI	Baumata	6.32	205	P	Pn	00 50 22.1	+0.4
	280nm,0.3s,baz=26,slow=1.7,SNR=109						
BATI				S	S	00 51 36.5	-2.6
	78nm,0.3s,baz=56,slow=20,SNR=5.8						
BATI	Baumata	6.32	205	P	Pn	00 50 21.9	+0.2
	2.8nm8µm632nm,0.6s						
MRSI	Marisa	6.57	318	P	P	00 50 25.7	0.0
	4.2nm12µm1µm,0.6s						
SPSI	Sidrap Palu	6.57	274	P	P	00 50 26.1	+0.5
	0.7nm2µm216nm,0.9s						
KAPI	Kappang	6.59	265	P	Pn	00 50 25.0	+0.2
	11nm,0.3s,baz=95,slow=6.2,SNR=42						
KAPI				S	S	00 51 44.2	-0.5
	baz=38,slow=19,SNR=1.4						
KAPI	Kappang	6.59	265	Pn	Pn	00 50 25.3	+0.5
TTSI	Tana Toraja	6.65	282	P	P	00 50 27.5	+0.9
	0.6nm187nm,0.8s						
KMPI	Kaimana, Papua	7.39	84	P	Pn	00 50 33.8	-0.2
	3.2nm295nm,0.7s						
TOLI2	Tolitoli	7.82	315	Pn	P	00 50 39.7	-0.3
BASI	Baing, Sumba	8.10	225	P	Pn	00 50 42.9	+0.6
	3µm219nm,0.9s						
SGSI	Sangihe	8.11	354	P	Pn	00 50 42.8	+0.4
	3.3nm10µm911nm,0.6s						
PLAI	Plampang	9.55	242	P	P	00 51 00.4	+0.1
	1µm109nm,0.8s						
KDU	Kakadu	10.20	144	P	Pn	00 51 06.6	-0.3
	baz=10,SNR=80						
KDU				S	S	00 52 57.3	-4.7
	baz=10						
KBKI	Kotabaru	10.21	276	P	P	00 51 09.5	+1.9
	95nm,0.8s						
SRPI	Serui, Papua	10.21	76	P	P	00 51 09.1	+1.5
TWSI	Taliwang, Sumb	10.32	245	P	P	00 51 09.0	+0.2
	56nm,0.8s						
KNRA	Kununurra	11.42	168	S	S	00 53 25.7	-2.5
	baz=12						
KNRA	Kununurra	11.42	168	P	Pn	00 51 21.9	+0.6
DAV	Davao City (W)	11.46	356	P	Pn	00 51 22.3	+0.5
	75nm,0.3s,baz=96,slow=2.8,SNR=9.6						
DAV				S	S	00 53 27.4	-1.7
	71nm,0.3s,baz=207,slow=7.3,SNR=1.8						
DAV	Davao City (W)	11.46	356	P	Pn	00 51 22.8	+1.0
BBKI	Banjar Baru	11.51	274	P	Pn	00 51 24.2	+1.7
	3µm123nm,0.9s						
MTKI	Muara Teweh, K	11.94	287	P	Pn	00 51 28.7	+1.2
JAGI	Jajag, Banyuwa	12.75	251		P	00 51 35.5	-0.2
FITZ	Fitzroy Crossi	13.59	183	P	P	00 51 44.8	-0.1
	4.5nm,0.3s,baz=17,slow=8.2,SNR=54						
FITZ				S	S	00 54 12.5	-0.2
	1.3nm,0.3s,baz=61,slow=22,SNR=10						
FITZ	Fitzroy Crossi	13.59	183	P	P	00 51 44.7	-0.3
	baz=14,SNR=29						
FITZ				S	S	00 54 10.7	-2.0
	baz=14						
FITZ	Fitzroy Crossi	13.59	183	P	P	00 51 45.9	+0.9
GENI	Genyem	13.93	83	P	Pn	00 51 49.9	-0.8
	110nm,0.7s						
WB0	Warramunga Arr	17.14	153	P	P	00 52 23.1	-0.4
WRAB	Tennant Creek	17.27	154	P	P	00 52 24.4	-0.4
WRA	Warramunga Arr	17.27	154	P	P	00 52 24.6	-0.2
	14nm,0.3s,baz=337,slow=9.8,SNR=202						
WRA				S	S	00 55 21.9	-3.8
	3.0nm,0.3s,baz=336,slow=20,SNR=14						
WRA	Warramunga Arr	17.27	154	P	P	00 52 23.7	-1.1
WB2	Warramunga Arr	17.28	154	P	P	00 52 24.8	-0.1
WR0	Warramunga Arr	17.38	153	P	P	00 52 25.6	-0.4
PSA00	Pilbara Seismi	18.16	200	P	P	00 52 33.7	-0.6
PSA00				IAmb	IAmb	00 52 37.2	
	comp=Z,28nm,0.7s						
CISI	Cisompet, Garu	18.68	260	P	P	00 52 39.6	-0.4
	comp=Z,96nm,0.8s						
COEN	Coen	19.11	121	P	P	00 52 44.0	-0.4
TGY	Tagaytay City	19.18	344	P	P	00 52 45.2	0.0
	comp=Z,13nm,0.3s,baz=136,slow=19,SNR=3.4						
AS31	Alice Springs	20.46	160	P	P	00 52 58.1	+0.5
AS31				IAmb	IAmb	00 53 00.7	
	comp=Z,22nm,0.6s						
ASAR	Alice Springs	20.46	160	P	P	00 52 57.6	+0.1
	comp=Z,43nm,0.5s,baz=336,slow=7.8,SNR=692						
ASAR				S	S	00 56 21.9	-0.7
	comp=Z,37nm,0.8s,baz=348,slow=18,SNR=16						
ASAR	Alice Springs	20.46	160	P	P	00 52 58.0	+0.4
WRKA	Warakurna	20.57	175	P	P	00 52 58.7	+0.2
	baz=21,SNR=134						
QIS	Mount Isa	20.58	142	P	P	00 52 59.2	+0.6
	baz=21,SNR=408						
MANU	Manus Island	21.13	84	P	P	00 53 04.4	+0.8
PMG	Port Moresby	21.25	105	P	P	00 53 05.4	+0.7
	comp=Z,121nm,0.7s,baz=289,slow=6.0,SNR=27						
PMG				S	S	00 56 36.5	+1.1
	comp=Z,5.9nm,0.3s,baz=251,slow=18,SNR=1.5						
PMG	Port Moresby	21.25	105	P	P	00 53 04.9	+0.2
PMG	Port Moresby	21.25	105	P	P	00 53 05.6	+1.0
KLSI		21.54	268	P	P	00 53 06.8	-0.6
	comp=Z,8.0nm,0.9s						
MDSI	Maura Dua	22.09	269	P	P	00 53 12.0	-0.4
	comp=Z,2µmcomp=Z,11nm,1.0s						
MTSU	Mount Surprise	22.24	129	P	P	00 53 14.6	+0.9
	baz=22,SNR=28						
SZP	Santa	22.61	345	P	P	00 53 17.5	+0.6
MEEK	Meekatharra	23.28	198	P	P	00 53 22.3	-0.7
	baz=23,SNR=21						
MNAI	Manna	23.31	269	P	P	00 53 24.3	+0.8
DLV	T Lat	24.08	313	P	P	00 53 31.4	+0.8
DLV				IAmb	IAmb	00 53 34.5	
	comp=Z,14nm,0.7s						
CTA	Charters Tower	24.86	130	P	P	00 53 38.5	+1.1
	comp=Z,14nm,0.7s,baz=310,slow=11,SNR=29						
CTAO	Charters Tower	24.86	130	P	P	00 53 36.8	-0.5
CTAO				IAmb	IAmb	00 53 39.3	
	comp=Z,17nm,0.8s						
RABL	Rabaul	25.75	90	P	P	00 53 46.6	+1.2
RABL	Rabaul	25.75	90	P	P	00 53 47.0	+1.6
FORT	Forrest	26.25	177	P	P	00 53 49.4	-0.1
	baz=26,SNR=18						
FORT	Forrest	26.25	177	P	P	00 53 49.4	-0.1
MORW	Morawa	26.37	201	P	P	00 53 50.1	-0.5
	baz=26,SNR=4.6						
MORW	Morawa	26.37	201	P	P	00 53 50.3	-0.3
KMBL	Kambalda	27.11	188	P	P	00 53 56.8	-0.4
	baz=27,SNR=13						
QLP	Quilpie	27.89	144	P	P	00 54 04.8	+0.7
	baz=28,SNR=7.9						
YULB	Yu-li	28.09	350	P	P	00 54 05.2	-0.7
TPUB	Ta-pu	28.13	349	P	P	00 54 05.4	-0.8
KLBR	Kellerberrin	28.19	196	P	P	00 54 06.6	-0.1
	baz=28,SNR=17						
RPSI	Rantau Prapat	28.29	284	P	P	00 54 07.4	-0.5
PSI	Prapat	28.32	284	P	P	00 54 07.5	-0.7
	comp=Z,3.2nm,0.6s,baz=180,slow=2.0,SNR=3.6						
QIZ	Qiongzhong	28.42	326	P	P	00 54 08.6	-0.3
SSLB	Suanglung	28.54	350	P	P	00 54 09.1	-0.8
NACB	Ninganchiao	28.81	351	P	P	00 54 10.4	-1.8
NACB				IAmb	IAmb	00 54 12.1	
	comp=Z,24nm,1.1s						
GSI	Gunungsitoli	29.30	281	P	P	00 54 15.0	-1.7
YHNB	Yeheng	29.33	351	P	P	00 54 15.4	-1.5
NWAO	Narrogin (SRO)	29.59	196	P	P	00 54 18.4	-0.6
	comp=Z,16nm,0.5s,baz=26,slow=8.9,SNR=14						
NWAO	Narrogin (SRO)	29.59	196	P	P	00 54 18.9	-0.1
	baz=30,SNR=10						
NWAO	Narrogin (SRO)	29.59	196	P	P	00 54 18.7	-0.3
NWAO				IAmb	IAmb	00 54 20.3	
	comp=Z,17nm,0.6s						
NWAO	Narrogin (SRO)	29.59	196	P	P	00 54 18.7	-0.3
NWAO				IAmb	IAmb	00 54 19.7	
	comp=Z,22nm,0.8s						
BBOO	Buckleboo	29.66	163	P	P	00 54 19.7	+0.2
	baz=30,SNR=20						
BBOO	Buckleboo	29.66	163	P	P	00 54 19.9	+0.3
BBOO				IAmb	IAmb	00 54 20.5	
	comp=Z,30nm,0.8s						
KNMB	Chin-men Tao	29.75	345	P	P	00 54 20.0	-0.4
KNMB				IAmb	IAmb	00 54 21.1	
	comp=Z,49nm,0.9s						
SRAK	Srakaew	30.28	308	P	P	00 54 21.7	-3.6
	comp=Z,166nm,0.7s						
RMQ	Roma	30.67	138	P	P	00 54 28.8	+0.2
	baz=31,SNR=13						
STKA	Stephens Creek	30.82	154	P	P	00 54 30.2	+0.5
	comp=Z,62nm,0.6s,baz=329,slow=8.7,SNR=156						
STKA	Stephens Creek	30.82	154	P	P	00 54 30.2	+0.5
	baz=31,SNR=59						
STKA	Stephens Creek	30.82	154	P	P	00 54 30.3	+0.5
STKA				IAmb	IAmb	00 54 31.1	
	comp=Z,14nm,0.6s						
KHON	Khomkaen	31.09	312	P	P	00 54 33.5	+1.2
	comp=Z,64nm,0.8s						
HTT	Hallett	31.14	159	P	P	00 54 33.1	+0.5
	baz=31,SNR=14						
JOW	Kunigami	31.14	3	P	P	00 54 32.5	0.0
JOW				IAmb	IAmb	00 54 34.7	
	comp=Z,42nm,0.8s						
CHAI	Chaiyaphum	31.45	311	P	P	00 54 36.0	+0.6
	comp=Z,666nmcomp=Z,75nm,0.7s						
EIDS	Eidsvold	31.58	134	P	P	00 54 35.6	-0.9
PHET	Kaeng Krachan	31.64	303	P	P	00 54 38.0	+1.0
	comp=Z,37nm,0.9s						
NONG	Nongkai	31.99	315	P	P	00 54 40.0	0.0
	comp=Z,37nm,1.1s						
CMSA	Cobar Meteorol	32.52	148	P	P	00 54 45.6	+1.2
	baz=33,SNR=80						
SRDT	SRDT	32.81	305	P	P	00 54 47.0	-0.2
	comp=Z,17nm,0.9s						
UTHA	Uthaitani	33.22	307	P	P	00 54 51.0	+0.3
	comp=Z,562nmcomp=Z,50nm,0.7s						
PHIT	Phitsanulok	33.42	311	P	P	00 54 55.8	+3.4
	comp=Z,50nm,0.8s						
UTTA	Uttaradit	33.66	312	P	P	00 54 55.3	+0.9
	comp=Z,416nmcomp=Z,46nm,0.8s						
HNR	Honiara	33.72	100	P	P	00 54 55.6	+0.6
	comp=Z,62nm,0.3s,baz=186,slow=12,SNR=4.1						
SLVN	Son La	33.76	320	P	P	00 54 56.7	+1.4
SLVN				IAmb	IAmb	00 54 57.5	
	comp=Z,18nm,0.8s						
UMPA	Umpang Tak	34.05	308	P	P	00 54 58.0	+0.2
	comp=Z,3µmcomp=Z,18nm,1.1s						
SUKH	Sukhothai	34.20	310	P	P	00 55 00.2	+1.2
	comp=Z,41nm,0.8s						
LAMP	Lampang	34.83	312	P	P	00 55 05.0	+0.7
	comp=Z,37nm,0.8s						
ARMA	Armidale	35.17	140	P	P	00 55 08.6	+1.4
	baz=35,SNR=12						
ARMA	Armidale	35.17	140	P	P	00 55 08.0	+0.8
ARMA				IAmb	IAmb	00 55 09.4	
	comp=Z,29nm,0.9s						
ARPS	Mount Arapiles	35.19	158	P	P	00 55 08.1	+1.0
	baz=35,SNR=30						
CM36	Chiang Mai Arr	35.23	311	P	P	00 55 08.0	+0.3
CM04	Chiang Mai Arr	35.24	311	P	P	00 55 09.0	+1.1
	comp=Z,198nmcomp=Z,27nm,0.9s						
CM09	Chiang Mai Arr	35.26	311	P	P	00 55 09.3	+1.3
	comp=Z,218nmcomp=Z,27nm,0.9s						
CM05	Chiang Mai Arr	35.27	311	P	P	00 55 09.0	+0.9
	comp=Z,183nmcomp=Z,19nm,0.8s						
CM01	Chiang Mai Arr	35.27	311	P	P	00 55 09.0	+0.9
	comp=Z,235nmcomp=Z,27nm,0.9s						
CM35	Chiang Mai Arr	35.28	311	P	P	00 55 08.0	-0.2
CM02	Chiang Mai Arr	35.29	311	P	P	00 55 09.5	+1.3
	comp=Z,186nmcomp=Z,23nm,0.9s						
CM31	Chiang Mai Arr	35.31	311	P	P	00 55 09.7	+1.3
	comp=Z,10µmcomp=Z,532nm,0.8s						
CMAR	Chiang Mai Arr	35.31	311	P	P	00 55 09.5	+1.1
	comp=Z,13nm,0.7s,baz=138,slow=7.2,SNR=68						
CMAR				PcP	PcP	00 57 31.3	+1.7
	comp=Z,1.8nm,0.3s,baz=137,slow=2.5,SNR=4.5						
CMAR				ScP	ScP	01 00 41.1	+1.5
	comp=Z,2.0nm,0.6s,baz=160,slow=2.9,SNR=9.2						
CM13	Chiang Mai Arr	35.31	311	P	P	00 55 09.0	+0.6
	comp=Z,162nmcomp=Z,19nm,0.9s						
CM15	Chiang Mai Arr	35.32	311	P	P	00 55 09.0	+0.5
	comp=Z,752nmcomp=Z,29nm,0.8s						
CM34	Chiang Mai Arr	35.39	312	P	P	00 55 09.0	-0.1
CM32	Chiang Mai Arr	35.50	311	P	P	00 55 11.0	+1.0
CMMT	Chiang Mai	35.52	311	P	P	00 55 10.0	-0.2
	comp=Z,26nm,0.8s						
CHTO	Chiang Mai	35.52	311	P	P	00 55 11.2	+1.0
CHTO				IAmb	IAmb	00 55 12.1	
	comp=Z,33nm,0.8s						
CM33	Chiang Mai Arr	35.52	311	P	P	00 55 10.0	-0.2
MHMT	Maesarieng	35.91	310	P	P	00 55 14.2	+0.7
YNG	Young	36.09	148	P	P	00 55 16.3	+1.5
	baz=36,SNR=58						
GYA	Guiyang	36.14	329	⇑P	P	00 55 15.5	+0.1
GYA				pmax	pmax		
	comp=Z,24nm,0.8s						
GYA				pmax	pmax		
	comp=Z,120nm,4.4s						
WHN	Wuhan	36.62	343	⇑iP	P	00 55 20.3	+1.1
WHN				pmax	pmax		
	comp=Z,100nm,0.9s						
MGCD	Mangrove Creek	36.79	144	P	P	00 55 22.9	+2.2
	baz=37,SNR=8.2						
NJ2	Nanjing	36.98	349	⇑P	P	00 55 22.6	+0.4
NJ2				pmax	pmax		
	comp=Z,47nm,0.7s						
CAN	Canberra	37.19	149	P	P	00 55 25.7	+1.7
KMI	Kunming	37.27	323	⇑P	P	00 55 26.6	+1.6
KMI				pmax	pmax		
	comp=Z,31nm,0.9s						
KMI	Kunming	37.27	323	P	P	00 55 26.3	+1.3
KMI				IAmb	IAmb	00 55 27.6	
	comp=Z,30nm,1.0s						
TOO	Toolangi	37.34	155	P	P	00 55 27.1	+1.9
	baz=38,SNR=14						
TOO	Toolangi	37.34	155	P	P	00 55 26.7	+1.5
CNB	Canberra Magne	37.38	148	P	P	00 55 26.9	+1.3
	baz=38,SNR=13						
JNU	Nakatsue	37.60	6	P	P	00 55 26.7	-0.7
	comp=Z,6.9nm,0.6s,baz=268,slow=2.5,SNR=5.3						
JNU	Nakatsue	37.60	6	P	P	00 55 26.7	-0.7
JNU				IAmb	IAmb	00 55 27.9	
	comp=Z,25nm,1.0s						
ENH	Enshi	38.10	336	IAmb	IAmb	00 55 32.5	
	comp=Z,29nm,0.6s						
JMN	Monobe	38.62	10	P	P	00 55 36.6	+0.8
JMN				IAmb	IAmb	00 55 37.0	
	comp=Z,41nm,0.9s						
JTU	Tsushima	38.86	4	P	P	00 55 37.8	+0.2
JHS	Saijyo	39.74	9	P	P	00 55 45.8	+0.9
JHS				IAmb	IAmb	00 55 47.0	
	comp=Z,31nm,0.8s						
JWT	Wachi	40.42	11	P	P	00 55 51.1	+0.7
JWT				IAmb	IAmb	00 55 51.8	
	comp=Z,43nm,0.7s						
LHI	Lord Howe Isla	40.86	135	P	P	00 55 54.4	+0.3
CD2	Chengdu	41.24	330	P	P	00 55 56.8	-0.4
CD2				pmax	pmax		
	comp=Z,50nm,0.7s						
TIA	Tai'an	41.35	349	P	P	00 55 57.0	-0.9
TIA				pmax	pmax		
	comp=Z,14nm,0.6s						
SANVU	Saraoutou	41.63	108	P	P	00 56 02.0	+1.5
SANVU	Saraoutou	41.63	108	P	P	00 56 02.1	+1.6
XAN	Xi'an	41.66	338	IAmb	IAmb	00 56 00.5	
	comp=Z,29nm,0.8s						
KSAR	Wonju Array Be	41.69	2	P	P	00 56 01.4	+0.8
KSRS	Korea Array	41.70	2	P	P	00 56 01.1	+0.4
	comp=Z,11nm,0.7s,baz=178,slow=11,SNR=33						
MAJO	Matsushiro	42.25	14	P	P	00 56 04.7	-0.4
MAT	Matsushiro	42.25	14	P	P	00 56 03.7	-1.4
MJAR	Matsushiro Arr	42.25	14	P	P	00 56 04.5	-0.6
	comp=Z,18nm,0.8s,baz=183,slow=9.3,SNR=27						
TAU	Tasmania Unive	42.60	157	P	P	00 56 08.2	+0.4
TAU				IAmb	IAmb	00 56 24.4	
	comp=Z,40nm,1.1s						
DZM	Mont Dzumac	42.60	118	P	P	00 56 08.3	0.0
	comp=Z,11nm,0.8s,baz=249,slow=8.5,SNR=7.2						
DZM	Mont Dzumac	42.60	118	P	P	00 56 08.9	+0.6
DL2	Dalian	43.35	355	P	P	00 56 13.8	+0.1
DL2				pmax	pmax		
	comp=Z,51nm,0.7s						
JSD	Sado	43.69	14	P	P	00 56 16.0	-0.4
JSD				IAmb	IAmb	00 56 27.8	
	comp=Z,32nm,1.0s						
JMM	Marumori	44.18	16	P	P	00 56 20.9	+0.6
JMM				IAmb	IAmb	00 56 21.7	
	comp=Z,36nm,0.7s						
BJT	Baijiatuau	45.22	349	P	P	00 56 27.8	-0.6
BJI	Beijing	45.24	349	P	P	00 56 27.8	-0.7
BJI				pmax	pmax		
	comp=Z,20nm,0.9s						
LZH	Lanzhou	45.48	334	⇑P	P	00 56 31.4	+0.6
LZH				pP	pP	00 57 41.4	-2.4
LZH				PP	PcP	00 58 12.3	+10
LZH				sP	sP	00 58 32.3	+7.0
LZH				pmax	pmax		
	comp=Z,23nm,1.1s						
LZH				pmax	pmax		
	comp=Z,120nm,5.0s						
JTM	Tenmabayashi	46.99	15	P	P	00 56 42.6	+0.6
JTM				IAmb	IAmb	00 56 48.3	
	comp=Z,43nm,1.0s						
HHC	Hu-ho-hao-te	47.06	345	eP	P	00 56 42.9	+0.2
HHC				pmax	pmax		
	comp=Z,23nm,1.0s						
HHC				pmax	pmax		
	comp=Z,120nm,5.1s						
LSA	Lhasa	47.85	317	P	P	00 56 50.4	+1.0
LSA				pmax	pmax		
	comp=Z,77nm,0.7s						
LSA	Lhasa	47.85	317	P	P	00 56 49.9	+0.5
LSA				IAmb	IAmb	00 56 51.2	
	comp=Z,15nm,0.6s						
CN2	Changchun	48.02	359	eP	P	00 56 49.1	-0.8
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
USA0B	Ussuriysk Arra	48.68	5	P	P	00 56 54.9	+0.1
USA0B				IAmb	IAmb	00 56 55.6	
	comp=Z,22nm,0.8s						
USRK	Ussuriysk Ar.	48.68	5	P	P	00 56 55.1	+0.3
	comp=Z,22nm,0.6s,baz=188,slow=6.9,SNR=56						
USRK	Ussuriysk Ar.	48.68	5	P	P	00 56 55.3	+0.5
ODAN	Odare	48.84	312	eP	P	00 56 56.6	0.0
	comp=Z,36nm,0.7s						
TAPN	Taplejung	48.88	313	eP	P	00 56 57.0	0.0
	comp=Z,30nm,0.4s						
MDJ	Mudanjiang	48.92	3	P	P	00 56 56.8	+0.2
MDJ				pmax	pmax		
	comp=Z,46nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,150nm,3.5s						
MDJ	Mudanjiang	48.92	3	P	P	00 56 57.5	+0.9
MDJ				IAmb	IAmb	00 56 58.2	
	comp=Z,34nm,0.9s						
RAMN	Ramite	49.48	311	eP	P	00 57 01.9	+0.5
	comp=Z,81nm,0.6s						
GTA	Gaotai	50.02	333	⇑P	P	00 57 05.3	+0.2
GTA				PcP	pwP	00 58 26.8	+2.3
GTA				ScP	ScP	01 01 39.4	+0.8
GTA				pmax	pmax		
	comp=Z,23nm,1.0s						
ASAJ	Asahikawa	50.50	15	P	P	00 57 08.6	+0.2
	comp=Z,12nm,0.7s,baz=221,slow=20,SNR=2.6						
GUN	Gumba	50.54	312	eP	P	00 57 09.4	0.0
	comp=Z,69nm,0.6s						
PKI	Pulchoki	50.70	311	eP	P	00 57 10.2	-0.4
	comp=Z,19nm,0.6s						
PKIN	Phulchoki	50.72	311	eP	P	00 57 10.0	-0.6
	comp=Z,20nm,0.7s						
KKN	Kakani	50.92	311	eP	P	00 57 12.0	-0.1
	comp=Z,25nm,0.6s						
DMN	Daman	50.95	311	eP	P	00 57 12.3	-0.1
GKN	Gorkha	51.51	311	eP	P	00 57 16.3	-0.1
	comp=Z,44nm,0.5s						
MSVF	Nonsavu	52.26	109	P	P	00 57 23.6	+1.7
MSVF				IAmb	IAmb	00 57 24.6	
	comp=Z,28nm,0.9s						
OUZ	Omahuta	53.26	131	P	P	00 57 30.2	+1.4
KLR	Kul'dur	53.66	4	P	P	00 57 31.4	+0.1
	comp=Z,2.7nm,0.6s,baz=201,slow=5.3,SNR=14						
DCZ	Deep Cove	54.15	145	P	P	00 57 35.7	+0.7
PYZ	Puysegur Point	54.31	146	P	P	00 57 36.2	+0.2
PYZ				IAmb	IAmb	00 57 51.3	
	comp=Z,39nm,1.2s						
FOZ	Fox Glacier	54.62	142	P	P	00 57 38.5	+0.1
FOZ				IAmb	IAmb	00 57 39.1	
	comp=Z,18nm,0.6s						
MLZ	Mavora Lakes	54.65	145	P	P	00 57 38.8	+0.2
MLZ				IAmb	IAmb	00 57 39.7	
	comp=Z,21nm,0.7s						
ULN	Ulaanbaatar	54.77	344	P	P	00 57 39.8	+0.3
ULN				IAmb	IAmb	00 57 40.7	
	comp=Z,24nm,0.9s						
WHZ	Wether Hill Ro	54.85	145	P	P	00 57 40.4	+0.4
WKZ	Wanaka	54.86	144	P	P	00 57 40.4	+0.4
WKZ				IAmb	IAmb	00 57 41.2	
	comp=Z,17nm,0.8s						
SONM	Songino Array	54.92	344	P	P	00 57 40.6	+0.1

	comp=Z,12nm,0.9s,baz=154,slow=6.9,SNR=37						
SONM				pP	pP	00 58 56.3	-0.1
	comp=Z,2.3nm,1.0s,baz=159,slow=7.3,SNR=3.1						
SONM				ScP	ScP	01 02 00.3	+0.6
	comp=Z,1.5nm,0.9s,baz=160,slow=4.9,SNR=5.9						
SONM	Songino Array	54.92	344	P	P	00 57 40.8	+0.2
QRZ	Quartz Range	54.98	138	P	P	00 57 41.3	+0.3
QRZ				IAmb	IAmb	00 57 59.1	
	comp=Z,35nm,1.2s						
LBZ	Lake Benmore	55.31	143	P	P	00 57 43.3	+0.1
LBZ				IAmb	IAmb	00 57 44.9	
	comp=Z,33nm,1.1s						
RPZ	Rata Peaks	55.48	142	P	P	00 57 45.2	+0.8
THZ	Tophouse	55.68	139	P	P	00 57 46.5	+0.6
THZ				IAmb	IAmb	00 57 48.5	
	comp=Z,22nm,0.6s						
NNZ	Nelson	55.73	138	P	P	00 57 46.6	+0.4
OXZ	Oxford	55.90	141	P	P	00 57 46.1	-1.3
OXZ				IAmb	IAmb	00 57 50.6	
	comp=Z,17nm,0.8s						
ODZ	Otahua Downs	55.94	143	P	P	00 57 47.1	-0.6
BSWZ	Blackbirch Sta	56.30	138	P	P	00 57 49.9	-0.3
OTVZ	Oturere	56.39	135	P	P	00 57 52.8	+1.7
KHZ	Kahutara	56.41	139	P	P	00 57 51.4	+0.5
MQZ	McQueen's Vall	56.47	141	P	P	00 57 52.0	+0.6
MQZ				IAmb	IAmb	00 57 52.7	
	comp=Z,29nm,1.1s						
MCQ	Macquarie Isla	56.48	158	P	P	00 57 52.1	+1.0
MOVZ	Moawhango	56.56	135	P	P	00 57 52.7	+0.6
SNZO	South Karori	56.66	138	P	P	00 57 52.4	-0.4
OGWZ	Otaki Gorge	56.76	137	P	P	00 57 53.6	+0.2
BHHZ	Black Hill Sta	56.81	135	P	P	00 57 54.0	+0.1
CAW	Cannon Point	56.82	137	P	P	00 57 53.5	-0.3
BHW	Baring Head	56.82	138	P	P	00 57 53.1	-0.7
MRZ	Mangatainoka R	56.97	137	P	P	00 57 54.5	-0.4
BKZ	Black Stump Fm	56.98	135	P	P	00 57 55.3	+0.3
HOWZ	Holdsworth Sta	57.03	137	P	P	00 57 55.1	-0.2
KWHZ	Kaweka Forest	57.03	135	P	P	00 57 56.3	+0.8
URZ	Urewera	57.06	133	P	P	00 57 55.7	+0.2
URZ				IAmb	IAmb	00 58 00.1	
	comp=Z,31nm,0.7s						
MSWZ	Moikau Station	57.08	138	P	P	00 57 55.0	-0.7
KRHZ	Kereru	57.09	135	P	P	00 57 56.2	+0.5
MTHZ	Maungataniwha	57.10	134	P	P	00 57 56.2	+0.3
PLWZ	Palliser	57.15	138	P	P	00 57 55.4	-0.8
NMHZ	Naumai	57.17	134	P	P	00 57 52.9	-3.5
DVHZ	Dannevirke	57.22	136	P	P	00 57 52.4	-4.3
RUGZ	Raukumara Rang	57.36	133	P	P	00 57 57.2	-0.6
TMWZ	Te Maipa	57.38	137	P	P	00 57 58.3	+0.6
BFZ	Birch Farm	57.44	136	P	P	00 57 57.8	-0.4
BFZ				IAmb	IAmb	00 58 16.9	
	comp=Z,28nm,1.1s						
MXZ	Matakaoa Point	57.67	132	P	P	00 58 00.3	+0.5
TLY	Talaya	59.16	344	P	P	00 58 09.2	-0.5
	comp=Z,2.8nm,0.5s,baz=219,slow=5.5,SNR=6.0						
WMQ	Urumqi	59.29	328	*e*P	P	00 58 12.8	+2.0
KNTN	Kanton	61.83	91	P	P	00 58 29.2	+0.9
KNTN				IAmb	IAmb	00 58 40.8	
	comp=Z,28nm,1.1s						
CASY	Casey	62.72	187	P	P	00 58 33.0	-0.1
CASY				IAmb	IAmb	00 58 33.9	
	comp=Z,23nm,0.8s						
NIL	Nilore	62.80	311	P	P	00 58 34.0	-0.3
NIL				IAmb	IAmb	00 58 34.8	
	comp=Z,11nm,0.6s						
PEA0B	Petropavlovsk-	63.13	21	P	P	00 58 37.3	+1.3
PEA0B				IAmb	IAmb	00 58 37.9	
	comp=Z,14nm,0.8s						
PETK	Petropavlovsk-	63.13	21	P	P	00 58 37.6	+1.6
	comp=Z,8.3nm,0.7s,baz=164,slow=2.4,SNR=15						
PETK	Petropavlovsk-	63.13	21	P	P	00 58 37.3	+1.3
ZSN	Zaisan	63.22	330	*e*P	P	00 58 35.8	-0.9
	baz=330						
SHLS	Shalkode	63.49	323	*e*P	P	00 58 36.0	-2.7
	baz=323						
KSH	Kashi	63.69	318	P	P	00 58 40.6	+0.5
KSH				pP	pP	01 00 00.8	+2.3
KSH				PP	PP	01 01 11.3	+5.6
KSH				S	S	01 06 39.3	-5.3
KSH				pmax	pmax		
	comp=Z,19nm,0.8s						
KSH				pmax	pmax		
	comp=Z,410nm,5.9s						
UZB	Uzynbulak	63.75	323	*e*P	P	00 58 39.5	-0.9
	baz=323						
SATY	Saty	64.06	323	*e*P	P	00 58 41.6	-0.9
	comp=Z,5.2nm,0.6s,baz=323						
SATY				*e*pP	pP	00 59 59.4	-1.7
	baz=323						
MK31	Makanchi Array	64.12	328	P	P	00 58 42.6	0.0
MK31				IAmb	IAmb	00 58 43.3	
	comp=Z,9.7nm,0.8s						
MKAR	Makanchi Array	64.12	328	P	P	00 58 42.5	-0.1
	comp=Z,14nm,0.7s,baz=116,slow=8.4,SNR=114						
MKAR				pP	pP	00 59 59.2	-2.0
	comp=Z,2.2nm,0.8s,baz=118,slow=8.3,SNR=2.8						
MKAR				S	S	01 06 47.8	-1.5
	comp=Z,0.8nm,1.1s,baz=131,slow=13,SNR=5.2						
KPKS	Kokpek	64.13	323	*e*P	P	00 58 41.8	-1.0
	comp=Z,5.8nm,0.5s,baz=323						
KPKS				*e*pP	pP	00 59 59.7	-1.8
	baz=323						
MAKZ	Makanchi	64.29	328	P	P	00 58 43.5	-0.2
MAKZ				IAmb	IAmb	00 58 43.9	
	comp=Z,7.8nm,0.6s						
TNSS	Tian-Shan	64.94	322	*e*P	P	00 58 47.6	-0.8
	baz=322						
MDOK	Medeo	64.95	322	*e*P	P	00 58 47.0	-1.1
	baz=322						
MDOK				*e*pP	pP	01 00 05.2	-1.8
	baz=322						
AAA	Alma-Ata	65.05	322	*e*P	P	00 58 47.6	-1.1
	baz=322						
TDK	Taldyqorghan	65.18	325	*e*P	P	00 58 47.9	-1.5
	comp=Z,6.0nm,0.4s,baz=324						
KUU	Kurty	65.78	323	*e*P	P	00 58 52.6	-0.6
	comp=Z,16nm,0.6s,baz=322						
KBK	Karagaybulak	65.98	321	P	P	00 58 55.3	+0.6
	SNR=5.6						
UCH	Uchtor	66.03	320	P	P	00 58 56.4	+1.0
	SNR=6.4						
AAK	Ala-Archa	66.25	321	P	P	00 58 56.9	+0.5
	comp=Z,5.5nm,0.7s,baz=149,slow=6.3,SNR=16						
AAK				pP	pP	01 00 13.3	-2.3
	comp=Z,1.9nm,0.9s,baz=143,slow=6.1,SNR=3.1						
AAK	Ala-Archa	66.25	321	P	P	00 58 57.3	+0.9
	SNR=5.8						
AAK	Ala-Archa	66.25	321	P	P	00 58 57.3	+0.9
AAK				IAmb	IAmb	00 58 57.9	
	comp=Z,6.8nm,0.8s						
YAK	Yakutsk	66.33	2	P	P	00 58 57.0	+0.7
	comp=Z,30nm,0.6s,baz=298,slow=0.2,SNR=12						
YAK	Yakutsk	66.33	2	P	P	00 58 56.5	+0.2
KBL	Kabul	66.34	311	P	P	00 58 57.4	+0.2
AML	Almayashu	66.51	320	P	P	00 58 58.9	+0.6
	SNR=9.7						
USP	Ospenovka	66.58	321	P	P	00 58 58.5	+0.2
	SNR=15						
SGDS	Sogindy	66.59	321	*e*P	P	00 58 57.5	-0.9
	baz=321						
MA2	Magadan	66.68	13	P	P	00 58 59.4	+0.9
	comp=Z,7.3nm,0.7s,baz=190,slow=9.3,SNR=4.9						
EKS2	Erkin-Say	66.72	320	P	P	00 59 00.0	+0.7
	SNR=9.3						
SEM	Semipalatinsk	67.45	330	*e*P	P	00 59 02.0	-1.8
	baz=330						
ZAA0	Zalesovo Array	67.71	335	IAmb	IAmb	00 59 05.0	
	comp=Z,12nm,1.0s						
ZALV	Zalesovo Beam	67.71	335	P	P	00 59 04.1	-1.0
	comp=Z,6.4nm,0.6s,baz=119,slow=4.8,SNR=35						
ZALV				S	S	01 07 26.8	-5.2
	comp=Z,0.3nm,0.5s,baz=103,slow=6.4,SNR=2.0						
BTLS	Baital	67.78	323	*e*P	P	00 59 04.7	-0.9
	baz=322						
KURBB	Kurchatov Arra	68.45	330	P	P	00 59 09.3	-0.4
	comp=Z,10.0nm,0.7s,baz=131,slow=5.4,SNR=58						
KURBB				pP	pP	01 00 28.2	-1.2
	comp=Z,5.9nm,1.1s,baz=125,slow=6.0,SNR=6.3						
KURBB				S	S	01 07 38.4	-2.5
	comp=Z,1.0nm,1.1s,baz=97,slow=20,SNR=5.0						
KURK	Kurchatov	68.46	330	P	P	00 59 09.5	-0.2
KURK				IAmb	IAmb	00 59 10.4	
	comp=Z,19nm,0.8s						
IUG	Iuzhnay	68.90	318	*e*P	P	00 59 12.1	-0.7
	baz=318						
KKAR	Karatay Array	69.03	320	P	P	00 59 13.0	-0.4
BRLS	Borolday	69.44	319	*e*P	P	00 59 15.1	-0.8
	baz=319						
BRZS	Berezniki	71.17	327	*e*P	P	00 59 25.5	-0.7
	comp=Z,3.8nm,0.7s,baz=326						
WSAR	Wadi Sarin	71.47	296	P	P	00 59 29.4	+0.9
	comp=Z,6.0nm,0.6s,baz=127,slow=5.1,SNR=5.2						
SOCY	Socotra	73.77	284	P	P	00 59 41.7	-0.4
SOCY				IAmb	IAmb	00 59 42.7	
	comp=Z,10nm,0.8s						
BVAR	Borovoye Array	73.98	329	P	P	00 59 41.7	-0.7
	comp=Z,0.8nm,0.4s,baz=67,slow=14,SNR=18						
BVAR				pP	pP	01 01 02.7	-0.8
	comp=Z,2.0nm,1.0s,baz=220,slow=27,SNR=4.8						
BRVK	Borovoye	74.05	329	P	P	00 59 42.7	-0.1
VNDA	Vanda	75.43	172	P	P	00 59 49.3	-1.0
	comp=Z,8.0nm,0.7s,baz=322,slow=6.6,SNR=13						
TIXI	Tiksi	75.96	1	P	P	00 59 53.0	-0.2
ABKAR	Akbulak array	78.26	322	P	P	01 00 06.0	-0.4
ABKAR	Akbulak array	78.26	322	IAmb	IAmb	01 00 06.9	
	comp=Z,2.7nm,0.8s						
AKTO	Aktyubinsk	79.84	323	P	P	01 00 14.7	-0.2
	comp=Z,3.6nm,0.7s,baz=117,slow=5.2,SNR=9.7						
ARU	Arti	81.63	329	P	P	01 00 23.3	-0.7
	comp=Z,0.9nm,0.6s,baz=126,slow=5.9,SNR=3.9						
RAYN	Ar Rayn	83.38	294	P	P	01 00 34.6	+0.7
ILAR	Eielson Array	92.60	25	PKKPbc	PKKPbc	01 18 27.6	-3.1
	comp=Z,0.5nm,0.9s,baz=34,slow=3.3,SNR=4.8						
BRTR	Keskin Array B	94.88	309	P	P	01 01 27.5	-0.4
	comp=Z,0.3nm,0.5s,baz=117,slow=3.4,SNR=2.5						
BOSA	Boshof	97.58	241	P	P	01 01 39.3	-1.0
	comp=Z,2.7nm,0.7s,baz=111,slow=4.0,SNR=5.3						
INK	Inuvik	97.85	22	P	P	01 01 39.3	-1.1
	comp=Z,1.7nm,1.0s,baz=294,slow=1.3,SNR=3.2						
VNA2	Neumayer--Watz	98.86	194	Pdiff	P	01 01 47.1	+2.1
VNA3	Neumayer Olymp	99.17	193	Pdiff	Pdif	01 01 49.6	+3.3
VNA1	Neumayer--Stat	99.26	194	Pdiff	Pdif	01 01 47.8	+1.1
YKA	Yellowknife Ar	107.03	25	PKiKP	PKiKP	01 06 28.3	-0.4
	comp=Z,0.3nm,0.7s,baz=328,slow=1.3,SNR=6.9						
YKA				PKKPbc	PKKPbc	01 17 45.1	-4.6
	comp=Z,0.5nm,0.7s,baz=106,slow=3.3,SNR=12						
YKA				PKKP	PKKPdf	01 18 00.9	0.0
	comp=Z,0.1nm,0.5s,baz=106,slow=5.4,SNR=4.2						
GERES	GERESS Array B	108.13	320	PKiKP	PKiKP	01 06 30.9	-0.4
	comp=Z,0.5nm,0.6s,baz=135,slow=0.4,SNR=5.9						
PDAR	Pinedale Array	117.62	43	PKP	PKPdf	01 06 49.6	-0.1
	comp=Z,0.3nm,0.5s,baz=107,slow=1.5,SNR=4.6						
PDAR				PKKPbc	PKKPbc	01 17 12.6	-1.7
	comp=Z,0.9nm,0.8s,baz=117,slow=5.2,SNR=3.8						
PDAR	Pinedale Array	117.62	43	PKPdf	PKiKP	01 06 50.0	+0.2
U15A	North Rim	117.65	51	PKPdf	PKPdf	01 06 49.6	-0.5
ULM	Lac du Bonnet	122.21	31	PKP	PKPdf	01 06 57.1	-0.9
	comp=Z,0.9nm,0.5s,baz=271,slow=2.5,SNR=6.1						
TORD	Torodi Ar. Bea	124.71	283	PKP	PKPdf	01 07 03.8	-0.1
	comp=Z,3.3nm,0.7s,baz=58,slow=2.1,SNR=20						
TORD				PKKPbc	PKKPab	01 16 47.1	+0.4
	comp=Z,2.8nm,0.9s,baz=299,slow=5.1,SNR=12						
TXAR	Lajitas Array	126.66	56	PKP	PKiKP	01 07 08.2	+0.4
	comp=Z,1.0nm,0.8s,baz=296,slow=3.7,SNR=4.8						
JCT	Junction City	129.44	54	PKPdf	PKPdf	01 07 12.6	+0.1
S39A	Bolivar	130.97	42	PKPdf	PKPdf	01 07 15.4	+0.2
KIC	Kosan Boka	131.27	275	*e*P	PKiKP	01 07 16.9	-0.5
	comp=Z,6.7nm,0.8s						
DBIC	Dimbokro	131.39	275	PKP	PKPdf	01 07 16.7	+0.1
	comp=Z,3.9nm,0.8s,baz=130,slow=3.1,SNR=5.5						
DBIC				SKPbc	SKPbc	01 10 06.1	-0.5
	comp=Z,6.1nm,0.9s,baz=101,slow=5.9,SNR=6.4						
TIC	Toumodi	131.55	275	*e*P	PKPdf	01 07 15.1	-1.8
LIC	Lamto	131.56	274	*e*P	PKPdf	01 07 17.2	+0.3
	comp=Z,33nm,1.1s						
PLCA	Paso Flores	132.46	163	PKP	PKPdf	01 07 17.9	-0.2
	comp=Z,3.4nm,0.8s,baz=285,slow=0.2,SNR=7.5						
CMIG	Matias Romero	137.71	69	PKP	PKPdf	01 07 28.1	-0.2
	comp=Z,2.3nm,0.7s,baz=271,slow=1.9						
LCO	Las Campanas	142.93	155	PKPdf	PKPdf	01 07 35.0	-2.8
AC01	Pan de Azucar	145.45	153	PKPab	PKPab	01 07 43.3	-0.1
GO02	Mina Guanaco	146.75	153		PKPbc	01 07 47.2	+0.4
JTS	Las Juntas de	148.44	78	PKPbc	PKPbc	01 07 51.0	-0.2
	comp=Z,20nm,0.7s,baz=92,slow=1.2,SNR=9.7						
JTS	Las Juntas de	148.44	78		PKiKP	01 07 52.1	-0.4
CPUP	Villa Florida	149.21	174	PKP	PKPdf	01 07 46.9	-1.2
	comp=Z,12nm,0.8s,baz=11,slow=2.5,SNR=4.2						
CPUP				PKPbc	PKPbc	01 07 52.7	0.0
	comp=Z,12nm,0.8s,baz=188,slow=2.1,SNR=25						
LVC	Limon Verde	149.26	152	PKPbc	PKiKP	01 07 54.6	+0.2
	comp=Z,10nm,0.7s,baz=256,slow=2.6,SNR=10						
LVC	Limon Verde	149.26	152		PKiKP	01 07 54.4	0.0
NNA	Nana	151.76	126	PKPbc	PKPbc	01 07 58.2	-0.9
	comp=Z,12nm,0.8s,baz=278,slow=6.8,SNR=4.4						
ATAH	Atahualpa	152.77	115	PKPbc	PKiKP	01 08 03.6	+1.7
	comp=Z,6.7nm,0.7s,baz=244,slow=3.5,SNR=5.8						
SIV	San Ignacio	158.42	160	PKP	PKPdf	01 08 02.0	+0.7
	comp=Z,1.9nm,0.8s,baz=156,slow=3.7,SNR=9.4						
SIV				PKPab	PKPab	01 08 37.9	+0.1
	comp=Z,5.8nm,1.0s,baz=199,slow=3.1,SNR=14						
SDV	Santo Domingo	162.58	74	PKP	PKPdf	01 08 05.6	-0.4
	comp=Z,5.0nm,0.7s,baz=69,slow=6.9,SNR=5.8						
SDV				PKPab	PKPab	01 08 58.0	+1.4
	comp=Z,15nm,0.7s,baz=251,slow=2.1,SNR=16						

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*ISK **23** 00:53:10.7, 39°.66N×27°.86E, h8km, ML3.7/36*
*DDA **23** 00:53:11.2, 39°.67N×27°.84E, h2km±1km, MW3.8*
*THE **23** 00:53:11.8, 39°.65N×27°.84E, h4km±2km, ML3.5/4, Error ellipse: s-maj=2.8km s-min=1.1km az=79.0*
*SOF **23** 00:53:13.0, 39°.87N×27°.71E, h9km, MD3.5*
ISC 23 00:53:11.0±0.9**, 39°.66N**±0°.01×**27°.84E**±0°.01**, h8km**±8km**, n124, σ0s.97**/188**, 7C-14D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BALY	Balya	0.19	296	*i* P	Pg	00 53 14.6	-0.3
BALY				*i* S	Sg	00 53 16.5	-1.2
STEP	BALIKESIR_Sava	0.29	199	*i* P	Pg	00 53 17.3	+0.4
STEP				*i* S	Sg	00 53 21.6	+0.7
DURS	Dursunbey	0.49	96	*i* P	Pg	00 53 20.5	-0.1
DURS				*i* S	Sg	00 53 26.5	-0.6
DST	Dursunbey	0.60	95	PG	Pg	00 53 22.6	-0.1
DST				SG	Sg	00 53 31.2	+0.6
BUHA	Balikesir, Bur	0.61	255	*i* P	Pg	00 53 23.2	+0.3
BUHA				*i* S	Sg	00 53 31.2	+0.5
EDC	Edincik	0.69	1	PG	Pg	00 53 24.5	+0.2
EDC				SG	Sg	00 53 33.9	+0.6
KCTX	Karacabey (Bur	0.73	33	PG	Pg	00 53 24.8	-0.2
KCTX				SG	Sg	00 53 35.1	+0.6
KRBG	Karabiga-Canak	0.84	331	PG	Pg	00 53 27.6	+0.3
KRBG				SG	Sb	00 53 39.9	+0.5
ORLT	Orhaneli	0.90	64	PG	Pg	00 53 28.2	-0.2
ORLT				SG	Sg	00 53 40.9	+0.8
ZEDA	zmir-Bergama	0.91	221	*i* P	Pg	00 53 28.5	0.0
ZEDA				*i* S	Sg	00 53 40.7	+0.4
DEMI	Demirci	0.92	132	*i* P	Pg	00 53 28.5	-0.1
DEMI				*i* S	Sg	00 53 39.8	-0.7
DKL	Dikili	0.93	231	PG	Pg	00 53 29.1	+0.2
DKL				SG	Sn	00 53 43.1	-0.7
GOMA	Golmarmara-Man	0.95	176	PG	Pg	00 53 29.5	+0.2
GOMA				SG	Sb	00 53 43.4	+1.0
AYVA	Ayvalik	0.96	249	*i* P	Pg	00 53 29.6	+0.2
AYVA				*i* S	Sg	00 53 40.9	-0.9
MRMT	Marmara Adasi	0.96	349	PG	Pg	00 53 29.8	+0.2
MRMT				SG	Sb	00 53 43.8	+0.9
BAYC	CANAKKALE_Bayr	1.00	275	*i* P	Pg	00 53 30.2	-0.1
BAYC				*i* S	Sg	00 53 42.3	-1.0
SMAA	Simav-Kutahya	1.04	122	PG	Pg	00 53 31.1	0.0
SMAA				SG	Sb	00 53 45.6	+0.4
SIMA	Simav-Kutahya	1.05	123	PG	Pg	00 53 30.7	-0.6
MDNY	Mudanya-Bursa	1.07	48	PG	Pg	00 53 31.5	-0.1
MDNY				SG	Sb	00 53 46.6	+0.7
LPK	Lapseki	1.09	311	PN	Pg	00 53 31.4	-0.7
LPK				SN	Sn	00 53 47.7	-0.2
ULDT	Uludag	1.11	64	*i* P	Pg	00 53 32.0	-0.3
ULDT				*i* S	Sg	00 53 45.9	-0.9
RKY	Sarkoy-Tekirda	1.15	334	PN	Pb	00 53 33.3	+0.2
RKY				SN	Sn	00 53 49.7	+0.4
SART	Tekirdag	1.15	334	*i* P	Pg	00 53 32.8	-0.3
SART				*i* S	Sg	00 53 47.5	-0.5
MAR3	Marsite Statio	1.16	339	PN	Pb	00 53 33.5	+0.1
MAR3				SN	Sn	00 53 51.0	+1.4
EZN	Ezine	1.18	279	P	Pg	00 53 33.5	-0.2
EZN	Ezine	1.18	279	PN	Pn	00 53 34.0	+0.2
EZN				SN	Sn	00 53 50.9	+0.9
MAR4	Marsite Statio	1.20	340	PN	Pb	00 53 34.2	+0.1
MAR4				SN	Sn	00 53 51.4	+0.7
IGD	Bursa	1.21	59	*i* P	Pg	00 53 33.9	-0.3
IGD				*i* S	Sg	00 53 47.9	-2.1
SHAP	Saphane-Kutahy	1.25	120	PN	Pb	00 53 34.5	-0.3
SHAP				SN	Sg	00 53 51.3	+0.2
TVSB	Tavsanli	1.27	99	PN	Pn	00 53 33.9	-1.2
TVSB				SN	Sn	00 53 52.9	+0.5
FOCM	Foa	1.28	223	PN	Pn	00 53 35.3	+0.2
PRK	Paraskevi	1.28	252	P	Pg	00 53 36.2	+0.6
GELI	Tayfur-Gelibol	1.28	306	PN	Pn	00 53 35.4	+0.2
GELI				SN	Sn	00 53 53.5	+0.9
MANT	Manisa	1.29	154	*i* P	Pg	00 53 36.4	+0.6
GEMT	Gemlik	1.29	53	PN	Pn	00 53 35.3	-0.1
GEMT				SN	Sn	00 53 53.2	+0.3
KULA	Kula-Manisa	1.31	151	P	Pn	00 53 35.8	+0.2
KULA	Kula-Manisa	1.31	151	PN	Pn	00 53 35.5	-0.1
KULA				SN	Sg	00 53 53.5	+0.4
USAK	Uak-Merkez	1.31	135	*i* P	Pn	00 53 36.1	+0.5
USAK				*i* S	Sb	00 53 52.2	-0.7
KOCA	Canakkale, Ayv	1.32	264	*i* P	Pb	00 53 36.1	0.0
KOCA				*i* S	Sb	00 53 52.1	-1.1
ECEA	Canakkale, Ece	1.34	287	*i* P	Pb	00 53 36.5	+0.2
ECEA				*i* S	Sn	00 53 54.5	+0.5
TKR	Tekirdag	1.35	350	PN	Pb	00 53 36.7	+0.1
TKR				SN	Sn	00 53 55.5	+1.2
GEDZ	Gediz	1.36	116	PN	Pn	00 53 36.1	-0.3
GEDZ				SN	Sb	00 53 54.6	+0.2
BOZC	Bozcaada	1.39	278	PN	Pn	00 53 36.8	+0.1
BOZC				SN	Sg	00 53 55.9	+0.2
BOZC	Bozcaada	1.39	278	*i* P	Pb	00 53 37.1	-0.1
BOZC				*i* S	Sb	00 53 54.0	-1.1
GDZ	Gediz	1.39	114	*i* P	Pn	00 53 36.5	-0.3
GDZ				*i* S	Sb	00 53 54.3	-1.0
BLCB	Balcova	1.41	206	P	Pn	00 53 36.7	-0.3
BLCB				S	Sg	00 53 56.7	+0.2
BLCB	Balcova	1.41	206	PN	Pn	00 53 37.3	+0.3
BLCB				SN	Sg	00 53 56.4	-0.1
ERIK	Erikli-Kesan	1.44	315	PN	Pn	00 53 37.4	+0.1
ERIK				SN	Sg	00 53 57.1	-0.1
KESN	Edirne-Kesan	1.47	323	*i* P	Pn	00 53 38.0	-0.1
KESN				*i* S	Sb	00 53 56.5	-1.2
BUY	Buyukada	1.54	39	*i* P	Pn	00 53 38.6	-0.2
BUY				*i* S	Sb	00 53 59.8	+0.3
ELBA	Catalca	1.56	17	*i* P	Pn	00 53 39.0	+0.1
ELBA				*i* S	Sn	00 53 56.9	-2.4
GOKA	anakkale-Gk	1.58	290	*i* P	Pn	00 53 39.8	+0.6
GOKA				*i* S	Sn	00 54 00.1	+0.3
GADA	Gvkgeada	1.58	290	P	Pn	00 53 39.8	+0.4
GADA				S	Sb	00 54 01.2	+0.5
	1µm,0.6s						
GADA	Gvkgeada	1.58	290	PN	Pn	00 53 39.6	+0.2
ANDZ	Kutahya, Merke	1.60	95	*i* P	Pb	00 53 41.0	+0.1
ANDZ				*i* S	Sn	00 54 00.2	-0.3
SIGR	SIGRI	1.60	254	P	Pn	00 53 39.5	-0.1
SIGR				S	Sn	00 54 00.6	+0.2
	1µm,0.5s						
SIGR	SIGRI	1.60	254	PN	Pn	00 53 40.1	+0.6
URLA	Izmir	1.62	217	PN	Pn	00 53 40.2	+0.4
URLA	Izmir	1.62	217	*i* P	Pn	00 53 38.2	-1.7
URLA				*i* S	Sn	00 53 59.6	-1.3
BILE	Bilecik/Merkez	1.64	72	*i* P	Pn	00 53 40.1	-0.2
BILE				*i* S	Sn	00 54 01.2	-0.4
CAVK	Edirne/Enez-Ca	1.65	309	*i* P	Pn	00 53 40.7	+0.5
ENEZ	Enez	1.68	310	PN	Pn	00 53 41.0	+0.3
ISK	Istanbul-Kandi	1.69	33	P	Pn	00 53 40.5	-0.3
AUBOZ	BOZOYUK	1.71	81	*i* P	Pn	00 53 40.7	-0.5
AUBOZ				*i* S	Sn	00 54 02.1	-1.1
AYDB	Zeytinkoy-Aydi	1.71	179	PN	Pn	00 53 41.3	+0.1
ZEYE	Izmir, Urla-Ze	1.76	217	*i* P	Pb	00 53 43.8	+0.3
ZEYE				*i* S	Sn	00 54 05.1	+0.8
KHAL	Karahalli	1.82	134	*i* P	Pn	00 53 42.5	-0.1
KHAL				*i* S	Sn	00 54 05.4	-0.5
ALN	Alexandroupoli	1.85	313	P	Pn	00 53 43.2	+0.3
ALN				S	Sb	00 54 08.2	-0.1
	595nm,0.7s						
ALN	Alexandroupoli	1.85	313	PN	Pn	00 53 43.3	+0.3
KHL	Karahalli	1.87	135	PN	Pn	00 53 43.5	+0.1
CHOS	Chios island	1.88	228	P	Pn	00 53 43.3	-0.2
CHOS	Chios island	1.88	228	PN	Pn	00 53 43.9	+0.4
VIZE	Kirklareli, Vi	1.92	0	*i* P	Pn	00 53 43.5	-0.5
SMTH	Samothraki Isl	1.95	295	P	Pn	00 53 44.6	+0.2
GCAM	G?zelcaml?	2.01	194	PN	Pn	00 53 45.7	+0.5
GCAM	G?zelcaml?	2.01	194	*i* P	Pn	00 53 44.6	-0.6
BORA	Eskisehir	2.03	83	*i* P	Pn	00 53 46.2	+0.7
GEYV	SAKARYA_Geyve	2.06	66	*i* P	Pn	00 53 46.2	+0.3
GEYV				*i* S	Sb	00 54 16.1	+1.8
LIA	Limnos Island	2.06	278	P	Pn	00 53 46.5	+0.6
LIA				S	Sn	00 54 12.7	+1.0
	680nm,0.8s						
AFYO	Afyonkarahisar	2.10	114	*i* P	Pg	00 53 51.0	-0.3
AFYO				*i* S	Sb	00 54 15.3	-0.3
AUKIR	Kırka- Seyitga	2.12	99	*i* P	Pb	00 53 49.4	-0.2
SRCK	Saricakaya, Es	2.18	79	*i* P	Pn	00 53 49.5	+1.9
SRCK				*i* S	Sn	00 54 14.3	-0.3
KIRK	Kırklareli	2.20	345	*i* P	Pn	00 53 46.9	-0.9
KIRK				*i* S	Sn	00 54 08.1	-7.0
ARMN	Kirklareli, Me	2.23	352	*i* P	Pn	00 53 48.2	0.0
ARMN				*i* S	Sn	00 54 13.7	-2.2
KZIL	AFYON_Kizioren	2.27	127	*i* P	Pn	00 53 49.1	+0.1
KAND	Kocaeli-Kandir	2.30	51	*i* P	Pn	00 53 49.2	+0.1
RDO	Rodhopi	2.30	311	P	Pn	00 53 49.7	+0.5
KAYN	Sakarya, Kayna	2.32	55	*i* P	Pn	00 53 49.7	+0.3
SGAZ	Eskisehir, Sey	2.32	92	*i* P	Pn	00 53 49.9	+0.3
SGAZ				*i* S	Sb	00 54 23.1	+1.1
EDRB	Edirne	2.34	340	P	Pn	00 53 49.5	-0.3
MLSB	Milas	2.36	181	PN	Pn	00 53 50.7	+0.7
YER	Yerkesik	2.54	172	PN	Pn	00 53 53.2	+0.6
BODT	Bodrum	2.62	189	PN	Pn	00 53 54.5	+0.8
KDZ	Kurdzhali	2.71	318	*i* P	Pn	00 53 55.4	+0.5
AUSIV	SIVRIHISAR	2.87	93	*i* P	Pg	00 54 05.6	-0.4
DIM	Dimitrovgrad	2.96	325	*i* P	Pn	00 53 58.9	+0.6
JMB	Yambol	2.96	342	*i* P	Pn	00 53 59.1	+0.8
RZN	Rozhen	3.12	311	*i* P	Pn	00 54 01.3	+0.6
APE	Apeiranthos	3.16	216	⇑P	Pn	00 53 60.0	-1.1
APE				⇓S	Sn	00 54 35.4	-3.5
KIBS	BOLU	3.17	75	*i* P	Pn	00 54 03.3	+2.0
KIBS				*i* S	Sb	00 54 49.1	+2.5
PLD	Plovdiv	3.41	317	*i* P	Pn	00 54 05.2	+0.7
PRD	Provadia	3.56	355	*i* P	Pn	00 54 06.7	+0.3
SZH	Strazhica	3.88	339	*i* P	Pn	00 54 11.6	+0.7
PLVB	Pleven	4.44	328	⇓P	Pn	00 54 19.1	+0.5
ICOR	Ion Corvin	4.46	360	⇑P	Pn	00 54 19.7	+0.9
VTS	Vitosha	4.56	312	⇑P	Pn	00 54 20.8	+0.3
STIP	Stip	4.76	297	*i* Pn	Pn	00 54 21.9	-1.0
MPEP	Malo Peshtene	4.81	322	*i* P	Pn	00 54 24.4	+0.7
HARR	Harsova	5.03	1	⇑P	Pn	00 54 27.1	+0.4
GRER		5.75	354	⇑P	Pn	00 54 38.1	+1.4
MTUR	Matau	5.93	341	⇓P	Pn	00 54 39.7	+0.5
BISRR	Bisoca	5.95	352	⇓P	Pn	00 54 41.4	+2.1
MLR	Muntele Rosu	6.00	347	⇓P	Pn	00 54 42.2	+2.1
ODBI	Odobesti	6.13	355	⇓P	Pn	00 54 43.8	+2.0
VOIR		6.13	341	⇓P	Pn	00 54 42.5	+0.5
VARL	Varlezi	6.24	0	⇓P	Pn	00 54 44.8	+1.5
PLOR	Plostina	6.25	352	⇓P	Pn	00 54 44.9	+1.3
VRI	Vrincioaia	6.26	353	⇓P	Pn	00 54 44.9	+1.2
DOPR	Dopca	6.56	345	⇑P	Pn	00 54 48.7	+1.0
HERR	Herculane	6.59	324	⇑P	Pn	00 54 47.6	-0.6
OZUR		6.61	347	⇓P	Pn	00 54 49.9	+1.5
TESR	Tescani	6.91	353	⇓P	Pn	00 54 53.3	+0.9
MDB	Medias	6.96	340	⇓P	Pn	00 54 55.0	+1.8
BZS	Buzias	7.52	324	⇓P	Pn	00 55 00.1	-0.7

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*IDC **23** 01:22:12.1±5.5, 8°.54S×118°.69E, h150km±49km, mb3.0/3, mb1 3.1/7, mb1mx3.0/38, mbtmp3.6/7, Error ellipse: s-maj=104.1km s-min=17.2km az=62.0*
*DJA **23** 01:22:13.3±0.6, 8°S±6°×11°9E±°, h122km±7km, M3.2/7, MLv3.2/7*
ISC 23 01:22:11.7±0.9**, 8°.55S**±0°.07×**118°.77E**±0°.05**, h156km, n12, σ2s.15**/17**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	Plampang	1.02	254	P	Pn	01 22 36.1	-1.0
PLAI				S	Sn	01 22 54.3	-2.3
TWSI	Taliwang, Sumb	1.87	264	P	Pn	01 22 45.3	-0.4
TWSI				S	Sn	01 23 11.7	-0.2
WSI	Waingapu	1.88	127	P	Pn	01 22 45.7	-0.1
BASI	Baing, Sumba	2.44	133	P	Pn	01 22 53.9	+1.5
BASI				S	Sn	01 23 25.2	+1.4
BSSI	Bau Bau, Buton	2.94	36	P	Pn	01 22 58.4	-0.1
KAPI	Kappang	3.64	16	P	Pn	01 23 08.1	+0.6
	2.9nm,0.3s,baz=186,slow=7.8,SNR=8.0						

BATI	Baumata	5.11	109	P	Pn	01 23 27.7	+1.1
	2.6nm,0.3s,baz=292,slow=5.4,SNR=1.2						
BATI				S	Sn	01 24 19.5	-5.7
	2.9nm,0.3s,baz=297,slow=16,SNR=1.3						
FITZ	Fitzroy Crossi	11.61	146	P	Pn	01 24 53.3	+0.6
	0.2nm,0.3s,baz=334,slow=8.3,SNR=6.4						
FITZ				S	Sn	01 26 54.2	-7.1
	0.1nm,0.3s,baz=126,slow=19,SNR=1.7						
WRA	Warramunga Arr	18.85	129	P	P	01 26 21.3	+1.4
	0.1nm,0.3s,baz=303,slow=12,SNR=9.1						
WRA				S	S	01 29 42.7	-3.5
	0.1nm,0.3s,baz=304,slow=23,SNR=2.4						
ASAR	Alice Springs	20.89	138	P	P	01 26 43.9	+2.1
	0.3nm,0.3s,baz=315,slow=9.3,SNR=8.3						
MKAR	Makanchi Array	63.95	333	P	P	01 32 28.9	+0.7
	0.1nm,0.4s,baz=156,slow=6.1,SNR=4.3						
ZALV	Zalesovo Beam	68.54	339	P	P	01 32 57.7	+0.6
	0.6nm,0.5s,baz=137,slow=5.0,SNR=3.6						

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*BJI **23** 01:37:37.9±0.0, 39°.71N×143°.47E, h10^{km}, mB5.0/36, mb4.7/57, Ms4.4/28, Ms7 4.2/29*

*IDC **23** 01:37:38.5±0.7, 39°.79N×143°.37E, h0^{km}, mb4.1/22, mb1 4.3/26, mb1mx4.2/38, mbtmp4.2/26, ML3.6/4, MS3.8/21, Ms1 3.8/21, ms1mx3.6/39, Error ellipse: s-maj=17.1km s-min=14.0km az=109.0*

*NEIC **23** 01:37:39.0±2.4, 39°.73N±0°.05×143°.6E±0°.1, h10^{km}±1^{km}, mb4.6/29, Error ellipse: s-maj=15.2km s-min=8.6km az=106.0*

*JMA **23** 01:37:41.1±0.3, 39°.93N×143°.32E, h17^{km}±4^{km}, M4.5*

JMA Felt I J1.

*NIED **23** 01:37:41.1, 39°.93N×143°.32E, h17^{km}, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}3.27; $M_{\theta\theta}$-0.07; $M_{\phi\phi}$-3.20; $M_{r\theta}$2.12; $M_{\theta\phi}$-1.52; $M_{\phi r}$3.17; Fault plane solution: $M_0$5.21000×10^{15} NP1:ϕ_s31.00000°, δ69.00000°, λ98.00000°. NP2:ϕ_s191.00000°, δ23.00000°, λ71.00000°.*

ISC 23 01:37:39.7±0.5**, 39°.87N**±0°.04×**143°.34E**±0°.05**, h6^{km}, n136, σ1^s.55**/135**, mb4.5**/50**, MS3.9**/23**, 2C-3D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTH	Tanohata	1.14	274	P	Pg	01 38 01.5	-0.1
MIYJ	Miyakonagasawa	1.21	256	P	Pn	01 38 03.2	0.0
MIYJ				*e*S	Sb	01 38 19.1	+0.2
JKEN	Kujiedanarisaw	1.30	285	P	Pn	01 38 03.7	-0.7
JKEN				*e*S	Sb	01 38 20.3	-1.1
JANG	Nango	1.49	290	P	Pn	01 38 06.8	-0.2
JOM	Ohasama	1.63	257	P	Pb	01 38 10.0	-0.2
JMK	Ichinoseki	1.88	241	P	Pn	01 38 13.0	+0.6
JTM	Tenmabayashi	1.96	298	P	Pn	01 38 14.3	+0.8
JIO	Ouri	2.10	228	P	Pn	01 38 15.2	-0.2
JAH	Hinai	2.10	280	P	Pn	01 38 16.7	+1.3
ERM	Erimo	2.15	356	Pn	Pn	01 38 17.2	+1.2
JEM	Erimo	2.15	356	P	Pn	01 38 17.0	+1.0
JOT	Ohata	2.31	312	P	Pn	01 38 19.2	+0.9
JNBK	Urakawa-nobuka	2.45	350	P	Pn	01 38 21.7	+1.5
JYK	Kaneyama	2.50	249	P	Pn	01 38 22.1	+1.2
JKB	Kayabe	2.67	320	P	Pn	01 38 25.4	+2.2
JCH	Churui	2.74	0	P	Pn	01 38 24.6	+0.4
JCH				*e*S	Sn	01 38 56.0	-1.6
JMM	Marumori	2.82	226	Pn	Pn	01 38 25.4	0.0
JEW	Eniwo	3.29	335	Pn	Pb	01 38 35.5	-2.9
JKA	Kamikawa-asahi	4.28	353	Pn	Pn	01 38 46.6	+1.2
ASAJ	Asahikawa	4.28	353	Pn	Pn	01 38 47.0	+1.7
	5.1nm,0.3s,baz=163,slow=12,SNR=9.6						
ASAJ				Sn	Sn	01 39 36.2	+0.6
	3.3nm,0.3s,baz=348,slow=26,SNR=5.4						
JSD	Sado	4.37	247	Pn	Pn	01 38 48.3	+1.8
JYT	Yasato	4.41	215	Pn	Pn	01 38 46.3	-0.8
MJAR	Matsushiro Arr	5.23	232	Pn	Pn	01 39 00.6	+2.0
	0.9nm,0.3s,baz=35,slow=13,SNR=34						
MJAR				LR	LR	01 41 03.3	
	comp=Z,475nm,18.3s,baz=50,slow=40						
MAJO	Matsushiro	5.24	232	Pn	Pn	01 38 59.6	+1.1
MAT	Matsushiro	5.24	232	P	Pn	01 39 00.4	+1.9
MAT				*e*S	Sn	01 40 00.9	+1.7
JGF	Kuroka	6.38	230	Pn	Pn	01 39 16.6	+2.4
JHJ	Hachijo jima 2	7.32	204	Pn	Pn	01 39 26.4	-0.8
	19nm,0.3s,baz=24,slow=20,SNR=1.3						
JHJ				Sn	Sn	01 40 41.8	-8.8
	17nm,0.3s,baz=243,slow=23,SNR=1.7						
JWT	Wachi	7.79	236	Pn	Pn	01 39 36.8	+3.1
USA0B	Ussuriysk Arra	9.49	301	Pn	Pn	01 40 02.1	+5.3
USRK	Ussuriysk Ar.	9.49	301	Pn	Pn	01 39 58.6	+1.8
	baz=92,slow=14,SNR=22						
USRK				LR	LR	01 43 29.3	
	comp=Z,627nm,19.4s,baz=70,slow=37						
USRK	Ussuriysk Ar.	9.49	301	Pn	Pn	01 40 01.2	+4.4
JNU	Nakatsue	12.08	240	LR	LR	01 45 21.7	
	comp=Z,530nm,20.2s,baz=46,slow=38						
KSRS	Korea Array	12.29	264	Pn	Pn	01 40 39.0	+3.7
	0.5nm,0.3s,baz=87,slow=14,SNR=7.8						
KSRS				LR	LR	01 45 03.1	
	comp=Z,530nm,18.6s,baz=74,slow=36						
KLR	Kul'dur	12.47	322	Pn	Pn	01 40 40.1	+2.5
	0.1nm,0.3s,baz=125,slow=13,SNR=6.2						
KLR				LR	LR	01 45 47.9	
	comp=Z,574nm,18.2s,baz=138,slow=39						
CN2	Changchun	13.91	292	*e*P	Pn	01 40 52.5	-4.7
CN2				*e*S	Sn	01 43 29.5	-2.4
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=N,400nm,15.0s						
CN2				LR	LR		
	comp=E,500nm,15.0s						
CN2				LR	LR		
	comp=Z,700nm,10.0s						
PETK	Petropavlovsk-	16.48	32	LR	LR	01 47 25.8	
	comp=Z,142nm,20.8s,baz=206,slow=36						
JMZ	Minamidaito 2	17.30	220	Pn	Pn	01 41 40.2	-1.6
MA2	Magadan	20.27	11	Pn	Pn	01 42 17.8	+0.1
BJI	Beijing	20.80	279	P	P	01 42 19.8	-1.8
BJI				pmax	pmax		
	comp=Z,7.0nm,1.2s						
BJI				LR	LR		
	comp=Z,180nm,9.7s						
BJI				LR	LR		
	comp=Z,350nm,16.9s						
BJI				LR	LR		
	comp=Z,180nm,18.2s						
BJT	Baijiatuau	20.81	279	P	P	01 42 19.8	-2.0
TIA	Tai'an	20.94	268	P	P	01 42 22.3	-0.9
TIA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
TIA				pmax	pmax		
	comp=Z,130nm,3.7s						
TIA				LR	LR		
	comp=Z,230nm,8.5s						
TIA				LR	LR		
	comp=Z,590nm,16.4s						
TIA				LR	LR		
	comp=Z,630nm,15.0s						
NJ2	Nanjing	21.26	256	*e*P	P	01 42 28.3	+1.7
NJ2				pmax	pmax		
	comp=Z,11nm,0.6s						
YAK	Yakutsk	23.70	344	P	P	01 42 51.2	-0.7
	comp=Z,9.4nm,0.4s,baz=1.7,slow=1.9,SNR=7.2						
YAK				LR	LR	01 52 29.4	
	comp=Z,120nm,20.2s,baz=215,slow=38						
YAK	Yakutsk	23.70	344	P	P	01 42 50.2	-1.7
SEY	Seymchan	23.72	10	P	P	01 42 51.9	-0.3
	comp=Z,14nm,0.9s,baz=180,slow=7.5,SNR=26						
HHC	Hu-ho-hao-te	24.17	283	*e*P	P	01 42 57.8	+1.0
HHC				pmax	pmax		
	comp=Z,5.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,180nm,5.3s						
HHC				LR	LR		
	comp=Z,160nm,16.5s						
HHC				LR	LR		
	comp=Z,470nm,16.7s						
HHC				LR	LR		
	comp=Z,690nm,13.9s						
YULB	Yu-li	24.84	235	IAmb	IAmb	01 43 07.0	
	comp=Z,20nm,1.2s						
WHN	Wuhan	25.36	258	⇓*i*P	P	01 43 07.9	+0.4
WHN				pmax	pmax		
	comp=Z,54nm,0.8s						
ULN	Ulaanbaatar	27.16	299	P	P	01 43 24.2	+0.3
ULN				IAmb	IAmb	01 43 25.5	
	comp=Z,11nm,1.0s						
SONM	Songino Array	27.60	299	P	P	01 43 28.4	+0.7
	comp=Z,5.9nm,0.8s,baz=88,slow=8.3,SNR=40						
SONM				LR	LR	01 55 04.4	
	comp=Z,438nm,18.6s,baz=84,slow=38						
SONM	Songino Array	27.60	299	P	P	01 43 28.5	+0.7
XAN	Xi'an	28.00	269	P	P	01 43 30.9	-0.5
H11N2	WAKE ISLAND Hy	28.50	128	T	T	02 13 33.9	
	baz=320,slow=75,SNR=365						
H11N1	WAKE ISLAND Hy	28.50	128	T	T	02 13 34.3	
	baz=320,slow=75,SNR=316						
H11N3	WAKE ISLAND Hy	28.51	128	T	T	02 13 34.9	
	baz=320,slow=75,SNR=293						
ENH	Enshi	29.17	261	P	P	01 43 40.9	-1.0
H11S1	WAKE ISLAND Hy	29.32	130	T	T	02 14 38.1	
	baz=322,slow=76,SNR=40						
H11S3	WAKE ISLAND Hy	29.32	130	T	T	02 14 39.7	
	baz=322,slow=76,SNR=35						
H11S2	WAKE ISLAND Hy	29.34	130	T	T	02 14 39.6	
	baz=322,slow=76,SNR=36						
TLY	Talaya	29.73	307	LR	LR	01 56 32.2	
	comp=Z,193nm,18.1s,baz=96,slow=38						
LZH	Lanzhou	31.19	276	⇑P	P	01 44 00.5	+0.7
LZH				pP	pwP	01 44 05.5	+2.2
LZH				sP	sP	01 44 07.8	+6.2
LZH				PP	PnPn	01 44 58.8	-2.5
LZH				pmax	pmax		
	comp=Z,14nm,1.2s						
LZH				pmax	pmax		
	comp=Z,64nm,5.5s						
LZH				LR	LR		
	comp=Z,360nm,12.4s						
LZH				LR	LR		
	comp=Z,530nm,14.6s						
LZH				LR	LR		
	comp=Z,500nm,13.6s						
GYA	Guiyang	33.25	258	⇑P	P	01 44 17.3	-0.6
GYA				pP	pwP	01 44 26.3	+4.8
GYA				sP	sP	01 44 30.8	+11
GYA				pmax	pmax		
	comp=Z,13nm,0.9s						
GYA				pmax	pmax		
	comp=Z,160nm,5.9s						
GYA				LR	LR		
	comp=Z,160nm,17.7s						
CD2	Chengdu	33.26	267	P	P	01 44 17.3	-0.6
CD2				pmax	pmax		
	comp=Z,20nm,0.9s						
CD2				LR	LR		
	comp=Z,410nm,12.4s						
CD2				LR	LR		
	comp=Z,370nm,12.2s						
CD2				LR	LR		
	comp=Z,460nm,11.0s						
GTA	Gaotai	33.28	283	⇓P	P	01 44 18.8	+0.8
GTA				pP	pwP	01 44 25.3	+3.7
GTA				sP	sP	01 44 28.1	+8.2
GTA				pmax	pmax		
	comp=Z,11nm,1.0s						
GTA				pmax	pmax		
	comp=Z,140nm,6.4s						
GTA				LR	LR		
	comp=Z,230nm,15.1s						
GTA				LR	LR		
	comp=Z,480nm,17.5s						
GTA				LR	LR		
	comp=Z,630nm,17.9s						
QIZ	Qiongzhong	35.51	244	P	P	01 44 35.9	-1.4
QIZ				S	S	01 50 14.8	+1.6
QIZ				LR	LR		
	comp=Z,140nm,13.7s						
QIZ				LR	LR		
	comp=Z,200nm,13.9s						
QIZ				LR	LR		
	comp=Z,170nm,16.1s						
KMI	Kunming	36.94	259	⇓P	P	01 44 50.3	+0.5
KMI				pP	pwP	01 45 00.9	+7.5
KMI				pmax	pmax		
	comp=Z,10.0nm,1.3s						
WMQ	Urumqi	40.98	294	*e*P	P	01 45 24.3	+0.9
WMQ				pP	pwP	01 45 29.8	+2.8
WMQ				sP	sP	01 45 36.4	+11
WMQ				pmax	pmax		
	comp=Z,16nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,230nm,6.9s						
ZAA0	Zalesovo Array	41.19	310	P	P	01 45 25.3	+0.5
ZAA0				IAmb	IAmb	01 45 25.9	
	comp=Z,7.5nm,0.7s						
ZALV	Zalesovo Beam	41.19	310	P	P	01 45 25.2	+0.5
	comp=Z,7.0nm,0.5s,baz=92,slow=8.2,SNR=37						
ZALV				PcP	PcP	01 47 24.2	+0.5
	comp=Z,1.6nm,0.7s,baz=112,slow=4.0,SNR=3.8						
ZALV				LR	LR	02 03 16.7	
	comp=Z,166nm,18.9s,baz=70,slow=37						
ZALV	Zalesovo Beam	41.19	310	P	P	01 45 25.4	+0.6
CMAR	Chiang Mai Arr	43.71	254	P	P	01 45 46.5	+0.8
	comp=Z,1.4nm,0.3s,baz=40,slow=7.1,SNR=5.5						
CMAR				LR	LR	02 05 52.6	
	comp=Z,67nm,19.8s,baz=78,slow=39						
MK31	Makanchi Array	43.96	300	P	P	01 45 47.5	0.0
MKAR	Makanchi Array	43.96	300	P	P	01 45 47.6	+0.1
	comp=Z,5.6nm,0.8s,baz=83,slow=9.4,SNR=58						
MKAR				LR	LR	02 05 11.7	
	comp=Z,201nm,18.7s,baz=68,slow=38						
MAKZ	Makanchi	44.16	300	P	P	01 45 49.1	0.0
MAKZ				IAmb	IAmb	01 45 50.4	
	comp=Z,7.0nm,0.9s						
SHL	Shillong	45.00	268	P	P	01 45 57.1	+0.9
SHL				IAmb	IAmb	01 45 58.4	
	comp=Z,8.0nm,1.0s						
KURK	Kurchatov	45.43	306	P	P	01 45 59.2	+0.1
ILAR	Eielson Array	46.29	34	P	P	01 46 06.2	+0.5
	comp=Z,1.4nm,0.8s,baz=267,slow=6.4,SNR=15						
ILAR				LR	LR	02 07 05.9	
	comp=Z,47nm,19.4s,baz=274,slow=38						
ILAR	Eielson Array	46.29	34	P	P	01 46 06.1	+0.4
TAPN	Taplejung	47.30	272	*e*P	P	01 46 14.7	+0.3
ODAN	Odare	47.79	272	*e*P	P	01 46 18.1	-0.1
	comp=Z,10nm,0.3s						
RAMN	Ramite	48.35	273	*e*P	P	01 46 22.8	+0.2
	comp=Z,32nm,0.8s						
GUN	Gumba	48.42	274	*e*P	P	01 46 23.6	+0.4
	comp=Z,38nm,0.7s						
KKN	Kakani	48.94	274	*e*P	P	01 46 27.5	+0.4
	comp=Z,36nm,0.9s						
PKI	Pulchoki	48.95	274	*e*P	P	01 46 27.3	0.0
PKIN	Phulchoki	48.96	274	*e*P	P	01 46 27.2	-0.1
	comp=Z,12nm,0.8s						
GKN	Gorkha	49.33	275	*e*P	P	01 46 30.2	+0.2
TKM2	Tokmak 2	49.66	297	P	P	01 46 33.4	+1.0
	SNR=20						
BRVK	Borovoye	49.88	311	P	P	01 46 33.4	-0.2
BRVK				IAmb	IAmb	01 46 35.1	
	comp=Z,8.0nm,0.8s						
KBK	Karagaybulak	50.20	297	P	P	01 46 37.1	+0.7
	SNR=21						
USP	Ospenovka	50.28	298	P	P	01 46 37.4	+0.4
	SNR=10						
AAK	Ala-Archa	50.52	297	P	P	01 46 38.3	-0.5
KSH	Kashi	50.67	293	P	P	01 46 44.4	+4.4
KSH				pmax	pmax		
	comp=Z,15nm,1.0s						
KSH				pmax	pmax		
	comp=Z,520nm,5.6s						
EKS2	Erkin-Say	51.00	297	P	P	01 46 42.6	+0.2
	SNR=5.2						
INK	Inuvik	51.17	28	P	P	01 46 43.6	+0.5
	comp=Z,1.3nm,0.9s,baz=237,slow=8.8,SNR=4.6						
INK	Inuvik	51.17	28	P	P	01 46 44.0	+0.9
AML	Almayashu	51.26	297	P	P	01 46 45.6	+0.9
	SNR=9.9						
KK31	Karatay Array	53.05	299	P	P	01 46 57.2	-0.4
KK31				IAmb	IAmb	01 46 58.4	
	comp=Z,4.7nm,0.8s						
KKAR	Karatay Array	53.05	299	P	P	01 46 57.3	-0.2
KKAR				IAmb	IAmb	01 46 58.4	
	comp=Z,4.7nm,0.8s						
ARU	Arti	55.26	318	P	P	01 47 14.0	+0.6
ARU				IAmb	IAmb	01 47 14.9	
	comp=Z,8.9nm,1.0s						
OBL	Observatory Le	56.01	92	P	P	01 47 11.2	-8.3
AB05	Akbulak array	57.29	309	P	P	01 47 28.3	+0.3
ABKAR	Akbulak array	57.29	309	P	P	01 47 28.4	+0.3
KBL	Kabul	57.84	290	P	P	01 47 32.2	-0.2
RES	Resolute Bay	59.47	15	P	P	01 47 43.0	+0.2
	comp=Z,1.7nm,0.8s,baz=300,slow=6.4,SNR=8.7						
WB0	Warramunga Arr	59.91	190		P	01 47 46.3	-0.2
WB0				IAmb	IAmb	01 47 51.2	
	comp=Z,4.5nm,1.1s						
WRAB	Tennant Creek	60.08	190	P	P	01 47 47.5	-0.2
WRAB				IAmb	IAmb	01 47 56.4	
	comp=Z,4.2nm,0.9s						
WR0	Warramunga Arr	60.08	190	P	P	01 47 47.2	-0.5
WR0				IAmb	IAmb	01 47 49.1	
	comp=Z,10nm,1.5s						
WB2	Warramunga Arr	60.09	190	P	P	01 47 48.1	+0.3
WB2				IAmb	IAmb	01 47 58.9	
	comp=Z,9.6nm,1.3s						
WRA	Warramunga Arr	60.09	190	P	P	01 47 45.5	-2.2
	comp=Z,1.1nm,0.7s,baz=7.0,slow=7.2,SNR=56						
YKA	Yellowknife Ar	60.60	31	P	P	01 47 50.8	+0.1
	comp=Z,0.3nm,0.7s,baz=300,slow=5.8,SNR=5.3						
ARCES	ARCESS Array B	61.88	339	P	P	01 48 00.3	+0.9
	comp=Z,4.9nm,1.0s,baz=59,slow=7.5,SNR=1.8						
ARCES				LR	LR	02 18 05.5	
	comp=Z,64nm,18.9s,baz=30,slow=39						
GEYT	Alibeck	63.80	299	P	P	01 48 13.1	+0.3
	comp=Z,4.4nm,0.9s,baz=73,slow=9.9,SNR=7.7						
ASAR	Alice Springs	63.82	190	P	P	01 48 12.3	-0.5
	comp=Z,0.4nm,0.6s,baz=13,slow=5.1,SNR=6.7						
ASAR	Alice Springs	63.82	190	P	P	01 48 13.0	+0.2
FINES	FINESS Array B	67.01	332	P	P	01 48 33.0	-0.1
	comp=Z,4.6nm,0.8s,baz=28,slow=8.6,SNR=7.6						
FINES				LR	LR	02 20 34.5	
	comp=Z,208nm,18.1s,baz=65,slow=38						
FINES	FINESS Array B	67.01	332	P	P	01 48 33.1	+0.1
KBZ	Khabaz	70.20	311	P	P	01 48 53.9	+0.6
	comp=Z,7.3nm,0.9s,baz=40,slow=4.3,SNR=19						
NACGM	Naroch	71.18	327	*i* P	P	01 48 59.4	+0.4
NACGM				*i* P	P	01 48 59.4	+0.4
NACGM				*i* P	P	01 48 59.4	+0.4
NACGM				*i* PcP	PcP	01 49 22.7	+3.6
NACGM				*i* PP	PP	01 51 35.4	-0.9
NACGM				*i* PPP	PPP	01 53 22.4	
NACGM				*i* S	S	01 58 13.1	-3.1
NACGM				*i* PS	PnS	01 59 12.4	+29
NACGM				*i* SS	SS	02 02 43.6	-5.2
NACGM				*i* SSS	SSS	02 06 14.5	
NACGM				*i* LR	LR	02 19 59.2	
STKA	Stephens Creek	71.41	182	LR	LR	02 20 31.8	
	comp=Z,31nm,20.1s,baz=34,slow=36						
NC405	NORSAR Array S	71.94	338	P	P	01 49 03.1	-0.5
NC204	NORSAR Array S	72.09	338	P	P	01 49 05.2	+0.7
NVAR	Mina Array Bea	72.09	55	P	P	01 49 06.7	+1.5
	comp=Z,0.9nm,1.0s,baz=270,slow=5.6,SNR=3.8						
NB2	NORSAR Subarra	72.15	338	P	P	01 49 05.3	+0.5
	comp=Z,1.6nm,0.8s,baz=39,slow=6.2						
NOA	NORSAR Array B	72.15	338	P	P	01 49 04.2	-0.6
	comp=Z,2.4nm,0.8s,baz=38,slow=6.0,SNR=6.4						
NOA				LR	LR	02 24 50.2	
	comp=Z,62nm,19.0s,baz=35,slow=39						
AKASG	Malin Array Be	72.97	323	P	P	01 49 09.3	-0.5
	comp=Z,0.5nm,0.4s,baz=41,slow=7.0,SNR=6.0						
PDAR	Pinedale Array	74.61	47	P	P	01 49 20.9	+1.0
	comp=Z,0.3nm,0.7s,baz=274,slow=3.5,SNR=3.5						
PDAR	Pinedale Array	74.61	47	P	P	01 49 20.6	+0.7
BUR08	Bucovina Ar. S	77.00	322	P	P	01 49 33.2	-0.2
BURAR	Bucovina Array	77.01	322	P	P	01 49 34.2	+0.8
KOLS	Kolonicke sedl	77.40	325	*e*P	P	01 49 36.6	+1.1
BRTR	Keskin Array B	78.09	312	P	P	01 49 39.7	+0.1
	comp=Z,0.8nm,0.7s,baz=45,slow=3.7,SNR=5.7						
BRTR				LR	LR	02 27 24.2	
	comp=Z,51nm,18.8s,baz=35,slow=38						
BRTR	Keskin Array B	78.09	312	P	P	01 49 39.3	-0.3
CLL	Collm	79.38	331	*e*P	P	01 49 47.0	+0.7
GERES	GERESS Array B	81.08	329	P	P	01 49 55.0	-0.7
	comp=Z,1.0nm,0.8s,baz=51,slow=5.3,SNR=6.8						
GERES				LR	LR	02 30 37.5	
	comp=Z,72nm,21.7s,baz=344,slow=39						
PPT	Papeete	84.59	118	LR	LR	02 19 36.8	
	comp=Z,47nm,21.0s,baz=1.5,slow=30						
ESDC	Sonseca Array	95.38	335	LR	LR	02 40 06.5	
	comp=Z,81nm,20.4s,baz=25,slow=39						

TAP 23 01:42:56.8, 23°.22N×121°.33E, h25^{km}±1^{km}, ML1.2, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FULB	Fuli	0.04	246	*i* P	Pb	01 43 01.3	+0.1
	baz=246						
FULB				*i* S	Sb	01 43 04.8	+0.6
	baz=246						
EYUL	Yuli	0.13	354	P	Pb	01 43 02.4	+0.6
	baz=353						
EYUL				*i* S	Sb	01 43 06.9	+1.7
	baz=353						
TWF1	Yuli	0.14	346	*i* P	Pb	01 43 02.2	+0.3
	baz=348						
TWF1				*i* S	Sb	01 43 06.3	+0.9
	baz=348						
YULB	Yu-li	0.18	349	*i* P	Pb	01 43 02.6	+0.3
	baz=349						
YULB				*i* S	Sb	01 43 06.5	+0.5
	baz=349						
YULB	Yu-li	0.18	349	P	Pb	01 43 02.5	+0.2
EDH	Donghe	0.24	187	*e*P	Pb	01 43 03.6	+0.6
	baz=186						
EDH				*e*S	Sb	01 43 09.1	+1.8
	baz=186						
HGSD	Ruisui	0.29	17	*e*P	Pb	01 43 04.1	+0.4
	baz=16						
HGSD				*e*S	Sn	01 43 09.7	-1.2
	baz=16						
EHY	Hungye	0.29	358	*i* P	Pb	01 43 04.1	+0.4
	baz=359						
EHY				S	Sb	01 43 09.7	+1.2
	baz=359						
ELDTW	Lidau	0.29	265	*e*P	Pb	01 43 04.3	+0.4
	baz=264						
ELDTW				*e*S	Sb	01 43 09.3	+0.6
	baz=264						
YUS	Yu-Shan	0.45	308	*e*P	Pn	01 43 07.4	-0.6
	baz=307						
YUS				*e*S	Sn	01 43 14.3	-1.2
	baz=307						
VWDT	VWDT	0.56	342	*e*P	Pb	01 43 08.2	+0.1
	baz=341						
VWDT				*e*S	Sn	01 43 17.3	-0.4
	baz=341						

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*JMA **23** 01:43:49.6±0.1, 36°.89N×141°.38E, h46^{km}±2^{km}, M3.9*

JMA Felt I J1.

*NIED **23** 01:43:49.7, 36°.89N×141°.38E, h46^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-2.03; $M_{\theta\theta}$-0.84; $M_{\phi\phi}$2.87; $M_{r\theta}$-3.04; $M_{\theta\phi}$1.31; $M_{\phi r}$-3.32; Fault plane solution: $M_0$5.32000×10^{14} NP1:ϕ_s41.00000°, δ77.00000°, λ-72.00000°. NP2:ϕ_s166.00000°, δ22.00000°, λ-143.00000°.*

*NEIC **23** 01:43:52±2.1, 36°.90N±0°.05×141°.4E±0°.1, h36^{km}±9^{km}, mb4.4/11 Error ellipse: s-maj=13.6km s-min=5.6km az=106.0*

*IDC **23** 01:43:53.1±2.6, 36°.81N×141°.37E, h51^{km}±24^{km}, mb3.3/11, mb1 3.6/14, mb1mx3.5/42, mbtmp3.6/14, ML3.5/2, Error ellipse: s-maj=19.7km s-min=13.6km az=69.0*

ISC 23 01:43:49.8±1.8**, 36°.91N**±0°.04×**141°.44E**±0°.06**, h23^{km}**±11^{km}**, n65, σ1^s.20**/72**, mb3.9**/20**, 1D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ONAJ	Iwakimizuishiy	0.55	290	P	Pb	01 44 00.6	-0.2
ONAJ				*e*S	Sb	01 44 08.3	+0.1
JFK	Kawauchi	0.64	315	P	Pb	01 44 02.0	-0.3
JFK				*e*S	Sb	01 44 10.5	-0.4
JFFD	Fukushimafurud	0.73	284	P	Pn	01 44 03.0	-1.7
JHO	Hitachi	0.76	247	P	Pn	01 44 03.1	-2.0
JHO				S	Sb	01 44 13.1	-1.2
JHYU	Hitachinakayam	0.89	231	*e*S	Sn	01 44 16.2	-2.9
JFT	Otama	1.07	305	P	Pn	01 44 09.2	-0.2
JFT				*e*S	Sn	01 44 23.2	-0.4
JMM	Marumori	1.08	332	P	Pn	01 44 08.6	-1.0
JMM				*e*S	Sn	01 44 22.2	-1.7
JMM	Marumori	1.08	332		Pn	01 44 08.7	-0.8
JMM					Sn	01 44 21.6	-2.2

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JYT   Yasato             1.21 236   Pn      Pn      01 44 10.2 -1.2
JYT                                 Sn      Sn      01 44 23.8 -3.3
JIO   Ouri               1.54 357   P       Pn      01 44 14.7 -1.1
JIO                                eS       Sn      01 44 32.4 -2.8
JOU   Okura              1.58 337   P       Pn      01 44 16.4  0.0
JOU                                eS       Sn      01 44 36.2 +0.1
JAG   Ashikaga           1.67 254   P       Pn      01 44 16.7 -0.9
MJAR  Matsushiro Arr     2.62 263   P       Pn      01 44 31.3 +0.5
      2.5nm,0.3s,baz=90,slow=15,SNR=32
MJAR                                S       Sn      01 45 02.5 +0.7
      2.8nm,0.3s,baz=90,slow=18,SNR=2.8
MJAR  Matsushiro Arr     2.62 263           Pn      01 44 31.5 +0.7
MAJO  Matsushiro         2.62 263   Pn      Pn      01 44 31.6 +0.8
MAT   Matsushiro         2.62 263   P       Pn      01 44 31.5 +0.7
MAT                                 S       Sn      01 45 02.2 +0.3
JSD   Sado               2.77 295   Pn      Pn      01 44 32.6 -0.1
JGF   Kuroka             3.55 250   Pn      Pn      01 44 44.8 +1.2
JTM   Tenmabayashi       3.88 356   Pn      Pn      01 44 48.8 +0.8
INU   Inuyama            3.91 248   Pn      Pn      01 44 49.5 +1.2
JHJ   Hachijo jima 2     4.02 200   P       Pn      01 44 51.1 +1.1
      29nm,0.3s,baz=80,slow=19,SNR=1.6
JHJ                                 S       Sn      01 45 34.9 -1.4
      16nm,0.3s,baz=46,slow=23,SNR=1.3
JHS   Saijyo             7.02 257   Pn      Pn      01 45 33.8 +2.7
USRK  Ussuriysk Ar.     10.23 318   P       Pn      01 46 17.7 +2.6
      baz=137,slow=13,SNR=1.5
NJ2   Nanjing           19.23 262  eP       P       01 48 12.5 +0.2
NJ2                                 pmax    pmax
      comp=Z,7.0nm,0.5s
HHC   Hu-ho-hao-te      23.53 289  eP       P       01 48 58.8 +0.4
HHC                                 pmax    pmax
      comp=Z,4.0nm,1.0s
HHC                                 pmax    pmax
      comp=Z,210nm,5.5s
SONM  Songino Array     27.87 304   P       P       01 49 38.0 +0.2
      comp=Z,0.7nm,0.7s,baz=103,slow=8.8,SNR=6.8
SONM  Songino Array     27.87 304   P       P       01 49 38.0 +0.2
H11N2 WAKE ISLAND Hy    28.07 121   T       T       02 18 56.2
      baz=313,slow=75,SNR=43
H11N1 WAKE ISLAND Hy    28.07 121   T       T       02 18 56.1
      baz=313,slow=75,SNR=55
H11N3 WAKE ISLAND Hy    28.09 121   T       T       02 18 55.7
      baz=313,slow=75,SNR=43
H11S1 WAKE ISLAND Hy    28.77 123   T       T       02 19 48.8
      baz=315,slow=76,SNR=21
H11S3 WAKE ISLAND Hy    28.78 123   T       T       02 19 47.1
      baz=315,slow=76,SNR=26
H11S2 WAKE ISLAND Hy    28.79 123   T       T       02 19 48.2
      baz=315,slow=76,SNR=18
LZH   Lanzhou           30.11 280  eP       P       01 49 59.3 +1.5
LZH                                 pP      sP      01 50 10.6 +3.2
LZH                                 sP      pP      01 50 13.8 +9.2
LZH                                 pmax    pmax
      comp=Z,13nm,1.1s
LZH                                 pmax    pmax
      comp=Z,61nm,4.9s
LZH                                 LR      LR
      comp=N,250nm,13.6s
LZH                                 LR      LR
      comp=E,520nm,13.3s
LZH                                 LR      LR
      comp=Z,340nm,14.1s
KMI   Kunming           34.96 262 ⇓P       P       01 50 40.3 -0.2
KMI                                 pP      pP      01 50 50.8 +3.5
KMI                                 sP      sP      01 50 53.5 +3.5
KMI                                 pmax    pmax
      comp=Z,7.0nm,0.7s
KMI                                 LR      LR
      comp=N,200nm,10.0s
KMI                                 LR      LR
      comp=E,260nm,14.2s
KMI                                 LR      LR
      comp=Z,320nm,16.2s
WMQ   Urumqi            40.91 297  eP       P       01 51 31.6 +1.3
ZAA0  Zalesovo Array    42.01 312   P       P       01 51 39.8 +0.7
ZAA0                                IAmb    IAmb    01 51 48.6
      comp=Z,2.4nm,0.8s
ZALV  Zalesovo Beam     42.01 312   P       P       01 51 39.3 +0.2
      comp=Z,1.3nm,0.5s,baz=98,slow=6.8,SNR=9.4
ZALV                                PcP     PcP     01 53 33.3 -0.6
      comp=Z,0.5nm,0.6s,baz=64,slow=3.4,SNR=2.5
ZALV  Zalesovo Beam     42.01 312   P       P       01 51 40.0 +0.9
MK31  Makanchi Array    44.20 302   P       P       01 51 57.6 +0.6
MKAR  Makanchi Array    44.20 302   P       P       01 51 56.5 -0.5
      comp=Z,0.3nm,0.4s,baz=82,slow=11,SNR=6.0
MKAR                                PcP     PcP     01 53 41.0 -0.4
      comp=Z,0.3nm,0.8s,baz=67,slow=4.8,SNR=2.9
MKAR  Makanchi Array    44.20 302   P       P       01 51 57.4 +0.4
KURK  Kurchatov         46.02 308   P       P       01 52 10.8 -0.6
KURK                                IAmb    IAmb    01 52 21.2
      comp=Z,4.1nm,0.8s
IMAR  Indian Mountai    46.74  31   P       P       01 52 18.1 +1.3
MDM   Murphy Dome       49.01  32   P       P       01 52 36.1 +1.8
MDM                                 IAmb    IAmb    01 52 36.6
      comp=Z,7.5nm,1.5s
ILAR  Eielson Array     49.59  32   P       P       01 52 39.2 +0.5
      comp=Z,0.3nm,0.6s,baz=268,slow=5.7,SNR=8.4
ILAR                                PcP     PcP     01 53 58.8 -1.2
      comp=Z,0.1nm,0.6s,baz=290,slow=3.7,SNR=1.2
ILAR  Eielson Array     49.59  32   P       P       01 52 39.4 +0.6
INK   Inuvik            54.48  27   P       P       01 53 16.9 +1.8
INK                                 IAmb    IAmb    01 53 29.1
      comp=Z,3.8nm,1.5s
FITZ  Fitzroy Crossi    56.71 198   P       P       01 53 32.2 +0.6
WB0   Warramunga Arr    56.76 188   P       P       01 53 31.5 -0.5
WB0                                 IAmb    IAmb    01 53 31.6
      comp=Z,8.9nm,1.5s
WR0   Warramunga Arr    56.94 188   P       P       01 53 32.7 -0.5
WB2   Warramunga Arr    56.94 188   P       P       01 53 32.9 -0.3
WB2                                 IAmb    IAmb    01 53 33.3
      comp=Z,7.4nm,1.4s
WRA   Warramunga Arr    56.94 188   P       P       01 53 32.0 -1.3
      comp=Z,0.5nm,0.8s,baz=4.3,slow=7.4,SNR=0.9
WRA                                 PcP     PcP     01 54 28.5 +0.1
      comp=Z,0.4nm,0.6s,baz=359,slow=4.5,SNR=1.9
ABKAR Akbulak array     58.03 310   P       P       01 53 39.5 -1.2
EUNU  Eureka            60.30   9   P       P       01 53 56.0 -0.1
ASAR  Alice Springs     60.67 188   P       P       01 53 58.4 -0.8
      comp=Z,0.3nm,0.7s,baz=18,slow=6.3,SNR=2.6
YKA   Yellowknife Ar    63.90  30   P       P       01 54 20.7 +0.4
      comp=Z,0.2nm,0.9s,baz=305,slow=6.5,SNR=2.7
FINES FINESS Array B    68.93 332   P       P       01 54 52.1 -0.5
      comp=Z,1.7nm,0.9s,baz=40,slow=11,SNR=1.3
NVAR  Mina Array Bea    75.04  53   P       P       01 55 31.4 +1.5
      comp=Z,0.3nm,0.5s,baz=280,slow=6.6,SNR=3.8
PDAR  Pinedale Array    77.74  45   P       P       01 55 45.2  0.0
      comp=Z,0.2nm,0.7s,baz=270,slow=2.7,SNR=1.8
BRTR  Keskin Array B    78.95 312   P       P       01 55 50.8 -1.0
      comp=Z,0.9nm,1.1s,baz=72,slow=9.3,SNR=2.2
LPAZ  La Paz           146.74  60   PKPbc   PKPbc   02 03 30.7 -0.3
      comp=Z,1.0nm,0.7s,baz=354,slow=8.6,SNR=4.2
H03N2 Juan Fernandez   146.99  96   T       T       04 47 52.1
      baz=291,slow=76,SNR=25
H03N3 Juan Fernandez   147.00  96   T       T       04 47 53.0
      baz=291,slow=76,SNR=32
H03N1 Juan Fernandez   147.01  96   T       T       04 47 52.6
      baz=291,slow=76,SNR=26
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*IDC **23** 01:52:16.4±1.7, 4°.99S×133°.91E, h0^{km}, mb3.2/1, mb1 3.7/6, mb1mx3.5/25, mbtmp3.5/6, ML3.5/5, MS2.9/2, Ms1 2.9/2, ms1mx2.5/17, Error ellipse: s-maj=53.4km s-min=19.5km az=71.0*

ISC 23 01:52:19.7±1.2**, 5°.09S**±0°.08×**133°.6E**±0°.2**, h25^{km}, n6, σ1^{s}84**/9**, Aru Islands region**

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Code  Station Name         Δ°  AZ°    Phase ID          Time      Res
                                    Op      ISC       h  m  s    ISC
SIJI  Sorong             4.79 331   Pn      Pn      01 53 30.7 +0.3
      1.0nm,0.3s,baz=248,slow=19,SNR=1.6
SIJI                                Sn      Sn      01 54 22.5 -2.6
      1.6nm,0.3s,baz=325,slow=19,SNR=4.0
SIJI                                LR      LR      01 55 28.0
      comp=Z,107nm,18.6s,baz=327,slow=39
WRA   Warramunga Arr    14.78 177   Pn      Pn      01 55 46.9 -0.5
      0.1nm,0.3s,baz=355,slow=13,SNR=2.7
WRA                                 Sn      Sn      01 58 28.9 -1.6
      0.2nm,0.3s,baz=359,slow=23,SNR=6.1
WRA                                 Lg      Lg      02 00 07.4
      0.0nm,0.3s,baz=359,slow=29,SNR=2.7
WRA                                 LR      LR      02 01 54.3
      comp=Z,62nm,21.6s,baz=115,slow=39
FITZ  Fitzroy Crossi    15.09 210   Pn      Pn      01 55 53.2 +1.8
      0.3nm,0.3s,baz=32,slow=10,SNR=6.5
FITZ                                Sn      Sn      01 58 36.0 -1.8
      0.2nm,0.3s,baz=179,slow=14,SNR=3.0
ASAR  Alice Springs     18.47 179   P       Pn      01 56 35.5 +1.4
      0.2nm,0.3s,baz=8.4,slow=10.0,SNR=12
ASAR                                Lg      Lg      02 02 04.9
      baz=7.3,slow=30,SNR=1.6
CTA   Charters Tower    19.34 142   P       P       01 56 43.0 -0.6
      0.2nm,0.3s,baz=338,slow=11,SNR=2.1
CTA                                 Lg      Lg      02 02 27.1
      0.2nm,0.3s,baz=253,slow=17,SNR=1.5
MKAR  Makanchi Array    68.66 325   P       P       02 03 22.4 +1.3
      0.1nm,0.5s,baz=119,slow=7.9,SNR=4.2
```

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*NEIC **23** 01:55:43.1±1.3, 18°.6N±0°.2×68°.9W±0°.1, h93^{km}±37^{km}, Error ellipse: s-maj=30.0km s-min=11.2km az=207.0*
*RSPR **23** 01:55:43.6, 18°.77N×68°.91W, h94^{km}±5^{km}, MD3.7/7*
*OSPL **23** 01:55:45.7±2.4, 18°.38N×68°.74W, h0^{km}±22^{km}, ML2.8*

ISC 23 01:55:45.0±2.0**, 18°.8N**±0°.1×**68°.81W**±0°.06**, h81^{km}**±35^{km}**, n36, σ0^{s}89**/41**, 10C, Mona Passage**

```
Code  Station Name         Δ°  AZ°    Phase ID          Time      Res
                                    Op      ISC       h  m  s    ISC
SDD   Santo Domingo      1.11 251  i P      Pn      01 56 06.1 +0.7
SDD                                eS       Sn      01 56 20.2 -0.5
AGPR  Aguadilla, PR      1.65 102⇑eP       Pn      01 56 11.7 -0.6
AGPR  Aguadilla, PR      1.65 102  eS       Sn      01 56 34.4 +1.4
AGPR  Aguadilla, PR      1.65 102           Pn      01 56 11.4 -0.9
AGPR                                        Sn      01 56 34.0 +1.0
AGPR                                IAML            01 56 37.7
      comp=N,188nm,0.8s
AGPR                                IAML            01 56 41.6
      comp=E,178nm,1.2s
AGPR  Aguadilla, PR      1.65 102  i P      Pn      01 56 11.4 -0.9
AGPR                               eS       Sn      01 56 33.3 +0.3
AGPR                                IAML            01 56 44.3
      comp=Z,132nm,1.1s
MPR   Mayaguez           1.70 111   Pn      Pn      01 56 10.8 -2.1
MPR   Mayaguez           1.70 111  eP       Pn      01 56 12.1 -0.8
MLPR  Magueyes Islan     1.88 116⇑eP       Pn      01 56 14.4 -0.9
MLPR  Magueyes Islan     1.88 116   Pn      Pn      01 56 13.9 -1.4
SC01  Santiago de lo     1.91 289  i P      Pn      01 56 20.9 +5.1
SC01                               eS       Sn      01 56 46.2 +6.9
SC01                                IAML            01 56 53.1
      comp=Z,70nm,0.3s
AOPR  Arecibo Observ     2.01 103⇑eP       Pn      01 56 16.9 -0.1
AOPR  Arecibo Observ     2.01 103  eS       Sn      01 56 42.0 +0.5
AOPR  Arecibo Observ     2.01 103   Pn      Pn      01 56 16.5 -0.6
AOPR                                        Sn      01 56 41.6 +0.1
AOPR                                IAML            01 56 45.1
      comp=N,257nm,0.3s
OBIP  Obispado Ponce     2.23 110⇑eP       Pn      01 56 19.7 -0.3
OBIP  Obispado Ponce     2.23 110  eS       Sn      01 56 47.7 +0.9
OBIP  Obispado Ponce     2.23 110   Pn      Pn      01 56 18.5 -1.5
CELP  Cerrillos          2.24 109⇑eP       Pn      01 56 19.8 -0.4
CELP  Cerrillos          2.24 109  eS       Sn      01 56 48.3 +1.2
CELP  Cerrillos          2.24 109           Pn      01 56 19.8 -0.4
CELP                                        Sn      01 56 48.3 +1.2
SDDR  Presa de Saban     2.35 274  i P      Pn      01 56 24.9 +3.1
SDDR                               eS       Sn      01 56 57.1 +7.3
SDDR                                IAML            01 57 05.2
      comp=Z,36nm,0.5s
SJG   San Juan           2.62 105   Pn      Pn      01 56 24.1 -1.2
SJG                                 IAML            01 56 57.0
      comp=Z,52nm,0.3s
SJG                                 IAML            01 56 58.9
      comp=Z,50nm,0.4s
GCPR  Guaynabo City      2.63 101   Pn      Pn      01 56 25.1 -0.3
GCPR                                IAML            01 57 08.2
      comp=E,40nm,2.4s
IGPR  InterUniversit     2.70 108⇑eP       Pn      01 56 26.1 -0.2
IGPR  InterUniversit     2.70 108  eS       Sn      01 56 59.0 +0.8
PDPR  Patillas Dam,      2.76 106   Pn      Pn      01 56 26.6 -0.6
CBYP  Canovanas          2.85 101⇑eP       Pn      01 56 28.0 -0.5
CBYP  Canovanas          2.85 101           Pn      01 56 28.0 -0.5
HUMP  Col San Antoni     2.89 103⇑eP       Pn      01 56 28.3 -0.6
HUMP  Col San Antoni     2.89 103  eS       Sn      01 57 03.1 +0.5
HUMP  Col San Antoni     2.89 103           Pn      01 56 27.9 -0.9
HUMP                                        Sn      01 57 01.6 -1.0
HUMP                                IAML            01 57 03.8
      comp=E,50nm,0.2s
HUMP                                IAML            01 57 05.0
      comp=N,53nm,0.2s
MTP   Monte Pirata       3.17 103⇑eP       Pn      01 56 32.5 -0.3
MTP   Monte Pirata       3.17 103  eS       Sn      01 57 11.1 +1.6
MTP   Monte Pirata       3.17 103           Pn      01 56 32.9 +0.1
MTP                                 Sn      Sn      01 57 09.2 -0.4
MTP                                 IAML            01 57 14.7
      comp=E,27nm,0.7s
MTP                                 IAML            01 58 11.0
      comp=N,29nm,3.6s
CUPR  Culebra, Puert     3.38  98⇑eP       Pn      01 56 36.2 +0.6
CUPR  Culebra, Puert     3.38  98           Pn      01 56 36.0 +0.5
CUPR                                IAML            01 57 16.8
      comp=E,35nm,3.4s
CUPR                                IAML            01 58 51.8
      comp=N,37nm,2.8s
GRTK  Grand Turk         3.46 321   Pn      Pn      01 56 35.9 -0.7
GRTK                                IAML            01 58 40.0
      comp=N,125nm,1.9s
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*IDC **23** 02:02:58.5±1.7, 19°.38N×64°.27W, h0^{km}, mb3.5/3, mb1 4.0/4, mb1mx3.6/25, mbtmp3.7/4, ML3.1/1, MS3.4/2, Ms1 3.4/2, ms1mx2.8/20, Error ellipse: s-maj=54.8km s-min=29.5km az=58.0*
*NEIC **23** 02:03:01.2±1.6, 19°.18N±0°.05×64°.35W±0°.05, h21^{km}±7^{km}, Error ellipse: s-maj=7.4km s-min=5.9km az=143.0*
*RSPR **23** 02:03:03.1, 19°.14N×64°.27W, h32^{km}±18^{km}, MD3.8/8*

ISC 23 02:02:58.8±1.7**, 19°.22N**±0°.05×**64°.28W**±0°.03**, h9^{km}**±11^{km}**, n71, σ1^{s}31**/80**, mb3.9**/6**, 17C-3D, Virgin Islands**

```
Code  Station Name         Δ°  AZ°    Phase ID          Time      Res
                                    Op      ISC       h  m  s    ISC
TBVI  Tortola            0.86 202⇓iP       Pb      02 03 16.4 +0.6
TBVI                               eS       Sg      02 03 26.8 +0.3
TBVI  Tortola            0.86 202⇓iP       Pb      02 03 16.4 +0.6
TBVI  Tortola            0.86 202           Pb      02 03 16.4 +0.6
TBVI                                        Sg      02 03 26.8 +0.3
CUPR  Culebra, Puert     1.31 226⇓eP       Pn      02 03 23.0 -0.3
CUPR  Culebra, Puert     1.31 226  eS       Sb      02 03 38.7 -1.9
CUPR  Culebra, Puert     1.31 226           Pn      02 03 23.0 -0.3
CUPR                                        Sb      02 03 40.0 -0.5
CUPR                                IAML            02 03 43.1
      comp=N,2µm,0.5s
CUPR                                IAML            02 03 44.8
      comp=E,2µm,0.7s
CDVI  St. Croix          1.53 198  eP       Pb      02 03 27.6 +0.2
CDVI                               eS       Sg      02 03 49.6 +1.6
CDVI  St. Croix          1.53 198   Pn      Pb      02 03 27.5 +0.2
MTP   Monte Pirata       1.64 227⇑eP       Pn      02 03 28.0 +0.1
MTP   Monte Pirata       1.64 227⇑eP       Pn      02 03 28.0 +0.1
MTP   Monte Pirata       1.64 227   Pn      Pn      02 03 28.3 +0.4
MTP                                 IAML            02 03 53.3
      comp=E,1µm,0.6s
CBYP  Canovanas          1.76 238⇑eP       Pn      02 03 29.7 +0.1
CBYP  Canovanas          1.76 238⇑eP       Pn      02 03 29.7 +0.1
CBYP  Canovanas          1.76 238   Pn      Pn      02 03 29.4 -0.2
HUMP  Col San Antoni     1.83 235⇑eP       Pn      02 03 30.7 +0.2
HUMP                               eS       Sn      02 03 52.0 -1.8
HUMP  Col San Antoni     1.83 235⇑eP       Pn      02 03 30.7 +0.2
HUMP  Col San Antoni     1.83 235   Pn      Pn      02 03 30.5  0.0
HUMP                                Sn      Sn      02 03 51.7 -2.1
HUMP                                IAML            02 03 56.8
      comp=N,925nm,0.4s
SABA  Saba               1.87 148  eP       Pg      02 03 34.0 -0.8
SABA                               eS       Sg      02 04 01.5 +2.5
SABA  Saba               1.87 148   Pn      Pb      02 03 32.5 -0.7
SABA                                IAML            02 04 12.6
      comp=N,1µm,0.5s
SABA                                IAML            02 04 13.5
      comp=E,1µm,0.7s
GCPR  Guaynabo City      1.93 242⇑eP       Pn      02 03 31.4 -0.5
GCPR  Guaynabo City      1.93 242           Pn      02 03 31.2 -0.7
PDPR  Patillas Dam,      2.04 234           Pn      02 03 32.9 -0.4
SJG   San Juan           2.08 238  eP       Pn      02 03 34.3 +0.3
SJG   San Juan           2.08 238           Pn      02 03 33.5 -0.5
SJG                                 IAML            02 04 04.7
      comp=E,789nm,0.6s
SJG                                 IAML            02 04 07.5
      comp=E,710nm,0.4s
SEUS  St. Eustatius      2.11 144  e        Pn      02 03 26.1 -8.3
IGPR  InterUniversit     2.13 235⇑eP       Pn      02 03 35.5 +0.9
IGPR  InterUniversit     2.13 235  eS       Sn      02 03 59.8 -1.4
EMPR  Esperanza - Ma     2.25 251   Pn      Pn      02 03 37.7 +1.4
EMPR                                IAML            02 04 10.9
      comp=N,1µm,1.0s
SKI   Saint Kitts        2.38 142  eP       Pb      02 03 41.2 -0.7
CELP  Cerrillos          2.46 243⇑eP       Pn      02 03 39.7 +0.6
CELP                               eS       Sn      02 04 07.5 -1.7
CELP  Cerrillos          2.46 243⇑eP       Pn      02 03 39.7 +0.6
CELP  Cerrillos          2.46 243           Pn      02 03 39.7 +0.6
CELP                                        Sn      02 04 07.5 -1.7
OBIP  Obispado Ponce     2.49 242           Pn      02 03 38.5 -1.1
OBIP                                IAML            02 04 12.7
      comp=E,496nm,0.6s
OBIP                                IAML            02 04 19.5
      comp=N,470nm,0.6s
AOPR  Arecibo Observ     2.50 250⇑eP       Pn      02 03 40.3 +0.6
AOPR  Arecibo Observ     2.50 250⇑eP       Pn      02 03 40.3 +0.6
AOPR  Arecibo Observ     2.50 250           Pn      02 03 39.7  0.0
AOPR                                IAML            02 04 20.4
      comp=N,926nm,0.4s
ICMP  Isla Caja de M     2.51 238   Pn      Pn      02 03 41.0 +1.2
ICMP                                IAML            02 04 21.2
      comp=N,451nm,0.7s
ICMP                                IAML            02 04 23.2
      comp=E,685nm,0.7s
AGPR  Aguadilla, PR      2.78 255⇑eP       Pn      02 03 44.1 +0.5
AGPR  Aguadilla, PR      2.78 255⇑eP       Pn      02 03 44.1 +0.5
AGPR  Aguadilla, PR      2.78 255   Pn      Pn      02 03 43.2 -0.3
AGPR                                IAML            02 04 26.9
      comp=N,459nm,0.5s
AGPR                                IAML            02 04 38.6
      comp=E,354nm,0.7s
ANWB  Willy Bob          2.83 123  eP       Pb      02 03 47.6 -1.9
LSP   Las Mesas          2.85 249⇑eP       Pn      02 03 45.7 +1.1
LSP   Las Mesas          2.85 249⇑eP       Pn      02 03 45.7 +1.1
LSP   Las Mesas          2.85 249           Pn      02 03 45.7 +1.1
MPR   Mayaguez           2.89 250           Pn      02 03 46.0 +1.0
MLPR  Magueyes Islan     2.90 245⇑eP       Pn      02 03 45.2 +0.1
MLPR  Magueyes Islan     2.90 245           Pn      02 03 45.1 -0.1
BPA   Boggy Peak         3.16 133  eP       Pn      02 03 50.8 +2.0
BPA                                eS       Sn      02 04 27.6 +0.9
MLYT  Lee's Yard         3.18 141  eP       Pb      02 03 54.1 -1.5
ANBD  Bethesda, Anti     3.22 132  eP       Pn      02 03 51.8 +2.1
ANBD                               eS       Sn      02 04 29.3 +1.1
CBE   Ff, Capester       4.04 140  eP       Pn      02 04 05.0 +4.0
CBE   Ff, Capester       4.04 140  eS       Sb      02 04 54.4 -4.8
H05N1 Guadeloupe/Mar     4.21 133   Pn      Pn      02 04 05.8 +2.5
H05N1                               Sn      Sn      02 04 53.1 +0.3
DSLB  Salisbury          4.65 144  eP       Pn      02 04 12.2 +3.0
BIM   Bigot              5.59 146  eP       Pn      02 04 27.1 +4.8
SDDR  Presa de Saban     6.63 269  eP       Pn      02 04 37.7 +1.1
SDDR  Presa de Saban     6.63 269  eS       Sn      02 05 51.7 -0.6
SDDR  Presa de Saban     6.63 269   Pn      Pn      02 04 38.0 +1.4
BBSR  BB Station        13.11 358   Pn      Pn      02 06 04.0 -1.2
ROSC  El Rosal          17.32 216   P       P       02 07 03.8 +0.9
      comp=E,1.2nm,0.3s,baz=56,slow=23,SNR=4.6
ROSC                                LR      LR      02 14 07.5
      comp=E,129nm,21.0s,baz=16,slow=38
ROSC  El Rosal          17.32 216   P       P       02 07 03.4 +0.5
ROSC                                IAmb    IAmb    02 07 22.2
      comp=Z,10nm,0.8s
HNH   Hanover           25.32 346   P       P       02 08 26.9 +1.0
SAML  Samuel            28.01 178   P       P       02 08 50.9 +0.6
MNMC  Minye Minye       38.47 188   P       P       02 10 21.0 -0.6
MNMC                                IAmb    IAmb    02 10 21.4
      comp=Z,7.1nm,0.8s
PV04  Paradox Valley    43.04 306   P       P       02 11 00.7 +1.5
PV04                                IAmb    IAmb    02 11 20.2
      comp=Z,7.1nm,1.3s
PDAR  Pinedale Array    44.68 312   P       P       02 11 12.6 +0.1
      comp=Z,0.2nm,0.4s,baz=113,slow=8.4,SNR=4.8
PDAR  Pinedale Array    44.68 312   P       P       02 11 14.0 +1.6
FCC   Fort Churchill    45.04 339   P       P       02 11 15.2 +0.5
FCC                                 IAmb    IAmb    02 11 34.2
      comp=Z,4.2nm,1.5s
NVAR  Mina Array Bea    50.32 304   P       P       02 11 57.0 +0.7
      comp=Z,0.6nm,0.8s,baz=112,slow=9.2,SNR=3.9
YBH   Yreka Blue Hor    54.03 308   LR      LR      02 35 35.1
      comp=Z,40nm,21.8s,baz=302,slow=36
YKA   Yellowknife Ar    55.26 334   P       P       02 12 32.1  0.0
      comp=Z,0.5nm,0.7s,baz=110,slow=8.3,SNR=6.5
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*IDC **23** 02:20:55.8±9.2, 22°.10S×179°.38W, h544^{km}±103^{km}, mb3.0/3, mb1 3.2/4, mb1mx2.9/26, mbtmp4.0/4, Error ellipse: s-maj=59.5km s-min=46.5km az=23.0*
*NEIC **23** 02:20:58.9±1.2, 22°.2S±0°.2×179°.4W±0°.2, h590^{km}±5^{km}, mb4.2/17, Error ellipse: s-maj=32.5km s-min=24.7km az=123.0*

ISC 23 02:20:58.4±1.1**, 22°.3S**±0°.2×**179°.3W**±0°.2**, h592^{km}, n35, σ0^{s}60**/35**, mb4.1**/10**, South of Fiji Islands**

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Code  Station Name         Δ°  AZ°    Phase ID          Time      Res
                                    Op      ISC       h  m  s    ISC
MSVF  Nonsavu            5.16 330   P       P       02 22 31.9 -0.4
URZ   Urewera           16.26 190   P       P       02 24 18.3  0.0
      0.6nm,0.3s,baz=194,slow=20,SNR=1.7
URZ   Urewera           16.26 190   P       P       02 24 18.3  0.0
URZ                                 IAmb    IAmb    02 24 32.0
      comp=Z,11nm,1.0s
CTAO  Charters Tower    32.19 267   P       P       02 26 39.7 +0.2
CTAO                                IAmb    IAmb    02 26 49.2
      comp=Z,5.7nm,1.2s
STKA  Stephens Creek    35.99 246   P       P       02 27 11.9 +0.9
BBOO  Buckleboo         40.73 245   P       P       02 27 49.5 +0.3
BBOO                                IAmb    IAmb    02 28 02.7
      comp=Z,22nm,1.4s
AS31  Alice Springs     43.00 259   P       P       02 28 07.1 -0.1
ASAR  Alice Springs     43.00 259   P       P       02 28 07.2 -0.1
      comp=Z,1.6nm,0.7s,baz=96,slow=8.0,SNR=14
ASAR  Alice Springs     43.00 259   P       P       02 28 06.7 -0.5
WR0   Warramunga Arr    43.04 264   P       P       02 28 07.0 -0.5
WC3   Warramunga Arr    43.19 264   P       P       02 28 08.1 -0.6
WC3                                 IAmb    IAmb    02 28 20.3
      comp=Z,8.0nm,1.4s
WB0   Warramunga Arr    43.21 264   P       P       02 28 08.3 -0.6
WB0                                 IAmb    IAmb    02 28 23.6
      comp=Z,10nm,1.5s
WB2   Warramunga Arr    43.21 264   P       P       02 28 08.1 -0.8
WB2                                 IAmb    IAmb    02 28 14.4
      comp=Z,6.4nm,1.4s
WRAB  Tennant Creek     43.22 264   P       P       02 28 08.2 -0.7
WRA   Warramunga Arr    43.23 264   P       P       02 28 08.2 -0.7
      comp=Z,0.7nm,0.3s,baz=95,slow=7.8,SNR=32
WRA   Warramunga Arr    43.23 264   P       P       02 28 08.6 -0.4
FORT  Forrest           47.54 248   P       P       02 28 41.3 -0.3
FITZ  Fitzroy Crossi    51.66 264   P       P       02 29 12.4 +0.5
FITZ                                IAmb    IAmb    02 29 13.0
      comp=Z,17nm,1.4s
PSA00 Pilbara Seismi    56.15 258   P       P       02 29 43.5 +0.1
PSA00                               IAmb    IAmb    02 29 48.8
      comp=Z,40nm,1.4s
PSAA2 Pilbara Seismi    56.15 258   P       P       02 29 42.5 -1.0
PSAC3 Pilbara Seismi    56.15 258   P       P       02 29 43.5 +0.1
PSAD1 Pilbara Seismi    56.19 258   P       P       02 29 43.8 +0.1
PETK  Petropavlovsk-    77.66 346   P       P       02 31 55.8 +1.3
      comp=Z,0.9nm,0.6s,baz=174,slow=7.1,SNR=1.6
AKASG Malin Array Be   143.94 329   PKP     PKPdf   02 39 27.1 +0.1
      comp=Z,0.4nm,0.3s,baz=45,slow=4.1,SNR=7.6
AKASG Malin Array Be   143.94 329           PKPdf   02 39 27.2 +0.2
AKBB  Malin Array Si   143.94 329   PKPbc   PKPdf   02 39 26.7 -0.4
BR131 Keskin Array S   147.09 310   PKPbc   PKiKP   02 39 37.2 -0.7
BRTR  Keskin Array B   147.09 310   PKPbc   PKiKP   02 39 37.0 -0.9
      comp=Z,0.7nm,0.8s,baz=48,slow=2.5,SNR=4.1
KWP   Kalwaria Pacla   147.64 333           PKiKP   02 39 38.8 +0.3
BUR08 Bucovina Ar. S   147.95 328           PKiKP   02 39 39.6 +0.3
BURAR Bucovina Array   147.96 328   PKPbc   PKiKP   02 39 39.5 +0.2
OJC   Ojcow            148.32 336           PKPbc   02 39 37.9 -0.8
GRA1  Grafenberg Arr   151.39 346   PKPbc   PKPbc   02 39 45.3 -0.6
GRFO  Grafenberg       151.39 346   PKPbc   PKPbc   02 39 45.2 -0.7
GERES GERESS Array B   151.53 342           PKiKP   02 39 47.7 +1.0
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*NNC **23** 02:32:31.9±0.3, 43°.12N×78°.52E, h6^{km}±3^{km}, mb2.8, mpv2.9, Error ellipse: s-maj=4.5km s-min=1.9km az=164.0*
*IASPEI **23** 02:32:32.3±0.9, 43°.13N±0°.02×78°.48E±0°.02, h12^{km}±6^{km}, Error ellipse: s-maj=3.6km s-min=2.9km az=161.5, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

SOME ***23*** *02:32:32.6, 43°.13N×78°.45E, h10^{km}*
KRNET ***23*** *02:32:32.8±0.1, 43°.15N×78°.45E, h18^{km}, mb2.6*
ISC 23 02:32:32.4±0.8**, 43°.13N**±0°.02×**78°.47E**±0°.02**, h12**^{km}±5^{km}**,**
n47, σ0^s.53/92**, 22C-6D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SATY	**Saty**	0.09	212	⇑*e*P	Pg	02 32 35.2	-0.1
	baz=2.0						
SATY				⇑*e*S	Sg	02 32 37.0	-0.3
	baz=2.0						
SATY	**Saty**	0.09	212	⇑*e*P	Pg	02 32 35.2	-0.1
	22nm,0.1s						
SATY				*e*S	Sg	02 32 37.0	-0.3
	340nm,0.1s						
SATY	**Saty**	0.09	212	P	Pg	02 32 35.2	-0.1
	22nm,0.1s						
SATY				S	Sg	02 32 37.2	-0.1
	671nm,0.2s						
KPKS	**Kokpek**	0.37	25	⇑*e*P	Pg	02 32 39.9	0.0
	baz=28						
KPKS				⇑*e*S	Sg	02 32 45.0	+0.2
	baz=28						
KPKS	**Kokpek**	0.37	25	⇑*e*P	Pg	02 32 39.9	0.0
	4.8nm,0.0s						
KPKS				*e*S	Sg	02 32 45.0	+0.2
	39nm,0.3s						
UZB	**Uzynbulak**	0.41	88	*e*P	Pg	02 32 40.6	+0.1
	baz=90						
UZB				*e*S	Sg	02 32 46.0	+0.1
	baz=90						
UZB	**Uzynbulak**	0.41	88	*e*P	Pg	02 32 40.6	+0.1
	26nm,0.0s						
UZB				*e*S	Sg	02 32 46.0	+0.1
	66nm,0.0s						
UZB	**Uzynbulak**	0.41	88	P	Pg	02 32 40.6	+0.1
	26nm,0.0s						
UZB				S	Sg	02 32 46.0	+0.1
	66nm,0.0s						
KURS	**Kuram**	0.42	328	⇓*e*P	Pg	02 32 40.8	+0.1
	baz=29						
KURS				⇓*e*S	Sg	02 32 46.7	+0.4
	baz=29						
KURS	**Kuram**	0.42	328	⇓*e*P	Pg	02 32 40.8	+0.1
	4.1nm,0.2s						
KURS				*e*S	Sg	02 32 46.7	+0.4
	2.4nm,0.2s						
PRZ	**Przheval'sk**	0.65	185	⇑*i*P	Pb	02 32 45.9	0.0
	baz=83						
PRZ				⇑*i*S	Sb	02 32 55.3	+0.3
	baz=83						
ANVS	**Anan'yevo**	0.69	240	⇑*i*P	Pg	02 32 45.7	-0.1
	baz=38						
ANVS				⇑*i*S	Sg	02 32 54.8	0.0
	baz=38						
PDGK	**Podgornoye**	0.77	75	P	Pg	02 32 46.4	-1.0
	1.4nm,0.1s						
PDGK				S	Sg	02 32 56.3	-1.2
	1.8nm,0.1s						
PDGK	**Podgornoye**	0.77	75	⇑P	Pg	02 32 46.9	-0.5
	0.9nm,0.3s						
PDGK				⇑S	Sg	02 32 57.1	-0.4
	2.0nm,0.6s						
MNBS	**Baschi**	0.95	357	⇑*e*P	Pg	02 32 50.8	0.0
	2.5nm,0.1s						
MNBS				*e*S	Sg	02 33 03.5	+0.4
	8.7nm,0.2s						
MNBS	**Baschi**	0.95	357	P	Pg	02 32 50.3	-0.4
	2.5nm,0.1s						
MNBS				S	Sg	02 33 02.9	-0.2
	8.7nm,0.2s						
KOTS	**Kotyrbulak**	1.00	276	*e*P	Pg	02 32 51.4	-0.3
	baz=76						
KOTS				*e*S	Sb	02 33 04.8	-0.1
	baz=76						
KOTS	**Kotyrbulak**	1.00	276	*e*P	Pg	02 32 51.4	-0.3
	8.5nm,0.1s						
KOTS				*e*S	Sb	02 33 04.8	-0.1
	15nm,0.4s						
KOTS	**Kotyrbulak**	1.00	276	P	Pg	02 32 51.4	-0.3
	8.5nm,0.1s						
KOTS				S	Sb	02 33 04.8	-0.1
	15nm,0.4s						
TNSS	**Tian-Shan**	1.12	266	*e*P	Pg	02 32 53.8	-0.2
	baz=65						
TNSS				*e*S	Sb	02 33 08.8	+0.1
	baz=65						
TNSS	**Tian-Shan**	1.12	266	*e*P	Pg	02 32 53.8	-0.2
	2.1nm,0.1s						
TNSS				*e*S	Sb	02 33 08.8	+0.1
	1.4nm,0.1s						
TNSS	**Tian-Shan**	1.12	266	P	Pg	02 32 53.8	-0.2
	2.1nm,0.1s						
TNSS				S	Sb	02 33 08.8	+0.1
	1.4nm,0.1s						
ARXS	**Arharly**	1.18	337	*e*P	Pb	02 32 54.4	-0.4
	4.8nm,0.1s						
ARXS				*e*S	Sb	02 33 10.0	0.0
	1.5nm,0.1s						
ARXS	**Arharly**	1.18	337	P	Pb	02 32 54.3	-0.4
	4.8nm,0.1s						
ARXS				S	Sb	02 33 10.0	0.0
	1.5nm,0.1s						
IZV	**Izvestkoviy**	1.36	267	*e*P	Pb	02 32 58.0	0.0
	baz=66						
IZV				*e*S	Sg	02 33 16.3	-0.1
	baz=66						
IZV	**Izvestkoviy**	1.36	267	*e*P	Pb	02 32 58.0	0.0
	1.0nm,0.1s						
IZV				*e*S	Sg	02 33 16.3	-0.1
	4.2nm,0.1s						
IZV	**Izvestkoviy**	1.36	267	P	Pb	02 32 58.0	0.0
	1.0nm,0.1s						
IZV				S	Sg	02 33 16.3	-0.1
	4.2nm,0.1s						
KDJ	**Kajisay**	1.38	224	⇑*i*P	Pb	02 32 58.3	0.0
	baz=23						
KDJ				⇑*i*S	Sn	02 33 16.5	+0.4
	baz=23						
KTBS	**Karatobe**	1.43	295	*e*P	Pb	02 32 59.1	+0.1
	baz=94						
KTBS				*e*S	Sg	02 33 18.2	-0.2
	baz=94						
KTBS	**Karatobe**	1.43	295	*e*P	Pb	02 32 59.1	+0.1
	0.7nm,0.2s						
KTBS				*e*S	Sg	02 33 18.1	-0.2
	8.4nm,0.2s						
KTBS	**Karatobe**	1.43	295	P	Pb	02 32 59.1	+0.1
	0.7nm,0.2s						
KTBS				S	Sg	02 33 18.1	-0.2
	8.4nm,0.2s						
DJR	**Jarkent**	1.53	38	*e*P	Pb	02 33 01.1	+0.2
	2.0nm,0.1s						
DJR				*e*S	Sb	02 33 21.5	+1.2
	3.1nm,0.1s						
DJR	**Jarkent**	1.53	38	P	Pn	02 32 59.8	0.0
	2.0nm,0.1s						
DJR				S	Sn	02 33 19.3	-0.4
	3.1nm,0.1s						
KUU	**Kurty**	1.73	297	*e*P	Pb	02 33 04.3	+0.2
	baz=97						
KUU				*e*S	Sg	02 33 27.0	-1.0
	baz=97						
KUU	**Kurty**	1.73	297	*e*P	Pb	02 33 04.2	+0.2
	0.6nm,0.2s						
KUU				*e*S	Sg	02 33 26.9	-1.0
	7.6nm,0.2s						
KUU	**Kurty**	1.73	297	P	Pb	02 33 04.2	+0.2
	0.6nm,0.2s						
KUU				S	Sg	02 33 26.9	-1.0
	7.6nm,0.2s						
KST	**Kastek**	1.84	268	*e*P	Pb	02 33 06.2	+0.1
	baz=68						
KST				*e*S	Sb	02 33 30.2	+1.0
	baz=68						
KST	**Kastek**	1.84	268	*e*P	Pb	02 33 06.2	+0.1
	1.8nm,0.4s						
KST				*e*S	Sb	02 33 30.1	+1.0
	2.4nm,0.3s						
KST	**Kastek**	1.84	268	P	Pb	02 33 06.1	+0.1
	1.8nm,0.4s						
KST				S	Sb	02 33 30.1	+1.0
	2.4nm,0.3s						
ULHL	**Ulahol**	1.87	242	⇑*i*P	Pb	02 33 06.9	+0.3
	baz=42						
ULHL				⇑*i*S	Sb	02 33 31.1	+1.1
	baz=42						
BOOM	**Boomskoye usch**	1.97	252	⇑*i*P	Pb	02 33 08.4	+0.1
	baz=51						
BOOM				⇑*i*S	Sb	02 33 33.8	+0.9
	baz=51						
DGS	**Degeres**	1.98	274	*e*P	Pb	02 33 08.5	+0.1
	baz=74						
DGS				*e*S	Sb	02 33 34.3	+1.2
	baz=74						
DGS	**Degeres**	1.98	274	*e*P	Pb	02 33 08.5	+0.1
	1.2nm,0.3s						
DGS				*e*S	Sb	02 33 34.3	+1.2
	4.2nm,0.1s						
DGS	**Degeres**	1.98	274	Pg	Pb	02 33 08.5	+0.1
	1.2nm,0.3s						
DGS				Lg	Lg	02 33 34.3	
	4.2nm,0.1s						
TKM2	**Tokmak 2**	2.12	265	⇑*i*P	Pb	02 33 10.9	0.0
	baz=65						
TKM2				⇑*i*S	Sb	02 33 38.6	+1.4
	baz=65						
TKM2	**Tokmak 2**	2.12	265	⇓Pg	Pb	02 33 11.0	+0.1
	1.8nm,0.8s						
TKM2				⇑Lg	Lg	02 33 40.8	
	1.5nm,0.3s						
KBK	**Karagaybulak**	2.63	261	⇓*i*P	Pb	02 33 18.1	-1.5
	baz=60						
KBK				⇓*e*S	Sb	02 33 50.5	-1.5
	baz=60						

JMA ***23*** *02:57:59.0±0.3, 36°.53N×142°.39E, h27^{km}±5^{km}, M3.4*
IDC ***23*** *02:58:20.1±1.7, 34°.99N×136°.99E, h0^{km}, mb3.4/3, mb1 3.6/3, mb1mx3.3/27, mbtmp3.4/3, Error ellipse: s-maj=35.8km s-min=24.7km az=122.0*
ISC 23 02:58:01.8±2.4**, 36°.55N**±0°.10×**142°.4E**±0°.1**, h35**^{km}**, n14,**
σ0^s.90/19**, mb3.5**/3**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ONAJ	**Iwakimizuishiy**	1.38	294	P	Pn	02 58 23.4	-1.2
JFK	**Kawauchi**	1.45	305	P	Pn	02 58 24.5	-1.1
JHO	**Hitachi**	1.45	273	P	Pn	02 58 24.1	-1.4
JHYU	**Hitachinakayam**	1.45	262	P	Pn	02 58 24.5	-1.0
JHYU				S	Sn	02 58 42.5	-0.9
JMM	**Marumori**	1.82	317	P	Pn	02 58 29.6	-1.0
JMM				S	Sn	02 58 51.9	-0.6
JFT	**Otama**	1.89	301	P	Pn	02 58 31.5	-0.1
JFT				S	Sn	02 58 55.3	+1.0
JIO	**Ouri**	2.07	337	P	Pn	02 58 33.2	-0.8
JIO				S	Sn	02 58 58.7	+0.1
JAG	**Ashikaga**	2.35	268	P	Pn	02 58 37.3	-0.7
JMK	**Ichinoseki**	2.57	340	P	Pn	02 58 40.7	-0.2
JMK				S	Sn	02 59 11.2	+0.3
MJAR	**Matsushiro Arr**	3.35	271	Pn	Pn	02 58 52.8	+1.1
	0.7nm,0.3s,baz=92,slow=8.2,SNR=25						
MJAR				Sn	Sn	02 59 18.5	-12
	0.8nm,0.3s,baz=104,slow=9.6,SNR=6.4						
MAT	**Matsushiro**	3.35	271	P	Pn	02 58 51.6	-0.1
MAT				*e*S	Sn	02 59 31.4	+1.1
SONM	**Songino Array**	28.69	304	P	P	03 03 56.1	+0.5
	0.9nm,0.8s,baz=104,slow=8.3,SNR=7.0						
MKAR	**Makanchi Array**	45.03	303	P	P	03 06 14.1	+0.2
	0.2nm,0.5s,baz=100,slow=13,SNR=3.4						
WRA	**Warramunga Arr**	56.69	189	P	P	03 07 51.0	+9.2
	0.4nm,0.6s,baz=1.6,slow=7.3,SNR=2.3						

JMA 23 03:16:28.3, 35°.29N×137°.23E, h47^{km}, M2.9, 1C-1D
Broadband fault plane solution: P waves. NP1: ϕ_s224.00000°, δ44.00000°, λ-26.00000°. **NP2:** ϕ_s333.00000°, δ72.00000°, λ-131.00000°. **Principal axes:** T Plg17.0000°, Azm92.0000°; N Plg39.0000°, Azm348.0000°; P Plg46.0000°, Azm201.0000°; **Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAO	**Obara**	0.03	135	⇓P	Pn	03 16 35.5	-0.2
JAO				S	Sn	03 16 40.8	0.0
JICN	**Ichinomiyachia**	0.32	272	P	Pn	03 16 37.3	0.0
JICN				S	Sn	03 16 43.9	+0.2
JYTA	**Yamagatataniai**	0.51	307	⇑P	Pn	03 16 39.4	0.0
JYTA				S	Sn	03 16 47.4	0.0
SHZ3	**Shizuoka 3**	0.83	105	P	Pn	03 16 43.2	-0.6
TSUJ	**Tsu 2**	0.88	229	P	Pn	03 16 44.2	-0.1
JKG	**Kaga**	1.23	324	P	Pn	03 16 50.2	+1.2
JKG				S	Sn	03 17 06.5	+2.1
JKN2	**Miekihoku**	1.31	217	P	Pn	03 16 49.8	-0.4
JKN2				S	Sn	03 17 05.7	-0.8
MAT	**Matsushiro**	1.48	32	P	Pn	03 16 53.7	+1.2
MAT				S	Sn	03 17 12.8	+2.1

NEIC ***23*** *03:19:22.5±2.2, 4°.08N±0°.09×126°.2E±0°.2, h52^{km}±8^{km}, mb4.5/27 Error ellipse: s-maj=23.1km s-min=12.0km az=70.0*
IDC ***23*** *03:19:22.5±2.1, 3°.97N×125°.95E, h57^{km}±19^{km}, mb3.9/21, mb1 4.0/22, mb1mx3.9/45, mbtmp4.2/22, ML4.5/1, MS3.1/6, Ms1 3.2/6, ms1mx2.8/33, Error ellipse: s-maj=28.2km s-min=11.2km az=73.0*
DJA ***23*** *03:19:24.3±0.8, 4°N±7°×12°6E±°, h44^{km}±8^{km}, M4.3/10, mb4.5/6, mB5.2/2, MLv4.3/10, Mw(mB)4.5/2*
MAN ***23*** *03:19:27.5, 4°.41N×126°.01E, h12^{km}, mb4.6, ML3.5, MS3.4*
ISC 23 03:19:21.6±0.4**, 4°.14N**±0°.04×**126°.37E**±0°.07**, h45**^{km}**, n73,**
σ1^s.81/80**, mb4.3**/30**, MS3.3**/4**, 1C, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	0.95	242	P	Pn	03 19 40.7	+2.2
SGSI				S	Sn	03 19 53.9	+3.0
DDMP	**Don Marcelino,**	2.06	342	*e*P	Pn	03 19 55.9	+2.1
DDMP				*e*S	Sn	03 20 19.6	+1.2
SKMP	**Bagumbayan, Su**	2.98	323	*e*P	Pn	03 20 09.6	+3.1
SKMP				*e*S	Sn	03 20 45.6	+4.6
DAV	**Davao City (W)**	3.02	345	LR	LR	03 21 23.9	
	comp=Z,182nm,21.4s,baz=9.0,slow=39						
KCP	**Kidapawan**	3.12	336	⇑*e*P	Pn	03 20 13.4	+4.9
TNTI	**Ternate**	3.49	163		Pn	03 20 15.5	+2.1
TNTI	**Ternate**	3.49	163	P	Pn	03 20 15.5	+2.1
TNTI				S	Sn	03 20 54.3	+0.9
BUKP	**Musuan**	3.94	341	*e*P	Pn	03 20 23.8	+4.1
BUKP				*e*S	Sn	03 21 00.4	-4.2
PAGZ	**Pagadian**	4.74	321	*e*P	Pn	03 20 33.2	+2.7
PAGZ				*e*S	Sn	03 21 25.9	+1.7
GTOI	**Gorontalo**	4.83	224	P	Pn	03 20 35.2	+3.4
GLSP	**General Luna,**	5.62	358	*e*P	Pn	03 20 49.5	+6.9
MRSI	**Marisa**	5.72	231	P	Pn	03 20 48.2	+4.1
	0.4nm1µm88nm,0.5s						
SANI	**Sanana**	6.16	184	P	Pn	03 20 50.1	+0.1
	0.1nm13nm,0.7s						
SWI	**Sorong**	6.97	135	P	Pn	03 21 03.0	+1.8
	0.2nm30nm,0.5s						
SIJI	**Sorong**	6.98	135	P	Pn	03 21 03.4	+2.0
	7.7nm,0.3s,baz=339,slow=23,SNR=10.0						
SIJI				LR	LR	03 24 03.5	
	comp=Z,98nm,18.5s,baz=28,slow=39						
NLAI	**Namlea**	7.36	174	P	Pn	03 21 06.8	+0.2
FAKI	**Fak Fak**	9.15	140	Pn	Pn	03 21 33.1	+2.1
YULB	**Yu-li**	19.76	346	P	P	03 23 46.3	-1.7
YULB				IAmb	IAmb	03 23 51.7	
	comp=Z,17nm,1.3s						
SSLB	**Suanglung**	20.23	346	P	P	03 23 53.3	+0.2
SSLB				IAmb	IAmb	03 23 59.3	
	comp=Z,14nm,1.1s						
KNMB	**Chin-men Tao**	21.62	340	P	P	03 24 09.8	+1.8
KNMB				IAmb	IAmb	03 24 15.2	
	comp=Z,48nm,1.4s						
FITZ	**Fitzroy Crossi**	22.10	182	P	P	03 24 11.4	-1.8
	comp=Z,3.0nm,0.5s,baz=13,slow=13,SNR=14						
FITZ	**Fitzroy Crossi**	22.10	182	P	P	03 24 12.8	-0.5
FITZ				IAmb	IAmb	03 24 15.2	
	comp=Z,17nm,1.5s						
COEN	**Coen**	24.52	137	P	P	03 24 36.9	-0.2
WB0	**Warramunga Arr**	25.03	162	P	P	03 24 41.0	-0.7
WB0				IAmb	IAmb	03 24 42.5	
	comp=Z,14nm,0.6s						
WRAB	**Tennant Creek**	25.17	162	P	P	03 24 42.4	-0.5
WRAB				IAmb	IAmb	03 24 44.0	
	comp=Z,9.1nm,0.6s						
WRA	**Warramunga Arr**	25.18	162	P	P	03 24 42.2	-0.8
	comp=Z,8.0nm,0.8s,baz=338,slow=10,SNR=40						
WRA				ScP	ScP	03 31 48.7	-3.2
	comp=Z,0.5nm,0.7s,baz=340,slow=3.2,SNR=5.5						
WRA	**Warramunga Arr**	25.18	162	P	P	03 24 41.6	-1.4
WB2	**Warramunga Arr**	25.18	162	P	P	03 24 42.5	-0.6
WB2				IAmb	IAmb	03 24 44.6	
	comp=Z,23nm,1.2s						
WR0	**Warramunga Arr**	25.26	162	P	P	03 24 43.0	-0.7
WR0				IAmb	IAmb	03 24 45.3	
	comp=Z,6.4nm,0.8s						
AS31	**Alice Springs**	28.59	165	P	P	03 25 12.1	-1.7
ASAR	**Alice Springs**	28.59	165	P	P	03 25 13.2	-0.5
	comp=Z,0.5nm,0.5s,baz=352,slow=7.6,SNR=9.7						
ASAR				PcP	PcP	03 28 23.8	-0.5
	comp=Z,0.1nm,0.4s,baz=343,slow=2.9,SNR=1.7						
ASAR				ScP	ScP	03 31 59.6	-2.5
	comp=Z,0.3nm,0.6s,baz=336,slow=2.0,SNR=2.6						
CMAR	**Chiang Mai Arr**	30.36	300	P	P	03 25 27.6	-1.9
	comp=Z,1.6nm,0.3s,baz=112,slow=7.2,SNR=2.3						
CMAR				LR	LR	03 39 24.2	
	comp=Z,12nm,18.1s,baz=70,slow=40						
KSRS	**Korea Array**	33.19	2	P	P	03 25 55.7	+1.6
	comp=Z,2.1nm,0.5s,baz=181,slow=10,SNR=12						
KS19	**Wonju Array Si**	33.24	2	P	P	03 25 55.8	+1.3
XAN	**Xi'an**	33.89	333	P	P	03 26 00.0	-0.3
XAN				IAmb	IAmb	03 26 00.5	
	comp=Z,3.3nm,0.6s						
FORT	**Forrest**	34.76	177	P	P	03 26 07.5	-0.2
NWAO	**Narrogin (SRO)**	37.86	193	P	P	03 26 34.2	-0.1
BBOO	**Buckleboo**	37.88	167	P	P	03 26 34.0	-0.3
STKA	**Stephens Creek**	38.63	159	P	P	03 26 40.7	-0.1
	comp=Z,2.6nm,0.4s,baz=336,slow=9.5,SNR=12						
STKA				LR	LR	03 44 33.2	
	comp=Z,44nm,18.9s,baz=190,slow=39						
STKA	**Stephens Creek**	38.63	159	P	P	03 26 40.6	-0.2
USRK	**Ussuriysk Ar.**	40.21	6	P	P	03 26 55.1	+1.4
	comp=Z,1.6nm,0.5s,baz=181,slow=8.0,SNR=10						
USRK	**Ussuriysk Ar.**	40.21	6	P	P	03 26 55.3	+1.6
ARMA	**Armidale**	42.00	147	P	P	03 27 10.0	+1.2
ARMA				IAmb	IAmb	03 27 21.4	
	comp=Z,22nm,1.4s						
SONM	**Songino Array**	46.80	342	P	P	03 27 46.8	-0.2
	comp=Z,0.9nm,0.5s,baz=158,slow=8.6,SNR=14						
SONM				PcP	PcP	03 29 19.6	0.0
	comp=Z,0.3nm,0.6s,baz=145,slow=5.3,SNR=2.0						
SONM	**Songino Array**	46.80	342	P	P	03 27 46.9	0.0
PETK	**Petropavlovsk-**	55.20	22	P	P	03 28 51.2	+1.4
	comp=Z,1.0nm,0.5s,baz=180,slow=3.9,SNR=7.3						
PETK	**Petropavlovsk-**	55.20	22	P	P	03 28 51.3	+1.6
MK31	**Makanchi Array**	57.02	325	P	P	03 29 02.1	-0.8
MKAR	**Makanchi Array**	57.02	325	P	P	03 29 02.0	-0.9
	comp=Z,1.6nm,0.5s,baz=120,slow=8.5,SNR=24						
MKAR				PcP	PcP	03 29 57.2	-0.4
	comp=Z,0.8nm,0.5s,baz=126,slow=3.9,SNR=6.3						
ZALV	**Zalesovo Beam**	60.06	333	P	P	03 29 21.8	-2.2
	comp=Z,0.7nm,0.4s,baz=113,slow=5.4,SNR=4.8						
ZALV	**Zalesovo Beam**	60.06	333	P	P	03 29 24.1	+0.2
KURK	**Kurchatov**	61.21	328	P	P	03 29 31.5	-0.3
LBZ	**Lake Benmore**	62.22	146	P	P	03 29 39.3	+0.6
KKAR	**Karatay Array**	62.69	317	P	P	03 29 40.6	-1.4
BVAR	**Borovoye Array**	66.78	327	P	P	03 30 08.3	-0.1
	comp=Z,0.4nm,0.6s,baz=266,slow=5.9,SNR=5.8						
BRVK	**Borovoye**	66.86	327	P	P	03 30 09.1	+0.2
BRVK				IAmb	IAmb	03 30 09.6	
	comp=Z,7.5nm,1.4s						
ABKAR	**Akbulak array**	71.61	321	P	P	03 30 36.9	-1.5
AKTO	**Aktyubinsk**	73.12	322	P	P	03 30 45.7	-1.7
	comp=Z,0.8nm,0.5s,baz=124,slow=11,SNR=4.5						
ARU	**Arti**	74.40	328	P	P	03 30 53.2	-1.5
	comp=Z,1.6nm,0.6s,baz=150,slow=6.2,SNR=7.7						
ARU	**Arti**	74.40	328	P	P	03 30 55.0	+0.2
ARU				IAmb	IAmb	03 30 55.5	
	comp=Z,4.2nm,0.5s						
TTA	**Tatalina**	80.70	27	P	P	03 31 31.7	+1.7
IMAR	**Indian Mountai**	82.12	24	P	P	03 31 39.2	+1.9
KTH	**Kantishna Hill**	83.07	27	P	P	03 31 44.6	+2.3
KTH				IAmb	IAmb	03 31 45.3	
	comp=Z,9.1nm,1.4s						
COLD	**Coldfoot**	83.66	23	P	P	03 31 47.7	+2.4
POKR	**Poker Plat Res**	84.67	25	P	P	03 31 52.0	+1.5
POKR				IAmb	IAmb	03 32 02.5	
	comp=Z,7.4nm,1.5s						
ILAR	**Eielson Array**	84.89	25	P	P	03 31 53.7	+2.2
	comp=Z,0.5nm,1.0s,baz=224,slow=5.0,SNR=2.9						
OBN	**Obninsk**	86.52	325	LR	LR	04 11 53.4	
	comp=Z,14nm,20.7s,baz=191,slow=36						
BRTR	**Keskin Array B**	89.48	310	P	P	03 32 12.0	-2.5
	comp=Z,0.3nm,0.8s,baz=75,slow=3.4,SNR=1.6						
ARCES	**ARCESS Array B**	89.95	340	P	P	03 32 14.6	-1.2
	comp=Z,2.3nm,0.8s,baz=90,slow=7.3,SNR=5.9						
ARCES				LR	LR	04 19 28.9	
	comp=Z,39nm,18.2s,baz=260,slow=40						
SPITS	**Spitsbergen Ar**	90.01	349	P	P	03 32 16.8	+0.8
	comp=Z,4.0nm,0.8s,baz=128,slow=9.3,SNR=4.3						
FINES	**FINESS Array B**	91.31	332	P	P	03 32 20.8	-1.4
	comp=Z,2.6nm,0.9s,baz=64,slow=4.4,SNR=7.2						
NOA	**NORSAR Array B**	98.27	334	P	P	03 32 52.0	-2.2
	comp=Z,1.2nm,0.8s,baz=42,slow=5.9,SNR=3.3						
YKA	**Yellowknife Ar**	99.28	24	P	Pdif	03 32 59.3	+0.7
	comp=Z,0.2nm,0.7s,baz=293,slow=3.2,SNR=1.9						

HEL ***23*** *03:21:25.8±0.0, 67°.81N×20°.20E, h1^{km}, ML2.3, ML2.3(UPP), Confirmed Induced event*
NAO ***23*** *03:21:25.7±0.8, 67°.81N×20°.56E, ML2.9*
IDC ***23*** *03:21:26.4±0.9, 67°.75N×20°.55E, h0^{km}, mb1 3.4/5, mb1mx3.1/38, mbtmp3.4/5, ML2.4/5, Error ellipse: s-maj=15.6km s-min=7.4km az=111.0*
BER ***23*** *03:21:27.1±3.0, 67°.80N×20°.21E, h0^{km}, ML2.1, ML2.9(NAO), Confirmed Induced event*
ISC 23 03:21:24.3±0.7**, 67°.78N**±0°.02×**20°.22E**±0°.03**, h0**^{km}**, n42,**
σ1^s.35/74**, 1C, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RATU	**Laukkuluspa**	0.24	280	*i* P	Pg	03 21 29.8	+0.9
RATU				*i* S	Sg	03 21 33.1	+1.0
KOVU	**Salmi**	0.44	357	*i* P	Pg	03 21 32.9	+0.1
KOVU				*i* S	Sg	03 21 38.3	-0.2
NIKU	**Nikkaluokta**	0.46	281	*i* P	Pg	03 21 33.7	+0.6
DUNU	**Dundret**	0.68	168	*i* P	Pg	03 21 38.5	+1.2
LANU	**Lannavaara**	0.72	67	*e*P	Pg	03 21 38.5	+0.4
LANU				*e*S	Sg	03 21 47.7	+0.3
MASU	**Masugnsbyn**	0.76	115	*i* P	Pg	03 21 39.8	+1.0
KIF	**Kilpisjarvi**	1.25	10	Pg	Pg	03 21 47.9	-0.3
KIF				Lg	Lg	03 22 05.3	
KIF	**Kilpisjarvi**	1.25	10	*e*P	Pg	03 21 48.5	+0.2
KIF				*e*S	Sg	03 22 04.6	+0.3
KIF	**Kilpisjarvi**	1.25	10	*e*P	Pg	03 21 48.4	+0.2
KIF				*e*S	Sb	03 22 05.0	-0.3
KIF				MSG		03 22 08.1	
	comp=Z,22nm,0.1s						
PAJU	**Pajala**	1.35	123	*e*P	Pg	03 21 50.4	+0.2
PAJU				*e*S	Sg	03 22 08.4	+0.7
KTK1	**Kautokeino**	1.67	41	Pn	Pn	03 21 54.9	+0.2
KTK1				Sn	Sn	03 22 16.7	-0.1
KTK1	**Kautokeino**	1.67	41	*e*P	Pn	03 21 55.0	+0.3
KTK1				*e*S	Sn	03 22 16.2	-0.5
KTK1				IAML		03 22 20.7	
	comp=Z,31nm,0.8s						
KTK1	**Kautokeino**	1.67	41	*e*P	Pn	03 21 55.1	+0.3
KTK1				*e*S	Sn	03 22 16.3	-0.5
JETT	**Jettan, Norway**	1.78	2	⇑*i*P	Pn	03 21 56.9	+0.5
JETT				*e*S	Sn	03 22 19.9	+0.2
TRO	**Tromso**	1.92	346	Pn	Pn	03 21 59.1	+0.9
TRO				Sn	Sb	03 22 24.7	+0.1
TRO	**Tromso**	1.92	346	*e*P	Pn	03 21 59.1	+0.9
TRO				*e*S	Sb	03 22 24.1	-0.4
TRO				IAML		03 22 26.3	
	comp=Z,33nm,0.4s						
TRO	**Tromso**	1.92	346	*e*P	Pn	03 21 58.9	+0.7
TRO				*e*S	Sn	03 22 23.2	+0.3
KALU	**Kalix**	2.30	146	*e*PB	Pn	03 22 05.7	+2.3
KALU				*e*SG	Sb	03 22 37.3	+1.8
TOF	**Tornio**	2.35	135	*e*PB	Pb	03 22 06.8	-0.7
TOF				*e*SG	Sb	03 22 39.3	+2.2
TOF				MSG		03 22 39.6	
	comp=Z,14nm,0.2s						
SGF	**Sodankyl**	2.44	95	*e*P	Pn	03 22 07.0	+1.6
SGF				*e*PB	Pb	03 22 08.4	-0.6
SGF				*e*S	Sn	03 22 37.6	+1.7
SGF				*e*SG	Sb	03 22 40.4	+0.9
SGF				MSG		03 22 43.2	
	comp=Z,14nm,0.2s						
RNF	**Rovaniemi**	2.55	115	*e*PB	Pb	03 22 09.9	-1.0
RNF				*e*SB	Sb	03 22 42.4	-0.3
RNF				MSG		03 22 45.2	

	comp=Z,18nm,0.2s						
ARA0	**ARCESS Array S**	**2.62**	**45**	Pn	**Pn**	**03 22 08.9**	**+1.1**
	baz=235,slow=14						
ARA0				Sn	**Sn**	**03 22 40.5**	**+0.3**
ARA0				Lg	Lg	03 22 44.4	
	baz=218,slow=28						
ARA0	**ARCESS Array S**	**2.62**	**45**	Pn	**Pn**	**03 22 08.9**	**+1.1**
	baz=235,slow=14						
ARA0				IAML		03 22 45.8	
	comp=Z,12nm,0.3s						
ARA0	**ARCESS Array S**	**2.62**	**45**	*e*P	**Pn**	**03 22 09.4**	**+1.7**
ARA0				*e*SB	**Sb**	**03 22 43.4**	**-1.3**
ARCES	**ARCESS Array B**	**2.62**	**45**	Pn	**Pn**	**03 22 09.5**	**+1.7**
	baz=228,slow=14,SNR=62						
ARCES				Sn	**Sn**	**03 22 41.5**	**+1.3**
	baz=225,slow=22,SNR=17						
HAMF	**Hammerfest**	**3.13**	**22**	*e*P	**Pn**	**03 22 16.4**	**+1.6**
HAMF				*e*S	**Sn**	**03 22 52.2**	**-0.6**
HAMF				IAML		03 22 55.0	
	comp=Z,20nm,0.5s						
BURU	**Burvik**	**3.25**	**171**	*e*P	**Pn**	**03 22 18.9**	**+2.5**
BURU				*e*S	**Sn**	**03 22 56.8**	**+1.1**
APA0	**Apatity Array**	**4.87**	**86**	Pn	**Pn**	**03 22 38.5**	**-0.3**
	baz=282,slow=11						
APA0				Sn	**Sn**	**03 23 33.9**	**-1.9**
	baz=282,slow=22						
APA0				Lg	Lg	03 23 51.4	
	baz=288,slow=28						
APA0	**Apatity Array**	**4.87**	**86**	Pn	**Pn**	**03 22 38.5**	**-0.3**
	baz=282,slow=11						
APA0				Sn	**Sn**	**03 23 33.9**	**-1.9**
	baz=282,slow=22						
NOD	**Norderasen**	**4.89**	**210**	*e*P	**Pn**	**03 22 40.6**	**+1.5**
FIA0	**FINESS Array S**	**6.84**	**156**	Pn	**Pn**	**03 23 07.6**	**+1.8**
	baz=341,slow=12						
FIA0				Sn	**Sn**	**03 24 24.9**	**+0.7**
	baz=346,slow=28						
FIA0				Lg	Lg	03 24 58.4	
	baz=349,slow=37						
FIA0	**FINESS Array S**	**6.84**	**156**	Pn	**Pn**	**03 23 07.6**	**+1.8**
	baz=341,slow=12						
FIA0				Sn	**Sn**	**03 24 24.9**	**+0.7**
	baz=346,slow=28						
FIA0				Sg	**Sg**	**03 24 58.4**	**-5.4**
	baz=349,slow=37						
FINES	**FINESS Array B**	**6.84**	**156**	Pn	**Pn**	**03 23 07.7**	**+1.8**
	comp=Z,0.2nm,0.3s,baz=347,slow=12,SNR=7.7						
FINES				Sn	**Sn**	**03 24 23.4**	**-0.8**
	comp=Z,0.3nm,0.3s,baz=342,slow=22,SNR=2.0						
FINES				Lg	Lg	03 24 56.3	
	comp=Z,0.5nm,0.3s,baz=4.7,slow=19,SNR=4.2						
NB2	**NORSAR Subarra**	**7.80**	**214**	Pn	**Pn**	**03 23 19.6**	**+0.6**
	baz=20,slow=12						
NB2				Lg	Lg	03 25 30.0	
	baz=20,slow=37						
NB2	**NORSAR Subarra**	**7.80**	**214**	Pn	**Pn**	**03 23 19.6**	**+0.6**
	baz=20,slow=12						
NB2				Sg	**Sg**	**03 25 30.0**	**-4.5**
	baz=20,slow=37						
NOA	**NORSAR Array B**	**7.80**	**214**	Pn	**Pn**	**03 23 20.2**	**+1.2**
	comp=Z,0.0nm,0.3s,baz=26,slow=16,SNR=2.5						
NOA				Lg	Lg	03 25 31.2	
	comp=Z,0.1nm,0.3s,baz=37,slow=22,SNR=3.4						
HFS	**Hagfors**	**8.19**	**204**	Pn	**Pn**	**03 23 24.9**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=26,slow=17,SNR=1.6						
HFS				Sn	**Sn**	**03 24 56.2**	**-1.2**
	comp=Z,0.3nm,0.3s,baz=23,slow=23,SNR=5.8						
HFS				Lg	Lg	03 25 41.8	
	comp=Z,0.3nm,0.3s,baz=26,slow=27,SNR=3.1						
HFS	**Hagfors**	**8.19**	**204**	Pn	**Pn**	**03 23 25.0**	**+0.7**
	baz=24,slow=14						
HFS	**Hagfors**	**8.19**	**204**	Pn	**Pn**	**03 23 25.0**	**+0.7**
	baz=24,slow=14						
SPA0	**Spitsbergen Ar**	**10.51**	**356**	Pn	**Pn**	**03 23 55.8**	**-0.1**
	baz=170,slow=11						
SPA0	**Spitsbergen Ar**	**10.51**	**356**	Pn	**Pn**	**03 23 55.8**	**-0.1**
	baz=170,slow=11						
SPITS	**Spitsbergen Ar**	**10.51**	**356**	Pn	**Pn**	**03 23 55.8**	**-0.1**
	baz=168,slow=18,SNR=5.0						

*TRN **23** 03:43:43.0, 19°.04N×64°.45W, h20^{km}, M3.5(RSPR)*
*NEIC **23** 03:43:44.2±1.8, 19°.13N±0°.04×64°.5W±0°.1, h14^{km}±12^{km}, Error ellipse: s-maj=16.9km s-min=5.0km az=95.0*
*RSPR **23** 03:43:45.5, 19°.10N×64°.32W, h35^{km}±20^{km}, MD3.5/10*
ISC 23 03:43:44.1±1.7, **19°.1N**±0°.1×**64°.41W**±0°.04, **h21**^{km}±6^{km}, **n55**, σ**0^{s}.80**/76, **23C**, **Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TBVI	**Tortola**	**0.71**	**196**	⇑*e*P	**Pb**	**03 43 57.8**	**-0.1**
TBVI				*e*S	**Sb**	**03 44 08.1**	**+0.8**
TBVI	**Tortola**	**0.71**	**196**	⇑*e*P	**Pb**	**03 43 57.8**	**-0.1**
TBVI	**Tortola**	**0.71**	**196**		**Pb**	**03 43 57.8**	**-0.1**
TBVI					**Sb**	**03 44 08.1**	**+0.8**
CUPR	**Culebra, Puert**	**1.15**	**226**	⇑*e*P	**Pn**	**03 44 04.5**	**-0.4**
CUPR	**Culebra, Puert**	**1.15**	**226**	*e*S	**Sb**	**03 44 19.6**	**-0.1**
CUPR	**Culebra, Puert**	**1.15**	**226**		**Pn**	**03 44 04.5**	**-0.4**
CUPR					**Sb**	**03 44 19.3**	**-0.4**
CUPR				IAML		03 44 24.5	
	comp=N,519nm,0.6s						
CUPR				IAML		03 44 24.0	
	comp=E,478nm,0.8s						
CDVI	**St. Croix**	**1.39**	**194**	*e*P	**Pb**	**03 44 09.7**	**+0.3**
CDVI				*e*S	**Sb**	**03 44 26.9**	**+0.3**
CDVI	**St. Croix**	**1.39**	**194**	Pn	**Pb**	**03 44 09.3**	**-0.1**
MTP	**Monte Pirata**	**1.48**	**227**	⇑*e*P	**Pn**	**03 44 09.5**	**0.0**
MTP				*e*S	**Sn**	**03 44 28.3**	**0.0**
MTP	**Monte Pirata**	**1.48**	**227**	⇑*e*P	**Pn**	**03 44 09.5**	**0.0**
MTP	**Monte Pirata**	**1.48**	**227**	Pn	**Pn**	**03 44 09.4**	**-0.1**
MTP					**Sn**	**03 44 28.2**	**0.0**
MTP				IAML		03 44 34.5	
	comp=E,390nm,0.4s						
MTP				IAML		03 44 35.2	
	comp=N,332nm,0.2s						
CBYP	**Canovanas**	**1.60**	**239**	⇑*e*P	**Pn**	**03 44 10.9**	**-0.4**
CBYP				*e*S	**Sn**	**03 44 31.6**	**+0.2**
CBYP	**Canovanas**	**1.60**	**239**	⇑*e*P	**Pn**	**03 44 10.9**	**-0.4**
CBYP	**Canovanas**	**1.60**	**239**	Pn	**Pn**	**03 44 10.7**	**-0.6**
CBYP				Sn	**Sn**	**03 44 31.2**	**-0.2**
HUMP	**Col San Antoni**	**1.67**	**235**	⇑*e*P	**Pn**	**03 44 12.1**	**0.0**
HUMP				*e*S	**Sn**	**03 44 32.8**	**-0.2**
HUMP	**Col San Antoni**	**1.67**	**235**	⇑*e*P	**Pn**	**03 44 12.1**	**0.0**
HUMP	**Col San Antoni**	**1.67**	**235**	Pn	**Pn**	**03 44 11.8**	**-0.4**
HUMP				Sn	**Sn**	**03 44 33.6**	**+0.7**
HUMP				IAML		03 44 37.9	
	comp=N,227nm,0.3s						
HUMP				IAML		03 44 38.8	
	comp=E,253nm,0.3s						
GCPR	**Guaynabo City**	**1.77**	**244**	⇑*e*P	**Pn**	**03 44 14.4**	**+0.9**
GCPR	**Guaynabo City**	**1.77**	**244**	*e*S	**Sn**	**03 44 35.4**	**-0.1**
GCPR	**Guaynabo City**	**1.77**	**244**	Pn	**Pn**	**03 44 12.4**	**-1.1**
GCPR				Sn	**Sn**	**03 44 34.6**	**-0.9**
SABA	**Saba**	**1.85**	**143**	*e*P	**Pb**	**03 44 16.9**	**-0.3**
PDPR	**Patillas Dam,**	**1.88**	**235**	Pn	**Pn**	**03 44 14.6**	**-0.4**
SJG	**San Juan**	**1.93**	**239**	*e*P	**Pn**	**03 44 15.1**	**-0.6**
SJG	**San Juan**	**1.93**	**239**	Pn	**Pn**	**03 44 15.2**	**-0.4**
SJG				IAML		03 44 47.6	
	comp=E,168nm,0.4s						
IGPR	**InterUniversit**	**1.97**	**235**	⇑*e*P	**Pn**	**03 44 16.8**	**+0.5**
IGPR	**InterUniversit**	**1.97**	**235**	*e*S	**Sn**	**03 44 40.1**	**-0.3**
CELP	**Cerrillos**	**2.30**	**244**	⇑*e*P	**Pn**	**03 44 21.2**	**+0.4**
CELP				*e*S	**Sn**	**03 44 48.8**	**+0.3**
CELP	**Cerrillos**	**2.30**	**244**	⇑*e*P	**Pn**	**03 44 21.2**	**+0.4**
CELP	**Cerrillos**	**2.30**	**244**		**Pn**	**03 44 21.2**	**+0.4**
CELP					**Sn**	**03 44 48.8**	**+0.3**
OBIP	**Obispado Ponce**	**2.34**	**243**	⇑*e*P	**Pn**	**03 44 20.7**	**-0.6**
OBIP				*e*S	**Sn**	**03 44 48.9**	**-0.5**
OBIP	**Obispado Ponce**	**2.34**	**243**	⇑*e*P	**Pn**	**03 44 20.7**	**-0.6**
OBIP	**Obispado Ponce**	**2.34**	**243**	Pn	**Pn**	**03 44 19.9**	**-1.4**
OBIP				Sn	**Sn**	**03 44 50.3**	**+0.9**
OBIP				IAML		03 44 59.0	
	comp=N,126nm,0.6s						
AOPR	**Arecibo Observ**	**2.35**	**252**	*e*P	**Pn**	**03 44 20.8**	**-0.7**
AOPR				*e*S	**Sn**	**03 44 50.3**	**+0.6**
AOPR	**Arecibo Observ**	**2.35**	**252**	⇑*e*P	**Pn**	**03 44 22.2**	**+0.7**
AOPR	**Arecibo Observ**	**2.35**	**252**	Pn	**Pn**	**03 44 21.4**	**-0.1**
AOPR				IAML		03 45 11.0	
	comp=N,235nm,0.4s						
SKI	**Saint Kitts**	**2.37**	**138**	*e*P	**Pn**	**03 44 23.9**	**+2.1**
GBPR	**Guanica, Bosqu**	**2.60**	**245**	⇑*e*P	**Pn**	**03 44 26.7**	**+1.8**
GBPR	**Guanica, Bosqu**	**2.60**	**245**	⇑*e*P	**Pn**	**03 44 26.7**	**+1.8**
GBPR	**Guanica, Bosqu**	**2.60**	**245**		**Pn**	**03 44 26.7**	**+1.8**
AGPR	**Aguadilla, PR**	**2.64**	**256**	⇑*e*P	**Pn**	**03 44 25.3**	**-0.1**
AGPR	**Aguadilla, PR**	**2.64**	**256**	⇑*e*P	**Pn**	**03 44 25.3**	**-0.1**
AGPR	**Aguadilla, PR**	**2.64**	**256**	Pn	**Pn**	**03 44 24.1**	**-1.3**
AGPR				IAML		03 45 36.5	
	comp=E,145nm,2.7s						
AGPR				IAML		03 45 38.9	
	comp=N,137nm,2.6s						
LSP	**Las Mesas**	**2.70**	**250**	⇑*e*P	**Pn**	**03 44 27.8**	**+1.4**
LSP				*e*S	**Sn**	**03 44 58.7**	**+0.3**
LSP	**Las Mesas**	**2.70**	**250**	⇑*e*P	**Pn**	**03 44 27.8**	**+1.4**
LSP	**Las Mesas**	**2.70**	**250**		**Pn**	**03 44 27.8**	**+1.4**
LSP					**Sn**	**03 44 58.7**	**+0.3**
MPR	**Mayaguez**	**2.74**	**251**	Pn	**Pn**	**03 44 27.3**	**+0.5**
MLPR	**Magueyes Islan**	**2.74**	**246**	⇑*e*P	**Pn**	**03 44 26.4**	**-0.5**
MLPR	**Magueyes Islan**	**2.74**	**246**	*e*S	**Sn**	**03 45 00.2**	**+0.8**
MLPR	**Magueyes Islan**	**2.74**	**246**		**Pn**	**03 44 25.9**	**-1.0**
MLPR					**Sn**	**03 44 59.6**	**+0.1**
MLPR				IAML		03 45 15.7	
	comp=E,76nm,0.8s						
ANWB	**Willy Bob**	**2.87**	**119**	*e*P	**Pn**	**03 44 30.4**	**+1.7**
MLYT	**Lee's Yard**	**3.18**	**138**	*e*P	**Pn**	**03 44 31.8**	**-1.1**
BPA	**Boggy Peak**	**3.18**	**130**	*e*P	**Pn**	**03 44 32.0**	**-1.0**
BPA				*e*S	**Sn**	**03 45 10.1**	**-0.1**
ANBD	**Bethesda, Anti**	**3.24**	**129**	*e*P	**Pn**	**03 44 33.0**	**-0.7**
ANBD				*e*S	**Sn**	**03 45 09.9**	**-1.9**
CBE	**Ff, Capester**	**4.03**	**138**	*e*P	**Pn**	**03 44 45.5**	**+0.8**
DSLB	**Salisbury**	**4.63**	**142**	*e*P	**Pn**	**03 44 53.4**	**+0.5**

*ISK **23** 03:58:57.8, 36°.55N×28°.24E, h78^{km}, ML3.0/17*
*ATH **23** 03:59:00.3, 36°.62N×27°.54E, h8^{km}±7^{km}, ML2.9/2, Error ellipse: s-maj=8.4km s-min=1.7km az=109.0*
*DDA **23** 03:59:00.6, 36°.75N×28°.18E, h60^{km}±1^{km}, ML2.9*
*NIC **23** 03:59:00.9±0.0, 36°.26N×28°.39E, h66^{km}±1^{km}, Ml3.7/5*
*THE **23** 03:59:01.3, 36°.56N×28°.07E, h66^{km}±2^{km}, ML3.0/3, Error ellipse: s-maj=2.7km s-min=0.7km az=97.0*
*HLW **23** 03:59:04.9, 35°.97N×28°.30E, h31^{km}±40^{km}, Md4.2, Ml3.9*
ISC 23 03:58:58.0±1.1, **36°.57N**±0°.03×**28°.22E**±0°.03, **h80**^{km}±5^{km}, **n96**, σ**1^{s}.24**/133, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MRSB	**Marmaris-Mugla**	**0.15**	**354**	PG	**Pn**	**03 59 09.9**	**+0.2**
MRSB				SG	**Sn**	**03 59 18.3**	**0.0**
TURN	**Turunc**	**0.21**	**7**	PG	**Pn**	**03 59 10.1**	**+0.2**
TURN				SG	**Sn**	**03 59 18.9**	**+0.3**
TURN	**Turunc**	**0.21**	**7**	*i* P	**Pn**	**03 59 10.3**	**+0.4**
TURN				*i* S	**Sn**	**03 59 17.4**	**-1.2**
TURN				IAML		03 59 19.0	
	comp=N,974nm,0.2s						
TURN				IAML		03 59 20.0	
	comp=E,1µm,0.2s						
ARG	**Arkhangelos**	**0.36**	**192**	P	**Pn**	**03 59 11.5**	**+0.8**
ARG				S	**Sn**	**03 59 19.9**	**-0.1**
ARG				AML	AML	03 59 20.4	
	comp=E,2553µm,0.3s						
ARG				AML	AML	03 59 21.2	
	comp=N,1944µm,0.2s						
ARG	**Arkhangelos**	**0.36**	**192**	P	**Pn**	**03 59 11.5**	**+0.8**
ARG				S	**Sn**	**03 59 19.9**	**-0.1**
	comp=N,1µm,0.2s						
ARG	**Arkhangelos**	**0.36**	**192**	PG	**Pn**	**03 59 10.8**	**+0.1**
ARG				SG	**Sn**	**03 59 19.9**	**-0.1**
ARG	**Arkhangelos**	**0.36**	**192**	P	**Pn**	**03 59 11.5**	**+0.8**
ARG				S	**Sn**	**03 59 19.3**	**-0.8**
DALY	**Dalyan (Mula)**	**0.43**	**55**	PG	**Pn**	**03 59 11.5**	**+0.3**
DALY				SG	**Sn**	**03 59 21.1**	**+0.2**
DALY	**Dalyan (Mula)**	**0.43**	**55**	*i* P	**Pn**	**03 59 11.9**	**+0.7**
DALY				*i* S	**Sn**	**03 59 20.4**	**-0.5**
YER	**Yerkesik**	**0.57**	**6**	P	**Pn**	**03 59 14.1**	**+1.6**
YER				S	**Sn**	**03 59 24.4**	**+1.2**
YER	**Yerkesik**	**0.57**	**6**	PG	**Pn**	**03 59 12.9**	**+0.4**
YER				SG	**Sn**	**03 59 23.7**	**+0.5**
MULA	**Mugla, Merkez-**	**0.69**	**7**	*i* P	**Pn**	**03 59 15.5**	**+1.8**
MULA				IAML		03 59 27.0	
	comp=E,627nm,0.3s						
MULA				IAML		03 59 27.0	
	comp=N,292nm,0.2s						
FETY	**Fethiye**	**0.70**	**84**	PG	**Pn**	**03 59 13.2**	**-0.5**
BDRM	**Kayabasi**	**0.79**	**309**	*i* P	**Pn**	**03 59 15.5**	**+0.8**
BDRM				*i* S	**Sn**	**03 59 25.8**	**-1.4**
MLSB	**Milas**	**0.81**	**334**	PG	**Pn**	**03 59 15.6**	**+0.7**
BODT	**Bodrum**	**0.88**	**304**	P	**Pn**	**03 59 15.6**	**-0.1**
BODT				S	**Sn**	**03 59 28.1**	**-0.7**
BODT	**Bodrum**	**0.88**	**304**	PG	**Pn**	**03 59 15.7**	**0.0**
CAEL	**Denizli, Camel**	**1.04**	**58**	*i* P	**Pn**	**03 59 19.0**	**+1.2**
CAEL				*i* S	**Sn**	**03 59 30.7**	**-1.8**
TAVA	**DENIZLI_Tavas**	**1.06**	**32**	*i* P	**Pn**	**03 59 18.9**	**+1.0**
AYDN	**Tasoluk**	**1.12**	**346**	*i* P	**Pn**	**03 59 20.0**	**+1.4**
AKAS	**Kas**	**1.17**	**106**	PN	**Pn**	**03 59 19.4**	**+0.1**
AKAS				SN	**Sn**	**03 59 35.2**	**0.0**
AKAS	**Kas**	**1.17**	**106**	*i* P	**Pn**	**03 59 18.9**	**-0.3**
AKAS				IAML		03 59 38.0	
	comp=N,165nm,0.3s						
DDIM	**Aydin, Didim**	**1.18**	**319**	*i* P	**Pn**	**03 59 20.6**	**+1.4**
DDIM				*i* S	**Sn**	**03 59 34.1**	**-1.1**
DDIM				IAML		03 59 37.0	
	comp=E,271nm,1.1s						
KSL	**Kastellorizon**	**1.18**	**110**	S	**Sn**	**03 59 32.9**	**-2.3**
GOLH	**Golhisar**	**1.27**	**58**	*i* P	**Pn**	**03 59 22.3**	**+1.8**
GOLH				*i* S	**Sn**	**03 59 38.2**	**+0.8**
KARP	**Karpathos**	**1.33**	**220**	P	**Pn**	**03 59 22.3**	**+1.1**
KARP				S	**Sn**	**03 59 37.2**	**-1.5**
KARP				AML	AML	03 59 40.0	
	comp=N,1541µm,0.3s						
KARP				AML	AML	03 59 40.3	
	comp=E,1742µm,0.1s						
KARP	**Karpathos**	**1.33**	**220**	P	**Pn**	**03 59 22.4**	**+1.1**
KARP				S	**Sn**	**03 59 38.6**	**0.0**
	comp=E,825nm,0.2s						
KARP	**Karpathos**	**1.33**	**220**	PN	**Pn**	**03 59 21.8**	**+0.6**
KARP				SN	**Sn**	**03 59 39.3**	**+0.7**
KARP	**Karpathos**	**1.33**	**220**	P	**Pn**	**03 59 22.4**	**+1.1**
KARP				S	**Sn**	**03 59 38.9**	**+0.3**
KARP				AML	AML	03 59 39.6	
	comp=E,1.5nm,0.3s						
KARP				AML	AML	03 59 39.6	
	comp=E,1.5nm,0.3s						
KARP				AML	AML	03 59 39.9	
	comp=E,1.7nm,0.1s						
KARP				AML	AML	03 59 39.9	
	comp=E,1.7nm,0.1s						
ELL	**Elmali**	**1.37**	**82**	PN	**Pn**	**03 59 22.3**	**+0.5**
ELL	**Elmali**	**1.37**	**82**	P	**Pn**	**03 59 23.7**	**+1.8**
ELL				S	**Sn**	**03 59 42.0**	**+2.2**
GCAM	**G?zelcaml?**	**1.38**	**326**	PN	**Pn**	**03 59 22.9**	**+1.2**
GCAM	**G?zelcaml?**	**1.38**	**326**	*i* P	**Pn**	**03 59 22.9**	**+1.2**
AYDB	**Zeytinkoy-Aydi**	**1.40**	**349**	PN	**Pn**	**03 59 23.1**	**+0.9**
AYDB				SN	**Sn**	**03 59 41.5**	**+1.1**
SMG	**Samos**	**1.58**	**316**	P	**Pn**	**03 59 24.0**	**-0.4**
SMG	**Samos**	**1.58**	**316**	P	**Pn**	**03 59 25.4**	**+1.0**
AKUM	**Antalya-Kumluc**	**1.73**	**98**	*i* P	**Pn**	**03 59 28.0**	**+1.6**
AKUM				IAML		03 59 51.0	
	comp=E,106nm,0.2s						
KORT	**Korkueli**	**1.77**	**75**	*i* P	**Pn**	**03 59 29.4**	**+2.4**
DGB	**zmir**	**1.82**	**325**	*i* P	**Pn**	**03 59 28.3**	**+0.8**
DGB				IAML		03 59 50.0	
	comp=E,94nm,1.1s						
BRDR	**BURDUR-Merkez**	**1.86**	**52**	*i* P	**Pn**	**03 59 29.3**	**+1.2**
MANT	**Manisa**	**1.94**	**8**	*i* P	**Pn**	**03 59 29.5**	**+0.2**
MANT				*i* S	**Sn**	**03 59 51.2**	**-1.9**
KULA	**Kula-Manisa**	**1.97**	**10**	PN	**Pn**	**03 59 30.4**	**+0.7**
BUCA	**Burdur, Bucak-**	**2.02**	**67**	*i* P	**Pn**	**03 59 32.2**	**+1.9**
KHL	**Karahalli**	**2.04**	**30**	PN	**Pn**	**03 59 31.7**	**+1.2**
BLCB	**Balcova**	**2.04**	**333**	PN	**Pn**	**03 59 31.6**	**+1.2**
KHAL	**Karahalli**	**2.07**	**29**	*i* P	**Pn**	**03 59 32.0**	**+1.1**
GOMA	**Golmarmara-Man**	**2.15**	**354**	PN	**Pn**	**03 59 33.4**	**+1.5**
ZKR	**Zakros**	**2.18**	**229**	P	**Pn**	**03 59 33.9**	**+1.7**
ZKR				S	**Sn**	**03 59 58.2**	**-0.3**
ZKR	**Zakros**	**2.18**	**229**	P	**Pn**	**03 59 34.0**	**+1.7**
ZKR				S	**Sn**	**03 59 58.4**	**-0.1**
ZKR	**Zakros**	**2.18**	**229**	PN	**Pn**	**03 59 33.5**	**+1.2**
ZKR	**Zakros**	**2.18**	**229**	P	**Pn**	**03 59 34.5**	**+2.2**
ZKR				S	**Sn**	**04 00 00.1**	**+1.6**
URLA	**Izmir**	**2.20**	**325**	PN	**Pn**	**03 59 33.2**	**+0.5**
URLA	**Izmir**	**2.20**	**325**	*i* P	**Pn**	**03 59 32.3**	**-0.4**
USAK	**Uak-Merkez**	**2.23**	**16**	*i* P	**Pn**	**03 59 34.3**	**+1.2**
USAK				IAML		04 00 00.0	
	comp=E,173nm,0.4s						
USAK				IAML		04 00 01.0	
	comp=N,104nm,0.4s						
KZIL	**AFYON_Kizioren**	**2.28**	**42**	*i* P	**Pn**	**03 59 34.5**	**+0.7**
NPS	**Neapolis**	**2.48**	**239**	P	**Pn**	**03 59 37.6**	**+1.2**
NPS				S	**Sn**	**04 00 04.0**	**-1.7**
NPS	**Neapolis**	**2.48**	**239**	P	**Pn**	**03 59 37.6**	**+1.2**
NPS				S	**Sn**	**04 00 05.1**	**-0.7**
	comp=N,158nm,0.3s						
CHOS	**Chios island**	**2.50**	**317**	P	**Pn**	**03 59 38.1**	**+1.4**
CHOS	**Chios island**	**2.50**	**317**	P	**Pn**	**03 59 38.1**	**+1.4**
CHOS	**Chios island**	**2.50**	**317**	PN	**Pn**	**03 59 38.4**	**+1.7**
DEMI	**Demirci**	**2.50**	**9**	*i* P	**Pn**	**03 59 37.7**	**+1.0**
ZEDA	**zmir-Bergama**	**2.56**	**340**	*i* P	**Pn**	**03 59 38.5**	**+1.1**
LAST	**Lasithi**	**2.63**	**239**	P	**Pn**	**03 59 40.1**	**+1.7**
GDZ	**Gediz**	**2.71**	**21**	*i* P	**Pn**	**03 59 39.8**	**+0.2**
GDZ				*i* S	**Sn**	**04 00 09.3**	**-2.1**
KEPZ	**Antalya-Kepez**	**2.74**	**82**	*i* P	**Pn**	**03 59 42.5**	**+2.6**
KEPZ				*i* S	**Sn**	**04 00 14.6**	**+2.4**
KEPZ				IAML		04 00 17.0	
	comp=E,36nm,0.6s						
KEPZ				IAML		04 00 18.0	
	comp=N,39nm,0.6s						
STEP	**BALIKESIR_Sava**	**2.83**	**352**	*i* P	**Pn**	**03 59 41.9**	**+0.8**
STEP				*i* S	**Sn**	**04 00 10.3**	**-3.9**
YVAC	**Isparta, Yalva**	**2.95**	**54**	*i* P	**Pn**	**03 59 44.9**	**+2.1**
SEDI	**Konya, Seydise**	**2.97**	**72**	*i* P	**Pn**	**03 59 44.7**	**+1.6**
SEDI				*i* S	**Sn**	**04 00 17.9**	**+0.2**
IDI	**Anoyia**	**2.98**	**246**	P	**Pn**	**03 59 44.3**	**+1.1**
IDI				S	**Sn**	**04 00 16.8**	**-1.2**
IDI	**Anoyia**	**2.98**	**246**	P	**Pn**	**03 59 44.0**	**+0.8**
IDI				S	**Sn**	**04 00 16.8**	**-1.2**
DURS	**Dursunbey**	**3.03**	**4**	*i* P	**Pn**	**03 59 44.7**	**+0.8**
DURS				*i* S	**Sn**	**04 00 16.7**	**-2.6**
DOGA	**KONYA_Doganhis**	**3.15**	**60**	*i* P	**Pn**	**03 59 47.6**	**+2.0**
BALY	**Balya**	**3.20**	**352**	*i* P	**Pn**	**03 59 46.1**	**-0.1**
VAM	**Vamos**	**3.46**	**252**	P	**Pn**	**03 59 52.0**	**+2.4**
IMMV	**Iera Moni Meta**	**3.61**	**253**	P	**Pn**	**03 59 53.9**	**+2.3**
AKMS	**Akamas**	**3.69**	**114**	P	**Pn**	**03 59 52.9**	**+0.1**
AKMS				AML	AML	04 00 34.1	
	comp=N,1.1nm,0.5s						
AKMS				AML	AML	04 00 34.3	
	comp=N,0.6nm,0.3s						
ALFC	**Alefka**	**3.83**	**110**	P	**Pn**	**03 59 54.7**	**0.0**
ALFC				AML	AML	04 00 38.5	
	comp=N,0.4nm,0.3s						
ALFC				AML	AML	04 00 38.6	
	comp=N,0.3nm,0.3s						
OSC1	**CSNet OBS 1**	**3.96**	**140**	P	**Pn**	**03 59 55.8**	**-0.6**
OSC1				S	**Sn**	**04 00 38.4**	**-3.3**
NATA	**Nata**	**3.97**	**115**	P	**Pn**	**03 59 57.0**	**+0.5**
SZAC	**Souni**	**4.21**	**114**	P	**Pn**	**03 59 59.9**	**+0.1**
SZAC				AML	AML	04 00 48.2	
	comp=N,0.7nm,0.2s						
SZAC				AML	AML	04 00 48.2	
	comp=N,0.4nm,0.4s						
CSS	**Mathiatis**	**4.46**	**110**	P	**Pn**	**04 00 03.4**	**+0.2**
ASGA	**Asgata**	**4.47**	**112**	P	**Pn**	**04 00 03.8**	**+0.5**
ASGA				AML	AML	04 00 59.6	
	comp=N,0.2nm,0.7s						
ASGA				AML	AML	04 00 59.9	
	comp=N,0.2nm,0.4s						
MVOU	**Mavrovouni**	**4.67**	**108**	P	**Pn**	**04 00 06.9**	**+0.9**
OSC2	**CSNet OBS 4**	**4.82**	**135**	P	**Pn**	**04 00 07.5**	**-0.6**
MATC	**Matruh**	**5.27**	**189**	P	**Pn**	**04 00 14.5**	**+0.2**
	baz=192						
SLUM	**Salum**	**5.64**	**207**	P	**Pn**	**04 00 20.0**	**+0.6**
	baz=211						
HNAT	**Natroun**	**7.20**	**163**	P	**Pn**	**04 00 40.6**	**0.0**
	baz=162						
HNAT				S	Sn	04 01 50.5	-11
	baz=162						
KOT	**Kottamia**	**7.28**	**154**	P	**Pn**	**04 00 41.4**	**-0.4**
	baz=152						
HHAG	**Hagoal**	**7.36**	**153**	P	**Pn**	**04 00 42.9**	**+0.1**
	baz=150						
HSAF	**As Saff**	**7.47**	**157**	P	**Pn**	**04 00 44.2**	**-0.2**
	baz=155						
GLL	**Jalalah**	**7.56**	**156**	P	**Pn**	**04 00 45.6**	**0.0**
	baz=154						
RYAN	**Fayoum**	**7.66**	**166**	P	**Pn**	**04 00 46.3**	**-0.6**
	baz=165						
RYAN				S	Sn	04 01 59.9	-12
	baz=165						
RYAN				AMP		04 02 00.0	
	baz=165						
SWA2		**7.66**	**198**	P	**Pn**	**04 00 46.8**	**-0.1**
	baz=201						
SWA2				AMP		04 02 00.0	
	baz=201						
ZAF	**Zafarana**	**8.13**	**152**	P	**Pn**	**04 00 53.1**	**-0.1**
	baz=150						
NBNS	**Bani Suef**	**8.34**	**161**	P	**Pn**	**04 00 56.0**	**-0.2**
	baz=160						
HFRF	**Wahat Farafira**	**9.39**	**179**	P	**Pn**	**04 01 10.0**	**-0.6**
	baz=179						

*IDC **23** 04:00:00.8±0.9, 40°.83N×51°.92E, h0^{km}, mb3.8/7, mb1 3.9/15, mb1mx3.6/60, mbtmp3.8/15, ML3.4/6, Error ellipse: s-maj=15.2km s-min=8.0km az=168.0*
*TEH **23** 04:00:07.6, 40°.66N×51°.88E, h52^{km}, ML4.0*
*AZER **23** 04:00:07.6±0.2, 40°.68N×51°.82E, h54^{km}±25^{km}, ml3.8/29, Error ellipse: s-maj=4.4km s-min=3.5km az=246.0*
*NNC **23** 04:00:13.6±1.8, 41°.30N×52°.72E, h37^{km}±18^{km}, mb3.7, Error ellipse: s-maj=15.7km s-min=9.0km az=91.0*
ISC 23 04:00:00.8±1.4, **40°.89N**±0°.04×**52°.01E**±0°.03, **h3**^{km}±9^{km}, **n76**, σ**2^{s}.62**/113, **mb4.0**/7, **3C-3D**, **Turkmenistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GALA	**Gala**	**1.49**	**252**	P	**Pb**	**04 00 30.9**	**+1.7**
GALA				S	**Sn**	**04 00 49.8**	**+1.3**
GALA	**Gala**	**1.49**	**252**	*e*Pn	**Pb**	**04 00 30.8**	**+1.7**
NDR	**Nardaran**	**1.57**	**259**	P	**Pg**	**04 00 32.4**	**+1.4**
	SNR=10.0						
NDR				S	**Sn**	**04 00 52.5**	**+2.1**
NDR	**Nardaran**	**1.57**	**259**	*e*Pn	**Pg**	**04 00 32.3**	**+1.4**
GOBA	**Gobu**	**1.80**	**255**	Pn	**Pg**	**04 00 36.6**	**+1.3**
GOBA				Sn	**Sg**	**04 00 57.3**	**-1.5**
GOBA	**Gobu**	**1.80**	**255**	*e*Pn	**Pg**	**04 00 36.6**	**+1.3**
ATGJ	**Altiaghaj**	**2.33**	**270**	Pn	**Pg**	**04 00 44.0**	**-1.5**
	SNR=18						
ATGJ				Sn	**Sb**	**04 01 11.6**	**-1.1**
ATGJ	**Altiaghaj**	**2.33**	**270**	*e*Pn	**Pg**	**04 00 43.9**	**-1.5**
SIZA	**Siyzn**	**2.37**	**275**	Pn	**Pg**	**04 00 44.5**	**-1.6**
	SNR=58						
SIZA				Sn	**Sb**	**04 01 12.5**	**-1.2**
SIZA	**Siyzn**	**2.37**	**275**	*e*Pn	**Pg**	**04 00 45.0**	**-1.1**
ALIB	**Äli-Bayra**	**2.48**	**249**	Pn	**Pg**	**04 00 46.3**	**-1.9**
ALIB				Sn	**Sb**	**04 01 13.9**	**-2.9**
PQL	**Pirkuli**	**2.60**	**269**	Pn	**Pb**	**04 00 47.2**	**-0.9**
	SNR=17						
PQL				Sn	**Sb**	**04 01 17.7**	**-2.8**
PQL	**Pirkuli**	**2.60**	**269**	*e*Pn	**Pb**	**04 00 47.5**	**-0.6**
QUBA	**Quba, Azerbaij**	**2.70**	**281**	Pn	**Pb**	**04 00 49.1**	**-0.7**
	SNR=9.2						
QUBA				Sn	**Sb**	**04 01 20.4**	**-2.8**
QUB	**Quba**	**2.80**	**281**	*e*Pn	**Pb**	**04 00 49.0**	**-2.5**
QSAR	**Qusar**	**2.90**	**284**	Pn	**Pb**	**04 00 51.7**	**-1.4**
	SNR=32						
QSAR				Sn	**Sn**	**04 01 24.9**	**+1.7**
QSAR	**Qusar**	**2.90**	**284**	*e*Pn	**Pb**	**04 00 51.3**	**-1.8**
IML	**Ismayilli**	**2.91**	**269**	Pn	**Pb**	**04 00 50.8**	**-2.5**
	SNR=26						
IML				Sn	**Sn**	**04 01 23.3**	**-0.2**
IML	**Ismayilli**	**2.91**	**269**	*e*Pn	**Pb**	**04 00 50.8**	**-2.5**
XNQ	**Khinaliq**	**2.94**	**277**	Pn	**Pb**	**04 00 51.7**	**-2.3**
	SNR=668						
XNQ				Sn	**Sn**	**04 01 25.2**	**+0.6**
XNQ	**Khinaliq**	**2.94**	**277**	*e*Pn	**Pb**	**04 00 51.3**	**-2.7**
QBL	**Gabala**	**3.17**	**272**	Pn	**Pb**	**04 00 54.2**	**-3.5**
	SNR=20						
QBL				Sn	**Sn**	**04 01 29.5**	**-0.3**
QBL	**Gabala**	**3.17**	**272**	*e*Pn	**Pb**	**04 00 54.2**	**-3.5**
GLBA	**Clilabad**	**3.23**	**240**	Pn	**Pb**	**04 00 55.1**	**-3.7**
	SNR=4.1						
GLBA				Sn	**Sn**	**04 01 29.6**	**-1.7**
GLBA	**Clilabad**	**3.23**	**240**	*e*Pn	**Pb**	**04 00 55.1**	**-3.7**
LKRN	**Lenkeran, Azer**	**3.31**	**230**	Pn	**Pn**	**04 00 54.9**	**+1.4**
	SNR=46						
LKRN				Sn	**Sn**	**04 01 30.5**	**-2.9**
LKRN	**Lenkeran, Azer**	**3.31**	**230**	*e*Pn	**Pn**	**04 00 54.8**	**+1.4**
ZRD	**Zardab**	**3.35**	**261**	Pn	**Pb**	**04 00 57.0**	**-3.9**
	SNR=11						
ZRD				Sn	**Sn**	**04 01 35.6**	**+1.2**
ASTR	**Astara**	**3.41**	**228**	Pn	**Pn**	**04 00 56.2**	**+1.4**

	SNR=42						
ASTR				Sn	Sn	04 01 32.3	-3.4
YRD	**Yardimli**	3.51	237	Pn	Pn	04 00 57.7	+1.3
	SNR=18						
YRD				Sn	Sn	04 01 35.3	-3.3
BLQ	**Beylaqan**	3.60	252	Pn	Pn	04 00 59.5	+2.0
BLQ				Sn	Sn	04 01 38.2	-2.4
LRK	**Lerik**	3.62	233	Pn	Pn	04 00 59.0	+1.2
	SNR=42						
LRK				Sn	Sn	04 01 37.5	-3.5
SEKA	**Sheki**	3.66	277	Pn	Pn	04 01 01.2	+3.0
	SNR=23						
SEKA				Sn	Sn	04 01 39.6	-2.3
BRDA	**Brd**	3.73	262	Pn	Pn	04 01 02.1	+2.8
	SNR=3.7						
BRDA				Sn	Sn	04 01 44.5	+0.7
AGDM	**Agdam**	3.82	260	Pn	Pn	04 01 02.3	+1.8
	SNR=5.9						
AGDM				Sn	Sn	04 01 44.5	-1.4
QRD	**Qoradiz**	3.87	250	Pn	Pn	04 01 03.6	+2.4
QRD				Sn	Sn	04 01 44.4	-2.8
ZKTA	**Zakatala**	4.13	282	Pn	Pn	04 01 07.8	+3.0
	SNR=9.8						
ZKTA				Sn	Sn	04 01 54.5	+0.9
GANJ	**Ganja**	4.33	269	Pn	Pn	04 01 08.5	+1.0
	SNR=14						
GANJ				Sn	Sn	04 01 54.4	-4.1
ISRB	**Sarab**	4.55	229	*e*Pn	Pn	04 01 12.8	+2.0
ISRB				*e*		04 02 05.4	
	comp=Z,99nm,0.2s						
IGLO	**Ghaloghah**	4.61	161	*e*Pn	Pn	04 01 13.7	+2.2
IHRS	**Heris**	4.62	238	*e*Pn	Pn	04 01 13.9	+2.2
IHRS				*e*		04 01 16.4	
	comp=Z,99nm,0.2s						
IPRN	**Peran**	4.65	177	*e*Pn	Pn	04 01 13.6	+1.5
GDB	**GEDABAY**	4.75	270	Pn	Pn	04 01 14.5	+1.0
	SNR=53						
GDB				Sn	Sn	04 02 05.4	-3.8
ORD	**Ordubad**	5.03	249	Pn	Pn	04 01 19.4	+2.2
	SNR=8.2						
ORD				Sn	Sn	04 02 13.2	-2.6
QZX	**Qazax, Azerbai**	5.03	274	Pn	Pn	04 01 18.5	+1.4
	SNR=7.2						
QZX				Sn	Sn	04 02 12.1	-3.7
ITBZ	**Tabriz**	5.25	242	*e*Pn	Pn	04 01 22.1	+1.7
ITBZ				*e*		04 01 22.4	
	comp=Z,99nm,0.3s						
IFIR	**Firoozkooh**	5.28	173	*e*Pn	Pn	04 01 24.8	+4.0
NAX	**Nakhchivan**	5.29	253	Pn	Pn	04 01 23.8	+3.0
	SNR=6.5						
NAX				Sn	Sn	04 02 18.4	-3.9
IMRD	**Marand**	5.33	248	*e*Pn	Pn	04 01 23.6	+2.3
IMRD				*e*		04 01 25.1	
	comp=Z,99nm,0.2s						
ILAS	**Lasjerd**	5.55	172	*e*Pn	Pn	04 01 27.7	+3.2
ILAS				*e*		04 02 33.6	
	comp=Z,99nm,0.4s						
GEYT	**Alibeck**	5.58	120	Pn	Pn	04 01 27.5	+2.8
	comp=Z,1.1nm,0.3s,baz=295,slow=16,SNR=11						
GEYT				Pg	Pg	04 01 44.1	-3.5
	comp=Z,3.6nm,0.3s,baz=299,slow=15,SNR=8.9						
GEYT				Sn	Sn	04 02 27.8	-1.5
	comp=Z,3.0nm,0.3s,baz=301,slow=20,SNR=4.2						
GEYT				Lg	Lg	04 03 00.5	
	comp=Z,1.1nm,0.3s,baz=338,slow=34,SNR=1.9						
GNI	**Garni**	5.59	265	Pn	Pn	04 01 27.0	+2.0
	comp=Z,1.5nm,0.3s,baz=15,slow=3.6,SNR=5.9						
GNI				Sn	Sn	04 02 30.3	+0.4
	comp=Z,0.9nm,0.3s,baz=348,slow=19,SNR=1.4						
IRAZ	**Razeghan**	5.72	197	*e*Pn	Pn	04 01 28.6	+1.8
IKRD	**Kardeh**	7.15	123	*e*Pn	Pn	04 01 51.5	+5.0
IKRD				*e*		04 04 04.0	
	comp=Z,99nm,0.5s						
KBZ	**Khabaz**	7.33	296	Pn	Pn	04 01 49.4	+0.8
	comp=Z,0.4nm,0.3s,baz=122,slow=4.5,SNR=14						
KBZ				Sn	Sn	04 03 06.1	-6.1
	comp=Z,2.4nm,0.3s,baz=284,slow=21,SNR=9.0						
KVAR	**Kislovodsk Arr**	7.54	297	Pn	Pn	04 01 53.2	+1.5
	baz=70,slow=15,SNR=2.3						
KVAR				Sn	Sn	04 03 11.2	-6.6
	baz=208,slow=8.2,SNR=13						
AB31	**Akbulak array**	10.06	31	Pn	Pn	04 02 26.9	+0.8
	comp=Z,0.4nm,0.3s,baz=213,slow=12,SNR=32						
AB31				Sn	Sn	04 04 13.4	-6.0
	comp=Z,12nm,0.6s,baz=205,slow=23,SNR=8.8						
AKTO	**Aktyubinsk**	10.42	22	Pn	Pn	04 02 32.1	+1.1
	comp=Z,0.6nm,0.3s,baz=206,slow=13,SNR=7.2						
AKTO				Sn	Sn	04 04 23.0	-5.2
	comp=Z,3.6nm,0.3s,baz=70,slow=20,SNR=17						
AKTO	**Aktyubinsk**	10.42	22	⇑Pn	Pn	04 02 32.4	+1.3
	comp=Z,2.1nm,0.7s						
AKTO				⇓Sn	Sn	04 04 22.4	-5.9
	comp=Z,17nm,0.5s						
KK31	**Karatay Array**	13.93	75	P	Pn	04 03 20.0	+0.9
	comp=Z,0.8nm,0.4s,baz=273,slow=15,SNR=5.8						
KK31				⇑S	Sn	04 05 47.6	-6.7
	comp=Z,1.1nm,0.3s,baz=267,slow=23,SNR=6.4						
BRTR	**Keskin Array B**	14.07	271	Pn	Pn	04 03 24.2	+3.1
	comp=Z,0.0nm,0.3s,baz=78,slow=8.1,SNR=2.3						
ARU	**Arti**	16.12	13	Pn	Pn	04 03 47.4	-0.9
	comp=Z,0.0nm,0.3s,baz=258,slow=17,SNR=4.0						
ARU				Sn	Sn	04 06 36.4	-11
	comp=Z,0.0nm,0.3s,baz=11,slow=22,SNR=7.9						
AAK	**Ala-Archa**	16.86	77	Pn	Pn	04 03 59.8	+2.0
	comp=Z,0.2nm,0.3s,baz=230,slow=7.3,SNR=5.5						
BRVK	**Borovoye**	17.36	39	⇓P	Pn	04 04 03.8	-0.1
	comp=Z,1.1nm,0.6s						
BRVK				⇑S	Sn	04 07 08.4	-8.9
	comp=Z,8.5nm,1.0s						
BVAR	**Borovoye Array**	17.39	40	P	Pn	04 04 05.9	+1.6
	comp=Z,0.5nm,0.3s,baz=254,slow=7.1,SNR=11						
BVAR				S	Sn	04 07 10.1	-8.0
	comp=Z,1.1nm,0.3s,baz=278,slow=16,SNR=9.2						
KIRV	**Kirov**	17.79	356	P	Pn	04 04 10.4	+1.3
	comp=Z,1.6nm,0.3s,baz=210,slow=8.1,SNR=4.3						
KURBB	**Kurchatov Arra**	20.80	53	P	P	04 04 45.1	+2.1
	comp=Z,0.8nm,0.7s,baz=256,slow=10,SNR=8.0						
IDI	**Anoyia**	22.02	264	P	P	04 04 56.1	-0.3
	comp=Z,9.4nm,0.9s,baz=22,slow=11,SNR=1.8						
KOLS	**Kolonicke sedl**	22.43	301	*e*P	P	04 05 07.1	+6.5
MK31	**Makanchi Array**	22.53	65	⇓P	P	04 05 03.2	+1.5
	comp=Z,2.5nm,1.0s,baz=262,slow=8.4,SNR=9.5						
MKAR	**Makanchi Array**	22.53	65	P	P	04 05 03.3	+1.5
	comp=Z,0.7nm,0.7s,baz=260,slow=9.5,SNR=9.9						
MKAR				S	S	04 09 11.4	+2.0
	comp=Z,0.4nm,0.9s,baz=246,slow=24,SNR=3.2						
CRVS	**Cervenica-Dubn**	22.96	301	*e*P	P	04 05 11.8	+5.6
ZALV	**Zalesovo Beam**	25.49	48	P	P	04 05 31.4	+1.3
	comp=Z,1.9nm,0.4s,baz=262,slow=12,SNR=11						
FINES	**FINESS Array B**	25.91	331	P	P	04 05 33.2	-0.5
	comp=Z,1.2nm,0.4s,baz=131,slow=11,SNR=12						
HFS	**Hagfors**	30.43	322	P	P	04 06 13.2	-0.9
	comp=Z,1.4nm,0.7s,baz=108,slow=9.5,SNR=5.5						
WRA	**Warramunga Arr**	97.23	110	P	P	04 13 33.7	-1.4
	comp=Z,0.4nm,1.0s,baz=319,slow=4.6,SNR=1.6						

SOME ***23*** *04:45:56.6, 44°.55N×85°.43E, h0^{km}*
NNC ***23*** *04:45:57.9±1.9, 44°.47N×85°.49E, h0^{km}, mb3.6, mpv3.3, Error ellipse: s-maj=16.7km s-min=8.7km az=121.0*
ISC 23 04:45:57.3±1.9**, 44°.37N**±0°.08×**85°.36E**±0°.10**, h10**^{km}**, n16, σ2^{s}.31**/25**, 10C-4D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZSN	**Zaisan**	3.10	354	*e*P	Pb	04 46 51.6	-1.0
	3.9nm,0.2s						
ZSN				*e*S	Sb	04 47 31.3	+0.9
	32nm,0.6s						
ZSN	**Zaisan**	3.10	354	Pg	Pb	04 46 51.6	-1.0
	3.9nm,0.2s						
ZSN				Lg	Lg	04 47 31.9	
	32nm,0.6s						
MK31	**Makanchi Array**	3.25	319	⇑Pn	Pn	04 46 50.5	+2.1
	0.8nm,0.6s,baz=246,slow=40,SNR=168						
MK31				⇑Pg	Pg	04 46 58.5	-1.0
	5.1nm,0.5s,baz=139,slow=17,SNR=46						
MK31				⇑Lg	Lg	04 47 41.3	
	10nm,0.5s,baz=134,slow=27,SNR=12						
MAKZ	**Makanchi**	3.41	317	⇑Pn	Pn	04 46 52.8	+2.2
	1.4nm,0.5s						
MAKZ				⇓Pg	Pg	04 47 01.2	-1.3
	1.9nm,0.3s						
MAKZ				⇑Lg	Lg	04 47 47.0	
	18nm,1.0s						
DJR	**Jarkent**	4.00	271	*e*P	Pg	04 47 11.4	-2.5
	5.2nm,0.5s						
DJR				*e*S	Sg	04 48 05.3	-0.3
	16nm,0.5s						
DJR	**Jarkent**	4.00	271	Pg	Pg	04 47 10.9	-3.0
	3.1nm,0.4s						
DJR				Lg	Lg	04 48 05.3	
	16nm,0.5s						
PDGK	**Podgornoye**	4.37	258	⇑Pn	Pn	04 47 07.3	+3.3
	1.6nm,0.6s						
PDGK				⇓Pg	Pg	04 47 20.4	-0.6
	5.8nm,0.7s						
PDGK				⇑Lg	Lg	04 48 21.0	
	24nm,0.8s						
SHLS	**Shalkode**	4.44	256	*e*P	Pb	04 47 15.2	-0.3
	20nm,0.6s						
SHLS				*e*S	Sb	04 48 12.1	+2.9
	47nm,0.6s						
UZB	**Uzynbulak**	4.75	257	*e*P	Pg	04 47 25.6	-2.8
	2.6nm,0.2s						
UZB				*e*S	Sg	04 48 29.8	-0.1
	18nm,0.6s						
KPKS	**Kokpek**	4.91	262	*e*P	Pg	04 47 29.5	-1.8
	7.2nm,0.3s						
KPKS				*e*S	Sg	04 48 36.9	+2.0
	24nm,0.5s						
ARXS	**Arharly**	5.41	271	*e*P	Pg	04 47 37.1	-3.8
	5.4nm,0.3s						
ARXS				*e*S	Sg	04 48 49.8	-1.2
	14nm,0.8s						
ARXS	**Arharly**	5.41	271	Pg	Pg	04 47 37.1	-3.8
	5.4nm,0.3s						
ARXS				Lg	Lg	04 48 49.8	
	14nm,0.8s						
KUU	**Kurty**	6.51	269	Pg	Pg	04 47 57.8	-4.2
	2.7nm,1.3s						
KUU				Lg	Lg	04 49 26.2	
	4.6nm,0.7s						
TKM2	**Tokmak 2**	7.23	262	⇑Lg	Lg	04 49 52.3	
	6.1nm,1.0s						
KURBB	**Kurchatov Arra**	7.78	326	⇑Pn	Pn	04 47 51.8	+1.3
	1.1nm,0.5s						
KURBB				⇓Lg	Lg	04 50 04.7	
	22nm,0.7s						
ZAA0	**Zalesovo Array**	9.59	358	⇓Pn	Pn	04 48 14.7	-0.6
	0.3nm,0.7s						
ZAA0				⇑Sn	Sn	04 50 04.4	+1.3
	0.4nm,0.7s						

IDC ***23*** *05:11:56.4±1.5, 4°.80S×153°.29E, h0^{km}, mb4.0/11, mb1 4.2/11, mb1mx4.0/39, mbtmp4.0/11, MS3.1/5, Ms1 3.0/5, ms1mx2.8/25, Error ellipse: s-maj=51.5km s-min=19.4km az=121.0*
ISC 23 05:12:02.6±1.5**, 4°.8S**±0°.2×**153°.3E**±0°.3**, h43**^{km}**, n19, σ0^{s}.50**/12**, mb3.8**/11**, MS3.0**/4**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	8.06	125	LR	LR	05 16 25.0	
	comp=Z,55nm,19.5s,baz=340,slow=33						
GUMO	**Guam**	20.11	336	LR	LR	05 23 46.3	
	comp=Z,43nm,21.3s,baz=98,slow=35						
WRA	**Warramunga Arr**	23.75	229	P	P	05 17 11.7	+0.4
	3.0nm,0.5s,baz=53,slow=9.9,SNR=57						
ASAR	**Alice Springs**	26.42	223	P	P	05 17 36.0	+0.4
	0.6nm,0.4s,baz=56,slow=9.1,SNR=5.1						
ASAR				LR	LR	05 27 44.4	
	comp=Z,31nm,20.2s,baz=18,slow=36						
H11S3	**WAKE ISLAND Hy**	26.71	29	T	T	05 45 30.2	
	baz=209						
H11S2	**WAKE ISLAND Hy**	26.71	29	T	T	05 45 23.9	
	baz=209						
H11S1	**WAKE ISLAND Hy**	26.73	29	T	T	05 45 31.9	
	baz=209						
STKA	**Stephens Creek**	29.03	201	LR	LR	05 28 52.2	
	comp=Z,58nm,18.1s,baz=23,slow=35						
FITZ	**Fitzroy Crossi**	30.03	242	P	P	05 18 07.3	-0.5
	2.8nm,0.6s,baz=58,slow=8.0,SNR=12						
MJAR	**Matsushiro Arr**	43.51	342	LR	LR	05 35 09.6	
	comp=Z,36nm,21.8s,baz=280,slow=32						
KLR	**Kul'dur**	57.01	343	P	P	05 21 43.4	-0.6
	1.8nm,0.7s,baz=127,slow=3.6,SNR=4.7						
PETK	**Petropavlovsk-**	57.86	3	P	P	05 21 50.4	+0.5
	4.2nm,1.0s,baz=67,slow=8.2,SNR=3.8						
CMAR	**Chiang Mai Arr**	58.30	295	P	P	05 21 53.7	0.0
	1.2nm,0.4s,baz=115,slow=5.0,SNR=4.5						
SONM	**Songino Array**	66.60	328	P	P	05 22 49.5	+0.8
	0.3nm,0.6s,baz=152,slow=5.8,SNR=4.0						
MKAR	**Makanchi Array**	80.65	319	P	P	05 24 11.0	-0.1
	0.9nm,0.8s,baz=100,slow=6.6,SNR=9.0						
ZALV	**Zalesovo Beam**	81.43	326	P	P	05 24 15.0	-0.1
	0.5nm,0.5s,baz=99,slow=6.6,SNR=2.8						
ILAR	**Eielson Array**	82.03	22	P	P	05 24 17.4	-0.6
	0.7nm,0.9s,baz=244,slow=6.0,SNR=6.5						
YKA	**Yellowknife Ar**	95.26	28	P	P	05 25 21.9	+0.3
	0.3nm,0.8s,baz=270,slow=4.1,SNR=3.8						
TORD	**Torodi Ar. Bea**	150.74	288	PKPbc	PKPbc	05 31 51.2	-0.2
	2.8nm,0.7s,baz=58,slow=2.4,SNR=16						

IDC ***23*** *05:17:30.6±0.8, 39°.67N×143°.45E, h0^{km}, mb3.7/14, mb1 3.9/17, mb1mx3.8/34, mbtmp3.7/17, ML3.2/3, MS3.3/7, Ms1 3.3/7, ms1mx3.0/39, Error ellipse: s-maj=20.7km s-min=17.3km az=112.0*
NEIC ***23*** *05:17:33.0±1.7, 39°.69N±0°.04×143°.21E±0°.09, h10^{km}±1^{km}, mb4.4/12, Error ellipse: s-maj=12.2km s-min=6.6km az=252.0*
JMA ***23*** *05:17:33.2±0.2, 39°.78N×143°.47E, h36^{km}, M4.3*
NIED ***23*** *05:17:33.2, 39°.78N×143°.47E, h36^{km}, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.95; $M_{\theta\theta}$0.18; $M_{\phi\phi}$-1.14; $M_{r\theta}$1.32; $M_{\theta\phi}$-0.55; $M_{\phi r}$1.37; Fault plane solution: $M_0$2.24000×10^{15} NP1:ϕ_s41.00000°, δ76.00000°, λ105.00000°. NP2:ϕ_s173.00000°, δ21.00000°, λ44.00000°.*
ISC 23 05:17:32.6±0.7**, 39°.73N**±0°.05×**143°.42E**±0°.07**, h11**^{km}**, n67, σ1^{s}.18**/62**, mb4.0**/20**, MS3.3**/4**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	1.22	280	P	Pn	05 17 54.7	-0.9
MIYJ	**Miyakonagasawa**	1.25	264	P	Pn	05 17 55.5	-0.5
MIYJ				*e*S	Sb	05 18 11.4	-0.8
JKEN	**Kujiedanarisaw**	1.40	290	P	Pn	05 17 57.0	-1.1
JANG	**Nango**	1.60	294	P	Pn	05 17 59.9	-0.9
JOM	**Ohasama**	1.66	262	P	Pn	05 18 02.1	+0.4
JMK	**Ichinoseki**	1.87	246	P	Pn	05 18 04.6	0.0
JIO	**Ouri**	2.05	232	P	Pn	05 18 06.6	-0.5
JTM	**Tenmabayashi**	2.09	301	P	Pn	05 18 07.6	0.0
JTM	**Tenmabayashi**	2.09	301	Pn	Pn	05 18 07.5	0.0
ERM	**Erimo**	2.29	355	Pn	Pn	05 18 11.2	+0.8
JOT	**Ohata**	2.45	313	P	Pn	05 18 14.1	+1.6
JYK	**Kaneyama**	2.51	252	P	Pn	05 18 14.1	+0.8
JNBK	**Urakawa-nobuka**	2.60	349	P	Pn	05 18 14.8	+0.2
JMM	**Marumori**	2.77	229		Pn	05 18 15.9	-1.1
JCH	**Churui**	2.88	359	P	Pn	05 18 17.5	-1.0
JCH				S	Sn	05 18 49.8	-3.4
JFT	**Otama**	3.27	229	P	Pn	05 18 23.9	+0.1
JEW	**Eniwo**	3.44	335	Pn	Pn	05 18 25.1	-1.1
JYT	**Yasato**	4.33	217	Pn	Pn	05 18 38.4	+0.1
JSD	**Sado**	4.37	249	Pn	Pn	05 18 39.1	+0.3
JKA	**Kamikawa-asahi**	4.43	352	Pn	Pn	05 18 40.9	+1.2
ASAJ	**Asahikawa**	4.43	352	Pn	Pn	05 18 40.7	+1.0
	2.1nm,0.3s,baz=257,slow=13,SNR=4.1						
ASAJ				Sn	Sn	05 19 33.1	+1.9
	2.4nm,0.3s,baz=124,slow=7.3,SNR=1.9						
MJAR	**Matsushiro Arr**	5.20	234	Pn	Pn	05 18 51.4	+1.1
	0.4nm,0.3s,baz=40,slow=11,SNR=9.4						
MJAR				LR	LR	05 21 07.2	
	comp=Z,205nm,18.8s,baz=50,slow=42						
MAJO	**Matsushiro**	5.20	234		Pn	05 18 50.8	+0.5
MAT	**Matsushiro**	5.20	234	P	Pn	05 18 51.3	+1.0
MAT				*e*S	Sn	05 19 50.0	-0.2
JGF	**Kuroka**	6.33	231	Pn	Pn	05 19 06.1	+0.2
USA0B	**Ussuriysk Arra**	9.61	301	Pn	Pn	05 19 49.7	-1.2
USRK	**Ussuriysk Ar.**	9.61	301	Pn	Pn	05 19 54.8	+3.9
	baz=95,slow=13,SNR=7.1						
USRK	**Ussuriysk Ar.**	9.61	301		Pn	05 19 50.3	-0.6
KSRS	**Korea Array**	12.34	264	Pn	Pn	05 20 31.8	+3.7
	0.3nm,0.3s,baz=85,slow=15,SNR=2.6						
KSRS				LR	LR	05 24 49.4	
	comp=Z,136nm,20.7s,baz=76,slow=35						
KLR	**Kul'dur**	12.62	323	Pn	Pn	05 20 33.8	+1.7
	0.1nm,0.3s,baz=171,slow=13,SNR=2.2						
KLR				LR	LR	05 25 36.5	
	comp=Z,140nm,20.9s,baz=70,slow=38						
YAK	**Yakutsk**	23.85	344	LR	LR	05 32 49.3	
	comp=Z,46nm,20.0s,baz=138,slow=38						
SEY	**Seymchan**	23.86	10	P	P	05 22 45.6	0.0
	2.0nm,0.5s,baz=200,slow=11,SNR=8.9						
SONM	**Songino Array**	27.72	299	P	P	05 23 21.1	+0.1
	1.2nm,0.7s,baz=90,slow=8.2,SNR=9.0						
SONM				LR	LR	05 35 19.1	
	comp=Z,130nm,18.8s,baz=36,slow=38						
SONM	**Songino Array**	27.72	299	P	P	05 23 20.9	-0.1
H11N2	**WAKE ISLAND Hy**	28.36	128	T	T	05 54 26.0	
	baz=318,slow=75,SNR=116						
H11N1	**WAKE ISLAND Hy**	28.37	128	T	T	05 54 27.2	
	baz=318,slow=75,SNR=77						
H11N3	**WAKE ISLAND Hy**	28.38	128	T	T	05 54 19.8	
	baz=318,slow=75,SNR=77						
H11S1	**WAKE ISLAND Hy**	29.18	130	T	T	05 55 22.2	
	baz=319,slow=76,SNR=9.3						
H11S3	**WAKE ISLAND Hy**	29.18	130	T	T	05 55 24.7	
	baz=319,slow=76,SNR=9.0						
H11S2	**WAKE ISLAND Hy**	29.20	130	T	T	05 55 29.3	
	baz=319,slow=76,SNR=8.6						
ENH	**Enshi**	29.21	262	P	P	05 23 33.4	-0.9
ENH				IAmb	IAmb	05 23 46.9	
	comp=Z,7.8nm,0.8s						
TLY	**Talaya**	29.87	307	LR	LR	05 35 28.1	
	comp=Z,43nm,20.8s,baz=52,slow=36						
ZAA0	**Zalesovo Array**	41.33	310	P	P	05 25 17.0	-1.0
ZALV	**Zalesovo Beam**	41.33	310	P	P	05 25 17.9	-0.1
	comp=Z,2.1nm,0.5s,baz=97,slow=7.8,SNR=11						
ZALV	**Zalesovo Beam**	41.33	310	P	P	05 25 18.1	0.0
IMAR	**Indian Mountai**	43.53	32	P	P	05 25 37.3	+1.4
MK31	**Makanchi Array**	44.08	300	P	P	05 25 40.2	-0.4
MK31				IAmb	IAmb	05 25 44.5	
	comp=Z,1.9nm,0.8s						
MKAR	**Makanchi Array**	44.08	300	P	P	05 25 40.4	-0.2
	comp=Z,1.4nm,0.7s,baz=84,slow=9.5,SNR=10						
MKAR	**Makanchi Array**	44.08	300	P	P	05 25 40.6	0.0
MAKZ	**Makanchi**	44.28	300	P	P	05 25 42.2	0.0
MAKZ				IAmb	IAmb	05 25 47.0	
	comp=Z,4.7nm,1.2s						
KURK	**Kurchatov**	45.56	306	P	P	05 25 51.7	-0.5
KURK				IAmb	IAmb	05 26 01.6	
	comp=Z,4.4nm,0.8s						
ILAR	**Eielson Array**	46.38	34	P	P	05 25 58.5	-0.1
	comp=Z,0.2nm,0.5s,baz=274,slow=7.7,SNR=5.0						
INK	**Inuvik**	51.27	28	P	P	05 26 36.5	+0.5
	comp=Z,0.3nm,0.6s,baz=307,slow=5.1,SNR=1.4						
ABKAR	**Akbulak array**	57.43	309	P	P	05 27 21.2	+0.1
ABKAR				IAmb	IAmb	05 27 30.3	
	comp=Z,2.3nm,0.7s						
WB0	**Warramunga Arr**	59.78	190	P	P	05 27 36.8	-0.9
WRAB	**Tennant Creek**	59.95	190	P	P	05 27 36.2	-2.7
WRAB				IAmb	IAmb	05 27 40.3	
	comp=Z,6.7nm,1.3s						
WR0	**Warramunga Arr**	59.95	190	P	P	05 27 37.8	-1.1
WB2	**Warramunga Arr**	59.96	190	P	P	05 27 37.9	-1.0
WRA	**Warramunga Arr**	59.96	190	P	P	05 27 37.8	-1.2
	comp=Z,0.9nm,0.8s,baz=8.1,slow=7.4,SNR=6.4						
YKA	**Yellowknife Ar**	60.69	31	P	P	05 27 43.7	+0.2
	comp=Z,0.2nm,0.8s,baz=304,slow=6.2,SNR=2.2						
ASAR	**Alice Springs**	63.69	190	P	P	05 28 03.5	-0.5
	comp=Z,0.5nm,0.9s,baz=8.8,slow=6.7,SNR=2.2						
FINES	**FINESS Array B**	67.16	332	P	P	05 28 25.9	-0.2
	comp=Z,2.1nm,0.9s,baz=46,slow=11,SNR=4.2						
KBZ	**Khabaz**	70.34	311	P	P	05 28 46.5	+0.3
	comp=Z,2.0nm,0.9s,baz=59,slow=7.7,SNR=4.2						
NVAR	**Mina Array Bea**	72.13	55	P	P	05 28 57.5	+0.1
	comp=Z,0.3nm,0.8s,baz=294,slow=6.7,SNR=1.8						
NOA	**NORSAR Array B**	72.30	338	LR	LR	06 04 02.0	
	comp=Z,31nm,19.5s,baz=250,slow=39						
AKASG	**Malin Array Be**	73.12	323	P	P	05 29 02.5	-0.3
	comp=Z,0.3nm,0.3s,baz=45,slow=5.9,SNR=1.8						
PDAR	**Pinedale Array**	74.67	47	P	P	05 29 12.7	+0.4
	comp=Z,0.3nm,0.6s,baz=297,slow=11,SNR=2.4						

IDC ***23*** *05:28:00.6±3.1, 39°.83N×143°.82E, h0^{km}, mb3.5/4, mb1 3.6/5, mb1mx3.3/32, mbtmp3.4/5, ML2.6/1, Error ellipse: s-maj=73.8km s-min=33.1km az=72.0*
JMA ***23*** *05:28:03.9±0.2, 39°.76N×143°.54E, h23^{km}±5^{km}, M3.7*
ISC 23 05:28:01.8±2.6**, 39°.81N**±0°.06×**143°.51E**±0°.09**, h2**^{km}±14^{km}**, n23, σ1^{s}.23**/22**, mb3.4**/4**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	1.27	276	P	Pg	05 28 26.6	+0.4
JTH				*e*S	Sg	05 28 43.4	+0.8
MIYJ	**Miyakonagasawa**	1.32	260	P	Pg	05 28 27.5	+0.4
MIYJ				*e*S	Sg	05 28 45.0	+0.7
JKEN	**Kujiedanarisaw**	1.44	287	P	Pg	05 28 29.1	-0.2
JANG	**Nango**	1.63	291	P	Pb	05 28 31.9	-0.6
JOM	**Ohasama**	1.74	260	P	Pb	05 28 34.1	-0.4
JOM				*e*S	Sb	05 28 56.0	-0.8
JMK	**Ichinoseki**	1.97	245	P	Pb	05 28 36.7	-1.6
JTM	**Tenmabayashi**	2.11	298	P	Pb	05 28 40.1	-0.5
JTM				*e*S	Sb	05 29 05.8	-1.4
JIO	**Ouri**	2.16	232	P	Pn	05 28 38.7	0.0
JAH	**Hinai**	2.24	281	P	Pb	05 28 41.4	-1.5
JNBK	**Urakawa-nobuka**	2.53	347	P	Pb	05 28 46.8	-1.1
JNBK				*e*S	Sb	05 29 18.1	-1.4
JYK	**Kaneyama**	2.60	251	P	Pb	05 28 46.4	-2.6
JCH	**Churui**	2.80	358	*e*S	Sn	05 29 22.3	+0.4
MJAR	**Matsushiro Arr**	5.30	234	Pn	Pn	05 29 24.2	+2.3
	0.2nm,0.3s,baz=42,slow=12,SNR=5.2						
SONM	**Songino Array**	27.74	299	P	P	05 33 51.5	-0.1
	0.3nm,0.6s,baz=94,slow=8.8,SNR=2.2						
H11N2	**WAKE ISLAND Hy**	28.36	128	T	T	06 03 59.6	
	baz=320,slow=76						
H11N1	**WAKE ISLAND Hy**	28.37	128	T	T	06 03 45.6	
	baz=320,slow=76						
H11N3	**WAKE ISLAND Hy**	28.38	128	T	T	06 04 03.7	
	baz=320,slow=76						
H11S1	**WAKE ISLAND Hy**	29.18	130	T	T	06 04 51.3	
	baz=321						
H11S3	**WAKE ISLAND Hy**	29.18	130	T	T	06 05 08.2	
	baz=321						
H11S2	**WAKE ISLAND Hy**	29.20	130	T	T	06 04 51.3	
	baz=321						
ZALV	**Zalesovo Beam**	41.32	310	P	P	05 35 49.7	+1.2
	0.6nm,0.5s,baz=98,slow=8.9,SNR=2.5						
MKAR	**Makanchi Array**	44.10	300	P	P	05 36 11.9	+0.7
	0.3nm,0.7s,baz=81,slow=9.5,SNR=3.8						
WRA	**Warramunga Arr**	60.05	190	P	P	05 38 09.6	-0.6
	0.3nm,0.7s,baz=6.9,slow=7.1,SNR=2.0						

NNC ***23*** *05:57:09.5±1.9, 36°.96N×71°.14E, h142^{km}±45^{km}, mb3.0, mpv3.9, Error ellipse: s-maj=17.7km s-min=13.0km az=12.0*
ISC 23 05:57:06.3±3.7**, 36°.8N**±0°.2×**71°.1E**±0°.1**, h88**^{km}**, n9, σ0^{s}.96**/12**, 4C-1D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	5.73	20	P	Pn	05 58 29.7	+0.6
	SNR=35						
UCH	**Uchtor**	6.07	25	P	Pn	05 58 34.8	+1.0
	SNR=13						
EKS2	**Erkin-Say**	6.24	19	P	Pn	05 58 37.0	+1.1
	SNR=15						
KK31	**Karatay Array**	6.34	356	⇑P	Pn	05 58 38.6	+1.5
	5.2nm,0.3s,baz=173,slow=11,SNR=230						
KK31				S	Sn	05 59 47.6	-0.4
	5.0nm,0.5s,baz=180,slow=20,SNR=9.9						
AAK	**Ala-Archa**	6.43	23	P	Pn	05 58 39.5	+1.1
	SNR=5.7						
AAK	**Ala-Archa**	6.43	23	P	Pn	05 58 39.2	+0.7
AAK				⇑S	Sn	05 59 49.7	-0.7
	8.0nm,0.7s						
TKM2	**Tokmak 2**	7.06	28	P	Pn	05 58 47.6	+0.4
	SNR=7.3						
TKM2	**Tokmak 2**	7.06	28	⇑P	Pn	05 58 47.2	0.0
	2.8nm,0.5s						
TKM2				⇓S	Sn	06 00 05.9	-0.1
	3.6nm,0.8s						
AB31	**Akbulak array**	14.87	331	⇑P	Pn	06 00 30.7	-1.0
	0.3nm,0.3s,baz=141,slow=13,SNR=24						

IDC ***23*** *06:15:56.2±1.1, 33°.29N×92°.09E, h0^{km}, mb3.6/5, mb1 3.7/8, mb1mx3.5/33, mbtmp3.6/8, ML2.9/3, MS3.2/3, Ms1 3.2/3, ms1mx2.7/52, Error ellipse: s-maj=47.1km s-min=19.6km az=60.0*
BJI ***23*** *06:16:00.0±0.0, 33°.52N×92°.33E, h10^{km}, mb3.7/2, ML3.5/3,*

Ms3.5/1, Ms7 3.2/1

ISC 23 06:15:57.8±0.9**, 33°.36N**±0°.06×**92°.2E**±0°.1**, h10^{km}, n20, σ2ˢ.36**/19**, mb3.6**/5**, Qinghai**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LSA	**Lhasa**	**3.77**	**194**	Pn	**Pb**	**06 17 01.3**	**-3.3**
LSA				Sn	**Sg**	**06 17 58.6**	**-0.2**
LSA				smax	smax		
	comp=N,87nm,0.6s						
LSA				smax	smax		
	comp=E,120nm,0.9s						
TAPN	**Taplejung**	**7.15**	**214**	*e*P	**Pn**	**06 17 44.6**	**+1.9**
	4.9nm,0.3s						
GUN	**Gumba**	**7.71**	**227**	*e*P	**Pn**	**06 17 54.1**	**+3.7**
	9.9nm,0.4s						
ODAN	**Odare**	**7.72**	**214**	*e*P	**Pn**	**06 17 51.5**	**+1.1**
	7.5nm,0.4s						
RAMN	**Ramite**	**8.03**	**219**	*e*P	**Pn**	**06 17 55.9**	**+1.1**
	15nm,0.4s						
PKI	**Pulchoki**	**8.24**	**227**	*e*P	**Pn**	**06 17 59.9**	**+2.2**
	16nm,0.5s						
PKIN	**Phulchoki**	**8.24**	**227**	*e*P	**Pn**	**06 18 00.1**	**+2.4**
	13nm,0.6s						
GKN	**Gorkha**	**8.44**	**233**	*e*P	**Pn**	**06 18 02.3**	**+2.0**
	21nm,0.4s						
WMQ	**Urumqi**	**11.02**	**343**	*e*P	**Pn**	**06 18 38.9**	**+3.4**
WMQ				S	**Sn**	**06 20 33.5**	**-5.4**
MKAR	**Makanchi Array**	**15.40**	**333**	Pn	**Pn**	**06 19 34.1**	**-1.0**
	0.0nm,0.3s,baz=143,slow=12,SNR=6.9						
CMAR	**Chiang Mai Arr**	**16.02**	**156**	LR	LR	06 26 28.5	
	comp=Z,38nm,19.6s,baz=325,slow=40						
SONM	**Songino Array**	**17.98**	**32**	P	**P**	**06 20 09.5**	**+1.1**
	0.1nm,0.3s,baz=211,slow=12,SNR=9.1						
KURBB	**Kurchatov Arra**	**19.97**	**334**	P	**P**	**06 20 30.3**	**+0.3**
	0.0nm,0.3s,baz=143,slow=11,SNR=5.1						
ZALV	**Zalesovo Beam**	**21.24**	**348**	P	**P**	**06 20 43.4**	**-0.4**
	0.5nm,0.4s,baz=165,slow=9.8,SNR=5.7						
BVAR	**Borovoye Array**	**25.11**	**328**	P	**P**	**06 21 22.5**	**0.0**
	0.8nm,0.6s,baz=151,slow=19,SNR=6.2						
JOW	**Kunigami**	**31.75**	**92**	LR	LR	06 36 40.1	
	comp=Z,74nm,20.2s,baz=12,slow=39						
YAK	**Yakutsk**	**37.26**	**28**	LR	LR	06 39 35.3	
	comp=Z,41nm,20.3s,baz=162,slow=38						
WRA	**Warramunga Arr**	**66.52**	**137**	P	**P**	**06 26 48.3**	**+0.3**
	0.3nm,0.8s,baz=326,slow=8.6,SNR=2.9						
ASAR	**Alice Springs**	**69.23**	**139**	P	**P**	**06 27 05.2**	**+0.2**
	0.5nm,0.5s,baz=322,slow=6.3,SNR=12						
TORD	**Torodi Ar. Bea**	**83.33**	**281**	P	**P**	**06 28 25.0**	**-0.4**
	0.8nm,0.8s,baz=47,slow=6.1,SNR=3.0						

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*IDC **23** 06:32:02.0±1.0, 10°.63N×92°.03E, h0^{km}, mb4.0/11, mb1 4.2/13, mb1mx3.8/72, mbtmp4.0/13, ML4.1/2, MS3.7/14, Ms1 3.6/14, ms1mx3.4/41, Error ellipse: s-maj=31.3km s-min=17.3km az=57.0*

*NDI **23** 06:32:03.4±2.2, 10°.84N×91°.70E, h10^{km}, ML4.2, mb4.5(NEIC)*

*NEIC **23** 06:32:07.7±1.8, 10°.82N±0°.08×92°.06E±0°.09, h30^{km}±4^{km}, mb4.5/25, Error ellipse: s-maj=15.6km s-min=7.4km az=135.0*

ISC 23 06:32:07.5±0.6**, 10°.78N**±0°.08×**92°.07E**±0°.07**, h27^{km}, n90, σ1ˢ.59**/65**, mb4.5**/29**, MS3.6**/15**, 1C-1D, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PBA	**Port Blair**	**1.09**	**37**	*e*P	Pn	06 32 26.3	-0.8
PBA				*e*S	Sb	06 32 46.4	+4.8
PBA				IAML		06 32 49.0	
	comp=E,7µm,0.5s						
PBA				IAML		06 32 50.1	
	comp=N,5µm,0.3s						
PBA	**Port Blair**	**1.09**	**37**		Pn	06 32 26.6	-0.5
DGPR	**DIGLIPUR**	**2.53**	**19**	*e*PN	**Pn**	**06 32 47.0**	**+0.2**
DGPR				*i* PG	**Pb**	**06 32 56.9**	**+4.7**
DGPR				*e*x	x	06 32 57.9	
DGPR				IAML		06 33 40.0	
	comp=N,1µm,0.7s						
DGPR				IAML		06 33 40.1	
	comp=E,1µm,0.5s						
PKDT	**Phuket**	**6.82**	**114**	P	Pb	06 33 58.3	-7.1
PHET	**Kaeng Krachan**	**7.70**	**73**	P	Pn	06 34 07.0	+9.0
	comp=E,0.2nmcomp=E,84nm,0.7s						
SRDT	**SRDT**	**7.75**	**62**	P	Pn	06 34 06.0	+7.4
	comp=E,0.1nmcomp=E,16nm,0.9s						
TRTT	**Trang**	**8.07**	**111**	P	Pn	06 34 09.7	+6.6
	comp=E,16nm,0.6s						
UMPA	**Umpang Tak**	**8.53**	**50**	P	Pn	06 34 18.2	+8.9
	comp=E,0.2nmcomp=E,2µmcomp=E,47nm,0.8s						
UTHA	**Uthaitani**	**8.61**	**56**	P	Pn	06 34 19.9	+9.4
	comp=E,0.1nmcomp=E,21nm,0.8s						
MHMT	**Maesarieng**	**9.29**	**37**	P	Pn	06 34 29.7	+10
	comp=E,1µmcomp=E,34nm,0.9s						
SUKH	**Sukhothai**	**9.91**	**47**	P	Pn	06 34 41.0	+13
	comp=E,14nm,0.8s						
CMAR	**Chiang Mai Arr**	**10.12**	**40**	Pn	**Pn**	**06 34 29.4**	**-1.8**
	comp=E,0.5nm,0.3s,baz=231,slow=14,SNR=7.0						
CHTO	**Chiang Mai**	**10.39**	**39**	Pn	**Pn**	**06 34 35.1**	**+0.2**
VIS	**Vishakhapatnam**	**10.92**	**310**	*e*P	Pn	06 34 35.3	-6.8
VIS				*e*S	Sn	06 36 25.4	-18
BWNR	**Bhubaneshwar**	**11.21**	**328**	*e*P	Pn	06 34 40.0	-6.2
BWNR				*e*S	Sn	06 36 32.2	-18
PALK	**Pallekele**	**11.75**	**254**	Pn	Pn	06 34 49.4	-4.2
	comp=E,1.1nm,0.3s,baz=169,slow=10,SNR=4.0						
PALK				Sn	Sn	06 36 43.8	-20
	comp=E,4.7nm,0.3s,baz=262,slow=21,SNR=6.7						
PALK				LR	LR	06 38 45.9	
	comp=E,276nm,19.2s,baz=174,slow=35						
PALK	**Pallekele**	**11.75**	**254**	Pn	**Pn**	**06 34 52.2**	**-1.5**
HYB	**Hyderabad**	**14.67**	**298**	*i* P	**Pn**	**06 35 37.0**	**+3.6**
SHL	**Shillong**	**14.71**	**359**	Pn	**Pn**	**06 35 32.1**	**-2.0**
SLVN	**Son La**	**15.46**	**46**	P	**P**	**06 35 47.9**	**-0.3**
KMI	**Kunming**	**17.49**	**34**	⇓P	**P**	**06 36 11.1**	**+0.2**
KMI				pP	pP	06 36 18.0	-0.1
KMI				sP	sP	06 36 22.3	+0.9
KMI				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KMI				LR	LR		
	comp=N,410nm,15.6s						
KMI				LR	LR		
	comp=E,280nm,15.5s						
KMI				LR	LR		
	comp=Z,230nm,13.4s						
LSA	**Lhasa**	**18.84**	**358**	P	**Pn**	**06 36 27.6**	**+1.0**
LSA	**Lhasa**	**18.84**	**358**	P	**P**	**06 36 23.6**	**-2.4**
LSA				IAmb	IAmb	06 36 36.1	
	comp=Z,16nm,0.6s						
MNCI	**Minicoy**	**18.91**	**264**	P	**P**	**06 36 26.7**	**+0.4**
MNCI				IAmb	IAmb	06 36 39.0	
	comp=Z,34nm,1.1s						
QIZ	**Qiongzhong**	**19.02**	**62**	P	**P**	**06 36 26.3**	**-1.3**
QIZ				S	**Sn**	**06 40 00.5**	**-0.3**
QIZ				LR	LR		
	comp=N,280nm,17.9s						
QIZ				LR	LR		
	comp=E,220nm,12.2s						
GYA	**Guiyang**	**20.81**	**39**	⇑P	**P**	**06 36 46.9**	**-0.2**
GYA				pP	sP	06 36 57.0	-0.7
GYA				sP	pP	06 37 02.8	+8.4
GYA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
GYA				pmax	pmax		
	comp=Z,130nm,6.4s						
CD2	**Chengdu**	**22.78**	**27**	P	**P**	**06 37 07.4**	**-0.7**
CD2				pmax	pmax		
	comp=Z,30nm,1.3s						
ENH	**Enshi**	**25.27**	**37**	P	**P**	**06 37 31.0**	**-0.7**
ENH				IAmb	IAmb	06 37 38.1	
	comp=Z,19nm,0.9s						
H08S3	**Diego Garcia H**	**26.73**	**228**	T	T	07 05 16.6	
	baz=48,slow=75,SNR=844						
H08S2	**Diego Garcia H**	**26.73**	**228**	T	T	07 05 07.5	
	baz=48,slow=75,SNR=82						
H08S1	**Diego Carcia H**	**26.75**	**228**	T	T	07 05 08.7	
	baz=48,slow=75,SNR=21						
LZH	**Lanzhou**	**27.36**	**21**	*e*P	**P**	**06 37 51.4**	**+0.7**
LZH				pP	pP	06 38 00.5	+2.0
LZH				sP	sP	06 38 05.1	+3.3
LZH				PP	**PnPn**	**06 38 29.0**	**-6.4**
LZH				pmax	pmax		
	comp=Z,18nm,1.1s						
LZH				pmax	pmax		
	comp=Z,65nm,4.3s						
LZH				LR	LR		
	comp=N,430nm,14.5s						
LZH				LR	LR		
	comp=E,300nm,15.2s						
LZH				LR	LR		
	comp=Z,380nm,14.8s						
GTA	**Gaotai**	**29.33**	**12**	*e*P	**P**	**06 38 08.8**	**+0.6**
GTA				pP	pP	06 38 14.4	-1.7
GTA				sP	sP	06 38 17.5	-1.9
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
KAPI	**Kappang**	**31.72**	**118**	LR	LR	06 50 58.1	
	comp=Z,76nm,20.8s,baz=262,slow=36						
KSH	**Kashi**	**32.00**	**336**	P	P	06 38 37.5	+5.7
KSH				pP	sP	06 38 45.8	+3.1
KSH				pmax	pmax		
	comp=Z,18nm,1.0s						
KSH				pmax	pmax		
	comp=Z,350nm,5.5s						
NJ2	**Nanjing**	**32.54**	**45**	*e*P	**P**	**06 38 37.6**	**+1.1**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.6s						
WMQ	**Urumqi**	**33.13**	**354**	*e*P	**P**	**06 38 40.3**	**-1.3**
WMQ				pP	pP	06 38 50.4	+1.1
WMQ				pmax	pmax		
	comp=Z,13nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,240nm,5.7s						
WMQ				LR	LR		
	comp=N,880nm,29.1s						
WMQ				LR	LR		
	comp=E,1µm,29.1s						
WMQ				LR	LR		
	comp=Z,110nm,29.2s						
BTO	**Baotou**	**33.68**	**25**	*e*P	P	06 38 51.5	+5.1
HHC	**Hu-ho-hao-te**	**34.54**	**27**	*e*P	**P**	**06 38 54.0**	**+0.1**
HHC				pmax	pmax		
	comp=Z,4.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,160nm,5.4s						
AAK	**Ala-Archa**	**35.25**	**337**	P	**P**	**06 39 00.2**	**+0.1**
	comp=Z,1.0nm,0.7s,baz=210,slow=8.1,SNR=2.1						
AAK				LR	LR	06 56 58.5	
	comp=Z,96nm,19.2s,baz=154,slow=42						
AAK	**Ala-Archa**	**35.25**	**337**	P	**P**	**06 38 59.4**	**-0.7**
AAK				IAmb	IAmb	06 39 12.7	
	comp=Z,8.7nm,1.2s						
MK31	**Makanchi Array**	**36.84**	**349**	P	**P**	**06 39 12.2**	**-1.2**
MK31				IAmb	IAmb	06 39 26.3	
	comp=Z,5.3nm,1.1s						
MKAR	**Makanchi Array**	**36.84**	**349**	P	**P**	**06 39 12.9**	**-0.6**
	comp=Z,1.9nm,0.8s,baz=168,slow=8.5,SNR=12						
MKAR				LR	LR	06 58 35.6	
	comp=Z,104nm,18.5s,baz=161,slow=43						
MKAR	**Makanchi Array**	**36.84**	**349**	P	**P**	**06 39 12.5**	**-0.9**
MAKZ	**Makanchi**	**36.91**	**348**	P	**P**	**06 39 13.8**	**-0.3**
KK31	**Karatay Array**	**37.26**	**334**	P	**P**	**06 39 16.9**	**-0.3**
KK31				IAmb	IAmb	06 39 25.7	
	comp=Z,8.0nm,0.9s						
KKAR	**Karatay Array**	**37.26**	**334**	P	**P**	**06 39 17.4**	**+0.3**
KKAR	**Karatay Array**	**37.26**	**334**	P	**P**	**06 39 17.4**	**+0.3**
KKAR				IAmb	IAmb	06 39 25.7	
	comp=Z,8.0nm,0.9s						
SONM	**Songino Array**	**38.85**	**15**	P	**P**	**06 39 30.3**	**-0.3**
	comp=Z,0.9nm,0.5s,baz=200,slow=8.2,SNR=9.7						
SONM	**Songino Array**	**38.85**	**15**	P	**P**	**06 39 30.3**	**-0.3**
KURBB	**Kurchatov Arra**	**41.26**	**347**	P	**P**	**06 39 49.8**	**-0.5**
	comp=Z,1.4nm,1.0s,baz=158,slow=7.5,SNR=8.8						
KURK	**Kurchatov**	**41.32**	**347**	P	**P**	**06 39 51.1**	**+0.2**
KURK				IAmb	IAmb	06 40 08.2	
	comp=Z,5.6nm,1.1s						
KSAR	**Wonju Array Be**	**41.70**	**44**	P	**P**	**06 39 55.8**	**+1.6**
KSRS	**Korea Array**	**41.73**	**44**	LR	LR	07 00 01.0	
	comp=Z,126nm,19.0s,baz=243,slow=40						
FAKI	**Fak Fak**	**42.24**	**107**	P	**P**	**06 40 00.5**	**+1.6**
ZAA0	**Zalesovo Array**	**43.44**	**354**	P	**P**	**06 40 06.6**	**-1.4**
ZAA0	**Zalesovo Array**	**43.44**	**354**	P	**P**	**06 40 06.6**	**-0.7**
ZAA0	**Zalesovo Array**	**43.44**	**354**	IAmb	IAmb	06 40 24.2	
	comp=Z,4.4nm,1.0s						
ZALV	**Zalesovo Beam**	**43.44**	**354**	P	**P**	**06 40 07.0**	**-1.0**
	comp=Z,1.4nm,0.4s,baz=170,slow=8.4,SNR=10						
ZALV				LR	LR	07 01 28.7	
	comp=Z,69nm,18.8s,baz=224,slow=40						
ZALV	**Zalesovo Beam**	**43.44**	**354**		**P**	**06 40 06.9**	**-1.1**
ZALV	**Zalesovo Beam**	**43.44**	**354**		**P**	**06 40 06.8**	**-0.5**
CN2	**Changchun**	**43.76**	**35**	*e*P	**P**	**06 40 11.0**	**+0.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
FITZ	**Fitzroy Crossi**	**43.84**	**131**	LR	LR	07 00 43.6	
	comp=Z,52nm,18.5s,baz=308,slow=39						
FITZ	**Fitzroy Crossi**	**43.84**	**131**	P	**P**	**06 40 09.1**	**-2.6**
FITZ				IAmb	IAmb	06 40 15.4	
	comp=Z,7.2nm,0.7s						
BVAR	**Borovoye Array**	**45.60**	**342**	P	**P**	**06 40 25.3**	**-0.1**
	comp=Z,0.5nm,0.6s,baz=123,slow=11,SNR=2.3						
AB31	**Akbulak array**	**46.71**	**331**	P	**P**	**06 40 33.6**	**-0.5**
AB31				IAmb	IAmb	06 40 42.3	
	comp=Z,5.5nm,0.9s						
ABKAR	**Akbulak array**	**46.71**	**331**	P	**P**	**06 40 33.7**	**-0.5**
ABKAR				IAmb	IAmb	06 40 42.3	
	comp=Z,5.5nm,0.9s						
AB05	**Akbulak array**	**46.73**	**331**	P	**P**	**06 40 33.8**	**-0.5**
USRK	**Ussuriysk Ar.**	**47.85**	**39**	LR	LR	07 03 28.3	
	comp=Z,77nm,19.6s,baz=212,slow=39						
ATD	**Arta Tunnel**	**48.25**	**276**	LR	LR	06 57 45.5	
	comp=Z,64nm,20.9s,baz=23,slow=32						
AKTO	**Aktyubinsk**	**48.43**	**331**	P	**P**	**06 40 48.7**	**+1.2**
	comp=Z,0.8nm,0.5s,baz=120,slow=14,SNR=2.5						
MJAR	**Matsushiro Arr**	**48.82**	**50**	LR	LR	07 03 06.2	
	comp=Z,65nm,18.9s,baz=255,slow=38						
WB0	**Warramunga Arr**	**51.56**	**126**	P	**P**	**06 41 10.1**	**-1.6**
WRA	**Warramunga Arr**	**51.61**	**126**	P	**P**	**06 41 10.0**	**-2.0**
	comp=Z,5.4nm,0.8s,baz=305,slow=8.7,SNR=19						
WRA	**Warramunga Arr**	**51.61**	**126**	P	**P**	**06 41 11.0**	**-1.1**
WRAB	**Tennant Creek**	**51.62**	**126**	P	**P**	**06 41 11.7**	**-0.4**
WB2	**Warramunga Arr**	**51.62**	**126**	P	**P**	**06 41 11.1**	**-1.0**
WR0	**Warramunga Arr**	**51.78**	**126**	P	**P**	**06 41 13.5**	**+0.2**
OPO	**Ambohidratompo**	**53.02**	**237**	LR	LR	07 00 38.1	
	comp=Z,99nm,19.6s,baz=196,slow=32						
AS31	**Alice Springs**	**53.34**	**130**	P	**P**	**06 41 25.5**	**+0.6**
ASAR	**Alice Springs**	**53.34**	**130**	P	**P**	**06 41 23.1**	**-1.7**
	comp=Z,2.4nm,0.9s,baz=304,slow=6.5,SNR=14						
ASAR	**Alice Springs**	**53.34**	**130**	P	**P**	**06 41 24.9**	**0.0**
KMBO	**Kilima Mbogo**	**55.77**	**261**	LR	LR	07 03 30.1	
	comp=Z,50nm,18.1s,baz=90,slow=34						
STKA	**Stephens Creek**	**63.58**	**134**	P	**P**	**06 42 37.6**	**+1.5**
	comp=Z,5.3nm,0.8s,baz=26,slow=6.4,SNR=6.8						
STKA				LR	LR	07 12 40.6	
	comp=Z,54nm,18.3s,baz=271,slow=38						
STKA	**Stephens Creek**	**63.58**	**134**	P	**P**	**06 42 39.0**	**+2.9**
TIXI	**Tiksi**	**64.82**	**12**		**P**	**06 42 41.8**	**-1.8**
TIXI				IAmb	IAmb	06 43 05.5	
	comp=Z,4.1nm,0.8s						
MLR	**Muntele Rosu**	**65.68**	**315**	P	**P**	**06 42 47.7**	**-2.1**
	comp=Z,2.1nm,0.8s,baz=141,slow=6.3,SNR=4.1						
MLR	**Muntele Rosu**	**65.68**	**315**	P	**P**	**06 42 49.3**	**-0.5**
MLR				IAmb	IAmb	06 43 15.5	
	comp=Z,11nm,1.4s						
PETK	**Petropavlovsk-**	**66.88**	**37**	LR	LR	07 15 27.1	
	comp=Z,70nm,18.4s,baz=240,slow=39						
ILAR	**Eielson Array**	**92.82**	**22**	P	**P**	**06 45 17.1**	**-0.4**
	comp=Z,0.5nm,0.8s,baz=291,slow=4.6,SNR=4.8						

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*JMA **23** 06:32:50.7±0.1, 41°.96N×141°.63E, h83^{km}±2^{km}, M3.7*

JMA Felt I J1.

*NEIC **23** 06:32:50.6±0.6, 41°.95N±0°.02×141°.60E±0°.08, h89^{km}±9^{km}, mb4.2/7, Error ellipse: s-maj=9.1km s-min=3.5km az=86.0*

*IDC **23** 06:32:51.8±1.7, 41°.99N×141°.66E, h98^{km}±12^{km}, mb3.5/14, mb1 3.6/18, mb1mx3.4/70, mbtmp3.8/18, MS3.0/1, Ms1 3.0/1, ms1mx2.2/36, Error ellipse: s-maj=20.4km s-min=13.2km az=135.0*

ISC 23 06:32:50.4±0.7**, 41°.96N**±0°.04×**141°.68E**±0°.04**, h85^{km}**±6^{km}**, n63, σ0ˢ.89**/66**, mb4.0**/17**, 7C-1D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKB	**Kayabe**	**0.49**	**262**	⇓P	**Pn**	**06 33 04.3**	**-0.3**
JKB				*e*S	**Sn**	**06 33 14.6**	**-0.5**
JIAM	**Iburiatsuma**	**0.69**	**15**	P	**Pn**	**06 33 06.9**	**+0.5**
JNB	**Noboribetsu**	**0.70**	**317**	⇑P	**Pn**	**06 33 06.2**	**-0.3**
JNB				*e*S	**Sn**	**06 33 18.2**	**-0.3**
JOT	**Ohata**	**0.74**	**220**	P	**Pn**	**06 33 07.2**	**+0.3**
JOT				*e*S	**Sn**	**06 33 19.4**	**+0.2**
JNBK	**Urakawa-nobuka**	**0.86**	**67**	P	**Pn**	**06 33 08.2**	**0.0**
JEW	**Eniwo**	**0.90**	**349**	⇑P	**Pn**	**06 33 08.9**	**+0.2**
JEW				*e*S	**Sn**	**06 33 22.4**	**+0.1**
JEW	**Eniwo**	**0.90**	**349**		**Pn**	**06 33 09.0**	**+0.3**
JBT2	**Biratori 2**	**0.97**	**31**	⇑P	**Pn**	**06 33 09.8**	**+0.4**
JBT2				*e*S	**Sn**	**06 33 24.5**	**+0.9**
JYM2	**Yakumo 2**	**0.99**	**280**	P	**Pn**	**06 33 09.8**	**+0.2**
JSR	**Shiriuchi**	**1.03**	**246**	P	**Pn**	**06 33 10.4**	**+0.2**
ERM	**Erimo**	**1.10**	**86**	Pn	**Pn**	**06 33 11.8**	**+0.9**
JEM	**Erimo**	**1.10**	**86**	P	**Pn**	**06 33 11.7**	**+0.7**
JTM	**Tenmabayashi**	**1.25**	**202**	⇑P	**Pn**	**06 33 13.3**	**+0.5**
JTM				*e*S	**Sn**	**06 33 29.9**	**+0.2**
JTM	**Tenmabayashi**	**1.25**	**202**	Pn	**Pn**	**06 33 13.4**	**+0.5**
JOMM	**Oshimamatsumae**	**1.32**	**252**	P	**Pn**	**06 33 14.5**	**+0.8**
JFR	**Furan**	**1.38**	**29**	P	**Pn**	**06 33 14.2**	**-0.3**
JCH	**Churui**	**1.41**	**62**	P	**Pn**	**06 33 15.4**	**+0.6**
JCH				*e*S	**Sn**	**06 33 33.9**	**+0.7**
JANG	**Nango**	**1.58**	**185**	P	**Pn**	**06 33 16.7**	**-0.4**
JANG				*e*S	**Sn**	**06 33 36.3**	**-0.9**
JOSM	**Okushiri--Mats**	**1.65**	**275**	P	**Pn**	**06 33 18.3**	**+0.5**
JHR	**Hokuryu**	**1.79**	**1**	⇑P	**Pn**	**06 33 20.5**	**+0.8**
JAR	**Ashorobuto**	**2.04**	**48**	⇑P	**Pn**	**06 33 23.4**	**+0.4**
JAR				*e*S	**Sn**	**06 33 48.1**	**+0.2**
JKK2	**Kamakawa 2**	**2.07**	**22**	⇑P	**Pn**	**06 33 23.9**	**+0.5**
ASAJ	**Asahikawa**	**2.26**	**17**	P	**Pn**	**06 33 26.9**	**+1.0**
	16nm,0.3s,baz=224,slow=12,SNR=18						
ASAJ				S	**Sn**	**06 33 54.8**	**+1.7**
	8.6nm,0.3s,baz=9.2,slow=31,SNR=6.9						
JKA	**Kamikawa-asahi**	**2.26**	**17**	Pn	**Pn**	**06 33 26.8**	**+0.8**
JMM	**Marumori**	**4.14**	**190**	Pn	**Pn**	**06 33 51.3**	**0.0**
JSD	**Sado**	**4.71**	**215**	Pn	**Pn**	**06 34 01.1**	**+2.1**
MAT	**Matsushiro**	**6.04**	**208**	P	**Pn**	**06 34 18.7**	**+1.5**
MJAR	**Matsushiro Arr**	**6.04**	**208**	P	**Pn**	**06 34 19.1**	**+2.0**
	0.3nm,0.3s,baz=28,slow=12,SNR=7.1						
JGF	**Kuroka**	**7.18**	**209**	Pn	**Pn**	**06 34 35.1**	**+2.3**
USA0B	**Ussuriysk Arra**	**7.44**	**291**	Pn	**Pn**	**06 34 37.0**	**+0.8**
USRK	**Ussuriysk Ar.**	**7.44**	**291**	P	**Pn**	**06 34 37.8**	**+1.6**
	baz=90,slow=14,SNR=7.2						
USRK	**Ussuriysk Ar.**	**7.44**	**291**		**Pn**	**06 34 38.4**	**+2.2**
KLR	**Kul'dur**	**10.06**	**320**	P	**Pn**	**06 35 14.7**	**+2.8**
	0.1nm,0.3s,baz=120,slow=13,SNR=6.8						
SONM	**Songino Array**	**25.52**	**295**	P	**P**	**06 38 10.5**	**-0.4**
	0.5nm,0.5s,baz=81,slow=7.6,SNR=6.7						
TLY	**Talaya**	**27.50**	**304**	LR	LR	06 51 41.2	
	comp=Z,33nm,18.9s,baz=282,slow=41						
H11N2	**WAKE ISLAND Hy**	**30.77**	**128**	T	T	07 11 34.7	
	baz=322,slow=75,SNR=41						
H11N1	**WAKE ISLAND Hy**	**30.78**	**128**	T	T	07 11 35.5	
	baz=322,slow=75,SNR=36						
H11N3	**WAKE ISLAND Hy**	**30.79**	**128**	T	T	07 11 36.1	
	baz=322,slow=75,SNR=38						
H11S1	**WAKE ISLAND Hy**	**31.62**	**130**	T	T	07 12 35.1	
	baz=323,slow=76,SNR=42						
H11S3	**WAKE ISLAND Hy**	**31.62**	**130**	T	T	07 12 33.1	
	baz=323,slow=76,SNR=26						
H11S2	**WAKE ISLAND Hy**	**31.64**	**130**	T	T	07 12 34.2	
	baz=323,slow=76,SNR=27						
MK31	**Makanchi Array**	**41.85**	**298**	P	**P**	**06 40 30.7**	**-1.1**
MK31				IAmb	IAmb	06 40 33.3	
	comp=Z,1.4nm,0.7s						
MKAR	**Makanchi Array**	**41.85**	**298**	P	**P**	**06 40 31.4**	**-0.4**
	comp=Z,1.3nm,0.6s,baz=84,slow=9.7,SNR=7.1						
MKAR	**Makanchi Array**	**41.85**	**298**	P	**P**	**06 40 30.4**	**-1.4**
KURBB	**Kurchatov Arra**	**43.28**	**304**	P	**P**	**06 40 42.8**	**-0.4**
	comp=Z,1.1nm,0.3s,baz=77,slow=8.6,SNR=12						
ILAR	**Eielson Array**	**45.29**	**35**	P	**P**	**06 40 59.1**	**0.0**
	comp=Z,0.7nm,1.0s,baz=262,slow=6.8,SNR=5.9						
ILAR	**Eielson Array**	**45.29**	**35**	P	**P**	**06 40 59.2**	**+0.1**
BVAR	**Borovoye Array**	**47.52**	**309**	P	**P**	**06 41 16.5**	**-0.3**
	comp=Z,0.5nm,0.3s,baz=80,slow=14,SNR=6.1						
AAK	**Ala-Archa**	**48.48**	**295**	P	**P**	**06 41 24.1**	**-0.4**
	comp=Z,0.9nm,0.5s,baz=90,slow=5.1,SNR=2.1						
AAK	**Ala-Archa**	**48.48**	**295**	P	**P**	**06 41 24.4**	**-0.1**
INK	**Inuvik**	**49.95**	**29**	P	**P**	**06 41 35.4**	**+0.3**
	comp=Z,0.7nm,0.6s,baz=285,slow=8.0,SNR=3.9						
INK	**Inuvik**	**49.95**	**29**	P	**P**	**06 41 35.5**	**+0.4**
INK				IAmb	IAmb	06 41 45.5	
	comp=Z,2.8nm,1.4s						
KK31	**Karatay Array**	**50.96**	**297**	P	**P**	**06 41 42.7**	**-0.5**
KK31				IAmb	IAmb	06 41 43.2	
	comp=Z,2.3nm,0.7s						
KKAR	**Karatay Array**	**50.96**	**297**	P	**P**	**06 41 42.5**	**-0.7**
ABKAR	**Akbulak array**	**55.01**	**308**	P	**P**	**06 42 12.3**	**-0.5**
ABKAR				IAmb	IAmb	06 42 13.0	
	comp=Z,1.9nm,0.7s						
YKA	**Yellowknife Ar**	**59.48**	**32**	P	**P**	**06 42 43.9**	**-0.1**
	comp=Z,0.2nm,0.5s,baz=306,slow=6.1,SNR=6.3						
WRA	**Warramunga Arr**	**61.96**	**188**	P	**P**	**06 43 01.2**	**-0.1**
	comp=Z,0.4nm,0.6s,baz=5.7,slow=7.5,SNR=2.9						
FINES	**FINESS Array B**	**64.58**	**331**	P	**P**	**06 43 17.7**	**-0.5**
	comp=Z,2.9nm,0.5s,baz=52,slow=6.8,SNR=30						
HFS	**Hagfors**	**69.70**	**335**	P	**P**	**06 43 50.4**	**-0.2**
	comp=Z,0.8nm,0.4s,baz=39,slow=5.5,SNR=7.6						
AKASG	**Malin Array Be**	**70.56**	**321**	P	**P**	**06 43 55.5**	**-0.5**
	comp=Z,1.1nm,0.5s,baz=44,slow=6.2,SNR=5.4						
BRTR	**Keskin Array B**	**75.77**	**311**	P	**P**	**06 44 27.1**	**0.0**
	comp=Z,0.3nm,0.5s,baz=58,slow=3.6,SNR=2.4						
GERES	**GERESS Array B**	**78.65**	**328**	P	**P**	**06 44 42.6**	**-0.4**
	comp=Z,0.6nm,0.6s,baz=46,slow=7.0,SNR=2.2						
SIV	**San Ignacio**	**147.56**	**44**	PKPbc	**PKPbc**	**06 52 24.4**	**-0.7**
	comp=Z,1.0nm,0.7s,baz=305,slow=4.4,SNR=3.3						

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*NDI **23** 06:36:32.8±3.2, 26°.09N×95°.23E, h114^{km}±25^{km}, ML4.2, mb4.4(NEIC)*

*NEIC **23** 06:36:34.9±1.3, 25°.77N±0°.03×95°.17E±0°.08, h94^{km}±7^{km}, mb4.4/30, Error ellipse: s-maj=10.7km s-min=2.2km az=114.0*

*IDC **23** 06:36:35.2±2.0, 25°.85N×95°.29E, h97^{km}±18^{km}, mb3.8/20, mb1 3.9/21, mb1mx3.6/66, mbtmp4.1/21, Error ellipse: s-maj=29.7km s-min=10.4km az=58.0*

ISC 23 06:36:35.5±0.4**, 25°.87N**±0°.05×**95°.07E**±0°.05**, h100^{km}, n108, σ1ˢ.40**/122**, mb4.2**/37**, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOKO	**MOKOCHONG**	**0.67**	**312**	*e*P	**Pn**	**06 36 50.4**	**-2.5**
MOKO				*e*S	**Sn**	**06 37 03.1**	**-2.8**
MOKO				IAML		06 37 06.1	
	comp=E,15µm,0.3s						
MOKO				IAML		06 37 06.4	
	comp=N,12µm,0.1s						
KOHI	**KOHIMA**	**0.88**	**261**	*e*P	**Pn**	**06 36 53.4**	**-1.5**
KOHI				*e*S	**Sn**	**06 37 08.0**	**-1.4**
KOHI				IAML		06 37 13.6	
	comp=N,3µm,0.1s						
KOHI				IAML		06 37 14.7	
	comp=E,2µm,0.1s						
ZIRO	**ZIRO**	**1.98**	**327**	*e*P	**Pn**	**06 37 05.1**	**-2.9**
ZIRO				*e*S	**Sn**	**06 37 28.8**	**-4.1**
ZIRO				IAML		06 37 30.5	
	comp=E,9µm,0.4s						
ZIRO				IAML		06 37 30.8	
	comp=N,9µm,0.0s						
SHL	**Shillong**	**2.89**	**265**	IAML		06 38 13.4	
	comp=E,1µm,0.2s						
SHL				IAML		06 38 13.4	
	comp=N,1µm,0.2s						
SHL	**Shillong**	**2.89**	**265**	Pn	**Pn**	**06 37 19.1**	**-0.9**
SAIH	**SAIHA**	**3.87**	**210**	*e*P	**Pn**	**06 37 33.6**	**+0.5**
SAIH				*e*S	**Sn**	**06 38 17.8**	**+0.2**
SAIH				IAML		06 38 21.8	
	comp=N,218nm,0.2s						
SAIH				IAML		06 38 21.9	
	comp=E,346nm,0.3s						
LSA	**Lhasa**	**5.16**	**319**		**Pn**	**06 37 50.6**	**-0.3**
TAPN	**Taplejung**	**6.75**	**284**	*e*Pn	**Pn**	**06 38 11.0**	**-1.4**
TAPN				*e*Sn	**Sn**	**06 39 26.3**	**-1.7**
	comp=E,161nm,0.6s						
ODAN	**Odare**	**6.96**	**280**	*e*Pn	**Pn**	**06 38 14.3**	**-0.8**
ODAN				*e*Sn	**Sn**	**06 39 31.3**	**-1.6**
	comp=E,183nm,0.4s						
KMI	**Kunming**	**6.97**	**94**	Pn	**Pn**	**06 38 14.4**	**-0.8**
RAMN	**Ramite**	**7.67**	**280**	*e*Pn	**Pn**	**06 38 23.8**	**-1.0**
RAMN				*e*Sn	**Sn**	**06 39 48.7**	**-1.6**
	comp=E,101nm,0.5s						
CM33	**Chiang Mai Arr**	**7.88**	**152**	P	**Pn**	**06 38 26.0**	**-1.4**
CHTO	**Chiang Mai**	**7.88**	**152**		**Pn**	**06 38 25.4**	**-2.1**
CM34	**Chiang Mai Arr**	**7.94**	**151**	P	**Pn**	**06 38 27.0**	**-1.2**
CM32	**Chiang Mai Arr**	**7.99**	**153**	P	**Pn**	**06 38 29.0**	**+0.1**
CM35	**Chiang Mai Arr**	**8.09**	**151**	P	**Pn**	**06 38 29.0**	**-1.3**
CM15	**Chiang Mai Arr**	**8.20**	**153**	P	**Pn**	**06 38 31.0**	**-0.8**
CM31	**Chiang Mai Arr**	**8.20**	**153**	Pn	**Pn**	**06 38 31.0**	**-0.8**
CMAR	**Chiang Mai Arr**	**8.20**	**153**	P	**Pn**	**06 38 30.8**	**-1.0**
	comp=E,1.3nm,0.3s,baz=332,slow=13,SNR=38						

CMAR	Chiang Mai Arr	8.20	153	Pn	Pn	06 38 30.2	-1.7
CM36	Chiang Mai Arr	8.21	152	P	Pn	06 38 31.0	-0.9
CM13	Chiang Mai Arr	8.22	154	P	Pn	06 38 32.0	-0.1
CM02	Chiang Mai Arr	8.22	153	P	Pn	06 38 31.9	-0.2
CM09	Chiang Mai Arr	8.23	153	P	Pn	06 38 32.0	-0.2
CM01	Chiang Mai Arr	8.24	153	P	Pn	06 38 32.1	-0.2
CM05	Chiang Mai Arr	8.25	153	P	Pn	06 38 32.0	-0.5
CM04	Chiang Mai Arr	8.27	153	P	Pn	06 38 32.5	-0.3
GUN	Gumba	8.46	286	*e*Pn	Pn	06 38 34.0	-1.6
GUN				*e*Sn	Sn	06 40 06.9	-2.6
	comp=E,82nm,0.4s						
PKI	Pulchoki	8.81	283	*e*Pn	Pn	06 38 38.3	-2.0
PKI				*e*Sn	Sn	06 40 15.5	-2.5
	comp=E,37nm,0.5s						
PKIN	Phulchoki	8.82	283	*e*Pn	Pn	06 38 38.5	-1.9
PKIN				*e*Sn	Sn	06 40 15.0	-3.2
	comp=E,46nm,0.4s						
KKN	Kakani	8.96	285	*e*Pn	Pn	06 38 40.9	-1.3
KKN				*e*Sn	Sn	06 40 18.4	-3.0
	comp=E,42nm,0.4s						
DMN	Daman	9.08	283	*e*Pn	Pn	06 38 42.0	-1.9
DMN				*e*Sn	Sn	06 40 21.6	-2.9
	comp=E,66nm,0.9s						
SLVN	Son La	9.27	117	Pn	Pn	06 38 44.0	-2.4
SUKH	Sukhothai	9.36	152	P	Pn	06 38 47.0	-0.5
GKN	Gorkha	9.55	285	*e*Pn	Pn	06 38 48.2	-2.1
GKN				*e*Sn	Sn	06 40 33.2	-2.7
	comp=E,53nm,0.4s						
UTHA	Uthaitani	11.04	157	P	Pn	06 39 10.8	+0.4
ENH	Enshi	13.46	68	Pn	Pn	06 39 42.4	0.0
WMQ	Urumqi	18.89	343		P	06 40 48.9	+0.7
WMQ				IAmb	IAmb	06 40 51.1	
	comp=Z,9.4nm,0.8s						
NIL	Nilore	20.45	297		P	06 41 05.3	+0.3
NIL				IAmb	IAmb	06 41 09.5	
	comp=Z,18nm,0.7s						
SHLS	Shalkode	21.45	327	*e*P	P	06 41 14.3	-1.5
	comp=Z,5.1nm,0.5s,baz=328						
UZB	Uzynbulak	21.66	327	*e*P	P	06 41 18.8	+0.6
	baz=326						
SATY	Saty	21.91	326	*e*P	P	06 41 21.6	+0.9
	comp=Z,4.2nm,1.0s,baz=325						
KPKS	Kokpek	22.06	327	*e*P	P	06 41 22.6	+0.3
	baz=326						
MDOK	Medeo	22.68	324	*e*P	P	06 41 30.7	+1.9
	baz=324						
AAA	Alma-Ata	22.79	324	*e*P	P	06 41 32.0	+2.3
	comp=Z,11nm,0.4s,baz=324						
ZSN	Zaisan	23.00	342	*e*P	P	06 41 32.8	+1.0
	baz=341						
MK31	Makanchi Array	23.23	337	P	P	06 41 33.6	-0.2
MKAR	Makanchi Array	23.23	337	P	P	06 41 34.1	+0.3
	comp=Z,4.4nm,0.6s,baz=146,slow=9.6,SNR=33						
MKAR				ScP	ScP	06 48 47.8	+0.3
	comp=Z,0.8nm,0.9s,baz=131,slow=3.7,SNR=6.2						
MKAR	Makanchi Array	23.23	337	P	P	06 41 33.6	-0.2
PSI	Prapat	23.23	170	P	P	06 41 35.0	+0.8
	comp=Z,2.4nm,0.3s,baz=0.0,slow=9.7,SNR=5.7						
TDK	Taldyqorghan	23.34	329	*e*P	P	06 41 35.7	+0.7
	comp=Z,7.5nm,0.6s,baz=329						
MAKZ	Makanchi	23.35	337	P	P	06 41 35.0	0.0
MAKZ				IAmb	IAmb	06 41 37.3	
	comp=Z,8.2nm,0.8s						
KUU	Kurty	23.56	324	*e*P	P	06 41 36.5	-0.4
	baz=324						
SONM	Songino Array	23.67	19	P	P	06 41 37.7	-0.4
	comp=Z,0.6nm,0.5s,baz=208,slow=10,SNR=5.5						
SONM	Songino Array	23.67	19	P	P	06 41 37.4	-0.6
AAK	Ala-Archa	23.76	320	P	P	06 41 41.3	+2.4
	comp=Z,4.1nm,0.9s,baz=141,slow=11,SNR=5.8						
AAK	Ala-Archa	23.76	320	P	P	06 41 39.2	+0.3
ULN	Ulaanbaatar	23.90	20	P	P	06 41 39.4	-0.7
KBL	Kabul	24.05	297	P	P	06 41 43.4	+1.7
KBL				IAmb	IAmb	06 41 44.8	
	comp=Z,14nm,1.3s						
GSI	Gunungsitoli	24.54	174	P	P	06 41 45.3	-0.7
GSI				IAmb	IAmb	06 41 48.2	
	comp=Z,21nm,0.6s						
BTLS	Baital	25.55	324	*e*P	P	06 41 56.4	+1.5
	baz=324						
KURBB	Kurchatov Arra	27.79	337	P	P	06 42 15.8	+0.9
	comp=Z,2.4nm,0.6s,baz=148,slow=9.5,SNR=13						
KURBB				ScP	ScP	06 49 01.6	+1.1
	comp=Z,0.9nm,0.8s,baz=163,slow=2.7,SNR=8.3						
KURK	Kurchatov	27.84	337	P	P	06 42 16.3	+0.9
ZALV	Zalesovo Beam	29.07	347	P	P	06 42 27.4	+1.2
	comp=Z,0.5nm,0.4s,baz=156,slow=7.6,SNR=2.5						
BRZS	Berezniki	29.64	330	*e*P	P	06 42 32.7	+1.3
	comp=Z,2.4nm,0.5s,baz=330						
KSAR	Wonju Array Be	30.07	59	P	P	06 42 35.2	-0.2
BRVK	Borovoye	32.90	332	P	P	06 43 01.4	+1.5
BRVK				IAmb	IAmb	06 43 02.0	
	comp=Z,5.5nm,0.7s						
ABKAR	Akbulak array	35.85	320	P	P	06 43 27.2	+1.7
ABKAR				IAmb	IAmb	06 43 27.8	
	comp=Z,3.3nm,0.8s						
AKTO	Aktyubinsk	37.50	321	P	P	06 43 40.7	+1.3
	comp=Z,0.7nm,0.4s,baz=129,slow=6.5,SNR=1.9						
ARU	Arti	40.26	329	P	P	06 44 03.4	+1.0
	comp=Z,0.9nm,0.5s,baz=119,slow=2.6,SNR=6.3						
KIRV	Kirov	45.62	328	P	P	06 44 46.5	+1.0
	comp=Z,12nm,0.5s,baz=104,slow=8.3,SNR=5.5						
KLMR	Klimovskoe	51.11	329	*e*P	P	06 45 26.8	-0.9
KLMR				AMP		06 45 30.2	
	comp=Z,28nm,1.5s						
BR131	Keskin Array S	52.52	301	P	P	06 45 40.5	+1.7
BR131				IAmb	IAmb	06 45 52.7	
	comp=Z,6.0nm,1.3s						
BRTR	Keskin Array B	52.52	301	P	P	06 45 39.9	+1.2
	comp=Z,0.6nm,0.5s,baz=118,slow=7.3,SNR=5.9						
FITZ	Fitzroy Crossi	52.85	143	P	P	06 45 40.1	-1.0
ANTO	Ankara	53.16	302	P	P	06 45 44.9	+1.6
AKASG	Malin Array Be	55.30	315	P	P	06 45 58.8	+0.2
	comp=Z,0.9nm,0.3s,baz=80,slow=6.2,SNR=5.7						
ELL	Elmali	55.78	298	P	P	06 46 03.1	+0.7
FINES	FINESS Array B	57.61	328	P	P	06 46 15.6	+0.9
	comp=Z,2.4nm,0.8s,baz=117,slow=11,SNR=5.6						
FINES	FINESS Array B	57.61	328	P	P	06 46 16.2	+1.4
BURAR	Bucovina Array	58.03	312	P	P	06 46 19.0	+0.9
KEV	Kevo	58.40	338	P	P	06 46 21.3	+1.2
ARCES	ARCESS Array B	58.88	337	P	P	06 46 24.2	+0.7
	comp=Z,2.1nm,0.7s,baz=120,slow=7.2,SNR=7.7						
ARCES	ARCESS Array B	58.88	337	P	P	06 46 25.9	+2.4
WB0	Warramunga Arr	59.30	136	P	P	06 46 25.8	-1.3
WRA	Warramunga Arr	59.40	136	P	P	06 46 26.6	-1.1
	comp=Z,9.5nm,0.5s,baz=323,slow=7.4,SNR=54						
WRAB	Tennant Creek	59.40	136	P	P	06 46 26.8	-0.9
WB2	Warramunga Arr	59.41	136	P	P	06 46 26.7	-1.1
WR0	Warramunga Arr	59.54	136	P	P	06 46 26.6	-2.1
AS31	Alice Springs	61.95	139	P	P	06 46 44.0	-1.0
AS31				IAmb	IAmb	06 46 44.9	
	comp=Z,1.8nm,0.8s						
ASAR	Alice Springs	61.95	139	P	P	06 46 44.0	-1.0
	comp=Z,4.1nm,0.5s,baz=322,slow=6.6,SNR=62						
NWAO	Narrogin (SRO)	62.16	159	P	P	06 46 45.2	-1.0
NWAO				IAmb	IAmb	06 47 01.9	
	comp=Z,19nm,1.2s						
HFS	Hagfors	63.69	326	P	P	06 46 56.6	+0.5
	comp=Z,9.4nm,1.1s,baz=102,slow=6.1,SNR=8.4						
NB2	NORSAR Subarra	64.79	328	P	P	06 47 03.7	+0.4
	comp=Z,0.7nm,0.5s,baz=83,slow=6.2						
NOA	NORSAR Array B	64.79	328	P	P	06 47 03.7	+0.4
	comp=Z,1.1nm,0.6s,baz=83,slow=6.4,SNR=3.9						
NC204	NORSAR Array S	64.97	328	P	P	06 47 05.3	+0.9
NC204				IAmb	IAmb	06 47 31.7	
	comp=Z,10.0nm,0.9s						
GERES	GERESS Array B	65.48	314	P	P	06 47 09.2	+1.2
	comp=Z,1.0nm,0.5s,baz=75,slow=7.2,SNR=7.0						
GERES	GERESS Array B	65.48	314	P	P	06 47 09.4	+1.3
BBOO	Buckleboo	70.20	144	P	P	06 47 36.5	-1.2
BBOO				IAmb	IAmb	06 47 59.0	
	comp=Z,24nm,1.4s						
BNI	Bardonecchia	71.10	312	P	P	06 47 45.0	+1.8
BNI				IAmb	IAmb	06 47 46.0	
	comp=Z,23nm,1.5s						
STKA	Stephens Creek	72.58	140	P	P	06 47 51.0	-1.0
	comp=Z,1.2nm,0.4s,baz=296,slow=5.4,SNR=3.1						
STKA	Stephens Creek	72.58	140	P	P	06 47 51.2	-0.8
IMAR	Indian Mountai	74.77	23	P	P	06 48 04.4	+0.1
TOLK	Toolik Lake Re	74.78	20	P	P	06 48 05.1	+0.6
TOLK				IAmb	IAmb	06 48 33.3	
	comp=Z,5.1nm,1.4s						
ILAR	Eielson Array	77.84	23	P	P	06 48 21.3	-0.5
	comp=Z,0.2nm,0.7s,baz=294,slow=4.8,SNR=2.6						
ILAR	Eielson Array	77.84	23	P	P	06 48 21.4	-0.4
TORD	Torodi Ar. Bea	87.34	283	P	P	06 49 12.3	+0.4
	comp=Z,0.9nm,0.5s,baz=72,slow=4.7,SNR=4.0						
TORD	Torodi Ar. Bea	87.34	283	P	P	06 49 11.8	-0.1
TORD				IAmb	IAmb	06 49 12.5	
	comp=Z,2.9nm,1.2s						

IDC 23 06:37:56.5±1.9, 6°.45S×154°.89E, h0^{km}, mb3.8/4, mb1 4.1/5, mb1mx3.6/48, mbtmp3.9/5, ML4.3/1, MS2.9/2, Ms1 2.9/2, ms1mx2.6/32, Error ellipse: s-maj=42.3km s-min=31.7km az=66.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	5.82	121	LR	LR	06 41 43.1	
	comp=Z,151nm,20.4s,baz=252,slow=39						
PMG	Port Moresby	8.20	249	LR	LR	06 42 46.3	
	comp=Z,66nm,20.3s,baz=217,slow=35						
DZM	Mont Dzumac	19.13	145	P	P	06 42 21.3	-0.1
	0.9nm,0.3s,baz=309,slow=14,SNR=8.8						
WRA	Warramunga Arr	24.04	234	P	P	06 43 13.8	+0.2
	1.8nm,0.5s,baz=58,slow=9.5,SNR=9.7						
ASAR	Alice Springs	26.45	227	P	P	06 43 35.1	-0.4
	1.2nm,0.6s,baz=60,slow=8.5,SNR=12						
CMAR	Chiang Mai Arr	60.45	295	P	P	06 48 09.0	+0.4
	0.9nm,0.3s,baz=119,slow=5.7,SNR=5.5						
MKAR	Makanchi Array	82.93	319	P	P	06 50 23.0	-0.4
	0.2nm,0.7s,baz=103,slow=5.0,SNR=2.1						

IDC 23 06:46:28.9±2.7, 3°.69N×63°.47E, h0^{km}, mb3.7/7, mb1 3.8/7, mb1mx3.5/42, mbtmp3.7/7, MS3.6/15, Ms1 3.6/15, ms1mx3.4/36, Error ellipse: s-maj=87.6km s-min=28.7km az=69.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSAR	Wadi Sarin	19.99	347	LR	LR	06 57 29.9	
	comp=Z,187nm,18.2s,baz=156,slow=33						
GEYT	Alibeck	34.43	353	LR	LR	07 07 34.8	
	comp=Z,67nm,18.9s,baz=355,slow=37						
CMAR	Chiang Mai Arr	37.67	64	LR	LR	07 07 38.8	
	comp=Z,47nm,19.1s,baz=330,slow=34						
KBZ	Khabaz	43.83	338	LR	LR	07 12 21.8	
	comp=Z,75nm,19.9s,baz=106,slow=35						
BRTR	Keskin Array B	44.90	327	LR	LR	07 13 55.0	
	comp=Z,86nm,18.6s,baz=75,slow=37						
MKAR	Makanchi Array	45.94	18	P	P	06 54 53.4	-0.1
	0.3nm,0.4s,baz=215,slow=9.6,SNR=7.2						
MKAR				LR	LR	07 12 40.7	
	comp=Z,54nm,18.3s,baz=217,slow=34						
AKTO	Aktyubinsk	46.81	355	P	P	06 55 00.2	0.0
	2.6nm,0.7s,baz=176,slow=8.2,SNR=6.8						
KURBB	Kurchatov Arra	48.46	13	P	P	06 55 12.5	-0.6
	0.2nm,0.2s,baz=210,slow=7.4,SNR=1.6						
ZALV	Zalesovo Beam	53.06	16	P	P	06 55 47.3	-0.4
	0.3nm,0.3s,baz=219,slow=6.9,SNR=5.1						
ZALV				LR	LR	07 18 18.9	
	comp=Z,96nm,18.3s,baz=245,slow=36						
AKASG	Malin Array Be	54.97	334	LR	LR	07 22 12.6	
	comp=Z,54nm,18.1s,baz=280,slow=39						
SONM	Songino Array	57.34	33	P	P	06 56 19.4	+0.4
	1.4nm,1.0s,baz=243,slow=6.5,SNR=9.4						
TLY	Talaya	58.35	28	LR	LR	07 20 52.4	
	comp=Z,77nm,19.3s,baz=244,slow=35						
JOW	Kunigami	65.90	62	LR	LR	07 24 10.0	
	comp=Z,54nm,20.4s,baz=328,slow=34						
KSRS	Korea Array	67.59	51	LR	LR	07 28 08.5	
	comp=Z,30nm,18.9s,baz=261,slow=37						
KLR	Kul'dur	73.12	40	LR	LR	07 31 50.2	
	comp=Z,44nm,18.1s,baz=8.0,slow=37						
WRA	Warramunga Arr	73.38	112	P	P	06 58 02.7	-0.7
	0.8nm,1.0s,baz=283,slow=5.1,SNR=2.6						
ASAR	Alice Springs	73.69	116	P	P	06 58 05.7	+0.6
	0.8nm,1.0s,baz=290,slow=5.5,SNR=3.6						
MJAR	Matsushiro Arr	75.56	53	LR	LR	07 34 23.2	
	comp=Z,18nm,18.1s,baz=120,slow=38						
YAK	Yakutsk	75.75	26	LR	LR	07 32 39.5	
	comp=Z,65nm,19.3s,baz=272,slow=37						
PETK	Petropavlovsk-	89.62	37	LR	LR	07 41 12.8	
	comp=Z,26nm,18.2s,baz=254,slow=37						
TXAR	Lajitas Array	144.92	340	PKP	PKPdf	07 06 08.5	-0.4
	0.5nm,0.6s,baz=28,slow=4.1,SNR=3.0						

*IDC **23** 06:51:46.0±0.9, 5°.15N×78°.25W, h0^{km}, mb3.7/6, mb1 4.0/11, mb1mx3.8/32, mbtmp4.0/11, ML3.2/4, MS2.8/4, Ms1 2.8/4, ms1mx2.6/32, Error ellipse: s-maj=25.0km s-min=18.1km az=60.0*

*RSNC **23** 06:51:48.6±2.2, 5°.03N×78°.14W, h40^{km}, ML3.2, Mw3.7*

*NEIC **23** 06:51:50.0±2.6, 5°.04N±0°.06×78°.24W±0°.07, h34^{km}±5^{km}, mb4.4/5, Error ellipse: s-maj=10.0km s-min=8.6km az=61.0*

ISC 23 06:51:46.4±1.6, 5°.02N±0°.03×78°.22W±0°.04, h11^{km}±10^{km}, n58, σ2^{s}.84/90, mb3.8/8, 5C-2D, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PIZC	Pizarro, Choco	0.86	93	⇓*i*P	Pg	06 52 02.3	-0.7
PIZC				*e*S	Sg	06 52 12.8	-1.4
PIZC				*i*		06 52 18.7	
	comp=Z,1μm,0.5s						
MALC	Bahia Malaga	1.33	138	⇑*i*P	Pn	06 52 10.0	-0.9
MALC				*e*S	Sb	06 52 26.3	-2.2
MALC				*i*		06 52 27.4	
	comp=Z,418nm,0.7s						
SOLC	Bahia Solano	1.45	34	*e*P	Pn	06 52 10.6	-2.0
SOLC				*e*S	Sn	06 52 27.4	-4.2
PLMC	San Jos del P	1.94	93	*e*P	Pn	06 52 17.6	-1.8
PLMC				*e*S	Sn	06 52 39.1	-4.6
PLMC				*i*		06 52 40.7	
	comp=Z,498nm,0.4s						
YOTC	Yotoco, Valle	2.13	119	⇑*i*P	Pn	06 52 20.5	-1.6
YOTC				*e*S	Sn	06 52 43.6	-5.1
YOTC				*i*		06 52 44.9	
	comp=Z,153nm,0.5s						
PTAC	Punta Ardita,	2.16	11	*e*P	Pn	06 52 20.6	-1.7
PTAC				*e*S	Sn	06 52 43.5	-5.6
CBOC	Ciudad Bolivar	2.36	69	*i* P	Pn	06 52 23.5	-1.7
CBOC				*e*S	Sn	06 52 46.4	-7.9
CBOC				*i*		06 52 57.9	
	comp=Z,73nm,0.6s						
DBBC	Dabeiba	2.82	45	*e*P	Pn	06 52 31.9	+0.4
GUY2C	Guyana, Caldas	2.85	86	*e*P	Pn	06 52 31.7	-0.6
GUY2C				*e*S	Sn	06 53 04.9	-2.0
GUY2C				*i*		06 53 09.9	
	comp=Z,66nm,0.5s						
POPC	Popayan, Colom	2.90	148	⇑*e*P	Pn	06 52 31.8	-1.0
POPC				*i*		06 52 48.2	
	comp=Z,36nm,0.4s						
POPC				*e*S	Sn	06 53 03.0	-4.9
MARP	Paez Belalcaza	3.13	134	*e*P	Pn	06 52 35.8	-0.1
MARP				*e*S	Sn	06 53 09.2	-4.2
BBAC	Balboa, Cauca	3.13	162	⇑*i*P	Pn	06 52 34.2	-1.7
BBAC				*e*S	Sn	06 53 07.1	-6.4
BBAC				*i*		06 53 18.6	
	comp=Z,51nm,0.4s						
ORTC	Ortega, Tolima	3.17	110	*e*P	Pn	06 52 36.8	+0.6
ORTC				*e*S	Sn	06 53 11.9	-2.1
ORTC				*i*		06 53 17.8	
	comp=Z,103nm,0.3s						
TUMC	Tumaco	3.21	189	*e*P	Pn	06 52 36.4	-0.4
TUMC				*e*S	Sn	06 53 10.3	-4.8
TUMC				*i*		06 53 16.1	
	comp=Z,103nm,0.8s						
PCON	Cinco Dias	3.23	146	*e*P	Pn	06 52 37.7	+0.1
PCON				*e*S	Sn	06 53 14.1	-2.3
PCON				*i*		06 53 23.1	
	comp=Z,56nm,0.5s						
SOTA	Rioblanco	3.29	151	*e*S	Sn	06 53 14.6	-3.0
NORC	Norcasia	3.38	81	⇓*e*P	Pn	06 52 40.2	+0.9
NORC				*e*S	Sn	06 53 17.5	-2.0
NORC				*i*		06 53 23.2	
	comp=Z,67nm,0.5s						
AZU	Azuero	3.43	324	*e*P	Pn	06 52 39.0	-0.8
AZU				*e*S	Sn	06 53 17.6	-2.9
AZU				*i*		06 53 21.6	
	comp=Z,65nm,0.1s						
PRAC	Prado	3.57	111	*e*P	Pn	06 52 42.5	+0.7
PRAC				*e*S	Sn	06 53 22.1	-1.9
PRAC				*i*		06 53 32.3	
	comp=Z,122nm,0.5s						
BETC	Betania	3.62	130	*e*P	Pn	06 52 44.0	+1.6
BETC				*e*S	Sn	06 53 24.8	-0.4
UREC	San Jos de Ur	3.81	44	*e*P	Pn	06 52 42.7	-2.4
UREC				*e*S	Sn	06 53 28.2	-1.8
GCUF	Volcan Galeras	3.87	167	*e*P	Pn	06 52 46.6	+0.3
GCUF				*e*S	Sn	06 53 26.3	-5.7
GCUF				*i*		06 53 32.4	
	comp=Z,40nm,0.4s						
ROSC	El Rosal	3.89	92	Pn	Pn	06 52 49.9	+3.4
	comp=Z,4.2nm,0.3s,baz=358,slow=19,SNR=12						
ROSC				Sn	Sn	06 53 36.0	+3.5
	comp=Z,4.0nm,0.3s,baz=308,slow=16,SNR=4.4						
ROSC	El Rosal	3.89	92		Pn	06 52 49.7	+3.2
GARC	Garzon, Huila	3.91	136	*e*P	Pn	06 52 47.8	+1.1
GARC				*e*S	Sn	06 53 30.3	-2.6
GARC				*i*		06 53 33.9	
	comp=Z,37nm,0.4s						
PTBC	PUERTO BERRIO,	4.04	68	*e*P	Pn	06 52 49.6	+1.4
PTBC				*e*S	Sn	06 53 35.5	-0.1
PTBC				*i*		06 53 38.9	
	comp=Z,29nm,0.6s						
SPBC	San Pablo de B	4.18	81	*e*P	Pn	06 52 51.3	+1.0
SPBC				*e*S	Sn	06 53 39.4	+0.2
SPBC				*i*		06 53 44.2	
	comp=Z,29nm,0.6s						
FLOC	Florencia	4.27	143	⇑*e*P	Pn	06 52 52.6	+1.2
FLOC				*e*S	Sn	06 53 40.5	-0.8
FLOC				*i*		06 53 50.1	
	comp=Z,17nm,0.5s						
BCIP	Isla Barro Col	4.42	339	Pn	Pn	06 52 53.4	-0.1
BCIP				Sn	Sn	06 53 44.8	-0.2
BCIP	Isla Barro Col	4.42	339	*e*P	Pn	06 52 53.1	-0.3
BCIP				*e*S	Sn	06 53 42.9	-2.1
MOTC	Monteria, Cord	4.52	34	*e*P	Pn	06 52 55.4	+0.6
MOTC				*e*S	Sn	06 53 43.2	-4.2
MOTC				*i*		06 53 51.1	
	comp=Z,10nm,0.5s						
OTAV	Otavalo	4.75	183		Pn	06 52 58.1	-0.3
OTAV				Sn	Sn	06 53 48.2	-5.6
OTAV	Otavalo	4.75	183	*e*P	Pn	06 52 57.8	-0.7
OTAV				*e*S	Sn	06 53 45.6	-8.2
OTAV				*i*		06 53 53.8	
	comp=Z,10nm,0.3s						
RUSC	La Rusia	5.19	80	*e*P	Pn	06 53 06.0	+1.5
RUSC				*e*S	Sn	06 54 04.7	+0.1
RUSC				*i*		06 54 13.2	
	comp=Z,12nm,0.1s						
MACC	Macarena, Meta	5.21	123	*e*P	Pn	06 53 04.6	+0.2
MACC				*e*S	Sn	06 54 00.3	-4.3
BARC	Barichara	5.25	72	*e*P	Pn	06 53 06.7	+1.5
BARC				*e*S	Sn	06 54 06.2	+0.4
BARC				*i*		06 54 08.6	
	comp=Z,48nm,0.6s						
OCAC	Ocana	5.83	56	*e*P	Pn	06 53 13.9	+1.0
OCAC				*e*S	Sn	06 54 12.2	-7.8
SDV	Santo Domingo	8.46	63	Pn	Pn	06 53 50.8	+1.7
	comp=Z,4.6nm,0.3s,baz=214,slow=12,SNR=24						
SDV				Sn	Sn	06 55 21.7	-3.1
	comp=Z,0.8nm,0.3s,baz=258,slow=20,SNR=2.5						
SDV	Santo Domingo	8.46	63		Pn	06 53 49.9	+0.7
JTS	Las Juntas de	8.48	309	LR	LR	06 56 58.6	
	comp=Z,78nm,19.0s,baz=186,slow=37						
ATAH	Atahualpa	12.07	181	Pn	Pn	06 54 42.0	+3.2
	comp=Z,0.5nm,0.3s,baz=19,slow=13,SNR=6.2						
ATAH				LR	LR	06 59 59.2	
	comp=Z,28nm,20.6s,baz=346,slow=40						
PCRV	Puerto La Cruz	14.41	68	Pn	Pn	06 55 12.7	+2.2
	comp=Z,0.5nm,0.3s,baz=270,slow=5.1,SNR=1.5						
PLCV	Puerto La Cruz	14.45	68		Pn	06 55 12.7	+1.7
NNA	Nana	16.95	175	P	P	06 55 48.2	+2.5
	comp=Z,2.5nm,0.3s,baz=8.0,slow=12,SNR=9.2						
NNA				LR	LR	07 03 05.7	
	comp=Z,27nm,19.7s,baz=341,slow=40						
NNA	Nana	16.95	175	P	P	06 55 48.7	+3.1
NNA				IAmb	IAmb	06 55 49.7	
	comp=Z,48nm,1.4s						
SAML	Samuel	20.43	133	P	P	06 56 24.0	+0.2
LPAZ	La Paz	23.40	155	P	P	06 56 59.3	+3.1
	comp=Z,1.1nm,0.5s,baz=320,slow=8.8,SNR=5.1						
MNMC	Minye Minye	25.45	161	P	P	06 57 16.3	+1.4
MNMC				IAmb	IAmb	06 57 22.2	
	comp=Z,9.2nm,0.8s						
SIV	San Ignacio	26.90	141	P	P	06 57 28.5	+0.7
	comp=Z,0.6nm,0.6s,baz=343,slow=10,SNR=5.2						
LVC	Limon Verde	28.93	162	LR	LR	07 10 57.9	
	comp=Z,40nm,20.9s,baz=348,slow=40						
FCAR	Ozark Folk Cen	33.29	339	P	P	06 58 22.6	-1.5
FCAR				IAmb	IAmb	06 58 40.9	
	comp=Z,6.8nm,1.2s						
ULM	Lac du Bonnet	47.47	345	P	P	07 00 21.2	0.0
	comp=Z,1.3nm,0.5s,baz=162,slow=9.6,SNR=4.2						
ULM	Lac du Bonnet	47.47	345	IAmb	IAmb	07 00 23.0	
	comp=Z,8.1nm,1.5s						
YKA	Yellowknife Ar	63.30	342	P	P	07 02 15.8	+0.7
	comp=Z,0.8nm,0.8s,baz=125,slow=8.0,SNR=8.8						
ILAR	Eielson Array	76.48	336	P	P	07 03 36.7	+0.6
	comp=Z,0.3nm,0.9s,baz=117,slow=4.5,SNR=2.3						
TORD	Torodi Ar. Bea	79.08	78	P	P	07 03 51.2	-0.4
	comp=Z,0.7nm,0.8s,baz=276,slow=6.6,SNR=2.4						
ASAR	Alice Springs	143.92	236	PKP	PKPdf	07 11 24.4	+1.5
	comp=Z,0.7nm,0.9s,baz=115,slow=3.5,SNR=5.0						
WRA	Warramunga Arr	145.02	242	PKPbc	PKPdf	07 11 25.5	+0.6
	comp=Z,0.8nm,0.7s,baz=96,slow=3.2,SNR=7.8						

IDC 23 07:16:41.3±3.4, 46°.98N×153°.98E, h0^{km}, mb3.5/3, mb1 3.6/4, mb1mx3.3/42, mbtmp3.4/4, ML2.2/1, Error ellipse: s-maj=72.6km s-min=48.7km az=148.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	Petropavlovsk-	6.58	20	Pn	Pn	07 18 18.9	-0.5
	0.2nm,0.3s,baz=177,slow=12,SNR=5.2						
PETK				Sn	Sn	07 19 36.9	+1.8
	0.3nm,0.3s,baz=144,slow=18,SNR=2.0						
ILAR	Eielson Array	36.00	39	P	P	07 23 43.2	-0.4
	0.1nm,0.5s,baz=254,slow=7.1,SNR=4.3						
YKA	Yellowknife Ar	50.38	37	P	P	07 25 40.1	+0.3
	0.3nm,0.7s,baz=298,slow=6.9,SNR=5.9						
FINES	FINESS Array B	64.08	335	P	P	07 27 16.6	0.0
	1.0nm,0.7s,baz=36,slow=8.0,SNR=3.6						

IDC 23 07:17:21.4±6.8, 35°.72N×81°.34E, h0^{km}, mb3.3/2, mb1 3.5/4, mb1mx3.2/42, mbtmp3.5/4, ML3.3/2, Error ellipse: s-maj=100.9km s-min=42.0km az=5.0, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	11.09	3	Pn	Pn	07 20 02.8	+1.5
	0.7nm,0.3s,baz=183,slow=12,SNR=30						
MKAR				Sn	Sn	07 21 54.1	-12
	0.2nm,0.3s,baz=188,slow=24,SNR=3.6						
ZALV	Zalesovo Beam	18.39	7	P	Pn	07 21 36.0	-1.7
	0.1nm,0.3s,baz=182,slow=8.7,SNR=3.5						
SONM	Songino Array	22.15	49	P	P	07 22 19.1	+0.2
	1.1nm,0.8s,baz=243,slow=11,SNR=8.6						
AKTO	Aktyubinsk	22.38	318	P	P	07 22 21.2	+0.1
	0.7nm,0.6s,baz=97,slow=8.1,SNR=2.0						

*NNC **23** 07:22:45.9±0.3, 50°.01N×78°.73E, h0^{km}, mb3.0, mpv2.9, Error ellipse: s-maj=3.5km s-min=1.7km az=61.0, Suspected Mining explosion.*

*IDC **23** 07:22:46.5±1.1, 50°.06N×78°.68E, h0^{km}, mb1 2.9/2, mb1mx2.8/40, mbtmp2.9/2, ML2.6/2, Error ellipse: s-maj=18.7km s-min=6.5km az=70.0*

ISC 23 07:22:46.9±0.8, 50°.01N±0°.04×78°.69E±0°.04, h0^{km}, n20, σ1^{s}.09/34, 20C-6D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR07	Kurchatov Arra	0.58	349	⇑P	Pg	07 22 57.3	-0.7
KUR07				⇓S	Sb	07 23 06.5	-2.3
KUR06	Kurchatov Arra	0.60	350	⇑P	Pg	07 22 57.7	-0.7
KUR06				⇑S	Sg	07 23 06.5	+0.3
KUR14	Kurchatov Arra	0.61	354	⇑P	Pg	07 22 57.7	-0.8
KUR14				⇑S	Sg	07 23 06.6	+0.3
KUR15	Kurchatov Arra	0.61	352	⇑P	Pg	07 22 57.8	-0.8
KUR15				⇑S	Sg	07 23 06.8	+0.2
KURBB	Kurchatov Arra	0.62	350	Pg	Pg	07 22 56.8	-1.9
	2.5nm,0.3s,baz=168,slow=18,SNR=169						
KURBB				Lg	Lg	07 23 07.1	
	3.5nm,0.3s,baz=224,slow=32,SNR=28						

KURBB	Kurchatov Arra	0.62	350	⇑P	Pg	07 22 57.9	-0.9
	15nm,0.3s						
KURBB				⇑S	Sg	07 23 07.1	+0.3
	141nm,0.6s						
KUR16	Kurchatov Arra	0.63	349	⇑P	Pg	07 22 58.1	-0.8
KUR16				⇓S	Sg	07 23 06.8	-0.2
KUR17	Kurchatov Arra	0.64	347	⇑P	Pg	07 22 58.2	-0.9
KUR17				⇑S	Sg	07 23 07.3	0.0
KUR05	Kurchatov Arra	0.64	351	⇑P	Pg	07 22 58.2	-0.9
KUR05				⇓S	Sg	07 23 07.3	-0.1
KUR04	Kurchatov Arra	0.66	352	⇑P	Pg	07 22 58.7	-0.8
KUR04				⇓S	Sg	07 23 07.9	-0.1
SEM	Semipalatinsk	1.08	68	P	Pg	07 23 05.4	-2.1
	4.0nm,0.1s						
SEM				S	Sg	07 23 21.0	-0.5
	36nm,0.3s						
BRZS	Berezniki	3.88	272	Pg	Pb	07 23 56.5	+0.4
	1.5nm,0.2s						
BRZS				Lg	Lg	07 24 48.5	
	8.0nm,0.5s						
MAKZ	Makanchi	3.88	144	⇑Pn	Pn	07 23 48.1	+0.3
	0.3nm,0.5s						
MAKZ				⇓Pg	Pb	07 23 55.6	-0.6
	2.3nm,0.8s						
MAKZ				⇑Lg	Lg	07 24 48.9	
	5.1nm,0.6s						
MK31	Makanchi Array	4.01	142	⇑Pn	Pn	07 23 49.3	-0.3
	0.1nm,0.2s,baz=323,slow=10.0,SNR=34						
MK31				⇑Pg	Pb	07 23 59.0	+0.6
	0.5nm,0.3s,baz=243,slow=32,SNR=7.4						
MK31				Lg	Lg	07 24 53.7	
	3.2nm,0.8s,baz=334,slow=26,SNR=12						
MKAR	Makanchi Array	4.01	142	Pn	Pn	07 23 50.2	+0.6
	0.4nm,0.3s,baz=321,slow=10,SNR=29						
MKAR				Pg	Pb	07 23 57.9	-0.6
	0.8nm,0.3s,baz=318,slow=12,SNR=12						
MKAR				Lg	Lg	07 24 52.0	
	1.3nm,0.3s,baz=329,slow=26,SNR=13						
ZSN	Zaisan	4.82	120	Pg	Pb	07 24 15.5	+3.2
	2.4nm,0.2s						
ZSN				Lg	Lg	07 25 20.8	
	7.2nm,0.6s						
I46RU	ZALESOVO INFRA	5.46	41	*i*		07 56 30.0	
	baz=225,slow=327,SNR=2.0						
ZALV	Zalesovo Beam	5.46	41	Pn	Pn	07 24 10.2	+0.7
	0.9nm,0.3s,baz=230,slow=14,SNR=10						
ZALV				Sn	Sn	07 25 14.5	+1.5
	0.1nm,0.3s,baz=227,slow=15,SNR=1.1						
ZALV				Lg	Lg	07 25 38.4	
	0.2nm,0.3s,baz=228,slow=21,SNR=2.0						
BVAR	Borovoye Array	6.00	303	Sn	Sn	07 25 26.4	+0.3
	0.7nm,0.3s,baz=130,slow=29,SNR=7.4						
BVAR				Lg	Lg	07 25 56.0	
	0.6nm,0.3s,baz=114,slow=35,SNR=2.1						
BRVK	Borovoye	6.07	303	⇑Pn	Pn	07 24 18.5	+0.7
	0.6nm,0.6s						
BRVK				⇑Sn	Sn	07 25 28.9	+1.0
	2.0nm,0.7s						
BRVK				⇓Lg	Lg	07 26 01.4	
	4.9nm,1.0s						

*IDC **23** 07:45:08.9±4.5, 37.°17N×72.°36E, h166km±28km, mb3.5/4, mb1 3.4/10, mb1mx3.0/47, mbtmp3.8/10, MS3.1/1, Ms1 3.1/1, ms1mx2.3/49, Error ellipse: s-maj=56.3km s-min=22.4km az=150.0*

*NEIC **23** 07:45:13.3±0.8, 37.°54N±0.°07×72.°2E±0.°1, h189km±8km, mb4.1/1, Error ellipse: s-maj=14.6km s-min=9.3km az=78.0*

*NNC **23** 07:45:19.9±2.9, 38.°13N×72.°36E, h226km±28km, mb2.4, mpv3.3, Error ellipse: s-maj=29.1km s-min=17.9km az=19.0*

ISC 23 07:45:13.9±1.0, **37.°66N**±0.°08×**72.°14E**±0.°09, **h200**km, **n32**, σ**1.s58**/37, **mb3.9**/5, **6C-3D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	Kabul	3.99	220	Pn	Pn	07 46 14.2	-1.6
NIL	Nilore	4.10	167	Pn	Pn	07 46 14.3	-2.7
AML	Almayashu	4.62	15	P	Pn	07 46 23.9	+0.1
	SNR=36						
UCH	Uchtor	4.92	21	P	Pn	07 46 27.5	0.0
	SNR=9.2						
EKS2	Erkin-Say	5.15	14	P	Pn	07 46 31.4	+1.1
	SNR=6.7						
AAK	Ala-Archa	5.29	19	P	Pn	07 46 31.8	-0.2
	2.3nm,0.3s,baz=181,slow=5.7,SNR=20						
AAK				S	Sn	07 47 32.4	-1.4
	0.8nm,0.3s,baz=341,slow=22,SNR=12						
AAK	Ala-Archa	5.29	19	P	Pn	07 46 32.5	+0.4
	SNR=8.3						
AAK	Ala-Archa	5.29	19	⇓P	Pn	07 46 32.1	0.0
	3.6nm,0.5s						
AAK				⇑S	Sn	07 47 31.3	-2.5
	8.5nm,0.8s						
AAK	Ala-Archa	5.29	19		Pn	07 46 33.0	+0.9
ULHL	Ulahol	5.56	33	P	Pn	07 46 35.0	-0.6
	SNR=7.1						
KK31	Karatay Array	5.58	348	⇓P	Pn	07 46 36.5	+0.8
	0.7nm,0.3s,baz=162,slow=12,SNR=22						
KK31				⇓S	Sn	07 47 38.1	-2.2
	5.4nm,0.3s,baz=162,slow=22,SNR=22						
KK31	Karatay Array	5.58	348		Pn	07 46 36.4	+0.8
KKAR	Karatay Array	5.58	348		Pn	07 46 36.2	+0.6
KKAR	Karatay Array	5.58	348		Pn	07 46 36.6	+1.0
TKM2	Tokmak 2	5.88	26	⇑P	Pn	07 46 39.5	-0.3
	3.2nm,0.7s						
GEYT	Alibeck	11.10	276	P	Pn	07 47 45.8	-1.5
	0.5nm,0.3s,baz=127,slow=12,SNR=5.8						
GEYT	Alibeck	11.10	276		Pn	07 47 46.9	-0.4
MKAR	Makanchi Array	11.82	36	P	Pn	07 47 55.8	-0.5
	0.0nm,0.3s,baz=215,slow=15,SNR=2.9						
KURBB	Kurchatov Arra	13.74	17	P	P	07 48 22.9	+0.3
	0.0nm,0.3s,baz=206,slow=10,SNR=7.7						
KURK	Kurchatov	13.85	17		Pn	07 48 22.0	+0.3
AB31	Akbulak array	14.56	327	⇑P	P	07 48 33.9	+2.2
	1.7nm,0.7s,baz=134,slow=12,SNR=25						
AB31				⇑S	S	07 51 08.0	-4.3
	1.4nm,0.6s,baz=132,slow=24,SNR=5.4						
ABKAR	Akbulak array	14.56	327		P	07 48 31.8	+0.1
ABKAR	Akbulak array	14.56	327		P	07 48 32.1	+0.3
BVAR	Borovoye Array	15.42	356	P	P	07 48 43.7	+2.6
	0.2nm,0.3s,baz=309,slow=26,SNR=1.8						
AKTO	Aktyubinsk	16.28	326	P	Pn	07 48 54.2	+2.9
	0.5nm,0.3s,baz=129,slow=8.8,SNR=7.3						
AKTO	Aktyubinsk	16.28	326	⇑P	Pn	07 48 52.7	+1.3
	1.4nm,0.5s						
AKTO				⇑S	S	07 51 50.0	-0.8
	4.0nm,1.2s						
ZALV	Zalesovo Beam	18.49	24	P	Pn	07 49 16.1	-1.2
	0.4nm,0.3s,baz=218,slow=10,SNR=8.1						
ZALV				LR	LR	07 57 28.7	
	comp=Z,59nm,18.4s,baz=347,slow=39						
FINES	FINESS Array B	37.05	325	P	P	07 52 05.9	+1.7
	3.4nm,1.0s,baz=202,slow=14,SNR=2.3						
ARCES	ARCESS Array B	40.43	337	P	P	07 52 34.8	+2.5
	3.3nm,0.9s,baz=116,slow=8.1,SNR=7.2						
TOA0	Torodi Ar. Sit	66.65	269	P	P	07 55 42.6	-0.7
TOA0				IAmb	IAmb	07 55 59.1	
	comp=Z,5.5nm,1.4s						
TORD	Torodi Ar. Bea	66.65	269	P	P	07 55 43.4	+0.1
	comp=Z,0.5nm,0.4s,baz=50,slow=3.4,SNR=4.1						
YKA	Yellowknife Ar	80.05	3	P	P	07 57 02.0	+1.3
	comp=Z,0.3nm,0.4s,baz=358,slow=5.2,SNR=9.9						

IDC 23 07:51:09.9±2.9, **30.°97S**×**178.°84W**, **h0**km, **mb3.9**/4, **mb1 4.1**/5, **mb1mx3.9**/38, **mbtmp3.9**/5, **ML3.3**/1, **Error ellipse: s-maj=60.8km s-min=35.4km az=111.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	8.00	204	Pn	Pn	07 53 06.7	-0.7
	0.4nm,0.3s,baz=37,slow=17,SNR=1.1						
URZ				Sn	Sn	07 54 39.7	+1.1
	1.3nm,0.3s,baz=189,slow=20,SNR=8.8						
STKA	Stephens Creek	33.65	258	P	P	07 57 54.1	+1.8
	2.0nm,0.8s,baz=91,slow=11,SNR=4.3						
ASAR	Alice Springs	42.36	268	P	P	07 59 05.4	-0.6
	0.7nm,0.5s,baz=106,slow=7.0,SNR=12						
WRA	Warramunga Arr	43.40	273	P	P	07 59 13.6	-0.9
	0.6nm,0.3s,baz=112,slow=8.1,SNR=10						
H03N3	Juan Fernandez	80.95	123	T	T	09 32 37.1	
	baz=235						
H03N2	Juan Fernandez	80.95	123	T	T	09 32 33.6	
	baz=235						
H03N1	Juan Fernandez	80.96	123	T	T	09 32 37.1	
	baz=235						
ILAR	Eielson Array	98.64	13	P	Pdif	08 04 50.2	+0.1
	0.3nm,1.0s,baz=226,slow=6.1,SNR=1.6						

*IDC **23** 07:57:51.1±1.8, 41.°01N×48.°20E, h0km, mb3.4/2, mb1 3.4/4, mb1mx3.2/43, mbtmp3.3/4, ML2.1/2, Error ellipse: s-maj=23.1km s-min=16.1km az=158.0*

*DRS **23** 07:57:53.6±0.0, 41.°06N×47.°72E, h14km, ML3.1/6*

*NSSP **23** 07:57:53.5, 41.°17N×47.°83E, h10km, Ms3.2*

*AZER **23** 07:57:54.3±0.0, 41.°11N×47.°95E, h14km, ml3.3/29, Error ellipse: s-maj=0.7km s-min=0.5km az=12.0*

*MOS **23** 07:57:54.9±0.0, 41.°16N×47.°84E, h5km, MPVA4.1*

ISC 23 07:57:56.2±0.8, **41.°10N**±0.°01×**47.°90E**±0.°02, **h14**km±6km, **n64**, σ**1.s90**/118, **12D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QBL	Gabala	0.16	196	P	Pg	07 58 00.5	+0.3
	SNR=64						
QBL				S	Sg	07 58 04.4	+1.5
XNQ	Khinaliq	0.20	69	P	Pg	07 58 00.3	-0.5
	SNR=406						
XNQ				S	Sg	07 58 03.8	-0.1
IML	Ismayilli	0.38	145	P	Pg	07 58 03.0	-0.8
	SNR=8.8						
IML				S	Sb	07 58 10.5	0.0
AKT	Akhty	0.40	341	⇓*i*Pg	Pg	07 58 03.6	-0.6
	564nm,0.7s						
AKT				⇓*e*Sg	Sb	07 58 09.5	-1.6
	2μm,0.4s						
QSAR	Qusar	0.49	34	P	Pg	07 58 05.6	-0.4
	SNR=55						
QSAR				S	Sb	07 58 13.0	-0.8
QUBA	Quba, Azerbaij	0.51	61	P	Pg	07 58 06.2	-0.1
	SNR=27						
QUBA				S	Sb	07 58 13.8	-0.6
SEKA	Sheki	0.54	281	P	Pg	07 58 06.1	-0.7
	SNR=34						
SEKA				S	Sb	07 58 15.0	-0.2
PQL	Pirkuli	0.61	121	P	Pg	07 58 07.8	-0.4
	SNR=138						
PQL				S	Sb	07 58 18.7	+1.3
MNGR	Mingechevir, A	0.70	242	P	Pb	07 58 10.3	+0.1
	SNR=6.3						
MNGR				S	Sb	07 58 21.4	+1.7
KDMR	Kurdemir	0.76	163	P	Pg	07 58 10.7	-0.1
	SNR=7.3						
KDMR				S	Sb	07 58 23.2	+1.8
ATGJ	Altiaghaj	0.82	107	P	Pg	07 58 11.5	-0.7
	SNR=19						
ATGJ				S	Sg	07 58 23.4	+0.4
ZRD	Zardab	0.84	191	P	Pb	07 58 12.7	+0.1
	SNR=33						
ZRD				S	Sn	07 58 26.5	+0.7
GBS	Qobustan	0.97	125	P	Pg	07 58 14.5	-0.5
	SNR=8.7						
GBS				S	Sb	07 58 29.4	+1.7
BRDA	Brd	1.00	213	P	Pb	07 58 15.6	+0.3
	SNR=20						
BRDA				S	Sn	07 58 31.6	+1.8
URKR	Urkarakh	1.08	349	*e*Pg	Pg	07 58 15.8	-1.2
URKR				*e*Sg	Sn	07 58 31.7	-0.3
ZKTA	Zakatala	1.10	299	P	Pb	07 58 16.5	-0.5
	SNR=16						
ZKTA				S	Sn	07 58 33.5	+1.2
AGDM	Agdam	1.16	211	P	Pg	07 58 17.3	-1.3
	SNR=47						
AGDM				S	Sb	07 58 34.5	+1.5
GANJ	Ganja	1.28	250	P	Pg	07 58 18.4	-2.4
	SNR=8.0						
GANJ				S	Sg	07 58 36.2	-1.3
SAAT	Saatly	1.30	162	P	Pn	07 58 18.6	-1.4
	SNR=3.0						
SAAT				S	Sg	07 58 37.1	-1.2
DDFL	Dedoflistskaro	1.38	285	P	Pb	07 58 22.1	+0.2
DDFL				S	Sn	07 58 46.1	+6.7
BLQ	Beylaqan	1.41	191	P	Pn	07 58 20.4	-1.1
	SNR=15						
BLQ				S	Sb	07 58 40.3	+0.3
ALIB	Äli-Bayra	1.42	143	P	Pg	07 58 23.9	+0.4
ALIB				S	Sn	07 58 46.6	+6.5
LGD	Lagodekhi	1.44	301	P	Pg	07 58 22.7	-1.2
LGD				S	Sn	07 58 46.6	+5.8
GNBR	Gunib	1.46	332	⇓*e*Pg	Pg	07 58 23.1	-1.2
	91nm,0.7s						
GNBR				⇓*e*Sg	Sn	07 58 42.4	+1.1
	234nm,0.6s						
ARKR	Arakani	1.64	336	⇓*e*Pg	Pb	07 58 26.1	-0.2
	54nm,0.7s						
ARKR				⇓*e*Sg	Sg	07 58 49.4	+0.3
	192nm,1.0s						
GDB	GEDABAY	1.67	257	Pn	Pn	07 58 24.4	-0.8
	SNR=74						
GDB				Sn	Sn	07 58 46.6	+0.1
XNZR	Khunzakh	1.69	329	*e*Pg	Pg	07 58 27.9	-0.8
XNZR				*e*Sg	Sg	07 58 50.8	+0.1
QRD	Qoradiz	1.70	195	Pn	Pn	07 58 24.6	-0.8
	SNR=9.5						
QRD				Sn	Sn	07 58 48.0	+1.0
BUJR	Buynaksk	1.82	341	*e*Pg	Pg	07 58 29.9	-1.2
BUJR				*e*Sg	Sg	07 58 55.0	+0.3
KRNR	Karanay	1.87	337	⇓*e*Pg	Pg	07 58 30.9	-1.3
	21nm,0.4s						
KRNR				⇓*e*Sg	Sg	07 58 58.0	+1.5
	137nm,0.8s						
MAK	Makhachkala	1.88	351	*e*Pg	Pg	07 58 32.5	+0.3
MAK				*e*Sg	Sg	07 58 56.9	+0.3
GLBA	Clilabad	1.90	168	Pn	Pn	07 58 27.6	-0.5
	SNR=4.6						
GLBA				Sn	Sn	07 58 53.9	+2.0
QZX	Qazax, Azerbai	1.91	269	Pn	Pn	07 58 28.7	+0.3
	SNR=26						
QZX				Sn	Sb	07 58 54.1	-0.5
BTLR	Botlikh	2.00	322	⇓*i*Pg	Pg	07 58 32.8	-1.7
	54nm,0.6s						
BTLR				⇓*e*Sg	Sg	07 59 00.2	-0.2
	36nm,0.6s						
DBC	Dubki	2.07	338	⇓*e*Pg	Pb	07 58 33.4	-0.2
	45nm,0.6s						
DBC				⇓*i*Sg	Sg	07 59 02.9	0.0
	132nm,0.8s						
YRD	Yardimli	2.20	173	Pn	Pn	07 58 31.3	-1.3
	SNR=21						
YRD				Sn	Sn	07 59 00.1	+0.4
DVE	Vedeno	2.27	325	*e*Pg	Pb	07 58 35.7	-1.4
DVE				*e*Sg	Sb	07 59 05.9	+0.8
LRK	Lerik	2.48	172	Pn	Pn	07 58 35.4	-1.0
	SNR=12						
LRK				Sn	Sn	07 59 09.0	+2.5
LKRN	Lenkeran, Azer	2.48	164	Pn	Pn	07 58 37.4	+1.2
LKRN				Sn	Sn	07 59 08.4	+2.0
KAPZ	Kaputan	2.55	253	*i* P	Pn	07 58 38.6	+1.2
KAPZ				*i* S	Sb	07 59 13.4	+0.1
GNI	Garni	2.58	249	Pn	Pb	07 58 40.8	-1.6
	7.7nm,0.3s,baz=26,slow=9.1,SNR=7.6						
GNI				Sn	Sb	07 59 13.9	-0.2
	4.0nm,0.3s,baz=173,slow=22,SNR=6.2						
GNI	Garni	2.58	249	*i* P	Pb	07 58 40.7	-1.8
GNI				*i* S	Sg	07 59 17.3	-1.9
GNI	Garni	2.58	249	*e*Pn	Pn	07 58 40.2	+2.4
GNI				*e*Sn	Sb	07 59 15.4	+1.3
GROC	Groznyy	2.62	324	*e*Pn	Pb	07 58 42.4	-0.5
GROC				*e*Sn	Sb	07 59 15.9	+1.0
ORD	Ordubad	2.62	215	Pn	Pn	07 58 38.3	+0.1
	SNR=18						
ORD				Sn	Sn	07 59 13.2	+3.4
ASTR	Astara	2.63	165	Pn	Pn	07 58 39.9	+1.6
ASTR				Sn	Sn	07 59 11.7	+1.7
NRKZ	NAREK	2.70	247	*i* P	Pn	07 58 40.7	+1.3
NRKZ				*i* S	Sb	07 59 17.3	-0.1
HYR	Heyderabad	2.71	240	Sg	Sb	07 59 19.5	+2.0
DMNI	Dmanisi	2.81	276	P	Pn	07 58 41.4	+0.6
PNSH	Pansheti	2.89	303	P	Pn	07 58 43.9	+1.9
GUDG	Gudauri	2.90	299	P	Pb	07 58 45.7	-2.1
KMGR	Komgaron	2.98	312	*e*Pn	Pb	07 58 48.8	-0.3
KMGR				*e*Sn	Sb	07 59 23.3	-2.2
METS	Metsamor	3.06	253	*i* P	Pn	07 58 46.4	+2.1
METS				*i* S	Sb	07 59 27.8	+0.2
BRNG	Burnasheti	3.11	281	P	Pn	07 58 46.3	+1.3
VNNZ	Vanand	3.26	253	*i* P	Pb	07 58 54.1	+0.2
VNNZ				*i* S	Sg	07 59 41.1	+0.3
ZEI	Tsey	3.42	301	*e*Pn	Pn	07 58 49.7	+0.3
ZEI				*e*Sn	Sn	07 59 33.6	+3.7
ONI	Oni	3.64	296	P	Pn	07 58 54.1	+1.9
ONI	Oni	3.64	296	*e*Pn	Pn	07 58 54.2	+2.0
DIGR	Digorskoe uzhe	3.68	301	*e*Pn	Pn	07 58 55.1	+2.2
DIGR				*e*Sn	Sn	07 59 40.7	+4.4
NEY	Neytrino	4.40	301	*e*Pn	Pn	07 59 05.7	+2.9
KBZ	Khabaz	4.54	307	Pn	Pn	07 59 07.0	+2.5
	0.2nm,0.3s,baz=186,slow=7.3,SNR=6.0						
KBZ				Sn	Sn	08 00 03.6	+6.6
	0.2nm,0.3s,baz=274,slow=16,SNR=1.5						
SHA1	Shidzhatmaz	4.69	306	*e*Pn	Pn	07 59 08.9	+2.1
SHA1				*e*Sn	Sn	08 00 04.5	+3.4
FINES	FINESS Array B	24.29	334	P	P	08 03 10.3	-2.6
	1.3nm,0.6s,baz=140,slow=9.1,SNR=4.9						
MKAR	Makanchi Array	25.27	65	P	P	08 03 17.7	-4.3
	0.3nm,0.6s,baz=263,slow=7.1,SNR=3.2						

*BJI **23** 08:00:07.0±0.0, 35.°50N×140.°30E, h35km, mB5.1/26, mb4.5/47, Ms4.3/8, Ms7 4.0/8*

*NEIC **23** 08:00:08.0±2.4, 35.°49N±0.°04×140.°30E±0.°06, h35km±2km, mb4.6/85, Error ellipse: s-maj=9.2km s-min=5.4km az=109.0*

*JMA **23** 08:00:09.6±0.2, 35.°56N×140.°14E, h68km±2km, M4.5 Broadband fault plane solution: P waves. NP1: ϕ_s201.00000°, δ33.00000°, λ51.00000°. NP2: ϕ_s65.00000°, δ65.00000°, λ112.00000°. Principal axes: T Plg63.0000°, Azm12.0000°; N Plg20.0000°, Azm235.0000°; P Plg17.0000°, Azm139.0000°;*

JMA Felt III J1.

*NIED **23** 08:00:09.6, 35.°56N×140.°14E, h68km, MW4.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}7.28; $M_{\theta\theta}$-2.71; $M_{\phi\phi}$-4.57; $M_{r\theta}$0.31; $M_{\theta\phi}$-5.54; $M_{\phi r}$-1.28; Fault plane solution: $M_0$8.41000×10^{15} NP1: ϕ_s210.00000°, δ49.00000°, λ76.00000°. NP2: ϕ_s51.00000°, δ43.00000°, λ106.00000°.*

*IDC **23** 08:00:10.7±1.1, 35.°48N×140.°13E, h71km±10km, mb4.0/31, mb1 4.1/37, mb1mx4.0/67, mbtmp4.4/37, MS3.5/17, Ms1 3.5/17, ms1mx3.3/40 Error ellipse: s-maj=12.9km s-min=5.8km az=69.0*

ISC 23 08:00:10.4±0.7, **35.°52N**±0.°04×**140.°27E**±0.°04, **h65**km±6km, **n226**, σ**1.s52**/232, **mb4.5**/81, **5C-10D, Fault plane solution: NP1:**ϕ_s55.73481°, δ30.07799°, λ101.41325°. **NP2:** ϕ_s222.60315°, δ60.57606°, λ83.46198°. **Principal axes:** T Plg73.5910°, Azm116.0438°; N Plg5.6917°, Azm225.8257°; P Plg15.3379°, Azm317.3922°; **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCN	Nagara	0.12	208	P	Pn	08 00 20.3	+0.3
JSMT	Sammumatsuo	0.19	51	⇑P	Pn	08 00 20.9	+0.6
JKUC	kamogawauchiur	0.36	189	⇑P	Pn	08 00 21.4	-0.1
JKUC				*e*S	Sn	08 00 30.2	+0.7
TOK	Tokyo	0.45	292	P	Pn	08 00 21.8	-0.3
JYT	Yasato	0.71	355	Pn	Pn	08 00 23.8	-1.2
JYT				Sn	Sn	08 00 34.0	-1.7
BSO3	Boso 3	0.74	164	⇑P	Pn	08 00 25.5	+0.3
JOD2	Odawara 2	1.00	255	⇑P	Pn	08 00 26.9	-1.7
JOD2				S	Sn	08 00 39.6	-2.5
BSO1	Boso 1	1.04	146	P	Pn	08 00 28.8	+0.2
JIM2	Oshima 3	1.05	221	P	Pn	08 00 28.0	-1.3
JIM2				S	Sn	08 00 41.8	-1.6
JAG	Ashikaga	1.12	324	⇓P	Pn	08 00 28.5	-1.6
JAG				S	Sn	08 00 42.6	-2.3
JRY	Ryogami san	1.22	294	⇓P	Pn	08 00 30.1	-1.3
JFNN	Fujinakano	1.33	256	P	Pn	08 00 31.5	-1.4
JFNN				S	Sn	08 00 47.5	-2.4
JIZS	Izushimoda	1.39	235	P	Pn	08 00 32.4	-1.3
JIZS				S	Sn	08 00 49.1	-2.2
JYN	Shimob	1.41	270	P	Pn	08 00 32.3	-1.7
JSG	Sagara	1.90	244	Pn	Pn	08 00 40.7	+0.1
JSG				Sn	Sn	08 01 06.9	+3.3
MJAR	Matsushiro Arr	1.96	302	P	Pn	08 00 39.9	-1.4
	32nm,0.3s,baz=92,slow=15,SNR=284						
MJAR				S	Sn	08 01 03.0	-1.8
	28nm,0.3s,baz=126,slow=17,SNR=8.6						
MJAR	Matsushiro Arr	1.96	302		Pn	08 00 38.5	-2.8
MAJO	Matsushiro	1.96	302	Pn	Pn	08 00 40.5	-0.8
MAJO				Sn	Sn	08 01 03.5	-1.4
MAT	Matsushiro	1.96	302	P	Pn	08 00 40.2	-1.1
MAT				S	Sn	08 01 03.1	-1.8
MJB9	Matsu-Tunnel	1.96	302		Pn	08 00 40.5	-0.9
MJB9				Sn	Sn	08 01 03.5	-1.5
JGF	Kuroka	2.37	273	Pn	Pn	08 00 46.5	-0.5
JMM	Marumori	2.38	10		Pn	08 00 47.3	+0.2
JMM				Sn	Sn	08 01 15.3	+0.2
JHJ	Hachijo jima 2	2.43	190	P	Pn	08 00 47.7	-0.1
	268nm,0.3s,baz=328,slow=20,SNR=29						
JHJ				S	Sn	08 01 16.1	-0.2
	664nm,0.3s,baz=242,slow=23,SNR=14						
JHJ2	Mitsune	2.43	189		Pn	08 00 47.6	-0.2
INU	Inuyama	2.66	267	Pn	Pn	08 00 50.0	-0.8
JSD	Sado	2.98	328	Pn	Pn	08 00 54.2	-1.0
JWT	Wachi	3.98	268	Pn	Pn	08 01 08.3	-0.6
JTM	Tenmabayashi	5.29	7	Pn	Pn	08 01 26.6	-0.2
JMN	Monobe	5.56	253	Pn	Pn	08 01 32.5	+1.9
JHS	Saijyo	5.87	267	Pn	Pn	08 01 35.4	+0.6
ERM	Erimo	6.87	18	Pn	Pn	08 01 47.0	-1.3
JEW	Eniwo	7.37	7	Pn	Pn	08 01 53.2	-2.0
JNU	Nakatsue	8.13	256	P	Pn	08 02 05.0	-0.6
	1.7nm,0.3s,baz=106,slow=3.0,SNR=9.3						
JNU	Nakatsue	8.13	256	Pn	Pn	08 02 07.7	+2.0
JCJ	Chichijima	8.56	168	P	Pn	08 02 08.8	-2.8
	80nm,0.3s,baz=342,slow=5.5,SNR=37						
JCJ				S	Sn	08 03 38.5	-8.2
	29nm,0.3s,baz=254,slow=22,SNR=7.0						
JCJ				LR	LR	08 05 28.1	
	comp=Z,238nm,21.2s,baz=60,slow=37						
JCJ	Chichijima	8.56	168	Pn	Pn	08 02 08.4	-3.2
ASAJ	Asahikawa	8.77	11	P	Pn	08 02 12.0	-2.3
	3.6nm,0.3s,baz=218,slow=15,SNR=6.3						
ASAJ				S	Sn	08 03 46.0	-5.6
	4.1nm,0.3s,baz=332,slow=29,SNR=2.3						
ASAJ				LR	LR	08 05 43.2	
	comp=Z,102nm,21.8s,baz=162,slow=38						
JKA	Kamikawa-asahi	8.77	11	Pn	Pn	08 02 12.2	-2.2
KSRS	Korea Array	10.13	285	P	Pn	08 02 33.9	+0.9
	0.6nm,0.3s,baz=101,slow=14,SNR=18						
KSRS				LR	LR	08 06 25.4	
	comp=Z,337nm,19.4s,baz=93,slow=37						
KSAR	Wonju Array Be	10.15	285	Pn	Pn	08 02 30.6	-2.7
KS19	Wonju Array Si	10.18	285	Pn	Pn	08 02 34.1	+0.5
USA0B	Ussuriysk Arra	10.75	326	Pn	Pn	08 02 43.4	+2.1
USRK	Ussuriysk Ar.	10.75	326	P	Pn	08 02 42.6	+1.3
	baz=141,slow=12,SNR=29						
USRK	Ussuriysk Ar.	10.75	326	Pn	Pn	08 02 41.9	+0.5
MDJ	Mudanjiang	12.21	321	P	Pn	08 03 04.4	+3.0
MDJ				pmax	pmax		
	comp=Z,72nm,1.6s						
MDJ				pmax	pmax		
	comp=Z,410nm,4.1s						
MDJ	Mudanjiang	12.21	321		Pn	08 03 01.9	+0.5
JOW	Kunigami	13.42	233	P	Pn	08 03 18.4	+0.5
	0.6nm,0.3s,baz=99,slow=13,SNR=2.0						
CN2	Changchun	14.08	310	*e*P	P	08 03 29.5	-2.8
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KLR	Kul'dur	15.06	338	P	Pn	08 03 38.2	-1.1
	0.5nm,0.3s,baz=157,slow=9.6,SNR=12						
DL2	Dalian	15.23	288	P	P	08 03 43.9	-1.2
DL2				S	Sn	08 06 34.3	+5.2
DL2				pmax	pmax		
	comp=Z,32nm,1.2s						
DL2				pmax	pmax		
	comp=Z,430nm,4.1s						
DL2				LR	LR		
	comp=N,340nm,14.7s						
DL2				LR	LR		
	comp=E,400nm,15.1s						
DL2				LR	LR		
	comp=Z,380nm,15.9s						
NJ2	Nanjing	18.13	265	*e*P	P	08 04 17.3	+0.1
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
TIA	Tai'an	18.77	279	P	Pn	08 04 27.8	+2.5
TIA				pmax	pmax		
	comp=Z,4.0nm,0.7s						

BJI	Beijing	19.55	291	P	Pn	08 04 35.0	+0.5
BJT	Baijiatuau	19.55	290	P	P	08 04 32.7	0.0
PEA0B	Petropavlovsk-	21.46	30	P	P	08 04 54.1	+1.0
PEA0B				IAmb	IAmb	08 05 05.2	
	comp=Z,26nm,1.1s						
PETK	Petropavlovsk-	21.46	30	P	P	08 04 53.2	+0.1
	comp=Z,6.9nm,1.0s,baz=237,slow=5.9,SNR=8.0						
PETK				LR	LR	08 12 35.5	
	comp=Z,44nm,21.1s,baz=229,slow=35						
PETK	Petropavlovsk-	21.46	30	P	P	08 04 54.3	+1.1
WHN	Wuhan	22.26	264	P	P	08 05 05.6	+3.6
HHC	Hu-ho-hao-te	23.12	292	*e*P	P	08 05 12.8	+1.8
HHC				pmax	pmax		
	comp=Z,230nm,5.5s						
MA2	Magadan	25.03	13	P	P	08 05 29.4	+1.3
	comp=Z,6.8nm,0.7s,baz=201,slow=8.1,SNR=14						
MA2	Magadan	25.03	13	P	P	08 05 29.6	+1.5
MA2				IAmb	IAmb	08 05 40.8	
	comp=Z,14nm,0.7s						
XAN	Xi'an	25.74	276	P	P	08 05 35.0	+0.1
XAN				pP	pP	08 05 41.4	-9.0
XAN				sP	sP	08 05 47.0	-11
XAN				pmax	pmax		
	comp=Z,7.0nm,0.5s						
XAN	Xi'an	25.74	276	P	P	08 05 33.6	-1.2
ENH	Enshi	26.31	267	P	P	08 05 38.0	-2.1
YAK	Yakutsk	27.36	349	P	P	08 05 47.9	-1.2
	comp=Z,5.8nm,0.4s,baz=342,slow=8.9,SNR=6.9						
YAK	Yakutsk	27.36	349	P	P	08 05 47.4	-1.6
ULN	Ulaanbaatar	27.48	307	P	P	08 05 49.0	-1.6
SONM	Songino Array	27.90	307	P	P	08 05 52.4	-1.9
	comp=Z,2.6nm,0.7s,baz=112,slow=9.1,SNR=20						
SONM				LR	LR	08 17 18.2	
	comp=Z,79nm,21.8s,baz=144,slow=37						
SONM	Songino Array	27.90	307	P	P	08 05 52.6	-1.7
H11N2	WAKE ISLAND Hy	28.23	117	T	T	08 35 26.4	
	baz=309,slow=75,SNR=91						
H11N1	WAKE ISLAND Hy	28.24	117	T	T	08 35 27.0	
	baz=309,slow=75,SNR=87						
H11N3	WAKE ISLAND Hy	28.25	117	T	T	08 35 18.7	
	baz=309,slow=75,SNR=87						
SEY	Seymchan	28.45	12	P	P	08 05 58.6	-0.2
	comp=Z,1.7nm,0.8s,baz=227,slow=4.4,SNR=9.0						
H11S3	WAKE ISLAND Hy	28.88	119	T	T	08 36 03.5	
	baz=312,slow=75,SNR=22						
H11S1	WAKE ISLAND Hy	28.88	119	T	T	08 36 15.7	
	baz=312,slow=75,SNR=68						
H11S2	WAKE ISLAND Hy	28.89	119	T	T	08 36 04.7	
	baz=312,slow=75,SNR=58						
LZH	Lanzhou	29.44	282	*e*P	P	08 06 11.3	+3.2
LZH				pP	pP	08 06 19.3	-4.5
LZH				sP	sP	08 06 23.8	-7.6
LZH				pmax	pmax		
	comp=Z,16nm,1.0s						
LZH				pmax	pmax		
	comp=Z,64nm,4.9s						
GYA	Guiyang	30.07	262	⇓P	P	08 06 14.3	+0.6
GYA				sP	pP	08 06 28.4	-1.0
GYA				pmax	pmax		
	comp=Z,6.0nm,1.2s						
CD2	Chengdu	30.77	272	*e*P	P	08 06 22.6	+2.8
KMI	Kunming	33.83	263	⇓P	P	08 06 49.1	+2.3
KMI				pP	pP	08 06 55.3	-7.4
KMI				pmax	pmax		
	comp=Z,4.0nm,0.6s						
TIXI	Tiksi	36.69	354	P	P	08 07 09.9	-0.6
FAKI	Fak Fak	38.97	193	P	P	08 07 29.0	-1.3
FAKI				IAmb	IAmb	08 07 48.4	
	comp=Z,15nm,1.0s						
CMAR	Chiang Mai Arr	40.23	256	LR	LR	08 25 07.2	
	comp=Z,30nm,19.8s,baz=136,slow=37						
WMQ	Urumqi	40.72	298	*e*P	P	08 07 45.9	+1.2
WMQ				pP	pP	08 07 54.3	-6.6
WMQ				sP	sP	08 08 03.4	-5.0
WMQ				pmax	pmax		
	comp=Z,14nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,130nm,8.9s						
WMQ				LR	LR		
	comp=Z,520nm,28.8s						
WMQ				LR	LR		
	comp=Z,1µm,29.2s						
WMQ				LR	LR		
	comp=Z,100nm,25.3s						
ZAA0	Zalesovo Array	42.27	314	P	P	08 07 56.8	-0.3
ZALV	Zalesovo Beam	42.27	314	P	P	08 07 56.5	-0.7
	comp=Z,4.2nm,0.4s,baz=105,slow=7.9,SNR=21						
ZALV				PcP	PcP	08 09 48.9	-0.9
	comp=Z,0.9nm,0.5s,baz=111,slow=2.9,SNR=2.5						
ZALV				LR	LR	08 24 22.4	
	comp=Z,39nm,20.5s,baz=32,slow=34						
ZALV	Zalesovo Beam	42.27	314	P	P	08 07 56.6	-0.5
ZSN	Zaisan	42.34	304	*e*P	P	08 07 57.0	-0.9
	comp=Z,4.2nm,0.8s,baz=304						
MK31	Makanchi Array	44.15	303	P	P	08 08 12.2	-0.4
MKAR	Makanchi Array	44.15	303	P	P	08 08 11.9	-0.6
	comp=Z,4.2nm,0.7s,baz=87,slow=9.4,SNR=23						
MKAR				LR	LR	08 27 21.0	
	comp=Z,84nm,18.1s,baz=67,slow=37						
MKAR	Makanchi Array	44.15	303	P	P	08 08 12.1	-0.4
MAKZ	Makanchi	44.37	303	P	P	08 08 13.6	-0.6
SEM	Semipalatinsk	45.14	309	*e*P	P	08 08 18.7	-1.9
	comp=Z,4.1nm,1.2s,baz=309						
KURK	Kurchatov	46.15	309	P	P	08 08 27.3	-0.9
KURBB	Kurchatov Arra	46.22	309	P	P	08 08 27.9	-0.9
	comp=Z,14nm,0.9s,baz=86,slow=8.0,SNR=46						
SHLS	Shalkode	46.73	299	*e*P	P	08 08 29.4	-3.7
	baz=299						
UZB	Uzynbulak	47.05	299	*e*P	P	08 08 34.6	-1.0
	comp=Z,3.1nm,1.0s,baz=299						
TTA	Tatalina	47.19	34	P	P	08 08 36.5	+0.2
KPKS	Kokpek	47.22	299	*e*P	P	08 08 35.6	-1.3
	baz=299						
SATY	Saty	47.51	299	*e*P	P	08 08 37.8	-1.3
	baz=299						
CHKK	Chushkaly	48.34	300	*e*P	P	08 08 44.2	-1.2
	baz=300						
MDOK	Medeo	48.45	299	*e*P	P	08 08 45.5	-1.0
	baz=299						
OHAK	Old Harbor	48.49	42	P	P	08 08 47.0	+0.7
AAA	Alma-Ata	48.54	299	*e*P	P	08 08 45.9	-1.1
	baz=299						
KUU	Kurty	48.79	300	*e*P	P	08 08 47.5	-1.4
	comp=Z,2.6nm,0.7s,baz=300						
KDAK	Kodiak Island	48.84	41	P	P	08 08 49.7	+0.8
KDAK				IAmb	IAmb	08 08 58.0	
	comp=Z,11nm,1.1s						
PPLA	Purkeypile	48.94	34	P	P	08 08 52.0	+2.2
SKT	Skwentna	49.24	35	P	P	08 08 53.4	+1.4
SKT				IAmb	IAmb	08 08 55.0	
	comp=Z,7.0nm,1.2s						
COEN	Coen	49.28	176	P	P	08 08 53.2	+0.4
COEN				IAmb	IAmb	08 09 08.9	
	comp=Z,5.4nm,1.1s						
CNPM	China Poot	49.45	39	P	P	08 08 54.8	+1.1
BPAW	Bear Paw Mtn.	49.49	33	P	P	08 08 54.5	+0.6
BPAW				IAmb	IAmb	08 08 56.4	
	comp=Z,8.9nm,1.4s						
SUA	Susitna One	49.62	36	P	P	08 08 55.9	+0.9
TRF	Thorofare Moun	49.80	33	P	P	08 08 55.2	-1.3
TRF				IAmb	IAmb	08 09 03.8	
	comp=Z,7.8nm,1.4s						
BRZS	Berezniki	50.02	309	*e*P	P	08 08 56.7	-1.4
	baz=309						
BTLS	Baital	50.12	302	*e*P	P	08 08 57.4	-1.6
	baz=302						
O22K	Cooper Landing	50.16	37	P	P	08 09 00.7	+1.7
KSH	Kashi	50.19	295	P	P	08 09 07.3	+7.6
KSH				pmax	pmax		
	comp=Z,12nm,1.5s						
KSH				pmax	pmax		
	comp=Z,170nm,6.5s						
I23K	Minto, Yukon-K	50.21	31	P	P	08 09 00.9	+1.7
I23K				IAmb	IAmb	08 09 28.7	
	comp=Z,7.4nm,1.3s						
TOLK	Toolik Lake Re	50.24	27	P	P	08 09 01.3	+1.8
TOLK				IAmb	IAmb	08 09 19.3	
	comp=Z,5.3nm,1.1s						
SEW	Seward	50.32	38	P	P	08 09 00.9	+0.7
PMR	Palmer	50.39	36	P	P	08 09 00.2	-0.4
PMR				IAmb	IAmb	08 09 14.1	
	comp=Z,8.2nm,1.2s						
AAK	Ala-Archa	50.40	299	P	P	08 09 01.3	-0.1
	comp=Z,1.5nm,0.4s,baz=78,slow=4.4,SNR=5.8						
AAK	Ala-Archa	50.40	299	P	P	08 09 01.5	+0.2
RND	Reindeer	50.45	33	P	P	08 09 02.3	+1.0
RND				IAmb	IAmb	08 09 30.4	
	comp=Z,9.6nm,1.2s						
MDM	Murphy Dome	50.69	31	P	P	08 09 04.9	+2.0
WRH	Wood River Hil	50.76	32	P	P	08 09 05.1	+1.7
WRH				IAmb	IAmb	08 09 26.0	
	comp=Z,5.6nm,0.9s						
SML	Sawmill	50.76	36	P	P	08 09 03.7	+0.1
CCB	Clear Creek Bu	50.88	32	P	P	08 09 06.0	+1.7
BVAR	Borovoye Array	50.91	313	P	P	08 09 04.8	0.0
	comp=Z,1.4nm,0.5s,baz=140,slow=12,SNR=8.8						
BRVK	Borovoye	50.97	313	P	P	08 09 05.6	+0.4
BRVK				IAmb	IAmb	08 09 22.0	
	comp=Z,5.8nm,1.0s						
POKR	Poker Plat Res	51.02	31	P	P	08 09 06.0	+0.6
HDA	Harding Lake	51.25	32	P	P	08 09 07.7	+0.6
HDA				IAmb	IAmb	08 09 27.2	
	comp=Z,8.4nm,1.0s						
IL31		51.27	32	P	P	08 09 06.8	-0.4
ILAR	Eielson Array	51.27	32	P	P	08 09 07.5	+0.2
	comp=Z,2.5nm,0.8s,baz=270,slow=6.3,SNR=27						
ILAR	Eielson Array	51.27	32	P	P	08 09 06.3	-1.0
BMAR	Burnt Mountain	52.10	28	P	P	08 09 15.0	+1.5
DZA	Taraz	52.58	300	*e*P	P	08 09 16.6	-0.8
	baz=300						
BCAR	Beaver Creek A	53.66	34	P	P	08 09 26.4	+1.3
FITZ	Fitzroy Crossi	55.10	197	P	P	08 09 35.4	-0.5
EPYK	Eagle Plains	55.30	29	P	P	08 09 38.4	+1.6
WRA	Warramunga Arr	55.45	187	P	P	08 09 37.2	-1.2
	comp=Z,3.5nm,0.4s,baz=1.4,slow=7.7,SNR=108						
WRA				LR	LR	08 31 44.6	
	comp=Z,27nm,21.2s,baz=130,slow=34						
HYT	Haines Junctio	56.06	36	P	P	08 09 44.8	+2.3
INK	Inuvik	56.15	27	P	P	08 09 43.4	+0.6
	comp=Z,1.2nm,0.6s,baz=276,slow=9.7,SNR=5.8						
INK	Inuvik	56.15	27	P	P	08 09 43.7	+0.9
INK				IAmb	IAmb	08 10 07.6	
	comp=Z,9.0nm,1.4s						
ARU	Arti	56.88	319	P	P	08 09 47.7	-0.5
	comp=Z,2.2nm,0.4s,baz=98,slow=3.3,SNR=6.9						
ABKAR	Akbulak array	58.21	311	P	P	08 09 58.6	+0.9
ABKAR				IAmb	IAmb	08 10 17.0	
	comp=Z,5.8nm,0.7s						
AKTO	Aktyubinsk	59.00	312	LR	LR	08 38 50.1	
	comp=Z,61nm,20.1s,baz=354,slow=39						
AS31	Alice Springs	59.17	187	P	P	08 10 04.0	-0.6
AS31				IAmb	IAmb	08 10 08.8	
	comp=Z,1.9nm,0.4s						
ASAR	Alice Springs	59.17	187	P	P	08 10 03.6	-1.0
	comp=Z,1.1nm,0.4s,baz=21,slow=11,SNR=23						
ASAR	Alice Springs	59.17	187	P	P	08 10 03.7	-0.8
C36M	Paulatuk	59.19	24	P	P	08 10 04.2	+0.1
C36M				IAmb	IAmb	08 10 18.2	
	comp=Z,4.3nm,0.7s						
PSA00	Pilbara Seismi	59.99	202	P	P	08 10 09.3	-0.9
KIRV	Kirov	60.90	323	P	P	08 10 15.5	-0.5
	comp=Z,8.2nm,0.4s,baz=225,slow=1.3,SNR=3.1						
SPA0	Spitsbergen Ar	61.82	349	P	P	08 10 23.5	+1.5
SPITS	Spitsbergen Ar	61.82	349	P	P	08 10 21.5	-0.5
	comp=Z,7.2nm,1.0s,baz=140,slow=9.1,SNR=1.8						
SPITS				LR	LR	08 37 28.8	
	comp=Z,40nm,19.2s,baz=210,slow=36						
DZM	Mont Dzumac	62.42	153	P	P	08 10 26.4	-0.3
	comp=Z,6.2nm,0.9s,baz=312,slow=15,SNR=1.7						
GEYT	Alibeck	63.76	299	LR	LR	08 38 32.6	
	comp=Z,55nm,19.4s,baz=0.0,slow=36						
ARCES	ARCESS Array B	65.08	339	P	P	08 10 43.1	-0.6
	comp=Z,3.1nm,0.8s,baz=54,slow=7.5,SNR=7.2						
ARCES	ARCESS Array B	65.08	339	P	P	08 10 44.3	+0.7
YKA	Yellowknife Ar	65.58	29	P	P	08 10 46.8	-0.1
	comp=Z,1.2nm,0.7s,baz=301,slow=6.0,SNR=25						
FORT	Forrest	66.94	191	P	P	08 10 55.7	-0.2
STKA	Stephens Creek	67.06	179	P	P	08 10 56.1	-0.5
	comp=Z,1.8nm,0.7s,baz=347,slow=7.0,SNR=4.1						
STKA				LR	LR	08 41 30.1	
	comp=Z,26nm,18.2s,baz=17,slow=37						
DAG	Danmarks Havn	67.20	355	*i* P	P	08 10 57.0	0.0
DAG	Danmarks Havn	67.20	355	*i* P	P	08 10 57.1	0.0
NLWA	Neilton Lookou	68.42	47	P	P	08 11 06.7	+1.4
FINES	FINESS Array B	69.72	332	P	P	08 11 11.6	-1.3
	comp=Z,3.3nm,0.7s,baz=65,slow=4.3,SNR=5.1						
FINES	FINESS Array B	69.72	332	P	P	08 11 12.8	-0.1
B08A	Colville Reser	70.56	44	P	P	08 11 19.6	+1.2
B08A				IAmb	IAmb	08 11 20.7	
	comp=Z,6.2nm,1.2s						
KBZ	Khabaz	71.18	311	P	P	08 11 21.3	-0.9
	comp=Z,2.4nm,0.8s,baz=35,slow=4.5,SNR=2.6						
C09A	Chrisman Ranch	71.46	44	P	P	08 11 25.2	+1.3
C09A				IAmb	IAmb	08 11 25.8	
	comp=Z,5.1nm,0.9s						
D08A	Wollman Farm,	71.49	45	P	P	08 11 25.1	+1.1
D08A				IAmb	IAmb	08 11 26.1	
	comp=Z,4.5nm,0.9s						
F07A	Phinny Hill Vi	71.52	47	P	P	08 11 24.4	+0.1
F07A				IAmb	IAmb	08 11 26.8	
	comp=Z,8.2nm,0.9s						
NEW	Newport	71.86	43	P	P	08 11 26.1	-0.2
NEW				IAmb	IAmb	08 11 28.3	
	comp=Z,5.0nm,0.9s						
GNI	Garni	71.86	307	LR	LR	08 43 57.4	
	comp=Z,73nm,18.8s,baz=28,slow=37						
PINE	Pine Mountain	72.03	49	P	P	08 11 27.1	-0.5
PINE				IAmb	IAmb	08 11 30.5	
	comp=Z,8.6nm,0.9s						
SUMG	Summit	72.19	360	*i* P	P	08 11 29.0	+0.7
SUMG	Summit	72.19	360	*i* P	P	08 11 29.0	+0.7
E09A	Wood Farm, Sta	72.23	45	P	P	08 11 29.3	+0.8
E09A				IAmb	IAmb	08 11 30.8	
	comp=Z,7.6nm,0.9s						
K05A	Summer Lake	72.62	50	P	P	08 11 33.1	+2.0
K05A				IAmb	IAmb	08 11 34.2	
	comp=Z,12nm,1.1s						
F10A	Beach Ranch, E	73.06	45	P	P	08 11 35.2	+1.6
WALA	Waterton Lakes	73.18	41	P	P	08 11 34.9	+0.7
WALA				IAmb	IAmb	08 12 01.5	
	comp=Z,6.5nm,1.2s						
BMO	Blue Mountains	73.64	46	P	P	08 11 38.2	+1.2
BMO				IAmb	IAmb	08 11 39.3	
	comp=Z,5.3nm,1.1s						
JTMT	Jette	73.73	43	P	P	08 11 38.6	+1.0
J08A	Circle Bar Ran	73.77	48	P	P	08 11 39.5	+1.7
J08A				IAmb	IAmb	08 11 40.4	
	comp=Z,5.9nm,1.1s						
BEKR	Beckworth	74.51	52	P	P	08 11 43.5	+1.3
BEKR				IAmb	IAmb	08 11 44.4	
	comp=Z,5.6nm,0.9s						
AKASG	Malin Array Be	74.92	322	P	P	08 11 43.1	-1.1
	comp=Z,1.8nm,0.5s,baz=48,slow=6.0,SNR=7.3						
AKASG				LR	LR	08 46 21.1	
	comp=Z,93nm,18.8s,baz=300,slow=37						
AKBB	Malin Array Si	74.92	322	P	P	08 11 43.4	-0.8
AKBB				IAmb	IAmb	08 12 03.3	
	comp=Z,5.1nm,0.8s						
HFS	Hagfors	75.08	335	P	P	08 11 43.7	-1.2
	comp=Z,3.4nm,0.9s,baz=69,slow=9.7,SNR=2.3						
NB2	NORSAR Subarra	75.22	337	P	P	08 11 43.9	-1.9
	comp=Z,0.4nm,0.3s,baz=41,slow=5.3						
NOA	NORSAR Array B	75.22	337	P	P	08 11 45.2	-0.6
	comp=Z,2.6nm,0.8s,baz=38,slow=6.0,SNR=3.2						
NOA				LR	LR	08 50 39.5	
	comp=Z,42nm,18.4s,baz=245,slow=40						
MFID	Camas Ranch	75.33	47	P	P	08 11 48.2	+1.4
FFC	Flin Flon	75.48	32	P	P	08 11 48.0	+0.7
FFC				IAmb	IAmb	08 12 14.7	
	comp=Z,7.1nm,1.2s						
CMB	Columbia Colle	75.50	54	P	P	08 11 49.3	+1.5
HRY	Holter Researc	75.69	43	P	P	08 11 48.9	+0.1
FCC	Fort Churchill	75.76	26	P	P	08 11 49.2	+0.4
LRM	Limekiln Ridge	75.88	44	P	P	08 11 51.4	+1.3
EGMT	Eagleton	76.02	41	P	P	08 11 51.5	+0.8
EGMT				IAmb	IAmb	08 11 52.5	
	comp=Z,8.7nm,0.8s						
DLMT	Dillon	76.07	44	P	P	08 11 52.7	+1.7
DLMT				IAmb	IAmb	08 11 53.2	
	comp=Z,7.6nm,0.9s						
MCMT	McKenzie Canyo	76.24	45	P	P	08 11 52.9	+0.7
BOZ	Bozeman (W)	76.47	43	P	P	08 11 54.1	+0.7
BOZ				IAmb	IAmb	08 11 55.5	
	comp=Z,4.8nm,0.9s						
NVAR	Mina Array Bea	76.64	52	P	P	08 11 55.6	+1.1
	comp=Z,3.7nm,0.9s,baz=282,slow=5.9,SNR=17						
NVAR	Mina Array Bea	76.64	52	P	P	08 11 55.8	+1.3
QLMT	Earthquake Lak	77.05	44	P	P	08 11 58.4	+1.7
ELK	Elko	77.23	49	P	P	08 11 59.4	+1.6
GCMT	Greycliff	77.44	42	P	P	08 11 57.0	-1.8
TPH	Tonopah	77.54	52	P	P	08 12 01.0	+1.5
RLMT	Red Lodge	78.08	43	P	P	08 12 03.6	+1.1
R11A	Troy Canyon, C	78.43	51	P	P	08 12 05.5	+1.1
BRTR	Keskin Array B	79.15	311	P	P	08 12 08.9	+0.6
	comp=Z,1.2nm,0.9s,baz=141,slow=2.8,SNR=3.6						
PD31	Pinedale Array	79.39	45	P	P	08 12 09.8	+0.1
PDAR	Pinedale Array	79.39	45	P	P	08 12 10.4	+0.7
	comp=Z,2.1nm,0.6s,baz=275,slow=1.5,SNR=29						
PDAR	Pinedale Array	79.39	45	P	P	08 12 10.2	+0.5
ULM	Lac du Bonnet	81.27	33	P	P	08 12 19.3	-0.1
	comp=Z,2.0nm,0.8s,baz=303,slow=7.4,SNR=5.2						
ULM	Lac du Bonnet	81.27	33	P	P	08 12 20.4	+1.0
ULM				IAmb	IAmb	08 12 28.3	
	comp=Z,7.5nm,1.4s						
RWWY	Rawlins	81.42	44	P	P	08 12 20.3	-0.4
RWWY				IAmb	IAmb	08 12 22.5	
	comp=Z,6.0nm,1.0s						
W13A	Hualapai Mount	81.46	53	P	P	08 12 21.6	+0.7
U15A	North Rim	81.67	51	P	P	08 12 23.4	+1.3
U15A				IAmb	IAmb	08 12 24.8	
	comp=Z,4.6nm,0.8s						
CLL	Collm	81.94	330	*e*P	P	08 12 24.0	+1.2
PV22	Blue Mesa, Par	82.52	48	P	P	08 12 27.6	+1.2
PV22				IAmb	IAmb	08 12 46.9	
	comp=Z,6.9nm,1.1s						
PV11	David Mesa, Pa	82.62	48	P	P	08 12 28.1	+1.2
PV11				IAmb	IAmb	08 12 47.0	
	comp=Z,5.8nm,0.8s						
PV18	Skein Mesa, Pa	82.63	48	P	P	08 12 28.6	+1.6
PV18				IAmb	IAmb	08 12 28.9	
	comp=Z,4.9nm,0.7s						
PV03	Paradox Valley	82.66	48	P	P	08 12 28.5	+1.3
PV03				IAmb	IAmb	08 12 29.5	
	comp=Z,5.4nm,0.9s						
GERES	GERESS Array B	83.50	328	LR	LR	08 51 01.4	
	comp=Z,205nm,19.1s,baz=316,slow=36						
TXAR	Lajitas Array	91.78	52	P	P	08 13 12.2	+0.8
	comp=Z,0.7nm,0.6s,baz=310,slow=2.9,SNR=4.2						
TXAR	Lajitas Array	91.78	52	P	P	08 13 12.0	+0.6
LPAZ	La Paz	148.25	60	PKPbc	PKPbc	08 19 50.2	-0.1
	comp=Z,2.2nm,0.8s,baz=288,slow=1.6,SNR=9.6						

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*JMA **23** 08:03:11.2±0.1, 23°.22N×121°.63E, h35^{km}±3^{km}, M3.0*

*TAP **23** 08:03:12.8, 23°.26N×121°.56E, h33^{km}, ML3.2, C*

ISC 23 08:03:11.9±1.0**, 23°.23N**±0°.02×**121°.61E**±0°.02**, h30**^{km}±8^{km}**,**

n96, σ**0^{s}.85**/152**, 1C, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHKT	Chengkung	0.26	239	*e*P	Pn	08 03 19.4	-0.2
	baz=219						
CHKT				*e*S	Sn	08 03 24.8	+0.1
	baz=219						
EYUL	Yuli	0.29	294	P	Pn	08 03 20.3	+0.2
	baz=292						
FULB	Fuli	0.29	264	P	Pn	08 03 19.8	-0.4
	baz=253						
FULB				S	Sn	08 03 25.4	0.0
	baz=253						
HGSD	Ruisui	0.31	327	P	Pb	08 03 19.8	+0.2
	baz=339						
HGSD				*e*S	Sn	08 03 25.5	-0.4
	baz=339						
TWF1	Yuli	0.31	293	P	Pn	08 03 20.2	-0.2
	baz=292						
YULB	Yu-li	0.33	299	P	Pn	08 03 20.2	-0.5
	baz=299						
YULB				*e*S	Sn	08 03 26.0	-0.4
	baz=299						
EHY	Hungye	0.38	316	*e*P	Pb	08 03 20.8	+0.2
	baz=308						
EHY				S	Sb	08 03 26.7	+0.3
	baz=308						
EDH	Donghe	0.38	227	*e*P	Pn	08 03 21.3	-0.1
	baz=209						
EDH				*e*S	Sn	08 03 27.6	0.0
	baz=209						
EGFH	Guangfu	0.47	339	*e*P	Pn	08 03 22.1	-0.5
	baz=333						
ELDTW	Lidau	0.55	266	⇑*i*P	Pb	08 03 22.7	-0.5
	baz=261						
ELDTW				*e*S	Sb	08 03 29.8	-1.1
	baz=261						
LONT	Longtian	0.55	234	P	Pn	08 03 23.2	-0.5
	baz=236						
LONT				*e*S	Sn	08 03 31.4	-0.4
	baz=236						
LDUT	Ludao	0.57	193	*e*P	Pn	08 03 23.3	-0.7
	baz=186						
LDUT				*e*S	Sn	08 03 31.6	-0.8
	baz=186						
ESL	Shilin	0.60	345	*e*P	Pb	08 03 23.4	-0.7
	baz=339						
ESL				S	Sb	08 03 31.5	-0.8
	baz=339						
TWGBT	Beinan	0.64	230	*e*P	Pb	08 03 24.0	-0.6
	baz=233						
TWGBT				*e*S	Sb	08 03 32.9	-0.4
	baz=233						
TWG	Pinlang	0.64	230	*e*P	Pb	08 03 24.1	-0.6
	baz=233						
TWG				*e*S	Sb	08 03 33.0	-0.4
	baz=233						
YUS	Yu-Shan	0.66	293	P	Pb	08 03 25.0	-0.3
	baz=292						
YUS				*e*S	Sb	08 03 33.6	-0.7
	baz=292						
VWDT	VWDT	0.67	321	*e*P	Pb	08 03 25.0	-0.2
	baz=323						
VWDT				*e*S	Sb	08 03 34.0	-0.2
	baz=323						
HWA	Hwalien	0.74	360	*e*S	Sn	08 03 37.0	+0.4
	baz=16						
STYH	Taoyuan	0.77	266	P	Pn	08 03 26.4	-0.2
	baz=259						
STYH				S	Sb	08 03 36.3	-0.6
	baz=259						
STYT	Tauyuan	0.79	265	P	Pn	08 03 26.8	-0.2
	baz=259						
STYT				S	Sb	08 03 37.0	-0.5
	baz=259						
ALS	Alishan	0.79	291	*e*P	Pb	08 03 27.4	0.0
	baz=290						
SSLB	Suanglung	0.82	313	*e*P	Pn	08 03 27.0	-0.4
	baz=314						
SSLB				*e*S	Sb	08 03 36.9	-1.5
	baz=314						
WHYT	Xinyi Township	0.83	304	*e*P	Pb	08 03 27.9	0.0
	baz=308						
WHYT				*e*S	Sb	08 03 38.6	-0.2
	baz=308						
TWD	Chiawan	0.84	359	*e*P	Pn	08 03 27.2	-0.6
	baz=14						
ECL	Taimali	0.87	224	*e*P	Pn	08 03 27.1	-1.1
	baz=217						
ECL				*e*S	Sn	08 03 38.0	-1.8
	baz=217						
TPUB	Ta-pu	0.90	275	*e*P	Pb	08 03 29.3	+0.2
	baz=272						
TPUB				*e*S	Sb	08 03 41.6	+0.8
	baz=272						
WTP	Ta-pu	0.91	271	*e*P	Pb	08 03 29.4	+0.1
	baz=268						
WTP				*e*S	Sb	08 03 41.9	+0.8
	baz=268						
CHGB	Renai	0.92	334	*e*P	Pn	08 03 28.6	-0.4
	baz=345						
CHGB				*e*S	Sn	08 03 39.4	-1.8
	baz=345						
SLGT	Liugui	0.92	255	*e*P	Pb	08 03 29.2	-0.1
	baz=251						
SLGT				*e*S	Sb	08 03 41.5	+0.3
	baz=251						
SMLT	Sun Moon Lake	0.92	315	*e*P	Pn	08 03 29.0	+0.1
	baz=321						
CHN5	Tsauling	0.93	293	*e*P	Pb	08 03 30.2	+0.6
	baz=293						
NACB	Ninganchiao	0.94	359	*e*P	Pn	08 03 28.3	-0.7
	baz=352						
NACB				*e*S	Sn	08 03 39.9	-1.6
	baz=352						
CHN4	Tsaushan	0.94	277	*e*P	Pb	08 03 30.0	+0.3
	baz=275						
CHN4				*e*S	Sb	08 03 43.2	+1.4
	baz=275						
SGST	Jiashian	0.95	261	*e*P	Pn	08 03 29.2	-0.1

	baz=257						
SGST				*e*S	Sb	08 03 42.4	+0.1
	baz=257						
TYC	**Yuchr**	0.96	314	*e*P	Pn	08 03 29.6	+0.2
	baz=319						
WHF	**Hehuan Shan**	0.96	341	*e*P	Pn	08 03 29.5	-0.2
	baz=356						
ETLH	**Xiulin Townshi**	0.98	353	*e*P	Pn	08 03 28.9	-0.8
	baz=358						
ETLH				*e*S	Sn	08 03 41.1	-1.5
	baz=358						
WPL	**Puli Township**	0.98	323	*e*P	Pn	08 03 29.2	-0.4
	baz=334						
CHN1	**Nanshi**	0.99	268	*e*P	Pb	08 03 31.6	+0.9
	baz=264						
CHN1				*e*S	Sb	08 03 45.1	+1.7
	baz=264						
WJS	**Zhushan**	1.00	306	*e*P	Pb	08 03 31.0	+0.3
	baz=307						
WJS				*e*S	Sb	08 03 43.9	+0.4
	baz=307						
DPDB	**Guoxing**	1.01	322	*e*P	Pb	08 03 30.5	-0.5
	baz=325						
DPDB				*e*S	Sn	08 03 43.8	+0.4
	baz=325						
SNST	**Tainan City**	1.02	270	*e*P	Pb	08 03 31.6	+0.5
	baz=267						
SNST				*e*S	Sb	08 03 45.9	+1.8
	baz=267						
SSD	**Sandimen**	1.02	242	*e*P	Pn	08 03 30.1	-0.1
	baz=234						
TSMG	**Majia**	1.03	240	*e*P	Pb	08 03 31.6	+0.3
	baz=234						
TSMG				*e*S	Sn	08 03 43.6	-0.1
	baz=234						
TWK	**Hsinying**	1.03	272	*e*P	Pb	08 03 31.4	+0.1
	baz=269						
TWK				*e*S	Sb	08 03 45.2	+0.8
	baz=269						
WCS	**Beigang Elemen**	1.04	322	*e*P	Pb	08 03 30.9	-0.5
	baz=333						
WGK	**Gukeng**	1.06	295	*e*P	Pb	08 03 32.4	+0.7
	baz=296						
WGK				*e*S	Sb	08 03 45.7	+0.5
	baz=296						
WNT	**Mingjian**	1.06	307	*e*P	Pb	08 03 32.0	+0.2
	baz=309						
WNT				*e*S	Sb	08 03 45.9	+0.5
	baz=309						
FUSS	**Fushou**	1.06	342	*e*P	Pb	08 03 31.5	-0.5
	baz=357						
WDLH	**Douliu**	1.08	295	*e*P	Pb	08 03 32.6	+0.5
	baz=295						
WDLH				*e*S	Sb	08 03 46.8	+0.9
	baz=295						
CHN2	**Minshiung**	1.08	286	*e*S	Sb	08 03 47.5	+1.6
	baz=286						
WNT1	**Nantou City**	1.08	308	*e*P	Pb	08 03 32.4	+0.3
	baz=296						
WNT1				*e*S	Sb	08 03 46.5	+0.5
	baz=296						
MASBT	**Mashibuluo**	1.09	236	*e*P	Pb	08 03 31.3	-0.9
	baz=225						
TWT	**Tachien**	1.09	339	*e*P	Pn	08 03 31.5	+0.2
	baz=342						
TWT				*e*S	Sn	08 03 44.1	-1.4
	baz=342						
TDCB	**Techi**	1.10	338	*e*P	Pn	08 03 31.8	+0.4
	baz=333						
CHY	**Chiayi**	1.12	284	*e*P	Pb	08 03 32.8	0.0
	baz=283						
CHY				*e*S	Sb	08 03 47.5	+0.6
	baz=283						
CHN3	**Shinhua**	1.15	263	*e*P	Pb	08 03 35.2	+1.9
	baz=259						
CHN3				*e*S	Sb	08 03 51.2	+3.3
	baz=259						
TWM1	**Shoushan**	1.17	250	*e*P	Pb	08 03 35.1	+1.6
	baz=244						
TWM1				*e*S	Sb	08 03 50.9	+2.6
	baz=244						
LAY	**Lan-yu**	1.19	183	*e*P	Pn	08 03 32.0	-0.5
	baz=171						
ENA	**Nanau**	1.20	6	*e*P	Pn	08 03 32.3	-0.3
	baz=24						
WHP	**Taichung City**	1.21	330	*e*P	Pb	08 03 34.2	0.0
	baz=339						
WTK	**Tuku**	1.21	292	*e*S	Sb	08 03 49.6	+0.2
	baz=293						
NNSB	**Datong**	1.21	350	*e*P	Pn	08 03 32.8	-0.1
	baz=6.0						
NNSB				*e*S	Sn	08 03 47.0	-1.3
	baz=6.0						
NNSH	**Datong**	1.21	350	*e*P	Pb	08 03 34.0	-0.4
	baz=4.0						
NNSH				*e*S	Sn	08 03 47.7	-0.7
	baz=4.0						
SSPT	**Xinbi**	1.21	232	*e*P	Pb	08 03 35.1	+0.8
	baz=218						
ICHU	**Yijhu**	1.23	276	*e*S	Sb	08 03 50.0	-0.1
	baz=275						
SCZT	**Fangliau**	1.25	227	*e*P	Pb	08 03 34.3	-0.6
	baz=219						
SCZT				*e*S	Sb	08 03 52.2	+1.5
	baz=219						
WCHH	**Zhanghua**	1.28	311	*e*S	Sb	08 03 52.0	+0.5
	baz=313						
CHN8	**Yiju**	1.29	275	*e*P	Pb	08 03 34.9	-0.7
	baz=274						
CHN8				*e*S	Sb	08 03 51.5	-0.2
	baz=274						
WRL	**Guolierlin Hig**	1.31	301	*e*S	Sn	08 03 51.5	+0.9
	baz=302						
TWQ1	**Liyutan**	1.35	326	*e*P	Pb	08 03 36.5	-0.1
	baz=329						
TWQ1				*e*S	Sb	08 03 54.4	+0.9
	baz=329						
TWC	**Suao**	1.39	9	*e*P	Pb	08 03 36.2	-1.1
	baz=16						
NDS	**Dongshan**	1.40	4	*e*P	Pn	08 03 35.8	+0.4
	baz=360						
ENTT	**Nioudou**	1.40	358	*e*P	Pn	08 03 35.5	+0.1
	baz=6.0						
NSY	**Sanyi**	1.41	327	*e*P	Pb	08 03 37.6	-0.1
	baz=331						
NSY				*e*S	Sb	08 03 56.1	+0.8
	baz=331						
WDJ	**Dajia District**	1.42	322	*e*P	Pb	08 03 37.4	-0.4
	baz=326						
YHNB	**Yeheng**	1.45	352	*e*P	Pn	08 03 36.7	+0.6
	baz=8.0						
NSK	**Sanguang**	1.46	351	*e*P	Pn	08 03 36.9	+0.7
	baz=356						
NSK				*e*S	Sn	08 03 54.3	-0.1
	baz=356						
TWKBT	**Hengchun**	1.48	210	*e*S	Sb	08 03 55.3	-1.9
	baz=192						
TWK1	**Hengchun**	1.48	210	*e*S	Sn	08 03 54.7	-0.2
	baz=192						
TWE	**Neicheng**	1.48	2	*e*P	Pb	08 03 37.7	-1.2
	baz=10.0						
NSTT	**Nanjuang**	1.50	338	*e*S	Sn	08 03 56.7	+1.3
	baz=343						
LIOB	**Emei**	1.51	339	*e*P	Pb	08 03 38.5	-0.8
	baz=346						
NWLT	**Wulai**	1.54	356	*e*P	Pn	08 03 38.2	+0.8
	baz=14						
JYNG	**Yonagunijimaku**	1.73	45	P	Pn	08 03 40.5	+0.6
JYNG				S	Sn	08 04 01.5	+0.6
TIPB	**Shuangxi**	1.74	7	*e*P	Pb	08 03 41.6	-1.7
	baz=5.0						
YOJ	**Yonaguni jima**	1.77	46	P	Pn	08 03 41.6	+1.0
YOJ				*e*S	Sn	08 04 03.0	+0.9
WDGT	**Dungji**	1.79	271	*e*P	Pn	08 03 41.0	+0.2
	baz=270						
PHUB	**P'eng-hu**	1.89	279	P	Pn	08 03 42.1	0.0
	baz=279						
PHUB				*e*S	Sn	08 04 03.5	-1.5
	baz=279						
PNG	**Penghu**	1.92	280	*e*P	Pn	08 03 42.6	+0.1
	baz=266						
PNG				*e*S	Sn	08 04 04.5	-1.1
	baz=266						
HATJ	**Hateruma jima**	2.18	67	*e*S	Sn	08 04 12.1	+0.1
IRIF	**Iriomote-Funau**	2.23	60	P	Pn	08 03 48.0	+1.2
IRIF				*e*S	Sn	08 04 14.4	+1.0
JKRS	**Kuro-shima**	2.42	65	P	Pn	08 03 50.4	+1.0
JKRS				*e*S	Sn	08 04 18.7	+0.7
JIJ	**Ishigaki jima**	2.58	64	P	Pn	08 03 52.3	+0.7
JIJ				S	Sn	08 04 21.5	-0.5
JISG	**Ishigakijimahi**	2.82	61	*e*S	Sn	08 04 26.9	-0.9
JTJ	**Tarama**	3.16	63	P	Pn	08 04 00.6	+1.0
JTJ				S	Sn	08 04 37.1	+0.8

IDC ***23*** *08:04:36.7±2.5, 23°.96S×176°.69W, h0^{km}, mb3.9/3, mb1 4.2/4, mb1mx3.8/23, mbtmp4.0/4, ML4.2/1, MS3.6/1, Ms1 3.6/1, ms1mx2.7/34, Error ellipse: s-maj=71.3km s-min=46.6km az=139.0*

ISC 23 08:04:47.4±2.4**, 24°.4S**±0°.2×**176°.5W**±0°.4**, h100^{km}, n7,** σ**1^{s}.10**/6**, mb3.8**/3**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	14.87	200	Pn	Pn	08 08 12.3	-0.1
	0.9nm,0.3s,baz=254,slow=5.1,SNR=6.7						
RPZ	**Rata Peaks**	21.83	205	LR	LR	08 17 57.3	
	comp=Z,127nm,18.2s,baz=20,slow=36						
CTA	**Charters Tower**	34.68	270	P	P	08 11 28.5	+0.9
	1.3nm,0.3s,baz=103,slow=12,SNR=2.2						
ASAR	**Alice Springs**	45.11	260	P	P	08 12 54.2	+0.2
	0.4nm,0.3s,baz=94,slow=7.6,SNR=8.3						
WRA	**Warramunga Arr**	45.56	265	P	P	08 12 56.1	-1.5
	0.6nm,0.4s,baz=102,slow=8.1,SNR=5.5						
AKASG	**Malin Array Be**	147.06	330	PKPbc	PKPab	08 24 19.6	-0.4
	0.8nm,0.5s,baz=38,slow=4.3,SNR=4.5						
BRTR	**Keskin Array B**	150.40	308	PKPbc	PKiKP	08 24 28.8	+0.6
	0.6nm,0.7s,baz=72,slow=4.7,SNR=3.3						

NSSP ***23*** *08:04:49.0, 40°.92N×46°.27E, h10^{km}, Ms3.9*

AZER ***23*** *08:04:49.9±0.0, 40°.93N×46°.21E, h10^{km}, ml4.3/31, Error ellipse: s-maj=0.9km s-min=0.4km az=3.0*

IDC ***23*** *08:04:50.1±1.0, 40°.89N×46°.05E, h0^{km}, mb3.8/5, mb1 3.7/10, mb1mx3.5/43, mbtmp3.7/10, ML2.9/5, Error ellipse: s-maj=15.4km s-min=9.1km az=128.0*

DDA ***23*** *08:04:50.6, 40°.84N×46°.11E, h5^{km}±4^{km}, MW3.8*

TIF ***23*** *08:04:51.4, 40°.88N×46°.25E, h22^{km}±1^{km}*

TEH ***23*** *08:04:51.5, 40°.89N×46°.25E, h16^{km}, ML4.2*

MOS ***23*** *08:04:51.1±0.9, 40°.82N×46°.20E, h9^{km}, mb4.3/2, Error ellipse: s-maj=6.8km s-min=4.6km az=97.6*

ISC 23 08:04:51.4±0.9**, 40°.92N**±0°.01×**46°.30E**±0°.01**, h13^{km}**±7^{km}**, n154,** σ**1^{s}.42**/233**, mb3.8**/6**, 6C-6D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GANJ	**Ganja**	0.28	176	P	Pg	08 04 56.9	-0.2
	SNR=916						
GANJ				S	Sg	08 05 00.8	-0.2
GANJ	**Ganja**	0.28	176	*e*Pg	Pg	08 04 56.9	-0.2
GDB	**GEDABAY**	0.46	244	P	Pg	08 04 59.7	-0.8
	SNR=6272						
GDB				S	Sg	08 05 05.5	-1.1
GDB	**GEDABAY**	0.46	244	*e*Pg	Pg	08 04 59.7	-0.8
DDFL	**Dedoflistskaro**	0.54	346	P	Pn	08 05 04.2	-0.7
DDFL	**Dedoflistskaro**	0.54	346	*i* P	Pb	08 05 03.7	+0.9
DDFL	**Dedoflistskaro**	0.54	346	PG	Pn	08 05 04.1	-0.7
DDFL	**Dedoflistskaro**	0.54	346	*e*Pg	Pb	08 05 03.6	+0.9
MNGR	**Mingechevir, A**	0.62	104	P	Pb	08 05 05.0	+0.9
	SNR=683						
MNGR				S	Sn	08 05 16.1	+0.5
MNGR	**Mingechevir, A**	0.62	104	*e*Pg	Pb	08 05 04.9	+0.9
QZX	**Qazax, Azerbai**	0.71	281	P	Pg	08 05 04.7	-0.5
	SNR=8320						
QZX				S	Sg	08 05 14.7	+0.1
QZX	**Qazax, Azerbai**	0.71	281	*e*Pg	Pg	08 05 04.7	-0.5
SEKA	**Sheki**	0.74	67	Pg	Pb	08 05 06.4	+0.2
	SNR=230						
SEKA				Sg	Sn	08 05 17.8	-1.0
SEKA	**Sheki**	0.74	67	*e*Pg	Pb	08 05 06.3	+0.2
ZKTA	**Zakatala**	0.76	19	P	Pb	08 05 06.9	+0.5
	SNR=206						
ZKTA				S	Sn	08 05 19.2	+0.1
ZKT	**Zaqatala**	0.78	21	*e*Pg	Pb	08 05 06.9	0.0
LGD	**Lagodekhi**	0.91	358	P	Pn	08 05 09.7	-0.3
LGD				S	Sn	08 05 23.6	+0.6
LGD	**Lagodekhi**	0.91	358	PG	Pn	08 05 09.6	-0.3
LGD				S	Sn	08 05 23.5	+0.6
BRDA	**Brd**	0.94	134	P	Pb	08 05 10.1	+0.5
	SNR=212						
BRDA				S	Sn	08 05 25.5	+1.9
BRDA	**Brd**	0.94	134	*e*Pg	Pb	08 05 10.0	+0.5
AGDM	**Agdam**	1.02	142	P	Pg	08 05 10.8	-0.3
	SNR=1764						
AGDM				S	Sn	08 05 26.0	+0.3
QBL	**Gabala**	1.17	88	P	Pn	08 05 13.6	+0.2
	SNR=66						
QBL				S	Sn	08 05 30.9	+1.6
QBL	**Gabala**	1.17	88	*e*Pg	Pn	08 05 13.7	+0.2
AKT	**Akhty**	1.22	62	⇑*i*PG	Pb	08 05 14.3	0.0
AKT				*i*		08 05 31.5	
AKT				pmax	pmax		
	comp=Z,687nm,0.2s						
AKT				smax	smax		
	comp=N,3µm,0.3s						
ZRD	**Zardab**	1.24	121	P	Pb	08 05 15.0	+0.4
	SNR=23						
ZRD				S	Sn	08 05 34.7	+3.8
ZRD	**Zardab**	1.24	121	*e*Pg	Pb	08 05 15.0	+0.4
KAPZ	**Kaputan**	1.35	244	*i* P	Pn	08 05 15.6	-0.6
KAPZ				*i* S	Sb	08 05 33.5	-0.5
BTNK	**Botanikuri**	1.36	304	P	Pn	08 05 16.4	+0.3
BTNK				S	Sn	08 05 34.7	+0.7
BTNK	**Botanikuri**	1.36	304	*i* P	Pn	08 05 16.1	0.0
BTNK				*i* S	Sn	08 05 34.6	+0.6
BTNK	**Botanikuri**	1.36	304	PG	Pn	08 05 16.4	+0.3
BTNK				S	Sn	08 05 34.7	+0.7
SEAG	**Tbilisi Sea**	1.40	307	P	Pb	08 05 17.4	0.0
SEAG				S	Sg	08 05 36.9	+0.3
SEAG	**Tbilisi Sea**	1.40	307	PG	Pb	08 05 17.4	0.0
SEAG				S	Sg	08 05 36.9	+0.3
GNI	**Garni**	1.41	237	Pn	Pn	08 05 17.0	+0.1
	comp=N,561nm,0.3s,baz=8.0,slow=1.3,SNR=533						
GNI				Sn	Sn	08 05 36.1	+0.6
	comp=N,446nm,0.3s,baz=166,slow=19,SNR=16						
GNI	**Garni**	1.41	237	*i* P	Pn	08 05 17.1	+0.1
GNI				*i* S	Sn	08 05 36.5	+1.0
GNI	**Garni**	1.41	237	*c i*PG	Pn	08 05 16.9	-0.1
GNI	**Garni**	1.41	237	*e*Pg	Pn	08 05 16.9	-0.1
XNQ	**Khinaliq**	1.42	79	Pn	Pn	08 05 17.5	+0.4
	SNR=996						
XNQ				Sn	Sg	08 05 37.3	+0.2
XNQ	**Khinaliq**	1.42	79	*e*Pg	Pn	08 05 17.4	+0.4
IML	**Ismayilli**	1.44	95	Pn	Pb	08 05 18.0	-0.1
	SNR=127						
IML				Sn	Sg	08 05 38.7	+1.0
IML	**Ismayilli**	1.44	95	*e*Pg	Pb	08 05 17.9	-0.1
STE	**Stepanavan**	1.46	274	*e*P	Pn	08 05 16.4	-1.2
STE				*e*S	Sn	08 05 35.2	-1.4
KZRT	**Kazreti**	1.50	289	P	Pn	08 05 17.2	-0.9
KZRT				S	Sn	08 05 36.9	-0.8
KZRT	**Kazreti**	1.50	289	*i* P	Pn	08 05 16.8	-1.4
KZRT				*i* S	Sn	08 05 36.4	-1.3
KZRT	**Kazreti**	1.50	289	PG	Pn	08 05 17.2	-0.9
KZRT				S	Sn	08 05 36.8	-0.8
KDMR	**Kurdemir**	1.54	110	Pn	Pb	08 05 19.8	+0.1
	SNR=12						
KDMR				Sn	Sg	08 05 42.0	+1.2
KDMR	**Kurdemir**	1.54	110	*e*Pn	Pb	08 05 19.7	+0.1
BLQ	**Beylaqan**	1.54	141	Pn	Pn	08 05 18.8	+0.3
	SNR=160						
BLQ				Sn	Sb	08 05 40.0	+0.8
BLQ	**Beylaqan**	1.54	141	*e*Pn	Pn	08 05 18.8	+0.3
GNBR	**Gunib**	1.55	19	⇓*i*PN	Pg	08 05 20.7	-0.4
GNBR				*e*		08 05 42.3	
GNBR				pmax	pmax		
	comp=Z,584nm,0.5s						
GNBR				smax	smax		
	comp=N,2µm,0.9s						
NRKZ	**NAREK**	1.55	234	*i* P	Pn	08 05 19.3	+0.5
NRKZ				*i* S	Sb	08 05 40.8	+1.2
URKR	**Urkarakh**	1.60	39	⇓*e*PN	Pg	08 05 22.0	-0.1
URKR				*e*		08 05 43.6	
URKR				pmax	pmax		
	comp=Z,382nm,0.4s						
URKR				smax	smax		
	comp=N,1µm,0.5s						
QSAR	**Qusar**	1.60	68	Pn	Pg	08 05 21.8	-0.3
	SNR=211						
QSAR				Sn	Sg	08 05 43.3	+0.5
QSAR	**Qusar**	1.60	68	*e*Pn	Pg	08 05 21.8	-0.3
HYR	**Heyderabad**	1.63	223	Pn	Pn	08 05 21.0	+1.1
	SNR=166						
HYR				Sn	Sb	08 05 42.5	+0.6
HYR	**Heyderabad**	1.63	223	*e*Pn	Pn	08 05 21.0	+1.1
DMNI	**Dmanisi**	1.64	285	P	Pn	08 05 19.5	-0.6
DMNI				S	Sn	08 05 40.7	-0.5
DMNI	**Dmanisi**	1.64	285	PG	Pn	08 05 19.4	-0.6
DMNI				S	Sn	08 05 40.6	-0.5
QRD	**Qoradiz**	1.66	151	Pn	Pn	08 05 20.5	+0.3
	SNR=81						
QRD				Sn	Sb	08 05 42.8	+0.2
QRD	**Qoradiz**	1.66	151	*e*Pn	Pn	08 05 20.4	+0.3
QUBA	**Quba, Azerbaij**	1.71	75	Pn	Pg	08 05 23.7	-0.6
	SNR=195						
QUBA				Sn	Sg	08 05 47.7	+1.1
BTLR	**Botlikh**	1.74	358	⇓*i*PN	Pb	08 05 23.6	+0.4
BTLR				pmax	pmax		
	comp=Z,790nm,0.7s						
PQL	**Pirkuli**	1.75	94	Pn	Pb	08 05 22.8	-0.6
	SNR=572						
PQL				Sn	Sg	08 05 47.4	-0.2
PQL	**Pirkuli**	1.75	94	*e*Pn	Pb	08 05 22.8	-0.6
ARKR	**Arakani**	1.76	17	⇓*i*PN	Pg	08 05 24.4	-0.7
ARKR				pmax	pmax		
	comp=Z,265nm,0.3s						
SGKR	**Sergokala**	1.84	33	⇓*e*PN	Pg	08 05 26.3	-0.5
SGKR				*e*		08 05 53.0	
SGKR				pmax	pmax		
	comp=Z,180nm,0.6s						
SGKR				smax	smax		
	comp=N,2µm,0.4s						
NAX	**Nakhchivan**	1.85	200	Pn	Pb	08 05 25.8	+0.7
	SNR=16						
NAX				Sn	Sb	08 05 49.9	+1.7
NAX	**Nakhchivan**	1.85	200	*e*Pn	Pb	08 05 25.9	+0.8
METS	**Metsamor**	1.86	246	*i* P	Pn	08 05 23.3	+0.4
METS				*i* S	Sb	08 05 48.4	0.0
SAAT	**Saatly**	1.94	122	Pn	Pn	08 05 23.7	-0.3
	SNR=10.0						
SAAT				Sn	Sn	08 05 50.0	+1.7
SAAT	**Saatly**	1.94	122	*e*Pn	Pn	08 05 24.1	+0.1
KRNR	**Karanay**	1.96	13	⇑*e*PN	Pb	08 05 27.5	+0.6
KRNR				*e*		08 05 53.7	
KRNR				pmax	pmax		
	comp=Z,104nm,0.3s						
KRNR				smax	smax		
	comp=E,321nm,0.3s						
BRNG	**Burnasheti**	1.99	291	P	Pn	08 05 25.8	+0.9
BRNG				S	Sb	08 05 51.7	-0.5
IGDI	**IGDIR**	1.99	239	*i* P	Pn	08 05 24.7	-0.1
IGDI				*i* S	Sn	08 05 51.0	+1.3
IGDI	**IGDIR**	1.99	239	*e*Pn	Pn	08 05 24.7	-0.1
BUJR	**Buynaksk**	2.00	17	⇑*e*PN	Pg	08 05 28.7	-0.9
BUJR				*e*		08 05 54.4	
BUJR				pmax	pmax		
	comp=Z,218nm,0.5s						
BUJR				smax	smax		
	comp=N,2µm,0.6s						
ATGJ	**Altiaghaj**	2.00	91	Pn	Pb	08 05 27.6	-0.1
	SNR=51						
ATGJ				Sn	Sg	08 05 55.9	0.0
ATGJ	**Altiaghaj**	2.00	91	*e*Pn	Pb	08 05 27.6	-0.1
ORD	**Ordubad**	2.01	187	Pn	Pn	08 05 27.0	+1.9
	SNR=453						
ORD				Sn	Sb	08 05 52.9	+0.2
ORD	**Ordubad**	2.01	187	*e*Pn	Pn	08 05 26.8	+1.8
EAK	**Akyaka**	2.05	264	*i* P	Pn	08 05 25.9	+0.2
EAK				*i* S	Sb	08 05 54.2	+0.1
EAK	**Akyaka**	2.05	264	*e*Pn	Pn	08 05 25.9	+0.2
VNNZ	**Vanand**	2.06	247	*i* P	Pn	08 05 27.2	+1.5
VNNZ				*i* S	Sb	08 05 55.5	+1.5
GUDG	**Gudauri**	2.06	319	P	Pb	08 05 28.2	-0.6
GUDG				S	Sg	08 05 56.1	-1.4
GUDG	**Gudauri**	2.06	319	PN	Pb	08 05 28.1	-0.6
GUDG				S	Sg	08 05 56.1	-1.4
BGD	**Bogdanovka**	2.07	280	P	Pn	08 05 27.3	+1.3
BGD				S	Sb	08 05 54.9	+0.3
BGD	**Bogdanovka**	2.07	280	PN	Pn	08 05 27.3	+1.3
BGD				S	Sb	08 05 54.9	+0.3
PNSH	**Pansheti**	2.12	324	P	Pn	08 05 28.1	+1.3
PNSH				S	Sb	08 05 55.4	-0.7
PNSH	**Pansheti**	2.12	324	PN	Pn	08 05 28.0	+1.3
PNSH				S	Sb	08 05 55.4	-0.7
DBC	**Dubki**	2.13	11	⇑*e*PN	Pb	08 05 29.7	-0.2
DBC				*i*		08 05 59.3	
DBC				pmax	pmax		
	comp=Z,102nm,0.5s						
DBC				smax	smax		
	comp=N,259nm,0.4s						
DLMR	**Dylym**	2.16	7	⇓*e*PN	Pb	08 05 29.9	-0.5
DLMR				*e*		08 05 59.7	
DLMR				pmax	pmax		
	comp=Z,240nm,0.3s						
DLMR				smax	smax		
	comp=N,1µm,0.7s						
AKH	**Akhalkalaki**	2.17	284	P	Pn	08 05 29.0	+1.6
AKH				S	Sb	08 05 56.9	-0.6
AKH	**Akhalkalaki**	2.17	284	PN	Pn	08 05 29.0	+1.6
AKH				S	Sb	08 05 56.9	-0.6
MAK	**Makhachkala**	2.23	24	*e*PN	Pb	08 05 31.0	-0.5
MAK				*e*		08 05 59.7	
MAK				pmax	pmax		
	comp=Z,215nm,0.5s						
MAK				smax	smax		
	comp=E,2µm,0.4s						
MAK				smax	smax		
	comp=E,1µm,0.5s						
MAK				MLR	MLR		
	comp=Z,678nm,2.0s						
BKRG	**Bakuriani**	2.25	293	P	Pn	08 05 29.9	+1.5
BKRG				S	Sb	08 05 59.7	-0.1
BKRG	**Bakuriani**	2.25	293	PN	Pn	08 05 29.9	+1.5
BKRG				S	Sb	08 05 59.7	-0.1
IMRD	**Marand**	2.25	192	*e*Pn	Pb	08 05 31.1	-0.9
IMRD				*e*		08 06 04.3	
	comp=Z,99nm,0.2s						
DIGO	**Kars**	2.28	258	*i* P	Pn	08 05 28.6	-0.3
DIGO				*i* S	Sb	08 06 02.2	+1.5
ALIB	**Äli-Bayra**	2.28	114	Pn	Pb	08 05 32.0	-0.4
	SNR=30						
ALIB				Sn	Sb	08 06 02.4	+1.8
GROC	**Groznyy**	2.31	351	*e*PN	Pb	08 05 33.1	+0.2
GROC				*e*		08 05 37.9	
GROC				*e*		08 06 05.2	
GROC				*e*		08 06 16.3	
GROC				pmax	pmax		
	comp=Z,115nm,0.7s						
GROC				pmax	pmax		
	comp=Z,174nm,0.4s						
GROC				smax	smax		
	comp=E,397nm,0.7s						
GROC				smax	smax		
	comp=E,350nm,0.4s						
GROC				smax	smax		
	comp=N,414nm,0.6s						
GROC				MLR	MLR		
	comp=Z,223nm,2.0s						
GLBA	**Clilabad**	2.33	136	Pn	Pn	08 05 30.5	+1.2
	SNR=19						
GLBA				Sn	Sb	08 06 01.4	-0.3
DYDN	**Diyadin**	2.42	236	*i* P	Pn	08 05 32.1	+1.2
AHAR	**Ahar**	2.50	166	*e*Pn	Pn	08 05 34.3	+2.4
AHAR				*e*		08 05 36.3	
	comp=Z,99nm,0.2s						
YRD	**Yardimli**	2.50	143	Pn	Pn	08 05 32.1	+0.1
	SNR=47						
YRD				Sn	Sb	08 06 05.6	-1.4
CLDR	**Caldiran**	2.55	227	*i* P	Pn	08 05 33.4	+0.7
CLDR				*i* S	Sg	08 06 12.1	-1.2
CLDR	**Caldiran**	2.55	227	*e*Pn	Pn	08 05 33.3	+0.7
ZEI	**Tsey**	2.58	317	*e*PN	Pn	08 05 35.1	+2.0
ZEI				*e*S	Sb	08 06 10.3	+0.9
ZEI				pmax	pmax		
	comp=Z,115nm,0.5s						
ZEI				smax	smax		
	comp=N,646nm,0.6s						
ZEI				smax	smax		
	comp=E,866nm,0.7s						
KOTA	**Agri, Merkez-K**	2.61	246	*i* P	Pn	08 05 34.6	+1.1
IHRS	**Heris**	2.66	167	*e*Pn	Pn	08 05 35.8	+1.6
IHRS				*e*		08 05 38.4	
	comp=Z,99nm,0.2s						

GOBA	Gobu	2.67	100	Pn	Pn	08 05 36.6	+2.6
	SNR=3.6						
GOBA				Sn	Sb	08 06 11.2	-0.3
ITBZ	Tabriz	2.69	182	ePn	Pb	08 05 37.7	-1.7
ONI	Oni	2.70	309	P	Pn	08 05 36.3	+1.7
ONI				S	Sb	08 06 13.0	+0.3
ONI	Oni	2.70	309	PN	Pn	08 05 36.2	+1.7
ONI				S	Sb	08 06 13.0	+0.3
ABS	Abastumani	2.75	289	P	Pb	08 05 38.6	-1.9
ABS				S	Sb	08 06 15.4	+1.2
ABS	Abastumani	2.75	289	PN	Pb	08 05 38.6	-1.9
ABS				S	Sb	08 06 15.4	+1.2
EPOS	Posof	2.75	283	i P	Pn	08 05 38.0	+2.6
EPOS				i S	Sb	08 06 14.9	+0.6
LRK	Lerik	2.77	145	Pn	Pn	08 05 36.8	+1.2
	SNR=71						
LRK				Sn	Sb	08 06 13.9	-0.8
NDR	Nardaran	2.83	96	Pn	Pb	08 05 39.3	-2.3
NDR				Sn	Sb	08 06 14.8	-1.3
VMUR	Van-Muradiye	2.85	228	i P	Pb	08 05 41.1	-1.0
OZAP	Van, Ozalp-Mer	2.87	219	i P	Pb	08 05 41.7	-0.9
LKRN	Lenkeran, Azer	2.92	138	Pn	Pn	08 05 38.2	+0.7
	SNR=10						
LKRN				Sn	Sn	08 06 15.9	+3.4
ASTR	Astara	3.04	140	Pn	Pn	08 05 39.7	+0.5
	SNR=8.9						
ASTR				Sn	Sb	08 06 20.1	-2.4
EATA	Eleskirt	3.09	251	i P	Pn	08 05 41.7	+1.5
ISRB	Sarab	3.27	161	ePn	Pn	08 05 44.4	+1.9
ADCV	BITLIS_Adilcev	3.46	234	i P	Pb	08 05 53.1	+0.4
ADCV				i S	Sg	08 06 44.9	+2.2
DBOC	Borcka	3.52	278	i P	Pb	08 05 52.3	-1.3
DBOC				i S	Sb	08 06 38.2	+2.0
BATM	Batumi	3.54	283	P	Pb	08 05 52.8	-1.0
BATM				S	Sb	08 06 38.6	+2.0
BATM	Batumi	3.54	283	PN	Pb	08 05 52.8	-1.0
BATM				S	Sb	08 06 38.6	+2.0
CHVG	Ch'k'valeri	3.62	301	P	Pb	08 05 57.0	+1.7
CHVG				S	Sb	08 06 39.3	+0.2
CHVG	Ch'k'valeri	3.62	301	PN	Pb	08 05 57.0	+1.7
CHVG				S	Sb	08 06 39.3	+0.2
KBZ	Khabaz	3.77	319	Pn	Pn	08 05 50.4	+1.3
	comp=Z,0.2nm,0.3s,baz=224,slow=4.1,SNR=2.9						
KBZ				Lg	Lg	08 06 47.0	
	comp=Z,4.4nm,0.3s,baz=168,slow=15,SNR=6.8						
KBZ	Khabaz	3.77	319	i PN	Pn	08 05 53.2	+4.1
KVAR	Kislovodsk Arr	4.04	320	Pn	Pn	08 05 56.4	+3.4
	baz=90,slow=20,SNR=3.1						
KVAR				Lg	Lg	08 06 55.4	
	baz=254,slow=13,SNR=4.5						
KIV	Kislovodsk	4.04	320	ePN	Pn	08 05 56.1	+3.1
KIV				eS	Sn	08 06 44.6	+4.4
KIV				pmax	pmax		
	comp=Z,25nm,1.1s						
GOF	Gofitskoye	4.77	331	⇑ePG	Pg	08 06 30.1	+7.4
GOF				eS	Sg	08 07 32.5	+8.0
GOF				pmax	pmax		
	comp=Z,56nm,0.7s						
GOF				smax	smax		
	comp=E,235nm,1.5s						
GOF				smax	smax		
	comp=N,101nm,0.8s						
SOC	Sochi	5.56	301	eP	Pn	08 06 13.9	+0.1
SOC				e		08 07 18.6	
SOC				pmax	pmax		
	comp=Z,5.0nm,0.5s						
SOC				MLR	MLR		
	comp=Z,393nm,8.0s						
IPRN	Peran	6.65	133	ePn	Pn	08 06 28.5	-0.4
IGLO	Ghaloghah	7.36	124	ePn	Pn	08 06 38.9	+0.2
IGLO				e		08 08 11.5	
	comp=Z,99nm,0.6s						
IANJ	Anjilo	8.10	130	ePn	Pn	08 06 50.5	+1.6
GEYT	Alibeck	9.62	104	Pn	Pn	08 07 07.5	-2.0
	comp=Z,1.3nm,0.3s,baz=306,slow=5.3,SNR=8.0						
GEYT				Sn	Sn	08 08 54.0	-3.6
	comp=Z,1.1nm,0.3s,baz=306,slow=19,SNR=2.2						
BR131	Keskin Array S	9.74	267	i P	Pn	08 07 11.9	+0.6
BRTR	Keskin Array B	9.74	267	Pn	Pn	08 07 11.7	+0.4
	comp=Z,0.1nm,0.3s,baz=73,slow=12,SNR=3.4						
IKRD	Kardeh	11.11	108	ePn	Pn	08 07 30.7	+0.6
AKTO	Aktyubinsk	12.54	37	Pn	Pn	08 07 49.4	0.0
	comp=Z,0.4nm,0.3s,baz=234,slow=7.9,SNR=4.4						
AKTO				Sn	Sn	08 10 02.4	-6.5
	comp=Z,0.6nm,0.3s,baz=43,slow=19,SNR=3.3						
OBN	Obninsk	15.60	339	i P	P	08 08 34.1	-0.8
OBN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ARU	Arti	17.46	23	P	P	08 08 55.5	-0.1
	comp=Z,0.0nm,0.3s,baz=249,slow=8.2,SNR=3.6						
UZH	Uzhgorod	18.65	302	eP	P	08 09 05.5	-3.2
BRVK	Borovoye	20.26	45	i P	Pn	08 09 30.7	+2.4
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
AAK	Ala-Archa	21.06	76	i P	P	08 09 39.2	+3.9
AAK				pmax	pmax		
	comp=Z,17nm,1.0s						
FINES	FINESS Array B	23.95	336	P	P	08 10 04.4	-0.5
	comp=Z,0.5nm,0.3s,baz=141,slow=9.0,SNR=6.5						
KURBB	Kurchatov Arra	24.31	56	P	P	08 10 10.9	+2.4
	comp=Z,1.0nm,0.7s,baz=265,slow=11,SNR=2.4						
KURK	Kurchatov	24.39	55	P	P	08 10 10.9	+1.7
MKAR	Makanchi Array	26.45	65	P	P	08 10 31.2	+3.3
	comp=Z,0.7nm,0.7s,baz=258,slow=9.4,SNR=2.5						
ARCES	ARCESS Array B	30.68	346	P	P	08 11 05.6	+0.2
	comp=Z,4.7nm,1.1s,baz=153,slow=10,SNR=5.4						
TORD	Torodi Ar. Bea	47.70	248	P	P	08 13 26.6	-1.2
	comp=Z,1.0nm,0.7s,baz=45,slow=7.3,SNR=6.0						

BJI ***23*** *08:23:13.9±0.0, 22°.60N×118°.40E, h9^{km}, mb3.8/1, ML3.9/6*
TAP ***23*** *08:23:22.9, 24°.27N×121°.68E, h27^{km}±1^{km}, ML1.3, D*
ISC 23 08:23:18.6±3.8**, 24°.2N**±0°.2×**121°.6E**±0°.2**, h62**^{km}±17^{km}**, n8,**
σ**1**^{s}**.60**/12**, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NACB	Ninganchiao	0.05	299	eP	Pn	08 23 28.3	+0.5
	baz=220						
NACB				eS	Sn	08 23 32.2	-2.3
	baz=220						
ETLH	Xiulin Townshi	0.16	291	P	Pn	08 23 29.3	+1.1
	baz=251						
ETLH				eS	Sn	08 23 33.6	-1.6
	baz=251						
WHF	Hehuan Shan	0.34	269	eS	Sn	08 23 38.7	+0.8
	baz=251						
NNSB	Datong	0.36	320	eP	Pn	08 23 31.0	+1.4
	baz=300						
NNSB				eS	Sn	08 23 37.0	-0.6
	baz=300						
ENTT	Nioudou	0.49	352	eP	Pn	08 23 31.9	+1.1
	baz=344						
YHNB	Yeheng	0.57	335	eP	Pn	08 23 33.5	+1.9
	baz=324						
YHNB				eS	Sn	08 23 41.1	0.0
	baz=324						
WHN	Wuhan	9.09	316	P	Pn	08 25 26.9	-0.1
WHN				S	Sn	08 27 05.9	-1.9
WMQ	Urumqi	33.98	314	eP	P	08 29 51.4	-5.0

IDC ***23*** *08:36:44.5±3.4, 8°.17S×119°.70E, h190^{km}±28^{km}, mb3.0/4, mb1 3.2/8, mb1mx3.0/39, mbtmp3.6/8, MS3.1/1, Ms1 3.1/1, ms1mx2.3/18, Error ellipse: s-maj=94.5km s-min=14.0km az=61.0*
DJA ***23*** *08:36:45.6±0.9, 8°S±13°×12°0E±°, h173^{km}±12^{km}, M3.4/5, MLv3.4/5*
ISC 23 08:36:44.2±0.8**, 8°.33S**±0°.07×**119°.62E**±0°.06**, h200**^{km}**, n12,**
σ**2**^{s}**.14**/20**, mb3.4**/3**, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLAI	Plampang	1.89	255	P	Pn	08 37 20.7	-1.0
PLAI				S	Sn	08 37 48.3	-2.4
BASI	Baing, Sumba	2.10	153	P	Pn	08 37 23.5	-0.4
BASI				S	Sn	08 37 52.0	-2.8
TWSI	Taliwang, Sumb	2.74	261	P	Pn	08 37 30.5	-0.4
TWSI				S	Sn	08 38 05.1	-2.2
KAPI	Kappang	3.29	2	P	Pn	08 37 35.3	-2.1
	3.7nm,0.3s,baz=171,slow=7.8,SNR=9.7						
BATI	Baumata	4.41	115	P	Pn	08 37 51.3	+0.2
	13nm,0.3s,baz=260,slow=5.4,SNR=6.8						
BATI				S	Sn	08 38 39.6	-4.1
	2.3nm,0.3s,baz=347,slow=18,SNR=1.2						
BATI	Baumata	4.41	115	P	Pn	08 37 51.5	+0.3
FITZ	Fitzroy Crossi	11.34	150	P	Pn	08 39 22.6	+1.9
	0.2nm,0.3s,baz=335,slow=14,SNR=1.6						
FITZ				S	Sn	08 41 22.8	-4.6
	0.1nm,0.3s,baz=195,slow=20,SNR=1.8						
WRA	Warramunga Arr	18.34	131	P	P	08 40 44.4	+0.5
	0.2nm,0.3s,baz=309,slow=12,SNR=8.4						
WRA				S	S	08 44 02.4	-0.7
	0.1nm,0.3s,baz=306,slow=24,SNR=2.2						
ASAR	Alice Springs	20.49	140	P	P	08 41 08.6	+1.6
	0.3nm,0.3s,baz=314,slow=8.9,SNR=9.8						
ASAR				S	S	08 44 46.1	+0.9
	0.7nm,0.8s,baz=330,slow=24,SNR=5.0						
ASAR				PcP	PcP	08 45 11.4	+1.1
	0.1nm,0.4s,baz=70,slow=1.1,SNR=1.4						
ASAR				LR	LR	08 48 52.1	
	comp=Z,52nm,20.2s,baz=180,slow=35						
STKA	Stephens Creek	31.09	142	P	P	08 42 46.2	+2.3
	2.9nm,1.0s,baz=330,slow=12,SNR=3.7						
SONM	Songino Array	57.13	349	P	P	08 46 11.0	+1.0
	0.3nm,0.6s,baz=161,slow=6.6,SNR=2.1						
MKAR	Makanchi Array	64.14	332	P	P	08 46 57.5	+0.2
	0.3nm,0.5s,baz=157,slow=7.0,SNR=6.4						

NEIC ***23*** *08:57:54.1±1.6, 7°.0S±0°.1×125°.3E±0°.2, h525^{km}±11^{km}, mb4.4/16, Error ellipse: s-maj=23.7km s-min=15.0km az=75.0*
IDC ***23*** *08:57:54.1±0.8, 7°.01S×125°.25E, h527^{km}±14^{km}, mb3.3/9, mb1 3.4/15, mb1mx3.2/43, mbtmp4.3/15, Error ellipse: s-maj=25.8km s-min=11.2km az=63.0*
DJA ***23*** *08:57:56.6±0.9, 7°S±5°×12°5E±°, h489^{km}±9^{km}, M4.2/7, mB4.9/1, mb4.0/3, MLv4.2/7, Mw(mB)4.2/1*
ISC 23 08:57:53.7±0.6**, 7°.00S**±0°.06×**125°.37E**±0°.10**, h511**^{km}**, n46,**
σ**1**^{s}**.16**/50**, mb3.7**/10**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOEI	Soe	2.95	202	P	P	08 59 06.8	+1.4
SOEI	Soe	2.95	202	P	P	08 59 07.0	+1.6
SOEI				S	S	09 00 03.7	0.0
BATI	Baumata	3.61	208	P	P	08 59 11.4	+1.6
	41nm,0.3s,baz=333,slow=1.3,SNR=16						
BATI				S	S	09 00 13.7	+1.8
	6.2nm,0.3s,baz=114,slow=20,SNR=1.5						
BATI	Baumata	3.61	208	P	P	08 59 10.9	+1.0
NLAI	Namlea	4.11	25	P	P	08 59 15.5	+1.7
NLAI				S	S	09 00 20.1	+1.1
SANI	Sanana	4.95	7	P	P	08 59 22.4	+1.5
BNSI	Bone	5.84	296	P	P	08 59 31.0	+2.0
	0.2nm42nm,0.7s						
KAPI	Kappang	5.92	289	P	P	08 59 30.6	+0.8
	baz=126,slow=7.5,SNR=8.3						
SPSI	Sidrap Palu	6.33	298	P	P	08 59 34.5	+0.7
	0.1nm22nm,0.8s						
TTSI	Tana Toraja	6.78	305	P	P	08 59 40.6	+2.5
FAKI	Fak Fak	7.96	60	P	P	08 59 51.7	+1.6
SIJI	Sorong	8.46	44	P	P	08 59 56.6	+1.4
	2.4nm,0.3s,baz=179,slow=9.3,SNR=5.3						
TOLI2	Tolitoli	9.26	330	P	P	09 00 03.9	+0.3
FITZ	Fitzroy Crossi	11.04	179	P	P	09 00 22.1	+0.1
	0.9nm,0.3s,baz=3.1,slow=8.0,SNR=33						
FITZ				S	S	09 02 21.6	-2.7
	0.5nm,0.3s,baz=217,slow=11,SNR=7.7						
FITZ	Fitzroy Crossi	11.04	179	P	P	09 00 22.5	+0.4
WB0	Warramunga Arr	15.43	146	P	P	09 01 07.5	-0.8
WB0				IAmb	IAmb	09 01 09.7	
	comp=Z,12nm,1.0s						
PSA00	Pilbara Seismi	15.44	200	P	P	09 01 09.5	+1.1
WRAB	Tennant Creek	15.54	147	P	P	09 01 08.8	-0.6
WRAB				IAmb	IAmb	09 01 23.9	
	comp=Z,14nm,1.4s						
WRA	Warramunga Arr	15.54	147	P	P	09 01 08.4	-1.0
	comp=Z,2.2nm,0.3s,baz=331,slow=7.7,SNR=75						
WB2	Warramunga Arr	15.54	147	P	P	09 01 08.7	-0.8
WB2				IAmb	IAmb	09 01 10.8	
	comp=Z,6.7nm,0.7s						
WR0	Warramunga Arr	15.66	146	P	P	09 01 10.1	-0.6
WR0				IAmb	IAmb	09 01 12.0	
	comp=Z,17nm,0.9s						
AS31	Alice Springs	18.49	155	P	P	09 01 38.4	+0.3
AS31				IAmb	IAmb	09 01 39.5	
	comp=Z,4.8nm,0.5s						
ASAR	Alice Springs	18.49	155	P	P	09 01 38.1	+0.1
	comp=Z,2.6nm,0.3s,baz=332,slow=8.6,SNR=207						
ASAR	Alice Springs	18.49	155	P	P	09 01 38.3	+0.2
COEN	Coen	18.82	113	P	P	09 01 40.6	-0.5
COEN				IAmb	IAmb	09 01 54.4	
	comp=Z,4.6nm,1.1s						
FORT	Forrest	23.79	174	P	P	09 02 25.4	-0.4
CTA	Charters Tower	24.07	125	P	P	09 02 28.3	-0.2
	comp=Z,0.7nm,0.4s,baz=297,slow=11,SNR=1.6						
BBOO	Buckleboo	27.54	160	P	P	09 02 58.3	-0.6
STKA	Stephens Creek	29.02	151	P	P	09 03 11.9	0.0
	comp=Z,2.8nm,0.3s,baz=330,slow=8.1,SNR=17						
STKA	Stephens Creek	29.02	151	P	P	09 03 11.9	0.0
CAN	Canberra	35.58	146	P	P	09 04 09.7	+1.9
CAN				IAmb	IAmb	09 04 11.1	
	comp=Z,16nm,1.1s						
USRK	Ussuriysk Ar.	51.31	6	P	P	09 06 09.2	-0.8
	comp=Z,1.2nm,0.6s,baz=201,slow=7.7,SNR=2.3						
RPZ	Rata Peaks	54.12	140	P	P	09 06 30.3	0.0
	comp=Z,6.3nm,0.6s,baz=285,slow=4.9,SNR=5.6						
RPZ	Rata Peaks	54.12	140	P	P	09 06 30.5	+0.2
RPZ				IAmb	IAmb	09 06 51.2	
	comp=Z,28nm,1.5s						
SONM	Songino Array	57.11	345	P	P	09 06 50.2	-0.9
	comp=Z,0.4nm,0.4s,baz=160,slow=9.0,SNR=3.0						
MK31	Makanchi Array	65.78	329	P	P	09 07 47.1	-0.8
MKAR	Makanchi Array	65.78	329	P	P	09 07 46.9	-1.0
	comp=Z,0.6nm,0.4s,baz=125,slow=6.8,SNR=16						
MKAR	Makanchi Array	65.78	329	P	P	09 07 47.0	-0.9
PEA0B	Petropavlovsk-	65.85	21	P	P	09 07 48.4	+0.3
PETK	Petropavlovsk-	65.85	21	P	P	09 07 47.9	-0.2
	comp=Z,1.3nm,0.7s,baz=289,slow=0.8,SNR=10						
PETK	Petropavlovsk-	65.85	21	P	P	09 07 48.5	+0.4
ZAA0	Zalesovo Array	69.62	336	P	P	09 08 09.8	-1.3
ZALV	Zalesovo Beam	69.62	336	P	P	09 08 09.0	-2.1
	comp=Z,1.3nm,0.4s,baz=122,slow=5.2,SNR=7.6						
ZALV	Zalesovo Beam	69.62	336	P	P	09 08 09.6	-1.5
KURK	Kurchatov	70.18	331	P	P	09 08 13.7	-0.9
SEY	Seymchan	72.72	13	P	P	09 08 28.6	-0.6
	comp=Z,2.0nm,0.5s,baz=228,slow=8.1,SNR=17						

BJI ***23*** *09:05:35.7±0.0, 5°.41S×152°.81E, h25^{km}, mB5.2/9, mb4.6/30, Ms4.9/1, Ms7 4.6/2*
NEIC ***23*** *09:05:38.7±1.7, 5°.66S±0°.08×152°.7E±0°.1, h41^{km}±7^{km}, mb4.7/37, Error ellipse: s-maj=17.1km s-min=10.2km az=110.0*
IDC ***23*** *09:05:40.2±2.0, 5°.69S×152°.66E, h56^{km}±16^{km}, mb4.0/20, mb1 4.2/22, mb1mx4.1/41, mbtmp4.3/22, ML2.9/2, MS3.3/5, Ms1 3.3/5, ms1mx3.0/29, Error ellipse: s-maj=20.0km s-min=9.1km az=103.0*
ISC 23 09:05:37.9±0.5**, 5°.67S**±0°.06×**152°.76E**±0°.09**, h35**^{km}**, n101,**
σ**0**^{s}**.97**/98**, mb4.6**/44**, MS3.2**/5**, 1D, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	1.58	338		Pn	09 06 03.6	+0.1
RABL	Rabaul	1.58	338	P	Pn	09 06 03.9	+0.4
PMG	Port Moresby	6.68	236	P	Pn	09 07 13.9	+0.4
	4.4nm,0.3s,baz=23,slow=6.9,SNR=13						
PMG				S	Sn	09 08 28.1	-0.3
	5.7nm,0.3s,baz=111,slow=18,SNR=3.0						
PMG				LR	LR	09 09 58.6	
	comp=Z,148nm,20.5s,baz=38,slow=39						
PMG	Port Moresby	6.68	236	Pn	Pn	09 07 13.2	-0.3
PMG	Port Moresby	6.68	236	P	Pn	09 07 16.4	+2.9
CTA	Charters Tower	15.67	203	P	P	09 09 18.4	-1.4
	0.1nm,0.3s,baz=31,slow=15,SNR=2.4						
EIDS	Eidsvold	19.65	185	P	P	09 10 03.8	0.0
DZM	Mont Dzumac	21.00	142	P	P	09 10 19.6	+1.0
	4.8nm,0.6s,baz=288,slow=20,SNR=2.4						
DZM	Mont Dzumac	21.00	142	P	P	09 10 18.1	-0.5
DZM				IAmb	IAmb	09 10 40.9	
	comp=Z,48nm,1.5s						
SIJI	Sorong	21.98	282	P	P	09 10 30.1	+1.1
	comp=Z,3.6nm,0.3s,baz=288,slow=20,SNR=1.9						
WRAB	Tennant Creek	22.84	230	P	P	09 10 39.0	+0.8
WRA	Warramunga Arr	22.85	230	P	P	09 10 38.0	-0.3
	comp=Z,2.3nm,0.9s,baz=53,slow=10.0,SNR=10						
WRA				LR	LR	09 20 24.1	
	comp=Z,86nm,18.2s,baz=55,slow=39						
AS31	Alice Springs	25.49	224	P	P	09 11 02.8	-0.3
ASAR	Alice Springs	25.49	224	P	P	09 11 02.6	-0.4
	comp=Z,1.3nm,0.6s,baz=62,slow=9.0,SNR=17						
ASAR	Alice Springs	25.49	224	P	P	09 11 03.6	+0.5
STKA	Stephens Creek	28.09	200	P	P	09 11 27.1	+0.7
	comp=Z,3.7nm,0.9s,baz=16,slow=19,SNR=4.7						
STKA				LR	LR	09 23 24.4	
	comp=Z,105nm,18.2s,baz=19,slow=38						
STKA	Stephens Creek	28.09	200	P	P	09 11 26.4	+0.1
FITZ	Fitzroy Crossi	29.22	243	P	P	09 11 35.4	-1.1
	comp=Z,3.7nm,0.6s,baz=58,slow=7.6,SNR=10						
PSAD1	Pilbara Seismi	35.53	241	P	P	09 12 30.1	-1.7
MJAR	Matsushiro Arr	44.15	343	LR	LR	09 33 22.6	
	comp=Z,20nm,18.1s,baz=265,slow=38						
KSRS	Korea Array	48.76	334	P	P	09 14 19.4	+0.1
	comp=Z,1.2nm,0.9s,baz=149,slow=10,SNR=3.3						
NJ2	Nanjing	49.49	321	eP	P	09 14 26.3	+1.2
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.6s						
XAN	Xi'an	57.22	317	P	P	09 15 21.1	-0.8
XAN				pP	pP	09 15 31.3	+0.1
XAN				sP	sP	09 15 35.1	+0.3
XAN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
XAN	Xi'an	57.22	317	P	P	09 15 20.4	-1.6
XAN				IAmb	IAmb	09 15 21.7	
	comp=Z,8.8nm,1.3s						
KMI	Kunming	57.44	304	⇓P	P	09 15 24.9	+1.1
KMI				pP	pP	09 15 30.3	-2.1
KLR	Kul'dur	57.66	344	P	P	09 15 23.9	-0.8
	comp=Z,2.0nm,0.7s,baz=177,slow=6.1,SNR=5.6						
CMAR	Chiang Mai Arr	58.21	296	P	P	09 15 29.5	+0.4
	comp=Z,1.8nm,0.3s,baz=112,slow=5.0,SNR=5.6						
CMAR				LR	LR	09 43 16.6	
	comp=Z,18nm,18.0s,baz=16,slow=39						
CMAR	Chiang Mai Arr	58.21	296	P	P	09 15 28.9	-0.2
CMAR					PcP	09 16 18.7	-1.6
PETK	Petropavlovsk-	58.70	3	P	P	09 15 32.2	+0.3
	comp=Z,3.3nm,0.6s,baz=177,slow=9.7,SNR=6.9						
CD2	Chengdu	59.27	311	P	P	09 15 35.8	-0.5
CD2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
HHC	Hu-ho-hao-te	59.73	325	eP	P	09 15 40.6	+1.3
LZH	Lanzhou	61.82	316	eP	P	09 15 55.5	+1.7
LZH				pP	pP	09 16 04.3	+1.1
LZH				sP	sP	09 16 06.3	-0.5
LZH				PP	PP	09 18 12.1	+1.9
LZH				pmax	pmax		
	comp=Z,17nm,1.0s						
LZH				pmax	pmax		
	comp=Z,58nm,4.3s						
MA2	Magadan	65.06	359	P	P	09 16 14.5	+0.1
	comp=Z,6.3nm,0.7s,baz=165,slow=9.1,SNR=5.8						
MA2	Magadan	65.06	359	IAmb	IAmb	09 16 15.1	
	comp=Z,6.3nm,0.7s						
GTA	Gaotai	66.27	318	eP	P	09 16 23.4	+0.5
GTA				pP	pP	09 16 27.6	-4.7
GTA				sP	sP	09 16 30.8	-5.1
GTA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
SONM	Songino Array	67.04	328	P	P	09 16 26.8	-0.8
	comp=Z,1.0nm,0.6s,baz=148,slow=5.5,SNR=8.2						
SONM	Songino Array	67.04	328	P	P	09 16 27.2	-0.4
SEY	Seymchan	68.41	360	P	P	09 16 35.5	-0.2
	comp=Z,0.7nm,0.3s,baz=245,slow=15,SNR=8.4						
SEY	Seymchan	68.41	360		P	09 16 35.5	-0.2
WMQ	Urumqi	76.35	318	eP	P	09 17 24.0	+0.3
WMQ				pP	pP	09 17 30.5	-1.9
WMQ				pmax	pmax		
	comp=Z,12nm,0.8s						
WMQ				LR	LR		
	comp=Z,130nm,11.7s						
KDAK	Kodiak Island	76.97	27	P	P	09 17 27.1	+0.5
	comp=Z,4.9nm,0.8s,baz=116,slow=12,SNR=1.8						
TTA	Tatalina	78.59	21	P	P	09 17 36.8	+1.0
TTA				IAmb	IAmb	09 17 38.1	
	comp=Z,6.9nm,0.9s						
TIXI	Tiksi	78.75	352	P	P	09 17 35.7	-0.6
ZSN	Zaisan	79.51	320	eP	P	09 17 40.5	-0.5
	baz=320						
SUA	Susitna One	79.76	24	P	P	09 17 42.5	+0.2
SUA				IAmb	IAmb	09 17 43.9	
	comp=Z,10nm,0.8s						
RDOG	Red Dog Mine	79.83	15	P	P	09 17 43.4	+1.1
SML	Sawmill	80.93	24	P	P	09 17 49.5	+1.1
MK31	Makanchi Array	80.95	319	P	P	09 17 49.2	+0.3
MKAR	Makanchi Array	80.95	319	P	P	09 17 48.9	0.0
	comp=Z,2.4nm,0.8s,baz=106,slow=6.3,SNR=18						
MKAR	Makanchi Array	80.95	319	P	P	09 17 48.6	-0.2
MAKZ	Makanchi	81.16	319	P	P	09 17 49.9	-0.1
MAKZ				IAmb	IAmb	09 17 50.9	
	comp=Z,4.6nm,0.8s						
IMAR	Indian Mountai	81.21	19	P	P	09 17 49.7	0.0
RND	Reindeer	81.54	23	P	P	09 17 51.6	0.0
RND				IAmb	IAmb	09 17 52.7	
	comp=Z,9.3nm,0.8s						
KLU	Klutina	81.78	25	P	P	09 17 54.1	+1.1
SHLS	Shalkode	81.81	315	eP	P	09 17 51.6	-2.0
	baz=315						
ZALV	Zalesovo Beam	81.85	326	P	P	09 17 52.5	-0.9
	comp=Z,2.8nm,0.6s,baz=113,slow=5.6,SNR=14						
ZALV	Zalesovo Beam	81.85	326	P	P	09 17 52.4	-1.0
UZB	Uzynbulak	82.12	315	eP	P	09 17 55.1	-0.2
	baz=315						
WRH	Wood River Hil	82.38	22	IAmb	IAmb	09 17 56.8	
	comp=Z,14nm,1.2s						
KPKS	Kokpek	82.44	315	eP	P	09 17 56.4	-0.5
	baz=315						
SATY	Saty	82.53	315	eP	P	09 17 57.4	-0.1
	baz=315						
CCB	Clear Creek Bu	82.57	22	IAmb	IAmb	09 17 57.6	
	comp=Z,5.6nm,0.8s						
COLA	College	82.67	22	P	P	09 17 57.7	+0.3
HDA	Harding Lake	82.77	22	IAmb	IAmb	09 17 59.3	
	comp=Z,5.7nm,0.5s						
IL31		82.97	22	IAmb	IAmb	09 17 59.5	
	comp=Z,5.7nm,0.7s						
ILAR	Eielson Array	82.97	22	P	P	09 17 58.4	-0.7
	comp=Z,4.8nm,0.6s,baz=241,slow=5.3,SNR=88						
ILAR	Eielson Array	82.97	22	P	P	09 17 58.6	-0.4
TDK	Taldyqorghan	83.04	317	eP	P	09 17 59.7	-0.2
	baz=316						
COLD	Coldfoot	83.09	19	IAmb	IAmb	09 18 02.9	
	comp=Z,3.7nm,0.9s						
KSH	Kashi	83.47	311	P	P	09 18 04.4	+2.1
KSH				PP	PP	09 21 16.5	+1.6
KSH				S	S	09 28 19.6	-2.1
KSH				pmax	pmax		
	comp=Z,18nm,1.7s						
MDOK	Medeo	83.52	314	eP	P	09 18 02.5	-0.1
	baz=314						
DOT	Dot Lake	83.54	24	IAmb	IAmb	09 18 03.8	
	comp=Z,8.2nm,0.7s						
TOLK	Toolik Lake Re	84.05	18	IAmb	IAmb	09 18 06.9	
	comp=Z,8.0nm,0.8s						
KUU	Kurty	84.20	315	eP	P	09 18 05.5	-0.4
	comp=Z,10nm,0.8s,baz=315						
BCAR	Beaver Creek A	84.21	25	P	P	09 18 06.5	+1.0
KURK	Kurchatov	84.43	322	P	P	09 18 06.5	-0.3
KURK				IAmb	IAmb	09 18 07.5	
	comp=Z,7.8nm,1.1s						
TKM2	Tokmak 2	84.50	314	P	P	09 18 08.5	+0.8
	SNR=7.2						
BMAR	Burnt Mountain	85.07	20	P	P	09 18 10.8	+1.0
CHMS	Chumysh	85.12	314	P	P	09 18 11.2	+0.6
	SNR=7.0						
UCH	Uchtor	85.13	313	P	P	09 18 12.3	+1.2
	SNR=12						
EGAK	Eagle	85.17	23	P	P	09 18 10.3	+0.1
AAK	Ala-Archa	85.23	314	P	P	09 18 12.0	+0.7
	SNR=7.3						
AAK	Ala-Archa	85.23	314	P	P	09 18 11.9	+0.7
AAK				IAmb	IAmb	09 18 12.8	
	comp=Z,8.5nm,0.8s						
SGDS	Sogindy	85.31	314	eP	P	09 18 10.8	-0.7
	baz=314						
USP	Ospenovka	85.36	314	P	P	09 18 12.7	+1.0
	SNR=5.7						
AML	Almayashu	85.71	313	P	P	09 18 15.4	+1.4
	SNR=25						
EKS2	Erkin-Say	85.75	313	P	P	09 18 15.0	+1.2
	SNR=9.5						
BTLS	Baital	86.05	316	eP	P	09 18 14.6	-0.4
	comp=Z,3.6nm,0.9s,baz=316						
EPYK	Eagle Plains	87.48	22	P	P	09 18 22.9	+1.3

BRZS	Berezniki	87.95	320	eP	P	09 18 22.9	-1.4
	baz=320						
IUG	Iuzhnay	88.39	312	eP	P	09 18 26.8	+0.2
	baz=312						
INK	Inuvik	89.28	21	P	P	09 18 30.3	+0.3
	comp=Z,3.7nm,0.9s,baz=243,slow=2.7,SNR=8.6						
INK	Inuvik	89.28	21	P	P	09 18 30.3	+0.3
INK				IAmb	IAmb	09 18 31.2	
	comp=Z,4.2nm,0.9s						
BRVK	Borovoye	89.98	323	P	P	09 18 33.4	-0.2
BRVK				IAmb	IAmb	09 18 47.6	
	comp=Z,2.7nm,0.8s						
NVAR	Mina Array Bea	92.65	52	P	P	09 18 48.2	+1.6
	comp=Z,2.1nm,1.0s,baz=258,slow=4.5,SNR=5.7						
NV11	Mina Array Sit	92.77	52	P	P	09 18 47.0	-0.1
NV11				IAmb	IAmb	09 18 50.2	
	comp=Z,2.8nm,1.1s						
C36M	Paulatuk	92.85	21	P	P	09 18 46.8	+0.2
YKA	Yellowknife Ar	96.21	28	P	P	09 19 02.7	+0.6
	comp=Z,1.1nm,0.7s,baz=270,slow=4.2,SNR=15						
CLL	Collm	123.59	331	e(PKPdf)	PKPdf	09 24 29.0	-2.7
LPAZ	La Paz	134.04	119	PKP	PKiKP	09 24 54.2	-0.5
	comp=Z,1.1nm,0.8s,baz=243,slow=5.1,SNR=4.9						
TORD	Torodi Ar. Bea	150.53	287	PKPbc	PKPbc	09 25 26.6	-0.5
	comp=Z,2.8nm,0.8s,baz=60,slow=3.9,SNR=8.3						
TORD				PKPab	pPKPdf	09 25 32.1	+1.0
	comp=Z,2.0nm,0.6s,baz=124,slow=1.3,SNR=7.7						

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*DDA **23** 09:12:08.7,39°.35N×29°.00E,h7^{km}±4^{km},ML2.2*
*ISK **23** 09:12:09.4,39°.31N×29°.00E,h6^{km},ML2.5/12*
ISC 23 09:12:09.3±1.1**,39°.34N**±0°.03×**29°.00E**±0°.03**,h9**^{km}±9^{km}**,**
n22,σ**0^s.68**/36**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIMA	Simav-Kutahya	0.26	184	PG	Pg	09 12 14.4	-0.1
SIMA				SG	Sg	09 12 18.3	+0.3
SHAP	Saphane-Kutahy	0.36	152	PG	Pg	09 12 16.5	0.0
SHAP				SG	Sg	09 12 21.7	+0.5
USAK	Uak-Merkez	0.62	179	iP	Pb	09 12 21.6	-0.8
USAK				iS	Sb	09 12 30.6	-0.8
USAK				IAML		09 12 51.0	
	comp=E,79nm,1.0s						
ANDZ	Kutahya, Merke	0.71	76	iP	Pg	09 12 21.8	-1.3
ANDZ				iS	Sg	09 12 32.5	+0.1
ANDZ				IAML		09 12 34.0	
	comp=N,92nm,0.3s						
ANDZ				IAML		09 12 34.0	
	comp=E,91nm,0.3s						
KULA	Kula-Manisa	0.87	198	PG	Pg	09 12 25.9	-0.1
KULA				SG	Sb	09 12 38.2	-0.2
MANT	Manisa	0.92	202	iP	Pg	09 12 26.4	-0.6
MANT				iS	Sb	09 12 39.2	-0.7
IGD	Bursa	0.94	9	iP	Pg	09 12 26.6	-0.7
IGD				iS	Sn	09 12 41.7	-0.5
IGD				IAML		09 12 43.0	
	comp=N,65nm,0.4s						
IGD				IAML		09 12 44.0	
	comp=E,46nm,0.4s						
STEP	BALIKESIR_Sava	1.00	272	iP	Pb	09 12 28.7	-0.1
STEP				iS	Sb	09 12 42.7	+0.6
STEP				IAML		09 12 46.0	
	comp=N,113nm,0.7s						
STEP				IAML		09 12 46.0	
	comp=E,76nm,0.3s						
MDNY	Mudanya-Bursa	1.03	355	PG	Pn	09 12 30.1	+0.1
MDNY				SG	Sn	09 12 45.3	+0.7
KHAL	Karahalli	1.04	158	iP	Pb	09 12 29.7	+0.1
KHAL				iS	Sn	09 12 44.2	-0.8
KCTX	Karacabey (Bur	1.05	332	PG	Pn	09 12 30.4	+0.1
KCTX				SG	Sn	09 12 45.9	+0.8
CAVI	Cavuskoy	1.08	37	PN	Pn	09 12 30.8	+0.1
BALY	Balya	1.14	291	iP	Pg	09 12 30.2	-1.0
BALY				iS	Sb	09 12 46.3	0.0
BALY				IAML		09 12 56.0	
	comp=N,31nm,1.0s						
ADVT	Abdulvahap	1.23	27	PN	Pn	09 12 33.7	+1.0
BORA	Eskisehir	1.24	64	PN	Pn	09 12 33.6	+0.6
YLV	Yalova	1.26	13	PN	Pn	09 12 33.2	0.0
SRCK	Saricakaya, Es	1.44	60	PN	Pg	09 12 36.6	-0.3
BUHA	Balikesir, Bur	1.50	277	iP	Pn	09 12 36.4	-0.1
BUHA				iS	Sn	09 12 55.7	-0.5
BUHA				IAML		09 13 02.0	
	comp=E,24nm,0.5s						
ZEDA	zmir-Bergama	1.54	257	iP	Pb	09 12 38.1	0.0
ZEDA				iS	Sg	09 13 00.5	+1.5
ZEDA				IAML		09 13 27.0	
	comp=E,27nm,2.4s						
GULT	Gulveren	1.59	46	PN	Pb	09 12 38.9	-0.1
SVRH	Sivrihisar-ESK	1.96	86	PN	Pn	09 12 43.9	+1.1
YUVA	Yuva-Kibriscik	2.32	62	PN	Pn	09 12 49.1	+1.3

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*KRNET **23** 09:25:37.3±0.1,38°.68N×69°.67E,mb3.2*
*NNC **23** 09:25:43.4±3.6,38°.98N×69°.49E,h0^{km},mb3.7,mpv3.5,*
Error ellipse: s-maj=39.2km s-min=24.3km az=70.0
ISC 23 09:25:40.0±2.7**,38°.6N**±0°.2×**69°.69E**±0°.09**,h12**^{km}**,n15,**
σ**1^s.28**/24**,18C-2D,Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTK	Batken	1.73	30	⇑iP	Pn	09 26 08.0	-2.1
	baz=33						
BTK				⇑iS	Sn	09 26 30.6	-1.6
	baz=33						
DRK	Karamyk	1.88	60	⇑iP	Pn	09 26 11.8	-0.5
	baz=64						
DRK				⇑iS	Sn	09 26 37.1	+1.0
	baz=64						
OHH	Osh	3.09	50	⇑iP	Pn	09 26 28.8	0.0
	baz=52						
OHH				⇑iS	Sn	09 27 06.6	+0.9
	baz=52						
TRKS	Terek-Say	3.17	20	⇑iP	Pn	09 26 29.6	-0.3
	baz=22						
TRKS				⇑iS	Sn	09 27 08.2	+0.5
	baz=22						
SFK	Sufi-Kurgan	3.29	63	⇑iP	Pn	09 26 32.2	+0.5
	baz=65						
SFK				⇑iS	Sn	09 27 11.5	+0.6
	baz=65						
IUG	Iuzhnay	3.59	4	Pg	Pn	09 26 36.7	+1.1
	12nm,0.2s						
IUG				Lg	Lg	09 27 23.3	
	96nm,1.2s						
ARSB	Arslanbob	3.75	41	⇓eP	Pn	09 26 37.6	-0.2
	baz=43						
ARSB				⇓iS	Sn	09 27 21.8	-0.1
	baz=43						
BRLS	Borolday	4.47	1	Pg	Pn	09 26 50.1	+2.5
	16nm,0.2s						
BRLS				Lg	Lg	09 27 45.9	
	23nm,0.5s						
MNAS	Manas	4.47	28	⇑iP	Pn	09 26 48.3	+0.6
	baz=29						
MNAS				⇑iS	Sn	09 27 39.6	-0.2
	baz=29						
KK31	Karatay Array	4.58	8	⇑Pn	Pn	09 26 49.7	+0.6
	0.8nm,0.3s,baz=200,slow=16,SNR=26						
KK31				Pg	Pb	09 27 01.3	+1.0
	1.4nm,0.3s,baz=192,slow=18,SNR=9.4						
KK31				⇑Lg	Lg	09 27 57.5	
	2.9nm,0.4s,baz=188,slow=26,SNR=4.2						
AML	Almayashu	4.70	39	⇑iP	Pn	09 26 50.6	-0.5
	baz=40						
AML				⇑iS	Sn	09 27 43.8	-1.9
	baz=40						
MRKS	Merke	4.97	32	Pg	Pn	09 26 55.8	+1.2
	5.5nm,0.4s						
MRKS				Lg	Lg	09 27 55.8	
	5.5nm,0.6s						
AAK	Ala-Archa	5.47	40	⇑P	Pn	09 27 04.0	+2.5
	1.4nm,0.4s						
TKM2	Tokmak 2	6.25	44	⇑P	Pn	09 27 13.2	+1.0
	1.6nm,0.5s						
AB31	Akbulak array	12.78	330	P	Pn	09 28 39.8	-1.7
	0.1nm,0.3s,baz=158,slow=11,SNR=11						

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*IDC **23** 10:11:16.9±7.3,21°.35S×178°.00W,h346^{km}±66^{km},mb2.9/3,*
mb1 3.2/4,mb1mx2.9/34,mbtmp3.8/4,Error ellipse:
s-maj=49.0km s-min=30.2km az=70.0
ISC 23 10:11:21.9±2.0**,21°.4S**±0°.2×**177°.9W**±0°.4**,h412**^{km}**,n6,**
σ**1^s.43**/8**,mb2.8**/3**,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	17.34	193	P	P	10 14 56.4	-2.5
	1.1nm,0.3s,baz=261,slow=3.4,SNR=8.9						
URZ				S	S	10 17 59.8	+1.5
	0.3nm,0.3s,baz=330,slow=7.5,SNR=1.9						
RPZ	Rata Peaks	24.07	200	P	P	10 16 03.1	+0.8
	4.0nm,0.6s,baz=90,slow=1.8,SNR=6.5						
ASAR	Alice Springs	44.39	258	P	P	10 18 54.1	-0.1
	0.2nm,0.5s,baz=95,slow=8.4,SNR=5.9						
ASAR				PcP	PcP	10 20 30.6	+0.8
	0.3nm,0.7s,baz=98,slow=3.8,SNR=2.6						
WRA	Warramunga Arr	44.55	263	P	P	10 18 54.9	-0.6
	0.3nm,0.6s,baz=95,slow=7.9,SNR=2.4						
AKASG	Malin Array Be	143.83	331	PKP	PKPdf	10 30 08.8	0.0
	0.4nm,0.4s,baz=43,slow=4.4,SNR=8.8						
BRTR	Keskin Array B	147.49	311	PKPbc	PKiKP	10 30 20.8	+0.3
	1.0nm,0.5s,baz=139,slow=4.9,SNR=6.9						

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*SOME **23** 10:12:25.4,43°.70N×69°.67E*
*NNC **23** 10:12:27.5±1.6,43°.67N×69°.71E,h0^{km},mb3.8,mpv3.3,*
Error ellipse: s-maj=11.8km s-min=5.2km az=128.0,
Suspected Mining explosion.
*KRNET **23** 10:12:29.5±0.1,43°.78N×69°.61E,mb3.2*
ISC 23 10:12:30.0±2.1**,43°.61N**±0°.07×**69°.73E**±0°.09**,h0**^{km}**,n22,**
σ**1^s.03**/35**,15C-11D,Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRLS	Borolday	0.59	172	P	Pb	10 12 43.4	+0.2
	14nm,0.2s						
BRLS				S	Sn	10 12 56.4	+0.4
	30nm,0.3s						
KK31	Karatay Array	0.77	131	⇓P	Pg	10 12 42.7	-2.0
	2.4nm,0.3s,baz=316,slow=14,SNR=224						
KK31				⇓S	Sg	10 12 54.4	-0.3
	16nm,0.5s,baz=292,slow=30,SNR=108						
IUG	Iuzhnay	1.48	171	P	Pn	10 12 56.9	-1.1
	24nm,0.2s						
IUG				S	Sn	10 13 19.1	+0.9
	75nm,0.4s						
MNAS	Manas	2.33	118	⇑iP	Pn	10 13 10.7	+1.0
	baz=20						
MNAS				⇑iS	Sn	10 13 40.4	+1.3
	baz=20						
TRKS	Terek-Say	2.33	153	⇑iP	Pb	10 13 11.8	-1.2
	baz=53						
TRKS				⇑iS	Sb	10 13 43.1	+0.8
	baz=53						
MRKS	Merke	2.70	108	Pg	Pb	10 13 17.8	-1.5
	5.6nm,0.5s						
MRKS				Lg	Lg	10 13 55.5	
	13nm,0.3s						
EKS2	Erkin-Say	3.11	106	⇑iP	Pn	10 13 21.1	+0.6
	baz=9.0						
EKS2				⇑iS	Sn	10 13 58.9	+0.4
	baz=9.0						
AML	Almayashu	3.27	116	⇑iP	Pn	10 13 23.7	+0.8
	baz=17						
AML				⇑iS	Sn	10 14 03.7	+1.0
	baz=17						
ARSB	Arslanbob	3.32	132	⇑iP	Pn	10 13 24.6	+1.2
	baz=33						
ARSB				⇑iS	Sn	10 14 04.6	+1.0
	baz=33						
BTLS	Baital	3.41	64	Pg	Pb	10 13 30.9	-0.5
	16nm,0.5s						
BTLS				Lg	Lg	10 14 18.1	
	4.3nm,0.4s						
AAK	Ala-Archa	3.62	104	⇑iP	Pn	10 13 28.4	+0.8
	baz=6.0						
AAK				⇑iS	Sn	10 14 11.2	+0.1
	baz=6.0						
AAK	Ala-Archa	3.62	104	⇓Pg	Pb	10 13 33.7	-1.4
	5.6nm,0.5s						
AAK				⇓Lg	Lg	10 14 24.2	
	6.5nm,0.5s						
BTK	Batken	3.64	167	⇓iP	Pn	10 13 29.2	+1.4
	baz=66						
BTK				⇓iS	Sn	10 14 12.6	+1.1
	baz=66						
CHMS	Chumysh	3.72	98	⇑iP	Pn	10 13 29.1	+0.4
	baz=0.0						
CHMS				⇑iS	Sn	10 14 12.7	-0.6
	baz=0.0						
ARLS	Aral	3.81	116	⇓iP	Pn	10 13 30.8	+0.7
	baz=17						
ARLS				⇓iS	Sn	10 14 16.0	+0.2
	baz=17						
OHH	Osh	3.84	143	⇓iP	Pn	10 13 31.7	+1.3
	baz=43						
OHH				⇓iS	Sn	10 14 17.2	+1.0
	baz=43						
TKM2	Tokmak 2	4.34	97	⇑Pg	Pb	10 13 46.8	-0.5
	4.8nm,0.8s						
TKM2				⇓Lg	Lg	10 14 47.5	
	4.6nm,0.5s						
DGS	Degeres	4.42	93	Pg	Pb	10 13 48.1	-0.5
	2.2nm,0.5s						
DGS				Lg	Lg	10 14 47.0	
	6.1nm,0.7s						
KST	Kastek	4.59	95	Pg	Pb	10 13 51.9	+0.5
	3.7nm,0.7s						
KST				Lg	Lg	10 14 54.0	
	11nm,0.7s						
KUU	Kurty	4.80	84	Pg	Pb	10 13 54.7	-0.3
KUU				Lg	Lg	10 14 58.3	
MTBS	Maitube	4.91	93	Pg	Pb	10 13 59.0	+2.0
	2.1nm,0.4s						
MTBS				Lg	Lg	10 15 05.5	
	4.2nm,0.4s						
TNSS	Tian-Shan	5.30	94	Pg	Pb	10 14 04.9	+1.2
	1.2nm,0.2s						
TNSS				Lg	Lg	10 15 16.5	
	3.5nm,0.6s						

IDC 23 10:24:05.5±2.5**,10°.50N**×**91°.80E,h0**^{km}**,mb3.7**/4**,**
mb1 3.8/5**,mb1mx3.5**/43**,mbtmp3.6**/5**,ML4.2**/1**,MS3.3**/3**,**
Ms1 3.3/3**,ms1mx2.9**/39**,Error ellipse: s-maj=68.7km**
s-min=31.7km az=62.0,Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	10.50	40	Pn	Pn	10 26 38.1	+0.7
	0.5nm,0.3s,baz=224,slow=15,SNR=1.7						
PALK	Pallekele	11.42	255	LR	LR	10 30 28.4	
	comp=Z,108nm,19.7s,baz=174,slow=34						
LEM	Lembang	23.33	137	LR	LR	10 40 20.7	
	comp=Z,82nm,20.3s,baz=252,slow=42						
H08S3	Diego Garcia H	26.35	228	T	T	10 57 11.4	
	baz=47,slow=76,SNR=418						
H08S2	Diego Garcia H	26.35	228	T	T	10 57 14.4	
	baz=47,slow=76,SNR=150						
H08S1	Diego Carcia H	26.37	228	T	T	10 57 12.8	
	baz=47,slow=76,SNR=29						
MKAR	Makanchi Array	37.06	349	P	P	10 31 17.5	+0.2
	1.0nm,0.9s,baz=158,slow=7.8,SNR=5.2						
SONM	Songino Array	39.19	16	P	P	10 31 34.9	-0.5
	0.3nm,0.5s,baz=201,slow=7.7,SNR=1.9						
SONM				LR	LR	10 51 01.2	
	comp=Z,48nm,18.9s,baz=58,slow=41						
KURBB	Kurchatov Arra	41.47	347	P	P	10 31 53.7	-0.3
	0.2nm,0.3s,baz=167,slow=7.3,SNR=1.9						
WRA	Warramunga Arr	51.66	126	P	P	10 33 14.5	-0.1
	0.6nm,0.5s,baz=307,slow=8.7,SNR=1.6						

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*WEL **23** 10:25:00,36°.52S×177°.27E,h5^{km},ML4.7,Mw5.1, Moment Tensor Solution. s13 Moment tensor: Scale 10^{16}Nm; M_{rr}-4.08; $M_{\theta\theta}$1.80; $M_{\phi\phi}$2.28; $M_{r\theta}$0.99; $M_{\theta\phi}$1.85; $M_{\phi r}$1.27; Fault plane solution: $M_0$4.30000×10^{16} NP1: ϕ_s42.00000°,δ34.00000°,λ-88.00000°. NP2:ϕ_s220.00000°, δ56.00000°,λ-91.00000°. Principal axes: T 4213.6800, Plg11.0000°, Azm311.0000°; N 176.5900, Plg1.0000°, Azm220.0000°; P -4390.2700, Plg79.0000°, Azm126.0000°;*
*NEIC **23** 10:25:04.4±2.3,36°.49S±0°.07×177°.35E±0°.10,h10^{km}±1^{km} Error ellipse: s-maj=15.2km s-min=9.0km az=51.0*
*BJI **23** 10:25:05.0±0.0,36°.33S×177°.46E,h8^{km},mB5.6/4, mb5.1/18,Ms5.2/3,Ms7 4.8/3*
*WEL **23** 10:25:06.2,37°S±5°×17°7E±°,h25^{km}±6^{km},M4.7/61, ML4.9/61,MLv4.7/61,Error ellipse: s-maj=0.0km s-min=0.0km az=5.5*
*NEIC **23** 10:25:07.1,36°.60S×177°.13E,h5^{km},Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-2.78; $M_{\theta\theta}$1.25; $M_{\phi\phi}$1.53; $M_{r\theta}$-0.26; $M_{\theta\phi}$0.98; $M_{\phi r}$0.34; Fault plane solution: $M_0$2.64000×10^{16} NP1:ϕ_s213.61000°, δ46.50000°,λ-100.19000°. NP2:ϕ_s48.24000°,δ44.44000°, λ-79.44000°. Principal axes: T 2.3778, Plg1.0000°, Azm311.0000°; N 0.4558, Plg7.0000°, Azm221.0000°; P -2.8336, Plg83.0000°, Azm49.0000°;*
*IDC **23** 10:25:08.7±6.0,36°.66S×177°.47E,h33^{km}±42^{km},mb4.5/14, mb1 4.6/16,mb1mx4.4/32,mbtmp4.6/16,ML4.1/2,MS4.2/19, Ms1 4.2/19,ms1mx4.1/23 Error ellipse: s-maj=32.9km s-min=14.9km az=57.0*
*GCMT **23** 10:25:09.2±0.2,36°.45S±0°.01×177°.41E±0°.01,h12^{km}, MW5.1/130,Moment Tensor Solution. s75,c107; s130,c199; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-5.26±.15; $M_{\theta\theta}$2.14±.11; $M_{\phi\phi}$3.12±.11; $M_{r\theta}$0.83±.29; $M_{\theta\phi}$2.86±.07; $M_{\phi r}$0.58±.28; Best double couple: $M_0$5.49100×10^{16} NP1:ϕ_s37.00000°,δ40.00000°, λ-95.00000°. NP2:ϕ_s223.00000°,δ50.00000°, λ-86.00000°. Principal axes: T 5.6200, Plg5.0000°, Azm310.0000°; N -0.2580, Plg3.0000°, Azm41.0000°; P -5.3620, Plg84.0000°, Azm160.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **23** 10:25:10,36°.59S×177°.11E,h12^{km},Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-5.62; $M_{\theta\theta}$2.26; $M_{\phi\phi}$3.36; $M_{r\theta}$0.56; $M_{\theta\phi}$2.34; $M_{\phi r}$4.73; Fault plane solution: $M_0$7.22000×10^{16} NP1:ϕ_s51.00000°,δ28.00000°, λ-61.00000°. NP2:ϕ_s199.00000°,δ66.00000°, λ-104.00000°. Principal axes: T 6.6694, Plg20.0000°, Azm300.0000°; N 0.9981, Plg13.0000°, Azm206.0000°; P -7.6675, Plg66.0000°, Azm84.0000°;*
*NOU **23** 10:25:11.0,36°.96S×177°.31E,h15^{km},mb4.8,Off E. Coast of N. Island, N.Z.*
ISC 23 10:25:06.2±1.5**,36°.63S**±0°.04×**177°.24E**±0°.04**,h11**^{km}±8^{km}**,**
n306,σ**1^s.70**/298**,mb5.0**/37**,MS4.3**/22**,3C,Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WSRZ	White Island S	0.89	183	P	Pb	10 25 24.2	+0.5
WSRZ				S	Sb	10 25 37.1	+1.6
WIZ	White Island	0.90	183	P	Pb	10 25 24.2	+0.4
WIZ				S	Sb	10 25 37.0	+1.2
MYRZ	Mayor Island	1.03	231	P	Pn	10 25 28.6	+2.0
KUZ	Kuaotunu	1.23	264	P	Pn	10 25 28.0	-1.3
MXZ	Matakaoa Point	1.26	138	Pn	Pn	10 25 28.6	-1.2
MXZ	Matakaoa Point	1.26	138	P	Pn	10 25 27.4	-2.4
MXZ				S	Sb	10 25 44.5	-1.8
OPRZ	Ohinepanea	1.33	204	P	Pn	10 25 30.4	-0.3
TGRZ	Tauranga	1.35	215	P	Pn	10 25 31.0	+0.1
RUGZ	Raukumara Rang	1.38	165	P	Pn	10 25 30.0	-1.6
RUGZ				S	Sb	10 25 49.0	-0.8
PKGZ	Pakihiroa	1.42	152	P	Pn	10 25 30.5	-1.6
MARZ	Manawahe	1.43	198	P	Pn	10 25 32.2	+0.1
GRZ	Great Barrier	1.49	284	P	Pn	10 25 31.5	-1.3
GRZ				S	Sn	10 25 50.4	-1.8
WMGZ	Waiomatatini S	1.51	142	P	Pn	10 25 32.4	-0.8
WMGZ				S	Sg	10 25 56.2	+1.3
EDRZ	Edgecumbe	1.53	195	P	Pn	10 25 33.9	+0.4
LIRZ	Lichensteins R	1.53	206	P	Pn	10 25 34.1	+0.6
KMRZ	Kaimai	1.60	220	P	Pn	10 25 34.7	+0.2
KARZ	Kaharoa	1.60	209	P	Pn	10 25 34.9	+0.4
MKRZ	Makatiti	1.63	202	P	Pb	10 25 36.5	+0.2
OMRZ	Omania	1.63	205	P	Pn	10 25 35.6	+0.7
URZ	Urewera	1.63	184	Pn	Pn	10 25 34.9	0.0
	152nm,0.3s,baz=2.6,slow=7.6,SNR=421						
URZ				Sn	Sn	10 25 56.0	+0.2
	551nm,0.3s,baz=209,slow=22,SNR=8.4						
URZ				LR	LR	10 26 23.0	
	comp=Z,9µm,18.5s,baz=346,slow=46						
URZ	Urewera	1.63	184	P	Pn	10 25 33.9	-0.9
URZ				S	Sb	10 25 57.2	+0.3
PUZ	Puketiti	1.65	151	P	Pn	10 25 35.1	-0.1
TWGZ	Tauwhareparae	1.65	159	P	Pn	10 25 35.3	+0.1
NGRZ	Ngongotaha	1.69	209	P	Pn	10 25 36.5	+0.8
WIAZ	Waiheke Island	1.70	264	P	Pn	10 25 35.4	-0.4
TARZ	Mount Tarawera	1.71	200	P	Pn	10 25 37.1	+1.1
MWZ	Matawai	1.72	172	P	Pn	10 25 35.1	-1.0
MWZ				S	Sn	10 25 58.2	+0.1
MKAZ	Moumakai	1.73	253	P	Pn	10 25 35.4	-0.9
UTU	Utuhina	1.76	208	P	Pn	10 25 37.8	+1.2
HLRZ	Highlands Stat	1.77	203	P	Pn	10 25 38.0	+1.2
TOZ	Tahuroa Road	1.77	231	P	Pn	10 25 37.1	+0.3
RRRZ	Republican Roa	1.80	198	P	Pn	10 25 38.0	+0.8
RAGZ	Rawiri	1.87	176	P	Pn	10 25 38.4	+0.1
TKGZ	Te Karaka	1.87	165	P	Pn	10 25 39.3	+1.1
MUGZ	Murupara	1.88	191	P	Pn	10 25 38.3	0.0
ETAZ	East Tamaki Re	1.88	259	P	Pn	10 25 38.3	0.0
MBAZ	Motutapu North	1.89	265	P	Pn	10 25 38.1	-0.3
HRRZ	Handcock Road	1.92	203	P	Pn	10 25 40.0	+1.1
ABAZ	Army Bay	1.94	270	P	Pn	10 25 38.9	-0.2
GRRZ	Galatos Road	1.94	207	P	Pn	10 25 40.0	+0.9
PRRZ	Plateau Road	1.98	200	P	Pn	10 25 40.5	+0.7
RTZ	Ruatahuna	1.99	186	P	Pn	10 25 40.1	+0.1
CNGZ	Carnagh Statio	2.00	158	P	Pn	10 25 41.4	+1.4
EPAZ	Eden Park BICE	2.02	262	P	Pn	10 25 40.9	+0.7
HBAZ	Herne Bay Bore	2.03	263	P	Pn	10 25 40.7	+0.4
ALRZ	Allen Road	2.06	200	P	Pb	10 25 42.6	-1.0
WPRZ	Whakapapatarin	2.07	204	P	Pn	10 25 42.1	+1.1
RIGZ	Rimuhau	2.12	169	P	Pb	10 25 43.6	-1.0
AWAZ	Awhitu Peninsu	2.13	257	P	Pn	10 25 42.1	+0.5
RVAZ	Riverhead Bore	2.14	265	P	Pn	10 25 41.9	0.0
SNGZ	Shannon Statio	2.15	178	P	Pn	10 25 42.8	+0.8
WTAZ	Waiatarua	2.16	261	P	Pn	10 25 42.7	+0.5
KUTZ	Kaahu Road	2.17	211	P	Pn	10 25 43.3	+1.0
TLZ	Tolley Road	2.17	218	P	Pn	10 25 43.0	+0.7
MTHZ	Maungataniwha	2.24	188	P	Pn	10 25 44.2	+0.8
WHTZ	Whakaora	2.27	206	P	Pg	10 25 51.9	+2.0
RAHZ	Arahi	2.29	183	P	Pn	10 25 44.8	+0.8
MRHZ	Matea Rd	2.30	196	P	Pn	10 25 44.9	+0.8
PRGZ	Paritu Road	2.35	168	P	Pb	10 25 46.9	-1.6
WATZ	Wairara	2.40	209	P	Pn	10 25 47.2	+1.8
KNZ	Kokohu	2.41	172	P	Pn	10 25 47.0	+1.4
HATZ	Hinemaiaia	2.44	202	P	Pn	10 25 47.1	+1.2
WCZ	Waipu Caves	2.44	286	P	Pn	10 25 45.2	-0.7
WHHZ	Waihua	2.44	180	P	Pn	10 25 48.1	+2.1
NMHZ	Naumai	2.49	188	P	Pn	10 25 48.4	+1.7
RATZ	Rangitukua	2.52	207	P	Pb	10 25 51.3	-0.2
MHGZ	Mahia Peninsul	2.57	168	P	Pn	10 25 49.1	+1.3
RITZ	Rihia Road	2.59	205	P	Pb	10 25 52.8	+0.1
BKZ	Black Stump Fm	2.60	193	Pn	Pn	10 25 49.5	+1.2
BKZ	Black Stump Fm	2.60	193	P	Pn	10 25 49.5	+1.2
ARHZ	Aropaoanui	2.64	184	P	Pn	10 25 51.1	+2.4
KATZ	Kakaramea	2.64	207	P	Pb	10 25 52.3	-1.3
HIZ	Hauiti	2.67	224	Pn	Pn	10 25 50.0	+0.8
HIZ	Hauiti	2.67	224	P	Pn	10 25 49.2	0.0
TMVZ	Te Maari	2.76	206	P	Pn	10 25 52.9	+2.3
KRVZ	Karewarewa	2.77	207	P	Pb	10 25 55.2	-0.6
ETVZ	East Tongariro	2.78	205	P	Pn	10 25 53.0	+2.2
WTVZ	West Tongariro	2.81	207	P	Pn	10 25 53.3	+2.2
OTVZ	Oturere	2.82	206	P	Pn	10 25 53.7	+2.3
TWVZ	Taurewa	2.83	210	P	Pn	10 25 52.8	+1.4
MCHZ	McNeill Hill	2.84	189	P	Pn	10 25 54.2	+2.6
NGZ	Ngauruhoe	2.85	207	P	Pb	10 25 55.6	-1.7
KWHZ	Kaweka Forest	2.86	193	P	Pn	10 25 53.6	+1.7
TUVZ	Tukino	2.92	205	P	Pb	10 25 56.7	-1.7
FWVZ	Far West T-bar	2.94	206	P	Pb	10 25 58.3	-0.5
WHVZ	Whangaehu Hut	2.95	206	P	Pb	10 25 57.6	-1.4
DRZ	Dome Shelter	2.96	206	P	Pb	10 25 60.0	+0.9
TRVZ	Turoa	2.98	206	P	Pb	10 25 58.9	-0.6
WNVZ	Wahianoa	2.99	205	P	Pb	10 25 57.1	-2.5
BHHZ	Black Hill Sta	3.00	198	P	Pn	10 25 55.9	+2.1
MOVZ	Moawhango	3.01	203	P	Pn	10 25 55.9	+2.0
MOVZ				S	Sb	10 26 35.7	-1.0
CKHZ	Cape Kidnapper	3.03	182	P	Pn	10 25 56.3	+2.2
CKHZ				S	Sb	10 26 34.8	-2.2
PKVZ	Pokaka	3.05	209	P	Pb	10 25 59.9	-0.7
MTVZ	Mangateitei	3.09	206	P	Pb	10 26 00.2	-1.0
KRHZ	Kereru	3.09	193	P	Pn	10 25 57.1	+2.2
KRHZ				S	Sb	10 26 36.5	-2.4
VRZ	Vera Road	3.17	217	P	Pn	10 25 57.9	+1.8
KAHZ	Kahuranaki	3.17	185	P	Pn	10 25 57.8	+1.7
OUZ	Omahuta	3.27	294	Pn	Pn	10 25 56.7	-0.8

OUZ	Omahuta	3.27	294	P	Pn	10 25 56.3	-1.1
MHEZ	Mangahewa	3.36	223	P	Pn	10 26 02.0	+3.3
PNHZ	Pukenui	3.38	194	P	Pn	10 26 00.6	+1.7
PNHZ				S	Sn	10 26 42.7	+3.6
PXZ	Pawanui	3.41	185	P	Pn	10 25 59.9	+0.6
WPHZ	Waipukurau	3.49	190	P	Pn	10 26 01.7	+1.3
TSZ	Takapari Road	3.57	196	P	Pn	10 26 03.1	+1.6
WAZ	Wanganui	3.59	209	P	Pb	10 26 06.3	-3.4
LREZ	Lake Rotokare	3.61	218	P	Pn	10 26 05.1	+3.1
NEZ	North Egmont	3.62	222	P	Pn	10 26 05.1	+2.7
PKE	Pukeiti	3.63	224	P	Pn	10 26 05.0	+2.6
PREZ	Palmer Road	3.64	221	P	Pn	10 26 05.9	+3.3
PRHZ	Porangahau	3.66	187	P	Pn	10 26 03.4	+0.6
KHEZ	Kahui Hut	3.69	223	P	Pn	10 26 06.0	+2.8
NBEZ	Newall Road No	3.75	224	P	Pn	10 26 06.6	+2.6
DVHZ	Dannevirke	3.76	193	P	Pn	10 26 04.9	+0.8
NMEZ	Namu Road	3.84	223	P	Pn	10 26 08.4	+3.1
ANWZ	Angora Road	3.87	189	P	Pn	10 26 06.7	+1.1
OHWZ	Ohakea	3.88	202	P	Pn	10 26 09.7	+4.0
POWZ	Post Office Ro	3.93	197	P	Pn	10 26 07.7	+1.2
PRWZ	Pori Road	4.04	194	P	Pn	10 26 09.6	+1.6
BFZ	Birch Farm	4.12	191	Pn	Pn	10 26 10.1	+1.0
BFZ	Birch Farm	4.12	191	P	Pn	10 26 09.0	-0.1
MRZ	Mangatainoka R	4.23	197	P	Pn	10 26 10.9	+0.3
TIWZ	Tintock	4.28	194	P	Pn	10 26 11.9	+0.7
TIWZ				S	Sn	10 27 02.5	+1.3
CPWZ	Castlepoint	4.35	190	P	Pn	10 26 13.6	+1.4
HOWZ	Holdsworth Sta	4.47	197	P	Pn	10 26 13.8	-0.1
HOWZ				S	Sn	10 27 06.6	+0.7
OGWZ	Otaki Gorge	4.48	201	P	Pn	10 26 15.1	+1.1
TMWZ	Te Maipa	4.59	193	P	Pn	10 26 15.9	+0.3
KIW	Kapiti Island	4.60	203	P	Pn	10 26 16.5	+0.8
MTW	Mount Morrison	4.72	196	P	Pn	10 26 17.4	0.0
CAW	Cannon Point	4.78	200	P	Pn	10 26 18.4	+0.2
DUWZ	D’Urville Isla	4.91	211	P	Pn	10 26 21.7	+1.8
TRWZ	Traveller	4.91	194	P	Pn	10 26 19.8	-0.2
PAWZ	Paruwai Farm	4.95	196	P	Pn	10 26 19.9	-0.6
MSWZ	Moikau Station	5.03	197		Pn	10 26 21.0	-0.5
MSWZ	Moikau Station	5.03	197	P	Pn	10 26 21.1	-0.5
WEL	Wellington	5.03	202	P	Pn	10 26 22.6	+1.0
SNZO	South Karori	5.08	202	Pn	Pn	10 26 21.9	-0.3
BHW	Baring Head	5.12	200		Pn	10 26 22.0	-0.8
BHW	Baring Head	5.12	200	P	Pn	10 26 22.4	-0.4
TCW	Tory Channel	5.12	206	P	Pn	10 26 24.1	+1.2
PLWZ	Palliser	5.17	197	Pn	Pn	10 26 22.1	-1.5
PLWZ	Palliser	5.17	197	P	Pn	10 26 23.5	-0.1
TUWZ	Tuamarina	5.44	207		Pn	10 26 27.1	0.0
TUWZ	Tuamarina	5.44	207	P	Pn	10 26 27.6	+0.4
NNZ	Nelson	5.48	212		Pn	10 26 29.1	+1.3
NNZ	Nelson	5.48	212	P	Pn	10 26 29.4	+1.6
QRZ	Quartz Range	5.58	220	Pn	Pn	10 26 29.5	+0.4
QRZ	Quartz Range	5.58	220	P	Pn	10 26 31.0	+1.8
CMWZ	Cape Campbell	5.63	204		Pn	10 26 30.1	+0.3
CMWZ	Cape Campbell	5.63	204	P	Pn	10 26 31.1	+1.3
BSWZ	Blackbirch Sta	5.71	206	Pn	Pn	10 26 32.0	+1.1
BSWZ	Blackbirch Sta	5.71	206	P	Pn	10 26 32.3	+1.3
THZ	Tophouse	6.13	212	Pn	Pn	10 26 37.3	+0.5
THZ	Tophouse	6.13	212	P	Pn	10 26 37.8	+1.0
KHZ	Kahutara	6.45	205	Pn	Pn	10 26 40.9	-0.2
KHZ	Kahutara	6.45	205	P	Pn	10 26 40.2	-0.8
DSZ	Denniston Nort	6.63	218	P	Pn	10 26 46.0	+2.5
LTZ	Lake Taylor	7.24	210	Pn	Pn	10 26 53.6	+1.6
LTZ	Lake Taylor	7.24	210	P	Pn	10 26 51.2	-0.8
AMCZ	Amberley	7.43	207	P	Pn	10 26 55.2	+0.7
INZ	Inchbonnie	7.55	214	P	Pn	10 26 56.8	+0.6
OXZ	Oxford	7.79	209		Pn	10 26 57.9	-1.6
OXZ	Oxford	7.79	209	P	Pn	10 26 58.9	-0.6
MQZ	McQueen’s Vall	7.89	205	Pn	Pn	10 26 58.9	-1.9
RACZ	Rakaia	8.09	207	P	Pn	10 27 03.1	-0.5
WVZ	Waitaha Valley	8.15	216	P	Pn	10 27 06.6	+2.2
WACZ	Wakanui South	8.39	208	P	Pn	10 27 08.6	+1.0
RAO	Raoul Island	8.40	30	LR	LR	10 30 06.0	
	comp=Z,1µm,20.7s,baz=144,slow=36						
CTZ	Chatham Island	8.51	148	P	Pn	10 27 07.9	-1.5
RPZ	Rata Peaks	8.51	212	Pn	Pn	10 27 08.5	-0.9
	3.3nm,0.3s,baz=66,slow=2.5,SNR=15						
RPZ				Sn	Sn	10 28 45.4	0.0
	7.3nm,0.3s,baz=40,slow=17,SNR=6.4						
RPZ				LR	LR	10 31 02.0	
	comp=Z,2µm,20.4s,baz=63,slow=41						
RPZ	Rata Peaks	8.51	212		Pn	10 27 10.2	+0.8
RPZ	Rata Peaks	8.51	212	P	Pn	10 27 09.8	+0.4
GCSZ	Gaunt Creek Bo	8.53	216	P	Pn	10 27 12.3	+2.7
ARCZ	Arundel	8.65	210	P	Pn	10 27 11.7	+0.4
FOZ	Fox Glacier	8.94	217	P	Pn	10 27 16.9	+1.7
TMZ	Timaru	9.08	210	P	Pn	10 27 16.7	-0.5
LBZ	Lake Benmore	9.43	213	P	Pn	10 27 23.5	+1.6
ODZ	Otahua Downs	9.78	209	P	Pn	10 27 25.9	-0.8
JCZ	Jackson Bay	9.84	218	P	Pn	10 27 29.6	+1.9
WKZ	Wanaka	10.29	215	Pn	Pn	10 27 35.1	+1.3
WKZ	Wanaka	10.29	215	P	Pn	10 27 35.2	+1.4
EAZ	Earnscleugh	10.47	212	P	Pn	10 27 37.2	+1.0
HHSZ	Highcliff Hill	10.51	206	P	Pn	10 27 36.2	-0.5
MSZ	Milford Sound	10.70	218	P	Pn	10 27 42.7	+3.4
MLZ	Mavora Lakes	11.12	215	Pn	Pn	10 27 47.2	+2.2
MLZ	Mavora Lakes	11.12	215	P	Pn	10 27 46.4	+1.3
WHZ	Wether Hill Ro	11.59	214	P	Pn	10 27 55.0	+3.5
SYZ	Scrubby Hill	11.60	209	P	Pn	10 27 52.7	+1.1
YATNC	Mamie plateau,	17.07	325	P	P	10 29 13.1	+6.4
	48nm,1.1s						
DZM	Mont Dzumac	17.27	324	P	P	10 29 09.1	+0.2
	0.4nm,0.3s,baz=166,slow=11,SNR=4.3						
DZM	Mont Dzumac	17.27	324	*e*P	Pn	10 29 06.6	-0.9
	96nm,1.4s						
DZM				*e*LR	LR	10 33 03.4	
	comp=Z,4µm,25.7s						
DZM	Mont Dzumac	17.27	324	P	P	10 29 16.1	+7.1
	26nm,1.3s						
MSVF	Nonsavu	18.84	2	P	Pn	10 29 26.2	-0.5
MSVF				IAmb	IAmb	10 29 54.4	
	comp=Z,100nm,1.2s						
MSVF	Nonsavu	18.84	2	P	Pn	10 29 32.5	+5.8
	comp=Z,85nm,1.2s						
CNB	Canberra Magne	22.57	265	P	P	10 30 10.5	+3.8
	baz=23,SNR=5.2						
RMQ	Roma	26.21	285	P	P	10 30 44.7	+3.7
	baz=27,SNR=9.7						
STKA	Stephens Creek	29.73	269	P	P	10 31 14.2	+1.6
	comp=Z,8.1nm,1.1s,baz=96,slow=12,SNR=5.1						
STKA				LR	LR	10 42 12.3	
	comp=Z,517nm,19.7s,baz=107,slow=34						
STKA	Stephens Creek	29.73	269	P	P	10 31 15.5	+3.0
	baz=30,SNR=4.3						
TBI	Tubuai	31.56	75	*e*S	S	10 36 40.1	+2.8
	comp=Z,96nm,28.0s						
TBI				*e*LR	LR	10 39 51.0	
	comp=Z,750nm,27.8s,baz=236						
TBI	Tubuai	31.56	75	*e*T	T	11 04 24.0	
	comp=Z,63nm,0.3s						
CTA	Charters Tower	31.68	293	P	P	10 31 31.4	+1.7
	comp=Z,6.9nm,1.1s,baz=100,slow=12,SNR=5.2						
CTAO	Charters Tower	31.68	293	P	P	10 31 27.7	-2.1
CTAO				IAmb	IAmb	10 31 39.7	
	comp=Z,17nm,0.9s						
PAE	Paea	34.81	66	*e*T	T	11 08 27.5	
	comp=Z,3.7nm,0.3s						
PPT2	Papeete2	34.86	66	*e*S	S	10 37 32.2	+3.6
	comp=Z,89nm,27.2s						
PPT2				*e*LR	LR	10 41 16.3	
	comp=Z,716nm,27.2s,baz=225						
PPT2	Papeete2	34.86	66	*e*T	T	11 08 31.6	
	comp=Z,11nm,0.3s						
PPT	Papeete	34.87	66	LR	LR	10 42 25.0	
	comp=Z,228nm,20.8s,baz=224,slow=30						
TVO	Taravao	34.97	67	*e*T	T	11 08 39.9	
	comp=Z,4.0nm,0.4s						
MEH	Mehetia	35.80	68	*e*T	T	11 09 41.4	
	comp=Z,29nm,0.3s						
QIS	Mount Isa	36.45	286	P	P	10 32 12.9	+1.6
	baz=37,SNR=7.8						
VAH	Vaihoa	37.80	65	*e*T	T	11 12 11.5	
	comp=Z,22nm,0.3s						
COEN	Coen	37.88	298	P	P	10 32 19.9	-3.5
PMG	Port Moresby	38.44	307	P	P	10 32 30.0	+1.9
	comp=Z,16nm,1.0s,baz=140,slow=7.9,SNR=3.4						
AS31	Alice Springs	39.32	277	P	P	10 32 34.6	-0.9
ASAR	Alice Springs	39.32	277	P	P	10 32 36.4	+0.9
	comp=Z,23nm,1.1s,baz=118,slow=7.1,SNR=42						
ASAR				LR	LR	10 48 55.6	
	comp=Z,520nm,18.5s,baz=122,slow=36						
ASAR	Alice Springs	39.32	277	P	P	10 32 34.5	-1.1
RABL	Rabaul	39.66	319	P	P	10 32 37.0	-1.3
RABL	Rabaul	39.66	319	P	P	10 32 44.5	+6.1
	comp=Z,89nm,1.0s						
WRAB	Tennant Creek	40.90	282	P	P	10 32 47.7	-0.9
WRA	Warramunga Arr	40.91	282	P	P	10 32 49.1	+0.4
	comp=Z,7.2nm,0.8s,baz=123,slow=7.5,SNR=44						
WRA				PcP	PcP	10 34 49.5	+0.3
	comp=Z,1.1nm,1.0s,baz=132,slow=3.7,SNR=2.0						
WRA				LR	LR	10 49 27.9	
	comp=Z,720nm,19.1s,baz=125,slow=36						
VNDA	Vanda	41.54	185	P	P	10 32 52.8	-0.3
	comp=Z,4.2nm,1.1s,baz=80,slow=12,SNR=1.8						
VNDA				LR	LR	10 48 22.4	
	comp=Z,255nm,18.3s,baz=34,slow=34						
RKT	Rikitea	43.15	86	*e*LQ	LQ	10 42 57.9	
	comp=Z,465nm,32.5s						
RKT				*e*LR	LR	10 45 07.5	
	comp=Z,696nm,28.8s						
WRKA	Warakurna	43.17	271	P	P	10 33 08.4	+1.3
	baz=44,SNR=3.9						
TAOE	Nuku Hiva Isla	47.48	65	*e*S	S	10 40 40.5	+4.4
	comp=Z,165nm,26.8s						
TAOE				*e*LR	LR	10 46 54.3	
	comp=Z,462nm,30.9s						
FITZ	Fitzroy Crossi	48.80	278	P	P	10 33 52.6	+1.0
	baz=49,SNR=13						
FITZ	Fitzroy Crossi	48.80	278	P	P	10 33 48.5	-3.0
KLBR	Kellerberrin	48.83	258	P	P	10 33 52.5	+0.8
	baz=49,SNR=5.3						
MUN	Mundaring	49.90	256	P	P	10 34 01.0	+1.2
	baz=50,SNR=3.9						
BAKI	Biak	51.83	303	P	P	10 34 14.2	-0.3
	comp=Z,52nm,0.8s						
QSPA	South Pole Qui	53.49	180	P	P	10 34 26.8	+0.4
	comp=Z,12nm,0.8s,baz=344,slow=0.7,SNR=25						
QSPA	South Pole Qui	53.49	180	P	P	10 34 26.6	+0.2
QSPA				IAmb	IAmb	10 34 39.0	
	comp=Z,48nm,1.2s						
SIJI	Sorong	55.39	299	P	P	10 34 40.7	0.0
	comp=Z,10nm,0.8s,baz=75,slow=6.7,SNR=6.7						
SWI	Sorong	55.40	299	P	P	10 34 40.7	0.0
	comp=Z,36nm,1.0s						
RPN	Rapa Nui	61.71	104	LR	LR	10 56 03.0	
	comp=Z,98nm,18.7s,baz=232,slow=30						
BELA	Belgrano 2	64.14	173	P	P	10 35 38.7	-1.3
BELA				IAmb	IAmb	10 35 51.5	
	comp=Z,26nm,1.1s						
MAW	Mawson	65.07	203	LR	LR	11 03 06.2	
	comp=Z,237nm,18.6s,baz=100,slow=35						
LEM	Lembang	69.62	277	P	P	10 36 15.8	-0.2
	comp=Z,10nm,0.3s,baz=146,slow=12,SNR=5.5						
SYO	Syowa Base	70.13	195	⇑*i*PcP	PcP	10 36 35.3	-4.7
SBUM	Sibu	71.69	287	P	P	10 36 28.3	-0.2
SBUM				IAmb	IAmb	10 36 30.7	
	comp=Z,22nm,1.3s						
SNAA	Sanae	72.00	180	P	P	10 36 29.9	+0.3
SNAA	Sanae	72.00	180	P	P	10 36 29.2	-0.3
SNAA				IAmb	IAmb	10 36 40.5	
	comp=Z,26nm,1.1s						
VNA3	Neumayer Olymp	72.32	178	P	P	10 36 31.0	-0.4
KSM	Kuching	72.55	285	IAmb	IAmb	10 36 35.2	
	comp=Z,28nm,1.2s						
VNA2	Neumayer--Watz	72.70	178	P	P	10 36 33.5	-0.1
KASI	Kota Agung	72.88	276	P	P	10 36 34.2	-1.4
	comp=Z,40nm,1.6s						
VNA1	Neumayer--Stat	72.95	178	P	P	10 36 34.7	-0.4
KLSI		73.19	277	P	P	10 36 37.5	+0.1
	comp=Z,249nmcomp=Z,17nm,1.5s						
LHSI	Lahat	74.67	277	P	P	10 36 46.3	+0.2
	comp=Z,1µmcomp=Z,66nm,2.0s						
H03S2	Juan Fernandez	80.26	125	T	T	12 05 47.9	
	baz=231,slow=74,SNR=8.4						
H03S1	Juan Fernandez	80.27	125	T	T	12 05 49.2	
	baz=231,slow=74,SNR=9.1						
H03S3	Juan Fernandez	80.28	125	T	T	12 05 46.8	
	baz=231,slow=74,SNR=8.0						
H03N3	Juan Fernandez	80.50	125	T	T	12 05 57.2	
	baz=235,slow=72,SNR=80						
H03N2	Juan Fernandez	80.50	125	T	T	12 05 58.7	
	baz=235,slow=72,SNR=49						
H03N1	Juan Fernandez	80.51	125	T	T	12 05 52.9	
	baz=235,slow=72,SNR=66						
MNSI	Mandailing Nat	80.58	278	P	P	10 37 18.3	-0.8
	comp=Z,17nm,1.0s						
PLCA	Paso Flores	81.08	135	P	P	10 37 21.3	-0.2
	comp=Z,1.3nm,0.8s,baz=198,slow=6.6,SNR=4.1						
PLCA				LR	LR	11 04 59.4	
	comp=Z,158nm,21.3s,baz=209,slow=30						
PLCA	Paso Flores	81.08	135	P	P	10 37 20.3	-1.2
MJAR	Matsushiro Arr	81.31	329	P	P	10 37 21.3	-1.1
	comp=Z,2.3nm,0.8s,baz=169,slow=7.1,SNR=4.3						
MJAR				LR	LR	11 10 09.0	
	comp=Z,46nm,21.7s,baz=150,slow=33						
MJAR	Matsushiro Arr	81.31	329	P	P	10 37 19.9	-2.5
JHS	Saijyo	82.25	325	P	P	10 37 24.2	-3.2
KULM	Kulim	82.45	282	P	P	10 37 27.7	-1.3
KULM				IAmb	IAmb	10 37 30.2	
	comp=Z,36nm,1.2s						
GSI	Gunungsitoli	82.48	277	P	P	10 37 26.1	-3.0
QIZ	Qiongzhong	84.26	299	P	P	10 37 38.4	+0.2
QIZ				S	S	10 48 06.3	+2.6
QIZ				pmax	pmax		
	comp=Z,15nm,1.8s						
UBPT	Khong Chiam	84.99	293	P	P	10 37 41.7	-0.2
KSRS	Korea Array	86.70	323	P	P	10 37 50.7	+0.9
	comp=Z,5.7nm,1.0s,baz=148,slow=6.1,SNR=14						
KSRS				LR	LR	11 13 33.8	
	comp=Z,53nm,18.6s,baz=151,slow=34						
NJ2	Nanjing	87.46	314	*e*P	P	10 37 54.4	+0.7
NJ2				pmax	pmax		
	comp=Z,18nm,0.9s						
LCO	Las Campanas	88.74	126		P	10 37 59.4	-1.1
LCO	Las Campanas	88.74	126	Pn	P	10 37 59.7	-0.7
SLVN	Son La	89.99	297	P	P	10 38 03.8	-2.2
SLVN				IAmb	IAmb	10 38 16.5	
	comp=Z,19nm,1.3s						
USRK	Ussuriysk Ar.	90.31	329	P	P	10 38 07.5	+0.7
	comp=Z,3.3nm,1.1s,baz=124,slow=9.5,SNR=4.6						
USRK				LR	LR	11 19 18.3	
	comp=Z,63nm,18.6s,baz=146,slow=36						
USRK	Ussuriysk Ar.	90.31	329	P	P	10 38 05.6	-1.2
PETK	Petropavlovsk-	90.97	348	LR	LR	11 11 49.0	
	comp=Z,142nm,21.9s,baz=148,slow=31						
GYA	Guiyang	91.34	302	⇑P	P	10 38 13.3	+1.0
GYA				sP	pwP	10 38 20.6	+2.1
GYA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
TIA	Tai'an	91.45	315	P	P	10 38 13.4	+1.0
TIA				pmax	pmax		
	comp=Z,9.0nm,1.2s						
CMAR	Chiang Mai Arr	91.84	292	P	P	10 38 16.1	+1.5
	comp=Z,8.7nm,0.9s,baz=154,slow=3.6,SNR=44						
CMAR				LR	LR	11 21 59.9	
	comp=Z,123nm,19.9s,baz=195,slow=37						
CMAR	Chiang Mai Arr	91.84	292	P	P	10 38 15.3	+0.7
KMI	Kunming	93.21	299	⇑P	P	10 38 22.3	+1.2
KMI				pP	pwP	10 38 30.1	+2.8
KMI				pmax	pmax		
	comp=Z,7.0nm,1.6s						
KMI				pmax	pmax		
	comp=Z,180nm,6.6s						
BJI	Beijing	94.70	318	P	P	10 38 29.1	+1.9
BJI				pmax	pmax		
	comp=Z,4.0nm,1.1s						
XAN	Xi'an	94.83	309	P	P	10 38 28.0	-0.1
XAN				pP	pwP	10 38 36.8	+2.5
XAN				sP	sP	10 38 42.3	+10
XAN				pmax	pmax		
	comp=Z,7.0nm,2.0s						
NVAR	Mina Array Bea	95.47	45	LR	LR	11 17 07.3	
	comp=Z,58nm,18.4s,baz=250,slow=33						
CD2	Chengdu	96.15	304	*e*P	P	10 38 37.0	+2.8
HHC	Hu-ho-hao-te	97.80	316	*e*P	Pdif	10 38 42.6	+1.1
HHC				pmax	pmax		
	comp=Z,6.0nm,1.0s						
LPAZ	La Paz	99.00	118	LR	LR	11 14 20.9	
	comp=Z,111nm,21.5s,baz=282,slow=30						
CPUP	Villa Florida	99.00	132	LR	LR	11 16 31.0	
	comp=Z,345nm,20.2s,baz=231,slow=31						
CPUP	Villa Florida	99.00	132	P	Pdif	10 38 48.2	+0.9
CPUP				IAmb	IAmb	10 41 25.7	
	comp=Z,5.7nm,0.9s						
TXAR	Lajitas Array	99.01	60	LR	LR	11 17 50.4	
	comp=Z,32nm,18.9s,baz=0.0,slow=32						
LZH	Lanzhou	99.33	308	*e*P	Pdif	10 38 56.1	+7.6
LZH				pP	pwP	10 39 00.3	+5.5
LZH				sP	sP	10 39 02.3	+10
LZH				PP	PP	10 42 41.8	-10
LZH				pmax	pmax		
	comp=Z,15nm,1.2s						
LZH				pmax	pmax		
	comp=Z,70nm,4.9s						
YKA	Yellowknife Ar	112.78	28	PKiKP	PKiKP	10 43 42.2	+0.2
	comp=Z,0.2nm,0.9s,baz=237,slow=1.9,SNR=2.1						
WMQ	Urumqi	113.91	308	*e*PKP	PKiKP	10 43 46.1	+1.2
WMQ				LR	LR		
	comp=Z,720nm,28.9s						
MKAR	Makanchi Array	118.64	309	PKP	PKPdf	10 43 50.8	-3.1
	comp=Z,1.1nm,1.0s,baz=167,slow=2.1,SNR=4.5						
MKAR				PKKPbc	PKKPbc	10 54 09.8	-0.6
	comp=Z,0.5nm,0.8s,baz=315,slow=2.8,SNR=4.2						
MKAR	Makanchi Array	118.64	309		PKPdf	10 43 51.5	-2.4
ARCES	ARCESS Array B	143.64	344	PKhKP	PKPpre	10 44 36.1	
	comp=Z,4.5nm,0.9s,baz=25,slow=5.0,SNR=4.3						
KLMR	Klimovskoe	144.03	326	*e*	PKPab	10 44 36.4	-2.0
KLMR				AMP		10 44 39.4	
	comp=Z,34nm,1.5s						
KBZ	Khabaz	144.76	296	PKP	PKPab	10 44 39.3	-2.4
	comp=Z,7.2nm,0.9s,baz=98,slow=2.3,SNR=15						
FINES	FINESS Array B	149.27	333	PKPbc	PKPdf	10 44 51.1	+1.4
	comp=Z,15nm,1.1s,baz=70,slow=4.6,SNR=8.6						
FINES	FINESS Array B	149.27	333	PKPdf	PKPdf	10 44 46.2	-3.6
LIC	Lamto	149.67	176	*e*PKP1	PKPbc	10 44 55.0	-1.5
	comp=Z,75nm,1.1s						
KIC	Kosan Boka	149.82	176	*e*PKP1	PKPbc	10 44 55.6	-1.3
	comp=Z,78nm,1.3s						
TIC	Toumodi	150.09	175	*e*PKP1	PKPbc	10 44 56.3	-1.3
DBIC	Dimbokro	150.12	176	PKPbc	PKPbc	10 44 55.8	-1.8
	comp=Z,5.3nm,1.0s,baz=188,slow=4.9,SNR=4.4						
BRTR	Keskin Array B	151.34	287	PKPbc	PKPbc	10 44 57.9	-2.1
	comp=Z,4.3nm,1.0s,baz=158,slow=4.0,SNR=15						
BRTR	Keskin Array B	151.34	287		PKPdf	10 44 56.6	+2.7
AKASG	Malin Array Be	153.17	312	PKPbc	PKPbc	10 45 00.8	-2.7
	comp=Z,2.0nm,0.8s,baz=65,slow=2.6,SNR=5.1						
AKASG	Malin Array Be	153.17	312		PKPbc	10 45 01.3	-2.2
TORD	Torodi Ar. Bea	156.28	191	PKPab	PKPab	10 45 26.4	-2.9
	comp=Z,5.6nm,1.1s,baz=209,slow=8.0,SNR=11						
BURAR	Bucovina Array	156.65	307		PKPab	10 45 30.7	+0.4
CLL	Collm	161.51	327	*e*PKPab	PKPab	10 45 50.0	-1.1
GERES	GERESS Array B	162.86	321	PKPab	PKPab	10 45 58.1	+0.8
	comp=Z,0.2nm,0.3s,baz=343,slow=6.1,SNR=1.6						

SOME ***23*** *10:25:48.0, 41.°48N×76.°12E, h5km*

KRNET ***23*** *10:25:48.4±0.1, 41.°44N×76.°10E, h19km, mb3.0*

NNC ***23*** *10:25:49.1±0.7, 41.°45N×76.°08E, h0km, mb3.9, mpv3.7, Error ellipse: s-maj=4.8km s-min=3.4km az=1.0*

KNET ***23*** *10:25:50.1±0.3, 41.°56N×75.°97E, h0km±1km, ml2.5, Error ellipse: s-maj=2.0km s-min=1.1km az=151.0*

ISC 23 10:25:49.6±1.4**, 41.°50N**±0.°04×**76.°08E**±0.°02**, h5km**±11km**, n72,** σ**1.s14**/125**, 26C-34D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULHL	Ulahol	0.75	9	⇓*i*P	Pg	10 26 03.8	-0.3
	baz=8.0						
ULHL				⇓*i*S	Sb	10 26 15.2	-0.8
	baz=8.0						
ULHL	Ulahol	0.75	9	⇓P	Pg	10 26 03.8	-0.3
	49nm,0.1s,SNR=380						
ULHL				⇓S	Sb	10 26 15.1	-1.0
	44nm,0.1s						
BOOM	Boomskoye usch	0.99	354	⇑*i*P	Pg	10 26 07.9	-0.8
	baz=54						
BOOM				⇑*i*S	Sg	10 26 22.3	+0.7
	baz=54						
KDJ	Kajisay	1.03	52	⇓*i*P	Pg	10 26 08.2	-1.3
	baz=50						
KDJ				⇓*i*S	Sg	10 26 22.7	-0.2
	baz=50						
ARLS	Aral	1.36	286	⇑*i*P	Pn	10 26 14.2	-1.3
	baz=88						
ARLS				⇑*i*S	Sg	10 26 32.6	-0.9
	baz=88						
UCH	Uchtor	1.38	302	⇓*e*P	Pn	10 26 14.8	-1.2
	baz=4.0						
UCH				⇓*i*S	Sg	10 26 33.9	0.0
	baz=4.0						
UCH	Uchtor	1.38	302	⇑P	Pn	10 26 14.7	-1.3
	6.2nm,0.1s,SNR=18						
UCH				⇓S	Sg	10 26 34.1	+0.1
	32nm,0.2s						
KBK	Karagaybulak	1.43	324	⇑*i*P	Pn	10 26 15.9	-0.5
	baz=25						
KBK				⇑*i*S	Sg	10 26 36.0	+0.4
	baz=25						
KBK	Karagaybulak	1.43	324	⇓P	Pn	10 26 16.2	-0.3
	31nm,0.1s,SNR=19						
KBK				⇑S	Sg	10 26 36.4	+0.8
	108nm,0.2s						
TKM2	Tokmak 2	1.46	346	⇑*i*P	Pn	10 26 16.7	-0.2
	baz=46						
TKM2				⇑*i*S	Sg	10 26 37.1	+0.5
	baz=46						
TKM2	Tokmak 2	1.46	346	⇓P	Pn	10 26 16.9	0.0
	44nm,0.2s,SNR=77						
TKM2				⇑S	Sg	10 26 37.7	+1.1
	59nm,0.2s						
TKM2	Tokmak 2	1.46	346	⇓P	Pn	10 26 16.7	-0.2
	8.9nm,0.2s						
TKM2				⇓S	Sg	10 26 37.3	+0.6
	18nm,0.3s						
KST	Kastek	1.54	357	⇓*e*P	Pb	10 26 18.3	-0.5
	33nm,0.2s						
KST				*e*S	Sg	10 26 40.2	+1.1
	30nm,0.2s						
KST	Kastek	1.54	357	P	Pb	10 26 18.3	-0.5
	33nm,0.2s						
KST				S	Sg	10 26 40.2	+1.1
	30nm,0.2s						
IZV	Izvestkoviy	1.58	14	*e*P	Pb	10 26 19.4	-0.1
	13nm,0.2s						
IZV				*e*S	Sg	10 26 42.2	+1.7
	26nm,0.3s						
IZV	Izvestkoviy	1.58	14	P	Pb	10 26 19.4	-0.1
	13nm,0.2s						
IZV				S	Sg	10 26 42.2	+1.7
	26nm,0.3s						
AAK	Ala-Archa	1.64	314	⇓*i*P	Pn	10 26 19.4	+0.1
	baz=16						
AAK				⇓*i*S	Sg	10 26 42.1	-0.2
	baz=16						
AAK	Ala-Archa	1.64	314	⇑P	Pn	10 26 19.6	+0.2
	5.5nm,0.1s,SNR=11						
AAK				⇓S	Sg	10 26 42.7	+0.5
	46nm,0.3s						
AAK	Ala-Archa	1.64	314	⇓P	Pn	10 26 19.5	+0.2
	5.4nm,0.2s						
AAK				⇓S	Sn	10 26 41.0	+0.1
	27nm,0.2s						
MTBS	Maitube	1.65	9	⇓*e*P	Pb	10 26 20.1	-0.5
	19nm,0.2s						
MTBS				*e*S	Sg	10 26 43.1	+0.5
	41nm,0.2s						
MTBS	Maitube	1.65	9	P	Pb	10 26 20.1	-0.5
	19nm,0.2s						
MTBS				S	Sg	10 26 43.1	+0.5
	41nm,0.2s						
TNSS	Tian-Shan	1.66	22	⇓*e*P	Pb	10 26 20.4	-0.6
	105nm,0.3s						
TNSS				*e*S	Sg	10 26 43.7	+0.6
	16nm,0.2s						
TNSS	Tian-Shan	1.66	22	P	Pb	10 26 20.5	-0.6
	105nm,0.3s						
TNSS				S	Sg	10 26 43.7	+0.6
	16nm,0.2s						
ANVS	Anan'yevo	1.74	42	⇑*i*P	Pb	10 26 21.1	-1.1
	baz=40						
ANVS				⇑*i*S	Sg	10 26 45.0	-0.6
	baz=40						
DGS	Degeres	1.75	353	*e*P	Pb	10 26 22.1	-0.2
	9.4nm,0.1s						
DGS				*e*S	Sg	10 26 46.7	+0.8
	26nm,0.2s						
DGS	Degeres	1.75	353	P	Pb	10 26 22.1	-0.2
	9.4nm,0.1s						
DGS				S	Sg	10 26 46.7	+0.8
	26nm,0.2s						
CHMS	Chumysh	1.79	327	⇑*i*P	Pn	10 26 21.9	+0.6
	baz=28						
CHMS				⇑*i*S	Sb	10 26 46.3	+0.5
	baz=28						
CHMS	Chumysh	1.79	327	⇑P	Pb	10 26 22.3	-0.7
	8.1nm,0.2s,SNR=12						

CHMS				⇓S	**Sg**	**10 26 47.0**	**-0.1**
	51nm,0.2s						
MDOK	**Medeo**	**1.81**	**23**	⇑*e*P	**Pb**	**10 26 22.8**	**-0.5**
	66nm,0.4s						
MDOK				*e*S	**Sg**	**10 26 48.1**	**+0.4**
	22nm,0.6s						
MDOK	**Medeo**	**1.81**	**23**	Pn	**Pb**	**10 26 22.6**	**-0.8**
	36nm,0.4s						
MDOK				Sn	**Sg**	**10 26 47.7**	**0.0**
	32nm,0.7s						
MDOK	**Medeo**	**1.81**	**23**	Pg	**Pb**	**10 26 22.8**	**-0.5**
	66nm,0.4s						
MDOK				Lg	Lg	10 26 48.1	
	22nm,0.6s						
KNDC	**Almaty**	**1.83**	**21**	⇑Pn	**Pb**	**10 26 23.7**	**0.0**
	80nm,0.5s						
KNDC				⇑Sn	**Sg**	**10 26 49.8**	**+1.2**
	102nm,0.5s						
AML	**Almayashu**	**1.89**	**290**	⇓*i*P	**Pn**	**10 26 23.2**	**+0.2**
	baz=92						
AML				⇓*i*S	**Sb**	**10 26 48.9**	**-0.1**
	baz=92						
AML	**Almayashu**	**1.89**	**290**	⇑P	**Pb**	**10 26 24.1**	**-0.8**
	7.6nm,0.2s,SNR=12						
KOTS	**Kotyrbulak**	**1.89**	**23**	⇓*e*P	**Pb**	**10 26 24.4**	**-0.3**
	196nm,0.3s						
KOTS				*e*S	**Sg**	**10 26 50.8**	**+0.4**
	208nm,0.5s						
KOTS	**Kotyrbulak**	**1.89**	**23**	Pg	**Pb**	**10 26 24.4**	**-0.3**
	196nm,0.3s						
KOTS				Lg	Lg	10 26 50.8	
	208nm,0.5s						
PRZ	**Przheval'sk**	**1.99**	**60**	⇑*i*P	**Pb**	**10 26 24.7**	**-1.7**
	baz=57						
PRZ				⇑*i*S	**Sb**	**10 26 51.0**	**-0.5**
	baz=57						
EKS2	**Erkin-Say**	**2.07**	**305**	⇓*e*P	**Pn**	**10 26 25.8**	**+0.6**
	baz=6.0						
EKS2				⇓*i*S	**Sb**	**10 26 52.9**	**-1.0**
	baz=6.0						
SGDS	**Sogindy**	**2.22**	**332**	Pg	**Pb**	**10 26 30.3**	**-0.1**
	24nm,0.3s						
SGDS				Lg	Lg	10 27 00.8	
	16nm,0.1s						
KTBS	**Karatobe**	**2.25**	**11**	⇓*e*P	**Pb**	**10 26 31.1**	**+0.2**
	49nm,0.1s						
KTBS				*e*S	**Sg**	**10 27 02.4**	**+0.4**
	107nm,0.4s						
KTBS	**Karatobe**	**2.25**	**11**	Pg	**Pb**	**10 26 31.1**	**+0.2**
	49nm,0.1s						
KTBS				Lg	Lg	10 27 02.4	
	107nm,0.4s						
SATY	**Saty**	**2.32**	**47**	*e*P	**Pb**	**10 26 31.6**	**-0.5**
	6.8nm,0.1s						
SATY				*e*S	**Sg**	**10 27 03.0**	**-1.2**
	52nm,0.3s						
SATY	**Saty**	**2.32**	**47**	Pg	**Pb**	**10 26 31.6**	**-0.5**
	6.8nm,0.1s						
SATY				Lg	Lg	10 27 03.0	
	52nm,0.3s						
ARSB	**Arslanbob**	**2.34**	**267**	⇓*i*P	**Pn**	**10 26 28.9**	**0.0**
	baz=68						
ARSB				⇓*i*S	**Sn**	**10 26 58.2**	**+0.1**
	baz=68						
KUU	**Kurty**	**2.40**	**4**	*e*P	**Pb**	**10 26 33.7**	**+0.4**
	29nm,0.3s						
KUU				*e*S	**Sg**	**10 27 06.6**	**0.0**
	41nm,0.4s						
KUU	**Kurty**	**2.40**	**4**	Pg	**Pb**	**10 26 33.7**	**+0.4**
	29nm,0.3s						
KUU				Lg	Lg	10 27 06.6	
	41nm,0.4s						
CHKK	**Chushkaly**	**2.44**	**16**	⇓*e*P	**Pb**	**10 26 34.2**	**+0.2**
	23nm,0.3s						
CHKK				*e*S	**Sg**	**10 27 07.8**	**-0.3**
	42nm,0.2s						
CHKK	**Chushkaly**	**2.44**	**16**	Pg	**Pb**	**10 26 34.2**	**+0.2**
	23nm,0.3s						
CHKK				Lg	Lg	10 27 07.8	
	42nm,0.2s						
MRKS	**Merke**	**2.46**	**301**	*e*P	**Pb**	**10 26 33.9**	**-0.5**
	3.1nm,0.4s						
MRKS				*e*S	**Sg**	**10 27 07.1**	**-1.5**
	12nm,0.5s						
MRKS	**Merke**	**2.46**	**301**	Pg	**Pb**	**10 26 33.9**	**-0.5**
	3.1nm,0.4s						
MRKS				Lg	Lg	10 27 07.1	
	12nm,0.5s						
KURS	**Kuram**	**2.51**	**37**	*e*P	**Pb**	**10 26 35.0**	**-0.4**
	5.8nm,0.5s						
KURS				*e*S	**Sg**	**10 27 08.9**	**-1.5**
	19nm,0.7s						
KURS	**Kuram**	**2.51**	**37**	Pg	**Pb**	**10 26 35.0**	**-0.4**
	5.8nm,0.5s						
KURS				Lg	Lg	10 27 08.9	
	19nm,0.7s						
UZB	**Uzynbulak**	**2.73**	**52**	*e*P	**Pb**	**10 26 38.2**	**-0.8**
	16nm,0.5s						
UZB				*e*S	**Sb**	**10 27 14.5**	**+1.6**
	43nm,0.4s						
UZB	**Uzynbulak**	**2.73**	**52**	Pg	**Pb**	**10 26 38.3**	**-0.8**
	16nm,0.5s						
UZB				Lg	Lg	10 27 14.5	
	43nm,0.4s						
KPKS	**Kokpek**	**2.75**	**44**	*e*P	**Pb**	**10 26 38.8**	**-0.5**
	6.4nm,0.1s						
KPKS				*e*S	**Sg**	**10 27 15.5**	**-2.4**
	92nm,0.4s						
ARXS	**Arharly**	**3.00**	**25**	*e*P	**Pb**	**10 26 43.6**	**+0.1**
	20nm,0.3s						
ARXS				*e*S	**Sg**	**10 27 24.0**	**-1.9**
	14nm,0.5s						
ARXS	**Arharly**	**3.00**	**25**	Pg	**Pb**	**10 26 43.7**	**+0.1**
	20nm,0.3s						
ARXS				Lg	Lg	10 27 24.0	
	14nm,0.5s						
SHLS	**Shalkode**	**3.00**	**55**	*e*P	**Pg**	**10 26 48.0**	**+0.8**
	8.6nm,0.3s						
SHLS				*e*S	**Sg**	**10 27 31.3**	**+5.2**
	41nm,0.7s						
SHLS	**Shalkode**	**3.00**	**55**	Pg	**Pg**	**10 26 48.0**	**+0.8**
	8.6nm,0.3s						
SHLS				Lg	Lg	10 27 31.3	
	41nm,0.7s						
MNBS	**Baschi**	**3.09**	**33**	*e*P	**Pb**	**10 26 46.0**	**+0.9**
	4.6nm,0.3s						
MNBS				*e*S	**Sg**	**10 27 27.6**	**-1.2**
	20nm,0.5s						
MNBS	**Baschi**	**3.09**	**33**	Pg	**Pb**	**10 26 46.0**	**+0.9**
	4.6nm,0.3s						
MNBS				Lg	Lg	10 27 27.6	
	20nm,0.5s						
PDGK	**Podgornoye**	**3.11**	**53**	⇓Pn	**Pn**	**10 26 41.5**	**+2.0**
	4.0nm,0.6s						
PDGK				⇓Sn	**Sb**	**10 27 21.8**	**-2.1**
	11nm,0.5s						
KTMS	**Ketmen**	**3.71**	**57**	*e*P	**Pb**	**10 26 55.2**	**-0.5**
	0.9nm,0.2s						
KTMS				*e*S	**Sb**	**10 27 43.5**	**+2.5**
	9.7nm,0.5s						
KTMS	**Ketmen**	**3.71**	**57**	Pg	**Pb**	**10 26 55.2**	**-0.5**
	0.9nm,0.2s						
KTMS				Lg	Lg	10 27 43.5	
	9.7nm,0.5s						
TRKS	**Terek-Say**	**3.71**	**272**	⇑*i*P	**Pn**	**10 26 47.3**	**-0.5**
	baz=72						
TRKS				⇑*i*S	**Sn**	**10 27 31.3**	**-0.7**
	baz=72						
BTLS	**Baital**	**3.84**	**338**	*e*P	**Pb**	**10 26 58.6**	**+0.8**
	1.9nm,0.1s						
BTLS				*e*S	**Sg**	**10 27 49.4**	**-3.4**
	13nm,0.4s						
BTLS	**Baital**	**3.84**	**338**	Pg	**Pb**	**10 26 58.6**	**+0.8**
	1.9nm,0.1s						
BTLS				Lg	Lg	10 27 49.4	
	13nm,0.4s						
DJR	**Jarkent**	**3.93**	**43**	*e*P	**Pb**	**10 27 00.2**	**+0.8**
	2.3nm,0.4s						
DJR				*e*S	**Sg**	**10 27 52.2**	**-3.5**
	4.4nm,0.3s						
DJR	**Jarkent**	**3.93**	**43**	Pg	**Pb**	**10 27 00.2**	**+0.8**
	2.3nm,0.4s						
DJR				Lg	Lg	10 27 52.3	
	4.4nm,0.3s						
KK31	**Karatay Array**	**4.43**	**293**	⇓Pg	**Pb**	**10 27 10.3**	**+2.4**
	1.4nm,0.8s,baz=207,slow=4.7,SNR=6.7						
KK31				⇑Lg	Lg	10 28 08.7	
	1.6nm,0.5s,baz=107,slow=26,SNR=7.4						
IUG	**Iuzhnay**	**4.57**	**280**	*e*P	**Pb**	**10 27 13.4**	**+3.1**
	0.6nm,0.1s						
IUG				*e*S	**Sg**	**10 28 14.9**	**-1.3**
	8.8nm,0.6s						
IUG	**Iuzhnay**	**4.57**	**280**	Pg	**Pb**	**10 27 13.4**	**+3.1**
	0.6nm,0.1s						
IUG				Lg	Lg	10 28 14.9	
	8.8nm,0.6s						

KRSC 23 10:33:19.6±1.6**,49°.93N**×**156°.60E,h30**^{km}±18^{km}**,ML3.9, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**0.81**	**338**	*e*P	Pn	10 33 34.8	-0.2
SKR				*e*S	Sn	10 33 46.1	+0.1
PAU	**Pauzhetka**	**1.54**	**5**	*e*P	Pb	10 33 46.7	-0.8
PAU				*e*S	Sb	10 34 06.1	-0.5
KDTR	**Khodutka, Kamc**	**2.10**	**26**	*e*P	Pn	10 33 54.5	+1.9
KDTR				*e*S	Sb	10 34 20.2	-2.3
MTVR	**Mutnovka**	**2.74**	**21**	*e*P	Pn	10 34 04.6	+3.0
MTVR				*e*S	Sn	10 34 37.2	+3.5
RUS	**Russkaya**	**2.78**	**25**	*e*P	Pn	10 34 03.8	+1.8
RUS				*e*S	Sn	10 34 36.5	+2.1
GRL	**Gorelyy**	**2.78**	**19**	*e*P	Pn	10 34 05.1	+2.9
GRL				*e*S	Sb	10 34 39.0	-3.3
APC	**Apacha**	**3.02**	**6**	*e*P	Pn	10 34 07.5	+2.2
PET	**Petropavlovsk**	**3.35**	**22**	*e*S	Sn	10 34 52.9	+4.4
DALK	**Dalny**	**3.38**	**23**	*e*P	Pn	10 34 12.9	+2.6
DALK				*e*S	Sn	10 34 53.6	+4.3
UGLR	**Uglovaya**	**3.56**	**22**	*e*P	Pn	10 34 17.1	+4.2
AVH	**Avacha**	**3.59**	**21**	*e*P	Pn	10 34 17.7	+4.4
KOK	**Koryaka**	**3.59**	**20**	*e*P	Pn	10 34 17.7	+4.4
SMAR	**Somma**	**3.60**	**22**	*e*P	Pb	10 34 18.2	-4.5
KRER	**Koryakskii**	**3.63**	**21**	*e*P	Pb	10 34 18.9	-4.2
SDLR	**Sedlovina**	**3.64**	**22**	*e*P	Pn	10 34 18.2	+4.3
KRX	**Arik**	**3.66**	**20**	*e*P	Pn	10 34 18.5	+4.2
SPN	**Mys Shipunski**	**3.82**	**33**	*e*P	Pn	10 34 20.1	+3.8
GNL	**Ganaly**	**3.86**	**12**	*e*P	Pn	10 34 20.2	+3.3
KZV	**Kizimen**	**5.66**	**22**	P	Pn	10 34 48.2	+6.5

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*IDC **23** 10:36:34.8±1.0,24°.01S×66°.82W,h183^{km}±9^{km},mb3.9/10, mb1 4.0/15,mb1mx3.9/31,mbtmp4.4/15,MS4.2/1, Ms1 4.1/1,ms1mx2.9/21,Error ellipse: s-maj=16.3km s-min=12.8km az=46.0*

*GUC **23** 10:36:34.6±0.8,24°.15S×67°.02W,h188^{km}±7^{km},ML4.8*

*NEIC **23** 10:36:34.8±2.6,24°.10S±0°.06×66°.93W±0°.10,h192^{km}±5^{km}, mb4.4/12,Error ellipse: s-maj=13.2km s-min=8.4km az=104.0*

*VAO **23** 10:36:34.6±0.4,24°.11S×66°.93W,h199^{km}±4^{km},mb4.5*

ISC 23 10:36:34.4±0.6**,24°.10S**±0°.04×**66°.98W**±0°.04**,h190**^{km}±6^{km}**, n139,**σ**1^{s}.23**/158**,mb4.3**/14**,14C-2D,Salta Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SLA	**San Lorenzo**	**1.48**	**115**	⇓*i*P	**Pn**	**10 37 08.8**	**+1.4**
SLA				*i* S	**Sn**	**10 37 33.7**	**+0.8**
LVC	**Limon Verde**	**2.31**	**310**	P	**Pn**	**10 37 17.8**	**+1.7**
	75nm,0.3s,baz=121,slow=7.0,SNR=166						
LVC				S	**Sn**	**10 37 48.8**	**+0.5**
	167nm,0.3s,baz=305,slow=21,SNR=9.3						
LVC				LR	LR	10 38 12.4	
	comp=Z,57nm,21.3s,baz=120,slow=41						
LVC	**Limon Verde**	**2.31**	**310**	*e*P	**Pn**	**10 37 17.5**	**+1.5**
LVC				*i* S	**Sn**	**10 37 50.0**	**+1.7**
LVC	**Limon Verde**	**2.31**	**310**	*e*P	**Pn**	**10 37 17.9**	**+1.9**
LVC				*e*S	**Sn**	**10 37 49.6**	**+1.3**
PB15	**IPOC Station P**	**2.45**	**291**	⇑*i*P	**Pn**	**10 37 19.1**	**+1.7**
PB15				*i* S	**Sn**	**10 37 51.8**	**+1.0**
PB15	**IPOC Station P**	**2.45**	**291**		**Pn**	**10 37 19.2**	**+1.7**
GO02	**Mina Guanaco**	**2.60**	**245**	⇑*e*P	**Pn**	**10 37 20.5**	**+1.3**
GO02				*i* S	**Sn**	**10 37 55.4**	**+1.3**
GO02				IAML		10 37 56.1	
	comp=N,2μm,0.2s						
GO02	**Mina Guanaco**	**2.60**	**245**		**Pn**	**10 37 20.5**	**+1.3**
PB06	**IPOC Station P**	**2.75**	**300**	⇑*e*P	**Pn**	**10 37 22.3**	**+1.4**
PB06				*i* S	**Sn**	**10 37 57.3**	**+0.2**
PB06				IAML		10 38 00.0	
	comp=E,4μm,0.2s						
PB06	**IPOC Station P**	**2.75**	**300**		**Pn**	**10 37 22.5**	**+1.6**
AHML	**Horco Molle**	**3.06**	**151**	⇑*e*P	**Pn**	**10 37 25.2**	**+0.8**
PB09	**IPOC Station P**	**3.10**	**317**	⇑*i*P	**Pn**	**10 37 26.9**	**+2.0**
PB09				*e*S	**Sn**	**10 38 05.4**	**+1.0**
PB09				IAML		10 38 07.2	
	comp=N,854nm,0.5s						
PB09	**IPOC Station P**	**3.10**	**317**		**Pn**	**10 37 26.7**	**+1.7**
PB14	**IPOC Station P**	**3.16**	**260**	⇑*e*P	**Pn**	**10 37 26.6**	**+0.8**
PB14				*e*S	**Sn**	**10 38 05.5**	**-0.6**
PB14	**IPOC Station P**	**3.16**	**260**		**Pn**	**10 37 26.7**	**+0.8**
PB05	**IPOC Station P**	**3.21**	**292**	⇑*e*P	**Pn**	**10 37 27.1**	**+0.9**
PB05				*i* S	**Sn**	**10 38 05.3**	**-1.3**
PB05				IAML		10 38 12.2	
	comp=N,1μm,0.4s						
PB10	**IPOC Station P**	**3.32**	**279**	⇑*e*P	**Pn**	**10 37 28.7**	**+1.2**
PB10				*i* S	**Sn**	**10 38 09.8**	**+0.8**
PB10	**IPOC Station P**	**3.32**	**279**	Pn	**Pn**	**10 37 28.6**	**+1.1**
AC02	**Maricunga**	**3.34**	**215**	⇑*e*P	**Pn**	**10 37 29.5**	**+1.3**
AC02	**Maricunga**	**3.34**	**215**		**Pn**	**10 37 29.5**	**+1.3**
PB04	**IPOC Station P**	**3.40**	**300**	⇑*e*P	**Pn**	**10 37 29.6**	**+0.9**
PB04				*e*S	**Sn**	**10 38 10.0**	**-1.1**
PB04	**IPOC Station P**	**3.40**	**300**		**Pn**	**10 37 29.7**	**+1.0**
PB07	**IPOC Station P**	**3.57**	**311**	⇑*e*P	**Pn**	**10 37 31.6**	**+0.8**
PB07				*e*S	**Sn**	**10 38 13.2**	**-1.6**
PB07	**IPOC Station P**	**3.57**	**311**		**Pn**	**10 37 31.6**	**+0.8**
PB01	**IPOC Station P**	**3.82**	**322**	*e*P	**Pn**	**10 37 34.5**	**+0.7**
PB01				*e*S	**Sn**	**10 38 19.4**	**-0.9**
PB01	**IPOC Station P**	**3.82**	**322**		**Pn**	**10 37 34.5**	**+0.7**
AC01	**Pan de Azucar**	**3.86**	**237**	⇑*e*P	**Pn**	**10 37 33.9**	**-0.2**
AC01				*e*S	**Sn**	**10 38 18.9**	**-2.1**
AC01	**Pan de Azucar**	**3.86**	**237**	Pn	**Pn**	**10 37 33.9**	**-0.2**
PATCX	**Punta Patache**	**4.39**	**317**	*e*P	**Pn**	**10 37 41.5**	**+0.6**
PATCX				*e*S	**Sn**	**10 38 31.3**	**-1.8**
PATCX	**Punta Patache**	**4.39**	**317**	Pn	**Pn**	**10 37 40.7**	**-0.2**
PB08	**IPOC Station P**	**4.42**	**333**	⇑*e*P	**Pn**	**10 37 43.2**	**+1.6**
PB08				*e*S	**Sn**	**10 38 34.8**	**+0.4**
PB08	**IPOC Station P**	**4.42**	**333**		**Pn**	**10 37 43.3**	**+1.6**
GO03	**Copiap**	**4.55**	**219**	*e*P	**Pn**	**10 37 42.4**	**-0.5**
GO03				*i* S	**Sn**	**10 38 34.6**	**-2.1**
GO03	**Copiap**	**4.55**	**219**		**Pn**	**10 37 42.3**	**-0.5**
HMBC	**Humberstone**	**4.66**	**324**	*e*P	**Pn**	**10 37 43.8**	**-0.6**
HMBC				*e*S	**Sn**	**10 38 36.4**	**-3.0**
AC04	**Llanos de Chal**	**5.50**	**221**	⇑*e*P	**Pn**	**10 37 53.5**	**-1.6**
AC04				*e*S	**Sn**	**10 38 55.1**	**-3.5**
AC04	**Llanos de Chal**	**5.50**	**221**	Pn	**Pn**	**10 37 53.7**	**-1.3**
MNMC	**Minye Minye**	**5.51**	**333**		**Pn**	**10 37 56.1**	**+0.5**
AC05	**El Transito**	**5.56**	**211**	⇓*e*P	**Pn**	**10 37 55.7**	**-0.4**
AC05				*e*S	**Sn**	**10 38 58.4**	**-2.0**
AC05	**El Transito**	**5.56**	**211**		**Pn**	**10 37 55.6**	**-0.4**
CO01	**Juntas del Tor**	**6.48**	**205**	Pn	**Pn**	**10 38 07.8**	**-0.2**
GO04	**Tololo Observa**	**6.94**	**209**	Pn	**Pn**	**10 38 12.3**	**-1.7**
CO03	**El Pedregal**	**7.48**	**205**		**Pn**	**10 38 19.4**	**-1.6**
LPAZ	**La Paz**	**7.85**	**352**	P	**Pn**	**10 38 27.2**	**+0.8**
	comp=N,3.5nm,0.3s,baz=155,slow=6.7,SNR=75						
LPAZ				S	**Sn**	**10 39 53.4**	**-1.7**
	comp=N,1.4nm,0.3s,baz=314,slow=15,SNR=5.6						
LPAZ	**La Paz**	**7.85**	**352**	Pn	**Pn**	**10 38 27.4**	**+1.1**
CO02	**Combarbal**	**7.92**	**206**		**Pn**	**10 38 25.8**	**-1.0**
CPUP	**Villa Florida**	**9.02**	**106**	P	**Pn**	**10 38 40.3**	**-0.7**
	comp=N,0.2nm,0.3s,baz=298,slow=12,SNR=5.9						
VA03	**San Esteban**	**9.19**	**199**		**Pn**	**10 38 42.9**	**-0.3**
MT02	**Curacav**	**9.83**	**201**		**Pn**	**10 38 47.9**	**-3.6**
AQDB	**Aquidauana**	**11.05**	**73**	*e*P	**Pn**	**10 39 06.6**	**-0.9**
BO02	**Sierra Bellavi**	**11.16**	**196**	Pn	**Pn**	**10 39 08.4**	**-0.4**
VILB	**Vilhena**	**12.81**	**31**	*e*P	**Pn**	**10 39 31.4**	**+1.3**
PP1B	**Ponte de Pedra**	**13.03**	**63**	*e*P	**Pn**	**10 39 31.4**	**-1.3**
BI02	**San Fabin de**	**13.06**	**195**		**Pn**	**10 39 31.7**	**-1.2**
TRCB	**Terra Rica**	**13.23**	**87**	*e*P	**Pn**	**10 39 35.3**	**0.0**
CPSB	**Cacapava Do Su**	**13.58**	**120**	*e*P	**Pn**	**10 39 38.1**	**-1.4**
PTGB	**Pitanga**	**13.61**	**96**	*e*P	**Pn**	**10 39 40.1**	**+0.1**
ITAB	**Concordia**	**13.75**	**106**	*e*P	**Pn**	**10 39 39.8**	**-1.9**
H03N1	**Juan Fernandez**	**13.99**	**226**	P	**P**	**10 39 47.4**	**+1.0**
	baz=113,slow=17,SNR=13						
H03N2	**Juan Fernandez**	**14.01**	**226**	P	**P**	**10 39 46.9**	**+0.4**
	baz=113,slow=17,SNR=4.6						
H03N3	**Juan Fernandez**	**14.01**	**226**	P	**P**	**10 39 47.2**	**+0.6**
	baz=113,slow=17,SNR=7.7						
PLTB	**Pedras Altas**	**14.07**	**126**	*e*P	**Pn**	**10 39 44.0**	**-1.6**
ETMB	**Extrema**	**14.22**	**3**	*e*P	**Pn**	**10 39 47.3**	**-0.3**
H03S3	**Juan Fernandez**	**14.23**	**224**	P	**P**	**10 39 49.7**	**+0.6**
	SNR=3.7						
H03S1	**Juan Fernandez**	**14.24**	**224**	P	**P**	**10 39 49.8**	**+0.6**
H03S2	**Juan Fernandez**	**14.25**	**224**	P	**P**	**10 39 48.8**	**-0.5**
PCMB	**Pacaembu**	**14.70**	**83**	*e*P	**Pn**	**10 39 52.7**	**-0.8**
CNLB	**Canela**	**15.32**	**113**	*e*P	**Pn**	**10 39 59.7**	**-1.3**
LC01	**Cunco**	**15.33**	**195**	IAmb	IAmb	10 40 06.4	
	comp=Z,27nm,1.4s						
SAML	**Samuel**	**15.50**	**14**	*e*P	**Pn**	**10 40 02.4**	**-0.9**
ITRB	**Iturama**	**16.03**	**77**	*e*P	**P**	**10 40 08.7**	**-0.7**
ARAG	**Araguaiana, MT**	**16.52**	**62**	*e*P	**P**	**10 40 15.1**	**+0.3**
PLCA	**Paso Flores**	**16.85**	**189**	P	**Pn**	**10 40 19.4**	**0.0**
	comp=Z,0.5nm,0.3s,baz=20,slow=14,SNR=20						
PLCA	**Paso Flores**	**16.85**	**189**	P	**P**	**10 40 17.9**	**-0.5**
PLCA				IAmb	IAmb	10 40 27.2	
	comp=Z,12nm,0.7s						
CZSB	**Cruzeiro do Su**	**17.18**	**340**	*e*P	**P**	**10 40 21.0**	**-1.0**
BB19B	**Bebedouro**	**17.31**	**84**	*e*P	**P**	**10 40 23.3**	**-0.2**
SPB	**Sao Paulo**	**17.89**	**92**	P	**P**	**10 40 29.6**	**-0.2**
SPB	**Sao Paulo**	**17.89**	**92**	*e*P	**P**	**10 40 29.8**	**-0.1**
PET01	**Itanhaem-SP**	**17.98**	**95**	*e*P	**P**	**10 40 30.8**	**+0.1**
VAO	**Valinhos**	**18.39**	**91**	*e*P	**P**	**10 40 34.6**	**-0.7**
IPMB	**Ipameri, GO**	**18.54**	**74**	*e*P	**P**	**10 40 36.8**	**-0.2**
SNDB	**Serra Nova Dou**	**19.16**	**54**	*e*P	**P**	**10 40 42.7**	**-0.9**
PARB	**Paraibuna**	**19.57**	**92**	*e*P	**P**	**10 40 48.0**	**-0.1**
BDFB	**Brasilia**	**19.71**	**68**	P	**P**	**10 40 49.6**	**-0.1**
	comp=Z,7.5nm,0.3s,baz=243,slow=11,SNR=82						
NPGB	**Novo Progresso**	**20.30**	**35**	*e*P	**P**	**10 40 53.6**	**-2.2**
ESAR	**Angra dos Reis**	**20.69**	**92**	*e*P	**P**	**10 40 59.6**	**-0.3**
BSCB	**Bom Sucesso**	**20.74**	**86**	*e*P	**P**	**10 40 59.8**	**-0.8**
MAN01	**Angra dos Reis**	**21.15**	**91**	*e*P	**P**	**10 41 03.7**	**-1.1**
PEXB	**Peixe**	**21.36**	**59**	*e*P	**P**	**10 41 04.6**	**-2.5**
MACA	**Manacapuru-AM**	**21.69**	**17**	*e*P	**P**	**10 41 08.4**	**-2.0**
VAS01	**Vassouras-RJ**	**21.71**	**90**	*e*P	**P**	**10 41 09.6**	**-1.1**
ITTB	**Itaituba**	**22.41**	**31**	*e*P	**P**	**10 41 15.6**	**-1.8**
DIAM	**Diamantina, MG**	**22.47**	**80**	*e*P	**P**	**10 41 15.4**	**-2.7**
DUB01	**Friburgo-RJ**	**22.72**	**90**	*e*P	**P**	**10 41 19.2**	**-1.1**
JANB	**Januaria**	**23.15**	**71**	*e*P	**P**	**10 41 23.0**	**-1.2**
CAM01	**Campos-RJ**	**23.42**	**90**	*e*P	**P**	**10 41 25.8**	**-0.7**
SDBA	**SAO DESIDERIO**	**23.93**	**65**	*e*P	**P**	**10 41 30.6**	**-0.8**
SMTB	**Santa Maria do**	**23.94**	**54**	*e*P	**P**	**10 41 30.1**	**-1.3**
PTGA	**Pitinga**	**24.20**	**17**	P	**P**	**10 41 32.9**	**-0.8**
	comp=Z,3.8nm,0.3s,baz=203,slow=14,SNR=16						
PTGA	**Pitinga**	**24.20**	**17**	P	**P**	**10 41 33.5**	**-0.3**
PTGA				IAmb	IAmb	10 41 34.4	
	comp=Z,9.9nm,1.1s						
PTGA	**Pitinga**	**24.20**	**17**	*e*P	**P**	**10 41 33.4**	**-0.3**
PRPB	**Parauapebas**	**24.29**	**46**	*e*P	**P**	**10 41 32.3**	**-2.1**
ALF01	**Guarapari-ES**	**24.52**	**87**	*e*P	**P**	**10 41 36.0**	**-0.5**
SJMB	**Sao Joao De Ma**	**24.59**	**82**	*e*P	**P**	**10 41 36.4**	**-0.9**
BSFB	**Barra de Sao F**	**24.86**	**83**	*e*P	**P**	**10 41 38.7**	**-1.0**
RIB01	**Linhares ES**	**25.14**	**84**	*e*P	**P**	**10 41 41.3**	**-0.8**
MALB	**Monte Alegre**	**25.31**	**31**	*e*P	**P**	**10 41 43.6**	**-0.1**
NAN01	**Guarapari, ES**	**25.81**	**81**	*e*P	**P**	**10 41 47.0**	**-1.3**
OTAV	**Otavalo**	**26.63**	**334**	*e*P	**P**	**10 41 55.9**	**-0.2**
GDU01	**Guandu, BA**	**27.86**	**73**	*e*P	**P**	**10 42 05.1**	**-1.4**
NBPS	**Pedro II - PI**	**31.45**	**55**	*e*P	**P**	**10 42 37.0**	**-1.3**
NBPA	**Parau_RN**	**34.01**	**62**	*e*P	**P**	**10 42 59.7**	**-0.8**
RCBR	**Riachuelo**	**34.95**	**64**	P	**P**	**10 43 08.5**	**-0.1**
	comp=Z,12nm,0.8s,baz=218,slow=9.0,SNR=8.5						
RCBR	**Riachuelo**	**34.95**	**64**	*e*P	**P**	**10 43 08.6**	**-0.1**
NBPV	**Pedro Velho**	**35.13**	**65**	*e*P	**P**	**10 43 09.6**	**-0.5**
BELA	**Belgrano 2**	**55.94**	**172**	P	**P**	**10 45 53.0**	**+0.8**
BELA				IAmb	IAmb	10 45 54.4	
	comp=Z,4.9nm,0.8s						
SNAA	**Sanae**	**59.25**	**161**	P	**P**	**10 46 17.2**	**+1.8**
	comp=Z,3.0nm,0.6s,baz=274,slow=10,SNR=9.6						
SNAA	**Sanae**	**59.25**	**161**	P	**P**	**10 46 16.5**	**+1.0**
SNAA				IAmb	IAmb	10 46 17.6	
	comp=Z,4.7nm,0.8s						
WVT	**Waverly**	**63.06**	**341**	P	**P**	**10 46 41.5**	**+0.1**
WVT				IAmb	IAmb	10 46 42.4	
	comp=Z,5.3nm,0.7s						
QSPA	**South Pole Qui**	**66.11**	**180**	P	**P**	**10 47 03.0**	**+2.0**
LIC	**Lamto**	**67.45**	**72**	*e*P	**P**	**10 47 09.6**	**-0.5**
	comp=Z,49nm,2.0s						
TIC	**Toumodi**	**67.66**	**71**	*e*P	**P**	**10 47 12.6**	**+1.1**
KIC	**Kosan Boka**	**67.77**	**72**	*e*P	**P**	**10 47 11.3**	**-0.8**
	comp=Z,6.9nm,0.6s						
DBIC	**Dimbokro**	**67.82**	**71**	P	**P**	**10 47 11.5**	**-0.9**
	comp=Z,2.8nm,0.5s,baz=214,slow=7.1,SNR=5.5						
DBIC	**Dimbokro**	**67.82**	**71**	P	**P**	**10 47 12.2**	**-0.2**
DBIC				IAmb	IAmb	10 47 15.9	
	comp=Z,6.7nm,1.1s						
P38A	**Dawn**	**68.07**	**338**	P	**P**	**10 47 10.6**	**-2.9**
LENM	**Lemitar**	**69.30**	**325**	P	**P**	**10 47 21.9**	**+0.6**
TORD	**Torodi Ar. Bea**	**76.59**	**69**	P	**P**	**10 48 04.3**	**-0.1**
	comp=Z,4.2nm,0.5s,baz=261,slow=5.2,SNR=33						
PDAR	**Pinedale Array**	**77.24**	**329**	P	**P**	**10 48 08.8**	**+1.1**
	comp=Z,0.2nm,0.6s,baz=133,slow=9.2,SNR=2.6						
ULM	**Lac du Bonnet**	**78.33**	**342**	P	**P**	**10 48 14.4**	**+1.2**
	comp=Z,2.2nm,0.5s,baz=155,slow=5.9,SNR=8.8						
ULM				LR	LR	11 27 11.8	
	comp=Z,134nm,18.0s,baz=108,slow=39						
BOSA	**Boshof**	**80.67**	**117**	P	**P**	**10 48 26.9**	**+0.2**
	comp=Z,1.6nm,0.6s,baz=247,slow=4.1,SNR=3.9						
ESDC	**Sonseca Array**	**86.46**	**44**	P	**P**	**10 48 56.5**	**+0.8**
	comp=Z,0.6nm,0.4s,baz=250,slow=3.7,SNR=4.4						
ESDC	**Sonseca Array**	**86.46**	**44**	IAmb	IAmb	10 49 00.1	
	comp=Z,5.9nm,1.2s						
YKA	**Yellowknife Ar**	**94.22**	**340**	P	**P**	**10 49 32.5**	**+1.3**
	comp=Z,0.4nm,0.6s,baz=127,slow=5.3,SNR=17						
ASAR	**Alice Springs**	**128.37**	**205**	SKPbc	SKPbc	10 58 21.4	
	comp=Z,0.4nm,0.8s,baz=135,slow=3.2,SNR=4.3						
WRA	**Warramunga Arr**	**131.54**	**207**	SKPbc	**SKPbc**	**10 58 33.5**	**+0.7**
	comp=Z,1.3nm,1.0s,baz=157,slow=3.8,SNR=11						
SEY	**Seymchan**	**133.18**	**337**	SKPbc	**SKPbc**	**10 58 38.5**	**+1.5**
	comp=Z,0.3nm,0.2s,baz=55,slow=12,SNR=3.8						
ZALV	**Zalesovo Beam**	**143.47**	**28**	PKP	PKPbc	10 55 44.3	+0.6
	comp=Z,1.9nm,0.6s,baz=294,slow=3.8,SNR=13						
ZALV				SKPbc	**SKiKP**	**10 59 08.7**	**+1.3**
	comp=Z,0.6nm,0.5s,baz=288,slow=1.4,SNR=4.1						
MKAR	**Makanchi Array**	**146.59**	**40**	PKPbc	**PKPbc**	**10 55 53.3**	**-0.1**
	comp=Z,3.8nm,0.7s,baz=302,slow=3.2,SNR=32						

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*MOS **23** 10:46:36.7±1.7,44°.46N×148°.60E,h51^{km},mb4.2/1,Error ellipse: s-maj=9.9km s-min=7.9km az=139.5*

MOS Felt (II-III) at Gornyy, Goryachiye Klyuchi, Kuril'sk, Reydovo.

*NIED **23** 10:46:39.0,44°.10N×148°.19E,h0^{km},MW4.0,Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-0.02; M$_{\theta\theta}$0.54; M$_{\phi\phi}$-0.53; M$_{r\theta}$0.71; M$_{\theta\phi}$-0.30; M$_{\phi r}$0.62; Fault plane solution: M$_0$1.12000×10^{15} NP1: ϕ_s236.00000°,δ90.00000°,λ-123.00000°. NP2: ϕ_s146.00000°,δ33.00000°,λ0.00000°.*

*SKHL **23** 10:46:39.6±0.8,44°.50N×148°.40E,h71^{km}±8^{km},mb4.8/10*

*JMA **23** 10:46:39.0±0.3,44°.10N×148°.19E,h0^{km},M4.7*

*IDC **23** 10:46:41.2±2.5,44°.60N×148°.27E,h66^{km}±23^{km},mb3.4/11, mb1 3.7/16,mb1mx3.6/40,mbtmp3.7/16,Error ellipse: s-maj=22.0km s-min=14.6km az=132.0*

ISC 23 10:46:38.7±1.2**,44°.43N**±0°.06×**148°.52E**±0°.07**,h46**^{km}±12^{km}**, n74,**σ**1^{s}.44**/83**,mb3.6**/11**,2D,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**0.93**	**330**	*d* *i*PN	**Pn**	**10 46 54.9**	**-0.4**
KUR	**Kuril'sk**	**0.93**	**330**	*i* P	**Pn**	**10 46 54.9**	**-0.4**
KUR				AMB	AMB	10 46 56.0	
	1μm,0.2s						
KUR				*i* S	**Sn**	**10 47 06.0**	**-1.5**
KUR				A	A	10 47 07.0	
	7μm,0.2s						
KUR				A	A	10 47 07.0	
	5μm,0.2s						
YUK	**Yuzh-Kuril'sk**	**1.95**	**259**	*i* PN	**Pn**	**10 47 09.4**	**+0.1**
YUK	**Yuzh-Kuril'sk**	**1.95**	**259**	*i* P	**Pn**	**10 47 09.0**	**-0.3**
YUK				AMB	AMB	10 47 12.0	
	673nm,0.2s						
YUK				*e*S	**Sn**	**10 47 30.0**	**-2.6**
YUK				A	A	10 47 36.0	
	1μm,0.4s						
YUK				A	A	10 47 36.0	
	3μm,0.4s						
GRPR	**Tuman**	**2.03**	**258**	*e*PN	**Pn**	**10 47 10.2**	**-0.1**
GRPR				*e*S	**Sn**	**10 47 33.1**	**-1.3**
GRPR				pmax	pmax		
	comp=Z,438nm,0.2s						
GRPR				pmax	pmax		
	comp=E,115nm,0.1s						
GRPR				pmax	pmax		
	comp=N,108nm,0.2s						
GRPR				smax	smax		

	comp=E,2µm,0.2s						
GRPR				smax	smax		
	comp=N,3µm,0.4s						
GRPR	Tuman	2.03	258	eP	Pn	10 47 10.0	-0.3
GRPR				AMB	AMB	10 47 12.0	
	comp=N,438nm,0.2s						
GRPR				eS	Sn	10 47 33.0	-1.4
GRPR				A	A	10 47 40.0	
	comp=N,3µm,0.4s						
GRPR				A	A	10 47 40.0	
	comp=N,2µm,0.4s						
GLVR	Golovnino	2.27	253	ePN	Pn	10 47 14.1	+0.4
GLVR				eS	Sn	10 47 41.1	+0.7
GLVR				pmax	pmax		
	comp=Z,347nm,0.1s						
GLVR				smax	smax		
	comp=N,4µm,0.3s						
GLVR				smax	smax		
	comp=E,3µm,0.3s						
GLVR	Golovnino	2.27	253	eP	Pn	10 47 14.0	+0.3
GLVR				AMB	AMB	10 47 15.0	
	comp=E,347nm,0.2s						
GLVR				eS	Sn	10 47 40.0	-0.4
GLVR				A	A	10 47 45.0	
	comp=E,4µm,0.3s						
GLVR				A	A	10 47 45.0	
	comp=E,3µm,0.3s						
NEM2	Nemuro 2	2.27	243	P	Pn	10 47 13.3	-0.4
NEM2				eS	Sn	10 47 38.6	-1.9
NMR	Nemuro--Hokkai	2.28	243	⇓iPN	Pn	10 47 13.3	-0.5
NMR				i S	Sn	10 47 38.6	-2.1
NMR	Nemuro--Hokkai	2.28	243	i P	Pn	10 47 13.0	-0.8
NMR				i S	Sn	10 47 38.0	-2.7
RUSJ	Misakicho	2.38	263	ePN	Pn	10 47 16.4	+1.3
RUSJ				eS	Sn	10 47 44.7	+1.7
JRA	Rausu	2.50	260	P	Pn	10 47 17.9	+1.2
JRA				eS	Sn	10 47 46.6	+0.7
JNSB	Nemuroshibetsu	2.62	257	P	Pn	10 47 19.4	+1.0
JNSB				eS	Sn	10 47 49.8	+0.8
JKHN	Kushirohamanak	2.78	242	P	Pn	10 47 20.8	+0.1
JKHN				eS	Sn	10 47 52.0	-1.0
JNK	Nakash	2.87	254	P	Pn	10 47 22.7	+0.8
JAK	Akkeshi	3.12	244	P	Pn	10 47 25.5	+0.1
JAK				eS	Sn	10 48 00.3	-1.1
JTKR	Abashiri--Toko	3.35	264	P	Pn	10 47 29.3	+0.8
JAR	Ashorobuto	3.62	253	P	Pn	10 47 33.7	+1.5
JCH	Churui	4.17	246	P	Pn	10 47 40.7	+1.0
JKK2	Kamakawa 2	4.19	264	P	Pn	10 47 42.2	+2.1
JKA	Kamikawa-asahi	4.27	268	eP	Pn	10 47 42.7	+1.6
ASAJ	Asahikawa	4.27	268	P	Pn	10 47 42.7	+1.6
	comp=E,4.5nm,0.3s,baz=62,slow=17,SNR=18						
MYR	Moyori	4.38	243	eP	Pn	10 47 43.9	+1.3
ERM	Erimo	4.61	240	i PN	Pn	10 47 48.1	+2.4
ERM	Erimo	4.61	240	eP	Pn	10 47 47.7	+2.0
JNBK	Urakawa-nobuka	4.72	245	P	Pn	10 47 48.6	+1.2
YSS	Yuzh-Sakhalins	4.76	304	ePN	Pn	10 47 48.0	+0.1
YSS				eS	Sn	10 48 42.6	+0.8
YSS				pmax	pmax		
	comp=Z,30nm,1.0s						
YSS				smax	smax		
	comp=N,30nm,1.1s						
YSS	Yuzh-Sakhalins	4.76	304	eP	Pn	10 47 48.3	+0.4
YSS				AMB	AMB	10 47 50.5	
	comp=N,20nm,0.4s						
YSS				eS	Sn	10 48 40.4	-1.4
JKB	Kayabe	6.04	248	P	Pn	10 48 06.5	+1.1
JOT	Ohata	6.28	244	P	Pn	10 48 09.1	+0.4
UGL	Uglegorsk	6.42	319	eP	Pn	10 48 11.6	+1.0
UGL				AMB	AMB	10 48 13.0	
	comp=N,30nm,0.4s						
SKR	Severo-Kuril's	8.09	37	i PN	Pn	10 48 30.1	-3.3
SKR	Severo-Kuril's	8.09	37	eP	Pn	10 48 35.2	+1.8
SKR				eS	Sn	10 50 03.5	+0.1
TEY	Ternei	8.51	278	eP	Pn	10 48 42.8	+3.6
PAU	Pauzhetka	8.97	35	eP	Pn	10 48 47.2	+1.8
PAU				AMB	AMB	10 48 49.2	
	comp=N,17nm,0.7s						
PETK	Petropavlovsk-	10.58	32	P	Pn	10 49 08.5	+1.0
	comp=N,0.1nm,0.3s,baz=200,slow=13,SNR=10.0						
MJAR	Matsushiro Arr	11.12	228	P	Pn	10 49 14.9	-0.1
	comp=N,0.0nm,0.3s,baz=20,slow=11,SNR=2.8						
MAJO	Matsushiro	11.12	228	i PN	Pn	10 49 14.1	-0.9
USA0B	Ussuriysk Arra	11.85	275	i PN	Pn	10 49 25.3	+0.4
USRK	Ussuriysk Ar.	11.85	275	P	Pn	10 49 25.1	+0.2
	baz=81,slow=14,SNR=5.6						
KLR	Kul'dur	12.44	299	P	Pn	10 49 34.3	+1.3
	comp=N,0.1nm,0.3s,baz=110,slow=17,SNR=6.9						
KLR	Kul'dur	12.44	299	i PN	Pn	10 49 35.5	+2.5
KLR	Kul'dur	12.44	299	eP	Pn	10 49 32.6	-0.4
EKMR	Ekimchan	13.40	316	eP	Pn	10 49 45.0	-1.1
EKMR				AMB	AMB	10 49 50.0	
	comp=N,4.0nm,0.8s						
KROS	Kirovskiy	17.16	313	eP	Pn	10 50 32.0	-2.9
SEY	Seymchan	18.67	6	P	P	10 50 51.4	-1.2
	comp=N,0.1nm,0.3s,baz=159,slow=14,SNR=2.4						
SEY	Seymchan	18.67	6	eP	P	10 50 51.4	-1.2
YAK	Yakutsk	20.79	335	i P	P	10 51 17.0	+1.4
YAK				pmax	pmax		
	comp=Z,7.0nm,0.7s						
YAK	Yakutsk	20.79	335	eP	P	10 51 17.0	+1.4
ULN	Ulaanbaatar	28.69	292	i P	P	10 52 34.0	+2.7
ULN	Ulaanbaatar	28.69	292	eP	P	10 52 34.0	+2.7
H11N2	WAKE ISLAND Hy	29.00	142	T	T	11 23 22.3	
	baz=332,slow=76,SNR=281						
H11N1	WAKE ISLAND Hy	29.01	142	T	T	11 23 25.9	
	baz=332,slow=76,SNR=167						
H11N3	WAKE ISLAND Hy	29.02	142	T	T	11 23 25.0	
	baz=332,slow=76,SNR=249						
SONM	Songino Array	29.13	292	P	P	10 52 34.4	-0.8
	comp=Z,0.3nm,0.4s,baz=59,slow=5.6,SNR=4.1						
H11S1	WAKE ISLAND Hy	30.00	144	T	T	11 24 37.0	
	baz=333,slow=76,SNR=510						
H11S3	WAKE ISLAND Hy	30.00	144	T	T	11 24 33.7	
	baz=333,slow=76,SNR=337						
H11S2	WAKE ISLAND Hy	30.02	144	T	T	11 24 39.7	
	baz=333,slow=76,SNR=329						
ILAR	Eielson Array	40.35	37	P	P	10 54 11.8	+0.4
	comp=Z,0.5nm,0.7s,baz=268,slow=8.7,SNR=11						
ZALV	Zalesovo Beam	41.38	307	PcP	PcP	10 56 16.6	-0.8
	comp=Z,0.5nm,0.4s,baz=57,slow=5.3,SNR=2.6						
MKAR	Makanchi Array	45.15	298	P	P	10 54 49.4	-1.2
	comp=Z,0.2nm,0.4s,baz=77,slow=8.9,SNR=6.3						
MKAR				PcP	PcP	10 56 29.7	-0.6
	comp=Z,0.7nm,0.6s,baz=72,slow=4.6,SNR=2.1						
MKAR	Makanchi Array	45.15	298	eP	P	10 54 49.4	-1.2
YKA	Yellowknife Ar	54.68	34	P	P	10 56 02.9	+0.2
	comp=Z,0.7nm,0.6s,baz=301,slow=6.3,SNR=16						
FINES	FINESS Array B	64.71	333	P	P	10 57 08.8	-2.8
	comp=Z,6.1nm,1.1s,baz=18,slow=9.5,SNR=6.8						
WRA	Warramunga Arr	65.36	195	P	P	10 57 16.1	-0.2
	comp=Z,1.0nm,0.8s,baz=11,slow=6.4,SNR=5.0						
NVAR	Mina Array Bea	66.38	59	P	P	10 57 24.4	+1.4
	comp=Z,0.3nm,0.5s,baz=306,slow=7.7,SNR=1.9						
PDAR	Pinedale Array	68.71	51	P	P	10 57 38.0	+0.2
	comp=Z,0.2nm,0.4s,baz=344,slow=3.2,SNR=4.2						
ASAR	Alice Springs	69.08	194	P	P	10 57 41.0	+1.3
	comp=Z,0.5nm,0.6s,baz=7.3,slow=5.2,SNR=13						
NOA	NORSAR Array B	69.32	339	P	P	10 57 39.5	-1.5
	comp=Z,0.5nm,0.5s,baz=31,slow=6.6,SNR=5.1						
TXAR	Lajitas Array	81.45	57	P	P	10 58 52.0	+0.9
	comp=Z,0.8nm,0.6s,baz=304,slow=2.9,SNR=3.6						
H03N2	Juan Fernandez	141.97	90	T	T	13 45 40.0	
	baz=306,slow=76,SNR=6.0						
H03N3	Juan Fernandez	141.99	90	T	T	13 44 42.5	
	baz=306,SNR=8.7						
H03N1	Juan Fernandez	141.99	90	T	T	13 45 39.5	
	baz=306,slow=76,SNR=7.5						

IDC 23 10:47:03.6±3.3,**30°.03S×176°.03W,h0^{km},mb3.7**/2,
mb1 4.1/4,**mb1mx3.8**/33,**mbtmp3.9**/4,**ML3.4**/2,**Error ellipse: s-maj=76.5km s-min=35.0km az=111.0,**
Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	9.98	213	Pn	Pn	10 49 28.6	+0.3
	0.2nm,0.3s,baz=241,slow=3.7,SNR=6.5						
URZ				Sn	Sn	10 51 21.5	+0.5
	0.9nm,0.3s,baz=248,slow=22,SNR=8.1						
RPZ	Rata Peaks	17.10	213	P	Pn	10 51 03.6	-0.4
	0.3nm,0.3s,baz=191,slow=16,SNR=1.9						
ASAR	Alice Springs	44.83	266	P	P	10 55 19.9	+0.1
	0.7nm,0.8s,baz=106,slow=7.7,SNR=15						
WRA	Warramunga Arr	45.79	271	P	P	10 55 27.1	-0.2
	0.9nm,0.6s,baz=111,slow=7.7,SNR=12						
FINES	FINESS Array B	145.36	341	PKPbc	PKPbc	11 06 41.6	-1.0
	1.5nm,0.8s,baz=81,slow=8.6,SNR=3.7						

UPA ***23*** *11:13:00.0±1.3,8°.62N×84°.19W,h10^{km}±17^{km},MW4.2*
UCR ***23*** *11:13:00.3±2.1,8°.61N×84°.21W,h20^{km}±9^{km},MW3.6*
INET ***23*** *11:13:02.8,8°.71N×84°.08W,h17^{km},MW2.8*
ISC 23 11:12:58.1±1.7,**8°.67N**±0°.08×**84°.19W**±0°.05,**h6^{km}**±11^{km},
n25,σ**1^{s}01**/33,**2C-2D,Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDDO	Dominical	0.66	29	⇓eP	Pn	11 13 14.3	+0.3
EDDO				i S	Sn	11 13 24.7	0.0
RIOS	Rincon, Osa	0.67	88	eP	Pn	11 13 13.6	-0.5
RIOS				eS	Sn	11 13 23.3	-1.7
EDPN	Palmar Norte	0.78	68	⇓eP	Pn	11 13 15.9	+0.2
EDPN				eS	Sn	11 13 27.6	-0.1
EDLM	Las Mercedes	0.85	45	eP	Pg	11 13 13.9	-0.6
PEZE	Perez Zeledon,	0.87	36	eP	Pn	11 13 17.4	+0.4
PIRO	Carate, Puerto	0.89	107	⇑iP	Pb	11 13 17.0	+1.0
PIRO				eS	Sb	11 13 28.6	+0.6
PIRO	Carate, Puerto	0.89	107	eP	Pb	11 13 16.9	+1.0
EDBA	Buenos Aires	1.03	62	eP	Pn	11 13 19.4	+0.3
EDBA				eS	Sn	11 13 34.0	+0.1
LCR2	La Lucha 2	1.08	10	eP	Pn	11 13 20.5	+0.5
JACO	JACO, Garabito	1.09	335	eP	Pn	11 13 19.7	-0.1
DRK0	Durika	1.10	58	⇑iP	Pn	11 13 20.9	+0.7
DRK0				eS	Sn	11 13 36.6	+0.7
DRK0	Durika	1.10	58	eP	Pn	11 13 20.8	+0.5
RIMA	Rio Macho	1.13	17	eP	Pn	11 13 21.6	+0.9
EDSV	San Vito	1.22	83	eP	Pn	11 13 22.9	+1.2
CDITO	Canoas	1.31	94	eS	Sb	11 13 36.9	-3.3
HDC	Heredia	1.32	3	eS	Sn	11 13 42.8	+1.6
CVTR	Volcan Turrial	1.41	18	eP	Pg	11 13 26.6	+1.5
BRU2	Volcan	1.49	85	eP	Pb	11 13 26.6	+0.3
BRU2				eS	Sg	11 13 46.8	+0.8
BRU2	Volcan	1.49	85	eP	Pb	11 13 26.6	+0.3
BCO2	Palmira	1.65	88	eP	Pb	11 13 29.1	+0.2
BCO2				eS	Sg	11 13 50.6	-0.4
JTS	Las Juntas de	1.77	335	eP	Pg	11 13 31.8	-0.4
CNI2	El Empalme, Bo	1.86	66	eS	Sg	11 13 56.7	-1.2
GRZA	Playa Garza	1.89	311	eP	Pn	11 13 31.6	+0.7
PLVR	Palo Verde	2.02	326	eP	Pb	11 13 34.5	-0.8
CHGR2	Aguacate	2.04	82	eS	Sn	11 13 58.8	-0.1

GEN ***23*** *11:31:07.8,44°.20N×10°.89E,h13^{km}±7^{km},Ml1.7*
ROM 23 11:31:07.6±0.1,**44°.182N**±0°.006×**10°.895E**±0°.006,
h11^{km},ML2.0/7,**4C-1D,Error ellipse: s-maj=0.6km s-min=0.5km az=155.0,Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FNVD	Fontana Vidola	0.16	95	⇓P	Pg	11 31 11.1	-0.1
FNVD				S	Sg	11 31 14.2	+0.3
FNVD				AML	AML		
	comp=N,711µm,0.5s						
FNVD				AML	AML		
	comp=E,672µm,0.2s						
POPM	Popiglio	0.17	216	P	Pg	11 31 12.0	+0.7
POPM				S	Sg	11 31 15.7	+1.8
POPM	Popiglio	0.17	216	⇑P	Pg	11 31 12.0	+0.7
POPM				S	Sg	11 31 15.6	+1.7
POPM				AML	AML		
	comp=N,2275µm,0.2s						
POPM				AML	AML		
	comp=E,2965µm,0.2s						
MTCR	Monte La Croce	0.17	154	⇑P	Pg	11 31 11.9	+0.5
MTCR				S	Sg	11 31 15.4	+1.3
ZCCA	Zocca	0.18	19	⇑P	Pg	11 31 11.9	+0.5
ZCCA				S	Sg	11 31 16.6	+2.4
ZCCA				AML	AML		
	comp=E,658µm,0.4s						
ZCCA				AML	AML		
	comp=N,683µm,0.5s						
ZCCA				AML	AML		
	comp=E,658µm,0.4s						
BDI	Bagni Di Lucca	0.25	241	⇑P	Pg	11 31 13.0	+0.4
BDI				S	Sg	11 31 17.5	+1.4
BDI				AML	AML		
	comp=E,490µm,0.3s						
BDI				AML	AML		
	comp=N,412µm,0.7s						
BDI				AML	AML		
	comp=E,580µm,0.4s						
BDI				AML	AML		
	comp=N,443µm,0.5s						
PTF	Prato	0.26	151	P	Pg	11 31 13.1	+0.3
PTF				S	Sb	11 31 17.6	-1.1
CARD	Cardoso	0.34	242	S	Sb	11 31 20.1	-0.9
CARD	Cardoso	0.34	242	P	Pg	11 31 14.3	0.0
CARD				S	Sb	11 31 20.0	-1.0
CARD				AML	AML		
	comp=E,199µm,1.1s						
CARD				AML	AML		
	comp=N,254µm,0.7s						
CARD				AML	AML		
	comp=E,200µm,1.1s						
SARO	Sassorosso	0.36	270	P	Pg	11 31 14.9	+0.2
SARO				S	Sg	11 31 19.7	+0.3
SARO	Sassorosso	0.36	270	P	Pg	11 31 14.8	+0.1
SARO				S	Sg	11 31 20.5	+1.0
SARO				AML	AML		
	comp=E,78µm,0.3s						
SARO				AML	AML		
	comp=N,208µm,0.4s						
SEI	Scarperia	0.36	111	P	Pg	11 31 14.6	-0.1
SEI				S	Sb	11 31 21.5	-0.2
VLC	Villacollemand	0.37	267	P	Pg	11 31 15.3	+0.4
VLC				S	Sb	11 31 21.3	-0.6
CRMI	Carmignano	0.40	172	P	Pg	11 31 16.0	+0.6
CRMI				S	Sb	11 31 22.5	-0.2
MAIM	Mastiano	0.40	228	P	Pg	11 31 15.8	+0.4
MAIM				S	Sb	11 31 22.2	-0.5
MAIM	Mastiano	0.40	228	P	Pg	11 31 15.6	+0.2
MAIM				S	Sb	11 31 21.9	-0.8
ERBM	Eremo	0.42	305	P	Pg	11 31 16.2	+0.3
ERBM				AML	AML		
	comp=E,292µm,1.6s						
ERBM				AML	AML		
	comp=N,402µm,1.3s						
MTRZ	Monterenzio	0.45	64	P	Pg	11 31 16.2	-0.3
PII	Pisa	0.53	210	P	Pg	11 31 18.1	+0.2
PII				S	Sg	11 31 25.4	+0.5
EQUI	Equi	0.53	269	P	Pb	11 31 19.0	0.0
EQUI				S	Sg	11 31 25.2	+0.1
EQUI	Equi	0.53	269	P	Pb	11 31 19.1	+0.1
EQUI				S	Sg	11 31 25.3	+0.3
RUFI	Rufina	0.56	127	P	Pb	11 31 19.0	-0.4
RUFI				S	Sb	11 31 27.2	-0.3
GRAM	Graiana	0.67	298	P	Pg	11 31 20.8	+0.2
MSSA	Maissana	1.00	278	AML	AML		
	comp=N,58µm,1.6s						
MSSA				AML	AML		
	comp=E,58µm,1.6s						

ROM 23 11:31:28.0±0.1,**43°.361N**±0°.002×**12°.617E**±0°.004,
h8^{km},Md1.0/2,**Error ellipse: s-maj=0.3km s-min=0.1km az=126.0,Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATFO	Monte Foce - G	0.03	280	P	Pg	11 31 29.7	+0.1
ATFO				S	Sg	11 31 30.8	0.0
ATFO				AML	AML		
	comp=E,428µm,0.2s						
ATFO				AML	AML		
	comp=N,556µm,0.3s						
ATFO				END			
MURB	Monte Urbino	0.12	215	P	Pg	11 31 31.1	+0.4
MURB				S	Sg	11 31 33.4	+0.9
MURB				AML	AML		
	comp=E,408µm,0.2s						
MURB				AML	AML		
	comp=N,402µm,0.7s						
MURB				END			
SSFR	Montelago di S	0.14	58	P	Pg	11 31 31.5	+0.4
SSFR				S	Sg	11 31 34.3	+1.1
ATVO	AVT- Monte Val	0.15	278	P	Pg	11 31 31.7	+0.5
ATVO				S	Sg	11 31 34.5	+1.0
ATCC	AVT- Casa Cast	0.18	175	P	Pg	11 31 32.0	+0.4
ATCC				S	Sg	11 31 35.3	+1.2
FRON	Frontone	0.18	27	P	Pg	11 31 32.1	+0.5
FRON				S	Sg	11 31 35.2	+1.1
ATPI	Pietralunga -	0.18	300	P	Pg	11 31 32.2	+0.5
ATPI				S	Sg	11 31 35.7	+1.4
ARRO	Arrone	0.79	172	S	Sb	11 31 55.0	+0.2
ARRO	Arrone	0.79	172	S	Sb	11 31 55.0	+0.2
ARRO	Arrone	0.79	172	S	Sb	11 31 55.0	+0.2

PGC ***23*** *11:47:08.1±0.8,50°.39N×130°.27W,h10^{km},MLSn3.3/36, Mw3.9/36,204km west of Pt. Hardy, Bc Vancouver Island, Canada Region*
IDC ***23*** *11:47:11.2±1.5,50°.56N×129°.72W,h0^{km},mb3.7/3, mb1 4.0/11,mb1mx3.7/49,mbtmp3.7/11,ML3.7/8,MS3.3/7, Ms1 3.3/7,ms1mx3.1/50,Error ellipse: s-maj=22.4km s-min=9.4km az=71.0*
NEIC ***23*** *11:47:11.1±1.3,50°.7N±0°.1×129°.9W±0°.2,h10^{km}±2^{km}, mb4.0/11,ML3.9(OTT),Error ellipse: s-maj=26.3km s-min=10.5km az=230.0*
ISC 23 11:47:08.2±3.3,**50°.56N**±0°.05×**130°.09W**±0°.04,**h1^{km}**±23^{km},
n145,σ**1^{s}53**/158,**mb4.0**/7,**MS3.5**/3,**Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOLB	Holberg	1.25	86	Pn	Pb	11 47 31.2	-1.4
HOLB				Sn	Sb	11 47 47.5	-1.7
PHC	Port Hardy	1.70	84	Pn	Pn	11 47 37.8	-1.2
PHC				Sn	Sn	11 47 58.0	-3.3
HG4B	Hotspring	1.87	339	Pn	Pn	11 47 39.5	-1.8
HG4B				Sn	Sn	11 48 03.7	-1.8
MAYB	Maynard	1.87	94	Pn	Pn	11 47 39.7	-1.8
FHRB	Fair Harbour	1.97	104	Pn	Pn	11 47 40.5	-2.2
EDB	Eliza Dome	2.03	109	Pn	Pn	11 47 40.7	-2.8
BBB	Bella Bella	2.04	37	Pn	Pn	11 47 43.5	-0.2
	34nm,0.3s,baz=232,slow=5.1,SNR=949						
BBB				Sn	Sb	11 48 07.4	-4.5
	97nm,0.3s,baz=216,slow=23,SNR=8.6						
BBB				LR	LR	11 48 37.0	
	comp=Z,149nm,21.5s,baz=148,slow=45						
BBB	Bella Bella	2.04	37	Pn	Pn	11 47 43.5	-0.2
BBB				Sn	Sb	11 48 07.6	-4.3
BBB	Bella Bella	2.04	37		Pn	11 47 43.6	-0.1
TLCB	Telegraph Cove	2.08	89	Pn	Pn	11 47 43.0	-1.1
TLCB				Sn	Sn	11 48 08.2	-2.4
BNB	Barry Inlet	2.27	333	Pn	Pn	11 47 45.1	-1.7
BNB				Sn	Sn	11 48 12.5	-2.9
WOSB	Woss	2.29	99	Pn	Pn	11 47 45.8	-1.3
ETB	Estevan Point	2.58	116	Pn	Pn	11 47 48.4	-2.6
NCRB	Newcastle Ridg	2.58	92	Pn	Pn	11 47 50.0	-1.3
HG1B	Mitchell Dam	2.69	333	Pn	Pn	11 47 51.6	-1.0
GDR	Gold River	2.72	105	Pn	Pn	11 47 51.2	-1.9
NC89	ODP889	2.83	131	Pn	Pn	11 47 52.6	-1.8
MOBC	Moresby Island	2.84	336	Pn	Pn	11 47 53.0	-1.6
MOBC				Sn	Sn	11 48 27.9	-1.6
BNAB	Bonilla	2.95	354	Pn	Pn	11 47 55.5	-0.7
BNAB				Sn	Sn	11 48 29.6	-2.6
DIB	Dawson Inlet,	3.03	332	Pn	Pn	11 47 55.3	-1.9
DIB				Sn	Sn	11 48 32.5	-1.6
DIB	Dawson Inlet,	3.03	332	Pn	Pn	11 47 57.4	+0.1
H02S1	DAWSON INLET T	3.03	332	Pn	Pn	11 47 56.5	-0.7
	SNR=1471						
H02S1				Sn	Sn	11 48 30.5	-3.6
TOFB	Tofino	3.05	116	Pn	Pn	11 47 55.3	-2.2
CBB	Campbell River	3.08	98	Pn	Pn	11 47 56.1	-1.8
H02N1	VAN INLET T-PH	3.09	332	Pn	Pn	11 47 55.6	-2.6
H02N1				Sn	Sn	11 48 33.9	-1.9
	SNR=650						
VIB	Van Inlet	3.09	332	Pn	Pn	11 47 56.3	-1.9
VIB				Sn	Sn	11 48 33.7	-2.1
BTB	Buttle Lake	3.14	109	Pn	Pn	11 47 57.2	-1.8
GRNB	Grenville Isla	3.29	1	Pn	Pn	11 48 00.7	-0.1
GRNB				Sn	Sn	11 48 38.7	-2.0
OZB	Mount Ozzard	3.38	117	Pn	Pn	11 47 59.6	-2.6
KITB	Kitimat	3.63	14	Pn	Pn	11 48 05.8	+0.3
KITB				Sn	Sn	11 48 48.0	-1.0
B927	Port Alberni	3.67	109	Pn	Pn	11 48 04.6	-1.4
TXB	Texada	3.74	101	Pn	Pn	11 48 05.8	-1.2
RUBB	Prince Rupert	3.77	359	Pn	Pn	11 48 07.5	+0.1
RUBB				Sn	Sn	11 48 50.7	-1.7
NDB	Naden	3.82	334	Pn	Pn	11 48 07.0	-1.2
MGB	Mount Grey	3.83	112	Pn	Pn	11 48 06.6	-1.8
GHNB	Nanoose	3.98	106	Pn	Pn	11 48 08.8	-1.6
SHB	Sechelt	4.12	101	Pn	Pn	11 48 11.3	-1.0
LIB	Langara Island	4.12	335	Pn	Pn	11 48 10.8	-1.4
NLLB	Nanaimo Lost L	4.17	106	Pn	Pn	11 48 11.1	-1.7
PFB	Port Renfrew	4.18	116	Pn	Pn	11 48 12.0	-1.1
OCP	Olym-Cheeka Pk	4.23	120	Pn	Pn	11 48 13.4	-0.3
B926	Mesachie Lake	4.24	112	Pn	Pn	11 48 13.4	-0.6
UBRB	Upper Baezaeko	4.40	56	Pn	Pn	11 48 17.6	+1.4
UBRB				Sn	Sn	11 49 07.3	-0.9
WPB	Watts Point	4.52	99	Pn	Pn	11 48 17.5	-0.2
BIB	Bowen Island	4.53	102	Pn	Pn	11 48 16.5	-1.3
GOBB	Galiano Island	4.56	108	Pn	Pn	11 48 17.6	-0.7
WSLR	Whistler	4.61	93	Pn	Pn	11 48 18.6	-0.4
OBC	Olympics--Boni	4.68	120	Pn	Pn	11 48 20.0	0.0
B009	North Saanich	4.72	111	Pn	Pn	11 48 19.9	-0.6
B010	North Saanich	4.72	111	Pn	Pn	11 48 19.4	-1.1
PA02	PA02 Ocean	4.72	111	Pn	Pn	11 48 20.1	-0.4
PGC	Sidney	4.72	111	Pn	Pn	11 48 19.5	-1.0
PGC	Sidney	4.72	111		Pn	11 48 20.0	-0.5
PA01	PA01 North	4.72	111	Pn	Pn	11 48 20.3	-0.2
B011	North Saanich	4.72	111	Pn	Pn	11 48 19.6	-1.0
PA12	PA12 Sannich	4.72	111	Pn	Pn	11 48 19.3	-1.2
STW	Striped Peak	4.84	117	Pn	Pn	11 48 21.9	-0.3
VGZ	Gonzales	4.91	113	Pn	Pn	11 48 23.0	0.0
MCW	Mount Constitu	5.08	109	Pn	Pn	11 48 25.6	+0.1
NLWA	Neilton Lookou	5.18	125		Pn	11 48 27.3	+0.4
LLLB	Lillooet	5.23	86	Pn	Pn	11 48 27.7	+0.2
CRAG	Craig	5.24	341	Pn	Pn	11 48 28.3	+0.6
BLN	Blyn Mountain	5.31	116	Pn	Pn	11 48 28.8	+0.1
VDB	Vedder Mountai	5.40	103	Pn	Pn	11 48 30.1	+0.3
A05A	Maple Falls	5.42	104	Pn	Pn	11 48 31.4	+1.3
A05A	Maple Falls	5.42	104	Pn	Pn	11 48 31.1	+1.1
HDW	Hoodsport	5.46	120	Pn	Pn	11 48 31.1	+0.3
MBW	Mount Baker	5.61	105	Pn	Pn	11 48 33.1	+0.3
CMW	Cultus Mountai	5.62	109	Pn	Pn	11 48 33.3	+0.4
HOPB	Hope	5.72	99	Pn	Pn	11 48 35.1	+0.9
JCW	Jim Creek	5.83	111	Pn	Pn	11 48 36.1	+0.3
B06A	Marblemount	5.96	107	Pn	Pn	11 48 38.1	+0.6
B06A	Marblemount	5.96	107		Pn	11 48 38.5	+1.0
RPW	Rockport	5.97	107	Pn	Pn	11 48 38.4	+0.6
WRAK	Wrangell Islan	6.02	348	Pn	Pn	11 48 39.3	+1.1
D05A	Enumclaw	6.32	119	Pn	Pn	11 48 43.4	+0.9
D05A	Enumclaw	6.32	119	Pn	Pn	11 48 44.2	+1.7
GPW	Glacier Peak	6.34	109	Pn	Pn	11 48 43.7	+0.7
FMW	Mount Fremont	6.65	120	Pn	Pn	11 48 48.1	+1.0
LON	Longmire	6.68	122	Pn	Pn	11 48 48.3	+0.8
LON	Longmire	6.68	122		Pn	11 48 48.8	+1.3
PNT	Penticton	6.87	96	Pn	Pn	11 48 50.7	+0.6
LTY	Liberty	7.03	114	Pn	Pn	11 48 53.1	+0.8
LTY	Liberty	7.03	114		Pn	11 48 53.9	+1.6
BMBC	Bull Mountain	7.27	38	Pn	Pn	11 48 57.8	+2.2
BMBC				Sn	Sn	11 50 19.0	+0.3
B08A	Colville Reser	7.35	103	Pn	Pn	11 48 57.4	+0.8
B08A	Colville Reser	7.35	103	Pn	Pn	11 48 57.1	+0.5
MNB	Mounoet Dainar	7.51	73	Pn	Pn	11 48 59.7	+0.7
NBC4	NorthernBC 4	7.64	44	Pn	Pn	11 49 02.5	+1.9
NBC4				Sn	Sn	11 50 27.3	-0.6
DLBC	Dease Lake	7.89	0	Pn	Pn	11 49 07.0	+3.0
	1.8nm,0.3s,baz=170,slow=3.7,SNR=130						
DLBC				Sn	Sn	11 50 36.9	+3.0
	0.9nm,0.3s,baz=295,slow=14,SNR=3.0						
DLBC				LR	LR	11 52 09.8	
	comp=Z,330nm,19.9s,baz=258,slow=38						
DLBC	Dease Lake	7.89	0	Pn	Pn	11 49 06.9	+2.8
DLBC				Sn	Sn	11 50 34.5	+0.5
HAWA	Hanford	8.16	117		Pn	11 49 08.8	+1.0
D08A	Wollman Farm,	8.16	111		Pn	11 49 08.0	+0.2
C09A	Chrisman Ranch	8.22	105	Pn	Pn	11 49 09.0	+0.4
C09A	Chrisman Ranch	8.22	105	Pn	Pn	11 49 08.7	+0.1
NBC5	NorthernBC 5	8.22	29	Pn	Pn	11 49 10.7	+2.1
NBC5				Sn	Sn	11 50 42.2	+0.1
NEW	Newport	8.76	100	Pn	Pn	11 49 16.1	+0.1
	1.0nm,0.3s,baz=298,slow=12,SNR=11						
NEW				LR	LR	11 52 40.2	
	comp=Z,148nm,21.3s,baz=299,slow=39						
E09A	Wood Farm, Sta	8.90	112	Pn	Pn	11 49 18.4	+0.6

NBC6	NorthernBC 6	9.50	29	Sn	Sn	11 51 13.9	+0.5
F10A	Beach Ranch, E	9.72	113	Pn	Pn	11 49 30.5	+1.2
YBH	Yreka Blue Hor	10.20	147	Pn	Pn	11 49 38.7	+2.9
	0.1nm,0.3s,baz=41,slow=9.7,SNR=4.1						
YBH				LR	LR	11 53 08.4	
	comp=Z,143nm,18.7s,baz=344,slow=36						
BMO	Blue Mountains	10.33	119	Pn	Pn	11 49 38.4	+0.8
WHY	Whitehorse	10.47	347	Pn	Pn	11 49 41.8	+2.4
MSO	Missoula	11.31	103	Pn	Pn	11 49 50.7	-0.2
HLID	Hailey	12.76	117	Pn	Pn	11 50 12.1	+1.2
DLMT	Dillon	12.82	107	Pn	Pn	11 50 11.9	+0.4
MCMT	McKenzie Canyo	12.94	110		Pn	11 50 13.8	+0.4
EGMT	Eagleton	13.51	93		Pn	11 50 22.9	+2.0
ELK	Elko	14.27	128	LR	LR	11 56 10.8	
	comp=Z,71nm,21.5s,baz=342,slow=38						
H17A	Grant Village	14.55	108		Pn	11 50 36.3	+1.0
YKA	Yellowknife Ar	14.64	29	Pn	Pn	11 50 35.8	-0.4
	0.2nm,0.3s,baz=216,slow=12,SNR=18						
YKA				Sn	Sn	11 53 08.7	-10
	0.1nm,0.3s,baz=216,slow=21,SNR=3.2						
NVAR	Mina Array Bea	14.74	141	Pn	Pn	11 50 41.9	+4.0
	0.1nm,0.3s,baz=311,slow=12,SNR=1.7						
REDW	Red Top Meadow	14.95	111		Pn	11 50 42.3	+1.5
SNOW	Snow King Moun	14.95	111		Pn	11 50 41.0	+0.1
LOHW	Long Hollow	14.96	110		Pn	11 50 42.8	+1.9
RLMT	Red Lodge	14.98	103		Pn	11 50 41.8	+0.6
BW06	Boulder Array	16.07	111		Pn	11 50 54.2	-1.3
BW06				IAmb	IAmb	11 50 59.4	
	comp=Z,9.0nm,1.1s						
PD31	Pinedale Array	16.07	111		Pn	11 50 54.0	-1.5
PDAR	Pinedale Array	16.07	111	Pn	P	11 50 58.5	-0.5
	comp=Z,0.1nm,0.3s,baz=316,slow=12,SNR=27						
PDAR				LR	LR	11 57 22.8	
	comp=Z,99nm,21.3s,baz=19,slow=39						
PDAR	Pinedale Array	16.07	111		Pn	11 50 56.2	+0.6
ILAR	Eielson Array	16.75	335	Pn	P	11 51 10.4	+4.2
	comp=Z,0.1nm,0.3s,baz=155,slow=11,SNR=24						
ILAR	Eielson Array	16.75	335	P	Pn	11 51 04.7	+0.9
PRP	Porcupine Dome	16.99	338	P	P	11 51 09.7	+0.7
INK	Inuvik	17.88	356	P	P	11 51 19.7	+1.2
	comp=Z,0.1nm,0.3s,baz=161,slow=9.7,SNR=4.5						
BMAR	Burnt Mountain	18.40	342	P	Pn	11 51 24.7	+0.4
PV14	Lion Creek, Pa	19.27	121	P	Pn	11 51 36.3	+1.0
PV14				IAmb	IAmb	11 51 41.0	
	comp=Z,7.4nm,0.9s						
IMAR	Indian Mountai	19.64	331	P	P	11 51 38.3	+0.4
TOLK	Toolik Lake Re	20.45	340	P	P	11 51 48.2	+1.4
TOLK				IAmb	IAmb	11 52 01.3	
	comp=Z,10.0nm,1.2s						
ULM	Lac du Bonnet	21.70	77	P	P	11 51 59.5	-0.9
	comp=Z,4.7nm,0.7s,baz=287,slow=11,SNR=7.4						
ULM	Lac du Bonnet	21.70	77	P	P	11 52 00.4	+0.1
FCC	Fort Churchill	22.14	54	P	P	11 52 05.6	+0.6
FCC				IAmb	IAmb	11 52 10.3	
	comp=Z,5.3nm,1.1s						
KSCO	Kaye Shedlock’	22.52	110	P	P	11 52 10.6	+1.2
F33A	5 Mile Ranch,	22.89	89	P	P	11 52 13.8	+0.7
F33A				IAmb	IAmb	11 52 16.0	
	comp=Z,6.3nm,1.1s						
ANMO	Albuquerque	23.19	123	P	P	11 52 16.2	-0.3
	comp=Z,0.7nm,0.6s,baz=311,slow=14,SNR=3.4						
ANMO				LR	LR	12 02 44.7	
	comp=Z,87nm,20.1s,baz=8.5,slow=41						
ECSD	EROS Data Cent	23.62	94	P	P	11 52 22.0	+1.4
ECSD				IAmb	IAmb	11 52 23.7	
	comp=Z,6.2nm,1.1s						
EYMN	Ely	25.14	81	P	P	11 52 35.0	+0.5
EYMN				IAmb	IAmb	11 52 45.4	
	comp=Z,3.2nm,0.8s						
TXAR	Lajitas Array	29.06	127	P	P	11 53 10.4	+0.4
	comp=Z,0.7nm,0.7s,baz=327,slow=6.0,SNR=4.1						
H11N2	WAKE ISLAND Hy	57.92	262	T	T	12 59 35.6	
	baz=42,slow=76,SNR=226						
H11N3	WAKE ISLAND Hy	57.92	262	T	T	12 59 35.7	
	baz=42,slow=76,SNR=230						
H11N1	WAKE ISLAND Hy	57.94	262	T	T	12 59 36.9	
	baz=42,slow=76,SNR=139						
KLR	Kul'dur	58.51	310	LR	LR	12 22 04.0	
	comp=Z,38nm,18.4s,baz=332,slow=36						
H11S1	WAKE ISLAND Hy	58.95	261	T	T	13 01 00.5	
	baz=40,slow=75,SNR=22						
H11S2	WAKE ISLAND Hy	58.96	261	T	T	13 00 59.7	
	baz=40,slow=75,SNR=22						
H11S3	WAKE ISLAND Hy	58.97	261	T	T	13 01 06.2	
	baz=40,slow=75,SNR=24						
RAO	Raoul Island	90.02	220	LR	LR	12 31 32.6	
	comp=Z,338nm,21.0s,baz=90,slow=30						

IDC 23 11:47:30.2±9.6**, 22°.51S**×**172°.22E, h51**^{km}±66^{km}**, mb3.5**/3**, mb1 3.7**/4**, mb1mx3.4**/35**, mbtmp3.7**/4**, ML3.6**/1**, MS3.0**/1**, Ms1 3.0**/1**, ms1mx2.5**/24**, Error ellipse: s-maj=117.3km s-min=62.9km az=10.0, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	5.37	274	P	Pn	11 48 47.9	+0.1
	2.0nm,0.3s,baz=118,slow=20,SNR=45						
DZM				S	Sn	11 49 49.0	+0.6
	2.5nm,0.3s,baz=312,slow=22,SNR=6.5						
URZ	Urewera	16.25	166	LR	LR	11 56 52.3	
	comp=Z,55nm,19.7s,baz=31,slow=35						
STKA	Stephens Creek	28.71	244	P	P	11 53 22.3	-0.4
	0.4nm,0.6s,baz=100,slow=12,SNR=0.6						
ASAR	Alice Springs	35.20	260	P	P	11 54 20.2	+0.5
	1.2nm,0.9s,baz=85,slow=8.2,SNR=12						
WRA	Warramunga Arr	35.34	267	P	P	11 54 20.6	-0.4
	0.8nm,0.6s,baz=97,slow=8.6,SNR=8.6						

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*ASRS **23** 11:55:58.0±0.2, 51°N±1°×89°.3E±0°.9, h10^{km}, MLh3.0/14, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/tab confirmed*

*NNC **23** 11:55:58.5±1.8, 51°.18N×89°.12E, h0^{km}, mb3.0, mpv2.6, Error ellipse: s-maj=15.7km s-min=7.6km az=90.0*

ISC 23 11:55:57.9±0.8**, 50°.98N**±0°.03×**89°.30E**±0°.02**, h10**^{km}**, n30,** σ**1**^{s}.**70**/52**, 5C-4D, Tuva-Buryatia-Mongolia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TEL	Teeli	0.57	86	Pg	Pg	11 56 08.1	-0.9
TEL				Sg	Sg	11 56 15.7	-0.8
ULGR	Ulagan, Altay	0.92	248	Pg	Pg	11 56 14.0	-1.6
ULGR				Sg	Sg	11 56 26.3	-1.2
CUR	Chagan-Uzun	1.07	215	Pg	Pg	11 56 15.0	-3.4
CUR				Sg	Sg	11 56 29.6	-2.7
CHBI	Chibit, Altay	1.32	240	Pg	Pn	11 56 21.2	-1.2
CHBI				Sg	Sb	11 56 38.8	-1.1
ARTR	Artybash	1.51	304	Pg	Pb	11 56 25.9	0.0
ARTR				Sg	Sg	11 56 45.8	-0.5
DGZ	Jazzator, Alta	1.75	224	Pg	Pg	11 56 31.2	-0.2
DGZ				Sg	Sb	11 56 52.8	+0.6
TASR	Tashtagol	1.99	334	Pg	Pg	11 56 34.8	-1.1
TASR				Sg	Sg	11 57 02.7	+0.9
DJO	Djoy, Khakassi	2.16	33	Pg	Pg	11 56 38.0	-1.3
DJO				Sg	Sg	11 57 06.6	-0.7
DJOS	Djoyskaya Sosn	2.24	35	Pg	Pg	11 56 40.6	-0.1
DJOS				Sg	Sg	11 57 10.0	+0.3
CERR	Cheremushki	2.29	34	Pg	Pg	11 56 40.7	-1.1
CERR				Sg	Sg	11 57 11.1	-0.4
GALT	Gorno-Altaysk,	2.31	296	Pg	Pb	11 56 40.3	+0.7
GALT				Sg	Sb	11 57 09.2	+0.9
LUZB	Luzhba, Kemero	2.70	355	Pg	Pb	11 56 46.9	+0.7
LUZB				Sg	Sg	11 57 24.3	-0.2
BLRR	Bol’shaya Rech	2.83	42	Pg	Pg	11 56 51.0	-1.0
BLRR				Sg	Sg	11 57 28.2	-0.5
UKR	Ust'-Kan	2.86	271	Pg	Pb	11 56 49.7	+0.7
UKR				Sg	Sg	11 57 28.3	-1.4
ELT	Eltsovka	2.96	322	Pg	Pb	11 56 49.6	-1.1
ELT				Sg	Sg	11 57 31.0	-1.9
ARDR	Aradan	3.03	56	Pg	Pb	11 56 52.7	+0.8
ARDR				Sg	Sg	11 57 33.1	-2.0
KZLR	Kyzyl	3.31	75	Pg	Pb	11 56 56.6	-0.2
KZLR				Sg	Sg	11 57 43.3	-0.9
SHRR	Shira	3.56	8	Pg	Pb	11 57 01.6	+0.8
SHRR				Sg	Sg	11 57 49.4	-2.7
BJR3	Bachatsky-3 (S	3.77	331	Sg	Sg	11 57 58.7	-0.3
ZAA0	Zalesovo Array	4.04	319	⇑Pg	Pb	11 57 07.2	-1.9
	0.1nm,0.3s						
ZAA0				⇓Lg	Lg	11 58 01.3	
	2.1nm,0.7s						
SALR	Pechorkino, Sa	4.08	329	Sg	Sg	11 58 09.7	+1.0
TDJR	Todzha	4.47	69	Sg	Sg	11 58 21.4	+0.3
BRCR	Berchikul'	4.71	353	Pg	Pb	11 57 21.1	+0.7
BRCR				Sg	Sg	11 58 30.0	+1.1
KNGR	Kungurtug, Tuv	5.23	91	Sg	Sg	11 58 48.0	+2.3
NVSII	Novosibirsk	5.33	319	Sg	Sg	11 58 48.4	-0.4
NVS	Novosibirsk	5.33	319	Sg	Sg	11 58 47.3	-1.5
ORY	Orie	5.34	39	Pg	Pg	11 57 35.8	-4.4
ORY				Sg	Sg	11 58 45.4	-3.9
MK31	Makanchi Array	6.23	231	Pn	Pn	11 57 32.5	+2.6
	0.1nm,0.2s,baz=54,slow=12,SNR=17						
MK31				⇑Sn	Sn	11 58 46.0	+4.8
	0.7nm,0.5s,baz=266,slow=54,SNR=4.4						
MK31				⇑Lg	Lg	11 59 16.6	
	1.8nm,0.6s,baz=54,slow=25,SNR=3.6						
MAKZ	Makanchi	6.38	232	⇑Pn	Pn	11 57 34.3	+2.5
	1.4nm,1.0s						
MAKZ				⇑Lg	Lg	11 59 21.7	
	3.0nm,0.8s						
KURK	Kurchatov	6.77	272	⇓Pn	Pn	11 57 38.1	+0.9
	1.3nm,0.7s						
KURK				⇓Sn	Sn	11 58 54.7	+0.5
	2.6nm,0.7s						
KURK				⇓Lg	Lg	11 59 30.1	
	6.3nm,0.9s						

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*IDC **23** 11:57:38.6±1.9, 53°.27N×166°.61W, h0^{km}, mb3.4/5, mb1 3.7/7, mb1mx3.4/47, mbtmp3.5/7, ML3.4/2, MS3.7/1, Ms1 3.7/1, ms1mx2.7/38, Error ellipse: s-maj=40.6km s-min=25.6km az=167.0*

*AEIC **23** 11:57:44±1.3, 53°.27N±0°.09×166°.66W±0°.08, h53^{km}±8^{km}, ML3.7, Error ellipse: s-maj=14.0km s-min=5.5km az=158.0*

*NEIC **23** 11:57:45.1±1.3, 53°.31N±0°.10×166°.7W±0°.1, h61^{km}±10^{km}, Error ellipse: s-maj=16.1km s-min=6.3km az=147.0*

ISC 23 11:57:44.9±0.9**, 53°.31N**±0°.10×**166°.68W**±0°.07**, h53**^{km}**, n57,** σ**0**^{s}.**93**/47**, mb3.3**/5**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MGOD	Makushin Gods	0.50	347		Pn	11 57 57.2	+0.9
MREP	Makushin Rep’t	0.50	356		Pn	11 57 57.3	+0.9
MAPS	Pakushin South	0.52	343		Pn	11 57 57.7	+1.2
UNV	Unalaska Valle	0.55	11		Pn	11 57 57.1	+0.3
MNAT	Makushin Natee	0.57	0		Pn	11 57 58.0	+0.8
MSW	Makushin Switc	0.61	354		Pn	11 57 58.7	+1.1
OKFG	Magazine Ridge	0.74	278		Pn	11 57 59.0	-0.3
AKMO	Akutan Morgan	0.88	27		Pn	11 58 01.7	+0.6
OKSO	Okmok South	0.89	274		Pn	11 58 00.7	-0.5
AKBBA	Akutan Broad B	0.91	29		Pn	11 58 02.0	+0.6
AKLV	Akutan Long Va	0.96	27		Pn	11 58 02.6	+0.5
OKSP	Okmok Steeple	0.97	267		Pn	11 58 02.7	+0.4
AKGG	Akutan Green G	0.98	25		Pn	11 58 02.5	+0.1
AKUT	Akutan	0.99	33		Pn	11 58 02.8	+0.3
AKSA	Akutan Strait	1.01	35		Pn	11 58 02.8	-0.1
NIKH	Nikolski High	1.35	256		Pn	11 58 07.5	+0.1
WEBT	Westdahl Beart	1.72	41		Pn	11 58 13.4	+1.1
SSBA	Shishaldin	2.10	45		Pn	11 58 18.2	+0.5
SSLW	Shishaldin Wes	2.10	45		Pn	11 58 18.3	+0.6
SSLS	Shishaldin Sou	2.12	47		Pn	11 58 18.8	+0.9
SSLN	Shishaldin Nor	2.18	45		Pn	11 58 20.0	+1.3
FALS	False Pass	2.47	50		Pn	11 58 23.2	+0.6
DT1	Dutton Round H	3.15	53		Pn	11 58 32.4	+0.4
SDPT	Sand Point	4.17	58	Pn	Pn	11 58 45.7	-0.2
SPIA	Saint Paul Isl	4.38	334	Pn	Pn	11 58 48.8	0.0
ATKA	Atka Island	4.70	259	Pn	Pn	11 58 53.3	+0.2
ADK	Adak	6.26	261	Pn	Pn	11 59 14.3	-0.2
OHAK	Old Harbor	8.59	58	Pn	Pn	11 59 44.6	-1.8
KDAK	Kodiak Island	9.16	55	Pn	Pn	11 59 52.2	-1.9
	0.7nm,0.3s,baz=235,slow=2.4,SNR=17						
KDAK	Kodiak Island	9.16	55		Pn	11 59 52.5	-1.7
SVW2	Sparrevohn	9.85	33	Pn	Pn	12 00 04.1	+0.5
TTA	Tatalina	11.15	26	Pn	Pn	12 00 20.4	-1.1
ANM	Nome	11.31	3	Pn	Pn	12 00 24.3	+0.8
SEW	Seward	11.63	47	Pn	Pn	12 00 27.3	-0.7
SUA	Susitna One	11.83	40	Pn	Pn	12 00 29.0	-1.7
SKT	Skwentna	11.86	37	Pn	Pn	12 00 31.4	+0.3
PPLA	Purkeypile	12.26	33	Pn	Pn	12 00 37.3	+0.8
HIN	Hinchinbrook I	13.09	49	Pn	Pn	12 00 46.3	-1.5
IMAR	Indian Mountai	14.24	22		Pn	12 01 02.5	-1.0
ILAR	Eielson Array	15.26	33	Pn	Pn	12 01 15.8	-0.8
	0.1nm,0.3s,baz=219,slow=10.0,SNR=6.6						
EGAK	Eagle	17.29	38	P	P	12 01 42.6	-0.3
TOLK	Toolik Lake Re	17.36	21	P	Pn	12 01 42.1	-1.0
PETK	Petropavlovsk-	21.20	284	P	P	12 02 25.9	+0.2
	1.1nm,0.7s,baz=88,slow=14,SNR=8.8						
INK	Inuvik	21.66	33	P	P	12 02 28.5	-2.0
	2.1nm,0.4s,baz=258,slow=6.6,SNR=14						
YKA	Yellowknife Ar	28.39	50	P	P	12 03 34.1	+0.4
	0.2nm,0.4s,baz=274,slow=7.0,SNR=9.2						
PDAR	Pinedale Array	38.64	82	P	P	12 05 04.1	+0.9
	0.2nm,0.5s,baz=256,slow=7.3,SNR=2.0						
H11N2	WAKE ISLAND Hy	39.22	222	T	T	12 46 51.9	
	baz=25,slow=76,SNR=96						
H11N3	WAKE ISLAND Hy	39.23	221	T	T	12 47 02.5	
	baz=25,slow=76,SNR=71						
H11N1	WAKE ISLAND Hy	39.24	222	T	T	12 47 03.3	
	baz=25,slow=76,SNR=52						
H11S1	WAKE ISLAND Hy	40.41	221	T	T	12 48 29.3	
	baz=24,slow=76,SNR=95						
H11S2	WAKE ISLAND Hy	40.42	221	T	T	12 48 30.5	
	baz=24,slow=76,SNR=89						
H11S3	WAKE ISLAND Hy	40.42	221	T	T	12 48 31.6	
	baz=24,slow=76,SNR=85						
NRIK	Noril'sk	46.37	332	LR	LR	12 26 47.3	
	comp=Z,90nm,19.6s,baz=322,slow=38						
TXAR	Lajitas Array	51.12	92	P	P	12 06 42.8	+0.5
	0.2nm,0.5s,baz=328,slow=8.5,SNR=1.5						
H03N2	Juan Fernandez	114.78	113	T	T	14 21 31.5	
	baz=322,slow=77,SNR=60						
H03N1	Juan Fernandez	114.79	113	T	T	14 21 32.8	
	baz=322,slow=77,SNR=92						
H03N3	Juan Fernandez	114.79	113	T	T	14 21 30.7	
	baz=322,slow=77,SNR=104						

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*IDC **23** 11:58:35.6±2.2, 2°.54S×128°.45E, h0^{km}, mb3.3/2, mb1 3.7/3, mb1mx3.3/35, mbtmp3.5/3, ML3.7/1, MS3.1/1, Ms1 3.3/1, ms1mx2.7/22, Error ellipse: s-maj=140.3km s-min=28.1km az=68.0*

*DJA **23** 11:58:40.1±0.4, 3°S±5°×12°7E±°, h24^{km}±6^{km}, M3.3/7, MLv3.3/7*

ISC 23 11:58:42.0±1.0**, 3°.15S**±0°.09×**127°.36E**±0°.06**, h42**^{km}**, n9,** σ**1**^{s}.**26**/10**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NLAI	Namlea	0.27	250	P	Pn	11 58 48.7	-1.4
NLAI				S	Sn	11 58 54.4	-1.4
MSAI	Masohi	1.58	97	P	Pn	11 59 07.0	-0.6
SANI	Sanana	1.75	309	P	Pn	11 59 09.5	-0.3
SANI				S	Sn	11 59 30.8	-0.1
SWI	Sorong	4.51	60	P	Pn	11 59 46.4	-1.4
FAKI	Fak Fak	4.89	87	P	Pn	11 59 52.0	-1.1
WRA	Warramunga Arr	18.03	158	P	Pn	12 02 50.0	+0.5
	0.3nm,0.3s,baz=341,slow=12,SNR=17						
ASAR	Alice Springs	21.36	163	P	P	12 03 27.5	+1.6
	0.6nm,0.3s,baz=347,slow=12,SNR=27						
CMAR	Chiang Mai Arr	35.27	309	LR	LR	12 22 26.0	
	comp=Z,27nm,19.3s,baz=325,slow=40						
MKAR	Makanchi Array	63.58	327	P	P	12 09 09.3	+0.8
	0.2nm,0.5s,baz=120,slow=8.5,SNR=2.6						

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*IDC **23** 12:12:58.7±0.6, 13°.56N×144°.84E, h104^{km}±4^{km}, mb3.3/8, mb1 3.5/8, mb1mx3.2/55, mbtmp3.6/8, Error ellipse: s-maj=31.2km s-min=17.4km az=113.0*

*NEIC **23** 12:12:58.5±1.1, 13°.40N±0°.10×144°.9E±0°.2, h106^{km}±4^{km}, mb4.2/8, Error ellipse: s-maj=31.1km s-min=12.1km az=106.0*

ISC 23 12:12:58.4±0.8**, 13°.36N**±0°.10×**144°.9E**±0°.2**, h106**^{km}±6^{km}**, n33,** σ**0**^{s}.**93**/27**, mb3.6**/11**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	0.23	5	P	Pn	12 13 13.6	+0.1
	524nm,0.3s,baz=247,slow=6.0,SNR=900						
GUMO				S	Sn	12 13 24.5	-0.3
	1µm,0.3s,baz=244,slow=23,SNR=18						
GUMO	Guam	0.23	5	P	Pn	12 13 13.7	+0.2
ANA2	Anatahan	3.08	16	Pn	Pn	12 13 46.6	+1.1
SARN	Sarigan	3.44	15	P	Pn	12 13 51.8	+1.5
MANU	Manus Island	15.50	171	Pn	Pn	12 16 31.3	0.0
MANU				IAmb	IAmb	12 16 32.5	
	comp=Z,11nm,1.3s						
H11S3	WAKE ISLAND Hy	21.61	73	T	T	12 40 18.4	
	baz=261,slow=70,SNR=3.3						
H11S1	WAKE ISLAND Hy	21.62	73	T	T	12 39 50.2	
	baz=261,slow=70,SNR=4.0						
H11S2	WAKE ISLAND Hy	21.62	74	T	T	12 39 51.7	
	baz=261,slow=70,SNR=3.5						
H11N1	WAKE ISLAND Hy	22.04	70	T	T	12 40 55.2	
	baz=257,slow=75,SNR=8.4						
H11N2	WAKE ISLAND Hy	22.05	70	T	T	12 40 56.4	
	baz=257,slow=75,SNR=6.1						
H11N3	WAKE ISLAND Hy	22.06	70	T	T	12 40 57.6	
	baz=257,slow=75,SNR=8.3						
WB0	Warramunga Arr	34.49	198	P	P	12 19 37.6	+1.2
WB0				IAmb	IAmb	12 19 38.9	
	comp=Z,4.1nm,1.2s						
WR0	Warramunga Arr	34.63	197	P	P	12 19 39.0	+1.4
WR0				IAmb	IAmb	12 19 54.8	
	comp=Z,5.3nm,1.2s						
WB2	Warramunga Arr	34.67	198	P	P	12 19 38.4	+0.4
WRA	Warramunga Arr	34.67	198	P	P	12 19 39.3	+1.3
	comp=Z,0.3nm,0.5s,baz=20,slow=9.6,SNR=5.0						
ASAR	Alice Springs	38.32	196	P	P	12 20 10.9	+1.9
	comp=Z,0.3nm,0.6s,baz=21,slow=13,SNR=6.6						
ASAR	Alice Springs	38.32	196	P	P	12 20 09.6	+0.6
CMAR	Chiang Mai Arr	44.35	283	P	P	12 20 58.8	+0.3
	comp=Z,0.3nm,0.3s,baz=91,slow=6.3,SNR=1.7						
MK31	Makanchi Array	61.64	316	P	P	12 23 04.6	-0.5
MKAR	Makanchi Array	61.64	316	P	P	12 23 04.6	-0.5
	comp=Z,0.3nm,0.5s,baz=94,slow=8.8,SNR=6.4						
MKAR	Makanchi Array	61.64	316	P	P	12 23 04.4	-0.7
PMR	Palmer	67.00	28	P	P	12 23 39.0	-0.6
ILAR	Eielson Array	68.78	25	P	P	12 23 49.3	-1.6
	comp=Z,0.3nm,0.5s,baz=247,slow=6.2,SNR=14						
ILAR	Eielson Array	68.78	25	P	P	12 23 49.7	-1.2
DOT	Dot Lake	69.75	27	P	P	12 23 56.5	-0.3
BMAR	Burnt Mountain	70.32	23	P	P	12 24 00.1	-0.2
EGAK	Eagle	71.19	26	P	P	12 24 06.2	+0.6
EGAK				IAmb	IAmb	12 24 26.5	
	comp=Z,6.0nm,1.4s						
DLBC	Dease Lake	76.19	33	P	P	12 24 35.8	+0.8
	comp=Z,1.0nm,0.7s,baz=198,slow=3.2,SNR=4.1						
YKA	Yellowknife Ar	83.07	27	P	P	12 25 11.7	-0.4
	comp=Z,0.2nm,0.5s,baz=287,slow=4.2,SNR=5.5						
RES	Resolute Bay	84.78	13	P	P	12 25 19.9	-0.6
	comp=Z,0.5nm,0.7s,baz=286,slow=5.0,SNR=3.6						
ECR	Eagle Creek	90.79	45	P	P	12 25 49.9	-0.4
DBIC	Dimbokro	143.93	302	PKP	PKPbc	12 32 20.5	0.0
	comp=Z,1.0nm,0.2s,baz=61,slow=2.8,SNR=8.6						
LPAZ	La Paz	148.00	99	PKPbc	PKiKP	12 32 34.4	-0.6
	comp=Z,1.0nm,0.5s,baz=315,slow=2.9,SNR=4.1						

IDC 23 12:37:21.7±3.0**, 6°.89S**×**129°.58E, h126**^{km}±40^{km}**, mb2.8**/1**, mb1 3.1**/5**, mb1mx2.9**/54**, mbtmp3.5**/5**, Error ellipse: s-maj=67.4km s-min=21.7km az=89.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	6.21	16	P	Pn	12 38 51.3	+0.1
	0.6nm,0.3s,baz=210,slow=20,SNR=8.8						
SIJI				S	Sn	12 39 53.9	-7.1
	1.0nm,0.3s,baz=238,slow=22,SNR=7.4						
FITZ	Fitzroy Crossi	11.78	199	P	Pn	12 40 06.5	+0.6
	0.1nm,0.3s,baz=318,slow=20,SNR=1.4						
FITZ				S	Sn	12 42 10.6	-5.2
	0.1nm,0.3s,baz=255,slow=22,SNR=1.3						
WRA	Warramunga Arr	13.77	161	P	Pn	12 40 29.9	-1.9
	0.3nm,0.3s,baz=339,slow=13,SNR=11						
WRA				S	Sn	12 42 54.9	-9.0
	0.2nm,0.3s,baz=336,slow=23,SNR=2.6						
ASAR	Alice Springs	17.19	166	P	Pn	12 41 15.1	+0.8
	0.1nm,0.3s,baz=345,slow=10,SNR=9.9						
MKAR	Makanchi Array	67.90	327	P	P	12 48 06.7	-0.1
	0.1nm,0.4s,baz=120,slow=8.1,SNR=4.4						

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*NEIC **23** 12:41:08.9±0.9, 13°.0N±0°.2×51°.09E±0°.07, h10^{km}±2^{km}, mb4.0/6, Error ellipse: s-maj=31.8km s-min=12.2km az=180.0*

*IDC **23** 12:41:08.3±1.7, 13°.05N×51°.03E, h0^{km}, mb3.9/9, mb1 4.1/10, mb1mx3.6/59, mbtmp4.0/10, ML4.8/1, MS3.8/1, Ms1 3.8/1, ms1mx2.9/38, Error ellipse: s-maj=40.8km s-min=22.8km az=163.0*

ISC 23 12:41:09.5±0.9**, 12°.9N**±0°.1×**51°.15E**±0°.08**, h16**^{km}**, n22,** σ**0**^{s}.**90**/22**, mb4.0**/11**, Eastern Gulf of Aden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCY	Socotra	2.85	103		Pn	12 41 54.6	+0.1
SOCY				Sn	Sn	12 42 27.1	-1.5
ATD	Arta Tunnel	8.22	262	Pn	Pn	12 43 07.8	-0.4
	12nm,0.3s,baz=349,slow=3.5,SNR=32						
ATD	Arta Tunnel	8.22	262		Pn	12 43 08.0	-0.2
GEYT	Alibeck	25.74	13	P	P	12 46 39.4	+0.1
	2.7nm,0.7s,baz=204,slow=11,SNR=4.0						
GEYT	Alibeck	25.74	13	P	P	12 46 38.9	-0.5
GEYT				IAmb	IAmb	12 46 41.9	
	comp=Z,2.4nm,0.8s						
KBZ	Khabaz	31.58	349	P	P	12 47 31.2	0.0
	comp=Z,1.2nm,0.8s,baz=184,slow=9.6,SNR=4.0						
KKAR	Karatay Array	34.48	25	P	P	12 47 56.5	-0.2
KKAR				IAmb	IAmb	12 47 59.0	
	comp=Z,2.0nm,1.0s						
AAK	Ala-Archa	35.91	30	LR	LR	13 04 21.6	
	comp=Z,167nm,21.6s,baz=268,slow=39						
ABKAR	Akbulak array	37.02	10	P	P	12 48 17.5	-0.9
ABKAR				IAmb	IAmb	12 48 21.9	
	comp=Z,4.1nm,1.2s						
AKTO	Aktyubinsk	37.90	7	P	P	12 48 25.9	+0.1
	comp=Z,1.6nm,0.8s,baz=203,slow=8.8,SNR=4.0						
MK31	Makanchi Array	42.77	32	P	P	12 49 05.8	-0.5
MKAR	Makanchi Array	42.77	32	P	P	12 49 06.7	+0.4
	comp=Z,0.8nm,0.5s,baz=219,slow=8.0,SNR=14						
MKAR	Makanchi Array	42.77	32	P	P	12 49 05.9	-0.4
BVAR	Borovoye Array	42.92	17	P	P	12 49 06.8	-0.5
	comp=Z,0.5nm,0.5s,baz=206,slow=9.9,SNR=5.5						
CM31	Chiang Mai Arr	46.26	77	P	P	12 49 35.5	+0.9
CMAR	Chiang Mai Arr	46.26	77	P	P	12 49 36.4	+1.8
	comp=Z,2.5nm,0.8s,baz=277,slow=9.1,SNR=22						
CMAR	Chiang Mai Arr	46.26	77	P	P	12 49 35.6	+1.0
TORD	Torodi Ar. Bea	48.12	276	P	P	12 49 49.2	+0.1
	comp=Z,1.1nm,0.8s,baz=89,slow=7.2,SNR=4.7						
ZALV	Zalesovo Beam	48.85	26	P	P	12 49 53.0	-1.2
	comp=Z,1.0nm,0.7s,baz=227,slow=8.1,SNR=5.5						
ZALV	Zalesovo Beam	48.85	26	P	P	12 49 52.6	-1.5
SONM	Songino Array	57.46	41	P	P	12 50 59.4	+1.5
	comp=Z,0.5nm,0.4s,baz=232,slow=1.7,SNR=3.7						
SONM	Songino Array	57.46	41	P	P	12 50 58.2	+0.3
SONM				IAmb	IAmb	12 51 02.4	
	comp=Z,2.4nm,1.5s						

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*BJI **23** 12:42:02.0±0.0, 13°.00N×51°.10E, h10^{km}, mB5.2/26, mb4.6/50, Ms5.0/4, Ms7 4.7/2*

*IDC **23** 12:42:03.1±0.5, 13°.09N×51°.02E, h0^{km}, mb4.4/31, mb1 4.5/33, mb1mx4.4/57, mbtmp4.4/33, ML4.5/2, MS3.6/4, Ms1 3.6/4, ms1mx3.1/41, Error ellipse: s-maj=14.6km s-min=10.4km az=119.0*

*NEIC **23** 12:42:03.8±1.5, 13°.01N±0°.10×51°.08E±0°.05, h10^{km}±1^{km}, mb4.8/39, Error ellipse: s-maj=17.4km s-min=7.1km az=344.0*

*OMAN **23** 12:42:03.4, 13°.22N×51°.11E, h10^{km}, mb5.5/2, ml4.1/3*

ISC 23 12:42:04.9±0.4**, 13°.10N**±0°.05×**51°.13E**±0°.05**, h16**^{km}**, n172,** σ**1**^{s}.**61**/185**, mb4.7**/87**, 2C-1D, Eastern Gulf of Aden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCY	Socotra	2.93	108	Pn	Pn	12 42 49.7	-1.4
SOCY	Socotra	2.93	108	P	Pn	12 42 49.6	-1.4
	SNR=5.9						
SOCY				S	Sn	12 43 23.1	-2.8
ABTO	Aybut	4.71	26	P	Pn	12 43 13.5	-2.0
	SNR=6.9						
ABTO				S	Sn	12 44 04.1	-5.9
	SNR=9.1						
RBK	Rabkut	5.28	34	P	Pn	12 43 22.4	-0.9
	SNR=14						
RBK				S	Sn	12 44 22.1	-1.9
WHFO	Wadi Hawf	5.42	28	P	Pn	12 43 23.6	-1.6
	SNR=16						
WHFO				S	Sn	12 44 24.0	-3.4
DMTO	DMTO	5.88	38	P	Pn	12 43 31.9	+0.4
	SNR=6.6						
DMTO				S	Sn	12 44 37.7	-0.9

DOK	Doka	6.20	27	P	Pn	12 43 34.3	-1.5
	SNR=8.0						
DOK				S	Sn	12 44 43.3	-3.1
ATD	Arta Tunnel	8.25	260	Pn	Pn	12 44 02.9	-1.1
	23nm,0.3s,baz=226,slow=23,SNR=30						
ATD	Arta Tunnel	8.25	260	Pn	Pn	12 44 02.5	-1.6
WSAR	Wadi Sarin	12.34	34	LR	LR	12 49 33.0	
	comp=Z,694nm,18.3s,baz=250,slow=36						
UOSS	Minazif	12.72	21	Pn	Pn	12 45 07.2	+1.9
UMR	Umm Al-Rimmam	16.67	350	*e*P		12 45 57.1	
RST	Umm Al-Ruwaisa	16.76	347	*e*P		12 45 58.5	
MIB	Mutribah	16.99	349	*e*P		12 46 01.0	
LODK	Lodwar	18.32	240	P	Pn	12 46 17.9	-0.8
	SNR=12						
KMBO	Kilima Mbogo	19.73	225	P	P	12 46 33.2	-1.3
	0.5nm,0.3s,baz=38,slow=11,SNR=10.0						
KMBO				LR	LR	12 53 32.7	
	comp=Z,89nm,19.6s,baz=68,slow=35						
KIBK	Kibwezi	20.10	221	P	P	12 46 38.1	-0.1
	SNR=6.1						
EIL	Elat	22.29	320	P	P	12 47 05.3	+3.7
	7.0nm,0.9s,baz=87,slow=9.3,SNR=3.6						
ASF	Jabal al Asfar	23.04	328	P	P	12 47 12.9	+3.2
	0.1nm,0.6s,baz=44,slow=2.7,SNR=3.2						
MMAI	Mount Meron Ar	24.48	327	P	P	12 47 24.8	+1.3
	3.5nm,0.8s,baz=148,slow=4.9,SNR=4.9						
GEYT	Alibeck	25.50	13	P	P	12 47 34.0	+1.4
	15nm,0.9s,baz=205,slow=13,SNR=13						
GEYT	Alibeck	25.50	13	P	P	12 47 33.6	+1.0
GYA0B	ALIBECK ARRAY	25.50	13	P	P	12 47 33.5	+0.9
GYA0B				IAmb	IAmb	12 47 45.9	
	comp=Z,22nm,0.9s						
MARD	Mardin	25.83	341	P	P	12 47 36.9	+1.1
GEVA	Gevas	26.11	345	P	P	12 47 39.7	+1.3
GEVA				IAmb	IAmb	12 47 44.6	
	comp=Z,28nm,0.9s						
KBL	Kabul	26.82	34	P	P	12 47 46.3	+1.5
KBL				IAmb	IAmb	12 47 53.4	
	comp=Z,17nm,1.1s						
GNI	Garni	27.52	349	P	P	12 47 52.8	+1.8
	comp=Z,23nm,0.8s,baz=311,slow=3.4,SNR=8.3						
GNI				LR	LR	12 59 31.1	
	comp=Z,94nm,19.8s,baz=234,slow=38						
GNI	Garni	27.52	349	P	P	12 47 52.0	+0.9
BR131	Keskin Array S	30.68	333	P	P	12 48 19.6	+0.5
BRTR	Keskin Array B	30.68	333	P	P	12 48 19.1	0.0
	comp=Z,4.5nm,1.1s,baz=162,slow=9.1,SNR=12						
BRTR				PcP	PcP	12 51 18.0	+0.9
	comp=Z,0.6nm,0.9s,baz=242,slow=3.1,SNR=2.3						
BRTR	Keskin Array B	30.68	333	P	P	12 48 18.4	-0.7
KBZ	Khabaz	31.33	348	P	P	12 48 25.9	+1.4
	comp=Z,8.0nm,0.9s,baz=176,slow=7.3,SNR=14						
KIV	Kislovodsk	31.59	348	P	P	12 48 27.2	+0.2
KIV				IAmb	IAmb	12 48 30.9	
	comp=Z,21nm,1.2s						
OPO	Ambohidratompo	31.71	187	P	P	12 48 29.2	+0.8
	comp=Z,6.4nm,0.9s,baz=156,slow=6.0,SNR=4.1						
IUG	Iuzhnay	33.27	26	*e*P	P	12 48 43.0	+1.2
	comp=Z,8.9nm,1.0s,baz=26						
KSH	Kashi	34.24	35	P	P	12 48 49.3	-1.0
KSH				PP	PnPn	12 50 00.8	-3.7
KSH				PcP	PcP	12 51 21.3	-5.5
KSH				S	S	12 54 13.8	-2.9
KSH				ScP	ScP	12 55 12.0	+0.6
KSH				pmax	pmax		
	comp=Z,11nm,0.4s						
KSH				pmax	pmax		
	comp=Z,430nm,7.3s						
KSH				LR	LR		
	comp=Z,910nm,7.3s						
KSH				LR	LR		
	comp=Z,750nm,10.8s						
KSH				LR	LR		
	comp=Z,760nm,10.7s						
KK31	Karatay Array	34.26	26	P	P	12 48 52.1	+1.9
KK31				IAmb	IAmb	12 48 54.5	
	comp=Z,15nm,1.2s						
KKAR	Karatay Array	34.26	26	P	P	12 48 51.6	+1.3
KKAR				IAmb	IAmb	12 48 54.6	
	comp=Z,15nm,1.2s						
KKAR	Karatay Array	34.26	26	P	P	12 48 51.7	+1.4
DZA	Taraz	34.44	27	*e*P	P	12 48 53.3	+1.4
	comp=Z,6.3nm,0.7s,baz=27						
GKN	Gorkha	34.56	59	*e*P	P	12 48 54.8	+1.6
	comp=Z,54nm,1.1s						
DMN	Daman	34.83	60	*e*P	P	12 48 57.4	+1.7
	comp=Z,33nm,1.0s						
AML	Almayashu	34.93	30	P	P	12 48 58.9	+2.3
	SNR=10.0						
KKN	Kakani	35.03	60	*e*P	P	12 48 58.8	+1.4
	comp=Z,42nm,1.0s						
PKIN	Phulchoki	35.07	60	*e*P	P	12 48 58.6	+0.8
	comp=Z,13nm,0.7s						
PKI	Pulchoki	35.08	60	*e*P	P	12 48 58.7	+0.8
	comp=Z,21nm,1.0s						
UCH	Uchtor	35.41	31	P	P	12 49 03.0	+2.3
	SNR=16						
GUN	Gumba	35.57	60	*e*P	P	12 49 03.2	+1.0
	comp=Z,77nm,1.1s						
AAK	Ala-Archa	35.70	30	P	P	12 49 05.6	+2.7
	comp=Z,8.8nm,0.9s,baz=235,slow=2.1,SNR=18						
AAK	Ala-Archa	35.70	30	P	P	12 49 05.9	+3.0
	SNR=10						
AAK	Ala-Archa	35.70	30	P	P	12 49 04.9	+1.9
AAK				IAmb	IAmb	12 49 06.7	
	comp=Z,12nm,1.1s						
RAMN	Ramite	35.92	62	*e*P	P	12 49 05.7	+0.6
	comp=Z,18nm,1.0s						
KBK	Karagaybulak	35.94	30	P	P	12 49 07.7	+2.7
	SNR=14						
CHMS	Chumysh	36.10	30	P	P	12 49 08.1	+1.9
	SNR=7.4						
LSZ	Lusaka	36.20	220	P	P	12 49 06.2	-1.2
	comp=Z,5.8nm,1.0s,baz=25,slow=5.3,SNR=3.5						
LSZ	Lusaka	36.20	220	P	P	12 49 06.7	-0.7
ULHL	Ulahol	36.30	32	P	P	12 49 10.5	+2.4
	SNR=18						
TKM2	Tokmak 2	36.46	31	P	P	12 49 11.1	+1.6
	SNR=7.0						
ODAN	Odare	36.58	62	*e*P	P	12 49 11.9	+1.2
ABKAR	Akbulak array	36.77	10	P	P	12 49 12.6	+0.8
ABKAR	Akbulak array	36.77	10	P	P	12 49 12.2	+0.4
ABKAR				IAmb	IAmb	12 49 14.7	
	comp=Z,19nm,1.0s						
TNSS	Tian-Shan	37.23	32	*e*P	P	12 49 17.9	+1.7
	baz=32						
AAA	Alma-Ata	37.33	32	*e*P	P	12 49 18.2	+1.4
	baz=32						
BTLS	Baital	37.34	27	*e*P	P	12 49 17.4	+0.7
	baz=27						
MDOK	Medeo	37.37	32	*e*P	P	12 49 17.8	+0.7
	baz=32						
KUU	Kurty	37.54	30	*e*P	P	12 49 19.2	+0.8
	comp=Z,21nm,1.1s,baz=30						
AKTO	Aktyubinsk	37.65	7	P	P	12 49 20.2	+1.0
	comp=Z,14nm,1.0s,baz=210,slow=8.7,SNR=19						
CHKK	Chushkaly	37.83	31	*e*P	P	12 49 21.7	+0.8
	baz=31						
SATY	Saty	38.01	33	*e*P	P	12 49 23.7	+1.2
	comp=Z,15nm,1.2s,baz=33						
UZB	Uzynbulak	38.40	33	*e*P	P	12 49 26.8	+1.0
	baz=34						
KPKS	Kokpek	38.43	33	*e*P	P	12 49 27.1	+1.1
	comp=Z,25nm,1.2s,baz=33						
SHLS	Shalkode	38.64	34	*e*P	P	12 49 30.6	+2.8
	baz=34						
MLR	Muntele Rosu	38.71	331	P	P	12 49 29.2	+0.8
	comp=Z,2.2nm,0.6s,baz=50,slow=5.9,SNR=4.0						
TDK	Taldyqorghan	39.37	31	*e*P	P	12 49 34.5	+0.8
	comp=Z,22nm,0.9s,baz=31						
MATP	Matopo	40.07	214	P	P	12 49 39.4	-0.5
	comp=Z,4.7nm,0.9s,baz=32,slow=11,SNR=6.6						
SHL	Shillong	40.24	66	P	P	12 49 42.0	+0.5
BURAR	Bucovina Array	40.64	333	P	P	12 49 44.9	+0.5
BRZS	Berezniki	40.80	21	*e*P	P	12 49 46.1	+0.6
	baz=21						
AKASG	Malin Array Be	41.52	339	P	P	12 49 51.0	-0.4
	comp=Z,4.6nm,0.9s,baz=146,slow=7.4,SNR=10						
AKASG				PcP	PcP	12 51 49.7	+0.9
	comp=Z,0.3nm,0.2s,baz=131,slow=1.7,SNR=4.3						
AKASG	Malin Array Be	41.52	339	P	P	12 49 50.3	-1.1
AKBB	Malin Array Si	41.52	339	P	P	12 49 51.4	-0.1
AKBB				IAmb	IAmb	12 50 01.6	
	comp=Z,16nm,1.2s						
PAOL	Paolisi	42.33	318		P	12 49 57.7	-0.5
MAKZ	Makanchi	42.41	31	P	P	12 49 59.5	+0.7
MAKZ				IAmb	IAmb	12 50 01.1	
	comp=Z,20nm,1.2s						
MK31	Makanchi Array	42.56	32	P	P	12 50 00.5	+0.4
MK31				IAmb	IAmb	12 50 03.3	
	comp=Z,23nm,1.4s						
MKAR	Makanchi Array	42.56	32	P	P	12 50 01.1	+1.0
	comp=Z,5.0nm,0.6s,baz=223,slow=7.6,SNR=36						
MKAR				LR	LR	13 09 00.5	
	comp=Z,104nm,20.4s,baz=301,slow=38						
MKAR	Makanchi Array	42.56	32	P	P	12 50 00.7	+0.6
BRVK	Borovoye	42.68	17	P	P	12 50 01.2	+0.3
BVAR	Borovoye Array	42.68	17	P	P	12 50 01.4	+0.5
	comp=Z,3.3nm,0.6s,baz=189,slow=8.3,SNR=22						
KOLS	Kolonicke sedl	42.94	332	*e*P	P	12 50 04.6	+1.5
CRVS	Cervenica-Dubn	43.29	332	*e*P	P	12 50 06.9	+1.0
KURBB	Kurchatov Arra	43.56	25	P	P	12 50 08.8	+0.8
	comp=Z,5.0nm,0.8s,baz=224,slow=8.1,SNR=18						
ARU	Arti	43.61	6	P	P	12 50 10.3	+1.9
	comp=Z,0.6nm,0.4s,baz=187,slow=10,SNR=6.6						
ARU	Arti	43.61	6	P	P	12 50 08.2	-0.2
KURK	Kurchatov	43.67	25	P	P	12 50 09.4	+0.5
WMQ	Urumqi	43.79	39	*e*P	P	12 50 12.0	+1.9
WMQ				pP	sP	12 50 16.8	+1.1
WMQ				sP	pwP	12 50 23.0	+4.9
WMQ				pmax	pmax		
	comp=Z,28nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,270nm,4.5s						
WMQ				LR	LR		
	comp=Z,430nm,29.2s						
WMQ				LR	LR		
	comp=Z,340nm,29.1s						
WMQ	Urumqi	43.79	39		P	12 50 11.5	+1.4
SEM	Semipalatinsk	44.13	27	*e*P	P	12 50 13.2	+0.3
	baz=27						
MODS	Modra-Piesok	44.98	328	*e*P	P	12 50 21.4	+1.9
MHMT	Maesarieng	45.26	77	P	P	12 50 23.3	+1.2
	comp=Z,1µmcomp=Z,24nm,1.0s						
LBTB	Lobatse	45.34	213	P	P	12 50 23.4	+0.7
	comp=Z,4.8nm,0.8s,baz=41,slow=12,SNR=5.4						
NACGM	Naroch	45.85	341	*i* P	P	12 50 30.6	+4.4
NACGM				*i* P	P	12 50 30.6	+4.4
NACGM				*i* P	P	12 50 30.6	+4.4
NACGM				*i* PcP	PcP	12 51 51.0	-12
NACGM				*i* PP	PP	12 52 25.7	+12
NACGM				*i* PPP	PPP	12 53 11.9	
NACGM				*i* S	S	12 57 22.3	+13
NACGM				*i* SS	ScS	13 00 17.8	-3.7
NACGM				*i* SSS	SSS	13 01 54.5	
NACGM				*i* LQ	LQ	13 08 38.5	
NACGM				*i* LR	LR	13 13 10.8	
CM32	Chiang Mai Arr	46.12	77	P	P	12 50 31.0	+2.1
CM13	Chiang Mai Arr	46.18	77	P	P	12 50 30.6	+1.2
	comp=Z,129nmcomp=Z,19nm,1.1s						
CM15	Chiang Mai Arr	46.20	77	P	P	12 50 30.8	+1.2
	comp=Z,148nmcomp=Z,20nm,0.9s						
CHTO	Chiang Mai	46.21	76		P	12 50 29.4	-0.2
CHTO				IAmb	IAmb	12 50 33.5	
	comp=Z,5.9nm,0.9s						
CM31	Chiang Mai Arr	46.21	77	P	P	12 50 31.0	+1.3
	comp=Z,4µmcomp=Z,455nm,0.9s						
CM31	Chiang Mai Arr	46.21	77	P	P	12 50 30.7	+1.0
CMAR	Chiang Mai Arr	46.21	77	P	P	12 50 30.6	+1.0
	comp=Z,22nm,1.0s,baz=275,slow=8.7,SNR=66						
CMAR	Chiang Mai Arr	46.21	77	P	P	12 50 30.5	+0.8
CM33	Chiang Mai Arr	46.22	76	P	P	12 50 30.0	+0.3
CM05	Chiang Mai Arr	46.22	77	P	P	12 50 30.9	+1.2
	comp=Z,171nmcomp=Z,26nm,1.0s						
CM02	Chiang Mai Arr	46.22	77	P	P	12 50 31.0	+1.3
	comp=Z,217nmcomp=Z,33nm,1.0s						
CM01	Chiang Mai Arr	46.23	77	P	P	12 50 31.1	+1.3
	comp=Z,244nmcomp=Z,34nm,1.0s						
CM04	Chiang Mai Arr	46.25	77	P	P	12 50 31.2	+1.3
	comp=Z,232nmcomp=Z,36nm,1.0s						
CM09	Chiang Mai Arr	46.26	77	P	P	12 50 31.4	+1.3
	comp=Z,200nmcomp=Z,30nm,1.0s						
CM36	Chiang Mai Arr	46.36	77	P	P	12 50 31.0	+0.2
CM34	Chiang Mai Arr	46.41	76	P	P	12 50 33.0	+1.8
CM35	Chiang Mai Arr	46.41	77	P	P	12 50 32.0	+0.8
DPC	Dobruska-Polom	46.73	330	*e*P	P	12 50 32.5	-0.8
LAMP	Lampang	46.87	77	P	P	12 50 36.3	+1.5
	comp=Z,354nmcomp=Z,29nm,0.8s						
OSTC	Ostas	46.91	330	*e*P	P	12 50 34.6	-0.1
CHVC	Chvalec	47.01	330	*e*P	P	12 50 34.7	-0.8
GERES	GERESS Array B	47.14	327	P	P	12 50 35.8	-0.8
	comp=Z,0.3nm,0.4s,baz=174,slow=6.3,SNR=3.7						
UTTA	Uttaradit	47.76	78	P	P	12 50 44.9	+3.1
	comp=Z,7.5nm,0.6s						
TOA0	Torodi Ar. Sit	48.08	276	P	P	12 50 43.6	-0.7
TOA0				IAmb	IAmb	12 51 02.7	
	comp=Z,7.0nm,1.1s						
TORD	Torodi Ar. Bea	48.08	276	P	P	12 50 43.4	-0.8
	comp=Z,2.4nm,0.7s,baz=88,slow=7.3,SNR=12						
TORD	Torodi Ar. Bea	48.08	276	P	P	12 50 43.5	-0.8
KLMR	Klimovskoe	48.42	352	*e*P	P	12 50 43.9	-2.3
KLMR				AMP		12 50 47.0	
	comp=Z,43nm,1.4s						
BOSA	Boshof	48.44	211	P	P	12 50 47.5	+0.6
	comp=Z,5.3nm,0.9s,baz=24,slow=7.5,SNR=5.5						
ZAA0	Zalesovo Array	48.63	26	P	P	12 50 47.1	-0.8
ZAA0				IAmb	IAmb	12 50 49.6	
	comp=Z,6.8nm,0.8s						
ZALV	Zalesovo Beam	48.63	26	P	P	12 50 47.6	-0.3
	comp=Z,4.5nm,0.7s,baz=234,slow=7.9,SNR=24						
ZALV	Zalesovo Beam	48.63	26	P	P	12 50 47.9	-0.1
GRA1	Grafenberg Arr	48.96	326	P	P	12 50 51.0	+0.4
GRFO	Grafenberg	48.96	326	P	P	12 50 50.4	-0.1
CLL	Collm	48.97	329	*e*P	P	12 50 49.0	-1.6
KMI	Kunming	49.94	68	⇑P	P	12 50 59.6	+0.9
KMI				pP	pP	12 51 02.8	+0.1
KMI				sP	pwP	12 51 05.8	-1.2
KMI				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KMI				pmax	pmax		
	comp=Z,130nm,4.5s						
GTA	Gaotai	50.15	49	*e*P	P	12 51 01.3	+1.3
GTA				pP	sP	12 51 05.8	+0.2
GTA				sP	pwP	12 51 08.8	+0.7
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
NONG	Nongkai	50.22	77	P	P	12 51 01.0	+0.4
	comp=Z,4µmcomp=Z,19nm,1.1s						
SLVN	Son La	50.88	73	P	P	12 51 05.9	+0.3
CD2	Chengdu	51.43	61	*e*P	P	12 51 08.8	-0.9
CD2				pmax	pmax		
	comp=Z,10.0nm,1.1s						
FINES	FINESS Array B	51.56	345	P	P	12 51 09.6	-0.4
	comp=Z,2.9nm,0.8s,baz=141,slow=12,SNR=5.4						
FINES	FINESS Array B	51.56	345	P	P	12 51 10.1	+0.1
PANO	Nakornpanom	51.66	78	P	P	12 51 19.7	+8.2
LZH	Lanzhou	52.40	54	*e*P	P	12 51 17.8	+0.9
LZH				pP	sP	12 51 22.6	0.0
LZH				sP	pwP	12 51 25.3	+0.1
LZH				pmax	pmax		
	comp=Z,15nm,1.1s						
LZH				pmax	pmax		
	comp=Z,67nm,5.4s						
GYA	Guiyang	53.55	67	⇑P	P	12 51 25.8	+0.3
GYA				pP	sP	12 51 31.6	+0.4
GYA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
LHSI	Lahat	54.67	104	P	P	12 51 35.0	+1.3
	comp=Z,2µmcomp=Z,14nm,0.6s						
ESDC	Sonseca Array	55.00	309	P	P	12 51 36.3	+0.5
	comp=Z,3.7nm,0.9s,baz=88,slow=6.5,SNR=11						
ESDC	Sonseca Array	55.00	309	P	P	12 51 36.1	+0.3
DBIC	Dimbokro	55.44	269	P	P	12 51 38.6	-0.6
	comp=Z,2.0nm,0.7s,baz=50,slow=8.9,SNR=2.6						
XAN	Xi'an	56.17	58		P	12 51 43.9	-0.4
XAN				IAmb	IAmb	12 51 46.9	
	comp=Z,16nm,1.2s						
SONM	Songino Array	57.28	41	P	P	12 51 53.3	+1.2
	comp=Z,11nm,1.1s,baz=244,slow=7.1,SNR=26						
SONM	Songino Array	57.28	41	P	P	12 51 53.1	+1.0
ULN	Ulaanbaatar	57.71	41	P	P	12 51 55.6	+0.4
ULN				IAmb	IAmb	12 51 58.3	
	comp=Z,10.0nm,1.1s						
HHC	Hu-ho-hao-te	59.24	50	*e*P	P	12 52 07.6	+1.7
HHC				pmax	pmax		
	comp=Z,6.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,230nm,5.0s						
NRIK	Noril'sk	60.74	14	P	P	12 52 15.3	-0.2
	comp=Z,6.0nm,0.6s,baz=206,slow=4.3,SNR=10						
NRIK	Noril'sk	60.74	14	P	P	12 52 15.6	+0.1
BJI	Beijing	62.62	52	P	P	12 52 30.1	+1.4
BJI				pmax	pmax		
	comp=Z,5.0nm,1.1s						
TIA	Tai'an	63.06	56	P	P	12 52 32.5	+0.8
TIA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
NJ2	Nanjing	64.37	61	*e*P	P	12 52 38.8	-1.6
NJ2				pmax	pmax		
	comp=Z,12nm,1.1s						
CN2	Changchun	69.75	48	*e*P	P	12 53 15.5	+1.0
CN2				pmax	pmax		
	comp=Z,10.0nm,1.2s						
KSAR	Wonju Array Be	71.69	55	P	P	12 53 25.9	-0.5
KSRS	Korea Array	71.72	55	P	P	12 53 26.8	+0.2
	comp=Z,3.3nm,1.1s,baz=271,slow=7.1,SNR=7.7						
DAG	Danmarks Havn	72.74	347	*i* P	P	12 53 31.1	-0.8
DAG	Danmarks Havn	72.74	347	*i* P	P	12 53 31.1	-0.8
YAK	Yakutsk	73.15	29	P	P	12 53 34.0	-0.6
TIXI	Tiksi	73.79	19	P	P	12 53 37.6	-0.6
TIXI				IAmb	IAmb	12 53 40.5	
	comp=Z,15nm,1.1s						
SUMG	Summit	77.47	342	*i* P	P	12 54 00.6	+0.8
SUMG	Summit	77.47	342	P	P	12 54 00.6	+0.8
SUMG	Summit	77.47	342	*i* P	P	12 54 00.6	+0.8
MJAR	Matsushiro Arr	80.01	55	P	P	12 54 16.0	+2.0
	comp=Z,4.6nm,1.1s,baz=294,slow=5.6,SNR=4.5						
SYO	Syowa Base	82.31	184	⇓*e*X	P	12 54 23.0	-2.3
WRA	Warramunga Arr	88.16	111	P	P	12 54 57.5	+1.8
	comp=Z,5.8nm,1.1s,baz=299,slow=3.7,SNR=15						
ASAR	Alice Springs	88.71	115	P	P	12 55 00.4	+2.1
	comp=Z,2.5nm,1.0s,baz=294,slow=4.9,SNR=11						
ASAR	Alice Springs	88.71	115	P	P	12 54 59.2	+0.8
NVAR	Mina Array Bea	127.79	350	PKP	PKiKP	13 01 12.3	+1.1
	comp=Z,1.2nm,0.9s,baz=275,slow=0.2,SNR=4.9						

IDC 23 12:45:27.1±13.0**, 17°.56S**×**178°.17W, h554**^{km}±136^{km}**, mb3.2**/4**, mb1 3.5**/4**, mb1mx3.0**/30**, mbtmp4.2**/4**, Error ellipse: s-maj=130.9km s-min=46.5km az=130.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	39.00	241	P	P	12 52 06.4	-0.1
	1.8nm,0.8s,baz=98,slow=10.0,SNR=4.7						
WRA	Warramunga Arr	44.92	259	P	P	12 52 53.0	-0.3
	1.4nm,0.5s,baz=95,slow=6.9,SNR=40						
ASAR	Alice Springs	45.11	254	P	P	12 52 54.5	-0.1
	9.0nm,0.5s,baz=87,slow=8.5,SNR=238						
ASAR				PcP	PcP	12 54 23.2	-0.2
	0.4nm,0.6s,baz=104,slow=3.7,SNR=5.1						
ILAR	Eielson Array	85.49	13	P	P	12 57 06.2	-0.1
	0.2nm,0.4s,baz=223,slow=4.8,SNR=6.4						

IDC 23 12:53:02.3±2.2**, 13°.08N**×**51°.06E, h0**^{km}**, mb3.5**/3**, mb1 3.9**/5**, mb1mx3.3**/61**, mbtmp3.9**/5**, ML3.8**/2**, MS2.4**/1**, Ms1 2.4**/1**, ms1mx2.2**/36**, Error ellipse: s-maj=67.3km s-min=32.3km az=159.0, Eastern Gulf of Aden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATD	Arta Tunnel	8.17	260	Pn	Pn	12 55 02.0	-0.3
	3.1nm,0.3s,baz=342,slow=5.4,SNR=9.2						
WSAR	Wadi Sarin	12.40	34	Pn	Pn	12 55 59.3	-0.9
	0.2nm,0.3s,baz=114,slow=8.9,SNR=3.6						
ASF	Jabal al Asfar	23.01	328	LR	LR	13 06 26.7	
	comp=Z,9.0nm,19.1s,baz=165,slow=35						
MKAR	Makanchi Array	42.62	32	P	P	13 00 59.8	-0.6
	0.2nm,0.5s,baz=221,slow=9.2,SNR=6.2						
CMAR	Chiang Mai Arr	46.29	77	P	P	13 01 29.9	-0.3
	0.9nm,0.8s,baz=271,slow=9.0,SNR=8.9						
SONM	Songino Array	57.34	41	P	P	13 02 53.6	+1.1
	0.4nm,0.7s,baz=232,slow=7.1,SNR=1.9						

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*IDC **23** 13:37:16.7±1.2, 40°.67N×79°.95E, h0^{km}, mb3.6/7, mb1 3.6/12, mb1mx3.5/58, mbtmp3.6/12, ML3.2/5, Error ellipse: s-maj=18.0km s-min=16.7km az=15.0*

*KRNET **23** 13:37:19.9±0.1, 40°.93N×79°.86E, h11^{km}, mb4.1*

*BJI **23** 13:37:20.5±0.0, 40°.85N×79°.93E, h5^{km}, mb3.6/2, ML3.7/8*

*SOME **23** 13:37:21.1, 40°.92N×79°.82E, h15^{km}, MS3.5*

*NNC **23** 13:37:23.7±1.0, 41°.05N×79°.85E, h8^{km}±4^{km}, mb4.5, mpv4.2, Error ellipse: s-maj=6.5km s-min=4.2km az=146.0*

ISC 23 13:37:21.5±1.4**, 40°.95N**±0°.05×**80°.02E**±0°.03**, h14**^{km}±9^{km}**, n89,** σ**2^{s}03**/133**, mb3.7**/5**, 34C-16D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRZ	Przheval'sk	1.95	322	⇑*i*P	Pn	13 37 55.6	+1.1
	baz=26						
PRZ				⇑*i*S	Sb	13 38 22.0	+0.6
	baz=26						
SHLS	Shalkode	2.25	350	*e*P	Pb	13 38 02.6	+0.6
	232nm,0.3s						
SHLS				*e*S	Sb	13 38 32.1	+2.4
	750nm,0.4s						
SHLS	Shalkode	2.25	350	Pg	Pb	13 38 02.6	+0.6
	232nm,0.3s						
SHLS				Lg	Lg	13 38 32.1	
	750nm,0.4s						
UZB	Uzynbulak	2.32	342	*e*P	Pb	13 38 04.1	+0.8
	114nm,0.3s						
UZB				*e*S	Sb	13 38 34.8	+2.9
	421nm,0.5s						
UZB	Uzynbulak	2.32	342	Pg	Pb	13 38 04.1	+0.8
	114nm,0.3s						
UZB				Lg	Lg	13 38 34.8	
	421nm,0.5s						
PDGK	Podgornoye	2.41	351	⇑Pn	Pn	13 38 03.3	+2.5
	82nm,0.7s						
PDGK				⇑Lg	Lg	13 38 36.4	
	482nm,0.7s						
SATY	Saty	2.43	331	*e*P	Pb	13 38 05.7	+0.6
	96nm,0.4s						
SATY				*e*S	Sb	13 38 37.5	+2.6
	1µm,0.8s						
SATY	Saty	2.43	331	Pg	Pb	13 38 05.7	+0.6
	96nm,0.4s						
SATY				Lg	Lg	13 38 37.5	
	1µm,0.8s						
KDJ	Kajisay	2.43	300	⇑*e*P	Pn	13 38 01.5	+0.4
	baz=2.0						
KDJ				⇑*i*S	Sn	13 38 32.0	+1.2
	baz=2.0						
KTMS	Ketmen	2.51	6	*e*P	Pb	13 38 06.8	+0.3
	98nm,0.3s						
KTMS				*e*S	Sb	13 38 38.7	+1.4
	748nm,0.6s						
KTMS	Ketmen	2.51	6	Pg	Pb	13 38 06.8	+0.3
	98nm,0.3s						
KTMS				Lg	Lg	13 38 38.7	
	748nm,0.6s						
ANVS	Anan'yevo	2.54	317	⇑*e*P	Pn	13 38 04.1	+1.6
	baz=19						
ANVS				⇑*i*S	Sn	13 38 36.9	+3.5
	baz=19						
KPKS	Kokpek	2.70	339	*e*P	Pb	13 38 10.6	+0.8
	289nm,0.5s						
KPKS				*e*S	Sb	13 38 45.9	+3.0
	3µm,0.5s						
KURS	Kuram	2.88	332	*e*P	Pb	13 38 13.5	+0.7
	43nm,0.5s						
KURS				*e*S	Sb	13 38 51.0	+2.9
	289nm,0.6s						
KURS	Kuram	2.88	332	Pg	Pb	13 38 13.5	+0.7
	43nm,0.5s						
KURS				Lg	Lg	13 38 51.0	
	289nm,0.6s						
TNSS	Tian-Shan	3.10	313	*e*P	Pb	13 38 17.9	+1.2
	90nm,0.3s						
TNSS				*e*S	Sg	13 38 58.4	-2.6
	287nm,0.6s						
TNSS	Tian-Shan	3.10	313	Pg	Pb	13 38 17.9	+1.2
	90nm,0.3s						
TNSS				Lg	Lg	13 38 58.4	
	287nm,0.6s						
ULHL	Ulahol	3.11	296	⇑*i*P	Pn	13 38 11.7	+1.2
	baz=97						
ULHL				⇑*i*S	Sn	13 38 48.7	+1.1
	baz=97						
MDOK	Medeo	3.13	316	*e*P	Pb	13 38 17.7	+0.6
MDOK				*e*S	Sb	13 38 58.2	+3.1
	434nm,0.5s						
MDOK	Medeo	3.13	316	⇓Pn	Pn	13 38 11.8	+1.2
	12nm,0.5s						

MDOK				⇑Pg	Pb	13 38 17.2	+0.1
	56nm,0.6s						
MDOK				⇑Lg	Lg	13 38 57.9	
	315nm,0.5s						
MDOK	Medeo	3.13	316	Pg	Pb	13 38 17.7	+0.6
MDOK				Lg	Lg	13 38 58.2	
	434nm,0.5s						
KOTS	Kotyrbulak	3.15	318	*e*P	Pb	13 38 17.2	-0.1
	150nm,0.5s						
KOTS				*e*S	Sb	13 38 57.2	+1.6
	371nm,0.5s						
KOTS	Kotyrbulak	3.15	318	Pg	Pb	13 38 17.2	-0.1
	150nm,0.5s						
KOTS				Lg	Lg	13 38 57.2	
	371nm,0.5s						
KNDC	Almaty	3.21	316	⇓Pn	Pn	13 38 12.0	+0.3
	18nm,0.4s						
KNDC				⇑Pg	Pb	13 38 20.5	+2.1
	118nm,0.5s						
KNDC				⇑Lg	Lg	13 39 00.5	
	512nm,0.6s						
AAA	Alma-Ata	3.23	315	*e*P	Pb	13 38 20.1	+1.4
	19nm,0.1s						
AAA				*e*S	Sg	13 39 02.2	-3.0
	440nm,0.6s						
AAA	Alma-Ata	3.23	315	Pg	Pb	13 38 20.1	+1.4
	19nm,0.1s						
AAA				Lg	Lg	13 39 02.2	
	440nm,0.6s						
IZV	Izvestkoviy	3.28	311	*e*P	Pb	13 38 20.7	+0.9
	137nm,0.6s						
IZV				*e*S	Sb	13 39 03.4	+3.7
	511nm,0.5s						
IZV	Izvestkoviy	3.28	311	Pg	Pb	13 38 20.7	+0.9
	137nm,0.6s						
IZV				Lg	Lg	13 39 03.4	
	511nm,0.5s						
MNBS	Baschi	3.35	340	*e*P	Pb	13 38 22.1	+1.3
	27nm,0.4s						
MNBS				*e*S	Sb	13 39 05.5	+4.0
	477nm,0.4s						
MNBS	Baschi	3.35	340	Pg	Pb	13 38 22.1	+1.3
	27nm,0.4s						
MNBS				Lg	Lg	13 39 05.5	
	477nm,0.4s						
DJR	Jarkent	3.39	357	*e*P	Pb	13 38 22.8	+1.4
	16nm,0.6s						
DJR				*e*S	Sb	13 39 07.0	+4.4
	82nm,0.3s						
DJR	Jarkent	3.39	357	Pg	Pb	13 38 22.8	+1.4
	16nm,0.6s						
DJR				Lg	Lg	13 39 07.0	
	82nm,0.3s						
KSH	Kashi	3.41	247	Pg	Pg	13 38 25.6	-1.2
KSH				Sg	Sg	13 39 15.3	+4.3
KSH				smax	smax		
	comp=N,120nm,0.8s						
KSH				smax	smax		
	comp=E,170nm,0.8s						
BOOM	Boomskoye usch	3.42	298	⇓*i*P	Pn	13 38 15.3	+0.7
	baz=99						
BOOM				⇓*i*S	Sn	13 38 56.0	+0.9
	baz=99						
MTBS	Maitube	3.45	310	*e*P	Pb	13 38 23.2	+0.7
	34nm,0.3s						
MTBS				*e*S	Sb	13 39 07.6	+3.3
	241nm,0.5s						
MTBS	Maitube	3.45	310	Pg	Pb	13 38 23.2	+0.7
	34nm,0.3s						
MTBS				Lg	Lg	13 39 07.6	
	241nm,0.5s						
ARXS	Arharly	3.64	334	*e*P	Pb	13 38 27.3	+1.5
	94nm,0.4s						
ARXS				*e*S	Sb	13 39 14.7	+4.8
	322nm,0.4s						
ARXS	Arharly	3.64	334	Pg	Pb	13 38 27.3	+1.5
	94nm,0.4s						
ARXS				Lg	Lg	13 39 14.6	
	322nm,0.4s						
CHKK	Chushkaly	3.67	323	*e*P	Pb	13 38 27.8	+1.6
	20nm,0.3s						
CHKK				*e*S	Sb	13 39 15.4	+4.9
	410nm,0.4s						
CHKK	Chushkaly	3.67	323	Pg	Pb	13 38 27.8	+1.6
	20nm,0.3s						
CHKK				Lg	Lg	13 39 15.4	
	410nm,0.4s						
KST	Kastek	3.67	306	*e*P	Pb	13 38 27.1	+0.7
	31nm,0.2s						
KST				*e*S	Sb	13 39 14.2	+3.4
	300nm,0.5s						
KST	Kastek	3.67	306	Pg	Pb	13 38 27.1	+0.7
	31nm,0.2s						
KST				Lg	Lg	13 39 14.2	
	300nm,0.5s						
KTBS	Karatobe	3.71	319	*e*P	Pb	13 38 28.1	+1.3
	35nm,0.3s						
KTBS				*e*S	Sb	13 39 16.0	+4.3
	212nm,0.5s						
KTBS	Karatobe	3.71	319	Pg	Pb	13 38 28.1	+1.3
	35nm,0.3s						
KTBS				Lg	Lg	13 39 16.0	
	212nm,0.5s						
TKM2	Tokmak 2	3.84	302	⇑*i*P	Pn	13 38 21.3	+0.8
	baz=3.0						
TKM2				⇑*i*S	Sn	13 39 06.2	+0.7
	baz=3.0						
TKM2	Tokmak 2	3.84	302	⇑Pn	Pn	13 38 21.3	+0.8
	13nm,0.3s						
TKM2				Lg	Lg	13 39 18.8	
	75nm,0.5s						
DGS	Degeres	3.90	307	*e*P	Pb	13 38 31.3	+1.1
	50nm,0.4s						
DGS				*e*S	Sb	13 39 21.4	+4.0
	174nm,0.6s						
DGS	Degeres	3.90	307	Pg	Pb	13 38 31.3	+1.1
	50nm,0.4s						
DGS				Lg	Lg	13 39 21.3	
	174nm,0.6s						
KUU	Kurty	4.01	318	*e*P	Pb	13 38 33.5	+1.5
	9.2nm,0.3s						
KUU				*e*S	Sb	13 39 25.0	+4.7
	160nm,0.6s						
KUU	Kurty	4.01	318	Pg	Pb	13 38 33.5	+1.5
	9.2nm,0.3s						
KUU				Lg	Lg	13 39 25.0	
	160nm,0.6s						
KBK	Karagaybulak	4.16	296	⇓*e*P	Pn	13 38 26.0	+1.2
	baz=97						
KBK				⇓*i*S	Sn	13 39 13.4	+0.2
	baz=97						
KBK	Karagaybulak	4.16	296	P	Pb	13 38 35.5	+1.0
	SNR=7.5						
UCH	Uchtor	4.32	289	⇑*i*P	Pn	13 38 28.2	+0.9
	baz=90						
UCH				⇑*i*S	Sn	13 39 17.2	-0.5
	baz=90						
UCH	Uchtor	4.32	289	P	Pb	13 38 39.5	+2.0
	SNR=17						
ARLS	Aral	4.38	284	⇑*i*P	Pn	13 38 28.6	+0.8
	baz=84						
ARLS				⇑*i*S	Sn	13 39 19.1	+0.4
	baz=84						
CHMS	Chumysh	4.43	299	⇓*e*P	Pn	13 38 30.0	+1.6
	baz=0.0						
CHMS				⇓*i*S	Sn	13 39 20.7	+1.0
	baz=0.0						
CHMS	Chumysh	4.43	299	P	Pb	13 38 41.1	+2.0
	SNR=13						
FRU1	Bishkek	4.43	297	⇑*i*P	Pn	13 38 30.2	+1.8
	baz=98						
FRU1				⇑*i*S	Sn	13 39 21.0	+1.1
	baz=98						
AAK	Ala-Archa	4.46	294	Pn	Pn	13 38 29.3	+0.4
	1.2nm,0.3s,baz=122,slow=10.0,SNR=11						
AAK				Pg	Pb	13 38 40.6	+0.9
	4.0nm,0.3s,baz=129,slow=12,SNR=19						
AAK				Lg	Lg	13 39 38.3	
	4.8nm,0.3s,baz=224,slow=23,SNR=9.2						
AAK	Ala-Archa	4.46	294	⇓*e*P	Pn	13 38 30.4	+1.5
	baz=95						
AAK				⇓*i*S	Sn	13 39 21.3	+0.6
	baz=95						
AAK	Ala-Archa	4.46	294	⇑Pn	Pn	13 38 29.6	+0.7
	3.0nm,0.7s						
AAK				⇓Pg	Pb	13 38 40.4	+0.6
	6.9nm,0.3s						
AAK				⇑Lg	Lg	13 39 38.8	
	90nm,0.8s						
USP	Ospenovka	4.71	301	P	Pb	13 38 47.3	+3.3
	SNR=7.0						
AML	Almayashu	4.89	286	⇓*e*P	Pn	13 38 36.1	+1.1
	baz=87						
AML				⇓*i*S	Sn	13 39 30.6	-1.0
	baz=87						
AML	Almayashu	4.89	286	P	Pb	13 38 48.9	+1.7
	SNR=21						
EKS2	Erkin-Say	4.97	292	⇑*e*P	Pn	13 38 37.4	+1.5
	baz=93						
EKS2				⇑*i*S	Sn	13 39 32.7	-0.5
	baz=93						
EKS2	Erkin-Say	4.97	292	P	Pb	13 38 49.9	+1.5
	SNR=16						
MRKS	Merke	5.38	292	*e*P	Pb	13 38 58.7	+3.3
	11nm,0.4s						
MRKS				*e*S	Sg	13 40 08.8	-5.4
	23nm,0.4s						
MRKS	Merke	5.38	292	Pg	Pb	13 38 58.7	+3.3
	11nm,0.4s						
MRKS				Lg	Lg	13 40 08.8	
	23nm,0.4s						
MAKZ	Makanchi	6.03	13	⇑Pn	Pn	13 38 51.9	+1.6
	6.5nm,0.7s						
MAKZ				⇓Sn	Sn	13 40 00.1	+1.0
	7.0nm,0.6s						
MAKZ				⇓Lg	Lg	13 40 34.2	
	14nm,0.9s						
MK31	Makanchi Array	6.07	15	Pn	Pn	13 38 52.5	+1.6
	1.0nm,0.3s,baz=191,slow=12,SNR=28						
MK31				⇓Sn	Sn	13 40 01.4	+1.1
	7.1nm,0.4s						
MK31				⇑Lg	Lg	13 40 35.6	
	9.4nm,0.6s						
MKAR	Makanchi Array	6.07	15	Pn	Pn	13 38 52.8	+1.9
	1.4nm,0.3s,baz=197,slow=13,SNR=31						
MKAR				Sn	Sn	13 40 01.2	+1.0
	5.0nm,0.3s,baz=188,slow=25,SNR=13						
MKAR				Lg	Lg	13 40 37.3	
	1.7nm,0.3s,baz=202,slow=28,SNR=3.7						
WMQ	Urumqi	6.37	61	*e*Pn	Pn	13 38 56.3	+1.2
WMQ				Sn	Sn	13 40 08.4	+0.7
WMQ				Sg	Sg	13 40 44.6	-1.3
WMQ				smax	smax		
	comp=N,44nm,0.9s						
WMQ				smax	smax		
	comp=E,37nm,1.1s						
ZSN	Zaisan	7.38	27	Pg	Pb	13 39 36.4	+7.1
	3.4nm,0.3s						
ZSN				Lg	Lg	13 41 12.7	
	18nm,0.6s						
KK31	Karatay Array	7.40	290	⇑Pg	Pb	13 39 33.5	+3.8
	3.3nm,0.6s,baz=90,slow=18,SNR=17						
KK31				⇑Lg	Lg	13 41 15.0	
	21nm,1.1s,baz=107,slow=26,SNR=5.2						
CEP	Cherat	9.60	225	P	Pn	13 39 37.5	-1.9
KURBB	Kurchatov Arra	9.73	354	Pn	Pn	13 39 42.6	+1.6
	0.1nm,0.3s,baz=183,slow=12,SNR=21						
KURBB				Lg	Lg	13 42 30.3	
	0.2nm,0.3s,baz=177,slow=29,SNR=4.4						
KURK	Kurchatov	9.82	355	⇑Pn	Pn	13 39 43.5	+1.3
	1.8nm,0.4s						
KURK				⇑Lg	Lg	13 42 29.8	
	23nm,1.1s						
ZALV	Zalesovo Beam	13.40	12	Pn	Pn	13 40 30.4	-0.8
	0.1nm,0.3s,baz=207,slow=9.5,SNR=7.0						
ZALV				Sn	Sn	13 42 59.0	-0.9
	0.2nm,0.3s,baz=167,slow=20,SNR=2.7						
ZALV				Lg	Lg	13 44 27.6	
	0.0nm,0.3s,baz=201,slow=23,SNR=1.8						
BVAR	Borovoye Array	13.74	335	Pn	Pn	13 40 34.2	-1.6
	0.4nm,0.3s,baz=96,slow=13,SNR=7.5						
BVAR				Lg	Lg	13 44 33.4	
	0.2nm,0.3s,baz=88,slow=26,SNR=3.7						
BRVK	Borovoye	13.80	335	⇑P	Pn	13 40 35.0	-1.7
	2.4nm,0.7s						
GTA	Gaotai	15.21	89	*e*P	Pn	13 41 00.4	+4.3
GTA				pP	sP	13 41 04.6	-2.5
GTA				sP	pP	13 41 07.8	+2.6
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
AB31	Akbulak array	16.39	307	P	Pn	13 41 12.4	+1.3
	0.9nm,0.6s,baz=109,slow=11,SNR=10						
SONM	Songino Array	20.01	61	P	P	13 41 54.5	+0.7
	2.1nm,0.8s,baz=252,slow=10,SNR=10						
ARU	Arti	20.85	325	P	P	13 42 01.8	-1.0
	1.7nm,0.6s,baz=78,slow=2.0,SNR=10						
BRTR	Keskin Array B	35.05	284	P	P	13 44 12.4	-1.7
	1.3nm,0.6s,baz=97,slow=8.7,SNR=7.3						
ARCES	ARCESS Array B	40.02	334	P	P	13 44 54.0	-1.6
	1.0nm,0.6s,baz=96,slow=8.7,SNR=8.6						
TORD	Torodi Ar. Bea	72.73	273	P	P	13 48 46.2	-3.3
	1.0nm,0.6s,baz=38,slow=5.3,SNR=3.6						
YKA	Yellowknife Ar	76.24	7	P	P	13 49 06.3	-2.8
	0.1nm,0.4s,baz=348,slow=5.7,SNR=2.3						
WRA	Warramunga Arr	78.80	129	P	P	13 49 20.5	-3.6
	0.2nm,0.9s,baz=330,slow=5.3,SNR=1.4						

IDC 23 13:46:41.2±1.8**,2°.99S**×**141°.52E,h0**^{km}**,mb3.2**/3**,**
mb1 3.6/4**,mb1mx3.4**/31**,mbtmp3.3**/4**,ML3.7**/1**,MS2.8**/1**,**
Ms1 2.8/1**,ms1mx2.5**/16**,Error ellipse: s-maj=86.2km**
s-min=28.2km az=102.0,Near north coast of New
Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
PMG	Port Moresby	8.48	139	LR	LR	13 52 26.4	
	comp=Z,61nm,18.6s,baz=149,slow=41						
WRA	Warramunga Arr	18.25	202	P	P	13 50 56.8	+0.3
	0.3nm,0.3s,baz=21,slow=13,SNR=13						
ASAR	Alice Springs	21.83	199	P	P	13 51 35.1	-0.4
	0.5nm,0.6s,baz=27,slow=9.8,SNR=15						
H11S3	WAKE ISLAND Hy	32.71	48	T	T	14 27 47.5	
	baz=232,slow=75,SNR=252						
H11S2	WAKE ISLAND Hy	32.72	48	T	T	14 27 48.1	
	baz=232,slow=75,SNR=135						
H11S1	WAKE ISLAND Hy	32.73	48	T	T	14 27 49.0	
	baz=232,slow=75,SNR=108						
H11N1	WAKE ISLAND Hy	33.62	47	T	T	14 28 58.5	
	baz=229,slow=75,SNR=7.1						
H11N2	WAKE ISLAND Hy	33.64	47	T	T	14 28 57.3	
	baz=229,slow=75,SNR=9.9						
H11N3	WAKE ISLAND Hy	33.64	47	T	T	14 28 58.2	
	baz=229,slow=75,SNR=5.7						
MKAR	Makanchi Array	71.74	322	P	P	13 58 05.7	+0.3
	0.1nm,0.4s,baz=96,slow=9.2,SNR=1.7						
ILAR	Eielson Array	84.93	24	P	P	13 59 17.7	-0.3
	0.3nm,0.7s,baz=264,slow=5.3,SNR=2.3						

IDC 23 13:53:26.8±9.7**,21°.60N**×**143°.01E,h0**^{km}**,mb3.1**/3**,**
mb1 3.3/3**,mb1mx3.1**/38**,mbtmp3.1**/3**,Error ellipse:**
s-maj=365.5km s-min=35.2km az=74.0,Mariana Islands
region

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
WRA	Warramunga Arr	42.15	192	P	P	14 01 21.6	+0.3
	0.2nm,0.5s,baz=13,slow=8.4,SNR=6.5						
ASAR	Alice Springs	45.86	192	P	P	14 01 50.2	-0.9
	0.1nm,0.4s,baz=14,slow=6.4,SNR=1.3						
MKAR	Makanchi Array	54.64	313	P	P	14 02 57.4	0.0
	0.3nm,0.9s,baz=87,slow=6.7,SNR=1.5						

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*IDC **23** 14:24:03.0±1.5,6°.66S×104°.44E,h0^{km},mb3.9/10,*
mb1 4.1/12,mb1mx3.9/44,mbtmp4.0/12,ML4.3/2,MS2.9/2,
Ms1 2.9/2,ms1mx2.7/33,Error ellipse: s-maj=47.1km
s-min=14.7km az=49.0
*NEIC **23** 14:24:07.3±2.2,6°.96S±0°.09×104°.36E±0°.08,h38^{km}±8^{km},*
mb4.4/21,Error ellipse: s-maj=14.2km s-min=8.8km
az=217.0
*DJA **23** 14:24:09.0±0.4,7°S±3°×10°5E±°,h10^{km},M4.4/15,mb4.8/1,*
MLv4.2/15
ISC 23 14:24:05.3±0.6**,6°.88S**±0°.06×**104°.42E**±0°.05**,h21**^{km}±4^{km}**,**
n64,σ**1**^{s}**.40**/65**,mb4.5**/19**,Sunda Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KASI	Kota Agung	1.35	3	P	Pb	14 24 30.8	+0.9
KASI				S	Sb	14 24 47.4	+0.6
BLSI	Bandar Lampung	1.71	29	P	Pb	14 24 35.3	-0.8
BLSI				S	Sn	14 24 54.2	-1.1
LWLI	Liwa	1.89	349	P	Pb	14 24 40.3	+1.2
LWLI				S	Sb	14 25 03.5	+1.2
KLSI		2.20	8	P	Pb	14 24 43.2	-1.2
KLSI				S	Sb	14 25 09.6	-1.6
TNG	Tangerang	2.32	72	P	Pn	14 24 42.4	0.0
DBJI	Dramaga	2.34	82	P	Pn	14 24 43.7	+1.1
CBJI	Citeko	2.46	79	P	Pb	14 24 46.9	-2.0
MNAI	Manna	2.90	330	Pn	Pn	14 24 51.8	+1.5
MNAI	Manna	2.90	330	P	Pb	14 24 54.6	-1.7
LHSI	Lahat	3.16	344	P	Pn	14 24 57.6	+3.7
LEM	Lembang	3.18	89	Pn	Pn	14 24 56.0	+1.8
	7.0nm,0.3s,baz=280,slow=23,SNR=4.2						
LEM				Sn	Sn	14 25 33.6	+2.0
	6.8nm,0.3s,baz=288,slow=12,SNR=4.2						
LEM				LR	LR	14 26 20.8	
	comp=Z,179nm,18.2s,baz=312,slow=44						
LEM	Lembang	3.18	89	P	Pn	14 24 56.7	+2.4
CISI	Cisompet, Garu	3.44	101		Pn	14 24 59.0	+1.3
CISI	Cisompet, Garu	3.44	101	P	Pn	14 25 00.4	+2.7
XMIS	Christmas Isla	3.78	161	Pn	Pn	14 25 02.2	-0.2
JCJI	Jatiwangi	3.85	84	P	Pn	14 25 04.1	+0.8
PMBI	Palembang	3.94	5	P	Pn	14 25 07.4	+2.7
PPBI	Pangkal Pinang	4.99	20	P	Pn	14 25 21.0	+1.9
TPI	Tanjungpandan	5.21	38	P	Pn	14 25 23.9	+1.8
UGM	Wanagama	6.14	100	Pn	Pn	14 25 37.2	+2.3
UGM	Wanagama	6.14	100	P	Pn	14 25 37.8	+2.9
JAGI	Jajag, Banyuwa	9.78	100	Pn	Pn	14 26 26.6	+1.7
KAPI	Kappang	15.36	84	LR	LR	14 33 33.3	
	comp=Z,54nm,21.9s,baz=253,slow=37						
BATI	Baumata	19.32	101	P	Pn	14 28 30.6	+0.1
	5.5nm,0.3s,baz=292,slow=1.8,SNR=6.9						
BATI				S	S	14 32 06.3	-0.8
	1.0nm,0.3s,baz=71,slow=23,SNR=2.5						
SOEI	Soe	19.85	100	P	P	14 28 34.8	-0.4
SOEI				IAmb	IAmb	14 28 53.8	
	comp=Z,36nm,1.0s						
FITZ	Fitzroy Crossi	23.50	120	P	P	14 29 14.8	+0.8
	comp=Z,2.4nm,0.8s,baz=284,slow=8.3,SNR=2.3						
FITZ	Fitzroy Crossi	23.50	120	P	P	14 29 15.2	+1.2
TNTI	Ternate	24.13	73	P	P	14 29 18.3	-1.8
CMAR	Chiang Mai Arr	25.75	348	P	P	14 29 33.0	-1.7
	comp=Z,0.8nm,0.7s,baz=182,slow=8.8,SNR=8.4						
PALK	Pallekele	27.52	300	P	P	14 29 51.3	+0.5
PALK				IAmb	IAmb	14 30 16.4	
	comp=Z,16nm,1.2s						
H01W3	Cape Leeuwin H	29.27	164	T	T	15 00 48.2	
	baz=344						
H01W1	Cape Leeuwin H	29.29	163	T	T	15 00 46.8	
	baz=344						
H01W2	Cape Leeuwin H	29.29	164	T	T	15 00 44.7	
	baz=344						
WB0	Warramunga Arr	31.79	117	P	P	14 30 29.5	+1.0
WB0				IAmb	IAmb	14 30 35.3	
	comp=Z,8.0nm,1.4s						
WRA	Warramunga Arr	31.80	117	P	P	14 30 29.7	+1.0
	comp=Z,2.4nm,0.6s,baz=288,slow=10.0,SNR=24						
WRA	Warramunga Arr	31.80	117	IAmb	IAmb	14 30 30.4	
	comp=Z,0.1nm,0.7s						
WRAB	Tennant Creek	31.80	117	P	P	14 30 29.3	+0.6
WRAB				IAmb	IAmb	14 30 30.5	
	comp=Z,3.8nm,0.7s						
WB2	Warramunga Arr	31.81	117	P	P	14 30 29.7	+0.9
WB2				IAmb	IAmb	14 30 30.4	
	comp=Z,3.9nm,0.7s						
WR0	Warramunga Arr	31.98	117	P	P	14 30 31.3	+1.0
WR0				IAmb	IAmb	14 30 32.2	
	comp=Z,3.7nm,0.6s						
ASAR	Alice Springs	32.87	124	P	P	14 30 39.7	+1.7
	comp=Z,0.6nm,0.8s,baz=291,slow=7.5,SNR=18						
ASAR	Alice Springs	32.87	124	P	P	14 30 38.2	+0.2
AS31	Alice Springs	32.87	124	P	P	14 30 38.5	+0.4
PMG	Port Moresby	42.37	96	P	P	14 31 58.7	+0.2
PMG				IAmb	IAmb	14 31 58.9	
	comp=Z,11nm,0.8s						
STKA	Stephens Creek	42.64	131	P	P	14 32 02.8	+2.2
	comp=Z,2.0nm,0.8s,baz=348,slow=14,SNR=3.1						
JHS	Saijyo	49.68	31	P	P	14 32 55.1	-0.8
WMQ	Urumqi	52.69	345	P	P	14 33 17.6	-0.7
SONM	Songino Array	54.51	2	P	P	14 33 31.1	-0.6
	comp=Z,0.5nm,0.7s,baz=201,slow=5.6,SNR=4.3						
USA0B	Ussuriysk Arra	56.61	23	P	P	14 33 45.0	-1.7
USRK	Ussuriysk Ar.	56.61	23	P	P	14 33 45.6	-1.1
	comp=Z,2.6nm,0.5s,baz=205,slow=5.9,SNR=12						
MK31	Makanchi Array	56.94	342	P	P	14 33 49.0	-0.1
MK31				IAmb	IAmb	14 33 49.9	
	comp=Z,1.5nm,0.8s						
MKAR	Makanchi Array	56.94	342	P	P	14 33 49.3	+0.2
	comp=Z,2.4nm,0.6s,baz=145,slow=8.1,SNR=30						
MKAR	Makanchi Array	56.94	342	P	P	14 33 48.9	-0.1
MAKZ	Makanchi	57.05	342	P	P	14 33 49.4	-0.5
KKAR	Karatay Array	58.50	331	P	P	14 34 00.8	+0.7
ERM	Erimo	60.15	33	P	P	14 34 11.6	+0.2
KURK	Kurchatov	61.55	342	P	P	14 34 20.8	0.0
KURK				IAmb	IAmb	14 34 21.9	
	comp=Z,2.8nm,0.8s						
ZAA0	Zalesovo Array	62.81	347	P	P	14 34 28.9	-0.3
ZAA0				IAmb	IAmb	14 34 30.1	
	comp=Z,2.9nm,0.8s						
ZALV	Zalesovo Beam	62.81	347	P	P	14 34 28.8	-0.4
	comp=Z,1.7nm,0.5s,baz=153,slow=5.5,SNR=12						
ZALV	Zalesovo Beam	62.81	347	P	P	14 34 28.2	-1.0
ABKAR	Akbulak array	68.02	330	P	P	14 35 03.4	+0.4
PETK	Petropavlovsk-	74.76	30	P	P	14 35 42.2	-1.4
PET	Petropavlovsk	75.19	30	P	P	14 35 45.3	-0.8
SEY	Seymchan	78.56	20	P	P	14 36 04.4	-0.6
	comp=Z,0.5nm,0.6s,baz=232,slow=6.5,SNR=4.2						
TXAR	Lajitas Array	145.38	46	PKPbc	PKPbc	14 43 42.9	+0.5
	comp=Z,0.8nm,0.7s,baz=217,slow=1.8,SNR=5.2						

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*IDC **23** 14:24:50.2±2.0,23°.79S×179°.89W,h495^{km}±21^{km},*
mb3.5/11,mb1 3.7/12,mb1mx3.4/44,mbtmp4.3/12,Error
ellipse: s-maj=33.6km s-min=15.4km az=159.0
*NEIC **23** 14:24:52.9±1.3,23°.8S±0°.1×180°.0E±0°.1,h527^{km}±9^{km},*
mb4.6/31,Error ellipse: s-maj=18.3km s-min=13.5km
az=215.0
ISC 23 14:24:52.1±0.6**,23°.85S**±0°.08×**179°.99W**±0°.09**,h518**^{km}**,**
n49,σ**1**^{s}**.08**/53**,mb4.5**/26**,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
MSVF	Nonsavu	6.36	343	P	P	14 26 33.0	+0.1
NIUE	Niue	10.50	65	P	P	14 27 16.2	+1.3
OUZ	Omahuta	12.63	205	P	P	14 27 37.6	+0.6
URZ	Urewera	14.57	189	P	P	14 27 56.2	-1.2
	0.5nm,0.3s,baz=82,slow=17,SNR=1.6						
URZ				S	S	14 30 27.8	-2.5
	0.4nm,0.3s,baz=207,slow=23,SNR=1.7						
URZ	Urewera	14.57	189	P	P	14 27 57.6	+0.2
SANVU	Saraoutou	14.67	302	P	P	14 27 58.7	-0.1
QRZ	Quartz Range	18.05	199	P	P	14 28 30.7	-1.2
LTZ	Lake Taylor	19.94	197	P	P	14 28 48.3	-0.8
LTZ				IAmb	IAmb	14 28 50.2	
	comp=Z,20nm,1.4s						
HNR	Honiara	23.94	303	P	P	14 29 22.9	-2.5
WHZ	Wether Hill Ro	24.06	201	P	P	14 29 26.8	+0.7
WHZ				IAmb	IAmb	14 29 46.3	
	comp=Z,16nm,1.3s						
ARMA	Armidale	26.05	249	P	P	14 29 45.5	+1.5
ARMA				IAmb	IAmb	14 29 57.7	
	comp=Z,24nm,1.4s						
EIDS	Eidsvold	26.33	261	P	P	14 29 46.8	+0.4
EIDS				IAmb	IAmb	14 29 48.4	
	comp=Z,12nm,0.6s						
CAN	Canberra	29.18	240	P	P	14 30 12.2	+0.9
CAN				IAmb	IAmb	14 30 20.1	
	comp=Z,22nm,1.3s						
CTAO	Charters Tower	31.49	270	P	P	14 30 32.5	+1.2
TOO	Toolangi	32.48	237	P	P	14 30 40.7	+1.0
TOO				IAmb	IAmb	14 30 59.3	
	comp=Z,30nm,1.4s						
TAU	Tasmania Unive	32.98	227	P	P	14 30 44.5	+0.8
PMG	Port Moresby	34.49	289	P	P	14 30 55.0	-1.8
STKA	Stephens Creek	34.75	248	P	P	14 30 59.8	+0.9
	comp=Z,0.7nm,0.3s,baz=86,slow=11,SNR=7.8						
STKA	Stephens Creek	34.75	248	P	P	14 30 59.3	+0.5
COEN	Coen	36.12	279	P	P	14 31 10.2	-0.3
BBOO	Buckleboo	39.48	247	P	P	14 31 37.2	-0.4
BBOO				IAmb	IAmb	14 32 00.2	
	comp=Z,26nm,1.4s						
AS31	Alice Springs	42.05	261	P	P	14 31 58.1	-0.2
ASAR	Alice Springs	42.05	261	P	P	14 31 58.8	+0.4
	comp=Z,8.3nm,0.8s,baz=95,slow=7.6,SNR=122						
ASAR				ScP	ScP	14 36 44.9	+2.4
	comp=Z,1.0nm,0.8s,baz=111,slow=4.7,SNR=8.2						

ASAR				S	S	14 37 41.7	+1.6
	comp=Z,0.3nm,0.8s,baz=101,slow=14,SNR=3.1						
ASAR	Alice Springs	42.05	261	P	P	14 31 57.4	-1.0
WR0	Warramunga Arr	42.23	266	P	P	14 31 59.2	-0.6
WR0				IAmb	IAmb	14 32 00.0	
	comp=Z,6.8nm,0.5s						
WB2	Warramunga Arr	42.41	266	P	P	14 32 00.9	-0.3
WB2				IAmb	IAmb	14 32 01.8	
	comp=Z,15nm,0.8s						
WB0	Warramunga Arr	42.41	266	P	P	14 32 00.8	-0.4
WRAB	Tennant Creek	42.41	266	P	P	14 32 00.8	-0.4
WRAB				IAmb	IAmb	14 32 01.8	
	comp=Z,15nm,0.8s						
WRA	Warramunga Arr	42.42	266	P	P	14 32 01.2	0.0
	comp=Z,9.3nm,0.3s,baz=96,slow=8.4,SNR=195						
WRA				ScP	ScP	14 36 47.0	+3.1
	comp=Z,0.9nm,0.7s,baz=99,slow=3.7,SNR=6.2						
WRA	Warramunga Arr	42.42	266	P	P	14 31 59.7	-1.5
FORT	Forrest	46.34	250	P	P	14 32 30.5	-0.8
FAKI	Fak Fak	50.58	287	P	P	14 33 02.8	-0.4
FITZ	Fitzroy Crossi	50.84	266	P	P	14 33 05.6	+0.6
	comp=Z,4.1nm,0.5s,baz=106,slow=4.5,SNR=29						
FITZ	Fitzroy Crossi	50.84	266	P	P	14 33 05.2	+0.1
SIJI	Sorong	52.43	288	P	P	14 33 16.7	+0.1
	comp=Z,16nm,0.6s,baz=145,slow=2.3,SNR=8.8						
PSA00	Pilbara Seismi	55.19	260	P	P	14 33 35.7	-0.3
PSA00				IAmb	IAmb	14 34 03.5	
	comp=Z,44nm,1.5s						
BATI	Baumata	55.24	274	P	P	14 33 36.8	+0.3
	comp=Z,13nm,0.5s,baz=90,slow=1.0,SNR=2.0						
NWAO	Narrogin (SRO)	55.27	246	P	P	14 33 35.8	-0.6
NWAO				IAmb	IAmb	14 33 44.5	
	comp=Z,28nm,1.2s						
MORW	Morawa	56.90	250	P	P	14 33 47.5	-0.3
TOLI2	Tolitoli	62.58	285	P	P	14 34 25.3	-0.5
TOLI2				IAmb	IAmb	14 34 26.0	
	comp=Z,13nm,0.9s						
QSPA	South Pole Qui	66.23	180	P	P	14 34 48.4	+0.2
KKM	Kota Kinabalu	68.90	287	P	P	14 35 05.4	-0.1
KKM				IAmb	IAmb	14 35 14.7	
	comp=Z,20nm,1.1s						
KSM	Kuching	72.11	280	P	P	14 35 24.2	-0.1
KSM				IAmb	IAmb	14 35 39.2	
	comp=Z,19nm,1.4s						
JSU	Suzuyama	72.65	317	P	P	14 35 27.4	+0.3
JSU				IAmb	IAmb	14 35 46.4	
	comp=Z,30nm,1.5s						
NVAR	Mina Array Bea	84.71	44	P	P	14 36 31.2	-0.4
	comp=Z,0.3nm,0.6s,baz=221,slow=7.8,SNR=2.1						
CMAR	Chiang Mai Arr	89.52	290	P	P	14 36 55.8	+1.4
	comp=Z,0.5nm,0.8s,baz=145,slow=3.6,SNR=4.6						
TXAR	Lajitas Array	90.39	58	P	P	14 36 58.4	0.0
	comp=Z,0.9nm,0.7s,baz=206,slow=6.8,SNR=6.7						
ILAR	Eielson Array	91.98	14	P	P	14 37 03.5	-1.2
	comp=Z,0.3nm,0.9s,baz=236,slow=6.4,SNR=2.0						
PDAR	Pinedale Array	92.65	44	P	P	14 37 07.6	-1.0
	comp=Z,0.3nm,0.6s,baz=224,slow=2.5,SNR=3.1						

IDC ***23*** *14:27:03.8±2.8, 57°.05N×154°.30W, h0^{km}, mb3.7/3, mb1 4.0/6, mb1mx3.5/49, mbtmp3.8/6, ML3.4/3, Error ellipse: s-maj=48.8km s-min=27.8km az=162.0*

ANF ***23*** *14:27:17.9±0.3, 58°.03N×153°.13W, h65^{km}±9^{km}, ML3.8/19, Error ellipse: s-maj=6.1km s-min=2.9km az=129.0*

NEIC ***23*** *14:27:18±1.3, 58°.03N±0°.04×153°.25W±0°.08, h59^{km}±7^{km}, Error ellipse: s-maj=6.5km s-min=5.4km az=94.0*

AEIC ***23*** *14:27:19±1.7, 58°.05N±0°.03×153°.31W±0°.08, h47^{km}±7^{km}, ML3.5, ML3.8/36(NEIC), Error ellipse: s-maj=5.9km s-min=4.7km az=78.0*

ISC 23 14:27:18.1±0.8**, 58°.05N**±0°.03×**153°.17W**±0°.04**, h61**^{km}±9^{km}**, n140,** σ**1^{s}14**/163**, Kodiak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDAK	Kodiak Island	0.41	131	Pg	Pn	14 27 29.2	-0.1
	316nm,0.3s,baz=6.9,slow=1.6,SNR=4174						
KDAK				Lg	Lg	14 27 37.7	
	807nm,0.3s,baz=232,slow=23,SNR=38						
KDAK				LR	LR	14 28 02.0	
	comp=Z,151nm,21.9s,baz=278,slow=49						
KDAK	Kodiak Island	0.41	131	P	Pn	14 27 29.2	-0.1
	baz=304						
KDAK				S	Sn	14 27 37.7	+0.3
	baz=304						
KDAK	Kodiak Island	0.41	131		Pn	14 27 29.3	-0.1
KDAK				IAML		14 27 39.9	
	4μm,0.6s						
KDAK				IAML		14 27 40.2	
	4μm,0.8s						
KDAK	Kodiak Island	0.41	131		Sn	14 27 37.5	+0.1
OHAK	Old Harbor	0.84	184	P	Pn	14 27 33.8	-0.3
	baz=2.5,SNR=75						
OHAK				S	Sn	14 27 45.3	-0.4
	baz=2.5						
OHAK	Old Harbor	0.84	184		Pn	14 27 33.8	-0.3
OHAK					Sn	14 27 45.4	-0.4
OHAK	Old Harbor	0.84	184	IAML		14 27 50.5	
	comp=E,2μm,0.7s						
KCG	Knife Ck. Glac	1.06	285		Pn	14 27 35.6	-1.4
AUCH	Augustine Cone	1.32	354		Pn	14 27 40.8	+0.3
AU22	Augustine Moun	1.32	356		Pn	14 27 41.0	+0.5
AU22					Sn	14 27 58.6	+1.4
AUL	Augustine Lava	1.34	354		Pn	14 27 41.0	+0.4
AUL					Sn	14 27 58.8	+1.2
SII	Sitkinak Islan	1.60	201	P	Pn	14 27 43.5	-0.6
	baz=19,SNR=16						
SII				S	Sn	14 28 02.4	-1.3
	baz=19						
SII	Sitkinak Islan	1.60	201		Pn	14 27 43.5	-0.6
SII					Sn	14 28 02.5	-1.3
SII	Sitkinak Islan	1.60	201	IAML		14 28 15.3	
	comp=E,2μm,0.4s						
SII				IAML		14 28 19.6	
	comp=N,2μm,0.8s						
OPT	Oil Point	1.60	359		Pn	14 27 44.8	+0.6
PLK3	Peulik 3	1.69	259		Pn	14 27 45.1	-0.3
PLK3					Sn	14 28 06.0	-0.2
PLK2	Peulik 2	1.71	262		Pn	14 27 45.2	-0.4
CNPM	China Poot	1.79	34		Pn	14 27 47.6	+0.8
CNPM	China Poot	1.79	34	IAML		14 28 16.1	
	comp=N,741nm,0.6s						
CNPM				IAML		14 28 16.7	
	comp=E,631nm,0.6s						
HOM	Homer	1.79	26	P	Pn	14 27 47.6	+0.8
	baz=207,SNR=5.8						
HOM				S	Sn	14 28 10.2	+1.7
	baz=207						
PLK1	Peulik 1	1.85	264		Pn	14 27 46.8	-0.7
ILS	Iliamna Low So	1.91	2		Pn	14 27 48.6	+0.2
IVE	Iliamna Volcan	1.97	2		Pn	14 27 49.5	+0.2
BRLK	Bradley Lake	2.09	34		Pn	14 27 51.0	+0.2
BRLK	Bradley Lake	2.09	34	IAML		14 28 25.9	
	comp=N,398nm,0.4s						
BRSE	Bradley Lake S	2.11	36	P	Pn	14 27 51.5	+0.5
	baz=218,SNR=16						
BRSE				S	Sn	14 28 15.7	-0.5
	baz=218						
BRSE	Bradley Lake S	2.11	36		Pn	14 27 51.6	+0.5
RED	Redoubt Volcan	2.38	5		Pn	14 27 55.2	+0.3
RSO	Redoubt South	2.43	5		Pn	14 27 55.9	+0.3
DFR	Drift River	2.56	5		Pn	14 27 57.6	+0.4
DFR					Sn	14 28 28.7	+1.5
SEW	Seward	2.81	41	P	Pn	14 28 00.3	-0.3
	baz=224,SNR=8.7						
SEW				S	Sn	14 28 30.7	-2.6
	baz=224						
SEW	Seward	2.81	41		Pn	14 28 00.3	-0.3
SLKM	Skilak Lake	2.89	30		Pn	14 28 01.8	0.0
CAPN	Captain Cook N	2.91	20	P	Pn	14 28 03.6	+1.7
	baz=202						
CAPN	Captain Cook N	2.91	20		Pn	14 28 03.9	+2.0
O22K	Cooper Landing	3.01	35	P	Pn	14 28 03.0	-0.2
	baz=217,SNR=12						
O22K	Cooper Landing	3.01	35		Pn	14 28 03.1	-0.2
SPCR	Spurr Chakacha	3.19	8	P	Pn	14 28 06.1	+0.2
	baz=190,SNR=18						
SPCR				S	Sn	14 28 44.4	+1.7
	baz=190						
SPCR	Spurr Chakacha	3.19	8		Pn	14 28 06.2	+0.3
SPCN	Chakachatna No	3.22	9		Pn	14 28 06.9	+0.7
SPBG	Spurr Blockage	3.24	7		Pn	14 28 06.0	-0.6
SPCP	Crater Peak Br	3.26	9		Pn	14 28 07.6	+0.7
SVW2	Sparrevohn	3.29	339		Pn	14 28 06.7	-0.5
SVW2	Sparrevohn	3.29	339	IAML		14 28 56.2	
	comp=E,150nm,0.8s						
SPCG	Spurr Capps Gl	3.30	10		Pn	14 28 08.1	+0.7
RC01	Rabbit Creek A	3.51	28	P	Pn	14 28 10.2	0.0
	baz=211,SNR=18						
RC01				S	Sn	14 28 49.6	-0.8
	baz=211						
RC01	Rabbit Creek A	3.51	28		Pn	14 28 10.4	+0.2
STLK	Strandline Lak	3.52	11		Pn	14 28 10.8	+0.4
SUA	Susitna One	3.63	19	P	Pn	14 28 12.2	+0.3
	baz=201,SNR=104						
SUA	Susitna One	3.63	19		Pn	14 28 12.3	+0.3
PWL	Port Wells	3.74	39		Pn	14 28 13.3	0.0
SKT	Skwentna	4.02	11	P	Pn	14 28 16.9	-0.3
	baz=193						
SKT	Skwentna	4.02	11		Pn	14 28 17.0	-0.2
SKT	Skwentna	4.02	11	IAML		14 29 14.7	
	comp=N,82nm,0.4s						
PMR	Palmer	4.09	28	P	Pn	14 28 17.5	-0.6
	baz=212,SNR=6.5						
PMR				S	Sn	14 29 02.2	-2.4
	baz=212						
PMR	Palmer	4.09	28	Pn	Pn	14 28 17.4	-0.7
HIN	Hinchinbrook I	4.16	53		Pn	14 28 19.3	+0.3
HIN				IAML		14 29 40.0	
	comp=N,116nm,2.0s						
HIN				IAML		14 30 14.1	
	comp=E,109nm,2.3s						
SML	Sawmill	4.48	31	P	Pn	14 28 23.2	-0.3
	baz=215						
SML	Sawmill	4.48	31	Pn	Pn	14 28 23.6	+0.1
SML				IAML		14 29 33.5	
	comp=E,78nm,0.9s						
SML				IAML		14 29 34.7	
	comp=N,67nm,1.1s						
EYAK	Cordova Ski Ar	4.55	54	P	Pn	14 28 24.4	+0.1
	baz=240						
SCM	Sheep Creek Mo	4.80	35		Pn	14 28 27.9	+0.1
SCM	Sheep Creek Mo	4.80	35	IAML		14 29 23.8	
	comp=E,58nm,0.7s						
SCM				IAML		14 30 01.3	
	comp=N,62nm,1.7s						
SDPT	Sand Point	4.85	239	P	Pn	14 28 28.1	-0.4
	baz=53						
SDPT				S	Sn	14 29 23.2	-0.1
	baz=53						
PPLA	Purkeypile	4.88	5	P	Pn	14 28 29.3	+0.3
	baz=186						
PPLA	Purkeypile	4.88	5		Pn	14 28 29.6	+0.6
KAIM	Kayak Island	4.90	64	Pn	Pn	14 28 29.8	+0.6
RAGM	Ragged Mountai	4.95	58	Pn	Pn	14 28 30.6	+0.7
RAGM				IAML		14 31 08.9	
	comp=E,139nm,3.1s						
KLU	Klutina	5.03	44	P	Pn	14 28 30.4	-0.6
	baz=230						
KLU				S	Sn	14 29 25.3	-2.4
	baz=230						
KLU	Klutina	5.03	44		Pn	14 28 31.2	+0.2
KLU				IAML		14 29 48.8	
	comp=N,38nm,0.9s						
TTA	Tatalina	5.09	345	P	Pn	14 28 31.3	-0.5
	baz=163,SNR=9.6						
TTA	Tatalina	5.09	345	Pn	Pn	14 28 31.1	-0.7
HMT	Hamilton	5.12	60	Pn	Pn	14 28 32.7	+0.5
BMRM	Bremner River	5.25	53	S	Sn	14 29 31.3	-1.8
	baz=240						
WAT6	Susitna Watana	5.28	28	P	Pn	14 28 34.4	-0.2
	baz=213						
WAT6				S	Sn	14 29 31.3	-2.8
	baz=213						
M24K	Tolsona, Glenn	5.36	38	P	Pn	14 28 35.7	+0.1
	baz=224						
M24K				S	Sn	14 29 33.6	-2.3
	baz=224						
M24K	Tolsona, Glenn	5.36	38		Pn	14 28 36.3	+0.7
WAT2	Susitna Watana	5.42	23	P	Pn	14 28 36.1	-0.3
	baz=207,SNR=9.2						
WAT2				S	Sn	14 29 36.5	-0.8
	baz=207						
TRF	Thorofare Moun	5.60	13	P	Pn	14 28 38.9	+0.1
	baz=196,SNR=8.9						
TRF				S	Sn	14 29 40.9	-0.8
	baz=196						
TRF	Thorofare Moun	5.60	13	Pn	Pn	14 28 38.8	-0.1
N25K	Chitina, Valde	5.60	47	P	Pn	14 28 39.1	+0.3
	baz=234						
N25K				S	Sn	14 29 39.6	-2.2
	baz=234						
N25K	Chitina, Valde	5.60	47	Pn	Pn	14 28 39.5	+0.7
KTH	Kantishna Hill	5.63	10		Pn	14 28 39.3	+0.1
RND	Reindeer	5.77	20	Pn	Pn	14 28 40.7	-0.5
GLB	Gilahina Butte	5.82	50	Pn	Pn	14 28 42.1	+0.2
CHUM	Lake Minchumin	5.86	4	P	Pn	14 28 42.5	+0.2
	baz=185,SNR=11						
VRDI	Verde Repeater	5.87	53	Pn	Pn	14 28 43.3	+0.8
MCK	McKinley	6.06	18	P	Pn	14 28 45.0	0.0
	baz=202						
MCK				S	Sn	14 29 52.1	-0.8
	baz=202						
MCARA	McCarthy VSAT	6.12	53	S	Sn	14 29 52.4	-2.1
	baz=241						
MCARA	McCarthy VSAT	6.12	53	Pn	Pn	14 28 48.0	+2.1
BPAW	Bear Paw Mtn.	6.16	9	P	Pn	14 28 46.1	-0.3
	baz=191,SNR=8.3						
BPAW				S	Sn	14 29 54.3	-1.1
	baz=191						
BPAW	Bear Paw Mtn.	6.16	9	Pn	Pn	14 28 46.4	0.0
PAX	Paxson	6.22	34	P	Pn	14 28 47.0	-0.4
	baz=221						
PAX				S	Sn	14 29 54.9	-2.2
	baz=221						
PAX	Paxson	6.22	34		Pn	14 28 47.2	-0.1
BALM	Baldy	6.26	57	Pn	Pn	14 28 48.4	+0.5
BWN	Browne	6.39	15		Pn	14 28 49.3	-0.3
BARN	Barnard Glacie	6.58	58	Pn	Pn	14 28 53.0	+0.7
CTGM	Chitina Glacie	6.69	59	Pn	Pn	14 28 54.9	+1.0
MENT	Mentasta	6.76	40	Pn	Pn	14 28 55.6	+0.9
WRH	Wood River Hil	6.89	19	Pn	Pn	14 28 54.6	-1.8
HDA	Harding Lake	7.04	23	P	Pn	14 28 58.0	-0.5
	baz=208						
HDA				S	Sn	14 30 14.0	-3.0
	baz=208						
HDA				S	Sn	14 30 14.0	-3.0
	baz=208						
HDA	Harding Lake	7.04	23		Pn	14 28 57.3	-1.2
MLY	Manley	7.10	8	P	Pn	14 28 58.3	-0.9
	baz=191,SNR=10.0						
CCB	Clear Creek Bu	7.10	19	Pn	Pn	14 28 57.8	-1.3
DOT	Dot Lake	7.16	35	Pn	Pn	14 28 59.5	-0.5
TCOL	CIGO, UAF Yank	7.30	18	S	Sn	14 30 20.2	-2.9
	baz=203						
TCOL	CIGO, UAF Yank	7.30	18		Pn	14 29 02.0	+0.1
COLA	College	7.30	18	P	Pn	14 29 01.1	-0.8
	baz=203						
COLA				S	Sn	14 30 20.6	-2.5
	baz=203						
COLA	College	7.30	18		Pn	14 29 02.2	+0.3
MDM	Murphy Dome	7.32	17	Pn	Pn	14 29 00.9	-1.4
I23K	Minto, Yukon-K	7.35	13	P	Pn	14 29 01.5	-1.0
	baz=196,SNR=9.0						
I23K	Minto, Yukon-K	7.35	13		Pn	14 29 01.3	-1.3
IL31		7.38	21		Pn	14 29 02.3	-0.7
ILAR	Eielson Array	7.38	21	Pn	Pn	14 29 02.3	-0.8
	comp=N,0.5nm,0.3s,baz=210,slow=14,SNR=36						
ILAR				Sn	Sn	14 30 20.7	-4.5
	comp=N,1.1nm,0.3s,baz=203,slow=20,SNR=3.3						
ILAR	Eielson Array	7.38	21	Pn	Pn	14 29 02.2	-0.9
BCAR	Beaver Creek A	7.53	43	Pn	Pn	14 29 05.4	+0.3
POKR	Poker Plat Res	7.59	19	P	Pn	14 29 05.6	-0.4
	baz=204						
POKR	Poker Plat Res	7.59	19	Pn	Pn	14 29 06.0	0.0
IMAR	Indian Mountai	7.96	358		Pn	14 29 10.7	-0.3
PRP	Porcupine Dome	8.31	23	P	Pn	14 29 15.5	-0.5
	baz=209,SNR=17						
PRP	Porcupine Dome	8.31	23	Pn	Pn	14 29 15.3	-0.6
HYT	Haines Junctio	8.45	64	Pn	Pn	14 29 19.6	+1.7
UNV	Unalaska Valle	8.58	246	Pn	Pn	14 29 17.8	-1.7
ANM	Nome	8.77	323	P	Pn	14 29 22.0	+0.1
	baz=133,SNR=11						
ANM	Nome	8.77	323	Pn	Pn	14 29 22.1	+0.1
EGAK	Eagle	8.85	35	Pn	Pn	14 29 23.0	-0.1
FYU	Fort Yukon	9.30	20	Pn	Pn	14 29 27.6	-1.6
COLD	Coldfoot	9.31	7	P	Pn	14 29 28.0	-1.4
	baz=190						
COLD	Coldfoot	9.31	7	Pn	Pn	14 29 27.6	-1.8
BMAR	Burnt Mountain	10.19	19	Pn	Pn	14 29 41.6	+0.2
GAMB	Gambell	10.66	310	P	Pn	14 29 47.9	+0.1
	baz=114						
GAMB	Gambell	10.66	310	Pn	Pn	14 29 47.8	0.0
TOLK	Toolik Lake Re	10.75	7	Pn	Pn	14 29 47.8	-1.3
DLBC	Dease Lake	12.19	78	Pn	Pn	14 30 10.0	+1.2
	comp=N,0.1nm,0.3s,baz=270,slow=3.0,SNR=2.3						
DLBC				Sn	Sn	14 32 20.7	-2.1
	comp=N,0.1nm,0.3s,baz=126,slow=18,SNR=1.4						
INK	Inuvik	13.49	32	Pn	P	14 30 33.0	-0.6
	comp=N,0.1nm,0.3s,baz=233,slow=12,SNR=3.4						
INK	Inuvik	13.49	32	Pn	Pn	14 30 28.4	+2.1
YKA	Yellowknife Ar	19.41	61	P	Pn	14 31 41.1	+0.4
	comp=N,0.5nm,0.5s,baz=274,slow=9.3,SNR=11						
TXAR	Lajitas Array	44.42	108	P	P	14 35 25.7	+2.9
AKASG	Malin Array Be	71.59	358	P	P	14 38 32.1	-0.3
	comp=N,0.9nm,0.4s,baz=5.3,slow=6.2,SNR=7.2						
GERES	GERESS Array B	72.92	9	P	P	14 38 41.9	+1.4
	comp=N,0.4nm,0.4s,baz=346,slow=7.5,SNR=1.9						
GERES	GERESS Array B	72.92	9	P	P	14 38 41.6	+1.1

SJA ***23*** *14:36:11.6±0.6, 29°.14S×71°.00W, h100^{km}±6^{km}, ML4.0, MW4.0*

IDC ***23*** *14:36:14.6±1.0, 29°.07S×70°.75W, h82^{km}±6^{km}, mb3.5/1, mb1 3.5/5, mb1mx3.3/26, mbtmp3.7/5, Error ellipse: s-maj=63.0km s-min=18.2km az=104.0*

GUC ***23*** *14:36:15.2±0.6, 29°.16S×70°.67W, h83^{km}±4^{km}, ML4.1*

ISC 23 14:36:14.2±0.8**, 29°.12S**±0°.03×**70°.88W**±0°.05**, h83**^{km}±7^{km}**, n51,** σ**1^{s}35**/63**, 5C-2D, Central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AC05	El Transito	0.60	62	⇓*i*P	Pn	14 36 28.9	-0.4
AC05				*i* S	Sn	14 36 39.1	-1.3
AC05				IAML		14 36 39.8	
	comp=N,11μm,0.3s						
AC04	Llanos de Chal	0.93	349	*e*P	Pn	14 36 34.4	+1.8
AC04				*i* S	Sn	14 36 49.0	+2.7
AC04				IAML		14 36 54.9	
	comp=E,7μm,0.3s						
GO04	Tololo Observa	1.05	176	⇑*i*P	Pn	14 36 34.6	+0.4
GO04				*i* S	Sn	14 36 49.8	+0.5
GO04				IAML		14 36 53.5	
	comp=N,17μm,0.5s						
GO04	Tololo Observa	1.05	176	*e*P	Pn	14 36 34.7	+0.5
GO04				*e*S	Sn	14 36 50.0	+0.8
CO01	Juntas del Tor	1.09	141	⇓*i*P	Pn	14 36 34.0	-0.8
CO01				*i* S	Sn	14 36 48.1	-2.0
CO01				IAML		14 36 48.8	
	comp=E,3μm,0.4s						
AROD	Rodeo	1.61	131	*e*P	Pn	14 36 41.8	+0.5
AROD				*e*S	Sn	14 37 01.7	-0.1
GO03	Copiap	1.62	21	⇑*i*P	Pn	14 36 42.0	+0.7
GO03				*i* S	Sn	14 37 02.7	+0.9
GO03				IAML		14 37 05.1	
	comp=N,3μm,0.3s						
GO03	Copiap	1.62	21	*e*P	Pn	14 36 42.2	+0.9
GO03				*e*S	Sn	14 37 03.2	+1.4
CO03	El Pedregal	1.72	175	⇑*i*P	Pn	14 36 43.0	+0.5
CO03				*i* S	Sn	14 37 04.7	+0.6
CO03				IAML		14 37 05.8	
	comp=E,4μm,0.2s						
ACDV	Cuesta del Vie	1.85	125	*e*P	Pn	14 36 44.6	+0.3
ACDV				IAML		14 37 11.9	
	comp=Z,461nm,0.4s						
AGUA	GUANDACOL	2.12	101	*e*P	Pn	14 36 48.5	+0.7
AGUA				*e*S	Sn	14 37 15.2	+1.7
AGUA				IAML		14 37 18.2	
	comp=Z,581nm,0.3s						
ACCO	Cerro Coronel	2.15	133	*e*P	Pn	14 36 49.2	+0.8
ACCO				*e*S	Sn	14 37 16.8	+2.2
ACCO				IAML		14 37 20.2	
	comp=Z,830nm,0.4s						
VCA	Vinchina	2.38	81	*e*P	Pn	14 36 53.0	+1.7
VCA				*e*S	Sn	14 37 22.3	+2.6
VCA				IAML		14 37 29.9	
	comp=Z,859nm,0.3s						
AC02	Maricunga	2.75	35	⇑*i*P	Pn	14 36 57.4	+0.7
AC02				IAML		14 37 32.0	
	comp=E,1μm,0.2s						
AC01	Pan de Azucar	2.97	5	⇑*i*P	Pn	14 36 59.3	+0.1
AC01				IAML		14 37 46.0	
	comp=E,602nm,0.3s						
RTLS	Leoncito	3.00	153	*e*P	Pn	14 36 53.1	-6.7
RTLS				IAML		14 37 43.4	
	comp=Z,368nm,0.5s						
RTLL	Cerro Villicun	3.03	137	*e*P	Pn	14 37 01.0	+1.0
RTLL				*e*S	Sn	14 37 36.3	+1.0
RTLL				IAML		14 37 37.4	
	comp=Z,273nm,0.7s						
ZON	Zonda	3.08	142	*e*P	Pn	14 36 59.4	-1.2
SJA	San Juan	3.13	141	*e*P	Pn	14 37 03.9	+2.6
AVFE	Valle Fertil	3.34	118	*e*P	Pn	14 37 03.7	-0.6
AVFE				*e*S	Sn	14 37 41.3	-1.7
AVFE				IAML		14 37 46.4	
	comp=Z,245nm,0.6s						
AUSP	Uspallata	3.35	158	*e*P	Pn	14 36 48.4	-16
RTCV	Cerro Valdivia	3.40	144	*e*P	Pn	14 36 57.3	-7.7
RTCV				IAML		14 37 54.5	
	comp=Z,134nm,0.6s						
ACLC	CERRO LA CRUZ	3.44	96	*e*P	Pn	14 37 05.1	-0.6
ACLC				*e*S	Sn	14 37 45.3	-0.3
ACLC				IAML		14 37 48.4	
	comp=Z,303nm,0.4s						
GO02	Mina Guanaco	4.11	17	*e*P	Pn	14 37 14.8	0.0
ACHE	Chepes	4.18	120	*e*P	Pn	14 37 15.1	-0.6
PB14	IPOC Station P	4.50	6	*e*P	Pn	14 37 19.2	-1.0
PB14				IAML		14 38 34.8	
	comp=Z,249nm,0.8s						
FSA	Cafayete	5.28	57	*e*P	Pn	14 37 29.3	-1.5
AHML	Horco Molle	5.43	66	*e*P	Pn	14 37 33.2	+0.6
AHML				IAML		14 38 56.5	
	comp=Z,43nm,0.8s						
MRA	San Martin	5.53	128	*e*P	Pn	14 37 23.9	-10
MRA				*e*S	Sn	14 38 36.2	0.0
PB10	IPOC Station P	5.59	3	*e*P	Pn	14 37 34.0	-0.8
PB10				IAML		14 39 10.2	
	comp=Z,68nm,0.4s						
PB15	IPOC Station P	6.02	12	*e*P	Pn	14 37 40.9	0.0
PB06	IPOC Station P	6.50	11	*e*P	Pn	14 37 46.1	-1.2
PB06				IAML		14 39 37.4	
	comp=Z,95nm,1.1s						
LVC	Limon Verde	6.72	16	P	Pn	14 37 49.2	-1.4
	comp=Z,1.4nm,0.3s,baz=202,slow=11,SNR=22						
LVC				S	Sn	14 39 05.1	-0.8
	comp=Z,3.4nm,0.3s,baz=153,slow=18,SNR=1.4						
LVC	Limon Verde	6.72	16	*e*P	Pn	14 37 49.4	-1.2
LVC				IAML		14 39 45.3	
	comp=Z,61nm,0.8s						
PB04	IPOC Station P	6.79	6	*e*P	Pn	14 37 50.1	-1.2
PB04				IAML		14 39 49.2	
	comp=Z,85nm,0.7s						
PB07	IPOC Station P	7.42	7	*e*P	Pn	14 37 57.8	-2.1
PB02	IPOC Station P	7.82	7	*e*P	Pn	14 38 04.0	-1.4
H03N1	Juan Fernandez	8.11	236	T	T	14 46 03.6	
	baz=64,slow=72,SNR=541						
H03N2	Juan Fernandez	8.12	236	T	T	14 46 04.1	
	baz=64,slow=72,SNR=399						
H03N3	Juan Fernandez	8.13	236	T	T	14 46 10.7	
	baz=64,slow=72,SNR=385						
PSGCX	Pisagua	9.51	4	*e*P	Pn	14 38 24.8	-3.5
MNMCX	Minye Minye	10.01	7	*e*P	Pn	14 38 40.9	+5.5
PLCA	Paso Flores	11.59	179	P	Pn	14 38 56.5	-0.1
	comp=Z,0.1nm,0.3s,baz=15,slow=2.6,SNR=1.6						
CPUP	Villa Florida	12.32	80	S	Sn	14 41 25.1	+3.2
	comp=Z,0.2nm,0.3s,baz=338,slow=17,SNR=1.4						
LPAZ	La Paz	13.02	12	P	Pn	14 39 14.4	-2.1
	comp=Z,0.3nm,0.3s,baz=207,slow=8.1,SNR=2.5						
SIV	San Ignacio	15.89	37	P	Pn	14 39 50.9	-2.1
	comp=Z,0.2nm,0.3s,baz=229,slow=11,SNR=7.4						
TORD	Torodi Ar. Bea	81.61	70	P	P	14 48 23.6	+0.1
	comp=Z,0.5nm,0.5s,baz=259,slow=5.4,SNR=2.0						
TORD				pP	pP	14 48 45.4	-0.8
	comp=Z,0.6nm,0.4s,baz=254,slow=5.5,SNR=1.4						
ASAR	Alice Springs	122.35	207	PKP	PKPdf	14 55 00.5	+0.2
	comp=Z,0.1nm,0.4s,baz=134,slow=1.8,SNR=5.5						
WRA	Warramunga Arr	125.49	209	PKP	PKPdf	14 55 06.7	+0.3
	comp=Z,0.4nm,0.4s,baz=152,slow=1.7,SNR=9.7						
ZALV	Zalesovo Beam	149.53	29	PKPbc	PKPbc	14 55 53.9	+0.4
	comp=Z,2.5nm,0.5s,baz=306,slow=3.7,SNR=13						
ZALV				pPKPbc	pPKPbc	14 56 16.4	-0.6
	comp=Z,2.0nm,0.6s,baz=298,slow=3.1,SNR=5.6						
MKAR	Makanchi Array	152.65	42	PKPbc	PKPbc	14 56 01.4	+0.4
	comp=Z,0.4nm,0.6s,baz=325,slow=2.0,SNR=5.5						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MKAR				pPKPbc	**pPKPbc**	**14 56 24.4**	**-0.3**
	comp=Z,0.5nm,0.6s,baz=326,slow=1.7,SNR=5.9						

IDC 23 14:43:41.8±11.0,**9°.78N**×**93°.04E,h0^{km},mb3.3**/2, **mb1 3.5**/3,**mb1mx3.1**/39,**mbtmp3.2**/3,**ML3.2**/1,**Error ellipse: s-maj=257.6km s-min=46.5km az=95.0,Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**10.36**	**33**	Pn	Pn	14 46 11.9	+0.2
	0.1nm,0.3s,baz=222,slow=13,SNR=1.6						
H08S3	**Diego Garcia H**	**26.80**	**231**	T	T	15 16 46.7	
	baz=48,slow=76,SNR=64						
H08S2	**Diego Garcia H**	**26.80**	**230**	T	T	15 16 39.0	
	baz=48,slow=76,SNR=14						
H08S1	**Diego Carcia H**	**26.81**	**231**	T	T	15 16 38.8	
	baz=48,slow=76,SNR=5.6						
WRA	**Warramunga Arr**	**50.25**	**126**	P	P	14 52 39.5	-0.7
	0.3nm,0.3s,baz=306,slow=8.4,SNR=3.9						
ASAR	**Alice Springs**	**51.97**	**130**	P	P	14 52 53.4	+0.4
	0.2nm,0.6s,baz=308,slow=7.6,SNR=6.4						

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*UPA **23** 15:06:40.8±1.6,9°.03N×78°.49W,h18^{km}±8^{km},MW4.3*
ISC 23 15:06:39.7±5.1,**9°.23N**±0°.07×**78°.41W**±0°.03,**h38**^{km}±7^{km}, **n36,**σ**1^{s}23**/50,**8C-8D,Panama**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNTA3	**Canitas, Panam**	**0.47**	**269**	⇓*i*P	**Pn**	**15 06 50.4**	**+0.5**
CNTA3				*i* S	**Sn**	**15 06 57.1**	**0.0**
CHPO	**Chepo, Panama**	**0.70**	**266**	⇓*i*P	**Pn**	**15 06 53.0**	**-0.1**
CHPO				*e*S	**Sn**	**15 07 02.6**	**0.0**
UPD2	**Meteti**	**0.78**	**150**	⇑*i*P	**Pn**	**15 06 54.8**	**+0.6**
UPD2				*e*S	**Sn**	**15 07 05.3**	**+0.6**
MIRA3	**Miramar, Colon**	**0.97**	**291**	⇓*i*P	**Pn**	**15 06 58.1**	**+1.3**
MIRA3				*i* S	**Sn**	**15 07 11.7**	**+2.3**
UPA	**Univ. de Panam**	**1.14**	**258**	⇑*i*P	**Pn**	**15 06 59.2**	**+0.1**
UPA				*i* S	**Sn**	**15 07 13.4**	**0.0**
FLAM	**Flamenco Islan**	**1.16**	**254**	⇓*i*P	**Pn**	**15 06 59.2**	**-0.1**
FLAM				*i* S	**Sn**	**15 07 12.6**	**-1.2**
CAP2	**Capurgana**	**1.19**	**119**	⇓*i*P	**Pn**	**15 06 59.7**	**0.0**
CAP2				*e*S	**Sn**	**15 07 16.9**	**+2.3**
CAPC	**Capurgana**	**1.20**	**119**	*e*P	**Pn**	**15 06 59.7**	**-0.2**
CAPC				*e*S	**Sn**	**15 07 17.0**	**+2.0**
PML3	**Paraiso**	**1.21**	**260**	⇑*e*P	**Pn**	**15 06 60.0**	**0.0**
TABO3	**Taboga, Panama**	**1.21**	**249**	⇑*e*P	**Pn**	**15 06 60.0**	**-0.1**
GAMB1	**Gamboa**	**1.29**	**265**	⇑*e*P	**Pn**	**15 07 00.9**	**-0.2**
CHOR3	**La Chorrera**	**1.38**	**256**	*e*P	**Pn**	**15 07 02.1**	**-0.2**
CHOR3				*i* S	**Sn**	**15 07 20.4**	**+1.1**
SABA3	**Sabanitas, Col**	**1.38**	**275**	⇓*i*P	**Pn**	**15 07 02.9**	**+0.6**
SABA3				*i* S	**Sn**	**15 07 21.6**	**+2.3**
MLIR	**Monte Lirio**	**1.42**	**271**	⇑*e*P	**Pn**	**15 07 03.6**	**+0.6**
MLIR				*e*S	**Sn**	**15 07 20.9**	**+0.4**
ZANG	**Zanguenga, Cho**	**1.46**	**260**	⇑*e*P	**Pn**	**15 07 03.5**	**0.0**
ZANG				*e*S	**Sn**	**15 07 21.9**	**+0.5**
PNME	**Penonome**	**2.03**	**249**	⇓*i*P	**Pn**	**15 07 11.3**	**0.0**
PTAC	**Punta Ardita,**	**2.15**	**164**	*e*P	**Pn**	**15 07 12.1**	**-0.9**
AZU	**Azuero**	**2.33**	**232**	*i* P	**Pn**	**15 07 14.6**	**-0.9**
AZU				*i* S	**Sn**	**15 07 41.0**	**-1.8**
CHIT3	**Chitre**	**2.35**	**238**	*e*P	**Pn**	**15 07 15.5**	**-0.3**
OCU3	**Ocu, Herrera**	**2.66**	**242**	*e*P	**Pn**	**15 07 19.7**	**-0.4**
SFRA3	**San Francisco,**	**2.71**	**249**	⇑*e*P	**Pn**	**15 07 21.0**	**+0.2**
MOTC	**Monteria, Cord**	**2.75**	**99**	*e*P	**Pn**	**15 07 21.1**	**-0.2**
MOTC				*e*S	**Sn**	**15 07 50.4**	**-2.8**
MONA	**Monteria**	**2.75**	**99**	⇓*i*P	**Pn**	**15 07 21.1**	**-0.2**
STIA3	**Santiago, Vera**	**2.77**	**246**	*e*P	**Pn**	**15 07 20.1**	**-1.4**
PONU3	**Ponuga, Veragu**	**2.87**	**242**	*e*P	**Pn**	**15 07 23.4**	**+0.5**
MESA3	**La Mesa, Verag**	**2.94**	**249**	*e*P	**Pn**	**15 07 24.5**	**+0.6**
CACAO	**El Cacao, Vera**	**3.06**	**233**	*e*P	**Pn**	**15 07 25.4**	**-0.1**
DBBC	**Dabeiba**	**3.09**	**135**	*e*P	**Pn**	**15 07 28.1**	**+2.1**
GMAL	**Guarumal, Vera**	**3.15**	**243**	*e*P	**Pn**	**15 07 28.0**	**+1.3**
UREC	**San Jos de Ur**	**3.20**	**117**	*e*P	**Pn**	**15 07 27.3**	**-0.2**
CBOC	**Ciudad Bolivar**	**4.10**	**144**	*e*P	**Pn**	**15 07 40.2**	**+0.2**
SMLC	**San Martn de**	**4.31**	**95**	*e*P	**Pn**	**15 07 40.9**	**-1.8**
PTBC	**PUERTO BERRIO,**	**4.74**	**124**	*e*P	**Pn**	**15 07 48.1**	**-0.5**
GUY2C	**Guyana, Caldas**	**4.99**	**143**	*e*P	**Pn**	**15 07 55.2**	**+2.7**
NORC	**Norcasia**	**5.06**	**136**	*e*P	**Pn**	**15 07 55.6**	**+2.5**
RREF	**El Recreo**	**5.26**	**145**	*e*P	**Pn**	**15 07 58.5**	**+2.1**

IDC 23 15:20:02.5±5.5,**5°.18S**×**133°.22E,h0^{km},mb3.8**/1, **mb1 3.7**/4,**mb1mx3.5**/25,**mbtmp3.6**/4,**ML3.4**/3,**MS3.8**/2, **Ms1 3.8**/2,**ms1mx2.8**/38,**Error ellipse: s-maj=329.2km s-min=27.0km az=76.0,Aru Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**4.71**	**335**	Pn	Pn	15 21 14.5	-0.4
	0.8nm,0.3s,baz=246,slow=22,SNR=7.5						
SIJI				Sn	Sn	15 22 06.0	-4.2
	0.7nm,0.3s,baz=203,slow=22,SNR=1.8						
WRA	**Warramunga Arr**	**14.71**	**176**	Pn	Pn	15 23 30.6	-1.5
	0.2nm,0.3s,baz=353,slow=13,SNR=7.6						
WRA				Sn	Sn	15 26 03.9	-12
	0.1nm,0.3s,baz=355,slow=24,SNR=1.9						
FITZ	**Fitzroy Crossi**	**14.82**	**209**	Sn	Sn	15 26 15.7	-3.0
	0.3nm,0.3s,baz=190,slow=8.5,SNR=1.7						
ASAR	**Alice Springs**	**18.39**	**178**	P	P	15 24 19.5	+0.3
	0.2nm,0.3s,baz=4.4,slow=11,SNR=26						
ASAR				S	Sn	15 27 40.1	-5.2
	0.0nm,0.3s,baz=352,slow=26,SNR=1.8						
CTA	**Charters Tower**	**19.50**	**141**	LR	LR	15 31 21.8	
	comp=Z,208nm,19.5s,baz=80,slow=35						
MKAR	**Makanchi Array**	**68.52**	**325**	P	P	15 31 07.1	+0.1
	1.0nm,0.9s,baz=123,slow=7.7,SNR=6.4						
MMAI	**Mount Meron Ar**	**99.35**	**302**	LR	LR	16 27 15.9	
	comp=Z,59nm,18.4s,baz=0.0,slow=41						

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*INET **23** 15:25:44.2,10°.48N×86°.87W,h15^{km},MW3.0*
UCR 23 15:25:45.4±1.5,**11°.16N**×**85°.66W,h170**^{km}±4^{km},**MW3.7, 3C-4D,Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUAI	**Buenos Aires**	**0.42**	**132**	⇓*i*P	Pn	15 26 08.6	-0.2
BUAI				*i* S	Sn	15 26 27.4	+0.6
GBS3	**Finca Las Img**	**0.42**	**152**	⇓*i*P	Pn	15 26 08.3	-0.6
GBS3				*i* S	Sn	15 26 27.2	+0.3
LAPC	**Finca la Perla**	**0.45**	**151**	*i* P	Pn	15 26 08.5	-0.5
LIM1	**Limonal**	**0.61**	**139**	*i* P	Pn	15 26 09.6	-0.1
LIM1				*i* S	Sn	15 26 28.7	+0.4
COLC	**Colonia**	**0.66**	**138**	*i* P	Pn	15 26 10.0	0.0
CUI	**Cuipilapa**	**0.69**	**136**	*i* P	Pn	15 26 10.3	+0.1
CUI				*e*S	Sn	15 26 30.2	+1.1
PLVR	**Palo Verde**	**0.86**	**160**	*e*P	Pn	15 26 10.5	-0.9
PLVR				*e*S	Sn	15 26 31.1	-0.2
JTS	**Las Juntas de**	**1.11**	**141**	*e*P	Pn	15 26 12.9	-0.1
JTS				*e*S	Sn	15 26 34.3	0.0
CEDE	**Laguna Cedeo**	**1.15**	**126**	*e*P	Pn	15 26 14.1	+0.6
ARE1	**Arenal 1**	**1.15**	**127**	⇓*i*P	Pn	15 26 14.0	+0.6
ARE1				*e*S	Sn	15 26 37.5	+2.5
CASO	**Castillo**	**1.16**	**128**	⇓*i*P	Pn	15 26 13.6	+0.1
CASO				*i* S	Sn	15 26 36.4	+1.3
GRZA	**Playa Garza**	**1.24**	**179**	⇑*i*P	Pn	15 26 14.2	+0.1
COVE	**Coope Vega, Sa**	**1.31**	**109**	*e*P	Pn	15 26 14.0	-0.7
LAFE	**Finca La Fe, P**	**1.53**	**151**	*e*P	Pn	15 26 17.1	+0.2
LAFE				*e*S	Sn	15 26 41.9	+0.6
SRA1	**San Ramn**	**1.57**	**133**	*e*P	Pn	15 26 17.7	+0.3
SRA1				*e*S	Sn	15 26 43.1	+0.9
JACO	**JACO, Garabito**	**1.78**	**147**	*e*P	Pn	15 26 20.0	+0.5
JACO				*e*S	Sn	15 26 47.0	+1.2
HDC	**Heredia**	**1.90**	**127**	*e*P	Pn	15 26 21.9	+1.0
TRT1	**Tortuguero**	**2.00**	**106**	*e*P	Pn	15 26 24.0	+2.2
LCR2	**La Lucha 2**	**2.15**	**131**	⇑*e*P	Pn	15 26 24.2	+0.5
LCR2				*e*S	Sn	15 26 53.9	+0.5
RIMA	**Rio Macho**	**2.24**	**128**	*e*P	Pn	15 26 25.1	+0.4
CDM	**Cerro de Muert**	**2.45**	**130**	⇑*e*P	Pn	15 26 28.2	+0.7
CDM				*e*S	Sn	15 27 01.2	+1.2
EDDO	**Dominical**	**2.59**	**137**	*e*P	Pn	15 26 29.9	+1.2
PEZE	**Perez Zeledon,**	**2.63**	**132**	*e*P	Pn	15 26 30.0	+0.7
DRK0	**Durika**	**3.03**	**128**	*e*P	Pn	15 26 34.4	+0.2
RIOS	**Rincon, Osa**	**3.23**	**139**	*e*P	Pn	15 26 37.3	+0.8
PIRO	**Carate, Puerto**	**3.57**	**140**	*e*P	Pn	15 26 41.8	+1.1
BRU2	**Volcan**	**3.75**	**129**	*e*P	Pn	15 26 44.0	+0.8

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*IDC **23** 15:59:05.9±1.5,52°.71N×34°.09W,h0^{km},mb3.7/15, mb1 3.9/16,mb1mx3.7/50,mbtmp3.7/16,ML4.4/1,Error ellipse: s-maj=41.0km s-min=16.8km az=9.0*
*NEIC **23** 15:59:08.1±1.3,52°.7N±0°.2×34°.1W±0°.2,h15^{km}±6^{km}, mb4.5/18,Error ellipse: s-maj=26.0km s-min=14.3km az=178.0*
ISC 23 15:59:06.9±0.7,**52°.6N**±0°.2×**34°.10W**±0°.07,**h10^{km},n39,** σ**0^{s}85**/37,**mb3.9**/22,**Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRLN	**Deer Lake**	**15.12**	**267**	Pn	**Pn**	**16 02 39.3**	**-0.9**
DRLN				IAmb	IAmb	16 02 46.3	
	comp=Z,14nm,0.9s						
EKA	**Eskdalemuir Ar**	**18.32**	**69**	P	**Pn**	**16 03 20.9**	**0.0**
	baz=277,slow=9.7,SNR=4.8						
FRB	**Frobisher Bay**	**21.01**	**315**	P	**P**	**16 03 50.8**	**+0.6**
	comp=Z,2.8nm,0.7s,baz=111,slow=11,SNR=6.2						
LMN	**Caledonia Moun**	**21.05**	**264**	P	**P**	**16 03 50.8**	**+0.1**
LMN				IAmb	IAmb	16 04 00.4	
	comp=Z,40nm,1.5s						
BATG	**Bathurst New B**	**21.14**	**268**	P	**P**	**16 03 52.2**	**+0.5**
BATG				IAmb	IAmb	16 04 01.6	
	comp=Z,22nm,1.4s						
MTE	**Manteigas**	**21.84**	**113**	P	**P**	**16 04 00.3**	**+1.0**
MTE				IAmb	IAmb	16 04 11.0	
	comp=Z,36nm,1.3s						
E63A	**Oxbow**	**22.97**	**268**	P	**P**	**16 04 12.0**	**+0.7**
E63A				IAmb	IAmb	16 04 20.6	
	comp=Z,15nm,1.1s						
G65A	**Princeton**	**23.05**	**265**	P	**P**	**16 04 13.0**	**+0.9**
EMMW	**East Machias**	**23.24**	**264**	P	**P**	**16 04 14.2**	**+0.2**
ESDC	**Sonseca Array**	**24.36**	**110**	P	**P**	**16 04 26.2**	**+1.3**
	comp=Z,1.0nm,0.8s,baz=139,slow=9.9,SNR=2.4						
ESDC	**Sonseca Array**	**24.36**	**110**	IAmb	IAmb	16 04 28.2	
	comp=Z,4.8nm,1.1s						
NC204	**NORSAR Array S**	**25.48**	**52**	P	**P**	**16 04 32.9**	**-1.9**
NOA	**NORSAR Array B**	**25.70**	**53**	P	**P**	**16 04 37.0**	**+0.2**
	comp=Z,1.7nm,0.8s,baz=292,slow=9.8,SNR=3.5						
ARCES	**ARCESS Array B**	**31.74**	**35**	P	**P**	**16 05 29.9**	**-0.7**
	comp=Z,8.3nm,1.1s,baz=348,slow=4.0,SNR=6.2						
ARCES	**ARCESS Array B**	**31.74**	**35**	IAmb	IAmb	16 05 31.3	
	comp=Z,30nm,1.5s						
FINES	**FINESS Array B**	**32.77**	**50**	P	**P**	**16 05 39.5**	**-0.1**
	comp=Z,1.6nm,0.7s,baz=284,slow=7.7,SNR=6.2						
OJC	**Ojcow**	**33.05**	**72**	P	**P**	**16 05 40.0**	**-2.1**
OJC				IAmb	IAmb	16 06 04.5	
	comp=Z,3.1nm,0.6s						
FCC	**Fort Churchill**	**33.35**	**305**	P	**P**	**16 05 44.9**	**+0.3**
Y60A	**Bolivia**	**36.40**	**257**	P	**P**	**16 06 10.1**	**-1.2**
AKASG	**Malin Array Be**	**38.21**	**67**	P	**P**	**16 06 25.9**	**-0.5**
	comp=Z,1.2nm,0.6s,baz=301,slow=8.7,SNR=2.5						
AKBB	**Malin Array Si**	**38.21**	**67**	P	**P**	**16 06 25.9**	**-0.5**
AKBB				IAmb	IAmb	16 06 27.7	
	comp=Z,16nm,1.5s						
YKA	**Yellowknife Ar**	**41.53**	**316**	P	**P**	**16 06 54.1**	**+0.2**
	comp=Z,0.2nm,0.6s,baz=65,slow=9.3,SNR=3.9						
YKA				PcP	**PcP**	**16 08 50.5**	**-0.5**
	comp=Z,0.1nm,0.5s,baz=66,slow=4.2,SNR=1.7						
INK	**Inuvik**	**45.69**	**329**	P	**P**	**16 07 25.9**	**-1.3**
	comp=Z,0.5nm,0.5s,baz=50,slow=7.9,SNR=2.8						
BR131	**Keskin Array S**	**46.95**	**78**	P	**P**	**16 07 38.5**	**+0.7**
BR131				IAmb	IAmb	16 08 01.2	
	comp=Z,7.4nm,1.4s						
BRTR	**Keskin Array B**	**46.95**	**78**	P	**P**	**16 07 38.5**	**+0.7**
	comp=Z,0.8nm,0.6s,baz=295,slow=5.6,SNR=5.4						
PDAR	**Pinedale Array**	**49.54**	**290**	P	**P**	**16 07 58.1**	**+0.3**
	comp=Z,0.3nm,0.6s,baz=70,slow=9.6,SNR=4.3						
TOLK	**Toolik Lake Re**	**50.11**	**334**	P	**P**	**16 08 02.6**	**+1.0**
ILAR	**Eielson Array**	**52.06**	**330**	P	**P**	**16 08 17.3**	**+1.1**
	comp=Z,0.4nm,0.8s,baz=53,slow=6.0,SNR=1.5						
IMAR	**Indian Mountai**	**53.16**	**334**	P	**P**	**16 08 25.5**	**+1.2**
BVAR	**Borovoye Array**	**57.35**	**44**	P	**P**	**16 08 55.1**	**+0.3**
	comp=Z,0.7nm,0.5s,baz=248,slow=16,SNR=5.9						
KURK	**Kurchatov**	**62.48**	**41**	P	**P**	**16 09 30.3**	**+0.4**
KURK	**Kurchatov**	**62.48**	**41**	IAmb	IAmb	16 09 42.5	
	comp=Z,3.5nm,1.5s						
KURBB	**Kurchatov Arra**	**62.51**	**42**	P	**P**	**16 09 30.3**	**+0.1**
	comp=Z,0.6nm,0.7s,baz=325,slow=7.0,SNR=4.4						
MK31	**Makanchi Array**	**67.07**	**42**	P	**P**	**16 09 59.9**	**-0.1**
MKAR	**Makanchi Array**	**67.07**	**42**	P	**P**	**16 10 00.3**	**+0.3**
	comp=Z,0.6nm,0.7s,baz=324,slow=6.0,SNR=8.2						
MKAR	**Makanchi Array**	**67.07**	**42**	P	**P**	**16 10 00.0**	**0.0**
SONM	**Songino Array**	**74.41**	**26**	P	**P**	**16 10 45.2**	**+0.4**
	comp=Z,0.2nm,0.4s,baz=331,slow=5.4,SNR=2.5						
WRA	**Warramunga Arr**	**146.18**	**20**	PKPbc	**PKPdf**	**16 18 46.6**	**+0.4**
	comp=Z,0.5nm,0.8s,baz=337,slow=3.3,SNR=3.0						
ASAR	**Alice Springs**	**149.68**	**22**	PKPbc	**PKPbc**	**16 18 56.0**	**-0.6**
	comp=Z,0.2nm,0.7s,baz=351,slow=2.4,SNR=1.8						

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*TIF **23** 16:00:19.7,43°.37N×45°.13E,h8^{km}±2^{km}*
*DRS **23** 16:00:19.9±0.0,42°.98N×44°.98E,h17^{km},ML3.3/8*
*MOS **23** 16:00:20.7±0.0,43°.21N×45°.07E,h17^{km},MPVA3.9*
*NORS **23** 16:00:20.8±0.0,43°.19N×45°.10E,h17^{km},MPVA3.8*
ISC 23 16:00:22.2±0.9,**43°.20N**±0°.02×**45°.10E**±0°.01,**h17**^{km}±6^{km}, **n94,**σ**1^{s}20**/151,**15C-19D,Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMGR	**Komgaron**	**0.22**	**230**	⇑*i*PG	**Pg**	**16 00 27.0**	**-0.4**
KMGR	**Komgaron**	**0.22**	**230**	*i* Pg	**Pg**	**16 00 26.8**	**-0.6**
KMGR				*e*Sg	**Sb**	**16 00 32.0**	**+0.4**
VLKR	**Vladikavkaz**	**0.34**	**244**	*i* Pg	**Pg**	**16 00 29.1**	**-0.4**
VLKR				*e*Sg	**Sg**	**16 00 33.8**	**-0.6**
BTKR	**Batakoyurt**	**0.44**	**293**	⇓*i*PG	**Pg**	**16 00 30.9**	**-0.3**
BTKR				*e*S	**Sg**	**16 00 37.8**	**+0.5**
BTKR	**Batakoyurt**	**0.44**	**293**	*i* Pg	**Pg**	**16 00 29.8**	**-1.4**
BTKR				*e*Sg	**Sg**	**16 00 37.8**	**+0.5**
GROC	**Groznyy**	**0.51**	**89**	*e*PG	**Pb**	**16 00 33.1**	**+0.4**
GROC				*e*		16 00 41.0	
GROC				pmax	pmax		
	comp=Z,100nm,0.5s						
GROC				smax	smax		
	comp=N,2μm,0.9s						
GROC				smax	smax		
	comp=E,901nm,0.6s						
GROC				smax	smax		
	comp=N,2μm,0.8s						
GROC	**Groznyy**	**0.51**	**89**	*e*Pg	**Pb**	**16 00 33.3**	**+0.7**
GROC				*e*Sg	**Sn**	**16 00 43.2**	**+0.2**
TRKR	**Terskaya**	**0.59**	**333**	⇓*e*PG	**Pg**	**16 00 33.2**	**-0.7**
TRKR	**Terskaya**	**0.59**	**333**	*e*Pg	**Pg**	**16 00 33.2**	**-0.7**
TRKR				*e*Sg	**Sg**	**16 00 42.8**	**+1.1**
ARNR	**Ardon**	**0.60**	**268**	*e*PG	**Pg**	**16 00 33.5**	**-0.5**
ARNR	**Ardon**	**0.60**	**268**	*e*Pg	**Pg**	**16 00 33.3**	**-0.7**
ARNR				*e*Sg	**Sg**	**16 00 42.2**	**+0.2**
PNSH	**Pansheti**	**0.67**	**212**	P	**Pg**	**16 00 35.3**	**-0.1**
PNSH				S	**Sn**	**16 00 47.4**	**+0.2**
PNSH	**Pansheti**	**0.67**	**212**	PG	**Pg**	**16 00 35.2**	**-0.1**
PNSH				S	**Sn**	**16 00 47.4**	**+0.2**
LACR	**Lac**	**0.70**	**238**	⇓*i*PG	**Pg**	**16 00 36.0**	**+0.1**
LACR				*e*S	**Sb**	**16 00 47.0**	**+1.7**
LACR	**Lac**	**0.70**	**238**	*i* Pg	**Pg**	**16 00 36.0**	**+0.1**
LACR				*e*Sg	**Sb**	**16 00 47.0**	**+1.7**
KORR	**Kora**	**0.76**	**262**	*e*PG	**Pb**	**16 00 37.6**	**+0.5**
KORR				*e*S	**Sb**	**16 00 47.9**	**+0.7**
KORR	**Kora**	**0.76**	**262**	*e*Pg	**Pb**	**16 00 37.6**	**+0.5**
KORR				*e*Sg	**Sb**	**16 00 47.9**	**+0.7**
STDR	**Stavd-Durt**	**0.78**	**283**	⇓*i*PG	**Pg**	**16 00 37.8**	**+0.4**
STDR				*e*S	**Sn**	**16 00 51.0**	**+1.4**
STDR	**Stavd-Durt**	**0.78**	**283**	*i* Pg	**Pg**	**16 00 37.8**	**+0.4**
STDR				*e*Sg	**Sb**	**16 00 49.1**	**+1.6**
DVE	**Vedeno**	**0.79**	**108**	*e*PG	**Pb**	**16 00 37.6**	**+0.1**
DVE				*e*S	**Sn**	**16 00 50.0**	**-0.1**
DVE	**Vedeno**	**0.79**	**108**	*e*Pg	**Pb**	**16 00 37.6**	**+0.1**
DVE				*e*Sg	**Sn**	**16 00 50.0**	**-0.1**
PRTR	**Priterechnaya**	**0.81**	**313**	*e*PG	**Pg**	**16 00 37.3**	**-0.8**
PRTR				*e*S	**Sn**	**16 00 51.5**	**+1.0**
PRTR	**Priterechnaya**	**0.81**	**313**	*e*Pg	**Pg**	**16 00 37.3**	**-0.8**
PRTR				*e*Sg	**Sn**	**16 00 51.5**	**+1.0**
GUDG	**Gudauri**	**0.87**	**212**	P	**Pn**	**16 00 40.2**	**+0.4**
GUDG				S	**Sn**	**16 00 54.1**	**+1.9**
GUDG	**Gudauri**	**0.87**	**212**	PG	**Pn**	**16 00 40.2**	**+0.4**
GUDG				S	**Sn**	**16 00 54.0**	**+1.9**
LSNR	**Lesken**	**0.94**	**275**	*e*PG	**Pb**	**16 00 40.3**	**+0.3**
LSNR				*e*S	**Sn**	**16 00 55.2**	**+1.6**
LSNR	**Lesken**	**0.94**	**275**	*e*Pg	**Pb**	**16 00 40.3**	**+0.3**
LSNR				*e*Sg	**Sn**	**16 00 55.2**	**+1.6**
ZEI	**Tsey**	**0.97**	**245**	⇓*i*PG	**Pb**	**16 00 40.3**	**-0.4**
ZEI				*e*S	**Sn**	**16 00 55.1**	**+0.4**
ZEI	**Tsey**	**0.97**	**245**	*i* Pg	**Pb**	**16 00 40.3**	**-0.4**
ZEI				*e*Sg	**Sn**	**16 00 55.1**	**+0.4**
BTLR	**Botlikh**	**0.98**	**123**	⇑*e*PG	**Pb**	**16 00 39.9**	**-0.9**
BTLR				*e*		16 00 55.5	
BTLR				pmax	pmax		
	comp=Z,103nm,0.6s						
BTLR				smax	smax		
	comp=N,313nm,0.3s						
BTLR	**Botlikh**	**0.98**	**123**	⇑*e*Pg	**Pg**	**16 00 40.9**	**-0.4**
	comp=N,103nm,0.6s						
BTLR				⇑*e*Sg	**Sn**	**16 00 55.6**	**+0.8**
	comp=N,313nm,0.3s						
DLMR	**Dylym**	**1.13**	**96**	⇓*i*PG	**Pg**	**16 00 44.6**	**+0.6**
DLMR				*e*		16 01 02.0	
DLMR				pmax	pmax		
	comp=Z,207nm,0.4s						
DLMR				smax	smax		
	comp=N,1μm,0.8s						
DLMR	**Dylym**	**1.13**	**96**	⇓*i*Pg	**Pg**	**16 00 44.6**	**+0.6**
	comp=N,207nm,0.4s						
DLMR				⇓*e*Sg	**Sn**	**16 01 02.1**	**+3.8**
	comp=N,1μm,0.8s						
NCK	**Nalchik**	**1.14**	**286**	*e*PG	**Pb**	**16 00 43.4**	**0.0**
NCK				*e*S	**Sn**	**16 01 00.5**	**+1.9**
NCK	**Nalchik**	**1.14**	**286**	*e*Pg	**Pb**	**16 00 43.4**	**0.0**
NCK				*e*Sg	**Sn**	**16 01 00.5**	**+1.9**
DIGR	**Digorskoe uzhe**	**1.15**	**255**	*e*PG	**Pb**	**16 00 42.9**	**-0.9**
DIGR				pmax	pmax		
	comp=Z,26nm,0.2s						
DIGR	**Digorskoe uzhe**	**1.15**	**255**	*e*Pg	**Pb**	**16 00 42.9**	**-0.9**
DIGR				*e*Sg	**Sg**	**16 00 59.7**	**+0.1**
DBC	**Dubki**	**1.28**	**97**	⇓*e*PG	**Pb**	**16 00 46.3**	**+0.5**
DBC				*e*		16 01 04.7	
DBC				pmax	pmax		
	comp=Z,137nm,0.6s						
DBC				smax	smax		
	comp=N,549nm,0.4s						
DBC	**Dubki**	**1.28**	**97**	⇓*e*Pg	**Pb**	**16 00 46.4**	**+0.5**
	comp=N,137nm,0.6s						
DBC				⇓*e*Sg	**Sg**	**16 01 04.8**	**+1.2**
	comp=N,549nm,0.3s						
XNZR	**Khunzakh**	**1.35**	**119**	*e*Pg	**Pb**	**16 00 47.6**	**+0.4**
XNZR				*e*Sg	**Sg**	**16 01 07.7**	**+1.8**
ONI	**Oni**	**1.35**	**244**	P	**Pn**	**16 00 47.0**	**+0.6**
ONI	**Oni**	**1.35**	**244**	PG	**Pn**	**16 00 47.0**	**+0.6**
ONI	**Oni**	**1.35**	**244**	*e*Pg	**Pb**	**16 00 47.3**	**+0.1**
ONI				*e*Sg	**Sg**	**16 01 06.6**	**+0.5**
KRNR	**Karanay**	**1.38**	**105**	⇑*e*PG	**Pb**	**16 00 47.8**	**+0.3**
KRNR				*e*		16 01 07.5	
KRNR				pmax	pmax		
	comp=Z,45nm,0.5s						
KRNR				smax	smax		
	comp=N,341nm,0.6s						
KRNR	**Karanay**	**1.38**	**105**	⇑*e*Pg	**Pb**	**16 00 47.8**	**+0.3**
	comp=N,45nm,0.5s						
KRNR				⇑*e*Sg	**Sg**	**16 01 07.6**	**+0.9**
	comp=N,341nm,0.7s						
ARKR	**Arakani**	**1.51**	**113**	⇓*e*PG	**Pg**	**16 00 50.5**	**-0.8**
ARKR				*e*		16 01 12.1	
ARKR				pmax	pmax		
	comp=Z,58nm,0.5s						
ARKR				smax	smax		
	comp=N,153nm,0.6s						
ARKR	**Arakani**	**1.51**	**113**	⇓*e*Pg	**Pg**	**16 00 50.6**	**-0.8**
	comp=N,58nm,0.5s						
ARKR				⇓*e*Sg	**Sg**	**16 01 12.1**	**+1.0**
	comp=N,154nm,0.7s						
BUJR	**Buynaksk**	**1.52**	**104**	⇑*e*PG	**Pg**	**16 00 51.5**	**+0.1**
BUJR				*i*		16 01 14.2	
BUJR				pmax	pmax		
	comp=Z,156nm,0.5s						
BUJR				smax	smax		
	comp=N,1μm,0.7s						
BUJR	**Buynaksk**	**1.52**	**104**	⇑*e*Pg	**Pg**	**16 00 51.5**	**+0.1**
	comp=N,156nm,0.5s						
BUJR				⇑*i*Sg	**Sg**	**16 01 12.5**	**+1.2**
	comp=N,1μm,0.7s						
BTNK	**Botanikuri**	**1.53**	**188**	P	**Pg**	**16 00 52.3**	**+0.6**
BTNK				S	**Sg**	**16 01 14.9**	**+3.3**
BTNK	**Botanikuri**	**1.53**	**188**	PG	**Pg**	**16 00 52.3**	**+0.6**
BTNK				S	**Sg**	**16 01 14.9**	**+3.3**
GNBR	**Gunib**	**1.59**	**120**	⇑*e*PN	**Pg**	**16 00 53.2**	**+0.4**
GNBR				*e*		16 01 14.2	
GNBR				pmax	pmax		
	comp=Z,63nm,0.4s						
GNBR				smax	smax		
	comp=N,244nm,0.5s						
GNBR	**Gunib**	**1.59**	**120**	⇑*e*Pg	**Pg**	**16 00 53.2**	**+0.4**
	comp=N,63nm,0.4s						
GNBR				⇓*e*Sg	**Sg**	**16 01 14.2**	**+0.6**
	comp=N,244nm,0.5s						
LGD	**Lagodekhi**	**1.60**	**148**	P	**Pg**	**16 00 52.4**	**-0.7**
LGD	**Lagodekhi**	**1.60**	**148**	PN	**Pg**	**16 00 52.3**	**-0.7**
KBZ	**Khabaz**	**1.69**	**289**	⇑*e*PN	**Pn**	**16 00 51.3**	**+0.4**
KBZ	**Khabaz**	**1.69**	**289**	*e*Pg	**Pn**	**16 00 51.2**	**+0.3**
KBZ				*e*Sg	**Sn**	**16 01 12.9**	**+0.8**
PYA1	**Pyatigorsk**	**1.69**	**301**	*e*Pg	**Pn**	**16 00 50.9**	**-0.1**
PYA1				*e*Sg	**Sn**	**16 01 13.3**	**+1.1**
NEY	**Neytrino**	**1.74**	**272**	*e*PN	**Pn**	**16 00 52.3**	**+0.5**
NEY	**Neytrino**	**1.74**	**272**	*e*Pg	**Pn**	**16 00 52.3**	**+0.5**
NEY				*e*Sg	**Sn**	**16 01 14.8**	**+1.2**
KANR	**Karaman**	**1.75**	**89**	*e*Pg	**Pb**	**16 00 53.3**	**-0.5**
KANR				*e*Sg	**Sg**	**16 01 20.3**	**+1.8**
MAK	**Makhachkala**	**1.78**	**97**	*e*PN	**Pb**	**16 00 53.8**	**-0.5**
MAK				*e*		16 01 20.1	
MAK				pmax	pmax		
	comp=Z,107nm,0.3s						
MAK				smax	smax		
	comp=N,911nm,0.4s						
MAK				smax	smax		
	comp=N,1μm,0.6s						
BRNG	**Burnasheti**	**1.84**	**211**	P	**Pb**	**16 00 55.5**	**+0.1**
BRNG				S	**Sg**	**16 01 22.4**	**+1.0**
BEYR	**Belyy Ugol+**	**1.85**	**297**	*e*Pg	**Pn**	**16 00 53.5**	**+0.3**
BEYR				*e*Sg	**Sn**	**16 01 17.6**	**+1.4**
BKRG	**Bakuriani**	**1.85**	**220**	P	**Pb**	**16 00 55.2**	**-0.6**
BKRG				S	**Sg**	**16 01 21.8**	**-0.2**
BKRG	**Bakuriani**	**1.85**	**220**	PN	**Pb**	**16 00 55.1**	**-0.6**
SHA1	**Shidzhatmaz**	**1.86**	**288**	*e*PN	**Pn**	**16 00 54.6**	**+1.1**
SHA1	**Shidzhatmaz**	**1.86**	**288**	*e*Pg	**Pn**	**16 00 54.6**	**+1.1**
SHA1				*e*Sg	**Sn**	**16 01 18.1**	**+1.4**
KZRT	**Kazreti**	**1.89**	**196**	P	**Pb**	**16 00 56.4**	**+0.2**
KZRT				S	**Sg**	**16 01 21.9**	**-1.0**
KZRT	**Kazreti**	**1.89**	**196**	PN	**Pb**	**16 00 56.4**	**+0.2**
KIV0	**Kislovodsk Arr**	**1.90**	**294**	*e*Pg	**Pn**	**16 00 54.4**	**+0.4**
DDFL	**Dedoflistskaro**	**1.91**	**156**	P	**Pg**	**16 00 59.4**	**+0.5**
DDFL	**Dedoflistskaro**	**1.91**	**156**	PN	**Pg**	**16 00 59.4**	**+0.5**
KIV	**Kislovodsk**	**1.91**	**294**	*i* PN	**Pn**	**16 00 54.7**	**+0.6**
KIV	**Kislovodsk**	**1.91**	**294**	*e*Pg	**Pn**	**16 00 54.7**	**+0.6**
KIV				*e*Sg	**Sn**	**16 01 19.6**	**+1.8**
DMNI	**Dmanisi**	**1.99**	**200**	P	**Pb**	**16 00 57.0**	**-0.9**
DMNI				S	**Sg**	**16 01 24.1**	**-2.1**
DMNI	**Dmanisi**	**1.99**	**200**	PN	**Pb**	**16 00 57.0**	**-0.9**
URKR	**Urkarakh**	**2.13**	**118**	*i* Pg	**Pb**	**16 01 00.9**	**+0.4**
URKR				*e*Sg	**Sb**	**16 01 25.5**	**-1.2**
AKH	**Akhalkalaki**	**2.15**	**214**	P	**Pb**	**16 01 00.5**	**-0.3**
AKH				S	**Sg**	**16 01 32.0**	**+0.6**
AKH	**Akhalkalaki**	**2.15**	**214**	PN	**Pb**	**16 01 00.5**	**-0.3**
AKH				S	**Sg**	**16 01 32.0**	**+0.6**
ABS	**Abastumani**	**2.22**	**230**	P	**Pb**	**16 01 01.5**	**-0.5**
ABS	**Abastumani**	**2.22**	**230**	PN	**Pb**	**16 01 01.5**	**-0.5**
BGD	**Bogdanovka**	**2.23**	**210**	PN	**Pg**	**16 01 05.4**	**+0.3**
CHVG	**Ch'k'valeri**	**2.27**	**259**	P	**Pg**	**16 01 04.9**	**-0.8**
CHVG	**Ch'k'valeri**	**2.27**	**259**	PN	**Pg**	**16 01 04.9**	**-0.8**
GOF	**Gofitskoye**	**2.38**	**322**	⇑*e*PN	**Pb**	**16 01 05.8**	**+1.3**
GOF				*e*S	**Sb**	**16 01 36.9**	**+3.4**
GOF				pmax	pmax		
	comp=Z,40nm,0.8s						
GOF				smax	smax		
	comp=E,94nm,0.5s						
GOF				smax	smax		
	comp=N,101nm,0.6s						
GOF	**Gofitskoye**	**2.38**	**322**	*e*Pn	**Pb**	**16 01 05.7**	**+1.2**
GOF				*e*Sn	**Sn**	**16 01 32.2**	**+3.1**
SEKA	**Sheki**	**2.53**	**141**	PN	**Pb**	**16 01 06.5**	**-0.6**
AKT	**Akhty**	**2.60**	**131**	⇓*e*PN	**Pb**	**16 01 09.3**	**+1.0**
AKT				*e*		16 01 44.4	
AKT				pmax	pmax		
	comp=Z,23nm,0.6s						
AKT				smax	smax		
	comp=N,60nm,0.8s						
AKT	**Akhty**	**2.60**	**131**	⇓*e*Pg	**Pb**	**16 01 09.4**	**+1.0**
	comp=N,23nm,0.6s						
AKT				⇓*e*Sg	**Sg**	**16 01 44.4**	**-1.3**
	comp=N,60nm,0.8s						
GNI	**Garni**	**3.06**	**185**	*i* PN	**Pn**	**16 01 12.7**	**+2.8**
AB31	**Akbulak array**	**11.92**	**54**	Pn	**Pn**	**16 03 09.5**	**-1.8**
	comp=N,0.2nm,0.4s,baz=244,slow=12,SNR=12						

AB31				⇓Sn	**Sn**	**16 05 17.7**	**-6.0**
	comp=N,0.8nm,0.7s,baz=249,slow=22,SNR=2.8						
BRVK	**Borovoye**	**19.39**	**51**	⇑P	**P**	**16 04 44.4**	**-2.7**
	comp=N,1.6nm,1.0s						
BRVK	**Borovoye**	**19.39**	**51**	*i* P	**P**	**16 04 47.3**	**+0.2**
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.6s						

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*IDC **23** 16:03:32.6±2.8, 17°.56S×178°.81W, h539^{km}±29^{km}, mb3.4/11, mb1 3.7/12, mb1mx3.5/23, mbtmp4.2/12, Error ellipse: s-maj=35.5km s-min=14.9km az=144.0*

*NEIC **23** 16:03:33.1±1.8, 17°.67S±0°.10×178°.74W±0°.08, h557^{km}±6^{km}, mb4.6/48, Error ellipse: s-maj=14.6km s-min=10.8km az=208.0*

ISC 23 16:03:32.5±0.5**, 17°.69S**±0°.08×**178°.70W**±0°.08**, h547**^{km}**, n77, σ0^{s}92**/80**, mb4.5**/37**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.10**	**269**	P	**P**	**16 04 51.2**	**+3.3**
NIUE	**Niue**	**8.45**	**101**	P	**P**	**16 05 34.8**	**+0.2**
FUNA	**Funafuti**	**9.33**	**347**	P	**P**	**16 05 44.7**	**+1.1**
SANVU	**Saraoutou**	**13.69**	**277**	P	**P**	**16 06 28.1**	**-0.5**
DZM	**Mont Dzumac**	**14.63**	**250**	P	**P**	**16 06 38.0**	**-0.4**
	2.7nm,0.3s,baz=77,slow=20,SNR=17						
DZM	**Mont Dzumac**	**14.63**	**250**	P	**P**	**16 06 37.9**	**-0.5**
KNTN	**Kanton**	**16.33**	**26**	P	**P**	**16 06 54.9**	**-0.4**
HIZ	**Hauiti**	**21.50**	**194**	P	**P**	**16 07 42.5**	**+0.5**
BKZ	**Black Stump Fm**	**21.81**	**190**	P	**P**	**16 07 45.5**	**+0.6**
BKZ				IAmb	IAmb	16 07 46.4	
	comp=Z,20nm,1.4s						
BFZ	**Birch Farm**	**23.33**	**190**	P	**P**	**16 07 58.6**	**+0.2**
QRZ	**Quartz Range**	**24.27**	**196**	P	**P**	**16 08 06.8**	**+0.1**
QRZ				IAmb	IAmb	16 08 32.9	
	comp=Z,33nm,1.5s						
TUWZ	**Tuamarina**	**24.49**	**193**	P	**P**	**16 08 08.3**	**-0.4**
FOZ	**Fox Glacier**	**27.54**	**198**	P	**P**	**16 08 33.9**	**-1.6**
FOZ				IAmb	IAmb	16 09 01.6	
	comp=Z,16nm,1.0s						
LBZ	**Lake Benmore**	**28.21**	**197**	P	**P**	**16 08 38.9**	**-2.5**
LBZ				IAmb	IAmb	16 08 54.0	
	comp=Z,19nm,1.3s						
WKZ	**Wanaka**	**28.95**	**198**	P	**P**	**16 08 45.6**	**-2.2**
WKZ				IAmb	IAmb	16 08 49.2	
	comp=Z,33nm,1.3s						
EIDS	**Eidsvold**	**29.08**	**250**	P	**P**	**16 08 48.4**	**-0.8**
EIDS				IAmb	IAmb	16 08 50.0	
	comp=Z,12nm,0.9s						
MLZ	**Mavora Lakes**	**29.71**	**199**	P	**P**	**16 08 54.1**	**-0.3**
MLZ				IAmb	IAmb	16 08 55.2	
	comp=Z,11nm,0.7s						
ARMA	**Armidale**	**29.81**	**239**	P	**P**	**16 08 56.1**	**+0.5**
ARMA				IAmb	IAmb	16 08 57.3	
	comp=Z,12nm,0.7s						
DCZ	**Deep Cove**	**30.11**	**200**	P	**P**	**16 08 56.9**	**-0.8**
DCZ				IAmb	IAmb	16 09 24.2	
	comp=Z,21nm,1.5s						
WHZ	**Wether Hill Ro**	**30.24**	**199**	P	**P**	**16 08 58.8**	**-0.1**
WHZ				IAmb	IAmb	16 09 05.1	
	comp=Z,28nm,1.3s						
CTAO	**Charters Tower**	**33.21**	**260**	P	**P**	**16 09 24.4**	**-0.2**
CTAO				IAmb	IAmb	16 09 25.6	
	comp=Z,8.2nm,0.8s						
PATS	**Pohnpei**	**33.30**	**315**	P	**P**	**16 09 24.6**	**-0.9**
CAN	**Canberra**	**33.62**	**232**	P	**P**	**16 09 28.1**	**+0.2**
CAN				IAmb	IAmb	16 09 29.3	
	comp=Z,16nm,1.1s						
PMG	**Port Moresby**	**34.15**	**279**	P	**P**	**16 09 34.0**	**+1.5**
PMG				IAmb	IAmb	16 09 34.7	
	comp=Z,19nm,0.9s						
COEN	**Coen**	**36.82**	**270**	P	**P**	**16 09 55.0**	**+0.2**
COEN				IAmb	IAmb	16 09 56.4	
	comp=Z,9.7nm,0.9s						
TOO	**Toolangi**	**37.09**	**230**	P	**P**	**16 09 56.8**	**+0.1**
TOO				IAmb	IAmb	16 09 58.3	
	comp=Z,17nm,0.8s						
STKA	**Stephens Creek**	**38.49**	**241**	P	**P**	**16 10 09.0**	**+0.8**
	comp=Z,8.6nm,0.4s,baz=87,slow=10.0,SNR=47						
STKA	**Stephens Creek**	**38.49**	**241**	P	**P**	**16 10 08.5**	**+0.4**
WAKE	**Wake Island**	**39.46**	**338**	P	**P**	**16 10 15.1**	**-0.9**
BBOO	**Buckleboo**	**43.27**	**241**	P	**P**	**16 10 46.4**	**+0.3**
WR0	**Warramunga Arr**	**44.21**	**259**	P	**P**	**16 10 52.7**	**-0.9**
WB0	**Warramunga Arr**	**44.36**	**260**	P	**P**	**16 10 53.8**	**-1.0**
WB0				IAmb	IAmb	16 10 55.0	
	comp=Z,10nm,0.9s						
WB2	**Warramunga Arr**	**44.38**	**259**	P	**P**	**16 10 53.8**	**-1.2**
WB2				IAmb	IAmb	16 10 55.2	
	comp=Z,8.8nm,0.7s						
WRAB	**Tennant Creek**	**44.39**	**259**	P	**P**	**16 10 53.9**	**-1.1**
WRAB				IAmb	IAmb	16 10 55.1	
	comp=Z,6.5nm,0.6s						
WRA	**Warramunga Arr**	**44.40**	**259**	P	**P**	**16 10 54.2**	**-0.8**
	comp=Z,4.5nm,0.6s,baz=97,slow=7.0,SNR=107						
WRA				PcP	**PcP**	**16 12 27.0**	**0.0**
	comp=Z,0.7nm,0.5s,baz=93,slow=3.3,SNR=2.6						
WRA	**Warramunga Arr**	**44.40**	**259**	P	**P**	**16 10 53.6**	**-1.4**
AS31	**Alice Springs**	**44.58**	**254**	P	**P**	**16 10 56.2**	**-0.2**
AS31				IAmb	IAmb	16 10 57.1	
	comp=Z,16nm,0.6s						
ASAR	**Alice Springs**	**44.58**	**254**	P	**P**	**16 10 56.5**	**0.0**
	comp=Z,56nm,0.6s,baz=90,slow=7.8,SNR=2155						
ASAR				PcP	**PcP**	**16 12 27.5**	**-0.2**
	comp=Z,0.7nm,0.4s,baz=96,slow=4.7,SNR=2.8						
ASAR				ScP	**ScP**	**16 15 29.1**	**+1.1**
	comp=Z,0.5nm,0.8s,baz=89,slow=4.7,SNR=4.4						
ASAR	**Alice Springs**	**44.58**	**254**	P	**P**	**16 10 55.7**	**-0.7**
FORT	**Forrest**	**49.85**	**244**	P	**P**	**16 11 34.9**	**-0.9**
FAKI	**Fak Fak**	**50.26**	**281**	P	**P**	**16 11 39.5**	**+0.3**
FITZ	**Fitzroy Crossi**	**52.79**	**260**	P	**P**	**16 11 57.5**	**+0.2**
SOEI	**Soe**	**55.79**	**270**	P	**P**	**16 12 20.1**	**+1.5**
SOEI				IAmb	IAmb	16 12 24.8	
	comp=Z,16nm,0.7s						
TNTI	**Ternate**	**56.14**	**283**	P	**P**	**16 12 19.7**	**-1.2**
TNTI				IAmb	IAmb	16 12 41.4	
	comp=Z,52nm,1.3s						
PSA00	**Pilbara Seismi**	**57.69**	**255**	P	**P**	**16 12 30.3**	**-1.2**
MORW	**Morawa**	**60.31**	**246**	P	**P**	**16 12 48.7**	**-0.1**
GIRL	**Giralia**	**62.69**	**253**	P	**P**	**16 13 05.4**	**+0.9**
MJAR	**Matsushiro Arr**	**67.56**	**323**	P	**P**	**16 13 35.0**	**+0.2**
	comp=Z,1.3nm,0.7s,baz=167,slow=0.8,SNR=4.1						
AMKA	**Amchitka**	**68.79**	**359**	P	**P**	**16 13 39.4**	**-2.4**
UGM	**Wanagama**	**69.37**	**268**	P	**P**	**16 13 46.2**	**-0.1**
ATKA	**Atka Island**	**69.70**	**3**	P	**P**	**16 13 46.8**	**-0.5**
UNV	**Unalaska Valle**	**72.01**	**8**	P	**P**	**16 14 01.0**	**+0.2**
UNV				IAmb	IAmb	16 14 29.4	
	comp=Z,50nm,1.4s						
CISI	**Cisompet, Garu**	**72.05**	**268**	P	**P**	**16 14 01.2**	**-0.8**
QSPA	**South Pole Qui**	**72.37**	**180**	P	**P**	**16 14 03.3**	**+0.3**
PET	**Petropavlovsk**	**73.09**	**346**	P	**P**	**16 14 07.1**	**+0.1**
PET				IAmb	IAmb	16 14 27.2	
	comp=Z,15nm,1.1s						
PEA0B	**Petropavlovsk-**	**73.40**	**345**	P	**P**	**16 14 09.2**	**+0.4**
PEA0B				IAmb	IAmb	16 14 18.1	
	comp=Z,27nm,1.5s						
PETK	**Petropavlovsk-**	**73.40**	**345**	P	**P**	**16 14 08.9**	**+0.2**
	comp=Z,2.1nm,0.6s,baz=129,slow=8.5,SNR=7.5						
PETK	**Petropavlovsk-**	**73.40**	**345**	P	**P**	**16 14 09.0**	**+0.2**
USRK	**Ussuriysk Ar.**	**76.28**	**326**	P	**P**	**16 14 25.4**	**+0.3**
	comp=Z,0.9nm,0.8s,baz=116,slow=5.7,SNR=1.9						
OHAK	**Old Harbor**	**77.59**	**14**	P	**P**	**16 14 32.3**	**+0.3**
BEKR	**Beckworth**	**78.92**	**42**	P	**P**	**16 14 40.6**	**+0.8**
NVAR	**Mina Array Bea**	**79.46**	**44**	P	**P**	**16 14 43.7**	**+1.0**
	comp=Z,1.2nm,0.6s,baz=224,slow=8.9,SNR=8.4						
NVAR	**Mina Array Bea**	**79.46**	**44**	P	**P**	**16 14 43.5**	**+0.8**
NV11	**Mina Array Sit**	**79.56**	**44**	P	**P**	**16 14 43.9**	**+0.7**
WVOR	**Wild Horse Val**	**81.42**	**40**	P	**P**	**16 14 52.2**	**-0.5**
TRF	**Thorofare Moun**	**83.86**	**12**	P	**P**	**16 15 03.5**	**-0.9**
TRF				IAmb	IAmb	16 15 05.3	
	comp=Z,6.5nm,0.8s						
ILAR	**Eielson Array**	**85.74**	**13**	P	**P**	**16 15 12.8**	**-0.6**
	comp=Z,0.8nm,0.4s,baz=223,slow=5.2,SNR=50						
ILAR	**Eielson Array**	**85.74**	**13**	P	**P**	**16 15 12.6**	**-0.8**
TXAR	**Lajitas Array**	**86.11**	**58**	P	**P**	**16 15 17.1**	**+1.0**
	comp=Z,1.1nm,0.7s,baz=215,slow=6.1,SNR=7.2						
TXAR	**Lajitas Array**	**86.11**	**58**	P	**P**	**16 15 16.1**	**-0.1**
PDAR	**Pinedale Array**	**87.39**	**44**	P	**P**	**16 15 22.6**	**+0.5**
	comp=Z,0.9nm,0.6s,baz=208,slow=3.2,SNR=13						
CMAR	**Chiang Mai Arr**	**88.55**	**290**	P	**P**	**16 15 27.1**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=125,slow=4.7,SNR=4.3						
CMAR	**Chiang Mai Arr**	**88.55**	**290**	P	**P**	**16 15 26.5**	**-1.1**
YKA	**Yellowknife Ar**	**94.25**	**25**	P	**P**	**16 15 52.5**	**-0.4**
	comp=Z,0.1nm,0.4s,baz=238,slow=4.4,SNR=4.1						
BRTR	**Keskin Array B**	**144.43**	**315**	PKP	**PKPdf**	**16 22 07.4**	**+0.3**
	comp=Z,0.6nm,0.5s,baz=66,slow=1.7,SNR=3.9						
CLL	**Collm**	**145.19**	**347**	*i* PKPbc	**PKPbc**	**16 22 08.7**	**0.0**
	comp=Z,7.0nm,0.7s						
GERES	**GERESS Array B**	**147.33**	**345**	PKPbc	**PKPbc**	**16 22 15.1**	**+0.2**
	comp=Z,1.2nm,0.5s,baz=42,slow=1.6,SNR=5.0						

JMA 23 16:07:04.9, 37°.77N×140°.06E, h8^{km}±1^{km}**, M2.6, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYAR	**Yonezawaarcadi**	**0.16**	**25**	P	Pg	16 07 08.2	0.0
JYAR				S	Sg	16 07 10.7	+0.2
JFT	**Otama**	**0.33**	**139**	P	Pg	16 07 11.6	+0.1
JFT				S	Sg	16 07 16.2	+0.3
JYS	**Shirataka**	**0.45**	**1**	P	Pg	16 07 13.8	+0.1
JYS				S	Sg	16 07 20.1	+0.5
JFY	**Yanaizu**	**0.46**	**218**	P	Pg	16 07 14.0	+0.2
JFY				S	Sg	16 07 20.0	+0.2
JMM	**Marumori**	**0.59**	**80**	P	Pg	16 07 16.2	-0.1
JMM				S	Sg	16 07 23.8	-0.2
JNS	**Sasagawa**	**0.59**	**275**	P	Pg	16 07 16.3	0.0
JNS				*e*S	Sg	16 07 24.0	0.0
JFK	**Kawauchi**	**0.76**	**122**	P	Pg	16 07 19.4	-0.2
JOU	**Okura**	**0.76**	**39**	P	Pg	16 07 19.6	0.0
JOU				S	Sg	16 07 29.5	0.0
JYA	**Atsumi**	**0.87**	**342**	P	Pg	16 07 21.5	-0.1
JYA				*e*S	Sg	16 07 32.8	0.0
JAW	**Awa shima**	**0.94**	**317**	P	Pg	16 07 23.1	+0.2
JAW				S	Sb	16 07 35.8	-0.2
MAT	**Matsushiro**	**1.92**	**231**	P	Pn	16 07 38.9	+1.0
MAT				S	Sb	16 08 04.6	+0.3

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*MOS **23** 16:16:27.7±1.0, 39°.05N×2°.64W, h10^{km}, mb4.8/22, Error ellipse: s-maj=6.0km s-min=4.2km az=55.7*

*IDC **23** 16:16:27.6±0.5, 39°.02N×2°.59W, h0^{km}, mb4.2/30, mb1 4.4/36, mb1mx4.2/57, mbtmp4.2/36, ML4.0/6, MS4.0/25, Ms1 4.0/25, ms1mx3.8/47, Error ellipse: s-maj=11.1km s-min=9.3km az=24.0*

*BJI **23** 16:16:27.0±0.0, 39°.00N×2°.60W, h8^{km}, mB5.3/27, mb4.7/50, Ms5.3/7, Ms7 4.9/6*

*CRAAG **23** 16:16:29.4, 39°.04N×2°.65W, Mb4.8*

*MED_RC **23** 16:16:29.0±0.5, 38°.97N×2°.68W, h14^{km}±1^{km}, MW4.7/21, Moment Tensor Solution.Mantle waves: s21,c27; Duration: 1^{s}1 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.81±.12; $M_{\theta\theta}$0.81±.08; $M_{\phi\phi}$-0.01±.06; $M_{r\theta}$-0.84±.15; $M_{\theta\phi}$-0.32±.03; $M_{\phi r}$-0.49±.11; Best double couple: $M_0$1.29000×10^{16} NP1:ϕ_s311.00000°, δ31.00000°, λ-41.00000°. NP2:ϕ_s78.00000°, δ70.00000°, λ-115.00000°. Principal axes: T 1.1800, Plg21.0000°, Azm186.0000°; N 0.2200, Plg23.0000°, Azm86.0000°; P -1.4000, Plg58.0000°, Azm314.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

*IGIL **23** 16:16:29.2, 39°.04N×2°.55W, h4^{km}, ML4.7*

*NEIC **23** 16:16:29.5±1.5, 39°.06N±0°.04×2°.67W±0°.04, h8^{km}±3^{km}, mb5.0/252, Mwr4.5/14, Error ellipse: s-maj=5.3km s-min=4.2km az=193.0*

*SFS **23** 16:16:30.0, 39°.00N×2°.60W, h10^{km}, ML5.2, OSSA DE MONTIEL (ALBACETE)*

*NEIC **23** 16:16:30.4, 39°.06N×2°.67W, h11^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-3.01; $M_{\theta\theta}$4.40; $M_{\phi\phi}$-1.40; $M_{r\theta}$-7.00; $M_{\theta\phi}$-1.17; $M_{\phi r}$0.09; Fault plane solution: $M_0$8.10000×10^{15} NP1:ϕ_s299.92000°, δ15.86000°, λ-61.58000°. NP2:ϕ_s90.57000°, δ76.09000°, λ-97.70000°. Principal axes: T 8.7272, Plg31.0000°, Azm187.0000°; N -1.4609, Plg7.0000°, Azm92.0000°; P -7.2662, Plg58.0000°, Azm350.0000°;*

*STR **23** 16:16:30.6±0.7, 39°N±5°×°±°, h10^{km}, mB6.1/3, mb4.5/9, MLv5.7/6, Mw(mB)5.8/3, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/ldg_taup-2.11 preliminary*

*LDG **23** 16:16:30.6±0.1, 39°.02N×2°.62W, h17^{km}, Md4.8/5, Ml4.9/53, ms3.9/8, Error ellipse: s-maj=2.3km s-min=1.6km az=142.0*

*CNRM **23** 16:16:31.3, 38°.94N×2°.83W, h12^{km}, ml4.7, Hypocentre not reviewed by the ISC*

*INMG **23** 16:16:31.0±1.8, 39°.05N×2°.64W, h18^{km}±3^{km}, ML5.3, Error ellipse: s-maj=1.7km s-min=1.4km az=97.0*

*MDD **23** 16:16:31.4±0.2, 39°.05N×2°.63W, h17^{km}, mbLg5.2/50, Error ellipse: s-maj=2.3km s-min=2.1km az=118.0, PRXIMO*

MDD EMS: V INTENSIDAD MAXIMA.

*BGR **23** 16:16:34.8±0.0, 38°.98N×3°.08W, h33^{km}*

ISC 23 16:16:29.7±0.6**, 39°.10N**±0°.02×**2°.61W**±0°.02**, h11**^{km}±3^{km}**, h11**^{km}**:pP-P, n1027, σ2^{s}06**/1249**, mb4.9**/207**, MS4.0**/24**, 32C-54D, Spain**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ETOB	**Tobarra**	**0.95**	**119**	⇑Pg	**Pg**	**16 16 48.1**	**+0.2**
	4µm,0.3s,SNR=18						
ETOB				Lg	Lg	16 16 59.7	
	22µm,0.2s,SNR=12						
ETOB	**Tobarra**	**0.95**	**119**		**Pg**	**16 16 48.1**	**+0.2**
SESP	**Santiago Espad**	**0.98**	**177**	⇑Pg	**Pg**	**16 16 48.0**	**-0.7**
	5µm,0.2s,SNR=18						
SESP				Lg	Lg	16 17 00.2	
	38µm,0.2s,SNR=7.9						
SESP	**Santiago Espad**	**0.98**	**177**	P		16 16 47.6	
ESBB	**Sonseca Array**	**1.20**	**299**		**Pn**	**16 16 52.0**	**-0.4**
ESDC	**Sonseca Array**	**1.20**	**299**	Pg	**Pn**	**16 16 52.1**	**-0.3**
	2µm,0.3s,baz=117,slow=17,SNR=5129						
ESDC				Lg	Lg	16 17 08.6	
	11µm,0.3s,baz=121,slow=30,SNR=283						
ESDC	**Sonseca Array**	**1.20**	**299**	Pn	**Pn**	**16 16 52.1**	**-0.3**
	5µm,0.3s,baz=118,slow=17,SNR=4364						
ESDC				Pg	**Pg**	**16 16 53.5**	**+0.8**
	baz=118,slow=17,SNR=7.9						
ESDC				Lg	Lg	16 17 09.1	
	49µm,0.4s,baz=121,slow=30,SNR=242						
ESDC	**Sonseca Array**	**1.20**	**299**		**Pn**	**16 16 51.5**	**-0.9**
UCM	**Universidad Co**	**1.30**	**338**	*i* P	**Pb**	**16 16 54.1**	**-0.1**
UCM				*e*S	**Sg**	**16 17 13.8**	**+2.3**
EQES	**Quesada**	**1.35**	**196**	⇑Pn	**Pn**	**16 16 53.3**	**-1.2**
	2µm,0.2s,SNR=18						
EQES				⇑Pg	**Pb**	**16 16 54.7**	**-0.3**
	SNR=18						
EQES				Lg	Lg	16 17 12.0	
	17µm,0.3s,SNR=11						
EQES	**Quesada**	**1.35**	**196**		**Pn**	**16 16 53.4**	**-1.2**
ECHE	**Chera**	**1.36**	**69**	⇓Pn	**Pb**	**16 16 55.1**	**-0.1**
	66nm,0.1s,SNR=18						
ECHE				⇑Pg	**Pg**	**16 16 57.4**	**+1.5**
	206nm,0.3s,SNR=18						
ECHE				Lg	Lg	16 17 14.9	
	10µm,0.3s,SNR=7.9						
ECHE	**Chera**	**1.36**	**69**	P	**Pg**	**16 16 57.1**	**+1.3**
ECHE	**Chera**	**1.36**	**69**		**Pg**	**16 16 57.1**	**+1.3**
PAB	**San Pablo**	**1.42**	**289**	⇓Pn	**Pn**	**16 16 55.4**	**-0.1**
	736nm,0.2s,SNR=18						
PAB				Pg	**Pg**	**16 16 57.2**	**+0.2**
	4µm,0.4s,SNR=7.9						
PAB				Lg	Lg	16 17 15.4	
	11µm,0.2s,SNR=7.9						
PAB	**San Pablo**	**1.42**	**289**	P	**Pn**	**16 16 55.2**	**-0.3**
PAB	**San Pablo**	**1.42**	**289**		**Pn**	**16 16 55.2**	**-0.3**
PAB	**San Pablo**	**1.42**	**289**	P		16 16 55.2	
EMUR	**La Murta**	**1.66**	**139**	⇑Pn	**Pn**	**16 16 57.6**	**-1.1**
	1µm,0.3s,SNR=18						
EMUR				Pg	**Pb**	**16 17 00.7**	**+0.5**
	320nm,0.2s,SNR=7.9						
EMUR				Sn	**Sn**	**16 17 18.4**	**-1.5**
	2µm,0.3s,SNR=7.9						
EMUR				Lg	Lg	16 17 22.0	
	24µm,0.3s,SNR=5.0						
EMUR	**La Murta**	**1.66**	**139**		**Pn**	**16 16 57.6**	**-1.1**
GORA	**Gorafe**	**1.66**	**192**	⇑Pn	**Pn**	**16 16 58.1**	**-0.6**
	2µm,0.3s,SNR=18						
GORA				Pg	**Pb**	**16 17 00.3**	**0.0**
	2µm,0.4s,SNR=7.9						
GORA				Sn	**Sn**	**16 17 18.5**	**-1.5**
	5µm,0.2s,SNR=7.9						
GORA				Lg	Lg	16 17 21.9	
	29µm,0.3s,SNR=7.9						
AFON	**Font Roja**	**1.67**	**105**	Pn	**Pn**	**16 16 58.7**	**-0.3**
	138nm,0.2s,SNR=120						
AFON				Pg	**Pg**	**16 17 01.8**	**+0.1**
	1µm,0.3s,SNR=7.9						
AFON				Lg	Lg	16 17 24.2	
	12µm,0.3s,SNR=23						
AFON	**Font Roja**	**1.67**	**105**		**Pn**	**16 16 58.9**	**-0.1**
ETOR	**Torete**	**1.77**	**14**	⇓Pn	**Pn**	**16 17 00.8**	**+0.5**
	415nm,0.2s,SNR=18						
ETOR				Pg	**Pg**	**16 17 04.5**	**+0.9**
	22µm,0.3s,SNR=96						
ETOR				Sn	**Sn**	**16 17 22.8**	**0.0**
	7µm,0.2s,SNR=7.9						
ETOR				Lg	Lg	16 17 28.7	
	43µm,0.3s,SNR=11						
EADA	**Adamuz**	**1.80**	**239**	⇓Pn	**Pn**	**16 16 59.8**	**-1.0**
	2µm,0.5s,SNR=18						
EADA				Pg	**Pb**	**16 17 02.7**	**0.0**
	438nm,0.5s,SNR=7.9						
EADA				Sn	**Sn**	**16 17 21.6**	**-2.0**
	2µm,0.1s,SNR=7.9						
EADA				Lg	Lg	16 17 25.9	
	31µm,0.4s,SNR=5.0						
EADA	**Adamuz**	**1.80**	**239**		**Pn**	**16 16 59.8**	**-1.0**
ETRV	**Los Montesinos**	**1.81**	**126**	⇑Pn	**Pn**	**16 16 59.8**	**-0.9**
	84nm,0.3s,SNR=18						
ETRV				Pg	**Pb**	**16 17 03.2**	**+0.5**
	1µm,0.5s,SNR=7.9						
ETRV				Sn	**Sn**	**16 17 21.5**	**-2.1**
	2µm,0.1s,SNR=7.9						
ETRV				Lg	Lg	16 17 27.3	
	24µm,0.3s,SNR=7.9						
ETRV	**Los Montesinos**	**1.81**	**126**		**Pg**	**16 17 04.2**	**-0.1**
EBEN2	**Beniarda presa**	**1.93**	**102**	⇓Pn	**Pn**	**16 17 02.1**	**-0.4**
	52nm,0.6s,SNR=18						
EBEN2				Pg	**Pb**	**16 17 05.6**	**+0.7**
	411nm,0.1s,SNR=7.9						
EBEN2				Sn	**Sn**	**16 17 23.9**	**-3.0**
	770nm,0.1s,SNR=7.9						
EBEN2				Lg	Lg	16 17 32.6	
	14µm,0.4s,SNR=7.9						
EBEN2	**Beniarda presa**	**1.93**	**102**		**Pn**	**16 17 02.0**	**-0.5**
GUD	**Guadarrama**	**1.94**	**323**	⇓Pn	**Pn**	**16 17 02.7**	**-0.1**
	23nm,0.4s,SNR=18						
GUD				Pg	**Pg**	**16 17 06.8**	**-0.2**
	753nm,0.4s,SNR=53						
GUD				Sn	**Sn**	**16 17 26.5**	**-0.8**
	969nm,0.3s,SNR=7.9						
GUD				Lg	Lg	16 17 31.9	
	9µm,0.2s,SNR=7.0						
GUD	**Guadarrama**	**1.94**	**323**	P	**Pn**	**16 17 02.7**	**-0.1**
GUD	**Guadarrama**	**1.94**	**323**		**Pn**	**16 17 02.7**	**-0.1**
CART	**Cartagena**	**1.97**	**140**	*e*P	**Pn**	**16 17 01.0**	**-2.0**
CART				*e*S	**Sn**	**16 17 28.9**	**+1.2**
CART	**Cartagena**	**1.97**	**140**	Pn	**Pn**	**16 17 03.0**	**0.0**
EQUE	**Quentar**	**2.01**	**199**	⇑Pn	**Pn**	**16 17 02.8**	**-0.8**
	1µm,0.5s,SNR=18						
EQUE				Pg	**Pb**	**16 17 06.3**	**0.0**
	2µm,0.4s,SNR=30						
EQUE				Lg	Lg	16 17 32.1	
	8µm,0.4s,SNR=11						
EMOS	**Mosqueruela**	**2.07**	**52**	⇑Pn	**Pn**	**16 17 05.8**	**+1.2**
	77nm,0.3s,SNR=18						
EMOS				Pg	**Pg**	**16 17 09.9**	**+0.5**
	4µm,0.6s,SNR=247						
EMOS				Sn	**Sn**	**16 17 30.7**	**+0.3**
	23µm,0.8s,SNR=5.0						
EMOS				Lg	Lg	16 17 37.4	
	56µm,0.9s,SNR=22						
EMOS	**Mosqueruela**	**2.07**	**52**		**Pn**	**16 17 05.8**	**+1.2**
ENIJ	**Nijar**	**2.15**	**171**	Pn	**Pn**	**16 17 04.8**	**-0.7**
	24nm,0.9s,SNR=7.9						
ENIJ				Pg	**Pb**	**16 17 08.9**	**+0.2**
	182nm,0.1s,SNR=7.9						
ENIJ				Sn	**Sn**	**16 17 29.1**	**-3.1**
	3µm,0.3s,SNR=4.0						
ENIJ				Lg	Lg	16 17 37.6	
	15µm,0.3s,SNR=7.9						
ENIJ	**Nijar**	**2.15**	**171**	P	**Pn**	**16 17 05.8**	**+0.3**
ENIJ	**Nijar**	**2.15**	**171**		**Pn**	**16 17 05.8**	**+0.3**
EBER	**Berja**	**2.21**	**186**	⇑Pn	**Pn**	**16 17 06.4**	**-0.1**
	808nm,0.3s,SNR=18						
EBER				Pg	**Pb**	**16 17 10.2**	**+0.4**
	241nm,0.3s,SNR=7.2						
EBER				Sn	**Sn**	**16 17 29.7**	**-4.2**
	4µm,0.4s,SNR=7.9						
EBER				Lg	Lg	16 17 39.2	
	13µm,0.5s,SNR=15						
EBER	**Berja**	**2.21**	**186**		**Pn**	**16 17 06.4**	**-0.1**
EGOR	**Sierra Gorda,**	**2.32**	**211**	Lg	Lg	16 17 42.5	
	5µm,0.4s,SNR=7.9						
ELGU	**Los Guajares,**	**2.37**	**200**	⇑Pn	**Pn**	**16 17 08.3**	**-0.3**
	180nm,0.9s,SNR=18						
ELGU				Pg	**Pb**	**16 17 12.8**	**+0.3**
	37nm,0.3s,SNR=7.9						
ELGU				Lg	Lg	16 17 44.1	
	6µm,0.3s,SNR=7.9						
ELGU	**Los Guajares,**	**2.37**	**200**		**Pb**	**16 17 13.5**	**+1.1**
HORN	**Hornachuelos**	**2.43**	**240**	P		16 17 08.1	
EMAL	**Malaga-Limoner**	**2.75**	**212**	*e*P	**Pn**	**16 17 13.3**	**-0.4**
EMAL				*e*S	**Sb**	**16 17 51.5**	**-0.9**
EPLA	**Plasencia**	**2.85**	**291**	⇓Pn	**Pn**	**16 17 14.9**	**-0.2**
	845nm,0.4s,SNR=18						
EPLA				Pg	**Pg**	**16 17 22.8**	**-1.5**
	149nm,0.5s,SNR=7.9						
EPLA				Sn	**Sn**	**16 17 46.6**	**-2.8**
	1µm,0.4s,SNR=5.8						
EPLA				Lg	Lg	16 17 59.2	
	17µm,0.4s,SNR=5.0						
EPLA	**Plasencia**	**2.85**	**291**	P	**Pn**	**16 17 15.0**	**-0.2**
EPLA						16 17 44.8	
EPLA	**Plasencia**	**2.85**	**291**		**Pn**	**16 17 14.9**	**-0.2**
EPLA					**Sn**	**16 17 44.8**	**-4.6**
ERTA	**Horta de San J**	**2.92**	**50**	Pn	**Pn**	**16 17 16.8**	**+0.8**
	7.2nm,0.3s,SNR=26						
ERTA				Pg	**Pg**	**16 17 26.4**	**+0.8**
	2µm,0.8s,SNR=14						
ERTA				Sn	**Sn**	**16 17 49.9**	**-1.3**
	1µm,0.6s,SNR=4.0						
ERTA				Lg	Lg	16 18 02.2	
	9µm,0.6s,SNR=8.7						
ERTA	**Horta de San J**	**2.92**	**50**		**Pn**	**16 17 16.8**	**+0.8**
ERTA					**Sn**	**16 17 48.9**	**-2.3**
EIBI	**Ibiza**	**3.08**	**90**	⇓Pn	**Pn**	**16 17 17.5**	**-0.6**
	479nm,0.6s,SNR=18						
EIBI				Sn	**Sn**	**16 17 52.5**	**-2.5**
	620nm,0.6s,SNR=15						
EIBI				Lg	Lg	16 18 05.9	
	683nm,0.2s,SNR=5.0						
EIBI	**Ibiza**	**3.08**	**90**		**Pn**	**16 17 17.6**	**-0.6**
EIBI					**Sn**	**16 17 58.3**	**+3.4**
EALB	**Alboran**	**3.18**	**186**	Pn	**Pn**	**16 17 18.6**	**-1.0**
	51nm,0.3s,SNR=18						
EALB				Pg	**Pb**	**16 17 25.4**	**-0.7**
	426nm,0.6s,SNR=11						
EALB				Sn	**Sn**	**16 17 53.5**	**-3.9**
	530nm,0.4s,SNR=7.9						
EALB				Lg	Lg	16 18 10.1	
	5µm,0.9s,SNR=7.9						
REAL	**Reales**	**3.33**	**219**	*e*P	**Pn**	**16 17 22.0**	**+0.2**
REAL				*e*S	**Sn**	**16 18 00.0**	**-1.4**
ESPR	**Espera**	**3.40**	**230**	⇑Pn	**Pn**	**16 17 22.1**	**-0.5**
	73nm,0.3s,SNR=18						
ESPR				Pg	**Pb**	**16 17 31.8**	**+1.8**
	296nm,0.3s,SNR=7.9						
ESPR				Sn	**Sn**	**16 18 00.3**	**-2.7**
	904nm,0.6s,SNR=5.2						
ESPR				Lg	Lg	16 18 16.9	
	4µm,0.4s,SNR=4.6						
ESPR	**Espera**	**3.40**	**230**		**Pn**	**16 17 22.4**	**-0.2**
ESPR					**Sn**	**16 18 03.2**	**+0.3**
EMIN	**Mina Concepcio**	**3.46**	**249**	⇓Pn	**Pn**	**16 17 22.4**	**-1.1**
	56nm,0.3s,SNR=18						
EMIN				Pg	**Pb**	**16 17 32.7**	**+1.8**
	239nm,0.3s,SNR=4.0						
EMIN				Sn	**Sn**	**16 18 00.5**	**-3.9**
	279nm,0.4s,SNR=7.5						
EMIN				Lg	Lg	16 18 17.4	
	6µm,0.6s,SNR=9.0						
EMIN	**Mina Concepcio**	**3.46**	**249**		**Pn**	**16 17 22.4**	**-1.1**
EMIN					**Sn**	**16 17 58.2**	**-6.3**
EJIF	**Jimena Fronter**	**3.49**	**221**	⇓Pn	**Pn**	**16 17 23.7**	**-0.1**
	SNR=18						
PBAR	**Barrancos**	**3.59**	**256**	⇓*e*Pn	**Pn**	**16 17 24.6**	**-0.7**
PBAR				*e*Sg	**Sg**	**16 18 21.9**	**-3.1**
PBAR				A	A	16 18 28.6	
	8µm,0.6s						
EPOB	**Poblet**	**3.61**	**50**	Pn	**Pn**	**16 17 26.0**	**+0.5**
	14nm,0.2s,SNR=82						
EPOB				Pg	**Pg**	**16 17 39.2**	**+0.4**
	2µm,0.8s,SNR=32						

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EPOB                            Sn     Sn    16 18 08.4 +0.3
       526nm,0.6s,SNR=7.1
EPOB                            Lg     Lg    16 18 23.3
       4µm,0.6s,SNR=5.0
EPOB   Poblet          3.61  50        Pn    16 17 26.1 +0.5
EPOB                                   Sn    16 18 08.4 +0.3
EPOB                                   Sg    16 18 26.7 +1.2
PMRV   Marv??o         3.73 276⇓ePn    Pn    16 17 26.4 -0.8
PMRV                           eSg     Sb    16 18 25.0 +4.3
PMRV                            A      A     16 18 33.3
       7µm,0.5s
USTO   Oran            3.74 153 P      Pb    16 17 33.0 -2.7
EARA   Aranguren       3.75  12 Pn     Pn    16 17 29.2 +1.8
       20nm,0.3s,SNR=7.9
EARA                            Pg     Pg    16 17 42.1 +0.7
       5µm,0.4s,SNR=334
EARA                            Lg     Lg    16 18 30.9
       8µm,0.6s,SNR=14
EARA   Aranguren       3.75  12 Pn     Pn    16 17 29.4 +1.9
EARA                            Pg     Pg    16 17 42.9 +1.5
EARA   Aranguren       3.75  12 Sn     Sn    16 18 12.4 +0.9
MELI   Melilla         3.81 184 eP     Pn    16 17 28.6 +0.3
MELI                            eS     Sn    16 18 17.0 +3.9
PCBR   Castelo Branco  3.84 283 ePn    Pn    16 17 28.2 -0.5
PCBR                            eSg    Sb    16 18 27.3 +3.4
PCBR                            A      A     16 18 37.9
       4µm,0.8s
CNIL   Conil           3.86 226 eP     Pn    16 17 29.0  0.0
CNIL                            eS     Sn    16 18 16.0 +1.7
SFS    San Fernando    3.88 228 P      Pn    16 17 27.9 -1.3
SFS    San Fernando    3.88 228 eP     Pn    16 17 30.2 +1.0
SFS                             eS     Sn    16 18 15.7 +0.9
SFS    San Fernando    3.88 228 Pn     Pn    16 17 27.9 -1.3
CEU    Ceuta           3.88 215 eP     Pn    16 17 28.1 -1.2
CEU                             eS     Sn    16 18 14.5 -0.3
ECEU   Ceuta           3.88 215 Pn     Pn    16 17 29.7 +0.4
       76nm,0.4s,SNR=23
ECEU                            Pg     Pg    16 17 45.1 +1.1
       287nm,0.6s,SNR=7.9
ECEU                            Sn     Sn    16 18 10.7 -4.3
       317nm,0.8s,SNR=5.0
ECEU                            Lg     Lg    16 18 31.6
       1µm,0.9s,SNR=7.9
ECEU   Ceuta           3.88 215        Pn    16 17 29.7 +0.4
ECEU                                   Lg    16 18 42.3
PESTR  Estremoz        3.89 268 Pn     Pn    16 17 28.2 -1.2
PESTR  Estremoz        3.89 268⇓ePn    Pn    16 17 28.4 -1.0
PESTR                           eSg    Sg    16 18 31.0 -3.6
PESTR                           A      A     16 18 35.8
       4µm,0.4s
PESTR  Estremoz        3.89 268 P            16 17 28.3
EORO   Oroz-Betelu     3.91  14 Pn     Pn    16 17 29.5 -0.2
       15nm,0.2s,SNR=21
EORO                           ⇓Pg     Pg    16 17 44.8 +0.3
       3µm,0.4s,SNR=18
EORO                            Lg     Lg    16 18 35.9
       14µm,0.6s,SNR=9.8
EORO   Oroz-Betelu     3.91  14        Pn    16 17 29.5 -0.2
EORO                                   Lg    16 18 38.5
MVO    Moncorvo        3.96 303 ⇓Pn    Pn    16 17 30.4 -0.1
       96nm,0.4s,SNR=18
MVO                             Pg     Pg    16 17 44.9 -0.7
       SNR=7.9
MVO                             Sn     Sn    16 18 15.2 -1.7
       383nm,0.3s,SNR=7.0
MVO                             Lg     Lg    16 18 37.0
       19µm,0.5s,SNR=27
MVO    Moncorvo        3.96 303        Pn    16 17 30.4 -0.1
MVO                                    Sn    16 18 15.8 -1.2
MVO                                    Lg    16 18 41.6
MVO    Moncorvo        3.96 303⇓ePn    Pn    16 17 30.4 -0.1
MVO                             eSg    Sg    16 18 34.9 -2.1
MVO                             A      A     16 18 41.9
       9µm,0.5s
OKGL   Djebel Kef Gue  4.00 139 P      Pb    16 17 37.0 -3.2
MTE    Manteigas       4.02 290 Pn     Pn    16 17 30.3 -0.9
MTE    Manteigas       4.02 290 ePn    Pn    16 17 30.6 -0.6
MTE                             eSg    Sg    16 18 34.8 -3.9
MTE                             A      A     16 18 42.2
       7µm,0.6s
SMIR   Smir Dam        4.07 214 P            16 17 30.5
ETSF   Etsaut          4.09  22 ePn    Pn    16 17 31.4 -0.9
ETSF   Etsaut          4.09  22 eP     Pn    16 17 34.3 +2.0
ETSF   Etsaut          4.09  22 ePg    Pg    16 17 48.4 +0.3
ETSF                            eSn    Sn    16 18 16.3 -3.9
ETSF                            eSg    Sg    16 18 42.3 +1.2
       2µm,0.5s
SJPF   Ste Jean        4.14  14 ePn    Pn    16 17 32.8  0.0
SJPF   Ste Jean        4.14  14 eP     Pn    16 17 35.7 +2.9
SJPF   Ste Jean        4.14  14 ePg    Pg    16 17 49.3 +0.4
SJPF                            eSn    Sn    16 18 16.7 -4.5
       3µm,0.6s
SJPF                            eSg    Sg    16 18 43.2 +0.7
       2µm,0.4s
ECHI   Chisagues Biel  4.14  30 Pn     Pn    16 17 33.3 +0.3
       20nm,0.2s,SNR=7.9
ECHI                            Pg     Pg    16 17 49.4 +0.4
       SNR=7.9
ECHI                            Sn     Sn    16 18 19.2 -2.2
       334nm,0.3s,SNR=7.9
ECHI                            Lg     Lg    16 18 48.7
       2µm,0.8s,SNR=7.9
EGRO   El Granado      4.14 249 ⇓Pn    Pn    16 17 31.6 -1.2
       102nm,0.4s,SNR=18
EGRO                            Sn     Sn    16 18 16.3 -4.9
       338nm,0.3s,SNR=5.0
EGRO                            Lg     Lg    16 18 39.3
       15µm,0.9s,SNR=32
EGRO   El Granado      4.14 249        Pn    16 17 31.6 -1.2
EGRO                                   Sn    16 18 16.3 -4.9
EGRO                                   Lg    16 18 47.9
PBRG   Braganca        4.15 312 ePn    Pn    16 17 32.6 -0.4
PBRG                            eSg    Sg    16 18 40.8 -2.1
PBRG                            A      A     16 18 47.3
       4µm,0.5s
PVLZ   Peæn de         4.15 200 eP     Pn    16 17 35.6 +2.7
PVLZ                            eS     Sn    16 18 25.8 +4.4
ELAN   Lanestosa       4.17 352 Pn     Pn    16 17 34.2 +0.9
       0.9nm,0.6s,SNR=33
ELAN                            Pg     Pg    16 17 50.0 +0.5
       3µm,0.5s,SNR=97
ELAN                            Sn     Sn    16 18 21.4 -0.6
       1µm,0.7s,SNR=13
ELAN                            Lg     Lg    16 18 43.3
       9µm,0.8s,SNR=5.0
ELAN   Lanestosa       4.17 352        Pn    16 17 33.9 +0.6
ELAN                                   Lg    16 18 51.1
EMIR   Miracle         4.22  47 Pn     Pn    16 17 34.5 +0.5
       27nm,1.0s,SNR=26
EMIR                            Pg     Pg    16 17 49.8 -0.7
       770nm,0.4s,SNR=7.9
EMIR                            Sn     Sn    16 18 22.2 -1.0
       867nm,0.5s,SNR=6.2
EMIR                            Lg     Lg    16 18 43.5
       8µm,0.8s,SNR=5.8
EMIR   Miracle         4.22  47        Pn    16 17 37.1 +3.1
EMIR                                   Sn    16 18 20.3 -2.9
OJBR   Djebel Berber   4.23 145 P      Pn    16 17 34.0 -0.1
ATE    Arette          4.23  19 Pn     Pn    16 17 34.8 +0.8
       5.8nm,0.6s,SNR=7.9
ATE                             Pg     Pg    16 17 50.9 +0.2
       812nm,0.5s,SNR=7.9
ATE                             Sn     Sn    16 18 22.6 -0.9
       336nm,0.5s,SNR=7.9
ATE                             Lg     Lg    16 18 46.8
       4µm,0.8s,SNR=7.9
ATE    Arette          4.23  19 P      Pn    16 17 34.4 +0.3
ATE                             Pn     Pn    16 17 36.3 +2.2
ATE                             Sn     Sn    16 18 24.9 +1.5
ECAL   Calabor         4.24 313 Pn     Pn    16 17 33.9 -0.3
       174nm,0.3s,SNR=299
ECAL                            Pg     Pg    16 17 50.8  0.0
       391nm,0.3s,SNR=7.9
ECAL                            Sn     Sn    16 18 20.9 -2.8
       740nm,0.5s,SNR=5.7
ECAL                            Lg     Lg    16 18 44.7
       14µm,0.6s,SNR=5.0
ECAL   Calabor         4.24 313        Pn    16 17 33.9 -0.3
ECAL                                   Lg    16 18 47.5
ODJA   Bouhanifia      4.25 152 P      Pn    16 17 35.0 +0.7
ETOS   Mallorca        4.25  79 ⇓Pn    Pn    16 17 34.3 -0.1
       38nm,0.4s,SNR=18
ETOS                            Sn     Sn    16 18 22.6 -1.4
       SNR=7.9
ETOS                            Lg     Lg    16 18 48.3
       773nm,0.9s,SNR=7.9
ETOS   Mallorca        4.25  79        Pn    16 17 34.5 +0.1
ETOS                                   Lg    16 19 00.9
PBEJ   Beja            4.26 257 ePn    Pn    16 17 33.3 -1.2
PBEJ                            eSg    Sg    16 18 42.3 -4.2
PBEJ                            A      A     16 18 49.9
       3µm,0.6s
EVO    Evora           4.26 264 eS     Sn    16 18 19.8 -4.4
EVO    Evora           4.26 264⇓ePn    Pn    16 17 33.3 -1.2
EVO                             eSg    Sg    16 18 42.0 -4.5
EVO                             A      A     16 18 50.4
       4µm,0.9s
TAF    Taforalt        4.29 178 P            16 17 35.0
ECHA   Ech Chlef       4.32 132 P      Pn    16 17 33.6 -1.6
EBNR   Beni Rached     4.32 129 P      Pn    16 17 35.0 -0.3
CSOR   Sort            4.33  40 Pn     Pn    16 17 35.9 +0.3
       68nm,0.5s,SNR=52
CSOR                            Pg     Pg    16 17 50.4 -2.2
       665nm,0.5s,SNR=7.9
CSOR                            S      Sn    16 18 24.3 -1.8
       1µm,0.5s,SNR=6.0
CSOR                            Lg     Lg    16 18 46.7
       5µm,0.7s,SNR=6.7
CSOR   Sort            4.33  40        Pn    16 17 35.9 +0.3
CSOR                                   Lg    16 19 03.1
PVAQ   Vaqueiros       4.37 249 Pn     Pn    16 17 34.2 -1.7
PVAQ   Vaqueiros       4.37 249⇓ePn    Pn    16 17 34.5 -1.4
PVAQ                            eSg    Sb    16 18 44.1 +5.1
PVAQ                            A      A     16 19 00.0
       4µm,0.5s
PVAQ   Vaqueiros       4.37 249 P            16 17 34.5
PMTG   Montargil       4.37 271 ePn    Pn    16 17 34.6 -1.4
PMTG                            eSg    Sb    16 18 44.6 +5.4
PMTG                            A      A     16 18 53.0
       5µm,0.6s
PVIS   Viseu           4.37 293⇓ePn    Pn    16 17 35.4 -0.7
PVIS                            eSg    Sg    16 18 47.3 -2.8
PVIS                            A      A     16 18 59.6
       3µm,0.4s
PYLO   Lourdes         4.43  25 P      Pn    16 17 37.8 +0.9
PYLO                            Pn     Pn    16 17 38.8 +2.0
PYLO                            Sn     Sn    16 18 29.8 +1.4
PVRL   Vila Real       4.47 301⇓ePn    Pn    16 17 37.1 -0.3
PVRL                            eSg    Sg    16 18 51.6 -1.7
PVRL                            A      A     16 18 57.4
       3µm,0.6s
OJGS   Djebel Guires   4.48 142 P      Pn    16 17 38.0 +0.4
EPF    Esparros        4.51  29 eP     Pn    16 17 41.1 +3.1
EPF    Esparros        4.51  29 ePg    Pg    16 17 55.9 -0.2
EPF                             eSg    Sg    16 18 54.4 -0.1
       2µm,0.4s
PCVE   Castro Verde    4.51 253⇓ePn    Pn    16 17 36.7 -1.3
PCVE                            eSg    Sg    16 18 49.4 -5.2
PCVE                            A      A     16 19 04.1
       3µm,0.7s
POLO   Lamas de Olo    4.57 301 ePn    Pn    16 17 38.5 -0.3
POLO                            eSg    Sg    16 18 53.7 -2.7
POLO                            A      A     16 19 03.1
       2µm,0.6s
MESJ   Messejana       4.58 256 eP     Pn    16 17 37.7 -1.2
MESJ                            eS     Sn    16 18 27.8 -4.4
MESJ                            AML    AML   16 18 29.9
       comp=N,485nm,0.3s
MESJ   Messejana       4.58 256 eP     Pn    16 17 37.6 -1.2
MESJ                            eS     Sn    16 18 27.7 -4.4
MESJ   Messejana       4.58 256 ePn    Pn    16 17 37.7 -1.2
MESJ                            eSn    Sn    16 18 28.7 -3.4
MESJ                            eSg    Sg    16 18 52.5 -4.3
MESJ                            A      A     16 18 57.4
       comp=N,5µm,0.5s
PBDV   Barranco-do-Ve  4.59 248⇓ePn    Pn    16 17 37.8 -1.2
PBDV                            eSg    Sg    16 18 51.5 -5.5
PBDV                            A      A     16 19 02.9
       comp=N,5µm,0.6s
COI    Coimbra         4.61 286 P      Pn    16 17 38.6 -0.7
COI    Coimbra         4.61 286 Pn     Pn    16 17 38.6 -0.7
COI    Coimbra         4.61 286 ePn    Pn    16 17 39.3  0.0
COI                             eSg    Sb    16 18 52.1 +5.9
COI                             A      A     16 19 08.7
       comp=N,5µm,0.5s
EARI   Arriondas       4.63 336 Pn     Pn    16 17 39.5 -0.1
       comp=N,144nm,0.4s,SNR=99
EARI                            Pg     Pg    16 17 56.7 -1.7
       comp=N,1µm,0.6s,SNR=7.9
EARI                            Lg     Lg    16 18 56.9
       comp=N,7µm,0.7s,SNR=8.4
EARI   Arriondas       4.63 336        Pn    16 17 39.5 -0.1
EARI                                   Lg    16 19 08.2
PCAS   Casmilo, Conde  4.65 284 ePn    Pn    16 17 39.7 -0.1
PCAS                            eSg    Sg    16 18 55.0 -3.9
PCAS                            A      A     16 19 09.8
       comp=N,4µm,0.6s
CFON   Fontmartina     4.67  54 Pn     Pn    16 17 40.6 +0.4
       comp=N,22nm,0.6s,SNR=35
CFON                            Pg     Pg    16 17 58.5 -0.6
       comp=N,215nm,0.4s,SNR=6.1
CFON                            Lg     Lg    16 18 56.9
       comp=N,1µm,0.3s,SNR=5.0
CFON   Fontmartina     4.67  54        Pn    16 17 40.6 +0.4
CFON                                   Sn    16 18 29.4 -5.1
CFON                                   Lg    16 19 04.8
TERF   Tercis-les-Bai  4.71  13 P      Pn    16 17 41.5 +0.9
TERF                            Pn     Pn    16 17 42.4 +1.9
TERF                            Pg     Pg    16 18 01.0 +1.2
PNCL   Nicolau / Gran  4.74 260 ePn    Pn    16 17 39.9 -1.2
PNCL                            eSg    Sg    16 18 57.6 -4.3
PNCL                            A      A     16 19 03.0
       comp=N,3µm,0.5s
PSBE   So Bento        4.82 277⇓ePn    Pn    16 17 41.7 -0.5
PSBE                            eSg    Sg    16 18 59.9 -4.4
PSBE                            A      A     16 19 12.1
       comp=N,4µm,0.6s
CLLI   Llivia          4.84  44 Pn     Pn    16 17 43.2 +0.6
       comp=N,109nm,0.5s,SNR=45
CLLI                            Pg     Pg    16 18 01.6 -0.8
       comp=N,718nm,0.9s,SNR=7.9
CLLI                            Sn     Sn    16 18 37.6 -1.2
       comp=N,597nm,0.8s,SNR=7.7
CLLI                            Lg     Lg    16 19 07.3
       comp=N,4µm,1.1s,SNR=10
CLLI   Llivia          4.84  44        Pn    16 17 43.2 +0.6
CLLI                                   Sn    16 18 37.6 -1.2
CLLI                                   Lg    16 19 14.7
ETRT   Tiaret          4.84 139 P      Pn    16 17 40.0 -2.6
PCAB   Cabril          4.89 304⇓ePn    Pn    16 17 42.8 -0.3
PCAB                            eSg    Sg    16 19 03.5 -3.1
PCAB                            A      A     16 19 08.7
       comp=N,4µm,0.5s
ELOB   Lobios          4.99 305 ⇓Pn    Pn    16 17 44.3 -0.3
       comp=N,125nm,0.4s,SNR=18
ELOB                            Sn     Sn    16 18 38.3 -4.0
       comp=N,502nm,0.6s,SNR=5.6
ELOB                            Lg     Lg    16 19 07.7
       comp=N,9µm,0.8s,SNR=5.6
ELOB   Lobios          4.99 305        Pn    16 17 44.3 -0.3
ELOB                                   Sn    16 18 38.3 -4.0
ELOB                                   Lg    16 19 13.9
PTO    Porto           5.03 296 ePn    Pn    16 17 43.8 -1.1
PTO                             eSg    Sg    16 19 06.5 -4.4
PTO                             A      A     16 19 23.4
       comp=N,3µm,0.6s
PTEO   Sao Teotonio    5.05 254 ePn    Pn    16 17 44.3 -1.1
PTEO                            eSg    Sg    16 19 07.2 -4.8
PTEO                            A      A     16 19 20.8
       comp=N,5µm,0.5s
MORF   Marmelete       5.09 251 eP     Pn    16 17 44.5 -1.3
MORF                            eS     Sn    16 18 39.2 -5.5
MORF                            AML    AML   16 18 43.6
       comp=N,900nm,0.3s
MORF   Marmelete       5.09 251 eP     Pn    16 17 44.5 -1.3
MORF                            eS     Sn    16 18 39.1 -5.5
MORF   Marmelete       5.09 251 ePn    Pn    16 17 44.6 -1.3
MORF                            eSn    Sn    16 18 39.8 -4.8
MORF                            A      A     16 19 17.7
       comp=N,2µm,0.4s
INMG   Instituto de M  5.09 268 ePn    Pn    16 17 46.0 +0.1
INMG                            eSg    Sg    16 19 13.0 -0.2
INMG                            A      A     16 19 19.8
       comp=N,6µm,0.6s
LIS    Lisbon          5.12 268 eP     Pn    16 17 45.1 -1.2
LIS                             eS     Sn    16 18 40.4 -4.9
LIS                             AML    AML   16 18 44.9
       comp=N,3µm,0.7s
LIS    Lisbon          5.12 268 eP     Pn    16 17 45.0 -1.2
LIS                             eS     Sn    16 18 40.4 -4.9
LIS    Lisbon          5.12 268 ePn    Pn    16 17 45.3 -0.9
LIS                             eSn    Sn    16 18 41.4 -3.9
LIS                             eSg    Sg    16 19 13.2 -0.7
LIS                             A      A     16 19 21.2
       comp=N,4µm,0.6s
PGAV   Gavieira, Arco  5.17 305 ePn    Pn    16 17 46.7 -0.4
PGAV                            eSn    Sn    16 18 45.0 -1.9
PGAV                            eSg    Sg    16 19 13.6 -2.2
PGAV                            A      A     16 19 17.7
       comp=N,3µm,0.7s
PMAFR  Mafra           5.20 270 ⇓Pn    Pn    16 17 46.7 -0.7
       comp=N,476nm,0.5s,SNR=18
PMAFR                           Sn     Sn    16 18 43.2 -4.1
       comp=N,662nm,0.4s,SNR=6.4
PMAFR                           Lg     Lg    16 19 16.0
       comp=N,13µm,0.8s,SNR=5.0
PMAFR  Mafra           5.20 270        Pn    16 17 46.5 -0.9
PMAFR                                  Lg    16 19 20.0
PMAFR  Mafra           5.20 270⇓ePn    Pn    16 17 46.7 -0.7
PMAFR                           eSn    Sn    16 18 41.6 -5.8
PMAFR                           eSg    Sg    16 19 13.1 -3.5
PMAFR                           A      A     16 19 20.8
       comp=N,6µm,0.6s
FNEB   Nbias           5.21  42 P      Pn    16 17 49.2 +1.6
FNEB                            Pn     Pn    16 17 49.7 +2.2
FNEB                            Pg     Pg    16 18 11.6 +2.2
FNEB                            Sn     Sn    16 18 48.9 +1.3
FNEB                            Sg     Sg    16 19 21.7 +4.9
PFVI   Vila Bisbo      5.28 250 Pn     Pn    16 17 47.2 -1.3
       comp=N,4.8nm,0.3s,SNR=32
PFVI                            Sn     Sn    16 18 44.6 -4.8
       comp=N,184nm,0.4s,SNR=5.6
PFVI                            Lg     Lg    16 19 17.4
       comp=N,12µm,1.0s,SNR=14
PFVI   Vila Bisbo      5.28 250 Pn     Pn    16 17 47.0 -1.6
PFVI   Vila Bisbo      5.28 250        Sn    16 18 45.2 -4.2
PFVI   Vila Bisbo      5.28 250 ePn    Pn    16 17 47.2 -1.3
PFVI                            eSn    Sn    16 18 44.3 -5.1
PFVI                            eSg    Sg    16 19 17.4 -1.9
PFVI                            A      A     16 19 24.9
       comp=N,3µm,0.6s
PFVI   Vila Bisbo      5.28 250 P            16 17 47.2
EJON   La Jonquera     5.34  50 Pn     Pn    16 17 50.0 +0.6
       comp=N,39nm,0.5s,SNR=22
EJON                            Pg     Pg    16 18 11.0 -1.0
       comp=N,712nm,1.0s,SNR=7.9
EJON                            Lg     Lg    16 19 22.1
       comp=N,3µm,0.7s,SNR=5.0
EJON   La Jonquera     5.34  50        Pn    16 17 50.0 +0.6
EJON                                   Lg    16 19 26.9
SJAF   Saint Jean de   5.36  49 Pn     Pn    16 17 50.4 +0.8
       comp=N,23nm,0.6s,SNR=7.9
SJAF                            Pg     Pg    16 18 11.2 -1.1
       comp=N,560nm,0.6s,SNR=7.9
SJAF                            Lg     Lg    16 19 20.6
       comp=N,4µm,1.4s,SNR=7.9
MAHO   Mahon           5.38  79 eP     Pn    16 17 52.8 +3.0
MAHO                            eS     Sn    16 18 50.6 -1.0
EPON   Pontenova       5.43 322 Pn     Pn    16 17 50.3 -0.3
       comp=N,8.4nm,0.4s,SNR=42
EPON                            Pg     Pg    16 18 12.8 -0.9
       comp=N,585nm,0.6s,SNR=7.9
EPON                            Sn     Sn    16 18 50.1 -3.0
       comp=N,369nm,0.4s,SNR=5.2
EPON                            Lg     Lg    16 19 23.2
       comp=N,8µm,1.0s,SNR=7.6
EPON   Pontenova       5.43 322        Pn    16 17 50.3 -0.3
EPON                                   Lg    16 19 28.8
EZAM   Zamans          5.54 305 Pn     Pn    16 17 52.0 -0.1
       comp=N,9.8nm,0.2s,SNR=7.9
EZAM                            Sn     Sn    16 18 51.6 -4.2
       comp=N,77nm,0.4s,SNR=7.9
EZAM                            Lg     Lg    16 19 24.6
       comp=N,3µm,0.6s,SNR=7.9
EAGO   Agolada(Pontev  5.56 313 Pn     Pn    16 17 52.5 +0.2
       comp=N,48nm,0.4s,SNR=7.9
EAGO                            Sn     Sn    16 18 53.1 -3.0
       comp=N,182nm,0.7s,SNR=7.9
EAGO                            Lg     Lg    16 19 25.2
       comp=N,4µm,0.5s,SNR=7.9
MTLF   Montolieu       5.58  39 ePn    Pn    16 17 51.7 -0.9
MTLF   Montolieu       5.58  39 ePg    Pg    16 18 15.6 -0.9
MTLF                            eSn    Sn    16 18 51.4 -5.3
MTLF                            eSg    Sg    16 19 27.5 -1.3
       comp=N,1µm,0.7s
MTLF   Montolieu       5.58  39 P      Pn    16 17 52.7 +0.1
MTLF                            Pn     Pn    16 17 55.2 +2.6
MTLF   Montolieu       5.58  39 Pg     Pg    16 18 17.7 +1.2
LCRM   LCR             5.70 199 P            16 17 54.2
IFR    Ifrane          5.94 201 eP     Pn    16 17 56.9 -0.8
IFR                             eS     Sn    16 19 00.1 -5.6
MONQ   Montcuq         5.98  27 P      Pn    16 17 58.2 +0.1
MONQ                            Pn     Pn    16 18 00.2 +2.2
MONQ                            Pg     Pg    16 18 25.5 +1.4
LRVF   chteau la Riv   6.08  16 P      Pn    16 17 59.6 +0.1
LRVF                            Pn     Pn    16 18 01.5 +2.0
LRVF                            Pg     Pg    16 18 27.3 +1.2
RTC    Rabat Centre    6.14 215        Pn    16 17 58.5 -1.9
RTC    Rabat Centre    6.14 215 P            16 17 59.1
EMAZ   Mazaricos       6.16 311 Pn     Pn    16 18 00.4 -0.1
       comp=N,63nm,0.5s,SNR=7.9
EMAZ                            Sn     Sn    16 19 06.2 -4.8
       comp=N,53nm,0.2s,SNR=7.9
EMAZ                            Lg     Lg    16 19 46.7
       comp=N,3µm,0.6s,SNR=7.9
LFF    La Frestale     6.34  22 ePn    Pn    16 18 02.6 -0.4
LFF    La Frestale     6.34  22 ePg    Pg    16 18 30.6 -0.4
LFF                             eSn    Sn    16 19 08.2 -7.2
       comp=N,752nm,0.6s
MDT    Midelt          6.48 195 Pn     Pn    16 18 05.1  0.0
       comp=N,11nm,0.3s,baz=12,slow=9.9,SNR=90
MDT                             Sn     Sn    16 19 14.9 -4.2
       comp=N,19nm,0.3s,baz=208,slow=21,SNR=11
MDT                             LR     LR    16 20 05.8
       comp=N,314nm,18.6s,baz=15,slow=34
MDT    Midelt          6.48 195 P            16 18 05.0
CAF    Calviac         6.78  29 ePn    Pn    16 18 08.6 -0.5
CAF                             eSn    Sn    16 19 20.0 -6.2
       comp=N,327nm,0.5s
CAF                             eSg    Sg    16 20 05.6 -1.5
       comp=N,251nm,0.4s
RJF    Les Rejaudoux   6.91  25 ePn    Pn    16 18 10.3 -0.6
RJF                             eR
       comp=N,2µm,13.8s
RJF    Les Rejaudoux   6.91  25 ePg    Pg    16 18 41.0 -0.9
RJF                             eSn    Sn    16 19 23.2 -6.2
       comp=N,278nm,0.5s
RJF                             eSg    Sg    16 20 09.3 -2.0
       comp=N,350nm,0.6s
LASF   Ste Croix       6.94  42 ePn    Pn    16 18 10.6 -0.7
LASF   Ste Croix       6.94  42 ePg    Pg    16 18 40.4 -2.1
LASF                            eSn    Sn    16 19 24.1 -6.1
LASF                            eSg    Sg    16 20 09.4 -2.9
       comp=N,131nm,0.5s
AVE    Averroes        6.97 215 eP     Pn    16 18 09.9 -1.9
AVE                             eS     Sn    16 19 22.8 -8.3
SET    Setif           6.98 112 P      Pn    16 18 17.0 +5.0
DFRA   Djebel Bou Aff  7.18 108 P      Pn    16 18 19.9 +5.2
CHIF   Chize           7.21  12 P      Pn    16 18 14.6 -0.3
CHIF                            Pn     Pn    16 18 16.2 +1.3
CHIF                            Pg     Pg    16 18 46.9 -0.7
ARBF   Arbois          7.41  51 Pn     Pn    16 18 19.4 +1.7
ARBF                            Sn     Sn    16 19 41.7  0.0
LBL    Lubilhac        7.51  33 P      Pn    16 18 18.6 -0.5
LBL    Lubilhac        7.51  33 Pn     Pn    16 18 21.1 +1.9
LBL    Lubilhac        7.51  33 P      Pn    16 18 18.6 -0.5
MFF    Saint Martin d  7.71  13 ePn    Pn    16 18 21.3 -0.5
MFF    Saint Martin d  7.71  13 ePg    Pg    16 18 55.1 -2.1
MFF                             eSn    Sn    16 19 42.5 -6.6
       comp=N,43nm,0.3s
MFF    Saint Martin d  7.71  13 Pn     Pn    16 18 23.1 +1.3
MFF    Saint Martin d  7.71  13 P      Pn    16 18 20.9 -0.9
MFF    Saint Martin d  7.71  13 Pn     Pn    16 18 23.1 +1.3
MFF    Saint Martin d  7.71  13 Pg     Pg    16 18 56.5 -0.6
CASM   Ain Smara       7.75 109 P      Pn    16 18 26.9 +4.4
RUSF   Rustrel         7.76  49 P      Pn    16 18 23.9 +1.4
RUSF                            Pn     Pn    16 18 24.4 +1.9
RUSF                            Pg     Pg    16 18 59.0 +0.9
BSTF   la Bastide-des  7.82  50 P      Pn    16 18 22.8 -0.5
BSTF                            Pn     Pn    16 18 24.0 +0.7
CAEH   'Ain El Ouahch  7.82 104 P      Pn    16 18 28.9 +5.5
PYM    Petit Puy Mans  7.83  30 P      Pn    16 18 23.1 -0.4
PYM                             Pn     Pn    16 18 24.9 +1.4
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PYM	Petit Puy Mans	7.83	30	Sn	Sn	16 19 51.7	-0.5
SMRF	Simiane la Rot	7.83	49	*e*Pn	Pn	16 18 23.1	-0.4
SMRF	Simiane la Rot	7.83	49	*e*Pg	Pg	16 18 57.0	-2.5
SMRF				*e*Sg	Sg	16 20 36.5	-4.4
	comp=N,50nm,0.5s						
CKFL	Kef-Lekhel	7.87	107	P	Pn	16 18 29.8	+5.7
VIVF	Saint-Julien-l	7.90	41	*e*Pn	Pn	16 18 23.4	-1.1
VIVF	Saint-Julien-l	7.90	41	*e*Pg	Pg	16 18 59.0	-1.8
VIVF				*e*Sn	Sn	16 19 46.4	-7.4
VIVF				*e*Sg	Sg	16 20 41.1	-2.0
	comp=N,108nm,0.5s						
TCF	Toulx Ste Croi	8.01	25	*e*Pn	Pn	16 18 24.9	-1.0
TCF	Toulx Ste Croi	8.01	25	*e*P	Pn	16 18 29.6	+3.7
TCF				*e*Sn	Sn	16 19 49.9	-6.5
	comp=N,200nm,0.5s						
LMR	La Mourre	8.06	55	*e*Pn	Pn	16 18 25.6	-1.1
LMR	La Mourre	8.06	55	*e*P	Pn	16 18 31.0	+4.3
LMR	La Mourre	8.06	55	*e*Pg	Pg	16 19 00.7	-3.3
LMR				*e*Sn	Sn	16 19 51.5	-6.3
	comp=N,80nm,0.5s						
AGO	Saint Agoulin	8.13	29	P	Pn	16 18 26.9	-0.7
AGO				Pn	Pn	16 18 29.5	+1.8
SSB	Saint Sauveur	8.14	38	P	Pn	16 18 28.0	+0.3
SSB	Saint Sauveur	8.14	38	P	Pn	16 18 28.0	+0.3
SSB				Pn	Pn	16 18 28.8	+1.1
FRF	La Foret Royal	8.26	54	*e*Pn	Pn	16 18 28.6	-0.8
FRF				*e*Sn	Sn	16 19 56.0	-6.7
	comp=N,37nm,0.4s						
FRF				*e*Sg	Sg	16 20 52.1	-2.6
	comp=N,29nm,0.3s						
CMAH	Djebel Manchou	8.31	104	P	Pn	16 18 31.7	+1.6
BGF	Bois d'Agland	8.46	26	*e*Pn	Pn	16 18 31.1	-1.0
BGF				*e*Sn	Sn	16 20 00.2	-7.3
	comp=N,816nm,0.7s						
ORIF	Oris-en-Rattie	8.58	45	*e*Pn	Pn	16 18 32.7	-1.1
ORIF				*e*R			
	comp=N,2µm,14.5s						
ORIF	Oris-en-Rattie	8.58	45	*e*Pg	Pg	16 19 10.8	-3.0
ORIF				*e*Sg	Sg	16 21 00.7	-4.2
	comp=N,148nm,0.7s						
QUIF	Quistinic	8.82	358	*e*Pn	Pn	16 18 36.0	-1.0
QUIF	Quistinic	8.82	358	*e*P	Pn	16 18 40.6	+3.6
QUIF				*e*Sn	Sn	16 20 09.1	-7.2
	comp=N,269nm,0.6s						
AVF	Avril sur Loir	8.84	28	*e*Pn	Pn	16 18 36.2	-1.0
AVF				*e*Sn	Sn	16 20 09.6	-7.1
	comp=N,110nm,0.5s						
SMF	Signal de Mont	8.90	30	*e*Pn	Pn	16 18 36.7	-1.4
SMF				*e*Sn	Sn	16 20 11.3	-7.0
	comp=N,76nm,0.5s						
SBF	Sospel	8.91	55	*e*P	Pn	16 18 41.6	+3.3
SBF	Sospel	8.91	55	*e*Pg	Pg	16 19 16.0	-4.1
SBF				*e*Sn	Sn	16 20 11.6	-7.1
	comp=N,50nm,0.4s						
MBDF	Montbardon	8.97	48	*e*P	Pn	16 18 43.4	+4.2
MBDF				*e*Sn	Sn	16 20 12.2	-8.0
	comp=N,49nm,0.5s						
OUK	Oukaimeden	8.98	210	P		16 18 37.1	
HYF	Humbligny	9.01	23	*e*Pn	Pn	16 18 38.7	-1.0
HYF	Humbligny	9.01	23	*e*P	Pn	16 18 44.4	+4.7
HYF				*e*Sn	Sn	16 20 13.3	-7.8
BNI	Bardonecchia	9.11	46	P	Pn	16 18 42.8	+1.7
BNI	Bardonecchia	9.11	46		Pn	16 18 42.8	+1.7
SSF	Saint Saulge	9.12	27	*e*Pn	Pn	16 18 40.2	-1.0
SSF				*e*Sn	Sn	16 20 16.3	-7.5
	comp=N,105nm,0.6s						
SGMF	Saint Gilles	9.15	0	*e*Pn	Pn	16 18 39.8	-1.7
SGMF				*e*Sn	Sn	16 20 17.1	-7.3
	comp=N,30nm,0.3s						
ROSF	Rostrenen	9.24	357	*e*P	Pn	16 18 42.5	-0.3
ROSF	Rostrenen	9.24	357	*e*Pn	Pn	16 18 41.6	-1.2
ROSF				*e*Sn	Sn	16 20 19.1	-7.6
	comp=N,214nm,0.5s						
VSL	Villasalto	9.30	84	Pn	Pn	16 18 45.2	+1.5
EAH	EAH	9.37	220	P		16 18 42.5	
GRR	Gorron	9.37	7	*e*Pn	Pn	16 18 43.7	-0.8
GRR				*e*Sn	Sn	16 20 21.5	-8.3
	comp=N,118nm,0.3s						
LOR	Lormes	9.42	28	*e*Pn	Pn	16 18 44.1	-1.2
	baz=210						
LOR				*e*Sn	Sn	16 20 23.2	-8.1
	comp=N,216nm,1.0s						
LOR				*e*Sg		16 21 26.2	
	comp=N,130nm,0.7s						
LOR				*e*R			
	comp=N,2µm,14.8s						
LPG	La Plagne	9.42	44	*e*Pn	Pn	16 18 45.1	-0.5
LPG	La Plagne	9.42	44	*e*P	Pn	16 18 50.4	+4.8
LPL	La Plagne	9.43	44	*e*Pn	Pn	16 18 45.1	-0.5
PGF	Pioggiola	9.45	65	*e*Pn	Pn	16 18 44.6	-1.1
PGF				*e*Sn	Sn	16 20 23.4	-8.6
	comp=N,51nm,0.6s						
CLF	Chambon-Foret	9.59	20	Pn	Pn	16 18 47.6	+0.1
LDF	La Druitiere	9.65	10	*e*Pn	Pn	16 18 47.1	-1.4
LDF				*e*Sn	Sn	16 20 29.2	-7.6
	comp=N,42nm,0.4s						
FLN	La Foliniere	9.78	8	*e*Pn	Pn	16 18 49.1	-1.0
	baz=188						
FLN				*e*Sn	Sn	16 20 31.9	-7.9
	comp=N,98nm,0.6s						
FLN				*e*R			
	comp=N,2µm,15.2s						
CABF	La Chapelle	9.85	38	*e*Pn	Pn	16 18 50.4	-0.8
CABF				*e*Sn	Sn	16 20 34.7	-7.0
	comp=N,72nm,0.6s						
KEST	Kesra	10.09	106	Pn	Pn	16 18 54.4	-0.1
	comp=N,0.2nm,0.3s,baz=242,slow=4.6,SNR=1.7						
KEST				Sn	Sn	16 20 48.0	+0.4
	baz=168,slow=20,SNR=1.9						
KEST				LR	LR	16 22 49.3	
	comp=N,521nm,18.4s,baz=284,slow=38						
KEST	Kesra	10.09	106	Pn	Pn	16 18 55.4	+0.9
JSA	Saint Aubin	10.09	2	*e*P	Pn	16 18 55.0	+0.7
SENIN	Lac Senin/Sane	10.28	42	Pn	Pn	16 18 58.8	+1.6
CGR	Cap Guir	10.35	217	P		16 18 56.0	
MSSA	Maissana	10.45	56	Pn	Pn	16 19 01.9	+2.4
SFTF	Sexfontaines	10.64	29	*e*P	Pn	16 19 07.2	+5.2
SFTF				*e*Sn	Sn	16 20 53.5	-7.7
	comp=N,18nm,0.4s						
CASP	Castiglione de	10.84	66	Pn	Pn	16 19 07.9	+3.3
MEZF	Maizieres J'vi	10.90	28	*e*P	Pn	16 19 09.3	+3.8
MEZF				*e*Sn	Sn	16 20 59.6	-7.7
	comp=N,68nm,0.7s						
MEZF				*e*Sg		16 22 14.5	
	comp=N,234nm,0.9s						
HAU	Haudompre	11.01	33	*e*Pn	Pn	16 19 06.7	-0.3
HAU				*e*Sn	Sn	16 21 01.9	-8.2
	comp=N,78nm,0.8s						
HAU				*e*Sg		16 22 16.0	
	comp=N,44nm,0.6s						
HAU				*e*R			
	comp=N,1µm,15.0s						
SAVF	Savonnieres en	11.02	28	*e*Pn	Pn	16 19 06.3	-0.8
	baz=209						
SAVF				*e*Sn	Sn	16 21 02.1	-8.2
	comp=N,246nm,1.1s						
HINF	Hinteralfeld	11.09	35	*e*Pn	Pn	16 19 07.2	-0.9
HINF				*e*Sn	Sn	16 21 03.6	-8.5
	comp=N,10nm,0.4s						
HINF				*e*Sg		16 22 20.6	
	comp=N,13nm,0.4s						
PAGF	Fort de Pagny	11.19	30	*e*Pn	Pn	16 19 08.8	-0.7
	baz=217						
PAGF				*e*Sn	Sn	16 21 05.4	-9.2
	comp=N,70nm,0.8s						
OSSC	Osservatorio P	11.31	63	Pn	Pn	16 19 13.2	+2.0
ZCCA	Zocca	11.42	58	Pn	Pn	16 19 14.6	+1.9
TUE	Stuetta	11.45	46	Pn	Pn	16 19 15.7	+2.4
LATE	Laterza	11.46	68	Pn	Pn	16 19 15.4	+2.1
ECH	Echery	11.52	35	P	Pn	16 19 16.6	+2.6
ECH	Echery	11.52	35	Pn	Pn	16 19 16.6	+2.6
CDF	Champ du Feu	11.72	34	*e*Pn	Pn	16 19 16.0	-0.8
CDF				*e*Sn	Sn	16 21 19.1	-8.6
	comp=N,23nm,0.7s						
DAVOX	Davos/Dischmat	11.93	46	Pn	Pn	16 19 18.6	-1.2
	comp=N,0.1nm,0.3s,baz=242,slow=15,SNR=1.1						
DAVOX				Sn	Sn	16 21 36.4	+3.5
	comp=N,0.3nm,0.3s,baz=262,slow=7.1,SNR=3.4						
DAVOX				Lg	Lg	16 22 47.9	
	comp=N,0.2nm,0.3s,baz=281,slow=23,SNR=1.2						
HTL	Hartland	11.96	354	*e*P	Pn	16 19 23.0	+3.0
BAIF	Baives	11.97	22	*e*Pn	Pn	16 19 19.4	-0.8
BAIF				*e*Sn	Sn	16 21 24.5	-9.2
	comp=N,72nm,0.8s						
DOU	Dourbes	12.12	23	*e*P	Pn	16 19 21.0	-1.2
DOU	Dourbes	12.12	23	*d*Pn	Pn	16 19 21.0	-1.2
DOU				*d*pPn	pPn	16 19 25.3	+0.3
DOU				*d*Sn	Sn	16 21 25.4	-12
BFO	Black Forest	12.14	37	*e*P	P	16 19 29.0	-6.3
	baz=228,slow=14						
GIVF	Givet	12.20	23	*e*Pn	Pn	16 19 22.2	-1.0
GIVF				*e*Sn	Sn	16 21 29.3	-10
	comp=N,40nm,0.6s						
DAVA	Damuels	12.23	44	Pn	Pn	16 19 27.7	+3.8
	comp=N,7.8nm,0.5s						
WLF	Walferdange	12.27	28	*d*Pn	Pn	16 19 25.3	+1.1
WLF				*d*pPn	pPn	16 19 27.7	+0.7
WLF	Walferdange	12.27	28	P	Pn	16 19 24.4	+0.2
WLF	Walferdange	12.27	28	Pn	Pn	16 19 24.4	+0.2
WLF	Walferdange	12.27	28	*e*P	Pn	16 19 27.6	+3.4
	baz=228,slow=14						
BATH	Bath	12.34	1	*e*P	Pn	16 19 26.8	+1.6
BMRD	Maredsous	12.36	23	*d*Pn	Pn	16 19 23.9	-1.5
BMRD				*d*Sn	Sn	16 21 20.1	-23
RCHB	Rochefort	12.37	24	*d*Pn	Pn	16 19 24.8	-0.7
RCHB				*d*Sn	Sn	16 21 24.5	-19
SNF	Seneffe	12.40	21	*d*Pn	Pn	16 19 26.8	+0.8
NRCA	Norcia	12.45	68	Pn	Pn	16 19 26.4	-0.5
BSKQ	Steenkerk	12.47	20	*d*Pn	Pn	16 19 29.4	+2.4
BSKQ				*d*Sn	Sn	16 21 42.4	-3.4
BGES	Gesves	12.53	23	*d*Pn	Pn	16 19 28.3	+0.6
FETA	Feichten	12.55	47	*e*Pn	Pn	16 19 32.5	+4.3
	comp=N,3.8nm,0.6s						
UBR	Ueberruh	12.60	43	*e*P	P	16 19 34.7	-5.6
	baz=228,slow=14						
BCLA	Clavier	12.62	24	*d*Pn	Pn	16 19 31.5	+2.4
BCLA				*d*Sn	Sn	16 21 38.6	-11
BHOU	Houvegnez	12.79	26	*d*Pn	Pn	16 19 34.6	+3.2
BSTI	Sart Tilman	12.85	24	*d*Pn	Pn	16 19 31.8	-0.3
BSTI				*d*pPn	pPn	16 19 35.1	+0.1
BSTI				*d*sPn	sPn	16 19 36.8	+0.2
STU	Stuttgart	12.86	37	*e*P	P	16 19 39.2	-4.0
	baz=228,slow=14						
INTR	Introdacqua	12.89	72	Pn	Pn	16 19 33.1	+0.2
MCH1	Michaelchurch	12.90	359	*e*P	Pn	16 19 34.1	+1.3
MOTA	Moosalm	12.94	46	*e*Pn	Pn	16 19 37.2	+3.7
	comp=N,4.0nm,0.5s						
MEM	Membach	13.01	25	*d*Pn	Pn	16 19 36.3	+1.9
MEM				*d*Sn	Sn	16 21 40.8	-18
BTNL	Ternell	13.04	25	*d*Pn	Pn	16 19 33.6	-1.1
BTNL				*d*pPn	pPn	16 19 38.0	+0.5
WATA	Walderalm	13.20	47	*i* Pn	Pn	16 19 39.4	+2.3
	comp=N,5.6nm,0.5s						
AHRW	Bad Neuenahr-A	13.33	28	*e*P	Pn	16 19 41.9	+3.2
	baz=228,slow=14						
PMOZ	Porto Moniz, M	13.37	247	Pn	Pn	16 19 39.0	-0.4
HLM1	Long Mynd	13.42	359	*e*P	Pn	16 19 42.2	+2.3
ABTA	Abfaltersbach	13.44	50	*e*Pn	Pn	16 19 44.7	+4.4
	comp=N,7.6nm,0.7s						
TNS	Taunus Mts	13.60	32	*e*P	P	16 19 47.6	-3.9
	baz=228,slow=14						
CWF	Charnwood Fore	13.67	3	*e*P	Pn	16 19 44.4	+1.1
LLW	Llanuwychllyn	13.77	357	*e*P	Pn	16 19 46.3	+1.7
MYKA	Terra Mystica	14.07	52	*e*Pn	P	16 19 52.9	-3.9
	comp=N,1.9nm,0.5s						
RJOB	Jochberg	14.11	47	*e*P	P	16 19 54.1	-3.1
	baz=228,slow=14						
BUG	Bochum--Univer	14.14	26	*e*P	Pn	16 19 52.1	+2.3
	baz=228,slow=14						
DSB	Dublin	14.38	351	Pn	Pn	16 19 51.8	-1.2
GRF	Grafenberg Arr	14.46	38	*e*P	P	16 20 01.3	+0.3
	baz=228,slow=14						
OBKA	Obir	14.59	54	*e*Pn	P	16 19 59.7	-2.8
	comp=N,2.6nm,0.7s						
UBBA	Unterbreizbach	14.70	33	*e*P	P	16 20 03.7	+0.2
	baz=228,slow=14						
WET	Wettzell	14.95	43	*e*P	P	16 20 06.6	+0.1
	baz=228,slow=14						
SOKA	Soboth	14.96	54	*e*Pn	P	16 20 04.8	-1.9
	comp=N,2.1nm,0.6s						
MOA	Molln	15.02	49	*e*Pn	P	16 20 05.3	-2.0
	comp=N,2.6nm,0.4s						
TIP	Timpagrande	15.03	84	Pn	Pn	16 20 02.9	+0.9
MANZ	Manzenberg	15.08	39	*e*P	P	16 20 09.6	+1.7
	baz=228,slow=14						
GEC2	GERESS Array S	15.22	45		Pn	16 20 04.9	+0.3
GEC2	GERESS Array S	15.22	45	*e*P	P	16 20 10.0	+0.5
	baz=228,slow=14						
GERES	GERESS Array B	15.22	45	Pn	Pn	16 20 04.5	0.0
	comp=N,0.4nm,0.3s,baz=233,slow=13,SNR=11						
GERES				Sn	Sn	16 22 47.0	-6.2
	comp=N,0.1nm,0.3s,baz=241,slow=20,SNR=1.9						
GERES				Lg	Lg	16 24 43.4	
	comp=N,0.1nm,0.3s,baz=245,slow=28,SNR=2.9						
GERES				LR	LR	16 25 46.0	
	comp=N,631nm,19.8s,baz=252,slow=37						
GERES	GERESS Array B	15.22	45	P	Pn	16 20 05.3	+0.7
GERES	GERESS Array B	15.22	45	Pn	Pn	16 20 05.3	+0.7
KHC	Kasperske Hory	15.32	44	*ce*P	Pn	16 20 07.4	+1.7
KHC				pmax	pmax		
	comp=Z,35nm,2.5s						
KHC	Kasperske Hory	15.32	44	*e*P	P	16 20 08.6	-1.9
KHC				*e*S	Sn	16 22 50.0	-5.3
KHC	Kasperske Hory	15.32	44	Pn	Pn	16 20 07.3	+1.6
GUNZ	Gunzen	15.44	38	*e*P	P	16 20 14.3	+2.4
	baz=228,slow=14						
WERD	Werda	15.48	38	*e*P	P	16 20 14.7	+2.4
	baz=228,slow=14						
ARSA	Arzberg	15.51	52	*i* Pn	P	16 20 13.0	+0.4
	comp=Z,2.1nm,0.4s						
EDMD	Edmundbyers	15.74	1	*e*P	Pn	16 20 11.9	+0.7
CONA	Conrad Observa	16.01	51	*e*Pn	P	16 20 18.2	-0.1
	comp=Z,2.3nm,0.5s						
EKA	Eskdalemuir Ar	16.24	359	Pn	Pn	16 20 16.5	-1.1
	baz=178,slow=14,SNR=2.1						
EKA				Sn	Sn	16 23 07.1	-11
	baz=180,slow=26,SNR=2.2						
CLL	Collm	16.39	37	*e*P	Pn	16 20 19.0	-0.5
CLL				*e*sP	P	16 20 24.0	+1.7
	comp=Z,40nm,1.8s						
CLL				LmH		16 26 00.0	
	comp=N,600nm,19.3s						
CLL				LmH		16 26 00.0	
	comp=E,900nm,18.3s						
CLL				Lmax		16 28 00.0	
CLL	Collm	16.39	37	*e*P	P	16 20 24.0	+1.7
CLL				pmax	pmax		
	comp=Z,40nm,1.8s						
CLL	Collm	16.39	37	*e*P	P	16 20 27.1	+4.8
	baz=228,slow=14						
BRG	Berggiesshubel	16.55	39	Amp		16 20 29.4	
	comp=Z,2.0nm,0.7s						
BRG				*e*x	P	16 20 27.9	+3.7
BRG				*e*x	x	16 25 24.3	
BRG				Amp		16 25 45.4	
	comp=Z,9.0nm,1.1s						
KRUC	Moravsky	16.85	48	*e*PN	P	16 20 26.5	-1.0
KRUC				*e*		16 25 43.7	
MODS	Modra-Piesok	17.06	51	*e*P	P	16 20 32.0	+2.2
MODS	Modra-Piesok	17.06	51	*e*PN	P	16 20 32.0	+2.2
VRAC	Vranov	17.09	47	Pn	Pn	16 20 28.7	+0.3
	comp=Z,0.2nm,0.3s,baz=238,slow=13,SNR=1.6						
VRAC				Sn	Sn	16 23 32.6	-5.6
	comp=Z,0.2nm,0.3s,baz=14,slow=18,SNR=1.3						
VRAC				Lg	Lg	16 25 39.7	
	comp=Z,0.3nm,0.3s,baz=334,slow=22,SNR=1.2						
BSEG	Bad Segeberg	17.25	26	*e*P	P	16 20 34.2	+2.3
	baz=228,slow=14						
KRLC	Kraliky	17.58	45	*e*P	P	16 20 36.4	+0.8
KRLC	Kraliky	17.58	45	*e*P	P	16 20 36.4	+0.8
TAM	Tamanrasset	17.68	155	P	Pn	16 20 34.9	-1.2
TAM				pmax	pmax		
	comp=Z,9.0nm,1.0s						
TAM	Tamanrasset	17.68	155	Pn	Pn	16 20 34.9	-1.2
VYHS	Vyhne	18.05	52	*e*P	P	16 20 42.8	+2.0
VYHS	Vyhne	18.05	52	*e*PN	P	16 20 42.8	+2.0
FNA	Florina	18.46	77	P	Pn	16 20 46.8	+1.4
FNA				pmax	pmax		
	comp=Z,20nm,1.1s						
FNA	Florina	18.46	77	P	Pn	16 20 46.8	+1.4
STIP	Stip	19.04	74	*i* P	Pn	16 20 55.5	+3.1
VAY	Valandovo	19.34	75	*i* P	Pn	16 20 56.8	+0.7
AGG	Agios Georgios	19.35	82	P	Pn	16 20 56.9	+0.6
AGG				pmax	pmax		
	comp=Z,55nm,1.0s						
AGG	Agios Georgios	19.35	82	P	Pn	16 20 56.9	+0.6
AGG				IAmb	IAmb	16 21 03.1	
	comp=Z,55nm,1.0s						
GKP	Gorka Klasztor	19.64	37	*e*P	P	16 20 58.0	-0.2
CRVS	Cervenica-Dubn	19.82	53	*e*P	Pn	16 21 03.1	+1.4
CRVS	Cervenica-Dubn	19.82	53	*e*PN	Pn	16 21 03.1	+1.4
VTS	Vitosha	19.83	72	P	Pn	16 21 02.0	-0.1
VTS				pmax	pmax		
	comp=Z,23nm,1.1s						
VTS	Vitosha	19.83	72	P	Pn	16 21 02.0	-0.1
UZH	Uzhgorod	20.24	54	*e*P	P	16 21 03.2	-1.5
UZH				*e*		16 21 08.8	
UZH				*i*		16 21 29.9	
KOLS	Kolonicke sedl	20.33	53	*e*P	Pn	16 21 07.5	-0.3
KOLS	Kolonicke sedl	20.33	53	*e*PN	Pn	16 21 07.5	-0.3
LVV	L'vov	21.71	52	*e*P	P	16 21 19.8	-0.8
BUR08	Bucovina Ar. S	21.85	58	P	P	16 21 23.9	+1.7
BURAR	Bucovina Array	21.85	58	P	P	16 21 23.8	+1.6
MLR	Muntele Rosu	21.99	64	P	P	16 21 24.4	+0.6
	comp=Z,6.4nm,0.9s,baz=131,slow=2.3,SNR=7.1						
MLR				LR	LR	16 30 13.1	
	comp=Z,288nm,18.5s,baz=290,slow=38						
MLR	Muntele Rosu	21.99	64	P	P	16 21 25.0	+1.2
MLR				pmax	pmax		
	comp=Z,12nm,1.0s						
MLR	Muntele Rosu	21.99	64	P	P	16 21 25.0	+1.2
IDI	Anoyia	22.20	91	P	P	16 21 27.8	+1.7
	comp=Z,56nm,0.7s,baz=305,slow=9.9,SNR=21						
IDI				LR	LR	16 29 51.0	
	comp=Z,216nm,18.5s,baz=310,slow=36						
IDI	Anoyia	22.20	91	P	P	16 21 28.0	+2.0
IDI				IAmb	IAmb	16 21 32.7	
	comp=Z,90nm,1.0s						
SUW	Suwalki	22.99	41	*e*P	P	16 21 35.2	+1.1
HFS	Hagfors	23.42	21	P	P	16 21 37.9	-0.6
	comp=Z,4.9nm,0.5s,baz=207,slow=9.6,SNR=15						
PBUR	Paburge	23.48	36	*e*P	P	16 21 39.9	+0.8
NB2	NORSAR Subarra	23.58	17	P	P	16 21 39.4	-0.7
	comp=Z,4.9nm,0.9s,baz=201,slow=9.3						
NOA	NORSAR Array B	23.58	17	P	P	16 21 40.1	0.0
	comp=Z,0.9nm,0.7s,baz=222,slow=10,SNR=3.0						
NOA				LR	LR	16 31 34.5	
	comp=Z,140nm,21.3s,baz=210,slow=38						
PABE	Paberze	24.15	38	*e*P	P	16 21 45.7	+0.2
KOWA	Kowa	24.54	183	P	P	16 21 48.2	-1.3
	comp=Z,8.1nm,0.6s,baz=3.3,slow=9.8,SNR=18						
KOWA				LR	LR	16 31 33.8	
	comp=Z,296nm,18.4s,baz=12,slow=37						
KOWA	Kowa	24.54	183	P	P	16 21 48.0	-1.4
AKASG	Malin Array Be	25.15	52	P	P	16 21 52.8	-1.9
	comp=Z,1.4nm,0.6s,baz=250,slow=9.0,SNR=3.4						
AKASG				LR	LR	16 34 01.3	
	comp=Z,351nm,18.7s,baz=295,slow=42						
AKASG	Malin Array Be	25.15	52	*ce*P	P	16 21 59.0	+4.3
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.7s						
NACGM	Naroch	25.26	42	*i* P	P	16 21 55.9	+0.2
NACGM				*i* P	P	16 21 55.9	+0.2
NACGM				*i* P	P	16 21 55.9	+0.2
NACGM				*i* PP	PnPn	16 22 27.9	-2.0
NACGM				*i* PPP	PPP	16 22 40.1	
NACGM				*i* S	S	16 26 30.3	+9.3
NACGM				*i* SS	SnSn	16 27 07.8	-3.9
NACGM				*i* SSS	SSS	16 27 28.5	
NACGM				*i* LQ	LQ	16 29 54.1	
NACGM				*i* LR	LR	16 31 18.3	
AAL	Aland	25.43	27	*e*P	P	16 21 58.1	+1.1
MNK	Minsk	25.67	43	*i* P	P	16 21 58.7	-0.6
	comp=E,5.0nm,1.3s						
MNK				*i* P	P	16 21 58.7	-0.6
	comp=N,44nm,1.2s						
MNK				*i* P	P	16 21 58.7	-0.6
	comp=Z,14nm,1.1s						
MNK				*i* PP	PnPn	16 22 36.2	+0.8
MNK				*i* PcP	PcP	16 25 26.6	-2.9
MNK				*i* S	S	16 26 29.1	+1.7
MNK				*i* SS	SnSn	16 27 28.4	+6.9
MNK				*i* LQ	LQ	16 30 11.1	
MNK				*i* LR	LR	16 32 09.7	
MNK				*i* LRM	MLR	16 33 03.0	
	comp=N,321nm,16.8s						
MNK				*i* LRM	MLR	16 33 28.7	
	comp=Z,182nm,11.8s						
MNK				*i* LRM	MLR	16 33 31.3	
	comp=E,30nm,14.2s						
MTSE	Matsula	25.91	32	*e*P	P	16 22 06.5	+5.1
TOA0	Torodi Ar. Sit	26.13	170	P	P	16 22 02.5	-1.3
TOA0				IAmb	IAmb	16 22 10.7	
	comp=Z,28nm,1.2s						
TORD	Torodi Ar. Bea	26.13	170	P	P	16 22 02.2	-1.6
	comp=Z,15nm,0.8s,baz=345,slow=8.7,SNR=28						
TORD				LR	LR	16 33 01.2	
	comp=Z,523nm,18.0s,baz=0.0,slow=38						
TORD	Torodi Ar. Bea	26.13	170	P	P	16 22 02.8	-1.1
BRTR	Keskin Array B	27.89	77	P	P	16 22 20.2	+0.5
	comp=Z,1.5nm,0.9s,baz=266,slow=7.7,SNR=4.1						
BRTR	Keskin Array B	27.89	77	P	P	16 22 20.4	+0.7
BORG	Borgarnes	27.93	343	LR	LR	16 34 06.8	
	comp=Z,372nm,18.2s,baz=149,slow=38						
FINES	FINESS Array B	28.49	29	P	P	16 22 25.6	+1.0
	comp=Z,7.3nm,0.9s,baz=270,slow=5.7,SNR=9.8						
FIA1	FINESS Array S	28.49	29	P	P	16 22 25.2	+0.6
FIA1				IAmb	IAmb	16 22 32.6	
	comp=Z,21nm,1.1s						
ANN	Anapa	30.09	66	*e*P	P	16 22 37.1	-1.9
ANN				pmax	pmax		
	comp=Z,30nm,0.8s						
MMAI	Mount Meron Ar	31.16	89	P	P	16 22 49.2	+0.6
	comp=Z,1.0nm,0.6s,baz=304,slow=8.3,SNR=1.9						
VSR	Storozhevoye	31.42	53	*e*P	P	16 22 47.7	-3.0
VSR				pmax	pmax		
	comp=Z,7.0nm,0.7s						
LPSR	Galich'ya Gora	31.46	51	*e*P	P	16 22 48.4	-2.5
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
VORD	Divnogorie	31.48	54	*e*P	P	16 22 39.7	-11
VORD				pmax	pmax		
	comp=Z,4.0nm,0.6s						
DBIC	Dimbokro	32.35	184	P	P	16 22 57.2	-1.9
	comp=Z,5.8nm,0.6s,baz=1.4,slow=9.5,SNR=5.5						
DBIC	Dimbokro	32.35	184	P	P	16 22 57.5	-1.6
DBIC				pmax	pmax		
	comp=Z,6.0nm,0.7s						
DBIC	Dimbokro	32.35	184	P	P	16 22 57.5	-1.6
TIC	Toumodi	32.39	184	*e*P	P	16 23 02.8	+3.3
KIC	Kosan Boka	32.66	184	*e*P	P	16 23 05.2	+3.4
	comp=Z,17nm,0.8s						
LIC	Lamto	32.81	184	*e*P	P	16 23 06.4	+3.3
	comp=Z,34nm,1.1s						
LIC	Lamto	32.81	184	*e*P	P	16 23 04.6	+1.5
	comp=Z,7.5nm,0.7s						
LIC				*e*pP	sP	16 23 08.1	-0.1
	comp=Z,22nm,0.9s						
LIC				*e*R			
	comp=Z,517nm,16.2s						
KLMR	Klimovskoe	33.88	36	*e*P	P	16 23 10.7	-1.3
KLMR				pmax	pmax		
	comp=Z,25nm,1.5s						
KLMR	Klimovskoe	33.88	36	*e*P	P	16 23 10.7	-1.3
KLMR				AMP		16 23 14.4	
	comp=Z,25nm,1.5s						
ARCES	ARCESS Array B	33.96	17	P	P	16 23 12.6	-0.1
	comp=Z,2.2nm,0.7s,baz=217,slow=8.8,SNR=2.7						
ARCES				PcP	PcP	16 25 50.3	-0.3
	comp=Z,2.3nm,0.7s,baz=220,slow=0.9,SNR=4.4						
ARCES				LR	LR	16 38 35.3	
	comp=Z,273nm,20.7s,baz=215,slow=39						
ARCES	ARCESS Array B	33.96	17	P	P	16 23 12.8	+0.1
TMCR	Tamitsa	34.58	30	*e*P	P	16 23 17.1	-0.9
TMCR				pmax	pmax		
	comp=Z,17nm,0.9s						
GNI	Garni	36.15	73	*ce*P	P	16 23 32.9	+0.8
GNI				pmax	pmax		
	comp=Z,24nm,1.7s						
SUMG	Summit	37.91	343	*i* P	P	16 23 48.7	+1.8
	comp=Z,5.7nm,0.5s						
SUMG				*i*		16 23 54.7	
SUMG	Summit	37.91	343	P	P	16 23 47.8	+0.9
SUMG				pmax	pmax		
	comp=Z,24nm,0.9s						
SUMG	Summit	37.91	343	P	P	16 23 47.8	+0.9
SUMG				IAmb	IAmb	16 23 49.4	
	comp=Z,24nm,0.9s						
SUMG	Summit	37.91	343	*i* P	P	16 23 48.7	+1.8
SUMG				IAmb	IAmb	16 23 49.5	
	comp=Z,5.7nm,0.5s						
SUMG				*i*		16 23 54.7	
KIRV	Kirov	38.20	42	*ce*P	P	16 23 48.1	-0.9
DAG	Danmarks Havn	38.42	354	*i* P	P	16 23 52.0	+1.3

	comp=Z,15nm,1.0s						
DAG				*i*		16 23 58.3	
DAG	**Danmarks Havn**	**38.42**	**354**	*i* P	**P**	**16 23 52.0**	**+1.3**
DAG				*i*		16 23 58.3	
DAG				pmax	pmax		
	comp=Z,15nm,1.0s						
DAG	**Danmarks Havn**	**38.42**	**354**	*i* P	**P**	**16 23 52.0**	**+1.3**
DAG				IAmb	IAmb	16 23 53.7	
	comp=Z,15nm,1.0s						
DAG				*i*		16 23 58.3	
SFJD	**Kangerlussuaq**	**38.54**	**332**	P	**P**	**16 23 51.6**	**-0.1**
	comp=Z,6.5nm,0.7s,baz=101,slow=11,SNR=3.0						
NUUG	**Nuugaatsiaq**	**41.17**	**338**	*i* P	**P**	**16 24 14.8**	**+1.2**
NUUG				*i*		16 24 20.2	
RST	**Umm Al-Ruwaisa**	**41.64**	**88**	*e*P		16 24 13.6	
MIB	**Mutribah**	**41.77**	**87**	*e*P		16 24 14.5	
UMR	**Umm Al-Rimmam**	**42.18**	**87**	*e*P		16 24 17.4	
ARU	**Arti**	**43.05**	**45**	LR	LR	16 44 13.1	
	comp=Z,212nm,20.0s,baz=296,slow=39						
ARU	**Arti**	**43.05**	**45***c*	*i*P	**P**	**16 24 29.1**	**0.0**
ARU						16 26 06.2	
ARU				S	**S**	**16 30 57.7**	**+3.2**
ARU				SS	**SS**	**16 33 57.7**	**-8.7**
ARU				pmax	pmax		
	comp=Z,36nm,0.8s						
ARU	**Arti**	**43.05**	**45**	P	**P**	**16 24 28.6**	**-0.6**
ARU				IAmb	IAmb	16 24 36.4	
	comp=Z,32nm,0.7s						
AKTO	**Aktyubinsk**	**43.36**	**54**	LR	LR	16 42 48.2	
	comp=Z,80nm,20.1s,baz=285,slow=36						
SVE	**Sverdlovsk**	**44.17**	**45**	⇓*e*P	**P**	**16 24 39.1**	**+1.0**
SVE				pmax	pmax		
	comp=Z,20nm,1.1s						
ABKAR	**Akbulak array**	**44.80**	**56**	P	**P**	**16 24 42.6**	**-0.7**
GEYT	**Alibeck**	**46.73**	**71**	P	**P**	**16 24 58.5**	**-0.3**
	comp=Z,1.4nm,0.4s,baz=254,slow=11,SNR=3.8						
GEYT	**Alibeck**	**46.73**	**71**	IAmb	IAmb	16 25 05.2	
	comp=Z,2.2nm,0.8s						
E64A	**Bridgewater**	**47.22**	**301**	P	**P**	**16 25 02.5**	**+0.1**
	baz=74						
D63A	**Stockholm**	**47.24**	**302**	P	**P**	**16 25 02.6**	**+0.1**
	baz=75						
H66A	**Whiting**	**47.33**	**299**	P	**P**	**16 25 03.3**	**+0.1**
	baz=73						
G65A	**Princeton**	**47.38**	**299**	P	**P**	**16 25 04.0**	**+0.4**
	baz=73						
E63A	**Oxbow**	**47.61**	**301**	P	**P**	**16 25 05.8**	**+0.3**
	baz=74						
F64A	**Sherman**	**47.72**	**301**	P	**P**	**16 25 06.8**	**+0.5**
	baz=74						
H65A	**Eastbrook**	**47.99**	**299**	P	**P**	**16 25 08.5**	**0.0**
	baz=73						
G64A	**Maxfield**	**48.17**	**300**	P	**P**	**16 25 09.9**	**+0.1**
	baz=73						
F63A	**Nahmakanta, Br**	**48.27**	**301**	P	**P**	**16 25 11.3**	**+0.6**
	baz=73						
D61A	**St Aubert, Com**	**48.56**	**303**	P	**P**	**16 25 13.1**	**+0.4**
	baz=74,SNR=5.6						
H64A	**Troy**	**48.67**	**299**	P	**P**	**16 25 14.4**	**+0.7**
	baz=72						
E61A	**Lac Etchemin**	**48.98**	**302**	P	**P**	**16 25 16.9**	**+0.8**
	baz=73						
D60A	**Saint Jean D'O**	**49.12**	**303**	P	**P**	**16 25 17.4**	**+0.3**
	baz=73,SNR=5.8						
G62A	**West of Eustis**	**49.38**	**300**	P	**P**	**16 25 19.5**	**+0.4**
	baz=72						
E60A	**Ste Agathe de**	**49.63**	**302**	P	**P**	**16 25 21.6**	**+0.6**
	baz=72						
D59A	**Saint-Raymond**	**49.69**	**303**	P	**P**	**16 25 22.2**	**+0.7**
	baz=73						
I63A	**Otisfield**	**49.78**	**299**	P	**P**	**16 25 22.3**	**+0.1**
	baz=71						
MBAR	**Mbarara**	**49.95**	**134**	P	**P**	**16 25 24.4**	**+0.4**
	comp=Z,4.4nm,0.2s,baz=315,slow=11,SNR=1.6						
MBAR	**Mbarara**	**49.95**	**134**	*i* P	**P**	**16 25 24.8**	**+0.8**
H62A	**Milan**	**50.00**	**300**	P	**P**	**16 25 24.2**	**+0.3**
	baz=71						
G61A	**St-Isidore-de-**	**50.02**	**301**	P	**P**	**16 25 24.5**	**+0.5**
	baz=71						
F60A	**Warwick**	**50.09**	**302**	P	**P**	**16 25 25.1**	**+0.6**
	baz=72						
L65A	**Cape Cod Natio**	**50.11**	**296**	P	**P**	**16 25 26.2**	**+1.5**
	baz=70						
LATQ	**La Tuque**	**50.20**	**304**	P	**P**	**16 25 26.3**	**+1.0**
	baz=72						
BRVK	**Borovoye**	**50.28**	**49***ce*	P	**P**	**16 25 26.5**	**+0.6**
BRVK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
BRVK	**Borovoye**	**50.28**	**49**	P	**P**	**16 25 26.4**	**+0.6**
D58A	**Chemin du LacG**	**50.35**	**303**	P	**P**	**16 25 27.0**	**+0.6**
	baz=72						
H61A	**Lyndonville**	**50.54**	**300**	P	**P**	**16 25 29.0**	**+1.0**
	baz=71						
G60A	**Masonville**	**50.62**	**301**	P	**P**	**16 25 29.4**	**+0.8**
	baz=71						
LBNH	**Lisbon**	**50.63**	**300**	P	**P**	**16 25 29.4**	**+0.7**
	baz=70						
F59A	**Saint Guilaume**	**50.68**	**302**	P	**P**	**16 25 30.1**	**+1.2**
	baz=71						
EUNU	**Eureka**	**50.71**	**347**	P	**P**	**16 25 29.6**	**+0.8**
E58A	**La Victoria**	**50.83**	**303**	P	**P**	**16 25 30.7**	**+0.6**
	baz=71						
HRV	**Adam Dziewonsk**	**50.98**	**297**	P	**P**	**16 25 32.0**	**+0.7**
	baz=69						
H60A	**Morristown**	**51.05**	**300**	P	**P**	**16 25 32.8**	**+1.0**
	baz=70						
M64A	**Tiverton**	**51.09**	**296**	P	**P**	**16 25 32.9**	**+0.8**
	baz=69						
D56A	**ZEC Mazanza, M**	**51.58**	**304**	P	**P**	**16 25 36.5**	**+0.8**
	baz=71						
H59A	**Cadyville**	**51.69**	**301**	P	**P**	**16 25 37.3**	**+0.8**
	baz=70,SNR=7.3						
I60A	**Shoreham**	**51.70**	**300**	P	**P**	**16 25 37.7**	**+1.1**
	baz=69						
TRQ	**Mont Tremblant**	**51.72**	**303**	P	**P**	**16 25 37.2**	**+0.3**
G58A	**Ormstown**	**51.75**	**301**	P	**P**	**16 25 37.7**	**+0.7**
	baz=70						
L61B	**Northampton**	**51.78**	**298**	P	**P**	**16 25 38.1**	**+0.9**
	baz=69						
E56A	**St. Veronique**	**51.92**	**303**	P	**P**	**16 25 39.0**	**+0.7**
	baz=70,SNR=5.3						
J60A	**Lant Hill Farm**	**52.00**	**299**	P	**P**	**16 25 39.6**	**+0.7**
	baz=69						
D55A	**Sainte-Anne-du**	**52.05**	**304**	P	**P**	**16 25 39.9**	**+0.7**
	baz=71,SNR=7.8						
H58A	**Gabriels**	**52.09**	**300**	P	**P**	**16 25 40.2**	**+0.5**
	baz=69						
K61A	**Williamstown**	**52.10**	**298**	P	**P**	**16 25 40.5**	**+0.8**
	baz=68						
I59A	**Olmsteadville**	**52.11**	**300**	P	**P**	**16 25 40.3**	**+0.5**
	baz=69						
ACCN	**Adirondack Com**	**52.12**	**299**	P	**P**	**16 25 41.2**	**+1.4**
ACCN				IAmb	IAmb	16 25 42.0	
	comp=Z,13nm,0.9s						
NCB	**Newcomb**	**52.28**	**300**	P	**P**	**16 25 42.1**	**+1.1**
LSQQ	**Lebel-sur-Quev**	**52.34**	**307**	P	**P**	**16 25 42.2**	**+0.9**
	baz=71						
G57A	**Newington**	**52.39**	**302**	P	**P**	**16 25 42.5**	**+0.7**
	baz=69						
L61A	**Hillsdale 1, H**	**52.48**	**298**	P	**P**	**16 25 43.6**	**+1.1**
	baz=68						
MATQ	**Matagami**	**52.52**	**308**	P	**P**	**16 25 42.7**	**0.0**
	baz=71,SNR=5.6						
BRZS	**Berezniki**	**52.60**	**52**	*e*P	**P**	**16 25 42.7**	**-0.6**
	baz=52						
BRZS	**Berezniki**	**52.60**	**52**	*e*P	**P**	**16 25 42.6**	**-0.7**
E55A	**Montcerf-Lytto**	**52.62**	**303**	P	**P**	**16 25 44.0**	**+0.5**
	baz=70						
J59A	**Piesco**	**52.65**	**299**	P	**P**	**16 25 44.9**	**+1.1**
	baz=68						
H57A	**Richville**	**52.89**	**301**	P	**P**	**16 25 46.5**	**+1.1**
	baz=69						
I58A	**Old Forge**	**52.89**	**300**	P	**P**	**16 25 46.2**	**+0.6**
	baz=68						
L60A	**Shokan**	**53.01**	**298**	P	**P**	**16 25 47.4**	**+1.0**
	baz=68						
K59A	**Cooperstown**	**53.15**	**299**	P	**P**	**16 25 48.9**	**+1.4**
	baz=68						
RES	**Resolute Bay**	**53.32**	**341**	P	**P**	**16 25 48.7**	**+0.5**
	comp=Z,2.4nm,0.8s,baz=167,slow=4.0,SNR=12						
RES				LR	LR	16 46 18.2	
	comp=Z,189nm,20.6s,baz=89,slow=34						
TRNY	**Table Rock, Ra**	**53.34**	**297**	P	**P**	**16 25 48.9**	**+0.1**
TRNY				IAmb	IAmb	16 25 52.2	
	comp=Z,34nm,1.4s						
N61A	**South Mountain**	**53.55**	**296**	P	**P**	**16 25 51.5**	**+1.1**
	baz=67						
KK31	**Karatay Array**	**53.62**	**61**	P	**P**	**16 25 51.1**	**+0.2**
KK31				pmax	pmax		
	comp=Z,6.0nm,1.4s						
KK31	**Karatay Array**	**53.62**	**61**	P	**P**	**16 25 51.1**	**+0.2**
KKAR	**Karatay Array**	**53.62**	**61**	P	**P**	**16 25 50.9**	**0.0**
KKAR	**Karatay Array**	**53.62**	**61**	P	**P**	**16 25 50.9**	**0.0**
KKAR	**Karatay Array**	**53.62**	**61**	P	**P**	**16 25 50.8**	**0.0**
KKAR				IAmb	IAmb	16 26 18.1	
	comp=Z,5.7nm,1.4s						
ODNJ	**Ogdensburg**	**53.63**	**297**	P	**P**	**16 25 51.8**	**+0.8**
ODNJ				IAmb	IAmb	16 26 05.5	
	comp=Z,29nm,1.3s						
IUG	**Iuzhnay**	**53.66**	**62**	*e*P	**P**	**16 25 50.1**	**-1.2**
	baz=62						
IUG	**Iuzhnay**	**53.66**	**62**	*e*P	**P**	**16 25 50.9**	**-0.4**
K58A	**Earlville**	**53.69**	**299**	P	**P**	**16 25 52.4**	**+0.9**
	baz=68						
PLVO	**Plevna**	**53.79**	**302**	P	**P**	**16 25 52.7**	**+0.6**
PLVO				IAmb	IAmb	16 25 53.9	
	comp=Z,17nm,1.1s						
M59A	**Waymart**	**54.02**	**298**	P	**P**	**16 25 54.6**	**+0.7**
	baz=67,SNR=5.3						
N60A	**Cedar Hill Far**	**54.06**	**297**	P	**P**	**16 25 55.1**	**+1.0**
	baz=66						
NRIK	**Noril'sk**	**54.09**	**26**	P	**P**	**16 25 54.1**	**+0.2**
	comp=Z,3.1nm,0.8s,baz=280,slow=4.4,SNR=7.6						
NRIK	**Noril'sk**	**54.09**	**26***ce*	P	**P**	**16 25 55.9**	**+2.0**
NRIK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
NRIK	**Noril'sk**	**54.09**	**26**	P	**P**	**16 25 55.5**	**+1.6**
ALGO	**Algonquin Park**	**54.09**	**304**	P	**P**	**16 25 55.1**	**+0.9**
	baz=68						
L58A	**Harry Jones Me**	**54.11**	**298**	P	**P**	**16 25 55.6**	**+1.1**
	baz=67						
BINY	**Binghamton**	**54.14**	**299**	P	**P**	**16 25 55.8**	**+1.1**
	baz=67						
PECO	**Prince Edward**	**54.15**	**301**	P	**P**	**16 25 55.1**	**+0.3**
PECO				IAmb	IAmb	16 25 56.7	
	comp=Z,15nm,0.9s						
DZA	**Taraz**	**54.25**	**60**	*e*P	**P**	**16 25 55.9**	**+0.3**
	baz=60						
DZA	**Taraz**	**54.25**	**60**	*e*P	**P**	**16 25 55.8**	**+0.3**
K57A	**Scipio Center**	**54.30**	**299**	P	**P**	**16 25 56.7**	**+0.9**
	baz=67						
G54A	**Lake Saint Pet**	**54.32**	**303**	P	**P**	**16 25 57.2**	**+1.2**
	baz=68						
DELO	**Deloro Mine**	**54.35**	**302**	P	**P**	**16 25 56.9**	**+0.7**
DELO				IAmb	IAmb	16 25 58.0	
	comp=Z,17nm,1.1s						
LUPA	**Lehigh Univers**	**54.36**	**297**	P	**P**	**16 25 57.2**	**+0.9**
LUPA				IAmb	IAmb	16 25 58.5	
	comp=Z,19nm,1.1s						
N59A	**State Game Lan**	**54.50**	**297**	P	**P**	**16 25 59.1**	**+1.7**
	baz=66						
N59A	**State Game Lan**	**54.50**	**297**	P	**P**	**16 25 58.3**	**+0.9**
L57A	**Andrews Acres**	**54.81**	**299**	P	**P**	**16 26 00.8**	**+1.2**
	baz=66						
K56A	**Middlesex**	**54.86**	**300**	P	**P**	**16 26 01.4**	**+1.4**
	baz=67						
H53A	**Bobcaygeon**	**54.96**	**302**	P	**P**	**16 26 01.2**	**+0.6**
	baz=67						
J55A	**Hilton**	**54.96**	**300**	P	**P**	**16 26 01.7**	**+1.1**
O59A	**Robesonia**	**55.04**	**296**	P	**P**	**16 26 02.0**	**+0.7**
	baz=66						
N58A	**Sunbury**	**55.19**	**297**	P	**P**	**16 26 03.2**	**+0.9**
	baz=66						
N58A	**Sunbury**	**55.19**	**297**	P	**P**	**16 26 03.4**	**+1.1**
N58A				IAmb	IAmb	16 26 04.6	
	comp=Z,22nm,1.1s						
BTLS	**Baital**	**55.23**	**57**	*e*P	**P**	**16 26 02.2**	**-0.4**
	baz=57						
BTLS	**Baital**	**55.23**	**57**	*e*P	**P**	**16 26 02.1**	**-0.4**
MMNY	**Mt. Morris Dam**	**55.24**	**300**	P	**P**	**16 26 03.5**	**+0.9**
MMNY				IAmb	IAmb	16 26 05.4	
	comp=Z,26nm,1.0s						
L56A	**Greenwood**	**55.24**	**299**	P	**P**	**16 26 03.9**	**+1.2**
	baz=66						
L56A	**Greenwood**	**55.24**	**299**	P	**P**	**16 26 03.9**	**+1.2**
SADO	**Sadowa**	**55.25**	**303**	P	**P**	**16 26 03.3**	**+0.6**
SADO				IAmb	IAmb	16 26 04.6	
	comp=Z,17nm,1.1s						
M57A	**Sunshine Farm,**	**55.27**	**298**	P	**P**	**16 26 04.3**	**+1.4**
	baz=66						
M57A	**Sunshine Farm,**	**55.27**	**298**	P	**P**	**16 26 03.7**	**+0.8**
M57A				IAmb	IAmb	16 26 05.3	
	comp=Z,18nm,0.9s						
MVL	**Millersville**	**55.28**	**296**	P	**P**	**16 26 03.5**	**+0.5**
PAGS	**Pennsylvania G**	**55.45**	**297**	P	**P**	**16 26 04.4**	**+0.2**
PAGS				IAmb	IAmb	16 26 06.6	
	comp=Z,29nm,1.2s						
P59A	**Jarrettsville**	**55.51**	**296**	P	**P**	**16 26 06.0**	**+1.4**
	baz=65						
O58A	**Lewisberry**	**55.63**	**297**	P	**P**	**16 26 06.8**	**+1.3**
	baz=65						
N57A	**Milroy**	**55.80**	**298**	P	**P**	**16 26 07.4**	**+0.6**
	baz=65						
WVNY	**West Valley, N**	**55.84**	**300**	P	**P**	**16 26 07.7**	**+0.6**
WVNY				IAmb	IAmb	16 26 09.3	
	comp=Z,18nm,1.1s						
SDMD	**Soldier's Deli**	**55.88**	**296**	P	**P**	**16 26 08.2**	**+0.9**
SDMD				IAmb	IAmb	16 26 09.7	
	comp=Z,11nm,0.8s						
KURK	**Kurchatov**	**55.92**	**49***ce*	P	**P**	**16 26 07.1**	**-0.3**
KURK				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KURK	**Kurchatov**	**55.92**	**49**	P	**P**	**16 26 07.2**	**-0.2**
KURK				IAmb	IAmb	16 26 14.8	
	comp=Z,7.6nm,0.8s						
M56A	**Emporium**	**55.93**	**299**	P	**P**	**16 26 08.7**	**+1.0**
	baz=66,SNR=6.1						
M56A	**Emporium**	**55.93**	**299**	P	**P**	**16 26 09.1**	**+1.4**
Q59A	**Harwood**	**55.98**	**295**	P	**P**	**16 26 09.1**	**+1.1**
	baz=64						
O57A	**Amberson**	**56.09**	**297**	P	**P**	**16 26 10.2**	**+1.4**
	baz=65						
KBL	**Kabul**	**56.17**	**71**	P	**P**	**16 26 10.0**	**+0.3**
KBL				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KBL	**Kabul**	**56.17**	**71**	P	**P**	**16 26 10.0**	**+0.3**
R60A	**Leonardtown, M**	**56.18**	**294**	P	**P**	**16 26 10.3**	**+0.8**
	baz=64						
N56A	**West Decatur**	**56.25**	**298**	P	**P**	**16 26 10.9**	**+0.9**
	baz=65						
AAK	**Ala-Archa**	**56.49**	**60**	LR	LR	16 52 49.6	
	comp=Z,167nm,18.3s,baz=308,slow=39						
AAK	**Ala-Archa**	**56.49**	**60***ce*	P	**P**	**16 26 12.2**	**+0.4**
AAK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
AAK	**Ala-Archa**	**56.49**	**60**	P	**P**	**16 26 12.5**	**+0.7**
P57A	**Homestead Farm**	**56.66**	**296**	P	**P**	**16 26 14.0**	**+1.1**
	baz=64						
Q58A	**Fox Den Farm,**	**56.67**	**296**	P	**P**	**16 26 13.9**	**+1.0**
	baz=64						
O56A	**Blue Knob Stat**	**56.71**	**297**	P	**P**	**16 26 14.0**	**+0.7**
	baz=64,SNR=5.6						
O56A	**Blue Knob Stat**	**56.71**	**297**	P	**P**	**16 26 14.2**	**+0.9**
O56A				IAmb	IAmb	16 26 15.6	
	comp=Z,25nm,0.9s						
I51A	**Listowel**	**56.88**	**302**	P	**P**	**16 26 15.2**	**+0.8**
	baz=66,SNR=6.4						
ERPA	**Erie**	**56.89**	**300**	P	**P**	**16 26 15.2**	**+0.6**
	baz=65						
ERPA	**Erie**	**56.89**	**300**	P	**P**	**16 26 15.1**	**+0.6**
ERPA				IAmb	IAmb	16 26 16.5	
	comp=Z,23nm,1.0s						
S59A	**Mechanicsville**	**56.91**	**294**	P	**P**	**16 26 16.1**	**+1.4**
	baz=64						
M54A	**Oil Creek Stat**	**56.93**	**299**	P	**P**	**16 26 15.8**	**+0.9**
	baz=65,SNR=5.5						
M54A	**Oil Creek Stat**	**56.93**	**299**	P	**P**	**16 26 15.7**	**+0.8**
M54A				IAmb	IAmb	16 26 17.2	
	comp=Z,23nm,1.1s						
V62A	**Hyde County Ai**	**56.94**	**291**	P	**P**	**16 26 16.1**	**+1.2**
	baz=63						
SEM	**Semipalatinsk**	**57.00**	**49**	*e*P	**P**	**16 26 14.9**	**-0.5**
	baz=49						
SEM	**Semipalatinsk**	**57.00**	**49**	*e*P	**P**	**16 26 14.8**	**-0.6**
Q57A	**Strasburg**	**57.14**	**296**	P	**P**	**16 26 17.4**	**+1.1**
	baz=64						
L53A	**Girard**	**57.15**	**300**	P	**P**	**16 26 17.2**	**+0.9**
	baz=65,SNR=6.4						
R58A	**Rapidan**	**57.18**	**295**	P	**P**	**16 26 17.0**	**+0.4**
	baz=64						
KUU	**Kurty**	**57.19**	**58**	*e*P	**P**	**16 26 16.5**	**-0.1**
	comp=Z,3.4nm,0.7s,baz=58						
KUU	**Kurty**	**57.19**	**58**	*e*P	**P**	**16 26 16.5**	**-0.1**
KUU				pmax	pmax		
	comp=Z,3.0nm,0.7s						
P56A	**Dayton Farm, R**	**57.23**	**297**	P	**P**	**16 26 17.9**	**+1.0**
	baz=64						
R58B	**Mineral**	**57.24**	**295**	P	**P**	**16 26 18.2**	**+1.2**
	baz=64						
N54A	**Moraine State**	**57.39**	**299**	P	**P**	**16 26 19.2**	**+1.1**
	baz=64						
T59A	**Double "B" Far**	**57.45**	**293**	P	**P**	**16 26 18.7**	**+0.2**
T59A				IAmb	IAmb	16 26 34.5	
	comp=Z,19nm,1.4s						
S58A	**Poland Farm, P**	**57.52**	**294**	P	**P**	**16 26 19.9**	**+1.0**
	baz=63						
R57A	**Stanardsville**	**57.54**	**295**	P	**P**	**16 26 20.4**	**+1.2**
	baz=63						
CHKK	**Chushkaly**	**57.63**	**57**	*e*P	**P**	**16 26 19.6**	**-0.1**
	baz=57						
CHKK	**Chushkaly**	**57.63**	**57**	*e*P	**P**	**16 26 19.6**	**-0.1**
M53A	**WI Miller and**	**57.65**	**299**	P	**P**	**16 26 20.9**	**+1.0**
	baz=64						
M53A	**WI Miller and**	**57.65**	**299**	P	**P**	**16 26 20.5**	**+0.6**
M53A				IAmb	IAmb	16 26 21.8	
	comp=Z,20nm,0.9s						
Q56A	**Snyder Ridge,**	**57.68**	**296**	P	**P**	**16 26 21.1**	**+1.0**
	baz=64						
Q56A	**Snyder Ridge,**	**57.68**	**296**	P	**P**	**16 26 21.1**	**+1.0**
Q56A				IAmb	IAmb	16 26 22.0	
	comp=Z,15nm,0.9s						
AAA	**Alma-Ata**	**57.86**	**58**	*e*P	**P**	**16 26 22.0**	**+0.6**
	baz=58						
AAA	**Alma-Ata**	**57.86**	**58**	*e*P	**P**	**16 26 22.0**	**+0.6**
MCWV	**Mont Chateau**	**57.86**	**297**	P	**P**	**16 26 22.5**	**+1.1**
	baz=64						
E46A	**Sault Ste Mari**	**57.93**	**306**	P	**P**	**16 26 22.1**	**+0.3**
E46A				IAmb	IAmb	16 26 23.4	
	comp=Z,13nm,0.8s						
TNSS	**Tian-Shan**	**57.95**	**58**	*e*P	**P**	**16 26 22.5**	**0.0**
	baz=58						
TNSS	**Tian-Shan**	**57.95**	**58**	*e*P	**P**	**16 26 22.5**	**0.0**
MDOK	**Medeo**	**57.97**	**58**	*e*P	**P**	**16 26 22.7**	**+0.4**
	baz=58						
MDOK	**Medeo**	**57.97**	**58**	*e*P	**P**	**16 26 22.6**	**+0.4**
M52A	**Chesterland**	**58.06**	**300**	P	**P**	**16 26 23.5**	**+0.7**
TDK	**Taldyqorghan**	**58.07**	**56**	*e*P	**P**	**16 26 23.5**	**+0.7**
	baz=56						
TDK	**Taldyqorghan**	**58.07**	**56**	*e*P	**P**	**16 26 23.5**	**+0.7**
S57A	**Dark Hollow, R**	**58.09**	**295**	P	**P**	**16 26 24.1**	**+1.1**
	baz=63						
ZALV	**Zalesovo Beam**	**58.17**	**44**	P	**P**	**16 26 22.7**	**-0.6**
	comp=Z,0.7nm,0.5s,baz=283,slow=8.7,SNR=5.9						
ZALV				LR	LR	16 52 27.5	
	comp=Z,170nm,18.0s,baz=297,slow=37						
FCC	**Fort Churchill**	**58.29**	**322**	P	**P**	**16 26 23.7**	**-0.3**
FCC				pmax	pmax		
	comp=Z,8.0nm,0.9s						
FCC	**Fort Churchill**	**58.29**	**322**	P	**P**	**16 26 23.7**	**-0.3**
FCC				IAmb	IAmb	16 26 25.3	
	comp=Z,8.5nm,0.9s						
U58A	**Oxford**	**58.43**	**293**	P	**P**	**16 26 26.6**	**+1.2**
	baz=62						
V59A	**Middlesex**	**58.50**	**292**	P	**P**	**16 26 26.9**	**+1.0**
	baz=62						
O53A	**New Philadelph**	**58.54**	**298**	P	**P**	**16 26 27.2**	**+1.1**
	baz=63						
S56A	**Natural Bridge**	**58.56**	**295**	P	**P**	**16 26 26.9**	**+0.6**
	baz=63						
T57A	**Hurt**	**58.65**	**294**	P	**P**	**16 26 28.0**	**+1.1**
	baz=62						
Q54A	**Coxs Mills**	**58.85**	**297**	P	**P**	**16 26 29.1**	**+0.8**
KSH	**Kashi**	**58.85**	**62**	P	**P**	**16 26 29.5**	**+1.0**
KSH				pP	sP	16 26 33.8	+0.1
KSH				PcP	**PcP**	**16 27 21.1**	**+3.2**
KSH				S	**S**	**16 34 29.8**	**-4.2**
KSH				pmax	pmax		
	comp=Z,12nm,1.1s						
KSH				pmax	pmax		
	comp=Z,210nm,6.2s						
KSH				LR	LR		
	comp=Z,340nm,7.9s						
KSH				LR	LR		
	comp=Z,480nm,9.3s						
KSH				LR	LR		
	comp=Z,380nm,8.8s						
X60A	**Albert Glenn T**	**58.87**	**291**	P	**P**	**16 26 28.8**	**+0.3**
	baz=62						
SATY	**Saty**	**58.91**	**58**	*e*P	**P**	**16 26 29.1**	**+0.2**
	baz=58						
SATY	**Saty**	**58.91**	**58**	*e*P	**P**	**16 26 29.0**	**+0.2**
KPKS	**Kokpek**	**58.91**	**57**	*e*P	**P**	**16 26 29.0**	**+0.1**
	baz=57						
KPKS	**Kokpek**	**58.91**	**57**	*e*P	**P**	**16 26 28.9**	**+0.1**
U57A	**Blanch**	**58.97**	**294**	P	**P**	**16 26 30.0**	**+0.9**
	baz=62						
P53A	**Whipple**	**59.00**	**298**	P	**P**	**16 26 30.5**	**+1.1**
O52A	**Adamsville**	**59.02**	**299**	P	**P**	**16 26 30.6**	**+1.1**
N51A	**Ashland**	**59.03**	**300**	P	**P**	**16 26 31.4**	**+1.9**
T56A	**Rocky Mt**	**59.19**	**295**	P	**P**	**16 26 31.1**	**+0.4**
	baz=62						
R54A	**Victor**	**59.33**	**296**	P	**P**	**16 26 32.2**	**+0.6**
	baz=62						
G45A	**Suttons Bay**	**59.35**	**305**	P	**P**	**16 26 32.2**	**+0.5**
G45A				IAmb	IAmb	16 26 33.2	
	comp=Z,12nm,0.7s						
BLA	**Blacksburg**	**59.38**	**295**	P	**P**	**16 26 32.7**	**+0.7**
	baz=62						
Q53A	**Leroy**	**59.38**	**297**	P	**P**	**16 26 33.0**	**+0.9**
	baz=62						
P52A	**Corning**	**59.45**	**298**	P	**P**	**16 26 33.5**	**+1.0**
	baz=63,SNR=5.2						
P52A	**Corning**	**59.45**	**298**	P	**P**	**16 26 33.3**	**+0.9**
MAKZ	**Makanchi**	**59.54**	**52**	P	**P**	**16 26 32.5**	**-0.5**
MAKZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MAKZ	**Makanchi**	**59.54**	**52**	P	**P**	**16 26 32.5**	**-0.5**
V57A	**Coltrane Farms**	**59.54**	**293**	P	**P**	**16 26 33.0**	**-0.2**
	baz=62						
SHLS	**Shalkode**	**59.56**	**57**	*e*P	**P**	**16 26 35.7**	**+2.4**
	comp=Z,10nm,0.9s,baz=57						
SHLS	**Shalkode**	**59.56**	**57**	*e*P	**P**	**16 26 35.7**	**+2.4**
SHLS				pmax	pmax		
	comp=Z,11nm,0.9s						
E43A	**Lone Tree Farm**	**59.61**	**307**	P	**P**	**16 26 33.5**	**+0.1**
E43A				IAmb	IAmb	16 26 34.8	
	comp=Z,16nm,0.8s						
J47A	**Sunmer**	**59.61**	**303**	P	**P**	**16 26 34.0**	**+0.5**
NIL	**Nilore**	**59.67**	**70**	P	**P**	**16 26 34.9**	**+0.8**
NIL				pmax	pmax		
	comp=Z,19nm,0.9s						
NIL	**Nilore**	**59.67**	**70**	P	**P**	**16 26 34.9**	**+0.8**
S54A	**Dingess, Beckl**	**59.73**	**296**	P	**P**	**16 26 34.5**	**0.0**
	baz=62						
MK31	**Makanchi Array**	**59.74**	**52***ce*	P	**P**	**16 26 34.6**	**+0.2**
MK31	**Makanchi Array**	**59.74**	**52**	P	**P**	**16 26 34.2**	**-0.2**
MKAR	**Makanchi Array**	**59.74**	**52**	P	**P**	**16 26 34.0**	**-0.3**
	comp=Z,2.2nm,0.7s,baz=287,slow=6.1,SNR=32						
MKAR				LR	LR	16 55 33.5	
	comp=Z,129nm,20.3s,baz=304,slow=39						
MKAR	**Makanchi Array**	**59.74**	**52***ce*	P	**P**	**16 26 34.7**	**+0.3**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MKAR	**Makanchi Array**	**59.74**	**52**	P	**P**	**16 26 34.3**	**-0.1**
ACSO	**Alum Creek Sta**	**59.75**	**299**	P	**P**	**16 26 35.4**	**+0.9**
	baz=63						
Q52A	**Bidwell**	**59.85**	**298**	P	**P**	**16 26 34.2**	**-1.0**
R53A	**Hurricane**	**59.92**	**297**	P	**P**	**16 26 36.2**	**+0.5**
L48A	**N Adams**	**59.94**	**301**	P	**P**	**16 26 36.5**	**+0.7**
V56A	**Mocksville**	**60.09**	**294**	P	**P**	**16 26 37.9**	**+1.0**
	baz=61						
P51A	**Williamsport**	**60.15**	**298**	P	**P**	**16 26 37.9**	**+0.7**
N49A	**Columbus Grove**	**60.25**	**300**	P	**P**	**16 26 38.4**	**+0.5**
W56A	**Indian Trail**	**60.48**	**293**	P	**P**	**16 26 40.1**	**+0.5**
	baz=61						
Q51A	**Peebles**	**60.56**	**298**	P	**P**	**16 26 40.7**	**+0.6**
U54A	**Nelsons Funny**	**60.69**	**295**	P	**P**	**16 26 41.5**	**+0.4**
	baz=61						
ZSN	**Zaisan**	**61.01**	**51**	*e*P	**P**	**16 26 43.5**	**+0.4**
	baz=51						
ZSN	**Zaisan**	**61.01**	**51**	*e*P	**P**	**16 26 43.4**	**+0.4**
COWI	**Conover**	**61.06**	**307**	P	**P**	**16 26 43.5**	**+0.2**
COWI				IAmb	IAmb	16 26 44.9	
	comp=Z,10nm,1.0s						
NHSC	**New Hope**	**61.18**	**291**	P	**P**	**16 26 45.0**	**+0.7**
	baz=60						
P49A	**Miami Univ. Ec**	**61.26**	**299**	P	**P**	**16 26 45.4**	**+0.6**
	baz=62						
P49A	**Miami Univ. Ec**	**61.26**	**299**	P	**P**	**16 26 44.9**	**+0.1**

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N47A  Urbana            61.28 301   P      P      16 26 45.2 +0.2
S51A  Beattyville       61.40 297   P      P      16 26 46.3 +0.5
S51A                                IAmb   IAmb   16 26 47.7
      comp=Z,11nm,0.8s
DGZ   Jazzator, Alta    61.48  48⇑iP      P      16 26 47.8 +1.4
DGZ                                 pmax   pmax
      comp=Z,8.0nm,1.2s
R50A  Paris             61.59 298   P      P      16 26 47.8 +0.7
R50A                                IAmb   IAmb   16 26 48.9
      comp=Z,14nm,0.8s
EYMN  Ely               61.63 310   P      P      16 26 47.3 +0.1
      baz=62,SNR=8.0
EYMN  Ely               61.63 310   P      P      16 26 47.1  -0.1
EYMN                                IAmb   IAmb   16 26 48.4
      comp=Z,9.6nm,0.9s
P48A  Milroy            61.77 299   P      P      16 26 48.2  -0.1
V53A  Saluda            61.81 294   P      P      16 26 49.0 +0.4
V53A                                IAmb   IAmb   16 26 50.1
      comp=Z,7.3nm,0.8s
I42A  Draeger Farm,     61.95 305   P      P      16 26 49.8 +0.3
I42A                                IAmb   IAmb   16 26 51.1
      comp=Z,20nm,1.1s
G40A  Rib Lake          62.10 307   P      P      16 26 50.6 +0.1
G40A                                IAmb   IAmb   16 26 51.9
      comp=Z,7.5nm,0.8s
K43A  Burlington        62.14 304   P      P      16 26 51.3 +0.5
R49A  Shelbyville       62.17 298   P      P      16 26 51.4 +0.4
E38A  The Farm, Brul    62.30 309   P      P      16 26 51.6  -0.1
SFIN  Lafayette         62.45 301   P      P      16 26 53.0 +0.2
      baz=61
SFIN  Lafayette         62.45 301   P      P      16 26 53.0 +0.2
SFIN                                IAmb   IAmb   16 26 53.8
      comp=Z,9.2nm,1.0s
TKL   Tuckaleechee C    62.49 295   P      P      16 26 53.5 +0.3
TKL                                 pmax   pmax
      comp=Z,8.0nm,0.9s
TKL   Tuckaleechee C    62.49 295   P      P      16 26 53.5 +0.3
TKL                                 IAmb   IAmb   16 26 54.3
      comp=Z,8.0nm,0.8s
T50A  Nancy             62.56 297   P      P      16 26 54.2 +0.5
B35A  Bob, Littlefor    62.75 311   P      P      16 26 54.4  -0.3
B35A                                IAmb   IAmb   16 26 55.6
      comp=Z,11nm,0.9s
V51A  Loudon            62.83 295   P      P      16 26 55.8 +0.4
W52A  Murphy            62.88 294   P      P      16 26 56.4 +0.5
WCI   Wyandotte Cave    62.97 299   P      P      16 26 56.5 +0.3
      baz=60
WCI   Wyandotte Cave    62.97 299   P      P      16 26 56.6 +0.3
WCI                                 pmax   pmax
      comp=Z,12nm,0.9s
WCI   Wyandotte Cave    62.97 299   P      P      16 26 56.6 +0.3
WCI                                 IAmb   IAmb   16 26 57.7
      comp=Z,12nm,0.9s
ULM   Lac du Bonnet     63.05 314   P      P      16 26 56.2  -0.5
      comp=Z,9.1nm,0.9s,baz=69,slow=5.8,SNR=16
ULM   Lac du Bonnet     63.05 314⇓iP      P      16 26 55.9  -0.8
ULM   Lac du Bonnet     63.05 314   P      P      16 26 56.0  -0.7
ULM                                 IAmb   IAmb   16 26 57.4
      comp=Z,13nm,1.1s
CPCT  Cooper Cave       63.12 295   P      P      16 26 57.8 +0.4
CPCT                                IAmb   IAmb   16 27 05.7
      comp=Z,10nm,0.9s
JFWS  Jewell Farm       63.27 305   P      P      16 26 58.4 +0.1
      baz=60
GOGA  Godfrey           63.41 293   P      P      16 26 59.7 +0.4
      baz=59
Y52A  Lilburn           63.60 293   P      P      16 27 01.6 +1.0
SPMN  Marine on St.     63.73 308   P      P      16 27 01.0  -0.3
      baz=60
SPMN  Marine on St.     63.73 308   P      P      16 27 01.4 +0.2
W50A  Signal Mountai    63.81 295   P      P      16 27 02.3 +0.4
HDIL  Hopedale          63.83 302   P      P      16 27 01.8  -0.2
      baz=60
F36A  Milaca            63.85 309   P      P      16 27 02.0  -0.1
F36A                                IAmb   IAmb   16 27 03.1
      comp=Z,10nm,0.9s
AGMN  Agassiz Nation    64.02 312   P      P      16 27 02.8  -0.3
      baz=60
CLTN  Cedars of Leba    64.07 296   P      P      16 27 03.9 +0.3
CLTN                                IAmb   IAmb   16 27 04.8
      comp=Z,8.7nm,0.8s
T47A  Sharon Grove      64.15 298   P      P      16 27 04.1   0.0
L40A  Anamosa           64.32 304   P      P      16 27 04.5  -0.7
L40A                                IAmb   IAmb   16 27 06.0
      comp=Z,14nm,0.8s
TIXI  Tiksi             64.37  15ceP      P      16 27 06.3 +1.3
TIXI  Tiksi             64.37  15   P      P      16 27 06.3 +1.3
WMQ   Urumqi            64.50  53  eP      P      16 27 08.0 +1.6
WMQ                                 pP     sP     16 27 13.1 +1.4
WMQ                                 sP     pP     16 27 16.9 +6.6
WMQ                                 pmax   pmax
      comp=Z,9.0nm,0.9s
WMQ                                 pmax   pmax
      comp=Z,400nm,5.3s
WMQ                                 LR     LR
      comp=Z,340nm,17.7s
WMQ                                 LR     LR
      comp=Z,2µm,29.0s
V48A  Smith Brothers    64.59 296   P      P      16 27 06.8  -0.2
V48A                                IAmb   IAmb   16 27 08.2
      comp=Z,11nm,1.0s
Z51A  Franklin          64.68 293   P      P      16 27 08.4 +0.7
152A  Waverly Hall      64.69 292   P      P      16 27 08.7 +1.0
I37A  Lemond, Waseca    64.71 307   P      P      16 27 07.8 +0.1
WVT   Waverly           65.09 297   P      P      16 27 10.0  -0.3
      baz=59
WVT   Waverly           65.09 297   P      P      16 27 09.6  -0.7
WVT                                 pmax   pmax
      comp=Z,9.0nm,1.2s
WVT   Waverly           65.09 297   P      P      16 27 09.6  -0.7
WVT                                 IAmb   IAmb   16 27 10.5
      comp=Z,9.3nm,1.1s
YKA   Yellowknife Ar    65.10 332   P      P      16 27 10.3 +0.4
      comp=Z,5.1nm,0.7s,baz=59,slow=7.0,SNR=76
YKA                                 LR     LR     16 53 43.6
      comp=Z,166nm,19.3s,baz=0.0,slow=34
Y49A  Blount Mountai    65.28 294   P      P      16 27 12.1 +0.5
Y49A                                IAmb   IAmb   16 27 13.0
      comp=Z,9.5nm,0.9s
X48A  Hartselle         65.41 295   P      P      16 27 12.6 +0.2
X48A                                IAmb   IAmb   16 27 13.1
      comp=Z,12nm,0.7s
F33A  5 Mile Ranch,     65.53 310   P      P      16 27 12.6  -0.4
F33A                                IAmb   IAmb   16 27 13.6
      comp=Z,12nm,0.7s
PLAL  Pickwick Lake     65.86 296   P      P      16 27 14.7  -0.5
FVM   French Village    65.90 300   P      P      16 27 15.0  -0.5
FVM                                 pmax   pmax
      comp=Z,19nm,1.2s
FVM   French Village    65.90 300   P      P      16 27 15.0  -0.5
FVM                                 IAmb   IAmb   16 27 16.1
      comp=Z,19nm,1.1s
LRAL  Lakeview Retre    66.13 294   P      P      16 27 16.9  -0.1
      baz=58
LRAL  Lakeview Retre    66.13 294   P      P      16 27 17.1   0.0
LRAL                                IAmb   IAmb   16 27 17.7
      comp=Z,9.6nm,0.9s
P40A  Paris             66.17 302   P      P      16 27 16.4  -0.8
P40A                                IAmb   IAmb   16 27 17.5
      comp=Z,9.7nm,1.1s
CCM   Cathedral Cave    66.41 301   P      P      16 27 18.3  -0.5
      baz=58
CCM   Cathedral Cave    66.41 301   P      P      16 27 17.9  -0.9
CCM                                 pmax   pmax
      comp=Z,10.0nm,1.0s
CCM   Cathedral Cave    66.41 301   P      P      16 27 17.9  -0.9
CCM                                 IAmb   IAmb   16 27 19.1
      comp=Z,10nm,0.9s
PBMO  Poplar Bluff      66.53 299   P      P      16 27 18.5  -1.0
PBMO                                IAmb   IAmb   16 27 19.7
      comp=Z,12nm,1.0s
W45A  Hickory Valley    66.54 297   P      P      16 27 18.5  -1.1
Z47A  Carrollton        66.80 295   P      P      16 27 20.7  -0.6
Z47A                                IAmb   IAmb   16 27 21.5
      comp=Z,13nm,0.8s
INK   Inuvik            66.82 342   P      P      16 27 21.6 +0.8
      comp=Z,2.0nm,0.6s,baz=25,slow=8.7,SNR=9.2
INK   Inuvik            66.82 342   P      P      16 27 20.8   0.0
INK                                 pmax   pmax
      comp=Z,8.0nm,1.1s
INK   Inuvik            66.82 342   P      P      16 27 20.8   0.0
INK                                 IAmb   IAmb   16 27 22.6
      comp=Z,7.5nm,1.1s
ECSD  EROS Data Cent    66.84 308   P      P      16 27 21.1  -0.3
      baz=58,SNR=6.9
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ECSD  EROS Data Cent    66.84 308   P      P      16 27 20.4  -1.0
ECSD                                IAmb   IAmb   16 27 21.8
      comp=Z,6.6nm,0.7s
T42A  Van Buren         66.85 300   P      P      16 27 20.5  -1.1
T42A                                IAmb   IAmb   16 27 21.8
      comp=Z,11nm,0.8s
OXF   Oxford            67.04 296   P      P      16 27 21.4  -1.5
      baz=58
OXF   Oxford            67.04 296   P      P      16 27 21.4  -1.5
OXF                                 pmax   pmax
      comp=Z,49nm,1.2s
OXF   Oxford            67.04 296   P      P      16 27 21.4  -1.5
P38A  Dawn              67.09 303   P      P      16 27 22.6  -0.5
P38A                                IAmb   IAmb   16 27 23.6
      comp=Z,13nm,0.9s
LCAR  Lake Charles      67.41 299   P      P      16 27 24.3  -0.9
LCAR                                IAmb   IAmb   16 27 25.4
      comp=Z,10nm,1.1s
SDV   Santo Domingo     67.41 263   P      P      16 27 25.3  -0.4
SDV                                 IAmb   IAmb   16 27 27.2
      comp=Z,12nm,1.1s
MGMO  Mountain Grove    67.58 300   P      P      16 27 25.9  -0.4
MGMO                                IAmb   IAmb   16 27 27.0
      comp=Z,14nm,0.8s
L34A  Svendsen Farm,    67.64 306   P      P      16 27 25.8  -0.8
E28A  Huff              67.71 312   P      P      16 27 27.0 +0.1
SUSD  Miller            67.87 310   P      P      16 27 27.5  -0.5
S39A  Bolivar           67.99 301   P      P      16 27 28.3  -0.5
S39A                                IAmb   IAmb   16 27 29.7
      comp=Z,7.2nm,0.8s
FCAR  Ozark Folk Cen    68.16 299   P      P      16 27 29.4  -0.5
FCAR                                IAmb   IAmb   16 27 29.9
      comp=Z,5.7nm,0.8s
A21K  Barrow            68.32 351   P      P      16 27 31.0 +0.7
      baz=22
U40A  Yellville         68.40 300   P      P      16 27 31.0  -0.5
      baz=57,SNR=8.1
U40A  Yellville         68.40 300   P      P      16 27 31.0  -0.5
U40A                                IAmb   IAmb   16 27 32.3
      comp=Z,10nm,0.8s
WHAR  Wooly Hollow      68.60 299   P      P      16 27 32.2  -0.5
W41B  Gary Mavity, V    68.64 298   P      P      16 27 32.3  -0.6
      baz=57,SNR=6.7
BGNE  Belgrade          69.06 307   P      P      16 27 35.1  -0.4
      baz=56,SNR=5.0
BGNE  Belgrade          69.06 307   P      P      16 27 35.0  -0.5
TLY   Talaya            69.14  40  iP      P      16 27 37.5 +1.7
TLY                                 pmax   pmax
      comp=Z,8.0nm,1.5s
TLY   Talaya            69.14  40   P      P      16 27 37.1 +1.3
HHAR  Hobbs             69.18 300   P      P      16 27 35.9  -0.4
HHAR                                IAmb   IAmb   16 27 36.9
      comp=Z,15nm,1.0s
KSU1  Kansas State U    69.37 304   P      P      16 27 37.6 +0.2
      baz=56
KSU1  Kansas State U    69.37 304   P      P      16 27 36.9  -0.5
U38A  Gravette          69.39 301   P      P      16 27 37.1  -0.5
X40A  Basin Creek Fa    69.42 298   P      P      16 27 37.3  -0.5
      baz=56,SNR=5.7
X40A  Basin Creek Fa    69.42 298   P      P      16 27 37.3  -0.5
X40A                                IAmb   IAmb   16 27 37.9
      comp=Z,7.0nm,0.8s
W39A  Magazine          69.67 299   P      P      16 27 39.3   0.0
      baz=56,SNR=6.3
W39A  Magazine          69.67 299   P      P      16 27 39.2  -0.2
W39A                                IAmb   IAmb   16 27 39.9
      comp=Z,12nm,0.8s
TOLK  Toolik Lake Re    69.78 348   P      P      16 27 40.8 +1.2
      baz=27,SNR=5.4
TOLK  Toolik Lake Re    69.78 348   P      P      16 27 41.2 +1.7
TOLK                                IAmb   IAmb   16 27 42.6
      comp=Z,7.8nm,1.0s
BOD   Bodaibo           69.87  31  eP      P      16 27 39.1  -1.0
BOD                                 pmax   pmax
      comp=Z,11nm,1.5s
MIAR  Mount Ida         69.90 298   P      P      16 27 40.8 +0.1
      baz=56,SNR=7.3
MIAR  Mount Ida         69.90 298   P      P      16 27 40.2  -0.5
MIAR                                pmax   pmax
      comp=Z,14nm,0.9s
MIAR  Mount Ida         69.90 298   P      P      16 27 40.2  -0.5
MIAR                                IAmb   IAmb   16 27 41.8
      comp=Z,14nm,0.8s
T35A  Sooner Cattle     70.53 302   P      P      16 27 43.8  -0.9
TUL1  Leonard           70.63 301   P      P      16 27 45.2   0.0
      baz=55
TUL1  Leonard           70.63 301   P      P      16 27 44.4  -0.8
GKN   Gorkha            70.94  69  eP      P      16 27 47.4   0.0
      comp=Z,40nm,1.1s
RSSD  Black Hills       71.05 312   P      P      16 27 48.2 +0.3
      baz=54
RSSD  Black Hills       71.05 312   P      P      16 27 48.1 +0.2
RSSD                                pmax   pmax
      comp=Z,7.0nm,1.0s
RSSD  Black Hills       71.05 312   P      P      16 27 48.1 +0.2
QUOK  Quay              71.09 301   P      P      16 27 48.5 +0.5
QUOK                                IAmb   IAmb   16 27 50.6
      comp=Z,18nm,0.9s
X37A  Clayton           71.09 299   P      P      16 27 48.5 +0.5
R32A  Long Quarter,     71.11 304   P      P      16 27 48.2 +0.1
KAN13 South Haven SW    71.11 303   P      P      16 27 48.5 +0.4
COLD  Coldfoot          71.16 347   P      P      16 27 49.2 +1.3
      baz=26,SNR=7.3
COLD  Coldfoot          71.16 347   P      P      16 27 49.1 +1.2
KAN01 Argonia South     71.22 303   P      P      16 27 49.4 +0.6
OK030 Cody Creek RV     71.28 301   P      P      16 27 49.4 +0.3
OK031 S. Brethren Rd    71.30 301   P      P      16 27 49.6 +0.3
KAN10 Anthony SW Sta    71.46 303   P      P      16 27 50.9 +0.7
KAN14 Manchester OK     71.47 303   P      P      16 27 50.8 +0.5
EGAK  Eagle             71.48 343   P      P      16 27 50.6 +0.8
      baz=33,SNR=5.7
EGAK  Eagle             71.48 343   P      P      16 27 51.2 +1.4
EGAK                                IAmb   IAmb   16 27 52.4
      comp=Z,8.6nm,0.9s
DMN   Daman             71.51  69  eP      P      16 27 51.6 +0.6
      comp=Z,46nm,1.2s
KKN   Kakani            71.53  69  eP      P      16 27 51.4 +0.3
CBKS  Cedar Bluff       71.54 305   P      P      16 27 50.8 +0.1
      baz=54,SNR=9.9
CBKS  Cedar Bluff       71.54 305   P      P      16 27 50.8 +0.1
CBKS                                pmax   pmax
      comp=Z,39nm,0.9s
CBKS  Cedar Bluff       71.54 305   P      P      16 27 50.8 +0.1
OGNE  Ogallala          71.73 308   P      P      16 27 51.8  -0.1
      baz=54
OGNE  Ogallala          71.73 308   P      P      16 27 51.8  -0.1
PKIN  Phulchoki         71.74  69  eP      P      16 27 52.6 +0.2
      comp=Z,24nm,0.9s
PKI   Pulchoki          71.75  69  eP      P      16 27 52.6 +0.1
      comp=Z,21nm,0.9s
PRP   Porcupine Dome    71.80 345   P      P      16 27 53.1 +1.1
      baz=30,SNR=7.2
PRP   Porcupine Dome    71.80 345   P      P      16 27 53.8 +1.9
PRP                                 IAmb   IAmb   16 27 55.2
      comp=Z,13nm,1.1s
OK029 Liberty Lake      71.80 301   P      P      16 27 52.8 +0.5
OK029                               IAmb   IAmb   16 27 53.7
      comp=Z,22nm,1.0s
EGMT  Eagleton          71.84 318   P      P      16 27 53.0 +0.6
      baz=52,SNR=5.9
EGMT  Eagleton          71.84 318   P      P      16 27 53.1 +0.6
EGMT                                IAmb   IAmb   16 27 54.4
      comp=Z,13nm,0.9s
GUN   Gumba             71.90  69  eP      P      16 27 53.7 +0.3
      comp=Z,40nm,1.0s
BCOK  Bluff Creek, N    71.98 301   P      P      16 27 53.9 +0.5
FNO   Franklin          72.07 301   P      P      16 27 54.6 +0.7
FNO                                 IAmb   IAmb   16 27 55.6
      comp=Z,16nm,1.0s
YAK   Yakutsk           72.11  21ceP      P      16 27 54.7 +1.0
YAK                                 pmax   pmax
      comp=Z,37nm,1.7s
YAK   Yakutsk           72.11  21   P      P      16 27 54.4 +0.8
YAK                                 IAmb   IAmb   16 27 55.7
      comp=Z,19nm,0.8s
BOSA  Boshof            72.21 154   LR     LR     17 01 01.5
      comp=Z,196nm,18.9s,baz=341,slow=37
U32A  Winter Ranch,     72.48 303   P      P      16 27 57.0 +0.6
POKR  Poker Plat Res    72.54 345   P      P      16 27 58.1 +1.9
      baz=28,SNR=7.1
POKR  Poker Plat Res    72.54 345   P      P      16 27 57.7 +1.5
POKR                                IAmb   IAmb   16 27 59.3
      comp=Z,16nm,1.2s
ILAR  Eielson Array     72.73 345   P      P      16 27 58.4 +1.0
      comp=Z,2.6nm,1.1s,baz=30,slow=5.0,SNR=14
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SCRK  Sand Creek        72.81 343   P      P      16 27 59.2 +1.2
      baz=31,SNR=6.8
MDM   Murphy Dome       72.83 345   P      P      16 27 59.4 +1.4
I23K  Minto, Yukon-K    72.88 346   P      P      16 27 59.7 +1.5
      baz=26
SONM  Songino Array     72.93  42   P      P      16 27 59.8 +0.7
      comp=Z,0.9nm,0.7s,baz=293,slow=6.7,SNR=7.8
SONM                                LR     LR     17 04 18.8
      comp=Z,168nm,19.3s,baz=336,slow=39
SONM  Songino Array     72.93  42   P      P      16 27 59.4 +0.4
RAMN  Ramite            72.97  69  eP      P      16 27 59.4  -0.4
      comp=Z,28nm,0.9s
CCB   Clear Creek Bu    73.03 345   P      P      16 28 00.2 +1.1
HDA   Harding Lake      73.06 345   P      P      16 28 00.7 +1.4
      baz=28,SNR=6.1
HDA   Harding Lake      73.06 345   P      P      16 28 00.4 +1.0
HDA                                 IAmb   IAmb   16 28 02.0
      comp=Z,8.5nm,1.0s
Z35A  Perchaven, San    73.09 299   P      P      16 28 00.1   0.0
DOT   Dot Lake          73.11 343   P      P      16 28 00.7 +1.1
DOT                                 IAmb   IAmb   16 28 03.1
      comp=Z,14nm,1.1s
WRH   Wood River Hil    73.24 345   P      P      16 28 01.1 +0.8
WRH                                 IAmb   IAmb   16 28 02.9
      comp=Z,11nm,1.1s
MLY   Manley            73.24 346   P      P      16 28 01.8 +1.4
      baz=25
ULN   Ulaanbaatar       73.25  41ceP      P      16 28 01.3 +0.4
ULN                                 pmax   pmax
      comp=Z,1.0nm,0.7s
ULN   Ulaanbaatar       73.25  41   P      P      16 28 01.0 +0.1
WMOK  Wichita Mounta    73.30 301   P      P      16 28 01.8 +0.5
      baz=54,SNR=8.2
WMOK  Wichita Mounta    73.30 301   P      P      16 28 01.3   0.0
WMOK                                pmax   pmax
      comp=Z,9.0nm,1.0s
WMOK  Wichita Mounta    73.30 301   P      P      16 28 01.3   0.0
WMOK                                IAmb   IAmb   16 28 02.7
      comp=Z,8.9nm,0.9s
WALA  Waterton Lakes    73.31 320   P      P      16 28 01.3 +0.1
WALA                                IAmb   IAmb   16 28 02.7
      comp=Z,20nm,0.9s
NEA2  Nenana            73.33 346   P      P      16 28 02.1 +1.2
      baz=27
K22A  Casper            73.38 312   P      P      16 28 01.9   0.0
      baz=52
K22A  Casper            73.38 312   P      P      16 28 01.7  -0.1
RLMT  Red Lodge         73.40 315   P      P      16 28 02.8 +0.9
      baz=51
RLMT  Red Lodge         73.40 315   P      P      16 28 01.8  -0.1
TAPN  Taplejung         73.55  68  eP      P      16 28 03.1  -0.1
      comp=Z,14nm,0.8s
PHWY  Pilot Hill        73.58 310   P      P      16 28 03.7 +0.5
PHWY                                IAmb   IAmb   16 28 05.1
      comp=Z,17nm,0.8s
ODAN  Odare             73.60  69  eP      P      16 28 02.9  -0.5
      comp=Z,19nm,1.1s
MCK   McKinley          74.07 345   P      P      16 28 07.3 +2.0
      baz=27
N23A  Red Feather La    74.12 310   P      P      16 28 07.7 +1.3
      baz=52,SNR=9.2
BPAW  Bear Paw Mtn.     74.14 346   P      P      16 28 07.2 +1.6
      baz=25
RND   Reindeer          74.35 345   P      P      16 28 07.6 +0.6
RND                                 pmax   pmax
      comp=Z,5.0nm,1.0s
RND   Reindeer          74.35 345   P      P      16 28 07.6 +0.6
RWWY  Rawlins           74.38 311   P      P      16 28 07.7  -0.1
RWWY                                IAmb   IAmb   16 28 09.7
      comp=Z,14nm,0.9s
BOZ   Bozeman (W)       74.38 316   P      P      16 28 08.3 +0.6
      baz=50,SNR=12
BOZ   Bozeman (W)       74.38 316   P      P      16 28 08.2 +0.6
BOZ                                 pmax   pmax
      comp=Z,7.0nm,0.9s
BOZ   Bozeman (W)       74.38 316   P      P      16 28 08.2 +0.6
GTA   Gaotai            74.48  52  eP      P      16 28 09.3 +1.0
GTA                                 pP     sP     16 28 13.8 +0.2
GTA                                 sP     pP     16 28 16.6 +4.5
GTA                                 pmax   pmax
      comp=Z,3.0nm,1.0s
CHUM  Lake Minchumin    74.58 347   P      P      16 28 09.2 +1.0
      baz=24
TRF   Thorofare Moun    74.59 346   P      P      16 28 09.6 +1.0
      baz=26,SNR=7.4
TRF   Thorofare Moun    74.59 346   P      P      16 28 09.4 +0.9
TRF                                 IAmb   IAmb   16 28 10.6
      comp=Z,10nm,1.0s
ISCO  Idaho Springs     74.60 309   P      P      16 28 09.7 +0.5
ISCO                                pmax   pmax
      comp=Z,8.0nm,1.0s
ISCO  Idaho Springs     74.60 309   P      P      16 28 09.7 +0.5
LSA   Lhasa             74.61  64   P      P      16 28 10.3 +0.7
LSA                                 pmax   pmax
      comp=Z,4.0nm,0.9s
LSA   Lhasa             74.61  64   P      P      16 28 10.3 +0.7
KTH   Kantishna Hill    74.62 346   P      P      16 28 08.9 +0.4
KTH                                 IAmb   IAmb   16 28 11.2
      comp=Z,17nm,1.1s
LRM   Limekiln Ridge    74.67 317   P      P      16 28 09.9 +0.5
WAT2  Susitna Watana    74.69 345   P      P      16 28 10.0 +1.0
      baz=27
CTGM  Chitina Glacie    74.75 341   P      P      16 28 11.3 +1.9
CTGM                                IAmb   IAmb   16 28 19.0
      comp=Z,22nm,1.3s
CTG   Chitna Glacier    74.75 341   P      P      16 28 11.1 +1.7
      baz=32
MSO   Missoula          74.79 318   P      P      16 28 10.3 +0.4
      baz=49
MSO   Missoula          74.79 318   P      P      16 28 10.0 +0.1
Q24A  Divide            74.83 308   P      P      16 28 11.0 +0.5
      baz=52
WAT6  Susitna Watana    74.85 344   P      P      16 28 11.8 +1.7
      baz=28
M24K  Tolsona, Glenn    74.93 343   P      P      16 28 11.8 +1.4
      baz=29
N25K  Chitina, Valde    75.01 342   P      P      16 28 12.5 +1.6
N25K                                IAmb   IAmb   16 28 37.3
      comp=Z,14nm,1.2s
DLMT  Dillon            75.05 317   P      P      16 28 10.6  -0.9
DLMT                                IAmb   IAmb   16 28 14.2
      comp=Z,14nm,1.1s
PD31  Pinedale Array    75.05 313   P      P      16 28 11.3  -0.3
PDAR  Pinedale Array    75.05 313   P      P      16 28 11.7 +0.1
      comp=Z,3.1nm,0.7s,baz=62,slow=6.4,SNR=29
PDAR  Pinedale Array    75.05 313   P      P      16 28 10.9  -0.7
BW06  Boulder Array     75.05 313   P      P      16 28 11.8 +0.1
      baz=50,SNR=7.6
BW06  Boulder Array     75.05 313   P      P      16 28 10.8  -0.9
ABTX  Abilene, Hawle    75.13 300   P      P      16 28 12.3 +0.3
      baz=53
ABTX  Abilene, Hawle    75.13 300   P      P      16 28 12.1 +0.1
ABTX                                IAmb   IAmb   16 28 13.3
      comp=Z,12nm,1.0s
KLU   Klutina           75.42 343   P      P      16 28 14.6 +1.4
      baz=29
NEW   Newport           75.42 321   P      P      16 28 13.6 +0.2
      baz=47
NEW   Newport           75.42 321   P      P      16 28 13.1  -0.4
NEW                                 pmax   pmax
      comp=Z,5.0nm,1.1s
NEW   Newport           75.42 321   P      P      16 28 13.1  -0.4
SCM   Sheep Creek Mo    75.43 344   P      P      16 28 15.1 +1.8
SCM                                 pmax   pmax
      comp=Z,19nm,1.1s
SCM   Sheep Creek Mo    75.43 344   P      P      16 28 15.1 +1.8
SCM                                 IAmb   IAmb   16 28 16.9
      comp=Z,19nm,1.1s
PPLA  Purkeypile        75.46 346   P      P      16 28 14.4 +0.9
      baz=24
PPLA  Purkeypile        75.46 346   P      P      16 28 14.2 +0.7
PPLA                                IAmb   IAmb   16 28 14.7
      comp=Z,11nm,1.2s
T25A  Trinidad          75.50 306   P      P      16 28 14.6 +0.3
      baz=52
MCMT  McKenzie Canyo    75.53 316   P      P      16 28 15.6 +1.2
BMRM  Bremner River     75.56 342   P      P      16 28 14.7 +0.7
      baz=30
SML   Sawmill           75.67 344   P      P      16 28 16.2 +1.6
      baz=27
ANM   Nome              75.78 352   P      P      16 28 16.3 +1.3
      baz=14
ANM   Nome              75.78 352   P      P      16 28 16.4 +1.3
ANM                                 pmax   pmax
      comp=Z,7.0nm,0.9s
ANM   Nome              75.78 352   P      P      16 28 16.4 +1.3
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SDCO	**Great Sand Dun**	**75.80**	**307**	P	**P**	**16 28 16.7**	**+0.6**
	baz=51,SNR=14						
SDCO	**Great Sand Dun**	**75.80**	**307**	P	**P**	**16 28 16.4**	**+0.2**
O20A	**White River Ci**	**75.96**	**310**	P	**P**	**16 28 17.1**	**+0.3**
	baz=50						
O20A	**White River Ci**	**75.96**	**310**	P	**P**	**16 28 16.0**	**-0.9**
PMR	**Palmer**	**76.03**	**344**	P	**P**	**16 28 17.8**	**+1.2**
	baz=26						
TTA	**Tatalina**	**76.10**	**348**	P	**P**	**16 28 18.5**	**+1.4**
	baz=21						
TTA	**Tatalina**	**76.10**	**348**	P	**P**	**16 28 18.4**	**+1.4**
TTA				pmax	pmax		
	comp=Z,7.0nm,1.2s						
TTA	**Tatalina**	**76.10**	**348**	P	**P**	**16 28 18.4**	**+1.4**
SKT	**Skwentna**	**76.17**	**345**	P	**P**	**16 28 18.4**	**+1.0**
	baz=24						
SKT	**Skwentna**	**76.17**	**345**	P	**P**	**16 28 18.0**	**+0.6**
SKT				IAmb	IAmb	16 28 19.3	
	comp=Z,14nm,1.2s						
BCYI	**Bear Canyon**	**76.17**	**316**	P	**P**	**16 28 18.8**	**+0.8**
MSTX	**Muleshoe**	**76.39**	**303**	P	**P**	**16 28 19.9**	**+0.6**
	baz=52						
MSTX	**Muleshoe**	**76.39**	**303**	P	**P**	**16 28 19.2**	**-0.1**
MSTX				IAmb	IAmb	16 28 20.3	
	comp=Z,9.3nm,1.1s						
B08A	**Colville Reser**	**76.43**	**322**	P	**P**	**16 28 19.4**	**+0.3**
SUA	**Susitna One**	**76.49**	**345**	P	**P**	**16 28 21.1**	**+1.8**
	baz=25,SNR=6.2						
SUA	**Susitna One**	**76.49**	**345**	P	**P**	**16 28 20.6**	**+1.2**
SUA				IAmb	IAmb	16 28 22.1	
	comp=Z,13nm,0.8s						
JCT	**Junction City**	**76.53**	**298**	P	**P**	**16 28 20.5**	**+0.5**
	baz=52,SNR=5.6						
JCT	**Junction City**	**76.53**	**298**	P	**P**	**16 28 20.3**	**+0.2**
JCT				pmax	pmax		
	comp=Z,13nm,0.9s						
JCT	**Junction City**	**76.53**	**298**	P	**P**	**16 28 20.2**	**+0.2**
JCT				IAmb	IAmb	16 28 21.4	
	comp=Z,13nm,0.9s						
S22A	**4UR Ranch, Cre**	**76.62**	**308**	P	**P**	**16 28 21.5**	**+0.7**
	baz=51,SNR=8.0						
F10A	**Beach Ranch, E**	**77.05**	**319**	P	**P**	**16 28 23.2**	**+0.4**
GAMB	**Gambell**	**77.09**	**355**	P	**P**	**16 28 23.7**	**+1.2**
	baz=8.7						
GAMB	**Gambell**	**77.09**	**355**	P	**P**	**16 28 23.5**	**+1.0**
HLID	**Hailey**	**77.22**	**316**	P	**P**	**16 28 24.6**	**+0.7**
	baz=48,SNR=7.4						
HLID	**Hailey**	**77.22**	**316**	P	**P**	**16 28 25.1**	**+1.2**
PV07	**Paradox Valley**	**77.29**	**309**	P	**P**	**16 28 24.4**	**0.0**
PV07				IAmb	IAmb	16 28 26.1	
	comp=Z,10.0nm,1.2s						
PV22	**Blue Mesa, Par**	**77.31**	**309**	P	**P**	**16 28 24.9**	**+0.4**
PV22				IAmb	IAmb	16 28 26.4	
	comp=Z,12nm,1.1s						
PV12	**Saucer Basin,**	**77.46**	**309**	P	**P**	**16 28 26.0**	**+0.6**
PV12				IAmb	IAmb	16 28 27.2	
	comp=Z,11nm,0.9s						
PV04	**Paradox Valley**	**77.47**	**309**	P	**P**	**16 28 26.0**	**+0.6**
PV04				IAmb	IAmb	16 28 27.3	
	comp=Z,14nm,0.9s						
PV11	**David Mesa, Pa**	**77.51**	**309**	P	**P**	**16 28 26.3**	**+0.6**
PV11				IAmb	IAmb	16 28 27.5	
	comp=Z,12nm,0.9s						
PV03	**Paradox Valley**	**77.53**	**309**	P	**P**	**16 28 26.1**	**+0.3**
PV16	**Nyswonger Mesa**	**77.53**	**309**	P	**P**	**16 28 26.2**	**+0.4**
PV16				IAmb	IAmb	16 28 27.7	
	comp=Z,15nm,1.0s						
PV20	**West Nyswonger**	**77.54**	**309**	P	**P**	**16 28 26.1**	**+0.3**
PV20				IAmb	IAmb	16 28 27.7	
	comp=Z,10nm,0.9s						
PV14	**Lion Creek, Pa**	**77.55**	**309**	P	**P**	**16 28 26.5**	**+0.5**
PV14				IAmb	IAmb	16 28 27.8	
	comp=Z,12nm,1.0s						
833A	**Chaparral WMA,**	**77.56**	**296**	P	**P**	**16 28 27.3**	**+1.5**
	baz=52						
PV10	**Paradox Valley**	**77.56**	**309**	P	**P**	**16 28 26.9**	**+0.9**
PV10				IAmb	IAmb	16 28 28.2	
	comp=Z,14nm,0.8s						
PV18	**Skein Mesa, Pa**	**77.57**	**309**	P	**P**	**16 28 26.3**	**+0.3**
PV18				IAmb	IAmb	16 28 27.3	
	comp=Z,7.4nm,0.8s						
PV19	**Morning Glory**	**77.57**	**309**	P	**P**	**16 28 26.6**	**+0.6**
PV19				IAmb	IAmb	16 28 27.9	
	comp=Z,12nm,0.9s						
PV17	**East Wray Mesa**	**77.58**	**309**	P	**P**	**16 28 26.7**	**+0.6**
PV17				IAmb	IAmb	16 28 27.8	
	comp=Z,12nm,0.8s						
BMO	**Blue Mountains**	**77.86**	**319**	P	**P**	**16 28 27.7**	**+0.4**
BMO				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BMO	**Blue Mountains**	**77.86**	**319**	P	**P**	**16 28 27.7**	**+0.4**
MVCO	**Mesa Verde**	**77.98**	**308**	P	**P**	**16 28 29.2**	**+0.8**
	baz=50						
MVCO	**Mesa Verde**	**77.98**	**308**	P	**P**	**16 28 29.0**	**+0.7**
MVCO				IAmb	IAmb	16 28 30.1	
	comp=Z,8.9nm,1.1s						
MFID	**Camas Ranch**	**78.07**	**317**	P	**P**	**16 28 29.2**	**+0.6**
ANMO	**Albuquerque**	**78.16**	**305**	*ce*P	**P**	**16 28 30.8**	**+1.5**
ANMO				pmax	pmax		
	comp=Z,2.0nm,0.6s						
DUG	**Dugway, Tooele**	**78.58**	**313**	P	**P**	**16 28 32.3**	**+0.8**
	baz=48						
LON	**Longmire**	**78.75**	**322**	P	**P**	**16 28 32.6**	**+0.4**
LON				pmax	pmax		
	comp=Z,4.0nm,0.9s						
LON	**Longmire**	**78.75**	**322**	P	**P**	**16 28 32.6**	**+0.4**
BNM	**Barren Site**	**78.77**	**305**	P	**P**	**16 28 33.5**	**+0.7**
D03D	**Eldon**	**78.78**	**323**	P	**P**	**16 28 33.9**	**+1.7**
	baz=43						
LZH	**Lanzhou**	**79.05**	**52**	*e*P	**P**	**16 28 36.1**	**+1.9**
LZH				pP	sP	16 28 40.5	+1.0
LZH				sP	PcP	16 28 43.4	+0.7
LZH				pmax	pmax		
	comp=Z,17nm,1.2s						
LZH				pmax	pmax		
	comp=Z,69nm,4.9s						
MA2	**Magadan**	**79.24**	**13**	*ce*P	**P**	**16 28 35.9**	**+1.4**
MA2				pmax	pmax		
	comp=Z,7.0nm,1.3s						
MA2	**Magadan**	**79.24**	**13**	P	**P**	**16 28 35.9**	**+1.4**
MA2				IAmb	IAmb	16 28 37.4	
	comp=Z,11nm,1.1s						
MVU	**Marysvale**	**79.36**	**311**	P	**P**	**16 28 36.8**	**+0.9**
J08A	**Circle Bar Ran**	**79.50**	**318**	P	**P**	**16 28 37.5**	**+1.1**
J08A				IAmb	IAmb	16 28 38.6	
	comp=Z,15nm,1.4s						
ELK	**Elko**	**79.58**	**315**	LR	LR	17 00 37.1	
	comp=Z,78nm,19.7s,baz=41,slow=33						
ELK	**Elko**	**79.58**	**315**	P	**P**	**16 28 38.4**	**+1.4**
ELK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ELK	**Elko**	**79.58**	**315**	P	**P**	**16 28 38.4**	**+1.4**
TXAR	**Lajitas Array**	**79.87**	**299**	P	**P**	**16 28 39.2**	**+0.6**
	comp=Z,1.0nm,0.7s,baz=67,slow=5.8,SNR=7.3						
TXAR				LR	LR	17 00 57.4	
	comp=Z,149nm,21.9s,baz=0.0,slow=33						
TX31	**Lajitas Ar. Si**	**79.87**	**299**	P	**P**	**16 28 39.1**	**+0.5**
TX32	**Lajitas Array**	**79.87**	**299**	P	**P**	**16 28 39.3**	**+0.6**
WVOR	**Wild Horse Val**	**80.24**	**318**	P	**P**	**16 28 41.6**	**+1.1**
WVOR				pmax	pmax		
	comp=Z,11nm,1.3s						
WVOR	**Wild Horse Val**	**80.24**	**318**	P	**P**	**16 28 41.6**	**+1.1**
SPR3	**Spring Creek 3**	**80.25**	**313**	P	**P**	**16 28 41.6**	**+0.8**
I05D	**Terrebonne, OR**	**80.26**	**320**	P	**P**	**16 28 41.9**	**+1.4**
	baz=44						
HHC	**Hu-ho-hao-te**	**80.35**	**45**	*e*P	**P**	**16 28 42.5**	**+1.4**
HHC				pmax	pmax		
	comp=Z,3.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,42nm,5.4s						
H04A	**Detroit Lake**	**80.43**	**321**	P	**P**	**16 28 42.0**	**+0.6**
H04A				IAmb	IAmb	16 28 43.3	
	comp=Z,11nm,1.0s						
121A	**Cookes Peak, D**	**80.55**	**304**	P	**P**	**16 28 43.4**	**+1.0**
	baz=50						
G03D	**McMinnville, O**	**80.57**	**322**	P	**P**	**16 28 43.6**	**+1.6**
	baz=43						
U15A	**North Rim**	**80.79**	**310**	P	**P**	**16 28 44.1**	**+0.3**
WUAZ	**Wupatki**	**80.84**	**309**	P	**P**	**16 28 45.2**	**+1.3**
	baz=48						
OHAK	**Old Harbor**	**80.90**	**344**	P	**P**	**16 28 45.2**	**+1.7**
	baz=23						
J05D	**Fort Rock, OR**	**80.97**	**320**	P	**P**	**16 28 46.2**	**+1.8**
	baz=44,SNR=9.2						
K05A	**Summer Lake**	**81.20**	**319**	P	**P**	**16 28 47.0**	**+1.3**
K05A				IAmb	IAmb	16 28 49.4	
	comp=Z,18nm,1.1s						
R11A	**Troy Canyon, C**	**81.41**	**313**	P	**P**	**16 28 47.7**	**+0.8**
	baz=46,SNR=14						
R11A	**Troy Canyon, C**	**81.41**	**313**	P	**P**	**16 28 47.7**	**+0.8**
R11A				IAmb	IAmb	16 28 49.2	
	comp=Z,9.0nm,0.9s						
MOD	**Modoc Plateau**	**81.49**	**318**	P	**P**	**16 28 47.8**	**+0.6**
MOD				IAmb	IAmb	16 28 50.1	
	comp=Z,18nm,1.4s						
I03D	**Drain, OR**	**81.72**	**321**	P	**P**	**16 28 49.4**	**+1.2**
	baz=42						
LPAZ	**La Paz**	**82.27**	**242**	P	**P**	**16 28 51.0**	**-1.0**
	comp=Z,3.7nm,0.6s,baz=56,slow=7.3,SNR=4.6						
LPAZ				LR	LR	17 03 50.1	
	comp=Z,38nm,20.9s,baz=90,slow=35						
LPAZ	**La Paz**	**82.27**	**242**	P	**P**	**16 28 51.6**	**-0.5**
LPAZ				pmax	pmax		
	comp=Z,4.0nm,0.7s						
LPAZ	**La Paz**	**82.27**	**242**	P	**P**	**16 28 51.6**	**-0.5**
M04C	**Macdoel**	**82.37**	**319**	P	**P**	**16 28 53.2**	**+1.4**
	baz=43						
CD2	**Chengdu**	**82.38**	**56**	P	**P**	**16 28 53.1**	**+1.2**
CD2				pP	sP	16 28 57.8	+0.6
CD2				S	**S**	**16 39 07.9**	**-0.1**
CD2				pmax	pmax		
	comp=Z,20nm,0.9s						
CD2				pmax	pmax		
	comp=Z,360nm,8.0s						
SHPR	**Sheep Range**	**82.44**	**311**	P	**P**	**16 28 52.9**	**+0.7**
TPH	**Tonopah**	**82.53**	**314**	P	**P**	**16 28 53.8**	**+1.0**
TPH				pmax	pmax		
	comp=Z,35nm,1.1s						
TPH	**Tonopah**	**82.53**	**314**	P	**P**	**16 28 53.8**	**+1.0**
PAHR	**Pah Rah Range**	**82.57**	**316**	P	**P**	**16 28 54.1**	**+1.2**
PAHR				IAmb	IAmb	16 28 55.8	
	comp=Z,7.8nm,1.0s						
TUC	**Tucson**	**82.61**	**306**	P	**P**	**16 28 54.9**	**+1.7**
	baz=48						
TUC	**Tucson**	**82.61**	**306**	P	**P**	**16 28 54.7**	**+1.5**
TUC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
TUC	**Tucson**	**82.61**	**306**	P	**P**	**16 28 54.7**	**+1.5**
TUC				IAmb	IAmb	16 28 55.9	
	comp=Z,7.1nm,0.9s						
W13A	**Hualapai Mount**	**82.64**	**310**	P	**P**	**16 28 54.8**	**+1.4**
CPUP	**Villa Florida**	**82.75**	**228**	P	**P**	**16 28 52.8**	**-0.8**
	comp=Z,1.4nm,0.9s,baz=53,slow=5.1,SNR=2.1						
TPNV	**Topopah Spring**	**82.76**	**312**	P	**P**	**16 28 55.1**	**+1.1**
	baz=46						
TPNV	**Topopah Spring**	**82.76**	**312**	P	**P**	**16 28 54.9**	**+0.9**
TPNV				pmax	pmax		
	comp=Z,4.0nm,0.9s						
TPNV	**Topopah Spring**	**82.76**	**312**	P	**P**	**16 28 54.9**	**+0.9**
NVAR	**Mina Array Bea**	**82.89**	**315**	P	**P**	**16 28 55.2**	**+0.5**
	comp=Z,1.0nm,0.8s,baz=52,slow=5.1,SNR=6.3						
YERR	**Yerington**	**83.01**	**315**	P	**P**	**16 28 56.8**	**+1.6**
YERR				IAmb	IAmb	16 28 58.1	
	comp=Z,11nm,1.2s						
PDMCI	**Parker Dam,Lak**	**83.34**	**309**	P	**P**	**16 28 58.5**	**+1.7**
	baz=47						
GRAC	**Grapevine Rang**	**83.37**	**313**	P	**P**	**16 28 58.7**	**+1.7**
	baz=45						
BJI	**Beijing**	**83.40**	**43**	P	**P**	**16 28 57.3**	**+0.3**
BJI				pmax	pmax		
	comp=Z,4.0nm,1.6s						
N02D	**Trinity Center**	**83.40**	**319**	P	**P**	**16 28 58.2**	**+1.1**
	baz=43						
WAKR	**Walker**	**83.46**	**315**	P	**P**	**16 28 59.6**	**+2.0**
WAKR				IAmb	IAmb	16 29 07.1	
	comp=Z,7.6nm,1.0s						
GMRC	**Granite Mounta**	**83.92**	**310**	P	**P**	**16 29 01.5**	**+1.6**
	baz=46						
O02D	**Mt. Diablo Mer**	**84.03**	**318**	P	**P**	**16 29 01.0**	**+0.6**
	baz=42						
SDPT	**Sand Point**	**84.03**	**348**	P	**P**	**16 29 00.5**	**+0.6**
	baz=17						
IRM	**Iron Mountain**	**84.04**	**310**	P	**P**	**16 29 02.2**	**+1.8**
	baz=46						
MPMC	**Manual Prospec**	**84.10**	**312**	P	**P**	**16 29 02.6**	**+1.7**
	baz=45,SNR=7.5						
214A	**Organ Pipe Nat**	**84.12**	**307**	P	**P**	**16 29 02.3**	**+1.5**
	baz=47						
CWC	**Cottonwood Cre**	**84.17**	**313**	P	**P**	**16 29 02.2**	**+1.0**
	baz=45						
HEC	**Hector,Ludlow**	**84.28**	**311**	P	**P**	**16 29 03.3**	**+1.6**
	baz=46						
BC3	**Big Chuckawall**	**84.58**	**309**	P	**P**	**16 29 04.2**	**+0.9**
	baz=46						
GLA	**Glamis**	**84.61**	**309**	P	**P**	**16 29 04.9**	**+1.5**
	baz=46						
LRMC	**Laurel Mtn Rad**	**84.61**	**312**	P	**P**	**16 29 05.7**	**+2.2**
	baz=45,SNR=5.9						
PB16	**IPOC Station P**	**84.63**	**241**	P	**P**	**16 29 04.2**	**+0.1**
BELC	**Belle Mtn. Jos**	**84.66**	**310**	P	**P**	**16 29 05.2**	**+1.5**
	baz=46						
ISA	**Isabella, Lake**	**84.94**	**313**	P	**P**	**16 29 07.1**	**+2.1**
	baz=45,SNR=18						
ISA	**Isabella, Lake**	**84.94**	**313**	P	**P**	**16 29 06.8**	**+1.8**
ISA				pmax	pmax		
	comp=Z,28nm,1.0s						
ISA	**Isabella, Lake**	**84.94**	**313**	P	**P**	**16 29 06.8**	**+1.8**
FALS	**False Pass**	**84.97**	**349**	P	**P**	**16 29 07.1**	**+2.5**
	baz=15						
PFO	**Pinyon Flats O**	**85.21**	**310**	P	**P**	**16 29 08.2**	**+1.8**
	baz=46						
TPFO	**Pinon Flats**	**85.21**	**310**	P	**P**	**16 29 08.1**	**+1.7**
	baz=46						
EDW2	**Edwards Air Fo**	**85.22**	**312**	P	**P**	**16 29 08.2**	**+1.8**
	baz=45						
BFSC	**Mount Baldy Ra**	**85.48**	**311**	P	**P**	**16 29 09.2**	**+1.4**
	baz=45						
KMI	**Kunming**	**85.49**	**61**	⇑P	**P**	**16 29 09.1**	**+1.0**
KMI				pP	sP	16 29 14.3	+0.8
KMI				sP	pP	16 29 20.9	+8.8
KMI				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KMI				pmax	pmax		
	comp=Z,150nm,5.4s						
MURC	**Murrieta**	**85.65**	**310**	P	**P**	**16 29 10.6**	**+2.0**
	baz=45						
IKP	**In-Ko-Pah, Jac**	**85.67**	**309**	P	**P**	**16 29 10.7**	**+2.0**
	baz=46						
MONP2	**Monument Peak**	**85.69**	**309**	P	**P**	**16 29 10.8**	**+1.8**
	baz=46						
ENH	**Enshi**	**86.45**	**53**	P	**P**	**16 29 13.0**	**+0.4**
ENH				IAmb	IAmb	16 29 18.8	
	comp=Z,8.3nm,0.8s						
CMAR	**Chiang Mai Arr**	**87.14**	**69**	P	**P**	**16 29 15.4**	**-0.7**
	comp=Z,1.2nm,1.1s,baz=307,slow=6.7,SNR=6.6						
CMAR				LR	LR	17 14 54.3	
	comp=Z,27nm,19.4s,baz=315,slow=40						
CMAR	**Chiang Mai Arr**	**87.14**	**69**	*ce*P	**P**	**16 29 16.1**	**0.0**
CMAR				pmax	pmax		
	comp=Z,1.0nm,1.1s						
CMAR	**Chiang Mai Arr**	**87.14**	**69**	P	**P**	**16 29 16.4**	**+0.3**
GYA	**Guiyang**	**87.24**	**58**	*e*P	**P**	**16 29 17.1**	**+0.5**
GYA				pmax	pmax		
	comp=Z,4.0nm,1.6s						
USRK	**Ussuriysk Ar.**	**87.51**	**31**	P	**P**	**16 29 17.1**	**-0.2**
	comp=Z,3.0nm,0.7s,baz=306,slow=3.2,SNR=7.5						
NJ2	**Nanjing**	**90.75**	**46**	*e*P	**P**	**16 29 33.8**	**+0.9**
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KSRS	**Korea Array**	**91.26**	**37**	LR	LR	17 15 31.4	
	comp=Z,83nm,21.1s,baz=327,slow=39						
ASAR	**Alice Springs**	**140.20**	**80**	PKhKP	PKPpre	16 35 49.7	
	comp=Z,0.4nm,0.9s,baz=312,slow=1.8,SNR=2.3						
ASAR				PKP	**PKPdf**	**16 35 57.9**	**-0.9**
	comp=Z,0.7nm,0.8s,baz=318,slow=2.2,SNR=6.7						
CTA	**Charters Tower**	**147.19**	**64**	PKPbc	**PKPbc**	**16 36 12.6**	**-0.7**
	comp=Z,3.0nm,0.8s,baz=18,slow=3.1,SNR=4.4						
STKA	**Stephens Creek**	**150.12**	**87**	PKPbc	**PKPbc**	**16 36 18.3**	**-2.2**
	comp=Z,9.1nm,1.0s,baz=301,slow=9.0,SNR=5.4						
STKA	**Stephens Creek**	**150.12**	**87**		**PKPbc**	**16 36 20.4**	**-0.1**

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*MAN **23** 16:21:27.1, 5°.79N×126°.23E, h27^{km}, mb4.7, ML3.6, MS3.5*

*DJA **23** 16:21:30.2±0.5, 6°N±4°×12°6E±°, h10^{km}, M4.8/18, mb4.9/18, mB5.3/10, MLv4.9/12, Mw(mB)4.7/10, MwMwp8.8/1, Mwp8.2/1*

*IDC **23** 16:21:31.6±1.0, 6°.05N×126°.21E, h70^{km}±8^{km}, mb3.9/18, mb1 4.1/21, mb1mx3.9/43, mbtmp4.3/21, MS3.2/3, Ms1 3.3/3, ms1mx2.9/31, Error ellipse: s-maj=23.1km s-min=8.7km az=72.0*

*NEIC **23** 16:21:32±1.6, 6°.02N±0°.06×126°.28E±0°.09, h73^{km}±5^{km}, mb4.6/54, Error ellipse: s-maj=13.5km s-min=7.9km az=65.0*

ISC 23 16:21:31.0±0.7**, 5°.99N**±0°.03×**126°.23E**±0°.05**, h63**^{km}±6^{km}**, n144,** σ1^{s}.**41**/148**, mb4.5**/43**, 1C-3D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**0.53**	**282**	*e*P	**Pn**	**16 21 40.5**	**-3.1**
DDMP				*e*S	**Sn**	**16 21 49.1**	**-3.7**
MATI	**Mati**	**0.95**	**1**	*e*P	**Pn**	**16 21 46.2**	**-2.4**
MATI				*e*S	**Sn**	**16 22 03.5**	**+1.9**
DAV	**Davao City (W)**	**1.25**	**329**	P	**Pn**	**16 21 52.6**	**+0.1**
	86nm,0.3s,baz=168,slow=2.6,SNR=13						
DAV				S	**Sn**	**16 22 08.4**	**-0.2**
	318nm,0.3s,baz=267,slow=23,SNR=5.9						
DAV				LR	LR	16 22 09.6	
	comp=Z,95nm,21.1s,baz=92,slow=32						
KCP	**Kidapawan**	**1.52**	**312**	⇓*i*P	**Pn**	**16 21 55.4**	**-0.8**
KCP				*i* S	**Sn**	**16 22 13.3**	**-1.8**
SKMP	**Bagumbayan, Su**	**1.76**	**287**	*e*P	**Pn**	**16 21 57.3**	**-2.0**
SKMP				*e*S	**Sn**	**16 22 20.2**	**-0.5**
BUKP	**Musuan**	**2.21**	**328**	*e*P	**Pn**	**16 22 04.7**	**-0.8**
SGSI	**Sangihe**	**2.40**	**197**	P	**Pn**	**16 22 08.4**	**+0.4**
SGSI				S	**Sn**	**16 22 37.6**	**+1.4**
CGP	**Cagayan de Oro**	**2.88**	**328**	⇑*e*P	**Pn**	**16 22 14.8**	**+0.1**
CGP				*e*S	**Sn**	**16 22 50.0**	**+1.8**
BUTP	**Butuan**	**3.02**	**348**	*e*P	**Pn**	**16 22 16.6**	**+0.1**
BUTP				*e*S	**Sn**	**16 22 57.6**	**+6.1**
PAGZ	**Pagadian**	**3.38**	**303**	*e*P	**Pn**	**16 22 20.2**	**-1.2**
ZCP	**Zamboanga City**	**4.24**	**283**	⇓*i*P	**Pn**	**16 22 32.9**	**-0.3**
ZCP				*i* S	**Sn**	**16 23 22.9**	**+1.5**
MSLP	**Maasin**	**4.33**	**342**	*e*P	**Pn**	**16 22 35.3**	**+0.8**
MSLP				*e*S	**Sn**	**16 23 27.8**	**+4.1**
TNTI	**Ternate**	**5.31**	**168**	Pn	**Pn**	**16 22 49.4**	**+1.6**
TNTI	**Ternate**	**5.31**	**168**	P	**Pn**	**16 22 51.1**	**+3.3**
	0.4nm1µm81nm,0.6s						
KMSI	**Cibinong**	**5.83**	**203**	P	**Pn**	**16 22 56.1**	**+1.1**
	0.8nm3µm203nm,0.6s						
GTOI	**Gorontalo**	**6.22**	**211**	P	**Pn**	**16 23 00.1**	**-0.1**
	0.6nm2µm129nm,0.7s						
MRSI	**Marisa**	**6.95**	**218**	P	**Pn**	**16 23 10.8**	**+0.5**
	1.1nm2µm108nm,0.6s						
TOLI2	**Tolitoli**	**7.29**	**228**	Pn	**Pn**	**16 23 12.3**	**-2.6**
MYLDM	**Lahad Datu**	**7.74**	**264**	Pn	**Pn**	**16 23 22.6**	**+1.5**
LUWI	**Luwuk**	**7.79**	**206**		**Pn**	**16 23 24.4**	**+2.6**
LUWI	**Luwuk**	**7.79**	**206**	P	**Pn**	**16 23 20.6**	**-1.3**
	0.8nm2µm174nm,0.8s						
SANI	**Sanana**	**7.99**	**182**	P	**Pn**	**16 23 23.8**	**-0.8**
	0.3nm2µm40nm,0.4s						
APSI	**Ampana**	**8.24**	**214**	P	**Pn**	**16 23 29.2**	**+1.2**
	695nm67nm,0.6s						
SWI	**Sorong**	**8.46**	**143**	P	**Pn**	**16 23 32.3**	**+1.3**
	22nm,0.7s						
SIJI	**Sorong**	**8.47**	**143**	P	**Pn**	**16 23 32.5**	**+1.3**
	1.5nm,0.3s,baz=338,slow=22,SNR=7.7						
SIJI				S	**Sn**	**16 25 04.3**	**-0.9**
	0.7nm,0.3s,baz=336,slow=23,SNR=1.3						
SIJI				LR	LR	16 26 24.0	
	comp=Z,146nm,18.9s,baz=338,slow=34						
NLAI	**Namlea**	**9.21**	**175**	P	**Pn**	**16 23 42.3**	**+1.1**
	11µm67nm,0.5s						
KKM	**Kota Kinabalu**	**9.96**	**271**	Pn	**Pn**	**16 23 53.7**	**+2.1**
FAKI	**Fak Fak**	**10.70**	**146**	Pn	**Pn**	**16 24 01.9**	**+0.4**
TTSI	**Tana Toraja**	**11.03**	**216**	P	Pn	16 24 16.2	+10
BKB	**Balikpapan**	**11.78**	**233**	Pn	**Pn**	**16 24 17.1**	**+0.7**
KAPI	**Kappang**	**12.70**	**211**	P	**Pn**	**16 24 30.7**	**+1.8**
	1.3nm,0.3s,baz=57,slow=5.4,SNR=4.2						
KAPI	**Kappang**	**12.70**	**211**		**Pn**	**16 24 28.4**	**-0.6**
SBUM	**Sibu**	**14.41**	**256**	P	**P**	**16 24 58.4**	**+1.4**
BBKI	**Banjar Baru**	**14.75**	**231**	P	P	16 25 07.9	+7.1
MMRI	**Maumere**	**15.07**	**195**	P	**P**	**16 25 04.6**	**+0.3**
MMRI				IAmb	IAmb	16 25 13.4	
	comp=Z,94nm,1.2s						
SOEI	**Soe**	**15.77**	**187**	Pn	**Pn**	**16 25 09.3**	**-0.1**
SOEI				IAmb	IAmb	16 25 27.4	
	comp=Z,55nm,1.1s						
SOEI	**Soe**	**15.77**	**187**	P	P	16 25 27.5	+15
BATI	**Baumata**	**16.29**	**189**	P	**P**	**16 25 17.3**	**-0.6**
	comp=Z,9.3nm,0.3s,baz=351,slow=1.6,SNR=12						
KSM	**Kuching**	**16.51**	**255**	Pn	**P**	**16 25 19.7**	**-0.7**
TWG	**Pinlang**	**17.46**	**344**	P	**Pn**	**16 25 30.3**	**-0.1**
TPUB	**Ta-pu**	**18.04**	**343**	P	**P**	**16 25 37.1**	**-0.1**
TPUB				IAmb	IAmb	16 25 52.8	
	comp=Z,51nm,1.4s						
SSLB	**Suanglung**	**18.41**	**345**	P	**P**	**16 25 41.4**	**+0.1**
SSLB				IAmb	IAmb	16 25 42.1	
	comp=Z,36nm,1.5s						
DLV	**T Lat**	**18.49**	**290**	P	**P**	**16 25 42.4**	**0.0**
KDU	**Kakadu**	**19.57**	**162**	P	**Pn**	**16 25 57.0**	**+1.2**
	baz=22,SNR=18						
KNMB	**Chin-men Tao**	**19.85**	**339**	P	**P**	**16 25 57.2**	**+0.2**
KNMB				IAmb	IAmb	16 26 08.0	
	comp=Z,36nm,1.0s						
JMZ	**Minamidaito 2**	**20.29**	**13**	P	**P**	**16 26 00.1**	**-1.6**
QIZ	**Qiongzhong**	**20.56**	**311**	P	**P**	**16 26 05.2**	**+0.5**
QIZ				IAmb	IAmb	16 26 08.3	
	comp=Z,18nm,0.9s						
UGM	**Wanagama**	**20.89**	**229**	P	Pn	16 26 10.3	-1.1
FITZ	**Fitzroy Crossi**	**23.94**	**181**	P	**P**	**16 26 39.5**	**0.0**
	comp=Z,6.6nm,0.5s,baz=4.6,slow=11,SNR=59						
FITZ	**Fitzroy Crossi**	**23.94**	**181**	P	**P**	**16 26 40.0**	**+0.5**
	baz=26,SNR=42						
FITZ	**Fitzroy Crossi**	**23.94**	**181**	P	**P**	**16 26 39.3**	**-0.2**
FITZ				IAmb	IAmb	16 27 05.3	
	comp=Z,10nm,0.8s						
KASI	**Kota Agung**	**24.53**	**243**	P	**P**	**16 26 47.9**	**+3.0**
	comp=Z,51nm,1.0s						
KULM	**Kulim**	**25.47**	**270**	P	**P**	**16 26 55.9**	**+2.4**
KULM				IAmb	IAmb	16 26 58.6	
	comp=Z,22nm,1.3s						
PMG	**Port Moresby**	**25.86**	**126**	P	**P**	**16 26 57.0**	**0.0**
	comp=Z,6.9nm,0.9s,baz=300,slow=14,SNR=1.5						
COEN	**Coen**	**25.99**	**140**	P	**P**	**16 26 58.2**	**+0.1**
NJ2	**Nanjing**	**26.83**	**346**	*e*P	**P**	**16 27 07.8**	**+2.2**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.8s						
WRA	**Warramunga Arr**	**26.98**	**163**	P	**P**	**16 27 06.7**	**-0.4**
	comp=Z,2.0nm,0.4s,baz=344,slow=10,SNR=16						
WRA				ScP	**ScP**	**16 34 02.5**	**-0.1**
	comp=Z,0.6nm,0.7s,baz=335,slow=3.2,SNR=3.4						
PSA00	**Pilbara Seismi**	**28.10**	**193**	P	**P**	**16 27 16.6**	**-0.4**
PSA00				IAmb	IAmb	16 27 23.3	
	comp=Z,46nm,1.4s						
ENH	**Enshi**	**28.84**	**329**	P	**P**	**16 27 22.9**	**-0.7**
ENH				IAmb	IAmb	16 27 32.5	
	comp=Z,10nm,1.3s						
GSI	**Gunungsitoli**	**28.97**	**262**	P	**P**	**16 27 23.8**	**-1.2**
GSI				IAmb	IAmb	16 27 24.6	
	comp=Z,10nm,0.7s						
CMAR	**Chiang Mai Arr**	**29.35**	**297**	P	**P**	**16 27 27.8**	**-0.5**
	comp=Z,0.5nm,0.5s,baz=105,slow=6.8,SNR=7.3						
CMAR				LR	LR	16 39 49.6	
	comp=Z,53nm,18.7s,baz=20,slow=38						
KMI	**Kunming**	**29.47**	**313**	⇓P	**P**	**16 27 30.3**	**+0.8**
KMI				pmax	pmax		
	comp=Z,6.0nm,1.3s						
KMI				pmax	pmax		
	comp=Z,180nm,5.1s						
KMI				LR	LR		
	comp=Z,180nm,8.4s						
KMI				LR	LR		
	comp=Z,220nm,6.5s						
KMI				LR	LR		
	comp=Z,130nm,7.0s						
QIS	**Mount Isa**	**29.48**	**154**	P	**P**	**16 27 28.4**	**-0.9**
	baz=32,SNR=15						
MTSU	**Mount Surprise**	**29.89**	**144**	P	**P**	**16 27 28.4**	**-4.5**
	baz=32,SNR=4.6						
JWT	**Wachi**	**30.35**	**15**	P	**P**	**16 27 36.8**	**-0.1**
JWT				IAmb	IAmb	16 27 50.6	
	comp=Z,29nm,1.4s						
AS31	**Alice Springs**	**30.41**	**166**	P	**P**	**16 27 37.4**	**-0.2**
ASAR	**Alice Springs**	**30.41**	**166**	P	**P**	**16 27 37.7**	**+0.1**
	comp=Z,5.8nm,0.6s,baz=344,slow=7.1,SNR=143						
ASAR				PcP	**PcP**	**16 30 36.2**	**+0.1**
	comp=Z,0.6nm,0.5s,baz=340,slow=2.4,SNR=4.2						
ASAR				ScP	**ScP**	**16 34 11.7**	**-1.6**
	comp=Z,0.4nm,0.8s,baz=353,slow=2.9,SNR=3.0						
ASAR	**Alice Springs**	**30.41**	**166**	P	**P**	**16 27 37.4**	**-0.2**
GIRL	**Giralia**	**30.79**	**202**	P	**P**	**16 27 41.4**	**+0.6**
WRKA	**Warakurna**	**30.91**	**176**	P	**P**	**16 27 42.1**	**+0.2**
	baz=33,SNR=25						
KSRS	**Korea Array**	**31.36**	**3**	P	**P**	**16 27 44.4**	**-1.3**
	comp=Z,0.5nm,0.5s,baz=187,slow=10,SNR=1.7						

KSRS				LR	LR	16 39 03.4	
	comp=Z,47nm,21.7s,baz=316,slow=34						
XAN	**Xi'an**	**32.19**	**332**	P	**P**	**16 27 56.4**	**+3.2**
XAN				pmax	pmax		
	comp=Z,10.0nm,0.7s						
XAN	**Xi'an**	**32.19**	**332**	P	**P**	**16 27 53.6**	**+0.5**
XAN				IAmb	IAmb	16 27 57.5	
	comp=Z,10nm,1.1s						
MAJO	**Matsushiro**	**32.33**	**18**	P	**P**	**16 27 53.1**	**-1.1**
MAJO				IAmb	IAmb	16 27 60.0	
	comp=Z,11nm,1.1s						
CD2	**Chengdu**	**32.55**	**322**	P	**P**	**16 27 58.8**	**+2.5**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MEEK	**Meekatharra**	**33.27**	**192**	P	**P**	**16 28 02.1**	**-0.5**
	baz=36,SNR=12						
BJT	**Baijiatuau**	**35.07**	**346**	P	**P**	**16 28 16.0**	**-2.0**
BJT				IAmb	IAmb	16 28 22.4	
	comp=Z,4.6nm,0.8s						
BJI	**Beijing**	**35.09**	**347**	P	**P**	**16 28 19.8**	**+1.7**
BJI				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MORW	**Morawa**	**36.21**	**195**	P	**P**	**16 28 27.7**	**-0.3**
	baz=38,SNR=3.9						
MORW	**Morawa**	**36.21**	**195**	P	**P**	**16 28 26.4**	**-1.5**
LZH	**Lanzhou**	**36.32**	**329**	*e*P	**P**	**16 28 28.1**	**-0.9**
LZH				pP	sP	16 28 52.3	+1.2
LZH				sP	pwP	16 29 03.6	+17
LZH				pmax	pmax		
	comp=Z,16nm,1.0s						
LZH				pmax	pmax		
	comp=Z,80nm,4.9s						
FORT	**Forrest**	**36.60**	**177**	P	**P**	**16 28 31.0**	**-0.3**
QLP	**Quilpie**	**36.78**	**152**	P	**P**	**16 28 30.2**	**-2.6**
	baz=39,SNR=3.3						
HHC	**Hu-ho-hao-te**	**37.11**	**341**	*e*P	**P**	**16 28 36.8**	**+1.2**
HHC				pmax	pmax		
	comp=Z,4.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,180nm,5.7s						
BLDU	**Ballidu**	**37.52**	**194**	P	**P**	**16 28 38.7**	**-0.4**
	baz=40,SNR=8.0						
USA0B	**Ussuriysk Arra**	**38.39**	**7**	P	**P**	**16 28 46.3**	**+0.1**
USA0B				IAmb	IAmb	16 29 05.5	
	comp=Z,13nm,1.4s						
USRK	**Ussuriysk Ar.**	**38.39**	**7**	P	**P**	**16 28 45.9**	**-0.3**
	comp=Z,1.2nm,0.5s,baz=174,slow=7.8,SNR=10						
USRK	**Ussuriysk Ar.**	**38.39**	**7**	P	**P**	**16 28 46.3**	**+0.1**
JEM	**Erimo**	**38.90**	**20**	P	P	16 29 06.3	+16
MUN	**Mundaring**	**38.95**	**194**	P	**P**	**16 28 50.9**	**-0.1**
	baz=41,SNR=5.5						
NWAO	**Narrogin (SRO)**	**39.64**	**192**	P	**P**	**16 28 57.0**	**+0.2**
BBOO	**Buckleboo**	**39.70**	**167**	P	**P**	**16 28 58.0**	**+0.7**
	baz=42,SNR=37						
BBOO	**Buckleboo**	**39.70**	**167**	P	**P**	**16 28 57.8**	**+0.5**
STKA	**Stephens Creek**	**40.41**	**160**	P	**P**	**16 29 03.8**	**+0.6**
	comp=Z,8.2nm,0.5s,baz=336,slow=8.1,SNR=26						
STKA				PcP	**PcP**	**16 31 04.3**	**-0.9**
	comp=Z,0.8nm,0.4s,baz=304,slow=5.3,SNR=3.1						
STKA	**Stephens Creek**	**40.41**	**160**	P	**P**	**16 29 03.9**	**+0.8**
H11S3	**WAKE ISLAND Hy**	**41.33**	**69**	T	T	17 13 21.0	
	SNR=4.3						
H11S1	**WAKE ISLAND Hy**	**41.35**	**69**	T	T	17 13 17.4	
	SNR=3.9						
H11S2	**WAKE ISLAND Hy**	**41.35**	**69**	T	T	17 13 15.7	
	SNR=6.6						
H11N1	**WAKE ISLAND Hy**	**41.79**	**67**	T	T	17 14 16.5	
	baz=257						
H11N2	**WAKE ISLAND Hy**	**41.80**	**67**	T	T	17 14 00.3	
	baz=257						
H11N3	**WAKE ISLAND Hy**	**41.81**	**67**	T	T	17 14 17.8	
	baz=257						
ARMA	**Armidale**	**43.62**	**148**	P	**P**	**16 29 29.5**	**-0.1**
ARMA				IAmb	IAmb	16 29 31.7	
	comp=Z,10nm,1.0s						
ULN	**Ulaanbaatar**	**44.83**	**342**	P	**P**	**16 29 40.9**	**+1.9**
SONM	**Songino Array**	**45.01**	**341**	P	**P**	**16 29 39.7**	**-0.8**
	comp=Z,0.7nm,0.7s,baz=161,slow=7.7,SNR=4.5						
SONM				PcP	**PcP**	**16 31 20.7**	**+0.1**
	comp=Z,0.7nm,0.7s,baz=161,slow=4.4,SNR=2.9						
SONM	**Songino Array**	**45.01**	**341**	P	**P**	**16 29 41.6**	**+1.2**
CAN	**Canberra**	**46.35**	**154**	P	**P**	**16 29 52.7**	**+1.7**
TOO	**Toolangi**	**46.91**	**159**	P	**P**	**16 29 55.1**	**-0.3**
DZM	**Mont Dzumac**	**48.26**	**127**	P	**P**	**16 30 05.3**	**-0.8**
DZM				IAmb	IAmb	16 30 22.3	
	comp=Z,22nm,1.2s						
WMQ	**Urumqi**	**50.60**	**324**	*e*P	**P**	**16 30 25.9**	**+2.2**
PEA0B	**Petropavlovsk-**	**53.55**	**23**	P	**P**	**16 30 46.4**	**+1.1**
PEA0B				IAmb	IAmb	16 30 49.1	
	comp=Z,18nm,1.2s						
PETK	**Petropavlovsk-**	**53.55**	**23**	P	**P**	**16 30 44.9**	**-0.4**
	comp=Z,2.2nm,0.9s,baz=216,slow=1.8,SNR=5.7						
PETK	**Petropavlovsk-**	**53.55**	**23**	P	**P**	**16 30 45.1**	**-0.2**
MK31	**Makanchi Array**	**55.43**	**325**	P	**P**	**16 30 58.5**	**-0.6**
MKAR	**Makanchi Array**	**55.43**	**325**	P	**P**	**16 30 58.0**	**-1.1**
	comp=Z,1.0nm,0.4s,baz=118,slow=6.6,SNR=14						
MKAR				ScP	**ScP**	**16 35 51.9**	**-0.4**
	comp=Z,0.3nm,0.8s,baz=133,slow=4.5,SNR=2.5						
MKAR	**Makanchi Array**	**55.43**	**325**	P	**P**	**16 30 58.2**	**-0.9**
YAK	**Yakutsk**	**55.98**	**2**	P	**P**	**16 31 03.4**	**+0.7**
ZALV	**Zalesovo Beam**	**58.36**	**333**	P	**P**	**16 31 18.6**	**-1.0**
	comp=Z,0.7nm,0.4s,baz=117,slow=6.3,SNR=4.6						
ZALV	**Zalesovo Beam**	**58.36**	**333**	P	**P**	**16 31 20.8**	**+1.1**
KKAR	**Karatay Array**	**61.26**	**316**	P	**P**	**16 31 40.0**	**+0.2**
DCZ	**Deep Cove**	**62.92**	**149**	P	**P**	**16 31 51.5**	**+0.7**
WHZ	**Wether Hill Ro**	**63.62**	**149**	P	**P**	**16 31 54.7**	**-0.7**
WHZ				IAmb	IAmb	16 32 11.6	
	comp=Z,20nm,1.5s						
BKZ	**Black Stump Fm**	**64.59**	**139**	P	**P**	**16 32 01.7**	**-0.3**
TIXI	**Tiksi**	**65.60**	**1**	P	**P**	**16 32 07.5**	**-0.4**
TIXI				IAmb	IAmb	16 32 10.9	
	comp=Z,6.0nm,1.0s						
NIUE	**Niue**	**67.60**	**113**	P	**P**	**16 32 20.1**	**-1.5**
NRIK	**Noril'sk**	**68.13**	**346**	P	**P**	**16 32 23.1**	**-0.9**
	comp=Z,1.7nm,0.5s,baz=138,slow=6.8,SNR=6.6						
NRIK	**Noril'sk**	**68.13**	**346**	P	**P**	**16 32 23.9**	**-0.2**
ABKAR	**Akbulak array**	**70.10**	**320**	P	**P**	**16 32 36.7**	**+0.1**
CASY	**Casey**	**72.99**	**187**	P	**P**	**16 32 54.0**	**+0.5**
BPAW	**Bear Paw Mtn.**	**81.49**	**26**	P	**P**	**16 33 40.8**	**-0.5**
BPAW				IAmb	IAmb	16 33 51.5	
	comp=Z,5.7nm,1.0s						
COLD	**Coldfoot**	**82.02**	**23**	P	**P**	**16 33 45.2**	**+1.1**
I23K	**Minto, Yukon-K**	**82.25**	**25**	P	**P**	**16 33 45.4**	**+0.2**
I23K				IAmb	IAmb	16 33 53.8	
	comp=Z,13nm,1.4s						
TOLK	**Toolik Lake Re**	**82.34**	**22**	P	**P**	**16 33 45.9**	**+0.1**
RND	**Reindeer**	**82.40**	**27**	P	**P**	**16 33 46.0**	**-0.2**
RND				IAmb	IAmb	16 33 59.0	
	comp=Z,4.9nm,0.6s						
HDA	**Harding Lake**	**83.26**	**26**	P	**P**	**16 33 49.5**	**-1.0**
HDA				IAmb	IAmb	16 33 51.6	
	comp=Z,3.1nm,0.7s						
ILAR	**Eielson Array**	**83.29**	**26**	P	**P**	**16 33 50.1**	**-0.5**
	comp=Z,1.4nm,0.6s,baz=251,slow=5.3,SNR=26						
ILAR	**Eielson Array**	**83.29**	**26**	P	**P**	**16 33 49.8**	**-0.9**
VNDA	**Vanda**	**85.72**	**173**	P	**P**	**16 34 03.0**	**+0.4**
	comp=Z,4.2nm,1.0s,baz=331,slow=5.7,SNR=2.6						
ARCES	**ARCESS Array B**	**88.17**	**340**	P	**P**	**16 34 13.5**	**-1.2**
	comp=Z,2.4nm,0.7s,baz=77,slow=6.1,SNR=8.6						
ARCES	**ARCESS Array B**	**88.17**	**340**	IAmb	IAmb	16 34 21.0	
	comp=Z,7.3nm,1.1s						
FINES	**FINESS Array B**	**89.62**	**332**	P	**P**	**16 34 19.9**	**-1.8**
	comp=Z,4.5nm,1.0s,baz=50,slow=6.0,SNR=6.3						
FINES				LR	LR	17 20 49.3	
	comp=Z,335nm,19.1s,baz=266,slow=40						
YKA	**Yellowknife Ar**	**97.65**	**24**	P	**P**	**16 34 58.3**	**-0.3**
	comp=Z,0.3nm,0.8s,baz=303,slow=3.9,SNR=6.9						
TORD	**Torodi Ar. Bea**	**121.73**	**289**	PKP	**PKPdf**	**16 40 17.8**	**-1.1**
	comp=Z,0.9nm,0.6s,baz=68,slow=1.8,SNR=5.2						
PLCA	**Paso Flores**	**142.28**	**159**	PKhKP	PKPpre	16 40 52.8	
	comp=Z,0.9nm,0.7s,baz=225,slow=1.4,SNR=3.4						
CPUP	**Villa Florida**	**159.49**	**171**	PKPab	**PKPab**	**16 42 01.3**	**+0.1**
	comp=Z,0.8nm,0.4s,baz=207,slow=8.3,SNR=3.4						

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*TIF **23** 16:43:38.6, 43.°35N×45.°06E, h4^{km}±2^{km}*

*DRS **23** 16:43:39.5±0.0, 43.°01N×45.°04E, h18^{km}, ML2.8/6*

*NORS **23** 16:43:40.0±0.0, 43.°18N×45.°08E, h19^{km}, MPVA3.6*

*MOS **23** 16:43:40.3±0.0, 43.°20N×45.°06E, h17^{km}, MPVA3.6*

ISC 23 16:43:40.8±1.0**, 43.°24N**±0.°03×**45.°03E**±0.°02**, h13**^{km}±8^{km}**, n41, σ1.^{s}18**/80**, 4C-8D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KMGR	**Komgaron**	**0.22**	**213**	*e*Pg	**Pb**	**16 43 45.8**	**-0.9**
KMGR				*e*Sg	**Sg**	**16 43 51.2**	**+2.4**
VLKR	**Vladikavkaz**	**0.32**	**233**	*i* Pg	**Pb**	**16 43 48.1**	**-0.4**
VLKR				*e*Sg	**Sb**	**16 43 52.8**	**-0.8**
BTKR	**Batakoyurt**	**0.38**	**290**	*e*Pg	**Pb**	**16 43 49.6**	**+0.2**
BTKR				*e*Sg	**Sb**	**16 43 56.5**	**+1.3**
TRKR	**Terskaya**	**0.53**	**336**	*e*Pg	**Pb**	**16 43 52.1**	**+0.2**
TRKR				*e*Sg	**Sn**	**16 44 02.2**	**-0.7**
ARNR	**Ardon**	**0.55**	**264**	*e*Pg	**Pn**	**16 43 53.5**	**-0.8**
ARNR				*e*Sg	**Sn**	**16 44 04.2**	**+0.8**
GROC	**Groznyy**	**0.56**	**94**	*e*Pg	**Pb**	**16 43 52.7**	**+0.2**
GROC				*e*Sg	**Sb**	**16 44 02.0**	**+1.5**
LACR	**Lac**	**0.68**	**232**	*e*Pg	**Pn**	**16 43 54.9**	**-1.3**
LACR				*e*Sg	**Sn**	**16 44 07.4**	**+0.7**
PNSH	**Pansheti**	**0.68**	**207**	P	**Pn**	**16 43 54.8**	**-1.5**
PNSH				S	**Sn**	**16 44 05.9**	**-0.9**
STDR	**Stavd-Durt**	**0.71**	**281**	*e*Pg	**Pn**	**16 43 56.6**	**-0.1**
STDR				*e*Sg	**Sn**	**16 44 09.1**	**+1.6**
KORR	**Kora**	**0.72**	**258**	*e*Pg	**Pn**	**16 43 56.6**	**-0.2**
KORR				*e*Sg	**Sn**	**16 44 07.6**	**-0.1**
PRTR	**Priterechnaya**	**0.74**	**313**	*e*Pg	**Pn**	**16 43 57.3**	**+0.3**
PRTR				*e*Sg	**Sn**	**16 44 10.8**	**+2.5**
DVE	**Vedeno**	**0.85**	**109**	*e*Pg	**Pg**	**16 43 56.1**	**-1.2**
DVE				*e*Sg	**Sb**	**16 44 08.9**	**0.0**
GUDG	**Gudauri**	**0.88**	**208**	P	**Pn**	**16 43 59.3**	**+0.3**
GUDG				S	**Sn**	**16 44 12.7**	**+0.9**
LSNR	**Lesken**	**0.88**	**273**	*e*Pg	**Pn**	**16 43 58.8**	**-0.1**
LSNR				*e*Sg	**Sn**	**16 44 14.1**	**+2.5**
ZEI	**Tsey**	**0.94**	**242**	*e*Pg	**Pn**	**16 43 59.7**	**-0.3**
ZEI				*e*Sg	**Sn**	**16 44 14.3**	**+0.9**
BTLR	**Botlikh**	**1.05**	**123**	⇓*e*Pg	**Pg**	**16 44 00.1**	**-1.0**
	41nm,0.7s						
BTLR				⇓*e*Sg	**Sb**	**16 44 14.5**	**-0.2**
	123nm,0.6s						
NCK	**Nalchik**	**1.07**	**284**	*e*Pg	**Pn**	**16 44 02.4**	**+0.8**
NCK				*e*Sg	**Sn**	**16 44 19.4**	**+3.0**
DIGR	**Digorskoe uzhe**	**1.11**	**253**	*e*Pg	**Pn**	**16 44 01.7**	**-0.6**
DIGR				*e*Sg	**Sn**	**16 44 18.4**	**+0.7**
ONI	**Oni**	**1.33**	**241**	P	**Pg**	**16 44 05.1**	**-1.2**
ONI				S	**Sg**	**16 44 25.7**	**+2.1**
ONI	**Oni**	**1.33**	**241**	*e*Pg	**Pg**	**16 44 06.2**	**-0.1**
ONI				*e*Sg	**Sg**	**16 44 25.7**	**+2.1**
DBC	**Dubki**	**1.34**	**99**	⇑*e*Pg	**Pn**	**16 44 05.5**	**+0.2**
	61nm,0.3s						
DBC				⇓*e*Sg	**Sn**	**16 44 23.4**	**+0.4**
	218nm,0.3s						
KRNR	**Karanay**	**1.44**	**106**	⇑*e*Pg	**Pn**	**16 44 06.8**	**+0.1**
	23nm,0.5s						
KRNR				⇓*e*Sg	**Sb**	**16 44 26.4**	**+0.6**
	175nm,0.7s						
BTNK	**Botanikuri**	**1.57**	**186**	P	**Pg**	**16 44 11.5**	**+0.6**
BTNK				S	**Sg**	**16 44 34.9**	**+3.7**
ARKR	**Arakani**	**1.58**	**113**	⇑*e*Pg	**Pb**	**16 44 10.0**	**+0.1**
	21nm,0.5s						
ARKR				⇑*e*Sg	**Sg**	**16 44 30.8**	**-0.8**
	59nm,0.3s						
BUJR	**Buynaksk**	**1.58**	**105**	*e*Pg	**Pb**	**16 44 09.8**	**-0.1**
BUJR				*e*Sg	**Sg**	**16 44 31.4**	**-0.3**
KBZ	**Khabaz**	**1.62**	**288**	*e*Pg	**Pb**	**16 44 10.0**	**-0.6**
KBZ				*e*Sg	**Sg**	**16 44 32.9**	**-0.1**
PYA1	**Pyatigorsk**	**1.62**	**301**	*e*Pg	**Pb**	**16 44 09.7**	**-1.0**
PYA1				*e*Sg	**Sg**	**16 44 31.9**	**-1.1**
GNBR	**Gunib**	**1.66**	**120**	⇓*e*Pg	**Pb**	**16 44 11.2**	**-0.1**
	25nm,0.8s						
GNBR				⇓*e*Sg	**Sg**	**16 44 33.2**	**-1.1**
	83nm,0.5s						
LGD	**Lagodekhi**	**1.67**	**147**	P	**Pb**	**16 44 11.4**	**0.0**
NEY	**Neytrino**	**1.68**	**271**	*e*Pg	**Pb**	**16 44 11.1**	**-0.7**
NEY				*e*Sg	**Sg**	**16 44 34.5**	**-0.5**
BEYR	**Belyy Ugol+**	**1.78**	**296**	*e*Pg	**Pb**	**16 44 12.8**	**-0.5**
BEYR				*e*Sg	**Sb**	**16 44 35.9**	**+0.3**
SHA1	**Shidzhatmaz**	**1.79**	**287**	*e*Pg	**Pb**	**16 44 13.4**	**-0.2**
SHA1				*e*Sg	**Sg**	**16 44 39.0**	**+0.4**
MAK	**Makhachkala**	**1.84**	**98**	*e*Pg	**Pn**	**16 44 11.4**	**-0.7**
MAK				*e*Sg	**Sb**	**16 44 38.5**	**+1.3**
KIV0	**Kislovodsk Arr**	**1.84**	**294**	*e*Pg	**Pb**	**16 44 13.3**	**-1.1**
KIV0				*e*Sg	**Sb**	**16 44 36.0**	**-1.3**
KIV	**Kislovodsk**	**1.84**	**294**	*e*Pg	**Pb**	**16 44 13.1**	**-1.3**
KIV				*e*Sg	**Sg**	**16 44 38.4**	**-1.7**
BRNG	**Burnasheti**	**1.85**	**209**	P	**Pg**	**16 44 14.6**	**-1.6**
BRNG				S	**Sg**	**16 44 41.5**	**+1.4**
BKRG	**Bakuriani**	**1.85**	**217**	P	**Pg**	**16 44 15.3**	**-1.0**
BKRG				S	**Sg**	**16 44 41.8**	**+1.4**
DDFL	**Dedoflistskaro**	**1.97**	**155**	P	**Pg**	**16 44 18.6**	**0.0**
DMNI	**Dmanisi**	**2.01**	**198**	P	**Pb**	**16 44 16.1**	**-1.2**
DMNI				S	**Sg**	**16 44 43.4**	**-2.1**
URKR	**Urkarakh**	**2.20**	**118**	*e*Pg	**Pb**	**16 44 20.3**	**-0.3**
URKR				*e*Sg	**Sn**	**16 44 45.6**	**+1.2**
AKT	**Akhty**	**2.67**	**130**	⇓*e*Pn	**Pb**	**16 44 27.5**	**-1.0**
	7.8nm,0.6s						
AKT				⇓*e*Sn	**Sn**	**16 44 56.4**	**+0.6**
	20nm,0.8s						

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*IDC **23** 17:15:50.4±2.0, 26.°42S×71.°45E, h0^{km}, mb4.1/8, mb1 4.2/8, mb1mx3.9/34, mbtmp4.1/8, MS3.9/6, Ms1 3.9/6, ms1mx3.6/39, Error ellipse: s-maj=64.2km s-min=26.9km az=41.0*

*NEIC **23** 17:15:52.3±1.1, 26.°4S±0.°2×71.°5E±0.°2, h10^{km}±2^{km}, mb4.5/11, Error ellipse: s-maj=36.7km s-min=30.4km az=242.0*

ISC 23 17:15:52.0±2.1**, 26.°4S**±0.°4×**71.°5E**±0.°3**, h10**^{km}**, n32, σ0.^{s}56**/24**, mb4.3**/14**, MS4.0**/6**, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**37.42**	**114**	T	T	18 02 39.3	
	baz=271,slow=75,SNR=5.5						
H01W3	**Cape Leeuwin H**	**37.43**	**114**	T	T	18 02 37.8	
	baz=271,slow=75,SNR=6.8						
H01W1	**Cape Leeuwin H**	**37.44**	**114**	T	T	18 02 40.3	
	baz=271,slow=75,SNR=7.8						
BOSA	**Boshof**	**40.85**	**256**	LR	LR	17 36 35.8	
	comp=Z,220nm,19.0s,baz=162,slow=30						
CMAR	**Chiang Mai Arr**	**52.00**	**34**	P	**P**	**17 25 02.0**	**+0.4**
	1.6nm,1.0s,baz=221,slow=7.5,SNR=16						
CMAR				LR	LR	17 43 01.4	
	comp=Z,64nm,19.4s,baz=276,slow=31						
CMAR	**Chiang Mai Arr**	**52.00**	**34**	P	**P**	**17 25 01.4**	**-0.3**
ASAR	**Alice Springs**	**56.14**	**102**	P	**P**	**17 25 32.4**	**+0.3**
	2.4nm,0.9s,baz=246,slow=7.2,SNR=17						
ASAR	**Alice Springs**	**56.14**	**102**	P	**P**	**17 25 32.6**	**+0.6**
WRA	**Warramunga Arr**	**57.67**	**98**	P	**P**	**17 25 43.3**	**+0.3**
	3.1nm,0.9s,baz=257,slow=7.2,SNR=5.4						
WB2	**Warramunga Arr**	**57.68**	**98**	P	**P**	**17 25 43.1**	**+0.1**
WB2				IAmb	IAmb	17 25 44.3	
	comp=Z,12nm,1.2s						
WB0	**Warramunga Arr**	**57.77**	**98**	P	**P**	**17 25 43.9**	**+0.2**
WR0	**Warramunga Arr**	**57.84**	**98**	P	**P**	**17 25 44.0**	**-0.2**
KKAR	**Karatay Array**	**69.20**	**359**	P	**P**	**17 26 59.3**	**+0.6**
KKAR	**Karatay Array**	**69.20**	**359**	P	**P**	**17 26 59.4**	**+0.6**
KKAR				IAmb	IAmb	17 27 00.2	
	comp=Z,4.8nm,1.1s						
MK31	**Makanchi Array**	**73.54**	**8**	P	**P**	**17 27 24.2**	**-0.7**
MK31				IAmb	IAmb	17 27 25.1	
	comp=Z,4.1nm,1.1s						
MKAR	**Makanchi Array**	**73.54**	**8**	P	**P**	**17 27 24.3**	**-0.5**
	comp=Z,4.0nm,0.9s,baz=196,slow=6.3,SNR=28						
MKAR	**Makanchi Array**	**73.54**	**8**	P	**P**	**17 27 23.9**	**-1.0**
BRTR	**Keskin Array B**	**74.68**	**331**	P	**P**	**17 27 32.9**	**+1.1**
	comp=Z,0.5nm,0.7s,baz=138,slow=8.9,SNR=3.6						
ANTO	**Ankara**	**75.17**	**330**	P	**P**	**17 27 34.1**	**-0.4**
ABKAR	**Akbulak array**	**76.05**	**352**	P	**P**	**17 27 39.2**	**-0.1**
ABKAR	**Akbulak array**	**76.05**	**352**	P	**P**	**17 27 39.2**	**-0.1**
ABKAR				IAmb	IAmb	17 28 04.1	
	comp=Z,1.6nm,0.8s						
KURK	**Kurchatov**	**77.07**	**5**	P	**P**	**17 27 45.2**	**+0.2**
KURK				IAmb	IAmb	17 27 46.2	
	comp=Z,5.8nm,1.1s						
AKTO	**Aktyubinsk**	**77.46**	**351**	LR	LR	18 01 44.3	
	comp=Z,116nm,18.4s,baz=302,slow=36						
SONM	**Songino Array**	**80.33**	**23**	P	**P**	**17 28 03.3**	**+0.1**
	comp=Z,0.8nm,0.8s,baz=212,slow=5.3,SNR=4.6						
SONM	**Songino Array**	**80.33**	**23**	P	**P**	**17 28 02.9**	**-0.3**
ZAA0	**Zalesovo Array**	**80.88**	**8**	P	**P**	**17 28 05.3**	**-0.5**
ZAA0				IAmb	IAmb	17 28 06.0	
	comp=Z,4.3nm,1.0s						
ZALV	**Zalesovo Beam**	**80.88**	**8**	P	**P**	**17 28 05.3**	**-0.5**
	comp=Z,2.6nm,0.8s,baz=198,slow=4.2,SNR=12						
GUMO	**Guam**	**81.62**	**70**	LR	LR	17 57 34.7	
	comp=Z,23nm,21.8s,baz=112,slow=31						
KSRS	**Korea Array**	**82.75**	**42**	P	**P**	**17 28 16.1**	**+0.1**
	comp=Z,1.0nm,0.8s,baz=215,slow=7.6,SNR=4.4						
KSRS				LR	LR	18 04 26.9	
	comp=Z,57nm,18.7s,baz=329,slow=35						
ARU	**Arti**	**83.27**	**353**	LR	LR	18 02 11.4	
	comp=Z,74nm,18.1s,baz=285,slow=33						
ILAR	**Eielson Array**	**134.54**	**22**	PKP	**PKPdf**	**17 35 08.8**	**-1.0**
	comp=Z,0.4nm,1.0s,baz=272,slow=5.1,SNR=3.2						
YKA	**Yellowknife Ar**	**143.72**	**5**	PKP	PKPbc	17 35 23.9	-0.2
	comp=Z,0.2nm,0.6s,baz=326,slow=2.7,SNR=6.0						

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*NOU **23** 17:26:59.6, 41.°98S×175.°01E, h9^{km}, MLv3.6, North Island, New Zealand*

WEL 23 17:27:01.4, 42°S±1°×**17°5E**±°**, h41**^{km}±2^{km}**, M3.5**/42**, ML3.7**/42**, MLv3.5**/42**, Error ellipse: s-maj=0.0km s-min=0.0km az=108.2, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
PLWZ	**Palliser**	**0.39**	**41**	P	Pn	17 27 11.7	+0.8
PLWZ				S	Sn	17 27 18.8	+1.3
BHW	**Baring Head**	**0.46**	**356**	P	Pn	17 27 11.6	0.0
BHW				S	Sn	17 27 18.2	-0.6
MSWZ	**Moikau Station**	**0.52**	**29**	P	Pn	17 27 13.1	+0.7
MSWZ				S	Sn	17 27 21.0	+0.9
CMWZ	**Cape Campbell**	**0.54**	**282**	P	Pn	17 27 13.4	+0.7
CMWZ				S	Sn	17 27 22.7	+2.1
WEL	**Wellington**	**0.59**	**349**	P	Pn	17 27 13.6	+0.2
PAWZ	**Paruwai Farm**	**0.62**	**39**	P	Pn	17 27 14.7	+0.9
PAWZ				S	Sn	17 27 24.1	+1.5
TRWZ	**Traveller**	**0.75**	**51**	P	Pn	17 27 16.5	+1.0
CAW	**Cannon Point**	**0.77**	**9**	P	Pn	17 27 16.6	+0.9
CAW				S	Sn	17 27 26.9	+0.7
BSWZ	**Blackbirch Sta**	**0.79**	**281**	P	Pn	17 27 16.8	+0.7
TCW	**Tory Channel**	**0.81**	**324**	P	Pn	17 27 16.6	+0.3
TCW				S	Sn	17 27 26.7	-0.5
MTW	**Mount Morrison**	**0.83**	**32**	P	Pn	17 27 17.5	+0.8
TUWZ	**Tuamarina**	**0.85**	**301**	P	Pn	17 27 17.1	+0.3
TUWZ				S	Sn	17 27 28.5	+0.4
KIW	**Kapiti Island**	**1.00**	**360**	P	Pn	17 27 20.0	+0.9
TMWZ	**Te Maipa**	**1.06**	**44**	P	Pn	17 27 20.5	+0.8
OGWZ	**Otaki Gorge**	**1.07**	**11**	P	Pn	17 27 20.8	+0.9
OGWZ				S	Sn	17 27 34.3	+0.8
HOWZ	**Holdsworth Sta**	**1.07**	**25**	P	Pn	17 27 20.9	+1.0
KHZ	**Kahutara**	**1.16**	**241**	P	Pn	17 27 22.1	+1.0
DUWZ	**D’Urville Isla**	**1.30**	**325**	P	Pn	17 27 24.3	+1.2
MRZ	**Mangatainoka R**	**1.30**	**23**	P	Pn	17 27 24.1	+0.9
TIWZ	**Tintock**	**1.31**	**34**	P	Pn	17 27 24.0	+0.8
NNZ	**Nelson**	**1.32**	**299**	P	Pn	17 27 24.4	+1.1
THZ	**Tophouse**	**1.50**	**273**	P	Pn	17 27 26.7	+0.8
PRWZ	**Pori Road**	**1.53**	**32**	P	Pn	17 27 27.2	+0.9
BFZ	**Birch Farm**	**1.55**	**41**	P	Pn	17 27 27.1	+0.6
POWZ	**Post Office Ro**	**1.61**	**24**	P	Pn	17 27 28.6	+1.3
OHWZ	**Ohakea**	**1.69**	**11**	P	Pn	17 27 30.9	+2.5
GVZ	**Greta Valley S**	**1.77**	**231**	P	Pn	17 27 30.6	+1.1
DVHZ	**Dannevirke**	**1.83**	**32**	P	Pn	17 27 30.8	+0.4
ANWZ	**Angora Road**	**1.83**	**41**	P	Pn	17 27 30.8	+0.5
ANWZ				S	Sn	17 27 53.3	+1.0
TSZ	**Takapari Road**	**1.97**	**24**	P	Pn	17 27 33.3	+1.0
PRHZ	**Porangahau**	**2.06**	**40**	P	Pn	17 27 33.7	+0.2
QRZ	**Quartz Range**	**2.07**	**299**	P	Pn	17 27 35.6	+1.9
WAZ	**Wanganui**	**2.11**	**2**	P	Pn	17 27 37.4	+3.2
WPHZ	**Waipukurau**	**2.14**	**33**	P	Pn	17 27 36.2	+1.6
LTZ	**Lake Taylor**	**2.16**	**244**	P	Pn	17 27 35.9	+1.0
LTZ				S	Sn	17 27 60.0	-0.5
PNHZ	**Pukenui**	**2.18**	**27**	P	Pn	17 27 35.7	+0.5
OKCZ	**Okains Bay**	**2.30**	**216**	P	Pn	17 27 37.4	+0.6
DSZ	**Denniston Nort**	**2.33**	**272**	P	Pn	17 27 39.0	+1.8
LREZ	**Lake Rotokare**	**2.44**	**351**	P	Pn	17 27 42.3	+3.7
MQZ	**McQueen’s Vall**	**2.48**	**221**	P	Pn	17 27 39.3	+0.1
KRHZ	**Kereru**	**2.48**	**27**	P	Pn	17 27 41.6	+2.3
MTVZ	**Mangateitei**	**2.52**	**10**	P	Pn	17 27 42.1	+2.3
BHHZ	**Black Hill Sta**	**2.53**	**21**	P	Pn	17 27 41.2	+1.2
MOVZ	**Moawhango**	**2.54**	**15**	P	Pn	17 27 41.6	+1.4
KAHZ	**Kahuranaki**	**2.55**	**36**	P	Pn	17 27 40.4	+0.2
OXZ	**Oxford**	**2.58**	**235**	P	Pn	17 27 40.6	+0.1
WNVZ	**Wahianoa**	**2.59**	**12**	P	Pn	17 27 42.9	+2.0
PKVZ	**Pokaka**	**2.59**	**7**	P	Pn	17 27 43.2	+2.3
TRVZ	**Turoa**	**2.61**	**11**	P	Pn	17 27 43.5	+2.2
WHVZ	**Whangaehu Hut**	**2.63**	**11**	P	Pn	17 27 43.7	+2.1
FWVZ	**Far West T-bar**	**2.65**	**11**	P	Pn	17 27 43.9	+2.0
TUVZ	**Tukino**	**2.66**	**13**	P	Pn	17 27 43.9	+2.1
KHEZ	**Kahui Hut**	**2.66**	**345**	P	Pn	17 27 46.4	+4.6
NEZ	**North Egmont**	**2.67**	**346**	P	Pn	17 27 46.9	+5.0
INZ	**Inchbonnie**	**2.71**	**250**	P	Pn	17 27 43.5	+1.1
NGZ	**Ngauruhoe**	**2.74**	**11**	P	Pn	17 27 45.1	+2.1
VRZ	**Vera Road**	**2.74**	**357**	P	Pn	17 27 45.7	+2.9
OTVZ	**Oturere**	**2.76**	**12**	P	Pn	17 27 45.4	+2.1
PKE	**Pukeiti**	**2.76**	**345**	P	Pn	17 27 50.9	+7.7
RACZ	**Rakaia**	**2.76**	**227**	P	Pn	17 27 43.3	+0.2
ETVZ	**East Tongariro**	**2.79**	**13**	P	Pn	17 27 45.7	+2.0
WTVZ	**West Tongariro**	**2.80**	**11**	P	Pn	17 27 46.0	+2.2
TMVZ	**Te Maari**	**2.81**	**13**	P	Pn	17 27 45.7	+1.7
KRVZ	**Karewarewa**	**2.82**	**12**	P	Pn	17 27 46.4	+2.3
BKZ	**Black Stump Fm**	**2.95**	**25**	P	Pn	17 27 46.5	+0.6
RITZ	**Rihia Road**	**2.98**	**14**	P	Pn	17 27 54.3	+8.2
WACZ	**Wakanui South**	**3.07**	**226**	P	Pn	17 27 47.7	+0.5
MRHZ	**Matea Rd**	**3.24**	**21**	P	Pn	17 27 51.1	+1.4
WVZ	**Waitaha Valley**	**3.32**	**247**	P	Pn	17 27 52.0	+1.3
HIZ	**Hauiti**	**3.35**	**359**	P	Pn	17 27 53.7	+2.5
MTHZ	**Maungataniwha**	**3.35**	**27**	P	Pn	17 27 53.3	+2.0
RPZ	**Rata Peaks**	**3.39**	**236**	P	Pn	17 27 52.3	+0.6
ARCZ	**Arundel**	**3.44**	**232**	P	Pn	17 27 52.8	+0.3
GCSZ	**Gaunt Creek Bo**	**3.68**	**245**	P	Pn	17 27 57.1	+1.3
TMZ	**Timaru**	**3.81**	**227**	P	Pn	17 27 58.0	+0.5
LBZ	**Lake Benmore**	**4.28**	**232**	P	Pn	17 28 04.7	+0.8
ODZ	**Otahua Downs**	**4.44**	**223**	P	Pn	17 28 06.7	+0.5
JCZ	**Jackson Bay**	**5.01**	**242**	P	Pn	17 28 14.7	+0.6
CTZ	**Chatham Island**	**6.50**	**110**	P	Pn	17 28 36.1	+1.6

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*IDC **23** 17:50:30.9±5.5, 9.°46S×118.°64E, h72^{km}±51^{km}, mb2.9/2, mb1 3.4/6, mb1mx3.1/48, mbtmp3.5/6, ML3.5/4, MS3.2/1, Ms1 3.4/1, ms1mx2.8/7, Error ellipse: s-maj=87.6km s-min=21.0km az=63.0*

ISC 23 17:50:28.6±1.4**, 9.°56S**±0.°09×**118.°7E**±0.°1**, h48**^{km}**, n7, σ3.^{s}63**/8**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KAPI	**Kappang**	**4.63**	**13**	P	**Pn**	**17 51 38.6**	**+2.6**
	1.7nm,0.3s,baz=200,slow=7.0,SNR=15						
KAPI				S	**Sn**	**17 52 25.2**	**-3.3**
	13nm,0.3s,baz=348,slow=24,SNR=23						
BATI	**Baumata**	**4.90**	**98**	P	**Pn**	**17 51 42.5**	**+2.7**
	7.7nm,0.3s,baz=272,slow=4.2,SNR=14						
BATI				S	**Sn**	**17 52 33.7**	**-1.6**
	3.1nm,0.3s,baz=330,slow=20,SNR=3.8						
FITZ	**Fitzroy Crossi**	**10.81**	**142**	P	**Pn**	**17 53 03.7**	**+2.9**
	0.3nm,0.3s,baz=330,slow=10,SNR=24						
FITZ				S	**Sn**	**17 54 55.5**	**-4.9**
	0.4nm,0.3s,baz=196,slow=18,SNR=9.1						
WRA	**Warramunga Arr**	**18.27**	**126**	P	**Pn**	**17 54 40.5**	**+1.8**
	0.1nm,0.3s,baz=307,slow=11,SNR=2.6						
ASAR	**Alice Springs**	**20.17**	**136**	P	Pn	17 55 02.4	+1.0
	0.3nm,0.3s,baz=314,slow=9.6,SNR=18						
CMAR	**Chiang Mai Arr**	**34.01**	**325**	LR	LR	18 12 39.8	
	comp=Z,32nm,18.0s,baz=205,slow=39						
MKAR	**Makanchi Array**	**64.83**	**333**	P	**P**	**18 01 01.0**	**-1.5**
	0.1nm,0.4s,baz=133,slow=5.9,SNR=5.6						

WEL 23 17:51:58.0, 36°S±11°×**17°9E**±2°5**, h298**^{km}±14^{km}**, M3.5**/24**, mB4.5**/1**, MLv3.5**/24**, Mw(mB)3.7**/1**, Error ellipse: s-maj=0.0km s-min=0.0km az=86.1, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**2.23**	**186**	P	Pn	17 52 46.7	+0.4
WMGZ				S	S	17 53 22.4	-2.5
HAZ	**Te Kaha**	**2.28**	**199**	P	Pn	17 52 47.4	+0.6
PKGZ	**Pakihiroa**	**2.34**	**193**	P	Pn	17 52 47.4	0.0
RUGZ	**Raukumara Rang**	**2.50**	**199**	P	Pn	17 52 49.0	+0.1
MWZ	**Matawai**	**2.89**	**199**	P	Pn	17 52 53.6	+1.1
MWZ				S	S	17 53 33.7	-2.2
CNGZ	**Carnagh Statio**	**2.91**	**188**	P	Pn	17 52 54.0	+1.4
URZ	**Urewera**	**2.95**	**205**	P	Pn	17 52 53.3	+0.3
URZ				S	S	17 53 34.7	-2.2
RAGZ	**Rawiri**	**3.07**	**199**	P	Pn	17 52 55.6	+1.3
RAGZ				S	S	17 53 38.2	-1.1
RIGZ	**Rimuhau**	**3.19**	**194**	P	Pn	17 52 57.3	+1.8
RIGZ				S	S	17 53 39.8	-1.7

MUGZ	Murupara	3.27	208	P	Pn	17 52 57.4	+1.2
MUGZ				S	S	17 53 41.2	-1.6
RTZ	Ruatahuna	3.31	204	P	Pn	17 52 57.3	+0.6
KNZ	Kokohu	3.51	193	P	Pn	17 52 59.8	+1.1
RAHZ	Arahi	3.56	201	P	Pn	17 52 59.3	+0.1
RAHZ				S	S	17 53 47.7	-0.6
MTHZ	Maungataniwha	3.57	204	P	Pn	17 53 01.2	+1.7
MRHZ	Matea Rd	3.71	209	P	Pn	17 53 02.7	+1.8
NMHZ	Naumai	3.81	203	P	Pn	17 53 04.4	+2.5
ARHZ	Aropaoanui	3.90	200	P	Pn	17 53 05.1	+2.2
KWHZ	Kaweka Forest	4.23	205	P	Pn	17 53 08.3	+1.7
TMVZ	Te Maari	4.25	213	P	Pn	17 53 09.6	+2.7
ETVZ	East Tongariro	4.26	213	P	Pn	17 53 08.7	+1.6
OTVZ	Oturere	4.31	213	P	Pn	17 53 09.5	+1.9
BHHZ	Black Hill Sta	4.42	208	P	Pn	17 53 10.7	+2.0
KAHZ	Kahuranaki	4.43	199	P	Pn	17 53 10.8	+2.0
KRHZ	Kereru	4.44	204	P	Pn	17 53 10.6	+1.6
MOVZ	Moawhango	4.47	211	P	Pn	17 53 10.0	+0.7
PXZ	Pawanui	4.66	198	P	Pn	17 53 13.7	+2.4
PXZ				S	S	17 54 06.8	-3.5
PNHZ	Pukenui	4.74	204	P	Pn	17 53 12.3	-0.1
PRHZ	Porangahau	4.94	199	P	Pn	17 53 16.5	+1.9
PRHZ				S	S	17 54 17.6	+1.5
TSZ	Takapari Road	4.96	205	P	Pn	17 53 16.5	+1.7
BFZ	Birch Farm	5.43	200	P	Pn	17 53 22.5	+2.1
BFZ				S	S	17 54 25.9	-0.8

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*MOS **23** 18:06:14.4±0.0, 43.°74N×41.°19E, h1km, ML2.7/8, MPVA3.8*

*NORS **23** 18:06:20.0±0.0, 43.°69N×41.°57E, h1km, MPVA3.5*

ISC 23 18:06:14.8±1.0, **43.°75N**±0.°03×**41.°20E**±0.°02, **h8**km±10km, **n27**, σ**0ˢ94**/52, **Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARXR	Arkhyz	0.19	164	*e*Pg	Pg	18 06 18.9	+0.2
	1µm,0.2s						
ARXR				*e*Sg	Sg	18 06 21.9	+0.5
AHMR	Akhmetovskaya	0.43	345	*i* Pg	Pg	18 06 23.7	+0.6
AHMR				*i* Sg	Sg	18 06 29.8	+1.1
RPOR	Krasnaya Polya	0.68	266	*i* Pg	Pg	18 06 27.2	-0.7
	23nm,0.1s						
RPOR				*i* Sg	Sg	18 06 36.1	-0.6
	136nm,0.2s						
GUZR	Guzeripl'	0.82	288	*e*Pg	Pg	18 06 29.4	-1.1
	86nm,0.2s						
GUZR				*i* Sg	Sg	18 06 40.1	-1.2
	302nm,0.2s						
VSLR	Vesyoloye	0.90	252	*e*Pg	Pg	18 06 32.3	+0.3
VSLR				*e*Sg	Sg	18 06 43.9	+0.3
LABN	Labinsk	0.96	339	*e*Pg	Pg	18 06 33.7	+0.5
	385nm,0.3s						
LABN				*i* Sg	Sb	18 06 47.0	+0.5
	398nm,0.6s						
SHA1	Shidzhatmaz	1.06	90	*i* Pg	Pg	18 06 34.7	-0.3
	70nm,0.3s						
SHA1				*i* Sg	Sg	18 06 48.5	-0.3
	296nm,0.2s						
SOC	Sochi	1.09	262	*e*Pg	Pg	18 06 34.3	-1.4
	9.0nm,0.2s						
SOC				*i* Sg	Sg	18 06 48.3	-1.5
	37nm,0.2s						
CHVG	Ch'k'valeri	1.21	148	P	Pn	18 06 39.7	+1.6
NEY	Neytrino	1.21	114	*e*Pg	Pg	18 06 37.4	-0.7
	118nm,0.4s						
NEY				*i* Sg	Sg	18 06 52.3	-1.5
	114nm,0.3s						
KBZ	Khabaz	1.23	90	*i* Pg	Pb	18 06 37.6	-0.7
KBZ				*i* Sg	Sg	18 06 53.3	-1.0
LZRR	Lazarevskoye	1.33	279	*i* Pg	Pn	18 06 39.5	-0.2
	35nm,0.4s						
LZRR				*i* Sg	Sb	18 06 57.4	+0.2
	80nm,0.5s						
TPSR	Tuapse	1.56	283	*e*Pg	Pn	18 06 44.0	+1.3
TPSR				*i* Sg	Sb	18 07 05.1	+1.4
	33nm,0.6s						
NCK	Nalchik	1.76	97	*e*Pg	Pb	18 06 47.6	+0.3
NCK				*e*Sg	Sg	18 07 10.8	-0.4
DIGR	Digorskoe uzhe	1.93	115	*e*Pg	Pg	18 06 52.1	+0.3
DIGR				*e*Sg	Sg	18 07 15.8	-1.1
LSNR	Lesken	1.97	103	*e*Pg	Pg	18 06 52.2	-0.3
LSNR				*e*Sg	Sg	18 07 17.1	-0.8
ONI	Oni	2.01	124	P	Pg	18 06 53.1	-0.3
ONI				S	Sg	18 07 21.6	+2.2
ONI	Oni	2.01	124	*e*Pg	Pg	18 06 53.1	-0.3
ONI				*e*Sg	Sg	18 07 19.4	-0.1
ERBR	Yeremizino-Bor	2.03	346	*e*Pg	Pb	18 06 51.7	-0.3
ERBR				*e*Sg	Sb	18 07 17.4	0.0
STDR	Stavd-Durt	2.12	99	*e*Pg	Pg	18 06 56.1	+0.8
STDR				*e*Sg	Sg	18 07 23.3	+0.6
BATM	Batumi	2.17	170	P	Pb	18 06 55.8	+1.4
BATM				S	Sg	18 07 24.3	-0.2
ZEI	Tsey	2.19	115	*e*Pg	Pb	18 06 55.5	+0.6
ZEI				*e*Sg	Sb	18 07 23.2	+1.0
ABS	Abastumani	2.32	149	P	Pb	18 06 56.0	-0.9
ABS				S	Sg	18 07 28.5	-0.7
LACR	Lac	2.44	111	*e*Pn	Pg	18 07 01.5	-0.1
LACR				*e*Sn	Sg	18 07 33.1	-0.1
BKRG	Bakuriani	2.62	138	P	Pb	18 07 01.4	-0.7
BKRG				S	Sg	18 07 38.0	-0.9
PNSH	Pansheti	2.73	113	P	Pn	18 06 56.7	-2.4
PNSH				S	Sg	18 07 41.3	-1.2
BRNG	Burnasheti	2.87	137	P	Pb	18 07 06.8	+0.4

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*IDC **23** 18:17:36.9±1.1, 27.°73N×100.°31E, h0km, mb3.4/5, mb1 3.5/5, mb1mx3.3/58, mbtmp3.4/5, Error ellipse: s-maj=45.8km s-min=17.8km az=72.0*

ISC 23 18:17:38.3±1.1, **27.°65N**±0.°09×**100.°2E**±0.°3, **h10**km, **n9**, σ**0ˢ89**/8, **mb3.4**/4, **Yunnan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CM34	Chiang Mai Arr	8.81	186	P	Pg	18 20 28.0	+1.0
CM33	Chiang Mai Arr	8.87	188	P	Pg	18 20 28.0	-0.1
CMMT	Chiang Mai	8.87	188	P	Pg	18 20 27.4	-0.7
CMAR	Chiang Mai Arr	9.22	187	Pg	Pg	18 20 28.6	
	0.1nm,0.3s,baz=359,slow=16,SNR=4.5						
CMAR				Lg	Lg	18 22 35.5	
	0.1nm,0.3s,baz=18,slow=30,SNR=5.9						
SONM	Songino Array	20.73	12	P	P	18 22 19.3	+0.3
	1.3nm,0.9s,baz=187,slow=12,SNR=3.9						
MKAR	Makanchi Array	23.73	328	P	P	18 22 50.0	-0.6
	0.5nm,0.6s,baz=133,slow=9.9,SNR=9.9						
KURBB	Kurchatov Arra	28.23	330	P	P	18 23 31.4	+0.2
	0.2nm,0.3s,baz=138,slow=11,SNR=4.9						
WRA	Warramunga Arr	57.72	141	P	P	18 27 28.3	-1.2
	0.4nm,0.5s,baz=330,slow=7.7,SNR=3.0						
ASAR	Alice Springs	60.52	144	P	P	18 27 49.6	+0.8
	0.2nm,0.6s,baz=325,slow=7.0,SNR=4.5						

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*TRN **23** 18:22:33.2, 10.°84N×62.°59W, h51km, MD3.4*

*FUNV **23** 18:22:33.7, 10.°75N×62.°41W, h82km, MW3.2*

ISC 23 18:22:31.6±1.4, **10.°77N**±0.°04×**62.°49W**±0.°04, **h99**km±13km, **n21**, σ**1ˢ40**/33, **1D**, **Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRUV	Carupano	0.74	263	⇓*i*P	Pn	18 22 50.0	+0.7
CRUV				*e*S	Sn	18 23 01.9	-0.8
TRN	Trinidad (W)	1.07	97	*e*P	Pn	18 22 53.2	+0.5
TRN				*e*S	Sn	18 23 07.4	-1.3
TRN	Trinidad (W)	1.07	97	*e*P	Pn	18 22 53.1	+0.3
TRN				*e*S	Sn	18 23 06.8	-1.8
TPP	Pointe-a-Pierr	1.11	114	*e*	Pn	18 22 54.9	+1.7
TBH	Brigand Hill	1.42	101	*e*P	Pn	18 22 59.0	+2.1
TBH				*e*S	Sn	18 23 17.7	+1.6
GRGR	Grenville	1.58	31	*e*P	Pn	18 22 58.7	-0.1
GRGR				*e*S	Sn	18 23 18.6	-0.9
GRGR	Grenville	1.58	31	*e*P	Pn	18 22 58.9	+0.1
GRGR				*e*S	Sn	18 23 17.6	-1.9
ORIV	Oritupano	1.92	208	*e*P	Pn	18 23 04.8	+1.6
ORIV				*e*S	Sn	18 23 27.1	-0.1
ORIV	Oritupano	1.92	208	*e*P	Pn	18 23 04.0	+0.8
ORIV				*e*S	Sn	18 23 26.8	-0.4
GCMP	Grenada, Carri	2.00	31	*e*P	Pn	18 23 04.6	+0.5
GCMP				*e*S	Sn	18 23 28.3	-0.6
RIOV	Rio Grande	2.77	166	*e*P	Pn	18 23 14.8	+0.5
RIOV				*e*S	Sn	18 23 44.5	-2.6
BIRV	Birongo	3.73	266	*e*P	Pn	18 23 29.7	+2.5
BIRV				*e*S	Sn	18 24 10.3	+0.1
MERV	Las Mercedes	4.05	248	*e*P	Pn	18 23 33.1	+1.7
LUEV	Luepa	5.00	168	*e*P	Pn	18 23 44.3	-0.2
TURV	Turiamo	5.27	267	*e*P	Pn	18 23 49.0	+0.9
BAUV	El Baul	5.77	252	*e*P	Pn	18 23 55.7	+0.9
BAUV	El Baul	5.77	252	*e*P	Pn	18 23 55.2	+0.4
BAUV				*e*S	Sn	18 24 56.7	-3.0
MAPV	Macapo	5.95	261	*e*P	Pn	18 23 58.8	+1.5
SANV	Sanarito	7.06	260	*e*P	Pn	18 24 13.9	+1.5
PAYV	Puerto Ayacuch	7.38	224	*e*P	Pn	18 24 16.7	0.0
SOCV	Socops	8.62	254	*e*P	Pn	18 24 33.4	-0.2

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*IDC **23** 18:28:11.9±0.8, 59.°94S×26.°55W, h0km, mb4.3/8, mb1 4.5/9, mb1mx4.3/25, mbtmp4.4/9, ML4.9/1, MS4.0/13, Ms1 4.0/13, ms1mx3.9/24, Error ellipse: s-maj=30.5km s-min=20.3km az=15.0*

*NEIC **23** 18:28:21.0±1.4, 60.°0S±0.°1×26.°3W±0.°2, h72km±7km, mb4.7/24, Error ellipse: s-maj=23.0km s-min=14.1km az=216.0*

ISC 23 18:28:15.8±0.5, **59.°9S**±0.°1×**26.°4W**±0.°1, **h26**km, **n59**, σ**0ˢ78**/51, **mb4.6**/14, **MS3.9**/11, **South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	7.87	311		Pn	18 30 13.8	+5.3
VNA1	Neumayer--Stat	13.10	153	P	Pn	18 31 20.0	+0.1
VNA3	Neumayer Olymp	13.24	156	P	Pn	18 31 21.5	-0.3
VNA2	Neumayer--Watz	13.50	153	P	Pn	18 31 24.9	-0.4
SNAA	Sanae	15.09	151	P	Pn	18 31 46.8	-0.2
SNAA	Sanae	15.09	151	Pn	Pn	18 31 46.9	-0.1
	4.6nm,0.3s,baz=314,slow=14,SNR=73						
SNAA				LR	LR	18 36 34.2	
	comp=Z,707nm,18.2s,baz=307,slow=33						
SNAA	Sanae	15.09	151	Pn	Pn	18 31 47.3	+0.4
SNAA				IAmb	IAmb	18 31 49.3	
	comp=Z,33nm,0.8s						
PMSA	Palmer Station	17.94	238	LR	LR	18 38 38.9	
	comp=Z,333nm,19.0s,baz=56,slow=35						
BELA	Belgrano 2	18.26	186	P	P	18 32 27.9	+1.0
PLCA	Paso Flores	33.26	285	P	P	18 34 50.5	-0.4
	comp=Z,2.3nm,0.8s,baz=142,slow=5.2,SNR=6.4						
PLCA				LR	LR	18 47 15.2	
	comp=Z,186nm,19.9s,baz=179,slow=34						
PLCA	Paso Flores	33.26	285	P	P	18 34 50.3	-0.5
MAW	Mawson	36.84	140	LR	LR	18 49 01.4	
	comp=Z,476nm,19.2s,baz=250,slow=34						
PEL	Peldehue	39.41	293	P	P	18 35 43.4	+0.1
MT02	Curacav	39.52	292	P	P	18 35 44.1	-0.1
CPUP	Villa Florida	39.74	314	P	P	18 35 46.2	+0.2
	comp=Z,4.7nm,0.7s,baz=163,slow=8.8,SNR=8.5						
CPUP				LR	LR	18 51 49.4	
	comp=Z,100nm,18.8s,baz=206,slow=36						
CPUP	Villa Florida	39.74	314	P	P	18 35 46.8	+0.8
ZON	Zonda	39.83	296	P	P	18 35 47.3	+0.5
ZON				IAmb	IAmb	18 35 52.0	
	comp=Z,12nm,1.1s						
CO03	El Pedregal	41.34	295	P	P	18 36 00.5	+1.2
CO01	Juntas del Tor	41.80	296	P	P	18 36 04.8	+1.6
VNDA	Vanda	42.73	183	LR	LR	18 53 14.5	
	comp=Z,161nm,19.1s,baz=202,slow=35						
AC05	El Transito	42.85	297	P	P	18 36 12.7	+1.0
LCO	Las Campanas	42.90	296	P	P	18 36 12.8	+0.5
LCO				IAmb	IAmb	18 36 15.5	
	comp=Z,8.7nm,0.8s						
AC04	Llanos de Chal	43.75	296	P	P	18 36 19.2	+0.4
GO02	Mina Guanaco	45.72	300	P	P	18 36 35.7	+0.7
GO02				IAmb	IAmb	18 36 39.5	
	comp=Z,10nm,0.8s						
BOSA	Boshof	46.65	71	P	P	18 36 42.6	+0.7
	comp=Z,5.5nm,1.0s,baz=182,slow=9.6,SNR=2.8						
BOSA				LR	LR	18 51 46.7	
	comp=Z,139nm,20.7s,baz=254,slow=30						
BOSA	Boshof	46.65	71	P	P	18 36 40.7	-1.2
BOSA				IAmb	IAmb	18 37 01.9	
	comp=Z,14nm,1.4s						
BDFB	Brasilia	46.94	331	LR	LR	18 53 48.2	
	comp=Z,120nm,20.9s,baz=116,slow=33						
LVC	Limon Verde	47.67	302	P	P	18 36 51.4	+1.2
LVC				IAmb	IAmb	18 36 57.3	
	comp=Z,8.9nm,1.1s						
PB01	IPOC Station P	49.30	303	P	P	18 37 03.3	+0.8
LBTB	Lobatse	49.85	69	P	P	18 37 06.8	+0.2
	comp=Z,4.0nm,0.8s,baz=195,slow=11,SNR=4.9						
LBTB	Lobatse	49.85	69	P	P	18 37 06.1	-0.6
LBTB				IAmb	IAmb	18 37 08.1	
	comp=Z,8.2nm,1.0s						
PB08	IPOC Station P	49.96	304	P	P	18 37 06.8	-1.1
PB08				IAmb	IAmb	18 37 11.5	
	comp=Z,9.6nm,1.0s						
MNMC	Minye Minye	51.05	304	P	P	18 37 16.2	+0.2
LPAZ	La Paz	53.00	307	P	P	18 37 30.5	-0.4
	comp=Z,3.5nm,0.6s,baz=150,slow=6.1,SNR=8.8						
LPAZ				LR	LR	19 00 29.8	
	comp=Z,69nm,20.5s,baz=145,slow=37						
LPAZ	La Paz	53.00	307	P	P	18 37 31.4	+0.5
LPAZ				IAmb	IAmb	18 37 34.4	
	comp=Z,4.3nm,0.8s						
SAML	Samuel	57.85	316	P	P	18 38 03.8	-1.3
LSZ	Lusaka	59.47	66	P	P	18 38 16.9	+0.4
DBIC	Dimbokro	68.53	23	P	P	18 39 16.6	+0.8
	comp=Z,0.9nm,0.5s,baz=168,slow=8.3,SNR=2.5						
DBIC				LR	LR	19 04 06.2	
	comp=Z,124nm,18.1s,baz=211,slow=31						
ROSC	El Rosal	74.69	310	LR	LR	19 16 27.0	
	comp=Z,63nm,18.6s,baz=82,slow=39						
TOA0	Torodi Ar. Sit	76.24	28	P	P	18 40 02.2	+0.4
TOA0				IAmb	IAmb	18 40 03.9	
	comp=Z,5.3nm,0.6s						
TORD	Torodi Ar. Bea	76.24	28	P	P	18 40 02.5	+0.8
	comp=Z,3.1nm,0.5s,baz=199,slow=6.2,SNR=21						
TORD	Torodi Ar. Bea	76.24	28	P	P	18 40 01.9	+0.2
STKA	Stephens Creek	88.02	170	LR	LR	19 18 51.1	
	comp=Z,62nm,18.9s,baz=207,slow=34						
ASAR	Alice Springs	95.18	162	P	P	18 41 37.1	+0.3
	comp=Z,0.5nm,0.6s,baz=182,slow=4.7,SNR=8.6						
ASAR				LR	LR	19 21 43.7	
	comp=Z,244nm,20.3s,baz=188,slow=34						
ASAR	Alice Springs	95.18	162	P	P	18 41 36.8	0.0
CMAR	Chiang Mai Arr	123.26	112	PKP	PKiKP	18 47 10.6	+0.4
	comp=Z,0.3nm,0.7s,baz=188,slow=3.6,SNR=2.7						
FINES	FINESS Array B	127.59	29	PKP	PKPdf	18 47 17.0	+0.1
	comp=Z,3.5nm,1.0s,baz=285,slow=7.0,SNR=3.3						
KSH	Kashi	129.11	77	PKP	PKPdf	18 47 18.8	-1.9
KSH				PP	PP	18 49 21.3	-8.4
KSH				AMB	AMB		
	comp=Z,570nm,5.8s						
ARCES	ARCESS Array B	134.36	23	PKP	PKiKP	18 47 30.7	-0.2
	comp=Z,3.5nm,1.1s,baz=242,slow=1.9,SNR=0.9						
YKA	Yellowknife Ar	139.26	315	PKP	PKPdf	18 47 38.5	-0.2
	comp=Z,0.4nm,0.7s,baz=119,slow=3.3,SNR=6.8						
ZALV	Zalesovo Beam	143.56	68	PKhKP	PKPpre	18 47 43.4	
	comp=Z,0.5nm,0.4s,baz=191,slow=2.4,SNR=3.2						
INK	Inuvik	148.99	316	PKPbc	PKPbc	18 47 57.5	-2.0
	comp=Z,1.5nm,0.7s,baz=102,slow=7.5,SNR=3.9						
INK	Inuvik	148.99	316		PKPdf	18 47 56.8	+1.4
SONM	Songino Array	150.33	93	PKPbc	PKiKP	18 48 04.3	-0.2
	comp=Z,1.7nm,0.9s,baz=183,slow=2.7,SNR=8.4						
SONM	Songino Array	150.33	93		PKPbc	18 48 03.7	0.0
KDAK	Kodiak Island	152.72	289	PKPbc	PKPbc	18 48 08.5	-0.1
	comp=Z,5.4nm,0.7s,baz=77,slow=2.5,SNR=4.5						
KDAK	Kodiak Island	152.72	289		PKPbc	18 48 07.8	-0.9
ILAR	Eielson Array	152.87	306	PKPbc	PKPbc	18 48 08.4	-0.4
	comp=Z,0.9nm,0.6s,baz=146,slow=1.5,SNR=7.9						
ILAR	Eielson Array	152.87	306		PKPbc	18 48 07.8	-1.0

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*JMA **23** 19:05:12.0±0.1, 27.°84N×139.°84E, h548km, M4.1*

*NEIC **23** 19:05:14.1±1.4, 27.°85N±0.°10×139.°5E±0.°1, h506km±3km, mb4.2/70, Error ellipse: s-maj=15.7km s-min=13.1km az=125.0*

*IDC **23** 19:05:15.0±0.9, 27.°88N×139.°49E, h517km±9km, mb3.3/26, mb1 3.5/33, mb1mx3.3/75, mbtmp4.3/33, Error ellipse: s-maj=11.6km s-min=10.3km az=105.0*

ISC 23 19:05:14.2±0.4, **27.°89N**±0.°06×**139.°49E**±0.°06, **h507**km, **n208**, σ**1ˢ04**/216, **mb4.2**/93, **3D**, **Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	2.52	108	P	P	19 06 23.1	+0.3
CBIJ				*e*S	S	19 07 18.2	-0.3
JCJ	Chichijima	2.52	108	P	P	19 06 23.3	+0.5
	75nm,0.3s,baz=0.5,slow=14,SNR=50						
JCJ				S	S	19 07 16.2	-2.3
	111nm,0.3s,baz=289,slow=23,SNR=14						
JHH2	Haha-jima-NKT2	2.70	117	*e*S	S	19 07 20.6	+0.2
JHJ2	Mitsune	5.21	3	P	P	19 06 44.1	+0.8
JHJ2	Mitsune	5.21	3	P	P	19 06 43.6	+0.3
JHJ	Hachijo jima 2	5.22	3	P	P	19 06 43.2	-0.1
	30nm,0.3s,baz=205,slow=22,SNR=15						
JHJ				S	S	19 07 52.6	-3.8
	13nm,0.3s,baz=49,slow=20,SNR=1.2						
JTNC	Tanabenakahech	6.78	332	P	P	19 07 00.9	+2.5
JKN2	Miekihoku	6.90	337	P	P	19 07 01.8	+2.3
BSO3	Boso 3	6.94	7	P	P	19 07 01.0	+1.4
HMMJ	Hamamatsu 2	7.11	348	P	P	19 07 02.5	+1.0
JOD2	Odawara 2	7.36	357	P	P	19 07 04.6	+0.5
JMN	Monobe	7.56	322	P	P	19 07 08.6	+2.4
INU	Inuyama	7.73	345	P	P	19 07 08.9	+1.1
JGF	Kuroka	7.90	347	P	P	19 07 10.6	+1.0
JHU	Hanno	7.94	359	P	P	19 07 09.9	-0.1
JHU				*e*S	S	19 08 42.9	-2.1
JWT	Wachi	8.15	336	P	P	19 07 13.1	+1.0
JYT	Yasato	8.33	4	P	P	19 07 14.2	+0.2
JYT	Yasato	8.33	4	P	P	19 07 14.4	+0.3
JSU	Suzuyama	8.64	297	P	P	19 07 16.3	-1.1
MJAR	Matsushiro Arr	8.69	353	P	P	19 07 17.8	0.0
	0.6nm,0.3s,baz=172,slow=12,SNR=21						
MJAR	Matsushiro Arr	8.69	353	P	P	19 07 16.5	-1.3
MAJO	Matsushiro	8.69	353	P	P	19 07 18.4	+0.5
MAT	Matsushiro	8.69	353	P	P	19 07 18.0	+0.2
MAT				*e*S	S	19 08 57.4	-2.0
JHS	Saijyo	8.93	324	P	P	19 07 21.8	+1.4
JNU	Nakatsue	9.07	307	P	P	19 07 24.7	+2.8
	1.3nm,0.3s,baz=0.8,slow=3.1,SNR=7.8						
JNU	Nakatsue	9.07	307	P	P	19 07 22.9	+1.1
JAMN	Amaminishikomi	9.12	275	P	P	19 07 24.8	+2.4
JSJ	Shimokoshiki	9.29	296	P	P	19 07 25.9	+1.8
JMM	Marumori	10.01	6	P	P	19 07 32.8	+1.3
JOW	Kunigami	10.03	267	P	P	19 07 33.9	+1.9
	5.2nm,0.3s,baz=134,slow=6.7,SNR=20						
JOW	Kunigami	10.03	267	P	P	19 07 33.7	+1.7
JOW	Kunigami	10.03	267	P	P	19 07 33.6	+1.7
JSD	Sado	10.17	354	P	P	19 07 33.6	+0.4
JTU	Tsushima	10.87	310	P	P	19 07 41.3	+0.6
JKE	Kume jima 2	11.43	265	P	P	19 07 48.0	+1.3
KSRS	Korea Array	13.62	317	P	P	19 08 09.3	-0.3
	0.3nm,0.3s,baz=140,slow=9.6,SNR=5.8						
YHNB	Yeheng	16.56	263	P	P	19 08 38.6	-2.1
YULB	Yu-li	17.00	259	P	P	19 08 44.4	-0.7
USA0B	Ussuriysk Arra	17.35	342	P	P	19 08 46.9	-1.2
USA0B				IAmb	IAmb	19 09 13.7	
	comp=Z,11nm,1.4s						
USRK	Ussuriysk Ar.	17.35	342	P	P	19 08 49.3	+1.3
	baz=145,slow=9.0,SNR=22						
USRK	Ussuriysk Ar.	17.35	342	P	P	19 08 48.2	+0.2
TWG	Pinlang	17.39	257	P	P	19 08 46.1	-2.6
TPUB	Ta-pu	17.61	259	P	P	19 08 49.1	-1.7
DL2	Dalian	18.49	311	P	P	19 08 58.5	0.0
DL2				pmax	pmax		
	comp=Z,20nm,1.0s						
KNMB	Chin-men Tao	19.24	265	P	P	19 09 05.3	-0.3
WHN	Wuhan	22.09	283	⇓P	P	19 09 32.1	+0.7
WHN				pmax	pmax		
	comp=Z,56nm,0.6s						
KLR	Kul'dur	22.12	346	P	P	19 09 32.6	+1.2
	comp=Z,0.6nm,0.3s,baz=163,slow=12,SNR=6.9						
KLR				ScP	ScP	19 15 57.0	-1.0
	comp=Z,0.4nm,0.5s,baz=205,slow=1.6,SNR=4.3						
BJT	Baijiatuau	22.74	308	P	P	19 09 36.2	-0.8
BJT				IAmb	IAmb	19 09 38.6	
	comp=Z,3.1nm,0.6s						
ENH	Enshi	26.29	282	P	P	19 10 08.5	-0.3
HHC	Hu-ho-hao-te	26.30	307	*e*P	P	19 10 09.8	+1.0
HHC				pmax	pmax		
	comp=Z,6.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,260nm,5.5s						
XAN	Xi'an	26.86	291	P	P	19 10 13.8	+0.1
XAN				pmax	pmax		
	comp=Z,13nm,0.7s						
XAN	Xi'an	26.86	291	P	P	19 10 12.5	-1.3
PETK	Petropavlovsk-	28.58	23	P	P	19 10 30.5	+2.0
	comp=Z,0.7nm,0.4s,baz=157,slow=1.3,SNR=6.8						
GYA	Guiyang	29.19	275	⇓P	P	19 10 34.4	0.0
GYA				pmax	pmax		
	comp=Z,13nm,0.6s						
LZH	Lanzhou	31.18	294	*e*P	P	19 10 52.0	+0.5
LZH				pmax	pmax		
	comp=Z,17nm,1.2s						
CD2	Chengdu	31.19	284	⇓P	P	19 10 51.6	+0.1
CD2				pmax	pmax		
	comp=Z,70nm,0.5s						
ULN	Ulaanbaatar	32.11	317	P	P	19 11 00.0	+0.8
SONM	Songino Array	32.49	317	P	P	19 11 03.0	+0.6
	comp=Z,1.2nm,0.5s,baz=122,slow=7.6,SNR=11						
SONM	Songino Array	32.49	317	P	P	19 11 02.6	+0.1
SLVN	Son La	32.92	267	P	P	19 11 06.8	+0.4
SLVN				IAmb	IAmb	19 11 07.9	
	comp=Z,8.5nm,1.0s						
KMI	Kunming	32.92	274	P	P	19 11 06.7	+0.1
KMI				IAmb	IAmb	19 11 08.5	
	comp=Z,6.8nm,0.9s						
DLV	T Lat	33.05	248	P	P	19 11 08.1	+0.4
DLV				IAmb	IAmb	19 11 34.3	
	comp=Z,11nm,1.3s						
UBPT	Khong Chiam	33.91	255	P	P	19 11 15.2	+0.4
UBPT				IAmb	IAmb	19 11 21.3	
	comp=Z,10.0nm,1.4s						
GTA	Gaotai	34.71	300	*e*P	P	19 11 21.3	0.0
GTA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
NONG	Nongkai	34.75	262	P	P	19 11 22.6	+0.9
	comp=Z,38nm,0.8s						
SEY	Seymchan	36.05	10	P	P	19 11 33.0	+1.1
	comp=Z,1.3nm,0.7s,baz=203,slow=6.8,SNR=5.7						
CHAI	Chaiyaphum	36.64	259	P	P	19 11 38.7	+1.2
	comp=Z,458nmcomp=Z,50nm,0.8s						
UTTA	Uttaradit	37.15	263	P	P	19 11 41.9	+0.3
	comp=Z,250nmcomp=Z,22nm,0.7s						
SRAK	Srakaew	37.44	256	P	P	19 11 40.8	-3.3
	comp=Z,3µmcomp=Z,383nm,0.8s						
CM34	Chiang Mai Arr	37.97	265	P	P	19 11 48.0	-0.4
CM35	Chiang Mai Arr	38.03	265	P	P	19 11 49.0	+0.1
CM36	Chiang Mai Arr	38.14	265	P	P	19 11 50.0	+0.2
CM33	Chiang Mai Arr	38.16	265	P	P	19 11 49.0	-0.9
CMMT	Chiang Mai	38.16	265	P	P	19 11 49.0	-1.0
	comp=Z,4.9nm,0.9s						
CHTO	Chiang Mai	38.16	265	P	P	19 11 49.6	-0.4
CHTO				IAmb	IAmb	19 11 50.8	
	comp=Z,7.1nm,0.7s						
CM09	Chiang Mai Arr	38.26	265	P	P	19 11 51.5	+0.8
CM04	Chiang Mai Arr	38.28	265	P	P	19 11 51.0	0.0
	comp=Z,60nmcomp=Z,7.1nm,0.7s						
CM01	Chiang Mai Arr	38.29	265	P	P	19 11 51.0	0.0
	comp=Z,38nmcomp=Z,5.1nm,1.1s						
CM31	Chiang Mai Arr	38.29	265	P	P	19 11 52.1	+1.1
	comp=Z,154nm,0.7s						
CMAR	Chiang Mai Arr	38.29	265	P	P	19 11 51.4	+0.3
	comp=Z,2.5nm,0.6s,baz=71,slow=5.6,SNR=22						
CMAR	Chiang Mai Arr	38.29	265	P	P	19 11 50.6	-0.5
CM02	Chiang Mai Arr	38.30	265	P	P	19 11 51.9	+0.8
	comp=Z,39nmcomp=Z,5.2nm,1.0s						
CM32	Chiang Mai Arr	38.30	265	P	P	19 11 51.0	-0.1
CM15	Chiang Mai Arr	38.31	265	P	P	19 11 51.0	-0.2
	comp=Z,50nmcomp=Z,4.0nm,0.8s						
CM05	Chiang Mai Arr	38.31	265	P	P	19 11 52.0	+0.8
	comp=Z,44nmcomp=Z,5.1nm,0.7s						
CM13	Chiang Mai Arr	38.34	265	P	P	19 11 52.5	+1.1
	comp=Z,38nmcomp=Z,4.7nm,1.0s						
UTHA	Uthaitani	39.00	260	P	P	19 11 57.8	+1.0
	comp=Z,187nmcomp=Z,19nm,0.8s						
UMPA	Umpang Tak	39.24	261	P	P	19 12 01.7	+2.9
	comp=Z,1µmcomp=Z,14nm,1.0s						
MHMT	Maesarieng	39.29	265	P	P	19 11 58.9	-0.2
COEN	Coen	41.75	175	P	P	19 12 19.0	+0.3
COEN				IAmb	IAmb	19 12 26.9	
	comp=Z,4.4nm,0.8s						
LSA	Lhasa	42.16	284	P	P	19 12 23.6	+1.2
SHL	Shillong	42.38	278	P	P	19 12 22.5	-1.4
KULM	Kulim	43.19	246	P	P	19 12 30.2	0.0
KULM				IAmb	IAmb	19 12 31.5	
	comp=Z,7.2nm,0.6s						
WMQ	Urumqi	44.16	305	*e*P	P	19 12 38.5	+1.0
WMQ	Urumqi	44.16	305	P	P	19 12 37.8	+0.3
WMQ				IAmb	IAmb	19 12 39.2	

	comp=Z,9.4nm,0.6s						
TAPN	Taplejung	45.59	282	*e*P	P	19 12 49.3	+0.3
	comp=Z,11nm,0.4s						
ODAN	Odare	45.98	281	*e*P	P	19 12 52.4	+0.5
	comp=Z,15nm,0.3s						
PSI	Prapat	46.04	244	P	P	19 12 52.6	+0.3
	comp=Z,5.5nm,0.4s,baz=0.4,slow=3.7,SNR=6.2						
RPSI	Rantau Prapat	46.10	244	P	P	19 12 52.6	0.0
ZSN	Zaisan	46.41	310	*e*P	P	19 12 54.7	+0.1
	baz=310						
RAMN	Ramite	46.65	282	*e*P	P	19 12 57.2	+0.2
	comp=Z,28nm,0.5s						
GUN	Gumba	47.05	283	*e*P	P	19 13 00.9	+0.8
	comp=Z,41nm,0.4s						
ZAA0	Zalesovo Array	47.32	319	P	P	19 13 01.0	-0.2
ZAA0				IAmb	IAmb	19 13 01.6	
	comp=Z,5.3nm,1.0s						
ZALV	Zalesovo Beam	47.32	319	P	P	19 13 01.0	-0.3
	comp=Z,2.9nm,0.4s,baz=104,slow=7.4,SNR=23						
ZALV				PcP	PcP	19 14 21.2	-1.0
	comp=Z,0.8nm,0.5s,baz=108,slow=2.3,SNR=4.3						
ZALV				ScP	ScP	19 17 25.2	-2.4
	comp=Z,0.9nm,0.7s,baz=98,slow=4.5,SNR=4.1						
ZALV	Zalesovo Beam	47.32	319	P	P	19 13 01.0	-0.3
AKUT	Akutan	47.39	41	P	P	19 13 02.4	+0.6
PKI	Pulchoki	47.53	283	*e*P	P	19 13 03.8	+0.1
	comp=Z,13nm,0.5s						
PKIN	Phulchoki	47.54	283	*e*P	P	19 13 03.8	+0.1
	comp=Z,12nm,0.4s						
KKN	Kakani	47.59	283	*e*P	P	19 13 04.3	+0.3
	comp=Z,14nm,0.4s						
WB0	Warramunga Arr	47.63	187	P	P	19 13 02.2	-1.9
DMN	Daman	47.78	283	*e*P	P	19 13 06.0	+0.5
	comp=Z,16nm,0.4s						
GSI	Gunungsitoli	48.01	244	P	P	19 13 06.4	-0.6
GKN	Gorkha	48.09	284	*e*P	P	19 13 08.1	+0.4
	comp=Z,9.6nm,0.5s						
MK31	Makanchi Array	48.12	309	P	P	19 13 07.7	+0.3
MKAR	Makanchi Array	48.12	309	P	P	19 13 07.7	+0.3
	comp=Z,2.8nm,0.4s,baz=88,slow=10,SNR=108						
MKAR				ScP	ScP	19 17 29.1	-2.2
	comp=Z,0.4nm,0.7s,baz=80,slow=4.7,SNR=5.7						
MKAR	Makanchi Array	48.12	309	P	P	19 13 07.3	-0.2
CTA	Charters Tower	48.15	171	P	P	19 13 07.9	0.0
	comp=Z,2.8nm,0.7s,baz=1.2,slow=8.7,SNR=3.7						
MAKZ	Makanchi	48.34	309	P	P	19 13 09.4	+0.3
SEM	Semipalatinsk	49.66	314	*e*P	P	19 13 18.1	-1.0
	comp=Z,4.9nm,0.7s,baz=314						
SHLS	Shalkode	50.15	304	*e*P	P	19 13 20.2	-2.5
	baz=304						
ANM	Nome	50.34	27	P	P	19 13 25.3	+1.8
ANM				IAmb	IAmb	19 13 26.1	
	comp=Z,5.3nm,0.8s						
UZB	Uzynbulak	50.48	304	*e*P	P	19 13 24.8	-0.3
	baz=304						
SDPT	Sand Point	50.62	40	P	P	19 13 24.9	-0.8
KPKS	Kokpek	50.70	305	*e*P	P	19 13 26.4	-0.2
	comp=Z,3.8nm,0.5s,baz=305						
KURK	Kurchatov	50.72	314	P	P	19 13 26.4	-0.1
KURK				IAmb	IAmb	19 13 27.3	
	comp=Z,11nm,0.7s						
TDK	Taldyqorghan	50.83	307	*e*P	P	19 13 27.7	+0.2
	comp=Z,6.7nm,0.4s,baz=307						
SATY	Saty	50.93	304	*e*P	P	19 13 28.4	0.0
	baz=304						
NRIK	Noril'sk	51.04	339	P	P	19 13 28.7	+0.1
	comp=Z,2.3nm,0.4s,baz=118,slow=7.5,SNR=3.7						
NRIK	Noril'sk	51.04	339	P	P	19 13 28.2	-0.3
ASAR	Alice Springs	51.54	187	P	P	19 13 32.6	-0.3
	comp=Z,1.6nm,0.4s,baz=8.5,slow=12,SNR=4.5						
ASAR	Alice Springs	51.54	187	P	P	19 13 32.3	-0.6
CHGN	Chignik	51.88	39	P	P	19 13 34.7	-0.1
CHGN				IAmb	IAmb	19 13 43.4	
	comp=Z,23nm,1.0s						
CHKK	Chushkaly	51.91	305	*e*P	P	19 13 35.0	-0.3
	baz=306						
MDOK	Medeo	51.91	304	*e*P	P	19 13 35.5	-0.1
	baz=305						
AAA	Alma-Ata	52.01	305	*e*P	P	19 13 36.9	+0.7
	baz=305						
KUU	Kurty	52.37	305	*e*P	P	19 13 38.5	-0.1
	comp=Z,11nm,0.6s,baz=306						
ULHL	Ulahol	52.59	303	P	P	19 13 41.3	+0.8
	SNR=12						
TKM2	Tokmak 2	53.00	304	P	P	19 13 44.3	+0.9
	SNR=8.1						
KSH	Kashi	53.11	300	P	P	19 13 48.0	+3.8
KSH				pmax	pmax		
	comp=Z,19nm,0.6s						
KSH				pmax	pmax		
	comp=Z,700nm,6.2s						
KBK	Karagaybulak	53.50	304	P	P	19 13 47.8	+0.9
	SNR=8.4						
USP	Ospenovka	53.76	305	P	P	19 13 49.0	+0.4
	SNR=5.8						
AAK	Ala-Archa	53.83	304	P	P	19 13 49.7	+0.4
	SNR=5.2						
AAK	Ala-Archa	53.83	304	P	P	19 13 49.5	+0.2
AAK				IAmb	IAmb	19 13 50.1	
	comp=Z,4.5nm,0.5s						
UCH	Uchtor	53.87	304	P	P	19 13 51.5	+1.6
	SNR=6.2						
BTLS	Baital	53.92	307	*e*P	P	19 13 49.4	-0.2
	baz=307						
SVW2	Sparrevohn	53.92	33	P	P	19 13 49.3	0.0
SVW2				IAmb	IAmb	19 13 52.1	
	comp=Z,10nm,1.4s						
TTA	Tatalina	53.98	31	P	P	19 13 49.7	-0.1
EKS2	Erkin-Say	54.36	304	P	P	19 13 53.5	+0.6
	SNR=5.6						
AML	Almayashu	54.48	304	P	P	19 13 55.5	+1.3
	SNR=6.1						
BRZS	Berezniki	54.52	313	*e*P	P	19 13 53.2	-0.6
	baz=313						
OHAK	Old Harbor	54.77	38	P	P	19 13 55.4	+0.1
OHAK				IAmb	IAmb	19 14 15.6	
	comp=Z,19nm,1.2s						
KDAK	Kodiak Island	55.17	37	P	P	19 13 58.6	+0.5
KDAK				IAmb	IAmb	19 14 13.8	
	comp=Z,36nm,1.4s						
IMAR	Indian Mountai	55.42	27	P	P	19 14 01.1	+1.2
BVAR	Borovoye Array	55.84	317	P	P	19 14 02.7	-0.3
	comp=Z,7.1nm,0.4s,baz=105,slow=7.6,SNR=37						
BRVK	Borovoye	55.90	317	P	P	19 14 03.7	+0.4
BRVK				IAmb	IAmb	19 14 04.4	
	comp=Z,10nm,0.7s						
SKT	Skwentna	55.94	32	P	P	19 14 03.9	+0.4
SKT				IAmb	IAmb	19 14 09.2	
	comp=Z,13nm,1.5s						
CNPM	China Poot	55.94	35	P	P	19 14 03.6	0.0
DZA	Taraz	56.11	305	*e*P	P	19 14 04.5	-0.6
	baz=305						
SUA	Susitna One	56.27	33	P	P	19 14 06.4	+0.4
NIL	Nilore	56.35	293	P	P	19 14 07.4	+0.5
NIL				IAmb	IAmb	19 14 09.1	
	comp=Z,9.7nm,0.7s						
BPAW	Bear Paw Mtn.	56.35	30	P	P	19 14 07.5	+1.1
KK31	Karatay Array	56.67	305	P	P	19 14 09.1	+0.1
KK31				IAmb	IAmb	19 14 10.1	
	comp=Z,11nm,0.8s						
KKAR	Karatay Array	56.67	305	P	P	19 14 09.0	+0.1
KKAR				IAmb	IAmb	19 14 10.1	
	comp=Z,11nm,0.8s						
KKAR	Karatay Array	56.67	305	P	P	19 14 09.1	+0.1
IUG	Iuzhnay	57.17	304	*e*P	P	19 14 12.7	+0.2
	baz=304						
RND	Reindeer	57.25	31	P	P	19 14 12.4	-0.2
WRH	Wood River Hil	57.64	29	P	P	19 14 15.6	+0.4
CCB	Clear Creek Bu	57.77	29	P	P	19 14 16.0	0.0
SCM	Sheep Creek Mo	57.92	32	P	P	19 14 18.1	+1.0
SCM				IAmb	IAmb	19 14 30.8	
	comp=Z,19nm,1.3s						
HDA	Harding Lake	58.13	29	P	P	19 14 18.4	-0.1
ILAR	Eielson Array	58.17	29	P	P	19 14 18.0	-0.7
	comp=Z,0.8nm,0.4s,baz=246,slow=5.7,SNR=18						
ILAR	Eielson Array	58.17	29	P	P	19 14 18.4	-0.3
BMAR	Burnt Mountain	59.18	26	P	P	19 14 27.4	+1.8
DOT	Dot Lake	59.40	30	P	P	19 14 27.3	+0.2
DOT				IAmb	IAmb	19 14 28.1	
	comp=Z,4.9nm,0.8s						
STKA	Stephens Creek	59.47	178	P	P	19 14 28.0	+0.1
	comp=Z,3.1nm,0.6s,baz=288,slow=1.4,SNR=3.8						
STKA	Stephens Creek	59.47	178	P	P	19 14 27.5	-0.3
KBL	Kabul	59.52	295	P	P	19 14 27.8	-0.9
KBL				IAmb	IAmb	19 14 30.1	
	comp=Z,5.8nm,0.8s						
MENT	Mentasta	59.58	31	P	P	19 14 28.1	-0.2
MENT				IAmb	IAmb	19 14 36.2	
	comp=Z,14nm,1.5s						
GLB	Gilahina Butte	59.60	33	P	P	19 14 28.4	-0.2
GLB				IAmb	IAmb	19 14 41.1	
	comp=Z,12nm,1.4s						
MCARA	McCarthy VSAT	59.99	33	P	P	19 14 31.9	+0.9
MCARA				IAmb	IAmb	19 14 51.0	
	comp=Z,21nm,1.3s						
BALM	Baldy	60.34	33	P	P	19 14 33.8	+0.3
BALM				IAmb	IAmb	19 14 53.6	
	comp=Z,18nm,1.4s						
BCAR	Beaver Creek A	60.45	31	P	P	19 14 35.2	+1.0
ARU	Arti	62.32	322	P	P	19 14 46.1	-0.4
ABKAR	Akbulak array	62.82	314	P	P	19 14 49.3	-0.5
ABKAR				IAmb	IAmb	19 14 50.3	
	comp=Z,6.6nm,0.8s						
ABKAR	Akbulak array	62.82	314	P	P	19 14 49.3	-0.5
INK	Inuvik	63.30	25	P	P	19 14 52.0	-0.4
	comp=Z,0.7nm,0.4s,baz=291,slow=6.2,SNR=5.6						
INK	Inuvik	63.30	25	P	P	19 14 52.3	-0.2
AKTO	Aktyubinsk	63.79	315	P	P	19 14 55.6	-0.4
	comp=Z,3.3nm,0.7s,baz=84,slow=14,SNR=10						
HRA	Herat	64.96	297	P	P	19 15 03.9	-0.1
HRA				IAmb	IAmb	19 15 05.3	
	comp=Z,4.2nm,0.8s						
ARCES	ARCESS Array B	72.00	340	P	P	19 15 45.8	+0.1
	comp=Z,1.1nm,0.5s,baz=63,slow=8.3,SNR=12						
ARCES	ARCESS Array B	72.00	340	P	P	19 15 45.4	-0.4
YKA	Yellowknife Ar	72.57	28	P	P	19 15 49.2	0.0
	comp=Z,1.7nm,0.6s,baz=297,slow=5.1,SNR=22						
KBZ	Khabaz	75.71	312	P	P	19 16 07.8	+0.6
	comp=Z,1.8nm,0.7s,baz=103,slow=6.0,SNR=7.1						
FIA1	FINESS Array S	76.16	333	P	P	19 16 09.0	-0.4
FINES	FINESS Array B	76.17	333	P	P	19 16 09.1	-0.4
	comp=Z,3.7nm,0.5s,baz=66,slow=5.0,SNR=42						
PINE	Pine Mountain	77.62	47	P	P	19 16 18.6	+0.5
PINE				IAmb	IAmb	19 16 20.4	
	comp=Z,5.6nm,0.7s						
BMO	Blue Mountains	79.44	45	P	P	19 16 28.7	+1.0
BEKR	Beckworth	79.80	50	P	P	19 16 30.5	+0.7
AKASG	Malin Array Be	80.55	323	P	P	19 16 32.5	-0.7
	comp=Z,0.8nm,0.5s,baz=51,slow=5.7,SNR=2.8						
HFS	Hagfors	81.73	336	P	P	19 16 37.8	-1.3
	comp=Z,2.6nm,0.8s,baz=82,slow=3.1,SNR=5.2						
NVAR	Mina Array Bea	81.89	51	P	P	19 16 41.3	+0.6
	comp=Z,0.8nm,0.5s,baz=291,slow=5.5,SNR=7.1						
NVAR	Mina Array Bea	81.89	51	P	P	19 16 40.1	-0.6
NB2	NORSAR Subarra	81.97	337	P	P	19 16 39.4	-1.0
	comp=Z,1.0nm,0.5s,baz=46,slow=5.1						
NOA	NORSAR Array B	81.97	337	P	P	19 16 39.5	-1.0
	comp=Z,1.0nm,0.6s,baz=48,slow=4.7,SNR=3.8						
RAYN	Ar Rayn	82.64	293	P	P	19 16 44.6	+0.1
RAYN				IAmb	IAmb	19 16 45.7	
	comp=Z,9.4nm,0.9s						
BRTR	Keskin Array B	83.70	312	P	P	19 16 49.0	-0.7
	comp=Z,0.6nm,0.7s,baz=93,slow=4.3,SNR=4.4						
TXAR	Lajitas Array	97.02	52	P	Pdif	19 17 52.3	+0.5
	comp=Z,0.4nm,0.7s,baz=198,slow=3.7,SNR=3.8						
PLCA	Paso Flores	152.22	125	PKPbc	PKiKP	19 24 12.7	+0.2
	comp=Z,1.2nm,0.5s,baz=246,slow=2.5,SNR=8.6						

IDC ***23*** *19:07:28.4±3.4, 7.°30S×128.°51E, h115^{km}±32^{km}, mb4.0/11, mb1 4.0/15, mb1mx3.6/53, mbtmp4.3/15, Error ellipse: s-maj=23.1km s-min=14.1km az=62.0*

NEIC ***23*** *19:07:32.4±1.9, 7.°3S±0.°1×128.°60E±0.°03, h161^{km}±8^{km}, mb4.0/17, Error ellipse: s-maj=15.4km s-min=4.0km az=175.0*

DJA ***23*** *19:07:32.9±2.8, 7°S±4°×12°9E±°, h25^{km}±26^{km}, M4.6/11, mb4.6/6, mB5.3/5, MLv4.6/11, Mw(mB)4.7/5*

ISC 23 19:07:31.6±0.4**, 7.°36S**±0.°05×**128.°62E**±0.°06**, h151^{km}, n75, σ1.^{s}37**/81**, mb4.2**/26**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	2.73	103	Pn	Pn	19 08 17.2	+1.6
SAUI	Saumlaki	2.73	103	P	Pn	19 08 17.8	+2.2
SAUI				S	Sn	19 08 50.3	+0.8
BNDI	Bandanaira	3.10	24	P	Pn	19 08 20.4	+0.2
SOEI	Soe	4.92	241	Pn	Pn	19 08 44.8	+0.8
SOEI	Soe	4.92	241	P	Pn	19 08 44.8	+0.8
BATI	Baumata	5.65	240	P	Pn	19 08 54.8	+1.1
	229nm,0.3s,baz=97,slow=2.9,SNR=218						
BATI				S	Sn	19 09 56.4	-1.5
	69nm,0.3s,baz=65,slow=21,SNR=7.6						
BATI	Baumata	5.65	240	P	Pn	19 08 54.7	+1.0
	2.3nm7µm588nm,0.5s						
FAKI	Fak Fak	5.71	40	Pn	Pn	19 08 53.8	-0.6
FAKI	Fak Fak	5.71	40	P	Pn	19 08 54.1	-0.3
	0.3nm2µm48nm,0.5s						
SANI	Sanana	5.89	333	P	Pn	19 08 57.8	+0.9
	0.1nm10nm,0.9s						
MMRI	Maumere	6.44	258	Pn	Pn	19 09 05.1	+0.8
MMRI	Maumere	6.44	258	P	Pn	19 09 05.2	+1.0
	0.4nm108nm,0.8s						
SIJI	Sorong	6.97	22	P	Pn	19 09 11.8	+0.5
	9.4nm,0.3s,baz=156,slow=5.8,SNR=111						
SIJI				S	Sn	19 10 26.6	-2.9
	0.7nm,0.3s,baz=253,slow=19,SNR=3.1						
SWI	Sorong	6.97	22	P	Pn	19 09 12.5	+1.2
	0.3nm2µm44nm,0.7s						
EDFI	Ende, Flores	7.00	258	P	Pn	19 09 13.2	+1.5
BSSI	Bau Bau, Buton	8.16	278	P	Pn	19 09 28.6	+1.4
WAMI	Wamena	10.62	72	P	P	19 10 18.2	+9.3
FITZ	Fitzroy Crossi	11.06	195	P	Pn	19 10 02.9	-2.6
	2.1nm,0.3s,baz=21,slow=8.4,SNR=68						
FITZ				S	Sn	19 11 55.6	-12
	6.0nm,0.3s,baz=79,slow=19,SNR=8.8						
WRA	Warramunga Arr	13.68	157	P	Pn	19 10 37.6	-1.9
	0.8nm,0.3s,baz=337,slow=12,SNR=9.7						
WRA				S	Sn	19 12 59.1	-12
	2.4nm,0.3s,baz=326,slow=25,SNR=10						
MTKI	Muara Teweh, K	15.09	294	P	P	19 11 03.9	+5.0
AS31	Alice Springs	16.99	163		Pn	19 11 20.9	+0.6
ASAR	Alice Springs	16.99	163	P	Pn	19 11 22.1	+1.8
	1.2nm,0.3s,baz=342,slow=10,SNR=117						
ASAR				S	S	19 14 24.7	-4.5
	0.9nm,0.3s,baz=338,slow=22,SNR=8.9						
ASAR	Alice Springs	16.99	163	P	Pn	19 11 20.9	+0.6
PMG	Port Moresby	18.45	98	P	P	19 11 36.5	+0.6
	0.2nm,0.3s,baz=266,slow=16,SNR=3.0						
PMG	Port Moresby	18.45	98	P	P	19 11 36.1	+0.3
SBUM	Sibu	19.05	300		P	19 11 42.8	+0.5
SBUM				IAmb	IAmb	19 11 49.1	
	comp=Z,5.7nm,0.7s						
KSM	Kuching	20.27	295	P	P	19 11 53.4	-2.1
STKA	Stephens Creek	27.23	155	P	P	19 13 02.8	+1.3
	comp=Z,4.2nm,0.7s,baz=313,slow=9.5,SNR=8.4						
STKA	Stephens Creek	27.23	155	P	P	19 13 01.9	+0.4
NWAO	Narrogin (SRO)	27.55	201	P	P	19 13 05.0	+0.8
	comp=Z,3.9nm,0.4s,baz=53,slow=8.2,SNR=8.6						
RPSI	Rantau Prapat	31.27	288	P	P	19 13 35.8	-1.6
PSI	Prapat	31.30	288	P	P	19 13 35.8	-2.1
	comp=Z,2.9nm,0.4s,baz=180,slow=1.0,SNR=2.6						
CMAR	Chiang Mai Arr	38.93	312	P	P	19 14 43.7	+0.7
	comp=Z,1.3nm,0.7s,baz=146,slow=7.5,SNR=14						
CMAR				PcP	PcP	19 16 52.2	+1.5
	comp=Z,0.5nm,0.7s,baz=161,slow=3.1,SNR=4.4						
CMAR	Chiang Mai Arr	38.93	312	P	P	19 14 43.3	+0.3
CHTO	Chiang Mai	39.15	312	P	P	19 14 45.1	+0.3
CHTO				IAmb	IAmb	19 14 46.7	
	comp=Z,3.8nm,0.8s						
HHC	Hu-ho-hao-te	50.48	343	*e*P	P	19 16 14.8	+0.6
HHC				pmax	pmax		
	comp=Z,3.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,280nm,5.2s						
LSA	Lhasa	51.52	317	P	P	19 16 23.0	+0.3
ODAN	Odare	52.47	312	*e*P	P	19 16 29.9	+0.5
	comp=Z,4.1nm,0.5s						
TAPN	Taplejung	52.51	313	*e*P	P	19 16 29.3	-0.5
	comp=Z,5.9nm,0.4s						
RAMN	Ramite	53.10	312	*e*P	P	19 16 34.3	+0.2
	comp=Z,7.8nm,0.6s						
GTA	Gaotai	53.64	332	*e*P	P	19 16 38.3	+0.6
GTA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
PKIN	Phulchoki	54.34	312	*e*P	P	19 16 42.4	-0.7
	comp=Z,3.6nm,0.4s						
GKN	Gorkha	55.14	312	*e*P	P	19 16 48.3	-0.4
	comp=Z,6.4nm,0.3s						
ULN	Ulaanbaatar	58.20	343	P	P	19 17 10.7	+0.8
ULN				IAmb	IAmb	19 17 12.4	
	comp=Z,3.0nm,1.1s						
SONM	Songino Array	58.36	343	P	P	19 17 12.3	+1.2
	comp=Z,2.7nm,0.9s,baz=166,slow=7.9,SNR=16						
SONM	Songino Array	58.36	343	P	P	19 17 11.8	+0.7
WMQ	Urumqi	62.96	328	*e*P	P	19 17 44.5	+2.3
PETK	Petropavlovsk-	65.10	19	P	P	19 17 56.6	+0.8
	comp=Z,3.0nm,0.9s,baz=199,slow=3.1,SNR=4.8						
PETK				PcP	PcP	19 18 26.6	-0.8
	comp=Z,2.0nm,1.0s,baz=180,slow=2.9,SNR=4.3						
KSH	Kashi	67.37	318	P	P	19 18 11.8	+1.0
KSH				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KSH				pmax	pmax		
	comp=Z,190nm,12.3s						
MKAR	Makanchi Array	67.78	328	P	P	19 18 13.6	+0.5
	comp=Z,2.4nm,0.6s,baz=116,slow=8.2,SNR=33						
MKAR	Makanchi Array	67.78	328	P	P	19 18 13.2	+0.1
MAKZ	Makanchi	67.96	327	P	P	19 18 14.3	+0.1
AAK	Ala-Archa	69.94	320	P	P	19 18 27.2	+0.5
AAK				IAmb	IAmb	19 18 29.2	
	comp=Z,2.8nm,1.0s						
ZAA0	Zalesovo Array	71.31	334	P	P	19 18 33.9	-0.6
ZAA0				IAmb	IAmb	19 18 34.8	
	comp=Z,2.8nm,0.7s						
ZALV	Zalesovo Beam	71.31	334	P	P	19 18 34.2	-0.3
	comp=Z,2.6nm,0.5s,baz=136,slow=5.2,SNR=17						
ZALV	Zalesovo Beam	71.31	334	P	P	19 18 33.1	-1.4
KURK	Kurchatov	72.12	329	P	P	19 18 38.6	-0.8
KK31	Karatay Array	72.72	319	P	P	19 18 41.1	-2.1
KK31				IAmb	IAmb	19 18 45.0	
	comp=Z,3.1nm,1.1s						
KKAR	Karatay Array	72.72	319	P	P	19 18 42.6	-0.6
KKAR				IAmb	IAmb	19 18 45.0	
	comp=Z,3.1nm,1.1s						
KKAR	Karatay Array	72.72	319	P	P	19 18 40.4	-2.8
BVAR	Borovoye Array	77.64	328	P	P	19 19 10.8	-0.4
	comp=Z,0.9nm,0.5s,baz=186,slow=13,SNR=8.2						
TIXI	Tiksi	78.85	0	P	P	19 19 16.4	-1.0
TIXI				IAmb	IAmb	19 19 17.6	
	comp=Z,2.1nm,0.7s						
ABKAR	Akbulak array	81.94	322	P	P	19 19 33.8	-0.5
ABKAR				PP	PP	19 22 45.6	+1.5
ABKAR	Akbulak array	81.94	322	P	P	19 19 33.8	-0.5
ABKAR				IAmb	IAmb	19 19 50.7	
	comp=Z,1.4nm,1.1s						
AKTO	Aktyubinsk	83.52	323	P	P	19 19 42.5	-0.1
	comp=Z,1.5nm,0.6s,baz=90,slow=6.0,SNR=7.3						
ARU	Arti	85.29	328	P	P	19 19 50.2	-1.1
	comp=Z,0.6nm,0.4s,baz=25,slow=2.6,SNR=4.6						
TORD	Torodi Ar. Bea	127.53	281	PKP	PKPdf	19 26 19.2	-0.5
	comp=Z,0.9nm,0.6s,baz=82,slow=1.0,SNR=3.8						
TORD	Torodi Ar. Bea	127.53	281		PKPdf	19 26 18.8	-0.9
KOWA	Kowa	133.03	283	PKP	PKiKP	19 26 31.1	-0.2
	comp=Z,0.7nm,0.3s,baz=10.0,slow=3.1,SNR=2.5						
KOWA	Kowa	133.03	283		PKPdf	19 26 28.6	-1.5
DBIC	Dimbokro	133.83	272	PKP	PKiKP	19 26 33.1	+0.1
	comp=Z,1.5nm,0.5s,baz=76,slow=3.0,SNR=2.1						
CPUP	Villa Florida	146.01	170	PKPbc	PKPab	19 26 55.1	0.0
	comp=Z,1.7nm,0.4s,baz=196,slow=1.7,SNR=4.6						
CPUP	Villa Florida	146.01	170		PKPbc	19 26 54.5	+0.1
LPAZ	La Paz	151.24	145	PKPbc	PKiKP	19 27 10.7	+1.3
	comp=Z,1.3nm,0.4s,baz=37,slow=6.1,SNR=6.7						
LPAZ	La Paz	151.24	145		PKiKP	19 27 09.6	+0.2

TAP 23 19:08:32.7, 24.°36N×121.°55E, h29^{km}, ML1.6, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ETLH	Xiulin Townshi	0.17	203	P	Pn	19 08 39.1	-0.3
	baz=210						
ETLH				*e*S	Sb	19 08 43.2	+0.8
	baz=210						
NNSB	Datong	0.17	294	*e*P	Pb	19 08 38.4	-0.1
	baz=294						
NNSB				*e*S	Sb	19 08 41.6	-0.9
	baz=294						
NNSH	Datong	0.17	294	P	Pb	19 08 38.7	+0.2
	baz=294						
NNSH				*e*S	Sb	19 08 41.4	-1.2
	baz=294						
NNS	Nan Shan	0.18	296	*e*P	Pb	19 08 39.0	+0.3
	baz=297						
NNS				*e*S	Sb	19 08 42.7	-0.1
	baz=297						
ENA	Nanau	0.19	69	*e*P	Pn	19 08 39.3	-0.3
	baz=70						
ENA				*e*S	Sb	19 08 43.3	+0.7
	baz=70						
NACB	Ninganchiao	0.19	168	*e*P	Pb	19 08 38.1	-0.5
	baz=174						
NACB				S	Sb	19 08 42.2	-0.5
	baz=174						
NACB	Ninganchiao	0.19	168	P	Pb	19 08 37.9	-0.7
ENTT	Nioudou	0.28	3	*e*P	Pb	19 08 39.7	-0.1
	baz=360						
ENTT				*e*S	Sb	19 08 45.3	+0.7
	baz=360						
TWD	Chiawan	0.28	172	*e*P	Pb	19 08 39.8	+0.1
	baz=175						
TWD				*e*S	Sb	19 08 45.0	+0.4
	baz=175						
FUSS	Fushou	0.30	248	*e*P	Pn	19 08 41.6	+0.2
	baz=244						
FUSS				*e*S	Sb	19 08 44.8	-0.6
	baz=244						
WHF	Hehuan Shan	0.34	231	*e*P	Pb	19 08 41.2	+0.3
	baz=225						
WHF				S	Sb	19 08 46.8	+0.3
	baz=225						
YHNB	Yeheng	0.35	333	*e*P	Pb	19 08 39.7	-1.1
	baz=326						
TWT	Tachien	0.36	253	*e*S	Sb	19 08 46.0	-0.7
	baz=249						
NSK	Sanguang	0.36	331	*e*P	Pb	19 08 40.8	-0.2
	baz=325						
TDCB	Techi	0.37	254	*e*P	Pb	19 08 39.6	-1.7
	baz=249						
TDCB				*e*S	Sb	19 08 47.2	+0.2
	baz=249						
CHGB	Renai	0.46	229	*e*P	Pb	19 08 42.9	+0.4
	baz=225						
ESL	Shilin	0.55	191	*e*P	Pb	19 08 43.8	-0.2
	baz=180						
WHP	Taichung City	0.56	262	*e*P	Pn	19 08 44.5	-0.3
	baz=256						
LIOB	Emei	0.56	300	P	Pb	19 08 43.6	-0.6
	baz=296						
NSTT	Nanjuang	0.57	298	*e*P	Pn	19 08 44.7	-0.1
	baz=299						
DPDB	Guoxing	0.66	240	*e*P	Pn	19 08 46.4	+0.3
	baz=240						
WCS	Beigang Elemen	0.66	243	*e*P	Pn	19 08 46.0	-0.1
	baz=242						
VWDT	VWDT	0.71	212	*e*P	Pb	19 08 45.7	-0.8
	baz=213						
SMLT	Sun Moon Lake	0.76	232	P	Pn	19 08 47.8	+0.2
	baz=231						
TYC	Yuchr	0.78	235	*e*P	Pb	19 08 47.2	-0.5
	baz=238						
SSLB	Suanglung	0.79	224	*e*P	Pb	19 08 46.5	-1.3
	baz=229						
SSLB	Suanglung	0.79	224	P	Pb	19 08 46.3	-1.6
HGSD	Ruisui	0.87	188	*e*P	Pn	19 08 47.2	-1.8
	baz=186						

IDC ***23*** *19:09:25.3±3.6, 6.°64S×127.°81E, h318^{km}±47^{km}, mb3.3/5, mb1 3.6/8, mb1mx3.1/52, mbtmp4.2/8, Error ellipse: s-maj=48.3km s-min=21.2km az=53.0*

ISC 23 19:09:23.4±0.9**, 6.°6S**±0.°1×**128.°1E**±0.°1**, h300^{km}, n8, σ1.^{s}44**/9**, mb3.8**/5**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	5.60	230	P	Pn	19 10 50.1	+2.0
	27nm,0.3s,baz=45,slow=4.3,SNR=2.9						
BATI				S	S	19 11 54.2	-2.0
	11nm,0.3s,baz=72,slow=3.2,SNR=2.7						
WRA	Warramunga Arr	14.57	156	P	Pn	19 12 37.3	+0.5
	2.6nm,0.3s,baz=333,slow=12,SNR=10						
ASAR	Alice Springs	17.85	162	P	Pn	19 13 13.5	-1.7
	2.2nm,0.3s,baz=345,slow=12,SNR=14						
KSRS	Korea Array	43.86	360	P	P	19 17 00.8	+0.1
	1.0nm,0.6s,baz=176,slow=9.5,SNR=4.3						
SONM	Songino Array	57.50	343	P	P	19 18 42.3	+0.4
	0.9nm,0.6s,baz=165,slow=7.3,SNR=5.4						
PETK	Petropavlovsk-	64.60	19	P	P	19 19 28.8	-0.3

	1.5nm,0.8s,baz=169,slow=2.1,SNR=4.0						
MKAR	Makanchi Array	66.87	328	P	P	19 19 43.4	-0.3
	0.8nm,0.5s,baz=116,slow=8.3,SNR=5.8						
ZALV	Zalesovo Beam	70.41	335	P	P	19 20 04.2	-1.0
	1.1nm,0.5s,baz=133,slow=6.3,SNR=5.1						

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*THE **23** 19:17:13.7, 35°.93N×22°.37E, h0^{km}±2^{km}, ML3.3/6, Error ellipse: s-maj=2.7km s-min=0.7km az=214.0*
*IDC **23** 19:17:14.6±2.6, 36°.23N×22°.64E, h0^{km}, mb3.9/6, mb1 3.9/9, mb1mx3.5/61, mbtmp3.8/9, ML3.0/3, MS2.9/1, Ms1 2.9/1, ms1mx2.6/47, Error ellipse: s-maj=51.1km s-min=22.3km az=37.0*
*ATH **23** 19:17:14.0, 35°.92N×22°.37E, h11^{km}±2^{km}, ML3.4/8, Error ellipse: s-maj=3.2km s-min=0.8km az=52.0*
ISC 23 19:17:14.1±1.9**, 35°.91N**±0°.05×**22°.38E**±0°.05**, h13**^{km}±12^{km}**, n40, σ1^{s}.02**/52**, mb4.0**/7**, Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTHR	**Kythira**	**0.61**	**55**	P	**Pb**	**19 17 25.4**	**-1.2**
KTHR				S	**Sb**	**19 17 33.3**	**-1.8**
	4μm,0.5s						
KTHA	**Kythira Island**	**0.65**	**58**	P	**Pb**	**19 17 26.3**	**-1.0**
KTHA				S	**Sg**	**19 17 35.5**	**+0.2**
KTHA				AML	AML	19 17 36.9	
	comp=N,5310μm,0.5s						
KTHA				AML	AML	19 17 38.0	
	comp=E,8194μm,0.5s						
KTHA	**Kythira Island**	**0.65**	**58**	P	**Pb**	**19 17 26.2**	**-1.0**
KTHA				S	**Sg**	**19 17 36.0**	**+0.7**
	comp=E,3μm,0.5s						
ANKY	**Antikythira Is**	**0.75**	**93**	P	**Pb**	**19 17 28.0**	**-0.9**
ANKY				S	**Sg**	**19 17 38.8**	**+0.3**
ANKY				AML	AML	19 17 39.7	
	comp=N,5652μm,0.8s						
ANKY				AML	AML	19 17 42.6	
	comp=E,5002μm,0.7s						
ANKY	**Antikythira Is**	**0.75**	**93**	P	**Pb**	**19 17 27.6**	**-1.3**
ANKY				S	**Sg**	**19 17 39.3**	**+0.9**
	comp=E,3μm,0.7s						
VLI	**Veliai**	**0.92**	**29**	P	**Pb**	**19 17 31.3**	**-0.6**
VLI				S	**Sg**	**19 17 43.9**	**0.0**
VLI				AML	AML	19 17 57.3	
	comp=E,4163μm,0.9s						
VLI				AML	AML	19 18 02.5	
	comp=N,2792μm,0.6s						
VLI	**Veliai**	**0.92**	**29**	P	**Pb**	**19 17 31.3**	**-0.6**
PYL	**PYLOS**	**1.11**	**332**	P	**Pn**	**19 17 34.3**	**-0.9**
PYL				S	**Sb**	**19 17 49.3**	**-0.1**
PYL				AML	AML	19 17 53.4	
	comp=N,2503μm,0.3s						
PYL				AML	AML	19 17 56.2	
	comp=E,4225μm,0.5s						
PYL	**PYLOS**	**1.11**	**332**	P	**Pn**	**19 17 33.5**	**-1.8**
PYL				S	**Sn**	**19 17 50.4**	**0.0**
	comp=E,2μm,0.6s						
ITM	**Ithomi**	**1.31**	**344**	P	**Pn**	**19 17 38.3**	**+0.1**
ITM				S	**Sn**	**19 17 55.1**	**-0.5**
ITM				AML	AML	19 18 00.2	
	comp=N,2922μm,0.3s						
ITM				AML	AML	19 18 01.1	
	comp=E,3361μm,0.3s						
ITM	**Ithomi**	**1.31**	**344**	P	**Pn**	**19 17 38.1**	**-0.1**
ITM				S	**Sg**	**19 17 56.8**	**+0.3**
	comp=E,2μm,0.3s						
IMMV	**Iera Moni Meta**	**1.38**	**109**	P	**Pn**	**19 17 39.3**	**+0.3**
IMMV				S	**Sb**	**19 17 57.7**	**+0.5**
IMMV				AML	AML	19 18 07.5	
	comp=N,2998μm,0.6s						
IMMV				AML	AML	19 18 09.7	
	comp=E,3472μm,0.9s						
IMMV	**Iera Moni Meta**	**1.38**	**109**	P	**Pn**	**19 17 39.2**	**+0.3**
VLX	**Vlachokerasia**	**1.45**	**360**	P	**Pn**	**19 17 40.3**	**+0.2**
VLX				S	**Sb**	**19 17 59.1**	**-0.4**
VLX				AML	AML	19 18 10.5	
	comp=E,3035μm,0.9s						
VLX				AML	AML	19 18 12.7	
	comp=N,1980μm,0.7s						
VLX	**Vlachokerasia**	**1.45**	**360**	P	**Pn**	**19 17 40.3**	**+0.2**
VAM	**Vamos**	**1.56**	**108**	P	**Pb**	**19 17 42.5**	**-0.4**
VAM				S	**Sb**	**19 18 03.3**	**+0.8**
VAM				AML	AML	19 18 12.1	
	comp=N,2354μm,0.8s						
VAM				AML	AML	19 18 16.4	
	comp=E,1787μm,0.6s						
VAM	**Vamos**	**1.56**	**108**	P	**Pn**	**19 17 42.1**	**+0.6**
KRND	**KRANIDI**	**1.59**	**23**	P	**Pb**	**19 17 43.3**	**0.0**
GVD	**Gavdhos**	**1.76**	**127**	P	**Pb**	**19 17 45.5**	**-0.6**
MHLO	**Agia Marina, M**	**1.81**	**64**	P	**Pb**	**19 17 46.3**	**-0.7**
MHLO	**Agia Marina, M**	**1.81**	**64**	P	**Pb**	**19 17 46.1**	**-0.9**
MHLO				S	**Sb**	**19 18 10.1**	**+0.6**
	comp=E,3μm,0.6s						
MHLA	**Plaka, Milos I**	**1.84**	**63**	P	**Pb**	**19 17 47.0**	**-0.6**
THAL	**Thalero**	**2.13**	**6**	P	**Pb**	**19 17 53.7**	**+1.2**
KLV	**Kalavryta, Ach**	**2.13**	**355**	P	**Pb**	**19 17 52.6**	**-0.1**
IDI	**Anoyia**	**2.14**	**106**	Pn	**Pb**	**19 17 51.9**	**-0.8**
	comp=E,5.6nm,0.3s,baz=329,slow=21,SNR=21						
IDI				LR	LR	19 19 05.0	
	comp=E,231nm,18.3s,baz=290,slow=54						
IDI	**Anoyia**	**2.14**	**106**	P	**Pb**	**19 17 51.5**	**-1.2**
LTK	**Loutraki**	**2.16**	**12**	P	**Pb**	**19 17 52.5**	**-0.5**
DION	**Dionisos Attik**	**2.49**	**29**	P	**Pn**	**19 17 56.2**	**+1.9**
DION	**Dionisos Attik**	**2.49**	**29**	P	**Pn**	**19 17 55.4**	**+1.1**
VAY	**Valandovo**	**5.40**	**2**	*i* Pn	Pn	19 18 40.7	+6.4
STIP	**Stip**	**5.77**	**359**	*i* Pn	Pn	19 18 43.6	+4.2
AKASG	**Malin Array Be**	**15.59**	**16**	Pn	**Pn**	**19 20 51.3**	**-2.0**
	comp=E,0.3nm,0.3s,baz=207,slow=10,SNR=3.4						
KBZ	**Khabaz**	**17.56**	**57**	P	**Pn**	**19 21 18.2**	**-0.1**
	comp=E,0.0nm,0.3s,baz=252,slow=16,SNR=2.3						
HFS	**Hagfors**	**24.88**	**350**	P	**P**	**19 22 36.1**	**-0.1**
	comp=E,11nm,1.2s,baz=161,slow=9.2,SNR=6.2						
FINES	**FINESS Array B**	**25.66**	**4**	P	**P**	**19 22 41.5**	**-1.7**
	comp=E,2.9nm,0.9s,baz=218,slow=16,SNR=3.4						
EKA	**Eskdalemuir Ar**	**26.13**	**326**	P	**P**	**19 22 49.2**	**+1.6**
	comp=E,0.4nm,0.4s,baz=123,slow=10,SNR=3.3						
ARCES	**ARCESS Array B**	**33.72**	**2**	P	**P**	**19 23 55.7**	**+1.0**
	comp=E,2.9nm,0.9s,baz=195,slow=3.8,SNR=5.4						
SPITS	**Spitsbergen Ar**	**42.45**	**358**	P	**P**	**19 25 10.8**	**+2.7**
	comp=E,2.4nm,0.8s,baz=210,slow=17,SNR=2.7						
MKAR	**Makanchi Array**	**45.26**	**57**	P	**P**	**19 25 29.6**	**-1.5**
	comp=E,0.7nm,0.4s,baz=272,slow=7.5,SNR=24						
ZALV	**Zalesovo Beam**	**46.13**	**47**	P	**P**	**19 25 36.4**	**-1.4**
	comp=E,0.3nm,0.3s,baz=261,slow=5.7,SNR=2.6						

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*OTT **23** 19:19:45.5±0.2, 72°.06N×75°.21W, h18^{km}, MN3.7/7, 118km southeast from Pond Inlet, Nu Baffin Island Seismic Zone, Nt.*
ISC 23 19:19:43.2±0.7**, 71°.89N**±0°.05×**75°.24W**±0°.05**, h32**^{km}**, n21, σ2^{s}.51**/34**, Baffin Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CLRN	**Clyde River**	**2.58**	**120**	PN	**Pb**	**19 20 28.9**	**+0.2**
CLRN				SN	**Sb**	**19 20 58.2**	**-1.7**
CLRN				Trac		19 21 06.0	
	comp=Z,144nm,0.1s						
TULEG	**Thule**	**4.99**	**18**	PN	**Pn**	**19 20 56.3**	**+0.6**
TULEG				SN	**Sn**	**19 21 49.5**	**-2.6**
TULEG				Trac		19 22 12.6	
	comp=Z,21nm,0.2s						
TULEG				LG	Lg	19 22 13.3	
TULEG	**Thule**	**4.99**	**18**	*i* P	**Pn**	**19 20 56.4**	**+0.6**
TULEG				*i* S	**Sn**	**19 21 48.5**	**-3.7**
TULEG				IAmb	IAmb	19 21 51.9	
	comp=Z,16nm,0.4s						
KULLO	**Kullorsuaq**	**5.86**	**54**	*i* P	**Pn**	**19 21 08.7**	**+1.1**
KULLO				*i* S	**Sn**	**19 22 11.5**	**-2.0**
KULLO	**Kullorsuaq**	**5.86**	**54**	PN	**Pn**	**19 21 08.9**	**+1.2**
KULLO				SN	**Sn**	**19 22 11.7**	**-1.8**
KULLO				Trac		19 22 29.2	
	comp=Z,86nm,0.8s						
KULLO	**Kullorsuaq**	**5.86**	**54**	*i* P	**Pn**	**19 21 08.7**	**+1.1**
KULLO				*i* S	**Sn**	**19 22 11.6**	**-2.0**
UPNV	**Upernavik**	**5.88**	**72**	*i* P	**Pn**	**19 21 09.7**	**+1.8**
UPNV				*i* S	**Sn**	**19 22 12.5**	**-1.4**
UPNV				IAML		19 22 14.3	
	comp=Z,7.5nm,0.3s						
RES	**Resolute Bay**	**6.31**	**306**	PN	**Pn**	**19 21 15.5**	**+1.7**
RES				SN	**Sn**	**19 22 23.0**	**-1.6**
RES				LG	Lg	19 23 01.3	
RES				Trac		19 23 26.3	
	comp=Z,42nm,0.7s						
NUUG	**Nuugaatsiaq**	**6.93**	**82**	*e*P	**Pn**	**19 21 24.8**	**+2.5**
ILULI	**Ilulissat**	**8.45**	**97**	PN	Pn	19 21 26.6	-17
FRB	**Frobisher Bay**	**8.55**	**160**	PN	**Pn**	**19 21 47.4**	**+2.8**
FRB				SN	**Sn**	**19 23 21.6**	**+1.9**
FRB				LG	Lg	19 24 13.6	
FRB				Trac		19 24 35.2	
	comp=Z,75nm,0.7s						
EUNU	**Eureka**	**8.62**	**347**	PN	**Pn**	**19 21 46.5**	**+1.0**
KNGQ	**Kangiqsujuaq**	**10.43**	**171**	PN	**Pn**	**19 22 13.5**	**+3.3**
KNGQ				SN	**Sn**	**19 24 04.9**	**-0.8**
KNGQ				LG	Lg	19 25 12.1	
KNGQ				Trac		19 25 19.8	
	comp=Z,50nm,0.8s						
SUMG	**Summit**	**11.14**	**69**	*i* P	**Pn**	**19 22 19.7**	**-0.6**
SUMG				*e*		19 24 15.8	
SUMG	**Summit**	**11.14**	**69**	*i* P	**Pn**	**19 22 19.7**	**-0.6**
SUMG				*e*		19 24 15.8	
SUMG				IAML		19 24 20.9	
	comp=Z,4.3nm,0.3s						
KAJQ	**Kangiqsualujju**	**13.78**	**159**	PN	**Pn**	**19 22 56.5**	**+0.6**
KAJQ				SN	**Sn**	**19 25 24.9**	**-2.6**
KAJQ				LG	Lg	19 26 55.9	
KAJQ				Trac		19 27 12.2	
	comp=Z,0.8nm,0.1s						
FCC	**Fort Churchill**	**15.22**	**220**	PN	**Pn**	**19 23 16.1**	**+0.6**
FCC				SN	**Sn**	**19 25 57.9**	**-4.8**
FCC				LG	Lg	19 27 47.4	
FCC				Trac		19 28 06.1	
	comp=Z,102nm,1.8s						
DAG	**Danmarks Havn**	**15.43**	**46**	*i* P	**Pn**	**19 23 16.6**	**-1.5**
DAG				*i*		19 26 00.4	
DAG	**Danmarks Havn**	**15.43**	**46**	*i* P	**Pn**	**19 23 16.6**	**-1.5**
DAG				*i*		19 26 00.4	
SILO	**Sutton Inlier**	**17.96**	**199**	PN	**P**	**19 23 54.1**	**+3.7**
SILO				SN	**Sn**	**19 27 03.8**	**-5.4**
SILO				LG	Lg	19 29 11.7	
SILO				Trac		19 29 30.1	
	comp=Z,75nm,1.5s						
LG4Q	**La Grande 4**	**18.34**	**178**	PN	**P**	**19 23 54.9**	**+0.4**
LG4Q				SN	**Sn**	**19 27 12.1**	**-6.0**
LG4Q				Trac		19 29 36.3	
	comp=Z,12nm,0.5s						

ASRS 23 19:24:54.2±0.4**, 49°N**±2°×**9°5E**±°**, h5**^{km}**, MLh3.5**/14**, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/iasp91 confirmed, Tuva-Buryatia-Mongolia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KNGR	**Kungurtug, Tuv**	**2.07**	**48**	Pg	Pg	19 25 36.2	+2.3
KNGR				Sg	Sg	19 26 05.2	+4.4
KZLR	**Kyzyl**	**2.50**	**351**	Pg	Pg	19 25 46.0	+3.8
KZLR				Sg	Sg	19 26 20.0	+5.4
TDJR	**Todzha**	**3.23**	**11**	Pg	Pg	19 26 00.9	+4.9
TDJR				Sg	Sg	19 26 42.5	+4.7
ARDR	**Aradan**	**3.51**	**343**	Pg	Pg	19 26 02.6	+1.2
ARDR				Sg	Sg	19 26 51.0	+4.2
TEL	**Teeli**	**3.62**	**301**	Pg	Pg	19 26 04.8	+1.2
TEL				Sg	Sg	19 26 53.1	+2.5
DJOS	**Djoyskaya Sosn**	**4.26**	**328**	Pg	Pg	19 26 18.3	+2.5
DJOS				Sg	Sg	19 27 15.1	+4.2
CERR	**Cheremushki**	**4.30**	**329**	Sg	Sg	19 27 13.3	+1.0
DJO	**Djoy, Khakassi**	**4.31**	**327**	Sg	Sg	19 27 13.3	+0.7
CUR	**Chagan-Uzun**	**4.47**	**284**	Pg	Pg	19 26 20.4	+0.6
CUR				Sg	Sg	19 27 21.6	+3.9
MOY	**Mondy**	**4.48**	**55**	Pg	Pg	19 26 19.4	-0.6
MOY				Sg	Sg	19 27 17.7	-0.3
ULGR	**Ulagan, Altay**	**4.82**	**289**	Pg	Pg	19 26 27.5	+1.1
ULGR				Sg	Sg	19 27 31.0	+2.1
DGZ	**Jazzator, Alta**	**5.02**	**278**	Pg	Pg	19 26 29.9	-0.5
DGZ				Sg	Sg	19 27 39.5	+4.0
CHBI	**Chibit, Altay**	**5.04**	**285**	Pg	Pg	19 26 32.7	+2.0
CHBI				Sg	Sg	19 27 39.1	+3.1
ZAK	**Zakamensk**	**5.42**	**75**	Sg	Sg	19 27 48.1	+0.1
ARTR	**Artybash**	**5.61**	**300**	Sg	Sg	19 27 59.2	+5.0
KTRR	**Kuturchin**	**5.73**	**355**	Sg	Sg	19 28 01.1	+2.9
TASR	**Tashtagol**	**5.76**	**310**	Sg	Sg	19 28 02.1	+3.0
LUZB	**Luzhba, Kemero**	**5.88**	**321**	Sg	Sg	19 28 01.5	-1.5
TLY	**Talaya**	**5.98**	**63**	Sg	Sg	19 28 04.7	-1.3
SHRR	**Shira**	**6.08**	**332**	Sg	Sg	19 28 10.6	+1.1

IDC 23 19:52:16.3±2.7**, 9°.41S**×**120°.86E, h0**^{km}**, mb3.3**/1**, mb1 3.8**/3**, mb1mx3.4**/23**, mbtmp3.6**/3**, ML3.5**/2**, Error ellipse: s-maj=274.2km s-min=28.7km az=52.0, Sumba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**16.71**	**130**	Pn	Pn	19 56 12.1	0.0
	0.1nm,0.3s,baz=305,slow=13,SNR=5.3						
WRA				Sn	Sn	19 59 07.8	-11
	0.1nm,0.3s,baz=290,slow=25,SNR=2.8						
ASAR	**Alice Springs**	**18.89**	**140**	P	P	19 56 38.5	+0.1
	0.3nm,0.3s,baz=320,slow=13,SNR=39						
ASAR				S	Sn	20 00 00.7	-10
	0.1nm,0.3s,baz=321,slow=25,SNR=3.8						
MKAR	**Makanchi Array**	**65.66**	**332**	P	P	20 03 02.5	0.0
	0.3nm,0.8s,baz=150,slow=6.0,SNR=4.4						

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*JMA **23** 20:03:25.9±0.1, 23°.74N×121°.48E, h22^{km}±2^{km}, M3.6*
*TAP **23** 20:03:26.8, 23°.78N×121°.42E, h24^{km}, ML4.2, B*
*IDC **23** 20:03:29.6±3.2, 23°.69N×121°.74E, h48^{km}±35^{km}, mb3.4/7, mb1 3.7/8, mb1mx3.3/46, mbtmp3.8/8, ML4.1/1, Error ellipse: s-maj=21.5km s-min=18.3km az=61.0*
ISC 23 20:03:27.0±0.7**, 23°.75N**±0°.01×**121°.47E**±0°.02**, h23**^{km}±4^{km}**, n183, σ0^{s}.97**/307**, mb3.6**/7**, 16C-25D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESL	**Shilin**	**0.07**	**330**	⇓*i*P	**Pb**	**20 03 31.0**	**-0.1**
	baz=26						
ESL				*i* S	**Sb**	**20 03 33.7**	**-0.2**
	baz=26						
EGFH	**Guangfu**	**0.09**	**205**	*i* P	**Pb**	**20 03 31.3**	**0.0**
	baz=177						
EGFH				*e*S	**Sb**	**20 03 34.6**	**+0.4**
	baz=177						
HWA	**Hwalien**	**0.25**	**29**	*e*P	**Pb**	**20 03 33.7**	**+0.5**
	baz=36						
HWA				*e*S	**Sb**	**20 03 38.4**	**+1.0**
	baz=36						
HGSD	**Ruisui**	**0.26**	**189**	*i* P	**Pb**	**20 03 33.6**	**+0.3**
	baz=184						
HGSD				*e*S	**Sb**	**20 03 38.6**	**+1.1**
	baz=184						
EHY	**Hungye**	**0.28**	**209**	⇓*i*P	**Pb**	**20 03 33.0**	**-0.6**
	baz=192						
EHY				*e*S	**Sb**	**20 03 37.9**	**-0.2**
	baz=192						
VWDT	**VWDT**	**0.30**	**270**	⇑*i*P	**Pb**	**20 03 33.5**	**-0.3**
	baz=265						
VWDT				*i* S	**Sb**	**20 03 37.4**	**-1.1**
	baz=265						
TWD	**Chiawan**	**0.34**	**20**	*i* P	**Pb**	**20 03 34.4**	**-0.2**
	baz=29						
TWD				*i* S	**Sb**	**20 03 39.6**	**-0.1**
	baz=29						
YULB	**Yu-li**	**0.39**	**204**	P	**Pb**	**20 03 34.4**	**-0.9**
	baz=187						
YULB				*e*S	**Sb**	**20 03 41.6**	**+0.6**
	baz=187						
CHGB	**Renai**	**0.41**	**318**	⇓*i*P	**Pb**	**20 03 35.2**	**-0.5**
	baz=325						
CHGB				*e*S	**Sb**	**20 03 40.5**	**-1.2**
	baz=325						
EYUL	**Yuli**	**0.43**	**199**	*e*P	**Pb**	**20 03 35.2**	**-0.8**
	baz=192						
EYUL				*e*S	**Sn**	**20 03 43.0**	**-1.9**
	baz=192						
TWF1	**Yuli**	**0.43**	**202**	⇓*i*P	**Pb**	**20 03 35.0**	**-1.0**
	baz=193						
TWF1				*e*S	**Sb**	**20 03 42.4**	**+0.4**
	baz=193						
WHF	**Hehuan Shan**	**0.43**	**334**	⇑*i*P	**Pb**	**20 03 35.7**	**-0.6**
	baz=340						
WHF				*i* S	**Sb**	**20 03 41.2**	**-1.4**
	baz=340						
NACB	**Ninganchiao**	**0.43**	**15**	⇑*i*P	**Pb**	**20 03 35.4**	**-0.6**
	baz=22						
NACB				S	**Sb**	**20 03 41.2**	**-1.0**
	baz=22						
ETLH	**Xiulin Townshi**	**0.45**	**1**	⇑P	**Pb**	**20 03 35.8**	**-0.6**
	baz=16						
ETLH				*e*S	**Sb**	**20 03 42.2**	**-0.5**
	baz=16						
SSLB	**Suanglung**	**0.47**	**274**	⇑*i*P	**Pb**	**20 03 35.6**	**-1.1**
	baz=272						
SSLB				*e*S	**Sb**	**20 03 41.2**	**-2.1**
	baz=272						
FUSS	**Fushou**	**0.53**	**337**	⇓*i*P	**Pb**	**20 03 37.6**	**-0.3**
	baz=341						
FUSS				*e*S	**Sb**	**20 03 44.5**	**-0.8**
	baz=341						
WPL	**Puli Township**	**0.54**	**299**	⇓*i*P	**Pb**	**20 03 36.9**	**-0.9**
	baz=303						
WPL				*e*S	**Sb**	**20 03 43.4**	**-1.7**
	baz=303						
SMLT	**Sun Moon Lake**	**0.54**	**284**	⇓P	**Pb**	**20 03 36.9**	**-0.9**
	baz=286						
SMLT				S	**Sb**	**20 03 43.8**	**-1.5**
	baz=286						
YUS	**Yu-Shan**	**0.54**	**241**	⇑*i*P	**Pb**	**20 03 37.8**	**-0.4**
	baz=236						
YUS				*e*S	**Sb**	**20 03 44.9**	**-0.9**
	baz=236						
TWT	**Tachien**	**0.56**	**332**	⇓*i*P	**Pb**	**20 03 38.1**	**-0.3**
	baz=333						
TWT				S	**Sb**	**20 03 44.8**	**-1.3**
	baz=333						
WHYT	**Xinyi Township**	**0.57**	**264**	*e*P	**Pb**	**20 03 37.6**	**-0.7**
	baz=259						
WHYT				*e*S	**Sb**	**20 03 44.9**	**-1.2**
	baz=259						
DPDB	**Guoxing**	**0.57**	**299**	⇓*i*P	**Pb**	**20 03 37.6**	**-0.8**
	baz=303						
DPDB				*e*S	**Sb**	**20 03 44.3**	**-1.8**
	baz=303						
TDCB	**Techi**	**0.57**	**330**	⇓*i*P	**Pb**	**20 03 38.1**	**-0.4**
	baz=333						
TDCB				S	**Sb**	**20 03 44.8**	**-1.4**
	baz=333						
FULB	**Fuli**	**0.58**	**196**	P	**Pb**	**20 03 37.8**	**-0.7**
	baz=200						
FULB				*e*S	**Sn**	**20 03 47.7**	**-0.9**
	baz=200						
TYC	**Yuchr**	**0.58**	**285**	⇓*i*P	**Pb**	**20 03 37.5**	**-1.0**
	baz=288						
TYC				*e*S	**Sb**	**20 03 44.5**	**-1.9**
	baz=288						
WCS	**Beigang Elemen**	**0.59**	**301**	⇓*i*P	**Pb**	**20 03 38.0**	**-0.7**
	baz=304						
WCS				*e*S	**Sb**	**20 03 45.2**	**-1.5**
	baz=304						
ALS	**Alishan**	**0.66**	**248**	⇑*i*P	**Pb**	**20 03 39.7**	**-0.3**
	baz=245						
ALS				*e*S	**Sb**	**20 03 48.0**	**-0.8**
	baz=245						
CHKT	**Chengkung**	**0.66**	**188**	*e*P	**Pb**	**20 03 39.2**	**-0.7**
	baz=173						
CHKT				*e*S	**Sn**	**20 03 50.1**	**-0.5**
	baz=173						
NNSB	**Datong**	**0.68**	**353**	⇑*i*P	**Pb**	**20 03 39.9**	**-0.3**
	baz=4.0						
NNSB				*e*S	**Sb**	**20 03 48.4**	**-0.8**
	baz=4.0						
NNSH	**Datong**	**0.68**	**353**	P	**Pb**	**20 03 39.9**	**-0.3**
	baz=3.0						
NNSH				*e*S	**Sb**	**20 03 48.5**	**-0.7**
	baz=3.0						
WJS	**Zhushan**	**0.68**	**276**	⇓P	**Pb**	**20 03 40.5**	**+0.3**
	baz=274						
WJS				*e*S	**Sn**	**20 03 50.3**	**-1.0**
	baz=274						
NNS	**Nan Shan**	**0.69**	**353**	⇑*i*P	**Pb**	**20 03 40.0**	**-0.4**
	baz=4.0						
NNS				*e*S	**Sb**	**20 03 49.0**	**-0.6**
	baz=4.0						
ELDTW	**Lidau**	**0.70**	**217**	⇓*i*P	**Pb**	**20 03 39.3**	**-1.3**
	baz=211						
ELDTW				*e*S	**Sb**	**20 03 49.6**	**-0.3**
	baz=211						
WHP	**Taichung City**	**0.71**	**317**	⇓*i*P	**Pb**	**20 03 40.1**	**-0.6**
	baz=319						
WHP				*e*S	**Sb**	**20 03 49.4**	**-0.7**
	baz=319						
ENA	**Nanau**	**0.71**	**20**	⇑*i*P	**Pb**	**20 03 39.8**	**-1.0**
	baz=25						
ENA				*e*S	**Sb**	**20 03 49.3**	**-0.9**
	baz=25						
WNT	**Mingjian**	**0.73**	**280**	⇓*i*P	**Pb**	**20 03 41.3**	**+0.2**
	baz=279						
WNT				S	**Sb**	**20 03 51.4**	**+0.7**
	baz=279						
WNT1	**Nantou City**	**0.74**	**282**	*e*P	**Pb**	**20 03 41.0**	**-0.2**
	baz=282						
WNT1				*e*S	**Sb**	**20 03 51.4**	**+0.5**
	baz=282						
CHN5	**Tsauling**	**0.74**	**258**	⇑P	**Pb**	**20 03 41.3**	**0.0**
	baz=247						
CHN5				*e*S	**Sb**	**20 03 51.6**	**+0.5**
	baz=247						
EWUT	**Wuta**	**0.74**	**22**	⇑P	**Pb**	**20 03 40.0**	**-1.2**
	baz=26						
EWUT				*e*S	**Sb**	**20 03 50.1**	**-0.9**
	baz=26						
WWF	**Wufeng**	**0.76**	**292**	*e*P	**Pn**	**20 03 42.0**	**-0.4**
	baz=295						
WWF				*e*S	**Sn**	**20 03 52.8**	**-0.4**
	baz=295						
EDH	**Donghe**	**0.79**	**191**	*e*P	**Pb**	**20 03 40.6**	**-1.5**
	baz=186						
EDH				*e*S	**Sn**	**20 03 53.8**	**-0.1**
	baz=186						
TCU	**Taichung**	**0.82**	**298**	⇓*i*P	**Pn**	**20 03 43.0**	**-0.2**
	baz=300						
TCU				*e*S	**Sn**	**20 03 54.5**	**-0.2**
	baz=300						
WGK	**Gukeng**	**0.83**	**266**	⇓*i*P	**Pb**	**20 03 42.8**	**0.0**
	baz=264						
WGK				*e*S	**Sn**	**20 03 54.5**	**-0.5**
	baz=264						
NDT	**Datong Townshi**	**0.84**	**3**	*e*P	**Pb**	**20 03 42.7**	**-0.3**
	baz=11						
NDT				*e*S	**Sb**	**20 03 53.8**	**-0.2**
	baz=11						
WDLH	**Douliu**	**0.86**	**266**	⇓P	**Pn**	**20 03 43.3**	**-0.3**
	baz=264						
WDLH				S	**Sn**	**20 03 55.5**	**0.0**
	baz=264						
STYH	**Taoyuan**	**0.86**	**228**	P	**Pb**	**20 03 43.2**	**-0.1**
	baz=219						
STYH				*e*S	**Sb**	**20 03 54.0**	**-0.4**
	baz=219						
TWQ1	**Liyutan**	**0.87**	**313**	⇓*i*P	**Pn**	**20 03 43.6**	**-0.2**
	baz=324						
TWQ1				*e*S	**Sb**	**20 03 55.3**	**+0.7**
	baz=324						
STYT	**Tauyuan**	**0.88**	**228**	⇓*i*P	**Pb**	**20 03 43.4**	**-0.2**
	baz=219						
STYT				*e*S	**Sb**	**20 03 54.8**	**-0.2**
	baz=219						
ENTT	**Nioudou**	**0.89**	**6**	P	**Pb**	**20 03 42.9**	**-0.8**
	baz=16						
ENTT				*e*S	**Sb**	**20 03 54.9**	**-0.2**
	baz=16						
TPUB	**Ta-pu**	**0.89**	**240**	⇑P	**Pn**	**20 03 43.9**	**-0.3**
	baz=237						
TPUB				*e*S	**Sb**	**20 03 55.2**	**-0.1**
	baz=237						
WCHH	**Zhanghua**	**0.90**	**291**	*e*P	**Pb**	**20 03 43.9**	**0.0**
	baz=292						
WCHH				*e*S	**Sb**	**20 03 55.8**	**+0.5**
	baz=292						
CHN4	**Tsaushan**	**0.90**	**244**	⇓*i*P	**Pn**	**20 03 44.2**	**-0.1**
	baz=232						
CHN4				S	**Sn**	**20 03 57.1**	**+0.6**
	baz=232						
LONT	**Longtian**	**0.90**	**200**	*e*P	**Pn**	**20 03 43.7**	**-0.5**
	baz=182						
LONT				*e*S	**Sb**	**20 03 55.2**	**-0.3**
	baz=182						
NDS	**Dongshan**	**0.90**	**14**	*e*P	**Pb**	**20 03 43.1**	**-0.9**
	baz=29						
NDS				*e*S	**Sb**	**20 03 55.2**	**-0.4**
	baz=29						
YHNB	**Yeheng**	**0.92**	**355**	⇑P	**Pb**	**20 03 43.8**	**-0.5**
	baz=358						
YHNB				*e*S	**Sb**	**20 03 55.5**	**-0.5**
	baz=358						

TWC	**Suao** baz=26	0.92	22	*e*P	Pb	20 03 43.2	-1.0
TWC	baz=26			*e*S	Sn	20 03 57.5	+0.4
NSK	**Sanguang** baz=357	0.92	354	P	Pb	20 03 44.0	-0.4
NSK	baz=357			*e*S	Sb	20 03 55.7	-0.6
NSY	**Sanyi** baz=318	0.92	316	⇓*i*P	Pn	20 03 45.0	+0.4
NSY	baz=318			*e*S	Sn	20 03 58.2	+1.0
WTP	**Ta-pu** baz=234	0.94	237	⇑P	Pn	20 03 44.6	-0.1
WTP	baz=234			*e*S	Sn	20 03 57.5	0.0
CHN2	**Minshiung** baz=255	0.94	257	*e*P	Pn	20 03 44.7	-0.1
CHN2	baz=255			*e*S	Sn	20 03 57.7	+0.2
WDJ	**Dajia District** baz=321	0.96	308	⇓*i*P	Pb	20 03 45.5	+0.5
WDJ	baz=321			*e*S	Sn	20 03 58.9	+0.8
NSTT	**Nanjuang** baz=343	0.97	334	*e*P	Pb	20 03 45.3	+0.1
NSTT	baz=343			*e*S	Sb	20 03 57.4	-0.2
TWE	**Neicheng** baz=25	0.98	11	*e*P	Pn	20 03 44.1	-1.2
TWE	baz=25			*e*S	Sb	20 03 56.6	-1.1
LIOB	**Emei** baz=338	0.98	335	⇓*i*P	Pb	20 03 45.5	+0.2
LIOB	baz=338			*e*S	Sb	20 03 57.9	0.0
CHY	**Chiayi** baz=253	0.99	255	*e*P	Pb	20 03 45.4	-0.1
CHY	baz=253			*e*S	Sn	20 03 59.2	+0.4
WTK	**Tuku** baz=265	0.99	266	*e*P	Pn	20 03 45.3	-0.2
WTK	baz=265			*e*S	Sn	20 03 59.5	+0.6
NMLH	**Miaoli** baz=324	1.00	322	*e*P	Pb	20 03 46.3	+0.7
NMLH	baz=324			*e*S	Sn	20 04 00.4	+1.4
TWG	**Pinlang** baz=185	1.00	202	*e*P	Pn	20 03 43.3	-2.3
TWG	baz=185			*e*S	Sn	20 03 59.9	+0.9
TWGBT	**Beinan** baz=185	1.00	201	*e*P	Pn	20 03 43.2	-2.4
TWGBT	baz=185			*e*S	Sn	20 03 58.8	-0.2
WRL	**Guolierlin Hig** baz=278	1.01	279	*e*P	Pn	20 03 45.5	-0.2
WRL	baz=278			*e*S	Sn	20 03 59.8	+0.5
NWLT	**Wulai** baz=13	1.02	2	*e*P	Pb	20 03 46.0	0.0
NWLT	baz=13			*e*S	Sb	20 03 58.6	-0.3
TWK	**Hsinying** baz=238	1.02	242	⇑P	Pb	20 03 46.0	0.0
TWK	baz=238			*e*S	Sn	20 04 00.0	+0.3
RLNB	**Erlin** baz=278	1.03	278	*e*P	Pn	20 03 45.7	-0.2
CHN1	**Nanshi** baz=234	1.03	237	P	Pb	20 03 46.5	+0.2
CHN1	baz=234			*e*S	Sn	20 04 00.4	+0.5
NJD	**Zhudong** baz=343	1.04	340	*e*P	Pb	20 03 46.7	+0.5
NJD	baz=343			*e*S	Sn	20 04 00.9	+0.9
TTN	**Taitung** baz=175	1.04	197	*e*P	Pn	20 03 45.3	-0.9
SNST	**Tainan City** baz=236	1.04	239	*e*P	Pb	20 03 46.6	+0.3
SNST	baz=236			*e*S	Sn	20 04 00.6	+0.5
SGST	**Jiashian** baz=227	1.05	231	P	Pn	20 03 46.1	-0.3
SGST	baz=227			*e*S	Sn	20 04 00.6	+0.1
SLGT	**Liugui** baz=221	1.07	225	*e*P	Pb	20 03 46.9	+0.1
SLGT	baz=221			*e*S	Sn	20 04 01.1	+0.3
NJN	**Zhunan** baz=332	1.07	329	*e*P	Pb	20 03 46.9	0.0
NJN	baz=332			*e*S	Sn	20 04 01.7	+0.8
LDUT	**Ludao** baz=173	1.08	180	*e*P	Pn	20 03 44.6	-2.1
HSN1	**Hsinchu** baz=341	1.10	338	*e*P	Pb	20 03 48.0	+0.7
HSN1	baz=341			*e*S	Sb	20 04 02.5	+1.2
SBCB	**Hsinchu** baz=324	1.12	337	*e*P	Pb	20 03 48.1	+0.3
SBCB	baz=324			*e*S	Sb	20 04 03.0	+1.0
HSN	**Hsinchu** baz=327	1.14	336	*e*P	Pb	20 03 48.4	+0.4
HSN	baz=327			*e*S	Sb	20 04 04.5	+2.1
NTC	**Toucheng** baz=19	1.14	17	*e*P	Pn	20 03 47.5	-0.1
NTC	baz=19			*e*S	Sn	20 04 02.4	-0.2
WMLT	**Mailiao** baz=273	1.14	273	*e*P	Pn	20 03 47.6	0.0
WSF	**Szhu** baz=263	1.15	264	*e*P	Pn	20 03 47.5	-0.1
WSF	baz=263			*e*S	Sb	20 04 03.6	+0.9
ICHU	**Yijhu** baz=248	1.16	251	*e*P	Pb	20 03 48.5	+0.1
ICHU	baz=248			*e*S	Sb	20 04 03.9	+0.9
NHDH	**Xindian Distri** baz=18	1.20	2	*e*P	Pn	20 03 48.6	+0.1
NHDH	baz=18			*e*S	Sn	20 04 03.7	-0.4
TATO	**Taipei** baz=16	1.22	1	*e*P	Pn	20 03 48.9	+0.3
TATO	baz=16			*e*S	Sb	20 04 05.0	+0.4
CHN3	**Shinhua** baz=233	1.22	237	*e*P	Pb	20 03 50.1	+0.8
CHN3	baz=233			*e*S	Sb	20 04 08.4	+3.7
CHN8	**Yiju** baz=249	1.23	251	*e*P	Pb	20 03 48.9	-0.6
CHN8	baz=249			*e*S	Sb	20 04 05.6	+0.8
TWA	**Mucha** baz=19	1.23	5	*e*P	Pn	20 03 48.8	0.0
TWA	baz=19			*e*S	Sb	20 04 06.0	+1.1
NCUH	**Zhongli** baz=350	1.24	348	*e*P	Pb	20 03 50.0	+0.3
NCUH	baz=350			*e*S	Sb	20 04 07.6	+2.4
BACT	**New Taipei Cit** baz=13	1.24	359	*e*P	Pn	20 03 49.2	+0.3
BACT	baz=13			*e*S	Sb	20 04 06.4	+1.2
NCU	**National Centr** baz=351	1.24	348	*e*P	Pb	20 03 49.7	0.0
NCU	baz=351			*e*S	Sb	20 04 08.1	+2.9
ECL	**Taimali** baz=185	1.25	203	*e*P	Pn	20 03 48.3	-0.7
ECL	baz=185			*e*S	Sn	20 04 03.8	-1.3
SCST	**Cishan** baz=223	1.25	226	*e*P	Pb	20 03 51.3	+1.5
SCST	baz=223			*e*S	Sb	20 04 08.7	+3.3
NTY	**Taoyuan** baz=359	1.25	353	*e*P	Pb	20 03 50.0	+0.2
NTY	baz=359			*e*S	Sb	20 04 05.9	+0.3
TIPB	**Shuangxi** baz=17	1.25	15	*e*P	Pn	20 03 48.8	-0.4
TIPB	baz=17			*e*S	Sn	20 04 04.1	-1.3
SSD	**Sandimen** baz=224	1.27	218	*e*P	Pb	20 03 49.6	-0.5
SSD	baz=224			*e*S	Sb	20 04 07.2	+1.2
TAP	**Taipei** baz=17	1.28	1	*e*P	Pb	20 03 51.0	+0.6
TAP	baz=17			*e*S	Sb	20 04 06.4	0.0
TAP1	**Taipei** baz=17	1.28	2	*e*P	Pb	20 03 51.0	+0.6
TAP1	baz=17			*e*S	Sb	20 04 06.4	0.0
TSMG	**Majia** baz=223	1.29	216	*e*P	Pb	20 03 50.6	0.0
TSMG	baz=223			*e*S	Sb	20 04 08.8	+2.1
SCLT	**Jiali** baz=241	1.31	244	*e*P	Pb	20 03 50.3	-0.5
SCLT	baz=241			*e*S	Sb	20 04 08.2	+1.1
TWB1	**Santiao Chiao** baz=23	1.33	21	*e*P	Pb	20 03 50.8	-0.5
TWB1	baz=23			*e*S	Sb	20 04 09.2	+1.2
TWM1	**Shoushan** baz=236	1.34	226	*e*P	Pb	20 03 52.6	+1.3
TWM1	baz=236			*e*S	Sb	20 04 10.4	+2.3
NWF	**Wu-fen Shan** baz=25	1.34	12	*e*P	Pn	20 03 50.4	0.0
NWF	baz=25			*e*S	Sn	20 04 06.8	-0.8
TWS1	**Kuangyinshan** baz=12	1.34	358	*e*P	Pb	20 03 51.1	-0.3
TWS1	baz=12			*e*S	Sb	20 04 09.4	+1.2
WFSB	**Wu-fen Shan** baz=25	1.34	12	*e*P	Pn	20 03 50.5	+0.2
WFSB	baz=25			*e*S	Sb	20 04 08.9	+0.7
SGLT	**Jiouru** baz=203	1.36	222	*e*P	Pb	20 03 53.5	+1.7
MASBT	**Mashibuluo** baz=204	1.37	214	*e*P	Pn	20 03 50.9	+0.1
YM01	**YM01** baz=19	1.39	4	*e*P	Pn	20 03 50.1	-0.9
YM01	baz=19			*e*S	Sn	20 04 09.1	+0.4
YM04	**YM04** baz=22	1.40	2	*e*P	Pn	20 03 50.5	-0.6
YM04	baz=22			*e*S	Sn	20 04 08.6	-0.3
YM10	**YM10** baz=26	1.40	3	*e*P	Pn	20 03 50.6	-0.5
TSPT	**Pingtung City** baz=216	1.40	220	*e*P	Pb	20 03 51.7	-0.7
TSPT	baz=216			*e*S	Sb	20 04 13.1	+3.3
NTST	**Danshui** baz=23	1.40	359	*e*P	Pb	20 03 51.8	-0.7
YM05	**YM05** baz=19	1.41	4	*e*P	Pn	20 03 50.6	-0.7
YM05	baz=19			*e*S	Sn	20 04 08.8	-0.4
YM11	**YM11** baz=19	1.41	4	*e*P	Pn	20 03 51.3	-0.1
YM11	baz=19			*e*S	Sb	20 04 11.1	+0.9
TNOU	**National Taiwa** baz=27	1.42	11	*e*P	Pn	20 03 51.1	-0.3
TNOU	baz=27			*e*S	Sb	20 04 10.9	+0.5
YM03	**YM03** baz=25	1.42	3	*e*P	Pn	20 03 51.5	0.0
ANP	**Anpu** baz=25	1.43	2	*e*P	Pn	20 03 51.0	-0.6
YM08	**YM08** baz=10.0	1.43	4	*e*P	Pn	20 03 50.6	-1.0
SNJT	**Kaohsiung City** baz=216	1.44	227	*e*P	Pb	20 03 53.3	+0.2
SSPT	**Xinbi** baz=202	1.51	213	*e*P	Pb	20 03 54.5	+0.2
JYNG	**Yonagunijimaku**	1.52	62	P	Pn	20 03 53.1	+0.4
JYNG				*e*S	Sn	20 04 11.3	-0.5
TWY	**Chenhua** baz=26	1.52	4	*e*P	Pn	20 03 51.9	-0.9
YOJ	**Yonaguni jima** baz=65	1.57	63	*e*P	Pn	20 03 53.9	+0.3
YOJ	baz=65			*e*S	Sn	20 04 12.6	-0.6
YOJ	**Yonaguni jima**	1.57	63	P	Pn	20 03 54.1	+0.6
YOJ				*e*S	Sn	20 04 13.1	-0.1
SCZT	**Fangliau** baz=205	1.58	210	*e*P	Pn	20 03 54.2	+0.6
SCZT	baz=205			*e*S	Sb	20 04 15.1	0.0
SLIU	**Shizi** baz=180	1.65	202	*e*P	Pb	20 03 56.6	-0.1
LAY	**Lan-yu** baz=166	1.71	177	*e*P	Pn	20 03 53.6	-1.8
LAY	baz=166			*e*S	Sn	20 04 14.5	-2.1
WLCH	**Liuqiu** baz=224	1.72	216	*e*P	Pb	20 03 58.6	+0.7
WDGT	**Dungji** baz=249	1.73	254	*e*P	Pn	20 03 55.4	-0.3
TWP	**Hsiaoliuchiu** baz=224	1.73	216	*e*P	Pb	20 03 57.9	-0.2
PHUB	**P'eng-hu** baz=243	1.76	263	*e*P	Pn	20 03 55.8	-0.2
PHUB	baz=243			*e*S	Sn	20 04 16.8	-0.9
PNG	**Penghu** baz=262	1.77	264	*e*P	Pn	20 03 55.8	-0.3
PNG	baz=262			*e*S	Sn	20 04 19.0	+1.0
HEN	**Hengchun** baz=175	1.87	201	*e*P	Pb	20 04 00.2	-0.2
TWK1	**Hengchun** baz=182	1.90	199	*e*P	Pb	20 04 00.1	-1.0
TWKBT	**Hengchun** baz=182	1.90	199	*e*P	Pb	20 04 00.6	-0.4
TSEB	**Hengchuen, Pin** baz=174	1.92	196	*e*P	Pb	20 04 00.6	-0.7
PCYT	**Pengchaiyu** baz=21	1.94	16	*e*P	Pn	20 03 59.4	+0.7
VCHM	**Qimei** baz=252	1.95	254	*e*P	Pn	20 03 57.9	-0.8
IRIF	**Iriomote-Funau**	2.15	74	P	Pn	20 04 02.0	+0.6
IRIF				*e*S	Sn	20 04 28.1	+0.8
HATJ	**Hateruma jima**	2.16	82	P	Pn	20 04 02.0	+0.4
HATJ				S	Sn	20 04 28.2	+0.6
VWUC	**VWUC** baz=310	2.22	304	*e*P	Pn	20 04 00.7	-1.6
PTTC	**Pingtan** baz=326	2.33	319	*e*P	Pn	20 04 02.6	-1.3
JKRS	**Kuro-shima**	2.37	78	P	Pn	20 04 05.4	+0.9
JKRS				*e*S	Sn	20 04 33.8	+0.9
PTMZ	**Houxiangcun** baz=307	2.50	301	*e*P	Pn	20 04 05.2	-1.0
JIJ	**Ishigaki jima**	2.52	76	P	Pn	20 04 06.8	+0.3
JIJ				S	Sn	20 04 36.1	-0.4
JISG	**Ishigakijimahi**	2.72	72	P	Pn	20 04 09.6	+0.3
JISG				*e*S	Sn	20 04 41.1	-0.5
MATB	**Ma-tsu** baz=338	2.76	330	*e*P	Pn	20 04 08.3	-1.5
MSUT	**Lienchiang** baz=338	2.78	330	*e*P	Pn	20 04 09.2	-1.0
KNM	**Kinmen** baz=287	2.85	284	*e*P	Pn	20 04 12.0	+0.9
KNMB	**Chin-men Tao** baz=289	2.90	285	*e*P	Pn	20 04 11.2	-0.6
JTJ	**Tarama**	3.08	73	P	Pn	20 04 14.9	+0.7
JTJ				S	Sn	20 04 50.3	-0.1
LYJJ	**Jianjiangzhen** baz=339	3.19	331	*e*P	Pn	20 04 14.7	-1.0
MHZQ	**Yeshan** baz=325	3.22	317	*e*P	Pn	20 04 15.0	-1.1
XPSS	**Dashiqiu** baz=337	3.37	340	*e*P	Pn	20 04 17.6	-0.6
AXDP	**Jialang** baz=296	3.39	290	*e*P	Pn	20 04 17.9	-0.7
ZPLA	**Ao Xicun** baz=275	3.41	274	*e*P	Pn	20 04 18.1	-0.7
JIRB	**Irabujima**	3.54	72	P	Pn	20 04 21.1	+0.5
JIRB				*e*S	Sn	20 05 02.4	+0.6
ZZJH	**Jiuhuzhen** baz=286	3.58	282	*e*P	Pn	20 04 20.6	-0.6
JIKM	**Ikemajima**	3.64	71	P	Pn	20 04 23.0	+1.1
JIKM				S	Sn	20 05 04.9	+0.8
JMJ	**Miyako jima 2** baz=76	3.65	72	*e*P	Pn	20 04 23.0	+1.0
JMJ2	**Miyako jima3**	3.66	74	P	Pn	20 04 23.5	+1.3
JMJ2				S	Sn	20 05 06.0	+1.4
JOGS	**Gusukube**	3.73	74	P	Pn	20 04 25.1	+1.9
JOGS				*e*S	Sn	20 05 07.5	+1.1
JOW	**Kunigami** 9.4nm,0.3s,baz=171,slow=10,SNR=63	6.88	62	P	Pn	20 05 05.5	-1.0
JOW	baz=126,slow=19,SNR=1.9			S	Sn	20 06 20.8	-3.3
JOW	**Kunigami** baz=67	6.88	62	*e*P	Pn	20 05 05.4	-1.0
KSRS	**Korea Array** 0.1nm,0.3s,baz=202,slow=12,SNR=2.9	14.73	21	P	P	20 06 58.3	-1.5
CMAR	**Chiang Mai Arr** 0.5nm,0.4s,baz=54,slow=8.0,SNR=12	21.66	260	P	P	20 08 20.2	+4.1
SONM	**Songino Array** 0.6nm,0.6s,baz=160,slow=8.4,SNR=5.5	26.86	337	P	P	20 09 07.0	+0.9
MKAR	**Makanchi Array** 2.6nm,1.0s,baz=106,slow=10.0,SNR=17	38.83	316	P	P	20 10 51.1	+0.9
ZALV	**Zalesovo Beam** 1.1nm,0.5s,baz=109,slow=6.4,SNR=7.2	40.75	327	P	P	20 11 06.5	+0.5
H11N1	**WAKE ISLAND Hy** baz=283,slow=74,SNR=4.3	42.25	86	T	T	20 56 22.5	
H11N2	**WAKE ISLAND Hy** baz=283,slow=74,SNR=5.2	42.25	86	T	T	20 56 22.5	
H11N3	**WAKE ISLAND Hy** baz=283,slow=74,SNR=6.1	42.27	86	T	T	20 56 22.9	
H11S3	**WAKE ISLAND Hy** baz=285,slow=75,SNR=12	42.37	88	T	T	20 56 29.9	
H11S1	**WAKE ISLAND Hy** baz=285,slow=75,SNR=6.2	42.38	88	T	T	20 56 31.3	
H11S2	**WAKE ISLAND Hy** baz=285,slow=75,SNR=7.3	42.39	88	T	T	20 56 28.6	
WRA	**Warramunga Arr** 0.4nm,0.6s,baz=345,slow=8.7,SNR=5.0	45.21	163	P	P	20 11 40.3	-2.2
ASAR	**Alice Springs** 0.2nm,0.3s,baz=340,slow=6.5,SNR=4.0	48.66	165	P	P	20 12 07.8	-1.7
ILAR	**Eielson Array** 0.2nm,0.6s,baz=283,slow=7.9,SNR=4.2	69.47	27	P	P	20 14 33.5	+0.2

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*ATH **23** 20:04:34.9, 38.°43N×20.°48E, h16^{km}±1^{km}, ML2.7/4, Error ellipse: s-maj=2.1km s-min=0.6km az=287.0*

*THE **23** 20:04:35.3, 38.°43N×20.°51E, h11^{km}, ML2.6/18, Error ellipse: s-maj=1.0km s-min=0.3km az=280.0*

ISC 23 20:04:34.4±0.9, **38.°44N**±0.°02×**20.°46E**±0.°03, **h19**^{km}±2^{km}, **n48**, σ**0.^{s}74**/87, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KEF5	**Kardakata, Kep**	0.16	179	P	Pg	20 04 38.8	0.0
KEF5				S	Sg	20 04 41.6	-0.2
KEF5	**Kardakata, Kep**	0.16	179	P	Pg	20 04 38.7	0.0
KEF5	13μm,0.3s			S	Sg	20 04 42.1	+0.3
KEF4	**Livadi, Kephal**	0.18	190	P	Pg	20 04 39.4	+0.3
KEF4				S	Sg	20 04 42.6	+0.4
KEF4	**Livadi, Kephal**	0.18	190	P	Pg	20 04 39.3	+0.3
KEF4	43μm,0.2s			S	Sg	20 04 42.5	+0.3
DMLN	**Damoulianata-K**	0.21	200	P	Pg	20 04 40.0	+0.5
DMLN	**Damoulianata-K**	0.21	200	P	Pg	20 04 40.0	+0.5
DMLN	2μm,0.2s			S	Sg	20 04 43.8	+0.8
EVGI	**Lefkada island**	0.24	39	P	Pb	20 04 40.0	+0.2
EVGI				S	Sb	20 04 43.6	+0.1
EVGI	**Lefkada island**	0.24	39	P	Pb	20 04 40.0	+0.2
EVGI	2μm,0.1s			S	Sb	20 04 43.9	+0.4
LXRA	**Lixouri, Kepha**	0.24	185	P	Pg	20 04 40.5	+0.6
LXRA				S	Sg	20 04 44.4	+0.7
KEF3	**Kipouria, Keph**	0.25	201	P	Pg	20 04 40.1	0.0
KEF3	**Kipouria, Keph**	0.25	201	P	Pg	20 04 40.1	0.0
KEF3	6μm,0.2s			S	Sg	20 04 44.5	+0.5
ARG2	**Argostoli**	0.26	176	P	Pg	20 04 40.4	+0.2
ARG2	13μm,0.2s			S	Sb	20 04 44.6	+0.4
ARGA	**Argostoli. Kep**	0.26	177	P	Pg	20 04 40.3	+0.1
ARGA				S	Sg	20 04 44.3	+0.1
NYDR	**Nydri-Lefkada**	0.33	34	P	Pg	20 04 41.6	+0.1
NYDR				S	Sg	20 04 46.6	+0.2
NYDR	**Nydri-Lefkada**	0.33	34	P	Pg	20 04 41.6	+0.1
NYDR	2μm,0.4s			S	Sg	20 04 45.9	-0.4
PSDA	**Pessada-Kefalo**	0.34	164	P	Pg	20 04 41.6	+0.1
PSDA				S	Sg	20 04 46.5	+0.2
PSDA	**Pessada-Kefalo**	0.34	164	P	Pg	20 04 41.6	+0.1
PSDA	695nm,0.4s			S	Sg	20 04 46.6	+0.2
LKD2	**Lefkada island**	0.38	23	P	Pg	20 04 42.7	+0.3
LKD2				S	Sg	20 04 48.2	+0.4
LKD2	comp=N,1792μm,0.4s			AML	AML	20 04 50.9	
LKD2	comp=E,1087μm,0.2s			AML	AML	20 04 51.4	
LKD2	**Lefkada island**	0.38	23	P	Pb	20 04 42.8	+0.1
LKD2	comp=E,760nm,0.3s			S	Sb	20 04 48.7	+0.4
TSLK	**Tsoukalades, L**	0.41	21	P	Pb	20 04 43.4	+0.2
TSLK	**Tsoukalades, L**	0.41	21	P	Pb	20 04 43.5	+0.2
TSLK	comp=E,895nm,0.4s			S	Sb	20 04 49.6	+0.4
AST1	**Astakos**	0.50	78	P	Pg	20 04 44.3	-0.2
AST1				S	Sb	20 04 51.9	+0.4
VLMS	**Volimes, Zakyn**	0.58	164	P	Pb	20 04 45.9	0.0
VLMS				S	Sg	20 04 54.3	+0.5
VLMS	comp=N,3972μm,0.3s			AML	AML	20 04 58.4	
VLMS	comp=E,3770μm,0.3s			AML	AML	20 04 59.4	
VLMS	**Volimes, Zakyn**	0.58	164	P	Pb	20 04 45.9	0.0
VLMS	comp=E,2μm,0.4s			S	Sg	20 04 54.5	+0.7
PDO	**Prodromos**	0.59	74	P	Pb	20 04 45.8	-0.2
PDO				S	Sb	20 04 54.3	+0.4
PDO	comp=N,1392μm,0.4s			AML	AML	20 04 58.9	
PDO	comp=E,1529μm,0.6s			AML	AML	20 04 59.2	
PDO	**Prodromos**	0.59	74	P	Pb	20 04 45.8	-0.2
PDO	comp=E,1μm,0.4s			S	Sb	20 04 54.4	+0.5
AXS	**Araxos**	0.76	108	P	Pb	20 04 48.6	-0.3
AXS				S	Sg	20 04 59.7	+0.5
AXS	**Araxos**	0.76	108	P	Pb	20 04 48.6	-0.3
AXS	comp=E,355nm,0.4s			S	Sg	20 04 59.7	+0.5
LTHK	**Lithakia**	0.78	158	P	Pb	20 04 49.1	-0.3
LTHK				S	Sg	20 05 00.3	+0.3
LTHK	comp=N,1944μm,0.2s			AML	AML	20 05 02.3	
LTHK	comp=E,1352μm,0.4s			AML	AML	20 05 02.8	
LTHK	**Lithakia**	0.78	158	P	Pb	20 04 49.2	-0.2
LTHK	comp=E,812nm,0.3s			S	Sg	20 05 00.4	+0.3
RLS	**Riolos of Patr**	0.88	115	P	Pb	20 04 50.6	-0.4
RLS	**Riolos of Patr**	0.88	115	P	Pb	20 04 50.8	-0.2
RLS	comp=E,188nm,0.4s			S	Sg	20 05 03.5	+0.5
EFP	**Efpalio**	1.13	90	P	Pn	20 04 55.0	-0.2
EFP	comp=E,198nm,0.5s			S	Sg	20 05 11.6	+0.5
ANX	**Ano Chora**	1.15	82	P	Pn	20 04 55.7	+0.1
ANX	comp=E,262nm,0.6s			S	Sg	20 05 12.8	+0.9
SERG	**Sergoula**	1.25	91	P	Pn	20 04 57.1	+0.2
SERG	comp=E,205nm,0.4s			S	Sg	20 05 15.4	+0.5
TRIZ	**Trizonia**	1.27	93	P	Pn	20 04 57.0	-0.1
AGG	**Agios Georgios**	1.57	68	P	Pb	20 05 02.9	0.0
DBRK	**Dubrovnik**	4.58	338	*i* Pn	Pn	20 05 43.6	+1.0
DBRK				Sn	Sn	20 06 32.9	-2.5
STON	**Ston**	4.90	335	*e*Pn	Pn	20 05 46.5	-0.6
STON				Sn	Sn	20 06 40.7	-2.6
LSTV	**Lastovo**	5.11	329	*i* Pn	Pn	20 05 49.5	-0.4

LSTV				Sn	**Sn**	**20 06 47.2**	**-1.1**
MAKA	**Makarska**	**5.50**	**333**	Sn	**Sn**	**20 06 59.1**	**+1.1**
HVAR	**Hvar**	**5.63**	**329**	*i* Pn	**Pn**	**20 05 56.9**	**-0.1**
HVAR				Sn	**Sn**	**20 07 00.4**	**-0.8**
RICI	**Ricice**	**5.65**	**335**	*e*Pn	**Pn**	**20 05 57.5**	**+0.2**
RICI				Sn	**Sn**	**20 07 01.2**	**-0.4**
KIJV	**Kijevo**	**6.35**	**332**	*e*Pn	**Pn**	**20 06 08.8**	**+1.9**
KIJV				Sn	**Sn**	**20 07 19.6**	**+0.6**
ZIRJ	**Zirje**	**6.36**	**327**	*e*Pn	**Pn**	**20 06 08.5**	**+1.4**
ZIRJ				Sn	**Sn**	**20 07 17.1**	**-2.0**
MORI	**Morici**	**6.50**	**328**	*e*Pn	**Pn**	**20 06 10.9**	**+1.9**
MORI				Sn	**Sn**	**20 07 21.9**	**-0.8**
DUGI	**Dugi Otok**	**6.88**	**325**	*i* Pn	**Pn**	**20 06 14.2**	**0.0**
NVLJ	**Novalja**	**7.42**	**327**	*e*Pn	**Pn**	**20 06 19.2**	**-2.4**

IDC 23 20:12:18.2±10.0**, 27°.85S**×**179°.37W, h422**^{km}±105^{km}**, mb2.9**/3**, mb1 3.2**/4**, mb1mx3.0**/33**, mbtmp3.9**/4**, Error ellipse: s-maj=86.8km s-min=45.3km az=20.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**10.79**	**195**	P	P	20 14 44.5	+0.4
	1.4nm,0.3s,baz=268,slow=3.7,SNR=12						
URZ				S	S	20 16 43.9	-0.6
	2.7nm,0.3s,baz=30,slow=22,SNR=12						
ASAR	**Alice Springs**	**42.09**	**265**	P	P	20 19 31.4	-0.2
	0.4nm,0.4s,baz=97,slow=7.4,SNR=8.0						
WRA	**Warramunga Arr**	**42.84**	**270**	P	P	20 19 37.0	-0.5
	0.7nm,0.6s,baz=106,slow=7.4,SNR=5.1						
FITZ	**Fitzroy Crossi**	**51.19**	**269**	P	P	20 20 41.6	+0.5
	0.8nm,0.6s,baz=61,slow=10,SNR=1.1						
AKASG	**Malin Array Be**	**148.54**	**324**	PKPbc	PKPbc	20 31 15.4	-0.5
	0.8nm,0.5s,baz=47,slow=3.5,SNR=4.5						

MEX 23 20:17:10.7±1.0**, 15°.14N**×**91°.92W, h165**^{km}±11^{km}**, MD4.0, Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CCIG	**Comitan**	**1.15**	**349**	*i* P	Pn	20 17 37.4	-1.0
CCIG				*i* S	Sn	20 17 57.1	-2.7
PCIG		**1.38**	**294**	*i* P	Pn	20 17 38.9	-1.3
PCIG				*i* S	Sn	20 18 00.1	-2.8
CMIG	**Matias Romero**	**3.45**	**305**	*e*P	Pn	20 18 03.1	-1.2
CMIG				*e*S	Sn	20 18 40.5	-5.6
HUIG	**Huatulco**	**4.09**	**279**	*e*P	Pn	20 18 09.8	-2.7
HUIG				*e*S	Sn	20 18 51.2	-10
PNIG	**Pinotepa**	**6.11**	**283**	*e*P	Pn	20 18 37.9	-1.1
PNIG				*e*S	Sn	20 19 45.0	-3.3

*IDC **23** 20:19:55.7±5.3, 8°.90S×119°.05E, h96^{km}±54^{km}, mb3.0/4, mb1 3.1/7, mb1mx3.0/39, mbtmp3.4/7, Error ellipse: s-maj=49.8km s-min=30.2km az=65.0*

ISC 23 20:19:55.9±1.2**, 9°.0S**±0°.2×**119°.0E**±0°.1**, h102**^{km}**, n7, σ1ˢ36**/8**, mb3.5**/3**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**4.76**	**105**	P	**Pn**	**20 21 06.4**	**+0.9**
	2.0nm,0.3s,baz=45,slow=5.7,SNR=5.1						
BATI				S	**Sn**	**20 21 58.1**	**-1.5**
	2.2nm,0.3s,baz=14,slow=4.2,SNR=2.1						
FITZ	**Fitzroy Crossi**	**11.11**	**145**	P	**Pn**	**20 22 31.4**	**-0.3**
	0.1nm,0.3s,baz=264,slow=10,SNR=5.7						
FITZ				S	Sn	20 24 23.7	-10
	0.1nm,0.3s,baz=184,slow=19,SNR=3.7						
WRA	**Warramunga Arr**	**18.40**	**128**	P	**Pn**	**20 24 03.9**	**-0.5**
	0.0nm,0.3s,baz=302,slow=12,SNR=2.6						
ASAR	**Alice Springs**	**20.40**	**137**	P	**P**	**20 24 26.4**	**+1.5**
	0.2nm,0.5s,baz=312,slow=9.8,SNR=4.1						
SONM	**Songino Array**	**57.68**	**350**	P	**P**	**20 29 36.6**	**+0.8**
	0.3nm,0.6s,baz=162,slow=9.3,SNR=3.2						
MKAR	**Makanchi Array**	**64.46**	**333**	P	**P**	**20 30 21.3**	**-0.3**
	0.3nm,0.5s,baz=152,slow=6.1,SNR=7.4						
ZALV	**Zalesovo Beam**	**69.04**	**339**	P	**P**	**20 30 48.7**	**-1.7**
	0.5nm,0.5s,baz=127,slow=3.8,SNR=2.5						

IDC 23 20:23:09.7±26.0**, 5°.56N**×**124°.18E, h0**^{km}**, mb3.7**/4**, mb1 3.9**/4**, mb1mx3.4**/38**, mbtmp3.7**/4**, Error ellipse: s-maj=445.1km s-min=119.0km az=147.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**23.55**	**177**	P	P	20 28 23.6	+1.8
	1.5nm,0.7s,baz=13,slow=9.3,SNR=7.1						
WRA	**Warramunga Arr**	**27.24**	**159**	P	P	20 28 54.5	-1.1
	0.7nm,0.4s,baz=333,slow=11,SNR=13						
ASAR	**Alice Springs**	**30.55**	**162**	P	P	20 29 24.9	-0.3
	0.4nm,0.4s,baz=338,slow=7.0,SNR=13						
STKA	**Stephens Creek**	**40.76**	**157**	P	P	20 30 52.6	0.0
	1.2nm,0.6s,baz=353,slow=8.1,SNR=2.9						

*TIR **23** 20:38:01.6, 42°.72N×20°.26E, h4^{km}±1^{km}, Md2.3*
*BEO **23** 20:38:02.6±0.3, 42°.73N×20°.33E, h5^{km}±2^{km}, ML1.9/11*
*PDG **23** 20:38:02.3±0.1, 42°.75N×20°.32E, h0^{km}±11^{km}, MD2.5/1, ML2.4/13, Error ellipse: s-maj=0.1km s-min=0.2km az=0.0*
*RHSSO **23** 20:38:03.5±0.6, 42°.80N×20°.24E, h7^{km}±4^{km}, ML2.1/7*

ISC 23 20:38:01.7±1.0**, 42°.75N**±0°.02×**20°.33E**±0°.02**, h7**^{km}±9^{km}**, n48, σ1ˢ03**/89**, 3C-6D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PVY	**Plav**	**0.31**	**240**	*e*Pg	**Pg**	**20 38 07.9**	**0.0**
PVY				*i* Sg	**Sg**	**20 38 12.6**	**+0.6**
IVA	**Berane**	**0.34**	**291**	⇑*i*Pg	**Pg**	**20 38 08.8**	**+0.4**
IVA				*i* Sg	**Sg**	**20 38 13.6**	**+0.7**
BCI	**Bajram Curri**	**0.43**	**206**	P	**Pg**	**20 38 09.7**	**-0.3**
	baz=203						
BCI				S	**Sg**	**20 38 15.6**	**-0.1**
	baz=203						
KOME	**Kolasin**	**0.60**	**280**	⇑*i*Pg	**Pg**	**20 38 13.3**	**0.0**
KOME				*i* Sg	**Sb**	**20 38 22.7**	**-0.7**
PUK	**Puka**	**0.78**	**204**	P	**Pg**	**20 38 16.2**	**-0.4**
	baz=203						
PUK				S	**Sg**	**20 38 27.4**	**+0.7**
	baz=203						
IVAS	**Ivanjica**	**0.83**	**351**	*e*Pg	**Pg**	**20 38 17.2**	**-0.5**
IVAS				*e*Sg	**Sg**	**20 38 29.0**	**+0.5**
PDG	**Podgorica**	**0.85**	**248**	*e*Pg	**Pb**	**20 38 18.7**	**-0.1**
PDG				*e*Sg	**Sg**	**20 38 29.2**	**+0.1**
PDG	**Podgorica**	**0.85**	**248**	⇓*i*Pg	**Pg**	**20 38 17.9**	**-0.2**
PDG				*e*Sg	**Sg**	**20 38 28.9**	**-0.2**
TTG	**Podgorica**	**0.85**	**248**	*e*Pg	**Pg**	**20 38 17.8**	**-0.3**
TTG				*i* Sg	**Sb**	**20 38 31.3**	**+0.9**
PLE	**Pljevlja**	**0.90**	**310**	*e*Pg	**Pg**	**20 38 18.8**	**-0.1**
PLE				*i* Sg	**Sb**	**20 38 32.5**	**+0.6**
NKY	**Niksic**	**0.98**	**274**	*e*Pg	**Pg**	**20 38 20.6**	**+0.1**
NKY				*i* Sg	**Sn**	**20 38 35.7**	**-0.5**
NKME	**Niksic**	**1.01**	**271**	*e*Pg	**Pg**	**20 38 20.8**	**-0.3**
NKME				*i* Sg	**Sn**	**20 38 36.6**	**-0.2**
DRME	**Dracevica, Mon**	**1.02**	**237**	⇓*i*Pg	**Pg**	**20 38 21.2**	**0.0**
DRME				*e*Sg	**Sb**	**20 38 35.2**	**0.0**
DRME	**Dracevica, Mon**	**1.02**	**237**	*e*Pg	**Pg**	**20 38 21.0**	**-0.2**
DRME				*i* Sg	**Sn**	**20 38 36.8**	**-0.1**
CEME	**Cevo**	**1.06**	**259**	*e*Pg	**Pg**	**20 38 21.7**	**-0.3**
CEME				*i* Sg	**Sn**	**20 38 38.1**	**+0.1**
PHP	**Peshkopia**	**1.07**	**175**	P	**Pg**	**20 38 22.3**	**+0.1**
	baz=172						
PHP				S	**Sn**	**20 38 37.7**	**-0.6**
	baz=172						
RUDO	**Rudo**	**1.11**	**321**	⇓*i*Pg	**Pb**	**20 38 21.6**	**-1.7**
RUDO				*e*Sg	**Sg**	**20 38 35.8**	**-1.7**
ULC	**Ulcinj**	**1.12**	**226**	⇓*i*Pg	**Pb**	**20 38 23.0**	**-0.5**
ULC				*i* Sg	**Sn**	**20 38 40.7**	**+1.1**
UPM	**Unac-Piva**	**1.14**	**294**	*e*Pg	**Pb**	**20 38 23.2**	**-0.6**
UPM				*e*Sg	**Sg**	**20 38 37.2**	**-1.0**
UPM	**Unac-Piva**	**1.14**	**294**	*e*Pg	**Pb**	**20 38 23.1**	**-0.7**
UPM				*i* Sg	**Sn**	**20 38 41.1**	**+1.0**
BUM	**Brajici-Budva**	**1.15**	**247**	⇑*i*Pg	**Pb**	**20 38 23.4**	**-0.5**
BUM				*i* Sg	**Sn**	**20 38 41.3**	**+1.0**
GRUS	**Gruza**	**1.17**	**14**	*e*Pg	**Pg**	**20 38 25.0**	**+0.9**
GRUS				*e*Sg	**Sn**	**20 38 41.3**	**+0.6**
BBLS	**Lazići**	**1.30**	**329**	*e*Pg	**Pn**	**20 38 25.9**	**-0.4**
BBLS				*e*Sg	**Sg**	**20 38 44.8**	**+1.3**
BBLS	**Lazići**	**1.30**	**329**	⇓*i*Pg	**Pb**	**20 38 26.2**	**-0.3**
BBLS				*e*Sg	**Sb**	**20 38 42.0**	**-1.4**
PRVS	**Prvonek**	**1.31**	**100**	*e*Pg	**Pn**	**20 38 26.2**	**-0.3**
PRVS				*e*Sg	**Sg**	**20 38 44.2**	**+0.3**
BRY	**Bratogost**	**1.32**	**277**	*e*Pg	**Pn**	**20 38 26.5**	**-0.2**
BRY				*e*Sg	**Sb**	**20 38 43.4**	**-0.7**
BRY	**Bratogost**	**1.32**	**277**	*e*Pg	**Pn**	**20 38 26.6**	**-0.2**
BRY				*i* Sg	**Sg**	**20 38 47.1**	**+2.9**
DIVS	**Divibare**	**1.37**	**350**	*e*Pg	**Pg**	**20 38 28.7**	**+0.8**
DIVS				*e*Sg	**Sg**	**20 38 46.1**	**+0.5**
DIVS	**Divibare**	**1.37**	**350**	*e*Pg	**Pb**	**20 38 27.2**	**-0.4**
DIVS				*e*Sg	**Sg**	**20 38 45.5**	**-0.1**
HCY	**Herceg Novi**	**1.39**	**258**	⇓*i*Pg	**Pn**	**20 38 27.4**	**0.0**
HCY				*e*Sg	**Sn**	**20 38 46.0**	**0.0**
HCY	**Herceg Novi**	**1.39**	**258**	*e*Pg	**Pb**	**20 38 27.9**	**0.0**
HCY				*i* Sg	**Sg**	**20 38 49.3**	**+3.1**
TREB	**Trebinje**	**1.46**	**269**	*e*Pn	**Pb**	**20 38 28.8**	**-0.3**
TREB				*e*Sn	**Sg**	**20 38 50.5**	**+2.0**
TREB	**Trebinje**	**1.46**	**269**	*e*Pg	**Pb**	**20 38 28.9**	**-0.2**
TREB				*e*Sg	**Sg**	**20 38 48.6**	**+0.1**
TRUS	**Trudelj**	**1.47**	**2**	*e*Pn	**Pg**	**20 38 31.0**	**+1.1**
DBRK	**Dubrovnik**	**1.61**	**268**	*i* Pn	**Pb**	**20 38 31.0**	**-0.7**
DBRK				Sn	**Sg**	**20 38 55.1**	**+1.8**
BOSS	**Bosilegrad**	**1.61**	**98**	*e*Pn	**Pn**	**20 38 30.7**	**+0.2**
BOSS				*e*Sn	**Sb**	**20 38 52.1**	**-0.2**
HAPS	**Han Pijesak,BI**	**1.67**	**324**	*e*Pn	**Pn**	**20 38 31.3**	**-0.1**
HAPS				*e*Sn	**Sg**	**20 38 54.8**	**-0.5**
HAPS	**Han Pijesak,BI**	**1.67**	**324**	*e*Pn	**Pn**	**20 38 31.5**	**+0.1**
HAPS				*e*Sn	**Sn**	**20 38 53.1**	**0.0**
ZAGS	**Zajecar**	**1.75**	**52**	*e*Pn	**Pb**	**20 38 33.9**	**-0.2**
ZAGS				*e*Sn	**Sb**	**20 38 56.5**	**+0.2**
ZAPS	**Zavoj**	**1.77**	**72**	*e*Pn	**Pb**	**20 38 33.4**	**-1.1**
ZAPS				*e*Sn	**Sb**	**20 38 56.8**	**-0.1**
STON	**Ston**	**1.94**	**274**	*e*Pn	**Pb**	**20 38 37.0**	**-0.3**
STON				Sn	**Sg**	**20 39 03.0**	**-0.9**
FRGS	**Fruska Gora**	**2.43**	**351**	*e*Pn	**Pn**	**20 38 42.9**	**+1.0**
FRGS				*e*Sn	**Sn**	**20 39 12.4**	**+0.5**
RICI	**Ricice**	**2.45**	**289**	Sn	**Sb**	**20 39 17.7**	**+1.2**
LSTV	**Lastovo**	**2.53**	**272**	*e*Pn	**Pb**	**20 38 46.4**	**-1.0**
HVAR	**Hvar**	**2.88**	**280**	*e*Pn	**Pb**	**20 38 51.0**	**-2.3**
KIJV	**Kijevo**	**3.12**	**295**	*i* Pn	**Pb**	**20 38 54.7**	**-2.8**
ZIRJ	**Zirje**	**3.54**	**286**	*e*Pn	**Pb**	**20 39 00.7**	**-3.9**
DUGI	**Dugi Otok**	**4.04**	**290**	*e*Pn	**Pn**	**20 39 06.2**	**+2.3**

*TIR **23** 21:04:02.9, 42°.70N×20°.41E, h12^{km}±1^{km}, Md3.3, Ml3.4*
*LDG **23** 21:04:03.7±0.1, 42°.77N×20°.32E, h2^{km}, Ml3.0/10, Error ellipse: s-maj=2.5km s-min=2.0km az=29.0*
*PDG **23** 21:04:03.9±0.1, 42°.74N×20°.34E, h10^{km}, MD3.4/8, ML3.4/13, Error ellipse: s-maj=0.2km s-min=0.2km az=90.0*
*BEO **23** 21:04:04.6±0.2, 42°.74N×20°.31E, h9^{km}±2^{km}, ML3.5/11*
*RHSSO **23** 21:04:04.8±0.5, 42°.76N×20°.28E, h8^{km}±2^{km}, ML3.5/14*
*SKO **23** 21:04:04.5, 42°.74N×20°.32E, h5^{km}*
*THE **23** 21:04:05.7, 42°.66N×20°.49E, h0^{km}±2^{km}, ML3.1/2, Error ellipse: s-maj=4.0km s-min=2.0km az=328.0*
*PRU **23** 21:04:06.7±0.0, 42°.84N×20°.44E, h8^{km}*

ISC 23 21:04:04.5±0.9**, 42°.75N**±0°.01×**20°.30E**±0°.02**, h9**^{km}±6^{km}**, n155, σ1ˢ86**/242**, 26C-16D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PEJK	**Peje**	**0.10**	**190**	⇓*i*Pg	**Pg**	**21 04 06.6**	**-0.4**
PEJK				*i* Sg	**Sg**	**21 04 08.4**	**-0.5**
PVY	**Plav**	**0.30**	**239**	⇓*i*Pg	**Pg**	**21 04 10.0**	**-0.4**
PVY				*i* Sg	**Sg**	**21 04 14.6**	**+0.2**
BEY	**Berane**	**0.33**	**293**	⇑*i*Pg	**Pg**	**21 04 11.1**	**+0.1**
IVA	**Berane**	**0.33**	**293**	⇑*i*Pg	**Pg**	**21 04 11.0**	**0.0**
IVA				*i* Sg	**Sg**	**21 04 16.3**	**+1.0**
BCI	**Bajram Curri**	**0.42**	**205**	P	**Pg**	**21 04 11.8**	**-0.8**
	baz=218						
BCI				S	**Sg**	**21 04 17.9**	**-0.2**
	baz=218						
BCI				AMP			
	comp=N,22nm,0.4s,baz=218						
SMRK	**Smrekonice**	**0.48**	**75**	⇑*i*Pg	**Pg**	**21 04 13.4**	**-0.5**
SMRK				*i* Sg	**Sb**	**21 04 20.8**	**-1.7**
KOME	**Kolasin**	**0.59**	**281**	⇓*i*Pg	**Pg**	**21 04 15.3**	**-0.6**
KOME				*i* Sg	**Sg**	**21 04 25.3**	**+1.7**
PRZK	**Prizren**	**0.63**	**148**	⇑*i*Pg	**Pg**	**21 04 14.9**	**-1.7**
PUK	**Puka**	**0.77**	**204**	P	**Pg**	**21 04 18.2**	**-1.0**
	baz=211						
PUK				S	**Sg**	**21 04 29.6**	**+0.4**
	baz=211						
PUK				AMP			
	comp=N,8.7nm,0.4s,baz=211						
PDG	**Podgorica**	**0.84**	**248**	*e*Pg	**Pg**	**21 04 19.2**	**-1.2**
PDG				*e*Sg	**Sg**	**21 04 30.5**	**-0.9**
PDG	**Podgorica**	**0.84**	**248**	⇑P	**Pg**	**21 04 19.5**	**-1.0**
PDG				⇑S	**Sg**	**21 04 30.9**	**-0.5**
PDG	**Podgorica**	**0.84**	**248**	⇓*i*Pg	**Pg**	**21 04 19.1**	**-1.4**
PDG				*e*Sg	**Sg**	**21 04 30.9**	**-0.5**
PDG	**Podgorica**	**0.84**	**248**	⇑*i*Pg	**Pg**	**21 04 19.4**	**-1.2**
PDG				*i* Sg	**Sg**	**21 04 31.0**	**-0.4**
TTG	**Podgorica**	**0.84**	**248**	*e*Pg	**Pg**	**21 04 19.3**	**-1.2**
TTG				*i* Sg	**Sg**	**21 04 33.4**	**+2.0**
IVAS	**Ivanjica**	**0.84**	**352**	*e*Pg	**Pg**	**21 04 19.7**	**-0.9**
IVAS				*e*Sg	**Sg**	**21 04 30.7**	**-0.8**
PLE	**Pljevlja**	**0.89**	**311**	*e*Pg	**Pg**	**21 04 21.0**	**-0.6**
PLE				*i* Sg	**Sg**	**21 04 34.9**	**+1.7**
NKY	**Niksic**	**0.97**	**274**	*e*Pg	**Pb**	**21 04 22.1**	**-1.4**
NKY				*i* Sg	**Sb**	**21 04 37.5**	**+1.1**
NKME	**Niksic**	**0.99**	**272**	*e*Pg	**Pb**	**21 04 22.8**	**-1.1**
NKME				*i* Sg	**Sb**	**21 04 38.8**	**+1.7**
DRME	**Dracevica, Mon**	**1.00**	**236**	*e*Pg	**Pb**	**21 04 21.9**	**-2.0**
DRME				*e*Sg	**Sb**	**21 04 36.1**	**-1.1**
DRME	**Dracevica, Mon**	**1.00**	**236**	*e*Pg	**Pb**	**21 04 22.4**	**-1.5**
DRME				*i* Sg	**Sg**	**21 04 39.0**	**+2.4**
CEME	**Cevo**	**1.04**	**259**	*e*Pg	**Pb**	**21 04 23.2**	**-1.5**
CEME				*i* Sg	**Sg**	**21 04 40.5**	**+2.5**
PHP	**Peshkopia**	**1.06**	**174**	P	**Pb**	**21 04 22.7**	**-2.4**
PHP				S	**Sb**	**21 04 38.5**	**-0.7**
PHP	**Peshkopia**	**1.06**	**174**	P	**Pb**	**21 04 22.6**	**-2.5**
	baz=178						
PHP				S	**Sb**	**21 04 38.0**	**-1.2**
	baz=178						
PHP				AMP			
	comp=N,3.5nm,0.7s,baz=178						
RUDO	**Rudo**	**1.11**	**322**	⇓*i*Pg	**Pb**	**21 04 24.0**	**-1.8**
RUDO				*e*Sg	**Sb**	**21 04 38.4**	**-2.0**
ULC	**Ulcinj**	**1.11**	**225**	⇑*i*Pg	**Pb**	**21 04 24.8**	**-1.1**
ULC	**Ulcinj**	**1.11**	**225**	*e*Pg	**Pb**	**21 04 24.7**	**-1.1**
ULC				*i* Sg	**Sn**	**21 04 42.5**	**+0.9**
UPM	**Unac-Piva**	**1.12**	**294**	*e*Pg	**Pb**	**21 04 25.2**	**-1.0**
UPM				*e*Sg	**Sb**	**21 04 39.4**	**-1.6**
UPM	**Unac-Piva**	**1.12**	**294**	*e*Pg	**Pb**	**21 04 25.0**	**-1.2**
UPM				*i* Sg	**Sn**	**21 04 43.0**	**+0.7**
BUM	**Brajici-Budva**	**1.13**	**247**	*e*Pg	**Pn**	**21 04 25.4**	**-1.2**
BUM				*i* Sg	**Sg**	**21 04 43.4**	**+2.5**
SKO	**Skopje**	**1.14**	**132**	*i* Pg	**Pb**	**21 04 24.9**	**-1.5**
SKO				*i* Sg	**Sn**	**21 04 47.5**	**+5.0**
SKO				*e*Lg	Lg	21 04 48.3	
	comp=E,26nm,0.8s						
GRUS	**Gruza**	**1.18**	**15**	*e*Pg	**Pn**	**21 04 26.8**	**-0.4**
GRUS				*e*Sg	**Sn**	**21 04 43.3**	**-0.1**
GRUS	**Gruza**	**1.18**	**15**	⇓P	**Pb**	**21 04 27.2**	**+0.1**
GRUS				⇑S	**Sn**	**21 04 44.4**	**+1.0**
BBLS	**Lazići**	**1.30**	**330**	*e*Pg	**Pn**	**21 04 28.6**	**-0.3**
BBLS				*e*Sg	**Sb**	**21 04 46.5**	**+0.6**
BBLS	**Lazići**	**1.30**	**330**	⇑*i*Pg	**Pn**	**21 04 28.0**	**-0.9**
BBLS				*e*Sg	**Sb**	**21 04 45.2**	**-0.7**
BRY	**Bratogost**	**1.31**	**277**	*e*Pg	**Pn**	**21 04 27.8**	**-1.3**
BRY				*e*Sg	**Sb**	**21 04 45.5**	**-0.7**
BRY	**Bratogost**	**1.31**	**277**	⇓*i*Pg	**Pn**	**21 04 28.5**	**-0.6**
BRY				*i* Sg	**Sg**	**21 04 49.3**	**+2.8**
PRVS	**Prvonek**	**1.33**	**100**	*e*Pg	**Pn**	**21 04 29.0**	**-0.3**
PRVS				*e*Sg	**Sn**	**21 04 46.1**	**-1.0**
BOVS	**Bovan**	**1.36**	**49**	*e*Pg	**Pn**	**21 04 28.6**	**-1.0**
BOVS				*e*Sg	**Sg**	**21 04 48.0**	**-0.1**
HCY	**Herceg Novi**	**1.37**	**258**	⇓*i*Pg	**Pn**	**21 04 29.5**	**-0.3**
HCY				*e*Sg	**Sn**	**21 04 48.2**	**+0.2**
HCY	**Herceg Novi**	**1.37**	**258**	*e*Pg	**Pn**	**21 04 29.8**	**0.0**
HCY				*i* Sg	**Sg**	**21 04 51.8**	**+3.3**
DIVS	**Divibare**	**1.37**	**351**	*e*Pg	**Pn**	**21 04 29.7**	**-0.2**
DIVS				*e*Sg	**Sb**	**21 04 48.1**	**+0.1**
DIVS	**Divibare**	**1.37**	**351**	⇑*i*Pg	**Pn**	**21 04 29.6**	**-0.3**
DIVS				*e*Sg	**Sn**	**21 04 47.8**	**-0.4**
TIR	**Tirane**	**1.44**	**193**	P	**Pn**	**21 04 31.4**	**+0.7**
TIR				S	**Sg**	**21 04 52.1**	**+1.5**
	comp=E,508nm,0.6s						
TIR	**Tirane**	**1.44**	**193**	*e*Pg	**Pn**	**21 04 31.0**	**+0.3**
TIR				*e*Sg	**Sn**	**21 04 50.1**	**+0.4**
TIR	**Tirane**	**1.44**	**193**	⇑P	**Pb**	**21 04 31.8**	**+0.4**
TIR	**Tirane**	**1.44**	**193**	P	**Pn**	**21 04 30.9**	**+0.2**
	baz=198						
TIR				S	**Sn**	**21 04 50.0**	**+0.4**
	baz=198						
TIR				AMP			
	comp=E,1.9nm,0.5s,baz=198						
TIR	**Tirane**	**1.44**	**193**	*i* Pg	**Pn**	**21 04 31.1**	**+0.5**
TREB	**Trebinje**	**1.44**	**270**	⇓*i*Pg	**Pn**	**21 04 30.6**	**-0.1**
TREB				*e*Sg	**Sn**	**21 04 50.4**	**+0.6**
TRUS	**Trudelj**	**1.48**	**3**	*e*Pg	**Pb**	**21 04 32.0**	**-0.1**
TRUS				*e*Sg	**Sb**	**21 04 51.0**	**-0.1**
DBRK	**Dubrovnik**	**1.59**	**268**	*i* Pn	**Pn**	**21 04 32.8**	**0.0**
DBRK				Sn	**Sg**	**21 04 57.8**	**+2.2**
BOSS	**Bosilegrad**	**1.63**	**98**	*e*Pn	**Pn**	**21 04 32.5**	**-0.8**
BOSS				*e*Sn	**Sn**	**21 04 53.4**	**-1.0**
HAPS	**Han Pijesak,BI**	**1.66**	**324**	*e*Pn	**Pn**	**21 04 33.7**	**-0.2**
HAPS	**Han Pijesak,BI**	**1.66**	**324**	*e*Pn	**Pn**	**21 04 33.6**	**-0.3**
HAPS				*e*Sn	**Sn**	**21 04 55.5**	**0.0**
OHR	**Ohrid**	**1.67**	**167**	*i* Pg	**Pn**	**21 04 34.5**	**+0.4**
OHR				*i* Sg	**Sg**	**21 04 58.5**	**+0.2**
OHR				*e*Lg	Lg	21 05 00.1	
	comp=E,522nm,0.6s						
STIP	**Stip**	**1.75**	**126**	⇓*i*Pn	**Pn**	**21 04 35.3**	**+0.3**
STIP				*i* Sn	**Sg**	**21 05 09.3**	**+8.6**
STIP				*e*Lg	Lg	21 05 09.5	
	comp=N,20nm,0.4s						
ZAGS	**Zajecar**	**1.77**	**52**	*e*Pn	**Pn**	**21 04 34.5**	**-0.7**
ZAGS				*e*Sn	**Sb**	**21 04 58.0**	**-1.3**
ZAPS	**Zavoj**	**1.79**	**72**	*e*Pn	**Pn**	**21 04 35.9**	**+0.3**
ZAPS				*e*Sn	**Sb**	**21 04 58.6**	**-1.4**
STON	**Ston**	**1.92**	**275**	*e*Pn	**Pn**	**21 04 38.5**	**+1.2**
STON				Sn	**Sb**	**21 05 04.9**	**+1.2**
KUBS	**Kucevo**	**1.94**	**30**	*e*Pn	**Pb**	**21 04 38.7**	**-1.3**
KUBS				*e*Sn	**Sn**	**21 05 02.0**	**-0.2**
FNA	**Florina**	**2.12**	**157**	P	**Pn**	**21 04 39.7**	**-0.4**
FNA				S	**Sn**	**21 05 06.1**	**-0.5**
	comp=N,402nm,0.6s						
FNA	**Florina**	**2.12**	**157**	⇑*i*Pn	**Pn**	**21 04 40.6**	**+0.5**
FNA				*i* Sn	**Sn**	**21 05 06.9**	**+0.3**
VTS	**Vitosha**	**2.17**	**92**	⇑P	**Pn**	**21 04 40.7**	**-0.1**
VTS	**Vitosha**	**2.17**	**92**	⇑*i*Pn	**Pn**	**21 04 40.7**	**-0.1**
VAY	**Valandovo**	**2.21**	**129**	*e*Pn	**Pn**	**21 04 41.2**	**-0.1**
VAY	**Valandovo**	**2.21**	**129**	*i* Pn	**Pb**	**21 04 43.1**	**-1.4**
VAY				*e*Sn	**Sg**	**21 05 17.3**	**+1.9**
	comp=N,83nm,0.8s						
VAY				*e*Lg	Lg	21 05 25.1	
MDVR	**Moldovita**	**2.28**	**26**	⇑P	**Pn**	**21 04 42.0**	**-0.3**
GRG	**Griva**	**2.38**	**138**	P	**Pn**	**21 04 43.7**	**0.0**
GRG	**Griva**	**2.38**	**138**	*i* Pn	**Pn**	**21 04 43.8**	**+0.1**
NEST	**Nestorio**	**2.40**	**166**	P	**Pn**	**21 04 44.8**	**+0.8**
FRGS	**Fruska Gora**	**2.44**	**352**	*e*Pn	**Pn**	**21 04 44.1**	**-0.4**
FRGS	**Fruska Gora**	**2.44**	**352**	⇓P	**Pn**	**21 04 44.5**	**0.0**
FRGS	**Fruska Gora**	**2.44**	**352**	*e*Pn	**Pn**	**21 04 44.1**	**-0.4**
FRGS				*e*Sn	**Sn**	**21 05 13.9**	**-0.5**
RICI	**Ricice**	**2.44**	**289**	*e*Pn	**Pb**	**21 04 47.8**	**-0.7**
RICI				Sn	**Sb**	**21 05 20.6**	**+1.9**
MAKA	**Makarska**	**2.47**	**284**	*e*Pn	**Pb**	**21 04 48.7**	**-0.2**
MAKA				Sn	**Sb**	**21 05 20.9**	**+1.4**
KNT	**Kendrikon**	**2.50**	**128**	P	**Pn**	**21 04 45.1**	**-0.2**
KNT	**Kendrikon**	**2.50**	**128**	*i* Pn	**Pn**	**21 04 45.1**	**-0.2**
LSTV	**Lastovo**	**2.51**	**272**	*e*Pn	**Pb**	**21 04 49.2**	**-0.5**
LSTV				Sn	**Sb**	**21 05 22.5**	**+1.7**
LSK	**Leskovik**	**2.60**	**175**	P	**Pn**	**21 04 48.6**	**+1.8**
	baz=176						
HERR	**Herculane**	**2.63**	**35**	⇑P	**Pn**	**21 04 47.1**	**0.0**
KZN	**Kozani**	**2.67**	**155**	P	**Pn**	**21 04 48.4**	**+0.6**
BANR	**Banloc**	**2.70**	**13**	⇑P	**Pn**	**21 04 48.3**	**+0.3**
HVAR	**Hvar**	**2.86**	**280**	*i* Pn	**Pn**	**21 04 52.9**	**+2.6**
HVAR				Sn	**Sn**	**21 05 28.6**	**+3.8**
SRN	**Sarande**	**2.87**	**185**	P	**Pn**	**21 04 52.5**	**+2.0**
	baz=187						
MGRS	**Mrkonjic Grad**	**2.87**	**307**	*e*Pn	**Pn**	**21 04 51.2**	**+0.7**
MGRS				*e*Sn	**Sn**	**21 05 25.0**	**-0.2**
KPRO	**Kipourio**	**2.90**	**164**	P	**Pn**	**21 04 50.6**	**-0.3**
THE	**Thessaloniki**	**2.90**	**136**	*i* Pn	**Pn**	**21 04 50.8**	**-0.1**
SRS	**Serrai**	**2.94**	**122**	*i* Pn	**Pn**	**21 04 51.3**	**-0.1**
NVR	**Nevrokopi**	**3.00**	**117**	P	**Pn**	**21 04 52.2**	**0.0**
BLY	**Banja Luka**	**3.02**	**313**	*e*Pn	**Pn**	**21 04 54.3**	**+1.8**
BLY	**Banja Luka**	**3.02**	**313**	*e*Pn	**Pn**	**21 04 52.7**	**+0.2**
BLY				*e*Sn	**Sn**	**21 05 28.6**	**-0.2**
BZS	**Buzias**	**3.02**	**18**	*e*Pn	**Pn**	**21 04 52.4**	**-0.1**
BZS	**Buzias**	**3.02**	**18**	⇑P	**Pn**	**21 04 52.9**	**+0.5**
KIJV	**Kijevo**	**3.11**	**295**	*e*Pn	**Pn**	**21 04 56.7**	**+3.0**
LIT	**Litokhoron**	**3.11**	**147**	P	**Pn**	**21 04 54.0**	**+0.2**
GZR	**Gura Zlata**	**3.19**	**33**	⇓P	**Pn**	**21 04 55.4**	**+0.5**
MATE	**Matera**	**3.41**	**233**	⇑P	**Pn**	**21 04 58.9**	**+1.1**
PRIJ	**Prijedor**	**3.42**	**312**	*e*Pn	**Pn**	**21 04 57.9**	**-0.1**
PRIJ				*e*Sn	**Sn**	**21 05 38.5**	**-0.1**
ZIRJ	**Zirje**	**3.53**	**287**	*e*Pn	**Pn**	**21 05 01.6**	**+2.2**
MORI	**Morici**	**3.54**	**290**	*i* Pn	**Pn**	**21 05 03.1**	**+3.6**
MORH	**Mrgy, Hungar**	**3.67**	**342**	⇓P	**Pn**	**21 05 01.4**	**+0.1**
MORH	**Mrgy, Hungar**	**3.67**	**342**	*e*Pn	**Pn**	**21 05 01.3**	**0.0**
MORH				*e*Sn	**Sn**	**21 05 44.1**	**-0.6**
LOT	**Lotru**	**3.68**	**42**	⇑P	**Pn**	**21 05 01.9**	**+0.2**
UDBI	**Udbina**	**3.75**	**300**	*e*Pn	**Pn**	**21 05 04.4**	**+1.9**
HUMR	**Humele**	**3.83**	**61**	⇓P	**Pn**	**21 05 04.5**	**+0.8**
MOSL	**Moslavina**	**3.84**	**320**	*i* Pn	**Pn**	**21 05 04.1**	**+0.4**
MAKR	**Makrakomi, Fth**	**3.98**	**159**	P	**Pn**	**21 05 06.6**	**+0.9**
DUGI	**Dugi Otok**	**4.02**	**290**	*i* Pn	**Pn**	**21 05 08.7**	**+2.4**
NVLJ	**Novalja**	**4.34**	**297**	*e*Pn	**Pn**	**21 05 12.0**	**+1.4**
VOIR		**4.35**	**50**	⇑P	**Pn**	**21 05 11.7**	**+0.8**
KALN	**Kalnik**	**4.36**	**322**	*e*Pn	**Pn**	**21 05 11.3**	**+0.3**
DRGR		**4.39**	**22**	⇑P	**Pn**	**21 05 11.6**	**+0.2**
PTJ	**Puntijarka**	**4.43**	**317**	*e*Pn	**Pn**	**21 05 12.4**	**+0.4**
TIP	**Timpagrande**	**4.46**	**218**	⇓P	**Pn**	**21 05 13.4**	**+1.0**
BEHE	**Becsehely**	**4.50**	**327**	*e*Pn	**Pn**	**21 05 12.8**	**+0.1**
BEHE				*e*Sn	**Sn**	**21 06 02.9**	**-2.2**
CRES	**Cresnjev**	**4.65**	**313**	*e*Pn	**Pn**	**21 05 14.7**	**-0.1**
CRES				*e*Sn	**Sn**	**21 06 07.2**	**-1.7**
DOPR	**Dopca**	**4.87**	**47**	⇑P	**Pn**	**21 05 18.6**	**+0.8**
MLR	**Muntele Rosu**	**4.90**	**54**	⇓P	**Pn**	**21 05 19.3**	**+0.8**
AQU	**L'Aquila**	**5.11**	**268**	*e*Pn	**Pn**	**21 05 21.2**	**-0.1**
AQU				*e*Sn	**Sn**	**21 06 17.9**	**-2.6**
CEY	**Cerknica**	**5.17**	**307**	*e*Pn	**Pn**	**21 05 21.5**	**-0.6**
CEY				*e*Sn	**Sn**	**21 06 19.7**	**-2.2**
PSZ	**Piszkesteto**	**5.18**	**357**	⇑P	**Pn**	**21 05 22.2**	**0.0**
LJU	**Ljubljana**	**5.29**	**311**	*e*Pn	**Pn**	**21 05 23.7**	**0.0**
SOKA	**Soboth**	**5.44**	**318**	*i* Pn	**Pn**	**21 05 26.4**	**+0.6**
	comp=N,4.7nm,0.3s,SNR=18						
SOKA				*e*Sn	**Sn**	**21 06 30.2**	**+1.7**
	comp=N,5.7nm,0.6s						
VRI	**Vrincioaia**	**5.57**	**54**	⇑P	**Pn**	**21 05 28.3**	**+0.9**
OBKA	**Obir**	**5.57**	**314**	*e*Pn	**Pn**	**21 05 28.9**	**+1.3**
	comp=N,3.9nm,0.3s,SNR=12						
OBKA				*e*Pg	**Pg**	**21 05 49.6**	**-1.5**
	comp=N,11nm,0.5s						
ARSA	**Arzberg**	**5.64**	**325**	*e*Pn	**Pn**	**21 05 29.3**	**+0.8**
	comp=N,10nm,0.3s,SNR=11						
ARSA				*i* Sn	**Sn**	**21 06 31.2**	**-2.1**
	comp=N,10nm,0.5s						
KECS	**Kecovo**	**5.74**	**1**	*e*PN	**Pn**	**21 05 30.5**	**+0.7**
VYHS	**Vyhne**	**5.84**	**350**	*e*PN	**Pn**	**21 05 31.7**	**+0.5**
VYHS				*e*SN	**Sn**	**21 06 37.4**	**-0.9**
ZST	**Bratislava**	**5.90**	**339**	*e*PN	**Pn**	**21 05 33.5**	**+1.5**
ZST				*e*SN	**Sn**	**21 06 37.7**	**-1.9**
MODS	**Modra-Piesok**	**6.01**	**340**	*e*PN	**Pn**	**21 05 33.9**	**+0.3**
MODS				*e*SN	**Sn**	**21 06 39.0**	**-3.6**
CONA	**Conrad Observa**	**6.05**	**330**	*e*Pn	**Pn**	**21 05 34.5**	**+0.3**
	comp=N,2.1nm,0.3s						
CONA				*e*Sn	**Sn**	**21 06 44.7**	**+1.0**
	comp=N,3.7nm,0.4s						
SMOL	**Smolenice**	**6.11**	**342**	*e*PN	**Pn**	**21 05 36.0**	**+1.1**
SMOL				*e*SN	**Sn**	**21 06 45.3**	**+0.4**
MYKA	**Terra Mystica**	**6.13**	**312**	*e*Pn	**Pn**	**21 05 37.0**	**+1.7**
	comp=N,1.9nm,0.3s,SNR=4.9						
MYKA				Sg	Sg	21 07 30.4	+9.2
	comp=N,3.7nm,0.4s						
CRVS	**Cervenica-Dubn**	**6.21**	**7**	*e*PN	**Pn**	**21 05 36.9**	**+0.6**
KOLS	**Kolonicke sedl**	**6.34**	**12**	*e*PN	**Pn**	**21 05 39.0**	**+0.9**
LANS	**Liptovska Anna**	**6.43**	**355**	*e*PN	**Pn**	**21 05 41.1**	**+1.7**
KBA	**Koelnbreinsper**	**6.57**	**314**	*e*Pn	**Pn**	**21 05 42.9**	**+1.5**
	comp=N,1.8nm,0.3s						
KBA				*e*Sn	**Sn**	**21 06 55.3**	**-1.2**
	comp=N,2.2nm,0.4s						
MOA	**Molln**	**6.64**	**322**	*e*Pn	**Pn**	**21 05 44.0**	**+1.7**
	comp=N,1.2nm,0.3s,SNR=6.3						
MOA				*e*Sn	**Sn**	**21 07 00.1**	**+2.0**
	comp=N,5.0nm,0.4s						
ABTA	**Abfaltersbach**	**6.84**	**308**	*i* Pn	**Pn**	**21 05 46.5**	**+1.5**
	comp=N,1.2nm,0.3s,SNR=5.8						

ABTA				Sg	Sg	21 07 53.9	+10
	comp=N,16nm,0.7s						
WTTA	Wattenberg	7.62	309	*i* Pn	Pn	21 05 58.5	+2.7
	comp=N,2.1nm,0.2s						
WTTA				*i* Sn	Sn	21 07 23.4	+1.0
	comp=N,2.1nm,0.3s						
WATA	Walderalm	7.70	310	*e*Pn	Pn	21 05 59.4	+2.6
	comp=N,4.0nm,0.4s						
WATA				*e*Sn	Sn	21 07 25.5	+1.4
	comp=N,1.0nm,0.2s						
SQTA	Sankt Quirin	7.85	308	*e*Pn	Pn	21 06 01.1	+2.3
	comp=N,3.4nm,0.5s						
KHC	Kasperske Hory	7.92	326	*e*PN	Pn	21 06 01.2	+1.4
KHC				*e*SN	Sn	21 07 26.6	-2.9
MOTA	Moosalm	7.97	308	*i* Pn	Pn	21 06 02.7	+2.1
	comp=N,0.7nm,0.2s						
DPC	Dobruska-Polom	8.09	342	*e*PN	Pn	21 06 02.8	+0.8
PGF	Pioggiola	8.34	272	*e*Pn	Pn	21 06 03.9	-1.7
PGF				*e*Sn	Sn	21 07 33.3	-6.6
	comp=N,2.1nm,0.5s						
SBF	Sospel	9.45	281	*e*Pn	Pn	21 06 19.4	-1.4
SBF				*e*Sn	Sn	21 07 59.4	-7.8
	comp=N,0.6nm,0.2s						
MBDF	Montbardon	9.99	286	*e*Pn	Pn	21 06 27.9	-0.4
MBDF	Montbardon	9.99	286	*e*P	Pn	21 06 31.1	+2.8
MBDF				*e*Sn	Sn	21 08 11.4	-9.2
	comp=N,0.1nm,0.1s						
FRF	La Foret Royal	10.02	279	*e*P	Pn	21 06 31.4	+2.9
FRF				*e*Sn	Sn	21 08 12.9	-8.1
	comp=N,0.3nm,0.2s						
LMR	La Mourre	10.12	278	*e*Pn	Pn	21 06 27.4	-2.5
LMR	La Mourre	10.12	278	*e*P	Pn	21 06 33.3	+3.4
LMR				*e*Sn	Sn	21 08 15.5	-8.0
	comp=N,0.2nm,0.2s						
LPG	La Plagne	10.13	290	*e*P	Pn	21 06 34.1	+3.8
LPG				*e*Sn	Sn	21 08 16.2	-7.9
	comp=N,0.6nm,0.4s						
LPL	La Plagne	10.14	290	*e*P	Pn	21 06 33.8	+3.4
LPL				*e*Sn	Sn	21 08 16.3	-8.1
	comp=N,2.1nm,0.5s						
ORIF	Oris-en-Rattie	10.65	287	*e*P	Pn	21 06 40.2	+3.0
ORIF				*e*Sn	Sn	21 08 28.1	-8.4
	comp=N,1.3nm,0.5s						
SMRF	Simiane la Rot	10.80	282	*e*Pn	Pn	21 06 37.8	-1.4

*IDC **23** 22:01:16.1±1.7, 18°.97N×145°.61E, h217^{km}±17^{km}, mb3.4/20, mb1 3.7/24, mb1mx3.5/55, mbtmp4.1/24, Error ellipse: s-maj=16.7km s-min=10.0km az=85.0*

*NEIC **23** 22:01:17.1±2.1, 18°.9N±0°.1×145°.6E±0°.2, h223^{km}±9^{km}, mb4.1/35, Error ellipse: s-maj=22.4km s-min=14.7km az=96.0*

ISC 23 22:01:16.4±0.5**, 19°.00N**±0°.05×**145°.5E**±0°.1**, h214**^{km}**, n69, σ0^{s}99**/71**, mb3.9**/35**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	5.41	187	P	Pn	22 02 36.8	+0.4
	14nm,0.3s,baz=15,slow=8.5,SNR=2.2						
GUMO				S	S	22 03 37.8	-1.8
	16nm,0.3s,baz=9.6,slow=22,SNR=1.9						
GUMO	Guam	5.41	187	Pn	Pn	22 02 37.1	+0.7
JCJ	Chichijima	8.63	340	P	Pn	22 03 17.1	-0.7
	5.1nm,0.3s,baz=282,slow=19,SNR=2.1						
JCJ				S	S	22 04 52.0	-3.0
	4.5nm,0.3s,baz=281,slow=24,SNR=1.9						
JOW	Kunigami	17.70	299	P	Pn	22 05 10.3	+0.2
	22nm,0.3s,baz=134,slow=11,SNR=26						
JOW	Kunigami	17.70	299	P	Pn	22 05 10.7	+0.5
JMN	Monobe	17.99	327	P	Pn	22 05 13.4	-0.1
JMN				IAmb	IAmb	22 05 15.3	
	comp=Z,26nm,1.1s						
JGF	Kuroka	18.05	338	P	Pn	22 05 13.6	-0.7
JWT	Wachi	18.54	333	P	Pn	22 05 19.5	-0.4
MJAR	Matsushiro Arr	18.63	341	P	P	22 05 19.0	+0.9
	comp=Z,0.3nm,0.3s,baz=105,slow=11,SNR=15						
MJAR	Matsushiro Arr	18.63	341	P	P	22 05 18.6	+0.6
MJAR				IAmb	IAmb	22 05 23.3	
	comp=Z,4.1nm,0.7s						
MAJO	Matsushiro	18.63	341	P	P	22 05 19.5	+1.5
MAJO				IAmb	IAmb	22 05 24.8	
	comp=Z,13nm,0.8s						
JMM	Marumori	19.25	349	P	Pn	22 05 29.1	+0.8
JSD	Sado	20.01	343	P	P	22 05 35.3	+2.5
JTM	Tenmabayashi	22.05	351	P	P	22 05 55.4	+1.6
SSLB	Suanglung	23.36	286	P	P	22 06 07.1	+1.2
KSRS	Korea Array	23.99	324	P	P	22 06 11.4	0.0
	comp=Z,2.9nm,0.6s,baz=154,slow=9.0,SNR=7.7						
USRK	Ussuriysk Ar.	27.57	339	P	P	22 06 42.5	-1.0
	comp=Z,2.0nm,0.8s,baz=147,slow=22,SNR=2.4						
USRK	Ussuriysk Ar.	27.57	339	P	P	22 06 44.9	+1.3
KLR	Kul'dur	32.14	343	P	P	22 07 24.2	+0.5
	comp=Z,5.3nm,0.6s,baz=163,slow=8.6,SNR=34						
PETK	Petropavlovsk-	35.34	13	P	P	22 07 50.9	-0.2
	comp=Z,1.6nm,0.7s,baz=206,slow=9.5,SNR=2.1						
CTA	Charters Tower	38.85	179	P	P	22 08 21.1	+0.1
	comp=Z,0.5nm,0.2s,baz=33,slow=23,SNR=1.2						
WB0	Warramunga Arr	40.04	196	P	P	22 08 30.2	-0.7
WB0				IAmb	IAmb	22 08 39.2	
	comp=Z,6.3nm,1.4s						
WB2	Warramunga Arr	40.22	196	P	P	22 08 32.0	-0.4
WB2				IAmb	IAmb	22 08 47.7	
	comp=Z,6.2nm,1.3s						
WRA	Warramunga Arr	40.22	196	P	P	22 08 31.6	-0.8
	comp=Z,1.3nm,0.7s,baz=18,slow=9.0,SNR=12						
WRA	Warramunga Arr	40.22	196	P	P	22 08 31.6	-0.8
WC3	Warramunga Arr	40.23	196	P	P	22 08 31.7	-0.8
WC3				IAmb	IAmb	22 08 43.1	
	comp=Z,7.3nm,1.2s						
FITZ	Fitzroy Crossi	41.72	209	P	P	22 08 44.0	-0.6
FITZ				IAmb	IAmb	22 08 45.2	
	comp=Z,4.3nm,1.1s						
SONM	Songino Array	42.81	321	P	P	22 08 53.1	-0.2
	comp=Z,0.9nm,0.5s,baz=137,slow=9.7,SNR=11						
SONM	Songino Array	42.81	321	P	P	22 08 52.8	-0.5
ASAR	Alice Springs	43.89	195	P	P	22 09 01.0	-1.0
	comp=Z,0.1nm,0.4s,baz=16,slow=7.1,SNR=2.3						
CMAR	Chiang Mai Arr	44.03	277	P	P	22 09 04.2	+1.0
	comp=Z,0.6nm,0.3s,baz=67,slow=7.0,SNR=4.5						
SEY	Seymchan	44.15	4	P	P	22 09 02.3	-1.3
	comp=Z,4.8nm,0.3s,baz=103,slow=1.0,SNR=31						
YAK	Yakutsk	44.40	349	P	P	22 09 05.5	0.0
YAK				IAmb	IAmb	22 09 06.3	
	comp=Z,19nm,0.7s						
LSA	Lhasa	50.29	293	P	P	22 09 53.9	+1.9
TIXI	Tiksi	53.56	354	P	P	22 10 16.3	+1.6
WMQ	Urumqi	54.00	311	P	P	22 10 19.5	+1.0
WMQ				IAmb	IAmb	22 10 26.5	
	comp=Z,4.4nm,0.7s						
SDPT	Sand Point	54.32	35	P	P	22 10 21.2	+0.7
ZALV	Zalesovo Beam	57.69	322	P	P	22 10 43.5	-0.9
	comp=Z,0.6nm,0.5s,baz=86,slow=6.5,SNR=3.9						
ZALV	Zalesovo Beam	57.69	322	P	P	22 10 44.1	-0.3
MK31	Makanchi Array	58.15	314	P	P	22 10 47.4	-0.4
MKAR	Makanchi Array	58.15	314	P	P	22 10 47.3	-0.5
	comp=Z,1.1nm,0.6s,baz=88,slow=9.2,SNR=18						
MKAR	Makanchi Array	58.15	314	P	P	22 10 47.4	-0.4
MAKZ	Makanchi	58.36	314	P	P	22 10 49.2	-0.1
MAKZ				IAmb	IAmb	22 10 49.9	
	comp=Z,1.5nm,0.8s						
KURK	Kurchatov	60.95	318	P	P	22 11 05.8	-1.0
KURK				IAmb	IAmb	22 11 07.5	
	comp=Z,3.7nm,1.1s						
KURBB	Kurchatov Arra	60.99	318	P	P	22 11 05.9	-1.1
	comp=Z,1.3nm,0.4s,baz=93,slow=7.6,SNR=7.4						
IMAR	Indian Mountai	61.01	24	P	P	22 11 07.4	+0.5
BPAW	Bear Paw Mtn.	61.56	27	P	P	22 11 10.5	-0.2
BPAW				IAmb	IAmb	22 11 27.8	
	comp=Z,1.6nm,0.9s						
TRF	Thorofare Moun	61.69	27	P	P	22 11 11.9	+0.1
TRF				IAmb	IAmb	22 11 19.3	
	comp=Z,3.4nm,1.2s						
SML	Sawmill	62.19	29	P	P	22 11 16.1	+1.1
SML				IAmb	IAmb	22 11 17.1	
	comp=Z,5.6nm,1.0s						
I23K	Minto, Yukon-K	62.51	26	P	P	22 11 17.9	+1.0
WRH	Wood River Hil	62.88	26	P	P	22 11 19.2	-0.2
WRH				IAmb	IAmb	22 11 20.4	
	comp=Z,6.2nm,1.4s						
MDM	Murphy Dome	62.93	26	P	P	22 11 20.7	+0.9
MDM				IAmb	IAmb	22 11 21.6	
	comp=Z,1.6nm,0.6s						
TOLK	Toolik Lake Re	63.38	22	P	P	22 11 23.5	+0.8
TOLK				IAmb	IAmb	22 11 24.7	
	comp=Z,1.6nm,0.5s						
ILAR	Eielson Array	63.45	26	P	P	22 11 22.4	-0.7
	comp=Z,0.8nm,0.6s,baz=256,slow=5.1,SNR=12						
IL18	Eielson Array	63.49	26	P	P	22 11 22.8	-0.6
AAK	Ala-Archa	63.56	309	P	P	22 11 24.4	-0.1
BMAR	Burnt Mountain	64.91	24	P	P	22 11 33.6	+1.0
BCAR	Beaver Creek A	65.40	29	P	P	22 11 35.9	0.0
KKAR	Karatay Array	66.46	309	P	P	22 11 42.5	-0.5
INK	Inuvik	69.16	23	P	P	22 11 59.1	-0.1
	comp=Z,1.6nm,1.0s,baz=318,slow=2.4,SNR=4.6						
INK	Inuvik	69.16	23	P	P	22 11 59.4	+0.2
ABKAR	Akbulak array	73.02	317	P	P	22 12 22.2	-0.6
ABKAR				IAmb	IAmb	22 12 22.6	
	comp=Z,1.5nm,0.5s						
ABKAR	Akbulak array	73.02	317	P	P	22 12 21.2	-1.6
YKA	Yellowknife Ar	77.80	28	P	P	22 12 49.5	-0.2
	comp=Z,0.6nm,0.5s,baz=292,slow=4.8,SNR=9.0						
ARCES	ARCESS Array B	82.16	342	P	P	22 13 12.5	-0.5
	comp=Z,5.5nm,1.1s,baz=55,slow=6.4,SNR=4.4						
ARCES	ARCESS Array B	82.16	342	P	P	22 13 12.6	-0.3
ARCES				IAmb	IAmb	22 13 15.3	
	comp=Z,18nm,1.4s						
NVAR	Mina Array Bea	83.08	52	P	P	22 13 18.6	0.0
	comp=Z,0.7nm,0.7s,baz=255,slow=5.2,SNR=5.3						
KBZ	Khabaz	85.83	315	P	P	22 13 33.1	+1.2
	comp=Z,0.6nm,0.6s,baz=19,slow=14,SNR=2.0						
FINES	FINESS Array B	86.55	335	P	P	22 13 32.8	-2.3
	comp=Z,0.8nm,0.4s,baz=66,slow=3.9,SNR=13						

IDC 23 22:46:29.6±2.7**, 7°.15S**×**128°.67E, h0**^{km}**, mb3.7**/1**, mb1 4.0**/3**, mb1mx3.5**/35**, mbtmp3.8**/3**, ML3.9**/2**, Error ellipse: s-maj=296.3km s-min=31.0km az=66.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	13.86	157	Pn	Pn	22 49 46.5	-1.0
	0.5nm,0.3s,baz=335,slow=13,SNR=19						
WRA				Sn	Sn	22 52 09.4	-13
	1.5nm,0.3s,baz=335,slow=21,SNR=12						
ASAR	Alice Springs	17.18	164	P	Pn	22 50 32.0	+0.8
	0.5nm,0.3s,baz=340,slow=9.8,SNR=17						
ASAR				S	Sn	22 53 30.4	-13
	0.3nm,0.3s,baz=325,slow=21,SNR=4.0						
MKAR	Makanchi Array	67.64	327	P	P	22 57 28.4	0.0
	0.4nm,0.5s,baz=114,slow=8.0,SNR=9.1						

*IDC **23** 22:58:15.7±1.5, 34°.10N×25°.24E, h0^{km}, mb3.6/4, mb1 3.7/6, mb1mx3.5/32, mbtmp3.5/6, ML3.6/2, MS3.6/1, Ms1 3.5/1, ms1mx2.8/35, Error ellipse: s-maj=62.1km s-min=26.4km az=143.0*

*ATH **23** 22:58:17.2, 34°.19N×25°.09E, h10^{km}±3^{km}, ML2.9/2, Error ellipse: s-maj=4.2km s-min=2.2km az=29.0*

*THE **23** 22:58:17.8, 34°.26N×25°.11E, h0^{km}±6^{km}, ML2.4/2, Error ellipse: s-maj=11.6km s-min=1.4km az=156.0*

ISC 23 22:58:16.2±2.6**, 34°.2N**±0°.1×**25°.12E**±0°.05**, h1**^{km}±15^{km}**, n20, σ0^{s}60**/26**, mb3.5**/4**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIVA	Sivas	0.90	344	P	Pg	22 58 33.4	0.0
SIVA				S	Sg	22 58 45.1	-0.1
SIVA				AML	AML	22 58 55.6	
	comp=E,2243µm,0.5s						
SIVA				AML	AML	22 58 58.1	
	comp=N,2301µm,0.5s						
LAST	Lasithi	1.05	16	P	Pg	22 58 36.4	0.0
LAST				S	Sg	22 58 50.2	+0.2
LAST	Lasithi	1.05	16	P	Pg	22 58 36.5	+0.2
GVD	Gavdhos	1.10	309	P	Pg	22 58 37.2	0.0
GVD				S	Sg	22 58 51.6	+0.2
GVD				AML	AML	22 58 57.6	
	comp=E,810µm,0.3s						
GVD				AML	AML	22 58 59.5	
	comp=N,968µm,0.4s						
GVD	Gavdhos	1.10	309	P	Pg	22 58 37.2	0.0
GVDS	Gavdos	1.10	309	P	Pg	22 58 37.2	0.0
GVDS				S	Sb	22 58 53.7	+1.0
	comp=N,302nm,0.2s						
IDI	Anoyia	1.15	351	P	Pg	22 58 37.6	-0.7
IDI				S	Sg	22 58 53.1	-0.1
IDI	Anoyia	1.15	351	P	Pg	22 58 37.4	-0.9
IDI				S	Sg	22 58 53.1	-0.1
	comp=N,125nm,0.5s						
NPS	Neapolis	1.18	20	P	Pg	22 58 38.9	0.0
NPS	Neapolis	1.18	20	P	Pg	22 58 38.7	-0.1
ZKR	Zakros	1.32	43	P	Pg	22 58 41.6	+0.1
VAM	Vamos	1.47	329	P	Pn	22 58 43.2	-0.5
VAM	Vamos	1.47	329	P	Pn	22 58 43.2	-0.5
IMMV	Iera Moni Meta	1.61	325	P	Pn	22 58 45.1	-0.6
KBZ	Khabaz	16.79	50	Pn	Pn	23 02 13.1	+0.7
	comp=N,0.1nm,0.3s,baz=198,slow=12,SNR=4.8						
KBZ				LR	LR	23 10 39.8	
	comp=N,199nm,18.5s,baz=304,slow=44						
GERES	GERESS Array B	16.96	333	P	Pn	23 02 16.1	+1.4
	comp=N,0.1nm,0.3s,baz=146,slow=13,SNR=2.4						
TORD	Torodi Ar. Bea	29.82	231	P	P	23 04 24.7	-0.2
	comp=N,0.5nm,0.6s,baz=37,slow=9.2,SNR=3.2						
MKAR	Makanchi Array	44.36	56	P	P	23 06 27.9	-0.1
	comp=N,0.4nm,0.5s,baz=268,slow=7.8,SNR=9.4						
ZALV	Zalesovo Beam	45.73	45	P	P	23 06 37.2	-1.5
	comp=N,0.9nm,0.4s,baz=272,slow=8.6,SNR=6.2						
SONM	Songino Array	60.15	50	P	P	23 08 25.8	+0.3
	comp=N,0.2nm,0.4s,baz=290,slow=8.3,SNR=1.7						

*IDC **23** 23:13:31.0±1.7, 2°.98S×128°.59E, h0^{km}, mb3.5/2, mb1 3.8/4, mb1mx3.5/39, mbtmp3.6/4, ML3.7/2, Error ellipse: s-maj=45.7km s-min=27.3km az=83.0*

*DJA **23** 23:13:33.8±0.3, 3°S±2°×12°9E±°, h10^{km}, M3.6/9, MLv3.6/9*

*NEIC **23** 23:13:36.6±2.1, 3°.00S±0°.09×128°.8E±0°.1, h50^{km}±10^{km}, mb4.1/8, Error ellipse: s-maj=17.3km s-min=10.6km az=57.0*

ISC 23 23:13:35.1±0.7**, 2°.92S**±0°.05×**128°.79E**±0°.05**, h33**^{km}**, n21, σ1^{s}38**/24**, Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.44	162	P	Pn	23 13 45.2	0.0
MSAI				S	Sn	23 13 52.3	+0.3
NLAI	Namlea	1.71	259	P	Pb	23 14 05.6	-0.4
BNDI	Bandanaira	1.94	145	P	Pn	23 14 07.3	+1.5
SANI	Sanana	2.93	287	P	Pn	23 14 21.5	+2.1
SWI	Sorong	3.21	50	P	Pn	23 14 20.8	-2.4
SIJI	Sorong	3.21	51	Pn	Pn	23 14 25.3	+2.1
	12nm,0.3s,baz=66,slow=21,SNR=82						
SIJI				Sn	Sn	23 15 02.6	+2.3
	13nm,0.3s,baz=341,slow=22,SNR=12						
FAKI	Fak Fak	3.46	90	Pn	Pn	23 14 28.2	+1.6
FAKI				Sn	Sn	23 15 05.8	-0.7
FAKI	Fak Fak	3.46	90	P	Pn	23 14 27.4	+0.8
TNTI	Ternate	3.94	339	P	Pn	23 14 32.3	-0.9
SBUM	Sibu	17.40	288		Pn	23 17 36.3	+0.8
SBUM				IAmb	IAmb	23 18 17.0	
	comp=Z,61nm,1.9s						
WB0	Warramunga Arr	17.61	162		Pn	23 17 37.0	-1.1
WB0				IAmb	IAmb	23 18 26.7	
	comp=Z,39nm,1.9s						
WRA	Warramunga Arr	17.76	163	P	Pn	23 17 39.4	-0.6
	comp=Z,0.2nm,0.3s,baz=344,slow=12,SNR=12						
WB2	Warramunga Arr	17.77	163		Pn	23 17 39.0	-1.0
WB2				IAmb	IAmb	23 17 48.0	
	comp=Z,37nm,2.0s						
WR0	Warramunga Arr	17.84	162		Pn	23 17 40.7	-0.2
WR0				IAmb	IAmb	23 18 26.5	
	comp=Z,26nm,1.6s						
COEN	Coen	17.95	128		P	23 17 43.9	+1.3
COEN				IAmb	IAmb	23 18 17.8	
	comp=Z,11nm,1.7s						
AS31	Alice Springs	21.21	167	P	P	23 18 17.8	-0.3
ASAR	Alice Springs	21.21	167	P	P	23 18 18.9	+0.7
	comp=Z,0.9nm,0.4s,baz=350,slow=12,SNR=15						
ASAR	Alice Springs	21.21	167	P	P	23 18 19.3	+1.2
PLWZ	Palliser	56.66	139	P	P	23 23 14.8	-0.5
MKAR	Makanchi Array	64.18	326	P	P	23 24 07.1	+0.5
	comp=Z,0.4nm,0.7s,baz=115,slow=5.2,SNR=2.6						
CASY	Casey	64.53	188	P	P	23 24 06.0	-2.4

*IDC **23** 23:14:06.2±0.7, 16°.25N×120°.76E, h0^{km}, mb3.9/16, mb1 4.1/18, mb1mx3.9/50, mbtmp4.0/18, ML4.1/2, MS3.8/14, Ms1 3.8/14, ms1mx3.6/41, Error ellipse: s-maj=23.3km s-min=11.4km az=83.0*

*MAN **23** 23:14:08.3, 16°.34N×120°.49E, h13^{km}, mb5.1, ML4.1, MS4.1*

MAN INTENSITY IV - BAGUIO CITY; LA TRINIDAD BENGUET; SAN MANUEL.

*NEIC **23** 23:14:12.6±1.3, 16°.30N±0°.05×120°.6E±0°.1, h49^{km}±9^{km}, mb4.4/25, Error ellipse: s-maj=15.2km s-min=7.6km az=85.0*

ISC 23 23:14:08.9±0.8**, 16°.24N**±0°.03×**120°.61E**±0°.04**, h14**^{km}±5^{km}**, n111, σ1^{s}61**/100**, mb4.2**/34**, MS3.9**/16**, 4C-3D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPP	San Manuel, Pa	0.11	143	*e*P	Pg	23 14 11.1	-1.1
SMPP				*e*S	Sg	23 14 17.4	+3.1
BCP	Baguio City	0.18	360	⇑*i*P	Pg	23 14 13.3	0.0
BCP				*i* S	Sg	23 14 14.7	-1.5
BOLP	Bolinao	0.69	282	*e*P	Pg	23 14 19.8	-2.5
BOLP				*e*S	Sb	23 14 31.8	-0.3
BALP	Baler	1.05	118	*e*P	Pn	23 14 29.7	+0.4
BALP				*e*S	Sn	23 14 46.3	+2.6
SZP	Santa	1.31	354		Pn	23 14 30.9	-2.0
ABRA	Dolores	1.41	4	*e*P	Pn	23 14 30.3	-3.9
ABRA				*e*S	Sn	23 14 51.4	-1.2
QVP	Quezon City--P	1.65	167	*e*P	Pb	23 14 38.2	-0.9
QVP				*e*S	Sg	23 15 02.2	+0.2
SIPP	Brgy, Tapao	1.68	355	⇓*e*P	Pn	23 14 34.9	-3.1
SIPP				*e*S	Sg	23 15 05.4	+2.2
APYP	Conner	1.73	20	*e*P	Pn	23 14 36.5	-2.1
APYP				*e*S	Sn	23 15 00.1	-0.3
MACP	Maragondon, Ca	1.97	177	*e*P	Pn	23 14 41.6	-0.2
MACP				*e*S	Sb	23 15 08.0	-0.9
TGY	Tagaytay City	2.15	172	Pn	Pn	23 14 45.5	+1.1
	320nm,0.3s,baz=323,slow=1.1,SNR=23						
TGY				Lg	Lg	23 15 14.8	
	456nm,0.3s,baz=243,slow=3.2,SNR=3.6						
TGY				LR	LR	23 16 06.3	
	comp=Z,2µm,18.5s,baz=76,slow=56						
TGY	Tagaytay City	2.15	172	⇓*e*P	Pb	23 14 47.4	-0.3
TGY				*e*S	Sg	23 15 18.4	+0.4
LQP	Lukban	2.29	157	*e*P	Pb	23 14 48.9	-1.4
LQP				*i* S	Sn	23 15 14.6	-0.2
SGCP	Mt. Cagua	2.42	34	*e*P	Pn	23 14 48.9	+0.7
SGCP				*e*S	Sb	23 15 21.6	-0.4
PGP	Puerto Galera	2.74	173	⇑*e*P	Pn	23 14 55.0	+2.4
JCNP	Jose Panganiba	2.79	134	*e*P	Pn	23 14 55.6	+2.3
JCNP				*e*S	Sb	23 15 31.5	-1.2
GQP	Guinayangan	2.92	142	⇑*e*P	Pb	23 14 58.4	-2.4
GQP				*e*S	Sb	23 15 34.6	-1.8
TWG	Pinlang	6.56	4	Pn	Pn	23 15 45.7	+0.5
TPUB	Ta-pu	7.03	0		Pn	23 15 52.8	+1.3
SSLB	Suanglung	7.52	2	Pn	Pn	23 16 00.2	+1.9
NACB	Ninganchiao	7.95	7	Pn	Pn	23 16 06.2	+2.0
YHNB	Yeheng	8.42	5	Pn	Pn	23 16 13.2	+2.6
KNMB	Chin-men Tao	8.45	346	Pn	Pn	23 16 12.0	+1.0
YOJ	Yonaguni jima	8.49	15	Pn	Pn	23 16 13.2	+1.7
QIZ	Qiongzhong	10.63	287	P	Pn	23 16 42.3	+1.3
QIZ				S	Sn	23 18 42.0	+2.0
QIZ				LR	LR		
	comp=N,370nm,22.2s						
QIZ				LR	LR		
	comp=E,260nm,20.8s						
QIZ				LR	LR		
	comp=Z,340nm,18.4s						
QIZ	Qiongzhong	10.63	287	Pn	Pn	23 16 44.9	+3.9
DLV	T Lat	12.51	252	Pn	Pn	23 17 08.8	+2.0
JOW	Kunigami	12.72	33	Pn	Pn	23 17 08.4	-1.1
	comp=Z,0.9nm,0.3s,baz=277,slow=17,SNR=1.5						
JOW				LR	LR	23 21 40.7	
	comp=Z,461nm,21.0s,baz=146,slow=36						
NJ2	Nanjing	15.83	355	*e*P	Pn	23 17 53.3	+1.9
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.6s						
GYA	Guiyang	16.48	310	⇓P	P	23 18 05.8	+3.1
GYA				pP	sP	23 18 12.3	+3.7
GYA				pmax	pmax		
	comp=Z,9.0nm,1.4s						
GYA				pmax	pmax		
	comp=Z,93nm,3.6s						
KMI	Kunming	18.90	301	⇑P	Pn	23 18 32.9	+2.8
KMI				pP	sP	23 18 41.4	+6.0
KMI				sP	pP	23 18 46.4	+13
KMI				pmax	pmax		
	comp=Z,5.0nm,1.2s						
KMI				pmax	pmax		
	comp=Z,89nm,3.9s						
KMI				LR	LR		
	comp=N,290nm,19.0s						
KMI				LR	LR		
	comp=E,160nm,14.8s						
KMI				LR	LR		
	comp=Z,280nm,16.9s						
SUKH	Sukhothai	20.12	277	P	Pn	23 18 55.8	+11
TIA	Tai'an	20.14	352	P	P	23 18 43.3	+0.6
TIA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
LAMP	Lampang	20.15	280	P	Pn	23 18 49.6	+4.7
	comp=Z,13nm,1.1s						
CM35	Chiang Mai Arr	20.61	280	P	Pn	23 18 51.0	+0.7
XAN	Xi'an	20.61	331	P	Pn	23 18 51.5	+1.3
XAN				pP	sP	23 19 06.0	+12
XAN				sP	pP	23 19 14.4	+22
XAN				pmax	pmax		
	comp=Z,11nm,1.3s						
XAN	Xi'an	20.61	331	P	Pn	23 18 50.7	+0.4
XAN				IAmb	IAmb	23 18 53.1	
	comp=Z,18nm,1.4s						
CM34	Chiang Mai Arr	20.63	280	P	Pn	23 18 50.0	-0.5
CM36	Chiang Mai Arr	20.66	279	P	Pn	23 18 51.0	+0.1
CM09	Chiang Mai Arr	20.75	279	P	Pn	23 18 54.0	+2.0
	comp=Z,88nmcomp=Z,7.5nm,1.1s						
CM04	Chiang Mai Arr	20.76	279	P	Pn	23 18 53.0	+0.9
	comp=Z,66nmcomp=Z,9.5nm,1.1s						
CM01	Chiang Mai Arr	20.78	279	P	Pn	23 18 54.0	+1.7
	comp=Z,82nmcomp=Z,9.9nm,1.1s						
CM02	Chiang Mai Arr	20.80	279	P	Pn	23 18 54.6	+2.1
	comp=Z,10nm,1.1s						
CM05	Chiang Mai Arr	20.80	279	P	Pn	23 18 53.5	+1.1
	comp=Z,56nmcomp=Z,6.1nm,1.3s						
CMAR	Chiang Mai Arr	20.80	279	P	Pn	23 18 52.2	-0.3
	comp=Z,9.0nm,1.1s,baz=106,slow=7.7,SNR=28						
CMAR				LR	LR	23 26 56.6	
	comp=Z,184nm,20.3s,baz=132,slow=37						
CMAR	Chiang Mai Arr	20.80	279	P	Pn	23 18 52.0	-0.5
CMMT	Chiang Mai	20.82	280	P	Pn	23 18 51.6	-1.1
	comp=Z,193nmcomp=Z,2.6nm,1.3s						
CM15	Chiang Mai Arr	20.82	279	P	Pn	23 18 54.5	+1.7
	comp=Z,5.8nm,0.9s						
CM33	Chiang Mai Arr	20.82	280	P	Pn	23 18 52.0	-0.7
CHTO	Chiang Mai	20.82	280		P	23 18 50.5	+0.2
CHTO	Chiang Mai	20.82	280	P	P	23 18 50.4	+0.1
CHTO				IAmb	IAmb	23 18 52.9	
	comp=Z,8.5nm,1.2s						
CM13	Chiang Mai Arr	20.83	279	P	Pn	23 18 54.3	+1.4
	comp=Z,52nmcomp=Z,7.5nm,1.1s						
CM32	Chiang Mai Arr	20.90	280	P	Pn	23 18 54.0	+0.3
KAPI	Kappang	21.13	182	LR	LR	23 27 50.2	
	comp=Z,87nm,20.8s,baz=48,slow=39						
CD2	Chengdu	21.22	316	P	P	23 18 56.1	+1.6
CD2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CD2				LR	LR		
	comp=N,500nm,18.0s						
CD2				LR	LR		
	comp=E,470nm,14.7s						
CD2				LR	LR		
	comp=Z,220nm,14.9s						
KSRS	Korea Array	22.10	16	P	P	23 19 01.7	-2.1
	comp=Z,1.5nm,0.8s,baz=76,slow=39,SNR=2.9						
KSRS				LR	LR	23 29 37.8	
	comp=Z,127nm,18.1s,baz=192,slow=42						
GUMO	Guam	23.58	93	LR	LR	23 27 46.4	
	comp=Z,106nm,20.0s,baz=254,slow=35						
BJT	Baijiatuau	24.01	352	P	P	23 19 22.9	-0.5
BJT				IAmb	IAmb	23 19 38.1	
	comp=Z,27nm,1.5s						
BJI	Beijing	24.03	352	P	P	23 19 23.3	-0.2
BJI				pmax	pmax		
	comp=Z,7.0nm,1.1s						
LZH	Lanzhou	24.77	326	*e*P	P	23 19 31.8	+1.2
LZH				pP	sP	23 19 41.3	+4.4
LZH				sP	pP	23 19 49.4	+14

LZH				PP	PnPn	23 20 16.0	+13
LZH				pmax	pmax		
	comp=Z,16nm,1.1s						
LZH				pmax	pmax		
	comp=Z,76nm,5.1s						
LZH				LR	LR		
	comp=N,570nm,16.3s						
LZH				LR	LR		
	comp=E,420nm,16.3s						
LZH				LR	LR		
	comp=Z,530nm,15.6s						
PSI	Prapat	25.17	240	P	P	23 19 34.1	-0.2
	comp=Z,6.3nm,0.5s,baz=1.2,slow=5.2,SNR=5.9						
RPSI	Rantau Prapat	25.23	240	P	P	23 19 34.1	-0.5
HHC	Hu-ho-hao-te	25.75	344	eP	P	23 19 39.8	+0.5
HHC				pmax	pmax		
	comp=Z,5.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,150nm,5.2s						
LEM	Lembang	26.28	210	LR	LR	23 30 42.3	
	comp=Z,78nm,20.4s,baz=162,slow=38						
GTA	Gaotai	29.38	326	eP	P	23 20 12.3	+0.4
GTA				pP	sP	23 20 16.8	-1.5
GTA				sP	pP	23 20 19.6	+3.4
GTA				pmax	pmax		
	comp=Z,2.0nm,1.4s						
USRK	Ussuriysk Ar.	29.49	17	P	P	23 20 18.4	+5.7
	comp=Z,3.3nm,0.9s,baz=205,slow=11,SNR=4.1						
USRK				LR	LR	23 32 12.5	
	comp=Z,151nm,18.6s,baz=196,slow=37						
USRK	Ussuriysk Ar.	29.49	17	P	P	23 20 10.4	-2.2
SONM	Songino Array	33.62	343	P	P	23 20 48.6	-0.5
	comp=Z,0.5nm,0.6s,baz=153,slow=13,SNR=2.0						
KLR	Kul'dur	34.14	13	P	P	23 20 52.5	-0.9
	comp=Z,1.2nm,0.6s,baz=230,slow=8.1,SNR=5.3						
WB0	Warramunga Arr	38.26	159	P	P	23 21 28.7	-0.3
WB0				IAmb	IAmb	23 21 47.1	
	comp=Z,7.5nm,1.2s						
WRA	Warramunga Arr	38.40	159	P	P	23 21 28.2	-1.9
	comp=Z,0.9nm,0.7s,baz=340,slow=9.1,SNR=7.1						
WB2	Warramunga Arr	38.41	159	P	P	23 21 29.3	-0.9
WB2				IAmb	IAmb	23 21 48.5	
	comp=Z,5.9nm,0.9s						
WMQ	Urumqi	39.16	321	eP	P	23 21 37.6	+1.2
WMQ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,160nm,4.9s						
WMQ				LR	LR		
	comp=N,380nm,29.1s						
WMQ				LR	LR		
	comp=E,1µm,29.3s						
WMQ				LR	LR		
	comp=Z,230nm,22.1s						
ASAR	Alice Springs	41.73	162	P	P	23 21 56.4	-1.5
	comp=Z,0.7nm,0.5s,baz=337,slow=6.9,SNR=8.3						
ASAR	Alice Springs	41.73	162	P	P	23 21 56.6	-1.2
MK31	Makanchi Array	43.97	322	P	P	23 22 14.8	-1.0
MKAR	Makanchi Array	43.97	322	P	P	23 22 15.2	-0.6
	comp=Z,2.2nm,1.0s,baz=123,slow=8.8,SNR=8.8						
MKAR				LR	LR	23 39 50.0	
	comp=Z,161nm,19.6s,baz=344,slow=35						
MKAR	Makanchi Array	43.97	322	P	P	23 22 14.7	-1.1
MAKZ	Makanchi	44.16	322	P	P	23 22 16.1	-1.2
KSH	Kashi	45.18	310	P	P	23 22 27.3	+1.6
KSH				PP	PP	23 24 12.8	+1.4
KSH				S	S	23 29 08.0	+2.7
KSH				sS	sS	23 29 31.1	+18
KSH				pmax	pmax		
	comp=Z,8.0nm,1.6s						
KSH				pmax	pmax		
	comp=Z,210nm,7.0s						
KSH				LR	LR		
	comp=N,380nm,10.3s						
KSH				LR	LR		
	comp=E,480nm,7.8s						
KSH				LR	LR		
	comp=Z,520nm,7.5s						
NIL	Nilore	45.89	301	P	P	23 22 30.2	-1.1
NIL				IAmb	IAmb	23 22 42.3	
	comp=Z,5.2nm,0.7s						
ZALV	Zalesovo Beam	46.79	332	P	P	23 22 36.5	-1.4
	comp=Z,0.3nm,0.3s,baz=125,slow=7.8,SNR=3.5						
PETK	Petropavlovsk-	46.87	30	LR	LR	23 41 16.9	
	comp=Z,82nm,21.3s,baz=244,slow=35						
KURK	Kurchatov	48.06	325	P	P	23 22 46.9	-1.0
KURK				IAmb	IAmb	23 22 48.4	
	comp=Z,7.1nm,1.2s						
KBL	Kabul	49.48	302	P	P	23 22 58.7	-0.7
KK31	Karatay Array	50.17	313	P	P	23 23 02.8	-1.5
KK31				IAmb	IAmb	23 23 21.8	
	comp=Z,2.1nm,1.0s						
KKAR	Karatay Array	50.17	313	P	P	23 23 03.2	-1.1
KKAR	Karatay Array	50.17	313	P	P	23 23 02.8	-1.5
KKAR				IAmb	IAmb	23 23 21.8	
	comp=Z,2.1nm,1.0s						
STKA	Stephens Creek	51.90	157	LR	LR	23 46 46.0	
	comp=Z,89nm,18.4s,baz=27,slow=38						
BRVK	Borovoye	53.72	325	P	P	23 23 29.2	-1.3
BRVK				IAmb	IAmb	23 23 41.4	
	comp=Z,3.2nm,0.9s						
TIXI	Tiksi	55.62	3	P	P	23 23 42.8	-1.1
NRIK	Noril'sk	56.94	347	P	P	23 23 51.5	-1.9
	comp=Z,1.7nm,0.7s,baz=169,slow=4.2,SNR=4.7						
GEYT	Alibeck	58.61	305	P	P	23 24 06.6	+0.8
	comp=Z,1.2nm,0.6s,baz=97,slow=11,SNR=4.3						
GEYT	Alibeck	58.61	305	P	P	23 24 05.4	-0.4
GEYT				IAmb	IAmb	23 24 17.5	
	comp=Z,3.1nm,0.9s						
GYA0B	ALIBECK ARRAY	58.61	305	P	P	23 24 05.0	-0.8
ABKAR	Akbulak array	58.78	318	P	P	23 24 05.3	-1.4
ABKAR	Akbulak array	58.78	318	P	P	23 24 05.9	-0.9
ABKAR				IAmb	IAmb	23 24 15.4	
	comp=Z,2.1nm,0.7s						
ARU	Arti	61.24	326	P	P	23 24 22.4	-1.1
KBZ	Khabaz	70.15	311	LR	LR	23 58 29.4	
	comp=Z,265nm,18.2s,baz=323,slow=38						
RND	Reindeer	75.87	28	P	P	23 25 53.2	-1.7
RND				IAmb	IAmb	23 26 03.8	
	comp=Z,6.1nm,1.0s						
MDM	Murphy Dome	75.92	26	P	P	23 25 54.8	-0.2
MDM				IAmb	IAmb	23 26 09.2	
	comp=Z,8.2nm,1.4s						
ILAR	Eielson Array	76.52	26	P	P	23 25 57.0	-1.4
	comp=Z,0.3nm,0.7s,baz=262,slow=4.0,SNR=2.5						
HDA	Harding Lake	76.55	26	P	P	23 25 57.1	-1.5
HDA				IAmb	IAmb	23 26 09.4	
	comp=Z,5.9nm,1.3s						
ARCES	ARCESS Array B	76.70	339	P	P	23 26 00.5	+1.1
	comp=Z,2.3nm,0.8s,baz=82,slow=6.5,SNR=1.1						
BRTR	Keskin Array B	77.52	308	LR	LR	00 03 08.3	
	comp=Z,168nm,18.4s,baz=308,slow=38						
FINES	FINESS Array B	78.04	331	P	P	23 26 07.4	+0.5
	comp=Z,2.1nm,0.7s,baz=52,slow=7.3,SNR=11						
N25K	Chitina, Valde	78.13	29	P	P	23 26 06.2	-1.4
NOA	NORSAR Array B	84.98	333	P	P	23 26 43.8	0.0
	comp=Z,1.4nm,0.9s,baz=109,slow=4.6,SNR=2.4						
VYHS	Vyhne	85.58	319	eP	P	23 26 50.5	+3.5
YKA	Yellowknife Ar	90.48	22	P	P	23 27 10.6	+0.5
	comp=Z,0.5nm,0.7s,baz=314,slow=4.3,SNR=11						
DAVOX	Davos/Dischmat	91.82	320	LR	LR	00 10 59.9	
	comp=Z,316nm,18.6s,baz=295,slow=37						

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*DJA **23** 23:21:50.8±0.3, 3°S±2°×12°9E±°, h10km, M3.3/7, MLv3.3/7*
*IDC **23** 23:21:52.0±1.7, 3°.24S×129°.35E, h0km, mb3.5/2, mb1 3.8/4, mb1mx3.4/32, mbtmp3.6/4, ML3.7/2, Error ellipse: s-maj=42.1km s-min=24.5km az=99.0*
*NEIC **23** 23:21:59.4±2.9, 3°.1S±0°.1×129°.41E±0°.09, h129km±6km, mb4.1/13, Error ellipse: s-maj=17.6km s-min=12.9km az=192.0*
ISC 23 23:21:49.5±0.7, **3°.07S**±0°.07×**129°.26E**±0°.05, **h28km, n27,** σ**2ˢ01**/21, **mb4.3**/3, **Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.43	230	P	Pb	23 21 59.7	+0.9
BNDI	Bandanaira	1.58	156	P	Pb	23 22 23.5	+5.3
BNDI				S	Sb	23 22 47.2	+9.4
NLAI	Namlea	2.16	265	P	Pn	23 22 22.1	-1.6
SIJI	Sorong	2.96	43	Pn	Pb	23 22 41.0	-0.7
	7.4nm,0.3s,baz=270,slow=20,SNR=42						
SIJI				Sn	Sb	23 23 18.1	+0.6
	8.4nm,0.3s,baz=293,slow=23,SNR=12						
SWI	Sorong	2.96	42	P	Pb	23 22 40.3	-1.4
FAKI	Fak Fak	2.99	87	Pn	Pb	23 22 44.0	+1.9
FAKI				Sn	Sb	23 23 19.4	+1.1
SANI	Sanana	3.42	287	P	Pn	23 22 39.3	-1.7
LUWI	Luwuk	6.79	287	Pn	Pn	23 23 38.1	+11
SOEI	Soe	8.29	216	Pn	Pn	23 23 56.5	+8.4
TOLI2	Tolitoli	9.43	296	Pn	Pn	23 24 15.0	+11
WB0	Warramunga Arr	17.34	164		P	23 25 51.9	+1.0
WRAB	Tennant Creek	17.49	164		P	23 25 54.3	+1.8
COEN	Coen	17.49	129		P	23 25 51.3	-1.3
COEN				IAmb	IAmb	23 25 52.9	
	comp=Z,7.5nm,1.4s						
WRA	Warramunga Arr	17.49	164	P	P	23 25 54.5	+1.9
	comp=Z,0.3nm,0.3s,baz=342,slow=12,SNR=3.5						
WRA	Warramunga Arr	17.49	164		P	23 25 53.3	+0.8
WB2	Warramunga Arr	17.50	164		P	23 25 55.0	+2.4
WB2				IAmb	IAmb	23 26 10.6	
	comp=Z,5.9nm,1.5s						
WR0	Warramunga Arr	17.57	163		P	23 25 51.8	-1.5
WR0				IAmb	IAmb	23 26 06.0	
	comp=Z,7.7nm,1.4s						
PSA00	Pilbara Seismi	20.55	206	P	P	23 26 25.9	-0.1
PSA00				IAmb	IAmb	23 26 39.4	
	comp=Z,33nm,1.4s						
AS31	Alice Springs	20.97	168	P	Pn	23 26 34.6	+1.4
ASAR	Alice Springs	20.97	168	P	Pn	23 26 34.5	+1.2
	comp=Z,2.2nm,0.4s,baz=344,slow=10,SNR=9.1						
ASAR	Alice Springs	20.97	168	P	Pn	23 26 34.6	+1.4
YULB	Yu-li	27.42	344	P	P	23 27 37.0	+4.0
YULB				IAmb	IAmb	23 27 39.1	
	comp=Z,8.1nm,1.1s						
MORW	Morawa	28.75	205	P	P	23 27 42.1	-2.8
MORW				IAmb	IAmb	23 27 59.2	
	comp=Z,8.7nm,1.1s						
QIZ	Qiongzhong	29.10	320	P	P	23 27 50.8	+2.8
SANVU	Saraoutou	39.34	111	P	P	23 29 14.3	-2.4
DZM	Mont Dzumac	40.73	121	P	P	23 29 26.5	-1.8
MKAR	Makanchi Array	64.56	326	P	P	23 32 33.0	+8.9
	comp=Z,0.2nm,0.6s,baz=119,slow=5.1,SNR=2.6						

IDC 23 23:56:35.3±2.9, **11°.19S**×**119°.57E, h0km, mb3.1**/1, **mb1 3.3**/4, **mb1mx3.2**/36, **mbtmp3.2**/4, **ML3.1**/3, **Error ellipse: s-maj=219.3km s-min=28.4km az=50.0, South of Sumba**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	9.03	140	Pn	Pn	23 58 46.7	-0.3
	0.2nm,0.3s,baz=328,slow=13,SNR=6.7						
FITZ				Sn	Sn	00 00 21.8	-7.8
	0.3nm,0.3s,baz=181,slow=23,SNR=7.7						
WRA	Warramunga Arr	16.66	123	Pn	Pn	00 00 29.4	-1.0
	0.1nm,0.3s,baz=293,slow=13,SNR=1.4						
WRA				Sn	Sn	00 03 24.8	-12
	0.1nm,0.3s,baz=291,slow=26,SNR=1.8						
ASAR	Alice Springs	18.44	134	P	P	00 00 53.4	+0.8
	0.1nm,0.3s,baz=319,slow=12,SNR=5.7						
MKAR	Makanchi Array	66.65	333	P	P	00 07 27.8	-0.1
	0.1nm,0.5s,baz=145,slow=5.3,SNR=2.0						

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*IDC **24** 00:06:21.4±1.2, 42°.81N×20°.36E, h0km, mb3.7/6, mb1 3.7/13, mb1mx3.5/47, mbtmp3.6/13, ML3.4/7, Error ellipse: s-maj=18.0km s-min=12.2km az=29.0*
*PDG **24** 00:06:21.7±0.3, 42°.75N×20°.30E, h10km, MD3.4/9, ML3.3/14, Error ellipse: s-maj=0.4km s-min=0.6km az=0.0*
*TIR **24** 00:06:21.8, 42°.64N×20°.37E, h19km, Md3.3, Ml3.5*
*LDG **24** 00:06:21.1±0.1, 42°.74N×20°.34E, h2km, Ml3.0/15, Error ellipse: s-maj=2.1km s-min=1.6km az=25.0*
*BEO **24** 00:06:22.2±0.2, 42°.74N×20°.33E, h11km±2km, ML3.5/9*
*RHSSO **24** 00:06:22.1±0.5, 42°.74N×20°.32E, h7km±2km, ML3.5/15*
*PRU **24** 00:06:22.2±0.0, 42°.75N×20°.15E, h0km*
*SKO **24** 00:06:22.0, 42°.74N×20°.33E, h3km*
*THE **24** 00:06:28.1, 42°.37N×20°.41E, h9km±1km, ML3.0/3, Error ellipse: s-maj=3.0km s-min=1.9km az=305.0*
ISC 24 00:06:22.1±0.8, **42°.73N**±0°.01×**20°.32E**±0°.01, **h9km**±6km, **n183,** σ**1ˢ69**/277, **mb3.5**/6, **31C-31D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PEJK	Peje	0.09	200	⇓iPg	Pg	00 06 24.3	-0.3
PEJK				i Sg	Sg	00 06 26.1	-0.2
PVY	Plav	0.30	243	⇑iPg	Pg	00 06 27.5	-0.6
PVY				i Sg	Sg	00 06 32.3	+0.1
BEY	Berane	0.35	294	⇑iPg	Pg	00 06 28.8	-0.2
IVA	Berane	0.35	294	ePg	Pg	00 06 28.5	-0.5
IVA				i Sg	Sg	00 06 33.6	0.0
ZATK	Zatriq	0.36	142	⇑iPg	Pg	00 06 28.5	-0.7
ZATK				i Sg	Sg	00 06 33.2	-0.7
BCI	Bajram Curri	0.41	207	P	Pg	00 06 29.4	-0.6
	baz=220						
BCI				S	Sg	00 06 35.4	-0.1
	baz=220						
BCI				AMP			
	comp=N,26nm,0.4s,baz=220						
SMRK	Smrekonice	0.47	72	⇑iPg	Pg	00 06 31.1	-0.3
SMRK				i Sg	Sg	00 06 38.0	+0.4
KOME	Kolasin	0.61	282	ePg	Pg	00 06 33.0	-0.8
KOME				i Sg	Sg	00 06 42.1	+0.3
PRZK	Prizren	0.61	148	⇑iPg	Pg	00 06 32.6	-1.3
PUK	Puka	0.76	205	P	Pg	00 06 35.9	-0.8
	baz=211						
PUK				S	Sg	00 06 46.1	-0.4
	baz=211						
PUK				AMP			
	comp=N,13nm,0.3s,baz=211						
PDG	Podgorica	0.84	250	ePg	Pg	00 06 36.9	-1.3
PDG				eSg	Sg	00 06 48.6	-0.7
PDG	Podgorica	0.84	250	⇑P	Pg	00 06 37.0	-1.3
PDG				⇑S	Sg	00 06 46.9	-2.3
PDG	Podgorica	0.84	250	⇓iPg	Pg	00 06 36.7	-1.5
PDG				eSg	Sg	00 06 48.5	-0.7
PDG	Podgorica	0.84	250	i Pg	Pg	00 06 37.0	-1.3
PDG				i Sg	Sg	00 06 48.6	-0.7
TTG	Podgorica	0.84	250	⇓iPg	Pg	00 06 36.8	-1.5
TTG				i Sg	Sb	00 06 50.2	0.0
IVAS	Ivanjica	0.86	352	ePg	Pg	00 06 37.3	-1.3
IVAS				eSg	Sg	00 06 48.7	-1.0
GJIK	Gjilan	0.86	108	i Pg	Pg	00 06 37.6	-1.1
PLE	Pljevlja	0.91	312	⇑iPg	Pg	00 06 38.4	-1.2
PLE				i Sg	Sg	00 06 50.4	-1.1
NKY	Niksic	0.98	275	⇓iPg	Pg	00 06 40.0	-1.0
NKY				i Sg	Sb	00 06 54.9	+0.5
DRME	Dracevica, Mon	1.00	238	⇑iPg	Pg	00 06 39.6	-1.7
DRME				eSg	Sg	00 06 54.7	+0.4
DRME	Dracevica, Mon	1.00	238	ePg	Pg	00 06 39.6	-1.7
DRME				i Sg	Sb	00 06 55.6	+0.8
NKME	Niksic	1.01	273	ePg	Pg	00 06 40.2	-1.3
NKME				i Sg	Sb	00 06 55.6	+0.5
PHP	Peshkopia	1.05	175	P	Pg	00 06 40.2	-2.0
PHP				S	Sg	00 06 51.6	-4.2
PHP	Peshkopia	1.05	175	P	Pg	00 06 40.3	-1.9
	baz=176						
PHP				S	Sg	00 06 54.3	-1.5
	baz=176						
PHP				AMP			
	comp=N,4.6nm,0.3s,baz=176						
CEME	Cevo	1.05	260	ePg	Pg	00 06 40.7	-1.6
CEME				i Sg	Sg	00 06 55.3	-0.7
ULC	Ulcinj	1.11	227	i Pg	Pg	00 06 42.3	-1.0
ULC	Ulcinj	1.11	227	ePg	Pg	00 06 42.3	-1.0
ULC				i Sg	Sn	00 06 59.5	+0.4
SKO	Skopje	1.12	132	i Pg	Pg	00 06 42.6	-1.0
SKO				i Sg	Sb	00 06 58.8	+0.5
SKO				eLg	Lg	00 07 01.7	
	comp=N,31nm,0.4s						
RUDO	Rudo	1.13	322	⇓iPg	Pg	00 06 41.6	-2.2
RUDO				eSg	Sg	00 06 57.1	-1.3
BUM	Brajici-Budva	1.14	248	⇑iPg	Pg	00 06 42.6	-1.4
BUM				i Sg	Sn	00 07 00.5	+0.5
UPM	Unac-Piva	1.14	295	⇓iPg	Pg	00 06 43.2	-0.8
UPM				eSg	Sg	00 06 58.6	-0.3
UPM	Unac-Piva	1.14	295	ePg	Pg	00 06 42.6	-1.4
UPM				i Sg	Sb	00 07 00.0	+0.9
GRUS	Gruza	1.19	14	ePg	Pg	00 06 44.4	-0.6
GRUS				eSg	Sb	00 07 00.6	+0.2
GRUS	Gruza	1.19	14	⇓P	Pn	00 06 44.9	0.0
GRUS				⇓S	Sn	00 07 01.4	+0.1
PRVS	Prvonek	1.31	99	ePg	Pn	00 06 46.5	-0.1
PRVS				eSg	Sb	00 07 03.9	+0.1
BBLS	Lazići	1.32	330	ePg	Pn	00 06 46.3	-0.4
BBLS				eSg	Sg	00 07 04.3	-0.2
BBLS	Lazići	1.32	330	ePg	Pn	00 06 46.2	-0.4
BBLS				eSg	Sb	00 07 03.9	-0.1
BRY	Bratogost	1.32	278	ePg	Pn	00 06 45.6	-1.3
BRY				eSg	Sb	00 07 03.5	-0.7
BRY	Bratogost	1.32	278	ePg	Pn	00 06 45.5	-1.3
BRY				i Sg	Sn	00 07 06.4	+1.8
BOVS	Bovan	1.36	48	ePg	Pn	00 06 46.1	-1.1
BOVS				eSg	Sb	00 07 04.6	-0.5
BOVS	Bovan	1.36	48	⇑P	Pg	00 06 47.8	-0.3
HCY	Herceg Novi	1.38	259	⇓iPg	Pn	00 06 47.2	-0.2
HCY				eSg	Sb	00 07 06.1	+0.4
HCY	Herceg Novi	1.38	259	⇓iPg	Pn	00 06 47.2	-0.2
HCY				i Sg	Sg	00 07 08.3	+1.9
DIVS	Divibare	1.39	350	ePg	Pn	00 06 47.6	-0.1
DIVS				eSg	Sb	00 07 05.4	-0.7
DIVS	Divibare	1.39	350	ePg	Pn	00 06 47.4	-0.3
DIVS				eSg	Sb	00 07 05.9	-0.2
TIR	Tirane	1.42	194	P	Pb	00 06 49.0	+0.3
TIR				S	Sb	00 07 04.4	-2.5
	comp=N,560nm,0.7s						
TIR	Tirane	1.42	194	ePg	Pb	00 06 48.8	+0.1
TIR				eSg	Sn	00 07 07.8	+1.0
TIR	Tirane	1.42	194	⇑P	Pb	00 06 49.2	+0.5
TIR				⇓S	Sg	00 07 08.6	+0.8
TIR	Tirane	1.42	194	P	Pb	00 06 48.9	+0.3
	baz=197						
TIR				S	Sb	00 07 06.2	-0.7
	baz=197						
TIR				AMP			
	comp=N,2.5nm,0.4s,baz=197						
TIR	Tirane	1.42	194	i Pn	Pb	00 06 49.0	+0.3
TREB	Trebinje	1.45	270	⇓iPg	Pn	00 06 48.3	-0.2
TREB				eSg	Sb	00 07 08.4	+0.6
TRUS	Trudelj	1.50	2	ePg	Pn	00 06 49.5	+0.4
TRUS				eSn	Sb	00 07 09.2	+0.2
DBRK	Dubrovnik	1.60	269	i Pn	Pn	00 06 50.6	0.0
DBRK				Sn	Sb	00 07 12.3	+0.1
BOSS	Bosilegrad	1.61	98	ePn	Pn	00 06 50.4	-0.2
BOSS				eSn	Sn	00 07 10.4	-1.1
OHR	Ohrid	1.66	167	i Pn	Pn	00 06 51.9	+0.6
OHR				i Sn	Sb	00 07 14.3	+0.6
OHR				eLg	Lg	00 07 16.9	
	comp=N,330nm,0.5s						
HAPS	Han Pijesak,Bl	1.69	324	ePn	Pn	00 06 51.1	-0.7
HAPS	Han Pijesak,Bl	1.69	324	⇑iPn	Pn	00 06 51.1	-0.7
HAPS				eSn	Sn	00 07 14.1	+0.6
STIP	Stip	1.73	126	i Pn	Pn	00 06 52.9	+0.7
STIP				i Sn	Sg	00 07 17.7	+0.1
ZAGS	Zajecar	1.77	52	ePn	Pn	00 06 52.0	-0.8
ZAGS				eSn	Sn	00 07 15.6	+0.3
ZAPS	Zavoj	1.78	71	ePn	Pn	00 06 52.6	-0.4
ZAPS				eSn	Sn	00 07 14.8	-1.0
STON	Ston	1.94	275	ePn	Pn	00 06 55.9	+0.8
STON				Sn	Sg	00 07 23.5	-0.7
BLKB	Belogradchik	1.94	62	⇑S	Sg	00 07 24.5	+0.1
KUBS	Kucevo	1.95	30	ePn	Pn	00 06 55.8	+0.5
KUBS				eSn	Sn	00 07 19.6	-0.3
FNA	Florina	2.10	158	P	Pn	00 06 58.0	+0.6
FNA				S	Sn	00 07 21.0	-2.6
	comp=N,485nm,0.7s						
FNA	Florina	2.10	158	i Pn	Pn	00 06 58.2	+0.8
KBN	Korca	2.13	170	P	Pn	00 06 58.6	+0.7
KBN				S	Sn	00 07 21.2	-3.3
	comp=N,288nm,0.6s						
KBN	Korca	2.13	170	P	Pn	00 06 58.8	+0.9
	baz=171						
VTS	Vitosha	2.15	92	⇓S	Sg	00 07 30.6	-0.5
VTS	Vitosha	2.15	92	i Pn	Pn	00 06 58.3	+0.1
VTS				i Sn	Sn	00 07 25.1	0.0
VAY	Valandovo	2.19	129	ePn	Pn	00 06 58.7	+0.2
VAY	Valandovo	2.19	129	i Pn	Pn	00 06 58.8	+0.3
MDVR	Moldovita	2.29	26	⇑P	Pn	00 06 59.5	-0.5
MDVR				⇓S	Sb	00 07 30.9	-0.9
GRG	Griva	2.36	138	P	Pn	00 07 01.5	+0.6
GRG	Griva	2.36	138	i Pn	Pn	00 07 01.4	+0.5
NEST	Nestorio	2.38	166	P	Pn	00 07 02.4	+1.2
PUNG	Punghina	2.45	50	⇑P	Pn	00 07 04.2	+2.0
PUNG				⇑S	Sb	00 07 37.0	+0.5
FRGS	Fruska Gora	2.46	352	ePn	Pn	00 07 01.7	-0.5
FRGS	Fruska Gora	2.46	352	⇓P	Pn	00 07 02.0	-0.3
FRGS	Fruska Gora	2.46	352	⇓iPn	Pn	00 07 01.8	-0.5
FRGS				eSn	Sn	00 07 32.4	0.0
RICI	Ricice	2.46	289	i Pn	Pb	00 07 05.0	-1.3
KNT	Kendrikon	2.48	128	i Pn	Pn	00 07 02.8	+0.2
MAKA	Makarska	2.49	284	ePn	Pb	00 07 05.4	-1.4
DJES	Djerdap	2.51	39	⇑P	Pb	00 07 05.6	-1.7
LSTV	Lastovo	2.53	272	ePn	Pn	00 07 05.5	+2.3
BAIL	Bailesti	2.55	59	⇑P	Pb	00 07 06.6	-1.4
BAIL				⇑S	Sb	00 07 39.3	-0.2
LSK	Leskovik	2.59	175	P	Pn	00 07 06.3	+2.2
	baz=175						
HERR	Herculane	2.63	34	⇑P	Pn	00 07 04.6	-0.1
KZN	Kozani	2.65	155	P	Pn	00 07 06.0	+1.0
BANR	Banloc	2.72	12	⇓P	Pn	00 07 07.0	+1.2
SRE	Strehaia	2.85	46	⇓P	Pn	00 07 08.2	+0.5
HVAR	Hvar	2.88	280	i Pn	Pn	00 07 09.8	+1.8
MGRS	Mrkonjic Grad	2.90	307	ePn	Pn	00 07 09.2	+0.9
MGRS				eSn	Sn	00 07 43.5	+0.3
BZS	Buzias	3.03	17	ePn	Pn	00 07 09.3	-0.9
BZS	Buzias	3.03	17	⇓P	Pn	00 07 10.9	+0.7
BLY	Banja Luka	3.04	313	ePn	Pn	00 07 11.9	+1.6
BLY	Banja Luka	3.04	313	⇓iPn	Pn	00 07 11.2	+0.9
BLY				eSn	Sn	00 07 47.0	+0.2
KIJV	Kijevo	3.13	295	ePn	Pn	00 07 13.8	+2.3
GZR	Gura Zlata	3.20	33	⇑P	Pn	00 07 13.0	+0.5
PLVB	Pleven	3.22	77	⇓P	Pn	00 07 16.0	+3.2
VLAD	Vladila	3.23	66	⇑P	Pn	00 07 13.3	+0.3
VLAD				⇑S	Sn	00 07 55.3	+3.8
PRIJ	Prijedor	3.44	312	ePn	Pn	00 07 16.5	+0.7
PRIJ				eSn	Sn	00 07 56.6	-0.1
ZIRJ	Zirje	3.54	287	ePn	Pn	00 07 18.8	+1.6
MORI	Morici	3.56	290	i Pn	Pn	00 07 20.3	+2.9
AMBH	Ambrzfalva	3.63	4	⇑P	Pn	00 07 19.0	+0.6
DEV	Deva	3.66	30	⇓P	Pn	00 07 19.1	+0.3
SIRR	Siria	3.66	15	⇑P	Pn	00 07 19.4	+0.5
LOT	Lotru	3.68	41	⇓P	Pn	00 07 20.4	+1.2
MORH	Mrgy, Hungar	3.69	342	⇓P	Pn	00 07 19.0	-0.1
MORH	Mrgy, Hungar	3.69	342	⇓iPn	Pn	00 07 18.9	-0.2
MORH				eSn	Sn	00 08 01.8	-0.9
UDBI	Udbina	3.77	300	ePn	Pn	00 07 22.7	+2.4
HUMR	Humele	3.83	60	⇑P	Pn	00 07 23.6	+2.4
MOSL	Moslavina	3.86	320	ePn	Pn	00 07 21.8	+0.2
DUGI	Dugi Otok	4.04	290	i Pn	Pn	00 07 25.8	+1.8
VOIR		4.35	50	⇑P	Pn	00 07 29.4	+1.1
KALN	Kalnik	4.38	322	i Pn	Pn	00 07 28.9	+0.1
DRGR		4.40	22	⇓P	Pn	00 07 29.4	+0.3
TIP	Timpagrande	4.46	218	⇑P	Pn	00 07 30.3	+0.5
TIP				⇓S	Sn	00 08 21.2	-0.6
BEHE	Becsehely	4.52	327	ePn	Pn	00 07 31.2	+0.6
BEHE				eSn	Sn	00 08 21.5	-1.7
CRES	Cresnjev	4.67	313	⇓iPn	Pn	00 07 32.2	-0.4
CRES				eSn	Sn	00 08 25.3	-1.6
KOGS	Kog	4.72	323	i Pn	Pn	00 07 33.6	+0.3
MLR	Muntele Rosu	4.90	54	Pn	Pn	00 07 37.0	+1.1
	comp=N,1.3nm,0.3s,baz=232,slow=12,SNR=25						
MLR				Lg	Lg	00 09 00.3	
	comp=N,0.6nm,0.3s,baz=277,slow=19,SNR=3.5						
MLR	Muntele Rosu	4.90	54	⇓P	Pn	00 07 37.4	+1.5
VISS	Visnje	4.99	310	i Pn	Pn	00 07 38.3	+1.2
PDKS	Podkum	5.06	313	i Pn	Pn	00 07 39.1	+1.0
GROS	Grobnik	5.08	319	i Pn	Pn	00 07 38.6	+0.3
NEHR	Nehoiu	5.08	56	⇑P	Pn	00 07 40.4	+2.1
AQU	L'Aquila	5.13	268	ePn	Pn	00 07 38.4	-0.6
AQU				eSn	Sn	00 08 36.4	-1.9
CEY	Cerknica	5.20	307	ePn	Pn	00 07 39.5	-0.4
CEY				eSn	Sn	00 08 37.6	-2.3
PSZ	Piszkesteto	5.20	357	⇑P	Pn	00 07 39.7	-0.3
SRO	Srobarova	5.28	345	ePN	Pn	00 07 42.2	+1.2
LJU	Ljubljana	5.31	311	ePn	Pn	00 07 41.5	0.0
LJU				eSn	Sn	00 08 41.0	-1.8
SOKA	Soboth	5.46	318	i Pn	Pn	00 07 44.2	+0.6
	comp=N,4.4nm,0.3s,SNR=23						
SOKA				i Sn	Sn	00 08 46.4	-0.1
	comp=N,1.7nm,0.2s						
VRI	Vrincioaia	5.56	54	⇓P	Pn	00 07 46.1	+1.2
OBKA	Obir	5.59	315	ePn	Pn	00 07 46.5	+1.1
	comp=N,4.7nm,0.3s,SNR=18						
OBKA				Pg	Pg	00 08 07.1	-2.0
	comp=N,13nm,0.6s						

ARSA	Arzberg	5.66	325	*i* Pn	Pn	00 07 47.0	+0.7
	comp=N,10nm,0.3s,SNR=24						
ARSA				*e*Sn	Sn	00 08 47.9	-3.4
	comp=N,6.3nm,0.5s						
KECS	Kecovo	5.75	1	*e*PN	Pn	00 07 48.5	+0.9
KECS				*e*SN	Sn	00 08 52.7	-1.0
VYHS	Vyhne	5.86	350	*e*PN	Pn	00 07 49.6	+0.6
VYHS				*e*SN	Sn	00 08 56.8	+0.6
TESR	Tescani	5.89	48	⇓P	Pn	00 07 50.0	+0.6
ZST	Bratislava	5.92	339	*e*PN	Pn	00 07 51.2	+1.4
ZST				*e*SN	Sn	00 08 55.0	-2.6
MODS	Modra-Piesok	6.04	340	*e*PN	Pn	00 07 51.4	0.0
MODS				*e*SN	Sn	00 08 57.3	-3.3
CONA	Conrad Observa	6.07	330	*i* Pn	Pn	00 07 52.5	+0.4
	comp=N,1.3nm,0.3s						
CONA				*e*Sn	Sn	00 09 01.5	-0.1
	comp=N,2.9nm,0.4s						
SMOL	Smolenice	6.13	342	*e*PN	Pn	00 07 53.6	+0.9
SMOL				*e*SN	Sn	00 08 59.8	-3.1
MYKA	Terra Mystica	6.15	312	*e*Pn	Pn	00 07 55.0	+1.9
	comp=N,2.4nm,0.3s						
CRVS	Cervenica-Dubn	6.22	7	*e*PN	Pn	00 07 54.5	+0.5
KOLS	Kolonicke sedl	6.35	12	*e*PN	Pn	00 07 56.7	+0.9
KBA	Koelnbreinsper	6.59	314	*e*Pn	Pn	00 08 00.5	+1.3
	comp=N,2.6nm,0.3s						
KBA				*e*Sn	Sn	00 09 13.0	-1.5
	comp=N,3.8nm,0.5s						
MOA	Molln	6.67	322	*i* Pn	Pn	00 08 01.6	+1.4
	comp=N,2.9nm,0.4s,SNR=6.8						
MOA				*e*Sn	Sn	00 09 14.3	-1.8
	comp=N,4.9nm,0.3s						
ABTA	Abfaltersbach	6.86	309	*i* Pn	Pn	00 08 04.3	+1.5
	comp=N,1.2nm,0.2s,SNR=5.2						
ABTA				*e*Sg	Sg	00 10 05.6	+3.5
	comp=N,13nm,0.8s						
VRAC	Vranov	7.07	340	Pn	Pn	00 08 05.8	+0.1
	comp=N,0.2nm,0.3s,baz=181,slow=21,SNR=2.4						
VRAC				Sn	Sn	00 09 25.5	-0.6
	comp=N,0.3nm,0.3s,baz=120,slow=20,SNR=1.7						
CKRC	Cesky Krumlov	7.40	327	*e*SN	Sn	00 09 30.8	-3.3
WTTA	Wattenberg	7.64	309	*e*Pn	Pn	00 08 15.2	+1.6
	comp=N,3.8nm,0.5s						
WTTA				*e*Sn	Sn	00 09 45.5	+5.1
	comp=N,4.1nm,0.6s						
GERES	GERESS Array B	7.67	325	Pn	Pn	00 08 15.3	+1.4
	comp=N,0.4nm,0.3s,baz=148,slow=14,SNR=9.2						
GERES				Sn	Sn	00 09 39.0	-1.8
	baz=139,slow=27,SNR=1.0						
WATA	Walderalm	7.72	310	*i* Pn	Pn	00 08 16.3	+1.6
	comp=N,1.7nm,0.3s						
SQTA	Sankt Quirin	7.87	308	*e*Pn	Pn	00 08 19.0	+2.3
	comp=N,3.3nm,0.5s						
SQTA				*i* Sn	Sn	00 09 48.0	+2.2
	comp=N,2.5nm,0.4s						
KHC	Kasperske Hory	7.94	326	*e*PN	Pn	00 08 18.2	+0.6
KHC				*e*SN	Sn	00 09 44.6	-2.9
MOTA	Moosalm	7.99	308	*i* Pn	Pn	00 08 20.1	+1.7
	comp=N,1.9nm,0.4s						
FETA	Feichten	8.05	305	*i* Pn	Pn	00 08 21.8	+2.6
	comp=N,0.9nm,0.5s						
DPC	Dobruska-Polom	8.11	342	*e*PN	Pn	00 08 20.9	+1.0
PGF	Pioggiola	8.35	273	*e*P	Pn	00 08 25.8	+2.5
PGF				*e*Sn	Sn	00 09 50.1	-7.6
	comp=N,1.6nm,0.3s						
DAVOX	Davos/Dischmat	8.46	302	Pn	Pn	00 08 27.2	+2.3
	comp=N,0.3nm,0.3s,baz=80,slow=17,SNR=3.0						
DAVOX				Sn	Sn	00 09 56.9	-3.6
	comp=N,0.2nm,0.3s,baz=162,slow=20,SNR=2.2						
SBF	Sospel	9.47	281	*e*P	Pn	00 08 41.8	+3.2
SBF				*e*Sn	Sn	00 10 16.6	-8.5
	comp=N,0.5nm,0.2s						
MBDF	Montbardon	10.01	286	*e*Pn	Pn	00 08 44.6	-1.5
MBDF				*e*Sn	Sn	00 10 29.9	-8.7
	comp=N,0.2nm,0.2s						
FRF	La Foret Royal	10.03	279	*e*P	Pn	00 08 49.6	+3.4
FRF				*e*Sn	Sn	00 10 30.0	-8.8
	comp=N,0.1nm,0.2s						
LMR	La Mourre	10.13	278	*e*P	Pn	00 08 50.6	+3.0
LMR				*e*Sn	Sn	00 10 31.9	-9.4
	comp=N,0.2nm,0.1s						
LPG	La Plagne	10.14	290	*e*P	Pn	00 08 51.6	+3.5
LPG				*e*Sn	Sn	00 10 33.0	-9.0
	comp=N,0.3nm,0.2s						
LPL	La Plagne	10.16	291	*e*P	Pn	00 08 51.8	+3.6
LPL				*e*Sn	Sn	00 10 33.8	-8.5
	comp=N,1.7nm,0.4s						
ORIF	Oris-en-Rattie	10.66	287	*e*Pn	Pn	00 08 53.7	-1.3
ORIF				*e*Sn	Sn	00 10 45.2	-9.3
	comp=N,0.6nm,0.3s						
SMRF	Simiane la Rot	10.81	282	*e*P	Pn	00 09 00.7	+3.7
SMRF				*e*Sn	Sn	00 10 48.8	-9.3
	comp=N,0.1nm,0.1s						
CABF	La Chapelle	10.85	296	*e*P	Pn	00 09 02.1	+4.5
CABF				*e*Sn	Sn	00 10 50.0	-9.1
	comp=N,0.1nm,0.2s						
HAU	Haudompre	11.15	303	*e*P	Pn	00 09 04.4	+2.8
VIVF	Saint-Julien-l	11.51	286	*e*P	Pn	00 09 08.9	+2.4
VIVF				*e*Sn	Sn	00 11 05.7	-9.4
	comp=N,0.3nm,0.3s						
LOR	Lormes	12.50	297	*e*Pn	Pn	00 09 18.3	-1.7
	baz=114						
LOR				*e*Sn	Sn	00 11 30.0	-9.3
	comp=N,0.3nm,0.2s						
CAF	Calviac	13.37	286	*e*P	Pn	00 09 33.9	+2.1
RJF	Les Rejaudoux	13.78	287	*e*P	Pn	00 09 40.5	+3.1
MMAI	Mount Meron Ar	15.34	124	Pn	Pn	00 09 59.4	+0.7
	comp=N,0.1nm,0.3s,baz=320,slow=13,SNR=1.5						
ESDC	Sonseca Array	18.51	269	P	Pn	00 10 40.6	+1.9
	comp=N,0.1nm,0.3s,baz=62,slow=6.0,SNR=2.2						
FINES	FINESS Array B	19.06	8	P	P	00 10 44.7	+0.4
	comp=N,0.1nm,0.3s,baz=183,slow=9.7,SNR=5.0						
ARCES	ARCESS Array B	27.00	4	P	P	00 12 02.9	-1.0
	comp=N,1.1nm,0.8s,baz=185,slow=10.0,SNR=1.2						
TORD	Torodi Ar. Bea	33.59	214	P	P	00 13 03.6	+1.0
	comp=N,0.3nm,0.6s,baz=20,slow=8.4,SNR=1.6						
SPITS	Spitsbergen Ar	35.60	359	P	P	00 13 20.1	+0.7
	comp=N,12nm,1.1s,baz=159,slow=12,SNR=2.0						
ZALV	Zalesovo Beam	42.87	52	P	P	00 14 20.3	-0.1
	comp=N,0.6nm,0.5s,baz=282,slow=8.0,SNR=4.0						
MKAR	Makanchi Array	43.19	62	P	P	00 14 23.4	+0.4
	comp=N,0.2nm,0.8s,baz=303,slow=6.3,SNR=1.9						
YKA	Yellowknife Ar	69.07	339	P	P	00 17 27.2	-0.6
	comp=N,0.2nm,0.6s,baz=39,slow=5.8,SNR=3.1						

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*IDC **24** 00:18:57.4±1.0, 26°.15N×128°.60E, h0^{km}, mb3.6/10, mb1 3.8/11, mb1mx3.6/35, mbtmp3.7/11, ML3.7/1, MS2.4/1, Ms1 2.4/1, ms1mx2.2/44, Error ellipse: s-maj=43.9km s-min=14.1km az=72.0*

*JMA **24** 00:18:59.8±0.2, 26°.10N×128°.76E, h37^{km}±4^{km}, M3.4*

*NEIC **24** 00:19:01.1±0.8, 26°.18N±0°.10×128°.75E±0°.07, h28^{km}±6^{km}, mb4.3/11, Error ellipse: s-maj=16.0km s-min=5.3km az=211.0*

ISC 24 00:18:59.2±1.8**, 26°.11N**±0°.05×**128°.75E**±0°.04**, h15**^{km}±11^{km}**, n39, σ0^{s}.58**/46**, mb3.8**/15**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNTH	Nagotoyohara	0.77	302	P	Pb	00 19 14.2	-0.1
JOW	Kunigami	0.83	329	Pn	Pb	00 19 15.6	+0.2
	470nm,0.3s,baz=142,slow=16,SNR=366						
JOW				Sn	Sb	00 19 27.1	+0.6
	497nm,0.3s,baz=124,slow=23,SNR=13						
JOW	Kunigami	0.83	329	P	Pb	00 19 15.5	+0.1
JOW				*e*S	Sb	00 19 27.0	+0.6
JOW	Kunigami	0.83	329		Pn	00 19 15.9	-0.4
JOW					Sb	00 19 26.9	+0.5
JJT3	Tamagusuku3	0.87	272	P	Pg	00 19 16.1	0.0
JYRO	Yoronjima	0.95	343	P	Pb	00 19 17.2	-0.1
JYRO				*e*S	Sb	00 19 29.4	-0.2
JIH	Iheya	1.16	323	P	Pn	00 19 20.5	-0.3
JIH				*e*S	Sb	00 19 35.3	-0.4
JOKE	Okinoerabujima	1.25	353	P	Pn	00 19 22.0	-0.1
JOKE				*e*S	Sb	00 19 37.6	-0.9
JAGN	Aguni-jima	1.44	290	P	Pn	00 19 24.5	-0.1
JAGN				S	Sn	00 19 42.2	-1.0
JTK	Tokunoshima	1.68	6	P	Pn	00 19 27.9	0.0
JKE	Kume jima 2	1.78	277	P	Pn	00 19 28.4	-1.0
JKE				*e*S	Sn	00 19 50.8	-0.9
JMZ	Minamidaito 2	2.24	97	P	Pn	00 19 35.2	-0.5
JMZ	Minamidaito 2	2.24	97		Pn	00 19 35.4	-0.3
JKDJ	Kitadaitoujima	2.29	94	P	Pn	00 19 36.1	-0.3
JKDJ				*e*S	Sn	00 20 02.9	-1.5
JNU	Nakatsue	7.22	14	Pn	Pn	00 20 44.2	-0.1
	1.4nm,0.3s,baz=12,slow=4.0,SNR=5.5						
KSRS	Korea Array	11.33	357	LR	LR	00 25 06.2	
	comp=Z,22nm,21.5s,baz=120,slow=33						
SONM	Songino Array	27.91	327	P	P	00 24 48.9	+0.3
	1.0nm,0.5s,baz=126,slow=9.3,SNR=5.0						
MK31	Makanchi Array	41.96	312	P	P	00 26 49.3	-0.1
MKAR	Makanchi Array	41.96	312	P	P	00 26 48.8	-0.7
	0.5nm,0.6s,baz=99,slow=11,SNR=8.4						
MKAR	Makanchi Array	41.96	312	P	P	00 26 49.2	-0.2
ZALV	Zalesovo Beam	42.62	323	P	P	00 26 54.1	-0.5
	0.2nm,0.3s,baz=127,slow=8.3,SNR=2.2						
KURBB	Kurchatov Arra	45.26	316	P	P	00 27 15.2	-0.6
	0.2nm,0.4s,baz=102,slow=9.0,SNR=3.6						
WB0	Warramunga Arr	45.93	173	P	P	00 27 22.4	+0.8
WB0				IAmb	IAmb	00 27 27.8	
	comp=Z,1.9nm,0.9s						
WRA	Warramunga Arr	46.10	173	P	P	00 27 23.4	+0.6
	comp=Z,0.8nm,0.6s,baz=354,slow=8.4,SNR=11						
WRA	Warramunga Arr	46.10	173	IAmb	IAmb	00 27 29.2	
	comp=Z,0.2nm,1.1s						
WB2	Warramunga Arr	46.10	173	P	P	00 27 22.8	0.0
WB2				IAmb	IAmb	00 27 35.5	
	comp=Z,1.9nm,1.0s						
WR0	Warramunga Arr	46.14	172	P	P	00 27 23.7	+0.6
PSA00	Pilbara Seismi	48.18	191	P	P	00 27 39.3	+0.3
ADK	Adak	48.19	43	P	P	00 27 38.2	-0.6
ASAR	Alice Springs	49.74	174	P	P	00 27 52.0	+1.1
	comp=Z,0.3nm,0.5s,baz=5.4,slow=14,SNR=5.6						
ABKAR	Akbulak array	57.07	313	P	P	00 28 44.1	-0.5
ABKAR	Akbulak array	57.07	313	P	P	00 28 44.8	+0.2
ABKAR				IAmb	IAmb	00 28 54.4	
	comp=Z,1.7nm,0.6s						
CNPM	China Poot	62.86	34	P	P	00 29 24.2	-0.1
CNPM				IAmb	IAmb	00 29 28.7	
	comp=Z,16nm,1.2s						
BRLK	Bradley Lake	63.02	34	P	P	00 29 25.0	-0.3
RND	Reindeer	63.61	30	P	P	00 29 30.2	+1.0
RND				IAmb	IAmb	00 29 45.9	
	comp=Z,3.5nm,1.2s						
FINES	FINESS Array B	73.19	331	P	P	00 30 29.3	+0.2
	comp=Z,2.4nm,1.1s,baz=40,slow=6.2,SNR=3.6						
AKASG	Malin Array Be	75.92	320	P	P	00 30 45.5	+0.3
	comp=Z,0.3nm,0.4s,baz=62,slow=5.3,SNR=2.0						
BRTR	Keskin Array B	77.47	308	P	P	00 30 54.4	0.0
	comp=Z,0.3nm,0.6s,baz=99,slow=6.4,SNR=2.3						
YKA	Yellowknife Ar	78.43	25	P	P	00 30 59.9	+0.9
	comp=Z,0.1nm,0.4s,baz=306,slow=5.0,SNR=2.1						

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*NOU **24** 00:24:16.4, 37°.57S×179°.05E, h6^{km}, MLv3.9, Off E. Coast of N. Island, N.Z.*

WEL 24 00:24:25.1, 37°S±3°×**17°8E**±°**, h45**^{km}±2^{km}**, M3.1**/18**, ML3.5**/18**, MLv3.1**/18**, Error ellipse: s-maj=0.0km s-min=0.0km az=160.3, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	0.09	138	P	Pn	00 24 32.4	+0.2
MXZ				S	Sn	00 24 37.6	+0.4
WMGZ	Waiomatatini S	0.36	156	P	Pn	00 24 34.8	+0.5
WMGZ				S	Sn	00 24 41.7	+0.8
PKGZ	Pakihiroa	0.41	197	P	Pn	00 24 34.9	-0.1
PKGZ				S	Sn	00 24 41.9	-0.1
HAZ	Te Kaha	0.44	233	P	Pn	00 24 35.8	+0.6
HAZ				S	Sn	00 24 43.5	+1.0
PUZ	Puketiti	0.58	178	P	Pn	00 24 37.4	+0.3
PUZ				S	Sn	00 24 46.5	+0.9
RUGZ	Raukumara Rang	0.64	223	P	Pn	00 24 38.7	+0.7
RUGZ				S	Sn	00 24 48.3	+1.1
TWGZ	Tauwhareparae	0.71	196	P	Pn	00 24 39.6	+0.8
TWGZ				S	Sn	00 24 51.1	+2.4
CNGZ	Carnagh Statio	0.99	181	P	Pn	00 24 42.9	+0.4
TKGZ	Te Karaka	0.99	198	P	Pn	00 24 42.9	+0.3
MWZ	Matawai	1.01	213	P	Pn	00 24 43.8	+1.0
URZ	Urewera	1.17	229	P	Pn	00 24 45.7	+0.8
RAGZ	Rawiri	1.19	212	P	Pn	00 24 46.1	+0.8
RIGZ	Rimuhau	1.27	197	P	Pn	00 24 46.4	0.0
MARZ	Manawahe	1.33	248	P	Pn	00 24 47.7	+0.6
OPRZ	Ohinepanea	1.37	255	P	Pn	00 24 48.5	+0.7
PRGZ	Paritu Road	1.45	191	P	Pn	00 24 48.5	-0.4
SNGZ	Shannon Statio	1.47	208	P	Pn	00 24 49.6	+0.5
RTZ	Ruatahuna	1.49	221	P	Pn	00 24 50.0	+0.5
MUGZ	Murupara	1.52	229	P	Pn	00 24 50.4	+0.7
MKRZ	Makatiti	1.54	245	P	Pn	00 24 51.4	+1.3
TARZ	Mount Tarawera	1.55	241	P	Pn	00 24 51.4	+1.1
KNZ	Kokohu	1.59	196	P	Pn	00 24 49.7	-1.0
OMRZ	Omania	1.59	247	P	Pn	00 24 51.8	+1.0
MHGZ	Mahia Peninsul	1.68	189	P	Pn	00 24 51.2	-0.7
RAHZ	Arahi	1.68	212	P	Pn	00 24 52.8	+0.8
MTHZ	Maungataniwha	1.74	218	P	Pn	00 24 53.9	+1.0
WHHZ	Waihua	1.77	206	P	Pn	00 24 53.3	+0.2
NMHZ	Naumai	1.95	215	P	Pn	00 24 56.9	+1.1
MRHZ	Matea Rd	1.96	226	P	Pn	00 24 56.8	+1.0
ARHZ	Aropaoanui	2.02	208	P	Pn	00 24 57.0	+0.5
KUZ	Kuaotunu	2.14	290	P	Pn	00 24 59.2	+0.9
KUTZ	Kaahu Road	2.15	242	P	Sn	00 25 24.6	+0.8
BKZ	Black Stump Fm	2.16	219	P	Pn	00 24 59.0	+0.4
TOZ	Tahuroa Road	2.18	263	P	Pn	00 24 59.2	+0.4
TLZ	Tolley Road	2.29	248	P	Sn	00 25 29.7	+2.4
MCHZ	McNeill Hill	2.29	211	P	Pn	00 25 00.7	+0.4
CKHZ	Cape Kidnapper	2.34	202	P	Pn	00 25 00.0	-1.1
KWHZ	Kaweka Forest	2.39	216	P	Pn	00 25 01.8	0.0
MKAZ	Moumakai	2.48	278	P	Pn	00 25 04.2	+1.3
KAHZ	Kahuranaki	2.53	204	P	Pn	00 25 02.5	-1.2
GRZ	Great Barrier	2.54	298	P	Pn	00 25 05.6	+1.8
TMVZ	Te Maari	2.56	230	P	Pn	00 25 05.0	+0.8
ETVZ	East Tongariro	2.57	230	P	Pn	00 25 05.2	+0.8
KRVZ	Karewarewa	2.59	231	P	Pn	00 25 05.4	+0.8
KRHZ	Kereru	2.59	214	P	Pn	00 25 03.8	-0.7
OTVZ	Oturere	2.62	230	P	Pn	00 25 05.7	+0.7
BHHZ	Black Hill Sta	2.62	220	P	Pn	00 25 05.1	+0.2
NGZ	Ngauruhoe	2.66	230	P	Pn	00 25 06.5	+0.9
TUVZ	Tukino	2.69	228	P	Pn	00 25 06.9	+0.9
MOVZ	Moawhango	2.73	225	P	Pn	00 25 06.5	+0.1
PXZ	Pawanui	2.75	202	P	Pn	00 25 04.6	-2.0
WNVZ	Wahianoa	2.76	228	P	Pn	00 25 07.5	+0.6
HIZ	Hauiti	2.85	248	P	Pn	00 25 09.6	+1.6
MTVZ	Mangateitei	2.87	228	P	Pn	00 25 09.0	+0.6
AWAZ	Awhitu Peninsu	2.89	277	P	Pn	00 25 10.7	+2.1
PNHZ	Pukenui	2.89	213	P	Pn	00 25 07.3	-1.4
PRHZ	Porangahau	3.04	204	P	Pn	00 25 08.6	-2.0
TSZ	Takapari Road	3.12	214	P	Pn	00 25 10.2	-1.5
DVHZ	Dannevirke	3.23	209	P	Pn	00 25 10.9	-2.4
WAZ	Wanganui	3.40	227	P	Pn	00 25 16.4	+0.8
POWZ	Post Office Ro	3.47	213	P	Pn	00 25 14.9	-1.7
WCZ	Waipu Caves	3.48	295	P	Pn	00 25 18.9	+2.2
BFZ	Birch Farm	3.54	205	P	Pn	00 25 14.9	-2.6
TIWZ	Tintock	3.75	208	P	Pn	00 25 18.3	-2.2
MRZ	Mangatainoka R	3.78	212	P	Pn	00 25 17.9	-2.8
HOWZ	Holdsworth Sta	4.00	211	P	Pn	00 25 20.5	-3.3
TMWZ	Te Maipa	4.04	206	P	Pn	00 25 21.1	-3.3
OGWZ	Otaki Gorge	4.08	215	P	Pn	00 25 21.9	-3.0
MTW	Mount Morrison	4.23	209	P	Pn	00 25 23.6	-3.3
KIW	Kapiti Island	4.24	216	P	Pn	00 25 24.3	-2.8
CAW	Cannon Point	4.36	213	P	Pn	00 25 25.1	-3.7
TRWZ	Traveller	4.37	206	P	Pn	00 25 25.0	-3.8
OUZ	Omahuta	4.37	300	P	Pn	00 25 31.8	+2.8
PAWZ	Paruwai Farm	4.45	208	P	Pn	00 25 26.2	-3.8
MSWZ	Moikau Station	4.55	210	P	Pn	00 25 27.2	-4.1
PLWZ	Palliser	4.67	209	P	Pn	00 25 28.9	-4.2
TCW	Tory Channel	4.81	218	P	Pn	00 25 31.6	-3.4
DSZ	Denniston Nort	6.53	227	P	Pn	00 26 01.1	+2.5
CTZ	Chatham Island	7.36	149	P	Pn	00 26 09.6	-0.4

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*IDC **24** 00:38:58.5±2.0, 15°.10S×168°.07E, h0^{km}, mb3.8/5, mb1 4.0/6, mb1mx3.7/35, mbtmp3.8/6, ML3.8/1, Error ellipse: s-maj=54.3km s-min=29.5km az=127.0*

*NEIC **24** 00:39:06.7±1.4, 15°.4S±0°.1×167°.70E±0°.10, h36^{km}±15^{km}, mb4.1/6, Error ellipse: s-maj=19.9km s-min=12.6km az=200.0*

ISC 24 00:39:05.3±1.0**, 15°.2S**±0°.1×**167°.8E**±0°.1**, h36**^{km}**, n14, σ1^{s}.60**/15**, mb4.0**/7**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.58	246	Pn	Pn	00 39 16.6	-0.5
DZM	Mont Dzumac	6.94	190	Pn	Pn	00 40 43.8	-0.8
	1.5nm,0.3s,baz=71,slow=18,SNR=13						
DZM				Sn	Sn	00 42 01.4	-0.9
	0.3nm,0.3s,baz=69,slow=23,SNR=1.2						
DCZ	Deep Cove	30.17	181	P	P	00 45 12.7	+0.8
RAR	Rarotonga	31.38	106	P	P	00 45 24.2	+1.3
WB0	Warramunga Arr	32.10	257	P	P	00 45 30.5	+1.1
WB0				IAmb	IAmb	00 45 36.4	
	comp=Z,2.7nm,1.0s						
WB2	Warramunga Arr	32.15	257	P	P	00 45 31.9	+2.1
WRAB	Tennant Creek	32.15	257	P	P	00 45 27.1	-2.7
WRAB				IAmb	IAmb	00 45 28.1	
	comp=Z,1.5nm,0.6s						
WRA	Warramunga Arr	32.16	257	P	P	00 45 31.0	+1.1
	comp=Z,0.2nm,0.4s,baz=84,slow=8.3,SNR=6.8						
WRA	Warramunga Arr	32.16	257	P	P	00 45 30.6	+0.7
ASAR	Alice Springs	32.94	250	P	P	00 45 37.1	+0.4
	comp=Z,1.0nm,0.4s,baz=78,slow=8.7,SNR=19						
FITZ	Fitzroy Crossi	40.39	260	P	P	00 46 41.6	+1.5
	comp=Z,2.1nm,0.6s,baz=82,slow=8.4,SNR=10						
FITZ	Fitzroy Crossi	40.39	260	P	P	00 46 42.0	+1.8
FITZ				IAmb	IAmb	00 46 48.8	
	comp=Z,4.0nm,1.0s						
SONM	Songino Array	83.16	323	P	P	00 51 28.1	+0.3
	comp=Z,0.3nm,0.6s,baz=126,slow=4.1,SNR=2.3						
ILAR	Eielson Array	86.84	18	P	P	00 51 43.1	-2.5
	comp=Z,0.5nm,0.8s,baz=226,slow=6.2,SNR=4.6						

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*IDC **24** 00:52:04.1±0.6, 31°.55N×104°.07E, h0^{km}, mb4.0/21, mb1 4.2/22, mb1mx4.0/39, mbtmp4.0/22, ML3.3/1, MS3.4/5, Ms1 3.4/5, ms1mx3.0/53, Error ellipse: s-maj=19.0km s-min=13.8km az=49.0*

*NEIC **24** 00:52:07.1±2.3, 31°.71N±0°.06×104°.16E±0°.08, h10^{km}±1^{km}, mb4.2/21, ML4.1(BJI), Error ellipse: s-maj=12.1km s-min=10.7km az=77.0*

*BJI **24** 00:52:09.0±0.0, 31°.66N×104°.01E, h24^{km}, mb4.2/20, ML4.0/27, Ms3.7/12, Ms7 3.7/10*

ISC 24 00:52:07.2±0.4**, 31°.66N**±0°.03×**104°.13E**±0°.05**, h14**^{km}**, n102, σ1^{s}.91**/102**, mb4.1**/35**, 1C-2D, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CD2	Chengdu	0.82	203	Pg	Pg	00 52 22.5	-0.6
CD2				Sg	Sg	00 52 33.5	-0.2
CD2				smax	smax		
	comp=N,10µm,0.8s						
CD2				smax	smax		
	comp=E,10µm,0.5s						
CD2	Chengdu	0.82	203	⇓Pg	Pg	00 52 22.4	-0.6
CD2				Sg	Sg	00 52 33.5	-0.2
CD2				smax	smax		
	comp=E,10µm,0.7s						
CD2				smax	smax		
	comp=E,10µm,1.0s						
LZH	Lanzhou	4.42	357	*e*Pn	Pn	00 53 10.3	-3.7
LZH				smax	smax		
	comp=E,140nm,1.0s						
LZH				smax	smax		
	comp=E,160nm,1.1s						
LZH				LR	LR		
	comp=E,1µm,7.6s						
LZH				LR	LR		
	comp=E,840nm,9.2s						
XAN	Xi'an	4.68	58	Pn	Pn	00 53 17.8	+0.4
XAN				Sg	Sg	00 54 33.6	-3.7
XAN				smax	smax		
	comp=E,310nm,1.2s						
XAN				smax	smax		
	comp=E,370nm,0.6s						
XAN	Xi'an	4.68	58	Pn	Pn	00 53 17.1	-0.3
ENH	Enshi	4.80	105	Pn	Pn	00 53 20.7	+1.6
GYA	Guiyang	5.64	156	⇑Pn	Pn	00 53 31.6	+0.9
GYA				Sn	Sn	00 54 36.5	+1.1
GYA				Sg	Sg	00 55 07.3	-0.9
GYA				smax	smax		
	comp=E,180nm,0.9s						
GYA				smax	smax		
	comp=E,190nm,1.2s						
GYA				LR	LR		
	comp=E,500nm,3.8s						
KMI	Kunming	6.63	191	*e*Pn	Pn	00 53 45.3	+0.9
KMI				Sn	Sn	00 54 57.5	-2.4
KMI				Sg	Sg	00 55 36.6	-3.4
KMI				smax	smax		
	comp=E,72nm,0.8s						
KMI				smax	smax		
	comp=E,65nm,0.8s						
KMI				LR	LR		
	comp=E,360nm,7.2s						
KMI				LR	LR		
	comp=E,550nm,10.5s						
KMI	Kunming	6.63	191		Pn	00 53 45.6	+1.2
GTA	Gaotai	8.49	337	*e*P	Pn	00 54 14.6	+4.8
GTA				pmax	pmax		
	comp=E,2.0nm,1.0s						
WHN	Wuhan	8.83	95	⇓P	Pn	00 54 23.0	+8.6
WHN				LR	LR		
	comp=E,860nm,4.8s						
WHN				LR	LR		
	comp=E,800nm,10.2s						
HHC	Hu-ho-hao-te	10.95	31	*e*P	Pn	00 54 52.6	+9.1
HHC				S	Sn	00 56 49.8	+3.9
HHC				pmax	pmax		
	comp=E,7.0nm,0.9s						
HHC				LR	LR		
	comp=E,300nm,9.8s						
HHC				LR	LR		
	comp=E,330nm,9.7s						
LSA	Lhasa	11.35	263	P	Pn	00 54 52.0	+2.7
LSA	Lhasa	11.35	263	Pn	Pn	00 54 51.2	+1.9
CM34	Chiang Mai Arr	13.53	201	P	P	00 55 28.0	+0.1
QIZ	Qiongzhong	13.59	156	P	Pn	00 55 20.1	+0.5
QIZ				S	Sn	00 57 53.6	+3.1
QIZ				LR	LR		
	comp=E,230nm,10.8s						
QIZ				LR	LR		
	comp=E,160nm,14.7s						
QIZ				LR	LR		
	comp=E,260nm,15.2s						
CM33	Chiang Mai Arr	13.62	201	P	P	00 55 29.0	+0.1
CHTO	Chiang Mai	13.62	201	Pn	Pn	00 55 21.9	+1.9
CM35	Chiang Mai Arr	13.69	200	P	P	00 55 36.0	+6.3
LAMP	Lampang	13.70	198	P	Pn	00 55 25.2	+4.1
	comp=E,0.1nmcomp=E,14nm,0.7s						
CM32	Chiang Mai Arr	13.80	201	P	P	00 55 32.0	+1.0
CM36	Chiang Mai Arr	13.86	200	P	P	00 55 32.0	+0.5
CM09	Chiang Mai Arr	13.96	201	P	P	00 55 33.5	+0.8
	comp=E,0.1nmcomp=E,17nm,0.8s						
CMAR	Chiang Mai Arr	13.96	201	Pn	Pn	00 55 25.2	+0.6
	baz=60,slow=42,SNR=0.9						
CMAR				LR	LR	01 01 36.4	
	comp=E,59nm,19.1s,baz=25,slow=41						
CMAR	Chiang Mai Arr	13.96	201		P	00 55 33.3	+0.6
CM02	Chiang Mai Arr	13.98	201	P	P	00 55 33.6	+0.7
	comp=E,0.0nmcomp=E,112nmcomp=E,15nm,0.9s						
CM01	Chiang Mai Arr	13.99	201	P	P	00 55 33.0	0.0
	comp=E,0.0nmcomp=E,12nm,0.9s						
CM04	Chiang Mai Arr	14.00	201	P	P	00 55 33.6	+0.5
	comp=E,0.0nmcomp=E,111nmcomp=E,13nm,0.8s						
CM13	Chiang Mai Arr	14.01	201	P	P	00 55 33.9	+0.7
	comp=E,0.0nmcomp=E,81nmcomp=E,9.7nm,1.0s						
CM05	Chiang Mai Arr	14.01	201	P	P	00 55 33.0	-0.3
	comp=E,0.0nmcomp=E,75nmcomp=E,10nm,0.8s						
TAPN	Taplejung	14.93	257	*e*P	Pn	00 55 39.0	+0.9
	comp=E,28nm,1.1s						
ODAN	Odare	15.37	256	*e*P	Pn	00 55 42.4	-1.5
	comp=E,12nm,0.7s						
CHAI	Chaiyaphum	15.81	188	P	P	00 56 06.9	+14
RAMN	Ramite	15.99	257	*e*P	Pn	00 55 50.6	-1.4
	comp=E,10nm,0.8s						
UMPA	Umpang Tak	16.12	199	P	P	00 56 08.3	+12
SONM	Songino Array	16.24	5	Pn	Pn	00 55 56.4	+1.4
	comp=E,0.1nm,0.3s,baz=190,slow=13,SNR=7.7						
SONM				LR	LR	01 02 19.0	
	comp=E,126nm,18.6s,baz=155,slow=38						
SONM	Songino Array	16.24	5	Pn	Pn	00 55 55.7	+0.8
GUN	Gumba	16.28	261	*e*P	Pn	00 55 54.6	-1.2
	comp=E,34nm,0.8s						
ULN	Ulaanbaatar	16.34	7	P	Pn	00 55 57.5	+1.4
UTHA	Uthaitani	16.59	196	P	P	00 56 06.2	+4.3
PKI	Pulchoki	16.78	261	*e*P	Pn	00 55 59.7	-2.4
	comp=E,27nm,0.7s						
PKIN	Phulchoki	16.79	261	*e*P	Pn	00 56 00.0	-2.2
	comp=E,26nm,0.7s						
KKN	Kakani	16.82	262	*e*P	Pn	00 56 01.0	-1.6
	comp=E,24nm,0.7s						
DMN	Daman	17.02	261	*e*P	Pn	00 56 03.0	-2.1
	comp=E,47nm,0.9s						

GKN	**Gorkha**	**17.30**	**263**	*e*P	**Pn**	**00 56 06.5**	**-2.0**
	comp=E,21nm,0.7s						
WMQ	**Urumqi**	**17.75**	**318**	*e*P	**Pn**	**00 56 13.3**	**-0.5**
WMQ				pmax	pmax		
	comp=E,8.0nm,0.7s						
KSRS	**Korea Array**	**20.40**	**67**	P	**P**	**00 56 44.6**	**+0.9**
	comp=E,4.4nm,0.9s,baz=251,slow=10,SNR=9.7						
KSRS				LR	LR	01 06 18.7	
	comp=E,54nm,19.1s,baz=332,slow=42						
MK31	**Makanchi Array**	**22.58**	**318**	P	**P**	**00 57 08.4**	**+1.3**
MK31				IAmb	IAmb	00 57 09.3	
	comp=Z,9.2nm,1.4s						
MKAR	**Makanchi Array**	**22.58**	**318**	P	**P**	**00 57 08.1**	**+1.0**
	comp=Z,3.4nm,0.8s,baz=118,slow=12,SNR=15						
MAKZ	**Makanchi**	**22.76**	**318**	P	**P**	**00 57 09.8**	**+0.8**
KSH	**Kashi**	**24.13**	**297**	P	**P**	**00 57 26.8**	**+4.0**
KSH				sP	sP	00 57 36.3	+6.7
KSH				PcP	**PcP**	**01 01 10.8**	**+7.2**
KSH				S	**S**	**01 01 33.3**	**-7.0**
KSH				pmax	pmax		
	comp=Z,2.0nm,0.6s						
USRK	**Ussuriysk Ar.**	**25.16**	**52**	P	**P**	**00 57 32.5**	**+0.6**
	comp=Z,0.7nm,0.4s,baz=259,slow=11,SNR=6.4						
AAK	**Ala-Archa**	**25.91**	**303**	P	**P**	**00 57 39.3**	**+0.3**
	comp=Z,1.7nm,0.8s,baz=103,slow=3.9,SNR=7.1						
AAK	**Ala-Archa**	**25.91**	**303**	P	**P**	**00 57 41.0**	**+2.1**
NIL	**Nilore**	**26.03**	**283**	P	**P**	**00 57 42.1**	**+2.2**
ZAA0	**Zalesovo Array**	**26.23**	**334**	P	**P**	**00 57 42.2**	**+0.8**
ZAA0				IAmb	IAmb	00 57 43.4	
	comp=Z,4.8nm,0.8s						
ZALV	**Zalesovo Beam**	**26.23**	**334**	P	**P**	**00 57 42.0**	**+0.5**
	comp=Z,4.9nm,0.8s,baz=131,slow=9.0,SNR=21						
ZALV				LR	LR	01 08 38.0	
	comp=Z,111nm,19.2s,baz=303,slow=38						
KURBB	**Kurchatov Arra**	**26.81**	**322**	P	**P**	**00 57 46.8**	**0.0**
	comp=Z,1.8nm,0.7s,baz=132,slow=8.7,SNR=11						
KURBB				PcP	**PcP**	**01 01 07.5**	**-1.7**
	comp=Z,0.4nm,0.7s,baz=98,slow=2.8,SNR=2.7						
KURK	**Kurchatov**	**26.82**	**323**	P	**P**	**00 57 48.6**	**+1.8**
KK31	**Karatay Array**	**28.87**	**303**	P	**P**	**00 58 06.5**	**+1.2**
KK31				IAmb	IAmb	00 58 07.2	
	comp=Z,5.7nm,1.5s						
KKAR	**Karatay Array**	**28.87**	**303**	P	**P**	**00 58 05.8**	**+0.5**
KKAR	**Karatay Array**	**28.87**	**303**	P	**P**	**00 58 05.8**	**+0.5**
KKAR				IAmb	IAmb	00 58 07.2	
	comp=Z,5.7nm,1.5s						
PSI	**Prapat**	**29.13**	**191**	P	**P**	**00 58 06.0**	**-1.9**
	comp=Z,3.5nm,0.5s,baz=0.0,slow=8.1,SNR=1.4						
RPSI	**Rantau Prapat**	**29.23**	**191**	P	**P**	**00 58 06.0**	**-2.7**
KBL	**Kabul**	**29.45**	**285**	P	**P**	**00 58 11.8**	**+1.1**
KBL				IAmb	IAmb	00 58 15.1	
	comp=Z,4.3nm,1.2s						
GSI	**Gunungsitoli**	**30.82**	**193**	P	P	00 58 30.1	+7.3
ABKAR	**Akbulak array**	**37.32**	**311**	P	**P**	**00 59 19.2**	**+0.4**
ABKAR	**Akbulak array**	**37.32**	**311**	P	**P**	**00 59 19.5**	**+0.6**
ABKAR				IAmb	IAmb	00 59 20.6	
	comp=Z,2.8nm,0.8s						
GEYT	**Alibeck**	**38.00**	**292**	P	**P**	**00 59 22.7**	**-2.1**
	comp=Z,1.0nm,0.5s,baz=99,slow=8.9,SNR=2.5						
GEYT	**Alibeck**	**38.00**	**292**	IAmb	IAmb	00 59 27.3	
	comp=Z,1.2nm,0.7s						
NRIK	**Noril'sk**	**38.88**	**351**	P	**P**	**00 59 31.1**	**-0.7**
	comp=Z,2.4nm,0.7s,baz=160,slow=12,SNR=6.7						
NRIK	**Noril'sk**	**38.88**	**351**		**P**	**00 59 32.3**	**+0.6**
NRIK				IAmb	IAmb	00 59 33.5	
	comp=Z,8.3nm,1.4s						
ARU	**Arti**	**40.01**	**322**	P	**P**	**00 59 41.7**	**+0.4**
ARU				IAmb	IAmb	00 59 43.0	
	comp=Z,5.2nm,0.8s						
KBZ	**Khabaz**	**48.91**	**303**	P	**P**	**01 00 52.0**	**-0.6**
	comp=Z,0.7nm,0.7s,baz=150,slow=9.2,SNR=2.6						
BRTR	**Keskin Array B**	**56.49**	**299**	P	**P**	**01 01 47.2**	**-1.7**
	comp=Z,0.8nm,0.9s,baz=72,slow=6.5,SNR=4.5						
ARCES	**ARCESS Array B**	**56.76**	**336**	P	**P**	**01 01 50.2**	**0.0**
	comp=Z,1.7nm,0.7s,baz=104,slow=6.6,SNR=3.8						
ARCES	**ARCESS Array B**	**56.76**	**336**	IAmb	IAmb	01 01 59.9	
	comp=Z,18nm,1.4s						
AKASG	**Malin Array Be**	**57.02**	**313**	P	**P**	**01 01 51.6**	**-0.7**
	comp=Z,0.6nm,0.3s,baz=68,slow=6.9,SNR=5.5						
AKASG	**Malin Array Be**	**57.02**	**313**	IAmb	IAmb	01 01 54.5	
	comp=Z,0.7nm,0.7s						
FINES	**FINESS Array B**	**57.12**	**326**	P	**P**	**01 01 52.6**	**-0.3**
	comp=Z,3.0nm,0.8s,baz=104,slow=8.0,SNR=6.0						
EIL	**Elat**	**58.60**	**288**	LR	LR	01 31 22.7	
	comp=Z,75nm,18.9s,baz=288,slow=40						
WRA	**Warramunga Arr**	**58.92**	**146**	P	**P**	**01 02 05.4**	**-0.6**
	comp=Z,1.6nm,0.6s,baz=339,slow=7.7,SNR=26						
WRA	**Warramunga Arr**	**58.92**	**146**	IAmb	IAmb	01 02 06.5	
	comp=Z,0.4nm,1.5s						
BURAR	**Bucovina Array**	**60.29**	**310**	P	**P**	**01 02 14.3**	**-1.0**
MLR	**Muntele Rosu**	**60.39**	**308**	P	**P**	**01 02 16.4**	**+0.3**
ASAR	**Alice Springs**	**61.96**	**149**	P	**P**	**01 02 25.5**	**-1.2**
	comp=Z,1.0nm,0.8s,baz=332,slow=6.0,SNR=8.8						
NB2	**NORSAR Subarra**	**64.20**	**327**	P	**P**	**01 02 39.7**	**-1.6**
	comp=Z,1.8nm,0.7s,baz=71,slow=7.4						
NOA	**NORSAR Array B**	**64.20**	**327**	P	**P**	**01 02 40.1**	**-1.1**
	comp=Z,1.2nm,0.7s,baz=71,slow=7.0,SNR=4.6						
CONA	**Conrad Observa**	**66.18**	**313**	*e*P	**P**	**01 02 54.4**	**0.0**
	comp=Z,1.6nm,0.7s						
ARSA	**Arzberg**	**66.64**	**312**	*e*P	**P**	**01 02 57.5**	**+0.2**
	comp=Z,2.5nm,0.8s						
COLD	**Coldfoot**	**66.95**	**24**	P	**P**	**01 03 00.1**	**+1.2**
SOKA	**Soboth**	**67.17**	**312**	*i* P	**P**	**01 03 01.0**	**+0.3**
	comp=Z,4.2nm,0.8s						
GERES	**GERESS Array B**	**67.17**	**314**	P	**P**	**01 03 00.1**	**-0.6**
	comp=Z,1.5nm,0.6s,baz=75,slow=5.7,SNR=14						
GERES	**GERESS Array B**	**67.17**	**314**	P	**P**	**01 03 00.2**	**-0.5**
WTTA	**Wattenberg**	**69.07**	**313**	*i* P	**P**	**01 03 12.9**	**+0.1**
	comp=Z,4.1nm,1.1s						
ILAR	**Eielson Array**	**69.32**	**26**	P	**P**	**01 03 12.0**	**-1.8**
	comp=Z,0.8nm,1.0s,baz=290,slow=6.3,SNR=5.9						
ILAR	**Eielson Array**	**69.32**	**26**		pP	01 03 17.9	-1.1
SQTA	**Sankt Quirin**	**69.36**	**313**	*i* P	**P**	**01 03 14.5**	**0.0**
	comp=Z,5.6nm,0.7s						
MOTA	**Moosalm**	**69.37**	**313**	*i* P	**P**	**01 03 14.5**	**-0.1**
	comp=Z,3.6nm,0.9s						
FETA	**Feichten**	**69.74**	**313**	*i* P	**P**	**01 03 16.9**	**0.0**
	comp=Z,4.5nm,1.0s						
KMBO	**Kilima Mbogo**	**71.06**	**256**	P	**P**	**01 03 25.0**	**-0.5**
	comp=Z,0.8nm,0.4s,baz=56,slow=12,SNR=4.8						
YKA	**Yellowknife Ar**	**81.15**	**17**	P	**P**	**01 04 21.5**	**-0.4**
	comp=Z,1.3nm,0.9s,baz=334,slow=4.7,SNR=18						

*IDC **24** 01:23:13.9±2.2, 56°.05N×114°.19E, h0^{km}, mb3.3/5, mb1 3.4/6, mb1mx3.2/53, mbtmp3.3/6, ML2.7/1, MS4.0/2, Ms1 4.0/2, ms1mx2.9/36, Error ellipse: s-maj=48.1km s-min=22.4km az=127.0*

*MOS **24** 01:23:14.3±0.8, 56°.08N×113°.89E, h9^{km}, mb3.5/1, Error ellipse: s-maj=13.9km s-min=8.8km az=67.0*

*BYKL **24** 01:23:15.5±0.1, 56°.14N×113°.81E, h3^{km}±2^{km}*

ISC 24 01:23:16.1±0.6**, 56°.13N**±0°.02×**113°.86E**±0°.02**, h10**^{km}**, n44, σ2^{s}.24**/85**, mb3.4**/5**, 4C-3D, East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	**0.17**	**265**	⇑*i*Pg	**Pg**	**01 23 17.7**	**-2.1**
SVKR				*e*Sg	**Sg**	**01 23 20.0**	**-2.4**
SVKR				Pmax			
	3μm,0.2s						
SVKR				Smax			
	18μm,0.8s						
SVKR	**Severomuysk**	**0.17**	**265**	⇑*i*PG	**Pg**	**01 23 17.7**	**-2.1**
SVKR				pmax	pmax		
	comp=Z,4μm,0.3s						
UKT	**Uakit**	**0.66**	**192**	⇓*i*Pg	**Pg**	**01 23 26.9**	**-1.9**
UKT				*e*Pb	**Pb**	**01 23 29.3**	**-0.4**
UKT				*e*Sg	**Sg**	**01 23 36.5**	**-0.9**
UKT				*e*Sb	**Sb**	**01 23 38.9**	**0.0**
UKT				max			
	comp=Z,165nm,0.2s						
UKT				max			
	comp=Z,451nm,0.4s						
UKT	**Uakit**	**0.66**	**192**	⇓*i*PG	**Pg**	**01 23 26.9**	**-1.9**
UKT				*e*S	**Sg**	**01 23 36.3**	**-1.1**
NLYR	**Nelyaty**	**1.09**	**70**	*e*Pg	**Pg**	**01 23 35.5**	**-1.6**
NLYR				*e*Pb	**Pn**	**01 23 37.9**	**+0.4**
NLYR				*e*		01 23 39.3	
NLYR				*e*Sg	**Sg**	**01 23 50.8**	**-0.4**
NLYR				*e*Sb	**Sn**	**01 23 55.1**	**+2.5**
NLYR				max			
	comp=Z,436nm,0.4s						
NLYR				max			
	comp=Z,753nm,0.9s						
NLYR	**Nelyaty**	**1.09**	**70**	*e*PG	**Pg**	**01 23 35.3**	**-1.8**
NLYR				*e*		01 23 49.7	
NLYR				pmax	pmax		
	comp=Z,437nm,0.4s						
NLYR				smax	smax		
	comp=E,751nm,0.9s						
YOA	**Uoyan**	**1.20**	**271**	*e*Pg	**Pn**	**01 23 37.1**	**-1.8**
YOA				*e*		01 23 40.1	
YOA				*e*Sg	**Sb**	**01 23 52.7**	**-1.7**
YOA				*e*Sb	**Sn**	**01 23 56.8**	**+1.6**
YOA				max			
	comp=E,491nm,0.2s						
YOA				max			
	comp=E,2μm,0.6s						
YOA	**Uoyan**	**1.20**	**271**	*e*PG	**Pn**	**01 23 38.2**	**-0.7**
YOA				*i*		01 23 53.3	
YOA				pmax	pmax		
	comp=Z,411nm,0.2s						
YOA				smax	smax		
	comp=E,2μm,0.5s						
KMO	**Kumora**	**1.51**	**262**	*e*Pg	**Pn**	**01 23 42.0**	**-1.3**
KMO				*e*		01 23 44.5	
KMO				*e*Sg	**Sn**	**01 24 02.8**	**-0.2**
KMO				*e*Sb	**Sg**	**01 24 05.2**	**+0.5**
KMO				max			
	comp=E,249nm,0.5s						
KMO				max			
	comp=E,1μm,0.9s						
KMO	**Kumora**	**1.51**	**262**	⇑*i*PG	**Pn**	**01 23 42.0**	**-1.3**
KMO				*e*		01 24 02.5	
KMO				pmax	pmax		
	comp=Z,251nm,0.4s						
KMO				smax	smax		
	comp=N,1μm,0.9s						
BOD	**Bodaibo**	**1.69**	**3**	*e*Pn	**Pn**	**01 23 45.4**	**-0.4**
BOD				*e*Pg	**Pb**	**01 23 46.3**	**-1.1**
BOD				*e*Sg	**Sn**	**01 24 08.0**	**+0.5**
BOD				Pmax			
	comp=N,77nm,0.3s						
BOD				Smax			
	comp=N,448nm,0.5s						
BOD	**Bodaibo**	**1.69**	**3**	*e*PN	**Pn**	**01 23 45.9**	**+0.1**
BOD				*e*		01 24 07.5	
BOD				pmax	pmax		
	comp=Z,78nm,0.2s						
BOD				smax	smax		
	comp=E,450nm,0.3s						
YLYR	**Ulyunkhan**	**1.98**	**232**	*e*Pn	**Pn**	**01 23 50.1**	**+0.3**
YLYR				*e*Pg	**Pb**	**01 23 50.9**	**-1.4**
YLYR				*e*Sg	**Sb**	**01 24 16.9**	**-0.2**
YLYR				Pmax			
	comp=E,137nm,0.5s						
YLYR				Smax			
	comp=E,475nm,0.5s						
YLYR	**Ulyunkhan**	**1.98**	**232**	*e*PN	**Pn**	**01 23 50.4**	**+0.6**
YLYR				*e*		01 23 51.8	
YLYR				*e*S	**Sn**	**01 24 15.2**	**+0.5**
YLYR				*e*		01 24 16.8	
YLYR				pmax	pmax		
	comp=Z,140nm,0.4s						
YLYR				smax	smax		
	comp=E,477nm,0.2s						
NIZ	**Nizh Angarsk**	**2.45**	**263**	*e*Pn	**Pn**	**01 23 57.1**	**+0.9**
NIZ				*e*Pg	**Pb**	**01 23 58.7**	**-1.6**
NIZ				*e*Sg	**Sb**	**01 24 31.8**	**+1.2**
NIZ				Pmax			
	comp=E,31nm,0.5s						
NIZ				Smax			
	comp=E,256nm,0.7s						
NIZ	**Nizh Angarsk**	**2.45**	**263**	*e*PN	**Pn**	**01 23 57.8**	**+1.6**
NIZ				*e*S	**Sn**	**01 24 25.6**	**-0.6**
NIZ				*e*		01 24 31.9	
NIZ				pmax	pmax		
	comp=Z,31nm,0.4s						
NIZ				smax	smax		
	comp=N,256nm,0.8s						
CRS	**Chara**	**2.56**	**71**	⇓*i*Pn	**Pn**	**01 23 58.5**	**+0.8**
CRS				⇑*i*Pg	**Pb**	**01 24 02.6**	**+0.4**
CRS				*e*Sg	**Sg**	**01 24 36.4**	**-2.0**
CRS				Pmax			
	comp=N,136nm,1.1s						
CRS				Smax			
	comp=N,295nm,0.7s						
CRS	**Chara**	**2.56**	**71**	*e*PN	**Pn**	**01 23 58.3**	**+0.6**
CRS				*e*		01 24 02.3	
CRS				*e*		01 24 36.2	
CRS				pmax	pmax		
	comp=Z,127nm,0.6s						
CRS				smax	smax		
	comp=E,295nm,0.8s						
SYVR	**Suvo**	**3.33**	**224**	*e*Pn	**Pn**	**01 24 08.4**	**+0.1**
SYVR				*e*Pg	**Pb**	**01 24 15.7**	**+0.4**
SYVR				*e*PgPg	**PbPb**	**01 24 18.1**	**-0.3**
SYVR				*e*Sn	**Sn**	**01 24 48.3**	**+0.4**
SYVR				*e*Sg	**Sb**	**01 24 58.4**	**+2.5**
SYVR				*e*		01 25 06.3	
SYVR				max			
	comp=E,30nm,0.7s						
SYVR				max			
	comp=E,176nm,1.2s						
SYVR	**Suvo**	**3.33**	**224**	*e*PN	**Pn**	**01 24 08.4**	**+0.1**
SYVR				*e*		01 24 15.7	
SYVR				*e*		01 24 58.4	
SYVR				pmax	pmax		
	comp=Z,34nm,0.4s						
SYVR				smax	smax		
	comp=E,182nm,1.0s						
VTMR	**Vitim**	**3.39**	**349**	*e*Pn	**Pn**	**01 24 10.4**	**+1.3**
VTMR				*e*		01 24 17.3	
VTMR				*e*Sn	**Sn**	**01 24 48.5**	**-0.8**
VTMR				*e*Sg	**Sb**	**01 24 59.2**	**+1.7**
KHNR	**Khani**	**3.48**	**74**	*e*Pn	**Pn**	**01 24 10.4**	**0.0**
KHNR				*e*Pg	**Pb**	**01 24 17.4**	**-0.4**
KHNR				*e*Sg	**Sb**	**01 25 02.6**	**+2.4**
TUP	**Tupik**	**3.88**	**114**	*e*Pn	**Pn**	**01 24 16.2**	**+0.3**
TUP				*e*Pg	**Pb**	**01 24 26.2**	**+1.5**
TUP				*e*Sn	**Sn**	**01 25 01.1**	**-0.4**
TUP				*e*Sg	**Sg**	**01 25 17.1**	**-3.6**
TUP				*e*SgSg	**SbSb**	**01 25 21.6**	**+4.8**
TUP				Pmax			
	comp=E,27nm,0.5s						
TUP				max			
	comp=E,224nm,0.7s						
TUP	**Tupik**	**3.88**	**114**	*e*PN	**Pn**	**01 24 16.1**	**+0.2**
TUP				*e*		01 24 25.8	
TUP				*e*S	**Sn**	**01 25 01.0**	**-0.4**
TUP				*e*		01 25 16.2	
TUP				pmax	pmax		
	comp=Z,28nm,0.3s						
TUP				smax	smax		
	comp=E,224nm,0.8s						
CIT	**Chita**	**4.12**	**183**	*e*Sg	**Sg**	**01 25 23.7**	**-4.7**
CIT				Smax			
	comp=E,148nm,0.4s						
MXMB	**Maximikha**	**4.13**	**228**	*e*Pg	**Pb**	**01 24 29.8**	**+0.9**
MXMB				*e*Sn	**Sn**	**01 25 07.4**	**-0.2**
MXMB				*e*Sg	**Sb**	**01 25 22.5**	**+3.7**
YKLR	**Yuktali**	**4.36**	**81**	*e*Pn	**Pn**	**01 24 23.2**	**+0.8**
YKLR				*e*Pg	**Pb**	**01 24 33.7**	**+0.9**
YKLR				*e*Sg	**Sg**	**01 25 31.3**	**-4.7**
OGRR	**Ongureny**	**4.39**	**238**	*e*Pn	**Pn**	**01 24 23.9**	**+1.1**
OGRR				*e*Pg	**Pb**	**01 24 34.1**	**+0.8**
OGRR				*e*Sg	**Sb**	**01 25 31.5**	**+5.2**
OGRR				Pmax			
	comp=E,11nm,0.6s						
OGRR				Smax			
	comp=E,50nm,1.6s						
OGRR	**Ongureny**	**4.39**	**238**	*e*PN	**Pn**	**01 24 23.3**	**+0.5**
OGRR				*e*		01 24 34.4	
OGRR				*e*		01 25 29.5	
OGRR				pmax	pmax		
	comp=Z,12nm,0.6s						
OGRR				smax	smax		
	comp=E,50nm,1.2s						
ZRHB	**Zarechye**	**5.31**	**230**	*e*Sg	**Sg**	**01 26 00.7**	**-5.8**
ZRHB				Smax			
	comp=E,146nm,1.5s						
TRG	**Tyrgan**	**5.53**	**235**	*e*Pg	**Pb**	**01 24 53.8**	**+1.0**
TRG				*e*Sg	**Sb**	**01 26 05.5**	**+6.4**
TRG				Pmax			
	comp=E,2.0nm,0.2s						
TRG				Smax			
	comp=E,30nm,1.1s						
KPC	**Khapcheranga**	**6.50**	**189**	*e*	**Pn**	**01 24 50.5**	**-1.3**
KPC				*e*Pg	**Pb**	**01 25 12.5**	**+3.2**
KPC				*e*Sg	**Sg**	**01 26 36.4**	**-8.2**
KPC				Pmax			
	comp=E,2.0nm,0.3s						
KPC				Smax			
	comp=E,74nm,1.8s						
KPC	**Khapcheranga**	**6.50**	**189**	*e*PN	**Pn**	**01 24 50.6**	**-1.3**
KPC				*e*		01 25 10.6	
KPC				*e*		01 26 34.7	
KPC				pmax	pmax		
	comp=Z,2.0nm,0.2s						
KPC				smax	smax		
	comp=E,74nm,1.8s						
TLY	**Talaya**	**7.50**	**238**	Pg	**Pb**	**01 25 29.6**	**+3.4**
	comp=E,0.0nm,0.3s,baz=29,slow=6.7,SNR=4.4						
TLY				Lg	Lg	01 27 06.0	
	comp=E,0.0nm,0.3s,baz=108,slow=20,SNR=6.5						
SONM	**Songino Array**	**9.49**	**212**	Pn	**Pn**	**01 25 32.5**	**-0.4**
	comp=E,0.1nm,0.3s,baz=21,slow=12,SNR=2.1						
SONM				Pg		01 26 08.1	
	comp=E,0.2nm,0.3s,baz=22,slow=15,SNR=2.6						
SONM				Lg	Lg	01 28 12.3	
	comp=E,0.5nm,0.3s,baz=21,slow=26,SNR=11						
KLR	**Kul'dur**	**12.84**	**115**	Lg	Lg	01 29 55.4	
	comp=E,0.1nm,0.3s,baz=347,slow=17,SNR=3.3						
KURK	**Kurchatov**	**21.52**	**270**	P	**P**	**01 28 09.1**	**+4.1**
MKAR	**Makanchi Array**	**21.60**	**258**	P	**P**	**01 28 07.4**	**+1.4**
	comp=E,0.7nm,0.7s,baz=57,slow=9.0,SNR=8.3						
KURBB	**Kurchatov Arra**	**21.61**	**270**	P	**P**	**01 28 09.1**	**+3.1**
	comp=E,1.0nm,0.5s,baz=70,slow=12,SNR=4.3						
BVAR	**Borovoye Array**	**25.07**	**281**	P	**P**	**01 28 41.0**	**+0.6**
	comp=E,0.2nm,0.5s,baz=81,slow=8.9,SNR=2.5						
JNU	**Nakatsue**	**25.86**	**146**	LR	LR	01 39 26.0	
	comp=E,583nm,19.7s,baz=228,slow=38						
FINES	**FINESS Array B**	**42.52**	**315**	P	**P**	**01 31 11.0**	**-0.1**
	comp=E,0.5nm,0.6s,baz=72,slow=8.9,SNR=4.0						
KDAK	**Kodiak Island**	**47.08**	**47**	LR	LR	01 52 23.6	
	comp=E,90nm,18.1s,baz=87,slow=37						
YKA	**Yellowknife Ar**	**55.84**	**25**	P	**P**	**01 32 52.3**	**-0.8**
	comp=E,0.3nm,0.7s,baz=339,slow=6.7,SNR=4.1						

NNC 24 01:23:16.9±14.0**, 37°.05N**×**70°.69E, h0**^{km}**, mb4.1, mpv3.8, 2C-1D, Error ellipse: s-maj=111.7km s-min=100.2km az=174.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IUG	**Iuzhnay**	**5.12**	**355**	Pg	Pn	01 24 36.6	+1.8
	2.4nm,0.1s						
IUG				Lg	Lg	01 25 39.0	
	59nm,0.4s						
BRLS	**Borolday**	**6.01**	**354**	Pg	Pn	01 24 45.1	-1.9
	4.2nm,0.3s						
MRKS	**Merke**	**6.01**	**18**	Pg	Pn	01 24 46.9	-0.3
	6.3nm,0.4s						
MRKS				Lg	Lg	01 25 57.2	
	5.2nm,0.4s						
KK31	**Karatay Array**	**6.05**	**359**	P	Pn	01 24 49.0	+1.4
	2.4nm,0.3s,baz=177,slow=12,SNR=104						
KK31				⇓S	Sn	01 25 59.6	+2.1
	2.2nm,0.3s,baz=184,slow=22						
AAK	**Ala-Archa**	**6.30**	**27**	⇑P	Pn	01 24 50.3	-0.9
	1.7nm,0.3s						
AAK				⇑S	Sn	01 26 03.6	-0.4
	3.2nm,0.5s						

IDC 24 01:25:56.2±2.1**, 7°.79S**×**118°.86E, h0**^{km}**, mb3.1**/2**, mb1 3.4**/5**, mb1mx3.2**/56**, mbtmp3.2**/5**, ML2.9**/3**, Error ellipse: s-maj=68.5km s-min=24.0km az=65.0, Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPI	**Kappang**	**2.90**	**18**	Pn	Pn	01 26 43.6	0.0
	1.4nm,0.3s,baz=203,slow=6.9,SNR=6.3						
KAPI				Sn	Sn	01 27 16.0	-3.2
	3.9nm,0.3s,baz=162,slow=20,SNR=2.6						
FITZ	**Fitzroy Crossi**	**12.19**	**148**	Pn	Pn	01 28 50.5	-0.7
	0.1nm,0.3s,baz=337,slow=7.7,SNR=2.1						
FITZ				Sn	Sn	01 31 02.0	-5.9
	0.1nm,0.3s,baz=212,slow=18,SNR=1.7						
WRA	**Warramunga Arr**	**19.26**	**130**	P	P	01 30 22.1	-0.4
	0.1nm,0.3s,baz=308,slow=13,SNR=1.2						
ASAR	**Alice Springs**	**21.39**	**139**	P	P	01 30 46.3	+0.7
	0.6nm,0.8s,baz=313,slow=8.9,SNR=6.6						
MKAR	**Makanchi Array**	**63.32**	**333**	P	P	01 36 27.0	-0.1
	0.3nm,0.7s,baz=123,slow=5.3,SNR=1.8						

*IDC **24** 01:31:49.2±0.6, 54°.56S×136°.32W, h0^{km}, mb4.2/9, mb1 4.4/9, mb1mx4.3/25, mbtmp4.2/9, MS4.5/12, Ms1 4.4/12, ms1mx4.4/16, Error ellipse: s-maj=43.7km s-min=17.4km az=177.0*

*NEIC **24** 01:31:51.4±1.5, 54°.1S±0°.2×136°.1W±0°.2, h15^{km}±3^{km}, mb4.9/20, Error ellipse: s-maj=23.8km s-min=15.9km az=176.0*

*GCMT **24** 01:31:55.4±0.2, 54°.51S±0°.01×136°.28W±0°.02, h17^{km}±1^{km}, MW5.1/112, Moment Tensor Solution. s53,c72; s112,c158; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.92±.16; $M_{\theta\theta}$4.63±.20; $M_{\phi\phi}$-3.71±.14; $M_{r\theta}$0.27±.37; $M_{\theta\phi}$3.75±.12; $M_{\phi r}$0.48±.32; Best double couple: $M_0$5.63600×10^{16} NP1:ϕ_s114.00000°,δ84.00000°, λ-1.00000°. NP2:ϕ_s204.00000°,δ89.00000°, λ-174.00000°. Principal axes: T 6.0940, Plg3.0000°, Azm339.0000°; N -0.9140, Plg84.0000°, Azm213.0000°; P -5.1780, Plg5.0000°, Azm69.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 24 01:31:50.6±0.4**, 54°.1S**±0°.1×**136°.22W**±0°.09**, h10**^{km}**, n78, σ1^{s}.21**/54**, mb4.8**/15**, MS4.6**/17**, 1D, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RKT	**Rikitea**	**30.92**	**2**	*e*LR	LR	01 46 03.7	
	comp=Z,2μm,26.8s						
VNDA	**Vanda**	**31.91**	**201**	LR	LR	01 47 42.3	
	comp=Z,379nm,18.4s,baz=85,slow=30						
TBI	**Tubuai**	**32.26**	**337**	*e*LR	LR	01 46 40.6	
	comp=Z,2μm,28.0s,baz=166						
TBI	**Tubuai**	**32.26**	**337**	*e*T	T	02 12 15.4	
	56nm,0.3s						
RPZ	**Rata Peaks**	**35.40**	**265**	LR	LR	01 50 02.1	
	comp=Z,802nm,19.0s,baz=108,slow=31						
NNZ	**Nelson**	**35.54**	**270**	P	**P**	**01 38 46.6**	**-1.0**
NNZ				IAmb	IAmb	01 38 49.0	
	comp=Z,23nm,1.3s						
QSPA	**South Pole Qui**	**36.10**	**180**	P	**P**	**01 38 51.9**	**-0.5**
MCQ	**Macquarie Isla**	**36.64**	**242**	P	**P**	**01 38 57.0**	**+0.2**
TVO	**Taravao**	**37.59**	**339**	*e*T	T	02 18 59.8	
	comp=Z,2.3nm,0.3s						
PAE	**Paea**	**37.78**	**339**	*e*T	T	02 19 11.5	
	comp=Z,3.6nm,0.3s						
TIAR	**Tiarei**	**37.83**	**339**	*e*T	T	02 19 16.9	
	comp=Z,4.8nm,0.4s						
PPT2	**Papeete2**	**37.85**	**339**	*e*S	**S**	**01 44 57.6**	**-1.0**
	comp=Z,138nm,26.0s						
PPT2				*e*LR	LR	01 49 16.4	
	comp=Z,2μm,26.0s,baz=171						
PPT2	**Papeete2**	**37.85**	**339**	*e*T	T	02 19 17.2	
	comp=Z,7.3nm,0.3s						
VAH	**Vaihoa**	**39.76**	**343**	*e*T	T	02 21 44.5	
	comp=Z,33nm,0.3s						
BELA	**Belgrano 2**	**40.13**	**161**	P	**P**	**01 39 25.6**	**-0.4**
H03S2	**Juan Fernandez**	**44.54**	**87**	T	T	02 27 51.5	
	baz=222,slow=74,SNR=30						
H03S1	**Juan Fernandez**	**44.54**	**87**	T	T	02 27 56.0	
	baz=222,slow=74,SNR=29						
H03S3	**Juan Fernandez**	**44.55**	**87**	T	T	02 27 53.5	
	baz=222,slow=74,SNR=22						
PLCA	**Paso Flores**	**44.80**	**101**	P	**P**	**01 40 03.5**	**-1.0**
	comp=Z,1.6nm,1.0s,baz=25,slow=6.4,SNR=2.7						
PLCA				LR	LR	01 54 09.2	
	comp=Z,516nm,19.5s,baz=232,slow=30						
PLCA	**Paso Flores**	**44.80**	**101**	P	**P**	**01 40 03.8**	**-0.6**
PLCA				IAmb	IAmb	01 40 08.2	
	comp=Z,25nm,1.9s						
H03N3	**Juan Fernandez**	**44.81**	**87**	T	T	02 28 16.1	
	baz=226,slow=72,SNR=316						
H03N2	**Juan Fernandez**	**44.81**	**87**	T	T	02 28 08.5	
	baz=226,slow=72,SNR=437						
H03N1	**Juan Fernandez**	**44.82**	**87**	T	T	02 28 08.0	
	baz=226,slow=72,SNR=245						

TAOE	Nuku Hiva Isla	45.20	355	eS	S	01 46 44.8	-2.8
	comp=Z,78nm,26.0s						
TAOE				eLR	LR	01 52 39.9	
	comp=Z,1μm,25.0s						
BO02	Sierra Bellavi	48.66	94	P	P	01 40 33.7	-1.1
ZON	Zonda	52.21	93	P	P	01 41 00.8	-0.8
ZON				IAmb	IAmb	01 41 04.0	
	comp=Z,23nm,1.7s						
DZM	Mont Dzumac	53.35	283	eLR	LR	01 56 42.5	
	comp=Z,560nm,22.6s						
SYO	Syowa Base	57.20	178	⇓eP	P	01 41 27.3	-10
MAW	Mawson	57.81	189	LR	LR	02 04 34.6	
	comp=Z,440nm,18.2s,baz=210,slow=34						
LVC	Limon Verde	58.74	86	P	P	01 41 50.2	+1.1
LVC				IAmb	IAmb	01 41 51.9	
	comp=Z,12nm,0.9s						
PB09	IPOC Station P	59.17	85	P	P	01 41 50.9	-1.0
STKA	Stephens Creek	60.48	256	P	P	01 42 00.0	-0.5
	comp=Z,3.1nm,0.9s,baz=156,slow=14,SNR=3.4						
STKA				LR	LR	02 03 54.0	
	comp=Z,231nm,19.4s,baz=180,slow=32						
STKA	Stephens Creek	60.48	256	P	P	01 42 00.9	+0.4
MNMC	Minye Minye	61.04	83	P	P	01 42 05.3	+0.5
CPUP	Villa Florida	62.72	98	P	P	01 42 16.0	+0.3
	comp=Z,2.6nm,0.9s,baz=252,slow=6.0,SNR=5.8						
CPUP				LR	LR	02 05 02.3	
	comp=Z,471nm,20.4s,baz=218,slow=32						
CPUP	Villa Florida	62.72	98	P	P	01 42 15.6	-0.1
CPUP				IAmb	IAmb	01 42 17.6	
	comp=Z,12nm,1.4s						
LPAZ	La Paz	64.13	82	P	P	01 42 26.5	+0.7
	comp=Z,3.7nm,1.0s,baz=213,slow=4.3,SNR=11						
LPAZ				LR	LR	02 03 51.0	
	comp=Z,103nm,18.6s,baz=254,slow=30						
LPAZ	La Paz	64.13	82	P	P	01 42 24.7	-1.1
LPAZ				IAmb	IAmb	01 42 40.3	
	comp=Z,24nm,1.5s						
CTAO	Charters Tower	66.70	268	P	P	01 42 41.5	-0.3
CTAO				IAmb	IAmb	01 42 50.4	
	comp=Z,12nm,1.2s						
AS31	Alice Springs	71.12	256	P	P	01 43 09.6	+0.4
ASAR	Alice Springs	71.12	256	P	P	01 43 08.1	-1.1
	comp=Z,7.6nm,1.0s,baz=144,slow=6.2,SNR=28						
ASAR				LR	LR	02 11 06.6	
	comp=Z,389nm,18.7s,baz=153,slow=33						
ASAR	Alice Springs	71.12	256	P	P	01 43 08.2	-1.0
H01W1	Cape Leeuwin H	72.70	234	T	T	03 03 12.4	
	baz=143,slow=76,SNR=35						
H01W2	Cape Leeuwin H	72.71	234	T	T	03 03 13.1	
	baz=143,slow=76,SNR=38						
H01W3	Cape Leeuwin H	72.72	234	T	T	03 03 14.0	
	baz=143,slow=76,SNR=33						
WB2	Warramunga Arr	73.77	258	P	P	01 43 24.2	-0.9
WB2				IAmb	IAmb	01 43 27.2	
	comp=Z,11nm,1.1s						
WRA	Warramunga Arr	73.78	258	P	P	01 43 23.9	-1.2
	comp=Z,5.5nm,1.0s,baz=143,slow=5.2,SNR=18						
WRA				LR	LR	02 12 49.4	
	comp=Z,427nm,18.8s,baz=160,slow=33						
WRA	Warramunga Arr	73.78	258	P	P	01 43 25.9	+0.7
WB0	Warramunga Arr	73.89	259	P	P	01 43 26.2	+0.4
WB0				IAmb	IAmb	01 43 30.9	
	comp=Z,7.6nm,0.8s						
BDFB	Brasilia	76.45	98	P	P	01 43 41.6	+0.9
	comp=Z,1.0nm,0.4s,baz=238,slow=9.5,SNR=2.4						
BDFB				LR	LR	02 13 14.9	
	comp=Z,354nm,20.9s,baz=218,slow=32						
BDFB	Brasilia	76.45	98	P	P	01 43 40.1	-0.6
BDFB				IAmb	IAmb	01 43 57.5	
	comp=Z,26nm,1.7s						
ROSC	El Rosal	77.94	64	LR	LR	02 13 54.9	
	comp=Z,227nm,18.6s,baz=228,slow=32						
TLIG	Tlapa	78.30	37	P	P	01 43 49.4	-1.4
TXAR	Lajitas Array	87.70	28	P	P	01 44 41.9	+2.7
	comp=Z,0.6nm,0.8s,baz=180,slow=5.3,SNR=2.7						
TXAR	Lajitas Array	87.70	28	P	P	01 44 39.6	+0.4
NVAR	Mina Array Bea	93.42	14	P	P	01 45 08.2	+2.4
	comp=Z,0.1nm,0.3s,baz=188,slow=5.5,SNR=2.3						
BOSA	Boshof	96.11	164	LR	LR	02 22 42.5	
	comp=Z,320nm,21.2s,baz=206,slow=32						
ILAR	Eielson Array	118.79	355	PKP	PKiKP	01 50 38.0	+0.5
	comp=Z,0.1nm,0.6s,baz=207,slow=3.8,SNR=2.9						
KOWA	Kowa	125.77	118	PKP	PKPdf	01 50 51.7	-0.8
	comp=Z,1.5nm,0.9s,baz=52,slow=7.6,SNR=3.7						
KOWA	Kowa	125.77	118		PKPdf	01 50 52.1	-0.3
TORD	Torodi Ar. Bea	127.50	125	PKP	PKPdf	01 50 55.2	-0.6
	comp=Z,0.2nm,0.4s,baz=191,slow=1.5,SNR=4.1						
SONM	Songino Array	141.22	287	PKP	PKPdf	01 51 19.4	-1.2
	comp=Z,0.2nm,0.4s,baz=146,slow=3.3,SNR=2.0						
SONM	Songino Array	141.22	287		PKPdf	01 51 19.7	-0.9
TLY	Talaya	144.72	291	PKP	PKPab	01 51 25.5	+0.1
	comp=Z,0.9nm,0.4s,baz=187,slow=6.1,SNR=3.9						
TLY	Talaya	144.72	291		PKPdf	01 51 26.1	-0.4
ESDC	Sonseca Array	145.04	94	PKPbc	PKPdf	01 51 28.1	+0.6
	comp=Z,3.6nm,0.9s,baz=246,slow=2.6,SNR=7.6						
ESDC	Sonseca Array	145.04	94		PKPdf	01 51 27.5	0.0
RAYN	Ar Rayn	149.47	183		PKPbc	01 51 40.0	+0.1
EKA	Eskdalemuir Ar	153.24	68	PKPbc	PKiKP	01 51 47.6	-0.1
	comp=Z,1.2nm,0.6s,baz=207,slow=3.0,SNR=1.6						
MKAR	Makanchi Array	154.67	269	PKPbc	PKiKP	01 51 53.2	+2.3
	comp=Z,0.7nm,0.8s,baz=100,slow=3.2,SNR=1.8						
MKAR	Makanchi Array	154.67	269		PKiKP	01 51 52.2	+1.2
NRIK	Noril'sk	155.00	324	PKPab	PKPab	01 52 07.0	+0.4
	comp=Z,0.8nm,0.3s,baz=18,slow=3.8,SNR=2.2						
NRIK	Noril'sk	155.00	324		PKPab	01 52 06.8	+0.3
ZALV	Zalesovo Beam	156.12	287	PKPab	PKPab	01 52 13.3	+1.4
	comp=Z,2.9nm,1.0s,baz=107,slow=5.0,SNR=4.5						
ZALV	Zalesovo Beam	156.12	287		PKPab	01 52 13.1	+1.3
GERES	GERESS Array B	160.63	93	PKP	PKPdf	01 51 53.5	+3.7
	comp=Z,1.1nm,1.1s,baz=242,slow=2.9,SNR=4.3						
GERES	GERESS Array B	160.63	93		PKPdf	01 51 50.9	+1.1
BRTR	Keskin Array B	164.09	150	PKPab	PKPab	01 52 44.7	-2.4
	comp=Z,0.5nm,0.9s,baz=223,slow=7.9,SNR=2.1						

IDC ***24*** *01:42:17.6±0.7, 39°.66N×143°.42E, h0^{km}, mb4.0/22, mb1 4.1/26, mb1mx4.0/52, mbtmp3.9/26, ML3.5/4, MS3.2/8, Ms1 3.2/8, ms1mx3.0/36, Error ellipse: s-maj=18.9km s-min=14.6km az=96.0*

JMA ***24*** *01:42:19.1±0.2, 39°.65N×143°.42E, h23^{km}±4^{km}, M4.2*

NIED ***24*** *01:42:19.2, 39°.65N×143°.42E, h23^{km}, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.92; $M_{\theta\theta}$0.08; $M_{\phi\phi}$-1.00; $M_{r\theta}$0.91; $M_{\theta\phi}$-0.39; $M_{\phi r}$0.98; Fault plane solution: $M_0$1.69000×10^{15} NP1:ϕ_s38.00000°, δ72.00000°, λ105.00000°. NP2:ϕ_s176.00000°, δ23.00000°, λ50.00000°.*

NEIC ***24*** *01:42:19.7±0.6, 39°.64N±0°.05×143°.2E±0°.1, h10^{km}±1^{km}, mb4.4/10 Error ellipse: s-maj=16.3km s-min=8.8km az=97.0*

ISC 24 01:42:19.3±0.6**, 39°.66N**±0°.05×**143°.37E**±0°.06**, h11**^{km}**, n84, σ0^{s}.83**/83**, mb4.1**/27**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTH	Tanohata	1.19	284	P	Pn	01 42 41.3	-0.6
JTH				eS	Sb	01 42 57.1	-0.2
MIYJ	Miyakonagasawa	1.20	266	P	Pn	01 42 41.0	-1.0
MIYJ				eS	Sb	01 42 57.3	-0.2
JKEN	Kujiedanarisaw	1.39	294	P	Pn	01 42 43.8	-0.8
JKEN				eS	Sn	01 43 01.8	-1.1
JANG	Nango	1.59	297	P	Pn	01 42 47.0	-0.4
JOM	Ohasama	1.62	264	P	Pn	01 42 48.1	+0.4
JOM				eS	Sn	01 43 08.7	+0.1
JMK	Ichinoseki	1.81	248	P	Pn	01 42 50.3	-0.1
JIO	Ouri	1.98	233	P	Pn	01 42 52.1	-0.7
JTM	Tenmabayashi	2.09	303	P	Pn	01 42 54.5	+0.3
JTM	Tenmabayashi	2.09	303	Pn	Pn	01 42 54.9	+0.7
JRG	Rokugo	2.13	264	P	Pn	01 42 55.3	+0.5
JAH	Hinai	2.17	285	P	Pn	01 42 55.9	+0.6
ERM	Erimo	2.35	356		Pn	01 42 59.1	+1.2
JYK	Kaneyama	2.45	253	P	Pn	01 42 59.8	+0.6
JOT	Ohata	2.46	315	P	Pn	01 42 59.9	+0.5
JNBK	Urakawa-nobuka	2.66	350	P	Pn	01 43 03.3	+1.3
JMM	Marumori	2.70	229	Pn	Pn	01 43 02.1	-0.5
JCH	Churui	2.95	360	eS	Sn	01 43 39.8	-1.6
JEW	Eniwo	3.49	336	Pn	Pn	01 43 13.7	+0.2
JYT	Yasato	4.25	217		Pn	01 43 23.8	-0.2
JSD	Sado	4.31	249	Pn	Pn	01 43 24.4	-0.4
ASAJ	Asahikawa	4.49	353	Pn	Pn	01 43 27.9	+0.7
	3.5nm,0.3s,baz=202,slow=12,SNR=11						
ASAJ				Sn	Sn	01 44 17.3	-2.1
	4.0nm,0.3s,baz=349,slow=17,SNR=1.8						
ASAJ				Lg	Lg	01 44 38.7	
	1.4nm,0.3s,baz=101,slow=33,SNR=2.2						
MJAR	Matsushiro Arr	5.12	234	Pn	Pn	01 43 37.4	+1.4
	0.5nm,0.3s,baz=38,slow=12,SNR=24						
MJAR				LR	LR	01 45 47.2	
	comp=Z,170nm,19.0s,baz=50,slow=41						
MJAR	Matsushiro Arr	5.12	234		Pn	01 43 35.2	-0.8
MAJO	Matsushiro	5.13	234		Pn	01 43 34.6	-1.4
MAT	Matsushiro	5.13	234	P	Pn	01 43 37.5	+1.5
MAT				eS	Sn	01 44 34.5	-0.7
JGF	Kuroka	6.26	232		Pn	01 43 50.6	-1.1
JWT	Wachi	7.70	238	Pn	Pn	01 44 11.8	+0.5
USA0B	Ussuriysk Arra	9.61	302		Pn	01 44 37.9	+0.3
USRK	Ussuriysk Ar.	9.61	302	Pn	Pn	01 44 41.1	+3.6
	baz=94,slow=13,SNR=11						
USRK				LR	LR	01 48 12.6	
	comp=Z,152nm,19.2s,baz=153,slow=37						
USRK	Ussuriysk Ar.	9.61	302	Pn	Pn	01 44 37.6	+0.1
MDJ	Mudanjiang	11.36	300	Pn	Pn	01 45 02.3	+0.8
JNU	Nakatsue	11.99	241	LR	LR	01 49 43.4	
	comp=Z,232nm,18.5s,baz=31,slow=37						
KSRS	Korea Array	12.29	265	Pn	Pn	01 45 15.8	+1.6
	0.2nm,0.3s,baz=70,slow=13,SNR=1.4						
KSRS				LR	LR	01 49 30.6	
	comp=Z,115nm,18.1s,baz=40,slow=35						
KLR	Kul'dur	12.65	323	Pn	Pn	01 45 21.3	+2.2
	0.5nm,0.3s,baz=333,slow=21,SNR=2.5						
KLR				LR	LR	01 49 50.6	
	comp=Z,66nm,20.3s,baz=102,slow=36						
PETK	Petropavlovsk-	16.64	31	LR	LR	01 52 08.7	
	comp=Z,52nm,20.4s,baz=350,slow=36						
YAK	Yakutsk	23.90	344	LR	LR	01 57 26.0	
	comp=Z,36nm,19.9s,baz=272,slow=38						
SEY	Seymchan	23.93	10	P	P	01 47 34.0	+1.0
	1.8nm,0.3s,baz=183,slow=7.2,SNR=11						
SONM	Songino Array	27.71	299	P	P	01 48 07.8	+0.1
	3.0nm,0.8s,baz=98,slow=8.4,SNR=6.5						
SONM				LR	LR	01 59 26.1	
	comp=Z,126nm,19.4s,baz=44,slow=37						
SONM	Songino Array	27.71	299	P	P	01 48 07.0	-0.6
H11N2	WAKE ISLAND Hy	28.35	128	T	T	02 18 09.4	
	baz=318,slow=75,SNR=99						
H11N1	WAKE ISLAND Hy	28.36	128	T	T	02 18 09.4	
	baz=318,slow=75,SNR=72						
H11N3	WAKE ISLAND Hy	28.37	128	T	T	02 18 09.4	
	baz=318,slow=75,SNR=91						
ENH	Enshi	29.16	262	P	P	01 48 19.9	-0.7
ENH				IAmb	IAmb	01 48 20.8	
	comp=Z,7.1nm,0.8s						
H11S1	WAKE ISLAND Hy	29.17	130	T	T	02 19 14.5	
	baz=321,slow=74						
H11S3	WAKE ISLAND Hy	29.17	130	T	T	02 19 10.5	
	baz=321						
H11S2	WAKE ISLAND Hy	29.19	130	T	T	02 19 12.8	
	baz=321,slow=74						
ZAA0	Zalesovo Array	41.34	310	P	P	01 50 04.9	+0.1
ZAA0				IAmb	IAmb	01 50 05.8	
	comp=Z,2.5nm,0.6s						
ZALV	Zalesovo Beam	41.34	310	P	P	01 50 05.3	+0.5
	comp=Z,2.4nm,0.5s,baz=97,slow=8.4,SNR=16						
ZALV				PcP	PcP	01 52 02.6	-0.4
	comp=Z,0.7nm,0.6s,baz=73,slow=5.0,SNR=2.6						
ZALV	Zalesovo Beam	41.34	310	P	P	01 50 05.0	+0.2
ZALV					PcP	01 52 03.1	0.0
CMAR	Chiang Mai Arr	43.67	254	P	P	01 50 24.7	+0.4
	comp=Z,1.6nm,0.3s,baz=59,slow=7.4,SNR=4.7						
CMAR	Chiang Mai Arr	43.67	254	P	P	01 50 23.7	-0.6
MK31	Makanchi Array	44.08	300	P	P	01 50 27.1	-0.2
MKAR	Makanchi Array	44.08	300	P	P	01 50 27.5	+0.2
	comp=Z,1.7nm,0.6s,baz=83,slow=9.2,SNR=28						
MKAR	Makanchi Array	44.08	300	P	P	01 50 27.1	-0.1
MAKZ	Makanchi	44.28	300	P	P	01 50 28.8	-0.1
MAKZ				IAmb	IAmb	01 50 30.0	
	comp=Z,3.8nm,0.9s						
KURK	Kurchatov	45.57	306	P	P	01 50 39.0	+0.1
KURBB	Kurchatov Arra	45.64	306	P	P	01 50 39.5	-0.1
	comp=Z,3.2nm,0.7s,baz=81,slow=8.3,SNR=30						
BVAR	Borovoye Array	49.97	311	P	P	01 51 13.0	-0.1
	comp=Z,1.4nm,0.6s,baz=76,slow=9.1,SNR=9.3						
BRVK	Borovoye	50.03	311	P	P	01 51 13.5	0.0
BRVK				IAmb	IAmb	01 51 15.0	
	comp=Z,5.1nm,1.1s						
AAK	Ala-Archa	50.63	297	P	P	01 51 18.4	-0.1
	comp=Z,1.0nm,0.4s,baz=140,slow=8.2,SNR=8.1						
AAK	Ala-Archa	50.63	297	P	P	01 51 18.1	-0.4
AAK				IAmb	IAmb	01 52 51.2	
	comp=Z,5.8nm,1.4s						
KKAR	Karatay Array	53.17	299	P	P	01 51 36.9	-0.3
ARU	Arti	55.43	318	P	P	01 51 53.7	+0.3
	comp=Z,0.7nm,0.5s,baz=58,slow=6.1,SNR=4.3						
ARU	Arti	55.43	318	P	P	01 51 53.6	+0.1
ABKAR	Akbulak array	57.44	309	P	P	01 52 08.1	+0.2
ABKAR	Akbulak array	57.44	309	P	P	01 52 08.0	+0.1
ABKAR				IAmb	IAmb	01 52 08.8	
	comp=Z,3.2nm,0.6s						
WRA	Warramunga Arr	59.89	190	P	P	01 52 24.5	-0.7
	comp=Z,0.5nm,0.5s,baz=8.1,slow=7.1,SNR=12						
WRA	Warramunga Arr	59.89	190	P	P	01 52 25.1	-0.1
YKA	Yellowknife Ar	60.77	31	P	P	01 52 30.9	+0.2
	comp=Z,0.1nm,0.6s,baz=308,slow=6.0,SNR=2.4						
ASAR	Alice Springs	63.62	190	P	P	01 52 51.1	+0.9
	comp=Z,0.4nm,0.6s,baz=4.3,slow=5.9,SNR=4.3						
ASAR	Alice Springs	63.62	190	P	P	01 52 50.3	0.0
FINES	FINESS Array B	67.20	332	P	P	01 53 13.0	0.0
	comp=Z,5.4nm,1.2s,baz=116,slow=4.4,SNR=7.7						
FINES	FINESS Array B	67.20	332	P	P	01 53 13.4	+0.3
KBZ	Khabaz	70.35	311	P	P	01 53 33.0	+0.1
	comp=Z,2.7nm,0.8s,baz=57,slow=4.0,SNR=5.6						
NVAR	Mina Array Bea	72.20	55	P	P	01 53 44.1	-0.5
	comp=Z,0.1nm,0.3s,baz=289,slow=8.5,SNR=2.2						
HFS	Hagfors	72.32	336	P	P	01 53 45.0	+0.4
	comp=Z,1.9nm,0.4s,baz=46,slow=8.5,SNR=17						
NB2	NORSAR Subarra	72.35	338	P	P	01 53 45.4	+0.6
	comp=Z,0.7nm,0.6s,baz=36,slow=6.2						
NOA	NORSAR Array B	72.35	338	P	P	01 53 44.8	0.0
	comp=Z,1.9nm,0.8s,baz=38,slow=5.9,SNR=5.3						
AKASG	Malin Array Be	73.15	323	P	P	01 53 48.6	-1.1
	comp=Z,0.7nm,0.4s,baz=44,slow=6.5,SNR=4.1						
PDAR	Pinedale Array	74.74	47	P	P	01 54 00.0	+0.5
	comp=Z,0.2nm,0.6s,baz=338,slow=3.5,SNR=2.4						
BRTR	Keskin Array B	78.25	312	P	P	01 54 19.8	+0.6
	comp=Z,0.2nm,0.5s,baz=87,slow=5.9,SNR=1.8						
EKA	Eskdalemuir Ar	81.15	341	P	P	01 54 34.8	+0.2
	comp=Z,0.6nm,0.4s,baz=31,slow=4.4,SNR=1.8						
GERES	GERESS Array B	81.27	329	P	P	01 54 35.5	0.0
	comp=Z,0.3nm,0.4s,baz=12,slow=6.8,SNR=4.1						
TORD	Torodi Ar. Bea	116.50	318	PKP	PKPdf	02 01 02.9	-0.9
	comp=Z,0.3nm,0.8s,baz=2.9,slow=2.9,SNR=1.2						

IDC 24 01:57:32.1±5.8**, 5°.06S**×**133°.43E, h0**^{km}**, mb4.0**/1**, mb1 3.8**/3**, mb1mx3.6**/19**, mbtmp3.7**/3**, ML3.5**/2**, Error ellipse: s-maj=344.5km s-min=30.3km az=77.0, Aru Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	14.82	177	Pn	Pn	02 01 03.7	+0.6
	0.2nm,0.3s,baz=359,slow=14,SNR=14						
WRA				Sn	Sn	02 03 29.9	-18
	0.8nm,0.3s,baz=357,slow=23,SNR=9.6						
ASAR	Alice Springs	18.51	179	P	P	02 01 49.6	-0.5
	0.2nm,0.3s,baz=348,slow=9.4,SNR=9.1						
ASAR				S	Sn	02 05 00.6	-17
	0.2nm,0.3s,baz=0.0,slow=25,SNR=5.7						
MKAR	Makanchi Array	68.54	325	P	P	02 08 36.6	0.0
	1.0nm,0.5s,baz=113,slow=8.1,SNR=18						

IDC ***24*** *02:28:50.8±0.4, 39°.63N×143°.22E, h0^{km}, mb5.2/39, mb1 5.2/48, mb1mx5.1/61, mbtmp5.1/48, ML4.3/8, MS5.6/35, Ms1 5.6/35, ms1mx5.4/50, Error ellipse: s-maj=11.5km s-min=9.0km az=92.0*

BJI ***24*** *02:28:50.8±0.0, 39°.70N×143°.20E, h10^{km}, mB6.0/81, mb5.7/86, Ms6.2/95, Ms7 6.1/89*

NIED ***24*** *02:28:52.4, 39°.63N×143°.38E, h29^{km}, MW5.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{17}Nm; M_{rr}3.22; $M_{\theta\theta}$-0.12; $M_{\phi\phi}$-3.10; $M_{r\theta}$1.15; $M_{\theta\phi}$-1.21; $M_{\phi r}$2.85; Fault plane solution: $M_0$4.57000×10^{17} NP1:ϕ_s21.00000°, δ66.00000°, λ92.00000°. NP2:ϕ_s197.00000°, δ24.00000°, λ87.00000°.*

JMA ***24*** *02:28:52.3±0.2, 39°.63N×143°.38E, h29^{km}±4^{km}, M5.9*

JMA Felt II J1.

NEIC ***24*** *02:28:53.3, 39°.66N×143°.25E, h14^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}3.13; $M_{\theta\theta}$0.40; $M_{\phi\phi}$-3.53; $M_{r\theta}$1.65; $M_{\theta\phi}$-1.31; $M_{\phi r}$4.29; Fault plane solution: $M_0$5.84000×10^{17} NP1:ϕ_s191.37000°, δ18.93000°, λ81.31000°. NP2:ϕ_s20.55000°, δ71.30000°, λ92.96000°. Principal axes: T 5.4127, Plg64.0000°, Azm295.0000°; N 0.7751, Plg3.0000°, Azm200.0000°; P -6.1878, Plg26.0000°, Azm108.0000°;*

MOS ***24*** *02:28:54.0±0.9, 39°.69N×143°.19E, h30^{km}, mb5.7/108, MS5.7/55 Error ellipse: s-maj=5.0km s-min=3.4km az=102.6*

NEIC ***24*** *02:28:54.1±0.9, 39°.66N±0°.05×143°.20E±0°.09, h20^{km}±1^{km}, mb5.4/476, Ms_20 5.5/669, Mwb5.8/82, Mww5.8, Mwc5.8(GCMT), Error ellipse: s-maj=11.5km s-min=8.4km az=103.0*

NEIC ***24*** *02:28:56, 39°.77N×143°.25E, h26^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}2.82; $M_{\theta\theta}$-0.23; $M_{\phi\phi}$-2.59; $M_{r\theta}$0.79; $M_{\theta\phi}$-0.21; $M_{\phi r}$5.27; Fault plane solution: $M_0$5.98000×10^{17} NP1:ϕ_s183.00000°, δ14.00000°, λ85.00000°. NP2:ϕ_s8.00000°, δ76.00000°, λ91.00000°. Principal axes: T 6.0884, Plg58.0000°, Azm280.0000°; N -0.2172, Plg1.0000°, Azm188.0000°; P -5.8711, Plg31.0000°, Azm97.0000°;*

NEIC ***24*** *02:28:57, 39°.63N×143°.38E, h22^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}3.42; $M_{\theta\theta}$-0.02; $M_{\phi\phi}$-3.40; $M_{r\theta}$1.96; $M_{\theta\phi}$-0.92; $M_{\phi r}$4.63; Fault plane solution: $M_0$6.14000×10^{17} NP1:ϕ_s186.00000°, δ18.00000°, λ76.00000°. NP2:ϕ_s21.00000°, δ73.00000°, λ95.00000°. Principal axes: T 6.0660, Plg62.0000°, Azm298.0000°; N 0.1539, Plg4.0000°, Azm200.0000°; P -6.2199, Plg27.0000°, Azm108.0000°;*

GCMT ***24*** *02:28:58.1±0.1, 39°.65N±0°.01×143°.32E±0°.01, h22^{km}, MW5.8/171, Moment Tensor Solution. s145,c285; s171,c481; Duration: 1^{s}.9 Moment tensor: Scale 10^{17} Nm; M_{rr}3.57±.05; $M_{\theta\theta}$-0.20±.03; $M_{\phi\phi}$-3.37±.04; $M_{r\theta}$1.65±.07; $M_{\theta\phi}$-0.82±.02; $M_{\phi r}$4.06±.08; Best double couple: $M_0$5.65200×10^{17} NP1:ϕ_s187.00000°, δ20.00000°, λ78.00000°. NP2:ϕ_s20.00000°, δ70.00000°, λ94.00000°. Principal axes: T 5.6750, Plg64.0000°, Azm297.0000°; N -0.0420, Plg4.0000°, Azm199.0000°; P -5.6300, Plg25.0000°, Azm107.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

BGR ***24*** *02:28:59.3±0.0, 39°.81N×142°.82E, h42^{km}, mb5.2, Ms6.0*

ISC 24 02:28:55.0±0.4**, 39°.61N**±0°.03×**143°.23E**±0°.03**, h27**^{km}±2^{km}**, h27**^{km}**:pP-P, n1666, σ1^{s}.53**/1496**, mb5.4**/461**, MS5.6**/452**, 156C-29D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MIYJ	Miyakonagasawa	1.09	269	⇓P	Pn	02 29 13.6	-0.8
MIYJ				eS	Sn	02 29 28.2	-0.5
JTH	Tanohata	1.11	288	⇓P	Pn	02 29 13.8	-0.8
JTH				eS	Sb	02 29 30.4	+0.9
JKEN	Kujiedanarisaw	1.32	298	⇑P	Pn	02 29 16.2	-1.3
JKEN				eS	Sn	02 29 34.0	-0.2
OFUJ	Ofunato	1.32	247	⇓P	Pn	02 29 17.0	-0.6
OFUJ				eS	Sn	02 29 34.6	+0.3
JOM	Ohasama	1.51	266	⇓P	Pn	02 29 20.3	+0.2
JOM				eS	Sb	02 29 40.9	0.0
JANG	Nango	1.53	301	⇑P	Pn	02 29 19.3	-1.1
JMK	Ichinoseki	1.69	248	⇑P	Pn	02 29 22.8	+0.1
JMK				eS	Sn	02 29 44.8	+1.3
JIO	Ouri	1.86	233	⇑P	Pn	02 29 24.6	-0.4
JRG	Rokugo	2.02	265	⇑P	Pn	02 29 27.9	+0.7
JTM	Tenmabayashi	2.04	306	⇑P	Pn	02 29 27.2	-0.2
JTM	Tenmabayashi	2.04	306	Pn	Pn	02 29 27.2	-0.2
JAH	Hinai	2.08	287	⇑P	Pn	02 29 28.6	+0.6
JYK	Kaneyama	2.33	254	⇑P	Pn	02 29 32.2	+0.7
ERM	Erimo	2.41	359	ceP	Pn	02 29 31.3	-1.2
ERM				pmax	pmax		
	comp=Z,640nm,1.0s						
ERM	Erimo	2.41	359	Pn	Pn	02 29 31.1	-1.4
JEM	Erimo	2.41	359	P	Pn	02 29 30.9	-1.6
JEM				eS	Sn	02 29 58.5	-2.6
JOT	Ohata	2.44	318	⇑P	Pn	02 29 32.0	-0.9
JMM	Marumori	2.58	228	P	Pn	02 29 34.3	-0.6
JMM	Marumori	2.58	228	Pn	Pn	02 29 34.3	-0.6
JNBK	Urakawa-nobuka	2.70	352	⇑P	Pn	02 29 35.7	-0.8
JKB	Kayabe	2.83	324	P	Pn	02 29 38.0	-0.3
JYA	Atsumi	2.92	251	⇑P	Pn	02 29 40.3	+0.7
JBT2	Biratori 2	3.24	349	P	Pn	02 29 43.2	-0.7
JEW	Eniwo	3.50	338	Pn	Pn	02 29 47.0	-0.6
JNS	Sasagawa	3.54	241	⇑P	Pn	02 29 48.9	+0.7
JHO	Hitachi	3.65	216	⇑P	Pn	02 29 47.9	-1.8
JAR	Ashorobuto	3.71	6	⇑P	Pn	02 29 48.4	-2.0
JYT	Yasato	4.14	216	Pn	Pn	02 29 55.0	-1.4
JSD	Sado	4.19	250	⇑P	Pn	02 29 57.6	+0.6
JSD	Sado	4.19	250	Pn	Pn	02 29 57.2	+0.2
NMR	Nemuro--Hokkai	4.20	26	d iP	Pn	02 29 54.7	-2.5
NMR				i S	Sn	02 30 39.8	-5.5
JKT	Katashina	4.23	229	⇑P	Pn	02 29 58.9	+1.2
JKK2	Kamakawa 2	4.28	355	P	Pn	02 29 57.4	-0.9
JAG	Ashikaga	4.36	224	P	Pn	02 29 59.4	+0.1
JTKR	Abashiri--Toko	4.39	6	⇑P	Pn	02 29 58.1	-1.7
GLVR	Golovnino	4.47	22	eP	Pn	02 29 58.4	-2.5
GLVR				i S	Sn	02 30 46.9	-5.0
GLVR				pmax	pmax		
	comp=N,440nm,0.1s						
GLVR				pmax	pmax		
	comp=E,608nm,0.1s						
GLVR				pmax	pmax		
	comp=Z,1μm,0.1s						
GLVR				smax	smax		
	comp=E,11μm,0.7s						
GLVR				smax	smax		
	comp=N,5μm,0.3s						
JKA	Kamikawa-asahi	4.53	354	Pn	Pn	02 30 00.9	-0.9
JKA					Sn	02 30 52.4	-1.1
ASAJ	Asahikawa	4.53	354	Pn	Pn	02 30 01.4	-0.4
	comp=N,30nm,0.3s,baz=220,slow=14,SNR=118						
ASAJ				Sn	Sn	02 30 52.8	-0.7
	comp=N,44nm,0.3s,baz=47,slow=28,SNR=4.6						
ASAJ	Asahikawa	4.53	354	P	Pn	02 30 01.1	-0.6
JGK	Kuni	4.73	231	⇑P	Pn	02 30 06.1	+1.6
RUSJ	Misakicho	4.74	18	⇓iP	Pn	02 30 03.2	-1.4
RUSJ				i S	Sn	02 30 55.0	-3.6
GRPR	Tuman	4.78	23	d iP	Pn	02 30 02.6	-2.5
GRPR				i S	Sn	02 30 53.1	-6.4
GRPR				pmax	pmax		
	comp=Z,319nm,0.7s						
GRPR				pmax	pmax		
	comp=N,145nm,0.8s						
GRPR				pmax	pmax		
	comp=E,135nm,0.1s						
GRPR				pmax	pmax		
	comp=Z,2μm,1.4s						
GRPR				smax	smax		
	comp=E,2773μm,0.4s						
YUK	Yuzh-Kuril'sk	4.84	23	⇑iP	Pn	02 30 04.2	-1.8
YUK				i S	Sn	02 30 54.6	-6.5
YUK				pmax	pmax		
	comp=Z,1μm,0.4s						
YUK				pmax	pmax		
	comp=E,500nm,0.3s						
YUK				pmax	pmax		
	comp=Z,3μm,1.4s						
YUK				smax	smax		
	comp=N,12μm,0.7s						
YUK				smax	smax		
	comp=E,10μm,0.7s						
YUK				MLR	MLR		
	comp=Z,37μm,16.0s						
YUK				MLR	MLR		
	comp=N,29μm,10.0s						
YUK				MLR	MLR		
	comp=E,41μm,16.0s						
JRY	Ryogami san	4.96	225	⇑P	Pn	02 30 07.8	+0.2
MJAR	Matsushiro Arr	5.01	234	Pn	Pn	02 30 08.8	+0.6
	comp=E,5.9nm,0.3s,baz=40,slow=12,SNR=518						
MJAR				LR	LR	02 32 12.0	
	comp=E,42μm,21.8s,baz=50,slow=40						
MJAR	Matsushiro Arr	5.01	234	Pn	Pn	02 30 08.7	+0.4
MAJO	Matsushiro	5.01	234	c iP	Pn	02 30 09.9	+1.6
MAJO	Matsushiro	5.01	234	Pn	Pn	02 30 08.9	+0.6
MAT	Matsushiro	5.01	234	P	Pn	02 30 09.7	+1.5
MAT				eS	Sn	02 31 09.2	+3.9
MAT	Matsushiro	5.01	234	P	Pn	02 30 09.8	+1.5
MJB9	Matsu-Tunnel	5.01	234		Pn	02 30 09.0	+0.7
JSGW	Sagamiharawaka	5.12	220	P	Pn	02 30 08.8	-1.0

JNG	**Nsakai**	**5.16**	**233**	P	**Pn**	**02 30 11.8**	**+1.3**
JTT	**Ttatey**	**5.53**	**239**	P	**Pn**	**02 30 17.7**	**+2.2**
JJH	**Hakui**	**5.74**	**244**	P	**Pn**	**02 30 19.8**	**+1.5**
JGN	**Niukaw**	**5.77**	**236**	P	**Pn**	**02 30 20.5**	**+1.7**
JGF	**Kuroka**	**6.14**	**231**	P	**Pn**	**02 30 24.7**	**+0.8**
JGF	**Kuroka**	**6.14**	**231**	Pn	**Pn**	**02 30 24.4**	**+0.5**
JSG	**Sagara**	**6.36**	**221**		**Pn**	**02 30 28.4**	**+1.6**
INU	**Inuyama**	**6.52**	**231**	Pn	**Pn**	**02 30 30.0**	**+1.0**
KUR	**Kuril'sk**	**6.59**	**30**	*e*P	**Pn**	**02 30 28.6**	**-1.3**
KUR				*i* S	**Sn**	**02 31 39.3**	**-4.7**
KUR				pmax	pmax		
	comp=Z,2µm,0.7s						
KUR				pmax	pmax		
	comp=N,723nm,0.6s						
KUR				pmax	pmax		
	comp=E,561nm,0.7s						
KUR				pmax	pmax		
	comp=Z,7µm,3.4s						
KUR				smax	smax		
	comp=N,3µm,0.6s						
KUR				smax	smax		
	comp=E,1µm,0.4s						
KUR				smax	smax		
	comp=N,25µm,2.9s						
KUR				smax	smax		
	comp=E,6µm,2.2s						
KUR				MLR	MLR		
	comp=Z,32µm,13.0s						
KUR				MLR	MLR		
	comp=E,51µm,16.0s						
KUR				MLR	MLR		
	comp=N,44µm,13.0s						
JHJ2	**Mitsune**	**7.04**	**204**		**Pn**	**02 30 34.7**	**-1.5**
JHJ	**Hachijo jima 2**	**7.04**	**204**	Pn	**Pn**	**02 30 35.4**	**-0.9**
	comp=N,64nm,0.3s,baz=129,slow=22,SNR=16						
JHJ				Sn	**Sn**	**02 31 49.5**	**-5.9**
	comp=N,140nm,0.3s,baz=73,slow=22,SNR=5.7						
JFM	**Mihama**	**7.05**	**237**	P	**Pn**	**02 30 38.2**	**+1.9**
TEY	**Ternei**	**7.32**	**320**⇑	*e*P	**Pn**	**02 30 42.2**	**+2.2**
TEY				pmax	pmax		
	comp=N,270nm,0.9s						
TEY				pmax	pmax		
	comp=E,310nm,0.9s						
TEY				pmax	pmax		
	comp=Z,340nm,0.9s						
TEY				pmax	pmax		
	comp=Z,620nm,0.9s						
TEY				pmax	pmax		
	comp=N,540nm,0.9s						
TEY				pmax	pmax		
	comp=E,510nm,0.9s						
TEY				MLR	MLR		
	comp=E,3µm,14.0s						
TEY				MLR	MLR		
	comp=N,3µm,16.0s						
TEY				MLR	MLR		
	comp=Z,5µm,15.0s						
YSS	**Yuzh-Sakhalins**	**7.36**	**357**α	*e*P	**Pn**	**02 30 39.9**	**-0.5**
YSS				*e*S	**Sn**	**02 32 01.3**	**-1.6**
YSS				pmax	pmax		
	comp=Z,4µm,5.4s						
YSS				pmax	pmax		
	comp=N,3µm,4.2s						
YSS				pmax	pmax		
	comp=Z,250nm,1.0s						
YSS				MLR	MLR		
	comp=Z,67µm,13.0s						
YSS				MLR	MLR		
	comp=N,50µm,15.0s						
YSS				MLR	MLR		
	comp=E,28µm,10.0s						
YSS	**Yuzh-Sakhalins**	**7.36**	**357**	Pn	**Pn**	**02 30 39.1**	**-1.3**
JWT	**Wachi**	**7.58**	**238**	P	**Pn**	**02 30 46.3**	**+2.7**
JWT	**Wachi**	**7.58**	**238**	Pn	**Pn**	**02 30 44.1**	**+0.5**
JHS	**Saijyo**	**9.28**	**243**	Pn	**Pn**	**02 31 07.5**	**+0.6**
UGL	**Uglegorsk**	**9.51**	**355**	*e*P	Pn	02 31 04.4	-5.6
UGL				pmax	pmax		
	comp=Z,266nm,1.0s						
UGL				MLR	MLR		
	comp=Z,36µm,13.0s						
UGL				MLR	MLR		
	comp=E,23µm,12.0s						
UGL				MLR	MLR		
	comp=N,36µm,14.0s						
JMN	**Monobe**	**9.53**	**235**	Pn	**Pn**	**02 31 10.7**	**+0.4**
USA0B	**Ussuriysk Arra**	**9.56**	**302***c*	*i*P	**Pn**	**02 31 12.6**	**+1.9**
USA0B	**Ussuriysk Arra**	**9.56**	**302**	Pn	**Pn**	**02 31 10.3**	**-0.4**
USRK	**Ussuriysk Ar.**	**9.56**	**302**	Pn	**Pn**	**02 31 10.7**	**+0.1**
	baz=113,slow=13,SNR=64						
USRK				LR	LR	02 34 45.3	
	comp=N,56µm,20.1s,baz=103,slow=37						
USRK	**Ussuriysk Ar.**	**9.56**	**302**	Pn	**Pn**	**02 31 10.2**	**-0.5**
MSHR	**Mys Shultsa**	**9.59**	**292**	*i* P	**Pn**	**02 31 10.4**	**-0.7**
TYV	**Tymovskoe**	**11.27**	**358**	*e*P	**Pn**	**02 31 33.7**	**-0.3**
TYV				*e*S	**Sn**	**02 33 42.6**	**+3.7**
TYV				pmax	pmax		
	comp=Z,2µm,2.8s						
TYV				pmax	pmax		
	comp=Z,76nm,1.5s						
TYV				smax	smax		
	comp=N,54nm,1.3s						
TYV				smax	smax		
	comp=N,2µm,4.9s						
TYV				MLR	MLR		
	comp=N,39µm,19.0s						
TYV				MLR	MLR		
	comp=Z,42µm,19.0s						
MDJ	**Mudanjiang**	**11.30**	**301**	P	**Pn**	**02 31 35.8**	**+1.3**
MDJ				pP		02 31 40.3	
MDJ				PP	**PnPn**	**02 31 43.8**	**+1.7**
MDJ				S	**Sn**	**02 33 42.0**	**+2.2**
MDJ				SS	**SnSn**	**02 33 54.9**	**+3.3**
MDJ				ScP	**ScP**	**02 41 01.4**	**+2.8**
MDJ				PcS	**PcS**	**02 41 05.4**	**+3.7**
MDJ				pmax	pmax		
	comp=Z,230nm,1.0s						
MDJ				LR	LR		
	comp=Z,44µm,12.2s						
MDJ				LR	LR		
	comp=Z,78µm,16.1s						
MDJ				LR	LR		
	comp=Z,91µm,15.5s						
MDJ	**Mudanjiang**	**11.30**	**301**	Pn	**Pn**	**02 31 34.3**	**-0.2**
JNU	**Nakatsue**	**11.87**	**241**	Pn	**Pn**	**02 31 41.9**	**-0.5**
	comp=Z,1.3nm,0.3s,baz=39,slow=8.8,SNR=11						
JNU				LR	LR	02 36 38.7	
	comp=Z,61µm,18.9s,baz=48,slow=39						
JNU	**Nakatsue**	**11.87**	**241**	Pn	**Pn**	**02 31 42.7**	**+0.3**
GRNR	**Gornyy**	**12.15**	**339**⇓	*i*P	**Pn**	**02 31 46.2**	**+0.1**
GRNR				*e*S	**Sn**	**02 34 05.1**	**+4.6**
GRNR				pmax	pmax		
	comp=N,90nm,1.0s						
GRNR				pmax	pmax		
	comp=E,60nm,1.0s						
GRNR				pmax	pmax		
	comp=Z,100nm,1.0s						
GRNR				smax	smax		
	comp=N,5.0nm,1.0s						
GRNR				MLR	MLR		
	comp=E,24µm,16.0s						
GRNR				MLR	MLR		
	comp=N,14µm,18.0s						
GRNR				MLR	MLR		
	comp=Z,29µm,15.0s						
JTU	**Tsushima**	**12.15**	**250**	Pn	**Pn**	**02 31 45.6**	**-0.7**
KSRS	**Korea Array**	**12.18**	**265**	Pn	**Pn**	**02 31 47.4**	**+0.8**
	comp=Z,1.1nm,0.3s,baz=83,slow=12,SNR=63						
KSRS				Sn	Sn	02 34 16.8	+15
	comp=Z,0.8nm,0.3s,baz=73,slow=24,SNR=4.7						
KSRS				LR	LR	02 36 13.4	
	comp=Z,43µm,18.4s,baz=76,slow=36						
KS19	**Wonju Array Si**	**12.21**	**265**		**Pn**	**02 31 47.2**	**+0.1**
KSAR	**Wonju Array Be**	**12.22**	**265**	P	**Pn**	**02 31 47.2**	**+0.1**
KSAR	**Wonju Array Be**	**12.22**	**265**		**Pn**	**02 31 47.2**	**+0.1**
JCJ	**Chichijima**	**12.51**	**184**	Pn	**Pn**	**02 31 47.2**	**-3.9**
	comp=Z,10nm,0.3s,baz=276,slow=22,SNR=9.8						
JCJ				Sn	Sn	02 33 56.8	-13
	comp=Z,25nm,0.3s,baz=289,slow=21,SNR=4.5						
JCJ	**Chichijima**	**12.51**	**184**	Pn	**Pn**	**02 31 49.8**	**-1.3**
KLR	**Kul'dur**	**12.63**	**323**	Pn	**Pn**	**02 31 50.6**	**-2.1**
	comp=Z,1.1nm,0.3s,baz=131,slow=13,SNR=48						
KLR				LR	LR	02 36 56.1	
	comp=Z,39µm,20.3s,baz=138,slow=38						
KLR	**Kul'dur**	**12.63**	**323***c*	*e*P	**Pn**	**02 31 51.2**	**-1.5**
TJN	**Taejon**	**12.93**	**261***c*	*e*P	**Pn**	**02 31 58.2**	**+1.4**
JSU	**Suzuyama**	**13.16**	**236**	Pn	**Pn**	**02 32 00.6**	**+0.5**
INCN	**Inchon**	**13.17**	**266**	P	**Pn**	**02 32 00.0**	**-0.1**
INCN	**Inchon**	**13.17**	**266**	Pn	**Pn**	**02 32 00.0**	**-0.1**
NKL	**Nikolayevsk**	**13.66**	**353**	*e*P	**Pn**	**02 32 03.5**	**-3.2**
NKL				*e*S	**Sn**	**02 34 38.3**	**+0.9**
NKL				pmax	pmax		
	comp=N,5.0nm,1.0s						
NKL				pmax	pmax		
	comp=E,71nm,1.0s						
NKL				pmax	pmax		
	comp=Z,141nm,1.2s						
NKL				smax	smax		
	comp=E,85nm,2.0s						
NKL				smax	smax		
	comp=N,29nm,4.8s						
NKL				MLR	MLR		
	comp=E,2µm,15.0s						
NKL				MLR	MLR		
	comp=N,69nm,10.0s						
NKL				MLR	MLR		
	comp=Z,12µm,14.0s						
CN2	**Changchun**	**13.93**	**293**	*e*P	**Pn**	**02 32 09.3**	**-1.2**
CN2				sP	P	02 32 16.1	-2.2
CN2				S	**Sn**	**02 34 36.8**	**-7.3**
CN2				pmax	pmax		
	comp=Z,140nm,1.2s						
CN2				pmax	pmax		
	comp=Z,5µm,9.0s						
CN2				LR	LR		
	comp=Z,20µm,14.0s						
CN2				LR	LR		
	comp=Z,41µm,18.0s						
CN2				LR	LR		
	comp=Z,42µm,17.0s						
OKH	**Okha**	**13.95**	**359***c*	*i*P	**Pn**	**02 32 06.7**	**-4.0**
OKH				pmax	pmax		
	comp=Z,1µm,13.1s						
OKH				MLR	MLR		
	comp=N,51µm,15.0s						
OKH				MLR	MLR		
	comp=Z,35µm,15.0s						
OKH				MLR	MLR		
	comp=E,56µm,16.0s						
SKR	**Severo-Kuril's**	**14.30**	**35**	*e*P	P	02 32 27.3	+4.9
SKR				pmax	pmax		
	comp=Z,400nm,3.0s						
SKR				pmax	pmax		
	comp=Z,210nm,0.8s						
SKR				MLR	MLR		
	comp=Z,12µm,15.0s						
SKR				MLR	MLR		
	comp=Z,12µm,11.0s						
SNY	**Shenyang**	**15.07**	**285**	⇑P	**Pn**	**02 32 25.1**	**-0.8**
SNY				S	**S**	**02 35 21.8**	**-6.9**
SNY				pmax	pmax		
	comp=Z,5µm,9.0s						
SNY				LR	LR		
	comp=Z,26µm,14.5s						
SNY				LR	LR		
	comp=Z,49µm,15.5s						
SNY				LR	LR		
	comp=Z,67µm,15.7s						
DL2	**Dalian**	**16.75**	**275**	P	**Pn**	**02 32 46.3**	**-1.2**
DL2				S	**Sn**	**02 35 54.4**	**+1.7**
DL2				pmax	pmax		
	comp=Z,260nm,1.2s						
DL2				pmax	pmax		
	comp=Z,8µm,6.5s						
DL2				LR	LR		
	comp=Z,27µm,14.1s						
DL2				LR	LR		
	comp=Z,22µm,15.7s						
DL2				LR	LR		
	comp=Z,33µm,16.3s						
PEA0B	**Petropavlovsk-**	**16.75**	**32**	P	**Pn**	**02 32 46.9**	**-0.5**
PEA0B				pmax	pmax		
	comp=Z,267nm,1.1s						
PEA0B	**Petropavlovsk-**	**16.75**	**32**	P	**Pn**	**02 32 46.9**	**-0.5**
PEA0B				IAmb	IAmb	02 33 04.5	
	comp=Z,267nm,1.1s						
PETK	**Petropavlovsk-**	**16.75**	**32**	Pn	**Pn**	**02 32 45.2**	**-2.3**
	comp=Z,0.4nm,0.3s,baz=193,slow=7.1,SNR=7.6						
PETK				LR	LR	02 38 42.5	
	comp=Z,12µm,21.2s,baz=217,slow=35						
PETK	**Petropavlovsk-**	**16.75**	**32**	P	**Pn**	**02 32 46.0**	**-1.4**
PETK	**Petropavlovsk-**	**16.75**	**32**	P	**Pn**	**02 32 46.0**	**-1.4**
PET	**Petropavlovsk**	**17.08**	**33**	*e*P	**P**	**02 32 53.7**	**+0.6**
PET				*e*S	**Sn**	**02 36 01.2**	**+0.7**
PET				pmax	pmax		
	comp=Z,546nm,1.3s						
PET				pmax	pmax		
	comp=Z,1µm,19.7s						
PET	**Petropavlovsk**	**17.08**	**33**	P	**Pn**	**02 32 50.8**	**-0.8**
JOW	**Kunigami**	**17.83**	**229**	P	**Pn**	**02 33 00.1**	**-0.9**
	comp=Z,2.7nm,0.3s,baz=166,slow=7.9,SNR=4.2						
JOW	**Kunigami**	**17.83**	**229**		**P**	**02 33 01.7**	**+0.1**
ZEA	**Zeya**	**17.83**	**328***c*	*e*P	**Pn**	**02 32 57.5**	**-3.4**
ZEA				pmax	pmax		
	comp=Z,130nm,0.9s						
ZEA				pmax	pmax		
	comp=N,1µm,4.3s						
ZEA				pmax	pmax		
	comp=Z,1µm,4.1s						
ZEA				MLR	MLR		
	comp=E,18µm,14.0s						
ZEA				MLR	MLR		
	comp=N,13µm,19.0s						
ZEA				MLR	MLR		
	comp=Z,18µm,16.0s						
SSE	**Sheshan**	**19.85**	**251**	P	**P**	**02 33 21.3**	**-2.4**
SSE				S	**S**	**02 37 02.9**	**-2.9**
SSE				pmax	pmax		
	comp=Z,60nm,1.0s						
SSE				pmax	pmax		
	comp=Z,990nm,3.5s						
SSE	**Sheshan**	**19.85**	**251**	P	**P**	**02 33 21.6**	**-2.2**
SSE				IAmb	IAmb	02 33 38.0	
	comp=Z,205nm,1.0s						
MA2	**Magadan**	**20.55**	**11***c*	*i*P	**P**	**02 33 30.6**	**-0.6**
MA2				pmax	pmax		
	comp=Z,635nm,2.5s						
MA2				MLR	MLR		
	comp=Z,8µm,16.0s						
MA2	**Magadan**	**20.55**	**11**	P	**P**	**02 33 30.9**	**-0.3**
MA2				IAmb	IAmb	02 33 33.3	
	comp=Z,219nm,0.9s						
BJI	**Beijing**	**20.76**	**280**	P	**P**	**02 33 31.1**	**-2.5**
BJI				S	**S**	**02 37 22.8**	**-1.1**
BJI				pmax	pmax		
	comp=Z,74nm,1.0s						
BJI				pmax	pmax		
	comp=Z,2µm,3.5s						
BJI				LR	LR		
	comp=Z,8µm,12.9s						
BJI				LR	LR		
	comp=Z,34µm,15.3s						
BJI				LR	LR		
	comp=Z,18µm,16.2s						
BJT	**Baijiatuau**	**20.77**	**280**	P	**P**	**02 33 30.9**	**-2.8**
BJT				pmax	pmax		
	comp=Z,107nm,1.0s						
BJT				MLR	MLR		
	comp=Z,23µm,19.0s						
BJT	**Baijiatuau**	**20.77**	**280**	P	**P**	**02 33 30.9**	**-2.8**
BJT				IAmb	IAmb	02 33 43.5	
	comp=Z,107nm,1.0s						
BJT	**Baijiatuau**	**20.77**	**280**	IAMs_20	IAMs_20	02 41 20.0	
	comp=Z,23µm,19.0s						
TIA	**Tai'an**	**20.85**	**269**	P	**P**	**02 33 31.8**	**-2.8**
TIA				pmax	pmax		
	comp=Z,3µm,4.4s						
TIA				LR	LR		
	comp=Z,21µm,12.9s						
TIA				LR	LR		
	comp=Z,52µm,14.7s						
TIA				LR	LR		
	comp=Z,74µm,14.1s						
NJ2	**Nanjing**	**21.11**	**257**⇑	*i*P	**P**	**02 33 34.9**	**-2.5**
NJ2				S	**S**	**02 37 24.6**	**-6.4**
NJ2				sS	**sS**	**02 37 42.1**	**0.0**
NJ2				SS	**SnSn**	**02 37 59.1**	**+6.0**
NJ2				pmax	pmax		
	comp=Z,55nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,2µm,4.2s						
NJ2				LR	LR		
	comp=Z,25µm,16.1s						
NJ2				LR	LR		
	comp=Z,24µm,15.6s						
NJ2				LR	LR		
	comp=Z,31µm,18.5s						
YHNB	**Yeheng**	**23.67**	**238**	P	**P**	**02 34 01.5**	**-2.8**
YHNB				IAmb	IAmb	02 34 04.0	
	comp=Z,121nm,1.1s						
YHNB				IAMs_20	IAMs_20	02 44 11.5	
	comp=Z,22µm,18.0s						
NACB	**Ninganchiao**	**23.87**	**236**	P	**P**	**02 34 03.3**	**-2.9**
NACB				IAmb	IAmb	02 34 04.6	
	comp=Z,90nm,1.0s						
YAK	**Yakutsk**	**23.93**	**344**	P	**P**	**02 34 04.6**	**-1.7**
	comp=Z,97nm,0.5s,baz=351,slow=1.7,SNR=47						
YAK	**Yakutsk**	**23.93**	**344***c*	*i*P	**P**	**02 34 04.1**	**-2.2**
YAK				*e**PP	**sP**	**02 34 19.0**	**+2.2**
YAK				*e*S	**S**	**02 38 15.8**	**-5.1**
YAK				*e**SS	**pS**	**02 38 29.8**	**+1.4**
YAK				pmax	pmax		
	comp=Z,379nm,0.9s						
YAK				pmax	pmax		
	comp=N,164nm,1.1s						
YAK				pmax	pmax		
	comp=E,38nm,1.0s						
YAK				pmax	pmax		
	comp=Z,264nm,1.0s						
YAK				pmax	pmax		
	comp=E,18nm,0.4s						
YAK				pmax	pmax		
	comp=N,216nm,1.3s						
YAK				smax	smax		
	comp=N,905nm,3.0s						
YAK				smax	smax		
	comp=E,2µm,3.0s						
YAK				MLR	MLR		
	comp=Z,19µm,14.0s						
YAK				MLR	MLR		
	comp=N,11µm,13.0s						
YAK				MLR	MLR		
	comp=E,5µm,13.0s						
YAK	**Yakutsk**	**23.93**	**344**	P	**P**	**02 34 04.1**	**-2.2**
CIT	**Chita**	**23.94**	**311**	*e*P	**P**	**02 34 06.7**	**0.0**
CIT				*e*		02 34 17.2	
CIT				*e*		02 34 40.3	
CIT				*e*		02 34 45.8	
CIT				pmax	pmax		
	comp=Z,1µm,2.3s						
SEY	**Seymchan**	**24.00**	**10**	P	**P**	**02 34 05.8**	**-1.2**
	comp=Z,169nm,0.9s,baz=194,slow=7.2,SNR=104						
SEY				LR	LR	02 43 41.6	
	comp=Z,7µm,20.5s,baz=198,slow=37						
SEY	**Seymchan**	**24.00**	**10**	*i* P	**P**	**02 34 06.7**	**-0.3**
TIY	**Taiyuan**	**24.07**	**275**	*e*P	**P**	**02 34 06.3**	**-1.7**
TIY				PP	sP	02 34 44.3	+26
TIY				S	**S**	**02 38 20.8**	**-3.0**
TIY				SS	**SnSn**	**02 39 11.3**	**+5.8**
TIY				pmax	pmax		
	comp=Z,21nm,0.6s						
TIY				pmax	pmax		
	comp=Z,2µm,7.9s						
TIY				LR	LR		
	comp=Z,21µm,14.3s						
TIY				LR	LR		
	comp=Z,13µm,14.7s						
TIY				LR	LR		
	comp=Z,23µm,17.7s						
HHC	**Hu-ho-hao-te**	**24.15**	**283**	*e*P	**P**	**02 34 05.9**	**-2.9**
HHC				S	**S**	**02 38 21.8**	**-3.3**
HHC				pmax	pmax		
	comp=Z,31nm,0.9s						
HHC				pmax	pmax		
	comp=Z,2µm,4.9s						
HHC				LR	LR		
	comp=Z,14µm,13.1s						
HHC				LR	LR		
	comp=Z,48µm,16.0s						
HHC				LR	LR		
	comp=Z,61µm,13.0s						
SSLB	**Suanglung**	**24.56**	**237**	P	**P**	**02 34 09.4**	**-3.2**
SSLB				IAmb	IAmb	02 34 21.6	
	comp=Z,130nm,0.9s						
SSLB				IAMs_20	IAMs_20	02 44 45.2	
	comp=Z,15µm,18.0s						
YULB	**Yu-li**	**24.62**	**235**	P	**P**	**02 34 10.1**	**-3.0**
YULB				IAmb	IAmb	02 34 21.1	
	comp=Z,126nm,1.0s						
YULB				IAMs_20	IAMs_20	02 45 10.8	
	comp=Z,12µm,19.0s						
TPUB	**Ta-pu**	**25.11**	**236**	P	**P**	**02 34 15.2**	**-2.3**
TPUB				IAMs_20	IAMs_20	02 44 45.2	
	comp=Z,20µm,20.0s						
TWG	**Pinlang**	**25.18**	**235**	P	**P**	**02 34 16.3**	**-1.8**
WHN	**Wuhan**	**25.22**	**258**	⇑P	**P**	**02 34 18.0**	**-0.4**
WHN				S	**S**	**02 38 36.3**	**-5.9**
WHN				pmax	pmax		
	comp=Z,710nm,0.9s						
WHN				pmax	pmax		
	comp=Z,6µm,4.0s						
WHN				LR	LR		
	comp=Z,28µm,13.5s						
WHN				LR	LR		
	comp=Z,55µm,15.8s						
WHN				LR	LR		
	comp=Z,64µm,17.4s						
BTO	**Baotou**	**25.34**	**283**	*e*P	**P**	**02 34 18.5**	**-1.1**
QZH	**Quanzhou**	**25.34**	**242**⇑	*i*P	**P**	**02 34 18.5**	**-1.1**
QZH				S	**S**	**02 38 43.8**	**-0.4**
QZH				pmax	pmax		
	comp=Z,110nm,2.4s						
QZH				pmax	pmax		
	comp=Z,3µm,4.1s						
QZH				LR	LR		
	comp=Z,14µm,16.1s						
QZH				LR	LR		
	comp=Z,8µm,14.7s						
QZH				LR	LR		
	comp=Z,17µm,15.7s						
KNMB	**Chin-men Tao**	**25.80**	**242**	P	**P**	**02 34 21.9**	**-1.8**
KNMB				IAmb	IAmb	02 34 26.8	
	comp=Z,131nm,1.1s						
BOD	**Bodaibo**	**26.21**	**324**⇓	*i*P	**P**	**02 34 26.5**	**-0.7**
BOD				pmax	pmax		
	comp=Z,228nm,1.0s						
BBP	**Basco**	**26.41**	**230**	*e*P	**P**	**02 34 28.9**	**-0.4**
ULN	**Ulaanbaatar**	**27.21**	**300***c*	*i*P	**P**	**02 34 36.4**	**-0.1**
ULN				pmax	pmax		
	comp=Z,258nm,1.3s						
ULN				MLR	MLR		
	comp=Z,41µm,16.0s						
ULN	**Ulaanbaatar**	**27.21**	**300**	P	**P**	**02 34 36.3**	**-0.2**
ULN				IAmb	IAmb	02 34 38.5	
	comp=Z,146nm,1.0s						
AMKA	**Amchitka**	**27.61**	**53**	P	**P**	**02 34 40.1**	**+0.3**
SONM	**Songino Array**	**27.65**	**299**	P	**P**	**02 34 40.6**	**+0.2**
	comp=Z,110nm,0.8s,baz=103,slow=9.5,SNR=327						
SONM				LR	LR	02 46 19.0	
	comp=Z,44µm,18.5s,baz=96,slow=38						
SONM	**Songino Array**	**27.65**	**299**	P	**P**	**02 34 39.9**	**-0.5**
SONM				IAmb	IAmb	02 34 44.0	
	comp=Z,109nm,0.9s						
XAN	**Xi'an**	**27.91**	**269**	P	**P**	**02 34 41.4**	**-1.3**
XAN				pP	pwP	02 34 52.8	+0.3
XAN				pmax	pmax		
	comp=Z,90nm,1.2s						
XAN				pmax	pmax		
	comp=Z,3µm,8.4s						
XAN				LR	LR		
	comp=Z,21µm,14.0s						
XAN				LR	LR		
	comp=Z,36µm,15.1s						
XAN				LR	LR		
	comp=Z,35µm,15.2s						
XAN	**Xi'an**	**27.91**	**269**	P	**P**	**02 34 41.5**	**-1.3**
XAN				pmax	pmax		
	comp=Z,94nm,1.2s						
XAN				MLR	MLR		
	comp=Z,21µm,18.0s						
XAN	**Xi'an**	**27.91**	**269**	P	**P**	**02 34 41.5**	**-1.2**
XAN				IAmb	IAmb	02 34 44.2	
	comp=Z,94nm,1.2s						
SGCP	**Mt. Cagua**	**28.10**	**227**	*e*P	**P**	**02 34 46.4**	**+2.0**
H11N3	**WAKE ISLAND Hy**	**28.42**	**127**	T	T	03 04 33.4	
	SNR=231						
WAKE	**Wake Island**	**28.59**	**128**	IAMs_20	IAMs_20	02 44 00.9	
	comp=Z,12µm,21.0s						
ENH	**Enshi**	**29.05**	**262**	P	**P**	**02 34 52.6**	**-0.3**

ENH				IAMs_20	IAMs_20	02 46 55.5	
	comp=Z,14µm,20.0s						
H11S1	**WAKE ISLAND Hy**	**29.21**	**129**	T	T	03 06 01.8	
	SNR=118						
H11S3	**WAKE ISLAND Hy**	**29.22**	**129**	T	T	03 06 55.0	
	baz=250,slow=74,SNR=96						
H11S2	**WAKE ISLAND Hy**	**29.23**	**129**	T	T	03 06 38.2	
	baz=319,slow=74,SNR=93						
CAUP	**Cauayan**	**29.27**	**226**	*e*P	P	02 35 07.5	+13
ABRA	**Dolores**	**29.33**	**228**	*e*P	P	02 35 15.8	+20
IRK	**Irkutsk**	**29.53**	**308**	*e*P	**P**	**02 34 56.4**	**-0.5**
IRK				pmax	pmax		
	comp=Z,259nm,3.5s						
SZP	**Santa**	**29.56**	**228**	P	**P**	**02 34 57.9**	**+0.5**
TLY	**Talaya**	**29.83**	**307**	P	**P**	**02 34 59.7**	**+0.2**
	comp=Z,64nm,1.1s,baz=113,slow=5.8,SNR=65						
TLY				LR	LR	02 47 31.0	
	comp=Z,11µm,20.2s,baz=94,slow=38						
TLY	**Talaya**	**29.83**	**307**	*c* *i*P	**P**	**02 34 59.5**	**0.0**
TLY				*e*PPP	PPP	02 36 16.0	
TLY				*e*S	**S**	**02 39 57.7**	**+3.2**
TLY				pmax	pmax		
	comp=Z,243nm,1.2s						
TLY				MLR	MLR		
	comp=Z,37µm,15.0s						
TLY	**Talaya**	**29.83**	**307**	P	**P**	**02 34 59.6**	**0.0**
TLY				IAmb	IAmb	02 35 01.6	
	comp=Z,70nm,1.1s						
ZAK	**Zakamensk**	**29.90**	**304**	*e*P	**P**	**02 34 59.4**	**-0.9**
ZAK				pmax	pmax		
	comp=Z,79nm,1.4s						
GZH	**Guangzhou**	**30.19**	**246**	P	**P**	**02 34 58.8**	**-4.2**
GZH				S	**S**	**02 39 52.8**	**-7.8**
GZH				LR	LR		
	comp=Z,18µm,14.9s						
GZH				LR	LR		
	comp=Z,18µm,15.1s						
BALP	**Baler**	**30.39**	**225**	*e*P	P	02 35 18.3	+14
SMPP	**San Manuel, Pa**	**30.55**	**226**	*e*P	**P**	**02 35 06.3**	**+0.1**
JCNP	**Jose Panganiba**	**31.01**	**221**	*e*P	**P**	**02 35 14.2**	**+3.9**
LZH	**Lanzhou**	**31.13**	**276**	⇑P	**P**	**02 35 09.8**	**-1.6**
LZH				pP	pP	02 35 16.3	-2.7
LZH				sP	pwP	02 35 19.6	-1.6
LZH				S	**S**	**02 40 12.9**	**-2.7**
LZH				sS	sS	02 40 27.5	-0.5
LZH				SS	ScP	02 41 58.0	+11
LZH				pmax	pmax		
	comp=Z,170nm,1.2s						
LZH				pmax	pmax		
	comp=Z,2µm,8.1s						
LZH				LR	LR		
	comp=Z,20µm,13.0s						
LZH				LR	LR		
	comp=Z,39µm,13.0s						
LZH				LR	LR		
	comp=Z,34µm,13.0s						
MOY	**Mondy**	**31.46**	**307**	*e*P	**P**	**02 35 14.1**	**0.0**
MOY				pmax	pmax		
	comp=Z,289nm,2.5s						
QVP	**Quezon City--P**	**31.62**	**224**	*e*P	**P**	**02 35 18.7**	**+3.1**
ATKA	**Atka Island**	**31.72**	**52**	P	**P**	**02 35 14.4**	**-1.8**
ATKA				IAmb	IAmb	02 35 23.8	
	comp=Z,64nm,1.2s						
MACP	**Maragondon, Ca**	**32.07**	**224**	*e*P	P	02 35 27.5	+8.0
LUBP	**Lubang**	**32.76**	**225**	*e*P	P	02 35 30.9	+5.2
TIXI	**Tiksi**	**32.93**	**352**	⇑*i*P	**P**	**02 35 25.0**	**-1.6**
TIXI	**Tiksi**	**32.93**	**352**	P	**P**	**02 35 25.8**	**-0.8**
TIXI				IAmb	IAmb	02 35 27.9	
	comp=Z,33nm,1.1s						
TIXI				IAMs_20	IAMs_20	02 49 49.2	
	comp=Z,8µm,20.0s						
GYA	**Guiyang**	**33.11**	**258**	⇑P	**P**	**02 35 28.1**	**-0.7**
GYA				pP	pP	02 35 31.8	-4.6
GYA				sP	pwP	02 35 37.9	-0.8
GYA				PP	**PP**	**02 36 44.9**	**+1.0**
GYA				S	**S**	**02 40 48.5**	**+2.0**
GYA				pmax	pmax		
	comp=Z,220nm,0.9s						
GYA				pmax	pmax		
	comp=Z,1µm,3.8s						
GYA				LR	LR		
	comp=Z,7µm,19.4s						
GYA				LR	LR		
	comp=Z,11µm,14.2s						
GYA				LR	LR		
	comp=Z,15µm,14.9s						
CD2	**Chengdu**	**33.16**	**267**	⇑P	**P**	**02 35 28.3**	**-0.9**
CD2				PP	**PnPn**	**02 36 41.0**	**+1.6**
CD2				S	**S**	**02 40 49.9**	**+2.8**
CD2				pmax	pmax		
	comp=Z,140nm,1.0s						
CD2				pmax	pmax		
	comp=Z,3µm,8.4s						
CD2				LR	LR		
	comp=Z,35µm,12.6s						
CD2				LR	LR		
	comp=Z,31µm,15.2s						
CD2				LR	LR		
	comp=Z,50µm,14.3s						
GTA	**Gaotai**	**33.26**	**284**	⇑P	**P**	**02 35 29.9**	**-0.1**
GTA				pP	pP	02 35 37.4	-0.2
GTA				sP	sP	02 35 41.4	+0.8
GTA				PcP	**PcP**	**02 38 13.3**	**+1.4**
GTA				pmax	pmax		
	comp=Z,67nm,1.0s						
GTA				pmax	pmax		
	comp=Z,2µm,9.2s						
GTA				LR	LR		
	comp=Z,15µm,17.5s						
GTA				LR	LR		
	comp=Z,46µm,16.7s						
GTA				LR	LR		
	comp=Z,55µm,17.5s						
BUSP	**Coron**	**34.23**	**223**	*e*P	P	02 35 31.0	-7.4
CNOP	**Candoni, Negro**	**34.88**	**217**	*e*P	P	02 35 51.0	+7.0
ENPP	**El Nido**	**35.30**	**223**	*e*P	**P**	**02 35 48.7**	**+1.0**
QIZ	**Qiongzhong**	**35.31**	**244**	P	**P**	**02 35 48.6**	**+0.8**
QIZ				S	**S**	**02 41 24.3**	**+4.0**
QIZ				sS	**sS**	**02 41 34.9**	**+2.1**
QIZ				pmax	pmax		
	comp=Z,940nm,6.2s						
QIZ				LR	LR		
	comp=Z,12µm,15.2s						
QIZ				LR	LR		
	comp=Z,10µm,16.6s						
QIZ				LR	LR		
	comp=Z,14µm,15.1s						
PATS	**Pohnpei**	**35.33**	**153**	IAMs_20	IAMs_20	02 47 51.1	
	comp=Z,13µm,19.0s						
GAMB	**Gambell**	**35.78**	**33**	P	**P**	**02 35 52.5**	**+1.2**
	baz=249						
GAMB				S	**S**	**02 41 28.4**	**+1.8**
	baz=249						
GAMB	**Gambell**	**35.78**	**33**	P	**P**	**02 35 51.5**	**+0.2**
KCP	**Kidapawan**	**36.32**	**211**	⇑*i*P	**P**	**02 35 57.0**	**+0.4**
KMI	**Kunming**	**36.81**	**259**	⇑P	**P**	**02 36 00.6**	**-0.2**
KMI				pP	pP	02 36 07.4	-1.0
KMI				sP	pwP	02 36 10.4	-0.3
KMI				PP	**PP**	**02 37 21.6**	**-3.2**
KMI				S	**S**	**02 41 39.3**	**-4.3**
KMI				sS	pS	02 41 53.0	+0.6
KMI				pmax	pmax		
	comp=Z,120nm,1.0s						
KMI				pmax	pmax		
	comp=Z,2µm,6.6s						
KMI				LR	LR		
	comp=Z,13µm,15.2s						
KMI				LR	LR		
	comp=Z,17µm,16.1s						
KMI				LR	LR		
	comp=Z,19µm,15.3s						
KMI	**Kunming**	**36.81**	**259**	P	**P**	**02 36 00.4**	**-0.4**
KMI				pmax	pmax		
	comp=Z,179nm,1.1s						
KMI				MLR	MLR		
	comp=Z,15µm,18.0s						
KMI	**Kunming**	**36.81**	**259**	P	**P**	**02 36 00.4**	**-0.4**
SKMP	**Bagumbayan, Su**	**36.99**	**212**	*e*P	P	02 36 12.6	+10
KWAJ	**Kwajalein Atol**	**37.63**	**138**	IAMs_20	IAMs_20	02 47 57.6	
	comp=Z,11µm,21.0s						
SLVN	**Son La**	**38.11**	**253**	P	**P**	**02 36 11.8**	**+0.1**
SLVN				IAmb	IAmb	02 36 26.2	
	comp=Z,55nm,0.9s						
SLVN				IAMs_20	IAMs_20	02 53 24.2	
	comp=Z,8µm,18.0s						
BATP	**Bataraza**	**38.18**	**223**	*e*P	**P**	**02 36 13.5**	**+1.2**
ANM	**Nome**	**38.66**	**33**	P	**P**	**02 36 17.1**	**+1.4**
	baz=255						
ANM				S	**S**	**02 42 13.6**	**+3.1**
	baz=255						
ANM	**Nome**	**38.66**	**33**	P	**P**	**02 36 16.0**	**+0.2**
ANM				pmax	pmax		
	comp=Z,83nm,1.1s						
ANM				MLR	MLR		
	comp=Z,4µm,20.0s						
ANM	**Nome**	**38.66**	**33**	P	**P**	**02 36 16.0**	**+0.2**
ANM				IAmb	IAmb	02 36 31.6	
	comp=Z,83nm,1.1s						
DGZ	**Jazzator, Alta**	**40.11**	**304**	*c* *i*P	**P**	**02 36 29.4**	**+1.2**
DGZ				pmax	pmax		
	comp=Z,137nm,1.0s						
DGZ				MLR	MLR		
	comp=Z,56µm,16.0s						
CHNA	**Chernabura Isl**	**40.52**	**48**	S	**S**	**02 42 35.1**	**-3.3**
	baz=272						
RDOG	**Red Dog Mine**	**40.57**	**28**	S	**S**	**02 42 39.2**	**+0.3**
	baz=254						
NONG	**Nongkai**	**40.72**	**250**	P	**P**	**02 36 34.1**	**+0.7**
	comp=Z,149nm,0.9s						
MYLDM	**Lahad Datu**	**40.90**	**220**	P	**P**	**02 36 35.4**	**+0.5**
MYLDM				IAmb	IAmb	02 36 51.0	
	comp=Z,54nm,1.0s						
MYLDM				IAMs_20	IAMs_20	02 51 33.1	
	comp=Z,8µm,20.0s						
LKP	**Lekhapani**	**40.95**	**267**	*e*P	**P**	**02 36 36.0**	**+0.8**
LKP				IAMs_20	IAMs_20	02 55 53.2	
	comp=Z,11µm,12.9s						
WMQ	**Urumqi**	**41.02**	**295**	*e*P	**P**	**02 36 36.6**	**+0.9**
WMQ				pP	pP	02 36 42.6	-0.7
WMQ				sP	pwP	02 36 44.8	-1.1
WMQ				PP	**PnPn**	**02 38 15.3**	**+0.5**
WMQ				PcP	**PcP**	**02 38 39.8**	**+4.5**
WMQ				S	**S**	**02 42 44.4**	**-1.9**
WMQ				sS	sS	02 42 58.8	-0.2
WMQ				SS	**SS**	**02 45 43.8**	**-4.8**
WMQ				pmax	pmax		
	comp=Z,350nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,3µm,3.6s						
WMQ				LR	LR		
	comp=Z,10µm,14.5s						
WMQ				LR	LR		
	comp=Z,12µm,13.3s						
WMQ				LR	LR		
	comp=Z,5µm,18.1s						
WMQ	**Urumqi**	**41.02**	**295**	P	**P**	**02 36 35.4**	**-0.3**
WMQ				pmax	pmax		
	comp=Z,234nm,0.9s						
WMQ				MLR	MLR		
	comp=Z,7µm,18.0s						
WMQ	**Urumqi**	**41.02**	**295**	P	**P**	**02 36 35.4**	**-0.3**
WMQ	**Urumqi**	**41.02**	**295**	IAMs_20	IAMs_20	02 53 55.1	
	comp=Z,7µm,18.0s						
DLV	**T Lat**	**41.26**	**238**	P	**P**	**02 36 38.5**	**+0.4**
DLV				IAmb	IAmb	02 36 49.6	
	comp=Z,115nm,1.0s						
TNTI	**Ternate**	**41.27**	**204**	P	**P**	**02 36 36.7**	**-1.2**
ZAA0	**Zalesovo Array**	**41.30**	**310**	P	**P**	**02 36 37.6**	**-0.1**
ZAA0				IAmb	IAmb	02 36 38.3	
	comp=Z,54nm,0.8s						
ZALV	**Zalesovo Beam**	**41.30**	**310**	P	**P**	**02 36 37.4**	**-0.3**
	comp=Z,35nm,0.6s,baz=86,slow=7.9,SNR=224						
ZALV				LR	LR	02 54 33.2	
	comp=Z,11µm,19.7s,baz=81,slow=37						
KKM	**Kota Kinabalu**	**41.33**	**223**	P	**P**	**02 36 38.8**	**+0.3**
KKM				IAMs_20	IAMs_20	02 54 54.3	
	comp=Z,5µm,19.0s						
NRIK	**Noril'sk**	**41.56**	**334**	P	**P**	**02 36 39.4**	**-0.4**
	comp=Z,26nm,1.0s,baz=104,slow=8.8,SNR=27						
NRIK				LR	LR	02 55 14.3	
	comp=Z,22µm,18.1s,baz=104,slow=38						
NRIK	**Noril'sk**	**41.56**	**334**	*c* *i*P	**P**	**02 36 39.3**	**-0.4**
NRIK				pmax	pmax		
	comp=Z,151nm,2.4s						
NRIK				MLR	MLR		
	comp=Z,21µm,18.0s						
NRIK	**Noril'sk**	**41.56**	**334**	P	**P**	**02 36 39.5**	**-0.3**
MANU	**Manus Island**	**41.62**	**174**	P	**P**	**02 36 41.3**	**+0.6**
SWI	**Sorong**	**41.74**	**198**	P	**P**	**02 36 42.3**	**+0.6**
	comp=Z,2µmcomp=Z,44nm,0.7s						
SIJI	**Sorong**	**41.74**	**198**	P	**P**	**02 36 41.8**	**0.0**
	comp=Z,7.9nm,0.5s,baz=71,slow=8.6,SNR=6.0						
KHON	**Khomkaen**	**42.07**	**248**	P	**P**	**02 36 45.0**	**+0.5**
	comp=Z,205nm,0.9s						
ZIRO	**ZIRO**	**42.39**	**269**	*e*P	**P**	**02 36 47.8**	**+0.5**
ZIRO				IAMs_20	IAMs_20	02 55 54.3	
	comp=Z,10µm,18.0s						
JORH	**JORHAT**	**42.47**	**268**	*e*P	**P**	**02 36 47.8**	**+0.1**
JORH				IAMs_20	IAMs_20	02 56 14.9	
	comp=Z,14µm,17.1s						
MOKO	**MOKOCHONG**	**42.48**	**267**	*e*P	**P**	**02 36 48.6**	**+0.6**
TTA	**Tatalina**	**42.50**	**36**	P	**P**	**02 36 48.9**	**+1.3**
	baz=266						
TTA				S	**S**	**02 43 08.8**	**+1.0**
	baz=266						
TTA	**Tatalina**	**42.50**	**36**	P	**P**	**02 36 47.5**	**-0.1**
TTA				pmax	pmax		
	comp=Z,25nm,1.1s						
TTA				MLR	MLR		
	comp=Z,4µm,18.0s						
TTA	**Tatalina**	**42.50**	**36**	P	**P**	**02 36 47.5**	**-0.1**
TTA				IAMs_20	IAMs_20	02 57 48.5	
	comp=Z,4µm,18.0s						
SVW2	**Sparrevohn**	**42.62**	**39**	P	**P**	**02 36 48.8**	**+0.3**
UTTA	**Uttaradit**	**42.81**	**252**	P	**P**	**02 36 50.8**	**+0.3**
	comp=Z,686nmcomp=Z,88nm,1.0s						
GTOI	**Gorontalo**	**42.95**	**210**	P	**P**	**02 36 52.5**	**+0.8**
	comp=Z,763nmcomp=Z,53nm,1.1s						
GTOI	**Gorontalo**	**42.95**	**210**	P	P	02 37 06.5	+15
CHAI	**Chaiyaphum**	**42.96**	**249**	P	**P**	**02 36 52.6**	**+0.8**
	comp=Z,1µmcomp=Z,140nm,0.9s						
LAMP	**Lampang**	**43.00**	**254**	P	**P**	**02 36 52.9**	**+0.8**
	comp=Z,1µmcomp=Z,96nm,0.9s						
KOHI	**KOHIMA**	**43.10**	**267**	*e*x	**P**	**02 36 52.7**	**-0.4**
KOHI				IAMs_20	IAMs_20	02 56 15.8	
	comp=Z,18µm,18.4s						
CM34	**Chiang Mai Arr**	**43.16**	**254**	P	**P**	**02 36 53.0**	**-0.4**
CM35	**Chiang Mai Arr**	**43.26**	**254**	P	**P**	**02 36 54.0**	**-0.2**
PHIT	**Phitsanulok**	**43.27**	**251**	P	**P**	**02 36 55.5**	**+1.3**
	comp=Z,203nm,1.0s						
CM33	**Chiang Mai Arr**	**43.33**	**255**	P	**P**	**02 36 54.0**	**-0.8**
CHTO	**Chiang Mai**	**43.33**	**255**	P	**P**	**02 36 54.8**	**0.0**
CHTO				pmax	pmax		
	comp=Z,60nm,0.9s						
CHTO				MLR	MLR		
	comp=Z,13µm,18.0s						
CHTO	**Chiang Mai**	**43.33**	**255**	P	**P**	**02 36 54.8**	**0.0**
CHTO				IAmb	IAmb	02 37 05.5	
	comp=Z,60nm,0.9s						
CM36	**Chiang Mai Arr**	**43.40**	**254**	P	**P**	**02 36 55.0**	**-0.3**
TOLI2	**Tolitoli**	**43.44**	**214**	P	**P**	**02 36 55.2**	**-0.4**
LSA	**Lhasa**	**43.44**	**273**	P	**P**	**02 36 57.1**	**+0.9**
LSA				pP	**sP**	**02 37 06.9**	**0.0**
LSA				S	**S**	**02 43 20.0**	**-3.2**
LSA				pmax	pmax		
	comp=Z,100nm,0.9s						
LSA				LR	LR		
	comp=Z,29µm,18.5s						
LSA				LR	LR		
	comp=Z,38µm,19.2s						
LSA				LR	LR		
	comp=Z,68µm,17.8s						
LSA	**Lhasa**	**43.44**	**273**	P	**P**	**02 36 57.0**	**+0.9**
LSA	**Lhasa**	**43.44**	**273**	P	**P**	**02 36 55.5**	**-0.6**
LSA				pmax	pmax		
	comp=Z,87nm,0.9s						
LSA				MLR	MLR		
	comp=Z,21µm,18.0s						
LSA	**Lhasa**	**43.44**	**273**	P	**P**	**02 36 55.5**	**-0.6**
LSA				IAmb	IAmb	02 37 11.5	
	comp=Z,87nm,0.9s						
SII	**Sitkinak Islan**	**43.47**	**46**	S	**S**	**02 43 21.6**	**-0.5**
	baz=275						
CM32	**Chiang Mai Arr**	**43.51**	**254**	P	**P**	**02 36 56.0**	**-0.2**
FAKI	**Fak Fak**	**43.51**	**196**	P	**P**	**02 36 56.5**	**+0.4**
FAKI				IAmb	IAmb	02 37 08.5	
	comp=Z,83nm,1.1s						
FAKI				IAMs_20	IAMs_20	02 52 27.0	
	comp=Z,5µm,20.0s						
FAKI	**Fak Fak**	**43.51**	**196**	P	**P**	**02 36 57.1**	**+1.0**
	comp=Z,2µmcomp=Z,77nm,1.6s						
CM09	**Chiang Mai Arr**	**43.53**	**254**	P	**P**	**02 36 57.1**	**+0.8**
	comp=Z,320nmcomp=Z,27nm,0.7s						
MRSI	**Marisa**	**43.53**	**212**	P	**P**	**02 36 58.0**	**+1.7**
	comp=Z,2µmcomp=Z,2µmcomp=Z,115nm,1.4s						
MRSI	**Marisa**	**43.53**	**212**	P	**P**	**02 36 58.0**	**+1.7**
	comp=Z,2µmcomp=Z,2µmcomp=Z,115nm,1.4s						
A21K	**Barrow**	**43.53**	**24**	P	**P**	**02 36 55.8**	**+0.1**
	baz=257,SNR=8.6						
A21K				S	**S**	**02 43 20.9**	**-1.7**
	baz=257						
A21K	**Barrow**	**43.53**	**24**	P	**P**	**02 36 56.0**	**+0.3**
A21K				IAmb	IAmb	02 37 05.9	
	comp=Z,73nm,1.1s						
CM31	**Chiang Mai Arr**	**43.55**	**254**	P	**P**	**02 36 57.9**	**+1.4**
	comp=Z,1µm,0.5s						
CM31	**Chiang Mai Arr**	**43.55**	**254**	P	**P**	**02 36 56.6**	**0.0**
CMAR	**Chiang Mai Arr**	**43.55**	**254**	P	**P**	**02 36 56.3**	**-0.3**
	comp=Z,16nm,0.9s,baz=50,slow=6.2,SNR=67						
CMAR				LR	LR	02 56 53.5	
	comp=Z,7µm,18.0s,baz=95,slow=39						
CMAR	**Chiang Mai Arr**	**43.55**	**254**	*i* P	**P**	**02 36 57.0**	**+0.4**
CMAR				pmax	pmax		
	comp=Z,17nm,0.9s						
CMAR	**Chiang Mai Arr**	**43.55**	**254**	P	**P**	**02 36 56.6**	**+0.1**
CM04	**Chiang Mai Arr**	**43.56**	**254**	P	**P**	**02 36 57.1**	**+0.5**
	comp=Z,369nmcomp=Z,36nm,1.0s						
CM01	**Chiang Mai Arr**	**43.57**	**254**	P	**P**	**02 36 57.5**	**+0.8**
	comp=Z,276nmcomp=Z,31nm,0.9s						
CM02	**Chiang Mai Arr**	**43.57**	**254**	P	**P**	**02 36 57.4**	**+0.7**
	comp=Z,270nmcomp=Z,33nm,0.8s						
CM15	**Chiang Mai Arr**	**43.57**	**254**	P	**P**	**02 36 57.4**	**+0.7**
	comp=Z,458nmcomp=Z,31nm,0.9s						
CM05	**Chiang Mai Arr**	**43.59**	**254**	P	**P**	**02 36 57.3**	**+0.5**
	comp=Z,315nmcomp=Z,32nm,0.8s						
CM13	**Chiang Mai Arr**	**43.60**	**254**	P	**P**	**02 36 57.5**	**+0.6**
	comp=Z,288nmcomp=Z,34nm,0.8s						
SUKH	**Sukhothai**	**43.66**	**252**	P	**P**	**02 36 57.8**	**+0.5**
	comp=Z,89nm,1.0s						
IMP	**Imphal**	**43.69**	**266**	*e*P	**P**	**02 36 57.2**	**-0.6**
IMP				IAmb	IAmb	02 36 60.0	
	comp=Z,60nm,1.1s						
IMAR	**Indian Mountai**	**43.72**	**32**	P	**P**	**02 36 57.9**	**+0.6**
OHAK	**Old Harbor**	**43.91**	**45**	S	**S**	**02 43 26.8**	**-1.6**
	baz=275						
OHAK	**Old Harbor**	**43.91**	**45**	IAMs_20	IAMs_20	02 54 53.1	
	comp=Z,5µm,21.0s						
MK31	**Makanchi Array**	**44.02**	**300**	P	**P**	**02 37 00.2**	**+0.2**
MK31				pmax	pmax		
	comp=Z,101nm,0.9s						
MK31	**Makanchi Array**	**44.02**	**300**	P	**P**	**02 37 00.2**	**+0.2**
MKAR	**Makanchi Array**	**44.02**	**300**	P	**P**	**02 36 60.0**	**0.0**
	comp=Z,108nm,0.9s,baz=82,slow=8.2,SNR=572						
MKAR				LR	LR	02 56 07.7	
	comp=Z,18µm,20.2s,baz=73,slow=37						
MKAR	**Makanchi Array**	**44.02**	**300**	P	**P**	**02 37 00.1**	**+0.1**
MKAR	**Makanchi Array**	**44.02**	**300**	P	**P**	**02 37 00.1**	**+0.1**
SRAK	**Srakaew**	**44.19**	**247**	P	**P**	**02 36 58.8**	**-2.8**
	comp=Z,8µmcomp=Z,891nm,0.8s						
CHUM	**Lake Minchumin**	**44.21**	**35**	P	**P**	**02 37 03.4**	**+2.1**
	baz=269,SNR=7.7						
CHUM				S	**S**	**02 43 36.2**	**+3.6**
	baz=269						
MAKZ	**Makanchi**	**44.22**	**300**	P	**P**	**02 37 01.6**	**0.0**
MAKZ				pmax	pmax		
	comp=Z,141nm,1.0s						
MAKZ				MLR	MLR		
	comp=Z,25µm,18.0s						
MAKZ	**Makanchi**	**44.22**	**300**	P	**P**	**02 37 01.6**	**0.0**
KDAK	**Kodiak Island**	**44.24**	**44**	P	**P**	**02 37 02.9**	**+1.3**
	baz=275						
KDAK	**Kodiak Island**	**44.24**	**44**	P	**P**	**02 37 01.8**	**+0.2**
KDAK				pmax	pmax		
	comp=Z,83nm,1.2s						
KDAK				MLR	MLR		
	comp=Z,5µm,20.0s						
KDAK	**Kodiak Island**	**44.24**	**44**	P	**P**	**02 37 01.8**	**+0.2**
KDAK				IAmb	IAmb	02 37 11.8	
	comp=Z,83nm,1.1s						
KDAK	**Kodiak Island**	**44.24**	**44**	IAMs_20	IAMs_20	02 55 16.9	
	comp=Z,5µm,20.0s						
PPLA	**Purkeypile**	**44.25**	**36**	P	**P**	**02 37 03.6**	**+1.8**
	baz=270,SNR=8.3						
PPLA				S	**S**	**02 43 36.0**	**+2.5**
	baz=270						
PPLA	**Purkeypile**	**44.25**	**36**	P	**P**	**02 37 01.6**	**-0.1**
PPLA				IAmb	IAmb	02 37 16.9	
	comp=Z,51nm,1.1s						
SPCR	**Spurr Chakacha**	**44.25**	**39**	P	**P**	**02 37 03.1**	**+1.3**
	baz=272						
SPCR				S	**S**	**02 43 37.2**	**+3.6**
	baz=272						
SANI	**Sanana**	**44.37**	**205**	P	**P**	**02 37 03.2**	**+0.1**
	comp=Z,1µmcomp=Z,65nm,0.8s						
MHMT	**Maesarieng**	**44.48**	**255**	P	**P**	**02 37 03.0**	**-1.0**
	comp=Z,3µmcomp=Z,121nm,0.8s						
SKT	**Skwentna**	**44.56**	**38**	P	**P**	**02 37 04.6**	**+0.5**
	baz=271						
SKT				S	**S**	**02 43 39.0**	**+1.2**
	baz=271						
SKT	**Skwentna**	**44.56**	**38**	P	**P**	**02 37 04.0**	**-0.1**
SEM	**Semipalatinsk**	**44.56**	**306**	⇑*i*P	**P**	**02 37 03.8**	**-0.7**
	comp=Z,206nm,2.0s,baz=305						
SEM				*e*S	**S**	**02 43 40.3**	**+1.8**
	baz=305						
SEM	**Semipalatinsk**	**44.56**	**306**	*c* *i*P	**P**	**02 37 03.8**	**-0.7**
SEM				*e*S	**S**	**02 43 40.3**	**+1.8**
SEM				pmax	pmax		
	comp=Z,207nm,2.0s						
SILR	**SILCHAR**	**44.60**	**266**	*e*P	**P**	**02 37 04.5**	**-0.3**
GUWA	**GUWAHATI**	**44.73**	**269**	*e*P	**P**	**02 37 04.5**	**-1.3**
GUWA				IAmb	IAmb	02 37 15.9	
	comp=Z,49nm,0.7s						
GUWA				IAMs_20	IAMs_20	02 57 28.9	
	comp=Z,8µm,17.2s						
BPAW	**Bear Paw Mtn.**	**44.80**	**35**	P	**P**	**02 37 06.9**	**+0.9**
	baz=270						
BPAW				S	**S**	**02 43 43.6**	**+2.4**
	baz=270						
BPAW	**Bear Paw Mtn.**	**44.80**	**35**	P	**P**	**02 37 06.0**	**0.0**
BPAW				IAmb	IAmb	02 37 23.0	
	comp=Z,38nm,1.0s						
KTH	**Kantishna Hill**	**44.82**	**35**	P	**P**	**02 37 06.1**	**-0.1**
SHL	**Shillong**	**44.90**	**268**	P	**P**	**02 37 07.4**	**-0.1**
SHL				pmax	pmax		
	comp=Z,80nm,1.0s						
SHL				MLR	MLR		
	comp=Z,13µm,18.0s						
SHL	**Shillong**	**44.90**	**268**	*e*P	**P**	**02 37 06.7**	**-0.8**
SHL				IAMs_20	IAMs_20	02 57 49.6	
	comp=Z,12µm,15.4s						
SHL	**Shillong**	**44.90**	**268**	P	**P**	**02 37 07.4**	**-0.1**
SHL				IAmb	IAmb	02 37 10.6	
	comp=Z,80nm,1.0s						
APSI	**Ampana**	**44.91**	**211**	P	**P**	**02 37 06.6**	**-0.7**
	comp=Z,980nmcomp=Z,62nm,1.2s						
APSI	**Ampana**	**44.91**	**211**	P	**P**	**02 37 08.8**	**+1.5**
	comp=Z,975nmcomp=Z,63nm,1.2s						
MLY	**Manley**	**44.92**	**33**	P	**P**	**02 37 07.9**	**+0.9**
	baz=269,SNR=20						
MLY				S	**S**	**02 43 45.1**	**+2.1**
	baz=269						
SUA	**Susitna One**	**44.95**	**38**	P	**P**	**02 37 08.5**	**+1.2**
	baz=272						
SUA				S	**S**	**02 43 43.2**	**-0.4**
	baz=272						
SUA	**Susitna One**	**44.95**	**38**	P	**P**	**02 37 07.4**	**+0.1**
BRLK	**Bradley Lake**	**44.98**	**41**	P	**P**	**02 37 07.8**	**+0.3**
BRLK				IAmb	IAmb	02 37 23.1	
	comp=Z,26nm,0.8s						
UTHA	**Uthaitani**	**45.03**	**251**	P	**P**	**02 37 09.0**	**+0.7**
	comp=Z,562nmcomp=Z,60nm,0.9s						
UMPA	**Umpang Tak**	**45.04**	**252**	P	**P**	**02 37 10.3**	**+1.8**
	comp=Z,6µmcomp=Z,118nm,0.9s						
BRSE	**Bradley Lake S**	**45.05**	**41**	S	**S**	**02 43 42.4**	**-2.6**
	baz=274						
TRF	**Thorofare Moun**	**45.11**	**36**	P	**P**	**02 37 09.3**	**+0.6**
	baz=271						
TRF				S	**S**	**02 43 47.2**	**+1.2**
	baz=271						
TRF	**Thorofare Moun**	**45.11**	**36**	P	**P**	**02 37 08.4**	**-0.3**
TRF				IAmb	IAmb	02 37 26.2	
	comp=Z,34nm,1.1s						
CUT	**Chulitna**	**45.14**	**37**	P	**P**	**02 37 09.8**	**+1.1**
	baz=272						
CUT				S	**S**	**02 43 45.9**	**-0.3**
	baz=272						
COLD	**Coldfoot**	**45.21**	**30**	P	**P**	**02 37 10.2**	**+1.0**

	baz=267,SNR=13						
COLD				S	S	02 43 48.0	+0.9
	baz=267						
COLD	Coldfoot	45.21	30	P	P	02 37 09.1	-0.1
COLD				IAmb	IAmb	02 37 27.8	
	comp=Z,33nm,0.9s						
RC01	Rabbit Creek A	45.46	39	P	P	02 37 12.2	+0.9
	baz=274						
RC01				S	S	02 43 47.8	-3.0
	baz=274						
BWN	Browne	45.46	35	P	P	02 37 11.7	+0.4
I23K	Minto, Yukon-K	45.50	33	P	P	02 37 12.7	+1.2
	baz=270,SNR=10						
I23K				S	S	02 43 54.1	+2.9
	baz=270						
I23K	Minto, Yukon-K	45.50	33	P	P	02 37 11.2	-0.2
I23K				IAmb	IAmb	02 37 27.3	
	comp=Z,57nm,1.1s						
O22K	Cooper Landing	45.51	40	P	P	02 37 12.2	+0.6
	baz=274						
O22K	Cooper Landing	45.51	40	P	P	02 37 11.8	+0.2
KURK	Kurchatov	45.52	306*c*	*i*P	P	02 37 11.5	-0.3
KURK				pmax	pmax		
	comp=Z,212nm,1.0s						
KURK				MLR	MLR		
	comp=Z,6µm,16.0s						
KURK	Kurchatov	45.52	306	P	P	02 37 11.8	-0.1
KURK	Kurchatov	45.52	306	IAMs_20	IAMs_20	02 58 33.7	
	comp=Z,6µm,20.0s						
TOLK	Toolik Lake Re	45.53	28	P	P	02 37 12.6	+0.8
	baz=266,SNR=36						
TOLK				S	S	02 43 52.7	+0.9
	baz=266						
TOLK	Toolik Lake Re	45.53	28	P	P	02 37 11.6	-0.2
TOLK				IAmb	IAmb	02 37 30.3	
	comp=Z,54nm,1.1s						
KURBB	Kurchatov Arra	45.59	306	P	P	02 37 12.2	-0.2
	comp=Z,122nm,0.8s,baz=82,slow=8.3,SNR=654						
BNDI	Bandanaira	45.60	199	P	P	02 37 24.6	+12
NEA2	Nenana	45.63	34	P	P	02 37 13.3	+0.7
	baz=271,SNR=19						
NEA2				S	S	02 43 55.2	+2.0
	baz=271						
SEW	Seward	45.67	40	P	P	02 37 13.5	+0.6
	baz=275						
SEW				S	S	02 43 51.7	-2.1
	baz=275						
SEW	Seward	45.67	40	P	P	02 37 12.8	-0.1
SEW				IAmb	IAmb	02 37 24.9	
	comp=Z,60nm,1.2s						
SEW				IAMs_20	IAMs_20	02 56 58.5	
	comp=Z,5µm,20.0s						
SAIH	SAIHA	45.70	263	*e*P	P	02 37 13.3	-0.5
MCK	McKinley	45.71	35	P	P	02 37 13.9	+0.7
	baz=272,SNR=6.5						
MCK				S	S	02 43 53.6	-0.8
	baz=272						
PMR	Palmer	45.72	38	P	P	02 37 13.8	+0.5
	baz=274						
PMR				S	S	02 43 53.1	-1.3
	baz=274						
PMR	Palmer	45.72	38	P	P	02 37 13.5	+0.3
PMR				pmax	pmax		
	comp=Z,38nm,1.0s						
PMR	Palmer	45.72	38	P	P	02 37 13.5	+0.3
PMR				IAmb	IAmb	02 37 30.8	
	comp=Z,38nm,1.0s						
RND	Reindeer	45.75	36	P	P	02 37 13.6	0.0
RND				pmax	pmax		
	comp=Z,61nm,1.0s						
RND				MLR	MLR		
	comp=Z,3µm,18.0s						
RND	Reindeer	45.75	36	P	P	02 37 13.6	0.0
RND				IAmb	IAmb	02 37 28.2	
	comp=Z,61nm,1.0s						
WAT2	Susitna Watana	45.89	36	P	P	02 37 14.9	+0.1
	baz=273,SNR=8.8						
WAT2				S	S	02 43 54.0	-3.3
	baz=273						
MDM	Murphy Dome	45.98	33	P	P	02 37 15.4	0.0
SRDT	SRDT	46.05	250	P	P	02 37 16.6	+0.1
	comp=Z,7µmcomp=Z,30nm,1.2s						
WRH	Wood River Hil	46.05	34	P	P	02 37 15.9	0.0
WRH				IAmb	IAmb	02 37 30.0	
	comp=Z,42nm,1.0s						
SML	Sawmill	46.08	38	P	P	02 37 16.6	+0.4
	baz=274						
SML				S	S	02 43 59.9	0.0
	baz=274						
SML	Sawmill	46.08	38	P	P	02 37 16.0	-0.2
TCOL	CIGO, UAF Yank	46.14	34	P	P	02 37 16.6	+0.1
	baz=272						
TCOL				S	S	02 44 03.0	+2.5
	baz=272						
TCOL	CIGO, UAF Yank	46.14	34	P	P	02 37 16.6	+0.1
TCOL				IAmb	IAmb	02 37 30.6	
	comp=Z,73nm,1.0s						
COLA	College	46.15	34	P	P	02 37 16.8	+0.2
	baz=272						
COLA	College	46.15	34	P	P	02 37 17.1	+0.5
COLA				pmax	pmax		
	comp=Z,68nm,1.0s						
COLA	College	46.15	34	P	P	02 37 17.1	+0.5
COLA				IAmb	IAmb	02 37 30.6	
	comp=Z,68nm,0.9s						
CCB	Clear Creek Bu	46.17	34	P	P	02 37 16.9	+0.1
CCB				IAmb	IAmb	02 37 31.7	
	comp=Z,37nm,1.0s						
AGT	Agartala	46.28	266	*e*P	P	02 37 19.7	+1.5
AGT				IAmb	IAmb	02 37 25.3	
	comp=Z,158nm,0.4s						
WAT6	Susitna Watana	46.30	37	P	P	02 37 18.5	+0.4
	baz=274						
WAT6				S	S	02 44 01.6	-1.7
	baz=274						
POKR	Poker Plat Res	46.32	33	P	P	02 37 19.0	+1.1
	baz=272,SNR=30						
POKR				S	S	02 44 03.8	+0.8
	baz=272						
POKR	Poker Plat Res	46.32	33	P	P	02 37 18.0	0.0
BELO	BELONIA	46.47	265	*e*P	P	02 37 18.5	-1.2
SBUM	Sibu	46.49	225	P	P	02 37 19.8	-0.1
SBUM	Sibu	46.49	225	P	P	02 37 21.0	+1.1
GTK	Tadong	46.55	272	*e*P	P	02 37 18.5	-2.0
HDA	Harding Lake	46.55	34	P	P	02 37 20.5	+0.7
	baz=273						
HDA				S	S	02 44 04.1	-2.4
	baz=273						
HDA				S	S	02 44 04.1	-2.4
	baz=273						
HDA	Harding Lake	46.55	34	P	P	02 37 19.6	-0.2
HDA				IAmb	IAmb	02 37 37.4	
	comp=Z,41nm,1.0s						
SCM	Sheep Creek Mo	46.55	38	P	P	02 37 19.9	-0.1
SCM				pmax	pmax		
	comp=Z,38nm,0.8s						
SCM				MLR	MLR		
	comp=Z,3µm,21.0s						
SCM	Sheep Creek Mo	46.55	38	P	P	02 37 19.9	-0.1
SCM				IAmb	IAmb	02 37 32.5	
	comp=Z,38nm,0.8s						
IL31		46.56	34	P	P	02 37 19.8	-0.1
IL31				IAmb	IAmb	02 37 34.7	
	comp=Z,60nm,0.9s						
ILAR	Eielson Array	46.56	34	P	P	02 37 20.2	+0.4
	comp=Z,12nm,0.7s,baz=256,slow=4.2,SNR=68						
PHET	Kaeng Krachan	46.65	248	P	P	02 37 22.3	+1.1
	comp=Z,1µmcomp=Z,146nm,0.8s						
TARA	Tarawa	46.70	137	P	P	02 37 22.4	+0.9
TARA	Tarawa	46.70	137	IAMs_20	IAMs_20	02 54 03.0	
	comp=Z,7µm,19.0s						
JOHN	Johnston Islan	46.82	105	P	P	02 37 22.3	-0.2
SHLS	Shalkode	46.95	296	*i* P	P	02 37 21.0	-2.4
	comp=Z,337nm,2.7s,baz=296						
SHLS				*e*S	S	02 44 11.5	-1.5
	baz=296						
SHLS	Shalkode	46.95	296	*i* P	P	02 37 21.0	-2.4
SHLS				*e*S	S	02 44 11.5	-1.5
SHLS				pmax	pmax		
	comp=Z,337nm,2.7s						
M24K	Tolsona, Glenn	47.07	37	P	P	02 37 24.4	+0.4
	baz=276						
M24K				S	S	02 44 14.7	+0.7
	baz=276						
M24K	Tolsona, Glenn	47.07	37	P	P	02 37 24.0	0.0
PRP	Porcupine Dome	47.10	33	P	P	02 37 24.7	+0.4
	baz=273						
PRP				S	S	02 44 16.6	+2.0
	baz=273						
PRP	Porcupine Dome	47.10	33	P	P	02 37 24.3	0.0
HIN	Hinchinbrook I	47.10	40	P	P	02 37 24.6	+0.3
HIN				IAmb	IAmb	02 37 39.2	
	comp=Z,31nm,0.9s						
HIN				IAMs_20	IAMs_20	03 00 56.3	
	comp=Z,4µm,18.0s						
TDK	Taldyqorghan	47.11	299	*i* P	P	02 37 25.1	+0.5
	comp=Z,394nm,1.6s,baz=298						
TDK				*e*S	S	02 44 18.3	+3.3
	baz=298						
TDK				LR	LR	02 57 01.7	
	comp=Z,7µm,13.6s,baz=298						
TDK	Taldyqorghan	47.11	299	*i* P	P	02 37 25.0	+0.5
TDK				*e*S	S	02 44 18.2	+3.3
TDK				pmax	pmax		
	comp=Z,394nm,1.6s						
TDK				MLR	MLR		
	comp=Z,7µm,14.0s						
FYU	Fort Yukon	47.17	31	P	P	02 37 24.8	+0.2
TAPN	Taplejung	47.22	273	*e*P	P	02 37 26.3	+0.4
	comp=Z,226nm,0.8s						
KLU	Klutina	47.26	38	P	P	02 37 25.8	+0.4
	baz=276						
KLU				S	S	02 44 17.8	+1.1
	baz=276						
KLU	Klutina	47.26	38	P	P	02 37 25.5	+0.1
KLU				IAmb	IAmb	02 37 43.4	
	comp=Z,63nm,1.0s						
UZB	Uzynbulak	47.26	296⇑	*i*P	P	02 37 25.8	-0.1
	comp=Z,284nm,3.0s,baz=296						
UZB				*e*S	S	02 44 19.9	+2.5
	baz=296						
UZB	Uzynbulak	47.26	296*c*	*i*P	P	02 37 25.7	-0.1
UZB				*e*S	S	02 44 19.9	+2.5
UZB				pmax	pmax		
	comp=Z,284nm,3.0s						
BKB	Balikpapan	47.29	217	P	P	02 37 24.9	-1.1
PAX	Paxson	47.31	36	P	P	02 37 26.0	+0.1
	baz=276						
PAX				S	S	02 44 17.7	+0.1
	baz=276						
PAX	Paxson	47.31	36	P	P	02 37 26.8	+0.9
PAX				pmax	pmax		
	comp=Z,21nm,1.0s						
PAX				MLR	MLR		
	comp=Z,4µm,20.0s						
PAX	Paxson	47.31	36	P	P	02 37 26.8	+0.9
PAX				IAMs_20	IAMs_20	02 59 04.8	
	comp=Z,4µm,20.0s						
KPKS	Kokpek	47.39	297	*i* P	P	02 37 26.9	+0.1
	comp=Z,208nm,1.8s,baz=296						
KPKS				*e*S	S	02 44 22.1	+2.8
	baz=296						
KPKS	Kokpek	47.39	297	*i* P	P	02 37 26.9	+0.1
KPKS				*e*S	S	02 44 22.0	+2.8
KPKS				pmax	pmax		
	comp=Z,208nm,1.8s						
EYAK	Cordova Ski Ar	47.45	39	P	P	02 37 27.3	+0.4
	baz=278						
EYAK				S	S	02 44 21.6	+2.2
	baz=278						
EYAK	Cordova Ski Ar	47.45	39	P	P	02 37 27.1	+0.3
EYAK				IAmb	IAmb	02 37 42.8	
	comp=Z,27nm,0.9s						
EYAK				IAMs_20	IAMs_20	02 57 00.6	
	comp=Z,5µm,21.0s						
ODAN	Odare	47.71	272	*e*P	P	02 37 29.9	+0.2
	comp=Z,454nm,0.9s						
SATY	Saty	47.72	296⇑	*i*P	P	02 37 29.6	+0.2
	comp=Z,241nm,2.7s,baz=296						
SATY				*e*S	S	02 44 26.7	+2.8
	baz=296						
SATY	Saty	47.72	296*c*	*i*P	P	02 37 29.5	+0.2
SATY				*e*S	S	02 44 26.6	+2.8
SATY				pmax	pmax		
	comp=Z,241nm,2.7s						
N25K	Chitina, Valde	47.87	38	P	P	02 37 30.8	+0.6
	baz=278						
N25K				S	S	02 44 27.5	+2.0
	baz=278						
N25K	Chitina, Valde	47.87	38	P	P	02 37 30.3	0.0
DOT	Dot Lake	47.88	35	P	P	02 37 30.4	+0.2
DOT				IAmb	IAmb	02 37 44.7	
	comp=Z,26nm,0.9s						
SCRK	Sand Creek	47.88	35	P	P	02 37 30.4	+0.1
	baz=276,SNR=26						
SCRK				S	S	02 44 25.3	-0.3
	baz=276						
BMRM	Bremner River	47.95	39	P	P	02 37 31.4	+0.5
	baz=278						
BMRM				S	S	02 44 28.7	+2.1
	baz=278						
MTKI	Muara Teweh, K	47.97	220	P	P	02 37 31.7	+0.3
RAGM	Ragged Mountai	48.00	39	P	P	02 37 32.1	+0.8
RAGM				IAMs_20	IAMs_20	02 57 35.1	
	comp=Z,4µm,20.0s						
MENT	Mentasta	48.11	36	P	P	02 37 32.1	+0.1
KAIM	Kayak Island	48.20	40	IAMs_20	IAMs_20	03 00 09.4	
	comp=Z,4µm,19.0s						
GLB	Gilahina Butte	48.27	38	P	P	02 37 33.6	+0.4
RAMN	Ramite	48.28	273	*e*P	P	02 37 34.0	-0.1
	comp=Z,685nm,1.0s						
GUN	Gumba	48.36	274	*e*P	P	02 37 35.1	+0.3
	comp=Z,618nm,0.8s						
KSM	Kuching	48.36	227	P	P	02 37 34.2	-0.2
KSM				IAmb	IAmb	02 37 48.9	
	comp=Z,34nm,0.8s						
KSM	Kuching	48.36	227	P	P	02 37 36.0	+1.6
CHKK	Chushkaly	48.43	298⇑	*i*P	P	02 37 34.7	0.0
	baz=298						
CHKK	Chushkaly	48.43	298⇑	*i*P	P	02 37 34.7	0.0
VRDI	Verde Repeater	48.47	38	P	P	02 37 35.8	+0.8
VRDI				IAmb	IAmb	02 37 50.9	
	comp=Z,29nm,1.0s						
SUCK	Suckling Hills	48.49	40	IAMs_20	IAMs_20	03 02 00.1	
	comp=Z,5µm,18.0s						
MDOK	Medeo	48.62	297	*i* P	P	02 37 36.8	+0.4
	baz=297						
MDOK				*e*S	S	02 44 39.8	+3.0
	baz=297						
MDOK				LR	LR	02 57 37.3	
	comp=Z,5µm,14.3s,baz=297						
MDOK	Medeo	48.62	297	*i* P	P	02 37 36.7	+0.4
MDOK				*e*S	S	02 44 39.7	+3.0
MDOK				MLR	MLR		
	comp=Z,5µm,14.0s						
MCARA	McCarthy VSAT	48.65	38	P	P	02 37 36.7	+0.6
	baz=279						
MCARA				S	S	02 44 39.0	+2.7
	baz=279						
MCARA	McCarthy VSAT	48.65	38	P	P	02 37 35.6	-0.6
AAA	Alma-Ata	48.70	297⇑	*e*P	P	02 37 37.4	+0.5
	comp=Z,54nm,1.0s,baz=297						
AAA				*e*S	S	02 44 40.6	+3.0
	baz=297						
AAA				LR	LR	02 57 44.1	
	comp=Z,5µm,14.5s,baz=297						
AAA	Alma-Ata	48.70	297*c*	*e*P	P	02 37 37.3	+0.5
AAA				*e*S	S	02 44 40.6	+3.0
AAA				pmax	pmax		
	comp=Z,54nm,1.0s						
AAA				MLR	MLR		
	comp=Z,5µm,14.0s						
BNSI	Bone	48.70	211	P	P	02 37 38.9	+1.9
	comp=Z,1µmcomp=Z,87nm,1.1s						
TNSS	Tian-Shan	48.73	297⇑	*i*P	P	02 37 38.2	+0.6
	baz=296						
TNSS	Tian-Shan	48.73	297⇑	*i*P	P	02 37 38.1	+0.6
KUU	Kurty	48.86	298⇑	*i*P	P	02 37 37.8	-0.3
	comp=Z,304nm,1.9s,baz=298						
KUU				*e*S	S	02 44 42.2	+2.4
	baz=298						
KUU				*i* S	S	02 44 42.2	+2.4
	baz=298						
KUU				LR	LR	02 58 33.5	
	comp=Z,8µm,16.1s,baz=298						
KUU	Kurty	48.86	298*c*	*i*P	P	02 37 37.7	-0.3
KUU				*e*S	S	02 44 42.2	+2.4
KUU				pmax	pmax		
	comp=Z,304nm,1.9s						
KUU				MLR	MLR		
	comp=Z,8µm,16.0s						
KKN	Kakani	48.88	275	*e*P	P	02 37 38.9	+0.3
	comp=Z,772nm,0.8s						
PKI	Pulchoki	48.89	274	*e*P	P	02 37 38.9	+0.1
	comp=Z,221nm,0.8s						
PKIN	Phulchoki	48.90	274	*e*P	P	02 37 38.7	-0.1
	comp=Z,145nm,0.6s						
PMG	Port Moresby	48.90	175	LR	LR	02 56 40.3	
	comp=Z,1µm,21.4s,baz=358,slow=34						
BCAR	Beaver Creek A	48.97	36	P	P	02 37 38.8	+0.2
EGAK	Eagle	49.01	33	P	P	02 37 38.9	+0.2
	baz=278,SNR=19						
EGAK	Eagle	49.01	33	P	P	02 37 39.0	+0.2
EGAK				IAmb	IAmb	02 37 54.6	
	comp=Z,40nm,1.0s						
BALM	Baldy	49.03	38	P	P	02 37 39.1	-0.1
BALM				IAmb	IAmb	02 37 52.8	
	comp=Z,23nm,0.8s						
DMN	Daman	49.10	274	*e*P	P	02 37 40.4	0.0
	comp=Z,334nm,0.9s						
GKN	Gorkha	49.27	275	*e*P	P	02 37 41.7	+0.2
	comp=Z,147nm,0.6s						
MESA	MESA	49.38	39	S	S	02 44 44.0	-2.9
	baz=281						
BRZS	Berezniki	49.39	307⇑	*i*P	P	02 37 41.7	-0.3
	comp=Z,118nm,1.8s,baz=306						
BRZS				*e*S	S	02 44 49.5	+2.4
	baz=306						
BRZS	Berezniki	49.39	307*c*	*i*P	P	02 37 41.7	-0.3
BRZS				*e*S	S	02 44 49.4	+2.4
BRZS				pmax	pmax		
	comp=Z,119nm,1.8s						
KAPI	Kappang	49.40	212	P	P	02 37 42.4	+0.1
	comp=Z,21nm,1.1s,baz=316,slow=8.3,SNR=2.3						
KAPI	Kappang	49.40	212	P	P	02 37 43.1	+0.8
KAPI				pmax	pmax		
	comp=Z,43nm,1.2s						
KAPI	Kappang	49.40	212	P	P	02 37 43.1	+0.8
KAPI				IAmb	IAmb	02 37 52.2	
	comp=Z,42nm,1.1s						
ULHL	Ulahol	49.49	296	P	P	02 37 43.4	+0.2
	SNR=65						
CTG	Chitna Glacier	49.53	38	P	P	02 37 43.2	+0.1
	baz=281						
CTG				S	S	02 44 50.6	+1.7
	baz=281						
CTGM	Chitina Glacie	49.53	38	P	P	02 37 43.3	+0.2
CTGM				IAmb	IAmb	02 37 59.0	
	comp=Z,20nm,0.8s						
TKM2	Tokmak 2	49.70	297	P	P	02 37 45.5	+0.8
	SNR=211						
TKM2	Tokmak 2	49.70	297	*i* P	P	02 37 45.0	+0.3
TKM2				pmax	pmax		
	comp=Z,202nm,0.9s						
BVAR	Borovoye Array	49.94	311	P	P	02 37 45.7	-0.4
	comp=Z,65nm,0.9s,baz=64,slow=12,SNR=226						
BRVK	Borovoye	49.99	311	P	P	02 37 46.9	+0.4
BRVK				pmax	pmax		
	comp=Z,113nm,1.0s						
BRVK				MLR	MLR		
	comp=Z,12µm,18.0s						
BRVK	Borovoye	49.99	311	P	P	02 37 46.9	+0.4
BTLS	Baital	50.03	300⇑	*i*P	P	02 37 46.5	-0.5
	comp=Z,61nm,1.6s,baz=300						
BTLS				*e*S	S	02 44 58.3	+2.2
	baz=300						
BTLS	Baital	50.03	300*c*	*i*P	P	02 37 46.4	-0.5
BTLS				*e*S	S	02 44 58.3	+2.2
BTLS				pmax	pmax		
	comp=Z,61nm,1.6s						
TRTT	Trang	50.15	243	P	P	02 37 48.0	-0.1
SGDS	Sogindy	50.18	298	*i* P	P	02 37 48.3	+0.1
	baz=298						
SGDS	Sogindy	50.18	298	*i* P	P	02 37 48.3	+0.1
BBKI	Banjar Baru	50.19	218	P	P	02 37 47.7	-0.7
	comp=Z,3µmcomp=Z,62nm,1.4s						
KBK	Karagaybulak	50.24	297	P	P	02 37 49.4	+0.6
	SNR=149						
CHMS	Chumysh	50.26	297	P	P	02 37 48.9	+0.2
	SNR=20						
USP	Ospenovka	50.33	298	P	P	02 37 49.6	+0.3
	SNR=14						
BOK	Bokaro	50.47	270	*e*P	P	02 37 50.6	+0.1
BOK				IAmb	IAmb	02 37 55.4	
	comp=Z,31nm,1.2s						
AAK	Ala-Archa	50.56	297	P	P	02 37 51.3	+0.1
	comp=Z,26nm,0.8s,baz=104,slow=5.4,SNR=88						
AAK	Ala-Archa	50.56	297	P	P	02 37 51.4	+0.2
	SNR=36						
AAK	Ala-Archa	50.56	297	*i* P	P	02 37 51.0	-0.2
	SNR=59						
AAK	Ala-Archa	50.56	297	P	P	02 37 51.1	-0.1
AAK				IAmb	IAmb	02 37 58.9	
	comp=Z,55nm,1.0s						
EPYK	Eagle Plains	50.59	31	P	P	02 37 52.0	+1.1
	baz=280,SNR=37						
EPYK				S	S	02 45 06.8	+3.5
	baz=280						
EPYK	Eagle Plains	50.59	31	P	P	02 37 50.9	0.0
KSH	Kashi	50.70	293	P	P	02 37 56.1	+3.9
KSH				pP	sP	02 38 03.4	+0.3
KSH				PP	PP	02 39 53.3	+5.1
KSH				S	S	02 45 10.0	+4.2
KSH				ScS	ScS	02 47 41.4	+0.1
KSH				SS	SS	02 48 46.8	+6.8
KSH				pmax	pmax		
	comp=Z,110nm,1.0s						
KSH				pmax	pmax		
	comp=Z,3µm,7.1s						
KSH				LR	LR		
	comp=Z,8µm,14.5s						
KSH				LR	LR		
	comp=Z,9µm,15.7s						
KSH				LR	LR		
	comp=Z,10µm,19.3s						
UCH	Uchtor	50.70	297	P	P	02 37 53.1	+0.5
	SNR=42						
PKDT	Phuket	51.04	244	P	P	02 37 55.0	+0.1
EKS2	Erkin-Say	51.05	297	P	P	02 37 55.0	+0.2
	SNR=88						
HNR	Honiara	51.19	159	IAMs_20	IAMs_20	02 56 45.8	
	comp=Z,4µm,22.0s						
AML	Almayashu	51.30	297	P	P	02 37 57.8	+0.7
	SNR=132						
KULM	Kulim	51.35	240	P	P	02 37 56.8	-0.4
KULM				IAmb	IAmb	02 38 08.5	
	comp=Z,35nm,1.0s						
KULM				IAMs_20	IAMs_20	03 00 44.3	
	comp=Z,3µm,19.0s						
KULM	Kulim	51.35	240	P	P	02 37 58.0	+0.8
DGPR	DIGLIPUR	51.36	254	*e*P	P	02 37 58.0	+0.8
DGPR				IAmb	IAmb	02 38 03.9	
	comp=Z,130nm,1.3s						
DGPR				IAMs_20	IAMs_20	03 04 17.2	
	comp=Z,6µm,14.8s						
HYT	Haines Junctio	51.39	38	P	P	02 37 57.1	0.0
INK	Inuvik	51.45	28	LR	LR	03 03 12.5	
	comp=Z,3µm,19.2s,baz=270,slow=40						
INK	Inuvik	51.45	28	P	P	02 37 57.3	+0.1
INK				pmax	pmax		
	comp=Z,55nm,1.0s						
INK				MLR	MLR		
	comp=Z,4µm,20.0s						
INK	Inuvik	51.45	28	P	P	02 37 57.3	+0.1
INK				IAmb	IAmb	02 38 15.5	
	comp=Z,55nm,1.0s						
INK				IAMs_20	IAMs_20	03 01 50.3	
	comp=Z,4µm,20.0s						
MMRI	Maumere	51.80	207	P	P	02 38 01.5	+1.1
MYKOM	Kota Tinggi	51.94	234	IAMs_20	IAMs_20	03 00 40.1	
	comp=Z,4µm,19.0s						
MYKOM	Kota Tinggi	51.94	234	P	P	02 38 04.0	+2.5
BWNR	Bhubaneshwar	52.46	266	IAMs_20	IAMs_20	03 05 41.1	
	comp=Z,5µm,20.1s						
PBA	Port Blair	52.49	252	*e*x	P	02 38 03.1	-2.5
PBA				IAmb	IAmb	02 38 11.0	
	comp=Z,36nm,0.6s						
PBA	Port Blair	52.49	252	P	P	02 38 06.4	+0.7
PBA				IAmb	IAmb	02 38 17.8	
	comp=Z,62nm,0.9s						
DZA	Taraz	52.63	298⇑	*i*P	P	02 38 06.5	0.0
	comp=Z,55nm,0.9s,baz=298						
DZA	Taraz	52.63	298*c*	*i*P	P	02 38 06.4	0.0
DZA				pmax	pmax		
	comp=Z,55nm,0.9s						
OPA	Opana	52.70	92	P	P	02 38 08.6	+1.4
OPA				pmax	pmax		
	comp=Z,138nm,1.2s						
OPA	Opana	52.70	92	P	P	02 38 08.6	+1.4

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SKAG  Skagway           52.80  39   S        S        02 45 37.1 +3.3
      baz=286
KK31  Karatay Array     53.10 299   P        P        02 38 09.6 -0.4
KK31                                pmax     pmax
      comp=Z,57nm,1.0s
KK31  Karatay Array     53.10 299   P        P        02 38 09.6 -0.4
KK31                                IAmb     IAmb     02 38 10.4
      comp=Z,57nm,0.9s
KKAR  Karatay Array     53.10 299   P        P        02 38 09.5 -0.4
KKAR                                pmax     pmax
      comp=Z,57nm,1.0s
KKAR  Karatay Array     53.10 299   P        P        02 38 09.6 -0.4
KKAR                                IAmb     IAmb     02 38 10.4
      comp=Z,57nm,0.9s
KKAR  Karatay Array     53.10 299   P        P        02 38 09.5 -0.4
DDI   Dehra Dun         53.17 281  eP        P        02 38 10.7  0.0
DDI                                 IAmb     IAmb     02 38 13.5
      comp=Z,102nm,1.0s
COEN  Coen              53.28 180   P        P        02 38 11.4  0.0
BESE  Bessie Mountai    53.29  40   P        P        02 38 11.6 +0.4
TPI   Tanjungpandan     53.33 226   P        P        02 38 12.3 +0.5
SMLA  Simla             53.46 283  eP        P        02 38 12.5 -0.1
DHRM  DHARAMSHALA       53.58 284  eP        P        02 38 12.3 -1.5
DHRM                                IAmb     IAmb     02 38 20.3
      comp=Z,112nm,1.0s
BRLS  Borolday          53.59 299  eP        P        02 38 14.7 +1.2
      comp=Z,193nm,2.8s,baz=299
BRLS                               eS        S        02 45 50.2 +5.0
      baz=299
BRLS  Borolday          53.59 299  eP        P        02 38 14.7 +1.2
BRLS                               eS        S        02 45 50.1 +5.0
BRLS                                pmax     pmax
      comp=Z,193nm,2.8s
JIS   Juneau Island     53.62  41   P        P        02 38 13.9 +0.5
JIS                                 IAmb     IAmb     02 38 33.0
      comp=Z,35nm,1.0s
PPBI  Pangkal Pinang    53.70 228   P        P        02 38 15.7 +1.1
      comp=Z,7µmcomp=Z,67nm,1.1s
IUG   Iuzhnay           53.81 298  eP        P        02 38 15.6 +0.3
      comp=Z,240nm,2.8s,baz=298
IUG   Iuzhnay           53.81 298  eP        P        02 38 15.5 +0.3
IUG                                 pmax     pmax
      comp=Z,240nm,2.8s
LHMI  Lhok Sumawe       53.90 243   P        P        02 38 15.4 -0.6
LHMI                                IAmb     IAmb     02 38 28.1
      comp=Z,57nm,0.9s
LHMI                                IAMs_20  IAMs_20  03 02 56.9
      comp=Z,5µm,18.0s
TWSI  Taliwang, Sumb    53.95 213   P        P        02 38 16.3  0.0
      comp=Z,26nm,0.9s
SVE   Sverdlovsk        54.19 318d iP        P        02 38 18.3 +0.7
SVE                                eS        S        02 45 56.8 +4.1
SVE                                 pmax     pmax
      comp=Z,144nm,1.0s
SVE                                 MLR      MLR
      comp=E,24µm,15.0s
SVE                                 MLR      MLR
      comp=Z,34µm,15.0s
SVE                                 MLR      MLR
      comp=N,7µm,13.0s
C36M  Paulatuk          54.50  26   P        P        02 38 20.0 +0.3
      baz=289,SNR=18
C36M  Paulatuk          54.50  26   P        P        02 38 20.0 +0.3
BKNI  Bangkinang        54.83 235   P        P        02 38 22.6 -0.3
BKNI                                IAMs_20  IAMs_20  03 03 03.8
      comp=Z,4µm,19.0s
BKNI  Bangkinang        54.83 235   P        P        02 38 24.5 +1.7
      comp=Z,4µmcomp=Z,2µmcomp=Z,175nm,1.0s
NIL   Nilore            55.19 287   P        P        02 38 25.5 +0.1
NIL                                 pmax     pmax
      comp=Z,105nm,0.8s
NIL                                 MLR      MLR
      comp=Z,5µm,18.0s
NIL   Nilore            55.19 287   P        P        02 38 25.5 +0.1
NIL   Nilore            55.19 287   IAMs_20  IAMs_20  03 05 00.5
      comp=Z,5µm,18.0s
WRAK  Wrangell Islan    55.28  42   P        P        02 38 25.7 +0.2
      baz=291
ARU   Arti              55.40 318   P        P        02 38 26.0 -0.4
      comp=Z,42nm,0.9s,baz=72,slow=4.7,SNR=124
ARU   Arti              55.40 318c iP        P        02 38 26.6 +0.1
ARU                                                   02 39 25.7
ARU                                                   02 40 32.6
ARU                                 PPP      PPP      02 41 44.4
ARU                                 S        S        02 46 13.5 +4.4
ARU                                                   02 48 16.9
ARU                                 SSS      SSS      02 52 01.1
ARU                                 pmax     pmax
      comp=Z,211nm,1.2s
ARU                                 pmax     pmax
      comp=Z,797nm,7.7s
ARU                                 MLR      MLR
      comp=Z,29µm,15.0s
ARU   Arti              55.40 318   P        P        02 38 26.5 +0.1
SDSI  Sungai Dareh      55.56 234   P        P        02 38 29.1 +1.0
      comp=Z,2µmcomp=Z,91nm,1.3s
UGM   Wanagama          56.14 220   P        P        02 38 31.2 -1.0
UGM   Wanagama          56.14 220   P        P        02 38 33.4 +1.2
      comp=Z,177nm,2.1s
GSI   Gunungsitoli      56.34 239   P        P        02 38 33.3 -0.5
GSI   Gunungsitoli      56.34 239   P        P        02 38 34.5 +0.8
      comp=Z,4µmcomp=Z,95nm,1.3s
DIB   Dawson Inlet,     56.40  46   P        P        02 38 33.7 +0.1
KLSI                    56.56 228   P        P        02 38 35.3 +0.1
      comp=Z,658nmcomp=Z,40nm,1.3s
LHSI  Lahat             56.57 230   P        P        02 38 36.3 +1.0
      comp=Z,7µmcomp=Z,172nm,1.1s
LEM   Lembang           56.72 224   P        P        02 38 35.6 -0.9
      comp=Z,63nm,0.7s,baz=111,slow=4.1,SNR=12
BHPL  Bhopal            57.30 274  eP        P        02 38 38.5 -1.9
BHPL                                IAmb     IAmb     02 38 53.3
      comp=Z,49nm,0.6s
ABKAR Akbulak array     57.40 309   P        P        02 38 40.4 -0.4
ABKAR Akbulak array     57.40 309   P        P        02 38 40.7 -0.1
EUNU  Eureka            57.43   9   P        P        02 38 40.9 +0.3
EUNU                                IAmb     IAmb     02 39 00.5
      comp=Z,42nm,0.8s
KBL   Kabul             57.85 290   P        P        02 38 44.0 -0.5
KBL                                 pmax     pmax
      comp=Z,104nm,1.0s
KBL                                 MLR      MLR
      comp=Z,11µm,20.0s
KBL   Kabul             57.85 290   P        P        02 38 44.0 -0.5
HOPEN Hopen             57.90 346  eP        P        02 38 44.2 +0.3
HOPEN                              ePP       PP       02 40 51.7 -0.1
AKTO  Aktyubinsk        58.04 311   P        P        02 38 45.0 -0.2
      comp=Z,42nm,0.8s,baz=73,slow=7.6,SNR=92
SPA0  Spitsbergen Ar    58.28 349  eP        P        02 38 46.7 +0.1
SPA0                               ePP       PP       02 40 56.3 +1.0
SPITS Spitsbergen Ar    58.28 349   P        P        02 38 46.3 -0.3
      comp=Z,29nm,1.1s,baz=124,slow=10,SNR=5.7
KBS   Kingsbay          58.37 350ceP         P        02 38 48.1 +0.9
KBS                                 pmax     pmax
      comp=Z,41nm,0.9s
KBS   Kingsbay          58.37 350   IAMs_20  IAMs_20  03 06 39.8
      comp=Z,3µm,18.0s
KBS   Kingsbay          58.37 350  eP        P        02 38 48.8 +1.7
KBS                                ePP       PP       02 40 55.3 -0.7
KBS   Kingsbay          58.37 350  i P       P        02 38 48.1 +0.9
KBS                                 IAmb     IAmb     02 38 49.5
      comp=Z,115nm,0.9s
KNTN  Kanton            59.02 124   P        P        02 38 52.8 +0.3
KNTN                                IAmb     IAmb     02 38 58.8
      comp=Z,36nm,1.0s
KIRV  Kirov             59.07 322   P        P        02 38 52.5 +0.2
      comp=Z,105nm,0.8s,baz=82,slow=1.0,SNR=46
SANVU Saraoutou         59.16 153   P        P        02 38 53.4 +0.1
SANVU                               IAMs_20  IAMs_20  03 00 42.5
      comp=Z,4µm,21.0s
HSPB  Hornsund (broa    59.23 348  eP        P        02 38 53.9 +0.7
HSPB                               eS        S        02 47 00.3 +1.5
HSPB                               eL        L        03 06 11.7
      comp=Z,6µm,20.9s
HSPB  Hornsund (broa    59.23 348  eP        P        02 38 53.7 +0.5
HSPB                               ePP       PP       02 41 04.4 +0.8
BBB   Bella Bella       59.24  46   P        P        02 38 53.6 +0.1
CTA   Charters Tower    59.45 177   P        P        02 38 56.5 +1.3
      comp=Z,1.5nm,0.8s,baz=24,slow=6.9,SNR=3.1
CTAO  Charters Tower    59.45 177   P        P        02 38 56.0 +0.7
CTAO                                pmax     pmax
      comp=Z,6.0nm,1.0s
CTAO  Charters Tower    59.45 177   P        P        02 38 56.0 +0.7
WB0   Warramunga Arr    59.64 190   P        P        02 38 56.6  0.0
FITZ  Fitzroy Crossi    59.71 199   P        P        02 38 57.4 +0.3
      comp=Z,14nm,1.1s,baz=17,slow=6.2,SNR=12
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FITZ  Fitzroy Crossi    59.71 199   P        P        02 38 56.9 -0.2
FITZ                                IAmb     IAmb     02 39 07.5
      comp=Z,30nm,1.0s
HYB   Hyderabad         59.71 268  i P       P        02 38 57.0 -0.4
HYB                                esP       pwP      02 39 07.0 -0.8
HYB                                eS        S        02 47 08.0 +1.3
HYB   Hyderabad         59.71 268  eP        P        02 38 56.2 -1.2
HYB                                 IAmb     IAmb     02 38 59.1
      comp=Z,43nm,1.1s
HYB                                 IAMs_20  IAMs_20  03 07 01.3
      comp=Z,4µm,14.4s
WRAB  Tennant Creek     59.81 190   P        P        02 38 57.7  0.0
WRAB                                pmax     pmax
      comp=Z,44nm,0.9s
WRAB  Tennant Creek     59.81 190   P        P        02 38 57.7  0.0
WRAB                                IAmb     IAmb     02 39 07.3
      comp=Z,44nm,0.9s
WR0   Warramunga Arr    59.81 189   P        P        02 38 57.8  0.0
WR0                                 IAmb     IAmb     02 39 05.5
      comp=Z,39nm,1.0s
WB2   Warramunga Arr    59.81 190   P        P        02 38 57.3 -0.5
WRA   Warramunga Arr    59.82 190   P        P        02 38 57.1 -0.7
      comp=Z,16nm,0.8s,baz=7.2,slow=7.1,SNR=80
WRA                                 LR       LR       03 04 45.5
      comp=Z,1µm,19.4s,baz=345,slow=36
WRA   Warramunga Arr    59.82 190   P        P        02 38 57.8 -0.1
WRA                                 pmax     pmax
      comp=Z,3.0nm,0.8s
WRA   Warramunga Arr    59.82 190   P        P        02 38 57.8 -0.1
YKA   Yellowknife Ar    60.87  31   P        P        02 39 04.5 -0.1
      comp=Z,2.9nm,0.7s,baz=305,slow=6.0,SNR=38
YKA                                 LR       LR       03 08 44.3
      comp=Z,2µm,18.2s,baz=0.0,slow=39
APA   Apatity           60.94 336⇓iP         P        02 39 02.4 -2.6
APA                                i PPP     PPP      02 42 51.0
APA                                i S       S        02 47 17.0 -4.0
APA                                i PS               02 47 35.0
APA                                i SS      SS       02 51 14.0 -5.6
APA                                i SSS     SSS      02 53 59.0
APA                                 pmax     pmax
      comp=Z,23nm,0.8s
APA                                 MLR      MLR
      comp=Z,7µm,23.0s
MDRS  Chennai           61.02 263  eP        P        02 39 05.9 -0.3
MDRS                                IAmb     IAmb     02 39 17.8
      comp=Z,42nm,0.9s
TMCR  Tamitsa           61.18 331  eP        P        02 39 06.2 -0.5
TMCR                                pmax     pmax
      comp=Z,83nm,1.0s
KEV   Kevo              61.55 339   P        P        02 39 09.6 +0.5
KEV                                 pmax     pmax
      comp=Z,37nm,0.9s
KEV                                 MLR      MLR
      comp=Z,6µm,18.0s
KEV   Kevo              61.55 339   P        P        02 39 09.6 +0.5
KEV                                 IAmb     IAmb     02 39 10.7
      comp=Z,37nm,0.9s
HAMF  Hammerfest        61.87 341  eP        P        02 39 11.6 +0.5
HAMF                               ePP       PP       02 41 28.1 +1.2
ARA0  ARCESS Array S    62.10 339  eP        P        02 39 12.4 -0.4
ARA0                               ePP       PP       02 41 29.2 +0.1
ARCES ARCESS Array B    62.10 339   P        P        02 39 12.5 -0.3
      comp=Z,19nm,0.8s,baz=44,slow=7.7,SNR=17
ARCES                               LR       LR       03 09 24.6
      comp=Z,5µm,20.7s,baz=60,slow=39
ARCES ARCESS Array B    62.10 339   P        P        02 39 13.1 +0.3
ARCES                               pmax     pmax
      comp=Z,26nm,1.1s
ARCES ARCESS Array B    62.10 339   P        P        02 39 13.1 +0.3
ARCES                               IAmb     IAmb     02 39 13.7
      comp=Z,26nm,1.1s
KLMR  Klimovskoe        62.35 328  eP        P        02 39 13.4 -1.2
KLMR                               e                  02 41 28.6
KLMR                               eS        S        02 47 40.5 +1.4
KLMR                                pmax     pmax
      comp=Z,111nm,1.4s
KLMR                                MLR      MLR
      comp=Z,8µm,15.0s
KLMR  Klimovskoe        62.35 328  eP        P        02 39 13.5 -1.2
KLMR                                AMP               02 39 17.6
      comp=Z,111nm,1.4s
KLMR                               ePP       PP       02 41 28.6 -2.9
KLMR                               eS        S        02 47 40.5 +1.4
KLMR                               eS        S        02 47 40.5 +1.4
KLMR                                LQ       LQ       03 01 17.7
KLMR                                LQ       LQ       03 01 17.7
KLMR                                LR       LR       03 05 07.9
KLMR                                AMP               03 08 39.7
      comp=Z,8µm,15.2s
TULEG Thule             62.36   8   P        P        02 39 14.2 -0.3
TULEG                               IAmb     IAmb     02 39 33.0
      comp=Z,42nm,1.0s
TULEG Thule             62.36   8  i P       P        02 39 13.8 -0.7
TULEG                               IAmb     IAmb     02 39 14.8
      comp=Z,24nm,0.9s
POO   Poona             62.70 272  eP        P        02 39 16.8 -0.8
POO                                 IAMs_20  IAMs_20  03 08 15.2
      comp=Z,7µm,18.3s
HRA   Herat             62.80 293   P        P        02 39 18.0 -0.3
HRA                                 IAmb     IAmb     02 39 26.4
      comp=Z,37nm,1.0s
KTK1  Kautokeino        63.05 340  eP        P        02 39 19.1 -0.1
KTK1                               ePP       PP       02 41 38.5 +1.0
BHUJ  Bhuj              63.25 279  eP        P        02 39 18.5 -2.7
BHUJ                                IAmb     IAmb     02 39 25.9
      comp=Z,44nm,1.0s
BHUJ                                IAMs_20  IAMs_20  03 08 20.2
      comp=Z,9µm,15.4s
DAG   Danmarks Havn     63.34 355  i P       P        02 39 20.4 -0.5
      comp=Z,71nm,1.1s
DAG   Danmarks Havn     63.34 355  i P       P        02 39 20.4 -0.5
DAG                                 pmax     pmax
      comp=Z,71nm,1.1s
DAG   Danmarks Havn     63.34 355  i P       P        02 39 20.5 -0.5
DAG                                 IAmb     IAmb     02 39 22.7
      comp=Z,71nm,1.1s
JETT  Jettan, Norway    63.43 341  eP        P        02 39 21.7  0.0
PGC   Sidney            63.54  48   P        P        02 39 22.7 +0.1
PGC                                 IAmb     IAmb     02 39 35.0
      comp=Z,21nm,1.1s
AS31  Alice Springs     63.54 190   P        P        02 39 23.2 +0.3
ASAR  Alice Springs     63.54 190   P        P        02 39 22.7 -0.2
      comp=Z,8.1nm,0.7s,baz=9.7,slow=5.7,SNR=46
ASAR                                LR       LR       03 06 40.4
      comp=Z,2µm,20.4s,baz=13,slow=36
TRO   Tromso            63.75 341  eP        P        02 39 23.7  0.0
TRO                                ePP       PP       02 41 44.0 +0.5
GEYT  Alibeck           63.85 299   P        P        02 39 24.9  0.0
      comp=Z,40nm,0.9s,baz=61,slow=3.7,SNR=46
GEYT                                LR       LR       03 09 58.9
      comp=Z,8µm,18.1s,baz=90,slow=39
GEYT  Alibeck           63.85 299   P        P        02 39 25.1  0.0
GYA0B ALIBECK ARRAY     63.85 299   P        P        02 39 24.8 -0.2
A04D  Lummi Island      63.93  47   P        P        02 39 25.8 +0.6
      baz=301
A04D                                S        S        02 48 01.9 +2.9
      baz=301
NLWA  Neilton Lookou    63.94  49   P        P        02 39 25.7 +0.3
NLWA                                IAmb     IAmb     02 39 38.6
      comp=Z,31nm,1.1s
D03D  Eldon             64.32  49   P        P        02 39 28.9 +1.0
      baz=301,SNR=13
D03D                                S        S        02 48 08.9 +4.9
      baz=301
PALK  Pallekele         64.32 258   P        P        02 39 28.2 -0.1
PALK                                pmax     pmax
      comp=Z,19nm,1.1s
PALK                                MLR      MLR
      comp=Z,4µm,20.0s
PALK  Pallekele         64.32 258   P        P        02 39 28.2 -0.1
PALK  Pallekele         64.32 258   IAMs_20  IAMs_20  03 09 58.3
      comp=Z,4µm,20.0s
GOA   Goa               64.50 269  eP        P        02 39 29.6 +0.2
GOA                                 IAmb     IAmb     02 39 31.0
      comp=Z,76nm,1.4s
B05A  Bryant            64.51  48   P        P        02 39 30.5 +1.5
      baz=302,SNR=6.2
B05A                                S        S        02 48 07.9 +1.6
      baz=302
E03A  Lebam             64.55  50   P        P        02 39 29.5 +0.2
D04E  Lakebay           64.69  49   P        P        02 39 31.2 +0.9
      baz=302
D04E                                S        S        02 48 13.0 +4.4
      baz=302
B06A  Marblemount       64.72  47   P        P        02 39 30.8 +0.4
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B06A                                IAmb     IAmb     02 39 49.7
      comp=Z,21nm,0.9s
EIDS  Eidsvold          65.05 172   P        P        02 39 33.6 +0.9
EIDS                                IAmb     IAmb     02 39 42.8
      comp=Z,19nm,0.8s
DZM   Mont Dzumac       65.08 156   P        P        02 39 33.5 +0.4
      comp=Z,17nm,1.0s,baz=21,slow=8.4,SNR=3.7
DZM   Mont Dzumac       65.08 156  eP        P        02 39 34.0 +0.9
      comp=Z,177nm,1.3s
DZM                                eS        S        02 48 09.6 -4.2
      comp=Z,5µm,30.9s
DZM   Mont Dzumac       65.08 156  eLR       LR       02 59 03.8
      comp=Z,6µm,22.0s
DZM   Mont Dzumac       65.08 156   P        P        02 39 33.8 +0.7
DZM                                 IAMs_20  IAMs_20  03 04 03.4
      comp=Z,4µm,20.0s
F04D  Rainier, OR       65.12  50   P        P        02 39 33.9 +0.8
      baz=302
E04D  Cinebar           65.13  49   P        P        02 39 34.6 +1.4
      baz=302,SNR=11
E04D                                S        S        02 48 19.2 +5.1
      baz=302
D05A  Enumclaw          65.14  49   P        P        02 39 33.7 +0.5
D05A                                IAmb     IAmb     02 39 45.0
      comp=Z,47nm,1.1s
KULLO Kullorsuaq        65.28   6  i P       P        02 39 33.2 -0.4
      comp=Z,59nm,1.1s
KULLO Kullorsuaq        65.28   6  eP        P        02 39 33.2 -0.4
KULLO                               pmax     pmax
      comp=Z,59nm,1.1s
KULLO Kullorsuaq        65.28   6  eP        P        02 39 33.3 -0.4
KULLO                               IAmb     IAmb     02 39 35.8
      comp=Z,59nm,1.1s
C06D  Leavenworth       65.37  47   P        P        02 39 36.2 +1.4
      baz=302
G03D  McMinnville, O    65.43  51   P        P        02 39 36.7 +1.6
      baz=302
G03D                                S        S        02 48 21.7 +3.9
      baz=302
LON   Longmire          65.47  49   P        P        02 39 35.6 +0.1
LON                                 pmax     pmax
      comp=Z,10.0nm,1.0s
LON   Longmire          65.47  49   P        P        02 39 35.6 +0.1
MSVF  Nonsavu           65.65 143   IAMs_20  IAMs_20  03 04 01.8
      comp=Z,4µm,20.0s
I02D  Swisshome         65.67  52   P        P        02 39 37.3 +0.6
      baz=302
I02D                                S        S        02 48 30.4  +10
      baz=302
N2IH  Innhavet          65.71 341  eP        P        02 39 36.7 +0.2
COR   Corvallis         65.74  51   P        P        02 39 37.3 +0.2
COR                                 pmax     pmax
      comp=Z,57nm,1.0s
COR   Corvallis         65.74  51   P        P        02 39 37.3 +0.2
DBG   Daneborg          65.83 355  i P       P        02 39 37.1 -0.1
LTY   Liberty           65.86  48   P        P        02 39 37.9 -0.1
LTY                                 IAmb     IAmb     02 39 44.3
      comp=Z,20nm,1.1s
B08A  Colville Reser    66.02  46   P        P        02 39 38.9 -0.1
KEBM  Edson Butte       66.03  53   P        P        02 39 39.0 -0.1
MOS   Moscow            66.04 323  eP        P        02 39 36.6 -2.3
MOS                                e                  02 40 07.5
MOS                                e                  02 42 01.2
MOS                                eS        S        02 48 21.2 -3.6
MOS                                e                  02 49 29.5
MOS                                eSS       SS       02 52 34.8 -4.8
MOS                                 pmax     pmax
      comp=Z,171nm,1.5s
MOS                                 pmax     pmax
      comp=N,83nm,1.2s
MOS                                 pmax     pmax
      comp=E,68nm,1.2s
MOS                                 pmax     pmax
      comp=Z,1µm,3.2s
MOS                                 MLR      MLR
      comp=Z,17µm,16.0s
MOS                                 MLR      MLR
      comp=N,11µm,15.0s
MOS                                 MLR      MLR
      comp=E,10µm,16.0s
H04D  Lebanon           66.12  51   P        P        02 39 40.4 +0.8
      baz=303
H04D                                S        S        02 48 30.0 +3.8
      baz=303
J01E  Myrtle Point      66.12  53   P        P        02 39 40.8 +1.2
      baz=303
J01E                                S        S        02 48 31.1 +4.9
      baz=303
F05D  White Salmon      66.14  50   P        P        02 39 41.1 +1.3
      baz=303
F05D                                S        S        02 48 30.6 +4.2
      baz=303
LOF   Lofoten           66.18 342  eP        P        02 39 40.4 +0.8
I03D  Drain, OR         66.19  52   P        P        02 39 42.2 +2.2
      baz=303,SNR=13
I03D                                S        S        02 48 31.6 +4.5
      baz=303
N2TV  T¥rnvik           66.21 341  eP        P        02 39 40.3 +0.6
N2ST  Straumen          66.26 340  eP        P        02 39 40.3 +0.2
FAUS  Fauske            66.31 341  eP        P        02 39 40.2 -0.2
H04A  Detroit Lake      66.36  51   P        P        02 39 41.4 +0.2
H04A                                IAmb     IAmb     02 39 50.4
      comp=Z,41nm,1.1s
TRD   Trivandrum        66.37 261  eP        P        02 39 40.8 -0.8
KBO   Bosley Butte      66.45  54   P        P        02 39 42.0 +0.2
NBB08 Skaug oppvekst    66.47 341  eP        P        02 39 42.0 +0.6
K02D  Willamette Mer    66.54  53   P        P        02 39 43.7 +1.3
      baz=303,SNR=5.3
G05D  Wamic, OR         66.58  50   P        P        02 39 44.4 +1.8
      baz=303
G05D                                S        S        02 48 37.3 +5.5
      baz=303
VRH   Novokhopyorsk     66.64 318  eP        P        02 39 42.0 -0.8
VRH                                 pmax     pmax
      comp=Z,100nm,0.9s
VRH                                 MLR      MLR
      comp=Z,26µm,16.0s
NBB28 Valnes            66.67 341  eP        P        02 39 43.0 +0.4
E07A  Sunnyside         66.71  48   P        P        02 39 43.7 +0.4
E07A                                IAmb     IAmb     02 39 60.0
      comp=Z,31nm,1.0s
I04A  Tendick Farm,     66.71  52   P        P        02 39 44.9 +1.4
      baz=303,SNR=22
I04A                                S        S        02 48 35.4 +1.9
      baz=303
N2VA  Vr¸y              66.75 342  eP        P        02 39 43.2  0.0
L02E  Cave Junction     66.87  54   P        P        02 39 45.8 +1.4
      baz=303
L02E                                S        S        02 48 39.8 +4.4
      baz=303
NBB05 Inndyr            66.89 341  eP        P        02 39 44.2 +0.1
OBN   Obninsk           66.90 323   P        P        02 39 43.7 -0.6
      comp=Z,13nm,1.0s,baz=123,slow=0.5,SNR=14
OBN   Obninsk           66.90 323c iP        P        02 39 44.6 +0.3
OBN                                e                  02 39 54.1
OBN                                e                  02 40 09.9
OBN                                e                  02 42 16.8
OBN                                ePPP      PPP      02 43 45.2
OBN                                eS        S        02 48 38.8 +3.6
OBN                                eSS       SS       02 52 47.0 -5.8
OBN                                 pmax     pmax
      comp=Z,117nm,1.3s
OBN                                 pmax     pmax
      comp=Z,1µm,3.4s
OBN                                 MLR      MLR
      comp=Z,16µm,15.0s
OBN   Obninsk           66.90 323   P        P        02 39 44.2 -0.1
C09A  Chrisman Ranch    66.92  46   P        P        02 39 44.7  0.0
C09A                                IAmb     IAmb     02 40 00.8
      comp=Z,34nm,1.1s
D08A  Wollman Farm,     66.97  47   P        P        02 39 45.2 +0.3
D08A                                IAmb     IAmb     02 39 57.4
      comp=Z,31nm,1.0s
HAWA  Hanford           66.99  48   P        P        02 39 45.1  0.0
N2RO  R¸st              67.00 342  eP        P        02 39 45.1 +0.4
NBB30 Finnes            67.02 341  eP        P        02 39 45.0 +0.1
HUMO  Hull Mountain     67.02  53   P        P        02 39 45.5  0.0
F07A  Phinny Hill Vi    67.03  49   P        P        02 39 45.3 -0.1
F07A                                IAmb     IAmb     02 39 54.7
      comp=Z,33nm,1.0s
I05D  Terrebonne, OR    67.06  51   P        P        02 39 46.8 +1.1
      baz=304
I05D                                S        S        02 48 42.6 +4.9
      baz=304
UPNV  Upernavik         67.10   6  eP        P        02 39 44.8 -0.6
COCO  West Island       67.19 230  i P       P        02 39 45.1 -1.5
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J04D  Umpqua Nationa   67.20  52  P        P        02 39 47.6 +0.9
      baz=304,SNR=11
J04D                              S        S        02 48 42.9 +3.2
      baz=304
E08A  Dider Farm, El   67.20  48  P        P        02 39 46.3 -0.2
E08A                              IAmb     IAmb     02 39 59.0
      comp=Z,27nm,1.0s
FIA1  FINESS Array S   67.20 332  P        P        02 39 46.2 +0.1
FINES FINESS Array B   67.21 332  P        P        02 39 46.0 -0.2
      comp=Z,44nm,0.8s,baz=46,slow=8.2,SNR=61
FINES                             LR       LR       03 12 01.0
      comp=Z,18µm,18.1s,baz=34,slow=39
FINES FINESS Array B   67.21 332  P        P        02 39 46.3 +0.1
FINES FINESS Array B   67.21 332  P        P        02 39 46.3 +0.1
LPSR  Galich'ya Gora   67.25 320 eP        P        02 39 46.0 -0.6
LPSR                              pmax     pmax
      comp=Z,90nm,0.9s
LPSR                              MLR      MLR
      comp=Z,15µm,15.0s
NEW   Newport          67.30  46  P        P        02 39 48.0 +0.9
      baz=304,SNR=19
NEW   Newport          67.30  46  P        P        02 39 47.0 -0.1
NEW                               pmax     pmax
      comp=Z,27nm,1.2s
NEW   Newport          67.30  46  P        P        02 39 47.0 -0.1
NEW                               IAmb     IAmb     02 40 03.4
      comp=Z,27nm,1.1s
KHMM  Horse Mountain   67.49  55  P        P        02 39 48.4 -0.2
KHMM                              IAmb     IAmb     02 39 56.8
      comp=Z,50nm,1.1s
KONS  Konsvik          67.54 341 eP        P        02 39 48.2  0.0
PINE  Pine Mountain    67.60  51  P        P        02 39 48.9 -0.4
L04D  Klamath Falls    67.64  53  P        P        02 39 50.5 +1.0
      baz=304,SNR=22
VORR  Voronezh         67.65 319 eP        P        02 39 47.0 -2.2
VORR                              pmax     pmax
      comp=Z,250nm,0.8s
YBH   Yreka Blue Hor   67.66  54  P        P        02 39 49.4 -0.2
YBH                               pmax     pmax
      comp=Z,35nm,1.2s
YBH   Yreka Blue Hor   67.66  54  P        P        02 39 49.4 -0.2
YBH                               IAmb     IAmb     02 40 03.0
      comp=Z,35nm,1.1s
STOK  Stokkvaagen      67.69 341 eP        P        02 39 49.8 +0.6
J05D  Fort Rock, OR    67.70  52  P        P        02 39 51.2 +1.3
      baz=304,SNR=29
J05D                              S        S        02 48 50.5 +4.8
      baz=304
E09A  Wood Farm, Sta   67.71  48  P        P        02 39 49.6 -0.1
E09A                              IAmb     IAmb     02 40 06.1
      comp=Z,50nm,1.1s
K04D  Chiloquin, OR    67.75  53  P        P        02 39 51.3 +1.1
      baz=304
K04D                              S        S        02 48 49.2 +3.0
      baz=304
M02C  Callahan         67.75  54  P        P        02 39 51.3 +1.2
      baz=304
M02C                              S        S        02 48 49.3 +3.0
      baz=304
G08A  Pilot Rock       67.94  49  P        P        02 39 51.2 -0.1
VSR   Storozhevoye     67.94 319 eP        P        02 39 50.0 -1.0
VSR                               pmax     pmax
      comp=Z,60nm,0.9s
VSR                               MLR      MLR
      comp=Z,8µm,16.0s
MAK   Makhachkala      68.00 308 eP        P        02 39 46.2 -5.3
MAK                              eS        S        02 48 42.6 -6.3
MAK                              eSS       SS       02 53 16.0 +5.4
MAK                               pmax     pmax
      comp=Z,168nm,1.6s
MAK                               MLR      MLR
      comp=Z,6µm,13.0s
VORD  Divnogorie       68.03 319 eP        P        02 39 51.0 -0.5
VORD                              pmax     pmax
      comp=Z,60nm,1.1s
N02D  Trinity Center   68.08  55  P        P        02 39 52.7 +0.5
      baz=304
N02D                              S        S        02 48 54.6 +4.5
      baz=304
SUMG  Summit           68.11   1 i P       P        02 39 52.1 -0.1
      comp=Z,287nm,1.1s
SUMG  Summit           68.11   1  P        P        02 39 52.3 +0.1
SUMG                              pmax     pmax
      comp=Z,84nm,0.9s
SUMG  Summit           68.11   1  P        P        02 39 52.3 +0.1
SUMG  Summit           68.11   1 i P       P        02 39 52.2 -0.1
SUMG                              IAmb     IAmb     02 39 55.7
      comp=Z,287nm,1.1s
M04C  Macdoel          68.17  53  P        P        02 39 53.9 +1.1
      baz=304,SNR=18
M04C                              S        S        02 48 54.1 +2.8
      baz=304
K05A  Summer Lake      68.22  52  P        P        02 39 52.9 -0.4
KCPM  Cahto Peak       68.24  56  P        P        02 39 53.1 -0.2
KCPM                              IAmb     IAmb     02 40 12.3
      comp=Z,45nm,1.1s
I07A  Izee             68.30  50  P        P        02 39 53.4 -0.1
WDC   Whiskeytown Da   68.40  55  P        P        02 39 54.0 -0.1
WDC                               pmax     pmax
      comp=Z,14nm,1.0s
WDC   Whiskeytown Da   68.40  55  P        P        02 39 54.0 -0.1
O02D  Mt. Diablo Mer   68.47  55  P        P        02 39 55.8 +1.1
      baz=304,SNR=8.4
O02D                              S        S        02 48 58.7 +3.9
      baz=304
NUUG  Nuugaatsiaq      68.54   6 i P       P        02 39 54.4  0.0
F10A  Beach Ranch, E   68.55  48  P        P        02 39 54.8 -0.3
WALA  Waterton Lakes   68.58  44  P        P        02 39 54.7 -0.5
WALA                              IAmb     IAmb     02 40 06.1
      comp=Z,27nm,1.1s
WALA                              IAMs_20  IAMs_20  03 13 13.6
      comp=Z,2µm,19.0s
GROC  Groznyy          68.90 309 eP        P        02 39 56.5 -0.7
GROC                             e                  02 40 21.6
GROC                             eS        S        02 48 59.6  0.0
GROC                              pmax     pmax
      comp=Z,74nm,1.3s
GROC                              MLR      MLR
      comp=Z,2µm,13.0s
HOPS  Hopland Field    68.95  56  P        P        02 39 57.5 -0.1
HOPS                              IAMs_20  IAMs_20  03 01 54.4
      comp=Z,2µm,21.0s
VSU   Vasula           68.96 330 eP        P        02 39 57.1 -0.1
O03E  Paynes Creek     69.03  55  P        P        02 39 58.3 +0.2
      baz=305,SNR=18
O03E                              S        S        02 49 02.8 +1.3
      baz=305
MOD   Modoc Plateau    69.05  53  P        P        02 39 58.0 -0.3
BMO   Blue Mountains   69.15  49  P        P        02 39 58.6 -0.2
BMO                               pmax     pmax
      comp=Z,20nm,1.1s
BMO                               MLR      MLR
      comp=Z,1µm,20.0s
BMO   Blue Mountains   69.15  49  P        P        02 39 58.6 -0.2
JTMT  Jette            69.16  45  P        P        02 39 58.6 -0.3
JTMT                              IAmb     IAmb     02 40 14.9
      comp=Z,34nm,1.2s
GDXM  Geysers          69.24  56  P        P        02 39 59.2 -0.2
GDXM                              IAMs_20  IAMs_20  03 11 22.9
      comp=Z,3µm,19.0s
J08A  Circle Bar Ran   69.32  50  P        P        02 39 59.8 -0.1
J08A                              IAmb     IAmb     02 40 04.9
      comp=Z,23nm,1.1s
NSS   Namsos           69.38 340 eP        P        02 39 59.3 -0.4
GOF   Gofitskoye       69.45 312⇑eP        P        02 40 01.2 +0.6
GOF                               pmax     pmax
      comp=Z,211nm,1.0s
MNCI  Minicoy          69.50 264  P        P        02 40 01.2  0.0
MNCI                              IAMs_20  IAMs_20  03 13 50.3
      comp=Z,3µm,19.0s
MNCY  Minicoy          69.53 264 eP        P        02 39 58.9 -2.5
MCCM  Marconi Confer   69.56  57  P        P        02 40 01.6 +0.3
MCCM                              IAmb     IAmb     02 40 04.7
      comp=Z,54nm,1.1s
ORV   Oroville         69.64  55  P        P        02 40 01.5 -0.3
ORV                               pmax     pmax
      comp=Z,25nm,1.2s
ORV   Oroville         69.64  55  P        P        02 40 01.5 -0.3
ORV                               IAmb     IAmb     02 40 07.9
      comp=Z,25nm,1.1s
SCO   Scoresbysund     69.70 355  P        P        02 40 01.8 +0.2
SCO                               pmax     pmax
      comp=Z,26nm,1.1s
SCO   Scoresbysund     69.70 355  P        P        02 40 01.8 +0.2
SCO                               IAmb     IAmb     02 40 17.9
      comp=Z,26nm,1.1s
WVOR  Wild Horse Val   69.76  51  P        P        02 40 02.5 -0.2
WVOR                              pmax     pmax
      comp=Z,21nm,1.2s
WVOR  Wild Horse Val   69.76  51  P        P        02 40 02.5 -0.2
MSO   Missoula         69.89  45  P        P        02 40 03.9 +0.5
      baz=307,SNR=11
MSO   Missoula         69.89  45  P        P        02 40 03.1 -0.3
MTSE  Matsula          69.90 331 eP        P        02 39 59.6 -3.4
ARMA  Armidale         70.10 172  P        P        02 40 05.6 +0.9
ARMA                              IAmb     IAmb     02 40 16.7
      comp=Z,24nm,1.1s
BEKR  Beckworth        70.18  54  P        P        02 40 05.0 -0.4
BEKR                              IAmb     IAmb     02 40 11.8
      comp=Z,36nm,1.2s
AAL   Aland            70.23 334 eP        P        02 40 04.6 -0.4
ZEI   Tsey             70.27 309 eP        P        02 40 02.6 -3.3
ZEI                               pmax     pmax
      comp=Z,50nm,1.1s
KIV   Kislovodsk       70.30 311 ⇑P        P        02 40 06.6 +0.7
KIV   Kislovodsk       70.30 311 i P       P        02 40 06.7 +0.7
      SNR=46
KIV   Kislovodsk       70.30 311 eP        P        02 40 06.6 +0.7
KIV                              e                  02 42 41.4
KIV                              eS        S        02 49 19.0 +2.7
KIV                              eSS       SS       02 53 51.1 +4.9
KIV                               pmax     pmax
      comp=Z,790nm,1.1s
KIV                               pmax     pmax
      comp=Z,1µm,4.2s
KIV                               MLR      MLR
      comp=Z,24µm,17.0s
KIV   Kislovodsk       70.30 311  P        P        02 40 05.3 -0.7
KBZ   Khabaz           70.31 311  P        P        02 40 06.5 +0.6
      comp=Z,74nm,0.9s,baz=61,slow=4.3,SNR=132
KBZ                               LR       LR       03 13 23.8
      comp=Z,5µm,19.4s,baz=42,slow=38
KBZ   Khabaz           70.31 311c iP       P        02 40 06.5 +0.6
KBZ                               pmax     pmax
      comp=Z,89nm,0.9s
AFDM  Forest Hills D   70.33  55  P        P        02 40 06.0  0.0
FFC   Flin Flon        70.77  34  P        P        02 40 08.9 +0.4
FFC                               pmax     pmax
      comp=Z,33nm,1.0s
FFC                               MLR      MLR
      comp=Z,2µm,19.0s
FFC   Flin Flon        70.77  34  P        P        02 40 08.9 +0.4
FFC                               IAmb     IAmb     02 40 23.8
      comp=Z,33nm,1.0s
FFC   Flin Flon        70.77  34  IAMs_20  IAMs_20  03 14 06.9
      comp=Z,2µm,19.0s
PAHR  Pah Rah Range    70.89  54  IAmb     IAmb     02 40 28.3
      comp=Z,42nm,1.2s
VCNR  Virginia City    70.96  55  P        P        02 40 09.9 -0.3
VCNR                              IAmb     IAmb     02 40 23.1
      comp=Z,24nm,1.0s
ILULI Ilulissat        70.98   5  P        P        02 40 09.5  0.0
ILULI                             pmax     pmax
      comp=Z,28nm,0.9s
ILULI Ilulissat        70.98   5  P        P        02 40 09.5  0.0
ILULI                             IAmb     IAmb     02 40 22.4
      comp=Z,28nm,0.9s
FCC   Fort Churchill   71.06  28  P        P        02 40 09.2 -1.0
FCC                               pmax     pmax
      comp=Z,14nm,1.1s
FCC                               MLR      MLR
      comp=Z,3µm,22.0s
FCC   Fort Churchill   71.06  28  P        P        02 40 09.2 -1.0
FCC                               IAMs_20  IAMs_20  03 15 35.2
      comp=Z,3µm,22.0s
IDID  Didziasalis      71.10 327 eP        P        02 40 10.6 +0.2
PNTR  Pine Nut         71.11  55  P        P        02 40 10.7 -0.4
PNTR                              IAmb     IAmb     02 40 24.2
      comp=Z,34nm,1.1s
HRY   Holter Researc   71.11  45  P        P        02 40 10.5 -0.4
STKA  Stephens Creek   71.14 181  P        P        02 40 10.8  0.0
      comp=Z,4.4nm,0.8s,baz=344,slow=8.6,SNR=7.5
STKA                              LR       LR       03 11 04.7
      comp=Z,1µm,21.6s,baz=15,slow=36
STKA  Stephens Creek   71.14 181  P        P        02 40 10.9 +0.1
STKA                              pmax     pmax
      comp=Z,3.0nm,0.9s
STKA  Stephens Creek   71.14 181  P        P        02 40 10.9 +0.1
MNK   Minsk            71.17 326⇑eP        P        02 40 10.0 -0.9
MNK                              eS        S        02 49 26.0 +0.3
MNK                               pmax     pmax
      comp=Z,230nm,1.0s
MNK                               MLR      MLR
      comp=N,13µm,14.0s
MNK                               MLR      MLR
      comp=Z,16µm,15.0s
MNK                               MLR      MLR
      comp=E,6µm,18.0s
MNK                               MLR      MLR
      comp=Z,22µm,10.0s
MNK   Minsk            71.17 326 i P       P        02 40 11.4 +0.6
      comp=E,8.0nm,1.1s
MNK                              i P       P        02 40 11.4 +0.6
      comp=N,57nm,1.1s
MNK                              i P       P        02 40 11.4 +0.6
      comp=Z,102nm,1.0s
MNK                              i PP      PP       02 42 48.8 +0.5
MNK                              i PPP     PPP      02 44 32.0
MNK                              i S       S        02 49 25.7 -0.1
MNK                              i SS      SS       02 53 59.9 +1.3
MNK                              i SSS     SSS      02 57 19.3
MNK                              i LQ      LQ       03 06 32.5
MNK                              i LR      LR       03 11 56.8
MNK                              i LRM     MLR      03 13 58.8
      comp=E,613nm,18.0s
MNK                              i LRM     MLR      03 13 58.8
      comp=N,7µm,16.4s
MNK                              i LRM     MLR      03 13 58.8
      comp=Z,7µm,15.4s
ISAL  Salakas          71.18 328 eP        P        02 40 11.1 +0.2
CMB   Columbia Colle   71.23  56  P        P        02 40 11.4 -0.2
CMB                               pmax     pmax
      comp=Z,22nm,1.1s
CMB   Columbia Colle   71.23  56  P        P        02 40 11.4 -0.2
CMB                               IAmb     IAmb     02 40 30.2
      comp=Z,22nm,1.1s
CMB                               IAMs_20  IAMs_20  03 04 56.5
      comp=Z,2µm,20.0s
UPP   Uppsala          71.27 334 eP        P        02 40 11.5 +0.2
SAO   San Andreas Ge   71.28  58  P        P        02 40 11.5 -0.4
SAO                               pmax     pmax
      comp=Z,13nm,1.2s
SAO   San Andreas Ge   71.28  58  P        P        02 40 11.5 -0.4
IIGN  Ignalina         71.29 328 eP        P        02 40 11.4 -0.2
GNI   Garni            71.32 307  P        P        02 40 13.0 +0.8
GNI   Garni            71.32 307c iP       P        02 40 13.4 +1.1
GNI                               pmax     pmax
      comp=Z,92nm,1.3s
GNI                               MLR      MLR
      comp=Z,6µm,19.0s
GNI   Garni            71.32 307  P        P        02 40 12.2  0.0
AKH   Akhalkalaki      71.33 309 ⇑P        P        02 40 13.7 +1.3
NACGM Naroch           71.36 327 i P       P        02 40 12.6 +0.6
NACGM                            i P       P        02 40 12.6 +0.6
NACGM                            i P       P        02 40 12.6 +0.6
NACGM                            i PP      PP       02 42 57.5 +7.6
NACGM                            i PPP     PPP      02 44 49.9
NACGM                            i S       S        02 49 26.4 -1.6
NACGM                            i SS      SS       02 54 09.6 +8.0
NACGM                            i SSS     SSS      02 57 23.1
NACGM                            i LQ      LQ       03 06 10.6
NACGM                            i LR      LR       03 09 13.9
CHVG  Ch'k'valeri      71.39 310 ⇑P        P        02 40 13.3 +0.8
YERR  Yerington        71.40  55  IAmb     IAmb     02 40 31.6
      comp=Z,54nm,1.1s
EGMT  Eagleton         71.41  43  P        P        02 40 12.6 +0.1
      baz=309,SNR=11
EGMT  Eagleton         71.41  43  IAmb     IAmb     02 40 28.6
      comp=Z,42nm,1.1s
DLMT  Dillon           71.52  46  IAmb     IAmb     02 40 27.6
      comp=Z,43nm,1.0s
WAKR  Walker           71.56  55  IAMs_20  IAMs_20  03 03 46.2
      comp=Z,2µm,21.0s
HLID  Hailey           71.59  48  P        P        02 40 14.9 +1.0
      baz=308,SNR=38
BANOM Banah            71.74 289  P        P        02 40 14.8 -0.1
SHME  Shamm            71.78 289  P        P        02 40 15.1  0.0
BOZ   Bozeman (W)      71.91  45  P        P        02 40 16.5 +0.8
      baz=308,SNR=26
BOZ   Bozeman (W)      71.91  45  IAmb     IAmb     02 40 31.6
      comp=Z,24nm,0.8s
PMPB  Monarch Peak     72.03  58  P        P        02 40 16.5  0.0
PMPB                              IAmb     IAmb     02 40 31.4
      comp=Z,43nm,1.2s
RYN   Ryan             72.06  55  IAmb     IAmb     02 40 35.0
      comp=Z,28nm,1.1s
PABE  Paberze          72.10 329 eP        P        02 40 16.6 +0.2
MDH   Madha            72.11 288  P        P        02 40 16.1 -1.0
MOL   Molde            72.14 340 eP        P        02 40 16.5  0.0
DOMB  Dombas           72.16 339 eP        P        02 40 15.3 -1.5
MSFE  Esma-Masafi      72.17 288  P        P        02 40 17.6 +0.1
SOC   Sochi            72.24 312 i P       P        02 40 17.6 +0.1
SOC                              ePPP      PPP      02 44 37.1
SOC                              eS        S        02 49 39.4 +0.9
SOC                               pmax     pmax
      comp=Z,37nm,0.7s
SOC                               MLR      MLR
      comp=Z,5µm,16.0s
LHV   Little Huntoon   72.30  55  IAMs_20  IAMs_20  03 04 22.8
      comp=Z,2µm,21.0s
NVAR  Mina Array Bea   72.32  55  P        P        02 40 19.6 +1.2
      comp=Z,8.1nm,0.8s,baz=292,slow=5.8,SNR=41
NVAR                              LR       LR       03 05 58.7
      comp=Z,1µm,22.0s,baz=298,slow=31
NVAR  Mina Array Bea   72.32  55  P        P        02 40 18.1 -0.2
BBOO  Buckleboo        72.36 186  IAmb     IAmb     02 40 32.0
      comp=Z,26nm,0.9s
NB2   NORSAR Subarra   72.36 338  P        P        02 40 17.7 -0.3
      comp=Z,278nm,1.7s,baz=38,slow=6.2
NOA   NORSAR Array B   72.36 338  P        P        02 40 17.9  0.0
      comp=Z,46nm,0.8s,baz=38,slow=6.0,SNR=118
NOA                               LR       LR       03 17 41.5
      comp=Z,7µm,18.7s,baz=35,slow=40
NOA   NORSAR Array B   72.36 338  P        P        02 40 18.0  0.0
UOSS  Minazif          72.38 288 i P       P        02 40 18.1 -0.6
      SNR=6.3
UOSS  Minazif          72.38 288  P        P        02 40 18.4 -0.3
UOSS  Minazif          72.38 288  IAMs_20  IAMs_20  03 16 15.0
      comp=Z,3µm,21.0s
NV11  Mina Array Sit   72.41  55  IAmb     IAmb     02 40 39.0
      comp=Z,31nm,1.1s
MLAC  Mammoth, Mammo72.46  56  P        P        02 40 20.6 +1.3
      baz=307
MLAC                              S        S        02 49 46.7 +5.0
      baz=307
HATD  Hatta, Dubai     72.51 288 i P       P        02 40 19.0 -0.4
      SNR=7.2
NC602 NORSAR Array S   72.51 337  P        P        02 40 19.3 +0.4
NC602 NORSAR Array S   72.51 337 eP        P        02 40 18.6 -0.2
PBUR  Paburge          72.54 330 eP        P        02 40 19.3 +0.2
AKN   Aaknes           72.61 340 eP        P        02 40 20.1 +0.7
SOHO  SOHO             72.61 287 i P       P        02 40 19.7 -0.4
      SNR=6.9
ASHO  Ashiyiah         72.64 288 i P       P        02 40 20.2 -0.1
      SNR=6.6
PAGB  Antelope Grade   72.67  58  IAmb     IAmb     02 40 39.3
      comp=Z,37nm,1.1s
YHB   Horse Butte      72.68  46  IAmb     IAmb     02 40 36.5
      comp=Z,26nm,1.0s
NAZ   Nazwa, Dubai     72.76 288  P        P        02 40 20.7 -0.2
ANN   Anapa            72.78 314c iP       P        02 40 18.3 -2.4
ANN                              i                  02 40 30.6
ANN                              e                  02 42 57.9
ANN                              eS        S        02 49 43.8 -0.7
ANN                              eSSS      SSS      02 57 40.0
ANN                               pmax     pmax
      comp=Z,65nm,0.9s
ANN                               MLR      MLR
      comp=E,5µm,20.0s
ANN                               MLR      MLR
      comp=N,10µm,16.0s
MORW  Morawa           72.86 205  P        P        02 40 22.0 +0.8
MORW                              IAmb     IAmb     02 40 28.5
      comp=Z,26nm,1.1s
VOG   Valley Oaks Go   72.89  57  P        P        02 40 22.7 +1.2
      baz=307
FAQ   Al Faqa, Dubai   72.95 288  P        P        02 40 21.6 -0.4
SMMC  Simmler          73.09  58  P        P        02 40 23.9 +1.2
      baz=307
AKASG Malin Array Be   73.13 323  P        P        02 40 22.4 -0.3
      comp=Z,28nm,0.8s,baz=44,slow=6.4,SNR=78
AKASG                             LR       LR       03 16 12.2
      comp=Z,4µm,18.6s,baz=40,slow=39
AKASG Malin Array Be   73.13 323  P        P        02 40 22.7  0.0
AKASG                             pmax     pmax
      comp=Z,20nm,1.1s
AKASG Malin Array Be   73.13 323  P        P        02 40 22.7  0.0
AKBB  Malin Array Si   73.13 323ceP        P        02 40 21.5 -1.2
AKBB  Malin Array Si   73.13 323  IAmb     IAmb     02 40 41.6
      comp=Z,66nm,1.1s
SFJD  Kangerlussuaq    73.20   6 i P       P        02 40 22.9 +0.1
SFJD  Kangerlussuaq    73.20   6  P        P        02 40 23.3 +0.5
SFJD                              pmax     pmax
      comp=Z,34nm,1.0s
SFJD                              MLR      MLR
      comp=Z,7µm,21.0s
SFJD  Kangerlussuaq    73.20   6  P        P        02 40 23.3 +0.5
SFJD                              IAmb     IAmb     02 40 38.3
      comp=Z,34nm,0.9s
SFJD  Kangerlussuaq    73.20   6 i P       P        02 40 22.9 +0.1
ASUD  Al Ashush, Dub   73.21 288  P        P        02 40 23.6  0.0
LKWY  Lake             73.24  46  P        P        02 40 23.7 -0.1
LKWY                              pmax     pmax
      comp=Z,10.0nm,1.1s
LKWY  Lake             73.24  46  P        P        02 40 23.7 -0.1
ALNE  Al Ain           73.24 287  P        P        02 40 23.2 -0.6
H17A  Grant Village    73.25  46  P        P        02 40 26.2 +2.3
      baz=309,SNR=13
H17A                              S        SKiKP    02 49 56.1 +2.7
      baz=309
H17A  Grant Village    73.25  46  IAmb     IAmb     02 40 42.1
      comp=Z,30nm,1.1s
VES   Vestal, Richgr   73.37  57  P        P        02 40 24.8 +0.4
      baz=307
VES                               S        SKiKP    02 49 54.9 +1.5
      baz=307
OSL   Oslo             73.40 337 eP        P        02 40 24.6 +0.5
PKM   Mcpherson Peak   73.46  58  P        P        02 40 26.3 +1.1
      baz=307
PKM                               S        SKiKP    02 49 54.4 +0.6
      baz=307
GEVA  Gevas            73.46 306  P        P        02 40 25.6 +0.4
GEVA                              IAmb     IAmb     02 40 38.7
      comp=Z,28nm,1.1s
SUW   Suwalki          73.49 328 eP        P        02 40 24.5 -0.2
SUW                              eL        L        03 15 02.5
      comp=Z,9µm,17.9s
SUW   Suwalki          73.49 328 eP        P        02 40 24.0 -0.7
SKAR  Skarslia         73.49 339 eP        P        02 40 24.2 -0.5
RLMT  Red Lodge        73.50  45  P        P        02 40 25.7 +0.4
      baz=310,SNR=8.9
CWC   Cottonwood Cre   73.66  56  P        P        02 40 26.9 +0.7
      baz=307
REDW  Red Top Meadow   73.75  47  IAmb     IAmb     02 40 48.1
      comp=Z,33nm,1.1s
GRAC  Grapevine Rang   73.77  55  P        P        02 40 28.7 +1.9
      baz=308,SNR=5.7
SBC   Santa Barbara    73.80  59  P        P        02 40 28.1 +1.3
      baz=307
KTUT  Trabzon          73.82 310 ⇑P        P        02 40 27.1 +0.2
ISA   Isabella, Lake   73.87  57  P        P        02 40 29.2 +1.7
      baz=307,SNR=5.4
DGMT  Dagmar           73.94  40  P        P        02 40 28.4 +0.8
      baz=312
DGMT  Dagmar           73.94  40  IAmb     IAmb     02 40 48.5
      comp=Z,40nm,1.0s
ARVC  Arvin            73.96  58  P        P        02 40 29.3 +1.4
      baz=307
KONO  Kongsberg        73.96 338ceP        P        02 40 28.1 +0.7
KONO                              pmax     pmax
      comp=Z,91nm,2.5s
KONO  Kongsberg        73.96 338 eP        P        02 40 27.5 +0.1
AHID  Auburn Hatcher   73.98  48  P        P        02 40 28.3 +0.1
KOPT  Kop Dagi         73.99 309  IAmb     IAmb     02 40 43.7
      comp=Z,55nm,1.0s
KOPT                              IAMs_20  IAMs_20  03 18 22.7
      comp=Z,4µm,18.0s
R11A  Troy Canyon, C   74.07  53  P        P        02 40 29.5 +0.9
      baz=308,SNR=37
R11A                              S        S        02 50 02.2 +2.4
      baz=308
LAO   LASA Array       74.10  42  P        P        02 40 29.3 +0.7
      baz=311,SNR=8.0
LAO   LASA Array       74.10  42  IAmb     IAmb     02 40 50.0
      comp=Z,30nm,0.9s
LAO                               IAMs_20  IAMs_20  03 18 30.5
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	comp=Z,2µm,19.0s						
MPMC	Manual Prospec	74.27	56	P	P	02 40 30.1	+0.2
	baz=308,SNR=27						
OSI	Osito Audit: C	74.34	58	P	P	02 40 31.2	+1.0
	baz=308						
OSI				S	S	02 50 04.0	+1.2
	baz=308						
OSI	Osito Audit: C	74.34	58		P	02 40 30.5	+0.3
OSI				IAmb	IAmb	02 40 48.4	
	comp=Z,37nm,1.1s						
OSI				IAMs_20	IAMs_20	03 06 54.1	
	comp=Z,2µm,19.0s						
FURC	Furnace Creek,	74.42	56	P	P	02 40 31.2	+0.7
	baz=308,SNR=15						
FURC				S	S	02 50 05.5	+2.1
	baz=308						
LRMC	Laurel Mtn Rad	74.49	57	P	P	02 40 32.2	+1.0
	baz=308						
TPNV	Topopah Spring	74.51	55	P	P	02 40 32.2	+0.9
	baz=308,SNR=28						
TPNV	Topopah Spring	74.51	55	IAMs_20	IAMs_20	03 05 52.3	
	comp=Z,2µm,21.0s						
BER	Bergen	74.55	340	eP	P	02 40 31.4	+0.6
ODD1	Odda	74.60	339	eP	P	02 40 32.1	+0.9
DUG	Dugway, Tooele	74.60	50	P	P	02 40 32.4	+0.7
	baz=309,SNR=21						
DUG	Dugway, Tooele	74.60	50	IAmb	IAmb	02 40 50.8	
	comp=Z,39nm,1.1s						
SNCC	San Nicolas Is	74.64	60	P	P	02 40 32.6	+0.8
	baz=308						
SNCC	San Nicolas Is	74.64	60	IAMs_20	IAMs_20	03 06 36.2	
	comp=Z,2µm,19.0s						
EDW2	Edwards Air Fo	74.66	57	P	P	02 40 32.5	+0.5
	baz=308,SNR=7.2						
EDW2				S	S	02 50 06.9	+0.6
	baz=308						
DECC	Green Verdugo	74.82	58	P	P	02 40 33.6	+0.7
	baz=308						
TCUT	Toone Canyon	74.85	49	IAmb	IAmb	02 40 48.7	
	comp=Z,36nm,1.1s						
BW06	Boulder Array	74.86	47	P	P	02 40 33.6	+0.4
	baz=310,SNR=13						
PDAR	Pinedale Array	74.86	47	P	P	02 40 33.7	+0.5
	comp=Z,4.9nm,0.8s,baz=270,slow=1.7,SNR=24						
PDAR				LR	LR	03 12 00.5	
	comp=Z,502nm,21.1s,baz=342,slow=35						
PDAR	Pinedale Array	74.86	47	P	P	02 40 33.2	0.0
PRN	Pahroc Range	74.98	54	IAMs_20	IAMs_20	03 10 55.7	
	comp=Z,2µm,19.0s						
MWC	Mount Wilson	75.02	58	P	P	02 40 34.1	-0.2
MWC				pmax	pmax		
	comp=Z,32nm,1.2s						
MWC	Mount Wilson	75.02	58	P	P	02 40 34.1	-0.2
MWC				IAmb	IAmb	02 40 52.1	
	comp=Z,32nm,1.1s						
MWC				IAMs_20	IAMs_20	03 07 17.0	
	comp=Z,2µm,20.0s						
FMP	Fort Macarthur	75.17	59	P	P	02 40 35.2	+0.3
	baz=308						
BFSC	Mount Baldy Ra	75.27	58	P	P	02 40 34.9	-0.7
	baz=308						
CIS	Catalina Islan	75.28	59	P	P	02 40 36.0	+0.4
	baz=308						
SORM	Soroca	75.30	321	⇑P	P	02 40 35.0	-0.3
RRX	Edison Barstow	75.31	57	P	P	02 40 35.6	-0.1
	baz=308						
MPU	Maple Canyon	75.42	50	IAmb	IAmb	02 40 55.3	
	comp=Z,34nm,1.1s						
HOMB	Homborsund	75.42	337	i P	P	02 40 36.3	+0.5
SCI2	San Clemente I	75.45	59	P	P	02 40 35.9	-0.6
	baz=308						
UMR	Umm Al-Rimmam	75.71	296	eP		02 40 35.8	
BBRC	Big Bear Solar	75.73	57	P	P	02 40 38.4	0.0
	baz=308						
SNART	Snartemo	75.75	338	i P	P	02 40 36.7	-1.0
HEC	Hector,Ludlow	75.76	57	P	P	02 40 39.4	+1.0
	baz=309						
HEC				S	S	02 50 19.9	+1.2
	baz=309						
MIB	Mutribah	75.82	297	eP		02 40 36.9	
BSD	Bornholm Skovb	75.85	332	eP	P	02 40 38.8	+0.4
BSD	Bornholm Skovb	75.85	332	IAmb	IAmb	02 40 38.8	
	comp=Z,42nm,1.0s						
BSD				IAMs_20	IAMs_20	03 16 42.3	
	comp=Z,9µm,16.6s						
KIS	Kishinev	75.86	320	eP	P	02 40 38.0	-0.6
	comp=Z,400nm,5.2s						
KIS	Kishinev	75.86	320	ePP	PP	02 43 27.0	-1.3
KIS	Kishinev	75.86	320	ePPP	PPP	02 44 47.0	
KIS	Kishinev	75.86	320	ePS		02 50 47.0	
KIS				eLQ	LQ	03 07 30.0	
	comp=Z,2µm,17.5s						
KIS				LRM	MLR	03 17 19.0	
	comp=Z,2µm,15.5s						
KIS	Kishinev	75.86	320	eP	P	02 40 38.0	-0.6
KIS				e		02 43 27.0	
KIS				ePS	SKSac	02 50 47.0	-0.1
KIS				pmax	pmax		
	comp=Z,400nm,5.3s						
KIS				MLR	MLR		
	comp=Z,3µm,15.0s						
KIS				MLR	MLR		
	comp=E,2µm,15.5s						
MILM	Milestii Mici	75.92	320	⇑P	P	02 40 38.7	-0.2
CCUT	Cedar City	75.94	53	IAmb	IAmb	02 40 58.6	
	comp=Z,31nm,1.2s						
MURC	Murrieta	75.96	58	P	P	02 40 40.1	+0.6
	baz=308						
DIKM	Dikmen	76.01	313	⇓P	P	02 40 41.0	+1.4
BEL	Belsk	76.07	327	eP	P	02 40 40.6	+0.9
BEL				ePcP	sP	02 40 50.6	0.0
BEL				eL	L	03 16 46.3	
	comp=Z,7µm,19.4s						
SZCU	Shurtz Canyon	76.08	53	IAmb	IAmb	02 40 58.6	
	comp=Z,31nm,1.2s						
LVV	L'vov	76.14	324	eP	P	02 40 40.5	+0.3
LVV				e		02 43 30.6	
LVV				eS	S	02 50 23.0	+0.9
LVV				MLR	MLR		
	comp=Z,12µm,16.0s						
TOKA	Tokat	76.17	311	IAmb	IAmb	02 40 42.2	
	comp=Z,44nm,1.2s						
TOKA				IAMs_20	IAMs_20	03 18 55.4	
	comp=Z,2µm,20.0s						
RDF	Al-Radifah	76.20	296	eP		02 40 39.1	
GOET	G??ttrup	76.22	336	i P	P	02 40 41.2	+0.8
	comp=Z,126nm,0.9s						
GOET	G??ttrup	76.22	336	eP	P	02 40 41.2	+0.8
GOET				IAmb	IAmb	02 40 42.2	
	comp=Z,126nm,0.9s						
GMRC	Granite Mounta	76.23	56	P	P	02 40 42.0	+0.9
	baz=309						
GMRC				S	S	02 50 25.8	+2.0
	baz=309						
RST	Umm Al-Ruwaisa	76.24	297	eP		02 40 39.6	
COP	Copenhagen	76.27	334	i P	P	02 40 41.6	+0.9
	comp=Z,7µm,17.0s						
COP	Copenhagen	76.27	334	i P	P	02 40 41.6	+0.9
COP				MLR	MLR		
	comp=Z,7µm,17.0s						
COP	Copenhagen	76.27	334	i P	P	02 40 41.6	+0.9
COP				IAmb	IAmb	02 40 42.5	
	comp=Z,104nm,1.0s						
COP				IAMs_20	IAMs_20	03 17 06.8	
	comp=Z,7µm,16.8s						
RDMU	Red Mountain	76.27	49	IAmb	IAmb	02 40 58.1	
	comp=Z,54nm,1.0s						
P17A	Butcher Ranch,	76.29	50	IAmb	IAmb	02 41 00.5	
	comp=Z,55nm,1.1s						
IAS	Iasi	76.34	321	⇑P	P	02 40 41.6	+0.3
MTPU	Mount Pierson	76.35	52	IAmb	IAmb	02 41 00.9	
	comp=Z,34nm,1.2s						
LCMT	Little Creek M	76.35	53	IAmb	IAmb	02 40 57.0	
	comp=Z,34nm,1.0s						
GKP	Gorka Klasztor	76.41	330	eP	P	02 40 42.0	+0.3
GKP				eL	L	03 19 09.0	
	comp=Z,10µm,17.3s						
GKP	Gorka Klasztor	76.41	330	eP	P	02 40 41.7	+0.1
PFO	Pinyon Flats O	76.44	58	P	P	02 40 42.6	+0.3
	baz=309						
PFO	Pinyon Flats O	76.44	58	P	P	02 40 42.4	+0.1
PFO				pmax	pmax		
	comp=Z,14nm,1.0s						
PFO	Pinyon Flats O	76.44	58	P	P	02 40 42.4	+0.1
PFO	Pinyon Flats O	76.44	58	IAMs_20	IAMs_20	03 07 49.7	
	comp=Z,2µm,20.0s						
XPFO	Pion Flat	76.44	58	IAMs_20	IAMs_20	03 07 49.6	
	comp=Z,2µm,20.0s						
TPFO	Pinon Flats	76.44	58	P	P	02 40 42.8	+0.4
	baz=309						
109C	Camp Elliot, M	76.46	59	P	P	02 40 42.6	+0.3
	baz=309						
BELC	Belle Mtn. Jos	76.50	57	P	P	02 40 43.1	+0.4
	baz=309						
ULM	Lac du Bonnet	76.57	34	P	P	02 40 42.4	-0.3
	comp=Z,5.3nm,0.8s,baz=310,slow=7.1,SNR=8.7						
ULM	Lac du Bonnet	76.57	34	i P	P	02 40 42.5	-0.1
ULM	Lac du Bonnet	76.57	34	IAMs_20	IAMs_20	03 18 12.3	
	comp=Z,3µm,19.0s						
MDND	Maddock	76.60	38	P	P	02 40 43.0	+0.2
	baz=315						
MDND	Maddock	76.60	38	P	P	02 40 43.1	+0.2
MDND				IAMs_20	IAMs_20	03 12 28.3	
	comp=Z,2µm,21.0s						
VASR	Vaslui	76.61	320	⇓P	P	02 40 44.0	+1.1
K22A	Casper	76.62	45	P	P	02 40 43.3	+0.1
	baz=312						
K22A				S	S	02 50 28.8	+0.8
	baz=312						
K22A	Casper	76.62	45	IAmb	IAmb	02 40 58.2	
	comp=Z,24nm,0.9s						
SRU	San Rafael Swe	76.66	50	IAmb	IAmb	02 41 01.6	
	comp=Z,32nm,1.0s						
MUD	Monsted U'grnd	76.71	336	i P	P	02 40 43.9	+0.7
	comp=Z,27nm,0.7s						
MUD	Monsted U'grnd	76.71	336	i P	P	02 40 43.9	+0.7
MUD				pmax	pmax		
	comp=Z,27nm,0.7s						
MUD	Monsted U'grnd	76.71	336	i P	P	02 40 42.8	-0.4
MUD				i P	P	02 40 43.9	+0.7
MUD				IAmb	IAmb	02 40 44.6	
	comp=Z,27nm,0.7s						
RGN	Rugen	76.86	333	P	P	02 40 44.1	0.0
RGN	Rugen	76.86	333	eP	P	02 40 44.3	+0.2
	comp=Z,66nm,0.9s,baz=35,slow=5.4						
KWP	Kalwaria Pacla	76.87	325	eP	P	02 40 45.2	+0.9
PRAR	RASCA	76.87	322	⇑P	P	02 40 44.3	-0.1
RWWY	Rawlins	76.88	46	P	P	02 40 44.8	0.0
BAR	Barrett	76.88	58	P	P	02 40 45.0	+0.3
NEE2	Needles Airpor	76.90	56	P	P	02 40 44.9	+0.1
	baz=309						
NEE2				S	S	02 50 33.5	+2.5
	baz=309						
MONP2	Monument Peak	76.91	58	P	P	02 40 44.8	-0.3
	baz=309						
IRM	Iron Mountain	76.95	56	P	P	02 40 45.8	+0.7
	baz=309,SNR=5.9						
RSSD	Black Hills	76.97	43	P	P	02 40 45.4	+0.1
	baz=313						
RSSD	Black Hills	76.97	43	P	P	02 40 45.1	-0.2
RSSD				pmax	pmax		
	comp=Z,9.0nm,0.8s						
RSSD	Black Hills	76.97	43	P	P	02 40 45.0	-0.2
E28A	Huff	76.97	39	IAMs_20	IAMs_20	03 12 51.2	
	comp=Z,2µm,18.0s						
BC3	Big Chuckawall	77.07	57	P	P	02 40 46.2	+0.4
	baz=309,SNR=6.7						
VARL	Varlezi	77.10	320	⇑P	P	02 40 46.3	+0.7
TLCR		77.11	319	⇑P	P	02 40 46.0	+0.3
BUR08	Bucovina Ar. S	77.16	322	IAmb	IAmb	02 41 02.8	
	comp=Z,28nm,0.9s						
W13A	Hualapai Mount	77.16	55	P	P	02 40 47.6	+1.1
BURAR	Bucovina Array	77.17	322	⇑P	P	02 40 46.7	+0.6
BURAR	Bucovina Array	77.17	322	P	P	02 40 46.3	+0.1
GHRR		77.21	320	⇑P	P	02 40 47.5	+1.2
BIZ	Bicaz	77.23	321	⇑P	P	02 40 47.1	+0.7
TESR	Tescani	77.27	321	⇑P	P	02 40 46.6	0.0
IKP	In-Ko-Pah, Jac	77.27	58	P	P	02 40 46.8	-0.1
	baz=309						
IKP				S	S	02 50 37.8	+2.6
	baz=309						
ILGA	Ilgaz	77.28	313	P	P	02 40 48.0	+0.9
ILGA				IAMs_20	IAMs_20	03 20 45.5	
	comp=Z,2µm,20.0s						
SWSC	Sam W. Stewart	77.29	58	P	P	02 40 46.8	-0.2
	baz=309						
O20A	White River Ci	77.32	48	P	P	02 40 47.0	-0.3
	baz=312,SNR=11						
LNIZ	Loecknitz	77.38	332	eP	P	02 40 47.3	+0.2
	comp=Z,27nm,0.8s,baz=35,slow=5.4						
CFR	Carcaliu	77.46	319	⇑P	P	02 40 48.1	+0.5
PDMCI	Parker Dam,Lak	77.50	56	P	P	02 40 48.7	+0.6
	baz=310						
TPGR	Topolog	77.54	319	⇑P	P	02 40 48.5	+0.4
KOLS	Kolonicke sedl	77.57	325	eP	P	02 40 48.5	+0.2
KOLS				pmax	pmax		
	comp=Z,45nm,1.4s						
KOLS	Kolonicke sedl	77.57	325	eP	P	02 40 48.4	+0.2
KOLS	Kolonicke sedl	77.57	325	eS	S	02 50 49.5	+12
ODBI	Odobesti	77.59	320	⇑P	P	02 40 50.4	+2.0
VRI	Vrincioaia	77.68	320	⇑P	P	02 40 50.6	+1.6
OJC	Ojcow	77.69	327	eP	P	02 40 49.6	+0.7
OJC				eL	L	03 17 57.9	
	comp=Z,11µm,18.0s						
PLOR	Plostina	77.73	320	⇑P	P	02 40 49.9	+0.6
GAZ	Gaziantep	77.78	308	IAmb	IAmb	02 40 51.6	
	comp=Z,50nm,1.0s						
UZH	Uzhgorod	77.78	324	eP	P	02 40 48.4	-1.0
UZH				e		02 40 57.6	
UZH				e		02 43 43.0	
UZH				eS	S	02 50 37.4	-2.6
UZH				ePS		02 51 38.2	
UZH				eSS	SS	02 55 34.6	-4.7
UZH				eSSS	SSS	02 59 01.2	
UZH				MLR	MLR		
	comp=N,2µm,16.0s						
UZH				MLR	MLR		
	comp=E,3µm,16.0s						
UZH				MLR	MLR		
	comp=Z,2µm,16.0s						
TIRR	Tirgusor	77.82	318	⇑P	P	02 40 49.4	-0.3
TIRR	Tirgusor	77.82	318	⇑P	P	02 40 49.4	-0.3
TIRR	Tirgusor	77.82	318	P	P	02 40 49.8	+0.1
TIRR				pmax	pmax		
	comp=Z,40nm,0.9s						
TIRR				MLR	MLR		
	comp=Z,33µm,18.0s						
TIRR	Tirgusor	77.82	318	P	P	02 40 49.8	+0.1
TIRR				IAmb	IAmb	02 41 05.4	
	comp=Z,40nm,0.9s						
GLA	Glamis	77.85	57	P	P	02 40 49.9	-0.2
	baz=310						
GLA				S	S	02 50 42.7	+1.3
	baz=310						
GLA	Glamis	77.85	57	P	P	02 40 52.0	+1.8
GLA				pmax	pmax		
	comp=Z,15nm,0.9s						
GLA	Glamis	77.85	57	P	P	02 40 52.0	+1.8
GLA				IAMs_20	IAMs_20	03 08 46.0	
	comp=Z,2µm,20.0s						
HARR	Harsova	77.91	319	⇑P	P	02 40 50.8	+0.7
BISRR	Bisoca	77.92	320	⇑P	P	02 40 51.5	+1.2
TLBR	Topalu	77.95	319	⇑P	P	02 40 51.2	+0.8
CRVS	Cervenica-Dubn	77.95	325	eP	P	02 40 51.0	+0.6
CRVS				pmax	pmax		
	comp=Z,155nm,1.7s						
CRVS	Cervenica-Dubn	77.95	325	eP	P	02 40 51.0	+0.6
CRVS				eS	S	02 50 47.9	+6.0
OZUR		77.98	321	⇑P	P	02 40 52.0	+1.3
AGMN	Agassiz Nation	78.01	36	P	P	02 40 50.5	-0.3
	baz=318						
AGMN	Agassiz Nation	78.01	36	IAMs_20	IAMs_20	03 19 31.5	
	comp=Z,2µm,20.0s						
PV14	Lion Creek, Pa	78.03	50	IAmb	IAmb	02 40 57.9	
	comp=Z,44nm,1.0s						
PV22	Blue Mesa, Par	78.06	50	IAmb	IAmb	02 41 08.0	
	comp=Z,33nm,1.1s						
NIE	Niedzica	78.08	326	eP	P	02 40 52.2	+1.1
NIE				eL	L	03 18 23.4	
	comp=Z,6µm,18.1s						
PV20	West Nyswonger	78.08	50	IAmb	IAmb	02 41 10.4	
	comp=Z,48nm,1.0s						
PV04	Paradox Valley	78.08	50	IAmb	IAmb	02 41 09.9	
	comp=Z,27nm,0.9s						
N23A	Red Feather La	78.12	46	P	P	02 40 52.6	+0.8
	baz=313,SNR=8.7						
PV16	Nyswonger Mesa	78.13	50	IAmb	IAmb	02 41 10.1	
	comp=Z,53nm,1.1s						
PV11	David Mesa, Pa	78.16	50	IAmb	IAmb	02 41 11.0	
	comp=Z,54nm,1.1s						
PV18	Skein Mesa, Pa	78.18	50	IAmb	IAmb	02 41 11.1	
	comp=Z,61nm,1.2s						
PV18				IAMs_20	IAMs_20	03 18 52.0	
	comp=Z,2µm,19.0s						
PV12	Saucer Basin,	78.19	50	IAmb	IAmb	02 41 11.3	
	comp=Z,30nm,0.9s						
PV03	Paradox Valley	78.21	50	IAmb	IAmb	02 41 10.5	
	comp=Z,48nm,1.1s						
BR131	Keskin Array S	78.21	312	c iP	P	02 40 52.2	+0.1
BR131	Keskin Array S	78.21	312	IAmb	IAmb	02 40 57.9	
	comp=Z,31nm,0.9s						
BRTR	Keskin Array B	78.21	312	P	P	02 40 52.4	+0.2
	comp=Z,15nm,1.0s,baz=72,slow=4.0,SNR=50						
BRTR				PP	PP	02 43 50.1	+1.7
	comp=Z,3.7nm,0.8s,baz=65,slow=5.4,SNR=2.4						
BRTR				LR	LR	03 20 53.9	
	comp=Z,4µm,19.2s,baz=40,slow=40						
BRTR	Keskin Array B	78.21	312	P	P	02 40 51.9	-0.3
NEHR	Nehoiu	78.21	320	⇑P	P	02 40 52.3	+0.4
PGOR	Pogoanele	78.23	319	⇑P	P	02 40 53.5	+1.5
DOPR	Dopca	78.27	321	⇑P	P	02 40 54.5	+2.3
PV02	Paradox Valley	78.30	50	IAmb	IAmb	02 41 11.8	
	comp=Z,42nm,1.1s						
ISR	Istrita	78.31	320	⇑P	P	02 40 53.6	+1.1
D32A	Dogwood Acres,	78.33	37	IAMs_20	IAMs_20	03 13 43.1	
	comp=Z,2µm,21.0s						
MLR	Muntele Rosu	78.34	320	⇑P	P	02 40 53.1	+0.3
RUE	Ruedersdorf	78.34	331	eP	P	02 40 52.7	+0.3
	comp=Z,51nm,1.1s,baz=35,slow=5.4						
PV15	Paradox Valley	78.37	50	IAmb	IAmb	02 41 05.8	
	comp=Z,32nm,1.2s						
ICOR	Ion Corvin	78.38	318	⇑P	P	02 40 54.1	+1.3
BSEG	Bad Segeberg	78.40	334	eP	P	02 40 53.3	+0.6
	comp=Z,41nm,0.9s,baz=35,slow=5.4						
WUAZ	Wupatki	78.47	53	P	P	02 40 54.0	+0.3
	baz=311,SNR=24						
WUAZ	Wupatki	78.47	53	IAmb	IAmb	02 41 08.3	
	comp=Z,26nm,0.9s						
CJR	Cluj-Napoca	78.59	322	⇑P	P	02 40 55.2	+1.2
ANTO	Ankara	78.59	313	IAMs_20	IAMs_20	03 20 49.6	
	comp=Z,2µm,19.0s						
SECR		78.60	320	⇑P	P	02 40 55.2	+1.1
BR231	Keskin MP Arra	78.62	313	IAmb	IAmb	02 40 55.8	
	comp=Z,45nm,0.9s						
LANS	Liptovska Anna	78.64	326	eP	P	02 40 55.6	+1.4
LANS				pmax	pmax		
	comp=Z,21nm,1.0s						
LANS	Liptovska Anna	78.64	326	eP	P	02 40 55.6	+1.4
KSP	Ksiaz	78.66	329	eP	P	02 40 55.0	+0.8
KSP				ePcP	pP	02 41 01.5	-0.8
KSP				eL	L	03 18 26.6	
	comp=Z,9µm,18.6s						
OKC	Ostrava-Krasne	78.68	327	eP	P	02 40 55.2	+0.8
OKC				MLR	MLR		
	comp=Z,11µm,21.8s						
OKC	Ostrava-Krasne	78.68	327	eP	P	02 40 55.2	+0.8
OKC				AMS	AMS	03 18 20.0	
	comp=Z,11µm,21.8s						
KECS	Kecovo	78.70	325	eP	P	02 40 55.0	+0.5
KECS	Kecovo	78.70	325	eP	P	02 40 55.0	+0.5
SULR		78.76	320	⇑P	P	02 40 55.7	+0.8
VOIR		78.81	321	⇓P	P	02 40 55.8	+0.5
OSTC	Ostas	78.91	329	eP	P	02 40 56.2	+0.5
OSTC				AMS	AMS	03 18 30.0	
	comp=Z,8µm,18.2s						
B35A	Bob, Littlefor	78.92	35	IAMs_20	IAMs_20	03 19 32.3	
	comp=Z,2µm,19.0s						
DRGR		78.95	323	⇑P	P	02 40 56.5	+0.5
CHVC	Chvalec	78.95	329	eP	P	02 40 56.5	+0.6
CHVC				AMS	AMS	03 18 40.0	
	comp=Z,9µm,14.9s						
MTUR	Matau	78.96	321	⇑P	P	02 40 57.1	+1.0
MORC	Moravsky Berou	78.97	328	⇑P	P	02 40 56.9	+0.8
MORC	Moravsky Berou	78.97	328	⇑iP	P	02 40 56.6	+0.5
MORC	Moravsky Berou	78.97	328	IAmb	IAmb	02 40 58.0	
	comp=Z,34nm,0.8s						
DPC	Dobruska-Polom	79.03	329	eP	P	02 40 56.8	+0.4
DPC				MLR	MLR		
	comp=Z,7µm,14.6s						
DPC	Dobruska-Polom	79.03	329	eP	P	02 40 56.8	+0.4
DPC				AMS	AMS	03 18 50.0	
	comp=Z,7µm,14.6s						
UPC	Upice	79.03	329	eP	P	02 40 56.5	+0.2
UPC				MLR	MLR		
	comp=Z,9µm,16.6s						
UPC	Upice	79.03	329	eP	P	02 40 56.5	+0.2
UPC				AMS	AMS	03 18 30.0	
	comp=Z,9µm,16.6s						
ISCO	Idaho Springs	79.05	47	P	P	02 40 56.9	-0.1
	baz=313,SNR=21						
KRLC	Kraliky	79.06	328	eP	P	02 40 56.8	+0.3
KRLC				MLR	MLR		
	comp=Z,11µm,14.2s						
KRLC	Kraliky	79.06	328	eP	P	02 40 56.8	+0.3
KRLC				AMS	AMS	03 20 00.0	
	comp=Z,11µm,14.2s						
ARR	Arges	79.07	321	⇓P	P	02 40 58.2	+1.5
MVCO	Mesa Verde	79.11	51	P	P	02 40 57.6	+0.3
	baz=312,SNR=15						
SUSD	Miller	79.35	40	P	P	02 40 59.2	+1.0
	baz=316						
SUSD	Miller	79.35	40	IAMs_20	IAMs_20	03 15 44.1	
	comp=Z,3µm,20.0s						
PSZ	Piszkesteto	79.39	325	⇑P	P	02 40 58.9	+0.5
PSZ	Piszkesteto	79.39	325	IAmb	IAmb	02 41 16.9	
	comp=Z,57nm,1.1s						
FLTG	Flechtingen	79.39	332	eP	P	02 40 58.1	-0.1
	comp=Z,45nm,1.0s,baz=35,slow=5.4						
VYHS	Vyhne	79.41	326	eP	P	02 40 59.4	+1.0
VYHS				eS	S	02 51 04.7	+7.2
VYHS	Vyhne	79.41	326	eP	P	02 40 59.4	+1.0
VYHS	Vyhne	79.41	326	eS	S	02 51 04.7	+7.2
RAZG	Razgrad	79.43	319	⇑P	P	02 40 59.0	+0.4
LOT	Lotru	79.43	321	⇓P	P	02 40 59.1	+0.3
DEV	Deva	79.52	322	⇑P	P	02 40 58.7	-0.4
BRG	Berggiesshubel	79.56	330	i P	P	02 40 59.5	+0.3
BRG				Amp		02 41 00.3	
	comp=Z,183nm,2.0s						
BRG				ex	x	02 41 12.2	
BRG				ex	x	02 41 21.9	
BRG				Amp		03 21 56.0	
	comp=Z,10nm,16.4s						
BRG				Amp		03 22 00.0	
	comp=E,3.5nm,17.1s						
BRG				Amp		03 22 01.0	
	comp=N,6.0nm,16.1s						
BRG	Berggiesshubel	79.56	330	eP	P	02 40 59.4	+0.3
	comp=N,17nm,0.9s,baz=35,slow=5.4						
CLL	Collm	79.57	331	⇑iP	P	02 40 59.3	+0.1
	comp=Z,56nm,1.0s						
CLL				e		02 41 10.0	
CLL				e		02 41 15.0	
CLL				ePP	PP	02 43 56.0	-3.2
CLL				e		02 44 26.0	
CLL				ePPP	PPP	02 45 48.0	
CLL				eS	S	02 50 59.0	0.0
CLL				eSS	SS	02 56 06.0	+0.1
CLL				e		02 57 06.0	
CLL				eSSS	SSS	02 59 12.0	
CLL				e		03 01 24.0	
CLL				LmH		03 14 00.0	
	comp=N,4µm,19.3s						
CLL				LmH		03 14 00.0	
	comp=E,8µm,21.2s						
CLL				Lm	MLR	03 19 00.0	
	comp=Z,7µm,19.2s						
CLL	Collm	79.57	331	⇑iP	P	02 40 59.3	+0.1
CLL				e		02 41 10.0	
CLL				eS	S	02 50 59.0	0.0
CLL				pmax	pmax		
	comp=Z,56nm,1.0s						
CLL				MLR	MLR		
	comp=Z,7µm,19.2s						
CLL	Collm	79.57	331	IAmb	IAmb	02 41 00.4	
	comp=Z,41nm,0.9s						
CLL	Collm	79.57	331	eP	P	02 40 59.4	+0.2
	comp=Z,32nm,0.8s,baz=35,slow=5.4						
CLL				epP	sP	02 41 11.5	+1.3
PVCC	Panska Ves	79.59	330	eP	P	02 40 59.8	+0.5
PVCC				MLR	MLR		
	comp=Z,8µm,15.5s						
PVCC	Panska Ves	79.59	330	eP	P	02 40 59.8	+0.5
PVCC				AMS	AMS	03 19 10.0	
	comp=Z,8µm,15.5s						
F33A	5 Mile Ranch,	79.62	38	IAmb	IAmb	02 41 14.9	
	comp=Z,32nm,1.1s						

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F33A                                IAMs_20 IAMs_20 03 14 31.2
      comp=Z,3µm,22.0s
JAVC  Velka Javorina   79.63 327⇑iP     P       02 41 01.1 +1.4
NRDL  Niedersach Rie   79.66 333 eP     P       02 40 60.0 +0.4
      comp=Z,11nm,0.9s,baz=35,slow=5.4
BSZH  Besenyszg        79.69 325 ⇓P     P       02 41 00.9 +1.1
VRAC  Vranov           79.73 328 ⇑P     P       02 41 01.1 +1.0
VRAC  Vranov           79.73 328⇑iP     P       02 41 00.9 +0.8
S22A  4UR Ranch, Cre   79.73  49  P     P       02 41 01.4 +0.6
      baz=313,SNR=19
W18A  Petrified Fore   79.74  53  P     P       02 41 01.6 +1.0
      baz=312
W18A                              S     S       02 51 03.9 +2.1
      baz=312
W18A  Petrified Fore   79.74  53  IAMs_20 IAMs_20 03 09 11.6
      comp=Z,2µm,22.0s
FBE   Freiberg         79.74 330 eP     P       02 41 00.6 +0.4
      comp=Z,25nm,0.8s,baz=35,slow=5.4
ASSE  Asse, Remlinge   79.76 333 eP     P       02 41 01.1 +1.0
      comp=Z,22nm,1.0s,baz=35,slow=5.4
SIRR  Siria            79.82 323 ⇑P     P       02 41 00.3 -0.4
214A  Organ Pipe Nat   79.86  57  P     P       02 41 01.9 +0.7
      baz=311
Q24A  Divide           79.88  47  P     P       02 41 01.6 +0.1
      baz=313
Q24A                              S     S       02 51 05.1 +1.7
      baz=313
GZR   Gura Zlata       79.94 322 ⇑P     P       02 41 01.9 +0.4
SMOL  Smolenice        80.00 327 eP     P       02 41 02.7 +1.1
SMOL                              pmax  pmax
      comp=Z,37nm,1.4s
SMOL  Smolenice        80.00 327 eP     P       02 41 02.7 +1.1
KRUC  Moravsky         80.00 328⇑iP     P       02 41 02.3 +0.7
PRA   Prague           80.00 329 eP     P       02 41 01.8 +0.2
PRA                               MLR   MLR
      comp=Z,4µm,16.9s
PRA   Prague           80.00 329 eP     P       02 41 01.8 +0.2
PRA                               AMS   AMS     03 19 20.0
      comp=Z,4µm,16.9s
PRU   Pruhonice        80.03 329 eP     P       02 41 01.9 +0.2
PRU                               MLR   MLR
      comp=Z,9µm,14.1s
PRU   Pruhonice        80.03 329 eP     P       02 41 01.9 +0.2
PRU                               AMS   AMS     03 19 20.0
      comp=Z,9µm,14.1s
NEUB  Neuenburg        80.11 331 eP     P       02 41 02.5 +0.4
      comp=Z,34nm,0.9s,baz=35,slow=5.4
NEUB                             epP    sP      02 41 14.7 +1.5
SRO   Srobarova        80.16 326 eP     P       02 41 03.9 +1.5
SRO                               pmax  pmax
      comp=Z,94nm,1.3s
SRO   Srobarova        80.16 326 eP     P       02 41 03.9 +1.5
SRO2  Moca             80.16 326 eP     P       02 41 02.5 +0.1
SRO2                              pmax  pmax
      comp=Z,32nm,1.0s
SRO2  Moca             80.16 326 eP     P       02 41 02.5 +0.1
MODS  Modra-Piesok     80.17 327 eP     P       02 41 02.5  0.0
MODS                              pmax  pmax
      comp=Z,75nm,1.3s
MODS  Modra-Piesok     80.17 327 eP     P       02 41 02.5  0.0
MODS  Modra-Piesok     80.17 327 eS     S       02 51 08.0 +2.5
MODS                             eL     L       03 19 41.3
VLAD  Vladila          80.17 320 ⇓P     P       02 41 03.3 +0.7
TREC  Trest            80.19 328 eP     P       02 41 02.8 +0.1
TREC                              MLR   MLR
      comp=Z,11µm,14.0s
TREC  Trest            80.19 328 eP     P       02 41 02.8 +0.1
TREC                              AMS   AMS     03 20 50.0
      comp=Z,11µm,14.0s
EYMN  Ely              80.21  34  P     P       02 41 02.8  0.0
      baz=320,SNR=5.3
EYMN  Ely              80.21  34  IAMs_20 IAMs_20 03 23 25.4
      comp=Z,2µm,19.0s
OGNE  Ogallala         80.23  44  P     P       02 41 03.3 +0.1
      baz=315,SNR=8.4
OGNE  Ogallala         80.23  44  IAmb  IAmb    02 41 21.4
      comp=Z,46nm,0.9s
BZS   Buzias           80.33 323 ⇑P     P       02 41 03.6 +0.2
ZST   Bratislava       80.38 327 eP     P       02 41 04.9 +1.3
ZST                               pmax  pmax
      comp=Z,1µm,2.7s
ZST   Bratislava       80.38 327 eP     P       02 41 04.8 +1.2
PBCC  Pribram          80.48 329 eP     P       02 41 04.6 +0.4
GTTG  Gottingen        80.49 333 eP     P       02 41 04.6 +0.4
      comp=Z,22nm,0.8s,baz=35,slow=5.4
TANN  Tannenbergstha   80.49 331 eP     P       02 41 04.6 +0.3
      comp=Z,6.5nm,0.9s,baz=35,slow=5.4
HERR  Herculane        80.49 322 ⇑P     P       02 41 04.5 +0.2
SDCO  Great Sand Dun   80.51  49  P     P       02 41 04.7 -0.2
      baz=313
PLVB  Pleven           80.51 320 ⇑P     P       02 41 04.6 +0.2
WERD  Werda            80.52 331 eP     P       02 41 04.9 +0.4
      comp=Z,6.3nm,0.9s,baz=35,slow=5.4
EDRB  Edirne           80.53 317  P     P       02 41 04.0 -0.6
GUNZ  Gunzen           80.58 331 eP     P       02 41 04.9 +0.2
      comp=Z,15nm,0.9s,baz=35,slow=5.4
IBBN  Ibbenburen       80.62 334 eP     P       02 41 05.5 +0.6
      comp=Z,38nm,0.9s,baz=35,slow=5.4
MOX   Moxa             80.62 331 eP     P       02 41 05.2 +0.3
      comp=Z,14nm,0.9s,baz=35,slow=5.4
MOX                              epP    sP      02 41 16.9 +1.0
WERN  Wernitzgruen     80.62 331 eP     P       02 41 05.4 +0.4
      comp=Z,19nm,0.8s,baz=35,slow=5.4
NKC   Novy Kostel      80.64 330 eP     P       02 41 05.1  0.0
NKC                               MLR   MLR
      comp=Z,9µm,12.4s
NKC   Novy Kostel      80.64 330 eP     P       02 41 05.1  0.0
NKC                               AMS   AMS     03 23 10.0
      comp=Z,9µm,12.4s
BANR  Banloc           80.73 323 ⇑P     P       02 41 06.6 +1.0
K31A  O'Neill          80.76  41  IAMs_20 IAMs_20 03 22 11.6
      comp=Z,2µm,19.0s
F36A  Milaca           80.89  36  IAMs_20 IAMs_20 03 24 05.8
      comp=Z,2µm,19.0s
MDVR  Moldovita        80.90 322 ⇑P     P       02 41 06.5 -0.1
TUC   Tucson           80.93  56  P     P       02 41 07.5 +0.5
      baz=311
TUC   Tucson           80.93  56  P     P       02 41 07.2 +0.2
TUC                               pmax  pmax
      comp=Z,8.0nm,1.1s
TUC   Tucson           80.93  56  P     P       02 41 07.2 +0.2
MANZ  Manzenberg       80.97 331 eP     P       02 41 07.3 +0.5
      comp=Z,22nm,0.9s,baz=35,slow=5.4
RAYN  Ar Rayn          80.99 293 i P    P       02 41 07.3 -0.1
      SNR=33
RAYN  Ar Rayn          80.99 293  P     P       02 41 07.3 -0.1
RAYN                              pmax  pmax
      comp=Z,28nm,1.0s
RAYN                              MLR   MLR
      comp=Z,5µm,18.0s
RAYN  Ar Rayn          80.99 293  P     P       02 41 07.2 -0.1
RAYN                              IAmb  IAmb    02 41 08.0
      comp=Z,28nm,1.0s
ECSD  EROS Data Cent   81.02  39  P     P       02 41 07.1 -0.1
      baz=318,SNR=11
ECSD  EROS Data Cent   81.02  39  IAMs_20 IAMs_20 03 15 24.3
      comp=Z,2µm,19.0s
CKRC  Cesky Krumlov    81.04 329 eP     P       02 41 07.0 -0.2
UBBA  Unterbreizbach   81.07 332 eP     P       02 41 07.6 +0.4
      comp=Z,5.4nm,0.8s,baz=35,slow=5.4
KHC   Kasperske Hory   81.09 329ceP     P       02 41 07.5  0.0
KHC                               pmax  pmax
      comp=Z,102nm,1.0s
KHC                               MLR   MLR
      comp=Z,16µm,17.0s
KHC   Kasperske Hory   81.09 329 eP     P       02 41 07.8 +0.3
KHC                               AMS   AMS     03 20 50.0
      comp=Z,10µm,19.4s
KHC   Kasperske Hory   81.09 329  IAmb  IAmb    02 41 09.4
      comp=Z,34nm,0.9s
ROTZ  Rotzenmuhle      81.11 330 eP     P       02 41 08.0 +0.5
      comp=Z,15nm,0.9s,baz=35,slow=5.4
CONA  Conrad Observa   81.11 327 eP     P       02 41 08.7 +1.0
      comp=Z,37nm,1.0s,SNR=16
E38A  The Farm, Brul   81.21  35  IAmb  IAmb    02 41 23.4
      comp=Z,26nm,0.8s
E38A                              IAMs_20 IAMs_20 03 21 11.1
      comp=Z,2µm,18.0s
MORH  Mrgy, Hungar     81.24 325 ⇑P     P       02 41 08.2 -0.1
MORH  Mrgy, Hungar     81.24 325⇑iP     P       02 41 07.4 -0.8
KSCO  Kaye Shedlock'   81.26  46  P     P       02 41 08.7  0.0
      baz=315
KSCO  Kaye Shedlock'   81.26  46  IAmb  IAmb    02 41 25.5
      comp=Z,29nm,1.1s
GEC2  GERESS Array S   81.27 329 eP     P       02 41 08.5  0.0
      comp=Z,11nm,0.8s,baz=35,slow=5.4
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GERES GERESS Array B   81.27 329  P     P       02 41 08.6  0.0
      comp=Z,11nm,0.8s,baz=39,slow=5.1,SNR=65
GERES                             PP    PP      02 44 22.6 +9.1
      comp=Z,6.8nm,0.9s,baz=55,slow=7.0,SNR=4.9
GERES                             LR    LR      03 20 26.6
      comp=Z,7µm,18.7s,baz=22,slow=38
ISP   Isparta          81.28 312  IAMs_20 IAMs_20 03 22 23.4
      comp=Z,3µm,19.0s
KASTN Kahler Asten     81.32 333 eP     P       02 41 09.1 +0.4
      comp=Z,12nm,0.9s,baz=35,slow=5.4
WET   Wettzell         81.35 330 eP     P       02 41 09.4 +0.5
      comp=Z,21nm,0.9s,baz=35,slow=5.4
FRGS  Fruska Gora      81.51 323 ⇑P     P       02 41 10.2 +0.4
FRGS  Fruska Gora      81.51 323⇑iP     P       02 41 09.8  0.0
BUG   Bochum--Univer   81.51 334 eP     P       02 41 09.8 +0.2
      comp=Z,19nm,0.9s,baz=35,slow=5.4
GRF   Grafenberg Arr   81.55 331 eP     P       02 41 10.6 +0.8
      comp=Z,51nm,0.8s,baz=35,slow=5.4
GRF                              eL     L       03 22 40.1
      comp=Z,6µm,18.1s
GRFO  Grafenberg       81.55 331  P     P       02 41 10.2 +0.3
GRFO                              pmax  pmax
      comp=Z,78nm,1.0s
GRFO  Grafenberg       81.55 331  P     P       02 41 10.2 +0.3
T25A  Trinidad         81.55  48  P     P       02 41 11.3 +0.9
      baz=314,SNR=9.9
CSS   Mathiatis        81.59 309  IAmb  IAmb    02 41 15.8
      comp=Z,43nm,0.9s
CSS                               IAMs_20 IAMs_20 03 23 01.1
      comp=Z,3µm,21.0s
RDO   Rodhopi          81.66 317  P     P       02 41 10.2 -0.4
SPMN  Marine on St.    81.71  36  P     P       02 41 11.0 +0.2
      baz=320
BOVS  Bovan            81.76 321 ⇑P     P       02 41 10.7 -0.4
VTS   Vitosha          81.77 320  IAmb  IAmb    02 41 13.7
      comp=Z,29nm,0.8s
SOCY  Socotra          81.77 279  IAmb  IAmb    02 41 11.1
      comp=Z,53nm,0.9s
SOCY                              IAMs_20 IAMs_20 03 19 22.0
      comp=Z,2µm,19.0s
ARSA  Arzberg          81.78 327 eP     P       02 41 11.8 +0.6
      comp=Z,44nm,1.6s,SNR=12
ARSA                             i P    PP      02 44 19.1 +1.4
      comp=Z,10nm,1.0s
MOA   Molln            81.83 328 eP     P       02 41 11.7 +0.3
      comp=Z,27nm,1.2s,SNR=5.8
ANMO  Albuquerque      81.85  51  P     P       02 41 12.8 +0.8
      baz=313
ANMO  Albuquerque      81.85  51ceP     P       02 41 09.0 -3.0
ANMO                              pmax  pmax
      comp=Z,51nm,2.5s
ANMO                              MLR   MLR
      comp=Z,955nm,19.0s
ANMO  Albuquerque      81.85  51  P     P       02 41 11.8 -0.2
BEHE  Becsehely        81.86 326⇑iP     P       02 41 14.5 +2.9
BGNE  Belgrade         81.95  42  P     P       02 41 12.9 +0.7
      baz=317
BGNE  Belgrade         81.95  42  IAMs_20 IAMs_20 03 22 33.2
      comp=Z,2µm,18.0s
KOGS  Kog              82.11 326 eP     P       02 41 12.6 -0.2
TNS   Taunus Mts       82.12 333 eP     P       02 41 13.0 +0.1
      comp=Z,24nm,1.1s,baz=35,slow=5.4
Y22D  IRIS PASSCAL I   82.16  52  IAMs_20 IAMs_20 03 11 50.6
      comp=Z,2µm,21.0s
DIVS  Divibare         82.23 323⇑iP     P       02 41 13.6 -0.1
DIVS  Divibare         82.23 323  IAmb  IAmb    02 41 31.3
      comp=Z,24nm,0.9s
DIVS                              IAMs_20 IAMs_20 03 18 12.8
      comp=Z,3µm,20.0s
KALN  Kalnik           82.26 326 i P    P       02 41 13.3 -0.5
AHRW  Bad Neuenahr-A   82.34 334 eP     P       02 41 14.5 +0.6
      comp=Z,37nm,1.0s,baz=35,slow=5.4
I37A  Lemond, Waseca   82.35  37  IAMs_20 IAMs_20 03 16 04.5
      comp=Z,3µm,21.0s
NVR   Nevrokopi        82.38 319  P     P       02 41 12.7 -1.7
GROS  Grobnik          82.42 327 i P    P       02 41 14.6  0.0
GROS                             i              02 41 21.8
BISS  Bistriski jare   82.43 327 i P    P       02 41 14.8 +0.2
BISS                             i              02 41 21.9
L34A  Svendsen Farm,   82.44  40  IAMs_20 IAMs_20 03 17 20.1
      comp=Z,2µm,20.0s
SOKA  Soboth           82.44 327 eP     P       02 41 15.1 +0.4
      comp=Z,71nm,1.0s,SNR=37
319A  Douglas          82.51  55  IAmb  IAmb    02 41 36.5
      comp=Z,29nm,0.9s
319A                              IAMs_20 IAMs_20 03 11 50.0
      comp=Z,2µm,20.0s
RJOB  Jochberg         82.52 329 eP     P       02 41 16.0 +0.9
      comp=Z,97nm,0.9s,baz=35,slow=5.4
MOSL  Moslavina        82.54 325 i P    P       02 41 14.6 -0.6
BEBN  Eben Emael       82.59 334 dP     P       02 41 15.3  0.0
MEM   Membach          82.64 334 bP     P       02 41 15.4 -0.2
      comp=Z,23nm,0.9s
COWI  Conover          82.66  34  IAMs_20 IAMs_20 03 21 39.2
      comp=Z,2µm,19.0s
121A  Cookes Peak, D   82.67  54  P     P       02 41 17.0 +0.7
      baz=313,SNR=12
121A  Cookes Peak, D   82.67  54  IAmb  IAmb    02 41 27.7
      comp=Z,21nm,1.1s
BBLS  Lazi&#263;i      82.68 323⇑iP     P       02 41 16.4 +0.4
SRS   Serrai           82.69 319  P     P       02 41 15.8 -0.2
HAPS  Han Pijesak,Bl   82.72 323 eP     P       02 41 15.4 -0.9
FUR   Furstenfeldbru   82.77 330 eP     P       02 41 17.2 +0.8
      comp=Z,50nm,0.8s,baz=35,slow=5.4
OBKA  Obir             82.78 327 eP     P       02 41 16.4 -0.1
      comp=Z,20nm,0.8s,SNR=8.6
OBKA                             eP     PP      02 44 26.9 +0.9
      comp=Z,14nm,1.0s
N33A  J Bar K, Exete   82.80  42  IAMs_20 IAMs_20 03 23 17.7
      comp=Z,2µm,19.0s
BSTI  Sart Tilman      82.81 334 dP     P       02 41 16.6 +0.2
      comp=Z,19nm,2.8s
KBA   Koelnbreinsper   82.83 328 eP     P       02 41 17.0 +0.1
      comp=Z,69nm,1.0s,SNR=20
G40A  Rib Lake         82.84  35  IAMs_20 IAMs_20 03 22 27.3
      comp=Z,2µm,19.0s
AKAS  Kas              82.92 312  IAMs_20 IAMs_20 03 25 23.0
      comp=Z,3µm,18.0s
CRES  Cresnjev         82.94 326⇑iP     P       02 41 17.1 -0.1
STIP  Stip             82.97 320 i P    P       02 41 16.9 -0.5
CBKS  Cedar Bluff      82.99  45  P     P       02 41 18.1 +0.4
      baz=316
CBKS  Cedar Bluff      82.99  45  IAMs_20 IAMs_20 03 24 39.8
      comp=Z,2µm,18.0s
KNT   Kendrikon        83.01 319  P     P       02 41 17.5 -0.2
BLY   Banja Luka       83.02 325⇑iP     P       02 41 17.5 -0.1
UCC   Uccle            83.03 335 dP     P       02 41 17.2 -0.3
BCLA  Clavier          83.04 334 dP     P       02 41 17.7 +0.1
VAY   Valandovo        83.06 319 i P    P       02 41 18.4 +0.5
STU   Stuttgart        83.06 331 eP     P       02 41 18.6 +0.8
      comp=Z,41nm,0.8s,baz=35,slow=5.4
MYKA  Terra Mystica    83.06 328 eP     P       02 41 17.7 -0.3
      comp=Z,34nm,1.0s,SNR=10
SKO   Skopje           83.14 320 i P    P       02 41 19.4 +1.1
BGES  Gesves           83.14 335 dP     P       02 41 17.9 -0.3
LJU   Ljubljana        83.16 327 i P    P       02 41 18.1 -0.3
LJU   Ljubljana        83.16 327⇑iP     P       02 41 18.1 -0.3
RCHB  Rochefort        83.29 334 dP     P       02 41 18.4 -0.5
SNF   Seneffe          83.30 335 dP     P       02 41 19.1 +0.1
PLG   Polygyros        83.31 318  P     P       02 41 16.6 -2.7
BMRD  Maredsous        83.32 335 bP     P       02 41 18.8 -0.2
MGRS  Mrkonjic Grad    83.32 324⇑iP     P       02 41 20.1 +0.8
WATA  Walderalm        83.33 329 eP     P       02 41 19.4  0.0
      comp=Z,38nm,1.1s,SNR=12
E43A  Lone Tree Farm   83.34  32  IAMs_20 IAMs_20 03 20 24.7
      comp=Z,2µm,19.0s
WTTA  Wattenberg       83.36 329 eP     P       02 41 20.0 +0.3
      comp=Z,28nm,1.1s,SNR=8.7
WTTA                             eP     PP      02 44 31.4 +0.6
      comp=Z,12nm,1.0s
WLF   Walferdange      83.40 334 dP     P       02 41 21.2 +1.7
WLF   Walferdange      83.40 334 eP     P       02 41 20.4 +1.0
      comp=Z,7.7nm,0.8s,baz=35,slow=5.4
ZOU   Zoufplan         83.40 328  IAmb  IAmb    02 41 34.0
      comp=Z,38nm,1.1s
GRG   Griva            83.41 319  P     P       02 41 19.3 -0.5
ABTA  Abfaltersbach    83.43 328 eP     P       02 41 19.1 -0.7
      comp=Z,29nm,1.0s,SNR=10
CEY   Cerknica         83.44 327⇑iP     P       02 41 19.4 -0.5
URZ   Urewera          83.49 154  LR    LR      03 15 49.9
      comp=Z,2µm,19.8s,baz=24,slow=34
URZ   Urewera          83.49 154  IAMs_20 IAMs_20 03 16 09.4
      comp=Z,3µm,19.0s
MOTA  Moosalm          83.51 329 eP     P       02 41 20.6 +0.3
      comp=Z,58nm,1.0s,SNR=14
RETA  Reutte           83.52 330 eP     P       02 41 20.8 +0.5
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      comp=Z,47nm,1.0s,SNR=14
SQTA  Sankt Quirin     83.57 329 eP     P       02 41 20.9 +0.3
      comp=Z,51nm,1.5s,SNR=9.9
SQTA                             eP     PP      02 44 33.0 +0.6
      comp=Z,14nm,1.1s
UBR   Ueberruh         83.62 330 eP     P       02 41 21.1 +0.3
      baz=35,slow=5.4
N35A  Tabor            83.63  41  IAMs_20 IAMs_20 03 24 36.6
      comp=Z,2µm,18.0s
K38A  Parkersburg      83.69  38  IAMs_20 IAMs_20 03 24 11.9
      comp=Z,2µm,18.0s
BFO   Black Forest     83.75 332  P     P       02 41 21.3  0.0
BFO                               pmax  pmax
      comp=Z,38nm,1.1s
BFO   Black Forest     83.75 332  P     P       02 41 21.3  0.0
BFO                               IAmb  IAmb    02 41 22.2
      comp=Z,38nm,1.1s
BFO   Black Forest     83.75 332 eP     P       02 41 21.6 +0.2
      comp=Z,15nm,0.9s,baz=35,slow=5.4
TRI   Trieste          83.75 327  IAmb  IAmb    02 41 35.3
      comp=Z,37nm,1.0s
BRY   Bratogost        83.83 323⇑iP     P       02 41 21.3 -0.7
R32A  Long Quarter,    83.83  44  IAMs_20 IAMs_20 03 23 08.1
      comp=Z,2µm,21.0s
PHP   Peshkopia        83.84 321  P     P       02 41 20.2 -1.8
PDG   Podgorica        83.85 322 ⇑P     P       02 41 22.2 +0.3
PDG   Podgorica        83.85 322⇑iP     P       02 41 21.8 -0.1
FETA  Feichten         83.92 330 eP     P       02 41 22.7 +0.3
      comp=Z,40nm,1.0s,SNR=12
KIJV  Kijevo           83.95 324 i P    P       02 41 21.7 -0.8
LIT   Litokhoron       84.00 318  P     P       02 41 19.3 -3.5
MATQ  Matagami         84.00  25  P     P       02 41 22.5 -0.1
      baz=330
RICI  Ricice           84.02 324  P     P       02 41 21.6 -1.2
DAVA  Damuels          84.03 330 eP     P       02 41 23.4 +0.4
      comp=Z,61nm,1.0s,SNR=16
SCIA  State Center     84.04  39  IAMs_20 IAMs_20 03 22 24.3
      comp=Z,2µm,22.0s
TREB  Trebinje         84.06 323 eP     P       02 41 22.6 -0.4
FNA   Florina          84.06 320  P     P       02 41 22.0 -1.1
FNA   Florina          84.06 320  IAmb  IAmb    02 41 33.7
      comp=Z,31nm,1.1s
DRME  Dracevica, Mon   84.07 322⇑iP     P       02 41 23.2 +0.1
OHR   Ohrid            84.10 320 i P    P       02 41 23.3 -0.1
NVLJ  Novalja          84.19 326 i P    P       02 41 22.2 -1.3
HCY   Herceg Novi      84.20 322 eP     P       02 41 22.5 -1.2
MAKA  Makarska         84.23 324 i P    P       02 41 22.7 -1.2
STON  Ston             84.24 323 i P    P       02 41 21.6 -2.3
ECH   Echery           84.27 332  IAmb  IAmb    02 41 26.2
      comp=Z,36nm,1.1s
CTI   Castel Tesino    84.35 328  IAmb  IAmb    02 41 38.4
      comp=Z,33nm,1.1s
MORI  Morici           84.37 325 i P    P       02 41 23.7 -0.9
QRZ   Quartz Range     84.39 158  IAMs_20 IAMs_20 03 13 41.0
      comp=Z,3µm,21.0s
E46A  Sault Ste Mari   84.44  31  IAmb  IAmb    02 41 39.0
      comp=Z,17nm,0.9s
E46A                              IAMs_20 IAMs_20 03 19 16.6
      comp=Z,2µm,22.0s
KSU1  Kansas State U   84.44  43  P     P       02 41 24.2 -0.8
      baz=318
KSU1  Kansas State U   84.44  43  IAmb  IAmb    02 41 40.3
      comp=Z,21nm,0.9s
KSU1  Kansas State U   84.44  43  IAMs_20 IAMs_20 03 15 21.3
      comp=Z,2µm,21.0s
I42A  Draeger Farm,    84.50  35  IAMs_20 IAMs_20 03 26 18.0
      comp=Z,2µm,19.0s
PPT   Papeete          84.54 118  LR    LR      03 11 52.5
      comp=Z,3µm,21.7s,baz=290,slow=30
PPT2  Papeete2         84.55 118 eLR    LR      03 08 01.2
      comp=Z,7µm,22.2s,baz=316
PPT2  Papeete2         84.55 118 eT     T       04 14 36.0
      comp=Z,7.3nm,0.4s
JFWS  Jewell Farm      84.66  36  P     P       02 41 26.5 +0.4
      baz=322
JFWS  Jewell Farm      84.66  36  IAmb  IAmb    02 41 40.9
      comp=Z,21nm,0.9s
JFWS  Jewell Farm      84.66  36  IAMs_20 IAMs_20 03 17 29.5
      comp=Z,2µm,21.0s
AMTX  Amarillo         84.71  48  P     P       02 41 27.1 +0.6
      baz=316
AMTX  Amarillo         84.71  48  IAmb  IAmb    02 41 46.0
      comp=Z,23nm,0.9s
MSTX  Muleshoe         84.72  50  P     P       02 41 26.7 +0.1
      baz=315
MSTX  Muleshoe         84.72  50  IAmb  IAmb    02 41 47.4
      comp=Z,23nm,1.1s
MNTX  Cornudas Mount   84.73  53  P     P       02 41 27.0 +0.3
      baz=314,SNR=6.1
MNTX  Cornudas Mount   84.73  53  IAmb  IAmb    02 41 47.0
      comp=Z,17nm,1.1s
LKR   Lokris           84.82 317  P     P       02 41 22.7 -4.2
LSQQ  Lebel-sur-Quev   84.83  25  P     P       02 41 26.0 -0.8
      baz=330
L40A  Anamosa          84.87  37  IAmb  IAmb    02 41 46.0
      comp=Z,32nm,1.1s
L40A                              IAMs_20 IAMs_20 03 26 44.2
      comp=Z,2µm,18.0s
N38A  Joes South For   84.88  39  IAMs_20 IAMs_20 03 25 41.6
      comp=Z,2µm,18.0s
AGG   Agios Georgios   84.89 318  IAmb  IAmb    02 41 40.9
      comp=Z,34nm,1.2s
LSK   Leskovik         84.92 320  P     P       02 41 27.3 -0.3
G45A  Suttons Bay      84.97  32  IAMs_20 IAMs_20 03 21 33.3
      comp=Z,2µm,21.0s
NNZ   Nelson           85.00 158  IAMs_20 IAMs_20 03 13 25.1
      comp=Z,3µm,22.0s
U32A  Winter Ranch,    85.15  46  IAMs_20 IAMs_20 03 26 04.2
      comp=Z,2µm,18.0s
SANT  Santorini        85.16 314  IAMs_20 IAMs_20 03 23 49.2
      comp=Z,3µm,19.0s
KAN01 Argonia South    85.27  45  IAmb  IAmb    02 41 44.1
      comp=Z,38nm,1.2s
KAN14 Manchester OK    85.30  45  IAmb  IAmb    02 41 44.3
      comp=Z,23nm,1.1s
THZ   Tophouse         85.36 158  IAMs_20 IAMs_20 03 15 15.7
      comp=Z,2µm,20.0s
TAOE  Nuku Hiva Isla   85.43 105 eLR    LR      03 08 29.2
      comp=Z,6µm,20.8s,baz=317
SNZO  South Karori     85.48 157  IAMs_20 IAMs_20 03 13 56.8
      comp=Z,3µm,21.0s
VLDQ  Val d'Or         85.49  26  IAmb  IAmb    02 41 44.9
      comp=Z,35nm,1.0s
KAN13 South Haven SW   85.52  44  IAmb  IAmb    02 41 46.6
      comp=Z,32nm,1.1s
GLMI  Grayling         85.58  32  P     P       02 41 31.3 +0.7
      baz=325
GLMI  Grayling         85.58  32  IAMs_20 IAMs_20 03 19 15.8
      comp=Z,2µm,20.0s
CROK  Carrier          85.62  45  IAMs_20 IAMs_20 03 26 13.5
      comp=Z,3µm,18.0s
P38A  Dawn             85.62  40  IAmb  IAmb    02 41 46.5
      comp=Z,22nm,0.9s
P38A                              IAMs_20 IAMs_20 03 25 29.3
      comp=Z,2µm,20.0s
L42A  Oliver, Polo     85.64  37  IAMs_20 IAMs_20 03 18 20.5
      comp=Z,2µm,20.0s
K43A  Burlington       85.69  35  IAMs_20 IAMs_20 03 17 27.8
      comp=Z,2µm,21.0s
SENIN Lac Senin/Sane   85.78 331  IAmb  IAmb    02 41 46.3
      comp=Z,26nm,1.1s
MEH   Mehetia          85.78 117 eT     T       04 16 07.6
      comp=Z,25nm,0.3s
N41A  Harden Midland   86.10  38  IAMs_20 IAMs_20 03 17 19.7
      comp=Z,2µm,20.0s
T35A  Sooner Cattle    86.11  44  IAmb  IAmb    02 41 55.3
      comp=Z,25nm,1.1s
T35A                              IAMs_20 IAMs_20 03 26 14.6
      comp=Z,2µm,18.0s
IDI   Anoyia           86.27 314  IAMs_20 IAMs_20 03 24 44.5
      comp=Z,3µm,18.0s
L44A  Lake County Fo   86.30  35  P     P       02 41 34.3 +0.1
      baz=323
L44A  Lake County Fo   86.30  35  IAMs_20 IAMs_20 03 17 44.8
      comp=Z,2µm,21.0s
P40A  Paris            86.43  40  IAmb  IAmb    02 41 49.9
      comp=Z,38nm,1.1s
P40A                              IAMs_20 IAMs_20 03 19 53.7
      comp=Z,2µm,20.0s
MATE  Matera           86.44 322 ⇑P     P       02 41 35.5 +0.6
BCOK  Bluff Creek, N   86.45  45  IAmb  IAmb    02 41 54.3
      comp=Z,21nm,0.9s
WMOK  Wichita Mounta   86.47  47  P     P       02 41 35.4 +0.1
      baz=317,SNR=9.6
QUOK  Quay             86.56  45  P     P       02 41 35.6  0.0
QUOK                              IAmb  IAmb    02 41 51.7
      comp=Z,25nm,1.0s
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OXZ	Oxford	86.56	159	IAMs_20	IAMs_20	03 16 38.6	
	comp=Z,2µm,21.0s						
OSSC	Osservatorio P	86.57	327	P	P	02 41 35.1	-0.5
OSSC				IAmb	IAmb	02 41 50.2	
	comp=Z,24nm,1.2s						
AQU	L'Aquila	86.59	325	⇑*i*P	P	02 41 35.0	-0.8
AQU	L'Aquila	86.59	325	IAmb	IAmb	02 41 54.6	
	comp=Z,36nm,1.1s						
MSSA	Maissana	86.63	329	P	P	02 41 35.8	-0.2
MSSA				IAmb	IAmb	02 41 50.5	
	comp=Z,22nm,1.1s						
HQIL	Hanson Quary C	86.63	36	IAMs_20	IAMs_20	03 18 31.5	
	comp=Z,2µm,21.0s						
INTR	Introdacqua	86.65	325	IAmb	IAmb	02 41 50.5	
	comp=Z,35nm,1.0s						
OK031	S. Brethren Rd	86.65	45	IAmb	IAmb	02 41 52.3	
	comp=Z,22nm,1.1s						
OK031				IAMs_20	IAMs_20	03 25 06.8	
	comp=Z,2µm,20.0s						
OK025	Westminster Rd	86.65	45	P	P	02 41 36.2	+0.1
OK025				IAMs_20	IAMs_20	03 25 11.9	
	comp=Z,2µm,20.0s						
RPZ	Rata Peaks	86.66	160	LR	LR	03 17 54.6	
	comp=Z,2µm,19.5s,baz=352,slow=34						
OK030	Cody Creek RV	86.70	45	IAMs_20	IAMs_20	03 25 08.1	
	comp=Z,2µm,19.0s						
OKCFA	Oklahoma City	86.71	46	P	P	02 41 36.5	0.0
OKCFA				IAMs_20	IAMs_20	03 22 10.5	
	comp=Z,2µm,20.0s						
J47A	Sunmer	86.79	33	P	P	02 41 36.9	+0.3
J47A				IAmb	IAmb	02 41 49.0	
	comp=Z,38nm,1.1s						
M44A	Midewin, Midew	86.87	36	P	P	02 41 37.1	+0.1
M44A				IAmb	IAmb	02 41 51.6	
	comp=Z,19nm,0.8s						
M44A				IAMs_20	IAMs_20	03 19 10.0	
	comp=Z,2µm,20.0s						
HDIL	Hopedale	86.95	37	P	P	02 41 38.1	+0.6
	baz=322						
HDIL	Hopedale	86.95	37	IAMs_20	IAMs_20	03 27 08.3	
	comp=Z,2µm,20.0s						
LBZ	Lake Benmore	87.07	161	P	P	02 41 40.0	+2.4
LBZ				IAmb	IAmb	02 41 50.2	
	comp=Z,36nm,1.1s						
LBZ				IAMs_20	IAMs_20	03 14 45.9	
	comp=Z,3µm,20.0s						
LATE	Laterza	87.08	326	IAmb	IAmb	02 41 53.0	
	comp=Z,17nm,1.1s						
MQZ	McQueen's Vall	87.09	159	IAMs_20	IAMs_20	03 13 35.3	
	comp=Z,2µm,21.0s						
D55A	Sainte-Anne-du	87.10	25	P	P	02 41 37.9	-0.2
	baz=331						
ALGO	Algonquin Park	87.14	27	P	P	02 41 37.3	-0.9
	baz=329						
L46A	Eue Claire	87.15	35	IAMs_20	IAMs_20	03 26 34.2	
	comp=Z,2µm,19.0s						
S39A	Bolivar	87.20	42	IAmb	IAmb	02 41 53.9	
	comp=Z,14nm,0.8s						
S39A				IAMs_20	IAMs_20	03 26 15.2	
	comp=Z,2µm,19.0s						
SLBS	Sierra La Lagu	87.21	61	IAMs_20	IAMs_20	03 20 03.2	
	comp=Z,2µm,19.0s						
TUL1	Leonard	87.25	44	P	P	02 41 39.8	+0.8
	baz=319						
TUL1	Leonard	87.25	44	P	P	02 41 40.4	+1.4
TUL1				IAmb	IAmb	02 41 55.1	
	comp=Z,19nm,1.0s						
R40A	Maddies Statio	87.28	40	IAMs_20	IAMs_20	03 25 19.1	
	comp=Z,1µm,20.0s						
D56A	ZEC Mazanza, M	87.31	25	P	P	02 41 38.6	-0.5
	baz=332						
TX31	Lajitas Ar. Si	87.43	54	IAmb	IAmb	02 42 00.9	
	comp=Z,22nm,0.7s						
TXAR	Lajitas Array	87.43	54	P	P	02 41 41.0	+0.9
	comp=Z,4.0nm,0.9s,baz=319,slow=3.6,SNR=14						
TXAR				LR	LR	03 15 30.6	
	comp=Z,1µm,21.6s,baz=0.0,slow=32						
TXAR	Lajitas Array	87.43	54	P	P	02 41 40.0	-0.2
DAMY	Dhamar	87.49	287	IAmb	IAmb	02 41 53.9	
	comp=Z,18nm,1.1s						
ABTX	Abilene, Hawle	87.51	49	P	P	02 41 41.5	+1.1
	baz=317						
ABTX	Abilene, Hawle	87.51	49	IAmb	IAmb	02 41 59.6	
	comp=Z,17nm,1.1s						
P43A	Skaggs, Pawnee	87.57	38	P	P	02 41 41.6	+1.1
P43A				IAmb	IAmb	02 41 55.1	
	comp=Z,27nm,1.1s						
P43A				IAMs_20	IAMs_20	03 27 47.6	
	comp=Z,2µm,19.0s						
G54A	Lake Saint Pet	87.60	28	P	P	02 41 40.1	-0.5
	baz=329						
LATQ	La Tuque	87.64	24	P	P	02 41 39.9	-0.8
	baz=333						
O44A	Mansfield	87.66	37	P	P	02 41 41.6	+0.7
O44A				IAmb	IAmb	02 41 58.2	
	comp=Z,11nm,0.7s						
O44A				IAMs_20	IAMs_20	03 19 30.9	
	comp=Z,2µm,20.0s						
E56A	St. Veronique	87.66	25	P	P	02 41 38.7	-2.1
	baz=332						
SADO	Sadowa	87.76	29	IAMs_20	IAMs_20	03 22 37.3	
	comp=Z,2µm,20.0s						
HPIG		87.83	56	P	P	02 41 44.2	+2.0
HPIG				IAmb	IAmb	02 42 02.5	
	comp=Z,16nm,0.9s						
HPIG				IAMs_20	IAMs_20	03 17 47.2	
	comp=Z,2µm,18.0s						
D58A	Chemin du LacG	87.87	24	P	P	02 41 39.8	-1.9
	baz=333						
HHAR	Hobbs	87.95	43	IAmb	IAmb	02 41 58.0	
	comp=Z,15nm,1.1s						
CCM	Cathedral Cave	87.97	40	P	P	02 41 41.8	-0.7
	baz=321						
CCM	Cathedral Cave	87.97	40	P	P	02 41 42.6	+0.2
CCM				pmax	pmax		
	comp=Z,33nm,1.0s						
CCM				MLR	MLR		
	comp=Z,2µm,19.0s						
CCM	Cathedral Cave	87.97	40	P	P	02 41 42.6	+0.2
CCM	Cathedral Cave	87.97	40	IAMs_20	IAMs_20	03 20 39.4	
	comp=Z,2µm,19.0s						
L48A	N Adams	88.01	33	IAMs_20	IAMs_20	03 27 29.9	
	comp=Z,2µm,19.0s						
SLM	Saint Louis	88.01	39	IAMs_20	IAMs_20	03 25 55.5	
	comp=Z,2µm,21.0s						
AAM	Ann Arbor	88.05	33	IAMs_20	IAMs_20	03 25 04.2	
	comp=Z,2µm,20.0s						
K50A	Casco	88.08	32	P	P	02 41 43.3	+0.5
K50A				IAmb	IAmb	02 42 01.1	
	comp=Z,30nm,1.0s						
K50A				IAMs_20	IAMs_20	03 26 31.1	
	comp=Z,2µm,19.0s						
SFIN	Lafayette	88.11	36	P	P	02 41 42.8	-0.2
	baz=324						
SFIN	Lafayette	88.11	36	IAmb	IAmb	02 42 00.7	
	comp=Z,22nm,0.9s						
SFIN				IAMs_20	IAMs_20	03 25 33.7	
	comp=Z,2µm,19.0s						
H53A	Bobcaygeon	88.13	28	P	P	02 41 42.8	-0.3
	baz=329						
MGMO	Mountain Grove	88.15	41	IAmb	IAmb	02 41 58.8	
	comp=Z,18nm,1.1s						
MGMO				IAMs_20	IAMs_20	03 26 59.3	
	comp=Z,2µm,19.0s						
N47A	Urbana	88.33	35	IAmb	IAmb	02 42 01.4	
	comp=Z,20nm,0.8s						
N47A				IAMs_20	IAMs_20	03 24 54.5	
	comp=Z,2µm,20.0s						
E58A	La Victoria	88.39	24	P	P	02 41 43.3	-0.9
	baz=333						
Q44A	Meyer Farm, Va	88.39	38	IAmb	IAmb	02 42 05.7	
	comp=Z,27nm,1.0s						
Q44A				IAMs_20	IAMs_20	03 27 07.4	
	comp=Z,2µm,18.0s						
FVM	French Village	88.43	40	IAmb	IAmb	02 42 05.4	
	comp=Z,25nm,1.1s						
U40A	Yellville	88.46	42	P	P	02 41 44.6	-0.2
	baz=320						
U40A	Yellville	88.46	42	IAmb	IAmb	02 42 00.5	
	comp=Z,31nm,1.0s						
U40A				IAMs_20	IAMs_20	03 27 15.7	
	comp=Z,2µm,19.0s						
X37A	Clayton	88.47	45	IAMs_20	IAMs_20	03 26 09.8	
	comp=Z,2µm,19.0s						
D61A	St Aubert, Com	88.58	22	P	P	02 41 43.5	-1.6
	baz=335						
D60A	Saint Jean D'O	88.62	23	P	P	02 41 44.6	-0.8
	baz=334						
TBI	Tubuai	88.64	122	*e*S	S	02 52 25.2	-5.2
	comp=Z,846nm,27.5s						
TBI	Tubuai	88.64	122	*e*LR	LR	03 09 56.9	
	comp=Z,3µm,26.0s,baz=316						
TBI	Tubuai	88.64	122	*e*T	T	04 19 41.4	
	comp=Z,25nm,0.4s						
P46A	Rosedale	88.67	37	P	P	02 41 47.3	+1.6
P46A				IAMs_20	IAMs_20	03 20 13.6	
	comp=Z,2µm,19.0s						
CEL	Celeste	88.70	321	IAMs_20	IAMs_20	03 26 01.3	
	comp=Z,3µm,18.0s						
T42A	Van Buren	88.84	41	IAmb	IAmb	02 42 07.9	
	comp=Z,21nm,1.1s						
T42A				IAMs_20	IAMs_20	03 21 09.5	
	comp=Z,2µm,21.0s						
W39A	Magazine	88.86	43	P	P	02 41 46.4	-0.3
	baz=320						
W39A	Magazine	88.86	43	IAMs_20	IAMs_20	03 27 18.3	
	comp=Z,2µm,19.0s						
G57A	Newington	88.94	26	P	P	02 41 46.4	-0.4
	baz=332						
E60A	Ste Agathe de	88.96	23	P	P	02 41 46.3	-0.6
	baz=334						
N49A	Columbus Grove	88.96	34	IAmb	IAmb	02 42 07.1	
	comp=Z,23nm,0.9s						
N49A				IAMs_20	IAMs_20	03 29 28.0	
	comp=Z,2µm,20.0s						
OLIL	Olney	88.96	38	IAMs_20	IAMs_20	03 27 08.4	
	comp=Z,2µm,18.0s						
JCT	Junction City	88.97	50	P	P	02 41 47.5	+0.2
	baz=317						
JCT	Junction City	88.97	50	P	P	02 41 49.0	+1.7
JCT				pmax	pmax		
	comp=Z,19nm,1.1s						
JCT	Junction City	88.97	50	P	P	02 41 49.0	+1.7
JCT				IAmb	IAmb	02 42 08.8	
	comp=Z,18nm,1.1s						
JCT				IAMs_20	IAMs_20	03 16 24.6	
	comp=Z,2µm,21.0s						
FCAR	Ozark Folk Cen	89.20	42	IAmb	IAmb	02 42 03.9	
	comp=Z,31nm,1.0s						
FCAR				IAMs_20	IAMs_20	03 27 35.1	
	comp=Z,2µm,19.0s						
G58A	Ormstown	89.22	25	P	P	02 41 47.9	-0.3
	baz=332						
J54A	Appleton	89.23	29	P	P	02 41 50.2	+2.0
J54A				IAMs_20	IAMs_20	03 27 38.2	
	comp=Z,2µm,19.0s						
S44A	Carbondale	89.23	39	IAMs_20	IAMs_20	03 29 25.7	
	comp=Z,2µm,19.0s						
WHTX	Lake Whitney,	89.23	48	P	P	02 41 48.2	-0.3
	baz=318						
WHTX	Lake Whitney,	89.23	48	P	P	02 41 51.4	+2.9
WHTX				IAmb	IAmb	02 41 54.8	
	comp=Z,23nm,1.1s						
SIUC	Southern Illin	89.23	39	IAMs_20	IAMs_20	03 29 25.6	
	comp=Z,2µm,19.0s						
D63A	Stockholm	89.32	21	P	P	02 41 48.6	0.0
	baz=336						
BLO	Bloomington	89.34	36	P	P	02 41 49.4	+0.5
BLO				pmax	pmax		
	comp=Z,9.0nm,1.0s						
BLO				MLR	MLR		
	comp=Z,2µm,20.0s						
BLO	Bloomington	89.34	36	P	P	02 41 49.4	+0.5
BLO				IAMs_20	IAMs_20	03 20 35.4	
	comp=Z,2µm,20.0s						
H57A	Richville	89.37	27	P	P	02 41 48.1	-0.8
	baz=331						
PBMO	Poplar Bluff	89.37	40	IAmb	IAmb	02 42 09.2	
	comp=Z,35nm,1.1s						
PBMO				IAMs_20	IAMs_20	03 29 44.5	
	comp=Z,2µm,19.0s						
MEDO	Medina	89.39	29	IAMs_20	IAMs_20	03 27 51.5	
	comp=Z,2µm,18.0s						
F61A	St Evariste	89.45	23	P	P	02 41 48.8	-0.5
	baz=334						
MIAR	Mount Ida	89.47	44	P	P	02 41 49.7	+0.2
	baz=320						
MIAR	Mount Ida	89.47	44	IAmb	IAmb	02 42 05.9	
	comp=Z,22nm,1.1s						
MIAR				IAMs_20	IAMs_20	03 26 40.4	
	comp=Z,2µm,19.0s						
O49A	Covington	89.50	34	IAMs_20	IAMs_20	03 28 11.3	
	comp=Z,2µm,19.0s						
LONY	Lake Ozonia	89.51	26	P	P	02 41 49.1	-0.5
	baz=332						
J55A	Hilton	89.54	29	IAMs_20	IAMs_20	03 26 21.5	
	comp=Z,2µm,20.0s						
WHAR	Wooly Hollow	89.58	42	IAMs_20	IAMs_20	03 22 46.1	
	comp=Z,2µm,20.0s						
P48A	Milroy	89.61	36	IAMs_20	IAMs_20	03 27 54.3	
	comp=Z,2µm,19.0s						
M52A	Chesterland	89.63	32	IAmb	IAmb	02 42 08.2	
	comp=Z,35nm,1.0s						
M52A				IAMs_20	IAMs_20	03 27 44.1	
	comp=Z,3µm,19.0s						
DRLN	Deer Lake	89.64	13	IAMs_20	IAMs_20	03 25 59.4	
	comp=Z,3µm,20.0s						
BATG	Bathurst New B	89.64	19	IAmb	IAmb	02 42 07.2	
	comp=Z,16nm,0.9s						
BATG				IAMs_20	IAMs_20	03 26 16.7	
	comp=Z,3µm,19.0s						
FRNY	Flat Rock	89.65	25	IAMs_20	IAMs_20	03 24 42.1	
	comp=Z,3µm,20.0s						
Z38A	Mt. Pleasant	89.67	45	IAMs_20	IAMs_20	03 27 01.9	
	comp=Z,2µm,20.0s						
PQI	Presque Isle	89.68	21	IAMs_20	IAMs_20	03 28 47.7	
	comp=Z,3µm,20.0s						
W41B	Gary Mavity, V	89.69	42	P	P	02 41 50.1	-0.5
	baz=321						
ERPA	Erie	89.69	31	P	P	02 41 50.5	0.0
	baz=328						
ERPA	Erie	89.69	31	IAMs_20	IAMs_20	03 26 30.6	
	comp=Z,2µm,20.0s						
L53A	Girard	89.72	31	P	P	02 41 50.3	-0.3
	baz=328						
N51A	Ashland	89.73	33	IAMs_20	IAMs_20	03 27 18.8	
	comp=Z,2µm,19.0s						
USIN	University of	89.78	38	IAMs_20	IAMs_20	03 27 50.1	
	comp=Z,2µm,18.0s						
H59A	Cadyville	89.78	25	P	P	02 41 50.5	-0.3
	baz=332						
E63A	Oxbow	89.80	21	P	P	02 41 50.5	-0.3
	baz=336						
H58A	Gabriels	89.82	26	P	P	02 41 50.2	-0.8
	baz=332						
P49A	Miami Univ. Ec	89.86	35	P	P	02 41 51.0	-0.3
	baz=325						
P49A	Miami Univ. Ec	89.86	35	IAmb	IAmb	02 42 10.1	
	comp=Z,41nm,1.1s						
P49A				IAMs_20	IAMs_20	03 20 05.1	
	comp=Z,2µm,21.0s						
J56A	Wolcott	89.88	28	P	P	02 41 50.5	-0.8
	baz=330						
J56A	Wolcott	89.88	28	IAMs_20	IAMs_20	03 25 10.5	
	comp=Z,2µm,21.0s						
HENM	Henderson Moun	89.89	40	IAMs_20	IAMs_20	03 29 55.3	
	comp=Z,2µm,19.0s						
X40A	Basin Creek Fa	89.91	43	P	P	02 41 50.5	-1.1
	baz=320						
X40A	Basin Creek Fa	89.91	43	IAMs_20	IAMs_20	03 25 03.9	
	comp=Z,2µm,20.0s						
G61A	St-Isidore-de-	89.91	24	P	P	02 41 50.9	-0.5
	baz=334						
E64A	Bridgewater	89.96	21	P	P	02 41 51.6	0.0
	baz=337						
MMNY	Mt. Morris Dam	89.97	29	IAmb	IAmb	02 42 09.3	
	comp=Z,36nm,1.1s						
MMNY				IAMs_20	IAMs_20	03 26 25.8	
	comp=Z,2µm,20.0s						
WVNY	West Valley, N	89.98	30	IAMs_20	IAMs_20	03 27 54.2	
	comp=Z,3µm,20.0s						
M53A	WI Miller and	89.99	31	P	P	02 41 52.5	+0.7
	baz=328						
M53A	WI Miller and	89.99	31	IAMs_20	IAMs_20	03 22 36.6	
	comp=Z,2µm,22.0s						
PVMO	Portageville	90.02	40	IAMs_20	IAMs_20	03 28 34.7	
	comp=Z,2µm,20.0s						
PENMO	Penman	90.03	40	IAMs_20	IAMs_20	03 28 33.9	
	comp=Z,2µm,18.0s						
ACSO	Alum Creek Sta	90.04	34	P	P	02 41 52.5	+0.4
	baz=326						
ACSO	Alum Creek Sta	90.04	34	IAmb	IAmb	02 42 09.9	
	comp=Z,29nm,1.0s						
ACSO				IAMs_20	IAMs_20	03 25 13.7	
	comp=Z,2µm,20.0s						
435B	Jarrell	90.05	49	IAMs_20	IAMs_20	03 25 33.1	
	comp=Z,2µm,19.0s						
T45A	Paducah	90.06	39	IAMs_20	IAMs_20	03 27 16.7	
	comp=Z,1µm,20.0s						
HICK	Hickman	90.15	40	IAMs_20	IAMs_20	03 30 00.2	
	comp=Z,2µm,18.0s						
237A	Washetta, Mont	90.16	47	IAMs_20	IAMs_20	03 18 04.9	
	comp=Z,2µm,21.0s						
H60A	Morristown	90.18	25	P	P	02 41 52.0	-0.7
	baz=333						
I58A	Old Forge	90.19	27	P	P	02 41 51.5	-1.3
	baz=332						
NCB	Newcomb	90.20	26	IAMs_20	IAMs_20	03 27 40.7	
	comp=Z,2µm,20.0s						
WCI	Wyandotte Cave	90.21	37	P	P	02 41 53.0	+0.1
	baz=324						
WCI	Wyandotte Cave	90.21	37	P	P	02 41 53.2	+0.3
WCI				pmax	pmax		
	comp=Z,18nm,1.0s						
WCI	Wyandotte Cave	90.21	37	P	P	02 41 53.2	+0.3
WCI				IAmb	IAmb	02 42 12.0	
	comp=Z,18nm,1.0s						
K56A	Middlesex	90.21	29	P	P	02 41 52.2	-0.7
	baz=330						
GNAR	Gosnell	90.21	41	IAMs_20	IAMs_20	03 30 18.8	
	comp=Z,2µm,19.0s						
F63A	Nahmakanta, Br	90.26	22	IAMs_20	IAMs_20	03 28 46.0	
	comp=Z,3µm,20.0s						
G62A	West of Eustis	90.27	23	P	P	02 41 53.1	0.0
	baz=335						
G62A	West of Eustis	90.27	23	IAMs_20	IAMs_20	03 26 18.5	
	comp=Z,2µm,20.0s						
M54A	Oil Creek Stat	90.34	31	P	P	02 41 52.9	-0.7
	baz=328						
M54A	Oil Creek Stat	90.34	31	IAmb	IAmb	02 42 11.3	
	comp=Z,27nm,1.0s						
M54A				IAMs_20	IAMs_20	03 27 00.7	
	comp=Z,2µm,20.0s						
GLAT	Glass	90.34	40	IAMs_20	IAMs_20	03 30 06.1	
	comp=Z,2µm,19.0s						
LPAR	Lepanto	90.36	41	IAMs_20	IAMs_20	03 30 40.6	
	comp=Z,1µm,19.0s						
VT1	Waterbury	90.37	25	IAMs_20	IAMs_20	03 25 23.5	
	comp=Z,3µm,21.0s						
WLAR	White Oak Lake	90.37	44	IAMs_20	IAMs_20	03 25 23.3	
	comp=Z,1µm,19.0s						
LNXT	Lenox	90.37	40	IAMs_20	IAMs_20	03 28 53.9	
	comp=Z,2µm,18.0s						
H61A	Lyndonville	90.45	24	P	P	02 41 53.0	-1.0
	baz=334						
N53A	Lisbon	90.46	32	IAmb	IAmb	02 42 13.8	
	comp=Z,33nm,1.1s						
N53A				IAMs_20	IAMs_20	03 28 19.0	
	comp=Z,2µm,18.0s						
K57A	Scipio Center	90.48	28	P	P	02 41 52.8	-1.3
	baz=330						
J59A	Piesco	90.55	26	P	P	02 41 53.5	-1.0
	baz=332						
J59A	Piesco	90.55	26	IAmb	IAmb	02 42 11.9	
	comp=Z,20nm,0.9s						
HALT	Halls	90.59	40	IAMs_20	IAMs_20	03 30 08.9	
	comp=Z,2µm,19.0s						
ATD	Arta Tunnel	90.60	285	IAmb	IAmb	02 41 57.6	
	comp=Z,33nm,1.0s						
ATD				IAMs_20	IAMs_20	03 27 07.9	
	comp=Z,2µm,20.0s						
PKME	Peaks-Kenny Pk	90.60	22	IAMs_20	IAMs_20	03 28 09.2	
	comp=Z,2µm,18.0s						
L56A	Greenwood	90.61	29	P	P	02 41 54.4	-0.4
	baz=330						
L56A	Greenwood	90.61	29	IAmb	IAmb	02 42 11.0	
	comp=Z,38nm,1.1s						
L56A				IAMs_20	IAMs_20	03 26 54.8	
	comp=Z,2µm,20.0s						
I60A	Shoreham	90.62	26	P	P	02 41 55.1	+0.3
	baz=333						
O52A	Adamsville	90.62	33	IAMs_20	IAMs_20	03 26 33.5	
	comp=Z,2µm,21.0s						
P51A	Williamsport	90.63	34	IAMs_20	IAMs_20	03 24 51.3	
	comp=Z,2µm,21.0s						
H62A	Milan	90.66	24	P	P	02 41 54.3	-0.7
	baz=334						
N54A	Moraine State	90.67	31	P	P	02 41 54.1	-1.0
	baz=328						
N54A	Moraine State	90.67	31	IAMs_20	IAMs_20	03 27 03.6	
	comp=Z,2µm,21.0s						
R49A	Shelbyville	90.67	36	IAMs_20	IAMs_20	03 21 17.6	
	comp=Z,2µm,21.0s						
M55A	Ridgway	90.72	30	IAMs_20	IAMs_20	03 27 58.9	
	comp=Z,3µm,20.0s						
K58A	Earlville	90.77	28	P	P	02 41 55.1	-0.4
	baz=331						
K58A	Earlville	90.77	28	IAMs_20	IAMs_20	03 28 32.8	
	comp=Z,2µm,20.0s						
O53A	New Philadelph	90.77	32	IAMs_20	IAMs_20	03 23 04.4	
	comp=Z,2µm,20.0s						
T47A	Sharon Grove	90.83	38	IAmb	IAmb	02 42 12.1	
	comp=Z,20nm,0.9s						
T47A				IAMs_20	IAMs_20	03 20 16.8	
	comp=Z,2µm,20.0s						
Q51A	Peebles	90.89	34	IAMs_20	IAMs_20	03 29 02.0	
	comp=Z,2µm,19.0s						
CCAR	Cane Creek	90.91	43	IAMs_20	IAMs_20	03 28 02.4	
	comp=Z,2µm,22.0s						
M56A	Emporium	90.93	30	P	P	02 41 56.6	+0.3
	baz=329						
M56A	Emporium	90.93	30	IAMs_20	IAMs_20	03 28 42.4	
	comp=Z,3µm,18.0s						
NATX	Nacogdoches	90.98	46	IAMs_20	IAMs_20	03 27 59.7	
	comp=Z,2µm,19.0s						
L57A	Andrews Acres	90.99	29	P	P	02 41 56.8	+0.3
	baz=330						
K59A	Cooperstown	91.04	27	P	P	02 41 57.0	+0.3
	baz=332						
R50A	Paris	91.06	36	IAMs_20	IAMs_20	03 21 39.8	
	comp=Z,2µm,21.0s						
J60A	Lant Hill Farm	91.11	26	P	P	02 41 57.0	0.0
	baz=333						
WVL	Waterville	91.13	23	IAMs_20	IAMs_20	03 27 48.1	
	comp=Z,2µm,18.0s						
BINY	Binghamton	91.14	28	P	P	02 41 57.2	0.0
	baz=331						
BINY	Binghamton	91.14	28	IAMs_20	IAMs_20	03 25 45.6	
	comp=Z,3µm,21.0s						
WVT	Waverly	91.17	39	P	P	02 41 57.2	-0.2
	baz=323						
WVT	Waverly	91.17	39	P	P	02 41 57.5	+0.1
WVT				pmax	pmax		
	comp=Z,9.0nm,1.0s						
WVT	Waverly	91.17	39	P	P	02 41 57.5	+0.1
WVT	Waverly	91.17	39	IAMs_20	IAMs_20	03 30 57.9	
	comp=Z,2µm,18.0s						
O54A	Avella	91.17	32	IAMs_20	IAMs_20	03 23 15.9	
	comp=Z,2µm,22.0s						
I62A	Tamworth	91.23	24	P	P	02 41 57.6	0.0
	baz=334						
I62A	Tamworth	91.23	24	IAMs_20	IAMs_20	03 27 38.0	
	comp=Z,2µm,20.0s						
W45A	Hickory Valley	91.27	41	IAMs_20	IAMs_20	03 29 30.7	
	comp=Z,2µm,18.0s						
L58A	Harry Jones Me	91.32	28	P	P	02 41 57.7	-0.4
	baz=331						
735A	Kenedy	91.33	50	IAMs_20	IAMs_20	03 17 16.3	
	comp=Z,2µm,22.0s						
P53A	Whipple	91.34	33	IAMs_20	IAMs_20	03 28 23.4	
	comp=Z,2µm,19.0s						
M57A	Sunshine Farm,	91.46	29	P	P	02 41 58.7	0.0
	baz=330						
M57A	Sunshine Farm,	91.46	29	IAMs_20	IAMs_20	03 29 29.4	
	comp=Z,2µm,20.0s						
L59A	Walton	91.48	27	P	P	02 41 59.4	+0.6
	baz=332						
TRY	Troy	91.48	26	IAMs_20	IAMs_20	03 30 05.8	
	comp=Z,2µm,19.0s						
FFD	Franklin Falls	91.50	25	IAMs_20	IAMs_20	03 26 36.0	
	comp=Z,3µm,20.0s						
OXF	Oxford	91.66	41	IAMs_20	IAMs_20	03 30 09.2	
	comp=Z,1µm,18.0s						
K61A	Williamstown	91.68	26	P	P	02 41 60.0	+0.3
	baz=333						
HKT	Hockley	91.68	48	IAMs_20	IAMs_20	03 26 20.9	
	comp=Z,2µm,20.0s						
M58A	Price's Panora	91.68	29	P	P	02 42 00.4	+0.6
	baz=331						
KSPA	Keystone Colle	91.78	28	IAMs_20	IAMs_20	03 26 05.6	
	comp=Z,3µm,21.0s						
Q53A	Leroy	91.81	33	P	P	02 42 00.7	+0.3
	baz=327						
O56A	Blue Knob Stat	91.83	31	IAMs_20	IAMs_20	03 28 06.1	

	comp=Z,3μm,21.0s						
MCWV	Mont Chateau	91.83	32	IAMs_20	IAMs_20	03 23 45.4	
	comp=Z,2μm,20.0s						
U49A	Red Boiling Sp	91.84	37	IAmb	IAmb	02 42 20.7	
	comp=Z,21nm,1.1s						
U49A				IAMs_20	IAMs_20	03 28 45.5	
	comp=Z,2μm,18.0s						
T50A	Nancy	91.86	37	IAMs_20	IAMs_20	03 21 53.1	
	comp=Z,2μm,20.0s						
M59A	Waymart	91.91	28	P	P	02 42 00.4	-0.4
	baz=331						
CLTN	Cedars of Leba	91.92	38	IAMs_20	IAMs_20	03 31 39.7	
	comp=Z,2μm,18.0s						
L60A	Shokan	91.95	27	P	P	02 42 00.3	-0.7
	baz=332						
V48A	Smith Brothers	91.97	39	IAMs_20	IAMs_20	03 29 26.0	
	comp=Z,2μm,20.0s						
Q54A	Coxs Mills	92.00	33	IAMs_20	IAMs_20	03 29 10.7	
	comp=Z,2μm,19.0s						
143A	Socs Landing,	92.04	43	IAMs_20	IAMs_20	03 28 40.4	
	comp=Z,2μm,19.0s						
N58A	Sunbury	92.05	29	P	P	02 42 01.7	+0.3
	baz=330						
N58A	Sunbury	92.05	29	IAMs_20	IAMs_20	03 23 27.9	
	comp=Z,2μm,20.0s						
Y45A	Yeager Farm, C	92.10	42	IAMs_20	IAMs_20	03 31 43.3	
	comp=Z,1μm,20.0s						
K63A	Dunstable	92.24	25	IAMs_20	IAMs_20	03 26 27.1	
	comp=Z,2μm,20.0s						
QUA2	Belchertown	92.33	26	IAMs_20	IAMs_20	03 31 24.2	
	comp=Z,2μm,19.0s						
N59A	State Game Lan	92.33	29	P	P	02 42 02.4	-0.4
	baz=331						
N59A	State Game Lan	92.33	29	IAMs_20	IAMs_20	03 26 23.4	
	comp=Z,2μm,20.0s						
P56A	Dayton Farm, R	92.37	31	P	P	02 42 02.9	0.0
	baz=329						
HRV	Adam Dziewonsk	92.39	25	P	P	02 42 01.3	-1.6
	baz=334						
M60A	Port Jervis	92.39	28	P	P	02 42 02.0	-1.0
	baz=332						
KSCT	Kent School, K	92.44	27	IAMs_20	IAMs_20	03 28 52.0	
	comp=Z,3μm,20.0s						
L62A	Suffield	92.45	26	IAMs_20	IAMs_20	03 31 32.2	
	comp=Z,2μm,20.0s						
342A	Flagon Creek P	92.57	45	IAMs_20	IAMs_20	03 26 47.4	
	comp=Z,2μm,21.0s						
PAGS	Pennsylvania G	92.58	29	IAMs_20	IAMs_20	03 28 07.9	
	comp=Z,2μm,19.0s						
WES	Weston	92.58	25	IAMs_20	IAMs_20	03 26 37.6	
	comp=Z,2μm,21.0s						
Q56A	Snyder Ridge,	92.63	32	IAMs_20	IAMs_20	03 24 11.4	
	comp=Z,2μm,20.0s						
BCX	Boston College	92.67	25	IAMs_20	IAMs_20	03 29 20.1	
	comp=Z,2μm,19.0s						
ZAIG	Zacatecas	92.75	57	IAMs_20	IAMs_20	03 16 18.5	
	comp=Z,2μm,21.0s						
LUPA	Lehigh Univers	92.76	28	IAMs_20	IAMs_20	03 29 10.6	
	comp=Z,2μm,19.0s						
S54A	Dingess, Beckl	92.79	34	IAMs_20	IAMs_20	03 25 57.4	
	comp=Z,2μm,19.0s						
UCCT	U. Connecticut	92.81	26	IAMs_20	IAMs_20	03 28 33.7	
	comp=Z,2μm,20.0s						
SWET	Sewanee	92.81	38	IAMs_20	IAMs_20	03 32 15.5	
	comp=Z,2μm,18.0s						
MVL	Millersville	92.92	29	IAMs_20	IAMs_20	03 29 20.8	
	comp=Z,2μm,20.0s						
BRYW	Bryant College	92.92	25	IAMs_20	IAMs_20	03 26 49.8	
	comp=Z,2μm,20.0s						
PAL	Palisades	92.93	27	IAMs_20	IAMs_20	03 29 41.5	
	comp=Z,3μm,20.0s						
L63A	North Scituate	92.95	25	IAMs_20	IAMs_20	03 26 40.5	
	comp=Z,2μm,21.0s						
WSPT	Westport, CT	92.98	27	IAMs_20	IAMs_20	03 29 27.5	
	comp=Z,2μm,20.0s						
YLE	Yale	92.99	26	IAMs_20	IAMs_20	03 26 09.7	
	comp=Z,2μm,20.0s						
V51A	Loudon	93.08	37	IAMs_20	IAMs_20	03 28 51.5	
	comp=Z,2μm,19.0s						
W50A	Signal Mountai	93.12	38	IAMs_20	IAMs_20	03 32 23.6	
	comp=Z,2μm,19.0s						
L64A	Middleborough	93.14	25	IAMs_20	IAMs_20	03 29 17.4	
	comp=Z,3μm,19.0s						
M63A	Gales Ferry	93.22	26	IAMs_20	IAMs_20	03 27 45.6	
	comp=Z,2μm,19.0s						
CPCT	Cooper Cave	93.29	37	IAMs_20	IAMs_20	03 29 49.0	
	comp=Z,2μm,18.0s						
PSUB	Penn St. - Bra	93.31	29	IAMs_20	IAMs_20	03 29 21.4	
	comp=Z,2μm,18.0s						
146A	Union	93.32	42	IAMs_20	IAMs_20	03 29 54.5	
	comp=Z,1μm,20.0s						
P60A	Greenville	93.35	29	IAMs_20	IAMs_20	03 26 57.3	
	comp=Z,2μm,20.0s						
M64A	Tiverton	93.36	25	IAMs_20	IAMs_20	03 26 40.4	
	comp=Z,3μm,22.0s						
Z47A	Carrollton	93.38	41	IAMs_20	IAMs_20	03 27 11.7	
	comp=Z,2μm,19.0s						
V52A	Sevierville	93.40	36	IAMs_20	IAMs_20	03 30 15.8	
	comp=Z,2μm,20.0s						
TKL	Tuckaleechee C	93.47	37	IAMs_20	IAMs_20	03 30 18.7	
	comp=Z,2μm,19.0s						
FPAL	Fort Paine	93.52	39	IAMs_20	IAMs_20	03 29 59.1	
	comp=Z,2μm,18.0s						
M65A	Busby, Falmout	93.54	25	IAMs_20	IAMs_20	03 29 29.0	
	comp=Z,3μm,20.0s						
U54A	Nelsons Funny	93.64	35	IAMs_20	IAMs_20	03 29 32.9	
	comp=Z,2μm,19.0s						
BLA	Blacksburg	93.66	34	IAMs_20	IAMs_20	03 30 07.5	
	comp=Z,2μm,19.0s						
Y49A	Blount Mountai	93.68	39	IAMs_20	IAMs_20	03 28 00.5	
	comp=Z,2μm,21.0s						
S57A	Dark Hollow, R	93.81	32	IAMs_20	IAMs_20	03 24 57.8	
	comp=Z,2μm,21.0s						
KEST	Kesra	93.82	324	LR	LR	03 29 18.4	
	comp=Z,6μm,18.3s,baz=334,slow=39						
X51A	Calhoun	93.86	38	IAMs_20	IAMs_20	03 31 57.0	
	comp=Z,2μm,19.0s						
V53A	Saluda	93.90	36	IAMs_20	IAMs_20	03 23 19.0	
	comp=Z,3μm,22.0s						
LRAL	Lakeview Retre	94.05	40	IAMs_20	IAMs_20	03 28 57.4	
	comp=Z,2μm,21.0s						
CBN	Corbin Frederi	94.07	31	IAMs_20	IAMs_20	03 29 24.6	
	comp=Z,3μm,20.0s						
S58A	Poland Farm, P	94.31	32	IAMs_20	IAMs_20	03 30 38.9	
	comp=Z,2μm,19.0s						
T57A	Hurt	94.34	33	IAMs_20	IAMs_20	03 24 37.8	
	comp=Z,2μm,21.0s						
BG3	Lake Jocassee	94.41	36	IAMs_20	IAMs_20	03 30 55.4	
	comp=Z,2μm,20.0s						
U56A	King	94.41	34	IAMs_20	IAMs_20	03 29 49.3	
	comp=Z,2μm,20.0s						
V55A	Taylorsville	94.46	35	IAMs_20	IAMs_20	03 23 09.8	
	comp=Z,2μm,22.0s						
Z51A	Franklin	94.72	39	IAMs_20	IAMs_20	03 33 28.0	
	comp=Z,2μm,18.0s						
Y52A	Lilburn	94.81	38	IAMs_20	IAMs_20	03 32 41.6	
	comp=Z,2μm,18.0s						
T59A	Double "B" Far	95.06	32	IAMs_20	IAMs_20	03 29 58.8	
	comp=Z,3μm,21.0s						
250A	Grady	95.26	40	IAMs_20	IAMs_20	03 31 28.6	
	comp=Z,2μm,19.0s						
HODGE	Hodges	95.35	36	IAMs_20	IAMs_20	03 31 52.3	
	comp=Z,2μm,20.0s						
FURI	Furi	95.41	286	IAMs_20	IAMs_20	03 30 08.4	
	comp=Z,3μm,20.0s						
V58A	Windy Hill, Pi	95.42	33	IAMs_20	IAMs_20	03 27 39.5	
	comp=Z,2μm,20.0s						
GOGA	Godfrey	95.46	38	P	P	02 42 17.2	0.0
	baz=326						
GOGA	Godfrey	95.46	38	IAMs_20	IAMs_20	03 31 21.5	
	comp=Z,2μm,19.0s						
152A	Waverly Hall	95.47	39	IAMs_20	IAMs_20	03 32 26.8	
	comp=Z,1μm,18.0s						
W57A	Gilead	95.59	34	IAMs_20	IAMs_20	03 30 26.5	
	comp=Z,2μm,20.0s						
ESDC	Sonseca Array	95.59	335	P	P	02 42 17.4	-0.5
	comp=Z,2.9nm,0.9s,baz=16,slow=4.3,SNR=7.7						
ESDC				PP	PP	02 46 04.4	-3.7
	comp=Z,3.8nm,0.9s,baz=21,slow=7.0,SNR=4.5						
ESDC				LR	LR	03 30 47.1	
	comp=Z,5μm,18.9s,baz=30,slow=39						
ESDC	Sonseca Array	95.59	335	P	P	02 42 17.3	-0.5
154A	Montrose	96.29	38	IAMs_20	IAMs_20	03 31 10.5	
	comp=Z,2μm,20.0s						
Y57A	Sumter	96.37	35	IAMs_20	IAMs_20	03 32 05.3	
	comp=Z,2μm,20.0s						
X58A	Rowland	96.38	34	IAMs_20	IAMs_20	03 33 19.4	
	comp=Z,2μm,19.0s						
Z56A	Williston	96.51	36	IAMs_20	IAMs_20	03 24 46.1	
	comp=Z,2μm,20.0s						
Y58A	Scranton	96.78	35	IAMs_20	IAMs_20	03 33 37.2	
	comp=Z,3μm,19.0s						
255A	Hazlehurst	97.16	38	IAMs_20	IAMs_20	03 24 00.4	
	comp=Z,2μm,21.0s						
NHSC	New Hope	97.23	36	IAMs_20	IAMs_20	03 25 30.2	
	comp=Z,3μm,22.0s						
UNM	Universidad Na	97.41	58	IAMs_20	IAMs_20	03 19 46.0	
	comp=Z,2μm,20.0s						
RKT	Rikitea	98.42	113	*e*PP	PP	02 46 28.7	-2.6
	comp=Z,236nm,28.5s						
RKT				*e*SKSac	SKSac	02 53 01.8	-4.9
	comp=Z,1μm,26.8s						
RKT	Rikitea	98.42	113	*e*PS	PS	02 55 24.6	-0.7
	comp=Z,1μm,26.8s						
RKT				*e*SS	SS	03 00 40.6	-1.9
	comp=Z,879nm,26.2s						
RKT	Rikitea	98.42	113	*e*LR	LR	03 14 26.1	
	comp=Z,4μm,22.0s						
TLIG	Tlapa	99.08	58	IAMs_20	IAMs_20	03 22 47.4	
	comp=Z,1μm,20.0s						
DWPF	Disney Wildern	100.82	39	IAMs_20	IAMs_20	03 31 40.6	
	comp=Z,2μm,21.0s						
CCIG	Comitan	104.17	55	IAMs_20	IAMs_20	03 23 51.7	
	comp=Z,2μm,21.0s						
PETF	Flores	105.09	52	IAMs_20	IAMs_20	03 30 53.1	
	comp=Z,1μm,21.0s						
ABPO	Ambohimpanom	106.39	259	IAMs_20	IAMs_20	03 32 05.3	
	comp=Z,2μm,19.0s						
MTO3	Montecristo	107.33	54	IAMs_20	IAMs_20	03 26 21.4	
	comp=Z,1μm,21.0s						
TGUH	Tegucigalpa,Un	108.88	52	IAMs_20	IAMs_20	03 29 16.4	
	comp=Z,1μm,21.0s						
GTBY	Guantanamo Bay	110.79	39	IAMs_20	IAMs_20	03 33 49.6	
	comp=Z,1μm,20.0s						
MTDJ	Mount Denham	111.02	42	IAMs_20	IAMs_20	03 37 42.1	
	comp=Z,1μm,20.0s						
BOAB	BOACO BROADBAN	111.11	52	IAMs_20	IAMs_20	03 43 14.3	
	comp=Z,2μm,20.0s						
SDDR	Presa de Saban	113.39	36	IAMs_20	IAMs_20	03 42 01.3	
	comp=Z,2μm,20.0s						
SJG	San Juan	116.36	31	IAMs_20	IAMs_20	03 39 17.0	
	comp=Z,991nm,22.0s						
TOC7	Torodi Ar. Sit	116.47	317	IAMs_20	IAMs_20	03 45 51.1	
	comp=Z,2μm,21.0s						
TORD	Torodi Ar. Bea	116.47	317	PKP	PKiKP	02 47 37.0	+0.3
	comp=Z,0.7nm,0.5s,baz=6.3,slow=1.9,SNR=5.5						
TORD				PP	PP	02 48 41.0	-1.6
	comp=Z,20nm,1.1s,baz=22,slow=7.9,SNR=18						
SDV	Santo Domingo	122.44	41		PKPdf	02 47 48.0	-0.4
SDV	Santo Domingo	122.44	41	IAMs_20	IAMs_20	03 45 21.6	
	comp=Z,1μm,20.0s						
SACV	Santiago Islan	124.34	345	IAMs_20	IAMs_20	03 42 47.3	
	comp=Z,1μm,20.0s						
OTAV	Otavalo	125.05	54	IAMs_20	IAMs_20	03 49 09.2	
	comp=Z,774nm,19.0s						
SYO	Syowa Base	131.14	208	⇓*i*P	Pdif	02 44 57.4	+2.4
NNA	Nana	135.19	63	IAMs_20	IAMs_20	03 50 19.0	
	comp=Z,1μm,18.0s						
SAML	Samuel	141.42	45	PKIKP	PKPdf	02 48 23.7	-0.1
SAML	Samuel	141.42	45		PKPdf	02 48 23.7	-0.1
SAML	Samuel	141.42	45	IAMs_20	IAMs_20	03 59 13.8	
	comp=Z,1μm,20.0s						
SNAA	Sanae	143.62	197	PKPdf	PKPbc	02 48 23.2	-0.3
LPAZ	La Paz	144.15	59	PKP	PKPbc	02 48 27.9	+0.5
	comp=Z,1.5nm,0.4s,baz=13,slow=6.2,SNR=5.9						
VNA2	Neumayer--Watz	145.18	196	PKPdf	PKPbc	02 48 27.6	-0.8
	baz=119,slow=3.2						
VNA3	Neumayer Olymp	145.41	195	PKPdf	PKPdf	02 48 28.8	-0.3
VNA1	Neumayer--Stat	145.58	196	PKPdf	PKPbc	02 48 29.6	0.0
TA01	Diego Aracena	145.69	66	IAMs_20	IAMs_20	03 53 10.5	
	comp=Z,1μm,19.0s						
PB08	IPOC Station P	146.13	65	IAMs_20	IAMs_20	03 44 09.0	
	comp=Z,1μm,20.0s						
NBPA	Parau_RN	146.29	1	*e*P	PKPbc	02 48 33.7	+0.2
VILB	Vilhena	146.35	44	*e*P	PKPab	02 48 34.3	-0.2
RCBR	Riachuelo	146.36	358	*e*P	PKPab	02 48 34.8	+0.3
PB01	IPOC Station P	146.49	66	IAMs_20	IAMs_20	03 51 14.7	
	comp=Z,1μm,20.0s						
PB07	IPOC Station P	146.65	68	IAMs_20	IAMs_20	03 48 56.0	
	comp=Z,1μm,20.0s						
CLDB	Colider	146.76	36	*e*P	PKPbc	02 48 34.9	+0.1
SMTB	Santa Maria do	147.89	20	*e*P	PKPbc	02 48 37.0	-0.9
LVC	Limon Verde	147.91	68	PKP2	PKPbc	02 48 38.2	0.0
LVC	Limon Verde	147.91	68		PKPbc	02 48 38.2	0.0
PB14	IPOC Station P	148.05	72	IAMs_20	IAMs_20	03 44 18.5	
	comp=Z,778nm,19.0s						
LCO	Las Campanas	150.20	80	PKIKP	PKPbc	02 48 43.9	+0.1
LCO	Las Campanas	150.20	80		PKPbc	02 48 43.9	+0.1
GO04	Tololo Observa	150.69	82		PKPbc	02 48 45.1	+0.3
BDFB	Brasilia	154.18	26	PKPbc	PKPbc	02 48 52.6	-0.2
	comp=Z,9.1nm,1.0s,baz=52,slow=2.7,SNR=6.8						
BDFB	Brasilia	154.18	26	PKIKP	PKPdf	02 48 44.1	-0.6
BDFB	Brasilia	154.18	26	PKPdf	PKPdf	02 48 44.1	-0.6
PLCA	Paso Flores	154.25	103	PKPbc	PKiKP	02 48 52.7	+0.4
	comp=Z,4.2nm,1.1s,baz=356,slow=0.6,SNR=4.8						
CPUP	Villa Florida	158.32	59	PKP	PKPdf	02 48 49.8	+0.1
	comp=Z,2.7nm,1.0s,baz=158,slow=3.3,SNR=3.3						
CPUP				PKPab	PKPab	02 49 24.9	+0.8
	comp=Z,2.2nm,0.9s,baz=320,slow=1.8,SNR=3.2						

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*NEIC **24** 02:34:34.9±1.2, 56°.09N±0°.07×156°.26W±0°.08, h47^{km}±28^{km}, Error ellipse: s-maj=11.5km s-min=5.2km az=154.0*

AEIC 24 02:34:33±1.2**, 56°.10N**±0°.08×**156°.25W**±0°.07**, h41**^{km}±10^{km}**, ML3.5**/49**, ML3.4**/16(NEIC)**, Error ellipse: s-maj=11.3km s-min=4.6km az=162.0, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
CHGN	Chignik	1.23	280		Pn	02 34 54.0	+0.4
CHGN					Sn	02 35 10.2	+1.3
CHGN	Chignik	1.23	280	IAML		02 35 11.0	
	comp=N,663nm,0.1s						
SII	Sitkinak Islan	1.24	67		Pn	02 34 55.7	+1.9
SII					Sn	02 35 13.6	+4.3
VNSG	Veniaminof 6	1.59	272		Pn	02 34 59.9	+1.3
VNSG					Sn	02 35 21.1	+3.1
PLK3	Peulik 3	1.59	360		Pn	02 35 00.8	+2.1
PLK3					Sn	02 35 20.8	+2.7
PLBL	Peulik Blue Cr	1.63	349		Pn	02 35 01.2	+1.9
PLBL					Sn	02 35 21.0	+1.9
VNHG	Veniaminof 1	1.63	275		Pn	02 35 00.9	+1.6
VNHG					Sn	02 35 21.6	+2.5
PLK2	Peulik 2	1.67	359		Pn	02 35 02.0	+2.2
PLK1	Peulik 1	1.72	354		Pn	02 35 02.4	+2.0
VNSS	Veniaminof 8	1.80	275		Pn	02 35 03.9	+2.3
VNSS					Sn	02 35 27.6	+4.3
PLK5	Peulik 5	1.93	350		Pn	02 35 04.3	+1.0
OHAK	Old Harbor	1.99	54		Pn	02 35 05.8	+1.8
OHAK					Sn	02 35 29.4	+1.8
KJL	Kejulik	1.99	10		Pn	02 35 06.6	+2.4
CAHL	Cahill	2.02	14		Pn	02 35 06.6	+1.9
CNBA	Chernabura Isl	2.29	237		Pn	02 35 09.4	+1.1
KVTA	Katmai Vly 10	2.35	12		Pn	02 35 10.2	+1.2
KELA	Mount Kelaz	2.36	7		Pn	02 35 10.6	+1.2
SDPT	Sand Point	2.51	254		Pn	02 35 12.2	+1.0
SDPT	Sand Point	2.51	254	IAML		02 35 54.4	
	comp=N,200nm,0.7s						
PS4A	Pavlof South-4	3.26	259		Pn	02 35 23.6	+2.0
DT1	Dutton Round H	3.56	256		Pn	02 35 27.4	+1.7
IVE	Iliamna Volcan	4.29	22		Pn	02 35 37.7	+1.9
CNPM	China Poot	4.36	36		Pn	02 35 38.3	+1.7
CNPM	China Poot	4.36	36	IAML		02 36 19.0	
	comp=E,39nm,2.5s						
CNPM				IAML		02 36 39.4	
	comp=N,35nm,2.8s						
BRLK	Bradley Lake	4.66	36		Pn	02 35 41.8	+1.1
BRLK	Bradley Lake	4.66	36	IAML		02 37 25.1	
	comp=E,34nm,2.5s						
BRLK				IAML		02 38 10.7	
	comp=N,33nm,3.3s						
SSBA	Shishaldin	4.68	257		Pn	02 35 42.5	+1.4
BRSE	Bradley Lake S	4.69	37		Pn	02 35 42.6	+1.5
RSO	Redoubt South	4.75	21	Pn	Pn	02 35 43.3	+1.2
NCT	North Crescent	4.80	20		Pn	02 35 45.3	+2.4
DFR	Drift River	4.88	21		Pn	02 35 46.3	+2.5
SVW2	Sparrevohn	5.03	4		Pn	02 35 48.4	+2.6
SVW2	Sparrevohn	5.03	4	IAML		02 37 24.6	
	comp=N,19nm,1.3s						
SVW2				IAML		02 37 58.1	
	comp=E,23nm,3.0s						
SEW	Seward	5.39	39		Pn	02 35 53.4	+2.6
SLKM	Skilak Lake	5.44	33		Pn	02 35 54.1	+2.6
STLK	Strandline Lak	5.88	21		Pn	02 35 59.6	+2.0
PWL	Port Wells	6.32	38		Pn	02 36 06.0	+2.4
MSW	Makushin Switc	6.44	255		Pn	02 36 07.9	+2.6
HIN	Hinchinbrook I	6.71	46		Pn	02 36 11.3	+2.4
TT01	Tatalina	6.83	1		Pn	02 36 12.7	+2.2
EYAK	Cordova Ski Ar	7.10	47		Pn	02 36 16.4	+2.3
SCM	Sheep Creek Mo	7.37	35		Pn	02 36 20.2	+2.3
RAGM	Ragged Mountai	7.46	50		Pn	02 36 21.7	+2.4
KLU	Klutina	7.61	41		Pn	02 36 23.6	+2.3

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*TAP **24** 02:35:20.3, 24°.44N×122°.56E, h77^{km}±1^{km}, ML3.9, B*

*JMA **24** 02:35:20.1±0.1, 24°.37N×122°.54E, h83^{km}±2^{km}, M3.1*

ISC 24 02:35:20.2±1.2**, 24°.44N**±0°.03×**122°.57E**±0°.02**, h83**^{km}±6^{km}**, n137,** σ**1§12**/259**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.34	88	P	Pn	02 35 33.3	+0.2
JYNG				S	Sn	02 35 42.7	+0.1
YOJ	Yonaguni jima	0.40	87	P	Pn	02 35 33.6	+0.2
	baz=85						
YOJ				S	Sn	02 35 43.0	-0.3
	baz=85						
YOJ	Yonaguni jima	0.40	87	P	Pn	02 35 33.7	+0.2
YOJ				S	Sn	02 35 43.4	+0.1
TWC	Suao	0.68	284	*i* P	Pn	02 35 35.7	-0.1
	baz=285						
TWC				S	Sn	02 35 46.8	-0.7
	baz=285						
EWUT	Wuta	0.72	270	*e*P	Pn	02 35 35.9	-0.4
	baz=270						
TWB1	Santiao Chiao	0.77	317	*i* P	Pn	02 35 37.0	+0.1
	baz=318						
TWB1				S	Sn	02 35 49.0	-0.3
	baz=318						
NTC	Toucheng	0.79	302	P	Pn	02 35 37.4	+0.4
	baz=302						
NTC				S	Sn	02 35 49.6	0.0
	baz=302						
NDS	Dongshan	0.80	284	P	Pn	02 35 37.7	+0.5
	baz=284						
NDS				S	Sn	02 35 50.1	+0.3
	baz=284						
ILA	Ilan	0.81	294	*e*P	Pn	02 35 37.4	+0.1
	baz=294						
ILA				S	Sn	02 35 50.5	+0.4
	baz=294						
TIPB	Shuangxi	0.86	308	*i* P	Pn	02 35 37.9	+0.1
	baz=308						
TIPB				*i* S	Sn	02 35 50.4	-0.6
	baz=308						
TWE	Neicheng	0.87	289	P	Pn	02 35 38.2	+0.3
	baz=289						
TWE				S	Sn	02 35 51.0	-0.1
	baz=289						
NACB	Ninganchiao	0.93	253	P	Pn	02 35 38.3	-0.3
	baz=253						
NACB				S	Sn	02 35 51.8	-0.6
	baz=253						
NWF	Wu-fen Shan	0.95	311	P	Pn	02 35 39.3	+0.3
	baz=311						
NWF				S	Sn	02 35 52.6	-0.4
	baz=311						
WFSB	Wu-fen Shan	0.95	311	P	Pn	02 35 39.2	+0.4
	baz=311						
WFSB				S	Sn	02 35 53.0	+0.2
	baz=311						
TWD	Chiawan	0.96	248	P	Pn	02 35 38.7	-0.2
	baz=247						
TWD				S	Sn	02 35 52.6	-0.4
	baz=247						
NDT	Datong Townshi	0.97	280	*i* P	Pn	02 35 40.1	+0.9
	baz=279						
NDT				S	Sn	02 35 53.7	+0.4
	baz=279						
HWA	Hwalien	0.99	242	P	Pn	02 35 39.5	+0.1
	baz=242						
HWA				S	Sn	02 35 54.4	+0.7
	baz=242						
TNOU	National Taiwa	1.01	314	P	Pn	02 35 39.8	+0.2
	baz=314						
TNOU				*e*S	Sn	02 35 54.2	+0.1
	baz=314						
ETLH	Xiulin Townshi	1.02	257	P	Pn	02 35 39.6	-0.1
	baz=256						
ETLH				S	Sn	02 35 54.1	-0.3
	baz=256						
NWLT	Wulai	1.03	289	P	Pn	02 35 40.3	+0.5
	baz=289						
NWLT				S	Sn	02 35 54.4	0.0
	baz=289						
TWA	Mucha	1.04	301	*i* P	Pn	02 35 40.2	+0.2
	baz=301						
TWA				S	Sn	02 35 54.2	-0.6
	baz=301						
IRIF	Iriomote-Funau	1.06	96	P	Pn	02 35 40.4	+0.2
IRIF				S	Sn	02 35 55.4	+0.2
NNSH	Datong	1.08	270	P	Pn	02 35 40.8	+0.3
	baz=269						
NNSH				S	Sn	02 35 55.5	-0.3
	baz=269						
NHDH	Xindian Distri	1.08	299	P	Pn	02 35 40.5	+0.2
	baz=299						
NHDH				S	Sn	02 35 55.0	-0.5
	baz=299						
NNSB	Datong	1.08	270	P	Pn	02 35 40.7	+0.2
	baz=269						
NNSB				S	Sn	02 35 55.7	0.0
	baz=269						
NNS	Nan Shan	1.09	270	P	Pn	02 35 40.9	+0.2
	baz=270						
NNS				S	Sn	02 35 56.0	0.0
	baz=270						
YHNB	Yeheng	1.11	282	P	Pn	02 35 41.4	+0.6
	baz=282						
YHNB				S	Sn	02 35 56.7	+0.4
	baz=282						
TATO	Taipei	1.12	299	*e*P	Pn	02 35 40.9	0.0
	baz=298						
NSK	Sanguang	1.13	282	P	Pn	02 35 41.6	+0.6
	baz=282						
NSK				S	Sn	02 35 56.8	+0.1
	baz=282						
YM01	YM01	1.15	308	P	Pn	02 35 40.5	-0.8
	baz=308						
YM01				S	Sn	02 35 55.7	-1.4
	baz=308						
YM11	YM11	1.16	309	P	Pn	02 35 41.8	+0.4
	baz=309						
YM11				S	Sn	02 35 56.6	-0.7
	baz=309						
YM08	YM08	1.16	310	P	Pn	02 35 41.3	-0.1
	baz=310						
YM08				S	Sn	02 35 55.9	-1.4
	baz=310						
YM10	YM10	1.16	308	P	Pn	02 35 41.6	+0.1
	baz=308						
YM10				S	Sn	02 35 56.7	-0.7
	baz=308						
YM05	YM05	1.16	308	P	Pn	02 35 41.5	0.0
	baz=308						
YM05				S	Sn	02 35 56.7	-0.7
	baz=308						
YM04	YM04	1.18	307	P	Pn	02 35 41.7	+0.1
	baz=307						
YM04				S	Sn	02 35 56.9	-0.8
	baz=307						
YM03	YM03	1.19	308	P	Pn	02 35 41.8	0.0
	baz=308						
YM03				S	Sn	02 35 57.3	-0.7
	baz=308						
HATJ	Hateruma jima	1.19	109	P	Pn	02 35 42.4	+0.7
HATJ				*e*S	Sn	02 35 58.2	+0.3
TWY	Chenhua	1.21	314	P	Pn	02 35 42.5	+0.6
	baz=313						
TWY				S	Sn	02 35 58.9	+0.5
	baz=313						
ESL	Shilin	1.21	239	P	Pn	02 35 41.6	-0.4
	baz=238						
ESL				S	Sn	02 35 57.6	-0.8
	baz=238						
FUSS	Fushou	1.22	261	P	Pn	02 35 43.0	+0.6
	baz=261						
FUSS				S	Sn	02 35 59.0	0.0
	baz=261						

WHF	**Hehuan Shan** baz=256	**1.23**	**256**	P	**Pn**	**02 35 42.6**	**+0.1**
WHF	baz=256			S	**Sn**	**02 35 58.7**	**-0.6**
TWS1	**Kuangyinshan** baz=302	**1.23**	**302**	P	**Pn**	**02 35 42.6**	**+0.3**
TWS1	baz=302			S	**Sn**	**02 35 59.0**	**+0.1**
NTST	**Danshui** baz=305	**1.25**	**306**	P	**Pn**	**02 35 42.8**	**+0.4**
NTST	baz=305			S	**Sn**	**02 35 59.5**	**+0.3**
NTY	**Taoyuan** baz=296	**1.28**	**296**	*e*P	**Pn**	**02 35 42.8**	**-0.1**
NTY	baz=296			*e*S	**Sn**	**02 35 60.0**	**0.0**
EGFH	**Guangfu** baz=233	**1.30**	**234**	*e*P	**Pn**	**02 35 43.0**	**-0.1**
EGFH	baz=233			*e*S	**Sn**	**02 35 59.9**	**-0.4**
TDCB	**Techi** baz=261	**1.30**	**262**	P	**Pn**	**02 35 44.1**	**+0.9**
TDCB	baz=261			S	**Sn**	**02 36 00.3**	**-0.3**
CHGB	**Renai** baz=253	**1.33**	**254**	P	**Pn**	**02 35 44.1**	**+0.5**
CHGB	baz=253			S	**Sn**	**02 36 01.2**	**-0.1**
JKRS	**Kuro-shima**	**1.33**	**99**	P	**Pn**	**02 35 44.2**	**+0.7**
JKRS				S	**Sn**	**02 36 02.0**	**+1.0**
NCU	**National Centr** baz=293	**1.36**	**293**	*e*S	**Sn**	**02 36 02.9**	**+1.2**
NCUH	**Zhongli** baz=292	**1.36**	**293**	*e*S	**Sn**	**02 36 02.3**	**+0.5**
NJD	**Zhudong** baz=282	**1.38**	**283**	*e*P	**Pn**	**02 35 44.4**	**+0.3**
NJD	baz=282			*e*S	**Sn**	**02 36 03.6**	**+1.5**
HGSD	**Ruisui** baz=227	**1.41**	**228**	P	**Pn**	**02 35 44.2**	**-0.3**
HGSD	baz=227			S	**Sn**	**02 36 02.5**	**-0.3**
LIOB	**Emei** baz=278	**1.43**	**278**	P	**Pn**	**02 35 45.7**	**+0.9**
LIOB	baz=278			S	**Sn**	**02 36 03.8**	**+0.5**
JIJ	**Ishigaki jima**	**1.44**	**93**	P	**Pn**	**02 35 44.9**	**+0.1**
JIJ				S	**Sn**	**02 36 02.8**	**-0.6**
NSTT	**Nanjuang** baz=277	**1.44**	**278**	P	**Pn**	**02 35 45.7**	**+0.8**
NSTT	baz=277			S	**Sn**	**02 36 04.0**	**+0.5**
HSN1	**Hsinchu** baz=283	**1.45**	**284**	*e*S	**Sn**	**02 36 04.6**	**+0.9**
EHY	**Hungye** baz=230	**1.47**	**231**	P	**Pn**	**02 35 44.7**	**-0.6**
EHY	baz=230			S	**Sn**	**02 36 02.3**	**-2.0**
VWDT	**VWDT** baz=242	**1.47**	**243**	P	**Pn**	**02 35 45.8**	**+0.5**
VWDT	baz=242			S	**Sn**	**02 36 04.1**	**-0.1**
WHP	**Taichung City** baz=263	**1.49**	**264**	P	**Pn**	**02 35 47.2**	**+1.6**
WHP	baz=263			S	**Sn**	**02 36 05.8**	**+1.1**
WPL	**Puli Township** baz=254	**1.53**	**254**	*e*P	**Pn**	**02 35 46.7**	**+0.7**
WPL	baz=254			*e*S	**Sn**	**02 36 06.0**	**+0.3**
DPDB	**Guoxing** baz=254	**1.55**	**255**	*e*P	**Pn**	**02 35 46.1**	**-0.3**
DPDB	baz=254			S	**Sn**	**02 36 07.4**	**+1.2**
WCS	**Beigang Elemen** baz=255	**1.56**	**256**	*e*P	**Pn**	**02 35 48.0**	**+1.6**
WCS	baz=255			*e*S	**Sn**	**02 36 07.3**	**+1.1**
YULB	**Yu-li** baz=228	**1.56**	**228**	P	**Pn**	**02 35 46.0**	**-0.5**
YULB	baz=228			S	**Sn**	**02 36 05.0**	**-1.4**
EYUL	**Yuli** baz=226	**1.58**	**227**	*e*P	**Pn**	**02 35 47.1**	**+0.4**
EYUL	baz=226			*e*S	**Sn**	**02 36 07.5**	**+0.8**
TWF1	**Yuli** baz=226	**1.59**	**227**	P	**Pn**	**02 35 46.5**	**-0.3**
TWF1	baz=226			S	**Sn**	**02 36 05.8**	**-1.2**
JISG	**Ishigakijimahi**	**1.59**	**84**	P	**Pn**	**02 35 47.0**	**+0.2**
JISG				S	**Sn**	**02 36 06.5**	**-0.5**
SSLB	**Suanglung** baz=246	**1.61**	**246**	P	**Pn**	**02 35 47.5**	**+0.4**
SSLB	baz=246			S	**Sn**	**02 36 07.7**	**+0.1**
NMLH	**Miaoli** baz=273	**1.62**	**274**	*e*P	**Pn**	**02 35 48.4**	**+1.1**
NMLH	baz=273			S	**Sn**	**02 36 08.3**	**+0.6**
SMLT	**Sun Moon Lake** baz=249	**1.62**	**250**	P	**Pn**	**02 35 48.1**	**+0.7**
SMLT	baz=249			*e*S	**Sn**	**02 36 08.4**	**+0.5**
TWQ1	**Liyutan** baz=266	**1.64**	**267**	P	**Pn**	**02 35 48.5**	**+1.1**
TWQ1	baz=266			S	**Sn**	**02 36 08.4**	**+0.3**
NSY	**Sanyi** baz=269	**1.65**	**269**	*e*P	**Pn**	**02 35 48.8**	**+1.2**
NSY	baz=269			*e*S	**Sn**	**02 36 08.4**	**+0.1**
TYC	**Yuchr** baz=251	**1.65**	**251**	P	**Pn**	**02 35 48.4**	**+0.8**
TYC	baz=251			*e*S	**Sn**	**02 36 09.7**	**+1.3**
FULB	**Fuli** baz=223	**1.70**	**224**	*i* P	**Pn**	**02 35 48.1**	**-0.1**
FULB	baz=223			S	**Sn**	**02 36 09.1**	**-0.5**
CHKT	**Chengkung** baz=219	**1.73**	**220**	*e*P	**Pn**	**02 35 47.9**	**-0.8**
CHKT	baz=219			*e*S	**Sn**	**02 36 08.3**	**-2.0**
TCU	**Taichung** baz=260	**1.75**	**261**	*e*P	**Pn**	**02 35 50.6**	**+1.8**
TCU	baz=260			*e*S	**Sn**	**02 36 12.0**	**+1.3**
WWF	**Wufeng** baz=257	**1.75**	**257**	*e*P	**Pn**	**02 35 50.3**	**+1.4**
WWF	baz=257			*e*S	**Sn**	**02 36 12.6**	**+1.8**
YUS	**Yu-Shan** baz=237	**1.76**	**238**	P	**Pn**	**02 35 49.9**	**+0.5**
YUS	baz=237			S	**Sn**	**02 36 10.7**	**-0.8**
WDJ	**Dajia District** baz=267	**1.76**	**267**	*e*P	**Pn**	**02 35 50.0**	**+0.9**
WDJ	baz=267			*e*S	**Sn**	**02 36 11.6**	**+0.7**
WJS	**Zhushan** baz=249	**1.79**	**250**	*e*P	**Pn**	**02 35 51.4**	**+2.0**
WJS	baz=249			*e*S	**Sn**	**02 36 14.0**	**+2.4**
WNT1	**Nantou City** baz=252	**1.81**	**253**	*e*S	**Sn**	**02 36 14.3**	**+2.3**
WNT	**Mingjian** baz=251	**1.81**	**252**	*e*P	**Pn**	**02 35 51.9**	**+2.2**
WNT	baz=251			*e*S	**Sn**	**02 36 14.2**	**+2.1**
ALS	**Alishan** baz=239	**1.86**	**240**	*e*P	**Pn**	**02 35 51.6**	**+1.0**
ALS	baz=239			*e*S	**Sn**	**02 36 14.5**	**+0.8**
EDH	**Donghe** baz=218	**1.87**	**219**	P	**Pn**	**02 35 50.0**	**-0.5**
EDH	baz=218			S	**Sn**	**02 36 11.8**	**-1.6**
WCHH	**Zhanghua** baz=259	**1.87**	**259**	*e*P	**Pn**	**02 35 51.5**	**+1.1**
WCHH	baz=259			*e*S	**Sn**	**02 36 13.8**	**+0.4**
ELDTW	**Lidau** baz=228	**1.89**	**229**	P	**Pn**	**02 35 50.6**	**-0.3**
ELDTW	baz=228			S	**Sn**	**02 36 13.5**	**-0.7**
CHN5	**Tsauling** baz=244	**1.92**	**244**	P	**Pn**	**02 35 52.6**	**+1.4**
CHN5	baz=244			S	**Sn**	**02 36 17.1**	**+2.2**
JTJ	**Tarama**	**1.95**	**84**	P	**Pn**	**02 35 52.0**	**+0.5**
JTJ				S	**Sn**	**02 36 15.7**	**+0.3**
WGK	**Gukeng** baz=247	**1.98**	**248**	*e*P	**Pn**	**02 35 54.0**	**+2.0**
WGK	baz=247			*e*S	**Sn**	**02 36 18.9**	**+2.8**
WDLH	**Douliu** baz=248	**2.00**	**248**	*e*P	**Pn**	**02 35 53.9**	**+1.7**
WDLH	baz=248			*e*S	**Sn**	**02 36 19.0**	**+2.4**
LONT	**Longtian** baz=220	**2.02**	**221**	*e*P	**Pn**	**02 35 52.2**	**-0.3**
LONT	baz=220			*e*S	**Sn**	**02 36 16.0**	**-1.0**
LDUT	**Ludao** baz=209	**2.03**	**210**	*e*P	**Pn**	**02 35 52.1**	**-0.5**
LDUT	baz=209			*e*S	**Sn**	**02 36 15.5**	**-1.7**
WRL	**Guolierlin Hig** baz=255	**2.07**	**255**	S	**Sn**	**02 36 18.1**	**-0.1**
STYH	**Taoyuan** baz=232	**2.07**	**233**	*e*P	**Pn**	**02 35 54.4**	**+1.2**
STYH	baz=232			*e*S	**Sn**	**02 36 19.3**	**+1.1**
TPUB	**Ta-pu** baz=237	**2.11**	**238**	*e*P	**Pn**	**02 35 55.5**	**+1.8**
TPUB	baz=237			S	**Sn**	**02 36 21.3**	**+2.2**
CHN4	**Tsaushan** baz=239	**2.11**	**239**	P	**Pn**	**02 35 55.3**	**+1.7**
CHN4	baz=239			S	**Sn**	**02 36 21.4**	**+2.2**
TWGBT	**Beinan** baz=220	**2.12**	**220**	P	**Pn**	**02 35 53.2**	**-0.6**
TWGBT	baz=220			S	**Sn**	**02 36 17.9**	**-1.4**
TWG	**Pinlang** baz=220	**2.12**	**221**	P	**Pn**	**02 35 53.2**	**-0.5**
TWG	baz=220			S	**Sn**	**02 36 17.9**	**-1.5**
TTN	**Taitung** baz=217	**2.13**	**218**	*e*P	**Pn**	**02 35 54.8**	**+0.9**
TTN	baz=217			*e*S	**Sn**	**02 36 19.7**	**+0.1**
WTK	**Tuku** baz=249	**2.13**	**250**	P	**Pn**	**02 35 54.9**	**+1.0**
WTK	baz=249			S	**Sn**	**02 36 20.4**	**+0.8**
WTP	**Ta-pu** baz=236	**2.15**	**237**	P	**Pn**	**02 35 55.5**	**+1.3**
WTP	baz=236			S	**Sn**	**02 36 22.3**	**+2.1**
CHY	**Chiayi** baz=244	**2.17**	**245**	*e*P	**Pn**	**02 35 55.3**	**+0.8**
CHY	baz=244			*e*S	**Sn**	**02 36 22.6**	**+1.9**
CHN1	**Nanshi** baz=236	**2.25**	**237**	*e*P	**Pn**	**02 35 58.0**	**+2.4**
CHN1	baz=236			S	**Sn**	**02 36 24.2**	**+1.7**
SLGT	**Liugui** baz=230	**2.28**	**231**	*e*P	**Pn**	**02 35 57.8**	**+1.9**
SLGT	baz=230			*e*S	**Sn**	**02 36 25.2**	**+2.0**
WSF	**Szhu** baz=249	**2.29**	**250**	*e*S	**Sn**	**02 36 24.5**	**+1.0**
ICHU	**Yijhu** baz=242	**2.35**	**243**	*e*P	**Pn**	**02 35 58.3**	**+1.4**
ICHU	baz=242			*e*S	**Sn**	**02 36 25.2**	**+0.2**
ECL	**Taimali** baz=218	**2.36**	**219**	P	**Pn**	**02 35 56.2**	**-0.8**
ECL	baz=218			S	**Sn**	**02 36 23.4**	**-1.8**
JIRB	**Irabujima**	**2.40**	**80**	S	**Sn**	**02 36 25.2**	**-0.9**
CHN8	**Yiju** baz=243	**2.42**	**244**	*e*P	**Pn**	**02 35 59.4**	**+1.7**
CHN8	baz=243			S	**Sn**	**02 36 28.0**	**+1.5**
SSD	**Sandimen** baz=226	**2.45**	**227**	*e*P	**Pn**	**02 36 00.2**	**+2.0**
SSD	baz=226			*e*S	**Sn**	**02 36 29.0**	**+1.7**
SCST	**Cishan** baz=230	**2.45**	**231**	*e*P	**Pn**	**02 35 58.3**	**+0.1**
SCST	baz=230			*e*S	**Sn**	**02 36 28.3**	**+0.9**
TSMG	**Majia** baz=225	**2.47**	**226**	*e*P	**Pn**	**02 36 00.5**	**+2.0**
TSMG	baz=225			*e*S	**Sn**	**02 36 29.5**	**+1.7**
JIKM	**Ikemajima**	**2.48**	**78**	*e*S	**Sn**	**02 36 28.3**	**+0.2**
JMJ	**Miyako jima 2** baz=81	**2.51**	**81**	*e*S	**Sn**	**02 36 29.7**	**+1.0**
JMJ2	**Miyako jima3**	**2.53**	**83**	*e*S	**Sn**	**02 36 29.8**	**+0.6**
MASBT	**Mashibuluo** baz=224	**2.54**	**225**	P	**Pn**	**02 36 00.5**	**+1.0**
MASBT	baz=224			*e*S	**Sn**	**02 36 29.2**	**-0.4**
LAY	**Lan-yu** baz=201	**2.57**	**202**	P	**Pn**	**02 35 58.9**	**-1.0**
LAY	baz=201			S	**Sn**	**02 36 27.1**	**-3.1**
TAW	**Tawu** baz=216	**2.58**	**217**	*e*S	**Sn**	**02 36 28.6**	**-1.8**
SCZT	**Fangliau** baz=220	**2.73**	**221**	*e*P	**Pn**	**02 36 03.8**	**+1.9**
SCZT	baz=220			*e*S	**Sn**	**02 36 35.7**	**+1.7**
SLIU	**Shizi** baz=216	**2.75**	**217**	*e*P	**Pn**	**02 36 02.5**	**+0.3**
SLIU	baz=216			*e*S	**Sn**	**02 36 34.0**	**-0.5**
PTTC	**Pingtan** baz=292	**2.75**	**293**	*e*P	**Pn**	**02 36 02.2**	**0.0**
PTTC	baz=292			*e*S	**Sn**	**02 36 32.2**	**-2.3**
VWUC	**VWUC** baz=281	**2.89**	**282**	*e*P	**Pn**	**02 36 03.8**	**-0.3**
VWUC	baz=281			*e*S	**Sn**	**02 36 35.4**	**-2.5**
PNG	**Penghu** baz=252	**2.89**	**253**	*e*P	**Pn**	**02 36 04.7**	**+0.6**
PNG	baz=252			*e*S	**Sn**	**02 36 36.4**	**-1.5**
PHUB	**P'eng-hu** baz=251	**2.89**	**252**	*e*P	**Pn**	**02 36 03.6**	**-0.5**
PHUB	baz=251			*e*S	**Sn**	**02 36 35.7**	**-2.3**
WDGT	**Dungji** baz=246	**2.91**	**247**	*e*P	**Pn**	**02 36 04.8**	**+0.4**
WDGT	baz=246			*e*S	**Sn**	**02 36 37.2**	**-1.3**
MATB	**Ma-tsu** baz=305	**2.92**	**306**	*e*P	**Pn**	**02 36 04.5**	**0.0**
MATB	baz=305			*e*S	**Sn**	**02 36 37.3**	**-1.3**
MSUT	**Lienchiang** baz=305	**2.95**	**306**	*e*P	**Pn**	**02 36 05.2**	**+0.3**
MSUT	baz=305			*e*S	**Sn**	**02 36 38.4**	**-0.9**
HEN	**Hengchun** baz=214	**2.95**	**215**	*e*S	**Sn**	**02 36 38.7**	**-0.7**
TWKBT	**Hengchun** baz=212	**2.97**	**213**	*e*P	**Pn**	**02 36 05.6**	**+0.4**
TWKBT	baz=212			*e*S	**Sn**	**02 36 39.9**	**0.0**
TWK1	**Hengchun** baz=212	**2.97**	**213**	P	**Pn**	**02 36 05.5**	**+0.3**
TWK1	baz=212			*e*S	**Sn**	**02 36 39.8**	**0.0**
PTMZ	**Houxiangcun** baz=280	**3.19**	**281**	*e*P	**Pn**	**02 36 08.0**	**-0.1**
PTMZ	baz=280			*e*S	**Sn**	**02 36 42.6**	**-2.6**
XPSS	**Dashiqiu** baz=319	**3.28**	**320**	*e*P	**Pn**	**02 36 11.0**	**+1.6**
LYJJ	**Jianjiangzhen** baz=309	**3.29**	**310**	*e*P	**Pn**	**02 36 09.5**	**-0.1**
LYJJ	baz=309			*e*S	**Sn**	**02 36 46.7**	**-1.0**
MHZQ	**Yeshan** baz=297	**3.60**	**298**	*e*P	**Pn**	**02 36 13.3**	**-0.5**
MHZQ	baz=297			*e*S	**Sn**	**02 36 55.5**	**+0.3**
KNM	**Kinmen** baz=269	**3.77**	**270**	*e*P	**Pn**	**02 36 18.8**	**+2.8**
KNM	baz=269			*e*S	**Sn**	**02 37 01.1**	**+1.9**
KNMB	**Chin-men Tao** baz=270	**3.81**	**271**	*e*P	**Pn**	**02 36 16.6**	**0.0**
KNMB	baz=270			*e*S	**Sn**	**02 36 56.8**	**-3.4**
AXDP	**Jialang** baz=276	**4.21**	**277**	*e*P	**Pn**	**02 36 22.1**	**+0.2**
AXDP	baz=276			*e*S	**Sn**	**02 37 07.0**	**-3.0**
ZPLA	**Ao Xicun** baz=263	**4.43**	**264**	*e*P	**Pn**	**02 36 25.4**	**+0.4**
ZPLA	baz=263			*e*S	**Sn**	**02 37 11.8**	**-3.6**

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*ISU **24** 02:43:27, 41°.07N×71°.55E, h10^{km}, Hypocentre not reviewed by the ISC*
*SOME **24** 02:43:28.3, 41°.03N×71°.68E, h15^{km}*
*KRNET **24** 02:43:28.1±0.1, 41°.08N×71°.58E, h19^{km}, mb3.3*
*NNC **24** 02:43:32.5±2.2, 41°.30N×71°.77E, h0^{km}, mb3.9, mpv3.6, Error ellipse: s-maj=21.7km s-min=7.5km az=7.0*
ISC 24 02:43:29.6±0.8, **40°.97N**±0°.03×**71°.60E**±0°.02, **h10**^{km}**, n43,** σ1^{s}77/76**, 23C-19D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NAM	**Namangan**	**0.05**	**65**	*e*P		02 43 30.0	
NAM				*e*S		02 43 32.0	
FRG	**Fergana**	**0.27**	**150**	*e*P		02 43 41.0	
FRG				*e*S		02 43 52.0	
ANR	**Andizhan**	**0.61**	**110**	*e*P		02 43 41.0	
ANR				*e*S		02 43 52.0	
TRKS	**Terek-Say** baz=21	**0.66**	**328**	⇓*i*P	Pg	02 43 37.5	-4.9
TRKS	baz=21			⇓*i*S	**Sg**	**02 43 44.7**	**-6.4**
OHH	**Osh** baz=21	**1.00**	**116**	⇑*i*P	**Pg**	**02 43 48.1**	**-0.8**
OHH	baz=21			⇑*i*S	**Sn**	**02 44 02.8**	**-1.3**
OHH	**Osh**	**1.00**	**116**	*e*P		02 43 48.0	
OHH				*e*S		02 44 05.0	
SHAK	**Shakhimardan**	**1.02**	**174**	*e*P		02 44 49.0	
SHAK				*e*S		02 44 05.0	
BTK	**Batken** baz=10.0	**1.09**	**213**	⇑*i*P	**Pg**	**02 43 49.9**	**-0.7**
BTK	baz=10.0			⇑*i*S	**Sn**	**02 44 06.1**	**-0.1**
BTK	**Batken**	**1.09**	**213**	*i* P		02 43 50.0	
BTK				*i* S		02 44 09.0	
ARSB	**Arslanbob** baz=76	**1.10**	**71**	⇓*i*P	**Pg**	**02 43 48.5**	**-2.3**
ARSB	baz=76			⇓*i*S	**Sg**	**02 44 03.1**	**-2.0**
ARSB	**Arslanbob**	**1.10**	**71**	*e*P		02 43 49.0	
ARSB				*e*S		02 44 02.0	
CHMG	**Chimgan**	**1.33**	**296**	*e*P		02 43 53.0	
CHMG				*e*S		02 44 09.0	
DRK	**Karamyk** baz=74	**1.50**	**174**	⇓*i*P	**Pb**	**02 43 57.3**	**-0.4**
DRK	baz=74			⇓*i*S	**Sg**	**02 44 19.0**	**+1.2**
MNAS	**Manas** baz=26	**1.66**	**24**	⇑*i*P	**Pn**	**02 43 57.1**	**-1.8**
MNAS	baz=26			⇑*e*S	**Sn**	**02 44 17.9**	**-2.5**
IUG	**Iuzhnay** 152nm,0.2s	**1.66**	**315**	*e*P	**Pn**	**02 43 58.7**	**-0.3**
IUG	643nm,0.3s			*e*S	**Sn**	**02 44 20.7**	**+0.2**
IUG	**Iuzhnay** 152nm,0.2s	**1.66**	**315**	P	**Pn**	**02 43 58.7**	**-0.3**
IUG	643nm,0.3s			S	**Sn**	**02 44 20.9**	**+0.5**
SFK	**Sufi-Kurgan** baz=25	**1.74**	**123**	⇓*i*P	**Pb**	**02 44 01.1**	**-0.7**
SFK	baz=25			⇓*i*S	**Sg**	**02 44 24.8**	**-0.7**
TAS	**Tashkent**	**1.78**	**282**	*e*S		02 43 58.0	
DZA	**Taraz** 160nm,0.1s	**1.93**	**354**	*e*P	**Pn**	**02 44 02.1**	**-0.5**
DZA	648nm,0.4s			*e*S	**Sn**	**02 44 26.4**	**-0.5**
AML	**Almayashu** baz=56	**1.95**	**53**	⇓*i*P	**Pn**	**02 44 02.7**	**-0.5**
AML	baz=56			⇓*i*S	**Sn**	**02 44 27.8**	**-0.2**
CHM	**Chimkent** 6.1nm,0.4s	**2.01**	**313**	*e*P	**Pb**	**02 44 06.3**	**-0.1**
CHM	456nm,0.2s			*e*S	**Sg**	**02 44 33.6**	**-0.8**
MRKS	**Merke** 84nm,0.4s	**2.15**	**34**	*e*P	**Pn**	**02 44 06.6**	**+1.0**
MRKS	96nm,0.4s			*e*S	**Sn**	**02 44 33.6**	**+1.2**
MRKS	**Merke** 84nm,0.4s	**2.15**	**34**	Pg	**Pn**	**02 44 06.6**	**+1.0**
MRKS	96nm,0.4s			Lg	Lg	02 44 34.3	
ARLS	**Aral** baz=68	**2.23**	**66**	⇑*i*P	**Pn**	**02 44 06.5**	**-0.3**
ARLS	baz=68			⇑*i*S	**Sn**	**02 44 35.1**	**+0.6**
KK31	**Karatay Array** 52nm,0.6s,baz=149,slow=13,SNR=342	**2.28**	**340**	⇑Pn	**Pn**	**02 44 07.9**	**+0.6**
KK31	32nm,0.3s,baz=142,slow=27			⇓Sn	**Sn**	**02 44 36.2**	**+0.6**
EKS2	**Erkin-Say** baz=45	**2.34**	**43**	⇑*i*P	**Pn**	**02 44 07.7**	**-0.6**
EKS2	baz=45			⇑*i*S	**Sn**	**02 44 36.6**	**-0.7**
BRLS	**Borolday** 20nm,0.2s	**2.44**	**328**	*e*P	**Pn**	**02 44 09.6**	**0.0**
BRLS	107nm,0.4s			*e*S	**Sn**	**02 44 39.3**	**-0.3**
UCH	**Uchtor** baz=61	**2.52**	**59**	⇓*e*P	**Pn**	**02 44 10.7**	**-0.3**
UCH	baz=61			⇓*i*S	**Sn**	**02 44 41.7**	**-0.3**
AAK	**Ala-Archa** 7.9nm,0.5s	**2.73**	**51**	⇑Pn	**Pn**	**02 44 13.8**	**+0.1**
AAK	12nm,0.4s			⇓Pg	**Pg**	**02 44 25.8**	**+3.9**
AAK	25nm,0.6s			⇓Sn	**Sb**	**02 44 52.1**	**-0.1**
FRU1	**Bishkek** baz=51	**2.91**	**50**	⇑*e*P	**Pn**	**02 44 15.8**	**-0.3**
FRU1	baz=51			⇑*i*S	**Sn**	**02 44 50.4**	**-0.8**
KBK	**Karagaybulak** baz=57	**3.02**	**55**	⇓*e*P	**Pn**	**02 44 17.7**	**+0.1**
KBK	baz=57			⇓*e*S	**Sn**	**02 44 53.4**	**-0.5**
CHMS	**Chumysh** baz=50	**3.10**	**48**	⇑*e*P	**Pn**	**02 44 18.3**	**-0.4**
CHMS	baz=50			⇑*i*S	**Sn**	**02 44 55.1**	**-0.7**
SGDS	**Sogindy** 51nm,0.5s	**3.35**	**41**	Lg	Lg	02 45 08.6	
TKM2	**Tokmak 2** baz=57	**3.56**	**56**	⇓*e*P	**Pn**	**02 44 25.3**	**+0.2**
TKM2	baz=57			⇓*i*S	**Sn**	**02 45 06.5**	**-0.9**
TKM2	**Tokmak 2** 4.5nm,1.1s	**3.56**	**56**	⇑Pn	**Pn**	**02 44 24.3**	**-0.8**
TKM2	5.0nm,0.5s			⇑Pg	**Pb**	**02 44 32.1**	**-0.7**
TKM2	28nm,0.7s			⇑Lg	Lg	02 45 18.2	
BOOM	**Boomskoye usch** baz=65	**3.58**	**64**	⇑*e*P	**Pn**	**02 44 25.8**	**+0.4**
BOOM	baz=65			⇑*i*S	**Sn**	**02 45 07.2**	**-0.7**
ULHL	**Ulahol** baz=70	**3.71**	**68**	⇑*e*P	**Pn**	**02 44 27.6**	**+0.5**
ULHL	baz=70			⇑*i*S	**Sn**	**02 45 10.6**	**-0.3**
DGS	**Degeres** 8.6nm,0.4s	**3.84**	**52**	*e*P	**Pb**	**02 44 37.3**	**-0.3**
DGS	30nm,0.7s			*e*S	**Sb**	**02 45 26.8**	**+2.6**
DGS	**Degeres** 8.6nm,0.4s	**3.84**	**52**	Pg	**Pb**	**02 44 37.3**	**-0.3**
DGS	30nm,0.7s			Lg	Lg	02 45 26.8	

KST	Kastek	3.85	56	*e*P	Pb	02 44 38.0	+0.3
	11nm,0.6s						
KST				*e*S	Sb	02 45 28.1	+3.5
	36nm,0.5s						
KST	Kastek	3.85	56	Pg	Pb	02 44 38.0	+0.3
	11nm,0.6s						
KST				Lg	Lg	02 45 28.0	
	36nm,0.5s						
MTBS	Maitube	4.19	57	*e*P	Pb	02 44 43.5	0.0
	3.0nm,0.4s						
MTBS				*e*S	Sb	02 45 37.3	+3.1
	20nm,0.7s						
MTBS	Maitube	4.19	57	Pg	Pb	02 44 43.5	0.0
	3.0nm,0.4s						
MTBS				Lg	Lg	02 45 37.3	
	20nm,0.7s						
BTLS	Baital	4.45	23	*e*P	Pb	02 44 48.8	+1.1
	18nm,0.7s						
BTLS				*e*S	Sb	02 45 46.4	+5.0
	21nm,0.3s						
TNSS	Tian-Shan	4.49	61	*e*P	Pb	02 44 50.1	+1.4
	3.4nm,0.5s						
TNSS				*e*S	Sg	02 45 48.7	-5.0
	6.1nm,0.6s						
TNSS	Tian-Shan	4.49	61	Pg	Pb	02 44 50.1	+1.4
	3.4nm,0.5s						
KUU	Kurty	4.56	49	*e*P	Pb	02 44 49.1	-0.7
	6.3nm,0.4s						
KUU				*e*S	Sb	02 45 47.0	+2.2
	27nm,0.5s						
KUU	Kurty	4.56	49	Pg	Pb	02 44 49.1	-0.7
	6.3nm,0.4s						
KUU				Lg	Lg	02 45 47.0	
	27nm,0.5s						
MDOK	Medeo	4.61	60	*e*P	Pb	02 44 52.5	+1.9
	4.1nm,0.5s						
MDOK				*e*S	Sg	02 45 52.9	-4.7
	13nm,0.6s						
MDOK	Medeo	4.61	60	Pg	Pb	02 44 52.5	+1.9
	4.1nm,0.5s						
KTBS	Karatobe	4.66	52	*e*P	Pb	02 44 51.8	+0.4
	3.0nm,0.5s						
KTBS				*e*S	Sb	02 45 51.7	+4.2
	33nm,0.4s						
KTBS	Karatobe	4.66	52	Pg	Pb	02 44 51.8	+0.4
	3.0nm,0.5s						
KTBS				Lg	Lg	02 45 51.7	
	33nm,0.4s						

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*IDC **24** 02:45:14.8±1.2, 29°.77S×176°.22W, h0^{km}, mb4.0/5, mb1 4.2/5, mb1mx4.0/34, mbtmp4.0/5, Error ellipse: s-maj=48.5km s-min=26.0km az=175.0*

*NEIC **24** 02:45:22.4±2.1, 29°.4S±0°.1×176°.5W±0°.1, h57^{km}±5^{km}, mb4.2/13, Error ellipse: s-maj=19.1km s-min=12.8km az=186.0*

ISC 24 02:45:18.4±1.0, **29°.4S**±0°.1×**176°.36W**±0°.09, **h21**^{km}, **n27**, σ**1^{s}10**/28, **mb4.3**/7, **Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.38	277	Pn	Pb	02 45 45.1	+1.7
	179nm,0.3s,baz=129,slow=9.9,SNR=5.6						
RAO				Sn	Sn	02 45 58.8	-1.1
	579nm,0.3s,baz=155,slow=6.0,SNR=14						
RAO				LR	LR	02 46 08.9	
	comp=Z,333nm,18.6s,baz=114,slow=34						
RAO	Raoul Island	1.38	277	Pn	Pb	02 45 44.6	+1.2
RAO	Raoul Island	1.38	277	Sn	Sn	02 45 59.0	-0.9
URZ	Urewera	10.35	210	Pn	Pn	02 47 46.5	+1.0
KHZ	Kahutara	15.31	209	Pn	Pn	02 48 52.4	-0.8
KHZ				IAmb	IAmb	02 49 10.6	
	comp=Z,20nm,0.9s						
LTZ	Lake Taylor	16.17	211		P	02 49 06.9	-0.5
LTZ				IAmb	IAmb	02 49 12.5	
	comp=Z,10nm,1.1s						
OXZ	Oxford	16.70	211		P	02 49 12.8	-0.4
OXZ				IAmb	IAmb	02 49 26.0	
	comp=Z,17nm,1.1s						
ODZ	Otahua Downs	18.67	210		Pn	02 49 35.9	+0.5
ODZ				IAmb	IAmb	02 49 46.0	
	comp=Z,11nm,1.2s						
STKA	Stephens Creek	36.10	255	P	P	02 52 19.9	+1.1
	comp=Z,2.7nm,0.7s,baz=104,slow=12,SNR=5.6						
STKA	Stephens Creek	36.10	255	P	P	02 52 17.8	-1.1
BBOO	Buckleboo	40.61	253	P	P	02 52 56.6	-0.2
ASAR	Alice Springs	44.60	265	P	P	02 53 28.6	-0.7
	comp=Z,0.6nm,0.5s,baz=105,slow=8.3,SNR=12						
ASAR	Alice Springs	44.60	265	P	P	02 53 28.0	-1.4
WR0	Warramunga Arr	45.32	270	P	P	02 53 34.9	-0.2
WB2	Warramunga Arr	45.49	270	P	P	02 53 36.1	-0.4
WB2				IAmb	IAmb	02 53 36.9	
	comp=Z,3.1nm,0.8s						
WRA	Warramunga Arr	45.50	270	P	P	02 53 35.7	-0.9
	comp=Z,1.6nm,0.5s,baz=110,slow=7.8,SNR=17						
WRA	Warramunga Arr	45.50	270	P	P	02 53 36.2	-0.4
WB0	Warramunga Arr	45.52	271	P	P	02 53 35.3	-1.4
WB0				IAmb	IAmb	02 53 38.9	
	comp=Z,6.0nm,1.1s						
SBA	Scott Base	49.12	185	P	P	02 54 04.5	+0.7
KNRA	Kununurra	52.07	273	P	P	02 54 24.5	-2.5
FITZ	Fitzroy Crossi	53.80	268	P	P	02 54 40.7	+0.9
	comp=Z,3.0nm,0.9s,baz=149,slow=4.0,SNR=3.7						
FITZ	Fitzroy Crossi	53.80	268	P	P	02 54 38.6	-1.2
FITZ				IAmb	IAmb	02 54 52.6	
	comp=Z,3.4nm,0.9s						
NVAR	Mina Array Bea	86.56	42	P	P	02 58 00.8	+0.6
	comp=Z,0.3nm,0.4s,baz=220,slow=8.3,SNR=3.4						
NVAR	Mina Array Bea	86.56	42	P	P	02 57 60.0	-0.2
FINES	FINESS Array B	144.70	341	PKPbc	PKPab	03 04 52.1	+0.5
	comp=Z,3.2nm,0.8s,baz=49,slow=2.9,SNR=8.5						
AKASG	Malin Array Be	151.36	325	PKPbc	PKPbc	03 05 10.8	+0.7
	comp=Z,0.3nm,0.3s,baz=48,slow=2.8,SNR=2.2						
TORD	Torodi Ar. Bea	163.70	173	PKPab	PKPab	03 06 10.5	-1.7
	comp=Z,1.1nm,0.7s,baz=185,slow=4.1,SNR=5.2						

ROM 24 02:47:23.2±0.1, **43°.071N**±0°.008×**12°.818E**±0°.005, **h10**^{km}, **ML0.5**/1, **Error ellipse: s-maj=0.9km s-min=0.4km az=14.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASSB	Assisi San Ben	0.12	257	P	Pg	02 47 26.2	+0.1
ASSB				S	Sg	02 47 29.1	+0.9
ASSB				AML	AML		
	comp=E,32µm,1.6s						
ASSB				AML	AML		
	comp=N,32µm,1.6s						
ATCC	AVT- Casa Cast	0.17	311	P	Pg	02 47 27.6	+0.6
ATCC				S	Sg	02 47 30.7	+1.1
FDMO	Fiordimonte	0.20	100	P	Pg	02 47 28.1	+0.7
FDMO				S	Sg	02 47 31.6	+1.3

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*IDC **24** 02:50:27.1±0.6, 31°.12N×141°.44E, h0^{km}, mb4.1/17, mb1 4.2/23, mb1mx4.1/48, mbtmp4.0/23, ML3.5/6, Error ellipse: s-maj=21.4km s-min=13.1km az=69.0*

*NEIC **24** 02:50:31.8±1.5, 31°.16N±0°.06×141°.6E±0°.1, h37^{km}±3^{km}, mb4.5/20, Error ellipse: s-maj=14.6km s-min=7.6km az=72.0*

ISC 24 02:50:31.8±0.5, **31°.11N**±0°.05×**141°.55E**±0°.09, **h37**^{km}, **n66**, σ**1^{s}28**/71, **mb4.3**/26, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ2	Mitsune	2.48	324	Pn	Pn	02 51 09.5	-0.1
JHJ2				Sn	Sn	02 51 37.4	-1.2
JHJ	Hachijo jima 2	2.50	324	Pn	Pn	02 51 09.2	-0.7
	26nm,0.3s,baz=69,slow=22,SNR=10						
JHJ				Sn	Sn	02 51 37.6	-1.6
	77nm,0.3s,baz=298,slow=22,SNR=6.3						
JCJ	Chichijima	4.04	172	Pn	Pn	02 51 31.5	+0.4
	24nm,0.3s,baz=70,slow=18,SNR=17						
JCJ				Sn	Sn	02 52 15.1	-2.0
	46nm,0.3s,baz=268,slow=22,SNR=7.8						
JCJ	Chichijima	4.04	172	Pn	Pn	02 51 32.0	+0.9
JCJ					Sn	02 52 15.2	-1.9
JGF	Kuroka	5.69	323	Pn	Pn	02 51 53.0	-0.8
MJAR	Matsushiro Arr	6.09	334	Pn	Pn	02 51 59.0	-0.3
	0.9nm,0.3s,baz=160,slow=11,SNR=28						
MJAR	Matsushiro Arr	6.09	334		Pn	02 51 59.1	-0.1
MAJO	Matsushiro	6.09	334		Pn	02 52 01.1	+1.9
MAT	Matsushiro	6.09	334	P	Pn	02 52 00.5	+1.3
MAT				S	Sn	02 53 07.4	-0.3
JMM	Marumori	6.77	355	Pn	Pn	02 52 06.5	-2.0
JMM					Sn	02 53 19.1	-5.1
JSD	Sado	7.42	339	Pn	Pn	02 52 17.8	+0.3
KSRS	Korea Array	12.92	303	Pn	Pn	02 53 32.2	-0.5
	0.2nm,0.3s,baz=107,slow=12,SNR=1.6						
USRK	Ussuriysk Ar.	15.09	333	Pn	Pn	02 54 02.7	+0.6
	baz=131,slow=8.6,SNR=4.8						
USRK	Ussuriysk Ar.	15.09	333		Pn	02 54 02.4	+0.3
KLR	Kul'dur	19.55	341	P	P	02 54 54.9	-1.3
	0.4nm,0.3s,baz=157,slow=6.7,SNR=7.7						
SSLB	Suanglung	19.66	253	P	P	02 54 59.5	+1.9
SSLB				IAmb	IAmb	02 55 01.4	
	comp=Z,27nm,1.0s						
H11N2	WAKE ISLAND Hy	25.48	110	T	T	03 22 35.1	
	baz=306,slow=74,SNR=5.1						
H11N1	WAKE ISLAND Hy	25.49	110	T	T	03 22 17.2	
	baz=306,slow=74,SNR=6.2						
H11N3	WAKE ISLAND Hy	25.50	110	T	T	03 22 34.9	
	baz=306,slow=74,SNR=5.3						
XAN	Xi'an	27.59	285	P	P	02 56 14.2	-1.4
SONM	Songino Array	31.53	312	P	P	02 56 51.1	+0.7
	comp=Z,2.5nm,0.8s,baz=117,slow=8.2,SNR=14						
SONM	Songino Array	31.53	312	P	P	02 56 49.7	-0.7
KMI	Kunming	34.62	270	P	P	02 57 16.1	-1.7
KMI				IAmb	IAmb	02 57 28.2	
	comp=Z,6.7nm,1.1s						
GAMB	Gambell	43.80	28	P	P	02 58 34.6	+1.0
GAMB				IAmb	IAmb	02 58 41.4	
	comp=Z,6.3nm,0.9s						
ZALV	Zalesovo Beam	46.15	317	P	P	02 58 52.9	+0.4
	comp=Z,1.7nm,0.4s,baz=98,slow=8.4,SNR=9.7						
ZALV				PcP	PcP	03 00 28.6	+0.7
	comp=Z,1.6nm,0.7s,baz=110,slow=2.5,SNR=6.0						
MK31	Makanchi Array	47.56	307	P	P	02 59 04.0	+0.4
MKAR	Makanchi Array	47.56	307	P	P	02 59 04.4	+0.7
	comp=Z,1.4nm,0.5s,baz=86,slow=9.5,SNR=36						
MKAR				PcP	PcP	03 00 35.5	+2.3
	comp=Z,0.3nm,0.5s,baz=69,slow=5.6,SNR=1.8						
MKAR	Makanchi Array	47.56	307	P	P	02 59 03.6	0.0
MAKZ	Makanchi	47.78	307	P	P	02 59 05.2	-0.1
RDOG	Red Dog Mine	48.79	24	P	P	02 59 11.3	-1.5
KURK	Kurchatov	49.83	312	P	P	02 59 21.3	+0.3
KURK				IAmb	IAmb	02 59 22.0	
	comp=Z,4.7nm,0.8s						
WB0	Warramunga Arr	51.05	189	P	P	02 59 29.2	-1.2
WB0				IAmb	IAmb	02 59 33.5	
	comp=Z,4.5nm,0.7s						
WR0	Warramunga Arr	51.22	188	P	P	02 59 32.2	+0.5
WR0				IAmb	IAmb	02 59 34.2	
	comp=Z,6.0nm,0.9s						
WB2	Warramunga Arr	51.23	189	P	P	02 59 32.1	+0.3
WB2				IAmb	IAmb	02 59 33.8	
	comp=Z,8.2nm,1.1s						
WRA	Warramunga Arr	51.23	189	P	P	02 59 32.2	+0.4
	comp=Z,4.0nm,0.5s,baz=6.3,slow=7.7,SNR=14						
WRA	Warramunga Arr	51.23	189	P	P	02 59 31.6	-0.2
WC3	Warramunga Arr	51.24	189	P	P	02 59 32.3	+0.4
WC3				IAmb	IAmb	02 59 33.3	
	comp=Z,6.1nm,0.9s						
IMAR	Indian Mountai	51.75	28	P	P	02 59 34.1	-1.1
ILAR	Eielson Array	54.49	30	P	P	02 59 58.4	+3.0
	comp=Z,0.4nm,0.7s,baz=280,slow=7.1,SNR=5.0						
ILAR	Eielson Array	54.49	30	P	P	02 59 57.1	+1.7
BRVK	Borovoye	54.82	316	P	P	02 59 57.9	0.0
BRVK				IAmb	IAmb	03 00 00.9	
	comp=Z,2.1nm,0.6s						
AS31	Alice Springs	54.96	189	P	P	02 59 59.5	+0.3
AS31				IAmb	IAmb	03 00 03.4	
	comp=Z,2.5nm,0.4s						
ASAR	Alice Springs	54.96	189	P	P	02 59 59.8	+0.6
	comp=Z,2.0nm,0.3s,baz=358,slow=5.5,SNR=61						
ASAR	Alice Springs	54.96	189	P	P	02 59 59.3	+0.1
KK05	Karatay Array	56.33	304	P	P	03 00 08.8	-0.2
KK06	Karatay Array	56.34	304	P	P	03 00 09.2	+0.1
KK01	Karatay Array	56.35	304	P	P	03 00 09.7	+0.6
ARU	Arti	60.94	321	P	P	03 00 40.7	-0.1
AB06	Akbulak array	61.92	313	P	P	03 00 47.6	+0.1
ABKAR	Akbulak array	61.94	313	P	P	03 00 48.2	+0.6
ABKAR	Akbulak array	61.94	313	P	P	03 00 47.6	0.0
ABKAR				IAmb	IAmb	03 00 49.0	
	comp=Z,7.8nm,0.5s						
STKA	Stephens Creek	62.65	180	P	P	03 00 53.8	+1.4
	comp=Z,1.1nm,0.4s,baz=97,slow=22,SNR=3.0						
FORT	Forrest	62.87	193	P	P	03 00 54.3	+0.3
BBOO	Buckleboo	63.79	185	P	P	03 00 58.5	-1.5
YKA	Yellowknife Ar	68.89	29	P	P	03 01 32.4	0.0
	comp=Z,0.3nm,0.7s,baz=295,slow=5.7,SNR=5.6						
ARCES	ARCESS Array B	69.58	340	P	P	03 01 38.6	+2.0
	comp=Z,4.8nm,1.0s,baz=51,slow=9.6,SNR=4.3						
FINES	FINESS Array B	74.12	333	P	P	03 02 03.8	-0.1
	comp=Z,2.1nm,0.5s,baz=64,slow=3.8,SNR=7.9						
KBZ	Khabaz	74.89	312	P	P	03 02 09.3	+0.6
	comp=Z,3.7nm,0.9s,baz=96,slow=4.7,SNR=8.1						
NVAR	Mina Array Bea	78.49	52	P	P	03 02 30.9	+1.4
	comp=Z,1.1nm,0.7s,baz=292,slow=4.8,SNR=4.5						
AKASG	Malin Array Be	79.07	323	P	P	03 02 31.4	-0.8
	comp=Z,0.9nm,0.4s,baz=50,slow=6.0,SNR=9.7						
NOA	NORSAR Array B	79.69	338	P	P	03 02 34.6	-0.7
	comp=Z,0.4nm,0.5s,baz=54,slow=6.8,SNR=4.0						
PDAR	Pinedale Array	81.76	45	P	P	03 02 48.1	+1.1
	comp=Z,0.5nm,0.7s,baz=293,slow=3.2,SNR=5.2						
BRTR	Keskin Array B	82.89	312	P	P	03 02 52.5	-0.4
	comp=Z,1.5nm,0.7s,baz=126,slow=4.0,SNR=11						
TXAR	Lajitas Array	93.63	53	P	P	03 03 47.9	+3.2
	comp=Z,1.2nm,0.8s,baz=306,slow=3.0,SNR=3.9						
TXAR	Lajitas Array	93.63	53	P	P	03 03 44.6	-0.1
LPAZ	La Paz	149.20	68	PKPbc	PKPbc	03 10 17.8	+0.1
	comp=Z,1.2nm,0.5s,baz=348,slow=3.3,SNR=3.5						

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*IDC **24** 02:58:50.7±1.8, 13°.45S×167°.06E, h104^{km}±13^{km}, mb4.4/13, mb1 4.5/15, mb1mx4.3/27, mbtmp4.7/15, MS4.5/1, Ms1 4.5/1, ms1mx3.7/36, Error ellipse: s-maj=21.3km s-min=13.5km az=111.0*

*BJI **24** 02:58:51.3±0.0, 12°.94S×167°.11E, h109^{km}, mB5.4/9, mb4.7/41*

*GCMT **24** 02:58:52.0±0.3, 13°.36S±0°.02×166°.99E±0°.02, h124^{km}±5^{km}, MW5.0/83, Moment Tensor Solution. s8,c8; s83,c111; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.01±.17; $M_{\theta\theta}$-1.67±.21; $M_{\phi\phi}$2.68±.18; $M_{r\theta}$-2.57±.11; $M_{\theta\phi}$0.62±.23; $M_{\phi r}$1.15±.12; Best double couple: $M_0$3.58200×10^{16} NP1:ϕ_s42.00000°,δ47.00000°,λ-21.00000°. NP2: ϕ_s146.00000°,δ75.00000°,λ-136.00000°. Principal axes: T 3.0130, Plg17.0000°, Azm268.0000°; N 1.1380, Plg44.0000°, Azm161.0000°; P -4.1510, Plg41.0000°, Azm14.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **24** 02:58:52.0±1.6, 13°.44S±0°.08×167°.0E±0°.2, h116^{km}±3^{km}, mb4.7/55 Error ellipse: s-maj=22.1km s-min=11.4km az=94.0*

*NOU **24** 02:58:52.4, 13°.34S×167°.02E, h114^{km}, mb5.0, Vanuatu Islands*

ISC 24 02:58:52.4±0.4, **13°.44S**±0°.05×**166°.97E**±0°.09, **h116**^{km}, **n161**, σ**0^{s}93**/178, **mb4.8**/63, **5C-1D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	Saraoutou	2.00	174	Pn	Pn	02 59 25.2	-0.5
SANVU				Sn	Sn	02 59 50.4	-0.8
SANVU	Saraoutou	2.00	174	P	Pn	02 59 26.8	+1.0
DVP	Devils Point	4.42	165	P	Pn	03 00 00.2	+2.7
YATNC	Mamie plateau,	8.57	181	P	Pn	03 00 54.4	+0.8
DZM	Mont Dzumac	8.60	183	P	Pn	03 00 53.9	-0.1
	4.2nm,0.3s,baz=356,slow=21,SNR=30						
DZM				S	Sn	03 02 30.2	+0.9
	1.5nm,0.3s,baz=145,slow=23,SNR=1.8						
DZM	Mont Dzumac	8.60	183	*e*Pn	Pn	03 00 55.0	+0.9
	40nm,0.3s						
DZM				*e*Sn	Sn	03 02 28.1	-1.3
	15nm,0.3s						
DZM	Mont Dzumac	8.60	183	Pn	Pn	03 00 53.9	-0.1
DZM				Sn	Sn	03 02 31.1	+1.7
DZM	Mont Dzumac	8.60	183	P	Pn	03 00 55.2	+1.1
ONTNC	Ouen Toro	8.83	183	P	Pn	03 00 59.0	+1.9
OUENC	Ouen Island, N	8.93	181	P	Pn	03 00 59.3	+0.8
EIDS	Eidsvold	19.09	229		Pn	03 03 08.1	0.0
PMG	Port Moresby	19.83	280	P	Pn	03 03 15.9	-1.0
	1.8nm,0.3s,baz=236,slow=18,SNR=4.9						
PMG	Port Moresby	19.83	280	P	P	03 03 14.0	-0.2
PMG				IAmb	IAmb	03 03 17.5	
	comp=Z,25nm,0.9s						
CTA	Charters Tower	20.90	249	P	P	03 03 26.4	+0.7
	comp=Z,22nm,0.7s,baz=79,slow=12,SNR=44						
CTAO	Charters Tower	20.90	249	P	P	03 03 26.4	+0.7
CTAO				IAmb	IAmb	03 03 27.2	
	comp=Z,23nm,0.7s						
RMQ	Roma	21.44	230	P	P	03 03 32.9	+1.4
	baz=22,SNR=28						
PATS	Pohnpei	21.91	336	P	P	03 03 38.9	+2.5
	baz=22,SNR=3.6						
PATS	Pohnpei	21.91	336	P	P	03 03 36.3	-0.1
ARMA	Armidale	22.04	218	P	P	03 03 39.0	+1.1
	baz=22,SNR=14						
ARMA	Armidale	22.04	218	P	P	03 03 39.1	+1.1
ARMA				IAmb	IAmb	03 03 40.5	
	comp=Z,25nm,0.8s						
MTSU	Mount Surprise	22.29	255	P	P	03 03 41.0	+0.5
	baz=22,SNR=43						
COEN	Coen	23.12	266	P	P	03 03 49.7	+1.0
MGCD	Mangrove Creek	24.42	214	P	P	03 04 01.7	+1.5
	baz=24,SNR=9.3						
QLP	Quilpie	24.99	235	P	P	03 04 05.8	+0.3
	baz=25,SNR=7.0						
CMSA	Cobar Meteorol	26.57	224	P	P	03 04 20.4	+0.7
	baz=27,SNR=15						
YNG	Young	26.73	216	P	P	03 04 22.0	+0.8
	baz=27,SNR=6.4						
CNB	Canberra Magne	26.96	213	P	P	03 04 24.3	+1.1
	baz=27,SNR=5.4						
QIS	Mount Isa	27.08	251	P	P	03 04 23.2	-1.2
	baz=27,SNR=3.7						
CAN	Canberra	27.16	214	P	P	03 04 25.9	+1.0
STKA	Stephens Creek	29.62	228	P	P	03 04 47.5	+0.6
	comp=Z,13nm,0.6s,baz=47,slow=8.8,SNR=45						
STKA				ScP	ScP	03 11 21.4	+1.1
	comp=Z,3.7nm,0.8s,baz=78,slow=4.4,SNR=4.8						
STKA	Stephens Creek	29.62	228	P	P	03 04 47.5	+0.6
	baz=30,SNR=25						
STKA	Stephens Creek	29.62	228	P	P	03 04 47.4	+0.5
TOO	Toolangi	30.72	215	P	P	03 04 57.5	+0.9
	baz=31,SNR=9.9						
TOO	Toolangi	30.72	215	P	P	03 04 57.4	+0.9
TOO				IAmb	IAmb	03 04 58.2	
	comp=Z,10nm,0.7s						
WR0	Warramunga Arr	31.69	254	P	P	03 05 04.1	-1.2
WR0				IAmb	IAmb	03 05 04.5	
	comp=Z,6.2nm,0.5s						
WB0	Warramunga Arr	31.81	254	P	P	03 05 05.2	-1.1
WB0				IAmb	IAmb	03 05 06.0	
	comp=Z,16nm,0.6s						
WB2	Warramunga Arr	31.87	254	P	P	03 05 05.6	-1.2
WB2				IAmb	IAmb	03 05 06.5	
	comp=Z,6.8nm,0.6s						
WRA	Warramunga Arr	31.88	254	P	P	03 05 05.7	-1.2
	comp=Z,5.3nm,0.5s,baz=85,slow=9.3,SNR=106						
WRA				ScP	ScP	03 11 28.8	+0.8
	comp=Z,1.9nm,1.0s,baz=82,slow=3.1,SNR=8.7						
WRA				PKiKP	PKiKP	03 15 21.3	-2.3
	comp=Z,0.4nm,0.6s,baz=189,slow=2.7,SNR=6.5						
HTT	Hallett	32.36	227	P	P	03 05 11.5	+0.5
	baz=32,SNR=12						
AS31	Alice Springs	32.88	247	P	P	03 05 14.6	-1.1
ASAR	Alice Springs	32.88	247	P	P	03 05 14.5	-1.2
	comp=Z,10nm,0.6s,baz=74,slow=9.5,SNR=225						
ASAR				PcP	PcP	03 07 56.0	-1.9
	comp=Z,29nm,0.4s,baz=78,slow=2.7,SNR=304						
ASAR				ScP	ScP	03 11 32.1	+0.7
	comp=Z,2.0nm,0.9s,baz=76,slow=3.5,SNR=10.0						
ASAR				LR	LR	03 18 33.8	
	comp=Z,703nm,18.7s,baz=40,slow=36						
ASAR	Alice Springs	32.88	247	P	P	03 05 14.3	-1.4
ASAR				PcP	PcP	03 07 57.6	-0.2
ASAR				ScP	ScP	03 11 29.9	-1.5
KDU	Kakadu	33.60	267	P	P	03 05 22.0	+0.1
	baz=34,SNR=13						
BBOO	Buckleboo	34.15	230	P	P	03 05 26.7	+0.1
	baz=34,SNR=33						
BBOO	Buckleboo	34.15	230	P	P	03 05 26.6	+0.1
FAKI	Fak Fak	35.87	284	P	P	03 05 42.0	+0.5
FAKI				IAmb	IAmb	03 05 43.6	
	comp=Z,16nm,0.8s						
SWI	Sorong	37.50	287	P	P	03 05 55.8	+0.5
	comp=Z,49nm,0.9s						
BNDI	Bandanaira	37.62	280	P	P	03 05 56.7	+0.3
	comp=Z,26µmcomp=Z,182nm,0.9s						
WRKA	Warakurna	38.16	247	P	P	03 05 59.9	-0.9
	baz=38,SNR=63						
FORT	Forrest	39.72	238	P	P	03 06 13.5	-0.1
	baz=40,SNR=30						
FORT	Forrest	39.72	238	P	P	03 06 13.6	-0.1
FITZ	Fitzroy Crossi	39.98	258	P	P	03 06 15.9	-0.2
	baz=40,SNR=14						
FITZ	Fitzroy Crossi	39.98	258	P	P	03 06 15.8	-0.2
SANI	Sanana	42.08	282	P	P	03 06 33.1	-0.2
	comp=Z,18nm,0.9s						
KMBL	Kambalda	44.99	239	P	P	03 06 56.2	-0.2
	baz=45,SNR=8.1						
PSA00	Pilbara Seismi	45.52	253	P	P	03 07 01.0	+0.3
PSA00				IAmb	IAmb	03 07 02.9	
	comp=Z,11nm,0.7s						
GTOI	Gorontalo	45.75	284	P	P	03 07 04.3	+1.7
	comp=Z,12nm,0.7s						
GTOI				pP	pP	03 07 28.2	+0.3
	comp=Z,12nm,0.7s						
MEEK	Meekatharra	47.02	246	P	P	03 07 12.5	0.0
	baz=47,SNR=36						
PLAI	Plampang	48.43	270	P	P	03 07 22.4	-1.0
	comp=Z,68nm,0.8s						
KLBR	Kellerberrin	48.49	240	P	P	03 07 22.8	-0.8
	baz=48,SNR=12						
NWAO	Narrogin (SRO)	49.17	238	P	P	03 07 28.2	-0.7
	baz=49,SNR=6.6						
NWAO	Narrogin (SRO)	49.17	238	P	P	03 07 28.4	-0.5
NWAO				IAmb	IAmb	03 07 29.3	
	comp=Z,11nm,0.5s						
TWSI	Taliwang, Sumb	49.31	270	P	P	03 07 29.5	-0.7
	comp=Z,30nm,0.8s						
MORW	Morawa	49.57	243	P	P	03 07 31.9	-0.1
	baz=50,SNR=14						
MORW	Morawa	49.57	243	P	P	03 07 31.9	-0.1
GIRL	Giralia	50.75	252	P	P	03 07 40.9	0.0
	baz=51,SNR=4.3						
GIRL	Giralia	50.75	252	P	P	03 07 41.9	+0.9
JOW	Kunigami	54.91	317	P	P	03 08 13.0	+1.6
JGF	Kuroka	56.26	331	P	P	03 08 20.6	-0.3
JGF				IAmb	IAmb	03 08 21.1	
	comp=Z,8.6nm,0.6s						
JMN	Monobe	56.52	327	P	P	03 08 23.6	+0.8
MJAR	Matsushiro Arr	56.64	332	P	P	03 08 22.8	-0.8
	comp=Z,5.3nm,0.5s,baz=173,slow=7.9,SNR=20						
MJAR	Matsushiro Arr	56.64	332	P	P	03 08 23.0	-0.5
MAJO	Matsushiro	56.64	332	P	P	03 08 23.2	-0.3
MAJO				IAmb	IAmb	03 08 25.2	
	comp=Z,9.3nm,0.8s						
MAT	Matsushiro	56.64	332	P	P	03 08 22.6	-1.0
JMM	Marumori	56.64	335	P	P	03 08 23.7	+0.2
JMM				IAmb	IAmb	03 08 39.1	
	comp=Z,6.9nm,1.0s						
JNU	Nakatsue	57.72	324	P	P	03 08 30.6	-0.6
JHS	Saijyo	57.90	327	P	P	03 08 32.8	+0.3
JHS				IAmb	IAmb	03 08 41.0	
	comp=Z,7.2nm,0.9s						
YHNB	Yeheng	58.43	310	P	P	03 08 36.8	+0.4
QZH	Quanzhou	60.67	309	⇑*i*P	P	03 08 52.3	+0.6
JKA	Kamikawa-asahi	61.44	340	P	P	03 08 57.4	+0.9
SSE	Sheshan	62.40	316	P	P	03 09 02.9	-0.3
KSRS	Korea Array	62.52	326	P	P	03 09 04.0	+0.1
	comp=Z,2.5nm,0.6s,baz=140,slow=6.9,SNR=11						
VNDA	Vanda	64.13	181	P	P	03 09 14.4	+0.5
NJ2	Nanjing	64.56	316	*e*P	P	03 09 18.3	+0.9
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CASY	Casey	64.60	202	P	P	03 09 16.7	-0.4
USRK	Ussuriysk Ar.	65.62	333	P	P	03 09 24.8	+0.9
	comp=Z,3.3nm,0.6s,baz=148,slow=5.1,SNR=6.2						
USRK	Ussuriysk Ar.	65.62	333	P	P	03 09 25.2	+1.2
PETK	Petropavlovsk-	66.76	354	P	P	03 09 31.3	+0.2
	comp=Z,5.1nm,0.5s,baz=154,slow=7.4,SNR=17						
PETK	Petropavlovsk-	66.76	354	P	P	03 09 31.4	+0.3
WHN	Wuhan	66.87	312	⇓P	P	03 09 32.5	+0.2
DL2	Dalian	67.10	323	P	P	03 09 33.8	+0.2
DL2				pmax	pmax		
	comp=Z,41nm,0.6s						
MNSI	Mandailing Nat	68.23	276	P	P	03 09 41.4	+0.2
	comp=Z,4µmcomp=Z,24nm,0.7s						
GSI	Gunungsitoli	70.30	276	P	P	03 09 53.3	-0.7
ENH	Enshi	70.33	309	P	P	03 09 52.9	-0.9

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
ENH				IAmb	IAmb	03 09 54.4	
	comp=Z,10nm,0.7s						
GYA	Guiyang	70.75	304	⇑P	P	03 09 57.0	+0.4
GYA				pmax	pmax		
	comp=Z,5.0nm,0.6s						
BJT	Baijiatuau	71.08	321	P	P	03 09 57.1	-1.0
BJT				IAmb	IAmb	03 09 58.8	
	comp=Z,6.4nm,0.7s						
BJI	Beijing	71.09	321	P	P	03 09 58.3	+0.1
BJI				pmax	pmax		
	comp=Z,9.0nm,0.7s						
XAN	Xi'an	72.61	312	P	P	03 10 07.8	+0.3
XAN				pmax	pmax		
	comp=Z,19nm,0.7s						
XAN	Xi'an	72.61	312	P	P	03 10 07.3	-0.2
XAN				IAmb	IAmb	03 10 09.1	
	comp=Z,11nm,0.7s						
KMI	Kunming	73.39	302	⇑P	P	03 10 13.9	+1.4
KMI				pmax	pmax		
	comp=Z,8.0nm,0.8s						
CMAR	Chiang Mai Arr	74.17	294	P	P	03 10 18.2	+1.4
	comp=Z,5.2nm,0.6s,baz=131,slow=4.7,SNR=18						
CMAR	Chiang Mai Arr	74.17	294	P	P	03 10 17.8	+0.9
HHC	Hu-ho-hao-te	74.42	320	*e*P	P	03 10 18.8	+0.8
HHC				S	S	03 19 45.0	+1.5
HHC				pmax	pmax		
	comp=Z,9.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,370nm,6.4s						
CD2	Chengdu	75.00	307	P	P	03 10 22.1	+0.6
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CHGN	Chignik	75.25	19	P	P	03 10 22.3	0.0
CHGN				IAmb	IAmb	03 10 29.1	
	comp=Z,14nm,1.0s						
QSPA	South Pole Qui	76.58	180	P	P	03 10 29.9	-0.1
QSPA				IAmb	IAmb	03 10 32.9	
	comp=Z,10nm,1.1s						
LZH	Lanzhou	77.25	312	⇑P	P	03 10 35.8	+1.5
LZH				pP	pP	03 11 02.1	-1.5
LZH				sP	sP	03 11 15.0	-1.0
LZH				pmax	pmax		
	comp=Z,15nm,1.1s						
LZH				pmax	pmax		
	comp=Z,68nm,5.4s						
LZH				LR	LR		
	comp=Z,500nm,16.8s						
LZH				LR	LR		
	comp=Z,520nm,16.3s						
LZH				LR	LR		
	comp=Z,380nm,17.9s						
OHAK	Old Harbor	77.70	21	P	P	03 10 37.4	+1.3
OHAK				IAmb	IAmb	03 10 37.7	
	comp=Z,9.4nm,0.7s						
ULN	Ulaanbaatar	80.93	324	P	P	03 10 54.5	+0.4
SONM	Songino Array	81.30	324	P	P	03 10 55.9	-0.1
	comp=Z,2.0nm,0.7s,baz=120,slow=4.8,SNR=12						
SONM	Songino Array	81.30	324	P	P	03 10 55.9	-0.1
GTA	Gaotai	81.57	314	*e*P	P	03 10 58.3	+0.7
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
RND	Reindeer	83.81	18	P	P	03 11 07.8	-0.8
RND				IAmb	IAmb	03 11 09.6	
	comp=Z,8.7nm,0.5s						
N25K	Chitina, Valde	83.93	21	P	P	03 11 09.6	+0.3
BALM	Baldy	84.36	22	P	P	03 11 11.1	-0.4
BALM				IAmb	IAmb	03 11 17.5	
	comp=Z,6.3nm,0.9s						
IMAR	Indian Mountai	84.41	15	P	P	03 11 11.5	0.0
LSA	Lhasa	84.64	302	P	P	03 11 14.9	+0.9
LSA				IAmb	IAmb	03 11 17.3	
	comp=Z,8.4nm,0.7s						
CCB	Clear Creek Bu	85.03	18	P	P	03 11 13.1	-1.5
HDA	Harding Lake	85.12	18	P	P	03 11 14.7	-0.4
HDA				IAmb	IAmb	03 11 16.2	
	comp=Z,10nm,0.5s						
MDM	Murphy Dome	85.14	18	P	P	03 11 13.8	-1.3
IL31		85.40	18	P	P	03 11 15.6	-0.8
IL31				IAmb	IAmb	03 11 17.2	
	comp=Z,4.2nm,0.6s						
ILAR	Eielson Array	85.40	18	P	P	03 11 15.1	-1.4
	comp=Z,3.8nm,0.5s,baz=239,slow=4.9,SNR=103						
ILAR	Eielson Array	85.40	18	P	P	03 11 15.3	-1.2
POKR	Poker Plat Res	85.48	18	P	P	03 11 15.8	-1.1
NVAR	Mina Array Bea	86.66	49	P	P	03 11 24.5	+1.0
	comp=Z,0.2nm,0.4s,baz=233,slow=8.9,SNR=3.1						
TAPN	Taplejung	86.81	299	*e*P	P	03 11 24.3	-0.3
	comp=Z,9.7nm,0.6s						
ODAN	Odare	86.94	298	*e*P	P	03 11 25.3	+0.1
	comp=Z,34nm,0.7s						
TOLK	Toolik Lake Re	87.49	15	P	P	03 11 26.9	+0.2
RAMN	Ramite	87.64	298	*e*P	P	03 11 28.3	-0.3
	comp=Z,13nm,0.6s						
BELA	Belgrano 2	88.02	176	P	P	03 11 29.2	+0.1
GUN	Gumba	88.52	299	*e*P	P	03 11 32.3	-0.6
	comp=Z,26nm,0.8s						
PKI	Pulchoki	88.83	299	*e*P	P	03 11 33.4	-0.9
	comp=Z,19nm,0.6s						
PKIN	Phulchoki	88.85	299	*e*P	P	03 11 33.6	-0.7
	comp=Z,17nm,0.6s						
KKN	Kakani	89.00	299	*e*P	P	03 11 34.2	-0.7
	comp=Z,24nm,0.7s						
DMN	Daman	89.10	299	*e*P	P	03 11 35.1	-0.4
	comp=Z,32nm,0.6s						
GKN	Gorkha	89.61	299	*e*P	P	03 11 36.3	-1.4
	comp=Z,20nm,0.7s						
SYO	Syowa Base	89.85	197	⇑*e*X	P	03 11 43.1	+5.3
WMQ	Urumqi	91.62	315	*e*P	P	03 11 47.9	+1.3
WMQ				pmax	pmax		
	comp=Z,11nm,0.9s						
WMQ				LR	LR		
	comp=Z,710nm,29.2s						
WMQ				LR	LR		
	comp=Z,2μm,28.8s						
WMQ				LR	LR		
	comp=Z,330nm,16.1s						
SNAA	Sanae	94.81	183	P	P	03 12 00.9	+0.1
VNA3	Neumayer Olymp	95.49	181	P	P	03 12 03.1	-0.7
VNA2	Neumayer--Watz	95.75	182	P	P	03 12 04.7	-0.3
	baz=182,slow=4.8						
MK31	Makanchi Array	96.08	317	P	P	03 12 06.9	0.0
MK31				IAmb	IAmb	03 12 07.2	
	comp=Z,1.4nm,0.6s						
MKAR	Makanchi Array	96.08	317	P	P	03 12 06.7	-0.2
	comp=Z,2.2nm,0.6s,baz=90,slow=6.6,SNR=35						
MKAR				PP	PP	03 15 58.1	-3.2
	comp=Z,0.3nm,0.9s,baz=92,slow=11,SNR=4.3						
MKAR	Makanchi Array	96.08	317	P	P	03 12 06.3	-0.6
ZALV	Zalesovo Beam	96.19	324	P	P	03 12 06.3	-0.9
	comp=Z,1.4nm,0.6s,baz=104,slow=4.3,SNR=7.0						
ZALV	Zalesovo Beam	96.19	324	P	P	03 12 06.4	-0.8
ARCES	ARCESS Array B	118.94	346	PKP	PKPdf	03 17 25.6	-1.2
	comp=Z,2.9nm,0.5s,baz=93,slow=1.7,SNR=28						
ARCES				PKKPbc	PKKPab	03 27 41.4	-2.3
	comp=Z,2.2nm,1.0s,baz=227,slow=1.3,SNR=13						
BOSA	Boshof	124.15	221	PKP	PKPdf	03 17 37.7	-0.5
	comp=Z,2.9nm,0.9s,baz=106,slow=3.8,SNR=4.1						
BOSA	Boshof	124.15	221		PKPdf	03 17 36.9	-1.3
FINES	FINESS Array B	124.43	338	PKP	PKPdf	03 17 36.8	-0.7
	comp=Z,4.7nm,0.9s,baz=21,slow=5.3,SNR=13						
FINES	FINESS Array B	124.43	338		PKPdf	03 17 36.5	-1.0
NB2	NORSAR Subarra	129.31	345	PKP	PKPdf	03 17 46.3	-0.6
	comp=Z,1.1nm,0.6s,baz=43,slow=2.9						
NOA	NORSAR Array B	129.31	345	PKP	PKPdf	03 17 46.4	-0.5
	comp=Z,1.0nm,0.6s,baz=29,slow=2.0,SNR=6.8						
KOLS	Kolonicke sedl	134.21	328	*e*PKP	PKiKP	03 17 58.4	+0.5
GERES	GERESS Array B	138.37	333	PKP	PKPdf	03 18 04.3	0.0
	comp=Z,0.7nm,0.6s,baz=90,slow=2.7,SNR=6.5						
GERES				SKPbc	SKPbc	03 21 30.0	+1.7
	comp=Z,0.6nm,0.7s,baz=352,slow=4.0,SNR=4.9						
GERES	GERESS Array B	138.37	333		PKPdf	03 18 03.9	-0.5
KEST	Kesra	150.03	322	PKPbc	PKPbc	03 18 29.6	-0.3
	comp=Z,7.5nm,0.6s,baz=92,slow=1.0,SNR=12						
ESDC	Sonseca Array	152.68	345	PKPbc	PKPbc	03 18 35.1	-0.8
	comp=Z,1.8nm,0.6s,baz=6.4,slow=2.8,SNR=17						
ESDC				PKPab	PKPab	03 18 46.3	-0.5
	comp=Z,1.1nm,0.6s,baz=15,slow=3.3,SNR=3.2						
ESDC	Sonseca Array	152.68	345		PKPbc	03 18 35.5	-0.4
TORD	Torodi Ar. Bea	165.67	271	PKP	PKPdf	03 18 44.4	0.0
	comp=Z,0.5nm,0.7s,baz=90,slow=1.4,SNR=3.9						
TORD				PKPab	PKPab	03 19 44.0	0.0
	comp=Z,0.8nm,0.8s,baz=90,slow=1.4,SNR=2.6						
TORD	Torodi Ar. Bea	165.67	271		PKPdf	03 18 42.8	-1.6

GCG ***24*** *03:03:13.0±0.4, 13°.03N×88°.22W, h93^{km}±122^{km}, MD4.2*

NEIC ***24*** *03:03:14.9±0.8, 13°.53N±0°.04×88°.60W±0°.06, h183^{km}±6^{km}, mb4.3/23, Error ellipse: s-maj=9.1km s-min=5.7km az=63.0*

SNET ***24*** *03:03:15.1±0.6, 13°.52N×88°.61W, h180^{km}±5^{km}, ML3.6*

IDC ***24*** *03:03:15.3±1.3, 13°.51N×88°.51W, h190^{km}±14^{km}, mb3.4/8, mb1 3.6/12, mb1mx3.4/38, mbtmp3.9/12, MS3.6/2, Ms1 3.6/2, ms1mx3.3/26, Error ellipse: s-maj=28.4km s-min=9.7km az=54.0*

UCR ***24*** *03:03:18.6±4.7, 12°.52N×88°.98W, h0^{km}±11^{km}, ML3.3, mb4.3(NEIC)*

INET ***24*** *03:03:19.0, 13°.83N×88°.58W, h143^{km}, MW3.6*

ISC 24 03:03:14.9±0.6**, 13°.57N**±0°.06×**88°.55W**±0°.04**, h180**^{km}±5^{km}**, n102,** σ1^{s}.49/118**, mb4.2**/20**, 6C, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COEB	Comit de Eme	0.08	168	*e*P	Pn	03 03 39.5	+0.7
COEB				IAML		03 03 48.9	
	comp=Z,850nm,0.3s						
COEB	Comit de Eme	0.08	168	*e*P	Pn	03 03 39.5	+0.7
COEB				IAML		03 03 48.9	
	comp=Z,850nm,0.3s						
TECA	Tecapa	0.09	151	*e*P	Pn	03 03 39.9	+0.9
TECA	Tecapa	0.09	151	*e*P	Pn	03 03 39.9	+0.9
PACA	Pacayal	0.24	115	*e*P	Pn	03 03 40.2	+1.2
PACA	Pacayal	0.24	115	*e*P	Pn	03 03 40.2	+1.2
LCY	Lacayo	0.29	121	*e*P	Pn	03 03 40.1	+1.0
LCY	Lacayo	0.29	121	*e*P	Pn	03 03 40.1	+1.0
VSM	San Miguel	0.30	118	*e*P	Pn	03 03 40.1	+0.8
VSM	San Miguel	0.30	118	*e*P	Pn	03 03 40.1	+0.8
COEG	Centro de Oper	0.33	278	*e*P	Pn	03 03 39.6	+0.4
COEG				IAML		03 03 52.4	
	comp=Z,704nm,0.4s						
COEG	Centro de Oper	0.33	278	*e*P	Pn	03 03 39.6	+0.4
COEG				IAML		03 03 52.4	
	comp=Z,704nm,0.4s						
LFRS	El Faro	0.50	276	⇑*i*P	Pn	03 03 40.2	+0.4
LFRS	El Faro	0.50	276	⇑*i*P	Pn	03 03 40.2	+0.4
LBRS	Las Brisas	0.51	289	⇑*i*P	Pn	03 03 40.5	+0.7
LBRS	Las Brisas	0.51	289	⇑*i*P	Pn	03 03 40.5	+0.7
SNET	Serv Nac Est T	0.68	280		Pn	03 03 40.6	0.0
SNET				Sn	Sn	03 04 00.4	+0.1
LCND	La Caada	0.69	112	*e*P	Pn	03 03 41.4	+0.8
LCND				*e*S	Sn	03 04 01.4	+1.0
LCND				IAML		03 04 04.3	
	comp=Z,758nm,0.6s						
LCND	La Caada	0.69	112	*e*P	Pn	03 03 41.4	+0.8
LCND				*e*S	Sn	03 04 01.4	+1.0
LCND				IAML		03 04 04.3	
	comp=Z,758nm,0.6s						
BOQS	Boqueron	0.73	283	*e*P	Pn	03 03 42.0	+0.9
BOQS	Boqueron	0.73	283	*e*P	Pn	03 03 42.0	+0.9
LALI	Alcalda de L	0.76	264	*e*P	Pn	03 03 41.0	+0.1
LALI				*e*S	Sn	03 04 01.3	+0.4
LALI				IAML		03 04 07.8	
	comp=Z,234nm,0.4s						
LALI	Alcalda de L	0.76	264	*e*P	Pn	03 03 41.0	+0.1
LALI				*e*S	Sn	03 04 01.3	+0.4
LALI				IAML		03 04 07.8	
	comp=Z,234nm,0.4s						
CEDA	San Andres	0.85	286	*e*P	Pn	03 03 41.8	+0.2
CEDA	San Andres	0.85	286	*e*P	Pn	03 03 41.8	+0.2
JAYA	Jayaque - finc	0.88	275	⇑*i*P	Pn	03 03 41.9	0.0
JAYA	Jayaque - finc	0.88	275	⇑*i*P	Pn	03 03 41.9	0.0
CEVE	Cerro Verde	1.08	284	*e*P	Pn	03 03 44.1	+0.6
CEVE				IAML		03 04 11.4	
	comp=Z,1μm,0.3s						
CEVE	Cerro Verde	1.08	284	*e*P	Pn	03 03 44.1	+0.6
CEVE				IAML		03 04 11.4	
	comp=Z,1μm,0.3s						
SBLS	San Blas	1.08	284	*e*P	Pn	03 03 44.1	+0.7
SBLS	San Blas	1.08	284	*e*P	Pn	03 03 44.1	+0.7
RTR	El Retiro	1.11	287	*e*P	Pn	03 03 44.7	+1.0
RTR	El Retiro	1.11	287	*e*P	Pn	03 03 44.7	+1.0
MTO3	Montecristo	1.14	316		Pn	03 03 44.5	+0.6
MTO3				Sn	Sn	03 04 06.0	-0.4
ESQI	Esquipulas	1.25	322		Pn	03 03 45.5	+0.8
ESQI				Sn	Sn	03 04 08.7	+0.9
TGUH	Tegucigalpa,Un	1.33	69	Pn	Pn	03 03 46.1	+0.7
TGUH				Sn	Sn	03 04 09.3	+0.3
CRIN	San Cristobal	1.70	121	Pn	Pn	03 03 49.4	+0.6
CRIN				Sn	Sn	03 04 18.0	+2.9
MRL	Marmol	1.86	324	*e*P	Pn	03 03 52.8	+2.1
NBG	Las Nubes	2.02	300	*e*P	Pn	03 03 54.5	+2.1
PCG	Pacaya	2.16	292	*e*P	Pn	03 03 55.7	+1.8
PCG				*e*S	Sn	03 04 28.9	+4.7
FUG	Fuego 3	2.39	292	*e*P	Pn	03 03 58.3	+1.8
FUG				*e*S	Sn	03 04 34.0	+5.2
MATN	Matagalpa	2.63	104		Pn	03 03 59.5	+0.3
MATN				Sn	Sn	03 04 34.7	+1.1
BOAB	BOACO BROADBAN	3.02	111		Pn	03 04 04.0	+0.2
RTAL	Retalhuleu	3.20	288	Pn	Pn	03 04 05.5	-0.4
HUEH	Huehuetenango	3.35	302	Pn	Pn	03 04 07.5	-0.5
PETF	Flores	3.56	339		Pn	03 04 10.8	+0.4
ACON	Acoyapa	3.66	115		Pn	03 04 12.3	+0.7
CCIG	Comitan	4.39	308	Pn	Pn	03 04 21.7	+0.6
CUI	Cuipilapa	4.40	131	*e*P	Pn	03 04 23.2	+2.1
CUI				*i* P	Pn	03 04 23.6	+2.4
PLVR	Palo Verde	4.48	135	*e*P	Pn	03 04 24.1	+1.9
PLVR				*e*S	Sn	03 05 14.1	-1.0
GRZA	Playa Garza	4.62	142	*e*P	Pn	03 04 26.6	+2.6
INDI	Punta indio, G	4.74	141	*e*P	Pn	03 04 28.3	+2.8
JTS	Las Juntas de	4.80	132	P	Pn	03 04 27.8	+1.6
	comp=Z,16nm,0.3s,baz=18,slow=3.6,SNR=58						
JTS				S	Sn	03 05 20.9	-1.4
	comp=Z,29nm,0.3s,baz=3.2,slow=22,SNR=12						
JTS	Las Juntas de	4.80	132	*e*P	Pn	03 04 28.3	+2.0
JTS	Las Juntas de	4.80	132	Pn	Pn	03 04 26.9	+0.7
JTS				Sn	Sn	03 05 21.9	-0.4
ARE1	Arenal 1	4.86	129	*e*P	Pn	03 04 28.9	+1.8
LAFE	Finca La Fe, P	5.17	136	*e*P	Pn	03 04 33.2	+2.1
JACO	JACO, Garabito	5.44	135	*e*P	Pn	03 04 37.3	+2.7
LCR2	La Lucha 2	5.86	130	*e*P	Pn	03 04 43.2	+2.9
RIMA	Rio Macho	5.95	129	*e*P	Pn	03 04 43.7	+2.3
PEZE	Perez Zeledon,	6.33	131	*e*P	Pn	03 04 49.6	+3.2
TEIG	Tepich	6.62	2	P	Pn	03 04 51.3	+1.3
	comp=Z,0.5nm,0.3s,baz=180,slow=7.2,SNR=3.8						
TEIG				LR	LR	03 07 35.7	
	comp=Z,291nm,18.9s,baz=298,slow=39						
TEIG	Tepich	6.62	2		Pn	03 04 50.7	+0.7
DRK0	Durika	6.74	129	*e*P	Pn	03 04 54.6	+2.8
RIOS	Rincon, Osa	6.92	134	*e*P	Pn	03 04 56.4	+2.4
CMIG	Matias Romero	7.04	301	P	Pn	03 04 56.1	+0.6
	comp=Z,0.8nm,0.3s,baz=128,slow=6.6,SNR=11						
CMIG				S	Sn	03 06 08.1	-7.1
	comp=Z,0.8nm,0.3s,baz=60,slow=8.3,SNR=6.5						
060A	Indiantown	15.43	29		Pn	03 06 42.8	-0.4
ROSC	El Rosal	16.50	120	LR	LR	03 14 45.1	
	comp=Z,352nm,20.3s,baz=63,slow=42						
352A	Blakely	18.13	10	Pn	Pn	03 07 16.1	+0.6
SDV	Santo Domingo	18.17	103	P	P	03 07 15.3	+1.0
	comp=Z,0.8nm,0.3s,baz=291,slow=10,SNR=5.7						
SDV	Santo Domingo	18.17	103	P	P	03 07 13.7	-0.6
SDV				IAmb	IAmb	03 07 19.9	
	comp=Z,7.3nm,0.8s						
TX31	Lajitas Ar. Si	21.03	321	P	P	03 07 44.7	-0.1
TX31				IAmb	IAmb	03 07 46.9	
	comp=Z,7.5nm,0.7s						
TX32	Lajitas Array	21.03	321	P	P	03 07 44.4	-0.4
TXAR	Lajitas Array	21.03	321	P	P	03 07 46.0	+1.2
	comp=Z,1.8nm,0.5s,baz=140,slow=9.9,SNR=17						
TXAR	Lajitas Array	21.03	321	P	P	03 07 44.7	-0.1
MIAR	Mount Ida	21.37	349	P	P	03 07 48.5	+0.3
Y57A	Sumter	21.66	19	P	P	03 07 50.8	-0.4
TKL	Tuckaleechee C	22.41	10	P	P	03 07 59.0	+0.4
	comp=Z,5.4nm,0.7s,baz=184,slow=11,SNR=8.6						
KMSC	Kings Mountain	22.44	16	P	P	03 07 58.2	-0.7
KMSC				IAmb	IAmb	03 08 00.9	
	comp=Z,14nm,0.9s						
FCAR	Ozark Folk Cen	22.45	352	P	P	03 07 59.1	+0.2
FCAR				IAmb	IAmb	03 08 00.4	
	comp=Z,5.3nm,0.7s						
V53A	Saluda	22.60	12	P	P	03 08 00.6	+0.3
V53A				IAmb	IAmb	03 08 03.3	
	comp=Z,12nm,1.0s						
U40A	Yellville	23.02	351	P	P	03 08 04.3	+0.3
FNO	Franklin	23.02	341	P	P	03 08 04.3	+0.2
T47A	Sharon Grove	23.35	3	P	P	03 08 07.2	+0.1
T47A				IAmb	IAmb	03 08 07.9	
	comp=Z,11nm,0.7s						
QUOK	Quay	23.67	343	P	P	03 08 10.3	+0.3
QUOK				IAmb	IAmb	03 08 10.9	
	comp=Z,5.3nm,0.8s						
MSTX	Muleshoe	24.07	330	P	P	03 08 13.9	+0.1
MSTX				IAmb	IAmb	03 08 15.1	
	comp=Z,4.0nm,0.6s						
S39A	Bolivar	24.39	351	P	P	03 08 16.9	+0.3
S39A				IAmb	IAmb	03 08 17.8	
	comp=Z,9.7nm,0.7s						
R40A	Maddies Statio	24.84	353	P	P	03 08 20.7	+0.1
P38A	Dawn	26.32	351	P	P	03 08 34.1	+0.2
P38A				IAmb	IAmb	03 08 35.3	
	comp=Z,5.0nm,0.7s						
PDAR	Pinedale Array	34.28	332	P	P	03 09 45.1	+0.9
	comp=Z,0.4nm,0.7s,baz=119,slow=9.2,SNR=4.2						
AGMN	Agassiz Nation	35.15	352	P	P	03 09 51.5	+0.3
REDW	Red Top Meadow	35.34	331	P	P	03 09 53.0	-0.2
REDW				IAmb	IAmb	03 09 55.6	
	comp=Z,6.6nm,0.8s						
SNOW	Snow King Moun	35.38	332	P	P	03 09 53.2	-0.4
SNOW				IAmb	IAmb	03 09 56.0	
	comp=Z,5.8nm,0.7s						
YMR	Madison River	36.41	333	P	P	03 10 02.4	+0.1
ULM	Lac du Bonnet	37.06	352	P	P	03 10 06.5	-1.0
	comp=Z,3.2nm,0.5s,baz=166,slow=9.1,SNR=12						
ULM	Lac du Bonnet	37.06	352	P	P	03 10 06.7	-0.7
ULM				IAmb	IAmb	03 10 07.2	
	comp=Z,8.7nm,1.1s						
MCMT	McKenzie Canyo	37.39	331	P	P	03 10 10.6	-0.1
SIV	San Ignacio	40.01	136	P	P	03 10 31.3	-1.2
	comp=Z,1.1nm,0.5s,baz=317,slow=7.7,SNR=10						
LVC	Limon Verde	40.78	152	P	P	03 10 37.8	-1.3
	comp=Z,16nm,0.4s,baz=126,slow=16,SNR=5.6						
YKA	Yellowknife Ar	52.26	345	P	P	03 12 07.4	+0.1
	comp=Z,1.9nm,0.7s,baz=137,slow=8.2,SNR=31						
ILAR	Eielson Array	64.57	336	P	P	03 13 32.1	-0.4
	comp=Z,0.5nm,0.7s,baz=160,slow=5.3,SNR=5.3						
ESDC	Sonseca Array	77.34	52	P	P	03 14 49.2	-0.8
	comp=Z,0.5nm,0.8s,baz=267,slow=3.8,SNR=1.6						

BGR ***24*** *03:11:50.3±0.0, 22°.20S×178°.55W, h33^{km}*

BJI ***24*** *03:13:00.4±0.0, 21°.08S×178°.64W, h600^{km}, mB5.4/4, mb4.6/13*

IDC ***24*** *03:13:02.5±1.3, 21°.08S×179°.05W, h610^{km}±15^{km}, mb4.0/25, mb1 4.2/28, mb1mx4.1/38, mbtmp5.0/28, Error ellipse: s-maj=13.7km s-min=10.7km az=152.0*

NEIC ***24*** *03:13:02.2±0.8, 21°.07S±0°.10×179°.0W±0°.1, h614^{km}±6^{km}, mb4.7/173, Error ellipse: s-maj=16.3km s-min=13.6km az=121.0*

NOU ***24*** *03:13:02.3, 21°.08S×178°.97W, h621^{km}, mb4.8, Fiji Islands Region*

ISC 24 03:13:03.0±0.3**, 21°.09S**±0°.05×**179°.06W**±0°.05**, h619**^{km}**, n552,** σ1^{s}.06/542**, mb4.6**/104**, 45C-37D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.31	320	P	P	03 14 32.2	0.0
MSVF				S	S	03 15 43.1	-1.8
MSVF	Nonsavu	4.31	320	P	P	03 14 32.7	+0.5
RAO	Raoul Island	8.20	173	P	P	03 15 03.6	-1.1
	48nm,0.3s,baz=67,slow=23,SNR=1.7						
RAO				S	S	03 16 43.9	-0.6
	388nm,0.3s,baz=82,slow=22,SNR=7.3						
NIUE	Niue	8.81	78	P	P	03 15 04.5	-6.3
	baz=8.5,SNR=8.1						
NIUE				S	S	03 17 00.3	+4.8
	baz=8.5						
NIUE	Niue	8.81	78	P	P	03 15 09.2	-1.6
DVP	Devils Point	12.49	283	P	P	03 15 47.0	+0.4
LIFNC	LIFOU	12.80	269	P	P	03 15 49.0	-0.6
YATNC	Mamie plateau,	13.11	263	P	P	03 15 52.3	-0.3
DZM	Mont Dzumac	13.52	263	P	P	03 15 56.8	0.0
	6.8nm,0.3s,baz=134,slow=20,SNR=33						
DZM	Mont Dzumac	13.52	263	*e*P	P	03 15 56.0	-0.8
	95nm,0.9s						
DZM	Mont Dzumac	13.52	263	P	P	03 15 56.5	-0.3
DZM	Mont Dzumac	13.52	263	P	P	03 15 57.0	+0.2
SANVU	Saraoutou	14.20	291	P	P	03 16 02.8	-0.4
SANVU	Saraoutou	14.20	291	P	P	03 16 03.0	-0.2
URZ	Urewera	17.43	190	P	P	03 16 30.7	-1.7
	3.6nm,0.3s,baz=244,slow=2.6,SNR=15						
KNTN	Kanton	19.56	22	P	P	03 16 51.1	-0.9
THZ	Tophouse	21.70	196	P	P	03 17 10.8	-0.2
MLZ	Mavora Lakes	26.41	201	P	P	03 17 53.3	+0.8
EIDS	Eidsvold	27.73	255	P	P	03 18 04.9	+0.6
	baz=28,SNR=8.6						
EIDS	Eidsvold	27.73	255	P	P	03 18 04.3	0.0
ARMA	Armidale	27.92	245	P	P	03 18 07.7	+1.7
	baz=28,SNR=10						
ARMA	Armidale	27.92	245	P	P	03 18 06.0	0.0
RMQ	Roma	29.88	253	P	P	03 18 24.4	+1.6
	baz=30,SNR=17						
CNB	Canberra Magne	31.07	236	P	P	03 18 34.4	+1.5
	baz=31,SNR=6.2						
CTA	Charters Tower	32.45	265	P	P	03 18 45.3	+0.6
	88nm,0.5s,baz=92,slow=12,SNR=22						
CTAO	Charters Tower	32.45	265	P	P	03 18 44.4	-0.3
CMSA	Cobar Meteorol	33.14	244	P	P	03 18 51.0	+0.7
	baz=33,SNR=19						
QLP	Quilpie	33.94	253	P	P	03 18 57.7	+0.6
	baz=34,SNR=15						
PMG	Port Moresby	34.52	284	P	P	03 19 02.2	+0.1
	69nm,0.7s,baz=84,slow=7.7,SNR=17						
PMG	Port Moresby	34.52	284	P	P	03 19 01.6	-0.5
MTSU	Mount Surprise	34.58	268	P	P	03 19 03.1	+0.6
	baz=35,SNR=191						
TOO	Toolangi	34.75	234	P	P	03 19 05.0	+1.3
	baz=35,SNR=5.2						
TOO	Toolangi	34.75	234	P	P	03 19 03.4	-0.3
TOO				IAmb	IAmb	03 19 05.5	
	comp=Z,14nm,0.8s						
COEN	Coen	36.63	275	P	P	03 19 19.0	-0.5
COEN				IAmb	IAmb	03 19 21.3	
	comp=Z,26nm,0.8s						
STKA	Stephens Creek	36.64	245	P	P	03 19 20.5	+1.1
	comp=Z,17nm,0.6s,baz=92,slow=10,SNR=31						
STKA	Stephens Creek	36.64	245	P	P	03 19 20.4	+1.1
	baz=37,SNR=24						
STKA	Stephens Creek	36.64	245	P	P	03 19 19.2	-0.1
QIS	Mount Isa	38.56	263	P	P	03 19 34.9	-0.1
	baz=39,SNR=12						
HTT	Hallett	39.07	243	P	P	03 19 39.7	+0.7
	baz=39,SNR=12						
BBOO	Buckleboo	41.40	244	P	P	03 19 57.8	+0.4
	baz=42,SNR=42						
BBOO	Buckleboo	41.40	244	P	P	03 19 57.5	+0.1
BBOO				IAmb	IAmb	03 19 58.6	
	comp=Z,27nm,0.8s						
AS31	Alice Springs	43.42	257	P	P	03 20 13.3	0.0
AS31				IAmb	IAmb	03 20 15.4	
	comp=Z,18nm,0.9s						
ASAR	Alice Springs	43.42	257	P	P	03 20 13.6	+0.3
	comp=Z,57nm,0.8s,baz=96,slow=7.7,SNR=570						
ASAR				PcP	PcP	03 21 48.0	+0.6
	comp=Z,3.5nm,0.6s,baz=98,slow=3.7,SNR=6.3						
ASAR				ScP	ScP	03 24 42.9	+2.2
	comp=Z,5.3nm,0.9s,baz=105,slow=4.3,SNR=12						
ASAR				S	S	03 25 57.0	-1.4
	comp=Z,5.3nm,0.8s,baz=95,slow=16,SNR=18						
ASAR	Alice Springs	43.42	257	P	P	03 20 13.0	-0.3
ASAR				PcP	PcP	03 21 46.4	-0.9
WRAB	Tennant Creek	43.53	263	P	P	03 20 14.1	-0.1
WRA	Warramunga Arr	43.54	263	P	P	03 20 13.7	-0.6
	comp=Z,16nm,0.3s,baz=97,slow=7.2,SNR=353						
WRA				S	S	03 25 58.6	-1.5
	comp=Z,1.5nm,1.0s,baz=92,slow=14,SNR=4.6						
GENI	Genyem	43.73	289	P	P	03 20 12.5	-3.3
	comp=Z,98nm,1.0s						
KHLU	Kahalu`u	46.35	31	P	P	03 20 35.1	-0.6
MLH	Mauna Loa	46.52	31	P	P	03 20 36.4	-0.7
MLH				IAmb	IAmb	03 20 55.9	
	comp=Z,24nm,0.8s						
HMH	Humu‘ula Sheep	46.56	31	P	P	03 20 37.3	-0.2
KDU	Kakadu	46.97	272	P	P	03 20 40.2	-0.1
	baz=47,SNR=39						
HLK	Haleakala	47.19	30	P	P	03 20 42.3	+0.2
FORT	Forrest	48.15	247	P	P	03 20 48.9	0.0
WRKA	Warakurna	48.35	255	P	P	03 20 50.7	+0.2
	baz=49,SNR=152						
FAKI	Fak Fak	50.67	284	P	P	03 21 07.3	-0.2
FAKI				IAmb	IAmb	03 21 16.1	
	comp=Z,24nm,1.1s						
FITZ	Fitzroy Crossi	51.97	263	P	P	03 21 17.3	+0.5

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      baz=52,SNR=39
FITZ  Fitzroy Crossi  51.97 263  P     P     03 21 16.8  0.0
SWI   Sorong          52.44 286  P     P     03 21 20.3 +0.1
      comp=Z,1µmcomp=Z,174nm,0.8s
SOEI  Soe             55.53 273  P     P     03 21 41.9 -0.1
SOEI  Soe             55.53 273  P     P     03 21 42.1 +0.1
      comp=Z,118nm,0.8s
PSA00 Pilbara Seismi  56.57 258  P     P     03 21 48.9  0.0
PSA00                            IAmb  IAmb  03 21 49.7
      comp=Z,22nm,0.7s
SANI  Sanana          56.72 282  P     P     03 21 50.2 +0.1
      comp=Z,32nm,0.8s
MEEK  Meekatharra     56.79 251  P     P     03 21 50.2 -0.1
      baz=57,SNR=7.5
KLBR  Kellerberrin    56.91 245  P     P     03 21 51.5 +0.5
      baz=57,SNR=5.6
VNDA  Vanda           57.24 185  P     P     03 21 54.3 +1.8
      comp=Z,3.0nm,0.9s,baz=66,slow=6.9,SNR=5.0
VNDA  Vanda           57.24 185  P     P     03 21 53.8 +1.3
BLDU  Ballidu         57.91 246  P     P     03 21 58.2 +0.3
      baz=58,SNR=10.0
MORW  Morawa          58.69 248  P     P     03 22 03.5 +0.4
      baz=59,SNR=5.0
MORW  Morawa          58.69 248  P     P     03 22 03.0 -0.1
GIRL  Giralia         61.44 255  P     P     03 22 22.8 +1.5
      baz=62,SNR=6.0
GIRL  Giralia         61.44 255  P     P     03 22 21.4  0.0
GIRL                             IAmb  IAmb  03 22 23.3
      comp=Z,32nm,0.8s
QSPA  South Pole Qui  68.98 180  P     P     03 23 08.2 +0.5
QSPA                             IAmb  IAmb  03 23 10.1
      comp=Z,16nm,1.0s
JGF   Kuroka          69.88 323  P     P     03 23 13.8 +0.4
MJAR  Matsushiro Arr  70.10 324  P     P     03 23 14.3 -0.3
      comp=Z,3.5nm,0.6s,baz=153,slow=5.1,SNR=9.3
MJAR  Matsushiro Arr  70.10 324  P     P     03 23 15.0 +0.4
MAT   Matsushiro      70.10 324  P     P     03 23 14.7  0.0
JHS   Saijyo          71.91 320  P     P     03 23 25.3  0.0
ATKA  Atka Island     73.10   3  P     P     03 23 30.9 -0.7
NIKH  Nikolski High   74.28   6  P     P     03 23 37.7 -0.5
      baz=190
NIKH  Nikolski High   74.28   6  P     P     03 23 38.0 -0.2
UNV   Unalaska Valle  75.41   8  P     P     03 23 43.6 -0.9
      baz=192
PETK  Petropavlovsk-  76.59 346  P     P     03 23 51.2 +0.2
      comp=Z,12nm,0.8s,baz=125,slow=7.4,SNR=7.5
CHNA  Chernabura Isl  77.43  11  P     P     03 23 54.9 -0.6
      baz=198
SDPT  Sand Point      77.76  11  P     P     03 23 56.7 -0.5
      baz=198
SDPT  Sand Point      77.76  11  P     P     03 23 57.0 -0.2
SNCC  San Nicolas Is  78.37  48  P     P     03 23 59.0 -2.1
      baz=235
USRK  Ussuriysk Ar.   78.90 326  P     P     03 24 04.9 +1.3
      comp=Z,5.1nm,0.7s,baz=124,slow=4.4,SNR=7.4
USRK  Ussuriysk Ar.   78.90 326  P     P     03 24 03.6  0.0
CHGN  Chignik         79.04  12  P     P     03 24 03.8 -0.1
      baz=200
CHGN  Chignik         79.04  12  P     P     03 24 03.9 -0.1
CHGN                             IAmb  IAmb  03 24 04.7
      comp=Z,35nm,0.8s
BELA  Belgrano 2      79.10 173  P     P     03 24 04.4 +0.1
HOPS  Hopland Field   79.46  41  P     P     03 24 06.1 -0.6
HOPS                             IAmb  IAmb  03 24 09.2
      comp=Z,26nm,0.8s
NJ2   Nanjing         79.49 310 eP     P     03 24 08.8 +1.8
NJ2                              pmax  pmax
      comp=Z,6.0nm,0.6s
GDXM  Geysers         79.52  41  P     P     03 24 06.8 -0.3
109C  Camp Elliot, M  79.86  49  P     P     03 24 10.0 +1.1
      baz=237
CBX   Cerro Bola      79.86  50  P     P     03 24 08.0 -1.2
ARVC  Arvin           79.91  46  P     P     03 24 10.2 +1.0
      baz=235
VES   Vestal, Richgr  80.15  46  P     P     03 24 11.3 +0.9
      baz=235,SNR=5.0
MURC  Murrieta        80.18  48  P     P     03 24 11.6 +0.9
      baz=237
BFSC  Mount Baldy Ra  80.22  48  P     P     03 24 11.6 +0.7
      baz=236
KHMM  Horse Mountain  80.23  39  P     P     03 24 10.3 -0.6
KHMM                             IAmb  IAmb  03 24 13.3
      comp=Z,18nm,0.7s
EDW2  Edwards Air Fo  80.34  47  P     P     03 24 12.7 +1.2
      baz=236,SNR=9.1
MONP2 Monument Peak   80.34  49  P     P     03 24 12.7 +1.0
      baz=237
O02D  Mt. Diablo Mer  80.36  40  P     P     03 24 13.4 +2.0
      baz=232,SNR=11
MDJ   Mudanjiang      80.43 326  P     P     03 24 13.3 +1.7
MDJ                              pmax  pmax
      comp=Z,7.0nm,0.7s
MDJ                              pmax  pmax
      comp=Z,720nm,5.1s
IKP   In-Ko-Pah, Jac  80.44  50  P     P     03 24 13.2 +1.2
      baz=237
ISA   Isabella, Lake  80.45  46  P     P     03 24 13.3 +1.2
      baz=235,SNR=11
ISA   Isabella, Lake  80.45  46  P     P     03 24 11.3 -0.8
ISA                              IAmb  IAmb  03 24 14.4
      comp=Z,15nm,0.9s
KRMB  Red Mountain    80.54  39  P     P     03 24 12.8 +0.4
KRMB                             IAmb  IAmb  03 24 14.9
      comp=Z,22nm,0.8s
CMB   Columbia Colle  80.57  43  P     P     03 24 11.4 -1.2
PFO   Pinyon Flats O  80.70  49  P     P     03 24 14.6 +1.2
      comp=Z,4.7nm,0.9s,baz=296,slow=4.5,SNR=4.8
PFO   Pinyon Flats O  80.70  49  P     P     03 24 14.4 +1.0
      baz=237
TPFO  Pinon Flats     80.70  49  P     P     03 24 14.5 +1.0
      baz=237
AFDM  Forest Hills D  80.74  42  P     P     03 24 12.6 -0.8
WDC   Whiskeytown Da  80.76  40  P     P     03 24 13.0 -0.4
WDC                              IAmb  IAmb  03 24 16.0
      comp=Z,20nm,0.9s
ORV   Oroville        80.77  41  P     P     03 24 13.2 -0.3
SWSC  Sam W. Stewart  80.81  50  P     P     03 24 15.0 +1.2
      baz=238
LRMC  Laurel Mtn Rad  80.89  47  P     P     03 24 15.4 +1.0
      baz=236,SNR=5.5
N02D  Trinity Center  80.90  40  P     P     03 24 16.1 +1.9
      baz=232,SNR=11
O03E  Paynes Creek    81.03  41  P     P     03 24 16.0 +1.1
      baz=232,SNR=15
M02C  Callahan        81.07  39  P     P     03 24 17.1 +2.0
      baz=232,SNR=20
L02E  Cave Junction   81.11  38  P     P     03 24 17.0 +1.8
      baz=231
CWC   Cottonwood Cre  81.16  46  P     P     03 24 16.9 +1.1
      baz=236
OMMB  Old Mammoth Mi  81.22  44  P     P     03 24 15.8 -0.5
BELC  Belle Mtn. Jos  81.24  49  P     P     03 24 17.1 +0.9
      baz=237
MPMC  Manual Prospec  81.34  46  P     P     03 24 17.9 +1.2
      baz=236,SNR=13
YBH   Yreka Blue Hor  81.37  39  P     P     03 24 18.3 +1.7
      comp=Z,19nm,0.8s,baz=207,slow=1.1,SNR=49
YBH   Yreka Blue Hor  81.37  39  P     P     03 24 16.0 -0.6
YBH                              IAmb  IAmb  03 24 19.3
      comp=Z,21nm,0.8s
TIN   Tinemaha, Big   81.40  45  P     P     03 24 18.0 +1.1
      baz=235
K02D  Willamette Mer  81.41  38  P     P     03 24 18.2 +1.4
      baz=231,SNR=5.9
BC3   Big Chuckawall  81.44  49  P     P     03 24 18.7 +1.5
      baz=238
WAKR  Walker          81.45  43  P     P     03 24 16.4 -0.8
WAKR                             IAmb  IAmb  03 24 19.7
      comp=Z,33nm,1.2s
HEC   Hector,Ludlow   81.45  48  P     P     03 24 18.1 +0.9
      baz=237,SNR=7.2
J01E  Myrtle Point    81.56  37  P     P     03 24 18.8 +1.4
      baz=231
GLA   Glamis          81.56  50  P     P     03 24 19.4 +1.7
      baz=238
GLA   Glamis          81.56  50  P     P     03 24 17.0 -0.7
GLA                              IAmb  IAmb  03 24 20.5
      comp=Z,22nm,0.8s
BEKR  Beckworth       81.66  42  P     P     03 24 17.5 -0.8
PNTR  Pine Nut        81.68  43  P     P     03 24 17.4 -1.1
HUMO  Hull Mountain   81.77  38  P     P     03 24 18.6  0.0
HUMO                             IAmb  IAmb  03 24 21.4
      comp=Z,27nm,1.1s
VCNR  Virginia City   81.77  42  P     P     03 24 18.2 -0.7
YERR  Yerington       81.85  43  P     P     03 24 18.4 -0.9
YERR                             IAmb  IAmb  03 24 21.3
      comp=Z,18nm,0.8s
GMRC  Granite Mounta  81.89  48  P     P     03 24 20.6 +1.0
      baz=237
LHV   Little Huntoon  81.90  44  P     P     03 24 18.8 -0.5
LHV                              IAmb  IAmb  03 24 21.8
      comp=Z,15nm,0.9s
L04D  Klamath Falls   81.91  39  P     P     03 24 20.7 +1.3
      baz=232,SNR=11
M04C  Macdoel         81.91  39  P     P     03 24 20.9 +1.4
      baz=232
IRM   Iron Mountain   81.92  49  P     P     03 24 20.9 +1.3
      baz=238
GRAC  Grapevine Rang  81.94  45  P     P     03 24 20.9 +1.3
      baz=236,SNR=5.2
FURC  Furnace Creek,  81.99  46  P     P     03 24 20.8 +1.1
      baz=236,SNR=7.3
RYN   Ryan            82.11  44  P     P     03 24 19.7 -0.9
NVAR  Mina Array Bea  82.13  44  P     P     03 24 21.8 +1.0
      comp=Z,13nm,0.8s,baz=222,slow=8.5,SNR=61
PAHR  Pah Rah Range   82.18  42  P     P     03 24 20.1 -0.8
PAHR                             IAmb  IAmb  03 24 22.9
      comp=Z,17nm,0.9s
I02D  Swisshome       82.20  37  P     P     03 24 22.3 +1.7
      baz=231
I03D  Drain, OR       82.22  37  P     P     03 24 22.2 +1.4
      baz=231,SNR=5.9
NV11  Mina Array Sit  82.23  44  P     P     03 24 20.3 -0.9
214A  Organ Pipe Nat  82.46  52  P     P     03 24 23.7 +1.5
      baz=239
K04D  Chiloquin, OR   82.48  39  P     P     03 24 23.5 +1.2
      baz=232
TPH   Tonopah         82.64  45  P     P     03 24 22.5 -0.8
J04D  Umpqua Nationa  82.65  38  P     P     03 24 24.7 +1.5
      baz=232,SNR=11
TPNV  Topopah Spring  82.66  46  P     P     03 24 24.4 +1.1
      baz=237,SNR=22
TPNV  Topopah Spring  82.66  46  P     P     03 24 22.5 -0.9
TPNV                             IAmb  IAmb  03 24 25.4
      comp=Z,16nm,0.8s
PDMCI Parker Dam,Lak  82.70  49  P     P     03 24 24.7 +1.3
      baz=238
I04A  Tendick Farm,   82.81  38  P     P     03 24 24.7 +0.9
      baz=232,SNR=12
MOD   Modoc Plateau   82.90  40  P     P     03 24 23.7 -0.7
MOD                              IAmb  IAmb  03 24 26.6
      comp=Z,16nm,0.8s
K05A  Summer Lake     83.04  39  P     P     03 24 24.8 -0.4
H04D  Lebanon         83.08  37  P     P     03 24 26.6 +1.5
      baz=231,SNR=8.5
SHPR  Sheep Range     83.16  47  P     P     03 24 25.1 -0.8
J05D  Fort Rock, OR   83.18  39  P     P     03 24 27.2 +1.5
      baz=233,SNR=64
G03D  McMinnville, O  83.22  36  P     P     03 24 27.1 +1.4
      baz=231
W13A  Hualapai Mount  83.30  49  P     P     03 24 25.6 -1.1
H04A  Detroit Lake    83.49  37  P     P     03 24 26.2 -0.9
H04A                             IAmb  IAmb  03 24 28.9
      comp=Z,23nm,1.0s
PINE  Pine Mountain   83.66  38  P     P     03 24 27.2 -1.0
PRN   Pahroc Range    83.72  46  P     P     03 24 27.5 -1.0
I05D  Terrebonne, OR  83.76  38  P     P     03 24 29.5 +1.0
      baz=232,SNR=7.6
R11A  Troy Canyon, C  83.86  45  P     P     03 24 29.8 +0.5
      baz=237
E03A  Lebam           83.90  35  P     P     03 24 27.9 -1.1
MA2   Magadan         84.09 345  P     P     03 24 29.5 -0.2
      comp=Z,3.2nm,0.3s,baz=145,slow=11,SNR=3.1
MA2   Magadan         84.09 345  P     P     03 24 29.2 -0.5
TUC   Tucson          84.12  52  P     P     03 24 32.4 +1.8
      baz=241
TUC   Tucson          84.12  52  P     P     03 24 30.3 -0.3
TUC                              IAmb  IAmb  03 24 33.4
      comp=Z,10nm,0.8s
WVOR  Wild Horse Val  84.22  40  P     P     03 24 30.0 -0.9
WVOR                             IAmb  IAmb  03 24 33.2
      comp=Z,11nm,0.9s
NLWA  Neilton Lookou  84.28  34  P     P     03 24 30.4 -0.5
NLWA                             IAmb  IAmb  03 24 33.4
      comp=Z,19nm,0.9s
G05D  Wamic, OR       84.32  37  P     P     03 24 32.1 +0.9
      baz=232
E04D  Cinebar         84.44  35  P     P     03 24 33.1 +1.4
      baz=231
I07A  Izee            84.66  39  P     P     03 24 32.1 -0.9
I07A                             IAmb  IAmb  03 24 35.4
      comp=Z,19nm,1.1s
D04E  Lakebay         84.72  35  P     P     03 24 34.9 +1.9
      baz=231
LCMT  Little Creek M  84.73  47  P     P     03 24 32.5 -1.1
D03D  Eldon           84.78  34  P     P     03 24 34.7 +1.4
      baz=231,SNR=5.6
GAMB  Gambell         84.78   3  P     P     03 24 33.4 +0.5
      baz=187
319A  Douglas         84.80  54  P     P     03 24 32.6 -1.3
319A                             IAmb  IAmb  03 24 36.9
      comp=Z,32nm,1.1s
J08A  Circle Bar Ran  84.85  40  P     P     03 24 33.1 -0.8
CCUT  Cedar City      84.93  47  P     P     03 24 33.6 -1.0
LON   Longmire        84.97  35  P     P     03 24 33.7 -0.6
KNB   Kanab           85.03  47  P     P     03 24 33.9 -1.1
SPR3  Spring Creek 3  85.04  45  P     P     03 24 34.1 -1.1
PSUT  Pine Spring     85.11  46  P     P     03 24 34.3 -1.2
SZCU  Shurtz Canyon   85.14  47  P     P     03 24 34.4 -1.2
D05A  Enumclaw        85.15  35  P     P     03 24 34.5 -0.5
D05A                             IAmb  IAmb  03 24 37.7
      comp=Z,29nm,1.1s
WUAZ  Wupatki         85.28  49  P     P     03 24 37.3 +1.0
      baz=240
WUAZ  Wupatki         85.28  49  P     P     03 24 35.1 -1.2
PGC   Sidney          85.29  33  P     P     03 24 35.2 -0.5
PGC                              IAmb  IAmb  03 24 37.8
      comp=Z,17nm,0.9s
ELK   Elko            85.39  43  P     P     03 24 36.8  0.0
      comp=Z,3.0nm,0.8s,baz=208,slow=5.3,SNR=9.5
ELK   Elko            85.39  43  P     P     03 24 35.6 -1.1
BBB   Bella Bella     85.39  29  P     P     03 24 36.0 -0.1
      comp=Z,10nm,0.7s,baz=277,slow=4.0,SNR=10
BBB   Bella Bella     85.39  29  P     P     03 24 35.5 -0.6
BBB                              IAmb  IAmb  03 24 38.0
      comp=Z,13nm,0.8s
F07A  Phinny Hill Vi  85.49  37  P     P     03 24 36.1 -0.7
F07A                             IAmb  IAmb  03 24 38.9
      comp=Z,11nm,0.9s
PKCU  Pink Cliffs     85.59  47  P     P     03 24 36.4 -1.5
G08A  Pilot Rock      85.69  38  P     P     03 24 37.1 -0.8
G08A                             IAmb  IAmb  03 24 39.5
      comp=Z,12nm,0.8s
TTA   Tatalina        85.69  10  P     P     03 24 37.5 +0.1
      baz=201,SNR=8.0
TTA   Tatalina        85.69  10  P     P     03 24 37.1 -0.3
TTA                              IAmb  IAmb  03 24 53.7
      comp=Z,6.8nm,0.6s
A04D  Lummi Island    85.72  34  P     P     03 24 39.2 +1.4
      baz=231,SNR=18
B05A  Bryant          85.75  34  P     P     03 24 39.1 +1.2
      baz=232,SNR=8.8
LTY   Liberty         85.90  36  P     P     03 24 37.9 -0.9
LTY                              IAmb  IAmb  03 24 40.0
      comp=Z,8.3nm,0.7s
E07A  Sunnyside       85.93  36  P     P     03 24 38.2 -0.6
E07A                             IAmb  IAmb  03 24 41.1
      comp=Z,22nm,0.8s
SYO   Syowa Base      85.94 193⇓ePcP PcP   03 24 42.3 +2.1
HAWA  Hanford         86.01  37  IAmb  IAmb  03 24 41.5
      comp=Z,20nm,0.8s
ANM   Nome            86.03   6  P     P     03 24 39.1 +0.2
      baz=193
E08A  Dider Farm, El  86.33  37  IAmb  IAmb  03 24 42.9
      comp=Z,15nm,0.8s
PPLA  Purkeypile      86.36  12  P     P     03 24 40.4 -0.3
BMRM  Bremner River   86.37  16  P     P     03 24 40.8 +0.2
      baz=212
BMO   Blue Mountains  86.39  39  IAmb  IAmb  03 24 43.0
      comp=Z,7.9nm,0.8s
MFID  Camas Ranch     86.47  41  IAmb  IAmb  03 24 43.7
      comp=Z,11nm,0.9s
KLU   Klutina         86.49  15  P     P     03 24 41.3 +0.1
      baz=211
WRAK  Wrangell Islan  86.65  24  P     P     03 24 42.7 +0.8
      baz=223
SEY   Seymchan        86.72 347  P     P     03 24 42.3 +0.2
      comp=Z,9.9nm,0.8s,baz=148,slow=5.2,SNR=41
D08A  Wollman Farm,   86.74  36  IAmb  IAmb  03 24 44.8
      comp=Z,25nm,1.0s
E09A  Wood Farm, Sta  86.86  37  IAmb  IAmb  03 24 45.1
      comp=Z,16nm,1.0s
VRDI  Verde Repeater  86.89  16  IAmb  IAmb  03 24 43.9
      comp=Z,8.0nm,0.7s
N25K  Chitina, Valde  86.91  16  P     P     03 24 43.5 +0.2
      baz=212,SNR=11
N25K  Chitina, Valde  86.91  16  IAmb  IAmb  03 24 44.4
      comp=Z,18nm,0.7s
M24K  Tolsona, Glenn  86.95  15  P     P     03 24 43.8 +0.4
      baz=210
GLB   Gilahina Butte  86.98  16  IAmb  IAmb  03 24 44.5
      comp=Z,16nm,0.7s
WAT6  Susitna Watana  87.00  14  P     P     03 24 43.5 -0.2
      baz=209,SNR=22
MCARA McCarthy VSAT   87.13  16  P     P     03 24 44.6 +0.5
      baz=213
MCARA McCarthy VSAT   87.13  16  IAmb  IAmb  03 24 45.7
      comp=Z,21nm,1.2s
WAT2  Susitna Watana  87.16  13  P     P     03 24 44.0 -0.4
      baz=208,SNR=20
CHUM  Lake Minchumin  87.23  12  P     P     03 24 43.7 -0.8
      baz=205,SNR=9.1
TRF   Thorofare Moun  87.23  13  P     P     03 24 43.9 -0.8
      baz=207,SNR=36
CTG   Chitna Glacier  87.24  17  P     P     03 24 45.3 +0.4
      baz=215,SNR=7.8
HLID  Hailey          87.42  41  P     P     03 24 47.5 +1.3
      baz=238,SNR=22
HLID  Hailey          87.42  41  IAmb  IAmb  03 24 48.5
      comp=Z,11nm,0.9s
SNAA  Sanae           87.45 179  P     P     03 24 45.3 -0.4
C09A  Chrisman Ranch  87.53  36  IAmb  IAmb  03 24 48.1
      comp=Z,16nm,0.8s
VNA3  Neumayer Olymp  87.62 177  P     P     03 24 46.1 -0.3
BPAW  Bear Paw Mtn.   87.68  12  P     P     03 24 45.4 -1.3
      baz=206
BPAW  Bear Paw Mtn.   87.68  12  IAmb  IAmb  03 25 01.4
      comp=Z,16nm,0.8s
MCK   McKinley        87.76  13  P     P     03 24 46.6 -0.4
      baz=208,SNR=16
PAX   Paxson          87.87  15  P     P     03 24 47.3 -0.4
      baz=211,SNR=5.2
MNTX  Cornudas Mount  87.90  55  P     P     03 24 49.5 +1.1
      baz=244
MNTX  Cornudas Mount  87.90  55  IAmb  IAmb  03 24 50.7
      comp=Z,9.9nm,0.8s
VNA2  Neumayer--Watz  88.05 177  P     P     03 24 48.3 -0.1
TX32  Lajitas Array   88.21  58  IAmb  IAmb  03 24 52.6
      comp=Z,13nm,0.9s
TXAR  Lajitas Array   88.21  58  P     P     03 24 50.8 +0.7
      comp=Z,9.8nm,0.8s,baz=218,slow=6.0,SNR=57
TXAR  Lajitas Array   88.21  58  P     P     03 24 49.6 -0.4
HYT   Haines Junctio  88.25  19  IAmb  IAmb  03 24 51.2
      comp=Z,8.9nm,0.9s
MENT  Mentasta        88.26  15  IAmb  IAmb  03 24 50.7
      comp=Z,14nm,1.0s
VNA1  Neumayer--Stat  88.28 177  P     P     03 24 50.3 +0.8
PV14  Lion Creek, Pa  88.31  48  IAmb  IAmb  03 24 52.2
      comp=Z,10.0nm,1.0s
NEW   Newport         88.43  36  P     P     03 24 50.9 +0.3
      comp=Z,3.1nm,0.8s,baz=204,slow=4.8,SNR=8.2
NEW   Newport         88.43  36  P     P     03 24 50.8 +0.2
      baz=235
NEA2  Nenana          88.50  12  P     P     03 24 50.0 -0.5
      baz=208
ANMO  Albuquerque     88.55  52  P     P     03 24 52.5 +0.9
      baz=243
ANMO  Albuquerque     88.55  52  P     P     03 24 51.2 -0.4
ANMO                             IAmb  IAmb  03 24 53.5
      comp=Z,8.5nm,1.1s
MLY   Manley          88.56  12  P     P     03 24 49.8 -1.0
      baz=206,SNR=15
HDA   Harding Lake    88.78  13  P     P     03 24 51.3 -0.4
      baz=210
BCAR  Beaver Creek A  88.86  16  P     P     03 24 52.2  0.0
IMAR  Indian Mountai  88.90  10  P     P     03 24 52.5 +0.2
I23K  Minto, Yukon-K  88.93  12  P     P     03 24 51.5 -0.9
      baz=208,SNR=8.2
I23K  Minto, Yukon-K  88.93  12  IAmb  IAmb  03 24 52.7
      comp=Z,7.0nm,0.6s
DLBC  Dease Lake      88.98  23  P     P     03 24 52.9  0.0
      comp=Z,4.9nm,0.8s,baz=218,slow=8.1,SNR=6.6
TCOL  CIGO, UAF Yank  88.99  13  P     P     03 24 52.1 -0.6
      baz=209
COLA  College         89.00  13  P     P     03 24 52.1 -0.6
      baz=209
COLA  College         89.00  13  P     P     03 24 52.1 -0.6
HHC   Hu-ho-hao-te    89.06 315 eP     P     03 24 55.0 +1.3
HHC                              sP    sP    03 28 00.8 -5.9
HHC                              S     S     03 34 50.4 -0.8
HHC                              pmax  pmax
      comp=Z,6.0nm,1.1s
SCRK  Sand Creek      89.08  15  P     P     03 24 53.2 -0.1
      baz=212,SNR=11
IL31                  89.11  13  IAmb  IAmb  03 24 53.0
      comp=Z,6.7nm,0.6s
ILAR  Eielson Array   89.11  13  P     P     03 24 52.5 -0.7
      comp=Z,5.9nm,0.6s,baz=215,slow=5.2,SNR=107
POKR  Poker Plat Res  89.30  13  P     P     03 24 53.3 -0.9
      baz=209,SNR=6.8
CMAR  Chiang Mai Arr  89.38 290  P     P     03 24 57.5 +1.9
      comp=Z,1.3nm,0.4s,baz=135,slow=3.3,SNR=7.1
MSO   Missoula        89.44  39  P     P     03 24 55.5 +0.1
      baz=238
LC01  Cunco           89.52 132  P     P     03 24 55.1 -0.8
LC01                             IAmb  IAmb  03 24 57.9
      comp=Z,12nm,1.1s
S22A  4UR Ranch, Cre  89.55  49  P     P     03 24 57.1 +0.7
      baz=243
PLCA  Paso Flores     89.59 134  P     P     03 24 56.9 +0.6
      comp=Z,3.1nm,0.7s,baz=239,slow=5.6,SNR=14
SNOW  Snow King Moun  89.65  43  IAmb  IAmb  03 24 58.8
      comp=Z,15nm,0.9s
RDOG  Red Dog Mine    89.67   6  IAmb  IAmb  03 24 57.0
      comp=Z,6.3nm,0.8s
O20A  White River Ci  89.68  46  P     P     03 24 57.3 +0.5
      baz=242
O20A  White River Ci  89.68  46  IAmb  IAmb  03 24 58.5
      comp=Z,9.6nm,0.8s
FLWY  Flagg Ranch     89.99  42  IAmb  IAmb  03 25 01.1
      comp=Z,8.3nm,1.1s
PRP   Porcupine Dome  90.05  13  P     P     03 24 58.2 +0.4
      baz=211
BW06  Boulder Array   90.07  44  P     P     03 24 58.7 +0.2
      baz=241
BW06  Boulder Array   90.07  44  IAmb  IAmb  03 24 59.9
      comp=Z,8.2nm,0.8s
PD31  Pinedale Array  90.07  44  IAmb  IAmb  03 24 59.8
      comp=Z,7.3nm,0.8s
PDAR  Pinedale Array  90.07  44  P     P     03 24 58.8 +0.2
      comp=Z,5.3nm,0.7s,baz=206,slow=3.2,SNR=60
PDAR  Pinedale Array  90.07  44  P     P     03 24 58.2 -0.4
SMCO  Snowmass        90.10  48  IAmb  IAmb  03 25 00.7
      comp=Z,4.3nm,0.8s
BOZ   Bozeman (W)     90.18  40  P     P     03 24 59.7 +0.8
      baz=240,SNR=9.3
BOZ   Bozeman (W)     90.18  40  IAmb  IAmb  03 25 00.9
      comp=Z,6.2nm,1.0s
H17A  Grant Village   90.22  42  P     P     03 25 00.9 +1.7
      baz=240
EGAK  Eagle           90.43  15  P     P     03 24 59.5 +0.2
      baz=215,SNR=9.5
EGAK  Eagle           90.43  15  IAmb  IAmb  03 25 00.4
      comp=Z,9.6nm,0.8s
SDCO  Great Sand Dun  90.49  49  P     P     03 25 01.1 +0.4
      baz=244
COLD  Coldfoot        90.64  11  P     P     03 25 00.8 +0.5
      baz=207
MSTX  Muleshoe        90.86  54  P     P     03 25 01.9 -0.4
      baz=245
MSTX  Muleshoe        90.86  54  IAmb  IAmb  03 25 03.5
      comp=Z,7.0nm,0.8s
BI02  San Fabin de    90.96 130  P     P     03 25 02.5 -0.2
BI02                             IAmb  IAmb  03 25 04.8
      comp=Z,7.1nm,0.8s
T25A  Trinidad        91.00  50  P     P     03 25 03.2 +0.2
      baz=244
833A  Chaparral WMA,  91.21  60  P     P     03 25 04.1 +0.2
      baz=247
Q24A  Divide          91.28  49  P     P     03 25 04.8 +0.5
      baz=244
ISCO  Idaho Springs   91.32  48  P     P     03 25 05.2 +0.7
      baz=243
RLMT  Red Lodge       91.39  42  P     P     03 25 05.4 +0.9
      baz=241
N23A  Red Feather La  91.59  47  P     P     03 25 06.2 +0.5
      baz=243
JCT   Junction City   91.74  58  P     P     03 25 06.4 +0.1
      baz=246
JCT   Junction City   91.74  58  IAmb  IAmb  03 25 07.3
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	comp=Z,4.6nm,0.8s						
BMAR	Burnt Mountain	91.88	13	P	P	03 25 06.4	+0.3
TOLK	Toolik Lake Re	92.01	10	P	P	03 25 06.8	+0.2
	baz=207						
EGMT	Eagleton	92.50	39	P	P	03 25 09.6	+0.2
	baz=241						
ABTX	Abilene, Hawle	92.71	56	P	P	03 25 10.9	+0.2
	baz=247						
ABTX	Abilene, Hawle	92.71	56	IAmb	IAmb	03 25 13.2	
	comp=Z,3.7nm,0.8s						
EPYK	Eagle Plains	92.82	16	P	P	03 25 10.4	+0.1
	baz=219						
EPYK	Eagle Plains	92.82	16	IAmb	IAmb	03 25 10.8	
	comp=Z,7.1nm,0.8s						
KSCO	Kaye Shedlock'	93.07	49	P	P	03 25 13.2	+0.9
	baz=245						
A21K	Barrow	93.47	7	P	P	03 25 12.9	-0.2
	baz=201						
LAO	LASA Array	94.00	41	P	P	03 25 17.4	+1.2
	baz=243						
WHTX	Lake Whitney,	94.17	57	P	P	03 25 16.7	-0.6
	baz=248						
RSSD	Black Hills	94.27	44	P	P	03 25 17.9	+0.2
	baz=245						
RSSD	Black Hills	94.27	44	P	P	03 25 17.5	-0.3
RSSD				IAmb	IAmb	03 25 18.7	
	comp=Z,6.3nm,1.1s						
INK	Inuvik	95.10	15	P	P	03 25 19.8	-0.8
	comp=Z,1.0nm,0.5s,baz=213,slow=4.4,SNR=8.0						
INK	Inuvik	95.10	15	IAmb	IAmb	03 25 20.6	
	comp=Z,3.2nm,0.8s						
YKA	Yellowknife Ar	97.46	25	P	P	03 25 31.3	0.0
	comp=Z,1.2nm,0.7s,baz=241,slow=3.8,SNR=20						
ZALV	Zalesovo Beam	110.33	321	PKiKP	PKiKP	03 30 24.6	-1.1
	comp=Z,1.6nm,0.6s,baz=131,slow=1.4,SNR=9.4						
MKAR	Makanchi Array	110.88	313	PKiKP	PKiKP	03 30 25.6	-1.4
	comp=Z,0.6nm,0.4s,baz=151,slow=0.5,SNR=20						
MKAR				PKKPbc	PKKPbc	03 41 26.9	-0.6
	comp=Z,0.8nm,0.8s,baz=269,slow=3.9,SNR=7.7						
KURBB	Kurchatov Arra	113.80	317	PKiKP	PKiKP	03 30 31.2	-1.1
	comp=Z,1.3nm,0.5s,baz=102,slow=1.9,SNR=16						
KURBB				PKKPbc	PKKPab	03 41 25.4	+0.3
	comp=Z,0.5nm,0.8s,baz=267,slow=4.3,SNR=4.1						
KSH	Kashi	114.41	305	PKP	PKiKP	03 30 34.8	+0.7
KSH				PP	PP	03 31 49.8	+7.0
KSH				sPKP		03 33 47.8	
KSH				AMB	AMB		
	comp=Z,710nm,13.2s						
KKAR	Karatay Array	118.83	308	PKPdf	PKPdf	03 30 41.8	-0.5
BVAR	Borovoye Array	118.89	320	PKP	PKPdf	03 30 40.9	-1.2
	comp=Z,2.3nm,0.4s,baz=59,slow=9.0,SNR=16						
D63A	Stockholm	119.30	47	P	PKPdf	03 30 42.2	-0.9
	baz=270						
UPNV	Upernavik	119.51	17	*i* P	PKPdf	03 30 42.3	-0.5
SPA0	Spitsbergen Ar	122.39	356	*e*PKPdf	PKPdf	03 30 48.0	-0.2
SPITS	Spitsbergen Ar	122.39	356	PKP	PKPdf	03 30 48.0	-0.2
	comp=Z,10nm,0.7s,baz=129,slow=8.8,SNR=20						
DAG	Danmarks Havn	123.41	5	*i* P	PKPdf	03 30 49.0	-1.2
DAG	Danmarks Havn	123.41	5	*i* P	PKPdf	03 30 49.0	-1.2
HSPB	Hornsund (broa	123.57	356	*e*PKPdf	PKPdf	03 30 50.3	-0.1
SUMG	Summit	123.95	13	*i* P	PKiKP	03 30 52.2	+0.1
SUMG	Summit	123.95	13	*i* P	PKiKP	03 30 52.3	+0.1
ARU	Arti	125.11	325	PKP	PKPdf	03 30 54.1	+0.2
	comp=Z,3.7nm,0.4s,baz=89,slow=1.4,SNR=20						
ARU	Arti	125.11	325	PKPdf	PKiKP	03 30 54.2	-0.1
BOSA	Boshof	125.30	206	PKP	PKiKP	03 30 55.7	-0.2
	comp=Z,3.7nm,1.0s,baz=124,slow=3.8,SNR=3.3						
BOSA	Boshof	125.30	206		PKPdf	03 30 54.8	-0.7
DBG	Daneborg	125.54	7	*i* P	PKPdf	03 30 53.4	-0.9
ABKAR	Akbulak array	125.82	316		PKPdf	03 30 55.4	-0.1
ABKAR	Akbulak array	125.82	316	PKPdf	PKPdf	03 30 55.5	-0.1
AKTO	Aktyubinsk	126.84	318	PKP	PKiKP	03 30 57.8	-0.2
	comp=Z,2.9nm,0.8s,baz=71,slow=2.8,SNR=7.7						
GEYT	Alibeck	128.26	302	PKP	PKPdf	03 31 00.9	+0.3
	comp=Z,3.0nm,0.6s,baz=243,slow=6.3,SNR=5.4						
HAMF	Hammerfest	128.64	350	*e*PKPdf	PKPdf	03 31 00.3	0.0
HAMF				*e*PP	PP	03 33 17.2	+1.0
KIRV	Kirov	128.97	330	PKP	PKPdf	03 31 01.3	+0.1
	comp=Z,11nm,0.6s,baz=323,slow=0.1,SNR=5.3						
ARA0	ARCESS Array S	129.31	349	*e*PKPdf	PKPdf	03 31 01.3	-0.4
ARA0				*e*PP	PP	03 33 20.9	+0.3
ARCES	ARCESS Array B	129.31	349	PKP	PKPdf	03 31 01.4	-0.2
	comp=Z,7.2nm,0.5s,baz=6.4,slow=1.2,SNR=36						
KTK1	Kautokeino	130.16	350	*e*PKPdf	PKPdf	03 31 03.3	+0.1
TRO	Tromso	130.24	352	*e*PKPdf	PKPdf	03 31 03.6	+0.3
KLMR	Klimovskoe	132.01	336	*e*PKPdf	PKPdf	03 31 05.9	-1.0
KLMR				AMP		03 31 07.4	
	comp=Z,23nm,1.4s						
KLMR				*e*PP	PP	03 33 35.4	-2.5
LOF	Lofoten	132.30	354	*e*PKPdf	PKPdf	03 31 06.8	-0.5
STEI	Steigen	132.31	353	*e*PKPdf	PKiKP	03 31 08.3	-0.2
FAUS	Fauske	132.83	352	*e*PKPdf	PKPdf	03 31 08.6	+0.3
NSS	Namsos	135.96	353	*e*PKPdf	PKPdf	03 31 07.3	-6.8
FINES	FINESS Array B	136.05	343	PKhKP	PKPpre	03 31 04.2	
	comp=Z,5.5nm,1.0s,baz=26,slow=3.2,SNR=5.0						
FINES				PKP	PKPdf	03 31 14.5	0.0
	comp=Z,5.6nm,0.6s,baz=47,slow=2.5,SNR=5.3						
FINES				SKPbc	SKPbc	03 33 50.6	+1.4
	comp=Z,2.5nm,0.7s,baz=2.6,slow=4.2,SNR=4.2						
MOL	Molde	138.30	355	*e*PKPdf	PKPdf	03 31 18.1	-0.5
DOMB	Dombas	138.69	354	*e*	PKPdf	03 31 11.2	-8.1
NB2	NORSAR Subarra	139.44	352	PKP	PKPdf	03 31 13.0	-7.8
	comp=Z,1.7nm,0.7s,baz=17,slow=2.6						
NOA	NORSAR Array B	139.44	352	PKhKP	PKPpre	03 31 12.9	
	comp=Z,0.8nm,0.6s,baz=40,slow=0.8,SNR=14						
NOA				PKP	PKPdf	03 31 22.0	+1.2
	comp=Z,2.1nm,0.6s,baz=14,slow=4.0,SNR=6.1						
NC602	NORSAR Array S	139.69	352	*e*PKPdf	PKPdf	03 31 14.6	-6.6
SKAR	Skarslia	140.10	354	*e*PKPdf	PKPdf	03 31 17.2	-4.8
KONO	Kongsberg	140.98	353	*e*PKPdf	PKPdf	03 31 20.1	-3.5
BLS5	Blasjo	141.50	355	*e*PKPdf	PKPdf	03 31 20.2	-4.3
SUW	Suwalki	143.02	338	*e*PKP	PKPab	03 31 25.1	-0.1
AKASG	Malin Array Be	143.03	330	PKP	PKPab	03 31 24.9	-0.5
	comp=Z,22nm,0.4s,baz=44,slow=4.3,SNR=127						
AKASG	Malin Array Be	143.03	330	PKPdf	PKPab	03 31 25.0	-0.3
MBAR	Mbarara	143.76	237		PKPbc	03 31 28.7	-0.7
MUD	Monsted U'grnd	144.16	352	*i* P	PKPbc	03 31 28.7	-0.3
MUD	Monsted U'grnd	144.16	352	*i* P	PKPbc	03 31 28.8	-0.2
COP	Copenhagen	144.40	349	*i* P	PKPab	03 31 30.2	-0.2
COP	Copenhagen	144.40	349	*i* P	PKPab	03 31 30.2	-0.2
BSD	Bornholm Skovb	144.43	346	*i* P	PKPdf	03 31 29.6	-0.1
BSD	Bornholm Skovb	144.43	346	*i* P	PKPdf	03 31 29.7	-0.1
SORM	Soroca	145.17	327	⇓P	PKPbc	03 31 32.4	+0.1
GKP	Gorka Klasztor	145.52	343	*e*PKP	PKPbc	03 31 33.5	+0.3
BEL	Belsk	145.64	338	*e*PKP	PKPbc	03 31 34.2	+0.6
KIS	Kishinev	145.67	325	*e*PKP	PKPdf	03 31 31.0	-1.1
	comp=Z,42nm,0.5s						
MILM	Milestii Mici	145.72	325	⇑P	PKPbc	03 31 34.1	+0.1
LNIZ	Loecknitz	146.09	346	*e*PKPbc	PKPbc	03 31 34.5	-0.3
	baz=19,slow=2.4						
BSEG	Bad Segeberg	146.43	350	*e*PKPbc	PKPbc	03 31 36.2	+0.5
	baz=19,slow=2.4						
VASR	Vaslui	146.44	326	⇑P	PKPbc	03 31 36.3	+0.3
BR131	Keskin Array S	146.49	311	PKPdf	PKPdf	03 31 33.9	0.0
BRTR	Keskin Array B	146.49	311	PKPbc	PKPbc	03 31 36.2	-0.3
	comp=Z,5.9nm,0.7s,baz=140,slow=3.4,SNR=39						
BRTR	Keskin Array B	146.49	311	PKPdf	PKPdf	03 31 33.7	-0.2
KWP	Kalwaria Pacla	146.68	334	*e*PKP	PKPbc	03 31 37.0	+0.5
TLCR		146.79	323	⇓P	PKPbc	03 31 37.4	+0.4
VARL	Varlezi	146.88	325	⇑P	PKPbc	03 31 37.8	+0.7
GHRR		147.01	325	⇑P	PKiKP	03 31 38.7	-0.6
BURAR	Bucovina Array	147.07	329	⇓P	PKiKP	03 31 38.7	-0.7
BIZ	Bicaz	147.10	328	⇑P	PKiKP	03 31 38.7	-0.7
TESR	Tescani	147.12	327	⇑P	PKPbc	03 31 38.1	+0.3
RUE	Ruedersdorf	147.12	345	*e*PKPbc	PKPbc	03 31 38.0	+0.5
	baz=19,slow=2.4						
CFR	Carcaliu	147.17	323	⇑P	PKPbc	03 31 38.3	+0.4
TPGR	Topolog	147.21	323	⇓P	PKiKP	03 31 39.0	-0.7
OJC	Ojcow	147.33	337	*e*PKP	PKPbc	03 31 38.7	+0.4
ODBI	Odobesti	147.39	325	⇓P	PKiKP	03 31 39.5	-0.6
KOLS	Kolonicke sedl	147.41	334	*e*PKP	PKPbc	03 31 38.9	+0.4
VRI	Vrincioaia	147.50	326	⇓P	PKPbc	03 31 39.2	+0.3
PLOR	Plostina	147.55	326	⇑P	PKPbc	03 31 37.9	-1.1
HARR	Harsova	147.59	323	⇑P	PKPbc	03 31 39.5	+0.5
TLBR	Topalu	147.61	323	⇑P	PKPbc	03 31 39.7	+0.6
MFTR	Murfatlar	147.62	322	⇑P	PKiKP	03 31 40.2	-0.4
BISRR	Bisoca	147.72	325	⇑P	PKiKP	03 31 40.4	-0.5
CRVS	Cervenica-Dubn	147.76	334	*e*PKP	PKPbc	03 31 40.0	+0.6
NIE	Niedzica	147.81	336	*e*PKP	PKiKP	03 31 40.8	-0.1
FLTG	Flechtingen	147.81	348	*e*PKPbc	PKPbc	03 31 39.4	+0.1
	baz=19,slow=2.4						
OZUR		147.84	327	⇓P	PKPbc	03 31 40.2	+0.5
MDUB	Mudurnu	147.84	314	PKPdf	PKPdf	03 31 36.0	0.0
NRDL	Niedersach Rie	147.86	349	*e*PKPbc	PKPbc	03 31 39.8	+0.5
	baz=19,slow=2.4						
KSP	Ksiaz	147.94	342	*e*PKP	PKiKP	03 31 40.5	-0.6
NEHR	Nehoiu	148.02	325	⇓P	PKPbc	03 31 40.5	+0.4
DOPR	Dopca	148.13	327	⇑P	PKiKP	03 31 41.2	-0.4
MLR	Muntele Rosu	148.16	326	⇑P	PKPbc	03 31 40.9	+0.3
OSTC	Ostas	148.22	341	⇑*e*PKP	PKiKP	03 31 41.1	-0.6
OSTC				*e*PKPAB	PKPab	03 31 47.0	+1.0
CHVC	Chvalec	148.24	342	⇑*e*PKP	PKPbc	03 31 41.0	+0.5
CHVC				*e*PKPAB	PKPab	03 31 46.1	+0.1
UPC	Upice	148.32	342	⇑*e*PKP	PKPbc	03 31 41.2	+0.5
UPC				*e*PKPAB	PKPab	03 31 46.9	+0.5
LANS	Liptovska Anna	148.34	337	*e*PKP	PKiKP	03 31 41.9	-0.1
DPC	Dobruska-Polom	148.37	341	⇑*e*PKP	PKPbc	03 31 41.4	+0.5
DPC				*e*PKPAB	PKPab	03 31 47.3	+0.7
CLL	Collm	148.39	346	*e*PKPdf	PKPdf	03 31 37.0	+0.6
CLL				*i* PKPbc	PKPbc	03 31 41.1	+0.3
	comp=Z,24nm,0.7s						
CLL				*e*PKPab	PKPab	03 31 47.0	+0.4
CLL				*e*pPKPab	pPKPab	03 34 05.0	+3.2
CLL	Collm	148.39	346	*e*PKPbc	PKiKP	03 31 41.4	-0.6
	baz=19,slow=2.4						
SECR		148.40	325	⇓P	PKiKP	03 31 41.7	-0.4
KRLC	Kraliky	148.47	340	⇑*e*PKP	PKPbc	03 31 41.1	-0.1
KRLC				*e*PKPAB	PKPab	03 31 47.2	+0.2
MORC	Moravsky Berou	148.49	339	⇓P	PKiKP	03 31 41.9	-0.4
MORC	Moravsky Berou	148.49	339	*e*PKP	PKPbc	03 31 41.6	+0.4
CJR	Cluj-Napoca	148.49	330	⇑P	PKPbc	03 31 41.6	+0.3
BRG	Berggiesshubel	148.56	344	*i* PKP	PKPbc	03 31 41.6	+0.4
BRG				Amp		03 31 42.7	
	comp=Z,15nm,0.5s						
BRG	Berggiesshubel	148.56	344	*e*PKPbc	PKiKP	03 31 41.9	-0.4
	baz=19,slow=2.4						
VOIR		148.66	326	⇑P	PKPbc	03 31 42.0	+0.2
FBE	Freiberg	148.67	345	*e*PKPbc	PKiKP	03 31 42.0	-0.5
	baz=19,slow=2.4						
LEF	Lefka	148.69	303	⇑P	PKPbc	03 31 42.0	-0.1
PVCC	Panska Ves	148.72	343	⇑*e*PKP	PKiKP	03 31 42.2	-0.4
GTTG	Gottingen	148.79	349	*e*PKPbc	PKPbc	03 31 42.0	+0.2
	baz=19,slow=2.4						
DRGR		148.84	330	⇓P	PKiKP	03 31 42.7	-0.4
ARR	Arges	148.93	327	⇑P	PKiKP	03 31 44.0	+0.7
VYHS	Vyhne	149.12	337	*e*PKP	PKiKP	03 31 43.6	0.0
PRA	Prague	149.17	343	⇑*e*PKP	PKiKP	03 31 43.2	-0.4
PSZ	Piszkesteto	149.18	335	⇑P	PKiKP	03 31 43.7	-0.1
PSZ	Piszkesteto	149.18	335	PKPdf	PKPdf	03 31 37.8	-0.1
VRAC	Vranov	149.20	340	⇑P	PKiKP	03 31 43.3	-0.4
VRAC	Vranov	149.20	340	*e*PKP	PKPbc	03 31 43.1	+0.2
VRAC				*e*		03 31 51.0	
PRU	Pruhonice	149.21	343	⇑*e*PKP	PKPbc	03 31 43.0	+0.1
PRU				*e*x	x	03 31 55.6	
JAVC	Velka Javorina	149.23	338	*e*PKP	PKiKP	03 31 44.5	+0.7
LOT	Lotru	149.31	328	⇓P	PKPbc	03 31 42.8	-0.7
HUMR	Humele	149.31	325	⇓P	PKPbc	03 31 43.4	+0.1
MOX	Moxa	149.33	347	*e*PKPbc	PKiKP	03 31 43.5	-0.4
	baz=19,slow=2.4						
TANN	Tannenbergstha	149.35	345	*e*PKPbc	PKiKP	03 31 43.7	-0.3
	baz=19,slow=2.4						
WERD	Werda	149.36	346	*e*PKPbc	PKiKP	03 31 43.7	-0.3
	baz=19,slow=2.4						
KASTN	Kahler Asten	149.38	351	*e*PKPbc	PKPbc	03 31 43.6	+0.3
	baz=19,slow=2.4						
DEV	Deva	149.42	329	⇓P	PKiKP	03 31 44.3	0.0
GUNZ	Gunzen	149.43	346	*e*PKPbc	PKiKP	03 31 44.1	-0.1
	baz=19,slow=2.4						
COPA	Copaceanca	149.44	324	⇓P	PKPbc	03 31 43.9	+0.3
KRUC	Moravsky	149.48	340	*e*PKP	PKPbc	03 31 43.8	+0.3
KRUC				*e*		03 31 51.8	
UBBA	Unterbreizbach	149.48	349	*e*PKPbc	PKiKP	03 31 43.8	-0.3
	baz=19,slow=2.4						
WERN	Wernitzgruen	149.49	345	*e*PKPbc	PKiKP	03 31 44.1	-0.2
	baz=19,slow=2.4						
NKC	Novy Kostel	149.52	345	⇑*e*PKP	PKPbc	03 31 43.8	+0.1
NKC				*e*PKPAB	PKPab	03 31 51.6	+0.2
TREC	Trest	149.56	341	⇑*e*PKP	PKPbc	03 31 44.0	+0.2
SMOL	Smolenice	149.60	338	*e*PKP	PKiKP	03 31 44.7	+0.1
SMOL				*e*		03 31 53.1	
PBCC	Pribram	149.63	343	⇑*e*PKP	PKPbc	03 31 44.0	+0.1
SIRR	Siria	149.72	331	⇑P	PKiKP	03 31 44.6	-0.3
MODS	Modra-Piesok	149.78	338	*e*PKP	PKPbc	03 31 44.1	-0.2
MODS				*e*		03 31 53.0	
MANZ	Manzenberg	149.83	346	*e*PKPbc	PKiKP	03 31 44.7	-0.3
	baz=19,slow=2.4						
GZR	Gura Zlata	149.84	329	⇑P	PKPbc	03 31 44.5	-0.1
SRO	Srobarova	149.88	336	*e*PKP	PKiKP	03 31 45.1	0.0
ZST	Bratislava	149.99	338	*e*PKP	PKPbc	03 31 44.7	-0.1
ROTZ	Rotzenmuhle	150.01	345	*e*PKPbc	PKiKP	03 31 45.1	-0.3
	baz=19,slow=2.4						
SRE	Strehaia	150.15	327	⇑P	PKiKP	03 31 46.4	+0.6
BZS	Buzias	150.22	330	⇑P	PKPbc	03 31 45.6	+0.2
UCC	Uccle	150.23	356	*d*PKP	PKPbc	03 31 45.3	+0.1
KHC	Kasperske Hory	150.25	343	⇑*e*PKP	PKiKP	03 31 45.7	-0.2
KHC				*e*PKPAB	PKPab	03 31 55.5	+1.0
PLVB	Pleven	150.26	324	⇓P	PKiKP	03 31 46.1	0.0
MEM	Membach	150.27	353	*d*PKP	PKPbc	03 31 45.4	+0.1
MEM				*d*PKPab	PKPab	03 31 54.2	-0.2
BTNL	Ternell	150.28	353	*d*PKP	PKiKP	03 31 45.6	-0.2
GRF	Grafenberg Arr	150.31	346	*e*PKPbc	PKiKP	03 31 45.7	-0.2
	baz=19,slow=2.4						
TNS	Taunus Mts	150.32	350	*e*PKPbc	PKiKP	03 31 45.9	-0.1
	baz=19,slow=2.4						
CKRC	Cesky Krumlov	150.33	342	*e*PKP	PKiKP	03 31 46.0	-0.1
BSTI	Sart Tilman	150.34	354	*d*PKP	PKiKP	03 31 45.8	-0.2
BSTI				*d*PKPab	PKPab	03 31 54.4	-0.3
HERR	Herculane	150.38	328	⇓P	PKiKP	03 31 46.2	-0.1
WET	Wettzell	150.43	344	*e*PKPbc	PKiKP	03 31 46.2	-0.1
	baz=19,slow=2.4						
GEC2	GERESS Array S	150.48	343	*e*PKPbc	PKiKP	03 31 46.2	-0.2
	baz=19,slow=2.4						
GERES	GERESS Array B	150.48	343	PKP	PKPdf	03 31 39.3	-0.6
	comp=Z,0.3nm,0.4s,baz=48,slow=2.0,SNR=4.4						
GERES				PKPbc	PKPbc	03 31 46.1	+0.1
	comp=Z,11nm,0.8s,baz=36,slow=2.6,SNR=62						
GERES	GERESS Array B	150.48	343	PKPdf	PKPdf	03 31 39.8	-0.1
SNF	Seneffe	150.52	356	*d*PKP	PKiKP	03 31 46.1	-0.2
SNF				*d*PKPab	PKPab	03 31 55.1	-0.3
BCLA	Clavier	150.53	354	*d*PKP	PKPbc	03 31 46.0	+0.1
BCLA				*d*PKPab	PKPab	03 31 54.7	-0.8
PUNG	Punghina	150.55	327	⇑P	PKiKP	03 31 46.7	+0.1
BGES	Gesves	150.58	355	*d*PKP	PKPbc	03 31 46.0	-0.1
BANR	Banloc	150.62	330	⇓P	PKiKP	03 31 47.4	+0.7
CONA	Conrad Observa	150.64	339	*e*P	PKiKP	03 31 46.9	+0.1
	comp=Z,18nm,0.6s,SNR=6.7						
BMRD	Maredsous	150.69	355	*d*PKP	PKiKP	03 31 46.5	-0.2
MDVR	Moldovita	150.80	329	⇓P	PKiKP	03 31 47.1	-0.1
DOU	Dourbes	150.91	355	*d*PKP	PKiKP	03 31 47.0	-0.2
MORH	Mrgy, Hungar	151.06	334	⇓P	PKiKP	03 31 47.6	0.0
MORH	Mrgy, Hungar	151.06	334	*e*P	PKPbc	03 31 47.0	-0.3
WLF	Walferdange	151.18	353	*d*PKP	PKiKP	03 31 48.0	+0.3
WLF	Walferdange	151.18	353	*e*PKPbc	PKiKP	03 31 48.1	+0.3
	baz=19,slow=2.4						
MOA	Molln	151.22	341	*e*P	PKPbc	03 31 47.5	-0.1
	comp=Z,5.4nm,0.5s						
ARSA	Arzberg	151.34	339	*e*P	PKiKP	03 31 48.9	+0.7
	comp=Z,3.2nm,0.6s						
FRGS	Fruska Gora	151.40	331	⇑P	PKiKP	03 31 48.5	+0.1
FRGS	Fruska Gora	151.40	331	⇑*i*P	PKPbc	03 31 48.1	0.0
VTS	Vitosha	151.53	324	⇓P	PKiKP	03 31 48.8	-0.1
STU	Stuttgart	151.60	348	*e*PKPbc	PKiKP	03 31 48.8	+0.1
	baz=19,slow=2.4						
BOVS	Bovan	151.63	327	⇓P	PKPbc	03 31 48.3	-0.4
FUR	Furstenfeldbru	151.73	345	*e*PKPbc	PKPbc	03 31 48.8	0.0
	baz=19,slow=2.4						
RJOB	Jochberg	151.74	343	*e*PKPbc	PKPbc	03 31 48.8	-0.1
	baz=19,slow=2.4						
SOKA	Soboth	152.01	339	*i* P	PKPbc	03 31 49.1	-0.4
	comp=Z,7.7nm,0.8s						
PERS	Pernice	152.02	339	*i* PKPbc	PKPbc	03 31 48.9	-0.6
DIVS	Divibare	152.13	330	⇑*i*P	PKPbc	03 31 49.6	-0.3
BFO	Black Forest	152.18	349		PKiKP	03 31 49.8	-0.1
BFO	Black Forest	152.18	349	*e*PKPbc	PKiKP	03 31 50.0	+0.1
	baz=19,slow=2.4						
KBA	Koelnbreinsper	152.18	342	*i* P	PKPbc	03 31 49.3	-0.7
	comp=Z,9.0nm,0.9s						
OBKA	Obir	152.32	340	*i* P	PKPbc	03 31 49.3	-0.9
	comp=Z,5.4nm,0.6s						
WATA	Walderalm	152.43	344	*i* P	PKPbc	03 31 50.1	-0.4
	comp=Z,6.3nm,0.6s						
UBR	Ueberruh	152.45	347	*e*PKPbc	PKiKP	03 31 50.7	+0.2
	baz=19,slow=2.4						
WTTA	Wattenberg	152.48	344	*i* P	PKPbc	03 31 50.6	0.0
	comp=Z,11nm,0.5s						
RETA	Reutte	152.49	345	*i* P	PKPbc	03 31 50.3	-0.2
	comp=Z,5.2nm,0.7s						
MYKA	Terra Mystica	152.50	341	*i* P	PKPbc	03 31 49.9	-0.7
	comp=Z,7.6nm,0.5s						
MOTA	Moosalm	152.54	345	*e*P	PKPbc	03 31 50.5	-0.2
	comp=Z,14nm,1.1s						
BBLS	Lazići	152.58	330	⇑*i*P	PKPbc	03 31 50.2	-0.6
CRES	Cresnjev	152.60	338	⇑*i*P	PKPbc	03 31 50.6	-0.1
HAPS	Han Pijesak,Bl	152.62	331	*e*P	PKPbc	03 31 50.3	-0.7
VNDS	Vrh nad Dolski	152.62	339	*i* PKPbc	PKPbc	03 31 50.5	-0.3
SQTA	Sankt Quirin	152.63	345	*i* P	PKPbc	03 31 50.8	-0.1
	comp=Z,8.5nm,0.6s						
ABTA	Abfaltersbach	152.72	342	*e*P	PKPbc	03 31 50.3	-0.8
	comp=Z,13nm,0.6s,SNR=6.4						
LJU	Ljubljana	152.73	339	⇑*i*P	PKPbc	03 31 50.8	-0.2
CRNS	Crni Vrh	152.79	339	*i* PKPbc	PKPbc	03 31 50.7	-0.4
BLY	Banja Luka	152.85	334	⇑*i*P	PKiKP	03 31 52.2	+0.8
GBAS	Gorenja Brezov	152.86	339	*i* PKPbc	PKPbc	03 31 51.1	-0.2
FETA	Feichten	152.93	345	*i* P	PKPbc	03 31 50.4	-1.2
	comp=Z,15nm,1.3s						
CEY	Cerknica	153.03	339	⇑*i*P	PKPbc	03 31 51.0	-0.7
DRME	Dracevica, Mon	153.96	328	*e*P	PKPbc	03 31 53.3	-0.4
ESDC	Sonseca Array	161.00	12	PKPab	PKPab	03 32 41.0	-0.1
	comp=Z,3.6nm,1.0s,baz=334,slow=4.2,SNR=7.9						
ESDC	Sonseca Array	161.00	12		PKPab	03 32 40.2	-0.8
KEST	Kesra	163.66	335	PKPab	PKPab	03 32 53.5	+0.6
	comp=Z,5.1nm,0.8s,baz=242,slow=0.7,SNR=5.7						
LIC	Lamto	164.13	158	*e*PKIKP	PKPdf	03 31 56.9	-0.7
	comp=Z,27nm,1.0s						
LIC	Lamto	164.13	158	*e*PKP1	PKPab	03 32 56.7	+1.4
	comp=Z,32nm,1.3s						
KIC	Kosan Boka	164.36	159	*e*PKIKP	PKPdf	03 31 57.1	-0.7
	comp=Z,39nm,1.3s						
KIC	Kosan Boka	164.36	159	*e*PKP1	PKPab	03 32 56.6	+0.2
	comp=Z,22nm,1.0s						
TIC	Toumodi	164.53	157	*e*PKIKP	PKPdf	03 31 57.3	-0.6
TIC	Toumodi	164.53	157	*e*PKP1	PKPab	03 32 57.6	+0.5
DBIC	Dimbokro	164.61	158	PKP	PKPdf	03 31 57.3	-0.6
	comp=Z,3.0nm,0.7s,baz=118,slow=3.5,SNR=5.5						
DBIC	Dimbokro	164.61	158		PKPdf	03 31 57.0	-0.9
TOA0	Torodi Ar. Sit	172.07	185		PKPdf	03 32 01.9	-0.8
TORD	Torodi Ar. Bea	172.07	185	PKP	PKPdf	03 32 01.5	-1.2
	comp=Z,3.1nm,0.8s,baz=321,slow=0.8,SNR=15						
TORD				PKPab	PKPab	03 33 29.5	-0.8
	comp=Z,1.2nm,0.8s,baz=183,slow=3.4,SNR=4.4						
TORD	Torodi Ar. Bea	172.07	185		PKPdf	03 32 02.1	-0.6

IDC ***24*** *03:23:52.2±2.0, 59°.74N×152°.12W, h65^{km}±27^{km}, mb3.6/3, mb1 3.7/6, mb1mx3.2/70, mbtmp3.8/6, ML3.6/3, Error ellipse: s-maj=32.8km s-min=16.5km az=113.0*

NEIC ***24*** *03:23:52.9±0.9, 59°.68N±0°.03×152°.16W±0°.05, h70^{km}±5^{km}, Error ellipse: s-maj=4.6km s-min=3.5km az=191.0*

ANF ***24*** *03:23:52.8±0.2, 59°.63N×152°.03W, h60^{km}, ML3.7/28, Error ellipse: s-maj=3.9km s-min=2.4km az=110.0*

AEIC ***24*** *03:23:53±1.0, 59°.67N±0°.03×152°.17W±0°.03, h64^{km}±4^{km}, ML3.4, ML3.6/65(NEIC), Error ellipse: s-maj=4.8km s-min=1.9km az=174.0*

ISC 24 03:23:52.8±0.8**, 59°.67N**±0°.03×**152°.13W**±0°.03**, h69**^{km}±6^{km}**, n175, σ0.s92**/196**, mb3.9**/3**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOM	Homer	0.25	93	P	Pn	03 24 03.7	+0.2
	baz=274,SNR=44						
HOM				S	Sn	03 24 12.0	+0.7
	baz=274						
HOM	Homer	0.25	93		Pn	03 24 03.7	+0.2
HOM					Sn	03 24 12.2	+0.8
CNPM	China Poot	0.48	107		Pn	03 24 05.5	+0.2
CNPM					Sn	03 24 15.0	+0.5
ILS	Iliamna Low So	0.55	302		Pn	03 24 05.7	-0.5
OPT	Oil Point	0.56	269		Pn	03 24 06.0	-0.1
OPT					Sn	03 24 15.5	-0.4
IVE	Iliamna Volcan	0.56	308		Pn	03 24 05.6	-0.6
IVE					Sn	03 24 15.6	-0.6
ILIM	Iliamna	0.58	315		Pn	03 24 05.6	-0.8
ILIM					Sn	03 24 15.9	-0.5
BRLK	Bradley Lake	0.64	81		Pn	03 24 06.9	-0.1
BRLK					Sn	03 24 17.7	+0.3
BRLK	Bradley Lake	0.64	81	IAML		03 24 18.2	
	comp=N,3μm,0.3s						
BRLK				IAML		03 24 18.6	
	comp=E,3μm,0.5s						
AU22	Augustine Moun	0.69	245		Pn	03 24 07.5	0.0
AU22					Sn	03 24 18.9	+0.5
AU2	Augustine Isla	0.70	245		Pn	03 24 07.7	+0.1
BRSE	Bradley Lake S	0.71	84	P	Pn	03 24 07.7	-0.1
	baz=265						
BRSE				S	Sn	03 24 18.8	0.0
	baz=265						
BRSE	Bradley Lake S	0.71	84		Pn	03 24 07.7	-0.1
BRSE					Sn	03 24 19.1	+0.4
AUL	Augustine Lava	0.72	247		Pn	03 24 08.0	+0.2
AUL					Sn	03 24 19.7	+0.8
AUH	Augustine H	0.73	246		Pn	03 24 08.3	+0.2
AUCH	Augustine Cone	0.74	246		Pn	03 24 08.2	+0.1
AUW	Augustine West	0.74	247		Pn	03 24 08.3	+0.2
RED	Redoubt Volcan	0.82	337		Pn	03 24 08.7	-0.4
RED					Sn	03 24 21.1	0.0
RSO	Redoubt South	0.85	339		Pn	03 24 09.1	-0.5
DFR	Drift River	0.96	344		Pn	03 24 10.6	-0.3
NCT	North Crescent	0.98	336		Pn	03 24 10.8	-0.2
CAPN	Captain Cook N	1.21	24	P	Pn	03 24 15.5	+1.7
	baz=206						
CAPN				S	Sn	03 24 31.8	+2.3
	baz=206						
CAPN	Captain Cook N	1.21	24		Pn	03 24 13.9	+0.1
CAPN					Sn	03 24 30.7	+1.2
SLKM	Skilak Lake	1.27	48		Pn	03 24 14.8	+0.1
SEW	Seward	1.42	71	P	Pn	03 24 16.0	-0.6
	baz=254,SNR=38						
SEW				S	Sn	03 24 34.0	-0.5
	baz=254						
SEW	Seward	1.42	71		Pn	03 24 17.5	+0.9
O22K	Cooper Landing	1.46	55	P	Pn	03 24 16.9	-0.2
	baz=238,SNR=72						
O22K				S	Sn	03 24 35.6	+0.2
	baz=238						
O22K	Cooper Landing	1.46	55		Pn	03 24 18.0	+1.0
O22K					Sn	03 24 37.8	+2.4
SPCR	Spurr Chakacha	1.54	359	P	Pn	03 24 18.4	+0.2
	baz=180,SNR=69						
SPCR				S	Sn	03 24 38.1	+0.7
	baz=180						
SPCR	Spurr Chakacha	1.54	359		Pn	03 24 18.4	+0.2
SPCN	Chakachatna No	1.56	359		Pn	03 24 19.0	+0.5
SPBG	Spurr Blockage	1.60	356		Pn	03 24 18.5	-0.5
SPBG					Sn	03 24 39.6	+0.7
SPCP	Crater Peak Br	1.60	360		Pn	03 24 19.8	+0.6
BGL	Barrier Glacie	1.60	356		Pn	03 24 19.6	+0.5
SPCG	Spurr Capps Gl	1.63	2		Pn	03 24 20.0	+0.5
SPCG					Sn	03 24 41.3	+1.6
FIS	Fire Island	1.76	32		Pn	03 24 22.1	+1.0
STLK	Strandline Lak	1.84	5		Pn	03 24 23.1	+0.8
RC01	Rabbit Creek A	1.86	39	P	Pn	03 24 23.1	+0.7
	baz=222,SNR=41						
RC01				S	Sn	03 24 44.6	-0.3
	baz=222						
RC01	Rabbit Creek A	1.86	39		Pn	03 24 23.1	+0.7
RC01					Sn	03 24 47.2	+2.3
KDAK	Kodiak Island	1.91	187	P	Pn	03 24 22.6	-0.5
	comp=E,24nm,0.3s,baz=31,slow=9.2,SNR=9.7						
KDAK				S	Sn	03 24 51.9	+5.7
	comp=E,58nm,0.3s,baz=234,slow=19,SNR=12						
KDAK	Kodiak Island	1.91	187	P	Pn	03 24 22.8	-0.3
	baz=6.1						
KDAK				S	Sn	03 24 46.1	-0.1
	baz=6.1						
KDAK	Kodiak Island	1.91	187		Pn	03 24 22.9	-0.3
SUA	Susitna One	1.93	20	P	Pn	03 24 24.0	+0.5
	baz=202,SNR=68						
SUA				S	Sn	03 24 48.5	+1.7
	baz=202						
SUA	Susitna One	1.93	20		Pn	03 24 24.0	+0.5
SUA	Susitna One	1.93	20	IAML		03 24 52.6	
	comp=E,534nm,0.9s						
SUA				IAML		03 24 53.0	
	comp=N,393nm,0.7s						
KCG	Knife Ck. Glac	2.06	230		Pn	03 24 25.6	+0.3
KCG					Sn	03 24 49.8	-0.1
KBM	Katmai Bkd Mtn	2.12	230		Pn	03 24 26.4	+0.4
SVW2	Sparrevohn	2.23	311		Pn	03 24 26.8	-0.7
PWL	Port Wells	2.24	56		Pn	03 24 27.5	-0.1
PWL					Sn	03 24 53.5	-0.7

CAHL	Cahill	2.31	227		Pn	03 24 29.1	+0.5
SKT	Skwentna	2.34	7	P	Pn	03 24 29.3	+0.4
	baz=188,SNR=41						
SKT				S	Sn	03 24 58.2	+1.6
	baz=188						
SKT	Skwentna	2.34	7		Pn	03 24 29.4	+0.5
SKT	Skwentna	2.34	7	IAML		03 25 02.3	
	comp=E,280nm,0.5s						
KJL	Kejulik	2.41	229		Pn	03 24 31.0	+1.0
PMR	Palmer	2.43	36	P	Pn	03 24 29.6	-0.5
	baz=219						
PMR				S	Sn	03 24 58.2	-0.5
	baz=219						
PMR	Palmer	2.43	36		Pn	03 24 30.1	0.0
PMR					Sn	03 24 58.2	-0.5
OHAK	Old Harbor	2.53	194	P	Pn	03 24 30.6	-0.8
	baz=13						
OHAK				S	Sn	03 24 58.8	-2.4
	baz=13						
OHAK	Old Harbor	2.53	194		Pn	03 24 30.7	-0.8
OHAK	Old Harbor	2.53	194	IAML		03 25 14.3	
	comp=E,181nm,0.7s						
SML	Sawmill	2.84	39	P	Pn	03 24 35.6	-0.2
	baz=223						
SML				S	Sn	03 25 08.0	-0.9
	baz=223						
SML	Sawmill	2.84	39		Pn	03 24 36.1	+0.2
SML	Sawmill	2.84	39	IAML		03 25 23.1	
	comp=N,211nm,0.8s						
SML				IAML		03 25 27.0	
	comp=E,222nm,0.7s						
CUT	Chulitna	2.89	17	P	Pn	03 24 37.0	+0.6
	baz=200						
CUT				S	Sn	03 25 11.2	+1.2
	baz=200						
CUT	Chulitna	2.89	17		Pn	03 24 37.1	+0.7
HIN	Hinchinbrook I	2.92	73		Pn	03 24 37.5	+0.7
HIN					Sn	03 25 09.5	-1.3
HIN	Hinchinbrook I	2.92	73	IAML		03 25 28.0	
	comp=N,148nm,0.9s						
HIN				IAML		03 25 31.6	
	comp=E,119nm,1.0s						
Q23K	Middleton Isla	2.96	92		Pn	03 24 37.3	0.0
Q23K	Middleton Isla	2.96	92	IAML		03 25 48.9	
	comp=N,182nm,2.4s						
Q23K				IAML		03 26 07.7	
	comp=E,214nm,2.4s						
PLK1	Peulik 1	2.99	233		Pn	03 24 38.4	+0.6
SCM	Sheep Creek Mo	3.21	45		Pn	03 24 41.0	+0.3
SCM	Sheep Creek Mo	3.21	45	IAML		03 25 34.9	
	comp=E,163nm,1.2s						
SCM				IAML		03 25 48.7	
	comp=N,156nm,1.1s						
PPLA	Purkeypile	3.24	360	S	Sn	03 25 20.6	+1.9
	baz=180						
SII	Sitkinak Islan	3.31	200	P	Pn	03 24 41.6	-0.6
	baz=18						
SII	Sitkinak Islan	3.31	200		Pn	03 24 41.5	-0.6
EYAK	Cordova Ski Ar	3.31	72	P	Pn	03 24 40.6	-1.6
	baz=258						
EYAK				S	Sn	03 25 16.9	-3.4
	baz=258						
EYAK	Cordova Ski Ar	3.31	72		Pn	03 24 42.2	0.0
DIV	Divide	3.48	62		Pn	03 24 43.9	-0.6
KLU	Klutina	3.57	57	P	Pn	03 24 45.3	-0.4
	baz=242						
KLU				S	Sn	03 25 24.4	-2.3
	baz=242						
KLU	Klutina	3.57	57		Pn	03 24 45.5	-0.3
KLU	Klutina	3.57	57	IAML		03 25 27.2	
	comp=N,157nm,0.4s						
KLU				IAML		03 25 31.6	
	comp=E,88nm,0.4s						
WAT1	Susitna Watana	3.61	27		Pn	03 24 46.6	+0.3
WAT6	Susitna Watana	3.61	34	P	Pn	03 24 46.8	+0.4
	baz=218						
WAT6				S	Sn	03 25 26.4	-1.5
	baz=218						
WAT6	Susitna Watana	3.61	34		Pn	03 24 46.5	+0.1
WAT2	Susitna Watana	3.72	26	P	Pn	03 24 48.6	+0.8
	baz=209						
WAT2				S	Sn	03 25 29.7	-0.8
	baz=209						
WAT2	Susitna Watana	3.72	26		Pn	03 24 48.3	+0.5
TT01	Tatalina	3.75	332		Pn	03 24 48.1	0.0
TTA	Tatalina	3.77	332	P	Pn	03 24 48.2	-0.2
	baz=149						
TTA	Tatalina	3.77	332		Pn	03 24 48.5	0.0
M24K	Tolsona, Glenn	3.80	47	P	Pn	03 24 49.2	+0.3
	baz=233						
M24K	Tolsona, Glenn	3.80	47		Pn	03 24 49.4	+0.5
M24K	Tolsona, Glenn	3.80	47	IAML		03 25 50.8	
	comp=N,130nm,1.3s						
RAGM	Ragged Mountai	3.81	76		Sn	03 25 31.8	-0.8
RAGM				IAML		03 26 17.1	
	comp=E,83nm,0.8s						
RAGM	Ragged Mountai	3.81	76		Pn	03 24 49.0	0.0
GOAT	Goat Mountain	3.82	73		Pn	03 24 49.3	+0.2
TRF	Thorofare Moun	3.89	12		Pn	03 24 50.2	0.0
TRF	Thorofare Moun	3.89	12	IAML		03 25 43.8	
	comp=E,95nm,0.8s						
KAIM	Kayak Island	3.91	83		Pn	03 24 50.8	+0.6
KTH	Kantishna Hill	3.94	8		Pn	03 24 51.3	+0.5
KTH	Kantishna Hill	3.94	8	IAML		03 25 41.1	
	comp=N,85nm,0.5s						
KTH				IAML		03 25 44.0	
	comp=E,103nm,0.7s						
BMRM	Bremner River	3.96	68	P	Pn	03 24 49.9	-1.2
	baz=254						
RND	Reindeer	4.06	21		Pn	03 24 53.2	+0.8
RND	Reindeer	4.06	21	IAML		03 25 49.6	
	comp=N,62nm,0.9s						
RND				IAML		03 26 10.8	
	comp=E,48nm,0.9s						
NICHA	Nichawak Mount	4.15	79		Pn	03 24 53.6	0.0
N25K	Chitina, Valde	4.19	59	P	Pn	03 24 53.4	-0.8
	baz=246						
N25K	Chitina, Valde	4.19	59		Pn	03 24 53.7	-0.4
N25K	Chitina, Valde	4.19	59	IAML		03 25 41.8	
	comp=N,48nm,0.5s						
CHUM	Lake Minchumin	4.23	359	P	Pn	03 24 55.6	+1.0
	baz=179						
CHUM	Lake Minchumin	4.23	359		Pn	03 24 55.1	+0.5
SUCK	Suckling Hills	4.23	81		Pn	03 24 55.4	+0.7
SUCK	Suckling Hills	4.23	81	IAML		03 25 41.3	
	comp=N,109nm,2.5s						
SUCK				IAML		03 25 47.7	
	comp=E,98nm,3.0s						
BERG	Berg Lake	4.29	77		Pn	03 24 55.5	0.0
MCK	McKinley	4.35	19	P	Pn	03 24 56.9	+0.6
	baz=202						
MCK	McKinley	4.35	19		Pn	03 24 56.9	+0.6
GLB	Gilahina Butte	4.48	63		Pn	03 24 57.3	-0.8
BPAW	Bear Paw Mtn.	4.48	6	P	Pn	03 24 59.1	+1.1
	baz=188						
BPAW	Bear Paw Mtn.	4.48	6		Pn	03 24 57.9	-0.1
BPAW	Bear Paw Mtn.	4.48	6	IAML		03 25 54.0	
	comp=N,39nm,0.6s						
BPAW				IAML		03 26 16.1	
	comp=E,35nm,1.1s						
KHIT	Khitrov Hills	4.52	76		Pn	03 24 58.7	0.0
VRDI	Verde Repeater	4.57	66		Pn	03 24 58.8	-0.8
PAX	Paxson	4.61	41		Pn	03 25 00.2	+0.2
BWN	Browne	4.69	14		Pn	03 25 01.2	+0.3
MCARA	McCarthy VSAT	4.82	65		Pn	03 25 02.6	-0.1
MCARA	McCarthy VSAT	4.82	65	IAML		03 26 27.3	
	comp=N,58nm,0.9s						
MCARA				IAML		03 26 39.8	
	comp=E,52nm,1.3s						
KIAG	Kiagna River	5.02	71		Pn	03 25 05.7	0.0
PTPK	Patty Peak	5.03	68		Pn	03 25 05.4	-0.3
BALM	Baldy	5.05	70		Pn	03 25 06.2	+0.2
BALM	Baldy	5.05	70	IAML		03 26 48.9	
	comp=N,23nm,1.3s						
NEA2	Nenana	5.14	15	P	Pn	03 25 07.3	+0.2
	baz=198,SNR=10.0						
NEA2	Nenana	5.14	15		Pn	03 25 07.4	+0.2
MESA	MESA	5.15	80		Pn	03 25 07.9	+0.5
WRH	Wood River Hil	5.18	20		Pn	03 25 07.3	-0.3
WRH	Wood River Hil	5.18	20	IAML		03 26 36.3	
	comp=E,23nm,1.0s						
HDA	Harding Lake	5.34	25	P	Pn	03 25 10.3	+0.4
	baz=210						
HDA	Harding Lake	5.34	25		Pn	03 25 09.9	0.0
HDA	Harding Lake	5.34	25	IAML		03 26 11.6	
	comp=N,42nm,0.5s						
CCB	Clear Creek Bu	5.39	20		Pn	03 25 10.7	+0.3
MLY	Manley	5.42	6	P	Pn	03 25 11.7	+0.7
	baz=188						
MLY	Manley	5.42	6		Pn	03 25 11.2	+0.3
PS08	TAPS Pump Stn8	5.49	25		Pn	03 25 12.2	+0.4
CTG	Chitna Glacier	5.52	72	P	Pn	03 25 13.4	+1.0
	baz=261						
CTGM	Chitina Glacie	5.52	72		Pn	03 25 12.7	+0.2
TABL	Table Mountain	5.56	77		Pn	03 25 13.4	+0.4
TCOL	CIGO, UAF Yank	5.59	19	P	Pn	03 25 13.6	+0.4
	baz=203						
TCOL	CIGO, UAF Yank	5.59	19		Pn	03 25 13.6	+0.4
COLA	College	5.59	19	P	Pn	03 25 13.6	+0.4
	baz=203						
COLA	College	5.59	19		Pn	03 25 13.3	+0.1
MDM	Murphy Dome	5.61	17		Pn	03 25 13.6	+0.1
I23K	Minto, Yukon-K	5.65	12	P	Pn	03 25 14.5	+0.5
	baz=195,SNR=5.5						
I23K	Minto, Yukon-K	5.65	12		Pn	03 25 14.2	+0.2
LOGN	Logan Glacier	5.66	73		Pn	03 25 14.4	0.0
IL31		5.67	23		Pn	03 25 14.5	+0.1
ILAR	Eielson Array	5.67	23	P	Pn	03 25 14.6	+0.2
	comp=N,1.8nm,0.3s,baz=205,slow=14,SNR=25						
ILAR				S	Sn	03 26 15.3	-2.8
	comp=N,2.9nm,0.3s,baz=208,slow=22,SNR=7.2						
ILAR	Eielson Array	5.67	23	Pn	Pn	03 25 13.8	-0.6
ILAR					Sn	03 26 18.2	+0.1
SCRK	Sand Creek	5.79	38	P	Pn	03 25 15.8	-0.3
	baz=226						
POKR	Poker Plat Res	5.88	20	P	Pn	03 25 17.3	0.0
	baz=204						
POKR	Poker Plat Res	5.88	20		Pn	03 25 17.6	+0.3
YUK2	White River	5.93	64		Pn	03 25 18.2	+0.2
IMAR	Indian Mountai	6.38	354		Pn	03 25 24.4	+0.4
PRP	Porcupine Dome	6.61	25	P	Pn	03 25 27.9	+0.6
	baz=211						
PRP	Porcupine Dome	6.61	25	Pn	Pn	03 25 27.6	+0.3
EGAK	Eagle	7.24	40	P	Pn	03 25 35.5	-0.3
	baz=230						
EGAK	Eagle	7.24	40	Pn	Pn	03 25 35.9	+0.1
FYU	Fort Yukon	7.59	21	Pn	Pn	03 25 40.6	+0.1
ANM	Nome	7.90	314	P	Pn	03 25 45.1	+0.3
	baz=122						
ANM	Nome	7.90	314	Pn	Pn	03 25 44.9	0.0
ANM					Sn	03 27 11.9	-0.7
TOLK	Toolik Lake Re	9.07	6	P	Pn	03 26 02.9	+2.0
	baz=188						
DLBC	Dease Lake	11.44	87	P	Pn	03 26 33.5	+0.4
	comp=N,0.4nm,0.3s,baz=344,slow=27,SNR=6.8						
INK	Inuvik	11.85	35	P	Pn	03 26 42.2	+3.7
	comp=N,0.1nm,0.3s,baz=234,slow=9.2,SNR=2.2						
INK	Inuvik	11.85	35		Pn	03 26 38.8	+0.3
YKA	Yellowknife Ar	18.19	65	P	Pn	03 28 00.6	+0.3
	comp=N,0.1nm,0.3s,baz=278,slow=11,SNR=9.4						
SONM	Songino Array	55.34	307	P	P	03 33 19.3	+0.1
	comp=N,0.7nm,0.5s,baz=43,slow=6.7,SNR=7.3						
SONM	Songino Array	55.34	307	P	P	03 33 19.4	+0.2
ZALV	Zalesovo Beam	57.90	324	P	P	03 33 36.7	-0.4
	comp=N,1.2nm,0.7s,baz=36,slow=5.8,SNR=4.9						
MKAR	Makanchi Array	64.96	322	P	P	03 34 23.6	-1.2
	comp=N,0.6nm,0.5s,baz=36,slow=6.1,SNR=12						
MKAR	Makanchi Array	64.96	322	P	P	03 34 23.9	-0.9

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*ARE **24** 03:33:33±4.3, 16°.43S±0°.09×72°.95W±0°.09, h60km±9km, Error ellipse: s-maj=0.0km s-min=0.0km az=133.0*

NEIC 24 03:33:35.6±1.6**, 16°.70S**±0°.08×**72°.94W**±0°.09**, h102**km±23km**, mb4.0**/3**, ML4.2**(ARE)**, Error ellipse: s-maj=13.9km s-min=10.8km az=53.0, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AP01	Chacalluta	2.98	124	Pn	Pn	03 34 21.2	+0.1
AP01				Sn	Sn	03 34 59.4	+3.2
PSGCX	Pisagua	3.93	138		Pn	03 34 34.2	+0.2
PSGCX				Sn	Sn	03 35 17.9	-1.3
MNMC	Minye Minye	3.99	128		Pn	03 34 35.0	-0.1
MNMC				Sn	Sn	03 35 19.6	-1.4
LPAZ	La Paz	4.63	86		Pn	03 34 44.7	+0.8
TA01	Diego Aracena	4.64	146	Pn	Pn	03 34 43.7	+0.1
TA01				Sn	Sn	03 35 34.3	-2.1
PATCX	Punta Patache	4.87	148	Pn	Pn	03 34 46.9	+0.2
PATCX				Sn	Sn	03 35 39.5	-2.4
PB08	IPOC Station P	4.96	134	Pn	Pn	03 34 48.4	+0.3
PB08				Sn	Sn	03 35 43.0	-1.5
PB01	IPOC Station P	5.41	143		Pn	03 34 54.4	+0.3
PB07	IPOC Station P	5.77	151	Pn	Pn	03 34 59.5	+0.6
PB07					Sn	03 36 02.3	-1.6
NNA	Nana	6.03	321	Pn	Pn	03 35 01.8	-0.6
PB09	IPOC Station P	6.15	146	Pn	Pn	03 35 04.3	+0.1
PB09					Sn	03 36 13.0	-0.2
PB04	IPOC Station P	6.19	155	Pn	Pn	03 35 04.6	0.0
PB04				Sn	Sn	03 36 13.2	-0.9
PB06	IPOC Station P	6.76	153	Pn	Pn	03 35 12.5	+0.1
PB06				Sn	Sn	03 36 26.1	-1.9
LVC	Limon Verde	6.99	148	Pn	Pn	03 35 17.2	+1.4
LVC				Sn	Sn	03 36 34.1	+0.1
PB10	IPOC Station P	7.13	162	Pn	Pn	03 35 18.6	+1.2
PB14	IPOC Station P	8.23	164	Pn	Pn	03 35 32.6	0.0
AC02	Maricunga	10.68	161	Pn	Pn	03 36 06.5	+0.4
CPUP	Villa Florida	17.38	126		P	03 37 31.5	-0.1
CPUP				IAmb	IAmb	03 38 31.1	
	comp=Z,15nm,1.6s						
PTGA	Pitinga	20.38	40	P	P	03 38 03.2	-1.2
PTGA				IAmb	IAmb	03 39 01.1	
	comp=Z,12nm,1.6s						
LC01	Cunco	22.13	178	P	P	03 38 24.3	+1.4
LC01				IAmb	IAmb	03 38 43.3	
	comp=Z,6.4nm,1.0s						

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*IDC **24** 03:35:04.9±1.8, 5°.26N×125°.63E, h0km, mb3.4/5, mb1 3.5/5, mb1mx3.3/42, mbtmp3.4/5, Error ellipse: s-maj=132.2km s-min=21.0km az=68.0*

*MAN **24** 03:35:13.1, 4°.99N×125°.87E, h26km, mb4.8, ML3.7, MS3.7*

ISC 24 03:35:13.2±1.3**, 4°.90N**±0°.10×**126°.0E**±0°.2**, h35**km**, n9,** σ1§**64**/10**, mb3.5**/5**, 1C, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	1.22	348	eP	Pn	03 35 32.6	-1.2
DDMP				eS	Sn	03 35 47.8	-1.3
SKMP	Bagumbayan, Su	2.14	319	eP	Pn	03 35 46.2	-0.2
SKMP				eS	Sn	03 36 10.9	-0.9
KCP	Kidapawan	2.27	338	⇑eP	Pn	03 35 48.8	+0.5
KCP				i S	Sn	03 36 18.5	+3.5
PAGZ	Pagadian	3.89	319	eP	Pn	03 36 09.7	-0.9
FITZ	Fitzroy Crossi	22.86	181	P	P	03 40 14.4	+0.8
	1.3nm,0.8s,baz=342,slow=6.4,SNR=1.7						
WRA	Warramunga Arr	26.03	162	P	P	03 40 44.2	+0.9
	0.2nm,0.4s,baz=340,slow=10,SNR=7.1						
ASAR	Alice Springs	29.43	165	P	P	03 41 13.4	-0.4
	0.2nm,0.6s,baz=340,slow=6.9,SNR=4.3						
MKAR	Makanchi Array	56.16	325	P	P	03 44 42.3	-7.2
	0.2nm,0.3s,baz=119,slow=6.9,SNR=8.1						
KURBB	Kurchatov Arra	60.34	327	P	P	03 45 13.3	-5.3
	0.2nm,0.4s,baz=130,slow=5.6,SNR=2.9						

IDC 24 03:57:35.1±10.0**, 7°.40S**×**154°.82E, h56**km±76km**, mb3.0**/3**, mb1 3.4**/4**, mb1mx3.1**/35**, mbtmp3.5**/4**, ML2.3**/1**, Error ellipse: s-maj=75.5km s-min=50.2km az=109.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	7.84	255	P	Pn	03 59 26.6	+0.1
	2.5nm,0.3s,baz=45,slow=5.7,SNR=2.2						
PMG				S	Sn	04 00 55.9	+2.0
	2.9nm,0.3s,baz=53,slow=21,SNR=3.2						
WRA	Warramunga Arr	23.45	236	P	P	04 02 38.0	-1.8
	0.5nm,0.8s,baz=59,slow=9.4,SNR=3.5						
ASAR	Alice Springs	25.78	229	P	P	04 03 01.8	+0.8
	0.2nm,0.6s,baz=54,slow=9.4,SNR=1.6						
MKAR	Makanchi Array	83.59	319	P	P	04 09 57.9	+0.3
	0.2nm,0.6s,baz=94,slow=5.8,SNR=3.9						
TORD	Torodi Ar. Bea	152.96	284	PKPbc	PKPbc	04 17 27.3	0.0
	0.6nm,0.8s,baz=66,slow=4.9,SNR=2.6						

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*IDC **24** 04:02:15.4±2.7, 33°.18N×75°.09E, h0km, mb3.5/7, mb1 3.7/8, mb1mx3.4/41, mbtmp3.5/8, ML3.1/1, Error ellipse: s-maj=61.9km s-min=35.1km az=140.0*

ISC 24 04:02:21.7±2.4**, 33°.4N**±0°.3×**75°.1E**±0°.3**, h35**km**, n8,** σ1§**52**/8**, mb3.5**/7**, Eastern Kashmir**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	14.46	20	Pn	Pn	04 05 42.3	-1.4
	0.1nm,0.3s,baz=200,slow=10,SNR=4.5						
AKTO	Aktyubinsk	21.16	329	P	P	04 07 02.4	-1.2
	0.9nm,0.6s,baz=129,slow=15,SNR=3.0						
ZALV	Zalesovo Beam	21.68	16	P	P	04 07 09.7	+0.6
	0.8nm,0.4s,baz=195,slow=10,SNR=5.5						
ARCES	ARCESS Array B	45.29	338	P	P	04 10 36.2	+0.7
	2.8nm,0.8s,baz=108,slow=8.6,SNR=2.4						
NOA	NORSAR Array B	48.87	325	P	P	04 11 05.6	+2.0
	1.0nm,0.7s,baz=104,slow=6.8,SNR=3.7						
TORD	Torodi Ar. Bea	69.11	272	P	P	04 13 22.9	-1.7
	0.4nm,0.5s,baz=48,slow=5.7,SNR=2.5						
ILAR	Eielson Array	76.79	17	P	P	04 14 09.9	+0.6
	0.1nm,0.5s,baz=319,slow=7.1,SNR=4.5						
YKA	Yellowknife Ar	84.13	5	P	P	04 14 48.9	+0.3
	0.2nm,0.7s,baz=354,slow=5.1,SNR=5.1						

KRNET 24 04:03:49.5±0.1**, 40°.14N**×**73°.09E, h11**km**, mb2.0, 8C-4D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	0.34	112	⇑iP	Pg	04 03 56.5	+0.1
	baz=12						
SFK				⇑iS	Sg	04 04 01.0	-0.1
	baz=12						
ARSB	Arslanbob	1.18	356	⇓iP	Pg	04 04 12.3	+0.1
	baz=56						
ARSB				⇓iS	Sn	04 04 28.2	-0.1
	baz=56						
BTK	Batken	1.74	268	⇑iP	Pb	04 04 22.0	+0.5
	baz=68						
BTK				⇑iS	Sg	04 04 45.7	+0.1
	baz=68						
AML	Almayashu	2.04	13	⇑iP	Pb	04 04 27.5	+0.7
	baz=13						
AML				⇑iS	Sg	04 04 54.9	-0.1
	baz=13						
MNAS	Manas	2.38	350	⇓iP	Pb	04 04 32.0	-0.5
	baz=50						
MNAS				⇓iS	Sb	04 05 03.3	+1.3
	baz=50						
EKS2	Erkin-Say	2.57	11	⇑iP	Pb	04 04 34.5	-1.1
	baz=11						
EKS2				⇑iS	Sb	04 05 08.6	+1.3
	baz=11						

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*IDC **24** 04:23:32.1±0.9, 5°.75S×149°.78E, h90km±9km, mb3.7/12, mb1 3.8/13, mb1mx3.7/28, mbtmp4.0/13, MS3.9/1, Ms1 3.9/1, ms1mx2.9/36, Error ellipse: s-maj=21.3km s-min=11.2km az=115.0*

*NEIC **24** 04:23:33.2±1.4, 5°.9S±0°.1×149°.8E±0°.1, h103km±12km, mb4.1/9, Error ellipse: s-maj=22.8km s-min=9.2km az=138.0*

ISC 24 04:23:32.9±0.6**, 5°.79S**±0°.07×**149°.79E**±0°.10**, h100**km**, n28,** σ1§**17**/33**, mb3.7**/11**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	2.85	56	Pn	Pn	04 24 17.3	+0.6
PMG	Port Moresby	4.44	216	P	Pn	04 24 38.8	+0.7
	7.9nm,0.3s,baz=59,slow=5.2,SNR=6.8						
PMG				S	Sn	04 25 28.6	-0.1
	28nm,0.3s,baz=338,slow=18,SNR=15						
PMG	Port Moresby	4.44	216		Pn	04 24 37.2	-0.9
PMG					Sn	04 25 28.2	-0.4
EIDS	Eidsvold	19.51	176	P	P	04 27 50.8	-1.5
EIDS				IAmb	IAmb	04 28 06.6	
	comp=Z,18nm,0.7s						
WB0	Warramunga Arr	20.43	226	P	P	04 28 03.1	+0.7
WB0				IAmb	IAmb	04 28 07.8	
	comp=Z,5.6nm,1.0s						
WR0	Warramunga Arr	20.45	225	P	P	04 28 02.9	+0.3
WRAB	Tennant Creek	20.57	225	P	P	04 28 03.8	-0.1
WB2	Warramunga Arr	20.57	225	P	P	04 28 03.6	-0.3
WB2				IAmb	IAmb	04 28 23.9	
	comp=Z,3.1nm,0.8s						
WRA	Warramunga Arr	20.58	225	P	P	04 28 04.0	+0.1
	comp=Z,1.7nm,0.4s,baz=50,slow=10,SNR=27						
WRA				pP	pP	04 28 22.5	+0.7
	comp=Z,2.0nm,0.6s,baz=50,slow=11,SNR=6.2						
WRA	Warramunga Arr	20.58	225	P	P	04 28 04.6	+0.6
DZM	Mont Dzumac	22.83	137	P	P	04 28 28.2	+0.4
	comp=Z,6.7nm,0.7s,baz=260,slow=6.3,SNR=5.5						
DZM				pP	pP	04 28 47.7	+1.6
	comp=Z,8.7nm,0.9s,baz=331,slow=20,SNR=2.0						
DZM	Mont Dzumac	22.83	137	P	P	04 28 26.9	-0.9
DZM				IAmb	IAmb	04 28 29.7	
	comp=Z,9.9nm,0.9s						
ASAR	Alice Springs	23.45	219	P	P	04 28 33.8	+0.2
	comp=Z,0.8nm,0.4s,baz=51,slow=8.9,SNR=17						
ASAR				pP	pP	04 28 53.6	+0.8
	comp=Z,0.8nm,0.6s,baz=52,slow=11,SNR=4.8						
FITZ	Fitzroy Crossi	26.56	240	P	P	04 29 01.6	-0.1
	comp=Z,4.1nm,0.7s,baz=55,slow=7.1,SNR=27						
STKA	Stephens Creek	27.06	195	P	P	04 29 07.3	+1.2
	comp=Z,0.8nm,0.3s,baz=3.5,slow=14,SNR=3.9						
GIRL	Giralia	38.17	240	P	P	04 30 43.7	+0.8
JNU	Nakatsue	42.66	336	P	P	04 31 21.2	+1.4
	comp=Z,3.6nm,0.7s,baz=162,slow=3.2,SNR=1.6						
JTM	Tenmabayashi	47.04	351	P	P	04 31 55.4	+1.1
KSRS	Korea Array	47.61	336	P	P	04 31 60.0	+1.1
	comp=Z,2.3nm,0.5s,baz=150,slow=7.8,SNR=9.4						
KSAR	Wonju Array Be	47.62	336	P	P	04 31 59.2	+0.3
RAR	Rarotonga	51.15	113	LR	LR	04 51 55.2	
	comp=Z,127nm,20.5s,baz=234,slow=33						
PETK	Petropavlovsk-	59.06	6	P	P	04 33 23.7	+1.4
	comp=Z,3.2nm,0.9s,baz=167,slow=7.3,SNR=6.1						
SONM	Songino Array	65.60	329	P	P	04 34 05.6	-0.7
	comp=Z,0.5nm,0.5s,baz=142,slow=4.6,SNR=3.1						
SONM	Songino Array	65.60	329	P	P	04 34 05.0	-1.3
MKAR	Makanchi Array	79.12	320	P	P	04 35 25.5	-1.1
	comp=Z,0.1nm,0.3s,baz=94,slow=9.8,SNR=5.0						
ZALV	Zalesovo Beam	80.33	327	P	P	04 35 32.5	-0.4
	comp=Z,0.5nm,0.5s,baz=87,slow=7.6,SNR=2.3						
ILAR	Eielson Array	84.21	23	P	P	04 35 51.4	-1.6
	comp=Z,0.4nm,0.8s,baz=258,slow=4.7,SNR=4.6						
ILAR				pP	pP	04 36 15.0	-4.1
	comp=Z,0.2nm,0.6s,baz=248,slow=4.7,SNR=1.8						
TORD	Torodi Ar. Bea	147.72	285	PKPbc	PKPbc	04 43 07.3	+0.2
	comp=Z,0.4nm,0.6s,baz=81,slow=2.3,SNR=1.9						

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*UCR **24** 04:25:01.4±1.9, 8°.28N×82°.79W, h5km, MW3.8*

*UPA **24** 04:25:02.1±1.0, 8°.33N×82°.80W, h16km±2km, MW3.7*

ISC 24 04:25:01.8±1.1**, 8°.32N**±0°.04×**82°.78W**±0°.03**, h15**km±8km**, n25,** σ1§**17**/43**, 7D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CCOL	Caracol de Cor	0.21	294	eP	Pb	04 25 07.4	0.0
CCOL				eS	Sg	04 25 12.6	+2.6
CDITO	Canoas	0.27	339	⇓iP	Pb	04 25 08.4	0.0
CDITO				eS	Sb	04 25 12.6	-0.1
BCO2	Palmira	0.47	32	⇓iP	Pb	04 25 12.1	+0.3
BCO2				eS	Sb	04 25 19.9	+1.4
BRU2	Volcan	0.48	10	⇓iP	Pb	04 25 12.2	+0.2
BRU2				i S	Sb	04 25 20.8	+1.9
EDSV	San Vito	0.53	339	⇓iP	Pb	04 25 12.9	0.0
EDSV				eS	Sb	04 25 21.5	+1.0
PIRO	Carate, Puerto	0.56	279	eP	Pg	04 25 11.9	-1.0
PIRO				eS	Sb	04 25 20.5	-0.6
PIRO	Carate, Puerto	0.56	279	eP	Pg	04 25 11.7	-1.2
LPLA	Las Palmas La	0.74	342	⇓eP	Pg	04 25 15.7	-0.6
LPLA				eS	Sb	04 25 27.5	+1.0
CHGR2	Aguacate	0.88	45	eP	Pg	04 25 17.8	-1.1
CHGR2				eS	Sg	04 25 30.0	-0.3
EDPN	Palmar Norte	0.93	313	eP	Pg	04 25 18.2	-1.6
EDPN				eS	Sg	04 25 31.8	-0.3
DRK0	Durika	1.05	334	i P	Pg	04 25 20.6	-1.5
DRK0				eS	Sg	04 25 35.5	-0.4
CNI2	El Empalme, Bo	1.14	15	⇓iP	Pb	04 25 22.4	-0.8
CNI2				eS	Sb	04 25 36.5	-1.3
EDLM	Las Mercedes	1.25	320	eP	Pn	04 25 23.4	-1.4
EDLM				eS	Sg	04 25 42.0	-0.2
PEZE	Perez Zeledon,	1.38	320	eP	Pn	04 25 26.0	-0.6
EDDO	Dominical	1.42	311	eP	Pn	04 25 27.4	+0.4

EDDO				eS	Sb	04 25 46.7	+0.8
GMAL	Guarumal, Vera	1.62	110	⇓eP	Pn	04 25 29.6	-0.3
GMAL				eS	Sn	04 25 50.1	-0.4
GMAL	Guarumal, Vera	1.62	110	eP	Pn	04 25 28.4	-1.4
CACAO	El Cacao, Vera	2.13	117	eP	Pn	04 25 38.0	+1.3
CACAO				eS	Sn	04 26 03.5	+0.6
HDC3	Heredia 3	2.13	322	eP	Pn	04 25 38.2	+1.3
HDC	Heredia	2.13	322	eP	Pn	04 25 38.1	+1.2
HDC				eS	Sb	04 26 06.6	+0.1
AZU	Azuero	2.53	102	eP	Pn	04 25 43.1	+0.8
AZU				eS	Sn	04 26 13.8	+0.9
ARE1	Arenal 1	2.87	318	eP	Pn	04 25 49.3	+2.4
JTS	Las Juntas de	2.91	313	eP	Pn	04 25 49.6	+2.1
JTS				eS	Sn	04 26 21.1	-1.1
INDI	Punta indio, G	3.10	300	eP	Pn	04 25 49.8	-0.4
HZTE	Horizontes, Gu	3.66	311	eP	Pn	04 25 59.9	+2.0

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*VAO **24** 04:28:39.9±1.7, 28°.07S×72°.43W, h10^{km}, mb4.4*

*SJA **24** 04:28:50.4±0.6, 27°.71S×71°.52W, h52^{km}±5^{km}, ML4.5, MW4.3*

*NEIC **24** 04:28:51.1±1.4, 27°.81S±0°.04×71°.45W±0°.04, h49^{km}±7^{km}, mb4.4/9, ML4.9(GUC), Error ellipse: s-maj=7.0km s-min=2.5km az=47.0*

*GUC **24** 04:28:54.5±0.7, 27°.93S×71°.17W, h58^{km}±3^{km}, ML4.9*

*IDC **24** 04:28:55.3±1.1, 27°.73S×71°.07W, h62^{km}±6^{km}, mb4.1/4, mb1 4.1/7, mb1mx3.8/32, mbtmp4.3/7, MS3.9/4, Ms1 3.9/4, ms1mx3.5/36, Error ellipse: s-maj=32.8km s-min=16.7km az=110.0*

ISC 24 04:28:51.0±0.6**, 27°.78S**±0°.03×**71°.56W**±0°.06**, h48**^{km}±4^{km}**, n138, σ1^{s}.56**/162**, mb4.4**/8**, MS3.8**/4**, 7C-4D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AC04	Llanos de Chal	0.60	135	⇓iP	Pn	04 29 03.7	+0.4
AC04				i S	Sn	04 29 10.8	-1.5
AC04				IAML		04 29 11.8	
	comp=E,171μm,0.2s						
AC04	Llanos de Chal	0.60	135	Pn	Pn	04 29 03.4	+0.1
AC04				Sn	Sn	04 29 10.6	-1.6
GO03	Copiap	1.19	81	⇓iP	Pn	04 29 11.8	+0.5
GO03				i S	Sn	04 29 24.1	-2.2
GO03				IAML		04 29 26.0	
	comp=E,31μm,0.2s						
GO03	Copiap	1.19	81		Pn	04 29 11.6	+0.3
GO03				Sn	Sn	04 29 23.9	-2.4
GO03	Copiap	1.19	81	eP	Pn	04 29 11.6	+0.3
GO03				eS	Sn	04 29 27.0	+0.7
LCO	Las Campanas	1.44	149	Pn	Pn	04 29 15.2	+0.4
LCO				Sn	Sn	04 29 31.1	-1.6
AC05	El Transito	1.54	133	⇑iP	Pn	04 29 16.7	+0.5
AC05				i S	Sn	04 29 31.5	-3.6
AC05	El Transito	1.54	133		Pn	04 29 16.1	-0.1
AC05				Sn	Sn	04 29 33.2	-1.9
AC01	Pan de Azucar	1.84	28	IAML		04 29 43.4	
	comp=E,9μm,0.3s						
AC01	Pan de Azucar	1.84	28	Pn	Pn	04 29 21.2	+1.1
AC01				Sn	Sn	04 29 42.1	-0.2
AC02	Maricunga	2.36	67	⇓iP	Pn	04 29 29.4	+1.7
AC02				eS	Sn	04 29 55.3	-0.4
AC02				IAML		04 29 57.3	
	comp=N,12μm,0.4s						
AC02	Maricunga	2.36	67		Pn	04 29 28.8	+1.1
GO04	Tololo Observa	2.47	165	⇑iP	Pn	04 29 30.2	+1.2
GO04				i S	Sn	04 29 58.8	+0.7
GO04				IAML		04 30 05.7	
	comp=E,18μm,0.4s						
GO04	Tololo Observa	2.47	165		Pn	04 29 29.9	+0.9
GO04				Sn	Sn	04 29 56.9	-1.2
GO04	Tololo Observa	2.47	165	eP	Pn	04 29 30.2	+1.2
GO04				eS	Sn	04 30 01.1	+3.0
CO01	Juntas del Tor	2.53	150	⇑iP	Pn	04 29 31.4	+1.5
CO01				i S	Sn	04 29 58.6	-1.0
CO01				IAML		04 30 02.2	
	comp=N,4μm,0.3s						
CO01	Juntas del Tor	2.53	150		Pn	04 29 29.5	-0.4
CO01				Sn	Sn	04 29 58.5	-1.1
AROD	Rodeo	3.00	143	eP	Pn	04 29 39.2	+3.0
AROD				eS	Sn	04 30 14.5	+3.4
VCA	Vinchina	3.10	109	eP	Pn	04 29 24.2	-13
VCA				eS	Sn	04 29 59.1	-14
VCA				IAML		04 30 23.3	
	comp=Z,1μm,0.2s						
CO03	El Pedregal	3.14	166	⇑iP	Pn	04 29 39.1	+1.1
CO03				IAML		04 30 31.6	
	comp=E,4μm,0.1s						
CO03	El Pedregal	3.14	166		Pn	04 29 38.6	+0.6
GO02	Mina Guanaco	3.15	34	⇓iP	Pn	04 29 39.8	+1.4
GO02				IAML		04 30 17.7	
	comp=N,7μm,0.4s						
GO02	Mina Guanaco	3.15	34		Pn	04 29 39.8	+1.4
ACDV	Cuesta del Vie	3.20	139	eP	Pn	04 29 42.1	+3.2
ACDV				IAML		04 30 26.2	
	comp=Z,853nm,0.6s						
PB14	IPOC Station P	3.31	18	⇑iP	Pn	04 29 41.1	+0.5
PB14				eS	Sn	04 30 17.5	-1.4
PB14				IAML		04 30 19.9	
	comp=E,3μm,0.3s						
PB14	IPOC Station P	3.31	18		Pn	04 29 41.2	+0.6
PB14	IPOC Station P	3.31	18	eP	Pn	04 29 40.3	-0.3
PB14				eS	Sn	04 30 18.9	+0.1
PB14				IAML		04 30 25.9	
	comp=Z,1μm,0.5s						
CO02	Combarbal	3.44	172	⇑iP	Pn	04 29 43.1	+0.9
CO02	Combarbal	3.44	172		Pn	04 29 43.0	+0.8
ACCO	Cerro Coronel	3.54	143	eP	Pn	04 29 47.0	+3.2
ACCO				IAML		04 30 47.8	
	comp=Z,991nm,0.7s						
PB10	IPOC Station P	4.35	12	⇑iP	Pn	04 29 54.4	-0.1
PB10				IAML		04 30 44.1	
	comp=N,829nm,0.6s						
PB10	IPOC Station P	4.35	12	Pn	Pn	04 29 54.5	-0.1
PB10	IPOC Station P	4.35	12	eP	Pn	04 29 54.5	-0.1
PB10				eS	Sn	04 30 42.6	-1.4
PB10				IAML		04 30 43.2	
	comp=Z,437nm,0.4s						
ACLC	CERRO LA CRUZ	4.37	113	eP	Pn	04 29 57.3	+2.3
ACLC				IAML		04 31 08.8	
	comp=Z,630nm,0.9s						
RTLL	Cerro Villicun	4.44	144	eP	Pn	04 29 58.3	+2.5
RTLL				eS	Sn	04 30 48.4	+2.2
RTLL				IAML		04 31 07.5	
	comp=Z,691nm,0.5s						
RTLS	Leoncito	4.46	154	eP	Pn	04 29 59.8	+3.5
RTLS				IAML		04 31 08.4	
	comp=Z,574nm,1.1s						
ZON	Zonda	4.51	147	eP	Pn	04 29 59.2	+2.5
ZON				IAML		04 31 09.7	
	comp=Z,411nm,0.9s						
SJA	San Juan	4.55	146	eP	Pn	04 30 00.3	+2.9
SJA				IAML		04 31 11.1	
	comp=Z,384nm,0.7s						
AVFE	Valle Fertil	4.59	130	eP	Pn	04 29 59.5	+1.6
AVFE				eS	Sn	04 30 49.0	-1.0
AUSP	Uspallata	4.81	157	eP	Pn	04 30 04.8	+3.6
AUSP				eS	Sn	04 31 17.2	+22
RTCV	Cerro Valdivia	4.84	148	eP	Pn	04 30 03.9	+2.6
RTCV				IAML		04 31 20.6	
	comp=Z,251nm,0.9s						
PB15	IPOC Station P	4.93	23	eP	Pn	04 30 04.0	+1.3
PB15	IPOC Station P	4.93	23	Pn	Pn	04 30 02.1	-0.7
PB15	IPOC Station P	4.93	23	eP	Pn	04 30 04.3	+1.5
PB15				eS	Sn	04 31 00.7	+2.1
VA03	San Esteban	5.04	170		Pn	04 30 03.8	-0.3
FSA	Cafayete	5.25	73	eP	Pn	04 30 09.5	+2.4
PB06	IPOC Station P	5.37	20		Pn	04 30 08.0	-0.7
PB06	IPOC Station P	5.37	20	eP	Pn	04 30 09.0	+0.3
PB06				eS	Sn	04 31 10.1	+0.8
PB06				IAML		04 31 52.1	
	comp=Z,438nm,0.5s						
PEL	Peldehue	5.39	172		Pn	04 30 08.6	-0.3
PEL	Peldehue	5.39	172	eP	Pn	04 30 10.2	+1.3
ACHE	Chepes	5.43	129	eP	Pn	04 30 11.1	+1.5
ACHE				eS	Sn	04 31 09.7	-1.2
MT02	Curacav	5.47	176		Pn	04 30 09.9	0.0
PB04	IPOC Station P	5.58	14		Pn	04 30 11.3	-0.3
PB04	IPOC Station P	5.58	14	eP	Pn	04 30 11.2	-0.3
PB04				eS	Sn	04 31 12.8	-1.6
PB04				IAML		04 31 16.7	
	comp=Z,412nm,0.6s						
AHML	Horco Molle	5.63	81	eP	Pn	04 30 13.7	+1.6
AHML				IAML		04 31 48.5	
	comp=Z,68nm,0.8s						
MT05	Renca	5.63	173	Pn	Pn	04 30 13.0	+0.8
LVC	Limon Verde	5.68	26	P	Pn	04 30 14.1	+0.8
	comp=Z,23nm,0.3s,baz=176,slow=7.7,SNR=519						
LVC				S	Sn	04 31 16.6	-0.7
	comp=Z,54nm,0.3s,baz=187,slow=22,SNR=9.2						
LVC	Limon Verde	5.68	26	Pn	Pn	04 30 14.2	+1.0
LVC	Limon Verde	5.68	26	eP	Pn	04 30 14.0	+0.8
LVC				IAML		04 31 53.3	
	comp=Z,272nm,0.6s						
LVC	Limon Verde	5.68	26	eP	Pn	04 30 13.9	+0.7
PB07	IPOC Station P	6.22	14		Pn	04 30 19.8	-0.6
PB07	IPOC Station P	6.22	14	eP	Pn	04 30 19.8	-0.6
PB07				eS	Sn	04 31 28.3	-2.0
SLA	San Lorenzo	6.23	62	eP	Pn	04 30 23.6	+3.0
SLA				IAML		04 31 57.0	
	comp=Z,26nm,0.9s						
PB09	IPOC Station P	6.32	20		Pn	04 30 22.5	+0.7
PB09	IPOC Station P	6.32	20	eP	Pn	04 30 22.6	+0.7
PB09				eS	Sn	04 31 32.7	-0.1
MRA	San Martin	6.85	134	eP	Pn	04 30 29.2	+0.3
MRA				eS	Sn	04 31 41.8	-3.8
PB01	IPOC Station P	6.97	16		Pn	04 30 30.1	-0.6
PB01	IPOC Station P	6.97	16	eP	Pn	04 30 30.0	-0.6
PB01				eS	Sn	04 31 45.7	-3.0
BO02	Sierra Bellavi	7.02	175	Pn	Pn	04 30 31.2	-0.1
PATCX	Punta Patache	7.05	11	Pn	Pn	04 30 30.4	-1.3
TA01	Diego Aracena	7.29	10	Pn	Pn	04 30 33.7	-1.3
RFA	San Rafael	7.45	160	eP	Pn	04 30 37.7	+0.6
PB08	IPOC Station P	7.92	17	Pn	Pn	04 30 43.5	-0.5
PB08	IPOC Station P	7.92	17	eP	Pn	04 30 43.6	-0.3
PSGCX	Pisagua	8.26	9		Pn	04 30 46.8	-1.5
PSGCX	Pisagua	8.26	9	eP	Pn	04 30 46.7	-1.6
H03N1	Juan Fernandez	8.48	227	T	T	04 39 56.2	
	baz=54,slow=72,SNR=653						
H03N2	Juan Fernandez	8.49	227	T	T	04 40 09.2	
	baz=54,slow=72,SNR=650						
H03N3	Juan Fernandez	8.50	227	T	T	04 39 55.3	
	baz=54,slow=72,SNR=591						
VA04	Juan Fernndez	8.56	225	Pn	Pn	04 30 53.1	+0.9
MNMC	Minye Minye	8.80	12		Pn	04 30 54.5	-1.4
BI02	San Fabin de	8.86	179	Pn	Pn	04 30 55.8	-0.7
BI03	Tigo	9.12	187		Pn	04 30 58.8	-1.1
LC01	Cunco	11.09	181	Pn	Pn	04 31 25.2	-1.7
LPAZ	La Paz	11.87	16	P	Pn	04 31 39.0	+0.7
	comp=Z,1.1nm,0.3s,baz=200,slow=4.5,SNR=11						
LPAZ	La Paz	11.87	16	Pn	Pn	04 31 37.3	-0.9
CPUP	Villa Florida	12.76	87	P	Pn	04 31 46.3	-3.5
	comp=Z,0.1nm,0.3s,baz=252,slow=15,SNR=3.4						
CPUP	Villa Florida	12.76	87	Pn	Pn	04 31 48.8	-1.0
PLCA	Paso Flores	12.94	177	P	Pn	04 31 51.2	-1.0
	comp=Z,0.3nm,0.3s,baz=3.0,slow=12,SNR=14						
ITQB	Itaqui	13.24	102	eP	Pn	04 31 58.2	+1.9
SIV	San Ignacio	15.23	42	P	Pn	04 32 16.9	-6.2
	comp=Z,2.7nm,0.3s,baz=236,slow=12,SNR=30						
CPSB	Cacapava Do Su	16.05	104	eP	P	04 32 35.6	-0.6
PLTB	Pedras Altas	16.08	109	eP	P	04 32 35.2	-1.3
ITAB	Concordia	17.25	93	eP	P	04 32 50.1	+0.7
PTGB	Pitanga	17.75	85	eP	P	04 32 56.3	+1.2
VILB	Vilhena	18.18	38	eP	Pn	04 33 01.1	+1.1
ETMB	Extrema	18.57	17	eP	P	04 33 01.4	-2.7
PCMB	Pacaembu	19.43	76	eP	Pn	04 33 14.5	-0.5
SAML	Samuel	20.34	24	P	P	04 33 22.7	-0.6
ARAG	Araguaiana, MT	21.89	61	eP	P	04 33 40.3	+0.3
BB19B	Bebedouro	21.99	77	eP	P	04 33 41.5	+0.3
CLDB	Colider	22.41	44	eP	P	04 33 47.4	+1.7
VAO	Valinhos	22.70	83	eP	P	04 33 49.1	+0.2
SNDB	Serra Nova Dou	24.65	54	eP	P	04 34 08.8	+1.5
BDFB	Brasilia	24.93	66	P	P	04 34 08.5	-1.5
	comp=Z,2.7nm,0.5s,baz=232,slow=11,SNR=6.5						
BDFB				LR	LR	04 45 24.5	
	comp=Z,232nm,20.4s,baz=274,slow=40						
BDFB	Brasilia	24.93	66	P	P	04 34 09.1	-1.0
BDFB				IAmb	IAmb	04 34 13.3	
	comp=Z,15nm,1.4s						
NPGB	Novo Progresso	25.71	40	eP	P	04 34 17.8	+0.8
PEXB	Peixe	26.78	59	eP	P	04 34 27.6	+1.0
JANB	Januaria	28.27	69	eP	P	04 34 40.6	+0.6
SMTB	Santa Maria do	29.42	55	eP	P	04 34 51.6	+1.4
HOPE	Hope Point	36.79	146	P	P	04 35 53.5	-0.4
JTS	Las Juntas de	40.01	339	LR	LR	04 52 43.4	
	comp=Z,89nm,18.4s,baz=176,slow=36						
SJG	San Juan	45.92	7	LR	LR	04 55 33.7	
	comp=Z,120nm,18.6s,baz=142,slow=35						
VNA3	Neumayer Olymp	54.98	160	P	P	04 38 18.3	+1.4
VNA2	Neumayer--Watz	55.61	159	P	P	04 38 22.8	+1.3
	baz=289,slow=8.2						
SNAA	Sanae	57.21	159	P	P	04 38 33.9	+1.0
SNAA	Sanae	57.21	159	P	P	04 38 32.9	0.0
H06E1	SOCORRO T-PHAS	59.96	316	T	T	05 44 12.1	
	SNR=91						
QSPA	South Pole Qui	62.43	180	P	P	04 39 09.2	+0.2
TXAR	Lajitas Array	64.58	329	pP	pP	04 39 45.4	+10
	comp=Z,0.8nm,0.7s,baz=143,slow=10,SNR=4.0						
LIC	Lamto	72.49	73	eP	P	04 40 13.5	+0.4
	comp=Z,22nm,1.1s						
TIC	Toumodi	72.72	73	eP	P	04 40 15.4	+0.9
KIC	Kosan Boka	72.80	73	eP	P	04 40 15.8	+0.8
	comp=Z,6.8nm,0.5s						
DBIC	Dimbokro	72.87	73	P	P	04 40 16.3	+1.0
	comp=Z,4.5nm,0.5s,baz=216,slow=7.1,SNR=12						
DBIC	Dimbokro	72.87	73	P	P	04 40 14.5	-0.8
DBIC				IAmb	IAmb	04 40 16.7	
	comp=Z,5.8nm,0.6s						
TOA0	Torodi Ar. Sit	81.73	70	P	P	04 41 04.1	-0.8
TOA0				IAmb	IAmb	04 41 19.0	
	comp=Z,3.7nm,0.9s						
TORD	Torodi Ar. Bea	81.73	70	P	P	04 41 05.8	+0.9
	comp=Z,2.0nm,0.6s,baz=268,slow=4.1,SNR=25						
TORD				pP	sP	04 41 22.8	-0.1
	comp=Z,1.9nm,0.5s,baz=264,slow=5.4,SNR=5.4						
TORD	Torodi Ar. Bea	81.73	70	P	P	04 41 04.2	-0.7
TORD				IAmb	IAmb	04 41 06.8	
	comp=Z,5.6nm,1.3s						
BOSA	Boshof	82.62	118	P	P	04 41 10.1	+0.4
	comp=Z,3.3nm,0.9s,baz=241,slow=7.0,SNR=4.2						
BOSA				pP	sP	04 41 28.4	+0.4
	comp=Z,1.5nm,0.6s,baz=242,slow=3.3,SNR=1.6						
BOSA	Boshof	82.62	118	P	P	04 41 08.8	-0.9
BOSA				IAmb	IAmb	04 41 15.7	
	comp=Z,2.2nm,1.1s						
RAO	Raoul Island	89.58	237	LR	LR	05 12 33.0	
	comp=Z,206nm,20.9s,baz=127,slow=29						
ASAR	Alice Springs	123.25	208	PKP	PKiKP	04 47 44.8	+1.3
	comp=Z,0.3nm,0.5s,baz=111,slow=1.4,SNR=4.3						
ASAR				pPKP	sPKPdf	04 48 04.5	+3.0
	comp=Z,0.2nm,0.4s,baz=120,slow=1.6,SNR=1.8						
WRA	Warramunga Arr	126.34	211	PKP	PKiKP	04 47 51.1	+1.5
	comp=Z,0.5nm,0.5s,baz=157,slow=1.8,SNR=3.2						
WRA				pPKP	sPKPdf	04 48 09.2	+2.1
	comp=Z,0.3nm,0.6s,baz=156,slow=1.7,SNR=1.9						
ZALV	Zalesovo Beam	148.63	27	PKPbc	PKPab	04 48 35.0	-1.1
	comp=Z,3.8nm,0.8s,baz=310,slow=3.7,SNR=16						
ZALV	Zalesovo Beam	148.63	27	PKPdf	PKPdf	04 48 29.0	+0.4
KSH	Kashi	150.70	58	PKPbc	PKiKP	04 48 40.8	+2.0
MKAR	Makanchi Array	152.05	40	PKPbc	PKiKP	04 48 42.8	+1.6
	comp=Z,1.8nm,0.7s,baz=327,slow=2.0,SNR=13						
MKAR	Makanchi Array	152.05	40	PKPbc	PKiKP	04 48 40.9	-0.3

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*IDC **24** 04:29:57.8±0.5, 6°.81N×72°.97W, h156^{km}±4^{km}, mb3.9/9, mb1 4.2/18, mb1mx4.0/39, mbtmp4.5/18, Error ellipse: s-maj=9.9km s-min=7.0km az=115.0*

*NEIC **24** 04:29:57.5±1.3, 6°.77N±0°.06×73°.01W±0°.08, h160^{km}±2^{km}, Error ellipse: s-maj=12.5km s-min=7.6km az=114.0*

*CAR **24** 04:29:57.7±0.9, 6°.80N±0°.06×73°.17W±0°.07, h166^{km}±5^{km}, Error ellipse: s-maj=11.1km s-min=8.2km az=121.0*

*RSNC **24** 04:29:58.1±1.3, 6°.84N×73°.12W, h153^{km}±5^{km}, ML4.5, Mw4.7, Fault plane solution: NP1:ϕ_s132.00000°, δ72.00000°, λ-42.00000°.*

*VAO **24** 04:29:58.7±0.5, 6°.73N×73°.05W, h157^{km}±7^{km}, mb4.6*

ISC 24 04:29:58.0±0.4**, 6°.84N**±0°.03×**73°.10W**±0°.03**, h158**^{km}±4^{km}**, n370, σ1^{s}.83**/411**, mb4.3**/65**, 12C-7D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.26	198	eP	Pn	04 30 18.9	-0.8
BARC				eS	Sn	04 30 34.2	-2.0
BARC				i		04 30 34.7	
	comp=Z,5μm,0.5s						
PAMC	Pamplona, Colo	0.64	39	⇑iP	Pn	04 30 21.7	+0.1
PAMC				eS	Sn	04 30 38.6	-0.9
BRRC	Barranca, Sant	0.66	294	⇓iP	Pn	04 30 20.7	-0.4
BRRC				eS	Sn	04 30 37.4	-1.3
BRRC				i		04 30 41.0	
	comp=Z,5μm,0.5s						
RUSC	La Rusia	0.94	179	⇓iP	Pn	04 30 22.9	-0.7
RUSC				eS	Sn	04 30 41.7	-1.6
RUSC				i		04 30 43.4	
	comp=Z,5μm,0.3s						
TAMC	Tame, Arauca	1.36	107	⇓iP	Pn	04 30 27.3	+0.5
TAMC				eS	Sn	04 30 49.0	+0.1
TAMC				i		04 30 49.7	
	comp=Z,2μm,0.5s						
PTBC	PUERTO BERRIO,	1.38	258	⇓iP	Pn	04 30 25.4	-1.5
PTBC				eS	Sn	04 30 47.7	-1.4
PTBC				i		04 30 49.1	
	comp=Z,5μm,0.4s						
OCAC	Ocana	1.41	351	⇑iP	Pn	04 30 26.8	-0.6
OCAC				eS	Sn	04 30 48.5	-1.6
OCAC				i		04 30 54.7	
	comp=Z,5μm,0.6s						
SPBC	San Pablo de B	1.52	219	⇓iP	Pn	04 30 27.9	-0.7
SPBC				eS	Sn	04 30 50.0	-2.0
SPBC				i		04 30 57.2	
	comp=Z,6μm,0.4s						
ZARC	Zaragoza, Cauc	1.86	290	⇓iP	Pn	04 30 31.2	-0.8
ZARC				eS	Sn	04 30 56.7	-1.5
ZARC				i		04 31 03.2	
	comp=Z,5μm,0.5s						
NORC	Norcasia	2.17	234	eP	Pn	04 30 34.8	-0.8
NORC				eS	Sn	04 31 03.1	-1.5
NORC				i		04 31 08.2	
	comp=Z,3μm,0.7s						
SMLC	San Martn de	2.17	334	⇑eP	Pn	04 30 34.5	-1.1
SMLC				eS	Sn	04 31 02.8	-1.9
SMLC				i		04 31 10.0	
	comp=Z,2μm,0.3s						
CHIC	Chingaza	2.28	196	⇑iP	Pn	04 30 37.2	-0.2
CHIC				eS	Sn	04 31 06.7	-1.0
CHIC				i		04 31 12.0	
	comp=Z,2μm,0.4s						
ROSC	El Rosal	2.33	211	P	Pn	04 30 38.9	+1.0
	comp=Z,717nm,0.3s,baz=137,slow=1.2,SNR=878						
ROSC				S	Sn	04 31 08.6	+0.1
	comp=Z,412nm,0.3s,baz=327,slow=20,SNR=7.3						
ROSC	El Rosal	2.33	211	Pn	Pn	04 30 38.7	+0.9
ROSC				Sn	Sn	04 31 06.6	-2.0
ROSC	El Rosal	2.33	211	eP	Pn	04 30 37.9	+0.1
ROSC				eS	Sn	04 31 08.7	+0.1
UREC	San Jos de Ur	2.58	291	eP	Pn	04 30 38.6	-1.9
UREC				eS	Sn	04 31 09.9	-3.4
GUY2C	Guyana, Caldas	2.76	235	eP	Pn	04 30 43.4	+0.2
GUY2C				eS	Sn	04 31 17.5	-0.6
GUY2C				i		04 31 29.7	
	comp=Z,3μm,0.6s						
PTGC	Puerto Gaitan,	2.80	160	eP	Pn	04 30 42.4	-0.8
PTGC				eS	Sn	04 31 15.3	-2.8
PTGC				i		04 31 18.4	
	comp=Z,3μm,0.5s						
RREF	El Recreo	2.95	229	eP	Pn	04 30 45.3	-0.4
RREF				eS	Sn	04 31 22.2	-0.3
RREF				i		04 31 31.3	
	comp=Z,3μm,0.4s						
CMAN1	Manizales, Cal	2.98	234	eP	Pn	04 30 47.6	+1.9
CMAN1				eS	Sn	04 31 27.6	+4.9
CBOC	Ciudad Bolivar	3.05	252	eP	Pn	04 30 46.3	-0.1
CBOC				eS	Sn	04 31 23.3	-0.8
CBOC				i		04 31 35.1	
	comp=Z,920nm,0.6s						
DBBC	Dabeiba	3.09	273	i P	Pn	04 30 46.5	-0.4
DBBC				eS	Sn	04 31 18.0	-6.8
TOLC	Tolima	3.15	225	eP	Pn	04 30 48.2	+0.4
TOLC				eS	Sn	04 31 26.0	-0.5
TOLC				i		04 31 34.3	
	comp=Z,3μm,0.7s						
SDV	Santo Domingo	3.18	50	P	Pn	04 30 48.3	+0.1
	comp=Z,84nm,0.3s,baz=239,slow=7.0,SNR=271						
SDV				S	Sn	04 31 24.1	-2.9
	comp=Z,255nm,0.3s,baz=213,slow=16,SNR=37						
SDV	Santo Domingo	3.18	50	Pn	Pn	04 30 47.9	-0.3
SDV				Sn	Sn	04 31 25.0	-2.0
SDV	Santo Domingo	3.18	50	⇑eP	Pn	04 30 48.3	+0.1
SDV				eS	Sn	04 31 24.4	-2.6
SDV				i		04 31 29.6	
	comp=Z,1μm,0.6s						
SDV	Santo Domingo	3.18	50	eP	Pn	04 30 48.5	+0.3
MOTC	Monteria, Cord	3.19	307	eP	Pn	04 30 45.9	-2.1
MOTC				eS	Sn	04 31 22.8	-4.1
MOTC				i		04 31 41.4	
	comp=Z,2μm,0.5s						
ARGC	Ariguani, Magd	3.21	339	eP	Pn	04 30 48.3	0.0
ARGC				eS	Sn	04 31 25.8	-1.5
ARGC				i		04 31 35.1	
	comp=Z,1μm,0.1s						
ANIL	Santa Ana	3.27	225	eP	Pn	04 30 49.6	+0.2
ANIL				eS	Sn	04 31 29.8	+0.6
ANIL				i		04 31 42.5	
	comp=Z,575nm,0.4s						
PRAC	Prado	3.58	210	⇑eP	Pn	04 30 52.2	-0.9
PRAC				eS	Sn	04 31 35.4	-0.5
PRAC				i		04 31 43.0	
	comp=Z,2μm,0.6s						
ORTC	Ortega, Tolima	3.61	216	⇑eP	Pn	04 30 53.0	-0.5
ORTC				eS	Sn	04 31 36.4	-0.3
ORTC				i		04 31 45.4	
	comp=Z,2μm,0.6s						
CVALL	Valledupar, Ce	3.65	358	eP	Pn	04 30 52.6	-1.4
CVALL				eS	Sn	04 31 32.0	-5.5
CVALL				i		04 31 41.0	
	comp=Z,538nm,0.4s						
PLMC	San Jos del P	3.70	239	⇓eP	Pn	04 30 54.6	-0.1
PLMC				eS	Sn	04 31 38.0	-0.8
PLMC				i		04 31 43.3	
	comp=Z,1μm,0.5s						
GUVC	San Jose del G	4.29	174	eP	Pn	04 31 01.1	-1.2
GUVC				eS	Sn	04 31 49.2	-3.3
GUVC				i		04 31 57.3	
	comp=Z,1μm,0.3s						
YOTC	Yotoco, Valle	4.30	229	eP	Pn	04 31 01.8	-0.7
YOTC				eS	Sn	04 31 48.3	-4.4
SOLC	Bahia Solano	4.32	262	eP	Pn	04 31 01.9	-0.8
SOLC				eS	Sn	04 31 48.2	-4.9
SOLC				i		04 32 02.3	
	comp=Z,183nm,0.4s						
SMRC	Santa Marta, M	4.44	346	eP	Pn	04 31 02.9	-1.3
SMRC				eS	Sn	04 31 50.2	-5.6
CAPC	Capurgana	4.57	293	eP	Pn	04 31 02.5	-3.5
CAPC				eS	Sn	04 31 53.6	-5.4
CAPC				i		04 31 59.9	
	comp=Z,401nm,0.6s						
PIZC	Pizarro, Choco	4.63	246	eP	Pn	04 31 07.2	+0.5
PIZC				eS	Sn	04 31 59.8	-0.5
PTAC	Punta Ardita,	4.68	274	eP	Pn	04 31 06.3	-1.1
PTAC				eS	Sn	04 31 56.2	-5.3
MACC	Macarena, Meta	4.72	189	⇑eP	Pn	04 31 06.2	-1.8
MACC				eS	Sn	04 31 58.2	-4.4
MACC				i		04 32 08.6	
	comp=Z,590nm,0.6s						
BETC	Betania	4.74	210	eP	Pn	04 31 07.1	-1.2
BETC				eS	Sn	04 31 56.1	-7.1
MARP	Paez Belalcaza	4.88	216	eP	Pn	04 31 09.5	-0.9
MARP				eS	Sn	04 32 02.1	-4.6
MARP				i		04 32 10.8	
	comp=Z,116nm,0.7s						
MARP				i		04 32 10.8	
	comp=Z,116nm,0.7s						
URIC	Uribia, Colomb	4.95	13	⇑eP	Pn	04 31 09.1	-1.8
URIC				⇑eP	Pn	04 31 09.1	-1.8
URIC				eS	Sn	04 31 57.7	-10
URIC				eS	Sn	04 31 57.7	-10
URIC				i		04 32 10.3	
	comp=Z,126nm,0.6s						
URIC				i		04 32 10.3	
	comp=Z,126nm,0.6s						
MALC	Bahia Malaga	5.06	237	eP	Pn	04 31 13.3	+0.9
MALC				eP	Pn	04 31 13.3	+0.9
MALC				eS	Sn	04 32 08.7	-1.9
MALC				eS	Sn	04 32 08.7	-1.9
MALC				i		04 32 24.8	
	comp=Z,217nm,0.7s						
MALC				i		04 32 24.8	
	comp=Z,217nm,0.7s						
GARC	Garzon, Huila	5.20	207	eP	Pn	04 31 13.5	-1.0

GARC				*e*P	Pn	04 31 13.5	-1.0
GARC				*e*S	Sn	04 32 06.7	-7.5
GARC				*e*S	Sn	04 32 06.7	-7.5
BAUV	El Baul	5.43	67	*e*P	Pn	04 31 15.3	-2.0
PCON	Cinco Dias	5.56	216	⇑*e*P	Pn	04 31 19.3	-0.2
PCON				⇑*e*P	Pn	04 31 19.3	-0.2
PCON				*e*S	Sn	04 32 20.7	-2.4
PCON				*e*S	Sn	04 32 20.7	-2.4
POPC	Popayan, Colom	5.56	220	*e*P	Pn	04 31 18.8	-0.5
POPC				*e*P	Pn	04 31 18.8	-0.5
POPC				*e*S	Sn	04 32 21.2	-1.6
POPC				*e*S	Sn	04 32 21.2	-1.6
POPC				*i*		04 32 28.0	
	comp=Z,80nm,0.7s						
POPC				*i*		04 32 28.0	
	comp=Z,80nm,0.7s						
FLOC	Florencia	5.81	206	*e*P	Pn	04 31 21.3	-1.1
FLOC				*e*P	Pn	04 31 21.3	-1.1
FLOC				*e*S	Sn	04 32 21.0	-7.4
FLOC				*e*S	Sn	04 32 21.0	-7.4
BBAC	Balboa, Cauca	6.32	221	*e*P	Pn	04 31 28.8	-0.5
BBAC				*e*P	Pn	04 31 28.8	-0.5
BBAC				*e*S	Sn	04 32 34.1	-6.8
BBAC				*e*S	Sn	04 32 34.1	-6.8
BBAC				*e*		04 32 37.8	
BBAC				*e*		04 32 37.8	
BBAC				*i*		04 32 44.7	
	comp=Z,132nm,0.5s						
BBAC				*i*		04 32 44.7	
	comp=Z,132nm,0.5s						
CCUFI	Cufio, Nario	7.00	217	*e*P	Pn	04 31 39.5	+0.9
CCUFI				*e*P	Pn	04 31 39.5	+0.9
CCUFI				*e*S	Sn	04 32 54.0	-3.5
CCUFI				*e*S	Sn	04 32 54.0	-3.5
GCUF	Volcan Galeras	7.00	217	*e*P	Pn	04 31 39.0	+0.4
GCUF				*e*P	Pn	04 31 39.0	+0.4
GCUF				*e*S	Sn	04 32 53.1	-4.4
GCUF				*e*S	Sn	04 32 53.1	-4.4
GCUF				*i*		04 33 00.9	
	comp=Z,87nm,0.5s						
GCUF				*i*		04 33 00.9	
	comp=Z,87nm,0.5s						
OTAV	Otavalo	8.46	219	Pn	Pn	04 31 56.7	-1.3
OTAV	Otavalo	8.46	219	*e*P	Pn	04 31 57.1	-0.8
PCRV	Puerto La Cruz	9.01	68	P	Pn	04 32 02.5	-2.3
	comp=Z,1.9nm,0.3s,baz=223,slow=5.9,SNR=19						
PCRV				S	Sn	04 33 43.0	-2.0
	comp=Z,8.8nm,0.3s,baz=6.6,slow=7.8,SNR=5.9						
ORIV	Oritupano	9.85	76	*e*P	Pn	04 32 12.8	-3.2
HDC	Heredia	11.34	287		Pn	04 32 35.2	-0.4
JAKH	Jacmel	11.34	3	Pn	Pn	04 32 37.6	+2.1
LGNH	Logne	11.61	2		Pn	04 32 40.0	+0.9
HOJ	Hope	11.65	343	*i* P	Pn	04 32 42.1	+2.5
STH	Stony Hill	11.74	342	*i* P	Pn	04 32 43.0	+2.3
BANI	BANI	11.79	13	Pn	Pn	04 32 41.2	-0.3
MCJ	Malvern	11.89	338	*i* P	Pn	04 32 45.3	+2.5
MCJ				*i* S	Sn	04 34 48.6	-5.8
MTDJ	Mount Denham	12.11	340	Pn	Pn	04 32 45.2	-0.5
TRN	Trinidad (W)	12.17	71	*e*	P	04 32 52.2	-0.1
BBJ	Bamboo Saint A	12.17	341	*i* P	Pn	04 32 48.9	+2.5
SDDR	Presa de Saban	12.20	8	Pn	Pn	04 32 47.9	+1.2
JTS	Las Juntas de	12.21	287	P	Pn	04 32 47.6	+0.8
	comp=Z,0.9nm,0.3s,baz=129,slow=3.0,SNR=9.8						
JTS	Las Juntas de	12.21	287	Pn	Pn	04 32 48.8	+1.9
GRGR	Grenville	12.45	64	*e*	P	04 32 54.9	-0.6
MPR	Mayaguez	12.71	27		Pn	04 32 50.3	-3.0
ICMP	Isla Caja de M	12.71	30	Pn	Pn	04 32 51.7	-1.6
OBIP	Obispado Ponce	12.81	29		Pn	04 32 51.1	-3.4
SJG	San Juan	13.09	31	P	Pn	04 32 56.8	-1.3
	comp=Z,10nm,0.3s,baz=202,slow=11,SNR=31						
GTBY	Guantanamo Bay	13.15	352	Pn	Pn	04 32 58.3	-0.7
HUMP	Col San Antoni	13.27	32	Pn	Pn	04 32 59.4	-1.1
GCPR	Guaynabo City	13.29	30	Pn	Pn	04 32 59.4	-1.4
SVB	Belmont	13.30	60	*e*	Pn	04 33 01.7	+0.8
CBYP	Canovanas	13.38	31	Pn	Pn	04 33 00.6	-1.3
MTP	Monte Pirata	13.39	33	Pn	Pn	04 33 00.8	-1.2
CDVI	St. Croix	13.56	36	*e*	Pn	04 33 03.5	-0.5
CDVI	St. Croix	13.56	36	Pn	Pn	04 33 03.0	-1.1
CUPR	Culebra, Puert	13.71	33	Pn	Pn	04 33 06.0	0.0
BIM	Bigot	14.06	56	*e*	P	04 33 17.7	+4.3
MPOM	Morne Pois Mar	14.20	57	*e*	P	04 33 15.4	+0.5
CBCY	The Bluff, Cay	14.36	334	Pn	Pn	04 33 15.1	+0.9
LCCY	Blossom Villag	14.44	333	P	P	04 33 19.4	+1.9
CZSB	Cruzeiro do Su	14.48	178	*e*P	Pn	04 33 15.1	-0.6
CZSB	Cruzeiro do Su	14.48	178	*e*P	Pn	04 33 15.4	-0.3
ATAH	Atahualpa	14.85	201	P	Pn	04 33 21.2	+0.5
	comp=Z,2.5nm,0.3s,baz=12,slow=3.3,SNR=11						
PTGA	Pitinga	15.11	119	P	Pn	04 33 22.2	-1.4
	comp=Z,1.1nm,0.3s,baz=314,slow=22,SNR=12						
PTGA	Pitinga	15.11	119	Pn	Pn	04 33 22.5	-1.2
PTGA				IAmb	IAmb	04 33 28.6	
	comp=Z,19nm,1.0s						
PTGA	Pitinga	15.11	119	*e*P	Pn	04 33 22.6	-1.0
TGUH	Tegucigalpa,Un	15.66	298	Pn	Pn	04 33 29.9	-0.6
MACA	Manacapuru-AM	15.89	128	*e*P	Pn	04 33 32.9	-0.2
ESQI	Esquipulas	17.70	297	Pn	Pn	04 33 55.0	0.0
ETMB	Extrema	17.91	157	*e*P	P	04 33 55.5	-0.4
NNA	Nana	19.07	191	P	P	04 34 08.5	0.0
	comp=Z,0.9nm,0.3s,baz=345,slow=9.6,SNR=4.9						
NNA	Nana	19.07	191		P	04 34 09.3	+0.8
NNA				IAmb	IAmb	04 34 14.5	
	comp=Z,20nm,0.9s						
TEIG	Tepich	19.84	314	P	P	04 34 17.7	+0.9
	comp=Z,3.3nm,0.3s,baz=270,slow=1.9,SNR=12						
TEIG	Tepich	19.84	314	P	Pn	04 34 18.5	-1.6
ITTB	Itaituba	20.60	122	*e*P	P	04 34 25.4	+0.4
MALB	Monte Alegre	20.69	114	*e*P	P	04 34 26.7	+0.8
CCIG	Comitan	20.86	298	P	P	04 34 28.2	+0.4
MCPB	Macapa, AP	22.18	108	*e*P	P	04 34 42.6	+0.9
NPGB	Novo Progresso	22.44	128	*e*P	P	04 34 43.9	-0.2
VILB	Vilhena	23.47	147	*e*P	P	04 34 53.4	-0.2
LPAZ	La Paz	23.50	168	P	P	04 34 53.2	-1.3
	comp=Z,7.2nm,0.7s,baz=346,slow=11,SNR=7.5						
LPAZ				pP	pP	04 35 25.8	+0.9
	comp=Z,15nm,0.8s,baz=340,slow=6.9,SNR=6.2						
LPAZ	La Paz	23.50	168	P	P	04 34 53.3	-1.1
LPAZ				IAmb	IAmb	04 34 57.1	
	comp=Z,11nm,0.9s						
CMIG	Matias Romero	23.59	298	P	P	04 34 51.5	-3.2
	comp=Z,3.4nm,0.8s,baz=94,slow=8.2,SNR=4.5						
CLDB	Colider	24.63	135	*e*P	P	04 35 02.9	-1.2
SIV	San Ignacio	25.62	152	P	P	04 35 11.5	-1.5
	comp=Z,6.9nm,0.9s,baz=359,slow=5.8,SNR=7.3						
SIV				pP	pP	04 35 44.9	-1.7
	comp=Z,5.2nm,0.8s,baz=321,slow=6.4,SNR=4.7						
TIGA	Tifton	26.36	339	P	P	04 35 19.5	-0.1
	baz=156						
TLIG	Tlapa	27.04	296	P	P	04 35 25.3	-0.6
TLIG				IAmb	IAmb	04 35 34.6	
	comp=Z,10nm,0.9s						
BG3	Lake Jocassee	29.44	343	P	P	04 35 47.4	+0.5
SMTB	Santa Maria do	29.83	121	*e*P	P	04 35 50.6	0.0
T59A	Double "B" Far	30.27	353	P	P	04 35 54.2	+0.1
CPCT	Cooper Cave	30.35	341	P	P	04 35 55.1	+0.2
CPCT				IAmb	IAmb	04 36 02.5	
	comp=Z,7.0nm,1.1s						
T58A	Grand View Acr	30.37	351	P	P	04 35 56.1	+1.0
	baz=169						
W50A	Signal Mountai	30.38	340	P	P	04 35 54.8	-0.5
W50A				IAmb	IAmb	04 35 58.9	
	comp=Z,6.6nm,0.8s						
U54A	Nelsons Funny	30.60	346	P	P	04 35 59.6	+2.4
	baz=163						
V51A	Loudon	30.62	342	P	P	04 35 57.6	+0.4
V51A				IAmb	IAmb	04 36 04.5	
	comp=Z,5.1nm,0.8s						
ARAG	Araguaiana, MT	30.77	137	*e*P	P	04 35 57.8	-1.0
PEXB	Peixe	31.02	127	*e*P	P	04 36 00.6	-0.5
S57A	Dark Hollow, R	31.23	351	P	P	04 36 04.0	+1.3
	baz=169						
V48A	Smith Brothers	31.40	338	P	P	04 36 04.3	+0.2
R59A	King George, V	31.43	354	P	P	04 36 06.9	+2.6
	baz=172						
AQDB	Aquidauana	32.09	148	*e*P	P	04 36 09.6	-0.7
WVT	Waverly	32.12	337	P	P	04 36 11.9	+1.5
	baz=152						
WVT	Waverly	32.12	337	P	P	04 36 10.5	+0.1
833A	Chaparral WMA,	32.79	314	P	P	04 36 16.5	+0.2
	baz=126						
X40A	Basin Creek Fa	32.99	329	P	P	04 36 19.1	+1.1
	baz=142						
X40A	Basin Creek Fa	32.99	329	IAmb	IAmb	04 36 19.8	
	comp=Z,5.4nm,0.9s						
435B	Jarrell	33.07	319	P	P	04 36 20.0	+1.1
	baz=131						
W41B	Gary Mavity, V	33.24	331	P	P	04 36 21.6	+1.3
	baz=144						
O58A	Lewisberry	33.31	355	P	P	04 36 23.1	+2.3
	baz=173						
BDFB	Brasilia	33.41	132	P	P	04 36 22.2	+0.1
	comp=Z,3.9nm,0.5s,baz=290,slow=11,SNR=8.6						
BDFB	Brasilia	33.41	132	P	P	04 36 21.9	-0.1
BDFB				IAmb	IAmb	04 36 22.6	
	comp=Z,5.0nm,0.6s						
MIAR	Mount Ida	33.42	328	P	P	04 36 22.1	+0.4
	baz=141						
WCI	Wyandotte Cave	33.46	341	P	P	04 36 24.4	+2.4
	baz=156						
LCAR	Lake Charles	33.46	333	P	P	04 36 22.2	+0.1
O57A	Amberson	33.47	354	P	P	04 36 24.4	+2.3
	baz=172						
P52A	Corning	33.65	347	P	P	04 36 25.4	+1.8
	baz=164						
P52A	Corning	33.65	347	P	P	04 36 23.8	+0.1
PBMO	Poplar Bluff	33.74	334	IAmb	IAmb	04 36 26.7	
	comp=Z,7.1nm,0.9s						
FCAR	Ozark Folk Cen	33.76	332	P	P	04 36 24.8	+0.1
FCAR				IAmb	IAmb	04 36 26.6	
	comp=Z,4.8nm,0.6s						
N61A	South Mountain	33.78	358	P	P	04 36 26.1	+1.3
	baz=178						
WHTX	Lake Whitney,	33.79	321	P	P	04 36 26.2	+1.2
	baz=133						
N60A	Cedar Hill Far	33.93	357	P	P	04 36 28.2	+2.1
	baz=176						
SDBA	SAO DESIDERIO	33.93	124	*e*P	P	04 36 25.7	-0.8
N59A	State Game Lan	34.02	356	P	P	04 36 28.7	+1.9
	baz=175						
W39A	Magazine	34.03	329	P	P	04 36 28.4	+1.4
	baz=141						
W39A	Magazine	34.03	329	IAmb	IAmb	04 36 29.0	
	comp=Z,8.9nm,0.9s						
SIUC	Southern Illin	34.04	337	P	P	04 36 27.3	+0.2
SIUC				IAmb	IAmb	04 36 29.5	
	comp=Z,8.0nm,0.7s						
P49A	Miami Univ. Ec	34.19	344	P	P	04 36 30.1	+1.8
	baz=159						
T42A	Van Buren	34.23	334	P	P	04 36 28.9	+0.1
T42A				IAmb	IAmb	04 36 30.6	
	comp=Z,6.5nm,1.1s						
N56A	West Decatur	34.25	353	P	P	04 36 30.8	+1.9
	baz=171						
M63A	Gales Ferry	34.43	1	P	P	04 36 31.7	+1.4
	baz=182						
U40A	Yellville	34.49	331	P	P	04 36 31.9	+0.9
	baz=144,SNR=12						
N54A	Moraine State	34.53	351	P	P	04 36 33.6	+2.3
	baz=168						
M59A	Waymart	34.62	357	P	P	04 36 33.8	+1.7
	baz=176						
KSPA	Keystone Colle	34.65	356	P	P	04 36 33.0	+0.7
M56A	Emporium	34.79	353	P	P	04 36 35.5	+1.9
	baz=171						
M56A	Emporium	34.79	353	P	P	04 36 33.8	+0.3
M56A				IAmb	IAmb	04 36 37.1	
	comp=Z,6.5nm,0.7s						
M54A	Oil Creek Stat	35.01	351	P	P	04 36 37.7	+2.3
	baz=169						
M54A	Oil Creek Stat	35.01	351	P	P	04 36 35.8	+0.3
L58A	Harry Jones Me	35.14	356	P	P	04 36 38.4	+1.9
	baz=175						
CCM	Cathedral Cave	35.16	335	P	P	04 36 38.0	+1.3
	baz=148						
CCM	Cathedral Cave	35.16	335	P	P	04 36 36.8	+0.1
L57A	Andrews Acres	35.17	355	P	P	04 36 38.3	+1.5
	baz=174						
BINY	Binghamton	35.30	356	P	P	04 36 39.4	+1.5
	baz=175						
L56A	Greenwood	35.37	354	P	P	04 36 40.3	+1.7
	baz=172						
L61B	Northampton	35.47	1	P	P	04 36 40.0	+0.8
	baz=181						
PCMB	Pacaembu	35.47	143	*e*P	P	04 36 38.6	-1.0
L53A	Girard	35.54	351	P	P	04 36 41.2	+1.3
	baz=168						
ABTX	Abilene, Hawle	35.60	320	P	P	04 36 41.3	+0.7
	baz=130,SNR=6.2						
ABTX	Abilene, Hawle	35.60	320	IAmb	IAmb	04 36 42.3	
	comp=Z,9.3nm,0.8s						
TUL1	Leonard	35.63	327	P	P	04 36 41.6	+0.9
	baz=139						
SFIN	Lafayette	35.67	342	P	P	04 36 42.5	+1.4
	baz=156						
SFIN	Lafayette	35.67	342	P	P	04 36 41.2	+0.1
LCO	Las Campanas	35.72	176	P	P	04 36 40.8	-1.1
LCO				IAmb	IAmb	04 36 52.8	
	comp=Z,12nm,1.1s						
WVNY	West Valley, N	35.75	353	P	P	04 36 41.9	+0.2
K58A	Earlville	35.85	357	P	P	04 36 44.6	+2.1
	baz=176						
K58A	Earlville	35.85	357	P	P	04 36 42.8	+0.2
K58A				IAmb	IAmb	04 36 45.1	
	comp=Z,9.3nm,0.8s						
K57A	Scipio Center	35.87	356	P	P	04 36 44.7	+2.0
	baz=174						
JANB	Januaria	35.89	127	*e*P	P	04 36 42.5	-0.7
TX32	Lajitas Array	36.46	312	IAmb	IAmb	04 36 49.8	
	comp=Z,4.8nm,0.8s						
TXAR	Lajitas Array	36.46	312	P	P	04 36 48.8	+0.7
	comp=Z,4.0nm,0.7s,baz=128,slow=9.2,SNR=46						
TXAR				pP	pP	04 37 23.0	+1.0
	comp=Z,0.8nm,0.6s,baz=134,slow=8.8,SNR=2.5						
TXAR				PcP	PcP	04 39 10.4	+1.7
	comp=Z,1.0nm,0.7s,baz=131,slow=6.2,SNR=5.3						
TXAR	Lajitas Array	36.46	312	P	P	04 36 48.0	-0.1
I58A	Old Forge	36.74	358	P	P	04 36 51.9	+1.8
	baz=177						
P40A	Paris	36.74	335	IAmb	IAmb	04 36 51.4	
	comp=Z,6.1nm,0.8s						
I51A	Listowel	37.47	351	P	P	04 36 57.9	+1.7
	baz=167						
H57A	Richville	37.53	357	P	P	04 36 58.7	+2.0
	baz=176						
J47A	Sunmer	37.69	346	P	P	04 36 58.3	+0.2
G57A	Newington	38.15	358	P	P	04 37 03.3	+1.4
	baz=177						
G62A	West of Eustis	38.30	3	P	P	04 37 05.3	+2.2
	baz=184						
AMTX	Amarillo	38.35	321	P	P	04 37 04.9	+1.1
	baz=130						
KSU1	Kansas State U	38.48	330	P	P	04 37 05.2	+0.4
	baz=141						
KSU1	Kansas State U	38.48	330	P	P	04 37 04.8	+0.1
KSU1				IAmb	IAmb	04 37 05.3	
	comp=Z,8.7nm,0.8s						
MSTX	Muleshoe	38.48	319	P	P	04 37 05.6	+0.7
	baz=128						
MSTX	Muleshoe	38.48	319	IAmb	IAmb	04 37 06.3	
	comp=Z,10nm,1.1s						
G54A	Lake Saint Pet	38.65	354	P	P	04 37 07.3	+1.2
	baz=172						
MNTX	Cornudas Mount	38.97	314	P	P	04 37 09.8	+0.8
	baz=123,SNR=16						
MNTX	Cornudas Mount	38.97	314	P	P	04 37 09.1	0.0
MNTX				IAmb	IAmb	04 37 11.6	
	comp=Z,8.7nm,0.8s						
JFWS	Jewell Farm	38.98	340	P	P	04 37 09.4	+0.5
	baz=152,SNR=6.0						
F61A	St Evariste	39.03	2	P	P	04 37 10.6	+1.4
	baz=183						
ALGO	Algonquin Park	39.20	355	P	P	04 37 12.2	+1.6
	baz=172						
E55A	Montcerf-Lytto	39.55	357	P	P	04 37 15.3	+1.8
	baz=175						
E56A	St. Veronique	39.59	358	P	P	04 37 15.4	+1.5
	baz=177						
E63A	Oxbow	39.64	5	P	P	04 37 15.7	+1.5
	baz=187						
E64A	Bridgewater	39.69	6	P	P	04 37 16.2	+1.5
	baz=188						
PET01	Itanhaem-SP	39.90	142	*e*P	P	04 37 16.3	-0.4
D60A	Saint Jean D’O	39.97	2	P	P	04 37 18.6	+1.7
	baz=183						
D55A	Sainte-Anne-du	40.08	357	P	P	04 37 19.4	+1.5
	baz=176						
D56A	ZEC Mazanza, M	40.09	358	P	P	04 37 19.2	+1.2
	baz=178						
D58A	Chemin du LacG	40.11	0	P	P	04 37 19.6	+1.4
	baz=180						
D63A	Stockholm	40.28	5	P	P	04 37 21.0	+1.4
	baz=188						
D61A	St Aubert, Com	40.29	3	P	P	04 37 21.6	+2.0
	baz=184						
LATQ	La Tuque	40.40	0	P	P	04 37 22.1	+1.6
	baz=180						
121A	Cookes Peak, D	41.14	313	P	P	04 37 28.8	+1.7
	baz=121						
RIB01	Linhares ES	41.39	129	*e*P	P	04 37 28.4	-0.6
T25A	Trinidad	41.49	321	P	P	04 37 31.7	+1.8
	baz=129						
ANMO	Albuquerque	41.51	317	P	P	04 37 31.3	+1.3
	baz=125						
ANMO	Albuquerque	41.51	317	P	P	04 37 29.8	-0.3
319A	Douglas	41.68	311	IAmb	IAmb	04 37 34.1	
	comp=Z,8.4nm,0.8s						
ECSD	EROS Data Cent	42.14	334	P	P	04 37 35.1	+0.3
	baz=144						
LSQQ	Lebel-sur-Quev	42.20	356	P	P	04 37 36.6	+1.4
	baz=174						
SDCO	Great Sand Dun	42.55	321	P	P	04 37 40.2	+1.6
	baz=128,SNR=6.8						
MATQ	Matagami	42.94	356	P	P	04 37 42.7	+1.5
	baz=173						
Q24A	Divide	43.09	323	P	P	04 37 44.6	+1.6
	baz=130						
TUC	Tucson	43.25	311	P	P	04 37 45.4	+1.3
	baz=118						
TUC	Tucson	43.25	311	P	P	04 37 43.9	-0.1
TUC				IAmb	IAmb	04 37 46.2	
	comp=Z,5.4nm,0.8s						
S22A	4UR Ranch, Cre	43.38	320	P	P	04 37 46.9	+1.6
	baz=127,SNR=5.1						
EYMN	Ely	43.86	342	P	P	04 37 48.8	+0.3
	baz=153,SNR=7.2						
EYMN	Ely	43.86	342	P	P	04 37 48.8	+0.3
EYMN				IAmb	IAmb	04 37 50.1	
	comp=Z,8.5nm,0.7s						
ISCO	Idaho Springs	43.90	323	P	P	04 37 51.0	+1.5
	baz=130,SNR=6.1						
MVCO	Mesa Verde	44.15	318	P	P	04 37 52.5	+1.2
	baz=124						
214A	Organ Pipe Nat	44.63	309	P	P	04 37 56.5	+1.5
	baz=116						
214A	Organ Pipe Nat	44.63	309	IAmb	IAmb	04 37 57.3	
	comp=Z,5.4nm,0.8s						
PV15	Paradox Valley	44.79	320	IAmb	IAmb	04 37 59.1	
	comp=Z,14nm,0.9s						
N23A	Red Feather La	44.80	324	P	P	04 37 58.3	+1.8
	baz=130						
B35A	Bob, Littlefor	44.93	341	IAmb	IAmb	04 37 58.7	
	comp=Z,5.1nm,0.7s						
PV12	Saucer Basin,	44.98	320	IAmb	IAmb	04 38 00.3	
	comp=Z,6.4nm,0.7s						
PV18	Skein Mesa, Pa	45.01	319	IAmb	IAmb	04 38 02.2	
	comp=Z,5.9nm,0.8s						
PV17	East Wray Mesa	45.06	319	P	P	04 37 58.2	-0.3
WUAZ	Wupatki	45.22	315	P	P	04 38 01.3	+1.5
	baz=120,SNR=14						
AGMN	Agassiz Nation	45.61	339	P	P	04 38 03.1	+0.7
	baz=148						
AGMN	Agassiz Nation	45.61	339	IAmb	IAmb	04 38 04.2	
	comp=Z,4.6nm,0.7s						
O20A	White River Ci	45.69	322	P	P	04 38 04.7	+1.3
	baz=127						
RSSD	Black Hills	45.93	329	P	P	04 38 06.5	+1.2
	baz=135						
GLA	Glamis	46.63	310	P	P	04 38 11.8	+1.1
	baz=115						
MDND	Maddock	46.68	336	P	P	04 38 11.9	+1.1
	baz=143						
P17A	Butcher Ranch,	46.88	320	IAmb	IAmb	04 38 14.8	
	comp=Z,6.2nm,0.9s						
KNB	Kanab	46.98	316	IAmb	IAmb	04 38 16.3	
	comp=Z,11nm,0.9s						
MTPU	Mount Pierson	47.06	317	P	P	04 38 14.0	-0.4
LCMT	Little Creek M	47.27	315	IAmb	IAmb	04 38 18.3	
	comp=Z,9.5nm,1.0s						
ULM	Lac du Bonnet	47.27	340	P	P	04 38 15.1	-0.2
	comp=Z,5.3nm,0.7s,baz=144,slow=8.8,SNR=14						
ULM				pP	pP	04 38 50.6	-0.1
	comp=Z,3.8nm,0.9s,baz=146,slow=9.3,SNR=3.6						
ULM	Lac du Bonnet	47.27	340	IAmb	IAmb	04 38 17.3	
	comp=Z,6.3nm,0.8s						
IRM	Iron Mountain	47.34	311	P	P	04 38 17.3	+1.1
	baz=115						
BC3	Big Chuckawall	47.36	310	P	P	04 38 17.8	+1.3
	baz=115						
SZCU	Shurtz Canyon	47.45	316	IAmb	IAmb	04 38 19.0	
	comp=Z,5.4nm,1.0s						
MPU	Maple Canyon	47.75	320	IAmb	IAmb	04 38 21.5	
	comp=Z,6.0nm,0.8s						
MONP2	Monument Peak	47.80	309	P	P	04 38 20.9	+0.9
	baz=113						
BELC	Belle Mtn. Jos	47.92	310	P	P	04 38 22.2	+1.4
	baz=114						
GMRC	Granite Mounta	47.99	311	P	P	04 38 22.1	+0.7
	baz=116						
BW06	Boulder Array	48.07	324	P	P	04 38 22.6	+0.6
	baz=128						
PDAR	Pinedale Array	48.07	324	P	P	04 38 22.6	+0.7
	comp=Z,1.5nm,0.6s,baz=132,slow=9.7,SNR=17						
PDAR				pP	pP	04 38 58.4	+0.9
	comp=Z,1.0nm,0.9s,baz=120,slow=8.8,SNR=3.0						
PDAR	Pinedale Array	48.07	324	P	P	04 38 21.8	-0.2
TPFO	Pinon Flats	48.10	310	P	P	04 38 23.5	+1.3
	baz=114						
PFO	Pinyon Flats O	48.11	310	P	P	04 38 23.4	+1.2
	baz=114						
109C	Camp Elliot, M	48.33	309	P	P	04 38 25.1	+1.4
	baz=113						
SHPR	Sheep Range	48.39	314	P	P	04 38 24.1	-0.2
PSUT	Pine Spring	48.44	317	IAmb	IAmb	04 38 30.6	
	comp=Z,3.7nm,0.7s						
HEC	Hector,Ludlow	48.52	311	P	P	04 38 26.6	+1.4
	baz=115						
DUG	Dugway, Tooele	48.61	319	P	P	04 38 27.2	+1.2
	baz=122						
LAO	LASA Array	48.83	330	P	P	04 38 28.5	+1.0
	baz=134						
SHOC	Shoshone, Teco	48.93	313	P	P	04 38 29.8	+1.5
	baz=116						
BGU	Big Grassy Mou	49.14	320	IAmb	IAmb	04 38 31.7	
	comp=Z,7.9nm,0.7s						
DGMT	Dagmar	49.14	333	P	P	04 38 30.9	+1.2
	baz=137,SNR=6.2						
REDW	Red Top Meadow	49.19	324	IAmb	IAmb	04 38 32.2	
	comp=Z,7.2nm,0.7s						
SNOW	Snow King Moun	49.19	324	IAmb	IAmb	04 38 33.4	
	comp=Z,4.4nm,0.7s						
LOHW	Long Hollow	49.19	324	P	P	04 38 30.3	-0.2
LOHW				IAmb	IAmb	04 38 32.2	
	comp=Z,3.3nm,0.7s						
TPNV	Topopah Spring	49.37	314	P	P	04 38 33.4	+1.5
	baz=117,SNR=5.6						
TPNV	Topopah Spring	49.37	314	IAmb	IAmb	04 38 34.9	
	comp=Z,5.3nm,0.9s						
RLMT	Red Lodge	49.38	327	P	P	04 38 32.2	+0.4
	baz=130						
R11A	Troy Canyon, C	49.54	316	P	P	04 38 34.4	+1.3
	baz=118,SNR=7.1						
FURC	Furnace Creek,	49.60	313	P	P	04 38 34.9	+1.5
	baz=116						
H17A	Grant Village	49.65	325	P	P	04 38 35.6	+1.6
	baz=128						
EDW2	Edwards Air Fo	49.78	311	P	P	04 38 35.5	+0.7
	baz=114						
MPMC	Manual Prospec	49.88	312	P	P	04 38 36.5	+0.8
	baz=115						
GRAC	Grapevine Rang	50.19	313	P	P	04 38 39.4	+1.5
	baz=116						
YHL	Hebgen Lake	50.27	325	IAmb	IAmb	04 38 41.5	
	comp=Z,6.5nm,1.2s						
CWC	Cottonwood Cre	50.48	312	P	P	04 38 41.7	+1.5
	baz=115						
BOZ	Bozeman (W)	50.98	326	P	P	04 38 44.6	+0.8
	baz=127,SNR=6.7						
VES	Vestal, Richgr	50.98	311	P	P	04 38 45.4	+1.7
	baz=113						
HLID	Hailey	51.43	322	P	P	04 38 48.1	+0.8
	baz=123,SNR=8.9						
HLID	Hailey	51.43	322	P	P	04 38 47.1	-0.1
NVAR	Mina Array Bea	51.48	315	P	P	04 38 49.1	+1.4
	comp=Z,2.0nm,0.7s,baz=122,slow=7.4,SNR=13						
NVAR	Mina Array Bea	51.48	315	P	P	04 38 47.5	-0.3
HRY	Holter Researc	51.77	327	P	P	04 38 49.6	0.0
MFID	Camas Ranch	52.22	321	P	P	04 38 53.0	-0.1
MFID				IAmb	IAmb	04 38 55.9	
	comp=Z,6.7nm,0.8s						

YERR	Yerington comp=Z,5.0nm,0.8s	52.38	315	IAmb	IAmb	04 38 56.5	
PNTR	Pine Nut comp=Z,4.4nm,0.8s	52.68	315	IAmb	IAmb	04 38 58.8	
VCNR	Virginia City comp=Z,8.5nm,1.2s	52.80	315	IAmb	IAmb	04 38 59.8	
WVOR	Wild Horse Val comp=Z,8.8nm,1.1s	53.52	319	IAmb	IAmb	04 39 05.2	
JTMT	Jette comp=Z,4.3nm,0.8s	53.72	327	IAmb	IAmb	04 39 05.9	
J08A	Circle Bar Ran comp=Z,2.1nm,0.4s	53.86	320	IAmb	IAmb	04 39 07.0	
F10A	Beach Ranch, E comp=Z,4.2nm,0.7s	54.42	323	IAmb	IAmb	04 39 10.0	
O03E	Paynes Creek baz=114	54.73	315	P	P	04 39 11.7	+0.4
I07A	Izee comp=Z,4.3nm,0.8s	54.86	320	IAmb	IAmb	04 39 14.0	
M04C	Macdoel baz=115	55.37	317	P	P	04 39 16.5	+0.6
J05D	Fort Rock, OR baz=116,SNR=6.6	55.61	319	P	P	04 39 18.5	+0.8
L04D	Klamath Falls baz=115	55.86	317	P	P	04 39 20.2	+0.8
YBH	Yreka Blue Hor	55.94	317	P	P	04 39 19.5	-0.4
F07A	Phinny Hill Vi comp=Z,4.1nm,0.6s	56.00	322	IAmb	IAmb	04 39 24.9	
J04D	Umpqua Nationa baz=116	56.17	318	P	P	04 39 22.6	+1.0
I04A	Tendick Farm, baz=116	56.60	319	P	P	04 39 25.5	+0.9
B08A	Colville Reser comp=Z,3.2nm,0.8s	56.89	325	IAmb	IAmb	04 39 27.6	
K02D	Willamette Mer baz=114	56.98	317	P	P	04 39 28.1	+0.9
LTY	Liberty comp=Z,4.1nm,0.8s	57.11	323	IAmb	IAmb	04 39 29.9	
J01E	Myrtle Point baz=114	57.34	318	P	P	04 39 30.7	+1.0
I02D	Swisshome baz=115	57.68	319	P	P	04 39 32.9	+0.9
NRS	Narsarsuaq	58.01	15	P	P	04 39 34.5	+0.6
D04E	Lakebay baz=117	58.34	322	P	P	04 39 37.2	+0.7
B05A	Bryant baz=118	58.44	324	P	P	04 39 37.3	+0.1
D03D	Eldon baz=117	58.69	323	P	P	04 39 39.3	+0.4
A04D	Lummi Island baz=118	59.02	324	P	P	04 39 41.8	+0.6
NLWA	Neilton Lookou	59.10	322	P	P	04 39 42.0	+0.1
NLWA	comp=Z,5.0nm,1.0s			IAmb	IAmb	04 39 45.8	
YKA	Yellowknife Ar comp=Z,5.9nm,0.7s,baz=127,slow=7.5,SNR=102	63.25	340	P	P	04 40 09.6	+0.1
YKA	comp=Z,2.4nm,0.7s,baz=127,slow=7.7,SNR=4.0			pP	pP	04 40 47.4	+0.5
SUMG	Summit comp=Z,26nm,0.9s	68.97	11	*i* P	P	04 40 46.4	+0.2
SUMG	Summit	68.97	11	P	P	04 40 46.4	+0.2
SUMG	comp=Z,7.7nm,0.9s			IAmb	IAmb	04 40 50.1	
SUMG	Summit	68.97	11	*i* P	P	04 40 46.5	+0.2
SUMG	comp=Z,26nm,0.9s			IAmb	IAmb	04 40 49.4	
EPYK	Eagle Plains baz=112	73.37	338	P	P	04 41 13.2	+0.8
BCAR	Beaver Creek A	74.35	334	P	P	04 41 18.7	+0.5
BMRM	Bremner River baz=103	75.11	331	P	P	04 41 23.1	+0.6
SCRK	Sand Creek baz=104	75.54	335	P	P	04 41 26.5	+1.4
DAG	Danmarks Havn	75.64	11	*i* P	P	04 41 24.6	-0.6
DAG	Danmarks Havn	75.64	11	*i* P	P	04 41 24.6	-0.6
M24K	Tolsona, Glenn baz=102	76.09	332	P	P	04 41 29.4	+1.3
PRP	Porcupine Dome baz=103	76.55	336	P	P	04 41 31.7	+0.9
WAT6	Susitna Watana baz=101	76.90	333	P	P	04 41 34.1	+1.3
HDA	Harding Lake baz=102	76.91	335	P	P	04 41 33.5	+0.9
ILAR	Eielson Array comp=Z,0.9nm,0.7s,baz=111,slow=4.3,SNR=12	76.95	335	P	P	04 41 33.0	+0.2
ILAR	comp=Z,0.6nm,0.6s,baz=103,slow=3.9,SNR=3.9			pP	pP	04 42 12.4	+0.8
ILAR	Eielson Array	76.95	335	P	P	04 41 33.3	+0.5
WAT2	Susitna Watana baz=100	77.35	333	P	P	04 41 36.2	+1.0
PMR	Palmer baz=99	77.38	332	P	P	04 41 36.8	+1.6
RND	Reindeer	77.55	333	P	P	04 41 36.6	+0.3
RND	comp=Z,5.5nm,0.7s			IAmb	IAmb	04 41 38.4	
MCK	McKinley baz=100	77.64	334	P	P	04 41 37.7	+1.0
NEA2	Nenana baz=100	77.84	335	P	P	04 41 39.0	+1.2
CUT	Chulitna baz=98	78.03	332	P	P	04 41 39.7	+0.9
I23K	Minto, Yukon-K baz=100	78.06	335	P	P	04 41 40.1	+1.2
SUA	Susitna One baz=98	78.12	331	P	P	04 41 40.4	+0.8
TRF	Thorofare Moun baz=98	78.19	333	P	P	04 41 41.1	+1.1
SKT	Skwentna baz=97	78.56	332	P	P	04 41 42.9	+1.0
BPAW	Bear Paw Mtn. baz=98	78.59	334	P	P	04 41 42.8	+0.8
MLY	Manley baz=98	78.62	335	P	P	04 41 42.6	+0.5
COLD	Coldfoot baz=99	78.74	337	P	P	04 41 44.4	+1.7
TOLK	Toolik Lake Re baz=100	78.74	339	P	P	04 41 43.7	+0.9
SPCR	Spurr Chakacha baz=96	78.79	331	P	P	04 41 44.6	+1.4
PPLA	Purkeypile baz=97	78.97	333	P	P	04 41 45.2	+1.0
CHUM	Lake Minchumin baz=97	79.14	334	P	P	04 41 45.9	+1.0
A21K	Barrow baz=94	81.48	341	P	P	04 41 58.5	+1.3
MKAR	Makanchi Array comp=Z,0.2nm,0.4s,baz=292,slow=2.6,SNR=6.4	122.30	20	PKP	PKPdf	04 48 34.0	-0.6
MKAR	Makanchi Array	122.30	20		PKPdf	04 48 34.1	-0.4
ASAR	Alice Springs comp=Z,1.4nm,0.5s,baz=115,slow=3.7,SNR=18	149.14	234	PKPbc	PKPbc	04 49 28.1	-0.5
WRA	Warramunga Arr comp=Z,1.4nm,0.4s,baz=109,slow=2.4,SNR=32	150.36	241	PKPbc	PKPbc	04 49 31.1	-0.6
WRA	Warramunga Arr	150.36	241		PKPbc	04 49 30.9	-0.8
CMAR	Chiang Mai Arr comp=Z,1.7nm,0.4s,baz=313,slow=3.4,SNR=4.6	153.67	17	PKPbc	PKiKP	04 49 39.3	+0.1

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*JMA **24** 04:36:57.8±0.2, 24°.82N×122°.40E, h0km±2km, M2.4*
*TAP **24** 04:36:59.3, 24°.85N×122°.38E, h5km, ML2.8, D*
ISC 24 04:36:58.4±1.1, **24°.84N**±0°.03×**122°.42E**±0°.02, **h7**km±9km, **n51, σ0s.51**/98, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWB1	Santiao Chiao baz=294	0.42	294	*i* P	Pg	04 37 06.4	-0.3
TWB1	baz=294			*i* S	Sg	04 37 12.0	-0.2
NTC	Toucheng baz=270	0.53	272	P	Pg	04 37 09.2	+0.5
NTC	baz=270			S	Sb	04 37 16.6	-1.4
TIPB	Shuangxi baz=283	0.55	284	*i* P	Pg	04 37 09.5	+0.4
TIPB	baz=283			*i* S	Sg	04 37 16.1	-0.3
TWC	Suao baz=243	0.56	246	*e*P	Pg	04 37 09.4	+0.1
TWC	baz=243			*e*S	Sg	04 37 16.8	+0.1
JYNG	Yonagunijimaku	0.62	129	P	Pg	04 37 10.2	-0.1
JYNG				S	Sg	04 37 18.9	+0.6
NWF	Wu-fen Shan baz=292	0.62	292	P	Pg	04 37 10.7	+0.3
NWF	baz=292			S	Sg	04 37 19.3	+0.7
WFSB	Wu-fen Shan baz=292	0.62	292	P	Pg	04 37 10.7	+0.2
WFSB	baz=292			S	Sg	04 37 19.1	+0.6
YOJ	Yonaguni jima	0.66	125	P	Pg	04 37 11.0	-0.1
YOJ				*e*S	Sg	04 37 19.9	+0.2
TNOU	National Taiwa baz=298	0.66	298	P	Pg	04 37 11.2	0.0
TNOU	baz=298			S	Sg	04 37 19.8	-0.1
NDS	Dongshan baz=250	0.67	252	P	Pg	04 37 11.7	+0.3
NDS	baz=250			S	Sg	04 37 20.4	+0.3
TWE	Neicheng baz=258	0.69	260	P	Pg	04 37 11.8	+0.1
TWE	baz=258			S	Sg	04 37 21.1	+0.3
ENA	Nanau baz=233	0.74	237	*e*P	Pg	04 37 12.8	+0.1
ENA	baz=233			*e*S	Sb	04 37 22.9	-1.0
YM01	YM01 baz=291	0.83	292	P	Pg	04 37 13.7	-0.6
YM01	baz=291			S	Sg	04 37 24.3	-0.9
YM11	YM11 baz=293	0.83	293	P	Pb	04 37 15.2	-0.1
YM11	baz=293			S	Sb	04 37 26.3	-0.4
NWLT	Wulai baz=264	0.83	266	*e*P	Pb	04 37 14.8	-0.5
NWLT	baz=264			*e*S	Sg	04 37 25.6	+0.3
YM05	YM05 baz=293	0.84	293	P	Pg	04 37 14.2	-0.4
YM05	baz=293			S	Sb	04 37 26.2	-0.6
TATO	Taipei baz=278	0.85	279	*e*S	Sg	04 37 25.7	-0.3
NDT	Datong Townshi baz=252	0.86	254	*e*P	Pb	04 37 15.4	-0.2
NDT	baz=252			*e*S	Sb	04 37 27.4	+0.1
YM04	YM04 baz=291	0.86	292	P	Pb	04 37 15.3	-0.4
YM04	baz=291			S	Sg	04 37 26.5	+0.3
TWY	Chenhua baz=301	0.86	301	P	Pg	04 37 15.3	+0.3
TWY	baz=301			S	Sg	04 37 26.3	+0.2
YM03	YM03 baz=293	0.87	293	*e*P	Pg	04 37 15.2	+0.1
YHNB	Yeheng baz=258	0.96	260	*e*P	Pg	04 37 16.8	-0.1
YHNB	baz=258			*e*S	Sb	04 37 30.0	-0.4
NSK	Sanguang baz=259	0.98	261	*e*P	Pg	04 37 17.1	-0.1
NSK	baz=259			*e*S	Sb	04 37 30.1	-0.7
NACB	Ninganchiao baz=226	1.00	229	*e*P	Pg	04 37 17.0	-0.6
NACB	baz=226			*e*S	Sg	04 37 30.6	0.0
NNSH	Datong baz=245	1.03	247	*e*P	Pg	04 37 18.2	0.0
NNSH	baz=245			*e*S	Sb	04 37 31.6	-0.7
NNSB	Datong baz=245	1.03	247	*e*P	Pg	04 37 18.2	0.0
NNSB	baz=245			*e*S	Sb	04 37 31.8	-0.5
NNS	Nan Shan baz=245	1.03	248	*e*P	Pb	04 37 18.7	+0.1
NNS	baz=245			*e*S	Sb	04 37 31.9	-0.5
ETLH	Xiulin Townshi baz=231	1.06	234	*e*P	Pg	04 37 18.8	0.0
ETLH	baz=231			*e*S	Sb	04 37 33.3	+0.1
FUSS	Fushou baz=239	1.22	241	*e*P	Pg	04 37 21.7	-0.2
FUSS	baz=239			*e*S	Sg	04 37 37.5	-0.2
NHW	Xinwu Township baz=277	1.25	278	*e*S	Sn	04 37 39.6	+0.1
WHF	Hehuan Shan baz=235	1.26	237	*e*P	Pg	04 37 22.2	-0.3
WHF	baz=235			*e*S	Sb	04 37 39.7	+0.4
TWT	Tachien baz=241	1.27	243	*e*P	Pg	04 37 22.5	-0.4
TWT	baz=241			*e*S	Sb	04 37 39.8	+0.3
TDCB	Techi baz=241	1.29	243	*e*P	Pg	04 37 22.7	-0.4
TDCB	baz=241			*e*S	Sg	04 37 39.5	-0.3
LIOB	Emei baz=260	1.29	262	*e*P	Pg	04 37 22.9	-0.3
LIOB	baz=260			*e*S	Sb	04 37 40.0	+0.2
IRIF	Iriomote-Funau	1.30	113	P	Pg	04 37 22.6	-0.7
IRIF				S	Sg	04 37 39.6	-0.5
NSTT	Nanjuang baz=260	1.30	261	*e*P	Pg	04 37 23.2	-0.3
NSTT	baz=260			*e*S	Sb	04 37 40.2	0.0
CHGB	Renai baz=234	1.37	236	*e*P	Pb	04 37 24.8	+0.2
CHGB	baz=234			*e*S	Sn	04 37 42.9	+0.1
WHP	Taichung City baz=246	1.45	248	*e*P	Pg	04 37 26.3	0.0
WHP	baz=246			*e*S	Sg	04 37 44.3	-0.8
HATJ	Hateruma jima	1.48	121	P	Pn	04 37 26.5	+1.0
WCS	Beigang Elemen baz=239	1.58	241	*e*P	Pg	04 37 28.7	+0.1
WCS	baz=239			*e*S	Sn	04 37 47.2	-0.3
VWDT	VWDT baz=226	1.59	227	*e*P	Pn	04 37 27.6	+0.6
VWDT	baz=226			*e*S	Sn	04 37 47.3	-0.4
HGSD	Ruisui baz=212	1.62	214	*e*P	Pn	04 37 27.1	-0.3
HGSD	baz=212			*e*S	Sg	04 37 50.6	+0.1
SMLT	Sun Moon Lake baz=234	1.68	236	*e*P	Pb	04 37 29.5	-0.2
SMLT	baz=234			*e*S	Sb	04 37 51.1	0.0
SSLB	Suanglung baz=230	1.70	232	*e*P	Pn	04 37 29.1	+0.6
SSLB	baz=230			*e*S	Sn	04 37 50.5	0.0
TYC	Yuchr baz=235	1.70	237	*e*P	Pn	04 37 29.5	+1.0
TYC	baz=235			*e*S	Sb	04 37 51.4	-0.2
YULB	Yu-li baz=214	1.77	216	*e*P	Pn	04 37 30.3	+0.8
YULB	baz=214			*e*S	Sn	04 37 52.1	0.0
FULB	Fuli baz=211	1.93	212	*e*P	Pn	04 37 31.7	0.0
FULB	baz=211			*e*S	Sn	04 37 57.5	+1.2
ALS	Alishan baz=226	1.98	228	*e*P	Pn	04 37 33.9	+1.3
ALS	baz=226			*e*S	Sb	04 37 59.6	-0.4
CHN5	Tsauling baz=231	2.01	232	*e*P	Pb	04 37 34.7	-0.7
CHN5	baz=231			*e*S	Sn	04 37 58.1	-0.3
STYH	Taoyuan baz=221	2.24	222	*e*P	Pn	04 37 36.8	+0.9
STYH	baz=221			*e*S	Sb	04 38 06.2	-0.9
TPUB	Ta-pu baz=226	2.24	227	*e*P	Pn	04 37 35.2	-0.7
TPUB	baz=226			*e*S	Sn	04 38 05.4	+1.5

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*IDC **24** 04:42:43.8±2.4, 26°.41N×66°.19E, h0km, mb3.7/7, mb1 3.9/7, mb1mx3.5/50, mbtmp3.7/7, MS3.9/1, Ms1 3.9/1, ms1mx2.9/55, Error ellipse: s-maj=72.1km s-min=24.9km az=153.0*
ISC 24 04:42:49.5±2.5, **26°.5N**±0°.5×**66°.2E**±0°.3, **h35**km, **n8, σ1s.15**/7, **mb3.7**/7, **Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	Makanchi Array 0.6nm,0.8s,baz=213,slow=8.7,SNR=6.4	23.98	28	P	P	04 47 59.0	-1.5
KBZ	Khabaz 2.3nm,0.8s,baz=131,slow=7.7,SNR=5.6	25.52	318	P	P	04 48 15.5	+0.9
SONM	Songino Array 0.5nm,0.5s,baz=267,slow=7.2,SNR=2.1	37.95	45	P	P	04 50 05.1	+1.3
KMBO	Kilima Mbogo comp=Z,168nm,18.2s,baz=260,slow=36	39.11	230	LR	LR	05 06 06.5	
TORD	Torodi Ar. Bea 1.7nm,0.8s,baz=56,slow=7.0,SNR=9.8	61.53	271	P	P	04 53 03.0	-0.3
KOWA	Kowa 1.4nm,0.9s,baz=76,slow=8.4,SNR=4.4	66.12	275	P	P	04 53 33.8	+0.2
ILAR	Eielson Array 0.2nm,0.7s,baz=327,slow=4.8,SNR=4.4	85.49	14	P	P	04 55 22.9	-0.5
YKA	Yellowknife Ar 0.1nm,0.6s,baz=358,slow=5.0,SNR=4.7	91.34	0	P	P	04 55 51.0	-0.2

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*IDC **24** 04:46:18.4±1.6, 34°.15N×25°.11E, h0km, mb3.7/3, mb1 3.7/3, mb1mx3.3/47, mbtmp3.7/3, Error ellipse: s-maj=32.7km s-min=15.4km az=81.0*
*ATH **24** 04:46:20.7, 34°.22N×25°.08E, h11km±4km, ML2.8/2, Error ellipse: s-maj=7.2km s-min=2.5km az=355.0*
*THE **24** 04:46:21.1, 34°.28N×25°.02E, h1km±2km, ML2.4/4, Error ellipse: s-maj=3.7km s-min=1.1km az=169.0*
ISC 24 04:46:21.2±1.3, **34°.22N**±0°.08×**25°.06E**±0°.06, **h20**km, **n14, σ0s.69**/20, **mb3.5**/3, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIVA	Sivas	0.82	345	P	Pb	04 46 36.1	-0.8
SIVA				S	Sb	04 46 47.6	+0.1
SIVA	comp=E,1694µm,0.6s			AML	AML	04 46 57.4	
SIVA	comp=N,1791µm,0.5s			AML	AML	04 47 01.0	
SIVA	Sivas	0.82	345	P	Pb	04 46 36.1	-0.8
SIVA	comp=N,855nm,0.5s			S	Sb	04 46 47.6	+0.1
LAST	Lasithi	1.00	20	P	Pb	04 46 39.4	-0.5
LAST	Lasithi	1.00	20	P	Pb	04 46 39.4	-0.5
LAST	comp=N,115nm,1.3s			S	Sb	04 46 53.8	+1.1
GVD	Gavdhos	1.02	308	P	Pb	04 46 39.9	-0.3
GVD				S	Sb	04 46 53.6	+0.5
GVD	comp=E,672µm,0.4s			AML	AML	04 47 02.2	
GVD	comp=N,778µm,0.4s			AML	AML	04 47 02.4	
GVD	Gavdhos	1.02	308	P	Pb	04 46 39.9	-0.3
GVD	comp=N,362nm,0.4s			S	Sb	04 46 53.6	+0.5
IDI	Anoyia comp=N,3.0nm,0.3s,baz=162,slow=22,SNR=12	1.07	352	Pg	Pb	04 46 40.4	-0.8
IDI	comp=N,8.9nm,0.3s,baz=348,slow=18,SNR=12			Lg	Lg	04 46 56.1	
IDI	Anoyia	1.07	352	P	Pb	04 46 40.7	-0.5
IDI	Anoyia	1.07	352	P	Pb	04 46 40.7	-0.5
NPS	Neapolis	1.13	23	P	Pn	04 46 41.3	-0.7
NPS	Neapolis	1.13	23	P	Pn	04 46 41.3	-0.7
NPS	comp=N,118nm,0.8s			S	Sn	04 46 58.4	+1.4
TORD	Torodi Ar. Bea comp=N,0.4nm,0.6s,baz=34,slow=8.0,SNR=2.8	29.83	231	P	P	04 52 27.3	+0.1
MKAR	Makanchi Array comp=N,0.4nm,0.6s,baz=277,slow=6.2,SNR=5.9	44.36	56	P	P	04 54 30.6	+0.4
ZALV	Zalesovo Beam comp=N,0.7nm,0.4s,baz=269,slow=8.3,SNR=4.2	45.71	46	P	P	04 54 40.8	0.0

TAP 24 04:48:10.8, 24°.45N×121°.84E, h27km, ML1.7, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EWUT	Wuta baz=269	0.05	269	*i* P	Pb	04 48 15.4	0.0
EWUT	baz=269			*i* S	Sb	04 48 18.7	+0.1
ENA	Nanau baz=256	0.09	259	*i* P	Pb	04 48 15.8	+0.1
ENA	baz=256			*i* S	Sb	04 48 19.1	+0.2
TWC	Suao baz=7.0	0.16	4	*i* P	Pb	04 48 16.6	+0.3
TWC	baz=7.0			*i* S	Sb	04 48 20.4	+0.5
NDS	Dongshan baz=329	0.22	329	P	Pb	04 48 16.6	-0.3
NDS	baz=329			*i* S	Sb	04 48 21.3	+0.3
NACB	Ninganchiao baz=223	0.35	219	P	Pn	04 48 19.7	-0.5
NACB	baz=223			S	Sb	04 48 24.7	+0.6
ETLH	Xiulin Townshi baz=237	0.40	234	P	Pb	04 48 20.3	+0.7
ETLH	baz=237			S	Sn	04 48 27.2	-0.5
NNSB	Datong baz=271	0.41	268	P	Pb	04 48 20.1	+0.3
NNSB	baz=271			S	Sb	04 48 26.3	+0.4
NNSH	Datong baz=268	0.41	268	P	Pb	04 48 20.1	+0.2
NNSH	baz=268			S	Sb	04 48 26.1	+0.2
NNS	Nan Shan baz=269	0.42	269	*e*P	Pb	04 48 19.4	-0.6
NNS	baz=269			*e*S	Sb	04 48 26.8	+0.6
NWLT	Wulai baz=318	0.45	317	*e*P	Pb	04 48 20.8	+0.4
NWLT	baz=318			*e*S	Sb	04 48 26.8	+0.1
YHNB	Yeheng baz=298	0.48	298	P	Pb	04 48 21.2	+0.4
YHNB	baz=298			S	Sb	04 48 28.4	+0.8
NSK	Sanguang baz=298	0.49	298	P	Pb	04 48 21.3	+0.2
NSK	baz=298			S	Sb	04 48 28.5	+0.5
TIPB	Shuangxi baz=2.0	0.52	359	*e*P	Pb	04 48 21.8	+0.3
TWB1	Santiao Chiao baz=12	0.58	14	*e*P	Pn	04 48 23.2	-0.1
TWB1	baz=12			*e*S	Sn	04 48 31.3	-0.6
FUSS	Fushou baz=250	0.58	250	*e*P	Pb	04 48 22.8	+0.3
FUSS	baz=250			*e*S	Sb	04 48 31.2	+0.7
WHF	Hehuan Shan baz=247	0.60	240	*e*P	Pb	04 48 23.4	+0.2
WHF	baz=247			*e*S	Sn	04 48 32.4	-0.7

TAP 24 04:48:17.8, 24°.91N×122°.47E, h35km±1km, ML2.4, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWB1	Santiao Chiao baz=283	0.45	283	*e*P	Pb	04 48 27.5	-0.1
TWB1	baz=283			*e*S	Sb	04 48 32.3	-2.1
TIPB	Shuangxi baz=276	0.58	276	P	Pn	04 48 29.2	-0.4
TIPB	baz=276			S	Sn	04 48 37.0	-1.0
TIPB	Shuangxi baz=2.0	0.58	276	*e*S	Pb	04 48 29.2	-0.6
TWC	Suao baz=242	0.64	242	*e*S	Sn	04 48 38.7	-0.5
YOJ	Yonaguni jima baz=127	0.67	132	*e*P	Pn	04 48 30.7	0.0
YOJ	baz=127			S	Sn	04 48 39.6	-0.3

NDS	Dongshan	0.73	248	eP	Pn	04 48 31.2	-0.5
	baz=248						
NDS				eS	Sn	04 48 41.8	+0.1
	baz=248						
TWE	Neicheng	0.75	256	eP	Pn	04 48 31.6	-0.2
	baz=255						
TWE				eS	Sb	04 48 43.0	+0.5
	baz=255						
PCYT	Pengchaiyu	0.80	334	eP	Pb	04 48 33.5	+0.1
	baz=321						
TWA	Mucha	0.80	275	eS	Sb	04 48 44.2	+0.2
	baz=265						
ENA	Nanau	0.81	234	eS	Sn	04 48 42.4	-1.3
	baz=234						
YM01	YM01	0.85	286	eP	Pn	04 48 32.6	-0.6
	baz=286						
YM01				eS	Sn	04 48 43.7	-0.8
	baz=286						
TAP	Taipei	0.88	279	eP	Pn	04 48 32.6	-1.0
	baz=290						
TAP				eS	Sb	04 48 46.4	+0.2
	baz=290						
YM03	YM03	0.88	288	eP	Pb	04 48 35.2	+0.4
	baz=288						
YM03				eS	Sn	04 48 45.6	+0.2
	baz=288						
NWLT	Wulai	0.89	262	eS	Sn	04 48 45.2	-0.2
	baz=262						
YHNB	Yeheng	1.02	257	eP	Pn	04 48 36.1	+0.4
	baz=248						
YHNB				eS	Sn	04 48 49.0	+0.2
	baz=248						
NSK	Sanguang	1.03	257	eP	Pn	04 48 36.5	+0.7
	baz=249						
NSK				eS	Sn	04 48 49.6	+0.5
	baz=249						
NACB	Ninganchiao	1.08	228	eP	Pn	04 48 36.6	+0.2
	baz=233						
NACB				eS	Sn	04 48 49.8	-0.4
	baz=233						
NNSB	Datong	1.09	244	eP	Pn	04 48 37.3	+0.6
	baz=244						
NNSB				eS	Sn	04 48 50.5	-0.2
	baz=244						
NNSH	Datong	1.09	244	eP	Pn	04 48 36.7	-0.1
	baz=245						
NNSH				eS	Sn	04 48 50.7	0.0
	baz=245						
NNS	Nan Shan	1.10	245	eS	Sn	04 48 51.2	+0.4
	baz=245						
ETLH	Xiulin Townshi	1.14	232	eP	Pb	04 48 38.9	-0.1
	baz=238						
ETLH				eS	Sb	04 48 53.0	-0.5
	baz=238						
FUSS	Fushou	1.29	240	eP	Pb	04 48 41.3	-0.4
	baz=240						
WHF	Hehuan Shan	1.33	235	eP	Pn	04 48 41.2	+0.9
	baz=244						
TWT	Tachien	1.34	241	eP	Pn	04 48 40.8	+0.6
	baz=241						
CHGB	Renai	1.45	235	eP	Pb	04 48 43.6	-0.8
	baz=224						

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*IDC **24** 04:53:10.8±1.9, 3°.78N×71°.23W, h0^{km}, mb3.4/3, mb1 3.7/6, mb1mx3.5/47, mbtmp3.6/6, ML2.4/2, Error ellipse: s-maj=33.8km s-min=24.8km az=126.0*

*RSNC **24** 04:53:17.5±0.6, 3°.92N×71°.54W, h3^{km}±4^{km}, ML3.6*

ISC 24 04:53:13.2±2.0**, 3°.95N**±0°.04×**71°.38W**±0°.06**, h7**^{km}±12^{km}**, n16, σ1^{s}24**/24**, mb3.4**/3**, 2C, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTGC	Puerto Gaitan,	0.80	288⇑	iP	Pg	04 53 28.8	+0.3
PTGC				eS	Sg	04 53 38.3	-0.5
PTGC				i		04 53 44.1	
	comp=Z,1µm,0.3s						
GUVC	San Jose del G	1.88	222	eP	Pb	04 53 47.3	-0.5
GUVC				eS	Sn	04 54 10.1	+0.3
GUVC				i		04 54 15.8	
	comp=Z,734nm,0.2s						
CHIC	Chingaza	2.44	286⇑	eP	Pn	04 53 55.5	+1.6
CHIC				eS	Sn	04 54 25.0	+0.7
CHIC				i		04 54 28.3	
	comp=Z,376nm,0.3s						
TAMC	Tame, Arauca	2.50	350	eP	Pb	04 53 57.7	-0.8
TAMC				eS	Sb	04 54 29.3	-0.2
TAMC				i		04 54 38.9	
	comp=Z,275nm,0.4s						
RUSC	La Rusia	2.57	319	eP	Pb	04 53 58.4	-1.5
RUSC				eS	Sb	04 54 31.5	-0.4
RUSC				i		04 54 48.8	
	comp=Z,206nm,0.4s						
MACC	Macarena, Meta	3.05	234	eP	Pn	04 54 04.0	+2.0
MACC				eS	Sb	04 54 44.1	-1.4
MACC				i		04 54 55.2	
	comp=Z,257nm,0.4s						
ROSC	El Rosal	3.06	287	Pn	Pn	04 54 04.6	+2.1
	comp=Z,3.4nm,0.3s,baz=303,slow=19,SNR=14						
ROSC				Sn	Sb	04 54 45.8	-0.4
	comp=Z,26nm,0.3s,baz=299,slow=12,SNR=5.1						
SPBC	San Pablo de B	3.17	302	eP	Pn	04 54 05.0	+1.3
SPBC				eS	Sb	04 54 49.1	+0.1
SPBC				i		04 55 02.3	
	comp=Z,144nm,0.3s						
BARC	Barichara	3.18	326	eP	Pn	04 54 06.4	+2.5
SDV	Santo Domingo	4.96	9	Pn	Pn	04 54 29.6	+1.4
	comp=Z,4.0nm,0.3s,baz=216,slow=8.7,SNR=17						
SDV				Sn	Sn	04 55 25.9	-0.1
	comp=Z,9.6nm,0.3s,baz=315,slow=12,SNR=3.7						
SDV				Lg	Lg	04 55 53.2	
	comp=Z,10nm,0.3s,baz=250,slow=23,SNR=14						
PCRV	Puerto La Cruz	9.11	47	Pn	Pn	04 55 25.9	+0.7
	comp=Z,2.3nm,0.3s,baz=208,slow=8.3,SNR=9.7						
PTGA	Pitinga	12.31	112	Lg	Lg	04 59 37.1	
	comp=Z,1.8nm,0.3s,baz=349,slow=12,SNR=4.9						
TXAR	Lajitas Array	39.66	313	P	P	05 00 46.8	+0.6
	comp=Z,0.2nm,0.6s,baz=131,slow=11,SNR=2.3						
ULM	Lac du Bonnet	50.56	340	P	P	05 02 11.4	-1.0
	comp=Z,0.8nm,0.5s,baz=135,slow=1.4,SNR=2.0						
YKA	Yellowknife Ar	66.54	340	P	P	05 04 03.1	-0.4
	comp=Z,0.2nm,0.7s,baz=128,slow=6.3,SNR=4.1						
WRA	Warramunga Arr	150.32	236	PKPbc	PKPbc	05 13 05.1	-1.2
	comp=Z,0.6nm,1.0s,baz=105,slow=2.9,SNR=4.6						

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*DNK **24** 04:57:06.6±1.8, 51°.27N×16°.24E, h25^{km}±597^{km}, ML2.0*

*IDC **24** 04:57:09.9±1.1, 51°.44N×16°.08E, h0^{km}, mb1 3.6/4, mb1mx3.1/46, mbtmp3.4/4, ML2.7/4, Error ellipse: s-maj=19.1km s-min=10.3km az=109.0*

*VIE **24** 04:57:10.8, 51°.39N×16°.14E, h0^{km}, ML2.5/2 69 km WNW of Wroclaw Suspected Mining induced.*

*PRU **24** 04:57:10.1±0.0, 51°.44N×16°.09E, h0^{km}*

ISC 24 04:57:08.1±0.8**, 51°.50N**±0°.04×**16°.14E**±0°.03**, h0**^{km}**, n34, σ1^{s}00**/69**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.66	171	i Pg	Pg	04 57 21.7	+0.9
KSP				eSg	Sg	04 57 30.2	+0.8
CHVC	Chvalec	0.91	183	ePG	Pb	04 57 26.3	-0.5
CHVC				eSG	Sg	04 57 37.4	0.0
	comp=Z,30nm,0.5s						
OSTC	Ostas	0.94	177	ePG	Pb	04 57 26.8	-0.5
OSTC				eSG	Sg	04 57 38.8	+0.4
	comp=Z,27nm,0.6s						
UPC	Upice	1.00	185	ePG	Pb	04 57 27.8	-0.4
UPC				eSG	Sg	04 57 40.2	+0.2
	comp=Z,63nm,0.3s						
DPC	Dobruska-Polom	1.16	174	ePG	Pg	04 57 30.5	+0.3
DPC				eSG	Sg	04 57 44.8	-0.4
	comp=Z,28nm,0.8s						
PVCC	Panska Ves	1.39	226	ePG	Pg	04 57 34.8	+0.2
PVCC				eSG	Sn	04 57 53.9	+0.2
	comp=Z,87nm,0.3s						
KRLC	Kraliky	1.48	164	ePG	Pn	04 57 35.9	-0.1
KRLC				eSG	Sb	04 57 55.5	-0.4
	comp=Z,80nm,1.1s						
BRG	Berggiesshubel	1.52	246	Pn	Pn	04 57 37.3	+0.8
BRG				Pg	Pb	04 57 37.5	+0.5
BRG				Sg	Sn	04 57 57.8	+0.9
BRG				Amp		04 57 58.1	
	comp=Z,27nm,0.3s						
PRU	Pruhonice	1.82	214	ePG	Pn	04 57 41.8	+1.2
PRU				eSG	Sb	04 58 05.9	+0.3
	comp=Z,28nm,0.9s						
MORC	Moravsky Berou	1.94	152	ePN	Pn	04 57 42.2	-0.2
MORC				eSG	Sb	04 58 09.0	-0.1
CLL	Collm	1.97	266	ePn	Pn	04 57 43.0	+0.3
CLL				ePg	Pb	04 57 45.0	+0.2
CLL				i		04 57 49.5	
CLL				e		04 58 00.0	
CLL				eSg	Sb	04 58 11.0	+1.1
	comp=Z,12nm,0.5s						
OKC	Ostrava-Krasne	2.10	142	eSG	Sg	04 58 14.9	-0.5
	comp=Z,23nm,0.5s						
VRAC	Vranov	2.21	172	Pn	Pn	04 57 46.5	+0.5
	comp=Z,2.3nm,0.3s,baz=353,slow=15,SNR=10						
VRAC				Lg	Lg	04 58 18.6	
	comp=Z,3.0nm,0.3s,baz=93,slow=22,SNR=9.7						
VRAC	Vranov	2.21	172	ePN	Pn	04 57 46.7	+0.7
VRAC				eSG	Sb	04 58 17.4	+0.5
TREC	Trest	2.25	191	ePG	Pb	04 57 50.4	+0.9
TREC				eSG	Sg	04 58 18.6	-1.6
	comp=Z,49nm,0.8s						
PBCC	Pribram	2.27	218	ePG	Pb	04 57 50.8	+0.9
PBCC				eSG	Sg	04 58 20.3	-0.7
KRUC	Moravsky	2.45	176	ePN	Pn	04 57 50.3	+1.1
KRUC				eSG	Sg	04 58 26.1	-0.5
OJC	Ojcow	2.65	117	ePg	Pg	04 58 01.2	+2.4
OJC				eSg	Sg	04 58 35.4	+2.3
NKC	Novy Kostel	2.66	243	ePN	Pn	04 57 53.2	+1.0
NKC				ePG	Pb	04 57 57.3	+0.8
NKC				eSG	Sg	04 58 33.4	0.0
	comp=Z,29nm,0.8s						
JAVC	Velka Javorina	2.82	159	ePN	Pn	04 57 56.0	+1.6
KHC	Kasperske Hory	2.88	216	ePN	Pn	04 57 55.8	+0.5
KHC				ePG	Pb	04 58 01.3	+0.9
KHC				eSN	Sn	04 58 30.8	+0.2
KHC				eSG	Sg	04 58 40.4	-0.2
	comp=Z,11nm,0.7s						
CKRC	Cesky Krumlov	2.93	204	ePN	Pn	04 57 56.8	+0.9
CKRC				ePG	Pb	04 58 02.6	+1.5
CKRC				eSG	Sg	04 58 40.7	-1.4
GERES	GERESS Array B	3.08	211	Pn	Pn	04 57 58.5	+0.5
	comp=Z,0.6nm,0.3s,baz=26,slow=13,SNR=19						
GERES				Pg	Pb	04 58 05.2	+1.4
	comp=Z,2.1nm,0.3s,baz=30,slow=17,SNR=36						
GERES				Lg	Lg	04 58 45.9	
	comp=Z,2.6nm,0.3s,baz=33,slow=26,SNR=9.4						
SMOL	Smolenice	3.10	164	ePG	Pg	04 58 08.1	+0.6
SMOL				eSG	Sg	04 58 47.9	+0.2
LANS	Liptovska Anna	3.18	136	ePG	Pg	04 58 09.3	+0.4
LANS				eSG	Sg	04 58 50.2	+0.2
MODS	Modra-Piesok	3.21	166	ePG	Pg	04 58 08.7	-0.9
MODS				eSG	Sg	04 58 49.2	-2.1
NIE	Niedzica	3.38	126	eP	Pg	04 58 12.8	0.0
NIE				eS	Sg	04 58 56.5	-0.1
VYHS	Vyhne	3.48	149	eSG	Sg	04 58 56.8	-2.9
CONA	Conrad Observa	3.58	183	ePn	Pn	04 58 05.7	+0.8
	comp=Z,1.3nm,0.3s						
CONA				ePg	Pg	04 58 16.1	-0.6
	comp=Z,4.1nm,0.3s						
CONA				Sg	Sg	04 59 02.4	-0.6
	comp=Z,5.5nm,0.3s						
MOA	Molln	3.85	199	i Pn	Pn	04 58 09.5	+1.0
	comp=Z,0.6nm,0.2s						
MOA				ePg	Pg	04 58 21.7	-0.1
	comp=Z,2.0nm,0.3s						
MOA				eSg	Sg	04 59 11.5	-0.2
	comp=Z,6.4nm,0.5s						
ARSA	Arzberg	4.27	186	i Pn	Pn	04 58 15.6	+1.3
	comp=Z,0.6nm,0.2s						
ARSA				eSg	Sg	04 59 25.5	+0.3
	comp=Z,5.2nm,0.5s						
KOLS	Kolonicke sedl	4.70	121	ePN	Pn	04 58 21.0	+0.8
FINES	FINESS Array B	11.37	25	Pn	Pn	04 59 50.3	-1.2
	comp=Z,0.1nm,0.3s,baz=207,slow=11,SNR=3.8						
ARCES	ARCESS Array B	18.63	10	Pn	P	05 01 24.0	-2.9
	baz=191,slow=14,SNR=4.1						

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*IDC **24** 05:08:23.2±1.4, 13°.69S×167°.36E, h0^{km}, mb4.1/9, mb1 4.2/10, mb1mx4.0/43, mbtmp4.1/10, ML3.8/1, MS3.8/7, Ms1 3.8/7, ms1mx3.4/38, Error ellipse: s-maj=47.2km s-min=20.0km az=130.0*

ISC 24 05:08:28.3±1.0**, 13°.75S**±0°.09×**167°.4E**±0°.2**, h35**^{km}**, n13, σ0^{s}71**/11**, mb4.0**/9**, MS3.8**/6**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	8.32	186	Pn	Pn	05 10 26.6	0.0
	1.2nm,0.3s,baz=35,slow=18,SNR=2.4						
DZM				Sn	Sn	05 11 59.6	+0.1
	baz=315,slow=20,SNR=1.5						
DZM				LR	LR	05 13 30.2	
	comp=Z,344nm,18.3s,baz=198,slow=37						
CTA	Charters Tower	21.17	250	P	P	05 13 11.4	+0.6
	3.0nm,0.7s,baz=81,slow=11,SNR=6.5						
STKA	Stephens Creek	29.72	228	P	P	05 14 32.0	+0.6
	0.9nm,0.3s,baz=1.6,slow=8.3,SNR=3.5						
STKA				LR	LR	05 26 24.9	
	comp=Z,181nm,19.3s,baz=48,slow=36						
WRA	Warramunga Arr	32.19	254	P	P	05 14 52.2	-1.1
	1.3nm,0.7s,baz=85,slow=9.3,SNR=12						
WRA				LR	LR	05 28 10.5	
	comp=Z,159nm,18.4s,baz=170,slow=37						
ASAR	Alice Springs	33.14	248	P	P	05 15 00.4	-1.2
	0.9nm,0.6s,baz=74,slow=9.7,SNR=13						
ASAR				LR	LR	05 27 30.0	
	comp=Z,155nm,18.2s,baz=162,slow=35						
DAV	Davao City (W)	46.38	294	LR	LR	05 35 17.9	
	comp=Z,74nm,19.3s,baz=162,slow=35						
CMAR	Chiang Mai Arr	74.66	294	P	P	05 20 05.4	+0.6
	1.2nm,0.4s,baz=130,slow=4.7,SNR=4.8						
SEY	Seymchan	77.33	353	P	P	05 20 19.3	+0.3
	1.1nm,0.6s,baz=141,slow=4.9,SNR=11						
ILAR	Eielson Array	85.56	18	P	P	05 21 02.5	-0.1
	2.0nm,0.7s,baz=239,slow=5.2,SNR=25						
NVAR	Mina Array Bea	86.55	49	LR	LR	05 53 55.3	
	comp=Z,96nm,19.1s,baz=276,slow=32						
PDAR	Pinedale Array	94.20	47	LR	LR	05 55 21.5	
	comp=Z,64nm,20.4s,baz=6.5,slow=30						
MKAR	Makanchi Array	96.58	316	P	P	05 21 54.6	0.0
	0.3nm,0.7s,baz=97,slow=5.2,SNR=3.6						
YKA	Yellowknife Ar	96.63	27	P	P	05 21 54.0	-0.3
	0.4nm,0.7s,baz=252,slow=3.6,SNR=6.7						

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*BJI **24** 05:13:49.6±0.0, 22°.85S×66°.79W, h185^{km}, mB5.5/12*

*SJA **24** 05:13:50.2±0.7, 22°.70S×66°.82W, h221^{km}±5^{km}, ML5.2, MW5.0*

*NEIC **24** 05:13:50.4±2.1, 22°.75S±0°.04×66°.66W±0°.08, h189^{km}±3^{km}, mb5.4/474, Mww5.3, Md5.5(SJA), Error ellipse: s-maj=10.7km s-min=5.9km az=95.0*

*GUC **24** 05:13:51.2±0.6, 22°.76S×66°.88W, h218^{km}±7^{km}, MW5.3*

*VAO **24** 05:13:51.9±0.3, 22°.60S×66°.70W, h207^{km}±4^{km}, mb5.3*

*MOS **24** 05:13:52.0±1.2, 22°.54S×66°.66W, h206^{km}, mb5.3/23, Error ellipse: s-maj=11.5km s-min=7.2km az=107.9*

*IDC **24** 05:13:53.1±0.6, 22°.60S×66°.60W, h210^{km}±5^{km}, mb4.8/28, mb1 4.8/35, mb1mx4.8/47, mbtmp5.3/35, Error ellipse: s-maj=9.7km s-min=7.5km az=50.0*

*NEIC **24** 05:13:54, 22°.77S×66°.69W, h200^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-8.17; $M_{\theta\theta}$1.18; $M_{\phi\phi}$6.99; $M_{r\theta}$0.97; $M_{\theta\phi}$-3.14; $M_{\phi r}$-5.36; Fault plane solution: $M_0$9.90000×10^{16} NP1:ϕ_s149.00000°, δ29.00000°, λ-102.00000°. NP2:ϕ_s344.00000°, δ62.00000°, λ-82.00000°. Principal axes: T 9.9228, Plg16.0000°, Azm68.0000°; N -0.0543, Plg6.0000°, Azm160.0000°; P -9.8685, Plg72.0000°, Azm270.0000°;*

*GCMT **24** 05:13:55.4±0.2, 22°.71S±0°.01×66°.86W±0°.01, h215^{km}±1^{km}, MW5.3/135, Moment Tensor Solution. s90,c124; s135,c201; Duration: 1^{s}1 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.87±.02; $M_{\theta\theta}$0.07±.02; $M_{\phi\phi}$0.80±.02; $M_{r\theta}$0.02±.02; $M_{\theta\phi}$-0.45±.02; $M_{\phi r}$-0.72±.02; Best double couple: $M_0$1.19200×10^{17} NP1:ϕ_s138.00000°, δ30.00000°, λ-118.00000°. NP2:ϕ_s350.00000°, δ64.00000°, λ-75.00000°. Principal axes: T 1.2280, Plg18.0000°, Azm68.0000°; N -0.0730, Plg14.0000°, Azm163.0000°; P -1.1550, Plg67.0000°, Azm288.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 24 05:13:51.7±0.4**, 22°.68S**±0°.03×**66°.76W**±0°.03**, h203**^{km}±3^{km}**, h204**^{km}**:pP-P, n1060, σ1^{s}19**/917**, mb5.4**/268**, 32C-8D, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YJA	Yavi	1.26	66	eP	Pn	05 14 25.6	+1.4
YJA				eS	S	05 14 51.6	+2.5
YJA				IAML		05 14 55.0	
	comp=Z,2µm,1.5s						
LVC	Limon Verde	1.99	272	P	Pn	05 14 30.5	-0.3
	comp=Z,1µm,0.3s,baz=94,slow=5.8						
LVC				S	S	05 14 59.5	-1.1
	comp=Z,2µm,0.3s,baz=238,slow=20,SNR=39						
LVC	Limon Verde	1.99	272	eP	Pn	05 14 30.4	-0.3
LVC				i S	S	05 14 59.9	-0.7
LVC	Limon Verde	1.99	272	P	Pn	05 14 30.6	-0.2
LVC	Limon Verde	1.99	272	eP	Pn	05 14 30.5	-0.3
LVC				eS	S	05 15 00.6	0.0
LVC				IAML		05 15 02.8	
	comp=Z,2µm,0.5s						
LVC	Limon Verde	1.99	272	eP	Pn	05 14 30.7	-0.1
SLA	San Lorenzo	2.33	151⇓	iP	Pn	05 14 35.0	+0.9
SLA				i S	S	05 15 07.1	+0.3
SLA	San Lorenzo	2.33	151	eP	Pn	05 14 35.0	+0.9
SLA				eP	Pn	05 14 35.1	+0.9
SLA				IAML		05 15 15.4	
	comp=Z,298nm,0.9s						
PB09	IPOC Station P	2.47	291⇑	eP	Pn	05 14 35.8	+0.2
PB09				eS	S	05 15 09.1	-0.2
PB09	IPOC Station P	2.47	291		Pn	05 14 35.9	+0.2
PB09	IPOC Station P	2.47	291	eP	Pn	05 14 36.0	+0.4
PB09				eS	S	05 15 09.4	+0.1
PB09				IAML		05 15 10.9	
	comp=Z,18µm,0.7s						
PB15	IPOC Station P	2.56	258⇑	iP	Pn	05 14 35.8	-0.8
PB15				i S	S	05 15 09.9	-1.3
PB15	IPOC Station P	2.56	258		Pn	05 14 35.9	-0.8
PB15	IPOC Station P	2.56	258	eP	Pn	05 14 35.8	-0.8
PB15				eS	S	05 15 09.8	-1.3
PB15				IAML		05 15 11.2	
	comp=Z,25µm,0.3s						
PB06	IPOC Station P	2.60	269⇑	iP	Pn	05 14 36.2	-0.9
PB06				i S	S	05 15 10.4	-1.4
PB06	IPOC Station P	2.60	269	Pn	Pn	05 14 36.4	-0.7
PB06	IPOC Station P	2.60	269	eP	Pn	05 14 36.4	-0.7
PB06				eS	S	05 15 10.8	-1.1
PB06				IAML		05 15 13.7	
	comp=Z,10µm,0.6s						
PB01	IPOC Station P	3.02	302⇑	iP	Pn	05 14 41.4	-0.4
PB01				i S	S	05 15 19.6	-0.8
PB01	IPOC Station P	3.02	302	Pn	Pn	05 14 41.6	-0.3
PB01	IPOC Station P	3.02	302	eP	Pn	05 14 41.6	-0.3
PB01				eS	S	05 15 19.4	-1.0
PB01				IAML		05 15 21.9	
	comp=Z,23µm,0.2s						
PB07	IPOC Station P	3.05	288⇑	eP	Pn	05 14 41.7	-0.7
PB07				eS	S	05 15 18.7	-2.6
PB07	IPOC Station P	3.05	288	Pn	Pn	05 14 41.8	-0.7
PB07	IPOC Station P	3.05	288	eP	Pn	05 14 41.6	-0.7
PB07				eS	S	05 15 19.4	-1.9
PB07				IAML		05 15 22.2	
	comp=Z,23µm,0.4s						
PB04	IPOC Station P	3.16	276⇑	iP	Pn	05 14 42.4	-1.2
PB04				i S	S	05 15 21.1	-2.4
PB04	IPOC Station P	3.16	276	Pn	Pn	05 14 42.6	-0.9
PB04	IPOC Station P	3.16	276	eP	Pn	05 14 42.7	-0.9
PB04				eS	S	05 15 21.6	-1.9
PB04				IAML		05 15 25.4	
	comp=Z,17µm,0.3s						
PB08	IPOC Station P	3.38	318⇑	eP	Pn	05 14 47.3	+0.8
PB08				i S	S	05 15 29.5	+0.9
PB08	IPOC Station P	3.38	318	Pn	Pn	05 14 47.4	+1.0
PB08	IPOC Station P	3.38	318	eP	Pn	05 14 47.2	+0.8
PB08				eS	S	05 15 29.2	+0.6
PB08				IAML		05 15 34.7	
	comp=Z,7µm,0.6s						
FSA	Cafayete	3.48	168	eP	Pn	05 14 47.6	+0.1
GO02	Mina Guanaco	3.58	226⇑	iP	Pn	05 14 47.4	-1.3
GO02				eS	S	05 15 30.4	-2.6
GO02	Mina Guanaco	3.58	226	Pn	Pn	05 14 47.8	-1.0
PB10	IPOC Station P	3.59	256⇑	iP	Pn	05 14 47.0	-1.6
PB10				eS	S	05 15 28.1	-4.6
PB10	IPOC Station P	3.59	256	Pn	Pn	05 14 47.3	-1.4
PB10	IPOC Station P	3.59	256	eP	Pn	05 14 47.2	-1.4
PB10				eS	S	05 15 29.0	-3.6
PB10				IAML		05 15 32.5	
	comp=Z,4µm,0.3s						
PATCX	Punta Patache	3.66	300		Pn	05 14 47.6	-1.9
TA01	Diego Aracena	3.82	303⇑	iP	Pn	05 14 49.7	-1.7
TA01				eS	S	05 15 34.2	-3.5
TA01	Diego Aracena	3.82	303	Pn	Pn	05 14 50.3	-1.1
PB14	IPOC Station P	3.86	239⇑	eP	Pn	05 14 50.3	-1.9
PB14				eS	S	05 15 34.7	-4.4
PB14	IPOC Station P	3.86	239	Pn	Pn	05 14 50.5	-1.6
PB14	IPOC Station P	3.86	239	eP	Pn	05 14 50.6	-1.6
PB14				eS	S	05 15 35.0	-4.1
PB14				IAML		05 15 39.0	
	comp=Z,7µm,0.6s						
TA02	Huaiquique	3.96	307	eP	Pn	05 14 51.2	-1.9
TA02				eS	S	05 15 37.1	-3.6
AHML	Horco Molle	4.28	163⇓	eP	Pn	05 14 57.1	-0.1
AHML				eS	S	05 15 48.0	-0.3
AHML	Horco Molle	4.28	163	eP	Pn	05 14 57.0	-0.2
AHML				IAML		05 16 36.0	
	comp=Z,107nm,2.3s						
PSGC	Pisagua	4.39	314⇑	eP	Pn	05 14 56.6	-2.1
PSGCX	Pisagua	4.39	314		Pn	05 14 56.6	-2.1
MNMC	Minye Minye	4.42	323⇑	eP	Pn	05 14 58.9	-0.3
MNMC	Minye Minye	4.42	323	Pn	Pn	05 14 59.0	-0.3
AC02	Maricunga	4.66	207⇑	iP	Pn	05 15 01.0	-1.3
AC02	Maricunga	4.66	207	Pn	Pn	05 15 01.1	-1.2
AC01	Pan de Azucar	4.91	225⇑	iP	Pn	05 15 02.0	-3.1
AC01	Pan de Azucar	4.91	225	Pn	Pn	05 15 02.1	-3.0
AP01	Chacalluta	5.45	321		Pn	05 15 12.1	+0.1
VCA	Vinchina	6.17	192	eP	Pn	05 15 16.8	-4.5
VCA				IAML		05 16 44.6	
	comp=Z,599nm,1.0s						
LPAZ	La Paz	6.49	348	P	Pn	05 15 26.1	0.0
	comp=Z,26nm,0.3s,baz=172,slow=7.8,SNR=191						
LPAZ				S	S	05 16 37.0	-3.6
	comp=Z,4.7nm,0.3s,baz=61,slow=24,SNR=2.0						
LPAZ	La Paz	6.49	348	P	Pn	05 15 27.3	+1.2
LPAZ						05 16 37.0	
LPAZ	La Paz	6.49	348	Pn	Pn	05 15 27.2	+1.2
SIV	San Ignacio	8.55	40	P	Pn	05 15 50.8	-1.4
	comp=Z,140nm,0.3s,baz=228,slow=12,SNR=1768						
SIV				S	S	05 17 20.7	-7.8
	comp=Z,4.0nm,0.3s,baz=230,slow=14,SNR=5.1						
CPUP	Villa Florida	9.32	115	P	Pn	05 16 00.4	-1.7
	comp=Z,0.5nm,0.3s,baz=295,slow=12,SNR=29						
CPUP	Villa Florida	9.32	115	Pn	Pn	05 15 59.7	-2.4
AQDB	Aquidauana	10.52	80	eP	Pn	05 16 17.3	-0.4
ITQB	Itaqui	11.45	130	eP	Pn	05 16 29.6	+0.1
VILB	Vilhena	11.51	34	eP	Pn	05 16 29.0	-1.4
PP1B	Ponte de Pedra	12.25	68	eP	Pn	05 16 38.6	-1.2
ETMB	Extrema	12.81	2	eP	Pn	05 16 45.5	-1.2
TRCB	Terra Rica	13.03	93	eP	Pn	05 16 49.0	-0.6
PTGB	Pitanga	13.61	101	eP	Pn	05 16 56.9	+0.1
ITAB	Concordia	14.02	112	eP	Pn	05 17 01.9	+0.1
SAML	Samuel	14.08	15	P	Pn	05 17 01.8	-0.9
SAML	Samuel	14.08	15		Pn	05 17 01.8	-0.9
CPSB	Cacapava Do Su	14.18	126	eP	Pn	05 17 03.1	-0.6
NNA	Nana	14.34	316	P	Pn	05 17 06.5	+0.6
	comp=Z,6.2nm,0.3s,baz=152,slow=9.5,SNR=35						
NNA				S	S	05 19 45.0	-0.2
	comp=Z,11nm,0.3s,baz=269,slow=16,SNR=5.1						
NNA	Nana	14.34	316	ceP	Pn	05 17 05.8	-0.1
NNA				pmax	pmax		
	comp=Z,952nm,1.7s						
NNA	Nana	14.34	316		Pn	05 17 06.2	+0.3
PCMB	Pacaembu	14.40	89	eP	Pn	05 17 05.7	-0.8
PLTB	Pedras Altas	14.78	131	eP	Pn	05 17 09.9	-1.1
ITRB	Iturama	15.58	82	eP	P	05 17 20.6	-0.3
ARAG	Araguaiana, MT	15.72	66	eP	P	05 17 21.9	-0.6
CLDB	Colider	15.74	44	eP	P	05 17 21.1	-1.6
CNLB	Canela	15.74	118	eP	P	05 17 21.9	-0.7
CZSB	Cruzeiro do Su	15.93	338	eP	P	05 17 21.8	-3.0
BB19B	Bebedouro	17.00	88	eP	P	05 17 36.9	+0.4
SPB	Sao Paulo	17.80	97	P	P	05 17 45.2	0.0
SPB				IAmb	IAmb	05 17 47.2	
	comp=Z,167nm,0.7s						
SPB	Sao Paulo	17.80	97	eP	P	05 17 45.7	+0.5
PET01	Itanhaem-SP	17.94	99	eP	P	05 17 46.9	+0.1
IPMB	Ipameri, GO	18.01	78	eP	P	05 17 47.7	+0.1

SNDB	Serra Nova Dou	18.18	57	*e*P	P	05 17 49.3	-0.1
VAO	Valinhos	18.25	95	*e*P	P	05 17 50.2	0.0
PLCA	Paso Flores	18.28	189	P	P	05 17 50.5	+0.2
	comp=Z,2.2nm,0.3s,baz=8.9,slow=12,SNR=11						
PLCA				PcP	PcP	05 22 13.7	+0.7
	comp=Z,0.6nm,0.3s,baz=14,slow=0.7,SNR=9.6						
PLCA	Paso Flores	18.28	189	P	P	05 17 49.8	-0.5
PLCA				pmax	pmax		
	comp=Z,34nm,0.8s						
PLCA	Paso Flores	18.28	189	P	P	05 17 49.8	-0.5
BDFB	Brasilia	19.03	72	P	P	05 17 58.9	+0.2
	comp=Z,37nm,0.3s,baz=256,slow=9.5,SNR=555						
BDFB	Brasilia	19.03	72	P	P	05 17 58.9	+0.2
NPGB	Novo Progresso	19.04	37	*e*P	P	05 17 57.1	-1.5
ATAH	Atahualpa	19.09	322	P	Pn	05 18 02.0	-1.0
	comp=Z,2.4nm,0.3s,baz=153,slow=7.5,SNR=39						
PARB	Paraibuna	19.47	96	*e*P	P	05 18 03.2	-0.1
MACA	Manacapuru-AM	20.28	18	*e*P	P	05 18 10.3	-1.7
BSCB	Bom Sucesso	20.48	89	*e*P	P	05 18 13.1	-1.0
PEXB	Peixe	20.49	62	*e*P	P	05 18 13.8	-0.5
MAN01	Angra dos Reis	21.02	95	*e*P	P	05 18 19.2	-0.6
ITTB	Itaituba	21.10	32	*e*P	P	05 18 19.4	-1.4
GO07	Milladeo Hill,	21.17	194	P	P	05 18 19.5	-1.6
VAS01	Vassouras-RJ	21.55	93	*e*P	P	05 18 25.0	-0.3
JANB	Januaria	22.53	74	*e*P	P	05 18 33.4	-1.4
DUB01	Friburgo-RJ	22.55	93	*e*P	P	05 18 34.2	-0.7
PTGA	Pitinga	22.80	18	P	P	05 18 35.8	-1.4
	comp=Z,57nm,0.6s,baz=205,slow=13,SNR=151						
PTGA				S	S	05 22 27.8	-3.0
	comp=Z,27nm,0.8s,baz=302,slow=20,SNR=9.1						
PTGA	Pitinga	22.80	18	P	P	05 18 35.7	-1.4
PTGA				IAmb	IAmb	05 18 50.2	
	comp=Z,71nm,0.8s						
PTGA	Pitinga	22.80	18	*e*P	P	05 18 35.3	-1.8
PTGA	Pitinga	22.80	18	*e*P	P	05 18 35.9	-1.2
PTGA				*e*S	S	05 22 28.6	-2.2
SMTB	Santa Maria do	22.96	56	*e*P	P	05 18 37.4	-1.3
PRPB	Parauapebas	23.16	47	*e*P	P	05 18 39.1	-1.3
SDBA	SAO DESIDERIO	23.18	68	*e*P	P	05 18 39.4	-1.2
CAM01	Campos-RJ	23.24	93	*e*P	P	05 18 41.4	+0.4
MALB	Monte Alegre	24.00	32	*e*P	P	05 18 47.2	-0.8
PTLC	Puerto Leguiza	24.03	340	*e*P	P	05 18 44.0	-4.2
SJMB	Sao Joao De Ma	24.24	85	*e*P	P	05 18 49.2	-1.0
ALF01	Guarapari-ES	24.27	90	*e*P	P	05 18 48.0	-2.5
ALF01				*e*S	S	05 22 53.0	-1.3
BSFB	Barra de Sao F	24.52	86	*e*P	P	05 18 52.2	-0.5
BSFB				*e*S	S	05 22 57.5	-0.7
RIB01	Linhares ES	24.83	87	*e*P	P	05 18 54.4	-1.1
NAN01	Guarapari, ES	25.43	84	*e*P	P	05 18 59.7	-1.2
OTAV	Otavalo	25.47	332	P	P	05 19 03.7	+1.9
OTAV				pmax	pmax		
	comp=Z,95nm,1.5s						
OTAV	Otavalo	25.47	332	P	P	05 19 03.7	+1.9
OTAV				IAmb	IAmb	05 19 12.4	
	comp=Z,95nm,1.4s						
OTAV	Otavalo	25.47	332	*e*P	P	05 19 03.3	+1.5
OTAV	Otavalo	25.47	332	*e*P	P	05 19 01.4	-0.5
MACC	Macarena, Meta	25.63	343	*e*P	P	05 19 00.9	-1.8
FLOC	Florencia	25.63	339	*e*P	P	05 19 03.0	+0.3
GUVC	San Jose del G	25.72	346	*e*P	P	05 19 03.6	0.0
GCUF	Volcan Galeras	25.91	335	*e*P	P	05 19 07.7	+1.8
GARC	Garzon, Huila	26.15	340	*e*P	P	05 19 07.7	0.0
MCPB	Macapa, AP	26.40	35	*e*P	P	05 19 08.7	-1.0
PCON	Cinco Dias	26.58	338	*e*P	P	05 19 13.7	+1.8
BETC	Betania	26.60	340	*e*P	P	05 19 12.3	+0.9
BBAC	Balboa, Cauca	26.60	336	*e*P	P	05 19 13.1	+1.4
POPC	Popayan, Colom	26.88	338	*e*P	P	05 19 15.4	+1.2
MARP	Paez Belalcaza	26.91	339	*e*P	P	05 19 14.9	+0.4
TMAB	Tom-Au,PA,Br	27.12	45	*e*P	P	05 19 15.4	-0.7
PTGC	Puerto Gaitan,	27.23	348	*e*P	P	05 19 16.5	-0.6
GDU01	Guandu, BA	27.28	76	*e*P	P	05 19 15.4	-2.1
ORTC	Ortega, Tolima	27.70	342	*e*P	P	05 19 21.1	-0.2
CHIC	Chingaza	27.99	345	*e*P	P	05 19 24.0	-0.3
ROSC	El Rosal	28.34	344	P	P	05 19 27.5	+0.2
	comp=Z,22nm,0.5s,baz=335,slow=9.4,SNR=14						
TOLC	Tolima	28.37	342	*e*P	P	05 19 27.3	-0.2
RREF	El Recreo	28.67	342	*e*P	P	05 19 30.6	+0.1
PLMC	San Jos del P	28.96	340	*e*P	P	05 19 31.4	-1.0
GUY2C	Guyana, Caldas	28.99	342	*e*P	P	05 19 32.4	-0.7
SPBC	San Pablo de B	29.06	345	*e*P	P	05 19 32.2	-1.1
RUSC	La Rusia	29.07	347	*e*P	P	05 19 33.5	-0.3
NORC	Norcasia	29.17	343	*e*P	P	05 19 32.8	-1.6
TAMC	Tame, Arauca	29.36	350	*e*P	P	05 19 35.2	-0.8
ROSB	Rosrio	29.47	51	*e*P	P	05 19 35.7	-1.2
EFI	East Falkland	29.71	169	P	P	05 19 38.2	-0.4
EFI				pmax	pmax		
	comp=Z,64nm,0.9s						
EFI	East Falkland	29.71	169	P	P	05 19 38.2	-0.4
EFI				IAmb	IAmb	05 19 39.3	
	comp=Z,64nm,0.9s						
BARC	Barichara	29.77	347	*e*P	P	05 19 38.0	-1.8
CBOC	Ciudad Bolivar	29.78	341	*e*P	P	05 19 38.9	-0.9
PTBC	PUERTO BERRIO,	30.01	345	*e*P	P	05 19 38.0	-3.6
BRRC	Barranca, Sant	30.38	346	*e*P	P	05 19 44.3	-0.6
PAMC	Pamplona, Colo	30.40	348	*e*P	P	05 19 44.3	-1.3
SOLC	Bahia Solano	30.57	339	*e*P	P	05 19 52.7	+6.2
MDP	Montagnes des	30.87	28	P	P	05 19 48.5	-0.7
	comp=Z,100nm,0.5s,baz=204,slow=9.5,SNR=83						
DBBC	Dabeiba	30.93	342	*e*P	P	05 19 49.1	-0.8
OCAC	Ocana	31.40	347	*e*P	P	05 19 51.4	-2.6
UREC	San Jos de Ur	31.45	343	*e*P	P	05 19 52.2	-2.0
BAUV	El Baul	31.46	358	*e*	P	05 19 53.7	-0.6
SDV	Santo Domingo	31.60	353	P	P	05 19 55.4	-0.5
SDV				IAmb	IAmb	05 20 04.1	
	comp=Z,66nm,1.1s						
SDV	Santo Domingo	31.60	353	*e*P	P	05 19 55.0	-0.8
SDV	Santo Domingo	31.60	353	*e*P	P	05 19 55.2	-0.6
PAYG	Puerto Ayora	31.66	310	P	P	05 19 58.9	+2.7
ORIV	Oritupano	31.73	6	*e*	P	05 19 57.8	+1.1
SMLC	San Martn de	32.10	346	*e*P	P	05 19 56.8	-3.2
NBMO	Morrinhos-CE	32.26	57	*e*P	P	05 20 00.4	-1.1
NBLI	Livramento-PB	32.47	67	*e*P	P	05 20 02.4	-0.9
NBPA	Parau_RN	33.19	64	*e*P	P	05 20 08.6	-0.9
NBRF	Rio Formoso -	33.39	70	*e*P	P	05 20 09.8	-1.4
TRN	Trinidad (W)	33.54	10	*e*	P	05 20 14.1	+1.7
RCBR	Riachuelo	34.16	65	P	P	05 20 17.5	-0.4
	comp=Z,89nm,0.9s,baz=167,slow=1.2,SNR=48						
RCBR	Riachuelo	34.16	65	P	P	05 20 18.2	+0.3
RCBR				pmax	pmax		
	comp=Z,92nm,1.0s						
RCBR	Riachuelo	34.16	65	P	P	05 20 18.2	+0.3
RCBR				IAmb	IAmb	05 20 19.7	
	comp=Z,92nm,0.9s						
RCBR	Riachuelo	34.16	65	*e*P	P	05 20 17.8	-0.1
TOSP	Speyside	34.32	11	*e*	P	05 20 19.7	+0.6
TOSP	Speyside	34.32	11	P	P	05 20 19.7	+0.6
TOSP	Speyside	34.32	11	IAmb	IAmb	05 20 21.4	
	comp=Z,132nm,0.6s						
NBPV	Pedro Velho	34.37	67	*e*P	P	05 20 18.9	-0.8
GRGR	Grenville	34.96	9	*e*	P	05 20 25.1	+0.5
GRGR	Grenville	34.96	9	P	P	05 20 25.1	+0.5
GRGR	Grenville	34.96	9	IAmb	IAmb	05 20 26.3	
	comp=Z,309nm,0.6s						
GCMP	Grenada, Carri	35.34	9	*e*	P	05 20 28.0	+0.1
SVB	Belmont	36.14	9	*e*	P	05 20 34.2	-0.5
SVB	Belmont	36.14	9	P	P	05 20 34.2	-0.5
SVB	Belmont	36.14	9	IAmb	IAmb	05 20 36.8	
	comp=Z,71nm,0.8s						
SVV	Soufriere Volc	36.19	9	*e*	P	05 20 35.4	+0.3
MCLT	Moule a Chique	36.62	10	*e*	P	05 20 35.5	-3.2
MCLT	Moule a Chique	36.62	10	P	P	05 20 38.9	+0.2
MCLT				IAmb	IAmb	05 21 45.5	
	comp=Z,128nm,1.0s						
SLDE	Delcer	36.69	9	*e*	P	05 20 41.2	+1.9
SLPA	Patience	36.76	10	*e*	P	05 20 41.3	+1.4
SLBI	Saint Lucia, B	36.92	9	*e*	P	05 20 41.5	+0.3
JTS	Las Juntas de	37.31	330	P	P	05 20 46.2	+1.6
	comp=Z,65nm,0.8s,baz=205,slow=3.4,SNR=29						
JTS	Las Juntas de	37.31	330	*d i*P	P	05 20 47.0	+2.5
JTS				pmax	pmax		
	comp=Z,157nm,1.2s						
JTS	Las Juntas de	37.31	330	P	P	05 20 47.2	+2.6
JTS				IAmb	IAmb	05 20 48.5	
	comp=Z,150nm,1.1s						
JTS	Las Juntas de	37.31	330	*e*P	P	05 20 47.1	+2.5
MPOM	Morne Pois Mar	37.35	9	*e*	P	05 20 44.5	-0.3
BIM	Bigot	37.39	9	*e*	P	05 20 45.3	+0.1
FDF	Fort de France	37.59	9	*e*	P	05 20 46.3	-0.6
FDF	Fort de France	37.59	9	P	P	05 20 46.3	-0.6
FDF				pmax	pmax		
	comp=Z,182nm,0.8s						
FDF	Fort de France	37.59	9	P	P	05 20 46.3	-0.6
FDF	Fort de France	37.59	9	IAmb	IAmb	05 20 48.8	
	comp=Z,182nm,0.8s						
ILAM	Ilet Lapin Mar	37.67	9	*e*	P	05 20 46.2	-1.3
MAGL	Barre de l'ile	38.77	8	*e*	P	05 20 56.9	+0.2
CBE	Ff, Capester	38.84	8	*e*	P	05 20 57.5	+0.2
ACON	Acoyapa	38.88	330	P	P	05 20 59.5	+1.9
BPA	Boggy Peak	39.78	7	*e*	P	05 21 02.1	-3.0
ANBD	Bethesda, Anti	39.79	7	*e*	P	05 21 02.6	-2.5
MATN	Matagalpa	40.07	330	IAmb	IAmb	05 21 11.2	
	comp=Z,115nm,0.8s						
ANWB	Willy Bob	40.40	7	*e*	P	05 21 07.9	-2.2
ANWB	Willy Bob	40.40	7	P	P	05 21 08.7	-1.4
OBIP	Obispado Ponce	40.48	0	P	P	05 21 08.5	-2.3
MTP	Monte Pirata	40.55	2	P	P	05 21 09.1	-2.3
SJG	San Juan	40.55	1	P	P	05 21 09.8	-1.5
	comp=Z,37nm,0.8s,baz=124,slow=4.2,SNR=7.4						
SJG				S	S	05 27 03.2	-2.0
	comp=Z,16nm,0.9s,baz=329,slow=20,SNR=6.7						
SJG	San Juan	40.55	1	P	P	05 21 09.7	-1.7
MPR	Mayaguez	40.65	359	IAmb	IAmb	05 22 04.7	
	comp=Z,186nm,1.8s						
CBYP	Canovanas	40.72	1	P	P	05 21 11.0	-1.8
GCPR	Guaynabo City	40.75	1	P	P	05 21 10.8	-2.1
AOPR	Arecibo Observ	40.78	0	P	P	05 21 15.0	+1.7
AOPR				IAmb	IAmb	05 21 18.4	
	comp=Z,50nm,0.6s						
BANI	BANI	40.98	355	P	P	05 21 14.2	-0.8
SDDR	Presa de Saban	41.65	354	P	P	05 21 20.2	-0.2
TGUH	Tegucigalpa,Un	41.68	329	P	P	05 21 23.0	+2.3
TGUH				IAmb	IAmb	05 21 23.1	
	comp=Z,221nm,1.1s						
TGUH	Tegucigalpa,Un	41.68	329	*e*P	P	05 21 21.4	+0.7
MTO3	Montecristo	42.99	327	P	P	05 21 32.7	+1.2
MTO3				IAmb	IAmb	05 21 34.0	
	comp=Z,105nm,0.8s						
ESQI	Esquipulas	43.12	327	IAmb	IAmb	05 21 35.2	
	comp=Z,150nm,0.9s						
FSCY	Frank Sound, G	44.06	340	P	P	05 21 39.5	-0.1
WBCY	West Bay, Gran	44.18	340	P	P	05 21 41.5	+0.9
PETF	Flores	45.39	328	P	P	05 21 50.6	+0.4
PETF				IAmb	IAmb	05 21 52.5	
	comp=Z,104nm,0.9s						
CCIG	Comitan	46.01	325	IAmb	IAmb	05 21 57.2	
	comp=Z,107nm,1.0s						
TEIG	Tepich	47.54	332	P	P	05 22 06.7	-0.2
TEIG				IAmb	IAmb	05 22 08.1	
	comp=Z,119nm,0.8s						
061Z	Ochoppi	50.17	343	IAmb	IAmb	05 22 28.6	
	comp=Z,156nm,1.0s						
TLIG	Tlapa	50.67	319		PcP	05 23 47.9	+2.7
DWPF	Disney Wildern	52.45	344	P	P	05 22 43.6	0.0
	baz=163						
DWPF	Disney Wildern	52.45	344	P	P	05 22 44.5	+0.9
DWPF				IAmb	IAmb	05 22 45.1	
	comp=Z,70nm,0.8s						
MOIG	Morelia	53.88	319	IAmb	IAmb	05 22 57.4	
	comp=Z,109nm,0.8s						
656A	Willston	53.94	343	P	P	05 22 55.6	+1.2
656A				IAmb	IAmb	05 22 56.0	
	comp=Z,63nm,0.9s						
451A	Vernon	56.04	340	P	P	05 23 09.8	+0.3
352A	Blakely	56.60	341	P	P	05 23 13.5	+0.1
Z59A	Georgetown, SC	56.88	347	P	P	05 23 16.4	+1.1
	baz=166						
NHSC	New Hope	56.94	347	P	P	05 23 16.3	+0.6
	baz=165,SNR=7.0						
BRAL	Brewton	56.97	339	P	P	05 23 15.4	-0.6
	baz=158,SNR=9.4						
ZAIG	Zacatecas	57.06	320	P	P	05 23 18.9	+1.7
ZAIG				IAmb	IAmb	05 23 20.3	
	comp=Z,77nm,0.9s						
154A	Montrose	57.16	344	P	P	05 23 17.6	+0.3
BELA	Belgrano 2	57.31	172	P	P	05 23 14.3	-3.5
BELA				IAmb	IAmb	05 23 20.3	
	comp=Z,64nm,1.1s						
Z56A	Williston	57.41	345	IAmb	IAmb	05 23 20.6	
	comp=Z,114nm,0.9s						
Y60A	Bolivia	57.42	349	P	P	05 23 19.5	+0.5
250A	Grady	57.47	340	IAmb	IAmb	05 23 20.5	
	comp=Z,114nm,1.1s						
Y58A	Scranton	57.60	347	P	P	05 23 21.2	+0.9
Y57A	Sumter	57.86	347	P	P	05 23 22.9	+0.7
Y57A				IAmb	IAmb	05 23 23.8	
	comp=Z,67nm,1.0s						
X60A	Albert Glenn T	57.94	349	P	P	05 23 22.7	+0.1
	baz=168						
346A	Big Creek Wild	58.00	337	IAmb	IAmb	05 23 24.4	
	comp=Z,104nm,0.9s						
GOGA	Godfrey	58.01	344	P	P	05 23 22.8	-0.5
	baz=162,SNR=8.3						
X59A	McDuffie Farm,	58.04	348	P	P	05 23 22.9	-0.5
	baz=167						
X58A	Rowland	58.17	348	P	P	05 23 25.2	+0.9
X58A				IAmb	IAmb	05 23 25.6	
	comp=Z,46nm,0.8s						
X57A	Johnson Farm,	58.23	347	P	P	05 23 24.0	-0.7
	baz=166						
VNA3	Neumayer Olymp	58.32	161	P	P	05 23 25.7	+0.7
W61A	Ground Anchor	58.36	350	P	P	05 23 25.1	-0.4
	baz=169						
Z51A	Franklin	58.39	342	IAmb	IAmb	05 23 26.9	
	comp=Z,76nm,1.3s						
BIRD	Birdtown, Kers	58.48	347	IAmb	IAmb	05 23 28.1	
	comp=Z,100nm,1.0s						
HODGE	Hodges	58.49	345	IAmb	IAmb	05 23 28.1	
	comp=Z,56nm,1.1s						
VNA1	Neumayer--Stat	58.51	161	P	P	05 23 27.2	+1.0
344A	Westbrook Farm	58.53	336	P	P	05 23 26.9	0.0
344A				IAmb	IAmb	05 23 28.4	
	comp=Z,72nm,0.8s						
CNNC	Cliffs of the	58.57	349	P	P	05 23 26.6	-0.4
	baz=168						
V62A	Hyde County Ai	58.58	351	P	P	05 23 27.0	-0.1
	baz=170						
W58A	Raeford	58.60	348	P	P	05 23 27.3	+0.1
	baz=166,SNR=7.5						
Y52A	Lilburn	58.60	343	IAmb	IAmb	05 23 28.2	
	comp=Z,46nm,0.8s						
LRAL	Lakeview Retre	58.68	340	P	P	05 23 27.2	-0.6
	baz=158,SNR=20						
LRAL	Lakeview Retre	58.68	340	IAmb	IAmb	05 23 28.6	
	comp=Z,105nm,1.3s						
W57A	Gilead	58.88	347	P	P	05 23 29.0	-0.2
W57A				IAmb	IAmb	05 23 30.6	
	comp=Z,56nm,0.8s						
VNA2	Neumayer--Watz	58.88	161	P	P	05 23 29.2	+0.4
	baz=282,slow=8.3						
PAULI	Pauline	58.95	346	IAmb	IAmb	05 23 31.3	
	comp=Z,66nm,0.7s						
V60A	Jim Taylor Roa	58.98	350	P	P	05 23 29.5	-0.3
	baz=169						
W56A	Indian Trail	58.98	347	P	P	05 23 30.0	+0.2
	baz=165,SNR=13						
146A	Union	58.99	338	IAmb	IAmb	05 23 31.2	
	comp=Z,87nm,0.8s						
VBMS	Vicksburg	59.13	337	P	P	05 23 30.9	-0.1
	baz=154						
V59A	Middlesex	59.14	349	P	P	05 23 31.0	0.0
	baz=168						
KMSC	Kings Mountain	59.15	346	P	P	05 23 31.2	+0.1
	baz=164,SNR=20						
KMSC	Kings Mountain	59.15	346	IAmb	IAmb	05 23 32.7	
	comp=Z,75nm,0.8s						
Z47A	Carrollton	59.17	339	IAmb	IAmb	05 23 32.0	
	comp=Z,73nm,0.7s						
Y49A	Blount Mountai	59.26	341	IAmb	IAmb	05 23 32.7	
	comp=Z,72nm,1.2s						
HKT	Hockley	59.33	331	*d i*P	P	05 23 33.2	+0.9
HKT				pmax	pmax		
	comp=Z,81nm,1.2s						
HKT	Hockley	59.33	331	P	P	05 23 33.2	+0.9
HKT				IAmb	IAmb	05 23 34.6	
	comp=Z,81nm,1.2s						
U61A	Possum Corner	59.41	351	P	P	05 23 32.3	-0.4
	baz=170						
V57A	Coltrane Farms	59.54	348	P	P	05 23 33.5	-0.2
	baz=166,SNR=5.8						
V56A	Mocksville	59.61	347	P	P	05 23 34.7	+0.5
	baz=165,SNR=25						
U60A	Pendleton	59.65	350	P	P	05 23 34.1	-0.3
	baz=169						
FPAL	Fort Paine	59.66	342	IAmb	IAmb	05 23 35.4	
	comp=Z,47nm,0.7s						
833A	Chaparral WMA,	59.69	327	P	P	05 23 35.5	+0.6
	baz=145,SNR=60						
W52A	Murphy	59.73	344	IAmb	IAmb	05 23 36.3	
	comp=Z,59nm,0.9s						
V55A	Taylorsville	59.80	346	P	P	05 23 36.3	+0.8
U58A	Oxford	59.81	349	P	P	05 23 35.6	+0.1
	baz=167,SNR=5.1						
U57A	Blanch	59.99	348	P	P	05 23 37.0	+0.3
	baz=167,SNR=8.7						
V53A	Saluda	59.99	345	IAmb	IAmb	05 23 38.2	
	comp=Z,54nm,0.8s						
U56A	King	60.11	347	P	P	05 23 38.5	+0.9
	baz=166,SNR=11						
W50A	Signal Mountai	60.20	343	IAmb	IAmb	05 23 39.3	
	comp=Z,85nm,0.8s						
CPCT	Cooper Cave	60.22	343	IAmb	IAmb	05 23 39.4	
	comp=Z,53nm,0.8s						
TKL	Tuckaleechee C	60.22	344	IAmb	IAmb	05 23 39.2	
	comp=Z,68nm,0.8s						
T58A	Grand View Acr	60.34	349	P	P	05 23 39.3	+0.2
	baz=168,SNR=6.2						
V52A	Sevierville	60.35	344	IAmb	IAmb	05 23 40.2	
	comp=Z,75nm,0.8s						
NATX	Nacogdoches	60.37	333	P	P	05 23 40.6	+1.1
	baz=150,SNR=20						
NATX	Nacogdoches	60.37	333	P	P	05 23 40.9	+1.4
SNAA	Sanae	60.51	161	P	P	05 23 40.5	+0.5
SNAA	Sanae	60.51	161	P	P	05 23 40.7	+0.7
SNAA				pmax	pmax		
	comp=Z,51nm,0.9s						
SNAA	Sanae	60.51	161	P	P	05 23 40.6	+0.7
SNAA				IAmb	IAmb	05 23 42.1	
	comp=Z,50nm,0.9s						
T57A	Hurt	60.52	349	P	P	05 23 40.4	+0.1
	baz=167,SNR=6.1						
U54A	Nelsons Funny	60.58	346	P	P	05 23 41.0	+0.1
	baz=164,SNR=17						
T56A	Rocky Mt	60.70	348	P	P	05 23 41.9	+0.3
	baz=166,SNR=14						
S60A	Water View	60.78	351	P	P	05 23 41.7	-0.4
	baz=170						
PLAL	Pickwick Lake	60.82	340	IAmb	IAmb	05 23 42.8	
	comp=Z,70nm,0.9s						
OXF	Oxford	60.82	339	P	P	05 23 41.3	-1.1
	baz=156,SNR=14						
435B	Jarrell	60.84	330	P	P	05 23 42.8	+0.1
	baz=147,SNR=16						
435B	Jarrell	60.84	330	IAmb	IAmb	05 23 44.4	
	comp=Z,66nm,0.7s						
S58A	Poland Farm, P	60.91	350	P	P	05 23 42.7	-0.2
	baz=168						
Z41A	Richland Creek	60.92	335	P	P	05 23 43.5	+0.4
	baz=152,SNR=7.4						
S59A	Mechanicsville	60.94	350	P	P	05 23 43.3	+0.2
	baz=169						
BLA	Blacksburg	60.95	348	P	P	05 23 43.7	+0.4
	baz=166,SNR=8.4						
BLA	Blacksburg	60.95	348	P	P	05 23 43.9	+0.6
BLA				pmax	pmax		
	comp=Z,239nm,1.6s						
BLA	Blacksburg	60.95	348	P	P	05 23 43.9	+0.6
237A	Washetta, Mont	61.07	332	P	P	05 23 45.3	+1.1
S57A	Dark Hollow, R	61.21	349	P	P	05 23 45.2	+0.2
	baz=167,SNR=7.3						
S57A	Dark Hollow, R	61.21	349	IAmb	IAmb	05 23 46.5	
	comp=Z,76nm,1.4s						
R58B	Mineral	61.23	350	P	P	05 23 45.2	+0.1
	baz=168,SNR=7.1						
S56A	Natural Bridge	61.24	348	P	P	05 23 45.5	+0.3
	baz=166						
CLTN	Cedars of Leba	61.32	342	IAmb	IAmb	05 23 46.6	
	comp=Z,68nm,0.8s						
R60A	Leonardtown, M	61.33	351	P	P	05 23 46.0	+0.3
	baz=170						
X43A	Marvell	61.33	337	P	P	05 23 45.7	-0.2
	baz=155,SNR=19						
R59A	King George, V	61.34	351	P	P	05 23 45.8	0.0
	baz=169						
CBN	Corbin Frederi	61.38	350	P	P	05 23 46.4	+0.3
	baz=169						
U49A	Red Boiling Sp	61.56	343	IAmb	IAmb	05 23 47.9	
	comp=Z,36nm,0.7s						
R58A	Rapidan	61.57	350	P	P	05 23 47.4	0.0
	baz=168,SNR=7.0						
JCT	Junction City	61.65	328	P	P	05 23 48.3	+0.1
	baz=145,SNR=75						
JCT	Junction City	61.65	328	P	P	05 23 48.3	+0.1
JCT				pmax	pmax		
	comp=Z,99nm,0.8s						
JCT	Junction City	61.65	328	P	P	05 23 48.3	+0.1
R57A	Stanardsville	61.66	349	P	P	05 23 48.4	+0.4
	baz=168,SNR=6.5						
S54A	Dingess, Beckl	61.70	347	P	P	05 23 48.4	+0.1
	baz=165,SNR=21						
T50A	Nancy	61.78	344	IAmb	IAmb	05 23 49.5	
	comp=Z,38nm,0.8s						
WHTX	Lake Whitney,	61.80	331	P	P	05 23 49.3	+0.3
	baz=148,SNR=15						
WVT	Waverly	61.80	341	P	P	05 23 48.1	-0.8
	baz=158						
WVT	Waverly	61.80	341	P	P	05 23 48.4	-0.6
WVT				pmax	pmax		
	comp=Z,130nm,0.8s						
WVT	Waverly	61.80	341	P	P	05 23 48.4	-0.6
Q59A	Harwood	61.92	351	P	P	05 23 49.4	-0.3
	baz=170						
R54A	Victor	62.00	347	P	P	05 23 50.1	-0.2
	baz=165,SNR=16						
X40A	Basin Creek Fa	62.02	336	P	P	05 23 50.0	-0.5
	baz=153,SNR=6.7						
HPIG		62.04	321	IAmb	IAmb	05 23 53.4	
	comp=Z,54nm,1.1s						
Q58A	Fox Den Farm,	62.15	350	P	P	05 23 51.2	-0.1
	baz=169,SNR=5.8						
RKT	Rikitea	62.27	255	*e*S	S	05 31 59.7	-2.8
	comp=Z,400nm,27.8s						
RKT	Rikitea	62.27	255	*e*LR	LR	05 42 46.6	
	comp=Z,474nm,27.5s						
SLBS	Sierra La Lagu	62.34	315	P	P	05 23 54.9	+1.9
SLBS				IAmb	IAmb	05 23 56.3	
	comp=Z,93nm,1.1s						
R53A	Hurricane	62.35	347	IAmb	IAmb	05 23 53.9	
	comp=Z,62nm,0.9s						
Q57A	Strasburg	62.36	350	P	P	05 23 53.4	+0.8
	baz=168,SNR=8.9						
MIAR	Mount Ida	62.36	335	P	P	05 23 52.7	0.0
	baz=152,SNR=34						
MIAR	Mount Ida	62.36	335	IAmb	IAmb	05 23 54.0	
	comp=Z,110nm,1.2s						
W41B	Gary Mavity, V	62.42	337	P	P	05 23 52.7	-0.3
	baz=153,SNR=14						
Q56A	Snyder Ridge,	62.49	349	P	P	05 23 54.2	+0.7
	baz=167,SNR=6.7						
Q56A	Snyder Ridge,	62.49	349	IAmb	IAmb	05 23 55.6	
	comp=Z,44nm,0.8s						
P59A	Jarrettsville	62.63	352	P	P	05 23 54.9	+0.5
	baz=170,SNR=8.1						
P60A	Greenville	62.72	352	P	P	05 23 54.9	-0.1
	baz=171						
P57A	Homestead Farm	62.73	350	P	P	05 23 55.9	+0.8
	baz=168,SNR=6.5						
P57A	Homestead Farm	62.73	350	IAmb	IAmb	05 23 57.1	
	comp=Z,32nm,0.8s						
Q54A	Coxs Mills	62.74	348	IAmb	IAmb	05 23 56.4	
	comp=Z,43nm,0.8s						
TXAR	Lajitas Array	62.75	324	P	P	05 23 55.8	+0.3
	comp=Z,7.9nm,0.6s,baz=149,slow=8.5,SNR=82						
TX31	Lajitas Ar. Si	62.75	324	IAmb	IAmb	05 23 57.4	
	comp=Z,42nm,0.8s						
Q53A	Leroy	62.76	347	P	P	05 23 55.4	+0.1
	baz=165,SNR=18						
LCAR	Lake Charles	62.83	338	IAmb	IAmb	05 23 56.5	
	comp=Z,67nm,1.2s						
LPIG	La Paz	62.87	315	P	P	05 23 57.2	+0.9
	comp=Z,58nm,0.9s,baz=258,slow=14,SNR=7.5						
O61A	Allentown	62.87	353	P	P	05 23 56.2	+0.2
	baz=172						
P56A	Dayton Farm, R	62.89	350	P	P	05 23 56.0	-0.1
	baz=168						
FCAR	Ozark Folk Cen	63.01	337	IAmb	IAmb	05 23 57.6	
	comp=Z,44nm,1.0s						
W39A	Magazine	63.01	335	P	P	05 23 57.6	+0.6
	baz=152,SNR=29						
W39A	Magazine	63.01	335	IAmb	IAmb	05 23 58.9	
	comp=Z,67nm,0.8s						
Q52A	Bidwell	63.02	346	IAmb	IAmb	05 23 58.1	
	comp=Z,62nm,0.8s						
O60A	Telford	63.19	353	P	P	05 23 58.3	+0.2
	baz=171						
O58A	Lewisberry	63.20	351	P	P	05 23 58.7	+0.5
	baz=170						

MCWV	Mont Chateau	63.21	349	P	P	05 23 58.7	+0.5
	baz=166,SNR=9.3						
MCWV	Mont Chateau	63.21	349	IAmb	IAmb	05 24 00.1	
	comp=Z,53nm,0.7s						
O59A	Robesonia	63.28	352	P	P	05 23 58.9	+0.2
	baz=170						
WCI	Wyandotte Cave	63.31	343	P	P	05 23 58.0	-0.9
	baz=160						
WCI	Wyandotte Cave	63.31	343	P	P	05 23 58.1	-0.8
WCI				pmax	pmax		
	comp=Z,70nm,0.7s						
WCI	Wyandotte Cave	63.31	343	P	P	05 23 58.1	-0.8
Q51A	Peebles	63.32	346	IAmb	IAmb	05 23 59.8	
	comp=Z,64nm,1.2s						
ABTX	Abilene, Hawle	63.34	329	P	P	05 23 59.5	+0.2
	baz=146,SNR=61						
O57A	Amberson	63.39	351	P	P	05 23 59.9	+0.5
	baz=169,SNR=5.6						
USIN	University of	63.45	342	IAmb	IAmb	05 23 59.9	
	comp=Z,48nm,0.8s						
N61A	South Mountain	63.50	354	P	P	05 24 00.5	+0.4
	baz=172						
O56A	Blue Knob Stat	63.59	350	P	P	05 24 01.2	+0.5
	baz=168,SNR=7.1						
N62A	Caumsett State	63.60	354	P	P	05 24 00.5	-0.1
	baz=173						
P52A	Corning	63.64	347	P	P	05 24 00.7	-0.3
	baz=164,SNR=16						
S44A	Carbondale	63.68	340	IAmb	IAmb	05 24 01.8	
	comp=Z,44nm,0.9s						
SIUC	Southern Illin	63.69	340	IAmb	IAmb	05 24 01.9	
	comp=Z,68nm,1.1s						
U40A	Yellville	63.69	337	P	P	05 24 01.1	-0.3
	baz=153,SNR=27						
U40A	Yellville	63.69	337	P	P	05 24 01.4	0.0
U40A				IAmb	IAmb	05 24 02.4	
	comp=Z,46nm,0.9s						
P51A	Williamsport	63.69	346	IAmb	IAmb	05 24 02.1	
	comp=Z,90nm,1.2s						
N60A	Cedar Hill Far	63.70	353	P	P	05 24 01.8	+0.4
	baz=171						
PAL	Palisades	63.71	354	P	P	05 24 01.0	-0.4
	baz=173						
O54A	Avella	63.82	348	IAmb	IAmb	05 24 03.5	
	comp=Z,30nm,0.7s						
N59A	State Game Lan	63.83	352	P	P	05 24 02.7	+0.5
	baz=171						
N58A	Sunbury	63.87	352	P	P	05 24 03.0	+0.4
	baz=170						
N57A	Milroy	63.91	351	P	P	05 24 02.9	+0.1
	baz=169,SNR=6.3						
M63A	Gales Ferry	63.95	356	P	P	05 24 02.6	-0.4
	baz=174						
M61A	Granite Spring	64.00	354	P	P	05 24 03.2	-0.2
	baz=173						
HHAR	Hobbs	64.03	336	IAmb	IAmb	05 24 04.8	
	comp=Z,65nm,0.9s						
O52A	Adamsville	64.04	347	IAmb	IAmb	05 24 04.7	
	comp=Z,66nm,0.8s						
M64A	Tiverton	64.04	356	P	P	05 24 03.3	-0.3
	baz=175						
O53A	New Philadelph	64.04	348	P	P	05 24 03.7	0.0
	baz=165,SNR=11						
O53A	New Philadelph	64.04	348	IAmb	IAmb	05 24 04.9	
	comp=Z,55nm,0.7s						
M62A	Hamden	64.05	355	P	P	05 24 03.6	-0.1
	baz=174						
M60A	Port Jervis	64.10	353	P	P	05 24 04.1	+0.1
	baz=172						
P49A	Miami Univ. Ec	64.13	345	P	P	05 24 03.3	-0.9
	baz=162,SNR=21						
P49A	Miami Univ. Ec	64.13	345	IAmb	IAmb	05 24 04.5	
	comp=Z,65nm,0.8s						
N56A	West Decatur	64.18	350	P	P	05 24 05.0	+0.5
	baz=168,SNR=5.5						
MGMO	Mountain Grove	64.19	338	IAmb	IAmb	05 24 05.8	
	comp=Z,66nm,0.9s						
P48A	Milroy	64.24	344	IAmb	IAmb	05 24 04.9	
	comp=Z,41nm,0.6s						
U38A	Gravette	64.34	335	IAmb	IAmb	05 24 06.8	
	comp=Z,111nm,1.6s						
M58A	Price’s Panora	64.36	352	P	P	05 24 06.1	+0.4
	baz=170,SNR=10						
L63A	North Scituate	64.38	356	P	P	05 24 05.8	+0.1
	baz=175						
ACSO	Alum Creek Sta	64.39	346	P	P	05 24 05.6	-0.3
	baz=163,SNR=24						
M59A	Waymart	64.40	353	P	P	05 24 05.8	-0.2
	baz=171						
L64A	Middleborough	64.40	357	P	P	05 24 05.9	0.0
	baz=176						
M57A	Sunshine Farm,	64.42	351	P	P	05 24 06.5	+0.5
	baz=169,SNR=6.2						
M57A	Sunshine Farm,	64.42	351	P	P	05 24 06.8	+0.7
BRYW	Bryant College	64.43	356	IAmb	IAmb	05 24 07.7	
	comp=Z,56nm,0.9s						
TUL1	Leonard	64.43	334	P	P	05 24 06.2	0.0
	baz=150,SNR=31						
KSPA	Keystone Colle	64.46	353	IAmb	IAmb	05 24 08.0	
	comp=Z,153nm,2.0s						
N54A	Moraine State	64.50	349	P	P	05 24 07.1	+0.5
	baz=166,SNR=9.4						
N54A	Moraine State	64.50	349	IAmb	IAmb	05 24 08.5	
	comp=Z,47nm,0.9s						
N53A	Lisbon	64.51	348	IAmb	IAmb	05 24 08.1	
	comp=Z,51nm,1.0s						
FNO	Franklin	64.54	332	IAmb	IAmb	05 24 08.5	
	comp=Z,76nm,0.8s						
CCM	Cathedral Cave	64.65	339	P	P	05 24 07.1	-0.5
	baz=155						
CCM	Cathedral Cave	64.65	339	P	P	05 24 07.3	-0.3
CCM				pmax	pmax		
	comp=Z,118nm,0.8s						
CCM	Cathedral Cave	64.65	339	P	P	05 24 07.3	-0.3
O49A	Covington	64.66	345	IAmb	IAmb	05 24 08.2	
	comp=Z,64nm,0.8s						
OKCFA	Oklahoma City	64.69	333	IAmb	IAmb	05 24 09.0	
	comp=Z,64nm,0.8s						
WMOK	Wichita Mounta	64.70	331	P	P	05 24 07.4	-0.7
	baz=147,SNR=23						
WMOK	Wichita Mounta	64.70	331	IAmb	IAmb	05 24 09.0	
	comp=Z,69nm,1.6s						
M56A	Emporium	64.72	351	P	P	05 24 08.6	+0.6
	baz=168,SNR=8.8						
L60A	Shokan	64.72	354	P	P	05 24 08.8	+0.8
	baz=172,SNR=6.2						
Q44A	Meyer Farm, Va	64.72	341	IAmb	IAmb	05 24 08.0	
	comp=Z,40nm,0.9s						
SLM	Saint Louis	64.85	340	IAmb	IAmb	05 24 10.7	
	comp=Z,29nm,0.7s						
L61A	Hillsdale 1, H	64.86	354	P	P	05 24 08.4	-0.5
	baz=173						
P46A	Rosedale	64.86	343	P	P	05 24 07.7	-1.3
P46A				IAmb	IAmb	05 24 08.9	
	comp=Z,44nm,0.8s						
N51A	Ashland	64.92	347	IAmb	IAmb	05 24 10.1	
	comp=Z,67nm,0.8s						
L58A	Harry Jones Me	64.95	353	P	P	05 24 10.2	+0.7
	baz=171,SNR=13						
M54A	Oil Creek Stat	64.98	349	P	P	05 24 09.8	+0.1
	baz=167,SNR=15						
M54A	Oil Creek Stat	64.98	349	IAmb	IAmb	05 24 11.1	
	comp=Z,55nm,0.8s						
L59A	Walton	65.00	353	P	P	05 24 10.6	+0.7
	baz=172,SNR=7.7						
L59A	Walton	65.00	353	IAmb	IAmb	05 24 12.0	
	comp=Z,52nm,0.9s						
HRV	Adam Dziewonsk	65.01	356	P	P	05 24 10.6	+0.8
	baz=175						
NVL	N'lazarevskaya	65.02	159⇑	*i*P	P	05 24 10.9	+1.3
NVL				pmax	pmax		
	comp=Z,81nm,0.9s						
L57A	Andrews Acres	65.03	352	P	P	05 24 10.4	+0.3
	baz=170,SNR=5.1						
L61B	Northampton	65.04	355	P	P	05 24 10.6	+0.6
	baz=174						
M53A	WI Miller and	65.09	348	P	P	05 24 10.6	+0.2
	baz=166,SNR=15						
M53A	WI Miller and	65.09	348	IAmb	IAmb	05 24 11.7	
	comp=Z,56nm,0.8s						
BINY	Binghamton	65.12	352	P	P	05 24 11.0	+0.4
	baz=171,SNR=12						
BINY	Binghamton	65.12	352	IAmb	IAmb	05 24 12.6	
	comp=Z,110nm,1.1s						
K63A	Dunstable	65.19	356	P	P	05 24 11.4	+0.4
	baz=175						
R40A	Maddies Statio	65.21	338	P	P	05 24 11.1	-0.1
R40A				IAmb	IAmb	05 24 12.1	
	comp=Z,58nm,0.8s						
K62A	Royalston	65.22	356	P	P	05 24 10.9	-0.3
	baz=174						
L56A	Greenwood	65.26	351	P	P	05 24 11.8	+0.2
	baz=169,SNR=8.8						
L56A	Greenwood	65.26	351	IAmb	IAmb	05 24 13.2	
	comp=Z,123nm,1.4s						
K61A	Williamstown	65.30	355	P	P	05 24 11.0	-0.7
	baz=173						
K60A	Five Rivers En	65.31	354	P	P	05 24 12.1	+0.3
	baz=173						
M52A	Chesterland	65.32	348	IAmb	IAmb	05 24 13.0	
	comp=Z,60nm,0.9s						
TRY	Troy	65.40	354	IAmb	IAmb	05 24 14.5	
	comp=Z,78nm,0.9s						
MNTX	Cornudas Mount	65.51	324	P	P	05 24 13.1	-0.3
	baz=141,SNR=111						
MNTX	Cornudas Mount	65.51	324	IAmb	IAmb	05 24 14.5	
	comp=Z,49nm,0.9s						
L53A	Girard	65.52	349	P	P	05 24 13.0	-0.1
	baz=166,SNR=17						
M50A	Fremont	65.53	347	IAmb	IAmb	05 24 14.0	
	comp=Z,66nm,0.8s						
SFIN	Lafayette	65.54	343	P	P	05 24 11.8	-1.5
	baz=159,SNR=17						
SFIN	Lafayette	65.54	343	IAmb	IAmb	05 24 13.2	
	comp=Z,69nm,0.7s						
P43A	Skaggs, Pawnee	65.55	341	IAmb	IAmb	05 24 13.6	
	comp=Z,78nm,0.8s						
K59A	Cooperstown	65.56	353	P	P	05 24 14.2	+0.8
	baz=172,SNR=17						
ERPA	Erie	65.63	349	P	P	05 24 14.0	+0.2
	baz=167,SNR=28						
K58A	Earlville	65.63	353	P	P	05 24 14.6	+0.7
	baz=171,SNR=16						
K58A	Earlville	65.63	353	IAmb	IAmb	05 24 15.8	
	comp=Z,109nm,1.0s						
N47A	Urbana	65.64	344	IAmb	IAmb	05 24 14.3	
	comp=Z,106nm,1.0s						
WVNY	West Valley, N	65.68	350	P	P	05 24 14.6	+0.4
WVNY				IAmb	IAmb	05 24 16.0	
	comp=Z,56nm,0.8s						
K57A	Scipio Center	65.71	352	P	P	05 24 14.3	-0.1
	baz=170,SNR=8.7						
O44A	Mansfield	65.71	342	IAmb	IAmb	05 24 14.2	
	comp=Z,44nm,0.7s						
J62A	Henniker	65.75	356	P	P	05 24 14.8	+0.2
	baz=175						
J63A	Strafford	65.75	357	P	P	05 24 15.0	+0.4
	baz=176						
K56A	Middlesex	65.78	351	P	P	05 24 15.2	+0.3
	baz=169,SNR=12						
J60A	Lant Hill Farm	65.89	355	P	P	05 24 15.4	0.0
	baz=173						
MMNY	Mt. Morris Dam	65.90	351	P	P	05 24 15.8	+0.3
J61A	Chester	65.92	355	P	P	05 24 16.5	+0.8
	baz=174						
MSTX	Muleshoe	65.95	328	P	P	05 24 16.4	+0.2
	baz=144						
MSTX	Muleshoe	65.95	328	P	P	05 24 16.1	-0.1
AMTX	Amarillo	66.16	329	P	P	05 24 17.2	-0.3
	baz=145						
AMTX	Amarillo	66.16	329	P	P	05 24 17.5	0.0
AMTX				IAmb	IAmb	05 24 18.8	
	comp=Z,80nm,1.1s						
U32A	Winter Ranch,	66.18	332	IAmb	IAmb	05 24 19.1	
	comp=Z,73nm,0.9s						
J59A	Piesco	66.20	354	P	P	05 24 18.3	+0.7
	baz=172,SNR=32						
KAN14	Manchester OK	66.22	333	IAmb	IAmb	05 24 19.2	
	comp=Z,82nm,1.0s						
P40A	Paris	66.25	339	IAmb	IAmb	05 24 18.7	
	comp=Z,89nm,1.1s						
HNH	Hanover	66.26	356	IAmb	IAmb	05 24 20.2	
	comp=Z,106nm,1.3s						
J56A	Wolcott	66.29	352	P	P	05 24 17.8	-0.2
	baz=170,SNR=19						
HDIL	Hopedale	66.32	341	P	P	05 24 17.2	-1.1
	baz=157,SNR=10						
HDIL	Hopedale	66.32	341	IAmb	IAmb	05 24 18.4	
	comp=Z,72nm,0.8s						
I64A	Boothbay	66.33	358	P	P	05 24 18.8	+0.6
	baz=177						
SRIG	Santa Rosalia	66.36	316	IAmb	IAmb	05 24 21.6	
	comp=Z,104nm,1.3s						
I62A	Tamworth	66.36	356	P	P	05 24 19.3	+0.8
	baz=175						
J55A	Hilton	66.41	351	P	P	05 24 19.5	+0.7
J55A				IAmb	IAmb	05 24 20.1	
	comp=Z,59nm,0.9s						
KAN10	Anthony SW Sta	66.42	333	IAmb	IAmb	05 24 20.6	
	comp=Z,75nm,1.0s						
I60A	Shoreham	66.47	355	P	P	05 24 20.3	+1.2
	baz=173,SNR=12						
I58A	Old Forge	66.48	354	P	P	05 24 19.6	+0.4
	baz=172,SNR=24						
I63A	Otisfield	66.50	357	P	P	05 24 18.9	-0.4
	baz=176						
I63A	Otisfield	66.50	357	P	P	05 24 20.8	+1.5
I63A				IAmb	IAmb	05 24 21.5	
	comp=Z,41nm,0.7s						
AAM	Ann Arbor	66.52	346	P	P	05 24 19.3	-0.2
	baz=163						
AAM	Ann Arbor	66.52	346	P	P	05 24 19.7	+0.2
AAM				pmax	pmax		
	comp=Z,35nm,0.8s						
AAM	Ann Arbor	66.52	346	P	P	05 24 19.7	+0.2
NCB	Newcomb	66.68	354	P	P	05 24 21.0	+0.5
M44A	Midewin, Midew	66.74	343	P	P	05 24 20.3	-0.6
HSIG		66.74	318	P	P	05 24 22.8	+1.6
LBNH	Lisbon	66.76	356	P	P	05 24 20.8	-0.2
	baz=175						
LIC	Lamto	66.82	72	*e*P	P	05 24 21.1	-1.0
	comp=Z,49nm,0.7s						
L46A	Eue Claire	66.86	344	IAmb	IAmb	05 24 21.8	
	comp=Z,95nm,0.8s						
N41A	Harden Midland	66.93	340	P	P	05 24 21.2	-1.0
N41A				IAmb	IAmb	05 24 22.5	
	comp=Z,99nm,1.0s						
TIC	Toumodi	67.02	72	*e*P	P	05 24 22.7	-0.7
H64A	Troy	67.03	358	P	P	05 24 23.3	+0.6
	baz=178						
H62A	Milan	67.05	357	P	P	05 24 23.4	+0.6
	baz=176						
H61A	Lyndonville	67.06	356	P	P	05 24 23.4	+0.6
	baz=175,SNR=5.6						
H65A	Eastbrook	67.06	359	P	P	05 24 23.6	+0.8
	baz=178						
HQIL	Hanson Quary C	67.07	343	IAmb	IAmb	05 24 23.0	
	comp=Z,48nm,0.8s						
H63A	New Sharon	67.08	357	P	P	05 24 23.9	+0.9
	baz=177,SNR=5.8						
H58A	Gabriels	67.12	354	P	P	05 24 23.7	+0.4
	baz=172,SNR=18						
H60A	Morristown	67.14	355	P	P	05 24 24.1	+0.7
	baz=174						
KIC	Kosan Boka	67.14	72	*e*P	P	05 24 22.8	-1.3
	comp=Z,52nm,0.6s						
H66A	Whiting	67.14	360	P	P	05 24 24.0	+0.6
	baz=179						
DBIC	Dimbokro	67.18	72	P	P	05 24 23.2	-1.1
	comp=Z,26nm,0.6s,baz=212,slow=6.7,SNR=25						
DBIC	Dimbokro	67.18	72	P	P	05 24 23.4	-0.9
DBIC				pmax	pmax		
	comp=Z,37nm,0.9s						
DBIC	Dimbokro	67.18	72	P	P	05 24 23.4	-0.9
H57A	Richville	67.28	353	P	P	05 24 24.6	+0.3
	baz=171,SNR=22						
H59A	Cadyville	67.30	355	P	P	05 24 24.8	+0.4
	baz=173,SNR=7.6						
LONY	Lake Ozonia	67.36	354	P	P	05 24 25.4	+0.6
	baz=172,SNR=15						
LONY	Lake Ozonia	67.36	354	IAmb	IAmb	05 24 26.6	
	comp=Z,69nm,0.8s						
L44A	Lake County Fo	67.44	343	P	P	05 24 24.2	-1.0
	baz=159						
L44A	Lake County Fo	67.44	343	IAmb	IAmb	05 24 25.6	
	comp=Z,112nm,1.2s						
I51A	Listowel	67.44	349	P	P	05 24 25.3	-0.1
	baz=166,SNR=35						
121A	Cookes Peak, D	67.46	323	P	P	05 24 27.5	+1.6
	baz=139,SNR=39						
QSPA	South Pole Qui	67.51	180	P	P	05 24 26.6	+0.9
	comp=Z,35nm,0.6s,baz=340,slow=1.5,SNR=122						
QSPA	South Pole Qui	67.51	180	P	P	05 24 26.6	+0.9
QSPA				IAmb	IAmb	05 24 28.2	
	comp=Z,50nm,0.8s						
KSU1	Kansas State U	67.52	335	P	P	05 24 25.7	-0.2
	baz=150,SNR=26						
KSU1	Kansas State U	67.52	335	IAmb	IAmb	05 24 27.0	
	comp=Z,107nm,1.0s						
G63A	Kingsbury	67.52	358	P	P	05 24 26.4	+0.6
	baz=177,SNR=5.1						
G65A	Princeton	67.56	359	P	P	05 24 26.0	0.0
	baz=179						
DELO	Deloro Mine	67.61	352	IAmb	IAmb	05 24 27.7	
	comp=Z,61nm,0.7s						
G64A	Maxfield	67.63	358	P	P	05 24 27.2	+0.8
	baz=178						
G60A	Masonville	67.64	356	P	P	05 24 27.0	+0.4
	baz=174,SNR=9.2						
PKME	Peaks-Kenny Pk	67.66	358	P	P	05 24 26.7	+0.1
	baz=177						
G62A	West of Eustis	67.66	357	P	P	05 24 27.4	+0.7
	baz=176,SNR=8.1						
G62A	West of Eustis	67.66	357	IAmb	IAmb	05 24 28.8	
	comp=Z,72nm,0.9s						
J47A	Sunmer	67.67	346	IAmb	IAmb	05 24 27.3	
	comp=Z,110nm,1.1s						
L42A	Oliver, Polo	67.77	342	IAmb	IAmb	05 24 27.8	
	comp=Z,49nm,0.7s						
G61A	St-Isidore-de-	67.78	356	P	P	05 24 28.0	+0.6
	baz=175,SNR=9.6						
N38A	Joes South For	67.78	339	IAmb	IAmb	05 24 28.1	
	comp=Z,63nm,0.8s						
H53A	Bobcaygeon	67.80	351	P	P	05 24 27.6	+0.1
	baz=168,SNR=22						
G58A	Ormstown	67.83	354	P	P	05 24 27.9	+0.3
	baz=173,SNR=13						
G57A	Newington	67.88	354	P	P	05 24 28.4	+0.4
	baz=172,SNR=23						
K43A	Burlington	68.04	343	P	P	05 24 28.6	-0.5
PLVO	Plevna	68.05	352	IAmb	IAmb	05 24 30.7	
	comp=Z,72nm,0.8s						
SADO	Sadowa	68.07	351	IAmb	IAmb	05 24 30.3	
	comp=Z,68nm,0.8s						
F63A	Nahmakanta, Br	68.09	358	P	P	05 24 29.4	+0.1
	baz=178						
F63A	Nahmakanta, Br	68.09	358	IAmb	IAmb	05 24 31.2	
	comp=Z,102nm,1.4s						
Y22D	IRIS PASSCAL I	68.16	325	P	P	05 24 31.5	+1.3
	baz=140						
Y22D	IRIS PASSCAL I	68.16	325	IAmb	IAmb	05 24 35.6	
	comp=Z,49nm,0.8s						
F64A	Sherman	68.23	359	P	P	05 24 30.5	+0.4
	baz=178,SNR=6.5						
F64A	Sherman	68.23	359	IAmb	IAmb	05 24 31.9	
	comp=Z,49nm,0.7s						
F59A	Saint Guilaume	68.43	355	P	P	05 24 30.7	-0.6
	baz=174						
F61A	St Evariste	68.44	357	P	P	05 24 31.1	-0.3
	baz=176						
F60A	Warwick	68.49	356	P	P	05 24 31.3	-0.4
	baz=175,SNR=6.4						
F58A	St-Lin Laurent	68.52	355	P	P	05 24 32.2	+0.2
	baz=173						
G54A	Lake Saint Pet	68.54	351	P	P	05 24 32.2	+0.1
	baz=169,SNR=26						
CBKS	Cedar Bluff	68.54	333	P	P	05 24 32.9	+0.6
	baz=147,SNR=30						
F57A	Harrington	68.55	354	P	P	05 24 31.9	-0.2
	baz=172						
ANMO	Albuquerque	68.59	326	P	P	05 24 34.1	+1.2
	comp=Z,50nm,0.8s,baz=138,slow=7.3,SNR=195						
ANMO	Albuquerque	68.59	326	P	P	05 24 34.1	+1.2
	baz=141						
ANMO	Albuquerque	68.59	326	*ce*P	P	05 24 34.0	+1.2
ANMO				pmax	pmax		
	comp=Z,51nm,0.8s						
ANMO	Albuquerque	68.59	326	P	P	05 24 34.2	+1.3
ANMO				IAmb	IAmb	05 24 35.5	
	comp=Z,71nm,0.9s						
JFWS	Jewell Farm	68.77	342	P	P	05 24 33.1	-0.5
	baz=157,SNR=38						
SCIA	State Center	68.78	339	P	P	05 24 33.1	-0.5
	baz=154,SNR=5.4						
SCIA	State Center	68.78	339	IAmb	IAmb	05 24 34.6	
	comp=Z,89nm,0.8s						
E64A	Bridgewater	68.78	359	P	P	05 24 34.1	+0.6
	baz=179						
E63A	Oxbow	68.79	359	P	P	05 24 34.3	+0.6
	baz=178						
E60A	Ste Agathe de	68.86	357	P	P	05 24 34.4	+0.4
	baz=175						
E61A	Lac Etchemin	68.87	357	P	P	05 24 34.7	+0.6
	baz=176						
E58A	La Victoria	68.98	355	P	P	05 24 34.8	0.0
	baz=174,SNR=8.2						
TUC	Tucson	69.00	321	P	P	05 24 36.6	+1.3
	baz=137						
E59A	St. Maurice	69.03	356	P	P	05 24 35.3	+0.2
	baz=174						
ALGO	Algonquin Park	69.08	352	P	P	05 24 35.3	0.0
	baz=169,SNR=26						
GLMI	Grayling	69.14	346	P	P	05 24 35.1	-0.7
	baz=162,SNR=6.8						
GLMI	Grayling	69.14	346	IAmb	IAmb	05 24 37.1	
	comp=Z,95nm,0.8s						
T25A	Trinidad	69.28	329	P	P	05 24 38.4	+1.2
	baz=143,SNR=59						
K38A	Parkersburg	69.30	340	IAmb	IAmb	05 24 37.6	
	comp=Z,140nm,1.2s						
I42A	Draeger Farm,	69.30	343	IAmb	IAmb	05 24 37.8	
	comp=Z,71nm,0.8s						
E56A	St. Veronique	69.31	354	P	P	05 24 36.8	+0.1
	baz=172,SNR=13						
E55A	Montcerf-Lytto	69.32	353	P	P	05 24 36.7	-0.1
	baz=171,SNR=7.4						
D60A	Saint Jean D’O	69.37	357	P	P	05 24 37.7	+0.6
	baz=176						
D63A	Stockholm	69.40	359	P	P	05 24 37.5	+0.1
	baz=179,SNR=5.3						
D59A	Saint-Raymond	69.52	356	P	P	05 24 38.1	+0.1
	baz=175						
H43A	Windswept, Lux	69.54	344	IAmb	IAmb	05 24 39.0	
	comp=Z,66nm,0.8s						
G45A	Suttons Bay	69.57	346	IAmb	IAmb	05 24 39.1	
	comp=Z,50nm,0.9s						
D61A	St Aubert, Com	69.63	358	P	P	05 24 39.2	+0.5
	baz=177,SNR=5.1						
BATG	Bathurst New B	69.64	1	P	P	05 24 39.1	+0.4
D58A	Chemin du LacG	69.67	356	P	P	05 24 39.3	+0.3
	baz=174,SNR=22						
D56A	ZEC Mazanza, M	69.78	354	P	P	05 24 39.9	+0.2
	baz=172,SNR=9.5						
D55A	Sainte-Anne-du	69.82	354	P	P	05 24 39.9	0.0
	baz=171,SNR=16						
LATQ	La Tuque	69.95	356	P	P	05 24 41.2	+0.6
	baz=174,SNR=8.0						
KSCO	Kaye Shedlock’	69.96	331	P	P	05 24 42.1	+0.9
	baz=145,SNR=9.7						
KSCO	Kaye Shedlock’	69.96	331	IAmb	IAmb	05 24 43.6	
	comp=Z,118nm,1.1s						
BGNE	Belgrade	70.10	335	P	P	05 24 42.1	+0.3
	baz=149,SNR=17						
SDCO	Great Sand Dun	70.29	328	P	P	05 24 44.6	+1.2
	baz=142,SNR=141						
SDCO	Great Sand Dun	70.29	328	IAmb	IAmb	05 24 46.1	
	comp=Z,75nm,0.8s						
W18A	Petrified Fore	70.47	324	P	P	05 24 45.8	+1.4
	baz=138,SNR=7.1						
I37A	Lemond, Waseca	70.73	340	IAmb	IAmb	05 24 46.5	
	comp=Z,90nm,0.8s						
G40A	Rib Lake	70.92	343	IAmb	IAmb	05 24 47.7	
	comp=Z,111nm,1.6s						
S22A	4UR Ranch, Cre	70.94	327	P	P	05 24 48.3	+1.0
	baz=141,SNR=44						
Q24A	Divide	71.08	329	P	P	05 24 49.3	+1.1
	baz=143,SNR=54						
E43A	Lone Tree Farm	71.14	345	IAmb	IAmb	05 24 48.9	
	comp=Z,52nm,0.8s						
OGNE	Ogallala	71.29	332	P	P	05 24 49.9	+0.8
	baz=146,SNR=11						
OGNE	Ogallala	71.29	332	IAmb	IAmb	05 24 51.3	
	comp=Z,86nm,0.8s						
TAOE	Nuku Hiva Isla	71.37	268	*e*LR	LR	05 46 58.8	
	comp=Z,165nm,23.8s						
K31A	O'Neill	71.37	336	IAmb	IAmb	05 24 51.1	
	comp=Z,83nm,0.7s						
MVCO	Mesa Verde	71.38	326	P	P	05 24 51.2	+1.3
	baz=140,SNR=75						
MVCO	Mesa Verde	71.38	326	IAmb	IAmb	05 24 52.6	
	comp=Z,92nm,0.9s						
ECSD	EROS Data Cent	71.55	338	P	P	05 24 50.2	-0.3
	baz=151,SNR=40						
ECSD	EROS Data Cent	71.55	338	IAmb	IAmb	05 24 51.6	

	comp=Z,77nm,1.1s						
SPMN	**Marine on St.**	71.63	341	P	P	05 24 50.3	-0.6
	baz=155,SNR=15						
SPMN	**Marine on St.**	71.63	341	IAmb	IAmb	05 24 51.6	
	comp=Z,51nm,0.8s						
WUAZ	**Wupatki**	71.67	323	P	P	05 24 53.2	+1.7
	baz=137,SNR=30						
WUAZ	**Wupatki**	71.67	323	IAmb	IAmb	05 24 54.8	
	comp=Z,80nm,0.9s						
KOWA	**Kowa**	71.68	65	P	P	05 24 51.0	-0.8
	comp=Z,12nm,0.3s,baz=244,slow=4.7,SNR=65						
KOWA				pP	pP	05 25 42.5	+1.3
	comp=Z,10nm,0.7s,baz=251,slow=6.5,SNR=3.8						
KOWA				S	S	05 33 52.1	-3.1
	comp=Z,1.2nm,0.5s,baz=81,slow=22,SNR=9.8						
KOWA	**Kowa**	71.68	65	P	P	05 24 51.1	-0.8
ISCO	**Idaho Springs**	71.97	329	P	P	05 24 54.5	+1.1
	baz=143,SNR=58						
ISCO	**Idaho Springs**	71.97	329	IAmb	IAmb	05 24 56.0	
	comp=Z,56nm,1.0s						
LSQQ	**Lebel-sur-Quev**	72.00	353	P	P	05 24 52.4	-0.5
	baz=170						
DRLN	**Deer Lake**	72.09	6	P	P	05 24 52.0	-1.4
SMCO	**Snowmass**	72.13	328	IAmb	IAmb	05 24 57.5	
	comp=Z,62nm,0.8s						
PV15	**Paradox Valley**	72.23	327	IAmb	IAmb	05 24 58.7	
	comp=Z,136nm,1.1s						
PDMCI	**Parker Dam,Lak**	72.39	320	P	P	05 24 56.9	+1.3
	baz=135						
PV07	**Paradox Valley**	72.39	327	IAmb	IAmb	05 24 58.7	
	comp=Z,61nm,1.1s						
PV11	**David Mesa, Pa**	72.40	326	IAmb	IAmb	05 24 58.6	
	comp=Z,80nm,1.3s						
F36A	**Milaca**	72.43	341	P	P	05 24 54.9	-0.7
F36A				IAmb	IAmb	05 24 56.4	
	comp=Z,61nm,0.9s						
E38A	**The Farm, Brul**	72.53	342	IAmb	IAmb	05 24 57.1	
	comp=Z,59nm,1.0s						
PV14	**Lion Creek, Pa**	72.53	326	IAmb	IAmb	05 24 59.3	
	comp=Z,62nm,1.1s						
PV22	**Blue Mesa, Par**	72.54	327	IAmb	IAmb	05 24 59.5	
	comp=Z,82nm,1.0s						
PV10	**Paradox Valley**	72.54	326	IAmb	IAmb	05 24 59.0	
	comp=Z,59nm,1.0s						
BC3	**Big Chuckawall**	72.73	319	P	P	05 24 58.8	+1.0
	baz=134						
MATQ	**Matagami**	72.76	353	P	P	05 24 58.2	+0.8
	baz=170,SNR=10						
IRM	**Iron Mountain**	72.89	320	P	P	05 24 59.9	+1.2
	baz=134,SNR=6.2						
N23A	**Red Feather La**	72.99	330	P	P	05 25 00.7	+1.4
	baz=142,SNR=42						
NEE2	**Needles Airpor**	73.00	320	P	P	05 25 00.6	+1.4
	baz=134						
SUSD	**Miller**	73.01	336	P	P	05 24 59.2	+0.1
	baz=149						
SUSD	**Miller**	73.01	336	IAmb	IAmb	05 25 00.2	
	comp=Z,103nm,0.9s						
PHWY	**Pilot Hill**	73.09	331	IAmb	IAmb	05 25 02.4	
	comp=Z,95nm,1.4s						
109C	**Camp Elliot, M**	73.22	317	P	P	05 25 01.5	+0.9
	baz=132						
BELC	**Belle Mtn. Jos**	73.29	319	P	P	05 25 02.6	+1.5
	baz=133,SNR=5.6						
TPFO	**Pinon Flats**	73.30	318	P	P	05 25 02.8	+1.6
	baz=133,SNR=7.2						
PFO	**Pinyon Flats O**	73.31	318	P	P	05 25 01.1	-0.1
	comp=Z,13nm,0.7s,baz=143,slow=15,SNR=14						
PFO	**Pinyon Flats O**	73.31	318	P	P	05 25 02.8	+1.6
	baz=133,SNR=7.2						
PFO	**Pinyon Flats O**	73.31	318	*i* P	P	05 25 02.7	+1.5
PFO				pmax	pmax		
	comp=Z,56nm,1.2s						
PFO	**Pinyon Flats O**	73.31	318	P	P	05 25 03.2	+2.0
PFO				IAmb	IAmb	05 25 33.5	
	comp=Z,100nm,0.8s						
O20A	**White River Ci**	73.49	328	P	P	05 25 03.6	+1.3
	baz=140,SNR=76						
O20A	**White River Ci**	73.49	328	IAmb	IAmb	05 25 05.0	
	comp=Z,101nm,0.9s						
GMRC	**Granite Mounta**	73.62	320	P	P	05 25 04.8	+1.7
	baz=134,SNR=22						
EYMN	**Ely**	73.73	343	P	P	05 25 02.9	-0.3
	baz=156,SNR=18						
MURC	**Murrieta**	73.75	318	P	P	05 25 05.4	+1.6
	baz=132,SNR=7.1						
SRU	**San Rafael Swe**	73.86	326	IAmb	IAmb	05 25 07.0	
	comp=Z,83nm,0.7s						
BBRC	**Big Bear Solar**	74.03	319	P	P	05 25 07.0	+1.4
	baz=133						
HEC	**Hector,Ludlow**	74.06	319	P	P	05 25 07.4	+1.9
	baz=133,SNR=19						
SZCU	**Shurtz Canyon**	74.12	323	IAmb	IAmb	05 25 09.1	
	comp=Z,123nm,1.7s						
SCI2	**San Clemente I**	74.19	317	P	P	05 25 07.7	+1.5
	baz=131						
RWWY	**Rawlins**	74.20	330	IAmb	IAmb	05 25 09.1	
	comp=Z,76nm,0.9s						
CCUT	**Cedar City**	74.24	323	IAmb	IAmb	05 25 10.4	
	comp=Z,82nm,0.9s						
P17A	**Butcher Ranch,**	74.24	326	IAmb	IAmb	05 25 09.3	
	comp=Z,92nm,1.0s						
TMUT	**Trail Mountain**	74.35	326	IAmb	IAmb	05 25 10.1	
	comp=Z,100nm,1.6s						
CIS	**Catalina Islan**	74.39	317	P	P	05 25 08.5	+1.2
	baz=131						
BFSC	**Mount Baldy Ra**	74.47	318	P	P	05 25 08.9	+0.9
	baz=132,SNR=10						
RDMU	**Red Mountain**	74.47	328	IAmb	IAmb	05 25 10.4	
	comp=Z,64nm,0.8s						
RRX	**Edison Barstow**	74.49	319	P	P	05 25 09.4	+1.5
	baz=133						
FMP	**Fort Macarthur**	74.51	317	P	P	05 25 09.5	+1.5
	baz=132						
SHPR	**Sheep Range**	74.52	321	IAmb	IAmb	05 27 43.8	
	comp=Z,79nm,1.3s						
K22A	**Casper**	74.64	331	P	P	05 25 10.0	+1.2
	baz=142,SNR=27						
K22A	**Casper**	74.64	331	IAmb	IAmb	05 25 11.5	
	comp=Z,73nm,1.1s						
D32A	**Dogwood Acres,**	74.67	339	IAmb	IAmb	05 25 09.8	
	comp=Z,50nm,0.8s						
SYO	**Syowa Base**	74.69	159	⇓*e*PcP	PcP	05 25 21.2	-0.5
MWC	**Mount Wilson**	74.70	318	IAmb	IAmb	05 27 00.6	
	comp=Z,126nm,1.3s						
B35A	**Bob, Littlefor**	74.74	342	IAmb	IAmb	05 25 10.0	
	comp=Z,54nm,0.8s						
RSSD	**Black Hills**	74.74	333	P	P	05 25 09.9	+0.5
	baz=145						
RSSD	**Black Hills**	74.74	333	P	P	05 25 10.6	+1.2
RSSD				pmax	pmax		
	comp=Z,42nm,0.8s						
RSSD	**Black Hills**	74.74	333	P	P	05 25 10.6	+1.2
PASC	**Pasadena Art C**	74.75	318	IAmb	IAmb	05 25 12.3	
	comp=Z,61nm,1.1s						
SHOC	**Shoshone, Teco**	74.75	320	P	P	05 25 10.7	+1.3
	baz=133						
DECC	**Green Verdugo**	74.89	318	P	P	05 25 11.6	+1.3
	baz=132,SNR=9.0						
SNCC	**San Nicolas Is**	74.99	316	P	P	05 25 12.0	+1.2
	baz=131						
TBI	**Tubuai**	74.99	251	*e*LR	LR	05 48 41.9	
	comp=Z,155nm,26.0s						
EDW2	**Edwards Air Fo**	75.10	318	P	P	05 25 12.6	+1.1
	baz=132,SNR=13						
MPU	**Maple Canyon**	75.11	326	IAmb	IAmb	05 25 14.4	
	comp=Z,57nm,1.0s						
LRMC	**Laurel Mtn Rad**	75.31	319	P	P	05 25 14.0	+1.2
	baz=132,SNR=5.3						
AGMN	**Agassiz Nation**	75.32	340	P	P	05 25 12.1	-0.2
	baz=152,SNR=26						
OSI	**Osito Audit: C**	75.38	318	P	P	05 25 14.1	+1.1
	baz=131						
JLU	**Jordanelle**	75.44	326	IAmb	IAmb	05 25 16.4	
	comp=Z,54nm,0.7s						
TPNV	**Topopah Spring**	75.46	321	P	P	05 25 15.4	+1.8
	baz=134,SNR=35						
TPNV	**Topopah Spring**	75.46	321	IAmb	IAmb	05 25 17.0	
	comp=Z,61nm,0.9s						
FURC	**Furnace Creek,**	75.49	320	P	P	05 25 15.4	+1.9
	baz=133,SNR=31						
SCZ2	**Santa Cruz Isl**	75.54	317	P	P	05 25 15.1	+1.2
	baz=131						
MPMC	**Manual Prospec**	75.58	320	P	P	05 25 15.6	+1.2
	baz=133,SNR=15						
ARVC	**Arvin**	75.78	318	P	P	05 25 16.5	+1.2
	baz=131						
DUG	**Dugway, Tooele**	75.85	325	P	P	05 25 17.3	+1.6
	baz=137,SNR=38						
TOA0	**Torodi Ar. Sit**	75.89	69	IAmb	IAmb	05 25 19.5	
	comp=Z,125nm,1.7s						
TORD	**Torodi Ar. Bea**	75.89	69	P	P	05 25 15.5	-0.8
	comp=Z,14nm,0.4s,baz=257,slow=5.4,SNR=207						
TORD				pP	pP	05 26 07.2	+1.0
	comp=Z,12nm,0.7s,baz=253,slow=5.8,SNR=2.7						
TORD				S	S	05 34 39.3	-3.0
	comp=Z,2.4nm,0.8s,baz=249,slow=11,SNR=8.5						
TORD	**Torodi Ar. Bea**	75.89	69	P	P	05 25 15.4	-0.8
ISA	**Isabella, Lake**	75.91	319	P	P	05 25 17.7	+1.6
	baz=132,SNR=35						
ISA	**Isabella, Lake**	75.91	319	IAmb	IAmb	05 25 19.2	
	comp=Z,65nm,1.1s						
VNDA	**Vanda**	76.03	190	P	P	05 25 17.0	+0.9
	comp=Z,9.4nm,0.9s,baz=119,slow=5.3,SNR=7.6						
VNDA	**Vanda**	76.03	190	P	P	05 25 17.0	+0.9
R11A	**Troy Canyon, C**	76.05	322	P	P	05 25 18.7	+1.8
	baz=134,SNR=61						
BW06	**Boulder Array**	76.14	329	P	P	05 25 18.0	+0.6
	baz=140,SNR=30						
PDAR	**Pinedale Array**	76.14	329	P	P	05 25 17.9	+0.5
	comp=Z,8.7nm,0.6s,baz=128,slow=7.6,SNR=108						
GRAC	**Grapevine Rang**	76.14	320	P	P	05 25 19.0	+1.7
	baz=133,SNR=14						
MDND	**Maddock**	76.16	338	P	P	05 25 17.9	+0.7
	baz=149,SNR=28						
CWC	**Cottonwood Cre**	76.19	320	P	P	05 25 19.4	+1.6
	baz=132						
PKM	**Mcpherson Peak**	76.23	317	P	P	05 25 19.6	+1.6
	baz=131,SNR=22						
VES	**Vestal, Richgr**	76.40	319	P	P	05 25 20.0	+1.3
	baz=131,SNR=36						
SPUT	**South Promonto**	76.48	326	IAmb	IAmb	05 25 21.8	
	comp=Z,60nm,0.8s						
SMMC	**Simmler**	76.62	318	P	P	05 25 21.7	+1.6
	baz=131,SNR=20						
TIN	**Tinemaha, Big**	76.69	320	P	P	05 25 21.4	+0.9
	baz=132						
AHID	**Auburn Hatcher**	76.88	328	IAmb	IAmb	05 25 24.0	
	comp=Z,109nm,0.9s						
VOG	**Valley Oaks Go**	76.90	319	P	P	05 25 21.9	+0.4
	baz=131						
PPT2	**Papeete2**	76.98	256	*e*LR	LR	05 49 32.0	
	comp=Z,273nm,25.2s						
PAGB	**Antelope Grade**	77.05	318	IAmb	IAmb	05 25 25.4	
	comp=Z,80nm,1.1s						
ULM	**Lac du Bonnet**	77.06	341	P	P	05 25 21.8	-0.2
	comp=Z,34nm,0.6s,baz=155,slow=6.1,SNR=83						
ULM	**Lac du Bonnet**	77.06	341	*d i*P	P	05 25 22.0	-0.1
ULM	**Lac du Bonnet**	77.06	341	P	P	05 25 22.0	-0.1
ULM				IAmb	IAmb	05 25 23.1	
	comp=Z,48nm,0.8s						
REDW	**Red Top Meadow**	77.21	329	IAmb	IAmb	05 25 26.0	
	comp=Z,56nm,0.9s						
LOHW	**Long Hollow**	77.28	329	IAmb	IAmb	05 25 26.4	
	comp=Z,44nm,0.8s						
MLAC	**Mammoth, Mammo**	77.44	320	P	P	05 25 26.0	+1.2
	baz=132,SNR=11						
OMMB	**Old Mammoth Mi**	77.52	320	IAmb	IAmb	05 25 28.1	
	comp=Z,49nm,0.8s						
ELK	**Elko**	77.54	324	P	P	05 25 26.4	+1.1
	comp=Z,21nm,0.8s,baz=134,slow=3.8,SNR=74						
NVAR	**Mina Array Bea**	77.66	321	P	P	05 25 27.2	+1.2
	comp=Z,12nm,0.7s,baz=144,slow=5.6,SNR=76						
FLWY	**Flagg Ranch**	77.68	329	IAmb	IAmb	05 25 29.0	
	comp=Z,119nm,1.1s						
PMPB	**Monarch Peak**	77.70	318	P	P	05 25 28.6	+2.6
LAO	**LASA Array**	77.72	333	P	P	05 25 26.6	+0.7
	baz=143,SNR=22						
LAO	**LASA Array**	77.72	333	IAmb	IAmb	05 25 28.1	
	comp=Z,85nm,1.1s						
TSUM	**Tsumeb**	77.79	106	P	P	05 25 27.4	+0.2
RLMT	**Red Lodge**	77.81	331	P	P	05 25 27.8	+1.2
	baz=140,SNR=72						
RLMT	**Red Lodge**	77.81	331	IAmb	IAmb	05 25 29.2	
	comp=Z,64nm,0.8s						
H17A	**Grant Village**	77.86	329	P	P	05 25 28.6	+1.6
	baz=139,SNR=29						
YNE	**Yellowstone No**	78.06	330	IAmb	IAmb	05 25 30.6	
	comp=Z,90nm,0.8s						
YNR	**Norris Junctio**	78.15	330	P	P	05 25 31.0	+2.4
YHH	**Holmes Hill**	78.28	330	IAmb	IAmb	05 25 32.6	
	comp=Z,78nm,0.8s						
DGMT	**Dagmar**	78.36	336	P	P	05 25 30.6	+1.3
	baz=145,SNR=33						
YHB	**Horse Butte**	78.42	329	IAmb	IAmb	05 25 33.1	
	comp=Z,55nm,0.8s						
YHL	**Hebgen Lake**	78.48	329	P	P	05 25 32.4	+2.0
YHL				IAmb	IAmb	05 25 33.7	
	comp=Z,55nm,0.7s						
YERR	**Yerington**	78.58	321	IAmb	IAmb	05 25 34.0	
	comp=Z,49nm,0.8s						
PNTR	**Pine Nut**	78.85	321	P	P	05 25 34.3	+1.8
PNTR				IAmb	IAmb	05 25 36.1	
	comp=Z,84nm,0.7s						
HLID	**Hailey**	79.11	327	P	P	05 25 35.6	+1.8
	baz=136,SNR=159						
HLID	**Hailey**	79.11	327	P	P	05 25 35.2	+1.5
HLID				IAmb	IAmb	05 25 37.0	
	comp=Z,92nm,0.8s						
PAHR	**Pah Rah Range**	79.14	321	P	P	05 25 35.3	+1.3
PAHR				IAmb	IAmb	05 25 37.1	
	comp=Z,116nm,0.9s						
BOZ	**Bozeman (W)**	79.25	330	P	P	05 25 35.3	+0.9
	baz=138,SNR=33						
DLMT	**Dillon**	79.53	329	IAmb	IAmb	05 25 38.7	
	comp=Z,107nm,1.4s						
MFID	**Camas Ranch**	79.73	326	P	P	05 25 38.5	+1.5
MCCM	**Marconi Confer**	80.21	318	P	P	05 25 41.7	+2.2
MCCM				IAmb	IAmb	05 25 42.0	
	comp=Z,83nm,1.1s						
EGMT	**Eagleton**	80.26	332	P	P	05 25 40.1	+0.4
	baz=140,SNR=43						
EGMT	**Eagleton**	80.26	332	IAmb	IAmb	05 25 41.6	
	comp=Z,88nm,0.9s						
ORV	**Oroville**	80.27	320	IAmb	IAmb	05 25 42.7	
	comp=Z,110nm,1.2s						
PFVI	**Vila Bisbo**	80.71	43	*e*P	P	05 25 43.9	+1.7
HOPS	**Hopland Field**	80.86	319	P	P	05 25 45.0	+2.0
O03E	**Paynes Creek**	80.93	321	P	P	05 25 43.2	-0.2
	baz=130,SNR=20						
MORF	**Marmelete**	80.93	43	*e*P	P	05 25 43.8	+0.3
MORF				AMb	AMB	05 26 26.8	
	comp=Z,73nm,2.5s						
MORF	**Marmelete**	80.93	43	*e*P	P	05 25 43.8	+0.3
MORF	**Marmelete**	80.93	43	*e*P	P	05 25 44.9	+1.4
MDT	**Midelt**	81.00	49	P	P	05 25 44.0	0.0
	comp=Z,15nm,0.8s,baz=186,slow=1.5,SNR=22						
PTEO	**Sao Teotonio**	81.03	43	*e*P	P	05 25 46.4	+2.5
J08A	**Circle Bar Ran**	81.08	325	IAmb	IAmb	05 25 47.1	
	comp=Z,72nm,0.9s						
MOD	**Modoc Plateau**	81.11	323	IAmb	IAmb	05 25 47.1	
	comp=Z,88nm,1.3s						
BOSA	**Boshof**	81.13	117	P	P	05 25 44.8	-0.2
	comp=Z,12nm,0.6s,baz=265,slow=3.5,SNR=29						
BOSA				PKKPbc	PKKPbc	05 44 19.7	+0.3
	comp=Z,1.7nm,0.6s,baz=60,slow=1.6,SNR=5.6						
BOSA	**Boshof**	81.13	117	P	P	05 25 45.2	+0.2
BOSA				pmax	pmax		
	comp=Z,12nm,0.7s						
BOSA	**Boshof**	81.13	117	P	P	05 25 45.2	+0.2
MSO	**Missoula**	81.25	329	P	P	05 25 46.2	+1.2
	baz=137,SNR=32						
PBDV	**Barranco-do-Ve**	81.35	44	*e*P	P	05 25 47.1	+1.5
O02D	**Mt. Diablo Mer**	81.43	320	P	P	05 25 46.7	+0.6
	baz=129,SNR=14						
PNCL	**Nicolau / Gran**	81.49	43	*e*P	P	05 25 48.0	+1.7
BMO	**Blue Mountains**	81.50	326	IAmb	IAmb	05 25 48.9	
	comp=Z,81nm,1.2s						
PCVE	**Castro Verde**	81.51	43	*e*P	P	05 25 48.1	+1.6
MESJ	**Messejana**	81.52	43	*e*P	P	05 25 47.0	+0.5
MESJ	**Messejana**	81.52	43	*e*P	P	05 25 47.0	+0.5
MESJ	**Messejana**	81.52	43	*e*P	P	05 25 48.2	+1.7
PVAQ	**Vaqueiros**	81.58	44	*e*P	P	05 25 48.4	+1.6
PBEJ	**Beja**	81.86	43	*e*P	P	05 25 49.8	+1.5
N02D	**Trinity Center**	81.89	321	P	P	05 25 48.5	0.0
	baz=130,SNR=14						
M04C	**Macdoel**	81.90	322	P	P	05 25 49.1	+0.5
	baz=130						
K05A	**Summer Lake**	81.98	323	IAmb	IAmb	05 25 52.0	
	comp=Z,103nm,0.8s						
EVO	**Evora**	82.07	43	*e*P	P	05 25 50.4	+1.0
JTMT	**Jette**	82.07	330	IAmb	IAmb	05 25 51.6	
	comp=Z,46nm,0.8s						
PSBE	**So Bento**	82.18	41	*e*P	P	05 25 51.9	+1.9
F10A	**Beach Ranch, E**	82.23	327	IAmb	IAmb	05 25 53.4	
	comp=Z,53nm,0.7s						
M02C	**Callahan**	82.24	321	P	P	05 25 50.5	+0.2
	baz=129,SNR=11						
PMTG	**Montargil**	82.26	42	*e*P	P	05 25 51.7	+1.4
YBH	**Yreka Blue Hor**	82.37	321	P	P	05 25 50.5	-0.5
	comp=Z,11nm,0.8s,baz=105,slow=4.7,SNR=30						
K04D	**Chiloquin, OR**	82.40	322	P	P	05 25 51.9	+0.8
	baz=130						
L04D	**Klamath Falls**	82.45	322	P	P	05 25 51.7	+0.2
	baz=130,SNR=15						
PBAR	**Barrancos**	82.47	43	*e*P	P	05 25 52.3	+0.9
J05D	**Fort Rock, OR**	82.54	323	P	P	05 25 52.9	+1.0
	baz=131,SNR=43						
G08A	**Pilot Rock**	82.65	326	IAmb	IAmb	05 25 54.6	
	comp=Z,86nm,1.6s						
PINE	**Pine Mountain**	82.71	324	IAmb	IAmb	05 25 55.7	
	comp=Z,71nm,0.9s						
FFC	**Flin Flon**	82.80	340	P	P	05 25 52.9	+0.2
FFC				pmax	pmax		
	comp=Z,32nm,1.2s						
FFC	**Flin Flon**	82.80	340	P	P	05 25 52.9	+0.2
WALA	**Waterton Lakes**	82.86	331	P	P	05 25 54.3	+1.0
J04D	**Umpqua Nationa**	83.00	323	P	P	05 25 55.0	+0.7
	baz=130,SNR=17						
PMRV	**Marv??o**	83.00	42	*e*P	P	05 25 54.8	+0.7
L02E	**Cave Junction**	83.16	321	P	P	05 25 56.0	+1.1
	baz=129,SNR=11						
PCBR	**Castelo Branco**	83.19	42	*e*P	P	05 25 55.6	+0.5
I05D	**Terrebonne, OR**	83.28	324	P	P	05 25 56.9	+1.3
	baz=131,SNR=24						
MTE	**Manteigas**	83.48	41	*e*P	P	05 25 57.7	+1.0
I04A	**Tendick Farm,**	83.52	323	P	P	05 25 57.0	+0.2
	baz=130,SNR=14						
K02D	**Willamette Mer**	83.53	322	P	P	05 25 58.1	+1.2
	baz=129,SNR=18						
KBO	**Bosley Butte**	83.55	321	IAmb	IAmb	05 26 00.0	
	comp=Z,109nm,1.3s						
F07A	**Phinny Hill Vi**	83.56	326	IAmb	IAmb	05 25 59.9	
	comp=Z,105nm,1.6s						
HAWA	**Hanford**	83.69	326	IAmb	IAmb	05 25 60.0	
	comp=Z,57nm,0.9s						
NEW	**Newport**	83.78	329	P	P	05 25 58.5	+0.5
	comp=Z,15nm,0.7s,baz=87,slow=0.2,SNR=24						
NEW	**Newport**	83.78	329	P	P	05 25 57.8	-0.2
	baz=134,SNR=23						
D08A	**Wollman Farm,**	83.83	327	IAmb	IAmb	05 26 00.6	
	comp=Z,95nm,1.3s						
G05D	**Wamic, OR**	83.86	325	P	P	05 25 59.8	+1.4
	baz=131,SNR=22						
PVRL	**Vila Real**	83.91	41	*e*P	P	05 25 58.9	+0.1
J01E	**Myrtle Point**	83.97	322	P	P	05 26 00.1	+1.1
	baz=129,SNR=9.0						
I03D	**Drain, OR**	83.98	322	P	P	05 25 59.9	+0.9
	baz=129,SNR=11						
PCAB	**Cabril**	83.99	40	*e*P	P	05 26 00.0	+0.9
KEBM	**Edson Butte**	84.03	321	IAmb	IAmb	05 26 02.6	
	comp=Z,117nm,1.1s						
H04D	**Lebanon**	84.17	323	P	P	05 26 00.5	+0.5
	baz=130						
FCC	**Fort Churchill**	84.24	346	IAmb	IAmb	05 26 01.7	
	comp=Z,57nm,0.8s						
MVO	**Moncorvo**	84.26	41	*e*P	P	05 26 01.4	+0.8
F05D	**White Salmon**	84.36	325	P	P	05 26 01.8	+0.9
	baz=131,SNR=5.6						
COR	**Corvallis**	84.52	323	P	P	05 26 03.8	+2.1
COR				pmax	pmax		
	comp=Z,108nm,1.3s						
COR	**Corvallis**	84.52	323	P	P	05 26 03.8	+2.1
COR				IAmb	IAmb	05 26 04.5	
	comp=Z,108nm,1.2s						
I02D	**Swisshome**	84.52	323	P	P	05 26 02.8	+1.1
	baz=129,SNR=7.3						
LTY	**Liberty**	84.85	326	IAmb	IAmb	05 26 05.3	
	comp=Z,50nm,0.8s						
G03D	**McMinnville, O**	84.89	324	P	P	05 26 04.6	+1.1
	baz=129						
PAB	**San Pablo**	84.98	43	P	P	05 26 05.6	+1.4
PAB				pmax	pmax		
	comp=Z,22nm,0.8s						
PAB	**San Pablo**	84.98	43	P	P	05 26 05.6	+1.4
ESDC	**Sonseca Array**	85.29	44	P	P	05 26 06.1	+0.3
	comp=Z,12nm,0.9s,baz=239,slow=4.8,SNR=27						
ESDC	**Sonseca Array**	85.29	44	P	P	05 26 06.7	+1.0
F04D	**Rainier, OR**	85.31	324	P	P	05 26 06.7	+1.1
	baz=130						
E04D	**Cinebar**	85.38	325	P	P	05 26 06.3	+0.4
	baz=130,SNR=5.6						
C06D	**Leavenworth**	85.40	327	P	P	05 26 06.1	+0.1
	baz=131						
D05A	**Enumclaw**	85.48	326	IAmb	IAmb	05 26 08.2	
	comp=Z,69nm,0.9s						
D04E	**Lakebay**	85.88	325	P	P	05 26 09.2	+0.9
	baz=130,SNR=5.8						
E03A	**Lebam**	85.90	325	IAmb	IAmb	05 26 11.8	
	comp=Z,47nm,0.8s						
B06A	**Marblemount**	86.09	327	IAmb	IAmb	05 26 10.6	
	comp=Z,77nm,0.8s						
B05A	**Bryant**	86.23	327	P	P	05 26 10.0	-0.1
	baz=130,SNR=48						
D03D	**Eldon**	86.28	326	P	P	05 26 10.9	+0.6
	baz=130,SNR=23						
NLWA	**Neilton Lookou**	86.59	325	IAmb	IAmb	05 26 14.2	
	comp=Z,53nm,1.1s						
A04D	**Lummi Island**	86.84	327	P	P	05 26 13.5	+0.6
	baz=130,SNR=32						
PGC	**Sidney**	87.17	326	IAmb	IAmb	05 26 16.8	
	comp=Z,60nm,0.8s						
LSZ	**Lusaka**	88.65	106	P	P	05 26 24.6	+2.0
LSZ				pmax	pmax		
	comp=Z,21nm,1.1s						
LSZ	**Lusaka**	88.65	106	P	P	05 26 24.6	+2.0
CASY	**Casey**	91.29	179	P	P	05 26 35.3	+1.6
CASY				IAmb	IAmb	05 26 36.5	
	comp=Z,52nm,0.8s						
BBB	**Bella Bella**	91.69	327	P	P	05 26 36.0	+0.4
	comp=Z,18nm,0.8s,baz=124,slow=2.6,SNR=13						
BBB	**Bella Bella**	91.69	327	IAmb	IAmb	05 26 37.5	
	comp=Z,26nm,0.8s						
YKA	**Yellowknife Ar**	92.97	340	P	P	05 26 41.5	+0.2
	comp=Z,9.6nm,0.6s,baz=126,slow=5.1,SNR=200						
YKA				pP	pP	05 27 34.2	+1.1
	comp=Z,1.5nm,0.7s,baz=126,slow=5.2,SNR=1.6						
YKA				PP	PP	05 30 27.9	+0.6
	comp=Z,0.9nm,0.8s,baz=132,slow=8.0,SNR=3.9						
YKA				PKKPbc	PKKPdf	05 43 50.5	-0.8
	comp=Z,0.2nm,0.6s,baz=339,slow=2.4,SNR=4.5						
WRAK	**Wrangell Islan**	96.12	329	P	P	05 26 55.6	-0.2
	baz=122						
DLBC	**Dease Lake**	96.18	332	P	P	05 26 56.6	+0.4
	comp=Z,9.2nm,0.8s,baz=134,slow=3.5,SNR=20						
SUMG	**Summit**	96.93	8	*i* P	P	05 27 00.0	+0.3
SUMG	**Summit**	96.93	8	*i* P	P	05 27 00.5	+0.9
SUMG	**Summit**	96.93	8	*i* P	P	05 27 00.0	+0.3
SUMG	**Summit**	96.93	8	P	P	05 27 00.6	+0.9
SUMG				IAmb	IAmb	05 28 14.1	
	comp=Z,51nm,2.0s						
SUMG	**Summit**	96.93	8	*i* P	P	05 27 00.0	+0.3
SUMG	**Summit**	96.93	8	*i* P	P	05 27 00.6	+0.9
DAVOX	**Davos/Dischmat**	97.58	42	P	P	05 27 02.9	0.0
	comp=Z,3.0nm,0.7s,baz=131,slow=7.9,SNR=4.9						
FETA	**Feichten**	98.21	42	*e*P	Pdif	05 27 06.3	+0.6
	comp=Z,7.7nm,1.3s						
SQTA	**Sankt Quirin**	98.59	42	*i* P	Pdif	05 27 08.2	+0.9
	comp=Z,11nm,1.1s						
WATA	**Walderalm**	98.86	42	*e*P	Pdif	05 27 09.5	+0.9
	comp=Z,6.1nm,0.7s						
WTTA	**Wattenberg**	98.87	42	*e*P	Pdif	05 27 09.5	+0.8
	comp=Z,7.1nm,0.8s						
GERES	**GERESS Array B**	100.76	42	PKKPbc	PKKPbc	05 43 30.4	-0.8
	comp=Z,1.0nm,0.8s,baz=75,slow=1.5,SNR=5.3						
CLL	**Collm**	101.27	39	*e*PP	PP	05 31 29.0	-2.2
CTG	**Chitna Glacier**	102.41	331	P	Pdif	05 27 24.6	+0.6
	baz=114						
INK	**Inuvik**	102.74	339	P	Pdif	05 27 25.1	-0.1
	comp=Z,1.1nm,0.9s,baz=85,slow=4.9,SNR=4.8						
MCARA	**McCarthy VSAT**	103.33	331	P	Pdif	05 27 28.4	+0.4
	baz=113						
KLU	**Klutina**	104.66	331	P	Pdif	05 27 34.0	0.0
	baz=110						
SCRK	**Sand Creek**	104.72	334	P	Pdif	05 27 34.3	+0.1
	baz=111						
PAX	**Paxson**	104.98	332	P	Pdif	05 27 35.7	+0.3
	baz=110						
M24K	**Tolsona, Glenn**	104.99	331	P	Pdif	05 27 35.7	+0.3
	baz=110						
ILAR	**Eielson Array**	106.18	334	Pdiff	Pdif	05 27 41.3	+0.8
	comp=Z,0.6nm,0.7s,baz=154,slow=3.0,SNR=6.2						

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ILAR                                PP       PP       05 32 08.6 +1.3
      comp=Z,1.6nm,0.8s,baz=114,slow=6.2,SNR=7.5
ILAR                                PKKPbc   PKKPbc   05 43 13.1 -2.4
      comp=Z,0.6nm,1.0s,baz=294,slow=3.8,SNR=5.4
TOLK  Toolik Lake Re   108.33 337   P        PKiKP    05 31 55.8 +0.7
      baz=105
AKASG Malin Array Be   110.92  43   PKiKP    PKiKP    05 31 59.8 -0.6
      comp=Z,0.5nm,0.3s,baz=263,slow=2.7,SNR=8.7
AKASG                               PKKPbc   PKKPbc   05 42 59.4 -0.4
      comp=Z,1.7nm,0.7s,baz=64,slow=3.8,SNR=8.0
AKBB  Malin Array Si   110.92  43c iPKIKP    PKiKP    05 32 00.1 -0.3
FINES FINESS Array B   110.99  31   PKKPbc   PKKPbc   05 42 58.7 -1.2
      comp=Z,1.3nm,0.7s,baz=90,slow=1.9,SNR=3.5
ARCES ARCESS Array B   111.83  22   PKKPbc   PKKPbc   05 43 04.7 +7.2
      comp=Z,3.2nm,0.7s,baz=56,slow=3.1,SNR=5.5
BRTR  Keskin Array B   111.88  55   PKiKP    PKiKP    05 32 03.3 +0.5
      comp=Z,1.7nm,0.7s,baz=182,slow=1.9,SNR=12
BRTR                                PKKPbc   PKKPab   05 43 04.5 +0.3
      comp=Z,1.4nm,0.7s,baz=103,slow=4.4,SNR=10
OBN   Obninsk          115.86  38c iPKIKP    PKiKP    05 32 10.2 +0.6
OBN                                e                  05 33 14.8
OBN                                ePPP      PPP      05 35 42.5
OBN                                 pmax     pmax
      comp=Z,49nm,2.5s
LPSR  Galich'ya Gora   117.14  41  ePKIKP    PKPdf    05 32 11.3 -0.9
LPSR                                pmax     pmax
      comp=Z,10.0nm,0.6s
VSR   Storozhevoye     117.22  43  ePKIKP    PKPdf    05 32 09.9 -2.5
VSR                                 pmax     pmax
      comp=Z,10.0nm,1.1s
VORD  Divnogorie       117.29  43  ePKIKP    PKPdf    05 32 09.1 -3.4
VORD                                pmax     pmax
      comp=Z,7.0nm,0.7s
KLMR  Klimovskoe       117.46  32  ePKIKP    PKPdf    05 32 10.8 -1.8
KLMR                                pmax     pmax
      comp=Z,19nm,1.1s
KLMR  Klimovskoe       117.46  32  ePKPdf    PKPdf    05 32 10.8 -1.8
KLMR                                AMP               05 32 14.3
      comp=Z,19nm,1.1s
VRH   Novokhopyorsk    118.83  43  ePKIKP    PKPdf    05 32 10.0 -5.5
VRH                                 pmax     pmax
      comp=Z,10.0nm,0.7s
KIV   Kislovodsk       119.16  51  ePKIKP    PKiKP    05 32 17.3 +0.7
KIV                                 pmax     pmax
      comp=Z,44nm,1.0s
KIV   Kislovodsk       119.16  51            PKiKP    05 32 17.5 +0.9
KBZ   Khabaz           119.30  52   PKP      PKiKP    05 32 17.2 +0.5
      comp=Z,12nm,0.9s,baz=214,slow=2.8,SNR=21
KBZ   Khabaz           119.30  52c iPKIKP    PKiKP    05 32 17.4 +0.7
STKA  Stephens Creek   119.34 208   PKP      PKiKP    05 32 17.6 +0.3
      comp=Z,2.4nm,0.5s,baz=137,slow=3.6,SNR=6.9
GNI   Garni            120.38  56c iPKIKP    PKiKP    05 32 21.2 +2.0
GNI                                 pmax     pmax
      comp=Z,5.0nm,0.6s
KIRV  Kirov            122.69  34c iPKIKP    PKiKP    05 32 23.8 +0.9
CTA   Charters Tower   126.66 220   PKP      PKPdf    05 32 31.8 +0.2
      comp=Z,10nm,0.8s,baz=101,slow=1.4,SNR=17
CTAO  Charters Tower   126.66 220   PKIKP    PKiKP    05 32 31.9 -0.2
CTAO  Charters Tower   126.66 220   PKPdf    PKiKP    05 32 31.9 -0.2
ARU   Arti             127.98  35 i PKIKP    PKiKP    05 32 34.2 +0.7
ARU                                                   05 34 42.2
ARU                                                   05 39 25.6
ARU                                 SS       SS       05 51 34.3 -1.0
ARU   Arti             127.98  35   PKPdf    PKiKP    05 32 34.0 +0.5
AKTO  Aktyubinsk       129.17  43   SKPbc    SKPbc    05 35 38.2 +1.0
      comp=Z,4.6nm,0.9s,baz=290,slow=3.3,SNR=7.8
ASAR  Alice Springs    129.74 205   PKhKP    PKPpre   05 32 26.9
      comp=Z,0.8nm,0.7s,baz=135,slow=2.0,SNR=5.6
ASAR                                PKP      PKPdf    05 32 37.1 -0.3
      comp=Z,13nm,0.7s,baz=133,slow=1.7,SNR=16
ASAR                                SKPbc    SKPab    05 35 39.9 -0.4
      comp=Z,2.5nm,0.7s,baz=147,slow=3.3,SNR=9.4
ASAR  Alice Springs    129.74 205   PKIKP    PKPdf    05 32 36.7 -0.7
ASAR  Alice Springs    129.74 205   PKPdf    PKPdf    05 32 36.7 -0.7
AS31  Alice Springs    129.74 205   PKPdf    PKPdf    05 32 36.7 -0.7
TIXI  Tiksi            130.20 354c iPKIKP    PKiKP    05 32 37.2 -0.3
TIXI                                pmax     pmax
      comp=Z,52nm,1.7s
TIXI  Tiksi            130.20 354   PKPdf    PKPdf    05 32 35.9 -0.8
ABKAR Akbulak array    130.64  44   PKPdf    PKPdf    05 32 38.0 -0.2
ABKAR Akbulak array    130.64  44   PKPdf    PKiKP    05 32 39.2 +0.1
GEYT  Alibeck          130.72  59   SKPbc    SKPbc    05 35 43.5 -0.1
      comp=Z,2.1nm,0.5s,baz=233,slow=0.7,SNR=4.5
NRIK  Noril'sk         130.84  12   PKP      PKiKP    05 32 39.2 +0.3
      comp=Z,3.9nm,0.7s,baz=168,slow=20,SNR=5.7
NRIK  Noril'sk         130.84  12c iPKIKP    PKiKP    05 32 39.6 +0.7
SEY   Seymchan         131.96 337   PKP      PKiKP    05 32 41.3 -0.1
      comp=Z,9.4nm,0.7s,baz=73,slow=2.2,SNR=22
WRA   Warramunga Arr   132.89 208   PKhKP    PKPpre   05 32 28.4
      comp=Z,1.7nm,0.9s,baz=129,slow=2.5,SNR=8.4
WRA                                 PKP      PKPdf    05 32 43.6 +0.1
      comp=Z,7.3nm,0.5s,baz=161,slow=1.7,SNR=31
WRA                                 SKPbc    SKPbc    05 35 51.9 -0.1
      comp=Z,2.9nm,0.8s,baz=155,slow=3.3,SNR=9.7
WRAB  Tennant Creek    132.90 208c iPKIKP    PKiKP    05 32 44.6  0.0
WRAB                                pmax     pmax
      comp=Z,35nm,1.7s
WRAB  Tennant Creek    132.90 208            PKPdf    05 32 43.7 +0.2
PETK  Petropavlovsk-   134.70 324   PKP      PKiKP    05 32 47.2  0.0
      comp=Z,3.5nm,0.7s,baz=80,slow=8.1,SNR=5.4
BRVK  Borovoye         135.53  36c iPKIKP    PKiKP    05 32 49.3 +0.4
BRVK                                pmax     pmax
      comp=Z,6.0nm,0.6s
BRVK  Borovoye         135.53  36   PKPdf    PKiKP    05 32 48.1 -0.8
BVAR  Borovoye Array   135.61  36   PKP      PKPdf    05 32 48.2 +0.8
      comp=Z,6.1nm,0.8s,baz=207,slow=3.3,SNR=24
FITZ  Fitzroy Crossi   137.69 198   PKhKP    PKPpre   05 32 41.9
      comp=Z,3.2nm,0.7s,baz=193,slow=9.8,SNR=8.2
FITZ                                PKP      PKiKP    05 32 53.5 -0.9
      comp=Z,10.0nm,0.7s,baz=190,slow=6.5,SNR=17
BRZS  Berezniki        138.23  39  ePKP      PKPdf    05 32 52.5  0.0
      baz=39
BRZS  Berezniki        138.23  39  ePKIKP    PKPdf    05 32 52.4  0.0
IUG   Iuzhnay          139.19  51  ePKP      PKPdf    05 32 54.4 -0.2
      baz=51
IUG   Iuzhnay          139.19  51  ePKIKP    PKPdf    05 32 54.3 -0.2
KKAR  Karatay Array    139.28  50   PKIKP    PKPdf    05 32 54.5 -0.1
KKAR  Karatay Array    139.28  50            PKPdf    05 32 54.5 -0.1
KKAR  Karatay Array    139.28  50            pPKPdf   05 33 44.6 -4.2
DZA   Taraz            139.92  50  ePKP      PKPdf    05 32 56.2 +0.5
      baz=50
DZA   Taraz            139.92  50  ePKIKP    PKPdf    05 32 56.2 +0.5
BTLS  Baital           141.07  45  ePKP      PKPdf    05 32 57.6 -0.2
      baz=45
BTLS  Baital           141.07  45  ePKIKP    PKPdf    05 32 57.5 -0.2
KURK  Kurchatov        141.18  35   PKIKP    PKiKP    05 32 59.1 -1.4
KURK                                                  05 33 51.9
KURBB Kurchatov Arra   141.19  35   PKhKP    PKPpre   05 32 53.8
      comp=Z,1.9nm,0.5s,baz=303,slow=3.1,SNR=32
KURBB                               PKP      PKiKP    05 32 59.1 -1.4
      comp=Z,8.8nm,0.7s,baz=306,slow=2.6,SNR=25
KURBB                               pPKP     pPKPdf   05 33 51.9  0.0
      comp=Z,4.9nm,0.6s,baz=301,slow=2.9,SNR=8.0
KURBB                               PP       PP       05 36 08.2 +6.5
      comp=Z,0.3nm,0.2s,baz=288,slow=6.9,SNR=4.0
EKS2  Erkin-Say        141.71  49   P        PKiKP    05 33 01.5 -0.5
      SNR=11
COCO  West Island      141.79 153 i PKIKP    PKPdf    05 33 00.2 +0.3
AML   Almayashu        141.81  50   P        PKiKP    05 33 01.6 -1.0
      SNR=10
USP   Ospenovka        142.00  48   P        PKiKP    05 33 01.4 -1.1
      SNR=8.8
ZALV  Zalesovo Beam    142.13  27   PKhKP    PKPpre   05 32 55.5
      comp=Z,22nm,0.7s,baz=293,slow=2.3,SNR=35
ZALV                                PKP      PKPdf    05 33 00.2 +0.9
      comp=Z,22nm,0.6s,baz=296,slow=2.7,SNR=39
ZALV                                pPKP     pPKPdf   05 33 53.4 -0.1
      comp=Z,5.0nm,0.6s,baz=300,slow=3.1,SNR=3.0
AAK   Ala-Archa        142.21  49   PKP      PKPdf    05 32 57.5 -2.6
      comp=Z,9.4nm,0.6s,baz=207,slow=4.4,SNR=13
AAK                                 pPKP     pPKPdf   05 33 52.6 -1.7
      comp=Z,7.5nm,0.6s,baz=187,slow=2.4,SNR=5.9
AAK   Ala-Archa        142.21  49   P        PKiKP    05 33 02.5 -0.6
      SNR=5.4
AAK   Ala-Archa        142.21  49   PKPdf    PKPdf    05 32 57.3 -2.8
AAK   Ala-Archa        142.21  49            pPKPdf   05 33 52.9 -1.4
SEM   Semipalatinsk    142.22  35  ePKP      PKPdf    05 32 59.0 -1.0
      baz=35
SEM   Semipalatinsk    142.22  35  ePKIKP    PKPdf    05 32 58.9 -1.0
UCH   Uchtor           142.36  50   P        PKiKP    05 33 03.3 -0.5
      SNR=13
KUU   Kurty            143.02  46  ePKP      PKPdf    05 33 00.9 -0.4
      baz=46
KUU   Kurty            143.02  46  ePKIKP    PKPdf    05 33 00.8 -0.4
CHKK  Chushkaly        143.47  46  ePKP      PKPdf    05 33 02.0  0.0
      baz=46
CHKK  Chushkaly        143.47  46  ePKIKP    PKPdf    05 33 02.0  0.0
ULHL  Ulahol           143.56  49   P        PKPdf    05 33 02.1 -0.5
      SNR=23
GENI  Genyem           143.65 230   PKP      PKPdf    05 33 02.7 -0.5
AAA   Alma-Ata         143.67  47  ePKP      PKPdf    05 33 02.2 -0.4
      baz=47
AAA   Alma-Ata         143.67  47  ePKIKP    PKPdf    05 33 02.1 -0.4
TNSS  Tian-Shan        143.76  47  ePKP      PKPbc    05 33 01.6 +0.3
      baz=47
TNSS  Tian-Shan        143.76  47  ePKIKP    PKPbc    05 33 01.5 +0.2
MDOK  Medeo            143.78  47 i PKP      PKPdf    05 33 02.2 -0.7
      baz=47
MDOK  Medeo            143.78  47 i PKIKP    PKPdf    05 33 02.1 -0.7
TDK   Taldyqorghan     143.91  43  ePKP      PKPdf    05 33 02.0 -0.8
      baz=43
TDK   Taldyqorghan     143.91  43  ePKIKP    PKPbc    05 33 01.9 +0.8
KSH   Kashi            144.25  53   PKP      PKPbc    05 33 02.8 +0.3
KSH                                 PKS      PKSdf    05 36 36.9 -2.5
KSH                                 AMB      AMB
      comp=Z,540nm,8.1s
KSH                                 LR       LR
      comp=Z,410nm,6.0s
KSH                                 LR       LR
      comp=Z,810nm,6.4s
KPKS  Kokpek           144.75  46  ePKP      PKPbc    05 33 03.8 -0.1
      baz=46
KPKS  Kokpek           144.75  46  ePKIKP    PKPbc    05 33 03.7 -0.2
BOD   Bodaibo          144.90 359  ePKIKP    PKPbc    05 33 02.8 -0.9
BOD                                 pmax     pmax
      comp=Z,146nm,1.1s
UZB   Uzynbulak        145.11  46  ePKP      PKPbc    05 33 04.8 -0.3
      baz=46
UZB   Uzynbulak        145.11  46  ePKIKP    PKPbc    05 33 04.7 -0.3
PALK  Pallekele        145.15 111   PKPbc    PKPab    05 33 06.7 +0.6
      comp=Z,37nm,1.0s,baz=210,slow=0.6,SNR=8.4
MAKZ  Makanchi         145.18  39   PKIKP    PKPbc    05 33 05.1 +0.1
MAKZ  Makanchi         145.18  39   PKPdf    PKPbc    05 33 05.1 +0.1
MKAR  Makanchi Array   145.37  38   PKPbc    PKPab    05 33 05.8 -0.1
      comp=Z,35nm,0.8s,baz=299,slow=3.8,SNR=250
BATI  Baumata          145.75 198   PKPbc    PKPab    05 33 08.8 +0.5
      comp=Z,71nm,0.6s,baz=146,slow=2.6,SNR=6.6
YSS   Yuzh-Sakhalins   146.09 323c iPKP2     PKPab    05 33 09.3 +0.6
YSS                                 pmax     pmax
      comp=Z,89nm,1.3s
YSS   Yuzh-Sakhalins   146.09 323            PKPab    05 33 09.1 +0.4
ZSN   Zaisan           146.42  36  ePKP      PKPdf    05 33 06.6 -0.4
      baz=36
ZSN   Zaisan           146.42  36  ePKIKP    PKPdf    05 33 06.6 -0.4
HYB   Hyderabad        147.04  93 i PKP      PKPdf    05 33 10.0 +1.1
HYB                                epPKP     pPKPab   05 34 06.0 +0.2
ZEA   Zeya             147.22 345  ePKP2     PKPbc    05 33 11.3 +0.6
ZEA                                 pmax     pmax
      comp=Z,30nm,1.5s
BAKI  Biak             147.45 226   PKP      PKiKP    05 33 13.7 -0.8
ASAJ  Asahikawa        147.76 319   PKPbc    PKPbc    05 33 12.8 +0.3
      comp=Z,80nm,0.9s,baz=289,slow=4.4,SNR=12
PLAI  Plampang         148.37 189   PKP      PKPbc    05 33 14.9  0.0
ERM   Erimo            148.46 315c iPKP2     PKPab    05 33 17.2 -1.0
ERM                                 pmax     pmax
      comp=Z,86nm,1.0s
FAKI  Fak Fak          148.51 219            PKiKP    05 33 16.1 -0.6
CISI  Cisompet, Garu   149.48 169   PKPdf    PKPdf    05 33 13.9 +0.8
MOY   Mondy            149.55  15  ePKP2     PKiKP    05 33 17.9  0.0
MOY                                 pmax     pmax
      comp=Z,136nm,1.4s
KLR   Kul'dur          149.73 336   PKPbc    PKPbc    05 33 16.6 -0.7
      comp=Z,14nm,0.6s,baz=68,slow=2.8,SNR=4.7
TLY   Talaya           150.12  12   PKP      PKPdf    05 33 13.9 +1.0
      comp=Z,13nm,0.6s,baz=187,slow=4.7,SNR=5.8
TLY                                 PKPbc    PKiKP    05 33 18.6 -0.3
      comp=Z,13nm,0.6s,baz=252,slow=2.3,SNR=21
TLY   Talaya           150.12  12   PKHKP    PKPpre   05 33 15.0
TLY   Talaya           150.12  12   PKPdf    PKPdf    05 33 15.0 +2.1
LEM   Lembang          150.16 169   PKPbc    PKiKP    05 33 20.2 -0.1
      comp=Z,242nm,0.7s,baz=314,slow=6.7,SNR=37
WMQ   Urumqi           150.19  39  ePKPbc    PKPdf    05 33 14.9 +1.6
WMQ                                 sPKP              05 34 21.3
WMQ                                 LR       LR
      comp=Z,810nm,29.0s
WMQ                                 LR       LR
      comp=Z,1μm,29.1s
WMQ                                 LR       LR
      comp=Z,85nm,28.8s
TEY   Ternei           150.64 325⇓ ePKIKP    PKPbc    05 33 19.8 +0.3
TEY                                 pmax     pmax
      comp=E,30nm,0.9s
TEY                                 pmax     pmax
      comp=N,20nm,0.6s
TEY                                 pmax     pmax
      comp=Z,80nm,0.8s
KASI  Kota Agung       150.69 162   PKP      PKPbc    05 33 20.5 -0.1
SIJI  Sorong           150.73 219   PKPbc    PKiKP    05 33 21.2 -0.1
      comp=Z,146nm,0.7s,baz=80,slow=3.2,SNR=4.4
SWI   Sorong           150.74 219   PKP      PKPbc    05 33 21.0 +0.3
NLAI  Namlea           150.90 209   PKP      PKPbc    05 33 20.1 -1.0
ZAK   Zakamensk        151.27  13  ePKIKP    PKPdf    05 33 16.0 +1.2
ZAK                                 pmax     pmax
      comp=Z,22nm,1.1s
KLSI                   151.55 162   PKP      PKPdf    05 33 14.4 -1.8
KAPI  Kappang          151.75 194   PKPbc    PKiKP    05 33 23.3 -0.1
      comp=Z,53nm,0.9s,baz=241,slow=2.7,SNR=13
KAPI  Kappang          151.75 194   PKIKP    PKPbc    05 33 22.9 -0.1
KAPI  Kappang          151.75 194            PKPbc    05 33 22.9 -0.1
LHSI  Lahat            151.99 159   PKP      PKiKP    05 33 24.2 +0.3
SPSI  Sidrap Palu      152.76 194   PKP      PKPbc    05 33 22.3 -3.0
USRK  Ussuriysk Ar.    153.56 329   PKPbc    PKiKP    05 33 26.7 +0.5
      comp=Z,8.1nm,0.7s,baz=24,slow=1.2,SNR=16
USRK                                PKPab    PKPab    05 33 40.5 +1.0
      comp=Z,6.4nm,0.7s,baz=55,slow=4.6,SNR=7.2
USRK  Ussuriysk Ar.    153.56 329   PKIKP    PKPbc    05 33 25.7 -0.4
USRK  Ussuriysk Ar.    153.56 329            PKPbc    05 33 25.7 -0.4
GKN   Gorkha           153.64  72  eP        PKPdf    05 33 19.8 +0.7
DMN   Daman            154.09  73  eP        PKPdf    05 33 20.6 +0.7
      comp=Z,32nm,1.1s
KKN   Kakani           154.23  73  eP        PKPdf    05 33 20.8 +0.8
      comp=Z,24nm,0.8s
SONM  Songino Array    154.31  11   PKP      PKPdf    05 33 19.2 -0.2
      comp=Z,5.5nm,0.8s,baz=44,slow=0.2,SNR=14
SONM                                PKPbc    PKiKP    05 33 28.0 +0.2
      comp=Z,9.2nm,0.7s,baz=310,slow=1.2,SNR=16
SONM                                PKPab    PKPab    05 33 42.6  0.0
      comp=Z,14nm,0.7s,baz=325,slow=4.2,SNR=15
SONM  Songino Array    154.31  11   PKIKP    PKPdf    05 33 19.8 +0.4
SONM                                                  05 33 41.6
SONM  Songino Array    154.31  11   PKPdf    PKPdf    05 33 19.8 +0.4
SONM                                PKPbc    PKiKP    05 33 28.2 +0.4
SONM                                PKPab    PKPab    05 33 41.6 -1.0
MDJ   Mudanjiang       154.33 332   PKPbc    PKPdf    05 33 19.6 +0.3
PKIN  Phulchoki        154.35  73  eP        PKPdf    05 33 20.6 +0.4
PKI   Pulchoki         154.36  73  eP        PKPdf    05 33 20.8 +0.5
      comp=Z,14nm,0.7s
MJAR  Matsushiro Arr   154.37 308   PKP      PKPdf    05 33 20.6 +0.9
      comp=Z,1.2nm,0.5s,baz=1.0,slow=1.5,SNR=4.8
MJAR                                PKPbc    PKiKP    05 33 28.6 +0.4
      comp=Z,11nm,0.7s,baz=111,slow=1.1,SNR=16
MJAR                                PKPab    PKPab    05 33 44.2 +1.1
      comp=Z,6.4nm,0.7s,baz=66,slow=3.0,SNR=7.5
MJAR  Matsushiro Arr   154.37 308   PKPdf    PKPdf    05 33 22.1 +2.5
MAT   Matsushiro       154.37 308   PKP      PKiKP    05 33 28.3 +0.1
ULN   Ulaanbaatar      154.39  10c iPKIKP    PKPdf    05 33 21.4 +1.9
ULN                                 pmax     pmax
      comp=Z,12nm,1.7s
ULN   Ulaanbaatar      154.39  10   PKPdf    PKPdf    05 33 20.5 +1.0
ULN                                          PKiKP    05 33 29.4 +1.4
ULN                                 PKPab    PKPab    05 33 43.9 +0.9
GUN   Gumba            154.75  72  eP        PKPdf    05 33 21.7 +0.8
      comp=Z,35nm,1.0s
RAMN  Ramite           155.47  75  eP        PKPdf    05 33 22.6 +0.8
      comp=Z,32nm,0.9s
ODAN  Odare            156.18  75  eP        PKPdf    05 33 23.6 +0.9
TAPN  Taplejung        156.42  73  eP        PKPdf    05 33 23.7 +0.6
      comp=Z,26nm,1.2s
GTA   Gaotai           159.78  31   PKP      PKPdf    05 33 27.8 +1.2
SHL   Shillong         160.30  77   PKIKP    PKPdf    05 33 26.3 -1.3
SHL   Shillong         160.30  77   PKPdf    PKPdf    05 33 26.3 -1.3
KSRS  Korea Array      160.59 323   PKP      PKPdf    05 33 28.6 +1.2
      comp=Z,3.9nm,0.9s,baz=59,slow=1.3,SNR=17
KSRS                                PKPab    PKPab    05 34 11.1 +1.2
      comp=Z,5.6nm,0.7s,baz=46,slow=3.9,SNR=16
KSRS                                PP       PP       05 37 56.6 +3.9
      comp=Z,1.7nm,0.9s,baz=40,slow=4.9,SNR=4.0
KSAR  Wonju Array Be   160.62 323   PKIKP    PKPdf    05 33 27.6 +0.2
KSAR                                                  05 34 10.4
KSAR  Wonju Array Be   160.62 323            PKPdf    05 33 27.6 +0.2
KSAR                                         PKPab    05 34 10.4 +0.4
HHC   Hu-ho-hao-te     161.83   4  ePKP      PKPdf    05 33 27.8 -0.9
HHC                                 pPKP     PKPab    05 34 16.1 +0.8
BJI   Beijing          162.52 352   PKP      PKPdf    05 33 30.5 +1.3
BJI                                 pPKP     PKPab    05 34 18.0 -0.2
BJI                                 PP       PP       05 38 02.8 +0.7
LZH   Lanzhou          164.35  29  ⇑PKP      PKPdf    05 33 33.3 +2.0
LZH                                 pPKP     pPKPdf   05 34 16.6 -9.4
LZH                                 sPKP              05 34 33.3
LZH                                 LR       LR
      comp=Z,440nm,18.6s
LZH                                 LR       LR
      comp=Z,500nm,19.0s
LZH                                 LR       LR
      comp=Z,490nm,20.0s
CM05  Chiang Mai Arr   165.95 105   P        PKPdf    05 33 34.0 +1.1
CMAR  Chiang Mai Arr   165.97 105   PKP      PKPdf    05 33 33.0 +0.1
      comp=Z,1.3nm,0.3s,baz=262,slow=2.2,SNR=14
CMAR                                PKPab    PKPab    05 34 34.8 +0.6
      comp=Z,5.3nm,0.7s,baz=257,slow=5.3,SNR=12
CMAR  Chiang Mai Arr   165.97 105   PKPdf    PKPdf    05 33 33.0 +0.1
CMAR                                         PKPab    05 34 34.4 +0.2
CM04  Chiang Mai Arr   165.98 105   P        PKPdf    05 33 35.0 +2.0
CMMT  Chiang Mai       166.09 103   P        PKPdf    05 33 33.4 +0.4
CM33  Chiang Mai Arr   166.09 103   P        PKPdf    05 33 34.0 +0.9
CM36  Chiang Mai Arr   166.12 105   P        PKPdf    05 33 34.0 +0.9
CM35  Chiang Mai Arr   166.23 104   P        PKPdf    05 33 34.0 +0.8
CM34  Chiang Mai Arr   166.28 104   P        PKPdf    05 33 34.0 +0.8
SRAK  Srakaew          166.32 127   P        PKPab    05 34 39.4 +3.7
LAMP  Lampang          166.60 106   P        PKPdf    05 33 35.4 +2.0
XAN   Xi'an            168.07  18   PKIKP    PKPdf    05 33 34.4 +0.3
XAN   Xi'an            168.07  18            PKPdf    05 33 34.4 +0.3
CD2   Chengdu          168.22  44   PKP      PKPdf    05 33 34.3  0.0
CD2                                 sPKP              05 34 44.4
CD2                                 SKKS              05 45 00.4
NJ2   Nanjing          169.42 333  ePKP      PKPdf    05 33 35.1 +0.1
SLVN  Son La           171.23  97            PKPdf    05 33 36.0 -0.4
WHN   Wuhan            172.11 353  ⇓P        PKPab    05 35 00.9 +0.2
WHN                                 pmax     pmax
      comp=Z,110nm,1.6s
WHN   Wuhan            172.11 353   PKP      PKPdf    05 33 37.9 +1.5
WHN                                 PKPab    PKPab    05 35 00.9 +0.2
TATO  Taipei           172.11 288            PKPdf    05 33 36.6  0.0
GYA   Guiyang          172.93  57  ⇑PKP      PKPdf    05 33 37.8 +0.7
```

GUC ***24*** *05:14:02.1±0.9, 32°.63S×71°.71W, h60^{km}±10^{km}, ML4.9*

NEIC ***24*** *05:14:03.6±1.7, 32°.58S±0°.04×71°.80W±0°.08, h54^{km}±6^{km},*

Error ellipse: s-maj=10.0km s-min=5.8km az=80.0

ISC 24 05:14:02.5±1.1, **32°.59S**±0°.04×**71°.82W**±0°.06, **h58**^{km}±13^{km}, **n34**, σ1^s**46**/45, **mb4.9**/3, **9C-2D**, **Near coast of central Chile**

```
Code  Station Name       Δ°   AZ°    Phase ID          Time      Res
                                    Op       ISC       h  m  s   ISC
MT02  Curacav            0.88 140 ⇑iP        Pn       05 14 18.8 -0.1
MT02                               i S       Sn       05 14 30.3 -0.7
MT02  Curacav            0.88 140            Pn       05 14 19.4 +0.5
VA05  Santo Domingo      1.08 171 ⇑iP        Pn       05 14 21.8 +0.3
VA05                               i S       Sn       05 14 35.8 +0.3
VA05                                IAML              05 14 38.2
      comp=E,35μm,0.3s
VA03  San Esteban        1.08 100 ⇑iP        Pn       05 14 21.6  0.0
VA03                               i S       Sn       05 14 35.6 -0.2
VA03                                IAML              05 14 36.3
      comp=N,65μm,0.3s
VA03  San Esteban        1.08 100   Pn       Pn       05 14 22.1 +0.5
PEL   Peldehue           1.10 120 ⇑iP        Pn       05 14 21.7 -0.2
PEL                                i S       Sn       05 14 35.5 -0.7
PEL   Peldehue           1.10 120   Pn       Pn       05 14 22.5 +0.7
MT05  Renca              1.21 132 ⇑iP        Pn       05 14 23.5 +0.2
MT05                               i S       Sn       05 14 38.8  0.0
MT05  Renca              1.21 132   Pn       Pn       05 14 24.1 +0.8
MT09  Talagante          1.37 150 ⇑iP        Pn       05 14 25.5 -0.1
MT09                               i S       Sn       05 14 43.2 +0.3
MT09                                IAML              05 14 44.5
      comp=N,22μm,0.4s
MT03  Universidad Ad     1.42 130 ⇑iP        Pn       05 14 26.1  0.0
MT03                               i S       Sn       05 14 44.0  0.0
MT03                                IAML              05 14 46.3
      comp=N,36μm,0.2s
MT03                                IAML              05 14 47.5
      comp=E,31μm,0.1s
CO02  Combarbal          1.55  27 ⇓iP        Pn       05 14 29.2 +1.4
CO02                               i S       Sn       05 14 48.2 +1.2
CO02                                IAML              05 14 50.5
      comp=N,29μm,0.2s
CO02  Combarbal          1.55  27   Pn       Pn       05 14 29.3 +1.4
LMEL  Las Melosas        1.85 133 ⇑iP        Pn       05 14 32.4 +0.4
LMEL                               i S       Sn       05 14 55.0 +0.7
LMEL                                IAML              05 14 57.0
      comp=N,19μm,0.1s
BO03  Pichilemu          1.91 184 ⇑iP        Pn       05 14 32.9 +0.3
BO03                               i S       Sn       05 14 54.6 -0.9
CO03  El Pedregal        1.99  29 ⇓iP        Pn       05 14 35.3 +1.4
CO03                               i S       Sn       05 14 59.6 +1.9
CO03  El Pedregal        1.99  29            Pn       05 14 35.4 +1.4
BO02  Sierra Bellavi     2.36 159   Pn       Pn       05 14 40.4 +1.4
GO04  Tololo Observa     2.56  20   Pn       Pn       05 14 43.0 +1.2
ZON   Zonda              2.86  70   Pn       Pn       05 14 48.7 +2.9
CO01  Juntas del Tor     2.99  30            Pn       05 14 49.5 +1.8
LCO   Las Campanas       3.69  15   Pn       Pn       05 14 58.2 +0.9
AC05  El Transito        3.97  20            Pn       05 15 02.4 +1.4
BI02  San Fabin de       4.09 174   Pn       Pn       05 15 03.7 +1.1
BI03  Tigo               4.36 193            Pn       05 15 05.9 -0.3
AC04  Llanos de Chal     4.42   9   Pn       Pn       05 15 07.0  0.0
GO03  Copiap             5.16  16            Pn       05 15 13.2 -4.1
VA04  Juan Fernndez      5.98 258   Pn       Pn       05 15 30.8 +2.5
LC01  Cunco              6.30 180   Pn       Pn       05 15 32.3 -0.4
PLCA  Paso Flores        8.19 173            Pn       05 15 59.9 +1.2
GO07  Milladeo Hill,    10.61 187   Pn       Pn       05 16 29.0 -2.7
EFI   East Falkland     21.56 156   P        P        05 18 49.0 +2.1
EFI                                 IAmb     IAmb     05 18 51.9
      comp=Z,72nm,1.3s
RCBR  Riachuelo         42.75  59   P        P        05 21 51.1 -3.3
RCBR                                IAmb     IAmb     05 21 53.2
      comp=Z,45nm,1.4s
SNAA  Sanae             52.82 158   P        P        05 23 13.5 +1.9
SNAA                                IAmb     IAmb     05 23 20.0
      comp=Z,11nm,1.3s
```

SNET ***24*** *05:15:01.0±2.1, 13°.20N×89°.87W, h13^{km}±18^{km}, ML2.8*

GCG ***24*** *05:15:05.0±0.5, 15°.47N×90°.74W, h102^{km}±40^{km}, MD3.1*

ISC 24 05:14:59.8±2.3, **13°.2N**±0°.1×**89°.93W**±0°.06, **h18**^{km}±8^{km}, **n11**, σ1^s**31**/21, **El Salvador**

```
Code  Station Name       Δ°   AZ°    Phase ID          Time      Res
                                    Op       ISC       h  m  s   ISC
JAYA  Jayaque - finc     0.66  45  eP        Pb       05 15 13.3 +0.4
JAYA                               eS        Sb       05 15 22.9 +1.0
JAYA                                IAML              05 15 25.4
      comp=Z,809nm,0.2s
CEVE  Cerro Verde        0.71  25  eP        Pg       05 15 14.0 +0.2
CEVE                               eS        Sb       05 15 24.3 +1.0
CEVE                                IAML              05 15 30.2
      comp=Z,713nm,0.2s
CEDA  San Andres         0.81  40  eP        Pg       05 15 15.3 -0.4
CEDA                               eS        Sb       05 15 26.5 +0.5
CEDA                                IAML              05 15 30.6
      comp=Z,531nm,0.3s
UEES  Universidad Ev     0.86  51  eP        Pg       05 15 16.1 -0.4
UEES                               eS        Sb       05 15 27.6 +0.2
COEG  Centro de Oper     1.11  67  eP        Pb       05 15 20.8 +0.2
COEG                               eS        Sb       05 15 34.2 -0.5
COEG                                IAML              05 15 40.0
      comp=Z,221nm,0.3s
PCG   Pacaya             1.37 331  eS        Sb       05 15 45.0 +2.5
COEB  Comit de Eme       1.40  77  eP        Pn       05 15 24.1 -0.5
COEB                               eS        Sb       05 15 41.7 -1.3
COEB                                IAML              05 15 46.9
      comp=Z,80nm,0.3s
PQSS  Presa 15 de Se     1.40  72  eP        Pn       05 15 24.4 -0.1
PQSS                               eS        Sb       05 15 42.1 -1.0
NBG   Las Nubes          1.46 344  eP        Pn       05 15 25.9 +0.4
NBG                                eS        Sn       05 15 42.8 -1.5
FUG   Fuego 3            1.54 325  eP        Pn       05 15 26.8 +0.2
FUG                                eS        Sn       05 15 43.1 -3.1
LCND  La Caada           1.99  86  eP        Pn       05 15 34.1 +1.5
LCND                               eS        Sn       05 15 58.5 +1.4
LCND                                IAML              05 16 02.4
      comp=Z,82nm,0.2s
```

*MOS **24** 05:18:22.5±1.3, 56.°13N×113.°82E, h9^{km}, mb3.9/1, Error ellipse: s-maj=10.6km s-min=6.9km az=67.5*
*IDC **24** 05:18:23.6±1.5, 56.°28N×113.°89E, h0^{km}, mb3.7/6, mb1 3.9/10, mb1mx3.6/60, mbtmp3.8/10, ML3.7/4, Error ellipse: s-maj=31.1km s-min=21.6km az=158.0*
*BYKL **24** 05:18:24.1±0.1, 56.°14N×113.°82E, h5^{km}±2^{km}*
ISC 24 05:18:23.3±0.5**, 56.°04N**±0.°02×**113.°71E**±0.°02**, h10**^{km}**, n67,** σ**2.ˢ48**/125**, mb3.8**/6**, 7C-3D, East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	**0.12**	**315**	⇑*i*Pg	**Pg**	**05 18 26.5**	**+0.3**
SVKR				*e*Sg	**Sg**	**05 18 28.8**	**+0.6**
SVKR				Pmax			
	8µm,0.1s						
SVKR				Smax			
	49µm,0.4s						
SVKR	**Severomuysk**	**0.12**	**315**	⇑*i*PG	**Pg**	**05 18 26.5**	**+0.3**
SVKR				*e*		05 18 27.9	
SVKR				pmax	pmax		
	comp=Z,12µm,0.4s						
SVKR				smax	smax		
	comp=N,49µm,0.8s						
UKT	**Uakit**	**0.55**	**185**	⇑*i*Pg	**Pb**	**05 18 35.5**	**+0.4**
UKT				*e*Pb	**Pn**	**05 18 38.1**	**+0.8**
UKT				*e*Sg	**Sb**	**05 18 44.9**	**+1.9**
UKT				*e*Sb	**Sn**	**05 18 48.4**	**+1.9**
UKT				*e*		05 18 52.9	
UKT				max			
	comp=N,358nm,0.3s						
UKT				max			
	comp=N,2µm,1.0s						
UKT	**Uakit**	**0.55**	**185**	⇑*i*PG	**Pb**	**05 18 35.5**	**+0.4**
UKT				*e*S	**Sn**	**05 18 45.1**	**-1.4**
YOA	**Uoyan**	**1.12**	**276**	*e*Pg	**Pn**	**05 18 45.5**	**+0.5**
YOA				*e*Pb	**Pg**	**05 18 47.6**	**+2.9**
YOA				*e*Sg	**Sn**	**05 19 02.3**	**+1.9**
YOA				*e*Sb	**Sb**	**05 19 04.8**	**+5.6**
YOA				max			
	comp=N,764nm,0.4s						
YOA				max			
	comp=N,5µm,0.4s						
YOA	**Uoyan**	**1.12**	**276**	*e*PG	**Pn**	**05 18 45.4**	**+0.5**
YOA				*i*		05 19 04.0	
YOA				pmax	pmax		
	comp=Z,276nm,0.2s						
YOA				smax	smax		
	comp=E,5µm,0.3s						
NLYR	**Nelyaty**	**1.20**	**67**	⇓*i*Pg	**Pb**	**05 18 44.3**	**-1.9**
NLYR				*e*Pb	**Pg**	**05 18 46.7**	**+0.3**
NLYR				*e*Sg	**Sb**	**05 18 59.7**	**-2.1**
NLYR				max			
	comp=E,978nm,0.4s						
NLYR				max			
	comp=E,2µm,0.9s						
NLYR	**Nelyaty**	**1.20**	**67**	⇓*i*PG	**Pb**	**05 18 44.3**	**-1.9**
NLYR				*e*		05 18 58.8	
NLYR				pmax	pmax		
	comp=Z,975nm,0.4s						
NLYR				smax	smax		
	comp=E,2µm,0.9s						
KMO	**Kumora**	**1.42**	**265**	⇑*i*Pg	**Pg**	**05 18 50.8**	**+0.3**
KMO				*e*		05 18 52.4	
KMO				*e*Sg	**Sg**	**05 19 11.2**	**+2.4**
KMO				*e*		05 19 14.1	
KMO				max			
	comp=E,692nm,0.4s						
KMO				max			
	comp=E,3µm,0.7s						
KMO	**Kumora**	**1.42**	**265**	*e*PG	**Pg**	**05 18 50.7**	**+0.3**
KMO				*e*		05 19 10.9	
KMO				pmax	pmax		
	comp=Z,679nm,0.4s						
KMO				smax	smax		
	comp=E,3µm,0.5s						
BOD	**Bodaibo**	**1.79**	**5**	*e*Pn	**Pb**	**05 18 54.5**	**-1.7**
BOD				*e*Pg	**Pg**	**05 18 55.0**	**-2.7**
BOD				*e*		05 18 56.4	
BOD				*e*Sg	**Sb**	**05 19 16.7**	**-2.1**
BOD				max			
	comp=E,479nm,1.5s						
BOD				Smax			
	comp=E,1µm,0.5s						
BOD	**Bodaibo**	**1.79**	**5**	*e*PN	**Pb**	**05 18 54.3**	**-1.9**
BOD				*e*		05 19 16.7	
BOD				pmax	pmax		
	comp=Z,1µm,0.7s						
BOD				smax	smax		
	comp=E,5µm,0.6s						
YLYR	**Ulyunkhan**	**1.86**	**232**	*e*Pn	**Pg**	**05 18 58.9**	**0.0**
YLYR				*e*Pg	**Pb**	**05 18 59.7**	**+2.4**
YLYR				*e*Sg	**Sg**	**05 19 25.9**	**+3.0**
YLYR				Pmax			
	comp=E,374nm,0.6s						
YLYR				Smax			
	comp=E,2µm,0.3s						
YLYR	**Ulyunkhan**	**1.86**	**232**	*e*PN	**Pg**	**05 18 59.3**	**+0.4**
YLYR				*e*		05 19 00.8	
YLYR				*e*S	**Sg**	**05 19 24.1**	**+1.2**
YLYR				*e*		05 19 25.8	
YLYR				pmax	pmax		
	comp=Z,376nm,0.5s						
YLYR				smax	smax		
	comp=E,2µm,0.3s						
NIZ	**Nizh Angarsk**	**2.36**	**265**	*e*Pn	**Pb**	**05 19 05.2**	**-0.7**
NIZ				*e*Pg	**Pg**	**05 19 08.0**	**-0.5**
NIZ				*e*		05 19 10.0	
NIZ				*e*Sn	**Sb**	**05 19 35.9**	**+0.9**
NIZ				*e*Sg	**Sg**	**05 19 40.6**	**+1.6**
NIZ				max			
	comp=E,91nm,0.5s						
NIZ				Smax			
	comp=E,819nm,0.5s						
NIZ	**Nizh Angarsk**	**2.36**	**265**	*e*PN	**Pb**	**05 19 05.2**	**-0.7**
NIZ				*e*		05 19 08.8	
NIZ				*e*S	**Sb**	**05 19 35.7**	**+0.7**
NIZ				*e*		05 19 40.6	
NIZ				pmax	pmax		
	comp=Z,91nm,0.4s						
NIZ				smax	smax		
	comp=N,820nm,0.7s						
CRS	**Chara**	**2.68**	**69**	⇓*i*Pn	**Pn**	**05 19 07.3**	**+0.9**
CRS				⇑*i*Pg	**Pb**	**05 19 11.5**	**+0.3**
CRS				*e*Sg	**Sb**	**05 19 45.0**	**+0.9**
CRS				Pmax			
	comp=N,262nm,1.0s						
CRS				Smax			
	comp=N,773nm,0.8s						
CRS	**Chara**	**2.68**	**69**	*e*PN	**Pn**	**05 19 07.1**	**+0.7**
CRS				*e*		05 19 11.2	
CRS				*e*		05 19 44.7	
CRS				pmax	pmax		
	comp=Z,263nm,0.5s						
CRS				smax	smax		
	comp=E,774nm,0.6s						
SYVR	**Suvo**	**3.21**	**224**	*e*Pn	**Pb**	**05 19 17.1**	**-3.1**
SYVR				*e*Pg	**Pg**	**05 19 23.2**	**-1.4**
SYVR				*e*PgPg	**PbPb**	**05 19 26.6**	**+3.2**
SYVR				*e*Sg	**Sg**	**05 20 06.9**	**+0.8**
SYVR				*e*		05 20 14.8	
SYVR				max			
	comp=E,88nm,0.7s						
SYVR				max			
	comp=E,515nm,1.2s						
SYVR	**Suvo**	**3.21**	**224**	*e*PN	**Pb**	**05 19 17.1**	**-3.1**
SYVR				*e*		05 19 25.0	
SYVR				*e*		05 20 06.9	
SYVR				pmax	pmax		
	comp=Z,90nm,0.8s						
SYVR				smax	smax		
	comp=E,530nm,1.0s						
VTMR	**Vitim**	**3.47**	**350**	*e*Pn	**Pn**	**05 19 17.6**	**+0.3**
VTMR				*e*		05 19 46.6	
VTMR				*e*Sn	**Sn**	**05 19 57.4**	**-1.0**
VTMR				*e*Sg	**Sb**	**05 20 07.8**	**+0.9**
KHNR	**Khani**	**3.59**	**73**	*e*Pn	**Pn**	**05 19 19.2**	**+0.2**
KHNR				*e*Pg	**Pb**	**05 19 26.6**	**-0.2**
KHNR				*e*Sg	**Sb**	**05 20 11.6**	**+1.2**
TUP	**Tupik**	**3.92**	**112**	*e*Pn	**Pn**	**05 19 25.0**	**+1.4**
TUP				*e*Pg	**Pb**	**05 19 34.9**	**+2.4**
TUP				*e*Sn	**Sn**	**05 20 10.2**	**+0.5**
TUP				*e*Sg	**Sg**	**05 20 25.2**	**-4.0**
TUP				*e*SgSg	**SbSb**	**05 20 30.6**	**+5.5**
TUP				Pmax			
	comp=E,65nm,0.7s						
TUP				max			
	comp=E,535nm,1.0s						
TUP	**Tupik**	**3.92**	**112**	*e*PN	**Pn**	**05 19 24.9**	**+1.4**
TUP				*e*		05 19 34.5	
TUP				*e*S	**Sn**	**05 20 10.2**	**+0.5**
TUP				*e*		05 20 25.1	
TUP				pmax	pmax		
	comp=Z,64nm,0.6s						
TUP				smax	smax		
	comp=N,539nm,0.9s						
MXMB	**Maximikha**	**4.00**	**228**	*e*Pn	**Pn**	**05 19 28.4**	**+3.8**
MXMB				*e*Pg	**Pg**	**05 19 38.0**	**-1.9**
MXMB				*e*Sg	**Sg**	**05 20 31.1**	**-0.6**
CIT	**Chita**	**4.02**	**181**	*e*Pg	**Pg**	**05 19 38.7**	**-1.6**
CIT				*e*Sg	**Sg**	**05 20 31.6**	**-0.8**
CIT				Pmax			
	comp=N,80nm,0.2s						
CIT				Smax			
	comp=N,409nm,0.4s						
CIT	**Chita**	**4.02**	**181**	*e*PN	**Pn**	**05 19 28.4**	**+3.4**
CIT				*e*		05 19 38.5	
CIT				*e*S	**Sn**	**05 20 13.9**	**+1.8**
CIT				*e*		05 20 30.5	
CIT				pmax	pmax		
	comp=Z,101nm,0.3s						
CIT				smax	smax		
	comp=E,412nm,0.4s						
OGRR	**Ongureny**	**4.27**	**238**	*e*Pn	**Pn**	**05 19 32.4**	**+4.1**
OGRR				*e*Pg	**Pg**	**05 19 42.6**	**-2.4**
OGRR				*e*		05 19 45.4	
OGRR				*e*Sg	**Sg**	**05 20 41.0**	**+0.8**
OGRR				max			
	comp=E,33nm,0.6s						
OGRR				Smax			
	comp=E,157nm,1.0s						
OGRR	**Ongureny**	**4.27**	**238**	⇑*i*PN	**Pn**	**05 19 32.6**	**+4.3**
OGRR				*e*		05 19 43.7	
OGRR				*e*		05 20 38.5	
OGRR				pmax	pmax		
	comp=Z,33nm,0.7s						
OGRR				smax	smax		
	comp=E,157nm,1.6s						
YKLR	**Yuktali**	**4.46**	**80**	*e*Pn	**Pn**	**05 19 31.6**	**+0.7**
YKLR				*e*Pg	**Pb**	**05 19 42.3**	**+0.7**
YKLR				*e*Sg	**Sb**	**05 20 39.0**	**+3.6**
ZRHB	**Zarechye**	**5.19**	**230**	*e*Pn	**Pn**	**05 19 45.1**	**+4.2**
ZRHB				*e*Pg	**Pg**	**05 20 00.0**	**-2.5**
ZRHB				*e*Sg	**Sg**	**05 21 09.0**	**-0.6**
ZRHB				Pmax			
	comp=E,46nm,0.8s						
ZRHB				Smax			
	comp=E,365nm,1.4s						
TRG	**Tyrgan**	**5.41**	**236**	*e*Pn	**Pn**	**05 19 46.8**	**+2.9**
TRG				*e*Pg	**Pg**	**05 20 03.2**	**-3.6**
TRG				*e*Sg	**Sg**	**05 21 14.6**	**-2.1**
TRG				Pmax			
	comp=E,11nm,0.6s						
TRG				Smax			
	comp=E,124nm,1.2s						
UUDB	**Ulan-Yde**	**5.49**	**223**	*e*Pn	**Pn**	**05 19 48.3**	**+3.2**
UUDB				*e*Pg	**Pg**	**05 20 04.8**	**-3.6**
UUDB				*e*Sg	**Sg**	**05 21 18.5**	**-1.0**
UUDB				Pmax			
	comp=E,35nm,0.9s						
UUDB				Smax			
	comp=E,348nm,1.3s						
FFNB	**Fofonovo**	**5.72**	**229**	*e*Sg	**Sg**	**05 21 23.6**	**-3.1**
STDB	**Stepnoy Dvoret**	**5.80**	**231**	*e*Sg	**Sg**	**05 21 27.1**	**-2.2**
HRMR	**Khuramsha**	**5.96**	**225**	*e*Pn	**Pn**	**05 19 55.2**	**+3.8**
HRMR				*e*Pg	**Pg**	**05 20 14.1**	**-3.1**
HRMR				*e*Sn	**Sn**	**05 21 03.4**	**+3.7**
HRMR				*e*Sg	**Sg**	**05 21 33.2**	**-1.1**
HRMR				Pmax			
	comp=E,58nm,0.6s						
HRMR				Smax			
	comp=E,553nm,1.1s						
BGT	**Bolshoye Golou**	**6.31**	**234**	*e*Pg	Pg	05 20 19.7	-4.4
BGT				*e*Sg	**Sg**	**05 21 42.9**	**-2.9**
BGT				Pmax			
	comp=E,5.0nm,0.1s						
BGT				Smax			
	comp=E,73nm,1.0s						
KPC	**Khapcheranga**	**6.39**	**188**	*e*Pn	**Pn**	**05 19 59.8**	**+2.3**
KPC				*e*Pg	**Pg**	**05 20 21.8**	**-3.8**
KPC				*e*Sn	**Sn**	**05 21 11.9**	**+1.4**
KPC				*e*Sg	**Sg**	**05 21 45.8**	**-2.6**
KPC				Pmax			
	comp=E,6.0nm,0.6s						
KPC				Smax			
	comp=E,160nm,1.4s						
KPC	**Khapcheranga**	**6.39**	**188**	*e*PN	**Pn**	**05 19 59.6**	**+2.1**
KPC				*e*		05 20 20.8	
KPC				*e*		05 21 44.2	
KPC				pmax	pmax		
	comp=Z,6.0nm,0.4s						
KPC				smax	smax		
	comp=E,158nm,1.4s						
LSTR	**Listvyanka**	**6.70**	**235**	*e*Pg	Pg	05 20 26.7	-4.7
LSTR				*e*Sg	**Sg**	**05 21 54.8**	**-3.2**
LSTR				Pmax			
	comp=E,3.0nm,0.3s						
LSTR				Smax			
	comp=E,106nm,1.8s						
IVK	**Ivanovka**	**6.93**	**236**	*e*Pn	**Pn**	**05 20 08.1**	**+3.2**
IVK				*e*Pg	Pg	05 20 30.4	-5.5
IVK				*e*Sg	**Sg**	**05 22 01.2**	**-4.5**
IVK				Pmax			
	comp=E,2.0nm,0.4s						
IVK				Smax			
	comp=E,52nm,1.1s						
TLY	**Talaya**	**7.38**	**238**	Pg	**Pb**	**05 20 32.5**	**+1.3**
	comp=E,0.0nm,0.3s,baz=47,slow=19,SNR=1.8						
TLY				Lg	Lg	05 22 16.2	
	comp=E,0.0nm,0.3s,baz=115,slow=20,SNR=3.7						
TLY	**Talaya**	**7.38**	**238**	*e*Pg	Pg	05 20 38.4	-6.0
TLY				*e*Sg	**Sg**	**05 22 14.9**	**-4.9**
TLY				Pmax			
	comp=E,1.0nm,0.2s						
TLY				Smax			
	comp=E,41nm,1.2s						
TLY	**Talaya**	**7.38**	**238**	*i* PN	**Pn**	**05 20 11.9**	**+1.0**
ARS	**Arshan**	**7.82**	**243**	*e*Pn	**Pn**	**05 20 20.0**	**+2.9**
ARS				*e*Pg	Pg	05 20 47.0	-5.9
ARS				*e*Sg	**Sg**	**05 22 28.5**	**-5.6**
ARS				Pmax			
	comp=E,11nm,0.4s						
ARS				Smax			
	comp=E,93nm,0.9s						
ZEA	**Zeya**	**8.14**	**101**	*e*PG	Pg	05 20 51.9	-7.1
ZAK	**Zakamensk**	**8.43**	**232**	*e*Sg	**Sg**	**05 22 50.4**	**-3.3**
ZAK				Smax			
	comp=E,58nm,1.9s						
ZAK	**Zakamensk**	**8.43**	**232**	*e*PG	Pg	05 20 59.0	-5.6
ZAK				*e*		05 22 52.6	
ZAK				pmax	pmax		
	comp=Z,7.0nm,0.6s						
ZAK				smax	smax		
	comp=N,58nm,1.5s						
MOY	**Mondy**	**8.69**	**245**	*e*Pn	**Pn**	**05 20 32.8**	**+3.7**
MOY				*e*Sn	**Sn**	**05 22 06.9**	**-0.2**
MOY				*e*Sg	**Sg**	**05 22 56.0**	**-6.0**
MOY				max			
	comp=N,6.0nm,0.7s						
MOY				Smax			
	comp=N,80nm,1.8s						
ORL	**Orlik**	**8.85**	**252**	*e*Pn	**Pn**	**05 20 34.3**	**+3.1**
ORL				*e*Sn	**Sn**	**05 22 09.7**	**-1.3**
ORL				*e*Sg	**Sg**	**05 23 01.5**	**-5.5**
ORL	**Orlik**	**8.85**	**252**	*e*PN	**Pn**	**05 20 33.8**	**+2.6**
ORL				*e*		05 21 04.5	
ORL				*e*S	**Sn**	**05 22 11.4**	**+0.4**
ORL				*e*		05 22 58.9	
ORL				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ORL				smax	smax		
	comp=N,39nm,2.2s						
ULN	**Ulaanbaatar**	**9.15**	**209**	*i* P	**Pn**	**05 20 37.9**	**+2.5**
SONM	**Songino Array**	**9.37**	**212**	Pn	**Pn**	**05 20 41.6**	**+3.2**
	comp=N,0.4nm,0.3s,baz=28,slow=13,SNR=3.3						
SONM				Lg	Lg	05 23 21.8	
	comp=N,1.8nm,0.3s,baz=21,slow=27,SNR=10.0						
YAK	**Yakutsk**	**10.17**	**47**	Lg	Lg	05 23 34.6	
	comp=N,0.2nm,0.3s,baz=109,slow=22,SNR=6.9						
KLR	**Kul'dur**	**12.88**	**114**	Pn	**Pn**	**05 21 27.3**	**+1.1**
	comp=N,0.2nm,0.3s,baz=316,slow=13,SNR=5.8						
KLR				Lg	Lg	05 25 06.5	
	comp=N,0.4nm,0.3s,baz=232,slow=14,SNR=6.2						
KLR	**Kul'dur**	**12.88**	**114**	*i* P	**Pn**	**05 21 27.5**	**+1.3**
ZALV	**Zalesovo Beam**	**16.65**	**275**	Pn	**P**	**05 22 18.4**	**-0.5**
	comp=N,1.0nm,0.3s,baz=57,slow=11,SNR=2.8						
NRIK	**Noril'sk**	**17.72**	**329**	P	**Pn**	**05 22 27.7**	**-2.0**
	comp=N,1.0nm,0.3s,baz=107,slow=11,SNR=6.1						
SEY	**Seymchan**	**20.54**	**55**	P	**P**	**05 23 01.2**	**-0.3**
	comp=N,0.8nm,0.2s,baz=259,slow=9.9,SNR=6.1						
KURK	**Kurchatov**	**21.43**	**270**	*i* P	**P**	**05 23 11.4**	**+0.2**
MK31	**Makanchi Array**	**21.50**	**258**	*i* P	**P**	**05 23 15.6**	**+3.6**
MKAR	**Makanchi Array**	**21.50**	**258**	P	**P**	**05 23 15.2**	**+3.3**
	comp=N,2.1nm,0.7s,baz=60,slow=9.4,SNR=24						
KURBB	**Kurchatov Arra**	**21.53**	**270**	P	**P**	**05 23 15.5**	**+3.3**
	comp=N,2.1nm,0.5s,baz=64,slow=11,SNR=20						
BVAR	**Borovoye Array**	**25.01**	**281**	P	**P**	**05 23 49.5**	**+2.5**
	comp=N,0.8nm,0.6s,baz=81,slow=9.1,SNR=4.7						
BRVK	**Borovoye**	**25.05**	**282**	*i* P	**P**	**05 23 48.0**	**+0.6**
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.4s						
FINES	**FINESS Array B**	**42.52**	**315**	P	**P**	**05 26 18.8**	**+0.4**
	comp=Z,1.0nm,0.5s,baz=47,slow=8.4,SNR=7.3						
ESDC	**Sonseca Array**	**71.03**	**314**	P	**P**	**05 29 43.2**	**+2.1**
	comp=Z,1.1nm,0.8s,baz=28,slow=5.9,SNR=5.1						

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*ECX **24** 05:24:01.3±0.9, 31.°07N×114.°24W, h20^{km}±22^{km}, MD3.4, ML3.6*
*MEX **24** 05:24:12.4±0.3, 30.°93N×115.°00W, h5^{km}, MD4.1*
ISC 24 05:23:59.4±1.0**, 31.°08N**±0.°08×**114.°31W**±0.°03**, h10**^{km}**, n16,** σ**1.ˢ76**/16**, 3C-4D, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFX	**San Felipe**	**0.47**	**265**	⇑*e*P	**Pn**	**05 24 11.5**	**-0.6**
SFX				*e*S	**Sb**	**05 24 18.7**	**+2.0**
SFX				IAML		05 24 28.2	
	comp=E,4µm,1.1s						
ECBX	**El Chinero**	**0.75**	**302**	*e*P	**Pb**	**05 24 14.9**	**+0.4**
PIX	**Pinacate**	**0.87**	**56**	*e*P	**Pg**	**05 24 16.1**	**-0.1**
SPX	**San Pedro Mart**	**0.99**	**268**	⇓*e*P	**Pn**	**05 24 19.7**	**0.0**
SPX				IAML		05 24 29.1	
	comp=E,1µm,0.7s						
SPX				⇓*e*		05 24 41.6	
SPIG	**San Pedro Mart**	**0.99**	**268**	⇓*e*P	**Pn**	**05 24 20.2**	**+0.5**
	baz=106,slow=12						
SPIG				*i* S	**Sg**	**05 24 26.2**	**-5.3**
SPIG	**San Pedro Mart**	**0.99**	**268**	*e*P	**Pn**	**05 24 20.0**	**+0.3**
VTX	**Valle De La Tr**	**1.30**	**284**	*e*P	**Pb**	**05 24 24.4**	**+0.4**
VTX				IAML		05 25 03.9	
	comp=N,497nm,1.5s						
VTX				⇑*e*		05 25 03.9	
BAHB	**Baha de los**	**1.30**	**150**	*e*P	Pg	05 24 36.9	+12
SQX	**San Quintin**	**1.44**	**250**	*e*P	**Pn**	**05 24 25.9**	**+0.4**
MBIG	**Mexicali**	**1.52**	**330**	*i* P	Pg	05 24 34.0	+5.3
214A	**Organ Pipe Nat**	**1.55**	**55**	*e*P	**Pn**	**05 24 25.9**	**-1.2**
214A				*i* S	Sn	05 24 32.9	-14
SJX	**San Joaquin**	**1.57**	**296**	⇑*e*P	**Pg**	**05 24 30.0**	**+0.6**
CBX	**Cerro Bola**	**2.35**	**302**	*e*P	**Pn**	**05 24 39.8**	**+1.5**
CBX				IAML		05 25 25.7	
	comp=E,565nm,0.7s						
CBX				⇓*e*		05 25 25.7	
TJIG	**Tijuana**	**2.42**	**304**	*e*P	**Pn**	**05 24 40.4**	**+1.3**
HSIG		**3.56**	**124**	*i* P	**Pb**	**05 25 03.6**	**+1.1**
121A	**Cookes Peak, D**	**5.74**	**74**	*i* P	**Pn**	**05 25 25.1**	**+0.3**

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*IDC **24** 05:25:52.1±1.4, 56.°78N×163.°59E, h0^{km}, mb3.5/3, mb1 3.9/5, mb1mx3.5/70, mbtmp3.8/5, ML3.3/2, Error ellipse: s-maj=267.6km s-min=19.4km az=139.0*
*KRSC **24** 05:25:52.5±1.5, 56.°15N×164.°49E, h51^{km}±24^{km}, ML4.3*
*MOS **24** 05:25:54.9±0.8, 56.°17N×164.°45E, h49^{km}, mb3.9/1, Error ellipse: s-maj=10.3km s-min=5.4km az=56.1*
ISC 24 05:25:51.8±1.3**, 56.°16N**±0.°03×**164.°48E**±0.°03**, h4**^{km}±9^{km}**, n80,** σ**1.ˢ65**/115**, mb3.2**/3**, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.93**	**274**	PN	**Pg**	**05 26 09.4**	**-0.2**
KBTR				S	**Sg**	**05 26 21.0**	**-0.6**
KBTR	**Krutoberegovo**	**0.93**	**274**	*e*P	**Pg**	**05 26 09.4**	**-0.2**
KBTR				*e*S	**Sg**	**05 26 21.0**	**-0.6**
KBG	**Krutoberegovo**	**0.99**	**276**	PN	**Pg**	**05 26 10.2**	**-0.7**
KBG				S	**Sg**	**05 26 23.3**	**-0.4**
KBG	**Krutoberegovo**	**0.99**	**276**	*e*P	**Pg**	**05 26 10.2**	**-0.7**
KBG				*e*S	**Sg**	**05 26 23.3**	**-0.4**
BKI	**Bering**	**1.28**	**138**	PN	**Pg**	**05 26 16.4**	**+0.1**
BKI				S	**Sg**	**05 26 32.7**	**-0.1**
BKI	**Bering**	**1.28**	**138**	*e*P	**Pg**	**05 26 16.4**	**+0.1**
BKI				*e*S	**Sg**	**05 26 32.7**	**-0.1**
SMKR	**Semkarok**	**1.73**	**285**	*e*S	**Sn**	**05 26 43.7**	**-1.5**
BDR	**Baidarnaya**	**1.86**	**284**	PN	**Pn**	**05 26 25.3**	**+0.7**
BDR				S	**Sn**	**05 26 47.6**	**-1.0**
BDR	**Baidarnaya**	**1.86**	**284**	*e*P	**Pn**	**05 26 25.3**	**+0.7**
BDR				*e*S	**Sn**	**05 26 47.6**	**-1.0**
SRKR	**Sorokina**	**1.91**	**287**	PN	**Pn**	**05 26 26.4**	**+1.3**
SRKR				S	**Sn**	**05 26 48.3**	**-1.3**
SRKR	**Sorokina**	**1.91**	**287**	*e*P	**Pn**	**05 26 26.4**	**+1.3**
SRKR				*e*S	**Sn**	**05 26 48.3**	**-1.3**
KLY	**Klyuchi**	**2.14**	**276**	PN	**Pn**	**05 26 27.2**	**-1.1**
KLY				S	**Sn**	**05 26 51.9**	**-3.4**
KLY	**Klyuchi**	**2.14**	**276**	*e*P	**Pn**	**05 26 27.2**	**-1.1**
KLY				*e*S	**Sn**	**05 26 51.9**	**-3.4**
BZWR	**Bezymyannyi-We**	**2.24**	**267**	*e*P	**Pn**	**05 26 31.5**	**+1.6**
MKZ	**Mys Kozlova**	**2.24**	**225**	PN	**Pn**	**05 26 29.2**	**-0.5**
MKZ				S	**Sn**	**05 26 54.9**	**-2.9**
MKZ	**Mys Kozlova**	**2.24**	**225**	*e*P	**Pn**	**05 26 29.2**	**-0.5**
MKZ				*e*S	**Sn**	**05 26 54.9**	**-2.9**
BZMR	**Bezymyannaya**	**2.25**	**266**	PN	**Pn**	**05 26 31.1**	**+1.2**
BZMR	**Bezymyannaya**	**2.25**	**266**	*e*P	**Pn**	**05 26 31.1**	**+1.2**
KIRR	**Kirishev**	**2.33**	**267**	PN	**Pn**	**05 26 32.3**	**+1.3**
KIRR	**Kirishev**	**2.33**	**267**	*e*P	**Pn**	**05 26 32.3**	**+1.3**
KMNR	**Kamenistaya**	**2.42**	**262**	PN	**Pn**	**05 26 34.3**	**+2.1**
KMNR	**Kamenistaya**	**2.42**	**262**	*e*P	**Pn**	**05 26 34.3**	**+2.1**
TUMD	**Tumrok D**	**2.50**	**249**	*e*P	**Pn**	**05 26 34.0**	**+0.7**
TUMD				*e*S	**Sn**	**05 27 03.4**	**-0.8**
KOZ	**Kozyrevsk**	**2.58**	**270**	PN	**Pn**	**05 26 35.9**	**+1.5**
KOZ				S	**Sn**	**05 27 08.4**	**+2.2**
KOZ	**Kozyrevsk**	**2.58**	**270**	*e*P	**Pn**	**05 26 35.9**	**+1.5**
KOZ				*e*S	**Sn**	**05 27 08.4**	**+2.2**
KZV	**Kizimen**	**2.59**	**248**	PN	**Pn**	**05 26 35.3**	**+0.6**
KZV				S	**Sn**	**05 27 07.2**	**+0.5**
KZV	**Kizimen**	**2.59**	**248**	*e*P	**Pn**	**05 26 35.3**	**+0.6**
KZV				*e*S	**Sn**	**05 27 07.2**	**+0.5**
TUMR	**Tumrok**	**2.60**	**252**	PN	**Pn**	**05 26 34.0**	**-0.8**
TUMR				S	**Sn**	**05 27 03.4**	**-3.5**
TUMR	**Tumrok**	**2.60**	**252**	*e*P	**Pn**	**05 26 36.0**	**+1.2**
SRDR	**Sredinnyy**	**2.66**	**275**	PN	**Pn**	**05 26 36.5**	**+1.0**
SRDR				S	**Sn**	**05 27 08.7**	**+0.4**
SRDR	**Sredinnyy**	**2.66**	**275**	*e*P	**Pn**	**05 26 36.5**	**+1.0**
SRDR				*e*S	**Sn**	**05 27 08.7**	**+0.4**
OSSR	**Ossora**	**3.19**	**347**	PN	**Pn**	**05 26 41.8**	**-0.9**
OSSR	**Ossora**	**3.19**	**347**	*e*P	**Pn**	**05 26 41.8**	**-0.9**
ESO	**Esso**	**3.25**	**268**	PN	**Pn**	**05 26 45.4**	**+1.8**
ESO	**Esso**	**3.25**	**268**	*e*P	**Pn**	**05 26 45.4**	**+1.8**
KII	**Karymskiy**	**3.59**	**236**	PN	**Pn**	**05 26 49.9**	**+1.6**
KII	**Karymskiy**	**3.59**	**236**	*e*P	**Pn**	**05 26 49.9**	**+1.6**
PALN	**Palana**	**3.81**	**322**	PN	**Pn**	**05 26 51.7**	**+0.5**
PALN	**Palana**	**3.81**	**322**	*e*P	**Pn**	**05 26 51.7**	**+0.5**
SPN	**Mys Shipunski**	**4.01**	**222**	PN	**Pn**	**05 26 53.3**	**-0.7**
SPN	**Mys Shipunski**	**4.01**	**222**	*e*P	**Pn**	**05 26 53.3**	**-0.7**
SPN				*e*S	**Sn**	**05 27 36.6**	**-4.8**
NLC	**Nalytchevo**	**4.22**	**227**	*e*S	**Sn**	**05 27 44.2**	**-2.4**
SDLR	**Sedlovina**	**4.34**	**231**	PN	**Pn**	**05 26 59.9**	**+1.3**
SDLR				S	**Sn**	**05 27 47.5**	**-2.2**
SDLR	**Sedlovina**	**4.34**	**231**	*i* P	**Pn**	**05 26 59.9**	**+1.3**
SDLR				*e*S	**Sn**	**05 27 47.5**	**-2.2**
KRER	**Koryakskii**	**4.38**	**232**	PN	**Pn**	**05 27 01.5**	**+2.2**
KRER	**Koryakskii**	**4.38**	**232**	*e*P	**Pn**	**05 27 01.5**	**+2.2**
SMAR	**Somma**	**4.39**	**231**	PN	**Pn**	**05 27 00.6**	**+1.2**
SMAR	**Somma**	**4.39**	**231**	*i* P	**Pn**	**05 27 00.6**	**+1.2**
KRX	**Arik**	**4.39**	**233**	PN	**Pn**	**05 27 01.9**	**+2.6**
KRX				S	**Sn**	**05 27 49.9**	**-1.0**
KRX	**Arik**	**4.39**	**233**	P	**Pn**	**05 27 01.9**	**+2.6**
KRX				S	**Sn**	**05 27 49.9**	**-1.0**
TILK	**Tilichiki**	**4.39**	**11**	PN	**Pn**	**05 27 00.4**	**+1.2**
TILK				S	**Sn**	**05 27 48.6**	**-2.1**

TILK	Tilichiki	4.39	11	*e*P	Pn	05 27 00.4	+1.2
TILK				S	Sn	05 27 48.6	-2.1
AVH	Avacha	4.41	231	PN	Pn	05 27 01.6	+2.0
AVH	Avacha	4.41	231	*e*P	Pn	05 27 01.6	+2.0
UGLR	Uglovaya	4.41	230	PN	Pn	05 27 01.0	+1.3
UGLR	Uglovaya	4.41	230	*e*P	Pn	05 27 01.0	+1.3
KOK	Koryaka	4.44	232	PN	Pn	05 27 01.5	+1.5
KOK	Koryaka	4.44	232	*e*P	Pn	05 27 01.5	+1.5
GNL	Ganaly	4.50	239	PN	Pn	05 27 02.7	+1.8
GNL	Ganaly	4.50	239	*e*P	Pn	05 27 02.7	+1.8
DALK	Dalny	4.57	229	PN	Pn	05 27 02.6	+0.9
DALK	Dalny	4.57	229	*e*P	Pn	05 27 02.6	+0.9
DALK				S	Sn	05 27 52.7	-2.5
PET	Petropavlovsk	4.62	230	*e*PN	Pn	05 27 03.5	+1.2
PET	Petropavlovsk	4.62	230	S	Sn	05 27 55.8	-0.5
KRMR	Karymshinskiy	4.98	231	PN	Pn	05 27 10.5	+3.2
KRMR				S	Sn	05 28 05.8	+0.5
KRMR	Karymshinskiy	4.98	231	*e*P	Pn	05 27 10.5	+3.2
KRMR				*e*S	Sn	05 28 05.8	+0.5
PETK	Petropavlovsk-	4.98	235	Pn	Pn	05 27 09.1	+1.8
	0.8nm,0.3s,baz=60,slow=18,SNR=14						
PETK				Sn	Sn	05 28 07.1	+1.7
	1.6nm,0.3s,baz=203,slow=28,SNR=6.8						
RUS	Russkaya	5.11	226	PN	Pn	05 27 10.2	+1.1
RUS	Russkaya	5.11	226	*e*P	Pn	05 27 10.2	+1.1
RUS				S	Sn	05 28 05.2	-3.3
GRL	Gorelyy	5.20	229	PN	Pn	05 27 13.0	+2.5
GRL	Gorelyy	5.20	229	*i* P	Pn	05 27 13.0	+2.5
MTVR	Mutnovka	5.21	228	PN	Pn	05 27 12.6	+2.0
MTVR	Mutnovka	5.21	228	*e*P	Pn	05 27 12.6	+2.0
MTVR				*e*S	Sn	05 28 09.2	-1.9
KDTR	Khodutka, Kamc	5.76	224	PN	Pn	05 27 18.5	+0.5
KDTR	Khodutka, Kamc	5.76	224	*i* P	Pn	05 27 18.5	+0.5
ASAJ	Asahikawa	18.39	238	P	Pn	05 30 07.8	+0.3
	0.5nm,0.3s,baz=354,slow=8.7,SNR=4.0						
ILAR	Eielson Array	24.86	50	P	P	05 31 15.3	+0.2
	0.4nm,0.8s,baz=279,slow=7.2,SNR=3.0						
MJAR	Matsushiro Arr	26.44	233	P	P	05 31 30.0	+0.4
	1.5nm,0.3s,baz=26,slow=8.1,SNR=5.1						
MJAR	Matsushiro Arr	26.44	233	P	P	05 31 30.0	+0.4
YKA	Yellowknife Ar	39.19	47	P	P	05 33 21.0	+0.7
	0.2nm,0.5s,baz=302,slow=7.5,SNR=3.9						

JMA ***24*** *05:25:53.6±0.4, 43°.85N×147°.93E, h0^{km}, M3.6*

SKHL ***24*** *05:25:55.3±0.0, 44°.00N×148°.10E, h38^{km}±7^{km}, mb4.3/3*

ISC 24 05:25:55.4±2.9, **44°.1N**±0°.1×**148°.1E**±0°.2, **h35**^{km}**, n15,** σ**1^{s}19**/21**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	1.16	351	*i* P	Pn	05 26 14.9	-0.2
KUR				AMB	AMB	05 26 15.0	
	44nm,0.2s						
KUR				*e*S	Sn	05 26 29.6	-0.2
KUR				A	A	05 26 34.0	
	198nm,0.2s						
KUR				A	A	05 26 34.0	
	336nm,0.2s						
YUK	Yuzh-Kuril'sk	1.63	269	*e*P	Pn	05 26 20.4	-1.2
YUK				AMB	AMB	05 26 22.9	
	170nm,0.4s						
YUK				*e*S	Sn	05 26 40.6	-0.8
YUK				A	A	05 26 47.3	
	440nm,0.6s						
YUK				A	A	05 26 47.3	
	360nm,0.6s						
GRPR	Tuman	1.70	268	*e*P	Pn	05 26 22.0	-0.6
GRPR				AMB	AMB	05 26 24.0	
	106nm,0.4s						
GRPR				*e*S	Sn	05 26 42.0	-1.1
GRPR				A	A	05 26 45.0	
	278nm,0.4s						
GRPR				A	A	05 26 45.0	
	451nm,0.4s						
NEM2	Nemuro 2	1.87	248	P	Pn	05 26 24.3	-0.6
NEM2				*e*S	Sn	05 26 46.4	-0.9
NMR	Nemuro--Hokkai	1.88	248	*i* P	Pn	05 26 24.5	-0.5
NMR				*e*S	Sn	05 26 46.0	-1.5
GLVR	Golovnino	1.92	260	*e*S	Sn	05 26 47.0	-1.3
JRA	Rausu	2.17	267	P	Pn	05 26 30.0	+1.0
JNSB	Nemuroshibetsu	2.28	263	P	Pn	05 26 31.1	+0.6
JNK	Nakash	2.52	260	P	Pn	05 26 34.3	+0.5
JNK				*e*S	Sn	05 27 04.0	+0.8
JAK	Akkeshi	2.72	248	P	Pn	05 26 36.3	-0.3
JTKR	Abashiri--Toko	3.04	269	P	Pn	05 26 42.4	+1.4
JAR	Ashorobuto	3.26	257	P	Pn	05 26 45.8	+1.8
JOB	Onbets	3.34	251	P	Pn	05 26 45.8	+0.7
HRK	Horoka	3.67	262	*e*P	Pn	05 26 52.0	+2.3
JCH	Churui	3.77	249	P	Pn	05 26 52.8	+1.8

IDC 24 05:41:55.9±2.2, **2°.72S**×**128°.23E, h0**^{km}**, mb3.2**/2, **mb1 3.4**/3**, mb1mx3.3**/28**, mbtmp3.3**/3**, ML3.3**/1**, Error ellipse: s-maj=149.4km s-min=28.3km az=67.0, Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.13	161	P	Pn	05 46 09.3	+0.1
	0.1nm,0.3s,baz=340,slow=11,SNR=7.3						
ASAR	Alice Springs	21.53	166	P	P	05 46 45.9	-1.0
	0.4nm,0.7s,baz=346,slow=12,SNR=4.7						
MKAR	Makanchi Array	63.70	327	P	P	05 52 29.8	+0.5
	0.2nm,0.4s,baz=120,slow=8.2,SNR=3.7						

NNC 24 05:51:39.1±2.5, **37°.82N**×**71°.48E, h0**^{km}**, mb3.6, mpv3.3, 1C, Error ellipse: s-maj=17.6km s-min=12.1km az=173.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IUG	Iuzhnay	4.47	346	Pg	Pb	05 53 00.8	+2.3
	0.5nm,0.1s						
IUG				Lg	Lg	05 54 01.3	
	8.0nm,0.5s						
MRKS	Merke	5.10	15	Pg	Pb	05 53 11.9	+2.7
	4.2nm,0.3s						
MRKS				Lg	Lg	05 54 20.9	
	4.2nm,0.4s						
KK31	Karatay Array	5.33	352	P	Pb	05 53 10.7	-2.4
	0.3nm,0.3s,baz=172,slow=12,SNR=9.9						
KK31				⇑S	Sb	05 54 21.5	+3.8
	0.8nm,0.4s,baz=172,slow=22						

WEL 24 06:20:37.0±1.1, **36°S**±9°×**18°0E**±1°5**, h33**^{km}**, M3.8**/18, **ML3.9**/18, **MLv3.8**/18, **Error ellipse: s-maj=0.0km s-min=0.0km az=115.9, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	2.36	207	P	Pn	06 21 14.7	+1.3
PKGZ	Pakihiroa	2.56	212	P	Pn	06 21 16.4	+0.3
PKGZ				S	Sn	06 21 46.1	-0.1
HAZ	Te Kaha	2.59	218	P	Pn	06 21 17.2	+0.7
HAZ				S	Sn	06 21 48.3	+1.5
PUZ	Puketiti	2.64	207	P	Pn	06 21 17.0	-0.3
PUZ				S	Sn	06 21 48.6	+0.4
RUGZ	Raukumara Rang	2.80	217	P	Pn	06 21 19.7	+0.1
RUGZ				S	Sn	06 21 53.5	+1.2
TWGZ	Tauwhareparae	2.84	210	P	Pn	06 21 21.2	+1.2
TWGZ				S	Sn	06 21 54.2	+1.1
CNGZ	Carnagh Statio	3.03	204	P	Pn	06 21 23.3	+0.8
CNGZ				S	Sn	06 21 59.5	+1.9
OPRZ	Ohinepanea	3.35	230	P	Pn	06 21 27.3	+0.4
MARZ	Manawahe	3.36	227	P	Pn	06 21 27.5	+0.3
RIGZ	Rimuhau	3.38	208	P	Pn	06 21 27.6	+0.1
RIGZ				S	Sn	06 22 06.0	-0.5
RTZ	Ruatahuna	3.65	217	P	Pn	06 21 31.3	+0.1
MUGZ	Murupara	3.65	220	P	Pn	06 21 31.0	-0.2
MUGZ				S	Sn	06 22 13.3	+0.2
MTHZ	Maungataniwha	3.91	216	P	Pn	06 21 34.8	+0.2
MTHZ				S	Sn	06 22 19.2	-0.1
TOZ	Tahuroa Road	3.98	239	P	Pn	06 21 36.8	+1.2
MRHZ	Matea Rd	4.10	220	P	Pn	06 21 36.9	-0.5
NMHZ	Naumai	4.12	214	P	Pn	06 21 37.5	-0.1
ARHZ	Aropaoanui	4.17	211	P	Pn	06 21 37.8	-0.4
BKZ	Black Stump Fm	4.32	216	P	Pn	06 21 39.3	-1.1
KWHZ	Kaweka Forest	4.56	215	P	Pn	06 21 42.3	-1.3
KAHZ	Kahuranaki	4.67	209	P	Pn	06 21 43.8	-1.4
TMVZ	Te Maari	4.69	223	P	Pn	06 21 44.9	-0.7
ETVZ	East Tongariro	4.70	222	P	Pn	06 21 44.6	-1.0
MRZ	Mangatainoka R	5.94	213	P	Pn	06 21 59.3	-3.2

IDC ***24*** *06:21:25.4±3.7, 8°.40S×158°.91E, h83^{km}±40^{km}, mb3.8/9, mb1 4.0/9, mb1mx3.7/41, mbtmp4.0/9, Error ellipse: s-maj=43.4km s-min=18.1km az=147.0*

ISC 24 06:21:27.7±0.7, **8°.6S**±0°.1×**159°.1E**±0°.1**, h111**^{km}**, n16,** σ**0^{s}96**/11**, mb3.9**/9**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	1.20	135	P	Pn	06 21 50.1	-0.9
	192nm,0.3s,baz=223,slow=6.5,SNR=46						
HNR				LR	LR	06 21 59.5	
	comp=Z,54nm,19.7s,baz=308,slow=24						
HNR				S	Sn	06 22 08.9	+0.1
	672nm,0.3s,baz=360,slow=20,SNR=42						
WRA	Warramunga Arr	26.46	242	P	P	06 26 54.5	-0.1
	0.6nm,0.3s,baz=66,slow=9.2,SNR=14						
H11S3	WAKE ISLAND Hy	27.94	16	T	T	06 55 56.6	
	baz=196,slow=76,SNR=178						
H11S2	WAKE ISLAND Hy	27.94	16	T	T	06 55 52.5	
	baz=196,slow=76,SNR=188						
H11S1	WAKE ISLAND Hy	27.95	16	T	T	06 55 56.0	
	baz=196,slow=76,SNR=130						
STKA	Stephens Creek	28.30	213	P	P	06 27 12.8	+1.9
	1.8nm,0.4s,baz=33,slow=12,SNR=4.2						
ASAR	Alice Springs	28.38	235	P	P	06 27 11.2	-0.6
	1.0nm,0.5s,baz=64,slow=9.8,SNR=19						
H11N1	WAKE ISLAND Hy	29.16	15	T	T	06 57 23.1	
	baz=196,slow=76,SNR=136						
H11N3	WAKE ISLAND Hy	29.16	15	T	T	06 57 28.6	
	baz=196,slow=76,SNR=211						
H11N2	WAKE ISLAND Hy	29.17	15	T	T	06 57 24.7	
	baz=196,slow=76,SNR=122						
FITZ	Fitzroy Crossi	33.83	250	P	P	06 27 58.7	-1.0
	1.0nm,0.4s,baz=55,slow=8.6,SNR=16						
SONM	Songino Array	72.89	326	P	P	06 32 45.2	+0.3
	0.7nm,0.4s,baz=126,slow=7.3,SNR=2.6						
ILAR	Eielson Array	83.40	20	P	P	06 33 42.0	-0.3
	0.4nm,0.5s,baz=247,slow=5.7,SNR=3.0						
MKAR	Makanchi Array	87.28	318	P	P	06 34 01.6	-0.5
	1.0nm,0.6s,baz=102,slow=5.5,SNR=12						
YKA	Yellowknife Ar	95.85	28	P	P	06 34 41.4	0.0
	0.3nm,0.7s,baz=255,slow=4.3,SNR=6.5						
PDAR	Pinedale Array	96.75	48	P	P	06 34 47.3	+1.0
	0.2nm,0.5s,baz=193,slow=3.5,SNR=2.8						

IDC ***24*** *06:23:04.4±0.6, 5°.52S×147°.21E, h169^{km}±5^{km}, mb4.0/19, mb1 4.3/24, mb1mx4.1/48, mbtmp4.6/24, MS3.6/4, Ms1 3.5/4, ms1mx3.1/38, Error ellipse: s-maj=14.1km s-min=7.6km az=89.0*

NEIC ***24*** *06:23:06.5±1.8, 5°.58S±0°.07×147°.17E±0°.09, h193^{km}±3^{km}, mb4.6/37, Error ellipse: s-maj=13.3km s-min=10.1km az=104.0*

DJA ***24*** *06:23:06.2±0.3, 6°S±3°×14°7E±°, h166^{km}±5^{km}, M4.8/15, mB5.2/7, mb4.7/15, MLv5.2/4, Mw(mB)4.5/7*

ISC 24 06:23:05.3±0.5, **5°.54S**±0°.05×**147°.11E**±0°.06**, h178**^{km}±4^{km}**, h178**^{km}**:pP-P, n123,** σ**1^{s}34**/130**, mb4.5**/37**, 1D, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.84	179	P	Pn	06 24 04.2	-0.1
	baz=4.3,slow=13						
PMG				S	Sn	06 24 48.4	-2.1
	240nm,0.3s,baz=254,slow=23,SNR=15						
PMG	Port Moresby	3.84	179	P	Pn	06 24 04.2	-0.1
RABL	Rabaul	5.21	75	Pn	Pn	06 24 22.1	0.0
RABL	Rabaul	5.21	75	P	Pn	06 24 23.1	+1.1
GENI	Genyem	7.52	293	P	Pn	06 24 53.1	+0.8
	0.5nm127nm,1.2s						
SMPI	Sarmi	9.09	293	P	Pn	06 25 09.6	-3.4
	2µm33nm,1.1s						
COEN	Coen	9.22	205		Pn	06 25 15.6	+0.9
MTSU	Mount Surprise	12.81	192	P	P	06 26 03.5	-1.9
	baz=14,SNR=34						
HNR	Honiara	13.30	108	P	Pn	06 26 07.2	-0.2
	9.8nm,0.3s,baz=251,slow=9.2,SNR=1.8						
CTA	Charters Tower	14.48	183	P	P	06 26 23.8	-0.1
	2.0nm,0.3s,baz=354,slow=13,SNR=27						
CTAO	Charters Tower	14.48	183		Pn	06 26 22.9	+0.8
FAKI	Fak Fak	15.05	279		P	06 26 31.8	+1.5
FAKI				IAmb	IAmb	06 26 33.4	
	comp=Z,22nm,0.9s						
KDU	Kakadu	16.09	243	P	P	06 26 39.9	-1.9
	baz=17,SNR=15						
SIJI	Sorong	16.48	286	P	P	06 26 46.0	-0.1
	comp=Z,2.6nm,0.3s,baz=87,slow=6.8,SNR=7.4						
SWI	Sorong	16.49	286	P	Pn	06 26 46.6	-0.1
	comp=Z,48nm,0.8s						
QIS	Mount Isa	16.61	205	P	Pn	06 26 49.6	+1.5
	baz=17,SNR=52						
PATS	Pohnpei	16.62	42		Pn	06 26 48.7	+0.4
WB0	Warramunga Arr	18.79	220	P	Pn	06 27 12.6	-1.3
WB0					S	06 30 36.1	+0.4
WR0	Warramunga Arr	18.84	219	P	Pn	06 27 13.3	-1.1
WRAB	Tennant Creek	18.94	220	P	Pn	06 27 14.4	-1.2
WB2	Warramunga Arr	18.94	220	P	Pn	06 27 14.4	-1.3
WRA	Warramunga Arr	18.95	220	P	Pn	06 27 14.6	-1.2
	comp=Z,9.3nm,0.3s,baz=42,slow=11,SNR=151						
WRA				S	S	06 30 38.0	-1.0
	comp=Z,0.4nm,0.3s,baz=40,slow=20,SNR=7.3						
EIDS	Eidsvold	20.08	169	P	Pn	06 27 27.8	-1.3
	baz=21,SNR=4.8						
EIDS	Eidsvold	20.08	169	P	P	06 27 24.8	-0.3
EIDS				IAmb	IAmb	06 27 28.7	
	comp=Z,20nm,0.9s						
RMQ	Roma	20.89	176	P	P	06 27 36.2	+2.5
	baz=22,SNR=6.1						
QLP	Quilpie	21.10	187	P	P	06 27 39.0	+3.0
	baz=22,SNR=5.5						
SANI	Sanana	21.36	279	P	P	06 27 50.4	+12
SANVU	Saraoutou	22.05	118	P	P	06 27 45.6	-0.4
SANVU				IAmb	IAmb	06 27 48.3	
	comp=Z,25nm,0.8s						
SANVU	Saraoutou	22.05	118	P	P	06 27 49.3	+3.4
AS31	Alice Springs	22.05	214	P	P	06 27 47.4	+1.4
AS31				IAmb	IAmb	06 27 52.0	
	comp=Z,28nm,0.8s						
ASAR	Alice Springs	22.06	214	P	P	06 27 47.2	+1.2
	comp=Z,57nm,0.8s,baz=35,slow=11,SNR=201						
ASAR				S	S	06 31 39.3	+2.8
	comp=Z,26nm,0.8s,baz=28,slow=22,SNR=14						
ASAR	Alice Springs	22.06	214	P	P	06 27 47.0	+1.0
SOEI	Soe	23.02	258	P	P	06 27 56.0	+0.9
SOEI	Soe	23.02	258	P	P	06 27 53.3	-1.8
	comp=Z,89nm,1.0s						
BATI	Baumata	23.68	257	LR	LR	06 40 44.8	
	comp=Z,106nm,18.6s,baz=356,slow=45						
FITZ	Fitzroy Crossi	24.40	237	P	P	06 28 08.2	+0.8
	comp=Z,37nm,0.5s,baz=62,slow=8.6,SNR=88						
FITZ	Fitzroy Crossi	24.40	237	P	P	06 28 08.3	+0.9
	baz=25,SNR=39						
FITZ	Fitzroy Crossi	24.40	237	P	P	06 28 08.8	+1.3
DZM	Mont Dzumac	24.89	133	P	P	06 28 11.2	-0.8
	comp=Z,13nm,0.7s,baz=285,slow=7.3,SNR=5.5						
DZM	Mont Dzumac	24.89	133	P	P	06 28 11.2	-0.8
DZM				IAmb	IAmb	06 28 14.0	
	comp=Z,18nm,0.9s						
ARMA	Armidale	25.11	171	P	P	06 28 15.3	+1.5
	baz=26,SNR=6.9						
ARMA	Armidale	25.11	171	P	P	06 28 14.5	+0.7
ARMA				IAmb	IAmb	06 28 15.6	
	comp=Z,11nm,0.8s						
WRKA	Warakurna	26.48	221	P	P	06 28 27.2	+0.9
	baz=27,SNR=13						
STKA	Stephens Creek	26.70	190	P	P	06 28 29.6	+1.6
	comp=Z,2.2nm,0.6s,baz=338,slow=6.9,SNR=2.9						
STKA				LR	LR	06 41 13.2	
	comp=Z,107nm,18.1s,baz=24,slow=41						
STKA	Stephens Creek	26.70	190	P	P	06 28 32.5	+4.5
	baz=28,SNR=11						
HTT	Hallett	28.77	194	P	P	06 28 51.5	+4.9
	baz=30,SNR=13						
BBOO	Buckleboo	29.02	199	P	P	06 28 53.2	+4.6
	baz=30,SNR=5.3						
PSA00	Pilbara Seismi	30.84	236	P	P	06 29 04.8	0.0
PSA00				IAmb	IAmb	06 29 05.8	
	comp=Z,14nm,0.7s						
FORT	Forrest	30.84	213	P	P	06 29 03.3	-1.4
FORT				IAmb	IAmb	06 29 21.5	
	comp=Z,27nm,0.9s						
MEEK	Meekatharra	34.33	229	P	P	06 29 36.3	+1.0
	baz=35,SNR=8.9						
KMBL	Kambalda	34.92	220	P	P	06 29 41.1	+0.9
	baz=36,SNR=5.3						
GIRL	Giralia	36.00	239	P	P	06 29 50.4	+0.9
MORW	Morawa	37.56	228	P	P	06 30 03.2	+0.7
MORW				IAmb	IAmb	06 30 04.0	
	comp=Z,10nm,0.9s						
KLBR	Kellerberrin	37.78	223	P	P	06 30 04.7	+0.3
	baz=38,SNR=8.7						
TUWZ	Tuamarina	43.02	150	P	P	06 30 47.0	-0.2
RPZ	Rata Peaks	43.47	155	P	P	06 30 51.1	+0.2
	comp=Z,11nm,0.8s,baz=30,slow=2.8,SNR=4.3						
RPZ	Rata Peaks	43.47	155	IAmb	IAmb	06 30 51.7	
	comp=Z,13nm,1.0s						
BFZ	Birch Farm	43.66	148	P	P	06 30 50.8	-1.6
BFZ				IAmb	IAmb	06 30 53.7	
	comp=Z,42nm,1.2s						
MSWZ	Moikau Station	43.66	149	P	P	06 30 52.1	-0.3
MLZ	Mavora Lakes	43.69	159	P	P	06 30 52.6	0.0
MLZ				IAmb	IAmb	06 31 01.6	
	comp=Z,32nm,1.4s						
NJ2	Nanjing	46.06	326	*e*P	P	06 31 13.1	+1.7
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
KSRS	Korea Array	46.37	339	P	P	06 31 14.6	+0.9
	comp=Z,2.8nm,0.8s,baz=149,slow=9.0,SNR=10						
WHN	Wuhan	47.65	321	⇓P	P	06 31 25.4	+1.6
ENH	Enshi	50.66	317	P	P	06 31 46.7	0.0
ENH				IAmb	IAmb	06 31 48.1	
	comp=Z,15nm,1.2s						
CMAR	Chiang Mai Arr	53.13	298	P	P	06 32 05.5	+0.4
	comp=Z,2.3nm,0.4s,baz=101,slow=4.7,SNR=4.5						
CMAR				pP	pP	06 32 44.0	-0.9
	comp=Z,1.2nm,0.3s,baz=121,slow=6.0,SNR=1.8						
XAN	Xi'an	53.40	320	P	P	06 32 07.1	+0.2
XAN				pmax	pmax		
	comp=Z,18nm,1.3s						
XAN	Xi'an	53.40	320	P	P	06 32 06.6	-0.3
XAN				IAmb	IAmb	06 32 08.0	
	comp=Z,14nm,1.0s						
XAN					pwP	06 32 51.4	+2.5
CD2	Chengdu	55.04	314	*e*P	P	06 32 19.6	+0.8
CD2				pP	pwP	06 33 03.3	+2.4
CD2				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KLR	Kul'dur	56.17	348	LR	LR	06 56 42.1	
	comp=Z,78nm,18.5s,baz=315,slow=36						
HHC	Hu-ho-hao-te	56.50	328	*e*P	P	06 32 29.6	+0.5
HHC				pmax	pmax		
	comp=Z,11nm,1.0s						
HHC				pmax	pmax		
	comp=Z,200nm,6.0s						
LZH	Lanzhou	57.94	319	*e*P	P	06 32 41.3	+2.0
LZH				pP	PcP	06 33 26.0	-3.5
LZH				sP	sP	06 33 44.6	+5.7
LZH				PP	PP	06 34 45.8	-4.0
LZH				pmax	pmax		
	comp=Z,10.0nm,1.1s						
LZH				pmax	pmax		
	comp=Z,56nm,4.3s						
PETK	Petropavlovsk-	59.11	7	LR	LR	06 55 23.2	
	comp=Z,36nm,20.9s,baz=280,slow=33						
SONM	Songino Array	64.06	331	P	P	06 33 21.4	+1.1
	comp=Z,5.5nm,1.1s,baz=125,slow=7.4,SNR=8.2						
SONM	Songino Array	64.06	331	P	P	06 33 20.4	+0.1
SONM				IAmb	IAmb	06 33 22.7	
	comp=Z,4.2nm,1.0s						
TLY	Talaya	67.99	332	P	P	06 33 46.3	+1.1
	comp=Z,1.4nm,0.6s,baz=172,slow=3.7,SNR=5.3						
SEY	Seymchan	68.40	3	P	P	06 33 47.9	+0.5
	comp=Z,1.1nm,0.4s,baz=159,slow=3.0,SNR=8.0						
VNDA	Vanda	72.36	177	P	P	06 34 11.8	+0.6
	comp=Z,4.1nm,0.7s,baz=327,slow=6.1,SNR=8.9						
WMQ	Urumqi	72.52	319	*e*P	P	06 34 14.8	+1.9
MK31	Makanchi Array	77.22	320	P	P	06 34 39.6	-0.1
MKAR	Makanchi Array	77.22	320	P	P	06 34 39.6	-0.1
	comp=Z,2.4nm,0.9s,baz=107,slow=6.6,SNR=11						
MKAR				pP	pP	06 35 22.4	+0.1
	comp=Z,1.3nm,0.8s,baz=105,slow=7.6,SNR=3.6						
MKAR	Makanchi Array	77.22	320	P	P	06 34 39.7	0.0
MKAR					pP	06 35 23.3	+0.9
MAKZ	Makanchi	77.42	320	P	P	06 34 40.2	-0.6
SHLS	Shalkode	77.78	316	*e*P	P	06 34 41.6	-1.4
	baz=316						
TIXI	Tiksi	77.97	354	P	P	06 34 41.5	-1.8
KPKS	Kokpek	78.42	316	*e*P	P	06 34 46.4	-0.1
	baz=316						
SATY	Saty	78.48	316	*e*P	P	06 34 47.1	+0.2
	baz=316						
ZALV	Zalesovo Beam	78.69	328	P	P	06 34 46.5	-1.0
	comp=Z,1.9nm,0.6s,baz=95,slow=4.1,SNR=10						
ZALV				pP	pP	06 35 28.4	-2.1
	comp=Z,0.7nm,0.5s,baz=102,slow=6.2,SNR=2.3						
ZALV	Zalesovo Beam	78.69	328	P	P	06 34 46.2	-1.3
TDK	Taldyqorghan	79.11	318	*e*P	P	06 34 50.9	+0.7
	baz=318						
MDOK	Medeo	79.46	316	*e*P	P	06 34 52.2	0.0
	baz=315						
TNSS	Tian-Shan	79.49	315	*e*P	P	06 34 53.4	+0.6
	baz=315						
KUU	Kurty	80.17	316	*e*P	P	06 34 55.9	0.0
	baz=316						
KURK	Kurchatov	80.91	323	P	P	06 34 59.4	-0.2
KURK	Kurchatov	80.91	323	IAmb	IAmb	06 35 00.2	
	comp=Z,5.7nm,1.2s						
KURBB	Kurchatov Arra	80.93	323	P	P	06 34 59.4	-0.3
	comp=Z,1.1nm,0.8s,baz=117,slow=4.3,SNR=6.4						
KURBB				pP	pP	06 35 42.4	-0.3
	comp=Z,0.4nm,0.3s,baz=115,slow=4.1,SNR=1.9						
AAK	Ala-Archa	81.10	315	P	P	06 35 01.0	-0.1
	comp=Z,0.7nm,0.5s,baz=152,slow=2.6,SNR=3.6						
RDOG	Red Dog Mine	81.28	17	P	P	06 35 01.9	+0.7
RDOG				IAmb	IAmb	06 35 02.9	
	comp=Z,6.7nm,1.0s						
BTLS	Baital	82.07	317	*e*P	P	06 35 05.7	-0.1
	baz=317						
IMAR	Indian Mountai	83.03	21	P	P	06 35 09.5	-0.8
RND	Reindeer	83.66	24	P	P	06 35 13.4	-0.3
RND				IAmb	IAmb	06 35 14.1	
	comp=Z,8.4nm,1.0s						
KKAR	Karatay Array	84.05	314	P	P	06 35 15.6	-0.5
KKAR					pwP	06 36 03.1	+1.5
IUG	Iuzhnay	84.18	313	*e*P	P	06 35 17.2	+0.3
	baz=313						
BRZS	Berezniki	84.31	321	*e*P	P	06 35 16.4	-0.8
	baz=321						
QSPA	South Pole Qui	84.42	180	P	P	06 35 16.9	-0.7
QSPA				IAmb	IAmb	06 35 34.9	
	comp=Z,14nm,1.4s						
WRH	Wood River Hil	84.42	23	P	P	06 35 17.0	-0.5
CCB	Clear Creek Bu	84.61	23	P	P	06 35 17.5	-0.9
COLD	Coldfoot	84.87	20	P	P	06 35 19.8	+0.1
NRIK	Noril'sk	84.88	342	P	P	06 35 19.7	+0.1
	comp=Z,4.1nm,0.8s,baz=136,slow=5.8,SNR=6.9						
NRIK				pP	pP	06 36 01.2	-1.9
	comp=Z,2.8nm,0.8s,baz=149,slow=9.2,SNR=2.4						
NRIK	Noril'sk	84.88	342	P	P	06 35 19.0	-0.6
NRIK				IAmb	IAmb	06 35 20.3	
	comp=Z,6.3nm,0.9s						
ILAR	Eielson Array	85.02	23	P	P	06 35 19.1	-1.4
	comp=Z,3.5nm,0.8s,baz=253,slow=5.2,SNR=21						
ILAR	Eielson Array	85.02	23	P	P	06 35 18.7	-1.8
BCAR	Beaver Creek A	86.48	26	P	P	06 35 27.1	-0.6
BMAR	Burnt Mountain	86.93	21	P	P	06 35 29.6	-0.2
BMAR					pwP	06 36 17.6	+2.2
MDPB	Devils Postpil	96.36	53	P	P	06 36 13.6	-1.0
NVAR	Mina Array Bea	97.00	52	P	P	06 36 17.3	0.0
	comp=Z,0.6nm,0.7s,baz=262,slow=6.5,SNR=4.2						
YKA	Yellowknife Ar	98.72	28	P	P	06 36 24.0	-0.1
	comp=Z,0.4nm,0.8s,baz=274,slow=3.7,SNR=6.1						
YKA				pP	pP	06 37 07.2	-1.0
	comp=Z,0.4nm,0.8s,baz=274,slow=4.1,SNR=3.4						
VNA2	Neumayer--Watz	101.82	188	Pdiff	Pdif	06 36 35.8	-2.0
PDAR	Pinedale Array	103.53	47	Pdiff	Pdif	06 36 46.3	0.0
	comp=Z,0.4nm,0.8s,baz=258,slow=4.1,SNR=3.8						
GERES	GERESS Array B	121.59	326	PKP	PKPdf	06 41 37.5	-0.5
	comp=Z,0.8nm,0.6s,baz=93,slow=2.7,SNR=5.9						
GERES	GERESS Array B	121.59	326		PKPdf	06 41 37.3	-0.7
PLCA	Paso Flores	122.44	147	PKP	PKPdf	06 41 39.9	0.0
	comp=Z,0.7nm,0.6s,baz=272,slow=1.0,SNR=6.1						
TORD	Torodi Ar. Bea	145.08	285	PKPbc	PKPbc	06 42 21.5	-0.9
	comp=Z,2.7nm,0.5s,baz=66,slow=3.4,SNR=17						
BDFB	Brasilia	154.17	145	PKPbc	PKPbc	06 42 44.5	-0.7
	comp=Z,3.1nm,0.7s,baz=301,slow=0.8,SNR=5.9						

*IDC **24** 06:28:41.9±1.3, 63°.03N×150°.52W, h109^{km}±17^{km}, mb3.4/3, mb1 3.3/6, mb1mx3.1/49, mbtmp3.7/6, Error ellipse: s-maj=22.3km s-min=10.4km az=108.0*

*AEIC **24** 06:28:43±0.9, 63°.12N±0°.03×150°.45W±0°.08, h109^{km}±4^{km}, ML3.2, ML3.4/80(NEIC), Error ellipse: s-maj=5.0km s-min=4.0km az=92.0*

*ANF **24** 06:28:43.4±0.2, 63°.13N×150°.47W, h110^{km}±2^{km}, ML3.3/37, Error ellipse: s-maj=2.2km s-min=1.6km az=97.0*

*NEIC **24** 06:28:43.8±1.0, 63°.14N±0°.03×150°.48W±0°.08, h109^{km}±5^{km}, Error ellipse: s-maj=4.9km s-min=4.0km az=93.0*

ISC 24 06:28:43.1±0.9**, 63°.13N**±0°.02×**150°.46W**±0°.03**, h116**^{km}±5^{km}**, n172, σ0^{s}.72**/197**, mb3.9**/3**, Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRF	Thorofare Moun	0.33	14	P	Pn	06 29 00.3	+0.5
	baz=193,SNR=112						
TRF				S	Sn	06 29 12.6	+0.1
	baz=193						
TRF	Thorofare Moun	0.33	14		Pn	06 29 00.1	+0.3
TRF					Sn	06 29 12.6	+0.1
TRF	Thorofare Moun	0.33	14	IAML		06 29 13.4	
	comp=E,1μm,0.6s						
TRF				IAML		06 29 13.4	
	comp=N,1μm,0.4s						
HUR	Hurricane	0.41	112		Pn	06 29 00.1	+0.1
HUR					Sn	06 29 12.1	-0.7
KTH	Kantishna Hill	0.47	334		Pn	06 29 00.9	+0.4
KTH					Sn	06 29 13.2	-0.4
CUT	Chulitna	0.73	173	P	Pn	06 29 02.4	+0.2
	baz=353,SNR=121						
CUT				S	Sn	06 29 16.5	-0.2
	baz=353						
CUT	Chulitna	0.73	173		Pn	06 29 02.4	+0.2
CUT					Sn	06 29 16.6	0.0
RND	Reindeer	0.78	68		Pn	06 29 03.0	+0.3
RND					Sn	06 29 17.3	-0.3
RND	Reindeer	0.78	68	IAML		06 29 19.2	
	comp=E,766nm,0.3s						
RND				IAML		06 29 19.3	
	comp=N,785nm,0.4s						
CAST	Castle Rocks	0.79	292		Pn	06 29 02.9	+0.1
CAST					Sn	06 29 16.9	-0.7
PPLA	Purkeypile	0.82	254	P	Pn	06 29 03.7	+0.5
	baz=73,SNR=101						
PPLA				S	Sn	06 29 18.1	-0.3
	baz=73						
PPLA	Purkeypile	0.82	254		Pn	06 29 03.6	+0.5
WAT2	Susitna Watana	0.87	100	P	Pn	06 29 03.7	0.0
	baz=282,SNR=55						
WAT2				S	Sn	06 29 18.6	-0.6
	baz=282						
WAT2	Susitna Watana	0.87	100		Pn	06 29 03.6	0.0
MCK	McKinley	0.92	48	P	Pn	06 29 04.4	+0.5
	baz=229,SNR=83						
MCK				S	Sn	06 29 19.1	-0.6
	baz=229						
MCK	McKinley	0.92	48		Pn	06 29 04.4	+0.5
WAT1	Susitna Watana	0.92	108		Pn	06 29 04.2	+0.2
WAT1					Sn	06 29 19.7	-0.1
BPAW	Bear Paw Mtn.	1.00	347	P	Pn	06 29 05.1	+0.3
	baz=166						
BPAW				S	Sn	06 29 20.4	-0.8
	baz=166						
BPAW	Bear Paw Mtn.	1.00	347		Pn	06 29 05.1	+0.3
BPAW					Sn	06 29 20.6	-0.6
CHUM	Lake Minchumin	1.12	313	P	Pn	06 29 06.5	+0.5
	baz=132,SNR=31						
CHUM				S	Sn	06 29 23.1	-0.2
	baz=132						
CHUM	Lake Minchumin	1.12	313		Pn	06 29 06.4	+0.5
BWN	Browne	1.14	23		Pn	06 29 07.1	+1.0
BWN	Browne	1.14	23	IAML		06 29 25.0	
	comp=N,284nm,0.8s						
SKT	Skwentna	1.25	204	P	Pn	06 29 07.4	0.0
	baz=23,SNR=70						
SKT				S	Sn	06 29 25.5	-0.3
	baz=23						
SKT	Skwentna	1.25	204		Pn	06 29 07.3	-0.1
SKT					Sn	06 29 25.6	-0.3
SKT	Skwentna	1.25	204	IAML		06 29 27.3	
	comp=E,668nm,0.8s						
SKT				IAML		06 29 29.9	
	comp=N,647nm,0.4s						
WAT6	Susitna Watana	1.36	113	P	Pn	06 29 08.9	+0.1
	baz=295,SNR=71						
WAT6				S	Sn	06 29 27.5	-0.8
	baz=295						
WAT6	Susitna Watana	1.36	113		Pn	06 29 08.9	+0.1
NEA2	Nenana	1.59	22	P	Pn	06 29 11.5	+0.2
	baz=203,SNR=37						
NEA2				S	Sn	06 29 31.9	-0.9
	baz=203						
NEA2	Nenana	1.59	22		Pn	06 29 11.5	+0.2
SML	Sawmill	1.66	142	P	Pn	06 29 12.1	0.0
	baz=324,SNR=58						
SML				S	Sn	06 29 34.3	+0.1
	baz=324						
SML	Sawmill	1.66	142		Pn	06 29 12.1	0.0
SML	Sawmill	1.66	142	IAML		06 29 39.6	
	comp=N,352nm,0.6s						
SML				IAML		06 29 41.8	
	comp=E,306nm,0.7s						
PMR	Palmer	1.66	157	P	Pn	06 29 12.0	-0.1
	baz=339,SNR=95						
PMR				S	Sn	06 29 34.0	-0.2
	baz=339						
PMR	Palmer	1.66	157		Pn	06 29 12.0	-0.1
PMR	Palmer	1.66	157	IAML		06 29 34.6	
	comp=E,184nm,0.3s						
PMR				IAML		06 29 41.9	
	comp=N,144nm,0.5s						
SUA	Susitna One	1.68	185	P	Pn	06 29 12.7	+0.3
	baz=4.6,SNR=116						
SUA				S	Sn	06 29 35.3	+0.6
	baz=4.6						
SUA	Susitna One	1.68	185		Pn	06 29 13.0	+0.6
SUA					Sn	06 29 36.3	+1.5
SUA	Susitna One	1.68	185	IAML		06 29 38.2	
	comp=E,451nm,0.7s						
SUA				IAML		06 29 40.1	
	comp=N,322nm,0.5s						
WRH	Wood River Hil	1.71	37		Pn	06 29 13.1	+0.4
STLK	Strandline Lak	1.76	202		Pn	06 29 14.0	+0.7
STLK					Sn	06 29 36.6	+0.2
MLY	Manley	1.91	356	P	Pn	06 29 15.7	+0.5
	baz=176,SNR=54						
MLY				S	Sn	06 29 38.6	-1.3
	baz=176						
MLY	Manley	1.91	356		Pn	06 29 15.7	+0.5
CCB	Clear Creek Bu	1.93	36		Pn	06 29 15.8	+0.5
SCM	Sheep Creek Mo	1.95	130		Pn	06 29 16.3	+0.6
SCM					Sn	06 29 41.8	+1.0
SCM	Sheep Creek Mo	1.95	130	IAML		06 29 47.6	
	comp=E,279nm,0.5s						
SCM				IAML		06 29 52.1	
	comp=N,355nm,0.7s						
FIS	Fire Island	2.00	177		Pn	06 29 18.9	+2.7
HDA	Harding Lake	2.02	49	P	Pn	06 29 16.9	+0.4
	baz=232						
HDA				S	Sn	06 29 41.8	-0.3
	baz=232						
HDA				S	Sn	06 29 41.8	-0.3
	baz=232						
HDA	Harding Lake	2.02	49		Pn	06 29 16.9	+0.4
HDA	Harding Lake	2.02	49	IAML		06 29 46.4	
	comp=E,137nm,0.4s						
HDA				IAML		06 29 46.9	
	comp=N,154nm,0.4s						
CRP	Crater Peak	2.03	204		Pn	06 29 18.0	+1.2
CRP					Sn	06 29 44.0	+1.5
SPCP	Crater Peak Br	2.03	204		Pn	06 29 17.4	+0.6
SPCN	Chakachatna No	2.07	204		Pn	06 29 18.3	+1.1
RC01	Rabbit Creek A	2.08	170	P	Pn	06 29 17.5	+0.3
	baz=351,SNR=26						
RC01	Rabbit Creek A	2.08	170		Pn	06 29 17.4	+0.2
SPBG	Spurr Blockage	2.08	206		Pn	06 29 17.9	+0.6
SPBG					Sn	06 29 44.5	+1.0
BGL	Barrier Glacie	2.08	207		Pn	06 29 18.1	+0.8
MDM	Murphy Dome	2.08	27		Pn	06 29 17.9	+0.6
MDM					Sn	06 29 43.7	+0.1
I23K	Minto, Yukon-K	2.08	13	P	Pn	06 29 17.9	+0.6
	baz=194,SNR=57						
I23K				S	Sn	06 29 42.3	-1.2
	baz=194						
I23K	Minto, Yukon-K	2.08	13		Pn	06 29 17.9	+0.6
I23K					Sn	06 29 43.0	-0.5
TCOL	CIGO, UAF Yank	2.09	32	P	Pn	06 29 18.0	+0.6
	baz=214,SNR=18						
TCOL				S	Sn	06 29 44.1	+0.4
	baz=214						
TCOL	CIGO, UAF Yank	2.09	32		Pn	06 29 18.1	+0.7
TCOL	CIGO, UAF Yank	2.09	32	IAML		06 29 45.6	
	comp=N,154nm,1.0s						
TCOL				IAML		06 30 09.9	
	comp=E,151nm,0.5s						
COLA	College	2.10	32	P	Pn	06 29 18.0	+0.6
	baz=214						
COLA				S	Sn	06 29 44.1	+0.3
	baz=214						
COLA	College	2.10	32		Pn	06 29 18.0	+0.6
COLA	College	2.10	32	IAML		06 29 45.6	
	comp=E,172nm,1.0s						
COLA				IAML		06 30 09.9	
	comp=E,166nm,0.5s						
SPCR	Spurr Chakacha	2.10	204	P	Pn	06 29 18.5	+0.8
	baz=22,SNR=10						
SPCR				S	Sn	06 29 44.9	+0.8
	baz=22						
SPCR	Spurr Chakacha	2.10	204		Pn	06 29 18.2	+0.5
PS08	TAPS Pump Stn8	2.15	47		Pn	06 29 18.7	+0.5
M24K	Tolsona, Glenn	2.23	115	P	Pn	06 29 19.9	+0.6
	baz=299,SNR=41						
M24K				S	Sn	06 29 47.1	+0.1
	baz=299						
M24K	Tolsona, Glenn	2.23	115		Pn	06 29 20.1	+0.8
M24K					Sn	06 29 48.4	+1.4
PAX	Paxson	2.28	92	P	Pn	06 29 20.8	+0.9
	baz=276,SNR=113						
PAX				S	Sn	06 29 48.0	-0.1
	baz=276						
PAX	Paxson	2.28	92		Pn	06 29 20.8	+0.9
IL31		2.28	42		Pn	06 29 20.1	+0.4
ILAR	Eielson Array	2.28	42	P	Pn	06 29 20.2	+0.4
	comp=E,11nm,0.3s,baz=224,slow=13,SNR=1113						
ILAR				S	Sn	06 29 48.7	+0.7
	comp=E,4.1nm,0.3s,baz=226,slow=18,SNR=9.6						
ILAR	Eielson Array	2.28	42	Pn	Pn	06 29 19.5	-0.4
PS07	TAPS Pump Stn7	2.39	23		Pn	06 29 22.0	+0.8
PS07					Sn	06 29 50.9	+0.4
CAPN	Captain Cook N	2.39	188		Pn	06 29 23.6	+2.4
POKR	Poker Plat Res	2.40	32	P	Pn	06 29 22.1	+0.8
	baz=215,SNR=45						
POKR	Poker Plat Res	2.40	32		Pn	06 29 22.1	+0.8
PWL	Port Wells	2.49	155		Pn	06 29 22.3	-0.2
PWL					Sn	06 29 51.9	-1.0
PS11	TAPS Pump St11	2.54	112		Pn	06 29 23.6	+0.5
TTA	Tatalina	2.54	268	P	Pn	06 29 23.2	+0.1
	baz=83,SNR=48						
TTA				S	Sn	06 29 52.9	-1.0
	baz=83						
TTA	Tatalina	2.54	268		Pn	06 29 23.2	+0.1
TT01	Tatalina	2.54	267		Pn	06 29 23.3	+0.1
TT01					Sn	06 29 53.4	-0.6
SLKM	Skilak Lake	2.63	177		Pn	06 29 24.6	+0.2
O22K	Cooper Landing	2.68	172	P	Pn	06 29 25.2	+0.3
	baz=353,SNR=11						
O22K	Cooper Landing	2.68	172		Pn	06 29 25.5	+0.6
O22K					Sn	06 29 56.8	-0.3
KLU	Klutina	2.68	126	P	Pn	06 29 24.7	-0.5
	baz=310						
KLU	Klutina	2.68	126		Pn	06 29 24.6	-0.5
DFR	Drift River	2.75	203		Pn	06 29 26.6	+0.6
PS06	TAPS Pump Stn6	2.76	6		Pn	06 29 26.7	+0.8
NCT	North Crescent	2.83	206		Pn	06 29 27.8	+0.7
RSO	Redoubt South	2.89	203		Pn	06 29 29.0	+1.1
DOT	Dot Lake	2.93	77		Pn	06 29 28.6	+0.4
RED	Redoubt Volcan	2.93	203		Pn	06 29 28.9	+0.5
DIV	Divide	2.98	130		Pn	06 29 28.4	-0.6
PS12	TAPS Pump St12	2.99	121		Pn	06 29 28.8	-0.2
SCRK	Sand Creek	3.02	71	P	Pn	06 29 29.8	+0.2
	baz=256,SNR=63						
SCRK	Sand Creek	3.02	71		Pn	06 29 29.8	+0.2
SEW	Seward	3.07	171	P	Pn	06 29 30.0	-0.1
	baz=352,SNR=5.8						
SEW	Seward	3.07	171		Pn	06 29 30.3	+0.2
MENT	Mentasta	3.08	91		Pn	06 29 30.1	-0.2
N25K	Chitina, Valde	3.13	117	P	Pn	06 29 31.2	+0.2
	baz=302						
N25K	Chitina, Valde	3.13	117		Pn	06 29 31.2	+0.2
N25K	Chitina, Valde	3.13	117	IAML		06 30 22.9	
	comp=N,104nm,0.6s						
N25K				IAML		06 30 23.4	
	comp=E,83nm,0.5s						
SVW2	Sparrevohn	3.15	232		Pn	06 29 31.5	+0.3
SVW2	Sparrevohn	3.15	232	IAML		06 30 10.1	
	comp=N,84nm,0.8s						
IM03		3.20	335		Pn	06 29 32.2	+0.5
IMAR	Indian Mountai	3.20	335		Pn	06 29 32.0	+0.2
PRP	Porcupine Dome	3.22	40	P	Pn	06 29 32.5	+0.3
	baz=224						
PRP	Porcupine Dome	3.22	40		Pn	06 29 32.6	+0.5
HIN	Hinchinbrook I	3.33	144		Pn	06 29 33.0	-0.5
HIN	Hinchinbrook I	3.33	144	IAML		06 30 35.5	
	comp=E,137nm,1.0s						
HIN				IAML		06 30 35.9	
	comp=N,80nm,0.7s						
IVE	Iliamna Volcan	3.35	202		Pn	06 29 34.9	+0.9
BRLK	Bradley Lake	3.38	184		Pn	06 29 34.7	+0.5
BRLK	Bradley Lake	3.38	184	IAML		06 30 25.2	
	comp=E,128nm,0.9s						
BRSE	Bradley Lake S	3.40	182	P	Pn	06 29 34.6	+0.1
	baz=2.2						
BRSE	Bradley Lake S	3.40	182		Pn	06 29 33.6	-0.9
EYAK	Cordova Ski Ar	3.42	137	P	Pn	06 29 34.3	-0.4
	baz=321						
EYAK	Cordova Ski Ar	3.42	137		Pn	06 29 34.5	-0.2
BMRM	Bremner River	3.51	126	P	Pn	06 29 35.1	-0.8
	baz=311						
BMRM	Bremner River	3.51	126		Pn	06 29 35.4	-0.5
HOM	Homer	3.53	190	P	Pn	06 29 37.2	+1.0
	baz=8.9						
HOM	Homer	3.53	190		Pn	06 29 36.8	+0.7
GLB	Gilahina Butte	3.54	116		Pn	06 29 36.5	+0.1
GLB	Gilahina Butte	3.54	116	IAML		06 30 17.4	
	comp=E,89nm,0.4s						
CNPM	China Poot	3.63	186		Pn	06 29 37.9	+0.3
PS05	TAPS Pump Stn5	3.70	359		Pn	06 29 39.7	+1.3
VRDI	Verde Repeater	3.80	117		Pn	06 29 39.8	-0.2
VRDI	Verde Repeater	3.80	117	IAML		06 30 39.8	
	comp=E,56nm,0.7s						
VRDI				IAML		06 30 40.5	
	comp=N,78nm,0.9s						
MCARA	McCarthy VSAT	3.89	113	P	Pn	06 29 41.7	+0.7
	baz=300						
MCARA	McCarthy VSAT	3.89	113		Pn	06 29 41.8	+0.7
BC03		3.94	87		Pn	06 29 41.6	0.0
AU22	Augustine Moun	4.02	202		Pn	06 29 43.9	+1.2
AUL	Augustine Lava	4.02	202		Pn	06 29 44.2	+1.4
FYU	Fort Yukon	4.11	31	Pn	Pn	06 29 44.5	+0.6
FYU				IAML		06 31 43.2	
	comp=E,39nm,4.2s						
FYU				IAML		06 32 22.8	
	comp=N,38nm,4.7s						
COLD	Coldfoot	4.12	1	P	Pn	06 29 44.2	+0.3
	baz=182,SNR=23						
COLD	Coldfoot	4.12	1		Pn	06 29 44.7	+0.8
BERG	Berg Lake	4.22	127		Pn	06 29 45.3	-0.2
PTPK	Patty Peak	4.23	114		Pn	06 29 46.1	+0.4
NICHA	Nichawak Mount	4.24	130		Pn	06 29 45.2	-0.4
KAIM	Kayak Island	4.32	135	Pn	Pn	06 29 45.3	-1.4
BALM	Baldy	4.36	115		Pn	06 29 47.1	-0.2
BALM	Baldy	4.36	115	IAML		06 30 55.9	
	comp=E,52nm,0.8s						
BALM				IAML		06 30 56.9	
	comp=N,56nm,1.0s						
KIAG	Kiagna River	4.41	116		Pn	06 29 47.5	-0.6
EGAK	Eagle	4.42	64	P	Pn	06 29 48.2	+0.1
	baz=252,SNR=32						
EGAK	Eagle	4.42	64		Pn	06 29 48.2	+0.1
EGAK	Eagle	4.42	64	IAML		06 30 56.0	
	comp=N,37nm,0.5s						
EGAK				IAML		06 30 57.9	
	comp=N,33nm,0.7s						
SUCK	Suckling Hills	4.43	131	Pn	Pn	06 29 48.4	+0.2
YUK2	White River	4.67	102		Pn	06 29 52.5	+1.0
KULT	Kultieth River	4.68	125		Pn	06 29 51.7	0.0
CTGM	Chitina Glacie	4.81	113		Pn	06 29 54.2	+0.7
CTGM				IAML		06 30 49.2	
	comp=N,26nm,0.6s						
CTGM				IAML		06 30 50.9	
	comp=E,15nm,0.9s						
BM03	Burnt Mountain	4.96	27		Pn	06 29 56.1	+0.9
BMAR	Burnt Mountain	4.97	27		Pn	06 29 55.8	+0.3
MESA	MESA	5.02	122		Pn	06 29 56.1	-0.2
DAWY	Dawson	5.03	74		Pn	06 29 56.5	+0.2
TABL	Table Mountain	5.18	117		Pn	06 29 58.0	-0.5
TABL	Table Mountain	5.18	117	IAML		06 31 22.1	
	comp=E,32nm,3.2s						
TABL				IAML		06 31 23.9	
	comp=N,31nm,0.8s						
KDAK	Kodiak Island	5.46	192	P	Pn	06 30 01.2	-0.9
	comp=N,1.1nm,0.3s,baz=30,slow=13,SNR=38						
KDAK				S	Sn	06 30 59.6	-4.1
	comp=N,1.9nm,0.3s,baz=269,slow=22,SNR=9.3						
KDAK	Kodiak Island	5.46	192	P	Pn	06 30 01.1	-1.1
	baz=10						
KDAK	Kodiak Island	5.46	192		Pn	06 30 01.6	-0.5
TOLK	Toolik Lake Re	5.55	3	Pn	Pn	06 30 04.9	+1.7
OHAK	Old Harbor	6.09	195	P	Pn	06 30 09.5	-1.0
	baz=12						
OHAK	Old Harbor	6.09	195		Pn	06 30 09.7	-0.8
EPYK	Eagle Plains	6.71	55	P	Pn	06 30 19.2	+0.2
	baz=247,SNR=12						
EPYK	Eagle Plains	6.71	55	Pn	Pn	06 30 19.5	+0.6
SII	Sitkinak Islan	6.85	198	Pn	Pn	06 30 21.9	+1.0
YKA	Yellowknife Ar	16.27	76	P	Pn	06 32 24.4	0.0
	comp=N,0.1nm,0.3s,baz=286,slow=11,SNR=9.4						
ZALV	Zalesovo Beam	55.56	324	P	P	06 38 05.8	+0.1
	comp=N,0.8nm,0.5s,baz=32,slow=6.5,SNR=2.2						
KURBB	Kurchatov Arra	60.21	326	P	P	06 38 38.1	-0.1
	comp=N,0.4nm,0.2s,baz=29,slow=6.8,SNR=1.6						
MKAR	Makanchi Array	62.72	322	P	P	06 38 55.1	-0.2
	comp=N,0.5nm,0.5s,baz=40,slow=7.4,SNR=6.3						

IDC 24 06:46:42.4±2.9**, 6°.06S**×**130°.70E, h55**^{km}±39^{km}**, mb3.0**/1**, mb1 3.7**/5**, mb1mx3.3**/34**, mbtmp3.7**/5**, ML3.6**/4**, Error ellipse: s-maj=74.9km s-min=23.6km az=89.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	5.18	6	P	Pn	06 47 57.8	+0.4
	2.2nm,0.3s,baz=177,slow=18,SNR=8.8						
SIJI				S	Sn	06 48 50.4	-5.6
	2.0nm,0.3s,baz=115,slow=24,SNR=2.1						
FITZ	Fitzroy Crossi	12.95	202	P	Pn	06 49 43.5	-0.1
	0.3nm,0.3s,baz=32,slow=10,SNR=22						
FITZ				S	Sn	06 52 02.6	-3.7
	0.2nm,0.3s,baz=114,slow=22,SNR=2.2						
WRA	Warramunga Arr	14.25	166	P	Pn	06 49 59.4	-1.9
	0.2nm,0.3s,baz=350,slow=14,SNR=11						
WRA				S	Sn	06 52 31.9	-6.1
	0.5nm,0.3s,baz=343,slow=21,SNR=9.6						
ASAR	Alice Springs	17.78	170	P	P	06 50 47.5	+1.3
	0.3nm,0.3s,baz=346,slow=11,SNR=12						
MKAR	Makanchi Array	67.83	326	P	P	06 57 34.6	-0.2
	0.1nm,0.3s,baz=119,slow=6.7,SNR=2.1						

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*IDC **24** 06:48:55.5±1.2, 2°.72S×128°.91E, h0^{km}, mb4.0/3, mb1 4.4/6, mb1mx3.8/35, mbtmp4.2/6, ML4.3/3, MS3.0/1, Ms1 3.0/1, ms1mx2.6/42, Error ellipse: s-maj=31.4km s-min=21.4km az=88.0*

*DJA **24** 06:48:59.5±0.5, 3°S±3°×12°9E±°, h31^{km}±7^{km}, M4.2/9, mb4.4/3, MLv4.0/9*

*NEIC **24** 06:49:00.6±1.4, 2°.9S±0°.2×128°.90E±0°.06, h43^{km}±13^{km}, mb4.0/6, Error ellipse: s-maj=28.3km s-min=6.0km az=191.0*

ISC 24 06:48:59.9±0.7**, 2°.82S**±0°.05×**128°.85E**±0°.04**, h33**^{km}**, n24, σ1^{s}.51**/29**, mb4.0**/5**, Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	Masohi	0.53	172	P	Pn	06 49 11.3	+0.2
MSAI				S	Sn	06 49 21.7	+2.8
NLAI	Namlea	1.80	257	P	Pb	06 49 31.0	-1.2
BNDI	Bandanaira	1.99	148	P	Pb	06 49 33.7	-1.8
SANI	Sanana	2.96	285	P	Pn	06 49 44.7	+0.1
SANI				S	Sn	06 50 17.0	-2.0
SWI	Sorong	3.09	51	P	Pn	06 49 45.7	-0.7
SWI				S	Sn	06 50 21.5	-0.7
SIJI	Sorong	3.09	51	Pn	Pn	06 49 46.3	-0.1
	90nm,0.3s,baz=228,slow=13,SNR=78						
SIJI				Sn	Sn	06 50 21.3	-1.0
	55nm,0.3s,baz=222,slow=24,SNR=23						
FAKI	Fak Fak	3.39	92		Pn	06 49 50.4	-0.2
FAKI	Fak Fak	3.39	92	P	Pn	06 49 50.3	-0.2
FAKI				S	Sn	06 50 29.4	-0.3
LUWI	Luwuk	6.33	286	Pn	Pn	06 50 31.8	+0.9
GTOI	Gorontalo	6.77	300	P	Pn	06 50 40.1	+3.1
	0.1nm13nm,0.5s						
SRPI	Serui, Papua	7.44	83	P	Pn	06 50 50.0	+3.8
TOLI2	Tolitoli	8.96	296	Pn	Pn	06 51 09.1	+2.0
KAPI	Kappang	9.34	256	LR	LR	06 55 35.6	
	comp=Z,78nm,18.3s,baz=83,slow=42						
FITZ	Fitzroy Crossi	15.51	192	Pn	P	06 52 39.2	-1.1
	0.4nm,0.3s,baz=5.7,slow=10,SNR=7.9						
WB0	Warramunga Arr	17.69	163	P	Pn	06 53 02.9	-1.0
WB0				IAmb	IAmb	06 53 08.6	
	comp=Z,13nm,1.1s						
WRAB	Tennant Creek	17.84	163	P	Pn	06 53 04.7	-1.0
WRAB				IAmb	IAmb	06 53 18.5	
	comp=Z,12nm,1.0s						
WRA	Warramunga Arr	17.84	163	P	Pn	06 53 04.9	-0.9
	comp=Z,1.4nm,0.3s,baz=345,slow=12,SNR=15						
AS31	Alice Springs	21.29	167	P	P	06 53 43.7	-0.1
ASAR	Alice Springs	21.30	167	P	P	06 53 44.1	+0.2
	comp=Z,16nm,0.6s,baz=351,slow=12,SNR=191						
ASAR				S	S	06 57 36.6	-2.2
	comp=Z,3.1nm,0.9s,baz=349,slow=21,SNR=6.1						
MK31	Makanchi Array	64.13	326	P	P	06 59 31.6	+0.6
MK31				IAmb	IAmb	06 59 39.2	
	comp=Z,1.1nm,0.8s						
MKAR	Makanchi Array	64.13	326	P	P	06 59 32.2	+1.2
	comp=Z,1.1nm,0.8s,baz=121,slow=8.2,SNR=8.6						
MKAR	Makanchi Array	64.13	326	P	P	06 59 32.0	+1.0
ZALV	Zalesovo Beam	67.35	334	P	P	06 59 50.8	-0.8
	comp=Z,0.3nm,0.3s,baz=134,slow=8.3,SNR=1.7						
KURK	Kurchatov	68.38	328	P	P	06 59 58.2	+0.1
KURK				IAmb	IAmb	07 00 04.7	
	comp=Z,3.7nm,1.0s						

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*IDC **24** 06:54:46.0±0.6, 1°.02N×26°.34W, h0^{km}, mb4.3/21, mb1 4.4/21, mb1mx4.3/35, mbtmp4.3/21, MS4.8/35, Ms1 4.8/35, ms1mx4.6/44, Error ellipse: s-maj=23.2km s-min=12.7km az=155.0*

*NEIC **24** 06:54:48.5±2.1, 1°.0N±0°.1×26°.1W±0°.1, h10^{km}±1^{km}, mb5.1/101, Mwc5.4(GCMT), Error ellipse: s-maj=20.6km s-min=16.3km az=138.0*

*GCMT **24** 06:54:49.5±0.1, 1°.07N±0°.01×26°.41W±0°.01, h12^{km}, MW5.3/152, Moment Tensor Solution. s108,c171; s152,c281; Duration: 1^{s}.1 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.19±.01; $M_{\theta\theta}$0.43±.02; $M_{\phi\phi}$-0.24±.02; $M_{r\theta}$0.24±.04; $M_{\theta\phi}$-1.24±.01; $M_{\phi r}$0.02±.04; Best double couple: $M_0$1.31000×10^{17} NP1:ϕ_s172.00000°, δ79.00000°, λ-2.00000°. NP2:ϕ_s263.00000°, δ88.00000°, λ-169.00000°. Principal axes: T 1.4010, Plg7.0000°, Azm37.0000°; N -0.1840, Plg79.0000°, Azm272.0000°; P -1.2180, Plg9.0000°, Azm128.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **24** 06:54:51, 1°.05N×26°.41W, h12^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-0.25; $M_{\theta\theta}$0.49; $M_{\phi\phi}$-0.24; $M_{r\theta}$0.06; $M_{\theta\phi}$-1.31; $M_{\phi r}$0.24; Fault plane solution: $M_0$1.40000×10^{17} NP1:ϕ_s263.00000°, δ79.00000°, λ-173.00000°. NP2:ϕ_s172.00000°, δ83.00000°, λ-11.00000°. Principal axes: T 1.4913, Plg3.0000°, Azm218.0000°; N -0.2088, Plg77.0000°, Azm321.0000°; P -1.2824, Plg12.0000°, Azm127.0000°;*

ISC 24 06:54:48.6±0.3**, 0°.90N**±0°.07×**26°.37W**±0°.06**, h17**^{km}**, n225, σ2^{s}.10**/189**, mb5.0**/85**, MS4.8**/44**, 3D, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NBPV	Pedro Velho	11.49	231	*e*P	Pn	06 57 24.9	-7.1
RCBR	Riachuelo	11.62	235	Pn	Pn	06 57 28.3	-5.6
	2.7nm,0.3s,baz=48,slow=23,SNR=47						
RCBR				Sn	Sn	06 59 28.8	-15
	0.5nm,0.3s,baz=110,slow=12,SNR=1.4						
RCBR				LR	LR	07 00 48.3	
	comp=Z,10µm,21.7s,baz=322,slow=31						
RCBR	Riachuelo	11.62	235	*e*P	Pn	06 57 27.0	-6.9
NBPA	Parau_RN	12.59	238	*e*P	Pn	06 57 39.7	-7.4
SACV	Santiago Islan	14.25	11	Pn	Pn	06 58 06.2	-3.5
H10N3	ASCENSION HYDR	14.68	126	T	T	07 13 20.0	
	baz=306,slow=75						
H10N2	ASCENSION HYDR	14.68	126	T	T	07 13 20.2	
	baz=306,slow=75						
H10N1	ASCENSION HYDR	14.70	126	T	T	07 13 20.5	
	baz=306,slow=75						
NBPS	Pedro II - PI	15.95	251	*e*P	Pn	06 58 26.2	-6.3
ROSB	Rosrio	18.14	258	*e*P	Pn	06 58 54.4	-5.6
LIC	Lamto	21.95	76	*e*P	P	06 59 40.6	-1.0
	319nm,1.6s						
TMAB	Tom-Au,PA,Br	21.96	261	*e*P	P	06 59 38.3	-3.4
TIC	Toumodi	22.05	74	*e*P	P	06 59 42.5	-0.3
DBIC	Dimbokro	22.21	75	P	P	06 59 44.0	-0.5
	31nm,0.9s,baz=241,slow=13,SNR=24						
DBIC				LR	LR	07 06 14.7	
	comp=Z,3µm,21.9s,baz=236,slow=31						
DBIC	Dimbokro	22.21	75	P	P	06 59 42.7	-1.9
DBIC				IAmb	IAmb	07 00 01.7	
	comp=Z,67nm,1.1s						
KIC	Kosan Boka	22.25	75	*e*P	P	06 59 43.6	-1.3
	comp=Z,150nm,1.2s						
SDBA	SAO DESIDERIO	22.65	234	*e*P	P	06 59 45.5	-3.8
NAN01	Guarapari, ES	23.02	215	*e*P	P	06 59 50.4	-2.7
SMTB	Santa Maria do	23.25	245	*e*P	P	06 59 51.8	-3.7
JANB	Januaria	23.79	228	*e*P	P	06 59 57.0	-3.7
BSFB	Barra de Sao F	24.22	215	*e*P	P	07 00 03.3	-1.3
SJMB	Sao Joao De Ma	24.32	216	*e*P	P	07 00 04.0	-1.6
RIB01	Linhares ES	24.35	214	*e*P	P	07 00 05.1	-0.7
PRPB	Parauapebas	24.43	253	*e*P	P	07 00 03.4	-3.3
PEXB	Peixe	25.32	239	*e*P	P	07 00 12.3	-2.4
DIAM	Diamantina, MG	25.56	221	*e*P	P	07 00 15.4	-1.6
MCPB	Macapa, AP	25.71	267	*e*P	P	07 00 16.6	-1.7
KOWA	Kowa	25.91	57	P	P	07 00 19.3	-0.7
	comp=Z,37nm,1.1s,baz=234,slow=6.0,SNR=31						
KOWA				LR	LR	07 09 48.5	
	comp=Z,4µm,18.1s,baz=236,slow=35						
KOWA	Kowa	25.91	57	P	P	07 00 18.3	-1.7
MDP	Montagnes des	26.56	280	LR	LR	07 08 32.4	
	comp=Z,618nm,20.1s,baz=96,slow=31						
BDFB	Brasilia	26.97	232	P	P	07 00 26.8	-3.0
	comp=Z,2.4nm,0.8s,baz=77,slow=13,SNR=2.8						
BDFB				LR	LR	07 09 59.8	
	comp=Z,5µm,19.9s,baz=74,slow=34						
BDFB	Brasilia	26.97	232	P	P	07 00 31.1	+1.4
CAM01	Campos-RJ	27.07	213	*e*P	P	07 00 29.0	-1.4
DUB01	Friburgo-RJ	27.66	213	*e*P	P	07 00 34.0	-1.9
SNDB	Serra Nova Dou	27.86	242	*e*P	P	07 00 36.0	-1.6
MALB	Monte Alegre	28.02	264	*e*P	P	07 00 38.3	-0.8
MAN01	Angra dos Reis	29.18	215	*e*P	P	07 00 47.8	-1.6
ITTB	Itaituba	29.80	260	*e*P	P	07 00 51.8	-3.2
NPGB	Novo Progresso	29.98	254	*e*P	P	07 00 54.7	-1.8
ARAG	Araguaiana, MT	30.06	236	*e*P	P	07 00 55.2	-2.0
TOA0	Torodi Ar. Sit	30.35	65	P	P	07 00 58.9	-0.9
TOA0				IAmb	IAmb	07 01 01.4	
	comp=Z,27nm,1.1s						
TORD	Torodi Ar. Bea	30.35	65	P	P	07 00 59.4	-0.4
	comp=Z,20nm,1.1s,baz=252,slow=8.0,SNR=35						
TORD				LR	LR	07 11 55.6	
	comp=Z,3µm,18.5s,baz=250,slow=34						
TORD	Torodi Ar. Bea	30.35	65	P	P	07 00 59.0	-0.7
PARB	Paraibuna	30.51	217	*e*P	P	07 01 00.4	-0.8
PCMB	Pacaembu	33.03	226	*e*P	P	07 01 21.8	-1.6
PTGA	Pitinga	33.63	267	P	P	07 01 29.6	+0.9
	comp=Z,1.0nm,0.2s,baz=323,slow=22,SNR=1.2						
MACA	Manacapuru-AM	34.53	263	*e*P	P	07 01 34.9	-1.5
MDT	Midelt	37.78	31	P	P	07 02 02.5	-1.6
	comp=Z,2.3nm,1.0s,baz=222,slow=7.2,SNR=2.0						
TAM	Tamanrasset	37.87	53	P	P	07 02 03.2	-1.9
SAML	Samuel	37.95	254	P	P	07 02 06.9	+1.2
SIV	San Ignacio	38.15	242	P	P	07 02 06.8	-0.6
	comp=Z,0.7nm,0.7s,baz=65,slow=12,SNR=3.0						
SIV				LR	LR	07 17 04.3	
	comp=Z,2µm,19.1s,baz=45,slow=35						
CPUP	Villa Florida	40.30	226	P	P	07 02 25.5	+0.3
	comp=Z,1.8nm,1.0s,baz=36,slow=15,SNR=2.7						
CPUP				LR	LR	07 18 41.2	
	comp=Z,4µm,18.8s,baz=62,slow=36						
ETMB	Extrema	41.06	254	*e*P	P	07 02 29.7	-2.0
ESDC	Sonseca Array	43.67	25	P	P	07 02 53.1	+0.4
	comp=Z,5.0nm,1.2s,baz=220,slow=8.7,SNR=6.3						
ESDC				LR	LR	07 20 14.1	
	comp=Z,524nm,19.8s,baz=215,slow=35						
ESDC	Sonseca Array	43.67	25	P	P	07 02 51.9	-0.7
LPAZ	La Paz	44.60	246	P	P	07 03 03.2	+2.1
	comp=Z,1.1nm,0.7s,baz=30,slow=10,SNR=4.4						
LPAZ				LR	LR	07 21 00.4	
	comp=Z,2µm,19.9s,baz=70,slow=35						
LPAZ	La Paz	44.60	246	P	P	07 03 01.2	+0.1
SDV	Santo Domingo	44.76	282	*e*P	P	07 03 02.5	+0.5
CZSB	Cruzeiro do Su	46.99	259	*e*P	P	07 03 18.2	-1.1
KEST	Kesra	47.97	40	P	P	07 03 28.5	+1.8
	comp=Z,6.4nm,1.0s,baz=25,slow=8.6,SNR=2.5						
KEST				LR	LR	07 24 53.1	
	comp=Z,3µm,18.1s,baz=174,slow=38						
ROSC	El Rosal	48.03	276	P	P	07 03 29.8	+1.9
	comp=Z,7.1nm,0.8s,baz=216,slow=22,SNR=1.7						
ROSC				LR	LR	07 21 50.9	
	comp=Z,1µm,21.3s,baz=114,slow=34						
NNA	Nana	51.72	254	LR	LR	07 26 31.2	
	comp=Z,379nm,18.0s,baz=72,slow=37						
BO02	Sierra Bellavi	54.62	225	P	P	07 04 18.6	+2.0
NRCA	Norcia	54.68	35	P	P	07 04 16.2	-0.7
NRCA				IAmb	IAmb	07 04 20.1	
	comp=Z,28nm,1.4s						
DAVA	Damuels	55.92	29	*i* P	P	07 04 26.8	+0.9
	comp=Z,17nm,1.6s						
FETA	Feichten	56.16	30	*e*P	P	07 04 26.9	-0.6
	comp=Z,19nm,1.0s						
LSZ	Lusaka	56.26	109	P	P	07 04 29.2	+0.4
	comp=Z,0.9nm,0.3s,baz=233,slow=7.9,SNR=3.0						
LSZ	Lusaka	56.26	109	IAmb	IAmb	07 04 46.6	
	comp=Z,15nm,1.1s						
RETA	Reutte	56.49	29	*e*P	P	07 04 29.3	-0.5
	comp=Z,10nm,1.2s						
SQTA	Sankt Quirin	56.53	30	*e*P	P	07 04 29.6	-0.6
	comp=Z,22nm,1.4s						
MOTA	Moosalm	56.56	30	*e*P	P	07 04 31.0	+0.5
	comp=Z,12nm,1.4s						
MEM	Membach	56.63	24	*d*PcP	PcP	07 05 28.6	+1.7
WTTA	Wattenberg	56.77	30	*e*P	P	07 04 31.8	-0.2
	comp=Z,7.8nm,1.0s						
TRI	Trieste	56.86	33	P	P	07 04 31.4	-1.0
TRI				IAmb	IAmb	07 04 45.4	
	comp=Z,28nm,1.4s						
ABTA	Abfaltersbach	56.87	31	*e*P	P	07 04 32.8	+0.2
	comp=Z,23nm,1.7s						
SKDS	Skadanscina	56.89	33	*e*P	P	07 04 32.1	-0.6
VOJS	Vojsko	57.13	32	*e*P	P	07 04 34.2	-0.3
MYKA	Terra Mystica	57.38	32	*e*P	P	07 04 36.8	+0.6
	comp=Z,15nm,1.4s						
BOSA	Boshof	57.43	125	P	P	07 04 34.5	-2.5
	comp=Z,2.5nm,0.8s,baz=246,slow=16,SNR=2.1						
BOSA				LR	LR	07 24 18.5	
	comp=Z,1µm,20.7s,baz=286,slow=31						
BOSA	Boshof	57.43	125	IAmb	IAmb	07 06 22.1	
	comp=Z,38nm,1.7s						
KBA	Koelnbreinsper	57.52	31	*e*P	P	07 04 38.4	+1.2
	comp=Z,13nm,1.5s						
PLCA	Paso Flores	57.67	219	LR	LR	07 28 55.4	
	comp=Z,955nm,19.2s,baz=48,slow=36						
SOKA	Soboth	58.15	32	*e*P	P	07 04 41.9	+0.3
	comp=Z,13nm,1.5s						
AGG	Agios Georgios	58.41	43	P	P	07 04 43.9	+0.3
AGG				IAmb	IAmb	07 04 46.8	
	comp=Z,31nm,1.4s						
FNA	Florina	58.63	41	P	P	07 04 44.2	-0.8
FNA				IAmb	IAmb	07 04 48.0	
	comp=Z,28nm,1.4s						
GEC2	GERESS Array S	58.86	30	P	P	07 04 46.8	+0.2
GERES	GERESS Array B	58.86	30	P	P	07 04 46.2	-0.4
	comp=Z,1.0nm,0.8s,baz=205,slow=5.9,SNR=11						
GERES				LR	LR	07 27 40.1	
	comp=Z,584nm,21.9s,baz=235,slow=34						
GERES	GERESS Array B	58.86	30	P	P	07 04 45.6	-1.0
KHC	Kasperske Hory	58.99	29	*e*P	P	07 04 46.4	-0.9
CONA	Conrad Observa	59.38	32	*e*P	P	07 04 51.4	+1.3
	comp=Z,8.1nm,1.5s						
CLL	Collm	60.18	27	*e*P	P	07 04 55.0	-0.4
CLL				*e*S	S	07 13 12.0	+3.7
CLL				*e*SSSS		07 20 12.0	
CLL				Lm	MLR	07 28 00.0	
	comp=Z,600nm,19.6s						
MODS	Modra-Piesok	60.40	32	*e*P	P	07 05 00.5	+3.5
DPC	Dobruska-Polom	61.14	30	*e*pP	pP	07 05 06.5	+0.4
VYHS	Vyhne	61.30	33	*e*	P	07 05 14.5	+11
MORC	Moravsky Berou	61.39	31	P	P	07 05 03.1	-0.7
MORC				IAmb	IAmb	07 05 06.4	
	comp=Z,18nm,1.6s						
PSZ	Piszkesteto	61.55	34	P	P	07 05 04.5	-0.4
PSZ				IAmb	IAmb	07 05 15.3	
	comp=Z,17nm,1.0s						
OJC	Ojcow	62.83	31	P	P	07 05 13.7	+0.4
KMBO	Kilima Mbogo	63.66	92	P	P	07 05 22.6	+2.8
	comp=Z,0.6nm,0.3s,baz=272,slow=3.9,SNR=5.5						
KMBO				LR	LR	07 30 14.9	
	comp=Z,559nm,19.0s,baz=266,slow=34						
MLR	Muntele Rosu	63.83	38	P	P	07 05 19.2	-1.1
BURAR	Bucovina Array	64.42	36	P	P	07 05 24.4	+0.4
BUR08	Bucovina Ar. S	64.43	36	P	P	07 05 23.5	-0.6
BUR08				IAmb	IAmb	07 05 32.9	
	comp=Z,32nm,1.9s						
NOA	NORSAR Array B	66.47	19	LR	LR	07 33 00.9	
	comp=Z,311nm,18.1s,baz=210,slow=35						
BR131	Keskin Array S	66.71	47	IAmb	IAmb	07 05 56.8	
	comp=Z,10nm,0.8s						
BRTR	Keskin Array B	66.71	47	P	P	07 05 38.7	-0.4
	comp=Z,4.8nm,0.7s,baz=236,slow=5.7,SNR=17						
BRTR				LR	LR	07 36 05.1	
	comp=Z,846nm,20.4s,baz=231,slow=37						
BRTR	Keskin Array B	66.71	47	P	P	07 05 37.5	-1.6
AKASG	Malin Array Be	68.21	34	P	P	07 05 47.8	-0.3
	comp=Z,3.5nm,0.8s,baz=242,slow=6.9,SNR=15						
AKASG				LR	LR	07 34 34.8	
	comp=Z,297nm,20.6s,baz=240,slow=35						
AKASG	Malin Array Be	68.21	34	P	P	07 05 47.3	-0.8
AKBB	Malin Array Si	68.21	34	P	P	07 05 46.9	-1.3
AKBB				IAmb	IAmb	07 05 57.7	
	comp=Z,15nm,1.0s						
NACGM	Naroch	68.96	30	*e*P	P	07 05 57.1	+4.3
NACGM				*e*P	P	07 05 57.1	+4.3
NACGM				*e*P	P	07 05 57.1	+4.3
NACGM				*e*PcP	PcP	07 06 18.5	+1.5
NACGM				*e*PP	PP	07 08 34.9	+10
NACGM				*i* PPP	PPP	07 10 11.2	
NACGM				*e*S	S	07 15 01.9	+5.2
NACGM				*e*SS	SS	07 19 05.7	-17
NACGM				*e*SSS	SSS	07 23 08.9	
NACGM				*e*LQ	LQ	07 31 19.8	
NACGM				*e*LR	LR	07 36 32.7	
MNK	Minsk	69.31	30	*i* P	P	07 05 53.0	-1.9
	comp=E,2.0nm,0.8s						
MNK				*i* P	P	07 05 53.0	-1.9
	comp=N,13nm,0.6s						
MNK				*i* P	P	07 05 53.0	-1.9
	comp=Z,8.0nm,0.6s						
MNK				*i* PcP	PcP	07 06 17.4	-1.0
MNK				*i* PP	PP	07 08 24.6	-3.6
MNK				*i* PPP	PPP	07 10 04.0	
MNK				*i* S	S	07 14 58.6	-2.1
MNK				*i* ScS	SKSac	07 15 53.1	-1.2
MNK				*i* SS	SS	07 19 22.9	-4.9
MNK				*i* SSS	SSS	07 22 39.4	
MNK				*i* LQ	LQ	07 31 13.0	
MNK				*i* LR	LR	07 36 27.0	
MNK				*i* LRM	MLR	07 39 09.2	
	comp=N,314nm,10.2s						
MNK				*i* LRM	MLR	07 39 29.8	
	comp=Z,376nm,10.2s						
MNK				*i* LRM	MLR	07 39 32.2	
	comp=E,46nm,10.2s						
SUMG	Summit	71.98	356	*i* P	P	07 06 16.6	+5.3
SUMG	Summit	71.98	356	*i* P	P	07 06 16.7	+5.3
FINES	FINESS Array B	72.16	24	P	P	07 06 10.4	-1.7
	comp=E,2.7nm,0.8s,baz=222,slow=7.7,SNR=4.7						
FINES				LR	LR	07 34 06.7	
	comp=E,619nm,22.0s,baz=235,slow=33						
VNA1	Neumayer--Stat	72.42	174	P	P	07 06 21.0	+7.5
VNA2	Neumayer--Watz	72.77	174	P	P	07 06 17.4	+1.7
RAYN	Ar Rayn	73.04	66	P	P	07 06 18.1	-0.2
RAYN				IAmb	IAmb	07 06 35.9	
	comp=Z,13nm,1.1s						
GEVA	Gevas	73.39	50	P	P	07 06 19.6	-0.6
GEVA				IAmb	IAmb	07 06 22.7	
	comp=Z,20nm,1.3s						
SNAA	Sanae	74.02	172	P	P	07 06 24.4	+1.3
OBN	Obninsk	74.09	32	LR	LR	07 38 19.9	
	comp=Z,36nm,21.2s,baz=197,slow=35						
KBZ	Khabaz	74.50	45	P	P	07 06 25.4	-0.8
	comp=Z,5.7nm,1.0s,baz=252,slow=5.0,SNR=7.9						
KBZ				LR	LR	07 40 53.8	
	comp=Z,375nm,21.1s,baz=244,slow=37						
JCT	Junction City	75.28	301	P	P	07 06 33.8	+2.6
JCT				IAmb	IAmb	07 06 47.0	
	comp=Z,12nm,1.0s						
ABTX	Abilene, Hawle	75.45	303	P	P	07 06 33.8	+1.7
ABTX				IAmb	IAmb	07 06 53.3	
	comp=Z,19nm,1.3s						
AGMN	Agassiz Nation	75.79	320	IAmb	IAmb	07 06 51.9	
	comp=Z,30nm,1.9s						
DAG	Danmarks Havn	75.92	2	*i* P	P	07 06 39.0	+5.1
	comp=Z,3.8nm,0.8s						
DAG	Danmarks Havn	75.92	2	*i* P	P	07 06 39.0	+5.1
DAG				IAmb	IAmb	07 06 41.6	
	comp=Z,3.8nm,0.8s						
ULM	Lac du Bonnet	76.31	322	P	P	07 06 35.4	-1.2
	comp=Z,3.4nm,1.1s,baz=117,slow=2.3,SNR=2.7						
ULM				LR	LR	07 34 02.1	
	comp=Z,562nm,21.9s,baz=89,slow=31						
ULM	Lac du Bonnet	76.31	322	IAmb	IAmb	07 06 50.2	
	comp=Z,23nm,1.7s						
ARCES	ARCESS Array B	76.61	17	LR	LR	07 34 55.8	
	comp=Z,590nm,21.8s,baz=235,slow=32						
KLMR	Klimovskoe	77.67	27	*e*P	P	07 06 43.7	-0.3
KLMR				AMP		07 06 50.2	
	comp=Z,30nm,1.4s						
MDND	Maddock	78.12	319	P	P	07 06 47.9	+1.1
MSTX	Muleshoe	78.22	304	P	P	07 06 49.3	+1.4
TX31	Lajitas Ar. Si	78.48	300	IAmb	IAmb	07 07 06.9	
	comp=Z,15nm,0.9s						
TXAR	Lajitas Array	78.48	300	P	P	07 06 49.2	-0.2
	comp=Z,2.8nm,0.9s,baz=116,slow=7.1,SNR=9.9						
TXAR				LR	LR	07 37 31.0	
	comp=Z,174nm,21.7s,baz=0.0,slow=33						
TXAR	Lajitas Array	78.48	300	P	P	07 06 50.6	+1.2
BELA	Belgrano 2	78.81	182	P	P	07 06 50.6	+0.5
GDL2	Guadalupe Moun	79.36	302	P	P	07 06 55.4	+1.2
HPIG		80.05	297	P	P	07 07 00.1	+2.0
SDCO	Great Sand Dun	80.85	308	P	P	07 07 04.3	+2.0
FFC	Flin Flon	80.97	325	P	P	07 07 05.5	+3.2
FFC				IAmb	IAmb	07 07 29.0	
	comp=Z,32nm,1.9s						
ISCO	Idaho Springs	81.16	310	P	P	07 07 05.8	+1.8
DGMT	Dagmar	81.26	319	P	P	07 07 05.6	+1.7
DGMT				IAmb	IAmb	07 07 22.9	
	comp=Z,19nm,1.0s						
ANMO	Albuquerque	81.35	305	P	P	07 07 07.9	+3.0
ANMO				IAmb	IAmb	07 07 27.3	
	comp=Z,26nm,1.7s						
SMCO	Snowmass	82.14	309	P	P	07 07 12.0	+2.8
SMCO				IAmb	IAmb	07 07 30.7	
	comp=Z,23nm,1.5s						
LAO	LASA Array	82.38	317	P	P	07 07 13.0	+3.1
SYO	Syowa Base	82.40	161⇓	*e*P	P	07 07 09.0	-0.4
SYO	Syowa Base	82.40	161⇓	*e*pP	pP	07 07 11.8	-1.8
MVCO	Mesa Verde	83.18	307	P	P	07 07 19.1	+4.6
O20A	White River Ci	83.20	310	P	P	07 07 17.6	+3.1
PV12	Saucer Basin,	83.50	308	P	P	07 07 19.8	+3.7
PV22	Blue Mesa, Par	83.50	309	P	P	07 07 18.7	+2.6
PV03	Paradox Valley	83.53	308	P	P	07 07 17.5	+1.2
PV03				IAmb	IAmb	07 07 38.6	
	comp=Z,29nm,1.7s						
PV11	David Mesa, Pa	83.55	308	P	P	07 07 18.0	+1.6
RES	Resolute Bay	83.55	346	LR	LR	07 36 37.1	
	comp=Z,190nm,19.9s,baz=160,slow=30						
PV18	Skein Mesa, Pa	83.58	308	P	P	07 07 19.1	+2.6
PV16	Nyswonger Mesa	83.59	308	P	P	07 07 18.8	+2.3
PV17	East Wray Mesa	83.62	308	P	P	07 07 17.8	+1.1
PV14	Lion Creek, Pa	83.67	308	P	P	07 07 20.2	+3.2
PV14				IAmb	IAmb	07 07 40.4	
	comp=Z,18nm,1.3s						
W18A	Petrified Fore	84.05	305	P	P	07 07 21.8	+2.8
W18A				IAmb	IAmb	07 07 39.9	
	comp=Z,25nm,1.5s						
EUNU	Eureka	84.14	351	P	P	07 07 20.1	+1.8
EUNU				IAmb	IAmb	07 07 43.3	
	comp=Z,18nm,1.1s						
RLMT	Red Lodge	84.34	315	P	P	07 07 21.9	+1.6
RLMT				IAmb	IAmb	07 07 42.1	
	comp=Z,20nm,1.6s						
PDAR	Pinedale Array	84.38	313	P	P	07 07 20.9	+0.4
	comp=Z,0.7nm,0.7s,baz=93,slow=5.1,SNR=5.5						
PDAR				LR	LR	07 39 19.5	
	comp=Z,679nm,21.8s,baz=114,slow=32						
PDAR	Pinedale Array	84.38	313	P	P	07 07 20.6	0.0
TUC	Tucson	84.79	302	P	P	07 07 24.8	+2.1
SRU	San Rafael Swe	84.89	309	P	P	07 07 24.8	+1.6
SRU				IAmb	IAmb	07 07 44.1	
	comp=Z,14nm,1.5s						
YMP	Mirror Lake Pl	84.95	315	IAmb	IAmb	07 08 01.9	
	comp=Z,20nm,1.4s						
GEYT	Alibeck	85.10	52	LR	LR	07 49 18.8	
	comp=Z,174nm,18.7s,baz=20,slow=38						
LKWY	Lake	85.11	314	P	P	07 07 26.4	+2.2
H17A	Grant Village	85.22	314	P	P	07 07 27.0	+2.2
H17A				IAmb	IAmb	07 07 55.7	
	comp=Z,25nm,1.6s						
SNOW	Snow King Moun	85.30	313	P	P	07 07 26.6	+1.4
SNOW				IAmb	IAmb	07 07 41.0	
	comp=Z,18nm,1.2s						
REDW	Red Top Meadow	85.36	313	P	P	07 07 27.2	+1.7
WUAZ	Wupatki	85.41	305	P	P	07 07 28.2	+2.4
WUAZ				IAmb	IAmb	07 07 42.3	
	comp=Z,9.9nm,1.0s						
TMUT	Trail Mountain	85.43	309	P	P	07 07 26.9	+0.9
YHH	Holmes Hill	85.44	315	IAmb	IAmb	07 07 42.2	
	comp=Z,14nm,1.2s						
TCUT	Toone Canyon	85.67	311	P	P	07 07 29.8	+2.8
TCUT				IAmb	IAmb	07 07 47.3	
	comp=Z,18nm,1.1s						
JLU	Jordanelle	85.67	310	P	P	07 07 29.3	+2.2
YHL	Hebgen Lake	85.68	315	P	P	07 07 29.1	+2.0
YHL				IAmb	IAmb	07 07 45.9	
	comp=Z,16nm,1.2s						
YHB	Horse Butte	85.69	315	P	P	07 07 29.6	+2.6
QLMT	Earthquake Lak	85.86	315	P	P	07 07 30.0	+2.2
NLU	North Lily Min	86.13	310	P	P	07 07 31.6	+2.2
MTPU	Mount Pierson	86.14	308	IAmb	IAmb	07 07 37.5	
	comp=Z,14nm,1.1s						
HRY	Holter Researc	86.23	317	P	P	07 07 32.5	+3.0
DUG	Dugway, Tooele	86.70	310	IAmb	IAmb	07 07 50.1	
	comp=Z,8.5nm,1.1s						
DLMT	Dillon	86.70	315	IAmb	IAmb	07 07 50.5	
	comp=Z,9.2nm,1.1s						
HVU	Hansel Valley	86.72	312	P	P	07 07 34.4	+2.3
HVU				IAmb	IAmb	07 07 52.5	
	comp=Z,18nm,1.4s						
SZCU	Shurtz Canyon	86.85	307	IAmb	IAmb	07 07 56.1	
	comp=Z,19nm,1.4s						
MCMT	McKenzie Canyo	86.87	315	P	P	07 07 34.3	+1.4
ABKAR	Akbulak array	86.91	41	P	P	07 07 32.0	-0.7
BCYI	Bear Canyon	87.25	314	P	P	07 07 35.7	+1.0
MSO	Missoula	87.68	317	P	P	07 07 38.3	+1.7
MSO				IAmb	IAmb	07 07 58.2	
	comp=Z,11nm,1.2s						
SPR3	Spring Creek 3	87.85	309	P	P	07 07 41.0	+3.1
SPR3				IAmb	IAmb	07 07 59.2	
	comp=Z,17nm,1.7s						
JTMT	Jette	87.93	318	P	P	07 07 39.6	+1.8
JTMT				IAmb	IAmb	07 10 45.4	
	comp=Z,4.9nm,0.6s						
HLID	Hailey	87.96	313	IAmb	IAmb	07 07 55.6	
	comp=Z,8.4nm,1.2s						
YKA	Yellowknife Ar	88.39	332	P	P	07 07 38.1	-1.3
	comp=Z,0.4nm,0.9s,baz=96,slow=6.1,SNR=6.3						
YKA				LR	LR	07 42 44.7	
	comp=Z,485nm,21.3s,baz=0.0,slow=33						
PRN	Pahroc Range	88.41	307	P	P	07 07 41.4	+1.1
PRN				IAmb	IAmb	07 08 03.0	
	comp=Z,20nm,1.5s						
SHPR	Sheep Range	88.49	306	P	P	07 07 43.5	+2.8
ELK	Elko	88.56	311	P	P	07 07 45.5	+4.5
ELK				IAmb	IAmb	07 08 03.1	
	comp=Z,18nm,1.9s						
R11A	Troy Canyon, C	88.83	308	P	P	07 07 45.5	+3.2
TPNV	Topopah Spring	89.37	307	P	P	07 07 47.6	+2.8
NEW	Newport	89.84	318	LR	LR	07 42 59.5	
	comp=Z,444nm,20.4s,baz=100,slow=32						
BMO	Blue Mountains	90.04	315	P	P	07 07 49.0	+1.3
BMO				IAmb	IAmb	07 08 08.7	
	comp=Z,24nm,1.6s						
TPH	Tonopah	90.12	308	P	P	07 07 52.2	+3.8
MAW	Mawson	90.53	157	LR	LR	07 39 33.2	
	comp=Z,316nm,20.6s,baz=266,slow=30						
NVAR	Mina Array Bea	90.96	308	P	P	07 07 53.1	+0.8
	comp=Z,0.2nm,0.5s,baz=294,slow=22,SNR=2.7						
NVAR				LR	LR	07 44 12.1	
	comp=Z,242nm,21.6s,baz=104,slow=33						
NVAR	Mina Array Bea	90.96	308	P	P	07 07 55.2	+2.8
QSPA	South Pole Qui	90.96	180	P	P	07 07 53.8	+2.2
LON	Longmire	93.09	317	IAmb	IAmb	07 08 18.0	
	comp=Z,5.2nm,1.0s						
DLBC	Dease Lake	96.37	329	LR	LR	07 48 04.3	
	comp=Z,386nm,20.5s,baz=93,slow=33						
BBB	Bella Bella	96.49	323	LR	LR	07 46 52.6	
	comp=Z,444nm,20.5s,baz=82,slow=32						
NRIK	Noril'sk	97.43	19	LR	LR	07 53 35.5	
	comp=Z,331nm,18.6s,baz=296,slow=36						
RKT	Rikitea	107.44	246	*e*LQ	LQ	07 39 57.7	
	comp=Z,247nm,29.2s						
RKT				*e*LR	LR	07 44 43.0	
	comp=Z,592nm,34.0s						
TAOE	Nuku Hiva Isla	113.62	261	*e*LR	LR	07 47 42.3	
	comp=Z,147nm,23.9s						
TBI	Tubuai	120.52	243	*e*LQ	LQ	07 45 39.7	
	comp=Z,318nm,36.2s						
TBI				*e*LR	LR	07 50 52.7	
	comp=Z,338nm,28.0s						
PPT2	Papeete2	121.80	250	*e*SS	SS	07 31 55.6	+2.4
	comp=Z,102nm,25.8s						
PPT2	Papeete2	121.80	250	*e*LQ	LQ	07 45 47.2	
	comp=Z,968nm,34.2s						
PPT2				*e*LR	LR	07 51 19.3	
	comp=Z,218nm,22.2s						
HHC	Hu-ho-hao-te	123.57	38	*e*PKP	PKiKP	07 13 47.0	+1.0
HHC				PP	PP	07 15 30.6	+3.6
HHC				SS	SS	07 32 19.8	+6.1
HHC				AMB	AMB		
	comp=Z,220nm,8.6s						
HHC				LR	LR		
	comp=Z,450nm,20.4s						
HHC				LR	LR		
	comp=Z,360nm,19.9s						
HHC				LR	LR		
	comp=Z,520nm,21.2s						
SLVN	Son La	126.66	62		PKPpre	07 13 42.1	
QIZ	Qiongzhong	132.68	63	PKP	PKPdf	07 14 02.3	-1.2
QIZ				SS	SS	07 34 05.8	-2.5
QIZ				AMB	AMB		
	comp=Z,100nm,6.5s						
QIZ				LR	LR		
	comp=Z,180nm,18.6s						
QIZ				LR	LR		
	comp=Z,180nm,16.2s						
QIZ				LR	LR		
	comp=Z,230nm,22.6s						
NJ2	Nanjing	133.57	42	*e*PKP	PKPdf	07 14 04.8	-0.1
STKA	Stephens Creek	147.16	161	PKPbc	PKPab	07 14 32.6	-0.5
	comp=Z,3.0nm,0.8s,baz=321,slow=3.8,SNR=4.2						
FITZ	Fitzroy Crossi	147.63	124	PKPbc	PKPbc	07 14 34.1	+1.0
	comp=Z,3.2nm,1.0s,baz=243,slow=7.8,SNR=3.2						
ASAR	Alice Springs	150.37	141	PKPbc	PKPbc	07 14 39.2	-0.8
	comp=Z,2.1nm,0.8s,baz=204,slow=1.9,SNR=18						
ASAR	Alice Springs	150.37	141		PKPbc	07 14 39.3	-0.7
AS31	Alice Springs	150.37	141		PKiKP	07 14 41.6	+0.7
WRA	Warramunga Arr	153.27	136	PKPbc	PKPbc	07 14 45.9	-0.9
	comp=Z,0.6nm,1.0s,baz=137,slow=1.8,SNR=2.5						
DZM	Mont Dzumac	155.53	210	*e*LR	LR	08 06 56.7	
	comp=Z,298nm,24.2s						

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*IDC **24** 06:55:44.2±1.6, 2.°75S×128.°58E, h0km, mb3.5/2,*
mb1 3.9/5, mb1mx3.5/33, mbtmp3.6/5, ML3.5/3, Error

ellipse: s-maj=43.0km s-min=25.7km az=87.0
*DJA **24** 06:55:49.0±0.5, 3°S±4°×12°9E±°, h10^{km}, M3.3/6, MLv3.3/6*
ISC 24 06:55:49.6±1.0, **2°.84S**±0°.08×**128°.92E**±0°.09, **h35**^{km}, **n7**, σ**1^{s}.65**/9, **Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.50	179	P	Pn	06 56 01.7	+1.4
NLAI	Namlea	1.86	258	P	Pn	06 56 20.5	+1.5
SIJI	Sorong	3.05	50	Pn	Pn	06 56 36.5	+1.1
	10nm,0.3s,baz=246,slow=23,SNR=18						
SIJI				Sn	Sn	06 57 11.5	+0.7
	3.6nm,0.3s,baz=192,slow=23,SNR=10						
FITZ	Fitzroy Crossi	15.50	192	Pn	Pn	06 59 25.4	-0.3
	0.0nm,0.3s,baz=6.3,slow=9.2,SNR=1.5						
WRA	Warramunga Arr	17.80	163	P	P	06 59 54.9	-0.4
	0.3nm,0.3s,baz=343,slow=12,SNR=11						
ASAR	Alice Springs	21.26	167	P	P	07 00 34.5	+1.5
	2.7nm,0.4s,baz=350,slow=12,SNR=26						
ASAR				S	S	07 04 25.2	-2.3
	0.5nm,0.6s,baz=353,slow=22,SNR=4.1						
MKAR	Makanchi Array	64.18	326	P	P	07 06 19.1	-1.8
	0.2nm,0.8s,baz=140,slow=6.2,SNR=1.5						

*DJA **24** 07:14:33.8±0.7, 3°S±4°×12°9E±°, h12^{km}±6^{km}, M4.4/11, mb4.5/5, mB4.8/2, MLv4.3/11, Mw(mB)4.1/2*
*IDC **24** 07:14:36.6±2.0, 2°.86S×129°.01E, h48^{km}±19^{km}, mb3.8/9, mb1 4.0/13, mb1mx3.7/46, mbtmp4.1/13, ML3.9/4, MS3.2/2, Ms1 3.2/2, ms1mx2.9/39, Error ellipse: s-maj=18.3km s-min=10.6km az=87.0*
ISC 24 07:14:34.7±0.6, **2°.83S**±0°.06×**128°.95E**±0°.05, **h33**^{km}, **n24**, σ**2^{s}.05**/25, **mb4.1**/9, **Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.51	183	P	Pn	07 14 48.3	+2.6
NLAI	Namlea	1.89	258	P	Pb	07 15 07.0	-1.7
BNDI	Bandanaira	1.93	151	P	Pb	07 15 10.4	+1.1
SWI	Sorong	3.02	50	P	Pn	07 15 20.9	+0.6
SIJI	Sorong	3.02	50	P	Pn	07 15 21.1	+0.8
	43nm,0.3s,baz=248,slow=6.2,SNR=50						
SIJI				S	Sn	07 15 56.7	+1.2
	64nm,0.3s,baz=191,slow=23,SNR=22						
SANI	Sanana	3.06	285	P	Pn	07 15 20.1	-0.7
FAKI	Fak Fak	3.29	92	P	Pb	07 15 28.8	-3.7
TNTI	Ternate	3.92	336	P	Pn	07 15 28.7	-3.9
APSI	Ampana	7.54	285	P	Pn	07 16 22.6	+0.1
	0.5nm2μm124nm,0.8s						
MRSI	Marisa	7.74	295	P	Pn	07 16 25.4	+0.2
	0.2nm38nm,0.9s						
BATI	Baumata	9.02	215	LR	LR	07 20 45.6	
	comp=Z,206nm,18.7s,baz=358,slow=41						
KAPI	Kappang	9.43	256	P	Pn	07 16 51.5	+3.2
	0.9nm,0.3s,baz=107,slow=15,SNR=3.5						
KAPI				LR	LR	07 20 52.8	
	comp=Z,106nm,19.9s,baz=64,slow=40						
FITZ	Fitzroy Crossi	15.52	192	P	P	07 18 12.6	-2.6
	0.1nm,0.3s,baz=41,slow=15,SNR=2.5						
WRA	Warramunga Arr	17.80	163	P	P	07 18 40.0	-0.5
	0.7nm,0.3s,baz=347,slow=12,SNR=27						
WRA				S	Sn	07 21 52.2	-5.4
	0.1nm,0.3s,baz=339,slow=24,SNR=2.4						
ASAR	Alice Springs	21.26	167	P	P	07 19 19.1	+0.8
	24nm,0.6s,baz=351,slow=12,SNR=290						
ASAR				S	S	07 23 11.7	-1.3
	6.7nm,0.9s,baz=348,slow=21,SNR=13						
CTA	Charters Tower	24.07	137	P	P	07 19 49.1	+1.8
	2.8nm,0.8s,baz=330,slow=11,SNR=3.9						
MKAR	Makanchi Array	64.19	326	P	P	07 25 06.6	+0.3
	0.7nm,0.7s,baz=113,slow=9.7,SNR=6.0						
SEY	Seymchan	67.94	11	P	P	07 25 31.8	+1.9
	0.6nm,0.3s,baz=64,slow=23,SNR=5.9						
KURBB	Kurchatov Arra	68.44	328	P	P	07 25 33.7	+0.4
	2.1nm,0.6s,baz=128,slow=5.6,SNR=7.1						
BVAR	Borovoye Array	74.00	328	P	P	07 26 06.8	-0.2
	0.6nm,0.6s,baz=228,slow=19,SNR=6.9						
NRIK	Noril'sk	77.29	346	P	P	07 26 25.2	-0.2
	1.1nm,0.4s,baz=142,slow=6.0,SNR=1.8						
AKTO	Aktyubinsk	80.16	322	P	P	07 26 42.0	+0.3
	0.8nm,0.4s,baz=101,slow=15,SNR=3.1						
ILAR	Eielson Array	90.05	25	P	P	07 27 30.7	-0.2
	0.5nm,0.9s,baz=234,slow=5.2,SNR=4.5						
CPUP	Villa Florida	150.38	169	PKPbc	PKiKP	07 34 23.7	-0.6
	1.6nm,0.9s,baz=49,slow=9.1,SNR=4.4						

*GUC **24** 07:16:56.8±0.7, 20°.17S×68°.85W, h116^{km}±4^{km}, ML3.4*
*IDC **24** 07:16:57.4±1.4, 20°.21S×68°.46W, h127^{km}±15^{km}, mb3.1/3, mb1 3.3/6, mb1mx3.2/24, mbtmp3.6/6, Error ellipse: s-maj=41.6km s-min=14.4km az=106.0*
ISC 24 07:16:56.0±0.9, **20°.13S**±0°.04×**68°.83W**±0°.08, **h116**^{km}±8^{km}, **n17**, σ**1^{s}.22**/30, **7C-2D**, **Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB08	IPOC Station P	0.30	267	⇑iP	Pn	07 17 13.5	+0.5
PB08				i S	Sn	07 17 25.7	+0.1
PB08				IAML		07 17 27.0	
	comp=E,2μm,0.3s						
HMBC	Humberstone	1.00	261	⇑iP	Pn	07 17 17.8	-0.1
HMBC				i S	Sn	07 17 34.5	+0.2
HMBC				IAML		07 17 35.3	
	comp=E,990nm,0.2s						
PB01	IPOC Station P	1.10	214	⇑iP	Pn	07 17 18.8	+0.1
PB01				i S	Sn	07 17 35.8	-0.3
PB01				IAML		07 17 37.4	
	comp=E,950nm,0.2s						
MNMC	Minye Minye	1.23	324	eP	Pn	07 17 21.6	+1.2
MNMC				i S	Sn	07 17 40.3	+1.5
TA02	Huaiquique	1.23	263	⇑iP	Pn	07 17 20.4	+0.4
TA02				i S	Sn	07 17 38.3	0.0
PSGC	Pisagua	1.33	293	⇑iP	Pn	07 17 21.5	+0.3
PSGC				i S	Sn	07 17 40.7	+0.3
PSGC				IAML		07 17 42.4	
	comp=N,711nm,0.2s						
TA01	Diego Aracena	1.34	251	⇑iP	Pn	07 17 21.2	0.0
TA01				i S	Sn	07 17 39.8	-0.7
PATCX	Punta Patache	1.42	241	eP	Pn	07 17 22.4	+0.1
PATCX				i S	Sn	07 17 42.5	+0.2
PB09	IPOC Station P	1.70	193	⇓eP	Pn	07 17 26.4	+0.7
PB09				i S	Sn	07 17 49.2	+0.7
PB07	IPOC Station P	1.87	212	⇓eP	Pn	07 17 27.8	-0.1
PB07				i S	Sn	07 17 51.6	-0.5
PB07				IAML		07 17 54.3	
	comp=E,284nm,0.3s						
LVC	Limon Verde	2.47	182	P	Pn	07 17 36.6	+1.0
	comp=E,2.7nm,0.3s,baz=11,slow=9.8,SNR=50						
LVC				S	Sn	07 18 07.5	+1.6
	comp=E,14nm,0.3s,baz=349,slow=18,SNR=18						
PB04	IPOC Station P	2.52	209	⇑eP	Pn	07 17 36.0	0.0
PB04				i S	Sn	07 18 04.6	-2.1
PB04				IAML		07 18 15.2	
	comp=E,174nm,0.3s						
LPAZ	La Paz	3.88	10	P	Pn	07 17 57.5	+3.1
	comp=E,0.6nm,0.3s,baz=203,slow=13,SNR=11						
LPAZ				S	Sn	07 18 37.5	-2.0
	comp=E,0.2nm,0.3s,baz=195,slow=11,SNR=1.3						
SIV	San Ignacio	8.45	62	P	Pn	07 18 53.0	-2.7
	comp=E,1.7nm,0.3s,baz=246,slow=11,SNR=40						
PLCA	Paso Flores	20.59	184	P	P	07 21 26.9	+1.1
	comp=E,1.1nm,0.9s,baz=3.0,slow=11,SNR=3.2						
TORD	Torodi Ar. Bea	76.83	71	P	P	07 28 34.2	-1.4
	comp=E,0.4nm,0.7s,baz=249,slow=5.4,SNR=4.2						
YKA	Yellowknife Ar	89.92	341	P	P	07 29 41.9	+0.3
	comp=E,0.3nm,0.8s,baz=132,slow=5.2,SNR=4.2						

*ECX **24** 07:18:54.9±0.7, 31°.04N×114°.19W, h20^{km}±19^{km}, MD2.7, ML2.9*
*MEX **24** 07:19:06.5±0.3, 30°.96N×115°.01W, h5^{km}, MD3.9*
ISC 24 07:18:51.7±1.5, **31°.1N**±0°.1×**114°.27W**±0°.06, **h10**^{km}, **n11**, σ**2^{s}.01**/13, **9C-2D**, **Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFX	San Felipe	0.50	266	⇑eP	Pn	07 19 05.6	+0.7
SFX				eS	Sn	07 19 13.6	0.0
SFX				IAML		07 19 14.8	
	comp=E,1μm,0.6s						
SFX				⇑e		07 19 14.8	
ECBX	El Chinero	0.78	301	eP	Pn	07 19 09.4	+0.6
PIX	Pinacate	0.84	55	⇓eP	Pn	07 19 09.5	-0.1
SPX	San Pedro Mart	1.03	268	⇑eP	Pn	07 19 13.9	+1.4
SPX				IAML		07 19 32.3	
	comp=E,254nm,0.7s						
SPX				⇑e		07 19 32.3	
SPIG	San Pedro Mart	1.03	269	⇑eP	Pn	07 19 13.9	+1.4
	baz=103,slow=14						
SPIG				i S	Sg	07 19 19.7	-5.2
SPIG	San Pedro Mart	1.03	269	⇑eP	Pn	07 19 13.9	+1.4
VTX	Valle De La Tr	1.33	284	⇑eP	Pg	07 19 18.4	+1.0
SQX	San Quintin	1.47	251	⇑eP	Pg	07 19 20.4	+0.5
214A	Organ Pipe Nat	1.52	54	eP	Pn	07 19 19.4	+0.4
214A				i S	Sn	07 19 25.5	-13
CBX	Cerro Bola	2.38	302	eP	Pb	07 19 33.9	-0.9
CBX				⇓e		07 19 51.1	
CBX				IAML		07 19 51.1	
	comp=N,98nm,0.4s						
CBX				IAML		07 20 08.5	
	comp=E,85nm,0.7s						
CBX				⇑e		07 20 08.5	
TJIG	Tijuana	2.46	304	eP	Pb	07 19 38.0	+2.1

*NNC **24** 07:19:17.9±0.6, 50°.03N×78°.81E, h0^{km}, mb3.1, mpv2.6, Error ellipse: s-maj=16.3km s-min=3.0km az=71.0, Suspected Mining explosion.*
*IDC **24** 07:19:18.9±1.1, 50°.07N×78°.77E, h0^{km}, mb1 2.6/2, mb1mx2.6/48, mbtmp2.6/2, ML2.2/2, Error ellipse: s-maj=16.8km s-min=6.5km az=65.0*
ISC 24 07:19:18.9±1.3, **50°.04N**±0°.07×**78°.7E**±0°.2, **h0**^{km}, **n16**, σ**0^{s}.75**/27, **7C-2D**, **Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR07	Kurchatov Arra	0.56	346	P	Pg	07 19 29.5	-0.1
KUR07				S	Sg	07 19 38.1	+1.2
KUR06	Kurchatov Arra	0.58	347	P	Pg	07 19 29.9	0.0
KUR06				S	Sb	07 19 39.4	-1.3
KUR14	Kurchatov Arra	0.58	351	P	Pg	07 19 29.8	-0.2
KUR14				S	Sg	07 19 38.1	+0.5
KUR15	Kurchatov Arra	0.59	349	P	Pg	07 19 29.9	-0.3
KUR15				S	Sb	07 19 39.8	-1.1
KURBB	Kurchatov Arra	0.60	348	Pg	Pg	07 19 30.1	-0.3
	0.9nm,0.3s,baz=164,slow=17,SNR=42						
KURBB				Lg	Lg	07 19 38.5	
	0.9nm,0.3s,baz=164,slow=31,SNR=15						
KURBB				Rg	Rg	07 19 47.0	
	12nm,1.1s,baz=146,slow=43,SNR=6.2						
KURBB	Kurchatov Arra	0.60	348	⇑P	Pg	07 19 30.0	-0.3
	8.8nm,0.3s						
KURBB				⇑S	Sg	07 19 39.2	+1.2
	45nm,0.7s						
KUR16	Kurchatov Arra	0.61	346	P	Pg	07 19 30.2	-0.3
KUR16				S	Sg	07 19 39.2	+0.9
KUR05	Kurchatov Arra	0.62	348	P	Pg	07 19 30.3	-0.4
KUR05				S	Sg	07 19 39.4	+0.7
KUR17	Kurchatov Arra	0.62	344	P	Pg	07 19 30.2	-0.4
KUR17				S	Sg	07 19 39.4	+0.7
KUR04	Kurchatov Arra	0.64	349	P	Pg	07 19 30.7	-0.3
KUR04				S	Sg	07 19 39.8	+0.6
KURK	Kurchatov	0.68	354	⇑P	Pg	07 19 31.2	-0.7
	4.2nm,0.4s						
KURK				⇑S	Sg	07 19 41.5	+0.8
	5.6nm,0.6s						
MAKZ	Makanchi	3.89	145	⇑Pn	Pn	07 20 20.8	+0.9
	3.0nm,1.4s						
MAKZ				⇑Lg	Lg	07 21 18.6	
	3.0nm,1.1s						
MK31	Makanchi Array	4.02	143	⇑Pn	Pn	07 20 22.2	+0.5
	baz=317,slow=10,SNR=5.7						
MK31				⇓Pg	Pb	07 20 30.8	+0.3
	0.6nm,0.5s,baz=326,slow=16,SNR=15						
MK31				⇓Lg	Lg	07 21 22.3	
	0.8nm,0.3s						
MKAR	Makanchi Array	4.02	143	Pn	Pn	07 20 22.2	+0.5
	0.2nm,0.3s,baz=320,slow=18,SNR=9.0						
MKAR				Pg	Pb	07 20 29.3	-1.3
	0.6nm,0.3s,baz=330,slow=15,SNR=16						
MKAR				Lg	Lg	07 21 26.0	
	0.5nm,0.3s,baz=330,slow=25,SNR=7.5						
ZALV	Zalesovo Beam	5.43	42	Pn	Pn	07 20 41.6	+0.6
	0.3nm,0.3s,baz=226,slow=14,SNR=4.1						
I46RU	ZALESOVO INFRA	5.43	42	i		07 52 00.0	
	baz=224,slow=323,SNR=2.2						

*NIED **24** 07:25:11.9, 24°.85N×125°.37E, h48^{km}, MW4.2, Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M$_{rr}$0.74; M$_{\theta\theta}$-0.75; M$_{\phi\phi}$0.01; M$_{r\theta}$2.01; M$_{\theta\phi}$-0.21; M$_{\phi r}$0.65; Fault plane solution: M$_0$2.25000×10^{15} NP1:φ$_s$72.00000°, δ80.00000°, λ89.00000°. NP2:φ$_s$259.00000°, δ10.00000°, λ97.00000°.*
*JMA **24** 07:25:11.9±0.1, 24°.85N×125°.37E, h48^{km}±1^{km}, M4.1*
JMA Felt II J1.
*IDC **24** 07:25:12.8±2.1, 24°.88N×125°.26E, h49^{km}±19^{km}, mb4.0/31, mb1 4.1/35, mb1mx4.0/57, mbtmp4.2/35, ML3.6/4, Error ellipse: s-maj=15.1km s-min=13.5km az=167.0*
*NEIC **24** 07:25:12.4±1.6, 24°.8N±0°.1×125°.37E±0°.07, h47^{km}±8^{km}, mb4.6/40, Error ellipse: s-maj=17.7km s-min=3.4km az=150.0*
ISC 24 07:25:12.0±0.7, **24°.83N**±0°.08×**125°.35E**±0°.05, **h45**^{km}±5^{km}, **n115**, σ**0^{s}.82**/117, **mb4.4**/49, **Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOGS	Gusukube	0.08	144	P	Pn	07 25 19.3	+0.1
JOGS				S	Sn	07 25 24.8	+0.7
JMJ2	Miyako jima3	0.09	196	P	Pn	07 25 19.4	+0.2
JMJ2				S	Sn	07 25 24.9	+0.7
JIKM	Ikemajima	0.14	315	P	Pn	07 25 19.5	+0.1
JIKM				S	Sn	07 25 25.2	+0.6
JIRB	Irabujima	0.17	271	P	Pn	07 25 19.6	0.0
JIRB				S	Sn	07 25 25.1	+0.2
JTJ	Tarama	0.62	253	P	Pn	07 25 25.1	+0.6
JTJ				S	Sn	07 25 34.5	+1.0
JISG	Ishigakijimahi	0.98	256	P	Pn	07 25 29.5	+0.1
JIJ	Ishigaki jima	1.20	248	P	Pn	07 25 32.9	+0.6
JIJ				eS	Sn	07 25 48.7	+1.3
JKRS	Kuro-shima	1.36	245	P	Pn	07 25 35.5	+1.0
IRIF	Iriomote-Funau	1.56	252	P	Pn	07 25 37.6	+0.3
HATJ	Hateruma jima	1.61	242	P	Pn	07 25 38.8	+0.9
YOJ	Yonaguni jima	2.16	261		Pn	07 25 45.7	+0.1
JOW	Kunigami	3.30	52	P	Pn	07 26 01.4	+0.1
	18nm,0.3s,baz=227,slow=9.4,SNR=18						
JOW				S	Sn	07 26 42.8	+3.4
	34nm,0.3s,baz=102,slow=29,SNR=3.7						
JOW	Kunigami	3.30	52	Pn	Pn	07 26 01.2	-0.1
NACB	Ninganchiao	3.49	260		Pn	07 26 05.1	+1.3
YHNB	Yeheng	3.62	268		Pn	07 26 07.6	+1.9
YULB	Yu-li	3.97	250		Pn	07 26 09.6	-0.9
SSLB	Suanglung	4.14	256		Pn	07 26 13.4	+0.6
TWG	Pinlang	4.40	244		Pn	07 26 15.1	-1.2
TPUB	Ta-pu	4.58	252		Pn	07 26 19.9	+1.1
KNMB	Chin-men Tao	6.35	268	Pn	Pn	07 26 43.6	+0.5
JNU	Nakatsue	9.57	29	P	Pn	07 27 27.1	-0.2
	0.7nm,0.3s,baz=249,slow=8.6,SNR=2.2						
KSRS	Korea Array	12.78	9	P	Pn	07 28 12.1	+1.0
	0.3nm,0.3s,baz=190,slow=13,SNR=8.0						
MJAR	Matsushiro Arr	16.06	40	P	P	07 28 57.0	-0.6
	0.1nm,0.3s,baz=234,slow=10,SNR=7.2						
MJAR	Matsushiro Arr	16.06	40	P	P	07 28 57.6	+0.1
MJB9	Matsu-Tunnel	16.06	40	P	Pn	07 28 56.0	+1.1
USRK	Ussuriysk Ar.	20.07	14	P	P	07 29 40.3	-1.3
	1.1nm,0.5s,baz=180,slow=7.6,SNR=6.3						
ASAJ	Asahikawa	23.84	32	P	P	07 30 20.9	-0.1
	5.2nm,0.4s,baz=225,slow=11,SNR=6.4						
CMAR	Chiang Mai Arr	25.33	261	P	P	07 30 35.3	+0.4
	2.0nm,0.3s,baz=92,slow=8.1,SNR=2.0						
ULN	Ulaanbaatar	27.18	332	P	P	07 30 51.9	+0.4
SONM	Songino Array	27.43	332	P	P	07 30 52.5	-1.3
	1.2nm,0.4s,baz=151,slow=9.9,SNR=10						
SONM	Songino Array	27.43	332	P	P	07 30 52.4	-1.4
TLY	Talaya	31.53	334	P	P	07 31 29.0	-0.8
	1.7nm,0.4s,baz=186,slow=8.0,SNR=3.6						
PETK	Petropavlovsk-	37.26	32	P	P	07 32 19.3	0.0
	3.4nm,0.8s,baz=230,slow=5.0,SNR=5.8						
H11N1	WAKE ISLAND Hy	38.67	89	T	T	08 13 23.1	
	baz=283						
H11N2	WAKE ISLAND Hy	38.67	89	T	T	08 13 23.1	
	baz=283						
H11N3	WAKE ISLAND Hy	38.68	89	T	T	08 13 23.1	
	baz=283						
H11S3	WAKE ISLAND Hy	38.82	91	T	T	08 13 25.9	
	baz=288,slow=75						
H11S1	WAKE ISLAND Hy	38.83	91	T	T	08 13 25.7	
	baz=288,slow=75						
H11S2	WAKE ISLAND Hy	38.84	91	T	T	08 13 25.9	
	baz=288,slow=75						
MK31	Makanchi Array	40.58	314	P	P	07 32 46.7	-0.5
MKAR	Makanchi Array	40.58	314	P	P	07 32 46.9	-0.4
	3.4nm,0.5s,baz=101,slow=10,SNR=74						
MKAR				PcP	PcP	07 34 48.4	-0.4
	0.5nm,0.7s,baz=104,slow=4.6,SNR=2.1						
MKAR	Makanchi Array	40.58	314	P	P	07 32 46.6	-0.7
MAKZ	Makanchi	40.79	314	P	P	07 32 48.1	-0.9
MAKZ				IAmb	IAmb	07 32 49.2	
	comp=Z,5.2nm,0.7s						
ZALV	Zalesovo Beam	41.84	325	P	P	07 32 56.0	-1.4
	comp=Z,3.8nm,0.5s,baz=114,slow=8.4,SNR=5.7						
SEY	Seymchan	42.13	18	P	P	07 32 59.5	-0.2
	comp=Z,2.9nm,0.5s,baz=199,slow=8.3,SNR=14						
KURK	Kurchatov	44.09	318	P	P	07 33 15.1	-0.6
AAK	Ala-Archa	45.17	306	P	P	07 33 24.6	-0.1
	comp=Z,0.7nm,0.3s,baz=82,slow=10,SNR=3.7						
WB0	Warramunga Arr	45.19	168	P	P	07 33 24.6	-0.1
WRA	Warramunga Arr	45.35	168	P	P	07 33 26.1	+0.1
	comp=Z,1.7nm,0.7s,baz=348,slow=8.9,SNR=9.3						
WR0	Warramunga Arr	45.41	168	P	P	07 33 26.6	+0.2
WR0				IAmb	IAmb	07 33 41.2	
	comp=Z,4.7nm,0.8s						
NIL	Nilore	45.90	294	P	P	07 33 30.4	0.0
NIL				IAmb	IAmb	07 33 33.2	
	comp=Z,7.5nm,0.8s						
KKAR	Karatay Array	48.12	306	P	P	07 33 48.0	+0.4
ASAR	Alice Springs	48.91	170	P	P	07 33 54.3	+0.5
	comp=Z,0.5nm,0.5s,baz=356,slow=13,SNR=9.0						
NRIK	Noril'sk	49.82	343	P	P	07 33 58.9	-1.2
	comp=Z,2.2nm,0.5s,baz=111,slow=8.1,SNR=6.2						
NRIK				PcP	PcP	07 35 21.8	+1.6
	comp=Z,2.7nm,0.5s,baz=116,slow=3.8,SNR=5.0						
ABKAR	Akbulak array	55.73	314	P	P	07 34 43.9	-0.1
ABKAR				IAmb	IAmb	07 34 46.8	
	comp=Z,3.6nm,0.7s						
ABKAR	Akbulak array	55.73	314	P	P	07 34 44.4	+0.4
GAMB	Gambell	56.10	28	P	P	07 34 47.2	+0.7
GAMB				IAmb	IAmb	07 34 59.8	
	comp=Z,11nm,1.5s						
ARU	Arti	56.90	322	P	P	07 34 51.5	-0.8
	comp=Z,1.2nm,0.3s,baz=4.5,slow=3.8,SNR=5.5						
AKTO	Aktyubinsk	56.98	315	P	P	07 34 52.1	-0.9
	comp=Z,1.0nm,0.5s,baz=87,slow=7.4,SNR=4.8						
GEYT	Alibeck	57.75	300	P	P	07 34 59.1	+0.4
	comp=Z,4.0nm,0.5s,baz=90,slow=1.5,SNR=5.3						
GEYT	Alibeck	57.75	300	P	P	07 34 59.3	+0.7
GEYT				IAmb	IAmb	07 35 01.3	
	comp=Z,3.0nm,0.5s						
ANM	Nome	58.97	28	P	P	07 35 06.7	+0.1
ANM				IAmb	IAmb	07 35 10.4	
	comp=Z,4.0nm,0.8s						
A21K	Barrow	62.87	21	P	P	07 35 33.6	+0.7
TTA	Tatalina	63.05	30	P	P	07 35 35.3	+0.8
TTA				IAmb	IAmb	07 35 38.4	
	comp=Z,4.7nm,1.2s						
IMAR	Indian Mountai	63.91	27	P	P	07 35 40.4	+0.4
KDAK	Kodiak Island	65.18	36	P	P	07 35 48.3	0.0
	comp=Z,1.4nm,0.4s,baz=296,slow=7.6,SNR=6.5						
BPAW	Bear Paw Mtn.	65.22	29	P	P	07 35 47.6	-1.0
COLD	Coldfoot	65.24	25	P	P	07 35 49.2	+0.5
TOLK	Toolik Lake Re	65.35	24	P	P	07 35 50.4	+1.0
TOLK				IAmb	IAmb	07 35 52.7	
	comp=Z,8.1nm,1.0s						
SUA	Susitna One	65.63	32	P	P	07 35 51.8	+0.4
I23K	Minto, Yukon-K	65.80	28	P	P	07 35 53.0	+0.8
I23K				IAmb	IAmb	07 35 56.2	
	comp=Z,4.7nm,0.5s						
RND	Reindeer	66.24	29	P	P	07 35 55.0	-0.3
MDM	Murphy Dome	66.30	28	P	P	07 35 54.8	-0.8
WRH	Wood River Hil	66.42	28	P	P	07 35 55.1	-1.2
WRH				IAmb	IAmb	07 36 01.6	
	comp=Z,2.7nm,0.7s						
POKR	Poker Plat Res	66.61	27	P	P	07 35 58.3	+0.8
POKR				IAmb	IAmb	07 36 01.0	
	comp=Z,4.7nm,0.7s						
ILAR	Eielson Array	66.89	28	P	P	07 35 58.7	-0.6
	comp=Z,0.7nm,0.5s,baz=253,slow=4.6,SNR=35						
ILAR	Eielson Array	66.89	28	P	P	07 35 58.5	-0.8
HDA	Harding Lake	66.92	28	P	P	07 35 59.6	0.0
HDA				IAmb	IAmb	07 36 02.8	
	comp=Z,4.9nm,0.9s						
FYU	Fort Yukon	67.27	26	P	P	07 36 01.4	-0.2
FYU				IAmb	IAmb	07 36 05.3	
	comp=Z,4.2nm,0.8s						
PRP	Porcupine Dome	67.33	27	P	P	07 36 02.4	+0.1
PRP				IAmb	IAmb	07 36 07.5	
	comp=Z,6.9nm,1.4s						
BMAR	Burnt Mountain	67.37	25	P	P	07 36 02.5	+0.1
KBZ	Khabaz	68.03	309	P	P	07 36 07.2	+0.4
	comp=Z,5.1nm,0.7s,baz=89,slow=5.1,SNR=16						
KIV	Kislovodsk	68.13	309	P	P	07 36 07.7	+0.1
EGAK	Eagle	69.29	27	P	P	07 36 13.6	-0.8
BCAR	Beaver Creek A	69.45	29	P	P	07 36 14.8	-0.6
SPITS	Spitsbergen Ar	69.66	348	P	P	07 36 15.8	-0.6
	comp=Z,4.5nm,0.9s,baz=125,slow=10,SNR=13						
BARN	Barnard Glacie	70.01	31	IAmb	IAmb	07 36 17.5	
	comp=Z,7.7nm,1.0s						
BARN				P	P	07 36 17.8	-1.3
ARCES	ARCESS Array B	70.35	338	P	P	07 36 20.9	+0.1
	comp=Z,2.4nm,0.8s,baz=67,slow=6.5,SNR=7.0						
INK	Inuvik	71.19	23	P	P	07 36 26.9	+1.0
	comp=Z,5.9nm,0.8s,baz=298,slow=6.3,SNR=18						
INK	Inuvik	71.19	23	P	P	07 36 26.6	+0.7
INK				IAmb	IAmb	07 36 28.2	
	comp=Z,5.7nm,0.8s						
MARD	Mardin	71.31	303	P	P	07 36 27.3	0.0
FINES	FINESS Array B	72.80	330	P	P	07 36 35.5	-0.1
	comp=Z,2.2nm,0.7s,baz=35,slow=6.6,SNR=7.0						
FINES	FINESS Array B	72.80	330	P	P	07 36 35.9	+0.3
C36M	Paulatuk	73.91	20	P	P	07 36 42.4	+0.4
C36M				IAmb	IAmb	07 36 43.7	
	comp=Z,7.4nm,0.7s						
AKASG	Malin Array Be	74.90	319	P	P	07 36 47.5	-0.6
	comp=Z,2.6nm,0.4s,baz=67,slow=5.7,SNR=7.3						
AKASG	Malin Array Be	74.90	319	P	P	07 36 47.0	-1.1
AKBB	Malin Array Si	74.90	319	P	P	07 36 47.0	-1.1
AKBB				IAmb	IAmb	07 36 52.6	
	comp=Z,6.2nm,1.4s						
BR131	Keskin Array S	75.83	307	P	P	07 36 54.1	+0.2
BRTR	Keskin Array B	75.83	307	P	P	07 36 54.3	+0.4
	comp=Z,5.5nm,0.9s,baz=87,slow=6.3,SNR=20						
BRTR	Keskin Array B	75.83	307	P	P	07 36 53.6	-0.3
DAG	Danmarks Havn	76.29	352	i P	P	07 36 54.5	-1.1
	comp=Z,0.6nm,0.3s						
DAG	Danmarks Havn	76.29	352	i P	P	07 36 54.5	-1.1
DAG				IAmb	IAmb	07 36 55.5	
	comp=Z,0.6nm,0.3s						
DLBC	Dease Lake	76.44	32	P	P	07 36 58.1	+1.3
	comp=Z,1.2nm,0.5s,baz=5.1,slow=20,SNR=3.4						
RES	Resolute Bay	77.39	10	P	P	07 37 02.0	+0.2
	comp=Z,3.3nm,0.7s,baz=291,slow=5.4,SNR=12						
BURAR	Bucovina Array	78.51	317	P	P	07 37 08.7	0.0
NB2	NORSAR Subarra	79.40	333	P	P	07 37 12.9	-0.3
	comp=Z,0.6nm,0.5s,baz=55,slow=5.6						
NOA	NORSAR Array B	79.40	333	P	P	07 37 13.0	-0.3
	comp=Z,0.8nm,0.6s,baz=54,slow=5.5,SNR=3.8						
YKA	Yellowknife Ar	80.87	24	P	P	07 37 21.1	+0.1
	comp=Z,2.2nm,0.7s,baz=308,slow=4.6,SNR=28						
SUMG	Summit	82.23	355	i P	P	07 37 29.1	+0.5
	comp=Z,4.0nm,0.5s						
SUMG	Summit	82.23	355	P	P	07 37 29.0	+0.5
SUMG				IAmb	IAmb	07 37 30.0	
	comp=Z,8.5nm,0.8s						
SUMG	Summit	82.23	355	i P	P	07 37 29.1	+0.5
SUMG				IAmb	IAmb	07 37 29.9	
	comp=Z,4.0nm,0.5s						
GERES	GERESS Array B	84.72	322	P	P	07 37 42.1	+0.6
	comp=Z,0.6nm,0.5s,baz=48,slow=4.0,SNR=6.8						
NVAR	Mina Array Bea	93.34	45	P	P	07 38 23.7	+0.9
	comp=Z,0.4nm,0.8s,baz=297,slow=6.0,SNR=2.2						
MWC	Mount Wilson	95.92	48	P	P	07 38 32.4	-2.3
PFO	Pinyon Flats O	97.36	48	P	Pdif	07 38 41.8	+0.6

*PDG **24** 07:55:07.1±0.1, 42°.76N×20°.34E, h10^{km}, MD2.4/1, ML2.4/13, Error ellipse: s-maj=0.3km s-min=0.4km az=0.0*
*RHSSO **24** 07:55:07.0±0.7, 42°.71N×20°.38E, h5^{km}±4^{km}, ML2.3/7*
*BEO **24** 07:55:08.0±0.3, 42°.71N×20°.33E, h6^{km}±2^{km}, ML2.5/10*
ISC 24 07:55:07.2±1.1, **42°.73N**±0°.02×**20°.32E**±0°.02, **h6**^{km}±9^{km}, **n50**, σ**0^{s}.94**/92, **2D**, **Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PVY	Plav	0.30	243	*e*Pg	Pg	07 55 13.3	+0.2
PVY				*i* Sg	Sg	07 55 17.8	+0.7
IVA	Berane	0.35	294	*e*Pg	Pg	07 55 14.0	0.0
IVA				*i* Sg	Sg	07 55 19.3	+0.7
KOME	Kolasin	0.61	282	*e*Pg	Pg	07 55 18.6	-0.3
KOME				*i* Sg	Sg	07 55 28.2	+1.4
PDG	Podgorica	0.84	249	*e*Pg	Pg	07 55 23.6	+0.2
PDG				*e*Sg	Sg	07 55 34.3	0.0
PDG	Podgorica	0.84	249	*e*Pg	Pg	07 55 22.8	-0.6
PDG				*e*Sg	Sg	07 55 34.1	-0.2
TTG	Podgorica	0.84	249	*e*Pg	Pg	07 55 22.9	-0.5
TTG				*i* Sg	Sb	07 55 36.4	+0.6
IVAS	Ivanjica	0.85	352	*e*Pg	Pg	07 55 22.7	-0.9
IVAS				*e*Sg	Sg	07 55 34.4	-0.3
PLE	Pljevlja	0.91	311	*e*Pg	Pg	07 55 23.9	-0.8
PLE				*i* Sg	Sb	07 55 37.8	0.0
NKY	Niksic	0.98	275	*e*Pg	Pg	07 55 25.6	-0.4
NKY				*i* Sg	Sb	07 55 40.8	+0.9
DRME	Dracevica, Mon	1.00	238	*e*Pg	Pg	07 55 25.7	-0.7
DRME				*e*Sg	Sg	07 55 39.5	+0.1
DRME	Dracevica, Mon	1.00	238	*e*Pg	Pg	07 55 25.9	-0.5
DRME				*i* Sg	Sn	07 55 42.2	0.0
NKME	Niksic	1.01	272	*e*Pg	Pg	07 55 25.9	-0.7
NKME				*i* Sg	Sn	07 55 41.9	-0.5
CEME	Cevo	1.05	260	*e*Pg	Pg	07 55 26.9	-0.5
CEME				*i* Sg	Sn	07 55 43.7	+0.2
ULC	Ulcinj	1.11	227	*e*Pg	Pg	07 55 28.0	-0.4
ULC				*i* Sg	Sn	07 55 45.8	+1.0
BUM	Brajici-Budva	1.14	248	*e*Pg	Pg	07 55 28.7	-0.4
BUM				*i* Sg	Sn	07 55 46.7	+1.0
UPM	Unac-Piva	1.14	295	*e*Pg	Pg	07 55 28.8	-0.3
UPM				*e*Sg	Sb	07 55 44.9	+0.3
UPM	Unac-Piva	1.14	295	*e*Pg	Pg	07 55 28.1	-1.0
UPM				*i* Sg	Sn	07 55 46.0	+0.1
GRUS	Gruza	1.19	14	*e*Pg	Pb	07 55 30.4	+0.2
GRUS				*e*Sg	Sn	07 55 46.8	0.0
PRVS	Prvonek	1.31	99	*e*Pg	Pg	07 55 32.1	-0.3
PRVS				*e*Sg	Sn	07 55 49.4	-0.5
BBLS	Lazići	1.32	330	*e*Pg	Pn	07 55 31.7	-0.5
BBLS				*e*Sg	Sn	07 55 50.8	+0.7
BBLS	Lazići	1.32	330	⇓*i*Pg	Pn	07 55 31.2	-1.0
BBLS				*e*Sg	Sb	07 55 50.0	+0.5
BRY	Bratogost	1.32	278	*e*Pg	Pn	07 55 31.0	-1.3
BRY				*e*Sg	Sn	07 55 50.4	+0.1
BRY	Bratogost	1.32	278	*e*Pg	Pn	07 55 31.8	-0.5
BRY				*i* Sg	Sn	07 55 52.0	+1.7
BOVS	Bovan	1.35	48	*e*Pg	Pb	07 55 33.0	+0.1
BOVS				*e*Sg	Sb	07 55 50.5	0.0
HCY	Herceg Novi	1.38	259	*e*Pg	Pn	07 55 32.7	-0.2
HCY				*e*Sg	Sg	07 55 52.1	+0.6
HCY	Herceg Novi	1.38	259	*e*Pg	Pn	07 55 32.8	-0.2
HCY				*i* Sg	Sg	07 55 54.8	+3.3
DIVS	Divibare	1.39	350	*e*Pg	Pn	07 55 33.3	+0.2
DIVS				*e*Sg	Sg	07 55 52.4	+0.6
DIVS	Divibare	1.39	350	⇓*i*Pg	Pn	07 55 32.6	-0.5
DIVS				*e*Sg	Sb	07 55 51.5	0.0
TREB	Trebinje	1.45	270	*e*Pg	Pb	07 55 34.4	-0.2
TREB				*e*Sg	Sg	07 55 54.4	+0.5
TREB	Trebinje	1.45	270	*e*Pg	Pn	07 55 34.2	+0.2
TREB				*e*Sg	Sg	07 55 55.1	+1.2
TRUS	Trudelj	1.49	2	*e*Pg	Pg	07 55 36.3	+0.5
TRUS				*e*Sg	Sg	07 55 55.9	+0.7
DBRK	Dubrovnik	1.61	268	*e*Pn	Pb	07 55 36.9	-0.3
DBRK				Sn	Sg	07 56 00.8	+2.0
BOSS	Bosilegrad	1.61	98	*e*Pn	Pn	07 55 36.0	-0.1
BOSS				*e*Sn	Sn	07 55 56.8	-0.4
OHR	Ohrid	1.66	167	*i* Pn	Pg	07 55 38.6	-0.3
HAPS	Han Pijesak,BI	1.68	324	*e*Pn	Pn	07 55 37.4	+0.2
HAPS				*e*Sn	Sb	07 56 00.2	+0.2
HAPS	Han Pijesak,BI	1.68	324	*e*Pn	Pn	07 55 37.1	-0.1
HAPS				*e*Sn	Sb	07 56 00.3	+0.2
STIP	Stip	1.73	126	*i* Pn	Pg	07 55 39.4	-0.9
ZAGS	Zajecar	1.76	52	*e*Pn	Pb	07 55 39.7	-0.2
ZAGS				*e*Sn	Sb	07 56 02.5	+0.2
ZAPS	Zavoj	1.78	72	*e*Pn	Pb	07 55 39.8	-0.4
ZAPS				*e*Sn	Sn	07 56 01.3	-0.1
STON	Ston	1.94	275	*e*Pn	Pb	07 55 42.1	-0.7
STON				Sn	Sg	07 56 09.9	+0.6
KUBS	Kucevo	1.95	30	*e*Pn	Pn	07 55 42.0	+1.3
KUBS				*e*Sn	Sb	07 56 07.7	+0.2
FRGS	Fruska Gora	2.45	351	*e*Pn	Pn	07 55 48.6	+0.9
FRGS				*e*Sn	Sn	07 56 18.7	+0.7
RICI	Ricice	2.46	289	*e*Pn	Pb	07 55 51.1	-0.6
MAKA	Makarska	2.49	284	*e*Pn	Pb	07 55 51.9	-0.3
MAKA				Sn	Sg	07 56 25.4	-1.6
LSTV	Lastovo	2.53	272	*i* Pn	Pb	07 55 52.8	-0.1
LSTV				Sn	Sb	07 56 23.7	-0.5
HVAR	Hvar	2.88	280	*e*Pn	Pb	07 55 56.4	-2.5
KIJV	Kijevo	3.13	295	*i* Pn	Pb	07 56 00.3	-2.8
ZIRJ	Zirje	3.54	287	*e*Pn	Pn	07 56 05.9	+3.2
MORI	Morici	3.56	290	*e*Pn	Pb	07 56 07.7	-2.7
MORH	Mrgy, Hungar	3.68	342	*e*Pn	Pn	07 56 04.2	-0.4

NEIC ***24*** *07:58:29.6±0.6, 51°.7N±0°.1×178°.14E±0°.08, h125^{km}±5^{km}, Error ellipse: s-maj=15.2km s-min=7.1km az=183.0*

AEIC ***24*** *07:58:29±0.7, 51°.74N±0°.09×178°.1E±0°.1, h126^{km}±5^{km}, ML3.3/20, Error ellipse: s-maj=14.2km s-min=9.3km az=202.0*

IDC ***24*** *07:58:30.7±14.0, 51°.99N×178°.22E, h129^{km}±121^{km}, mb3.2/7, mb1 3.4/8, mb1mx3.1/70, mbtmp3.6/8, ML4.2/1, Error ellipse: s-maj=84.4km s-min=26.8km az=15.0*

ISC 24 07:58:29.4±1.1**, 51°.8N**±0°.2×**178°.16E**±0°.07**, h128**^{km}±6^{km}**, n20, σ0^{s}.58**/29**, mb3.6**/7**, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSSA	Little Sitkin	0.28	50		Pn	07 58 47.4	+0.1
LSSA					Sn	07 59 01.8	+1.0
LSNW	Little Sitkin	0.30	47		Pn	07 58 47.2	0.0
LSNW					Sn	07 59 00.5	-0.3
LSSE	Little Sitkin	0.30	56		Pn	07 58 47.3	+0.1
LSPA	Little Sitkin	0.32	53		Pn	07 58 47.5	+0.2
LSPA					Sn	07 59 00.2	-0.7
AMKA	Amchitka	0.81	118		Pn	07 58 50.4	0.0
AMKA					Sn	07 59 05.7	-0.5
CETU	Semis' Tuman	0.85	76		Pn	07 58 51.1	+0.4
CETU					Sn	07 59 07.7	+0.7
CESW	Semis' Southwe	0.88	81		Pn	07 58 51.0	0.0
CESW					Sn	07 59 06.8	-0.6
CEAP	Semis' Anvil P	0.91	74		Pn	07 58 51.7	+0.5
CEAP					Sn	07 59 07.7	-0.1
CERB	Semis' Cerberu	0.93	79		Pn	07 58 51.7	+0.3
CERB					Sn	07 59 08.7	+0.6
CERAA	Semis' Rag'd T	0.95	81		Pn	07 58 51.8	+0.1
CERAA					Sn	07 59 09.1	+0.5
SMY	Shemya	2.68	293		Pn	07 59 11.9	+0.2
ADK	Adak	3.20	86	Pn	Pn	07 59 18.7	+0.3
KDAK	Kodiak Island	17.82	59	P	P	08 02 26.6	-1.3
	0.7nm,0.3s,baz=292,slow=11,SNR=16						
ILAR	Eielson Array	22.16	41	P	P	08 03 13.9	-0.6
	0.3nm,0.4s,baz=250,slow=9.0,SNR=11						
YKA	Yellowknife Ar	36.34	46	P	P	08 05 20.4	+0.1
	0.2nm,0.6s,baz=285,slow=7.5,SNR=2.8						
ARCES	ARCESS Array B	57.37	349	P	P	08 08 02.4	-1.2
	4.0nm,0.9s,baz=35,slow=9.9,SNR=1.4						
KURBB	Kurchatov Arra	57.47	312	P	P	08 08 05.0	+0.4
	0.4nm,0.4s,baz=41,slow=6.4,SNR=6.9						
BVAR	Borovoye Array	59.35	318	P	P	08 08 17.7	+0.1
	0.5nm,0.5s,baz=36,slow=12,SNR=5.2						
TXAR	Lajitas Array	60.46	79	P	P	08 08 26.2	+0.6
	0.1nm,0.4s,baz=330,slow=7.2,SNR=4.5						
AKASG	Malin Array Be	74.57	340	P	P	08 09 54.5	+0.7
	0.4nm,0.3s,baz=22,slow=6.3,SNR=3.2						

IDC ***24*** *08:02:18.6±1.7, 3°.72S×144°.55E, h0^{km}, mb3.7/7, mb1 4.0/8, mb1mx3.8/46, mbtmp3.8/8, ML3.5/1, Error ellipse: s-maj=54.8km s-min=21.7km az=108.0*

ISC 24 08:02:23.7±1.6**, 3°.8S**±0°.2×**144°.5E**±0°.3**, h35**^{km}**, n8, σ0^{s}.64**/8**, mb3.7**/7**, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.88	211	P	Pn	08 06 41.8	-0.3
	0.2nm,0.3s,baz=30,slow=12,SNR=8.6						
ASAR	Alice Springs	22.27	207	P	P	08 07 18.5	+0.5
	1.2nm,0.7s,baz=33,slow=8.8,SNR=16						
FITZ	Fitzroy Crossi	23.33	231	P	P	08 07 28.4	-0.6
	4.1nm,0.8s,baz=57,slow=9.4,SNR=7.6						
CMAR	Chiang Mai Arr	50.05	298	P	P	08 11 16.0	+0.6
	0.9nm,0.3s,baz=101,slow=4.7,SNR=1.6						
SONM	Songino Array	61.30	332	P	P	08 12 34.9	-0.9
	0.2nm,0.4s,baz=134,slow=6.2,SNR=1.4						
MKAR	Makanchi Array	74.24	321	P	P	08 13 57.4	+0.1
	0.5nm,0.9s,baz=101,slow=6.3,SNR=4.0						
BVAR	Borovoye Array	83.55	324	P	P	08 14 48.5	+0.3
	0.4nm,0.6s,baz=104,slow=9.1,SNR=5.3						
ILAR	Eielson Array	84.44	24	P	P	08 14 52.5	+0.1
	0.7nm,0.9s,baz=261,slow=5.5,SNR=7.0						

IDC ***24*** *08:04:22.9±0.9, 34°.40N×73°.57E, h0^{km}, mb4.0/13, mb1 4.0/18, mb1mx3.9/61, mbtmp3.9/18, ML3.7/5, MS3.4/1, Ms1 3.4/1, ms1mx2.7/52, Error ellipse: s-maj=24.5km s-min=16.0km az=57.0*

NEIC ***24*** *08:04:27.9±1.3, 34°.32N±0°.03×73°.7E±0°.1, h60^{km}±14^{km}, mb3.7/5, Error ellipse: s-maj=14.3km s-min=3.3km az=78.0*

BJI ***24*** *08:04:31.0±0.0, 34°.90N×73°.50E, h80^{km}, mB4.5/2, mb3.8/6, Ms4.3/1*

NNC ***24*** *08:04:32.2±3.2, 34°.94N×72°.99E, h0^{km}, mb4.2, mpv4.5, Error ellipse: s-maj=30.2km s-min=25.7km az=126.0*

ISC 24 08:04:27.2±0.5**, 34°.33N**±0°.05×**73°.64E**±0°.05**, h50**^{km}**, n62, σ2^{s}.60**/80**, mb3.9**/15**, 3C-2D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIL	Nilore	0.75	205		Pn	08 04 42.4	+0.7
NIL				Sn	Sn	08 04 53.6	+1.4
KBL	Kabul	3.80	274	Pn	Pn	08 05 24.8	+1.3
IUG	Iuzhnay	8.30	341	*e*P	Pn	08 06 26.8	+1.8
	baz=339						
AAK	Ala-Archa	8.32	4	Pn	Pn	08 06 26.6	+1.3
	0.4nm,0.3s,baz=206,slow=15,SNR=7.5						
AAK				Sn	Sn	08 07 56.3	-1.6
	0.4nm,0.3s,baz=129,slow=20,SNR=1.6						
AAK	Ala-Archa	8.32	4	Pn	Pn	08 06 26.8	+1.5
MRKS	Merke	8.40	358	Pg	Pn	08 06 28.1	+1.7
	7.8nm,0.3s						
MRKS				Lg	Lg	08 07 57.5	
	5.4nm,0.3s						
TKM2	Tokmak 2	8.71	10	⇓P	Pn	08 06 32.6	+1.9
	6.4nm,1.2s						
TKM2				⇑S	Sn	08 08 06.8	-0.8
	3.2nm,0.7s						
DZA	Taraz	8.73	349	*e*P	Pn	08 06 31.5	+0.6
	baz=348						
TNSS	Tian-Shan	9.07	16	*e*P	Pn	08 06 36.6	+0.8
	baz=16						
KK07	Karatay Array	9.08	345	Pn	Pn	08 06 36.5	+0.9
KK31	Karatay Array	9.09	345	⇓P	Pn	08 06 36.7	+0.9
	8.5nm,0.3s,baz=156,slow=12,SNR=129						
KK31				⇑S	Sn	08 08 12.8	-3.8
	1.5nm,0.3s						
KK31	Karatay Array	9.09	345	Pn	Pn	08 06 36.5	+0.7
KKAR	Karatay Array	9.09	345	Pn	Pn	08 06 36.1	+0.4
BRLS	Borolday	9.18	342	Pg	Pn	08 06 34.8	-2.1
	42nm,0.3s						
BRLS				Lg	Lg	08 08 09.5	
	7.1nm,0.3s						
MDOK	Medeo	9.21	16	*e*P	Pn	08 06 38.9	+1.4
	baz=17						
SATY	Saty	9.47	22	*e*P	Pn	08 06 43.1	+2.1
	2.2nm,0.9s,baz=23						
UZB	Uzynbulak	9.75	24	*e*P	Pn	08 06 45.9	+1.0
	baz=25						
KUU	Kurty	9.77	12	*e*P	Pn	08 06 45.9	+0.9
	baz=12						
KPKS	Kokpek	9.93	22	*e*P	Pn	08 06 48.4	+1.1
	2.0nm,0.7s,baz=23						
GKN	Gorkha	11.34	121	*e*Pn	Pn	08 07 07.0	+0.3
	16nm,0.3s						
GKN				*e*Sn	Sn	08 09 06.3	-5.7
	26nm,0.5s						
DMN	Daman	11.90	121	*e*Pn	Pn	08 07 14.3	-0.2
	7.9nm,0.2s						
DMN				*e*Sn	Sn	08 09 19.1	-6.9
	19nm,0.5s						
PKIN	Phulchoki	12.13	121	*e*Pn	Pn	08 07 17.4	-0.2
	14nm,0.4s						
PKIN				*e*Sn	Sn	08 09 24.9	-6.6
	12nm,0.4s						
PKI	Pulchoki	12.14	121	*e*Pn	Pn	08 07 17.3	-0.5
	6.4nm,0.2s						
PKI				*e*Sn	Sn	08 09 25.7	-6.2
	12nm,0.4s						
GUN	Gumba	12.28	118	*e*Pn	Pn	08 07 20.2	+0.4
	9.4nm,0.3s						
GUN				*e*Sn	Sn	08 09 29.6	-5.8
	18nm,0.5s						
RAMN	Ramite	13.36	120	*e*Pn	Pn	08 07 33.8	-0.6
	11nm,0.4s						
TAPN	Taplejung	13.94	116	*e*Pn	Pn	08 07 41.8	-0.6
	10nm,0.3s						
MAKZ	Makanchi	13.97	24		P	08 07 50.1	+1.1
MK31	Makanchi Array	14.06	25	P	P	08 07 50.2	+0.1
	0.6nm,0.5s,baz=204,slow=12,SNR=20						
MK31	Makanchi Array	14.06	25	Pn	Pn	08 07 44.5	+0.8
MKAR	Makanchi Array	14.06	25	Pn	Pn	08 07 43.7	0.0
	0.1nm,0.3s,baz=199,slow=12,SNR=6.5						
MKAR	Makanchi Array	14.06	25	Pn	Pn	08 07 44.1	+0.4
WMQ	Urumqi	14.44	45	P	P	08 07 52.5	-1.8
KURBB	Kurchatov Arra	16.67	11	Pn	Pn	08 08 15.6	-1.6
	0.1nm,0.3s,baz=203,slow=10,SNR=12						
KURK	Kurchatov	16.77	11		P	08 08 19.9	-0.1
KURK				IAmb	IAmb	08 08 20.7	
	comp=Z,6.2nm,1.4s						
AB07	Akbulak array	18.01	330	P	P	08 08 33.4	-0.3
AB31	Akbulak array	18.02	330	P	P	08 08 33.5	-0.3
	comp=Z,1.1nm,0.6s,baz=138,slow=13,SNR=28						
AB31				S	Sn	08 11 46.4	-7.6
	comp=Z,0.6nm,0.5s,baz=145,slow=24,SNR=2.9						
ABKAR	Akbulak array	18.02	330		P	08 08 34.4	+0.5
SHL	Shillong	18.05	114		P	08 08 33.5	-1.0
SHL				IAmb	IAmb	08 09 01.9	
	comp=Z,4.8nm,0.4s						
BVAR	Borovoye Array	18.83	354	P	P	08 08 43.4	+0.7
	comp=Z,1.0nm,0.3s,baz=115,slow=8.7,SNR=19						
BRVK	Borovoye	18.87	354	P	Pn	08 08 44.9	+0.8
BRVK				IAmb	IAmb	08 08 45.4	
	comp=Z,2.2nm,0.6s						
AKTO	Aktyubinsk	19.73	329	P	P	08 08 53.9	+1.4
	comp=Z,0.9nm,0.3s,baz=138,slow=10,SNR=27						
AKTO	Aktyubinsk	19.73	329	⇑P	P	08 08 53.8	+1.2
	comp=Z,8.8nm,0.8s						
ZAA0	Zalesovo Array	21.14	19	P	P	08 09 08.7	+0.9
ZALV	Zalesovo Beam	21.14	19	P	P	08 09 08.0	+0.2
	comp=Z,4.6nm,0.4s,baz=212,slow=11,SNR=14						
ZALV	Zalesovo Beam	21.14	19	P	P	08 09 08.2	+0.5
GTA	Gaotai	21.51	69	*e*P	P	08 09 14.6	+2.6
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ARU	Arti	24.39	340	P	P	08 09 42.3	+1.7
	comp=Z,2.8nm,0.2s,baz=104,slow=6.1,SNR=5.1						
ARU				LR	LR	08 18 22.6	
	comp=Z,90nm,21.4s,baz=312,slow=34						
CMAR	Chiang Mai Arr	27.53	119	P	P	08 10 12.3	+3.1
	comp=Z,1.4nm,0.4s,baz=297,slow=8.9,SNR=1.5						
SONM	Songino Array	27.90	51	P	P	08 10 14.7	+2.2
	comp=Z,0.6nm,0.8s,baz=256,slow=8.8,SNR=3.6						
ANTO	Ankara	32.83	292	P	P	08 10 55.1	-0.9
WHN	Wuhan	34.41	85	P	P	08 11 09.5	-0.2
MNK	Minsk	37.55	317	*i* P	P	08 11 34.3	-2.0
	comp=E,1.0nm,1.0s						
MNK				*i* P	P	08 11 34.3	-2.0
	comp=N,10.0nm,0.8s						
MNK				*i* P	P	08 11 34.3	-2.0
	comp=Z,4.0nm,1.1s						
MNK				*i* PP	PP	08 13 01.2	-1.4
MNK				*i* PcP	PcP	08 13 51.9	-1.5
MNK				*i* S	S	08 17 13.0	-8.8
MNK				*i* ScP	ScP	08 17 29.6	-6.9
MNK				*i* PcS	PcS	08 17 40.5	-1.2
MNK				*i* SS	SnSn	08 20 00.9	-2.5
MNK				*i* ScS	ScS	08 21 37.8	-7.0
MNK				*i* LQ	LQ	08 24 15.6	
MNK				*i* LR	LR	08 27 04.1	
MNK				*i* LRM	MLR	08 29 11.6	
	comp=E,47nm,13.4s						
MNK				*i* LRM	MLR	08 29 12.9	
	comp=N,596nm,11.4s						
MNK				*i* LRM	MLR	08 29 32.0	
	comp=Z,191nm,14.9s						
FINES	FINESS Array B	40.47	327	P	P	08 12 02.0	+1.4
	comp=Z,4.4nm,1.1s,baz=127,slow=11,SNR=1.6						
ARCES	ARCESS Array B	43.96	338	P	P	08 12 30.9	+2.0
	comp=Z,0.9nm,0.5s,baz=114,slow=8.3,SNR=9.8						
KLR	Kul'dur	44.72	52	P	P	08 12 38.0	+2.7
	comp=Z,0.8nm,0.4s,baz=253,slow=6.0,SNR=4.4						
NB2	NORSAR Subarra	47.40	324	P	P	08 12 57.1	+0.9
	comp=Z,1.4nm,1.0s,baz=102,slow=8.6						
NOA	NORSAR Array B	47.40	324	P	P	08 12 57.6	+1.3
	comp=Z,1.0nm,0.7s,baz=103,slow=7.3,SNR=4.5						
TORD	Torodi Ar. Bea	67.87	271	P	P	08 15 22.8	+2.1
	comp=Z,0.2nm,0.4s,baz=54,slow=5.5,SNR=2.0						
ILAR	Eielson Array	76.25	17	P	P	08 16 12.2	+2.1
	comp=Z,0.3nm,0.4s,baz=300,slow=4.8,SNR=13						
WRA	Warramunga Arr	79.01	123	P	P	08 16 29.5	+3.4
	comp=Z,0.6nm,0.5s,baz=317,slow=4.4,SNR=12						
ASAR	Alice Springs	81.25	126	P	P	08 16 41.5	+3.4
	comp=Z,0.7nm,0.7s,baz=302,slow=5.5,SNR=8.1						
YKA	Yellowknife Ar	83.28	4	P	P	08 16 50.5	+2.3
	comp=Z,0.6nm,0.4s,baz=355,slow=5.0,SNR=25						

IDC 24 08:12:53.9±3.1**, 53°.55N**×**87°.93E, h0**^{km}**, mb1 3.2**/2**, mb1mx2.9**/51**, mbtmp3.2**/2**, ML2.9**/2**, Error ellipse: s-maj=32.5km s-min=18.1km az=84.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.89	284	*i*		08 27 04.5	
	baz=98,slow=327,SNR=8.2						
ZALV	Zalesovo Beam	1.89	283	Pn	Pn	08 13 26.6	-0.9
	2.6nm,0.3s,baz=102,slow=16,SNR=39						
ZALV				Sn	Sn	08 13 51.4	-0.6
	2.6nm,0.3s,baz=106,slow=21,SNR=5.4						
KURBB	Kurchatov Arra	6.49	247	Pn	Pn	08 14 31.7	+1.1
	0.3nm,0.3s,baz=59,slow=13,SNR=10						
KURBB				Lg	Lg	08 16 18.1	
	0.1nm,0.3s,baz=62,slow=32,SNR=8.4						
MKAR	Makanchi Array	7.67	210	Pn	Pn	08 14 47.9	+1.1
	0.2nm,0.3s,baz=30,slow=14,SNR=12						
MKAR				Sn	Sn	08 16 14.4	0.0
	0.2nm,0.3s,baz=30,slow=24,SNR=5.8						
MKAR				Lg	Lg	08 16 53.8	
	0.2nm,0.3s,baz=29,slow=32,SNR=5.1						

ASRS 24 08:19:55.2±0.5**, 49°N**±2°×**9°5E**±°**, h10**^{km}**, MLh3.7**/12**, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/tab confirmed, Tuva-Buryatia-Mongolia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KNGR	Kungurtug, Tuv	2.01	51	Pg	Pn	08 20 29.0	-0.4
KNGR				Sg	Sb	08 20 57.7	+0.6
KZLR	Kyzyl	2.37	351	Pg	Pb	08 20 39.1	+1.3
KZLR				Sg	Sg	08 21 10.6	-0.6
TDJR	Todzha	3.10	12	Pg	Pn	08 20 47.2	+3.0
TDJR				Sg	Sg	08 21 36.1	+1.4
ARDR	Aradan	3.37	343	Pg	Pb	08 20 56.1	+1.0
ARDR				Sg	Sg	08 21 43.8	+0.4
TEL	Teeli	3.52	300	Pg	Pb	08 20 56.0	-1.7
TEL				Sg	Sg	08 21 45.8	-2.5
BLRR	Bol'shaya Rech	4.02	337	Pg	Pg	08 21 10.0	-2.2
BLRR				Sg	Sg	08 22 02.4	-1.9
DJOS	Djoyskaya Sosn	4.13	327	Pg	Pg	08 21 12.4	-1.8
DJOS				Sg	Sg	08 22 04.6	-3.0
CERR	Cheremushki	4.17	328	Pg	Pb	08 21 11.1	+2.5
CERR				Sg	Sg	08 22 06.1	-2.9
DJO	Djoy, Khakassi	4.18	326	Pg	Pg	08 21 12.6	-2.7
DJO				Sg	Sg	08 22 06.7	-2.7
CUR	Chagan-Uzun	4.41	282	Pg	Pb	08 21 13.0	+0.3
CUR				Sg	Sg	08 22 13.5	-3.1
TBTR	Tabat	4.48	324	Pg	Pg	08 21 19.7	-1.4
TBTR				Sg	Sg	08 22 18.1	-1.0
ULGR	Ulagan, Altay	4.74	288	Pg	Pb	08 21 20.6	+2.2
ULGR				Sg	Sg	08 22 24.9	-2.5
DGZ	Jazzator, Alta	4.97	277	Pg	Pb	08 21 24.2	+1.8
DGZ				Sg	Sg	08 22 32.8	-1.9
CHBI	Chibit, Altay	4.97	284	Pg	Pb	08 21 23.4	+1.1
CHBI				Sg	Sg	08 22 32.6	-2.1
ARTR	Artybash	5.51	299	Pg	Pb	08 21 34.4	+3.0
ARTR				Sg	Sg	08 22 51.2	-0.8
TASR	Tashtagol	5.65	310	Pg	Pg	08 21 40.7	-2.6
TASR				Sg	Sg	08 22 52.9	-3.5
LUZB	Luzhba, Kemero	5.76	321	Sg	Sg	08 22 58.1	-1.8
SHRR	Shira	5.95	331	Sg	Sg	08 23 02.8	-3.3

JMA ***24*** *08:41:53.3±0.2, 39°.66N×143°.60E, h25^{km}, M3.1*

IDC ***24*** *08:42:00.5±6.9, 40°.04N×142°.21E, h0^{km}, mb3.3/3, mb1 3.2/5, mb1mx3.1/50, mbtmp3.2/5, ML2.5/2, Error ellipse: s-maj=134.4km s-min=30.8km az=111.0*

ISC 24 08:41:54.4±1.6**, 39°.65N**±0°.06×**143°.43E**±0°.09**, h11**^{km}**, n19, σ1^{s}.06**/21**, mb3.4**/3**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	1.24	284	P	Pb	08 42 17.1	-0.7
JTH				*e*S	Sg	08 42 34.6	+0.2
MIYJ	Miyakonagasawa	1.25	267	P	Pb	08 42 17.4	-0.5
MIYJ				S	Sg	08 42 35.3	+0.8
JKEN	Kujiedanarisaw	1.44	293	P	Pn	08 42 19.6	-0.7
JANG	Nango	1.64	297	P	Pn	08 42 22.4	-0.8
JOM	Ohasama	1.66	265	P	Pn	08 42 23.9	+0.5
JMK	Ichinoseki	1.85	249	P	Pn	08 42 26.2	+0.2
JIO	Ouri	2.01	234	P	Pn	08 42 27.9	-0.3
JIO				*e*S	Sn	08 42 53.5	+0.1
JYK	Kaneyama	2.49	254	P	Pn	08 42 35.9	+1.0
JNBK	Urakawa-nobuka	2.68	349	P	Pn	08 42 37.9	+0.5
JNBK				*e*S	Sn	08 43 10.0	+0.1
JKB	Kayabe	2.89	322	P	Pn	08 42 43.1	+2.9
JCH	Churui	2.96	359	P	Pn	08 42 40.9	-0.4
ASAJ	Asahikawa	4.51	352	Pn	Pn	08 43 04.5	+1.9
	0.5nm,0.3s,baz=224,slow=6.3,SNR=2.0						
ASAJ				Sn	Sn	08 43 53.6	-1.3
	0.4nm,0.3s,baz=345,slow=20,SNR=1.8						
MJAR	Matsushiro Arr	5.16	235	Pn	Pn	08 43 12.8	+1.3
	0.1nm,0.3s,baz=43,slow=12,SNR=3.1						
H11N2	WAKE ISLAND Hy	28.30	128	T	T	09 17 25.0	
	baz=320						
H11N1	WAKE ISLAND Hy	28.31	128	T	T	09 17 35.7	
	baz=320						
H11N3	WAKE ISLAND Hy	28.32	128	T	T	09 17 47.2	
	baz=320						
ZALV	Zalesovo Beam	41.38	310	P	P	08 49 40.3	0.0
	0.4nm,0.5s,baz=104,slow=9.1,SNR=1.7						
MKAR	Makanchi Array	44.13	300	P	P	08 50 02.2	-0.5
	0.2nm,0.6s,baz=88,slow=8.8,SNR=2.1						
KURBB	Kurchatov Arra	45.69	306	P	P	08 50 14.5	-0.5
	0.2nm,0.4s,baz=84,slow=8.5,SNR=2.0						

IDC ***24*** *08:50:12.9±1.3, 2°.84S×128°.75E, h0^{km}, mb3.6/3, mb1 3.9/5, mb1mx3.5/40, mbtmp3.7/5, ML3.7/2, MS3.6/1, Ms1 3.6/1, ms1mx2.6/39, Error ellipse: s-maj=41.9km s-min=24.4km az=75.0*

DJA ***24*** *08:50:15.9±0.3, 3°S±4°×12°9E±°, h10^{km}, M3.4/7, MLv3.4/7*

ISC 24 08:50:15.3±0.9**, 2°.79S**±0°.06×**129°.21E**±0°.08**, h33**^{km}**, n11, σ1^{s}.86**/13**, mb3.9**/3**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.62	207	P	Pn	08 50 26.8	-1.0
NLAI	Namlea	2.16	258	P	Pn	08 50 48.1	-0.9
SIJI	Sorong	2.80	47	Pn	Pb	08 51 04.2	-0.5
	9.7nm,0.3s,baz=247,slow=15,SNR=21						
SIJI				Sn	Sb	08 51 38.5	-0.2
	12nm,0.3s,baz=180,slow=20,SNR=15						
SWI	Sorong	2.80	47	P	Pb	08 51 03.8	-0.9
FAKI	Fak Fak	3.03	93	P	Pb	08 51 08.1	-0.6
SANI	Sanana	3.31	283	P	Pn	08 51 02.9	-1.9
WRA	Warramunga Arr	17.77	164	P	P	08 54 22.3	+1.5
	0.2nm,0.3s,baz=344,slow=12,SNR=12						
WRA				S	Sn	08 57 33.8	-3.6
	0.0nm,0.3s,baz=345,slow=23,SNR=1.5						
ASAR	Alice Springs	21.24	168	P	P	08 55 01.8	+3.0
	3.1nm,0.6s,baz=348,slow=12,SNR=56						
ASAR				S	S	08 58 54.0	+0.7
	0.5nm,1.0s,baz=354,slow=22,SNR=2.5						
KLR	Kul'dur	51.86	2	LR	LR	09 20 17.1	
	comp=Z,60nm,22.0s,baz=64,slow=35						

MKAR	Makanchi Array	64.31	326	P	P	09 00 48.7	+1.1
	0.2nm,0.4s,baz=125,slow=8.4,SNR=4.4						
KURBB	Kurchatov Arra	68.54	328	P	P	09 01 16.1	+1.6
	0.3nm,0.3s,baz=132,slow=5.7,SNR=2.9						

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*NEIC **24** 09:02:30.8±2.6, 19°.43N±0°.07×78°.39W±0°.05, h10^{km}±1^{km}, mb4.2/30, Error ellipse: s-maj=12.8km s-min=8.4km az=194.0*

*IDC **24** 09:02:30.6±0.8, 19°.34N×78°.42W, h0^{km}, mb3.7/7, mb1 4.1/10, mb1mx3.8/35, mbtmp3.9/10, ML3.7/3, MS3.5/9, Ms1 3.5/9, ms1mx3.2/45, Error ellipse: s-maj=35.8km s-min=17.0km az=48.0*

*JSN **24** 09:02:32.0±0.8, 19°.48N×78°.36W, h30^{km}±154^{km}, MD4.5, Fault plane solution: NP1:ϕ_s60.00000°, δ45.00000°, λ-82.00000°.*

*SSNC **24** 09:02:32.0±1.9, 19°.45N×78°.33W, h4^{km}±15^{km}, MD4.0, ML4.0, MW4.0*

ISC 24 09:02:32.0±2.9, **19°.46N**±0°.04×**78°.40W**±0°.04, **h16**^{km}±19^{km}, **n108**, σ**2^{s}.00**/117, **mb4.2**/17, **MS3.5**/3, **5C-3D, Cuba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEJ	Negril	1.20	177	⇓*i*P	Pb	09 02 51.8	-2.5
CBCY	The Bluff, Cay	1.31	283	Pn	Pn	09 02 53.9	-1.7
LMGC	Las Mercedes	1.44	65	⇑*i*P	Pn	09 02 55.5	-1.9
LMGC				*e*S	Sn	09 03 12.4	-3.7
LMGC				IAML		09 03 13.0	
	comp=E,1μm,0.2s						
LMGC				IAML		09 03 13.1	
	comp=N,1μm,0.2s						
MTDJ	Mount Denham	1.47	146		Pn	09 02 55.9	-2.0
MTDJ				Sn	Sn	09 03 13.4	-3.4
BBJ	Bamboo Saint A	1.51	135	⇑*i*P	Pn	09 02 56.4	-2.0
LCCY	Blossom Villag	1.60	278	Pn	Pn	09 02 58.0	-1.6
MCJ	Malvern	1.67	156	⇑*i*P	Pn	09 02 59.0	-1.5
MCJ				*i* S	Sn	09 03 18.4	-3.2
BNJ	Bonny Gate	1.77	129	⇓*i*P	Pn	09 02 59.9	-2.2
STH	Stony Hill	2.04	132	⇑*i*P	Pn	09 03 03.3	-2.3
HOJ	Hope	2.13	132	⇓*i*P	Pn	09 03 05.0	-1.8
CMJ	Castle Mountai	2.33	124	⇑*i*P	Pn	09 03 07.2	-2.4
RCC	Rio Carpintero	2.60	78	*i* P	Pn	09 03 10.9	-2.5
RCC				*e*S	Sn	09 03 39.9	-4.7
RCC				IAML		09 03 41.4	
	comp=E,367nm,0.5s						
RCC				IAML		09 03 41.6	
	comp=N,314nm,0.3s						
FSCY	Frank Sound, G	2.63	267		Pn	09 03 12.3	-1.5
FSCY				Sn	Sn	09 03 41.2	-4.2
WBCY	West Bay, Gran	2.83	269	Pn	Pn	09 03 15.4	-1.1
WBCY				Sn	Sn	09 03 47.0	-3.2
MGV	Manicaragua	3.03	331	*e*P	Pn	09 03 19.1	-0.1
MGV				*e*S	Sn	09 03 52.7	-2.4
GTMO	Guantanamo	3.13	78	*i* P	Pn	09 03 19.9	-0.7
GTMO				*e*S	Sn	09 03 55.9	-1.7
GTMO				IAML		09 03 59.8	
	comp=N,2μm,0.6s						
GTBY	Guantanamo Bay	3.13	81	Pn	Pn	09 03 19.0	-1.6
GTBY				Sn	Sn	09 03 54.7	-3.0
MOAC	Moa	3.45	69	*i* P	Pn	09 03 23.6	-1.3
MOAC				*e*S	Sn	09 04 03.8	-1.7
MOAC				IAML		09 04 08.9	
	comp=E,49nm,0.3s						
MOAC				IAML		09 04 08.9	
	comp=N,156nm,0.4s						
MASC	Masc	3.99	79	*e*P	Pn	09 03 30.6	-1.8
MASC				*e*S	Sn	09 04 11.1	-7.7
MASC				IAML		09 04 22.8	
	comp=N,534nm,0.5s						
MASC				IAML		09 04 23.2	
	comp=E,391nm,0.5s						
SOR	Soroa	5.43	308	*e*P	Pn	09 03 52.3	0.0
SOR				*e*S	Sn	09 04 52.6	-1.9
LGNH	Logne	5.56	99	Pn	Pn	09 03 51.9	-2.1
JAKH	Jacmel	5.70	101	Pn	Pn	09 03 55.6	-0.3
SDDR	Presa de Saban	6.74	93	Pn	Pn	09 04 09.6	-0.7
061Z	Ochoppi	6.79	341	Pn	Pn	09 04 12.5	+1.6
GRTK	Grand Turk	7.11	72	Pn	Pn	09 04 13.9	-1.4
SC01	Santiago de lo	7.24	89		Pn	09 04 17.3	+0.2
BANI	BANI	7.68	97		Pn	09 04 23.8	+0.5
SDD	Santo Domingo	8.09	96	Pn	Pn	09 04 29.9	+1.1
DR12	Loma Pena Alta	8.55	93		Pn	09 04 35.2	+0.1
DWPF	Disney Wildern	9.05	343	Pn	Pn	09 04 43.0	+1.0
ESPN	Las Esperanzas	9.19	219		Pn	09 04 44.9	+1.0
TEIG	Tepich	9.33	276	Pn	Pn	09 04 45.7	-0.1
	comp=E,52nm,0.3s,baz=93,slow=3.4,SNR=310						
TEIG				Sn	Sn	09 06 22.1	-8.3
	comp=E,4.5nm,0.3s,baz=10,slow=24,SNR=7.7						
TEIG				LR	LR	09 07 46.8	
	comp=E,150nm,21.3s,baz=78,slow=34						
TEIG	Tepich	9.33	276	Pn	Pn	09 04 45.9	+0.1
MATN	Matagalpa	9.71	229		Pn	09 04 53.0	+1.8
ACON	Acoyapa	9.90	222	Pn	Pn	09 04 53.6	0.0
TGUH	Tegucigalpa,Un	10.05	239	Pn	Pn	09 04 57.4	+1.5
656A	Willston	10.56	340	Pn	Pn	09 05 02.4	-0.3
AOPR	Arecibo Observ	11.08	94	Pn	Pn	09 05 10.2	+0.4
JTS	Las Juntas de	11.10	216	LR	LR	09 09 14.2	
	comp=E,161nm,18.6s,baz=92,slow=37						
PETF	Flores	11.19	259		Pn	09 05 11.5	+0.2
SMLC	San Martn de	11.39	158	*e*P	Pn	09 05 14.7	+0.6
SJG	San Juan	11.68	95	LR	LR	09 10 08.8	
	comp=E,245nm,19.5s,baz=269,slow=39						
CBYP	Canovanas	11.93	94	Pn	Pn	09 05 20.0	-1.6
UREC	San Jos de Ur	11.96	166	*e*P	Pn	09 05 25.0	+3.0
553A	Crawfordville	12.00	334	Pn	Pn	09 05 21.6	-0.8
MTP	Monte Pirata	12.24	94	Pn	Pn	09 05 25.2	-0.6
SDV	Santo Domingo	12.92	143	Pn	Pn	09 05 33.9	-1.3
	comp=E,3.0nm,0.3s,baz=328,slow=13,SNR=16						
SDV				Sn	Sn	09 07 48.9	-10
	comp=E,0.6nm,0.3s,baz=3.5,slow=19,SNR=1.9						
SDV				LR	LR	09 09 47.5	
	comp=E,99nm,21.1s,baz=22,slow=34						
SDV	Santo Domingo	12.92	143	Pn	Pn	09 05 34.1	-1.1
SDV	Santo Domingo	12.92	143	*e*P	Pn	09 05 34.8	-0.4
PAMC	Pamplona, Colo	13.26	155	*e*P	Pn	09 05 39.1	-0.9
352A	Blakely	13.34	335	Pn	Pn	09 05 39.9	-0.8
PTBC	PUERTO BERRIO,	13.40	163	*e*P	Pn	09 05 43.1	+1.6
CBOC	Ciudad Bolivar	13.71	170	*e*P	Pn	09 05 48.3	+2.4
SPBC	San Pablo de B	14.35	162	*e*P	Pn	09 05 57.4	+2.7
RUSC	La Rusia	14.44	158	*e*P	Pn	09 05 57.9	+1.6
ROSC	El Rosal	15.06	164	LR	LR	09 11 46.8	
	comp=E,119nm,18.0s,baz=18,slow=37						
TOLC	Tolima	15.08	168	*e*P	P	09 06 10.1	0.0
CHIC	Chingaza	15.42	162	*e*P	P	09 06 13.5	-0.4
ORTC	Ortega, Tolima	15.76	168	*e*P	P	09 06 18.2	+0.9
PRAC	Prado	16.02	167	*e*P	Pn	09 06 17.5	+0.7
PCRV	Puerto La Cruz	16.18	123	Pn	P	09 06 20.3	-1.6
	comp=E,1.1nm,0.3s,baz=323,slow=5.1,SNR=1.8						
PLCV	Puerto La Cruz	16.22	123	P	P	09 06 20.3	-2.1
TKL	Tuckaleechee C	16.82	345	Pn	P	09 06 28.8	-0.1
	comp=E,0.1nm,0.3s,baz=157,slow=16,SNR=2.2						
TKL				LR	LR	09 13 23.8	
	comp=E,162nm,18.7s,baz=45,slow=39						
PCON	Cinco Dias	17.14	173	*e*P	P	09 06 37.0	+3.9
LCAR	Lake Charles	20.00	328	P	P	09 07 04.7	+0.9
PBMO	Poplar Bluff	20.23	331	P	P	09 07 07.3	+1.0
FCAR	Ozark Folk Cen	20.35	326	P	P	09 07 07.4	-0.3
S44A	Carbondale	20.49	335	P	P	09 07 10.1	+0.9
S44A				IAmb	IAmb	09 07 16.7	
	comp=Z,8.2nm,0.8s						
SIUC	Southern Illin	20.49	335	P	P	09 07 09.3	+0.1
SIUC				IAmb	IAmb	09 07 23.8	
	comp=Z,9.1nm,0.9s						
T42A	Van Buren	20.74	330	P	P	09 07 12.3	+0.4
T42A				IAmb	IAmb	09 07 24.0	
	comp=Z,9.1nm,0.8s						
U40A	Yellville	21.09	326	P	P	09 07 14.4	-1.2
U40A				IAmb	IAmb	09 07 27.8	
	comp=Z,8.9nm,0.8s						
WHTX	Lake Whitney,	21.19	310	P	P	09 07 15.9	-0.9
X37A	Clayton	21.30	318	P	P	09 07 21.8	+3.8
X37A				IAmb	IAmb	09 07 45.1	
	comp=Z,18nm,1.4s						
HHAR	Hobbs	21.62	324	P	P	09 07 20.3	-1.1
HHAR				IAmb	IAmb	09 07 45.8	
	comp=Z,7.8nm,0.9s						
CCM	Cathedral Cave	21.64	332	P	P	09 07 22.3	+0.7
Z35A	Perchaven, San	21.77	313	P	P	09 07 22.6	-0.4
Z35A				IAmb	IAmb	09 07 37.4	
	comp=Z,10.0nm,0.7s						
JCT	Junction City	22.25	304	P	P	09 07 27.9	-0.4
JCT				IAmb	IAmb	09 07 43.1	
	comp=Z,9.7nm,0.9s						
R40A	Maddies Statio	22.30	330	P	P	09 07 28.1	-0.7
R40A				IAmb	IAmb	09 07 40.2	
	comp=Z,7.3nm,0.7s						
S39A	Bolivar	22.35	327	P	P	09 07 30.5	+1.3
OK031	S. Brethren Rd	23.10	319	P	P	09 07 34.4	-2.7
OK031				IAmb	IAmb	09 07 49.2	
	comp=Z,5.9nm,0.9s						
ABTX	Abilene, Hawle	23.10	309	P	P	09 07 35.9	-1.3
ABTX				IAmb	IAmb	09 07 49.8	
	comp=Z,8.4nm,0.8s						
TXAR	Lajitas Array	24.98	298	P	P	09 07 56.8	+1.7
	comp=Z,3.6nm,1.1s,baz=114,slow=10.0,SNR=11						
TXAR				PcP	PcP	09 11 33.2	+3.0
	comp=Z,0.1nm,0.6s,baz=141,slow=3.5,SNR=1.8						
TXAR	Lajitas Array	24.98	298	P	P	09 07 54.9	-0.2
TX31	Lajitas Ar. Si	24.98	298	P	P	09 07 54.9	-0.2
TX32	Lajitas Array	24.98	298	P	P	09 07 55.3	+0.2
KSU1	Kansas State U	25.12	325	P	P	09 07 56.2	+0.1
AMTX	Amarillo	25.70	311	P	P	09 08 00.6	-0.9
MSTX	Muleshoe	26.05	309	P	P	09 08 07.2	+2.4
PTGA	Pitinga	27.01	136	P	P	09 08 14.9	+1.5
	comp=Z,1.7nm,0.3s,baz=318,slow=9.5,SNR=8.3						
PTGA				LR	LR	09 19 02.4	
	comp=Z,112nm,18.1s,baz=347,slow=37						
PTGA	Pitinga	27.01	136	P	P	09 08 14.2	+0.8
PTGA				IAmb	IAmb	09 08 15.9	
	comp=Z,7.4nm,0.9s						
MNTX	Cornudas Mount	27.14	302	P	P	09 08 14.4	-0.1
ANMO	Albuquerque	29.21	308	LR	LR	09 21 15.9	
	comp=Z,94nm,19.0s,baz=106,slow=38						
WUAZ	Wupatki	33.15	306	P	P	09 09 08.4	+0.6
ULM	Lac du Bonnet	33.73	340	LR	LR	09 22 46.4	
	comp=Z,170nm,18.9s,baz=86,slow=36						
KNB	Kanab	34.77	307	P	P	09 09 22.1	+0.1
PDAR	Pinedale Array	35.05	318	P	P	09 09 26.0	+1.6
	comp=Z,0.2nm,0.7s,baz=94,slow=10,SNR=1.7						
PDAR	Pinedale Array	35.05	318	P	P	09 09 23.6	-0.7
NVAR	Mina Array Bea	39.34	307	P	P	09 10 03.5	+2.7
	comp=Z,0.3nm,0.7s,baz=113,slow=7.0,SNR=2.4						
YERR	Yerington	40.20	308	P	P	09 10 07.9	0.0
YERR				IAmb	IAmb	09 10 21.5	
	comp=Z,9.8nm,1.4s						
LON	Longmire	44.62	318	P	P	09 10 42.9	-0.8
YKA	Yellowknife Ar	49.70	339	P	P	09 11 24.0	+1.1
	comp=Z,0.3nm,0.9s,baz=129,slow=9.2,SNR=3.2						
PLCA	Paso Flores	60.32	173	P	P	09 12 40.3	+0.3
	comp=Z,0.6nm,0.7s,baz=315,slow=5.7,SNR=1.6						
IMAR	Indian Mountai	66.44	334	P	P	09 13 21.4	+1.3
TTA	Tatalina	67.23	331	P	P	09 13 26.6	+1.3
TTA				IAmb	IAmb	09 13 31.9	
	comp=Z,2.1nm,1.2s						
ARCES	ARCESS Array B	76.69	21	P	P	09 14 22.9	+1.0
	comp=Z,1.5nm,0.7s,baz=297,slow=5.9,SNR=3.5						
WRA	Warramunga Arr	149.20	264	PKPbc	PKPbc	09 22 20.7	+0.2
	comp=Z,0.7nm,0.8s,baz=80,slow=2.3,SNR=5.7						
ASAR	Alice Springs	149.71	256	PKPbc	PKPbc	09 22 21.5	-0.2
	comp=Z,0.8nm,0.8s,baz=80,slow=2.3,SNR=7.1						
ASAR	Alice Springs	149.71	256		PKPbc	09 22 21.7	0.0

IDC 24 09:18:17.6±2.1, **3°.74S**×**129°.63E, h0**^{km}**, mb3.2**/2, **mb1 3.3**/3, **mb1mx3.2**/33, **mbtmp3.2**/3, **ML3.0**/1, **Error ellipse: s-maj=115.9km s-min=29.1km az=69.0, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.74	164	Pn	Pn	09 22 14.8	+1.1
	0.1nm,0.3s,baz=344,slow=14,SNR=1.3						
WRA				Sn	Sn	09 25 06.8	-14
	0.0nm,0.3s,baz=340,slow=22,SNR=2.3						
ASAR	Alice Springs	20.23	169	P	P	09 22 54.0	-0.5
	0.5nm,0.6s,baz=344,slow=12,SNR=5.9						
MKAR	Makanchi Array	65.33	326	P	P	09 29 01.7	0.0
	0.2nm,0.4s,baz=112,slow=8.2,SNR=7.3						

IDC 24 09:20:13.4±3.2, **53°.53N**×**88°.00E, h0**^{km}**, mb1 3.1**/2, **mb1mx3.0**/35, **mbtmp3.1**/2, **ML2.7**/2, **1C-3D, Error ellipse: s-maj=33.3km s-min=18.2km az=86.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZALV	Zalesovo Beam	1.93	284	Pn	Pn	09 20 46.5	-1.0
	1.6nm,0.3s,baz=100,slow=15,SNR=20						
ZALV				Sn	Sn	09 21 12.6	+0.1
	5.2nm,0.3s,baz=100,slow=26,SNR=16						
I46RU	ZALESOVO INFRA	1.93	284	*i*		09 34 10.0	
	baz=98,slow=322,SNR=3.9						
KURK	Kurchatov	6.43	248	⇓Pn	Pb	09 22 01.3	-4.7
	3.1nm,1.1s						
KURK				⇓Sn	Sn	09 22 28.2	-35
	2.0nm,0.4s						
KURBB	Kurchatov Arra	6.52	247	Pn	Pn	09 21 51.7	+1.2
	0.1nm,0.3s,baz=61,slow=14,SNR=6.8						
KURBB				Lg	Lg	09 23 39.3	
	baz=56,slow=33,SNR=2.2						
KURBB	Kurchatov Arra	6.52	247	⇓Pn	Pb	09 22 00.2	-7.4
	1.6nm,0.2s,baz=303,slow=16						
KURBB				⇑Sn	Sn	09 22 29.8	-36
	10nm,0.7s						
MKAR	Makanchi Array	7.67	211	Pn	Pn	09 22 07.9	+1.5
	0.1nm,0.3s,baz=32,slow=13,SNR=7.8						
MKAR				Sn	Sn	09 23 31.9	-2.1
	0.1nm,0.3s,baz=27,slow=20,SNR=2.5						
MKAR				Lg	Lg	09 24 16.9	
	0.1nm,0.3s,baz=32,slow=31,SNR=6.9						

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*NEIC **24** 09:36:51.5±1.4, 20°.0S±0°.1×177°.8W±0°.1, h589^{km}±8^{km}, mb4.1/15, Error ellipse: s-maj=22.7km s-min=11.1km az=134.0*

*IDC **24** 09:36:51.3±4.2, 20°.01S×177°.86W, h580^{km}±49^{km}, mb3.2/11, mb1 3.5/12, mb1mx3.3/29, mbtmp4.1/12, Error ellipse: s-maj=33.3km s-min=20.1km az=159.0*

ISC 24 09:36:50.3±0.6, **20°.1S**±0°.1×**177°.8W**±0°.1, **h569**^{km}**, n37**, σ**1^{s}.24**/40, **mb3.9**/20, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.54	300	P	P	09 38 20.5	+2.7
URZ	Urewera	18.65	193	P	P	09 40 32.2	-0.9
	0.5nm,0.3s,baz=63,slow=17,SNR=2.1						
URZ				S	S	09 43 33.3	-0.7
	0.1nm,0.3s,baz=52,slow=19,SNR=1.1						
URZ	Urewera	18.65	193	P	P	09 40 32.4	-0.7
CTAO	Charters Tower	33.69	264	P	P	09 42 45.7	+0.4
CTAO				IAmb	IAmb	09 42 46.4	
	comp=Z,5.8nm,0.6s						
TOO	Toolangi	36.28	233	P	P	09 43 08.8	+2.2
COEN	Coen	37.72	273	P	P	09 43 18.5	-0.1
COEN				IAmb	IAmb	09 43 19.3	
	comp=Z,3.2nm,0.9s						
STKA	Stephens Creek	38.12	244	P	P	09 43 23.1	+1.4
	comp=Z,1.4nm,0.5s,baz=87,slow=12,SNR=4.0						
STKA	Stephens Creek	38.12	244	P	P	09 43 21.3	-0.4
MCQ	Macquarie Isla	38.65	202	P	P	09 43 24.2	-1.3
BBOO	Buckleboo	42.88	243	P	P	09 44 00.9	+1.4
BBOO				IAmb	IAmb	09 44 00.9	
	comp=Z,6.9nm,0.6s						
WR0	Warramunga Arr	44.63	262	P	P	09 44 13.1	-0.1
WR0				IAmb	IAmb	09 44 14.5	
	comp=Z,8.8nm,1.4s						
AS31	Alice Springs	44.77	256	P	P	09 44 14.9	+0.6
ASAR	Alice Springs	44.77	256	P	P	09 44 14.6	+0.3
	comp=Z,5.8nm,0.7s,baz=89,slow=7.9,SNR=91						
ASAR				PcP	PcP	09 45 44.0	-0.1
	comp=Z,1.1nm,0.6s,baz=105,slow=4.4,SNR=8.2						
ASAR				S	S	09 50 07.8	-3.0
	comp=Z,0.8nm,0.8s,baz=86,slow=14,SNR=7.8						
WB0	Warramunga Arr	44.80	262	P	P	09 44 14.2	-0.2
WB0				IAmb	IAmb	09 44 17.4	
	comp=Z,4.8nm,1.0s						
WB2	Warramunga Arr	44.81	262	P	P	09 44 14.5	0.0
WB2				IAmb	IAmb	09 44 15.3	
	comp=Z,15nm,1.4s						
WRA	Warramunga Arr	44.82	262	P	P	09 44 14.2	-0.5
	comp=Z,1.8nm,0.5s,baz=98,slow=7.9,SNR=34						
WRA				PcP	PcP	09 45 43.7	-0.5
	comp=Z,0.9nm,1.0s,baz=106,slow=3.3,SNR=3.3						
FITZ	Fitzroy Crossi	53.24	262	P	P	09 45 17.2	+0.4
FITZ				IAmb	IAmb	09 45 32.9	
	comp=Z,7.6nm,1.2s						
PSA00	Pilbara Seismi	57.92	257	P	P	09 45 49.2	+0.1
PSA00				IAmb	IAmb	09 45 56.8	
	comp=Z,23nm,1.2s						
MJAR	Matsushiro Arr	69.96	323	P	P	09 47 03.6	-1.6
	comp=Z,1.3nm,0.6s,baz=180,slow=4.7,SNR=2.9						
QSPA	South Pole Qui	70.00	180	P	P	09 47 07.4	+2.2
QSPA				IAmb	IAmb	09 47 25.8	
	comp=Z,2.7nm,1.1s						
USRK	Ussuriysk Ar.	78.70	326	P	P	09 47 54.6	+0.5
	comp=Z,2.2nm,0.9s,baz=119,slow=8.9,SNR=4.0						
USRK	Ussuriysk Ar.	78.70	326	P	P	09 47 54.2	+0.1
NVAR	Mina Array Bea	80.60	43	P	P	09 48 04.8	+0.2
	comp=Z,0.6nm,0.7s,baz=228,slow=9.6,SNR=4.9						
NVAR	Mina Array Bea	80.60	43	P	P	09 48 05.3	+0.7
TXAR	Lajitas Array	86.69	57	P	P	09 48 36.2	+1.5
	comp=Z,0.5nm,0.7s,baz=225,slow=7.1,SNR=7.5						
ILAR	Eielson Array	87.86	13	P	P	09 48 37.6	-1.6
	comp=Z,3.7nm,1.2s,baz=216,slow=5.6,SNR=14						
ILAR	Eielson Array	87.86	13	P	P	09 48 37.9	-1.4
PDAR	Pinedale Array	88.54	43	P	P	09 48 43.5	+0.2
	comp=Z,0.5nm,0.5s,baz=173,slow=1.6,SNR=5.9						
CMAR	Chiang Mai Arr	90.12	290	P	P	09 48 51.8	+1.0
	comp=Z,0.7nm,0.3s,baz=142,slow=3.4,SNR=4.4						
YKA	Yellowknife Ar	96.05	25	P	P	09 49 15.9	-1.0
	comp=Z,0.1nm,0.6s,baz=254,slow=6.3,SNR=1.8						
MKAR	Makanchi Array	111.02	314	PKiKP	PKiKP	09 54 17.9	-1.7
	comp=Z,0.4nm,0.7s,baz=82,slow=1.6,SNR=4.6						
BVAR	Borovoye Array	118.85	320	PKP	PKPdf	09 54 32.4	-1.9
	comp=Z,0.4nm,0.6s,baz=166,slow=17,SNR=4.0						
ARCES	ARCESS Array B	128.52	350	PKP	PKPdf	09 54 51.9	-0.5
	comp=Z,1.2nm,0.5s,baz=35,slow=3.3,SNR=7.2						
AKASG	Malin Array Be	142.71	331	PKhKP	PKPpre	09 55 14.4	
	comp=Z,0.9nm,0.3s,baz=44,slow=4.2,SNR=3.6						
BRTR	Keskin Array B	146.66	313	PKPbc	PKPdf	09 55 28.0	+1.5
	comp=Z,1.5nm,0.7s,baz=158,slow=4.2,SNR=4.8						
CLL	Collm	147.68	347	*i* PKPbc	PKPbc	09 55 30.7	-0.5
	comp=Z,7.0nm,0.9s						
GERES	GERESS Array B	149.83	345	PKPbc	PKPbc	09 55 36.0	-0.7
	comp=Z,2.5nm,0.8s,baz=29,slow=3.0,SNR=9.4						

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*IDC **24** 10:13:21.5±1.8, 13°.19N×50°.98E, h0^{km}, mb3.8/8, mb1 3.9/8, mb1mx3.5/75, mbtmp3.8/8, ML4.3/1, Error ellipse: s-maj=48.0km s-min=23.5km az=160.0*

ISC 24 10:13:23.8±1.5, **13°.2N**±0°.3×**51°.0E**±0°.2, **h16**^{km}**, n9**, σ**0^{s}.59**/9, **mb3.8**/8, **Eastern Gulf of Aden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATD	Arta Tunnel	8.09	259	Pn	Pn	10 15 20.7	-0.1
	4.1nm,0.3s,baz=62,slow=17,SNR=14						
AKTO	Aktyubinsk	37.62	7	P	P	10 20 38.5	+0.7
	1.2nm,0.7s,baz=196,slow=9.3,SNR=3.8						
MKAR	Makanchi Array	42.61	32	P	P	10 21 18.4	-0.9
	0.8nm,0.6s,baz=220,slow=8.8,SNR=13						
BVAR	Borovoye Array	42.68	17	P	P	10 21 19.4	-0.4
	0.8nm,0.6s,baz=190,slow=5.3,SNR=5.7						
KURBB	Kurchatov Arra	43.59	25	P	P	10 21 26.4	-0.6
	0.6nm,0.8s,baz=226,slow=8.1,SNR=6.1						
CMAR	Chiang Mai Arr	46.36	77	P	P	10 21 49.7	0.0
	2.2nm,0.7s,baz=274,slow=8.8,SNR=12						
TORD	Torodi Ar. Bea	47.91	276	P	P	10 22 01.9	0.0
	0.8nm,0.7s,baz=85,slow=8.8,SNR=3.5						
ZALV	Zalesovo Beam	48.66	26	P	P	10 22 06.7	-0.2
	0.5nm,0.3s,baz=235,slow=6.9,SNR=4.7						
SONM	Songino Array	57.35	41	P	P	10 23 11.9	+0.5
	0.8nm,0.8s,baz=251,slow=9.2,SNR=4.0						

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*BJI **24** 10:22:54.8±0.0, 12°.62N×50°.68E, h5^{km}, mB5.3/40, mb4.7/60, Ms4.8/16, Ms7 4.4/14*

*IDC **24** 10:22:60.0±0.4, 13°.06N×51°.04E, h0^{km}, mb4.6/51, mb1 4.7/54, mb1mx4.6/71, mbtmp4.6/54, ML4.2/3, MS4.1/27, Ms1 4.1/27, ms1mx3.9/54, Error ellipse: s-maj=11.0km s-min=9.2km az=131.0*

*GCMT **24** 10:23:00.2±0.3, 13°.19N±0°.02×50°.72E±0°.03, h12^{km}±1^{km}, MW4.9/93, Moment Tensor Solution. s23,c26; s93,c124; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.94±.15; $M_{\theta\theta}$-2.51±.11; $M_{\phi\phi}$0.57±.10; $M_{r\theta}$-1.03±.27; $M_{\theta\phi}$0.27±.07; $M_{\phi r}$-1.46±.41; Best double couple: $M_0$2.89600×10^{16} NP1:ϕ_s122.00000°, δ42.00000°, λ139.00000°. NP2: ϕ_s245.00000°, δ64.00000°, λ56.00000°. Principal axes: T 3.0540, Plg57.0000°, Azm109.0000°; N -0.3170, Plg30.0000°, Azm262.0000°; P -2.7380, Plg13.0000°, Azm359.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **24** 10:23:01.2±1.6, 13°.03N±0°.08×51°.10E±0°.06, h10^{km}±1^{km}, mb4.9/79 Error ellipse: s-maj=14.3km s-min=10.0km az=184.0*

*OMAN **24** 10:23:02.5, 13°.29N×51°.26E, h14^{km}, mb5.4/1, ml4.2/3*

ISC 24 10:23:01.1±1.0, **13°.13N**±0°.05×**51°.05E**±0°.04, **h10**^{km}±6^{km}, **n303**, σ**1^{s}.65**/328, **mb4.8**/147, **MS4.2**/29, **24C-3D, Eastern Gulf of Aden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCY	Socotra	3.02	108	Pn	Pn	10 23 46.1	-3.0
SOCY				Sn	Sn	10 24 20.7	-4.7
SOCY	Socotra	3.02	108	P	Pn	10 23 45.9	-3.2
	SNR=122						
SOCY				S	Sn	10 24 20.7	-4.7
ABTO	Aybut	4.73	27	P	Pn	10 24 10.3	-2.4
	SNR=10						
ABTO				S	Sn	10 25 03.1	-4.6
RBK	Rabkut	5.31	35	P	Pn	10 24 19.6	-1.0
	SNR=11						
RBK				S	Sn	10 25 18.2	-3.7
WHFO	Wadi Hawf	5.44	28	P	Pn	10 24 20.5	-1.9
	SNR=15						
WHFO				S	Sn	10 25 20.3	-4.8
DMTO	DMTO	5.91	39	P	Pn	10 24 28.1	-0.7
	SNR=7.0						
DOK	Doka	6.21	28	P	Pn	10 24 31.1	-1.8
	SNR=11						
ATD	Arta Tunnel	8.17	260	Pn	Pn	10 24 59.3	-0.6
	17nm,0.3s,baz=3.6,slow=2.8,SNR=62						
ATD				Sn	Sn	10 26 31.6	-0.9
	1.4nm,0.3s,baz=89,slow=20,SNR=1.6						
ATD				LR	LR	10 27 21.4	
	comp=Z,2μm,18.3s,baz=64,slow=32						
ATD	Arta Tunnel	8.17	260	Pn	Pn	10 24 59.4	-0.5
RAYN	Ar Rayn	11.60	334	Pn	Pn	10 25 46.3	-0.6
WSAR	Wadi Sarin	12.37	35	Pn	Pn	10 25 58.0	+0.6
	0.6nm,0.3s,baz=266,slow=11,SNR=5.4						
WSAR				LR	LR	10 30 24.2	
	comp=Z,2μm,20.0s,baz=235,slow=36						
UOSS	Minazif	12.72	22	Pn	Pn	10 26 04.8	+2.5
RDF	Al-Radifah	16.05	349	*e*P		10 26 48.6	
UMR	Umm Al-Rimmam	16.64	350	*e*P		10 26 56.2	
RST	Umm Al-Ruwaisa	16.72	348	*e*P		10 26 57.2	
KMBO	Kilima Mbogo	19.69	225	P	P	10 27 30.0	-1.0
	0.4nm,0.3s,baz=33,slow=11,SNR=9.6						
KMBO				LR	LR	10 34 57.9	
	comp=Z,730nm,18.2s,baz=72,slow=36						
EIL	Elat	22.22	320	P	P	10 27 57.9	0.0
	16nm,0.9s,baz=208,slow=2.3,SNR=2.6						
EIL				LR	LR	10 36 32.2	
	comp=Z,776nm,19.9s,baz=137,slow=36						
HRA	Herat	23.48	24	P	P	10 28 12.4	+1.1
HRA				IAmb	IAmb	10 28 28.5	
	comp=Z,63nm,1.2s						
MBAR	Mbarara	24.32	237	P	P	10 28 19.7	+0.1
	comp=Z,1.4nm,0.3s,baz=110,slow=8.6,SNR=4.4						
MBAR	Mbarara	24.32	237	P	P	10 28 18.2	-1.3
MMAI	Mount Meron Ar	24.42	327	P	P	10 28 22.3	+2.3
	comp=Z,16nm,0.9s,baz=139,slow=7.7,SNR=6.0						
MMAI				LR	LR	10 38 16.7	
	comp=Z,526nm,19.3s,baz=150,slow=38						
GYB1	ALIBECK ARRAY	25.48	13	P	P	10 28 30.1	+0.5
GYB1				IAmb	IAmb	10 28 46.0	
	comp=Z,49nm,1.1s						
GYB4	ALIBECK ARRAY	25.49	13	P	P	10 28 30.1	+0.4
GYB4				IAmb	IAmb	10 28 33.8	
	comp=Z,40nm,0.9s						
GEYT	Alibeck	25.49	13	P	P	10 28 31.5	+1.8
	comp=Z,15nm,0.8s,baz=198,slow=14,SNR=21						
GEYT				LR	LR	10 40 23.1	
	comp=Z,1μm,19.2s,baz=180,slow=41						
GEYT	Alibeck	25.49	13	P	P	10 28 30.3	+0.6
GEYT				IAmb	IAmb	10 28 33.8	
	comp=Z,22nm,0.9s						
GYA0B	ALIBECK ARRAY	25.49	13	P	P	10 28 29.9	+0.2
GYA0B				IAmb	IAmb	10 28 33.8	

	comp=Z,44nm,1.0s						
MARD	Mardin	25.78	341	P	P	10 28 34.3	+1.9
GEVA	Gevas	26.07	346	P	P	10 28 37.3	+2.2
HYB	Hyderabad	26.86	77	i P	P	10 28 43.0	+0.7
GAZ	Gaziantep	26.96	335	P	P	10 28 45.2	+2.2
GAZ				IAmb	IAmb	10 28 49.4	
	comp=Z,28nm,1.3s						
GNI	Garni	27.48	349	P	P	10 28 49.9	+2.0
	comp=Z,26nm,0.8s,baz=172,slow=1.4,SNR=21						
GNI				LR	LR	10 42 58.0	
	comp=Z,175nm,19.6s,baz=184,slow=44						
GNI	Garni	27.48	349	P	P	10 28 50.2	+2.4
KOPT	Kop Dagi	28.35	343	P	P	10 28 59.2	+3.5
KOPT				IAmb	IAmb	10 29 21.9	
	comp=Z,30nm,1.4s						
NIL	Nilore	28.74	41	P	P	10 29 01.7	+2.8
PALK	Pallekele	29.74	98	LR	LR	10 39 31.0	
	comp=Z,76nm,18.2s,baz=51,slow=33						
BRTR	Keskin Array B	30.62	333	P	P	10 29 17.4	+1.7
	comp=Z,3.6nm,0.9s,baz=159,slow=10,SNR=16						
BRTR				PcP	PcP	10 32 14.5	+0.4
	comp=Z,0.7nm,0.5s,baz=206,slow=30,SNR=3.3						
BRTR				LR	LR	10 42 14.1	
	comp=Z,368nm,20.0s,baz=162,slow=38						
BRTR	Keskin Array B	30.62	333	P	P	10 29 17.3	+1.6
BRTR					PcP	10 32 17.9	+3.8
BR131	Keskin Array S	30.62	333	P	P	10 29 16.3	+0.6
BR131				IAmb	IAmb	10 29 18.4	
	comp=Z,23nm,1.3s						
BR231	Keskin MP Arra	31.10	332	P	P	10 29 22.5	+2.6
KBZ	Khabaz	31.29	349	P	P	10 29 23.7	+2.4
	comp=Z,11nm,0.8s,baz=172,slow=8.6,SNR=32						
KBZ				LR	LR	10 44 03.5	
	comp=Z,1µm,20.6s,baz=164,slow=40						
KVAR	Kislovodsk Arr	31.55	348	P	P	10 29 26.0	+2.2
	comp=Z,4.0nm,0.5s,baz=86,slow=21,SNR=2.1						
KIV	Kislovodsk	31.55	348	P	P	10 29 25.2	+1.4
KIV				IAmb	IAmb	10 29 26.8	
	comp=Z,22nm,1.0s						
ILGA	Ilgaz	31.68	335	P	P	10 29 26.6	+1.4
ILGA				IAmb	IAmb	10 29 28.9	
	comp=Z,16nm,0.8s						
OPO	Ambohidratompo	31.73	187	P	P	10 29 26.5	+0.9
	comp=Z,5.5nm,0.8s,baz=12,slow=11,SNR=4.9						
MANT	Manisa	32.20	326	P	P	10 29 30.8	+1.1
IDI	Anoyia	32.31	318	P	P	10 29 32.6	+2.0
	comp=Z,8.5nm,0.8s,baz=136,slow=15,SNR=2.4						
APE	Apeiranthos	33.00	321	⇑P	P	10 29 38.6	+2.0
IUG	Iuzhnay	33.28	26	eP	P	10 29 38.9	-0.2
	comp=Z,11nm,0.9s,baz=27						
DANN	Dangsing	34.00	58	eP	P	10 29 47.1	+1.5
KSH	Kashi	34.27	35	P	P	10 29 47.6	-0.1
KSH				PP	PnPn	10 30 57.9	-3.9
KSH				S	S	10 35 09.0	-5.9
KSH				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KSH				pmax	pmax		
	comp=Z,650nm,6.3s						
KSH				LR	LR		
	comp=Z,630nm,7.1s						
KSH				LR	LR		
	comp=Z,870nm,6.9s						
KSH				LR	LR		
	comp=Z,550nm,14.6s						
KK31	Karatay Array	34.27	26	P	P	10 29 49.1	+1.6
KKAR	Karatay Array	34.27	26	P	P	10 29 48.8	+1.3
DZA	Taraz	34.45	27	eP	P	10 29 49.8	+0.7
	baz=27						
GKN	Gorkha	34.62	59	eP	P	10 29 51.4	+0.5
	comp=Z,110nm,1.2s						
DMN	Daman	34.89	60	eP	P	10 29 54.2	+0.8
	comp=Z,40nm,0.9s						
AML	Almayashu	34.95	30	P	P	10 29 56.3	+2.4
	SNR=11						
KKN	Kakani	35.09	60	eP	P	10 29 55.7	+0.7
	comp=Z,58nm,0.9s						
PKIN	Phulchoki	35.12	61	eP	P	10 29 55.9	+0.5
	comp=Z,37nm,0.9s						
UCH	Uchtor	35.43	31	P	P	10 30 00.8	+2.8
	SNR=18						
AAK	Ala-Archa	35.73	30	P	P	10 30 02.4	+2.2
	comp=Z,5.5nm,0.8s,baz=232,slow=7.8,SNR=20						
AAK	Ala-Archa	35.73	30	P	P	10 30 03.5	+3.2
	SNR=8.2						
AAK	Ala-Archa	35.73	30	P	P	10 30 02.0	+1.8
AAK				IAmb	IAmb	10 30 04.3	
	comp=Z,30nm,1.4s						
KBK	Karagaybulak	35.96	31	P	P	10 30 05.4	+3.1
	SNR=8.2						
RAMN	Ramite	35.98	62	eP	P	10 30 02.4	-0.3
	comp=Z,30nm,0.9s						
LSZ	Lusaka	36.17	219	P	P	10 30 05.1	+0.9
	comp=Z,7.7nm,0.9s,baz=40,slow=10,SNR=9.3						
LSZ	Lusaka	36.17	219	P	P	10 30 04.6	+0.3
ULHL	Ulahol	36.32	32	P	P	10 30 07.6	+2.2
	SNR=18						
SGDS	Sogindy	36.40	29	eP	P	10 30 05.9	0.0
	comp=Z,30nm,2.4s,baz=30						
TKM2	Tokmak 2	36.48	31	P	P	10 30 09.2	+2.4
	SNR=5.9						
ODAN	Odare	36.64	63	eP	P	10 30 08.4	+0.1
	comp=Z,11nm,0.7s						
TIRR	Tirgusor	36.73	333	⇑P	P	10 30 10.0	+1.3
TIRR	Tirgusor	36.73	333	P	P	10 30 09.1	+0.5
ABKAR	Akbulak array	36.76	10	P	P	10 30 09.1	+0.2
ABKAR				IAmb	IAmb	10 30 11.2	
	comp=Z,37nm,1.1s						
TAPN	Taplejung	37.04	62	eP	P	10 30 12.0	+0.2
	comp=Z,35nm,0.8s						
TPGR	Topolog	37.04	333	⇑P	P	10 30 12.3	+1.0
HARR	Harsova	37.13	332	⇑P	P	10 30 14.0	+2.0
BTLS	Baital	37.35	27	eP	P	10 30 13.3	-0.5
	comp=Z,17nm,1.8s,baz=28						
AAA	Alma-Ata	37.36	32	eP	P	10 30 14.8	+0.7
	baz=32						
MDOK	Medeo	37.39	32	eP	P	10 30 15.1	+0.6
	baz=32						
CFR	Carcaliu	37.42	333	⇓P	P	10 30 15.0	+0.6
KUU	Kurty	37.56	30	eP	P	10 30 16.0	+0.3
	comp=Z,81nm,2.1s,baz=31						
AKTO	Aktyubinsk	37.64	7	P	P	10 30 17.5	+1.3
	comp=Z,11nm,0.9s,baz=202,slow=8.6,SNR=25						
CHKK	Chushkaly	37.85	31	eP	P	10 30 19.2	+1.0
	baz=32						
VTS	Vitosha	37.98	326	⇑P	P	10 30 20.9	+1.5
VTS	Vitosha	37.98	326	P	P	10 30 19.9	+0.5
VTS				IAmb	IAmb	10 30 21.9	
	comp=Z,15nm,1.0s						
SATY	Saty	38.03	33	eP	P	10 30 20.0	+0.2
	comp=Z,35nm,2.3s,baz=34						
ISR	Istrita	38.10	332	⇑P	P	10 30 20.4	+0.1
BISRR	Bisoca	38.34	332	⇑P	P	10 30 25.8	+3.5
UZB	Uzynbulak	38.42	34	eP	P	10 30 23.4	+0.3
	comp=Z,37nm,2.0s,baz=34						
KPKS	Kokpek	38.46	33	eP	P	10 30 23.4	+0.1
	comp=Z,28nm,1.0s,baz=33						
VRI	Vrincioaia	38.58	333	⇑P	P	10 30 26.3	+2.1
PLOR	Plostina	38.60	332	⇑P	P	10 30 26.9	+2.4
MLR	Muntele Rosu	38.65	331	P	P	10 30 27.0	+1.9
	comp=Z,5.2nm,0.8s,baz=80,slow=3.2,SNR=7.5						
MLR	Muntele Rosu	38.65	331	⇑P	P	10 30 28.8	+3.8
MLR	Muntele Rosu	38.65	331	P	P	10 30 26.8	+1.7
MLR				IAmb	IAmb	10 30 28.8	
	comp=Z,38nm,1.5s						
SHLS	Shalkode	38.66	34	eP	P	10 30 27.6	+2.4
	comp=Z,34nm,1.4s,baz=35						
MTUR	Matau	38.88	330	⇑P	P	10 30 28.7	+1.9
TESR	Tescani	39.11	333	⇑P	P	10 30 29.9	+1.2
ARR	Arges	39.19	330	⇑P	P	10 30 31.1	+1.7
BELG	Belogornoye	39.26	357	P	P	10 30 30.5	+0.7
	comp=Z,8.5nm,0.6s,baz=322,slow=0.7,SNR=6.7						
DOPR	Dopca	39.27	331	⇑P	P	10 30 31.2	+1.2
TDK	Taldyqorghan	39.39	31	eP	P	10 30 30.1	-0.9
	comp=Z,30nm,1.0s,baz=31						
BOVS	Bovan	39.49	326	⇑P	P	10 30 32.0	+0.2
LOT	Lotru	39.66	330	⇑P	P	10 30 34.2	+0.7
BIZ	Bicaz	39.68	333	⇑P	P	10 30 35.2	+1.7
SORM	Soroca	39.68	336	⇑P	P	10 30 33.7	+0.3
HERR	Herculane	39.95	328	⇑P	P	10 30 21.9	-14
MATP	Matopo	40.04	214	P	P	10 30 37.0	+0.2
	comp=Z,7.5nm,0.9s,baz=29,slow=12,SNR=11						
GZR	Gura Zlata	40.12	329	⇑P	P	10 30 38.2	+1.0
SHL	Shillong	40.31	66	P	P	10 30 39.6	+0.4
BURAR	Bucovina Array	40.59	333	⇑P	P	10 30 43.3	+2.2
BURAR	Bucovina Array	40.59	333	P	P	10 30 42.3	+1.2
BUR08	Bucovina Ar. S	40.62	333	P	P	10 30 42.8	+1.5
DIVS	Divibare	40.73	325	P	P	10 30 42.6	+0.3
BRZS	Berezniki	40.80	21	eP	P	10 30 42.7	0.0
	comp=Z,33nm,2.2s,baz=22						
BZS	Buzias	40.87	328	⇓P	P	10 30 44.6	+1.3
DRGR		41.14	330	⇑P	P	10 30 47.1	+1.5
AKASG	Malin Array Be	41.47	339	P	P	10 30 49.0	+0.8
	comp=Z,3.0nm,0.6s,baz=146,slow=7.3,SNR=21						
AKASG				PP	PP	10 32 22.1	-1.9
	comp=Z,3.6nm,0.9s,baz=140,slow=9.4,SNR=6.1						
AKASG				PcP	PcP	10 32 45.6	-0.3
	comp=Z,0.8nm,0.6s,baz=147,slow=3.4,SNR=5.0						
AKASG				LR	LR	10 51 32.8	
	comp=Z,136nm,19.8s,baz=310,slow=41						
AKASG	Malin Array Be	41.47	339	P	P	10 30 48.2	0.0
AKBB	Malin Array Si	41.47	339	P	P	10 30 47.8	-0.3
AKBB				IAmb	IAmb	10 30 49.8	
	comp=Z,18nm,1.1s						
MAKZ	Makanchi	42.44	32	P	P	10 30 56.2	0.0
MAKZ				IAmb	IAmb	10 30 58.0	
	comp=Z,24nm,1.2s						
MK31	Makanchi Array	42.59	32	P	P	10 30 58.2	+0.8
MK31				IAmb	IAmb	10 30 59.8	
	comp=Z,33nm,1.4s						
MKAR	Makanchi Array	42.59	32	P	P	10 30 58.5	+1.1
	comp=Z,5.0nm,0.5s,baz=221,slow=8.1,SNR=89						
MKAR				PP	PP	10 32 43.0	+6.8
	comp=Z,0.9nm,0.6s,baz=225,slow=8.9,SNR=2.9						
MKAR				PcP	PcP	10 32 51.0	+1.3
	comp=Z,1.4nm,0.9s,baz=228,slow=5.6,SNR=2.5						
MKAR				ScP	ScP	10 36 40.7	-0.2
	comp=Z,0.2nm,0.5s,baz=204,slow=3.2,SNR=4.7						
MKAR				LR	LR	10 48 13.1	
	comp=Z,70nm,21.6s,baz=252,slow=36						
MKAR	Makanchi Array	42.59	32	P	P	10 30 56.9	-0.5
BRVK	Borovoye	42.68	17	P	P	10 30 59.5	+1.5
BVAR	Borovoye Array	42.68	17	P	P	10 30 58.9	+0.8
	comp=Z,6.7nm,0.7s,baz=192,slow=14,SNR=38						
KOLS	Kolonicke sedl	42.88	332	eP	P	10 31 01.7	+1.9
KWP	Kalwaria Pacla	43.20	333	P	P	10 31 03.6	+1.3
KWP				IAmb	IAmb	10 31 05.7	
	comp=Z,46nm,1.4s						
CRVS	Cervenica-Dubn	43.23	332	eP	P	10 31 04.1	+1.5
OBN	Obninsk	43.40	348	P	P	10 31 04.7	+1.0
KURBB	Kurchatov Arra	43.57	25	P	P	10 31 06.1	+0.8
	comp=Z,4.3nm,0.7s,baz=229,slow=8.0,SNR=28						
ARU	Arti	43.60	6	P	P	10 31 06.2	+0.8
	comp=Z,2.2nm,0.2s,baz=179,slow=8.8,SNR=8.3						
ARU	Arti	43.60	6	P	P	10 31 06.0	+0.6
ARU				IAmb	IAmb	10 31 11.2	
	comp=Z,14nm,1.0s						
KURK	Kurchatov	43.68	25	P	P	10 31 07.1	+1.0
KEST	Kesra	43.70	308	LR	LR	10 50 42.5	
	comp=Z,204nm,18.1s,baz=340,slow=38						
WMQ	Urumqi	43.82	39	eP	P	10 31 09.5	+2.0
WMQ				pP	sP	10 31 13.4	+2.8
WMQ				sP	pwP	10 31 15.1	+2.2
WMQ				PP	PcP	10 32 52.9	-1.1
WMQ				pmax	pmax		
	comp=Z,24nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,74nm,3.7s						
WMQ				LR	LR		
	comp=Z,520nm,11.5s						
WMQ				LR	LR		
	comp=Z,89nm,14.3s						
WMQ				LR	LR		
	comp=Z,210nm,24.1s						
WMQ	Urumqi	43.82	39	P	P	10 31 09.3	+1.7
WMQ				IAmb	IAmb	10 31 14.1	
	comp=Z,31nm,0.9s						
SEM	Semipalatinsk	44.15	27	eP	P	10 31 10.1	-0.1
	comp=Z,45nm,2.0s,baz=27						
TAM	Tamanrasset	44.21	289	P	P	10 31 11.0	0.0
ZSN	Zaisan	44.35	33	eP	P	10 31 11.4	-0.2
	baz=33						
JAVC	Velka Javorina	45.03	329	eP	P	10 31 18.1	+1.0
SOKA	Soboth	45.07	325	eP	P	10 31 18.7	+1.2
	comp=Z,15nm,2.1s						
MNK	Minsk	45.11	341	i P	P	10 31 15.1	-2.4
	comp=E,3.0nm,1.3s						
MNK				i P	P	10 31 15.1	-2.4
	comp=N,9.0nm,1.2s						
MNK				i P	P	10 31 15.1	-2.4
	comp=Z,7.0nm,1.2s						
MNK				i PcP	PcP	10 32 55.0	-3.0
MNK				i PP	PP	10 33 00.9	-2.1
MNK				i PPP	PPP	10 33 39.3	
MNK				i ScP	ScP	10 36 47.7	-3.2
MNK				i PcS	PcS	10 36 48.9	-2.6
MNK				i S	S	10 37 56.1	-0.6
MNK				i ScS	ScS	10 41 12.2	-2.6
MNK				i SS	SS	10 41 19.8	+0.8
MNK				i SSS	SSS	10 42 05.2	
MNK				i LQ	LQ	10 46 54.3	
MNK				i LR	LR	10 50 20.9	
MNK				i LRM	MLR	10 52 02.2	
	comp=N,280nm,14.6s						
MNK				i LRM	MLR	10 52 03.2	
	comp=Z,172nm,9.8s						
MNK				i LRM	MLR	10 52 06.1	
	comp=E,26nm,9.8s						
ARSA	Arzberg	45.14	326	i P	P	10 31 19.3	+1.4
	comp=E,8.9nm,0.9s						
TRI	Trieste	45.24	323	P	P	10 31 19.5	+0.8
TRI				IAmb	IAmb	10 31 20.3	
	comp=Z,19nm,0.8s						
OBKA	Obir	45.24	325	eP	P	10 31 20.4	+1.5
	comp=Z,12nm,1.2s						
LBTB	Lobatse	45.32	213	P	P	10 31 19.6	0.0
LBTB				IAmb	IAmb	10 31 21.6	
	comp=Z,20nm,1.0s						
MHMT	Maesarieng	45.33	77	P	P	10 31 20.7	+0.9
	comp=Z,31nm,0.6s						
CONA	Conrad Observa	45.37	327	i P	P	10 31 21.0	+1.2
	comp=Z,29nm,2.0s						
MORC	Moravsky Berou	45.70	330	eP	P	10 31 22.6	+0.3
MORC	Moravsky Berou	45.70	330	P	P	10 31 22.7	+0.4
MORC				IAmb	IAmb	10 31 23.4	
	comp=Z,11nm,1.2s						
NACGM	Naroch	45.80	341	eP	P	10 31 21.0	-2.0
NACGM				i P	pP	10 31 22.5	-2.6
NACGM				i P	pP	10 31 22.5	-2.6
NACGM				ePcP	PcP	10 32 58.9	-1.5
NACGM				ePP	PP	10 33 09.6	-0.6
NACGM				ePPP	PPP	10 34 04.7	
NACGM				eS	S	10 38 03.4	-3.3
NACGM				eScS	ScS	10 40 34.8	-44
NACGM				eSS	SnSn	10 42 29.6	+29
NACGM				eSSS	SSS	10 44 51.9	
NACGM				eLQ	LQ	10 50 16.2	
NACGM				eLR	LR	10 51 34.2	
KRUC	Moravsky	45.81	329	eP	P	10 31 23.0	-0.1
MYKA	Terra Mystica	45.83	324	eP	P	10 31 24.6	+1.1
	comp=Z,19nm,1.1s						
VRAC	Vranov	45.86	329	P	P	10 31 24.5	+0.9
	comp=Z,2.6nm,0.6s,baz=114,slow=6.0,SNR=4.8						
VRAC				LR	LR	10 54 07.2	
	comp=Z,330nm,19.0s,baz=150,slow=41						
VRAC	Vranov	45.86	329	eP	P	10 31 23.5	-0.1
ZOU	Zoufplan	46.17	324	P	P	10 31 27.3	+1.0
MOA	Molln	46.19	326	eP	P	10 31 27.2	+1.1
	comp=Z,11nm,1.1s						
CM32	Chiang Mai Arr	46.20	77	P	P	10 31 31.0	+4.3
KBA	Koelnbreinsper	46.25	325	eP	P	10 31 27.6	+0.7
	comp=Z,12nm,1.2s						
KRLC	Kraliky	46.27	330	eP	P	10 31 27.0	+0.2
CM15	Chiang Mai Arr	46.27	77	P	P	10 31 28.6	+1.3
	comp=Z,45nm,0.9s						
UMPA	Umpang Tak	46.28	80	P	P	10 31 29.8	+2.4
	comp=Z,4µmcomp=Z,32nm,1.0s						
CHTO	Chiang Mai	46.28	76	P	P	10 31 27.5	+0.1
CHTO				IAmb	IAmb	10 31 32.8	
	comp=Z,9.1nm,0.9s						
CM31	Chiang Mai Arr	46.29	77	P	P	10 31 28.9	+1.5
	comp=Z,1µm,0.9s						
CM31	Chiang Mai Arr	46.29	77	P	P	10 31 27.5	+0.1
CM33	Chiang Mai Arr	46.29	76	P	P	10 31 28.0	+0.6
CMAR	Chiang Mai Arr	46.29	77	P	P	10 31 27.7	+0.3
	comp=Z,37nm,0.8s,baz=275,slow=8.8,SNR=99						
CMAR				PcP	PcP	10 33 05.0	+2.2
	comp=Z,1.2nm,0.5s,baz=258,slow=4.4,SNR=1.4						
CMAR				PP	PP	10 33 13.5	-2.6
	comp=Z,4.5nm,0.8s,baz=275,slow=8.5,SNR=3.5						
CMAR				LR	LR	10 51 50.8	
	comp=Z,38nm,18.2s,baz=280,slow=37						
CMAR	Chiang Mai Arr	46.29	77	P	P	10 31 27.6	+0.2
CMMT	Chiang Mai	46.29	76	P	P	10 31 27.4	0.0
	comp=Z,5.3nm,0.9s						
CM05	Chiang Mai Arr	46.29	77	P	P	10 31 28.0	+0.6
	comp=Z,303nmcomp=Z,47nm,0.8s						
CM02	Chiang Mai Arr	46.29	77	P	P	10 31 28.0	+0.6
	comp=Z,360nmcomp=Z,58nm,0.9s						
CM04	Chiang Mai Arr	46.32	77	P	P	10 31 28.6	+0.9
	comp=Z,424nmcomp=Z,61nm,0.9s						
SUW	Suwalki	46.33	338	P	P	10 31 28.3	+1.1
CM36	Chiang Mai Arr	46.43	77	P	P	10 31 29.0	+0.5
CM34	Chiang Mai Arr	46.48	76	P	P	10 31 31.0	+2.1
CM35	Chiang Mai Arr	46.48	77	P	P	10 31 29.0	0.0
ABTA	Abfaltersbach	46.54	324	i P	P	10 31 30.2	+1.1
	comp=Z,5.5nm,1.0s						
TPTI		46.62	98	P	P	10 31 35.9	+5.8
DPC	Dobruska-Polom	46.67	330	eP	P	10 31 30.6	+0.6
CKRC	Cesky Krumlov	46.74	327	eP	P	10 31 31.0	+0.5
OSTC	Ostas	46.85	330	eP	P	10 31 31.9	+0.5
UTHA	Uthaitani	46.87	81	P	P	10 31 33.6	+1.6
	comp=Z,312nmcomp=Z,39nm,0.8s						
UPC	Upice	46.92	330	eP	P	10 31 32.8	+0.9
LAMP	Lampang	46.94	77	P	P	10 31 33.8	+1.3
	comp=Z,74nm,0.8s						
CHVC	Chvalec	46.95	330	eP	P	10 31 32.5	+0.3
SUKH	Sukhothai	46.96	78	P	P	10 31 37.1	+4.4
	comp=Z,15nm,0.9s						
GEC2	GERESS Array S	47.08	327	P	P	10 31 33.1	-0.1
GERES	GERESS Array B	47.08	327	P	P	10 31 33.4	+0.1
	comp=Z,0.8nm,0.6s,baz=132,slow=8.0,SNR=10.0						
GERES	GERESS Array B	47.08	327	P	P	10 31 32.6	-0.6
KHC	Kasperske Hory	47.31	327	eP	P	10 31 34.2	-0.8
KHC	Kasperske Hory	47.31	327	P	P	10 31 34.2	-0.8
WTTA	Wattenberg	47.32	324	eP	P	10 31 35.7	+0.4
	comp=Z,15nm,1.1s						
WATA	Walderalm	47.40	324	i P	P	10 31 36.0	+0.2
	comp=Z,7.4nm,0.7s						
KRAB	Krabi	47.51	91	P	P	10 31 31.4	-5.6
	comp=Z,211µmcomp=Z,5µm,1.5s						
SQTA	Sankt Quirin	47.55	324	eP	P	10 31 36.9	0.0
	comp=Z,15nm,1.2s						
MOTA	Moosalm	47.67	324	i P	P	10 31 38.0	0.0
	comp=Z,13nm,0.9s						
PHIT	Phitsanulok	47.72	79	P	P	10 31 45.1	+6.4
UTTA	Uttaradit	47.84	78	P	P	10 31 40.8	+1.4
	comp=Z,17nm,0.8s						
TOA0	Torodi Ar. Sit	48.00	276	P	P	10 31 40.3	-0.5
TOA0				IAmb	IAmb	10 31 41.7	
	comp=Z,12nm,0.9s						
TORD	Torodi Ar. Bea	48.00	276	P	P	10 31 40.1	-0.7
	comp=Z,8.4nm,0.8s,baz=86,slow=7.5,SNR=29						
TORD				PcP	PcP	10 33 09.5	+0.5
	comp=Z,0.3nm,0.6s,baz=79,slow=3.1,SNR=2.5						
TORD				PP	PP	10 33 25.9	-7.0
	comp=Z,3.3nm,0.9s,baz=86,slow=7.2,SNR=4.3						
TORD	Torodi Ar. Bea	48.00	276	P	P	10 31 40.1	-0.7
TORD				IAmb	IAmb	10 31 41.7	
	comp=Z,7.2nm,0.8s						
TRTT	Trang	48.06	91	P	P	10 31 45.2	+3.9
	comp=Z,13nm,1.6s						
DAVOX	Davos/Dischmat	48.09	323	P	P	10 31 40.9	-0.4
	comp=Z,3.1nm,0.8s,baz=130,slow=18,SNR=3.9						
DAVA	Damuels	48.35	323	eP	P	10 31 43.1	-0.2
	comp=Z,17nm,1.2s						
KLMR	Klimovskoe	48.39	352	eP	P	10 31 40.4	-2.7
KLMR				AMP		10 31 44.6	
	comp=Z,77nm,1.5s						
BOSA	Boshof	48.42	211	P	P	10 31 43.8	-0.1
	comp=Z,6.6nm,0.8s,baz=35,slow=8.7,SNR=9.7						
BOSA				LR	LR	10 54 12.6	
	comp=Z,254nm,18.1s,baz=40,slow=39						
BOSA	Boshof	48.42	211	P	P	10 31 43.5	-0.4
BOSA				IAmb	IAmb	10 31 48.9	
	comp=Z,12nm,1.0s						
ZAA0	Zalesovo Array	48.65	26	P	P	10 31 45.1	-0.1
ZAA0				IAmb	IAmb	10 31 51.9	
	comp=Z,11nm,0.9s						
ZALV	Zalesovo Beam	48.65	26	P	P	10 31 44.9	-0.2
	comp=Z,6.2nm,0.7s,baz=232,slow=8.1,SNR=30						
ZALV				PP	PP	10 33 29.5	-8.6
	comp=Z,2.3nm,0.7s,baz=241,slow=6.6,SNR=4.2						
ZALV	Zalesovo Beam	48.65	26	P	P	10 31 44.8	-0.4
CLL	Collm	48.91	329	eP	P	10 31 47.0	-0.3
	comp=Z,57nm,1.9s						
SENIN	Lac Senin/Sane	49.45	321	P	P	10 31 52.6	+0.8
SENIN				IAmb	IAmb	10 31 54.0	
	comp=Z,19nm,1.2s						
KULM	Kulim	49.50	94	P	P	10 31 50.5	-1.9
KULM				IAmb	IAmb	10 31 53.1	
	comp=Z,12nm,1.0s						
KMI	Kunming	50.01	68	⇓P	P	10 31 59.9	+3.6
KMI				pmax	pmax		
	comp=Z,18nm,1.0s						
GTA	Gaotai	50.20	49	eP	P	10 31 57.3	-0.2
GTA				pP	sP	10 32 02.8	+2.2
GTA				sP	pwP	10 32 05.9	+3.1
GTA				pmax	pmax		
	comp=Z,5.0nm,1.7s						
SLVN	Son La	50.95	73	P	P	10 32 03.0	-0.3
CD2	Chengdu	51.49	61	P	P	10 32 07.1	-0.2
CD2				pP	pP	10 32 10.3	+0.7
CD2				PcP	PcP	10 33 22.8	+1.2
CD2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
FINES	FINESS Array B	51.52	345	P	P	10 32 07.0	+0.2
	comp=Z,4.8nm,0.7s,baz=134,slow=11,SNR=15						
FINES				LR	LR	10 55 37.5	
	comp=Z,363nm,21.3s,baz=206,slow=38						
FINES	FINESS Array B	51.52	345	P	P	10 32 07.6	+0.8
LZH	Lanzhou	52.45	54	eP	P	10 32 15.6	+1.1
LZH				pP	pP	10 32 18.8	+2.0
LZH				sP	pwP	10 32 22.8	+3.0
LZH				PP	PP	10 34 14.4	+1.1
LZH				pmax	pmax		
	comp=Z,17nm,1.1s						
LZH				pmax	pmax		
	comp=Z,74nm,4.8s						
LZH				LR	LR		
	comp=Z,140nm,15.7s						
LZH				LR	LR		
	comp=Z,320nm,14.6s						
LZH				LR	LR		
	comp=Z,350nm,16.3s						
KOWA	Kowa	53.38	278	P	P	10 32 21.5	0.0
	comp=Z,3.8nm,0.7s,baz=85,slow=5.9,SNR=9.7						
KOWA	Kowa	53.38	278	P	P	10 32 21.4	-0.1
KOWA				IAmb	IAmb	10 32 22.5	
	comp=Z,8.7nm,1.0s						
GYA	Guiyang	53.62	67	⇑P	P	10 32 23.1	-0.1
GYA				pP	pP	10 32 26.8	+1.3
GYA				sP	pwP	10 32 32.8	+4.3
GYA				pmax	pmax		
	comp=Z,10.0nm,1.7s						
GYA				pmax	pmax		
	comp=Z,99nm,3.5s						
ESBB	Sonseca Array	54.93	309	P	P	10 32 33.5	+1.0
ESBB				IAmb	IAmb	10 32 34.4	
	comp=Z,17nm,0.9s						
ESDC	Sonseca Array	54.93	309	P	P	10 32 32.8	+0.3
	comp=Z,15nm,1.0s,baz=89,slow=6.5,SNR=35						
ESDC				LR	LR	10 59 19.0	
	comp=Z,125nm,19.5s,baz=0.0,slow=40						
ESDC	Sonseca Array	54.93	309	P	P	10 32 31.8	-0.7
DBIC	Dimbokro	55.35	269	P	P	10 32 35.6	-0.2
	comp=Z,4.1nm,0.9s,baz=72,slow=10,SNR=4.7						
DBIC				LR	LR	10 56 54.8	
	comp=Z,100nm,18.6s,baz=9.5,slow=37						
NB2	NORSAR Subarra	55.86	338	P	P	10 32 37.8	-1.0
	comp=Z,46nm,1.7s,baz=131,slow=7.4						
NOA	NORSAR Array B	55.86	338	P	P	10 32 38.6	-0.2
	comp=Z,5.7nm,1.0s,baz=127,slow=7.8,SNR=5.8						
NOA				LR	LR	11 01 18.3	
	comp=Z,204nm,18.0s,baz=140,slow=41						
KLSI		56.17	105	P	P	10 32 41.8	+0.1
	comp=Z,7.4nm,1.1s						
XAN	Xi'an	56.22	58	P	P	10 32 41.3	-0.6
XAN				pP	pwP	10 32 49.4	+2.1
XAN				sP	sP	10 32 54.5	+9.5
XAN				pmax	pmax		
	comp=Z,11nm,1.0s						
XAN	Xi'an	56.22	58	P	P	10 32 41.5	-0.4
XAN				IAmb	IAmb	10 32 48.3	
	comp=Z,14nm,1.2s						
ENH	Enshi	56.34	62	P	P	10 32 42.7	0.0
ENH				IAmb	IAmb	10 32 52.8	
	comp=Z,9.8nm,0.9s						

TLY	Talaya	56.97	36	P	P	10 32 47.9	+1.0
	comp=Z,0.9nm,0.3s,baz=250,slow=6.6,SNR=4.2						
TLY				LR	LR	11 00 08.3	
	comp=Z,209nm,19.6s,baz=240,slow=39						
TLY	Talaya	56.97	36	P	P	10 32 47.7	+0.9
SONM	Songino Array	57.32	41	P	P	10 32 50.2	+0.7
	comp=Z,7.5nm,0.9s,baz=243,slow=7.7,SNR=49						
SONM				LR	LR	11 00 08.2	
	comp=Z,145nm,21.7s,baz=259,slow=39						
SONM	Songino Array	57.32	41	P	P	10 32 50.1	+0.7
SONM				IAmb	IAmb	10 32 51.8	
	comp=Z,11nm,1.2s						
ULN	Ulaanbaatar	57.75	41	P	P	10 32 53.0	+0.4
ULN				IAmb	IAmb	10 32 54.9	
	comp=Z,10nm,1.1s						
ARCES	ARCESS Array B	58.64	350	P	P	10 32 58.7	+0.5
	comp=Z,14nm,0.9s,baz=141,slow=2.5,SNR=10						
ARCES				LR	LR	11 01 21.7	
	comp=Z,511nm,18.9s,baz=235,slow=39						
ARCES	ARCESS Array B	58.64	350	P	P	10 32 59.1	+0.9
HHC	Hu-ho-hao-te	59.28	50	*e*P	P	10 33 01.6	-1.8
HHC				SS	SS	10 45 11.0	+4.5
HHC				pmax	pmax		
	comp=Z,6.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,230nm,6.1s						
HHC				LR	LR		
	comp=Z,320nm,18.5s						
HHC				LR	LR		
	comp=Z,280nm,17.1s						
HHC				LR	LR		
	comp=Z,280nm,18.9s						
EKA	Eskdalemuir Ar	59.29	327	P	P	10 33 02.7	-0.2
	comp=Z,1.9nm,0.5s,baz=284,slow=12,SNR=3.9						
LEM	Lembang	59.58	106	P	P	10 33 06.5	+0.7
	comp=Z,41nm,0.9s,baz=141,slow=21,SNR=4.8						
WHN	Wuhan	60.55	62	⇑P	P	10 33 15.8	+3.8
NRIK	Noril'sk	60.73	14	P	P	10 33 13.7	+1.0
	comp=Z,11nm,0.8s,baz=216,slow=4.2,SNR=18						
NRIK				LR	LR	11 04 19.2	
	comp=Z,414nm,19.1s,baz=254,slow=41						
NRIK	Noril'sk	60.73	14	P	P	10 33 13.2	+0.6
SBUM	Sibu	61.38	94	P	P	10 33 17.0	-1.0
SBUM				IAmb	IAmb	10 33 23.1	
	comp=Z,9.4nm,0.9s						
UGM	Wanagama	62.66	106	P	P	10 33 30.6	+4.0
BJI	Beijing	62.66	52	P	P	10 33 27.1	+0.9
BJI				pmax	pmax		
	comp=Z,5.0nm,1.3s						
BJI				pmax	pmax		
	comp=Z,230nm,5.2s						
TIA	Tai'an	63.11	56	P	P	10 33 30.1	+0.8
TIA				pmax	pmax		
	comp=Z,8.0nm,1.1s						
NJ2	Nanjing	64.42	61	*e*P	P	10 33 37.1	-0.9
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
SPITS	Spitsbergen Ar	67.29	353	P	P	10 33 56.4	+0.7
	comp=Z,19nm,0.9s,baz=151,slow=14,SNR=15						
TWSI	Taliwang, Sumb	68.89	105	P	P	10 34 04.4	-2.3
	comp=Z,32nm,0.9s						
BNSI	Bone	70.73	99	P	P	10 34 17.7	-0.4
	comp=Z,34nm,1.0s						
MRSI	Marisa	71.29	94	P	P	10 34 21.2	-0.3
KSAR	Wonju Array Be	71.75	55	P	P	10 34 22.2	-1.7
KSRS	Korea Array	71.78	55	P	P	10 34 24.1	+0.1
	comp=Z,3.3nm,0.8s,baz=266,slow=7.1,SNR=11						
GTOI	Gorontalo	72.29	94	P	P	10 34 30.6	+3.0
DAG	Danmarks Havn	72.70	347	*i* P	P	10 34 29.0	+0.1
	comp=Z,15nm,0.9s						
DAG	Danmarks Havn	72.70	347	*i* P	P	10 34 29.0	+0.1
DAG				IAmb	IAmb	10 34 29.9	
	comp=Z,15nm,0.9s						
MDJ	Mudanjiang	72.77	47	P	P	10 34 30.9	+1.0
MDJ				pmax	pmax		
	comp=Z,10.0nm,1.6s						
MDJ				pmax	pmax		
	comp=Z,460nm,4.3s						
YAK	Yakutsk	73.17	29	P	P	10 34 31.5	-0.4
	comp=Z,44nm,1.1s,baz=266,slow=3.3,SNR=8.8						
KLR	Kul'dur	74.12	42	P	P	10 34 37.9	+0.1
	comp=Z,7.9nm,1.0s,baz=290,slow=8.0,SNR=14						
USRK	Ussuriysk Ar.	74.51	47	P	P	10 34 40.4	+0.3
	comp=Z,2.0nm,0.8s,baz=254,slow=7.2,SNR=7.2						
JNU	Nakatsue	74.51	59	P	P	10 34 41.1	+0.7
	comp=Z,21nm,0.9s,baz=309,slow=2.7,SNR=5.7						
SOEI	Soe	76.16	104	P	P	10 35 01.8	+12
SUMG	Summit	77.42	342	*i* P	P	10 34 57.5	+0.8
	comp=Z,19nm,0.9s						
SUMG	Summit	77.42	342	*i* P	P	10 34 57.5	+0.8
SUMG				IAmb	IAmb	10 35 00.1	
	comp=Z,19nm,0.9s						
FITZ	Fitzroy Crossi	79.83	111	P	P	10 35 10.5	+0.1
	baz=80,SNR=6.7						
FITZ	Fitzroy Crossi	79.83	111	P	P	10 35 10.1	-0.3
FITZ				IAmb	IAmb	10 35 11.9	
	comp=Z,13nm,1.0s						
MJAR	Matsushiro Arr	80.06	55	P	P	10 35 11.5	+0.1
	comp=Z,2.4nm,1.0s,baz=288,slow=5.4,SNR=7.6						
MJAR	Matsushiro Arr	80.06	55	P	P	10 35 11.3	-0.2
SWI	Sorong	80.66	93	P	P	10 35 15.4	+0.3
	comp=Z,31nm,1.1s						
ASAJ	Asahikawa	82.09	47	LR	LR	11 17 54.6	
	comp=Z,50nm,18.7s,baz=316,slow=40						
SEY	Seymchan	83.51	27	P	P	10 35 29.9	+0.9
	comp=Z,6.5nm,0.9s,baz=282,slow=5.6,SNR=16						
MA2	Magadan	83.65	30	P	P	10 35 30.2	+0.3
MA2				IAmb	IAmb	10 35 30.8	
	comp=Z,12nm,1.2s						
TULEG	Thule	83.93	348	P	P	10 35 30.9	0.0
TULEG	Thule	83.93	348	*i* P	P	10 35 30.9	0.0
TULEG				IAmb	IAmb	10 35 32.7	
	comp=Z,11nm,0.8s						
WRKA	Warakurna	84.25	117	P	P	10 35 33.8	+0.1
	baz=84,SNR=5.1						
EUNU	Eureka	84.41	353	P	P	10 35 34.2	+0.7
EUNU				IAmb	IAmb	10 35 36.1	
	comp=Z,11nm,0.9s						
WRA	Warramunga Arr	88.25	111	P	P	10 35 53.5	+0.1
	comp=Z,11nm,1.0s,baz=297,slow=4.1,SNR=30						
WRA	Warramunga Arr	88.25	111	P	P	10 35 52.5	-0.9
WB0	Warramunga Arr	88.25	111	P	P	10 35 53.5	+0.1
WRAB	Tennant Creek	88.26	111	P	P	10 35 52.7	-0.7
WB2	Warramunga Arr	88.26	111	P	P	10 35 52.7	-0.7
WR0	Warramunga Arr	88.44	111	P	P	10 35 54.3	0.0
ASAR	Alice Springs	88.80	114	P	P	10 35 56.3	+0.4
	comp=Z,6.8nm,1.0s,baz=292,slow=4.7,SNR=26						
ASAR	Alice Springs	88.80	114	P	P	10 35 55.0	-0.9
AS31	Alice Springs	88.80	114	P	P	10 35 56.3	+0.4
PETK	Petropavlovsk-	89.33	35	LR	LR	11 18 39.5	
	comp=Z,88nm,21.5s,baz=295,slow=37						
RES	Resolute Bay	89.83	351	P	P	10 35 59.1	-0.6
	comp=Z,1.2nm,1.0s,baz=26,slow=4.7,SNR=2.6						
FRB	Frobisher Bay	90.68	337	P	P	10 36 03.2	-0.7
	comp=Z,3.1nm,1.0s,baz=68,slow=5.4,SNR=3.7						
A21K	Barrow	93.69	9	P	P	10 36 18.2	+0.5
STKA	Stephens Creek	97.27	121	LR	LR	11 17 08.7	
	comp=Z,113nm,19.9s,baz=210,slow=33						
BMAR	Burnt Mountain	98.86	6	P	Pdif	10 36 41.5	+0.2
YKA	Yellowknife Ar	103.79	353	Pdiff	Pdif	10 37 04.2	+0.9
	comp=Z,0.1nm,0.4s,baz=27,slow=4.7,SNR=4.9						
YKA				PP	PP	10 41 10.8	-8.3
	comp=Z,0.3nm,0.9s,baz=10,slow=7.7,SNR=4.1						
PDAR	Pinedale Array	121.60	343	PKP	PKiKP	10 41 56.6	+0.7
	comp=Z,1.2nm,0.9s,baz=42,slow=2.4,SNR=7.0						
PDAR	Pinedale Array	121.60	343		PKPdf	10 41 55.2	-0.6
NVAR	Mina Array Bea	127.75	349	PKP	PKiKP	10 42 09.7	+1.4
	comp=Z,2.3nm,0.8s,baz=19,slow=0.1,SNR=16						
NVAR	Mina Array Bea	127.75	349	PKPdf	PKiKP	10 42 08.4	+0.1
MNTX	Cornudas Mount	130.03	334	PKPdf	PKPdf	10 42 11.5	-0.5
TX31	Lajitas Ar. Si	131.24	330	PKPdf	PKiKP	10 42 15.0	-0.4
TX32	Lajitas Array	131.24	330		PKiKP	10 42 15.0	-0.4
TXAR	Lajitas Array	131.24	330	PKP	PKiKP	10 42 15.5	+0.1
	comp=Z,1.2nm,1.0s,baz=64,slow=2.9,SNR=7.9						
TXAR	Lajitas Array	131.24	330	PKPdf	PKPdf	10 42 14.7	+0.3

*NEIC **24** 10:36:14.7±2.4, 39°.04N±0°.01×142°.2E±0°.1, h35^{km}±2^{km}, mb4.6/60, Error ellipse: s-maj=13.5km s-min=3.0km az=94.0*

*JMA **24** 10:36:15.4, 39°.05N×142°.21E, h49^{km}±1^{km}, M4.3*

JMA Felt III J1.

*NIED **24** 10:36:15.4, 39°.05N×142°.21E, h49^{km}, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}2.26; $M_{\theta\theta}$-0.08; $M_{\phi\phi}$-2.18; $M_{r\theta}$0.24; $M_{\theta\phi}$-0.46; $M_{\phi r}$0.14; Fault plane solution: $M_0$2.29000×10^{15} NP1:ϕ_s17.00000°, δ48.00000°, λ97.00000°. NP2:ϕ_s187.00000°, δ43.00000°, λ82.00000°.*

*IDC **24** 10:36:17.1±1.7, 39°.01N×142°.11E, h65^{km}±15^{km}, mb3.9/26, mb1 4.1/33, mb1mx4.0/48, mbtmp4.2/33, MS3.3/7, Ms1 3.3/7, ms1mx3.1/52 Error ellipse: s-maj=14.2km s-min=10.0km az=117.0*

ISC 24 10:36:15.1±1.1, **39°.02N**±0°.04×**142°.24E**±0°.07, **h48**^{km}±9^{km}, **n156**, σ1^s**27**/160, **mb4.4**/54, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	Ofunato	0.45	278	P	Pn	10 36 25.8	+0.1
OFUJ				S	Sn	10 36 33.0	-0.3
JKMT	Kesennumamotoy	0.64	251	P	Pn	10 36 27.9	-0.1
JKMT				S	Sn	10 36 36.8	-0.4
MIYJ	Miyakonagasawa	0.65	330	P	Pn	10 36 27.8	-0.4
MIYJ				S	Sn	10 36 36.5	-1.1
JMK	Ichinoseki	0.80	266	P	Pn	10 36 30.1	0.0
JMK				S	Sn	10 36 40.9	-0.1
JOM	Ohasama	0.87	302	P	Pn	10 36 30.9	-0.1
JOM				S	Sn	10 36 42.2	-0.5
JIO	Ouri	0.90	232	P	Pn	10 36 31.5	+0.1
JIO				S	Sn	10 36 42.8	-0.5
JTH	Tanohata	0.97	342	P	Pn	10 36 31.9	-0.5
JTH				S	Sn	10 36 44.4	-0.6
JKZ	Kuzumaki	1.20	324	P	Pn	10 36 35.8	+0.3
JKZ				S	Sn	10 36 50.8	+0.1
JRG	Rokugo	1.31	287	P	Pn	10 36 37.0	0.0
JOU	Okura	1.40	243	P	Pn	10 36 38.3	+0.1
JANG	Nango	1.47	338	P	Pn	10 36 38.9	-0.3
JYK	Kaneyama	1.47	267	P	Pn	10 36 39.5	+0.3
JMM	Marumori	1.62	225		Pn	10 36 41.4	+0.1
JTM	Tenmabayashi	1.98	333		Pn	10 36 46.8	+0.5
ERM	Erimo	3.07	13		Pn	10 37 02.2	+1.1
JYT	Yasato	3.23	211	Pn	Pn	10 37 03.7	+0.4
JSD	Sado	3.27	254	Pn	Pn	10 37 03.9	0.0
JEW	Eniwo	3.87	351		Pn	10 37 13.9	+1.9
MJAR	Matsushiro Arr	4.04	234	P	Pn	10 37 16.9	+2.4
	2.9nm,0.3s,baz=37,slow=12,SNR=156						
MJAR				S	Sn	10 37 59.6	-1.0
	0.2nm,0.3s,baz=327,slow=16,SNR=1.7						
MJAR				LR	LR	10 39 06.9	
	comp=Z,191nm,20.5s,baz=20,slow=43						
MJAR	Matsushiro Arr	4.04	234		Pn	10 37 16.4	+1.9
MAJO	Matsushiro	4.04	234	Pn	Pn	10 37 16.4	+1.9
MAT	Matsushiro	4.04	234	P	Pn	10 37 16.7	+2.2
MAT				*e*S	Sn	10 38 04.9	+4.4
MJB9	Matsu-Tunnel	4.04	234		Pn	10 37 15.0	+0.5
ASAJ	Asahikawa	5.10	3	P	Pn	10 37 29.8	+0.8
	3.5nm,0.3s,baz=229,slow=7.4,SNR=13						
ASAJ				S	Sn	10 38 26.4	-0.2
	5.0nm,0.3s,baz=116,slow=28,SNR=4.7						
ASAJ				LR	LR	10 39 42.3	
	comp=Z,179nm,21.5s,baz=164,slow=40						
JKA	Kamikawa-asahi	5.10	3		Pn	10 37 29.3	+0.3
JGF	Kuroka	5.18	230		Pn	10 37 33.0	+2.9
INU	Inuyama	5.55	230	Pn	Pn	10 37 37.5	+2.3
JHJ2	Mitsune	6.21	199	Pn	Pn	10 37 44.4	+0.2
JHJ	Hachijo jima 2	6.21	199	P	Pn	10 37 44.8	+0.5
	13nm,0.3s,baz=269,slow=13,SNR=1.3						
JHJ				S	Sn	10 38 51.9	-2.1
	20nm,0.3s,baz=64,slow=21,SNR=1.6						
JHJ				LR	LR	10 40 35.8	
	comp=Z,126nm,20.8s,baz=50,slow=42						
JWT	Wachi	6.61	238	Pn	Pn	10 37 52.9	+3.1
JHS	Saijyo	8.33	244	Pn	Pn	10 38 16.7	+3.4
JMN	Monobe	8.56	235	Pn	Pn	10 38 17.6	+1.0
USA0B	Ussuriysk Arra	9.26	307	Pn	Pn	10 38 25.7	-0.2
USRK	Ussuriysk Ar.	9.26	307	P	Pn	10 38 27.5	+1.5
	baz=114,slow=15,SNR=48						
USRK	Ussuriysk Ar.	9.26	307	Pn	Pn	10 38 26.2	+0.2
JNU	Nakatsue	10.91	241	P	Pn	10 38 50.6	+2.0
	0.4nm,0.3s,baz=193,slow=7.9,SNR=3.1						
JNU	Nakatsue	10.91	241	Pn	Pn	10 38 46.7	-2.0
MDJ	Mudanjiang	10.97	305	Pn	Pn	10 38 49.5	+0.1
KSRS	Korea Array	11.37	267	P	Pn	10 38 56.9	+2.0
	0.3nm,0.3s,baz=83,slow=14,SNR=6.8						
KSRS				LR	LR	10 42 38.9	
	comp=Z,97nm,22.0s,baz=6.5,slow=34						
KLR	Kul'dur	12.68	327	P	Pn	10 39 14.6	+2.0
	0.1nm,0.3s,baz=47,slow=22,SNR=2.6						
KLR				LR	LR	10 43 23.5	
	comp=Z,107nm,20.2s,baz=122,slow=34						
SSE	Sheshan	18.94	252		Pn	10 40 31.8	-1.3
BJT	Baijiatuau	20.12	281	P	P	10 40 43.5	-1.5
MA2	Magadan	21.28	12	P	P	10 40 57.4	+0.2
YAK	Yakutsk	24.30	346	P	P	10 41 26.9	-0.8
	9.0nm,0.5s,baz=340,slow=2.3,SNR=5.6						
YAK	Yakutsk	24.30	346	P	P	10 41 26.9	-0.8
YAK				IAmb	IAmb	10 41 28.5	
	comp=Z,19nm,0.7s						
SEY	Seymchan	24.72	11	P	P	10 41 31.8	+0.2
	comp=Z,3.8nm,0.6s,baz=199,slow=6.8,SNR=22						
SONM	Songino Array	27.28	301	P	P	10 41 54.5	-0.5
	comp=Z,0.9nm,0.6s,baz=100,slow=8.4,SNR=5.4						
ENH	Enshi	28.21	262	P	P	10 42 03.9	+0.6
ENH				IAmb	IAmb	10 42 10.1	
	comp=Z,16nm,0.8s						
H11N2	WAKE ISLAND Hy	28.67	125	T	T	11 12 46.0	
	baz=318,slow=75,SNR=1854						
H11N1	WAKE ISLAND Hy	28.68	125	T	T	11 12 46.5	
	baz=318,slow=75,SNR=2792						
H11N3	WAKE ISLAND Hy	28.69	125	T	T	11 12 47.4	
	baz=318,slow=75,SNR=2224						
H11S1	WAKE ISLAND Hy	29.46	127	T	T	11 13 31.2	
	baz=319,slow=76,SNR=137						
H11S3	WAKE ISLAND Hy	29.46	127	T	T	11 13 31.4	
	baz=319,slow=76,SNR=212						
H11S2	WAKE ISLAND Hy	29.47	127	T	T	11 13 31.7	
	baz=319,slow=76,SNR=141						
TLY	Talaya	29.58	308	P	P	10 42 15.6	+0.3
	comp=Z,1.2nm,0.4s,baz=84,slow=23,SNR=1.9						
ZAA0	Zalesovo Array	41.09	311	P	P	10 43 53.7	-0.2
ZAA0				IAmb	IAmb	10 44 06.5	
	comp=Z,6.9nm,0.7s						
ZALV	Zalesovo Beam	41.09	311	P	P	10 43 53.5	-0.4
	comp=Z,3.6nm,0.6s,baz=86,slow=8.3,SNR=10						
ZALV				PcP	PcP	10 45 52.6	-0.1
	comp=Z,1.1nm,0.3s,baz=132,slow=2.1,SNR=3.2						
ZALV	Zalesovo Beam	41.09	311	P	P	10 43 53.4	-0.5
CMAR	Chiang Mai Arr	42.66	254	P	P	10 44 06.0	-1.1
	comp=Z,0.7nm,0.3s,baz=48,slow=7.3,SNR=1.4						
CMAR	Chiang Mai Arr	42.66	254	P	P	10 44 07.4	+0.3
SVW2	Sparrevohn	43.56	39	P	P	10 44 16.3	+2.4
SVW2				IAmb	IAmb	10 44 17.4	
	comp=Z,9.5nm,1.1s						
MK31	Makanchi Array	43.65	300	P	P	10 44 14.3	-0.5
MKAR	Makanchi Array	43.65	300	P	P	10 44 14.4	-0.5
	comp=Z,3.8nm,0.6s,baz=84,slow=9.8,SNR=51						
MKAR				PcP	PcP	10 46 00.8	-0.6
	comp=Z,0.4nm,0.5s,baz=79,slow=3.2,SNR=1.9						
MAKZ	Makanchi	43.86	301	P	P	10 44 16.0	-0.5
A21K	Barrow	44.38	24	P	P	10 44 21.1	+0.8
A21K				IAmb	IAmb	10 44 21.6	
	comp=Z,5.0nm,0.6s						
RSO	Redoubt South	44.95	39	P	P	10 44 26.5	+1.2
KDAK	Kodiak Island	45.20	43	P	P	10 44 27.5	+0.5
	comp=Z,8.6nm,0.7s,baz=298,slow=4.1,SNR=19						
KDAK				PcP	PcP	10 46 07.0	+0.6
	comp=Z,2.5nm,0.8s,baz=236,slow=3.6,SNR=1.7						
KDAK	Kodiak Island	45.20	43	P	P	10 44 27.4	+0.4
KURK	Kurchatov	45.25	307	P	P	10 44 26.4	-1.1
BPAW	Bear Paw Mtn.	45.71	34	P	P	10 44 33.1	+2.0
KTH	Kantishna Hill	45.74	35	P	P	10 44 33.2	+1.8
KTH				IAmb	IAmb	10 44 34.2	
	comp=Z,5.9nm,0.9s						
SUA	Susitna One	45.89	38	P	P	10 44 33.6	+1.1
SUA				IAmb	IAmb	10 44 35.4	
	comp=Z,6.6nm,0.8s						
BRLK	Bradley Lake	45.92	40	P	P	10 44 34.4	+1.7
TRF	Thorofare Moun	46.03	35	P	P	10 44 35.2	+1.5
I23K	Minto, Yukon-K	46.41	33	P	P	10 44 38.1	+1.6
TOLK	Toolik Lake Re	46.41	28	P	P	10 44 38.3	+1.8
SEW	Seward	46.61	40	P	P	10 44 39.1	+1.0
PMR	Palmer	46.65	38	P	P	10 44 39.3	+0.9
PMR				IAmb	IAmb	10 44 39.9	
	comp=Z,6.5nm,0.9s						
RND	Reindeer	46.68	35	P	P	10 44 39.1	+0.4
RND				IAmb	IAmb	10 44 40.3	
	comp=Z,4.8nm,0.9s						
MDM	Murphy Dome	46.89	33	P	P	10 44 42.0	+1.7
MDM				IAmb	IAmb	10 44 42.7	
	comp=Z,5.9nm,1.2s						
WRH	Wood River Hil	46.97	34	P	P	10 44 41.1	+0.2
WRH				IAmb	IAmb	10 44 48.9	
	comp=Z,7.1nm,1.4s						
SML	Sawmill	47.02	37	P	P	10 44 42.6	+1.3
SML				IAmb	IAmb	10 44 42.9	
	comp=Z,8.3nm,1.0s						
CCB	Clear Creek Bu	47.09	34	P	P	10 44 43.1	+1.4
POKR	Poker Plat Res	47.23	33	P	P	10 44 44.7	+1.8
POKR				IAmb	IAmb	10 44 45.6	
	comp=Z,8.6nm,0.9s						
HDA	Harding Lake	47.47	34	P	P	10 44 45.7	+1.0
HDA				IAmb	IAmb	10 44 46.1	
	comp=Z,3.1nm,0.8s						
ILAR	Eielson Array	47.48	33	P	P	10 44 45.6	+0.9
	comp=Z,2.8nm,0.7s,baz=265,slow=6.3,SNR=53						
ILAR				PcP	PcP	10 46 13.8	-0.6
	comp=Z,0.4nm,0.6s,baz=272,slow=3.6,SNR=1.6						
ILAR	Eielson Array	47.48	33	P	P	10 44 45.9	+1.1
SCM	Sheep Creek Mo	47.49	37	P	P	10 44 46.7	+1.7
M24K	Tolsona, Glenn	48.00	37	P	P	10 44 51.1	+2.1
PRP	Porcupine Dome	48.01	32	P	P	10 44 50.6	+1.6
FYU	Fort Yukon	48.07	31	P	P	10 44 51.3	+2.0
KLU	Klutina	48.19	38	P	P	10 44 51.9	+1.4
KLU				IAmb	IAmb	10 44 53.6	
	comp=Z,8.0nm,1.2s						
BMAR	Burnt Mountain	48.28	30	P	P	10 44 53.6	+2.5
DOT	Dot Lake	48.80	35	P	P	10 44 55.2	+0.1
N25K	Chitina, Valde	48.80	37	P	P	10 44 56.8	+1.6
N25K				IAmb	IAmb	10 45 21.0	
	comp=Z,4.7nm,1.1s						
GLB	Gilahina Butte	49.20	38	P	P	10 44 59.3	+1.1
GLB				IAmb	IAmb	10 45 08.2	
	comp=Z,4.9nm,1.2s						
VRDI	Verde Repeater	49.41	38	P	P	10 45 01.6	+1.7
VRDI				IAmb	IAmb	10 45 24.0	
	comp=Z,11nm,1.4s						
MCARA	McCarthy VSAT	49.59	38	P	P	10 45 03.4	+2.3
BRVK	Borovoye	49.80	311	P	P	10 45 02.7	-0.1
BRVK				IAmb	IAmb	10 45 05.6	
	comp=Z,3.7nm,0.8s						
BCAR	Beaver Creek A	49.89	35	P	P	10 45 05.3	+1.8
EGAK	Eagle	49.92	33	P	P	10 45 04.7	+1.1
EGAK				IAmb	IAmb	10 45 22.1	
	comp=Z,6.0nm,1.4s						
BALM	Baldy	49.97	38	P	P	10 45 05.8	+1.6
BALM				IAmb	IAmb	10 45 06.2	
	comp=Z,5.5nm,1.0s						
AAK	Ala-Archa	50.15	297	P	P	10 45 05.8	0.0
CTGM	Chitina Glacie	50.47	38	P	P	10 45 09.8	+1.8
CTGM				IAmb	IAmb	10 45 31.9	
	comp=Z,10.0nm,1.4s						
HNR	Honiara	50.94	157	LR	LR	11 06 43.7	
	comp=Z,42nm,18.9s,baz=357,slow=36						
EPYK	Eagle Plains	51.48	31	P	P	10 45 17.5	+2.2
HYT	Haines Junctio	52.32	38	P	P	10 45 24.2	+2.4
HYT				IAmb	IAmb	10 45 25.8	
	comp=Z,7.5nm,1.0s						
INK	Inuvik	52.33	28	P	P	10 45 22.7	+1.2
	comp=Z,1.3nm,0.5s,baz=284,slow=7.1,SNR=12						
INK	Inuvik	52.33	28	P	P	10 45 22.6	+1.2
INK				IAmb	IAmb	10 45 23.5	
	comp=Z,7.4nm,1.3s						
KK31	Karatay Array	52.72	299	P	P	10 45 24.7	-0.1
KK31				IAmb	IAmb	10 45 25.0	
	comp=Z,3.4nm,0.8s						
KKAR	Karatay Array	52.72	299	P	P	10 45 24.6	-0.2
KKAR				IAmb	IAmb	10 45 25.0	
	comp=Z,3.4nm,0.8s						
KKAR	Karatay Array	52.72	299	P	P	10 45 24.4	-0.4
ARU	Arti	55.32	318	P	P	10 45 43.5	0.0
ABKAR	Akbulak array	57.18	309	P	P	10 45 56.3	-0.6
ABKAR				IAmb	IAmb	10 45 56.9	
	comp=Z,5.3nm,0.6s						
FITZ	Fitzroy Crossi	58.91	199	P	P	10 46 09.7	+0.5
FITZ				IAmb	IAmb	10 46 13.5	
	comp=Z,5.1nm,1.1s						
WB0	Warramunga Arr	58.94	189	P	P	10 46 08.8	-0.6
SANVU	Saraoutou	58.99	152	P	P	10 46 09.9	0.0
WRAB	Tennant Creek	59.10	189	P	P	10 46 10.1	-0.5
WRAB				IAmb	IAmb	10 46 10.6	
	comp=Z,6.0nm,0.9s						
WR0	Warramunga Arr	59.11	188	P	P	10 46 10.1	-0.5
WB2	Warramunga Arr	59.11	189	P	P	10 46 09.9	-0.8
WRA	Warramunga Arr	59.12	189	P	P	10 46 10.0	-0.7
	comp=Z,4.2nm,0.5s,baz=6.4,slow=7.1,SNR=87						
WRA				PcP	PcP	10 46 59.3	+0.4
	comp=Z,0.7nm,0.6s,baz=5.7,slow=6.7,SNR=1.9						
RES	Resolute Bay	60.52	15	P	P	10 46 19.5	-0.2
	comp=Z,2.8nm,0.8s,baz=311,slow=6.0,SNR=9.6						
YKA	Yellowknife Ar	61.77	31	P	P	10 46 29.0	+0.7
	comp=Z,0.9nm,0.8s,baz=307,slow=6.0,SNR=13						
ARCES	ARCESS Array B	62.38	339	P	P	10 46 32.2	-0.1
	comp=Z,3.8nm,0.9s,baz=56,slow=8.1,SNR=6.8						
AS31	Alice Springs	62.84	189	P	P	10 46 35.5	-0.4
ASAR	Alice Springs	62.84	189	P	P	10 46 35.6	-0.3
	comp=Z,2.0nm,0.7s,baz=11,slow=6.4,SNR=35						
ASAR	Alice Springs	62.84	189	P	P	10 46 35.5	-0.4
DAG	Danmarks Havn	63.86	355	*i* P	P	10 46 41.2	-0.8
DAG	Danmarks Havn	63.86	355	*i* P	P	10 46 41.3	-0.8
FINES	FINESS Array B	67.37	332	P	P	10 47 04.4	-0.4
	comp=Z,4.2nm,0.6s,baz=36,slow=10,SNR=15						
SUMG	Summit	68.70	0	*i* P	P	10 47 10.1	-3.5
SUMG	Summit	68.70	0	P	P	10 47 14.2	+0.7
SUMG	Summit	68.70	0	*i* P	P	10 47 10.1	-3.5
KBZ	Khabaz	70.11	310	P	P	10 47 22.5	+0.3
	comp=Z,2.4nm,0.8s,baz=52,slow=8.6,SNR=5.6						
FFC	Flin Flon	71.69	33	P	P	10 47 32.0	+0.4
FFC				IAmb	IAmb	10 47 33.0	
	comp=Z,4.7nm,0.9s						
HFS	Hagfors	72.55	336	P	P	10 47 36.6	-0.1
	comp=Z,2.7nm,0.6s,baz=68,slow=5.5,SNR=11						
NB2	NORSAR Subarra	72.61	337	P	P	10 47 36.5	-0.6
	comp=Z,1.1nm,0.6s,baz=38,slow=6.2						
NOA	NORSAR Array B	72.61	337	P	P	10 47 36.8	-0.3
	comp=Z,1.1nm,0.5s,baz=38,slow=5.9,SNR=6.1						
AKASG	Malin Array Be	73.13	322	P	P	10 47 39.5	-0.7
	comp=Z,2.0nm,0.5s,baz=44,slow=6.4,SNR=9.1						
NVAR	Mina Array Bea	73.28	54	P	P	10 47 42.4	+0.7
	comp=Z,0.6nm,0.7s,baz=286,slow=5.8,SNR=5.6						
SFJD	Kangerlussuaq	73.86	5	LR	LR	11 23 08.6	
	comp=Z,110nm,18.9s,baz=58,slow=38						
FRB	Frobisher Bay	74.69	14	P	P	10 47 48.8	-0.4
	comp=Z,2.5nm,0.5s,baz=326,slow=6.6,SNR=8.1						
PDAR	Pinedale Array	75.82	46	P	P	10 47 57.1	+0.8
	comp=Z,0.8nm,0.6s,baz=241,slow=1.9,SNR=10						
PDAR	Pinedale Array	75.82	46	P	P	10 47 56.9	+0.6
BURAR	Bucovina Array	77.16	322	P	P	10 48 03.7	0.0
SRU	San Rafael Swe	77.62	50	P	P	10 48 07.5	+1.0
BRTR	Keskin Array B	78.03	312	P	P	10 48 08.7	0.0
	comp=Z,0.5nm,0.5s,baz=141,slow=37,SNR=2.2						
GERES	GERESS Array B	81.37	328	P	P	10 48 26.4	-0.2
	comp=Z,0.3nm,0.4s,baz=35,slow=4.9,SNR=5.4						
TXAR	Lajitas Array	88.40	53	P	P	10 49 03.0	+0.8
	comp=Z,0.5nm,0.6s,baz=296,slow=3.4,SNR=9.9						
H06N1	SOCORRO T-PHAS	90.65	65	T	T	12 30 26.0	
	SNR=12						
H06E1	SOCORRO T-PHAS	90.75	65	T	T	12 30 28.9	
	SNR=20						
BOSA	Boshof	127.56	261	PKP	PKPdf	10 55 14.4	-0.6
	comp=Z,2.7nm,0.8s,baz=58,slow=4.0,SNR=3.7						
LPAZ	La Paz	145.11	58	PKPbc	PKPbc	10 55 47.8	0.0
	comp=Z,1.2nm,0.5s,baz=331,slow=2.9,SNR=2.7						
H03N2	Juan Fernandez	146.53	93	T	T	13 40 11.2	
	baz=300,slow=77,SNR=7.2						
H03N3	Juan Fernandez	146.54	93	T	T	13 40 12.8	
	baz=300,slow=77,SNR=7.7						
H03N1	Juan Fernandez	146.55	93	T	T	13 40 26.5	
	baz=300,slow=77,SNR=7.6						

*JMA **24** 10:55:39.5±0.1, 39°.10N×142°.41E, h31^{km}±1^{km}, M4.0*

JMA Felt I J1.

*NIED **24** 10:55:39.6, 39°.10N×142°.41E, h31^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-3.08; $M_{\theta\theta}$0.66; $M_{\phi\phi}$2.43; $M_{r\theta}$-0.91; $M_{\theta\phi}$-1.90; $M_{\phi r}$5.21; Fault plane solution: $M_0$6.29000×10^{14} NP1: ϕ_s167.00000°, δ75.00000°, λ-78.00000°. NP2: ϕ_s307.00000°, δ20.00000°, λ-128.00000°.*

*NEIC **24** 10:55:41.9±2.5, 39°.09N±0°.05×142°.2E±0°.1, h35^{km}±2^{km}, mb4.4/10 Error ellipse: s-maj=15.8km s-min=3.8km*

az=116.0

*IDC **24** 10:55:42.2±2.0, 39°.03N×142°.42E, h50^{km}±19^{km}, mb3.6/16, mb1 3.8/22, mb1mx3.6/66, mbtmp3.9/22, ML3.4/5, MS2.8/3, Ms1 2.8/3, ms1mx2.5/39, Error ellipse: s-maj=17.8km s-min=10.8km az=108.0*

ISC 24 10:55:39.8±1.7, **39°.07N**±0°.04×**142°.37E**±0°.07, **h26**^{km}±11^{km}, **n69**, σ**1^{s}.50**/73, **mb4.1**/21, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	0.54	271	P	Pb	10 55 51.1	+0.4
OFUJ				S	Sb	10 55 59.0	+0.9
MIYJ	Miyakonagasawa	0.66	320	P	Pb	10 55 52.1	-0.6
MIYJ				S	Sb	10 56 00.7	-0.7
JKMT	Kesennumamotoy	0.74	250	P	Pn	10 55 54.0	-0.6
JKMT				S	Sb	10 56 04.1	+0.3
JMK	Ichinoseki	0.90	263	P	Pn	10 55 56.6	-0.1
JMK				S	Sn	10 56 08.7	-0.2
JOM	Ohasama	0.93	296	P	Pb	10 55 57.0	-0.1
JOM				S	Sn	10 56 09.2	-0.4
JTH	Tanohata	0.95	336	P	Pn	10 55 56.3	-1.1
JTH				*e*S	Sn	10 56 09.1	-1.1
JIO	Ouri	1.01	233	P	Pn	10 55 57.6	-0.6
JIO				S	Sn	10 56 10.2	-1.3
JKZ	Kuzumaki	1.21	319	P	Pn	10 56 01.1	0.0
JKZ				*e*S	Sb	10 56 16.8	-0.6
JRG	Rokugo	1.38	284	P	Pn	10 56 04.0	+0.6
JMM	Marumori	1.72	226		Pn	10 56 07.9	-0.2
JTM	Tenmabayashi	1.98	330		Pb	10 56 13.4	-1.7
ERM	Erimo	3.00	11	Pn	Pn	10 56 27.8	+2.2
JYT	Yasato	3.32	212	Pn	Pn	10 56 30.3	+0.2
JSD	Sado	3.38	253	Pn	Pn	10 56 31.4	+0.5
JEW	Eniwo	3.83	350	Pn	Pb	10 56 41.3	-5.2
MAJO	Matsushiro	4.15	234	Pn	Pn	10 56 44.6	+3.1
MAT	Matsushiro	4.15	234	P	Pn	10 56 44.2	+2.7
MAT				*e*S	Sb	10 57 36.3	-5.5
MJAR	Matsushiro Arr	4.15	234	P	Pn	10 56 44.1	+2.7
	0.9nm,0.3s,baz=40,slow=11,SNR=59						
MJAR				S	Sn	10 57 30.3	+1.1
	baz=102,slow=38,SNR=0.9						
MJAR				LR	LR	10 58 11.1	
	comp=Z,48nm,21.9s,baz=45,slow=36						
MJAR	Matsushiro Arr	4.15	234	Pn	Pn	10 56 43.8	+2.4
MJB9	Matsu-Tunnel	4.15	234	Pn	Pn	10 56 41.6	+0.1
JKA	Kamikawa-asahi	5.04	2		Pn	10 56 54.8	+1.1
ASAJ	Asahikawa	5.04	2	P	Pn	10 56 57.5	+3.7
	2.0nm,0.3s,baz=196,slow=8.2,SNR=8.7						
ASAJ				S	Sn	10 57 52.3	+1.1
	1.5nm,0.3s,baz=51,slow=26,SNR=1.5						
JGF	Kuroka	5.28	231	Pn	Pn	10 57 00.5	+3.4
INU	Inuyama	5.66	231	Pn	Pn	10 57 05.4	+3.2
JHJ	Hachijo jima 2	6.30	200	P	Pn	10 57 12.4	+1.5
	9.0nm,0.3s,baz=56,slow=18,SNR=1.7						
JHJ				S	Sn	10 58 21.6	-0.5
	11nm,0.3s,baz=78,slow=23,SNR=1.6						
JMN	Monobe	8.67	235	Pn	Pn	10 57 41.0	-2.6
USA0B	Ussuriysk Arra	9.30	307	Pn	Pn	10 57 53.1	+1.0
USRK	Ussuriysk Ar.	9.30	307	P	Pn	10 57 54.3	+2.2
	baz=116,slow=18,SNR=2.3						
KSRS	Korea Array	11.47	266	P	Pn	10 58 25.6	+3.8
	0.2nm,0.3s,baz=83,slow=14,SNR=7.4						
KSRS				LR	LR	11 02 16.6	
	comp=Z,68nm,18.5s,baz=335,slow=34						
KLR	Kul'dur	12.68	327	P	Pn	10 58 39.8	+1.5
	0.1nm,0.3s,baz=217,slow=13,SNR=1.7						
KLR				LR	LR	11 03 12.1	
	comp=Z,72nm,21.8s,baz=246,slow=35						
MA2	Magadan	21.21	12	P	P	11 00 22.6	-0.6
	3.1nm,0.5s,baz=189,slow=16,SNR=1.6						
SEY	Seymchan	24.65	11	P	P	11 00 57.0	-1.0
	3.0nm,0.7s,baz=198,slow=8.9,SNR=18						
SONM	Songino Array	27.34	300	P	P	11 01 22.4	-0.2
	0.4nm,0.5s,baz=92,slow=10,SNR=3.5						
H11N2	WAKE ISLAND Hy	28.63	125	T	T	11 31 55.2	
	baz=317,slow=75,SNR=103						
H11N1	WAKE ISLAND Hy	28.64	125	T	T	11 32 00.8	
	baz=317,slow=75,SNR=156						
H11N3	WAKE ISLAND Hy	28.64	125	T	T	11 32 00.1	
	baz=317,slow=75,SNR=99						
H11S1	WAKE ISLAND Hy	29.41	127	T	T	11 33 00.0	
	baz=318,slow=76,SNR=29						
H11S3	WAKE ISLAND Hy	29.41	127	T	T	11 32 55.5	
	baz=318,slow=76,SNR=30						
H11S2	WAKE ISLAND Hy	29.43	127	T	T	11 32 56.8	
	baz=318,slow=76,SNR=14						
ZALV	Zalesovo Beam	41.13	311	P	P	11 03 20.1	-1.3
	1.1nm,0.5s,baz=104,slow=9.5,SNR=5.4						
ZALV	Zalesovo Beam	41.13	311	P	P	11 03 20.5	-0.9
MK31	Makanchi Array	43.70	300	P	P	11 03 43.2	+0.7
MK31				IAmb	IAmb	11 03 45.5	
	comp=Z,2.3nm,0.8s						
MKAR	Makanchi Array	43.70	300	P	P	11 03 42.8	+0.2
	comp=Z,2.2nm,0.7s,baz=84,slow=8.1,SNR=24						
MKAR	Makanchi Array	43.70	300	P	P	11 03 43.0	+0.4
IMAR	Indian Mountai	44.52	32	P	P	11 03 49.9	+1.1
KDAK	Kodiak Island	45.09	43	P	P	11 03 54.5	+1.1
KDAK				IAmb	IAmb	11 03 56.4	
	comp=Z,16nm,1.4s						
KURK	Kurchatov	45.29	307	P	P	11 03 55.4	+0.3
KURK				IAmb	IAmb	11 04 00.5	
	comp=Z,3.5nm,0.9s						
ILAR	Eielson Array	47.38	33	P	P	11 04 10.8	-0.5
	comp=Z,1.2nm,0.7s,baz=267,slow=6.2,SNR=18						
ILAR	Eielson Array	47.38	33	P	P	11 04 11.9	+0.6
BMAR	Burnt Mountain	48.19	30	P	P	11 04 20.0	+2.4
BCAR	Beaver Creek A	49.79	35	P	P	11 04 31.2	+1.2
EGAK	Eagle	49.82	33	P	P	11 04 30.6	+0.5
INK	Inuvik	52.23	28	P	P	11 04 47.8	-0.3
	comp=Z,0.8nm,0.4s,baz=282,slow=7.0,SNR=4.7						
INK	Inuvik	52.23	28	P	P	11 04 49.4	+1.3
INK				IAmb	IAmb	11 04 56.6	
	comp=Z,4.0nm,1.4s						
ARU	Arti	55.34	318	P	P	11 05 11.1	+0.1
	comp=Z,1.8nm,0.2s,baz=28,slow=5.4,SNR=3.4						
ABKAR	Akbulak array	57.22	309	P	P	11 05 24.9	+0.4
AKTO	Aktyubinsk	57.88	311	P	P	11 05 30.3	+1.1
	comp=Z,0.7nm,0.5s,baz=70,slow=13,SNR=3.7						
WB0	Warramunga Arr	59.00	189	P	P	11 05 36.9	-0.4
WB0				IAmb	IAmb	11 06 04.8	
	comp=Z,8.5nm,1.3s						
WRAB	Tennant Creek	59.17	189	P	P	11 05 37.9	-0.5
WRAB				IAmb	IAmb	11 05 51.1	
	comp=Z,9.1nm,1.2s						
WR0	Warramunga Arr	59.18	189	P	P	11 05 38.0	-0.4
WB2	Warramunga Arr	59.18	189	P	P	11 05 38.2	-0.3
WRA	Warramunga Arr	59.18	189	P	P	11 05 37.4	-1.2
	comp=Z,1.1nm,0.4s,baz=6.4,slow=7.2,SNR=30						
YKA	Yellowknife Ar	61.67	31	P	P	11 05 54.9	-0.2
	comp=Z,0.3nm,0.9s,baz=305,slow=5.6,SNR=6.7						
ASAR	Alice Springs	62.91	189	P	P	11 06 03.6	-0.2
	comp=Z,1.4nm,0.5s,baz=89,slow=7.9,SNR=40						
ASAR	Alice Springs	62.91	189	P	P	11 06 04.1	+0.3
AKASG	Malin Array Be	73.15	322	P	P	11 07 07.9	+0.1
	comp=Z,0.6nm,0.3s,baz=44,slow=6.3,SNR=3.0						
NVAR	Mina Array Bea	73.18	54	P	P	11 07 08.2	-0.3
	comp=Z,0.2nm,0.5s,baz=270,slow=7.2,SNR=4.3						
PDAR	Pinedale Array	75.71	46	P	P	11 07 22.7	-0.6
	comp=Z,0.4nm,0.6s,baz=277,slow=1.2,SNR=4.1						
TXAR	Lajitas Array	88.29	53	P	P	11 08 28.1	-1.2
	comp=Z,0.6nm,1.0s,baz=282,slow=1.2,SNR=3.8						

IDC 24 11:01:34.5±1.1, **19°.44N**×**120°.70E**, **h0**^{km}, **mb3.5**/5, **mb1 3.7**/5, **mb1mx3.4**/54, **mbtmp3.5**/5, **Error ellipse: s-maj=81.6km s-min=21.2km az=69.0, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	Songino Array	30.62	341	P	P	11 07 50.0	-0.5
	0.3nm,0.6s,baz=156,slow=11,SNR=2.1						
WRA	Warramunga Arr	41.36	160	P	P	11 09 21.0	-1.5
	0.7nm,0.6s,baz=343,slow=9.1,SNR=8.2						
MKAR	Makanchi Array	41.55	320	P	P	11 09 23.8	0.0
	0.4nm,0.6s,baz=112,slow=9.0,SNR=4.6						
ASAR	Alice Springs	44.74	163	P	P	11 09 50.9	+1.0
	0.5nm,0.5s,baz=340,slow=7.0,SNR=20						
YKA	Yellowknife Ar	87.50	22	P	P	11 14 24.3	+0.3
	0.2nm,0.8s,baz=325,slow=4.2,SNR=4.3						

IDC 24 11:37:04.2±2.3, **1°.87S**×**128°.32E**, **h0**^{km}, **mb3.2**/2, **mb1 3.4**/3, **mb1mx3.2**/42, **mbtmp3.2**/3, **ML3.2**/1, **Error ellipse: s-maj=154.2km s-min=28.1km az=68.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.90	162	P	P	11 41 26.0	-0.6
	0.1nm,0.3s,baz=341,slow=12,SNR=6.2						
ASAR	Alice Springs	22.33	166	P	P	11 42 04.3	+0.5
	0.6nm,0.5s,baz=350,slow=12,SNR=14						
MKAR	Makanchi Array	63.05	326	P	P	11 47 33.3	-0.1
	0.2nm,0.8s,baz=121,slow=7.6,SNR=2.6						

IDC 24 11:44:56.9±1.8, **4°.39N**×**37°.03E**, **h0**^{km}, **mb3.8**/2, **mb1 4.0**/4, **mb1mx3.4**/44, **mbtmp3.8**/4, **ML3.7**/2, **MS2.8**/1, **Ms1 2.8**/1, **ms1mx2.5**/34, **Error ellipse: s-maj=50.3km s-min=19.8km az=105.0, Ethiopia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMBO	Kilima Mbogo	5.49	178	Pn	Pn	11 46 21.6	+1.4
	1.2nm,0.3s,baz=357,slow=17,SNR=6.4						
KMBO				Sn	Sn	11 47 24.4	+0.2
	2.1nm,0.3s,baz=43,slow=22,SNR=2.1						
KMBO				Lg	Lg	11 47 49.3	
	17nm,0.3s,baz=259,slow=22,SNR=9.1						
KMBO				LR	LR	11 48 14.0	
	comp=Z,94nm,21.1s,baz=84,slow=36						
MBAR	Mbarara	8.01	232	Pn	Pn	11 46 55.1	+0.3
	2.0nm,0.3s,baz=104,slow=3.7,SNR=3.8						
MBAR				Sn	Sn	11 48 15.7	-10
	2.4nm,0.3s,baz=293,slow=19,SNR=4.6						
MBAR				Lg	Lg	11 49 01.0	
	12nm,0.3s,baz=309,slow=20,SNR=11						
ATD	Arta Tunnel	9.14	39	Lg	Lg	11 49 41.9	
	1.2nm,0.3s,baz=219,slow=19,SNR=2.2						
MKAR	Makanchi Array	57.49	35	P	P	11 54 47.1	-0.8
	1.0nm,0.9s,baz=235,slow=6.8,SNR=8.5						
CMAR	Chiang Mai Arr	62.00	72	P	P	11 55 20.1	+0.7
	0.5nm,0.4s,baz=275,slow=8.7,SNR=4.8						

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*JMA **24** 11:53:40.5±0.1, 23°.96N×122°.92E, h24^{km}±2^{km}, M2.0*

*TAP **24** 11:53:41.1, 24°.03N×122°.94E, h30^{km}, ML2.6, D*

ISC 24 11:53:41.1±1.1, **23°.99N**±0°.04×**122°.95E**±0°.03, **h28**^{km}±11^{km}, **n57**, σ**1^{s}.14**/108, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.46	360	P	Pb	11 53 50.3	-0.5
JYNG				*e*S	Sb	11 53 57.3	0.0
YOJ	Yonaguni jima	0.47	7	*i* P	Pb	11 53 50.8	-0.2
	baz=8.0						
YOJ				*i* S	Sb	11 53 57.7	0.0
	baz=8.0						
YOJ	Yonaguni jima	0.47	7	P	Pb	11 53 50.7	-0.2
YOJ				*e*S	Sb	11 53 57.7	0.0
HATJ	Hateruma jima	0.79	85	P	Pn	11 53 55.6	-0.8
HATJ				*e*S	Sb	11 54 07.2	+0.7
IRIF	Iriomote-Funau	0.79	64	P	Pn	11 53 56.0	-0.4
IRIF				*e*S	Sb	11 54 07.4	+0.7
JKRS	Kuro-shima	1.00	76	P	Pn	11 53 59.4	+0.1
JIJ	Ishigaki jima	1.15	71	P	Pn	11 54 01.6	+0.2
JIJ				S	Sn	11 54 16.8	+0.5
TWC	Suao	1.18	302	*e*P	Pn	11 54 02.1	+0.4
	baz=300						
TWC				*e*S	Sn	11 54 16.6	-0.2
	baz=300						
ENA	Nanau	1.18	292	*e*P	Pn	11 54 01.7	-0.1
	baz=289						
ENA				*e*S	Sn	11 54 15.9	-1.1
	baz=289						
NACB	Ninganchiao	1.25	279	*e*P	Pn	11 54 02.0	-0.8
	baz=261						
NACB				*e*S	Sn	11 54 17.8	-0.9
	baz=261						
NDS	Dongshan	1.29	300	*e*P	Pn	11 54 04.3	+1.0
	baz=298						
NDS				*e*S	Sb	11 54 21.4	+0.4
	baz=298						
TWB1	Santiao Chiao	1.34	319	*e*P	Pn	11 54 03.9	0.0
	baz=329						
TWB1				*e*S	Sn	11 54 18.9	-1.9
	baz=329						
ETLH	Xiulin Townshi	1.36	279	*e*P	Pn	11 54 04.3	0.0
	baz=264						
ETLH				*e*S	Sn	11 54 21.0	-0.4
	baz=264						
JISG	Ishigakijimahi	1.38	64	P	Pn	11 54 05.1	+0.6
TIPB	Shuangxi	1.41	314	*i* P	Pn	11 54 05.4	+0.4
	baz=312						
TIPB				*i* S	Sn	11 54 22.4	-0.3
	baz=312						
ENTT	Nioudou	1.42	297	*e*P	Pn	11 54 05.5	+0.4
	baz=295						
ENTT				*e*S	Sn	11 54 21.9	-0.8
	baz=295						
NDT	Datong Townshi	1.44	295	P	Pb	11 54 07.3	0.0
	baz=293						
NDT				S	Sb	11 54 25.3	0.0
	baz=293						
HGSD	Ruisui	1.48	251	P	Pn	11 54 04.7	-1.2
	baz=247						
HGSD				*e*S	Sn	11 54 21.9	-2.5
	baz=247						
NNSB	Datong	1.49	287	*e*P	Pn	11 54 06.4	+0.2
	baz=284						
NNSB				*e*S	Sn	11 54 25.3	+0.4
	baz=284						
NNSH	Datong	1.49	287	P	Pn	11 54 06.4	+0.2
	baz=284						
NNSH				S	Sn	11 54 24.9	+0.1
	baz=284						
WFSB	Wu-fen Shan	1.51	316	*e*P	Pn	11 54 05.8	-0.5
	baz=313						
WFSB				*e*S	Sn	11 54 24.7	-0.4
	baz=313						
NWLT	Wulai	1.53	301	*e*P	Pn	11 54 07.7	+1.0
	baz=299						
NWLT				*e*S	Sn	11 54 27.1	+1.4
	baz=299						
WHF	Hehuan Shan	1.54	276	P	Pn	11 54 06.9	-0.3
	baz=272						
WHF				*e*S	Sn	11 54 24.6	-1.9
	baz=272						
EHY	Hungye	1.57	252	*e*P	Pn	11 54 05.5	-1.6
	baz=249						
EHY				*e*S	Sn	11 54 23.8	-2.7
	baz=249						
FUSS	Fushou	1.58	280	*e*P	Pn	11 54 08.1	+0.7
	baz=263						
FUSS				*e*S	Sn	11 54 27.0	-0.1
	baz=263						
TWA	Mucha	1.58	309	*e*S	Sn	11 54 25.9	-1.0
	baz=319						
YHNB	Yeheng	1.58	296	P	Pn	11 54 08.2	+0.8
	baz=276						
YHNB				S	Sn	11 54 26.6	-0.4
	baz=276						
NSK	Sanguang	1.60	295	*e*P	Pn	11 54 08.2	+0.6
	baz=276						
NSK				*e*S	Sn	11 54 27.3	-0.1
	baz=276						
CHGB	Renai	1.62	273	*e*P	Pn	11 54 07.5	-0.5
	baz=269						
CHGB				*e*S	Sn	11 54 27.6	-0.6
	baz=269						
YULB	Yu-li	1.63	249	P	Pn	11 54 07.3	-0.7
	baz=235						
YULB				S	Sn	11 54 24.8	-3.2
	baz=235						
TWF1	Yuli	1.64	247	*e*P	Pn	11 54 06.4	-1.8
	baz=233						
TWF1				*e*S	Sn	11 54 27.2	-1.2
	baz=233						
VWDT	VWDT	1.67	262	P	Pn	11 54 08.2	-0.3
	baz=259						
VWDT				*e*S	Sn	11 54 27.2	-1.8
	baz=259						
CHKT	Chengkung	1.70	239	*e*S	Sn	11 54 26.1	-3.7
	baz=225						
FULB	Fuli	1.71	243	*e*P	Pn	11 54 09.6	+0.5
	baz=229						
FULB				*e*S	Sn	11 54 27.9	-2.2
	baz=229						
ANP	Anpu	1.76	313	*e*P	Pn	11 54 09.6	-0.2
	baz=310						
ANP				*e*S	Sn	11 54 29.8	-1.6
	baz=310						
SSLB	Suanglung	1.83	264	*e*P	Pn	11 54 11.7	+0.9
	baz=261						
SSLB				*e*S	Sn	11 54 32.2	-1.0
	baz=261						
WHP	Taichung City	1.85	279	*e*P	Pn	11 54 12.5	+1.5
	baz=265						
WHP				*e*S	Sn	11 54 34.4	+0.8
	baz=265						
SMLT	Sun Moon Lake	1.88	267	*e*P	Pn	11 54 12.0	+0.6
	baz=264						
SMLT				*e*S	Sn	11 54 32.5	-1.8
	baz=264						
LIOB	Emei	1.88	291	*e*P	Pn	11 54 10.5	-0.9
	baz=287						
LIOB				*e*S	Sn	11 54 35.2	+0.9
	baz=287						
NSTT	Nanjuang	1.89	290	*e*S	Sn	11 54 34.4	+0.1
	baz=286						
TYC	Yuchr	1.91	268	*e*P	Pn	11 54 13.6	+1.8
	baz=264						
TYC				*e*S	Sn	11 54 35.2	+0.1
	baz=264						
ALS	Alishan	2.02	257	*e*P	Pn	11 54 13.8	+0.2
	baz=253						
ALS				*e*S	Sn	11 54 37.8	-0.3
	baz=253						
CHN5	Tsauling	2.12	260	*e*P	Pn	11 54 16.6	+1.9
	baz=247						
CHN5				*e*S	Sn	11 54 41.3	+1.1
	baz=247						
STYT	Tauyuan	2.17	248	*e*P	Pn	11 54 15.9	+0.5
	baz=236						
STYT				*e*S	Sn	11 54 40.8	-0.7
	baz=236						
TPUB	Ta-pu	2.23	253	*e*P	Pn	11 54 17.4	+1.1
	baz=241						
TPUB				*e*S	Sn	11 54 44.0	+1.0
	baz=241						
CHN4	Tsaushan	2.25	254	*e*P	Pn	11 54 18.6	+2.1
	baz=241						
CHN4				*e*S	Sn	11 54 45.5	+2.1
	baz=241						
WTP	Ta-pu	2.27	251	*e*P	Pn	11 54 18.2	+1.5
	baz=240						
WTP				*e*S	Sn	11 54 45.2	+1.4
	baz=240						
ECL	Taimali	2.30	233	*e*P	Pn	11 54 18.3	+1.1
	baz=242						
ECL				*e*S	Sn	11 54 43.6	-1.0
	baz=242						
SLGT	Liugui	2.33	245	*e*P	Pn	11 54 18.6	+0.9
	baz=235						
SLGT				*e*S	Sn	11 54 46.8	+1.3
	baz=235						
SGST	Jiashian	2.35	248	*e*P	Pn	11 54 19.0	+1.1
	baz=235						
SGST				*e*S	Sn	11 54 46.5	+0.7
	baz=235						
CHN1	Nanshi	2.36	251	*e*P	Pn	11 54 18.9	+0.8
	baz=247						
CHN1				*e*S	Sn	11 54 46.5	+0.4
	baz=247						
TWK	Hsinying	2.37	253	*e*P	Pn	11 54 19.9	+1.8
	baz=240						
TWK				*e*S	Sn	11 54 47.3	+0.9
	baz=240						
SNST	Tainan City	2.38	252	*e*S	Sn	11 54 47.2	+0.7
	baz=239						
SSD	Sandimen	2.46	240	*e*P	Pn	11 54 20.4	+0.9
	baz=231						
SSD				*e*S	Sn	11 54 48.8	+0.2
	baz=231						
TSMG	Majia	2.47	239	*e*P	Pn	11 54 20.0	+0.5
	baz=230						
TSMG				*e*S	Sn	11 54 47.4	-1.5
	baz=230						
SCST	Cishan	2.51	244	*e*P	Pn	11 54 21.2	+1.2
	baz=233						
SCST				*e*S	Sn	11 54 51.7	+2.0
	baz=233						
MASBT	Mashibuluo	2.53	238	*e*P	Pn	11 54 20.7	+0.3
	baz=228						
MASBT				*e*S	Sn	11 54 51.1	+0.8
	baz=228						

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*SOME **24** 12:11:46.1, 42°.27N×79°.87E, h15^{km}*

*NNC **24** 12:11:46.5±2.3, 42°.32N×79°.76E, h0^{km}, mb2.7, mpv2.8, Error ellipse: s-maj=15.9km s-min=9.7km az=132.0*

*KRNET **24** 12:11:46.6±0.1, 41°.06N×79°.37E, mb2.2*

ISC 24 12:11:44.8±2.0, **42°.24N**±0°.07×**79°.84E**±0°.07, **h2**^{km}±12^{km}, **n18**, σ**0^{s}.49**/29, **9C-4D**, **Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	Shalkode	0.96	343	*e*P	Pg	12 12 02.8	-0.3
	4.9nm,0.2s						
SHLS				*e*S	Sg	12 12 15.0	-0.5
	14nm,0.3s						
UZB	Uzynbulak	1.09	327	*e*P	Pg	12 12 05.9	+0.2
	3.0nm,0.2s						
UZB				*e*S	Sg	12 12 20.1	+0.3
	8.2nm,0.2s						
PRZ	Przheval'sk	1.09	283	⇑*i*P	Pn	12 12 16.9	+10
	baz=34						
PRZ				⇑*i*S	Sn	12 12 39.2	+16
	baz=34						
PDGK	Podgornoye	1.12	347	⇑P	Pg	12 12 06.5	+0.3
	1.0nm,0.8s						
PDGK				⇑S	Sg	12 12 20.5	-0.2
	2.2nm,0.4s						
KTMS	Ketmen	1.26	17	*e*P	Pg	12 12 08.9	-0.1
	1.9nm,0.1s						
KTMS				*e*S	Sg	12 12 25.4	+0.1
	2.4nm,0.1s						
KTMS	Ketmen	1.26	17	P	Pg	12 12 09.1	+0.1
	1.9nm,0.1s						
KTMS				S	Sg	12 12 25.4	+0.1
	2.4nm,0.1s						
SATY	Saty	1.34	308	*e*P	Pb	12 12 11.5	+0.8
	0.9nm,0.1s						
SATY				*e*S	Sn	12 12 29.6	+0.5
	2.7nm,0.2s						
KPKS	Kokpek	1.49	326	*e*P	Pb	12 12 13.1	-0.2
	4.4nm,0.2s						
KPKS				*e*S	Sn	12 12 32.3	-0.5
	3.7nm,0.1s						
ANVS	Anan'yevo	1.70	289	⇑*i*P	Pg	12 12 25.6	+8.3
	baz=24						
ANVS				⇑*i*S	Sg	12 12 54.7	+15
	baz=24						
KDJ	Kajisay	1.98	268	⇑*i*P	Pg	12 12 23.0	+0.2
	baz=4.0						
KDJ				⇑*i*S	Sg	12 12 49.4	+1.0
	baz=4.0						
DJR	Jarkent	2.09	359	*e*P	Pb	12 12 24.2	+0.7
	0.5nm,0.1s						
DJR				*e*S	Sg	12 12 51.8	-0.2
	8.1nm,0.3s						
DJR	Jarkent	2.09	359	Pg	Pg	12 12 24.8	-0.1
	0.5nm,0.1s						
DJR				Lg	Lg	12 12 52.5	
	8.1nm,0.3s						
MNBS	Baschi	2.12	331	*e*P	Pb	12 12 24.4	+0.4
	3.7nm,0.1s						
MNBS				*e*S	Sg	12 12 51.9	-0.9
	12nm,0.3s						
MNBS	Baschi	2.12	331	Pg	Pb	12 12 24.4	+0.4
	3.7nm,0.1s						
MDOK	Medeo	2.25	295	Pn	Pn	12 12 22.9	-0.3
	1.7nm,0.5s						
MDOK				⇑Sn	Sn	12 12 52.4	+0.7
	0.8nm,0.3s						
ARXS	Arharly	2.46	324	Pg	Pb	12 12 30.1	+0.3
	4.6nm,0.2s						
ARXS				Lg	Lg	12 13 01.7	
	8.2nm,0.5s						
ULHL	Ulahol	2.67	271	⇓*i*P	Pb	12 12 32.9	-0.6
	baz=98						
ULHL				⇓*i*S	Sb	12 13 06.7	-0.1
	baz=98						
BOOM	Boomskoye usch	2.90	276	⇓*i*P	Pb	12 12 36.8	-0.6
	baz=0.0						
BOOM				⇓*i*S	Sb	12 13 13.0	-0.4
	baz=0.0						

SKO 24 12:36:08.7, 41°.38N×22°.29E, h3km, 2D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VAY	Valandovo	0.22	106	*i* Pg	Pg	12 36 12.2	-0.7
VAY				*i* Sg	Sg	12 36 16.3	+0.5
VAY				*e*Lg	Lg	12 36 21.5	
	comp=E,13nm,0.7s						
STIP	Stip	0.32	346	⇓*i*Pg	Pb	12 36 16.6	-0.5
STIP				*i* Sg	Sb	12 36 22.4	-0.4
STIP				*e*Lg	Lg	12 36 22.6	
	comp=E,3.5nm,0.3s						
GRG	Griva	0.43	169	⇓*i*Pg	Pg	12 36 17.5	+0.5
GRG				*i* Sg	Sb	12 36 24.6	-1.2
KNT	Kendrikon	0.51	115	*i* Pg	Pg	12 36 19.0	+0.6
KNT				*i* Sg	Sg	12 36 25.8	+0.8

IDC 24 12:36:50.1±1.5**, 34°.23N×25°.21E, h0km, mb3.8**/4**, mb1 3.8**/5**, mb1mx3.4**/40**, mbtmp3.8**/5**, ML3.5**/1**, Error ellipse: s-maj=29.6km s-min=14.7km az=73.0, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDI	Anoyia	1.09	346	Pg	Pg	12 37 11.2	+0.1
	3.1nm,0.3s,baz=259,slow=12,SNR=17						
IDI				Lg	Lg	12 37 26.4	
	8.1nm,0.3s,baz=208,slow=18,SNR=11						
GERES	GERESS Array B	16.93	333	Pn	P	12 40 49.5	-1.0
	0.1nm,0.3s,baz=140,slow=10,SNR=3.5						
HFS	Hagfors	26.99	347	P	P	12 42 32.7	-0.7
	2.6nm,0.9s,baz=127,slow=13,SNR=2.0						
TORD	Torodi Ar. Bea	29.93	231	P	P	12 43 00.3	+0.3
	0.4nm,0.6s,baz=43,slow=11,SNR=2.2						
MKAR	Makanchi Array	44.26	56	P	P	12 45 01.8	+0.4
	0.6nm,0.5s,baz=281,slow=6.2,SNR=9.1						
ZALV	Zalesovo Beam	45.62	46	P	P	12 45 11.4	-0.6
	0.9nm,0.5s,baz=278,slow=9.4,SNR=5.3						

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*IDC **24** 12:52:23.7±5.9, 35°.78N×72°.25E, h0km, mb3.5/2, mb1 3.8/4, mb1mx3.3/47, mbtmp3.7/4, ML3.5/2, Error ellipse: s-maj=131.2km s-min=39.3km az=154.0*

*NNC **24** 12:52:46.2±4.0, 37°.74N×71°.40E, h0km, mb4.1, mpv4.0, Error ellipse: s-maj=32.2km s-min=27.2km az=166.0*

ISC 24 12:52:37.3±0.9**, 37°.12N**±0°.07×**71°.46E**±0°.07**, h10km, n24, σ3s.08**/28**, 6C-2D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IUG	Iuzhnay	5.14	348	Pg	Pn	12 53 58.8	+4.3
	5.0nm,0.2s						
IUG				Lg	Lg	12 54 53.9	
	27nm,0.4s						
AML	Almayashu	5.30	18	P	Pn	12 54 00.1	+3.2
	SNR=50						
UCH	Uchtor	5.62	24	P	Pn	12 54 04.6	+3.2
	SNR=20						
EKS2	Erkin-Say	5.82	17	P	Pn	12 54 07.3	+3.5
	SNR=29						
AAK	Ala-Archa	5.99	22	P	Pn	12 54 09.8	+3.7
	SNR=24						
AAK	Ala-Archa	5.99	22	⇑P	Pn	12 54 09.7	+3.5
	15nm,0.5s						
AAK				⇑S	Sn	12 55 13.4	-1.4
	15nm,0.5s						
KK31	Karatay Array	6.02	353	⇑P	Pn	12 54 10.0	+3.5
	9.3nm,0.8s,baz=180,slow=14,SNR=35						
KK31				⇑Pg	Pb	12 54 15.6	-6.7
	1.8nm,0.4s,baz=174,slow=12,SNR=5.7						
KK31				⇓S	Sn	12 55 11.8	-3.7
	11nm,0.5s						
BRLS	Borolday	6.04	349	Pg	Pn	12 54 08.7	+2.0
	9.6nm,0.2s						
BRLS				Lg	Lg	12 55 10.8	
	13nm,0.7s						
KBK	Karagaybulak	6.15	25	P	Pn	12 54 12.6	+4.3
	SNR=7.2						
DHRM	DHARAMSHALA	6.28	139	*e*P	Pn	12 54 13.4	+3.2
DHRM				*e*S	Sn	12 55 19.6	-2.6
DHRM				IAML		12 55 23.7	
	comp=E,181nm,0.9s						
DHRM				IAML		12 55 24.1	
	comp=N,160nm,0.8s						
CHMS	Chumysh	6.39	22	P	Pn	12 54 14.9	+3.3
	SNR=6.9						
USP	Ospenovka	6.57	20	P	Pn	12 54 17.0	+3.0
	SNR=15						
TKM2	Tokmak 2	6.61	27	P	Pn	12 54 17.9	+3.2
	SNR=16						
TKM2	Tokmak 2	6.61	27	⇑P	Pn	12 54 17.7	+3.0
	comp=N,10nm,0.6s						
TKM2				⇓S	Sn	12 55 28.8	-1.4
	comp=N,8.4nm,0.9s						
SGDS	Sogindy	6.78	20	Pg	Pn	12 54 19.5	+2.6
	comp=N,15nm,0.5s						
SGDS				Lg	Lg	12 55 29.9	
	comp=N,13nm,0.7s						
DGS	Degeres	6.95	27	Pg	Pn	12 54 22.3	+2.9
	comp=N,10nm,0.6s						
DGS				Lg	Lg	12 55 33.8	
	comp=N,4.9nm,0.6s						
KRBS	Karabastau	7.32	25	Pg	Pn	12 54 26.6	+2.3
	comp=N,4.1nm,0.8s						
KRBS				Lg	Lg	12 55 41.3	
	comp=N,2.6nm,0.7s						
SMLA	Simla	7.62	140	*e*P	Pn	12 54 34.6	+6.3
SMLA				*e*S	Sn	12 55 50.6	-4.2
SMLA				IAML		12 55 54.8	
	comp=E,72nm,0.6s						
SMLA				IAML		12 55 55.5	
	comp=N,76nm,0.9s						
GEYT	Alibeck	10.63	278	Pn	Pn	12 55 10.1	+0.5
	comp=N,0.5nm,0.3s,baz=97,slow=12,SNR=2.1						
GEYT				Sn	Sn	12 57 07.6	-1.1
	comp=N,2.1nm,0.3s,baz=259,slow=30,SNR=7.9						
MK31	Makanchi Array	12.58	36	P	Pn	12 55 37.0	+0.7
	comp=N,1.5nm,0.7s,baz=225,slow=13,SNR=22						
MKAR	Makanchi Array	12.58	36	Pn	Pn	12 55 36.7	+0.4
	comp=N,0.1nm,0.3s,baz=226,slow=14,SNR=24						
AB31	Akbulak array	14.73	329	P	Pn	12 56 04.5	-1.1
	comp=N,0.2nm,0.3s,baz=157,slow=11,SNR=20						
AB31				⇑S	Sn	12 58 35.8	-13
	comp=N,1.1nm,0.5s						
ZALV	Zalesovo Beam	19.20	25	P	P	12 56 58.2	-3.0
	comp=N,1.1nm,0.6s,baz=224,slow=11,SNR=6.2						
YKA	Yellowknife Ar	80.61	3	P	P	13 04 44.7	-5.0
	comp=N,0.3nm,0.7s,baz=357,slow=5.3,SNR=5.2						

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*IDC **24** 12:54:08.8±2.0, 2°.17S×100°.25E, h0km, mb3.9/9, mb1 4.0/9, mb1mx3.7/46, mbtmp3.9/9, Error ellipse: s-maj=64.6km s-min=18.8km az=60.0*

*NEIC **24** 12:54:13.0±1.8, 2°.2S±0°.1×100°.0E±0°.1, h35km±2km, mb4.1/9, Error ellipse: s-maj=33.3km s-min=5.8km az=228.0*

ISC 24 12:54:11.9±1.3**, 2°.3S**±0°.2×**100°.0E**±0°.2**, h30km, n36, σ1s.02**/30**, mb4.1**/11**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNAI	Manna	3.64	125	Pn	Pn	12 55 06.3	+0.1
GSI	Gunungsitoli	4.28	326	Pn	Pn	12 55 14.1	-0.8
CISI	Cisompet, Garu	9.42	124	Pn	Pn	12 56 23.9	-1.9
KKM	Kota Kinabalu	18.21	63		P	12 58 21.8	-1.0
KKM				IAmb	IAmb	12 58 28.1	
	comp=Z,21nm,1.3s						
CMAR	Chiang Mai Arr	20.62	357	P	P	12 58 48.5	-0.5
	comp=Z,1.3nm,0.6s,baz=187,slow=9.8,SNR=15						
CMAR	Chiang Mai Arr	20.62	357	P	P	12 58 48.1	-0.9
H08S2	Diego Garcia H	27.87	258	T	T	13 28 51.8	
	baz=81,slow=76,SNR=80						
H08S3	Diego Garcia H	27.88	258	T	T	13 28 45.2	
	baz=81,slow=76,SNR=148						
H08S1	Diego Carcia H	27.89	258	T	T	13 28 36.0	
	baz=81,slow=76,SNR=40						
H01W3	Cape Leeuwin H	35.03	159	T	T	13 38 00.5	
	baz=335						
H01W2	Cape Leeuwin H	35.04	159	T	T	13 37 54.9	
	baz=335						
H01W1	Cape Leeuwin H	35.05	159	T	T	13 37 49.8	
	baz=335						
WB0	Warramunga Arr	37.87	120	P	P	13 01 26.7	+0.1
WRA	Warramunga Arr	37.89	120	P	P	13 01 26.4	-0.2
	comp=Z,1.1nm,0.4s,baz=305,slow=9.1,SNR=25						
WRA	Warramunga Arr	37.89	120	P	P	13 01 26.5	-0.2
WRAB	Tennant Creek	37.90	120	P	P	13 01 27.4	+0.6
WRAB				IAmb	IAmb	13 01 47.1	
	comp=Z,4.5nm,1.1s						
WB2	Warramunga Arr	37.90	120	P	P	13 01 26.9	+0.1
WR0	Warramunga Arr	38.07	120	P	P	13 01 28.5	+0.3
WR0				IAmb	IAmb	13 01 53.3	
	comp=Z,3.9nm,1.3s						
ASAR	Alice Springs	39.13	126	P	P	13 01 36.9	-0.2
	comp=Z,0.8nm,0.7s,baz=298,slow=8.3,SNR=9.7						
KSRS	Korea Array	47.27	31	P	P	13 02 42.4	-0.1
	comp=Z,0.7nm,0.5s,baz=223,slow=8.1,SNR=5.7						
SONM	Songino Array	50.21	6	P	P	13 03 07.3	+2.2
	comp=Z,0.9nm,0.4s,baz=190,slow=10.0,SNR=12						
SONM	Songino Array	50.21	6	P	P	13 03 07.7	+2.5
SONM				IAmb	IAmb	13 03 08.7	
	comp=Z,1.1nm,0.9s						
MK31	Makanchi Array	51.28	344	P	P	13 03 14.6	+1.5
MKAR	Makanchi Array	51.28	344	P	P	13 03 14.3	+1.2
	comp=Z,1.0nm,0.6s,baz=150,slow=8.1,SNR=13						
MKAR	Makanchi Array	51.28	344	P	P	13 03 14.2	+1.1
USRK	Ussuriysk Ar.	54.41	28	P	P	13 03 35.2	-1.1
	comp=Z,1.3nm,0.5s,baz=192,slow=2.0,SNR=7.4						
USRK	Ussuriysk Ar.	54.41	28	P	P	13 03 36.9	+0.7
ZAA0	Zalesovo Array	57.42	349	P	P	13 03 58.6	+0.9
ZAA0				IAmb	IAmb	13 03 59.2	
	comp=Z,2.8nm,1.0s						
ZALV	Zalesovo Beam	57.42	349	P	P	13 03 58.4	+0.7
	comp=Z,1.3nm,0.7s,baz=170,slow=4.5,SNR=8.8						
ZALV	Zalesovo Beam	57.42	349	P	P	13 03 57.7	+0.1
KLR	Kul'dur	58.19	24	P	P	13 04 02.4	-0.7
	comp=Z,0.6nm,0.6s,baz=210,slow=6.1,SNR=4.6						
ABKAR	Akbulak array	61.85	331	P	P	13 04 27.9	-0.4
TX31	Lajitas Ar. Si	144.94	38		PKPdf	13 13 47.8	+0.7
TX32	Lajitas Array	144.94	38		PKPdf	13 13 46.7	-0.3
TXAR	Lajitas Array	144.94	38	PKP	PKPdf	13 13 47.7	+0.7
	comp=Z,1.7nm,0.6s,baz=285,slow=1.0,SNR=26						
TXAR	Lajitas Array	144.94	38		PKPdf	13 13 47.5	+0.5

NNC 24 13:01:21.1±4.2**, 39°.51N×67°.47E, h0km, mb3.7, mpv3.4, 1C, Error ellipse: s-maj=29.5km s-min=21.4km az=28.0, Southeastern Uzbekistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IUG	Iuzhnay	3.28	36	Pg	Pb	13 02 20.7	+0.5
	9.8nm,0.6s						
IUG				Lg	Lg	13 03 06.2	
	14nm,0.7s						
KK31	Karatay Array	4.26	32	Pg	Pb	13 02 39.0	+2.1
	1.3nm,0.5s,baz=213,slow=17,SNR=7.5						
KK31				⇑Lg	Lg	13 03 35.0	
	1.7nm,0.4s,baz=214,slow=29						
MRKS	Merke	5.42	51	Pg	Pn	13 02 43.4	+0.2
	2.9nm,0.5s						
MRKS				Lg	Lg	13 03 45.1	
	4.2nm,0.5s						
SGDS	Sogindy	6.67	51	Pg	Pb	13 03 09.8	-8.1
	1.9nm,0.5s						

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*IDC **24** 13:02:46.6±1.7, 39°.58N×143°.36E, h0km, mb3.5/5, mb1 3.6/9, mb1mx3.4/51, mbtmp3.5/9, ML3.0/2, Error ellipse: s-maj=36.2km s-min=23.3km az=113.0*

*JMA **24** 13:02:47.7±0.3, 39°.61N×143°.38E, h18km±4km, M3.6*

*NIED **24** 13:02:47.8, 39°.62N×143°.38E, h18km, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}1.32; $M_{\theta\theta}$0.33; $M_{\phi\phi}$-1.65; $M_{r\theta}$1.55; $M_{\theta\phi}$-0.56; $M_{\phi r}$2.44; Fault plane solution: $M_0$3.30000×10^{14} NP1:ϕ_s31.00000°, δ77.00000°, λ101.00000°. NP2:ϕ_s172.00000°, δ17.00000°, λ52.00000°.*

ISC 24 13:02:48.6±1.1**, 39°.63N**±0°.06×**143°.30E**±0°.08**, h11km, n30, σ0s.89**/28**, mb3.5**/5**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MIYJ	Miyakonagasawa	1.15	268	P	Pn	13 03 09.4	-1.1
JTH	Tanohata	1.15	286	P	Pn	13 03 09.9	-0.7
JTH				*e*S	Sb	13 03 26.2	+0.8
JKEN	Kujiedanarisaw	1.35	296	P	Pn	13 03 12.4	-1.0
OFUJ	Ofunato	1.38	247	P	Pn	13 03 13.1	-0.7
OFUJ				*e*S	Sn	13 03 32.0	0.0
JANG	Nango	1.56	299	P	Pn	13 03 15.6	-0.6
JOM	Ohasama	1.56	265	P	Pn	13 03 16.3	0.0
JMK	Ichinoseki	1.75	248	P	Pn	13 03 18.7	-0.2
JIO	Ouri	1.92	233	P	Pn	13 03 20.3	-0.9
JTM	Tenmabayashi	2.06	305	P	Pn	13 03 23.4	+0.2
JRG	Rokugo	2.08	264	P	Pn	13 03 23.8	+0.5
JAH	Hinai	2.12	286	P	Pn	13 03 24.6	+0.6
JYK	Kaneyama	2.39	254	P	Pn	13 03 28.1	+0.4
JOU	Okura	2.41	239	P	Pn	13 03 27.9	-0.1
JNBK	Urakawa-nobuka	2.68	351	P	Pn	13 03 32.7	+1.1
ASAJ	Asahikawa	4.51	354	Pn	Pn	13 03 57.9	+1.0
	1.1nm,0.3s,baz=190,slow=9.7,SNR=25						
ASAJ				Sn	Sn	13 04 46.9	-2.4
	0.1nm,0.3s,baz=264,slow=29,SNR=1.3						
MJAR	Matsushiro Arr	5.06	234	Pn	Pn	13 04 05.6	+1.2
	0.2nm,0.3s,baz=42,slow=11,SNR=12						
MAT	Matsushiro	5.07	234	P	Pn	13 04 05.5	+1.1
MAT				*e*S	Sn	13 05 04.3	+1.4
KSRS	Korea Array	12.24	265	Pn	Pn	13 05 42.6	-0.1
	baz=72,slow=17,SNR=1.0						
PETK	Petropavlovsk-	16.70	31	Pn	Pn	13 06 42.4	0.0
	baz=210,slow=20,SNR=2.9						
SEY	Seymchan	23.97	10	P	P	13 08 03.0	+0.4
	0.3nm,0.3s,baz=100,slow=7.6,SNR=4.2						
SONM	Songino Array	27.69	299	P	P	13 08 37.3	+0.7
	1.0nm,0.8s,baz=100,slow=10,SNR=5.8						
H11N2	WAKE ISLAND Hy	28.37	127	T	T	13 39 00.9	
	baz=316						
H11N1	WAKE ISLAND Hy	28.38	128	T	T	13 39 36.2	
	baz=316,slow=74						
H11N3	WAKE ISLAND Hy	28.39	127	T	T	13 39 42.4	
	baz=316,slow=74						
H11S1	WAKE ISLAND Hy	29.19	129	T	T	13 39 55.4	
	baz=316						
H11S3	WAKE ISLAND Hy	29.19	129	T	T	13 40 23.4	
	baz=316						
H11S2	WAKE ISLAND Hy	29.21	129	T	T	13 40 08.8	
	baz=316						
ZALV	Zalesovo Beam	41.32	310	P	P	13 10 33.7	-0.3
	0.5nm,0.5s,baz=109,slow=7.9,SNR=2.7						
MKAR	Makanchi Array	44.05	300	P	P	13 10 55.7	-0.6
	0.4nm,0.5s,baz=84,slow=9.0,SNR=7.5						
WRA	Warramunga Arr	59.85	190	P	P	13 12 53.3	-0.9
	0.4nm,0.8s,baz=1.4,slow=6.9,SNR=2.1						

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*IDC **24** 13:11:03.0±2.2, 4°.15S×136°.82E, h0km, mb3.5/1, mb1 4.0/5, mb1mx3.6/31, mbtmp3.8/5, ML3.8/4, Error ellipse: s-maj=64.3km s-min=29.7km az=78.0*

*NEIC **24** 13:11:07.6±2.2, 4°.3S±0°.1×137°.1E±0°.1, h35km±2km, mb4.1/8, Error ellipse: s-maj=28.8km s-min=16.8km az=49.0*

ISC 24 13:11:08.2±1.3**, 4°.4S**±0°.1×**137°.0E**±0°.1**, h35km, n16, σ1s.30**/18**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	Fak Fak	4.96	288	Pn	Pn	13 12 20.9	+0.7
COEN	Coen	11.26	148	Pn	Pn	13 13 46.2	-0.5
WB0	Warramunga Arr	15.44	189	P	Pn	13 14 44.0	+0.5
WR0	Warramunga Arr	15.61	189		Pn	13 14 45.6	-0.1
WR0				IAmb	IAmb	13 14 53.4	
	comp=Z,8.3nm,0.7s						
WRAB	Tennant Creek	15.61	189	Pn	Pn	13 14 45.1	-0.6
WRAB				IAmb	IAmb	13 14 53.1	
	comp=Z,12nm,0.7s						
WB2	Warramunga Arr	15.62	189		Pn	13 14 45.5	-0.3
WB2				IAmb	IAmb	13 14 53.2	
	comp=Z,11nm,0.7s						
WRA	Warramunga Arr	15.62	189	Pn	Pn	13 14 46.1	+0.2
	comp=Z,0.4nm,0.3s,baz=4.3,slow=13,SNR=19						
WRA				Sn	Sn	13 17 36.5	-1.4
	comp=Z,0.2nm,0.3s,baz=9.7,slow=22,SNR=2.9						
WRA	Warramunga Arr	15.62	189		Pn	13 14 45.2	-0.6
FITZ	Fitzroy Crossi	17.53	218	P	P	13 15 11.7	+1.0
	comp=Z,0.2nm,0.3s,baz=46,slow=14,SNR=5.1						
FITZ	Fitzroy Crossi	17.53	218	Pn	Pn	13 15 11.0	+1.1
CTA	Charters Tower	17.99	151	P	P	13 15 17.3	+1.4
	comp=Z,0.1nm,0.3s,baz=318,slow=12,SNR=1.5						
CTAO	Charters Tower	17.99	151	P	P	13 15 16.9	+1.1
CTAO				IAmb	IAmb	13 15 38.5	
	comp=Z,10nm,1.4s						
AS31	Alice Springs	19.34	189		Pn	13 15 33.5	+1.5
AS31				IAmb	IAmb	13 15 34.9	
	comp=Z,3.5nm,0.4s						
ASAR	Alice Springs	19.34	189	P	Pn	13 15 34.3	+2.2
	comp=Z,1.0nm,0.3s,baz=16,slow=10,SNR=78						
ASAR				S	S	13 19 06.4	-1.5
	comp=Z,0.1nm,0.3s,baz=4.8,slow=26,SNR=2.4						
ASAR	Alice Springs	19.34	189	Pn	Pn	13 15 34.0	+1.9
MKAR	Makanchi Array	70.12	323	P	P	13 22 15.3	-1.7
	comp=Z,0.3nm,0.6s,baz=104,slow=8.2,SNR=2.5						

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*BJI **24** 13:11:22.3±0.0, 12°.86N×51°.44E, h8km, mB5.2/35, mb4.7/61, Ms4.8/11, Ms7 4.4/9*

*IDC **24** 13:11:23.9±0.4, 13°.02N×51°.08E, h0km, mb4.5/31, mb1 4.6/34, mb1mx4.5/57, mbtmp4.5/34, ML4.2/3, MS4.0/19, Ms1 4.0/19, ms1mx3.8/43, Error ellipse: s-maj=12.7km s-min=10.6km az=120.0*

*NEIC **24** 13:11:24.4±1.8, 13°.03N±0°.06×51°.14E±0°.05, h10km±1km, mb4.9/87, Error ellipse: s-maj=12.4km s-min=2.8km az=138.0*

*OMAN **24** 13:11:26.7, 13°.21N×51°.34E, h10km, mb5.3/1, ml4.3/3*

*GCMT **24** 13:11:26.4±0.5, 13°.32N±0°.03×50°.71E±0°.04, h12km±1km, MW4.8/79, Moment Tensor Solution. s14,c14; s79,c93; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.29±.14; $M_{\theta\theta}$-1.30±.10; $M_{\phi\phi}$0.00±.08; $M_{r\theta}$-0.89±.28; $M_{\theta\phi}$0.11±.05; $M_{\phi r}$-1.10±.34; Best double couple: $M_0$1.86800×10^{16} NP1:ϕ_s113.00000°, δ32.00000°, λ137.00000°. NP2: ϕ_s241.00000°, δ69.00000°, λ66.00000°. Principal axes: T 2.1230, Plg59.0000°, Azm117.0000°; N -0.5100, Plg22.0000°, Azm251.0000°; P -1.6140, Plg20.0000°, Azm349.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 24 13:11:25.6±0.3**, 13°.07N**±0°.05×**51°.15E**±0°.05**, h16km, n228, σ1s.39**/241**, mb4.8**/104**, MS4.0**/19**, 1C-2D, Eastern Gulf of Aden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCY	Socotra	2.91	107	Pn	Pn	13 12 09.3	-2.0
SOCY	Socotra	2.91	107	P	Pn	13 12 09.8	-1.6
	SNR=16						
SOCY				S	Sn	13 12 42.9	-3.1
ABTO	Aybut	4.74	26	P	Pn	13 12 34.9	-1.6
	SNR=8.0						
ABTO				S	Sn	13 13 26.5	-4.8
RBK	Rabkut	5.31	33	P	Pn	13 12 43.8	-0.5
	SNR=12						
RBK				S	Sn	13 13 42.6	-2.6
WHFO	Wadi Hawf	5.45	27	P	Pn	13 12 44.7	-1.6
	SNR=12						
DMTO	DMTO	5.90	38	P	Pn	13 12 52.9	+0.5
DMTO				S	Sn	13 13 58.7	-1.0
DOK	Doka	6.22	27	P	Pn	13 12 55.4	-1.4
	SNR=9.4						
DOK				S	Sn	13 14 06.2	-1.5
ATD	Arta Tunnel	8.26	260	Pn	Pn	13 13 24.2	-0.7
	20nm,0.3s,baz=207,slow=20,SNR=26						
ATD				LR	LR	13 15 47.0	
	comp=Z,897nm,18.8s,baz=117,slow=32						
ATD	Arta Tunnel	8.26	260	Pn	Pn	13 13 23.7	-1.1
RAYN	Ar Rayn	11.70	334	Pn	Pn	13 14 11.8	-0.2
WSAR	Wadi Sarin	12.36	34	Pn	Pn	13 14 22.6	+1.5
	0.2nm,0.3s,baz=263,slow=16,SNR=1.6						
WSAR				LR	LR	13 18 48.0	
	comp=Z,870nm,20.0s,baz=234,slow=36						
UOSS	Minazif	12.74	21	Pn	Pn	13 14 26.0	-0.3
RDF	Al-Radifah	16.13	349	*e*P		13 15 13.7	
UMR	Umm Al-Rimmam	16.71	350	*e*P		13 15 20.5	
RST	Umm Al-Ruwaisa	16.80	347	*e*P		13 15 21.4	
MIB	Mutribah	17.02	349	*e*P		13 15 24.4	
KMBO	Kilima Mbogo	19.72	225	P	P	13 15 53.6	-1.3
	0.7nm,0.3s,baz=32,slow=12,SNR=7.8						
KMBO				LR	LR	13 23 22.9	
	comp=Z,333nm,18.0s,baz=82,slow=37						
EIL	Elat	22.32	320	P	P	13 16 24.2	+1.5
	8.8nm,1.0s,baz=128,slow=12,SNR=3.1						
EIL				LR	LR	13 24 48.0	
	comp=Z,492nm,18.6s,baz=137,slow=36						
ASF	Jabal al Asfar	23.07	328	LR	LR	13 24 30.9	
	comp=Z,5.4nm,20.4s,baz=82,slow=34						
HRA	Herat	23.50	24	P	P	13 16 34.8	-0.3
HRA				IAmb	IAmb	13 16 39.1	
	comp=Z,72nm,1.5s						
MBAR	Mbarara	24.37	238	P	P	13 16 44.3	+0.8
	comp=Z,4.1nm,0.2s,baz=73,slow=19,SNR=1.7						
MBAR	Mbarara	24.37	238	P	P	13 16 42.9	-0.6
MMAI	Mount Meron Ar	24.52	327	P	P	13 16 46.9	+2.4
	comp=Z,1.8nm,0.5s,baz=155,slow=6.1,SNR=5.3						
MMAI				LR	LR	13 26 20.5	
	comp=Z,196nm,18.7s,baz=110,slow=37						
GEYT	Alibeck	25.53	13	P	P	13 16 54.8	+1.2
	comp=Z,12nm,0.9s,baz=207,slow=9.6,SNR=18						
GEYT	Alibeck	25.53	13	P	P	13 16 54.1	+0.5
GYA0B	ALIBECK ARRAY	25.53	13	P	P	13 16 54.7	+1.1
GYA0B				IAmb	IAmb	13 16 58.1	
	comp=Z,37nm,1.1s						
MARD	Mardin	25.87	341	P	P	13 16 56.3	-0.5
MARD				IAmb	IAmb	13 17 01.3	
	comp=Z,44nm,1.2s						
GEVA	Gevas	26.15	345	P	P	13 17 00.3	+0.9
GEVA				IAmb	IAmb	13 17 05.0	
	comp=Z,58nm,1.3s						
HYB	Hyderabad	26.78	77	*i* P	P	13 17 07.0	+1.8
KBL	Kabul	26.84	34	P	P	13 17 06.0	+0.3
KBL				IAmb	IAmb	13 17 14.3	
	comp=Z,26nm,1.2s						
GAZ	Gaziantep	27.05	335	P	P	13 17 07.8	+0.3
GAZ				IAmb	IAmb	13 17 34.7	
	comp=Z,22nm,1.2s						
GNI	Garni	27.56	349	P	P	13 17 14.1	+2.0
	comp=Z,44nm,1.3s,baz=147,slow=3.0,SNR=14						
GNI				LR	LR	13 30 22.7	
	comp=Z,973nm,18.1s,baz=176,slow=41						
GNI	Garni	27.56	349	P	P	13 17 13.2	+1.1
GNI				IAmb	IAmb	13 17 25.6	
	comp=Z,37nm,1.0s						
NIL	Nilore	28.72	41	P	P	13 17 23.7	+1.4
PALK	Pallekele	29.64	98	LR	LR	13 26 59.1	
	comp=Z,105nm,18.2s,baz=51,slow=32						
ELL	Elmali	30.31	325	P	P	13 17 36.7	+0.2
BRTR	Keskin Array B	30.72	333	P	P	13 17 41.3	+1.2
	comp=Z,7.6nm,1.2s,baz=143,slow=9.1,SNR=11						
BRTR				LR	LR	13 30 16.2	
	comp=Z,213nm,18.8s,baz=133,slow=37						
BRTR	Keskin Array B	30.72	333	P	P	13 17 40.0	-0.1
BR131	Keskin Array S	30.72	333	P	P	13 17 39.8	-0.3
BR131				IAmb	IAmb	13 17 42.7	
	comp=Z,22nm,1.5s						
KBZ	Khabaz	31.37	348	P	P	13 17 47.5	+1.9
	comp=Z,7.0nm,1.1s,baz=160,slow=5.6,SNR=11						
KBZ				LR	LR	13 32 27.9	
	comp=Z,850nm,20.8s,baz=154,slow=40						
KIV	Kislovodsk	31.63	348	P	P	13 17 48.4	+0.4
KIV				IAmb	IAmb	13 17 51.1	
	comp=Z,36nm,1.5s						
OPO	Ambohidratompo	31.68	187	P	P	13 17 47.4	-1.3
	comp=Z,2.0nm,0.6s,baz=325,slow=16,SNR=1.7						
MANT	Manisa	32.30	326	P	P	13 17 54.5	+0.4
IUG	Iuzhnay	33.30	26	*e*P	P	13 18 03.4	+0.7
	comp=Z,11nm,1.2s,baz=26						
BRLS	Borolday	33.94	25	*e*P	P	13 18 07.1	-1.1
	comp=Z,15nm,1.2s,baz=25						
KSH	Kashi	34.26	35	P	P	13 18 10.4	-0.8
KSH				PcP	PcP	13 20 50.1	+2.6
KSH				S	S	13 23 30.8	-6.9
KSH				PcS	PcS	13 24 33.8	-0.1
KSH				pmax	pmax		
	comp=Z,8.0nm,1.2s						
KSH				pmax	pmax		
	comp=Z,49nm,4.4s						
KSH				LR	LR		
	comp=Z,340nm,7.5s						
KSH				LR	LR		
	comp=Z,330nm,6.5s						
KSH				LR	LR		
	comp=Z,1μm,7.4s						
KK31	Karatay Array	34.28	26	P	P	13 18 12.5	+1.3
KKAR	Karatay Array	34.28	26	P	P	13 18 12.3	+1.2
KKAR	Karatay Array	34.28	26	P	P	13 18 12.4	+1.2

KKAR				IAmb	IAmb	13 18 16.4	
	comp=Z,9.8nm,1.2s						
DZA	Taraz	34.46	27	*e*P	P	13 18 14.5	+1.8
	baz=27						
GKN	Gorkha	34.56	59	*e*P	P	13 18 15.6	+1.6
	comp=Z,93nm,1.4s						
DMN	Daman	34.84	60	*e*P	P	13 18 18.5	+2.1
	comp=Z,43nm,1.2s						
AML	Almayashu	34.96	30	P	P	13 18 20.6	+3.2
	SNR=9.4						
KKN	Kakani	35.04	60	*e*P	P	13 18 20.0	+1.9
	comp=Z,60nm,1.1s						
PKIN	Phulchoki	35.07	60	*e*P	P	13 18 19.6	+1.1
	comp=Z,62nm,1.4s						
PKI	Pulchoki	35.08	60	*e*P	P	13 18 20.0	+1.4
ALN	Alexandroupoli	35.37	326	P	P	13 18 21.2	+0.7
ALN				IAmb	IAmb	13 18 23.4	
	comp=Z,34nm,1.3s						
UCH	Uchtor	35.43	31	P	P	13 18 24.6	+2.9
	SNR=19						
GUN	Gumba	35.58	60	*e*P	P	13 18 24.7	+1.8
	comp=Z,137nm,1.3s						
AAK	Ala-Archa	35.73	30	P	P	13 18 27.7	+3.8
	SNR=9.7						
AAK	Ala-Archa	35.73	30	P	P	13 18 23.4	-0.4
AAK				IAmb	IAmb	13 18 33.0	
	comp=Z,34nm,1.4s						
RAMN	Ramite	35.92	62	*e*P	P	13 18 27.1	+1.3
	comp=Z,74nm,1.6s						
KBK	Karagaybulak	35.97	30	P	P	13 18 29.2	+3.4
	SNR=12						
CHMS	Chumysh	36.12	30	P	P	13 18 30.2	+3.2
	SNR=8.5						
LSZ	Lusaka	36.18	220	P	P	13 18 28.5	+0.6
	comp=Z,4.4nm,0.9s,baz=36,slow=10.0,SNR=6.2						
LSZ	Lusaka	36.18	220	P	P	13 18 26.5	-1.4
ULHL	Ulahol	36.32	32	P	P	13 18 32.7	+3.7
	SNR=24						
SGDS	Sogindy	36.41	29	*e*P	P	13 18 31.0	+1.5
	baz=29						
TKM2	Tokmak 2	36.48	31	P	P	13 18 33.4	+3.1
	SNR=6.3						
ODAN	Odare	36.58	62	*e*P	P	13 18 32.7	+1.3
ABKAR	Akbulak array	36.81	10	P	P	13 18 32.5	-0.2
ABKAR				IAmb	IAmb	13 18 35.5	
	comp=Z,42nm,1.3s						
ABKAR	Akbulak array	36.81	10	P	P	13 18 32.9	+0.2
TIRR	Tirgusor	36.83	333	P	P	13 18 33.0	+0.1
LIT	Litokhoron	36.87	322	P	P	13 18 31.8	-1.6
TAPN	Taplejung	36.98	62	*e*P	P	13 18 35.8	+0.9
TNSS	Tian-Shan	37.25	32	*e*P	P	13 18 37.8	+0.7
	baz=32						
AAA	Alma-Ata	37.36	32	*e*P	P	13 18 39.2	+1.6
	baz=32						
BTLS	Baital	37.36	27	*e*P	P	13 18 38.8	+1.3
	baz=27						
MDOK	Medeo	37.39	32	*e*P	P	13 18 39.4	+1.4
	baz=32						
KUU	Kurty	37.56	30	*e*P	P	13 18 39.4	+0.2
	comp=Z,25nm,1.4s,baz=30						
VAY	Valandovo	37.60	324	*i* P	P	13 18 40.4	+0.8
CHKK	Chushkaly	37.86	31	*e*P	P	13 18 43.2	+1.4
	baz=31						
FNA	Florina	37.96	322	P	P	13 18 41.4	-1.3
FNA				IAmb	IAmb	13 18 44.4	
	comp=Z,21nm,1.2s						
SATY	Saty	38.03	33	*e*P	P	13 18 43.8	+0.4
	comp=Z,14nm,1.2s,baz=33						
STIP	Stip	38.06	324	*i* P	P	13 18 44.1	+0.6
VTS	Vitosha	38.08	326	P	P	13 18 42.7	-1.1
VTS				IAmb	IAmb	13 18 46.2	
	comp=Z,23nm,1.4s						
UZB	Uzynbulak	38.42	33	*e*P	P	13 18 46.1	-0.5
	baz=34						
KPKS	Kokpek	38.45	33	*e*P	P	13 18 47.3	+0.4
	comp=Z,20nm,1.1s,baz=33						
SHLS	Shalkode	38.66	34	*e*P	P	13 18 51.2	+2.5
	comp=Z,8.8nm,1.3s,baz=34						
TDK	Taldyqorghan	39.39	31	*e*P	P	13 18 55.7	+1.1
	comp=Z,40nm,1.3s,baz=31						
MATP	Matopo	40.05	214	P	P	13 19 00.4	-0.1
	comp=Z,3.2nm,0.8s,baz=38,slow=13,SNR=5.4						
SHL	Shillong	40.24	66	P	P	13 19 01.2	-0.9
SHL				IAmb	IAmb	13 19 04.4	
	comp=Z,25nm,1.3s						
LSA	Lhasa	40.52	59	P	P	13 19 03.4	-1.4
PBA	Port Blair	40.62	87	P	P	13 19 03.8	-1.4
BURAR	Bucovina Array	40.68	333	P	P	13 19 04.2	-1.2
BUR08	Bucovina Ar. S	40.71	333	P	P	13 19 04.5	-1.1
BRZS	Berezniki	40.82	21	*e*P	P	13 19 06.4	0.0
	baz=21						
AKASG	Malin Array Be	41.56	339	P	P	13 19 12.6	+0.2
	comp=Z,5.7nm,1.0s,baz=145,slow=7.5,SNR=19						
AKASG				PP	PP	13 20 50.5	+1.9
	comp=Z,0.4nm,0.4s,baz=139,slow=9.6,SNR=4.7						
AKASG				PcP	PcP	13 21 09.8	+0.2
	comp=Z,0.7nm,0.4s,baz=151,slow=2.2,SNR=4.7						
AKASG	Malin Array Be	41.56	339	P	P	13 19 12.0	-0.4
AKBB	Malin Array Si	41.56	339	P	P	13 19 11.7	-0.8
AKBB				IAmb	IAmb	13 19 14.1	
	comp=Z,35nm,1.5s						
MAKZ	Makanchi	42.44	31	P	P	13 19 20.1	+0.3
MAKZ				IAmb	IAmb	13 19 22.9	
	comp=Z,36nm,1.3s						
MK31	Makanchi Array	42.59	32	P	P	13 19 21.6	+0.7
MK31				IAmb	IAmb	13 19 24.1	
	comp=Z,25nm,1.2s						
MKAR	Makanchi Array	42.59	32	P	P	13 19 22.4	+1.5
	comp=Z,42nm,1.3s,baz=220,slow=7.4,SNR=49						
MKAR				PcP	PcP	13 21 13.9	+0.8
	comp=Z,1.5nm,1.1s,baz=222,slow=3.9,SNR=2.3						
MKAR				LR	LR	13 36 51.9	
	comp=Z,102nm,20.9s,baz=292,slow=36						
MKAR	Makanchi Array	42.59	32	P	P	13 19 21.4	+0.4
BRVK	Borovoye	42.71	17	P	P	13 19 22.4	+0.6
KOLS	Kolonicke sedl	42.98	332	*e*P	P	13 19 25.7	+1.6
INTR	Introdacqua	43.29	319	P	P	13 19 27.3	+0.5
CRVS	Cervenica-Dubn	43.33	332	*e*P	P	13 19 28.3	+1.4
PSZ	Piszkesteto	43.40	329	P	P	13 19 27.4	-0.1
ARU	Arti	43.65	6	P	P	13 19 29.5	+0.2
ARU				IAmb	IAmb	13 19 31.7	
	comp=Z,21nm,1.3s						
KURK	Kurchatov	43.70	25	P	P	13 19 30.3	+0.5
KURK				IAmb	IAmb	13 19 32.8	
	comp=Z,20nm,1.3s						
WMQ	Urumqi	43.81	39	*e*P	P	13 19 33.0	+2.1
WMQ				sP	pwP	13 19 42.5	+3.2
WMQ				pmax	pmax		
	comp=Z,29nm,1.7s						
WMQ				pmax	pmax		
	comp=Z,380nm,3.7s						
WMQ				LR	LR		
	comp=Z,350nm,10.7s						
WMQ				LR	LR		
	comp=Z,700nm,7.1s						
WMQ	Urumqi	43.81	39	P	P	13 19 32.2	+1.3
KEST	Kesra	43.81	308	LR	LR	13 37 10.2	
	comp=Z,183nm,20.9s,baz=214,slow=35						
SEM	Semipalatinsk	44.16	27	*e*P	P	13 19 34.0	+0.2
	comp=Z,8.8nm,1.3s,baz=27						
TAM	Tamanrasset	44.32	289	P	P	13 19 35.4	-0.1
ZSN	Zaisan	44.35	33	*e*P	P	13 19 36.0	+0.8
	comp=Z,4.9nm,1.2s,baz=33						
MODS	Modra-Piesok	45.02	328	*e*P	P	13 19 40.2	-0.3
JAVC	Velka Javorina	45.13	329	*e*P	P	13 19 42.9	+1.5
VSL	Villasalto	45.20	313	P	P	13 19 41.9	-0.1
MNK	Minsk	45.20	341	*i* P	P	13 19 40.5	-1.3
	comp=E,2.0nm,0.9s						
MNK				*i* P	P	13 19 40.5	-1.3
	comp=N,8.0nm,0.8s						
MNK				*i* P	P	13 19 40.5	-1.3
	comp=Z,10.0nm,1.3s						
MNK				*i* PcP	PcP	13 21 20.6	-1.1
MNK				*i* PP	PP	13 21 26.1	-1.4
MNK				*i* PPP	PPP	13 22 04.4	
MNK				*i* ScP	ScP	13 25 13.3	-0.7
MNK				*i* PcS	PcS	13 25 14.5	-0.8
MNK				*i* S	S	13 26 21.7	+0.8
MNK				*i* ScS	ScS	13 29 37.6	-0.4
MNK				*i* SS	SS	13 29 44.6	+1.0
MNK				*i* SSS	SSS	13 30 29.7	
MNK				*i* LQ	LQ	13 35 18.4	
MNK				*i* LR	LR	13 38 44.6	
MNK				*i* LRM	MLR	13 40 28.9	
	comp=E,14nm,9.8s						
MNK				*i* LRM	MLR	13 40 31.6	
	comp=N,106nm,9.1s						
MNK				*i* LRM	MLR	13 40 31.6	
	comp=Z,135nm,9.8s						
MHMT	Maesarieng	45.25	77	P	P	13 19 44.1	+1.4
TRI	Trieste	45.35	323	P	P	13 19 42.8	-0.3
TRI				IAmb	IAmb	13 19 44.2	
	comp=Z,23nm,1.1s						
MORC	Moravsky Berou	45.80	330	*e*P	P	13 19 46.9	+0.2
KRUC	Moravsky	45.91	329	*e*P	P	13 19 47.8	+0.3
VRAC	Vranov	45.96	329	*e*P	P	13 19 48.5	+0.6
TSUM	Tsumeb	46.06	227	P	P	13 19 49.3	+0.1
	comp=Z,1.3nm,0.3s,baz=258,slow=21,SNR=3.1						
TSUM	Tsumeb	46.06	227	IAmb	IAmb	13 19 50.9	
	comp=Z,8.8nm,1.2s						
UMPA	Umpang Tak	46.19	80	P	P	13 19 52.9	+2.7
	comp=Z,18nm,1.0s						
CHTO	Chiang Mai	46.21	76	P	P	13 19 50.8	+0.5
CM31	Chiang Mai Arr	46.21	77	P	P	13 19 51.2	+0.9
CMAR	Chiang Mai Arr	46.21	77	P	P	13 19 51.8	+1.5
	comp=Z,17nm,0.8s,baz=275,slow=8.8,SNR=148						
CMAR				LR	LR	13 39 16.6	
	comp=Z,30nm,18.6s,baz=360,slow=36						
CMMT	Chiang Mai	46.21	76	P	P	13 19 50.0	-0.3
	comp=Z,211nmcomp=Z,3.2nm,0.9s						
STAL	STALIGIAL	46.26	323	P	P	13 19 50.2	-0.2
STAL				IAmb	IAmb	13 19 52.0	
	comp=Z,28nm,1.4s						
ZOU	Zoufplan	46.27	324	P	P	13 19 50.7	+0.1
DPC	Dobruska-Polom	46.77	330	*e*P	P	13 19 53.7	-0.6
CTI	Castel Tesino	46.77	323	P	P	13 19 54.3	-0.2
CTI				IAmb	IAmb	13 20 01.6	
	comp=Z,13nm,1.3s						
UTHA	Uthaitani	46.79	81	P	P	13 19 57.3	+2.4
	comp=Z,395nmcomp=Z,24nm,0.9s						
CKRC	Cesky Krumlov	46.84	327	*e*P	P	13 19 58.6	+3.8
LAMP	Lampang	46.86	77	P	P	13 19 57.0	+1.6
	comp=Z,250nmcomp=Z,32nm,0.9s						
GEC2	GERESS Array S	47.18	327	P	P	13 19 56.9	-0.7
GEC2				IAmb	IAmb	13 19 58.1	
	comp=Z,12nm,1.4s						
GERES	GERESS Array B	47.18	327	P	P	13 19 56.9	-0.7
	comp=Z,0.2nm,0.4s,baz=163,slow=5.6,SNR=7.4						
GERES	GERESS Array B	47.18	327	P	P	13 19 56.8	-0.8
KHC	Kasperske Hory	47.41	327	P	P	13 19 58.0	-1.3
GSI	Gunungsitoli	47.42	100	P	P	13 19 58.2	-1.6
GSI				IAmb	IAmb	13 20 10.5	
	comp=Z,22nm,1.2s						
TORD	Torodi Ar. Bea	48.10	276	P	P	13 20 04.9	-0.2
	comp=Z,7.9nm,0.9s,baz=87,slow=7.5,SNR=28						
BOSA	Boshof	48.42	211	P	P	13 20 08.3	+0.9
	comp=Z,6.4nm,0.9s,baz=42,slow=18,SNR=5.4						
BOSA				LR	LR	13 40 07.7	
	comp=Z,138nm,20.5s,baz=16,slow=36						
KLMR	Klimovskoe	48.46	352	*e*P	P	13 20 04.6	-2.6
KLMR				AMP		13 20 08.9	
	comp=Z,69nm,1.4s						
ZAA0	Zalesovo Array	48.66	26	P	P	13 20 08.6	-0.2
ZAA0				IAmb	IAmb	13 20 10.5	
	comp=Z,18nm,1.1s						
ZALV	Zalesovo Beam	48.66	26	P	P	13 20 09.0	+0.2
	comp=Z,5.3nm,0.8s,baz=234,slow=7.1,SNR=29						
ZALV				LR	LR	13 40 12.9	
	comp=Z,119nm,18.2s,baz=315,slow=36						
ZALV	Zalesovo Beam	48.66	26	P	P	13 20 08.5	-0.3
GRA1	Grafenberg Arr	48.99	326	P	P	13 20 09.4	-2.1
GRA1				IAmb	IAmb	13 20 12.4	
	comp=Z,15nm,1.0s						
GRFO	Grafenberg	48.99	326	P	P	13 20 09.3	-2.2
CLL	Collm	49.01	329	*e*P	P	13 20 12.0	+0.4
KULM	Kulim	49.40	94	P	P	13 20 14.7	-0.5
KULM				IAmb	IAmb	13 20 23.3	
	comp=Z,19nm,1.3s						
SENIN	Lac Senin/Sane	49.55	321	P	P	13 20 15.1	-1.0
SENIN				IAmb	IAmb	13 20 27.9	
	comp=Z,24nm,1.4s						
BFO	Black Forest	49.89	324	P	P	13 20 17.3	-1.0
KMI	Kunming	49.94	68	⇓P	P	13 20 20.5	+1.1
KMI				pmax	pmax		
	comp=Z,14nm,1.1s						
KMI	Kunming	49.94	68	P	P	13 20 17.4	-2.0
KMI				IAmb	IAmb	13 20 21.9	
	comp=Z,24nm,1.3s						
GTA	Gaotai	50.16	49	*e*P	P	13 20 22.3	+1.6
GTA				pP	sP	13 20 26.5	+0.3
GTA				sP	pwP	13 20 29.9	+0.6
GTA				pmax	pmax		
	comp=Z,6.0nm,1.3s						
SLVN	Son La	50.87	73	P	P	13 20 25.4	-0.8
CD2	Chengdu	51.44	61	P	P	13 20 30.6	+0.2
CD2				PcP	PcP	13 21 46.0	+1.2
CD2				pmax	pmax		
	comp=Z,10.0nm,1.2s						
FIA1	FINESS Array S	51.60	345	P	P	13 20 29.9	-1.1
FINES	FINESS Array B	51.60	345	P	P	13 20 31.5	+0.5
	comp=Z,8.7nm,1.0s,baz=148,slow=11,SNR=9.3						
FINES	FINESS Array B	51.60	345	P	P	13 20 30.0	-1.0
CART	Cartagena	52.31	308	P	P	13 20 34.9	-1.7
LZH	Lanzhou	52.40	54	*e*P	P	13 20 39.5	+1.8
LZH				pP	pwP	13 20 45.1	-1.2
LZH				sP	sP	13 20 48.6	+5.4
LZH				pmax	pmax		
	comp=Z,16nm,1.3s						
LZH				pmax	pmax		
	comp=Z,70nm,5.4s						
LZH				LR	LR		
	comp=Z,230nm,16.8s						
LZH				LR	LR		
	comp=Z,330nm,15.2s						
LZH				LR	LR		
	comp=Z,310nm,17.4s						
MYKOM	Kota Tinggi	53.33	98	P	P	13 20 44.4	-0.2
MYKOM				IAmb	IAmb	13 20 46.8	
	comp=Z,14nm,1.1s						
KOWA	Kowa	53.49	278	P	P	13 20 43.6	-2.2
GYA	Guiyang	53.55	67	⇓P	P	13 20 46.8	+0.6
GYA				sP	sP	13 20 51.4	-0.3
GYA				pmax	pmax		
	comp=Z,11nm,1.3s						
GYA				pmax	pmax		
	comp=Z,160nm,4.2s						
ESBB	Sonseca Array	55.04	309	P	P	13 20 55.9	-0.9
ESBB				IAmb	IAmb	13 20 58.2	
	comp=Z,22nm,1.2s						
ESDC	Sonseca Array	55.04	309	P	P	13 20 57.1	+0.3
	comp=Z,12nm,1.0s,baz=90,slow=6.0,SNR=25						
ESDC				LR	LR	13 45 32.1	
	comp=Z,129nm,18.2s,baz=355,slow=37						
ESDC	Sonseca Array	55.04	309	P	P	13 20 56.0	-0.7
PAB	San Pablo	55.30	309	P	P	13 20 59.2	+0.5
DBIC	Dimbokro	55.45	269	P	P	13 21 00.0	0.0
	comp=Z,2.5nm,0.8s,baz=59,slow=9.4,SNR=3.4						
NOA	NORSAR Array B	55.95	338	P	P	13 21 02.9	0.0
	comp=Z,4.8nm,1.1s,baz=124,slow=8.0,SNR=3.3						
XAN	Xi'an	56.17	58	P	P	13 21 05.9	+0.9
XAN				pP	pwP	13 21 14.3	+0.6
XAN				pmax	pmax		
	comp=Z,12nm,1.4s						
XAN	Xi'an	56.17	58	P	P	13 21 04.5	-0.5
XAN				IAmb	IAmb	13 21 06.9	
	comp=Z,19nm,1.4s						
ENH	Enshi	56.28	62	P	P	13 21 04.5	-1.3
ENH				IAmb	IAmb	13 21 16.8	
	comp=Z,15nm,1.2s						
SONM	Songino Array	57.30	41	P	P	13 21 15.1	+2.2
	comp=Z,11nm,1.2s,baz=242,slow=5.4,SNR=37						
SONM	Songino Array	57.30	41	P	P	13 21 14.0	+1.1
ULN	Ulaanbaatar	57.73	41	P	P	13 21 16.1	+0.1
ULN				IAmb	IAmb	13 21 19.1	
	comp=Z,20nm,1.4s						
BTO	Baotou	58.05	50	*e*P	P	13 21 18.8	+0.5
DBJI	Dramaga	58.57	106	P	P	13 21 22.5	+0.4
	comp=Z,96μmcomp=Z,140nm,1.3s						
ARCES	ARCESS Array B	58.72	350	P	P	13 21 23.6	+1.3
	comp=Z,4.4nm,0.9s,baz=172,slow=9.1,SNR=2.6						
ARCES	ARCESS Array B	58.72	350	IAmb	IAmb	13 21 28.7	
	comp=Z,13nm,1.2s						
HHC	Hu-ho-hao-te	59.25	50	*e*P	P	13 21 28.4	+1.8
HHC				S	S	13 29 33.9	-0.4
HHC				pmax	pmax		
	comp=Z,12nm,1.2s						
HHC				pmax	pmax		
	comp=Z,210nm,6.3s						
KSM	Kuching	59.66	96	P	P	13 21 28.6	-1.1
KSM				IAmb	IAmb	13 21 32.2	
	comp=Z,9.6nm,1.2s						
CISI	Cisompet, Garu	59.90	107	P	P	13 21 30.4	-1.0
WHN	Wuhan	60.49	62	⇑P	P	13 21 36.6	+1.5
NRIK	Noril'sk	60.77	14	P	P	13 21 37.0	+0.6
	comp=Z,2.6nm,0.3s,baz=211,slow=5.5,SNR=15						
NRIK				LR	LR	13 51 19.1	
	comp=Z,258nm,18.6s,baz=290,slow=39						
NRIK	Noril'sk	60.77	14	P	P	13 21 36.4	+0.1
SBUM	Sibu	61.28	94	P	P	13 21 40.8	-0.1
SBUM				IAmb	IAmb	13 21 43.8	
	comp=Z,16nm,1.2s						
BJI	Beijing	62.63	52	P	P	13 21 51.3	+1.9
BJI				pmax	pmax		
	comp=Z,6.0nm,1.5s						
TIA	Tai'an	63.07	56	P	P	13 21 53.3	+0.8
TIA				pmax	pmax		
	comp=Z,8.0nm,1.2s						
NJ2	Nanjing	64.37	61	*e*P	P	13 21 59.8	-1.3
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.6s						
JAGI	Jajag, Banyuwa	66.13	105	P	P	13 22 12.0	-0.8
SSE	Sheshan	66.37	62	P	P	13 22 14.9	+0.8
SSE				IAmb	IAmb	13 22 21.7	
	comp=Z,9.6nm,0.9s						
SSLB	Suanglung	66.53	70	P	P	13 22 14.9	-0.4
SSLB				IAmb	IAmb	13 22 42.8	
	comp=Z,14nm,1.0s						
SPITS	Spitsbergen Ar	67.36	353	P	P	13 22 20.4	+0.7
	comp=Z,4.5nm,0.8s,baz=153,slow=18,SNR=7.5						
MRSI	Marisa	71.19	94	P	P	13 22 45.6	+1.2
	comp=Z,23nm,1.1s						
KSAR	Wonju Array Be	71.70	55	P	P	13 22 46.4	-0.7
KSRS	Korea Array	71.73	55	P	P	13 22 47.9	+0.6
	comp=Z,4.5nm,1.2s,baz=268,slow=8.0,SNR=11						
DAG	Danmarks Havn	72.78	347	*i* P	P	13 22 52.0	-0.8
	comp=Z,14nm,1.1s						
DAG	Danmarks Havn	72.78	347	*i* P	P	13 22 52.0	-0.8
DAG				IAmb	IAmb	13 22 54.1	
	comp=Z,14nm,1.1s						
TIXI	Tiksi	73.81	19	P	P	13 22 58.5	-0.5
TIXI				IAmb	IAmb	13 23 00.7	
	comp=Z,28nm,1.4s						
SUMG	Summit	77.51	342	*i* P	P	13 23 21.0	+0.3
	comp=Z,203nm,1.8s						
SUMG	Summit	77.51	342	*i* P	P	13 23 21.0	+0.3
SUMG				IAmb	IAmb	13 23 23.9	
	comp=Z,204nm,1.8s						
FITZ	Fitzroy Crossi	79.72	111	P	P	13 23 34.7	+1.4
	comp=Z,10nm,0.9s,baz=258,slow=1.5,SNR=8.5						
MAT	Matsushiro	80.01	55	P	P	13 23 34.9	+0.2
MJAR	Matsushiro Arr	80.01	55	P	P	13 23 36.0	+1.3
	comp=Z,3.8nm,1.0s,baz=294,slow=4.2,SNR=9.7						
MJAR	Matsushiro Arr	80.01	55	P	P	13 23 33.7	-1.0
SWI	Sorong	80.56	93	P	P	13 23 39.2	+1.2
	comp=Z,28nm,1.1s						
SIJI	Sorong	80.57	93	P	P	13 23 39.8	+1.7
	comp=Z,7.0nm,0.7s,baz=282,slow=6.5,SNR=7.3						
MAW	Mawson	80.90	175	LR	LR	13 56 24.0	
	comp=Z,266nm,18.2s,baz=3.5,slow=33						
EUNU	Eureka	84.48	353	P	P	13 23 57.3	0.0
WRA	Warramunga Arr	88.14	111	P	P	13 24 17.5	+1.2
	comp=Z,8.8nm,1.1s,baz=302,slow=3.7,SNR=27						
WRA	Warramunga Arr	88.14	111	P	P	13 24 16.8	+0.5
WB0	Warramunga Arr	88.14	111	P	P	13 24 16.6	+0.3
WRAB	Tennant Creek	88.14	111	P	P	13 24 16.6	+0.3
WB2	Warramunga Arr	88.15	111	P	P	13 24 16.5	+0.1
WR0	Warramunga Arr	88.33	111	P	P	13 24 17.6	+0.4
ASAR	Alice Springs	88.68	115	P	P	13 24 20.3	+1.4
	comp=Z,5.5nm,1.0s,baz=288,slow=4.7,SNR=23						
ASAR	Alice Springs	88.68	115	P	P	13 24 19.1	+0.2
AS31	Alice Springs	88.68	115	P	P	13 24 18.9	+0.1
PETK	Petropavlovsk-	89.32	35	LR	LR	14 08 03.1	
	comp=Z,62nm,19.4s,baz=320,slow=38						
A21K	Barrow	93.73	9	P	P	13 24 41.9	+0.6
STKA	Stephens Creek	97.15	121	LR	LR	14 06 12.0	
	comp=Z,70nm,19.6s,baz=207,slow=34						
YKA	Yellowknife Ar	103.86	353	PP	PKiKP	13 29 44.5	-0.2
	comp=Z,0.2nm,0.8s,baz=15,slow=8.3,SNR=3.8						
PDAR	Pinedale Array	121.69	343	PKP	PKPdf	13 30 18.8	-0.7
	comp=Z,1.0nm,1.0s,baz=37,slow=3.7,SNR=5.1						
NVAR	Mina Array Bea	127.83	350	PKP	PKiKP	13 30 33.5	+1.7
	comp=Z,2.1nm,0.9s,baz=40,slow=0.5,SNR=12						
TXAR	Lajitas Array	131.34	330	PKP	PKiKP	13 30 39.2	+0.2
	comp=Z,1.2nm,0.9s,baz=110,slow=1.5,SNR=7.0						

IDC 24 13:24:35.4±34.0**, 16°.29S×178°.48W, h0**^{km}**, mb3.8**/4**, mb1 4.0**/4**, mb1mx3.5**/48**, mbtmp3.8**/4**, Error ellipse: s-maj=642.7km s-min=146.2km az=82.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
STKA	Stephens Creek	39.37	239	P	P	13 32 07.2	+0.3
	2.5nm,1.0s,baz=81,slow=13,SNR=4.7						
WRA	Warramunga Arr	44.88	258	P	P	13 32 51.9	-0.2
	0.1nm,0.3s,baz=94,slow=7.7,SNR=8.3						
ASAR	Alice Springs	45.19	253	P	P	13 32 54.1	-0.3
	2.3nm,0.6s,baz=88,slow=7.8,SNR=53						
FITZ	Fitzroy Crossi	53.25	259	P	P	13 33 55.9	-0.3
	1.6nm,0.9s,baz=51,slow=6.5,SNR=1.4						

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*IDC **24** 13:35:27.5±4.1, 53°.18N×163°.26E, h0^{km}, mb3.2/2, mb1 3.6/3, mb1mx3.1/42, mbtmp3.4/3, ML3.4/1, Error ellipse: s-maj=213.2km s-min=30.3km az=179.0*

*KRSC **24** 13:35:57.9±0.6, 53°.52N×159°.61E, h99^{km}±7^{km}, ML3.6*

ISC 24 13:35:58.5±1.1**, 53°.51N**±0°.05×**159°.60E**±0°.05**, h102**^{km}±7^{km}**, n33, σ1^{s}38**/44**, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
NLC	Nalytchevo	0.37	204	*e*P	Pn	13 36 13.9	+0.3
NLC				*e*S	Sn	13 36 26.0	+1.2
SDLR	Sedlovina	0.48	242	*e*P	Pn	13 36 14.5	0.0
SDLR				*e*S	Sn	13 36 26.5	+0.1
SPN	Mys Shipunski	0.48	148	*e*P	Pn	13 36 14.9	+0.6
SPN				*e*S	Sn	13 36 26.7	+0.6
SMAR	Somma	0.54	243	*e*P	Pn	13 36 14.9	-0.1
KII	Karymskiy	0.54	351	*e*P	Pn	13 36 15.0	+0.2
KRER	Koryakskii	0.55	248	*i* P	Pn	13 36 15.2	+0.2
UGLR	Uglovaya	0.55	237	*i* P	Pn	13 36 15.2	+0.2
AVH	Avacha	0.57	245	*e*P	Pn	13 36 15.3	+0.3
AVH				*e*S	Sn	13 36 28.6	+1.2
KRX	Arik	0.58	256	*i* P	Pn	13 36 15.4	+0.1
KRX				*e*S	Sn	13 36 27.9	+0.1
KOK	Koryaka	0.61	250	*i* P	Pn	13 36 15.6	+0.2
DALK	Dalny	0.69	227	*e*P	Pn	13 36 15.9	-0.1
DALK				*e*S	Sn	13 36 28.6	-0.5
PET	Petropavlovsk	0.74	230	*i* P	Pn	13 36 16.4	0.0
PET				*e*S	Sn	13 36 29.9	0.0
GNL	Ganaly	1.00	281	*e*P	Pn	13 36 18.8	-0.4
GNL				*e*S	Sn	13 36 34.6	-0.1
KRMR	Karymshinskiy	1.11	233	*e*P	Pn	13 36 20.9	+0.7
KRMR				*e*S	Sn	13 36 37.7	+1.1
PETK	Petropavlovsk-	1.21	251	Pn	Pn	13 36 21.1	-0.3
	19nm,0.3s,baz=75,slow=17,SNR=1281						
PETK				Sn	Sn	13 36 44.2	+5.7
	3.7nm,0.3s,baz=99,slow=20,SNR=5.0						
RUS	Russkaya	1.26	212	*i* P	Pn	13 36 21.8	-0.1
RUS				*e*S	Sn	13 36 39.5	-0.1
GRL	Gorelyy	1.33	224	*i* P	Pn	13 36 23.3	+0.4
MTVR	Mutnovka	1.33	220	*e*P	Pn	13 36 23.5	+0.5
APC	Apacha	1.58	249	*e*P	Pn	13 36 26.1	+0.4
MKZ	Mys Kozlova	1.64	49	*e*P	Pn	13 36 27.8	+1.3
MKZ				*e*S	Sn	13 36 48.5	+0.7
KZV	Kizimen	1.66	14	*i* P	Pn	13 36 27.9	+1.0
TUMD	Tumrok D	1.76	15	*e*P	Pn	13 36 28.9	+0.8
TUMR	Tumrok	1.81	10	P	Pn	13 36 30.3	+1.5
KDTR	Khodutka, Kamc	1.94	209	*e*P	Pn	13 36 30.9	+0.6
KDTR				*e*S	Sn	13 36 57.2	+2.7
ESO	Esso	2.48	348	*e*P	Pn	13 36 38.2	+0.9
SRKR	Sorokina	3.28	15	P	Pn	13 36 50.1	+2.1
KBTR	Krutoberegovo	3.29	33	P	Pn	13 36 49.9	+1.9
SKR	Severo-Kuril’s	3.55	219	*e*P	Pn	13 36 53.9	+2.3
BKI	Bering	4.10	63	*e*P	Pn	13 36 59.2	+0.3
BKI				*e*S	Sn	13 37 44.8	-1.0
H11N2	WAKE ISLAND Hy	34.18	168	T	T	14 18 44.4	
	baz=354						
H11N3	WAKE ISLAND Hy	34.20	168	T	T	14 18 37.2	
	baz=354						
H11N1	WAKE ISLAND Hy	34.20	168	T	T	14 18 36.9	
	baz=354						
MKAR	Makanchi Array	47.71	295	P	P	13 44 21.8	-2.9
	0.1nm,0.5s,baz=54,slow=5.8,SNR=4.5						

IDC 24 13:38:42.6±37.0**, 14°.45N**×**52°.82E, h0^{km}, mb3.4**/4**, mb1 3.6**/4**, mb1mx3.3**/41**, mbtmp3.4**/4**, Error ellipse: s-maj=747.9km s-min=60.3km az=55.0, Eastern Gulf of Aden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	40.56	31	P	P	13 46 24.2	+0.4
	0.2nm,0.5s,baz=220,slow=7.8,SNR=8.4						
KURBB	Kurchatov Arra	41.66	25	P	P	13 46 32.7	-0.1
	0.2nm,0.6s,baz=225,slow=8.1,SNR=2.3						
CMAR	Chiang Mai Arr	44.33	78	P	P	13 46 54.9	0.0
	1.0nm,0.7s,baz=278,slow=9.5,SNR=9.8						
SONM	Songino Array	55.19	41	P	P	13 48 16.5	-0.9
	0.2nm,0.6s,baz=232,slow=7.1,SNR=2.3						

IDC 24 14:22:27.8±5.8**, 2°.80N**×**99°.09E, h0^{km}, mb3.1**/3**, mb1 3.3**/3**, mb1mx2.9**/68**, mbtmp3.1**/3**, MS3.0**/1**, Ms1 3.0**/1**, ms1mx2.6**/12**, Error ellipse: s-maj=317.6km s-min=27.5km az=55.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPI	Kappang	22.05	111	LR	LR	14 36 29.7	
	comp=Z,41nm,19.2s,baz=235,slow=38						
WRA	Warramunga Arr	41.33	125	P	P	14 30 15.7	0.0
	0.3nm,0.8s,baz=302,slow=10.0,SNR=4.3						
ASAR	Alice Springs	42.90	130	P	P	14 30 28.4	-0.2
	0.3nm,0.7s,baz=306,slow=7.7,SNR=5.0						
MKAR	Makanchi Array	46.20	344	P	P	14 30 54.3	-0.2
	0.2nm,0.7s,baz=159,slow=8.8,SNR=2.8						

IDC ***24*** *14:27:59.4±2.7, 22°.99N×81°.53E, h0^{km}, mb3.5/5, mb1 3.6/6, mb1mx3.4/64, mbtmp3.5/6, ML3.5/1, Error ellipse: s-maj=84.9km s-min=23.1km az=71.0*

ISC 24 14:28:05.9±2.7**, 23°.1N**±0°.3×**81°.8E**±0°.4**, h35^{km}, n6,** σ**1§29**/6**, mb3.6**/5**, Southern India**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	16.65	103	Pn	P	14 31 59.0	+0.3
	0.1nm,0.3s,baz=292,slow=11,SNR=4.6						
MKAR	Makanchi Array	23.65	1	P	P	14 33 12.4	-1.6
	0.8nm,0.8s,baz=183,slow=9.7,SNR=8.8						
ZALV	Zalesovo Beam	30.89	3	P	P	14 34 20.2	+1.4
	0.7nm,0.6s,baz=190,slow=7.3,SNR=4.3						
SONM	Songino Array	31.52	32	P	P	14 34 24.4	-0.3
	0.2nm,0.4s,baz=232,slow=9.1,SNR=3.0						
WRA	Warramunga Arr	66.73	126	P	P	14 38 53.2	-0.7
	0.5nm,0.7s,baz=313,slow=6.6,SNR=6.9						
ASAR	Alice Springs	68.70	129	P	P	14 39 06.5	+0.3
	0.5nm,0.8s,baz=308,slow=6.2,SNR=9.5						

BJI ***24*** *14:30:23.8±0.0, 36°.53N×70°.79E, h205^{km}, mB4.7/23, mb4.3/38*

MOS ***24*** *14:30:23.7±0.9, 36°.49N×70°.81E, h208^{km}, mb4.4/25, Error ellipse: s-maj=7.0km s-min=3.9km az=75.7*

IDC ***24*** *14:30:24.0±1.8, 36°.37N×70°.80E, h199^{km}±16^{km}, mb3.9/25, mb1 3.9/31, mb1mx3.7/65, mbtmp4.4/31, MS2.5/1, Ms1 2.5/1, ms1mx2.3/53, Error ellipse: s-maj=12.1km s-min=8.9km az=8.0*

NEIC ***24*** *14:30:24.8±1.5, 36°.51N±0°.07×70°.70E±0°.05, h202^{km}±6^{km}, mb4.5/79, Error ellipse: s-maj=11.3km s-min=2.7km az=152.0*

NNC ***24*** *14:30:29.4±2.1, 36°.91N×70°.75E, h214^{km}±17^{km}, mb3.5, mpv4.5, Error ellipse: s-maj=19.8km s-min=12.4km az=26.0*

ISC 24 14:30:24.4±0.3**, 36°.46N**±0°.04×**70°.73E**±0°.04**, h204^{km}, n294,** σ**1§20**/317**, mb4.4**/77**, 20C-6D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	Kabul	2.36	216	PN	Pn	14 31 07.8	+0.5
KBL	Kabul	2.36	216	Pn	Pn	14 31 07.8	+0.5
CEP	Cherat	2.80	160	P	Pn	14 31 13.3	+1.1
NIL	Nilore	3.48	143	PN	Pn	14 31 21.2	+1.1
NIL	Nilore	3.48	143	Pn	Pn	14 31 21.2	+1.1
THW	Thamme Wali	3.75	167	P	Pn	14 31 24.1	+0.7
SARP	Sargodha	4.81	160	P	Pn	14 31 36.6	+0.1
KSH	Kashi	5.14	52	P	Pn	14 31 36.3	-4.5
KSH				sP		14 32 16.9	
KSH				S	S	14 32 28.8	-12
KSH				smax	smax		
	comp=N,620nm,0.7s						
KSH				smax	smax		
	comp=E,350nm,0.5s						
KSH				LR	LR		
	comp=Z,3µm,3.9s						
IUG	Iuzhnay	5.70	355	eP	Pn	14 31 47.7	-0.2
	baz=354						
IUG	Iuzhnay	5.70	355	ePN	Pn	14 31 47.7	-0.2
AML	Almayashu	6.11	21	P	Pn	14 31 53.2	-0.2
	SNR=195						
DZA	Taraz	6.44	4	eP	Pn	14 31 57.4	0.0
	22nm,0.6s,baz=3.5						
DZA	Taraz	6.44	4	Pg	Pn	14 31 58.9	+1.6
	68nm,0.1s						
DZA				Lg	Lg	14 33 07.4	
	951nm,0.5s						
DZA	Taraz	6.44	4	ePN	Pn	14 31 57.3	0.0
DZA				pmax	pmax		
	comp=Z,22nm,0.6s						
UCH	Uchtor	6.46	26	P	Pn	14 31 57.9	-0.1
	SNR=50						
MRKS	Merke	6.56	16	Pg	Pn	14 31 58.9	-0.1
	comp=Z,72nm,0.6s						
MRKS				Lg	Lg	14 33 07.7	
	comp=Z,123nm,0.5s						
EKS2	Erkin-Say	6.62	20	P	Pn	14 31 59.8	0.0
	SNR=32						
KK31	Karatay Array	6.63	359	P	Pn	14 31 59.5	-0.4
	comp=Z,5.8nm,0.3s,baz=191,slow=13,SNR=284						
KK31				⇑S	S	14 33 10.5	-4.9
	comp=Z,188nm,0.6s						
KK31	Karatay Array	6.63	359	PN	Pn	14 31 59.4	-0.4
KK31	Karatay Array	6.63	359		Pn	14 31 59.4	-0.4
KKAR	Karatay Array	6.63	359	PN	Pn	14 31 59.4	-0.4
KKAR	Karatay Array	6.63	359	Pn	Pn	14 31 59.4	-0.4
KKAR	Karatay Array	6.63	359	Pn	Pn	14 31 59.5	-0.4
AAK	Ala-Archa	6.82	24	P	Pn	14 32 02.3	-0.1
	comp=Z,6.7nm,0.3s,baz=192,slow=7.4,SNR=66						
AAK				S	S	14 33 17.4	-2.5
	comp=Z,11nm,0.3s,baz=136,slow=22,SNR=46						
AAK	Ala-Archa	6.82	24	P	Pn	14 32 02.4	+0.1
	SNR=33						
AAK	Ala-Archa	6.82	24	⇑P	Pn	14 32 02.3	-0.1
	comp=Z,24nm,0.9s						
AAK				⇑S	S	14 33 16.7	-3.3
	comp=Z,235nm,0.7s						
AAK	Ala-Archa	6.82	24	Pn	Pn	14 32 02.2	-0.2
KBK	Karagaybulak	6.99	26	P	Pn	14 32 04.8	+0.2
	SNR=18						
ULHL	Ulahol	7.18	35	P	Pn	14 32 06.9	-0.2
	SNR=18						
CHMS	Chumysh	7.22	24	P	Pn	14 32 07.5	0.0
	SNR=6.2						
HRA	Herat	7.23	256	Pn	Pn	14 32 08.0	+0.1
USP	Ospenovka	7.39	22	P	Pn	14 32 08.9	-0.7
	SNR=19						
TKM2	Tokmak 2	7.46	29	P	Pn	14 32 10.7	-0.1
	SNR=77						
TKM2	Tokmak 2	7.46	29	⇓P	Pn	14 32 10.5	-0.3
	comp=Z,64nm,1.0s						
TKM2				⇓S	S	14 33 21.8	-13
	comp=Z,82nm,1.0s						
TKM2	Tokmak 2	7.46	29	*i* PN	Pn	14 32 10.4	-0.3
TKM2				pmax	pmax		
	comp=Z,65nm,1.0s						
SGDS	Sogindy	7.59	22	eP	Pn	14 32 11.0	-1.3
	baz=21						
SGDS	Sogindy	7.59	22	Pg	Pn	14 32 11.2	-1.1
	comp=Z,12nm,0.5s						
SGDS	Sogindy	7.59	22	ePN	Pn	14 32 11.0	-1.3
KST	Kastek	7.71	30	Pg	Pn	14 32 14.1	+0.2
	comp=Z,28nm,0.6s						
DGS	Degeres	7.80	28	Pg	Pn	14 32 14.4	-0.7
	comp=Z,16nm,0.7s						
DGS				Lg	Lg	14 33 33.6	
	comp=Z,11nm,0.5s						
MTBS	Maitube	7.97	32	Pg	Pn	14 32 17.8	+0.6
	comp=Z,19nm,0.5s						
IZV	Izvestkoviy	7.97	33	Pg	Pn	14 32 17.3	-0.1
	comp=Z,18nm,0.8s						
IZV				Lg	Lg	14 33 38.7	
	comp=Z,8.8nm,0.6s						
TNSS	Tian-Shan	8.12	34	eP	Pn	14 32 19.0	-0.6
	baz=33						
TNSS	Tian-Shan	8.12	34	Pg	Pn	14 32 19.1	-0.4
	comp=Z,9.9nm,0.5s						
TNSS				Lg	Lg	14 33 42.2	
	comp=Z,9.9nm,0.6s						
TNSS	Tian-Shan	8.12	34	ePN	Pn	14 32 18.9	-0.6
KRBS	Karabastau	8.15	26	Pg	Pn	14 32 19.2	-0.5
	comp=Z,2.8nm,0.4s						
AAA	Alma-Ata	8.24	33	eP	Pn	14 32 20.8	0.0
	comp=Z,9.3nm,0.6s,baz=32						
AAA	Alma-Ata	8.24	33	ePN	Pn	14 32 20.8	0.0
AAA				pmax	pmax		
	comp=Z,9.0nm,0.6s						
MDOK	Medeo	8.27	34	eP	Pn	14 32 20.6	-0.7
	baz=33						
MDOK	Medeo	8.27	34	⇓P	Pn	14 32 21.1	0.0
	comp=Z,13nm,0.6s						
MDOK	Medeo	8.27	34	Pg	Pn	14 32 21.3	+0.1
	comp=Z,14nm,0.4s						
MDOK				Lg	Lg	14 33 45.6	
	comp=Z,23nm,0.9s						
MDOK	Medeo	8.27	34	ePN	Pn	14 32 20.5	-0.7
KNDC	Almaty	8.27	33	⇑P	Pn	14 32 21.7	+0.5
	comp=Z,39nm,0.6s						
KTBS	Karatobe	8.55	30	Pg	Pn	14 32 25.2	+0.4
	comp=Z,1.7nm,0.5s						
KTBS				Lg	Lg	14 33 52.4	
	comp=Z,18nm,0.7s						
CHKK	Chushkaly	8.80	31	eP	Pn	14 32 26.4	-1.6
	baz=30						
CHKK	Chushkaly	8.80	31	ePN	Pn	14 32 26.3	-1.6
SATY	Saty	8.85	40	eP	Pn	14 32 27.6	-1.1
	baz=39						
SATY	Saty	8.85	40	Pg	Pn	14 32 28.4	-0.3
	comp=Z,5.8nm,0.7s						
SATY				Lg	Lg	14 33 58.2	
	comp=Z,11nm,0.5s						
SATY	Saty	8.85	40	ePN	Pn	14 32 27.6	-1.1
BTLS	Baital	8.93	15	eP	Pn	14 32 28.6	-1.1
	baz=15						
BTLS	Baital	8.93	15	ePN	Pn	14 32 28.5	-1.1
KURS	Kuram	9.04	37	Pg	Pn	14 32 31.7	+0.6
	comp=Z,9.7nm,0.6s						
KURS				Lg	Lg	14 34 03.8	
	comp=Z,16nm,0.9s						
UZB	Uzynbulak	9.23	41	eP	Pn	14 32 32.9	-0.8
	baz=40						
UZB	Uzynbulak	9.23	41	eP	Pn	14 32 32.9	-0.8
KPKS	Kokpek	9.28	39	eP	Pn	14 32 32.9	-1.4
	baz=38						
KPKS	Kokpek	9.28	39	eP	Pn	14 32 32.8	-1.4
SHLS	Shalkode	9.47	42	eP	Pn	14 32 38.4	+1.5
	baz=43						
SHLS	Shalkode	9.47	42	Pg	Pn	14 32 39.9	+3.1
	comp=Z,8.6nm,0.9s						
SHLS				Lg	Lg	14 34 17.7	
	comp=Z,16nm,0.8s						
SHLS	Shalkode	9.47	42	eP	Pn	14 32 38.3	+1.5
NDI	New Delhi	9.49	143	eP	Pn	14 32 37.0	0.0
NDI				eS	S	14 34 15.0	-8.5
PDGK	Podgornoye	9.60	42	Pg	Pn	14 32 41.1	+2.6
	comp=Z,1.8nm,0.6s						
PDGK				Lg	Lg	14 34 20.1	
	comp=Z,8.5nm,0.8s						
PDGK	Podgornoye	9.60	42	⇓P	Pn	14 32 38.5	0.0
	comp=Z,7.6nm,0.6s						
PDGK	Podgornoye	9.60	42	*i* P	Pn	14 32 38.5	0.0
PDGK				pmax	pmax		
	comp=Z,8.0nm,0.5s						
GEYT	Alibeck	10.17	282	P	Pn	14 32 44.5	-1.4
	comp=Z,3.3nm,0.3s,baz=106,slow=11,SNR=46						
GEYT				S	S	14 34 37.3	-2.6
	comp=Z,1.9nm,0.3s,baz=126,slow=14,SNR=4.6						
GEYT	Alibeck	10.17	282	Pn	Pn	14 32 43.6	-2.2
GYA0B	ALIBECK ARRAY	10.17	282	Pn	Pn	14 32 44.0	-1.8
TDK	Taldyqorghan	10.32	32	eP	Pn	14 32 46.7	-1.0
	baz=31						
TDK	Taldyqorghan	10.32	32	eP	Pn	14 32 46.6	-1.0
MAKZ	Makanchi	13.31	36	⇑P	Pn	14 33 24.5	-1.1
	comp=Z,46nm,0.6s						
MAKZ	Makanchi	13.31	36	P	Pn	14 33 24.9	-0.6
MAKZ	Makanchi	13.31	36	Pn	Pn	14 33 24.9	-0.6
MK31	Makanchi Array	13.45	36	P	Pn	14 33 26.2	-1.0
	comp=Z,26nm,0.8s,baz=217,slow=10,SNR=138						
MK31	Makanchi Array	13.45	36	P	Pn	14 33 26.3	-1.0
MK31	Makanchi Array	13.45	36		Pn	14 33 26.3	-1.0
MKAR	Makanchi Array	13.45	36	P	Pn	14 33 26.4	-0.8
	comp=Z,1.1nm,0.3s,baz=220,slow=11,SNR=41						
MKAR	Makanchi Array	13.45	36	*c* eP	Pn	14 33 26.7	-0.5
MKAR				pmax	pmax		
	comp=Z,17nm,0.6s						
MKAR	Makanchi Array	13.45	36	Pn	Pn	14 33 25.9	-1.3
GKN	Gorkha	14.47	122	eP	Pn	14 33 39.2	-0.9
	comp=Z,116nm,0.3s						
WMQ	Urumqi	14.89	55	eP	P	14 33 47.0	+1.2
WMQ				S	S	14 36 32.4	+2.1
WMQ				pmax	pmax		
	comp=Z,18nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,100nm,7.5s						
WMQ				LR	LR		
	comp=Z,670nm,29.2s						
WMQ				LR	LR		
	comp=Z,1µm,28.9s						
WMQ				LR	LR		
	comp=Z,110nm,28.1s						
WMQ	Urumqi	14.89	55	P	Pn	14 33 45.4	+0.3
WMQ	Urumqi	14.89	55		Pn	14 33 45.4	+0.3
AB31	Akbulak array	15.01	332	P	Pn	14 33 45.4	-1.0
	comp=Z,6.4nm,0.5s,baz=143,slow=9.8,SNR=161						
ABKAR	Akbulak array	15.01	332	Pn	Pn	14 33 44.8	-1.6
DMN	Daman	15.04	122	eP	Pn	14 33 46.7	-0.5
	comp=Z,71nm,0.3s						
ZSN	Zaisan	15.17	39	eP	Pn	14 33 48.1	-0.4
	baz=39						
ZSN	Zaisan	15.17	39	eP	Pn	14 33 48.0	-0.4
KURBB	Kurchatov Arra	15.23	19	P	Pn	14 33 47.9	-1.1
	comp=Z,0.6nm,0.3s,baz=210,slow=11,SNR=68						
KURBB				ScP	ScP	14 41 54.0	-0.9
	comp=Z,0.0nm,0.3s,baz=221,slow=2.5,SNR=4.2						
KURBB	Kurchatov Arra	15.23	19	⇑P	Pn	14 33 47.4	-1.6
	comp=Z,26nm,0.9s						
PKIN	Phulchoki	15.26	121	eP	Pn	14 33 49.1	-0.8
	comp=Z,75nm,0.4s						
PKI	Pulchoki	15.27	121	eP	Pn	14 33 49.2	-0.9
	comp=Z,46nm,0.3s						
KURK	Kurchatov	15.34	19	⇑P	Pn	14 33 49.1	-1.2
	comp=Z,35nm,1.6s						
KURK	Kurchatov	15.34	19	*c* eP	Pn	14 33 48.2	-2.1
KURK				pmax	pmax		
	comp=Z,28nm,1.3s						
KURK	Kurchatov	15.34	19		ScP	14 41 54.0	-1.1
KURK	Kurchatov	15.34	19	Pn	Pn	14 33 48.4	-1.9
KURK				IAmb	IAmb	14 33 54.3	
	comp=Z,16nm,0.9s						
GUN	Gumba	15.39	119	eP	Pn	14 33 51.0	-0.5
	comp=Z,78nm,0.4s						
SEM	Semipalatinsk	15.54	23	eP	Pn	14 33 52.1	-1.0
	baz=23						
SEM	Semipalatinsk	15.54	23	eP	Pn	14 33 52.0	-1.0
RAMN	Ramite	16.48	121	eP	P	14 34 04.2	+0.5
	comp=Z,70nm,0.4s						
BVAR	Borovoye Array	16.56	359	P	P	14 34 03.8	-0.2
	comp=Z,3.1nm,0.3s,baz=107,slow=7.4,SNR=42						
BVAR				S	S	14 37 06.2	-0.5
	comp=Z,0.5nm,0.3s,baz=169,slow=24,SNR=6.9						
BRVK	Borovoye	16.60	359	⇓P	P	14 34 05.1	+0.6
	comp=Z,13nm,0.7s						
BRVK	Borovoye	16.60	359	*i* P	P	14 34 05.0	+0.6
BRVK				pmax	pmax		
	comp=Z,13nm,0.7s						
BRVK	Borovoye	16.60	359		P	14 34 04.0	-0.4
BRVK				IAmb	IAmb	14 34 09.8	
	comp=Z,15nm,0.7s						
AKTO	Aktyubinsk	16.71	331	P	P	14 34 06.2	+0.5
	comp=Z,1.7nm,0.3s,baz=140,slow=10,SNR=47						
AKTO				S	S	14 37 04.4	-5.2
	comp=Z,0.2nm,0.3s,baz=306,slow=18,SNR=3.4						
AKTO	Aktyubinsk	16.71	331	⇓P	Pn	14 34 06.7	-0.1
	comp=Z,19nm,0.6s						
UOSS	Minazif	16.94	231		P	14 34 09.6	+1.0
UOSS				IAmb	IAmb	14 34 13.2	
	comp=Z,23nm,0.8s						
TAPN	Taplejung	17.02	117	eP	Pn	14 34 11.5	+0.4
	comp=Z,56nm,0.3s						
ODAN	Odare	17.09	119	eP	Pn	14 34 12.1	+0.3
	comp=Z,90nm,0.8s						
DGZ	Jazzator, Alta	17.94	37	*c i*P	P	14 34 20.5	+1.2
DGZ				pmax	pmax		
	comp=Z,29nm,0.9s						
LSA	Lhasa	18.38	106	P	P	14 34 26.0	+1.4
LSA				pmax	pmax		
	comp=Z,11nm,0.8s						
LSA	Lhasa	18.38	106	P	P	14 34 26.0	+1.4
LSA				IAmb	IAmb	14 34 33.6	
	comp=Z,11nm,0.8s						
ZAA0	Zalesovo Array	20.04	25	⇑P	P	14 34 41.9	+0.2
	comp=Z,9.3nm,0.7s						
ZAA0	Zalesovo Array	20.04	25	P	P	14 34 41.6	-0.1
ZALV	Zalesovo Beam	20.04	25	P	P	14 34 41.8	+0.2
	comp=Z,45nm,0.5s,baz=218,slow=11,SNR=241						
ZALV				S	S	14 38 14.7	-0.7
	comp=Z,3.0nm,0.8s,baz=219,slow=24,SNR=6.5						
ZALV	Zalesovo Beam	20.04	25	P	P	14 34 41.5	-0.1
MIB	Mutribah	20.66	258	eP		14 34 47.7	
GNI	Garni	20.70	288	P	P	14 34 49.9	+0.9
	comp=Z,4.0nm,0.4s,baz=155,slow=3.1,SNR=6.1						
GNI	Garni	20.70	288	*c i*P	P	14 34 49.0	-0.1
GNI				pmax	pmax		
	comp=Z,27nm,1.1s						
GNI	Garni	20.70	288	P	P	14 34 49.4	+0.3
RDF	Al-Radifah	20.88	256	eP		14 34 50.1	
RST	Umm Al-Ruwaisa	21.06	258	eP		14 34 51.4	
SVE	Sverdlovsk	21.47	345	eP	P	14 34 57.8	+1.1
ZEI	Tsey	21.56	295	eP	P	14 34 58.0	0.0
ZEI				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ARU	Arti	21.60	341	P	P	14 34 59.1	+1.1
	comp=Z,1.6nm,0.4s,baz=153,slow=5.9,SNR=11						
ARU	Arti	21.60	341	*c i*P	P	14 34 58.8	+0.8
ARU						14 35 38.3	
ARU				S	S	14 38 45.8	+2.6
ARU				pmax	pmax		
	comp=Z,13nm,1.0s						
ARU	Arti	21.60	341	P	P	14 34 57.2	-0.8
ARU				IAmb	IAmb	14 35 01.5	
	comp=Z,12nm,1.0s						
NCK	Nalchik	21.89	297	*i* P	P	14 35 01.7	+0.6
NCK				pmax	pmax		
	comp=Z,21nm,0.6s						
KBZ	Khabaz	22.43	297	P	P	14 35 07.7	+1.6
	comp=Z,1.3nm,0.6s,baz=95,slow=16,SNR=4.0						
KBZ	Khabaz	22.43	297	*i* P	P	14 35 05.4	-0.7
KBZ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
NEY	Neytrino	22.48	296	*i* P	P	14 35 06.5	-0.3
NEY				pmax	pmax		
	comp=Z,2.0nm,0.8s						
SHA1	Shidzhatmaz	22.60	297	*i* P	P	14 35 08.2	+0.2
KIV	Kislovodsk	22.61	298	eP	P	14 35 07.3	-0.6
KIV				eS	S	14 39 01.6	+1.6
KIV				pmax	pmax		
	comp=Z,15nm,0.9s						
BELG	Belogornoye	22.78	322	P	P	14 35 11.0	+1.8
	comp=Z,24nm,0.9s,baz=138,slow=9.7,SNR=5.8						
GTA	Gaotai	23.08	74	eP	P	14 35 13.6	+1.4
GTA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
RAYN	Ar Rayn	25.29	246	P	P	14 35 32.4	+0.2
RAYN				pmax	pmax		
	comp=Z,15nm,1.1s						
RAYN	Ar Rayn	25.29	246	P	P	14 35 32.4	+0.2
RAYN				IAmb	IAmb	14 35 34.4	
	comp=Z,15nm,1.1s						
TLY	Talaya	27.82	46	*i* P	P	14 35 54.4	-0.2
TLY				pmax	pmax		
	comp=Z,2.0nm,0.6s						
CD2	Chengdu	27.95	92	P	P	14 35 56.8	+0.8
CD2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ASF	Jabal al Asfar	28.18	271	LR	LR	14 48 39.1	
	comp=Z,10nm,20.4s,baz=34,slow=39						
SONM	Songino Array	28.53	55	P	P	14 36 02.0	+0.9
	comp=Z,3.2nm,0.8s,baz=254,slow=9.6,SNR=30						
SONM	Songino Array	28.53	55	P	P	14 36 01.8	+0.8
ULN	Ulaanbaatar	28.98	55	*c* eP	P	14 36 03.1	-1.9
ULN				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ULN	Ulaanbaatar	28.98	55	P	P	14 36 05.7	+0.7
BR131	Keskin Array S	29.24	288	*i* P	P	14 36 08.1	+0.7
BRTR	Keskin Array B	29.24	288	P	P	14 36 08.5	+1.1
	comp=Z,1.0nm,0.7s,baz=122,slow=11,SNR=3.5						
BRTR	Keskin Array B	29.24	288	P	P	14 36 07.8	+0.4
OBN	Obninsk	29.82	320	eP	P	14 36 12.3	+0.1
OBN				e*PP	pP	14 36 53.0	-0.7
OBN				e*SP	sP	14 37 14.3	-3.1
OBN				e		14 37 18.9	
OBN				pmax	pmax		
	comp=Z,25nm,0.3s						
CMAR	Chiang Mai Arr	30.63	118	P	P	14 36 20.1	+0.4
	comp=Z,0.9nm,0.8s,baz=302,slow=8.1,SNR=10						
CMAR				PcP	PcP	14 39 12.4	-0.4
	comp=Z,0.2nm,0.4s,baz=287,slow=5.1,SNR=4.3						
XAN	Xi'an	31.15	83	P	P	14 36 25.0	+0.9
XAN				pmax	pmax		
	comp=Z,9.0nm,1.0s						
XAN	Xi'an	31.15	83	P	P	14 36 24.5	+0.3
XAN				pmax	pmax		
	comp=Z,5.0nm,0.7s						
XAN	Xi'an	31.15	83	P	P	14 36 24.4	+0.3
XAN				IAmb	IAmb	14 36 25.7	
	comp=Z,5.2nm,0.7s						
HHC	Hu-ho-hao-te	31.98	69	eP	P	14 36 31.9	+0.5
HHC				pmax	pmax		
	comp=Z,5.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,110nm,4.9s						
GYA	Guiyang	32.07	98	⇑P	P	14 36 33.3	+0.9
GYA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
GYA				pmax	pmax		
	comp=Z,58nm,4.4s						
ELL	Elmali	32.60	283	P	P	14 36 37.1	+0.3
ELL				pmax	pmax		
	comp=Z,79nm,1.2s						
ELL	Elmali	32.60	283	P	P	14 36 37.1	+0.3
ENH	Enshi	32.79	89	P	P	14 36 38.6	+0.2
ENH				IAmb	IAmb	14 36 40.6	
	comp=Z,12nm,1.3s						
AKASG	Malin Array Be	32.80	309	P	P	14 36 39.5	+1.2
	comp=Z,0.7nm,0.5s,baz=82,slow=7.0,SNR=4.1						
AKBB	Malin Array Si	32.80	309	P	P	14 36 37.7	-0.6
AKBB				pmax	pmax		
	comp=Z,5.0nm,1.2s						
AKBB	Malin Array Si	32.80	309	P	P	14 36 37.7	-0.6
TMCR	Tamitsa	33.99	335	eP	P	14 36 48.5	+0.2
TMCR				pmax	pmax		
	comp=Z,24nm,1.0s						
NRIK	Noril'sk	34.20	11	P	P	14 36 51.8	+1.7
	comp=Z,19nm,0.6s,baz=202,slow=5.4,SNR=28						
NRIK	Noril'sk	34.20	11	*c* eP	P	14 36 51.5	+1.4
NRIK				pmax	pmax		
	comp=Z,20nm,0.9s						
NRIK	Noril'sk	34.20	11	P	P	14 36 51.0	+0.9
MNK	Minsk	34.37	315	*i* P	P	14 36 51.4	-0.4
	comp=E,2.0nm,0.9s						
MNK				*i* P	P	14 36 51.4	-0.4
	comp=N,7.0nm,1.0s						
MNK				*i* P	P	14 36 51.4	-0.4
	comp=Z,13nm,1.4s						
MNK				*i* PP	PP	14 38 14.0	+0.1
MNK				*i* PcP	PcP	14 39 21.2	-1.4
MNK				*i* S	S	14 42 04.8	+0.8
MNK				*i* ScP	ScP	14 42 47.1	-1.0
MNK				*i* PcS	PcS	14 43 08.1	-0.9
MNK				*i* SS	SS	14 44 43.2	+3.5
MNK				*i* ScS	ScS	14 46 50.6	-0.4
MNK				*i* LRM	MLR	14 52 51.2	
	comp=E,24nm,9.0s						
MNK				*i* LRM	MLR	14 52 54.0	
	comp=Z,197nm,11.3s						
MNK				*i* LRM	MLR	14 52 57.1	
	comp=N,238nm,10.3s						
MLR	Muntele Rosu	34.61	299	P	P	14 36 55.6	+1.5
	comp=N,7.0nm,0.8s,baz=108,slow=5.6,SNR=9.9						
MLR	Muntele Rosu	34.61	299	P	P	14 36 54.1	0.0

MLR				IAmb	IAmb	14 36 58.0	
	comp=Z,9.8nm,0.9s						
BURAR	Bucovina Array	35.12	303	P	P	14 36 58.8	+0.3
KOLS	Kolonicke sedl	37.12	305	*e*PP	PP	14 38 45.2	+1.0
FIA1	FINESS Array S	37.39	326	P	P	14 37 18.2	+0.9
FIA1				IAmb	IAmb	14 37 39.8	
	comp=Z,18nm,1.5s						
FINES	FINESS Array B	37.39	326	P	P	14 37 18.4	+1.0
	comp=Z,2.0nm,0.3s,baz=118,slow=9.3,SNR=26						
FINES	FINESS Array B	37.39	326	P	P	14 37 18.2	+0.9
NJ2	Nanjing	39.69	82	*e*P	P	14 37 35.5	-1.3
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KEV	Kevo	40.76	338	P	P	14 37 46.1	+1.1
KEV				pmax	pmax		
	comp=Z,30nm,1.3s						
KEV	Kevo	40.76	338	P	P	14 37 46.1	+1.1
KEV				IAmb	IAmb	14 38 00.8	
	comp=Z,30nm,1.3s						
ARA0	ARCESS Array S	41.10	338	*e*P	P	14 37 49.1	+1.2
ARCES	ARCESS Array B	41.10	338	P	P	14 37 49.1	+1.3
	comp=Z,2.6nm,0.4s,baz=113,slow=7.8,SNR=37						
ARCES	ARCESS Array B	41.10	338	IAmb	IAmb	14 37 49.5	
	comp=Z,7.3nm,0.8s						
KTK1	Kautokeino	41.56	336	*e*P	P	14 37 52.6	+1.0
HAMF	Hammerfest	42.18	339	*e*P	P	14 37 58.1	+1.5
ZEA	Zeya	42.25	47	*e*P	P	14 37 59.6	+2.2
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
JETT	Jettan, Norway	42.71	337	*e*P	P	14 38 02.6	+1.7
HFS	Hagfors	42.96	322	P	P	14 38 04.0	+1.0
	comp=Z,2.2nm,0.4s,baz=98,slow=11,SNR=13						
TRO	Tromso	43.22	336	*e*P	P	14 38 06.7	+1.9
FAUS	Fauske	43.74	333	*e*P	P	14 38 10.0	+0.9
NC405	NORSAR Array S	44.05	323	P	P	14 38 12.0	+0.3
NC602	NORSAR Array S	44.09	323	P	P	14 38 12.1	+0.1
NC602	NORSAR Array S	44.09	323	*e*P	P	14 38 12.4	+0.4
YAK	Yakutsk	44.12	35	P	P	14 38 12.4	+0.3
	comp=Z,6.0nm,0.3s,baz=257,slow=0.2,SNR=9.0						
YAK	Yakutsk	44.12	35	*e*P	P	14 38 12.1	-0.1
YAK				pmax	pmax		
	comp=Z,22nm,0.8s						
YAK	Yakutsk	44.12	35	P	P	14 38 13.6	+1.4
NC303	NORSAR Array S	44.22	323	P	P	14 38 14.2	+1.2
NB201	NORSAR Array S	44.24	323	P	P	14 38 13.5	+0.2
NB2	NORSAR Subarra	44.28	323	P	P	14 38 13.8	+0.2
	comp=Z,1.2nm,0.5s,baz=97,slow=7.9						
NOA	NORSAR Array B	44.28	323	P	P	14 38 14.2	+0.6
	comp=Z,1.7nm,0.6s,baz=46,slow=9.9,SNR=6.2						
KONS	Konsvik	44.34	331	*e*P	P	14 38 14.7	+0.8
NBO00	NORSAR Array S	44.49	323	P	P	14 38 15.6	+0.4
NC204	NORSAR Array S	44.52	323	P	P	14 38 16.2	+0.7
LOF	Lofoten	44.58	333	*e*P	P	14 38 16.6	+0.9
KONO	Kongsberg	44.98	321	*e*P	P	14 38 20.5	+1.5
KSRS	Korea Array	45.09	71	P	P	14 38 20.8	+0.5
	comp=Z,0.6nm,0.6s,baz=286,slow=7.2,SNR=4.8						
KSRS				PcP	PcP	14 39 56.9	-0.3
	comp=Z,0.2nm,0.5s,baz=299,slow=2.1,SNR=4.1						
KLR	Kul'dur	45.34	54	*ce*P	P	14 38 20.6	-1.4
KLR				pmax	pmax		
	comp=Z,39nm,3.8s						
DOMB	Dombas	45.40	324	*e*P	P	14 38 23.2	+0.9
SKAR	Skarslia	45.67	322	*e*P	P	14 38 25.0	+0.4
TIXI	Tiksi	45.89	22	*ce*P	P	14 38 26.4	+0.4
TIXI				pmax	pmax		
	comp=Z,83nm,0.7s						
TIXI	Tiksi	45.89	22	P	P	14 38 26.6	+0.7
SNART	Snartemo	46.19	319	*e*P	P	14 38 30.0	+1.5
HSPB	Hornsund (broa	47.12	345	*e*P	P	14 38 37.3	+1.9
FOO	Floro	47.28	324	*e*P	P	14 38 38.3	+1.4
SPA0	Spitsbergen Ar	47.48	347	P	P	14 38 40.1	+1.9
SPA0	Spitsbergen Ar	47.48	347	*e*P	P	14 38 39.4	+1.1
KBS	Kingsbay	48.60	347	*e*P	P	14 38 48.3	+1.5
KMBO	Kilima Mbogo	48.65	227	P	P	14 38 49.8	+1.5
	comp=Z,2.2nm,0.6s,baz=23,slow=11,SNR=5.7						
MA2	Magadan	54.52	38	*ce*P	P	14 39 30.1	-0.8
MA2				pmax	pmax		
	comp=Z,6.0nm,1.7s						
MA2	Magadan	54.52	38	P	P	14 39 31.1	+0.2
SEY	Seymchan	54.57	34	*i* P	P	14 39 31.4	+0.3
PETK	Petropavlovsk-	60.15	44	P	P	14 40 10.0	-0.3
PETK	Petropavlovsk-	60.15	44	P	P	14 40 10.0	-0.3
SUMG	Summit	61.03	341	P	P	14 40 16.2	-0.2
SUMG	Summit	61.03	341	P	P	14 40 16.2	-0.2
TOA0	Torodi Ar. Sit	65.50	268	P	P	14 40 45.1	-1.1
TOA0				IAmb	IAmb	14 40 46.5	
	comp=Z,3.8nm,0.5s						
TORD	Torodi Ar. Bea	65.50	268	P	P	14 40 44.9	-1.2
	comp=Z,3.6nm,0.5s,baz=48,slow=5.8,SNR=30						
TORD	Torodi Ar. Bea	65.50	268	P	P	14 40 44.9	-1.2
A21K	Barrow	67.41	15	P	P	14 40 58.2	+0.9
GAMB	Gambell	68.63	25	P	P	14 41 05.7	+0.7
GAMB				IAmb	IAmb	14 41 06.2	
	comp=Z,9.3nm,1.2s						
FAKI	Fak Fak	69.27	110	P	P	14 41 09.5	-0.2
FAKI				IAmb	IAmb	14 41 10.5	
	comp=Z,9.8nm,0.9s						
KOWA	Kowa	69.36	273	P	P	14 41 09.4	-0.8
KOWA				IAmb	IAmb	14 41 29.3	
	comp=Z,12nm,1.4s						
ANM	Nome	70.15	22	P	P	14 41 15.7	+1.3
ANM				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ANM	Nome	70.15	22	P	P	14 41 15.7	+1.3
ANM				IAmb	IAmb	14 41 44.1	
	comp=Z,7.2nm,1.0s						
TOLK	Toolik Lake Re	71.01	15	P	P	14 41 20.4	+0.8
COLD	Coldfoot	72.06	16	P	P	14 41 26.2	+0.4
COLD				IAmb	IAmb	14 41 27.6	
	comp=Z,8.7nm,1.1s						
FYU	Fort Yukon	73.66	14	P	P	14 41 36.3	+1.2
FYU				IAmb	IAmb	14 41 37.7	
	comp=Z,13nm,1.3s						
C36M	Paulatuk	73.94	5	P	P	14 41 36.7	+0.1
INK	Inuvik	73.97	9	P	P	14 41 37.4	+0.5
INK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
INK	Inuvik	73.97	9	P	P	14 41 37.4	+0.5
INK				IAmb	IAmb	14 41 38.3	
	comp=Z,6.3nm,0.7s						
I23K	Minto, Yukon-K	74.00	16	P	P	14 41 37.6	+0.5
I23K				IAmb	IAmb	14 41 39.7	
	comp=Z,8.0nm,1.1s						
PSA00	Pilbara Seismi	74.05	133	P	P	14 41 40.2	+2.2
TTA	Tatalina	74.13	20	P	P	14 41 38.4	+0.4
TTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
TTA	Tatalina	74.13	20	P	P	14 41 38.4	+0.4
MDM	Murphy Dome	74.42	16	P	P	14 41 40.2	+0.6
MDM				IAmb	IAmb	14 41 41.3	
	comp=Z,9.4nm,1.0s						
POKR	Poker Plat Res	74.45	16	P	P	14 41 41.0	+1.2
POKR				IAmb	IAmb	14 41 41.8	
	comp=Z,15nm,1.2s						
BPAW	Bear Paw Mtn.	74.49	18	P	P	14 41 40.3	+0.2
PRP	Porcupine Dome	74.51	15	P	P	14 41 41.3	+1.0
TCOL	CIGO, UAF Yank	74.57	16	P	P	14 41 40.4	-0.1
TCOL				IAmb	IAmb	14 41 42.0	
	comp=Z,11nm,0.8s						
COLA	College	74.57	16	*i* P	P	14 41 40.7	+0.3
COLA				pmax	pmax		
	comp=Z,11nm,1.0s						
COLA	College	74.57	16	P	P	14 41 40.6	+0.2
COLA				IAmb	IAmb	14 41 42.0	
	comp=Z,11nm,0.8s						
CCB	Clear Creek Bu	74.78	16	P	P	14 41 40.8	-0.8
WRH	Wood River Hil	74.86	16	P	P	14 41 42.2	+0.1
IL31		74.87	16	P	P	14 41 41.9	-0.2
ILAR	Eielson Array	74.87	16	P	P	14 41 42.2	+0.1
	comp=Z,3.3nm,1.0s,baz=317,slow=4.7,SNR=27						
ILAR				PP	PP	14 44 29.8	-2.1
	comp=Z,0.5nm,0.8s,baz=326,slow=4.7,SNR=3.3						
ILAR	Eielson Array	74.87	16	P	P	14 41 41.8	-0.4
KTH	Kantishna Hill	74.97	18	P	P	14 41 43.2	+0.4
KTH				IAmb	IAmb	14 41 44.6	
	comp=Z,9.7nm,1.1s						
FITZ	Fitzroy Crossi	75.04	126	P	P	14 41 43.6	-0.1
FITZ				IAmb	IAmb	14 42 07.8	
	comp=Z,14nm,1.4s						
HDA	Harding Lake	75.17	16	P	P	14 41 43.6	-0.3
PPLA	Purkeypile	75.19	19	P	P	14 41 44.3	+0.1
PPLA				IAmb	IAmb	14 42 08.7	
	comp=Z,9.4nm,1.4s						
TRF	Thorofare Moun	75.21	18	P	P	14 41 45.4	+1.1
EPYK	Eagle Plains	75.33	11	P	P	14 41 45.4	+0.5
EPYK				IAmb	IAmb	14 41 46.2	
	comp=Z,9.7nm,1.3s						
RND	Reindeer	75.59	17	P	P	14 41 46.2	-0.2
RND				pmax	pmax		
	comp=Z,4.0nm,0.9s						
RND	Reindeer	75.59	17	P	P	14 41 46.2	-0.2
SVW2	Sparrevohn	75.72	21	P	P	14 41 48.4	+1.3
EGAK	Eagle	76.03	13	P	P	14 41 49.8	+1.0
SKT	Skwentna	76.12	19	P	P	14 41 49.2	-0.1
SKT				IAmb	IAmb	14 41 50.6	
	comp=Z,7.7nm,1.0s						
DOT	Dot Lake	76.46	15	P	P	14 41 51.7	+0.4
PAX	Paxson	76.75	16	P	P	14 41 53.3	+0.3
PAX				pmax	pmax		
	comp=Z,16nm,1.4s						
PAX	Paxson	76.75	16	P	P	14 41 53.3	+0.3
PAX				IAmb	IAmb	14 41 54.7	
	comp=Z,16nm,1.4s						
SML	Sawmill	77.09	18	P	P	14 41 55.0	+0.2
MENT	Mentasta	77.16	15	P	P	14 41 56.3	+1.1
BRLK	Bradley Lake	78.15	20	P	P	14 42 00.3	-0.4
BRLK				IAmb	IAmb	14 42 06.3	
	comp=Z,19nm,1.4s						
CNPM	China Poot	78.25	20	P	P	14 42 01.1	-0.2
CNPM				IAmb	IAmb	14 42 26.8	
	comp=Z,16nm,1.2s						
SEW	Seward	78.25	19	P	P	14 42 01.2	+0.1
MCARA	McCarthy VSAT	78.70	16	P	P	14 42 03.9	+0.3
MCARA				IAmb	IAmb	14 42 21.5	
	comp=Z,8.7nm,1.1s						
VRDI	Verde Repeater	78.74	16	P	P	14 42 03.9	-0.2
VRDI				IAmb	IAmb	14 42 06.2	
	comp=Z,7.3nm,0.9s						
EYAK	Cordova Ski Ar	78.81	17	P	P	14 42 05.6	+1.4
EYAK				IAmb	IAmb	14 42 16.4	
	comp=Z,15nm,1.2s						
BALM	Baldy	79.16	16	P	P	14 42 07.2	+0.9
KDAK	Kodiak Island	79.31	22	P	P	14 42 07.6	+0.6
KDAK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KDAK	Kodiak Island	79.31	22	P	P	14 42 07.6	+0.6
KDAK				IAmb	IAmb	14 42 08.3	
	comp=Z,8.1nm,0.8s						
CNBA	Chernabura Isl	79.36	27	P	P	14 42 07.4	+0.1
CTGM	Chitina Glacie	79.44	15	P	P	14 42 08.6	+0.8
CTGM				IAmb	IAmb	14 42 09.8	
	comp=Z,6.5nm,0.9s						
OHAK	Old Harbor	79.56	23	P	P	14 42 08.9	+0.5
HYT	Haines Junctio	80.34	14	P	P	14 42 13.4	+0.7
HYT				IAmb	IAmb	14 42 14.7	
	comp=Z,7.1nm,0.9s						
YKA	Yellowknife Ar	81.29	3	P	P	14 42 18.1	+0.6
	comp=Z,2.7nm,0.3s,baz=1.0,slow=5.4,SNR=80						
YKA				PP	PP	14 45 24.3	-0.8
	comp=Z,0.6nm,0.9s,baz=356,slow=8.3,SNR=5.7						
WRA	Warramunga Arr	82.16	122	P	P	14 42 21.6	-1.1
	comp=Z,5.7nm,0.7s,baz=325,slow=5.0,SNR=63						
WRAB	Tennant Creek	82.16	122	*ce*P	P	14 42 20.7	-1.9
WRAB				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ASAR	Alice Springs	84.41	125	P	P	14 42 33.0	-1.0
	comp=Z,4.5nm,0.7s,baz=310,slow=4.9,SNR=81						
CTA	Charters Tower	90.72	114	P	P	14 43 03.0	-1.3
	comp=Z,3.2nm,0.6s,baz=306,slow=8.6,SNR=2.6						
ULM	Lac du Bonnet	92.85	351	P	P	14 43 13.8	0.0
	comp=Z,1.0nm,0.6s,baz=63,slow=2.3,SNR=2.9						
ULM	Lac du Bonnet	92.85	351	IAmb	IAmb	14 43 14.2	
	comp=Z,7.9nm,1.4s						
CPUP	Villa Florida	135.00	268	PKP	PKPdf	14 49 19.5	+0.2
	comp=Z,1.3nm,0.8s,baz=22,slow=5.4,SNR=3.0						
PLCA	Paso Flores	149.61	250	PKPbc	PKiKP	14 49 51.3	+0.7
	comp=Z,1.7nm,0.6s,baz=357,slow=4.6,SNR=7.1						

GCG ***24*** *14:46:47.9±0.5, 13°.16N×90°.56W, h16*^{km}*±14*^{km}*, MD3.6*
SNET ***24*** *14:46:48.4±1.1, 13°.21N×90°.40W, h12*^{km}*±12*^{km}*, ML3.3*
ISC 24 14:46:46.4±3.0, **13°.1N**±0°.1×**90°.43W**±0°.08, **h11**^{km}±14^{km},
n17, σ**0ˢ65**/21, **Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEVE	Cerro Verde	1.05	48	*e*P	Pg	14 47 06.9	+0.1
CEVE				*e*S	Sb	14 47 21.0	+0.2
CEVE				IAML		14 47 22.6	
	comp=Z,2μm,0.2s						
RTR	El Retiro	1.08	45	*e*P	Pg	14 47 07.3	0.0
JAYA	Jayaque - finc	1.09	61	*e*P	Pb	14 47 07.2	-0.3
JAYA				*e*S	Sg	14 47 21.7	-0.1
JAYA				IAML		14 47 22.5	
	comp=Z,2μm,0.3s						
SNJE	San Jose	1.09	47	*e*P	Pg	14 47 07.2	-0.3
LALI	Alcalda de L	1.14	71	*e*P	Pb	14 47 07.9	-0.3
LALI				IAML		14 47 25.0	
	comp=Z,232nm,0.4s						
CEDA	San Andres	1.22	56	IAML		14 47 30.5	
	comp=Z,1μm,0.4s						
PCG	Pacaya	1.27	352	*e*P	Pb	14 47 10.0	-0.6
BOQS	Boqueron	1.28	61	*e*P	Pn	14 47 10.2	-0.2
SNET	Serv Nac Est T	1.30	64	IAML		14 47 31.8	
	comp=Z,567nm,0.3s						
TACO	Tacachico	1.34	51	*e*P	Pn	14 47 11.1	-0.2
TACO				*e*S	Sb	14 47 27.6	-1.4
FUG	Fuego 3	1.38	343	*e*P	Pn	14 47 11.6	-0.2
LFRS	El Faro	1.42	69	*e*P	Pn	14 47 12.8	+0.3
NBG	Las Nubes	1.46	3	*e*P	Pb	14 47 14.0	+0.2
NBG				*e*S	Sg	14 47 34.0	+0.6
COEG	Centro de Oper	1.59	72	*e*P	Pn	14 47 15.2	+0.5
COEG				*e*S	Sb	14 47 37.0	+1.0
MTO3	Montecristo	1.64	39	*e*P	Pn	14 47 15.6	+0.2
ESQI	Esquipulas	1.78	36	*e*P	Pn	14 47 18.0	+0.8
ESQI				*e*S	Sb	14 47 40.8	-0.8
ESQI				IAML		14 47 42.3	
	comp=Z,225nm,0.5s						
MRL	Marmol	2.08	20	*e*P	Pn	14 47 22.8	+1.3

WEL 24 14:56:12.1±1.1, **32°S**±7°×**17°9E**±2°9, **h33**^{km}, **M4.2**/13,
mB4.7/5, **ML4.3**/13, **MLv4.3**/13, **Mw(mB)3.9**/5, **Error
ellipse: s-maj=0.0km s-min=0.0km az=97.0, South of
Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HAZ	Te Kaha	5.36	188	P	Pn	14 57 28.9	-0.9
HAZ				S	Sn	14 58 32.1	+1.8
WMGZ	Waiomatatini S	5.38	182	P	Pn	14 57 31.0	+1.0
WMGZ				S	Sn	14 58 31.9	+1.1
PKGZ	Pakihiroa	5.46	185	P	Pn	14 57 32.6	+1.3
RUGZ	Raukumara Rang	5.58	188	P	Pn	14 57 33.2	+0.3
RUGZ				S	Sn	14 58 36.2	+0.3
TWGZ	Tauwhareparae	5.76	185	P	Pn	14 57 35.9	+0.6
TWGZ				S	Sn	14 58 41.3	+1.0
URZ	Urewera	5.95	192	P	Pn	14 57 37.6	-0.3
URZ				S	Sn	14 58 47.7	+2.8
MWZ	Matawai	5.96	189	P	Pn	14 57 37.1	-1.0
MWZ				S	Sn	14 58 45.0	-0.2
CNGZ	Carnagh Statio	6.05	183	P	Pn	14 57 39.7	+0.5
MUGZ	Murupara	6.23	194	P	Pn	14 57 43.1	+1.5
RIGZ	Rimuhau	6.30	186	P	Pn	14 57 42.3	-0.5
RIGZ				S	Sn	14 58 53.2	-0.4
RTZ	Ruatahuna	6.32	192	P	Pn	14 57 41.6	-1.4
SNGZ	Shannon Statio	6.43	189	P	Pn	14 57 44.4	-0.1
SNGZ				S	Sn	14 58 56.3	-0.3
MTHZ	Maungataniwha	6.58	193	P	Pn	14 57 46.7	+0.2
MTHZ				S	Sn	14 59 01.7	+1.3
MRHZ	Matea Rd	6.64	195	P	Pn	14 57 47.9	+0.5
BKZ	Black Stump Fm	6.95	194	P	Pn	14 57 50.9	-0.6
OTVZ	Oturere	7.14	199	P	Pn	14 57 55.2	+0.8
KRHZ	Kereru	7.43	194	P	Pn	14 57 55.8	-2.4
KRHZ				S	Sn	14 59 21.8	+0.5
KAHZ	Kahuranaki	7.49	191	P	Pn	14 57 56.7	-2.3
TSZ	Takapari Road	7.92	195	P	Pn	14 58 01.9	-3.0

BYKL ***24*** *14:59:35.9±0.1, 56°.10N×113°.73E, h4*^{km}*±2*^{km}
MOS ***24*** *14:59:35.0±0.8, 56°.06N×113°.75E, h9*^{km}*, mb3.4/1, Error
ellipse: s-maj=13.4km s-min=9.6km az=66.3*
IDC ***24*** *14:59:37.8±1.8, 56°.57N×113°.37E, h0*^{km}*, mb3.4/4,
mb1 3.5/6, mb1mx3.3/52, mbtmp3.5/6, ML2.7/2, Error
ellipse: s-maj=57.1km s-min=21.1km az=149.0*
ISC 24 14:59:35.6±0.9, **56°.08N**±0°.02×**113°.72E**±0°.02, **h5**^{km}±7^{km},
n42, σ**2ˢ00**/83, **mb3.4**/3, **3C-2D, East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVKR	Severomuysk	0.10	294	⇑*i*Pg	Pg	14 59 37.9	+0.2
SVKR				*e*Sg	Sg	14 59 40.1	+0.9
SVKR				Pmax			
	6μm,0.2s						
SVKR				Smax			
	32μm,0.5s						
SVKR	Severomuysk	0.10	294	⇑*i*PG	Pg	14 59 37.8	+0.1
SVKR				pmax	pmax		
	comp=Z,6μm,0.4s						
UKT	Uakit	0.59	185	⇑*i*Pg	Pg	14 59 46.4	-0.6
UKT				*e*Sg	Sg	14 59 55.0	+0.3
UKT				Pmax			
	comp=Z,123nm,0.3s						
UKT				Smax			
	comp=Z,649nm,0.4s						
YOA	Uoyan	1.12	274	*e*Pg	Pb	14 59 56.7	-0.7
YOA				*e*Sg	Sb	15 00 12.1	-0.1
YOA				Pmax			
	comp=Z,377nm,0.2s						
YOA				Smax			
	comp=Z,2μm,0.6s						
YOA	Uoyan	1.12	274	*e*PG	Pb	14 59 56.7	-0.7
YOA				*i*		15 00 12.1	
YOA				pmax	pmax		
	comp=Z,233nm,0.3s						
YOA				smax	smax		
	comp=N,2μm,0.6s						
NLYR	Nelyaty	1.18	69	⇓*i*Pg	Pb	14 59 57.1	-1.4
NLYR				*e*Pb	Pg	14 59 59.1	+0.9
NLYR				*e*		15 00 03.9	
NLYR				*e*Sg	Sb	15 00 12.9	-1.1
NLYR				*e*		15 00 17.6	
NLYR				max			
	comp=N,774nm,0.3s						
NLYR				max			
	comp=N,812nm,0.7s						
KMO	Kumora	1.43	263	*e*Pg	Pn	15 00 01.7	-0.4
KMO				*e*		15 00 05.0	
KMO				*e*		15 00 06.7	
KMO				*e*Sg	Sb	15 00 20.9	-0.2
KMO				*e*		15 00 24.6	
KMO				max			
	comp=N,282nm,0.3s						
KMO				max			
	comp=N,535nm,0.7s						
KMO	Kumora	1.43	263	⇓*i*PG	Pn	15 00 01.7	-0.4
KMO				*e*		15 00 20.9	
KMO				pmax	pmax		
	comp=Z,283nm,0.3s						
KMO				smax	smax		
	comp=E,534nm,0.7s						
BOD	Bodaibo	1.75	5	*e*Pg	Pb	15 00 07.0	-1.2
BOD				*e*Sg	Sb	15 00 29.7	-0.7
BOD				Pmax			
	comp=E,118nm,0.4s						
BOD				Smax			
	comp=E,473nm,0.2s						
BOD	Bodaibo	1.75	5	*e*PN	Pb	15 00 07.0	-1.2
BOD				*e*		15 00 30.3	
BOD				pmax	pmax		
	comp=Z,119nm,0.4s						
BOD				smax	smax		
	comp=E,468nm,0.2s						
YLYR	Ulyunkhan	1.89	231	*e*Pg	Pb	15 00 09.9	-0.6
YLYR				*e*Sg	Sg	15 00 35.4	-0.8
YLYR				Pmax			
	comp=E,97nm,0.2s						
YLYR				Smax			
	comp=E,694nm,0.4s						
NIZ	Nizh Angarsk	2.37	264	*e*Pn	Pn	15 00 15.6	+0.6
NIZ				*e*Pg	Pb	15 00 19.1	+0.4
NIZ				*e*Sn	Sn	15 00 44.5	0.0
NIZ				*e*Sg	Sg	15 00 50.5	-1.1
NIZ				Pmax			
	comp=E,36nm,0.3s						
NIZ				Smax			
	comp=E,206nm,0.7s						
NIZ	Nizh Angarsk	2.37	264	*e*PN	Pb	15 00 16.7	-2.0
NIZ				*i*		15 00 50.4	
NIZ				pmax	pmax		
	comp=Z,43nm,0.4s						
NIZ				smax	smax		
	comp=N,171nm,0.5s						
CRS	Chara	2.66	70	*e*Pn	Pn	15 00 19.9	+0.9
CRS				*e*Pg	Pb	15 00 24.1	+0.5
CRS				*e*Sn	Sn	15 00 51.8	+0.3
CRS				*e*Sg	Sg	15 00 58.6	-2.2
CRS				Pmax			
	comp=N,379nm,0.8s						
CRS				Smax			
	comp=N,220nm,0.6s						
CRS	Chara	2.66	70	*e*PN	Pn	15 00 19.7	+0.7
CRS				*e*		15 00 23.9	
CRS				*e*		15 00 58.4	
CRS				pmax	pmax		
	comp=Z,166nm,0.5s						
CRS				smax	smax		
	comp=E,219nm,0.6s						
SYVR	Suvo	3.24	223	*e*Pn	Pn	15 00 28.0	+1.0
SYVR				*e*Pg	Pb	15 00 34.3	+0.8
SYVR				*e*PgPg	Pg	15 00 37.7	+0.1
SYVR				*e*Sn	Sn	15 01 06.4	+0.5
SYVR				*e*Sg	Sg	15 01 16.8	-2.7
SYVR				max			
	comp=E,52nm,0.6s						
SYVR				Smax			
	comp=E,283nm,1.3s						
SYVR	Suvo	3.24	223	*e*PN	Pn	15 00 28.1	+1.0
SYVR				*e*		15 00 33.1	
SYVR				*e*		15 01 17.0	
SYVR				pmax	pmax		
	comp=Z,52nm,0.6s						
SYVR				smax	smax		
	comp=E,341nm,1.6s						
VTMR	Vitim	3.43	350	*e*Pg	Pb	15 00 37.6	+0.9
VTMR				*e*Sn	Sn	15 01 09.1	-1.4
VTMR				*e*Sg	Sb	15 01 20.7	+2.1
KHNR	Khani	3.57	74	*e*Pn	Pn	15 00 31.8	+0.2
KHNR				*e*Pg	Pb	15 00 39.0	-0.2
KHNR				*e*Sn	Sn	15 01 12.4	-1.7
KHNR				*e*Sg	Sb	15 01 25.2	+2.4
TUP	Tupik	3.93	112	*e*Pn	Pn	15 00 37.0	+0.4
TUP				*e*Pg	Pb	15 00 46.5	+1.2
TUP				*e*Sg	Sg	15 01 37.9	-3.9
TUP				Pmax			
	comp=E,30nm,0.5s						
TUP				Smax			
	comp=E,219nm,0.8s						
TUP	Tupik	3.93	112	*e*PN	Pn	15 00 37.0	+0.4
TUP				*e*		15 00 46.7	
TUP				*e*S	Sn	15 01 22.4	-0.7
TUP				*e*		15 01 38.2	
TUP				pmax	pmax		
	comp=Z,30nm,0.4s						
TUP				smax	smax		
	comp=E,218nm,1.0s						
MXMB	Maximikha	4.04	228	*e*Pn	Pn	15 00 39.9	+2.0
MXMB				*e*Pg	Pb	15 00 48.5	+1.4
MXMB				*e*Sn	Sn	15 01 25.1	-0.4
MXMB				*e*Sg	Sg	15 01 40.9	-4.2
MXMB				*e*		15 01 48.7	
CIT	Chita	4.07	181	*e*Sg	Sg	15 01 42.3	-3.8
CIT				Smax			
	comp=E,172nm,0.5s						
CIT	Chita	4.07	181	*e*PN	Pn	15 00 38.5	+0.1
CIT				*e*		15 00 48.9	
CIT				*e*S	Sn	15 01 24.8	-1.5
CIT				*e*		15 01 42.1	
CIT				pmax	pmax		
	comp=Z,62nm,0.3s						
CIT				smax	smax		
	comp=E,175nm,0.5s						
OGRR	Ongureny	4.30	238	*e*Pn	Pn	15 00 43.7	+2.2
OGRR				*e*Pg	Pb	15 00 53.3	+1.8
OGRR				*e*Sn	Sn	15 01 32.3	+0.3
OGRR				*e*Sg	Sg	15 01 49.4	-4.1
OGRR				Pmax			
	comp=E,21nm,0.8s						
OGRR				Smax			
	comp=E,60nm,1.1s						
OGRR	Ongureny	4.30	238	*e*PN	Pn	15 00 43.7	+2.2

OGRR				e		15 00 54.7	
OGRR				e		15 01 49.3	
OGRR				pmax	pmax		
	comp=Z,20nm,1.0s						
OGRR				smax	smax		
	comp=N,62nm,1.5s						
YKLR	Yuktali	4.45	80	ePn	Pn	15 00 44.2	+0.6
YKLR				ePg	Pb	15 00 54.8	+0.7
YKLR				eSn	Sn	15 01 33.7	-1.9
YKLR				eSg	Sb	15 01 52.3	+4.4
ZRHB	Zarechye	5.22	230	ePg	Pb	15 01 10.7	+3.5
ZRHB				eSn	Sn	15 01 54.8	+0.1
ZRHB				eSg	Sg	15 02 18.4	-4.6
ZRHB				Pmax			
	comp=N,27nm,0.8s						
ZRHB				Smax			
	comp=N,290nm,1.3s						
TRG	Tyrgan	5.44	235	ePn	Pn	15 00 57.9	+0.7
TRG				ePg	Pb	15 01 13.7	+2.8
TRG				eSn	Sn	15 01 59.9	-0.2
TRG				eSg	Sg	15 02 24.4	-5.6
TRG				Pmax			
	comp=N,10.0nm,1.0s						
TRG				Smax			
	comp=N,38nm,0.5s						
TRG	Tyrgan	5.44	235	ePN	Pn	15 00 57.9	+0.7
TRG				e		15 01 13.7	
TRG				eS	Sn	15 01 58.1	-2.0
TRG				e		15 02 23.2	
TRG				pmax	pmax		
	comp=Z,18nm,1.5s						
TRG				smax	smax		
	comp=E,53nm,1.4s						
KPC	Khapcheranga	6.44	188	ePg	Pb	15 01 32.1	+4.1
KPC				eSn	Sn	15 02 23.7	-1.1
KPC				eSg	Sg	15 02 55.9	-6.2
KPC				Pmax			
	comp=E,6.0nm,0.6s						
KPC				Smax			
	comp=E,128nm,1.2s						
KPC	Khapcheranga	6.44	188	ePN	Pn	15 01 10.7	-0.3
KPC				e		15 01 31.0	
KPC				e		15 02 54.9	
KPC				pmax	pmax		
	comp=Z,3.0nm,0.4s						
KPC				smax	smax		
	comp=E,128nm,1.4s						
TLY	Talaya	7.40	238	Lg	Lg	15 03 24.1	
	comp=E,0.0nm,0.3s,baz=93,slow=21,SNR=6.0						
MOY	Mondy	8.72	245	ePN	Pn	15 01 44.8	+2.5
MOY				e		15 02 14.9	
MOY				eS	Sn	15 03 20.5	-0.4
MOY				e		15 04 06.3	
MOY				pmax	pmax		
	comp=Z,2.0nm,0.5s						
MOY				smax	smax		
	comp=E,35nm,1.4s						
SONM	Songino Array	9.41	212	Pn	Pn	15 01 58.8	+7.1
	comp=E,0.1nm,0.3s,baz=29,slow=12,SNR=2.8						
SONM				Lg	Lg	15 04 33.0	
	comp=E,0.9nm,0.3s,baz=24,slow=30,SNR=12						
KLR	Kul'dur	12.89	115	Lg	Lg	15 06 23.5	
	comp=E,0.1nm,0.3s,baz=36,slow=23,SNR=4.5						
ZALV	Zalesovo Beam	16.66	275	Pn	Pn	15 03 28.9	-0.5
	comp=E,0.1nm,0.3s,baz=57,slow=10,SNR=2.8						
SEY	Seymchan	20.51	55	P	Pn	15 04 16.4	0.0
	comp=E,3.0nm,0.3s,baz=197,slow=19,SNR=27						
KURK	Kurchatov	21.44	270	P	P	15 04 26.9	+2.7
MKAR	Makanchi Array	21.51	258	P	P	15 04 27.1	+2.0
	comp=E,0.3nm,0.6s,baz=64,slow=11,SNR=5.8						
KURBB	Kurchatov Arra	21.53	270	P	P	15 04 26.9	+1.7
	comp=E,1.7nm,0.9s,baz=65,slow=12,SNR=8.7						
YKA	Yellowknife Ar	55.92	25	P	P	15 09 13.7	-0.1
	comp=E,0.5nm,0.8s,baz=335,slow=6.7,SNR=6.1						

IDC 24 15:05:20.5±2.0, 1°.96N×126°.39E, h0^{km}, mb3.2/3, mb1 3.4/3, mb1mx3.1/42, mbtmp3.2/3, Error ellipse: s-maj=174.7km s-min=25.2km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	23.12	161	P	P	15 10 27.8	-0.5
	0.4nm,0.4s,baz=339,slow=11,SNR=7.9						
ASAR	Alice Springs	26.50	164	P	P	15 11 00.5	+0.6
	0.2nm,0.5s,baz=348,slow=13,SNR=5.1						
MKAR	Makanchi Array	58.82	326	P	P	15 15 20.6	-0.2
	0.1nm,0.3s,baz=117,slow=7.3,SNR=7.3						

IDC ***24*** *15:23:16.1±2.9, 6°.05S×130°.38E, h119^{km}±39^{km}, mb3.2/1, mb1 3.0/5, mb1mx2.8/28, mbtmp3.3/5, Error ellipse: s-maj=74.4km s-min=22.1km az=87.0*

ISC 24 15:23:14.5±1.0, 6°.12S±0°.07×130°.6E±0°.2, h124^{km}, n5, σ4.^{s}20/8, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	5.26	7	P	Pn	15 24 32.2	+1.2
	0.4nm,0.3s,baz=180,slow=20,SNR=1.8						
SIJI				S	Sn	15 25 26.2	-4.4
	1.3nm,0.3s,baz=314,slow=23,SNR=4.3						
FITZ	Fitzroy Crossi	12.86	202	P	Pn	15 26 14.6	+1.7
	0.0nm,0.3s,baz=18,slow=11,SNR=3.4						
FITZ				S	Sn	15 28 31.0	-3.7
	0.1nm,0.3s,baz=175,slow=11,SNR=4.2						
WRA	Warramunga Arr	14.21	166	P	Pn	15 26 32.1	+1.9
	0.1nm,0.3s,baz=345,slow=10,SNR=6.5						
WRA				S	Sn	15 28 59.8	-7.4
	0.2nm,0.3s,baz=336,slow=25,SNR=5.9						
ASAR	Alice Springs	17.73	170	P	Pn	15 27 17.1	+3.4
	0.1nm,0.3s,baz=344,slow=10,SNR=8.7						
ASAR				S	S	15 30 24.8	-5.9
	0.0nm,0.3s,baz=358,slow=27,SNR=2.9						
MKAR	Makanchi Array	67.84	326	P	P	15 34 00.2	+0.8
	0.2nm,0.4s,baz=120,slow=7.9,SNR=4.9						

WEL 24 15:34:29.4, 39°.4S±0°.8×175°.0E±0°.7, h31^{km}±2^{km}, M3.6/34, ML3.9/34, MLv3.6/34, Error ellipse: s-maj=0.0km s-min=0.0km az=139.1, North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PKVZ	Pokaka	0.28	76	P	Pb	15 34 36.8	+0.1
PKVZ				S	Sn	15 34 42.7	+0.2
VRZ	Vera Road	0.30	321	P	Pb	15 34 37.1	+0.2
VRZ				S	Sn	15 34 43.4	+0.4
MTVZ	Mangateitei	0.36	94	P	Pb	15 34 38.0	+0.1
MTVZ				S	Sn	15 34 44.5	-0.3
WAZ	Wanganui	0.40	182	P	Pb	15 34 38.0	-0.3
WAZ				S	Sn	15 34 45.0	-0.5
TRVZ	Turoa	0.43	82	P	Pb	15 34 39.0	+0.1
TRVZ				S	Sb	15 34 45.9	+0.5
FWVZ	Far West T-bar	0.44	77	P	Pb	15 34 39.2	+0.1
FWVZ				S	Sn	15 34 46.3	-0.5
DRZ	Dome Shelter	0.44	79	P	Pb	15 34 39.3	+0.1
DRZ				S	Sn	15 34 46.6	-0.5
TWVZ	Taurewa	0.44	50	P	Pb	15 34 38.9	-0.1
TWVZ				S	Sn	15 34 46.2	-0.5
WHVZ	Whangaehu Hut	0.46	81	P	Pb	15 34 39.3	-0.1
WHVZ				S	Sb	15 34 46.6	+0.4
WNVZ	Wahianoa	0.46	86	P	Pb	15 34 39.4	+0.1
LREZ	Lake Rotokare	0.48	257	P	Pb	15 34 39.2	-0.3
LREZ				S	Sn	15 34 47.5	+0.1
NGZ	Ngauruhoe	0.50	69	P	Pb	15 34 39.9	0.0
NGZ				S	Sn	15 34 48.0	-0.2
TUVZ	Tukino	0.51	80	P	Pb	15 34 40.3	+0.2
WTVZ	West Tongariro	0.52	62	P	Pb	15 34 40.2	0.0
OTVZ	Oturere	0.55	70	P	Pb	15 34 40.8	+0.1
KRVZ	Karewarewa	0.56	62	P	Pb	15 34 40.8	-0.1
MOVZ	Moawhango	0.58	95	P	Pb	15 34 40.9	-0.3
MHEZ	Mangahewa	0.60	298	P	Pb	15 34 41.5	+0.1
PREZ	Palmer Road	0.65	271	P	Pb	15 34 42.3	-0.1
PREZ				S	Sn	15 34 53.2	+1.4
KATZ	Kakaramea	0.66	55	P	Pb	15 34 42.1	-0.5
NEZ	North Egmont	0.71	277	P	Pb	15 34 43.0	-0.4
RITZ	Rihia Road	0.77	61	P	Pn	15 34 44.2	+0.1
RATZ	Rangitukua	0.77	51	P	Pn	15 34 43.9	-0.4
PKE	Pukeiti	0.81	281	P	Pn	15 34 44.7	+0.1
BHHZ	Black Hill Sta	0.83	99	P	Pn	15 34 44.4	-0.6
HIZ	Hauiti	0.85	352	P	Pn	15 34 45.2	-0.1
WATZ	Wairara	0.86	42	P	Pn	15 34 45.4	0.0
NMEZ	Namu Road	0.87	266	P	Pn	15 34 45.5	0.0
OHWZ	Ohakea	0.88	164	P	Pn	15 34 45.3	-0.4
OHWZ				S	Sn	15 34 57.5	+0.1
HATZ	Hinemaiaia	0.97	62	P	Pn	15 34 46.3	-0.6
TSZ	Takapari Road	1.02	134	P	Pn	15 34 47.2	-0.4
TSZ				S	Sb	15 35 01.3	-0.3
PNHZ	Pukenui	1.08	121	P	Pn	15 34 48.2	-0.3
PNHZ				S	Sb	15 35 03.7	+0.4
KRHZ	Kereru	1.10	106	P	Pn	15 34 48.8	+0.1
POWZ	Post Office Ro	1.19	151	P	Pn	15 34 50.1	+0.2
DVHZ	Dannevirke	1.30	137	P	Pn	15 34 52.2	+0.7
WPHZ	Waipukurau	1.31	123	P	Pb	15 34 53.3	-0.2
WPHZ				S	Sb	15 35 11.6	+1.6
MCHZ	McNeill Hill	1.32	94	P	Pb	15 34 53.4	-0.1
MRZ	Mangatainoka R	1.38	161	P	Pn	15 34 52.7	+0.2
PRWZ	Pori Road	1.41	148	P	Pb	15 34 54.0	-1.0
NMHZ	Naumai	1.43	80	P	Pb	15 34 54.3	-1.0
OGWZ	Otaki Gorge	1.46	175	P	Pn	15 34 53.7	+0.1
KIW	Kapiti Island	1.50	183	P	Pn	15 34 54.0	-0.2
KAHZ	Kahuranaki	1.51	107	P	Pn	15 34 55.6	+1.2
ARHZ	Aropaoanui	1.55	87	P	Pb	15 34 56.6	-0.8
PRHZ	Porangahau	1.55	126	P	Pb	15 34 56.4	-1.1
TIWZ	Tintock	1.57	155	P	Pn	15 34 56.3	+1.1
ANWZ	Angora Road	1.58	135	P	Pn	15 34 56.5	+1.2
PXZ	Pawanui	1.58	116	P	Pb	15 34 57.2	-0.8
HOWZ	Holdsworth Sta	1.59	166	P	Pn	15 34 56.1	+0.7
BFZ	Birch Farm	1.63	145	P	Pn	15 34 56.8	+0.8
DUWZ	D’Urville Isla	1.66	210	P	Pn	15 34 56.3	-0.1
MKRZ	Makatiti	1.67	44	P	Pb	15 35 01.9	+2.4
WHHZ	Waihua	1.76	82	P	Pb	15 34 59.6	-1.4
CPWZ	Castlepoint	1.80	150	P	Pb	15 35 01.7	0.0
MTW	Mount Morrison	1.84	168	P	Pn	15 34 59.7	+0.9
TMWZ	Te Maipa	1.88	159	P	Pn	15 34 59.9	+0.6
MARZ	Manawahe	1.90	44	P	Pb	15 35 04.6	+1.2
SNGZ	Shannon Statio	1.91	73	P	Pb	15 35 01.7	-1.9
WEL	Wellington	1.93	185	P	Pn	15 35 01.2	+1.1
PAWZ	Paruwai Farm	2.05	171	P	Pn	15 35 02.7	+1.0
BHW	Baring Head	2.05	183	P	Pn	15 35 02.9	+1.2
MSWZ	Moikau Station	2.06	175	P	Pn	15 35 02.6	+0.7
KNZ	Kokohu	2.10	82	P	Pn	15 35 03.2	+0.8
TRWZ	Traveller	2.10	166	P	Pn	15 35 03.3	+0.8
PLWZ	Palliser	2.22	175	P	Pn	15 35 04.3	+0.2
NNZ	Nelson	2.23	213	P	Pn	15 35 05.3	+1.1
RIGZ	Rimuhau	2.25	74	P	Pn	15 35 05.6	+1.1
MKAZ	Moumakai	2.25	3	P	Pn	15 35 04.4	-0.1
MHGZ	Mahia Peninsul	2.27	86	P	Pn	15 35 06.5	+1.8
PRGZ	Paritu Road	2.28	80	P	Pn	15 35 06.1	+1.1
TKGZ	Te Karaka	2.40	68	P	Pn	15 35 08.4	+1.8
BSWZ	Blackbirch Sta	2.51	200	P	Pn	15 35 09.4	+1.3
TWGZ	Tauwhareparae	2.61	64	P	Pn	15 35 11.6	+2.2
CNGZ	Carnagh Statio	2.65	72	P	Pn	15 35 11.4	+1.4
THZ	Tophouse	2.88	213	P	Pn	15 35 14.8	+1.5
WMGZ	Waiomatatini S	3.08	61	P	Pn	15 35 17.3	+1.3
KHZ	Kahutara	3.25	199	P	Pn	15 35 18.1	-0.1
DSZ	Denniston Nort	3.41	225	P	Pn	15 35 20.3	-0.2
GVZ	Greta Valley S	3.90	202	P	Pn	15 35 26.6	-0.6
LTZ	Lake Taylor	4.00	210	P	Pn	15 35 28.3	-0.2
INZ	Inchbonnie	4.31	218	P	Pn	15 35 33.2	+0.5
OXZ	Oxford	4.55	208	P	Pn	15 35 34.4	-1.7
OKCZ	Okains Bay	4.60	198	P	Pn	15 35 35.5	-1.3
MQZ	McQueen’s Vall	4.69	201	P	Pn	15 35 35.6	-2.3
RACZ	Rakaia	4.87	205	P	Pn	15 35 39.1	-1.3
WACZ	Wakanui South	5.16	206	P	Pn	15 35 43.7	-0.7
RPZ	Rata Peaks	5.26	213	P	Pn	15 35 47.4	+1.4
GCSZ	Gaunt Creek Bo	5.29	220	P	Pn	15 35 47.1	+0.8
FOZ	Fox Glacier	5.71	221	P	Pn	15 35 52.1	+0.2
TMZ	Timaru	5.84	209	P	Pn	15 35 52.6	-1.2
ODZ	Otahua Downs	6.54	208	P	Pn	15 36 02.1	-1.3
JCZ	Jackson Bay	6.62	223	P	Pn	15 36 04.3	-0.3

NEIC ***24*** *15:42:34.5±1.1, 37°.6S±0°.1×179°.7W±0°.1, h24^{km}±10^{km}, mb4.6/14, Error ellipse: s-maj=25.1km s-min=8.0km az=218.0*

WEL ***24*** *15:42:39.7±0.8, 38°S±6°×18°0E±°, h33^{km}, M3.9/37, ML4.1/37, MLv3.9/37, Error ellipse: s-maj=0.0km s-min=0.0km az=25.6*

NOU ***24*** *15:42:42.4, 38°.04S×179°.72E, h113^{km}, MLv4.2, Off E. Coast of N. Island, N.Z.*

IDC ***24*** *15:42:45.8±4.5, 38°.21S×179°.57E, h86^{km}±30^{km}, mb3.9/3, mb1 4.1/4, mb1mx3.6/38, mbtmp4.2/4, Error ellipse: s-maj=38.0km s-min=35.8km az=77.0*

ISC 24 15:42:38.6±2.1, 37°.74S±0°.07×179°.99W±0°.10, h50^{km}±17^{km}, n154, σ1.^{s}36/165, mb4.4/9, East of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMGZ	Waiomatatini S	1.27	266	P	Pn	15 42 59.9	-0.1
WMGZ				S	Sn	15 43 15.4	-0.4
MXZ	Matakaoa Point	1.36	277	Pn	Pn	15 42 59.8	-1.5
MXZ	Matakaoa Point	1.36	277	P	Pn	15 43 00.3	-0.9
MXZ				S	Sn	15 43 15.9	-2.3
PUZ	Puketiti	1.43	256	P	Pn	15 43 02.7	+0.6
PKGZ	Pakihiroa	1.54	264	P	Pn	15 43 03.5	-0.2
CNGZ	Carnagh Statio	1.60	242	P	Pn	15 43 06.5	+2.0
TWGZ	Tauwhareparae	1.66	254	P	Pn	15 43 06.1	+0.7
HAZ	Te Kaha	1.77	269	P	Pn	15 43 06.6	-0.2
HAZ				S	Sn	15 43 27.5	-0.6
TKGZ	Te Karaka	1.84	247	P	Pn	15 43 09.0	+1.2
TKGZ				S	Sn	15 43 30.9	+1.0
RUGZ	Raukumara Rang	1.86	262	P	Pn	15 43 08.0	-0.2
RIGZ	Rimuhau	2.02	241	P	Pn	15 43 11.6	+1.4
RIGZ				S	Sn	15 43 36.4	+2.2
PRGZ	Paritu Road	2.05	234	P	Pn	15 43 12.4	+1.8
MWZ	Matawai	2.05	252	P	Pn	15 43 10.8	+0.2
MHGZ	Mahia Peninsul	2.17	229	P	Pn	15 43 14.2	+1.8
KNZ	Kokohu	2.24	234	P	Pn	15 43 14.4	+1.2
SNGZ	Shannon Statio	2.34	243	P	Pn	15 43 15.9	+1.2
URZ	Urewera	2.35	256	P	Pn	15 43 15.4	+0.6
	112nm,0.3s,baz=270,slow=2.5,SNR=952						
URZ				S	Sn	15 43 42.2	-0.1
	38nm,0.3s,baz=136,slow=17,SNR=3.9						
URZ	Urewera	2.35	256	P	Pn	15 43 15.6	+0.8
URZ				S	Sn	15 43 42.9	+0.5
RTZ	Ruatahuna	2.54	249	P	Pn	15 43 18.3	+0.9
WHHZ	Waihua	2.56	238	P	Pn	15 43 19.3	+1.8
WHHZ				S	Sn	15 43 50.1	+2.6
RAHZ	Arahi	2.58	242	P	Pn	15 43 19.4	+1.4
EDRZ	Edgecumbe	2.61	261	P	Pn	15 43 18.4	0.0
MARZ	Manawahe	2.65	264	P	Pn	15 43 19.2	+0.2
MUGZ	Murupara	2.66	253	P	Pn	15 43 19.7	+0.7
MUGZ				S	Sn	15 43 49.2	-0.8
MTHZ	Maungataniwha	2.73	245	P	Pn	15 43 21.1	+1.1
MTHZ				S	Sn	15 43 53.0	+1.2
OPRZ	Ohinepanea	2.74	267	P	Pn	15 43 19.3	-0.8
ARHZ	Aropaoanui	2.81	236	P	Pn	15 43 22.6	+1.5
TARZ	Mount Tarawera	2.81	259	P	Pn	15 43 21.8	+0.6
RRRZ	Republican Roa	2.82	257	P	Pn	15 43 22.0	+0.7
MKRZ	Makatiti	2.83	261	P	Pn	15 43 22.3	+0.9
NMHZ	Naumai	2.86	241	P	Pn	15 43 23.3	+1.5
OMRZ	Omania	2.90	262	P	Pn	15 43 21.8	-0.5
HLRZ	Highlands Stat	2.93	259	P	Pn	15 43 23.4	+0.6
PRRZ	Plateau Road	2.95	254	P	Pn	15 43 23.6	+0.6
TGRZ	Tauranga	2.97	269	P	Pn	15 43 23.0	-0.3
CKHZ	Cape Kidnapper	2.99	229	P	Pn	15 43 24.9	+1.4
KARZ	Kaharoa	2.99	263	P	Pn	15 43 23.9	+0.3
ALRZ	Allen Road	3.00	253	P	Pn	15 43 24.6	+0.8
HRRZ	Handcock Road	3.01	256	P	Pn	15 43 24.7	+0.8
HSRZ	Hossack Road	3.03	258	P	Pn	15 43 25.3	+1.2
MRHZ	Matea Rd	3.03	248	P	Pn	15 43 24.9	+0.7
MCHZ	McNeill Hill	3.10	236	P	Pn	15 43 26.5	+1.4
BKZ	Black Stump Fm	3.11	242	Pn	Pn	15 43 25.9	+0.7
BKZ	Black Stump Fm	3.11	242	P	Pn	15 43 26.1	+0.9
WPRZ	Whakapapatarin	3.13	254	P	Pn	15 43 26.2	+0.7
GRRZ	Galatos Road	3.14	258	P	Pn	15 43 27.9	+2.3
KAHZ	Kahuranaki	3.19	229	P	Pn	15 43 27.5	+1.2
KMRZ	Kaimai	3.23	267	P	Pn	15 43 26.3	-0.5
KWHZ	Kaweka Forest	3.27	238	P	Pn	15 43 28.5	+1.0
PXZ	Pawanui	3.36	226	P	Pn	15 43 29.2	+0.7
KRHZ	Kereru	3.42	235	P	Pn	15 43 30.6	+1.1
RITZ	Rihia Road	3.49	248	P	Pn	15 43 31.3	+0.9
WATZ	Wairara	3.50	253	P	Pn	15 43 31.1	+0.5
RATZ	Rangitukua	3.52	250	P	Pn	15 43 31.5	+0.7
BHHZ	Black Hill Sta	3.55	239	P	Pn	15 43 32.0	+0.7
KUZ	Kuaotunu	3.56	285	P	Pn	15 43 29.8	-1.5
TOZ	Tahuroa Road	3.57	269	P	Pn	15 43 30.9	-0.7
KATZ	Kakaramea	3.61	249	P	Pn	15 43 32.9	+0.8
WPHZ	Waipukurau	3.62	229	P	Pn	15 43 32.8	+0.6
PRHZ	Porangahau	3.64	225	P	Pn	15 43 33.0	+0.5
TMVZ	Te Maari	3.65	247	P	Pn	15 43 33.0	+0.3
ETVZ	East Tongariro	3.65	246	P	Pn	15 43 33.2	+0.4
PNHZ	Pukenui	3.68	233	P	Pn	15 43 33.6	+0.5
KRVZ	Karewarewa	3.69	247	P	Pn	15 43 33.9	+0.6
OTVZ	Oturere	3.69	246	P	Pn	15 43 33.7	+0.3
MOVZ	Moawhango	3.73	242	P	Pn	15 43 34.2	+0.4
WTVZ	West Tongariro	3.73	247	P	Pn	15 43 35.1	+1.2
TUVZ	Tukino	3.74	245	P	Pn	15 43 34.7	+0.7
NGZ	Ngauruhoe	3.75	246	P	Pn	15 43 34.5	+0.4
WHVZ	Whangaehu Hut	3.79	245	P	Pn	15 43 35.7	+0.9
WNVZ	Wahianoa	3.81	244	P	Pn	15 43 35.3	+0.4
FWVZ	Far West T-bar	3.81	245	P	Pn	15 43 35.5	+0.5
TWVZ	Taurewa	3.83	248	P	Pn	15 43 36.0	+0.9
TRVZ	Turoa	3.83	245	P	Pn	15 43 35.6	+0.3
ANWZ	Angora Road	3.86	224	P	Pn	15 43 36.3	+0.8
MKAZ	Moumakai	3.91	278	P	Pn	15 43 35.2	-1.0
TSZ	Takapari Road	3.92	233	P	Pn	15 43 36.3	+0.1
DVHZ	Dannevirke	3.94	228	P	Pn	15 43 36.8	+0.3
PKVZ	Pokaka	3.97	246	P	Pn	15 43 38.1	+1.0
WIAZ	Waiheke Island	4.00	282	P	Pn	15 43 36.7	-0.7
ETAZ	East Tamaki Re	4.12	279	P	Pn	15 43 38.6	-0.5
HIZ	Hauiti	4.14	258		Pn	15 43 40.2	+0.9
HIZ	Hauiti	4.14	258	P	Pn	15 43 40.4	+1.1
BFZ	Birch Farm	4.14	224	Pn	Pn	15 43 38.8	-0.6
BFZ	Birch Farm	4.14	224	P	Pn	15 43 39.1	-0.3
MBAZ	Motutapu North	4.19	282	P	Pn	15 43 40.0	0.0
PRWZ	Pori Road	4.21	227	P	Pn	15 43 40.8	+0.5
POWZ	Post Office Ro	4.23	230	P	Pn	15 43 41.2	+0.6
AWAZ	Awhitu Peninsu	4.33	277	P	Pn	15 43 41.8	-0.1
VRZ	Vera Road	4.35	250	P	Pn	15 43 43.0	+0.8
TIWZ	Tintock	4.41	225	P	Pn	15 43 43.2	+0.2
WAZ	Wanganui	4.41	241	P	Pn	15 43 44.2	+1.2
MRZ	Mangatainoka R	4.51	228	P	Pn	15 43 44.2	-0.2
TMWZ	Te Maipa	4.63	222	P	Pn	15 43 45.9	-0.2
HOWZ	Holdsworth Sta	4.70	226	P	Pn	15 43 46.6	-0.4
LREZ	Lake Rotokare	4.72	247	P	Pn	15 43 49.2	+2.0
OGWZ	Otaki Gorge	4.85	229	P	Pn	15 43 48.8	-0.3
PREZ	Palmer Road	4.86	249	P	Pn	15 43 51.9	+2.7
MTW	Mount Morrison	4.88	224	P	Pn	15 43 48.6	-0.8
NEZ	North Egmont	4.88	250	P	Pn	15 43 52.0	+2.4
WCZ	Waipu Caves	4.89	290	P	Pn	15 43 48.9	-0.7
PKE	Pukeiti	4.95	251	P	Pn	15 43 52.6	+2.2
KHEZ	Kahui Hut	4.95	250	P	Pn	15 43 52.7	+2.2
KIW	Kapiti Island	5.04	230	P	Pn	15 43 51.4	-0.2
NBEZ	Newall Road No	5.05	251	P	Pn	15 43 54.3	+2.5
NMEZ	Namu Road	5.09	249	P	Pn	15 43 54.8	+2.5
CAW	Cannon Point	5.09	227	P	Pn	15 43 51.8	-0.6
MSWZ	Moikau Station	5.20	224	Pn	Pn	15 43 51.9	-1.9
PLWZ	Palliser	5.30	222	Pn	Pn	15 43 53.4	-1.9
BHW	Baring Head	5.40	226	Pn	Pn	15 43 55.0	-1.6
SNZO	South Karori	5.43	227	Pn	Pn	15 43 55.7	-1.3
DUWZ	D’Urville Isla	5.63	235	P	Pn	15 43 58.9	-0.9
TCW	Tory Channel	5.63	230	P	Pn	15 43 58.7	-1.0
OUZ	Omahuta	5.75	294	Pn	Pn	15 44 00.7	-0.7
OUZ	Omahuta	5.75	294	P	Pn	15 44 00.8	-0.6
TUWZ	Tuamarina	5.96	230	Pn	Pn	15 44 02.4	-1.9
BSWZ	Blackbirch Sta	6.17	228	Pn	Pn	15 44 05.0	-2.1
NNZ	Nelson	6.19	234	Pn	Pn	15 44 06.1	-1.4
NNZ	Nelson	6.19	234	P	Pn	15 44 06.6	-0.8
CTZ	Chatham Island	6.51	158	P	Pn	15 44 17.3	+5.5
CTZ				S	Sn	15 45 26.4	+1.7
QRZ	Quartz Range	6.57	240	Pn	Pn	15 44 10.1	-2.5
THZ	Tophouse	6.79	232	Pn	Pn	15 44 13.8	-1.9
KHZ	Kahutara	6.81	225	Pn	Pn	15 44 13.4	-2.5
GVZ	Greta Valley S	7.46	223	P	Pn	15 44 24.7	-0.1
LTZ	Lake Taylor	7.77	227	Pn	Pn	15 44 26.7	-2.4
MQZ	McQueen’s Vall	8.16	221	Pn	Pn	15 44 31.8	-2.7
OXZ	Oxford	8.24	225	Pn	Pn	15 44 33.1	-2.4
OXZ	Oxford	8.24	225	P	Pn	15 44 35.9	+0.4
WACZ	Wakanui South	8.76	222	P	Pn	15 44 42.5	0.0
WVZ	Waitaha Valley	8.85	230	P	Pn	15 44 45.5	+1.6
RPZ	Rata Peaks	9.04	226	P	Pn	15 44 45.2	-1.3
	0.6nm,0.3s,baz=150,slow=14,SNR=4.6						
RPZ				S	Sn	15 46 19.7	-7.2
	2.0nm,0.3s,baz=321,slow=23,SNR=8.6						
RPZ	Rata Peaks	9.04	226		Pn	15 44 44.7	-1.8
GCSZ	Gaunt Creek Bo	9.24	230	P	Pn	15 44 49.8	+0.7
LBZ	Lake Benmore	9.95	225	Pn	Pn	15 44 56.7	-2.2
ODZ	Otahua Downs	10.13	221	Pn	Pn	15 44 58.9	-2.4
MCQ	Macquarie Isla	22.08	214	P	P	15 47 27.7	-1.5
STKA	Stephens Creek	31.92	269	P	P	15 48 59.2	-0.3
COEN	Coen	40.35	296	P	P	15 50 12.6	+1.0
COEN				IAmb	IAmb	15 50 13.3	
	comp=Z,4.4nm,0.7s						
SBA	Scott Base	40.61	184	P	P	15 50 11.4	-1.6
AS31	Alice Springs	41.65	276	P	P	15 50 22.9	+0.6
ASAR	Alice Springs	41.65	276	P	P	15 50 23.2	+1.0
	comp=Z,3.9nm,0.7s,baz=121,slow=8.1,SNR=69						
FORT	Forrest	43.04	263	P	P	15 50 34.9	+1.4
FORT				IAmb	IAmb	15 50 45.4	
	comp=Z,55nm,1.4s						
WR0	Warramunga Arr	43.13	281	P	P	15 50 35.1	+0.8
WR0				IAmb	IAmb	15 50 51.3	
	comp=Z,11nm,1.5s						
WB2	Warramunga Arr	43.29	281	P	P	15 50 36.1	+0.6
WB2				IAmb	IAmb	15 50 42.8	
	comp=Z,8.9nm,1.3s						
WRAB	Tennant Creek	43.29	281	P	P	15 50 36.2	+0.6
WRAB				IAmb	IAmb	15 50 43.4	
	comp=Z,9.4nm,1.5s						
WRA	Warramunga Arr	43.30	281	P	P	15 50 36.4	+0.7
	comp=Z,1.9nm,0.5s,baz=121,slow=7.8,SNR=43						
WRA	Warramunga Arr	43.30	281	P	P	15 50 35.8	+0.2
WB0	Warramunga Arr	43.35	281	P	P	15 50 36.5	+0.4
CASY	Casey	47.94	211	P	P	15 51 11.8	+0.2
CASY				IAmb	IAmb	15 51 13.1	
	comp=Z,21nm,1.4s						
FITZ	Fitzroy Crossi	51.14	277	P	P	15 51 37.2	+0.6
	comp=Z,2.0nm,0.6s,baz=125,slow=7.9,SNR=4.8						
FITZ	Fitzroy Crossi	51.14	277	P	P	15 51 37.4	+0.8
FITZ				IAmb	IAmb	15 51 39.4	
	comp=Z,9.1nm,1.4s						
PMSA	Palmer Station	66.29	155	P	P	15 53 19.9	-1.3
ARCES	ARCESS Array B	145.31	345	PKPbc	PKiKP	16 02 13.7	+0.1
	comp=Z,5.9nm,1.0s,baz=19,slow=4.1,SNR=7.5						
FINES	FINESS Array B	151.25	334	PKPbc	PKiKP	16 02 29.7	+3.7
	comp=Z,1.8nm,0.9s,baz=19,slow=6.5,SNR=5.1						

NEIC ***24*** *16:36:43.9±1.3, 18°.89S±0°.07×169°.26E±0°.08, h247^{km}±6^{km}, mb4.7/118, Error ellipse: s-maj=11.2km s-min=9.9km az=95.0*

IDC ***24*** *16:36:43.9±1.3, 18°.91S×169°.31E, h244^{km}±10^{km}, mb4.1/18, mb1 4.3/20, mb1mx4.1/34, mbtmp4.7/20, Error ellipse: s-maj=15.9km s-min=10.8km az=152.0*

NOU ***24*** *16:36:44.4, 18°.93S×169°.23E, h234^{km}, MLv5.5, Vanuatu Islands*

ISC 24 16:36:43.9±0.3, 18°.93S±0°.05×169°.29E±0°.05, h246^{km}, n309, σ0.^{s}85/310, mb4.7/71, 9C-7D, Fault plane solution: NP1: ϕ_s180.41110°, δ87.64471°, λ82.14031°. **NP2:** ϕ_s73.83278°, δ8.20288°, λ163.25986°. **Principal axes:** T Plg46.7969°, Azm82.2911°; N Plg7.8530°, Azm180.7361°; P Plg42.1299°, Azm277.9028°; **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	Devils Point	1.59	319	P	Pn	16 37 21.9	-0.7
LIFNC	LIFOU	2.66	226	P	Pn	16 37 31.4	-1.1
YATNC	Mamie plateau,	3.84	215	P	Pn	16 37 44.6	-1.0
SANVU	Saraoutou	3.99	330	Pn	Pn	16 37 46.3	-1.3
SANVU	Saraoutou	3.99	330	P	Pn	16 37 46.8	-0.7
PINNC	Pines Island,	4.05	205	P	Pn	16 37 48.3	+0.2
DZM	Mont Dzumac	4.11	220	P	Pn	16 37 49.2	+0.3
	9.1nm,0.3s,baz=58,slow=16,SNR=53						
DZM	Mont Dzumac	4.11	220	ePn	Pn	16 37 48.2	-0.7
	72nm,0.3s						
DZM	Mont Dzumac	4.11	220	Pn	Pn	16 37 48.7	-0.2
DZM	Mont Dzumac	4.11	220	P	Pn	16 37 49.2	+0.3
OUENC	Ouen Island, N	4.16	213	P	Pn	16 37 49.7	+0.3
ONTNC	Ouen Toro	4.28	218	P	Pn	16 37 51.2	+0.3
MSVF	Nonsavu	8.41	83	Pn	Pn	16 38 43.8	+1.3
MSVF	Nonsavu	8.41	83	P	Pn	16 38 44.4	+1.9
HNR	Honiara	13.07	315	P	Pn	16 39 41.3	+0.3
	14nm,0.3s,baz=175,slow=3.0,SNR=50						
FUNA	Funafuti	14.12	44		Pn	16 39 52.9	-0.8
OUZ	Omahuta	16.67	168	Pn	Pn	16 40 24.4	+0.4
OUZ				IAmb	IAmb	16 40 26.8	
	comp=Z,49nm,0.9s						
EIDS	Eidsvold	18.03	246	P	P	16 40 38.2	+1.0

EIDS				IAmb	IAmb	16 40 41.1	
	comp=Z,20nm,1.1s						
ARMA	Armidale	19.68	231	P	P	16 40 54.9	0.0
ARMA				IAmb	IAmb	16 41 02.1	
	comp=Z,28nm,1.3s						
HIZ	Hauiti	20.11	167	P	P	16 41 00.6	+1.3
HIZ				IAmb	IAmb	16 41 07.5	
	comp=Z,32nm,1.1s						
URZ	Urewera	20.43	162	P	P	16 41 03.4	+0.7
	comp=Z,8.1nm,0.7s,baz=315,slow=13,SNR=2.7						
URZ	Urewera	20.43	162	IAmb	IAmb	16 41 11.2	
	comp=Z,45nm,1.5s						
BKZ	Black Stump Fm	21.11	164	P	P	16 41 10.4	+0.6
CTA	Charters Tower	21.74	263	P	P	16 41 16.5	+0.5
	comp=Z,17nm,0.8s,baz=91,slow=12,SNR=36						
CTAO	Charters Tower	21.74	263	P	P	16 41 15.8	-0.2
CTAO				IAmb	IAmb	16 41 18.3	
	comp=Z,37nm,1.1s						
QRZ	Quartz Range	22.00	173	P	P	16 41 19.1	+1.0
QRZ				IAmb	IAmb	16 41 22.4	
	comp=Z,31nm,1.3s						
BFZ	Birch Farm	22.49	166	P	P	16 41 22.2	-0.4
BFZ				IAmb	IAmb	16 41 24.6	
	comp=Z,32nm,1.1s						
SNZO	South Karori	22.79	169	P	P	16 41 25.5	+0.3
MSWZ	Moikau Station	22.99	168	P	P	16 41 27.1	0.0
PMG	Port Moresby	23.42	291	P	P	16 41 32.4	+1.0
	comp=Z,44nm,0.8s,baz=98,slow=6.0,SNR=22						
PMG	Port Moresby	23.42	291	P	P	16 41 32.0	+0.7
PMG	Port Moresby	23.42	291	P	P	16 41 32.4	+1.0
FOZ	Fox Glacier	24.53	179	P	P	16 41 41.5	+0.4
KNTN	Kanton	24.56	51	P	P	16 41 41.4	-0.3
COEN	Coen	25.51	277	P	P	16 41 51.0	+0.6
STKA	Stephens Creek	28.05	237	P	P	16 42 13.9	+1.2
	comp=Z,12nm,0.6s,baz=68,slow=8.9,SNR=38						
STKA				PcP	PcP	16 45 21.0	+0.2
	comp=Z,2.3nm,0.7s,baz=125,slow=4.4,SNR=3.1						
STKA				ScP	ScP	16 48 41.0	+2.8
	comp=Z,3.4nm,1.0s,baz=18,slow=6.4,SNR=4.3						
STKA	Stephens Creek	28.05	237	P	P	16 42 13.5	+0.8
WR0	Warramunga Arr	32.75	262	P	P	16 42 53.2	-0.9
WR0				IAmb	IAmb	16 42 54.3	
	comp=Z,18nm,1.1s						
GENI	Genyem	32.80	296	P	P	16 42 56.0	+1.5
WB0	Warramunga Arr	32.90	263	P	P	16 42 54.6	-0.8
WB0				IAmb	IAmb	16 42 55.6	
	comp=Z,21nm,0.6s						
WB2	Warramunga Arr	32.93	262	P	P	16 42 55.0	-0.7
WB2				IAmb	IAmb	16 42 55.9	
	comp=Z,25nm,1.2s						
WRAB	Tennant Creek	32.93	262	P	P	16 42 54.9	-0.8
WRAB				IAmb	IAmb	16 42 55.4	
	comp=Z,12nm,0.6s						
WRA	Warramunga Arr	32.94	262	P	P	16 42 54.9	-0.8
	comp=Z,3.9nm,0.3s,baz=82,slow=6.1,SNR=111						
WRA				S	S	16 47 52.8	-2.6
	comp=Z,1.9nm,1.0s,baz=93,slow=14,SNR=4.9						
WRA	Warramunga Arr	32.94	262	P	P	16 42 54.0	-1.7
AS31	Alice Springs	33.24	256	P	P	16 42 58.4	0.0
ASAR	Alice Springs	33.25	256	P	P	16 42 58.4	-0.1
	comp=Z,76nm,0.4s,baz=81,slow=8.8,SNR=3206						
ASAR				S	S	16 47 58.8	-1.4
	comp=Z,1.1nm,0.7s,baz=84,slow=17,SNR=6.6						
ASAR				ScP	ScP	16 48 57.1	+1.5
	comp=Z,0.8nm,0.7s,baz=100,slow=4.1,SNR=5.8						
ASAR	Alice Springs	33.25	256	P	P	16 42 58.2	-0.2
XMAS	Kiritimati	38.78	61	P	P	16 43 45.0	-0.3
XMAS				IAmb	IAmb	16 43 45.2	
	comp=Z,37nm,0.8s						
FAKI	Fak Fak	39.56	289	P	P	16 43 51.5	-0.2
FITZ	Fitzroy Crossi	41.32	264	P	P	16 44 06.7	+0.6
	comp=Z,28nm,0.6s,baz=104,slow=6.0,SNR=95						
FITZ	Fitzroy Crossi	41.32	264	P	P	16 44 06.6	+0.6
FITZ				IAmb	IAmb	16 44 07.6	
	comp=Z,29nm,0.7s						
SIJI	Sorong	41.37	291	P	P	16 44 05.6	-0.9
	comp=Z,5.0nm,0.3s,baz=94,slow=8.3,SNR=7.7						
SOEI	Soe	44.45	275	P	P	16 44 29.7	-1.6
SOEI				IAmb	IAmb	16 44 33.3	
	comp=Z,35nm,1.1s						
BATI	Baumata	44.89	274	P	P	16 44 36.4	+1.7
	comp=Z,36nm,1.1s,baz=16,slow=2.6,SNR=5.0						
PSA00	Pilbara Seismi	46.31	258	P	P	16 44 45.8	+0.2
PSA00				IAmb	IAmb	16 44 46.9	
	comp=Z,25nm,0.7s						
PSA00	Pilbara Seismi	46.31	258	P	P	16 44 42.6	-3.0
PSA00				IAmb	IAmb	16 44 43.8	
	comp=Z,8.9nm,0.7s						
PSAA2	Pilbara Seismi	46.31	258	P	P	16 44 45.7	+0.1
PSAA2				IAmb	IAmb	16 44 46.9	
	comp=Z,24nm,0.7s						
PSAA1	Pilbara Seismi	46.32	258	P	P	16 44 45.7	0.0
PSAA1				IAmb	IAmb	16 44 46.9	
	comp=Z,24nm,0.6s						
PSAD3	Pilbara Seismi	46.36	258	P	P	16 44 45.8	-0.2
PSAD3				IAmb	IAmb	16 44 47.3	
	comp=Z,27nm,0.9s						
MORW	Morawa	49.33	248	P	P	16 45 08.4	-0.3
MORW				IAmb	IAmb	16 45 09.3	
	comp=Z,36nm,1.4s						
KHU	Kahuku	51.24	44	P	P	16 45 22.2	-1.0
KHLU	Kahalu`u	51.30	44	P	P	16 45 23.6	0.0
GIRL	Giralia	51.36	256	P	P	16 45 24.2	+0.3
AIN	Ainahou	51.43	44	P	P	16 45 24.3	-0.3
MLOA	Mauna Loa Obse	51.47	44	P	P	16 45 24.5	-0.7
HMH	Humu‘ula Sheep	51.58	44	P	P	16 45 26.2	+0.4
TOLI2	Tolitoli	51.62	287	P	P	16 45 25.0	-0.9
HLK	Haleakala	51.92	42	P	P	16 45 28.3	+0.1
KKM	Kota Kinabalu	57.87	290	P	P	16 46 10.4	-0.3
UGM	Wanagama	57.97	272	P	P	16 46 10.3	-1.1
LEM	Lembang	61.04	273	P	P	16 46 33.4	+0.9
	comp=Z,8.2nm,0.5s,baz=79,slow=16,SNR=4.1						
KSM	Kuching	61.35	283	P	P	16 46 34.3	0.0
JGF	Kuroka	62.11	331	P	P	16 46 39.9	+0.9
JGF				IAmb	IAmb	16 47 01.2	
	comp=Z,25nm,1.4s						
MJAR	Matsushiro Arr	62.50	332	P	P	16 46 40.6	-0.9
	comp=Z,1.2nm,0.6s,baz=90,slow=6.1,SNR=5.2						
MAJO	Matsushiro	62.50	332	P	P	16 46 41.6	+0.1
MAT	Matsushiro	62.50	332	P	P	16 46 41.4	-0.1
JHS	Saijyo	63.69	327	P	P	16 46 49.9	+0.5
JHS				IAmb	IAmb	16 47 13.0	
	comp=Z,37nm,1.5s						
JSD	Sado	63.73	333	P	P	16 46 50.2	+0.7
KASI	Kota Agung	64.39	273	P	P	16 46 54.6	+0.2
JTM	Tenmabayashi	64.94	337	P	P	16 46 57.5	+0.2
JKA	Kamikawa-asahi	67.33	339	P	P	16 47 13.6	+1.2
NJ2	Nanjing	70.02	316	*e*P	P	16 47 30.9	+1.7
NJ2				pmax	pmax		
	comp=Z,2.0nm,0.5s						
USRK	Ussuriysk Ar.	71.48	333	P	P	16 47 38.4	+0.6
	comp=Z,1.7nm,0.8s,baz=148,slow=5.7,SNR=7.6						
USRK	Ussuriysk Ar.	71.48	333	P	P	16 47 37.7	0.0
PET	Petropavlovsk	72.24	353	P	P	16 47 42.3	+0.3
PET				IAmb	IAmb	16 47 43.4	
	comp=Z,19nm,0.7s						
PEA0B	Petropavlovsk-	72.43	353	P	P	16 47 44.2	+1.0
PETK	Petropavlovsk-	72.43	353	P	P	16 47 44.0	+0.8
	comp=Z,11nm,0.6s,baz=136,slow=5.7,SNR=36						
MDJ	Mudanjiang	72.87	331	P	P	16 47 47.4	+1.4
MDJ				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,190nm,4.3s						
NIKH	Nikolski High	74.07	14	P	P	16 47 51.7	-0.9
	baz=202						
UNV	Unalaska Valle	75.41	15	P	P	16 47 59.9	-0.5
	baz=204						
KMI	Kunming	78.15	302⇑	*e*P	P	16 48 18.8	+2.2
KMI				pmax	pmax		
	comp=Z,6.0nm,1.0s						
CMAR	Chiang Mai Arr	78.42	294	P	P	16 48 20.2	+2.3
	comp=Z,0.8nm,0.8s,baz=132,slow=3.3,SNR=7.7						
CMAR	Chiang Mai Arr	78.42	294	P	P	16 48 18.4	+0.5
CHGN	Chignik	79.73	18	P	P	16 48 23.2	-0.9
CHGN				IAmb	IAmb	16 48 24.4	
	comp=Z,16nm,1.0s						
AIS	Amsterdam Isla	79.96	234	P	P	16 48 24.9	-1.1
HHC	Hu-ho-hao-te	80.02	319	*e*P	P	16 48 24.4	-1.8
HHC				S	S	16 58 11.8	+2.3
HHC	Hu-ho-hao-te	80.02	319	sS	sS	16 59 58.3	+8.1
HHC				pmax	pmax		
	comp=Z,5.0nm,1.2s						
HHC				pmax	pmax		
	comp=Z,240nm,6.3s						
OHAK	Old Harbor	82.05	19	P	P	16 48 36.0	-0.3
	baz=216						
BELA	Belgrano 2	82.40	175	P	P	16 48 36.5	-1.5
KDAK	Kodiak Island	82.73	19	P	P	16 48 40.0	+0.1
	baz=216						
GAMB	Gambell	83.76	8	P	P	16 48 45.3	+0.4
	baz=198,SNR=5.8						
GAMB	Gambell	83.76	8	P	P	16 48 45.3	+0.4
GAMB				IAmb	IAmb	16 48 46.0	
	comp=Z,10nm,0.6s						
HOM	Homer	84.53	19	P	P	16 48 48.9	0.0
	baz=217						
SVW2	Sparrevohn	84.59	16	P	P	16 48 49.4	+0.2
SVW2				IAmb	IAmb	16 48 50.8	
	comp=Z,15nm,1.3s						
BRSE	Bradley Lake S	84.88	19	P	P	16 48 50.8	+0.1
	baz=218						
KCPM	Cahto Peak	85.48	45	P	P	16 48 54.7	+0.4
ANM	Nome	85.49	11	P	P	16 48 54.2	+0.6
	baz=204						
PKM	Mcpherson Peak	85.93	51	P	P	16 48 56.3	-0.4
	baz=244						
KHMM	Horse Mountain	85.96	44	P	P	16 48 57.5	+0.8
KHMM				IAmb	IAmb	16 48 58.4	
	comp=Z,16nm,0.7s						
TTA	Tatalina	86.03	15	P	P	16 48 56.7	+0.3
	baz=213						
TTA	Tatalina	86.03	15	P	P	16 48 56.3	-0.1
SUA	Susitna One	86.24	18	P	P	16 48 57.2	-0.4
	baz=218						
SUA	Susitna One	86.24	18	P	P	16 48 56.2	-1.3
RC01	Rabbit Creek A	86.25	19	P	P	16 48 57.0	-0.4
	baz=218						
O02D	Mt. Diablo Mer	86.25	45	P	P	16 48 58.2	+0.1
	baz=242,SNR=10						
SKT	Skwentna	86.43	17	P	P	16 48 57.9	-0.4
	baz=217						
FMP	Fort Macarthur	86.55	53	P	P	16 48 59.0	-0.5
	baz=245						
WDC	Whiskeytown Da	86.61	45	P	P	16 49 00.2	+0.5
WDC				IAmb	IAmb	16 49 00.9	
	comp=Z,6.3nm,0.8s						
ULN	Ulaanbaatar	86.64	323	P	P	16 49 00.0	+0.2
L02E	Cave Junction	86.67	43	P	P	16 48 59.6	-0.3
	baz=241						
N02D	Trinity Center	86.69	45	P	P	16 49 00.5	+0.3
	baz=242,SNR=6.9						
M02C	Callahan	86.79	44	P	P	16 49 01.3	+0.7
	baz=241,SNR=6.7						
ORV	Oroville	86.84	46	P	P	16 49 01.0	+0.2
ORV				IAmb	IAmb	16 49 02.1	
	comp=Z,8.1nm,1.0s						
VES	Vestal, Richgr	86.88	51	P	P	16 49 00.9	-0.1
	baz=244						
K02D	Willamette Mer	86.89	43	P	P	16 49 00.3	-0.7
	baz=241						
CMB	Columbia Colle	86.92	48	P	P	16 49 01.2	0.0
CMB				IAmb	IAmb	16 49 02.6	
	comp=Z,12nm,1.0s						
AFDM	Forest Hills D	86.92	47	P	P	16 49 01.2	0.0
AFDM				IAmb	IAmb	16 49 02.6	
	comp=Z,14nm,1.1s						
GTA	Gaotai	86.95	313	*e*P	P	16 49 01.8	+0.3
GTA				pP	PcP	16 49 05.9	+2.5
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
J01E	Myrtle Point	86.95	42	P	P	16 49 01.0	-0.1
	baz=241						
O03E	Paynes Creek	86.97	46	P	P	16 49 01.6	+0.1
	baz=242						
SONM	Songino Array	87.00	323	P	P	16 49 01.5	0.0
	comp=Z,3.0nm,0.8s,baz=145,slow=5.7,SNR=27						
109C	Camp Elliot, M	87.11	54	P	P	16 49 02.0	-0.2
	baz=245						
SML	Sawmill	87.23	19	P	P	16 49 03.5	+1.4
	baz=220						
BFSC	Mount Baldy Ra	87.25	53	P	P	16 49 03.1	0.0
	baz=245						
ISA	Isabella, Lake	87.25	51	P	P	16 49 03.1	+0.1
	baz=244						
ISA	Isabella, Lake	87.25	51	P	P	16 49 03.2	+0.3
ISA				IAmb	IAmb	16 49 04.5	
	comp=Z,12nm,0.9s						
EDW2	Edwards Air Fo	87.27	52	P	P	16 49 03.4	+0.4
	baz=245						
HUMO	Hull Mountain	87.30	43	P	P	16 49 03.5	+0.5
HUMO				IAmb	IAmb	16 49 05.0	
	comp=Z,12nm,1.0s						
MURC	Murrieta	87.33	53	P	P	16 49 03.0	-0.3
	baz=245						
L04D	Klamath Falls	87.54	44	P	P	16 49 04.6	+0.4
	baz=242						
I03D	Drain, OR	87.58	42	P	P	16 49 03.9	-0.3
	baz=241						
MONP2	Monument Peak	87.63	54	P	P	16 49 05.4	+0.4
	baz=246						
M04C	Macdoel	87.64	44	P	P	16 49 05.0	+0.3
	baz=242						
KLU	Klutina	87.74	20	P	P	16 49 04.5	-0.2
	baz=222						
CHUM	Lake Minchumin	87.75	16	P	P	16 49 03.5	-1.0
	baz=216						
BEKR	Beckworth	87.76	47	P	P	16 49 05.4	0.0
BEKR				IAmb	IAmb	16 49 06.3	
	comp=Z,6.2nm,0.7s						
IKP	In-Ko-Pah, Jac	87.77	54	P	P	16 49 05.5	0.0
	baz=246						
BMRM	Bremner River	87.79	21	P	P	16 49 04.2	-0.6
	baz=223						
WAKR	Walker	87.80	48	P	P	16 49 04.0	-1.6
WAKR				IAmb	IAmb	16 49 07.6	
	comp=Z,23nm,1.5s						
KTH	Kantishna Hill	87.86	17	P	P	16 49 03.2	-1.9
KTH				IAmb	IAmb	16 49 25.9	
	comp=Z,13nm,1.4s						
CWC	Cottonwood Cre	87.87	50	P	P	16 49 05.2	-0.8
	baz=245						
PFO	Pinyon Flats O	87.90	53	P	P	16 49 05.7	-0.4
	baz=246						
TPFO	Pinon Flats	87.90	53	P	P	16 49 05.7	-0.4
	baz=246						
PNTR	Pine Nut	87.94	47	P	P	16 49 05.6	-0.7
PNTR				IAmb	IAmb	16 49 08.8	
	comp=Z,6.9nm,0.9s						
TRF	Thorofare Moun	87.95	17	P	P	16 49 04.5	-1.2
	baz=218						
TRF	Thorofare Moun	87.95	17	P	P	16 49 04.4	-1.3
WAT6	Susitna Watana	88.00	18	P	P	16 49 04.4	-1.5
	baz=220						
WAT2	Susitna Watana	88.05	18	P	P	16 49 05.0	-1.1
	baz=220						
SWSC	Sam W. Stewart	88.13	54	P	P	16 49 07.6	+0.6
	baz=246						
MPMC	Manual Prospec	88.14	51	P	P	16 49 07.6	+0.3
	baz=245						
YERR	Yerington	88.14	48	P	P	16 49 07.2	-0.1
YERR				IAmb	IAmb	16 49 08.9	
	comp=Z,6.8nm,0.9s						
J04D	Umpqua Nationa	88.15	43	P	P	16 49 07.6	+0.4
	baz=242,SNR=6.8						
I04A	Tendick Farm,	88.22	42	P	P	16 49 07.3	0.0
	baz=242,SNR=5.4						
N25K	Chitina, Valde	88.26	20	P	P	16 49 06.5	-0.6
	baz=223						
BPAW	Bear Paw Mtn.	88.28	16	P	P	16 49 07.3	+0.3
	baz=217						
RND	Reindeer	88.32	17	P	P	16 49 05.7	-1.6
RND				IAmb	IAmb	16 49 08.2	
	comp=Z,5.1nm,0.6s						
LHV	Little Huntoon	88.34	49	P	P	16 49 08.3	+0.4
LHV				IAmb	IAmb	16 49 10.7	
	comp=Z,19nm,1.4s						
H04D	Lebanon	88.36	42	P	P	16 49 08.4	+0.6
	baz=241						
PAHR	Pah Rah Range	88.36	47	P	P	16 49 07.9	-0.3
PAHR				IAmb	IAmb	16 49 09.8	
	comp=Z,13nm,1.2s						
G03D	McMinnville, O	88.37	41	P	P	16 49 08.5	+0.6
	baz=241						
BELC	Belle Mtn. Jos	88.41	53	P	P	16 49 08.0	-0.5
	baz=246						
HEC	Hector,Ludlow	88.49	52	P	P	16 49 08.5	-0.3
	baz=246						
RYN	Ryan	88.49	48	P	P	16 49 08.8	-0.1
MCK	McKinley	88.55	17	P	P	16 49 09.0	+0.7
	baz=219						
NVAR	Mina Array Bea	88.56	48	P	P	16 49 09.7	+0.5
	comp=Z,3.7nm,0.9s,baz=226,slow=8.2,SNR=21						
NVAR	Mina Array Bea	88.56	48	P	P	16 49 09.1	-0.2
MCARA	McCarthy VSAT	88.62	21	P	P	16 49 09.3	+0.7
	baz=224						
NV11	Mina Array Sit	88.67	49	P	P	16 49 09.7	+0.1
NV11				IAmb	IAmb	16 49 11.2	
	comp=Z,13nm,1.3s						
BC3	Big Chuckawall	88.68	54	P	P	16 49 10.2	+0.4
	baz=246						
K05A	Summer Lake	88.70	44	P	P	16 49 09.7	-0.1
J05D	Fort Rock, OR	88.74	43	P	P	16 49 10.5	+0.6
	baz=242,SNR=14						
BWN	Browne	88.75	17	P	P	16 49 08.1	-1.1
FURC	Furnace Creek,	88.77	51	P	P	16 49 10.7	+0.7
	baz=245						
H04A	Detroit Lake	88.78	42	P	P	16 49 09.8	-0.2
E03A	Lebam	88.83	40	P	P	16 49 09.6	-0.4
CTG	Chitna Glacier	88.90	22	P	P	16 49 09.6	-0.6
	baz=226						
GLA	Glamis	88.92	55	P	P	16 49 11.1	+0.3
	baz=247						
SHOC	Shoshone, Teco	88.97	51	P	P	16 49 11.4	+0.4
	baz=246						
GMRC	Granite Mounta	88.98	53	P	P	16 49 11.3	+0.1
	baz=246						
MLY	Manley	89.09	16	P	P	16 49 11.1	+0.2
	baz=218						
IRM	Iron Mountain	89.12	53	P	P	16 49 12.0	+0.3
	baz=246						
I05D	Terrebonne, OR	89.16	42	P	P	16 49 11.7	0.0
	baz=242						
PINE	Pine Mountain	89.16	43	P	P	16 49 12.3	+0.4
NEA2	Nenana	89.18	17	P	P	16 49 10.6	-0.6
	baz=219						
TPH	Tonopah	89.18	49	P	P	16 49 12.4	+0.2
WRH	Wood River Hil	89.36	17	P	P	16 49 10.0	-2.0
SLBS	Sierra La Lagu	89.41	65	P	P	16 49 13.5	+0.2
TPNV	Topopah Spring	89.42	51	P	P	16 49 13.3	+0.1
	baz=246						
TPNV	Topopah Spring	89.42	51	P	P	16 49 13.4	+0.1
TPNV				IAmb	IAmb	16 49 14.8	
	comp=Z,13nm,1.0s						
E04D	Cinebar	89.44	40	P	P	16 49 13.7	+0.9
	baz=242,SNR=6.3						
SNAA	Sanae	89.47	182	P	P	16 49 10.1	-2.6
I23K	Minto, Yukon-K	89.54	16	P	P	16 49 11.6	-1.2
	baz=219						
WRAK	Wrangell Islan	89.55	28	P	P	16 49 13.2	+0.1
	baz=234						
CCB	Clear Creek Bu	89.57	17	P	P	16 49 10.8	-2.2
G05D	Wamic, OR	89.59	41	P	P	16 49 13.6	0.0
	baz=242						
D03D	Eldon	89.60	39	P	P	16 49 14.1	+0.6
	baz=241,SNR=5.5						
D04E	Lakebay	89.61	39	P	P	16 49 14.2	+0.6
	baz=241						
HDA	Harding Lake	89.63	17	P	P	16 49 13.8	+0.5
	baz=221						
HDA	Harding Lake	89.63	17	P	P	16 49 11.4	-2.0
MDM	Murphy Dome	89.69	17	P	P	16 49 11.6	-2.1
TCOL	CIGO, UAF Yank	89.73	17	P	P	16 49 13.7	0.0
	baz=220						
COLA	College	89.73	17	P	P	16 49 13.6	-0.1
	baz=220						
NEE2	Needles Airpor	89.76	53	P	P	16 49 15.0	+0.3
	baz=247						
F05D	White Salmon	89.80	41	P	P	16 49 14.5	-0.1
	baz=242						
DOT	Dot Lake	89.92	19	P	P	16 49 13.3	-1.5
IL31		89.92	17	P	P	16 49 12.6	-2.1
ILAR	Eielson Array	89.92	17	P	P	16 49 12.9	-1.8
	comp=Z,2.2nm,0.4s,baz=238,slow=5.0,SNR=51						
ILAR	Eielson Array	89.92	17	P	P	16 49 12.6	-2.1
PDMCI	Parker Dam,Lak	89.94	54	P	P	16 49 15.1	-0.3
	baz=247						
LON	Longmire	89.99	40	P	P	16 49 14.2	-1.3
POKR	Poker Plat Res	90.03	17	P	P	16 49 14.2	-1.0
	baz=220						
POKR	Poker Plat Res	90.03	17	P	P	16 49 13.5	-1.7
SHPR	Sheep Range	90.04	51	P	P	16 49 15.6	-0.6
SHPR				IAmb	IAmb	16 49 18.0	
	comp=Z,16nm,1.4s						
VNA3	Neumayer Olymp	90.06	180	P	P	16 49 14.3	-1.2
VNA3	Neumayer Olymp	90.06	180	pP	pP	16 50 12.5	-2.4
WVOR	Wild Horse Val	90.06	45	P	P	16 49 15.8	-0.3
214A	Organ Pipe Nat	90.07	56	P	P	16 49 15.9	-0.3
	baz=248						
D05A	Enumclaw	90.09	39	P	P	16 49 16.0	+0.2
SKAG	Skagway	90.15	25	P	P	16 49 15.3	-0.6
	baz=231						
SCRK	Sand Creek	90.18	19	P	P	16 49 15.1	-1.0
	baz=224,SNR=7.5						
I07A	Izee	90.22	43	P	P	16 49 17.0	+0.3
I07A				IAmb	IAmb	16 49 18.4	
	comp=Z,13nm,0.8s						
VNA2	Neumayer--Watz	90.35	181	P	P	16 49 15.0	-1.8
	baz=173,slow=4.9						
VNA2	Neumayer--Watz	90.35	181	pP	pP	16 50 13.5	-2.8
W13A	Hualapai Mount	90.44	53	P	P	16 49 18.1	0.0
W13A				IAmb	IAmb	16 49 19.8	
	comp=Z,7.3nm,0.9s						
R11A	Troy Canyon, C	90.47	49	P	P	16 49 17.4	-0.7
	baz=246						
PRN	Pahroc Range	90.48	50	P	P	16 49 18.6	+0.5
B05A	Bryant	90.53	38	P	P	16 49 18.2	+0.3
	baz=242						
J08A	Circle Bar Ran	90.57	44	P	P	16 49 18.4	0.0
J08A				IAmb	IAmb	16 49 19.9	
	comp=Z,12nm,0.8s						
VNA1	Neumayer--Stat	90.64	181	P	P	16 49 17.0	-1.1
PRP	Porcupine Dome	90.87	17	P	P	16 49 18.1	-1.2
	baz=222						
LTY	Liberty	90.92	40	P	P	16 49 19.9	0.0
LTY				IAmb	IAmb	16 49 21.1	
	comp=Z,9.6nm,1.1s						
COLD	Coldfoot	90.97	15	P	P	16 49 19.3	-0.2
	baz=218,SNR=7.5						
COLD	Coldfoot	90.97	15	P	P	16 49 19.7	+0.2
G08A	Pilot Rock	91.10	42	P	P	16 49 20.9	+0.2
G08A				IAmb	IAmb	16 49 22.2	
	comp=Z,11nm,0.9s						
HAWA	Hanford	91.23	41	P	P	16 49 21.4	+0.3
HAWA				IAmb	IAmb	16 49 22.9	
	comp=Z,14nm,0.9s						
E08A	Dider Farm, El	91.56	41	P	P	16 49 22.8	+0.1
EGAK	Eagle	91.62	19	P	P	16 49 21.6	-0.9
	baz=226,SNR=10						
EGAK	Eagle	91.62	19	P	P	16 49 21.8	-0.8
EGAK				IAmb	IAmb	16 49 23.2	
	comp=Z,7.0nm,0.7s						
SPR3	Spring Creek 3	91.63	49	P	P	16 49 23.2	-0.4
LCMT	Little Creek M	91.66	51	P	P	16 49 23.3	-0.3
ELK	Elko	91.68	47	P	P	16 49 23.5	-0.2
TUC	Tucson	91.80	57	P	P	16 49 23.7	-0.6
	baz=249						
TUC	Tucson	91.80	57	P	P	16 49 24.6	+0.4
TUC				IAmb	IAmb	16 49 26.3	
	comp=Z,10nm,1.1s						
BMO	Blue Mountains	91.97	43	P	P	16 49 24.6	-0.2
SZCU	Shurtz Canyon	91.99	51	P	P	16 49 25.6	+0.4
TOLK	Toolik Lake Re	92.23	14	P	P	16 49 25.3	-0.1
	baz=219						
TOLK	Toolik Lake Re	92.23	14	P	P	16 49 25.1	-0.3
MFID	Camas Ranch	92.35	45	P	P	16 49 26.4	-0.2
MFID				IAmb	IAmb	16 49 27.8	
	comp=Z,3.4nm,0.7s						
WUAZ	Wupatki	92.50	53	P	P	16 49 26.4	-1.2
	baz=249						
WUAZ	Wupatki	92.50	53	P	P	16 49 27.1	-0.4
WUAZ				IAmb	IAmb	16 49 29.3	
	comp=Z,8.2nm,1.0s						
MTPU	Mount Pierson	92.82	51	P	P	16 49 29.6	+0.4
A21K	Barrow	93.02	10	P	P	16 49 28.4	-0.4
	baz=212						
DUG	Dugway, Tooele	93.17	49	P	P	16 49 29.9	-0.6
	baz=248						
HLID	Hailey	93.35	45	P	P	16 49 30.9	-0.4
	baz=247						
HLID	Hailey	93.35	45	P	P	16 49 31.2	-0.1
NEW	Newport	93.51	40	P	P	16 49 31.6	-0.2
	baz=246						
W18A	Petrified Fore	93.61	54	P	P	16 49 32.6	-0.1
	baz=250						
EPYK	Eagle Plains	94.06	19	P	P	16 49 33.8	0.0
	baz=230						
121A	Cookes Peak, D	94.25	57	P	P	16 49 34.7	-1.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	baz=250						
MNTX	Cornudas Mount	95.91	59	P	P	16 49 43.4	+0.4
	baz=252						
BOZ	Bozeman (W)	95.96	44	P	P	16 49 42.8	-0.3
	baz=249						
ANMO	Albuquerque	96.09	55	P	P	16 49 44.2	+0.2
	baz=251						
H17A	Grant Village	96.23	45	P	P	16 49 44.6	+0.1
	baz=250						
INK	Inuvik	96.24	18	P	P	16 49 42.4	-1.2
INK				IAmb	IAmb	16 49 44.2	
	comp=Z,5.5nm,1.1s						
BW06	Boulder Array	96.37	47	P	P	16 49 44.7	-0.4
	baz=250						
PDAR	Pinedale Array	96.37	47	P	P	16 49 44.2	-1.0
	comp=Z,0.2nm,0.4s,baz=357,slow=3.0,SNR=3.7						
TXAR	Lajitas Array	96.58	61	P	P	16 49 46.1	-0.1
	comp=Z,0.6nm,0.7s,baz=215,slow=7.7,SNR=4.3						
S22A	4UR Ranch, Cre	96.70	53	P	P	16 49 47.0	+0.2
	baz=251						
WMQ	Urumqi	97.02	314	*e*P	Pdif	16 49 48.5	+0.6
RLMT	Red Lodge	97.36	45	P	P	16 49 48.9	-0.6
	baz=251						
SDCO	Great Sand Dun	97.70	53	P	P	16 49 50.9	-0.4
	baz=252						
N23A	Red Feather La	98.33	50	P	Pdif	16 49 54.1	0.0
	baz=252						
C36M	Paulatuk	99.69	19	P	Pdif	16 49 59.0	0.0
	baz=242						
YKA	Yellowknife Ar	100.37	27	P	Pdif	16 50 01.9	-0.3
	comp=Z,2.0nm,0.7s,baz=250,slow=4.0,SNR=31						
MKAR	Makanchi Array	101.55	316	P	Pdif	16 50 09.7	+1.8
	comp=Z,0.3nm,0.5s,baz=92,slow=5.5,SNR=12						
ARCES	ARCESS Array B	124.78	345	PKP	PKPdf	16 55 12.9	-0.8
	comp=Z,2.1nm,0.4s,baz=62,slow=2.3,SNR=52						
FINES	FINESS Array B	130.32	338	PKP	PKPdf	16 55 23.1	-1.3
	comp=Z,1.9nm,1.0s,baz=50,slow=3.0,SNR=6.8						
FINES				SKPbc	SKPbc	16 58 24.1	-0.2
	comp=Z,1.9nm,0.7s,baz=62,slow=4.5,SNR=6.2						
NOA	NORSAR Array B	135.16	345	PKP	PKPdf	16 55 33.9	+0.3
	comp=Z,0.8nm,0.8s,baz=29,slow=2.0,SNR=2.0						
AKASG	Malin Array Be	135.27	325	PKP	PKPdf	16 55 33.4	-0.7
	comp=Z,0.3nm,0.3s,baz=45,slow=2.6,SNR=3.0						
AKASG				SKPbc	SKPbc	16 58 41.8	+0.2
	comp=Z,1.2nm,0.5s,baz=51,slow=4.0,SNR=7.4						
CONA	Conrad Observa	143.90	329	*e*P	PKPdf	16 55 50.5	+0.5
	comp=Z,2.8nm,0.8s						
CKRC	Cesky Krumlov	143.99	332	*e*PKP	PKPab	16 55 47.9	-0.1
KHC	Kasperske Hory	144.08	333	*e*PKP	PKPab	16 55 47.9	-0.5
GERES	GERESS Array B	144.24	332	PKP	PKPab	16 55 49.3	+0.2
	comp=Z,3.4nm,0.7s,baz=39,slow=3.8,SNR=25						
GERES	GERESS Array B	144.24	332	PKPdf	PKPab	16 55 48.6	-0.5
MOA	Molln	144.71	331	*i* P	PKPab	16 55 51.0	+0.2
	comp=Z,6.5nm,0.6s						
SOKA	Soboth	145.17	328	*e*P	PKPdf	16 55 52.2	0.0
	comp=Z,6.5nm,0.7s,SNR=6.0						
KBA	Koelnbreinsper	145.70	330	*e*P	PKPbc	16 55 53.8	-0.3
	comp=Z,2.2nm,0.4s						
MYKA	Terra Mystica	145.89	330	*i* P	PKPdf	16 55 53.6	+0.1
	comp=Z,2.4nm,0.4s						
WATA	Walderalm	146.31	332	*i* P	PKPbc	16 55 56.0	+0.2
	comp=Z,4.1nm,0.5s						
ABTA	Abfaltersbach	146.33	331	*e*P	PKPdf	16 55 54.8	+0.6
	comp=Z,3.2nm,0.5s,SNR=4.9						
WTTA	Wattenberg	146.34	332	*e*P	PKPbc	16 55 55.7	-0.3
	comp=Z,2.4nm,0.4s						
MOTA	Moosalm	146.51	333	*e*P	PKPbc	16 55 55.9	-0.5
	comp=Z,4.3nm,0.6s,SNR=5.3						
RETA	Reutte	146.55	333	*i* P	PKPbc	16 55 56.0	-0.4
	comp=Z,2.4nm,0.5s						
SQTA	Sankt Quirin	146.56	332	*e*P	PKPbc	16 55 56.2	-0.3
	comp=Z,10nm,0.5s,SNR=5.8						
DOU	Dourbes	146.58	342	*d*PKP	PKPbc	16 55 56.0	-0.2
FETA	Feichten	146.93	333	*i* P	PKPbc	16 55 57.5	-0.1
	comp=Z,6.8nm,0.5s						
DAVA	Damuels	147.08	334	*e*P	PKPbc	16 55 57.8	-0.2
	comp=Z,3.6nm,0.5s						
DBIC	Dimbokro	166.55	206	PKP	PKPdf	16 56 19.0	-1.7
	comp=Z,0.8nm,0.5s,baz=253,slow=2.0,SNR=3.6						
TORD	Torodi Ar. Bea	166.76	246	PKP	PKPdf	16 56 20.1	-0.7
	comp=Z,1.6nm,0.9s,baz=342,slow=1.4,SNR=6.2						

DJA 24 16:40:26.9±0.5**,2°N**±4°×**12°7E**±°**,h64km**±38km**,M4.0**/9**,**
mb4.0/3**,mB4.2**/1**,MLv3.9**/9**,Mw(mB)3.3**/1**,Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	0.92	157	P	Pn	16 40 48.1	+4.0
TNTI				S	Sn	16 41 04.3	+7.6
SGSI	Sangihe	2.53	324	P	Pn	16 41 06.4	+0.7
SGSI				S	Sn	16 41 34.9	-0.5
KMSI	Cibinong	3.20	251	P	Pn	16 41 15.1	+0.3
KMSI				S	Sn	16 41 52.4	+0.6
SANI	Sanana	3.79	196	P	Pn	16 41 21.2	-1.6
GTOI	Gorontalo	4.12	256	P	Pn	16 41 28.6	+1.3
NLAI	Namlea	4.83	179	P	Pn	16 41 36.9	-0.2
MRSI	Marisa	5.19	257	P	Pn	16 41 42.1	0.0
	0.1nm10nm,0.6s						
APSI	Ampana	5.92	245	P	Pn	16 41 52.5	+0.4

WEL 24 16:53:35.3±1.2**,33°S**±29°×**17°9E**±5°0**,h459km**±32km**,**
M4.1/14**,mB4.4**/3**,MLv4.1**/14**,Mw(mB)3.6**/3**,Error ellipse:**
s-maj=0.1km s-min=0.0km az=117.4,South of
Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HAZ	Te Kaha	4.92	195	P	P	16 54 59.3	+0.1
HAZ				S	S	16 56 08.0	+0.3
PKGZ	Pakihiroa	4.99	192	P	P	16 55 00.8	+0.9
RUGZ	Raukumara Rang	5.15	196	P	P	16 55 01.1	-0.4
RUGZ				S	S	16 56 08.7	-3.2
TWGZ	Tauwhareparae	5.29	192	P	P	16 55 04.7	+1.9
TWGZ				S	S	16 56 15.5	+1.2
MWZ	Matawai	5.53	196	P	P	16 55 04.9	-0.3
MWZ				S	S	16 56 20.8	+2.1
URZ	Urewera	5.57	199	P	P	16 55 04.6	-0.8
URZ				S	S	16 56 19.6	+0.5
RIGZ	Rimuhau	5.84	193	P	P	16 55 08.4	+0.2
MUGZ	Murupara	5.87	201	P	P	16 55 08.4	-0.1
TLZ	Tolley Road	6.18	210	P	P	16 55 14.1	+2.4
MTHZ	Maungataniwha	6.20	199	P	P	16 55 12.1	+0.2
MTHZ				S	S	16 56 31.0	+0.1
MRHZ	Matea Rd	6.30	202	P	P	16 55 12.5	-0.5
BKZ	Black Stump Fm	6.59	200	P	P	16 55 15.3	-0.5
BKZ				S	S	16 56 40.1	+1.9
MCHZ	McNeill Hill	6.79	198	P	P	16 55 16.7	-1.1
OTVZ	Oturere	6.86	205	P	P	16 55 18.1	-0.6
BHHZ	Black Hill Sta	7.01	202	P	P	16 55 19.5	-0.7
KRHZ	Kereru	7.07	200	P	P	16 55 20.5	-0.3
KAHZ	Kahuranaki	7.08	196	P	P	16 55 22.0	+1.1
TSZ	Takapari Road	7.57	201	P	P	16 55 25.6	-0.5
MRZ	Mangatainoka R	8.24	201	P	P	16 55 32.5	-0.6

NNC 24 16:55:48.3±9.5**,37°.29N**×**70°.21E,h332km**±642km**,mb2.3,**
mpv3.8,3C-1D,Error ellipse: s-maj=386.8km
s-min=45.8km az=0.0,Afghanistan-Tajikistan border
region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IUG	Iuzhnay	4.85	358	Pg	Pn	16 57 05.0	-0.4
	17nm,0.3s						
IUG				Lg	Lg	16 58 07.5	
	13nm,0.5s						
KK31	Karatay Array	5.81	2	P	Pn	16 57 16.6	+0.4
	0.8nm,0.3s,baz=174,slow=11,SNR=29						
KK31				⇑S	S	16 58 27.6	+0.3
	0.6nm,0.3s						
MRKS	Merke	5.92	22	Pg	Pn	16 57 17.3	-0.3
	5.8nm,0.3s						
MRKS				Lg	Lg	16 58 29.9	
	4.0nm,0.7s						
AAK	Ala-Archa	6.27	30	⇑P	Pn	16 57 21.3	-0.4
	1.3nm,0.4s						
AAK				⇓S	S	16 58 38.0	+0.7
	5.5nm,1.1s						
TKM2	Tokmak 2	6.97	35	⇑P	Pn	16 57 30.1	0.0
	3.1nm,0.5s						
KST	Kastek	7.24	36	Pg	Pn	16 57 33.8	+0.7
	2.4nm,0.3s						
KST				Lg	Lg	16 58 57.2	
	1.9nm,0.7s						

IDC ***24*** *17:14:40.5±1.1,5°.81S×128°.19E,h358km±12km,mb3.0/4,*
mb1 3.2/9,mb1mx3.0/41,mbtmp3.9/9,Error ellipse:
s-maj=19.0km s-min=9.9km az=91.0
DJA ***24*** *17:14:41.1±0.6,6°S±5°×12°8E±°,h357km±8km,M3.9/10,*
mB4.9/2,mb3.9/5,MLv3.9/10,Mw(mB)4.2/2
NEIC ***24*** *17:14:41.7±0.4,5°.79S±0°.07×128°.14E±0°.08,h369km±9km,*
mb4.0/9,Error ellipse: s-maj=14.3km s-min=5.5km
az=48.0
ISC 24 17:14:40.3±0.6**,5°.79S**±0°.06×**128°.12E**±0°.07**,h350km,n33,**
σ**1ˢ55**/37**,mb3.5**/5**,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	Bandanaira	2.18	55	P	Pn	17 15 33.9	+1.0
NLAI	Namlea	2.73	338	P	Pn	17 15 39.0	+1.6
SAUI	Saumlaki	3.84	125	Pn	Pn	17 15 51.0	+3.3
SANI	Sanana	4.28	330	P	Pn	17 15 51.7	-0.6
FAKI	Fak Fak	5.01	56		Pn	17 16 01.8	+1.7
FAKI	Fak Fak	5.01	56	P	Pn	17 16 00.6	+0.5
	0.4nm3µm58nm,1.0s						
SOEI	Soe	5.49	224		Pn	17 16 07.8	+2.2
SOEI	Soe	5.49	224	P	Pn	17 16 06.5	+1.0
	0.2nm29nm,1.2s						
SIJI	Sorong	5.81	33	P	Pn	17 16 10.9	+1.9
	4.5nm,0.3s,baz=161,slow=23,SNR=49						
SIJI				S	S	17 17 19.6	-1.3
	4.9nm,0.3s,baz=244,slow=23,SNR=7.6						
SWI	Sorong	5.81	33	P	Pn	17 16 10.2	+1.2
BATI	Baumata	6.23	225	P	Pn	17 16 15.9	+2.1
	8.6nm,0.3s,baz=56,slow=2.0,SNR=10						
BATI				S	S	17 17 29.4	-0.2
	4.8nm,0.3s,baz=309,slow=20,SNR=6.9						
BATI	Baumata	6.23	225	P	Pn	17 16 15.3	+1.5
	0.2nm32nm,1.0s						
LUWI	Luwuk	7.12	311	Pn	Pn	17 16 26.3	+2.1
APSI	Ampana	8.07	307	P	Pn	17 16 35.6	+0.2
	8.2nm,0.7s						
GTOI	Gorontalo	8.17	321	P	P	17 16 39.7	+0.2
TOLI2	Tolitoli	10.03	313		P	17 17 00.4	+0.2
FITZ	Fitzroy Crossi	12.48	191	P	Pn	17 17 28.2	+0.5
	0.1nm,0.3s,baz=16,slow=10,SNR=9.1						
WB0	Warramunga Arr	15.18	157	P	P	17 17 57.3	+0.3
WB0				IAmb	IAmb	17 18 00.7	
	comp=Z,18nm,1.5s						
WRAB	Tennant Creek	15.31	157	P	P	17 17 58.9	+0.5
WRAB				IAmb	IAmb	17 18 14.0	
	comp=Z,16nm,1.5s						
WRA	Warramunga Arr	15.32	157	P	P	17 17 58.6	+0.1
	comp=Z,0.6nm,0.3s,baz=329,slow=12,SNR=44						
WRA				S	S	17 20 38.3	-4.6
	comp=Z,0.1nm,0.3s,baz=341,slow=17,SNR=3.5						
WRA	Warramunga Arr	15.32	157		S	17 20 39.2	-3.7
WB2	Warramunga Arr	15.32	157	P	P	17 17 58.9	+0.3
WB2				IAmb	IAmb	17 17 59.6	
	comp=Z,4.8nm,0.8s						
WR0	Warramunga Arr	15.41	157	P	P	17 18 00.0	+0.5
WR0				IAmb	IAmb	17 18 28.0	
	comp=Z,5.2nm,1.1s						
AS31	Alice Springs	18.63	163	P	P	17 18 34.4	+0.3
ASAR	Alice Springs	18.63	163	P	P	17 18 34.2	+0.1
	comp=Z,0.5nm,0.3s,baz=344,slow=12,SNR=59						
ASAR				S	S	17 21 46.2	-1.8
	comp=Z,0.1nm,0.3s,baz=344,slow=22,SNR=6.7						
ASAR	Alice Springs	18.63	163	P	P	17 18 34.3	+0.2
CISI	Cisompet, Garu	20.24	264	P	P	17 18 50.8	-0.1
KSRS	Korea Array	43.02	360	P	P	17 22 06.2	-0.4
	comp=Z,0.5nm,0.5s,baz=179,slow=8.9,SNR=2.7						
WHZ	Wether Hill Ro	52.75	146	P	P	17 23 20.6	+0.2
SONM	Songino Array	56.72	343	P	P	17 23 48.8	+0.1
	comp=Z,0.4nm,0.6s,baz=160,slow=8.7,SNR=3.5						
MKAR	Makanchi Array	66.20	327	P	P	17 24 51.0	-0.4
	comp=Z,0.5nm,0.5s,baz=116,slow=8.6,SNR=14						
ZALV	Zalesovo Beam	69.68	334	P	P	17 25 11.7	-1.0
	comp=Z,0.5nm,0.4s,baz=141,slow=5.4,SNR=3.1						
KURK	Kurchatov	70.52	329	P	P	17 25 17.4	-0.5
KURK				IAmb	IAmb	17 25 48.8	
	comp=Z,5.0nm,1.6s						

JMA 24 17:32:43.1±0.2**,37°.18N**×**144°.43E,h53km,M4.2,Off east**
coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	2.61	297	P	Pn	17 33 24.1	+1.4
JIKH				*e*S	Sn	17 33 54.3	+1.1
JIO	Ouri	2.75	298	P	Pn	17 33 26.1	+1.4
JFK	Kawauchi	2.84	275	P	Pn	17 33 27.0	+1.0
JFK				*e*S	Sn	17 33 59.9	+0.8
JKMT	Kesennumamotoy	2.85	306	P	Pn	17 33 27.2	+1.2
JKMT				S	Sn	17 34 00.0	+0.9
JMST	Minamisoumatoc	2.87	282	P	Pn	17 33 27.4	+1.0
JMST				S	Sn	17 34 00.7	+1.0
OFUJ	Ofunato	2.89	312	P	Pn	17 33 27.6	+1.0
OFUJ				*e*S	Sn	17 34 01.1	+1.0
JMK	Ichinoseki	3.09	306	P	Pn	17 33 30.9	+1.5
JMK				*e*S	Sn	17 34 06.5	+1.5
JOU	Okura	3.21	293	P	Pn	17 33 33.0	+2.0
JFT	Otama	3.28	277	P	Pn	17 33 34.1	+2.1
JFT				*e*S	Sn	17 34 11.6	+1.8
JYK	Kaneyama	3.65	300	P	Pn	17 33 39.1	+2.0
JRG	Rokugo	3.72	308	P	Pn	17 33 40.1	+2.1
JRG				*e*S	Sn	17 34 22.8	+2.3
BSO1	Boso 1	3.77	229	P	Pn	17 33 37.3	-0.9
BSO1				*e*S	Sn	17 34 18.7	-2.3
JAH	Hinai	4.22	317	P	Pn	17 33 46.9	+2.0
JTM	Tenmabayashi	4.45	325	P	Pn	17 33 49.2	+1.2
JTM				*e*S	Sn	17 34 39.3	+0.7
JRY	Ryogami san	4.60	257	P	Pn	17 33 50.8	+0.7
JRY				*e*S	Sn	17 34 41.7	-0.5
JOD2	Odawara 2	4.72	248	P	Pn	17 33 52.3	+0.5
JOD2				*e*S	Sn	17 34 43.5	-1.8
JOT	Ohata	4.95	329	P	Pn	17 33 55.6	+0.8
JOT				*e*S	Sn	17 34 49.6	-1.1
MAT	Matsushiro	5.03	265	P	Pn	17 33 58.4	+2.4
MAT				*e*S	Sn	17 34 54.6	+1.8
JKB	Kayabe	5.38	332	P	Pn	17 34 01.8	+1.0
JCH	Churui	5.49	352	P	Pn	17 34 01.0	-1.2
JCH				*e*S	Sn	17 35 00.6	-3.4
NEM2	Nemuro 2	6.26	9	P	Pn	17 34 09.9	-2.9
NEM2				*e*S	Sn	17 35 15.0	-7.9
JTKR	Abashiri--Toko	6.79	357	P	Pn	17 34 18.9	-1.2
JTKR				*e*S	Sn	17 35 30.8	-5.3
JHR	Hokuryu	6.87	343	P	Pn	17 34 22.9	+1.7

TUL ***24*** *18:30:10.2±1.2,36°.60N±0°.01×97°.62W±0°.02,h7km±6km,*
ML3.4,mb_Lg3.3/85(NEIC),Error ellipse: s-maj=2.8km
s-min=1.6km az=72.0
NEIC ***24*** *18:30:10.0±1.2,36°.58N±0°.01×97°.64W±0°.02,h4km±6km,*
Error ellipse: s-maj=2.7km s-min=1.7km az=65.0
ANF ***24*** *18:30:10.2±0.5,36°.59N×97°.62W,h5km,ML4.0/8,Error*
ellipse: s-maj=6.0km s-min=5.3km az=173.0
ISC 24 18:30:10.1±1.1**,36°.58N**±0°.02×**97°.63W**±0°.02**,h4km**±9km**,**
n100,σ**0ˢ70**/110**,Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAN13	South Haven SW	0.45	16	Pg	Pg	18 30 18.7	0.0
KAN13				Sg	Sg	18 30 24.8	+0.3
KAN14	Manchester OK	0.46	324		Pg	18 30 19.0	+0.1
KAN14				Sg	Sg	18 30 25.3	+0.4
KAN05	Bluff City Nor	0.56	340		Pg	18 30 20.9	0.0
KAN05				Sg	Sg	18 30 28.3	+0.1
KAN01	Argonia South	0.58	350		Pg	18 30 21.2	-0.1
KAN01				Sg	Sg	18 30 29.0	+0.3
KAN10	Anthony SW Sta	0.66	325		Pg	18 30 22.6	-0.1
KAN10				Sg	Sg	18 30 31.6	+0.3
KAN08	Anthony NE Sta	0.70	337		Pg	18 30 22.6	-0.9
KAN08				Sg	Sg	18 30 32.9	+0.2
KAN12	Harper NE Stat	0.77	338		Pg	18 30 24.9	0.0
KAN12				Sg	Sg	18 30 35.0	+0.1
OK029	Liberty Lake	0.80	170		Pg	18 30 24.8	-0.6
OK029				Sg	Sg	18 30 36.4	+0.6
QUOK	Quay	0.85	119		Pg	18 30 26.3	-0.1
OK031	S. Brethren Rd	0.90	134		Pg	18 30 27.2	-0.1
OK031				Sg	Sg	18 30 39.7	+0.8
BCOK	Bluff Creek, N	0.93	179		Pg	18 30 27.8	0.0
BCOK				Sg	Sg	18 30 40.4	+0.6
OK030	Cody Creek RV	0.94	134		Pg	18 30 28.1	-0.1
OK030				Sg	Sg	18 30 41.2	+0.7
T35A	Sooner Cattle	0.96	69		Pg	18 30 28.1	-0.3
T35A				Sg	Sg	18 30 40.7	-0.1
T35B	Sooner Cattle	0.96	69	P		18 30 28.1	
	baz=251						
T35B				S		18 30 40.7	
	baz=251						
OK025	Westminster Rd	1.03	167		Pg	18 30 29.7	-0.1
OK025				Sg	Sg	18 30 43.6	+0.5
U32A	Winter Ranch,	1.12	260	Pg	Pg	18 30 31.1	-0.6
U32A				Sg	Sg	18 30 46.5	+0.2
U32A	Winter Ranch,	1.12	260	P		18 30 31.1	
	baz=78						
U32A				S		18 30 46.5	
	baz=78						
OKCFA	Oklahoma City	1.17	173		Pg	18 30 32.3	-0.3
OKCFA				Sg	Sg	18 30 48.1	+0.2
OKCSW	OKLAHOMA CITY	1.19	172		Pg	18 30 32.4	-0.4
OKCSW				Sg	Sb	18 30 48.7	-0.1
FNO	Franklin	1.34	172		Pn	18 30 35.4	-0.1
FNO					Sn	18 30 53.8	+0.1
TUL1	Leonard	1.63	114	P	Pn	18 30 39.6	+0.1
	baz=296						
TUL1				S	Sb	18 31 01.2	-0.4
	baz=296						
TUL1	Leonard	1.63	114		Pn	18 30 39.5	0.0
TUL1				IAmb_Lg		18 31 04.6	
	comp=Z,173nm,0.9s						
TUL1	Leonard	1.63	114	P		18 30 39.5	
	baz=296						
TUL1				S		18 31 01.6	
	baz=296						
R32A	Long Quarter,	2.03	335		Pn	18 30 46.2	+1.2
R32A	Long Quarter,	2.03	335	P		18 30 46.3	
	baz=154						
R32A				S		18 31 13.2	
	baz=154						
WMOK	Wichita Mounta	2.07	207	P	Pn	18 30 46.0	+0.4
	baz=26						
WMOK				S	Sn	18 31 12.6	+0.9
	baz=26						
WMOK	Wichita Mounta	2.07	207	Pn	Pn	18 30 45.9	+0.4
WMOK	Wichita Mounta	2.07	207	P		18 30 46.1	
	baz=26						
U38A	Gravette	2.62	92		Pn	18 30 54.0	+0.9
U38A				IAmb_Lg		18 31 39.3	
	comp=Z,58nm,0.8s						
KSU1	Kansas State U	2.64	17	P	Pn	18 30 54.3	+0.9
	baz=198						
KSU1				S	Sn	18 31 26.1	+0.3
	baz=198						
KSU1	Kansas State U	2.64	17		Pn	18 30 54.7	+1.3
KSU1	Kansas State U	2.64	17	P		18 30 54.6	
	baz=198						
X37A	Clayton	2.71	137		Pn	18 30 55.1	+0.7
X37A	Clayton	2.71	137	P		18 30 55.1	
	baz=318						
CBKS	Cedar Bluff	2.79	324	P	Pn	18 30 55.5	0.0
	baz=142						
CBKS				S	Sn	18 31 30.3	+0.8
	baz=142						
CBKS	Cedar Bluff	2.79	324		Pn	18 30 55.9	+0.4
Z35A	Perchaven, San	3.26	174		Pn	18 31 02.1	+0.2
Z35A	Perchaven, San	3.26	174	S		18 31 43.0	
	baz=355						
W39A	Magazine	3.41	113	S	Sn	18 31 45.6	+0.7
	baz=295						
W39A	Magazine	3.41	113		Pn	18 31 04.7	+0.6
W39A				IAmb_Lg		18 32 07.2	
	comp=Z,93nm,0.9s						
S39A	Bolivar	3.61	71		Pn	18 31 06.8	0.0
S39A				IAmb_Lg		18 32 12.3	
	comp=Z,71nm,0.8s						
AMTX	Amarillo	3.71	244	P	Pn	18 31 08.6	+0.5
	baz=61						
AMTX				S	Sn	18 31 52.9	+0.5
	baz=61						
AMTX	Amarillo	3.71	244		Pn	18 31 06.9	-1.3
AMTX				IAmb_Lg		18 32 13.6	
	comp=Z,79nm,0.8s						
AMTX	Amarillo	3.71	244	P		18 31 08.8	
	baz=61						
U40A	Yellville	3.85	92	P	Pn	18 31 09.9	-0.2
	baz=275						
U40A				S	Sn	18 31 55.6	-0.3
	baz=275						
U40A	Yellville	3.85	92		Pn	18 31 10.3	+0.2
MIAR	Mount Ida	3.88	120	P	Pn	18 31 11.4	+1.0
	baz=303						
MIAR				S	Sn	18 31 56.6	+0.2
	baz=303						
MIAR	Mount Ida	3.88	120		Pn	18 31 11.5	+1.1
MIAR				IAmb_Lg		18 32 18.7	
	comp=Z,46nm,0.9s						
Z38A	Mt. Pleasant	3.96	146		Pn	18 31 12.3	+0.7
N33A	J Bar K, Exete	4.15	2	Pn	Pn	18 31 14.1	-0.1
N33A				IAmb_Lg		18 32 30.2	
	comp=Z,38nm,0.8s						
ABTX	Abilene, Hawle	4.29	203		Pn	18 31 15.9	-0.2
ABTX				IAmb_Lg		18 32 25.6	
	comp=Z,34nm,1.0s						
MGMO	Mountain Grove	4.33	81		Pn	18 31 17.6	+0.8
MGMO				IAmb_Lg		18 32 33.4	
	comp=Z,85nm,0.8s						
P38A	Dawn	4.43	46	Pn	Pn	18 31 19.0	+0.9
P38A				IAmb_Lg		18 32 31.3	
	comp=Z,54nm,0.7s						
X40A	Basin Creek Fa	4.43	117		Pn	18 31 18.4	+0.3
X40A				IAmb_Lg		18 32 32.2	
	comp=Z,36nm,0.9s						
N35A	Tabor	4.54	19		Pn	18 31 20.3	+0.7
WHTX	Lake Whitney,	4.58	178		Pn	18 31 20.7	+0.6
R40A	Maddies Statio	4.59	67		Pn	18 31 20.4	+0.1
R40A				IAmb_Lg		18 32 39.0	
	comp=Z,50nm,0.8s						
KSCO	Kaye Shedlock’	4.64	303		Pn	18 31 21.7	+0.7
KSCO				IAmb_Lg		18 32 40.5	
	comp=Z,34nm,0.7s						
237A	Washetta, Mont	4.81	161	Pn	Pn	18 31 23.7	+0.4
237A				IAmb_Lg		18 32 54.8	
	comp=Z,47nm,1.0s						
BGNE	Belgrade	4.83	355	Pn	Pn	18 31 23.1	-0.5
MSTX	Muleshoe	4.95	240		Pn	18 31 24.7	-0.6
T42A	Van Buren	5.26	83		Pn	18 31 29.2	-0.3
T42A				IAmb_Lg		18 33 02.8	
	comp=Z,51nm,0.8s						
P40A	Paris	5.29	55		Pn	18 31 30.8	+0.9
P40A				IAmb_Lg		18 33 01.7	
	comp=Z,66nm,0.8s						
CCM	Cathedral Cave	5.30	72		Pn	18 31 29.3	-0.6
N38A	Joes South For	5.43	38		Pn	18 31 31.6	-0.2
L34A	Svendsen Farm,	5.46	10	Pn	Pn	18 31 32.1	-0.2
L34A				IAmb_Lg		18 33 05.1	
	comp=Z,67nm,0.8s						
OGNE	Ogallala	5.55	323		Pn	18 31 33.0	-0.5
OGNE				IAmb_Lg		18 33 14.7	
	comp=Z,62nm,0.7s						
435B	Jarrell	5.79	180	IAmb_Lg		18 33 20.2	
	comp=Z,48nm,0.8s						
PBMO	Poplar Bluff	5.79	86	Pn	Pn	18 31 35.8	-0.9
PBMO				IAmb_Lg		18 33 21.5	
	comp=Z,61nm,0.9s						
FVM	French Village	5.91	74		Pn	18 31 38.4	0.0
K31A	O'Neill	6.09	352	Pn	Pn	18 31 42.6	+1.7
SLM	Saint Louis	6.22	69		Pn	18 31 43.4	+0.9
SCIA	State Center	6.32	31		Pn	18 31 45.6	+1.6
SCIA				IAmb_Lg		18 33 40.6	
	comp=Z,39nm,0.8s						
JCT	Junction City	6.35	197		Pn	18 31 43.5	-1.0
JCT				IAmb_Lg		18 33 38.1	
	comp=Z,42nm,0.9s						
SDCO	Great Sand Dun	6.39	283	Pn	Pn	18 31 47.1	+1.8
SDCO				IAmb_Lg		18 33 35.1	
	comp=Z,20nm,1.0s						
N41A	Harden Midland	6.71	50	IAmb_Lg		18 33 43.5	
	comp=Z,57nm,0.8s						
S44A	Carbondale	6.78	78	Pn	Pn	18 31 50.7	+0.4
W45A	Hickory Valley	7.00	99	Pn	Pn	18 31 54.4	+1.1
W45A				IAmb_Lg		18 34 07.2	
	comp=Z,48nm,0.8s						
OXF	Oxford	7.01	105	IAmb_Lg		18 34 05.5	
	comp=Z,37nm,0.9s						
ISCO	Idaho Springs	7.06	299		Pn	18 31 54.3	-0.1
GDL2	Guadalupe Moun	7.08	234	Pn	Pn	18 31 54.4	-0.1
K38A	Parkersburg	7.12	30	IAmb_Lg		18 34 12.3	
	comp=Z,40nm,0.7s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
Y45A	Yeager Farm, C	7.15	110	IAmb_Lg		18 34 06.3	
	comp=Z,36nm,0.9s						
ECSD	EROS Data Cent	7.18	6	Pn	Pn	18 31 55.1	-0.8
Q44A	Meyer Farm, Va	7.21	69	Pn	Pn	18 31 54.3	-1.8
ANMO	Albuquerque	7.36	260		Pn	18 31 58.5	0.0
L40A	Anamosa	7.39	40	Pn	Pn	18 31 57.8	-0.8
L40A				IAmb_Lg		18 34 09.0	
	comp=Z,33nm,1.1s						
PHWY	Pilot Hill	7.71	310	Pn	Pn	18 32 02.8	-0.5
BNM	Barren Site	7.74	254	Pn	Pn	18 32 04.7	+1.0
SMCO	Snowmass	7.83	292		Pn	18 32 04.9	-0.2
SUSD	Miller	7.92	353	IAmb_Lg		18 34 39.7	
	comp=Z,27nm,0.8s						
PLAL	Pickwick Lake	7.93	99	Pn	Pn	18 32 06.0	0.0
PLAL				IAmb_Lg		18 34 33.9	
	comp=Z,23nm,1.0s						
LENM	Lemitar	8.01	255	Pn	Pn	18 32 07.4	+0.1
MNTX	Cornudas Mount	8.06	235	Pn	Pn	18 32 07.6	-0.3
L42A	Oliver, Polo	8.21	46	Pn	Pn	18 32 09.7	-0.2
L42A				IAmb_Lg		18 34 29.7	
	comp=Z,43nm,0.8s						
T47A	Sharon Grove	8.45	84	IAmb_Lg		18 34 45.1	
	comp=Z,35nm,1.1s						
JFWS	Jewell Farm	8.50	40	Pn	Pn	18 32 14.0	+0.1
JFWS				IAmb_Lg		18 34 42.7	
	comp=Z,23nm,0.7s						
TX31	Lajitas Ar. Si	8.83	217	Pn	Pn	18 32 17.0	-1.5
TXAR	Lajitas Array	8.83	217	Pn	Pn	18 32 16.5	-2.0
TX32	Lajitas Array	8.83	217	Pn	Pn	18 32 18.1	-0.5
X48A	Hartselle	8.89	101	IAmb_Lg		18 34 57.7	
	comp=Z,14nm,0.9s						
RSSD	Black Hills	8.97	329	Pn	Pn	18 32 21.9	+1.3
RSSD				IAmb_Lg		18 35 01.6	
	comp=Z,36nm,1.3s						
SFIN	Lafayette	9.09	62	IAmb_Lg		18 35 00.7	
	comp=Z,36nm,0.8s						
K22A	Casper	9.15	314	IAmb_Lg		18 35 12.1	
	comp=Z,19nm,0.9s						
WCI	Wyandotte Cave	9.17	76	IAmb_Lg		18 35 00.8	
	comp=Z,32nm,0.9s						
F33A	5 Mile Ranch,	9.30	6	IAmb_Lg		18 35 14.4	
	comp=Z,14nm,0.9s						
U49A	Red Boiling Sp	9.54	87	IAmb_Lg		18 35 09.8	
	comp=Z,15nm,0.7s						
F36A	Milaca	9.77	17	Pn	Pn	18 32 32.5	+1.2
W18A	Petrified Fore	9.94	265	IAmb_Lg		18 35 26.0	
	comp=Z,16nm,0.9s						

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*KRSC **24** 18:54:01.1±1.1, 49.°20N×157.°19E, h16^{km}±24^{km}, ML4.1*
*MOS **24** 18:54:02.8±0.7, 49.°15N×156.°50E, h40^{km}, mb4.3/1, Error ellipse: s-maj=19.4km s-min=5.4km az=79.1*
*IDC **24** 18:54:09.0±4.4, 49.°58N×155.°78E, h49^{km}±27^{km}, mb3.2/7, mb1 3.4/10, mb1mx3.2/42, mbtmp3.5/10, ML3.1/3, MS2.9/2, Ms1 2.9/2, ms1mx2.5/24, Error ellipse: s-maj=87.7km s-min=24.2km az=130.0*
ISC 24 18:54:03.8±1.1**, 49.°16N**±0.°08×**156.°6E**±0.°1**, h34**^{km}**, n50,** σ1.^{s}**11**/52**, mb3.4**/7**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril’s	1.55	350	PN	Pn	18 54 29.2	+0.3
SKR				S	Sb	18 54 50.2	-0.9
SKR	Severo-Kuril’s	1.55	350	eP	Pn	18 54 29.2	+0.3
SKR				eS	Sb	18 54 50.2	-0.9
PAU	Pauzhetka	2.31	4	PN	Pn	18 54 40.2	+0.8
PAU				S	Sn	18 55 08.1	+1.4
PAU	Pauzhetka	2.31	4	eP	Pn	18 54 40.2	+0.8
PAU				eS	Sn	18 55 08.1	+1.4
KDTR	Khodutka, Kamc	2.82	20	eS	Sn	18 55 18.0	-1.2
MTVR	Mutnovka	3.48	17	PN	Pn	18 54 55.8	+0.2
MTVR				S	Sn	18 55 36.3	+0.6
MTVR	Mutnovka	3.48	17	eP	Pn	18 54 55.8	+0.2
MTVR				eS	Sn	18 55 36.3	+0.6
RUS	Russkaya	3.50	20	eS	Sn	18 55 35.8	-0.2
GRL	Gorelyy	3.53	15	PN	Pn	18 54 57.0	+0.8
GRL	Gorelyy	3.53	15	eP	Pn	18 54 57.0	+0.8
KRMR	Karymshinskiy	3.81	15	PN	Pn	18 55 01.9	+2.0
KRMR	Karymshinskiy	3.81	15	eP	Pn	18 55 01.9	+2.0
PETK	Petropavlovsk-	4.02	10	P	Pn	18 55 03.9	+1.1
	1.1nm,0.3s,baz=167,slow=15,SNR=34						
PET	Petropavlovsk	4.09	18	ePN	Pn	18 55 04.6	+0.8
DALK	Dalny	4.11	19	PN	Pn	18 55 04.2	+0.1
DALK				S	Sn	18 55 51.8	+0.8
DALK	Dalny	4.11	19	eP	Pn	18 55 04.2	+0.1
DALK				eS	Sn	18 55 51.8	+0.8
UGLR	Uglovaya	4.30	19	PN	Pn	18 55 08.0	+1.2
UGLR	Uglovaya	4.30	19	eP	Pn	18 55 08.0	+1.2
AVH	Avacha	4.33	18	PN	Pn	18 55 09.0	+1.8
AVH	Avacha	4.33	18	eP	Pn	18 55 09.0	+1.8
KOK	Koryaka	4.34	17	PN	Pn	18 55 08.9	+1.6
KOK	Koryaka	4.34	17	eP	Pn	18 55 08.9	+1.6
SMAR	Somma	4.34	18	PN	Pn	18 55 08.6	+1.1
SMAR	Somma	4.34	18	eP	Pn	18 55 08.6	+1.1
KRER	Koryakskii	4.37	18	PN	Pn	18 55 08.9	+1.0
KRER	Koryakskii	4.37	18	eP	Pn	18 55 08.9	+1.0
SDLR	Sedlovina	4.37	19	PN	Pn	18 55 08.1	+0.2
SDLR	Sedlovina	4.37	19	eP	Pn	18 55 08.1	+0.2
KRX	Arik	4.40	17	PN	Pn	18 55 09.4	+1.1
KRX	Arik	4.40	17	eP	Pn	18 55 09.4	+1.1
SPN	Mys Shipunski	4.50	28	PN	Pn	18 55 09.3	-0.2
SPN	Mys Shipunski	4.50	28	eP	Pn	18 55 09.3	-0.2
SPN				eS	Sn	18 56 00.8	+0.1
GNL	Ganaly	4.62	10	PN	Pn	18 55 12.9	+1.7
GNL	Ganaly	4.62	10	eP	Pn	18 55 12.9	+1.7
ASAJ	Asahikawa	10.84	248	P	Pn	18 56 37.8	+1.4
	0.9nm,0.3s,baz=53,slow=17,SNR=5.0						
KLR	Kul'dur	16.20	280	LR	LR	19 04 56.6	
	comp=Z,64nm,18.7s,baz=322,slow=41						
USRK	Ussuriysk Ar.	17.54	263	P	Pn	18 58 04.9	-0.5
	baz=55,slow=16,SNR=1.8						
KSRS	Korea Array	23.75	251	P	P	18 59 13.1	+0.3
	0.6nm,0.7s,baz=53,slow=8.8,SNR=4.6						
KSRS				LR	LR	19 08 45.4	
	comp=Z,19nm,18.6s,baz=355,slow=37						
H11N2	WAKE ISLAND Hy	30.52	161	T	T	19 32 53.5	
	baz=360						
H11N1	WAKE ISLAND Hy	30.53	161	T	T	19 32 42.7	
	baz=360						
H11N3	WAKE ISLAND Hy	30.53	161	T	T	19 32 49.8	
	baz=360						
H11S1	WAKE ISLAND Hy	31.66	161	T	T	19 34 40.9	
	baz=346,slow=76,SNR=7.8						
H11S3	WAKE ISLAND Hy	31.67	161	T	T	19 34 24.6	
	baz=346,slow=76,SNR=7.5						
H11S2	WAKE ISLAND Hy	31.68	161	T	T	19 34 26.4	
	baz=346,slow=76,SNR=4.1						
SONM	Songino Array	32.77	287	P	P	19 00 31.9	-1.6
	0.2nm,0.6s,baz=88,slow=13,SNR=2.5						
ZALV	Zalesovo Beam	43.10	305	P	P	19 01 58.6	-1.7
	0.2nm,0.3s,baz=49,slow=4.6,SNR=1.8						
MKAR	Makanchi Array	47.90	297	P	P	19 02 36.8	-1.6
	0.2nm,0.6s,baz=62,slow=12,SNR=2.7						
CMAR	Chiang Mai Arr	55.17	258	P	P	19 03 34.0	+1.0
	0.3nm,0.7s,baz=26,slow=7.1,SNR=4.5						
GERES	GERESS Array B	77.25	336	P	P	19 05 54.5	+0.3
	0.3nm,0.5s,baz=348,slow=5.7,SNR=3.6						
BRTR	Keskin Array B	78.16	319	P	P	19 05 59.7	+0.1
	0.5nm,0.7s,baz=63,slow=6.6,SNR=2.3						

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*NEIC **24** 19:11:40.6±1.6, 35.°48S±0.°04×70.°1W±0.°1, h162^{km}±6^{km}, mb4.3/10, Md4.3(SJA), ML4.0(GUC), Error ellipse: s-maj=12.8km s-min=6.5km az=83.0*
*GUC **24** 19:11:41.5±0.6, 35.°43S×70.°23W, h170^{km}±4^{km}, ML4.0*
*IDC **24** 19:11:41.4±0.8, 35.°58S×69.°76W, h163^{km}±6^{km}, mb3.5/7, mb1 3.7/11, mb1mx3.7/26, mbtmp4.0/11, Error ellipse: s-maj=26.5km s-min=15.7km az=96.0*
*VAO **24** 19:12:03.9±2.7, 34.°56S×68.°61W, h269^{km}±22^{km}, mb4.3*
ISC 24 19:11:40.7±0.6**, 35.°50S**±0.°05×**70.°13W**±0.°08**, h159**^{km}±5^{km}**, n74,** σ1.^{s}**12**/91**, mb3.9**/8**, 1C-5D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BO02	Sierra Bellavi	0.89	323	⇓iP	Pn	19 12 06.3	+0.7
BO02				eS	Sn	19 12 25.6	+0.9
BO02				IAML		19 12 27.1	
	comp=N,2µm,0.5s						
BO02	Sierra Bellavi	0.89	323		Pn	19 12 06.2	+0.6
BO02				Sn	Sn	19 12 25.6	+0.9
BI02	San Fabin de	1.48	218	⇑iP	Pn	19 12 11.7	+0.8
BI02	San Fabin de	1.48	218	Pn	Pn	19 12 11.5	+0.6
BI02				Sn	Sn	19 12 35.5	+1.4
LMEL	Las Melosas	1.65	358	⇓iP	Pn	19 12 13.8	+1.0
LMEL				i S	Sn	19 12 39.5	+2.1
BO03	Pichilemu	1.81	303	eP	Pn	19 12 14.9	+0.6
BO03				eS	Sn	19 12 39.5	-0.5
BO03				IAML		19 12 41.7	
	comp=N,979nm,0.3s						
MT09	Talagante	1.86	337	⇓iP	Pn	19 12 15.3	+0.2
MT09				i S	Sn	19 12 41.1	-0.4
MT09				IAML		19 12 42.3	
	comp=N,2µm,0.3s						
MT03	Universidad Ad	2.03	351	eP	Pn	19 12 17.5	+0.6
MT03				eS	Sn	19 12 45.1	+0.4
MT03				IAML		19 12 47.1	
	comp=E,816nm,0.2s						
MT05	Renca	2.16	346	eP	Pn	19 12 18.8	+0.4
MT05				i S	Sn	19 12 47.4	0.0
MT05				IAML		19 12 50.7	
	comp=N,1µm,0.3s						
MT05	Renca	2.16	346		Pn	19 12 19.0	+0.6
MT05				Sn	Sn	19 12 47.4	0.0
VA05	Santo Domingo	2.21	326	eP	Pn	19 12 19.3	+0.4
VA05				i S	Sn	19 12 47.3	-1.0
VA05				IAML		19 12 50.1	
	comp=N,1µm,0.2s						
MT02	Curacav	2.39	339	⇓iP	Pn	19 12 21.1	+0.1
MT02				i S	Sn	19 12 51.0	-1.1
MT02	Curacav	2.39	339		Pn	19 12 21.1	+0.1
MT02				Sn	Sn	19 12 50.1	-1.9
PEL	Peldehue	2.40	349	⇓iP	Pn	19 12 21.4	+0.2
PEL				i S	Sn	19 12 52.0	-0.3
PEL	Peldehue	2.40	349		Pn	19 12 21.6	+0.5
PEL				Sn	Sn	19 12 52.4	0.0
BI03	Tigo	2.70	239		Pn	19 12 24.5	-0.2
VA03	San Esteban	2.75	353		Pn	19 12 26.1	+0.6
ZON	Zonda	4.13	17		Pn	19 12 42.8	-0.2
CO02	Combarbal	4.35	350		Pn	19 12 45.3	-0.6
CO03	El Pedregal	4.67	354		Pn	19 12 50.0	-0.1
PLCA	Paso Flores	5.23	184	P	Pn	19 12 57.7	+0.3
	comp=N,1.1nm,0.3s,baz=357,slow=12,SNR=17						
PLCA	Paso Flores	5.23	184	Pn	Pn	19 12 58.0	+0.6
GO04	Tololo Observa	5.34	354	Pn	Pn	19 12 58.3	-0.8
CO01	Juntas del Tor	5.51	0		Pn	19 13 01.5	+0.2
LCO	Las Campanas	6.49	356	Pn	Pn	19 13 13.1	-1.2
AC05	El Transito	6.65	359	Pn	Pn	19 13 15.2	-1.1
AC04	Llanos de Chal	7.32	353	Pn	Pn	19 13 22.2	-2.9
GO03	Copiap	7.88	359	Pn	Pn	19 13 30.7	-2.0
GO07	Milladeo Hill,	8.08	199	Pn	Pn	19 13 31.6	-3.5
PB14	IPOC Station P	10.84	359	Pn	Pn	19 14 09.8	-2.2
PB10	IPOC Station P	11.95	358	Pn	Pn	19 14 24.2	-2.0
PB15	IPOC Station P	12.26	3		Pn	19 14 29.8	-0.7
LVC	Limon Verde	12.89	5	P	Pn	19 14 39.1	+0.5
	comp=N,0.7nm,0.3s,baz=235,slow=5.9,SNR=3.7						
LVC	Limon Verde	12.89	5	Pn	Pn	19 14 38.6	0.0
LVC	Limon Verde	12.89	5	eP	P	19 14 46.3	+3.0
CPUP	Villa Florida	14.28	54	P	Pn	19 14 54.4	-1.4
	comp=N,0.1nm,0.3s,baz=236,slow=9.8,SNR=5.4						
PB01	IPOC Station P	14.42	2	P	Pn	19 14 57.6	0.0
PB08	IPOC Station P	15.33	3	Pn	Pn	19 15 07.0	-2.2
MNMC	Minye Minye	16.32	2	P	Pn	19 15 21.1	-0.1
MNMC				IAmb	IAmb	19 15 24.6	
	comp=Z,8.6nm,0.8s						
PB16	IPOC Station P	17.11	2		Pn	19 15 31.6	+0.5
PB16				IAmb	IAmb	19 15 34.0	
	comp=Z,16nm,1.3s						
ITAB	Concordia	17.42	67	eP	Pn	19 15 34.4	+0.2
EFI	East Falkland	18.34	156	P	P	19 15 42.6	-0.1
PTGB	Pitanga	18.94	60	eP	P	19 15 49.1	-0.5
LPAZ	La Paz	19.22	6	P	Pn	19 15 55.4	-0.6
	comp=Z,1.0nm,0.3s,baz=178,slow=7.8,SNR=22						
LPAZ	La Paz	19.22	6	P	Pn	19 15 54.9	-1.1
LPAZ				IAmb	IAmb	19 15 59.2	
	comp=Z,21nm,1.4s						
AQDB	Aquidauana	19.62	44	eP	P	19 15 56.6	-0.4
TRCB	Terra Rica	19.81	55	eP	P	19 15 58.5	-0.5
SIV	San Ignacio	21.05	25	P	P	19 16 11.4	-1.0
	comp=Z,1.9nm,0.5s,baz=194,slow=8.4,SNR=11						
PCMB	Pacaembu	21.54	55	eP	P	19 16 15.7	-1.9
FRTB	Fartura	21.58	61	eP	P	19 16 16.1	-1.9
PP1B	Ponte de Pedra	22.40	41	eP	P	19 16 25.4	-0.8
PET01	Itanhaem-SP	22.69	67	eP	P	19 16 27.5	-1.3
SPB	Sao Paulo	22.98	65	P	P	19 16 30.0	-1.5
ITRB	Iturama	23.48	53	eP	P	19 16 36.2	0.0
VAO	Valinhos	23.67	65	eP	P	19 16 37.6	-0.3
BB19B	Bebedouro	23.78	59	eP	P	19 16 38.3	-0.5
BSCB	Bom Sucesso	26.50	64	eP	P	19 17 04.2	+0.6
SAML	Samuel	27.18	15	P	P	19 17 09.1	-0.4
BDFB	Brasilia	27.97	51	P	P	19 17 14.8	-1.9
	comp=Z,3.1nm,0.7s,baz=226,slow=11,SNR=4.0						
BDFB	Brasilia	27.97	51	P	P	19 17 15.1	-1.6
BDFB				IAmb	IAmb	19 17 16.8	
	comp=Z,3.1nm,0.7s						
JANB	Januaria	30.81	55	eP	P	19 17 42.8	+1.0
PTGA	Pitinga	35.87	18	P	P	19 18 24.4	-1.0
PTGA				IAmb	IAmb	19 18 25.7	
	comp=Z,5.9nm,0.7s						
SNAA	Sanae	49.60	157	P	P	19 20 14.3	-1.0
	comp=Z,4.7nm,1.0s,baz=322,slow=4.7,SNR=4.9						
SNAA	Sanae	49.60	157	P	P	19 20 14.8	-0.5
SNAA				IAmb	IAmb	19 20 15.7	
	comp=Z,10nm,1.1s						
TXAR	Lajitas Array	71.82	329	P	P	19 22 47.5	+1.5
	comp=Z,0.6nm,0.7s,baz=158,slow=9.1,SNR=5.9						
TORD	Torodi Ar. Bea	83.27	69	P	P	19 23 49.6	-0.2
	comp=Z,0.7nm,0.6s,baz=239,slow=4.5,SNR=3.6						
TORD				pP	pP	19 24 28.5	-1.3
	comp=Z,2.4nm,1.1s,baz=224,slow=4.1,SNR=4.1						
PDAR	Pinedale Array	85.82	332	P	P	19 24 03.3	+1.1
	comp=Z,0.7nm,0.6s,baz=163,slow=4.3,SNR=2.0						
NVAR	Mina Array Bea	86.02	324	P	P	19 24 05.2	+1.9
	comp=Z,0.5nm,0.6s,baz=154,slow=6.6,SNR=4.5						
WRA	Warramunga Arr	120.17	207	PKP	PKPdf	19 30 12.8	-0.4
	comp=Z,1.2nm,1.1s,baz=170,slow=1.6,SNR=7.8						
BVAR	Borovoye Array	147.26	45	PKPbc	PKPdf	19 31 02.9	+0.7
	comp=Z,0.3nm,0.4s,baz=349,slow=6.6,SNR=3.4						
KURBB	Kurchatov Arra	152.82	46	PKPbc	PKiKP	19 31 18.1	-0.4
	comp=Z,0.4nm,0.3s,baz=314,slow=2.8,SNR=1.3						
KURBB				pPKPbc	pPKPbc	19 32 01.3	+0.2
	comp=Z,0.5nm,0.3s,baz=294,slow=3.2,SNR=2.4						
ZALV	Zalesovo Beam	154.59	36	PKPbc	PKiKP	19 31 22.1	+0.1
	comp=Z,0.5nm,0.5s,baz=316,slow=6.0,SNR=2.7						
ZALV				pPKPbc	pPKPbc	19 32 04.4	-0.5
	comp=Z,0.3nm,0.3s,baz=352,slow=6.3,SNR=2.7						
MKAR	Makanchi Array	156.49	53	PKPab	PKPab	19 31 45.9	+0.1
	comp=Z,0.3nm,0.6s,baz=287,slow=3.7,SNR=2.7						
MKAR	Makanchi Array	156.49	53	Pn	PKPab	19 31 46.1	+0.3

KRSC 24 19:15:05.3±1.4**, 49.°24N**×**157.°16E, h16**^{km}±28^{km}**, ML4.0, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril’s	1.59	335	eP	Pn	19 15 32.9	+0.1
SKR				eS	Sn	19 15 52.8	-0.2
PAU	Pauzhetka	2.24	354	eP	Pb	19 15 43.8	-1.6
PAU				eS	Sb	19 16 11.2	-1.6
KDTR	Khodutka, Kamc	2.64	12	eP	Pn	19 15 49.6	+2.4
KDTR				eS	Sb	19 16 22.4	-1.9
RUS	Russkaya	3.31	15	eS	Sn	19 16 39.2	+3.8
MTVR	Mutnovka	3.31	11	eP	Pn	19 15 59.7	+3.1
MTVR				eS	Sn	19 16 39.4	+3.8
GRL	Gorelyy	3.37	10	eP	Pn	19 16 00.8	+3.5
GRL				eS	Sn	19 16 40.4	+3.4
KRMR	Karymshinskiy	3.65	9	eP	Pb	19 16 05.5	-3.8
APC	Apacha	3.69	360	eP	Pn	19 16 05.2	+3.6
DALK	Dalny	3.93	14	eP	Pn	19 16 08.1	+3.2
DALK				eS	Sn	19 16 53.6	+3.0
UGLR	Uglovaya	4.11	14	eP	Pn	19 16 11.4	+3.9
AVH	Avacha	4.15	13	eP	Pn	19 16 12.7	+4.7
SMAR	Somma	4.16	14	eP	Pn	19 16 12.5	+4.2
KOK	Koryaka	4.16	12	eP	Pn	19 16 12.8	+4.6
SDLR	Sedlovina	4.19	14	eP	Pn	19 16 11.9	+3.3
KRER	Koryakskii	4.19	13	eP	Pn	19 16 12.7	+4.0
KRER				eS	Sn	19 17 02.7	+5.3
KRX	Arik	4.23	12	eP	Pn	19 16 13.3	+4.1
KRX				eS	Sn	19 17 04.2	+5.9
SPN	Mys Shipunski	4.26	24	eP	Pn	19 16 13.0	+3.5
SPN				eS	Sn	19 17 03.3	+4.5
GNL	Ganaly	4.49	6	eP	Pn	19 16 16.8	+4.1
KZV	Kizimen	6.19	17	eP	Pn	19 16 41.8	+5.7
TUMD	Tumrok D	6.30	17	eP	Pn	19 16 41.4	+4.0
TUMR	Tumrok	6.33	16	eP	Pn	19 16 42.4	+4.5

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*IDC **24** 19:22:58.9±3.9, 35.°93N×70.°73E, h89^{km}±37^{km}, mb3.1/4, mb1 3.4/9, mb1mx3.0/50, mbtmp3.6/9, Error ellipse: s-maj=35.8km s-min=21.0km az=152.0*
*NNC **24** 19:23:04.0±5.7, 36.°36N×70.°31E, h49^{km}±136^{km}, mb4.1, mpv4.1, Error ellipse: s-maj=58.5km s-min=46.6km az=109.0*
ISC 24 19:23:01.4±1.2**, 36.°1N**±0.°1×**70.°60E**±0.°08**, h110**^{km}**, n15,** σ1.^{s}**58**/19**, mb3.2**/3**, 2C-2D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MRKS	Merke	6.93	16	Pg	Pn	19 24 40.7	+0.3
	4.6nm,0.3s						
MRKS				Lg	Lg	19 25 58.1	
	7.7nm,0.3s						
BRLS	Borolday	6.93	355	Pg	Pn	19 24 36.9	-3.4
	24nm,0.2s						
BRLS				Lg	Lg	19 25 51.5	
	20nm,0.3s						
KK31	Karatay Array	6.98	359	P	Pn	19 24 41.2	+0.2
	1.4nm,0.3s,baz=177,slow=11,SNR=107						
KK31				⇓S	Sn	19 25 56.2	-2.7
	5.1nm,0.3s						
AAK	Ala-Archa	7.18	24	P	Pn	19 24 44.3	+0.4
	1.5nm,0.3s,baz=174,slow=4.5,SNR=21						
AAK				S	Sn	19 26 03.0	-0.9
	0.5nm,0.3s,baz=141,slow=21,SNR=8.1						
AAK	Ala-Archa	7.18	24	⇓P	Pn	19 24 44.0	+0.2
	3.1nm,0.8s						
AAK				⇑S	Sn	19 26 04.7	+0.9
	5.0nm,0.8s						
GEYT	Alibeck	10.14	284	P	Pn	19 25 24.0	0.0
	0.8nm,0.3s,baz=131,slow=11,SNR=9.8						
GEYT				S	Sn	19 27 15.1	-0.6
	0.3nm,0.3s,baz=294,slow=44,SNR=2.0						
MKAR	Makanchi Array	13.79	36	P	Pn	19 26 11.1	-1.1
	0.0nm,0.3s,baz=224,slow=10,SNR=1.8						
AB31	Akbulak array	15.27	333	P	Pn	19 26 31.2	+0.3
	2.0nm,0.3s,baz=160,slow=12,SNR=98						
KURBB	Kurchatov Arra	15.59	19	P	P	19 26 36.8	0.0
	0.0nm,0.3s,baz=207,slow=10,SNR=1.6						
AKTO	Aktyubinsk	16.96	331	P	P	19 26 54.5	+2.6
	0.3nm,0.3s,baz=147,slow=14,SNR=10						
AKTO	Aktyubinsk	16.96	331	⇑P	P	19 26 54.2	+2.3
	4.3nm,0.8s						
ZALV	Zalesovo Beam	20.40	25	P	P	19 27 29.9	+0.5
	0.8nm,0.3s,baz=214,slow=11,SNR=8.2						
YKA	Yellowknife Ar	81.64	2	P	P	19 35 07.9	+1.0
	0.2nm,0.5s,baz=2.5,slow=5.1,SNR=3.7						
WRA	Warramunga Arr	82.06	122	P	P	19 35 08.3	-1.5
	0.2nm,0.3s,baz=327,slow=4.9,SNR=2.0						
ASAR	Alice Springs	84.30	125	P	P	19 35 20.0	-1.2
	0.2nm,0.6s,baz=302,slow=5.3,SNR=1.4						

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*BJI **24** 19:28:45.2±0.0, 36.°60N×71.°08E, h163^{km}, mB4.9/1*
*IDC **24** 19:28:46.6±6.8, 36.°58N×71.°53E, h182^{km}±58^{km}, mb3.3/5, mb1 3.4/8, mb1mx2.9/45, mbtmp3.9/8, Error ellipse: s-maj=58.5km s-min=21.4km az=38.0*
*NEIC **24** 19:28:48.9±2.6, 36.°85N±0.°07×71.°16E±0.°07, h181^{km}±4^{km}, mb4.4/12, Error ellipse: s-maj=9.6km s-min=7.6km az=196.0*
*NNC **24** 19:28:53.7±2.2, 37.°17N×71.°18E, h190^{km}±34^{km}, mb2.9, mpv3.9, Error ellipse: s-maj=24.2km s-min=13.1km az=25.0*
ISC 24 19:28:48.8±0.6**, 36.°73N**±0.°06×**71.°12E**±0.°07**, h188**^{km}**, n56,** σ1.^{s}**35**/45**, mb4.2**/9**, 4C-2D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIL	Nilore	3.53	150		Pn	19 29 43.7	-0.7
NIL				Sn	Sn	19 30 26.1	-1.8
KSH	Kashi	4.74	53	P	Pn	19 29 53.3	-6.3
KSH				S	Sn	19 30 40.1	-15
KSH				smax	smax		
	comp=N,63nm,0.3s						
KSH				smax	smax		
	comp=E,35nm,0.2s						
TAS	Tashkent	4.81	343	Pn	Pn	19 29 56.5	-3.8
TAS				Sn	Sn	19 30 55.0	-1.7
IUG	Iuzhnay	5.48	352	Pg	Pn	19 30 09.6	+0.5
	47nm,0.1s						
IUG				Lg	Lg	19 31 09.0	
	73nm,0.4s						
MRKS	Merke	6.23	14	Pg	Pn	19 30 18.9	+0.1
	3.6nm,0.3s						
MRKS				Lg	Lg	19 31 25.1	
	9.5nm,0.6s						
KK02	Karatay Array	6.39	356	Pn	Pn	19 30 20.4	-0.5
KK02				Sn	Sn	19 31 28.8	-4.8
KK31	Karatay Array	6.39	356	P	Pn	19 30 20.4	-0.4
	2.3nm,0.3s,baz=172,slow=12,SNR=153						
KK31				⇑S	Sn	19 31 28.6	-5.0
	7.5nm,0.3s						
KK31	Karatay Array	6.39	356		Pn	19 30 20.3	-0.5
KK31				Sn	Sn	19 31 28.5	-5.1
KKAR	Karatay Array	6.39	356	Pn	Pn	19 30 20.3	-0.5
KKAR				Sn	Sn	19 31 28.5	-5.1
KK09	Karatay Array	6.41	356	Pn	Pn	19 30 20.8	-0.3
KK09				Sn	Sn	19 31 29.1	-5.0
AAK	Ala-Archa	6.45	23	P	Pn	19 30 21.4	-0.4
	0.8nm,0.3s,baz=191,slow=7.2,SNR=17						
AAK				S	Sn	19 31 31.6	-3.8
	0.8nm,0.3s,baz=322,slow=23,SNR=23						
AAK	Ala-Archa	6.45	23	⇓P	Pn	19 30 21.1	-0.7
	1.8nm,0.5s						
AAK				⇑S	Sn	19 31 30.9	-4.5
	10nm,0.5s						
AAK	Ala-Archa	6.45	23		Pn	19 30 21.1	-0.8
AAK				Sn	Sn	19 31 31.6	-3.8
TKM2	Tokmak 2	7.08	28	⇓P	Pn	19 30 29.4	-0.8
	3.3nm,0.6s						
HRA	Herat	7.60	255	Pn	Pn	19 30 37.8	+0.8
GYB1	ALIBECK ARRAY	10.42	280	Pn	Pn	19 31 09.8	-3.8
GEYT	Alibeck	10.42	281	Pn	Pn	19 31 13.4	-0.3
GYA1	ALIBECK ARRAY	10.42	280	Pn	Pn	19 31 09.0	-4.7
MAKZ	Makanchi	12.92	35	Pn	Pn	19 31 44.6	-0.9
MK31	Makanchi Array	13.05	36	Pn	Pn	19 31 46.5	-0.7
GKN	Gorkha	14.35	123	eP	Pn	19 32 01.4	-2.3
	9.4nm,0.4s						
WMQ	Urumqi	14.49	56	eP	Pn	19 32 05.5	+0.3
KKN	Kakani	14.92	123	eP	Pn	19 32 08.0	-2.8
	17nm,0.7s						
AB06	Akbulak array	14.93	331		Pn	19 32 10.0	-0.4
AB31	Akbulak array	14.93	330	⇑P	Pn	19 32 10.4	-0.1
	1.2nm,0.4s,baz=150,slow=12,SNR=50						
ABKAR	Akbulak array	14.93	330	P	Pn	19 32 09.8	-0.7
ABKAR	Akbulak array	14.93	330	P	Pn	19 32 09.9	-0.5
KURK	Kurchatov	14.99	19	P	Pn	19 32 10.7	-0.4
PKIN	Phulchoki	15.13	123	eP	Pn	19 32 11.2	-2.3
	14nm,0.4s						
PKI	Pulchoki	15.15	123	eP	Pn	19 32 12.2	-1.5
	10.0nm,0.4s						
GUN	Gumba	15.25	121	eP	Pn	19 32 13.3	-1.7
	6.7nm,0.3s						
BRVK	Borovoye	16.34	358		P	19 32 27.1	+0.1
BRVK				IAmb	IAmb	19 32 28.4	
	comp=Z,3.1nm,1.0s						
RAMN	Ramite	16.36	122	eP	P	19 32 27.4	-0.3
	comp=Z,6.2nm,0.3s						
AKTO	Aktyubinsk	16.63	330	P	P	19 32 31.9	+1.7
	comp=Z,2.0nm,0.3s,baz=139,slow=8.3,SNR=22						
AKTO	Aktyubinsk	16.63	330	⇑P	P	19 32 31.6	+1.4
	comp=Z,4.3nm,0.4s						
TAPN	Taplejung	16.87	119	eP	P	19 32 33.8	+0.4
	comp=Z,9.9nm,0.5s						
ODAN	Odare	16.95	121	eP	P	19 32 34.8	+0.6
	comp=Z,4.5nm,0.4s						
LSA	Lhasa	18.15	107	P	P	19 32 49.0	+1.4
ZAA0	Zalesovo Array	19.67	25	P	P	19 33 02.5	-0.7
ZAA0				IAmb	IAmb	19 33 06.8	
	comp=Z,1.7nm,0.8s						
ZALV	Zalesovo Beam	19.67	25	P	P	19 33 02.8	-0.4
	comp=Z,0.3nm,0.3s,baz=225,slow=9.5,SNR=6.1						
ZALV	Zalesovo Beam	19.67	25	P	P	19 33 02.7	-0.5
ANTO	Ankara	30.09	288	P	P	19 34 41.1	+0.5
CSS	Mathiatis	30.55	278	P	P	19 34 46.3	+1.6
BURAR	Bucovina Array	35.24	303	P	P	19 35 26.7	+1.5
FIA1	FINESS Array S	37.35	326	P	P	19 35 43.3	+0.5
FIA1				IAmb	IAmb	19 35 58.3	

	comp=Z,29nm,1.6s						
FINES	FINESS Array B	37.35	326	P	P	19 35 43.5	+0.8
	comp=Z,3.6nm,1.1s,baz=118,slow=11,SNR=7.3						
ARD3	ARCESS Array S	40.96	337	P	P	19 36 12.6	0.0
ARD3				IAmb	IAmb	19 36 19.2	
	comp=Z,37nm,1.6s						
ARCES	ARCESS Array B	40.97	337	P	P	19 36 13.6	+0.9
	comp=Z,3.6nm,1.0s,baz=103,slow=5.5,SNR=5.4						
ARCES	ARCESS Array B	40.97	337	IAmb	IAmb	19 36 22.3	
	comp=Z,21nm,1.6s						
NC303	NORSAR Array S	44.20	323	P	P	19 36 38.2	-0.5
NC303				IAmb	IAmb	19 36 51.6	
	comp=Z,36nm,1.4s						
NB201	NORSAR Array S	44.22	323	P	P	19 36 39.2	+0.3
NOA	NORSAR Array B	44.26	323	P	P	19 36 39.5	+0.3
	comp=Z,0.4nm,0.5s,baz=95,slow=7.8,SNR=1.2						
NC204	NORSAR Array S	44.49	323	P	P	19 36 40.7	-0.5
NC204				IAmb	IAmb	19 36 55.4	
	comp=Z,42nm,1.4s						
JCJ	Chichijima	59.86	77	P	P	19 38 37.1	+2.4
WRA	Warramunga Arr	82.03	122	P	P	19 40 44.1	-4.0
	comp=Z,0.3nm,0.7s,baz=322,slow=4.9,SNR=4.7						
ASAR	Alice Springs	84.31	125	P	P	19 40 56.7	-3.0
	comp=Z,0.3nm,0.7s,baz=325,slow=4.7,SNR=3.1						

NEIC ***24*** *20:49:46.8±2.0, 0.°18S±0.°05×122.°95E±0.°06, h104km±6km, mb4.6/35, Error ellipse: s-maj=9.4km s-min=5.7km az=55.0*

IDC ***24*** *20:49:46.9±0.8, 0.°19S×122.°90E, h105km±7km, mb3.6/9, mb1 3.8/12, mb1mx3.5/44, mbtmp4.0/12, MS2.6/2, Ms1 2.7/2, ms1mx2.4/39, Error ellipse: s-maj=15.2km s-min=10.1km az=76.0*

DJA ***24*** *20:49:48.2±0.2, 0°S±2°×12°3E±°, h73km±8km, M4.5/19, mb4.8/12, mB5.0/8, MLv4.6/19, Mw(mB)4.3/8*

ISC 24 20:49:46.4±0.4**, 0.°20S**±0.°04×**122.°94E**±0.°05**, h100**km**, n95, σ1.s29**/104**, mb4.3**/34**, 1C, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GTOI	Gorontalo	0.84	5	P	Pn	20 50 07.0	+1.9
LUWI	Luwuk	0.85	191	Pn	Pn	20 50 05.9	+0.6
LUWI				Sn	Sn	20 50 19.8	+0.4
LUWI	Luwuk	0.85	191	P	Pn	20 50 05.9	+0.6
MRSI	Marisa	1.21	304	P	Pn	20 50 09.2	+0.1
MRSI				S	Sn	20 50 25.6	-0.7
KMSI	Cibinong	1.30	53	P	Pn	20 50 12.3	+2.1
APSI	Ampana	1.47	241	P	Pn	20 50 13.1	+0.8
APSI				S	Sn	20 50 31.4	-0.5
TOLI2	Tolitoli	2.52	301	Pn	Pn	20 50 25.6	-0.2
TOLI2				Sn	Sn	20 50 55.9	-0.2
SANI	Sanana	3.56	121	P	Pn	20 50 38.5	-1.1
KDI	Kendari	3.74	185	P	Pn	20 50 43.5	+1.3
TTSI	Tana Toraja	4.21	228	P	Pn	20 50 49.8	+1.4
TNTI	Ternate	4.53	78		Pn	20 50 52.5	-0.3
TNTI	Ternate	4.53	78	P	Pn	20 50 55.5	+2.7
SGSI	Sangihe	4.65	34	P	Pn	20 51 12.3	+18
SPSI	Sidrap Palu	4.90	220	P	Pn	20 50 59.5	+1.7
BNSI	Bone	5.04	214	P	Pn	20 51 01.2	+1.5
	0.7nm1µm76nm,0.5s						
NLAI	Namlea	5.14	126	P	Pn	20 51 02.4	+1.4
	1.2nm9µm303nm,0.6s						
SGKI	Sangatta, Kali	5.35	267	P	Pn	20 51 05.5	+1.6
	0.6nm146nm,1.2s						
KAPI	Kappang	5.74	214	P	Pn	20 51 11.2	+2.0
	9.3nm,0.3s,baz=8.8,slow=5.6,SNR=27						
KAPI				S	Sn	20 52 12.4	-1.5
	11nm,0.3s,baz=225,slow=23,SNR=13						
KAPI	Kappang	5.74	214	Pn	Pn	20 51 10.8	+1.5
KAPI				Sn	Sn	20 52 12.9	-0.9
BKB	Balikpapan	6.13	260	Pn	Pn	20 51 15.2	+0.7
BKB	Balikpapan	6.13	260	P	Pn	20 51 16.0	+1.5
	0.3nm51nm,0.5s						
BSSI	Bau Bau, Buton	6.39	202	P	Pn	20 51 19.5	+1.5
	48nm,0.7s						
MYLDM	Lahad Datu	6.95	320		Pn	20 51 26.2	+0.6
KCP	Kidapawan	7.48	17	⇑eP	Pn	20 51 38.3	+5.3
DAV	Davao City (W)	7.69	20	LR	LR	20 55 34.0	
	comp=Z,36nm,18.1s,baz=252,slow=45						
MTKI	Muara Teweh, K	8.08	265	P	Pn	20 51 43.1	+2.1
BNDI	Bandanaira	8.17	122	P	Pn	20 51 44.7	+2.4
	2µm239nm,0.8s						
SWI	Sorong	8.35	95	P	Pn	20 51 47.1	+2.5
	34nm,1.3s						
SIJI	Sorong	8.35	95	P	Pn	20 51 46.6	+1.8
	3.3nm,0.3s,baz=58,slow=22,SNR=16						
SIJI				S	Sn	20 53 18.9	+1.4
	0.6nm,0.3s,baz=235,slow=22,SNR=1.6						
KKM	Kota Kinabalu	9.14	313		Pn	20 51 56.7	+1.1
SOEI	Soe	9.58	172	Pn	Pn	20 51 59.0	-2.6
FAKI	Fak Fak	9.69	106	Pn	Pn	20 52 01.4	-1.6
FAKI					Sn	20 53 44.4	-5.6
FAKI	Fak Fak	9.69	106	P	Pn	20 52 01.7	-1.2
SBUM	Sibu	11.04	284		Pn	20 52 21.5	+0.2
FITZ	Fitzroy Crossi	17.98	172	P	Pn	20 53 51.3	+1.4
	0.3nm,0.3s,baz=356,slow=7.4,SNR=10						
IPM	Ipoh	22.38	282	P	P	20 54 33.8	-2.9
IPM				IAmb	IAmb	20 54 52.7	
	comp=Z,26nm,1.7s						
WB0	Warramunga Arr	22.45	151	P	P	20 54 37.1	-0.2
WB0				IAmb	IAmb	20 55 11.8	
	comp=Z,22nm,1.1s						
WRAB	Tennant Creek	22.57	151	P	P	20 54 38.2	-0.4
WRAB				IAmb	IAmb	20 55 12.6	
	comp=Z,11nm,0.9s						
WRA	Warramunga Arr	22.57	151	P	P	20 54 38.8	+0.1
	comp=Z,6.0nm,1.1s,baz=328,slow=11,SNR=28						
WRA				ScP	ScP	21 01 58.0	+0.6
	comp=Z,0.1nm,0.4s,baz=324,slow=2.7,SNR=6.1						
WB2	Warramunga Arr	22.58	151	P	P	20 54 38.8	+0.2
WB2				IAmb	IAmb	20 55 12.6	
	comp=Z,14nm,1.1s						
WR0	Warramunga Arr	22.68	151	P	P	20 54 39.9	+0.2
TPUB	Ta-pu	23.47	355	P	P	20 54 47.0	-0.2
TPUB				IAmb	IAmb	20 55 28.5	
	comp=Z,67nm,1.4s						
YULB	Yu-li	23.51	356	P	P	20 54 46.5	-1.0
YULB				IAmb	IAmb	20 54 48.5	
	comp=Z,32nm,1.3s						
SSLB	Suanglung	23.93	356	P	P	20 54 51.4	+0.1
SSLB				IAmb	IAmb	20 55 00.1	
	comp=Z,72nm,1.9s						
YHNB	Yeheng	24.77	357	P	P	20 55 00.5	+1.4
YHNB				IAmb	IAmb	20 55 53.8	
	comp=Z,125nm,1.9s						
KNMB	Chin-men Tao	24.91	350	P	P	20 55 01.2	+1.0
KNMB				IAmb	IAmb	20 55 15.1	
	comp=Z,56nm,1.3s						
AS31	Alice Springs	25.64	156	P	P	20 55 07.9	+1.0
ASAR	Alice Springs	25.64	156	P	P	20 55 06.8	0.0
	comp=Z,1.3nm,0.7s,baz=343,slow=15,SNR=18						
ASAR				pP	pP	20 55 30.9	+1.8
	comp=Z,1.6nm,0.6s,baz=339,slow=11,SNR=5.3						
ASAR				PcP	PcP	20 58 35.1	-0.2
	comp=Z,1.2nm,0.5s,baz=341,slow=2.0,SNR=15						
ASAR	Alice Springs	25.64	156	P	P	20 55 07.6	+0.7
CMAR	Chiang Mai Arr	30.00	309	P	P	20 55 47.2	+1.4
	comp=Z,0.9nm,0.8s,baz=133,slow=6.9,SNR=12						
CMAR				LR	LR	21 08 18.4	
	comp=Z,12nm,18.1s,baz=120,slow=37						
CMAR	Chiang Mai Arr	30.00	309	P	P	20 55 45.8	0.0
CHTO	Chiang Mai	30.20	310	P	P	20 55 48.2	+0.6
JCJ	Chichijima	32.85	33	P	P	20 56 09.0	-1.8
ENH	Enshi	32.90	338	P	P	20 56 11.8	+0.6
ENH				IAmb	IAmb	20 56 13.1	
	comp=Z,8.3nm,0.5s						
STKA	Stephens Creek	36.11	152	P	P	20 56 39.5	+0.6
	comp=Z,1.7nm,0.5s,baz=328,slow=11,SNR=7.1						
STKA				PcP	PcP	20 59 01.9	-0.9
	comp=Z,1.3nm,0.7s,baz=9.9,slow=1.7,SNR=3.5						
STKA	Stephens Creek	36.11	152	P	P	20 56 40.0	+1.2
MJAR	Matsushiro Arr	39.21	20	P	P	20 57 03.5	-1.4
	comp=Z,2.1nm,0.7s,baz=192,slow=9.4,SNR=7.0						
JSD	Sado	40.59	19	P	P	20 57 16.4	+0.2
JSD				IAmb	IAmb	20 57 56.4	
	comp=Z,80nm,1.7s						
JMM	Marumori	41.31	22	P	P	20 57 22.5	+0.4
LSA	Lhasa	42.46	317	P	P	20 57 32.8	+0.6
LSA				pmax	pmax		
	comp=Z,18nm,1.0s						
LSA	Lhasa	42.46	317	P	P	20 57 32.8	+0.6
LSA				IAmb	IAmb	20 57 34.7	
	comp=Z,3.3nm,0.6s						
CAN	Canberra	42.55	148	P	P	20 57 34.8	+2.4
ODAN	Odare	43.51	311	eP	P	20 57 41.0	+0.5
	comp=Z,6.9nm,0.7s						
TAPN	Taplejung	43.54	312	eP	P	20 57 41.0	+0.2
	comp=Z,5.3nm,0.7s						
RAMN	Ramite	44.16	311	eP	P	20 57 46.3	+0.6
	comp=Z,6.0nm,0.5s						
GTA	Gaotai	44.75	334	eP	P	20 57 50.9	+0.8
GTA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
USA0B	Ussuriysk Arra	44.94	9	P	P	20 57 51.4	+0.1
USA0B				IAmb	IAmb	20 58 04.7	
	comp=Z,30nm,1.8s						
USRK	Ussuriysk Ar.	44.94	9	P	P	20 57 51.0	-0.3
	comp=Z,1.4nm,0.4s,baz=205,slow=6.0,SNR=8.5						
USRK	Ussuriysk Ar.	44.94	9	P	P	20 57 51.3	0.0
GUN	Gumba	45.21	311	eP	P	20 57 54.2	0.0
	comp=Z,8.3nm,0.4s						
PKI	Pulchoki	45.38	311	eP	P	20 57 55.4	-0.2
	comp=Z,3.4nm,0.5s						
PKIN	Phulchoki	45.40	311	eP	P	20 57 54.9	-0.7
	comp=Z,4.0nm,0.6s						
JEM	Erimo	45.82	21	P	P	20 58 12.7	+14
GKN	Gorkha	46.19	311	eP	P	20 58 01.7	0.0
	comp=Z,3.2nm,0.4s						
WAKE	Wake Island	47.03	63	P	P	20 58 09.5	+1.4
ULN	Ulaanbaatar	49.83	346	P	P	20 58 29.4	0.0
SONM	Songino Array	49.97	345	P	P	20 58 30.3	-0.1
	comp=Z,1.4nm,0.8s,baz=158,slow=8.7,SNR=11						
SONM				pP	pwP	20 58 56.4	+0.4
	comp=Z,1.0nm,0.7s,baz=161,slow=9.0,SNR=4.2						
SONM	Songino Array	49.97	345	P	P	20 58 30.1	-0.3
WMQ	Urumqi	53.94	329	eP	P	20 59 01.8	+1.9
MK31	Makanchi Array	58.75	328	P	P	20 59 32.8	-1.1
MKAR	Makanchi Array	58.75	328	P	P	20 59 33.2	-0.8
	comp=Z,1.1nm,0.4s,baz=124,slow=8.6,SNR=38						
MKAR				pP	pP	20 59 58.1	+0.1
	comp=Z,0.5nm,0.5s,baz=121,slow=9.3,SNR=4.0						
MAKZ	Makanchi	58.93	328	P	P	20 59 35.2	+0.1
MAKZ				IAmb	IAmb	21 00 52.5	
	comp=Z,10nm,2.0s						
LBZ	Lake Benmore	60.71	143	P	P	20 59 46.8	-0.7
AAK	Ala-Archa	60.85	321	P	P	20 59 48.3	-0.3
	comp=Z,0.6nm,0.6s,baz=154,slow=8.5,SNR=5.2						
AAK	Ala-Archa	60.85	321	IAmb	IAmb	21 00 48.0	
	comp=Z,9.0nm,1.9s						
THZ	Tophouse	61.08	139	P	P	20 59 49.4	-0.7
TUWZ	Tuamarina	61.61	138	P	P	20 59 54.1	+0.6
BSWZ	Blackbirch Sta	61.70	139	P	P	20 59 54.8	+0.7
KHZ	Kahutara	61.81	140	P	P	20 59 55.0	+0.2
BKZ	Black Stump Fm	62.35	135	P	P	20 59 59.0	+0.4
BKZ				IAmb	IAmb	21 01 42.6	
	comp=Z,16nm,1.3s						
MSWZ	Moikau Station	62.47	138	P	P	21 00 00.7	+1.3
KURK	Kurchatov	63.12	330	P	P	21 00 02.2	-1.2
KURK				IAmb	IAmb	21 00 32.8	
	comp=Z,4.5nm,0.8s						
KKAR	Karatay Array	63.63	320	P	P	21 00 06.3	-0.6
TIXI	Tiksi	71.84	2	P	P	21 00 55.6	-2.3
TIXI				IAmb	IAmb	21 02 06.3	
	comp=Z,9.0nm,1.8s						
AB05	Akbulak array	72.86	322	P	P	21 01 03.5	-1.0

NEIC ***24*** *20:49:49.0±0.3, 21.°8S±0.°2×179.°3W±0.°3, h575km±14km, mb4.3/9, Error ellipse: s-maj=42.1km s-min=26.2km az=77.0*

IDC ***24*** *20:50:08.0±45.0, 21.°01S×178.°99E, h700km±345km, mb2.7/5, mb1 2.9/5, mb1mx2.7/31, mbtmp3.9/5, Error ellipse: s-maj=475.6km s-min=156.5km az=101.0*

ISC 24 20:49:47.8±2.6**, 21.°6S**±0.°2×**178.°9W**±0.°4**, h600**km**, n17, σ1.s06**/17**, mb3.7**/8**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.81	322	P	P	20 51 17.8	-1.6
URZ	Urewera	16.97	191	P	P	20 53 12.3	-1.5
URZ				IAmb	IAmb	20 53 36.2	
	comp=Z,20nm,1.3s						
QRZ	Quartz Range	20.51	199	P	P	20 53 46.2	+0.3
QRZ				IAmb	IAmb	20 54 02.9	
	comp=Z,16nm,1.3s						
NNZ	Nelson	20.63	197	P	P	20 53 46.9	-0.1
THZ	Tophouse	21.27	197	P	P	20 53 52.7	-0.1
CTA	Charters Tower	32.58	266	P	P	20 55 31.7	0.0
	comp=Z,0.8nm,0.3s,baz=106,slow=15,SNR=2.1						
WR0	Warramunga Arr	43.46	263	P	P	20 56 59.5	-0.1
WR0				IAmb	IAmb	20 57 10.0	
	comp=Z,10nm,1.5s						
AS31	Alice Springs	43.48	258	P	P	20 56 59.5	-0.3
ASAR	Alice Springs	43.48	258	P	P	20 56 59.7	-0.1
	comp=Z,1.1nm,0.6s,baz=91,slow=8.1,SNR=7.5						
ASAR	Alice Springs	43.48	258	P	P	20 56 59.4	-0.4
WB0	Warramunga Arr	43.63	264	P	P	20 57 00.6	-0.4
WB0				IAmb	IAmb	20 57 16.4	
	comp=Z,9.6nm,1.4s						
WB2	Warramunga Arr	43.64	263	P	P	20 57 00.5	-0.5
WRAB	Tennant Creek	43.64	263	P	P	20 57 00.6	-0.5
WRAB				IAmb	IAmb	20 57 13.6	
	comp=Z,13nm,1.5s						
WRA	Warramunga Arr	43.65	263	P	P	20 57 00.4	-0.7
	comp=Z,0.4nm,0.3s,baz=96,slow=8.0,SNR=14						
FITZ	Fitzroy Crossi	52.08	263	P	P	20 58 03.8	+0.1
	comp=Z,1.4nm,0.9s,baz=120,slow=7.3,SNR=6.0						
CMAR	Chiang Mai Arr	89.71	290	P	P	21 01 45.9	+2.3
	comp=Z,0.3nm,0.6s,baz=119,slow=3.2,SNR=2.2						
CMAR	Chiang Mai Arr	89.71	290	P	P	21 01 45.6	+2.1

IDC ***24*** *21:27:52.4±2.5, 36.°15N×140.°60E, h0km, mb3.4/4, mb1 3.5/4, mb1mx3.1/44, mbtmp3.4/4, Error ellipse: s-maj=67.8km s-min=31.6km az=60.0*

JMA ***24*** *21:28:02.8±0.1, 36.°06N×139.°91E, h44km±1km, M3.1 JMA Felt II J1.*

ISC 24 21:28:01.8±1.1**, 36.°06N**±0.°08×**139.°92E**±0.°07**, h54**km±9km**, n11, σ1.s12**/16**, mb3.4**/4**, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYT	Yasato	0.28	53	P	Pn	21 28 11.3	+0.2
JYT				S	Sn	21 28 17.3	-0.5
JAG	Ashikaga	0.52	314	P	Pn	21 28 14.0	+0.4
JAG				S	Sn	21 28 22.1	0.0
JRY	Ryogami san	0.82	267	P	Pn	21 28 17.7	+0.4
JRY				S	Sn	21 28 28.4	-0.3
JKT	Katashina	0.89	323	P	Pn	21 28 18.7	+0.5
JKT				S	Sn	21 28 30.9	+0.6
JOD2	Odawara 2	1.04	221	P	Pn	21 28 21.4	+1.2
MJAR	Matsushiro Arr	1.46	290	Pn	Pn	21 28 26.9	+1.1
	1.4nm,0.3s,baz=97,slow=9.9,SNR=56						
MAT	Matsushiro	1.46	290	P	Pn	21 28 26.3	+0.4
MAT				eS	Sn	21 28 41.0	-3.0
ZALV	Zalesovo Beam	41.69	313	P	P	21 35 45.6	+0.7
	0.3nm,0.4s,baz=107,slow=5.0,SNR=2.1						
MKAR	Makanchi Array	43.62	303	P	P	21 36 01.1	+0.3
	0.1nm,0.5s,baz=90,slow=8.3,SNR=2.1						
KURBB	Kurchatov Arra	45.66	309	P	P	21 36 17.6	+0.8
	0.4nm,0.5s,baz=83,slow=7.8,SNR=6.5						
WRA	Warramunga Arr	55.95	186	P	P	21 37 33.4	-1.1
	0.4nm,1.0s,baz=1.5,slow=7.4,SNR=1.9						

IDC ***24*** *22:04:22.7±4.8, 35.°93N×71.°36E, h106km±31km, mb3.4/7, mb1 3.4/13, mb1mx3.1/66, mbtmp3.7/13, Error ellipse: s-maj=54.0km s-min=23.9km az=150.0*

NNC ***24*** *22:04:34.4±5.1, 36.°89N×71.°02E, h140km±86km, mb3.3, mpv3.9, Error ellipse: s-maj=51.2km s-min=33.6km az=46.0*

ISC 24 22:04:29.9±0.9**, 36.°55N**±0.°08×**71.°12E**±0.°07**, h188**km**, n45, σ2.s56**/48**, mb3.5**/6**, 2C-7D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IUG	Iuzhnay	5.65	352	Pg	Pn	22 05 52.5	+0.1
	18nm,0.2s						
IUG				Lg	Lg	22 06 56.2	
	67nm,0.3s						
AML	Almayashu	5.92	19	P	Pn	22 05 55.8	-0.4
	SNR=49						
UCH	Uchtor	6.25	24	P	Pn	22 06 00.1	-0.4
	SNR=16						
EKS2	Erkin-Say	6.43	18	P	Pn	22 06 02.9	+0.2
	SNR=26						
KK31	Karatay Array	6.56	356	⇓P	Pn	22 06 04.3	+0.1
	26nm,0.5s						
KK31				⇓S	Sn	22 07 14.5	-4.4
	12nm,0.3s						
AAK	Ala-Archa	6.61	22	P	Pn	22 06 05.1	0.0
	2.6nm,0.3s,baz=187,slow=6.4,SNR=30						
AAK				S	Sn	22 07 17.5	-2.7
	2.4nm,0.3s,baz=346,slow=20,SNR=15						
AAK	Ala-Archa	6.61	22	P	Pn	22 06 05.1	0.0
	SNR=13						
AAK	Ala-Archa	6.61	22	⇓P	Pn	22 06 04.9	-0.1
	4.8nm,0.4s						
AAK				⇓S	Sn	22 07 17.6	-2.7
	35nm,0.7s						
KBK	Karagaybulak	6.77	25	P	Pn	22 06 07.8	+0.6
	SNR=6.6						
ULHL	Ulahol	6.93	33	P	Pn	22 06 09.0	-0.3
	SNR=6.5						
CHMS	Chumysh	7.02	22	P	Pn	22 06 10.3	0.0
	SNR=9.3						
USP	Ospenovka	7.19	20	P	Pn	22 06 12.4	-0.1
	SNR=16						
TKM2	Tokmak 2	7.23	27	P	Pn	22 06 13.2	-0.1
	SNR=14						
TKM2	Tokmak 2	7.23	27	⇑P	Pn	22 06 13.3	0.0
	6.8nm,0.6s						
SGDS	Sogindy	7.40	20	Pg	Pn	22 06 14.9	-0.4
	4.6nm,0.5s						
SGDS				Lg	Lg	22 07 34.5	
	7.7nm,0.4s						
DGS	Degeres	7.58	27	Pg	Pn	22 06 19.0	+1.4
	2.1nm,0.5s						
IZV	Izvestkoviy	7.73	31	Pg	Pn	22 06 19.8	+0.1
	1.9nm,0.5s						
IZV				Lg	Lg	22 07 43.1	
	5.0nm,0.4s						
TNSS	Tian-Shan	7.88	33	Pg	Pn	22 06 21.8	0.0
	1.0nm,0.2s						
TNSS				Lg	Lg	22 07 46.1	
	1.6nm,0.6s						
KRBS	Karabastau	7.94	25	Pg	Pn	22 06 23.1	+0.8
	1.3nm,0.4s						
KRBS				Lg	Lg	22 07 48.4	
	3.4nm,0.3s						
MDOK	Medeo	8.02	33	Pg	Pn	22 06 23.5	0.0
	1.3nm,0.4s						
MDOK				Lg	Lg	22 07 49.0	
	2.7nm,0.6s						
KOTS	Kotyrbulak	8.11	33	Pg	Pn	22 06 25.2	+0.6
	4.3nm,0.3s						
KOTS				Lg	Lg	22 07 52.0	
	11nm,0.7s						
KTBS	Karatobe	8.32	29	Pg	Pn	22 06 28.9	+1.5
	0.6nm,0.5s						
KTBS				Lg	Lg	22 07 58.1	
	3.7nm,0.7s						
GEYT	Alibeck	10.46	281	P	Pn	22 06 53.9	-1.4
	0.8nm,0.3s,baz=119,slow=10,SNR=10						
GEYT				S	Sn	22 08 47.6	-4.1
	0.6nm,0.3s,baz=145,slow=48,SNR=3.2						
MKAR	Makanchi Array	13.19	36	P	Pn	22 07 30.9	+0.8
	0.0nm,0.3s,baz=219,slow=14,SNR=3.0						
GKN	Gorkha	14.25	123	eP	Pn	22 07 40.1	-3.5
	61nm,0.6s						
DMN	Daman	14.82	123	eP	Pn	22 07 47.9	-2.9
	16nm,0.3s						
KKN	Kakani	14.82	122	eP	Pn	22 07 47.4	-3.4
	23nm,0.5s						
KURBB	Kurchatov Arra	15.04	18	P	P	22 07 56.6	+2.9
	0.0nm,0.3s,baz=205,slow=11,SNR=5.3						
PKIN	Phulchoki	15.04	122	eP	Pn	22 07 50.3	-3.2
	8.8nm,0.2s						
PKI	Pulchoki	15.05	122	eP	Pn	22 07 50.7	-3.0
	29nm,0.6s						
AB31	Akbulak array	15.08	331	⇓P	P	22 07 56.8	+2.5
	3.0nm,0.4s,baz=146,slow=12,SNR=136						
AB31				⇓S	S	22 10 34.2	-7.8
	1.6nm,0.5s						
GUN	Gumba	15.16	120	eP	Pn	22 07 52.1	-2.9
	22nm,0.5s						
RAMN	Ramite	16.26	122	eP	Pn	22 08 05.8	-2.5
	11nm,0.3s						
BVAR	Borovoye Array	16.48	358	P	Pn	22 08 13.0	+2.7
	0.3nm,0.3s,baz=165,slow=12,SNR=9.4						
AKTO	Aktyubinsk	16.78	330	P	Pn	22 08 17.9	+3.9
	0.5nm,0.3s,baz=136,slow=9.1,SNR=11						
AKTO				S	S	22 11 17.8	-0.5
	0.2nm,0.3s,baz=170,slow=23,SNR=3.5						
AKTO	Aktyubinsk	16.78	330	⇑P	Pn	22 08 18.2	+4.2
	7.6nm,1.1s						
AKTO				⇓S	S	22 11 17.6	-0.7
	14nm,2.3s						
TAPN	Taplejung	16.79	118	eP	Pn	22 08 13.4	-1.2
	21nm,0.3s						
ODAN	Odare	16.86	120	eP	Pn	22 08 13.6	-1.9
	12nm,0.4s						
ZALV	Zalesovo Beam	19.83	24	P	Pn	22 08 50.0	+0.1
	1.6nm,0.5s,baz=219,slow=12,SNR=8.2						
ARU	Arti	21.61	341	P	P	22 09 11.3	+6.4
	0.6nm,0.4s,baz=122,slow=9.7,SNR=5.1						
FINES	FINESS Array B	37.49	326	P	P	22 11 31.1	+6.0
	0.5nm,0.4s,baz=121,slow=7.8,SNR=4.5						
ARCES	ARCESS Array B	41.13	338	P	P	22 12 01.6	+6.5
	3.5nm,0.9s,baz=109,slow=7.7,SNR=7.7						
NOA	NORSAR Array B	44.39	323	P	P	22 12 26.9	+5.4
	0.6nm,0.7s,baz=115,slow=8.1,SNR=1.7						
TORD	Torodi Ar. Bea	65.81	269	P	P	22 14 58.2	+2.8
	0.4nm,0.4s,baz=52,slow=6.2,SNR=4.3						
YKA	Yellowknife Ar	81.19	3	P	P	22 16 29.3	+5.2
	0.2nm,0.5s,baz=0.0,slow=5.0,SNR=4.6						

DJA ***24*** *22:05:42.2±0.3, 3°S±3°×12°9E±°, h39km±10km, M4.1/11, mb4.2/4, mB4.8/1, MLv4.0/11, Mw(mB)4.1/1*

IDC ***24*** *22:05:45.0±2.2, 2.°84S×129.°02E, h62km±27km, mb3.5/2, mb1 4.0/6, mb1mx3.5/40, mbtmp4.0/6, ML3.9/4, MS3.1/8, Ms1 3.1/8, ms1mx2.9/35, Error ellipse: s-maj=19.8km s-min=15.7km az=110.0*

ISC 24 22:05:42.6±0.9**, 2.°82S**±0.°06×**128.°99E**±0.°07**, h33**km**, n19, σ2.s00**/17**, MS3.2**/4**, Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.53	186	P	Pn	22 05 55.1	+1.3
MSAI				S	Sn	22 06 05.3	+3.7
BNDI	Bandanaira	1.92	152	P	Pn	22 06 13.0	0.0
NLAI	Namlea	1.93	258	P	Pn	22 06 13.6	+0.5
SWI	Sorong	2.99	49	P	Pn	22 06 28.2	+0.5
SWI				S	Sn	22 07 03.3	+0.9
SIJI	Sorong	2.99	50	P	Pn	22 06 28.9	+1.2
	23nm,0.3s,baz=248,slow=23,SNR=55						
SIJI				S	Sn	22 07 05.1	+2.6
	15nm,0.3s,baz=56,slow=21,SNR=19						
SANI	Sanana	3.09	284	P	Pn	22 06 26.6	-2.5
FAKI	Fak Fak	3.26	92	P	Pn	22 06 32.1	+0.7
APSI	Ampana	7.58	284	P	Pn	22 07 28.8	-2.0
	0.2nm690nm61nm,0.6s						
KAPI	Kappang	9.47	256	P	Pn	22 07 59.9	+3.2
	2.8nm,0.3s,baz=103,slow=10,SNR=8.8						
KAPI				LR	LR	22 11 48.8	
	comp=Z,67nm,20.5s,baz=75,slow=38						
DAV	Davao City (W)	10.40	341	LR	LR	22 12 42.6	
	comp=Z,102nm,21.6s,baz=348,slow=40						
FITZ	Fitzroy Crossi	15.53	192	P	P	22 09 21.1	-2.2
	0.1nm,0.3s,baz=17,slow=12,SNR=2.6						
FITZ				LR	LR	22 15 56.0	
	comp=Z,59nm,19.8s,baz=68,slow=39						
WRA	Warramunga Arr	17.80	163	P	Pn	22 09 46.9	-1.1
	0.7nm,0.3s,baz=342,slow=12,SNR=38						
PMG	Port Moresby	19.21	111	LR	LR	22 18 05.2	
	comp=Z,61nm,20.2s,baz=291,slow=39						
ASAR	Alice Springs	21.26	167	P	P	22 10 26.8	+0.6
	5.5nm,0.5s,baz=349,slow=12,SNR=74						
ASAR				S	S	22 14 19.1	-1.9
	1.7nm,1.0s,baz=350,slow=21,SNR=5.8						
JOW	Kunigami	29.49	359	LR	LR	22 22 17.6	
	comp=Z,57nm,19.0s,baz=106,slow=34						
STKA	Stephens Creek	31.25	159	LR	LR	22 26 34.9	
	comp=Z,56nm,18.3s,baz=205,slow=40						
KSRS	Korea Array	40.08	359	LR	LR	22 27 55.2	
	comp=Z,9.8nm,20.6s,baz=350,slow=33						
ASAJ	Asahikawa	48.30	13	LR	LR	22 36 54.8	
	comp=Z,47nm,19.2s,baz=12,slow=39						
MKAR	Makanchi Array	64.20	326	P	P	22 16 13.8	-0.5
	0.3nm,0.6s,baz=118,slow=8.3,SNR=3.8						

*IDC **24** 22:10:34.1±1.8, 4°.14S×137°.02E, h0km, mb3.3/2, mb1 3.9/5, mb1mx3.5/41, mbtmp3.7/5, ML3.8/3, Error ellipse: s-maj=50.7km s-min=30.0km az=91.0*

ISC 24 22:10:38.6±1.4**, 4°.42S**±0°.09×**136°.8E**±0°.2**, h35km, n6, σ2s.18/8, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	6.55	302	Pn	Pn	22 12 11.5	-1.1
	1.2nm,0.3s,baz=208,slow=23,SNR=2.2						
WRA	Warramunga Arr	15.62	189	Pn	Pn	22 14 16.2	-0.1
	0.6nm,0.3s,baz=12,slow=12,SNR=12						
WRA				Sn	Sn	22 17 05.9	-2.4
	0.2nm,0.3s,baz=15,slow=22,SNR=2.0						
WRA				Lg	Lg	22 19 00.3	
	0.2nm,0.3s,baz=12,slow=29,SNR=3.4						
FITZ	Fitzroy Crossi	17.44	218	P	P	22 14 41.9	+1.7
	0.1nm,0.3s,baz=41,slow=11,SNR=1.7						
ASAR	Alice Springs	19.34	188	P	Pn	22 15 05.3	+2.9
	0.8nm,0.3s,baz=15,slow=10,SNR=36						
ASAR				S	S	22 18 37.1	-1.2
	0.0nm,0.3s,baz=4.1,slow=27,SNR=2.3						
MKAR	Makanchi Array	69.99	323	P	P	22 21 48.1	+1.4
	0.1nm,0.5s,baz=110,slow=7.7,SNR=4.1						
ILAR	Eielson Array	88.17	25	P	P	22 23 24.2	-1.4
	0.2nm,0.7s,baz=247,slow=4.6,SNR=2.2						

IDC 24 22:25:08.3±1.7**, 1°.43N×125°.48E, h0km, mb3.5**/4**, mb1 3.6**/4**, mb1mx3.3**/44**, mbtmp3.5**/4**, Error ellipse: s-maj=178.0km s-min=23.1km az=65.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.95	158	P	P	22 30 15.4	+1.1
	0.8nm,0.6s,baz=337,slow=11,SNR=5.7						
ASAR	Alice Springs	26.25	162	P	P	22 30 44.3	-1.2
	0.4nm,0.8s,baz=340,slow=7.1,SNR=2.1						
MKAR	Makanchi Array	58.75	327	P	P	22 35 08.2	+0.1
	0.3nm,0.5s,baz=122,slow=8.5,SNR=5.1						
KURBB	Kurchatov Arra	63.02	329	P	P	22 35 37.0	0.0
	0.4nm,0.2s,baz=130,slow=6.3,SNR=4.2						

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*IDC **24** 22:31:05.7±1.3, 3°.83N×127°.00E, h0km, mb3.7/6, mb1 3.9/6, mb1mx3.6/54, mbtmp3.7/6, Error ellipse: s-maj=94.5km s-min=19.2km az=70.0*

ISC 24 22:31:10.9±1.2**, 3°.9N**±0°.2×**127°.2E**±0°.3**, h35km, n10, σ1s.16**/10**, mb3.7**/8**, 2C, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKMP	Bagumbayan, Su	3.73	314	*e*P	Pn	22 32 06.4	+0.3
SKMP				*e*S	Sn	22 32 49.1	+0.2
KCP	Kidapawan	3.75	326	⇑*i*P	Pn	22 32 11.2	+4.8
FITZ	Fitzroy Crossi	21.91	184	P	P	22 35 59.9	-1.3
	4.5nm,1.1s,baz=3.8,slow=15,SNR=2.2						
WRA	Warramunga Arr	24.70	164	P	P	22 36 27.6	-1.4
	1.6nm,0.8s,baz=344,slow=11,SNR=17						
ASAR	Alice Springs	28.16	167	P	P	22 37 01.6	+1.4
	0.3nm,0.4s,baz=335,slow=11,SNR=2.0						
STKA	Stephens Creek	38.11	160	P	P	22 38 26.7	+0.1
	0.9nm,0.4s,baz=340,slow=15,SNR=1.5						
SONM	Songino Array	47.30	341	P	P	22 39 41.9	+0.7
	0.3nm,0.4s,baz=153,slow=8.5,SNR=2.6						
MK31	Makanchi Array	57.70	325	Pn	P	22 40 57.1	-1.1
	0.3nm,0.5s,baz=117,slow=7.2,SNR=18						
MKAR	Makanchi Array	57.70	325	P	P	22 40 57.2	-1.0
	0.7nm,0.5s,baz=118,slow=7.6,SNR=15						
MAKZ	Makanchi	57.89	325	⇑Pn	P	22 40 58.5	-1.0
	15nm,2.8s						

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*NEIC **24** 22:34:59.4±1.6, 18°.95N±0°.08×145°.5E±0°.2, h226km±8km, mb4.2/17, Error ellipse: s-maj=22.1km s-min=11.9km az=80.0*

*IDC **24** 22:34:59.8±3.5, 18°.99N×145°.59E, h236km±35km, mb3.3/9, mb1 3.5/12, mb1mx3.2/64, mbtmp4.0/12, Error ellipse: s-maj=25.5km s-min=12.5km az=88.0*

ISC 24 22:34:58.0±0.6**, 19°.02N**±0°.07×**145°.5E**±0°.1**, h214km, n40, σ1s.03**/35**, mb3.9**/15**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	5.43	187	Pn	Pn	22 36 18.6	+0.3
JCJ	Chichijima	8.61	340	P	Pn	22 37 00.1	+0.9
	5.7nm,0.3s,baz=270,slow=20,SNR=2.1						
JCJ				S	S	22 38 33.6	-2.6
	2.2nm,0.3s,baz=287,slow=19,SNR=1.3						
JCJ	Chichijima	8.61	340	Pn	Pn	22 36 60.0	+0.9
JOW	Kunigami	17.68	299	P	Pn	22 38 52.3	+0.7
	6.2nm,0.3s,baz=123,slow=12,SNR=16						
JOW	Kunigami	17.68	299	P	Pn	22 38 52.2	+0.7
JGF	Kuroka	18.03	338	P	Pn	22 38 55.2	-0.5
MJAR	Matsushiro Arr	18.61	341	P	P	22 38 59.2	-0.2
	0.1nm,0.3s,baz=170,slow=11,SNR=5.3						
MJAR	Matsushiro Arr	18.61	341	P	P	22 39 01.3	+1.8
MAJO	Matsushiro	18.61	341	P	Pn	22 39 02.1	-0.3
MAJO				IAmb	IAmb	22 39 07.1	
	comp=Z,5.9nm,0.7s						
H11S3	WAKE ISLAND Hy	20.05	88	T	T	23 00 37.8	
	baz=276						
H11S1	WAKE ISLAND Hy	20.06	88	T	T	23 00 38.9	
	baz=276						
H11S2	WAKE ISLAND Hy	20.06	88	T	T	23 00 40.7	
	baz=276						
H11N1	WAKE ISLAND Hy	20.17	84	T	T	23 00 51.0	
	baz=274						
H11N2	WAKE ISLAND Hy	20.17	84	T	T	23 00 52.7	
	baz=274						
H11N3	WAKE ISLAND Hy	20.19	84	T	T	23 00 51.0	
	baz=274						
JTM	Tenmabayashi	22.03	351	P	P	22 39 37.7	+2.5
WB0	Warramunga Arr	40.06	196	P	P	22 42 12.2	-0.5
WB0				IAmb	IAmb	22 42 12.8	
	comp=Z,4.9nm,0.5s						
WB2	Warramunga Arr	40.24	196	P	P	22 42 13.7	-0.5
WB2				IAmb	IAmb	22 42 14.4	
	comp=Z,8.2nm,0.8s						
WRA	Warramunga Arr	40.24	196	P	P	22 42 13.6	-0.5
	comp=Z,4.2nm,0.6s,baz=17,slow=8.9,SNR=90						
SONM	Songino Array	42.80	321	P	P	22 42 35.0	+0.3
	comp=Z,0.3nm,0.5s,baz=138,slow=9.3,SNR=3.4						
AS31	Alice Springs	43.91	195	P	P	22 42 43.6	-0.2
ASAR	Alice Springs	43.91	195	P	P	22 42 43.0	-0.8
	comp=Z,1.1nm,0.5s,baz=16,slow=6.9,SNR=17						
ASAR	Alice Springs	43.91	195	P	P	22 42 42.8	-1.0
DZM	Mont Dzumac	45.67	152	P	P	22 42 57.4	-0.4
	comp=Z,7.1nm,0.8s,baz=292,slow=16,SNR=1.9						
DZM	Mont Dzumac	45.67	152	P	P	22 42 58.0	+0.3
DZM				IAmb	IAmb	22 43 16.3	
	comp=Z,15nm,1.1s						
GSI	Gunungsitoli	50.15	255	P	P	22 43 32.8	+0.6
GSI				IAmb	IAmb	22 43 52.0	
	comp=Z,5.8nm,1.0s						
MK31	Makanchi Array	58.13	314	P	P	22 44 29.4	+0.1
MKAR	Makanchi Array	58.13	314	P	P	22 44 29.1	-0.1
	comp=Z,0.4nm,0.6s,baz=85,slow=8.8,SNR=7.0						
KURK	Kurchatov	60.93	318	P	P	22 44 47.2	-1.0
I23K	Minto, Yukon-K	62.50	26	P	P	22 45 00.3	+1.8
I23K				IAmb	IAmb	22 45 14.4	
	comp=Z,2.5nm,1.4s						
TOLK	Toolik Lake Re	63.36	22	P	P	22 45 05.5	+1.3
TOLK				IAmb	IAmb	22 45 08.4	
	comp=Z,4.8nm,1.4s						
ILAR	Eielson Array	63.43	26	P	P	22 45 04.5	-0.1
	comp=Z,0.2nm,0.6s,baz=258,slow=5.6,SNR=1.9						
BKZ	Black Stump Fm	64.73	154	P	P	22 45 12.6	-0.8
BKZ				IAmb	IAmb	22 45 22.9	
	comp=Z,11nm,1.4s						
KKAR	Karatay Array	66.44	309	P	P	22 45 24.7	+0.2
LBZ	Lake Benmore	67.00	161	P	P	22 45 28.1	+0.3
ABKAR	Akbulak array	73.00	317	P	P	22 46 04.3	0.0
ABKAR	Akbulak array	73.00	317	P	P	22 46 04.4	0.0
YKA	Yellowknife Ar	77.78	28	P	P	22 46 31.2	0.0
	comp=Z,0.2nm,0.4s,baz=294,slow=4.5,SNR=7.4						
NVAR	Mina Array Bea	83.07	52	P	P	22 46 59.7	-0.5
	comp=Z,0.4nm,0.6s,baz=270,slow=4.5,SNR=4.0						
FINES	FINESS Array B	86.53	335	P	P	22 47 14.4	-2.2
	comp=Z,2.3nm,1.1s,baz=82,slow=10.0,SNR=5.4						

ROM 24 22:37:45.1±0.4**, 44°.12N**±0°.02×**12°.02E**±0°.02**, h20km**±3km**, Md1.4**/4**, 2D, Error ellipse: s-maj=2.0km s-min=0.6km az=354.0, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LMD	Lutirano	0.23	261	⇓P	Pb	22 37 50.6	-0.2
LMD				S	Sb	22 37 55.3	+0.5
LMD				AML	AML		
	comp=E,47850µm,0.6s						
LMD				AML	AML		
	comp=N,34500µm,0.5s						
LMD				END			
SFI	Santa Sofia	0.24	210	⇓P	Pb	22 37 50.7	-0.3
SFI				S	Sb	22 37 55.4	+0.3
SFI				AML	AML		
	comp=E,15150µm,0.7s						
SFI				AML	AML		
	comp=N,16300µm,0.6s						
SFI				AML	AML		
	comp=E,11880µm,0.3s						
SFI				AML	AML		
	comp=N,19050µm,0.7s						
SFI				END			
ASQU	Asqua	0.36	207	P	Pb	22 37 52.5	-0.3
ASQU				S	Sb	22 37 58.8	+0.8
ASQU				AML	AML		
	comp=E,13495µm,1.4s						
ASQU				AML	AML		
	comp=N,8790µm,0.7s						
ASQU				END			
BRIS	BRISIGHELLA	0.37	276	P	Pb	22 37 50.9	-1.9
BRIS				AML	AML		
	comp=E,7630µm,1.1s						
BRIS				AML	AML		
	comp=N,16650µm,0.3s						
BRIS				END			
CPGN	Carpegna, Ital	0.38	145	P	Pb	22 37 54.1	+0.9
CPGN				AML	AML		
	comp=E,4525µm,0.8s						
CPGN				AML	AML		
	comp=N,3910µm,0.4s						
RUFI	Rufina	0.46	233	P	Pb	22 37 54.2	-0.2
RUFI				S	Sb	22 38 02.0	+1.2

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*IDC **24** 22:38:10.6±1.2, 44°.15N×12°.19E, h0km, mb3.5/4, mb1 3.6/8, mb1mx3.3/55, mbtmp3.4/8, ML3.2/4, Error ellipse: s-maj=23.1km s-min=13.6km az=92.0*

*ROM **24** 22:38:13.3±0.1, 44°.100N±0°.005×12°.041E±0°.006, h22km±1km, ML3.3/86, Error ellipse: s-maj=0.6km s-min=0.4km az=28.0*

*BGR **24** 22:38:13.9±0.7, 44°.08N×12°.18E, h10km, ML3.6/9, Error ellipse: s-maj=10.0km s-min=8.9km az=155.0*

*GEN **24** 22:38:13, 44°.11N×12°.03E, h23km±6km, Ml3.3*

*PRU **24** 22:38:13.7±0.0, 44°.33N×12°.18E, h0km*

*LDG **24** 22:38:14.7±0.2, 44°.02N×12°.02E, h23km, Md3.3/1, Ml3.5/35, Error ellipse: s-maj=3.6km s-min=3.0km az=61.0*

*STR **24** 22:38:17.3±4.0, 44°N±10°×1°2E±3°6, h10km, MLv4.2/8, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/haslach_taup-2.11*

ISC 24 22:38:12.4±0.6**, 44°.17N**±0°.02×**12°.03E**±0°.02**, h30km**±4km**, n271, σ2s.35**/320**, mb3.7**/4**, 1C-10D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAEN	Faenza	0.16	316	P	Pb	22 38 19.2	+1.0
FAEN				S	Sb	22 38 24.0	+1.9
LMD	Lutirano	0.25	248	⇓P	Pb	22 38 18.8	-0.4
LMD				S	Sb	22 38 23.5	-0.4
LMD				AML	AML		
	comp=E,47850µm,0.6s						
LMD				AML	AML		
	comp=N,34500µm,0.5s						
LMD				AML	AML		
	comp=E,47850µm,0.6s						
IMOL	Imola, Italy	0.28	312	P	Pb	22 38 21.4	+1.8
IMOL				AML	AML		
	comp=E,5285µm,0.3s						
IMOL				AML	AML		
	comp=N,8430µm,0.4s						
IMOL				AML	AML		
	comp=N,8425µm,0.4s						
SFI	Santa Sofia	0.30	207	⇓P	Pb	22 38 18.9	-0.9
SFI				S	Sn	22 38 23.6	-2.6
SFI				AML	AML		
	comp=E,15100µm,0.7s						
SFI				AML	AML		
	comp=E,11835µm,0.3s						
SFI				AML	AML		
	comp=E,15100µm,0.7s						
SFI				AML	AML		
	comp=N,16300µm,0.6s						
SFI				AML	AML		
	comp=E,11850µm,0.3s						
SFI				AML	AML		
	comp=N,16300µm,0.6s						
SFI				AML	AML		
	comp=E,11880µm,0.3s						
SFI				AML	AML		
	comp=E,15150µm,0.7s						
SFI				AML	AML		
	comp=E,11870µm,0.3s						
SFI				AML	AML		
	comp=N,16300µm,0.6s						
SFI				AML	AML		
	comp=N,19050µm,0.7s						
BLLA	Bellaria	0.32	95	P	Pb	22 38 20.2	+0.2
BLLA				S	Sb	22 38 25.1	-0.1
BLLA				AML	AML		
	comp=E,13720µm,1.3s						
BLLA				AML	AML		
	comp=N,10400µm,0.3s						
BLLA				AML	AML		
	comp=E,13710µm,1.3s						
BLLA				AML	AML		
	comp=N,10435µm,0.3s						
BLLA				AML	AML		
	comp=E,13710µm,1.3s						
BRIS	BRISIGHELLA	0.38	267	⇓P	Pb	22 38 18.9	-2.0
BRIS				S	Sb	22 38 24.0	-2.7
BRIS				AML	AML		
	comp=E,7630µm,1.1s						
BRIS				AML	AML		
	comp=N,16650µm,0.3s						
BRIS				AML	AML		
	comp=N,16650µm,0.3s						
ASQU	Asqua	0.41	205	⇓P	Pb	22 38 20.7	-0.9
ASQU				S	Sb	22 38 26.8	-1.0
ASQU				AML	AML		
	comp=E,13490µm,1.4s						
ASQU				AML	AML		
	comp=N,8785µm,0.7s						
ASQU				AML	AML		
	comp=E,13495µm,1.4s						
ASQU				AML	AML		
	comp=E,13495µm,1.4s						
ASQU				AML	AML		
	comp=N,8790µm,0.7s						
CPGN	Carpegna, Ital	0.43	151	P	Pb	22 38 21.7	-0.1
CPGN				AML	AML		
	comp=E,4520µm,0.8s						
CPGN				AML	AML		
	comp=E,3335µm,1.3s						
CPGN				AML	AML		
	comp=N,5340µm,0.8s						
CPGN				AML	AML		
	comp=N,3910µm,0.4s						
CPGN				AML	AML		
	comp=E,3325µm,1.3s						
CPGN				AML	AML		
	comp=N,5350µm,0.8s						
CPGN				AML	AML		
	comp=E,4525µm,0.8s						
CPGN				AML	AML		
	comp=N,5330µm,0.8s						
CPGN				AML	AML		
	comp=N,3910µm,0.4s						
CPGN				AML	AML		
	comp=E,4525µm,0.7s						
CMPO	Campotto Po	0.44	338	P	Pn	22 38 25.1	+2.5
MTRZ	Monterenzio	0.45	297	P	Pn	22 38 23.8	+1.0
MTRZ				AML	AML		
	comp=N,4540µm,0.4s						
MTRZ				AML	AML		
	comp=E,6315µm,0.5s						
MTRZ				AML	AML		
	comp=N,4560µm,0.4s						
MTRZ				AML	AML		
	comp=E,6190µm,0.5s						
MTRZ				AML	AML		
	comp=N,4545µm,0.4s						
SEI	Scarperia	0.50	257	⇓P	Pn	22 38 22.9	-0.7
SEI				S	Sn	22 38 31.2	0.0
SEI				AML	AML		
	comp=N,11150µm,0.3s						
SEI				AML	AML		
	comp=E,6220µm,0.4s						
RUFI	Rufina	0.50	229	⇓P	Pn	22 38 22.4	-1.0
RUFI				S	Sn	22 38 30.1	-1.0
RUFI				AML	AML		
	comp=E,1995µm,1.4s						
RUFI				AML	AML		
	comp=N,3485µm,1.5s						
RUFI				AML	AML		
	comp=N,3500µm,1.5s						
RUFI				AML	AML		
	comp=E,1970µm,1.4s						
PARC	Parchiule	0.55	164	P	Pb	22 38 22.6	-0.9
PARC				S	Sb	22 38 31.2	0.0
PARC				AML	AML		
	comp=E,1785µm,0.8s						
PARC				AML	AML		
	comp=N,1715µm,0.7s						
CRE	Caprese Michel	0.56	186	⇓P	Pb	22 38 22.9	-0.9
CRE				S	Sb	22 38 31.0	-0.6
CRE				AML	AML		
	comp=N,6145µm,0.3s						
CRE				AML	AML		
	comp=E,3020µm,0.3s						
PE3	Peglio	0.58	145	P	Pn	22 38 23.9	-0.7
PE3				AML	AML		
	comp=N,4390µm,1.4s						
PE3				AML	AML		
	comp=E,5875µm,0.4s						
PE3				AML	AML		
	comp=N,4385µm,1.4s						
SSP9	Sansepolcro	0.60	173	⇓P	Pn	22 38 23.6	-1.3
SSP9				AML	AML		
	comp=E,1576µm,1.4s						
SSP9				AML	AML		
	comp=N,1855µm,0.7s						
FIU	Minerbio Fiu	0.61	320	P	Pb	22 38 28.2	+3.7
FIU				AML	AML		
	comp=E,5325µm,0.5s						
FIU				AML	AML		
	comp=N,6780µm,0.4s						
PESA	Pesaro	0.63	111	P	Pb	22 38 24.9	+0.1
PESA				AML	AML		
	comp=N,5385µm,1.4s						
PESA				AML	AML		
	comp=E,7400µm,0.9s						
FNVD	Fontana Vidola	0.65	270	P	Pb	22 38 25.8	+0.5
APEC	Apecchio	0.68	155	P	Pn	22 38 25.1	-0.8
APEC				AML	AML		
	comp=N,2280µm,0.8s						
APEC				AML	AML		
	comp=E,2340µm,1.4s						
BADI	Badiali	0.68	167	P	Pn	22 38 25.0	-0.9
BADI				AML	AML		
	comp=E,1840µm,0.6s						
BADI				AML	AML		
	comp=N,2065µm,1.1s						
BADI				AML	AML		
	comp=N,2060µm,1.1s						
FSSB	Fossombrone	0.72	132	P	Pb	22 38 26.4	-0.1
FSSB				AML	AML		
	comp=E,4820µm,0.4s						
FSSB				AML	AML		
	comp=N,6005µm,0.3s						
PTF	Prato	0.73	253	P	Pb	22 38 26.7	+0.2
MPAG	Monte Paganucc	0.76	136	P	Pb	22 38 26.9	-0.2
MPAG				AML	AML		
	comp=E,2080µm,1.6s						
MPAG				AML	AML		
	comp=N,3300µm,0.3s						
MPAG				AML	AML		
	comp=E,2130µm,0.6s						
MPAG				AML	AML		
	comp=N,3355µm,0.3s						
MPAG				AML	AML		
	comp=E,2085µm,1.6s						
MTCR	Monte La Croce	0.76	259	P	Pb	22 38 27.4	+0.2
MTCR				AML	AML		
	comp=E,2160µm,0.6s						
MTCR				AML	AML		
	comp=N,2185µm,1.1s						
ATPI	Pietralunga -	0.77	160	P	Pn	22 38 26.8	-0.5
ATPI				AML	AML		
	comp=N,1380µm,1.1s						
ATPI				AML	AML		
	comp=E,1470µm,0.4s						
ATPI				AML	AML		
	comp=N,1375µm,1.1s						
ZCCA	Zocca	0.78	284	AML	AML		
	comp=N,871µm,1.2s						
ZCCA				AML	AML		
	comp=E,920µm,0.5s						
ZCCA				AML	AML		
	comp=E,866µm,0.5s						
ZCCA				AML	AML		
	comp=N,910µm,1.4s						
ZCCA				AML	AML		
	comp=E,870µm,0.5s						
ZCCA				AML	AML		
	comp=N,871µm,1.2s						
ZCCA				AML	AML		
	comp=E,918µm,0.5s						
ZCCA				AML	AML		
	comp=N,912µm,1.4s						
ATVO	AVT- Monte Val	0.84	161	⇑P	Pb	22 38 28.0	-0.4
ATVO				AML	AML		
	comp=E,2070µm,1.1s						
ATVO				AML	AML		
	comp=N,2445µm,0.5s						
ATVO				AML	AML		
	comp=E,2065µm,1.1s						
CAFI	Castiglion Fio	0.84	183	⇓P	Pb	22 38 27.8	-0.7
CAFI				AML	AML		
	comp=N,1560µm,1.6s						
CAFI				AML	AML		
	comp=N,1445µm,0.7s						
CAFI				AML	AML		
	comp=E,1500µm,0.8s						
CAFI				AML	AML		
	comp=N,1556µm,1.6s						
CAFI				AML	AML		
	comp=E,1490µm,0.8s						
CAFI				AML	AML		
	comp=N,1440µm,0.7s						
CAFI				AML	AML		
	comp=N,1555µm,1.6s						
CRMI	Carmignano	0.86	244	⇓P	Pb	22 38 29.0	+0.3
CRMI				AML	AML		
	comp=N,494µm,0.4s						
CRMI				AML	AML		
	comp=N,1215µm,0.4s						
CRMI				AML	AML		
	comp=E,1310µm,1.1s						
CRMI				AML	AML		
	comp=E,543µm,1.1s						
OSSC	Osservatorio P	0.86	221	P	Pb	22 38 28.6	-0.2
OSSC				AML	AML		
	comp=E,1970µm,1.3s						
OSSC				AML	AML		
	comp=N,1885µm,1.3s						
OSSC				AML	AML		
	comp=E,1670µm,0.7s						
OSSC				AML	AML		
	comp=E,1965µm,1.3s						
OSSC				AML	AML		
	comp=N,1705µm,0.7s						
RAVA	Ravarino	0.88	312	P	Pb	22 38 33.0	+4.0
RAVA				AML	AML		
	comp=N,2415µm,1.3s						
RAVA				AML	AML		
	comp=E,2500µm,1.6s						
CSNT	Castellina Chi	0.88	218	P	Pb	22 38 28.9	-0.3
CSNT				AML	AML		
	comp=E,1110µm,0.4s						
CSNT				AML	AML		
	comp=N,1210µm,0.6s						
ATFO	Monte Foce - G	0.90	154	P	Pb	22 38 29.1	-0.3

ATFO				AML	AML		
	comp=E,1850µm,0.4s						
ATFO				AML	AML		
	comp=N,1655µm,0.5s						
MODE	**Modena**	**0.90**	**301**	P	**Pb**	**22 38 33.3**	**+3.8**
SSFR	**Montelago di S**	**0.92**	**143**	P	**Pb**	**22 38 29.4**	**-0.4**
SSFR				AML	AML		
	comp=N,3430µm,1.1s						
SSFR				AML	AML		
	comp=E,4615µm,0.2s						
SSFR				AML	AML		
	comp=E,4995µm,0.2s						
SSFR				AML	AML		
	comp=N,3415µm,1.6s						
POPM	**Popiglio**	**0.93**	**262**	P	**Pb**	**22 38 30.8**	**+0.9**
POPM	**Popiglio**	**0.93**	**262**	P	**Pb**	**22 38 30.8**	**+0.9**
POPM				AML	AML		
	comp=N,1545µm,0.7s						
POPM				AML	AML		
	comp=E,1018µm,0.7s						
ARVD	**Arcevia**	**0.94**	**135**	P	**Pb**	**22 38 30.0**	**-0.1**
ARVD				AML	AML		
	comp=N,731µm,1.6s						
ARVD				AML	AML		
	comp=E,1190µm,1.0s						
MURB	**Monte Urbino**	**0.98**	**158**	P	**Pb**	**22 38 31.0**	**+0.2**
MURB				AML	AML		
	comp=N,3560µm,0.3s						
MURB				AML	AML		
	comp=E,4330µm,0.3s						
MURB				AML	AML		
	comp=N,3405µm,0.3s						
MURB				AML	AML		
	comp=E,3870µm,0.3s						
SERM	**Sermide**	**0.99**	**328**	P	**Pb**	**22 38 33.6**	**+2.7**
ATTE	**AVT- Monte Tez**	**1.00**	**166**	P	**Pb**	**22 38 30.8**	**-0.4**
ATTE				AML	AML		
	comp=E,1300µm,0.6s						
ATTE				AML	AML		
	comp=N,1050µm,0.8s						
CAVE	**Cavezzo**	**1.01**	**314**	AML	AML		
	comp=E,1610µm,0.6s						
CAVE				AML	AML		
	comp=N,1585µm,0.5s						
FOSV	**Fossato di Vic**	**1.02**	**149**	P	**Pb**	**22 38 31.3**	**-0.2**
FOSV				AML	AML		
	comp=E,1380µm,1.6s						
FOSV				AML	AML		
	comp=N,772µm,1.2s						
BDI	**Bagni Di Lucca**	**1.04**	**264**	P	**Pb**	**22 38 33.2**	**+1.4**
BDI				AML	AML		
	comp=N,960µm,0.7s						
BDI				AML	AML		
	comp=E,792µm,1.5s						
ATCC	**AVT- Casa Cast**	**1.08**	**156**	P	**Pb**	**22 38 32.7**	**+0.2**
ATCC				AML	AML		
	comp=N,1226µm,1.0s						
ATCC				AML	AML		
	comp=E,2145µm,0.9s						
CARD	**Cardoso**	**1.13**	**263**	P	**Pb**	**22 38 34.3**	**+1.0**
CARD	**Cardoso**	**1.13**	**263**	P	**Pb**	**22 38 34.2**	**+1.0**
CARD				AML	AML		
	comp=E,597µm,1.0s						
CARD				AML	AML		
	comp=N,845µm,0.5s						
SNTG	**Esanatoglia**	**1.13**	**144**	P	**Pb**	**22 38 33.0**	**-0.4**
SNTG				AML	AML		
	comp=E,965µm,0.4s						
SNTG				AML	AML		
	comp=N,1110µm,1.3s						
MAIM	**Mastiano**	**1.14**	**257**	P	**Pb**	**22 38 34.1**	**+0.6**
MAIM				S	**Sb**	**22 38 51.0**	**+3.1**
EL6	**Elcito**	**1.15**	**137**	P	**Pb**	**22 38 33.7**	**+0.1**
EL6				AML	AML		
	comp=N,2435µm,1.2s						
EL6				AML	AML		
	comp=E,2086µm,0.5s						
FROS	**Frosini**	**1.15**	**214**	P	**Pb**	**22 38 34.0**	**+0.3**
FROS				AML	AML		
	comp=E,944µm,0.5s						
FROS				AML	AML		
	comp=N,1132µm,0.4s						
CING	**Cingoli**	**1.16**	**133**	P	**Pb**	**22 38 34.0**	**+0.2**
CING				AML	AML		
	comp=E,654µm,0.7s						
CING				AML	AML		
	comp=N,636µm,1.0s						
SARO	**Sassorosso**	**1.17**	**271**	P	**Pb**	**22 38 35.8**	**+1.7**
SARO	**Sassorosso**	**1.17**	**271**	P	**Pb**	**22 38 35.6**	**+1.5**
SARO				AML	AML		
	comp=N,528µm,0.5s						
SARO				AML	AML		
	comp=E,435µm,0.6s						
PII	**Pisa**	**1.18**	**248**	P	**Pb**	**22 38 34.2**	**+0.1**
PII				AML	AML		
	comp=E,2275µm,0.3s						
PII				AML	AML		
	comp=N,2920µm,0.8s						
VLC	**Villacollemand**	**1.18**	**270**	P	**Pb**	**22 38 35.6**	**+1.4**
VLC				AML	AML		
	comp=E,462µm,1.4s						
VLC				AML	AML		
	comp=N,543µm,0.8s						
VLC				AML	AML		
	comp=N,545µm,0.7s						
VLC				AML	AML		
	comp=E,444µm,1.4s						
TEOL	**Teolo**	**1.21**	**348**	*e*Pg	**Pb**	**22 38 35.6**	**+0.9**
TEOL	**Teolo**	**1.21**	**348**	P	**Pb**	**22 38 35.6**	**+0.9**
TEOL				AML	AML		
	comp=E,2585µm,1.5s						
TEOL				AML	AML		
	comp=N,1940µm,1.4s						
ASSB	**Assisi San Ben**	**1.22**	**158**	P	**Pb**	**22 38 34.1**	**-0.7**
ASSB				AML	AML		
	comp=N,654µm,1.3s						
ASSB				AML	AML		
	comp=E,644µm,0.5s						
MGAB	**Montegabbione**	**1.26**	**177**	P	**Pb**	**22 38 35.3**	**-0.2**
MGAB				AML	AML		
	comp=N,1865µm,0.5s						
MGAB				AML	AML		
	comp=E,1575µm,0.4s						
MGAB				AML	AML		
	comp=E,1405µm,0.4s						
MGAB				AML	AML		
	comp=N,1650µm,0.5s						
OPPE	**Oppeano**	**1.29**	**332**	P	**Pb**	**22 38 37.3**	**+1.3**
SACS	**San Casciano d**	**1.33**	**184**	P	**Pb**	**22 38 36.5**	**-0.2**
SACS				AML	AML		
	comp=N,774µm,1.5s						
SACS				AML	AML		
	comp=N,773µm,1.6s						
SACS				AML	AML		
	comp=E,742µm,0.3s						
SACS				AML	AML		
	comp=E,716µm,0.3s						
ZOVE	**Zovencedo**	**1.34**	**343**	P	**Pb**	**22 38 37.4**	**+0.5**
TRIF	**Trifonti**	**1.34**	**218**	P	**Pb**	**22 38 36.5**	**-0.4**
TRIF				AML	AML		
	comp=E,516µm,0.6s						
TRIF				AML	AML		
	comp=N,492µm,0.6s						
EQUI	**Equi**	**1.35**	**270**	P	**Pb**	**22 38 37.9**	**+0.8**
EQUI	**Equi**	**1.35**	**270**	P	**Pb**	**22 38 37.8**	**+0.8**
EQUI				AML	AML		
	comp=N,470µm,0.5s						
EQUI				AML	AML		
	comp=E,296µm,1.3s						
FDMO	**Fiordimonte**	**1.37**	**146**	P	**Pb**	**22 38 37.2**	**-0.2**
FDMO				AML	AML		
	comp=N,483µm,0.5s						
FDMO				AML	AML		
	comp=E,569µm,1.4s						
CSP1	**Cessapalombo**	**1.38**	**141**	P	**Pb**	**22 38 37.5**	**-0.1**
CSP1				AML	AML		
	comp=N,1352µm,1.3s						
CSP1				AML	AML		
	comp=E,1183µm,0.6s						
GRAM	**Graiana**	**1.45**	**283**	P	**Pb**	**22 38 41.3**	**+2.6**
GRAM	**Graiana**	**1.45**	**283**	P	**Pb**	**22 38 41.0**	**+2.3**
GRAM				AML	AML		
	comp=E,1155µm,0.4s						
GRAM				AML	AML		
	comp=N,1016µm,0.3s						
SANR	**Sandrigo**	**1.50**	**349**	P	**Pb**	**22 38 39.1**	**-0.4**
PLMA	**Palmaria, Port**	**1.58**	**266**	AML	AML		
	comp=E,291µm,1.6s						
PLMA				AML	AML		
	comp=N,388µm,0.7s						
MARN	**Marana (Italy)**	**1.58**	**339**	*e*Pg	**Pb**	**22 38 40.8**	**0.0**
MARN				*e*Sg	**Sb**	**22 39 02.8**	**+2.3**
CESX	**Cesi**	**1.61**	**165**	P	**Pb**	**22 38 40.5**	**-1.0**
CESX				AML	AML		
	comp=E,623µm,0.4s						
CESX				AML	AML		
	comp=N,694µm,0.4s						
CASP	**Castiglione de**	**1.62**	**212**	P	**Pb**	**22 38 40.0**	**-1.6**
CASP				AML	AML		
	comp=E,512µm,0.7s						
CASP				AML	AML		
	comp=N,692µm,0.4s						
ROVR	**Rover Verones**	**1.62**	**335**	P	**Pb**	**22 38 41.4**	**-0.3**
ROVR				AML	AML		
	comp=E,980µm,1.6s						
ROVR				AML	AML		
	comp=N,679µm,0.2s						
ROVR				AML	AML		
	comp=N,1670µm,0.2s						
ROVR				AML	AML		
	comp=E,288µm,0.4s						
ASOL	**Asolo**	**1.63**	**357**	P	**Pb**	**22 38 41.7**	**-0.1**
MTLO	**Montello**	**1.64**	**2**	*e*Pg	**Pb**	**22 38 41.4**	**-0.5**
ARRO	**Arrone**	**1.68**	**161**	P	**Pb**	**22 38 41.8**	**-0.8**
ARRO				AML	AML		
	comp=E,364µm,1.6s						
ARRO				AML	AML		
	comp=N,308µm,1.2s						
ED06	**Collalto TV**	**1.69**	**4**	*e*Pg	**Pb**	**22 38 42.0**	**-0.8**
CGRP	**Cima Grappa**	**1.71**	**355**	*e*Pg	**Pb**	**22 38 42.6**	**-0.7**
SALO	**Salr**	**1.80**	**324**	AML	AML		
	comp=E,1840µm,0.4s						
SALO				AML	AML		
	comp=E,688µm,0.4s						
SALO				AML	AML		
	comp=N,700µm,0.4s						
SALO				AML	AML		
	comp=N,1855µm,0.4s						
GARGN	**Gargnano BS**	**1.80**	**328**	*e*Pn	**Pb**	**22 38 44.4**	**-0.4**
DOSS	**Dosso del Somm**	**1.81**	**341**	*e*Pn	**Pb**	**22 38 43.7**	**-1.2**
SMA1	**SAN MARTINO**	**1.81**	**148**	P	**Pb**	**22 38 44.6**	**-0.3**
SMA1				AML	AML		
	comp=E,698µm,1.6s						
SMA1				AML	AML		
	comp=N,668µm,0.6s						
MSSA	**Maissana**	**1.81**	**275**	P	**Pb**	**22 38 44.9**	**0.0**
MSSA				AML	AML		
	comp=N,490µm,1.3s						
MSSA				AML	AML		
	comp=E,426µm,1.6s						
CAE	**Caneva**	**1.86**	**9**	*e*Pn	**Pb**	**22 38 43.9**	**-1.7**
CAE				*e*Sn	**Sb**	**22 39 08.0**	**-0.5**
RM33	**Pellescritta (**	**1.87**	**152**	P	**Pb**	**22 38 45.0**	**-1.0**
RM33				AML	AML		
	comp=E,401µm,1.6s						
RM33				AML	AML		
	comp=N,380µm,1.5s						
POLC	**Polcenigo**	**1.88**	**10**	*e*Pn	**Pb**	**22 38 44.6**	**-1.5**
POLC	**Polcenigo**	**1.88**	**10**	AML	AML		
	comp=E,1173µm,0.8s						
POLC				AML	AML		
	comp=N,1685µm,0.6s						
MAGA	**Magasa**	**1.89**	**329**	P	**Pb**	**22 38 45.1**	**-1.1**
MAGA				AML	AML		
	comp=E,2125µm,1.1s						
MAGA				AML	AML		
	comp=N,1520µm,0.4s						
CTI	**Castel Tesino**	**1.89**	**352**	P	**Pb**	**22 38 45.1**	**-1.2**
CTI				AML	AML		
	comp=E,1020µm,0.2s						
CTI				AML	AML		
	comp=N,1085µm,0.4s						
TLI	**Talmassons**	**1.91**	**23**	*e*Pn	**Pb**	**22 38 44.9**	**-1.6**
TRI	**Trieste**	**1.97**	**38**	AML	AML		
	comp=E,508µm,0.5s						
TRI				AML	AML		
	comp=N,354µm,1.5s						
FIAM	**Fiamignano**	**2.06**	**157**	AML	AML		
	comp=E,227µm,1.6s						
FIAM				AML	AML		
	comp=N,221µm,1.0s						
NVLJ	**Novalja**	**2.07**	**78**	*e*Pn	**Pn**	**22 38 46.6**	**+1.6**
NVLJ				Sn	**Sn**	**22 39 11.4**	**+1.5**
AQU	**L'Aquila**	**2.08**	**151**	*e*Pn	**Pb**	**22 38 49.2**	**-0.2**
RIY	**Rijeka**	**2.09**	**56**	*e*Pn	**Pb**	**22 38 47.3**	**-2.3**
RIY				Sn	**Sb**	**22 39 13.1**	**-2.1**
SABO	**M.te Sabotino**	**2.12**	**31**	P	**Pb**	**22 38 47.6**	**-2.5**
SABO				AML	AML		
	comp=N,856µm,1.2s						
SABO				AML	AML		
	comp=E,734µm,1.2s						
MABI	**Malga Bissina**	**2.17**	**331**	AML	AML		
	comp=E,128µm,0.7s						
MABI				AML	AML		
	comp=N,124µm,1.2s						
DUGI	**Dugi Otok**	**2.19**	**94**	*e*Pn	**Pn**	**22 38 48.5**	**+1.8**
DUGI				Sn	**Sn**	**22 39 14.2**	**+1.5**
VINO	**Villanova**	**2.26**	**23**	AML	AML		
	comp=N,283µm,1.2s						
VINO				AML	AML		
	comp=E,290µm,0.5s						
CEY	**Cerknica**	**2.31**	**47**	*e*Pn	**Pn**	**22 38 49.5**	**+1.1**
ROBS	**Robic**	**2.32**	**26**	*i* Pn	**Pn**	**22 38 50.2**	**+1.7**
PTCC	**Patocco-Chiusa**	**2.42**	**22**	AML	AML		
	comp=E,234µm,0.5s						
PTCC				AML	AML		
	comp=N,287µm,0.5s						
CRNS	**Crni Vrh**	**2.48**	**39**	*i* Pn	**Pn**	**22 38 52.6**	**+1.9**
CRNS				*e*Sn	**Sb**	**22 39 23.0**	**-3.2**
CRNS				IAML		22 39 24.7	
	comp=Z,58nm,0.2s						
FVI	**Forni Avoltri**	**2.48**	**12**	AML	AML		
	comp=E,250µm,0.6s						
FVI				AML	AML		
	comp=N,346µm,0.4s						
LJU	**Ljubljana**	**2.57**	**42**	*i* Pn	**Pn**	**22 38 54.1**	**+2.2**
LJU				*e*Sn	**Sb**	**22 39 25.5**	**-3.5**
LJU	**Ljubljana**	**2.57**	**42**	*e*Pn	**Pn**	**22 38 53.5**	**+1.5**
LJU	**Ljubljana**	**2.57**	**42**	AML	AML		
	comp=E,1088µm,0.9s						
LJU				AML	AML		
	comp=N,1605µm,0.3s						
VISS	**Visnje**	**2.57**	**50**	*i* Pn	**Pn**	**22 38 54.1**	**+2.1**
VISS				*i* Sn	**Sn**	**22 39 25.2**	**+2.9**
BRMO	**Bormio**	**2.58**	**334**	AML	AML		
	comp=E,118µm,0.5s						
BRMO				AML	AML		
	comp=N,104µm,0.5s						
ACOM	**Acomizza, Ital**	**2.59**	**23**	AML	AML		
	comp=E,574µm,0.3s						
ACOM				AML	AML		
	comp=N,474µm,0.9s						
ABTA	**Abfaltersbach**	**2.60**	**7**	*e*Pn	**Pb**	**22 38 55.7**	**-2.5**
	comp=N,9.1nm,0.4s,SNR=13						
ABTA				*e*Sn	**Sb**	**22 39 27.2**	**-2.6**
	comp=N,25nm,0.2s						
ABSI	**Aberstueckl**	**2.60**	**349**	AML	AML		
	comp=N,501µm,0.4s						
ABSI				AML	AML		
	comp=E,532µm,0.5s						
MOSI	**Grossmontoni**	**2.66**	**337**	AML	AML		
	comp=N,650µm,0.7s						
MOSI				AML	AML		
	comp=E,332µm,0.4s						
ZIRJ	**Zirje**	**2.66**	**100**	*e*Pn	**Pn**	**22 38 55.0**	**+1.9**
ZIRJ				Sn	**Sn**	**22 39 25.5**	**+1.1**
FINB	**Finale Ligure**	**2.67**	**271**	AML	AML		
	comp=N,129µm,1.6s						
FINB				AML	AML		
	comp=E,114µm,1.6s						
MORI	**Morici**	**2.67**	**95**	*i* Pn	**Pb**	**22 38 56.3**	**-3.1**
MORI				Sn	**Sn**	**22 39 26.6**	**+2.0**
UDBI	**Udbina**	**2.70**	**81**	*e*Pn	**Pb**	**22 38 56.7**	**-3.3**
MYKA	**Terra Mystica**	**2.71**	**24**	*e*Pn	**Pn**	**22 38 56.5**	**+2.6**
	comp=E,3.2nm,0.2s,SNR=7.4						
MYKA				Sn	**Sb**	**22 39 29.4**	**-3.4**
	comp=E,33nm,0.3s						
PGF	**Pioggiola**	**2.74**	**235**	*e*P	**Pb**	**22 38 56.9**	**-3.9**
PGF				*e*Sn	**Sn**	**22 39 23.5**	**-3.1**
	comp=E,75nm,0.3s						
RISI	**Rein**	**2.77**	**1**	AML	AML		
	comp=N,560µm,0.4s						
RISI				AML	AML		
	comp=E,510µm,0.4s						
OZLJ	**Ozalj**	**2.83**	**58**	*e*Pn	**Pn**	**22 38 58.1**	**+2.6**
OZLJ				Sn	**Sn**	**22 39 31.2**	**+2.6**
SMPL	**Sampolo**	**2.89**	**225**	P	**Pb**	**22 39 00.9**	**-2.3**
OBKA	**Obir**	**2.93**	**36**	Pn	**Pn**	**22 38 59.5**	**+2.5**
	comp=E,6.7nm,0.3s,SNR=4.7						
OBKA	**Obir**	**2.93**	**36**	*e*Pn	**Pn**	**22 38 59.5**	**+2.5**
CRES	**Cresnjev**	**2.94**	**55**	*e*Pn	**Pn**	**22 38 58.8**	**+1.8**
TUE	**Stuetta**	**2.98**	**321**	AML	AML		
	comp=E,199µm,1.0s						
TUE				AML	AML		
	comp=N,188µm,0.4s						
FETA	**Feichten**	**2.99**	**343**	*i* Pn	**Pb**	**22 39 02.3**	**-2.7**
	comp=N,4.0nm,0.5s,SNR=17						
FETA				*e*Sn	**Sb**	**22 39 38.1**	**-3.0**
	comp=N,8.2nm,0.4s						
DAVOX	**Davos/Dischmat**	**3.02**	**331**	Pn	**Pb**	**22 39 02.7**	**-2.8**
	comp=N,3.1nm,0.3s,baz=168,slow=17,SNR=36						
DAVOX				Sn	**Sb**	**22 39 39.6**	**-2.3**
	comp=N,4.5nm,0.3s,baz=19,slow=22,SNR=5.9						
DAVOX				Lg	Lg	22 39 49.7	
	comp=N,5.4nm,0.3s,baz=12,slow=18,SNR=5.0						
KBA	**Koelnbreinsper**	**3.05**	**17**	*i* Pn	**Pn**	**22 39 01.9**	**+3.2**
	comp=N,2.3nm,0.1s,SNR=20						
KBA				*e*Sn	**Sn**	**22 39 37.7**	**+3.5**
	comp=N,19nm,0.2s						
KBA	**Koelnbreinsper**	**3.05**	**17**	*e*Pn	**Pn**	**22 39 01.9**	**+3.2**
SQTA	**Sankt Quirin**	**3.10**	**350**	*i* Pn	**Pb**	**22 39 03.6**	**-3.3**
	comp=N,13nm,0.1s,SNR=69						
WTTA	**Wattenberg**	**3.10**	**355**	*i* Pn	**Pb**	**22 39 03.7**	**-3.2**
	comp=N,3.3nm,0.1s,SNR=16						
WTTA				*e*Sn	**Sb**	**22 39 40.6**	**-3.8**
	comp=N,29nm,0.4s						
WTTA	**Wattenberg**	**3.10**	**355**	*e*Pn	**Pb**	**22 39 03.7**	**-3.2**
WTTA	**Wattenberg**	**3.10**	**355**	AML	AML		
	comp=N,180µm,0.9s						
WTTA				AML	AML		
	comp=E,251µm,0.5s						
KIJV	**Kijevo**	**3.15**	**92**	*e*Pn	**Pn**	**22 39 02.3**	**+2.4**
WATA	**Walderalm**	**3.18**	**354**	*i* Pn	**Pb**	**22 39 04.9**	**-3.3**
	comp=E,6.1nm,0.1s,SNR=25						
WATA				*i* Sn	**Sb**	**22 39 44.1**	**-2.4**
	comp=E,33nm,0.5s						
SAOF	**Saorge**	**3.23**	**268**	P	Pb	22 39 04.2	-4.8
MOTA	**Moosalm**	**3.24**	**349**	*i* Pn	**Pb**	**22 39 05.2**	**-4.0**
	comp=E,3.7nm,0.2s,SNR=17						
MOTA				*e*Sn	**Sb**	**22 39 45.7**	**-2.6**
	comp=E,25nm,0.5s						
SOKA	**Soboth**	**3.28**	**39**	*e*Pn	**Pn**	**22 39 04.6**	**+2.9**
	comp=E,1.4nm,0.2s						
SOKA				*e*Sn	**Sn**	**22 39 42.3**	**+2.6**
	comp=E,8.8nm,0.4s						
PTJ	**Puntijarka**	**3.29**	**57**	*e*Pn	**Pn**	**22 39 03.3**	**+1.4**
FUSIO	**Fusio**	**3.29**	**315**	AML	AML		
	comp=N,71µm,1.4s						
FUSIO				AML	AML		
	comp=E,128µm,0.8s						
ZUGS	**Zugspitze, Sch**	**3.33**	**348**	*e*Pn	**Pb**	**22 39 07.3**	**-3.5**
SBF	**Sospel**	**3.33**	**266**	*e*Pn	**Pn**	**22 39 03.7**	**+1.3**
SBF	**Sospel**	**3.33**	**266**	*e*P	**Pn**	**22 39 05.3**	**+2.9**
SBF				*e*Sn	**Sn**	**22 39 39.2**	**-1.8**
	comp=E,66nm,0.4s						
TURF	**col de Turini**	**3.35**	**268**	P	Pb	22 39 06.3	-4.8
HVAR	**Hvar**	**3.35**	**106**	*e*Pn	**Pn**	**22 39 04.3**	**+1.6**
HVAR				Sn	**Sn**	**22 39 41.6**	**+0.1**
PART	**Garmisch-Parte**	**3.39**	**349**	*e*Pn	**Pb**	**22 39 08.0**	**-3.6**
PLONS	**Plons/SG**	**3.42**	**328**	*e*Pn	**Pb**	**22 39 08.7**	**-3.7**
RETA	**Reutte**	**3.43**	**345**	*i* Pn	Pb	22 39 07.8	-4.6
	comp=E,0.9nm,0.2s,SNR=22						
RETA				*e*Sn	**Sb**	**22 39 49.9**	**-3.9**
	comp=E,13nm,0.3s						
MMK	**Mattmark**	**3.44**	**305**	AML	AML		
	comp=N,70µm,0.4s						
MMK				AML	AML		
	comp=E,64µm,0.8s						
OBER	**Oberstdorf**	**3.46**	**340**	*e*Pn	**Pb**	**22 39 08.8**	**-4.1**
DAVA	**Damuels**	**3.46**	**335**	*i* Pn	**Pb**	**22 39 09.2**	**-3.8**
	comp=E,3.1nm,0.1s,SNR=15						
DAVA				*e*Sn	**Sb**	**22 39 50.8**	**-3.8**
	comp=E,39nm,0.4s						
DAVA	**Damuels**	**3.46**	**335**	*e*Pn	**Pb**	**22 39 09.2**	**-3.8**
ISO	**Isola**	**3.58**	**272**	P	**Pn**	**22 39 09.5**	**+3.6**
EMBD	**Embd, Matterta**	**3.60**	**306**	P	**Pn**	**22 39 09.1**	**+2.8**
MGRS	**Mrkonjic Grad**	**3.63**	**84**	*e*Pn	**Pn**	**22 39 09.5**	**+2.9**
SGRT	**San Giovanni R**	**3.64**	**130**	AML	AML		
	comp=N,93µm,1.3s						
SGRT				AML	AML		
	comp=E,102µm,0.9s						
BNALP	**Bannalp**	**3.70**	**318**	AML	AML		
	comp=E,138µm,0.4s						
BNALP				AML	AML		
	comp=N,92µm,0.8s						
MAKA	**Makarska**	**3.72**	**102**	*e*Pn	**Pn**	**22 39 09.3**	**+1.6**
MAKA				Sn	**Sn**	**22 39 52.2**	**+1.6**
BLY	**Banja Luka**	**3.73**	**79**	*e*Pn	**Pn**	**22 39 07.4**	**-0.5**
RICI	**Ricice**	**3.75**	**99**	*e*Pn	**Pn**	**22 39 10.3**	**+2.1**
RICI				Sn	**Sn**	**22 39 52.6**	**+1.3**
UBR	**Ueberruh**	**3.76**	**340**	*e*Pn	**Pn**	**22 39 12.2**	**+3.9**
BE1	**Monatshausen**	**3.78**	**352**	*e*Pn	Pn	22 39 12.6	+4.0
LSTV	**Lastovo**	**3.81**	**110**	*i* Pn	**Pn**	**22 39 09.0**	**+0.1**
MBDF	**Montbardon**	**3.81**	**280**	*e*Pn	**Pn**	**22 39 11.1**	**+2.0**
MBDF				*e*Sn	**Sn**	**22 39 51.2**	**-1.7**
	comp=N,16nm,0.4s						
WILA	**Wila**	**3.91**	**327**	*e*Pn	**Pn**	**22 39 14.2**	**+3.8**
ARSA	**Arzberg**	**3.93**	**37**	*e*Pn	**Pn**	**22 39 12.5**	**+1.9**
	comp=N,1.5nm,0.2s						
ARSA				*e*Sn	**Sn**	**22 39 55.6**	**-0.2**
	comp=N,6.0nm,0.4s						
ARSA	**Arzberg**	**3.93**	**37**	*e*Pn	**Pn**	**22 39 13.3**	**+2.7**
FRF	**La Foret Royal**	**3.94**	**263**	*e*P	**Pn**	**22 39 13.5**	**+2.7**
FRF				*e*Sn	**Sn**	**22 39 53.0**	**-3.0**
	comp=N,21nm,0.3s						
LPG	**La Plagne**	**3.98**	**291**	*e*Pn	**Pn**	**22 39 12.8**	**+1.2**
LPG				*e*Sn	**Sn**	**22 39 55.8**	**-1.6**
	comp=N,31nm,0.5s						
MOA	**Molln**	**3.99**	**22**	*i* Pn	**Pn**	**22 39 14.6**	**+3.1**
	comp=N,4.8nm,0.1s,SNR=27						
MOA				*e*Sn	**Sn**	**22 40 00.2**	**+2.9**
	comp=N,22nm,0.5s						
MOA	**Molln**	**3.99**	**22**	*e*Pn	**Pn**	**22 39 14.6**	**+3.1**
LPL	**La Plagne**	**4.00**	**291**	*e*Pn	**Pn**	**22 39 11.7**	**-0.1**
LPL				*e*Sn	**Sn**	**22 39 56.7**	**-1.1**
	comp=N,39nm,0.4s						
LMR	**La Mourre**	**4.09**	**260**	*e*Pn	**Pn**	**22 39 14.6**	**+1.8**
LMR	**La Mourre**	**4.09**	**260**	*e*P	Pn	22 39 16.7	+3.9
LMR				*e*Sn	**Sn**	**22 39 56.6**	**-3.0**
	comp=N,12nm,0.3s						
RSL	**Roselend**	**4.13**	**293**	P	Pn	22 39 17.4	+3.9
STON	**Ston**	**4.32**	**106**	*e*Pn	**Pn**	**22 39 16.4**	**+0.4**
STON				Sn	**Sn**	**22 40 04.5**	**-0.8**
SULZ	**Cheisacher**	**4.33**	**322**	P	**Pn**	**22 39 19.7**	**+3.5**
GDM	**Grand'Maison**	**4.34**	**286**	P	Pb	22 39 22.0	-6.0
SLE	**Schleitheim**	**4.36**	**327**	*e*Pn	**Pn**	**22 39 19.3**	**+2.7**
BALST	**Balsthal**	**4.38**	**318**	P	**Pn**	**22 39 20.1**	**+3.1**
BALST	**Balsthal**	**4.38**	**318**	*e*Pn	**Pn**	**22 39 20.0**	**+3.1**
ORIF	**Oris-en-Rattie**	**4.46**	**282**	*e*Pn	**Pn**	**22 39 20.4**	**+2.4**
ORIF	**Oris-en-Rattie**	**4.46**	**282**	*e*P	Pn	22 39 22.7	+4.7
ORIF				*e*Sn	**Sn**	**22 40 06.4**	**-2.5**
	comp=N,6.1nm,0.2s						
CONA	**Conrad Observa**	**4.61**	**34**	*i* Pn	**Pn**	**22 39 22.5**	**+2.5**
	comp=N,1.9nm,0.2s,SNR=6.6						
CONA				*e*Sn	**Sn**	**22 40 13.8**	**+1.4**
	comp=N,6.3nm,0.3s						
GRN	**Grenoble**	**4.61**	**286**	P	Pn	22 39 24.0	+4.0
NORI	**Noerdlinger Ri**	**4.65**	**348**	*e*Pn	**Pn**	**22 39 23.7**	**+3.2**
NORI				*e*Sn	**Sn**	**22 40 15.0**	**+1.6**
BOURR	**Bourrignon**	**4.65**	**315**	P	**Pn**	**22 39 23.6**	**+3.0**
SMRF	**Simiane la Rot**	**4.66**	**270**	*e*P	Pn	22 39 25.0	+4.4
SMRF				*e*Sn	**Sn**	**22 40 10.5**	**-3.2**
	comp=N,5.4nm,0.3s						
DBRK	**Dubrovnik**	**4.70**	**107**	*e*Pn	**Pn**	**22 39 22.3**	**+1.1**
OGSM	**Saint Maurice**	**4.72**	**290**	P	**Pn**	**22 39 24.7**	**+3.2**
RUSF	**Rustrel**	**4.73**	**269**	P	Pn	22 39 26.1	+4.5
KIZ	**Kirchzarten**	**4.74**	**324**	P	**Pn**	**22 39 24.8**	**+3.0**
GEC2	**GERESS Array S**	**4.81**	**13**	*e*Pn	**Pn**	**22 39 24.9**	**+2.1**
GERES	**GERESS Array B**	**4.81**	**13**	Pn	**Pn**	**22 39 24.6**	**+1.8**
	comp=N,0.8nm,0.3s,baz=187,slow=14,SNR=21						
GERES				Sn	**Sn**	**22 40 18.5**	**+0.9**
	comp=N,4.1nm,0.3s,baz=172,slow=21,SNR=6.0						
TREB	**Trebinje**	**4.83**	**105**	*e*Pn	**Pn**	**22 39 24.1**	**+1.2**
CABF	**La Chapelle**	**4.84**	**302**	*e*Pn	**Pn**	**22 39 26.0**	**+2.7**
CABF				*e*Sn	**Sn**	**22 40 16.3**	**-2.1**
	comp=N,9.0nm,0.4s						
CHMF	**Charmoille**	**4.86**	**311**	P	**Pn**	**22 39 26.4**	**+2.9**

BFO	Black Forest	4.89	330	ePn	Pn	22 39 27.0	+3.3
BRY	Bratogost	4.90	103	ePn	Pn	22 39 26.1	+2.0
CKRC	Cesky Krumlov	4.91	18	ePN	Pn	22 39 26.2	+2.2
CKRC				eSN	Sn	22 40 20.3	+0.5
OG35	Corcelles	4.94	295	P	Pn	22 39 27.5	+3.0
HAPS	Han Pijesak,Bl	4.98	89	ePn	Pn	22 39 25.0	-0.2
WET	Wettzell	5.01	6	ePn	Pn	22 39 27.6	+2.2
WET				eSn	Sn	22 40 22.3	+0.1
MOF	Molkenrain	5.02	319	P	Pn	22 39 28.5	+2.9
HCY	Herceg Novi	5.02	108	ePn	Pn	22 39 28.6	+3.0
KHC	Kasperske Hory	5.07	12	ePN	Pn	22 39 28.3	+2.0
KHC				eSN	Sn	22 40 24.0	+0.1
MORH	Mrgy, Hungar	5.10	64	ePn	Pn	22 39 21.5	-5.1
HINF	Hinteralfeld	5.13	317	ePn	Pn	22 39 29.4	+2.3
HINF				eSn	Sn	22 40 22.8	-2.5
	comp=N,18nm,0.3s						
VIVF	Saint-Julien-l	5.31	280	ePn	Pn	22 39 31.4	+1.8
VIVF				eSn	Sn	22 40 25.9	-3.8
	comp=N,4.9nm,0.2s						
BBLS	Lazići	5.33	91	ePn	Pn	22 39 32.1	+2.2
ZST	Bratislava	5.35	39	ePN	Pn	22 39 33.0	+3.0
ZST				eSN	Sn	22 40 29.7	-0.8
CDF	Champ du Feu	5.37	324	ePn	Pn	22 39 33.2	+2.7
CDF				eSn	Sn	22 40 28.8	-2.5
	comp=N,18nm,0.4s						
HAU	Haudompre	5.51	316	ePn	Pn	22 39 34.7	+2.4
HAU				eSn	Sn	22 40 32.1	-2.4
	comp=N,46nm,0.3s						
PDG	Podgorica	5.55	106	ePn	Pn	22 39 32.8	-0.1
MODS	Modra-Piesok	5.55	39	ePN	Pn	22 39 34.7	+1.8
MODS				eSN	Sn	22 40 33.8	-2.0
DRME	Dracevica, Mon	5.59	108	ePn	Pn	22 39 34.7	+1.2
ROTZ	Rotzenmuhle	5.60	1	ePn	Pn	22 39 35.2	+1.7
ROTZ				eSn	Sn	22 40 36.3	-0.4
FRGS	Fruska Gora	5.63	77	ePn	Pn	22 39 34.8	+0.8
TREC	Trest	5.65	24	ePN	Pn	22 39 35.2	+1.0
KRUC	Moravsky	5.74	30	ePN	Pn	22 39 36.9	+1.5
KRUC				eSN	Sn	22 40 38.0	-2.2
LASF	Ste Croix	5.89	272	ePn	Pn	22 39 38.6	+1.1
LASF	Ste Croix	5.89	272	eP	Pn	22 39 42.8	+5.3
LASF				eSn	Sn	22 40 39.5	-4.4
	comp=N,1.4nm,0.2s						
VRAC	Vranov	6.02	30	Pn	Pn	22 39 41.1	+1.8
	comp=N,0.3nm,0.3s,baz=219,slow=16,SNR=1.9						
VRAC				Sn	Sn	22 40 45.8	-1.3
	comp=N,1.0nm,0.3s,baz=341,slow=9.0,SNR=4.6						
VRAC	Vranov	6.02	30	ePN	Pn	22 39 40.9	+1.6
VRAC				eSN	Sn	22 40 45.5	-1.6
PRU	Pruhonice	6.06	16	eSN	Sn	22 40 47.6	-0.6
NKC	Novy Kostel	6.07	3	ePN	Pn	22 39 41.8	+1.8
NKC				eSN	Sn	22 40 48.0	-0.4
PAGF	Fort de Pagny	6.18	317	ePn	Pn	22 39 44.7	+3.1
	baz=135						
PAGF				eSn	Sn	22 40 48.1	-3.1
	comp=N,25nm,0.7s,baz=148						
SMF	Signal de Mont	6.27	296	ePn	Pn	22 39 44.8	+2.0
SMF				eSn	Sn	22 40 50.8	-2.6
	comp=N,11nm,0.4s						
SFTF	Sexfontaines	6.31	312	ePn	Pn	22 39 46.0	+2.7
	baz=134						
SFTF				eSn	Sn	22 40 50.8	-3.5
	comp=N,4.9nm,0.2s						
VYHS	Vyhne	6.39	45	ePN	Pn	22 39 49.9	+5.5
VYHS				eSN	Sn	22 40 53.9	-2.4
MOX	Moxa	6.48	358	ePn	Pn	22 39 47.2	+1.5
MOX				eSn	Sn	22 40 57.2	-1.3
MEZF	Maizieres J'vi	6.49	314	ePn	Pn	22 39 47.8	+2.1
	baz=136						
MEZF				eSn	Sn	22 40 55.4	-3.2
	comp=N,11nm,0.5s,baz=135						
LOR	Lormes	6.50	301	ePn	Pn	22 39 48.5	+2.5
	baz=121						
LOR				eSn	Sn	22 40 57.0	-2.1
	comp=N,19nm,0.3s						
SAVF	Savonnieres en	6.52	315	ePn	Pn	22 39 49.5	+3.3
	baz=142						
SAVF				eSn	Sn	22 40 55.9	-3.6
	comp=N,21nm,0.7s						
TNS	Taunus Mts	6.53	339	ePn	Pn	22 39 49.1	+2.9
AVF	Avril sur Loir	6.64	296	ePn	Pn	22 39 49.0	+1.2
AVF				eSn	Sn	22 40 58.2	-4.2
	comp=N,5.1nm,0.5s						
SSF	Saint Saulge	6.64	299	ePn	Pn	22 39 49.1	+1.3
SSF				eSn	Sn	22 40 58.2	-4.2
	comp=N,16nm,0.4s						
KRLC	Kraliky	6.73	27	ePN	Pn	22 39 50.7	+1.6
KRLC				eSN	Sn	22 41 03.5	-1.3
BRG	Berggiesshubel	6.83	10	Pn	Pn	22 39 54.6	+4.3
BRG				Sn	Sn	22 41 06.2	-0.8
BRG				ex	x	22 41 29.5	
BRG	Berggiesshubel	6.83	10	Sg	Sb	22 41 50.6	+19
BRG				Amp		22 42 12.3	
	comp=Z,1.0nm,0.2s						
DPC	Dobruska-Polom	6.83	24	ePN	Pn	22 39 51.1	+0.6
DPC				eSN	Sn	22 41 04.9	-2.3
BGF	Bois d'Agland	6.90	293	ePn	Pn	22 39 52.9	+1.6
BGF				eSn	Sn	22 41 04.2	-4.5
	comp=Z,13nm,0.3s						
CHVC	Chvalec	6.97	22	ePN	Pn	22 39 53.3	+0.9
CHVC				eSN	Sn	22 41 08.6	-2.1
OSTC	Ostas	6.99	22	ePN	Pn	22 39 53.6	+1.0
OSTC				eSN	Sn	22 41 08.2	-2.8
MTLF	Montolieu	7.16	267	eP	Pn	22 39 58.4	+3.5
MTLF				eSn	Sn	22 41 09.7	-5.5
CAF	Calviac	7.16	280	ePn	Pn	22 39 57.3	+2.3
CLL	Collm	7.17	5	ePn	Pn	22 39 57.0	+2.0
CLL				eSn	Sn	22 41 06.0	-9.4
CLL				eSg	Sb	22 41 56.0	+15
TCF	Toulx Ste Croi	7.25	290	ePn	Pn	22 39 57.3	+1.1
TCF				eSn	Sn	22 41 12.7	-4.8
	comp=Z,4.0nm,0.2s						
HYF	Humbligny	7.27	298	ePn	Pn	22 39 58.4	+2.0
HYF				eSn	Sn	22 41 13.2	-4.6
GIVF	Givet	7.70	323	ePn	Pn	22 40 03.8	+1.5
GIVF	Givet	7.70	323	eP	Pn	22 40 09.1	+6.8
GIVF				eSn	Sn	22 41 24.3	-4.2
	comp=Z,2.4nm,0.2s						
BAIF	Baives	7.94	321	ePn	Pn	22 40 07.1	+1.4
BAIF	Baives	7.94	321	eP	Pn	22 40 11.3	+5.6
BAIF				eSn	Sn	22 41 30.3	-4.1
	comp=Z,0.4nm,0.2s						
EPF	Esparros	8.56	266	eP	Pn	22 40 19.0	+4.7
KEST	Kesra	8.68	195	Pn	Pn	22 40 17.2	+1.3
	comp=Z,0.1nm,0.3s,baz=24,slow=18,SNR=1.6						
MFF	Saint Martin d	8.91	290	ePn	Pn	22 40 19.7	+0.8
ETSF	Etsaut	9.24	266	eP	Pn	22 40 29.3	+5.8
ETSF				eSn	Sn	22 41 58.5	-7.9
	comp=Z,1.6nm,0.5s						
LDF	La Druitiere	9.49	302	ePn	Pn	22 40 28.2	+1.3
LDF				eSn	Sn	22 42 06.3	-6.1
	comp=Z,0.4nm,0.3s						
FLN	La Foliniere	9.78	302	ePn	Pn	22 40 30.9	+0.1
FLN				eSn	Sn	22 42 13.5	-5.9
	comp=Z,1.1nm,0.3s						
GRR	Gorron	9.87	300	ePn	Pn	22 40 34.4	+2.4
GRR				eSn	Sn	22 42 15.5	-6.2
	comp=Z,1.6nm,0.2s						
SGMF	Saint Gilles	10.90	297	ePn	Pn	22 40 48.9	+2.7
SGMF				eSn	Sn	22 42 40.2	-6.8
	comp=Z,0.7nm,0.2s						
QUIF	Quistinic	11.21	295	ePn	Pn	22 40 51.5	+1.2
TORD	Torodi Ar. Bea	32.16	199	P	P	22 44 38.3	+0.8
	comp=Z,0.5nm,0.5s,baz=12,slow=9.2,SNR=2.7						
MKAR	Makanchi Array	47.81	61	P	P	22 46 49.8	+2.8
	comp=Z,0.5nm,0.7s,baz=283,slow=5.7,SNR=6.3						
SONM	Songino Array	61.56	50	P	P	22 48 30.4	+3.7
	comp=Z,0.3nm,0.5s,baz=306,slow=4.8,SNR=2.5						
YKA	Yellowknife Ar	65.44	336	P	P	22 48 55.3	+3.5
	comp=Z,0.2nm,0.5s,baz=52,slow=7.1,SNR=4.2						

EAF **24** *23:43:05.1±0.6, 10°.10S×22°.72E, h0km±408km*
IDC **24** *23:43:15.4±0.5, 10°.30S×23°.33E, h0km, mb4.5/21,*
mb1 4.6/26, mb1mx4.6/34, mbtmp4.6/26, ML4.7/4, MS4.0/21,
Ms1 4.0/21, ms1mx3.8/34, Error ellipse: s-maj=15.7km
s-min=11.9km az=95.0
MOS **24** *23:43:15.6±1.4, 10°.34S×23°.76E, h10km, mb4.9/26, Error*
ellipse: s-maj=11.1km s-min=5.2km az=74.7
BJI **24** *23:43:16.0±0.0, 10°.40S×23°.50E, h5km, mB5.2/21,*
mb4.7/34, Ms5.0/5, Ms7 4.7/4
NEIC **24** *23:43:18.1±2.6, 10°.37S±0°.07×23°.48E±0°.08, h10km±1km,*
mb5.1/62, Error ellipse: s-maj=14.0km s-min=11.5km
az=256.0

ISC 24 23:43:17.3±0.3, **10°.40S**±0°.04×**23°.57E**±0°.05, **h10km, n310,**
σ**1s.86**/327, **mb4.8**/95, **MS4.1**/19, **9C-1D, Zaire**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ITZ	Itezhi-Tezhi	5.82	156	eP	Pn	23 44 46.3	+2.5
ITZ				i		23 44 46.4	
	baz=334,slow=7.9						
ITZ				eS	Sn	23 45 46.5	-4.3
ITZ				Lg	Lg	23 46 28.0	
LSZ	Lusaka	6.62	138	Pn	Pn	23 44 56.3	+1.6
	10nm,0.3s,baz=322,slow=12,SNR=103						
LSZ				Pg	Pg	23 45 18.9	-5.1
	22nm,0.3s,baz=322,slow=13,SNR=10						
LSZ				Sn	Sn	23 46 12.9	+2.6
	72nm,0.3s,baz=270,slow=19,SNR=5.4						
LSZ				Lg	Lg	23 46 46.5	
	49nm,0.3s,baz=227,slow=23,SNR=6.9						
LSZ	Lusaka	6.62	138	Pn	Pn	23 44 56.0	+1.2
TSUM	Tsumeb	10.49	213	Pn	Pn	23 45 48.2	+0.3
	11nm,0.3s,baz=21,slow=12,SNR=82						
TSUM				Sn	Sn	23 47 41.8	-3.8
	12nm,0.3s,baz=297,slow=10,SNR=3.8						
TSUM				Lg	Lg	23 48 44.7	
	20nm,0.3s,baz=252,slow=15,SNR=1.7						
TSUM				LR	LR	23 50 17.6	
	comp=Z,1µm,18.6s,baz=357,slow=40						
TSUM	Tsumeb	10.49	213	Pn	Pn	23 45 48.0	+0.1
MATP	Matopo	11.04	155	Pn	Pn	23 45 56.8	+1.4
	10nm,0.3s,baz=335,slow=13,SNR=107						
MATP				Sn	Sn	23 48 00.3	+1.1
	7.5nm,0.3s,baz=292,slow=14,SNR=2.6						
MATP				Lg	Lg	23 49 09.4	
	4.8nm,0.3s,baz=59,slow=15,SNR=10						
MBAR	Mbarara	12.07	37	Pn	Pn	23 46 06.1	-3.5
	14nm,0.3s,baz=205,slow=23,SNR=41						
MBAR				Lg	Lg	23 49 18.3	
	13nm,0.3s,baz=293,slow=21,SNR=6.8						
MBAR				LR	LR	23 50 48.6	
	comp=Z,828nm,19.0s,baz=198,slow=37						
MBAR	Mbarara	12.07	37	P	Pn	23 46 05.9	-3.7
MBAR	Mbarara	12.07	37		Pn	23 46 05.9	-3.7
MBAR	Mbarara	12.07	37	eP	Pn	23 46 06.0	-3.5
MBAR				eS	Sn	23 49 15.5	+51
SINGT	Singida	12.38	64	i P	Pn	23 46 08.2	-5.7
ZOMB	Zomba	12.50	115	i P	Pn	23 46 12.6	-2.9
ZOMB				S	Sn	23 48 29.4	-5.7
ZOMB	Zomba	12.50	115	i P	Pn	23 46 12.6	-2.9
ZOMB				S	Sn	23 48 29.4	-5.7
KIBA	Kibaya	13.84	70	i P	Pn	23 46 27.1	-6.7
LBTB	Lobatse	14.66	173	Pn	Pn	23 46 45.2	+0.2
	1.8nm,0.3s,baz=352,slow=14,SNR=21						
LBTB				Sn	Sn	23 49 26.9	-0.7
	3.7nm,0.3s,baz=344,slow=18,SNR=2.3						
LBTB				Lg	Lg	23 51 01.0	
	2.1nm,0.3s,baz=99,slow=22,SNR=4.6						
LBTB				LR	LR	23 51 34.0	
	comp=Z,248nm,18.0s,baz=349,slow=34						
LBTB	Lobatse	14.66	173	P	Pn	23 46 45.7	+0.7
LBTB	Lobatse	14.66	173	Pn	Pn	23 46 45.7	+0.7
KMBO	Kilima Mbogo	16.43	57	Pn	Pn	23 47 03.1	-5.2
	0.8nm,0.3s,baz=237,slow=15,SNR=21						
KMBO				Sn	Sn	23 50 10.1	-0.8
	0.6nm,0.3s,baz=317,slow=18,SNR=3.0						
KMBO				Lg	Lg	23 51 39.0	
	1.4nm,0.3s,baz=286,slow=16,SNR=5.6						
BOSA	Boshof	18.19	175	P	P	23 47 31.6	+1.2
	0.9nm,0.3s,baz=351,slow=12,SNR=20						
BOSA				S	Sn	23 50 46.5	-6.9
	2.4nm,0.3s,baz=83,slow=8.1,SNR=2.1						
BOSA				Lg	Lg	23 52 50.2	
	0.5nm,0.3s,baz=90,slow=20,SNR=2.0						
BOSA				LR	LR	23 54 07.3	
	comp=Z,419nm,18.4s,baz=354,slow=36						
BOSA	Boshof	18.19	175	P	P	23 47 31.4	+1.1
SUR	Sutherland	22.02	186	P	P	23 48 14.1	+2.0
	21nm,0.7s,baz=19,slow=11,SNR=20						
SUR				S	S	23 52 15.1	-0.2
	12nm,0.9s,baz=26,slow=4.9,SNR=1.7						
SUR				Lg	Lg	23 54 53.8	
	72nm,1.0s,baz=98,slow=14,SNR=5.0						
SUR				LR	LR	23 56 02.7	
	comp=Z,298nm,20.8s,baz=5.5,slow=35						
SUR	Sutherland	22.02	186	P	P	23 48 14.9	+2.8
SUR				IAmb	IAmb	23 48 40.3	
	comp=Z,46nm,0.9s						
OPO	Ambohidratompo	24.24	112	P	P	23 48 43.0	+8.1
	comp=Z,11nm,0.9s,baz=292,slow=11,SNR=7.2						
OPO				LR	LR	23 57 03.0	
	comp=Z,1µm,18.8s,baz=154,slow=34						
ATD	Arta Tunnel	29.01	42	LR	LR	00 01 40.3	
	comp=Z,217nm,20.6s,baz=233,slow=38						
TOA0	Torodi Ar. Sit	31.92	317	P	P	23 49 40.6	-2.8
TOA0				IAmb	IAmb	23 49 45.9	
	comp=Z,46nm,1.2s						
TORD	Torodi Ar. Bea	31.92	317	P	P	23 49 40.4	-2.9
	comp=Z,18nm,0.6s,baz=127,slow=8.5,SNR=35						
TORD				LR	LR	00 03 18.7	
	comp=Z,59nm,21.5s,baz=140,slow=38						
TORD	Torodi Ar. Bea	31.92	317	P	P	23 49 40.8	-2.5
DBIC	Dimbokro	33.00	300	P	P	23 49 49.7	-3.1
	comp=Z,10nm,0.8s,baz=104,slow=11,SNR=9.6						
DBIC				LR	LR	00 01 47.5	
	comp=Z,105nm,19.3s,baz=104,slow=34						
DBIC	Dimbokro	33.00	300	P	P	23 49 50.6	-2.2
DBIC				pmax	pmax		
	comp=Z,22nm,1.1s						
DBIC	Dimbokro	33.00	300	P	P	23 49 50.6	-2.2
DBIC				IAmb	IAmb	23 49 55.8	
	comp=Z,22nm,1.1s						
KOWA	Kowa	36.88	312	P	P	23 50 23.4	-2.9
	comp=Z,9.0nm,0.8s,baz=140,slow=7.7,SNR=4.6						
KOWA	Kowa	36.88	312	P	P	23 50 23.9	-2.4
KOWA				IAmb	IAmb	23 50 28.9	
	comp=Z,26nm,1.3s						
TAM	Tamanrasset	37.43	332	P	P	23 50 32.3	+1.3
TAM				pmax	pmax		
	comp=Z,4.0nm,0.8s						
TAM	Tamanrasset	37.43	332	P	P	23 50 32.3	+1.3
SOCY	Socotra	37.64	54	P	P	23 50 36.2	+3.3
SOCY				IAmb	IAmb	23 50 37.0	
	comp=Z,32nm,1.0s						
RAYN	Ar Rayn	39.96	32	P	P	23 50 54.3	+2.1
RAYN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
RAYN	Ar Rayn	39.96	32	P	P	23 50 54.3	+2.1
IDI	Anoyia	45.46	2	P	P	23 51 37.8	+1.2
IDI				IAmb	IAmb	23 51 50.3	
	comp=Z,54nm,1.4s						
CSS	Mathiatis	46.05	11	P	P	23 51 42.7	+1.3
CSS				IAmb	IAmb	23 52 13.6	
	comp=Z,57nm,1.4s						
ELL	Elmali	47.27	7	P	P	23 51 53.2	+2.2
ELL				pmax	pmax		
	comp=Z,258nm,1.7s						
ELL	Elmali	47.27	7	P	P	23 51 53.2	+2.2
ITM	Ithomi	47.35	358	P	P	23 51 52.4	+0.9
ITM				IAmb	IAmb	23 51 55.0	
	comp=Z,26nm,1.1s						
UOSS	Minazif	47.40	42	P	P	23 51 53.9	+1.8
UOSS				IAmb	IAmb	23 51 55.8	
	comp=Z,15nm,1.1s						
KEST	Kesra	47.81	344	P	P	23 51 55.9	+0.8
	comp=Z,7.7nm,0.8s,baz=126,slow=10,SNR=4.7						
RAFF	Raffo Rosso	48.15	350	P	P	23 51 59.1	+1.4
AGG	Agios Georgios	49.18	359	P	P	23 52 06.6	+1.0
AGG				pmax	pmax		
	comp=Z,15nm,1.2s						
AGG	Agios Georgios	49.18	359	P	P	23 52 06.6	+1.0
AGG				IAmb	IAmb	23 53 28.4	
	comp=Z,15nm,1.2s						
BR131	Keskin Array S	50.74	10	P	P	23 52 18.9	+1.3
BR131				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BR131	Keskin Array S	50.74	10	P	P	23 52 18.9	+1.3
BRTR	Keskin Array B	50.74	10	P	P	23 52 18.2	+0.6
	comp=Z,3.8nm,0.6s,baz=183,slow=10,SNR=12						
BRTR	Keskin Array B	50.74	10	ceP	P	23 52 18.5	+0.9
BRTR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BRTR	Keskin Array B	50.74	10	P	P	23 52 19.0	+1.5
ALN	Alexandroupoli	51.09	2	P	P	23 52 20.6	+0.6
ALN				pmax	pmax		
	comp=Z,11nm,1.5s						
ALN	Alexandroupoli	51.09	2	P	P	23 52 20.6	+0.6
VSL	Villasalto	51.37	346	P	P	23 52 22.7	+0.6
PDG	Podgorica	52.72	356	P	P	23 52 34.0	+1.9
PDG				IAmb	IAmb	23 52 56.5	
	comp=Z,72nm,1.7s						
VTS	Vitosha	52.76	360	P	P	23 52 33.3	+0.7
VTS				pmax	pmax		
	comp=Z,3.0nm,0.7s						
VTS	Vitosha	52.76	360	P	P	23 52 33.3	+0.7
GNI	Garni	53.99	20	P	P	23 52 44.2	+2.5
GNI				pmax	pmax		
	comp=Z,16nm,1.4s						
GNI	Garni	53.99	20	P	P	23 52 44.2	+2.5
GNI				IAmb	IAmb	23 53 06.1	
	comp=Z,16nm,1.4s						
MURB	Monte Urbino	54.35	350	P	P	23 52 42.0	-2.1
VLC	Villacollemand	55.61	349	P	P	23 52 54.3	+1.1
MLR	Muntele Rosu	55.67	2	P	P	23 52 52.6	-1.2
MLR				pmax	pmax		
	comp=Z,13nm,0.9s						
MLR	Muntele Rosu	55.67	2	P	P	23 52 52.6	-1.2
MLR				IAmb	IAmb	23 52 55.9	
	comp=Z,13nm,0.9s						
SOC	Sochi	55.70	14	eP	P	23 52 53.6	-0.3
SOC				e		23 54 55.5	
SOC				ePPP	PPP	23 56 07.9	
SOC				eS	S	00 00 40.4	+0.1
SOC				eSS	SS	00 04 20.4	-5.7
SOC				eSSS	SSS	00 06 33.8	
SOC				pmax	pmax		
	comp=Z,4.0nm,0.6s						
SOC				MLR	MLR		
	comp=Z,102nm,13.0s						
ESDC	Sonseca Array	56.00	335	P	P	23 52 54.6	-1.6
	comp=Z,2.5nm,0.9s,baz=239,slow=26,SNR=8.9						
ESDC				LR	LR	00 18 31.1	
	comp=Z,143nm,20.5s,baz=355,slow=38						
ESDC	Sonseca Array	56.00	335	P	P	23 52 56.8	+0.7
ZEI	Tsey	56.10	18	eP	P	23 52 54.8	-2.2
ZEI				pmax	pmax		
	comp=Z,13nm,1.0s						
NEY	Neytrino	56.18	17	i P	P	23 52 57.3	-0.2
NEY				pmax	pmax		
	comp=Z,2.0nm,1.4s						
SHA1	Shidzhatmaz	56.61	16	i P	P	23 53 00.6	-0.1
NCK	Nalchik	56.66	17	i P	P	23 53 01.3	+0.6
NCK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KBZ	Khabaz	56.67	17	P	P	23 53 01.9	+1.2
	comp=Z,2.7nm,0.7s,baz=150,slow=12,SNR=10						
KBZ	Khabaz	56.67	17	ceP	P	23 53 02.5	+1.7
KBZ				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KIV	Kislovodsk	56.82	16	P	P	23 53 02.8	+0.8
KIV				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KIV	Kislovodsk	56.82	16	P	P	23 53 02.8	+0.8
KIV				IAmb	IAmb	23 53 05.6	
	comp=Z,9.5nm,0.8s						
BNI	Bardonecchia	57.27	346	P	P	23 53 06.6	+1.4
BNI				pmax	pmax		
	comp=Z,78nm,2.0s						
BNI	Bardonecchia	57.27	346	P	P	23 53 06.6	+1.4
BURAR	Bucovina Array	57.77	1	P	P	23 53 11.4	+2.7
BUR08	Bucovina Ar. S	57.80	1	P	P	23 53 10.9	+2.0
BUR08				IAmb	IAmb	23 54 53.6	
	comp=Z,23nm,1.9s						
NBRF	Rio Formoso -	57.84	266	eP	P	23 53 07.5	-2.2
GEYT	Alibeck	57.93	32	P	P	23 53 11.1	+1.2
	comp=Z,1.6nm,0.5s,baz=220,slow=11,SNR=2.5						
GEYT				LR	LR	00 18 18.1	
	comp=Z,144nm,18.5s,baz=345,slow=36						
GEYT	Alibeck	57.93	32	P	P	23 53 10.5	+0.6
KBA	Koelnbreinsper	57.95	352	eP	P	23 53 12.9	+2.9
	comp=Z,1.5nm,0.6s						
TUE	Stuetta	58.03	348	P	P	23 53 12.2	+1.6
TUE				IAmb	IAmb	23 53 13.6	
	comp=Z,44nm,1.8s						
NBPV	Pedro Velho	58.30	269	eP	P	23 53 12.3	-0.5
FETA	Feichten	58.30	350	eP	P	23 53 14.3	+1.9
	comp=Z,3.0nm,0.9s						
WTTA	Wattenberg	58.38	350	eP	P	23 53 16.0	+3.0
	comp=Z,2.6nm,0.6s						
SQTA	Sankt Quirin	58.41	350	eP	P	23 53 13.9	+0.7
	comp=Z,1.7nm,0.4s						
CONA	Conrad Observa	58.47	354	eP	P	23 53 14.3	+0.8
	comp=Z,1.0nm,0.4s						
MOTA	Moosalm	58.55	350	eP	P	23 53 14.5	+0.3
	comp=Z,1.7nm,0.5s						
MOA	Molln	58.58	353	eP	P	23 53 15.0	+0.8
	comp=Z,3.1nm,0.6s						
DAVA	Damuels	58.71	349	eP	P	23 53 15.2	-0.1
	comp=Z,2.8nm,0.4s						
RETA	Reutte	58.75	350	eP	P	23 53 15.8	+0.3
	comp=Z,1.8nm,0.6s						
RCBR	Riachuelo	58.98	269	P	P	23 53 17.1	-0.6
	comp=Z,6.5nm,0.7s,baz=221,slow=23,SNR=4.6						
RCBR	Riachuelo	58.98	269	P	P	23 53 17.9	+0.2
RCBR				pmax	pmax		
	comp=Z,70nm,1.7s						
RCBR	Riachuelo	58.98	269	P	P	23 53 17.9	+0.2
RCBR	Riachuelo	58.98	269	eP	P	23 53 18.0	+0.3
CRVS	Cervenica-Dubn	59.07	358	eP	P	23 53 19.5	+1.9
CRVS	Cervenica-Dubn	59.07	358	eP	P	23 53 19.5	+1.9
KOLS	Kolonicke sedl	59.09	359	eP	P	23 53 19.9	+2.2
KOLS	Kolonicke sedl	59.09	359	eP	P	23 53 19.9	+2.2
LANS	Liptovska Anna	59.40	357	eP	P	23 53 21.9	+2.0
LANS				pmax	pmax		
	comp=Z,5.0nm,1.1s						
LANS	Liptovska Anna	59.40	357	eP	P	23 53 21.9	+2.0
CKRC	Cesky Krumlov	59.53	353	eP	P	23 53 21.6	+0.9
PALK	Pallekele	59.53	75	P	P	23 53 23.7	+2.2
	comp=Z,5.7nm,0.7s,baz=328,slow=3.0,SNR=4.5						
GERES	GERESS Array B	59.63	352	P	P	23 53 21.6	+0.1
	comp=Z,2.1nm,0.9s,baz=164,slow=6.9,SNR=8.2						
GERES	GERESS Array B	59.63	352	P	P	23 53 22.4	+0.8
GERES	GERESS Array B	59.63	352	P	P	23 53 22.4	+0.8
KWP	Kalwaria Pacla	59.78	359	P	P	23 53 23.8	+1.4
KWP				pmax	pmax		
	comp=Z,37nm,1.7s						
KWP	Kalwaria Pacla	59.78	359	P	P	23 53 23.8	+1.4
KWP				IAmb	IAmb	23 53 29.4	
	comp=Z,37nm,1.7s						
NBLI	Livramento-PB	59.80	267	eP	P	23 53 23.2	-0.2
KHC	Kasperske Hory	59.92	352	ceP	P	23 53 24.3	+0.8
KHC				pmax	pmax		
	comp=Z,31nm,2.5s						
KHC	Kasperske Hory	59.92	352	eP	P	23 53 23.9	+0.4
KHC	Kasperske Hory	59.92	352	P	P	23 53 24.5	+1.0
KHC				IAmb	IAmb	23 53 53.3	
	comp=Z,17nm,1.5s						
BFO	Black Forest	60.01	348	P	P	23 53 25.1	+1.0
BFO				pmax	pmax		
	comp=Z,45nm,1.9s						
BFO	Black Forest	60.01	348	P	P	23 53 25.1	+1.0
BFO				IAmb	IAmb	23 54 51.6	
	comp=Z,45nm,1.9s						
KRLC	Kraliky	60.51	355	eP	P	23 53 28.5	+1.0
KRLC	Kraliky	60.51	355	eP	P	23 53 28.5	+1.0
DPC	Dobruska-Polom	60.83	355	eP	P	23 53 29.8	+0.2
DPC	Dobruska-Polom	60.83	355	eP	P	23 53 29.8	+0.2
OSTC	Ostas	61.04	355	eP	P	23 53 31.6	+0.5
AKASG	Malin Array Be	61.05	4	P	P	23 53 28.4	-2.7
	comp=Z,1.1nm,0.5s,baz=190,slow=6.0,SNR=7.5						
AKASG				LR	LR	00 20 51.6	
	comp=Z,97nm,18.7s,baz=320,slow=37						
AKASG	Malin Array Be	61.05	4	ceP	P	23 53 31.6	+0.6
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKASG	Malin Array Be	61.05	4	P	P	23 53 32.4	+1.4
WLF	Walferdange	61.73	347	P	P	23 53 36.9	+1.2
WLF				pmax	pmax		
	comp=Z,43nm,1.5s						
WLF	Walferdange	61.73	347	P	P	23 53 36.9	+1.2
SNAA	Sanae	63.32	189	P	P	23 53 48.2	+2.0
SNAA	Sanae	63.32	189	P	P	23 53 46.3	+0.1
	comp=Z,3.9nm,1.0s,baz=18,slow=19,SNR=3.1						
SNAA	Sanae	63.32	189	P	P	23 53 46.9	+0.7
SNAA				pmax	pmax		
	comp=Z,33nm,1.7s						
SNAA	Sanae	63.32	189	P	P	23 53 46.9	+0.7
SNAA				IAmb	IAmb	23 54 41.7	
	comp=Z,33nm,1.7s						
VNA1	Neumayer--Stat	63.40	191	P	P	23 53 49.1	+2.5
NBMO	Morrinhos-CE	63.46	271	eP	P	23 53 48.3	+0.2
VNA2	Neumayer--Watz	63.46	191	P	P	23 53 48.5	+1.4

	baz=30,slow=6.3						
DUB01	Friburgo-RJ	63.96	251	eP	P	23 53 51.4	+0.1
VNA3	Neumayer Olymp	64.16	191	P	P	23 53 53.0	+1.4
NIL	Nilore	64.40	45	P	P	23 53 56.0	+2.1
NIL				pmax	pmax		
	comp=Z,11nm,1.1s						
NIL	Nilore	64.40	45	P	P	23 53 56.0	+2.1
NIL				IAmb	IAmb	23 53 59.6	
	comp=Z,11nm,1.1s						
NBPS	Pedro II - PI	64.66	270	eP	P	23 53 55.5	-0.6
VAS01	Vassouras-RJ	64.95	250	eP	P	23 53 58.4	+0.7
NACGM	Naroch	65.11	2	i P	P	23 53 55.6	-2.4
NACGM				i P	P	23 53 55.6	-2.4
NACGM				i P	P	23 53 55.6	-2.4
NACGM				i PcP	PcP	23 54 28.0	-2.7
NACGM				i PP	PP	23 56 18.9	-2.5
NACGM				i PPP	PPP	23 57 51.7	
NACGM				i S	S	00 02 36.5	-4.0
NACGM				i PS	PnS	00 03 50.9	+52
NACGM				i SS	SS	00 06 43.9	-9.3
NACGM				i SSS	SSS	00 09 54.5	
NACGM				i LQ	LQ	00 18 50.7	
NACGM				i LR	LR	00 24 48.1	
BELG	Belogornoye	65.87	16	eP	P	23 54 03.6	+0.7
BELG				pmax	pmax		
	comp=Z,5.0nm,0.8s						
JANB	Januaria	66.16	258	eP	P	23 54 05.5	-0.2
OBN	Obninsk	66.18	8	eP	P	23 54 04.9	+0.1
OBN				e		23 54 35.9	
OBN				e		23 56 31.4	
OBN				ePPP	PPP	23 58 02.9	
OBN				pmax	pmax		
	comp=Z,37nm,2.9s						
BSCB	Bom Sucesso	66.22	252	eP	P	23 54 05.9	-0.2
PARB	Paraibuna	66.93	249	eP	P	23 54 10.3	-0.2
SDBA	SAO DESIDERIO	66.98	261	eP	P	23 54 10.5	-0.5
IUG	Iuzhnay	67.42	36	eP	P	23 54 10.4	-2.8
	baz=36						
IUG	Iuzhnay	67.42	36	eP	P	23 54 10.4	-2.8
ABKAR	Akbulak array	67.45	25	P	P	23 54 11.1	-2.0
ABKAR	Akbulak array	67.45	25	P	P	23 54 11.1	-2.0
ROSB	Rosrio	67.55	271	eP	P	23 54 13.8	-0.7
VAO	Valinhos	68.18	249	eP	P	23 54 18.3	-0.2
KK31	Karatay Array	68.30	35	P	P	23 54 20.2	+1.6
KK31				pmax	pmax		
	comp=Z,12nm,1.3s						
KK31	Karatay Array	68.30	35	P	P	23 54 20.2	+1.6
KK31				IAmb	IAmb	23 54 21.7	
	comp=Z,12nm,1.3s						
KKAR	Karatay Array	68.30	35	P	P	23 54 16.9	-1.7
KKAR	Karatay Array	68.30	35	P	P	23 54 16.9	-1.7
DZA	Taraz	68.63	36	eP	P	23 54 19.1	-1.7
	baz=36						
DZA	Taraz	68.63	36	eP	P	23 54 19.0	-1.7
KSH	Kashi	69.48	41	P	P	23 54 26.0	-0.2
KSH				PP	PP	23 57 03.3	+3.3
KSH				S	S	00 03 37.0	+3.0
KSH				ScS	SKSac	00 04 26.3	-0.7
KSH				pmax	pmax		
	comp=Z,28nm,2.1s						
KSH				pmax	pmax		
	comp=Z,320nm,3.5s						
KSH				LR	LR		
	comp=Z,270nm,8.3s						
KSH				LR	LR		
	comp=Z,320nm,8.2s						
IPMB	Ipameri, GO	69.65	255	eP	P	23 54 28.1	+0.4
BDFB	Brasilia	69.67	257	P	P	23 54 26.9	-1.0
	comp=Z,2.9nm,0.8s,baz=99,slow=6.2,SNR=4.9						
BDFB				LR	LR	00 21 49.5	
	comp=Z,85nm,18.3s,baz=122,slow=33						
BDFB	Brasilia	69.67	257	P	P	23 54 27.4	-0.4
BDFB				pmax	pmax		
	comp=Z,21nm,1.8s						
BDFB	Brasilia	69.67	257	P	P	23 54 27.4	-0.4
BDFB				IAmb	IAmb	23 56 52.6	
	comp=Z,21nm,1.8s						
BB19B	Bebedouro	69.72	251	eP	P	23 54 28.8	+0.7
TER01	Tubaro-SC	69.96	243	eP	P	23 54 29.3	-0.1
SMTB	Santa Maria do	70.04	264	eP	P	23 54 30.4	+0.3
GKN	Gorkha	70.30	55	eP	P	23 54 32.8	+1.2
PEXB	Peixe	70.32	261	eP	P	23 54 31.6	-0.2
AAK	Ala-Archa	70.33	37	P	P	23 54 32.3	+0.8
AAK				pmax	pmax		
	comp=Z,11nm,1.7s						
AAK	Ala-Archa	70.33	37	P	P	23 54 32.2	+0.8
DMN	Daman	70.53	56	eP	P	23 54 35.1	+2.0
KKN	Kakani	70.74	56	eP	P	23 54 35.8	+1.5
PKI	Pulchoki	70.76	56	eP	P	23 54 35.6	+1.0
SGDS	Sogindy	70.89	37	eP	P	23 54 32.7	-2.0
	comp=Z,8.8nm,1.2s,baz=37						
SGDS	Sogindy	70.89	37	eP	P	23 54 32.6	-2.1
SGDS				pmax	pmax		
	comp=Z,9.0nm,1.2s						
GUN	Gumba	71.27	56	eP	P	23 54 39.2	+1.5
CNLB	Canela	71.45	243	eP	P	23 54 38.7	+0.2
RAMN	Ramite	71.50	57	eP	P	23 54 40.4	+1.4
BTLS	Baital	71.50	35	eP	P	23 54 36.5	-1.8
	baz=35						
BTLS	Baital	71.50	35	eP	P	23 54 36.4	-1.8
ITRB	Iturama	71.54	253	eP	P	23 54 39.0	-0.1
NC602	NORSAR Array S	71.55	354	P	P	23 54 40.6	+2.4
FINES	FINESS Array B	71.64	1	P	P	23 54 39.2	+0.5
	comp=Z,1.7nm,0.7s,baz=163,slow=7.2,SNR=9.0						
FINES				LR	LR	00 28 32.2	
	comp=Z,132nm,18.4s,baz=274,slow=38						
FINES	FINESS Array B	71.64	1	i P	P	23 54 40.2	+1.5
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
FINES	FINESS Array B	71.64	1	P	P	23 54 39.4	+0.7
NB2	NORSAR Subarra	71.88	354	P	P	23 54 38.8	-1.5
	comp=Z,10nm,1.0s,baz=168,slow=6.2						
NOA	NORSAR Array B	71.88	354	P	P	23 54 38.7	-1.6
	comp=Z,2.9nm,0.7s,baz=172,slow=5.9,SNR=11						
NOA				LR	LR	00 31 01.7	
	comp=Z,31nm,19.0s,baz=275,slow=40						
NB201	NORSAR Array S	71.88	354	P	P	23 54 42.2	+1.9
KIRV	Kirov	71.88	14	i P	P	23 54 39.8	-0.4
NC405	NORSAR Array S	71.90	354	P	P	23 54 41.9	+1.5
TNSS	Tian-Shan	72.04	38	eP	P	23 54 40.2	-1.9
	baz=38						
TNSS	Tian-Shan	72.04	38	eP	P	23 54 40.2	-1.9
AAA	Alma-Ata	72.12	38	eP	P	23 54 39.9	-2.3
	baz=38						
AAA	Alma-Ata	72.12	38	eP	P	23 54 39.8	-2.3
KLMR	Klimovskoe	72.14	8	eP	P	23 54 38.5	-3.2
KLMR				pmax	pmax		
	comp=Z,11nm,0.8s						
KLMR	Klimovskoe	72.14	8	eP	P	23 54 38.6	-3.2
KLMR				AMP		23 54 43.7	
	comp=Z,11nm,0.8s						
KUU	Kurty	72.16	37	eP	P	23 54 40.1	-2.3
	comp=Z,13nm,1.0s,baz=37						
KUU	Kurty	72.16	37	eP	P	23 54 40.0	-2.3
KUU				pmax	pmax		
	comp=Z,13nm,1.0s						
MDOK	Medeo	72.17	38	eP	P	23 54 40.7	-2.0
	baz=38						
MDOK	Medeo	72.17	38	eP	P	23 54 40.6	-2.0
PCMB	Pacaembu	72.23	251	eP	P	23 54 43.2	0.0
CHKK	Chushkaly	72.52	38	eP	P	23 54 42.4	-2.1
	baz=38						
CHKK	Chushkaly	72.52	38	eP	P	23 54 42.4	-2.1
TAPN	Taplejung	72.56	57	eP	P	23 54 47.3	+1.9
PRPB	Parauapebas	72.61	267	eP	P	23 54 45.9	+0.3
ARU	Arti	72.63	20	d iP	P	23 54 44.0	-0.8
ARU				S	S	00 04 10.0	+0.4
ARU				SS	SS	00 08 47.0	-2.2
ARU				pmax	pmax		
	comp=Z,18nm,0.9s						
ARU	Arti	72.63	20	P	P	23 54 46.0	+1.2
ARU				IAmb	IAmb	23 54 48.4	
	comp=Z,16nm,0.9s						
ITAB	Concordia	72.66	245	eP	P	23 54 45.9	+0.2
PTGB	Pitanga	72.75	247	eP	P	23 54 46.5	+0.1
SATY	Saty	72.95	39	eP	P	23 54 45.1	-2.1
	comp=Z,4.2nm,0.9s,baz=39						
SATY	Saty	72.95	39	eP	P	23 54 45.1	-2.1
SATY				pmax	pmax		
	comp=Z,4.0nm,0.9s						
SNDB	Serra Nova Dou	73.24	261	eP	P	23 54 49.7	+0.3
ARAG	Araguaiana, MT	73.30	257	eP	P	23 54 50.0	+0.3
UZB	Uzynbulak	73.38	39	eP	P	23 54 47.9	-1.8
	comp=Z,8.4nm,0.9s,baz=39						
UZB	Uzynbulak	73.38	39	eP	P	23 54 47.9	-1.8
UZB				pmax	pmax		
	comp=Z,8.0nm,0.9s						
SVE	Sverdlovsk	73.64	20	eP	P	23 54 52.7	+2.0
SVE				pmax	pmax		
	comp=Z,15nm,1.1s						
SHLS	Shalkode	73.66	39	eP	P	23 54 51.1	-0.2
	comp=Z,7.6nm,0.8s,baz=40						
SHLS	Shalkode	73.66	39	eP	P	23 54 51.1	-0.2
SHLS				pmax	pmax		
	comp=Z,8.0nm,0.8s						
CPSB	Cacapava Do Su	73.66	241	eP	P	23 54 51.8	+0.3
PLTB	Pedras Altas	73.74	240	eP	P	23 54 53.5	+1.5
BRZS	Berezniki	73.81	31	eP	P	23 54 49.9	-2.1
	baz=31						
BRZS	Berezniki	73.81	31	eP	P	23 54 49.9	-2.1
TDK	Taldyqorghan	74.01	37	eP	P	23 54 51.4	-1.9
	comp=Z,4.3nm,0.7s,baz=37						
TDK	Taldyqorghan	74.01	37	eP	P	23 54 51.3	-1.9
TDK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BRVK	Borovoye	74.69	27	ceP	P	23 54 55.8	-1.1
BRVK				pmax	pmax		
	comp=Z,9.0nm,1.0s						
BRVK	Borovoye	74.69	27	P	P	23 54 58.2	+1.2
TMCR	Tamitsa	75.16	7	eP	P	23 54 56.7	-2.7
TMCR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MCPB	Macapa, AP	75.80	272	eP	P	23 55 04.1	-0.1
PP1B	Ponte de Pedra	76.01	254	eP	P	23 55 06.2	+0.8
LSA	Lhasa	76.23	56	P	P	23 55 06.9	0.0
LSA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
LSA	Lhasa	76.23	56	P	P	23 55 06.9	0.0
LSA				IAmb	IAmb	23 55 10.9	
	comp=Z,10nm,0.7s						
ITQB	Itaqui	76.46	242	eP	P	23 55 08.0	+0.3
AQDB	Aquidauana	76.46	251	eP	P	23 55 07.8	-0.1
MAKZ	Makanchi	77.08	37	P	P	23 55 09.1	-1.7
MAKZ				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MAKZ	Makanchi	77.08	37	P	P	23 55 09.1	-1.7
MK31	Makanchi Array	77.25	37	ceP	P	23 55 10.4	-1.4
MK31	Makanchi Array	77.25	37	P	P	23 55 09.9	-1.9
MKAR	Makanchi Array	77.25	37	P	P	23 55 10.4	-1.4
	comp=Z,10nm,0.9s,baz=246,slow=5.3,SNR=20						
MKAR	Makanchi Array	77.25	37	P	P	23 55 10.0	-1.8
KURK	Kurchatov	77.30	32	i P	P	23 55 12.7	+0.8
KURK				pmax	pmax		
	comp=Z,10.0nm,1.2s						
KURK	Kurchatov	77.30	32	P	P	23 55 11.0	-0.9
CPUP	Villa Florida	77.36	245	P	P	23 55 11.9	-1.0
	comp=Z,2.6nm,0.8s,baz=117,slow=6.9,SNR=6.1						
CPUP				LR	LR	00 24 49.6	
	comp=Z,71nm,19.0s,baz=136,slow=32						
CPUP	Villa Florida	77.36	245	P	P	23 55 11.9	-1.0
CPUP	Villa Florida	77.36	245	eP	P	23 55 13.2	+0.3
MALB	Monte Alegre	77.70	270	eP	P	23 55 14.8	-0.2
CLDB	Colider	77.76	261	eP	P	23 55 15.7	+0.3
NPGB	Novo Progresso	77.91	265	eP	P	23 55 15.9	-0.3
SEM	Semipalatinsk	78.00	33	eP	P	23 55 14.2	-2.0
	baz=33						
SEM	Semipalatinsk	78.00	33	eP	P	23 55 14.1	-2.0
ITTB	Itaituba	78.72	268	eP	P	23 55 20.6	0.0
ZSN	Zaisan	79.11	37	eP	P	23 55 20.3	-1.8
	comp=Z,5.0nm,1.0s,baz=37						
ZSN	Zaisan	79.11	37	eP	P	23 55 20.2	-1.8
ZSN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
WMQ	Urumqi	79.22	42	eP	P	23 55 25.8	+3.0
WMQ				sP	PcP	23 55 31.8	+0.7
WMQ				PcP	sP	23 55 37.8	+10
WMQ				S	S	00 05 26.5	+3.4
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,170nm,8.1s						
WMQ				LR	LR		
	comp=Z,390nm,10.5s						
CMAR	Chiang Mai Arr	79.67	69	P	P	23 55 26.8	+1.1
	comp=Z,2.7nm,0.6s,baz=264,slow=6.7,SNR=12						
ARCES	ARCESS Array B	79.75	1	P	P	23 55 22.9	-2.1
	comp=Z,5.6nm,0.8s,baz=181,slow=6.0,SNR=30						
ARCES				LR	LR	00 37 03.9	
	comp=Z,132nm,20.7s,baz=260,slow=40						
ARCES	ARCESS Array B	79.75	1	P	P	23 55 26.2	+1.1
ARCES				pmax	pmax		
	comp=Z,46nm,2.0s						
ARCES	ARCESS Array B	79.75	1	P	P	23 55 26.2	+1.1
KEV	Kevo	80.00	1	P	P	23 55 27.6	+1.2
KEV				pmax	pmax		
	comp=Z,161nm,1.9s						
KEV	Kevo	80.00	1	P	P	23 55 27.6	+1.2
DGZ	Jazzator, Alta	81.66	36	i P	P	23 55 35.5	-0.4
DGZ				pmax	pmax		
	comp=Z,6.0nm,1.4s						
VILB	Vilhena	81.72	258	eP	P	23 55 36.9	0.0
ZAA0	Zalesovo Array	82.24	32	P	P	23 55 40.1	+1.4
ZALV	Zalesovo Beam	82.24	32	P	P	23 55 36.5	-2.1
	comp=Z,1.8nm,0.6s,baz=266,slow=2.2,SNR=5.3						
ZALV				LR	LR	00 36 04.7	
	comp=Z,104nm,18.7s,baz=299,slow=38						
ZALV	Zalesovo Beam	82.24	32	i P	P	23 55 36.4	-2.2
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KMI	Kunming	84.73	63	⇑P	P	23 55 55.1	+2.7
KMI				pmax	pmax		
	comp=Z,7.0nm,0.9s						
SAML	Samuel	85.25	262	P	P	23 55 55.0	0.0
SAML				pmax	pmax		
	comp=Z,17nm,1.5s						
SAML	Samuel	85.25	262	P	P	23 55 55.0	0.0
SAML				IAmb	IAmb	23 55 56.3	
	comp=Z,16nm,1.5s						
GTA	Gaotai	86.11	49	eP	P	23 55 58.8	-0.1
GTA				pP	pP	23 56 03.0	+0.4
GTA				sP	sP	23 56 06.4	+2.5
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
PLCA	Paso Flores	86.39	229	LR	LR	00 28 28.7	
	comp=Z,112nm,19.8s,baz=153,slow=31						
CD2	Chengdu	87.00	58	P	P	23 56 05.9	+2.6
CD2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BO02	Sierra Bellavi	87.68	235	P	P	23 56 07.8	+1.1
ETMB	Extrema	88.05	260	eP	P	23 56 08.9	+0.2
LZH	Lanzhou	88.31	53	eP	P	23 56 13.8	+4.1
LZH				pP	sP	23 56 17.3	+2.6
LZH				sP	pP	23 56 20.8	+7.4
LZH				pmax	pmax		
	comp=Z,14nm,1.1s						
LZH				pmax	pmax		
	comp=Z,65nm,5.3s						
LVC	Limon Verde	88.33	247	eP	P	23 56 09.9	-0.4
GYA	Guiyang	88.48	63	⇑P	P	23 56 13.3	+2.7
GYA				sP	sP	23 56 18.4	+2.8
GYA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
GYA				pmax	pmax		
	comp=Z,120nm,6.1s						
LPAZ	La Paz	88.74	254	P	P	23 56 10.9	-1.8
	comp=Z,2.7nm,0.9s,baz=99,slow=5.7,SNR=8.5						
LPAZ				LR	LR	00 32 03.6	
	comp=Z,71nm,20.5s,baz=116,slow=33						
LPAZ	La Paz	88.74	254	eP	P	23 56 12.1	-0.6
NRIK	Noril'sk	90.83	19	ceP	P	23 56 22.2	+1.7
NRIK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ENH	Enshi	91.68	60	P	P	23 56 27.1	+1.7
ENH				IAmb	IAmb	23 56 28.7	
	comp=Z,6.7nm,0.7s						
XAN	Xi'an	91.93	56	P	P	23 56 28.9	+2.4
XAN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
XAN	Xi'an	91.93	56	P	P	23 56 28.9	+2.4
XAN				IAmb	IAmb	23 56 29.8	
	comp=Z,5.7nm,0.9s						
SONM	Songino Array	92.85	42	PP	PP	00 00 12.2	-0.8
	comp=Z,1.6nm,1.1s,baz=249,slow=8.8,SNR=6.7						
HHC	Hu-ho-hao-te	95.21	50	eP	P	23 56 42.5	+1.0
HHC				pmax	pmax		
	comp=Z,4.0nm,1.3s						
HHC				pmax	pmax		
	comp=Z,130nm,7.1s						
LMN	Caledonia Moun	96.25	315	P	P	23 56 44.1	-1.9
FITZ	Fitzroy Crossi	98.06	110	LR	LR	00 35 46.4	
	comp=Z,82nm,18.3s,baz=284,slow=32						
NJ2	Nanjing	99.89	59	eP	Pdif	23 57 03.5	+0.9
YKA	Yellowknife Ar	119.95	339	PKP	PKPdf	00 02 05.9	-1.9
	comp=Z,0.4nm,0.5s,baz=56,slow=2.3,SNR=5.8						
IMAR	Indian Mountai	124.46	359		PKPdf	00 02 15.2	-1.2
COLA	College	125.28	356	i PKIKP	PKiKP	00 02 18.4	+0.2
ILAR	Eielson Array	125.30	355	PKP	PKPdf	00 02 16.2	-1.7
	comp=Z,1.5nm,0.9s,baz=336,slow=3.3,SNR=9.5						
BCAR	Beaver Creek A	126.38	352		PKPdf	00 02 19.4	-0.8
TXAR	Lajitas Array	127.39	299	PKP	PKPdf	00 02 21.7	-1.5
	comp=Z,1.4nm,0.9s,baz=130,slow=2.7,SNR=6.5						
TXAR	Lajitas Array	127.39	299	PKIKP	PKPdf	00 02 22.8	-0.4
TXAR	Lajitas Array	127.39	299	PKPdf	PKPdf	00 02 22.8	-0.4
TX31	Lajitas Ar. Si	127.39	299		PKPdf	00 02 22.8	-0.4
SMCO	Snowmass	127.58	312	PKPdf	PKPdf	00 02 23.3	-0.3
HYT	Haines Junctio	127.76	348		PKiKP	00 02 23.6	+0.1
YHH	Holmes Hill	128.04	320	PKPdf	PKiKP	00 02 24.8	0.0
PD31	Pinedale Array	128.07	317		PKPdf	00 02 23.0	-1.2
PDAR	Pinedale Array	128.07	317	PKP	PKPdf	00 02 22.6	-1.7
	comp=Z,2.2nm,0.9s,baz=95,slow=2.2,SNR=10						
PDAR	Pinedale Array	128.07	317	PKPdf	PKPdf	00 02 22.9	-1.4
MNTX	Cornudas Mount	128.39	302	PKPdf	PKPdf	00 02 24.3	-0.6
ANMO	Albuquerque	128.47	307	i PKIKP	PKPdf	00 02 24.8	-0.4
PV22	Blue Mesa, Par	129.13	312		PKPdf	00 02 26.4	+0.1
PV14	Lion Creek, Pa	129.36	312		PKPdf	00 02 26.3	-0.6
PRN	Pahroc Range	134.13	313		PKPdf	00 02 36.2	+0.4
NVAR	Mina Array Bea	135.96	316	PKP	PKPdf	00 02 38.6	-0.7
	comp=Z,1.1nm,0.8s,baz=131,slow=2.7,SNR=6.2						
NVAR	Mina Array Bea	135.96	316		PKPdf	00 02 39.9	+0.6
RYN	Ryan	136.01	316		PKPdf	00 02 39.7	+0.4
WAKR	Walker	136.69	317		PKiKP	00 02 43.3	+0.9

IDC 25 00:00:41.1±2.0**,0°.65N**×**126°.79E,h0**km**,mb3.6**/3**,**
mb1 3.8/3**,mb1mx3.4**/31**,mbtmp3.6**/3**,Error ellipse:**
s-maj=164.1km s-min=25.3km az=66.0,Northern
Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	21.76	161	P	P	00 05 35.0	+0.4
	1.0nm,0.6s,baz=339,slow=11,SNR=10						
ASAR	Alice Springs	25.14	165	P	P	00 06 07.9	-0.3
	1.2nm,0.7s,baz=344,slow=10,SNR=10						
MKAR	Makanchi Array	60.12	326	P	P	00 10 50.5	0.0
	0.6nm,0.8s,baz=118,slow=7.4,SNR=6.7						

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*NEIC **25** 00:07:33.7±2.5,31°.91N±0°.09×140°.8E±0°.1,h60km±10km,*
mb4.2/13,Error ellipse: s-maj=17.4km s-min=12.2km
az=62.0

*IDC **25** 00:07:35.6±1.7,32°.00N×140°.45E,h70km±12km,mb3.5/14,*
mb1 3.7/16,mb1mx3.6/32,mbtmp3.8/16,Error ellipse:
s-maj=25.5km s-min=15.6km az=81.0

*JMA **25** 00:07:37.5±0.2,32°.21N×140°.65E,h33km,M3.7*

ISC 25 00:07:35.9±0.6**,31°.99N**±0°.07×**140°.54E**±0°.07**,h73**km**,n61,**
σ**1**^{s}**39**/64**,mb3.9**/19**,Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHCJ	Hachijojimakas	1.25	330	P	Pn	00 07 57.1	-0.6
JHCJ				eS	Sn	00 08 11.9	-2.1
JHJ2	Mitsune	1.27	332	P	Pn	00 07 57.5	-0.5
JHJ2	Mitsune	1.27	332	Pn	Pn	00 07 57.9	-0.1
JHJ2				Sn	Sn	00 08 13.5	-1.1
JHJ	Hachijo jima 2	1.29	331	P	Pn	00 07 57.7	-0.6
	37nm,0.3s,baz=96,slow=23,SNR=20						
JHJ				S	Sn	00 08 13.1	-2.0
	194nm,0.3s,baz=241,slow=23,SNR=17						
BSO1	Boso 1	2.68	8	P	Pn	00 08 16.0	-0.3
BSO3	Boso 3	2.80	360	P	Pn	00 08 18.1	-0.1
BSO3				S	Sn	00 08 49.1	-1.7
BSO4	Boso 4	3.00	357	P	Pn	00 08 21.5	+0.5
TK02	Tokai 2	3.04	311	P	Pn	00 08 23.3	+1.8
JOD2	Odawara 2	3.48	340	eS	Sn	00 09 05.9	-1.8
JHU	Hanno	3.99	345	eS	Sn	00 09 17.3	-2.8
JIE	Ise	4.00	308	P	Pn	00 08 36.1	+1.3
INU	Inuyama	4.45	320		Pn	00 08 41.6	+0.6
JGF	Kuroka	4.47	325		Pn	00 08 44.1	+2.9
JTNC	Tanabenakahech	4.53	295	P	Pn	00 08 43.0	+1.0
JTNC				eS	Sn	00 09 33.2	-0.1
MJAR	Matsushiro Arr	4.93	338	P	Pn	00 08 51.5	+4.0
	0.2nm,0.3s,baz=153,slow=12,SNR=8.2						
MAT	Matsushiro	4.93	338	P	Pn	00 08 53.4	+5.9
MAT				eS	Sn	00 09 46.8	+3.6
JWT	Wachi	5.39	309	Pn	Pn	00 08 56.3	+2.5
JMN	Monobe	5.86	289	Pn	Pn	00 09 02.1	+1.9
JMM	Marumori	5.86	2	Pn	Pn	00 08 59.5	-0.7
JNU	Nakatsue	8.23	280	P	Pn	00 09 33.3	+0.7
	0.6nm,0.3s,baz=43,slow=15,SNR=3.1						
JNU	Nakatsue	8.23	280	Pn	Pn	00 09 34.9	+2.3
KSRS	Korea Array	11.72	301	P	Pn	00 10 19.8	-0.3
	0.2nm,0.3s,baz=121,slow=13,SNR=1.3						
YHNB	Yeheng	18.36	251	P	Pn	00 11 46.8	+1.1
YHNB				IAmb	IAmb	00 11 49.4	
	comp=Z,37nm,1.4s						
H11N2	WAKE ISLAND Hy	26.60	111	T	T	00 42 02.1	
	baz=305,slow=74						
H11N1	WAKE ISLAND Hy	26.61	111	T	T	00 41 49.0	
	baz=305						
H11N3	WAKE ISLAND Hy	26.62	111	T	T	00 42 11.5	
	baz=305,slow=74						
H11S3	WAKE ISLAND Hy	27.12	113	T	T	00 42 17.2	
	baz=304,slow=75,SNR=28						
H11S1	WAKE ISLAND Hy	27.12	113	T	T	00 41 58.5	
	baz=304,slow=75,SNR=29						
H11S2	WAKE ISLAND Hy	27.13	113	T	T	00 42 11.7	
	baz=304,slow=75,SNR=21						
SONM	Songino Array	30.30	311	P	P	00 13 38.8	-1.5
	comp=Z,0.1nm,0.4s,baz=132,slow=4.3,SNR=2.3						
SONM				PcP	PcP	00 16 39.8	+0.8
	comp=Z,0.2nm,0.4s,baz=134,slow=2.3,SNR=4.1						
ZALV	Zalesovo Beam	44.91	316	P	P	00 15 42.3	-0.9
	comp=Z,0.5nm,0.4s,baz=92,slow=10,SNR=3.1						
ZALV				PcP	PcP	00 17 23.8	+0.3
	comp=Z,0.5nm,0.5s,baz=91,slow=3.9,SNR=2.8						
MK31	Makanchi Array	46.34	306	P	P	00 15 54.6	0.0
MKAR	Makanchi Array	46.34	306	P	P	00 15 54.1	-0.5
	comp=Z,0.2nm,0.3s,baz=86,slow=8.7,SNR=9.1						
MKAR	Makanchi Array	46.34	306	P	P	00 15 54.3	-0.3
MAKZ	Makanchi	46.56	306	P	P	00 15 56.1	-0.1
KURK	Kurchatov	48.60	312	P	P	00 16 12.1	+0.1
KURK				IAmb	IAmb	00 16 14.3	
	comp=Z,2.1nm,0.9s						
WB0	Warramunga Arr	51.80	187	P	P	00 16 35.6	-0.8
FITZ	Fitzroy Crossi	51.81	198	P	P	00 16 33.1	-3.4
FITZ				IAmb	IAmb	00 16 48.0	
	comp=Z,6.8nm,1.5s						
WR0	Warramunga Arr	51.97	187	P	P	00 16 36.9	-0.8
WR0				IAmb	IAmb	00 16 41.2	
	comp=Z,4.1nm,1.1s						
WB2	Warramunga Arr	51.98	187	P	P	00 16 36.8	-1.0
WRA	Warramunga Arr	51.98	187	P	P	00 16 36.6	-1.2
	comp=Z,0.7nm,0.4s,baz=3.3,slow=7.7,SNR=15						
WRA				PcP	PcP	00 17 50.7	+1.4
	comp=Z,0.4nm,0.6s,baz=358,slow=4.0,SNR=2.7						
WRA	Warramunga Arr	51.98	187	P	P	00 16 36.4	-1.3
BRVK	Borovoye	53.58	315	P	P	00 16 49.4	+0.1
BRVK				IAmb	IAmb	00 16 50.4	
	comp=Z,1.1nm,0.8s						
ILAR	Eielson Array	54.17	30	P	P	00 16 53.1	-0.3
	comp=Z,0.4nm,0.8s,baz=276,slow=8.0,SNR=2.2						
KK31	Karatay Array	55.14	303	P	P	00 17 01.0	+0.2
KKAR	Karatay Array	55.14	303	P	P	00 17 00.3	-0.5
ASAR	Alice Springs	55.71	187	P	P	00 17 04.3	-0.6
	comp=Z,0.3nm,0.5s,baz=4.8,slow=7.6,SNR=7.3						
ASAR				PcP	PcP	00 18 04.0	+0.5
	comp=Z,0.1nm,0.4s,baz=359,slow=4.8,SNR=1.9						
ASAR	Alice Springs	55.71	187	P	P	00 17 04.6	-0.4
ARU	Arti	59.72	320	P	P	00 17 32.6	-0.1
ABKAR	Akbulak array	60.70	312	P	P	00 17 39.4	-0.2
ABKAR				IAmb	IAmb	00 17 53.9	
	comp=Z,1.1nm,0.9s						
ARCES	ARCESS Array B	68.46	340	P	P	00 18 30.3	+0.5
	comp=Z,3.8nm,1.1s,baz=60,slow=11,SNR=1.4						
FINES	FINESS Array B	72.94	333	P	P	00 18 56.3	-0.8
	comp=Z,1.4nm,0.7s,baz=80,slow=2.1,SNR=6.7						
FINES	FINESS Array B	72.94	333	P	P	00 18 58.9	+1.8
DBG	Daneborg	73.20	355	i P	P	00 18 60.0	+1.5
DBG				IAML		00 19 52.2	
	comp=Z,0.4nm,0.4s						
KBZ	Khabaz	73.66	312	P	P	00 19 01.4	-0.2
	comp=Z,1.5nm,0.8s,baz=129,slow=3.4,SNR=4.8						

AKASG	Malin Array Be	77.85	323	P	P	00 19 24.8	-0.6
	comp=Z,0.7nm,0.5s,baz=53,slow=5.0,SNR=2.0						
NOA	NORSAR Array B	78.55	337	P	P	00 19 28.3	-0.8
	comp=Z,0.5nm,0.7s,baz=44,slow=5.4,SNR=2.2						
NVAR	Mina Array Bea	78.63	52	P	P	00 19 31.3	+1.1
	comp=Z,0.2nm,0.5s,baz=297,slow=8.0,SNR=2.2						
BRTR	Keskin Array B	81.65	312	P	P	00 19 46.4	0.0
	comp=Z,1.3nm,0.9s,baz=145,slow=3.2,SNR=5.1						
TXAR	Lajitas Array	93.78	52	P	P	00 20 45.1	-0.2
	comp=Z,0.4nm,0.5s,baz=270,slow=2.6,SNR=2.8						
TORD	Torodi Ar. Bea	120.27	312	PKP	PKPdf	00 26 18.6	-0.7
	comp=Z,0.2nm,0.4s,baz=50,slow=1.2,SNR=1.6						

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*IDC **25** 00:29:14.8±1.5, 0°.95N×127°.25E, h0^{km}, mb3.9/4, mb1 4.1/4, mb1mx3.6/34, mbtmp3.9/4, MS3.3/1, Ms1 3.3/1, ms1mx2.7/35, Error ellipse: s-maj=137.5km s-min=20.8km az=69.0*

*DJA **25** 00:29:14.6±0.5, 1°N±3°×12°8E±°, h10^{km}, M3.6/5, MLv3.6/5*

ISC 25 00:29:16.3±1.1**, 0°.9N**±0°.2×**127°.1E**±0°.2**, h10^{km}, n7,** σ0^{s}.45/7**,**
mb4.0/4**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	0.26	119	P	Pg	00 29 21.1	-0.4
TNTI				S	Sg	00 29 25.5	+0.5
SGSI	Sangihe	3.21	330	P	Pn	00 30 06.7	0.0
WRA	Warramunga Arr	21.88	162	P	P	00 34 09.2	-0.4
	3.2nm,0.7s,baz=341,slow=11,SNR=19						
PMG	Port Moresby	22.41	118	LR	LR	00 46 08.7	
	comp=Z,76nm,18.3s,baz=26,slow=45						
ASAR	Alice Springs	25.29	165	P	P	00 34 43.5	+0.5
	3.7nm,0.8s,baz=342,slow=10,SNR=20						
SONM	Songino Array	50.10	342	P	P	00 38 11.6	-0.1
	0.4nm,0.7s,baz=141,slow=9.3,SNR=2.8						
MKAR	Makanchi Array	60.11	326	P	P	00 39 24.1	+0.2
	1.6nm,0.8s,baz=126,slow=8.1,SNR=19						

IDC 25 00:29:38.1±1.8**, 1°.06N**×**127°.22E, h0^{km}, mb3.9**/4**,**
mb1 4.0/4**, mb1mx3.5**/38**, mbtmp3.9**/4**, Error ellipse:**
s-maj=168.7km s-min=22.1km az=67.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	22.01	162	P	P	00 34 33.2	-1.0
	1.3nm,0.6s,baz=341,slow=11,SNR=5.9						
ASAR	Alice Springs	25.42	166	P	P	00 35 08.5	+0.8
	2.4nm,0.9s,baz=342,slow=8.7,SNR=5.4						
MKAR	Makanchi Array	60.02	326	P	P	00 39 46.7	-0.1
	1.0nm,0.6s,baz=117,slow=6.7,SNR=9.5						
KURBB	Kurchatov Arra	64.24	328	P	P	00 40 14.9	-0.1
	1.7nm,0.8s,baz=126,slow=6.3,SNR=5.6						

UPP 25 00:32:51.0±0.0**, 67°.81N**×**20°.19E, h0^{km}, ML2.2,**
Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUA	Kurravaara	0.16	21	P	Pg	00 32 54.3	+0.3
KUA				S	Sg	00 32 56.6	+0.6
RATU	Laukkuluspa	0.23	274	P	Pg	00 32 55.6	+0.3
RATU				S	Sg	00 32 59.0	+0.8
KOVU	Salmi	0.42	359	P	Pg	00 32 59.0	+0.1
KOVU				S	Sg	00 33 04.6	+0.3
NIKU	Nikkaluokta	0.44	278	P	Pg	00 32 59.5	+0.1
DUNU	Dundret	0.70	168	P	Pg	00 33 04.2	-0.2
LANU	Lannavaara	0.72	70	P	Pg	00 33 04.6	-0.2
SALU	Saltoluokta	0.78	237	eP	Pg	00 33 05.0	-0.8
MASU	Masugnsbyn	0.78	116	P	Pg	00 33 05.8	-0.1
KIF	Kilpisjarvi	1.22	10	eP	Pg	00 33 13.8	-0.6
PAJU	Pajala	1.38	124	P	Pg	00 33 16.2	-1.1
HARU	Harads	1.68	169	P	Pn	00 33 21.7	+0.1

BER 25 00:32:59.3±1.2**, 61°.51N**×**4°.40E, h8^{km}**±4^{km}**, ML1.1,**
Confirmed Earthquake, Southern Norway

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FOO	Floro	0.32	73	eP	Pg	00 33 04.8	-0.8
FOO				eS	Sg	00 33 09.8	0.0
FOO				IAML		00 33 10.4	
	comp=Z,15nm,0.3s						
SUE	Sulen	0.48	159	eP	Pg	00 33 08.1	-0.5
SUE				eS	Sg	00 33 15.2	+0.3
SUE				IAML		00 33 19.6	
	comp=Z,7.5nm,0.8s						
HYA	Hoyanger	0.93	111	eP	Pg	00 33 15.6	-1.5
HYA				eS	Sg	00 33 26.9	-2.1
HYA				eSg	Sb	00 33 28.8	-1.1
HYA				IAML		00 33 30.3	
	comp=Z,5.8nm,0.4s						
ASK	Askoy	1.10	159	eP	Pg	00 33 18.7	-1.6
ASK				eS	Sg	00 33 33.6	-0.8
ASK				IAML		00 33 43.9	
	comp=Z,9.9nm,0.7s						
BER	Bergen	1.21	158	eP	Pb	00 33 20.0	-2.4
BER				eS	Sb	00 33 36.0	-2.3
BER				IAML		00 33 42.7	
	comp=Z,6.7nm,0.9s						
AKN	Aaknes	1.40	60	eP	Pn	00 33 23.1	-2.1
AKN				eS	Sb	00 33 41.7	-2.1
AKN				IAML		00 33 43.7	
	comp=Z,6.8nm,0.2s						
MOL	Molde	1.83	53	eP	Pn	00 33 29.4	-1.6
MOL				eS	Sn	00 33 51.6	-2.7
MOL				IAML		00 34 06.7	
	comp=Z,3.2nm,0.4s						
ODD1	Odda	1.94	145	eP	Pn	00 33 31.1	-1.4
ODD1				eSg	Sb	00 33 58.9	-0.3
ODD1				IAML		00 34 00.7	
	comp=Z,3.4nm,0.3s						
SKAR	Skarslia	2.07	112	eP	Pn	00 33 32.8	-1.6
SKAR				ePg	Pb	00 33 36.3	-0.8
SKAR				eS	Sn	00 33 57.9	-2.4
SKAR				eSg	Sb	00 34 02.7	-0.2
SKAR				IAML		00 34 05.0	
	comp=Z,2.9nm,0.2s						

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*NDI **25** 00:39:13.6±3.2, 15°.69N×80°.24E, h9^{km}±16^{km}, ML4.0*

*IDC **25** 00:39:31.3±82.0, 17°.94N×81°.23E, h0^{km}, mb3.8/4, mb1 3.8/4, mb1mx3.3/52, mbtmp3.8/4, MS3.3/1, Ms1 3.3/1, ms1mx2.6/46, Error ellipse: s-maj=1428.0km s-min=104.5km az=17.0*

ISC 25 00:39:12.0±0.8**, 15°.69N**±0°.05×**80°.18E**±0°.05**, h10^{km}, n25,**
σ**2^{s}.21**/35**, mb3.5**/4**, Southern India**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HYB	Hyderabad	2.32	318	eP	Pn	00 39 49.0	-1.3
HYB				i x	Pb	00 39 53.0	-1.0
HYB				eS	Sb	00 40 22.4	-0.4
HYB				IAML		00 40 25.4	
	comp=E,1µm,0.2s						
HYB				IAML		00 40 25.7	
	comp=N,1µm,0.0s						
MDRS	Chennai	2.61	179	eP	Pn	00 39 57.1	+2.8
MDRS				eS	Sn	00 40 27.6	+1.5
MDRS				IAML		00 40 34.2	
	comp=E,2µm,0.0s						
MDRS				IAML		00 40 35.0	
	comp=N,874nm,0.6s						
VIS	Vishakhapatnam	3.63	56	eP	Pn	00 40 10.3	+2.0
VIS				eS	Sn	00 40 50.0	-1.2
GOA	Goa	6.13	269	eP	Pn	00 40 46.5	+3.7
GOA				eS	Sn	00 41 50.5	-2.5
GOA				IAML		00 42 23.1	
	comp=N,2µm,0.1s						
POO	Poona	6.68	296	eS	Sn	00 42 05.0	-1.6
POO				IAML		00 42 42.8	
	comp=E,168nm,0.4s						
POO				IAML		00 42 44.4	
	comp=N,306nm,0.4s						
BWNR	Bhubaneshwar	7.04	49	eP	Pn	00 40 54.9	-0.3
BWNR				eP	Pn	00 40 55.4	+0.1
BWNR				eS	Sn	00 42 10.5	-4.9
BWNR				eS	Sn	00 42 10.8	-4.6
BWNR				IAML		00 42 38.2	
	comp=N,104nm,0.8s						
BWNR				IAML		00 42 40.5	
	comp=E,57nm,0.8s						
TRD	Trivandrum	7.80	204	eP	Pn	00 41 07.1	+1.4
TRD				eS	Sn	00 42 29.2	-5.1
TRD				IAML		00 43 18.9	
	comp=E,850nm,0.6s						
BHPL	Bhopal	7.95	341	eP	Pn	00 41 10.1	+2.3
BHPL				eS	Sn	00 42 33.9	-3.9
BOK	Bokaro	9.68	33	eP	Pn	00 41 32.9	+1.4
BOK				ex	Sn	00 43 19.0	-1.4
MNCY	Minicoy	10.16	224	eP	Pn	00 41 36.5	-1.6
RAMN	Ramite	12.69	27	eP	Pn	00 42 12.9	-0.1
	comp=E,47nm,0.7s						
DMN	Daman	12.71	20	eP	Pn	00 42 12.1	-1.1
PKI	Pulchoki	12.78	21	eP	Pn	00 42 13.0	-1.2
	comp=E,17nm,0.5s						
PKIN	Phulchoki	12.78	21	eP	Pn	00 42 13.0	-1.1
	comp=E,7.5nm,0.3s						
GKN	Gorkha	12.93	18	eP	Pn	00 42 14.9	-1.2
	comp=E,39nm,0.5s						
KKN	Kakani	12.93	21	eP	Pn	00 42 14.9	-1.3
ODAN	Odare	12.98	30	eP	Pn	00 42 16.5	-0.4
	comp=E,20nm,0.6s						
GUN	Gumba	13.26	23	eP	Pn	00 42 19.5	-1.2
	comp=E,31nm,0.6s						
TAPN	Taplejung	13.54	30	eP	Pn	00 42 24.2	-0.4
	comp=E,17nm,0.6s						
SMLA	Simla	15.61	350	eP	Pn	00 42 53.7	+1.5
PSI	Prapat	22.47	123	LR	LR	00 53 54.1	
	comp=E,69nm,18.4s,baz=88,slow=38						
MKAR	Makanchi Array	31.06	3	P	P	00 45 30.6	+0.4
	comp=E,0.3nm,0.7s,baz=188,slow=10,SNR=3.9						
KURBB	Kurchatov Arra	34.87	358	P	P	00 46 05.1	+1.8
	comp=E,2.1nm,0.2s,baz=192,slow=7.7,SNR=4.0						
ZALV	Zalesovo Beam	38.34	4	P	P	00 46 34.4	+1.4
	comp=E,0.8nm,0.5s,baz=181,slow=8.1,SNR=5.2						
SONM	Songino Array	38.66	28	P	P	00 46 35.9	-0.1
	comp=E,0.1nm,0.4s,baz=206,slow=9.6,SNR=3.6						

MEX 25 00:58:46.0±1.2**, 14°.59N**×**91°.76W, h83^{km}**±35^{km}**, MD3.9,**
Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		0.58	303	eP	Pn	00 58 59.7	-1.1
THIG				i S	Sn	00 59 10.5	-1.1
CCIG	Comitan	1.72	348	i P	Pn	00 59 13.8	-0.7
CCIG				i S	Sn	00 59 34.3	-1.9
PCIG		1.79	308	eP	Pn	00 59 11.0	-4.2
PCIG				i S	Sn	00 59 31.5	-6.0
CMIG	Matias Romero	3.90	310	eP	Pn	00 59 39.4	-4.2
CMIG				eS	Sn	01 00 18.0	-10
TEIG	Tepich	6.52	30	i P	Pn	01 00 21.2	+1.9

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*IDC **25** 01:04:12.0±4.3, 36°.32N×69°.38E, h106^{km}±30^{km}, mb3.4/6, mb1 3.4/12, mb1mx3.1/56, mbtmp3.8/12, Error ellipse: s-maj=47.4km s-min=16.2km az=164.0*

*NNC **25** 01:04:20.0±6.2, 36°.88N×69°.36E, h168^{km}±96^{km}, mb3.1, mpv3.9, Error ellipse: s-maj=53.4km s-min=31.0km az=27.0*

ISC 25 01:04:12.4±0.6**, 36°.45N**±0°.06×**69°.37E**±0°.06**, h100^{km}, n37,**
σ**2^{s}.20**/45**, mb3.3**/5**, 8C-2D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEP	Cherat	3.35	141	P	Pn	01 05 05.6	+2.6
CEP				S	Sn	01 05 44.0	+2.0
THW	Thamme Wali	4.14	151	P	Pn	01 05 14.8	+1.3
SARP	Sargodha	5.28	148	P	Pn	01 05 29.3	+0.3
AML	Almayashu	6.59	29	P	Pn	01 05 49.9	+2.8
	SNR=22						
KK31	Karatay Array	6.70	7	⇑P	Pn	01 05 51.2	+2.9
	4.6nm,0.5s,baz=192,slow=13,SNR=60						
KK31				⇓S	Sn	01 07 03.6	+0.6
	5.0nm,0.3s,baz=192,slow=25,SNR=6.8						
UCH	Uchtor	7.01	33	P	Pn	01 05 55.8	+2.9
	SNR=13						
EKS2	Erkin-Say	7.08	27	P	Pn	01 05 57.4	+4.0
	SNR=15						
AAK	Ala-Archa	7.34	31	P	Pn	01 05 59.7	+2.7
	2.5nm,0.3s,baz=207,slow=4.7,SNR=40						
AAK				S	Sn	01 07 21.1	+2.3
	1.7nm,0.3s,baz=336,slow=20,SNR=9.2						
AAK	Ala-Archa	7.34	31	P	Pn	01 05 59.5	+2.5
	SNR=12						
AAK	Ala-Archa	7.34	31	⇑P	Pn	01 05 59.9	+2.9
	2.7nm,0.3s						
AAK				⇑S	Sn	01 07 18.3	-0.4
	8.8nm,0.5s						
KBK	Karagaybulak	7.55	33	P	Pn	01 06 03.4	+3.5
	SNR=7.5						
CHMS	Chumysh	7.74	31	P	Pn	01 06 05.5	+3.1
	SNR=9.1						
USP	Ospenovka	7.87	29	P	Pn	01 06 06.2	+2.2
	SNR=8.2						
TKM2	Tokmak 2	8.05	35	P	Pn	01 06 09.5	+2.8
	SNR=12						
TKM2	Tokmak 2	8.05	35	⇑P	Pn	01 06 08.6	+1.9
	4.3nm,0.5s						
TKM2				⇑S	Sn	01 07 34.6	-1.5
	3.4nm,0.7s						
GEYT	Alibeck	9.10	283	P	Pn	01 06 20.8	0.0
	0.7nm,0.3s,baz=108,slow=14,SNR=12						
GEYT				S	Sn	01 08 00.2	-1.3
	0.5nm,0.3s,baz=114,slow=22,SNR=2.9						
MKAR	Makanchi Array	14.13	39	P	Pn	01 07 27.6	-0.4
	0.4nm,0.3s,baz=220,slow=11,SNR=20						
AB31	Akbulak array	14.53	335	⇑P	Pn	01 07 33.2	+0.3
	0.9nm,0.3s						
AB31				⇑S	Sn	01 10 08.9	-4.0
	0.9nm,0.4s,baz=156,slow=24,SNR=6.0						
GKN	Gorkha	15.41	119	eP	Pn	01 07 41.6	-2.9
	16nm,0.4s						
KURBB	Kurchatov Arra	15.63	22	P	Pn	01 07 48.0	+1.2
	0.1nm,0.3s,baz=210,slow=9.6,SNR=8.1						
KKN	Kakani	15.99	118	eP	Pn	01 07 49.0	-2.8
	11nm,0.4s						
AKTO	Aktyubinsk	16.20	333	P	Pn	01 07 55.1	+1.2
	0.5nm,0.3s,baz=123,slow=11,SNR=11						
AKTO	Aktyubinsk	16.20	333	⇓P	Pn	01 07 54.5	+0.5
	2.6nm,0.6s						
AKTO				⇑S	Sn	01 10 49.6	-3.7
	1.6nm,0.7s						
PKIN	Phulchoki	16.20	119	eP	Pn	01 07 52.4	-2.1
	13nm,0.4s						
PKI	Pulchoki	16.22	119	eP	Pn	01 07 52.6	-2.1
	5.6nm,0.2s						
GUN	Gumba	16.35	117	eP	Pn	01 07 53.6	-2.8
	8.4nm,0.4s						
BVAR	Borovoye Array	16.59	2	P	Pn	01 07 58.4	-0.4
	0.3nm,0.3s,baz=171,slow=20,SNR=6.9						
RAMN	Ramite	17.43	118	eP	P	01 08 07.1	-2.2
	10nm,0.5s						
TAPN	Taplejung	18.00	115	eP	P	01 08 14.2	-1.4
	6.0nm,0.3s						
ODAN	Odare	18.05	117	eP	P	01 08 14.8	-1.3
	5.7nm,0.4s						
GNI	Garni	19.66	288	P	Pn	01 08 37.4	+1.6
	0.6nm,0.3s,baz=66,slow=3.1,SNR=10						
ZALV	Zalesovo Beam	20.53	27	P	P	01 08 42.2	-0.3
	2.6nm,0.4s,baz=215,slow=10,SNR=14						
ARU	Arti	21.28	343	P	P	01 08 51.3	+0.8
	0.5nm,0.4s,baz=288,slow=24,SNR=2.6						
KBZ	Khabaz	21.46	298	P	P	01 08 53.6	+1.0
	1.4nm,0.9s,baz=222,slow=3.2,SNR=2.7						
SONM	Songino Array	29.45	56	P	P	01 10 05.9	-0.8
	0.4nm,0.6s,baz=270,slow=9.6,SNR=5.8						
NRIK	Noril'sk	34.42	11	P	P	01 10 50.0	+0.2
	0.9nm,0.4s,baz=180,slow=15,SNR=5.4						
ARCES	ARCESS Array B	40.69	338	P	P	01 11 42.6	0.0
	2.9nm,1.0s,baz=109,slow=9.6,SNR=5.0						

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*DJA **25** 01:10:51.6±0.4, 1°N±3°×12°7E±°, h10^{km}, M3.0/4, MLv3.0/4*

*IDC **25** 01:10:52.1±2.2, 0°.71N×126°.87E, h0^{km}, mb3.3/3, mb1 3.6/3, mb1mx3.2/30, mbtmp3.4/3, Error ellipse: s-maj=178.8km s-min=27.1km az=66.0*

ISC 25 01:10:52.7±1.6**, 1°.0N**±0°.1×**127°.5E**±0°.2**, h10^{km}, n5,** σ**0^{s}.60**/6**,**
mb3.3/3**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	0.31	211	P	Pg	01 10 59.0	+0.1
TNTI				S	Sg	01 11 03.1	+0.1
GTOI	Gorontalo	4.53	265	P	Pn	01 12 01.2	-0.2
WRA	Warramunga Arr	21.89	163	P	P	01 15 46.5	+0.4
	0.9nm,0.8s,baz=340,slow=11,SNR=5.5						
ASAR	Alice Springs	25.32	166	P	P	01 16 19.0	-0.9
	0.4nm,0.5s,baz=350,slow=9.7,SNR=4.2						
MKAR	Makanchi Array	60.21	326	P	P	01 21 01.4	+0.3
	0.3nm,0.7s,baz=131,slow=8.1,SNR=5.2						

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*IGIL **25** 01:17:17.9, 31°.74N×16°.94W, h10^{km}, ML3.7*

*INMG **25** 01:17:20.9±1.6, 31°.76N×16°.94W, h10^{km}±24^{km}, ML3.8, Error ellipse: s-maj=8.0km s-min=7.0km az=57.0*

ISC 25 01:17:19.0±1.6**, 32°.1N**±0°.1×**16°.60W**±0°.06**, h10^{km}, n42,**
σ**2^{s}.54**/63**, 4C, Madeira Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FUL	Funchal	0.59	335	⇑iP	Pb	01 17 33.6	+2.2
FUL				i S	Sn	01 17 43.5	+0.4
FUL				A	A	01 17 44.8	
	2µm,0.2s						
PMAR	Madeira	0.66	336	⇑iP	Pb	01 17 34.6	+1.7
PMAR				eS	Sn	01 17 45.2	-0.1
PMAR				A	A	01 17 48.5	
	5µm,0.2s						
PMOZ	Porto Moniz, M	0.87	324	eP	Pg	01 17 36.6	+0.8
PMOZ				eS	Sb	01 17 48.4	+0.3
PMOZ				A	A	01 17 51.9	
	4µm,0.4s						
PMPS	Porto Santo	0.96	13	⇑iP	Pb	01 17 40.5	+2.6
PMPS				eS	Sn	01 17 55.9	+3.4
PMPS				A	A	01 17 59.3	
	698nm,0.2s						
PMPST	Porto Santo, M	0.99	13	⇑iP	Pb	01 17 40.8	+2.5
PMPST				eS	Sn	01 17 56.0	+3.0
PMPST				A	A	01 17 57.5	
	789nm,0.2s						
AVE	Averroes	7.83	79	eP	Pn	01 19 16.0	+3.0
AVE				eS	Sn	01 20 37.9	-3.8
PFVI	Vila Bisbo	8.13	50	ePn	Pn	01 19 18.0	+0.9
PFVI				eSn	Sn	01 20 46.7	-2.3
MORF	Marmelete	8.34	49	eP	Pn	01 19 21.2	+1.2
MORF				eS	Sn	01 20 51.4	-3.0
MORF				AML	AML	01 20 53.5	
	comp=N,54nm,0.5s						
MORF	Marmelete	8.34	49	ePn	Pn	01 19 21.3	+1.2
MORF				eSn	Sn	01 20 51.7	-2.7
MORF				A	A	01 20 56.6	
	comp=N,19nm,0.2s						
PTEO	Sao Teotonio	8.44	48	ePn	Pn	01 19 23.2	+1.9
PTEO				eSn	Sn	01 20 54.1	-2.5
PTEO				A	A	01 21 03.2	
	comp=N,17nm,0.4s						
PSMN	Pico do Norte,	8.52	307	eP	Pn	01 19 18.2	-4.2
PSMA	Santa Maria	8.55	307	eP	Pn	01 19 18.3	-4.7
PBDV	Barranco-do-Ve	8.78	52	ePn	Pn	01 19 27.1	+1.1
PBDV				eSn	Sn	01 21 03.0	-2.1
PBDV				A	A	01 21 19.1	
	comp=N,15nm,0.6s						
PNCL	Nicolau / Gran	8.91	46	ePn	Pn	01 19 29.9	+2.1
PNCL				eSn	Sn	01 21 06.2	-2.1
PNCL				A	A	01 21 22.1	
	comp=N,8.4nm,0.4s						
PCVE	Castro Verde	8.93	50	ePn	Pn	01 19 30.9	+2.9
PCVE				eSn	Sn	01 21 05.7	-3.0
PCVE				A	A	01 21 07.7	
	comp=N,13nm,0.5s						
MESJ	Messejana	8.93	48	eP	Pn	01 19 29.1	+0.9
MESJ				eS	Sn	01 21 05.0	-3.9
MESJ				AML	AML	01 21 08.7	
	comp=N,23nm,0.4s						
MESJ	Messejana	8.93	48	ePn	Pn	01 19 29.9	+1.8
MESJ				eSn	Sn	01 21 05.8	-3.0
MESJ				A	A	01 21 10.2	
	comp=N,8.8nm,0.2s						
PVAQ	Vaqueiros	9.01	52	ePn	Pn	01 19 30.1	+0.9
PVAQ				eSn	Sn	01 21 08.1	-2.6
PVAQ				A	A	01 21 14.3	
	comp=N,10nm,0.2s						
BART	Pico Bartolome	9.02	311	eP	Pn	01 19 27.2	-2.2
PMAFR	Mafra	9.06	39	eSn	Sn	01 21 09.4	-2.5
CMLA	Cha da Macela	9.24	310	eP	Pn	01 19 29.2	-3.2
GRON	Grota Negra	9.25	310	eP	Pn	01 19 28.6	-3.9
PBEJ	Beja	9.27	48	ePn	Pn	01 19 35.5	+2.7
PBEJ				eSn	Sn	01 21 14.1	-3.0
PBEJ				A	A	01 21 15.9	
	comp=N,6.2nm,0.4s						
EVO	Evora	9.49	45	eP	Pn	01 19 38.8	+3.0
EVO				eS	Sn	01 21 19.6	-3.0
PMTG	Montargil	9.72	42	eP	Pn	01 19 41.4	+2.4
PMTG				eS	Sn	01 21 25.3	-2.9
PSBE	So Bento	9.72	38	eP	Pn	01 19 41.0	+2.0
IFR	Ifrane	9.75	79	eP	Pn	01 19 41.1	+1.6
IFR				eS	Sn	01 21 21.1	-8.2
PBAR	Barrancos	9.88	50	eP	Pn	01 19 42.6	+1.4
PBAR				eS	Sn	01 21 28.6	-3.6
PESTR	Estremoz	9.96	45	eP	Pn	01 19 44.2	+2.0
PESTR				eS	Sn	01 21 31.2	-2.9
CEU	Ceuta	10.05	65	eP	Pn	01 19 47.6	+4.1
CEU				eS	Sn	01 21 36.2	-0.1
PCAS	Casmilo, Conde	10.28	37	eP	Pn	01 19 48.2	+1.7
PMRV	Marv??o	10.44	43	eP	Pn	01 19 50.9	+2.1
PMRV				eS	Sn	01 21 42.0	-3.9
PCBR	Castelo Branco	10.67	41	eP	Pn	01 19 54.4	+2.4
ADH	Angra Heroismo	10.86	310	eP	Pn	01 19 52.8	-1.7
MTE	Manteigas	11.03	39	eP	Pn	01 19 58.9	+2.0
MTE				eS	Sn	01 21 55.1	-5.2
PVIS	Viseu	11.08	37	eP	Pn	01 19 58.8	+1.3
PVIS				eS	Sn	01 21 54.4	-7.1
ROSA	Rosais	11.56	308	eP	Pn	01 20 01.2	-2.9
PICO	Pico	11.57	307	eP	Pn	01 20 01.4	-2.9
PCAN	Candelaria	11.59	306	eP	Pn	01 20 01.6	-3.0
POLO	Lamas de Olo	11.62	35	eP	Pn	01 20 06.8	+1.8
CALA	Caldeira	11.80	306	eP	Pn	01 20 05.2	-2.2
PBRG	Braganca	12.47	36	eP	Pn	01 20 18.1	+1.6

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*NEIC **25** 01:31:41.5±1.9, 6°.08N±0°.05×119°.84E±0°.05, h9^{km}±1^{km}, mb5.5/188, Ms_20 5.2/321, Mwb5.6/24, Mww5.7, Mwc5.7(GCMT), Error ellipse: s-maj=9.9km s-min=6.8km az=227.0*

*BJI **25** 01:31:41.8±0.0, 5°.98N×119°.96E, h28^{km}, mB5.2/79, mb5.1/85, Ms5.4/96, Ms7 5.1/88*

*NEIC **25** 01:31:43.9, 6°.09N×119°.84E, h9^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.10; M$_{θθ}$1.78; M$_{φφ}$-1.67; M$_{rθ}$0.32; M$_{θφ}$-2.14; M$_{φr}$-0.43; Fault plane solution: M$_0$2.80000×10^{17} NP1:φ$_s$70.31000°, δ79.63000°, λ177.41000°. NP2:φ$_s$160.78000°, δ87.45000°, λ10.38000°. Principal axes: T 2.8767, Plg9.0000°, Azm26.0000°; N -0.1566, Plg79.0000°, Azm174.0000°; P -2.7200, Plg5.0000°, Azm295.0000°;*

*MOS **25** 01:31:43.5±0.9, 6°.11N×119°.90E, h33^{km}, mb5.4/71, MS5.0/26 Error ellipse: s-maj=7.3km s-min=4.0km az=109.2*

*GCMT **25** 01:31:44.5±0.1, 6°.15N±0°.01×119°.87E±0°.01, h18^{km}, MW5.7/164, Moment Tensor Solution. s141,c260; s164,c322; Duration: 1^{s}.7 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-0.11±.04; M$_{θθ}$1.97±.03; M$_{φφ}$-1.86±.04; M$_{rθ}$0.30±.08; M$_{θφ}$-2.81±.03; M$_{φr}$-2.03±.11; Best double couple: M$_0$3.96900×10^{17} NP1:φ$_s$74.00000°, δ59.00000°, λ-176.00000°. NP2:φ$_s$342.00000°, δ87.00000°, λ-31.00000°. Principal axes: T 3.8660, Plg19.0000°, Azm32.0000°; N 0.2040, Plg59.0000°, Azm157.0000°; P -4.0720, Plg24.0000°, Azm294.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*DJA **25** 01:31:44.9±0.7, 6°N±2°×12°0E±°, h25^{km}±5^{km}, M5.5/96, mB6.0/78, mb5.6/96, MLv6.1/13, Mw5.6/25, Mw(mB)5.6/78, MwMwp5.4/49, Mwp5.5/49*

*MAN **25** 01:31:45.5, 6°.34N×119°.95E, h42^{km}, MS5.5*

MAN INTENSITY III - LANGUYAN.

*NEIC **25** 01:31:45, 6°.13N×119°.88E, h18^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.09; M$_{θθ}$2.18; M$_{φφ}$-2.10; M$_{rθ}$0.54; M$_{θφ}$-3.00; M$_{φr}$-1.86; Fault plane solution: M$_0$4.16000×10^{17} NP1:φ$_s$73.00000°, δ62.00000°, λ-179.00000°. NP2:φ$_s$342.00000°, δ89.00000°, λ-28.00000°. Principal axes: T 4.1679, Plg18.0000°, Azm31.0000°; N -0.0098, Plg62.0000°,* *Azm160.0000°; P -4.1581, Plg20.0000°, Azm294.0000°;*

*IDC **25** 01:31:45.6±3.0, 6°.11N×119°.90E, h33^{km}±23^{km}, mb4.8/35, mb1 4.8/40, mb1mx4.8/51, mbtmp5.0/40, ML5.0/6, MS5.0/37, Ms1 5.0/37, ms1mx5.0/39 Error ellipse: s-maj=12.9km s-min=8.4km az=78.0*

*NEIC **25** 01:31:47, 6°.09N×120°.04E, h26^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.05; $M_{\theta\theta}$2.32; $M_{\phi\phi}$-2.37; $M_{r\theta}$0.14; $M_{\theta\phi}$-2.58; $M_{\phi r}$-1.65; Fault plane solution: $M_0$3.86000×10^{17} NP1:ϕ_s70.00000°, δ66.00000°, λ-175.00000°. NP2:ϕ_s338.00000°, δ86.00000°, λ-24.00000°. Principal axes: T 3.6532, Plg13.0000°, Azm27.0000°; N 0.3864, Plg66.0000°, Azm149.0000°; P -4.0396, Plg20.0000°, Azm292.0000°;*

*KLM **25** 01:31:48, 6°.04N×120°.02E, h60^{km}, mb5.6*

ISC 25 01:31:44.5±0.4**, 6°.05N**±0°.03×**119°.89E**±0°.03**, h28**^{km}±2^{km}**, h28**^{km}**:pP-P, n911,** σ1^s.**71**/818**, mb5.3**/227**, MS5.1**/228**, 65C-31D, Sulu Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MYLDM	Lahad Datu	1.63	238	Pn	Pn	01 32 12.5	+1.1
ZCP	Zamboanga City	2.34	68	⇑iP	Pn	01 32 21.1	-0.1
ZCP				iS	Sb	01 33 00.9	+6.3
BATP	Bataraza	3.43	323	eP	Pn	01 32 32.3	-3.8
BATP				eS	Sn	01 33 16.9	+1.0
KKM	Kota Kinabalu	3.65	270	Pn	Pn	01 32 38.8	-0.5
SPMM	Sapulut	3.66	249	P	Pn	01 32 39.0	-0.4
PAGZ	Pagadian	3.90	63	eP	Pn	01 32 42.2	-0.4
PAGZ				eS	Sn	01 33 30.6	+2.9
CNOP	Candoni, Negro	4.64	36	eP	Pn	01 32 51.0	-1.8
CNOP				eS	Sn	01 33 41.9	-3.9
SKMP	Bagumbayan, Su	4.65	84	eP	Pn	01 32 50.6	-2.4
SKMP				eS	Sn	01 33 42.3	-3.8
CUYO	Cuyo Island	4.90	13	eP	Pn	01 32 54.6	-1.8
TOLI2	Tolitoli	4.99	170	Pn	Pn	01 32 57.1	-0.5
JAP	San Jose, Anti	5.09	23	⇓eP	Pn	01 32 59.1	0.0
ENPP	El Nido	5.14	355	eP	Pn	01 32 56.9	-2.9
KCP	Kidapawan	5.26	79	⇑iP	Pn	01 33 02.0	+0.6
GUIM	Jordan	5.27	30	eP	Pn	01 33 00.4	-1.2
CGP	Cagayan de Oro	5.33	63	⇓eP	Pn	01 33 02.6	+0.3
BUKP	Musuan	5.45	70	eP	Pn	01 33 04.7	+0.7
BUKP				eS	Sn	01 34 03.9	-2.0
DAV	Davao City (W)	5.74	80	Pn	Pn	01 33 09.8	+1.8
	32nm,0.3s,baz=283,slow=2.2,SNR=17						
DAV				LR	LR	01 35 40.4	
	comp=Z,43µm,18.8s,baz=216,slow=41						
DAV	Davao City (W)	5.74	80		Pn	01 33 09.5	+1.4
DAV	Davao City (W)	5.74	80	⇑eP	Pn	01 33 08.9	+0.9
DDMP	Don Marcelino,	5.79	89	eP	Pn	01 33 09.9	+1.2
DDMP				eS	Sn	01 34 17.8	+3.6
LLP	Lapu-Lapu	5.85	43	⇑eP	Pn	01 33 08.5	-1.0
LLP				eS	Sn	01 34 12.4	-3.4
MRSI	Marisa	5.90	160	P	Pn	01 33 11.0	+0.8
	9.7nm11µm28µm3µm,0.6s						
SGSI	Sangihe	6.09	112	P	Pn	01 33 13.4	+0.6
MSLP	Maasin	6.38	50	eP	Pn	01 33 15.6	-1.1
BUTP	Butuan	6.38	63	eP	Pn	01 33 17.9	+1.1
KMSI	Cibinong	6.80	143	P	Pn	01 33 22.5	-0.1
	7.3nm17µm2µm,0.8s						
SMKI	Samarinda	6.99	203	P	Pn	01 33 27.0	+1.9
	3.7nm37µm795nm,0.9s						
APSI	Ampana	7.13	166	P	Pn	01 33 28.7	+1.6
	9.3nm6µm20µm2µm,0.8s						
GLSP	General Luna,	7.21	59	eP	Pn	01 33 27.1	-1.1
PGP	Puerto Galera	7.48	8	⇑eP	Pn	01 33 31.5	-0.4
LUWI	Luwuk	7.61	158	Pn	Pn	01 33 36.7	+3.0
LUWI	Luwuk	7.61	158	P	Pn	01 33 36.5	+2.8
	29nm17µm37µm4µm,0.8s						
BKB	Balikpapan	7.85	202	Pn	Pn	01 33 37.2	+0.3
BKB	Balikpapan	7.85	202	P	Pn	01 33 37.3	+0.3
	3.1nm36µm8µm382nm,1.0s						
TGY	Tagaytay City	8.07	7	Pn	Pn	01 33 41.2	+1.2
	83nm,0.3s,baz=305,slow=11,SNR=4.9						
TGY				LR	LR	01 36 45.8	
	comp=Z,15µm,18.7s,baz=193,slow=38						
MACP	Maragondon, Ca	8.20	6	eP	Pn	01 33 39.7	-2.1
SBUM	Sibu	8.44	245	Pn	Pn	01 33 45.0	-0.1
SBUM	Sibu	8.44	245	P	Pn	01 33 45.0	-0.1
MTKI	Muara Teweh, K	8.55	216	P	Pn	01 33 47.8	+1.2
JCNP	Jose Panganiba	8.64	18	eP	Pn	01 33 45.8	-2.0
TTSI	Tana Toraja	9.03	180	P	Pn	01 33 56.3	+3.1
	10µm7µm777nm,1.0s						
TNTI	Ternate	9.12	125	Pn	Pn	01 33 56.6	+2.2
TNTI	Ternate	9.12	125	P	Pn	01 33 56.8	+2.4
	10µm4µm204nm,0.8s						
SPSI	Sidrap Palu	9.95	181	P	Pn	01 34 08.3	+2.5
	8µm5µm403nm,1.0s						
KBKI	Kotabaru	10.00	202	P	Pn	01 34 06.7	+0.2
	2µm209nm,0.8s						
SMPP	San Manuel, Pa	10.07	4	eP	Pn	01 34 07.1	-0.4
SANI	Sanana	10.09	143	P	Pn	01 34 06.2	-1.5
	9µm3µm217nm,1.0s						
KDI	Kendari	10.31	165	P	Pn	01 34 14.7	+4.0
	11µm355nm,0.9s						
BNSI	Bone	10.38	179	P	Pn	01 34 15.0	+3.3
	5µm220nm,0.7s						
KSM	Kuching	10.58	245	Pn	Pn	01 34 12.7	-1.7
KSM	Kuching	10.58	245	P	Pn	01 34 15.0	+0.5
BBKI	Banjar Baru	10.71	208	P	Pn	01 34 18.9	+2.7
	166nm,1.0s						
KAPI	Kappang	10.99	181	Pn	Pn	01 34 22.6	+2.6
	6.6nm,0.3s,baz=334,slow=5.3,SNR=16						
KAPI				Sn	Sn	01 36 26.9	+4.8
	1.7nm,0.3s,baz=61,slow=15,SNR=2.5						
KAPI				LR	LR	01 38 55.9	
	comp=Z,13µm,18.9s,baz=9.5,slow=39						
KAPI	Kappang	10.99	181	Pn	Pn	01 34 22.5	+2.4
KAPI	Kappang	10.99	181	P	Pn	01 34 23.6	+3.5
KAPI				P	Pn	01 34 23.6	+3.5
KAPI				P	Pn	01 34 23.6	+3.5
SZP	Santa	11.45	3	Pn	Pn	01 34 27.2	+0.9
NLAI	Namlea	11.70	142	P	Pn	01 34 30.9	+1.1
	137nm,0.8s						
PBKI	Pangkalan Bun	11.96	224	P	Pn	01 34 36.2	+2.9
	9µm559nm,1.2s						
DLV	T Lat	12.69	298		Pn	01 34 42.0	-1.5
MSAI	Masohi	12.98	136	P	Pn	01 34 48.3	+0.9
	376nm,1.0s						
SWI	Sorong	13.27	121	P	Pn	01 34 53.3	+2.1
	7µm3µm181nm,1.3s						
SIJI	Sorong	13.28	121	Pn	Pn	01 34 52.9	+1.5
	1.2nm,0.3s,baz=307,slow=9.0,SNR=30						
SIJI				LR	LR	01 40 26.9	
	comp=Z,3µm,18.0s,baz=284,slow=39						
KMMI	Kalianget	14.29	205	P	Pn	01 35 06.1	+0.9
	9µm4µm212nm,1.6s						
BNDI	Bandanaira	14.50	136	P	Pn	01 35 08.8	+0.7
	13µm992nm,1.3s						
MMRI	Maumere	14.78	171	P	P	01 35 15.7	-1.7
MMRI	Maumere	14.78	171	P	P	01 35 27.3	+10
SRBI	Singaraja	14.79	198	P	Pn	01 35 13.9	+1.9
	7µm8µm642nm,1.0s						
PLAI	Plampang	14.93	188	P	Pn	01 35 14.7	+0.9
	6µm4µm286nm,1.1s						
TWSI	Taliwang, Sumb	14.99	192	P	P	01 35 17.8	-2.1
	3µm2µm54nm,0.9s						
TPI	Tanjungpandan	15.03	235	P	Pn	01 35 15.9	+0.7
	8µm441nm,1.7s						
FAKI	Fak Fak	15.22	125		Pn	01 35 17.1	-0.6
FAKI				IAmb	IAmb	01 35 25.1	
	comp=Z,201nm,0.9s						
FAKI	Fak Fak	15.22	125	P	Pn	01 35 16.8	-1.0
	comp=Z,7µmcomp=Z,4µmcomp=Z,266nm,0.9s						
DNP	Denpasar	15.36	198	P	P	01 35 23.3	-0.6
	comp=Z,51µmcomp=Z,960nm,1.1s						
JAGI	Jajag, Banyuwa	15.52	202	P	P	01 35 23.9	-1.8
JAGI				IAmb	IAmb	01 35 36.8	
	comp=Z,297nm,1.0s						
JAGI	Jajag, Banyuwa	15.52	202	P	P	01 35 25.0	-0.7
	comp=Z,8µmcomp=Z,7µmcomp=Z,345nm,1.0s						
WSI	Waingapu	15.62	179	P	P	01 35 38.8	+12
PPBI	Pangkal Pinang	15.97	240	P	Pn	01 35 27.8	+0.3
	comp=Z,5µmcomp=Z,378nm,1.1s						
SMRI	Semarang	16.07	216	P	P	01 35 31.0	-0.9
SMRI				IAmb	IAmb	01 35 43.7	
	comp=Z,781nm,1.5s						
SMRI	Semarang	16.07	216	P	P	01 35 32.1	+0.2
	comp=Z,13µmcomp=Z,410nm,2.3s						
BASI	Baing, Sumba	16.18	178	P	Pn	01 35 31.4	+1.3
	comp=Z,4µmcomp=Z,161nm,1.0s						
QIZ	Qiongzhong	16.19	324	P	Pn	01 35 30.0	-0.3
QIZ				sP	pP	01 35 39.3	-0.8
QIZ				PP	sP	01 35 44.6	+1.1
QIZ				S	Sn	01 38 30.8	+1.6
QIZ				pmax	pmax		
	comp=Z,29nm,1.7s						
QIZ				pmax	pmax		
	comp=Z,660nm,6.6s						
QIZ				LR	LR		
	comp=Z,6µm,13.7s						
QIZ				LR	LR		
	comp=Z,6µm,16.2s						
QIZ				LR	LR		
	comp=Z,9µm,17.7s						
SOEI	Soe	16.30	164	P	P	01 35 36.3	+1.8
SOEI				IAmb	IAmb	01 36 27.0	
	comp=Z,629nm,1.6s						
SOEI	Soe	16.30	164	P	P	01 35 35.7	+1.2
	comp=Z,4µmcomp=Z,7µmcomp=Z,261nm,0.9s						
MYKOM	Kota Tinggi	16.55	256	P	Pn	01 35 34.1	-0.7
MYKOM				IAmb	IAmb	01 35 40.0	
	comp=Z,381nm,1.0s						
BATI	Baumata	16.58	167	Pn	P	01 35 37.5	-0.1
	comp=Z,7.9nm,0.3s,baz=268,slow=1.9,SNR=14						
BATI				LR	LR	01 43 12.6	
	comp=Z,9µm,19.1s,baz=21,slow=41						
BATI	Baumata	16.58	167	P	P	01 35 38.7	+1.1
	comp=Z,3µmcomp=Z,4µmcomp=Z,155nm,0.8s						
UGM	Wanagama	16.72	214	P	P	01 35 39.8	+0.7
UGM				IAmb	IAmb	01 36 03.1	
	comp=Z,837nm,1.4s						
UGM	Wanagama	16.72	214	P	P	01 35 39.3	+0.2
	comp=Z,10µmcomp=Z,11µmcomp=Z,476nm,1.9s						
UBPT	Khong Chiam	16.87	304	P	P	01 35 39.9	-0.8
	comp=Z,2µmcomp=Z,78nm,1.0s						
UBPT	Khong Chiam	16.87	304	P	Pn	01 35 39.1	+0.3
TPUB	Ta-pu	17.17	2	IAmb	IAmb	01 35 55.2	
	comp=Z,571nm,1.2s						
YULB	Yu-li	17.30	4	P	Pn	01 35 44.1	-0.1
SSLB	Suanglung	17.67	3	P	Pn	01 35 47.5	-1.3
LEM	Lembang	17.71	224	P	P	01 35 51.9	+1.7
	comp=Z,11nm,0.3s,baz=41,slow=8.0,SNR=29						
LEM				LR	LR	01 43 43.1	
	comp=Z,12µm,18.2s,baz=23,slow=40						
BAKI	Biak	17.72	113	P	P	01 35 50.3	+0.1
	comp=Z,7µmcomp=Z,450nm,1.0s						
JMBI	JAMBI	17.93	245	P	P	01 36 00.3	+7.8
CBJI	Citeko	17.97	227	P	P	01 35 55.7	+2.8
	comp=Z,8µmcomp=Z,12µmcomp=Z,567nm,1.1s						
SAUI	Saumlaki	18.00	141	P	Pn	01 35 52.7	-0.2
SAUI				IAmb	IAmb	01 36 44.6	
	comp=Z,467nm,1.1s						
SAUI	Saumlaki	18.00	141	P	Pn	01 35 51.2	-1.7
	comp=Z,10µmcomp=Z,9µmcomp=Z,416nm,1.2s						
GZH	Guangzhou	18.08	340	P	P	01 36 00.3	+6.3
GZH				S	S	01 39 26.1	+6.2
GZH				LR	LR		
	comp=Z,5µm,14.3s						
GZH				LR	LR		
	comp=Z,6µm,14.7s						
NACB	Ninganchiao	18.10	5	P	Pn	01 35 53.6	-0.4
CISI	Cisompet, Garu	18.10	222	P	P	01 35 56.9	+2.5
	comp=Z,12µmcomp=Z,24µmcomp=Z,1µm,2.1s						
KNMB	Chin-men Tao	18.37	356	P	P	01 35 56.1	-1.0
BLSI	Bandar Lampung	18.50	232	P	Pn	01 35 59.6	+0.5
	comp=Z,5µmcomp=Z,233nm,0.6s						
KLSI		18.52	235	P	Pn	01 35 59.9	+0.6
	comp=Z,4µmcomp=Z,139nm,2.5s						
QZH	Quanzhou	18.83	356	⇑iP	P	01 36 02.4	+0.1
QZH				S	S	01 39 34.4	-0.5
QZH				pmax	pmax		
	comp=Z,63nm,2.0s						
QZH				pmax	pmax		
	comp=Z,2µm,5.7s						
QZH				LR	LR		
	comp=Z,3µm,15.2s						
QZH				LR	LR		
	comp=Z,2µm,14.7s						
QZH				LR	LR		
	comp=Z,4µm,17.8s						
IPM	Ipoh	18.85	266	IAmb	IAmb	01 36 13.2	
	comp=Z,936nm,2.0s						
IPM	Ipoh	18.85	266	P	Pn	01 36 04.0	+0.7
LHSI	Lahat	19.06	239	P	Pn	01 36 06.9	+1.1
	comp=Z,10µmcomp=Z,172nm,2.0s						
KULM	Kulim	19.16	269	IAmb	IAmb	01 36 18.1	
	comp=Z,262nm,1.4s						
KULM	Kulim	19.16	269	P	Pn	01 36 09.0	+2.0
KASI	Kota Agung	19.19	233	P	Pn	01 36 08.3	+0.9
	comp=Z,8µmcomp=Z,6µmcomp=Z,377nm,1.2s						
LWLI	Liwa	19.25	236	P	Pn	01 36 08.9	+0.7
	comp=Z,8µmcomp=Z,539nm,0.8s						
SRAK	Srakaew	19.26	296	P	P	01 36 02.0	-5.1
	comp=Z,13µmcomp=Z,730nm,0.9s						
BKNI	Bangkinang	19.65	254	P	Pn	01 36 12.3	-0.7
BKNI	Bangkinang	19.65	254	P	Pn	01 36 13.0	+0.1
	comp=Z,6µmcomp=Z,570nm,1.4s						
SDSI	Sungai Dareh	19.69	250	P	Pn	01 36 13.3	-0.1
	comp=Z,13µmcomp=Z,170nm,1.2s						
MNAI	Manna	19.82	239		Pn	01 36 15.4	+0.5
MNAI	Manna	19.82	239	P	Pn	01 36 15.4	+0.5
	comp=Z,8µmcomp=Z,22µmcomp=Z,2µm,1.2s						
PATY	Pattaya	19.96	291	P	Pn	01 36 17.1	+0.6
	comp=Z,189nm,0.8s						
TRTT	Trang	20.13	276	P	P	01 36 16.0	-0.6
	comp=Z,6µmcomp=Z,202nm,1.2s						
NONG	Nongkai	20.24	308	P	P	01 36 17.6	-0.2
	comp=Z,284nm,0.8s						
SMPI	Sarmi	20.42	112	P	Pn	01 36 22.4	+0.4
	comp=Z,7µmcomp=Z,5µmcomp=Z,176nm,1.7s						
MNSI	Mandailing Nat	20.93	256	P	P	01 36 25.4	+0.1
	comp=Z,7µmcomp=Z,747nm,1.0s						
PHET	Kaeng Krachan	21.10	290	P	P	01 36 28.4	+1.3
	comp=Z,3µmcomp=Z,390nm,0.9s						
PSI	Prapat	21.15	262	P	P	01 36 27.5	-0.3
	comp=Z,238nm,1.1s,baz=1.0,slow=3.1,SNR=36						
PSI				LR	LR	01 47 00.3	
	comp=Z,6µm,18.8s,baz=90,slow=43						
TSI	Tuntungan	21.40	264	P	P	01 36 31.2	+0.9
	comp=Z,484nm,1.0s						
PKDT	Phuket	21.47	276	P	P	01 36 31.2	+0.1
	comp=Z,11µmcomp=Z,399nm,2.0s						
RNTT	Ranong	21.47	280	P	P	01 36 26.1	-5.0
	comp=Z,2µmcomp=Z,50nm,1.0s						
XMI	Christmas Isla	21.65	221	P	P	01 36 33.8	+0.8
	comp=Z,526nm,1.8s						
SLVN	Son La	21.69	316	P	P	01 36 33.0	-0.5
SLVN				IAMs_20	IAMs_20	01 45 10.5	
	comp=Z,6µm,19.0s						
XMIS	Christmas Isla	21.69	221	P	P	01 36 33.1	-0.4
XMIS	Christmas Isla	21.69	221	P	P	01 36 34.0	+0.5
	comp=Z,296nm,1.3s						
GENI	Genyem	22.00	112	P	P	01 36 39.7	+2.9
	comp=Z,8µmcomp=Z,6µmcomp=Z,517nm,1.3s						
PHIT	Phitsanulok	22.03	302	P	P	01 36 37.9	+0.9
	comp=Z,6µmcomp=Z,704nm,1.2s						
JOW	Kunigami	22.16	20	P	P	01 36 38.5	+0.1
	comp=Z,237nm,1.2s,baz=190,slow=9.7,SNR=20						
JOW				LR	LR	01 46 06.0	
	comp=Z,4µm,18.1s,baz=196,slow=39						
JOW	Kunigami	22.16	20	P	P	01 36 38.2	-0.2
JOW				IAmb	IAmb	01 36 41.3	
	comp=Z,247nm,1.2s						
UTHA	Uthaitani	22.17	297	P	P	01 36 39.0	+0.4
	comp=Z,2µmcomp=Z,211nm,0.9s						
UTTA	Uttaradit	22.17	303	P	P	01 36 39.6	+1.0
	comp=Z,1µmcomp=Z,116nm,1.1s						
KDU	Kakadu	22.43	146	P	P	01 36 40.6	-0.7
	baz=22,SNR=60						
JMZ	Minamidaito 2	22.45	28	P	P	01 36 41.0	-0.5
JMZ				IAMs_20	IAMs_20	01 44 11.8	
	comp=Z,6µm,19.0s						
GSI	Gunungsitoli	22.75	259	P	P	01 36 42.9	-2.0
GSI				IAmb	IAmb	01 37 07.0	
	comp=Z,226nm,0.8s						
GSI	Gunungsitoli	22.75	259	P	P	01 36 43.6	-1.3
	comp=Z,4µmcomp=Z,7µmcomp=Z,365nm,0.8s						
TPTI		22.80	264	P	P	01 36 45.0	-0.4
	comp=Z,895nmcomp=Z,55nm,1.0s						
LHMI	Lhok Sumawe	22.84	269	P	P	01 36 46.5	+0.7
LHMI	Lhok Sumawe	22.84	269	P	P	01 36 47.0	+1.2
	comp=Z,6µmcomp=Z,11µmcomp=Z,594nm,1.5s						
UMPA	Umpang Tak	22.94	298	P	P	01 36 46.2	-0.6
	comp=Z,5µmcomp=Z,169nm,1.0s						
KNRA	Kununurra	23.31	158	P	P	01 36 50.7	+0.3
LAMP	Lampang	23.32	304	P	P	01 36 51.3	+0.7
	comp=Z,749nmcomp=Z,64nm,0.9s						
CM36	Chiang Mai Arr	23.76	303	P	P	01 36 55.0	+0.1
CM35	Chiang Mai Arr	23.79	304	P	P	01 36 55.2	0.0
CM04	Chiang Mai Arr	23.80	303	P	P	01 36 56.3	+1.0
	comp=Z,398nmcomp=Z,41nm,1.2s						
CM09	Chiang Mai Arr	23.81	303	P	P	01 36 57.5	+2.0
	comp=Z,415nmcomp=Z,48nm,1.0s						
CM01	Chiang Mai Arr	23.83	303	P	P	01 36 57.0	+1.5
	comp=Z,464nmcomp=Z,38nm,1.0s						
CM05	Chiang Mai Arr	23.83	303	P	P	01 36 57.0	+1.4
	comp=Z,303nmcomp=Z,25nm,1.1s						
CM02	Chiang Mai Arr	23.84	303	P	P	01 36 57.7	+2.0
	comp=Z,378nmcomp=Z,33nm,0.8s						
CM31	Chiang Mai Arr	23.86	303	P	P	01 36 59.0	+3.2
	comp=Z,14µmcomp=Z,843nm,1.1s						
CM31	Chiang Mai Arr	23.86	303	P	P	01 36 55.2	-0.6
CM31				IAmb	IAmb	01 37 34.8	
	comp=Z,294nm,2.0s						
CMAR	Chiang Mai Arr	23.86	303	P	P	01 36 55.3	-0.6
	comp=Z,2.4nm,0.3s,baz=119,slow=7.6,SNR=28						
CMAR				PcP	PcP	01 40 39.7	+1.0
	comp=Z,1.1nm,0.3s,baz=172,slow=2.6,SNR=1.2						
CMAR				LR	LR	01 46 54.8	
	comp=Z,4µm,20.7s,baz=159,slow=38						
CMAR	Chiang Mai Arr	23.86	303	ceP	P	01 36 55.2	-0.6
CMAR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
CMAR	Chiang Mai Arr	23.86	303	P	P	01 36 54.8	-1.0
CM13	Chiang Mai Arr	23.87	303	P	P	01 36 57.0	+1.0
	comp=Z,292nmcomp=Z,27nm,0.9s						
CM15	Chiang Mai Arr	23.87	303	P	P	01 36 57.9	+1.9
	comp=Z,634nmcomp=Z,35nm,1.2s						
CM34	Chiang Mai Arr	23.88	304	P	P	01 36 56.0	0.0
GYA	Guiyang	23.90	330	⇑P	P	01 36 57.3	+1.1
GYA				pP	pP	01 37 03.9	+0.3
GYA				S	S	01 41 11.0	-0.1
GYA				SS	SnSn	01 41 59.5	+7.7
GYA				pmax	pmax		
	comp=Z,14nm,1.5s						
GYA				pmax	pmax		
	comp=Z,400nm,6.9s						
GYA				LR	LR		
	comp=Z,2µm,12.2s						
GYA				LR	LR		
	comp=Z,4µm,17.3s						
GYA				LR	LR		
	comp=Z,4µm,15.7s						
CM33	Chiang Mai Arr	24.03	304	P	P	01 36 56.0	-1.4
CHTO	Chiang Mai	24.03	304	P	P	01 36 56.2	-1.2
CHTO				pmax	pmax		
	comp=Z,76nm,1.1s						
CHTO				MLR	MLR		
	comp=Z,3µm,20.0s						
CHTO	Chiang Mai	24.03	304	P	P	01 36 56.2	-1.2
CHTO	Chiang Mai	24.03	304	P	P	01 36 59.2	+1.7
CHTO				P	P	01 36 59.2	+1.7
CHTO				P	P	01 36 59.2	+1.7
MHMT	Maesarieng	24.58	301	P	P	01 37 01.4	-1.1
FITZ	Fitzroy Crossi	24.66	167	P	P	01 37 02.4	-0.7
	comp=Z,22nm,0.9s,baz=3.4,slow=6.1,SNR=20						
FITZ				LR	LR	01 48 55.6	
	comp=Z,2µm,19.6s,baz=355,slow=42						
FITZ	Fitzroy Crossi	24.66	167	P	P	01 37 04.0	+0.9
	baz=25,SNR=14						
FITZ	Fitzroy Crossi	24.66	167	P	P	01 37 03.5	+0.4
WHN	Wuhan	24.92	349	⇑P	P	01 37 05.8	+0.5
WHN				pP	pP	01 37 13.9	+1.0
WHN				sP	sP	01 37 18.8	+2.8
WHN				PP	PnPn	01 37 42.1	+3.3
WHN				S	S	01 41 30.1	+3.0
WHN				SS	SnSn	01 42 20.4	+3.9
WHN				pmax	pmax		
	comp=Z,280nm,2.1s						
WHN				pmax	pmax		
	comp=Z,900nm,4.3s						
WHN				LR	LR		
	comp=Z,3µm,12.1s						
WHN				LR	LR		
	comp=Z,16µm,16.5s						
WHN				LR	LR		
	comp=Z,8µm,14.6s						
SSE	Sheshan	24.95	3	P	P	01 37 06.3	+0.7
SSE				S	S	01 41 30.0	+2.4
SSE				pmax	pmax		
	comp=Z,41nm,1.6s						
SSE				pmax	pmax		
	comp=Z,740nm,4.4s						
SSE				LR	LR		
	comp=Z,1µm,19.1s						
SSE				LR	LR		
	comp=Z,1µm,20.1s						
SSE	Sheshan	24.95	3	P	P	01 37 06.1	+0.5
SSE				IAmb	IAmb	01 37 08.1	
	comp=Z,303nm,1.7s						
KMI	Kunming	25.09	321	⇓P	P	01 37 07.6	+0.3
KMI				pP	pwP	01 37 16.3	-0.7
KMI				sP	sP	01 37 19.8	+1.9
KMI				S	S	01 41 33.1	+2.6
KMI				sS	sS	01 41 45.6	+2.8
KMI				SS	SnSn	01 42 28.5	+7.4
KMI				pmax	pmax		
	comp=Z,38nm,1.1s						
KMI				pmax	pmax		
	comp=Z,640nm,4.2s						
KMI				LR	LR		
	comp=Z,4µm,17.0s						
KMI				LR	LR		
	comp=Z,2µm,17.8s						
KMI				LR	LR		
	comp=Z,6µm,18.2s						
KMI	Kunming	25.09	321	IAMs_20	IAMs_20	01 46 52.8	
	comp=Z,6µm,21.0s						
NJ2	Nanjing	25.89	358	eP	P	01 37 13.3	-0.8
NJ2				pP	pP	01 37 17.9	-3.8
NJ2				sP	pwP	01 37 21.6	-2.4
NJ2				S	S	01 41 38.0	-4.5
NJ2				PcS	PcS	01 44 22.3	-1.4
NJ2				pmax	pmax		
	comp=Z,20nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,600nm,3.6s						
NJ2				LR	LR		
	comp=Z,4µm,17.5s						
NJ2				LR	LR		
	comp=Z,2µm,15.6s						
NJ2				LR	LR		
	comp=Z,4µm,18.0s						
ENH	Enshi	26.01	339	IAmb	IAmb	01 37 25.0	
	comp=Z,80nm,0.9s						
ENH				IAMs_20	IAMs_20	01 47 44.2	
	comp=Z,6µm,19.0s						
MBWA	Marble Bar	27.04	180	P	P	01 37 24.2	-0.4
MBWA				P	P	01 37 24.2	-0.4
ANA2	Anatahan	27.28	66	P	P	01 37 29.9	+2.9
	comp=Z,215nm,1.1s						
PBA	Port Blair	27.38	284	IAmb	IAmb	01 37 54.9	
	comp=Z,205nm,1.2s						
PBA				IAMs_20	IAMs_20	01 49 15.4	
	comp=Z,5µm,20.0s						
PSAC1	Pilbara Seismi	27.41	180	IAMs_20	IAMs_20	01 49 59.0	
	comp=Z,4µm,19.0s						
PSA00	Pilbara Seismi	27.45	180	P	P	01 37 27.4	-1.0
PSA00	Pilbara Seismi	27.45	180	P	P	01 37 28.0	-0.4
PSA00				IAmb	IAmb	01 37 41.0	
	comp=Z,106nm,1.2s						
PSA00				IAMs_20	IAMs_20	01 49 51.0	
	comp=Z,3µm,20.0s						
JNU	Nakatsue	28.81	19	P	P	01 37 39.6	-0.9
	comp=Z,28nm,0.9s,baz=175,slow=4.6,SNR=8.0						
JNU				LR	LR	01 48 54.2	
	comp=Z,3µm,21.1s,baz=199,slow=36						
CD2	Chengdu	29.00	330	P	P	01 37 41.1	-1.1
CD2				pP	pP	01 37 48.8	-0.9
CD2				S	S	01 42 29.9	-1.9
CD2				sS	sS	01 42 45.6	+1.4
CD2				pmax	pmax		
	comp=Z,80nm,0.9s						
CD2				pmax	pmax		
	comp=Z,330nm,5.9s						
CD2				LR	LR		
	comp=Z,4µm,13.9s						
CD2				LR	LR		
	comp=Z,5µm,20.1s						
CD2				LR	LR		
	comp=Z,7µm,17.2s						
WB0	Warramunga Arr	29.36	151	IAmb	IAmb	01 38 34.1	
	comp=Z,50nm,0.9s						
WRAB	Tennant Creek	29.48	151	P	P	01 37 45.6	-0.9
WRAB				pmax	pmax		
	comp=Z,34nm,0.8s						

WRAB	**Tennant Creek**	**29.48**	**151**	P	**P**	**01 37 45.5**	**-0.9**
WRA	**Warramunga Arr**	**29.48**	**152**	P	**P**	**01 37 45.9**	**-0.7**
	comp=Z,25nm,0.8s,baz=334,slow=9.4,SNR=186						
WRA				PcP	**PcP**	**01 40 51.0**	**-0.8**
	comp=Z,1.3nm,0.5s,baz=319,slow=2.6,SNR=1.9						
WRA	**Warramunga Arr**	**29.48**	**152**	P	**P**	**01 37 45.2**	**-1.3**
XAN	**Xi'an**	**29.65**	**341**	P	**P**	**01 37 47.4**	**-0.5**
XAN				pP	pP	01 37 55.9	+0.5
XAN				sP	sP	01 38 01.8	+3.2
XAN				S	**S**	**01 42 42.0**	**+0.1**
XAN				pmax	pmax		
	comp=Z,11nm,1.0s						
XAN				pmax	pmax		
	comp=Z,490nm,4.9s						
XAN				LR	LR		
	comp=Z,4µm,19.8s						
XAN				LR	LR		
	comp=Z,7µm,16.8s						
XAN				LR	LR		
	comp=Z,7µm,18.4s						
XAN	**Xi'an**	**29.65**	**341**	P	**P**	**01 37 48.0**	**+0.1**
XAN				pmax	pmax		
	comp=Z,17nm,1.0s						
XAN				MLR	MLR		
	comp=Z,6µm,20.0s						
XAN	**Xi'an**	**29.65**	**341**	P	**P**	**01 37 48.0**	**+0.1**
XAN	**Xi'an**	**29.65**	**341**	IAMs_20	IAMs_20	01 49 53.3	
	comp=Z,6µm,20.0s						
TIA	**Tai'an**	**30.13**	**356**	P	**P**	**01 37 51.6**	**-0.4**
TIA				S	**S**	**01 42 51.3**	**+2.0**
TIA				pmax	pmax		
	comp=Z,17nm,0.9s						
TIA				pmax	pmax		
	comp=Z,190nm,4.4s						
TIA				LR	LR		
	comp=Z,2µm,22.6s						
TIA				LR	LR		
	comp=Z,1µm,18.6s						
TIA				LR	LR		
	comp=Z,2µm,22.2s						
JMN	**Monobe**	**30.45**	**23**	IAmb	IAmb	01 38 04.7	
	comp=Z,105nm,1.3s						
TJN	**Taejon**	**30.95**	**12**	*ce*P	**P**	**01 37 58.3**	**-1.0**
PMG	**Port Moresby**	**31.21**	**119**	P	**P**	**01 38 01.4**	**-0.5**
PMG				pmax	pmax		
	comp=Z,33nm,0.9s						
PMG	**Port Moresby**	**31.21**	**119**	P	**P**	**01 38 01.4**	**-0.5**
PMG				IAmb	IAmb	01 38 03.1	
	comp=Z,33nm,0.8s						
PMG	**Port Moresby**	**31.21**	**119**	P	**P**	**01 38 02.4**	**+0.5**
	comp=Z,45nm,0.8s						
WRKA	**Warakurna**	**31.96**	**165**	P	**P**	**01 38 09.1**	**+0.7**
	baz=32,SNR=19						
KSAR	**Wonju Array Be**	**32.09**	**12**	P	**P**	**01 38 08.8**	**-0.5**
KSAR	**Wonju Array Be**	**32.09**	**12**	P	**P**	**01 38 08.8**	**-0.5**
KSRS	**Korea Array**	**32.11**	**12**	P	**P**	**01 38 08.2**	**-1.2**
	comp=Z,6.9nm,0.9s,baz=191,slow=10,SNR=24						
KSRS				LR	LR	01 51 25.6	
	comp=Z,2µm,21.8s,baz=189,slow=37						
TIY	**Taiyuan**	**32.24**	**349**	*e*P	**P**	**01 38 10.3**	**-0.4**
TIY				S	**S**	**01 43 21.8**	**-0.7**
TIY				pmax	pmax		
	comp=Z,240nm,5.2s						
TIY				LR	LR		
	comp=Z,2µm,12.8s						
TIY				LR	LR		
	comp=Z,730nm,16.3s						
TIY				LR	LR		
	comp=Z,2µm,17.1s						
JWT	**Wachi**	**32.41**	**24**	IAMs_20	IAMs_20	01 50 36.7	
	comp=Z,3µm,20.0s						
MEEK	**Meekatharra**	**32.52**	**182**	P	**P**	**01 38 13.2**	**0.0**
	baz=33,SNR=23						
AS31	**Alice Springs**	**32.55**	**156**	P	**P**	**01 38 12.7**	**-0.8**
ASAR	**Alice Springs**	**32.55**	**156**	P	**P**	**01 38 13.7**	**+0.1**
	comp=Z,4.7nm,0.8s,baz=332,slow=7.4,SNR=42						
ASAR				PcP	**PcP**	**01 40 58.9**	**-1.0**
	comp=Z,2.0nm,0.6s,baz=342,slow=3.4,SNR=1.9						
ASAR				LR	LR	01 52 56.4	
	comp=Z,2µm,20.4s,baz=325,slow=39						
ASAR	**Alice Springs**	**32.55**	**156**	P	**P**	**01 38 13.2**	**-0.4**
JHJ	**Hachijo jima 2**	**32.68**	**32**	LR	LR	01 48 59.5	
	comp=Z,2µm,21.9s,baz=238,slow=32						
DL2	**Dalian**	**32.75**	**3**	P	**P**	**01 38 14.9**	**-0.1**
DL2				S	**S**	**01 43 30.8**	**+0.7**
DL2				pmax	pmax		
	comp=Z,46nm,0.9s						
DL2				pmax	pmax		
	comp=Z,480nm,4.7s						
DL2				LR	LR		
	comp=Z,3µm,18.4s						
DL2				LR	LR		
	comp=Z,1µm,14.4s						
DL2				LR	LR		
	comp=Z,3µm,19.2s						
QIS	**Mount Isa**	**32.78**	**144**	P	**P**	**01 38 15.7**	**+0.2**
	baz=33,SNR=159						
SHL	**Shillong**	**33.07**	**309**	IAmb	IAmb	01 38 19.2	
	comp=Z,77nm,1.0s						
SHL				IAMs_20	IAMs_20	01 53 51.8	
	comp=Z,4µm,19.0s						
JSG	**Sagara**	**33.12**	**28**	IAMs_20	IAMs_20	01 50 03.6	
	comp=Z,5µm,20.0s						
INU	**Inuyama**	**33.15**	**26**	IAmb	IAmb	01 38 27.6	
	comp=Z,74nm,1.1s						
INU				IAMs_20	IAMs_20	01 49 25.4	
	comp=Z,3µm,22.0s						
LZH	**Lanzhou**	**33.33**	**336**	⇑P	**P**	**01 38 22.1**	**+1.7**
LZH				pP	pP	01 38 27.6	-0.3
LZH				sP	pwP	01 38 30.0	-0.3
LZH				S	**S**	**01 43 40.5**	**+0.9**
LZH				sS	sS	01 43 50.0	-2.0
LZH				SS	**SnSn**	**01 45 46.5**	**+5.0**
LZH				pmax	pmax		
	comp=Z,34nm,1.2s						
LZH				pmax	pmax		
	comp=Z,330nm,5.4s						
LZH				LR	LR		
	comp=Z,6µm,17.3s						
LZH				LR	LR		
	comp=Z,3µm,15.2s						
LZH				LR	LR		
	comp=Z,4µm,17.9s						
JGF	**Kuroka**	**33.51**	**26**	P	**P**	**01 38 20.3**	**-1.6**
JGF				IAMs_20	IAMs_20	01 49 36.8	
	comp=Z,4µm,22.0s						
RABL	**Rabaul**	**33.80**	**107**	P	**P**	**01 38 25.1**	**+0.6**
BJT	**Baijiatuau**	**33.98**	**355**	IAmb	IAmb	01 38 27.4	
	comp=Z,47nm,1.1s						
BJI	**Beijing**	**34.01**	**355**	P	**P**	**01 38 26.3**	**+0.3**
BJI				S	**S**	**01 43 51.8**	**+2.2**
BJI				pmax	pmax		
	comp=Z,40nm,0.9s						
BJI				pmax	pmax		
	comp=Z,240nm,3.5s						
BJI				LR	LR		
	comp=Z,2µm,15.1s						
BJI				LR	LR		
	comp=Z,2µm,14.9s						
BJI				LR	LR		
	comp=Z,2µm,18.0s						
MTSU	**Mount Surprise**	**34.04**	**135**	P	**P**	**01 38 27.0**	**+0.4**
	baz=34,SNR=5.8						
MAJO	**Matsushiro**	**34.68**	**26**	*i* P	**P**	**01 38 29.8**	**-2.1**
MAJO				pmax	pmax		
	comp=Z,62nm,1.8s						
MAJO	**Matsushiro**	**34.68**	**26**	P	**P**	**01 38 30.7**	**-1.2**
MAJO	**Matsushiro**	**34.68**	**26**	IAMs_20	IAMs_20	01 50 13.6	
	comp=Z,3µm,22.0s						
MAT	**Matsushiro**	**34.68**	**26**	P	**P**	**01 38 29.7**	**-2.2**
MAT				S	**S**	**01 43 56.4**	**-3.8**
MJAR	**Matsushiro Arr**	**34.68**	**26**	P	**P**	**01 38 31.0**	**-1.0**
	comp=Z,18nm,1.1s,baz=208,slow=8.3,SNR=25						
MJAR				LR	LR	01 51 27.1	
	comp=Z,3µm,20.3s,baz=205,slow=34						
MJAR	**Matsushiro Arr**	**34.68**	**26**	P	**P**	**01 38 29.7**	**-2.2**
MJAR				pmax	pmax		
	comp=Z,16nm,1.3s						
MJAR	**Matsushiro Arr**	**34.68**	**26**	P	**P**	**01 38 29.7**	**-2.2**
MJB9	**Matsu-Tunnel**	**34.68**	**26**	IAMs_20	IAMs_20	01 50 02.6	
	comp=Z,4µm,22.0s						
MORW	**Morawa**	**35.11**	**186**	P	**P**	**01 38 36.2**	**+0.5**
	baz=35,SNR=13						
MORW	**Morawa**	**35.11**	**186**	IAmb	IAmb	01 38 44.8	
	comp=Z,45nm,0.9s						
JYT	**Yasato**	**35.34**	**29**	IAMs_20	IAMs_20	01 49 56.2	
	comp=Z,3µm,22.0s						
HHC	**Hu-ho-hao-te**	**35.44**	**349**	*e*P	**P**	**01 38 38.9**	**+0.3**
HHC				PP	**PP**	**01 39 58.8**	**-0.6**
HHC				S	**S**	**01 44 11.3**	**-0.7**
HHC				SS	**SnSn**	**01 46 29.8**	**-2.8**
HHC				pmax	pmax		
	comp=Z,31nm,1.4s						
HHC				pmax	pmax		
	comp=Z,170nm,6.7s						
HHC				LR	LR		
	comp=Z,3µm,19.6s						
HHC				LR	LR		
	comp=Z,2µm,17.3s						
HHC				LR	LR		
	comp=Z,3µm,19.8s						
BTO	**Baotou**	**35.53**	**347**	*e*P	**P**	**01 38 40.1**	**+0.8**
SNY	**Shenyang**	**35.78**	**5**	⇑P	**P**	**01 38 40.8**	**-0.5**
SNY				S	**S**	**01 44 18.4**	**+1.5**
SNY				pmax	pmax		
	comp=Z,37nm,1.2s						
SNY				pmax	pmax		
	comp=Z,490nm,3.1s						
SNY				LR	LR		
	comp=Z,1µm,18.5s						
SNY				LR	LR		
	comp=Z,3µm,19.8s						
SNY				LR	LR		
	comp=Z,3µm,19.0s						
LSA	**Lhasa**	**35.87**	**314**	P	**P**	**01 38 43.8**	**+0.9**
LSA				pP	**pwP**	**01 38 52.5**	**-0.2**
LSA				PP	**PP**	**01 40 05.8**	**+1.2**
LSA				S	**S**	**01 44 19.8**	**+0.2**
LSA				pmax	pmax		
	comp=Z,100nm,1.4s						
LSA				pmax	pmax		
	comp=Z,410nm,2.6s						
LSA				LR	LR		
	comp=Z,4µm,23.5s						
LSA				LR	LR		
	comp=Z,4µm,23.5s						
LSA				LR	LR		
	comp=Z,6µm,18.5s						
LSA	**Lhasa**	**35.87**	**314**	P	**P**	**01 38 43.8**	**+0.9**
LSA	**Lhasa**	**35.87**	**314**	IAmb	IAmb	01 39 13.1	
	comp=Z,48nm,1.0s						
BLDU	**Ballidu**	**36.58**	**185**	P	**P**	**01 38 48.5**	**+0.2**
	baz=37,SNR=14						
CTAO	**Charters Tower**	**36.70**	**136**	P	**P**	**01 38 50.2**	**+0.7**
CTAO				pmax	pmax		
	comp=Z,56nm,1.4s						
CTAO				MLR	MLR		
	comp=Z,2µm,19.0s						
CTAO	**Charters Tower**	**36.70**	**136**	P	**P**	**01 38 50.2**	**+0.7**
JMM	**Marumori**	**36.94**	**28**	P	**P**	**01 38 50.4**	**-0.9**
JMM				IAmb	IAmb	01 39 00.1	
	comp=Z,87nm,0.9s						
JMM				IAMs_20	IAMs_20	01 51 33.6	
	comp=Z,3µm,22.0s						
TAPN	**Taplejung**	**37.20**	**308**	*e*P	**P**	**01 38 53.5**	**-0.5**
	comp=Z,199nm,0.8s						
ODAN	**Odare**	**37.22**	**307**	*e*P	**P**	**01 38 53.6**	**-0.5**
	comp=Z,223nm,0.8s						
KMBL	**Kambalda**	**37.25**	**177**	P	**P**	**01 38 54.5**	**+0.5**
	baz=38,SNR=14						
FORT	**Forrest**	**37.45**	**168**	P	**P**	**01 38 56.3**	**+0.7**
	baz=38,SNR=8.2						
FORT	**Forrest**	**37.45**	**168**	IAmb	IAmb	01 39 05.3	
	comp=Z,49nm,0.7s						
KLBR	**Kellerberrin**	**37.48**	**183**	P	**P**	**01 38 56.7**	**+0.7**
	baz=38,SNR=7.1						
MSHR	**Mys Shultsa**	**37.73**	**14**	*ce*P	**P**	**01 38 57.2**	**-0.7**
MSHR				pmax	pmax		
	comp=Z,39nm,1.0s						
GTA	**Gaotai**	**37.83**	**334**	P	**P**	**01 38 59.6**	**+0.6**
GTA				pP	pP	01 39 06.5	-0.1
GTA				sP	sP	01 39 10.9	+1.1
GTA				S	**S**	**01 44 48.3**	**-0.3**
GTA				sS	sS	01 45 07.8	+6.7
GTA				SS	**SnSn**	**01 47 23.1**	**-7.3**
GTA				ScS	**ScS**	**01 49 09.6**	**-0.5**
GTA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,98nm,7.6s						
GTA				LR	LR		
	comp=Z,3µm,15.9s						
GTA				LR	LR		
	comp=Z,3µm,14.7s						
GTA				LR	LR		
	comp=Z,4µm,16.7s						
RAMN	**Ramite**	**37.88**	**307**	*e*P	**P**	**01 38 59.9**	**+0.1**
	comp=Z,349nm,0.9s						
MUN	**Mundaring**	**37.98**	**185**	P	**P**	**01 39 00.9**	**+0.8**
	baz=38,SNR=3.3						
NWAO	**Narrogin (SRO)**	**38.84**	**184**	P	**P**	**01 39 08.7**	**+1.3**
	baz=39,SNR=12						
NWAO	**Narrogin (SRO)**	**38.84**	**184**	P	**P**	**01 39 07.9**	**+0.5**
NWAO				pmax	pmax		
	comp=Z,390nm,1.6s						
NWAO	**Narrogin (SRO)**	**38.84**	**184**	P	**P**	**01 39 07.9**	**+0.5**
NWAO	**Narrogin (SRO)**	**38.84**	**184**	P	**P**	**01 39 08.5**	**+1.1**
NWAO				P	**P**	**01 39 08.5**	**+1.1**
GUN	**Gumba**	**38.89**	**308**	*e*P	**P**	**01 39 08.0**	**-0.4**
	comp=Z,445nm,0.7s						
PALK	**Pallekele**	**38.93**	**274**	*i* P	**P**	**01 39 07.9**	**-0.6**
PALK				pmax	pmax		
	comp=Z,101nm,2.6s						
PALK	**Pallekele**	**38.93**	**274**	IAMs_20	IAMs_20	01 57 52.2	
	comp=Z,4µm,19.0s						
PALK	**Pallekele**	**38.93**	**274**	P	**P**	**01 39 10.3**	**+1.8**
PKI	**Pulchoki**	**39.11**	**307**	*e*P	**P**	**01 39 09.1**	**-1.1**
	comp=Z,118nm,0.8s						
PKIN	**Phulchoki**	**39.12**	**307**	*e*P	**P**	**01 39 09.4**	**-0.8**
	comp=Z,110nm,0.7s						
KKN	**Kakani**	**39.31**	**307**	*e*P	**P**	**01 39 11.0**	**-0.7**
	comp=Z,127nm,0.8s						
MDJ	**Mudanjiang**	**39.34**	**11**	P	**P**	**01 39 11.6**	**+0.2**
MDJ				pP	pP	01 39 18.8	-0.3
MDJ				sP	sP	01 39 22.8	+0.5
MDJ				ScP	**ScP**	**01 45 04.0**	**-2.6**
MDJ				S	**S**	**01 45 14.9**	**+4.0**
MDJ				sS	sS	01 45 24.6	+1.0
MDJ				ScS	**ScS**	**01 49 17.1**	**-1.2**
MDJ				pmax	pmax		
	comp=Z,91nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,540nm,4.0s						
MDJ				LR	LR		
	comp=Z,1µm,18.7s						
MDJ				LR	LR		
	comp=Z,3µm,20.4s						
MDJ				LR	LR		
	comp=Z,3µm,33.5s						
MDJ	**Mudanjiang**	**39.34**	**11**	IAmb	IAmb	01 39 13.2	
	comp=Z,95nm,1.1s						
DMN	**Daman**	**39.37**	**307**	*e*P	**P**	**01 39 11.8**	**-0.4**
	comp=Z,154nm,0.8s						
JTM	**Tenmabayashi**	**39.44**	**26**	IAmb	IAmb	01 39 37.5	
	comp=Z,109nm,1.3s						
JTM				IAMs_20	IAMs_20	01 53 08.4	
	comp=Z,4µm,22.0s						
USA0B	**Ussuriysk Arra**	**39.45**	**14**	*c i*P	**P**	**01 39 11.7**	**-0.7**
USRK	**Ussuriysk Ar.**	**39.45**	**14**	P	**P**	**01 39 12.8**	**+0.4**
	comp=Z,9.8nm,0.8s,baz=196,slow=8.2,SNR=27						
USRK				PcP	**PcP**	**01 41 20.2**	**+0.2**
	comp=Z,1.0nm,0.5s,baz=205,slow=3.0,SNR=1.1						
USRK				LR	LR	01 56 14.5	
	comp=Z,1µm,19.8s,baz=179,slow=37						
USRK	**Ussuriysk Ar.**	**39.45**	**14**	P	**P**	**01 39 12.5**	**+0.2**
GKN	**Gorkha**	**39.91**	**307**	*e*P	**P**	**01 39 16.0**	**-0.7**
	comp=Z,238nm,0.8s						
QLP	**Quilpie**	**40.11**	**145**	P	**P**	**01 39 19.6**	**+1.6**
	baz=40,SNR=5.0						
ERM	**Erimo**	**41.35**	**26**	*ce*P	**P**	**01 39 27.5**	**-0.6**
ERM				pmax	pmax		
	comp=Z,35nm,1.3s						
ERM	**Erimo**	**41.35**	**26**	IAMs_20	IAMs_20	01 54 26.3	
	comp=Z,3µm,21.0s						
JEM	**Erimo**	**41.35**	**26**	IAMs_20	IAMs_20	01 54 28.3	
	comp=Z,3µm,22.0s						
TEY	**Ternei**	**41.48**	**18**	⇓*e*P	**P**	**01 39 28.3**	**-0.8**
TEY				*e*		01 39 34.6	
TEY				pmax	pmax		
	comp=E,10.0nm,1.4s						
TEY				pmax	pmax		
	comp=N,40nm,1.1s						
TEY				pmax	pmax		
	comp=Z,60nm,1.1s						
BBOO	**Buckleboo**	**41.59**	**159**	P	**P**	**01 39 30.7**	**+0.5**
	baz=42,SNR=12						
BBOO	**Buckleboo**	**41.59**	**159**	P	**P**	**01 39 30.6**	**+0.5**
HYB	**Hyderabad**	**41.92**	**289**	*i* P	**P**	**01 39 32.0**	**-1.2**
ASAJ	**Asahikawa**	**42.83**	**24**	P	**P**	**01 39 40.3**	**+0.2**
	comp=Z,47nm,1.1s,baz=223,slow=11,SNR=8.3						
JKA	**Kamikawa-asahi**	**42.83**	**24**	P	**P**	**01 39 39.6**	**-0.5**
JKA				IAmb	IAmb	01 39 42.2	
	comp=Z,145nm,1.6s						
JKA				IAMs_20	IAMs_20	02 00 04.3	
	comp=Z,2µm,20.0s						
STKA	**Stephens Creek**	**43.02**	**153**	P	**P**	**01 39 43.0**	**+1.1**
	comp=Z,24nm,0.8s,baz=323,slow=7.9,SNR=44						
STKA	**Stephens Creek**	**43.02**	**153**	P	**P**	**01 39 43.1**	**+1.3**
	baz=43,SNR=18						
STKA	**Stephens Creek**	**43.02**	**153**	*i* P	**P**	**01 39 41.3**	**-0.6**
STKA	**Stephens Creek**	**43.02**	**153**	P	**P**	**01 39 42.4**	**+0.6**
ULN	**Ulaanbaatar**	**43.09**	**347**	*ce*P	**P**	**01 39 42.8**	**+0.4**
ULN				pmax	pmax		
	comp=Z,37nm,0.7s						
ULN	**Ulaanbaatar**	**43.09**	**347**	P	**P**	**01 39 42.1**	**-0.3**
ULN	**Ulaanbaatar**	**43.09**	**347**	IAMs_20	IAMs_20	01 59 28.3	
	comp=Z,3µm,20.0s						
SONM	**Songino Array**	**43.20**	**347**	P	**P**	**01 39 43.7**	**+0.3**
	comp=Z,27nm,0.8s,baz=160,slow=8.3,SNR=192						
SONM				PcP	**PcP**	**01 41 32.4**	**+0.1**
	comp=Z,4.6nm,0.8s,baz=163,slow=3.7,SNR=6.0						
SONM				LR	LR	01 59 33.6	
	comp=Z,3µm,19.6s,baz=154,slow=39						
SONM	**Songino Array**	**43.20**	**347**	P	**P**	**01 39 43.6**	**+0.3**
SONM				pmax	pmax		
	comp=Z,33nm,0.9s						
SONM	**Songino Array**	**43.20**	**347**	P	**P**	**01 39 43.6**	**+0.3**
HTT	**Hallett**	**43.22**	**157**	P	**P**	**01 39 44.8**	**+1.3**
	baz=43,SNR=21						
EIDS	**Eidsvold**	**43.53**	**137**	P	**P**	**01 39 46.8**	**+0.7**
	baz=44,SNR=6.7						
YUK	**Yuzh-Kuril'sk**	**44.16**	**27**	*e*P	**P**	**01 39 46.5**	**-4.4**
YUK				*i* S	**S**	**01 46 19.7**	**-2.6**
YUK				pmax	pmax		
	comp=Z,314nm,1.3s						
YUK				pmax	pmax		
	comp=E,167nm,1.2s						
YUK				pmax	pmax		
	comp=N,259nm,1.0s						
KLR	**Kul'dur**	**44.19**	**11**	P	**P**	**01 39 50.8**	**-0.2**
	comp=N,16nm,0.9s,baz=214,slow=5.5,SNR=44						
KLR	**Kul'dur**	**44.19**	**11**	*ce*P	**P**	**01 39 51.0**	**0.0**
KLR				pmax	pmax		
	comp=Z,24nm,1.0s						
CMSA	**Cobar Meteorol**	**44.76**	**148**	P	**P**	**01 39 57.5**	**+1.6**
	baz=45,SNR=17						
YSS	**Yuzh-Sakhalins**	**45.25**	**22**	*ce*P	**P**	**01 39 59.1**	**-0.4**
YSS				pmax	pmax		
	comp=Z,37nm,1.3s						
YSS	**Yuzh-Sakhalins**	**45.25**	**22**	P	**P**	**01 39 59.2**	**-0.3**
YSS				IAmb	IAmb	01 40 17.4	
	comp=Z,101nm,1.7s						
KUR	**Kuril'sk**	**46.00**	**27**	*e*P	**P**	**01 40 06.3**	**+0.9**
KUR				*e*S	**S**	**01 46 56.7**	**+7.9**
KUR				MLR	MLR		
	comp=Z,1µm,13.0s						
ZAK	**Zakamensk**	**46.33**	**345**	*e*P	**P**	**01 40 08.1**	**0.0**
ZAK				pmax	pmax		
	comp=Z,15nm,1.0s						
MNCI	**Minicoy**	**46.50**	**276**	IAMs_20	IAMs_20	02 00 09.6	
	comp=Z,3µm,22.0s						
GRNR	**Gornyy**	**46.66**	**14**	⇑*i*P	**P**	**01 40 11.0**	**+0.4**
GRNR				pmax	pmax		
	comp=N,10.0nm,1.2s						
GRNR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GRNR				MLR	MLR		
	comp=E,260nm,14.0s						
GRNR				MLR	MLR		
	comp=N,360nm,16.0s						
GRNR				MLR	MLR		
	comp=Z,760nm,13.0s						
WMQ	**Urumqi**	**47.05**	**328**	*e*P	**P**	**01 40 14.5**	**+0.7**
WMQ				pP	pwP	01 40 23.6	-0.3
WMQ				S	**S**	**01 47 04.5**	**+0.4**
WMQ				SS	**SS**	**01 50 24.3**	**-7.0**
WMQ				pmax	pmax		
	comp=Z,22nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,170nm,3.7s						
WMQ				LR	LR		
	comp=Z,1µm,19.3s						
WMQ				LR	LR		
	comp=Z,1µm,20.9s						
WMQ				LR	LR		
	comp=Z,1µm,25.7s						
WMQ	**Urumqi**	**47.05**	**328**	IAmb	IAmb	01 40 24.3	
	comp=Z,32nm,0.9s						
WMQ	**Urumqi**	**47.05**	**328**	IAMs_20	IAMs_20	02 00 01.8	
	comp=Z,2µm,22.0s						
ARPS	**Mount Arapiles**	**47.29**	**156**	P	**P**	**01 40 17.1**	**+1.4**
	baz=48,SNR=15						
ARMA	**Armidale**	**47.32**	**142**	P	**P**	**01 40 18.7**	**+2.5**
	baz=47,SNR=13						
ARMA	**Armidale**	**47.32**	**142**	P	**P**	**01 40 18.3**	**+2.1**
ARMA				IAmb	IAmb	01 40 19.4	
	comp=Z,58nm,1.1s						
TLY	**Talaya**	**47.44**	**346**	P	**P**	**01 40 17.3**	**+0.6**
	comp=Z,21nm,0.8s,baz=174,slow=5.8,SNR=26						
TLY	**Talaya**	**47.44**	**346**	*e*P	**P**	**01 40 17.6**	**+0.9**
TLY				*e*S	**S**	**01 47 14.6**	**+5.3**
TLY				pmax	pmax		
	comp=Z,58nm,0.8s						
TLY				MLR	MLR		
	comp=Z,4µm,18.0s						
TLY	**Talaya**	**47.44**	**346**	P	**P**	**01 40 16.9**	**+0.3**
TLY				IAmb	IAmb	01 40 19.7	
	comp=Z,24nm,0.8s						
TLY				IAMs_20	IAMs_20	02 02 08.4	
	comp=Z,2µm,19.0s						
IRK	**Irkutsk**	**47.82**	**347**	*e*P	**P**	**01 40 18.4**	**-1.2**
IRK				pmax	pmax		
	comp=Z,72nm,3.6s						
ZEA	**Zeya**	**47.92**	**6**	*e*P	**P**	**01 40 20.2**	**-0.1**
ZEA				*e*		01 47 20.0	
ZEA				pmax	pmax		
	comp=N,10.0nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,20nm,0.9s						
ZEA				MLR	MLR		
	comp=E,600nm,13.0s						
ZEA				MLR	MLR		
	comp=N,800nm,16.0s						
ZEA				MLR	MLR		
	comp=Z,800nm,15.0s						
TYV	**Tymovskoe**	**48.54**	**19**	*e*P	**P**	**01 40 26.3**	**+1.2**
TYV				pmax	pmax		
	comp=Z,25nm,1.9s						
TYV				pmax	pmax		
	comp=Z,200nm,3.8s						
TYV				MLR	MLR		
	comp=Z,1µm,19.0s						
TYV				MLR	MLR		
	comp=E,2µm,16.0s						
CAN	**Canberra**	**49.44**	**148**	P	**P**	**01 40 33.1**	**+0.8**
CAN				pmax	pmax		
	comp=Z,46nm,1.0s						
CAN	**Canberra**	**49.44**	**148**	P	**P**	**01 40 33.1**	**+0.8**
CAN				IAmb	IAmb	01 40 54.2	
	comp=Z,46nm,1.0s						
NKL	**Nikolayevsk**	**49.94**	**16**	*e*P	**P**	**01 40 36.5**	**+0.7**
NKL				*e*		01 42 24.2	
NKL				*e*S	**S**	**01 47 49.9**	**+5.5**
NKL				pmax	pmax		
	comp=N,6.0nm,0.5s						
NKL				pmax	pmax		
	comp=Z,61nm,1.0s						
NKL				pmax	pmax		
	comp=E,58nm,0.9s						
NKL				smax	smax		
	comp=E,35nm,0.4s						
NKL				smax	smax		
	comp=N,10.0nm,0.6s						
NKL				MLR	MLR		
	comp=E,2µm,13.0s						
NKL				MLR	MLR		
	comp=N,246nm,16.0s						
NKL				MLR	MLR		

	comp=Z,2µm,19.0s						
ZSN	Zaisan	50.98	330	eP	P	01 40 43.6	-0.3
	comp=Z,15nm,1.1s,baz=330						
ZSN				eS	S	01 48 01.4	+2.2
	baz=330						
ZSN	Zaisan	50.98	330	eP	P	01 40 43.5	-0.3
ZSN				eS	S	01 48 01.3	+2.2
ZSN				pmax	pmax		
	comp=Z,15nm,1.1s						
NIL	Nilore	51.15	309	P	P	01 40 44.5	-0.9
NIL				pmax	pmax		
	comp=Z,120nm,1.0s						
NIL				MLR	MLR		
	comp=Z,1µm,21.0s						
NIL	Nilore	51.15	309	P	P	01 40 44.5	-0.9
SHLS	Shalkode	51.29	323	eP	P	01 40 43.9	-2.5
	comp=Z,21nm,0.7s,baz=323						
SHLS				eS	S	01 48 02.2	-1.7
	baz=323						
SHLS	Shalkode	51.29	323	eP	P	01 40 43.9	-2.5
SHLS				eS	S	01 48 02.1	-1.7
SHLS				pmax	pmax		
	comp=Z,21nm,0.7s						
DGZ	Jazzator, Alta	51.35	334	i P	P	01 40 47.6	+0.8
DGZ				pmax	pmax		
	comp=Z,25nm,1.0s						
SANVU	Saraoutou	51.50	115	P	P	01 40 49.1	+1.0
SANVU				IAmb	IAmb	01 41 21.6	
	comp=Z,76nm,1.0s						
SANVU	Saraoutou	51.50	115	P	P	01 40 49.7	+1.5
UZB	Uzynbulak	51.55	322	eP	P	01 40 47.8	-0.6
	comp=Z,15nm,0.9s,baz=322						
UZB				eS	S	01 48 09.4	+1.9
	baz=322						
UZB	Uzynbulak	51.55	322	eP	P	01 40 47.8	-0.6
UZB				eS	S	01 48 09.4	+1.9
UZB				pmax	pmax		
	comp=Z,15nm,0.9s						
KSH	Kashi	51.65	317	P	P	01 40 50.6	+1.5
KSH				pP	pP	01 40 55.3	-1.7
KSH				S	S	01 48 08.5	-0.4
KSH				pmax	pmax		
	comp=Z,15nm,1.0s						
KSH				pmax	pmax		
	comp=Z,170nm,7.0s						
KSH				LR	LR		
	comp=Z,2µm,19.3s						
KSH				LR	LR		
	comp=Z,1µm,15.3s						
KSH				LR	LR		
	comp=Z,2µm,21.1s						
BOD	Bodaibo	51.84	356	eP	P	01 40 50.0	-0.1
BOD				pmax	pmax		
	comp=Z,48nm,1.1s						
MK31	Makanchi Array	51.87	328	ceP	P	01 40 50.6	+0.1
MK31	Makanchi Array	51.87	328	IAmb	IAmb	01 40 59.6	
	comp=Z,125nm,1.8s						
MKAR	Makanchi Array	51.87	328	P	P	01 40 50.9	+0.3
	comp=Z,26nm,0.7s,baz=130,slow=7.9,SNR=147						
MKAR				PcP	PcP	01 42 03.4	+0.2
	comp=Z,3.0nm,0.7s,baz=125,slow=5.4,SNR=0.8						
MKAR				LR	LR	02 04 46.5	
	comp=Z,2µm,19.1s,baz=114,slow=38						
MKAR	Makanchi Array	51.87	328	P	P	01 40 50.7	+0.1
SATY	Saty	51.88	322	eP	P	01 40 50.5	-0.4
	comp=Z,21nm,0.8s,baz=322						
SATY				eS	S	01 48 14.1	+2.1
	baz=322						
SATY	Saty	51.88	322	eP	P	01 40 50.4	-0.4
SATY				eS	S	01 48 14.1	+2.1
SATY				pmax	pmax		
	comp=Z,21nm,0.8s						
KPKS	Kokpek	51.94	322	eP	P	01 40 50.6	-0.6
	comp=Z,27nm,0.8s,baz=322						
KPKS	Kokpek	51.94	322	eP	P	01 40 50.6	-0.6
KPKS				pmax	pmax		
	comp=Z,27nm,0.8s						
MAKZ	Makanchi	52.05	328	P	P	01 40 52.1	+0.2
MAKZ				pmax	pmax		
	comp=Z,50nm,1.2s						
MAKZ				MLR	MLR		
	comp=Z,2µm,19.0s						
MAKZ	Makanchi	52.05	328	P	P	01 40 52.1	+0.2
MAKZ				IAmb	IAmb	01 41 05.5	
	comp=Z,50nm,1.2s						
MAKZ				IAMs_20	IAMs_20	02 04 32.3	
	comp=Z,2µm,19.0s						
TNSS	Tian-Shan	52.77	321	eP	P	01 40 57.3	-0.5
	baz=321						
TNSS	Tian-Shan	52.77	321	eP	P	01 40 57.3	-0.5
MDOK	Medeo	52.78	321	eP	P	01 40 56.9	-0.6
	baz=321						
MDOK				eS	S	01 48 26.1	+1.7
	baz=321						
MDOK				LR	LR	02 03 44.0	
	comp=Z,610nm,18.0s,baz=321						
MDOK	Medeo	52.78	321	eP	P	01 40 56.9	-0.6
MDOK				eS	S	01 48 26.0	+1.7
MDOK				MLR	MLR		
	comp=Z,610nm,18.0s						
ULHL	Ulahol	52.81	320	P	P	01 40 58.6	+0.8
	SNR=12						
AAA	Alma-Ata	52.88	321	eP	P	01 40 58.9	+0.7
	comp=Z,37nm,1.0s,baz=321						
AAA				eS	S	01 48 28.7	+3.0
	baz=321						
AAA				LR	LR	02 04 38.1	
	comp=Z,647nm,17.6s,baz=321						
AAA	Alma-Ata	52.88	321	eP	P	01 40 58.8	+0.7
AAA				eS	S	01 48 28.6	+3.0
AAA				pmax	pmax		
	comp=Z,37nm,1.0s						
AAA				MLR	MLR		
	comp=Z,647nm,18.0s						
TDK	Taldyqorghan	52.96	324	eP	P	01 40 58.4	-0.3
	comp=Z,35nm,0.7s,baz=324						
TDK				eS	S	01 48 28.7	+2.1
	baz=324						
TDK				LR	LR	02 04 49.8	
	comp=Z,868nm,16.8s,baz=324						
TDK	Taldyqorghan	52.96	324	eP	P	01 40 58.3	-0.3
TDK				eS	S	01 48 28.6	+2.1
TDK				pmax	pmax		
	comp=Z,35nm,0.7s						
TDK				MLR	MLR		
	comp=Z,869nm,17.0s						
TARA	Tarawa	53.11	93	IAMs_20	IAMs_20	01 58 27.2	
	comp=Z,3µm,19.0s						
CHKK	Chushkaly	53.18	322	eP	P	01 40 59.6	-0.8
	baz=322						
CHKK	Chushkaly	53.18	322	eP	P	01 40 59.5	-0.8
DZM	Mont Dzumac	53.47	123	eP	P	01 41 03.8	+1.0
	comp=Z,78nm,1.2s						
DZM	Mont Dzumac	53.47	123	eLR	LR	01 56 30.8	
	comp=Z,2µm,24.4s						
TKM2	Tokmak 2	53.56	320	P	P	01 41 04.1	+0.7
	SNR=29						
KUU	Kurty	53.60	322	eP	P	01 41 02.0	-1.4
	comp=Z,89nm,0.8s,baz=322						
KUU				eS	S	01 48 36.5	+1.2
	baz=322						
KUU	Kurty	53.60	322	eP	P	01 41 02.0	-1.4
KUU				eS	S	01 48 36.4	+1.2
KUU				pmax	pmax		
	comp=Z,89nm,0.8s						
SKR	Severo-Kuril's	53.76	28	ceP	P	01 41 05.3	+0.9
KBK	Karagaybulak	53.84	320	P	P	01 41 06.3	+0.9
	SNR=26						
UCH	Uchtor	53.92	319	P	P	01 41 07.4	+1.1
	SNR=50						
AAK	Ala-Archa	54.13	320	P	P	01 41 08.1	+0.6
	comp=Z,25nm,1.0s,baz=140,slow=5.5,SNR=36						
AAK	Ala-Archa	54.13	320	P	P	01 41 08.4	+0.9
	SNR=28						
AAK	Ala-Archa	54.13	320	i P	P	01 41 08.4	+0.9
	SNR=50						
AAK	Ala-Archa	54.13	320	ceP	P	01 41 07.4	0.0
AAK				pmax	pmax		
	comp=Z,124nm,1.3s						
AAK	Ala-Archa	54.13	320	P	P	01 41 07.9	+0.5
AAK				IAmb	IAmb	01 41 21.9	
	comp=Z,48nm,0.9s						
AAK	Ala-Archa	54.13	320	P	P	01 41 08.4	+0.9
AAK				P	P	01 41 08.4	+0.9
AAK				P	P	01 41 08.4	+0.9
CHMS	Chumysh	54.14	320	P	P	01 41 07.7	+0.3
	SNR=13						
AML	Almayashu	54.41	319	P	P	01 41 10.6	+0.8
	SNR=31						
USP	Ospenovka	54.43	320	P	P	01 41 10.0	+0.5
	SNR=37						
SGDS	Sogindy	54.44	321	eP	P	01 41 08.6	-1.1
	comp=Z,4.1nm,0.7s,baz=320						
SGDS				eS	S	01 48 48.1	+1.4
	baz=320						
SGDS	Sogindy	54.44	321	eP	P	01 41 08.5	-1.1
SGDS				eS	S	01 48 48.1	+1.4
SGDS				pmax	pmax		
	comp=Z,4.0nm,0.7s						
EKS2	Erkin-Say	54.60	319	P	P	01 41 11.7	+0.8
	SNR=30						
SEM	Semipalatinsk	55.22	330	eP	P	01 41 14.3	-1.0
	comp=Z,4.0nm,0.8s,baz=330						
SEM				LR	LR	02 05 09.9	
	comp=Z,333nm,15.2s,baz=330						
SEM	Semipalatinsk	55.22	330	eP	P	01 41 14.2	-1.0
SEM				pmax	pmax		
	comp=Z,4.0nm,0.8s						
SEM				MLR	MLR		
	comp=Z,333nm,15.0s						
ZAA0	Zalesovo Array	55.56	336	IAmb	IAmb	01 41 26.5	
	comp=Z,118nm,1.8s						
ZAA0				IAMs_20	IAMs_20	02 07 07.1	
	comp=Z,2µm,20.0s						
ZALV	Zalesovo Beam	55.56	336	P	P	01 41 17.2	-0.1
	comp=Z,5.2nm,0.6s,baz=122,slow=6.4,SNR=24						
ZALV				LR	LR	02 07 08.3	
	comp=Z,2µm,19.9s,baz=134,slow=38						
ZALV	Zalesovo Beam	55.56	336	P	P	01 41 16.1	-1.3
ZALV	Zalesovo Beam	55.56	336	P	P	01 41 16.1	-1.3
BTLS	Baital	55.60	322	eP	P	01 41 17.0	-0.9
	comp=Z,9.2nm,1.0s,baz=322						
BTLS				eS	S	01 49 03.7	+1.7
	baz=322						
BTLS	Baital	55.60	322	eP	P	01 41 16.9	-0.9
BTLS				eS	S	01 49 03.7	+1.7
BTLS				pmax	pmax		
	comp=Z,9.0nm,1.0s						
PEA0B	Petropavlovsk-	56.14	26	ceP	P	01 41 21.1	-0.4
PETK	Petropavlovsk-	56.14	26	P	P	01 41 21.8	+0.3
	comp=Z,78nm,0.8s,baz=197,slow=4.6,SNR=51						
PETK				LR	LR	02 05 30.6	
	comp=Z,826nm,20.1s,baz=217,slow=36						
PETK	Petropavlovsk-	56.14	26	P	P	01 41 22.0	+0.4
KURBB	Kurchatov Arra	56.21	330	P	P	01 41 22.0	-0.1
	comp=Z,29nm,0.9s,baz=128,slow=8.2,SNR=65						
KURK	Kurchatov	56.22	330	ceP	P	01 41 21.8	-0.4
KURK				pmax	pmax		
	comp=Z,77nm,1.3s						
KURK	Kurchatov	56.22	330	P	P	01 41 22.9	+0.7
KURK	Kurchatov	56.22	330	IAMs_20	IAMs_20	02 07 36.7	
	comp=Z,2µm,19.0s						
KURK	Kurchatov	56.22	330	P	P	01 41 22.5	+0.4
KURK				P	P	01 41 22.5	+0.4
DZA	Taraz	56.31	319	eP	P	01 41 22.5	-0.5
	comp=Z,14nm,0.9s,baz=318						
DZA	Taraz	56.31	319	eP	P	01 41 22.5	-0.5
DZA				pmax	pmax		
	comp=Z,13nm,0.9s						
YAK	Yakutsk	56.33	6	P	P	01 41 22.6	-0.2
	comp=Z,10nm,0.3s,baz=179,slow=2.2,SNR=2.2						
YAK	Yakutsk	56.33	6	eP	P	01 41 22.3	-0.4
YAK				e*PP	pP	01 41 30.9	+0.2
YAK				eS	S	01 49 11.1	-0.1
YAK				e*SS	sS	01 49 23.9	-0.3
YAK				pmax	pmax		
	comp=Z,53nm,0.9s						
YAK				pmax	pmax		
	comp=N,22nm,1.1s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.0s						
YAK				smax	smax		
	comp=N,204nm,3.3s						
YAK				smax	smax		
	comp=E,158nm,4.0s						
YAK				MLR	MLR		
	comp=Z,984nm,17.0s						
YAK				MLR	MLR		
	comp=N,635nm,17.0s						
YAK	Yakutsk	56.33	6	P	P	01 41 22.2	-0.6
YAK				IAmb	IAmb	01 41 23.6	
	comp=Z,71nm,1.0s						
YAK				IAMs_20	IAMs_20	02 06 22.9	
	comp=Z,1µm,20.0s						
PET	Petropavlovsk	56.51	27	eP	P	01 41 24.6	+0.5
PET				eS	S	01 49 11.2	-2.5
PET				pmax	pmax		
	comp=Z,86nm,1.3s						
PET				pmax	pmax		
	comp=Z,200nm,8.1s						
PET	Petropavlovsk	56.51	27	P	P	01 41 23.9	-0.2
PET				IAmb	IAmb	01 41 25.7	
	comp=Z,97nm,1.3s						
IUG	Iuzhnay	56.85	317	eP	P	01 41 26.4	-0.7
	comp=Z,14nm,0.8s,baz=317						
IUG	Iuzhnay	56.85	317	eP	P	01 41 26.3	-0.7
IUG				pmax	pmax		
	comp=Z,14nm,0.8s						
KKAR	Karatay Array	56.94	318	P	P	01 41 27.2	-0.3
KKAR				pmax	pmax		
	comp=Z,22nm,0.9s						
KKAR	Karatay Array	56.94	318	P	P	01 41 27.2	-0.3
KKAR	Karatay Array	56.94	318	P	P	01 41 27.3	-0.2
KKAR				IAmb	IAmb	01 41 36.4	
	comp=Z,22nm,0.8s						
TAS	Tashkent	57.02	316	P	P	01 41 28.3	+0.2
TAS				pmax	pmax		
	comp=Z,82nm,1.0s						
TAS	Tashkent	57.02	316	P	P	01 41 28.3	+0.2
TAS				IAmb	IAmb	01 41 37.3	
	comp=Z,82nm,1.0s						
MA2	Magadan	58.37	18	ceP	P	01 41 37.9	+0.7
MA2				pmax	pmax		
	comp=Z,105nm,1.7s						
MA2	Magadan	58.37	18	P	P	01 41 37.4	+0.3
MA2				IAmb	IAmb	01 41 39.0	
	comp=Z,66nm,1.0s						
MA2				IAMs_20	IAMs_20	02 11 11.0	
	comp=Z,1µm,19.0s						
BRZS	Berezniki	58.93	326	eP	P	01 41 41.0	-0.4
	comp=Z,12nm,0.8s,baz=326						
BRZS				eS	S	01 49 48.1	+2.4
	baz=326						
BRZS	Berezniki	58.93	326	eP	P	01 41 40.9	-0.4
BRZS				eS	S	01 49 48.1	+2.4
BRZS				pmax	pmax		
	comp=Z,12nm,0.8s						
HRA	Herat	60.06	306	P	P	01 41 48.7	-1.0
HRA				IAmb	IAmb	01 41 58.4	
	comp=Z,24nm,0.8s						
HRA				IAMs_20	IAMs_20	02 12 32.2	
	comp=Z,1µm,21.0s						
SEY	Seymchan	61.52	16	P	P	01 41 58.2	-0.6
	comp=Z,11nm,0.9s,baz=221,slow=5.4,SNR=29						
SEY	Seymchan	61.52	16	i P	P	01 41 59.3	+0.5
JMDO	Jabal Madar	61.65	292	P	P	01 41 58.7	-1.7
BVAR	Borovoye Array	61.73	329	P	P	01 42 00.1	-0.3
	comp=Z,9.0nm,0.9s,baz=222,slow=33,SNR=55						
BRVK	Borovoye	61.80	329	ceP	P	01 42 01.1	+0.2
BRVK				pmax	pmax		
	comp=Z,57nm,1.3s						
BRVK	Borovoye	61.80	329	P	P	01 42 00.2	-0.6
BRVK	Borovoye	61.80	329	IAMs_20	IAMs_20	02 11 16.5	
	comp=Z,1µm,20.0s						
BRVK	Borovoye	61.80	329	P	P	01 42 00.4	-0.5
BRVK				P	P	01 42 00.4	-0.5
MSVF	Nonsavu	62.08	114	i P	P	01 42 04.0	+0.6
MSVF				pmax	pmax		
	comp=Z,19nm,1.1s						
HOQ	Hoqain	62.49	293	P	P	01 42 03.9	-2.1
BSY	Bisya	62.52	292	P	P	01 42 03.8	-2.5
BSY				P	P	01 42 03.8	-2.5
ARQ	Araqi	63.19	293	P	P	01 42 09.0	-1.7
ARQ				P	P	01 42 09.0	-1.7
SOHO	SOHO	63.25	294	i P	P	01 42 10.0	-1.1
	SNR=6.7						
SOHO	SOHO	63.25	294	P	P	01 42 09.1	-2.0
SOHO				P	P	01 42 09.1	-2.0
UOSS	Minazif	63.63	295	P	P	01 42 11.4	-2.2
UOSS				IAmb	IAmb	01 42 20.5	
	comp=Z,22nm,1.0s						
UOSS	Minazif	63.63	295	P	P	01 42 11.7	-1.9
BANOM	Banah	63.65	296	P	P	01 42 12.7	-1.0
BANOM	Banah	63.65	296	P	P	01 42 13.0	-0.8
HATD	Hatta, Dubai	63.69	295	i P	P	01 42 13.2	-0.7
	SNR=12						
HATD	Hatta, Dubai	63.69	295	P	P	01 42 14.0	+0.1
	SNR=7.1						
SHAO	Shalim	63.70	287	P	P	01 42 14.2	0.0
SHAO				P	P	01 42 14.2	0.0
ASHO	Ashiyiah	63.74	294	i P	P	01 42 13.3	-1.1
	SNR=11						
ASHO	Ashiyiah	63.74	294	P	P	01 42 13.3	-1.1
	SNR=5.7						
ALNE	Al Ain	63.96	294	i P	P	01 42 14.9	-0.9
	SNR=7.2						
ALNE	Al Ain	63.96	294	P	P	01 42 14.9	-0.9
	SNR=7.5						
ALNE				P	P	01 42 14.9	-0.9
	SNR=7.5						
NAZ	Nazwa, Dubai	64.13	295	P	P	01 42 15.7	-1.2
GEYT	Alibeck	64.15	309	P	P	01 42 17.2	+0.4
	comp=Z,12nm,1.0s,baz=131,slow=6.7,SNR=25						
GEYT				LR	LR	02 13 33.4	
	comp=Z,652nm,20.1s,baz=240,slow=39						
GEYT	Alibeck	64.15	309	P	P	01 42 16.8	0.0
GYA0B	ALIBECK ARRAY	64.15	309	IAmb	IAmb	01 42 26.0	
	comp=Z,32nm,1.0s						
FAQ	Al Faqa, Dubai	64.17	294	P	P	01 42 15.8	-1.3
ASUD	Al Ashush, Dub	64.39	294	P	P	01 42 18.0	-0.6
ASUD	Al Ashush, Dub	64.39	294	P	P	01 42 17.9	-0.7
DOK	Doka	65.14	288	P	P	01 42 22.6	-1.0
DOK				P	P	01 42 22.6	-1.0
SOCY	Socotra	65.23	281	P	P	01 42 21.6	-2.8
SOCY				IAmb	IAmb	01 42 31.4	
	comp=Z,59nm,1.2s						
SOCY				IAMs_20	IAMs_20	02 13 34.8	
	comp=Z,1µm,18.0s						
TIXI	Tiksi	65.77	3	P	P	01 42 25.5	-1.1
TIXI				pmax	pmax		
	comp=Z,42nm,0.9s						
TIXI				MLR	MLR		
	comp=Z,1µm,21.0s						
TIXI	Tiksi	65.77	3	P	P	01 42 25.5	-1.1
TIXI				IAmb	IAmb	01 42 26.8	
	comp=Z,42nm,0.9s						
TIXI				IAMs_20	IAMs_20	02 12 35.7	
	comp=Z,1µm,21.0s						
ABKAR	Akbulak array	66.08	322	P	P	01 42 28.8	-0.3
NRIK	Noril'sk	66.67	348	P	P	01 42 32.8	+0.3
	comp=Z,18nm,0.7s,baz=133,slow=6.0,SNR=49						
NRIK				LR	LR	02 15 01.2	
	comp=Z,1µm,19.4s,baz=154,slow=39						
NRIK	Noril'sk	66.67	348	ceP	P	01 42 32.5	+0.1
NRIK				pmax	pmax		
	comp=Z,19nm,0.9s						
NRIK	Noril'sk	66.67	348	IAMs_20	IAMs_20	02 14 40.7	
	comp=Z,2µm,20.0s						
QRZ	Quartz Range	67.06	139	IAmb	IAmb	01 42 38.4	
	comp=Z,57nm,1.2s						
WHZ	Wether Hill Ro	67.09	146	P	P	01 42 35.3	-0.2
RPZ	Rata Peaks	67.66	142	P	P	01 42 39.5	+0.3
	comp=Z,31nm,0.9s,baz=143,slow=2.5,SNR=5.8						
THZ	Tophouse	67.78	140	P	P	01 42 40.3	+0.2
THZ				IAmb	IAmb	01 42 49.9	
	comp=Z,24nm,0.9s						
LTZ	Lake Taylor	67.91	141	P	P	01 42 41.7	+0.8
LTZ				IAmb	IAmb	01 43 06.5	
	comp=Z,62nm,1.2s						
SVE	Sverdlovsk	68.47	329	ceP	P	01 42 44.9	+0.8
SVE				pmax	pmax		
	comp=Z,43nm,1.1s						
BKZ	Black Stump Fm	68.92	136	P	P	01 42 46.5	-0.7
BKZ				IAmb	IAmb	01 42 48.7	
	comp=Z,45nm,0.9s						
ARU	Arti	69.38	329	d iP	P	01 42 49.9	+0.2
ARU						01 43 11.0	
ARU						01 45 23.1	
ARU				PPP	PPP	01 47 06.0	
ARU				S	S	01 52 00.8	+5.9
ARU						01 52 34.8	
ARU				SSS	SSS	01 59 23.4	
ARU				pmax	pmax		
	comp=Z,27nm,1.0s						
ARU				MLR	MLR		
	comp=Z,1µm,21.0s						
ARU	Arti	69.38	329	P	P	01 42 48.9	-0.9
ARU				IAmb	IAmb	01 42 58.5	
	comp=Z,45nm,1.0s						
ATKA	Atka Island	70.59	37	P	P	01 42 55.8	-1.4
ATKA				IAmb	IAmb	01 42 57.6	
	comp=Z,57nm,0.9s						
MAK	Makhachkala	73.02	313	eP	P	01 43 09.2	-2.8
MAK				e		01 45 54.2	
MAK				eS	S	01 52 35.7	-1.8
MAK				eSS	SS	01 57 18.1	-0.5
MAK				pmax	pmax		
	comp=Z,317nm,1.6s						
RAYN	Ar Rayn	73.31	293	i P	P	01 43 13.7	-0.5
	SNR=41						
RAYN	Ar Rayn	73.31	293	P	P	01 43 12.8	-1.4
RAYN				pmax	pmax		
	comp=Z,55nm,1.3s						
RAYN				MLR	MLR		
	comp=Z,2µm,19.0s						
RAYN	Ar Rayn	73.31	293	P	P	01 43 12.8	-1.4
RAYN				IAmb	IAmb	01 43 22.5	
	comp=Z,55nm,1.2s						
RAYN				IAMs_20	IAMs_20	02 20 23.4	
	comp=Z,1µm,19.0s						
NIKH	Nikolski High	73.94	37	P	P	01 43 16.5	-0.8
	baz=259						
NIKH	Nikolski High	73.94	37	P	P	01 43 16.1	-1.1
GROC	Groznyy	74.29	313	eP	P	01 43 18.3	-1.2
GROC				e		01 43 33.8	
GROC				pmax	pmax		
	comp=Z,77nm,1.1s						
BELG	Belogornoye	74.43	323	i P	P	01 43 19.9	-0.2
BELG				pmax	pmax		
	comp=Z,15nm,1.0s						
KIRV	Kirov	74.73	329	ceP	P	01 43 21.7	0.0
GNI	Garni	74.77	310	ceP	P	01 43 23.6	+1.0
GNI				pmax	pmax		
	comp=Z,30nm,1.7s						
GNI	Garni	74.77	310	P	P	01 43 22.8	+0.2
GNI				IAmb	IAmb	01 43 41.7	
	comp=Z,46nm,1.0s						
GAMB	Gambell	75.14	25	P	P	01 43 24.3	+0.3
	baz=253						
GAMB	Gambell	75.14	25	IAmb	IAmb	01 43 25.6	
	comp=Z,29nm,0.9s						
UNV	Unalaska Valle	75.48	36	P	P	01 43 25.5	-0.7
	baz=260						
UNV	Unalaska Valle	75.48	36	IAmb	IAmb	01 43 26.4	
	comp=Z,62nm,1.0s						
UNV				IAMs_20	IAMs_20	02 16 05.7	
	comp=Z,1µm,20.0s						
ZEI	Tsey	75.63	312	eP	P	01 43 25.7	-1.9
ZEI				pmax	pmax		
	comp=Z,88nm,1.3s						
ABPO	Ambohimpanom	75.73	249	P	P	01 43 27.1	-1.4
ABPO	Ambohimpanom	75.73	249	P	P	01 43 27.1	-1.4
ABPO	Ambohimpanom	75.73	249	IAMs_20	IAMs_20	02 16 23.9	
	comp=Z,1µm,18.0s						
AKH	Akhalkalaki	75.82	311	⇑P	P	01 43 30.1	+1.5
NCK	Nalchik	75.92	313	i P	P	01 43 28.7	-0.2
NCK				pmax	pmax		
	comp=Z,20nm,0.9s						
GEVA	Gevas	75.94	308	IAmb	IAmb	01 43 38.4	
	comp=Z,42nm,1.0s						
GEVA				IAMs_20	IAMs_20	02 22 16.4	
	comp=Z,839nm,22.0s						
ATD	Arta Tunnel	76.15	280	IAmb	IAmb	01 43 32.6	
	comp=Z,34nm,0.9s						
KBZ	Khabaz	76.44	313	P	P	01 43 32.0	+0.1
	comp=Z,11nm,0.8s,baz=108,slow=4.4,SNR=23						
KBZ				LR	LR	02 20 36.4	
	comp=Z,935nm,21.4s,baz=84,slow=38						
KBZ	Khabaz	76.44	313	ceP	P	01 43 31.4	-0.4
KBZ				pmax	pmax		
	comp=Z,16nm,1.0s						
GOF	Gofitskoye	76.45	315	⇑eP	P	01 43 37.1	+5.2
GOF				pmax	pmax		
	comp=Z,60nm,1.2s						
NEY	Neytrino	76.53	313	i P	P	01 43 34.2	+1.6
NEY				pmax	pmax		
	comp=Z,13nm,1.3s						

KIV	**Kislovodsk**	**76.61**	**314**	⇓P	**P**	**01 43 34.4**	**+1.4**
KIV	**Kislovodsk**	**76.61**	**314**	*i* P	**P**	**01 43 34.3**	**+1.4**
	SNR=14						
KIV	**Kislovodsk**	**76.61**	**314**	⇑*i*P	**P**	**01 43 33.3**	**+0.3**
KIV				*i*		01 43 41.1	
KIV				*e*		01 46 18.8	
KIV				*i* S	**S**	**01 53 20.9**	**+3.0**
KIV				pmax	pmax		
	comp=Z,25nm,1.0s						
KIV				MLR	MLR		
	comp=Z,601nm,21.0s						
KIV	**Kislovodsk**	**76.61**	**314**	P	**P**	**01 43 32.7**	**-0.3**
KIV				IAmb	IAmb	01 43 42.7	
	comp=Z,61nm,1.1s						
SHA1	**Shidzhatmaz**	**76.62**	**313**	*i* P	**P**	**01 43 31.6**	**-1.6**
CHVG	**Ch'k'valeri**	**76.96**	**312**	⇑P	**P**	**01 43 37.1**	**+2.2**
FALS	**False Pass**	**77.42**	**35**	P	**P**	**01 43 36.3**	**-0.8**
	baz=263						
MARD	**Mardin**	**77.70**	**307**	IAmb	IAmb	01 43 49.1	
	comp=Z,32nm,0.7s						
VRH	**Novokhopyorsk**	**77.90**	**321**	*e*P	**P**	**01 43 38.9**	**-0.9**
VRH				*e*		01 43 46.7	
VRH				pmax	pmax		
	comp=Z,30nm,0.9s						
KOPT	**Kop Dagi**	**78.02**	**309**	P	**P**	**01 43 42.1**	**+1.0**
KOPT				IAmb	IAmb	01 44 01.8	
	comp=Z,84nm,1.6s						
ANM	**Nome**	**78.03**	**25**	P	**P**	**01 43 40.8**	**+0.5**
	baz=259						
ANM	**Nome**	**78.03**	**25**	IAMs_20	IAMs_20	02 16 48.1	
	comp=Z,736nm,20.0s						
KTUT	**Trabzon**	**78.61**	**310**	⇑P	**P**	**01 43 43.9**	**-0.1**
SOC	**Sochi**	**78.74**	**313**	*e*P	**P**	**01 43 43.1**	**-1.6**
SOC				*e*S	**S**	**01 53 41.7**	**+1.1**
SOC				*e*SSS	SSS	02 02 07.4	
SOC				pmax	pmax		
	comp=Z,17nm,0.7s						
SOC				MLR	MLR		
	comp=Z,580nm,18.0s						
VORD	**Divnogorie**	**79.41**	**321**	*e*P	**P**	**01 43 46.9**	**-1.3**
VORD				*e*		01 43 54.1	
VORD				pmax	pmax		
	comp=Z,20nm,1.2s						
VSR	**Storozhevoye**	**79.50**	**321**	*e*P	**P**	**01 43 46.8**	**-1.9**
VSR				*e*		01 43 54.6	
VSR				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CHNA	**Chernabura Isl**	**79.62**	**35**	P	**P**	**01 43 48.9**	**-0.3**
	baz=266						
RDOG	**Red Dog Mine**	**79.64**	**22**	P	**P**	**01 43 49.4**	**+0.2**
	baz=260						
LPSR	**Galich'ya Gora**	**79.73**	**322**	*e*P	**P**	**01 43 49.7**	**-0.2**
LPSR				*e*		01 43 56.7	
LPSR				pmax	pmax		
	comp=Z,40nm,0.9s						
KLMR	**Klimovskoe**	**80.05**	**331**	*e*P	**P**	**01 43 50.9**	**-0.5**
KLMR				*e*		01 46 54.9	
KLMR				pmax	pmax		
	comp=Z,102nm,1.2s						
KLMR	**Klimovskoe**	**80.05**	**331**	*e*P	**P**	**01 43 51.0**	**-0.5**
KLMR				AMP		01 43 59.9	
	comp=Z,102nm,1.2s						
KLMR				*e*PP	**PP**	**01 46 54.9**	**+1.4**
KLMR				LQ	LQ	02 12 42.6	
KLMR				LQ	LQ	02 12 42.6	
KLMR				LR	LR	02 16 15.5	
CHGN	**Chignik**	**80.39**	**34**	IAMs_20	IAMs_20	02 12 40.2	
	comp=Z,858nm,22.0s						
ANN	**Anapa**	**80.42**	**314**	*e*P	**P**	**01 43 58.2**	**+4.4**
ANN				pmax	pmax		
	comp=Z,73nm,1.0s						
ANN				MLR	MLR		
	comp=Z,957nm,21.0s						
GAZ	**Gaziantep**	**80.55**	**307**	IAmb	IAmb	01 44 04.0	
	comp=Z,58nm,1.2s						
MOS	**Moscow**	**80.67**	**325**	*e*P	**P**	**01 43 53.5**	**-1.4**
MOS				pmax	pmax		
	comp=Z,73nm,1.6s						
MOS				MLR	MLR		
	comp=Z,800nm,17.0s						
TMCR	**Tamitsa**	**81.03**	**334**	*e*P	**P**	**01 43 55.4**	**-1.2**
TMCR				pmax	pmax		
	comp=Z,40nm,1.3s						
TOKA	**Tokat**	**81.10**	**310**	P	**P**	**01 43 57.8**	**+0.1**
TOKA				IAmb	IAmb	01 44 06.8	
	comp=Z,39nm,1.1s						
OBN	**Obninsk**	**81.25**	**325**	*ce*P	**P**	**01 43 57.9**	**-0.1**
OBN				*i*		01 44 05.1	
OBN				*e*S	**S**	**01 54 09.3**	**+2.7**
OBN				*e*SS	**SS**	**01 59 22.7**	**+0.6**
OBN				pmax	pmax		
	comp=Z,25nm,1.3s						
OBN				MLR	MLR		
	comp=Z,848nm,18.0s						
OBN	**Obninsk**	**81.25**	**325**	P	**P**	**01 43 58.0**	**0.0**
TTA	**Tatalina**	**81.96**	**27**	P	**P**	**01 44 01.9**	**+0.2**
	baz=268						
DIKM	**Dikmen**	**82.01**	**311**	⇓P	**P**	**01 44 00.7**	**-1.6**
SVW2	**Sparrevohn**	**82.09**	**29**	P	**P**	**01 44 03.2**	**+0.8**
KIBK	**Kibwezi**	**82.14**	**267**	P	**P**	**01 44 04.2**	**+0.5**
	SNR=12						
A21K	**Barrow**	**82.22**	**19**	P	**P**	**01 44 03.2**	**+0.4**
	baz=266,SNR=32						
A21K	**Barrow**	**82.22**	**19**	IAmb	IAmb	01 44 04.5	
	comp=Z,67nm,1.0s						
A21K				IAMs_20	IAMs_20	02 20 39.4	
	comp=Z,661nm,20.0s						
LVZ	**Lovozero**	**82.64**	**338**	*e*P	**P**	**01 44 06.9**	**+1.8**
LVZ				pmax	pmax		
	comp=Z,34nm,1.1s						
SII	**Sitkinak Islan**	**82.75**	**34**	P	**P**	**01 44 05.1**	**-0.8**
	baz=270						
SIM	**Simferopol'**	**82.78**	**314**	*ce*P	**P**	**01 44 05.2**	**-1.1**
SIM				*e*		01 44 13.0	
SIM				S	**S**	**01 54 18.7**	**-4.1**
SIM				pmax	pmax		
	comp=Z,43µm,0.7s						
KMBO	**Kilima Mbogo**	**82.80**	**268**	P	**P**	**01 44 08.0**	**+0.7**
	comp=Z,13nm,0.9s,baz=56,slow=6.7,SNR=34						
KMBO				LR	LR	02 21 10.0	
	comp=Z,633nm,19.7s,baz=46,slow=36						
KMBO	**Kilima Mbogo**	**82.80**	**268**	P	**P**	**01 44 08.0**	**+0.7**
IMAR	**Indian Mountai**	**83.03**	**24**	P	**P**	**01 44 07.0**	**-0.2**
APA	**Apatity**	**83.10**	**337**	⇓*i*P	**P**	**01 44 07.2**	**-0.3**
APA				*i*		01 44 16.5	
APA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
APA				MLR	MLR		
	comp=Z,2µm,24.0s						
HLP	**Hilina Pali**	**83.14**	**71**	P	**P**	**01 44 07.9**	**-0.8**
OBL	**Observatory Le**	**83.15**	**71**	P	**P**	**01 44 09.7**	**+0.8**
OHAK	**Old Harbor**	**83.23**	**33**	P	**P**	**01 44 08.6**	**+0.2**
	baz=271						
OHAK	**Old Harbor**	**83.23**	**33**	IAMs_20	IAMs_20	02 22 02.4	
	comp=Z,1µm,20.0s						
BR131	**Keskin Array S**	**83.29**	**309**	*i* P	**P**	**01 44 08.9**	**-0.3**
BRTR	**Keskin Array B**	**83.29**	**309**	P	**P**	**01 44 09.0**	**-0.3**
	comp=Z,3.4nm,0.9s,baz=111,slow=5.4,SNR=13						
BRTR				LR	LR	02 26 40.6	
	comp=Z,382nm,21.7s,baz=89,slow=40						
BRTR	**Keskin Array B**	**83.29**	**309**	P	**P**	**01 44 08.7**	**-0.5**
BRTR	**Keskin Array B**	**83.29**	**309**	P	**P**	**01 44 08.7**	**-0.5**
KDAK	**Kodiak Island**	**83.61**	**33**	LR	LR	02 20 05.4	
	comp=Z,807nm,20.4s,baz=271,slow=35						
KDAK	**Kodiak Island**	**83.61**	**33**	P	**P**	**01 44 10.6**	**+0.4**
	baz=271						
KDAK	**Kodiak Island**	**83.61**	**33**	*i* P	**P**	**01 44 09.2**	**-1.1**
KDAK				pmax	pmax		
	comp=Z,78nm,1.0s						
KDAK	**Kodiak Island**	**83.61**	**33**	P	**P**	**01 44 10.7**	**+0.4**
KDAK				IAmb	IAmb	01 44 11.8	
	comp=Z,51nm,1.0s						
KDAK	**Kodiak Island**	**83.61**	**33**	IAMs_20	IAMs_20	02 19 34.1	
	comp=Z,1µm,20.0s						
CHUM	**Lake Minchumin**	**83.64**	**26**	P	**P**	**01 44 11.1**	**+0.8**
	baz=271,SNR=14						
MAW	**Mawson**	**83.64**	**199**	LR	LR	02 16 45.0	
	comp=Z,689nm,21.2s,baz=52,slow=32						
PPLA	**Purkeypile**	**83.71**	**27**	P	**P**	**01 44 11.1**	**+0.2**
	baz=271,SNR=10						
SPCR	**Spurr Chakacha**	**83.73**	**29**	P	**P**	**01 44 10.7**	**-0.2**
	baz=271,SNR=17						
SKT	**Skwentna**	**84.03**	**28**	P	**P**	**01 44 11.7**	**-0.8**
	baz=272,SNR=44						
HOM	**Homer**	**84.05**	**31**	P	**P**	**01 44 13.2**	**+0.7**
	baz=272						
LODK	**Lodwar**	**84.21**	**273**	P	**P**	**01 44 14.2**	**-0.2**
	SNR=15						
BPAW	**Bear Paw Mtn.**	**84.22**	**26**	P	**P**	**01 44 13.7**	**+0.4**
	baz=272						
CAPN	**Captain Cook N**	**84.26**	**30**	P	**P**	**01 44 13.8**	**+0.4**
	baz=272,SNR=6.0						
CNPM	**China Poot**	**84.26**	**31**	P	**P**	**01 44 12.8**	**-0.8**
KTH	**Kantishna Hill**	**84.27**	**27**	IAmb	IAmb	01 44 23.6	
	comp=Z,65nm,1.3s						
MLY	**Manley**	**84.30**	**25**	P	**P**	**01 44 14.3**	**+0.5**
	baz=272,SNR=58						
SUA	**Susitna One**	**84.43**	**29**	P	**P**	**01 44 14.0**	**-0.6**
	baz=272,SNR=65						
SUA	**Susitna One**	**84.43**	**29**	P	**P**	**01 44 13.8**	**-0.7**
COLD	**Coldfoot**	**84.43**	**23**	P	**P**	**01 44 15.4**	**+1.1**
	baz=272,SNR=43						
BRSE	**Bradley Lake S**	**84.50**	**31**	P	**P**	**01 44 14.2**	**-0.6**
	baz=273						
TRF	**Thorofare Moun**	**84.55**	**27**	P	**P**	**01 44 15.0**	**-0.3**
	baz=273,SNR=31						
PUL	**Pulkovo**	**84.60**	**329**	*i* P	**P**	**01 44 15.4**	**+0.1**
PUL				pmax	pmax		
	comp=Z,39nm,0.7s						
TOLK	**Toolik Lake Re**	**84.61**	**22**	P	**P**	**01 44 16.0**	**+0.8**
	baz=273,SNR=32						
CUT	**Chulitna**	**84.61**	**28**	P	**P**	**01 44 14.5**	**-0.8**
	baz=273,SNR=16						
I23K	**Minto, Yukon-K**	**84.87**	**25**	P	**P**	**01 44 17.1**	**+0.6**
	baz=273,SNR=38						
BWN	**Browne**	**84.88**	**26**	IAMs_20	IAMs_20	02 22 41.3	
	comp=Z,661nm,21.0s						
RC01	**Rabbit Creek A**	**84.93**	**29**	P	**P**	**01 44 16.4**	**-0.5**
	baz=273,SNR=23						
O22K	**Cooper Landing**	**84.97**	**30**	P	**P**	**01 44 16.6**	**-0.6**
	baz=273,SNR=9.7						
O22K	**Cooper Landing**	**84.97**	**30**	P	**P**	**01 44 16.6**	**-0.6**
O22K				IAMs_20	IAMs_20	02 22 03.1	
	comp=Z,620nm,20.0s						
NEA2	**Nenana**	**85.03**	**26**	P	**P**	**01 44 17.3**	**-0.1**
	baz=274,SNR=13						
SEW	**Seward**	**85.13**	**30**	P	**P**	**01 44 17.6**	**-0.3**
	baz=274,SNR=10.0						
SEW	**Seward**	**85.13**	**30**	IAMs_20	IAMs_20	02 19 45.3	
	comp=Z,882nm,22.0s						
MCK	**McKinley**	**85.14**	**27**	P	**P**	**01 44 17.7**	**-0.3**
	baz=274,SNR=81						
PMR	**Palmer**	**85.19**	**29**	P	**P**	**01 44 17.8**	**-0.4**
	baz=274,SNR=14						
RND	**Reindeer**	**85.20**	**27**	IAMs_20	IAMs_20	02 25 05.8	
	comp=Z,650nm,20.0s						
WAT2	**Susitna Watana**	**85.35**	**27**	P	**P**	**01 44 18.5**	**-0.7**
	baz=274,SNR=47						
MDM	**Murphy Dome**	**85.36**	**25**	IAmb	IAmb	01 44 21.1	
	comp=Z,55nm,1.2s						
WRH	**Wood River Hil**	**85.46**	**26**	P	**P**	**01 44 19.0**	**-0.5**
WRH				IAmb	IAmb	01 44 20.5	
	comp=Z,66nm,1.2s						
TCOL	**CIGO, UAF Yank**	**85.53**	**25**	P	**P**	**01 44 19.3**	**-0.5**
	baz=275						
TCOL	**CIGO, UAF Yank**	**85.53**	**25**	IAmb	IAmb	01 44 52.9	
	comp=Z,32nm,1.3s						
TCOL				IAMs_20	IAMs_20	02 19 31.4	
	comp=Z,644nm,21.0s						
COLA	**College**	**85.53**	**25**	P	**P**	**01 44 19.2**	**-0.6**
	baz=275						
COLA	**College**	**85.53**	**25**	*i* P	**P**	**01 44 19.3**	**-0.6**
COLA				pmax	pmax		
	comp=Z,12nm,0.9s						
COLA	**College**	**85.53**	**25**	P	**P**	**01 44 18.6**	**-1.2**
SML	**Sawmill**	**85.56**	**28**	P	**P**	**01 44 20.0**	**-0.1**
	baz=274,SNR=58						
CCB	**Clear Creek Bu**	**85.57**	**26**	IAmb	IAmb	01 44 21.5	
	comp=Z,32nm,1.0s						
POKR	**Poker Plat Res**	**85.69**	**25**	P	**P**	**01 44 20.2**	**-0.5**
	baz=275						
POKR	**Poker Plat Res**	**85.69**	**25**	IAmb	IAmb	01 45 13.8	
	comp=Z,40nm,1.6s						
POKR				IAMs_20	IAMs_20	02 27 30.6	
	comp=Z,669nm,20.0s						
WAT6	**Susitna Watana**	**85.77**	**28**	P	**P**	**01 44 21.4**	**+0.1**
	baz=275,SNR=75						
AKASG	**Malin Array Be**	**85.79**	**320**	P	**P**	**01 44 20.7**	**-0.7**
	comp=Z,4.6nm,0.8s,baz=72,slow=4.5,SNR=20						
AKASG				LR	LR	02 27 53.7	
	comp=Z,1µm,18.3s,baz=75,slow=39						
AKASG	**Malin Array Be**	**85.79**	**320**	P	**P**	**01 44 20.6**	**-0.8**
AKASG				pmax	pmax		
	comp=Z,34nm,1.3s						
AKASG	**Malin Array Be**	**85.79**	**320**	P	**P**	**01 44 20.6**	**-0.8**
AKBB	**Malin Array Si**	**85.79**	**320**	*ce*P	**P**	**01 44 19.4**	**-2.0**
AKBB	**Malin Array Si**	**85.79**	**320**	IAmb	IAmb	01 44 29.9	
	comp=Z,78nm,1.4s						
ARCES	**ARCESS Array B**	**85.91**	**339**	P	**P**	**01 44 21.5**	**-0.2**
	comp=Z,9.4nm,0.9s,baz=82,slow=5.5,SNR=13						
ARCES				LR	LR	02 26 07.8	
	comp=Z,1µm,19.0s,baz=105,slow=38						
ARCES	**ARCESS Array B**	**85.91**	**339**	P	**P**	**01 44 20.2**	**-1.5**
ARCES				pmax	pmax		
	comp=Z,42nm,1.2s						
ARCES	**ARCESS Array B**	**85.91**	**339**	P	**P**	**01 44 20.2**	**-1.5**
IL31		**85.95**	**25**	IAmb	IAmb	01 44 30.5	
	comp=Z,44nm,1.6s						
ILAR	**Eielson Array**	**85.95**	**25**	P	**P**	**01 44 20.6**	**-1.4**
	comp=Z,4.8nm,0.7s,baz=257,slow=4.1,SNR=41						
ILAR				LR	LR	02 25 49.6	
	comp=Z,329nm,19.0s,baz=295,slow=38						
HDA	**Harding Lake**	**85.96**	**26**	P	**P**	**01 44 21.1**	**-0.9**
	baz=276						
HDA	**Harding Lake**	**85.96**	**26**	IAmb	IAmb	01 44 22.2	
	comp=Z,34nm,0.9s						
SCM	**Sheep Creek Mo**	**86.03**	**28**	IAMs_20	IAMs_20	02 22 59.9	
	comp=Z,681nm,22.0s						
MNK	**Minsk**	**86.29**	**324**	*i* P	**P**	**01 44 22.9**	**-0.9**
	comp=E,2.0nm,0.9s						
MNK				*i* P	**P**	**01 44 22.9**	**-0.9**
	comp=N,13nm,1.4s						
MNK				*i* P	**P**	**01 44 22.9**	**-0.9**
	comp=Z,17nm,0.8s						
MNK				*i* PP	**PP**	**01 47 43.6**	**-1.1**
MNK				*i* PPP	PPP	01 49 37.5	
MNK				*i* S	**S**	**01 54 48.8**	**-8.6**
MNK				*i* ScS	**ScS**	**01 55 06.8**	**+0.8**
MNK				*i* SS	**SS**	**02 00 39.2**	**+2.6**
MNK				*i* SSS	SSS	02 04 11.2	
MNK				*i* LQ	LQ	02 17 22.9	
MNK				*i* LR	LR	02 23 31.2	
MNK				*i* LRM	MLR	02 24 34.7	
	comp=E,32nm,17.1s						
MNK				*i* LRM	MLR	02 24 37.6	
	comp=N,516nm,21.9s						
MNK				*i* LRM	MLR	02 24 37.6	
	comp=Z,326nm,18.1s						
MILM	**Milestii Mici**	**86.36**	**317**	⇑P	**P**	**01 44 25.1**	**+0.7**
PRP	**Porcupine Dome**	**86.44**	**25**	P	**P**	**01 44 24.5**	**-0.1**
	baz=277						
PRP	**Porcupine Dome**	**86.44**	**25**	IAMs_20	IAMs_20	02 21 27.6	
	comp=Z,749nm,22.0s						
TLCR		**86.51**	**315**	⇑P	P	01 44 32.8	+7.7
TLCR		**86.51**	**315**	⇑P	P	01 44 32.8	+7.7
VSU	**Vasula**	**86.54**	**328**	*e*P	**P**	**01 44 25.0**	**0.0**
VSU	**Vasula**	**86.54**	**328**	*i* P	**P**	**01 44 25.3**	**+0.3**
VSU				pmax	pmax		
	comp=Z,84nm,1.1s						
M24K	**Tolsona, Glenn**	**86.54**	**28**	P	**P**	**01 44 25.6**	**+0.6**
	baz=276,SNR=24						
M24K	**Tolsona, Glenn**	**86.54**	**28**	P	**P**	**01 44 25.4**	**+0.3**
FINES	**FINESS Array B**	**86.56**	**331**	P	**P**	**01 44 25.2**	**+0.2**
	comp=Z,3.5nm,0.9s,baz=146,slow=0.7,SNR=8.7						
FINES				LR	LR	02 25 18.2	
	comp=Z,671nm,19.1s,baz=82,slow=37						
FINES	**FINESS Array B**	**86.56**	**331**	P	**P**	**01 44 24.8**	**-0.2**
SORM	**Soroca**	**86.57**	**318**	⇓P	**P**	**01 44 24.6**	**-0.7**
SORM	**Soroca**	**86.57**	**318**	⇓P	**P**	**01 44 24.6**	**-0.7**
HIN	**Hinchinbrook I**	**86.57**	**30**	IAMs_20	IAMs_20	02 22 43.3	
	comp=Z,722nm,20.0s						
BMAR	**Burnt Mountain**	**86.58**	**23**	P	**P**	**01 44 24.4**	**-0.7**
VNDA	**Vanda**	**86.64**	**172**	LR	LR	02 23 39.1	
	comp=Z,769nm,20.3s,baz=324,slow=36						
KLU	**Klutina**	**86.73**	**29**	P	**P**	**01 44 26.2**	**+0.2**
	baz=277						
KLU	**Klutina**	**86.73**	**29**	IAMs_20	IAMs_20	02 23 12.5	
	comp=Z,715nm,21.0s						
PAX	**Paxson**	**86.77**	**27**	P	**P**	**01 44 26.4**	**+0.3**
	baz=277,SNR=15						
PAX	**Paxson**	**86.77**	**27**	IAmb	IAmb	01 44 27.7	
	comp=Z,33nm,1.2s						
PAX				IAMs_20	IAMs_20	02 26 44.4	
	comp=Z,827nm,20.0s						
TIRR	**Tirgusor**	**86.86**	**314**	⇓P	**P**	**01 44 31.3**	**+4.5**
TIRR	**Tirgusor**	**86.86**	**314**	⇓P	**P**	**01 44 31.3**	**+4.5**
IDID	**Didziasalis**	**86.87**	**325**	*e*P	**P**	**01 44 26.1**	**-0.6**
NACGM	**Naroch**	**86.88**	**325**	*i* P	**P**	**01 44 26.4**	**-0.3**
NACGM				*i* P	**P**	**01 44 26.4**	**-0.3**
NACGM				*i* P	**P**	**01 44 26.4**	**-0.3**
NACGM				*i* Pb	**pP**	**01 44 36.2**	**+1.1**
	comp=Z,79nm,1.5s						
NACGM				*i* PP	PP	01 48 20.4	+31
NACGM				*i* PPP	PPP	01 49 39.1	
NACGM				*i* S	**S**	**01 55 05.0**	**+1.9**
NACGM				*i* PS	**PnS**	**01 56 14.3**	**+10**
NACGM				*i* SSS	SSS	02 04 32.8	
NACGM				SKKS	SKKSdf	02 08 54.2	-30
NACGM				*i* LQ	LQ	02 15 23.6	
NACGM				*i* LR	LR	02 23 01.0	
EYAK	**Cordova Ski Ar**	**86.93**	**30**	P	**P**	**01 44 27.1**	**+0.3**
	baz=277						
EYAK	**Cordova Ski Ar**	**86.93**	**30**	IAMs_20	IAMs_20	02 24 55.7	
	comp=Z,711nm,20.0s						
CFR	**Carcaliu**	**86.99**	**315**	⇑P	**P**	**01 44 28.1**	**+0.7**
CFR	**Carcaliu**	**86.99**	**315**	⇑P	**P**	**01 44 28.1**	**+0.7**
TLBR	**Topalu**	**87.11**	**314**	⇑P	P	01 44 36.9	+8.8
IIGN	**Ignalina**	**87.16**	**325**	*e*P	**P**	**01 44 27.2**	**-0.9**
HARR	**Harsova**	**87.18**	**314**	⇓P	P	01 44 35.6	+7.2
ISAL	**Salakas**	**87.19**	**325**	*e*P	**P**	**01 44 27.5**	**-0.7**
SCRK	**Sand Creek**	**87.30**	**26**	P	**P**	**01 44 28.8**	**+0.1**
	baz=278						
DOT	**Dot Lake**	**87.31**	**26**	IAmb	IAmb	01 44 30.0	
	comp=Z,40nm,1.5s						
N25K	**Chitina, Valde**	**87.35**	**28**	P	**P**	**01 44 29.1**	**+0.2**
	baz=278,SNR=8.4						
N25K	**Chitina, Valde**	**87.35**	**28**	IAmb	IAmb	01 44 30.8	
	comp=Z,38nm,1.4s						
N25K				IAMs_20	IAMs_20	02 22 18.7	
	comp=Z,672nm,22.0s						
BMRM	**Bremner River**	**87.43**	**29**	P	**P**	**01 44 29.2**	**-0.2**
	baz=278						
RAGM	**Ragged Mountai**	**87.47**	**30**	P	**P**	**01 44 29.6**	**+0.1**
RAGM				IAmb	IAmb	01 44 31.1	
	comp=Z,34nm,1.2s						
MENT	**Mentasta**	**87.57**	**27**	IAMs_20	IAMs_20	02 27 16.4	
	comp=Z,759nm,21.0s						
KAIM	**Kayak Island**	**87.66**	**30**	P	**P**	**01 44 30.5**	**+0.1**
	baz=278						
HMT	**Hamilton**	**87.69**	**30**	IAMs_20	IAMs_20	02 21 18.1	
	comp=Z,840nm,22.0s						
GLB	**Gilahina Butte**	**87.75**	**29**	IAMs_20	IAMs_20	02 21 04.2	
	comp=Z,820nm,22.0s						
TESR	**Tescani**	**87.89**	**316**	⇑P	**P**	**01 44 31.2**	**-0.6**
VRI	**Vrincioaia**	**87.90**	**316**	⇓P	**P**	**01 44 32.4**	**+0.5**
VRI	**Vrincioaia**	**87.90**	**316**	⇓P	**P**	**01 44 32.4**	**+0.5**
VRDI	**Verde Repeater**	**87.95**	**29**	IAMs_20	IAMs_20	02 25 35.6	
	comp=Z,656nm,22.0s						
BISRR	**Bisoca**	**87.95**	**315**	⇓P	P	01 44 21.4	-11
PLOR	**Plostina**	**87.96**	**316**	⇓P	P	01 44 40.1	+7.9
MCARA	**McCarthy VSAT**	**88.13**	**29**	P	**P**	**01 44 32.9**	**+0.3**
	baz=279						
MCARA	**McCarthy VSAT**	**88.13**	**29**	IAmb	IAmb	01 45 09.0	
	comp=Z,17nm,0.9s						
MCARA				IAMs_20	IAMs_20	02 21 13.4	
	comp=Z,675nm,22.0s						
BIZ	**Bicaz**	**88.21**	**317**	⇓P	**P**	**01 44 33.5**	**+0.2**
NEHR	**Nehoiu**	**88.26**	**315**	⇑P	P	01 44 41.3	+7.7
EGAK	**Eagle**	**88.38**	**25**	P	**P**	**01 44 33.3**	**-0.4**
	baz=281						
PABE	**Paberze**	**88.41**	**326**	*e*P	**P**	**01 44 33.3**	**-0.7**
BCAR	**Beaver Creek A**	**88.42**	**27**	P	**P**	**01 44 34.1**	**+0.1**
MLR	**Muntele Rosu**	**88.49**	**315**	⇑P	**P**	**01 44 34.4**	**-0.4**
MLR	**Muntele Rosu**	**88.49**	**315**	⇑P	**P**	**01 44 34.4**	**-0.4**
BALM	**Baldy**	**88.51**	**29**	IAmb	IAmb	01 44 36.0	
	comp=Z,14nm,0.9s						
OZUR		**88.53**	**316**	⇑P	P	01 44 49.3	+14
BURAR	**Bucovina Array**	**88.72**	**318**	⇑P	**P**	**01 44 35.9**	**+0.1**
BURAR	**Bucovina Array**	**88.72**	**318**	⇑P	**P**	**01 44 35.9**	**+0.1**
BURAR	**Bucovina Array**	**88.72**	**318**	P	**P**	**01 44 35.5**	**-0.3**
BUR08	**Bucovina Ar. S**	**88.73**	**318**	IAmb	IAmb	01 44 44.5	
	comp=Z,81nm,1.9s						
CTG	**Chitna Glacier**	**89.00**	**29**	P	**P**	**01 44 37.4**	**+0.5**
	baz=281						
CTGM	**Chitina Glacie**	**89.01**	**29**	IAmb	IAmb	01 44 38.9	
	comp=Z,33nm,1.0s						
CTGM				IAMs_20	IAMs_20	02 26 12.5	
	comp=Z,622nm,20.0s						
SUW	**Suwalki**	**89.09**	**324**	*e*P	**P**	**01 44 36.1**	**-1.1**
VOIR		**89.12**	**315**	⇓P	P	01 44 44.7	+6.9
LVV	**L'vov**	**89.20**	**320**	*e*P	P	01 44 30.0	-7.9
LVV				*e*		01 48 04.8	
LVV				*e*S	**S**	**01 55 27.9**	**+2.5**
MBAR	**Mbarara**	**89.22**	**269**	*c i*P	**P**	**01 44 38.8**	**-0.1**
MBAR				pmax	pmax		
	comp=Z,13nm,1.0s						
MBAR				pmax	pmax		
	comp=Z,16nm,1.0s						
MBAR	**Mbarara**	**89.22**	**269**	P	**P**	**01 44 39.2**	**+0.3**
MBAR	**Mbarara**	**89.22**	**269**	IAMs_20	IAMs_20	02 27 50.1	
	comp=Z,1µm,18.0s						
ARCR	**ARCALIA**	**89.38**	**317**	⇑P	**P**	**01 44 39.0**	**+0.2**
PLVB	**Pleven**	**89.71**	**313**	⇓P	P	01 44 48.1	+7.7
EPYK	**Eagle Plains**	**89.83**	**23**	P	**P**	**01 44 40.4**	**-0.2**
	baz=285						
EPYK	**Eagle Plains**	**89.83**	**23**	IAMs_20	IAMs_20	02 24 09.9	
	comp=Z,604nm,21.0s						
KOLS	**Kolonicke sedl**	**90.47**	**319**	*e*P	**P**	**01 44 44.8**	**+0.9**
KOLS				pmax	pmax		
	comp=Z,37nm,1.9s						
KOLS	**Kolonicke sedl**	**90.47**	**319**	*e*P	**P**	**01 44 44.8**	**+0.9**
INK	**Inuvik**	**90.48**	**21**	P	**P**	**01 44 43.0**	**-0.4**
	comp=Z,14nm,1.0s,baz=275,slow=6.0,SNR=33						
INK				LR	LR	02 30 12.3	
	comp=Z,287nm,18.8s,baz=283,slow=39						
INK	**Inuvik**	**90.48**	**21**	IAmb	IAmb	01 44 44.4	
	comp=Z,19nm,1.1s						
UZH	**Uzhgorod**	**90.51**	**319**	*e*P	**P**	**01 44 42.5**	**-1.5**
UZH				*e*		01 44 54.7	
DRGR		**90.53**	**317**	⇓P	**P**	**01 44 44.3**	**0.0**
DRGR		**90.53**	**317**	⇓P	**P**	**01 44 44.3**	**0.0**
DEV	**Deva**	**90.55**	**316**	⇑P	P	01 44 51.4	+7.1
DEV	**Deva**	**90.55**	**316**	⇑P	P	01 44 51.4	+7.1
IDI	**Anoyia**	**90.61**	**305**	⇓P	**P**	**01 44 44.9**	**0.0**
GZR	**Gura Zlata**	**90.71**	**316**	⇓P	P	01 44 52.3	+7.2
GZR	**Gura Zlata**	**90.71**	**316**	⇓P	P	01 44 52.3	+7.1
VTS	**Vitosha**	**90.83**	**313**	⇓P	**P**	**01 44 50.6**	**+4.7**
VTS	**Vitosha**	**90.83**	**313**	⇓P	**P**	**01 44 50.6**	**+4.7**
HYT	**Haines Junctio**	**90.86**	**29**	IAmb	IAmb	01 44 47.5	
	comp=Z,19nm,1.1s						
HYT				IAMs_20	IAMs_20	02 28 14.7	
	comp=Z,584nm,21.0s						
CRVS	**Cervenica-Dubn**	**91.00**	**319**	*e*	P	01 44 54.2	+7.8
HERR	**Herculane**	**91.05**	**315**	⇑P	**P**	**01 44 45.3**	**-1.3**
SIRR	**Siria**	**91.34**	**317**	⇓P	P	01 44 55.8	+7.9
VAY	**Valandovo**	**91.52**	**312**	*i* P	P	01 44 55.1	+6.2
STIP	**Stip**	**91.75**	**312**	*i* P	**P**	**01 44 48.8**	**-1.2**
SYO	**Syowa Base**	**92.14**	**201**	⇑*e*sP	P	01 44 56.8	+5.8
SYO	**Syowa Base**	**92.14**	**201**	⇑*i*PP	PP	01 48 30.2	-1.0
SKO	**Skopje**	**92.25**	**312**	*i* P	P	01 44 58.7	+6.5
SKAG	**Skagway**	**92.27**	**30**	P	**P**	**01 44 52.3**	**+0.4**
	baz=286						
PPT	**Papeete**	**92.31**	**107**	LR	LR	02 21 35.2	
	comp=Z,109nm,18.3s,baz=272,slow=32						
PPT2	**Papeete2**	**92.31**	**107**	*e*S	**S**	**01 55 52.4**	**-2.8**
	comp=Z,567nm,26.5s						
PPT2	**Papeete2**	**92.31**	**107**	*e*LQ	LQ	02 10 35.9	
	comp=Z,1µm,30.8s						
PPT2				*e*LR	LR	02 14 28.6	
	comp=Z,1µm,26.5s						
BESE	**Bessie Mountai**	**92.75**	**30**	IAmb	IAmb	01 44 56.5	
	comp=Z,31nm,1.2s						
DIVS	**Divibare**	**92.90**	**315**	IAMs_20	IAMs_20	02 29 32.6	
	comp=Z,730nm,20.0s						
TBI	**Tubuai**	**92.96**	**113**	*e*S	**S**	**01 56 01.8**	**+1.1**
	comp=Z,471nm,28.0s						
TBI	**Tubuai**	**92.96**	**113**	*e*LQ	LQ	02 10 52.9	
	comp=Z,718nm,31.2s						
TBI				*e*LR	LR	02 14 49.0	
	comp=Z,1µm,35.0s						
JIS	**Juneau Island**	**93.07**	**31**	IAmb	IAmb	01 44 57.8	
	comp=Z,33nm,1.2s						
LSZ	**Lusaka**	**93.20**	**255**	P	**P**	**01 44 56.2**	**-1.1**
LSZ				pmax	pmax		
	comp=Z,100nm,1.9s						
LSZ				MLR	MLR		
	comp=Z,2µm,20.0s						

LSZ	**Lusaka**	**93.20**	**255**	P	**P**	**01 44 56.2**	**-1.1**
LSZ	**Lusaka**	**93.20**	**255**	P	**P**	**01 44 56.8**	**-0.5**
LSZ				P	**P**	**01 44 56.8**	**-0.5**
C36M	**Paulatuk**	**93.27**	**19**	P	**P**	**01 44 55.9**	**-0.5**
	baz=297						
MORC	**Moravsky Berou**	**93.33**	**321**	⇓P	P	01 45 02.2	+5.1
MORC	**Moravsky Berou**	**93.33**	**321**	*e*P	P	01 45 04.3	+7.1
MORC	**Moravsky Berou**	**93.33**	**321**	⇓P	P	01 45 02.2	+5.0
MORH	**Mrgy, Hungar**	**93.40**	**317**	⇓P	**P**	**01 44 55.2**	**-2.2**
JAVC	**Velka Javorina**	**93.46**	**320**	*e*P	P	01 45 05.9	+8.1
NOA	**NORSAR Array B**	**93.64**	**332**	LR	LR	02 29 13.1	
	comp=Z,945nm,19.6s,baz=70,slow=37						
KRLC	**Kraliky**	**93.74**	**321**	*e*P	**P**	**01 45 03.5**	**+4.5**
KRLC	**Kraliky**	**93.74**	**321**	*e*P	**P**	**01 45 03.5**	**+4.5**
DPC	**Dobruska-Polom**	**93.96**	**321**	*e*P	**P**	**01 45 00.7**	**+0.7**
DPC	**Dobruska-Polom**	**93.96**	**321**	*e*P	**P**	**01 45 00.7**	**+0.7**
OSTC	**Ostas**	**93.97**	**322**	*e*P	P	01 45 07.4	+7.3
DAG	**Danmarks Havn**	**94.00**	**351**	⇑*i*P	**P**	**01 44 58.1**	**-1.5**
	comp=Z,46nm,1.1s						
DAG	**Danmarks Havn**	**94.00**	**351**	⇑*i*P	**P**	**01 44 58.1**	**-1.5**
DAG				pmax	pmax		
	comp=Z,46nm,1.1s						
DAG	**Danmarks Havn**	**94.00**	**351**	⇑*i*P	**P**	**01 44 58.2**	**-1.5**
DAG				IAmb	IAmb	01 45 07.6	
	comp=Z,46nm,1.1s						
VRAC	**Vranov**	**94.05**	**320**	⇑P	P	01 45 08.4	+8.0
VRAC	**Vranov**	**94.05**	**320**	*e*P	P	01 45 08.0	+7.6
CHVC	**Chvalec**	**94.07**	**322**	*e*P	P	01 45 07.1	+6.6
KRUC	**Moravsky**	**94.23**	**320**	*e*P	P	01 45 08.5	+7.3
CRAG	**Craig**	**94.56**	**33**	P	**P**	**01 45 02.8**	**+0.3**
	baz=288						
WRAK	**Wrangell Islan**	**94.68**	**32**	P	**P**	**01 45 03.5**	**+0.4**
	baz=288						
WRAK	**Wrangell Islan**	**94.68**	**32**	P	**P**	**01 45 02.9**	**-0.2**
WRAK				IAmb	IAmb	01 45 04.8	
	comp=Z,29nm,1.0s						
PVCC	**Panska Ves**	**95.00**	**322**	*e*P	P	01 45 12.4	+7.7
PVCC	**Panska Ves**	**95.00**	**322**	*e*P	P	01 45 12.4	+7.7
PRU	**Pruhonice**	**95.16**	**321**	*e*P	P	01 45 12.5	+7.0
PRU	**Pruhonice**	**95.16**	**321**	*e*P	P	01 45 12.5	+7.0
ARSA	**Arzberg**	**95.25**	**318**	*e*P	P	01 45 13.2	+7.2
	comp=Z,9.7nm,1.2s						
BRG	**Berggiesshubel**	**95.28**	**322**	*e*P	P	01 45 13.3	+7.3
BRG				Amp		01 45 15.8	
	comp=Z,32nm,1.6s						
CKRC	**Cesky Krumlov**	**95.62**	**320**	*e*P	P	01 45 15.0	+7.3
SOKA	**Soboth**	**95.72**	**318**	*e*P	P	01 45 16.2	+8.0
	comp=Z,9.0nm,1.3s						
CLL	**Collm**	**95.73**	**323**	*e*PP	**PP**	**01 48 58.0**	**-1.5**
CLL				*e*S	**S**	**01 56 28.0**	**+4.2**
CLL				*e*PPS	PPS	01 58 14.0	
CLL				*e*		01 59 06.0	
CLL				*e*SS	**SS**	**02 02 50.0**	**-2.9**
CLL				*e*SSS	SSS	02 06 42.0	
CLL				*e*		02 08 06.0	
CLL				*e*SSSS		02 10 18.0	
CLL				LmV		02 32 00.0	
	comp=Z,900nm,22.0s						
CLL	**Collm**	**95.73**	**323**	*e*P	P	01 45 15.0	+7.0
CLL				*e*		01 48 58.0	
CLL				*e*S	**S**	**01 56 28.0**	**+4.2**
CLL				MLR	MLR		
	comp=Z,900nm,22.0s						
MOA	**Molln**	**95.91**	**319**	*e*P	P	01 45 16.1	+7.1
	comp=Z,10nm,1.3s						
KHC	**Kasperske Hory**	**96.00**	**321**	*i* P	**P**	**01 45 09.8**	**+0.4**
KHC				pmax	pmax		
	comp=Z,11nm,1.5s						
KHC	**Kasperske Hory**	**96.00**	**321**	*e*P	P	01 45 15.1	+5.7
GERES	**GERESS Array B**	**96.00**	**320**	P	**P**	**01 45 07.6**	**-1.8**
	comp=Z,0.6nm,0.8s,baz=66,slow=5.6,SNR=4.1						
GERES				PP	**PP**	**01 49 05.2**	**+3.3**
	comp=Z,0.7nm,0.7s,baz=31,slow=5.9,SNR=2.4						
GERES				LR	LR	02 33 12.3	
	comp=Z,1µm,20.0s,baz=66,slow=38						
GERES	**GERESS Array B**	**96.00**	**320**	P	**P**	**01 45 08.9**	**-0.6**
DBG	**Daneborg**	**96.14**	**350**	*i* P	**P**	**01 45 08.6**	**-0.8**
DBG				IAmb	IAmb	01 45 11.4	
	comp=Z,7.1nm,1.0s						
DBG				*i*		01 45 16.9	
SGRT	**San Giovanni R**	**96.45**	**313**	IAMs_20	IAMs_20	02 24 55.9	
	comp=Z,670nm,20.0s						
BOSA	**Boshof**	**96.92**	**242**	LR	LR	02 25 02.6	
	comp=Z,691nm,21.4s,baz=88,slow=33						
WTTA	**Wattenberg**	**97.79**	**319**	*e*P	Pdif	01 45 25.3	+7.6
	comp=Z,16nm,1.6s						
WATA	**Walderalm**	**97.80**	**319**	*e*P	Pdif	01 45 25.2	+7.4
	comp=Z,16nm,1.6s						
SQTA	**Sankt Quirin**	**98.08**	**319**	*e*P	Pdif	01 45 26.3	+7.4
	comp=Z,18nm,2.0s						
MOTA	**Moosalm**	**98.11**	**319**	*e*P	Pdif	01 45 26.6	+7.5
	comp=Z,17nm,1.7s						
FETA	**Feichten**	**98.45**	**319**	*e*P	Pdif	01 45 28.4	+7.7
	comp=Z,14nm,1.4s						
YKA	**Yellowknife Ar**	**100.11**	**23**	P	**Pdif**	**01 45 27.7**	**+0.2**
	comp=Z,6.9nm,0.9s,baz=308,slow=3.9,SNR=66						
YKA				PP	**PP**	**01 49 26.5**	**-6.1**
	comp=Z,0.1nm,0.3s,baz=249,slow=40,SNR=2.8						
YKA				PKKPbc	**PKKPbc**	**02 01 44.1**	**-3.9**
	comp=Z,0.5nm,0.8s,baz=114,slow=2.8,SNR=9.2						
TAOE	**Nuku Hiva Isla**	**100.72**	**98**	*e*LR	LR	02 18 22.8	
	comp=Z,1µm,22.8s						
NLWA	**Neilton Lookou**	**102.83**	**39**	IAMs_20	IAMs_20	02 21 24.1	
	comp=Z,875nm,20.0s						
D03D	**Eldon**	**103.25**	**38**	P	**Pdif**	**01 45 41.8**	**0.0**
	baz=295						
TSUM	**Tsumeb**	**103.56**	**252**	IAMs_20	IAMs_20	02 34 57.4	
	comp=Z,624nm,19.0s						
B06A	**Marblemount**	**103.80**	**37**	IAMs_20	IAMs_20	02 27 36.8	
	comp=Z,608nm,19.0s						
LON	**Longmire**	**104.37**	**39**	IAMs_20	IAMs_20	02 24 12.0	
	comp=Z,890nm,22.0s						
LTY	**Liberty**	**104.85**	**38**	IAMs_20	IAMs_20	02 31 26.7	
	comp=Z,638nm,20.0s						
HUMO	**Hull Mountain**	**105.34**	**43**	IAMs_20	IAMs_20	02 25 29.1	
	comp=Z,701nm,21.0s						
YBH	**Yreka Blue Hor**	**105.85**	**44**	IAMs_20	IAMs_20	02 25 52.8	
	comp=Z,796nm,21.0s						
KCPM	**Cahto Peak**	**106.03**	**46**	IAMs_20	IAMs_20	02 28 57.9	
	comp=Z,690nm,21.0s						
RKT	**Rikitea**	**106.26**	**112**	*e*LQ	LQ	02 16 29.2	
	comp=Z,783nm,45.8s						
RKT				*e*LR	LR	02 20 51.3	
	comp=Z,652nm,36.2s						
E09A	**Wood Farm, Sta**	**106.73**	**38**	IAMs_20	IAMs_20	02 25 51.3	
	comp=Z,635nm,21.0s						
G08A	**Pilot Rock**	**106.80**	**39**	IAMs_20	IAMs_20	02 29 26.3	
	comp=Z,884nm,22.0s						
MOD	**Modoc Plateau**	**107.42**	**43**	IAMs_20	IAMs_20	02 27 21.2	
	comp=Z,728nm,22.0s						
F10A	**Beach Ranch, E**	**107.55**	**38**	IAMs_20	IAMs_20	02 26 16.0	
	comp=Z,795nm,21.0s						
ORV	**Oroville**	**107.56**	**45**	IAMs_20	IAMs_20	02 30 11.3	
	comp=Z,691nm,22.0s						
J08A	**Circle Bar Ran**	**107.99**	**41**	IAMs_20	IAMs_20	02 28 18.0	
	comp=Z,840nm,21.0s						
BMO	**Blue Mountains**	**108.04**	**39**	IAMs_20	IAMs_20	02 26 12.1	
	comp=Z,853nm,21.0s						
AFDM	**Forest Hills D**	**108.18**	**46**	IAMs_20	IAMs_20	02 26 41.9	
	comp=Z,724nm,22.0s						
BEKR	**Beckworth**	**108.24**	**45**	IAMs_20	IAMs_20	02 30 34.1	
	comp=Z,639nm,22.0s						
WVOR	**Wild Horse Val**	**108.30**	**42**	IAMs_20	IAMs_20	02 27 52.4	
	comp=Z,619nm,21.0s						
JTMT	**Jette**	**108.40**	**35**	IAMs_20	IAMs_20	02 33 30.1	
	comp=Z,598nm,21.0s						
RUBR	**Rubicon Trail**	**108.72**	**45**	IAMs_20	IAMs_20	02 30 14.0	
	comp=Z,749nm,20.0s						
VCNR	**Virginia City**	**108.98**	**45**	IAMs_20	IAMs_20	02 30 45.7	
	comp=Z,610nm,21.0s						
PNTR	**Pine Nut**	**109.10**	**45**	IAMs_20	IAMs_20	02 30 58.9	
	comp=Z,723nm,20.0s						
YERR	**Yerington**	**109.40**	**45**	IAMs_20	IAMs_20	02 31 20.8	
	comp=Z,742nm,20.0s						
WAKR	**Walker**	**109.46**	**46**	IAMs_20	IAMs_20	02 30 34.6	
	comp=Z,901nm,22.0s						
MFID	**Camas Ranch**	**109.67**	**40**	IAMs_20	IAMs_20	02 31 24.2	
	comp=Z,746nm,20.0s						
FCC	**Fort Churchill**	**109.91**	**18**	IAMs_20	IAMs_20	02 31 17.1	
	comp=Z,820nm,22.0s						
RYN	**Ryan**	**110.06**	**45**	IAMs_20	IAMs_20	02 31 05.3	
	comp=Z,704nm,21.0s						
MDPB	**Devils Postpil**	**110.08**	**46**	IAMs_20	IAMs_20	02 30 35.1	
	comp=Z,642nm,22.0s						
LHV	**Little Huntoon**	**110.23**	**46**	IAMs_20	IAMs_20	02 31 23.0	
	comp=Z,840nm,22.0s						
NVAR	**Mina Array Bea**	**110.30**	**45**	PKiKP	**PKiKP**	**01 50 16.0**	**+1.2**
	comp=Z,0.6nm,0.8s,baz=158,slow=2.8,SNR=3.8						
NVAR				PP	**PP**	**01 50 44.5**	**-4.6**
	comp=Z,0.9nm,0.8s,baz=275,slow=6.2,SNR=4.8						
NVAR				PKKPbc	**PKKPab**	**02 01 23.0**	**-4.5**
	comp=Z,0.3nm,0.5s,baz=149,slow=2.1,SNR=2.8						
NVAR				PKKP	**PKKPdf**	**02 01 33.1**	**-0.2**
	comp=Z,0.7nm,0.6s,baz=127,slow=5.0,SNR=7.3						
NVAR	**Mina Array Bea**	**110.30**	**45**	Pdif	**Pdif**	**01 46 13.3**	**-0.4**
HLID	**Hailey**	**110.48**	**39**	IAMs_20	IAMs_20	02 29 59.8	
	comp=Z,785nm,22.0s						
ELK	**Elko**	**111.34**	**42**	PKiKP	**PKiKP**	**01 50 17.4**	**+0.6**
	comp=Z,0.5nm,0.5s,baz=261,slow=7.2,SNR=3.3						
ELK	**Elko**	**111.34**	**42**	IAMs_20	IAMs_20	02 30 51.9	
	comp=Z,705nm,21.0s						
R11A	**Troy Canyon, C**	**112.24**	**44**	IAMs_20	IAMs_20	02 33 15.0	
	comp=Z,713nm,21.0s						
FLWY	**Flagg Ranch**	**112.49**	**37**	IAMs_20	IAMs_20	02 29 47.5	
	comp=Z,482nm,20.0s						
SPR3	**Spring Creek 3**	**112.80**	**43**	IAMs_20	IAMs_20	02 35 00.6	
	comp=Z,664nm,20.0s						
LOHW	**Long Hollow**	**112.80**	**37**	IAMs_20	IAMs_20	02 29 03.0	
	comp=Z,725nm,20.0s						
AHID	**Auburn Hatcher**	**112.97**	**38**	IAMs_20	IAMs_20	02 30 01.4	
	comp=Z,827nm,22.0s						
SHPR	**Sheep Range**	**113.39**	**46**	IAMs_20	IAMs_20	02 32 53.8	
	comp=Z,664nm,21.0s						
PFO	**Pinyon Flats O**	**113.72**	**49**	IAMs_20	IAMs_20	02 32 07.8	
	comp=Z,664nm,20.0s						
XPFO	**Pion Flat**	**113.72**	**49**	IAMs_20	IAMs_20	02 32 07.8	
	comp=Z,656nm,20.0s						
PDAR	**Pinedale Array**	**113.91**	**38**	PKiKP	**PKiKP**	**01 50 19.9**	**-1.7**
	comp=Z,0.7nm,1.1s,baz=104,slow=0.4,SNR=2.4						
PDAR				PP	**PP**	**01 51 07.8**	**-6.9**
	comp=Z,0.5nm,0.7s,baz=336,slow=3.3,SNR=3.7						
PDAR				PKKPbc	**PKKPab**	**02 01 09.5**	**-1.9**
	comp=Z,0.5nm,0.5s,baz=128,slow=6.9,SNR=7.2						
TKX	**Tecate**	**114.05**	**50**	IAMs_20	IAMs_20	02 29 48.6	
	comp=Z,646nm,21.0s						
RMX	**La Rumorosa**	**114.44**	**50**	IAMs_20	IAMs_20	02 30 12.4	
	comp=Z,603nm,21.0s						
ESJX	**Sierra Juarez**	**114.79**	**51**	IAMs_20	IAMs_20	02 36 45.3	
	comp=Z,422nm,20.0s						
W13A	**Hualapai Mount**	**114.96**	**47**	IAMs_20	IAMs_20	02 33 01.3	
	comp=Z,755nm,20.0s						
SPX	**San Pedro Mart**	**115.57**	**52**	IAMs_20	IAMs_20	02 31 54.0	
	comp=Z,490nm,21.0s						
TOB3	**Torodi Ar. Sit**	**115.72**	**288**	IAMs_20	IAMs_20	02 39 32.5	
	comp=Z,710nm,19.0s						
TOA0	**Torodi Ar. Sit**	**115.72**	**288**	IAMs_20	IAMs_20	02 39 33.6	
	comp=Z,740nm,21.0s						
TORD	**Torodi Ar. Bea**	**115.72**	**288**	PKP	**PKPdf**	**01 50 24.6**	**-0.8**
	comp=Z,1.6nm,0.9s,baz=37,slow=2.1,SNR=6.1						
TORD				PP	**PP**	**01 51 21.4**	**-7.1**
	comp=Z,3.4nm,1.1s,baz=50,slow=3.8,SNR=5.2						
TORD				PKKPbc	**PKKPbc**	**02 00 58.6**	**+1.2**
	comp=Z,2.0nm,0.9s,baz=267,slow=4.3,SNR=5.8						
TORD	**Torodi Ar. Bea**	**115.72**	**288**		**PKPdf**	**01 50 24.0**	**-1.4**
TOA3	**Torodi Ar. Sit**	**115.73**	**288**	IAMs_20	IAMs_20	02 39 32.7	
	comp=Z,760nm,22.0s						
TOB4	**Torodi Ar. Sit**	**115.74**	**288**	IAMs_20	IAMs_20	02 40 40.0	
	comp=Z,724nm,21.0s						
K22A	**Casper**	**115.80**	**36**	IAMs_20	IAMs_20	02 31 07.1	
	comp=Z,639nm,22.0s						
MDND	**Maddock**	**116.08**	**28**	IAMs_20	IAMs_20	02 38 50.5	
	comp=Z,606nm,22.0s						
O20A	**White River Ci**	**116.21**	**40**		**PKPdf**	**01 50 25.2**	**-0.8**
RSSD	**Black Hills**	**116.31**	**34**	P	**PKPdf**	**01 50 25.4**	**-0.7**
	baz=310						
PV17	**East Wray Mesa**	**116.77**	**42**		**PKiKP**	**01 50 27.2**	**0.0**
PV15	**Paradox Valley**	**117.06**	**41**	IAMs_20	IAMs_20	02 33 22.0	
	comp=Z,752nm,21.0s						
PHWY	**Pilot Hill**	**117.25**	**37**	IAMs_20	IAMs_20	02 35 53.4	
	comp=Z,645nm,21.0s						
MVCO	**Mesa Verde**	**117.66**	**42**	IAMs_20	IAMs_20	02 29 41.2	
	comp=Z,627nm,21.0s						
W18A	**Petrified Fore**	**117.92**	**45**	IAMs_20	IAMs_20	02 35 07.3	
	comp=Z,769nm,21.0s						
SDCO	**Great Sand Dun**	**119.33**	**40**	P	**PKPdf**	**01 50 31.5**	**-0.7**
	baz=306						
SDCO	**Great Sand Dun**	**119.33**	**40**	IAMs_20	IAMs_20	02 34 25.1	
	comp=Z,760nm,22.0s						
OGNE	**Ogallala**	**119.48**	**36**	IAMs_20	IAMs_20	02 33 31.5	
	comp=Z,563nm,21.0s						
EYMN	**Ely**	**119.56**	**24**	IAMs_20	IAMs_20	02 42 27.0	
	comp=Z,675nm,21.0s						
ANMO	**Albuquerque**	**120.28**	**43**	P	**PKPdf**	**01 50 33.8**	**-0.2**
	baz=304						
ANMO	**Albuquerque**	**120.28**	**43**	PKIKP	**PKPdf**	**01 50 32.1**	**-1.9**
ANMO	**Albuquerque**	**120.28**	**43**		**PKPdf**	**01 50 32.1**	**-1.9**
ANMO	**Albuquerque**	**120.28**	**43**	IAMs_20	IAMs_20	02 32 08.8	
	comp=Z,680nm,22.0s						
F36A	**Milaca**	**120.35**	**26**	IAMs_20	IAMs_20	02 41 53.2	
	comp=Z,602nm,20.0s						
ECSD	**EROS Data Cent**	**120.49**	**30**	P	**PKPdf**	**01 50 33.3**	**-0.6**
	baz=317						
ECSD	**EROS Data Cent**	**120.49**	**30**	IAMs_20	IAMs_20	02 39 28.4	
	comp=Z,564nm,20.0s						
121A	**Cookes Peak, D**	**120.64**	**47**	IAMs_20	IAMs_20	02 37 29.6	
	comp=Z,701nm,20.0s						
BGNE	**Belgrade**	**121.35**	**33**	IAMs_20	IAMs_20	02 38 46.4	
	comp=Z,551nm,21.0s						
EPT	**El Paso**	**121.96**	**47**	IAMs_20	IAMs_20	02 38 19.6	
	comp=Z,568nm,20.0s						
COWI	**Conover**	**122.00**	**23**	IAMs_20	IAMs_20	02 52 12.5	
	comp=Z,638nm,20.0s						
R32A	**Long Quarter,**	**123.07**	**36**	IAMs_20	IAMs_20	02 39 52.5	
	comp=Z,582nm,22.0s						
KIC	**Kosan Boka**	**123.38**	**282**	*e*P	**PKPdf**	**01 50 39.4**	**-0.8**
	comp=Z,35nm,1.0s						
DBIC	**Dimbokro**	**123.43**	**282**	PKP	**PKPdf**	**01 50 39.9**	**-0.4**
	comp=Z,5.1nm,0.8s,baz=120,slow=1.1,SNR=5.2						
TIC	**Toumodi**	**123.59**	**282**	*e*P	**PKPdf**	**01 50 39.6**	**-1.1**
LIC	**Lamto**	**123.69**	**282**	*e*P	**PKPdf**	**01 50 40.9**	**+0.1**
	comp=Z,64nm,1.0s						
TXAR	**Lajitas Array**	**125.33**	**48**	PKP	**PKPdf**	**01 50 43.8**	**0.0**
	comp=Z,1.0nm,0.8s,baz=318,slow=1.7,SNR=7.0						
TXAR	**Lajitas Array**	**125.33**	**48**	PKIKP	**PKPdf**	**01 50 42.6**	**-1.1**
TXAR	**Lajitas Array**	**125.33**	**48**	PKPdf	**PKPdf**	**01 50 42.6**	**-1.1**
D55A	**Sainte-Anne-du**	**125.44**	**13**	P	**PKPdf**	**01 50 42.3**	**-1.0**
	baz=341						
D56A	**ZEC Mazanza, M**	**125.56**	**12**	P	**PKPdf**	**01 50 42.6**	**-1.0**
	baz=342						
OK029	**Liberty Lake**	**125.58**	**37**	IAMs_20	IAMs_20	02 41 08.0	
	comp=Z,638nm,21.0s						
L44A	**Lake County Fo**	**125.72**	**25**	P	**PKPdf**	**01 50 43.0**	**-0.9**
	baz=325						
ALGO	**Algonquin Park**	**125.81**	**15**	P	**PKPdf**	**01 50 43.3**	**-0.7**
	baz=338						
D58A	**Chemin du LacG**	**125.89**	**11**	P	**PKPdf**	**01 50 43.5**	**-0.7**
	baz=344						
E56A	**St. Veronique**	**125.98**	**13**	P	**PKPdf**	**01 50 43.8**	**-0.5**
	baz=342						
E61A	**Lac Etchemin**	**126.94**	**9**	P	**PKPdf**	**01 50 46.0**	**-0.2**
	baz=347						
DELO	**Deloro Mine**	**127.25**	**16**	IAMs_20	IAMs_20	02 38 49.8	
	comp=Z,528nm,19.0s						
K50A	**Casco**	**127.27**	**21**	IAMs_20	IAMs_20	02 48 31.8	
	comp=Z,507nm,20.0s						
E64A	**Bridgewater**	**127.31**	**7**	P	**PKPdf**	**01 50 46.8**	**-0.1**
	baz=350						
JCT	**Junction City**	**127.43**	**44**	PKIKP	**PKPdf**	**01 50 47.3**	**-0.3**
JCT	**Junction City**	**127.43**	**44**	PKPdf	**PKPdf**	**01 50 47.3**	**-0.3**
JCT				IAMs_20	IAMs_20	02 55 54.1	
	comp=Z,417nm,20.0s						
WHTX	**Lake Whitney,**	**128.07**	**41**	IAMs_20	IAMs_20	02 42 13.6	
	comp=Z,621nm,21.0s						
T42A	**Van Buren**	**128.28**	**32**	IAMs_20	IAMs_20	02 57 21.9	
	comp=Z,563nm,20.0s						
S44A	**Carbondale**	**128.70**	**30**	IAMs_20	IAMs_20	02 44 54.8	
	comp=Z,632nm,21.0s						
435B	**Jarrell**	**128.75**	**42**	IAMs_20	IAMs_20	02 51 42.8	
	comp=Z,540nm,20.0s						
USIN	**University of**	**129.25**	**28**	IAMs_20	IAMs_20	02 51 24.1	
	comp=Z,546nm,21.0s						
M54A	**Oil Creek Stat**	**129.40**	**19**	P	**PKPdf**	**01 50 50.6**	**-0.4**
	baz=335						
ZAIG	**Zacatecas**	**129.57**	**54**	IAMs_20	IAMs_20	02 37 03.1	
	comp=Z,596nm,19.0s						
BINY	**Binghamton**	**129.85**	**15**	P	**PKPdf**	**01 50 51.2**	**-0.6**
	baz=339						
J63A	**Strafford**	**129.91**	**10**	P	**PKPdf**	**01 50 51.8**	**-0.1**
	baz=346						
P51A	**Williamsport**	**129.97**	**23**	IAMs_20	IAMs_20	02 45 29.6	
	comp=Z,649nm,22.0s						
WVT	**Waverly**	**130.64**	**30**	P	**PKPdf**	**01 50 53.9**	**+0.4**
	baz=323						
WUPA	**West Chester U**	**132.06**	**16**	IAMs_20	IAMs_20	02 59 48.7	
	comp=Z,307nm,20.0s						
PSUB	**Penn St. - Bra**	**132.11**	**16**	IAMs_20	IAMs_20	02 56 07.4	
	comp=Z,556nm,19.0s						
P60A	**Greenville**	**132.17**	**16**	IAMs_20	IAMs_20	02 51 34.9	
	comp=Z,508nm,20.0s						
X48A	**Hartselle**	**132.36**	**30**	IAMs_20	IAMs_20	02 49 57.5	
	comp=Z,602nm,22.0s						
TKL	**Tuckaleechee C**	**132.93**	**27**	PKP	**PKPdf**	**01 50 58.2**	**+0.3**
	comp=Z,4.7nm,0.9s,baz=313,slow=8.3,SNR=2.4						
TKL	**Tuckaleechee C**	**132.93**	**27**	PKIKP	**PKPdf**	**01 50 57.6**	**-0.3**
TKL	**Tuckaleechee C**	**132.93**	**27**		**PKPdf**	**01 50 57.6**	**-0.3**
CBN	**Corbin Frederi**	**133.13**	**19**	IAMs_20	IAMs_20	02 50 55.8	
	comp=Z,566nm,21.0s						
R58B	**Mineral**	**133.19**	**19**	P	**PKiKP**	**01 50 59.1**	**-0.4**
	baz=336						
T56A	**Rocky Mt**	**133.27**	**22**	P	**PKPdf**	**01 50 58.6**	**+0.1**
	baz=332						
CMIG	**Matias Romero**	**138.65**	**56**	PKP	**PKPdf**	**01 51 09.3**	**+0.4**
	comp=Z,4.5nm,0.8s,baz=330,slow=5.7,SNR=4.6						
TEIG	**Tepich**	**141.94**	**46**	PKhKP	PKPpre	01 51 11.4	
	comp=Z,2.2nm,0.5s,baz=3.1,slow=18,SNR=1.8						
TEIG	**Tepich**	**141.94**	**46**	IAMs_20	IAMs_20	03 00 38.7	
	comp=Z,321nm,21.0s						
HUEH	**Huehuetenango**	**142.34**	**55**	IAMs_20	IAMs_20	02 53 30.9	
	comp=Z,520nm,20.0s						
PLCA	**Paso Flores**	**144.22**	**166**	PKP	**PKPdf**	**01 51 19.8**	**+1.4**
	comp=Z,4.0nm,0.9s,baz=262,slow=5.9,SNR=3.6						
TGUH	**Tegucigalpa,Un**	**146.45**	**53**	IAMs_20	IAMs_20	02 49 31.4	
	comp=Z,437nm,21.0s						
BI02	**San Fabin de**	**147.86**	**163**		**PKPbc**	**01 51 26.4**	**-1.2**
CBCY	**The Bluff, Cay**	**147.90**	**37**		**PKPbc**	**01 51 28.1**	**+0.1**
MATN	**Matagalpa**	**148.17**	**54**	IAMs_20	IAMs_20	02 46 37.9	
	comp=Z,353nm,20.0s						
BOAB	**BOACO BROADB**	**148.65**	**54**	PKPbc	**PKPbc**	**01 51 29.6**	**-0.6**
ESPN	**Las Esperanzas**	**149.88**	**53**	PKPbc	**PKPbc**	**01 51 32.8**	**-0.5**
ESPN				IAMs_20	IAMs_20	02 50 52.3	
	comp=Z,534nm,22.0s						
JTS	**Las Juntas de**	**150.41**	**57**	PKPbc	**PKPbc**	**01 51 34.3**	**-0.3**
	comp=Z,19nm,0.9s,baz=6.9,slow=4.0,SNR=8.4						
JTS	**Las Juntas de**	**150.41**	**57**	PKIKP	**PKPbc**	**01 51 33.7**	**-0.9**
JTS	**Las Juntas de**	**150.41**	**57**	PKPbc	**PKPbc**	**01 51 33.7**	**-0.9**
MT02	**Curacav**	**151.05**	**161**	PKPbc	**PKPbc**	**01 51 34.4**	**-1.2**
MT05	**Renca**	**151.06**	**161**	IAMs_20	IAMs_20	03 09 48.8	
	comp=Z,518nm,22.0s						
VA03	**San Esteban**	**151.70**	**161**	PKPbc	**PKPbc**	**01 51 36.2**	**-1.0**
ZON	**Zonda**	**153.40**	**164**	PKPbc	**PKPbc**	**01 51 39.3**	**-1.7**
RCBR	**Riachuelo**	**155.92**	**269**	PKPab	**PKPab**	**01 52 04.7**	**+0.3**
	comp=Z,5.7nm,0.8s,baz=49,slow=18,SNR=1.5						
CPUP	**Villa Florida**	**159.66**	**187**	PKPab	**PKPab**	**01 52 22.4**	**+2.5**
	comp=Z,0.9nm,0.3s,baz=86,slow=10,SNR=3.0						
TOLC	**Tolima**	**161.50**	**56**	*e*P	**PKPab**	**01 52 28.0**	**-0.8**
ATAH	**Atahualpa**	**161.81**	**94**	PKP	**PKPdf**	**01 51 46.1**	**+1.3**
	comp=Z,6.1nm,0.9s,baz=262,slow=3.0,SNR=4.1						
SDV	**Santo Domingo**	**161.83**	**35**	PKP	**PKPdf**	**01 51 43.7**	**-0.8**
	comp=Z,2.1nm,0.4s,baz=305,slow=4.8,SNR=4.0						
SDV				PKPab	**PKPab**	**01 52 29.8**	**-0.1**
	comp=Z,16nm,0.8s,baz=347,slow=2.8,SNR=11						
SDV	**Santo Domingo**	**161.83**	**35**	⇑*e*P	PKPab	01 52 21.7	-8.3
SDV				*e*P	pPKPab	01 52 26.5	-12
BARC	**Barichara**	**161.89**	**46**	*e*P	**PKPab**	**01 52 29.7**	**-0.6**
RUSC	**La Rusia**	**162.44**	**48**	*e*P	**PKPab**	**01 52 28.5**	**-4.6**
PTLC	**Puerto Leguiza**	**164.09**	**68**	⇑*e*P	PKPab	01 52 31.2	-8.7
LPAZ	**La Paz**	**167.14**	**143**	PKP	**PKPdf**	**01 51 50.2**	**+0.5**
	comp=Z,0.9nm,0.8s,baz=157,slow=4.5,SNR=2.5						
LPAZ				PKPab	**PKPab**	**01 52 55.8**	**+2.0**
	comp=Z,2.5nm,0.6s,baz=198,slow=3.5,SNR=8.9						
LPAZ	**La Paz**	**167.14**	**143**		**PKPab**	**01 52 55.5**	**+1.7**
SIV	**San Ignacio**	**170.07**	**175**	PKP	**PKPdf**	**01 51 50.6**	**-0.2**
	comp=Z,1.3nm,0.9s,baz=259,slow=12,SNR=2.4						
SIV				PKPab	**PKPab**	**01 53 06.8**	**+1.0**
	comp=Z,0.8nm,0.6s,baz=284,slow=3.8,SNR=1.8						

ATH 25 01:42:56.0, 37°.80N × 23°.93E, h8$^{km}\pm$3^{km}, ML0.7/1, Error ellipse: s-maj=4.1km s-min=1.0km az=312.0, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLY	**Voula,Athens**	**0.12**	**295**	P	Pg	01 42 58.5	-0.1
VLY				S	Sg	01 42 59.9	-0.5
ATHU	**Athens Univers**	**0.20**	**325**	P	Pg	01 42 59.9	-0.1
ATHU				S	Sg	01 43 02.5	-0.3
ATH	**Athens Observa**	**0.24**	**315**	P	Pg	01 43 00.8	+0.1
ATH				S	Sg	01 43 03.6	-0.3
PTL	**Penteli**	**0.25**	**348**	P	Pg	01 43 00.8	-0.2
PTL				S	Sg	01 43 04.3	-0.1
PTL				AML	AML	01 43 05.3	
	comp=E,68µm,0.1s						
PTL				AML	AML	01 43 05.4	
	comp=N,53µm,0.1s						
DION	**Dionisos Attik**	**0.28**	**1**	P	Pg	01 43 01.3	-0.1
DION				S	Sg	01 43 05.0	-0.2
KARY	**Karystos**	**0.46**	**60**	P	Pg	01 43 04.7	-0.2
KARY				S	Sg	01 43 10.9	-0.1
EREA	**Eretria**	**0.62**	**0**	P	Pg	01 43 07.9	0.0
EREA				S	Sg	01 43 16.1	+0.2
VIL2	**Platees**	**0.66**	**308**	P	Pg	01 43 07.7	-1.1
VIL2				S	Sg	01 43 16.3	-1.1
KRND	**KRANIDI**	**0.75**	**236**	P	Pg	01 43 10.0	-0.3
KRND				S	Sg	01 43 20.4	+0.3
LOUT	**Loutraki**	**0.78**	**284**	P	Pg	01 43 10.2	-0.8
LTK	**Loutraki**	**0.79**	**286**	P	Pg	01 43 10.8	-0.4
LKR	**Lokris**	**1.12**	**319**	P	Pg	01 43 16.8	-0.7

TUL ***25*** *02:08:22.4±1.6, 36°.87N±0°.04×98°.30W±0°.04, h5$^{km}\pm$2^{km}, ML3.3, mb_Lg3.2/77(NEIC), Error ellipse: s-maj=6.6km s-min=5.7km az=357.0*

IDC ***25*** *02:08:22.3±1.8, 37°.03N×98°.38W, h0^{km}, mb1 3.4/3, mb1mx3.2/44, mbtmp3.1/3, ML3.6/2, Error ellipse: s-maj=29.3km s-min=12.2km az=101.0*

ANF ***25*** *02:08:23.0±0.7, 36°.86N×98°.33W, h5^{km}, ML4.1/8, Error ellipse: s-maj=8.6km s-min=7.2km az=55.0*

NEIC ***25*** *02:08:23.0±1.6, 36°.85N±0°.04×98°.27W±0°.05, h5$^{km}\pm$2^{km}, Error ellipse: s-maj=7.2km s-min=5.8km az=321.0*

ISC 25 02:08:22.8±1.2**, 36°.86N**±0°.03×**98°.29W**±0°.04**, h2**$^{km}\pm$10^{km}**, n92, σ0ˢ.68**/90**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAN14	**Manchester OK**	**0.28**	**69**		**Pg**	**02 08 28.1**	**-0.2**
KAN14				Sg	**Sg**	**02 08 32.3**	**+0.4**
KAN10	**Anthony SW Sta**	**0.31**	**30**		**Pg**	**02 08 28.5**	**-0.2**
KAN10				Sg	**Sg**	**02 08 33.3**	**+0.5**
KAN05	**Bluff City Nor**	**0.42**	**53**		**Pg**	**02 08 30.7**	**-0.2**
KAN05				Sg	**Sg**	**02 08 37.0**	**+0.7**
CROK	**Carrier**	**0.43**	**145**	Pg	**Pg**	**02 08 30.9**	**-0.2**
CROK				Sg	**Sg**	**02 08 36.8**	**+0.1**
KAN08	**Anthony NE Sta**	**0.45**	**35**		**Pg**	**02 08 31.1**	**-0.4**
KAN08				Sg	**Sg**	**02 08 37.6**	**+0.3**
KAN12	**Harper NE Stat**	**0.50**	**28**	Pg	**Pg**	**02 08 32.0**	**-0.4**
KAN12				Sg	**Sg**	**02 08 39.4**	**+0.5**
KAN01	**Argonia South**	**0.52**	**55**		**Pg**	**02 08 32.4**	**-0.4**
KAN01				Sg	**Sg**	**02 08 40.0**	**+0.5**
KAN13	**South Haven SW**	**0.67**	**76**		**Pg**	**02 08 35.2**	**-0.5**
U32A	**Winter Ranch,**	**0.74**	**230**	Pg	**Pg**	**02 08 36.8**	**-0.3**
U32A	**Winter Ranch,**	**0.74**	**230**	P		02 08 36.5	
	baz=49						
U32A				S		02 08 47.4	
	baz=49						
OK029	**Liberty Lake**	**1.25**	**147**		**Pg**	**02 08 45.8**	**-1.1**
BCOK	**Bluff Creek, N**	**1.32**	**155**	Pn	**Pn**	**02 08 46.9**	**-1.4**
T35A	**Sooner Cattle**	**1.43**	**87**		**Pn**	**02 08 48.6**	**-1.2**
T35B	**Sooner Cattle**	**1.43**	**87**	P		02 08 48.6	
	baz=269						
T35B				S		02 09 07.7	
	baz=269						
QUOK	**Quay**	**1.45**	**118**		**Pn**	**02 08 49.1**	**-0.9**
OK031	**S. Brethren Rd**	**1.48**	**127**		**Pn**	**02 08 49.9**	**-0.5**
OK025	**Westminster Rd**	**1.49**	**149**	Pn	**Pn**	**02 08 49.6**	**-1.0**
OK030	**Cody Creek RV**	**1.53**	**127**	Pn	**Pn**	**02 08 50.7**	**-0.4**
OKCFA	**Oklahoma City**	**1.59**	**154**	Pn	**Pn**	**02 08 51.6**	**-0.3**
R32A	**Long Quarter,**	**1.60**	**348**	Pn	**Pn**	**02 08 51.6**	**-0.6**
R32A				IAmb_Lg		02 09 16.4	
	comp=Z,94nm,0.7s						
R32A	**Long Quarter,**	**1.60**	**348**	P		02 08 51.7	
	baz=168,SNR=23						
R32A				S		02 09 13.0	
	baz=168						
OKCSW	**OKLAHOMA CITY**	**1.60**	**154**	Pn	**Pn**	**02 08 51.4**	**-0.7**
FNO	**Franklin**	**1.75**	**155**	Pn	**Pn**	**02 08 54.6**	**+0.4**
WMOK	**Wichita Mounta**	**2.15**	**191**	P	**Pn**	**02 08 59.0**	**-0.8**

	baz=10						
WMOK				S	Sn	02 09 27.3	+0.4
	baz=10						
WMOK	Wichita Mounta	2.15	191	Pn	Pn	02 08 59.7	0.0
WMOK				IAmb_Lg		02 09 32.7	
	comp=Z,63nm,0.8s						
WMOK	Wichita Mounta	2.15	191	P		02 08 59.3	
	baz=10,SNR=147						
TUL1	Leonard	2.23	114	P	Pn	02 09 01.5	+0.8
	baz=296						
TUL1				S	Sn	02 09 29.0	+0.2
	baz=296						
TUL1	Leonard	2.23	114	Pn	Pn	02 09 01.3	+0.6
TUL1				IAmb_Lg		02 09 33.3	
	comp=Z,112nm,0.8s						
TUL1	Leonard	2.23	114	P		02 09 01.4	
	baz=296,SNR=18						
TUL1				S		02 09 31.9	
	baz=296						
CBKS	Cedar Bluff	2.27	330	P	Pn	02 09 01.8	+0.5
	baz=149						
CBKS				S	Sn	02 09 30.0	+0.2
	baz=149						
CBKS	Cedar Bluff	2.27	330	Pn	Pn	02 09 02.1	+0.8
CBKS				IAmb_Lg		02 09 37.7	
	comp=Z,108nm,0.8s						
CBKS	Cedar Bluff	2.27	330	P		02 09 01.9	
	baz=149						
CBKS				S		02 09 30.1	
	baz=149						
KSU1	Kansas State U	2.60	30	P	Pn	02 09 06.2	+0.3
	baz=211						
KSU1				S	Sn	02 09 37.9	-0.2
	baz=211						
KSU1	Kansas State U	2.60	30	Pn	Pn	02 09 06.2	+0.3
KSU1	Kansas State U	2.60	30	P		02 09 06.5	
	baz=211						
KSU1				S		02 09 37.9	
	baz=211						
U38A	Gravette	3.17	96	Pn	Pn	02 09 13.8	+0.1
X37A	Clayton	3.28	133	Pn	Pn	02 09 14.8	-0.4
X37A	Clayton	3.28	133	P		02 09 15.4	
	baz=315						
X37A				S		02 09 55.0	
	baz=315						
AMTX	Amarillo	3.38	235	P	Pn	02 09 16.4	-0.3
	baz=53						
AMTX				S	Sn	02 09 58.0	+0.4
	baz=53						
AMTX	Amarillo	3.38	235	Pn	Pn	02 09 17.6	+0.9
AMTX	Amarillo	3.38	235	P		02 09 17.4	
	baz=53						
Z35A	Perchaven, San	3.62	166	S		02 10 03.7	
	baz=347						
Z35A	Perchaven, San	3.62	166	Pn	Pn	02 09 19.2	-0.6
N33A	J Bar K, Exete	3.93	9	Pn	Pn	02 09 22.4	-1.8
N33A				IAmb_Lg		02 10 36.9	
	comp=Z,41nm,0.8s						
W39A	Magazine	4.01	113	P	Pn	02 09 25.9	+0.6
	baz=296						
W39A	Magazine	4.01	113	Pn	Pn	02 09 26.1	+0.8
W39A				IAmb_Lg		02 10 33.9	
	comp=Z,68nm,0.7s						
KSCO	Kaye Shedlock’	4.05	303	P	Pn	02 09 25.8	-0.1
	baz=121						
KSCO				S	Sn	02 10 13.6	-0.3
	baz=121						
KSCO	Kaye Shedlock’	4.05	303	Pn	Pn	02 09 25.8	-0.1
KSCO				IAmb_Lg		02 10 37.5	
	comp=Z,42nm,0.8s						
KSCO	Kaye Shedlock’	4.05	303	S		02 10 13.4	
	baz=121						
S39A	Bolivar	4.05	77	Pn	Pn	02 09 24.8	-1.0
S39A				IAmb_Lg		02 10 30.8	
	comp=Z,51nm,0.8s						
S39A	Bolivar	4.05	77	P		02 09 25.9	
	baz=260						
ABTX	Abilene, Hawle	4.37	195	P	Pn	02 09 29.3	-0.8
	baz=14						
ABTX	Abilene, Hawle	4.37	195	Pn	Pn	02 09 29.1	-1.1
ABTX				IAmb_Lg		02 10 52.2	
	comp=Z,31nm,1.0s						
U40A	Yellville	4.40	95	Pn	Pn	02 09 29.6	-1.1
U40A				IAmb_Lg		02 10 45.3	
	comp=Z,47nm,0.8s						
MIAR	Mount Ida	4.48	120	Pn	Pn	02 09 32.2	+0.5
MIAR				IAmb_Lg		02 10 49.8	
	comp=Z,42nm,0.8s						
MIAR	Mount Ida	4.48	120	P		02 09 32.3	
	baz=303,SNR=11						
Z38A	Mt. Pleasant	4.50	142	Pn	Pn	02 09 32.0	0.0
BGNE	Belgrade	4.55	1	Pn	Pn	02 09 32.0	-0.7
P38A	Dawn	4.65	52	Pn	Pn	02 09 34.3	+0.2
P38A				IAmb_Lg		02 10 51.3	
	comp=Z,38nm,0.8s						
MSTX	Muleshoe	4.66	233	Pn	Pn	02 09 34.1	-0.2
MSTX				IAmb_Lg		02 10 53.3	
	comp=Z,40nm,0.9s						
MGMO	Mountain Grove	4.83	85		Pn	02 09 36.6	+0.1
MGMO				IAmb_Lg		02 11 05.7	
	comp=Z,30nm,0.7s						
WHTX	Lake Whitney,	4.90	172	Pn	Pn	02 09 36.6	-0.9
WHTX	Lake Whitney,	4.90	172	P		02 09 37.0	
	baz=352,SNR=9.5						
OGNE	Ogallala	5.02	326		Pn	02 09 40.3	+1.2
X40A	Basin Creek Fa	5.03	116		Pn	02 09 40.0	+0.7
X40A				IAmb_Lg		02 11 07.4	
	comp=Z,45nm,0.8s						
W41B	Gary Mavity, V	5.18	107	P		02 09 41.2	
	baz=291,SNR=5.1						
237A	Washetta, Mont	5.26	156		Pn	02 09 41.2	-1.2
237A				IAmb_Lg		02 11 23.5	
	comp=Z,39nm,0.8s						
237A	Washetta, Mont	5.26	156	P		02 09 41.6	
	baz=338,SNR=6.6						
L34A	Svendsen Farm,	5.31	16		Pn	02 09 43.3	+0.2
L34A				IAmb_Lg		02 11 12.0	
	comp=Z,45nm,0.7s						
N38A	Joes South For	5.57	44		Pn	02 09 46.3	-0.4
P40A	Paris	5.59	60	Pn	Pn	02 09 47.5	+0.5
CCM	Cathedral Cave	5.73	76	Pn	Pn	02 09 49.3	+0.4
CCM				IAmb_Lg		02 11 27.6	
	comp=Z,37nm,0.7s						
K31A	O'Neill	5.77	357	Pn	Pn	02 09 49.7	+0.3
K31A				IAmb_Lg		02 11 35.4	
	comp=Z,52nm,0.8s						
SDCO	Great Sand Dun	5.82	281	Pn	Pn	02 09 51.0	+0.6
NATX	Nacogdoches	5.91	148	IAmb_Lg		02 11 44.4	
	comp=Z,24nm,0.8s						
435B	Jarrell	6.09	174	IAmb_Lg		02 11 50.0	
	comp=Z,25nm,0.7s						
PBMO	Poplar Bluff	6.31	88	IAmb_Lg		02 11 44.4	
	comp=Z,37nm,0.7s						
FVM	French Village	6.36	77		Pn	02 09 57.0	-0.5
FVM				IAmb_Lg		02 11 41.7	
	comp=Z,28nm,0.8s						
ISCO	Idaho Springs	6.46	299		Pn	02 09 59.3	+0.1
SLM	Saint Louis	6.62	72	IAmb_Lg		02 11 51.6	
	comp=Z,23nm,0.8s						
ECSD	EROS Data Cent	6.99	10		Pn	02 10 05.0	-1.1
ECSD				IAmb_Lg		02 12 05.6	
	comp=Z,17nm,0.9s						
PHWY	Pilot Hill	7.12	311	IAmb_Lg		02 12 08.6	
	comp=Z,20nm,0.8s						
S44A	Carbondale	7.25	81	Pn	Pn	02 10 10.2	+0.5
S44A				IAmb_Lg		02 12 13.8	
	comp=Z,27nm,0.7s						
SIUC	Southern Illin	7.28	81	IAmb_Lg		02 12 19.4	
	comp=Z,27nm,0.8s						
BNM	Barren Site	7.32	251		Pn	02 10 11.9	+1.0
P43A	Skaggs, Pawnee	7.44	65	Pn	Pn	02 10 12.4	+0.1
W45A	Hickory Valley	7.57	100	IAmb_Lg		02 12 44.5	
	comp=Z,35nm,0.8s						
OXF	Oxford	7.60	105		Pn	02 10 14.4	-0.1
T45A	Paducah	7.73	86	IAmb_Lg		02 12 45.4	
	comp=Z,29nm,0.7s						
MNTX	Cornudas Mount	7.80	231		Pn	02 10 17.9	+0.5
MNTX				IAmb_Lg		02 12 41.4	
	comp=Z,14nm,0.8s						
HDIL	Hopedale	7.94	60	Pn	Pn	02 10 18.9	-0.3
OLIL	Olney	8.28	74	IAmb_Lg		02 13 06.2	
	comp=Z,26nm,0.8s						
L42A	Oliver, Polo	8.42	50	IAmb_Lg		02 12 52.6	
	comp=Z,28nm,0.7s						
RWWY	Rawlins	8.43	308	IAmb_Lg		02 12 59.5	
	comp=Z,17nm,0.7s						
WVT	Waverly	8.46	92	Pn	Pn	02 10 26.7	+0.4
RSSD	Black Hills	8.47	331	Pn	Pn	02 10 27.1	+0.4
RSSD				IAmb_Lg		02 12 56.8	
	comp=Z,19nm,0.9s						
K22A	Casper	8.58	315	IAmb_Lg		02 13 09.9	
	comp=Z,30nm,0.8s						
JFWS	Jewell Farm	8.65	43	Pn	Pn	02 10 28.3	-0.6
TX31	Lajitas Ar. Si	8.75	213	Pn	Pn	02 10 30.3	-0.2
TXAR	Lajitas Array	8.75	213	Pn	Pn	02 10 29.9	-0.6
	comp=Z,0.2nm,0.3s,baz=34,slow=10.0,SNR=8.4						
TXAR				Pg	Pg	02 11 01.7	-8.8
	comp=Z,0.4nm,0.3s,baz=32,slow=14,SNR=6.2						
TXAR				Lg	Lg	02 12 57.2	
	comp=Z,0.9nm,0.3s,baz=28,slow=18,SNR=3.1						
TXAR	Lajitas Array	8.75	213		Pn	02 10 29.4	-1.0
T47A	Sharon Grove	8.96	86	IAmb_Lg		02 13 16.2	
	comp=Z,27nm,1.2s						
E28A	Huff	9.87	350	IAmb_Lg		02 13 54.8	
	comp=Z,15nm,0.9s						
PDAR	Pinedale Array	10.48	308	Pn	Pn	02 10 52.5	-1.8
	comp=Z,0.1nm,0.3s,baz=117,slow=15,SNR=2.4						
PDAR				Pg		02 11 36.5	
	comp=Z,0.2nm,0.3s,baz=107,slow=17,SNR=4.7						
PDAR				Lg	Lg	02 13 45.9	
	comp=Z,0.5nm,0.3s,baz=118,slow=34,SNR=2.8						
TKL	Tuckaleechee C	11.78	92	Pn	Pn	02 11 12.8	+1.0
V52A	Sevierville	11.89	91	Pn	Pn	02 11 14.1	+0.7
V53A	Saluda	12.55	91	Pn	Pn	02 11 23.6	+1.2
ULM	Lac du Bonnet	13.50	7	Pn	Pn	02 11 28.6	-6.7
	comp=Z,0.1nm,0.3s,baz=182,slow=8.7,SNR=1.3						
ULM				Sn	Sn	02 13 48.9	-17
	comp=Z,0.1nm,0.3s,baz=131,slow=4.1,SNR=1.1						
ULM				Lg	Lg	02 15 16.1	
	comp=Z,0.2nm,0.3s,baz=295,slow=19,SNR=1.7						

IDC 25 02:09:53.5±4.4**, 4°.59S**×**144°.74E, h0**^{km}**, mb3.3**/2**, mb1 3.5**/3**, mb1mx3.3**/35**, mbtmp3.3**/3**, ML2.8**/1**, Error ellipse: s-maj=137.8km s-min=35.4km az=99.0, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.32	213	P	Pn	02 14 07.9	-1.3
	0.0nm,0.3s,baz=34,slow=11,SNR=5.2						
ASAR	Alice Springs	21.66	208	P	P	02 14 45.7	-0.1
	0.3nm,0.6s,baz=30,slow=12,SNR=3.1						
MKAR	Makanchi Array	74.99	321	P	P	02 21 37.4	+0.5
	0.3nm,0.5s,baz=118,slow=6.1,SNR=1.9						

MOS ***25*** *02:19:23.7±1.0, 44°.37N×148°.67E, h47*^{km}*, mb4.8/39, MS3.6/4, Error ellipse: s-maj=6.0km s-min=4.8km az=111.8*

SKHL ***25*** *02:19:24.2±0.2, 44°.30N×148°.80E, h51*^{km}*±3*^{km}*, mb5.0/14, ms4.0/3*

NIED ***25*** *02:19:24.2, 44°.03N×148°.37E, h0*^{km}*, MW4.7, Moment Tensor Solution. s3 Moment tensor: Scale 10*^{16}*Nm;* M_{rr}*0.16;* $M_{\theta\theta}$*0.73;* $M_{\phi\phi}$*-0.89;* $M_{r\theta}$*0.79;* $M_{\theta\phi}$*-0.47;* $M_{\phi r}$*0.30; Fault plane solution:* M_0*1.27000×10*^{16} *NP1:*ϕ_s*58.00000°, δ84.00000°, λ138.00000°. NP2:*ϕ_s*154.00000°, δ49.00000°, λ9.00000°.*

BGR ***25*** *02:19:24.6±0.0, 44°.86N×150°.97E, h33*^{km}*, mb4.9*

JMA ***25*** *02:19:24.1±0.4, 44°.03N×148°.37E, h0*^{km}*, M4.8*

IDC ***25*** *02:19:26.7±2.1, 44°.36N×148°.59E, h66*^{km}*±18*^{km}*, mb4.0/25, mb1 4.2/32, mb1mx4.1/42, mbtmp4.3/32, MS3.8/10, Ms1 3.8/10, ms1mx3.5/35, Error ellipse: s-maj=14.3km s-min=10.7km az=144.0*

NEIC ***25*** *02:19:27.4±1.6, 44°.40N±0°.09×148°.7E±0°.1, h60*^{km}*±6*^{km}*, mb4.6/82, Error ellipse: s-maj=13.9km s-min=10.8km az=139.0*

ISC 25 02:19:23.5±0.9**, 44°.28N**±0°.05×**148°.70E**±0°.04**, h32**^{km}±5^{km}**, n425,** σ1^{s}**48**/445**, mb4.7**/117**, MS3.9**/5**, 38C-19D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	1.13	329⇓	*i*PN	Pn	02 19 43.1	+0.1
KUR				*i* S	Sn	02 19 57.3	0.0
KUR				pmax	pmax		
	comp=Z,447nm,0.5s						
KUR				pmax	pmax		
	comp=Z,10.0nm,1.3s						
KUR	Kuril'sk	1.13	329	*e*P	Pn	02 19 43.1	+0.1
KUR				AMB	AMB	02 19 46.0	
	comp=Z,2µm,0.4s						
KUR				*i* S	Sn	02 19 57.1	-0.2
KUR				A	A	02 20 00.0	
	comp=Z,11µm,0.4s						
KUR				A	A	02 20 00.0	
	comp=Z,8µm,0.4s						
YUK	Yuzh-Kuril'sk	2.05	264	*i* PN	Pn	02 19 56.4	+0.7
YUK	Yuzh-Kuril'sk	2.05	264	*i* P	Pn	02 19 56.0	+0.3
YUK				AMB	AMB	02 20 02.0	
	comp=Z,2µm,0.4s						
YUK				*i* S	Sn	02 20 20.0	-0.2
YUK				A	A	02 20 26.0	
	comp=Z,5µm,0.5s						
YUK				A	A	02 20 26.0	
	comp=Z,2µm,0.5s						
GRPR	Tuman	2.12	263	*e*PN	Pn	02 19 57.3	+0.6
GRPR				*i* S	Sn	02 20 23.3	+1.4
GRPR				pmax	pmax		
	comp=Z,751nm,0.2s						
GRPR				pmax	pmax		
	comp=N,237nm,0.1s						
GRPR				smax	smax		
	comp=N,8µm,0.3s						
GRPR				smax	smax		
	comp=E,4µm,0.2s						
GRPR	Tuman	2.12	263	*e*P	Pn	02 19 57.5	+0.8
GRPR				AMB	AMB	02 20 06.0	
	comp=E,751nm,0.3s						
GRPR				*i* S	Sn	02 20 22.7	+0.8
GRPR				A	A	02 20 31.0	
	comp=E,8µm,0.5s						
GRPR				A	A	02 20 31.0	
	comp=E,4µm,0.5s						
NEM2	Nemuro 2	2.32	248	P	Pn	02 20 00.0	+0.6
NEM2				*e*S	Sn	02 20 26.3	-0.5
NMR	Nemuro--Hokkai	2.33	248	*e*PN	Pn	02 19 59.6	+0.1
NMR				*e*S	Sn	02 20 27.5	+0.5
NMR	Nemuro--Hokkai	2.33	248	*e*P	Pn	02 19 59.0	-0.5
NMR				*e*S	Sn	02 20 27.0	0.0
GLVR	Golovnino	2.35	258	*e*PN	Pn	02 20 01.0	+1.2
GLVR				*i* S	Sn	02 20 29.4	+1.8
GLVR				pmax	pmax		
	comp=N,254nm,0.2s						
GLVR				pmax	pmax		
	comp=Z,593nm,0.2s						
GLVR				pmax	pmax		
	comp=E,375nm,0.1s						
GLVR				smax	smax		
	comp=N,13µm,0.3s						
GLVR				smax	smax		
	comp=E,3µm,0.3s						
GLVR	Golovnino	2.35	258	*e*P	Pn	02 20 01.0	+1.2
GLVR				AMB	AMB	02 20 08.0	
	comp=E,593nm,0.4s						
GLVR				*i* S	Sn	02 20 28.7	+1.1
GLVR				A	A	02 20 34.0	
	comp=E,13µm,0.5s						
GLVR				A	A	02 20 34.0	
	comp=E,3µm,0.5s						
RUSJ	Misakicho	2.49	267	*e*PN	Pn	02 20 03.8	+2.1
RUSJ				*i* S	Sn	02 20 33.9	+3.0
JRA	Rausu	2.60	264	P	Pn	02 20 05.3	+2.1
JRA				*e*S	Sn	02 20 34.8	+1.2
JNSB	Nemuroshibetsu	2.71	261	P	Pn	02 20 06.3	+1.6
JKHN	Kushirohamanak	2.83	246	P	Pn	02 20 07.3	+0.9
JNK	Nakash	2.95	258	P	Pn	02 20 09.4	+1.3
JNK				*e*S	Sn	02 20 42.4	0.0
JAK	Akkeshi	3.17	248	P	Pn	02 20 12.0	+0.9
JAK				*e*S	Sn	02 20 47.5	-0.3
JTKR	Abashiri--Toko	3.46	267	P	Pn	02 20 17.1	+2.0
JCH	Churui	4.22	249	P	Pn	02 20 26.9	+1.4
JCH				*e*S	Sn	02 21 14.3	+0.6
JKK2	Kamakawa 2	4.30	267	P	Pn	02 20 30.1	+3.4
JKA	Kamikawa-asahi	4.39	270	Pn	Pn	02 20 32.2	+4.4
JKA	Kamikawa-asahi	4.39	270	*e*P	Pn	02 20 31.1	+3.3
ASAJ	Asahikawa	4.39	270	P	Pn	02 20 31.1	+3.3
	comp=E,3.5nm,0.3s,baz=80,slow=20,SNR=18						
ASAJ				S	Sb	02 21 27.1	-5.2
	comp=E,9.7nm,0.3s,baz=302,slow=9.3,SNR=3.8						
ASAJ				LR	LR	02 22 27.6	
	comp=E,2µm,18.0s,baz=132,slow=42						
JSE	Soyaes	4.42	281	P	Pn	02 20 31.2	+3.0
JFR	Furan	4.56	258	P	Pn	02 20 33.5	+3.3
JEM	Erimo	4.64	243		Pn	02 20 34.7	+3.5
ERM	Erimo	4.64	243	PN	Pn	02 20 35.0	+3.8
ERM	Erimo	4.64	243	Pn	Pn	02 20 35.0	+3.8
ERM	Erimo	4.64	243	*e*P	Pn	02 20 33.4	+2.1
JNBK	Urakawa-nobuka	4.78	247	P	Pn	02 20 34.9	+1.8
JWK2	Keihoku	4.95	285	P	Pn	02 20 39.3	+3.8
YSS	Yuzh-Sakhalins	4.95	305*c*	*e*PN	Pn	02 20 36.1	+0.5
YSS				pmax	pmax		
	comp=Z,36nm,0.7s						
YSS	Yuzh-Sakhalins	4.95	305	Pn	Pn	02 20 37.2	+1.6
YSS	Yuzh-Sakhalins	4.95	305	*e*P	Pn	02 20 37.2	+1.6
YSS				AMB	AMB	02 20 38.2	
	comp=Z,30nm,0.6s						
YSS				*e*S	Sn	02 21 33.5	+1.8
YSS				AMS	AMS	02 23 52.7	
	comp=Z,900nm,17.0s						
YSS				AMS	AMS	02 23 52.7	
	comp=Z,2µm,17.0s						
JEW	Eniwo	5.46	257	P	Pn	02 20 46.5	+4.0
JEW	Eniwo	5.46	257	Pn	Pn	02 20 46.4	+4.0
JKB	Kayabe	6.10	250	P	Pn	02 20 53.0	+1.7
JKB				*e*S	Sn	02 21 58.7	-1.2
JOT	Ohata	6.32	245	P	Pn	02 20 55.6	+1.2
JANG	Nango	6.59	236	P	Pn	02 20 58.1	-0.1
JANG				*e*S	Sn	02 22 07.0	-5.2
UGL	Uglegorsk	6.62	319	*e*P	Pn	02 21 01.9	+3.4
UGL				AMB	AMB	02 21 07.6	
	comp=Z,40nm,0.4s						
JOSM	Okushiri--Mats	7.09	255	P	Pn	02 21 07.3	+2.4
TYV	Tymovskoe	7.75	330	*e*PN	Pn	02 21 15.9	+1.9
TYV				*e*S	Sn	02 22 44.7	+4.2
TYV				pmax	pmax		
	comp=Z,14nm,0.7s						
TYV				pmax	pmax		
	comp=Z,300nm,3.9s						
TYV				smax	smax		
	comp=E,9.0nm,0.8s						
TYV				MLR	MLR		
	comp=Z,1µm,17.0s						
TYV	Tymovskoe	7.75	330	*e*P	Pn	02 21 16.2	+2.2
TYV				AMB	AMB	02 21 18.1	
	comp=Z,14nm,0.5s						
TYV				*e*S	Sn	02 22 41.7	+1.2
TYV				A	A	02 22 47.7	
	comp=Z,8.0nm,0.8s						
TYV				AMS	AMS	02 24 18.7	
	comp=Z,1µm,17.0s						
SKR	Severo-Kuril’s	8.14	35	*e*PN	Pn	02 21 20.4	+1.1
SKR				pmax	pmax		
	comp=Z,78nm,1.0s						
SKR				MLR	MLR		
	comp=Z,800nm,14.0s						
SKR				MLR	MLR		
	comp=Z,2µm,13.0s						
SKR	Severo-Kuril’s	8.14	35	*e*P	Pn	02 21 20.2	+0.9
SKR				AMB	AMB	02 21 22.4	
	comp=Z,60nm,0.4s						
SKR				*e*S	Sn	02 22 49.2	-0.9
TEY	Ternei	8.66	279⇑	*e*PN	Pn	02 21 33.6	+7.2
TEY				pmax	pmax		
	comp=Z,40nm,0.8s						
TEY				pmax	pmax		
	comp=E,30nm,0.7s						
TEY				pmax	pmax		
	comp=N,10.0nm,0.9s						
TEY	Ternei	8.66	279	*e*P	Pn	02 21 30.7	+4.3
TEY				AMB	AMB	02 21 35.7	
	comp=N,20nm,0.7s						
JMM	Marumori	8.75	226	Pn	Pn	02 21 28.2	+0.6
PAU	Pauzhetka	9.03	34	*e*P	Pn	02 21 32.6	+1.2
PAU				AMB	AMB	02 21 40.2	
	comp=N,90nm,0.5s						
PAU				*e*S	Sn	02 23 07.8	-4.0
OKH	Okha	10.02	340	*e*S	Sn	02 23 39.0	+2.7
OKH				AMS	AMS	02 25 36.7	
	comp=N,500nm,18.0s						
OKH				AMS	AMS	02 25 36.7	
	comp=N,1µm,18.0s						
OKH				AMS	AMS	02 25 36.7	
	comp=N,600nm,18.0s						
JSD	Sado	10.03	235	Pn	Pn	02 21 48.9	+3.6
GRNR	Gornyy	10.53	312	AMS	AMS	02 26 16.6	
	comp=N,290nm,14.0s						
GRNR				AMS	AMS	02 26 16.6	
	comp=N,310nm,14.0s						
GRNR				AMS	AMS	02 26 16.6	
	comp=N,530nm,14.0s						
PEA0B	Petropavlovsk-	10.65	31	PN	Pn	02 21 54.6	+1.0
PEA0B	Petropavlovsk-	10.65	31	Pn	Pn	02 21 54.6	+1.0
PETK	Petropavlovsk-	10.65	31	P	Pn	02 21 54.8	+1.2
	comp=N,2.4nm,0.3s,baz=208,slow=13,SNR=11						
PETK				LR	LR	02 25 46.2	
	comp=N,439nm,19.4s,baz=236,slow=36						
PET	Petropavlovsk	10.95	33	*e*PN	Pn	02 21 58.0	+0.3
PET				MLR	MLR		
	comp=Z,600nm,16.0s						
PET	Petropavlovsk	10.95	33	*e*P	Pn	02 21 58.0	+0.3
PET				AMS	AMS	02 26 30.1	
	comp=Z,590nm,16.0s						
MAJO	Matsushiro	11.11	230	*i* PN	Pn	02 22 01.2	+1.2
MAT	Matsushiro	11.11	230	P	Pn	02 21 58.8	-1.2
MAT				*e*S	Sn	02 24 05.4	+2.3
MJAR	Matsushiro Arr	11.11	230	P	Pn	02 22 01.2	+1.2
	comp=Z,0.1nm,0.3s,baz=26,slow=13,SNR=8.8						
MJAR	Matsushiro Arr	11.11	230	PN	Pn	02 22 02.2	+2.1
MJAR	Matsushiro Arr	11.11	230		Pn	02 22 02.2	+2.1
USA0B	Ussuriysk Arra	11.99	275	PN	Pn	02 22 16.5	+4.5
USA0B	Ussuriysk Arra	11.99	275	Pn	Pn	02 22 16.5	+4.5
USRK	Ussuriysk Ar.	11.99	275	P	Pn	02 22 14.7	+2.7
	baz=83,slow=14,SNR=10						
USRK				LR	LR	02 26 41.5	
	comp=Z,572nm,18.5s,baz=71,slow=36						
USRK	Ussuriysk Ar.	11.99	275	Pn	Pn	02 22 14.5	+2.5
KLR	Kul'dur	12.63	299	P	Pn	02 22 25.4	+4.7
	comp=Z,0.2nm,0.3s,baz=106,slow=15,SNR=25						
KLR				LR	LR	02 27 37.4	
	comp=Z,480nm,18.6s,baz=136,slow=39						
KLR	Kul'dur	12.63	299	*i* PN	Pn	02 22 21.0	+0.3
KLR	Kul'dur	12.63	299	*e*P	Pn	02 22 21.0	+0.3
EKMR	Ekimchan	13.60	316	*e*P	Pn	02 22 34.0	0.0
EKMR				AMB	AMB	02 22 41.0	
	comp=Z,25nm,0.9s						
MDJ	Mudanjiang	13.66	278	P	Pn	02 22 39.0	+4.3
MDJ				pP	P	02 22 47.1	+3.9
MDJ				sP		02 22 53.1	
MDJ				S	Sn	02 25 03.1	-2.1
MDJ				ScP	ScP	02 31 39.8	+11
MDJ				sS		02 31 43.0	
MDJ	Mudanjiang	13.66	278	ScS	ScS	02 35 15.3	+9.2
MDJ				pmax	pmax		
	comp=Z,16nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,160nm,4.6s						
MDJ				LR	LR		
	comp=N,570nm,11.5s						
MDJ				LR	LR		
	comp=E,600nm,13.8s						
MDJ				LR	LR		
	comp=Z,770nm,16.7s						
MDJ	Mudanjiang	13.66	278	Pn	Pn	02 22 39.1	+4.3
MA2	Magadan	15.38	4	P	Pn	02 22 57.9	+0.1
	comp=Z,0.6nm,0.3s,baz=177,slow=16,SNR=2.6						
MA2	Magadan	15.38	4	P	Pn	02 22 58.8	+0.9
MA2				pmax	pmax		
	comp=Z,6.0nm,0.7s						
MA2	Magadan	15.38	4		Pn	02 22 58.8	+0.9
MA2	Magadan	15.38	4	*e*P	Pn	02 22 58.8	+0.9
BMKR	Bomnak	16.54	316	*e*P	Pn	02 23 13.0	+0.3
BMKR				AMB	AMB	02 23 18.0	
	comp=Z,5.0nm,0.8s						
ZEA	Zeya	16.90	312	*e*P	P	02 23 20.2	+1.1
ZEA				MLR	MLR		
	comp=Z,300nm,16.0s						
ZEA	Zeya	16.90	312	*e*P	Pn	02 23 16.8	-0.5
ZEA				AMB	AMB	02 23 21.0	
	comp=Z,50nm,0.7s						
ZEA				AMS	AMS	02 30 30.0	
	comp=Z,300nm,16.0s						
KSRS	Korea Array	17.10	254	P	Pn	02 23 18.5	-1.5

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            comp=Z,0.2nm,0.3s,baz=65,slow=11,SNR=2.5
KSRS                                    LR      LR        02 29 25.8
            comp=Z,346nm,19.9s,baz=92,slow=35
KROS  Kirovskiy          17.35 314  eP      Pn        02 23 21.0  -2.0
KROS                                    AMB     AMB       02 23 27.1
            comp=Z,3.0nm,0.5s
JNU   Nakatsue           17.78 237   P      P         02 23 29.6  +0.7
            comp=Z,0.2nm,0.3s,baz=29,slow=18,SNR=2.5
JNU                                     LR      LR        02 29 22.5
            comp=Z,166nm,20.9s,baz=41,slow=34
JCJ   Chichijima         17.93 199   LR     LR        02 29 05.1
            comp=Z,176nm,19.3s,baz=313,slow=32
SEY   Seymchan           18.82   5   P      P         02 23 38.7  -1.4
            comp=Z,0.7nm,0.3s,baz=180,slow=7.8,SNR=29
SEY   Seymchan           18.82   5 i P      P         02 23 38.6  -1.5
SEY   Seymchan           18.82   5  eP      P         02 23 38.6  -1.5
YAK   Yakutsk            20.98 335   P      P         02 24 03.0  -0.7
            comp=Z,15nm,0.5s,baz=150,slow=2.3,SNR=4.8
YAK   Yakutsk            20.98 335  eP      P         02 24 04.5  +0.9
YAK                                 e*PP    sP        02 24 17.2  +1.3
YAK                                 eS      S         02 27 53.7  -1.6
YAK                                 e*SS    sS        02 28 11.0  +2.2
YAK                                     pmax    pmax
            comp=Z,35nm,0.8s
YAK                                     pmax    pmax
            comp=N,10.0nm,0.9s
YAK                                     pmax    pmax
            comp=E,4.0nm,0.8s
YAK                                     smax    smax
            comp=E,150nm,3.0s
YAK                                     smax    smax
            comp=N,105nm,2.6s
YAK   Yakutsk            20.98 335  eP      P         02 24 05.1  +1.5
BJI   Beijing            24.38 271   P      P         02 24 39.6  +1.0
BJI                                     pmax    pmax
            comp=Z,16nm,0.7s
BJT   Baijiatuau         24.40 271   P      P         02 24 39.8  +1.0
BJT                                     pmax    pmax
            comp=Z,12nm,0.8s
BJT   Baijiatuau         24.40 271   P      P         02 24 39.8  +1.0
BJT                                     IAmb    IAmb      02 24 40.9
            comp=Z,12nm,0.8s
BJT   Baijiatuau         24.40 271  eP      P         02 24 39.8  +1.0
NJ2   Nanjing            26.30 253  eP      P         02 24 57.8  +1.8
NJ2                                     pmax    pmax
            comp=Z,5.0nm,0.5s
HHC   Hu-ho-hao-te       27.41 276  eP      P         02 25 08.8  +2.7
HHC                                     pmax    pmax
            comp=Z,5.0nm,1.0s
HHC                                     pmax    pmax
            comp=Z,84nm,5.4s
BTO   Baotou             28.60 276  eP      P         02 25 20.8  +4.1
H11N2 WAKE ISLAND Hy     28.80 142   T      T         02 56 04.8
            baz=333,slow=76,SNR=702
H11N1 WAKE ISLAND Hy     28.81 142   T      T         02 56 04.3
            baz=333,slow=76,SNR=465
H11N3 WAKE ISLAND Hy     28.82 142   T      T         02 56 05.7
            baz=333,slow=76,SNR=681
ULN   Ulaanbaatar        28.86 292ceP       P         02 25 19.0   0.0
ULN                                     pmax    pmax
            comp=Z,2.0nm,0.8s
ULN   Ulaanbaatar        28.86 292  eP      P         02 25 19.0   0.0
SONM  Songino Array      29.30 292   P      P         02 25 22.7  -0.2
            comp=Z,1.3nm,0.7s,baz=85,slow=8.2,SNR=8.9
SONM                                    LR      LR        02 37 59.0
            comp=Z,277nm,19.5s,baz=103,slow=38
SONM  Songino Array      29.30 292   P      P         02 25 23.0  +0.1
SONM                                    pmax    pmax
            comp=Z,1.0nm,0.8s
SONM  Songino Array      29.30 292   P      P         02 25 23.0  +0.1
H11S1 WAKE ISLAND Hy     29.80 144   T      T         02 57 22.5
            baz=334,slow=76,SNR=1909
H11S3 WAKE ISLAND Hy     29.80 144   T      T         02 57 26.9
            baz=334,slow=76,SNR=1096
H11S2 WAKE ISLAND Hy     29.82 144   T      T         02 57 23.3
            baz=334,slow=76,SNR=992
WHN   Wuhan              30.29 255   P      P         02 25 34.1  +2.5
TLY   Talaya             30.64 300   LR     LR        02 38 51.6
            comp=Z,138nm,18.4s,baz=62,slow=38
LZH   Lanzhou            34.87 272 ⇑P       P         02 26 13.3  +1.4
LZH                                     pP      sP        02 26 29.4  +4.6
LZH                                     sP      pP        02 26 34.4   +13
LZH                                     PP      PnPn      02 27 23.3  -5.5
LZH                                     pmax    pmax
            comp=Z,52nm,1.1s
LZH                                     pmax    pmax
            comp=Z,160nm,5.4s
LZH                                     LR      LR
            comp=N,260nm,13.6s
LZH                                     LR      LR
            comp=E,340nm,16.3s
LZH                                     LR      LR
            comp=Z,260nm,15.2s
GTA   Gaotai             36.30 280  eP      P         02 26 25.0  +0.9
GTA                                     pP      pP        02 26 29.4  -4.0
GTA                                     sP      sP        02 26 32.6  -4.5
GTA                                     pmax    pmax
            comp=Z,8.0nm,0.8s
SVW2  Sparrevohn         36.43  43   P      P         02 26 25.8  +1.0
SVW2                                    IAmb    IAmb      02 26 41.1
            comp=Z,6.4nm,1.2s
IMAR  Indian Mountai     37.58  34   P      P         02 26 33.7  -0.8
A21K  Barrow             37.59  26   P      P         02 26 34.1  -0.4
PPLA  Purkeypile         38.06  40   P      P         02 26 40.0  +1.3
PPLA                                    IAmb    IAmb      02 26 53.5
            comp=Z,17nm,1.4s
KDAK  Kodiak Island      38.07  48   P      P         02 26 38.4  -0.3
            comp=Z,5.6nm,0.7s,baz=219,slow=1.8,SNR=2.0
GYA   Guiyang            38.13 256 ⇑P       P         02 26 40.5  +0.8
GYA                                     pP      sP        02 26 58.3  +5.5
GYA                                     pmax    pmax
            comp=Z,3.0nm,0.5s
GYA                                     pmax    pmax
            comp=Z,160nm,4.5s
BPAW  Bear Paw Mtn.      38.63  38   P      P         02 26 44.0  +0.7
CNPM  China Poot         38.63  45   P      P         02 26 43.4   0.0
KTH   Kantishna Hill     38.65  39   P      P         02 26 44.2  +0.6
SUA   Susitna One        38.76  42   P      P         02 26 45.8  +1.2
BRLK  Bradley Lake       38.79  45   P      P         02 26 46.2  +1.5
TRF   Thorofare Moun     38.93  39   P      P         02 26 46.7  +0.6
TRF                                     IAmb    IAmb      02 27 03.0
            comp=Z,9.9nm,1.4s
BWN   Browne             39.30  38   P      P         02 26 50.7  +1.8
O22K  Cooper Landing     39.31  43   P      P         02 26 49.2  +0.1
NRIK  Noril'sk           39.34 331   PcP    PcP       02 28 55.4  -1.6
            comp=Z,1.7nm,0.6s,baz=103,slow=1.8,SNR=4.1
I23K  Minto, Yukon-K     39.35  36   P      P         02 26 49.7  +0.4
TOLK  Toolik Lake Re     39.47  31   P      P         02 26 50.0  -0.4
TOLK                                    IAmb    IAmb      02 26 58.2
            comp=Z,8.7nm,1.4s
RND   Reindeer           39.58  39   P      P         02 26 51.7  +0.3
RND                                     pmax    pmax
            comp=Z,11nm,1.4s
RND   Reindeer           39.58  39   P      P         02 26 51.7  +0.3
RND                                     IAmb    IAmb      02 27 08.9
            comp=Z,11nm,1.4s
MDM   Murphy Dome        39.83  36   P      P         02 26 53.9  +0.6
MDM                                     IAmb    IAmb      02 26 56.9
            comp=Z,5.1nm,0.8s
SML   Sawmill            39.89  41   P      P         02 26 54.3  +0.4
SML                                     IAmb    IAmb      02 27 06.3
            comp=Z,12nm,1.0s
WRH   Wood River Hil     39.89  37   P      P         02 26 54.4  +0.5
COLA  College            39.99  36 i P      P         02 26 54.1  -0.5
COLA                                    pmax    pmax
            comp=Z,8.0nm,0.7s
CCB   Clear Creek Bu     40.01  37   P      P         02 26 55.5  +0.7
POKR  Poker Plat Res     40.16  36   P      P         02 26 56.5  +0.4
POKR                                    IAmb    IAmb      02 26 59.1
            comp=Z,8.2nm,0.8s
HDA   Harding Lake       40.39  37   P      P         02 26 57.6  -0.4
HDA                                     IAmb    IAmb      02 26 59.8
            comp=Z,5.0nm,0.6s
ILAR  Eielson Array      40.40  37   P      P         02 26 57.9  -0.3
            comp=Z,1.6nm,0.7s,baz=263,slow=8.1,SNR=18
ILAR  Eielson Array      40.40  37   P      P         02 26 58.4  +0.3
PRP   Porcupine Dome     40.96  35   P      P         02 27 03.2  +0.4
PRP                                     IAmb    IAmb      02 27 06.2
            comp=Z,5.7nm,0.6s
FYU   Fort Yukon         41.05  34   P      P         02 27 04.1  +0.7
FYU                                     IAmb    IAmb      02 27 07.7
            comp=Z,9.6nm,1.0s
DGZ   Jazzator, Alta     41.12 300  eP      P         02 27 03.8  -0.6
DGZ                                     pmax    pmax
            comp=Z,6.0nm,1.7s
BMAR  Burnt Mountain     41.29  33   P      P         02 27 05.7  +0.3
ZALV  Zalesovo Beam      41.57 307   P      P         02 27 05.6  -2.3
            comp=Z,0.3nm,0.4s,baz=48,slow=6.4,SNR=2.3
ZALV                                    PcP     PcP       02 29 02.7  -1.8
            comp=Z,3.8nm,0.6s,baz=66,slow=3.4,SNR=16
DOT   Dot Lake           41.70  38   P      P         02 27 08.1  -0.8
KMI   Kunming            41.72 258⇑eP       P         02 27 10.8  +1.2
KMI                                     pP      sP        02 27 27.1  +4.8
KMI                                     sP      pwP       02 27 33.6   +13
KMI                                     pmax    pmax
            comp=Z,6.0nm,0.8s
RAGM  Ragged Mountai     41.81  43   P      P         02 27 10.6  +0.8
RAGM                                    IAmb    IAmb      02 27 17.8
            comp=Z,11nm,1.0s
VRDI  Verde Repeater     42.28  42   P      P         02 27 14.8  +1.0
VRDI                                    IAmb    IAmb      02 27 22.1
            comp=Z,12nm,1.4s
BCAR  Beaver Creek A     42.79  39   P      P         02 27 18.0  +0.3
EGAK  Eagle              42.85  36   P      P         02 27 17.8  -0.3
EGAK                                    IAmb    IAmb      02 27 21.0
            comp=Z,7.3nm,0.9s
WMQ   Urumqi             42.94 292  eP      P         02 27 21.8  +2.6
WMQ                                     pP      pwP       02 27 30.3  -0.4
WMQ                                     sP      sP        02 27 46.8   +15
WMQ                                     pmax    pmax
            comp=Z,11nm,1.1s
WMQ                                     pmax    pmax
            comp=Z,91nm,6.9s
WMQ                                     LR      LR
            comp=N,150nm,10.3s
WMQ                                     LR      LR
            comp=E,450nm,18.9s
WMQ                                     LR      LR
            comp=Z,130nm,20.3s
ZSN   Zaisan             43.45 298  eP      P         02 27 23.6  +0.3
            baz=297
ZSN   Zaisan             43.45 298  eP      P         02 27 23.5  +0.3
HYT   Haines Junctio     45.20  42   P      P         02 27 39.0  +1.8
HYT                                     IAmb    IAmb      02 27 41.8
            comp=Z,9.1nm,0.9s
SEM   Semipalatinsk      45.29 303  eP      P         02 27 37.0  -1.1
            baz=303
SEM   Semipalatinsk      45.29 303  eP      P         02 27 37.0  -1.1
MK31  Makanchi Array     45.33 298ceP       P         02 27 37.3  -1.0
MK31  Makanchi Array     45.33 298   P      P         02 27 38.1  -0.2
MKAR  Makanchi Array     45.33 298   P      P         02 27 37.0  -1.3
            comp=Z,3.5nm,0.7s,baz=75,slow=8.2,SNR=46
MKAR                                    PcP     PcP       02 29 16.2  -1.2
            comp=Z,1.8nm,0.7s,baz=68,slow=4.4,SNR=5.4
MKAR  Makanchi Array     45.33 298   P      P         02 27 38.2  -0.1
MKAR  Makanchi Array     45.33 298  eP      P         02 27 38.2  -0.1
INK   Inuvik             45.38  31   P      P         02 27 38.5  +0.1
            comp=Z,2.5nm,0.4s,baz=307,slow=10,SNR=32
INK   Inuvik             45.38  31   P      P         02 27 38.7  +0.4
MAKZ  Makanchi           45.52 298   P      P         02 27 40.5  +0.7
MAKZ                                    pmax    pmax
            comp=Z,4.0nm,0.8s
MAKZ  Makanchi           45.52 298   P      P         02 27 40.5  +0.7
KURK  Kurchatov          46.16 304ceP       P         02 27 43.2  -1.5
KURK                                    pmax    pmax
            comp=Z,2.0nm,0.7s
KURK  Kurchatov          46.16 304   P      P         02 27 43.9  -0.8
KURK  Kurchatov          46.16 304  eP      P         02 27 43.2  -1.5
KURBB Kurchatov Arra     46.25 304   P      P         02 27 44.0  -1.3
            comp=Z,1.2nm,0.4s,baz=74,slow=8.5,SNR=16
KURBB                                   PcP     PcP       02 29 20.0  -0.5
            comp=Z,2.3nm,0.6s,baz=76,slow=3.3,SNR=14
C36M  Paulatuk           48.49  28   P      P         02 28 02.4  -0.1
TDK   Taldyqorghan       48.53 297  eP      P         02 28 03.0  -0.3
            baz=297
TDK   Taldyqorghan       48.53 297  eP      P         02 28 03.0  -0.3
SHLS  Shalkode           48.66 294  eP      P         02 28 01.9  -2.5
            baz=294
SHLS  Shalkode           48.66 294  eP      P         02 28 01.9  -2.5
CMAR  Chiang Mai Arr     48.74 255   P      P         02 28 04.3  -0.8
            comp=Z,1.6nm,0.4s,baz=32,slow=8.6,SNR=1.5
CMAR                                    LR      LR        02 50 53.6
            comp=Z,79nm,19.1s,baz=340,slow=39
UZB   Uzynbulak          48.95 294  eP      P         02 28 06.4  -0.4
            baz=294
UZB   Uzynbulak          48.95 294  eP      P         02 28 06.3  -0.4
KPKS  Kokpek             49.03 295  eP      P         02 28 07.2   0.0
            comp=Z,7.1nm,0.8s,baz=295
KPKS  Kokpek             49.03 295  eP      P         02 28 07.2   0.0
KPKS                                    pmax    pmax
            comp=Z,7.0nm,0.8s
SHL   Shillong           49.17 267   P      P         02 28 08.8  +0.1
SHL                                     pmax    pmax
            comp=Z,8.0nm,0.7s
SHL   Shillong           49.17 267   P      P         02 28 08.8  +0.1
SATY  Saty               49.39 295  eP      P         02 28 10.2  +0.2
            comp=Z,3.5nm,0.7s,baz=294
SATY  Saty               49.39 295  eP      P         02 28 10.2  +0.2
SATY                                    pmax    pmax
            comp=Z,3.0nm,0.7s
CHKK  Chushkaly          49.95 296  eP      P         02 28 13.7  -0.5
            baz=296
CHKK  Chushkaly          49.95 296  eP      P         02 28 13.6  -0.5
BRZS  Berezniki          49.96 305  eP      P         02 28 13.6  -0.6
            comp=Z,2.5nm,0.6s,baz=305
BRZS  Berezniki          49.96 305  eP      P         02 28 13.5  -0.6
BRZS                                    pmax    pmax
            comp=Z,3.0nm,0.6s
BRVK  Borovoye           50.08 310 i P      P         02 28 13.3  -1.6
BRVK                                    pmax    pmax
            comp=Z,10.0nm,2.9s
BRVK  Borovoye           50.08 310  eP      P         02 28 13.3  -1.6
MDOK  Medeo              50.23 295  eP      P         02 28 16.6  +0.1
            baz=295
MDOK  Medeo              50.23 295  eP      P         02 28 16.5  +0.1
KUU   Kurty              50.35 297  eP      P         02 28 16.3  -0.9
            comp=Z,5.4nm,0.6s,baz=296
KUU   Kurty              50.35 297  eP      P         02 28 16.3  -0.9
KUU                                     pmax    pmax
            comp=Z,5.0nm,0.6s
TNSS  Tian-Shan          50.35 295  eP      P         02 28 16.6  -1.1
            baz=295
TNSS  Tian-Shan          50.35 295  eP      P         02 28 16.6  -1.1
BTLS  Baital             51.28 299  eP      P         02 28 23.2  -1.0
            baz=299
BTLS  Baital             51.28 299  eP      P         02 28 23.2  -1.0
SGDS  Sogindy            51.66 297  eP      P         02 28 27.1   0.0
            baz=296
SGDS  Sogindy            51.66 297  eP      P         02 28 27.0   0.0
GUN   Gumba              52.09 274  eP      P         02 28 31.6  +0.8
            comp=Z,32nm,0.6s
AAK   Ala-Archa          52.13 296ceP       P         02 28 30.6  -0.1
AAK                                     pmax    pmax
            comp=Z,18nm,1.7s
AAK   Ala-Archa          52.13 296  eP      P         02 28 30.6  -0.1
RAMN  Ramite             52.14 272  eP      P         02 28 31.3  +0.2
            comp=Z,40nm,0.6s
KKN   Kakani             52.59 274  eP      P         02 28 35.4  +1.0
PKI   Pulchoki           52.63 274  eP      P         02 28 34.9  +0.1
            comp=Z,12nm,0.6s
PKIN  Phulchoki          52.64 274  eP      P         02 28 34.9  +0.1
            comp=Z,15nm,0.5s
KSH   Kashi              52.70 292   P      P         02 28 39.6  +4.6
KSH                                     pmax    pmax
            comp=Z,10.0nm,1.1s
KSH                                     pmax    pmax
            comp=Z,490nm,8.5s
DMN   Daman              52.83 274  eP      P         02 28 36.3  +0.1
            comp=Z,19nm,0.6s
GKN   Gorkha             52.93 275  eP      P         02 28 37.3  +0.5
            comp=Z,22nm,0.7s
DZA   Taraz              54.04 298  eP      P         02 28 44.6   0.0
            baz=297
DZA   Taraz              54.04 298  eP      P         02 28 44.6   0.0
KK31  Karatay Array      54.45 298   P      P         02 28 47.4  -0.2
KK31                                    pmax    pmax
            comp=Z,4.0nm,0.8s
KK31  Karatay Array      54.45 298   P      P         02 28 47.4  -0.2
KK31                                    IAmb    IAmb      02 28 48.4
            comp=Z,4.3nm,0.8s
KKAR  Karatay Array      54.45 298   P      P         02 28 47.4  -0.2
KKAR  Karatay Array      54.45 298   P      P         02 28 47.4  -0.2
ARU   Arti               54.72 317d iP      P         02 28 48.4  -0.9
ARU                                                       02 29 49.7
ARU                                     S       S         02 36 27.6  +0.4
ARU                                     pmax    pmax
            comp=Z,3.0nm,0.7s
ARU   Arti               54.72 317   P      P         02 28 48.8  -0.5
ARU                                     IAmb    IAmb      02 29 01.5
            comp=Z,8.0nm,1.3s
ARU   Arti               54.72 317  eP      P         02 28 48.4  -0.9
YKA   Yellowknife Ar     54.74  34   P      P         02 28 49.0  -0.4
            comp=Z,2.8nm,0.6s,baz=302,slow=6.3,SNR=55
YKA   Yellowknife Ar     54.74  34ceP       P         02 28 49.5  +0.2
YKA                                     pmax    pmax
            comp=Z,3.0nm,0.6s
IUG   Iuzhnay            55.24 297  eP      P         02 28 53.4  -0.1
            comp=Z,2.8nm,0.9s,baz=297
IUG   Iuzhnay            55.24 297  eP      P         02 28 53.3  -0.1
IUG                                     pmax    pmax
            comp=Z,3.0nm,0.9s
TULEG Thule              57.12  10   P      P         02 29 05.1  -1.1
TULEG                                   IAmb    IAmb      02 29 10.3
            comp=Z,8.4nm,0.8s
ABKAR Akbulak array      57.60 309   P      P         02 29 09.6  -0.4
NIL   Nilore             57.70 287   P      P         02 29 11.7  +0.7
NIL                                     pmax    pmax
            comp=Z,20nm,1.1s
NIL   Nilore             57.70 287   P      P         02 29 11.7  +0.7
B08A  Colville Reser     59.88  50   P      P         02 29 26.6  +0.8
B08A                                    IAmb    IAmb      02 29 27.7
            comp=Z,2.7nm,0.7s
PINE  Pine Mountain      61.55  55   P      P         02 29 39.3  +1.8
PINE                                    IAmb    IAmb      02 29 39.6
            comp=Z,3.9nm,0.8s
K05A  Summer Lake        62.19  56   P      P         02 29 43.0  +1.1
K05A                                    IAmb    IAmb      02 29 56.4
            comp=Z,11nm,1.4s
MOD   Modoc Plateau      63.03  57   P      P         02 29 45.7  -1.7
SUMG  Summit             63.34   2   P      P         02 29 48.4  -0.9
SUMG  Summit             63.34   2   P      P         02 29 48.4  -0.9
BEKR  Beckworth          64.21  59   P      P         02 29 55.7  +0.4
FFC   Flin Flon          64.61  37   P      P         02 29 57.9  +0.5
FFC                                     pmax    pmax
            comp=Z,9.0nm,1.1s
FFC   Flin Flon          64.61  37   P      P         02 29 57.9  +0.5
FFC                                     IAmb    IAmb      02 29 59.9
            comp=Z,8.6nm,1.1s
FIA1  FINESS Array S     64.91 333   P      P         02 29 57.1  -2.0
FIA1                                    IAmb    IAmb      02 29 58.8
            comp=Z,6.2nm,0.6s
FINES FINESS Array B     64.91 333   P      P         02 29 56.2  -2.9
            comp=Z,5.6nm,0.6s,baz=40,slow=7.0,SNR=27
FINES FINESS Array B     64.91 333 i P      P         02 29 57.4  -1.8
FINES                                   pmax    pmax
            comp=Z,6.0nm,0.6s
FINES FINESS Array B     64.91 333   P      P         02 29 56.8  -2.4
FCC   Fort Churchill     65.01  31   P      P         02 29 59.7  -0.1
FCC                                     pmax    pmax
            comp=Z,5.0nm,0.7s
FCC   Fort Churchill     65.01  31   P      P         02 29 59.7  -0.1
FCC                                     IAmb    IAmb      02 30 00.9
            comp=Z,5.1nm,0.7s
WB0   Warramunga Arr     65.06 195   P      P         02 30 00.9  +0.3
WB0                                     IAmb    IAmb      02 30 03.6
            comp=Z,6.8nm,1.1s
GEYT  Alibeck            65.16 299   P      P         02 29 59.8  -1.4
            comp=Z,5.0nm,0.7s,baz=47,slow=6.5,SNR=10.0
GEYT  Alibeck            65.16 299   P      P         02 30 00.9  -0.4
WB2   Warramunga Arr     65.24 195   P      P         02 30 02.2  +0.4
WB2                                     IAmb    IAmb      02 30 19.8
            comp=Z,6.8nm,1.1s
WRA   Warramunga Arr     65.24 195   P      P         02 30 00.4  -1.4
            comp=Z,1.8nm,0.8s,baz=15,slow=6.9,SNR=13
WRA   Warramunga Arr     65.24 195   P      P         02 30 03.0  +1.2
WRA   Warramunga Arr     65.24 195   P      P         02 30 03.0  +1.2
BOZ   Bozeman (W)        65.76  49   P      P         02 30 05.2   0.0
BOZ                                     pmax    pmax
            comp=Z,3.0nm,0.9s
BOZ   Bozeman (W)        65.76  49   P      P         02 30 05.2   0.0
VRH   Novokhopyorsk      65.87 319  eP      P         02 30 04.1  -1.5
VRH                                     pmax    pmax
            comp=Z,9.0nm,0.8s
LPSR  Galich'ya Gora     66.23 321  eP      P         02 30 06.5  -1.3
LPSR                                    pmax    pmax
            comp=Z,8.0nm,0.7s
LHV   Little Huntoon     66.34  59   P      P         02 30 10.2  +1.4
LHV                                     IAmb    IAmb      02 30 24.9
            comp=Z,11nm,1.2s
NVAR  Mina Array Bea     66.35  59   P      P         02 30 09.0  -0.2
            comp=Z,1.5nm,0.6s,baz=295,slow=6.9,SNR=9.4
NVAR  Mina Array Bea     66.35  59   P      P         02 30 09.5  +0.3
VSR   Storozhevoye       67.06 320  eP      P         02 30 11.9  -1.3
VSR                                     pmax    pmax
            comp=Z,6.0nm,0.7s
VORD  Divnogorie         67.17 320  eP      P         02 30 11.7  -2.2
VORD                                    pmax    pmax
            comp=Z,5.0nm,0.6s
TPH   Tonopah            67.24  59   P      P         02 30 15.7  +0.8
TPH                                     pmax    pmax
            comp=Z,26nm,1.2s
TPH   Tonopah            67.24  59   P      P         02 30 15.7  +0.8
PDAR  Pinedale Array     68.72  51   P      P         02 30 23.6  -0.5
            comp=Z,0.7nm,0.5s,baz=186,slow=1.3,SNR=6.9
ASAR  Alice Springs      68.95 195   P      P         02 30 25.6  +0.3
            comp=Z,1.4nm,0.8s,baz=12,slow=5.9,SNR=14
ASAR  Alice Springs      68.95 195   P      P         02 30 27.0  +1.6
ASAR  Alice Springs      68.95 195   P      P         02 30 27.0  +1.6
NC303 NORSAR Array S     69.31 339   P      P         02 30 25.5  -1.7
NB2   NORSAR Subarra     69.51 339   P      P         02 30 27.0  -1.4
            comp=Z,2.6nm,0.6s,baz=30,slow=6.5
NOA   NORSAR Array B     69.51 339   P      P         02 30 26.3  -2.2
            comp=Z,4.8nm,0.8s,baz=31,slow=6.2,SNR=17
NACGM Naroch             69.60 328 i P      P         02 30 28.0  -1.0
NACGM                              i P      P         02 30 28.0  -1.0
NACGM                              i P      P         02 30 28.0  -1.0
NACGM                              i PcP    PcP       02 30 53.6  +1.8
NACGM                              i PP     PP        02 32 58.3  -4.2
NACGM                              i S      S         02 39 26.1  -8.5
NACGM                              i SS     SS        02 43 37.9   -24
NACGM                              i SSS    SSS       02 46 47.2
NACGM                              i LR     LR        03 00 36.9
NCK   Nalchik            70.06 312 i P      P         02 30 31.8  -0.3
NCK                                     pmax    pmax
            comp=Z,6.0nm,0.9s
RDMU  Red Mountain       70.16  52   P      P         02 30 33.4  +0.4
KIV   Kislovodsk         70.24 312⇓iP       P         02 30 34.2  +0.9
KIV                                 e                     02 33 08.2
KIV                                     pmax    pmax
            comp=Z,17nm,1.3s
KBZ   Khabaz             70.28 312   P      P         02 30 32.2  -1.2
            comp=Z,5.6nm,0.9s,baz=91,slow=4.7,SNR=13
KBZ   Khabaz             70.28 312ceP       P         02 30 33.3  -0.1
KBZ                                     pmax    pmax
            comp=Z,6.0nm,0.9s
KBZ   Khabaz             70.28 312  eP      P         02 30 33.3  -0.1
ZEI   Tsey               70.38 311  eP      P         02 30 33.2  -1.1
ZEI                                     pmax    pmax
            comp=Z,4.0nm,0.8s
SHA1  Shidzhatmaz        70.40 312 i P      P         02 30 31.7  -2.8
ULM   Lac du Bonnet      70.41  38   P      P         02 30 32.1  -1.9
            comp=Z,2.9nm,0.6s,baz=315,slow=7.1,SNR=9.6
ULM   Lac du Bonnet      70.41  38   P      P         02 30 34.1   0.0
ULM                                     pmax    pmax
            comp=Z,3.0nm,0.7s
ULM   Lac du Bonnet      70.41  38   P      P         02 30 34.1   0.0
AKH   Akhalkalaki        71.53 310 ⇓P       P         02 30 42.8  +1.5
GNI   Garni              71.70 308   P      P         02 30 43.1  +0.8
GNI                                     pmax    pmax
            comp=Z,9.0nm,1.1s
GNI   Garni              71.70 308   P      P         02 30 43.1  +0.8
GNI                                     IAmb    IAmb      02 30 49.6
            comp=Z,9.2nm,1.1s
AKASG Malin Array Be     71.81 324   P      P         02 30 41.2  -1.4
            comp=Z,4.4nm,0.7s,baz=37,slow=6.4,SNR=18
AKASG Malin Array Be     71.81 324c iP      P         02 30 41.9  -0.6
AKASG                                   pmax    pmax
            comp=Z,4.0nm,0.7s
AKBB  Malin Array Si     71.81 324ceP       P         02 30 40.9  -1.6
PV17  East Wray Mesa     72.04  54   P      P         02 30 45.0  +0.6
PV17                                    IAmb    IAmb      02 30 59.4
            comp=Z,11nm,1.2s
SORM  Soroca             74.13 323 ⇓P       P         02 30 55.2  -1.1
SORM  Soroca             74.13 323 ⇓P       P         02 30 55.2  -1.1
MILM  Milestii Mici      74.86 322 ⇑P       P         02 30 59.6  -1.0
KWP   Kalwaria Pacla     75.28 327   P      P         02 31 03.3  +0.3
KWP                                     pmax    pmax
            comp=Z,13nm,0.8s
KWP   Kalwaria Pacla     75.28 327   P      P         02 31 03.3  +0.3
BUR08 Bucovina Ar. S     75.85 324   P      P         02 31 06.3  -0.1
BUR08                                   IAmb    IAmb      02 31 07.2
            comp=Z,6.4nm,0.8s
BURAR Bucovina Array     75.87 324 ⇓P       P         02 31 06.2  -0.3
BURAR Bucovina Array     75.87 324 ⇓P       P         02 31 06.2  -0.3
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BURAR	Bucovina Array	75.87	324	P	P	02 31 06.3	-0.2
BIR	Birlad	75.88	322	⇑P	P	02 31 05.6	-0.9
BIR	Birlad	75.88	322	⇑P	P	02 31 05.6	-0.9
KOLS	Kolonicke sedl	76.01	327	*e*P	P	02 31 07.5	+0.3
KOLS	Kolonicke sedl	76.01	327	*e*P	P	02 31 07.5	+0.3
BIZ	Bicaz	76.02	323	⇑P	P	02 31 07.5	+0.3
STKA	Stephens Creek	76.06	186	P	P	02 31 06.8	-0.6
	comp=Z,1.4nm,0.7s,baz=32,slow=9.5,SNR=1.7						
TESR	Tescani	76.12	323	⇑P	P	02 31 07.3	-0.5
GHRR		76.14	322	⇑P	P	02 31 08.9	+1.0
CFR	Carcaliu	76.50	321	⇓P	P	02 31 10.1	+0.1
CFR	Carcaliu	76.50	321	⇓P	P	02 31 10.1	+0.1
ODBI	Odobesti	76.53	322	⇑P	P	02 31 11.3	+1.2
VRI	Vrincioaia	76.59	322	⇑P	P	02 31 10.7	+0.2
VRI	Vrincioaia	76.59	322	⇑P	P	02 31 10.7	+0.2
TPGR	Topolog	76.62	321	⇓P	P	02 31 10.0	-0.8
ARCR	ARCALIA	76.64	325	⇓P	P	02 31 11.4	+0.6
G40A	Rib Lake	76.67	38	P	P	02 31 10.9	-0.1
G40A				IAmb	IAmb	02 31 18.9	
	comp=Z,12nm,1.3s						
LANS	Liptovska Anna	76.91	329	*e*P	P	02 31 13.8	+1.5
LANS				pmax	pmax		
	comp=Z,7.0nm,0.9s						
LANS	Liptovska Anna	76.91	329	*e*P	P	02 31 13.8	+1.5
OSTC	Ostas	76.92	331	*e*P	P	02 31 12.4	+0.1
CHVC	Chvalec	76.95	331	*e*P	P	02 31 12.2	-0.3
HARR	Harsova	76.97	321	⇑P	P	02 31 12.4	-0.2
HARR	Harsova	76.97	321	⇑P	P	02 31 12.4	-0.2
DPC	Dobruska-Polom	77.05	331	*e*P	P	02 31 12.7	-0.4
DPC	Dobruska-Polom	77.05	331	*e*P	P	02 31 12.7	-0.4
MORC	Moravsky Berou	77.10	330	⇓P	P	02 31 13.5	+0.1
MORC	Moravsky Berou	77.10	330	*e*P	P	02 31 13.7	+0.3
MORC	Moravsky Berou	77.10	330	⇓P	P	02 31 13.5	+0.1
MORC	Moravsky Berou	77.10	330	P	P	02 31 14.3	+0.9
MORC				IAmb	IAmb	02 31 14.5	
	comp=Z,9.2nm,0.8s						
KRLC	Kraliky	77.12	331	*e*P	P	02 31 13.0	-0.5
KRLC	Kraliky	77.12	331	*e*P	P	02 31 13.0	-0.5
MLR	Muntele Rosu	77.22	323	⇑P	P	02 31 14.8	+0.5
MLR	Muntele Rosu	77.22	323	P	P	02 31 14.8	+0.5
MLR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MLR	Muntele Rosu	77.22	323	P	P	02 31 14.8	+0.5
MLR				IAmb	IAmb	02 31 16.0	
	comp=Z,7.0nm,0.9s						
CLL	Collm	77.36	333	*i* P	P	02 31 14.1	-0.5
	comp=Z,19nm,0.8s						
CLL	Collm	77.36	333	P	P	02 31 14.2	-0.5
CLL				pmax	pmax		
	comp=Z,17nm,0.7s						
CLL	Collm	77.36	333	P	P	02 31 14.2	-0.5
BRG	Berggiesshubel	77.42	333	*e*P	P	02 31 14.8	-0.3
BRG				Amp		02 31 16.4	
	comp=Z,4.8nm,0.9s						
BRG				Amp		02 34 59.0	
	comp=Z,1.3nm,14.2s						
BRG				Amp		02 35 03.0	
	comp=E,1.0nm,18.9s						
BRG				Amp		02 35 07.0	
	comp=N,0.7nm,16.3s						
PVCC	Panska Ves	77.50	332	*e*P	P	02 31 15.3	-0.3
PVCC	Panska Ves	77.50	332	*e*P	P	02 31 15.3	-0.3
DRGR		77.56	325	⇑P	P	02 31 16.6	+0.6
DRGR		77.56	325	⇑P	P	02 31 16.6	+0.6
JAVC	Velka Javorina	77.82	329	*e*P	P	02 31 18.8	+1.4
VRAC	Vranov	77.83	330	⇓P	P	02 31 18.1	+0.6
VRAC	Vranov	77.83	330	*e*P	P	02 31 18.2	+0.8
VRAC	Vranov	77.83	330	⇓P	P	02 31 18.1	+0.6
ARR	Arges	77.89	323	⇓P	P	02 31 19.3	+1.4
PRA	Prague	77.94	332	*e*P	P	02 31 18.2	+0.2
PRA	Prague	77.94	332	*e*P	P	02 31 18.2	+0.2
ESK	Eskdalemuir	77.96	344	P	P	02 31 18.6	+0.6
ESK				pmax	pmax		
	comp=Z,54nm,1.5s						
ESK	Eskdalemuir	77.96	344	P	P	02 31 18.6	+0.6
PRU	Pruhonice	77.97	332	*e*P	P	02 31 17.7	-0.5
PRU	Pruhonice	77.97	332	*e*P	P	02 31 17.7	-0.5
BR131	Keskin Array S	77.98	314	P	P	02 31 19.8	+1.2
BR131				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BR131	Keskin Array S	77.98	314	P	P	02 31 19.8	+1.2
BR131				IAmb	IAmb	02 31 19.8	
	comp=Z,4.9nm,0.8s						
BRTR	Keskin Array B	77.98	314	P	P	02 31 17.6	-1.0
	comp=Z,2.1nm,0.7s,baz=108,slow=4.0,SNR=9.6						
BRTR	Keskin Array B	77.98	314	*ce*P	P	02 31 18.8	+0.2
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BRTR	Keskin Array B	77.98	314	P	P	02 31 18.9	+0.2
KRUC	Moravsky	78.11	330	*e*P	P	02 31 19.4	+0.4
TREC	Trest	78.23	331	*e*P	P	02 31 19.8	+0.1
TREC	Trest	78.23	331	*e*P	P	02 31 19.8	+0.1
MODS	Modra-Piesok	78.37	329	*e*P	P	02 31 20.7	+0.3
MODS				pmax	pmax		
	comp=Z,14nm,1.2s						
MODS	Modra-Piesok	78.37	329	*e*P	P	02 31 20.7	+0.3
NKC	Novy Kostel	78.46	333	*e*P	P	02 31 20.9	0.0
NKC	Novy Kostel	78.46	333	*e*P	P	02 31 20.9	0.0
GZR	Gura Zlata	78.66	324	⇑P	P	02 31 23.1	+1.0
GZR	Gura Zlata	78.66	324	⇑P	P	02 31 23.1	+1.0
MNTX	Cornudas Mount	78.71	57	P	P	02 31 23.5	+0.9
BZS	Buzias	78.95	325	⇑P	P	02 31 23.8	+0.1
BZS	Buzias	78.95	325	⇑P	P	02 31 23.8	+0.1
KHC	Kasperske Hory	79.03	332	*ce*P	P	02 31 23.2	-0.9
KHC				pmax	pmax		
	comp=Z,68nm,2.5s						
KHC	Kasperske Hory	79.03	332	*e*P	P	02 31 23.6	-0.5
KHC				*e*x	x	02 31 58.0	
KHC	Kasperske Hory	79.03	332	P	P	02 31 24.4	+0.3
CKRC	Cesky Krumlov	79.05	331	*e*P	P	02 31 23.7	-0.5
HERR	Herculane	79.22	324	⇑P	P	02 31 24.9	-0.3
GERES	GERESS Array B	79.24	332	P	P	02 31 24.5	-0.8
	comp=Z,3.2nm,0.8s,baz=38,slow=6.8,SNR=20						
GERES	GERESS Array B	79.24	332	P	P	02 31 24.8	-0.5
GERES	GERESS Array B	79.24	332	P	P	02 31 24.8	-0.5
CONA	Conrad Observa	79.26	330	*e*P	P	02 31 26.4	+1.0
	comp=Z,12nm,1.3s						
GRA1	Grafenberg Arr	79.33	333	P	P	02 31 26.5	+0.8
GRF	Grafenberg Arr	79.33	333	P	P	02 31 26.5	+0.8
GRF				pmax	pmax		
	comp=Z,17nm,0.8s						
GRF	Grafenberg Arr	79.33	333	*e*P	P	02 31 26.5	+0.8
	comp=Z,12nm,0.8s,baz=26,slow=4.6						
GRFO	Grafenberg	79.33	333	P	P	02 31 26.7	+1.0
GRFO				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GRFO	Grafenberg	79.33	333	P	P	02 31 26.7	+1.0
PUNG	Punghina	79.49	324	⇑P	P	02 31 14.3	-12
MORH	Mrgy, Hungar	79.65	327	⇑P	P	02 31 27.3	-0.1
MOA	Molln	79.89	331	*e*P	P	02 31 29.2	+0.4
	comp=Z,3.9nm,0.8s						
FRGS	Fruska Gora	80.06	326	⇑P	P	02 31 30.2	+0.4
BCLA	Clavier	80.45	337	*d*P	P	02 31 31.8	+0.1
BGES	Gesves	80.55	337	*d*P	P	02 31 32.3	+0.1
VTS	Vitosha	80.69	322	⇑P	P	02 31 34.0	+0.7
VTS	Vitosha	80.69	322	P	P	02 31 34.0	+0.7
VTS				pmax	pmax		
	comp=Z,7.0nm,0.9s						
VTS	Vitosha	80.69	322	P	P	02 31 34.0	+0.7
VTS				IAmb	IAmb	02 31 34.7	
	comp=Z,7.1nm,0.9s						
KBA	Koelnbreinsper	80.88	331	*e*P	P	02 31 34.8	+0.5
	comp=Z,8.1nm,0.9s						
WATA	Walderalm	81.26	332	*e*P	P	02 31 36.9	+0.6
	comp=Z,6.8nm,0.6s,SNR=5.7						
WTTA	Wattenberg	81.30	332	*e*P	P	02 31 37.2	+0.7
	comp=Z,15nm,1.1s,SNR=6.1						
RETA	Reutte	81.40	333	*e*P	P	02 31 37.5	+0.6
	comp=Z,7.7nm,1.0s,SNR=4.3						
MOTA	Moosalm	81.41	332	*e*P	P	02 31 37.6	+0.5
	comp=Z,8.8nm,0.8s,SNR=9.1						
TX31	Lajitas Ar. Si	81.43	57	P	P	02 31 37.6	+0.2
TX32	Lajitas Array	81.43	57	P	P	02 31 38.2	+0.7
TXAR	Lajitas Array	81.43	57	P	P	02 31 37.1	-0.3
	comp=Z,1.9nm,0.6s,baz=306,slow=3.8,SNR=21						
TXAR	Lajitas Array	81.43	57	P	P	02 31 37.7	+0.2
TXAR	Lajitas Array	81.43	57	P	P	02 31 37.6	+0.2
SQTA	Sankt Quirin	81.48	332	*e*P	P	02 31 38.0	+0.6
	comp=Z,7.7nm,0.9s						
DAVA	Damuels	81.86	333	*i* P	P	02 31 39.7	+0.2
	comp=Z,14nm,1.0s						
ELL	Elmali	82.15	315	P	P	02 31 41.1	-0.1
ELL				pmax	pmax		
	comp=Z,72nm,1.4s						
ELL	Elmali	82.15	315	P	P	02 31 41.0	-0.1
TUE	Stuetta	82.75	333	P	P	02 31 44.3	0.0
RAYN	Ar Rayn	82.78	296	P	P	02 31 45.1	+0.5
RAYN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
RAYN	Ar Rayn	82.78	296	P	P	02 31 45.1	+0.5
BATG	Bathurst New B	83.82	23	P	P	02 31 49.3	-0.1
L56A	Greenwood	84.52	33	P	P	02 31 52.5	-0.6
L56A				IAmb	IAmb	02 31 58.3	
	comp=Z,11nm,1.1s						
ESDC	Sonseca Array	92.87	339	P	P	02 32 31.5	-1.5
	comp=Z,0.6nm,0.7s,baz=15,slow=4.3,SNR=6.8						
ESDC	Sonseca Array	92.87	339	P	P	02 32 31.0	-2.1
TORD	Torodi Ar. Bea	115.44	324	PKP	PKiKP	02 38 00.9	-1.4
	comp=Z,0.3nm,0.7s,baz=18,slow=1.3,SNR=1.5						
H03N2	Juan Fernandez	141.85	90	T	T	05 17 26.1	
	baz=304,slow=77,SNR=52						
H03N3	Juan Fernandez	141.86	90	T	T	05 17 25.9	
	baz=304,slow=77,SNR=73						
H03N1	Juan Fernandez	141.86	90	T	T	05 17 26.1	
	baz=304,slow=77,SNR=59						
LCO	Las Campanas	145.28	77	PKIKP	PKPdf	02 38 58.8	+0.7
LCO	Las Campanas	145.28	77	PKPbc	PKPdf	02 38 58.8	+0.7
AC05	El Transito	145.47	77	PKPdf	PKPab	02 38 58.9	+0.3
GO04	Tololo Observa	145.89	79		PKPbc	02 38 60.0	+0.2
CO01	Juntas del Tor	146.27	78	PKPbc	PKPbc	02 39 01.5	+0.6
BDFB	Brasilia	148.13	32	PKPbc	PKPdf	02 39 04.7	+1.6
	comp=Z,2.1nm,0.5s,baz=254,slow=4.2,SNR=4.2						
ZON	Zonda	148.17	79	PKP2	PKPbc	02 39 06.4	+0.4
ZON	Zonda	148.17	79	PKPbc	PKPbc	02 39 06.3	+0.4
BO02	Sierra Bellavi	148.38	86	PKPbc	PKPbc	02 39 06.5	+0.1
BI02	San Fabin de	148.90	90	PKPbc	PKPbc	02 39 07.9	+0.2
SNAA	Sanae	149.29	197	PKPbc	PKPbc	02 39 07.9	+0.3
VNA2	Neumayer--Watz	150.80	196	PKPbc	PKPbc	02 39 11.7	+0.6
VNA3	Neumayer Olymp	150.96	194	PKPdf	PKPdf	02 39 07.6	+1.8

IDC ***25*** *02:19:33.3±2.9, 48°.42N×155°.19E, h0^{km}, mb3.7/3, mb1 3.9/4, mb1mx3.5/39, mbtmp3.6/4, ML2.5/1, Error ellipse: s-maj=58.5km s-min=49.9km az=80.0*

KRSC ***25*** *02:19:47.0±1.1, 49°.22N×156°.12E, h32^{km}±15^{km}, ML3.9*

ISC 25 02:19:42.6±1.5**, 48°.9N**±0°.1×**155°.6E**±0°.2**, h35**^{km}**, n22, σ2^{s}61**/23**, mb3.5**/3**, 2C, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	1.82	10	*e*S	Sn	02 20 30.9	-2.4
PAU	Pauzhetka	2.69	16	*e*P	Pn	02 20 26.0	+2.6
PAU				*e*S	Sn	02 20 53.0	-1.7
KDTR	Khodutka, Kamc	3.32	27	*e*S	Sn	02 21 07.7	-2.4
MTVR	Mutnovka	3.95	23	*e*P	Pn	02 20 43.4	+2.6
GRL	Gorelyy	3.98	22	*e*P	Pn	02 20 44.1	+2.8
GRL				*e*S	Sn	02 21 26.0	-0.7
RUS	Russkaya	4.00	26	*e*S	Sn	02 21 24.6	-2.2
PETK	Petropavlovsk-	4.42	17	Pn	Pn	02 20 50.1	+2.9
	1.0nm,0.3s,baz=179,slow=12,SNR=7.3						
PETK				Sn	Sn	02 21 46.2	+8.8
	1.3nm,0.3s,baz=206,slow=14,SNR=2.2						
DALK	Dalny	4.59	24	*e*S	Sn	02 21 41.4	-0.2
UGLR	Uglovaya	4.77	24	*e*P	Pn	02 20 54.9	+2.8
KOK	Koryaka	4.80	22	*e*P	Pn	02 20 56.1	+3.7
AVH	Avacha	4.80	23	*e*P	Pn	02 20 56.0	+3.6
SMAR	Somma	4.81	23	*e*P	Pn	02 20 56.1	+3.3
KRER	Koryakskii	4.84	23	*e*P	Pn	02 20 55.8	+2.7
SDLR	Sedlovina	4.85	24	*e*P	Pn	02 20 55.4	+2.2
KRX	Arik	4.86	22	*e*P	Pn	02 20 56.9	+3.5
GNL	Ganaly	5.03	16	*e*P	Pn	02 20 58.7	+3.1
YKA	Yellowknife Ar	48.20	39	P	P	02 28 18.6	-0.5
	0.2nm,0.7s,baz=300,slow=7.0,SNR=4.1						
ARCES	ARCESS Array B	56.38	341	P	P	02 29 18.3	-1.4
	3.4nm,1.0s,baz=51,slow=7.1,SNR=1.5						
ARCES	ARCESS Array B	56.38	341	P	P	02 29 18.3	-1.4
TXAR	Lajitas Array	74.99	63	P	P	02 31 19.3	-1.2
	0.3nm,0.6s,baz=308,slow=4.4,SNR=2.6						
PGOR	Pogoanele	76.36	325	⇑P	P	02 31 28.4	+0.6
ZIMR		78.03	326	⇑P	P	02 31 42.7	+5.4

DDA ***25*** *02:28:20.6, 37°.17N×30°.04E, h7^{km}±2^{km}, ML1.5*

ISK 25 02:28:21.8, 37°.15N×30°.17E, h5^{km}**, ML1.8**/5**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KORT	Korkueli	0.20	135	PG	Pg	02 28 26.6	+0.7
KORT				SG	Sg	02 28 29.9	+1.3
KORT	Korkueli	0.20	135	IAML		02 28 26.0	
	comp=E,50nm,1.3s						
KORT				*i* P	Pg	02 28 26.6	+0.8
KORT				*i* S	Sg	02 28 31.9	+3.3
BUCA	Burdur, Bucak-	0.36	60	*i* P	Pb	02 28 30.8	+0.1
BUCA				*i* S	Sb	02 28 36.1	-0.6
BUCA				IAML		02 28 39.0	
	comp=E,28nm,0.5s						
ELL	Elmali	0.45	208	PG	Pg	02 28 30.3	-0.2
ELL				SG	Sg	02 28 37.7	+1.3
GOLH	Golhisar	0.49	281	*i* P	Pg	02 28 28.5	-2.9
GOLH				IAML		02 28 33.0	
	comp=N,90nm,2.6s						
GOLH				*i* S	Sg	02 28 34.7	-3.1
BRDR	BURDUR-Merkez	0.56	351	*i* P	Pg	02 28 30.2	-2.3
BRDR				*i* S	Sg	02 28 38.8	-1.0
ISP	Isparta	0.73	22	PG	Pb	02 28 36.6	-0.5
ISP				SG	Sb	02 28 46.9	-0.5
BASM	Basmaki-Afyon	0.78	353	PG	Pg	02 28 37.1	+0.4
BASM				SG	Sb	02 28 48.0	-0.7
TAVA	DENIZLI_Tavas	1.05	288	*i* P	Pg	02 28 40.5	-1.5
TAVA				*i* S	Sg	02 28 52.6	-3.0
TAVA				IAML		02 29 08.0	
	comp=N,25nm,3.1s						
DALY	Dalyan (Mula)	1.26	255	PN	Pn	02 28 46.7	+0.7
DALY				SN	Sn	02 29 04.5	+1.2
KHAL	Karahalli	1.33	336	*i* P	Pn	02 28 46.0	-1.2

IDC ***25*** *02:46:59.4±0.6, 28°.27N×140°.20E, h459^{km}±8^{km}, mb3.1/11, mb1 3.3/14, mb1mx3.1/30, mbtmp4.0/14, Error ellipse: s-maj=19.5km s-min=16.5km az=30.0*

JMA ***25*** *02:46:59.3±0.1, 28°.01N×140°.95E, h506^{km}±2^{km}, M4.0*

ISC 25 02:46:58.9±0.8**, 27°.8N**±0°.2×**140°.1E**±0°.1**, h479**^{km}**, n20, σ1^{s}34**/24**, mb3.3**/12**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	Chichi jima	1.96	109	P	P	02 48 03.0	+1.1
CBIJ				*e*S	S	02 48 53.2	+0.3
JCJ	Chichijima	1.96	109	P	P	02 48 03.0	+1.1
	37nm,0.3s,baz=268,slow=23,SNR=34						
JCJ				S	S	02 48 51.7	-1.2
	153nm,0.3s,baz=290,slow=23,SNR=19						
JHH2	Haha-jima-NKT2	2.15	121	P	P	02 48 04.3	+1.4
JHH2				*e*S	S	02 48 55.5	+0.7
JIE	Ise	7.24	337	P	P	02 48 50.1	+3.4
JKN2	Miekihoku	7.26	334	P	P	02 48 50.3	+3.4
JOW	Kunigami	10.57	268	P	P	02 49 22.8	+0.6
	2.6nm,0.3s,baz=130,slow=5.9,SNR=5.7						
KSRS	Korea Array	14.10	316	P	P	02 49 57.8	-2.0
	0.3nm,0.3s,baz=129,slow=9.6,SNR=1.6						
USRK	Ussuriysk Ar.	17.67	340	P	P	02 50 37.8	+0.9
	baz=165,slow=9.2,SNR=21						
KLR	Kul'dur	22.40	346	P	P	02 51 20.6	+0.5
	0.4nm,0.5s,baz=162,slow=13,SNR=4.0						
SONM	Songino Array	32.97	317	P	P	02 52 52.1	-0.9
	0.4nm,0.5s,baz=128,slow=8.1,SNR=6.8						
WRA	Warramunga Arr	47.73	187	P	P	02 54 58.0	+6.4
	0.3nm,0.4s,baz=4.7,slow=7.5,SNR=8.5						
ZALV	Zalesovo Beam	47.79	319	P	P	02 54 51.4	-0.2
	1.8nm,0.4s,baz=104,slow=7.9,SNR=9.0						
ZALV				PcP	PcP	02 56 11.0	-0.4
	0.5nm,0.3s,baz=117,slow=5.0,SNR=2.5						
MKAR	Makanchi Array	48.64	309	P	P	02 54 58.2	+0.1
	1.0nm,0.4s,baz=88,slow=10,SNR=33						
MKAR				PcP	PcP	02 56 14.9	+0.3
	0.4nm,0.8s,baz=106,slow=3.1,SNR=2.2						
ILAR	Eielson Array	58.03	29	P	P	02 56 04.1	-0.6
	0.3nm,0.6s,baz=285,slow=7.4,SNR=2.5						
ARCES	ARCESS Array B	72.32	340	P	P	02 57 34.5	-0.3
	1.6nm,0.8s,baz=77,slow=7.6,SNR=4.4						
YKA	Yellowknife Ar	72.44	28	P	P	02 57 35.4	-0.1
	0.5nm,0.6s,baz=298,slow=5.1,SNR=12						
KBZ	Khabaz	76.21	312	P	P	02 57 57.4	+0.2
	1.0nm,0.9s,baz=108,slow=0.7,SNR=3.8						
FINES	FINESS Array B	76.54	333	P	P	02 57 58.7	0.0
	1.8nm,0.3s,baz=60,slow=4.9,SNR=25						
NVAR	Mina Array Bea	81.56	51	P	P	02 58 25.4	-0.8
	0.3nm,0.5s,baz=295,slow=6.4,SNR=5.1						
NOA	NORSAR Array B	82.32	338	P	P	02 58 28.6	-0.8
	0.6nm,0.7s,baz=53,slow=6.7,SNR=2.0						

MOS ***25*** *03:02:38.6±0.9, 1°.73N×126°.20E, h37^{km}, mb5.5/69, Error ellipse: s-maj=8.0km s-min=4.1km az=114.3*

NEIC ***25*** *03:02:39.7±1.1, 1°.75N±0°.06×126°.37E±0°.05, h36^{km}±4^{km}, mb5.3/172, Error ellipse: s-maj=9.4km s-min=7.3km az=213.0*

IDC ***25*** *03:02:40.8±1.4, 1°.66N×126°.30E, h39^{km}±11^{km}, mb4.9/33, mb1 5.0/38, mb1mx4.9/41, mbtmp5.1/38, ML4.9/5, MS4.1/21, Ms1 4.1/21, ms1mx3.9/38, Error ellipse: s-maj=12.3km s-min=7.0km az=75.0*

BJI ***25*** *03:02:40.0±0.0, 1°.70N×126°.30E, h50^{km}, mB5.2/49, mb5.2/78, Ms4.5/58, Ms7 4.4/57*

GCMT ***25*** *03:02:41.7±0.2, 1°.82N±0°.01×126°.33E±0°.01, h32^{km}, MW5.3/110, Moment Tensor Solution. s87,c129; s110,c171; Duration: 1^{s}1 Moment tensor: Scale 10^{17} Nm; M_{rr}0.56±.03; $M_{\theta\theta}$-0.21±.02; $M_{\phi\phi}$-0.36±.02; $M_{r\theta}$-0.47±.03; $M_{\theta\phi}$-0.66±.01; $M_{\phi r}$0.38±.03; Best double couple: $M_0$1.01700×10^{17} NP1:ϕ_s9.00000°, δ56.00000°, λ38.00000°. NP2:ϕ_s255.00000°, δ59.00000°, λ140.00000°. Principal axes: T 1.0820, Plg49.0000°, Azm221.0000°; N -0.1320, Plg41.0000°, Azm44.0000°; P -0.9510, Plg1.0000°, Azm312.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

DJA ***25*** *03:02:42.2±0.2, 2°N±2°×12°6E±°, h60^{km}±2^{km}, M5.2/92, mB5.6/60, mb5.4/92, MLv5.4/18, Mw(mB)5.1/60, MwMwp5.0/6, Mwp5.3/6*

KLM ***25*** *03:02:42, 1°.75N×126°.54E, h62^{km}, mb5.5*

ISC 25 03:02:40.5±0.3**, 1°.73N**±0°.03×**126°.36E**±0°.04**, h40**^{km}±2^{km}**, h40**^{km}**:pP-P, n848, σ1^{s}57**/898**, mb5.3**/217**, MS4.3**/41**, 44C-22D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.39	133	Pn	Pn	03 03 02.4	-1.0
TNTI				Sn	Sn	03 03 20.5	0.0
TNTI	Ternate	1.39	133	P	Pn	03 03 03.4	0.0
SGSI	Sangihe	2.11	337	P	Pn	03 03 14.3	+0.9
KMSI	Cibinong	2.64	244	P	Pn	03 03 21.6	+1.0
GTOI	Gorontalo	3.52	252	P	Pn	03 03 33.9	+1.2
SANI	Sanana	3.77	186	P	Pn	03 03 37.4	+1.2
DDMP	Don Marcelino,	4.39	352	*e*P	Pn	03 03 43.8	-1.0
DDMP				*e*S	Sn	03 04 34.2	-0.6
LUWI	Luwuk	4.52	233	Sn	Sn	03 04 41.8	+4.0
LUWI	Luwuk	4.52	233	P	Pn	03 03 48.0	+1.5
MRSI	Marisa	4.59	254	P	Pn	03 03 49.7	+2.3
MRSI				S	Sn	03 04 40.8	+1.3
NLAI	Namlea	4.99	171	P	Pn	03 03 52.5	-0.5
	2.0nm5μm218nm,0.5s						
NLAI				S	Sn	03 04 49.2	-0.2
	2.0nm5μm218nm,0.5s						
SKMP	Bagumbayan, Su	5.09	339	*e*P	Pn	03 03 55.4	+1.1
SKMP				*e*S	Sn	03 04 51.9	0.0
MATI	Mati	5.18	359	*e*P	Pn	03 03 55.2	-0.4
DAV	Davao City (W)	5.36	352	Pn	Pn	03 03 59.1	+1.0
	47nm,0.3s,baz=222,slow=2.8,SNR=4.7						
DAV				Sn	Sn	03 04 56.1	-2.6
	31nm,0.3s,baz=129,slow=20,SNR=1.9						
DAV	Davao City (W)	5.36	352		Pn	03 03 57.8	-0.3
APSI	Ampana	5.39	241	P	Pn	03 04 02.0	+3.6
	7.3nm18μm2μm,0.8s						
SWI	Sorong	5.54	118	P	Pn	03 04 02.6	+2.1
	1.1nm8μm3μm378nm,0.9s						
SIJI	Sorong	5.54	118	Pn	Pn	03 04 02.4	+1.8
	8.2nm,0.3s,baz=315,slow=9.0,SNR=20						
BUKP	Musuan	6.24	348	*e*P	Pn	03 04 12.2	+2.0
ZCP	Zamboanga City	6.70	321	⇓*i*P	Pn	03 04 17.4	+0.9
ZCP				*i* S	Sn	03 05 33.1	+1.5
PAGZ	Pagadian	6.76	334	*e*P	Pn	03 04 17.7	+0.4
KDI	Kendari	6.77	213	P	Pn	03 04 16.6	-0.8
	1.3nm13μm438nm,0.8s						
BUTP	Butuan	7.23	354	*e*P	Pn	03 04 19.2	-4.6
FAKI	Fak Fak	7.48	128	Pn	Pn	03 04 26.2	-1.0
FAKI	Fak Fak	7.48	128	P	Pn	03 04 30.1	+2.9
	1.5nm6μm5μm322nm,1.0s						
GLSP	General Luna,	8.01	358	*e*P	Pn	03 04 35.5	+1.2
TTSI	Tana Toraja	8.07	234	P	Pn	03 04 36.3	+1.0
	4μm575nm,0.8s						
MSLP	Maasin	8.48	350	*e*P	Pn	03 04 43.1	+2.2
MYLDM	Lahad Datu	8.56	294	Pn	Pn	03 04 41.4	-0.6
SPSI	Sidrap Palu	8.68	229	P	Pn	03 04 45.8	+2.2
	3μm340nm,0.8s						
BNSI	Bone	8.72	226	P	Pn	03 04 45.3	+1.1
	3μm308nm,0.9s						
CNOP	Candoni, Negro	8.85	335	*e*P	Pn	03 04 46.6	+0.6
SMKI	Samarinda	9.40	257	P	Pn	03 04 57.1	+3.6
	14μm320nm,0.6s						
KAPI	Kappang	9.40	225	Pn	Pn	03 04 54.5	+1.0
	14nm,0.3s,baz=43,slow=6.3,SNR=21						
KAPI				Sn	Sn	03 06 34.9	-3.1
	baz=263,slow=17,SNR=0.8						
KAPI	Kappang	9.40	225	Pn	Pn	03 04 53.1	-0.5
GUIM	Jordan	9.60	337	*e*P	Pn	03 04 57.7	+1.5
BSSI	Bau Bau, Buton	9.77	217	P	Pn	03 04 58.2	-0.4
	2μm183nm,0.5s						
BKB	Balikpapan	9.91	253	Pn	Pn	03 04 59.6	-1.0
BKB	Balikpapan	9.91	253	P	Pn	03 05 03.3	+2.7
	3μm310nm,0.9s						
SPMM	Sapulut	10.31	287	P	Pn	03 05 10.0	+4.0
SAUI	Saumlaki	10.83	153	Pn	Pn	03 05 11.8	-1.3
KKM	Kota Kinabalu	10.99	293	Pn	Pn	03 05 14.8	-0.6
BATP	Bataraza	11.04	310	*e*P	Pn	03 05 15.5	-0.4
MMRI	Maumere	11.09	202	Pn	Pn	03 05 17.0	+0.4
MMRI	Maumere	11.09	202	P	Pn	03 05 20.7	+4.1
	3μm123nm,1.0s						
KBKI	Kotabaru	11.35	244	P	Pn	03 05 22.1	+1.9
	1μm95nm,0.8s						
SOEI	Soe	11.60	190	Pn	Pn	03 05 25.4	+1.7
SOEI	Soe	11.60	190	P	Pn	03 05 27.8	+4.1
	2μm4μm446nm,0.9s						
ENPP	El Nido	11.66	324	*e*P	Pn	03 05 24.8	+0.3
MTKI	Muara Teweh, K	11.76	257	P	Pn	03 05 29.1	+3.2
	5μm56nm,0.9s						
BATI	Baumata	12.16	193	Pn	Pn	03 05 33.1	+1.8
	2.3nm,0.3s,baz=187,slow=20,SNR=2.4						
BATI				LR	LR	03 10 48.5	
	comp=Z,737nm,18.5s,baz=15,slow=40						
BATI	Baumata	12.16	193	P	Pn	03 05 34.7	+3.4
	1μm138nm,1.0s						
BBKI	Banjar Baru	12.61	246	P	Pn	03 05 39.8	+2.3
	57nm,1.1s						
SMPI	Sarmi	12.89	107	P	Pn	03 05 42.0	+0.7
	78nm,1.3s						
BASI	Baing, Sumba	13.19	206	P	Pn	03 05 47.1	+1.7
	3μm230nm,1.7s						
LQP	Lukban	13.19	339	⇑*e*P	Pn	03 05 47.9	+2.3
TGY	Tagaytay City	13.41	337	Pn	Pn	03 05 49.1	+0.6
	25nm,0.3s,baz=55,slow=22,SNR=1.2						
TGY				LR	LR	03 11 20.2	
	comp=Z,1μm,21.6s,baz=174,slow=39						
PLAI	Plampang	13.53	219	P	Pn	03 05 52.7	+2.6
	6μm632nm,1.1s						
TWSI	Taliwang, Sumb	14.05	222	P	Pn	03 05 58.6	+1.5
	2μm268nm,0.9s						
SBUM	Sibu	14.15	273	Pn	Pn	03 05 57.9	-0.5
GENI	Genyem	14.46	107	P	P	03 06 05.6	-3.1
	5μm478nm,1.2s						
SRBI	Singaraja	14.78	229	P	Pn	03 06 06.9	-0.1
	2μm187nm,1.0s						
KMMI	Kalianget	15.13	235	P	Pn	03 06 13.1	+1.5
	3μm263nm,0.8s						
ABJI	Asem Bagus	15.35	232	P	Pn	03 06 15.7	+1.2
	3μm209nm,1.0s						
SMPP	San Manuel, Pa	15.38	339	*e*P	Pn	03 06 15.7	+0.8
KDU	Kakadu	15.56	157	P	Pn	03 06 16.5	-0.6
	baz=16,SNR=20						
JAGI	Jajag, Banyuwa	15.83	230	P	Pn	03 06 19.5	-1.2
JAGI				IAmb	IAmb	03 06 37.1	
	comp=Z,233nm,0.9s						
JAGI	Jajag, Banyuwa	15.83	230	P	Pn	03 06 21.8	+1.1
	comp=Z,3μmcomp=Z,293nm,1.1s						
KSM	Kuching	16.05	269	Pn	Pn	03 06 23.4	-0.1
SZP	Santa	16.76	340		Pn	03 06 32.3	-0.1
SZP				IAmb	IAmb	03 06 48.2	
	comp=Z,192nm,0.9s						
MMPI	Merauke	17.27	126	P	P	03 06 41.7	+1.8

	comp=Z,18µmcomp=Z,978nm,0.6s						
KNRA	Kununurra	17.46	172		Pn	03 06 40.9	-0.2
SMRI	Semarang	18.12	241	P	P	03 06 50.8	+1.5
	comp=Z,15µmcomp=Z,180nm,1.0s						
TPI	Tanjungpandan	19.22	257	P	P	03 07 01.2	-0.2
	comp=Z,629nmcomp=Z,48nm,0.9s						
FITZ	Fitzroy Crossi	19.71	182	P	P	03 07 06.6	-0.1
	comp=Z,3.3nm,0.3s,baz=21,slow=8.9,SNR=98						
FITZ	Fitzroy Crossi	19.71	182	P	P	03 07 06.6	-0.1
	baz=20,SNR=41						
FITZ	Fitzroy Crossi	19.71	182	P	P	03 07 06.8	+0.1
DLV	T Lat	20.42	301	P	P	03 07 14.6	-0.1
DLV				IAmb	IAmb	03 07 23.1	
	comp=Z,97nm,0.8s						
LEM	Lembang	20.54	245	P	P	03 07 15.5	-0.5
	comp=Z,46nm,0.3s,baz=32,slow=16,SNR=5.8						
LEM				LR	LR	03 17 05.7	
	comp=Z,552nm,21.0s,baz=64,slow=42						
PPBI	Pangkal Pinang	20.58	259	P	P	03 07 16.4	+0.1
	comp=Z,22µmcomp=Z,90nm,1.0s						
CISI	Cisompet, Garu	20.67	243	P	P	03 07 16.2	-1.1
CISI				IAmb	IAmb	03 07 30.0	
	comp=Z,69nm,0.7s						
CISI	Cisompet, Garu	20.67	243	P	P	03 07 14.7	-2.6
	comp=Z,3µmcomp=Z,78nm,0.6s						
CBJI	Citeko	21.09	247	P	P	03 07 22.0	+0.3
	comp=Z,103nm,0.8s						
TWG	Pinlang	21.59	347	P	P	03 07 23.4	-3.5
TWG				IAmb	IAmb	03 07 36.6	
	comp=Z,124nm,0.6s						
DSRI	Dabo	21.89	264	P	P	03 07 31.2	+0.9
	comp=Z,50nm,1.3s						
DSRI				pP	pP	03 07 37.9	-2.1
	comp=Z,50nm,1.3s						
YULB	Yu-li	22.09	348	P	P	03 07 28.8	-3.5
YULB				IAmb	IAmb	03 07 31.2	
	comp=Z,73nm,0.7s						
TPUB	Ta-pu	22.15	346	P	P	03 07 29.8	-3.2
MYKOM	Kota Tinggi	22.50	270	P	P	03 07 36.7	-0.1
MYKOM				IAmb	IAmb	03 07 40.0	
	comp=Z,109nm,1.0s						
MYKOM	Kota Tinggi	22.50	270	P	P	03 07 37.0	+0.1
KLSI		22.53	253	P	P	03 07 35.7	-1.5
	comp=Z,269nmcomp=Z,26nm,0.9s						
SSLB	Suanglung	22.54	347	P	P	03 07 35.2	-2.1
SSLB				IAmb	IAmb	03 07 45.0	
	comp=Z,128nm,0.9s						
WB0	Warramunga Arr	22.77	160	P	P	03 07 39.2	-0.5
NACB	Ninganchiao	22.78	349	P	P	03 07 39.4	-0.3
COEN	Coen	22.82	134	P	P	03 07 39.1	-1.2
WRAB	Tennant Creek	22.91	160	*i* P	P	03 07 40.3	-0.8
WRAB				pmax	pmax		
	comp=Z,120nm,0.9s						
WRAB	Tennant Creek	22.91	160	P	P	03 07 40.8	-0.4
WRA	Warramunga Arr	22.92	160	P	P	03 07 40.5	-0.7
	comp=Z,89nm,0.5s,baz=339,slow=11,SNR=247						
WRA				PcP	PcP	03 11 31.8	+0.9
	comp=Z,10.0nm,0.6s,baz=318,slow=2.5,SNR=6.6						
WRA				S	S	03 11 44.6	-3.8
	comp=Z,11nm,0.9s,baz=331,slow=17,SNR=6.7						
WRA				P3KPbc		03 41 13.1	
	comp=Z,0.6nm,0.8s,baz=167,slow=4.6,SNR=3.7						
WRA	Warramunga Arr	22.92	160	P	P	03 07 39.2	-2.0
WRA					PcP	03 11 30.3	-0.6
WB2	Warramunga Arr	22.92	160	P	P	03 07 39.9	-1.4
JMBI	JAMBI	22.96	262	P	P	03 07 41.8	+0.1
KASI	Kota Agung	22.99	252	P	P	03 07 41.0	-1.0
	comp=Z,1µmcomp=Z,171nm,0.8s						
WR0	Warramunga Arr	23.00	160	P	P	03 07 40.7	-1.3
WR0				IAmb	IAmb	03 07 48.2	
	comp=Z,97nm,0.8s						
LWLI	Liwa	23.26	253	P	P	03 07 43.2	-1.7
	comp=Z,10µmcomp=Z,297nm,0.7s						
LHSI	Lahat	23.48	256	P	P	03 07 45.9	-0.9
	comp=Z,2µmcomp=Z,56nm,0.7s						
PMG	Port Moresby	23.49	118	P	P	03 07 46.5	-0.4
	comp=Z,31nm,0.7s,baz=306,slow=8.0,SNR=11						
PMG				LR	LR	03 19 28.7	
	comp=Z,652nm,18.7s,baz=326,slow=43						
PMG	Port Moresby	23.49	118	*d i*P	P	03 07 46.1	-0.8
PMG				pmax	pmax		
	comp=Z,43nm,0.9s						
PMG	Port Moresby	23.49	118	P	P	03 07 47.0	+0.1
PMG				IAmb	IAmb	03 07 57.2	
	comp=Z,57nm,0.8s						
PMG	Port Moresby	23.49	118	P	P	03 07 48.3	+1.4
QIZ	Qiongzhong	23.61	318	P	P	03 07 49.3	+1.3
QIZ				sP	sP	03 08 02.1	-0.9
QIZ				PP	PnPn	03 08 25.4	+9.1
QIZ				S	S	03 11 58.6	-1.3
QIZ				SS	SnSn	03 12 48.0	+8.6
QIZ				pmax	pmax		
	comp=Z,35nm,0.8s						
QIZ				LR	LR		
	comp=Z,840nm,20.1s						
QIZ				LR	LR		
	comp=Z,610nm,24.0s						
QIZ				LR	LR		
	comp=Z,950nm,24.0s						
QIZ	Qiongzhong	23.61	318	P	P	03 07 47.7	-0.3
QIZ				IAmb	IAmb	03 07 53.3	
	comp=Z,67nm,0.9s						
XMI	Christmas Isla	23.86	239	P	P	03 07 51.7	+1.2
	comp=Z,177nm,1.1s						
KNMB	Chin-men Tao	23.88	342	P	P	03 07 49.4	-1.1
XMIS	Christmas Isla	23.91	239	P	P	03 07 50.2	-0.7
XMIS				IAmb	IAmb	03 07 52.7	
	comp=Z,166nm,1.1s						
XMIS	Christmas Isla	23.91	239	P	P	03 07 51.8	+0.9
	comp=Z,158nm,1.1s						
PSA00	Pilbara Seismi	24.02	195	P	P	03 07 51.7	-0.1
PSA00				IAmb	IAmb	03 07 54.1	
	comp=Z,113nm,0.8s						
PSA00	Pilbara Seismi	24.02	195	P	P	03 07 50.8	-1.0
PSA00				IAmb	IAmb	03 07 53.3	
	comp=Z,17nm,0.7s						
QZH	Quanzhou	24.27	343	⇑*i*P	P	03 07 53.1	-0.9
QZH				S	S	03 12 10.4	+0.2
QZH				pmax	pmax		
	comp=Z,63nm,0.9s						
QZH				LR	LR		
	comp=Z,580nm,19.9s						
QZH				LR	LR		
	comp=Z,380nm,20.8s						
QZH				LR	LR		
	comp=Z,500nm,17.1s						
JOW	Kunigami	25.03	4	P	P	03 08 02.4	+1.4
	comp=Z,113nm,0.7s,baz=196,slow=8.3,SNR=36						
JOW	Kunigami	25.03	4	P	P	03 07 59.9	-1.0
SDSI	Sungai Dareh	25.07	264	P	P	03 08 01.9	+0.4
	comp=Z,2µmcomp=Z,97nm,1.3s						
KRJI	Kerinci	25.18	261	P	P	03 08 00.8	-1.8
BKNI	Bangkinang	25.35	267	P	P	03 08 04.2	+0.1
BKNI				IAmb	IAmb	03 08 10.2	
	comp=Z,99nm,0.9s						
BKNI	Bangkinang	25.35	267	P	P	03 08 03.6	-0.5
	comp=Z,1µmcomp=Z,140nm,1.1s						
IPM	Ipoh	25.44	277	P	P	03 08 04.1	-0.8
IPM					PcP	03 11 35.5	-0.9
IPM	Ipoh	25.44	277	P	P	03 08 05.0	+0.1
QIS	Mount Isa	25.67	150	P	P	03 08 07.2	+0.3
	baz=26,SNR=54						
KULM	Kulim	25.90	279	P	P	03 08 08.3	-0.7
KULM	Kulim	25.90	279	P	P	03 08 09.0	0.0
AS31	Alice Springs	26.29	164	P	P	03 08 11.8	-0.7
ASAR	Alice Springs	26.29	164	P	P	03 08 12.5	0.0
	comp=Z,40nm,0.5s,baz=345,slow=7.1,SNR=768						
ASAR				PcP	PcP	03 11 39.1	+0.8
	comp=Z,16nm,0.6s,baz=343,slow=2.1,SNR=11						
ASAR				S	S	03 12 42.1	-0.5
	comp=Z,16nm,0.9s,baz=349,slow=20,SNR=9.3						
ASAR				P3KPbc		03 40 58.8	
	comp=Z,0.4nm,0.8s,baz=164,slow=4.5,SNR=4.0						
ASAR	Alice Springs	26.29	164	P	P	03 08 11.7	-0.8
ASAR						03 11 37.4	
ASAR	Alice Springs	26.29	164	P	P	03 08 11.7	-0.8
ASAR				PcP	PcP	03 11 37.4	-0.8
MTSU	Mount Surprise	26.50	139	P	P	03 08 15.4	+1.0
	baz=26,SNR=29						
WRKA	Warakurna	26.67	176	P	P	03 08 16.6	+0.7
	baz=27,SNR=221						
MNSI	Mandailing Nat	26.79	268	P	P	03 08 16.0	-1.1
	comp=Z,59nm,0.7s						
GIRL	Giralia	26.96	205	P	P	03 08 19.8	+1.4
	baz=27,SNR=45						
GIRL	Giralia	26.96	205	P	P	03 08 18.0	-0.4
SRAK	Srakaew	26.96	298	P	P	03 08 15.5	-3.1
	comp=Z,4µmcomp=Z,505nm,0.8s						
TRTT	Trang	27.24	284	P	P	03 08 21.0	-0.2
	comp=Z,2µmcomp=Z,24nm,1.2s						
RPSI	Rantau Prapat	27.43	273	P	P	03 08 22.3	-0.5
PSI	Prapat	27.43	273	P	P	03 08 22.3	-0.7
	comp=Z,20nm,0.8s,baz=179,slow=2.1,SNR=22						
PSI				PcP	PcP	03 11 41.8	+0.5
	comp=Z,13nm,0.7s,baz=181,slow=0.5,SNR=6.0						
PSI				LR	LR	03 20 32.2	
	comp=Z,937nm,21.7s,baz=90,slow=39						
CHAI	Chaiyaphum	27.84	302	P	P	03 08 27.2	+0.7
	comp=Z,1µmcomp=Z,68nm,0.8s						
NONG	Nongkai	27.97	307	P	P	03 08 28.5	+0.9
	comp=Z,7µmcomp=Z,86nm,0.8s						
PKDT	Phuket	28.57	283	P	P	03 08 34.4	+1.4
PHET	Kaeng Krachan	28.70	294	P	P	03 08 36.0	+1.8
	comp=Z,29nm,0.8s						
RNTT	Ranong	28.75	286	P	P	03 08 39.6	+5.0
	comp=Z,5.0nm,0.8s						
GSI	Gunungsitoli	28.77	270	P	P	03 08 33.6	-1.2
GSI				IAmb	IAmb	03 08 47.3	
	comp=Z,48nm,0.8s						
GSI				PcP	PcP	03 11 43.4	-1.0
GSI	Gunungsitoli	28.77	270	P	P	03 08 33.2	-1.7
	comp=Z,66nm,0.7s						
CTA	Charters Tower	29.17	139	P	P	03 08 39.0	+0.7
	comp=Z,45nm,0.9s,baz=324,slow=11,SNR=25						
CTA				ScP	ScP	03 15 26.6	+2.6
	comp=Z,3.9nm,0.7s,baz=329,slow=5.0,SNR=3.8						
MEEK	Meekatharra	29.18	194	P	P	03 08 38.4	+0.1
	baz=29,SNR=37						
SLVN	Son La	29.30	313	P	P	03 08 39.1	-0.4
JCJ	Chichijima	29.44	30	P	P	03 08 40.8	+0.3
	comp=Z,69nm,0.4s,baz=279,slow=19,SNR=10						
JCJ				LR	LR	03 18 52.5	
	comp=Z,297nm,21.0s,baz=246,slow=33						
JCJ	Chichijima	29.44	30	P	P	03 08 40.0	-0.6
SSE	Sheshan	29.61	351	P	P	03 08 41.7	-0.3
PHIT	Phitsanulok	29.77	303	P	P	03 08 45.1	+1.4
	comp=Z,127nm,0.8s						
JSU	Suzuyama	29.87	7	P	P	03 08 43.9	-0.4
UTHA	Uthaitani	29.88	299	P	P	03 08 44.8	+0.2
	comp=Z,354nmcomp=Z,46nm,0.8s						
UTTA	Uttaradit	29.92	304	P	P	03 08 46.0	+1.0
	comp=Z,562nmcomp=Z,43nm,0.8s						
NANT	Nan	30.33	306	P	P	03 08 55.0	+6.4
	comp=Z,23µmcomp=Z,482nm,0.7s						
SUKH	Sukhothai	30.57	302	P	P	03 08 51.4	+0.7
	comp=Z,52nm,0.9s						
UMPA	Umpang Tak	30.66	300	P	P	03 08 56.1	+4.5
	comp=Z,4µmcomp=Z,35nm,0.8s						
WHN	Wuhan	30.84	340	P	P	03 08 54.5	+1.6
WHN				pP	sP	03 09 06.4	-1.7
WHN				sP	pwP	03 09 12.0	+6.5
WHN				LR	LR		
	comp=Z,2µm,23.6s						
NJ2	Nanjing	30.98	348	*e*P	P	03 08 56.3	+2.2
NJ2				pmax	pmax		
	comp=Z,16nm,0.6s						
GYA	Guiyang	31.03	324	⇑P	P	03 08 56.5	+1.7
GYA				pP	pP	03 09 04.6	-0.8
GYA				PcP	PcP	03 11 51.3	+1.2
GYA				S	S	03 13 56.4	-0.9
GYA				SS	SnSn	03 15 45.1	+4.5
GYA				ScS	ScS	03 19 27.9	+0.6
GYA				pmax	pmax		
	comp=Z,14nm,1.5s						
GYA				pmax	pmax		
	comp=Z,130nm,3.5s						
GYA				LR	LR		
	comp=Z,200nm,17.3s						
GYA				LR	LR		
	comp=Z,220nm,20.8s						
GYA				LR	LR		
	comp=Z,470nm,17.0s						
LAMP	Lampang	31.07	304	P	P	03 09 00.2	+5.2
	comp=Z,33nm,0.8s						
CM36	Chiang Mai Arr	31.51	304	P	P	03 09 02.0	+3.0
JNU	Nakatsue	31.52	7	P	P	03 08 59.8	+0.9
	comp=Z,21nm,0.6s,baz=222,slow=4.1,SNR=15						
JNU	Nakatsue	31.52	7	P	P	03 08 58.4	-0.5
JNU				IAmb	IAmb	03 09 02.4	
	comp=Z,34nm,0.9s						
CM35	Chiang Mai Arr	31.54	304	P	P	03 09 03.0	+3.8
CM04	Chiang Mai Arr	31.55	303	P	P	03 09 05.5	+6.2
	comp=Z,187nmcomp=Z,21nm,0.9s						
CM09	Chiang Mai Arr	31.56	304	P	P	03 09 04.8	+5.3
	comp=Z,226nmcomp=Z,35nm,0.9s						
CM01	Chiang Mai Arr	31.58	303	P	P	03 09 05.7	+6.1
	comp=Z,168nmcomp=Z,21nm,0.8s						
CM05	Chiang Mai Arr	31.58	303	P	P	03 09 05.7	+6.0
	comp=Z,110nmcomp=Z,15nm,0.9s						
CM02	Chiang Mai Arr	31.59	303	P	P	03 09 05.3	+5.6
	comp=Z,169nmcomp=Z,26nm,0.9s						
CM31	Chiang Mai Arr	31.61	304	P	P	03 09 05.8	+6.0
	comp=Z,574nm,0.8s						
CMAR	Chiang Mai Arr	31.61	304	P	P	03 09 00.5	+0.6
	comp=Z,5.5nm,0.7s,baz=85,slow=8.4,SNR=3.8						
CMAR				PcP	PcP	03 11 53.5	+1.8
	comp=Z,7.8nm,0.8s,baz=174,slow=1.5,SNR=9.6						
CMAR				LR	LR	03 21 40.1	
	comp=Z,409nm,21.7s,baz=158,slow=36						
CMAR	Chiang Mai Arr	31.61	304	P	P	03 08 59.6	-0.2
CMAR				PcP	PcP	03 11 51.3	-0.4
CM13	Chiang Mai Arr	31.62	303	P	P	03 09 04.0	+4.0
	comp=Z,168nmcomp=Z,25nm,0.9s						
CM15	Chiang Mai Arr	31.62	303	P	P	03 09 05.8	+5.9
	comp=Z,833nmcomp=Z,24nm,0.5s						
CM34	Chiang Mai Arr	31.63	304	P	P	03 09 00.0	0.0
CMMT	Chiang Mai	31.77	304	P	P	03 09 01.0	-0.3
	comp=Z,236nmcomp=Z,22nm,0.8s						
CM33	Chiang Mai Arr	31.78	304	P	P	03 09 02.0	+0.6
CHTO	Chiang Mai	31.78	304	P	P	03 09 01.4	+0.1
CHTO				pmax	pmax		
	comp=Z,27nm,0.8s						
CHTO	Chiang Mai	31.78	304	P	P	03 09 01.4	+0.1
CHTO				IAmb	IAmb	03 09 06.9	
	comp=Z,27nm,0.8s						
CM32	Chiang Mai Arr	31.78	304	P	P	03 09 06.0	+4.6
MORW	Morawa	32.18	197	P	P	03 09 05.2	+0.5
	baz=32,SNR=24						
MORW	Morawa	32.18	197	P	P	03 09 04.3	-0.4
MORW				IAmb	IAmb	03 09 05.7	
	comp=Z,42nm,0.8s						
MHMT	Maesarieng	32.33	302	P	P	03 09 09.9	+3.8
FORT	Forrest	32.37	177	P	P	03 09 07.6	+1.3
	baz=32,SNR=22						
FORT	Forrest	32.37	177	P	P	03 09 05.8	-0.6
KMI	Kunming	32.56	318	⇑*e*P	P	03 09 09.3	+0.9
KMI				pP	sP	03 09 20.6	-3.1
KMI				sP	pP	03 09 25.8	+6.8
KMI				PcP	PcP	03 11 56.6	+2.2
KMI				S	S	03 14 21.5	0.0
KMI				sS	sS	03 14 46.9	+7.7
KMI				PcS	PcS	03 15 39.8	-0.1
KMI				pmax	pmax		
	comp=Z,23nm,1.4s						
KMI				pmax	pmax		
	comp=Z,84nm,3.5s						
KMI				LR	LR		
	comp=Z,320nm,21.4s						
KMI				LR	LR		
	comp=Z,610nm,23.6s						
KMI				LR	LR		
	comp=Z,900nm,22.1s						
KMI	Kunming	32.56	318	P	P	03 09 07.6	-0.8
KMI				pmax	pmax		
	comp=Z,18nm,0.9s						
KMI	Kunming	32.56	318	P	P	03 09 07.6	-0.8
ENH	Enshi	32.59	332	P	P	03 09 07.9	-0.5
JMN	Monobe	32.60	12	P	P	03 09 07.7	-0.7
JMN				IAmb	IAmb	03 09 24.0	
	comp=Z,41nm,0.9s						
JTU	Tsushima	32.75	5	P	P	03 09 09.0	-0.6
JTU				IAmb	IAmb	03 09 21.6	
	comp=Z,24nm,0.7s						
QLP	Quilpie	33.02	150	P	P	03 09 11.3	-0.8
	baz=33,SNR=6.2						
KMBL	Kambalda	33.19	187	P	P	03 09 14.3	+0.7
	baz=33,SNR=36						
BLDU	Ballidu	33.45	195	P	P	03 09 16.1	+0.3
	baz=34,SNR=75						
JHJ	Hachijo jima 2	33.67	21	LR	LR	03 23 02.6	
	comp=Z,155nm,18.6s,baz=244,slow=36						
JHS	Saijyo	33.69	10	P	P	03 09 17.2	-0.7
JHS				IAmb	IAmb	03 09 35.0	
	comp=Z,56nm,1.1s						
KLBR	Kellerberrin	34.13	193	P	P	03 09 22.1	+0.4
	baz=34,SNR=92						
JWT	Wachi	34.43	13	P	P	03 09 23.6	-0.6
JWT				IAmb	IAmb	03 09 30.7	
	comp=Z,41nm,0.7s						
TJN	Taejon	34.49	1	*ce*P	P	03 09 24.6	-0.1
MUN	Mundaring	34.88	195	P	P	03 09 28.6	+0.4
	baz=35,SNR=23						
INU	Inuyama	34.89	15	P	P	03 09 27.5	-0.7
INU				IAmb	IAmb	03 09 35.7	
	comp=Z,48nm,0.9s						
JGF	Kuroka	35.22	16	P	P	03 09 30.4	-0.7
JGF				IAmb	IAmb	03 09 46.5	
	comp=Z,20nm,0.6s						
NWAO	Narrogin (SRO)	35.53	193	P	P	03 09 34.5	+0.7
	baz=36,SNR=24						
NWAO	Narrogin (SRO)	35.53	193	P	P	03 09 33.4	-0.4
NWAO				pmax	pmax		
	comp=Z,52nm,0.7s						
NWAO	Narrogin (SRO)	35.53	193	P	P	03 09 33.4	-0.4
NWAO	Narrogin (SRO)	35.53	193	P	P	03 09 33.4	-0.4
NWAO				IAmb	IAmb	03 09 35.4	
	comp=Z,41nm,0.7s						
BBOO	Buckleboo	35.56	166	P	P	03 09 34.3	+0.3
	baz=36,SNR=60						
BBOO	Buckleboo	35.56	166	P	P	03 09 33.4	-0.6
KSAR	Wonju Array Be	35.57	2	P	P	03 09 34.4	+0.4
KSAR	Wonju Array Be	35.57	2	P	P	03 09 34.4	+0.4
KSRS	Korea Array	35.58	2	P	P	03 09 35.4	+1.3
	comp=Z,13nm,0.6s,baz=182,slow=10,SNR=37						
KS19	Wonju Array Si	35.63	2	P	P	03 09 34.2	-0.4
KS19				IAmb	IAmb	03 09 42.6	
	comp=Z,41nm,1.0s						
EIDS	Eidsvold	36.04	140	P	P	03 09 39.5	+1.2
	baz=36,SNR=12						
EIDS	Eidsvold	36.04	140	P	P	03 09 37.4	-0.8
EIDS				IAmb	IAmb	03 09 41.0	
	comp=Z,65nm,1.0s						
XAN	Xi'an	36.04	335	P	P	03 09 37.8	-0.4
XAN				pmax	pmax		
	comp=Z,120nm,1.2s						
XAN				pmax	pmax		
	comp=Z,520nm,3.8s						
XAN				LR	LR		
	comp=Z,440nm,22.1s						
XAN				LR	LR		
	comp=Z,290nm,15.9s						
XAN				LR	LR		
	comp=Z,440nm,22.8s						
XAN	Xi'an	36.04	335	P	P	03 09 37.3	-0.9
XAN				pmax	pmax		
	comp=Z,105nm,1.1s						
XAN	Xi'an	36.04	335	P	P	03 09 37.3	-0.9
CD2	Chengdu	36.05	326	P	P	03 09 37.6	-0.8
CD2				pmax	pmax		
	comp=Z,140nm,1.1s						
CD2				LR	LR		
	comp=Z,610nm,25.9s						
CD2				LR	LR		
	comp=Z,690nm,21.6s						
CD2				LR	LR		
	comp=Z,810nm,15.1s						
MAJO	Matsushiro	36.33	16	P	P	03 09 40.8	+0.2
MAJO				pmax	pmax		
	comp=Z,44nm,1.0s						
MAJO	Matsushiro	36.33	16	P	P	03 09 40.8	+0.2
MAJO				IAmb	IAmb	03 09 48.3	
	comp=Z,44nm,1.0s						
MAT	Matsushiro	36.33	16	P	P	03 09 40.5	-0.1
MAT				*e*S	S	03 15 21.0	+2.0
MJAR	Matsushiro Arr	36.33	16	P	P	03 09 40.8	+0.2
	comp=Z,27nm,0.8s,baz=183,slow=9.5,SNR=56						
MJAR				PcP	PcP	03 12 06.2	+1.4
	comp=Z,3.6nm,0.8s,baz=174,slow=2.8,SNR=4.1						
MJAR				ScP	ScP	03 15 49.5	+1.2
	comp=Z,2.4nm,0.9s,baz=174,slow=4.1,SNR=4.2						
MJAR				LR	LR	03 23 18.1	
	comp=Z,254nm,21.8s,baz=215,slow=34						
MJAR	Matsushiro Arr	36.33	16	P	P	03 09 40.6	0.0
STKA	Stephens Creek	36.41	158	P	P	03 09 41.6	+0.2
	comp=Z,40nm,0.6s,baz=333,slow=9.1,SNR=56						
STKA				PcP	PcP	03 12 06.1	+1.0
	comp=Z,17nm,0.7s,baz=329,slow=4.4,SNR=3.3						
STKA	Stephens Creek	36.41	158	P	P	03 09 41.7	+0.2
	baz=36,SNR=62						
STKA	Stephens Creek	36.41	158	P	P	03 09 41.5	+0.1
STKA						03 12 04.2	
STKA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
STKA	Stephens Creek	36.41	158	P	P	03 09 41.5	+0.2
STKA				PcP	PcP	03 12 04.2	-0.9
JYT	Yasato	36.64	19	P	P	03 09 42.5	-0.7
JYT				IAmb	IAmb	03 09 46.5	
	comp=Z,56nm,0.8s						
HTT	Hallett	36.92	162	P	P	03 09 46.5	+0.7
	baz=37,SNR=36						
DL2	Dalian	37.25	354	P	P	03 09 48.8	+0.4
DL2				*e*S	S	03 15 34.4	+1.5
DL2				pmax	pmax		
	comp=Z,140nm,0.7s						
DL2				pmax	pmax		
	comp=Z,340nm,4.1s						
DL2				LR	LR		
	comp=Z,460nm,18.1s						
DL2				LR	LR		
	comp=Z,390nm,19.9s						
DL2				LR	LR		
	comp=Z,510nm,18.5s						
JSD	Sado	37.75	15	P	P	03 09 51.9	-0.7
JSD				IAmb	IAmb	03 09 55.6	
	comp=Z,53nm,0.8s						
CMSA	Cobar Meteorol	37.84	153	P	P	03 09 55.6	+2.1
	baz=38,SNR=21						
JMM	Marumori	38.33	19	P	P	03 09 56.9	-0.7
BJT	Baijiatuau	39.22	348	P	P	03 10 04.4	-0.6
BJT				pmax	pmax		
	comp=Z,44nm,0.8s						
BJT	Baijiatuau	39.22	348	P	P	03 10 04.3	-0.6
BJT				IAmb	IAmb	03 10 09.8	
	comp=Z,44nm,0.8s						
BJI	Beijing	39.24	348	P	P	03 10 05.3	+0.2
BJI				PP	PnPn	03 11 38.8	+0.2
BJI				PcP	PcP	03 12 15.8	+2.2
BJI				S	S	03 16 06.4	+3.5
BJI				pmax	pmax		
	comp=Z,35nm,1.0s						
BJI				pmax	pmax		
	comp=Z,110nm,3.5s						
BJI				LR	LR		
	comp=Z,110nm,8.2s						
BJI				LR	LR		
	comp=Z,330nm,22.9s						
BJI				LR	LR		
	comp=Z,440nm,30.3s						
SNY	Shenyang	40.00	357	⇓P	P	03 10 12.8	+1.4
SNY				S	S	03 16 13.8	-0.4
SNY				pmax	pmax		
	comp=Z,34nm,0.6s						
SNY				LR	LR		
	comp=Z,320nm,22.2s						
SNY				LR	LR		
	comp=Z,330nm,19.7s						
SNY				LR	LR		
	comp=Z,350nm,18.6s						
ARMA	Armidale	40.03	145	P	P	03 10 13.6	+1.6
	baz=40,SNR=47						
ARMA	Armidale	40.03	145	P	P	03 10 11.2	-0.8
LZH	Lanzhou	40.05	331	⇑P	P	03 10 12.9	+0.8
LZH				pP	sP	03 10 28.8	+1.3
LZH				sP	pwP	03 10 34.3	+9.2
LZH				pmax	pmax		
	comp=Z,68nm,1.3s						
LZH				pmax	pmax		
	comp=Z,230nm,4.9s						
LZH				LR	LR		
	comp=Z,410nm,16.1s						
LZH				LR	LR		
	comp=Z,420nm,16.8s						
LZH				LR	LR		
	comp=Z,370nm,18.4s						
SHL	Shillong	40.79	309	P	P	03 10 18.2	-0.2
SHL				pmax	pmax		
	comp=Z,66nm,1.0s						
SHL	Shillong	40.79	309	P	P	03 10 18.2	-0.2

SHL				IAmb	IAmb	03 10 22.6	
	comp=Z,66nm,1.0s						
MSHR	**Mys Shultsa**	**40.90**	**5**	*i* P	**P**	**03 10 20.0**	**+1.2**
ARPS	**Mount Arapiles**	**40.92**	**161**	P	**P**	**03 10 20.8**	**+1.7**
	baz=41,SNR=37						
JTM	**Tenmabayashi**	**41.10**	**17**	P	**P**	**03 10 19.9**	**-0.5**
JTM				IAmb	IAmb	03 10 24.5	
	comp=Z,74nm,0.8s						
HHC	**Hu-ho-hao-te**	**41.18**	**343**	*e*P	**P**	**03 10 21.9**	**+0.6**
HHC				pmax	pmax		
	comp=Z,11nm,1.2s						
HHC				pmax	pmax		
	comp=Z,130nm,6.1s						
HHC				LR	LR		
	comp=Z,400nm,20.0s						
HHC				LR	LR		
	comp=Z,190nm,16.1s						
HHC				LR	LR		
	comp=Z,560nm,19.0s						
YNG	**Young**	**41.39**	**152**	P	**P**	**03 10 25.0**	**+2.0**
	baz=42,SNR=8.1						
BTO	**Baotou**	**41.43**	**341**	*e*P	**P**	**03 10 24.3**	**+0.9**
MGCD	**Mangrove Creek**	**41.87**	**148**	P	**P**	**03 10 29.5**	**+2.6**
	baz=42,SNR=4.8						
CAN	**Canberra**	**42.51**	**152**	P	**P**	**03 10 32.3**	**+0.1**
CAN				pmax	pmax		
	comp=Z,36nm,0.9s						
CAN	**Canberra**	**42.51**	**152**	P	**P**	**03 10 32.3**	**+0.1**
USA0B	**Ussuriysk Arra**	**42.59**	**6**	P	**P**	**03 10 33.1**	**+0.5**
USA0B				pmax	pmax		
	comp=Z,26nm,0.8s						
USA0B	**Ussuriysk Arra**	**42.59**	**6**	P	**P**	**03 10 33.1**	**+0.5**
USRK	**Ussuriysk Ar.**	**42.59**	**6**	P	**P**	**03 10 34.0**	**+1.5**
	comp=Z,22nm,0.7s,baz=190,slow=7.0,SNR=64						
USRK				LR	LR	03 26 26.6	
	comp=Z,168nm,21.7s,baz=173,slow=33						
USRK	**Ussuriysk Ar.**	**42.59**	**6**	P	**P**	**03 10 33.0**	**+0.4**
USRK	**Ussuriysk Ar.**	**42.59**	**6**	P	**P**	**03 10 33.0**	**+0.4**
MDJ	**Mudanjiang**	**42.80**	**3**	P	**P**	**03 10 36.3**	**+1.9**
MDJ				pP	sP	03 10 47.8	-1.9
MDJ				sP	pwP	03 10 52.0	+4.5
MDJ				PcS	**PcS**	**03 16 17.1**	**-0.1**
MDJ				S	**S**	**03 16 59.1**	**+3.3**
MDJ				sS	sS	03 17 18.9	+5.0
MDJ				pmax	pmax		
	comp=Z,11nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,230nm,4.0s						
MDJ				LR	LR		
	comp=Z,390nm,5.4s						
MDJ				LR	LR		
	comp=Z,250nm,6.1s						
MDJ				LR	LR		
	comp=Z,480nm,23.3s						
MDJ	**Mudanjiang**	**42.80**	**3**	P	**P**	**03 10 33.8**	**-0.5**
MDJ				IAmb	IAmb	03 10 46.5	
	comp=Z,30nm,0.7s						
ERM	**Erimo**	**42.86**	**18**	*i* P	**P**	**03 10 34.8**	**0.0**
ERM				pmax	pmax		
	comp=Z,23nm,0.7s						
TOO	**Toolangi**	**42.93**	**158**	P	**P**	**03 10 37.5**	**+1.9**
	baz=43,SNR=5.9						
TOO	**Toolangi**	**42.93**	**158**	P	**P**	**03 10 35.8**	**+0.2**
TOO				pmax	pmax		
	comp=Z,17nm,0.8s						
TOO	**Toolangi**	**42.93**	**158**	P	**P**	**03 10 35.8**	**+0.2**
KOUNC	**Koumac, New Ca**	**43.25**	**123**	P	**P**	**03 10 39.4**	**+1.1**
LSA	**Lhasa**	**43.50**	**313**	P	**P**	**03 10 41.8**	**+1.0**
LSA				pmax	pmax		
	comp=Z,64nm,1.0s						
LSA	**Lhasa**	**43.50**	**313**	P	**P**	**03 10 39.5**	**-1.3**
LSA				pmax	pmax		
	comp=Z,50nm,0.6s						
LSA	**Lhasa**	**43.50**	**313**	P	**P**	**03 10 39.5**	**-1.3**
LSA				IAmb	IAmb	03 10 45.8	
	comp=Z,50nm,0.6s						
SANVU	**Saraoutou**	**43.84**	**114**	P	**P**	**03 10 43.0**	**-0.2**
SANVU				IAmb	IAmb	03 10 46.6	
	comp=Z,74nm,0.9s						
SANVU	**Saraoutou**	**43.84**	**114**	P	**P**	**03 10 45.2**	**+2.0**
TEY	**Ternei**	**44.06**	**10**	⇑*e*P	**P**	**03 10 46.3**	**+1.8**
TEY				pmax	pmax		
	comp=N,40nm,0.7s						
TEY				pmax	pmax		
	comp=Z,70nm,0.7s						
ASAJ	**Asahikawa**	**44.60**	**17**	P	**P**	**03 10 50.2**	**+1.4**
	comp=Z,26nm,0.7s,baz=245,slow=22,SNR=18						
ASAJ	**Asahikawa**	**44.60**	**17**	P	**P**	**03 10 48.3**	**-0.5**
ASAJ				pmax	pmax		
	comp=Z,30nm,0.8s						
JKA	**Kamikawa-asahi**	**44.60**	**17**	P	**P**	**03 10 48.3**	**-0.6**
JKA				IAmb	IAmb	03 10 52.1	
	comp=Z,30nm,0.8s						
GTA	**Gaotai**	**44.63**	**330**	⇑P	**P**	**03 10 49.8**	**+0.5**
GTA				PcP	**PP**	**03 12 33.3**	**-0.7**
GTA				ScP	**ScP**	**03 16 22.9**	**+2.0**
GTA				pmax	pmax		
	comp=Z,21nm,0.7s						
GTA				pmax	pmax		
	comp=Z,120nm,10.4s						
GTA				LR	LR		
	comp=Z,320nm,17.9s						
GTA				LR	LR		
	comp=Z,280nm,19.1s						
GTA				LR	LR		
	comp=Z,560nm,19.5s						
TAPN	**Taplejung**	**44.92**	**308**	*e*P	**P**	**03 10 51.5**	**-0.6**
	comp=Z,69nm,1.0s						
ODAN	**Odare**	**44.95**	**307**	*e*P	**P**	**03 10 51.6**	**-0.6**
	comp=Z,82nm,0.9s						
RAMN	**Ramite**	**45.62**	**307**	*e*P	**P**	**03 10 57.2**	**-0.3**
	comp=Z,43nm,0.5s						
DZM	**Mont Dzumac**	**45.72**	**123**	*e*LR	LR	03 23 48.3	
	comp=Z,677nm,27.7s						
DZM	**Mont Dzumac**	**45.72**	**123**	P	**P**	**03 10 58.2**	**0.0**
DZM				IAmb	IAmb	03 11 02.4	
	comp=Z,49nm,0.9s						
DZM	**Mont Dzumac**	**45.72**	**123**	P	**P**	**03 10 59.6**	**+1.4**
PALK	**Pallekele**	**45.82**	**278**	P	**P**	**03 10 58.0**	**-1.0**
	comp=Z,11nm,0.6s,baz=184,slow=4.6,SNR=6.7						
PALK				PcP	**PcP**	**03 12 36.8**	**+0.6**
	comp=Z,9.2nm,0.6s,baz=171,slow=1.4,SNR=5.9						
PALK	**Pallekele**	**45.82**	**278**	*i* P	**P**	**03 10 58.1**	**-1.0**
PALK				pmax	pmax		
	comp=Z,19nm,1.0s						
PALK	**Pallekele**	**45.82**	**278**	P	**P**	**03 10 58.9**	**-0.2**
LIFNC	**LIFOU**	**45.85**	**121**	P	**P**	**03 11 00.9**	**+1.8**
YATNC	**Mamie plateau,**	**46.09**	**123**	P	**P**	**03 11 03.0**	**+2.0**
GUN	**Gumba**	**46.62**	**308**	*e*P	**P**	**03 11 04.9**	**-0.6**
	comp=Z,78nm,0.5s						
PKI	**Pulchoki**	**46.84**	**307**	*e*P	**P**	**03 11 06.1**	**-1.2**
	comp=Z,27nm,0.5s						
PKIN	**Phulchoki**	**46.86**	**307**	*e*P	**P**	**03 11 06.0**	**-1.3**
	comp=Z,27nm,0.5s						
KKN	**Kakani**	**47.04**	**307**	*e*P	**P**	**03 11 08.0**	**-0.7**
DMN	**Daman**	**47.10**	**307**	*e*P	**P**	**03 11 07.7**	**-1.5**
	comp=Z,46nm,0.8s						
YSS	**Yuzh-Sakhalins**	**47.26**	**15**	*i* P	**P**	**03 11 10.5**	**+0.8**
YSS				pmax	pmax		
	comp=Z,17nm,0.9s						
KLR	**Kul'dur**	**47.55**	**5**	P	**P**	**03 11 12.4**	**+0.5**
	comp=Z,12nm,0.6s,baz=197,slow=4.5,SNR=43						
KLR	**Kul'dur**	**47.55**	**5**	*ce*P	**P**	**03 11 12.3**	**+0.4**
KLR				pmax	pmax		
	comp=Z,16nm,0.9s						
GKN	**Gorkha**	**47.65**	**307**	*e*P	**P**	**03 11 12.6**	**-0.7**
	comp=Z,56nm,0.8s						
ULN	**Ulaanbaatar**	**48.90**	**343**	*ce*P	**P**	**03 11 22.2**	**-0.4**
ULN				pmax	pmax		
	comp=Z,56nm,1.0s						
SONM	**Songino Array**	**49.07**	**342**	P	**P**	**03 11 24.3**	**+0.4**
	comp=Z,17nm,0.8s,baz=158,slow=7.9,SNR=48						
SONM				PcP	**PcP**	**03 12 48.3**	**+1.1**
	comp=Z,14nm,0.8s,baz=165,slow=4.6,SNR=7.7						
SONM				ScP	**ScP**	**03 16 40.5**	**+1.1**
	comp=Z,2.8nm,0.9s,baz=159,slow=4.9,SNR=6.2						
SONM				LR	LR	03 35 38.7	
	comp=Z,264nm,20.8s,baz=168,slow=40						
SONM	**Songino Array**	**49.07**	**342**	P	**P**	**03 11 24.4**	**+0.5**
SONM					**PcP**	**03 12 46.3**	**-0.9**
HYB	**Hyderabad**	**49.47**	**291**	*i* P	**P**	**03 11 25.0**	**-2.3**
HYB				*e*PcP	**sP**	**03 11 47.0**	**+4.1**
GRNR	**Gornyy**	**49.60**	**8**	⇓*i*P	**P**	**03 11 29.8**	**+2.1**
GRNR				pmax	pmax		
	comp=Z,9.0nm,0.7s						
TYV	**Tymovskoe**	**50.86**	**13**	*e*P	**P**	**03 11 39.5**	**+2.2**
TYV				*e*		03 19 11.9	
TYV				pmax	pmax		
	comp=Z,10.0nm,1.1s						
CIT	**Chita**	**51.26**	**350**	*e*P	**P**	**03 11 43.2**	**+2.9**
CIT				*e*		03 11 52.8	
CIT				pmax	pmax		
	comp=Z,205nm,1.7s						
ZEA	**Zeya**	**51.84**	**1**	*e*P	**P**	**03 11 46.7**	**+2.2**
ZEA				pmax	pmax		
	comp=Z,20nm,1.1s						
ZAK	**Zakamensk**	**52.28**	**342**	*e*P	**P**	**03 11 48.4**	**+0.3**
ZAK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
TLY	**Talaya**	**53.31**	**343**	P	**P**	**03 11 56.5**	**+1.0**
	comp=Z,9.6nm,0.6s,baz=193,slow=5.8,SNR=21						
TLY	**Talaya**	**53.31**	**343**	*i* P	**P**	**03 11 56.6**	**+1.1**
TLY				pmax	pmax		
	comp=Z,11nm,0.9s						
TLY	**Talaya**	**53.31**	**343**	P	**P**	**03 11 56.0**	**+0.5**
TLY				IAmb	IAmb	03 12 02.5	
	comp=Z,20nm,0.8s						
MNCI	**Minicoy**	**53.45**	**279**	P	**P**	**03 11 57.1**	**0.0**
IRK	**Irkutsk**	**53.62**	**343**	*e*P	**P**	**03 11 54.9**	**-2.8**
IRK				pmax	pmax		
	comp=Z,53nm,1.7s						
FUNA	**Funafuti**	**53.65**	**102**	P	**P**	**03 11 58.4**	**-0.2**
NDI	**New Delhi**	**53.92**	**305**	*e*P	**P**	**03 11 59.0**	**-1.4**
MOY	**Mondy**	**54.13**	**341**	*e*P	**P**	**03 12 02.8**	**+1.2**
MOY				pmax	pmax		
	comp=Z,50nm,1.8s						
WMQ	**Urumqi**	**54.15**	**326**	*e*P	**P**	**03 12 02.8**	**+0.9**
WMQ				pP	sP	03 12 15.3	-2.2
WMQ				sP	pwP	03 12 23.4	+8.2
WMQ				PcP	**PcP**	**03 13 09.8**	**+3.7**
WMQ				PP	**PP**	**03 14 06.5**	**+2.6**
WMQ				pmax	pmax		
	comp=Z,130nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,24nm,3.7s						
WMQ				LR	LR		
	comp=Z,570nm,26.3s						
WMQ				LR	LR		
	comp=Z,1µm,28.9s						
WMQ				LR	LR		
	comp=Z,530nm,24.9s						
WMQ	**Urumqi**	**54.15**	**326**	P	**P**	**03 12 01.2**	**-0.7**
WMQ				pmax	pmax		
	comp=Z,91nm,0.9s						
WMQ	**Urumqi**	**54.15**	**326**	P	**P**	**03 12 01.2**	**-0.7**
MSVF	**Nonsavu**	**54.45**	**113**	*i* P	**P**	**03 12 03.2**	**-1.2**
MSVF				pmax	pmax		
	comp=Z,51nm,1.1s						
MSVF	**Nonsavu**	**54.45**	**113**	P	**P**	**03 12 06.2**	**+1.8**
BOD	**Bodaibo**	**56.78**	**352**	*e*P	**P**	**03 12 21.4**	**+1.0**
BOD				pmax	pmax		
	comp=Z,65nm,1.6s						
PETK	**Petropavlovsk-**	**57.41**	**22**	P	**P**	**03 12 25.4**	**+0.4**
	comp=Z,17nm,0.6s,baz=178,slow=4.0,SNR=32						
PETK				LR	LR	03 36 58.1	
	comp=Z,72nm,20.8s,baz=217,slow=36						
PETK	**Petropavlovsk-**	**57.41**	**22**	P	**P**	**03 12 25.1**	**+0.2**
ZSN	**Zaisan**	**57.98**	**328**	*e*P	**P**	**03 12 28.2**	**-1.0**
	baz=328						
ZSN	**Zaisan**	**57.98**	**328**	*e*P	**P**	**03 12 28.1**	**-1.0**
DGZ	**Jazzator, Alta**	**58.15**	**331**	*i* P	**P**	**03 12 30.4**	**0.0**
DGZ				pmax	pmax		
	comp=Z,25nm,1.0s						
SHLS	**Shalkode**	**58.65**	**321**	*e*P	**P**	**03 12 31.4**	**-2.7**
	comp=Z,13nm,0.9s,baz=321						
SHLS				*e*S	**S**	**03 20 32.0**	**-3.9**
	baz=321						
SHLS	**Shalkode**	**58.65**	**321**	*e*P	**P**	**03 12 31.3**	**-2.7**
SHLS				*e*S	**S**	**03 20 31.9**	**-3.9**
SHLS				pmax	pmax		
	comp=Z,13nm,0.9s						
PDGK	**Podgornoye**	**58.72**	**321**	*i* P	**P**	**03 12 34.4**	**-0.1**
PDGK				pmax	pmax		
	comp=Z,63nm,0.7s						
NIL	**Nilore**	**58.86**	**309**	P	**P**	**03 12 34.9**	**-0.7**
NIL				pmax	pmax		
	comp=Z,28nm,0.7s						
NIL	**Nilore**	**58.86**	**309**	P	**P**	**03 12 34.9**	**-0.7**
UZB	**Uzynbulak**	**58.92**	**321**	*e*P	**P**	**03 12 35.4**	**-0.6**
	comp=Z,4.3nm,0.7s,baz=321						
UZB	**Uzynbulak**	**58.92**	**321**	*e*P	**P**	**03 12 35.3**	**-0.6**
UZB				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MK31	**Makanchi Array**	**58.99**	**326**	*i* P	**P**	**03 12 36.1**	**-0.1**
MK31				pmax	pmax		
	comp=Z,36nm,0.6s						
MK31	**Makanchi Array**	**58.99**	**326**	P	**P**	**03 12 35.7**	**-0.4**
MKAR	**Makanchi Array**	**58.99**	**326**	P	**P**	**03 12 35.9**	**-0.3**
	comp=Z,16nm,0.4s,baz=121,slow=8.5,SNR=176						
MKAR				PcP	**PcP**	**03 13 24.2**	**-0.6**
	comp=Z,20nm,0.9s,baz=116,slow=8.5,SNR=4.2						
MKAR				ScP	**ScP**	**03 17 22.9**	**+0.3**
	comp=Z,2.6nm,1.0s,baz=152,slow=5.5,SNR=3.6						
MKAR				S	**S**	**03 20 32.7**	**-7.2**
	comp=Z,0.2nm,0.4s,baz=88,slow=17,SNR=5.7						
MKAR				LR	LR	03 38 28.6	
	comp=Z,438nm,21.7s,baz=116,slow=36						
MKAR				PKPPKP	P'P'df	03 41 57.8	-13
	comp=Z,0.5nm,0.9s,baz=250,slow=3.6,SNR=4.2						
MKAR				P4KPbc		03 49 44.6	
	comp=Z,0.3nm,0.7s,baz=97,slow=5.0,SNR=3.8						
MKAR	**Makanchi Array**	**58.99**	**326**	P	**P**	**03 12 36.4**	**+0.2**
MKAR				ScP	**ScP**	**03 17 22.7**	**+0.2**
MAKZ	**Makanchi**	**59.17**	**326**	P	**P**	**03 12 37.7**	**+0.3**
MAKZ				pmax	pmax		
	comp=Z,72nm,1.0s						
MAKZ	**Makanchi**	**59.17**	**326**	P	**P**	**03 12 37.7**	**+0.3**
KSH	**Kashi**	**59.20**	**316**	P	**P**	**03 12 39.1**	**+1.2**
KSH				pP	sP	03 12 53.6	-0.2
KSH				S	**S**	**03 20 41.0**	**-2.1**
KSH				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KSH				pmax	pmax		
	comp=Z,370nm,6.4s						
KSH				LR	LR		
	comp=Z,550nm,5.4s						
KSH				LR	LR		
	comp=Z,360nm,10.6s						
SATY	**Saty**	**59.27**	**321**	*e*P	**P**	**03 12 38.0**	**-0.4**
	comp=Z,8.7nm,0.8s,baz=320						
SATY	**Saty**	**59.27**	**321**	*e*P	**P**	**03 12 37.9**	**-0.4**
SATY				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KPKS	**Kokpek**	**59.30**	**321**	*e*P	**P**	**03 12 37.9**	**-0.6**
	comp=Z,18nm,0.8s,baz=321						
KPKS	**Kokpek**	**59.30**	**321**	*e*P	**P**	**03 12 37.8**	**-0.6**
KPKS				pmax	pmax		
	comp=Z,18nm,0.8s						
MDOK	**Medeo**	**60.18**	**320**	*e*P	**P**	**03 12 44.1**	**-0.6**
	baz=320						
MDOK	**Medeo**	**60.18**	**320**	*e*P	**P**	**03 12 44.0**	**-0.6**
TNSS	**Tian-Shan**	**60.19**	**320**	*e*P	**P**	**03 12 44.9**	**-0.1**
	baz=320						
TNSS	**Tian-Shan**	**60.19**	**320**	*e*P	**P**	**03 12 44.8**	**-0.1**
YAK	**Yakutsk**	**60.21**	**2**	*e*P	**P**	**03 12 45.3**	**+1.1**
YAK				*e**PP	**pP**	**03 12 52.4**	**-3.0**
YAK				*e*		03 14 59.9	
YAK				*e*S	**S**	**03 20 56.9**	**+2.0**
YAK				*e*		03 22 29.2	
YAK				pmax	pmax		
	comp=Z,66nm,0.8s						
YAK				pmax	pmax		
	comp=N,18nm,0.9s						
YAK				pmax	pmax		
	comp=E,5.0nm,0.8s						
YAK				pmax	pmax		
	comp=Z,50nm,1.5s						
YAK				smax	smax		
	comp=E,93nm,2.2s						
YAK				smax	smax		
	comp=N,103nm,1.9s						
YAK	**Yakutsk**	**60.21**	**2**	P	**P**	**03 12 44.9**	**+0.8**
LBZ	**Lake Benmore**	**60.26**	**145**	P	**P**	**03 12 45.2**	**+0.3**
TDK	**Taldyqorghan**	**60.26**	**323**	*e*P	**P**	**03 12 44.7**	**-0.3**
	comp=N,9.9nm,0.7s,baz=322						
TDK	**Taldyqorghan**	**60.26**	**323**	*e*P	**P**	**03 12 44.7**	**-0.3**
TDK				pmax	pmax		
	comp=Z,10.0nm,0.7s						
AAA	**Alma-Ata**	**60.29**	**320**	*e*P	**P**	**03 12 45.2**	**-0.1**
	baz=320						
AAA	**Alma-Ata**	**60.29**	**320**	*e*P	**P**	**03 12 45.1**	**-0.1**
RPZ	**Rata Peaks**	**60.36**	**144**	LR	LR	03 39 12.0	
	comp=Z,218nm,21.4s,baz=296,slow=36						
THZ	**Tophouse**	**60.37**	**141**	P	**P**	**03 12 46.0**	**+0.3**
THZ				IAmb	IAmb	03 13 03.7	
	comp=Z,25nm,0.7s						
CHKK	**Chushkaly**	**60.56**	**321**	*e*P	**P**	**03 12 46.2**	**-0.9**
	baz=321						
CHKK	**Chushkaly**	**60.56**	**321**	*e*P	**P**	**03 12 46.1**	**-0.9**
MA2	**Magadan**	**60.72**	**14**	*ce*P	**P**	**03 12 49.3**	**+1.5**
MA2				pmax	pmax		
	comp=Z,46nm,0.8s						
MA2	**Magadan**	**60.72**	**14**	P	**P**	**03 12 48.4**	**+0.6**
TUWZ	**Tuamarina**	**60.84**	**141**	P	**P**	**03 12 48.5**	**-0.4**
PRRZ	**Plateau Road**	**60.98**	**137**	P	**P**	**03 12 53.6**	**+3.7**
KUU	**Kurty**	**60.99**	**321**	*e*P	**P**	**03 12 49.4**	**-0.6**
	comp=Z,17nm,0.6s,baz=320						
KUU	**Kurty**	**60.99**	**321**	*e*P	**P**	**03 12 49.3**	**-0.6**
KUU				pmax	pmax		
	comp=Z,17nm,0.6s						
TKM2	**Tokmak 2**	**61.00**	**319**	P	**P**	**03 12 50.5**	**+0.2**
	SNR=26						
TKM2	**Tokmak 2**	**61.00**	**319**	*i* P	**P**	**03 12 50.0**	**-0.3**
TKM2				pmax	pmax		
	comp=Z,33nm,0.9s						
KBK	**Karagaybulak**	**61.30**	**319**	P	**P**	**03 12 52.6**	**+0.3**
	SNR=12						
URZ	**Urewera**	**61.36**	**136**	LR	LR	03 41 27.2	
	comp=Z,168nm,18.7s,baz=26,slow=38						
BKZ	**Black Stump Fm**	**61.37**	**137**	P	**P**	**03 12 52.8**	**+0.2**
BKZ				IAmb	IAmb	03 12 54.1	
	comp=Z,15nm,0.6s						
BKZ	**Black Stump Fm**	**61.37**	**137**	P	**P**	**03 12 53.2**	**+0.6**
UCH	**Uchtor**	**61.40**	**318**	P	**P**	**03 12 53.5**	**+0.2**
	SNR=33						
RTZ	**Ruatahuna**	**61.44**	**136**	P	**P**	**03 12 53.7**	**+0.6**
KWHZ	**Kaweka Forest**	**61.44**	**137**	P	**P**	**03 12 54.1**	**+1.0**
MTHZ	**Maungataniwha**	**61.45**	**137**	P	**P**	**03 12 53.7**	**+0.5**
RAO	**Raoul Island**	**61.49**	**125**	LR	LR	03 37 28.4	
	comp=Z,99nm,21.5s,baz=156,slow=34						
NMHZ	**Naumai**	**61.55**	**137**	P	**P**	**03 12 55.7**	**+1.9**
HAZ	**Te Kaha**	**61.59**	**135**	P	**P**	**03 12 56.3**	**+2.3**
AAK	**Ala-Archa**	**61.59**	**319**	P	**P**	**03 12 53.6**	**-0.6**
	comp=Z,3.1nm,0.4s,baz=155,slow=5.6,SNR=12						
AAK	**Ala-Archa**	**61.59**	**319**	P	P	03 13 00.1	+5.8
	SNR=6.4						
AAK	**Ala-Archa**	**61.59**	**319**	*i* P	**P**	**03 12 55.1**	**+0.9**
AAK				pmax	pmax		
	comp=Z,40nm,0.8s						
AAK	**Ala-Archa**	**61.59**	**319**	P	**P**	**03 12 54.5**	**+0.2**
AAK				IAmb	IAmb	03 13 00.2	
	comp=Z,16nm,0.9s						
MCHZ	**McNeill Hill**	**61.64**	**137**	P	**P**	**03 12 55.3**	**+0.9**
RAHZ	**Arahi**	**61.65**	**137**	P	P	03 12 48.8	-5.7
MWZ	**Matawai**	**61.68**	**136**	P	**P**	**03 12 55.0**	**+0.2**
ARHZ	**Aropaoanui**	**61.76**	**137**	P	**P**	**03 12 56.0**	**+0.9**
SGDS	**Sogindy**	**61.87**	**320**	*e*P	**P**	**03 12 55.1**	**-1.0**
	baz=319						
SGDS	**Sogindy**	**61.87**	**320**	*e*P	**P**	**03 12 55.0**	**-1.0**
USP	**Ospenovka**	**61.87**	**319**	P	**P**	**03 12 55.6**	**-0.4**
	SNR=35						
AML	**Almayashu**	**61.90**	**318**	P	**P**	**03 12 56.8**	**+0.1**
	SNR=34						
KAHZ	**Kahuranaki**	**61.93**	**138**	P	**P**	**03 12 59.2**	**+2.8**
EKS2	**Erkin-Say**	**62.08**	**318**	P	**P**	**03 12 57.7**	**+0.2**
	SNR=28						
SEM	**Semipalatinsk**	**62.20**	**329**	*e*P	**P**	**03 12 57.0**	**-1.2**
	baz=328						
SEM	**Semipalatinsk**	**62.20**	**329**	*e*P	**P**	**03 12 57.0**	**-1.2**
ZAA0	**Zalesovo Array**	**62.20**	**334**	P	**P**	**03 12 57.6**	**-0.2**
ZAA0				IAmb	IAmb	03 13 03.1	
	comp=Z,17nm,0.7s						
ZALV	**Zalesovo Beam**	**62.20**	**334**	P	**P**	**03 12 57.3**	**-0.5**
	comp=Z,5.4nm,0.3s,baz=117,slow=7.1,SNR=22						
ZALV				PKPPKP	**P'P'df**	**03 41 58.8**	**-6.3**
	comp=Z,0.3nm,0.3s,baz=166,slow=7.6,SNR=4.2						
BTLS	**Baital**	**62.98**	**321**	*e*P	**P**	**03 13 01.4**	**-1.9**
	comp=Z,3.7nm,0.6s,baz=321						
BTLS	**Baital**	**62.98**	**321**	*e*P	**P**	**03 13 01.3**	**-1.9**
BTLS				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KURK	**Kurchatov**	**63.23**	**328**	P	**P**	**03 13 05.0**	**+0.3**
KURK				pmax	pmax		
	comp=Z,153nm,0.9s						
KURK	**Kurchatov**	**63.23**	**328**	P	**P**	**03 13 05.0**	**+0.3**
DZA	**Taraz**	**63.81**	**318**	*e*P	**P**	**03 13 08.1**	**-0.7**
	baz=318						
DZA	**Taraz**	**63.81**	**318**	*e*P	**P**	**03 13 08.1**	**-0.7**
SEY	**Seymchan**	**64.05**	**13**	*i* P	**P**	**03 13 12.2**	**+2.2**
IUG	**Iuzhnay**	**64.39**	**317**	*e*P	**P**	**03 13 11.7**	**-1.2**
	baz=316						
IUG	**Iuzhnay**	**64.39**	**317**	*e*P	**P**	**03 13 11.6**	**-1.2**
KK31	**Karatay Array**	**64.44**	**318**	P	**P**	**03 13 12.2**	**-0.8**
KK31				pmax	pmax		
	comp=Z,16nm,1.0s						
KK31	**Karatay Array**	**64.44**	**318**	P	**P**	**03 13 12.2**	**-0.8**
KKAR	**Karatay Array**	**64.44**	**318**	P	**P**	**03 13 12.5**	**-0.5**
KKAR				pmax	pmax		
	comp=Z,16nm,1.0s						
KKAR	**Karatay Array**	**64.44**	**318**	P	**P**	**03 13 12.5**	**-0.5**
KKAR	**Karatay Array**	**64.44**	**318**	P	**P**	**03 13 12.5**	**-0.5**
KKAR				IAmb	IAmb	03 13 19.6	
	comp=Z,16nm,0.9s						
BRZS	**Berezniki**	**66.10**	**325**	*e*P	**P**	**03 13 23.0**	**-0.7**
	comp=Z,5.8nm,0.7s,baz=325						
BRZS	**Berezniki**	**66.10**	**325**	*e*P	**P**	**03 13 22.9**	**-0.7**
BRZS				pmax	pmax		
	comp=Z,6.0nm,0.7s						
HRA	**Herat**	**67.81**	**307**	P	**P**	**03 13 34.0**	**-1.0**
HRA				PcP	**PcP**	**03 14 00.2**	**-1.3**
CASY	**Casey**	**68.80**	**187**	P	**P**	**03 13 41.1**	**+0.9**
CASY				IAmb	IAmb	03 13 42.2	
	comp=Z,27nm,0.7s						
BRVK	**Borovoye**	**68.86**	**328**	P	**P**	**03 13 41.1**	**+0.2**
BRVK				pmax	pmax		
	comp=Z,21nm,0.7s						
BRVK	**Borovoye**	**68.86**	**328**	P	**P**	**03 13 41.1**	**+0.2**
BRVK				IAmb	IAmb	03 13 52.8	
	comp=Z,20nm,0.7s						
TIXI	**Tiksi**	**69.83**	**1**	P	**P**	**03 13 46.4**	**-0.1**
TIXI				pmax	pmax		
	comp=Z,24nm,0.8s						
TIXI	**Tiksi**	**69.83**	**1**	P	**P**	**03 13 46.4**	**-0.1**
TIXI				IAmb	IAmb	03 13 50.1	
	comp=Z,24nm,0.8s						
ATKA	**Atka Island**	**70.35**	**34**	P	**P**	**03 13 49.6**	**-0.4**
UOSS	**Minazif**	**71.30**	**296**	P	**P**	**03 13 56.6**	**+0.1**
GEYT	**Alibeck**	**71.86**	**309**	P	**P**	**03 13 59.5**	**-0.2**
	comp=Z,9.5nm,0.6s,baz=134,slow=4.3,SNR=10						
GEYT	**Alibeck**	**71.86**	**309**	P	**P**	**03 13 59.8**	**+0.2**
GYA0B	**ALIBECK ARRAY**	**71.86**	**309**	P	**P**	**03 13 58.9**	**-0.7**
NRIK	**Noril'sk**	**72.27**	**346**	P	**P**	**03 14 02.3**	**+0.9**
	comp=Z,55nm,0.7s,baz=121,slow=5.7,SNR=80						
NRIK				S	**S**	**03 23 20.3**	**-1.0**
	comp=Z,2.8nm,0.6s,baz=209,slow=23,SNR=12						
NRIK	**Noril'sk**	**72.27**	**346**	P	**P**	**03 14 01.4**	**0.0**
SOCY	**Socotra**	**72.41**	**282**	P	**P**	**03 14 01.4**	**-2.0**
SOCY				IAmb	IAmb	03 14 06.6	
	comp=Z,39nm,0.9s						
ABKAR	**Akbulak array**	**73.46**	**321**	P	**P**	**03 14 08.6**	**-0.2**
ABKAR	**Akbulak array**	**73.46**	**321**	P	**P**	**03 14 08.4**	**-0.4**
ABKAR				IAmb	IAmb	03 14 14.9	
	comp=Z,15nm,0.7s						
NIKH	**Nikolski High**	**73.66**	**35**	P	**P**	**03 14 10.8**	**+0.9**
	baz=250						
UNV	**Unalaska Valle**	**75.27**	**34**	P	**P**	**03 14 18.9**	**-0.4**
SVE	**Sverdlovsk**	**75.46**	**329**	*ce*P	**P**	**03 14 20.9**	**+0.6**
SVE				pmax	pmax		
	comp=Z,74nm,0.8s						
AKUT	**Akutan**	**75.77**	**34**	P	**P**	**03 14 21.6**	**-0.4**
GAMB	**Gambell**	**76.36**	**24**	P	**P**	**03 14 26.7**	**+1.4**
	baz=245						
GAMB	**Gambell**	**76.36**	**24**	P	**P**	**03 14 25.1**	**-0.2**
GAMB				IAmb	IAmb	03 14 28.2	
	comp=Z,27nm,0.8s						
ARU	**Arti**	**76.42**	**328**	*c i*P	**P**	**03 14 25.4**	**-0.4**
ARU				*PP	**pwP**	**03 14 38.4**	**-1.1**
ARU						03 17 13.2	
ARU				S	**S**	**03 24 11.0**	**+2.8**
ARU				SS	**SS**	**03 28 57.7**	**-5.5**
ARU				pmax	pmax		
	comp=Z,33nm,0.7s						
ARU	**Arti**	**76.42**	**328**	P	**P**	**03 14 25.6**	**-0.2**
ARU				IAmb	IAmb	03 14 31.3	
	comp=Z,39nm,0.7s						
FALS	**False Pass**	**77.29**	**34**	P	**P**	**03 14 31.8**	**+1.1**

	baz=255						
SDPT	Sand Point	79.05	34	P	P	03 14 41.6	+1.1
	baz=257						
SDPT	Sand Point	79.05	34	P	P	03 14 40.2	-0.2
ANM	Nome	79.23	24	P	P	03 14 43.0	+1.7
	baz=251						
ANM	Nome	79.23	24	P	P	03 14 41.1	-0.2
ANM				pmax	pmax		
	comp=Z,12nm,0.8s						
ANM	Nome	79.23	24	P	P	03 14 41.1	-0.2
CHNA	Chernabura Isl	79.44	34	P	P	03 14 43.5	+1.0
	baz=258						
ABPO	Ambohimpanom	80.29	250	P	P	03 14 47.8	-0.4
ABPO				pmax	pmax		
	comp=Z,29nm,0.9s						
ABPO	Ambohimpanom	80.29	250	P	P	03 14 47.8	-0.4
ABPO				IAmb	IAmb	03 14 49.8	
	comp=Z,29nm,0.9s						
CHGN	Chignik	80.39	33	P	P	03 14 48.6	+0.9
	baz=259						
RAYN	Ar Rayn	80.92	293	P	P	03 14 51.0	-0.3
RAYN				pmax	pmax		
	comp=Z,30nm,0.9s						
RAYN	Ar Rayn	80.92	293	P	P	03 14 51.0	-0.3
RAYN				IAmb	IAmb	03 14 53.5	
	comp=Z,30nm,0.8s						
RDOG	Red Dog Mine	81.27	21	P	P	03 14 54.3	+2.1
	baz=253						
RDOG	Red Dog Mine	81.27	21	P	P	03 14 51.6	-0.6
VNDA	Vanda	81.50	173	P	P	03 14 53.8	+0.6
	comp=Z,28nm,0.7s,baz=320,slow=6.7,SNR=42						
VNDA	Vanda	81.50	173	P	P	03 14 54.2	+1.0
VNDA				pmax	pmax		
	comp=Z,32nm,0.8s						
VNDA	Vanda	81.50	173	P	P	03 14 54.2	+1.0
VNDA				IAmb	IAmb	03 14 55.0	
	comp=Z,32nm,0.8s						
KIRV	Kirov	81.73	329	ceP	P	03 14 54.1	-0.6
BELG	Belogornoye	81.76	323	c iP	P	03 14 54.5	-0.5
BELG				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GROC	Groznyy	81.94	313	eP	P	03 14 54.3	-1.9
GROC				eS	S	03 25 06.0	-1.3
GROC				pmax	pmax		
	comp=Z,23nm,1.0s						
GNI	Garni	82.47	310	ceP	P	03 14 58.4	-0.9
GNI				pmax	pmax		
	comp=Z,16nm,1.7s						
GNI	Garni	82.47	310	P	P	03 14 59.4	+0.1
SVW2	Sparrevohn	82.72	29	P	P	03 14 59.3	-0.6
SVW2				IAmb	IAmb	03 15 05.9	
	comp=Z,21nm,1.1s						
TTA	Tatalina	82.84	27	P	P	03 15 02.7	+2.1
	baz=260						
TTA	Tatalina	82.84	27	P	P	03 14 59.9	-0.7
TTA				pmax	pmax		
	comp=Z,39nm,0.8s						
TTA	Tatalina	82.84	27	P	P	03 14 59.9	-0.7
TTA				IAmb	IAmb	03 15 03.8	
	comp=Z,39nm,0.8s						
CLDR	Caldiran	83.04	309	eP	P	03 15 01.7	-0.7
CUKT	Cukurca	83.18	307	eP	P	03 15 01.9	-1.1
ZEI	Tsey	83.29	313	eP	P	03 15 01.7	-1.8
ZEI				pmax	pmax		
	comp=Z,37nm,1.0s						
OHAK	Old Harbor	83.33	33	P	P	03 15 04.7	+1.6
	baz=263						
OHAK	Old Harbor	83.33	33	P	P	03 15 02.5	-0.6
VANB	Van	83.42	308	eP	P	03 15 16.9	+13
AKH	Akhalkalaki	83.50	311	⇓P	P	03 15 05.5	+0.8
NCK	Nalchik	83.56	313	iP	P	03 15 04.6	-0.1
NCK				pmax	pmax		
	comp=Z,15nm,1.0s						
AKDM	Akdamar-Van	83.73	308	eP	P	03 15 06.9	+1.0
KDAK	Kodiak Island	83.77	32	P	P	03 15 06.7	+1.3
	baz=263						
KDAK	Kodiak Island	83.77	32	iP	P	03 15 06.8	+1.4
KDAK				pmax	pmax		
	comp=Z,81nm,1.6s						
KDAK	Kodiak Island	83.77	32	P	P	03 15 06.0	+0.6
KDAK				IAmb	IAmb	03 15 10.0	
	comp=Z,34nm,0.8s						
AGRB	Hanur-Agry	83.78	309	eP	P	03 15 02.3	-3.9
RSO	Redoubt South	84.00	29	P	P	03 15 06.0	-0.8
GOF	Gofitskoye	84.05	315	⇑eP	P	03 15 00.2	-6.9
KBZ	Khabaz	84.08	314	P	P	03 15 07.6	+0.4
	comp=Z,8.0nm,0.8s,baz=140,slow=7.0,SNR=19						
KBZ				LR	LR	03 56 55.1	
	comp=Z,80nm,20.8s,baz=90,slow=39						
KBZ	Khabaz	84.08	314	ceP	P	03 15 06.6	-0.7
KBZ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MLAZ	Malazgirt-MUS	84.11	309	eP	P	03 15 09.7	+1.9
NEY	Neytrino	84.18	313	iP	P	03 15 08.1	0.0
NEY				pmax	pmax		
	comp=Z,5.0nm,0.8s						
A21K	Barrow	84.22	18	P	P	03 15 09.6	+2.2
	baz=258,SNR=44						
A21K	Barrow	84.22	18	P	P	03 15 07.1	-0.3
KIV	Kislovodsk	84.24	314	⇑P	P	03 15 09.3	+1.0
KIV	Kislovodsk	84.24	314	ceP	P	03 15 08.1	-0.2
KIV				i		03 15 16.2	
KIV				e		03 18 23.9	
KIV				eS	S	03 25 25.5	-5.5
KIV				pmax	pmax		
	comp=Z,9.0nm,0.6s						
KIV	Kislovodsk	84.24	314	P	P	03 15 07.3	-1.0
KIV				IAmb	IAmb	03 15 17.5	
	comp=Z,23nm,1.0s						
SHA1	Shidzhatmaz	84.25	314	iP	P	03 15 07.1	-1.4
IMAR	Indian Mountai	84.31	24	P	P	03 15 07.6	-0.4
SENK	Senkaya-Erzuru	84.32	310	eP	P	03 15 10.5	+1.6
SPCR	Spurr Chakacha	84.36	29	P	P	03 15 09.5	+1.0
	baz=263,SNR=7.3						
GURO	Guroymak-BITLI	84.49	308	eP	P	03 15 10.9	+1.2
PPLA	Purkeypile	84.57	27	P	P	03 15 10.6	+1.1
	baz=263						
CHVG	Ch'k'valeri	84.62	313	⇑P	P	03 15 10.7	+0.6
CHVG	Ch'k'valeri	84.62	313	⇑P	P	03 15 10.7	+0.6
CHUM	Lake Minchumin	84.63	26	P	P	03 15 11.6	+2.0
	baz=263,SNR=8.0						
CNPM	China Poot	84.66	30	P	P	03 15 09.4	-0.5
SKT	Skwentna	84.77	28	P	P	03 15 10.9	+0.5
	baz=264,SNR=17						
SKT	Skwentna	84.77	28	IAmb	IAmb	03 15 12.5	
	comp=Z,36nm,1.0s						
PPT	Papeete	84.86	108	LR	LR	03 51 23.5	
	comp=Z,47nm,20.5s,baz=249,slow=34						
PPT2	Papeete2	84.86	108	eLR	LR	03 42 03.0	
	comp=Z,250nm,27.2s						
BRSE	Bradley Lake S	84.93	30	P	P	03 15 12.3	+1.0
	baz=265						
VRTB	Varto-Mus	84.96	309	eP	P	03 15 12.4	+0.3
SUA	Susitna One	85.09	29	P	P	03 15 13.1	+1.0
	baz=265,SNR=43						
SVAN	Silvan-Diyarba	85.13	308	eP	P	03 15 13.9	+1.1
BPAW	Bear Paw Mtn.	85.24	26	P	P	03 15 13.8	+1.1
	baz=264						
VRH	Novokhopyorsk	85.29	321	eP	P	03 15 12.4	-0.8
VRH				pmax	pmax		
	comp=Z,120nm,0.6s						
TBI	Tubuai	85.34	113	eLR	LR	03 42 06.2	
	comp=Z,273nm,31.0s						
MLY	Manley	85.44	25	P	P	03 15 14.9	+1.1
	baz=264,SNR=13						
TRF	Thorofare Moun	85.48	27	P	P	03 15 14.4	+0.2
	baz=265						
O22K	Cooper Landing	85.50	30	P	P	03 15 14.7	+0.6
	baz=266,SNR=15						
RC01	Rabbit Creek A	85.54	29	P	P	03 15 14.8	+0.5
	baz=266,SNR=17						
CHOM	Cayeli-Rize	85.55	311	eP	P	03 15 15.7	+0.9
BNGB	Bingl	85.56	309	eP	P	03 15 16.3	+1.3
SEW	Seward	85.61	30	P	P	03 15 15.4	+0.8
	baz=266,SNR=5.3						
YEDI	Yedisu-Bingol	85.67	309	eP	P	03 15 17.5	+1.9
COLD	Coldfoot	85.87	23	P	P	03 15 17.7	+1.9
	baz=265,SNR=40						
PMR	Palmer	85.87	29	P	P	03 15 16.9	+1.0
	baz=266,SNR=11						
PMR	Palmer	85.87	29	IAmb	IAmb	03 15 17.9	
	comp=Z,28nm,0.8s						
BWN	Browne	85.91	26	IAmb	IAmb	03 15 19.6	
	comp=Z,15nm,0.9s						
DYBB	Diyarbakir	85.96	308	eP	P	03 15 17.9	+0.9
I23K	Minto, Yukon-K	86.03	25	P	P	03 15 17.9	+1.3
	baz=266,SNR=22						
I23K	Minto, Yukon-K	86.03	25	IAmb	IAmb	03 15 18.9	
	comp=Z,17nm,0.7s						
MCK	McKinley	86.11	26	P	P	03 15 17.4	+0.4
	baz=266,SNR=12						
RND	Reindeer	86.12	27	IAmb	IAmb	03 15 18.9	
	comp=Z,19nm,0.6s						
WAT2	Susitna Watana	86.22	27	P	P	03 15 18.0	+0.2
	baz=266,SNR=23						
TOLK	Toolik Lake Re	86.23	21	P	P	03 15 19.4	+1.8
	baz=265,SNR=17						
TOLK	Toolik Lake Re	86.23	21	IAmb	IAmb	03 15 21.1	
	comp=Z,19nm,0.8s						
SML	Sawmill	86.26	28	P	P	03 15 18.7	+0.8
	baz=267,SNR=17						
KTUT	Trabzon	86.30	311	⇑P	P	03 15 18.8	+0.4
KTUT	Trabzon	86.30	311	eP	P	03 15 19.3	+0.8
SOC	Sochi	86.38	313	eP	P	03 15 15.7	-3.1
SOC				e		03 18 35.3	
SOC				ePPP	PPP	03 20 30.2	
SOC				eS	SKSac	03 25 37.7	-4.5
SOC				eSS	SS	03 31 36.1	+4.0
SOC				eSSS	SSS	03 35 01.4	
SOC				pmax	pmax		
	comp=Z,47nm,0.8s						
SOC				MLR	MLR		
	comp=Z,85nm,16.0s						
WAT6	Susitna Watana	86.58	28	P	P	03 15 20.1	+0.4
	baz=267,SNR=16						
COLA	College	86.65	25	iP	P	03 15 18.4	-1.2
COLA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
CCB	Clear Creek Bu	86.66	25	IAmb	IAmb	03 15 21.1	
	comp=Z,9.5nm,0.7s						
SCM	Sheep Creek Mo	86.74	28	IAmb	IAmb	03 15 30.0	
	comp=Z,22nm,0.8s						
VORD	Divnogorie	86.81	321	eP	P	03 15 19.9	-0.8
VORD				pmax	pmax		
	comp=Z,50nm,0.8s						
POKR	Poker Plat Res	86.84	25	P	P	03 15 21.7	+1.1
	baz=267						
VSR	Storozhevoye	86.90	321	eP	P	03 15 20.1	-1.1
VSR				pmax	pmax		
	comp=Z,60nm,0.9s						
KLMR	Klimovskoe	86.95	331	eP	P	03 15 19.5	-1.7
KLMR				e		03 18 40.6	
KLMR				pmax	pmax		
	comp=Z,58nm,1.1s						
KLMR	Klimovskoe	86.95	331	eP	P	03 15 19.5	-1.7
KLMR				AMP		03 15 28.0	
	comp=Z,58nm,1.1s						
KLMR				ePP	PP	03 18 40.7	-3.8
HDA	Harding Lake	87.02	26	P	P	03 15 21.1	-0.4
	baz=268						
HDA	Harding Lake	87.02	26	IAmb	IAmb	03 15 22.3	
	comp=Z,12nm,0.7s						
ILAR	Eielson Array	87.06	25	P	P	03 15 20.8	-0.9
	comp=Z,2.9nm,0.6s,baz=237,slow=5.2,SNR=62						
ILAR				PP	PP	03 18 51.1	+5.9
	comp=Z,0.2nm,0.7s,baz=320,slow=31,SNR=4.2						
ILAR	Eielson Array	87.06	25	P	P	03 15 21.1	-0.6
ILAR	Eielson Array	87.06	25	P	P	03 15 21.1	-0.6
LPSR	Galich'ya Gora	87.07	322	eP	P	03 15 21.5	-0.5
LPSR				pmax	pmax		
	comp=Z,70nm,0.9s						
ESPY	Espiye-Giresun	87.08	311	eP	P	03 15 22.6	+0.3
ILIC	ilic-Erzincan	87.20	309	eP	P	03 15 23.8	+0.7
M24K	Tolsona, Glenn	87.29	28	P	P	03 15 23.9	+0.9
	baz=269,SNR=6.0						
M24K	Tolsona, Glenn	87.29	28	IAmb	IAmb	03 15 32.9	
	comp=Z,23nm,0.8s						
MALT	Malatya	87.31	308	eP	P	03 15 24.9	+1.3
KLU	Klutina	87.40	29	P	P	03 15 24.3	+0.8
	baz=269						
PAX	Paxson	87.64	27	P	P	03 15 25.4	+0.8
	baz=269,SNR=9.9						
PRP	Porcupine Dome	87.66	25	P	P	03 15 24.4	-0.4
	baz=269						
TMCR	Tamitsa	87.72	334	eP	P	03 15 23.5	-1.3
TMCR				pmax	pmax		
	comp=Z,25nm,0.9s						
FYU	Fort Yukon	87.79	24	IAmb	IAmb	03 15 28.5	
	comp=Z,22nm,1.2s						
MOS	Moscow	87.87	326	eP	P	03 15 24.0	-1.7
MOS				e		03 15 35.7	
MOS				eS	SKSac	03 25 49.8	-1.0
MOS				e		03 26 02.1	
MOS				pmax	pmax		
	comp=Z,57nm,0.9s						
ANN	Anapa	88.03	315	eP	P	03 15 26.1	-0.6
ANN				pmax	pmax		
	comp=Z,87nm,0.9s						
BMRM	Bremner River	88.03	29	P	P	03 15 27.0	+0.5
	baz=270						
N25K	Chitina, Valde	88.03	29	P	P	03 15 27.5	+1.0
	baz=270,SNR=5.9						
DARE	Darende-Malaty	88.05	308	eP	P	03 15 28.8	+1.6
BMAR	Burnt Mountain	88.05	23	P	P	03 15 27.3	+0.8
RSDY	Resadiye-TOKAT	88.15	310	eP	P	03 15 28.4	+0.9
SCRK	Sand Creek	88.31	26	P	P	03 15 28.8	+1.0
	baz=270						
MENT	Mentasta	88.44	27	IAmb	IAmb	03 15 30.3	
	comp=Z,12nm,0.6s						
OBN	Obninsk	88.47	325	ceP	P	03 15 27.5	-1.1
OBN				e		03 18 57.6	
OBN				eS	SKSac	03 25 53.5	-0.9
OBN				pmax	pmax		
	comp=Z,84nm,1.7s						
OBN				MLR	MLR		
	comp=Z,182nm,19.0s						
OBN	Obninsk	88.47	325	P	P	03 15 28.3	-0.3
TOKT	Tokat	88.75	310	eP	P	03 15 31.4	+1.0
MCARA	McCarthy VSAT	88.79	29	IAmb	IAmb	03 15 42.5	
	comp=Z,10nm,1.0s						
KVT	Kavak	89.11	311	eP	P	03 15 32.9	+0.9
KMBO	Kilima Mbogo	89.14	269	P	P	03 15 34.3	+1.3
	comp=Z,9.7nm,0.9s,baz=60,slow=6.8,SNR=26						
BCAR	Beaver Creek A	89.32	27	P	P	03 15 33.2	+0.7
EGAK	Eagle	89.51	25	P	P	03 15 33.9	+0.6
	baz=273						
EGAK	Eagle	89.51	25	IAmb	IAmb	03 15 35.0	
	comp=Z,8.7nm,0.7s						
CTG	Chitna Glacier	89.62	29	P	P	03 15 35.4	+1.3
	baz=273						
CTGM	Chitina Glacie	89.63	29	IAmb	IAmb	03 15 36.9	
	comp=Z,16nm,0.8s						
SIM	Simferopol'	90.38	315	P	P	03 15 36.5	-1.3
SIM				pmax	pmax		
	comp=Z,40nm,0.7s						
SYO	Syowa Base	90.44	201	⇓eP	P	03 15 36.4	-1.1
SYO	Syowa Base	90.44	201	⇓ePcP	PcP	03 15 41.5	+2.9
BR131	Keskin Array S	91.00	310	iP	P	03 15 40.1	-0.9
BRTR	Keskin Array B	91.00	310	P	P	03 15 40.2	-0.8
	comp=Z,6.3nm,0.8s,baz=122,slow=5.8,SNR=25						
BRTR				LR	LR	04 03 25.7	
	comp=Z,123nm,18.8s,baz=97,slow=40						
EPYK	Eagle Plains	91.21	24	P	P	03 15 42.2	+0.9
	baz=277						
EPYK	Eagle Plains	91.21	24	IAmb	IAmb	03 15 43.6	
	comp=Z,12nm,0.8s						
HYT	Haines Junctio	91.50	29	IAmb	IAmb	03 15 45.4	
	comp=Z,7.5nm,0.7s						
QSPA	South Pole Qui	91.65	180	P	P	03 15 44.0	+0.7
QSPA				IAmb	IAmb	03 15 49.3	
	comp=Z,14nm,0.7s						
INK	Inuvik	92.15	21	IAmb	IAmb	03 15 47.1	
	comp=Z,9.8nm,1.0s						
ARCES	ARCESS Array B	92.19	340	P	P	03 15 45.5	-0.2
	comp=Z,14nm,0.8s,baz=79,slow=6.3,SNR=16						
ARCES				PKKP	PKKPdf	03 33 01.2	+0.2
	comp=Z,3.2nm,0.9s,baz=284,slow=4.9,SNR=4.7						
ARCES	ARCESS Array B	92.19	340	P	P	03 15 45.2	-0.5
SKAG	Skagway	92.75	30	P	P	03 15 49.7	+1.3
	baz=278						
SKAG	Skagway	92.75	30	IAmb	IAmb	03 15 51.2	
	comp=Z,12nm,0.8s						
AKASG	Malin Array Be	93.20	321	P	P	03 15 49.7	-0.9
	comp=Z,2.3nm,0.7s,baz=71,slow=4.4,SNR=15						
AKASG				LR	LR	04 01 50.5	
	comp=Z,177nm,20.8s,baz=315,slow=38						
AKASG	Malin Array Be	93.20	321	P	P	03 15 49.8	-0.9
AKASG				pmax	pmax		
	comp=Z,5.0nm,1.0s						
AKASG	Malin Array Be	93.20	321	P	P	03 15 49.8	-0.9
AKBB	Malin Array Si	93.20	321	ceP	P	03 15 48.5	-2.2
AKBB	Malin Array Si	93.20	321	IAmb	IAmb	03 15 55.8	
	comp=Z,7.6nm,0.8s						
FINES	FINESS Array B	93.41	332	P	P	03 15 50.6	-0.8
	comp=Z,2.6nm,0.4s,baz=58,slow=4.5,SNR=21						
FINES				LR	LR	04 01 24.8	
	comp=Z,220nm,18.4s,baz=54,slow=38						
FINES	FINESS Array B	93.41	332	P	P	03 15 50.8	-0.6
FINES	FINESS Array B	93.41	332	P	P	03 15 50.8	-0.6
MNK	Minsk	93.53	325	iP	P	03 15 48.8	-3.3
	comp=E,3.0nm,1.2s						
MNK				iP	P	03 15 48.8	-3.3
	comp=N,16nm,0.9s						
MNK				iP	P	03 15 48.8	-3.3
	comp=Z,20nm,0.9s						
MNK				iPP	PP	03 19 33.2	-3.6
MNK				iPPP	PPP	03 21 34.3	
MNK				iS	SKSac	03 26 19.6	-3.9
MNK				iPS	PS	03 28 13.7	-2.2
MNK				iSS	SS	03 33 05.0	-10
MNK				iSSS	SSS	03 36 33.5	
MNK				iLQ	LQ	03 52 10.2	
MNK				iLR	LR	03 56 30.8	
MNK				iLRM	MLR	03 58 41.8	
	comp=N,336nm,21.0s						
MNK				iLRM	MLR	03 58 53.2	
	comp=Z,43nm,10.1s						
MNK				iLRM	MLR	03 58 59.9	
MILM	Milestii Mici	93.91	317	⇑P	P	03 15 53.0	-1.0
IDID	Didziasalis	94.06	326	eP	P	03 15 53.8	-0.8
SORM	Soroca	94.07	318	⇓P	P	03 15 53.8	-1.0
SORM	Soroca	94.07	318	⇓P	P	03 15 53.8	-1.0
NACGM	Naroch	94.10	325	iP	P	03 15 54.5	-0.3
NACGM				iP	P	03 15 54.5	-0.3
NACGM				iP	P	03 15 54.5	-0.3
NACGM				iPb	pP	03 16 00.9	-5.7
	comp=Z,20nm,1.4s						
NACGM				iPb	pwP	03 16 02.4	-6.3
	comp=E,8.0nm,0.9s						
NACGM				iPb	pwP	03 16 02.4	-6.3
	comp=N,14nm,1.1s						
NACGM				iPP	PP	03 19 11.9	-29
NACGM				iPPP	PPP	03 21 45.2	
NACGM				iSKS		03 25 29.8	
NACGM				iS	SKSac	03 26 15.7	-11
NACGM				iSKKS	ScS	03 27 21.1	+17
NACGM				iPS	PS	03 28 35.3	+13
NACGM				iSS	SS	03 33 30.6	+7.5
NACGM				iSSS	SSS	03 37 13.2	
NACGM				iLQ	LQ	03 51 52.1	
IIGN	Ignalina	94.35	326	eP	P	03 15 55.0	-0.9
CRAG	Craig	94.55	34	P	P	03 15 58.0	+1.2
	baz=280						
CFR	Carcaliu	94.58	315	⇓P	P	03 15 57.1	-0.1
CFR	Carcaliu	94.58	315	⇓P	P	03 15 57.1	-0.1
WRAK	Wrangell Islan	94.81	33	P	P	03 15 59.0	+1.0
	baz=280						
C36M	Paulatuk	95.21	20	P	P	03 15 59.9	+0.4
	baz=289						
C36M	Paulatuk	95.21	20	IAmb	IAmb	03 16 01.0	
	comp=Z,14nm,0.8s						
TESR	Tescani	95.44	317	⇓P	P	03 16 00.6	-0.5
VRI	Vrincioaia	95.47	316	⇓P	P	03 16 01.9	+0.6
VRI	Vrincioaia	95.47	316	⇓P	P	03 16 01.9	+0.6
PLOR	Plostina	95.53	316	⇑P	P	03 16 01.4	-0.2
PLOR	Plostina	95.53	316	⇑P	P	03 16 01.4	-0.2
PABE	Paberze	95.59	326	eP	P	03 16 01.2	-0.3
MBAR	Mbarara	95.63	270	iP	P	03 16 02.2	-0.7
MBAR				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BIZ	Bicaz	95.74	317	⇓P	P	03 16 01.9	-0.6
NEHR	Nehoiu	95.84	316	⇑P	P	03 16 03.3	+0.3
MLR	Muntele Rosu	96.07	316	⇑P	P	03 16 03.6	-0.6
MLR	Muntele Rosu	96.07	316	⇑P	P	03 16 03.6	-0.6
MLR	Muntele Rosu	96.07	316	IAmb	IAmb	03 16 07.0	
	comp=Z,13nm,1.0s						
BURAR	Bucovina Array	96.23	318	⇓P	P	03 16 04.8	0.0
BURAR	Bucovina Array	96.23	318	⇓P	P	03 16 04.8	0.0
BURAR	Bucovina Array	96.23	318	P	P	03 16 05.2	+0.4
BUR08	Bucovina Ar. S	96.24	318	IAmb	IAmb	03 16 11.6	
	comp=Z,15nm,0.8s						
SUW	Suwalki	96.33	325	eP	P	03 16 04.2	-0.8
DOPR	Dopca	96.38	316	⇑P	P	03 16 05.1	-0.3
PBUR	Paburge	96.61	327	eP	P	03 16 05.8	-0.4
VOIR		96.70	316	⇑P	P	03 16 06.7	-0.3
VOIR		96.70	316	⇑P	P	03 16 06.7	-0.3
BMR	Baia Mare	97.37	318	⇓P	P	03 16 06.6	-3.2
BMR	Baia Mare	97.37	318	⇓P	P	03 16 06.6	-3.2
LOT	Lotru	97.59	316	⇑P	P	03 16 10.9	-0.1
KOLS	Kolonicke sedl	97.92	320	eP	Pdif	03 16 17.4	+5.0
KOLS	Kolonicke sedl	97.92	320	ePDIFF	Pdif	03 16 17.3	+4.9
UZH	Uzhgorod	97.97	319	⇑iP	P	03 16 11.0	-1.5
UZH				i		03 16 24.5	
DRGR		98.06	318	⇑P	P	03 16 13.1	0.0
DRGR		98.06	318	⇑P	P	03 16 13.1	0.0
LSZ	Lusaka	98.33	255	P	P	03 16 14.6	-0.4
LSZ				pmax	pmax		
	comp=Z,8.0nm,1.0s						
LSZ	Lusaka	98.33	255	P	P	03 16 14.6	-0.4
LSZ				IAmb	IAmb	03 16 15.3	
	comp=Z,7.8nm,0.9s						
PUNG	Punghina	98.39	315	⇑P	Pdif	03 16 16.1	+1.6
CRVS	Cervenica-Dubn	98.45	320	eP	Pdif	03 16 21.2	+6.5
CRVS	Cervenica-Dubn	98.45	320	ePDIFF	Pdif	03 16 21.2	+6.5
VTS	Vitosha	98.47	313	⇑P	P	03 16 14.6	-0.5
VTS	Vitosha	98.47	313	⇑P	P	03 16 14.6	-0.5
HERR	Herculane	98.64	316	⇓P	Pdif	03 16 15.7	+0.1
BZS	Buzias	99.04	317	⇓P	Pdif	03 16 16.7	-0.7
BZS	Buzias	99.04	317	⇓P	Pdif	03 16 16.7	-0.7
DAG	Danmarks Havn	99.17	352	⇑iP	Pdif	03 16 17.0	-0.3
	comp=Z,13nm,0.8s						
DAG	Danmarks Havn	99.17	352	⇑iP	Pdif	03 16 17.0	-0.3
DAG				pmax	pmax		
	comp=Z,13nm,0.8s						
DAG	Danmarks Havn	99.17	352	⇑iP	Pdif	03 16 17.0	-0.3
DAG				IAmb	IAmb	03 16 17.7	
	comp=Z,13nm,0.8s						
LIT	Litokhoron	99.47	311	IAmb	IAmb	03 16 19.3	
	comp=Z,13nm,0.9s						
NB2	NORSAR Subarra	100.40	333	P	Pdif	03 16 21.9	-1.2
	comp=Z,3.5nm,0.7s,baz=67,slow=4.6						
NOA	NORSAR Array B	100.40	333	P	Pdif	03 16 21.8	-1.3
	comp=Z,0.6nm,0.6s,baz=103,slow=4.1,SNR=2.1						
DBG	Daneborg	101.43	351	iP	Pdif	03 16 27.0	-0.4
DBG				IAmb	IAmb	03 16 28.4	
	comp=Z,10.0nm,1.2s						
YKA	Yellowknife Ar	101.46	24	P	Pdif	03 16 28.2	+0.5
	comp=Z,1.8nm,0.7s,baz=301,slow=4.0,SNR=25						
YKA				PKiKP	PKiKP	03 20 51.3	-0.3
	comp=Z,1.0nm,0.5s,baz=310,slow=1.0,SNR=15						
YKA				PKKPbc	PKKPbc	03 32 35.6	-2.8
	comp=Z,0.5nm,0.7s,baz=112,slow=3.3,SNR=9.1						
BRG	Berggiesshubel	102.61	323	eP	Pdif	03 16 33.0	-0.1
BRG				Amp		03 16 37.4	
	comp=Z,1.3nm,0.6s						
J01E	Myrtle Point	103.08	45	P	Pdif	03 16 34.5	-0.9
	baz=285						
GERES	GERESS Array B	103.41	321	Pdiff	Pdif	03 16 36.9	0.0
	comp=Z,0.2nm,0.3s,baz=265,slow=38,SNR=2.8						
GERES				PP	PKiKP	03 20 55.0	-0.7
	comp=Z,1.9nm,0.9s,baz=85,slow=8.2,SNR=7.4						
SUMG	Summit	105.19	355	iP	Pdif	03 16 49.2	+4.5
SUMG	Summit	105.19	355	eP	Pdif	03 16 49.2	+4.5
SUMG	Summit	105.19	355	eP	Pdif	03 16 49.3	+4.5
NVAR	Mina Array Bea	108.51	48	Pdiff	Pdif	03 17 01.1	+1.2
	comp=Z,0.2nm,0.5s,baz=266,slow=4.3,SNR=3.6						
NVAR				PKiKP	PKiKP	03 21 05.2	-0.5
	comp=Z,0.5nm,0.7s,baz=281,slow=1.8,SNR=4.6						
NVAR				PP	PP	03 21 27.5	-3.2
	comp=Z,1.0nm,0.8s,baz=253,slow=4.2,SNR=4.7						
NVAR				PKKPbc	PKKPbc	03 32 14.8	-1.8
	comp=Z,0.8nm,0.7s,baz=121,slow=5.5,SNR=5.7						
EGMT	Eagleton	110.61	37	P	PKiKP	03 21 09.6	+0.5
	baz=298						
GMRC	Granite Mounta	111.65	51	P	PKiKP	03 21 12.0	+0.5
	baz=288						
BW06	Boulder Array	113.09	42	P	PKiKP	03 21 14.0	-0.2
	baz=296						
PDAR	Pinedale Array	113.09	42	PKiKP	PKiKP	03 21 14.3	+0.1
	comp=Z,0.6nm,0.6s,baz=140,slow=3.0,SNR=5.9						
PDAR				PKKPbc	PKKPbc	03 32 00.9	-0.9
	comp=Z,0.9nm,0.6s,baz=119,slow=4.9,SNR=8.7						
LAO	LASA Array	113.35	37	P	PKiKP	03 21 15.4	+1.1
	baz=300						
WUAZ	Wupatki	114.71	49	P	PKPdf	03 21 18.4	+1.0

	baz=292						
O20A	White River Ci	115.13	44	P	PKPdf	03 21 18.4	+0.2
	baz=296						
RSSD	Black Hills	115.98	38	P	PKPdf	03 21 20.0	+0.3
	baz=301						
RSSD	Black Hills	115.98	38	PKIKP	PKiKP	03 21 19.5	-0.2
RSSD	Black Hills	115.98	38		PKiKP	03 21 19.5	-0.2
TUC	Tucson	116.31	53	P	PKPdf	03 21 20.1	-0.4
	baz=291						
MDND	Maddock	116.48	33	P	PKiKP	03 21 20.8	+0.5
	baz=307						
ULM	Lac du Bonnet	116.88	29	PKP	PKPdf	03 21 20.9	0.0
	comp=Z,5.8nm,0.7s,baz=286,slow=2.0,SNR=17						
ULM	Lac du Bonnet	116.88	29	PKIKP	PKPdf	03 21 21.0	0.0
ISCO	Idaho Springs	117.08	43	P	PKPdf	03 21 22.0	-0.1
	baz=298						
S22A	4UR Ranch, Cre	117.16	46	P	PKiKP	03 21 22.9	+0.6
	baz=296						
TAM	Tamanrasset	117.47	297	PKIKP	PKPdf	03 21 22.4	-0.6
TAM	Tamanrasset	117.47	297	PKPdf	PKPdf	03 21 22.4	-0.6
SDCO	Great Sand Dun	118.11	45	P	PKiKP	03 21 24.8	+0.7
	baz=297						
121A	Cookes Peak, D	118.59	51	P	PKiKP	03 21 25.7	+0.7
	baz=293						
ANMO	Albuquerque	118.63	48	P	PKPdf	03 21 25.1	+0.1
	baz=295						
ANMO	Albuquerque	118.63	48	PKIKP	PKPdf	03 21 24.7	-0.3
ANMO	Albuquerque	118.63	48	PKPdf	PKPdf	03 21 24.7	-0.3
ESDC	Sonseca Array	118.69	318	PKP	PKPdf	03 21 24.6	-0.3
	comp=Z,0.6nm,0.7s,baz=56,slow=1.6,SNR=2.5						
T25A	Trinidad	119.16	45	P	PKiKP	03 21 26.9	+0.8
	baz=298						
EYMN	Ely	120.56	29	P	PKiKP	03 21 28.9	+0.7
	baz=315						
ECSD	EROS Data Cent	120.63	35	P	PKiKP	03 21 28.6	+0.1
	baz=308						
MNTX	Cornudas Mount	120.79	51	P	PKiKP	03 21 29.2	+0.1
	baz=294						
MNTX	Cornudas Mount	120.79	51	PKPdf	PKPdf	03 21 28.9	-0.2
BGNE	Belgrade	121.09	38	P	PKPdf	03 21 29.2	-0.2
	baz=305						
CBKS	Cedar Bluff	121.52	41	P	PKPdf	03 21 30.0	-0.3
	baz=302						
SPMN	Marine on St.	121.77	32	P	PKPdf	03 21 30.6	+0.1
	baz=312						
MSTX	Muleshoe	121.80	48	P	PKiKP	03 21 31.3	+0.1
	baz=297						
AMTX	Amarillo	122.17	46	P	PKiKP	03 21 32.0	+0.1
	baz=299						
TXAR	Lajitas Array	123.10	53	PKP	PKiKP	03 21 34.5	+0.7
	comp=Z,3.0nm,0.7s,baz=272,slow=0.7,SNR=24						
TXAR				PKKPbc	PKKPbc	03 31 26.8	+1.6
	comp=Z,1.1nm,0.6s,baz=136,slow=7.9,SNR=7.8						
TXAR	Lajitas Array	123.10	53	PKIKP	PKPdf	03 21 33.3	-0.4
TXAR	Lajitas Array	123.10	53	PKPdf	PKPdf	03 21 33.3	-0.4
TORD	Torodi Ar. Bea	123.16	287	PKP	PKiKP	03 21 34.4	+0.2
	comp=Z,20nm,0.7s,baz=51,slow=2.1,SNR=120						
TORD				PKKPbc	PKKPab	03 31 26.1	+1.4
	comp=Z,1.9nm,0.7s,baz=275,slow=3.1,SNR=11						
TORD	Torodi Ar. Bea	123.16	287		PKPdf	03 21 33.5	-0.5
KSU1	Kansas State U	123.39	39	P	PKPdf	03 21 33.8	0.0
	baz=305						
WMOK	Wichita Mounta	124.31	45	P	PKPdf	03 21 35.6	-0.2
	baz=301						
JFWS	Jewell Farm	124.69	32	P	PKPdf	03 21 36.2	+0.1
	baz=314						
MATQ	Matagami	124.71	19	P	PKPdf	03 21 35.7	-0.3
	baz=330						
ABTX	Abilene, Hawle	124.74	48	P	PKPdf	03 21 36.6	0.0
	baz=299						
LSQQ	Lebel-sur-Quev	125.53	19	P	PKPdf	03 21 37.8	+0.2
	baz=331						
JCT	Junction City	125.63	50	P	PKiKP	03 21 38.8	0.0
	baz=298						
TUL1	Leonard	125.74	42	P	PKiKP	03 21 39.1	+0.3
	baz=304						
WHTX	Lake Whitney,	126.66	47	P	PKPdf	03 21 40.4	+0.1
	baz=300						
HDIL	Hopedale	126.83	34	P	PKPdf	03 21 40.5	+0.2
	baz=313						
833A	Chaparral WMA,	126.92	52	P	PKiKP	03 21 41.9	+0.6
	baz=296						
CCM	Cathedral Cave	127.36	37	P	PKiKP	03 21 41.9	-0.1
	baz=310						
CCM	Cathedral Cave	127.36	37	PKIKP	PKPdf	03 21 41.4	0.0
CCM	Cathedral Cave	127.36	37	PKPdf	PKPdf	03 21 41.4	0.0
U40A	Yellville	127.41	40	P	PKiKP	03 21 42.0	-0.1
	baz=307						
W39A	Magazine	127.49	42	P	PKiKP	03 21 42.3	0.0
	baz=306						
D55A	Sainte-Anne-du	127.81	19	P	PKiKP	03 21 42.5	-0.1
	baz=332						
ALGO	Algonquin Park	127.84	21	P	PKiKP	03 21 42.5	-0.1
	baz=328						
MIAR	Mount Ida	128.01	42	P	PKiKP	03 21 43.1	-0.2
	baz=306						
D56A	ZEC Mazanza, M	128.01	18	P	PKiKP	03 21 42.8	-0.2
	baz=333						
E55A	Montcerf-Lytto	128.11	20	P	PKiKP	03 21 43.1	0.0
	baz=331						
SFIN	Lafayette	128.15	32	P	PKiKP	03 21 43.5	0.0
	baz=316						
KOWA	Kowa	128.29	290	PKP	PKiKP	03 21 44.8	+0.4
	comp=Z,17nm,1.0s,baz=78,slow=0.5,SNR=14						
KOWA	Kowa	128.29	290		PKPdf	03 21 43.1	-0.7
LATQ	La Tuque	128.29	16	P	PKiKP	03 21 43.7	+0.2
	baz=335						
G54A	Lake Saint Pet	128.31	22	P	PKPdf	03 21 43.4	+0.4
	baz=328						
E56A	St. Veronique	128.37	19	P	PKPdf	03 21 43.3	+0.2
	baz=332						
I51A	Listowel	128.46	25	P	PKiKP	03 21 43.9	-0.1
	baz=324						
W41B	Gary Mavity, V	128.51	41	P	PKiKP	03 21 44.3	0.0
	baz=307						
D58A	Chemin du LacG	128.53	17	P	PKiKP	03 21 44.0	0.0
	baz=335						
H53A	Bobcaygeon	128.81	23	P	PKPdf	03 21 44.3	+0.2
	baz=327						
E58A	La Victoria	129.07	17	P	PKPdf	03 21 44.6	+0.2
	baz=334						
D61A	St Aubert, Com	129.16	15	P	PKiKP	03 21 45.1	-0.1
	baz=338						
D62A	Allapoint, All	129.54	14	P	PKPdf	03 21 45.7	+0.4
	baz=340						
G57A	Newington	129.66	20	P	PKPdf	03 21 45.6	0.0
	baz=332						
E61A	Lac Etchemin	129.79	15	P	PKiKP	03 21 46.7	0.0
	baz=338						
F60A	Warwick	129.82	17	P	PKiKP	03 21 46.4	-0.3
	baz=336						
P49A	Miami Univ. Ec	130.02	31	P	PKPdf	03 21 46.8	+0.3
	baz=318						
F61A	St Evariste	130.08	16	P	PKiKP	03 21 47.2	0.0
	baz=337						
WCI	Wyandotte Cave	130.12	34	P	PKiKP	03 21 47.2	-0.3
	baz=315						
ERPA	Erie	130.27	26	P	PKPdf	03 21 47.0	+0.1
	baz=325						
L53A	Girard	130.29	26	P	PKPdf	03 21 47.3	+0.4
	baz=324						
E63A	Oxbow	130.31	13	P	PKiKP	03 21 47.5	-0.1
	baz=340						
ACSO	Alum Creek Sta	130.38	29	P	PKiKP	03 21 48.1	+0.2
	baz=320						
H59A	Cadyville	130.49	19	P	PKiKP	03 21 48.5	+0.5
	baz=333						
M53A	WI Miller and	130.52	27	P	PKiKP	03 21 47.9	-0.3
	baz=323						
KIC	Kosan Boka	130.52	280	*e*PKIKP	PKiKP	03 21 49.4	+0.4
	comp=Z,46nm,0.7s						
H58A	Gabriels	130.53	19	P	PKiKP	03 21 47.9	-0.2
	baz=333						
G61A	St-Isidore-de-	130.57	17	P	PKiKP	03 21 48.3	+0.1
	baz=336						
J56A	Wolcott	130.57	22	P	PKiKP	03 21 48.5	+0.3
	baz=329						
DBIC	Dimbokro	130.60	280	PKP	PKiKP	03 21 49.9	+0.8
	comp=Z,16nm,0.7s,baz=67,slow=1.8,SNR=20						
DBIC	Dimbokro	130.60	280	PKPdf	PKPdf	03 21 47.7	-0.6
WVT	Waverly	130.68	37	P	PKiKP	03 21 48.6	-0.1
	baz=312						
WVT	Waverly	130.68	37	PKIKP	PKPdf	03 21 47.7	-0.1
WVT	Waverly	130.68	37	PKPdf	PKPdf	03 21 47.7	-0.1
OXF	Oxford	130.76	40	P	PKiKP	03 21 48.7	-0.2
	baz=310						
TIC	Toumodi	130.76	280	*e*PKIKP	PKiKP	03 21 49.9	+0.5
LIC	Lamto	130.82	280	*e*PKIKP	PKiKP	03 21 49.8	+0.2
	comp=Z,77nm,0.9s						
M54A	Oil Creek Stat	130.91	26	P	PKiKP	03 21 48.9	-0.1
	baz=325						
H61A	Lyndonville	131.13	17	P	PKiKP	03 21 49.2	-0.2
	baz=336						
K57A	Scipio Center	131.17	22	P	PKiKP	03 21 49.3	-0.2
	baz=329						
N54A	Moraine State	131.21	27	P	PKiKP	03 21 49.5	-0.2
	baz=324						
O53A	New Philadelph	131.21	28	P	PKiKP	03 21 49.5	-0.2
	baz=322						
P52A	Corning	131.25	29	P	PKiKP	03 21 49.5	-0.2
	baz=321						
J59A	Piesco	131.26	20	P	PKiKP	03 21 49.3	-0.4
	baz=332						
L56A	Greenwood	131.27	24	P	PKiKP	03 21 49.6	-0.2
	baz=328						
I60A	Shoreham	131.33	19	P	PKiKP	03 21 50.0	+0.3
	baz=334						
LBNH	Lisbon	131.40	17	P	PKiKP	03 21 49.8	-0.1
	baz=335						
K58A	Earlville	131.47	22	P	PKiKP	03 21 49.9	-0.2
	baz=330						
M56A	Emporium	131.56	25	P	PKiKP	03 21 50.1	-0.2
	baz=326						
L57A	Andrews Acres	131.66	23	P	PKiKP	03 21 50.5	0.0
	baz=328						
BINY	Binghamton	131.83	22	P	PKiKP	03 21 50.9	+0.1
	baz=329						
H65A	Eastbrook	131.98	14	P	PKiKP	03 21 51.1	+0.1
	baz=340						
N56A	West Decatur	131.98	25	P	PKiKP	03 21 51.2	0.0
	baz=326						
L58A	Harry Jones Me	132.01	22	P	PKiKP	03 21 51.4	+0.2
	baz=330						
J61A	Chester	132.02	19	P	PKiKP	03 21 51.1	-0.1
	baz=334						
M57A	Sunshine Farm,	132.12	24	P	PKiKP	03 21 51.3	-0.2
	baz=328						
Q53A	Leroy	132.15	30	P	PKiKP	03 21 51.6	0.0
	baz=321						
L59A	Walton	132.19	21	P	PKiKP	03 21 51.3	-0.3
	baz=331						
MCWV	Mont Chateau	132.32	27	P	PKiKP	03 21 51.5	-0.3
	baz=323						
M58A	Price's Panora	132.35	23	P	PKiKP	03 21 51.8	-0.1
	baz=328						
O56A	Blue Knob Stat	132.40	26	P	PKiKP	03 21 51.9	-0.2
	baz=325						
N57A	Milroy	132.43	25	P	PKiKP	03 21 51.9	-0.2
	baz=327						
M59A	Waymart	132.60	22	P	PKiKP	03 21 52.1	-0.4
	baz=330						
N58A	Sunbury	132.70	24	P	PKiKP	03 21 52.2	-0.4
	baz=328						
O57A	Amberson	132.85	25	P	PKPdf	03 21 52.4	+0.6
	baz=326						
P56A	Dayton Farm, R	132.90	27	P	PKiKP	03 21 52.9	-0.2
	baz=325						
K63A	Dunstable	132.93	18	P	PKiKP	03 21 52.9	-0.1
	baz=335						
R54A	Victor	132.94	30	P	PKiKP	03 21 53.3	0.0
	baz=321						
N59A	State Game Lan	133.01	23	P	PKiKP	03 21 53.2	-0.1
	baz=329						
S54A	Dingess, Beckl	133.07	30	P	PKiKP	03 21 53.2	-0.3
	baz=321						
Q56A	Snyder Ridge,	133.12	27	P	PKiKP	03 21 53.1	-0.4
	baz=324						
O58A	Lewisberry	133.22	25	P	PKPdf	03 21 53.1	+0.6
	baz=327						
LRAL	Lakeview Retre	133.24	39	P	PKiKP	03 21 53.4	-0.5
	baz=311						
N60A	Cedar Hill Far	133.31	22	P	PKPdf	03 21 52.9	+0.3
	baz=330						
O59A	Robesonia	133.36	24	P	PKiKP	03 21 53.7	-0.3
	baz=328						
M61A	Granite Spring	133.42	21	P	PKiKP	03 21 53.6	-0.5
	baz=332						
O60A	Telford	133.67	23	P	PKiKP	03 21 54.2	-0.4
	baz=329						
L64A	Middleborough	133.83	18	P	PKiKP	03 21 54.4	-0.4
	baz=336						
Q58A	Fox Den Farm,	133.88	26	P	PKiKP	03 21 55.1	+0.1
	baz=326						
BLA	Blacksburg	133.98	30	P	PKiKP	03 21 55.1	-0.3
	baz=321						
R57A	Stanardsville	134.03	27	P	PKiKP	03 21 55.3	-0.1
	baz=324						
R58A	Rapidan	134.26	27	P	PKiKP	03 21 55.5	-0.3
	baz=325						
T56A	Rocky Mt	134.31	30	P	PKiKP	03 21 56.3	+0.3
	baz=322						
R58B	Mineral	134.59	27	P	PKiKP	03 21 56.7	+0.2
	baz=325						
CBN	Corbin Frederi	134.62	26	P	PKiKP	03 21 56.5	0.0
	baz=326						
U56A	King	134.67	31	P	PKiKP	03 21 56.3	-0.5
	baz=321						
T57A	Hurt	134.72	29	P	PKPdf	03 21 56.1	+0.7
	baz=323						
R59A	King George, V	134.74	26	P	PKiKP	03 21 57.1	+0.3
	baz=326						
S58A	Poland Farm, P	134.80	28	P	PKiKP	03 21 57.0	0.0
	baz=324						
V56A	Mocksville	135.02	31	P	PKiKP	03 21 57.6	+0.1
	baz=320						
KMSC	Kings Mountain	135.09	33	P	PKiKP	03 21 57.9	+0.2
	baz=319						
T58A	Grand View Acr	135.11	29	P	PKiKP	03 21 57.4	-0.2
	baz=324						
U57A	Blanch	135.13	30	P	PKiKP	03 21 57.1	-0.5
	baz=322						
GOGA	Godfrey	135.15	36	P	PKiKP	03 21 57.4	-0.4
	baz=315						
V57A	Coltrane Farms	135.33	31	P	PKiKP	03 21 58.1	0.0
	baz=321						
S60A	Water View	135.35	26	P	PKiKP	03 21 57.9	-0.2
	baz=326						
W56A	Indian Trail	135.49	32	P	PKiKP	03 21 58.5	0.0
	baz=320						
U58A	Oxford	135.54	29	P	PKiKP	03 21 58.6	+0.1
	baz=323						
T60A	Surry	135.79	27	P	PKiKP	03 21 58.7	-0.3
	baz=326						
U60A	Pendleton	136.14	28	P	PKiKP	03 21 59.9	+0.2
	baz=325						
V59A	Middlesex	136.20	29	P	PKiKP	03 22 00.1	+0.3
	baz=323						
X57A	Johnson Farm,	136.26	32	P	PKiKP	03 22 00.5	+0.5
	baz=320						
W58A	Raeford	136.28	31	P	PKiKP	03 22 00.2	+0.1
	baz=322						
CNNC	Cliffs of the	136.79	29	P	PKiKP	03 22 01.1	0.0
	baz=323						
X59A	McDuffie Farm,	136.96	31	P	PKiKP	03 22 01.0	-0.5
	baz=322						
W61A	Ground Anchor	137.27	29	P	PKiKP	03 22 01.7	-0.3
	baz=324						
PLCA	Paso Flores	138.26	161	PKhKP	PKPpre	03 21 54.8	
	comp=Z,1.9nm,0.6s,baz=200,slow=7.3,SNR=3.7						
PLCA				PKP	PKPdf	03 22 02.9	+1.0
	comp=Z,8.3nm,0.7s,baz=226,slow=2.2,SNR=11						
PLCA	Paso Flores	138.26	161	PKIKP	PKPdf	03 22 01.7	-0.3
PLCA	Paso Flores	138.26	161	PKPdf	PKPdf	03 22 01.7	-0.3
JTS	Las Juntas de	146.63	68	PKP2	PKPdf	03 22 18.0	+0.6
JTS	Las Juntas de	146.63	68		PKPdf	03 22 18.0	+0.6
GO04	Tololo Observa	147.36	152	PKPdf	PKPbc	03 22 20.0	-0.9
LCO	Las Campanas	148.37	151	PKP2	PKPbc	03 22 22.9	-0.8
LCO	Las Campanas	148.37	151		PKPbc	03 22 22.9	-0.8
LVC	Limon Verde	154.49	146	PKP	PKPdf	03 22 31.1	+1.3
	comp=Z,3.9nm,0.7s,baz=252,slow=1.3,SNR=3.0						
CPUP	Villa Florida	155.28	172	PKP	PKPdf	03 22 30.1	-0.3
	comp=Z,3.9nm,1.0s,baz=196,slow=3.2,SNR=4.8						
CPUP				PKPab	sPKPbc	03 22 54.8	-1.2
	comp=Z,10.0nm,0.9s,baz=178,slow=3.7,SNR=5.8						
ROSC	El Rosal	158.34	72	PKP	PKPdf	03 22 35.9	+0.7
	comp=Z,12nm,0.8s,baz=35,slow=24,SNR=7.3						
ROSC				PKPab	PKPab	03 23 11.9	+2.4
	comp=Z,16nm,0.7s,baz=232,slow=19,SNR=6.8						
LPAZ	La Paz	159.68	136	PKP	PKPdf	03 22 36.2	-0.6
	comp=Z,5.0nm,0.8s,baz=153,slow=0.1,SNR=18						
SDV	Santo Domingo	160.05	58	PKPdf	PKPdf	03 22 35.9	-0.9
SIV	San Ignacio	164.05	153	PKP	PKPdf	03 22 41.3	+0.6
	comp=Z,3.7nm,0.7s,baz=218,slow=1.0,SNR=22						
SIV				PKPab	PKPab	03 23 34.9	+1.2
	comp=Z,8.6nm,0.7s,baz=247,slow=3.1,SNR=19						
BDFB	Brasilia	165.10	202	PKP	PKPdf	03 22 42.2	+0.6
	comp=Z,3.4nm,0.9s,baz=29,slow=6.7,SNR=2.8						
BDFB				PKPab	PKPab	03 23 39.0	+0.7
	comp=Z,4.6nm,0.9s,baz=158,slow=3.3,SNR=4.0						
BDFB	Brasilia	165.10	202	PKIKP	PKPdf	03 22 40.8	-0.9
BDFB	Brasilia	165.10	202		PKPdf	03 22 40.8	-0.9

WEL 25 03:14:19.2,43°S±2°×**17°1E**±°**,h112**^{km}±3^{km}**,M3.2**/13,
mB5.0/1**,MLv3.2**/13**,Mw(mB)4.3**/1**,Error ellipse:**
s-maj=0.0km s-min=0.0km az=95.8,Off west coast of
South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
INZ	Inchbonnie	0.36	103	P	Pn	03 14 35.6	+0.1
INZ				S	Sn	03 14 47.5	-0.2
WVZ	Waitaha Valley	0.46	202	P	Pn	03 14 36.5	+0.5
WVZ				S	Sn	03 14 48.1	-0.6
LTZ	Lake Taylor	0.97	99	P	Pn	03 14 40.6	+0.3
LTZ				S	Sn	03 14 56.3	+0.1
OXZ	Oxford	1.04	131	P	Pn	03 14 41.2	+0.3
OXZ				S	Sn	03 14 56.5	-0.9
RPZ	Rata Peaks	1.07	177	P	Pn	03 14 42.2	+0.8
RPZ				S	Sn	03 14 58.4	+0.3
DSZ	Denniston Nort	1.09	35	P	Pn	03 14 41.2	-0.4
DSZ				S	Sn	03 14 56.8	-1.7
FOZ	Fox Glacier	1.23	223	P	Pn	03 14 43.3	+0.4
FOZ				S	Sn	03 15 00.6	-0.4
THZ	Tophouse	1.69	59	P	Pn	03 14 48.2	-0.3
THZ				S	Sn	03 15 09.3	-1.3
LBZ	Lake Benmore	1.83	198	P	Pn	03 14 50.3	+0.1
LBZ				S	Sn	03 15 12.5	-1.3
JCZ	Jackson Bay	2.14	227	P	Pn	03 14 54.2	+0.1
JCZ				S	Sn	03 15 19.4	-1.5
QRZ	Quartz Range	2.16	33	P	Pn	03 14 53.4	-0.9
ODZ	Otahua Downs	2.41	186	P	Pn	03 14 56.9	-0.6
ODZ				S	Sn	03 15 24.2	-2.7
WKZ	Wanaka	2.60	212	P	Pn	03 14 59.5	-0.5
WKZ				S	Sn	03 15 29.7	-1.7
EAZ	Earnscleugh	2.85	204	P	Pn	03 15 02.3	-1.0
EAZ				S	Sn	03 15 33.9	-3.3
CAW	Cannon Point	3.42	65	P	Pn	03 15 08.7	-2.2
WTAZ	Waiatarua	6.34	27	P	Pn	03 15 48.6	-1.6

PRU 25 03:15:03.9±0.0**,50°.15N**×**19°.06E,h0**^{km}**,Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OJC	Ojcow	0.48	81	*e*Pg	Pg	03 15 12.9	-0.2
OJC				*e*Sg	Sg	03 15 19.5	+0.2
OKC	Ostrava-Krasne	0.67	242	*e*SG	Sg	03 15 25.9	+0.6
	comp=Z,16nm,0.6s						
LANS	Liptovska Anna	1.03	165	*e*PG	Pg	03 15 23.8	+0.1
LANS				*e*SG	Sg	03 15 36.4	-0.7
LANS				*e*LG	Lg	03 15 40.8	
MORC	Moravsky Berou	1.05	250	*e*PG	Pb	03 15 24.6	-0.3
MORC				*e*SG	Sg	03 15 38.1	+0.5
NIE	Niedzica	1.09	132	*e*Pg	Pg	03 15 23.8	-0.9
NIE				*e*Sg	Sg	03 15 39.0	+0.3
KRLC	Kraliky	1.47	268	*e*PG	Pn	03 15 31.2	-0.5
KRLC				*e*SG	Sn	03 15 51.7	+0.1
DPC	Dobruska-Polom	1.77	278	*e*PG	Pn	03 15 35.7	-0.1
DPC				*e*SG	Sb	03 16 00.1	+0.1
VRAC	Vranov	1.81	243	*e*SG	Sg	03 16 01.6	-0.4
OSTC	Ostas	1.87	284	*e*PG	Pn	03 15 37.0	-0.1
OSTC				*e*SG	Sg	03 16 04.0	+0.2
CHVC	Chvalec	1.97	284	*e*SG	Sg	03 16 07.9	+0.6
KRUC	Moravsky	2.05	239	*e*SG	Sb	03 16 08.1	+0.2

*JMA **25** 03:20:43.3±0.1, 36°.34N×140°.85E, h41^{km}±1^{km}, M3.6*
JMA Felt I J1.
*IDC **25** 03:20:45.6±3.2, 36°.29N×140°.70E, h56^{km}±29^{km}, mb3.1/6,*
mb1 3.3/7, mb1mx3.1/42, mbtmp3.5/7, ML3.5/1, Error
ellipse: s-maj=34.1km s-min=15.3km az=75.0
ISC 25 03:20:43.3±0.8**,36°.40N**±0°.04×**140°.76E**±0°.06**,h32**^{km}**,n25,**
σ**1**^{s}**.15**/27**,mb3.4**/6**,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHYU	Hitachinakayam	0.15	246	P	Pn	03 20 50.9	+1.4
JHYU				S	Sb	03 20 55.8	+2.4
JHO	Hitachi	0.26	323	P	Pn	03 20 52.0	+1.1
JIHU	Itakohorinouch	0.48	204	P	Pn	03 20 54.3	+0.4
JIHU				S	Sn	03 21 01.8	+0.7
JYT	Yasato	0.49	249	P	Pn	03 20 54.6	+0.5
JYT				S	Sn	03 21 02.1	+0.6
ONAJ	Iwakimizuishiy	0.70	2	P	Pn	03 20 57.2	+0.2
ONAJ				S	Sn	03 21 07.0	+0.2
JSMT	Sammumatsuo	0.80	199	S	Sn	03 21 08.9	-0.2
JFK	Kawauchi	0.97	5	P	Pn	03 21 00.6	-0.1
JFK				S	Sn	03 21 12.8	-0.6
JAG	Ashikaga	1.05	272	P	Pb	03 21 03.0	-0.1
JAG				S	Sb	03 21 17.2	+0.6
JFT	Otama	1.16	343	P	Pb	03 21 05.4	+0.5
JFT				S	Sb	03 21 21.2	+1.5
MJAR	Matsushiro Arr	2.06	275	P	Pn	03 21 17.3	+1.6
	2.1nm,0.3s,baz=111,slow=9.2,SNR=71						
MAT	Matsushiro	2.06	275	P	Pb	03 21 18.4	-1.7
MAT				S	Sb	03 21 43.3	-2.1
JHJ	Hachijo jima 2	3.37	194	P	Pn	03 21 35.4	+1.6
	13nm,0.3s,baz=247,slow=14,SNR=1.4						
JHJ				S	Sn	03 22 11.5	-1.2
	9.7nm,0.3s,baz=55,slow=20,SNR=1.9						
SONM	Songino Array	27.71	305	P	P	03 26 27.4	-1.3
	0.2nm,0.5s,baz=233,slow=37,SNR=2.2						
H11N2	WAKE ISLAND Hy	28.29	119	T	T	03 55 48.3	
	baz=312,slow=75,SNR=3.7						
H11N1	WAKE ISLAND Hy	28.30	119	T	T	03 55 47.7	
	baz=312,slow=75,SNR=3.8						
H11N3	WAKE ISLAND Hy	28.31	119	T	T	03 56 00.0	
	baz=312,slow=75,SNR=3.8						
H11S1	WAKE ISLAND Hy	28.97	121	T	T	03 57 19.0	
	SNR=36						
H11S3	WAKE ISLAND Hy	28.97	121	T	T	03 57 22.3	
	baz=253,slow=74,SNR=109						
H11S2	WAKE ISLAND Hy	28.99	121	T	T	03 57 22.3	
	baz=316,slow=74,SNR=54						
ZALV	Zalesovo Beam	41.95	313	P	P	03 28 30.9	0.0
	0.6nm,0.6s,baz=98,slow=11,SNR=3.7						
MKAR	Makanchi Array	44.01	303	P	P	03 28 48.5	+0.7
	0.4nm,0.7s,baz=81,slow=7.5,SNR=4.9						
ILAR	Eielson Array	50.31	32	P	P	03 29 36.8	+0.3
	0.7nm,0.8s,baz=264,slow=5.9,SNR=8.0						
WRA	Warramunga Arr	56.37	187	P	P	03 30 20.3	-1.2
	0.2nm,0.5s,baz=4.0,slow=7.3,SNR=5.0						
ASAR	Alice Springs	60.09	187	P	P	03 30 46.7	-0.8
	0.2nm,0.9s,baz=354,slow=5.6,SNR=1.4						
ICESG	Greenland Ices	74.82	0	*i* P	P	03 32 27.3	+6.9

*IDC **25** 03:42:33.4±1.1, 31°.73N×140°.43E, h45^{km}±9^{km}, mb4.1/24,*
mb1 4.2/27, mb1mx4.1/45, mbtmp4.3/27, ML4.0/3, MS3.4/8,
Ms1 3.5/8, ms1mx3.2/35, Error ellipse: s-maj=14.3km
s-min=7.0km az=77.0
*NEIC **25** 03:42:34.1±1.1, 31°.84N±0°.05×140°.78E±0°.08, h58^{km}±5^{km},*
mb4.6/77, Error ellipse: s-maj=10.2km s-min=6.5km
az=72.0
*NIED **25** 03:42:35.6, 32°.12N×140°.79E, h12^{km}, MW4.5, Moment*
Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm;
M$_{rr}$-5.12; M$_{\theta\theta}$0.98; M$_{\phi\phi}$4.14; M$_{r\theta}$2.14; M$_{\theta\phi}$-2.15; M$_{\phi r}$-3.75;
Fault plane solution: M$_{0}$6.74000×10^{15} NP1:
φ$_{s}$331.00000°, δ65.00000°, λ-92.00000°. NP2:
φ$_{s}$155.00000°, δ25.00000°, λ-87.00000°.
*JMA **25** 03:42:35.5±0.1, 32°.12N×140°.79E, h12^{km}, M4.5*
ISC 25 03:42:34.1±0.7**,31°.80N**±0°.04×**140°.76E**±0°.05**,h57**^{km}±5^{km}**,**
n225,σ**1**^{s}**.20**/226**,mb4.5**/65**,MS3.3**/4**,2C-3D,Southeast of**
Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAOM	Aogashimamukai	1.07	308	P	Pn	03 42 53.2	+0.1
JAOM				S	Sn	03 43 05.6	-1.5
JHCJ	Hachijojimakas	1.51	328	⇓P	Pn	03 42 58.8	-0.1
JHCJ				S	Sn	03 43 15.1	-2.4
JHJ2	Mitsune	1.53	329	⇓P	Pn	03 42 59.2	0.0
JHJ2				S	Sn	03 43 16.0	-2.0
JHJ2	Mitsune	1.53	329	Pn	Pn	03 42 59.5	+0.3
JHJ2				Sn	Sn	03 43 16.2	-1.9

JHJ	Hachijo jima 2	1.55	328	P	Pn	03 42 59.0	-0.5
	147nm,0.3s,baz=341,slow=7.0,SNR=76						
JHJ				S	Sn	03 43 15.2	-3.3
	2µm,0.3s,baz=65,slow=22,SNR=26						
JMKN	Mikurajimanish	2.31	335	⇓P	Pn	03 43 10.2	+0.5
JMKN				S	Sn	03 43 35.2	-1.8
JKO	Kozu shima	2.74	331	P	Pn	03 43 17.1	+1.4
JKO				S	Sn	03 43 47.6	0.0
BSO1	Boso 1	2.85	4	P	Pn	03 43 16.6	-0.1
BSO1				eS	Sn	03 43 47.8	-1.7
TK02	Tokai 2	3.31	311	P	Pn	03 43 25.3	+2.0
JSG	Sagara	3.59	324	Pn	Pn	03 43 26.6	-0.7
JSG				Sn	Sn	03 44 07.8	-0.6
JOD2	Odawara 2	3.73	338	P	Pn	03 43 30.3	+1.1
JOD2				S	Sn	03 44 09.0	-2.8
TTO1	TONANKAI O.B.S	3.81	300	P	Pn	03 43 32.0	+1.9
JIE	Ise	4.27	308	P	Pn	03 43 38.2	+1.6
JYT	Yasato	4.44	354	Pn	Pn	03 43 38.3	-0.6
JYT				Sn	Sn	03 44 27.8	-1.5
JRY	Ryogami san	4.48	340	P	Pn	03 43 41.2	+1.7
JRY				S	Sn	03 44 29.6	-0.7
INU	Inuyama	4.72	320	Pn	Pn	03 43 41.3	-1.5
INU				Sn	Sn	03 44 34.2	-2.0
JGF	Kuroka	4.73	324	Pn	Pn	03 43 44.2	+1.2
JGF				Sn	Sn	03 44 37.7	+1.1
JAG	Ashikaga	4.74	347	P	Pn	03 43 43.6	+0.6
JAG				S	Sn	03 44 33.9	-2.7
JTNC	Tanabenakahech	4.78	296	⇑P	Pn	03 43 44.6	+1.0
JCJ	Chichijima	4.85	165	P	Pn	03 43 45.2	+0.7
	6.7nm,0.3s,baz=289,slow=21,SNR=2.6						
JCJ				S	Sn	03 44 38.1	-1.3
	16nm,0.3s,baz=79,slow=22,SNR=3.5						
JCJ	Chichijima	4.85	165	Pn	Pn	03 43 45.2	+0.7
JCJ				Sn	Sn	03 44 39.6	+0.1
JWY	Kouya	4.96	300	P	Pn	03 43 48.1	+1.9
MJAR	Matsushiro Arr	5.18	337	P	Pn	03 43 51.5	+2.4
	2.7nm,0.3s,baz=150,slow=12,SNR=64						
MJAR	Matsushiro Arr	5.18	337		Pn	03 43 49.7	+0.6
MAJO	Matsushiro	5.18	337	Pn	Pn	03 43 50.0	+0.9
MAT	Matsushiro	5.18	337	P	Pn	03 43 52.4	+3.3
MAT				S	Sn	03 44 49.0	+1.4
MJB9	Matsu-Tunnel	5.19	337	Pn	Pn	03 43 48.1	-1.0
JWT	Wachi	5.66	309	Pn	Pn	03 43 57.4	+1.8
JMM	Marumori	6.05	0	Pn	Pn	03 44 01.1	+0.2
JMN	Monobe	6.11	290	Pn	Pn	03 44 03.4	+1.6
JSD	Sado	6.55	342	Pn	Pn	03 44 07.4	-0.4
JHS	Saijyo	7.14	299	Pn	Pn	03 44 15.9	-0.1
JNU	Nakatsue	8.45	282	P	Pn	03 44 35.4	+1.4
	2.0nm,0.3s,baz=106,slow=5.6,SNR=15						
JNU				LR	LR	03 47 35.1	
	comp=Z,352nm,20.6s,baz=120,slow=37						
JNU	Nakatsue	8.45	282	Pn	Pn	03 44 33.7	-0.3
JSU	Suzuyama	8.79	271		Pn	03 44 41.0	+2.4
JTM	Tenmabayashi	8.97	1	Pn	Pn	03 44 40.1	-0.9
JTU	Tsushima	9.90	289	Pn	Pn	03 44 53.8	+0.1
JMZ	Minamidaito 2	10.27	237	Pn	Pn	03 44 59.2	+0.5
ERM	Erimo	10.37	10	Pn	Pn	03 44 58.9	-1.2
JOW	Kunigami	11.96	249	P	Pn	03 45 22.9	+0.9
	2.3nm,0.3s,baz=234,slow=3.6,SNR=5.2						
JOW				LR	LR	03 49 27.7	
	comp=Z,232nm,21.9s,baz=118,slow=36						
KSRS	Korea Array	11.98	302	P	Pn	03 45 23.9	+1.9
	0.3nm,0.3s,baz=119,slow=13,SNR=20						
KSRS				LR	LR	03 49 34.8	
	comp=Z,190nm,19.5s,baz=76,slow=36						
KSAR	Wonju Array Be	12.00	301		Pn	03 45 22.1	-0.3
KS19	Wonju Array Si	12.04	302		Pn	03 45 22.1	-0.8
ASAJ	Asahikawa	12.38	6	P	Pn	03 45 27.4	-0.1
	1.7nm,0.3s,baz=198,slow=9.7,SNR=7.1						
ASAJ				LR	LR	03 51 23.8	
	comp=Z,93nm,19.7s,baz=226,slow=42						
JKA	Kamikawa-asahi	12.38	6		Pn	03 45 25.2	-2.3
USRK	Ussuriysk Ar.	14.17	333	P	Pn	03 45 53.8	+2.1
	baz=115,slow=13,SNR=2.0						
GUMO	Guam	18.52	167	P	P	03 46 45.8	0.0
NACB	Ninganchiao	18.54	251	P	Pn	03 46 46.5	-0.4
KLR	Kul'dur	18.68	341	P	P	03 46 48.1	+0.6
	0.3nm,0.3s,baz=142,slow=14,SNR=6.5						
YULB	Yu-li	19.16	249	P	Pn	03 46 53.9	-0.4
YULB				IAmb	IAmb	03 46 54.5	
	comp=Z,25nm,0.9s						
SSLB	Suanglung	19.24	250	P	Pn	03 46 55.0	-0.3
TWG	Pinlang	19.62	248	P	P	03 46 58.5	+0.5
TWG				IAmb	IAmb	03 47 02.7	
	comp=Z,24nm,0.7s						
TPUB	Ta-pu	19.73	250	P	P	03 46 59.5	+0.3
TPUB				IAmb	IAmb	03 47 03.7	
	comp=Z,28nm,0.9s						
WHN	Wuhan	22.62	274	⇑P	P	03 47 30.5	+0.3
HHC	Hu-ho-hao-te	25.10	299	eP	P	03 47 58.0	+4.4
HHC				pmax	pmax		
	comp=Z,5.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,95nm,7.0s						
TGY	Tagaytay City	25.29	230	P	P	03 47 54.5	-0.9
	comp=Z,206nm,0.3s,baz=226,slow=3.4,SNR=3.0						
H11N2	WAKE ISLAND Hy	26.36	111	T	T	04 17 07.0	
	baz=304,slow=75,SNR=231						
H11N1	WAKE ISLAND Hy	26.36	111	T	T	04 17 10.1	
	baz=304,slow=75,SNR=143						
H11N3	WAKE ISLAND Hy	26.37	111	T	T	04 17 09.5	
	baz=304,slow=75,SNR=102						
XAN	Xi'an	26.77	283	P	P	03 48 07.8	-0.8
XAN				pP	pP	03 48 15.3	-6.9
XAN				sP	pwP	03 48 18.8	-6.2
XAN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
XAN				pmax	pmax		
	comp=Z,230nm,5.5s						
XAN	Xi'an	26.77	283	P	P	03 48 08.1	-0.6
H11S3	WAKE ISLAND Hy	26.87	113	T	T	04 17 22.1	
	baz=304,slow=75,SNR=139						
H11S1	WAKE ISLAND Hy	26.87	113	T	T	04 17 18.6	
	baz=304,slow=75,SNR=218						
H11S2	WAKE ISLAND Hy	26.88	113	T	T	04 17 18.6	
	baz=304,slow=75,SNR=133						
DAV	Davao City (W)	28.39	213	LR	LR	03 58 01.2	
	comp=Z,60nm,20.9s,baz=27,slow=33						
MA2	Magadan	28.58	11	P	P	03 48 23.6	-0.9
SONM	Songino Array	30.56	312	P	P	03 48 42.9	+0.5
	comp=Z,1.8nm,0.7s,baz=113,slow=9.0,SNR=12						
SONM				ScP	ScP	03 55 16.0	-1.5
	comp=Z,0.3nm,0.5s,baz=188,slow=3.0,SNR=3.5						
SONM	Songino Array	30.56	312	P	P	03 48 41.3	-1.1
QIZ	Qiongzhong	30.57	253	P	P	03 48 42.6	+0.1
QIZ				IAmb	IAmb	03 48 54.1	
	comp=Z,12nm,1.2s						
LZH	Lanzhou	30.80	288	eP	P	03 48 50.8	+6.2
LZH				pP	pwP	03 49 03.8	+2.7
LZH				sP	sP	03 49 09.8	+4.9
LZH				PP	PnPn	03 49 50.0	+3.4
LZH				pmax	pmax		
	comp=Z,12nm,1.1s						
LZH				pmax	pmax		
	comp=Z,120nm,5.4s						
SEY	Seymchan	32.02	10	P	P	03 48 57.3	+2.5
	comp=Z,0.4nm,0.3s,baz=170,slow=6.5,SNR=4.3						
MYLDM	Lahad Datu	33.71	223	P	P	03 49 10.3	+0.3
MYLDM				IAmb	IAmb	03 49 14.2	
	comp=Z,11nm,0.9s						
SIJI	Sorong	33.72	197	LR	LR	04 00 20.0	
	comp=Z,46nm,20.1s,baz=202,slow=32						
SBUM	Sibu	39.68	228	P	P	03 50 01.6	+0.7
SBUM				IAmb	IAmb	03 50 02.6	
	comp=Z,6.9nm,0.6s						
CHTO	Chiang Mai	39.72	261	P	P	03 50 00.5	-0.6
CMAR	Chiang Mai Arr	39.88	261	P	P	03 49 59.4	-3.2
	comp=Z,1.4nm,0.3s,baz=48,slow=8.3,SNR=5.5						
CMAR				LR	LR	04 07 03.2	
	comp=Z,50nm,18.8s,baz=49,slow=37						
TIXI	Tiksi	40.42	354	P	P	03 50 05.8	-0.5
PMG	Port Moresby	41.43	170	P	P	03 50 15.1	0.0
PMG				IAmb	IAmb	03 50 16.4	
	comp=Z,16nm,1.1s						
TARA	Tarawa	42.87	129	P	P	03 50 26.6	-0.4
WMQ	Urumqi	42.93	302	eP	P	03 50 32.3	+5.0
ZSN	Zaisan	44.83	307	eP	P	03 50 41.7	-0.8
	baz=307						
ZAA0	Zalesovo Array	45.18	316	P	P	03 50 44.6	-0.5
ZAA0					PcP	03 52 24.8	+0.3
ZALV	Zalesovo Beam	45.18	316	P	P	03 50 44.4	-0.7
	comp=Z,2.0nm,0.5s,baz=98,slow=8.1,SNR=12						
ZALV				PcP	PcP	03 52 23.2	-1.3
	comp=Z,3.8nm,0.8s,baz=97,slow=2.8,SNR=8.6						
ZALV	Zalesovo Beam	45.18	316	P	P	03 50 44.4	-0.7
ZALV				PcP	PcP	03 52 24.6	+0.1
COEN	Coen	45.55	177	P	P	03 50 49.0	+0.6
KULM	Kulim	45.85	243	P	P	03 50 51.4	+0.5
KULM				IAmb	IAmb	03 51 10.5	
	comp=Z,8.8nm,1.1s						
ANM	Nome	46.38	29	P	P	03 50 55.1	+0.6
MK31	Makanchi Array	46.61	306	P	P	03 50 55.6	-0.9
MKAR	Makanchi Array	46.61	306	P	P	03 50 55.1	-1.4
	comp=Z,3.1nm,0.8s,baz=91,slow=9.3,SNR=31						
MKAR				PcP	PcP	03 52 29.7	+0.1
	comp=Z,1.6nm,0.8s,baz=103,slow=4.4,SNR=5.2						
MKAR	Makanchi Array	46.61	306	P	P	03 50 55.7	-0.8
MKAR					PcP	03 52 29.8	+0.1
NRIK	Noril'sk	47.84	337	P	P	03 51 05.4	-0.2
	comp=Z,2.4nm,0.5s,baz=108,slow=11,SNR=6.2						
NRIK	Noril'sk	47.84	337	P	P	03 51 05.4	-0.2
NRIK				IAmb	IAmb	03 51 11.2	
	comp=Z,4.5nm,0.8s						
SEM	Semipalatinsk	47.84	311	eP	P	03 51 05.5	-0.7
	baz=311						
RDOG	Red Dog Mine	48.44	25	pP	pP	03 51 25.0	+0.4
	baz=251						
KURK	Kurchatov	48.87	312	P	P	03 51 12.8	-1.0
KURK				IAmb	IAmb	03 51 15.3	
	comp=Z,6.1nm,1.0s						
SHLS	Shalkode	48.96	302	eP	P	03 51 11.2	-3.6
	baz=302						
SATY	Saty	49.73	302	eP	P	03 51 19.7	-1.1
	baz=302						
MDOK	Medeo	50.70	302	eP	P	03 51 27.7	-0.5
	baz=302						
GSI	Gunungsitoli	50.76	242	P	P	03 51 27.0	-1.7
KUU	Kurty	51.09	303	eP	P	03 51 29.9	-1.0
	comp=Z,3.0nm,0.6s,baz=303						
KDAK	Kodiak Island	51.42	39	P	P	03 51 35.1	+2.0
	comp=Z,12nm,1.0s,baz=178,slow=3.0,SNR=5.3						
WB0	Warramunga Arr	51.64	188	P	P	03 51 33.3	-1.8
FITZ	Fitzroy Crossi	51.69	198	P	P	03 51 34.8	-0.6
	comp=Z,4.1nm,0.8s,baz=25,slow=8.6,SNR=12						
FITZ	Fitzroy Crossi	51.69	198	P	P	03 51 34.7	-0.8
FITZ				IAmb	IAmb	03 51 37.4	
	comp=Z,7.1nm,1.0s						
SPCR	Spurr Chakacha	51.70	35	pP	pP	03 51 49.8	+0.3
	baz=267						
WRAB	Tennant Creek	51.80	188	P	P	03 51 35.5	-0.8
WRAB				IAmb	IAmb	03 51 36.5	
	comp=Z,4.3nm,0.6s						
WR0	Warramunga Arr	51.81	187	P	P	03 51 35.2	-1.1
WR0					PcP	03 52 49.0	+0.3
PPLA	Purkeypile	51.81	32	pP	pP	03 51 51.2	+0.8
	baz=266						
WB2	Warramunga Arr	51.81	188	P	P	03 51 35.4	-1.0
WB2				IAmb	IAmb	03 51 36.6	
	comp=Z,5.3nm,0.7s						
WRA	Warramunga Arr	51.81	188	P	P	03 51 35.0	-1.4
	comp=Z,4.9nm,0.6s,baz=3.5,slow=7.6,SNR=93						
WRA				PcP	PcP	03 52 50.2	+1.4
	comp=Z,4.3nm,0.8s,baz=1.3,slow=4.0,SNR=11						
WRA	Warramunga Arr	51.81	188	P	P	03 51 35.0	-1.4
WRA					PcP	03 52 48.5	-0.3
SKT	Skwentna	52.06	34	pP	pP	03 51 52.7	+0.6
	baz=267						
SUA	Susitna One	52.42	34	P	P	03 51 40.0	-0.6
SUA				IAmb	IAmb	03 51 55.7	
	comp=Z,5.3nm,0.8s						
BPAW	Bear Paw Mtn.	52.43	31	pP	pP	03 51 55.7	+0.8
	baz=266						
BTLS	Baital	52.52	305	eP	P	03 51 39.9	-1.5
	baz=305						
MLY	Manley	52.61	30	pP	pP	03 51 56.8	+0.7
	baz=266						
CUT	Chulitna	52.67	33	pP	pP	03 51 57.5	+0.9
	baz=268						
BRZS	Berezniki	52.72	311	eP	P	03 51 42.5	-0.4
	baz=311						
MCK	McKinley	53.32	31	pP	pP	03 52 01.8	+0.4
	baz=268						
RND	Reindeer	53.35	32	P	P	03 51 46.7	-0.6
RND				IAmb	IAmb	03 52 04.6	
	comp=Z,3.5nm,0.7s						
SANVU	Saraoutou	53.39	148	P	P	03 51 47.6	-0.5
TOLK	Toolik Lake Re	53.39	25	pP	pP	03 52 02.4	+0.4
	baz=264						
TOLK	Toolik Lake Re	53.39	25	P	P	03 51 47.1	-0.4
SML	Sawmill	53.58	34	pP	pP	03 52 03.7	+0.4
	baz=270						
SML	Sawmill	53.58	34	P	P	03 51 48.9	-0.2
MDM	Murphy Dome	53.67	30	P	P	03 51 50.0	+0.4
MDM				IAmb	IAmb	03 52 07.7	
	comp=Z,3.7nm,0.7s						
WRH	Wood River Hil	53.71	31	P	P	03 51 49.6	-0.3
WRH				IAmb	IAmb	03 52 08.7	
	comp=Z,2.7nm,0.7s						
CCB	Clear Creek Bu	53.84	30	P	P	03 51 51.3	+0.5
WAT6	Susitna Watana	53.85	33	pP	pP	03 52 05.1	-0.4
	baz=270						
BRVK	Borovoye	53.85	315	P	P	03 51 51.1	0.0
BRVK				IAmb	IAmb	03 51 52.2	
	comp=Z,3.9nm,0.8s						
POKR	Poker Plat Res	54.01	30	pP	pP	03 52 06.5	+0.1
	baz=269						
SCM	Sheep Creek Mo	54.05	34	P	P	03 51 53.0	+0.4
HDA	Harding Lake	54.21	31	pP	pP	03 52 07.5	-0.4
	baz=270						
ILAR	Eielson Array	54.24	30	P	P	03 51 55.6	+1.9
	comp=Z,0.8nm,0.9s,baz=267,slow=6.8,SNR=6.4						
ILAR	Eielson Array	54.24	30	P	P	03 51 54.1	+0.3
M24K	Tolsona, Glenn	54.59	34	pP	pP	03 52 10.9	+0.2
	baz=272						
PAX	Paxson	54.89	32	pP	pP	03 52 13.3	+0.4
	baz=272						
N25K	Chitina, Valde	55.36	34	pP	pP	03 52 16.9	+0.5
	baz=274						
BMRM	Bremner River	55.40	35	pP	pP	03 52 16.9	+0.3
	baz=274						
KK31	Karatay Array	55.40	303	P	P	03 52 02.0	-0.5
KK31				IAmb	IAmb	03 52 03.0	
	comp=Z,4.5nm,0.8s						
KKAR	Karatay Array	55.40	303	P	P	03 52 02.2	-0.4
KKAR				IAmb	IAmb	03 52 03.0	
	comp=Z,4.5nm,0.8s						
KKAR	Karatay Array	55.40	303	P	P	03 52 01.6	-0.9
AS31	Alice Springs	55.54	188	P	P	03 52 03.4	-0.2
ASAR	Alice Springs	55.54	188	P	P	03 52 02.4	-1.3
	comp=Z,2.1nm,0.8s,baz=16,slow=12,SNR=42						
ASAR				PcP	PcP	03 53 04.3	+1.4
	comp=Z,1.5nm,0.8s,baz=15,slow=4.4,SNR=5.6						
ASAR	Alice Springs	55.54	188	P	P	03 52 02.5	-1.2
NIL	Nilore	55.88	291	P	P	03 52 06.0	-0.1
NIL				IAmb	IAmb	03 52 07.7	
	comp=Z,5.1nm,0.6s						
IUG	Iuzhnay	55.97	302	eP	P	03 52 05.9	-0.9
	comp=Z,3.5nm,0.8s,baz=302						
EGAK	Eagle	56.69	30	pP	pP	03 52 25.1	-0.7
	baz=274						
EGAK	Eagle	56.69	30	P	P	03 52 11.9	+0.6
EGAK				IAmb	IAmb	03 52 31.4	
	comp=Z,3.8nm,0.8s						
CTG	Chitna Glacier	56.99	35	pP	pP	03 52 28.5	+0.4
	baz=277						
EPYK	Eagle Plains	58.36	28	pP	pP	03 52 38.3	+0.6
	baz=277						
HYT	Haines Junctio	58.86	35	P	P	03 52 26.9	+0.1
HYT				IAmb	IAmb	03 52 37.4	
	comp=Z,4.2nm,1.1s						
INK	Inuvik	59.30	26	P	P	03 52 31.9	+2.4
	comp=Z,1.1nm,0.4s,baz=287,slow=3.3,SNR=6.5						
INK	Inuvik	59.30	26	P	P	03 52 29.6	+0.1
ARU	Arti	59.98	321	P	P	03 52 34.1	-0.3
ABKAR	Akbulak array	60.98	312	P	P	03 52 40.8	-0.6
ABKAR	Akbulak array	60.98	312	P	P	03 52 40.7	-0.6
ABKAR				IAmb	IAmb	03 52 42.7	
	comp=Z,3.9nm,0.7s						
C36M	Paulatuk	62.41	23	pP	pP	03 53 05.5	+0.2
	baz=287						
C36M	Paulatuk	62.41	23	P	P	03 52 50.8	+0.2
C36M				IAmb	IAmb	03 53 09.3	
	comp=Z,3.2nm,1.0s						
STKA	Stephens Creek	63.34	179	P	P	03 52 57.9	+0.8
	comp=Z,2.7nm,0.7s,baz=340,slow=9.1,SNR=6.8						
STKA	Stephens Creek	63.34	179	P	P	03 52 57.8	+0.6
EUNU	Eureka	65.43	8	P	P	03 53 10.6	+0.1
YKA	Yellowknife Ar	68.62	29	P	P	03 53 31.9	+1.1
	comp=Z,0.6nm,0.6s,baz=301,slow=5.9,SNR=13						
ARCES	ARCESS Array B	68.71	340	P	P	03 53 31.4	+0.2
	comp=Z,1.9nm,0.7s,baz=55,slow=5.2,SNR=7.4						
DAG	Danmarks Havn	70.93	355	i P	P	03 53 45.3	+0.6
	comp=Z,7.7nm,0.9s						
DAG	Danmarks Havn	70.93	355	i P	P	03 53 45.3	+0.6
DAG				IAmb	IAmb	03 53 46.2	
	comp=Z,7.7nm,0.9s						
FINES	FINESS Array B	73.20	333	P	P	03 53 58.8	+0.2
	comp=Z,4.3nm,0.6s,baz=65,slow=5.1,SNR=29						
DBG	Daneborg	73.41	355	i P	P	03 54 00.0	+0.4
KBZ	Khabaz	73.93	312	P	P	03 54 03.8	+0.6
	comp=Z,8.6nm,0.8s,baz=79,slow=2.6,SNR=20						
KIV	Kislovodsk	73.96	312	P	P	03 54 03.4	-0.1
PINE	Pine Mountain	74.18	48	P	P	03 54 05.0	+0.1
PINE				IAmb	IAmb	03 54 15.3	
	comp=Z,4.2nm,0.8s						
SUMG	Summit	75.90	360	i P	P	03 54 16.2	+1.6
	comp=Z,23nm,0.9s						
SUMG	Summit	75.90	360	i P	P	03 54 16.2	+1.6
SUMG				IAmb	IAmb	03 54 18.6	
	comp=Z,23nm,0.9s						
JTMT	Jette	76.19	42	P	P	03 54 16.2	-0.1
GEVA	Gevas	76.47	307	P	P	03 54 18.1	0.0
GEVA				IAmb	IAmb	03 54 20.2	
	comp=Z,7.2nm,0.8s						
BEKR	Beckworth	76.49	51	P	P	03 54 17.9	-0.3
NACGM	Naroch	76.81	327	i P	P	03 54 17.4	-2.0
NACGM				i P	P	03 54 17.4	-2.0
NACGM				i P	P	03 54 17.4	-2.0
NACGM				i Pb	pwP	03 54 39.7	+1.7
	comp=Z,14nm,0.9s						
NACGM				i PP	PP	03 57 01.3	-11
NACGM				i PPP	PPP	03 58 46.4	
NACGM				i S	S	04 03 45.5	-17
NACGM				i PS	PnS	04 05 46.9	+60
NACGM				i SS	SS	04 08 32.5	-26
NACGM				i SSS	SSS	04 11 46.8	
NACGM				i LQ	LQ	04 21 50.1	
NACGM				i LR	LR	04 27 19.9	
AKASG	Malin Array Be	78.11	323	P	P	03 54 26.5	-0.4
	comp=Z,2.3nm,0.4s,baz=50,slow=5.4,SNR=14						
AKASG	Malin Array Be	78.11	323	P	P	03 54 27.0	+0.2
AKBB	Malin Array Si	78.11	323	P	P	03 54 27.0	+0.1
AKBB				IAmb	IAmb	03 54 45.9	
	comp=Z,8.3nm,1.1s						
MARD	Mardin	78.53	307	P	P	03 54 29.3	-0.3
EGMT	Eagleton	78.58	40	P	P	03 54 29.6	0.0
NVAR	Mina Array Bea	78.60	52	P	P	03 54 32.5	+2.4
	comp=Z,0.9nm,0.6s,baz=292,slow=5.9,SNR=8.6						
NVAR				LR	LR	04 22 29.0	
	comp=Z,61nm,20.1s,baz=358,slow=30						
NVAR	Mina Array Bea	78.60	52	P	P	03 54 29.6	-0.5
NB2	NORSAR Subarra	78.80	338	P	P	03 54 30.2	-0.3
	comp=Z,2.1nm,0.7s,baz=42,slow=5.6						
NOA	NORSAR Array B	78.80	338	P	P	03 54 30.5	0.0
	comp=Z,3.3nm,0.7s,baz=42,slow=5.4,SNR=11						
BOZ	Bozeman (W)	78.90	43	P	P	03 54 31.4	-0.1
ICESG	Greenland Ices	79.41	0	eP	P	03 54 35.0	+1.0
PDAR	Pinedale Array	81.74	44	P	P	03 54 48.5	+1.6
	comp=Z,0.8nm,0.6s,baz=245,slow=1.4,SNR=11						
BR131	Keskin Array S	81.92	312	P	P	03 54 47.6	-0.2
BRTR	Keskin Array B	81.92	312	P	P	03 54 48.2	+0.4
	comp=Z,5.5nm,0.7s,baz=101,slow=4.5,SNR=30						
BRTR	Keskin Array B	81.92	312	P	P	03 54 47.7	-0.2
BUR08	Bucovina Ar. S	82.07	322	P	P	03 54 48.5	+0.1
BURAR	Bucovina Array	82.08	322	P	P	03 54 48.5	+0.1
RAYN	Ar Rayn	82.15	293	P	P	03 54 49.0	-0.2
RAYN				IAmb	IAmb	03 54 50.7	
	comp=Z,5.8nm,0.7s						
KOLS	Kolonicke sedl	82.74	324	eP	P	03 54 53.9	+2.2
RDMU	Red Mountain	83.03	46	P	P	03 54 53.4	-0.3
O20A	White River Ci	84.10	46	P	P	03 54 58.8	-0.4
O20A				IAmb	IAmb	03 55 01.7	
	comp=Z,4.5nm,0.8s						
OSTC	Ostas	84.50	328	eP	P	03 55 01.8	+1.1
CHVC	Chvalec	84.55	328	eP	P	03 55 01.0	0.0
KRLC	Kraliky	84.58	328	eP	P	03 55 01.2	0.0
DPC	Dobruska-Polom	84.59	328	eP	P	03 55 02.0	+0.7
UPC	Upice	84.62	328	eP	P	03 55 01.7	+0.4
PV23	Carpenter Ridg	84.63	48	P	P	03 55 01.6	-0.3
PV14	Lion Creek, Pa	84.67	48	P	P	03 55 01.8	-0.3
PV14				IAmb	IAmb	03 55 04.8	
	comp=Z,5.2nm,0.7s						
PV17	East Wray Mesa	84.76	48	P	P	03 55 02.2	-0.4
PV17				IAmb	IAmb	03 55 14.3	
	comp=Z,7.9nm,1.1s						
PV16	Nyswonger Mesa	84.77	48	P	P	03 55 02.2	-0.4
PV16				IAmb	IAmb	03 55 21.0	
	comp=Z,5.6nm,1.2s						
PV03	Paradox Valley	84.85	48	P	P	03 55 02.5	-0.5
PV03				IAmb	IAmb	03 55 06.2	
	comp=Z,3.9nm,1.1s						
CSS	Mathiatis	84.86	308	P	P	03 55 03.0	+0.1
PV13	Radium Mtn., P	84.92	48	P	P	03 55 03.0	-0.4
PV13				IAmb	IAmb	03 55 05.9	
	comp=Z,3.4nm,0.7s						
PV01	Paradox Valley	85.10	48	P	P	03 55 03.8	-0.5
PV01				IAmb	IAmb	03 55 07.8	
	comp=Z,2.9nm,0.7s						
CLL	Collm	85.36	330	eP	P	03 55 04.0	-1.0
	comp=Z,7.0nm,0.9s						
CLL				epP	pP	03 55 19.0	-1.4
CLL				i sP	pwP	03 55 23.5	-0.2
CLL				ePP	PP	03 58 25.0	+2.2
KHC	Kasperske Hory	86.71	328	eP	P	03 55 11.2	-0.6
GERES	GERESS Array B	86.86	328	P	P	03 55 11.6	-1.1
	comp=Z,0.7nm,0.7s,baz=47,slow=5.9,SNR=5.5						
TX31	Lajitas Ar. Si	93.75	52	P	P	03 55 44.8	-0.4
TX32	Lajitas Array	93.75	52	P	P	03 55 44.9	-0.3
TX32				IAmb	IAmb	03 56 04.1	
	comp=Z,2.5nm,0.8s						
TXAR	Lajitas Array	93.75	52	P	P	03 55 47.3	+2.1
	comp=Z,1.6nm,0.6s,baz=276,slow=2.6,SNR=10.0						
TXAR	Lajitas Array	93.75	52	P	P	03 55 44.8	-0.4
TORD	Torodi Ar. Bea	120.54	312	PKP	PKiKP	04 01 19.8	-0.2
	comp=Z,0.4nm,0.5s,baz=27,slow=2.7,SNR=2.3						
H03N2	Juan Fernandez	146.66	104	T	T	06 47 03.6	
H03N3	Juan Fernandez	146.67	104	T	T	06 47 00.4	
	baz=281,slow=74,SNR=4.2						
H03N1	Juan Fernandez	146.68	104	T	T	06 47 05.3	
	baz=108,slow=74,SNR=4.2						
LPAZ	La Paz	149.56	66	PKPbc	PKiKP	04 02 20.2	+0.7
	comp=Z,2.9nm,0.8s,baz=329,slow=2.7,SNR=10.0						
LPAZ	La Paz	149.56	66	PKPdf	PKPdf	04 02 12.6	-1.3
SIV	San Ignacio	154.66	57	PKPab	PKPab	04 02 44.6	+0.4
	comp=Z,0.9nm,0.8s,baz=286,slow=12,SNR=2.2						

AUST 25 05:39:40.1±0.6, 32°.28S×138°.39E, h0^{km}, Error ellipse: s-maj=7.1km s-min=3.9km az=77.0, Near coast of South Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HTT	Hallett	1.23	159	P	Pg	05 40 02.6	-1.2
	baz=1.2,SNR=3.3						
HTT				S	Sb	05 40 20.9	+0.1
	baz=1.2						
LCRK	Leigh Creek	1.83	355	P	Pn	05 40 12.0	-0.9
	baz=1.8						
LCRK				S	Sg	05 40 38.7	-0.3
	baz=1.8						
BBOO	Buckleboo	2.04	254	P	Pn	05 40 16.8	+1.1
	baz=2.0,SNR=7.1						
BBOO				S	Sn	05 40 41.9	+0.1
	baz=2.0						

NNC 25 05:53:22.8±3.8, 37°.00N×70°.31E, h0^{km}, mb3.8, mpv3.4, Error ellipse: s-maj=31.0km s-min=28.6km az=121.0

ISC 25 05:53:13.8±2.2, 36°.19N±0°.09×70°.3E±0°.2, h50^{km}, n9, σ2^{s}.43/12, 5C-1D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	6.91	1	⇑P	Pn	05 54 54.8	+2.3
	0.9nm,0.2s,baz=190,slow=14,SNR=30						
KK31				⇓S	Sn	05 56 05.6	-4.1
	1.0nm,0.3s,baz=193,slow=19,SNR=4.3						
AAK	Ala-Archa	7.22	25	⇑P	Pn	05 55 00.1	+3.3
	1.2nm,0.5s						
AAK				⇑S	Sn	05 56 16.8	-0.7
	11nm,0.6s						
TKM2	Tokmak 2	7.87	30	⇑P	Pn	05 55 08.2	+2.4
	1.5nm,0.5s						
TKM2				⇑S	Sn	05 56 31.8	-1.9

	4.7nm,0.8s						
DMN	**Daman**	**15.20**	**120**	*e*P	**P**	**05 56 48.5**	**-1.1**
PKIN	**Phulchoki**	**15.42**	**120**	*e*P	**P**	**05 56 50.9**	**-1.2**
	18nm,0.4s						
PKI	**Pulchoki**	**15.44**	**120**	*e*P	**Pn**	**05 56 50.1**	**+1.5**
	27nm,0.7s						
GUN	**Gumba**	**15.57**	**118**	*e*P	**Pn**	**05 56 50.6**	**+0.3**
	13nm,0.5s						
RAMN	**Ramite**	**16.65**	**119**	*e*P	**Pn**	**05 57 03.1**	**-0.9**
	12nm,0.6s						
TAPN	**Taplejung**	**17.21**	**116**	*e*P	**Pn**	**05 57 08.9**	**-2.1**
	10nm,0.6s						

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*BJI **25** 05:59:31.2±0.0,51.°02N×85.°24E,h14^{km},mB4.4/1, mb4.2/2,ML3.8/4,Ms3.6/1*

*MOS **25** 05:59:33.8±1.2,50.°67N×85.°46E,h9^{km},mb4.1/1,Error ellipse: s-maj=13.0km s-min=10.5km az=114.7*

*IDC **25** 05:59:34.5±0.7,50.°53N×85.°56E,h0^{km},mb3.8/11, mb1 3.9/18,mb1mx3.8/63,mbtmp3.8/18,ML3.4/7,MS3.4/1, Ms1 3.4/1,ms1mx2.5/43,Error ellipse: s-maj=9.9km s-min=9.0km az=127.0*

*NNC **25** 05:59:36.1±1.3,50.°55N×85.°38E,h0^{km}±8^{km},mb4.0, mpv3.7,Error ellipse: s-maj=10.9km s-min=6.3km az=107.0*

*ASRS **25** 05:59:36.9±0.3,51 °N±1 °×8 °6E± °,h10^{km},MLh4.0/16, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/tab confirmed*

*SOME **25** 05:59:39.3,50.°30N×85.°10E,h10^{km}*

ISC 25 05:59:36.5±1.0**,50.°56N**±0.°02×**85.°50E**±0.°02**,h18**^{km}±7^{km}**, n76,σ1^{s}.88**/109**,mb3.8**/14**,17C-11D,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UKR	**Ust'-Kan**	**0.60**	**310**	Pg	**Pb**	**05 59 48.4**	**-0.1**
UKR				Sg	**Sb**	**05 59 56.5**	**-0.2**
CHBI	**Chibit, Altay**	**1.30**	**100**	Pg	**Pn**	**06 00 00.7**	**+0.8**
CHBI				Sg	**Sb**	**06 00 17.4**	**+0.4**
GALT	**Gorno-Altaysk,**	**1.43**	**11**	Pg	**Pg**	**06 00 03.7**	**-0.4**
GALT				Sg	**Sg**	**06 00 22.9**	**+0.2**
DGZ	**Jazzator, Alta**	**1.51**	**124**	Pg	**Pn**	**06 00 03.7**	**+0.8**
DGZ				Sg	**Sn**	**06 00 22.1**	**-0.1**
DGZ	**Jazzator, Alta**	**1.51**	**124***c*	*i*PN	**Pn**	**06 00 03.6**	**+0.8**
ULGR	**Ulagan, Altay**	**1.57**	**87**	Pg	**Pb**	**06 00 06.0**	**+1.0**
ULGR				Sg	**Sb**	**06 00 25.7**	**+1.1**
ARTR	**Artybash**	**1.67**	**41**	Pg	**Pg**	**06 00 08.1**	**-0.5**
ARTR				Sg	**Sg**	**06 00 30.0**	**-0.3**
CUR	**Chagan-Uzun**	**1.88**	**103**	Pg	**Pb**	**06 00 11.5**	**+1.0**
CUR				Sg	**Sg**	**06 00 36.3**	**-0.8**
TASR	**Tashtagol**	**2.66**	**33**	Pg	**Pb**	**06 00 25.5**	**+2.0**
TASR				Sg	**Sg**	**06 01 01.0**	**-0.8**
ELT	**Eltsovka**	**2.75**	**9**	Pg	**Pb**	**06 00 26.6**	**+1.6**
ELT				Sg	**Sg**	**06 01 04.4**	**-0.3**
TEL	**Teeli**	**3.02**	**79**	Pg	**Pg**	**06 00 33.5**	**-0.8**
TEL				Sg	**Sg**	**06 01 10.8**	**-2.6**
ZSN	**Zaisan**	**3.14**	**188**	*e*P	**Pb**	**06 00 32.9**	**+1.1**
	25nm,0.3s						
ZSN				*e*S	**Sb**	**06 01 11.8**	**+2.0**
	209nm,0.7s						
ZSN	**Zaisan**	**3.14**	**188**	Pg	**Pb**	**06 00 32.9**	**+1.1**
	25nm,0.3s						
ZSN				Lg	Lg	06 01 11.7	
	209nm,0.7s						
ZSN	**Zaisan**	**3.14**	**188**	*e*PN	**Pb**	**06 00 32.9**	**+1.1**
ZSN				*e*S	**Sb**	**06 01 11.8**	**+2.0**
SEM	**Semipalatinsk**	**3.36**	**269**	*e*P	**Pb**	**06 00 36.9**	**+1.2**
	10nm,0.4s						
SEM				*e*S	**Sb**	**06 01 18.6**	**+2.4**
	64nm,0.3s						
SEM	**Semipalatinsk**	**3.36**	**269**	Pg	**Pb**	**06 00 36.9**	**+1.2**
	10nm,0.4s						
SEM				Lg	Lg	06 01 18.6	
	64nm,0.3s						
SEM	**Semipalatinsk**	**3.36**	**269**	*e*PN	**Pb**	**06 00 36.9**	**+1.2**
SEM				*e*S	**Sb**	**06 01 18.6**	**+2.4**
ZAA0	**Zalesovo Array**	**3.42**	**353**	⇓Pn	**Pn**	**06 00 31.2**	**+2.3**
	1.6nm,0.6s						
ZAA0				⇓Pg	**Pb**	**06 00 36.6**	**0.0**
	4.0nm,0.5s						
ZAA0				⇑Sn	**Sn**	**06 01 12.2**	**+3.2**
	8.2nm,0.3s						
ZAA0				⇑Lg	Lg	06 01 26.8	
	24nm,0.5s						
ZALV	**Zalesovo Beam**	**3.42**	**353**	Pn	**Pn**	**06 00 31.4**	**+2.4**
	4.1nm,0.3s,baz=172,slow=14,SNR=58						
ZALV				Sn	**Sn**	**06 01 12.9**	**+3.9**
	25nm,0.3s,baz=167,slow=26,SNR=11						
ZALV				Lg	Lg	06 01 24.0	
	39nm,0.3s,baz=180,slow=26,SNR=10						
BJR3	**Bachatsky-3 (S**	**3.69**	**6**	Sg	**Sg**	**06 01 34.1**	**-0.9**
BJR1	**Bachatsky 1, K**	**3.70**	**5**	Pg	**Pb**	**06 00 42.7**	**+1.4**
BJR1				Sg	**Sg**	**06 01 32.4**	**-2.8**
LUZB	**Luzhba, Kemero**	**3.75**	**33**	Pg	**Pb**	**06 00 43.7**	**+1.5**
LUZB				Sg	**Sg**	**06 01 34.2**	**-2.5**
BJR4	**Bachatsky-4, K**	**3.78**	**7**	Sg	**Sg**	**06 01 35.5**	**-2.2**
SALR	**Pechorkino, Sa**	**3.87**	**2**	Pg	**Pb**	**06 00 47.0**	**+2.9**
SALR				Sg	**Sg**	**06 01 39.2**	**-1.4**
TBTR	**Tabat**	**4.02**	**52**	Pg	**Pb**	**06 00 45.4**	**-1.3**
TBTR				Sg	**Sg**	**06 01 44.9**	**-0.5**
DJO	**Djoy, Khakassi**	**4.20**	**56**	Pg	**Pb**	**06 00 50.3**	**+0.5**
DJO				Sg	**Sg**	**06 01 49.4**	**-1.8**
KHAR	**Kharino, NSO,**	**4.22**	**345**	Pg	**Pg**	**06 00 55.2**	**-2.2**
KHAR				Sg	**Sg**	**06 01 52.4**	**+0.4**
DJOS	**Djoyskaya Sosn**	**4.30**	**56**	Pg	**Pg**	**06 00 58.4**	**-0.4**
DJOS				Sg	**Sg**	**06 01 52.1**	**-2.3**
MK31	**Makanchi Array**	**4.33**	**211**	⇑Pn	**Pn**	**06 00 44.7**	**+3.3**
	0.6nm,0.2s,baz=26,slow=13,SNR=265						
MK31				⇓Pg	**Pb**	**06 00 55.1**	**+3.0**
	8.4nm,0.5s						
MK31				⇓Lg	Lg	06 01 49.1	
	26nm,0.5s,baz=33,slow=30						
MK31	**Makanchi Array**	**4.33**	**211***c*	*i*PN	**Pn**	**06 00 44.2**	**+2.8**
MKAR	**Makanchi Array**	**4.33**	**211**	Pn	**Pn**	**06 00 44.2**	**+2.7**
	4.1nm,0.3s,baz=25,slow=13,SNR=122						
MKAR				Sn	**Sn**	**06 01 33.5**	**+2.0**
	7.9nm,0.3s,baz=31,slow=25,SNR=8.6						
MKAR				Lg	Lg	06 01 48.5	
	9.4nm,0.3s,baz=31,slow=31,SNR=11						
MKAR	**Makanchi Array**	**4.33**	**211**	Sg	**Sg**	**06 01 51.2**	**-4.2**
MKAR	**Makanchi Array**	**4.33**	**211**	*i* PN	**Pn**	**06 00 44.5**	**+3.1**
MKAR				pmax	pmax		
	comp=Z,7.0nm,0.4s						
CERR	**Cheremushki**	**4.34**	**56**	Pg	**Pg**	**06 00 59.3**	**-0.2**
CERR				Sg	**Sg**	**06 01 53.9**	**-1.8**
BSTK	**Bystrovka, Nov**	**4.38**	**338**	Pg	**Pg**	**06 00 57.5**	**-2.7**
BSTK				Sg	**Sg**	**06 01 56.6**	**-0.3**
KURK	**Kurchatov**	**4.38**	**275**	⇓Pn	**Pn**	**06 00 44.0**	**+1.8**
	comp=Z,6.5nm,0.3s						
KURK				⇓Sn	**Sn**	**06 01 33.5**	**+0.8**
	comp=Z,17nm,0.6s						
KURK				⇓Lg	Lg	06 01 53.5	
	comp=Z,51nm,0.4s						
KURK	**Kurchatov**	**4.38**	**275***c*	*i*PN	**Pn**	**06 00 43.8**	**+1.6**
MAKZ	**Makanchi**	**4.42**	**213**	⇑Pn	**Pn**	**06 00 45.9**	**+3.2**
	comp=Z,6.1nm,0.5s						
MAKZ				⇑Lg	Lg	06 01 54.5	
	comp=Z,57nm,0.7s						
KURBB	**Kurchatov Arra**	**4.44**	**274**	Pn	**Pn**	**06 00 45.1**	**+2.1**
	comp=Z,2.9nm,0.3s,baz=87,slow=15,SNR=175						
KURBB				Sn	**Sn**	**06 01 35.2**	**+1.0**
	comp=Z,2.1nm,0.3s,baz=87,slow=26,SNR=8.5						
KURBB				Lg	Lg	06 01 54.4	
	comp=Z,3.4nm,0.3s,baz=89,slow=32,SNR=7.1						
KURBB	**Kurchatov Arra**	**4.44**	**274**	⇓Pn	**Pn**	**06 00 45.0**	**+2.1**
	comp=Z,33nm,0.3s						
KURBB				⇑Sn	**Sn**	**06 01 36.2**	**+2.0**
	comp=Z,36nm,0.4s						
KURBB				⇑Lg	Lg	06 01 55.4	
	comp=Z,166nm,0.6s						
TDK	**Taldyqorghan**	**7.33**	**223**	Pg	Pg	06 01 50.8	-6.0
	comp=Z,33nm,0.4s						
TDK				Lg	Lg	06 03 24.3	
	comp=Z,77nm,1.0s						
DJR	**Jarkent**	**7.33**	**214**	Pg	Pb	06 01 48.9	+5.6
	comp=Z,1.9nm,0.3s						
DJR				Lg	Lg	06 03 21.8	
	comp=Z,14nm,0.8s						
MNBS	**Baschi**	**8.08**	**219**	Pg		06 02 03.6	
	comp=Z,2.0nm,0.6s						
MNBS				Lg	Lg	06 03 46.7	
	comp=Z,18nm,0.8s						
BRZS	**Berezniki**	**8.24**	**271**	Pg		06 02 07.0	
	comp=Z,1.1nm,0.6s						
BRZS				Lg	Lg	06 03 52.4	
	comp=Z,10nm,0.9s						
PDGK	**Podgornoye**	**8.32**	**212**	⇓Pg	Pb	06 02 06.8	+6.8
	comp=Z,1.6nm,0.5s						
PDGK				⇑Sn	**Sn**	**06 03 12.5**	**+2.7**
	comp=Z,13nm,1.0s						
PDGK				⇑Lg	Lg	06 03 57.8	
	comp=Z,8.8nm,0.6s						
BVAR	**Borovoye Array**	**9.69**	**291**	Pn	**Pn**	**06 01 54.7**	**-0.2**
	comp=Z,0.8nm,0.3s,baz=118,slow=18,SNR=6.7						
BVAR				Sn	**Sn**	**06 03 40.1**	**-3.1**
	comp=Z,0.9nm,0.3s,baz=131,slow=22,SNR=3.3						
BVAR				Lg	Lg	06 04 42.3	
	baz=130,slow=27,SNR=1.3						
BRVK	**Borovoye**	**9.75**	**291**	⇑Pn	**Pn**	**06 01 56.5**	**+0.7**
	comp=Z,5.1nm,1.2s						
BRVK				⇑Sn	**Sn**	**06 03 43.6**	**-1.2**
	comp=Z,4.5nm,0.6s						
BRVK	**Borovoye**	**9.75**	**291**	*i* P	**Pn**	**06 01 55.6**	**-0.2**
TKM2	**Tokmak 2**	**10.22**	**225**	⇑Pn	**Pn**	**06 02 03.8**	**+1.4**
	comp=Z,1.2nm,0.8s						
TKM2				⇑Sn	**Sn**	**06 04 00.9**	**+4.3**
	comp=Z,2.2nm,0.6s						
AAK	**Ala-Archa**	**10.95**	**228**	Pn	**Pn**	**06 02 12.2**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=61,slow=10,SNR=1.4						
AAK				Lg	Lg	06 05 18.0	
	comp=Z,0.4nm,0.3s,baz=212,slow=18,SNR=4.1						
AAK	**Ala-Archa**	**10.95**	**228**	*i* P	**Pn**	**06 02 12.5**	**+0.1**
AAK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
KK31	**Karatay Array**	**12.67**	**240**	⇑Pn	**Pn**	**06 02 33.8**	**-2.0**
	comp=Z,2.8nm,0.7s,baz=52,slow=14,SNR=8.1						
KK31				⇓Sn	**Sn**	**06 04 55.8**	**-0.6**
	comp=Z,1.9nm,0.7s,baz=43,slow=23,SNR=5.8						
SONM	**Songino Array**	**13.93**	**93**	Lg	Lg	06 06 53.5	
	comp=Z,0.1nm,0.3s,baz=286,slow=26,SNR=2.9						
ULN	**Ulaanbaatar**	**14.33**	**92**	*i* P	**Pn**	**06 02 59.0**	**+0.4**
ARU	**Arti**	**17.00**	**301**	P	**Pn**	**06 03 32.7**	**-0.5**
ARU				S	**Sn**	**06 06 41.8**	**+0.2**
AKTO	**Aktyubinsk**	**17.45**	**280**	P	**Pn**	**06 03 38.5**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=80,slow=12,SNR=3.7						
NRIK	**Noril'sk**	**18.87**	**2**	P	**Pn**	**06 03 57.4**	**+1.4**
	comp=Z,0.3nm,0.3s,baz=168,slow=9.3,SNR=1.9						
NRIK	**Noril'sk**	**18.87**	**2**	*i* P	**P**	**06 03 54.7**	**-0.7**
NRIK				pmax	pmax		
	comp=Z,11nm,1.6s						
BELG	**Belogornoye**	**23.49**	**289**	LR	LR	06 13 45.1	
	comp=Z,78nm,18.4s,baz=205,slow=36						
ZEA	**Zeya**	**25.55**	**67**	*e*P	P	06 04 53.5	-10
CN2	**Changchun**	**27.71**	**88**	⇓P	**P**	**06 05 23.8**	**+0.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
WHN	**Wuhan**	**29.37**	**122**	P	**P**	**06 05 37.8**	**-0.7**
NEY	**Neytrino**	**29.79**	**273**	*i* P	**P**	**06 05 40.5**	**-1.8**
NEY				pmax	pmax		
	comp=Z,3.0nm,1.8s						
FINES	**FINESS Array B**	**33.76**	**312**	P	**P**	**06 06 17.5**	**+0.8**
	comp=Z,1.6nm,0.8s,baz=76,slow=12,SNR=2.5						
MNK	**Minsk**	**34.43**	**299**	*i* P	P	06 06 18.1	-4.5
	comp=E,4.0nm,1.0s						
MNK				*i* P	P	06 06 18.1	-4.5
	comp=N,19nm,0.8s						
MNK				*i* P	P	06 06 18.1	-4.5
	comp=Z,7.0nm,0.6s						
MNK				*i* PP	**PnPn**	**06 07 32.0**	**-5.3**
MNK				*i* PPP	PPP	06 07 43.5	
MNK				*i* PcP	**PcP**	**06 08 54.6**	**-3.0**
MNK				*i* S	**S**	**06 11 44.8**	**-4.8**
MNK				*i* SS	**SnSn**	**06 13 57.6**	**-2.4**
MNK				*i* SSS	SSS	06 14 17.9	
MNK				*i* ScS	**ScS**	**06 16 42.0**	**-2.1**
MNK				*i* LQ	LQ	06 17 45.6	
MNK				*i* LR	LR	06 20 15.0	
MNK				*i* LRM	MLR	06 21 12.2	
	comp=Z,32nm,10.1s						
MNK				*i* LRM	MLR	06 21 23.8	
	comp=E,12nm,16.6s						
MNK				*i* LRM	MLR	06 21 24.5	
	comp=N,96nm,15.2s						
AKASG	**Malin Array Be**	**34.96**	**293**	P	**P**	**06 06 27.8**	**+0.6**
	comp=N,0.4nm,0.4s,baz=64,slow=9.1,SNR=3.0						
JNU	**Nakatsue**	**37.36**	**100**	P	**P**	**06 06 48.0**	**0.0**
	comp=N,5.6nm,0.9s,baz=326,slow=11,SNR=2.1						
BRTR	**Keskin Array B**	**37.44**	**274**	P	**P**	**06 06 50.6**	**+1.9**
	comp=N,0.9nm,0.7s,baz=69,slow=5.8,SNR=3.9						
NB2	**NORSAR Subarra**	**40.81**	**314**	P	**P**	**06 07 17.1**	**+0.6**
	comp=Z,0.6nm,0.6s,baz=68,slow=7.9						
NOA	**NORSAR Array B**	**40.81**	**314**	P	**P**	**06 07 17.1**	**+0.6**
	comp=Z,0.6nm,0.5s,baz=67,slow=7.7,SNR=3.8						
ILAR	**Eielson Array**	**58.06**	**24**	P	**P**	**06 09 29.1**	**+1.0**
	comp=Z,0.7nm,0.6s,baz=322,slow=5.2,SNR=13						
ESDC	**Sonseca Array**	**60.37**	**297**	P	**P**	**06 09 45.4**	**+1.0**
	comp=Z,0.8nm,0.7s,baz=35,slow=6.8,SNR=5.6						
YKA	**Yellowknife Ar**	**66.17**	**10**	P	**P**	**06 10 23.0**	**+0.6**
	comp=Z,0.6nm,0.7s,baz=349,slow=6.7,SNR=12						
TORD	**Torodi Ar. Bea**	**76.05**	**274**	P	**P**	**06 11 23.2**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=37,slow=4.7,SNR=4.6						
WRA	**Warramunga Arr**	**82.31**	**134**	P	**P**	**06 11 56.5**	**-0.4**
	comp=Z,0.6nm,0.7s,baz=339,slow=5.5,SNR=6.3						
ASAR	**Alice Springs**	**85.36**	**137**	P	**P**	**06 12 12.1**	**-0.4**
	comp=Z,0.5nm,0.8s,baz=338,slow=5.7,SNR=5.3						

IDC 25 06:02:12.9±1.1**,0.°99N×127.°30E,h0**^{km}**,mb3.8**/5**, mb1 3.9**/6**,mb1mx3.7**/46**,mbtmp3.8**/6**,ML3.0**/1**,MS3.2**/1**, Ms1 3.2**/1**,ms1mx2.4**/38**,Error ellipse: s-maj=53.0km s-min=18.6km az=68.0,Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**4.38**	**115**	Pn	Pn	06 03 21.2	+0.5
	0.9nm,0.3s,baz=299,slow=14,SNR=1.6						
LEM	**Lembang**	**21.12**	**248**	LR	LR	06 16 37.4	
	comp=Z,73nm,20.2s,baz=255,slow=41						
WRA	**Warramunga Arr**	**21.92**	**162**	P	P	06 07 07.8	-0.3
	1.5nm,0.6s,baz=340,slow=11,SNR=14						
ASAR	**Alice Springs**	**25.34**	**166**	P	P	06 07 41.7	0.0
	3.0nm,0.8s,baz=346,slow=10.0,SNR=24						
USRK	**Ussuriysk Ar.**	**43.22**	**5**	P	P	06 10 15.7	-0.1
	0.6nm,0.7s,baz=159,slow=7.8,SNR=2.1						
SONM	**Songino Array**	**50.06**	**342**	P	P	06 11 08.4	-1.2
	0.6nm,0.8s,baz=152,slow=6.7,SNR=4.0						
MKAR	**Makanchi Array**	**60.12**	**326**	P	P	06 12 22.8	+0.6
	1.3nm,0.6s,baz=118,slow=8.3,SNR=17						

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*IDC **25** 06:07:39.3±0.7,60.°88S×41.°96W,h0^{km},mb4.2/12, mb1 4.3/13,mb1mx4.2/31,mbtmp4.2/13,ML3.6/1,MS3.6/7, Ms1 3.6/7,ms1mx3.4/18,Error ellipse: s-maj=27.4km s-min=16.4km az=41.0*

*NEIC **25** 06:07:40.6±1.7,60.°83S±0.°06×41.°8W±0.°2,h10^{km}±1^{km}, mb4.7/15,Error ellipse: s-maj=20.3km s-min=5.9km az=116.0*

ISC 25 06:07:40.5±0.5**,60.°86S**±0.°10×**41.°8W**±0.°1**,h10**^{km}**,n58, σ1^{s}.46**/47**,mb4.5**/17**,MS3.8**/8**,Scotia Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**7.18**	**26**	Pn	**Pn**	**06 09 25.0**	**-0.4**
PMSA	**Palmer Station**	**10.87**	**239**	LR	LR	06 14 07.0	
	comp=Z,431nm,19.2s,baz=11,slow=36						
VNA3	**Neumayer Olymp**	**16.43**	**143**	P	**Pn**	**06 11 29.0**	**-1.8**
VNA1	**Neumayer--Stat**	**16.64**	**140**	P	**Pn**	**06 11 32.4**	**-1.0**
VNA2	**Neumayer--Watz**	**17.00**	**141**	P	**Pn**	**06 11 36.8**	**-1.3**
	baz=293,slow=14						
SNAA	**Sanae**	**18.63**	**141**	P	**Pn**	**06 11 58.4**	**+0.2**
SNAA	**Sanae**	**18.63**	**141**	P	**Pn**	**06 11 58.4**	**+0.2**
	0.2nm,0.3s,baz=354,slow=3.4,SNR=17						
SNAA				LR	LR	06 16 37.7	
	comp=Z,128nm,21.7s,baz=358,slow=29						
SNAA	**Sanae**	**18.63**	**141**	P	**Pn**	**06 11 60.0**	**+1.8**
GO09	**Cerro Castillo**	**19.38**	**286**	P	**P**	**06 12 06.3**	**+0.2**
GO09				IAmb	IAmb	06 12 07.7	
	comp=Z,76nm,1.1s						
PLCA	**Paso Flores**	**26.75**	**306**	P	**P**	**06 13 19.4**	**-0.7**
	comp=Z,4.2nm,0.9s,baz=171,slow=6.4,SNR=6.2						
PLCA				LR	LR	06 22 52.5	
	comp=Z,115nm,21.5s,baz=166,slow=34						
QSPA	**South Pole Qui**	**29.38**	**180**	P	**P**	**06 13 44.8**	**+1.3**
	comp=Z,1.2nm,1.1s,baz=188,slow=4.5,SNR=1.8						
MT02	**Curacav**	**33.53**	**312**	P	**P**	**06 14 19.5**	**-0.6**
MT02				IAmb	IAmb	06 14 20.4	
	comp=Z,8.1nm,0.8s						
ZON	**Zonda**	**34.23**	**317**	P	**P**	**06 14 27.5**	**+1.3**
CPUP	**Villa Florida**	**36.10**	**336**	P	**P**	**06 14 42.3**	**0.0**
	comp=Z,2.0nm,0.9s,baz=178,slow=8.8,SNR=3.5						
CPUP				LR	LR	06 31 07.1	
	comp=Z,36nm,18.2s,baz=174,slow=39						
CO01	**Juntas del Tor**	**36.14**	**316**	P	**P**	**06 14 43.9**	**+0.9**
CO01				IAmb	IAmb	06 14 45.2	
	comp=Z,16nm,0.9s						
LCO	**Las Campanas**	**37.24**	**316**	P	**P**	**06 14 52.0**	**-0.3**
AC04	**Llanos de Chal**	**38.10**	**316**	P	**P**	**06 14 59.3**	**0.0**
VNDA	**Vanda**	**41.10**	**188**	LR	LR	06 31 18.7	
	comp=Z,70nm,18.4s,baz=200,slow=35						
PB01	**IPOC Station P**	**44.26**	**322**	P	**P**	**06 15 50.1**	**0.0**
PB01				IAmb	IAmb	06 15 51.7	
	comp=Z,10.0nm,1.0s						
SIV	**San Ignacio**	**46.91**	**334**	P	**P**	**06 16 11.3**	**+0.3**
	comp=Z,2.6nm,0.8s,baz=167,slow=8.5,SNR=10						
LPAZ	**La Paz**	**48.36**	**325**	P	**P**	**06 16 23.9**	**+0.9**
	comp=Z,2.0nm,1.0s,baz=141,slow=4.9,SNR=4.5						
LPAZ				LR	LR	06 39 40.5	
	comp=Z,47nm,18.3s,baz=169,slow=40						
LPAZ	**La Paz**	**48.36**	**325**	P	**P**	**06 16 23.4**	**+0.5**
LPAZ				IAmb	IAmb	06 16 24.7	
	comp=Z,5.5nm,1.2s						
SUR	**Sutherland**	**49.07**	**84**	P	**P**	**06 16 29.2**	**+1.4**
	comp=Z,3.8nm,0.8s,baz=234,slow=7.4,SNR=1.9						
SAML	**Samuel**	**54.19**	**334**	P	**P**	**06 17 06.4**	**+0.4**
SAML				IAmb	IAmb	06 17 07.7	
	comp=Z,9.5nm,1.1s						
BOSA	**Boshof**	**54.33**	**85**	P	**P**	**06 17 07.7**	**+0.6**
	comp=Z,5.2nm,0.9s,baz=229,slow=3.7,SNR=8.4						
BOSA				LR	LR	06 36 06.2	
	comp=Z,154nm,18.1s,baz=216,slow=31						
H10N3	**ASCENSION HYDR**	**56.69**	**33**	T	T	07 20 05.7	
	baz=194,slow=74						
H10N1	**ASCENSION HYDR**	**56.70**	**33**	T	T	07 20 02.1	
	baz=194						
H10N2	**ASCENSION HYDR**	**56.71**	**33**	T	T	07 20 04.9	
	baz=194,slow=74						
LBTB	**Lobatse**	**57.50**	**83**	P	**P**	**06 17 30.1**	**+0.3**
	comp=Z,6.3nm,0.7s,baz=198,slow=8.6,SNR=10						
LBTB	**Lobatse**	**57.50**	**83**	P	**P**	**06 17 29.9**	**+0.1**
LBTB				IAmb	IAmb	06 17 31.0	
	comp=Z,7.7nm,0.8s						
PTLC	**Puerto Leguiza**	**65.92**	**323**	*e*P	**P**	**06 18 22.5**	**-4.0**
LSZ	**Lusaka**	**67.05**	**80**	P	**P**	**06 18 33.1**	**-0.8**
PCON	**Cinco Dias**	**68.44**	**322**	*e*P	**P**	**06 18 44.9**	**+1.7**
PRAC	**Prado**	**69.31**	**324**	*e*P	**P**	**06 18 44.9**	**-3.1**
ORTC	**Ortega, Tolima**	**69.60**	**324**	*e*P	**P**	**06 18 53.2**	**+3.5**
TOLC	**Tolima**	**70.27**	**324**	*e*P	**P**	**06 18 53.2**	**-0.9**
RREF	**El Recreo**	**70.58**	**324**	*e*P	**P**	**06 18 56.0**	**-0.3**
SPBC	**San Pablo de B**	**70.93**	**326**	*e*P	**P**	**06 18 53.2**	**-4.7**
PTBC	**PUERTO BERRIO,**	**71.89**	**326**	*e*P	P	06 18 56.0	-7.5
SDV	**Santo Domingo**	**73.14**	**330**	P	**P**	**06 19 10.7**	**-0.5**
	comp=Z,2.2nm,0.6s,baz=31,slow=6.4,SNR=3.1						
DBIC	**Dimbokro**	**73.27**	**39**	P	**P**	**06 19 12.4**	**+0.7**
	comp=Z,2.4nm,0.7s,baz=186,slow=9.2,SNR=3.2						
TBI	**Tubuai**	**78.04**	**244**	*e*LR	LR	06 44 04.1	
	comp=Z,157nm,25.2s						
TOA0	**Torodi Ar. Sit**	**81.44**	**43**	P	**P**	**06 19 57.6**	**0.0**
TOA0				IAmb	IAmb	06 20 00.1	
	comp=Z,4.9nm,0.9s						
TORD	**Torodi Ar. Bea**	**81.44**	**43**	P	**P**	**06 19 59.2**	**+1.7**
	comp=Z,3.6nm,0.8s,baz=203,slow=5.7,SNR=16						
TORD	**Torodi Ar. Bea**	**81.44**	**43**	P	**P**	**06 19 58.1**	**+0.6**
TORD				IAmb	IAmb	06 20 00.2	
	comp=Z,3.5nm,0.8s						
PPT2	**Papeete2**	**83.14**	**246**	*e*LR	LR	06 46 26.8	
	comp=Z,156nm,25.5s						
TAOE	**Nuku Hiva Isla**	**86.38**	**258**	*e*LR	LR	06 47 52.3	
	comp=Z,81nm,23.4s						
ASAR	**Alice Springs**	**95.71**	**176**	P	**P**	**06 21 05.1**	**-1.4**
	comp=Z,0.3nm,0.8s,baz=160,slow=5.8,SNR=1.8						
AKASG	**Malin Array Be**	**124.88**	**47**	PKP	**PKPdf**	**06 26 38.1**	**-1.2**
	comp=Z,0.7nm,0.5s,baz=227,slow=27,SNR=4.3						
YKA	**Yellowknife Ar**	**134.84**	**321**	PKP	**PKiKP**	**06 26 59.8**	**+0.5**
	comp=Z,0.1nm,0.6s,baz=127,slow=2.4,SNR=3.1						
INK	**Inuvik**	**144.58**	**320**	PKP	PKPbc	06 27 14.2	0.0
	comp=Z,3.8nm,1.0s,baz=118,slow=1.2,SNR=7.2						
INK	**Inuvik**	**144.58**	**320**		PKPbc	06 27 14.1	-0.1
MKAR	**Makanchi Array**	**145.30**	**88**	PKPbc	**PKPab**	**06 27 17.4**	**+0.1**
	comp=Z,4.2nm,1.0s,baz=237,slow=3.8,SNR=19						
MKAR	**Makanchi Array**	**145.30**	**88**		**PKPdf**	**06 27 17.3**	**-0.1**
ILAR	**Eielson Array**	**147.40**	**310**	PKPbc	**PKPbc**	**06 27 23.5**	**+0.7**
	comp=Z,2.3nm,1.0s,baz=138,slow=1.8,SNR=14						
ZALV	**Zalesovo Beam**	**151.16**	**80**	PKPbc	**PKPbc**	**06 27 31.4**	**-1.2**
	comp=Z,0.4nm,0.3s,baz=222,slow=2.0,SNR=5.2						
ZALV	**Zalesovo Beam**	**151.16**	**80**		**PKPbc**	**06 27 31.6**	**-0.9**
SONM	**Songino Array**	**157.62**	**111**	PKPab	**PKPab**	**06 28 09.4**	**+1.0**
	comp=Z,0.1nm,0.4s,baz=226,slow=3.8,SNR=3.5						

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*IDC **25** 06:08:56.7±1.2,19.°00S×68.°82W,h130^{km}±11^{km},mb3.2/2, mb1 3.2/5,mb1mx3.1/33,mbtmp3.5/5,MS3.1/1,Ms1 3.0/1, ms1mx2.3/9,Error ellipse: s-maj=28.1km s-min=8.3km az=99.0*

*GUC **25** 06:08:56.6±0.7,18.°91S×69.°18W,h116^{km}±3^{km},ML3.4*

*VAO **25** 06:09:00.0±3.8,18.°63S×68.°93W,h150^{km}±17^{km},mb4.0*

ISC 25 06:08:55.5±0.7**,18.°90S**±0.°04×**69.°15W**±0.°07**,h118**^{km}±8^{km}**, n29,σ1^{s}.42**/41**,7C-1D,Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MNMC	**Minye Minye**	**0.48**	**241**	⇑*i*P	**Pn**	**06 09 13.9**	**+0.4**
MNMC				*i* S	**Sn**	**06 09 27.2**	**+0.2**
MNMC				IAML		06 09 28.3	
	comp=E,3µm,0.2s						
PB16	**IPOC Station P**	**0.66**	**329**	⇑*i*P	**Pn**	**06 09 16.0**	**+0.9**
PB16				*i* S	**Sn**	**06 09 30.9**	**+1.2**
PSGC	**Pisagua**	**1.15**	**233**	⇑*i*P	**Pn**	**06 09 18.8**	**-0.3**
PSGC				*i* S	**Sn**	**06 09 36.0**	**-0.8**
PB08	**IPOC Station P**	**1.23**	**180**	⇑*i*P	**Pn**	**06 09 21.3**	**+1.0**
PB08				*i* S	**Sn**	**06 09 39.9**	**+1.0**
PB08				IAML		06 09 41.4	
	comp=E,743nm,0.2s						
AP01	**Chacalluta**	**1.24**	**295**	⇑*i*P	**Pn**	**06 09 20.0**	**+0.1**
AP01				*e*S	**Sn**	**06 09 38.4**	**-0.1**
HMBC	**Humberstone**	**1.54**	**207**	⇑*i*P	**Pn**	**06 09 23.1**	**-0.3**
HMBC				*i* S	**Sn**	**06 09 44.1**	**-0.5**
TA02	**Huaiquique**	**1.65**	**214**	⇑*i*P	**Pn**	**06 09 24.4**	**-0.2**
TA02				*i* S	**Sn**	**06 09 45.7**	**-1.0**
TA01	**Diego Aracena**	**1.92**	**210**	*e*P	**Pn**	**06 09 27.2**	**-0.7**
TA01				IAML		06 09 54.7	
	comp=N,254nm,0.3s						
PATCX	**Punta Patache**	**2.13**	**206**	*e*P	**Pn**	**06 09 30.4**	**-0.2**
PB01	**IPOC Station P**	**2.15**	**188**	⇓*i*P	**Pn**	**06 09 31.3**	**+0.4**
PB01				*i* S	**Sn**	**06 09 57.5**	**-0.5**
PB01				IAML		06 09 59.3	
	comp=E,294nm,0.3s						
LPAZ	**La Paz**	**2.78**	**21**	P	**Pn**	**06 09 41.8**	**+2.4**
	comp=E,1.6nm,0.3s,baz=188,slow=7.3,SNR=65						
LPAZ				S	**Sn**	**06 10 15.4**	**+2.3**
	comp=E,0.6nm,0.3s,baz=239,slow=23,SNR=8.1						
LVC	**Limon Verde**	**3.70**	**177**	P	**Pn**	**06 09 53.0**	**+1.7**
	comp=E,1.2nm,0.3s,baz=342,slow=9.9,SNR=23						
LVC				S	**Sn**	**06 10 33.5**	**-0.9**
	comp=E,8.7nm,0.3s,baz=118,slow=23,SNR=26						
SIV	**San Ignacio**	**8.24**	**71**	P	**Pn**	**06 10 50.7**	**-1.5**
	comp=E,1.1nm,0.3s,baz=257,slow=12,SNR=30						
SIV				S	**Sn**	**06 12 18.7**	**-5.1**
	comp=E,0.0nm,0.3s,baz=55,slow=5.1,SNR=3.9						
VILB	**Vilhena**	**10.45**	**57**	*e*P	**Pn**	**06 11 21.3**	**-0.8**
TRCB	**Terra Rica**	**15.92**	**107**	*e*P	**Pn**	**06 12 35.2**	**+2.3**
PTGB	**Pitanga**	**16.89**	**113**	*e*P	**P**	**06 12 46.6**	**+1.7**
ITAB	**Concordia**	**17.71**	**121**	*e*P	**P**	**06 12 56.0**	**+2.1**
SNDB	**Serra Nova Dou**	**18.53**	**71**	*e*P	**P**	**06 13 02.4**	**-0.6**
FRTB	**Fartura**	**18.80**	**107**	*e*P	**P**	**06 13 05.5**	**-0.4**
BB19B	**Bebedouro**	**19.50**	**100**	*e*P	**P**	**06 13 13.3**	**-0.3**
ITTB	**Itaituba**	**19.50**	**44**	*e*P	**P**	**06 13 11.9**	**-1.6**
IPMB	**Ipameri, GO**	**19.89**	**91**	*e*P	**P**	**06 13 17.8**	**-0.1**
BDFB	**Brasilia**	**20.44**	**84**	P	**P**	**06 13 25.4**	**+1.6**
	comp=E,3.9nm,0.5s,baz=263,slow=9.7,SNR=14						
BDFB				LR	LR	06 21 51.6	
	comp=E,60nm,21.2s,baz=106,slow=38						
SMTB	**Santa Maria do**	**23.16**	**67**	*e*P	**P**	**06 13 51.4**	**-0.5**
JANB	**Januaria**	**24.06**	**85**	*e*P	**P**	**06 13 59.1**	**-1.0**
DIAM	**Diamantina, MG**	**24.15**	**93**	*e*P	**P**	**06 14 00.5**	**-0.5**
SDBA	**SAO DESIDERIO**	**24.21**	**78**	*e*P	**P**	**06 14 00.5**	**-0.9**
TORD	**Torodi Ar. Bea**	**76.72**	**71**	P	**P**	**06 20 32.6**	**-1.6**
	comp=E,0.7nm,0.6s,baz=256,slow=6.1,SNR=4.9						
YKA	**Yellowknife Ar**	**88.67**	**341**	P	**P**	**06 21 35.6**	**+0.6**
	comp=E,0.1nm,0.6s,baz=126,slow=5.8,SNR=2.1						
YKA				pP	**pP**	**06 22 07.4**	**+0.3**
	comp=E,0.6nm,0.8s,baz=133,slow=5.4,SNR=7.2						

*IDC **25** 06:23:40.0±2.7, 5°.35S×151°.82E, h0km, mb3.7/5, mb1 4.0/6, mb1mx3.7/30, mbtmp3.8/6, ML1.7/1, Error ellipse: s-maj=84.0km s-min=24.3km az=115.0*

ISC 25 06:23:45.6±2.5, **5°.5S**±0°.3×**151°.9E**±0°.4, **h45km, n7,** σ**0s82**/8, **mb3.8**/5, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	6.13	230	Pn	Pn	06 25 12.6	-1.1
	1.0nm,0.3s,baz=48,slow=15,SNR=1.3						
PMG				Sn	Sn	06 26 23.4	+0.8
	4.0nm,0.3s,baz=142,slow=17,SNR=8.4						
WRA	Warramunga Arr	22.34	228	P	P	06 28 40.5	+0.6
	2.5nm,0.5s,baz=52,slow=9.9,SNR=40						
ASAR	Alice Springs	25.06	222	P	P	06 29 06.8	+0.8
	2.5nm,0.7s,baz=56,slow=8.7,SNR=32						
FITZ	Fitzroy Crossi	28.58	242	P	P	06 29 37.1	-0.6
	1.3nm,0.6s,baz=52,slow=8.4,SNR=11						
SONM	Songino Array	66.46	328	P	P	06 34 31.0	+0.4
	0.2nm,0.4s,baz=142,slow=5.8,SNR=2.4						
MKAR	Makanchi Array	80.29	319	P	P	06 35 51.9	0.0
	0.1nm,0.5s,baz=103,slow=4.3,SNR=1.7						
TORD	Torodi Ar. Bea	149.70	287	PKPbc	PKPbc	06 43 31.4	-0.2
	0.5nm,0.3s,baz=88,slow=2.8,SNR=7.7						

IDC 25 06:27:06.0±2.0, **2°.55N**×**127°.40E, h0km, mb3.3**/4, **mb1 3.5**/4, **mb1mx3.4**/33, **mbtmp3.3**/4, **Error ellipse: s-maj=108.5km s-min=25.4km az=70.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	20.59	185	P	P	06 31 45.6	-1.2
	2.7nm,1.1s,baz=15,slow=11,SNR=2.6						
WRA	Warramunga Arr	23.36	163	P	P	06 32 16.4	0.0
	0.5nm,0.4s,baz=344,slow=11,SNR=10						
ASAR	Alice Springs	26.81	167	P	P	06 32 49.0	+0.7
	0.1nm,0.4s,baz=345,slow=11,SNR=1.8						
MKAR	Makanchi Array	58.90	325	P	P	06 37 07.0	0.0
	0.2nm,0.4s,baz=119,slow=8.0,SNR=4.9						

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*IDC **25** 06:31:45.4±3.8, 5°.47S×151°.82E, h81km±34km, mb3.8/10, mb1 4.0/11, mb1mx3.8/29, mbtmp4.1/11, MS2.8/2, Ms1 2.8/2, ms1mx2.7/29, Error ellipse: s-maj=25.2km s-min=20.5km az=120.0*

ISC 25 06:31:41.5±0.7, **5°.3S**±0°.1×**151°.9E**±0°.1, **h45km, n15,** σ**1s18**/17, **mb3.9**/11, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	6.23	229	P	Pn	06 33 13.0	+2.0
	0.7nm,0.3s,baz=23,slow=12,SNR=7.1						
PMG				S	Sn	06 34 21.1	+0.1
	3.9nm,0.3s,baz=167,slow=19,SNR=11						
PMG				LR	LR	06 35 36.0	
	comp=Z,97nm,21.0s,baz=76,slow=38						
HNR	Honiara	8.93	118	LR	LR	06 37 42.9	
	comp=Z,54nm,18.1s,baz=316,slow=40						
DZM	Mont Dzumac	21.77	141	P	P	06 36 30.2	+0.6
	6.7nm,0.9s,baz=337,slow=15,SNR=1.4						
WRA	Warramunga Arr	22.45	228	P	P	06 36 35.8	-1.1
	6.8nm,0.7s,baz=52,slow=9.8,SNR=44						
WRA				PcP	PcP	06 40 29.9	-0.4
	0.3nm,0.5s,baz=48,slow=2.2,SNR=2.2						
ASAR	Alice Springs	25.18	222	P	P	06 37 02.1	-0.9
	9.9nm,0.7s,baz=55,slow=9.1,SNR=83						
ASAR				PcP	PcP	06 40 35.8	-0.4
	0.2nm,0.6s,baz=60,slow=2.6,SNR=2.0						
FITZ	Fitzroy Crossi	28.65	242	P	P	06 37 32.8	-1.4
	4.1nm,0.6s,baz=70,slow=7.6,SNR=19						
MJAR	Matsushiro Arr	43.59	344	P	P	06 39 41.6	+0.2
	0.7nm,0.3s,baz=166,slow=8.9,SNR=1.9						
SONM	Songino Array	66.32	328	P	P	06 42 24.9	-0.7
	0.8nm,0.7s,baz=137,slow=5.8,SNR=3.5						
MKAR	Makanchi Array	80.16	319	P	P	06 43 47.5	+0.4
	0.1nm,0.4s,baz=85,slow=4.9,SNR=2.2						
ZALV	Zalesovo Beam	81.12	327	P	P	06 43 52.5	+0.5
	0.8nm,0.7s,baz=103,slow=6.4,SNR=2.0						
ILAR	Eielson Array	82.97	22	P	P	06 44 03.1	+1.6
	0.7nm,0.6s,baz=245,slow=5.0,SNR=14						
NVAR	Mina Array Bea	93.09	52	P	P	06 44 51.7	+0.5
	0.3nm,0.7s,baz=263,slow=6.2,SNR=4.1						
YKA	Yellowknife Ar	96.30	28	P	P	06 45 05.0	0.0
	0.1nm,0.5s,baz=270,slow=4.2,SNR=3.1						
TORD	Torodi Ar. Bea	149.65	287	PKPbc	PKPbc	06 51 26.3	-1.1
	2.4nm,0.7s,baz=65,slow=3.1,SNR=9.0						
BDFB	Brasilia	151.28	137	PKPbc	PKPbc	06 51 28.9	-2.5
	0.8nm,0.5s,baz=180,slow=5.1,SNR=3.1						

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*GCG **25** 06:33:35.9±0.3, 15°.03N×90°.69W, h173km±22km, MD3.5*
*MEX **25** 06:33:42.0±0.7, 14°.42N×91°.78W, h63km±13km, MD3.8*

ISC 25 06:33:40.3±2.9, **14°.2N**±0°.2×**92°.0W**±0°.1, **h35km, n6,** σ**1s10**/9, **Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.79	342	*i* P	Pn	06 33 54.9	0.0
THIG				*i* S	Sn	06 34 05.4	-0.1
FUG	Fuego 3	1.17	76	*e*P	Pn	06 34 01.1	+0.7
PCG	Pacaya	1.38	80	*e*P	Pn	06 34 01.6	-1.7
PCG				*e*S	Sn	06 34 21.8	+1.2
NBG	Las Nubes	1.67	75	*e*P	Pn	06 34 01.2	-6.1
PCIG		1.93	323	*e*P	Pn	06 34 10.6	-0.1
PCIG				*e*S	Sn	06 34 32.4	-1.3
CMIG	Matias Romero	4.02	317	*e*P	Pn	06 34 40.1	+0.7
CMIG				*e*S	Sn	06 35 25.8	+0.4

RSNC 25 06:38:48.6±1.2, **7°.94N**×**73°.56W, h81**km±10km, **ML1.7, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OCAC	Ocana	0.38	39	*e*P	Pn	06 39 00.8	-1.0
OCAC				*e*S	Sn	06 39 11.5	+0.1
OCAC				*i*		06 39 12.2	
	comp=Z,25nm,0.1s						
OCAC	Ocana	0.38	39	*e*P	Pn	06 39 00.7	-1.1
OCAC				*e*S	Sn	06 39 11.2	-0.2
OCAC				*i*		06 39 12.3	
	comp=Z,25nm,0.1s						
BRRC	Barranca, Sant	0.84	190	*e*P	Pn	06 39 05.3	-0.6
BRRC				*e*S	Sn	06 39 18.1	-0.6
BRRC				*i*		06 39 22.6	
	comp=Z,6.1nm,0.3s						
SMLC	San Martn de	0.99	330	*e*P	Pn	06 39 05.5	-2.2
SMLC				*e*S	Sn	06 39 20.6	-1.3
SMLC				*i*		06 39 26.5	
	comp=Z,26nm,0.1s						
SMLC	San Martn de	0.99	330	*e*P	Pn	06 39 07.4	-0.2
SMLC				*e*S	Sn	06 39 21.6	-0.3
SMLC				*i*		06 39 26.4	
	comp=Z,26nm,0.1s						
PAMC	Pamplona, Colo	1.04	125	*e*P	Pn	06 39 08.3	-0.4
PAMC				*e*S	Sn	06 39 24.8	+1.1
PAMC				*i*		06 39 26.2	
	comp=Z,4.6nm,0.4s						
ZARC	Zaragoza, Cauc	1.36	251	*e*P	Pn	06 39 11.3	-0.8
ZARC				*e*S	Sn	06 39 30.7	+0.7
ZARC				*i*		06 39 33.5	
	comp=Z,15nm,0.3s						
ZARC	Zaragoza, Cauc	1.36	251	*e*P	Pn	06 39 11.8	-0.4
ZARC				*e*S	Sn	06 39 30.0	+0.1
ZARC				*i*		06 39 33.4	
	comp=Z,15nm,0.3s						
BARC	Barichara	1.39	164	*e*P	Pn	06 39 11.5	-1.3
BARC				*e*S	Sn	06 39 31.1	+0.1
BARC				*i*		06 39 32.4	
	comp=Z,9.6nm,0.5s						
BARC	Barichara	1.39	164	*e*P	Pn	06 39 11.6	-1.2
BARC				*i*		06 39 32.2	
	comp=Z,10.0nm,0.7s						

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*BJI **25** 07:00:55.6±0.0, 31°.06N×141°.98E, h8km, mB5.9/81, mb5.5/58, Ms6.2/98, Ms7 6.2/91*

*JMA **25** 07:00:59.3±0.2, 31°.09N×142°.14E, h44km, M6.1*

*NIED **25** 07:00:59.3, 31°.09N×142°.14E, h44km, MW6.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{18}Nm; M_{rr}0.67; $M_{\theta\theta}$0.01; $M_{\phi\phi}$-0.68; $M_{r\theta}$-0.55; $M_{\theta\phi}$0.21; $M_{\phi r}$1.36; Fault plane solution: $M_0$1.63000×10^{18} NP1: ϕ_s338.00000°, δ77.00000°, λ87.00000°. NP2: ϕ_s172.00000°, δ13.00000°, λ103.00000°.*

*IDC **25** 07:00:59.2±0.4, 31°.03N×141°.81E, h0km, mb5.3/35, mb1 5.3/40, mb1mx5.3/43, mbtmp5.3/40, ML4.8/5, MS5.8/51, Ms1 5.8/51, ms1mx5.6/66 Error ellipse: s-maj=12.9km s-min=10.0km az=79.0*

*NEIC **25** 07:01:00.9±2.6, 31°.07N±0°.05×141°.82E±0°.08, h9km±1km, mb5.7/443, Ms_20 5.9/793, Mwb5.9/69, Mww5.9, Mwc5.9(GCMT), Error ellipse: s-maj=12.1km s-min=9.1km az=76.0*

*NEIC **25** 07:01:01.2, 31°.09N×141°.84E, h6km, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}0.65; $M_{\theta\theta}$-0.15; $M_{\phi\phi}$-0.50; $M_{r\theta}$0.09; $M_{\theta\phi}$0.11; $M_{\phi r}$0.87; Fault plane solution: $M_0$1.06000×10^{18} NP1:ϕ_s158.20000°, δ18.03000°, λ67.70000°. NP2:ϕ_s1.52000°, δ73.36000°, λ97.04000°. Principal axes: T 1.1262, Plg61.0000°, Azm282.0000°; N -0.1552, Plg7.0000°, Azm179.0000°; P -0.9710, Plg28.0000°, Azm86.0000°;*

*MOS **25** 07:01:03.4±1.0, 31°.30N×141°.70E, h28km, mb5.8/94, MS5.8/59 Error ellipse: s-maj=6.9km s-min=3.5km az=114.5*

*GCMT **25** 07:01:04.9±0.1, 30°.99N±0°.01×141°.93E, h13km, MW5.9/171, Moment Tensor Solution. s150,c313; s171,c545; Duration: 2s1 Moment tensor: Scale 10^{18} Nm; M_{rr}0.65±.01; $M_{\theta\theta}$0.04±.00; $M_{\phi\phi}$-0.68±.01; $M_{r\theta}$-0.09±.01; $M_{\theta\phi}$0.13±.00; $M_{\phi r}$0.35±.01; Best double couple: $M_0$0.76500×10^{18} NP1:ϕ_s173.00000°, δ31.00000°, λ94.00000°. NP2:ϕ_s348.00000°, δ59.00000°, λ88.00000°. Principal axes: T 0.7350, Plg76.0000°, Azm251.0000°; N 0.0600, Plg2.0000°, Azm349.0000°; P -0.7950, Plg14.0000°, Azm80.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*NEIC **25** 07:01:05, 30°.99N×141°.97E, h12km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}6.26; $M_{\theta\theta}$0.63; $M_{\phi\phi}$-6.89; $M_{r\theta}$-1.14; $M_{\theta\phi}$1.23; $M_{\phi r}$6.23; Fault plane solution: $M_0$9.23000×10^{17} NP1:ϕ_s172.00000°, δ23.00000°, λ92.00000°. NP2:ϕ_s350.00000°, δ67.00000°, λ89.00000°. Principal axes: T 8.7882, Plg68.0000°, Azm258.0000°; N 0.8241, Plg1.0000°, Azm350.0000°; P -9.6123, Plg22.0000°, Azm81.0000°;*

*NEIC **25** 07:01:06, 31°.09N×142°.09E, h16km, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}0.66; $M_{\theta\theta}$-0.05; $M_{\phi\phi}$-0.61; $M_{r\theta}$-0.09; $M_{\theta\phi}$0.08; $M_{\phi r}$0.79; Fault plane solution: $M_0$1.02000×10^{18} NP1:ϕ_s171.00000°, δ19.00000°, λ88.00000°. NP2:ϕ_s353.00000°, δ71.00000°, λ91.00000°. Principal axes: T 1.0433, Plg64.0000°, Azm264.0000°; N -0.0379, Plg1.0000°, Azm173.0000°; P -1.0054, Plg26.0000°, Azm83.0000°;*

*BGR **25** 07:01:08.7±0.0, 31°.21N×141°.68E, h51km, mb5.1, mB_BB6.2*

ISC 25 07:01:02.2±0.4, **31°.04N**±0°.03×**141°.86E**±0°.03, **h21**km±4km, **h21km:pP-P, n1710,** σ**1s65**/1396, **mb5.6**/405, **MS5.9**/525, **79C-48D, Fault plane solution: NP1:**ϕ_s136.96933°, δ23.64942°, λ31.37257°. **NP2:**ϕ_s17.78434°, δ77.94600°, λ110.50044°. **Principal axes:** T Plg52.6921°, Azm311.8999°; N Plg20.0288°, Azm193.3197°; P Plg30.0036°, Azm91.1681°; **Fault plane solution: NP1:**ϕ_s328.09262°, δ63.58939°, λ72.80210°. **NP2:** ϕ_s182.92448°, δ31.17556°, λ120.76757°. **Principal axes:** T Plg66.8548°, Azm205.9583°; N Plg15.3559°, Azm335.9313°; P Plg16.8860°, Azm70.7132°; **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAOM	Aogashimamukai	2.28	309	P	Pn	07 01 38.1	-0.5
JHCJ	Hachijojimakas	2.68	320	P	Pn	07 01 43.2	-0.9
JHCJ				*e*S	Sn	07 02 15.6	-0.3
JHJ2	Mitsune	2.70	320	P	Pn	07 01 42.6	-1.7
JHJ2	Mitsune	2.70	320	Pn	Pn	07 01 43.8	-0.5
JHJ	Hachijo jima 2	2.72	320	Pn	Pn	07 01 44.2	-0.4
	112nm,0.3s,baz=63,slow=22,SNR=26						
JHJ				Sn	Sn	07 02 16.2	-0.8
	434nm,0.3s,baz=258,slow=23,SNR=6.2						
JMKN	Mikurajimanish	3.43	327	P	Pn	07 01 53.1	-1.3
JMKN				*e*S	Sn	07 02 33.9	-0.5
BSO1	Boso 1	3.68	349	P	Pn	07 01 56.3	-1.0
JKO	Kozu shima	3.89	324	P	Pn	07 02 00.1	-0.6
JKO				*e*S	Sn	07 02 45.3	-0.4
BSO3	Boso 3	3.92	344	P	Pn	07 01 59.9	-1.0
CBIJ	Chichi jima	3.94	176	P	Pn	07 01 59.5	-2.0
CBIJ				*e*S	Sn	07 02 44.6	-2.5
JCJ	Chichijima	3.94	176	Pn	Pn	07 02 00.6	-0.9
	71nm,0.3s,baz=20,slow=23,SNR=20						
JCJ				Sn	Sn	07 02 45.4	-1.7
	398nm,0.3s,baz=286,slow=20,SNR=5.5						
JCJ				LR	LR	07 03 24.3	
	comp=Z,55μm,18.2s,baz=358,slow=37						
JCJ	Chichijima	3.94	176	Pn	Pn	07 02 00.7	-0.8
JSKK	Shikinejimakit	3.97	326	*e*S	Sn	07 02 47.2	-0.6
JTHY	Toshimahigashi	4.09	329	*e*S	Sn	07 02 49.7	-1.1
JIM2	Oshima 3	4.20	332	P	Pn	07 02 03.3	-1.7
JIM2				*e*S	Sn	07 02 52.4	-1.0
JKUC	kamogawauchiur	4.34	342	P	Pn	07 02 05.4	-1.5
JKUC				*e*S	Sn	07 02 54.6	-2.2
JIZS	Izushimoda	4.44	326	P	Pn	07 02 08.6	+0.3
JHTM	Izuhatsuma	4.58	329	P	Pn	07 02 09.9	-0.4
AJI	Ajiro2	4.62	331	P	Pn	07 02 13.1	+2.3
CHOJ	Chosi	4.72	350	*e*S	Sn	07 03 03.6	-2.7
TTO5	TONANKAI O.B.S	4.74	314	P	Pn	07 02 12.9	+0.6
JSG	Sagara	4.76	320		Pn	07 02 14.6	+1.9
JOD2	Odawara 2	4.81	332	P	Pn	07 02 12.5	-0.9
TTO1	TONANKAI O.B.S	5.01	302	P	Pn	07 02 17.1	+1.2
JSGW	Sagamiharawaka	5.06	335	P	Pn	07 02 15.8	-1.1
JYN	Shimob	5.24	329	P	Pn	07 02 18.8	-0.6
JHU	Hanno	5.26	337	*e*S	Sn	07 03 18.8	-0.8
JYT	Yasato	5.36	345	Pn	Pn	07 02 19.9	-1.0
JHYU	Hitachinakayam	5.39	349	*e*S	Sn	07 03 19.7	-3.1
JIE	Ise	5.48	309	P	Pn	07 02 22.5	-0.1
JRY	Ryogami san	5.54	334	P	Pn	07 02 22.3	-1.2
JRY				*e*S	Sn	07 03 25.7	-0.9
JHO	Hitachi	5.66	349	P	Pn	07 02 23.3	-1.8
JAO	Obara	5.71	319	P	Pn	07 02 27.4	+1.5
JAG	Ashikaga	5.73	340	P	Pn	07 02 25.6	-0.5
JNT	Takato	5.74	328	P	Pn	07 02 27.9	+1.6
JGF	Kuroka	5.91	322		Pn	07 02 30.1	+1.6
INU	Inuyama	5.91	318	Pn	Pn	07 02 29.6	+1.1
JTNC	Tanabenakahech	5.96	299	P	Pn	07 02 30.0	+0.7
JKT	Katashina	6.11	340	P	Pn	07 02 31.5	+0.2
JYTA	Yamagatataniai	6.25	318	P	Pn	07 02 33.8	+0.7
MJAR	Matsushiro Arr	6.27	332	Pn	Pn	07 02 34.4	+0.9
	14nm,0.3s,baz=150,slow=10,SNR=402						
MJAR				Sn	Sn	07 03 46.2	+1.7
	3.5nm,0.3s,baz=32,slow=12,SNR=4.8						
MJAR				LR	LR	07 05 06.8	
	comp=Z,60μm,18.7s,baz=170,slow=40						
MAJO	Matsushiro	6.27	332	*c i*P	Pn	07 02 33.5	0.0
MAJO	Matsushiro	6.27	332	Pn	Pn	07 02 35.2	+1.7
MAT	Matsushiro	6.27	332	P	Pn	07 02 34.6	+1.1
MAT				S	Sn	07 03 44.9	+0.3
MAT	Matsushiro	6.27	332	P	Pn	07 02 34.4	+0.9
MJB9	Matsu-Tunnel	6.28	332		Pn	07 02 35.4	+1.8
JGN	Niukaw	6.41	325	P	Pn	07 02 38.0	+2.6
JJN	Nakama	6.78	334	P	Pn	07 02 40.7	+0.3
JMM	Marumori	6.87	353	Pn	Pn	07 02 39.8	-1.8
JWT	Wachi	6.87	310	Pn	Pn	07 02 43.7	+2.0
JMN	Monobe	7.26	294	Pn	Pn	07 02 49.9	+2.8
JSZ	Suzu	7.39	331	⇓P	Pn	07 02 49.7	+0.8
JSD	Sado	7.58	338		Pn	07 02 50.5	-0.9
JMK	Ichinoseki	7.91	356	P	Pn	07 02 54.4	-1.5
JMK				*e*S	Sn	07 04 18.1	-6.7
JHG	Hegura jima	7.92	330	P	Pn	07 02 58.0	+1.9
JHS	Saijyo	8.33	301	P	Pn	07 03 02.5	+0.7
JHS	Saijyo	8.33	301		Pn	07 03 04.7	+2.8
JOI	OKI	8.88	308	P	Pn	07 03 11.3	+2.0
JNU	Nakatsue	9.54	285	Pn	Pn	07 03 22.3	+3.8
	2.3nm,0.3s,baz=86,slow=6.9,SNR=24						
JNU				LR	LR	07 07 01.7	
	comp=Z,83μm,18.2s,baz=102,slow=38						
JNU	Nakatsue	9.54	285		Pn	07 03 20.5	+2.0
JFA	Akaike	9.73	289	P	Pn	07 03 24.5	+3.6
JTM	Tenmabayashi	9.75	356	Pn	Pn	07 03 19.0	-2.1
JSU	Suzuyama	9.77	276		Pn	07 03 26.2	+4.6
JMZ	Minamidaito 2	10.71	244		Pn	07 03 35.8	+1.4
ERM	Erimo	11.00	5	P	Pn	07 03 34.8	-3.5
ERM	Erimo	11.00	5		Pn	07 03 34.8	-3.5
JTU	Tsushima	11.05	292		Pn	07 03 39.8	+0.8
JEW	Eniwo	11.78	359		Pn	07 03 45.1	-3.9
JOW	Kunigami	12.61	254	Pn	Pn	07 04 04.7	+4.2
	3.0nm,0.3s,baz=93,slow=5.5,SNR=10						
JOW				LR	LR	07 08 48.5	
	comp=Z,70μm,18.7s,baz=93,slow=37						
JOW	Kunigami	12.61	254		Pn	07 03 59.9	-0.5
NMR	Nemuro--Hokkai	12.68	13	*e*P	Pn	07 03 57.7	-3.6
GLVR	Golovnino	13.00	12	*e*P	Pn	07 04 02.9	-2.7
GLVR				pmax	pmax		
	comp=Z,250nm,0.6s						
GLVR				pmax	pmax		
	comp=N,136nm,0.4s						
GLVR				pmax	pmax		
	comp=E,110nm,0.3s						
JKA	Kamikawa-asahi	13.06	2	Pn	Pn	07 04 03.3	-3.2
ASAJ	Asahikawa	13.07	2	Pn	Pn	07 04 04.9	-1.7
	comp=E,13nm,0.3s,baz=234,slow=10,SNR=30						
ASAJ				Sn	Sn	07 06 22.1	-9.1
	comp=E,3.6nm,0.3s,baz=291,slow=27,SNR=3.3						
ASAJ				LR	LR	07 09 44.1	
	comp=E,34μm,21.4s,baz=190,slow=40						
KSRS	Korea Array	13.18	303	Pn	Pn	07 04 10.2	+2.1
	comp=E,1.2nm,0.3s,baz=113,slow=13,SNR=38						
KSRS				LR	LR	07 09 09.2	
	comp=E,30μm,18.5s,baz=116,slow=37						
TJN	Taejon	13.19	298	*ce*P	Pn	07 04 08.1	-0.1
KSAR	Wonju Array Be	13.20	303	P	Pn	07 04 10.3	+1.9
KSAR	Wonju Array Be	13.20	303		Pn	07 04 10.3	+1.9
KS19	Wonju Array Si	13.24	303		Pn	07 04 11.8	+2.8
GRPR	Tuman	13.29	12	P	Pn	07 04 07.8	-1.8
GRPR				pmax	pmax		
	comp=Z,180nm,0.5s						
GRPR				pmax	pmax		
	comp=N,61nm,0.3s						
GRPR				pmax	pmax		
	comp=E,123nm,0.3s						
RUSJ	Misakicho	13.31	11	*e*P	Pn	07 04 07.8	-2.1
RUSJ				*i* S	Sn	07 06 26.0	-11
YUK	Yuzh-Kuril'sk	13.35	13	*e*P	Pn	07 04 07.4	-3.0
YUK				pmax	pmax		
	comp=Z,484nm,1.3s						
YUK				pmax	pmax		
	comp=Z,279nm,0.4s						
YUK				pmax	pmax		
	comp=N,109nm,0.3s						
YUK				pmax	pmax		
	comp=E,53nm,0.3s						
INCN	Inchon	14.13	301	P	Pn	07 04 21.9	+0.8
INCN	Inchon	14.13	301	Pn	Pn	07 04 21.9	+0.8
INCN	Inchon	14.13	301	P	Pn	07 04 22.8	+1.7
INCN				P	Pn	07 04 22.8	+1.7
INCN				P	Pn	07 04 22.8	+1.7
MSHR	Mys Shultsa	14.34	326	*ce*P	Pn	07 04 23.4	-0.5
MSHR				pmax	pmax		
	comp=Z,46nm,0.8s						
MSHR				MLR	MLR		
	comp=Z,27μm,15.0s						
TEY	Ternei	14.57	345	⇓*e*P	Pn	07 04 23.7	-3.3
TEY				pmax	pmax		
	comp=E,30nm,1.0s						
TEY				pmax	pmax		
	comp=N,40nm,1.1s						
TEY				pmax	pmax		
	comp=Z,50nm,1.1s						
TEY				MLR	MLR		
	comp=E,1μm,12.0s						
TEY				MLR	MLR		
	comp=N,1μm,14.0s						
TEY				MLR	MLR		
	comp=Z,2μm,15.0s						
KUR	Kuril'sk	14.93	17	*e*P	Pn	07 04 31.0	-0.9
KUR				*e*S	Sn	07 07 05.7	-11
KUR				pmax	pmax		
	comp=Z,102nm,0.6s						
KUR				pmax	pmax		
	comp=N,87nm,0.8s						
KUR				pmax	pmax		
	comp=E,74nm,0.8s						
KUR				MLR	MLR		
	comp=Z,23μm,12.0s						
KUR				MLR	MLR		
	comp=E,68μm,13.0s						
KUR				MLR	MLR		
	comp=N,31μm,12.0s						
USA0B	Ussuriysk Arra	15.27	332	*c i*P	Pn	07 04 32.4	-4.1
USA0B	Ussuriysk Arra	15.27	332	Pn	Pn	07 04 35.0	-1.4
USRK	Ussuriysk Ar.	15.27	332	Pn	Pn	07 04 35.5	-1.0
	baz=146,slow=12,SNR=52						
USRK				LR	LR	07 10 28.2	
	comp=N,31μm,18.1s,baz=138,slow=37						
USRK	Ussuriysk Ar.	15.27	332		Pn	07 04 34.9	-1.6
YSS	Yuzh-Sakhalins	15.90	2	*d i*P	Pn	07 04 41.4	-3.3
YSS				MLR	MLR		
	comp=Z,52μm,14.0s						
YSS	Yuzh-Sakhalins	15.90	2	Pn	Pn	07 04 42.0	-2.6
MDJ	Mudanjiang	16.63	328	P	Pn	07 04 52.0	-2.0
MDJ				S	Sn	07 08 01.0	+3.0
MDJ				sS	S	07 08 06.3	-2.8
MDJ				SS	SnSn	07 08 17.0	+5.7
MDJ				pmax	pmax		
	comp=Z,4μm,11.7s						
MDJ				LR	LR		
	comp=Z,43μm,19.8s						
MDJ				LR	LR		
	comp=Z,43μm,19.6s						
MDJ				LR	LR		
	comp=Z,40μm,16.9s						
GUMO	Guam	17.59	170	P	Pn	07 05 05.2	-0.9
GUMO				pmax	pmax		
	comp=Z,2μm,1.2s						
GUMO	Guam	17.59	170	P	Pn	07 05 05.2	-0.9
GUMO	Guam	17.59	170	P	P	07 05 08.6	+1.6
SSE	Sheshan	17.71	276	P	Pn	07 05 07.5	-0.1
SSE				pmax	pmax		
	comp=Z,5μm,8.3s						
YOJ	Yonaguni jima	17.91	253	P	P	07 05 11.2	+0.6
YOJ				pmax	pmax		
	comp=Z,305nm,0.7s						
YOJ	Yonaguni jima	17.91	253	P	P	07 05 11.2	+0.6
YOJ				IAmb	IAmb	07 05 14.9	
	comp=Z,305nm,0.7s						
UGL	Uglegorsk	18.02	0	*e*P	Pn	07 05 10.3	-0.9
UGL				*e*S	Sn	07 08 31.6	+0.2
UGL				pmax	pmax		
	comp=Z,4μm,6.8s						
UGL				pmax	pmax		
	comp=Z,303nm,1.0s						
UGL				smax	smax		
	comp=E,24μm,8.1s						
UGL				smax	smax		
	comp=N,9μm,6.6s						
UGL				MLR	MLR		
	comp=Z,29μm,18.0s						
UGL				MLR	MLR		
	comp=N,29μm,15.0s						
UGL				MLR	MLR		
	comp=E,26μm,14.0s						
CN2	Changchun	18.18	319	⇓P	Pn	07 05 11.8	-1.5
CN2				*e*S	Sn	07 08 33.0	-2.6
CN2				pmax	pmax		
	comp=E,100nm,1.0s						
CN2				pmax	pmax		
	comp=E,5μm,6.0s						
CN2				LR	LR		
	comp=E,52μm,14.0s						
CN2				LR	LR		
	comp=E,28μm,14.0s						
CN2				LR	LR		
	comp=E,48μm,15.0s						
SNY	Shenyang	18.19	311	⇓P	Pn	07 05 12.8	-0.6
SNY				S	Sn	07 08 36.8	+1.0
SNY				pmax	pmax		
	comp=E,170nm,0.9s						
SNY				pmax	pmax		
	comp=E,6μm,8.4s						
SNY				LR	LR		
	comp=E,30μm,13.1s						
SNY				LR	LR		
	comp=E,43μm,13.7s						
SNY				LR	LR		
	comp=E,38μm,16.5s						
DL2	Dalian	18.32	301	⇑*i*P	Pn	07 05 13.3	-1.7

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DL2                                  S       Sn        07 08 36.0  -2.9
DL2                                  pmax    pmax
         comp=E,96nm,0.9s
DL2                                  pmax    pmax
         comp=E,8µm,8.4s
DL2                                  LR      LR
         comp=E,37µm,13.8s
DL2                                  LR      LR
         comp=E,49µm,16.7s
DL2                                  LR      LR
         comp=E,64µm,16.8s
TATO     Taipei             18.96 256    P       Pn        07 05 23.3  +0.4
TATO                                 IAmb    IAmb      07 05 26.3
         comp=Z,441nm,0.9s
TATO     Taipei             18.96 256    P       Pn        07 05 22.8  -0.1
TATO                                 P       Pn        07 05 22.8  -0.1
TATO                                 P       Pn        07 05 22.8  -0.1
YHNB     Yeheng             19.18 256    P       P         07 05 25.1  +0.5
YHNB                                 IAmb    IAmb      07 05 38.7
         comp=Z,270nm,0.8s
NACB     Ninganchiao        19.20 254    P       P         07 05 24.2  -0.6
NACB                                 IAmb    IAmb      07 05 28.6
         comp=Z,271nm,0.8s
NJ2      Nanjing            19.63 279⇑iP     P         07 05 28.5  -0.9
NJ2                                  pP      pP        07 05 32.5  -1.4
NJ2                                  sP      sP        07 05 35.8  -0.6
NJ2                                  PP      PnPn      07 05 45.5  +1.0
NJ2                                  S       S         07 08 58.5   -11
NJ2                                  pmax    pmax
         comp=Z,7µm,10.5s
NJ2                                  LR      LR
         comp=Z,23µm,17.5s
NJ2                                  LR      LR
         comp=Z,35µm,18.0s
NJ2                                  LR      LR
         comp=Z,43µm,18.2s
KLR      Kul'dur            19.71 340    P       P         07 05 29.9  -0.3
         comp=Z,2.6nm,0.3s,baz=149,slow=10,SNR=104
KLR      Kul'dur            19.71 340d iP    P         07 05 29.1  -1.0
KLR                                  pmax    pmax
         comp=Z,75nm,0.9s
KLR                                  MLR     MLR
         comp=Z,17µm,15.0s
YULB     Yu-li              19.79 252    P       P         07 05 31.7  +0.4
YULB                                 IAmb    IAmb      07 05 34.6
         comp=Z,361nm,0.6s
TYV      Tymovskoe          19.81   1  eP      Pn        07 05 32.3  -0.5
TYV                                  pmax    pmax
         comp=Z,77nm,0.9s
TYV                                  pmax    pmax
         comp=Z,2µm,4.4s
TYV                                  MLR     MLR
         comp=Z,23µm,18.0s
SSLB     Suanglung          19.90 254    P       P         07 05 32.9  +0.5
GRNR     Gornyy             20.12 350⇑iP     P         07 05 34.9  +0.3
GRNR                                 pmax    pmax
         comp=E,10.0nm,0.8s
GRNR                                 pmax    pmax
         comp=N,20nm,0.9s
GRNR                                 pmax    pmax
         comp=Z,20nm,0.8s
TPUB     Ta-pu              20.38 253    P       P         07 05 38.5  +0.8
TIA      Tai'an             21.21 291    P       P         07 05 45.0  -1.5
TIA                                  S       Sn        07 09 47.0  -1.7
TIA                                  pmax    pmax
         comp=Z,3µm,11.3s
TIA                                  LR      LR
         comp=Z,42µm,14.6s
TIA                                  LR      LR
         comp=Z,44µm,17.8s
TIA                                  LR      LR
         comp=Z,65µm,16.9s
QZH      Quanzhou           21.41 259⇑iP     P         07 05 47.5  -1.2
QZH                                  S       S         07 09 43.8  -1.6
QZH                                  pmax    pmax
         comp=Z,48nm,0.6s
QZH                                  pmax    pmax
         comp=Z,4µm,5.5s
QZH                                  LR      LR
         comp=Z,15µm,19.9s
QZH                                  LR      LR
         comp=Z,26µm,18.0s
QZH                                  LR      LR
         comp=Z,32µm,18.0s
KNMB     Chin-men Tao       21.76 258    P       P         07 05 50.9  -1.6
KNMB                                 IAMs_20 IAMs_20   07 14 54.4
         comp=Z,35µm,18.0s
SKR      Severo-Kuril's     22.32  24  eP      P         07 05 53.3  -4.9
SKR                                eS      S         07 10 04.0  +1.5
SKR                                  pmax    pmax
         comp=Z,2µm,4.4s
SKR                                  pmax    pmax
         comp=Z,1µm,5.5s
SKR                                  pmax    pmax
         comp=Z,221nm,1.0s
SKR                                  MLR     MLR
         comp=Z,11µm,13.0s
SKR                                  MLR     MLR
         comp=Z,8µm,13.0s
BJI      Beijing            22.68 300    P       P         07 06 00.5  -1.8
BJI                                  S       S         07 10 10.0  +0.6
BJI                                  pmax    pmax
         comp=Z,160nm,1.3s
BJI                                  LR      LR
         comp=Z,22µm,13.5s
BJI                                  LR      LR
         comp=Z,42µm,17.1s
BJI                                  LR      LR
         comp=Z,31µm,16.1s
BJT      Baijiatuau         22.68 300    IAMs_20 IAMs_20   07 16 01.6
         comp=Z,50µm,18.0s
WHN      Wuhan              23.62 276⇑iP     P         07 06 09.8  -2.0
WHN                                  sP      pP        07 06 16.3  -0.3
WHN                                  PP      PnPn      07 06 40.5  +1.4
WHN                                  pmax    pmax
         comp=Z,200nm,1.4s
WHN                                  pmax    pmax
         comp=Z,6µm,6.8s
WHN                                  LR      LR
         comp=Z,55µm,15.4s
WHN                                  LR      LR
         comp=Z,95µm,16.9s
WHN                                  LR      LR
         comp=Z,122µm,16.7s
SZP      Santa              23.63 240    IAMs_20 IAMs_20   07 14 27.3
         comp=Z,34µm,18.0s
PEA0B    Petropavlovsk-     24.88  23  i P     P         07 06 24.7  +1.4
PETK     Petropavlovsk-     24.88  23    P       P         07 06 25.8  +2.5
         comp=Z,9.0nm,0.8s,baz=193,slow=5.5,SNR=9.5
PETK                                 LR      LR        07 18 20.1
         comp=Z,12µm,18.9s,baz=215,slow=42
PETK     Petropavlovsk-     24.88  23    P       P         07 06 25.9  +2.6
PETK     Petropavlovsk-     24.88  23    P       P         07 06 25.9  +2.6
ZEA      Zeya               25.02 339  eP      P         07 06 24.3  -0.2
ZEA                                e                 07 06 58.5
ZEA                                eS      S         07 10 41.6  -5.7
ZEA                                  pmax    pmax
         comp=E,70nm,0.7s
ZEA                                  pmax    pmax
         comp=N,210nm,0.9s
ZEA                                  pmax    pmax
         comp=Z,360nm,1.0s
ZEA                                  pmax    pmax
         comp=E,1µm,10.3s
ZEA                                  pmax    pmax
         comp=N,2µm,10.5s
ZEA                                  pmax    pmax
         comp=Z,4µm,9.2s
ZEA                                  smax    smax
         comp=E,8µm,11.9s
TIY      Taiyuan            25.12 293  eP      P         07 06 22.5  -3.2
TIY                                  PP      PnPn      07 07 04.0  +4.4
TIY                                  S       S         07 10 46.3  -3.1
TIY                                  pmax    pmax
         comp=E,270nm,1.7s
TIY                                  pmax    pmax
         comp=E,2µm,8.5s
TIY                                  LR      LR
         comp=E,9µm,11.7s
TIY                                  LR      LR
         comp=E,54µm,17.6s
TIY                                  LR      LR
         comp=E,57µm,17.9s
PET      Petropavlovsk      25.14  24ceP     P         07 06 26.4  +0.8
PET                                  pmax    pmax
         comp=Z,372nm,1.3s
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PET                                  MLR     MLR
         comp=Z,35µm,15.0s
H11N2    WAKE ISLAND Hy     25.21 111    T       T         07 32 50.5
         baz=305,slow=74,SNR=18
H11N1    WAKE ISLAND Hy     25.21 111    T       T         07 32 54.0
         baz=305,slow=74,SNR=8.7
H11N3    WAKE ISLAND Hy     25.23 111    T       T         07 32 47.0
         baz=305,slow=74,SNR=8.8
TGY      Tagaytay City      25.56 233    P       P         07 06 30.2  +0.3
         comp=Z,167nm,0.4s,baz=7.5,slow=4.4,SNR=12
TGY                                  LR      LR        07 16 06.5
         comp=Z,20µm,18.0s,baz=48,slow=36
H11S3    WAKE ISLAND Hy     25.70 113    T       T         07 33 32.8
         baz=304
H11S1    WAKE ISLAND Hy     25.71 113    T       T         07 33 29.8
         baz=304
H11S2    WAKE ISLAND Hy     25.72 113    T       T         07 33 32.6
         baz=304
HKC      Hong Kong Obse     26.17 257 ⇑P     P         07 06 36.0  +0.7
HHC      Hu-ho-hao-te       26.30 300  eP      P         07 06 38.3  +1.9
HHC                                  PP      PnPn      07 07 20.8  +5.1
HHC                                  S       S         07 11 08.0  -0.1
HHC                                  pmax    pmax
         comp=Z,86nm,1.2s
HHC                                  pmax    pmax
         comp=Z,4µm,6.6s
HHC                                  LR      LR
         comp=Z,30µm,13.3s
HHC                                  LR      LR
         comp=Z,53µm,16.5s
HHC                                  LR      LR
         comp=Z,68µm,16.7s
GZH      Guangzhou          26.55 260    P       P         07 06 33.0  -5.7
GZH                                  S       S         07 11 05.0  -7.0
GZH                                  LR      LR
         comp=Z,25µm,17.7s
GZH                                  LR      LR
         comp=Z,16µm,18.8s
BTO      Baotou             27.40 299  eP      P         07 06 45.0  -1.3
XAN      Xi'an              27.86 285    P       P         07 06 48.5  -2.0
XAN                                  pP      pP        07 06 54.3  -1.1
XAN                                  sP      pwP       07 07 00.5  -1.4
XAN                                  pmax    pmax
         comp=Z,63nm,1.6s
XAN                                  pmax    pmax
         comp=Z,230nm,4.6s
XAN                                  LR      LR
         comp=Z,24µm,14.0s
XAN                                  LR      LR
         comp=Z,21µm,15.5s
XAN                                  LR      LR
         comp=Z,24µm,16.3s
XAN      Xi'an              27.86 285    IAmb    IAmb      07 07 03.5
         comp=Z,101nm,0.9s
DAV      Davao City (W)     28.30 216    P       P         07 06 54.8  +0.4
         comp=Z,204nm,0.4s,baz=275,slow=8.1,SNR=5.3
DAV                                  LR      LR        07 16 28.9
         comp=Z,12µm,20.4s,baz=50,slow=33
DAV      Davao City (W)     28.30 216    IAmb    IAmb      07 07 01.3
         comp=Z,364nm,0.4s
DAV      Davao City (W)     28.30 216⇓eP     P         07 06 54.8  +0.4
PATS     Pohnpei            28.59 144    IAMs_20 IAMs_20   07 17 46.1
         comp=Z,29µm,19.0s
MA2      Magadan            29.16   9    P       P         07 07 01.9  +0.3
         comp=Z,15nm,0.9s,baz=191,slow=10.0,SNR=4.9
MA2      Magadan            29.16   9ceP     P         07 07 00.9  -0.8
MA2                                  pmax    pmax
         comp=Z,59nm,1.3s
MA2                                  MLR     MLR
         comp=Z,11µm,14.0s
CIT      Chita              29.50 323  eP      P         07 07 05.1  +0.3
CIT                                e                 07 07 12.6
CIT                                e                 07 07 20.7
CIT                                e                 07 07 56.8
CIT                                e                 07 08 16.8
CIT                                  pmax    pmax
         comp=Z,249nm,1.6s
GYA      Guiyang            31.11 270 ⇓P     P         07 07 17.5  -2.0
GYA                                  pP      pP        07 07 24.0  -0.4
GYA                                  sP      pwP       07 07 30.0  -1.0
GYA                                  S       S         07 12 24.3  +0.2
GYA                                  pmax    pmax
         comp=Z,1µm,6.8s
GYA                                  LR      LR
         comp=Z,7µm,13.9s
GYA                                  LR      LR
         comp=Z,16µm,17.1s
GYA                                  LR      LR
         comp=Z,22µm,17.4s
QIZ      Qiongzhong         31.26 255    P       P         07 07 21.8  +1.1
QIZ                                  S       S         07 12 31.5  +5.2
QIZ                                  pmax    pmax
         comp=Z,1µm,9.0s
QIZ                                  LR      LR
         comp=Z,9µm,18.1s
QIZ                                  LR      LR
         comp=Z,10µm,19.1s
QIZ                                  LR      LR
         comp=Z,15µm,20.6s
ULN      Ulaanbaatar        31.36 312ceP     P         07 07 21.8  +0.4
ULN                                  pmax    pmax
         comp=Z,282nm,1.7s
ULN      Ulaanbaatar        31.36 312    P       P         07 07 22.0  +0.6
ULN                                  IAmb    IAmb      07 07 26.6
         comp=Z,175nm,1.2s
ULN      Ulaanbaatar        31.36 312    P       P         07 07 21.9  +0.4
ULN                                  P       P         07 07 21.9  +0.4
ULN                                  P       P         07 07 21.9  +0.4
SONM     Songino Array      31.77 312    P       P         07 07 25.3  +0.3
         comp=Z,52nm,0.9s,baz=118,slow=6.1,SNR=166
SONM                                 PcP     PcP       07 10 17.2  +1.2
         comp=Z,3.2nm,1.0s,baz=142,slow=4.9,SNR=1.0
SONM                                 LR      LR        07 20 47.5
         comp=Z,18µm,18.2s,baz=104,slow=37
SONM     Songino Array      31.77 312    P       P         07 07 25.5  +0.5
SONM                                 IAmb    IAmb      07 07 31.9
         comp=Z,67nm,0.9s
LZH      Lanzhou            31.93 289 ⇑P     P         07 07 24.3  -2.4
LZH                                  pP      pP        07 07 29.0  -2.5
LZH                                  sP      sP        07 07 30.5  -3.0
LZH                                  S       S         07 12 33.3  -3.6
LZH                                  sS      sS        07 12 47.0  +0.9
LZH                                  pmax    pmax
         comp=Z,160nm,1.3s
LZH                                  pmax    pmax
         comp=Z,1µm,7.0s
LZH                                  LR      LR
         comp=Z,19µm,13.6s
LZH                                  LR      LR
         comp=Z,24µm,13.6s
LZH                                  LR      LR
         comp=Z,19µm,14.1s
YAK      Yakutsk            32.00 349c iP    P         07 07 25.9  -0.8
YAK                                e*PP    sP        07 07 34.5  +1.2
YAK                                eS      S         07 12 38.5  +1.6
YAK                                  pmax    pmax
         comp=Z,91nm,1.0s
YAK                                  pmax    pmax
         comp=N,39nm,1.0s
YAK                                  pmax    pmax
         comp=E,12nm,1.1s
YAK                                  smax    smax
         comp=N,596nm,5.1s
YAK                                  smax    smax
         comp=E,407nm,5.3s
YAK                                  MLR     MLR
         comp=Z,19µm,17.0s
YAK                                  MLR     MLR
         comp=N,11µm,16.0s
YAK      Yakutsk            32.00 349    P       P         07 07 26.4  -0.2
YAK                                  IAmb    IAmb      07 07 43.4
         comp=Z,100nm,1.0s
CD2      Chengdu            32.56 280    P       P         07 07 29.3  -2.8
CD2                                  sP      pP        07 07 36.0  -1.0
CD2                                  PP      PnPn      07 08 42.3  +2.6
CD2                                  S       S         07 12 44.5  -2.0
CD2                                  pmax    pmax
         comp=Z,70nm,0.7s
CD2                                  LR      LR
         comp=Z,37µm,14.4s
CD2                                  LR      LR
         comp=Z,41µm,14.6s
CD2                                  LR      LR
         comp=Z,53µm,14.4s
SEY      Seymchan           32.61   9    P       P         07 07 32.8  +0.8
         comp=Z,5.8nm,0.5s,baz=191,slow=6.6,SNR=36
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SEY      Seymchan           32.61   9  i P     P         07 07 30.6  -1.5
BOD      Bodaibo            32.91 333  eP      P         07 07 34.1  -0.6
BOD                                  pmax    pmax
         comp=Z,125nm,1.7s
SMPI     Sarmi              32.98 186    P       P         07 07 33.9  -1.9
         comp=Z,6µmcomp=Z,131nm,1.6s
TNTI     Ternate            33.09 207    P       P         07 07 38.0  +1.2
TNTI     Ternate            33.09 207    P       P         07 07 31.6  -5.1
SWI      Sorong             33.29 200    P       P         07 07 37.8  -0.6
         comp=Z,5µmcomp=Z,2µmcomp=Z,53nm,0.9s
SIJI     Sorong             33.29 200    LR      LR        07 20 04.8
         comp=Z,16µm,18.2s,baz=18,slow=34
GENI     Genyem             33.49 183    P       P         07 07 44.3  +4.2
MYLDM    Lahad Datu         33.82 225    IAMs_20 IAMs_20   07 19 53.7
         comp=Z,18µm,18.0s
ZAK      Zakamensk          34.54 315  eP      P         07 07 49.1   0.0
ZAK                                  pmax    pmax
         comp=Z,103nm,1.8s
KKM      Kota Kinabalu      34.59 229    P       P         07 07 50.3  +0.4
KKM                                  IAmb    IAmb      07 08 10.7
         comp=Z,146nm,1.2s
IRK      Irkutsk            34.63 319  eP      P         07 07 49.8   0.0
IRK                                e                 07 13 21.7
IRK                                  pmax    pmax
         comp=Z,261nm,2.0s
KMSI     Cibinong           34.72 213    P       P         07 07 56.7  +5.8
         comp=Z,207nm,0.7s
TLY      Talaya             34.77 318    P       P         07 07 52.2  +1.1
         comp=Z,40nm,0.7s,baz=125,slow=7.1,SNR=92
TLY                                  LR      LR        07 22 42.3
         comp=Z,22µm,18.4s,baz=114,slow=38
TLY      Talaya             34.77 318c iP    P         07 07 51.6  +0.5
TLY                                e                 07 09 04.4
TLY                                ePPP    PPP       07 09 18.1
TLY                                eS      S         07 13 23.1  +2.8
TLY                                  pmax    pmax
         comp=Z,407nm,1.5s
TLY                                  MLR     MLR
         comp=Z,78µm,13.0s
TLY      Talaya             34.77 318    P       P         07 07 52.1  +1.0
TLY                                  IAmb    IAmb      07 08 18.1
         comp=Z,184nm,1.3s
TLY                                  IAMs_20 IAMs_20   07 22 38.2
         comp=Z,27µm,18.0s
TLY      Talaya             34.77 318    P       P         07 07 52.0  +0.9
TLY                                  P       P         07 07 52.0  +0.9
TLY                                  S       S         07 13 26.4  +6.1
TLY                                  S       S         07 13 26.4  +6.1
KMI      Kunming            34.89 270 ⇑P     P         07 07 50.3  -2.3
KMI                                  pP      pP        07 07 53.5  -4.0
KMI                                  sP      sP        07 07 56.0  -4.0
KMI                                  PP      PnPn      07 09 08.3  -1.0
KMI                                  S       S         07 13 21.5  -1.5
KMI                                  ScP     ScP       07 14 09.8  +0.3
KMI                                  ScS     ScS       07 18 06.5  -6.9
KMI                                  pmax    pmax
         comp=Z,1µm,9.3s
KMI                                  LR      LR
         comp=Z,10µm,13.4s
KMI                                  LR      LR
         comp=Z,14µm,14.7s
KMI                                  LR      LR
         comp=Z,23µm,14.8s
FAKI     Fak Fak            34.99 197    P       P         07 07 53.8  +0.6
FAKI                                 IAMs_20 IAMs_20   07 21 07.3
         comp=Z,15µm,18.0s
FAKI     Fak Fak            34.99 197    P       P         07 08 00.2  +7.0
         comp=Z,2µmcomp=Z,73nm,1.6s
GTA      Gaotai             35.09 296    P       P         07 07 52.0  -2.1
GTA                                  pP      pP        07 07 56.0  -3.0
GTA                                  sP      sP        07 07 59.5  -1.5
GTA                                  PP      PnPn      07 09 11.5   0.0
GTA                                  pmax    pmax
         comp=Z,2µm,10.0s
GTA                                  LR      LR
         comp=Z,21µm,15.9s
GTA                                  LR      LR
         comp=Z,41µm,16.3s
GTA                                  LR      LR
         comp=Z,42µm,16.3s
GTOI     Gorontalo          35.12 214    P       P         07 07 53.7  -0.7
         comp=Z,1µmcomp=Z,105nm,0.8s
SLVN     Son La             35.26 263    IAMs_20 IAMs_20   07 23 16.6
         comp=Z,19µm,18.0s
MIDW     Midway             35.41  84    IAMs_20 IAMs_20   07 21 30.6
         comp=Z,14µm,18.0s
MRSI     Marisa             35.79 216    P       P         07 08 01.3  +1.2
         comp=Z,5µmcomp=Z,5µmcomp=Z,334nm,1.2s
TOLI2    Tolitoli           35.84 218    P       P         07 07 59.3  -1.3
TOLI2                                IAmb    IAmb      07 08 07.8
         comp=Z,84nm,0.9s
DLV      T  Lat             36.20 246    P       P         07 08 02.8  -1.1
SANI     Sanana             36.21 208    P       P         07 08 02.4  -1.3
         comp=Z,3µmcomp=Z,183nm,1.3s
MOY      Mondy              36.32 317  eP      P         07 08 04.7  +0.2
MOY                                  pmax    pmax
         comp=Z,200nm,1.9s
LUWI     Luwuk              36.70 213    P       P         07 08 06.8  -1.1
LUWI                                 IAmb    IAmb      07 08 37.1
         comp=Z,214nm,1.1s
LUWI     Luwuk              36.70 213    P       P         07 08 08.2  +0.3
         comp=Z,6µmcomp=Z,124nm,0.6s
NLAI     Namlea             36.88 205    P       P         07 08 12.8  +3.4
         comp=Z,2µmcomp=Z,62nm,1.3s
APSI     Ampana             37.13 215    P       P         07 08 10.6  -0.9
         comp=Z,3µmcomp=Z,2µmcomp=Z,172nm,0.7s
NONG     Nongkai            37.32 259    P       P         07 08 13.8  +0.7
         comp=Z,87nm,0.9s
ATKA     Atka Island        38.30  44    IAMs_20 IAMs_20   07 25 47.4
         comp=Z,16µm,19.0s
CHAI     Chaiyaphum         39.33 257    P       P         07 08 30.0  -0.1
         comp=Z,998nmcomp=Z,107nm,0.7s
KDI      Kendari            39.35 211    P       P         07 08 34.1  +3.9
         comp=Z,259µmcomp=Z,131nm,1.2s
TTSI     Tana Toraja        39.88 216    P       P         07 08 36.5  +1.9
         comp=Z,2µmcomp=Z,40nm,0.8s
SBUM     Sibu               39.90 230    IAMs_20 IAMs_20   07 26 55.7
         comp=Z,20µm,18.0s
SBUM     Sibu               39.90 230    P       P         07 08 34.0  -0.9
BKB      Balikpapan         39.94 221    IAMs_20 IAMs_20   07 22 46.5
         comp=Z,14µm,21.0s
PHIT     Phitsanulok        40.03 260    P       P         07 08 43.0  +7.1
LAMP     Lampang            40.09 262    P       P         07 08 38.0  +1.6
         comp=Z,894nmcomp=Z,56nm,0.8s
LKP      Lekhapani          40.12 277  eP      P         07 08 35.4  -1.2
LKP                                  IAMs_20 IAMs_20   07 27 10.8
         comp=Z,27µm,16.3s
CM34     Chiang Mai Arr     40.35 263    P       P         07 08 37.0  -1.6
CM35     Chiang Mai Arr     40.42 263    P       P         07 08 38.0  -1.2
PMG      Port Moresby       40.54 172    S       S         07 14 45.7  -2.5
         comp=Z,4.2nm,0.3s,baz=240,slow=20,SNR=1.3
PMG      Port Moresby       40.54 172c iP    P         07 08 40.1  +0.1
PMG                                  pmax    pmax
         comp=Z,66nm,1.1s
PMG      Port Moresby       40.54 172    P       P         07 08 40.8  +0.8
PMG      Port Moresby       40.54 172    P       P         07 08 41.0  +1.0
CM33     Chiang Mai Arr     40.54 263    P       P         07 08 39.0  -1.2
CMMT     Chiang Mai         40.54 263    P       P         07 08 38.5  -1.7
         comp=Z,726nmcomp=Z,19nm,0.8s
CHTO     Chiang Mai         40.54 263    P       P         07 08 38.9  -1.3
CHTO                                 pmax    pmax
         comp=Z,27nm,0.8s
CHTO                                 MLR     MLR
         comp=Z,11µm,19.0s
CHTO     Chiang Mai         40.54 263    P       P         07 08 38.9  -1.3
CHTO     Chiang Mai         40.54 263    P       P         07 08 38.8  -1.4
CHTO                                 P       P         07 08 38.8  -1.4
CHTO                                 P       P         07 08 38.8  -1.4
CM36     Chiang Mai Arr     40.54 262    P       P         07 08 39.0  -1.2
SUKH     Sukhothai          40.56 261    P       P         07 08 42.6  +2.3
         comp=Z,24nm,0.8s
CM09     Chiang Mai Arr     40.67 262    P       P         07 08 43.0  +1.8
         comp=Z,283nmcomp=Z,26nm,0.8s
SPSI     Sidrap Palu        40.70 215    P       P         07 08 40.8  -0.6
         comp=Z,2µmcomp=Z,133nm,0.7s
CM04     Chiang Mai Arr     40.70 262    P       P         07 08 42.1  +0.7
         comp=Z,199nmcomp=Z,19nm,0.9s
CM32     Chiang Mai Arr     40.70 263    P       P         07 08 44.0  +2.5
CM31     Chiang Mai Arr     40.70 262    P       P         07 08 44.0  +2.5
         comp=Z,851nm,0.7s
CM31     Chiang Mai Arr     40.70 262    P       P         07 08 40.6  -0.9
CMAR     Chiang Mai Arr     40.70 262    P       P         07 08 41.8  +0.2
         comp=Z,10nm,0.7s,baz=53,slow=7.2,SNR=28
CMAR                                 LR      LR        07 26 52.4
         comp=Z,20µm,19.2s,baz=108,slow=38
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CMAR  Chiang Mai Arr    40.70 262    P         P         07 08 39.1  -2.4
CM01  Chiang Mai Arr    40.70 262    P         P         07 08 43.4 +1.8
      comp=Z,206nmcomp=Z,17nm,1.0s
CM02  Chiang Mai Arr    40.71 262    P         P         07 08 43.3 +1.7
      comp=Z,206nmcomp=Z,30nm,0.9s
CM15  Chiang Mai Arr    40.72 262    P         P         07 08 43.7 +2.0
      comp=Z,27nm,0.8s
CM05  Chiang Mai Arr    40.72 262    P         P         07 08 42.3 +0.6
      comp=Z,171nmcomp=Z,11nm,0.7s
CM13  Chiang Mai Arr    40.75 262    P         P         07 08 42.0 +0.1
      comp=Z,182nmcomp=Z,23nm,0.9s
MTKI  Muara Teweh, K    40.84 224    P         P         07 08 43.9 +1.3
      comp=Z,3µmcomp=Z,109nm,1.0s
BNSI  Bone              40.91 214    P         P         07 08 45.4 +2.3
      comp=Z,3µmcomp=Z,91nm,1.6s
TIXI  Tiksi             41.27 354    P         P         07 08 44.8  -0.7
TIXI                                 pmax      pmax
      comp=Z,96nm,1.8s
TIXI                                 MLR       MLR
      comp=Z,5µm,20.0s
TIXI  Tiksi             41.27 354    P         P         07 08 44.8  -0.7
MOKO  MOKOCHONG         41.56 276   eP         P         07 08 45.7  -3.0
KAPI  Kappang           41.61 214    LR        LR        07 25 30.0
      comp=Z,3µm,20.5s,baz=28,slow=35
KAPI  Kappang           41.61 214    P         P         07 08 48.3  -0.6
KAPI                                 pmax      pmax
      comp=Z,102nm,1.0s
KAPI  Kappang           41.61 214    P         P         07 08 48.3  -0.6
KAPI  Kappang           41.61 214    P         P         07 08 48.4  -0.6
KAPI                                 P         P         07 08 48.4  -0.6
UTHA  Uthaitani         41.62 258    P         P         07 08 51.0 +1.9
      comp=Z,395nmcomp=Z,27nm,1.2s
NIKH  Nikolski High     41.65  44    P         P         07 08 48.4  -0.4
      baz=258,SNR=6.3
NIKH  Nikolski High     41.65  44    P         P         07 08 47.6  -1.2
MHMT  Maesarieng        41.69 263    P         P         07 08 49.3  -0.3
      comp=Z,2µmcomp=Z,46nm,1.0s
ZIRO  ZIRO              41.77 278   eP         P         07 08 48.9  -1.5
KSM   Kuching           41.90 232    P         P         07 08 51.8 +0.4
KSM                                  IAMs_20   IAMs_20   07 26 03.6
      comp=Z,13µm,20.0s
KSM   Kuching           41.90 232    P         P         07 08 52.0 +0.7
SPIA  Saint Paul Isl    41.95  37    P         P         07 08 50.9  -0.3
      baz=252
KOHI  KOHIMA            42.09 275    IAMs_20   IAMs_20   07 29 04.2
      comp=Z,16µm,16.3s
IMP   Imphal            42.52 274   eP         P         07 08 56.4  -0.1
IMP                                  IAMs_20   IAMs_20   07 28 21.7
      comp=Z,14µm,18.6s
PHET  Kaeng Krachan     42.81 255    P         P         07 09 04.9 +6.1
      comp=Z,66nm,0.9s
BBKI  Banjar Baru       42.91 222    P         P         07 09 00.2 +0.7
      comp=Z,5µmcomp=Z,71nm,1.5s
UNV   Unalaska Valle    43.20  43    P         P         07 09 02.3 +0.9
      baz=260
UNV   Unalaska Valle    43.20  43    IAMs_20   IAMs_20   07 28 08.9
      comp=Z,12µm,19.0s
LSA   Lhasa             43.46 282    P         P         07 09 03.3  -1.2
LSA                                  pmax      pmax
      comp=Z,35nm,1.4s
LSA   Lhasa             43.46 282    P         P         07 09 03.7  -0.8
LSA   Lhasa             43.46 282    IAMs_20   IAMs_20   07 28 46.8
      comp=Z,20µm,19.0s
LSA   Lhasa             43.46 282    P         P         07 09 03.3  -1.2
LSA                                  P         P         07 09 03.3  -1.2
LSA                                  P         P         07 09 03.3  -1.2
SILR  SILCHAR           43.52 274   eP         P         07 09 04.4   0.0
MMRI  Maumere           43.71 209    P         P         07 09 05.6  -0.3
MMRI                                 IAmb      IAmb      07 09 17.4
      comp=Z,187nm,1.1s
MMRI  Maumere           43.71 209    P         P         07 09 09.5 +3.6
      comp=Z,5µmcomp=Z,4µmcomp=Z,157nm,1.1s
GAMB  Gambell           43.74  28    P         P         07 09 06.4 +0.8
      baz=244
GAMB  Gambell           43.74  28    P         P         07 09 03.2  -2.4
HNR   Honiara           43.82 154    IAMs_20   IAMs_20   07 24 50.0
      comp=Z,14µm,22.0s
SOEI  Soe               43.94 205    P         P         07 09 08.8 +0.9
      comp=Z,5µmcomp=Z,3µmcomp=Z,236nm,1.1s
SHL   Shillong          44.05 276    P         P         07 09 06.4  -2.5
SHL                                  pmax      pmax
      comp=Z,36nm,0.9s
SHL                                  MLR       MLR
      comp=Z,17µm,18.0s
SHL   Shillong          44.05 276   eP         P         07 09 06.1  -2.8
SHL                                  IAmb      IAmb      07 09 12.1
      comp=Z,29nm,0.3s
SHL                                  IAMs_20   IAMs_20   07 29 17.8
      comp=Z,13µm,9.8s
SHL   Shillong          44.05 276    P         P         07 09 06.4  -2.5
SHL                                  IAMs_20   IAMs_20   07 29 24.4
      comp=Z,17µm,18.0s
WMQ   Urumqi            44.13 303   eP         P         07 09 09.0  -0.2
WMQ                                  pP        sP        07 09 14.8  -1.6
WMQ                                  sP        pwP       07 09 20.8  -0.2
WMQ                                  PP        PP        07 10 52.8 +0.7
WMQ                                  S         S         07 15 41.3 +0.3
WMQ                                  sS        sS        07 15 48.8  -1.4
WMQ                                  pmax      pmax
      comp=Z,82nm,2.1s
WMQ                                  pmax      pmax
      comp=Z,3µm,4.9s
WMQ                                  LR        LR
      comp=Z,17µm,19.5s
WMQ                                  LR        LR
      comp=Z,15µm,13.9s
WMQ                                  LR        LR
      comp=Z,9µm,23.7s
WMQ   Urumqi            44.13 303    IAmb      IAmb      07 10 01.0
      comp=Z,191nm,1.3s
WMQ   Urumqi            44.13 303    IAMs_20   IAMs_20   07 26 41.0
      comp=Z,11µm,20.0s
SAIH  SAIHA             44.17 271   eP         P         07 09 07.1  -2.8
SAIH                                 IAmb      IAmb      07 09 11.5
      comp=Z,505nm,2.6s
DGZ   Jazzator, Alta    44.40 311c iP        P         07 09 11.7 +0.3
DGZ                                  pmax      pmax
      comp=Z,390nm,2.2s
DGZ                                  MLR       MLR
      comp=Z,21µm,16.0s
BATI  Baumata           44.58 206    LR        LR        07 26 39.0
      comp=Z,5µm,20.2s,baz=358,slow=35
BATI  Baumata           44.58 206    P         P         07 09 16.0 +3.1
      comp=Z,2µmcomp=Z,2µmcomp=Z,134nm,1.0s
COEN  Coen              44.76 178    P         P         07 09 15.7 +1.3
FALS  False Pass        45.15  42    P         P         07 09 16.9  -0.2
      baz=261
FALS  False Pass        45.15  42    IAMs_20   IAMs_20   07 30 04.5
      comp=Z,18µm,19.0s
BELO  BELONIA           45.21 273   eP         P         07 09 16.8  -1.2
BELO                                 IAMs_20   IAMs_20   07 31 44.8
      comp=Z,27µm,21.0s
WSI   Waingapu          45.46 211    P         P         07 09 15.6  -4.3
PLAI  Plampang          45.88 214    P         P         07 09 23.1  -0.1
      comp=Z,4µmcomp=Z,2µmcomp=Z,131nm,0.8s
ZSN   Zaisan            46.04 308⇑eP         P         07 09 24.6 +0.3
      comp=Z,155nm,1.7s,baz=308
ZSN                                 eS         S         07 16 10.6 +2.1
      baz=308
ZSN   Zaisan            46.04 308ceP         P         07 09 24.5 +0.3
ZSN                                 eS         S         07 16 10.5 +2.1
ZSN                                  pmax      pmax
      comp=Z,155nm,1.7s
MYKOM Kota Tinggi       46.22 238    IAMs_20   IAMs_20   07 27 35.9
      comp=Z,10µm,19.0s
TWSI  Taliwang, Sumb    46.24 215    P         P         07 09 25.0  -1.1
      comp=Z,3µmcomp=Z,1µmcomp=Z,85nm,1.2s
KMMI  Kalianget         46.34 220    P         P         07 09 29.4 +2.5
      comp=Z,6µmcomp=Z,70nm,1.0s
KULM  Kulim             46.37 245    P         P         07 09 26.8  -0.4
KULM                                           pP        07 09 27.8  -4.3
KULM                                 IAmb      IAmb      07 09 33.7
      comp=Z,101nm,1.5s
KULM  Kulim             46.37 245    P         P         07 09 29.0 +1.8
ZAA0  Zalesovo Array    46.38 317    IAmb      IAmb      07 09 28.4
      comp=Z,156nm,1.4s
ZAA0                                 IAMs_20   IAMs_20   07 29 24.0
      comp=Z,16µm,18.0s
ZALV  Zalesovo Beam     46.38 317    P         P         07 09 26.5  -0.3
      comp=Z,47nm,0.8s,baz=104,slow=6.8,SNR=127
ZALV                                 PcP       PcP       07 11 01.8 +0.3
      comp=Z,30nm,0.7s,baz=93,slow=2.9,SNR=6.7
ZALV                                 LR        LR        07 29 34.6
      comp=Z,15µm,18.2s,baz=94,slow=37
ZALV  Zalesovo Beam     46.38 317    P         P         07 09 25.6  -1.1
SRBI  Singaraja         46.53 218    P         P         07 09 31.4 +3.0
      comp=Z,8µmcomp=Z,5µmcomp=Z,167nm,1.7s
IPM   Ipoh              46.59 244    P         P         07 09 29.0 +0.1
ANM   Nome              46.60  28    P         P         07 09 29.2 +0.8
      baz=250
ANM   Nome              46.60  28    IAmb      IAmb      07 09 48.1
      comp=Z,78nm,1.0s
TPI   Tanjungpandan     46.80 230    P         P         07 09 31.1 +0.5
      comp=Z,5µmcomp=Z,2µmcomp=Z,66nm,1.7s
ABJI  Asem Bagus        46.81 219    P         P         07 09 33.8 +3.2
      comp=Z,6µmcomp=Z,4µmcomp=Z,120nm,1.1s
SDPT  Sand Point        46.89  41    P         P         07 09 31.6 +0.8
      baz=264
SDPT  Sand Point        46.89  41    IAMs_20   IAMs_20   07 31 05.5
      comp=Z,9µm,19.0s
TAPN  Taplejung         47.03 280   eP         P         07 09 31.3  -1.4
      comp=Z,67nm,0.6s
CNBA  Chernabura Isl    47.34  42    P         P         07 09 33.6  -0.7
CNBA                                 IAmb      IAmb      07 09 41.7
      comp=Z,98nm,1.0s
CHNA  Chernabura Isl    47.34  42    P         P         07 09 34.4 +0.1
      baz=265
PPBI  Pangkal Pinang    47.38 232    P         P         07 09 36.8 +1.7
      comp=Z,49nm,1.3s
JAGI  Jajag, Banyuwa    47.42 219    P         P         07 09 33.8  -1.6
JAGI  Jajag, Banyuwa    47.42 219    P         P         07 09 36.7 +1.4
      comp=Z,3µmcomp=Z,91nm,1.4s
ODAN  Odare             47.45 279   eP         P         07 09 34.4  -1.5
      comp=Z,100nm,0.7s
MK31  Makanchi Array    47.81 307   i P        P         07 09 37.9  -0.3
MK31                                 pmax      pmax
      comp=Z,76nm,0.8s
MK31  Makanchi Array    47.81 307    IAmb      IAmb      07 09 43.1
      comp=Z,53nm,0.8s
MKAR  Makanchi Array    47.81 307    P         P         07 09 37.8  -0.4
      comp=Z,51nm,0.7s,baz=88,slow=7.6,SNR=129
MKAR                                 PcP       PcP       07 11 08.4 +1.6
      comp=Z,13nm,0.8s,baz=90,slow=7.2,SNR=1.5
MKAR                                 LR        LR        07 28 59.5
      comp=Z,8µm,20.2s,baz=90,slow=35
MKAR                                 P4KPbc              07 47 17.3
      comp=Z,0.2nm,0.7s,baz=90,slow=3.6,SNR=1.6
MKAR  Makanchi Array    47.81 307    P         P         07 09 37.1  -1.1
MAKZ  Makanchi          48.03 307    P         P         07 09 39.5  -0.3
MAKZ                                 pmax      pmax
      comp=Z,72nm,1.0s
MAKZ                                 MLR       MLR
      comp=Z,10µm,22.0s
MAKZ  Makanchi          48.03 307    P         P         07 09 39.5  -0.3
MAKZ                                 IAmb      IAmb      07 09 44.4
      comp=Z,72nm,0.9s
RAMN  Ramite            48.09 280   eP         P         07 09 39.1  -1.8
      comp=Z,156nm,0.6s
CHGN  Chignik           48.15  40    P         P         07 09 40.0  -0.6
      baz=264
DGPR  DIGLIPUR          48.28 260   eP         P         07 09 40.0  -2.1
GUN   Gumba             48.40 281   eP         P         07 09 42.1  -1.3
      comp=Z,206nm,0.7s
WOJI  Wonogiri, Jawa    48.71 223    P         P         07 09 51.0 +5.7
      comp=Z,43nm,1.7s
RDOG  Red Dog Mine      48.74  24    P         P         07 09 45.9 +0.9
      baz=250
NRIK  Noril'sk          48.89 338    P         P         07 09 46.0  -0.2
      comp=Z,75nm,1.0s,baz=113,slow=8.0,SNR=72
NRIK                                 LR        LR        07 30 18.3
      comp=Z,9µm,20.1s,baz=118,slow=36
NRIK  Noril'sk          48.89 338ceP         P         07 09 45.8  -0.3
NRIK                                 pmax      pmax
      comp=Z,101nm,1.0s
NRIK                                 MLR       MLR
      comp=Z,9µm,16.0s
NRIK  Noril'sk          48.89 338    P         P         07 09 45.9  -0.2
NRIK                                 IAmb      IAmb      07 09 48.1
      comp=Z,100nm,1.0s
NRIK                                 IAMs_20   IAMs_20   07 30 08.1
      comp=Z,9µm,19.0s
PKI   Pulchoki          48.90 281   eP         P         07 09 45.3  -1.9
      comp=Z,90nm,0.9s
PKIN  Phulchoki         48.91 281   eP         P         07 09 45.4  -1.8
      comp=Z,75nm,0.7s
KKN   Kakani            48.94 281   eP         P         07 09 45.7  -1.7
      comp=Z,16nm,0.8s
UGM   Wanagama          49.00 223    P         P         07 09 48.8 +1.2
      comp=Z,4µmcomp=Z,5µmcomp=Z,268nm,1.5s
SEM   Semipalatinsk     49.05 312⇑eP         P         07 09 47.1  -0.8
      comp=Z,124nm,1.6s,baz=312
SEM                                 eS         S         07 16 52.5 +1.0
      baz=312
SEM                                  LR        LR        07 30 45.2
      comp=Z,3µm,13.7s,baz=312
SEM   Semipalatinsk     49.05 312ceP         P         07 09 47.0  -0.8
SEM                                 eS         S         07 16 52.4 +1.0
SEM                                  pmax      pmax
      comp=Z,124nm,1.6s
SEM                                  MLR       MLR
      comp=Z,3µm,14.0s
DMN   Daman             49.15 281   eP         P         07 09 47.5  -1.5
      comp=Z,102nm,0.9s
PBA   Port Blair        49.20 258    IAMs_20   IAMs_20   07 31 40.2
      comp=Z,9µm,19.0s
GKN   Gorkha            49.42 282   eP         P         07 09 49.3  -1.6
      comp=Z,166nm,0.9s
BOK   Bokaro            49.77 276   eP         P         07 09 51.2  -2.3
BOK                                  IAmb      IAmb      07 09 59.4
      comp=Z,1µm,3.5s
BOK                                  IAMs_20   IAMs_20   07 35 25.1
      comp=Z,6µm,21.0s
SDSI  Sungai Dareh      49.84 238    P         P         07 09 56.5 +2.5
      comp=Z,3µmcomp=Z,51nm,1.7s
LEM   Lembang           49.91 227    LR        LR        07 33 20.6
      comp=Z,7µm,18.1s,baz=37,slow=39
MNSI  Mandailing Nat    50.05 241    P         P         07 09 56.7 +1.0
      comp=Z,5µmcomp=Z,43nm,0.8s
KURK  Kurchatov         50.08 312ceP         P         07 09 54.9  -0.5
KURK                                 pmax      pmax
      comp=Z,134nm,0.8s
KURK                                 MLR       MLR
      comp=Z,35µm,16.0s
KURK  Kurchatov         50.08 312    P         P         07 09 54.9  -0.5
KURK  Kurchatov         50.08 312              S         07 17 06.6 +1.2
KURK  Kurchatov         50.08 312    P         P         07 09 55.1  -0.3
KURK                                 P         P         07 09 55.1  -0.3
KURK                                 P         P         07 09 55.1  -0.3
KURK                                 S         S         07 17 03.3  -2.1
KURK                                 S         S         07 17 03.3  -2.1
KURK                                 S         S         07 17 03.3  -2.1
CBJI  Citeko            50.08 228    P         P         07 09 59.6 +3.8
PDGK  Podgornoye        50.11 303   i P        P         07 09 55.3  -0.7
PDGK                                 pmax      pmax
      comp=Z,164nm,1.6s
KURBB Kurchatov Arra    50.14 312    P         P         07 09 55.4  -0.4
      comp=Z,70nm,0.6s,baz=88,slow=6.7,SNR=215
KURBB                                S         S         07 17 06.6 +0.3
      comp=Z,0.4nm,0.7s,baz=90,slow=15,SNR=1.3
SHLS  Shalkode          50.15 302⇑eP         P         07 09 53.3  -3.0
      comp=Z,231nm,2.9s,baz=302
SHLS  Shalkode          50.15 302ceP         P         07 09 53.3  -3.0
SHLS                                 pmax      pmax
      comp=Z,231nm,2.9s
SVW2  Sparrevohn        50.16  34    IAmb      IAmb      07 10 02.0
      comp=Z,110nm,1.6s
KLSI                    50.18 232    P         P         07 09 56.1  -0.5
      comp=Z,1µmcomp=Z,89nm,0.9s
TTA   Tatalina          50.22  32    P         P         07 09 56.4  -0.1
      baz=261,SNR=22
TTA   Tatalina          50.22  32    P         P         07 09 57.4 +1.0
TTA                                  pmax      pmax
      comp=Z,46nm,1.2s
TTA                                  MLR       MLR
      comp=Z,6µm,20.0s
TTA   Tatalina          50.22  32    P         P         07 09 57.4 +1.0
MLSI  Meulaboh, Aceh    50.33 247    P         P         07 10 08.7  +11
BLSI  Bandar Lampung    50.34 230    P         P         07 09 59.3 +1.5
      comp=Z,6µmcomp=Z,363nm,0.4s
CISI  Cisompet, Garu    50.35 226    IAmb      IAmb      07 10 06.7
      comp=Z,64nm,0.8s
CISI  Cisompet, Garu    50.35 226    P         P         07 09 58.3 +0.4
      comp=Z,4µmcomp=Z,5µmcomp=Z,87nm,1.0s
LHSI  Lahat             50.38 233    P         P         07 09 59.3 +1.2
      comp=Z,4µmcomp=Z,198nm,1.6s
UZB   Uzynbulak         50.47 302   eP         P         07 09 58.1  -0.7
      comp=Z,89nm,1.8s,baz=302
UZB                                 eS         S         07 17 12.8 +1.2
      baz=302
UZB   Uzynbulak         50.47 302   eP         P         07 09 58.0  -0.7
UZB                                 eS         S         07 17 12.7 +1.2
UZB                                  pmax      pmax
      comp=Z,89nm,1.8s
SII   Sitkinak Islan    50.51  40    P         P         07 09 58.6   0.0
      baz=268
SII   Sitkinak Islan    50.51  40    P         P         07 10 01.4 +2.7
SII                                  IAMs_20   IAMs_20   07 33 35.2
      comp=Z,9µm,19.0s
TDK   Taldyqorghan      50.67 305   eP         P         07 10 00.1   0.0
      comp=Z,288nm,1.7s,baz=305
TDK                                 eS         S         07 17 16.1 +2.2
      baz=305
TDK                                  LR        LR        07 32 01.0
      comp=Z,9µm,15.1s,baz=305
TDK   Taldyqorghan      50.67 305   eP         P         07 10 00.0   0.0
TDK                                 eS         S         07 17 16.1 +2.2
TDK                                  pmax      pmax
      comp=Z,288nm,1.7s
TDK                                  MLR       MLR
      comp=Z,9µm,15.0s
KPKS  Kokpek            50.67 303   eP         P         07 09 59.2  -1.0
      comp=Z,90nm,1.7s,baz=303
KPKS                                eS         S         07 17 15.3 +1.1
      baz=303
KPKS  Kokpek            50.67 303   eP         P         07 09 59.2  -1.0
KPKS                                eS         S         07 17 15.3 +1.1
KPKS                                 pmax      pmax
      comp=Z,90nm,1.7s
LWLI  Liwa              50.87 232    P         P         07 10 03.7 +1.7
      comp=Z,135nm,0.7s
SATY  Saty              50.93 302   eP         P         07 10 01.9  -0.3
      comp=Z,88nm,1.8s,baz=302
SATY                                eS         S         07 17 19.5 +1.7
      baz=302
SATY  Saty              50.93 302   eP         P         07 10 01.9  -0.3
SATY                                eS         S         07 17 19.5 +1.7
SATY                                 pmax      pmax
      comp=Z,88nm,1.8s
KASI  Kota Agung        50.95 231    P         P         07 10 02.7 +0.3
      comp=Z,1µmcomp=Z,101nm,1.0s
CTA   Charters Tower    51.01 175    S         S         07 17 16.1  -2.8
      comp=Z,4.7nm,1.0s,baz=33,slow=19,SNR=2.7
CTA                                  LR        LR        07 29 26.2
      comp=Z,2µm,21.3s,baz=354,slow=34
CTAO  Charters Tower    51.01 175    P         P         07 10 03.7 +1.0
CTAO                                 pmax      pmax
      comp=Z,262nm,1.8s
CTAO  Charters Tower    51.01 175    P         P         07 10 03.7 +1.0
CTAO                                 IAmb      IAmb      07 10 06.6
      comp=Z,262nm,1.8s
OHAK  Old Harbor        51.03  39    P         P         07 10 02.8 +0.3
      baz=268,SNR=6.8
OHAK  Old Harbor        51.03  39    IAmb      IAmb      07 10 07.1
      comp=Z,92nm,0.9s
OHAK                                 IAMs_20   IAMs_20   07 32 00.8
      comp=Z,13µm,20.0s
MNAI  Manna             51.15 234    P         P         07 10 06.3 +2.4
      comp=Z,232nm,1.3s
BWNR  Bhubaneshwar      51.18 272   eP         P         07 09 57.6  -6.5
BWNR                                 IAmb      IAmb      07 10 03.4
      comp=Z,141nm,1.8s
BWNR                                 IAMs_20   IAMs_20   07 35 55.5
      comp=Z,4µm,14.0s
WRAB  Tennant Creek     51.19 189ceP         P         07 10 02.8  -1.3
WRAB                                 pmax      pmax
      comp=Z,278nm,1.7s
WRAB  Tennant Creek     51.19 189    P         P         07 10 03.8  -0.3
WRAB  Tennant Creek     51.19 189    IAMs_20   IAMs_20   07 31 59.8
      comp=Z,9µm,19.0s
WRA   Warramunga Arr    51.20 189    P         P         07 10 03.7  -0.5
      comp=Z,54nm,0.7s,baz=6.4,slow=7.7,SNR=206
WRA                                  S         S         07 17 17.5  -4.0
      comp=Z,10nm,0.9s,baz=5.6,slow=13,SNR=8.3
WRA                                  LR        LR        07 32 11.4
      comp=Z,8µm,18.4s,baz=10.0,slow=37
WRA                                  P4KPbc              07 47 33.3
      comp=Z,0.1nm,0.8s,baz=8.6,slow=5.1,SNR=0.8
WRA   Warramunga Arr    51.20 189    P         P         07 10 03.0  -1.2
WRA                                  pmax      pmax
      comp=Z,13nm,1.2s
WRA   Warramunga Arr    51.20 189    P         P         07 10 03.0  -1.2
GSI   Gunungsitoli      51.25 244    IAmb      IAmb      07 10 18.5
      comp=Z,136nm,0.9s
GSI   Gunungsitoli      51.25 244    P         P         07 10 04.8 +0.1
      comp=Z,5µmcomp=Z,4µmcomp=Z,209nm,0.9s
FITZ  Fitzroy Crossi    51.28 200    S         S         07 17 21.2  -1.4
      comp=Z,1.8nm,1.0s,baz=134,slow=18,SNR=1.3
FITZ  Fitzroy Crossi    51.28 200    P         P         07 10 04.6  -0.1
FITZ                                 IAmb      IAmb      07 10 32.6
      comp=Z,120nm,1.6s
KDAK  Kodiak Island     51.42  39    P         P         07 10 05.3  -0.2
      baz=268
KDAK  Kodiak Island     51.42  39d iP        P         07 10 05.4   0.0
KDAK                                 pmax      pmax
      comp=Z,229nm,1.3s
KDAK  Kodiak Island     51.42  39    P         P         07 10 06.0 +0.5
KDAK  Kodiak Island     51.42  39    IAMs_20   IAMs_20   07 30 26.3
      comp=Z,13µm,20.0s
RSO   Redoubt South     51.48  35    P         P         07 10 07.2 +1.1
SPCR  Spurr Chakacha    51.80  34    P         P         07 10 09.3 +1.0
      baz=266,SNR=29
CHKK  Chushkaly         51.84 304   eP         P         07 10 08.5  -0.3
      baz=304
CHKK  Chushkaly         51.84 304   eP         P         07 10 08.5  -0.3
A21K  Barrow            51.86  21    P         P         07 10 09.6 +1.2
      baz=254,SNR=15
A21K  Barrow            51.86  21    IAmb      IAmb      07 10 47.8
      comp=Z,122nm,1.1s
MDOK  Medeo             51.90 303   eP         P         07 10 09.6 +0.2
      baz=303
MDOK                                eS         S         07 17 33.5 +2.3
      baz=303
MDOK                                 LR        LR        07 32 04.2
      comp=Z,10µm,14.1s,baz=303
MDOK  Medeo             51.90 303   eP         P         07 10 09.6 +0.2
MDOK                                eS         S         07 17 33.5 +2.3
MDOK                                 MLR       MLR
      comp=Z,10µm,14.0s
PPLA  Purkeypile        51.95  32    P         P         07 10 10.5 +1.0
      baz=264,SNR=30
HOM   Homer             51.99  36    P         P         07 10 10.8 +1.2
      baz=268
AAA   Alma-Ata          51.99 303   eP         P         07 10 10.2 +0.2
      comp=Z,85nm,1.3s,baz=303
AAA                                 eS         S         07 17 34.4 +2.1
      baz=303
AAA                                  LR        LR        07 32 12.5
      comp=Z,8µm,15.1s,baz=303
AAA   Alma-Ata          51.99 303   eP         P         07 10 10.2 +0.2
AAA                                 eS         S         07 17 34.3 +2.1
AAA                                  pmax      pmax
      comp=Z,85nm,1.3s
AAA                                  MLR       MLR
      comp=Z,8µm,15.0s
CHUM  Lake Minchumin    52.00  31    P         P         07 10 10.7 +1.1
      baz=264,SNR=19
SKT   Skwentna          52.18  33    P         P         07 10 11.4 +0.4
      baz=266,SNR=24
SKT   Skwentna          52.18  33    IAmb      IAmb      07 10 16.9
      comp=Z,175nm,1.7s
CNPM  China Poot        52.19  36    IAmb      IAmb      07 10 16.2
      comp=Z,66nm,0.9s
CNPM                                 IAMs_20   IAMs_20   07 33 32.3
      comp=Z,9µm,19.0s
SANVU Saraoutou         52.25 149    P         P         07 10 13.4 +1.4
SANVU                                IAmb      IAmb      07 10 21.0
      comp=Z,133nm,1.0s
SANVU Saraoutou         52.25 149    P         P         07 10 15.2 +3.2
CAPN  Captain Cook N    52.28  35    P         P         07 10 10.5  -1.3
      baz=267
KUU   Kurty             52.29 304   eP         P         07 10 11.2  -1.1
      comp=Z,311nm,1.8s,baz=304
KUU                                 eS         S         07 17 37.3 +1.0
      baz=304
KUU                                  LR        LR        07 32 47.0
      comp=Z,11µm,15.5s,baz=304
KUU   Kurty             52.29 304   eP         P         07 10 11.1  -1.1
KUU                                 eS         S         07 17 37.3 +1.0
KUU                                  pmax      pmax
      comp=Z,311nm,1.8s
KUU                                  MLR       MLR
      comp=Z,11µm,16.0s
BRLK  Bradley Lake      52.37  36    IAMs_20   IAMs_20   07 33 11.0
      comp=Z,7µm,19.0s
BRSE  Bradley Lake S    52.45  36    P         P         07 10 12.3  -0.8
      baz=268
SUA   Susitna One       52.52  34    P         P         07 10 13.5  -0.2
      baz=267,SNR=42
SUA   Susitna One       52.52  34    IAmb      IAmb      07 10 17.1
      comp=Z,69nm,0.8s
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KTH	Kantishna Hill	52.58	31	IAmb	IAmb	07 10 50.4	
	comp=Z,95nm,1.2s						
BPAW	Bear Paw Mtn.	52.60	31	P	P	07 10 15.0	+0.8
	baz=265						
ULHL	Ulahol	52.64	302	P	P	07 10 14.8	-0.2
	SNR=6.8						
CUT	Chulitna	52.80	33	P	P	07 10 15.3	-0.2
	baz=267						
MLY	Manley	52.80	29	P	P	07 10 16.7	+1.1
	baz=264,SNR=59						
TRF	Thorofare Moun	52.86	31	P	P	07 10 16.6	+0.4
	baz=266,SNR=27						
O22K	Cooper Landing	52.98	35	P	P	07 10 16.7	-0.2
	baz=269,SNR=7.8						
O22K	Cooper Landing	52.98	35	IAmb	IAmb	07 10 30.8	
	comp=Z,139nm,1.0s						
O22K				IAMs_20	IAMs_20	07 32 38.1	
	comp=Z,13µm,19.0s						
RC01	Rabbit Creek A	52.99	34	P	P	07 10 16.8	-0.2
	baz=268,SNR=16						
TKM2	Tokmak 2	52.99	303	P	P	07 10 18.7	+1.1
	SNR=35						
TKM2	Tokmak 2	52.99	303	i P	P	07 10 17.8	+0.2
TKM2				pmax	pmax		
	comp=Z,172nm,1.6s						
SEW	Seward	53.10	36	P	P	07 10 17.5	-0.4
	baz=269,SNR=13						
SEW	Seward	53.10	36	IAmb	IAmb	07 10 27.3	
	comp=Z,112nm,1.0s						
SEW				IAMs_20	IAMs_20	07 34 15.5	
	comp=Z,11µm,19.0s						
COLD	Coldfoot	53.26	27	P	P	07 10 20.1	+1.1
	baz=263,SNR=13						
COLD	Coldfoot	53.26	27	P	P	07 10 19.5	+0.5
BWN	Browne	53.27	31	P	P	07 10 19.2	+0.1
BWN				IAMs_20	IAMs_20	07 33 14.7	
	comp=Z,7µm,18.0s						
PMR	Palmer	53.30	34	P	P	07 10 19.1	-0.2
	baz=268,SNR=24						
PMR	Palmer	53.30	34	P	P	07 10 18.4	-0.9
PMR				pmax	pmax		
	comp=Z,126nm,1.3s						
PMR				MLR	MLR		
	comp=Z,6µm,19.0s						
PMR	Palmer	53.30	34	P	P	07 10 18.4	-0.9
PMR				IAmb	IAmb	07 10 24.6	
	comp=Z,126nm,1.3s						
KSH	Kashi	53.38	298	P	P	07 10 23.3	+2.8
KSH				sP	pwP	07 10 30.0	-2.4
KSH				S	S	07 17 54.0	+2.5
KSH				ScS	ScS	07 20 07.3	-1.7
KSH				SS	SKiKP	07 21 38.8	+3.0
KSH				pmax	pmax		
	comp=Z,59nm,1.5s						
KSH				pmax	pmax		
	comp=Z,6µm,7.6s						
KSH				LR	LR		
	comp=Z,11µm,14.6s						
KSH				LR	LR		
	comp=Z,8µm,13.3s						
KSH				LR	LR		
	comp=Z,27µm,18.2s						
I23K	Minto, Yukon-K	53.39	29	P	P	07 10 20.9	+0.9
	baz=265,SNR=38						
I23K	Minto, Yukon-K	53.39	29	IAmb	IAmb	07 10 54.8	
	comp=Z,90nm,1.4s						
NEA2	Nenana	53.47	30	P	P	07 10 21.2	+0.7
	baz=266,SNR=62						
MCK	McKinley	53.48	31	P	P	07 10 21.0	+0.3
	baz=267,SNR=29						
RND	Reindeer	53.50	32	IAMs_20	IAMs_20	07 36 13.7	
	comp=Z,9µm,18.0s						
KBK	Karagaybulak	53.51	302	P	P	07 10 21.7	+0.3
	SNR=30						
CHMS	Chumysh	53.59	303	P	P	07 10 22.3	+0.5
	SNR=16						
SGDS	Sogindy	53.59	303	⇑eP	P	07 10 21.6	-0.3
	comp=Z,66nm,1.8s,baz=303						
SGDS				eS	S	07 17 55.9	+1.8
	baz=303						
SGDS	Sogindy	53.59	303	ceP	P	07 10 21.5	-0.3
SGDS				eS	S	07 17 55.9	+1.8
SGDS				pmax	pmax		
	comp=Z,66nm,1.8s						
WAT2	Susitna Watana	53.60	32	P	P	07 10 21.5	-0.2
	baz=268,SNR=27						
TOLK	Toolik Lake Re	53.68	25	P	P	07 10 23.0	+1.0
	baz=263,SNR=38						
TOLK	Toolik Lake Re	53.68	25	IAmb	IAmb	07 10 49.5	
	comp=Z,50nm,0.8s						
SML	Sawmill	53.68	34	P	P	07 10 22.6	+0.4
	baz=269,SNR=41						
SML	Sawmill	53.68	34	IAmb	IAmb	07 10 27.3	
	comp=Z,91nm,0.8s						
SML				IAMs_20	IAMs_20	07 35 10.7	
	comp=Z,7µm,19.0s						
USP	Ospenovka	53.72	303	P	P	07 10 22.6	-0.2
	SNR=29						
BTLS	Baital	53.73	305	⇑eP	P	07 10 22.5	-0.3
	comp=Z,106nm,1.7s,baz=305						
BTLS				eS	S	07 17 57.6	+1.9
	baz=305						
BTLS	Baital	53.73	305	ceP	P	07 10 22.4	-0.3
BTLS				eS	S	07 17 57.6	+1.9
BTLS				pmax	pmax		
	comp=Z,105nm,1.7s						
AAK	Ala-Archa	53.84	302	P	P	07 10 23.5	-0.3
	comp=Z,21nm,0.9s,baz=96,slow=7.9,SNR=30						
AAK				LR	LR	07 34 07.6	
	comp=Z,18µm,18.2s,baz=78,slow=37						
AAK	Ala-Archa	53.84	302	P	P	07 10 24.4	+0.5
	SNR=18						
AAK	Ala-Archa	53.84	302	i P	P	07 10 23.4	-0.3
	SNR=12						
AAK	Ala-Archa	53.84	302	ceP	P	07 10 24.2	+0.4
AAK				pmax	pmax		
	comp=Z,201nm,1.7s						
AAK	Ala-Archa	53.84	302	P	P	07 10 24.3	+0.5
AAK	Ala-Archa	53.84	302	P	P	07 10 23.6	-0.2
AAK				P	P	07 10 23.6	-0.2
AAK				P	P	07 10 23.6	-0.2
AAK				S	S	07 17 59.3	+1.6
AAK				S	S	07 17 59.3	+1.6
AAK				S	S	07 17 59.3	+1.6
MDM	Murphy Dome	53.86	30	IAmb	IAmb	07 10 42.7	
	comp=Z,130nm,1.2s						
UCH	Uchtor	53.91	302	P	P	07 10 25.9	+1.3
	SNR=41						
BRZS	Berezniki	53.93	312	⇑eP	P	07 10 23.9	-0.2
	comp=Z,167nm,2.8s,baz=312						
BRZS				eS	S	07 18 00.2	+1.8
	baz=312						
BRZS	Berezniki	53.93	312	ceP	P	07 10 23.9	-0.2
BRZS				eS	S	07 18 00.1	+1.8
BRZS				pmax	pmax		
	comp=Z,167nm,2.8s						
XMIS	Christmas Isla	53.95	226	IAmb	IAmb	07 10 28.1	
	comp=Z,141nm,1.4s						
XMIS	Christmas Isla	53.95	226	P	P	07 10 26.4	+1.7
	comp=Z,67nm,1.3s						
WAT6	Susitna Watana	53.98	33	P	P	07 10 24.9	+0.4
	baz=269,SNR=32						
TCOL	CIGO, UAF Yank	54.01	30	P	P	07 10 25.0	+0.6
	baz=267,SNR=6.9						
COLA	College	54.01	30	P	P	07 10 25.0	+0.5
	baz=267						
COLA	College	54.01	30	d iP	P	07 10 25.6	+1.1
COLA				pmax	pmax		
	comp=Z,53nm,1.4s						
COLA	College	54.01	30	P	P	07 10 26.2	+1.7
OPA	Opana	54.12	84	IAMs_20	IAMs_20	07 31 24.1	
	comp=Z,11µm,20.0s						
DDI	Dehra Dun	54.17	287	eP	P	07 10 25.7	-0.6
DDI				IAMs_20	IAMs_20	07 35 29.8	
	comp=Z,7µm,14.0s						
POKR	Poker Plat Res	54.20	29	P	P	07 10 27.0	+1.1
	baz=267,SNR=25						
EKS2	Erkin-Say	54.35	303	P	P	07 10 27.5	0.0
	SNR=23						
HDA	Harding Lake	54.38	30	P	P	07 10 26.5	-0.8
	baz=268						
HDA	Harding Lake	54.38	30	IAmb	IAmb	07 10 35.2	
	comp=Z,42nm,0.8s						
IL31		54.42	30	IAmb	IAmb	07 10 45.7	
	comp=Z,80nm,1.1s						
ILAR	Eielson Array	54.42	30	P	P	07 10 27.2	-0.2
	comp=Z,21nm,0.7s,baz=264,slow=5.5,SNR=153						
ILAR	Eielson Array	54.42	30	P	P	07 10 27.0	-0.4
AML	Almayashu	54.52	302	P	P	07 10 29.6	+0.5
	SNR=44						
HIN	Hinchinbrook I	54.57	35	IAmb	IAmb	07 10 48.3	
	comp=Z,96nm,1.0s						
HIN				IAMs_20	IAMs_20	07 33 37.3	
	comp=Z,11µm,19.0s						
SMLA	Simla	54.65	288	eP	P	07 10 28.0	-1.6
SMLA				IAmb	IAmb	07 10 32.4	
	comp=Z,140nm,0.9s						
Q23K	Middleton Isla	54.68	37	P	P	07 10 28.8	-0.6
	baz=272						
Q23K	Middleton Isla	54.68	37	IAMs_20	IAMs_20	07 36 52.3	
	comp=Z,8µm,18.0s						
M24K	Tolsona, Glenn	54.70	33	P	P	07 10 30.8	+1.1
	baz=270,SNR=19						
M24K	Tolsona, Glenn	54.70	33	IAmb	IAmb	07 10 49.6	
	comp=Z,91nm,0.9s						
KLU	Klutina	54.83	34	P	P	07 10 31.1	+0.5
	baz=271						
KLU	Klutina	54.83	34	IAmb	IAmb	07 10 36.8	
	comp=Z,130nm,1.3s						
KLU				IAMs_20	IAMs_20	07 36 14.1	
	comp=Z,10µm,19.0s						
ASAR	Alice Springs	54.93	189	P	P	07 10 31.3	-0.3
	comp=Z,18nm,0.7s,baz=7.1,slow=5.9,SNR=254						
ASAR				S	S	07 18 09.8	-2.4
	comp=Z,10nm,1.1s,baz=13,slow=12,SNR=9.1						
ASAR				LR	LR	07 32 47.2	
	comp=Z,9µm,21.3s,baz=16,slow=35						
ASAR				PKP2bc		07 40 56.7	
	comp=Z,1.2nm,0.7s,baz=179,slow=1.9,SNR=15						
ASAR				P4KPbc		07 47 49.4	
	comp=Z,0.3nm,0.8s,baz=12,slow=4.7,SNR=1.9						
ASAR	Alice Springs	54.93	189	P	P	07 10 30.3	-1.3
ASAR				S	S	07 18 11.2	-1.0
ASAR	Alice Springs	54.93	189	P	P	07 10 30.3	-1.3
ASAR					S	07 18 11.2	-1.0
EYAK	Cordova Ski Ar	54.94	35	P	P	07 10 32.2	+0.9
	baz=272,SNR=9.5						
EYAK	Cordova Ski Ar	54.94	35	IAmb	IAmb	07 10 51.0	
	comp=Z,66nm,1.0s						
EYAK				IAMs_20	IAMs_20	07 34 00.1	
	comp=Z,12µm,20.0s						
BVAR	Borovoye Array	54.99	316	P	P	07 10 31.2	-0.6
	comp=Z,40nm,0.8s,baz=128,slow=11,SNR=70						
BVAR				PcP	PcP	07 11 34.0	+0.7
	comp=Z,14nm,0.8s,baz=114,slow=6.6,SNR=3.8						
BVAR				S	S	07 18 10.6	-2.0
	comp=Z,1.0nm,0.8s,baz=113,slow=15,SNR=2.6						
PRP	Porcupine Dome	55.02	29	P	P	07 10 31.9	-0.1
	baz=269						
PAX	Paxson	55.02	32	P	P	07 10 32.6	+0.6
	baz=271,SNR=34						
PAX	Paxson	55.02	32	IAmb	IAmb	07 10 37.4	
	comp=Z,91nm,1.3s						
PAX				IAMs_20	IAMs_20	07 36 35.1	
	comp=Z,8µm,19.0s						
BRVK	Borovoye	55.05	316	P	P	07 10 32.2	0.0
BRVK				pmax	pmax		
	comp=Z,74nm,1.1s						
BRVK				MLR	MLR		
	comp=Z,12µm,18.0s						
BRVK	Borovoye	55.05	316	P	P	07 10 32.2	0.0
BRVK				IAmb	IAmb	07 10 51.4	
	comp=Z,74nm,1.1s						
BRVK	Borovoye	55.05	316	IAMs_20	IAMs_20	07 34 43.5	
	comp=Z,12µm,18.0s						
BRVK	Borovoye	55.05	316	P	P	07 10 32.4	+0.2
BRVK				P	P	07 10 32.4	+0.2
BRVK				P	P	07 10 32.4	+0.2
N25K	Chitina, Valde	55.46	34	P	P	07 10 35.9	+0.8
	baz=272,SNR=17						
N25K	Chitina, Valde	55.46	34	IAMs_20	IAMs_20	07 36 32.8	
	comp=Z,10µm,18.0s						
RAGM	Ragged Mountai	55.48	35	IAmb	IAmb	07 10 55.3	
	comp=Z,120nm,1.2s						
RAGM				IAMs_20	IAMs_20	07 36 46.3	
	comp=Z,9µm,19.0s						
BMRM	Bremner River	55.49	35	P	P	07 10 36.1	+0.8
	baz=273,SNR=41						
KAIM	Kayak Island	55.63	36	P	P	07 10 36.2	-0.1
	baz=274						
KAIM	Kayak Island	55.63	36	IAmb	IAmb	07 10 42.1	
	comp=Z,120nm,1.3s						
KOUNC	Koumac, New Ca	55.63	154	P	P	07 10 40.9	+4.2
DOT	Dot Lake	55.65	31	IAmb	IAmb	07 10 42.2	
	comp=Z,222nm,1.9s						
DOT				IAMs_20	IAMs_20	07 34 21.5	
	comp=Z,7µm,19.0s						
SCRK	Sand Creek	55.68	31	P	P	07 10 37.1	+0.4
	baz=271,SNR=46						
HMT	Hamilton	55.69	35	IAMs_20	IAMs_20	07 36 52.7	
	comp=Z,8µm,19.0s						
MENT	Mentasta	55.82	32	IAmb	IAmb	07 10 43.7	
	comp=Z,61nm,1.0s						
GLB	Gilahina Butte	55.85	34	IAmb	IAmb	07 10 57.8	
	comp=Z,65nm,1.0s						
SUCK	Suckling Hills	55.95	36	IAmb	IAmb	07 10 58.8	
	comp=Z,118nm,1.4s						
VRDI	Verde Repeater	56.03	34	IAmb	IAmb	07 10 59.4	
	comp=Z,126nm,1.5s						
DZA	Taraz	56.07	303	eP	P	07 10 39.8	+0.1
	comp=Z,37nm,1.1s,baz=303						
DZA				eS	S	07 18 29.4	+2.0
	baz=303						
DZA	Taraz	56.07	303	eP	P	07 10 39.8	+0.1
DZA				eS	S	07 18 29.3	+2.0
DZA				pmax	pmax		
	comp=Z,37nm,1.1s						
MBWA	Marble Bar	56.08	205	P	P	07 10 37.0	-2.9
MBWA				P	P	07 10 37.0	-2.9
MBWA				S	S	07 18 22.0	-5.6
MBWA				S	S	07 18 22.0	-5.6
BGLC	Bering Glacier	56.19	36	P	P	07 10 40.4	+0.2
	baz=274						
MCARA	McCarthy VSAT	56.23	34	P	P	07 10 41.7	+1.2
	baz=274,SNR=55						
MCARA	McCarthy VSAT	56.23	34	IAmb	IAmb	07 10 49.4	
	comp=Z,92nm,0.8s						
PSA00	Pilbara Seismi	56.42	205	P	P	07 10 41.7	-0.6
KKAR	Karatay Array	56.60	304	P	P	07 10 42.7	-0.9
KKAR	Karatay Array	56.60	304	P	P	07 10 42.6	-0.9
KKAR	Karatay Array	56.60	304	IAmb	IAmb	07 10 48.8	
	comp=Z,119nm,0.8s						
KHLU	Kahalu`u	56.78	86	IAMs_20	IAMs_20	07 32 40.7	
	comp=Z,12µm,19.0s						
EIDS	Eidsvold	56.78	170	IAmb	IAmb	07 10 54.7	
	comp=Z,163nm,1.4s						
EGAK	Eagle	56.88	30	P	P	07 10 45.6	+0.5
	baz=273,SNR=33						
EGAK	Eagle	56.88	30	IAmb	IAmb	07 11 06.8	
	comp=Z,84nm,1.5s						
BARN	Barnard Glacie	56.91	34	IAMs_20	IAMs_20	07 36 13.9	
	comp=Z,7µm,19.0s						
NIL	Nilore	57.03	292	P	P	07 10 47.5	+0.7
NIL				pmax	pmax		
	comp=Z,182nm,0.7s						
NIL				MLR	MLR		
	comp=Z,8µm,18.0s						
NIL	Nilore	57.03	292	P	P	07 10 47.5	+0.7
NIL	Nilore	57.03	292	IAMs_20	IAMs_20	07 39 57.7	
	comp=Z,8µm,18.0s						
NIL	Nilore	57.03	292	P	P	07 10 46.6	-0.2
NIL				P	P	07 10 46.6	-0.2
CTG	Chitna Glacier	57.08	34	P	P	07 10 47.6	+0.8
	baz=276,SNR=21						
CTGM	Chitina Glacie	57.08	34	IAMs_20	IAMs_20	07 36 27.5	
	comp=Z,7µm,18.0s						
BRLS	Borolday	57.10	304	eP	P	07 10 48.6	+1.4
	comp=Z,34nm,0.8s,baz=304						
BRLS	Borolday	57.10	304	eP	P	07 10 48.5	+1.4
BRLS				pmax	pmax		
	comp=Z,35nm,0.8s						
KHU	Kahuku	57.16	86	IAMs_20	IAMs_20	07 32 12.8	
	comp=Z,9µm,19.0s						
IUG	Iuzhnay	57.17	303	eP	P	07 10 48.2	+0.5
	comp=Z,256nm,1.6s,baz=303						
IUG	Iuzhnay	57.17	303	eP	P	07 10 48.2	+0.5
IUG				pmax	pmax		
	comp=Z,256nm,1.6s						
BHPL	Bhopal	57.18	279	eP	P	07 10 44.9	-3.0
BHPL				IAmb	IAmb	07 10 51.9	
	comp=Z,40nm,0.8s						
BHPL				i x	x	07 11 13.2	
TABL	Table Mountain	57.23	35	IAMs_20	IAMs_20	07 38 12.9	
	comp=Z,7µm,18.0s						
DZM	Mont Dzumac	57.84	153	eP	P	07 10 56.6	+4.1
	comp=Z,392nm,1.6s						
DZM				eS	S	07 18 51.7	+0.7
	comp=Z,4µm,23.8s						
DZM				eLQ	LQ	07 25 13.2	
	comp=Z,9µm,37.0s						
DZM				eLR	LR	07 27 51.8	
	comp=Z,8µm,24.3s						
DZM	Mont Dzumac	57.84	153	LR	LR	07 35 54.6	
	comp=Z,5µm,18.3s,baz=344,slow=36						
DZM	Mont Dzumac	57.84	153	IAMs_20	IAMs_20	07 40 34.2	
	comp=Z,8µm,18.0s						
DZM	Mont Dzumac	57.84	153	P	P	07 10 56.9	+4.4
YATNC	Mamie plateau,	58.00	152	P	P	07 10 58.6	+5.1
ONTNC	Ouen Toro	58.06	153	P	P	07 10 56.3	+2.5
	comp=Z,121nm,1.8s						
EPYK	Eagle Plains	58.59	28	P	P	07 10 58.2	+1.0
	baz=276,SNR=65						
HYB	Hyderabad	58.62	272	i P	P	07 10 57.0	-1.1
HYB	Hyderabad	58.62	272	eP	P	07 10 54.1	-3.9
HYB				IAmb	IAmb	07 11 02.1	
HYB				IAMs_20	IAMs_20	07 43 44.1	
	comp=Z,3µm,23.3s						
HYT	Haines Junctio	58.95	34	IAmb	IAmb	07 11 21.4	
	comp=Z,70nm,1.0s						
MDRS	Chennai	59.14	267	eP	P	07 11 01.0	-0.7
MDRS				IAMs_20	IAMs_20	07 37 49.7	
	comp=Z,3µm,14.0s						
MDRS				IAMs_20	IAMs_20	07 39 45.1	
	comp=Z,3µm,11.7s						
MSVF	Nonsavu	59.68	139	IAMs_20	IAMs_20	07 35 10.3	
	comp=Z,7µm,20.0s						
SVE	Sverdlovsk	59.96	321	deP	P	07 11 07.3	+0.6
SVE				eS	S	07 19 17.7	0.0
SVE				e		07 20 50.2	
SVE				pmax	pmax		
	comp=Z,264nm,1.8s						
SVE				MLR	MLR		
	comp=E,9µm,17.0s						
SVE				MLR	MLR		
	comp=Z,11µm,17.0s						
SKAG	Skagway	60.26	36	P	P	07 11 10.0	+1.2
	baz=281,SNR=10						
BESE	Bessie Mountai	60.68	37	IAmb	IAmb	07 11 32.1	
	comp=Z,71nm,1.3s						
COCO	West Island	60.95	232	P	P	07 11 16.0	+2.0
COCO				pmax	pmax		
	comp=Z,296nm,1.4s						
COCO				MLR	MLR		
	comp=Z,4µm,19.0s						
COCO	West Island	60.95	232	P	P	07 11 16.0	+2.0
ARU	Arti	61.16	321	P	P	07 11 15.0	0.0
	comp=Z,13nm,0.5s,baz=90,slow=3.9,SNR=84						
ARU				LR	LR	07 41 16.1	
	comp=Z,10µm,18.1s,baz=71,slow=40						
ARU	Arti	61.16	321	c iP	P	07 11 15.0	0.0
ARU						07 11 55.4	
ARU						07 13 25.9	
ARU				S	S	07 19 36.2	+3.1
ARU						07 20 56.3	
ARU				SS	SS	07 23 36.3	+3.7
ARU				pmax	pmax		
	comp=Z,282nm,1.5s						
ARU				MLR	MLR		
	comp=Z,10µm,18.0s						
ARU	Arti	61.16	321	P	P	07 11 15.0	0.0
ARU				IAMs_20	IAMs_20	07 40 54.9	
	comp=Z,9µm,18.0s						
PALK	Pallekele	61.62	261	P	P	07 11 19.4	+0.7
PALK				pmax	pmax		
	comp=Z,23nm,1.1s						
PALK				MLR	MLR		
	comp=Z,5µm,20.0s						
PALK	Pallekele	61.62	261	P	P	07 11 19.4	+0.7
PALK	Pallekele	61.62	261	P	P	07 11 17.1	-1.6
ARMA	Armidale	61.82	170	IAmb	IAmb	07 11 40.1	
	comp=Z,51nm,1.1s						
POO	Poona	62.16	276	eP	P	07 11 21.2	-1.1
POO				IAMs_20	IAMs_20	07 40 13.1	
	comp=Z,5µm,16.3s						
ABKAR	Akbulak array	62.18	313	P	P	07 11 21.1	-0.8
ABKAR	Akbulak array	62.18	313	IAmb	IAmb	07 11 25.2	
	comp=Z,71nm,0.8s						
CRAG	Craig	62.34	40	P	P	07 11 22.9	+0.1
	baz=285						
WRAK	Wrangell Islan	62.51	39	P	P	07 11 24.7	+0.7
	baz=285,SNR=6.8						
WRAK	Wrangell Islan	62.51	39	IAmb	IAmb	07 11 30.9	
	comp=Z,69nm,1.6s						
WRAK	Wrangell Islan	62.51	39	IAMs_20	IAMs_20	07 38 20.4	
	comp=Z,6µm,19.0s						
STKA	Stephens Creek	62.58	180	P	P	07 11 25.1	+0.4
	comp=Z,7.6nm,0.4s,baz=349,slow=7.8,SNR=28						
STKA				S	S	07 19 48.0	-3.3
	comp=Z,1.7nm,1.0s,baz=168,slow=20,SNR=1.7						
STKA				LR	LR	07 38 02.0	
	comp=Z,9µm,20.6s,baz=5.2,slow=36						
STKA	Stephens Creek	62.58	180	P	P	07 11 25.0	+0.4
C36M	Paulatuk	62.73	23	P	P	07 11 25.3	0.0
	baz=286,SNR=121						
C36M	Paulatuk	62.73	23	IAmb	IAmb	07 11 33.8	
	comp=Z,54nm,0.7s						
FORT	Forrest	62.86	193	P	P	07 11 26.9	+0.4
FORT				IAMs_20	IAMs_20	07 37 55.9	
	comp=Z,6µm,20.0s						
AKTO	Aktyubinsk	63.04	314	P	P	07 11 28.4	+0.7
	comp=Z,26nm,0.8s,baz=84,slow=7.2,SNR=37						
AKTO				LR	LR	07 39 42.4	
	comp=Z,8µm,20.0s,baz=72,slow=37						
GOA	Goa	63.53	273	eP	P	07 11 29.4	-2.0
GOA				IAmb	IAmb	07 11 32.5	
	comp=Z,263nm,1.8s						
GOA				IAMs_20	IAMs_20	07 43 05.7	
	comp=Z,3µm,18.7s						
BBOO	Buckleboo	63.74	185	IAMs_20	IAMs_20	07 38 03.3	
	comp=Z,8µm,19.0s						
XMAS	Kiritimati	64.02	104	P	P	07 11 37.6	+3.0
XMAS				IAmb	IAmb	07 11 54.4	
	comp=Z,70nm,0.9s						
XMAS	Kiritimati	64.02	104	P	P	07 11 37.1	+2.5
	comp=Z,110nm,1.3s						
TRD	Trivandrum	64.18	264	eP	P	07 11 34.0	-1.7
TRD				IAMs_20	IAMs_20	07 40 09.6	
	comp=Z,17µm,23.3s						
MORW	Morawa	64.64	205	P	P	07 11 39.3	+1.0
MORW				IAmb	IAmb	07 12 39.1	
	comp=Z,74nm,1.5s						
KIRV	Kirov	65.30	325	P	P	07 11 43.1	+0.8
	comp=Z,53nm,0.6s,baz=71,slow=3.3,SNR=23						
HRA	Herat	65.39	297	IAmb	IAmb	07 11 48.8	
	comp=Z,79nm,1.1s						
HOPEN	Hopen	65.94	347	eP	P	07 11 47.6	+1.5
EUNU	Eureka	66.05	8	IAmb	IAmb	07 12 10.7	
	comp=Z,35nm,0.8s						
CAN	Canberra	66.35	174	IAmb	IAmb	07 12 16.6	
	comp=Z,59nm,1.0s						
SPA0	Spitsbergen Ar	66.46	349	eP	P	07 11 50.8	+1.3
SPITS	Spitsbergen Ar	66.46	349	LR	LR	07 42 10.6	
	comp=Z,3µm,21.5s,baz=60,slow=37						
KBS	Kingsbay	66.61	351	P	P	07 11 52.6	+2.1
KBS				pmax	pmax		
	comp=Z,58nm,1.0s						
KBS				MLR	MLR		
	comp=Z,4µm,19.0s						
KBS	Kingsbay	66.61	351	P	P	07 11 52.6	+2.1
KBS				IAmb	IAmb	07 11 53.4	
	comp=Z,58nm,0.9s						
KBS	Kingsbay	66.61	351	eP	P	07 11 51.1	+0.6
KBS	Kingsbay	66.61	351	i P	P	07 11 52.0	+1.5
KBS				IAmb	IAmb	07 11 53.6	
	comp=Z,135nm,1.0s						
GEYT	Alibeck	67.17	301	P	P	07 11 55.2	+0.6
	comp=Z,24nm,1.0s,baz=48,slow=2.2,SNR=29						
GEYT				LR	LR	07 42 56.4	
	comp=Z,6µm,19.0s,baz=55,slow=38						
GEYT	Alibeck	67.17	301	P	P	07 11 55.3	+0.6
GYA0B	ALIBECK ARRAY	67.17	301	IAmb	IAmb	07 12 20.3	
	comp=Z,68nm,1.1s						
HSPB	Hornsund (broa	67.38	349	eP	P	07 11 56.2	+0.9
MNCI	Minicoy	67.63	266	IAMs_20	IAMs_20	07 41 52.1	
	comp=Z,7µm,21.0s						
MNCY	Minicoy	67.66	266	eP	P	07 11 49.4	-8.7
MNCY				eP	pP	07 11 57.6	-5.6
MNCY				IAMs_20	IAMs_20	07 41 55.7	
	comp=Z,3µm,14.0s						
LVZ	Lovozero	67.74	337	i P	P	07 11 57.3	-0.5

LVZ				pmax	pmax		
	comp=Z,127nm,1.8s						
LVZ				MLR	MLR		
	comp=Z,4µm,16.0s						
LVZ	**Lovozero**	**67.74**	**337**	IAMs_20	IAMs_20	07 44 10.1	
	comp=Z,9µm,18.0s						
NWAO	**Narrogin (SRO)**	**67.75**	**202**	P	**P**	**07 11 59.8**	**+1.6**
NWAO				pmax	pmax		
	comp=Z,156nm,1.5s						
NWAO				MLR	MLR		
	comp=Z,4µm,18.0s						
NWAO	**Narrogin (SRO)**	**67.75**	**202**	P	**P**	**07 11 59.8**	**+1.6**
NWAO	**Narrogin (SRO)**	**67.75**	**202**	P	**P**	**07 11 58.1**	**-0.1**
NWAO				P	**P**	**07 11 58.1**	**-0.1**
TMCR	**Tamitsa**	**68.20**	**333**	*e*P	**P**	**07 11 59.3**	**-1.4**
TMCR				pmax	pmax		
	comp=Z,76nm,1.3s						
RES	**Resolute Bay**	**68.31**	**14**	LR	LR	07 46 52.6	
	comp=Z,2µm,19.3s,baz=317,slow=40						
APA	**Apatity**	**68.31**	**337**	⇓*i*P	**P**	**07 11 57.5**	**-3.9**
APA				*i*		07 12 22.5	
APA				*i*		07 14 34.0	
APA				*i* PPP	PPP	07 16 10.0	
APA				*i* S	S	07 20 51.0	-10
APA				*i*		07 21 56.0	
APA				*i* SS	**SS**	**07 25 17.0**	**-6.3**
APA				pmax	pmax		
	comp=Z,27nm,1.0s						
APA				MLR	MLR		
	comp=Z,9µm,17.0s						
TOO	**Toolangi**	**68.34**	**177**	P	**P**	**07 12 03.9**	**+2.0**
TOO				pmax	pmax		
	comp=Z,70nm,1.1s						
TOO				MLR	MLR		
	comp=Z,6µm,18.0s						
TOO	**Toolangi**	**68.34**	**177**	P	**P**	**07 12 03.9**	**+2.0**
TOO				IAmb	IAmb	07 12 23.2	
	comp=Z,70nm,1.1s						
TOO				IAMs_20	IAMs_20	07 43 22.1	
	comp=Z,6µm,18.0s						
BELG	**Belogornoye**	**68.49**	**319**	P	**P**	**07 12 03.8**	**+1.0**
	comp=Z,89nm,0.7s,baz=278,slow=2.6,SNR=19						
BELG	**Belogornoye**	**68.49**	**319**	*i* P	**P**	**07 12 02.8**	**+0.1**
BELG				pmax	pmax		
	comp=Z,34nm,0.9s						
BELG				MLR	MLR		
	comp=Z,2µm,16.0s						
YKA	**Yellowknife Ar**	**68.83**	**29**	P	**P**	**07 12 05.2**	**+0.5**
	comp=Z,11nm,0.6s,baz=303,slow=5.8,SNR=15						
YKA				PKP2bc		07 40 16.3	
	comp=Z,1.9nm,1.2s,baz=111,slow=2.8,SNR=5.7						
YKA				LR	LR	07 51 04.6	
	comp=Z,2µm,18.0s,baz=0.0,slow=44						
YKA	**Yellowknife Ar**	**68.83**	**29**	*i* P	**P**	**07 12 02.5**	**-2.2**
YKA				pmax	pmax		
	comp=Z,11nm,0.6s						
KLMR	**Klimovskoe**	**69.05**	**329**	*e*P	**P**	**07 12 04.4**	**-1.6**
KLMR				*e*		07 14 36.7	
KLMR				*e*S	**S**	**07 21 09.7**	**0.0**
KLMR				*e*SS	**SS**	**07 25 36.3**	**+1.4**
KLMR				pmax	pmax		
	comp=Z,53nm,0.9s						
KLMR	**Klimovskoe**	**69.05**	**329**	*e*P	**P**	**07 12 04.5**	**-1.6**
KLMR				AMP		07 12 14.9	
	comp=Z,53nm,0.9s						
KLMR				*e*PP	**PP**	**07 14 36.7**	**-1.5**
KLMR				*e*S	**S**	**07 21 09.7**	**0.0**
KLMR				*e*S	**S**	**07 21 09.7**	**0.0**
KLMR				*e*SS	**SS**	**07 25 36.4**	**+1.5**
KLMR				*e*SS	**SS**	**07 25 36.4**	**+1.5**
KLMR				LQ	LQ	07 36 32.8	
KLMR				LQ	LQ	07 36 32.8	
KLMR				LR	LR	07 42 12.4	
KEV	**Kevo**	**69.18**	**340**	IAMs_20	IAMs_20	07 46 05.1	
	comp=Z,7µm,19.0s						
HAMF	**Hammerfest**	**69.60**	**342**	*e*P	**P**	**07 12 08.7**	**-0.6**
ARA0	**ARCESS Array S**	**69.74**	**340**	*e*P	**P**	**07 12 11.1**	**+0.9**
ARCES	**ARCESS Array B**	**69.74**	**340**	P	**P**	**07 12 10.3**	**+0.1**
	comp=Z,24nm,0.8s,baz=48,slow=5.4,SNR=20						
ARCES				LR	LR	07 46 40.9	
	comp=Z,6µm,18.7s,baz=55,slow=39						
ARCES	**ARCESS Array B**	**69.74**	**340**	P	**P**	**07 12 11.0**	**+0.8**
ARCES				pmax	pmax		
	comp=Z,44nm,1.1s						
ARCES	**ARCESS Array B**	**69.74**	**340**	P	**P**	**07 12 11.0**	**+0.8**
PGC	**Sidney**	**70.27**	**45**	IAmb	IAmb	07 12 19.6	
	comp=Z,175nm,1.9s						
NLWA	**Neilton Lookou**	**70.55**	**46**	IAmb	IAmb	07 12 22.9	
	comp=Z,73nm,1.3s						
A04D	**Lummi Island**	**70.69**	**44**	P	**P**	**07 12 15.9**	**-0.4**
	baz=295						
KTK1	**Kautokeino**	**70.70**	**340**	*e*P	**P**	**07 12 16.9**	**+0.8**
D03D	**Eldon**	**70.97**	**46**	P	**P**	**07 12 18.9**	**+0.8**
	baz=295,SNR=22						
TULEG	**Thule**	**70.98**	**7**	IAmb	IAmb	07 12 39.7	
	comp=Z,109nm,1.4s						
TULEG				IAMs_20	IAMs_20	07 47 01.7	
	comp=Z,6µm,18.0s						
TULEG	**Thule**	**70.98**	**7**	*i* P	**P**	**07 12 18.0**	**+0.4**
TULEG				IAmb	IAmb	07 12 19.4	
	comp=Z,35nm,1.1s						
TULEG				IAMs_20	IAMs_20	07 46 56.5	
	comp=Z,6µm,18.8s						
E03A	**Lebam**	**71.09**	**47**	IAmb	IAmb	07 12 25.9	
	comp=Z,72nm,1.1s						
E03A				IAMs_20	IAMs_20	07 48 01.0	
	comp=Z,5µm,18.0s						
JETT	**Jettan, Norway**	**71.15**	**342**	*e*P	**P**	**07 12 20.1**	**+1.2**
B05A	**Bryant**	**71.25**	**45**	P	**P**	**07 12 20.6**	**+0.8**
	baz=296,SNR=10						
D04E	**Lakebay**	**71.31**	**46**	P	**P**	**07 12 21.2**	**+1.0**
	baz=296						
TRO	**Tromso**	**71.50**	**342**	*e*P	**P**	**07 12 19.7**	**-1.2**
B06A	**Marblemount**	**71.51**	**44**	IAmb	IAmb	07 12 27.8	
	comp=Z,74nm,1.3s						
F04D	**Rainier, OR**	**71.64**	**47**	P	**P**	**07 12 22.7**	**+0.5**
	baz=296						
E04D	**Cinebar**	**71.71**	**46**	P	**P**	**07 12 22.3**	**-0.3**
	baz=296,SNR=14						
DAG	**Danmarks Havn**	**71.76**	**355**	⇑*i*P	**P**	**07 12 22.8**	**+0.4**
	comp=Z,62nm,1.0s						
DAG	**Danmarks Havn**	**71.76**	**355**	⇑*i*P	**P**	**07 12 22.8**	**+0.4**
DAG				pmax	pmax		
	comp=Z,62nm,1.0s						
DAG	**Danmarks Havn**	**71.76**	**355**	⇑*i*P	**P**	**07 12 22.8**	**+0.4**
DAG				IAmb	IAmb	07 12 24.1	
	comp=Z,62nm,1.0s						
G03D	**McMinnville, O**	**71.86**	**48**	P	**P**	**07 12 23.6**	**+0.1**
	baz=296						
I02D	**Swisshome**	**71.97**	**49**	P	**P**	**07 12 23.8**	**-0.3**
	baz=296						
COR	**Corvallis**	**72.11**	**48**	P	**P**	**07 12 26.1**	**+1.1**
COR				pmax	pmax		
	comp=Z,89nm,1.3s						
COR	**Corvallis**	**72.11**	**48**	P	**P**	**07 12 26.1**	**+1.1**
COR				IAmb	IAmb	07 13 11.7	
	comp=Z,89nm,1.2s						
COR	**Corvallis**	**72.11**	**48**	IAMs_20	IAMs_20	07 42 28.9	
	comp=Z,7µm,19.0s						
C06D	**Leavenworth**	**72.13**	**45**	P	**P**	**07 12 25.1**	**-0.1**
	baz=297						
MOS	**Moscow**	**72.31**	**325**	*e*P	**P**	**07 12 23.3**	**-2.7**
MOS				*e*		07 15 02.1	
MOS				*e*PPP	PPP	07 16 48.3	
MOS				*e*S	**S**	**07 21 43.9**	**-4.0**
MOS				*e*		07 22 27.1	
MOS				pmax	pmax		
	comp=Z,176nm,1.6s						
MOS				MLR	MLR		
	comp=N,14µm,16.0s						
MOS				MLR	MLR		
	comp=E,11µm,16.0s						
MOS				MLR	MLR		
	comp=Z,20µm,16.0s						
VRH	**Novokhopyorsk**	**72.31**	**319**	*e*P	**P**	**07 12 25.7**	**-0.4**
VRH				pmax	pmax		
	comp=Z,90nm,0.8s						
VRH				MLR	MLR		
	comp=Z,14µm,16.0s						
J01E	**Myrtle Point**	**72.32**	**50**	P	**P**	**07 12 26.6**	**+0.2**
	baz=296						
OUZ	**Omahuta**	**72.36**	**153**	IAMs_20	IAMs_20	07 42 44.7	
	comp=Z,7µm,19.0s						
I03D	**Drain, OR**	**72.47**	**49**	P	**P**	**07 12 27.3**	**+0.1**
	baz=296,SNR=8.3						
H04D	**Lebanon**	**72.50**	**48**	P	**P**	**07 12 27.0**	**-0.4**
	baz=296						
MAK	**Makhachkala**	**72.51**	**310**	*e*P	P	07 12 22.5	-4.9
MAK				*e*		07 15 04.0	
MAK				*e*PPP	PPP	07 16 49.8	
MAK				*e*S	**S**	**07 21 46.3**	**-4.2**
MAK				pmax	pmax		
	comp=Z,393nm,1.8s						
MAK				pmax	pmax		
	comp=Z,4µm,7.2s						
MAK				smax	smax		
	comp=E,5µm,7.2s						
MAK				smax	smax		
	comp=N,6µm,7.7s						
MAK				MLR	MLR		
	comp=N,20µm,16.0s						
MAK				MLR	MLR		
	comp=Z,24µm,16.0s						
MAK				MLR	MLR		
	comp=E,28µm,16.0s						
F05D	**White Salmon**	**72.70**	**47**	P	**P**	**07 12 28.7**	**+0.2**
	baz=297						
K02D	**Willamette Mer**	**72.70**	**50**	P	**P**	**07 12 29.0**	**+0.2**
	baz=296,SNR=12						
JLN	**Jalan Bani Buh**	**72.73**	**286**	P	**P**	**07 12 28.9**	**-0.2**
	SNR=9.6						
JLN				P	**P**	**07 12 28.9**	**-0.2**
	SNR=9.6						
H04A	**Detroit Lake**	**72.78**	**48**	IAmb	IAmb	07 12 35.6	
	comp=Z,66nm,1.1s						
B08A	**Colville Reser**	**72.86**	**44**	IAmb	IAmb	07 12 35.9	
	comp=Z,107nm,1.6s						
WBK	**Wadi Bani Khal**	**72.88**	**286**	P	**P**	**07 12 30.3**	**+0.2**
	SNR=13						
WBK				P	**P**	**07 12 30.3**	**+0.2**
	SNR=13						
L02E	**Cave Junction**	**72.98**	**51**	P	**P**	**07 12 30.3**	**-0.1**
	baz=297,SNR=11						
I04A	**Tendick Farm,**	**73.03**	**49**	P	**P**	**07 12 31.2**	**+0.6**
	baz=297,SNR=17						
KRMB	**Red Mountain**	**73.06**	**52**	IAmb	IAmb	07 12 38.1	
	comp=Z,63nm,1.3s						
G05D	**Wamic, OR**	**73.08**	**47**	P	**P**	**07 12 31.2**	**+0.4**
	baz=297						
OBN	**Obninsk**	**73.15**	**325**	P	**P**	**07 12 31.5**	**+0.6**
	comp=Z,5.8nm,0.4s,baz=43,slow=1.7,SNR=11						
OBN				LR	LR	07 47 19.1	
	comp=Z,3µm,18.8s,baz=58,slow=38						
OBN	**Obninsk**	**73.15**	**325***c*	*i*P	**P**	**07 12 30.7**	**-0.3**
OBN				*i*		07 12 48.0	
OBN				*e*		07 15 12.2	
OBN				*e*S	**SKiKP**	**07 22 00.8**	**-1.0**
OBN				*e*SS	**SS**	**07 26 40.1**	**+2.2**
OBN				pmax	pmax		
	comp=Z,125nm,1.2s						
OBN				MLR	MLR		
	comp=Z,20µm,16.0s						
BIDO	**Bidbid**	**73.16**	**288**	P	**P**	**07 12 32.0**	**+0.3**
	SNR=17						
BIDO				P	**P**	**07 12 32.0**	**+0.3**
	SNR=17						
LPSR	**Galich'ya Gora**	**73.17**	**322**	*e*P	**P**	**07 12 31.4**	**+0.2**
LPSR				*e*S	**S**	**07 21 50.7**	**-7.1**
LPSR				pmax	pmax		
	comp=Z,70nm,1.0s						
LPSR				smax	smax		
	comp=N,1µm,10.4s						
LPSR				MLR	MLR		
	comp=Z,10µm,16.0s						
HUMO	**Hull Mountain**	**73.21**	**50**	IAmb	IAmb	07 12 37.6	
	comp=Z,106nm,1.9s						
JCC	**Jacoby Creek,**	**73.30**	**52**	IAMs_20	IAMs_20	07 41 40.8	
	comp=Z,8µm,19.0s						
E07A	**Sunnyside**	**73.38**	**45**	IAmb	IAmb	07 12 39.3	
	comp=Z,145nm,1.7s						
SMDO	**Samad**	**73.44**	**287**	P	**P**	**07 12 33.7**	**+0.3**
	SNR=16						
SMDO				P	**P**	**07 12 33.7**	**+0.3**
	SNR=16						
I05D	**Terrebonne, OR**	**73.47**	**48**	P	**P**	**07 12 33.2**	**0.0**
	baz=297,SNR=11						
KHMM	**Horse Mountain**	**73.47**	**52**	IAmb	IAmb	07 12 44.4	
	comp=Z,76nm,1.2s						
J04D	**Umpqua Nationa**	**73.48**	**49**	P	**P**	**07 12 33.6**	**+0.1**
	baz=297,SNR=11						
PUL	**Pulkovo**	**73.55**	**331**	*i* P	**P**	**07 12 33.8**	**+0.5**
PUL				pmax	pmax		
	comp=Z,161nm,0.5s						
BANOM	**Banah**	**73.56**	**291**	*i* P	**P**	**07 12 34.7**	**+0.7**
	SNR=18						
BANOM	**Banah**	**73.56**	**291**	P	**P**	**07 12 34.7**	**+0.7**
	SNR=9.4						
BANOM				P	**P**	**07 12 34.7**	**+0.7**
	SNR=9.4						
SHME	**Shamm**	**73.63**	**291**	*i* P	**P**	**07 12 34.8**	**+0.3**
	SNR=79						
SHME	**Shamm**	**73.63**	**291**	P	**P**	**07 12 34.8**	**+0.3**
	SNR=22						
SHME				P	**P**	**07 12 34.8**	**+0.3**
	SNR=22						
STEI	**Steigen**	**73.64**	**342**	*e*P	**P**	**07 12 34.5**	**+0.9**
JMDO	**Jabal Madar**	**73.70**	**287**	P	**P**	**07 12 34.9**	**0.0**
	SNR=13						
JMDO				P	**P**	**07 12 34.9**	**0.0**
	SNR=13						
VSR	**Storozhevoye**	**73.72**	**320**	*e*P	**P**	**07 12 34.3**	**-0.2**
VSR				*e*S	**SKiKP**	**07 21 57.3**	**-5.5**
VSR				pmax	pmax		
	comp=Z,80nm,1.0s						
VSR				smax	smax		
	comp=N,820nm,7.8s						
VSR				MLR	MLR		
	comp=Z,6µm,15.0s						
C09A	**Chrisman Ranch**	**73.75**	**44**	IAmb	IAmb	07 12 41.1	
	comp=Z,207nm,1.9s						
TAU	**Tasmania Unive**	**73.76**	**176**	IAMs_20	IAMs_20	07 46 31.5	
	comp=Z,6µm,19.0s						
YBH	**Yreka Blue Hor**	**73.77**	**51**	LR	LR	07 42 50.7	
	comp=Z,8µm,18.9s,baz=283,slow=34						
VORD	**Divnogorie**	**73.77**	**320**	*e*P	**P**	**07 12 34.8**	**0.0**
VORD				*e*S	**SKiKP**	**07 22 00.2**	**-2.7**
VORD				pmax	pmax		
	comp=Z,40nm,1.0s						
VORD				smax	smax		
	comp=E,330nm,6.4s						
VORD				MLR	MLR		
	comp=Z,10µm,17.0s						
HOQ	**Hoqain**	**73.80**	**288**	P	**P**	**07 12 35.9**	**+0.4**
	SNR=35						
HOQ				P	**P**	**07 12 35.9**	**+0.4**
	SNR=35						
L04D	**Klamath Falls**	**73.82**	**50**	P	**P**	**07 12 36.1**	**+0.7**
	baz=297,SNR=14						
M02C	**Callahan**	**73.83**	**51**	P	**P**	**07 12 36.5**	**+1.1**
	baz=297,SNR=11						
MDH	**Madha**	**73.85**	**290**	*i* P	**P**	**07 12 35.0**	**-0.7**
	SNR=7.5						
MDH	**Madha**	**73.85**	**290**	P	**P**	**07 12 35.2**	**-0.5**
KULLO	**Kullorsuaq**	**73.90**	**5**	*i* P	**P**	**07 12 35.3**	**+0.2**
	comp=Z,41nm,1.0s						
	comp=Z,6µm,18.0s						
KULLO	**Kullorsuaq**	**73.90**	**5**	*i* P	**P**	**07 12 35.3**	**+0.2**
KULLO				pmax	pmax		
	comp=Z,41nm,1.0s						
KULLO				MLR	MLR		
	comp=Z,6µm,18.0s						
KULLO	**Kullorsuaq**	**73.90**	**5**	*i* P	**P**	**07 12 35.3**	**+0.2**
KULLO				IAmb	IAmb	07 12 39.8	
	comp=Z,41nm,1.0s						
KULLO				IAMs_20	IAMs_20	07 51 19.9	
	comp=Z,6µm,17.8s						
MASF	**Masafi**	**73.93**	**290**	P	**P**	**07 12 35.6**	**-0.5**
	SNR=9.3						
MASF				P	**P**	**07 12 35.6**	**-0.5**
	SNR=9.3						
MSFE	**Esma-Masafi**	**73.93**	**290**	*i* P	**P**	**07 12 36.5**	**+0.3**
	SNR=16						
LOF	**Lofoten**	**73.96**	**342**	*e*P	**P**	**07 12 35.9**	**+0.4**
PINE	**Pine Mountain**	**73.98**	**48**	IAmb	IAmb	07 12 56.6	
	comp=Z,108nm,1.1s						
PINE				IAMs_20	IAMs_20	07 41 49.4	
	comp=Z,6µm,19.0s						
K04D	**Chiloquin, OR**	**73.99**	**50**	P	**P**	**07 12 36.7**	**+0.2**
	baz=298						
FAUS	**Fauske**	**74.02**	**341**	*e*P	**P**	**07 12 36.6**	**+0.7**
J05D	**Fort Rock, OR**	**74.03**	**49**	P	**P**	**07 12 38.0**	**+1.4**
	baz=298,SNR=20						
UOSS	**Minazif**	**74.08**	**290**	*i* P	**P**	**07 12 36.7**	**-0.4**
	SNR=15						
UOSS	**Minazif**	**74.08**	**290**	P	**P**	**07 12 37.6**	**+0.5**
UOSS				IAmb	IAmb	07 12 52.2	
	comp=Z,58nm,1.0s						
UOSS	**Minazif**	**74.08**	**290**	P	**P**	**07 12 37.1**	**0.0**
UOSS				P	**P**	**07 12 37.1**	**0.0**
N02D	**Trinity Center**	**74.12**	**52**	P	**P**	**07 12 38.3**	**+1.2**
	baz=298,SNR=17						
SOHO	**SOHO**	**74.19**	**289**	*i* P	**P**	**07 12 37.7**	**0.0**
	SNR=70						
SOHO	**SOHO**	**74.19**	**289**	P	**P**	**07 12 37.7**	**0.0**
SOHO				P	**P**	**07 12 37.7**	**0.0**
HATD	**Hatta, Dubai**	**74.20**	**290**	*i* P	**P**	**07 12 37.7**	**0.0**
	SNR=40						
HATD	**Hatta, Dubai**	**74.20**	**290**	P	**P**	**07 12 38.3**	**+0.5**
	SNR=23						
HATD				P	**P**	**07 12 38.3**	**+0.5**
	SNR=23						
NEW	**Newport**	**74.21**	**43**	P	**P**	**07 12 38.3**	**+0.8**
	baz=299,SNR=40						
DBG	**Daneborg**	**74.25**	**355**	*i* P	**P**	**07 12 37.2**	**0.0**
DBG				IAmb	IAmb	07 12 39.2	
	comp=Z,29nm,1.2s						
DBG				IAMs_20	IAMs_20	07 57 25.2	
	comp=Z,5µm,19.0s						
UMQ	**Umm Al-Quwin**	**74.26**	**291**	P	**P**	**07 12 39.0**	**+0.9**
UMQ	**Umm Al-Quwin**	**74.26**	**291**	P	**P**	**07 12 39.6**	**+1.5**
UMQ				P	**P**	**07 12 39.6**	**+1.5**
BSY	**Bisya**	**74.28**	**287**	P	**P**	**07 12 38.5**	**+0.3**
	SNR=21						
BSY				P	**P**	**07 12 38.5**	**+0.3**
	SNR=21						
FIA1	**FINESS Array S**	**74.30**	**333**	P	**P**	**07 12 38.1**	**+0.4**
FINES	**FINESS Array B**	**74.30**	**333**	P	**P**	**07 12 37.4**	**-0.2**
	comp=Z,6.0nm,0.4s,baz=74,slow=4.9,SNR=32						
FINES	**FINESS Array B**	**74.30**	**333**	*i* P	**P**	**07 12 38.0**	**+0.4**
FINES				pmax	pmax		
	comp=Z,6.0nm,0.4s						
FINES	**FINESS Array B**	**74.30**	**333**	P	**P**	**07 12 37.6**	**0.0**
ASHO	**Ashiyiah**	**74.32**	**290**	*i* P	**P**	**07 12 39.0**	**+0.5**
	SNR=20						
ASHO	**Ashiyiah**	**74.32**	**290**	P	**P**	**07 12 38.9**	**+0.4**
	SNR=34						
ASHO				P	**P**	**07 12 38.9**	**+0.4**
	SNR=34						
M04C	**Macdoel**	**74.33**	**51**	P	**P**	**07 12 38.8**	**+0.4**
	baz=298,SNR=18						
GOF	**Gofitskoye**	**74.41**	**313**	⇑*i*P	**P**	**07 12 39.2**	**+0.6**
GOF				pmax	pmax		
	comp=Z,241nm,1.3s						
WDC	**Whiskeytown Da**	**74.41**	**52**	P	**P**	**07 12 40.1**	**+1.4**
WDC				pmax	pmax		
	comp=Z,23nm,1.0s						
WDC	**Whiskeytown Da**	**74.41**	**52**	P	**P**	**07 12 40.1**	**+1.4**
WDC				IAMs_20	IAMs_20	07 42 00.2	
	comp=Z,8µm,20.0s						
O02D	**Mt. Diablo Mer**	**74.43**	**52**	P	**P**	**07 12 39.3**	**+0.4**
	baz=298,SNR=16						
E09A	**Wood Farm, Sta**	**74.44**	**45**	IAmb	IAmb	07 12 45.4	
	comp=Z,93nm,1.4s						
MHTO	**MHTO**	**74.45**	**285**	P	**P**	**07 12 38.9**	**-0.3**
	SNR=28						
MHTO				P	**P**	**07 12 38.9**	**-0.3**
	SNR=28						
NAZ	**Nazwa, Dubai**	**74.50**	**290**	*i* P	**P**	**07 12 39.7**	**+0.2**
	SNR=12						
NAZ	**Nazwa, Dubai**	**74.50**	**290**	P	**P**	**07 12 39.7**	**+0.2**
	SNR=14						
NAZ				P	**P**	**07 12 39.7**	**+0.2**
	SNR=14						
K05A	**Summer Lake**	**74.51**	**49**	IAmb	IAmb	07 13 00.1	
	comp=Z,104nm,1.1s						
ARQ	**Araqi**	**74.56**	**288**	P	**P**	**07 12 40.4**	**+0.5**
	SNR=38						
ARQ				P	**P**	**07 12 40.4**	**+0.5**
	SNR=38						
FAQ	**Al Faqa, Dubai**	**74.67**	**290**	*i* P	**P**	**07 12 40.7**	**+0.2**
	SNR=17						
FAQ	**Al Faqa, Dubai**	**74.67**	**290**	P	**P**	**07 12 40.6**	**+0.1**
	SNR=13						
FAQ				P	**P**	**07 12 40.6**	**+0.1**
	SNR=13						
I07A	**Izee**	**74.76**	**48**	IAMs_20	IAMs_20	07 43 38.0	
	comp=Z,5µm,19.0s						
NCK	**Nalchik**	**74.80**	**312***c*	*i*P	**P**	**07 12 41.2**	**+0.2**
NCK				pmax	pmax		
	comp=Z,133nm,1.1s						
NCK				MLR	MLR		
	comp=Z,8µm,18.0s						
ALNE	**Al Ain**	**74.86**	**289**	*i* P	**P**	**07 12 42.0**	**+0.4**
	SNR=20						
ALNE	**Al Ain**	**74.86**	**289**	P	**P**	**07 12 42.0**	**+0.4**
	SNR=30						
ALNE				P	**P**	**07 12 42.0**	**+0.4**
	SNR=30						
ASUD	**Al Ashush, Dub**	**74.94**	**290**	*i* P	**P**	**07 12 42.6**	**+0.6**
	SNR=28						
ASUD	**Al Ashush, Dub**	**74.94**	**290**	P	**P**	**07 12 42.6**	**+0.6**
	SNR=9.3						
ASUD				P	**P**	**07 12 42.6**	**+0.6**
	SNR=9.3						
ZEI	**Tsey**	**74.94**	**311**	*e*P	**P**	**07 12 38.8**	**-3.2**
ZEI				pmax	pmax		
	comp=Z,55nm,1.0s						
O03E	**Paynes Creek**	**75.05**	**52**	P	**P**	**07 12 42.5**	**0.0**
	baz=298,SNR=18						
KBZ	**Khabaz**	**75.14**	**312**	P	**P**	**07 12 43.7**	**+0.9**
	comp=Z,59nm,0.8s,baz=66,slow=2.8,SNR=70						
KBZ	**Khabaz**	**75.14**	**312***c*	*i*P	**P**	**07 12 43.1**	**+0.3**
KBZ				pmax	pmax		
	comp=Z,130nm,1.0s						
KIV	**Kislovodsk**	**75.16**	**312**	⇑P	**P**	**07 12 44.8**	**+1.6**
KIV	**Kislovodsk**	**75.16**	**312**	*i* P	**P**	**07 12 43.8**	**+0.6**
	SNR=14						
KIV	**Kislovodsk**	**75.16**	**312**	P	**P**	**07 12 44.4**	**+1.3**
KIV	**Kislovodsk**	**75.16**	**312***c*	*i*P	**P**	**07 12 43.3**	**+0.2**
KIV				*i*		07 12 51.2	
KIV				*i*		07 12 56.3	
KIV				*e*		07 15 31.0	
KIV				*i* S	**S**	**07 22 23.7**	**+3.0**
KIV				*e*SS	**SS**	**07 27 12.2**	**+2.8**
KIV				pmax	pmax		
	comp=Z,164nm,1.3s						
KIV				MLR	MLR		
	comp=Z,8µm,17.0s						
KIV	**Kislovodsk**	**75.16**	**312**	P	**P**	**07 12 44.1**	**+1.0**
KIV				IAMs_20	IAMs_20	07 48 12.8	
	comp=Z,6µm,19.0s						
KIV	**Kislovodsk**	**75.16**	**312**	P	**P**	**07 12 43.9**	**+0.8**
KIV				P	**P**	**07 12 43.9**	**+0.8**
AJN	**Ajban**	**75.24**	**290**	*i* P	**P**	**07 12 43.3**	**-0.5**
	SNR=10						
AJN	**Ajban**	**75.24**	**290**	P	**P**	**07 12 43.5**	**-0.3**
	SNR=10						
AJN				P	**P**	**07 12 43.5**	**-0.3**
	SNR=10						
KONS	**Konsvik**	**75.25**	**341**	*e*P	**P**	**07 12 43.7**	**+0.7**
DQM	**DQM**	**75.30**	**285**	P	**P**	**07 12 44.0**	**-0.1**
	SNR=7.7						
DQM				P	**P**	**07 12 44.0**	**-0.1**
	SNR=7.7						
NEY	**Neytrino**	**75.48**	**312**	*i* P	**P**	**07 12 45.1**	**0.0**
NEY				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ORV	**Oroville**	**75.60**	**52**	P	**P**	**07 12 46.4**	**+0.8**
ORV				pmax	pmax		
	comp=Z,87nm,1.6s						
ORV	**Oroville**	**75.60**	**52**	P	**P**	**07 12 46.4**	**+0.8**
ORV				IAmb	IAmb	07 12 51.5	
	comp=Z,87nm,1.6s						
GNI	**Garni**	**75.64**	**308**	LR	LR	07 48 42.6	
	comp=Z,5µm,18.1s,baz=68,slow=38						
GNI	**Garni**	**75.64**	**308**	P	**P**	**07 12 47.1**	**+1.1**
GNI	**Garni**	**75.64**	**308**	P	**P**	**07 12 47.8**	**+1.8**
GNI	**Garni**	**75.64**	**308**	P	**P**	**07 12 48.0**	**+2.0**
GNI				pmax	pmax		
	comp=Z,393nm,1.6s						
GNI				MLR	MLR		
	comp=Z,4µm,20.0s						
GNI	**Garni**	**75.64**	**308**	P	**P**	**07 12 48.0**	**+2.0**
GNI	**Garni**	**75.64**	**308**	P	**P**	**07 12 47.6**	**+1.6**
GNI				P	**P**	**07 12 47.6**	**+1.6**
WALA	**Waterton Lakes**	**75.66**	**41**	IAmb	IAmb	07 12 50.1	
	comp=Z,44nm,0.7s						
UPNV	**Upernavik**	**75.72**	**5**	*i* P	**P**	**07 12 46.5**	**+0.9**
UPNV				IAMs_20	IAMs_20	07 53 04.5	

	comp=Z,4µm,16.9s						
BMO	Blue Mountains	75.76	46	IAmb	IAmb	07 12 53.2	
	comp=Z,75nm,1.4s						
VSU	Vasula	75.82	331	*e*P	P	07 12 47.0	+0.5
AKH	Akhalkalaki	75.87	310	⇓P	P	07 12 49.8	+2.4
AKH	Akhalkalaki	75.87	310	P	P	07 12 49.2	+1.9
UMZA	Um Al Zommool	75.96	288	P	P	07 12 47.5	-0.4
JTMT	Jette	76.12	42	IAmb	IAmb	07 13 15.9	
	comp=Z,74nm,1.1s						
CHVG	Ch'k'valeri	76.15	312	⇑P	P	07 12 50.0	+1.3
CHVG	Ch'k'valeri	76.15	312	⇑P	P	07 12 50.0	+1.3
AFDM	Forest Hills D	76.25	53	IAmb	IAmb	07 12 55.7	
	comp=Z,123nm,1.9s						
RAR	Rarotonga	76.38	125	IAMs_20	IAMs_20	07 51 19.2	
	comp=Z,5µm,18.0s						
URZ	Urewera	76.39	152	IAMs_20	IAMs_20	07 41 34.4	
	comp=Z,7µm,22.0s						
KARS	Kars	76.52	309	P	P	07 12 52.8	+1.8
SUMG	Summit	76.66	0	⇑*i*P	P	07 12 52.8	+1.3
	comp=Z,104nm,1.0s						
SUMG	Summit	76.66	0	⇑*i*P	P	07 12 52.8	+1.3
SUMG				pmax	pmax		
	comp=Z,100nm,1.0s						
SUMG	Summit	76.66	0	P	P	07 12 52.4	+0.9
SUMG				IAmb	IAmb	07 12 57.8	
	comp=Z,109nm,1.4s						
SUMG	Summit	76.66	0	⇑*i*P	P	07 12 52.8	+1.3
SUMG				IAmb	IAmb	07 12 54.6	
	comp=Z,105nm,1.0s						
CLDR	Caldiran	76.68	308	P	P	07 12 52.5	+0.4
RUBR	Rubicon Trail	76.75	52	IAmb	IAmb	07 12 57.2	
	comp=Z,49nm,0.7s						
MSO	Missoula	76.79	43	P	P	07 12 52.4	0.0
	baz=301,SNR=32						
MTSE	Matsula	76.87	332	*e*P	P	07 12 49.5	-2.9
BKZ	Black Stump Fm	76.92	153	P	P	07 12 55.2	+2.3
BKZ				IAMs_20	IAMs_20	07 42 29.4	
	comp=Z,8µm,22.0s						
VCNR	Virginia City	76.98	52	IAmb	IAmb	07 12 59.3	
	comp=Z,148nm,1.9s						
NSS	Namsos	77.02	340	*e*P	P	07 12 54.0	+0.9
SENK	Senkaya-Erzuru	77.04	310	P	P	07 12 55.7	+1.7
CMB	Columbia Colle	77.09	53	IAMs_20	IAMs_20	07 45 12.2	
	comp=Z,5µm,20.0s						
AGRB	Hanur-Agry	77.09	308	P	P	07 12 55.9	+1.6
PNTR	Pine Nut	77.11	52	IAmb	IAmb	07 13 01.1	
	comp=Z,44nm,0.8s						
SOC	Sochi	77.22	313	*e*P	P	07 12 52.6	-2.1
SOC				*e*		07 15 43.6	
SOC				*e*S	S	07 22 42.3	-0.8
SOC				*e*SS	SS	07 27 42.2	+1.9
SOC				*e*SSS	SSS	07 31 00.4	
SOC				pmax	pmax		
	comp=Z,97nm,0.9s						
SOC				pmax	pmax		
	comp=Z,513nm,2.1s						
SOC				MLR	MLR		
	comp=Z,8µm,17.0s						
VANB	Van	77.31	307	P	P	07 12 57.2	+1.7
MFID	Camas Ranch	77.41	47	IAmb	IAmb	07 13 02.6	
	comp=Z,156nm,1.6s						
YERR	Yerington	77.41	52	IAmb	IAmb	07 13 02.5	
	comp=Z,59nm,1.1s						
WAKR	Walker	77.51	53	IAmb	IAmb	07 13 02.5	
	comp=Z,105nm,1.7s						
MLAZ	Malazgirt-MUS	77.61	308	P	P	07 12 59.2	+2.0
KOPR	Koprukoy-ERZUR	77.65	309	P	P	07 12 59.6	+2.2
MNK	Minsk	77.68	327	⇓*e*P	P	07 12 57.0	0.0
MNK				*e*		07 13 10.0	
MNK				*e*PPP	PPP	07 17 44.0	
MNK				*e*S	S	07 22 46.0	-1.7
MNK				*e*PS	PnS	07 23 36.0	+7.4
MNK				pmax	pmax		
	comp=N,70nm,1.5s						
MNK				pmax	pmax		
	comp=E,310nm,1.5s						
MNK				pmax	pmax		
	comp=Z,370nm,1.5s						
MNK				smax	smax		
	comp=E,2µm,8.0s						
MNK				MLR	MLR		
	comp=N,7µm,14.0s						
MNK				MLR	MLR		
	comp=N,7µm,14.0s						
MNK				MLR	MLR		
	comp=Z,19µm,16.0s						
MNK				MLR	MLR		
	comp=Z,14µm,16.0s						
MNK				MLR	MLR		
	comp=E,9µm,16.0s						
MNK				MLR	MLR		
	comp=E,8µm,16.0s						
MNK	Minsk	77.68	327	*i* P	P	07 12 53.6	-3.4
	comp=E,5.0nm,1.1s						
MNK				*i* P	P	07 12 53.6	-3.4
	comp=N,24nm,0.9s						
MNK				*i* P	P	07 12 53.6	-3.4
	comp=Z,51nm,1.0s						
MNK				*i* PcP	sP	07 13 03.7	-0.4
MNK				*i* PP	PP	07 15 48.2	-3.6
MNK				*i* PPP	PPP	07 17 35.5	
MNK				*i* S	S	07 22 45.5	-2.2
MNK				*i* ScS	ScS	07 23 21.6	+7.2
MNK				*i* SS	SS	07 27 45.7	-1.0
MNK				*i* SSS	SSS	07 31 09.8	
MNK				*i* LQ	LQ	07 42 01.2	
MNK				*i* LR	LR	07 47 26.4	
MNK				*i* LRM	MLR	07 49 44.0	
	comp=N,5µm,14.5s						
MNK				*i* LRM	MLR	07 50 23.8	
	comp=E,763nm,18.8s						
MNK				*i* LRM	MLR	07 50 33.9	
	comp=Z,6µm,17.4s						
PMPB	Monarch Peak	77.69	55	IAmb	IAmb	07 13 16.6	
	comp=Z,60nm,1.2s						
AKDM	Akdamar-Van	77.72	307	P	P	07 12 58.9	+1.1
IDID	Didziasalis	77.72	328	*e*P	P	07 12 57.4	+0.2
SHAO	Shalim	77.79	284	P	P	07 12 58.1	-0.3
SHAO	Shalim	77.79	284	P	P	07 12 58.5	+0.2
SHAO				P	P	07 12 58.5	+0.2
CHOM	Cayeli-Rize	77.81	311	P	P	07 12 59.2	+1.1
CUKT	Cukurca	77.82	306	P	P	07 12 57.8	-0.6
ISAL	Salakas	77.84	328	*e*P	P	07 12 58.2	+0.3
THZ	Tophouse	77.90	157	P	P	07 12 60.0	+1.7
IIGN	Ignalina	77.93	328	*e*P	P	07 12 58.6	+0.2
NACGM	Naroch	77.95	328	*i* P	P	07 12 59.7	+1.2
NACGM				*i* P	P	07 12 59.7	+1.2
NACGM				*i* P	P	07 12 59.7	+1.2
NACGM				*i* Pb	pwP	07 13 20.3	+10
	comp=Z,91nm,0.9s						
NACGM				*i* PP	PP	07 15 51.0	-3.0
NACGM				*i* PPP	PPP	07 17 43.2	
NACGM				*i* S	S	07 22 54.4	+3.8
NACGM				*i* SS	SS	07 27 42.7	-7.9
NACGM				*i* SSS	SSS	07 31 11.4	
NACGM				*i* LQ	LQ	07 41 45.0	
NACGM				*i* LR	LR	07 49 16.8	
TUWZ	Tuamarina	77.96	156	P	P	07 13 00.3	+1.8
ANN	Anapa	77.99	315*c*	*i*P	P	07 12 59.0	+0.1
ANN				*e*		07 15 56.9	
ANN				*e*S	S	07 22 49.6	-1.8
ANN				pmax	pmax		
	comp=Z,236nm,1.5s						
ANN				pmax	pmax		
	comp=E,39nm,0.9s						
ANN				pmax	pmax		
	comp=N,36nm,0.6s						
ANN				pmax	pmax		
	comp=N,687nm,3.9s						
ANN				pmax	pmax		
	comp=Z,3µm,6.9s						
ANN				pmax	pmax		
	comp=E,304nm,2.5s						
ANN				smax	smax		
	comp=Z,824nm,5.6s						
ANN				smax	smax		
	comp=N,1µm,9.9s						
ANN				smax	smax		
	comp=E,4µm,11.4s						
RYN	Ryan	78.07	52	IAMs_20	IAMs_20	07 43 58.0	
	comp=Z,8µm,20.0s						
SCO	Scoresbysund	78.10	355	*i* P	P	07 13 00.5	+1.5
	comp=Z,50nm,1.1s						
SCO	Scoresbysund	78.10	355	*i* P	P	07 13 00.5	+1.5
SCO				pmax	pmax		
	comp=Z,50nm,1.1s						
SCO	Scoresbysund	78.10	355	IAmb	IAmb	07 13 08.4	
	comp=Z,116nm,1.5s						
SCO	Scoresbysund	78.10	355	*i* P	P	07 13 00.6	+1.5
SCO				IAmb	IAmb	07 13 02.3	
	comp=Z,50nm,1.1s						
SLWR	Sila	78.12	291	P	P	07 12 59.9	-0.1
MDPB	Devils Postpil	78.19	53	IAMs_20	IAMs_20	07 43 32.2	
	comp=Z,5µm,20.0s						
HLID	Hailey	78.21	46	P	P	07 13 01.1	+0.6
	baz=302,SNR=46						
HLID	Hailey	78.21	46	IAmb	IAmb	07 13 07.4	
	comp=Z,113nm,1.9s						
GURO	Guroymak-BITLI	78.25	308	P	P	07 13 02.3	+1.6
OMMB	Old Mammoth Mi	78.25	53	IAMs_20	IAMs_20	07 43 33.9	
	comp=Z,5µm,20.0s						
LHV	Little Huntoon	78.27	52	IAmb	IAmb	07 13 07.7	
	comp=Z,87nm,1.2s						
NVAR	Mina Array Bea	78.32	52	P	P	07 13 02.5	+1.2
	comp=Z,29nm,0.7s,baz=292,slow=5.6,SNR=158						
NVAR				LR	LR	07 45 09.1	
	comp=Z,9µm,19.3s,baz=286,slow=34						
NVAR	Mina Array Bea	78.32	52	P	P	07 13 02.0	+0.7
VRTB	Varto-Mus	78.33	309	P	P	07 13 03.2	+2.0
MLAC	Mammoth, Mammo	78.36	53	P	P	07 13 01.6	+0.1
	baz=300						
DLMT	Dillon	78.36	44	IAmb	IAmb	07 13 07.7	
	comp=Z,169nm,1.6s						
NV11	Mina Array Sit	78.42	52	IAmb	IAmb	07 13 07.2	
	comp=Z,100nm,1.8s						
UPP	Uppsala	78.50	335	*e*P	P	07 13 02.4	+0.9
DMTO	DMTO	78.51	284	P	P	07 13 01.9	-0.4
	SNR=5.6						
DMTO				P	P	07 13 01.9	-0.4
	SNR=5.6						
KTUT	Trabzon	78.51	311	P	P	07 13 02.3	+0.4
KARO	Karliova-Bingo	78.53	309	P	P	07 13 03.2	+0.9
EGMT	Eagleton	78.55	41	P	P	07 13 02.4	+0.3
	baz=304,SNR=20						
FFC	Flin Flon	78.56	32	P	P	07 13 02.2	+0.3
FFC				pmax	pmax		
	comp=Z,53nm,0.8s						
FFC				MLR	MLR		
	comp=Z,5µm,19.0s						
FFC	Flin Flon	78.56	32	P	P	07 13 02.2	+0.3
FFC				IAmb	IAmb	07 13 06.9	
	comp=Z,53nm,0.8s						
FFC	Flin Flon	78.56	32	IAMs_20	IAMs_20	07 48 25.2	
	comp=Z,5µm,19.0s						
VOG	Valley Oaks Go	78.64	55	P	P	07 13 02.6	-0.1
	baz=300						
SMMC	Simmler	78.71	56	P	P	07 13 03.1	-0.1
	baz=300						
DOK	Doka	78.75	285	P	P	07 13 03.2	-0.4
	SNR=15						
DOK				P	P	07 13 03.2	-0.4
	SNR=15						
YEDI	Yedisu-Bingol	78.80	309	P	P	07 13 05.2	+1.4
BOZ	Bozeman (W)	78.81	43	P	P	07 13 04.3	+0.6
	baz=303,SNR=54						
BOZ	Bozeman (W)	78.81	43	IAmb	IAmb	07 13 10.4	
	comp=Z,95nm,1.5s						
PABE	Paberze	78.84	329	*e*P	P	07 13 03.6	+0.2
BNGB	Bingl	78.94	309	P	P	07 13 05.9	+1.4
SVAN	Silvan-Diyarba	79.02	308	P	P	07 13 06.4	+1.5
PKM	Mcpherson Peak	79.05	56	P	P	07 13 05.4	+0.1
	baz=300						
RPZ	Rata Peaks	79.05	159	IAmb	IAmb	07 13 18.5	
	comp=Z,62nm,0.8s						
VES	Vestal, Richgr	79.08	55	P	P	07 13 05.3	+0.1
	baz=300,SNR=12						
ESPY	Espiye-Giresun	79.22	311	P	P	07 13 06.5	+0.6
RBK	Rabkut	79.23	284	P	P	07 13 05.9	-0.4
	SNR=10.0						
RBK				P	P	07 13 05.9	-0.4
	SNR=10.0						
AKASG	Malin Array Be	79.28	323	P	P	07 13 05.9	0.0
	comp=Z,27nm,0.6s,baz=47,slow=6.1,SNR=39						
AKASG				LR	LR	07 50 42.3	
	comp=Z,18µm,18.2s,baz=50,slow=38						
AKASG	Malin Array Be	79.28	323	P	P	07 13 06.0	0.0
AKASG				pmax	pmax		
	comp=Z,31nm,0.9s						
AKASG	Malin Array Be	79.28	323	P	P	07 13 06.0	0.0
AKBB	Malin Array Si	79.28	323	IAmb	IAmb	07 13 14.9	
	comp=Z,84nm,0.8s						
SBC	Santa Barbara	79.34	56	P	P	07 13 07.1	+0.5
	baz=300						
WHFO	Wadi Hawf	79.39	285	P	P	07 13 06.4	-0.7
	SNR=9.7						
WHFO				P	P	07 13 06.4	-0.7
	SNR=9.7						
LBZ	Lake Benmore	79.39	160	IAmb	IAmb	07 13 22.0	
	comp=Z,79nm,1.1s						
CWC	Cottonwood Cre	79.48	54	P	P	07 13 07.7	+0.1
	baz=301						
YHB	Horse Butte	79.53	44	IAmb	IAmb	07 13 12.7	
	comp=Z,47nm,0.8s						
ILULI	Ilulissat	79.59	5	IAmb	IAmb	07 13 22.4	
	comp=Z,85nm,1.2s						
ISA	Isabella, Lake	79.60	55	P	P	07 13 08.9	+0.8
	baz=301,SNR=10						
GRAC	Grapevine Rang	79.69	53	P	P	07 13 09.0	+0.4
	baz=301,SNR=15						
DOMB	Dombas	79.76	339	*e*P	P	07 13 08.1	-0.3
MOL	Molde	79.80	340	*e*P	P	07 13 08.9	+0.4
NC204	NORSAR Array S	79.82	338	IAmb	IAmb	07 13 17.6	
	comp=Z,77nm,0.8s						
NB201	NORSAR Array S	79.82	338	IAmb	IAmb	07 13 19.9	
	comp=Z,113nm,1.1s						
DYBB	Diyarbakir	79.84	308	P	P	07 13 10.5	+1.1
YNR	Norris Junctio	79.85	44	IAmb	IAmb	07 13 17.2	
	comp=Z,270nm,2.0s						
NB2	NORSAR Subarra	79.86	338	P	P	07 13 08.6	-0.4
	comp=Z,46nm,1.0s,baz=42,slow=5.9						
NOA	NORSAR Array B	79.86	338	P	P	07 13 08.8	-0.2
	comp=Z,17nm,0.8s,baz=41,slow=5.4,SNR=46						
NOA				LR	LR	07 51 46.1	
	comp=Z,8µm,20.1s,baz=30,slow=38						
SIM	Simferopol'	79.89	317	*i* P	P	07 13 08.9	-0.5
SIM				*e*S	S	07 23 10.0	-1.7
SIM				pmax	pmax		
	comp=Z,83µm,0.8s						
OSI	Osito Audit: C	79.96	56	P	P	07 13 10.2	+0.1
	baz=301						
NBO00	NORSAR Array S	80.00	338	IAmb	IAmb	07 13 46.5	
	comp=Z,188nm,1.5s						
ABTO	Aybut	80.06	284	P	P	07 13 10.4	-0.4
	SNR=12						
ABTO				P	P	07 13 10.4	-0.4
	SNR=12						
SNCC	San Nicolas Is	80.08	57	P	P	07 13 10.6	-0.1
	baz=301						
MPMC	Manual Prospec	80.09	54	P	P	07 13 11.3	+0.4
	baz=301,SNR=21						
H17A	Grant Village	80.09	44	P	P	07 13 12.6	+1.7
	baz=304,SNR=46						
H17A	Grant Village	80.09	44	IAmb	IAmb	07 13 32.5	
	comp=Z,72nm,1.0s						
H17A				IAMs_20	IAMs_20	07 51 31.8	
	comp=Z,6µm,18.0s						
ILIC	ilic-Erzincan	80.10	310	P	P	07 13 12.7	+1.9
LKWY	Lake	80.10	44	IAmb	IAmb	07 13 41.9	
	comp=Z,73nm,1.1s						
NAO01	NORSAR Array S	80.11	338	IAmb	IAmb	07 13 46.9	
	comp=Z,71nm,1.1s						
SUW	Suwalki	80.15	328	*e*P	P	07 13 10.9	+0.3
SUW				*e*L	L	07 57 53.4	
	comp=Z,7µm,17.7s						
SUW	Suwalki	80.15	328	*e*P	P	07 13 11.3	+0.8
YMP	Mirror Lake Pl	80.15	43	IAmb	IAmb	07 13 48.9	
	comp=Z,128nm,1.4s						
ICESG	Greenland Ices	80.16	1	*i* P	P	07 13 12.2	+1.3
ICESG				IAmb	IAmb	07 13 18.3	
	comp=Z,65nm,1.0s						
HVU	Hansel Valley	80.18	47	IAmb	IAmb	07 13 20.1	
	comp=Z,175nm,1.7s						
R11A	Troy Canyon, C	80.19	51	P	P	07 13 12.3	+0.9
	baz=302,SNR=35						
LRMC	Laurel Mtn Rad	80.25	55	P	P	07 13 12.5	+0.7
	baz=301,SNR=21						
AKN	Aaknes	80.27	340	*e*P	P	07 13 11.9	+0.8
FURC	Furnace Creek,	80.31	53	P	P	07 13 12.2	+0.4
	baz=302,SNR=21						
EDW2	Edwards Air Fo	80.34	55	P	P	07 13 12.7	+0.6
	baz=301,SNR=17						
RSDY	Resadiye-TOKAT	80.40	311	P	P	07 13 13.2	+0.9
DECC	Green Verdugo	80.42	56	P	P	07 13 12.8	+0.3
	baz=301						
RLMT	Red Lodge	80.45	43	P	P	07 13 14.1	+1.3
	baz=305,SNR=31						
TPNV	Topopah Spring	80.48	53	P	P	07 13 13.6	+0.7
	baz=302,SNR=45						
TPNV	Topopah Spring	80.48	53	IAMs_20	IAMs_20	07 44 41.8	
	comp=Z,5µm,20.0s						
MWC	Mount Wilson	80.63	56	IAmb	IAmb	07 13 19.7	
	comp=Z,99nm,1.7s						
SPR3	Spring Creek 3	80.68	50	IAMs_20	IAMs_20	07 47 44.8	
	comp=Z,6µm,19.0s						
FMP	Fort Macarthur	80.73	56	P	P	07 13 14.8	+0.7
	baz=301						
MALT	Malatya	80.80	309	P	P	07 13 16.3	+1.7
CIS	Catalina Islan	80.80	57	P	P	07 13 14.2	-0.4
	baz=301						
KVT	Kavak	80.85	313	P	P	07 13 16.4	+1.7
SNOP	Sinop	80.86	314	P	P	07 13 15.5	+0.9
BFSC	Mount Baldy Ra	80.91	56	P	P	07 13 14.8	-0.4
	baz=301						
SCI2	San Clemente I	80.92	57	P	P	07 13 15.2	0.0
	baz=301						
TOKT	Tokat	80.94	312	P	P	07 13 16.6	+1.4
GSC	Goldstone, Bar	80.95	54	P	P	07 13 16.1	+0.6
	baz=302,SNR=12						
GSC	Goldstone, Bar	80.95	54	IAMs_20	IAMs_20	07 48 03.5	
	comp=Z,7µm,20.0s						
SHOC	Shoshone, Teco	81.01	54	P	P	07 13 15.9	+0.3
	baz=302						
DUG	Dugway, Tooele	81.02	48	P	P	07 13 16.6	+0.8
	baz=303,SNR=61						
DIKM	Dikmen	81.03	313	P	P	07 13 16.4	+0.8
RRX	Edison Barstow	81.04	55	P	P	07 13 16.1	+0.3
	baz=302						
SKAR	Skarslia	81.05	339	*e*P	P	07 13 16.2	+0.8
SORM	Soroca	81.28	322	⇓P	P	07 13 17.5	+0.7
SORM	Soroca	81.28	322	⇓P	P	07 13 17.5	+0.7
LAO	LASA Array	81.28	40	P	P	07 13 16.4	-0.5
	baz=306						
LAO	LASA Array	81.28	40	IAMs_20	IAMs_20	07 52 14.9	
	comp=Z,3µm,18.0s						
DARE	Darende-Malaty	81.28	310	P	P	07 13 19.1	+2.0
DGMT	Dagmar	81.31	38	P	P	07 13 17.1	+0.1
	baz=308,SNR=9.6						
DGMT	Dagmar	81.31	38	P	P	07 13 17.7	+0.7
HYA	Hoyanger	81.31	340	*e*P	P	07 13 16.6	0.0
TCUT	Toone Canyon	81.41	47	IAmb	IAmb	07 13 23.7	
	comp=Z,46nm,0.9s						
BBRC	Big Bear Solar	81.42	55	P	P	07 13 17.8	-0.3
	baz=302						
CTU	Camp Tracy	81.42	48	IAmb	IAmb	07 13 24.5	
	comp=Z,49nm,0.9s						
HEC	Hector,Ludlow	81.53	55	P	P	07 13 19.2	+0.7
	baz=302,SNR=19						
MURC	Murrieta	81.57	56	P	P	07 13 19.0	+0.3
	baz=302,SNR=8.5						
BW06	Boulder Array	81.62	45	P	P	07 13 18.9	-0.2
	baz=305,SNR=27						
BW06	Boulder Array	81.62	45	IAMs_20	IAMs_20	07 46 55.3	
	comp=Z,4µm,19.0s						
PDAR	Pinedale Array	81.62	45	P	P	07 13 20.1	+1.1
	comp=Z,14nm,0.7s,baz=278,slow=1.9,SNR=72						
PDAR				LR	LR	07 46 16.1	
	comp=Z,2µm,19.6s,baz=324,slow=33						
PPT	Papeete	81.65	116	LR	LR	07 43 51.9	
	comp=Z,3µm,19.6s,baz=294,slow=32						
PPT2	Papeete2	81.66	116	*e*S	S	07 23 28.0	-2.9
	comp=Z,5µm,32.0s						
PPT2				*e*SS	SS	07 28 46.4	-2.5
	comp=Z,1µm,24.5s						
PPT2				*e*LQ	LQ	07 35 15.4	
	comp=Z,4µm,29.0s						
PPT2				*e*LR	LR	07 38 46.4	
	comp=Z,5µm,21.5s,baz=302						
JLU	Jordanelle	81.67	47	IAmb	IAmb	07 13 26.0	
	comp=Z,62nm,1.1s						
PPTF	Pamatai, Papee	81.67	116	IAMs_20	IAMs_20	07 50 59.2	
	comp=Z,7µm,18.0s						
KIS	Kishinev	81.71	320	⇑*i*P	P	07 13 18.6	-0.5
	comp=Z,650nm,9.7s						
KIS	Kishinev	81.71	320	*e*PP	PP	07 16 25.0	-0.5
	comp=Z,400nm,10.8s						
KIS				⇑*i*S	S	07 23 28.8	-1.8
	comp=Z,1µm,14.7s						
KIS				*e*LQ	LQ	07 44 10.0	
	comp=Z,2µm,16.4s						
KIS				*e*LR	LR	07 50 27.0	
	comp=Z,2µm,16.0s						
KIS	Kishinev	81.71	320*c*	*i*P	P	07 13 18.6	-0.5
KIS				*e*		07 16 25.0	
KIS				*i* S	S	07 23 28.8	-1.8
KIS				pmax	pmax		
	comp=Z,650nm,9.7s						
KIS				pmax	pmax		
	comp=Z,400nm,10.8s						
KIS				smax	smax		
	comp=E,1µm,14.7s						
KIS				MLR	MLR		
	comp=Z,3µm,15.0s						
KIS				MLR	MLR		
	comp=E,2µm,16.0s						
KIS				MLR	MLR		
	comp=N,3µm,17.0s						
SFJD	Kangerlussuaq	81.81	5	*i* P	P	07 13 19.8	+0.6
SFJD	Kangerlussuaq	81.81	5	P	P	07 13 20.7	+1.5
SFJD				pmax	pmax		
	comp=Z,89nm,1.4s						
SFJD	Kangerlussuaq	81.81	5	P	P	07 13 20.7	+1.5
SFJD				IAmb	IAmb	07 13 28.9	
	comp=Z,89nm,1.4s						
SFJD	Kangerlussuaq	81.81	5	*i* P	P	07 13 19.9	+0.6
109C	Camp Elliot, M	82.01	57	P	P	07 13 20.9	0.0
	baz=302						
109C	Camp Elliot, M	82.01	57	IAMs_20	IAMs_20	07 45 59.6	
	comp=Z,6µm,20.0s						
SOCY	Socotra	82.02	279	IAmb	IAmb	07 13 24.3	
	comp=Z,68nm,0.8s						
SOCY	Socotra	82.02	279	P	P	07 13 19.7	-1.7
	SNR=6.0						
GMRC	Granite Mounta	82.03	54	P	P	07 13 21.8	+0.6
	baz=302,SNR=21						
PFO	Pinyon Flats O	82.08	56	LR	LR	07 50 28.6	
	comp=Z,9µm,18.0s,baz=288,slow=36						
PFO	Pinyon Flats O	82.08	56	P	P	07 13 22.1	+0.6
	baz=302,SNR=14						
PFO	Pinyon Flats O	82.08	56	P	P	07 13 22.4	+0.9
PFO				pmax	pmax		
	comp=Z,42nm,1.0s						
PFO				MLR	MLR		
	comp=Z,11µm,19.0s						
PFO	Pinyon Flats O	82.08	56	P	P	07 13 22.4	+0.9
TPFO	Pinon Flats	82.09	56	P	P	07 13 22.0	+0.5
	baz=302,SNR=19						
ODD1	Odda	82.17	339	*e*P	P	07 13 21.6	+0.3
BNN	Bunyan	82.20	311	P	P	07 13 22.3	+0.3
BELC	Belle Mtn. Jos	82.20	55	P	P	07 13 21.9	-0.2
	baz=302,SNR=16						
GAZ	Gaziantep	82.22	309	P	P	07 13 23.7	+1.6
TJX	Tijuana	82.24	57	IAMs_20	IAMs_20	07 46 12.8	
	comp=Z,7µm,19.0s						
CORM	Corum	82.24	312	P	P	07 13 22.7	+0.5
KMRS	Kahramanmaras	82.25	309	P	P	07 13 23.6	+1.4
BAR	Barrett	82.42	56	IAMs_20	IAMs_20	07 46 11.7	
	comp=Z,7µm,20.0s						
LVV	L'vov	82.45	325	*e*P	P	07 13 23.3	+0.4
LVV				*e*		07 16 33.7	
LVV				*e*S	S	07 23 36.3	-1.8
LVV				*e*SS	SS	07 28 59.7	+1.6
LVV				smax	smax		
	comp=N,3µm,13.0s						
LVV				MLR	MLR		
	comp=Z,18µm,17.0s						
KURC	Kurucasile-Bar	82.47	315	P	P	07 13 22.4	-0.8
MONP2	Monument Peak	82.49	56	P	P	07 13 23.1	-0.7
	baz=302,SNR=9.8						
FRB	Frobisher Bay	82.51	13	LR	LR	07 53 55.2	
	comp=Z,1µm,20.0s,baz=343,slow=38						
TKX	Tecate	82.53	57	IAMs_20	IAMs_20	07 46 16.5	
	comp=Z,6µm,20.0s						
MTPU	Mount Pierson	82.61	50	IAmb	IAmb	07 13 31.5	
	comp=Z,122nm,1.8s						
BLS5	Blasjo	82.61	339	*e*P	P	07 13 23.6	0.0
CANT	Cankiri	82.64	313	P	P	07 13 25.8	+1.6
BEL	Belsk	82.67	328	*e*P	P	07 13 24.9	+0.9
BEL				*e*L	L	07 52 53.6	
	comp=Z,9µm,17.9s						

IRM	Iron Mountain	82.72	55	P	P	07 13 25.1	+0.4
	baz=303,SNR=16						
KNB	Kanab	82.76	51	IAmb	IAmb	07 13 51.9	
	comp=Z,81nm,1.2s						
NEE2	Needles Airpor	82.76	54	P	P	07 13 24.7	-0.2
	baz=303						
BC3	Big Chuckawall	82.77	55	P	P	07 13 25.7	+0.6
	baz=303,SNR=18						
Q16A	Castle Valley	82.78	49	IAmb	IAmb	07 13 31.9	
	comp=Z,56nm,1.0s						
IKP	In-Ko-Pah, Jac	82.84	56	P	P	07 13 25.8	+0.4
	baz=302,SNR=7.4						
CCX	Cicese	82.86	57	IAMs_20	IAMs_20	07 48 21.2	
	comp=Z,7µm,19.0s						
PKCU	Pink Cliffs	82.86	51	IAmb	IAmb	07 13 48.6	
	comp=Z,104nm,1.7s						
SWSC	Sam W. Stewart	82.91	56	P	P	07 13 25.4	-0.2
	baz=302						
KOZT	Kozan	82.97	310	P	P	07 13 27.4	+1.5
JURR	Jurilovca	83.03	319	⇑P	P	07 13 27.5	+1.6
GHRR		83.06	320	⇓P	P	07 13 27.6	+1.4
W13A	Hualapai Mount	83.08	53	IAMs_20	IAMs_20	07 47 35.8	
	comp=Z,7µm,20.0s						
SRU	San Rafael Swe	83.09	48	IAmb	IAmb	07 13 32.1	
	comp=Z,42nm,0.7s						
BRTR	Keskin Array B	83.13	312	P	P	07 13 27.4	+0.5
	comp=Z,39nm,0.8s,baz=105,slow=2.2,SNR=90						
BRTR				LR	LR	07 54 33.3	
	comp=Z,4µm,18.6s,baz=50,slow=39						
BRTR	Keskin Array B	83.13	312	P	P	07 13 26.5	-0.4
TESR	Tescani	83.19	321	⇑P	P	07 13 27.3	+0.5
CFR	Carcaliu	83.19	319	⇓P	P	07 13 27.5	+0.7
BIZ	Bicaz	83.21	322	⇑P	P	07 13 28.5	+1.5
KWP	Kalwaria Pacla	83.22	325	*e*P	P	07 13 27.9	+0.9
KWP				*e*S	S	07 23 48.0	+2.0
KWP				*e*L	L	07 54 05.3	
	comp=Z,26µm,16.8s						
TPGR	Topolog	83.23	319	⇓P	P	07 13 28.0	+0.9
SNART	Snartemo	83.24	338	*i* P	P	07 13 26.4	-0.4
BUR08	Bucovina Ar. S	83.25	323	IAmb	IAmb	07 13 37.3	
	comp=Z,45nm,1.0s						
BURAR	Bucovina Array	83.26	322	⇑P	P	07 13 27.5	+0.3
BURAR	Bucovina Array	83.26	322	P	P	07 13 27.1	-0.2
KAMT	Kaman	83.28	312	P	P	07 13 29.1	+1.5
CEYT	Ceyhan	83.29	309	P	P	07 13 29.3	+1.8
ESJX	Sierra Juarez	83.30	57	IAMs_20	IAMs_20	07 46 44.9	
	comp=Z,6µm,20.0s						
RAYN	Ar Rayn	83.31	293	*i* P	P	07 13 28.8	+0.8
	SNR=109						
RAYN	Ar Rayn	83.31	293	P	P	07 13 28.8	+0.8
RAYN				pmax	pmax		
	comp=Z,803nm,1.9s						
RAYN	Ar Rayn	83.31	293	P	P	07 13 28.8	+0.8
RAYN				IAMs_20	IAMs_20	07 56 38.2	
	comp=Z,5µm,18.0s						
UABX	UABC, Campus M	83.33	56	IAMs_20	IAMs_20	07 46 54.5	
	comp=Z,6µm,20.0s						
PDMCI	Parker Dam,Lak	83.34	54	P	P	07 13 28.2	+0.4
	baz=303,SNR=14						
PETR	Petresti	83.36	320	⇓P	P	07 13 28.8	+1.1
CMRD	Camardi-Nigde	83.42	310	P	P	07 13 31.3	+2.9
YAYX	Yaylak	83.47	312	P	P	07 13 28.6	0.0
TIRR	Tirgusor	83.48	319	⇑P	P	07 13 28.7	+0.4
TIRR	Tirgusor	83.48	319	⇑P	P	07 13 28.7	+0.4
K22A	Casper	83.51	44	P	P	07 13 28.6	-0.1
	baz=307						
GULA	Gulagac	83.53	311	P	P	07 13 30.4	+1.5
GLA	Glamis	83.54	55	P	P	07 13 29.8	+0.8
	baz=303,SNR=12						
GLA	Glamis	83.54	55	IAmb	IAmb	07 13 48.4	
	comp=Z,37nm,0.9s						
CPBX	Cerro Prieto	83.54	56	IAMs_20	IAMs_20	07 47 09.2	
	comp=Z,5µm,19.0s						
VRI	Vrincioaia	83.55	320	⇓P	P	07 13 29.9	+1.2
VRI	Vrincioaia	83.55	320	P	P	07 13 27.7	-1.0
VRI	Vrincioaia	83.55	320	⇓P	P	07 13 29.9	+1.2
ANTO	Ankara	83.58	313	IAMs_20	IAMs_20	07 56 17.0	
	comp=Z,4µm,18.0s						
LOD	Lodumlu	83.59	313	P	P	07 13 29.1	0.0
PLOR	Plostina	83.60	320	⇓P	P	07 13 29.5	+0.5
PLOR	Plostina	83.60	320	⇓P	P	07 13 29.5	+0.5
KARA	Karaisali	83.61	310	P	P	07 13 30.5	+1.3
SERE	Sereflikochisa	83.62	312	P	P	07 13 29.9	+0.5
AFSR	Afar-Bala (An	83.65	312	P	P	07 13 29.5	0.0
RWWY	Rawlins	83.67	45	IAmb	IAmb	07 13 36.0	
	comp=Z,74nm,1.1s						
BISRR	Bisoca	83.76	320	⇑P	P	07 13 30.3	+0.4
KOLS	Kolonicke sedl	83.90	325	*e*P	P	07 13 30.8	+0.3
KOLS				pmax	pmax		
	comp=Z,33nm,1.2s						
KOLS	Kolonicke sedl	83.90	325	*e*P	P	07 13 30.8	+0.3
O20A	White River Ci	83.94	46	P	P	07 13 31.5	+0.4
	baz=306,SNR=34						
O20A	White River Ci	83.94	46	IAmb	IAmb	07 13 42.2	
	comp=Z,63nm,1.0s						
O20A				IAMs_20	IAMs_20	07 50 29.0	
	comp=Z,5µm,19.0s						
RGN	Rugen	83.94	333	IAMs_20	IAMs_20	07 52 55.9	
	comp=Z,4µm,18.0s						
RGN	Rugen	83.94	333	*e*P	P	07 13 34.3	+3.9
	comp=Z,41nm,0.8s,baz=41,slow=4.6						
YUVA	Yuva-Kibriscik	83.97	314	P	P	07 13 30.9	-0.2
ARCR	ARCALIA	84.05	322	⇑P	P	07 13 31.7	+0.5
RSSD	Black Hills	84.06	41	P	P	07 13 31.5	-0.1
	baz=308						
RSSD	Black Hills	84.06	41	P	P	07 13 32.3	+0.7
RSSD				pmax	pmax		
	comp=Z,80nm,1.7s						
RSSD	Black Hills	84.06	41	P	P	07 13 32.3	+0.7
RSSD				IAmb	IAmb	07 13 37.6	
	comp=Z,80nm,1.7s						
MDND	Maddock	84.08	37	P	P	07 13 31.4	-0.1
	baz=311						
MDND	Maddock	84.08	37	IAMs_20	IAMs_20	07 52 16.8	
	comp=Z,4µm,20.0s						
UZH	Uzhgorod	84.09	325	⇑*i*P	P	07 13 30.0	-1.4
UZH				*i*		07 13 38.0	
UZH				*e*		07 13 45.3	
UZH				*e*PPP	PPP	07 18 43.0	
UZH				*e*S	S	07 23 53.4	-1.3
UZH				*e*PS	PnS	07 24 39.4	-9.2
UZH				MLR	MLR		
	comp=N,1µm,16.0s						
UZH				MLR	MLR		
	comp=E,3µm,16.0s						
UZH				MLR	MLR		
	comp=Z,1µm,16.0s						
SPX	San Pedro Mart	84.17	57	IAmb	IAmb	07 13 42.7	
	comp=Z,76nm,1.9s						
YESY	Yesilyurt	84.17	311	P	P	07 13 34.1	+1.9
DOPR	Dopca	84.21	321	⇓P	P	07 13 33.5	+1.4
MLR	Muntele Rosu	84.21	321	⇓P	P	07 13 32.8	+0.5
MLR	Muntele Rosu	84.21	321	⇓P	P	07 13 32.8	+0.5
MDUB	Mudurnu	84.22	314	P	P	07 13 32.1	-0.3
OJC	Ojcow	84.23	327	*e*P	P	07 13 32.6	+0.5
OJC				*e*S	S	07 23 57.9	+1.8
OJC				*e*L	L	07 54 17.8	
	comp=Z,9µm,18.0s						
CHBY	Cihanbeyli	84.26	312	P	P	07 13 34.1	+1.5
ULM	Lac du Bonnet	84.30	33	P	P	07 13 32.6	+0.2
	comp=Z,9.2nm,0.8s,baz=306,slow=5.8,SNR=14						
ULM				LR	LR	07 52 47.3	
	comp=Z,4µm,19.2s,baz=314,slow=37						
ULM	Lac du Bonnet	84.30	33	IAmb	IAmb	07 13 39.7	
	comp=Z,77nm,1.8s						
ULM				IAMs_20	IAMs_20	07 52 17.3	
	comp=Z,4µm,20.0s						
CRVS	Cervenica-Dubn	84.32	325	*e*P	P	07 13 33.4	+0.8
CRVS				pmax	pmax		
	comp=Z,220nm,1.6s						
CRVS	Cervenica-Dubn	84.32	325	*e*P	P	07 13 33.4	+0.8
CRVS	Cervenica-Dubn	84.32	325	*e*S	S	07 24 01.1	+4.0
CRVS				*e*L	L	07 55 04.4	
TAOE	Nuku Hiva Isla	84.38	104	*e*LR	LR	07 39 51.4	
	comp=Z,5µm,23.9s						
TAOE	Nuku Hiva Isla	84.38	104	IAMs_20	IAMs_20	07 47 27.7	
	comp=Z,4µm,21.0s						
NUUK	Nuuk	84.49	6	*i* P	P	07 13 34.1	+1.1
NUUK				IAmb	IAmb	07 13 42.3	
	comp=Z,75nm,1.0s						
PV22	Blue Mesa, Par	84.53	48	IAmb	IAmb	07 13 45.4	
	comp=Z,63nm,1.2s						
NIE	Niedzica	84.54	326	*e*P	P	07 13 34.6	+0.9
NIE				*e*S	S	07 24 00.4	+1.1
NIE				*e*L	L	07 54 10.9	
	comp=Z,4µm,18.1s						
WUAZ	Wupatki	84.56	52	P	P	07 13 35.2	+0.9
	baz=304,SNR=26						
WUAZ	Wupatki	84.56	52	IAmb	IAmb	07 14 01.3	
	comp=Z,45nm,1.1s						
WUAZ				IAMs_20	IAMs_20	07 47 06.8	
	comp=Z,4µm,20.0s						
SFX	San Felipe	84.61	57	IAMs_20	IAMs_20	07 51 51.6	
	comp=Z,7µm,19.0s						
AUSIV	SIVRIHISAR	84.61	313	P	P	07 13 34.5	+0.1
SVRH	Sivrihisar-ESK	84.62	313	P	P	07 13 34.5	+0.1
SPNC	Sapanca-Adapaz	84.64	315	P	P	07 13 34.5	+0.2
GULT	Gulveren	84.66	314	P	P	07 13 35.1	+0.5
PV07	Paradox Valley	84.68	48	IAmb	IAmb	07 13 57.0	
	comp=Z,52nm,1.2s						
VOIR		84.73	321	⇑P	P	07 13 35.9	+1.1
VOIR		84.73	321	⇑P	P	07 13 35.9	+1.1
SILT	Sile	84.76	315	P	P	07 13 36.8	+1.9
LADK	Ladik-KONYA	84.82	312	P	P	07 13 34.8	-0.7
SRCK	Saricakaya, Es	84.83	314	P	P	07 13 36.3	+1.0
PV15	Paradox Valley	84.84	48	IAmb	IAmb	07 13 57.8	
	comp=Z,36nm,0.9s						
SILI	Silifke-Mersin	84.86	310	P	P	07 13 35.4	-0.1
N23A	Red Feather La	84.91	45	P	P	07 13 37.2	+1.1
	baz=307,SNR=36						
PV01	Paradox Valley	84.91	48	IAmb	IAmb	07 13 41.4	
	comp=Z,35nm,0.7s						
HRT	Hereke	84.94	315	P	P	07 13 36.5	+0.5
KEBE	Keben-Mersin	84.95	310	P	P	07 13 38.1	+2.0
CIFT	Cifteler, Eski	84.96	313	P	P	07 13 36.2	+0.1
KONT	Konya--Tatoy	84.97	312	P	P	07 13 36.9	+0.8
ARR	Arges	85.00	321	⇓P	P	07 13 37.6	+1.4
BORA	Eskisehir	85.03	314	P	P	07 13 36.9	+0.5
KLYT	Kilyos	85.06	316	P	P	07 13 37.7	+1.3
KECS	Kecovo	85.08	325	*e*P	P	07 13 37.3	+0.9
KECS				pmax	pmax		
	comp=Z,19nm,1.3s						
KECS	Kecovo	85.08	325	*e*P	P	07 13 37.3	+0.9
DRGR		85.09	323	⇑P	P	07 13 36.9	+0.3
DRGR		85.09	323	⇑P	P	07 13 36.9	+0.3
LANS	Liptovska Anna	85.12	326	*e*P	P	07 13 38.7	+2.1
LANS				pmax	pmax		
	comp=Z,35nm,1.4s						
LANS	Liptovska Anna	85.12	326	*e*P	P	07 13 38.7	+2.1
ADVT	Abdulvahap	85.14	315	P	P	07 13 37.7	+0.9
TEVE	Tevekalti-Mers	85.14	310	P	P	07 13 38.9	+1.9
TBI	Tubuai	85.15	121	*e*S	S	07 24 03.9	-1.9
	comp=Z,2µm,35.2s						
TBI	Tubuai	85.15	121	*e*LQ	LQ	07 36 39.4	
	comp=Z,3µm,30.0s						
TBI				*e*LR	LR	07 40 17.3	
	comp=Z,6µm,21.0s,baz=306						
ISK	Istanbul-Kandi	85.17	316	P	P	07 13 37.7	+0.7
KAVV	Kandilli-Istan	85.17	316	P	P	07 13 37.2	+0.2
CAVI	Cavuskoy	85.21	315	P	P	07 13 37.9	+0.6
AKKU	Akkuyu-Mersin	85.23	310	P	P	07 13 37.2	-0.2
OKC	Ostrava-Krasne	85.26	327	*e*P	P	07 13 38.7	+1.4
OKC				*e*S	S	07 24 07.5	+1.1
OKC				MLR	MLR		
	comp=Z,6µm,15.5s						
OKC	Ostrava-Krasne	85.26	327	*e*P	P	07 13 38.7	+1.4
OKC				*e*S	S	07 24 07.5	+1.1
OKC				AMS	AMS	07 55 50.0	
	comp=Z,6µm,15.5s						
AUBOZ	BOZOYUK	85.27	314	P	P	07 13 37.2	-0.4
YLV	Yalova	85.28	315	P	P	07 13 38.0	+0.3
SMCO	Snowmass	85.30	47	IAmb	IAmb	07 13 45.6	
	comp=Z,69nm,1.2s						
SMCO				IAMs_20	IAMs_20	07 49 31.8	
	comp=Z,3µm,20.0s						
PIX	Pinacate	85.32	56	IAMs_20	IAMs_20	07 50 46.3	
	comp=Z,5µm,19.0s						
CTYL	Yalikoy Yolu	85.38	316	P	P	07 13 37.2	-0.8
CTKS	Kestanelik-??a	85.39	316	P	P	07 13 38.1	0.0
KSP	Ksiaz	85.39	329	*e*P	P	07 13 38.5	+0.5
KSP				*e*S	S	07 24 08.2	+0.6
KSP				*e*L	L	07 55 58.6	
	comp=Z,10µm,17.7s						
MVCO	Mesa Verde	85.49	49	P	P	07 13 39.9	+0.9
	baz=306,SNR=17						
MVCO	Mesa Verde	85.49	49	IAmb	IAmb	07 14 05.1	
	comp=Z,51nm,1.2s						
MVCO				IAMs_20	IAMs_20	07 50 50.1	
	comp=Z,6µm,19.0s						
TEKE	Tekeli-Mersin	85.52	310	P	P	07 13 38.9	0.0
214A	Organ Pipe Nat	85.56	55	P	P	07 13 39.5	+0.3
	baz=304,SNR=12						
214A	Organ Pipe Nat	85.56	55	IAmb	IAmb	07 13 45.6	
	comp=Z,143nm,1.9s						
214A				IAMs_20	IAMs_20	07 48 22.6	
	comp=Z,7µm,19.0s						
BSEG	Bad Segeberg	85.57	334	*e*P	P	07 13 40.0	+1.3
	comp=Z,25nm,0.9s,baz=41,slow=4.6						
SLVT	Silivri	85.57	316	P	P	07 13 39.5	+0.5
MORC	Moravsky Berou	85.58	328	⇓P	P	07 13 40.0	+1.0
MORC	Moravsky Berou	85.58	328	*e*P	P	07 13 39.3	+0.3
MORC	Moravsky Berou	85.58	328	*e*S	S	07 24 09.8	+0.1
MORC	Moravsky Berou	85.58	328	⇓P	P	07 13 40.0	+1.0
MORC	Moravsky Berou	85.58	328	IAMs_20	IAMs_20	07 54 44.6	
	comp=Z,4µm,19.0s						
OSTC	Ostas	85.63	329	*e*P	P	07 13 39.6	+0.4
OSTC				*e*S	S	07 24 12.0	+1.9
OSTC				AMS	AMS	07 55 50.0	
	comp=Z,12µm,16.5s						
CHVC	Chvalec	85.68	329	*e*P	P	07 13 40.3	+0.9
CHVC				*e*SKS	S	07 24 10.1	-0.5
CHVC				AMS	AMS	07 56 00.0	
	comp=Z,10µm,15.6s						
MDNY	Mudanya-Bursa	85.69	315	P	P	07 13 39.9	+0.3
KRLC	Kraliky	85.72	328	*e*P	P	07 13 39.3	-0.4
KRLC				*e*S	S	07 24 08.5	-2.5
KRLC				MLR	MLR		
	comp=Z,8µm,16.4s						
KRLC	Kraliky	85.72	328	*e*P	P	07 13 39.3	-0.4
KRLC				*e*SKS	S	07 24 08.5	-2.5
KRLC				AMS	AMS	07 55 00.0	
	comp=Z,8µm,16.4s						
DPC	Dobruska-Polom	85.73	328	*e*P	P	07 13 40.3	+0.6
DPC				*e*S	S	07 24 08.8	-2.3
DPC				MLR	MLR		
	comp=Z,11µm,15.7s						
DPC	Dobruska-Polom	85.73	328	*e*P	P	07 13 40.3	+0.6
DPC				*e*SKS	S	07 24 08.8	-2.3
DPC				AMS	AMS	07 55 50.0	
	comp=Z,11µm,15.7s						
PSZ	Piszkesteto	85.75	325	IAmb	IAmb	07 14 07.2	
	comp=Z,47nm,1.0s						
SHUT	Suhut-Afyon	85.76	313	P	P	07 13 41.1	+0.9
UPC	Upice	85.76	329	*e*P	P	07 13 40.0	+0.2
UPC				*e*S	S	07 24 09.6	-1.7
UPC				MLR	MLR		
	comp=Z,12µm,16.0s						
UPC	Upice	85.76	329	*e*P	P	07 13 40.0	+0.2
UPC				*e*SKS	S	07 24 09.6	-1.7
UPC				AMS	AMS	07 56 00.0	
	comp=Z,12µm,16.0s						
ISCO	Idaho Springs	85.77	46	P	P	07 13 40.7	+0.3
	baz=308,SNR=21						
ISCO	Idaho Springs	85.77	46	IAmb	IAmb	07 13 51.3	
	comp=Z,80nm,1.6s						
D32A	Dogwood Acres,	85.87	36	IAmb	IAmb	07 13 44.9	
	comp=Z,50nm,0.8s						
W18A	Petrified Fore	85.89	51	P	P	07 13 40.9	-0.1
	baz=305						
W18A	Petrified Fore	85.89	51	IAMs_20	IAMs_20	07 48 09.9	
	comp=Z,5µm,20.0s						
TVSB	Tavsanli	85.90	314	P	P	07 13 40.4	-0.4
GZR	Gura Zlata	85.98	322	⇑P	P	07 13 40.2	-0.8
GZR	Gura Zlata	85.98	322	⇑P	P	07 13 40.2	-0.8
SIRR	Siria	85.98	323	⇓P	P	07 13 40.5	-0.5
CSS	Mathiatis	86.06	309	IAmb	IAmb	07 14 02.4	
	comp=Z,44nm,0.7s						
MMLI	Mount Malkishu	86.07	306	P	P	07 13 41.8	+0.1
JAVC	Velka Javorina	86.17	327	*e*P	P	07 13 43.3	+1.4
JAVC	Velka Javorina	86.17	327	*e*S	S	07 24 17.5	+2.0
GEDZ	Gediz	86.18	314	P	P	07 13 43.6	+1.4
ISP	Isparta	86.22	312	P	P	07 13 43.1	+0.7
S22A	4UR Ranch, Cre	86.24	48	P	P	07 13 43.5	+0.7
	baz=307,SNR=23						
EDC	Edincik	86.32	316	P	P	07 13 42.7	-0.1
MRMT	Marmara Adasi	86.33	316	P	P	07 13 42.2	-0.6
VRAC	Vranov	86.35	328	⇑P	P	07 13 43.4	+0.7
VRAC	Vranov	86.35	328	*e*P	P	07 13 43.3	+0.6
VRAC	Vranov	86.35	328	*e*S	S	07 24 15.6	-1.6
VRAC	Vranov	86.35	328	⇑P	P	07 13 43.4	+0.7
PVCC	Panska Ves	86.38	329	*e*P	P	07 13 44.1	+1.3
PVCC				*e*S	S	07 24 15.0	-2.4
PVCC				MLR	MLR		
	comp=Z,7µm,15.6s						
PVCC	Panska Ves	86.38	329	*e*P	P	07 13 44.1	+1.3
PVCC				*e*SKS	S	07 24 15.0	-2.4
PVCC				AMS	AMS	07 56 50.0	
	comp=Z,7µm,15.6s						
MAR4	Marsite Statio	86.39	316	P	P	07 13 43.3	+0.1
GZKV	Gazikoy-Tekird	86.39	316	P	P	07 13 44.0	+0.9
BRG	Berggiesshubel	86.40	330	*i* P	P	07 13 43.1	+0.2
BRG				Amp		07 13 46.8	
	comp=Z,92nm,1.8s						
BRG				*e*x	x	07 13 50.1	
BRG				Amp		07 13 52.1	
	comp=Z,177nm,1.9s						
BRG				*e*x	x	07 13 58.5	
BRG				Amp		07 14 02.1	
	comp=Z,128nm,1.9s						
BRG				PP	PP	07 17 08.4	+4.9
BRG				Amp		07 17 16.1	
	comp=Z,9.3nm,0.9s						
BRG				S	S	07 24 14.0	-3.5
BRG				SS	SS	07 30 00.0	+3.8
BRG	Berggiesshubel	86.40	330	*e*P	P	07 13 42.7	-0.2
	comp=Z,6.3nm,0.9s,baz=41,slow=4.6						
MAR3	Marsite Statio	86.42	316	P	P	07 13 43.1	-0.1
FLTG	Flechtingen	86.43	332	*e*P	P	07 13 43.4	+0.3
	comp=Z,30nm,1.1s,baz=41,slow=4.6						
BZS	Buzias	86.44	323	⇑P	P	07 13 43.6	+0.4
BZS	Buzias	86.44	323	⇑P	P	07 13 43.6	+0.4
CLL	Collm	86.48	331	*e*P	P	07 13 43.0	-0.3
	comp=Z,72nm,1.4s						
CLL				*i*		07 13 49.5	
	comp=Z,152nm,1.6s						
CLL				*e*Pmax		07 13 56.0	
CLL				*e*PP	PP	07 17 04.0	-0.1
CLL				*e*S	S	07 24 16.0	-2.2
CLL				*e*PS	PnS	07 25 17.0	-0.4
CLL				*e*		07 26 30.0	
CLL				*e*SS	SS	07 30 00.0	+2.7
CLL				*e*		07 34 30.0	
CLL				*e*SSSS		07 36 24.0	
CLL				LmV		07 57 00.0	
	comp=Z,6µm,18.2s						
CLL				Lmax		08 01 00.0	
CLL	Collm	86.48	331	*e*P	P	07 13 43.0	-0.3
CLL				*i*		07 13 49.5	
CLL				*e*S	S	07 24 16.0	-2.2
CLL				pmax	pmax		
	comp=Z,72nm,1.4s						
CLL				MLR	MLR		
	comp=Z,6µm,18.2s						
CLL	Collm	86.48	331	IAMs_20	IAMs_20	07 57 03.0	
	comp=Z,6µm,18.0s						
CLL	Collm	86.48	331	*e*P	P	07 13 43.8	+0.6
	comp=Z,22nm,1.0s,baz=41,slow=4.6						
RKY	Sarkoy-Tekirda	86.52	316	P	P	07 13 44.0	+0.2
SMOL	Smolenice	86.53	327	*e*P	P	07 13 44.7	+1.1
SMOL				pmax	pmax		
	comp=Z,42nm,1.3s						
SMOL	Smolenice	86.53	327	*e*P	P	07 13 44.6	+1.0
Q24A	Divide	86.56	46	P	P	07 13 44.3	-0.1
	baz=308						
FBE	Freiberg	86.62	330	*e*P	P	07 13 44.9	+0.9
	comp=Z,22nm,1.1s,baz=41,slow=4.6						
KRUC	Moravsky	86.62	328	*e*P	P	07 13 44.2	+0.2
KRUC	Moravsky	86.62	328	*e*S	S	07 24 21.0	+1.2
B35A	Bob, Littlefor	86.63	33	IAmb	IAmb	07 14 19.0	
	comp=Z,110nm,1.9s						
B35A				IAMs_20	IAMs_20	07 57 37.8	
	comp=Z,4µm,19.0s						
KRBG	Karabiga-Canak	86.63	316	P	P	07 13 43.1	-1.1
SUSD	Miller	86.66	39	P	P	07 13 44.2	-0.2
	baz=312						
SUSD	Miller	86.66	39	IAMs_20	IAMs_20	07 54 01.1	
	comp=Z,5µm,20.0s						
MODS	Modra-Piesok	86.70	327	*e*P	P	07 13 44.3	-0.2
MODS				pmax	pmax		
	comp=Z,74nm,1.5s						
MODS	Modra-Piesok	86.70	327	*e*P	P	07 13 44.3	-0.2
MODS	Modra-Piesok	86.70	327	*e*S	S	07 24 14.7	-5.9
MODS				*e*L	L	07 57 03.9	
NRDL	Niedersach Rie	86.76	333	*e*P	P	07 13 45.8	+1.3
	comp=Z,8.2nm,0.9s,baz=41,slow=4.6						
PRA	Prague	86.78	329	*e*SKS	S	07 24 18.2	-3.0
PRA				AMS	AMS	07 56 50.0	
	comp=Z,4µm,16.2s						
TUC	Tucson	86.78	54	P	P	07 13 45.4	+0.2
	baz=305						
TUC	Tucson	86.78	54	P	P	07 13 46.5	+1.2
TUC				pmax	pmax		
	comp=Z,18nm,1.1s						
TUC				MLR	MLR		
	comp=Z,13µm,18.0s						
TUC	Tucson	86.78	54	P	P	07 13 46.5	+1.2
PRU	Pruhonice	86.79	329	*e*P	P	07 13 44.6	-0.2
PRU				*e*S	S	07 24 18.3	-3.0
PRU				MLR	MLR		
	comp=Z,10µm,16.1s						
PRU	Pruhonice	86.79	329	*e*P	P	07 13 44.6	-0.2
PRU				*e*SKS	S	07 24 18.3	-3.0
PRU				AMS	AMS	07 56 40.0	
	comp=Z,10µm,16.1s						
ASSE	Asse, Remlinge	86.81	332	*e*P	P	07 13 46.2	+1.4
	comp=Z,16nm,1.1s,baz=41,slow=4.6						
TREC	Trest	86.87	328	*e*P	P	07 13 46.8	+1.5
TREC				*e*S	S	07 24 18.0	-4.2
TREC				MLR	MLR		
	comp=Z,9µm,17.6s						
TREC	Trest	86.87	328	*e*P	P	07 13 46.8	+1.5
TREC				*e*SKS	S	07 24 18.0	-4.2
TREC				AMS	AMS	07 55 30.0	
	comp=Z,9µm,17.6s						
ZST	Bratislava	86.91	327	*e*P	P	07 13 46.6	+1.2
ZST				pmax	pmax		
	comp=Z,112nm,1.3s						
ZST	Bratislava	86.91	327	*e*P	P	07 13 46.6	+1.2
ZST	Bratislava	86.91	327	*e*S	S	07 24 24.4	+1.9
MDVR	Moldovita	86.95	322	⇑P	P	07 13 45.5	-0.3
LPK	Lapseki	86.97	316	P	P	07 13 42.7	-3.2
ALN	Alexandroupoli	87.06	317	IAMs_20	IAMs_20	07 57 49.3	
	comp=Z,4µm,18.0s						
NEUB	Neuenburg	87.06	331	*e*P	P	07 13 46.3	+0.2
	comp=Z,17nm,0.8s,baz=41,slow=4.6						
SDCO	Great Sand Dun	87.08	47	P	P	07 13 47.2	+0.3
	baz=308,SNR=21						
SDCO	Great Sand Dun	87.08	47	IAMs_20	IAMs_20	07 51 42.1	
	comp=Z,6µm,19.0s						
F33A	5 Mile Ranch,	87.12	36	IAmb	IAmb	07 13 51.5	
	comp=Z,31nm,0.8s						
F33A				IAMs_20	IAMs_20	07 51 21.0	
	comp=Z,4µm,20.0s						
OGNE	Ogallala	87.20	43	P	P	07 13 46.4	-0.7
	baz=310						
TANN	Tannenbergstha	87.37	330	*e*P	P	07 13 48.5	+0.7
	baz=41,slow=4.6						
WERD	Werda	87.41	330	*e*P	P	07 13 49.0	+1.1
	baz=41,slow=4.6						
GUNZ	Gunzen	87.47	330	*e*P	P	07 13 49.2	+1.1
	comp=Z,6.7nm,0.9s,baz=41,slow=4.6						
WERN	Wernitzgruen	87.50	330	*e*P	P	07 13 49.6	+1.3
	baz=41,slow=4.6						
NKC	Novy Kostel	87.52	330	*e*P	P	07 13 49.0	+0.6
NKC				*e*S	S	07 24 27.5	-0.9
NKC				MLR	MLR		
	comp=Z,7µm,17.6s						
NKC	Novy Kostel	87.52	330	*e*P	P	07 13 49.0	+0.6
NKC				*e*S	S	07 24 27.5	-0.9
NKC				AMS	AMS	07 56 00.0	
	comp=Z,7µm,17.6s						
GTTG	Gottingen	87.54	332	*e*P	P	07 13 49.3	+0.8
	comp=Z,14nm,0.9s,baz=41,slow=4.6						
MORH	Mrgy, Hungar	87.55	324	⇑P	P	07 13 47.9	-0.7
MORH	Mrgy, Hungar	87.55	324	*e*P	P	07 13 48.0	-0.6
MOX	Moxa	87.56	331	*e*P	P	07 13 49.4	+0.9
	baz=41,slow=4.6						
VTS	Vitosha	87.56	320	⇓P	P	07 13 48.6	-0.3
VTS	Vitosha	87.56	320	⇓P	P	07 13 48.6	-0.3
VTS	Vitosha	87.56	320	IAMs_20	IAMs_20	07 59 05.3	
	comp=Z,4µm,18.0s						
GADA	Gvkgeada	87.59	316	P	P	07 13 49.0	+0.1
CONA	Conrad Observa	87.68	327	*e*P	P	07 13 49.7	+0.4
	comp=Z,28nm,1.1s,SNR=12						

FRGS	Fruska Gora	87.69	323	⇑P	P	07 13 49.5	+0.2
FRGS	Fruska Gora	87.69	323	*e*P	P	07 13 48.8	-0.5
HRFI	Mount Harif	87.70	304	P	P	07 13 49.0	-0.7
BOVS	Bovan	87.72	321	⇑P	P	07 13 49.3	-0.2
CKRC	Cesky Krumlov	87.75	328	*e*P	P	07 13 49.6	+0.1
CKRC				*e*SKS	S	07 24 23.1	-7.6
IBBN	Ibbenburen	87.81	334	*e*P	P	07 13 49.9	+0.2
	comp=Z,20nm,0.8s,baz=41,slow=4.6						
KHC	Kasperske Hory	87.84	329	*e*P	P	07 13 49.7	-0.3
KHC				*e*S	S	07 24 32.6	+1.0
KHC				MLR	MLR		
	comp=Z,9µm,16.2s						
KHC	Kasperske Hory	87.84	329	*e*P	P	07 13 49.7	-0.3
KHC				*e*S	S	07 24 32.6	+1.0
KHC				AMS	AMS	07 57 10.0	
	comp=Z,9µm,16.2s						
EYMN	Ely	87.97	33	P	P	07 13 50.3	-0.3
	baz=317						
EYMN	Ely	87.97	33	IAmb	IAmb	07 14 25.4	
	comp=Z,50nm,1.3s						
EYMN	Ely	87.97	33	IAMs_20	IAMs_20	07 58 49.2	
	comp=Z,5µm,19.0s						
K31A	O'Neill	87.97	40	IAmb	IAmb	07 14 27.0	
	comp=Z,73nm,1.2s						
K31A				IAMs_20	IAMs_20	07 56 13.0	
	comp=Z,4µm,20.0s						
GEC2	GERESS Array S	88.00	329	IAmb	IAmb	07 13 58.6	
	comp=Z,64nm,1.8s						
GEC2	GERESS Array S	88.00	329	*e*P	P	07 13 51.1	+0.2
	comp=Z,3.8nm,0.9s,baz=41,slow=4.6						
GERES	GERESS Array B	88.00	329	P	P	07 13 51.0	+0.2
	comp=Z,3.6nm,0.6s,baz=46,slow=5.8,SNR=17						
GERES				PP	PP	07 17 17.1	+0.5
	comp=Z,1.5nm,0.8s,baz=56,slow=8.2,SNR=4.1						
GERES				LR	LR	07 57 37.0	
	comp=Z,8µm,18.1s,baz=42,slow=39						
GERES	GERESS Array B	88.00	329	P	P	07 13 51.0	+0.2
GERES	GERESS Array B	88.00	329	P	P	07 13 50.5	-0.4
KSCO	Kaye Shedlock’	88.07	45	P	P	07 13 50.9	-0.6
	baz=309						
KSCO	Kaye Shedlock’	88.07	45	IAmb	IAmb	07 14 26.8	
	comp=Z,84nm,1.6s						
KSCO				IAMs_20	IAMs_20	08 00 07.0	
	comp=Z,4µm,18.0s						
UBBA	Unterbreizbach	88.09	332	*e*P	P	07 13 51.4	+0.5
	baz=41,slow=4.6						
T25A	Trinidad	88.14	47	P	P	07 13 52.4	+0.5
	baz=308,SNR=11						
WET	Wettzell	88.14	329	*e*P	P	07 13 52.0	+0.6
	baz=41,slow=4.6						
ANMO	Albuquerque	88.16	50	LR	LR	07 52 57.5	
	comp=Z,13µm,18.5s,baz=315,slow=35						
ANMO	Albuquerque	88.16	50	P	P	07 13 52.1	+0.1
	baz=307						
ANMO	Albuquerque	88.16	50	P	P	07 13 53.2	+1.2
ANMO				pmax	pmax		
	comp=Z,18nm,1.2s						
ANMO				MLR	MLR		
	comp=Z,14µm,19.0s						
ANMO	Albuquerque	88.16	50	P	P	07 13 53.2	+1.2
DIVS	Divibare	88.32	322	*e*P	P	07 13 51.5	-0.9
DIVS	Divibare	88.32	322	IAMs_20	IAMs_20	07 57 26.3	
	comp=Z,5µm,19.0s						
ARSA	Arzberg	88.33	327	*e*P	P	07 13 52.5	+0.1
	comp=Z,23nm,1.4s,SNR=6.6						
Y22D	IRIS PASSCAL I	88.38	51	P	P	07 13 52.7	-0.3
	baz=307						
Y22D	IRIS PASSCAL I	88.38	51	IAMs_20	IAMs_20	07 58 56.8	
	comp=Z,4µm,19.0s						
ECSD	EROS Data Cent	88.39	38	P	P	07 13 52.7	0.0
	baz=313						
ECSD	EROS Data Cent	88.39	38	IAmb	IAmb	07 14 00.9	
	comp=Z,37nm,1.1s						
ECSD	EROS Data Cent	88.39	38	IAMs_20	IAMs_20	07 53 14.8	
	comp=Z,4µm,20.0s						
KASTN	Kahler Asten	88.42	333	*e*P	P	07 13 53.6	+0.9
	comp=Z,6.3nm,0.8s,baz=41,slow=4.6						
GRA1	Grafenberg Arr	88.44	330	IAMs_20	IAMs_20	07 56 36.0	
	comp=Z,5µm,18.0s						
GRF	Grafenberg Arr	88.44	330	*e*P	P	07 13 54.2	+1.4
	comp=Z,9.9nm,0.9s,baz=41,slow=4.6						
GRFO	Grafenberg	88.44	330	P	P	07 13 54.5	+1.7
GRFO				pmax	pmax		
	comp=Z,32nm,1.5s						
GRFO				MLR	MLR		
	comp=Z,1µm,18.0s						
GRFO	Grafenberg	88.44	330	P	P	07 13 54.5	+1.7
MOA	Molln	88.48	328	*e*P	P	07 13 53.2	+0.2
	comp=Z,13nm,1.1s						
F36A	Milaca	88.49	35	IAmb	IAmb	07 14 27.8	
	comp=Z,80nm,1.9s						
F36A				IAMs_20	IAMs_20	07 55 50.3	
	comp=Z,4µm,19.0s						
HSIG		88.54	57	IAMs_20	IAMs_20	07 51 35.7	
	comp=Z,6µm,19.0s						
BUG	Bochum--Univer	88.68	334	*e*P	P	07 13 54.7	+0.8
	baz=41,slow=4.6						
121A	Cookes Peak, D	88.72	52	P	P	07 13 54.4	-0.2
	baz=307						
121A	Cookes Peak, D	88.72	52	IAmb	IAmb	07 14 59.8	
	comp=Z,70nm,1.9s						
121A				IAMs_20	IAMs_20	07 53 31.8	
	comp=Z,6µm,19.0s						
STIP	Stip	88.75	319	*i* P	P	07 13 54.1	-0.3
VAY	Valandovo	88.78	319	*i* P	P	07 13 55.2	+0.7
BBLS	Lazići	88.79	322	*e*P	P	07 13 53.0	-1.6
DAMY	Dhamar	88.84	286	IAMs_20	IAMs_20	07 59 43.1	
	comp=Z,5µm,18.0s						
EKA	Eskdalemuir Ar	88.90	341	LR	LR	07 56 29.5	
	comp=Z,20µm,20.5s,baz=40,slow=38						
E38A	The Farm, Brul	88.91	34	IAmb	IAmb	07 14 29.1	
	comp=Z,46nm,1.1s						
E38A				IAMs_20	IAMs_20	07 54 37.3	
	comp=Z,4µm,20.0s						
PERS	Pernice	88.97	326	*i* P	P	07 13 55.1	-0.3
SOKA	Soboth	88.97	327	*e*P	P	07 13 55.3	-0.2
	comp=Z,43nm,1.1s,SNR=10						
BGNE	Belgrade	89.12	41	P	P	07 13 56.1	-0.1
	baz=312						
BGNE	Belgrade	89.12	41	IAMs_20	IAMs_20	07 56 40.4	
	comp=Z,4µm,19.0s						
SPMN	Marine on St.	89.30	35	P	P	07 13 56.5	-0.4
	baz=316						
SPMN	Marine on St.	89.30	35	IAMs_20	IAMs_20	07 56 24.7	
	comp=Z,3µm,18.0s						
BLY	Banja Luka	89.31	324	*e*P	P	07 13 55.7	-1.3
OBKA	Obir	89.33	327	*e*P	P	07 13 56.4	-0.7
	comp=Z,23nm,1.3s						
CRES	Cresnjev	89.39	326	*e*P	P	07 13 53.8	-3.5
AHRW	Bad Neuenahr-A	89.47	333	*e*P	P	07 13 58.6	+1.1
	comp=Z,5.0nm,0.8s,baz=41,slow=4.6						
KBA	Koelnbreinsper	89.47	328	*e*P	P	07 13 57.5	-0.4
	comp=Z,10nm,0.8s						
FUR	Furstenfeldbru	89.58	329	*e*P	P	07 14 00.1	+1.9
	comp=Z,30nm,1.0s,baz=41,slow=4.6						
MGRS	Mrkonjic Grad	89.59	324	*e*P	P	07 13 59.0	+0.6
MYKA	Terra Mystica	89.66	327	*e*P	P	07 13 57.9	-0.8
	comp=Z,23nm,1.1s						
LJU	Ljubljana	89.68	326	*e*P	P	07 13 57.6	-1.1
L34A	Svendsen Farm,	89.72	39	IAmb	IAmb	07 14 03.6	
	comp=Z,45nm,0.8s						
L34A				IAMs_20	IAMs_20	07 55 37.2	
	comp=Z,5µm,20.0s						
BEBN	Eben Emael	89.80	334	*d*P	P	07 13 58.8	-0.3
BEBN				*d*x	x	07 14 13.8	
FNA	Florina	89.81	319	IAMs_20	IAMs_20	07 57 21.0	
	comp=Z,5µm,19.0s						
MEM	Membach	89.82	334	*d*PcP	P	07 13 59.8	+0.6
MEM				*d*x	x	07 14 13.4	
PDG	Podgorica	89.86	321	⇑P	P	07 13 58.4	-1.2
PDG	Podgorica	89.86	321	*e*P	P	07 13 55.6	-3.9
PDG	Podgorica	89.86	321	IAmb	IAmb	07 14 06.9	
	comp=Z,46nm,1.2s						
I37A	Lemond, Waseca	89.86	36	IAmb	IAmb	07 14 34.4	
	comp=Z,96nm,1.4s						
I37A				IAMs_20	IAMs_20	07 52 45.6	
	comp=Z,3µm,20.0s						
OHR	Ohrid	89.92	320	*i* P	P	07 13 56.5	-3.5
CBKS	Cedar Bluff	89.92	43	P	P	07 13 58.8	-1.3
	baz=311						
CEY	Cerknica	89.95	326	*e*P	P	07 13 57.1	-2.9
STU	Stuttgart	90.00	331	IAMs_20	IAMs_20	07 57 13.2	
	comp=Z,4µm,18.0s						
JAVS	Javornik	90.01	327	*i* P	P	07 13 59.1	-1.3
ZOU	Zoufplan	90.03	328	IAmb	IAmb	07 14 14.7	
	comp=Z,84nm,1.4s						
DRME	Dracevica, Mon	90.06	321	*e*P	P	07 13 59.9	-0.6
WATA	Walderalm	90.08	329	*e*P	P	07 14 00.8	+0.1
	comp=Z,9.1nm,0.8s						
ABTA	Abfaltersbach	90.10	328	*i* P	P	07 13 59.6	-1.1
	comp=Z,33nm,1.2s						
WTTA	Wattenberg	90.10	329	*i* P	P	07 14 00.4	-0.5
	comp=Z,23nm,1.3s						
BCLA	Clavier	90.24	334	*d*PcP	PcP	07 14 02.1	-0.3
BCLA				*d*x	x	07 14 15.7	
MOTA	Moosalm	90.28	329	*e*P	P	07 14 01.3	-0.3
	comp=Z,21nm,1.5s						
SANT	Santorini	90.29	314	IAMs_20	IAMs_20	07 59 34.1	
	comp=Z,3µm,18.0s						
RETA	Reutte	90.32	329	*e*P	P	07 14 01.7	0.0
	comp=Z,39nm,1.2s,SNR=7.1						
SQTA	Sankt Quirin	90.33	329	*i* P	P	07 14 02.8	+1.0
	comp=Z,19nm,1.0s						
BGES	Gesves	90.35	334	*d*P	P	07 14 01.9	+0.2
BGES				*d*x	x	07 14 08.6	
COWI	Conover	90.42	33	IAMs_20	IAMs_20	07 59 48.1	
	comp=Z,4µm,18.0s						
AGG	Agios Georgios	90.44	317	IAMs_20	IAMs_20	08 01 17.9	
	comp=Z,3µm,18.0s						
UBR	Ueberruh	90.46	330	*e*P	P	07 14 02.6	+0.3
	comp=Z,6.7nm,1.0s,baz=41,slow=4.6						
RCHB	Rochefort	90.49	334	*d*x	x	07 14 15.1	
WLF	Walferdange	90.53	333	*d*x	x	07 14 18.1	
WLF	Walferdange	90.53	333	IAMs_20	IAMs_20	07 57 45.9	
	comp=Z,4µm,20.0s						
G40A	Rib Lake	90.54	34	IAMs_20	IAMs_20	07 55 36.2	
	comp=Z,4µm,20.0s						
BMRD	Maredsous	90.54	334	*d*P	P	07 14 01.3	-1.3
BMRD				*d*x	x	07 14 17.2	
SNF	Seneffe	90.55	334	*d*x	x	07 14 10.4	
FETA	Feichten	90.69	329	*i* P	P	07 14 03.3	-0.3
	comp=Z,30nm,1.5s,SNR=7.1						
BFO	Black Forest	90.71	331	P	P	07 14 03.2	-0.3
BFO				pmax	pmax		
	comp=Z,57nm,1.2s						
BFO	Black Forest	90.71	331	P	P	07 14 03.2	-0.3
BFO				IAmb	IAmb	07 14 18.9	
	comp=Z,57nm,1.2s						
BFO				IAMs_20	IAMs_20	07 59 37.8	
	comp=Z,4µm,19.0s						
BFO	Black Forest	90.71	331	*e*P	P	07 14 03.5	0.0
	comp=Z,13nm,0.9s,baz=41,slow=4.6						
DOU	Dourbes	90.77	334	*d*PcP	PcP	07 14 04.3	-0.4
DOU				*d*x	x	07 14 14.4	
MNTX	Cornudas Mount	90.84	52	P	P	07 14 04.5	+0.1
	baz=308,SNR=9.2						
MNTX	Cornudas Mount	90.84	52	IAMs_20	IAMs_20	07 55 01.1	
	comp=Z,4µm,19.0s						
DAVA	Damuels	90.86	330	*e*P	P	07 14 04.2	-0.2
	comp=Z,53nm,1.2s,SNR=6.5						
N35A	Tabor	90.88	40	IAmb	IAmb	07 14 30.2	
	comp=Z,24nm,0.8s						
N35A				IAMs_20	IAMs_20	07 56 34.9	
	comp=Z,5µm,20.0s						
CTI	Castel Tesino	91.02	328	IAmb	IAmb	07 14 12.7	
	comp=Z,35nm,1.1s						
F42A	Maple Grove Fa	91.14	32	IAMs_20	IAMs_20	08 00 36.1	
	comp=Z,4µm,18.0s						
K38A	Parkersburg	91.16	37	IAMs_20	IAMs_20	07 56 54.0	
	comp=Z,5µm,20.0s						
MSTX	Muleshoe	91.16	49	P	P	07 14 05.3	-0.7
	baz=309						
DAVOX	Davos/Dischmat	91.25	329	LR	LR	07 58 46.3	
	comp=Z,4µm,18.8s,baz=30,slow=38						
AMTX	Amarillo	91.28	47	P	P	07 14 06.7	+0.3
	baz=310						
AMTX	Amarillo	91.28	47	IAmb	IAmb	07 14 13.1	
	comp=Z,102nm,1.8s						
IDI	Anoyia	91.34	313	IAMs_20	IAMs_20	08 00 26.9	
	comp=Z,4µm,19.0s						
I40A	Norwalk	91.34	35	IAMs_20	IAMs_20	07 59 36.7	
	comp=Z,4µm,18.0s						
SCIA	State Center	91.45	38	P	P	07 14 07.0	0.0
	baz=315						
SCIA	State Center	91.45	38	IAMs_20	IAMs_20	07 58 15.9	
	comp=Z,5µm,19.0s						
KSU1	Kansas State U	91.55	42	P	P	07 14 07.2	-0.3
	baz=313						
KSU1	Kansas State U	91.55	42	IAmb	IAmb	07 14 12.2	
	comp=Z,36nm,0.8s						
DSB	Dublin	91.63	342	IAMs_20	IAMs_20	07 57 38.7	
	comp=Z,4µm,19.0s						
ATD	Arta Tunnel	91.71	284	*e*P	P	07 14 00.6	-8.2
KAN05	Bluff City Nor	92.16	44	IAmb	IAmb	07 14 44.7	
	comp=Z,33nm,1.1s						
I42A	Draeger Farm,	92.17	34	IAMs_20	IAMs_20	07 53 14.6	
	comp=Z,4µm,21.0s						
KAN01	Argonia South	92.19	44	IAmb	IAmb	07 14 48.3	
	comp=Z,21nm,0.8s						
MATQ	Matagami	92.23	24	P	P	07 14 10.3	-0.2
	baz=327						
N38A	Joes South For	92.23	39	IAmb	IAmb	07 14 45.6	
	comp=Z,25nm,0.9s						
N38A				IAMs_20	IAMs_20	07 58 33.6	
	comp=Z,3µm,19.0s						
JFWS	Jewell Farm	92.24	35	P	P	07 14 10.3	-0.4
	baz=318						
JFWS	Jewell Farm	92.24	35	IAMs_20	IAMs_20	07 58 06.6	
	comp=Z,3µm,19.0s						
H43A	Windswept, Lux	92.28	33	IAMs_20	IAMs_20	07 55 06.4	
	comp=Z,3µm,20.0s						
L40A	Anamosa	92.38	37	IAMs_20	IAMs_20	07 59 38.1	
	comp=Z,4µm,19.0s						
E46A	Sault Ste Mari	92.38	30	IAMs_20	IAMs_20	07 57 01.6	
	comp=Z,4µm,19.0s						
KAN13	South Haven SW	92.45	44	IAmb	IAmb	07 14 46.0	
	comp=Z,71nm,1.6s						
G45A	Suttons Bay	92.82	32	IAMs_20	IAMs_20	08 00 57.4	
	comp=Z,3µm,19.0s						
P38A	Dawn	92.90	40	IAmb	IAmb	07 14 18.6	
	comp=Z,20nm,0.8s						
P38A				IAMs_20	IAMs_20	07 57 55.3	
	comp=Z,4µm,20.0s						
LSQQ	Lebel-sur-Quev	93.06	24	P	P	07 14 13.8	-0.4
	baz=328						
T35A	Sooner Cattle	93.09	43	IAmb	IAmb	07 14 22.6	
	comp=Z,32nm,1.2s						
TEND	Ethiopian Broa	93.10	286	*e*P	P	07 14 12.6	-2.6
WMOK	Wichita Mounta	93.18	46	P	P	07 14 15.3	+0.1
	baz=312,SNR=12						
WMOK	Wichita Mounta	93.18	46	IAMs_20	IAMs_20	07 53 59.5	
	comp=Z,5µm,20.0s						
OK029	Liberty Lake	93.28	44	IAMs_20	IAMs_20	08 04 30.0	
	comp=Z,3µm,18.0s						
I45A	Fountain	93.33	33	IAMs_20	IAMs_20	07 57 44.0	
	comp=Z,4µm,20.0s						
K43A	Burlington	93.34	35	IAMs_20	IAMs_20	07 55 24.6	
	comp=Z,3µm,20.0s						
GLMI	Grayling	93.45	31	P	P	07 14 15.7	-0.5
	baz=322						
GLMI	Grayling	93.45	31	IAMs_20	IAMs_20	08 03 37.0	
	comp=Z,3µm,18.0s						
TX32	Lajitas Array	93.46	53	IAmb	IAmb	07 14 43.3	
	comp=Z,43nm,0.9s						
TXAR	Lajitas Array	93.46	53	P	P	07 14 17.8	+1.1
	comp=Z,18nm,0.7s,baz=303,slow=2.8,SNR=149						
TXAR				LR	LR	07 57 21.7	
	comp=Z,7µm,18.1s,baz=0.0,slow=36						
QUOK	Quay	93.48	44	IAmb	IAmb	07 14 50.6	
	comp=Z,42nm,1.3s						
TIP	Timpagrande	93.48	320	IAMs_20	IAMs_20	08 00 57.1	
	comp=Z,5µm,20.0s						
OK025	Westminster Rd	93.50	45	IAMs_20	IAMs_20	08 02 05.7	
	comp=Z,4µm,18.0s						
OKCFA	Oklahoma City	93.54	45	IAMs_20	IAMs_20	08 03 31.9	
	comp=Z,3µm,18.0s						
OK031	S. Brethren Rd	93.55	44	IAmb	IAmb	07 14 51.0	
	comp=Z,54nm,1.5s						
OK031				IAMs_20	IAMs_20	07 55 48.9	
	comp=Z,4µm,19.0s						
N41A	Harden Midland	93.55	37	IAmb	IAmb	07 14 51.0	
	comp=Z,43nm,1.3s						
N41A				IAMs_20	IAMs_20	08 00 06.3	
	comp=Z,5µm,20.0s						
OK030	Cody Creek RV	93.60	44	IAmb	IAmb	07 14 24.8	
	comp=Z,56nm,1.5s						
OK030				IAMs_20	IAMs_20	07 55 59.2	
	comp=Z,4µm,19.0s						
FNO	Franklin	93.68	45	IAmb	IAmb	07 14 25.8	
	comp=Z,68nm,1.5s						
VLDQ	Val d'Or	93.68	25	IAMs_20	IAMs_20	08 03 23.1	
	comp=Z,5µm,19.0s						
P40A	Paris	93.77	39	IAMs_20	IAMs_20	08 04 19.9	
	comp=Z,3µm,19.0s						
L44A	Lake County Fo	93.94	35	P	P	07 14 17.9	-0.5
	baz=319						
L44A	Lake County Fo	93.94	35	IAMs_20	IAMs_20	07 59 38.5	
	comp=Z,3µm,18.0s						
BNI	Bardonecchia	93.99	330	IAmb	IAmb	07 14 49.8	
	comp=Z,42nm,1.1s						
ABTX	Abilene, Hawle	94.03	48	P	P	07 14 19.4	+0.3
	baz=311,SNR=18						
TUL1	Leonard	94.20	43	P	P	07 14 19.3	-0.5
	baz=314						
TUL1	Leonard	94.20	43	IAMs_20	IAMs_20	07 56 41.0	
	comp=Z,4µm,20.0s						
HQIL	Hanson Quary C	94.26	35	IAMs_20	IAMs_20	07 59 56.8	
	comp=Z,4µm,19.0s						
S39A	Bolivar	94.38	41	IAMs_20	IAMs_20	07 58 50.6	
	comp=Z,3µm,20.0s						
HDIL	Hopedale	94.47	37	P	P	07 14 20.4	-0.5
	baz=318						
HDIL	Hopedale	94.47	37	IAMs_20	IAMs_20	07 59 32.7	
	comp=Z,5µm,19.0s						
M44A	Midewin, Midew	94.47	35	IAMs_20	IAMs_20	07 59 23.6	
	comp=Z,3µm,19.0s						
R40A	Maddies Statio	94.54	40	IAmb	IAmb	07 14 29.2	
	comp=Z,25nm,1.1s						
R40A				IAMs_20	IAMs_20	08 04 44.7	
	comp=Z,3µm,19.0s						
DESE	Dese	94.59	286	*e*P	P	07 14 23.7	+1.4
J47A	Sunmer	94.59	32	IAMs_20	IAMs_20	07 56 47.5	
	comp=Z,4µm,20.0s						
CEL	Celeste	94.61	320	IAMs_20	IAMs_20	08 01 59.0	
	comp=Z,6µm,20.0s						
U38A	Gravette	94.65	42	IAmb	IAmb	07 14 55.7	
	comp=Z,32nm,1.4s						
U38A				IAMs_20	IAMs_20	08 00 39.0	
	comp=Z,4µm,18.0s						
L46A	Eue Claire	94.85	34	IAMs_20	IAMs_20	07 59 25.4	
	comp=Z,3µm,19.0s						
P43A	Skaggs, Pawnee	95.03	37	IAMs_20	IAMs_20	07 59 31.4	
	comp=Z,5µm,19.0s						
Z35A	Perchaven, San	95.06	46	IAmb	IAmb	07 14 32.6	
	comp=Z,40nm,1.0s						
O44A	Mansfield	95.19	36	IAMs_20	IAMs_20	07 59 45.6	
	comp=Z,3µm,19.0s						
ALGO	Algonquin Park	95.26	27	P	P	07 14 23.8	-0.6
	baz=327						
CCM	Cathedral Cave	95.27	39	P	P	07 14 24.0	-0.7
	baz=317						
CCM	Cathedral Cave	95.27	39	P	P	07 14 25.4	+0.8
CCM				pmax	pmax		
	comp=Z,20nm,1.0s						
CCM				MLR	MLR		
	comp=Z,2µm,19.0s						
CCM	Cathedral Cave	95.27	39	P	P	07 14 25.4	+0.8
D55A	Sainte-Anne-du	95.32	25	P	P	07 14 24.1	-0.6
	baz=329						
JCT	Junction City	95.32	50	P	P	07 14 25.3	+0.2
	baz=311,SNR=6.8						
JCT	Junction City	95.32	50	IAmb	IAmb	07 14 31.0	
	comp=Z,24nm,0.9s						
ANKE	Ethiopia-Afar	95.33	284	*e*P	P	07 14 14.3	-12
MGMO	Mountain Grove	95.35	41	IAMs_20	IAMs_20	07 59 26.3	
	comp=Z,3µm,19.0s						
X37A	Clayton	95.35	44	IAMs_20	IAMs_20	08 01 37.8	
	comp=Z,4µm,19.0s						
SLM	Saint Louis	95.39	38	IAMs_20	IAMs_20	07 59 19.1	
	comp=Z,4µm,20.0s						
D56A	ZEC Mazanza, M	95.55	24	P	P	07 14 25.0	-0.8
	baz=329						
U40A	Yellville	95.59	41	P	P	07 14 25.7	-0.5
	baz=315						
U40A	Yellville	95.59	41	IAMs_20	IAMs_20	08 01 16.7	
	comp=Z,5µm,18.0s						
SFIN	Lafayette	95.71	35	P	P	07 14 25.9	-0.7
	baz=320						
SFIN	Lafayette	95.71	35	IAMs_20	IAMs_20	08 00 13.2	
	comp=Z,4µm,18.0s						
G54A	Lake Saint Pet	95.71	27	P	P	07 14 25.4	-1.1
	baz=326						
FVM	French Village	95.76	39	IAMs_20	IAMs_20	08 00 41.1	
	comp=Z,3µm,20.0s						
L48A	N Adams	95.78	33	IAMs_20	IAMs_20	07 59 07.0	
	comp=Z,4µm,19.0s						
WHTX	Lake Whitney,	95.83	47	P	P	07 14 27.1	-0.3
	baz=312,SNR=8.0						
WHTX	Lake Whitney,	95.83	47	IAmb	IAmb	07 14 33.6	
	comp=Z,34nm,1.1s						
Q44A	Meyer Farm, Va	95.83	37	IAMs_20	IAMs_20	07 59 47.7	
	comp=Z,5µm,19.0s						
AAM	Ann Arbor	95.86	32	P	P	07 14 27.4	+0.2
	baz=322						
AAM	Ann Arbor	95.86	32	IAMs_20	IAMs_20	07 59 03.0	
	comp=Z,4µm,19.0s						
W39A	Magazine	95.87	43	P	P	07 14 27.1	-0.3
	baz=315						
W39A	Magazine	95.87	43	IAMs_20	IAMs_20	07 56 56.3	
	comp=Z,4µm,20.0s						
E56A	St. Veronique	95.88	25	P	P	07 14 27.1	-0.2
	baz=329						
LATQ	La Tuque	95.94	23	P	P	07 14 26.8	-0.6
	baz=331						
K50A	Casco	95.95	31	IAMs_20	IAMs_20	08 01 59.3	
	comp=Z,3µm,18.0s						
N47A	Urbana	96.01	34	IAMs_20	IAMs_20	08 05 30.1	
	comp=Z,3µm,19.0s						
T42A	Van Buren	96.09	40	IAmb	IAmb	07 15 02.9	
	comp=Z,33nm,1.6s						
T42A				IAMs_20	IAMs_20	07 59 51.9	
	comp=Z,4µm,19.0s						
RKT	Rikitea	96.10	113	*e*SKSac	SKSac	07 25 01.0	-3.0
	comp=Z,1µm,27.5s						
RKT	Rikitea	96.10	113	*e*LR	LR	07 45 20.2	
	comp=Z,3µm,31.5s						
P46A	Rosedale	96.23	36	IAMs_20	IAMs_20	07 59 03.1	
	comp=Z,3µm,20.0s						
PLVO	Plevna	96.40	27	IAMs_20	IAMs_20	08 04 39.8	
	comp=Z,3µm,19.0s						
OLIL	Olney	96.44	37	IAMs_20	IAMs_20	08 02 13.7	
	comp=Z,4µm,19.0s						
MIAR	Mount Ida	96.45	43	P	P	07 14 30.8	+0.7
	baz=315,SNR=10						
MIAR	Mount Ida	96.45	43	IAMs_20	IAMs_20	08 04 30.6	
	comp=Z,5µm,18.0s						
435B	Jarrell	96.56	48	P	P	07 14 30.7	0.0
	baz=312						
FURI	Furi	96.58	284	*e*P	P	07 14 25.4	-6.0
S44A	Carbondale	96.60	38	IAMs_20	IAMs_20	08 01 26.3	
	comp=Z,4µm,19.0s						
SIUC	Southern Illin	96.61	38	IAMs_20	IAMs_20	08 01 26.2	
	comp=Z,4µm,19.0s						
DELO	Deloro Mine	96.63	27	IAMs_20	IAMs_20	08 05 50.9	
	comp=Z,5µm,19.0s						
N49A	Columbus Grove	96.70	33	IAMs_20	IAMs_20	08 03 57.3	
	comp=Z,3µm,19.0s						
M50A	Fremont	96.85	32	IAMs_20	IAMs_20	08 01 15.2	
	comp=Z,4µm,18.0s						
BLO	Bloomington	96.91	36	IAMs_20	IAMs_20	07 59 25.1	
	comp=Z,3µm,19.0s						
X40A	Basin Creek Fa	96.92	43	P	P	07 14 32.2	0.0
	baz=315						
X40A	Basin Creek Fa	96.92	43	IAMs_20	IAMs_20	07 55 55.2	
	comp=Z,3µm,20.0s						
D60A	Saint Jean D’O	96.96	22	P	P	07 14 32.2	+0.1
	baz=332						
833A	Chaparral WMA,	96.99	51	P	P	07 14 33.2	+0.5
	baz=311						
O49A	Covington	97.20	34	IAMs_20	IAMs_20	08 02 07.6	
	comp=Z,5µm,19.0s						
USIN	University of	97.24	37	IAMs_20	IAMs_20	08 00 51.0	
	comp=Z,4µm,20.0s						
J54A	Appleton	97.25	29	IAMs_20	IAMs_20	08 00 24.5	
	comp=Z,4µm,20.0s						
MEDO	Medina	97.42	29	IAMs_20	IAMs_20	08 00 39.9	
	comp=Z,4µm,20.0s						
M52A	Chesterland	97.50	31	IAMs_20	IAMs_20	08 06 08.4	
	comp=Z,3µm,18.0s						
P49A	Miami Univ. Ec	97.53	35	IAMs_20	IAMs_20	07 57 18.3	
	comp=Z,3µm,20.0s						
N51A	Ashland	97.54	32	IAMs_20	IAMs_20	08 00 04.5	
	comp=Z,4µm,20.0s						
J55A	Hilton	97.59	28	IAMs_20	IAMs_20	08 05 46.5	
	comp=Z,3µm,18.0s						
ERPA	Erie	97.63	30	IAMs_20	IAMs_20	08 02 44.7	
	comp=Z,4µm,19.0s						
LONY	Lake Ozonia	97.70	25	IAMs_20	IAMs_20	08 03 18.0	
	comp=Z,3µm,19.0s						
WCI	Wyandotte Cave	97.75	36	IAMs_20	IAMs_20	08 01 24.3	
	comp=Z,3µm,18.0s						
ACSO	Alum Creek Sta	97.81	33	IAMs_20	IAMs_20	08 04 49.5	

	comp=Z,4µm,18.0s						
FRNY	Flat Rock	97.87	25	IAMs_20	IAMs_20	08 06 46.6	
	comp=Z,3µm,18.0s						
M53A	WI Miller and	97.89	31	IAMs_20	IAMs_20	08 00 26.5	
	comp=Z,3µm,19.0s						
ALLY	Alegheny Colle	97.95	30	IAMs_20	IAMs_20	07 58 43.1	
	comp=Z,4µm,20.0s						
J56A	Wolcott	97.97	27	IAMs_20	IAMs_20	08 06 32.4	
	comp=Z,4µm,18.0s						
WVNY	West Valley, N	97.98	29	IAMs_20	IAMs_20	08 00 34.9	
	comp=Z,3µm,19.0s						
MMNY	Mt. Morris Dam	98.00	28	IAMs_20	IAMs_20	08 00 38.3	
	comp=Z,4µm,19.0s						
PQI	Presque Isle	98.07	20	IAMs_20	IAMs_20	08 04 52.6	
	comp=Z,5µm,18.0s						
MET	Memphis--Engin	98.12	41	IAMs_20	IAMs_20	08 02 28.7	
	comp=Z,4µm,19.0s						
DRLN	Deer Lake	98.22	13	IAMs_20	IAMs_20	08 01 08.9	
	comp=Z,4µm,20.0s						
HKT	Hockley	98.24	48	P	Pdif	07 14 40.2	+2.0
HKT				pmax	pmax		
	comp=Z,23nm,1.5s						
HKT	Hockley	98.24	48	P	Pdif	07 14 40.2	+2.0
HKT				IAmb	IAmb	07 15 13.2	
	comp=Z,23nm,1.5s						
R49A	Shelbyville	98.26	36	IAMs_20	IAMs_20	08 01 40.9	
	comp=Z,4µm,19.0s						
T47A	Sharon Grove	98.27	38	IAMs_20	IAMs_20	08 00 27.2	
	comp=Z,5µm,19.0s						
M54A	Oil Creek Stat	98.27	30	IAMs_20	IAMs_20	08 04 22.6	
	comp=Z,4µm,19.0s						
N53A	Lisbon	98.33	31	IAMs_20	IAMs_20	08 06 31.2	
	comp=Z,3µm,20.0s						
P51A	Williamsport	98.36	34	IAMs_20	IAMs_20	08 03 12.3	
	comp=Z,3µm,18.0s						
NCB	Newcomb	98.39	25	IAMs_20	IAMs_20	08 05 38.2	
	comp=Z,3µm,20.0s						
O52A	Adamsville	98.43	32	IAMs_20	IAMs_20	08 00 49.0	
	comp=Z,4µm,20.0s						
N54A	Moraine State	98.58	31	IAMs_20	IAMs_20	08 00 39.7	
	comp=Z,3µm,19.0s						
G62A	West of Eustis	98.58	23	IAMs_20	IAMs_20	08 02 58.3	
	comp=Z,3µm,20.0s						
Q51A	Peebles	98.58	34	IAMs_20	IAMs_20	08 04 27.3	
	comp=Z,3µm,19.0s						
VT1	Waterbury	98.60	24	IAMs_20	IAMs_20	08 07 31.2	
	comp=Z,3µm,19.0s						
O53A	New Philadelph	98.61	32	IAMs_20	IAMs_20	08 00 46.6	
	comp=Z,4µm,19.0s						
F63A	Nahmakanta, Br	98.61	21	IAMs_20	IAMs_20	08 05 50.9	
	comp=Z,3µm,20.0s						
L56A	Greenwood	98.64	29	IAMs_20	IAMs_20	08 01 26.2	
	comp=Z,4µm,20.0s						
P52A	Corning	98.68	33	IAMs_20	IAMs_20	08 00 28.6	
	comp=Z,4µm,20.0s						
M55A	Ridgway	98.69	30	IAMs_20	IAMs_20	08 03 43.6	
	comp=Z,3µm,19.0s						
R50A	Paris	98.69	35	IAMs_20	IAMs_20	08 02 32.1	
	comp=Z,3µm,19.0s						
F64A	Sherman	98.70	21	IAMs_20	IAMs_20	08 00 51.2	
	comp=Z,3µm,20.0s						
J59A	Piesco	98.72	26	IAMs_20	IAMs_20	08 05 41.0	
	comp=Z,4µm,18.0s						
OXF	Oxford	98.86	41	IAMs_20	IAMs_20	08 07 18.5	
	comp=Z,3µm,18.0s						
K58A	Earlville	98.88	27	IAMs_20	IAMs_20	08 06 25.3	
	comp=Z,3µm,19.0s						
M56A	Emporium	98.92	29	IAMs_20	IAMs_20	07 57 51.8	
	comp=Z,4µm,22.0s						
PKME	Peaks-Kenny Pk	98.94	22	IAMs_20	IAMs_20	08 04 55.7	
	comp=Z,4µm,20.0s						
H62A	Milan	98.94	23	IAMs_20	IAMs_20	08 08 33.9	
	comp=Z,4µm,18.0s						
143A	Socs Landing,	99.03	43	IAMs_20	IAMs_20	07 57 23.0	
	comp=Z,4µm,20.0s						
O54A	Avella	99.04	31	IAMs_20	IAMs_20	08 04 39.0	
	comp=Z,3µm,18.0s						
P53A	Whipple	99.14	32	IAMs_20	IAMs_20	08 01 02.8	
	comp=Z,4µm,19.0s						
Q52A	Bidwell	99.15	33	IAMs_20	IAMs_20	08 03 46.1	
	comp=Z,3µm,19.0s						
BINY	Binghamton	99.22	28	IAMs_20	IAMs_20	08 07 01.5	
	comp=Z,5µm,19.0s						
PLAL	Pickwick Lake	99.25	40	IAMs_20	IAMs_20	08 02 03.5	
	comp=Z,3µm,19.0s						
Y45A	Yeager Farm, C	99.26	41	IAMs_20	IAMs_20	08 04 53.9	
	comp=Z,3µm,18.0s						
HNH	Hanover	99.32	24	IAMs_20	IAMs_20	08 08 21.8	
	comp=Z,3µm,18.0s						
U49A	Red Boiling Sp	99.32	37	IAMs_20	IAMs_20	08 01 57.0	
	comp=Z,4µm,20.0s						
T50A	Nancy	99.41	36	IAMs_20	IAMs_20	08 06 46.4	
	comp=Z,3µm,19.0s						
WVL	Waterville	99.45	22	IAMs_20	IAMs_20	08 02 32.1	
	comp=Z,3µm,20.0s						
M57A	Sunshine Farm,	99.48	29	IAMs_20	IAMs_20	08 02 11.6	
	comp=Z,4µm,19.0s						
G65A	Princeton	99.54	21	IAMs_20	IAMs_20	08 05 35.4	
	comp=Z,4µm,18.0s						
S51A	Beattyville	99.55	35	IAMs_20	IAMs_20	08 03 09.0	
	comp=Z,3µm,18.0s						
L59A	Walton	99.60	27	IAMs_20	IAMs_20	08 06 37.5	
	comp=Z,4µm,19.0s						
I63A	Otisfield	99.60	23	IAMs_20	IAMs_20	08 09 02.2	
	comp=Z,3µm,18.0s						
TRY	Troy	99.66	26	IAMs_20	IAMs_20	08 06 16.9	
	comp=Z,4µm,19.0s						
MCWV	Mont Chateau	99.70	31	IAMs_20	IAMs_20	08 05 06.6	
	comp=Z,4µm,19.0s						
LMN	Caledonia Moun	99.74	19	IAMs_20	IAMs_20	08 07 43.5	
	comp=Z,3µm,18.0s						
FFD	Franklin Falls	99.74	24	IAMs_20	IAMs_20	08 00 49.1	
	comp=Z,3µm,19.0s						
O56A	Blue Knob Stat	99.76	30	IAMs_20	IAMs_20	08 01 35.1	
	comp=Z,3µm,20.0s						
Q54A	Coxs Mills	99.80	32	IAMs_20	IAMs_20	08 01 42.3	
	comp=Z,5µm,20.0s						
R53A	Hurricane	99.80	34	IAMs_20	IAMs_20	08 04 06.4	
	comp=Z,3µm,20.0s						
GGN	Saint George	99.83	20	IAMs_20	IAMs_20	08 06 05.2	
	comp=Z,4µm,19.0s						
VBMS	Vicksburg	99.90	43	IAMs_20	IAMs_20	07 57 49.9	
	comp=Z,3µm,20.0s						
KEST	Kesra	100.00	322	LR	LR	08 06 36.7	
	comp=Z,3µm,18.1s,baz=352,slow=39						
EMMW	East Machias	100.01	21	IAMs_20	IAMs_20	08 08 27.0	
	comp=Z,3µm,18.0s						
N58A	Sunbury	100.07	29	IAMs_20	IAMs_20	08 02 01.1	
	comp=Z,4µm,20.0s						
X48A	Hartselle	100.21	39	IAMs_20	IAMs_20	08 02 39.8	
	comp=Z,3µm,19.0s						
K62A	Royalston	100.24	25	IAMs_20	IAMs_20	08 02 16.3	
	comp=Z,3µm,21.0s						
N59A	State Game Lan	100.39	28	IAMs_20	IAMs_20	08 02 41.5	
	comp=Z,4µm,20.0s						
146A	Union	100.44	42	IAMs_20	IAMs_20	07 59 26.1	
	comp=Z,4µm,20.0s						
K63A	Dunstable	100.47	24	IAMs_20	IAMs_20	08 08 10.4	
	comp=Z,4µm,18.0s						
Q56A	Snyder Ridge,	100.50	31	IAMs_20	IAMs_20	08 03 29.7	
	comp=Z,4µm,18.0s						
S54A	Dingess, Beckl	100.53	33	IAMs_20	IAMs_20	08 04 46.6	
	comp=Z,3µm,18.0s						
QUA2	Belchertown	100.53	25	IAMs_20	IAMs_20	08 01 55.1	
	comp=Z,3µm,19.0s						
W50A	Signal Mountai	100.57	38	IAMs_20	IAMs_20	08 02 25.1	
	comp=Z,4µm,20.0s						
PAGS	Pennsylvania G	100.58	29	IAMs_20	IAMs_20	08 08 26.6	
	comp=Z,4µm,18.0s						
Z47A	Carrollton	100.58	41	IAMs_20	IAMs_20	08 01 43.8	
	comp=Z,4µm,20.0s						
KSCT	Kent School, K	100.59	26	IAMs_20	IAMs_20	08 03 57.7	
	comp=Z,4µm,20.0s						
V51A	Loudon	100.60	37	IAMs_20	IAMs_20	08 05 07.9	
	comp=Z,4µm,18.0s						
L62A	Suffield	100.64	25	IAMs_20	IAMs_20	08 07 03.8	
	comp=Z,3µm,19.0s						
P57A	Homestead Farm	100.65	30	IAMs_20	IAMs_20	08 02 02.6	
	comp=Z,3µm,20.0s						
ODNJ	Ogdensburg	100.71	27	IAMs_20	IAMs_20	08 03 33.0	
	comp=Z,3µm,20.0s						
WES	Weston	100.81	24	IAMs_20	IAMs_20	08 08 38.4	
	comp=Z,5µm,19.0s						
BCX	Boston College	100.91	24	IAMs_20	IAMs_20	08 08 32.5	
	comp=Z,5µm,20.0s						
MVL	Millersville	100.93	29	IAMs_20	IAMs_20	07 59 37.7	
	comp=Z,4µm,21.0s						
V52A	Sevierville	100.96	36	IAMs_20	IAMs_20	08 05 04.3	
	comp=Z,3µm,19.0s						
UCCT	U. Connecticut	101.00	25	IAMs_20	IAMs_20	08 02 18.5	
	comp=Z,3µm,20.0s						
Y49A	Blount Mountai	101.00	39	IAMs_20	IAMs_20	08 05 35.8	
	comp=Z,3µm,19.0s						
TKL	Tuckaleechee C	101.01	36	IAMs_20	IAMs_20	08 05 13.7	
	comp=Z,4µm,18.0s						
PAL	Palisades	101.05	27	IAMs_20	IAMs_20	08 07 26.9	
	comp=Z,5µm,20.0s						
BRNJ	Basking Ridge	101.07	27	IAMs_20	IAMs_20	08 03 33.5	
	comp=Z,4µm,19.0s						
346A	Big Creek Wild	101.11	43	IAMs_20	IAMs_20	08 01 41.2	
	comp=Z,5µm,19.0s						
WSPT	Westport, CT	101.13	26	IAMs_20	IAMs_20	08 04 01.0	
	comp=Z,4µm,19.0s						
BRYW	Bryant College	101.14	25	IAMs_20	IAMs_20	08 07 00.2	
	comp=Z,3µm,20.0s						
YLE	Yale	101.16	26	IAMs_20	IAMs_20	08 02 59.6	
	comp=Z,4µm,20.0s						
L63A	North Scituate	101.17	25	IAMs_20	IAMs_20	08 08 32.8	
	comp=Z,4µm,18.0s						
HAL	Halifax	101.19	18	IAMs_20	IAMs_20	08 07 37.8	
	comp=Z,3µm,19.0s						
WUPA	West Chester U	101.29	28	IAMs_20	IAMs_20	08 10 07.4	
	comp=Z,3µm,19.0s						
X51A	Calhoun	101.29	38	IAMs_20	IAMs_20	08 08 23.4	
	comp=Z,3µm,19.0s						
U54A	Nelsons Funny	101.30	35	IAMs_20	IAMs_20	08 05 41.3	
	comp=Z,3µm,19.0s						
PSUB	Penn St. - Bra	101.36	28	IAMs_20	IAMs_20	08 02 40.1	
	comp=Z,4µm,19.0s						
W52A	Murphy	101.37	37	IAMs_20	IAMs_20	08 03 37.3	
	comp=Z,4µm,18.0s						
L64A	Middleborough	101.38	24	IAMs_20	IAMs_20	08 09 11.2	
	comp=Z,4µm,19.0s						
P60A	Greenville	101.38	29	IAMs_20	IAMs_20	08 02 32.8	
	comp=Z,4µm,19.0s						
M63A	Gales Ferry	101.41	25	IAMs_20	IAMs_20	08 09 03.2	
	comp=Z,3µm,18.0s						
BLA	Blacksburg	101.42	33	IAMs_20	IAMs_20	08 05 51.2	
	comp=Z,3µm,19.0s						
V53A	Saluda	101.49	36	IAMs_20	IAMs_20	08 06 02.2	
	comp=Z,3µm,19.0s						
M64A	Tiverton	101.58	25	IAMs_20	IAMs_20	08 09 00.8	
	comp=Z,4µm,18.0s						
S57A	Dark Hollow, R	101.65	32	IAMs_20	IAMs_20	08 02 13.3	
	comp=Z,4µm,20.0s						
M65A	Busby, Falmout	101.78	24	IAMs_20	IAMs_20	08 09 24.9	
	comp=Z,3µm,18.0s						
CBN	Corbin Frederi	101.99	31	IAMs_20	IAMs_20	08 04 11.1	
	comp=Z,3µm,18.0s						
Z51A	Franklin	102.08	39	IAMs_20	IAMs_20	08 02 57.3	
	comp=Z,4µm,20.0s						
V55A	Taylorsville	102.13	35	IAMs_20	IAMs_20	08 02 51.2	
	comp=Z,3µm,20.0s						
U56A	King	102.14	34	IAMs_20	IAMs_20	08 09 27.2	
	comp=Z,4µm,19.0s						
T57A	Hurt	102.14	33	IAMs_20	IAMs_20	08 03 05.2	
	comp=Z,5µm,19.0s						
S58A	Poland Farm, P	102.18	31	IAMs_20	IAMs_20	08 05 50.2	
	comp=Z,3µm,19.0s						
Y52A	Lilburn	102.25	38	IAMs_20	IAMs_20	08 03 57.7	
	comp=Z,5µm,20.0s						
250A	Grady	102.50	40	IAMs_20	IAMs_20	08 01 57.6	
	comp=Z,3µm,20.0s						
KMSC	Kings Mountain	102.64	35	IAMs_20	IAMs_20	08 04 53.7	
	comp=Z,4µm,19.0s						
BRAL	Brewton	102.67	41	IAMs_20	IAMs_20	08 07 43.1	
	comp=Z,3µm,19.0s						
ES18	SONSECA Array	102.78	334	IAMs_20	IAMs_20	08 06 50.0	
	comp=Z,4µm,20.0s						
ES17	SONSECA Array	102.79	334	IAMs_20	IAMs_20	08 06 49.5	
	comp=Z,5µm,19.0s						
ESBB	Sonseca Array	102.81	334	IAMs_20	IAMs_20	08 04 55.0	
	comp=Z,4µm,21.0s						
ESDC	Sonseca Array	102.81	334	P	**Pdif**	**07 14 58.7**	**+0.2**
	comp=Z,0.7nm,0.8s,baz=18,slow=4.5,SNR=2.1						
ESDC				PP	PP	07 19 00.7	-11
	comp=Z,1.5nm,0.8s,baz=35,slow=6.6,SNR=4.7						
152A	Waverly Hall	102.82	39	IAMs_20	IAMs_20	08 08 19.0	
	comp=Z,4µm,18.0s						
ES14	SONSECA Array	102.84	334	IAMs_20	IAMs_20	08 04 56.8	
	comp=Z,5µm,20.0s						
T59A	Double "B" Far	102.93	31	IAMs_20	IAMs_20	08 07 15.1	
	comp=Z,3µm,19.0s						
PAB	San Pablo	103.07	334	IAMs_20	IAMs_20	08 07 56.9	
	comp=Z,5µm,19.0s						
KMBO	Kilima Mbogo	103.09	277	Pdiff	**Pdif**	**07 15 00.3**	**-0.1**
	comp=Z,1.2nm,0.4s,baz=40,slow=10,SNR=3.1						
V58A	Windy Hill, Pi	103.18	33	IAMs_20	IAMs_20	08 06 11.9	
	comp=Z,3µm,19.0s						
W57A	Gilead	103.28	34	IAMs_20	IAMs_20	08 09 54.7	
	comp=Z,4µm,18.0s						
154A	Montrose	103.73	38	IAMs_20	IAMs_20	08 06 28.8	
	comp=Z,4µm,18.0s						
451A	Vernon	103.82	41	IAMs_20	IAMs_20	08 03 37.6	
	comp=Z,4µm,21.0s						
U61A	Possum Corner	103.96	31	IAMs_20	IAMs_20	08 08 55.2	
	comp=Z,3µm,19.0s						
Y57A	Sumter	104.00	35	IAMs_20	IAMs_20	08 06 53.8	
	comp=Z,5µm,20.0s						
Z56A	Williston	104.07	36	IAMs_20	IAMs_20	08 05 47.6	
	comp=Z,4µm,18.0s						
X58A	Rowland	104.08	34	IAMs_20	IAMs_20	08 03 53.4	
	comp=Z,4µm,20.0s						
CNNC	Cliffs of the	104.21	33	IAMs_20	IAMs_20	08 04 18.0	
	comp=Z,4µm,20.0s						
V61A	Roper	104.35	31	IAMs_20	IAMs_20	08 08 31.6	
	comp=Z,3µm,19.0s						
Y58A	Scranton	104.45	35	IAMs_20	IAMs_20	08 06 17.6	
	comp=Z,4µm,19.0s						
255A	Hazlehurst	104.59	38	IAMs_20	IAMs_20	08 04 12.8	
	comp=Z,5µm,20.0s						
Y59A	Loris	104.77	34	IAMs_20	IAMs_20	08 04 13.9	
	comp=Z,4µm,19.0s						
NHSC	New Hope	104.84	36	IAMs_20	IAMs_20	08 11 51.0	
	comp=Z,4µm,18.0s						
PESTR	Estremoz	104.85	336	IAMs_20	IAMs_20	08 02 48.9	
	comp=Z,3µm,19.0s						
553A	Crawfordville	104.88	40	IAMs_20	IAMs_20	08 03 10.6	
	comp=Z,3µm,20.0s						
Y60A	Bolivia	105.07	34	IAMs_20	IAMs_20	08 09 42.9	
	comp=Z,3µm,19.0s						
257A	Skidaway Islan	105.31	37	IAMs_20	IAMs_20	08 05 22.7	
	comp=Z,3µm,20.0s						
456A	Hilliard	105.78	38	IAMs_20	IAMs_20	08 09 15.1	
	comp=Z,3µm,19.0s						
SFS	San Fernando	106.47	334	IAMs_20	IAMs_20	08 09 14.9	
	comp=Z,4µm,18.0s						
656A	Willston	106.56	40	IAMs_20	IAMs_20	08 04 06.9	
	comp=Z,3µm,20.0s						
MBAR	Mbarara	108.34	281	IAMs_20	IAMs_20	08 07 53.4	
	comp=Z,3µm,20.0s						
TEIG	Tepich	109.89	50	IAMs_20	IAMs_20	08 08 49.2	
	comp=Z,3µm,20.0s						
061Z	Ochoppi	110.19	41	IAMs_20	IAMs_20	08 05 36.2	
	comp=Z,4µm,20.0s						
ESQI	Esquipulas	113.11	55	IAMs_20	IAMs_20	08 06 10.5	
	comp=Z,2µm,19.0s						
MTO3	Montecristo	113.21	55	IAMs_20	IAMs_20	08 06 14.0	
	comp=Z,3µm,20.0s						
SNET	Serv Nac Est T	113.79	56	IAMs_20	IAMs_20	08 07 56.4	
	comp=Z,3µm,20.0s						
MATN	Matagalpa	116.63	54	IAMs_20	IAMs_20	08 15 01.4	
	comp=Z,4µm,18.0s						
ACON	Acoyapa	117.82	54	IAMs_20	IAMs_20	08 07 37.1	
	comp=Z,3µm,22.0s						
LSZ	Lusaka	117.84	268	IAMs_20	IAMs_20	08 07 43.9	
	comp=Z,3µm,20.0s						
MTDJ	Mount Denham	118.09	43	IAMs_20	IAMs_20	08 16 09.0	
	comp=Z,2µm,20.0s						
GTBY	Guantanamo Bay	118.12	40	IAMs_20	IAMs_20	08 14 36.5	
	comp=Z,3µm,19.0s						
ESPN	Las Esperanzas	118.27	53	IAMs_20	IAMs_20	08 09 31.8	
	comp=Z,2µm,20.0s						
RPN	Rapa Nui	118.64	106	IAMs_20	IAMs_20	08 04 53.6	
	comp=Z,3µm,18.0s						
GRTK	Grand Turk	118.90	35	IAMs_20	IAMs_20	08 18 37.4	
	comp=Z,3µm,20.0s						
JTS	Las Juntas de	119.15	55	IAMs_20	IAMs_20	08 14 44.3	
	comp=Z,3µm,19.0s						
HDC	Heredia	119.94	55	IAMs_20	IAMs_20	08 17 36.3	
	comp=Z,3µm,19.0s						
QSPA	South Pole Qui	120.80	180		**PKiKP**	**07 19 53.6**	**+1.6**
QSPA	South Pole Qui	120.80	180	IAMs_20	IAMs_20	08 08 06.9	
	comp=Z,4µm,22.0s						
TORD	Torodi Ar. Bea	121.74	313	PKP	**PKPdf**	**07 19 55.1**	**-0.2**
	comp=Z,2.1nm,0.5s,baz=7.4,slow=1.9,SNR=12						
TORD				PP	PP	07 21 15.7	-12
	comp=Z,3.6nm,0.8s,baz=39,slow=5.9,SNR=5.7						
TORD				PKKPab	**PKKPab**	**07 29 56.1**	**-0.2**
	comp=Z,1.5nm,0.7s,baz=230,slow=3.3,SNR=4.3						
SYO	Syowa Base	122.98	205⥣	*e*pPdiff	pPdif	07 16 32.4	+0.2
KOWA	Kowa	124.09	319	PKPdf	**PKiKP**	**07 20 01.1**	**+1.1**
KOWA				IAMs_20	IAMs_20	08 22 15.0	
	comp=Z,3µm,18.0s						
BOSA	Boshof	125.62	255	PKP	**PKPdf**	**07 20 02.5**	**+0.1**
	comp=Z,4.0nm,1.1s,baz=31,slow=12,SNR=2.5						
SABA	Saba	125.93	30	IAMs_20	IAMs_20	08 17 37.2	
	comp=Z,3µm,20.0s						
SEUS	St. Eustatius	126.16	30	IAMs_20	IAMs_20	08 15 46.1	
	comp=Z,2µm,20.0s						
SMLC	San Martn de	127.51	47	*e*P	**Pdif**	**07 16 47.7**	**-1.0**
OCAC	Ocana	128.42	47	*e*P	**Pdif**	**07 16 42.9**	**-10**
TSUM	Tsumeb	128.65	269	IAMs_20	IAMs_20	08 15 01.4	
	comp=Z,3µm,20.0s						
FDF	Fort de France	129.40	29	IAMs_20	IAMs_20	08 18 10.9	
	comp=Z,3µm,20.0s						
PAMC	Pamplona, Colo	129.50	47	*e*P	**Pdif**	**07 16 45.9**	**-12**
SDV	Santo Domingo	129.54	44	PKPdf	**PKiKP**	**07 20 11.5**	**+0.3**
SDV	Santo Domingo	129.54	44	IAMs_20	IAMs_20	08 25 31.4	
	comp=Z,2µm,19.0s						
SDV	Santo Domingo	129.54	44	*e*P	**PKiKP**	**07 20 11.2**	**0.0**
ROSC	El Rosal	130.34	51	PKP	**PKPdf**	**07 20 12.0**	**-0.3**
	comp=Z,8.4nm,0.8s,baz=265,slow=5.4,SNR=5.6						
MBO	M'Bour	130.45	333	IAMs_20	IAMs_20	08 17 59.1	
	comp=Z,2µm,19.0s						
OTAV	Otavalo	130.72	59	PKIKP	**PKiKP**	**07 20 15.1**	**+1.2**
OTAV				MLR	MLR		
	comp=Z,2µm,19.0s						
OTAV	Otavalo	130.72	59	PKPdf	**PKiKP**	**07 20 15.1**	**+1.2**
OTAV	Otavalo	130.72	59	*e*P	**PKiKP**	**07 20 14.7**	**+0.7**
DBIC	Dimbokro	130.81	314	PKP	**PKPdf**	**07 20 12.8**	**+0.2**
	comp=Z,4.8nm,0.7s,baz=11,slow=4.7,SNR=7.5						
DBIC				PP	**PP**	**07 22 25.2**	**-2.4**
	comp=Z,4.6nm,0.9s,baz=7.4,slow=7.5,SNR=3.1						
TIC	Toumodi	130.93	314	*e*PKP1	**PKiKP**	**07 20 14.1**	**+0.3**
KIC	Kosan Boka	130.98	314	*e*PKP1	**PKiKP**	**07 20 15.3**	**+1.4**
	comp=Z,19nm,1.0s						
LIC	Lamto	131.26	314	*e*PKP1	**PKiKP**	**07 20 15.0**	**+0.6**
	comp=Z,26nm,0.9s						
GRGR	Grenville	131.49	31	IAMs_20	IAMs_20	08 22 24.7	
	comp=Z,2µm,20.0s						
NVL	N'lazarevskaya	131.84	200	*e*PKIKP	**PKiKP**	**07 20 16.8**	**+3.0**
SACV	Santiago Islan	132.17	341	IAMs_20	IAMs_20	08 22 01.0	
	comp=Z,2µm,21.0s						
SNAA	Sanae	135.10	195	P	**PKiKP**	**07 20 22.0**	**+1.5**
SNAA	Sanae	135.10	195	IAMs_20	IAMs_20	08 20 08.9	
	comp=Z,2µm,20.0s						
VNA2	Neumayer--Watz	136.65	194	P	**PKiKP**	**07 20 24.4**	**+0.8**
VNA3	Neumayer Olymp	136.85	193	P	**PKiKP**	**07 20 24.8**	**+0.7**
CZSB	Cruzeiro do Su	140.27	62	*e*P	**PKiKP**	**07 20 31.8**	**-1.0**
PMSA	Palmer Station	142.60	162	*e*P	**PKiKP**	**07 20 35.0**	**-0.9**
PTGA	Pitinga	143.44	39	PKPdf	**PKPdf**	**07 20 34.6**	**-1.3**
PTGA	Pitinga	143.44	39	*e*P	**PKiKP**	**07 20 37.7**	**-1.6**
MACA	Manacapuru-AM	145.05	42	*e*P	**PKPdf**	**07 20 39.1**	**+0.4**
ETMB	Extrema	146.44	57	*e*P	**PKPbc**	**07 20 42.5**	**+0.2**
MCPB	Macapa, AP	146.75	26	*e*P	**PKPbc**	**07 20 43.0**	**-0.4**
MALB	Monte Alegre	147.20	31	*e*P	**PKPbc**	**07 20 44.6**	**0.0**
GO09	Cerro Castillo	147.69	139		**PKPab**	**07 20 47.2**	**0.0**
SAML	Samuel	147.95	52	PKIKP	**PKPbc**	**07 20 45.1**	**-1.5**
SAML	Samuel	147.95	52		**PKPbc**	**07 20 45.1**	**-1.5**
SAML	Samuel	147.95	52	IAMs_20	IAMs_20	08 29 53.0	
	comp=Z,2µm,19.0s						
SAML	Samuel	147.95	52	*e*P	**PKPbc**	**07 20 45.2**	**-1.5**
AP01	Chacalluta	148.26	74	IAMs_20	IAMs_20	08 22 48.1	
	comp=Z,2µm,19.0s						
ITTB	Itaituba	148.72	35	*e*P	**PKPdf**	**07 20 46.6**	**+1.7**
LPAZ	La Paz	148.98	69	PKPbc	**PKPbc**	**07 20 48.7**	**-1.3**
	comp=Z,20nm,0.8s,baz=336,slow=2.1,SNR=15						
PSGCX	Pisagua	149.03	76	IAMs_20	IAMs_20	08 18 02.6	
	comp=Z,2µm,20.0s						
MNMC	Minye Minye	149.25	75	IAMs_20	IAMs_20	08 19 45.3	
	comp=Z,3µm,20.0s						
TMAB	Tom-Au,PA,Br	149.97	20	*e*P	**PKPdf**	**07 20 48.0**	**+1.2**
PB14	IPOC Station P	150.83	85	IAMs_20	IAMs_20	08 18 28.8	
	comp=Z,1µm,20.0s						
NPGB	Novo Progresso	151.20	38	*e*P	**PKPdf**	**07 20 50.5**	**+1.7**
LVC	Limon Verde	151.36	80		**PKiKP**	**07 20 57.2**	**+1.5**
LVC	Limon Verde	151.36	80	*e*P	**PKPdf**	**07 20 51.5**	**+2.3**
ROSB	Rosrio	151.44	13	*e*P	**PKPdf**	**07 20 50.3**	**+1.1**
LCO	Las Campanas	151.79	94	PKIKP	**PKiKP**	**07 20 57.6**	**+1.3**
LCO	Las Campanas	151.79	94		**PKiKP**	**07 20 57.6**	**+1.3**
PLCA	Paso Flores	152.15	119	PKPbc	**PKiKP**	**07 20 57.4**	**+0.9**
	comp=Z,12nm,0.8s,baz=247,slow=1.7,SNR=27						
VILB	Vilhena	152.85	53	*e*P	**PKPdf**	**07 20 52.9**	**+1.7**
PRPB	Parauapebas	152.94	26	*e*P	**PKPdf**	**07 20 53.1**	**+1.7**
NBPS	Pedro II - PI	153.31	7	*e*P	**PKPdf**	**07 20 53.8**	**+1.7**
CLDB	Colider	154.10	43	*e*P	**PKPdf**	**07 20 55.2**	**+2.2**
NBPA	Parau_RN	154.82	358	*e*P	**PKPdf**	**07 20 55.4**	**+1.3**
RCBR	Riachuelo	154.83	355	IAMs_20	IAMs_20	08 43 15.1	
	comp=Z,2µm,20.0s						
RCBR	Riachuelo	154.83	355	*e*P	**PKPdf**	**07 20 55.8**	**+1.7**
NBPV	Pedro Velho	155.36	353	*e*P	**PKPdf**	**07 20 56.4**	**+1.6**
SMTB	Santa Maria do	156.24	24	*e*P	**PKPdf**	**07 20 57.6**	**+1.7**
NBLI	Livramento-PB	156.42	357	*e*P	**PKPdf**	**07 20 58.4**	**+2.2**
SNDB	Serra Nova Dou	157.46	36	*e*P	**PKPdf**	**07 20 59.5**	**+2.0**
NBRF	Rio Formoso -	157.57	352	*e*P	**PKPdf**	**07 20 59.2**	**+1.6**
PEXB	Peixe	158.94	29	*e*P	**PKPdf**	**07 21 01.1**	**+1.8**
PP1B	Ponte de Pedra	159.75	53	*e*P	**PKPdf**	**07 21 02.1**	**+2.0**
ARAG	Araguaiana, MT	160.27	42	*e*P	**PKPdf**	**07 21 01.9**	**+1.2**
SDBA	SAO DESIDERIO	160.43	20	*e*P	**PKPdf**	**07 21 02.3**	**+1.3**
AQDB	Aquidauana	161.03	60	*e*P	**PKPdf**	**07 21 03.3**	**+1.9**
BDFB	Brasilia	162.21	33	PKP	**PKPdf**	**07 21 04.3**	**+1.4**
	comp=Z,2.8nm,1.0s,baz=94,slow=2.2,SNR=4.0						
CPUP	Villa Florida	162.53	79	PKP	**PKPdf**	**07 21 04.0**	**+1.2**
	comp=Z,3.2nm,0.8s,baz=331,slow=4.5,SNR=6.2						
GDU01	Guandu, BA	162.71	5	*e*P	**PKPdf**	**07 21 05.4**	**+2.0**
JANB	Januaria	163.12	21	*e*P	**PKPdf**	**07 21 05.6**	**+1.8**
ITQB	Itaqui	163.98	90	*e*P	**PKPdf**	**07 21 06.0**	**+1.9**
IPMB	Ipameri, GO	164.11	37	*e*P	**PKPdf**	**07 21 06.4**	**+1.7**
ITRB	Iturama	164.22	47	*e*P	**PKPdf**	**07 21 07.2**	**+2.5**
TRCB	Terra Rica	164.69	61	*e*P	**PKPdf**	**07 21 06.8**	**+1.8**
PCMB	Pacaembu	164.96	54	*e*P	**PKPdf**	**07 21 07.4**	**+2.2**
PTGB	Pitanga	166.17	66	*e*P	**PKPdf**	**07 21 09.2**	**+3.0**
DIAM	Diamantina, MG	166.35	23	*e*P	**PKPdf**	**07 21 08.2**	**+1.6**
BB19B	Bebedouro	166.38	46	*e*P	**PKPdf**	**07 21 08.4**	**+2.0**
NAN01	Guarapari, ES	166.74	8	*e*P	**PKPdf**	**07 21 08.8**	**+2.1**
PLTB	Pedras Altas	166.77	97	*e*P	**PKPdf**	**07 21 07.8**	**+1.4**
CPSB	Cacapava Do Su	166.82	91	*e*P	**PKPdf**	**07 21 08.6**	**+2.1**
FRTB	Fartura	167.27	56	*e*P	**PKPdf**	**07 21 09.0**	**+2.0**
SJMB	Sao Joao De Ma	167.41	13	*e*P	**PKPdf**	**07 21 09.4**	**+2.2**

MAN 25 07:01:27.9, 9°.80N×126°.18E, h26^{km}, mb3.8, ML2.6, MS2.1, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLSP	General Luna,	0.06	258	*e*P	Pb	07 01 32.8	+0.4
GLSP				*e*S	Sb	07 01 37.3	+1.8
MSLP	Maasin	1.35	285	*e*P	Pn	07 01 50.6	-0.4
MSLP				*e*S	Sb	07 02 08.9	-0.4

*SNET **25** 07:05:18.0±0.7, 13°.80N×91°.00W, h43^{km}±48^{km}, ML3.0*
*GCG **25** 07:05:19.6±0.4, 13°.75N×90°.90W, h33^{km}±3^{km}, MD3.3*

ISC 25 07:05:18.4±3.5, 13°.7N±0°.1×90°.9W±0°.1, h23^{km}±17^{km}, n9, σ0^{s}.71/15, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FUG	Fuego 3	0.79	6	*e*P	**Pb**	**07 05 33.5**	**-0.1**
FUG				*e*S	**Sn**	**07 05 46.8**	**+1.3**
PCG	Pacaya	0.79	23	*e*P	**Pb**	**07 05 34.0**	**+0.3**
PCG				*e*S	**Sn**	**07 05 45.0**	**-0.7**
NBG	Las Nubes	1.08	31	*e*P	**Pn**	**07 05 38.0**	**-0.5**
NBG				*e*S	**Sb**	**07 05 52.5**	**+0.1**
RTR	El Retiro	1.27	79	*e*P	**Pn**	**07 05 40.7**	**-0.1**
CEVE	Cerro Verde	1.27	82	*e*P	**Pn**	**07 05 41.1**	**0.0**
SBLS	San Blas	1.28	82	*e*P	**Pn**	**07 05 41.1**	**0.0**
SBLS				*e*S	**Sb**	**07 05 58.9**	**+0.8**
SNJE	San Jose	1.30	81	*e*P	**Pn**	**07 05 41.3**	**-0.1**
JAYA	Jayaque - finc	1.43	90	*e*P	**Pn**	**07 05 42.8**	**-0.4**
JAYA				*e*S	**Sn**	**07 06 02.0**	**+0.6**
JAYA				IAML		07 06 03.4	
	comp=Z,195nm,0.2s						
TACO	Tacachico	1.56	78	*e*P	**Pn**	**07 05 43.7**	**-1.0**
TACO				*e*S	**Sb**	**07 06 05.0**	**-0.9**

JMA ***25*** *07:15:32.3±0.3, 44°.99N×145°.12E, h0km, M2.8*
SKHL ***25*** *07:15:33.8±0.2, 45°.00N×146°.00E, h51km±4km, mb3.8/2*
ISC 25 07:15:29.3±2.4, **45°.2N**±0°.1×**145°.69E**±0°.10, **h35km, n9, σ1s.52**/12, **Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YUK	Yuzh-Kuril'sk	1.21	174	*e*P	Pn	07 15 50.6	+0.9
YUK				AMB	AMB	07 15 51.0	
	48nm,0.2s						
YUK				*i* S	Sn	07 16 03.3	-1.5
YUK				A	A	07 16 04.0	
	380nm,0.2s						
YUK				A	A	07 16 04.0	
	270nm,0.2s						
GRPR	Tuman	1.25	177	*e*S	Sn	07 16 03.4	-2.4
JRA	Rausu	1.36	198	P	Pn	07 15 52.9	+1.1
KUR	Kuril'sk	1.54	89	*e*P	Pn	07 15 55.0	+0.8
KUR				AMB	AMB	07 15 55.3	
	22nm,0.3s						
KUR				*e*S	Sn	07 16 11.6	-1.3
KUR				A	A	07 16 15.7	
	200nm,0.3s						
KUR				A	A	07 16 15.7	
	200nm,0.3s						
JNSB	Nemuroshibetsu	1.54	199	P	Pn	07 15 56.3	+2.0
JNSB				*e*S	Sn	07 16 12.8	-0.3
JNK	Nakash	1.79	203	*e*S	Sn	07 16 18.2	-1.1
JTKR	Abashiri--Toko	1.80	226	P	Pn	07 15 57.5	-0.3
NMR	Nemuro--Hokkai	1.87	179	*e*P	Pn	07 16 00.0	+1.2
NEM2	Nemuro 2	1.87	179	P	Pn	07 16 00.2	+1.4
NEM2				*e*S	Sn	07 16 20.5	-0.7

NNC 25 07:19:25.0±4.7, **53°.91N×90°.65E, h2km**±22km, **mb3.6, mpv3.3, 10C-4D, Error ellipse: s-maj=39.9km s-min=28.2km az=25.0, Suspected Mining explosion., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	3.45	273	⇓Pg	Pb	07 20 26.5	-0.2
	1.1nm,0.7s						
ZAA0				⇑Lg	Lg	07 21 17.0	
	3.4nm,0.7s						
KURK	Kurchatov	8.04	251	⇑Pn	Pn	07 21 23.7	+1.0
	1.9nm,1.0s						
KURK				⇑Sn	Sn	07 22 57.2	+3.1
	1.8nm,0.7s						
KURK				⇑Lg	Lg	07 23 40.8	
	14nm,1.3s						
KURBB	Kurchatov Arra	8.13	251	⇑Pn	Pn	07 21 22.9	-1.1
	1.7nm,0.4s						
KURBB				⇑Sn	Sn	07 22 54.9	-1.5
	9.8nm,0.7s						
KURBB				⇓Lg	Lg	07 23 45.6	
	15nm,0.8s						
MK31	Makanchi Array	8.90	220	⇓Pn	Pn	07 21 36.5	+1.9
	0.7nm,0.8s,baz=30,slow=14,SNR=12						
MK31				⇑Sn	Sn	07 23 13.3	-2.0
	1.6nm,0.8s						
MK31				⇑Lg	Lg	07 24 05.9	
	6.1nm,1.0s,baz=36,slow=30,SNR=4.1						
MAKZ	Makanchi	9.01	221	⇓Pn	Pn	07 21 36.8	+0.8
	5.9nm,1.2s						
MAKZ				⇑Sn	Sn	07 23 21.5	+3.5
	1.1nm,0.6s						
MAKZ				⇑Lg	Lg	07 24 11.5	
	8.0nm,1.4s						

NORS ***25*** *07:32:06.2±0.0, 42°.45N×41°.18E, h15km, MPVA2.9*
MOS ***25*** *07:32:06.7±0.0, 42°.49N×41°.09E, h10km, ML2.2/5, MPVA3.3*
DDA ***25*** *07:32:08.0, 42°.26N×41°.18E, h20km±4km, ML1.8*
ISC 25 07:32:03.9±1.2, **42°.36N**±0°.02×**41°.04E**±0°.03, **h0km**±11km, **n20, σ1s.01**/40, **Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHVG	Ch'k'valeri	0.85	65	P	Pb	07 32 21.9	+0.2
CHVG				S	Sn	07 32 39.3	+2.9
BATM	Batumi	0.90	147	P	Pn	07 32 24.4	+0.6
BATM				S	Sn	07 32 37.7	+0.3
BATM	Batumi	0.90	147	*i* P	Pn	07 32 24.0	+0.2
BATM				*i* S	Sn	07 32 37.9	+0.5
DBOC	Borcka	1.11	155	*i* P	Pg	07 32 23.4	-1.9
DBOC				*i* S	Sn	07 32 42.0	-0.8
DBOC				IAML		07 32 43.0	
	comp=E,44nm,0.5s						
ARXR	Arkhyz	1.22	8	*e*Pg	Pn	07 32 28.1	-0.3
	comp=E,20nm,0.3s						
ARXR				*i* Sg	Sg	07 32 43.0	-0.1
	comp=E,185nm,0.3s						
VSLR	Vesyoloye	1.33	327	*i* Pg	Pb	07 32 30.2	+0.5
VSLR				*i* Sg	Sn	07 32 48.0	0.0
DBAD	Bademkaya	1.43	160	*i* P	Pb	07 32 31.7	+0.3
DBAD				*i* S	Sn	07 32 50.1	-0.5
DBAD				IAML		07 32 55.0	
	comp=N,18nm,0.6s						
DBAD				IAML		07 32 57.0	
	comp=E,13nm,0.4s						
ABS	Abastumani	1.45	114	P	Pb	07 32 33.0	+1.1
ABS				S	Sn	07 32 53.2	+1.8
RPOR	Krasnaya Polya	1.46	337	*e*Pg	Pg	07 32 32.4	+0.5
	comp=E,9.5nm,0.1s						
RPOR				*i* Sg	Sn	07 32 50.9	-0.4
	comp=E,22nm,0.3s						
EPOS	Posof	1.52	123	*i* P	Pn	07 32 29.7	-2.8
EPOS				*i* S	Sg	07 32 53.3	+0.4
EPOS				IAML		07 32 55.0	
	comp=E,11nm,0.3s						
EPOS				IAML		07 32 59.0	
	comp=N,30nm,1.3s						
NEY	Neytrino	1.53	54	*i* Pg	Pg	07 32 33.3	+0.1
	comp=N,39nm,0.6s						
NEY				*i* Sg	Sn	07 32 52.4	-0.9
	comp=N,20nm,0.7s						
SOC	Sochi	1.56	322	*e*Pg	Pg	07 32 34.1	+0.2
SOC				*i* Sg	Sg	07 32 53.7	-0.4
	comp=N,72nm,0.3s						
GUZR	Guzeripl'	1.77	338	*i* Pg	Pg	07 32 37.4	-0.5
	comp=N,12nm,0.5s						
GUZR				*e*Sg	Sb	07 32 60.0	-0.1
ONI	Oni	1.80	82	P	Pg	07 32 38.1	-0.4
ONI				S	Sg	07 33 01.6	-0.2
ONI	Oni	1.80	82	*i* Pg	Pg	07 32 38.1	-0.4
ONI				*i* Sg	Sg	07 33 02.1	+0.2
SHA1	Shidzhatmaz	1.82	40	*i* Pg	Pg	07 32 38.7	-0.2
	comp=N,1.6nm,0.2s						
SHA1				*i* Sg	Sb	07 33 01.3	-0.4
	comp=N,18nm,0.5s						
KBZ	Khabaz	1.94	44	*i* Pg	Pg	07 32 40.4	-0.6
KBZ				*e*Sg	Sn	07 33 03.0	0.0
BKRG	Bakuriani	1.94	107	P	Pb	07 32 40.5	+0.2
BKRG				S	Sg	07 33 07.8	+1.4
KRIK	Erzurum-spir	2.02	182	*i* P	Pg	07 32 44.0	+1.3
KRIK				*i* S	Sg	07 33 08.8	0.0
BAYB	BAYBURT	2.18	196	*i* P	Pg	07 32 44.6	-1.1
BAYB				*i* S	Sg	07 33 15.3	+1.4

IDC ***25*** *07:39:00.1±1.3, 30°.85N×141°.25E, h0km, mb3.4/4, mb1 3.6/6, mb1mx3.4/49, mbtmp3.4/6, ML3.2/2, Error ellipse: s-maj=52.5km s-min=22.2km az=81.0*
ISC 25 07:39:04.8±1.0, **30°.9N**±0°.1×**141°.2E**±0°.3, **h35km, n8, σ0s.86**/8, **mb3.6**/4, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	3.83	167	Pn	Pn	07 40 01.6	+0.3
	5.4nm,0.3s,baz=277,slow=21,SNR=5.5						
JCJ				Sn	Sn	07 40 44.2	-1.0
	5.4nm,0.3s,baz=278,slow=23,SNR=2.1						
MJAR	Matsushiro Arr	6.21	337	Pn	Pn	07 40 33.2	-0.7
	0.2nm,0.3s,baz=159,slow=12,SNR=5.9						
MAT	Matsushiro	6.21	337	*e*S	Sn	07 41 24.8	-19
MAT	Matsushiro	6.21	337	P	Pn	07 40 32.9	-1.1
MKAR	Makanchi Array	47.50	307	P	P	07 47 37.2	+0.8
	0.7nm,1.0s,baz=89,slow=9.4,SNR=4.0						
WRA	Warramunga Arr	50.93	188	P	P	07 48 03.0	+0.2
	0.2nm,0.2s,baz=6.6,slow=7.8,SNR=5.6						
ASAR	Alice Springs	54.66	188	P	P	07 48 30.3	-0.1
	0.3nm,0.6s,baz=9.0,slow=6.2,SNR=4.4						
YKA	Yellowknife Ar	69.26	29	P	P	07 50 08.3	+0.4
	0.1nm,0.5s,baz=307,slow=6.3,SNR=2.1						

JMA 25 07:41:19.3±0.1, **36°.34N×140°.58E, h50km**±1km, **M1.4, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHYU	Hitachinakayam	0.01	85	P	Pn	07 41 27.0	+0.1
JHYU				S	Sn	07 41 32.5	+0.2
JHO	Hitachi	0.27	358	P	Pn	07 41 28.0	-0.2
JHO				S	Sn	07 41 34.1	-0.4
JYT	Yasato	0.33	250	P	Pn	07 41 28.7	0.0
JYT				S	Sn	07 41 35.3	-0.1
JAG	Ashikaga	0.91	276	P	Pn	07 41 36.0	+0.1
JAG				S	Sn	07 41 47.7	-0.3

IASPEI ***25*** *07:57:51.7±0.8, 47°.31N±0°.02×11°.04E±0°.02, h10km±5km, Error ellipse: s-maj=3.0km s-min=2.5km az=6.1, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*
STR ***25*** *07:57:51.8±1.0, 47°N±13°×1°1E±°, h15km, MLv2.9/5, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/alpes_taup-2.11 preliminary*
VIE ***25*** *07:57:51.8±0.2, 47°.29N×11°.03E, h6km±2km, mb1.9/9, ml3.0/12, Error ellipse: s-maj=1.3km s-min=1.1km az=179.0 3 km SW of Telfs felt 4-5 ems98 at Telfs / Tyrol*
ZUR ***25*** *07:57:52.0, 47°.31N×11°.07E, h6km±2km, MLh2.7/55, Error ellipse: s-maj=5.0km s-min=1.0km az=41.0*
LDG ***25*** *07:57:52.2±0.1, 47°.28N×11°.07E, h6km, Ml2.7/11, Error ellipse: s-maj=2.9km s-min=1.6km az=32.0*
PRU ***25*** *07:57:52.5±0.0, 47°.42N×10°.99E, h7km, Telfs*
ROM ***25*** *07:57:52.2±0.4, 47°.25N±0°.02×11°.08E±0°.01, h6km±1km, ML2.5/6, Error ellipse: s-maj=1.7km s-min=0.8km az=179.0*
BGR ***25*** *07:57:52.8±0.3, 47°.30N×11°.07E, h5km, ML2.7/16, Error ellipse: s-maj=5.6km s-min=2.2km az=178.0*
ISC 25 07:57:51.8±0.8, **47°.32N**±0°.02×**11°.04E**±0°.01, **h13km**±4km, **n108, σ1s.52**/182, **7C-12D, Austria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOTA	Moosalm	0.05	59	*i* Pg	Pg	07 57 53.9	-0.5
	248nm,0.1s,SNR=3519						
MOTA				*i* Sg	Sg	07 57 55.4	-1.0
	3µm,0.1s						
ZUGS	Zugspitze, Sch	0.10	336	*e*Pg	Pg	07 57 54.9	-0.3
SQTA	Sankt Quirin	0.15	131	*i* Pg	Pg	07 57 55.5	-0.1
	2µm,0.1s,SNR=2781						
SQTA				*e*Sg	Sg	07 57 57.3	-0.9
	708nm,0.1s						
PART	Garmisch-Parte	0.18	15	*e*Pg	Pg	07 57 55.8	-0.3
PART				*e*Sg	Sg	07 57 58.8	-0.2
RETA	Reutte	0.25	311	⇓Pg	Pg	07 57 56.9	-0.4
RETA				⇓Pg	Pg	07 57 56.9	-0.4
	0.5nm,SNR=3.6						
RETA	Reutte	0.25	311	*i* Pg	Pg	07 57 56.9	-0.4
	43nm,0.1s,SNR=193						
RETA				*i* Sg	Sg	07 58 00.8	-0.1
	130nm,0.1s						
WATA	Walderalm	0.36	87	*i* Pg	Pg	07 57 58.4	-0.8
	7.4nm,0.1s,SNR=39						
WATA				*e*Sg	Sg	07 58 04.8	+0.7
	151nm,0.2s						
FETA	Feichten	0.37	216	⇑Pg	Pg	07 57 59.1	-0.1
	0.2nm,SNR=2.7						
FETA				⇑Pg	Pg	07 57 59.1	-0.1
FETA				Sg	Sg	07 58 04.0	-0.3
FETA	Feichten	0.37	216	*i* Pg	Pg	07 57 59.1	-0.1
	34nm,0.1s,SNR=117						
FETA				*e*Sg	Sg	07 58 03.9	-0.3
	45nm,0.1s						
WTTA	Wattenberg	0.41	98	⇓Pg	Pg	07 57 59.5	-0.5
WTTA				⇓Pg	Pg	07 57 59.5	-0.5
	0.2nm,SNR=2.0						
WTTA				Sg	Sg	07 58 05.8	+0.2
WTTA	Wattenberg	0.41	98	*i* Pg	Pg	07 57 59.5	-0.5
	25nm,0.1s,SNR=72						
WTTA				*e*Sg	Sg	07 58 05.7	+0.2
	91nm,0.1s						
WTTA	Wattenberg	0.41	98	*e*Pg	Pg	07 57 59.7	-0.4
WTTA				*e*Sg	Sg	07 58 06.0	+0.5
WTTA	Wattenberg	0.41	98	P	Pg	07 57 59.6	-0.5
WTTA				S	Sg	07 58 06.0	+0.5
WTTA				AML	AML		
	comp=N,600µm,0.3s						
WTTA				AML	AML		
	comp=E,494µm,0.6s						
ROSI	Rosskopf	0.47	147	⇓P	Pg	07 58 01.0	-0.1
ROSI				S	Sg	07 58 07.1	-0.2
ROSI				AML	AML		
	comp=N,2465µm,0.3s						
ROSI				AML	AML		
	comp=E,1750µm,0.2s						
OBER	Oberstdorf	0.52	280	*e*Pg	Pg	07 58 02.1	+0.1
OBER				*e*Sg	Sb	07 58 10.9	+0.6
BE1	Monatshausen	0.60	12	*e*Pg	Pg	07 58 04.7	+1.0
BE1				*e*Sg	Sb	07 58 14.1	+1.4
ABSI	Aberstueckl	0.62	162	⇓Pg	Pg	07 58 04.0	0.0
ABSI				⇓Pg	Pg	07 58 04.0	0.0
	comp=E,0.5nm,SNR=5.0						
ABSI				Sg	Sg	07 58 12.0	-0.2
ABSI	Aberstueckl	0.62	162	⇓P	Pg	07 58 04.0	0.0
ABSI				S	Sg	07 58 11.8	-0.4
ABSI				AML	AML		
	comp=E,746µm,0.2s						
ABSI				AML	AML		
	comp=N,780µm,0.4s						
UBR	Ueberruh	0.73	300	⇓Pg	Pg	07 58 06.8	+0.8
UBR				⇓Pg	Pg	07 58 06.8	+0.8
	comp=N,0.3nm,SNR=2.4						
UBR				Sg	Sb	07 58 18.0	+1.6
UBR	Ueberruh	0.73	300	*e*Pg	Pg	07 58 06.9	+0.8
UBR				*e*Sg	Sb	07 58 17.9	+1.6
MOSI	Grossmontoni	0.78	206	⇑Pg	Pg	07 58 06.8	-0.2
	comp=N,0.5nm,SNR=3.2						
MOSI				⇑Pg	Pg	07 58 06.8	-0.2
MOSI	Grossmontoni	0.78	206	P	Pg	07 58 06.8	-0.2
MOSI				S	Sg	07 58 17.0	-0.2
MOSI				AML	AML		
	comp=N,549µm,1.0s						
MOSI				AML	AML		
	comp=N,550µm,1.0s						
MOSI				AML	AML		
	comp=E,363µm,0.7s						
BRES	Bressanone	0.78	142	P	Pg	07 58 07.1	+0.1
DAVA	Damuels	0.79	268	Pn	Pg	07 58 07.0	-0.2
	comp=E,0.3nm,SNR=2.7						
DAVA				Pn	Pg	07 58 07.0	-0.2
DAVA	Damuels	0.79	268	*e*Pg	Pg	07 58 06.8	-0.4
	comp=E,4.9nm,0.1s,SNR=22						
DAVA				Sg	Sb	07 58 19.5	+1.2
	comp=E,92nm,0.2s						
DAVA	Damuels	0.79	268	*e*Pg	Pg	07 58 07.7	+0.5
RISI	Rein	0.80	117	⇑Pg	Pg	07 58 06.8	-0.6
RISI				⇑Pg	Pg	07 58 06.8	-0.6
	comp=E,0.4nm,SNR=3.1						
RISI	Rein	0.80	117	⇓P	Pg	07 58 06.8	-0.6
RISI				S	Sg	07 58 17.7	-0.1
RISI				AML	AML		
	comp=N,662µm,0.3s						
RISI				AML	AML		
	comp=E,426µm,0.2s						
APPI	Appiano	0.85	171	P	Pg	07 58 08.2	0.0
APPI				AML	AML		
	comp=N,188µm,1.5s						
APPI				AML	AML		
	comp=E,166µm,1.3s						
FUR	Furstenfeldbru	0.86	11	*e*Pg	Pb	07 58 09.6	+1.0
BRMO	Bormio	0.96	209	Pn	Pg	07 58 09.7	-0.7
	comp=E,0.1nm,SNR=1.4						
BRMO				Pn	Pg	07 58 09.7	-0.7
BRMO	Bormio	0.96	209	P	Pg	07 58 10.0	-0.4
BRMO				AML	AML		
	comp=N,62µm,0.5s						
BRMO				AML	AML		
	comp=E,69µm,0.6s						
DAVOX	Davos/Dischmat	0.96	236	Pn	Pg	07 58 09.8	-0.6
DAVOX				Pn	Pg	07 58 09.8	-0.6
	comp=E,0.2nm,SNR=1.2						
DAVOX	Davos/Dischmat	0.96	236	P	Pg	07 58 09.9	-0.4
DAVOX				S	Sg	07 58 23.6	+0.6
DAVOX				AML	AML		
	comp=N,184µm,0.4s						
DAVOX				AML	AML		
	comp=E,190µm,0.3s						
LIENZ	Kamor/St.Gall	1.05	269	Pn	Pg	07 58 12.9	+0.7
LIENZ				Pn	Pg	07 58 12.9	+0.7
	comp=E,0.3nm,SNR=1.8						
SGT04	Schlatt-Haslen	1.15	272	Pn	Pg	07 58 14.7	+0.7
SGT04				Pn	Pg	07 58 14.7	+0.7
	comp=E,0.5nm,SNR=2.9						
ABTA	Abfaltersbach	1.16	119	*e*Pg	Pg	07 58 13.4	-0.7
	comp=E,2.2nm,0.1s,SNR=4.4						
ABTA				*e*Sg	Sg	07 58 28.3	-0.9
	comp=E,16nm,0.2s,SNR=4.7						
PLONS	Plons/SG	1.17	257	*e*Pg	Pn	07 58 16.2	+2.2
PLONS	Plons/SG	1.17	257	P	Pb	07 58 14.9	+1.0
PLONS				AML	AML		
	comp=N,302µm,0.4s						
PLONS				AML	AML		
	comp=E,309µm,0.5s						
RJOB	Jochberg	1.26	70	*e*Pn	Pn	07 58 17.3	+2.1
KW1	Garching a.d.	1.32	52	*e*Pg	Pg	07 58 18.2	+1.0
TUE	Stuetta	1.44	234	P	Pn	07 58 18.4	+0.6
WILA	Wila	1.45	275	*e*Pn	Pb	07 58 20.1	+1.3
STAL	STALIGIAL	1.56	132	P	Pb	07 58 21.2	+0.7
KBA	Koelnbreinsper	1.59	98	*e*Pn	Pb	07 58 21.7	+0.5
	comp=E,1.2nm,0.1s						
KBA				Sn	Sg	07 58 42.7	-0.3
	comp=E,20nm,0.2s						
KBA	Koelnbreinsper	1.59	98	*e*Pg	Pg	07 58 23.3	+1.0
POLC	Polcenigo	1.64	142	AML	AML		
	comp=N,352µm,0.7s						
POLC				AML	AML		
	comp=E,464µm,0.4s						
VOBA	Vobarno	1.72	193	S	Sg	07 58 47.0	-0.1
SLE	Schleitheim	1.78	285	*e*Pn	Pn	07 58 23.5	+1.1
SLE				*e*Pg	Pb	07 58 25.9	+1.5
SLE				*e*Sg	Sg	07 58 49.7	+0.5
BNALP	Bannalp	1.84	257	P	Pb	07 58 26.6	+1.2
BNALP				AML	AML		
	comp=E,152µm,0.6s						
BNALP				AML	AML		
	comp=N,150µm,0.6s						
FUSIO	Fusio	1.85	243	P	Pg	07 58 27.1	-0.2
FUSIO				AML	AML		
	comp=E,194µm,0.5s						
FUSIO				AML	AML		
	comp=N,104µm,1.4s						
ACOM	Acomizza, Ital	1.86	114	AML	AML		
	comp=E,174µm,0.4s						
ACOM				AML	AML		
	comp=N,156µm,1.2s						
MYKA	Terra Mystica	1.91	110	*i* Pg	Pg	07 58 28.0	-0.5
	comp=N,2.5nm,0.2s						
MYKA				*i* Sg	Sg	07 58 53.3	+0.1
	comp=N,12nm,0.3s						
SULZ	Cheisacher	2.00	277	*e*Sg	Sg	07 58 56.5	+0.4
BFO	Black Forest	2.09	300	*e*Pn	Pn	07 58 28.5	+2.0
WET	Wettzell	2.20	33	*e*Pn	Pn	07 58 28.7	+0.6
KIZ	Kirchzarten	2.21	288	Sg	Sg	07 59 02.7	0.0
KIZ	Kirchzarten	2.21	288	Pn	Pn	07 58 30.2	+2.0
KIZ				Pg	Pg	07 58 34.3	+0.2
MOA	Molln	2.25	75	*e*Pn	Pn	07 58 30.9	+2.2
	comp=N,0.1nm,0.1s						
MOA				*e*Sg	Sg	07 59 03.4	-0.5
	comp=N,66nm,0.4s						
MOA	Molln	2.25	75	*e*Pg	Pb	07 58 33.2	+0.9
OPP	Oppenau	2.25	303	Pn	Pn	07 58 30.1	+1.3
OPP				Pg	Pg	07 58 35.4	+0.4
OPP				Sg	Sg	07 59 04.3	+0.1
GEC2	GERESS Array S	2.35	48	*e*Pn	Pn	07 58 31.2	+1.0
KHC	Kasperske Hory	2.48	42	*e*PN	Pn	07 58 32.2	+0.2
KHC				*e*PG	Pb	07 58 37.0	+0.7
KHC				*e*SG	Sg	07 59 10.5	-1.0
	comp=N,29nm,0.7s						
OBKA	Obir	2.54	107	Pg	Pb	07 58 38.3	+1.0
	comp=N,1.1nm,0.3s						
ROTZ	Rotzenmuhle	2.57	17	*e*Pn	Pn	07 58 32.6	-0.6
CKRC	Cesky Krumlov	2.66	54	*e*PG	Pb	07 58 39.7	+0.5
CKRC				*e*SG	Sg	07 59 15.9	-1.2
WLS	Welschbruch	2.71	295	Pn	Pn	07 58 36.7	+1.5
WLS				Pg	Pg	07 58 44.1	+0.3
CDF	Champ du Feu	2.76	295	*e*P	Pn	07 58 37.2	+1.3
CDF	Champ du Feu	2.76	295	*e*Pg	Pg	07 58 44.0	-0.7
CDF				*e*Sg	Sg	07 59 19.9	-0.6
	comp=N,14nm,0.3s						
ECH	Echery	2.77	290	Pn	Pn	07 58 36.9	+1.0
ECH				Pg	Pg	07 58 44.4	-0.5
ECH				Sg	Sg	07 59 20.3	-0.4
HINF	Hinteralfeld	2.88	281	*e*P	Pn	07 58 39.3	+1.8
HINF	Hinteralfeld	2.88	281	*e*Pg	Pb	07 58 45.9	+2.8
HINF				*e*Sn	Sn	07 59 10.3	-1.7
HINF				*e*Sg	Sg	07 59 23.4	-0.9
	comp=N,21nm,0.3s						
ARSA	Arzberg	3.05	90	Sg	Sg	07 59 31.1	+1.3
	comp=N,2.7nm,0.4s						
ARSA	Arzberg	3.05	90	S	Sg	07 59 31.0	+1.2
NKC	Novy Kostel	3.06	17	*e*PN	Pn	07 58 39.5	-0.4
NKC				*e*SN	Sn	07 59 15.3	-1.1
NKC				*e*SG	Sb	07 59 26.9	+3.5
	comp=N,12nm,0.4s						
HAU	Haudompre	3.25	284	*e*P	Pn	07 58 44.3	+1.8
HAU	Haudompre	3.25	284	*e*Pg	Pg	07 58 53.1	-0.9
HAU				*e*Sn	Sn	07 59 18.9	-2.1
HAU				*e*Sg	Sg	07 59 35.1	-0.9
CONA	Conrad Observa	3.32	78	*e*Pn	Pn	07 58 45.6	+2.1
	comp=N,0.6nm,0.2s						
CONA				Sg	Sg	07 59 36.5	-1.8
	comp=N,0.1nm,0.1s						
ABH	Alteburg	3.46	319	Pn	Pn	07 58 46.9	+1.5
CABF	La Chapelle	3.47	260	*e*P	Pn	07 58 48.1	+2.5
CABF	La Chapelle	3.47	260	*e*Pg	Pg	07 58 57.0	-1.2
CABF				*e*Sg	Sg	07 59 41.9	-1.2
LPG	La Plagne	3.48	240	*e*P	Pn	07 58 49.1	+3.1
LPG				*e*Sn	Sn	07 59 24.3	-2.9
	comp=N,1.9nm,0.3s						
PRU	Pruhonice	3.54	40	*e*SG	Sg	07 59 43.1	-2.2
PAGF	Fort de Pagny	3.78	291	*e*P	Pn	07 58 52.4	+2.6
	baz=110						
PAGF	Fort de Pagny	3.78	291	*e*Pg	Pg	07 59 03.4	-0.8
	baz=111						
PAGF				*e*Sn	Sn	07 59 31.5	-2.7
PAGF				*e*Sg	Sg	07 59 52.1	-1.1
	comp=N,8.2nm,0.2s						
MBDF	Montbardon	3.95	230	*e*P	Pn	07 58 54.1	+1.9
MBDF				*e*Sn	Sn	07 59 35.7	-2.7
	comp=N,0.9nm,0.3s						
KRUC	Moravsky	3.98	62	*e*PN	Pn	07 58 53.1	+0.5
KRUC				*e*SN	Sn	07 59 38.8	-0.3
KRUC				*e*SG	Sg	07 59 57.0	-2.6
SAVF	Savonnieres en	4.18	290	*e*P	Pn	07 58 57.9	+2.6
SAVF	Savonnieres en	4.18	290	*e*Pg	Pg	07 59 09.9	-2.0
SAVF				*e*Sn	Sn	07 59 41.1	-2.9
SAVF				*e*Sg	Sg	08 00 03.6	-2.4
	comp=N,5.9nm,0.2s						
MURB	Monte Urbino	4.19	165	⇓P	Pb	07 59 01.1	-4.3
CLL	Collm	4.19	17	*e*Pn	Pn	07 58 55.0	-0.4
CLL				*e*Sg	Sg	08 00 04.0	-2.3
	comp=Z,9.0nm,0.7s						
VRAC	Vranov	4.21	60	*e*SN	Sn	07 59 45.9	+1.3
VRAC				*e*SG	Sg	08 00 03.7	-3.1
ATTE	AVT- Monte Tez	4.22	167	P	Pn	07 58 52.0	-4.0
ORIF	Oris-en-Rattie	4.32	238	*e*P	Pn	07 58 59.7	+2.4
ORIF				*e*Sn	Sn	07 59 44.1	-3.4
	comp=Z,0.8nm,0.2s						
MODS	Modra-Piesok	4.33	74	*e*SG	Sg	08 00 08.5	-2.2
UPC	Upice	4.57	44	*e*SG	Sg	08 00 15.8	-2.7
DPC	Dobruska-Polom	4.62	47	*e*PN	Pn	07 59 02.0	+0.6
DPC				*e*SN	Sn	07 59 54.6	-0.3
DPC				*e*SG	Sg	08 00 17.3	-2.8
CHVC	Chvalec	4.65	43	*e*SG	Sg	08 00 18.7	-2.2
KRLC	Kraliky	4.70	52	*e*PN	Pn	07 59 03.4	+1.0
KRLC				*e*SG	Sg	08 00 20.5	-2.0
	comp=Z,8.6nm,0.7s						
OSTC	Ostas	4.70	45	*e*SG	Sg	08 00 19.4	-3.3
FRF	La Foret Royal	4.87	221	*e*P	Pn	07 59 09.2	+4.5
MORC	Moravsky Berou	4.97	58	*e*SG	Sg	08 00 28.6	-2.6
VIVF	Saint-Julien-l	5.07	243	*e*P	Pn	07 59 09.0	+1.5
VIVF				*e*Sn	Sn	08 00 02.5	-3.5
	comp=Z,1.1nm,0.2s						

SSF	Saint Saulge	5.14	270	*e*Pn	Pn	07 59 08.3	-0.2
SSF	Saint Saulge	5.14	270	*e*Pg	Pg	07 59 27.6	-2.7
SSF				*e*Sn	Sn	08 00 04.9	-2.8
SSF				*e*Sg	Sg	08 00 33.6	-3.3
	comp=Z,2.6nm,0.3s						
AVF	Avril sur Loir	5.28	267	*e*P	Pn	07 59 11.8	+1.4
AVF				*e*Sn	Sn	08 00 07.5	-3.6
AVF				*e*Sg	Sg	08 00 38.3	-3.0
	comp=Z,1.1nm,0.3s						
LAV9	Lanuvio	5.76	168	⇑P	Pb	07 59 33.9	+1.7
CAF	Calviac	6.68	252	*e*P	Pn	07 59 31.5	+1.8

IDC ***25*** *08:00:24.2±0.5, 51.°55N×176.°86W, h0km, mb4.4/27, mb1 4.5/29, mb1mx4.3/62, mbtmp4.4/29, ML3.8/2, MS4.0/1, Ms1 4.0/1, ms1mx3.3/57, Error ellipse: s-maj=17.9km s-min=9.6km az=165.0*

AEIC ***25*** *08:00:30±2.9, 51.°43N±0.°05×176.°78W±0.°07, h40km±1km, Error ellipse: s-maj=9.4km s-min=6.6km az=333.0*

MOS ***25*** *08:00:30.9±1.1, 51.°59N×176.°90W, h60km, mb4.6/38, Error ellipse: s-maj=7.9km s-min=7.4km az=70.3*

NEIC ***25*** *08:00:32.8±2.1, 51.°6N±0.°1×176.°92W±0.°07, h63km±3km, mb4.6/188, ML4.5(AEIC), Error ellipse: s-maj=15.1km s-min=5.6km az=171.0*

ISC 25 08:00:30.8±0.9**, 51.°47N**±0.°08×**176.°82W**±0.°03**, h49**km±7km**, n504,** σ1.°**20**/503**, mb4.6**/134**, MS4.7**/4**, 16C, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ADK	Adak	0.43	11		Pn	08 00 40.3	-0.7
ADK				Sn	Sn	08 00 47.8	-0.6
ATKA	Atka Island	1.79	65	Pn	Pn	08 00 58.5	-0.6
ATKA	Atka Island	1.79	65		Sn	08 01 22.0	+1.4
KOWE	Korovin West	1.83	59		Pn	08 01 00.8	+1.1
KOFP	Korovin Flat P	1.87	63		Pn	08 01 00.7	+0.4
CERAA	Semis' Rag'd T	2.22	283		Pn	08 01 06.0	+0.9
CERB	Semis' Cerberu	2.26	283		Sn	08 01 34.8	+2.5
CESW	Semis' Southwe	2.29	282		Pn	08 01 06.7	+0.6
CEAP	Semis' Anvil P	2.31	285		Pn	08 01 07.2	+0.9
AMKA	Amchitka	2.43	269	Pn	Pn	08 01 08.1	+0.2
AMKA	Amchitka	2.43	269		Sn	08 01 37.2	+0.8
LSPA	Little Sitkin	2.91	282		Pn	08 01 15.1	+0.6
LSPA					Sn	08 01 50.6	+2.4
LSNW	Little Sitkin	2.95	282		Pn	08 01 15.7	+0.7
LSSA	Little Sitkin	2.95	281		Pn	08 01 15.8	+0.8
NIKH	Nikolski High	5.12	70	P	Pn	08 01 46.5	+1.6
	baz=254,SNR=11						
NIKH	Nikolski High	5.12	70	Pn	Pn	08 01 46.6	+1.8
NIKH	Nikolski High	5.12	70		Sn	08 02 46.1	+3.5
OKSO	Okmok South	5.63	67		Pn	08 01 53.3	+1.5
SMY	Shemya	5.74	286	P	Pn	08 01 53.0	-0.3
SMY	Shemya	5.74	286	Pn	Pn	08 01 53.0	-0.3
OKFG	Magazine Ridge	5.78	67		Pn	08 01 55.9	+2.0
MAPS	Pakushin South	6.45	65		Pn	08 02 05.3	+2.3
MGOD	Makushin Gods	6.49	65		Pn	08 02 05.7	+2.1
MREP	Makushin Rep't	6.56	65		Pn	08 02 07.0	+2.3
MSW	Makushin Switc	6.57	64		Pn	08 02 06.8	+2.0
MNAT	Makushin Natee	6.62	65		Pn	08 02 07.2	+1.8
UNV	Unalaska Valle	6.71	65	P	Pn	08 02 08.8	+2.2
	baz=252						
UNV	Unalaska Valle	6.71	65	Pn	Pn	08 02 09.3	+2.7
SPIA	Saint Paul Isl	6.89	31	P	Pn	08 02 10.9	+1.9
	baz=216						
SPIA	Saint Paul Isl	6.89	31	Pn	Pn	08 02 12.4	+3.4
ZRO	Akutan Zero	7.08	64		Pn	08 02 14.4	+2.7
AKBBA	Akutan Broad B	7.11	64		Pn	08 02 13.1	+1.0
AKUT	Akutan	7.21	64	Pn	Pn	08 02 16.5	+3.1
FALS	False Pass	8.74	62	P	Pn	08 02 36.3	+2.0
	baz=252						
FALS	False Pass	8.74	62	Pn	Pn	08 02 37.4	+3.1
SDPT	Sand Point	10.50	62	P	Pn	08 03 00.1	+1.7
	baz=254						
SDPT	Sand Point	10.50	62	Pn	Pn	08 02 58.4	0.0
CNBA	Chernabura Isl	10.88	65	Pn	Pn	08 03 03.4	-0.1
CHNA	Chernabura Isl	10.88	65	P	Pn	08 03 03.6	0.0
	baz=258						
GAMB	Gambell	12.64	10	P	Pn	08 03 27.7	+0.2
	baz=194,SNR=7.0						
GAMB	Gambell	12.64	10	Pn	Pn	08 03 30.2	+2.7
ANM	Nome	14.43	20	P	Pn	08 03 51.3	-0.5
	baz=210						
ANM	Nome	14.43	20	P	Pn	08 03 52.7	+0.9
ANM	Nome	14.43	20	Pn	Pn	08 03 52.7	+0.9
OHAK	Old Harbor	14.84	58	P	Pn	08 03 57.0	-0.2
	baz=257						
PET	Petropavlovsk	15.09	286	*i* P	P	08 04 04.0	-0.9
PET				pmax	pmax		
	comp=Z,1µm,4.5s						
SVW2	Sparrevohn	15.16	42		P	08 04 05.4	-0.3
SVW2				IAmb	IAmb	08 04 08.6	
	comp=Z,36nm,0.9s						
KDAK	Kodiak Island	15.34	56	Pn	Pn	08 04 01.4	-2.3
	comp=Z,0.8nm,0.3s,baz=236,slow=15,SNR=25						
KDAK				Sn	Sn	08 06 47.9	-4.5
	comp=Z,0.3nm,0.3s,baz=0.0,slow=20,SNR=1.6						
KDAK	Kodiak Island	15.34	56	P	Pn	08 04 02.9	-0.9
	baz=256						
KDAK	Kodiak Island	15.34	56	Pn	Pn	08 04 02.3	-1.5
KDAK				IAmb	IAmb	08 04 17.1	
	comp=Z,31nm,0.5s						
PEA0B	Petropavlovsk-	15.66	286	*i* P	Pn	08 04 09.7	+1.8
PETK	Petropavlovsk-	15.66	286	Pn	Pn	08 04 09.5	+1.6
	comp=Z,0.6nm,0.3s,baz=85,slow=16,SNR=8.7						
TTA	Tatalina	16.00	36	P	Pn	08 04 12.5	+0.2
	baz=233,SNR=10						
TTA	Tatalina	16.00	36	P	P	08 04 14.9	-0.1
TTA				pmax	pmax		
	comp=Z,17nm,0.9s						
TTA	Tatalina	16.00	36		P	08 04 14.9	-0.1
BRSE	Bradley Lake S	16.80	50	P	Pn	08 04 21.7	-0.6
	baz=252						
SKT	Skwentna	17.29	43	P	Pn	08 04 28.8	+0.5
	baz=244,SNR=10						
SKT	Skwentna	17.29	43	P	P	08 04 29.6	+0.3
SKT				IAmb	IAmb	08 04 32.4	
	comp=Z,23nm,0.8s						
SUA	Susitna One	17.41	45	P	Pn	08 04 30.1	+0.1
	baz=246						
SUA	Susitna One	17.41	45	P	P	08 04 30.7	-0.1
PPLA	Purkeypile	17.45	40	P	P	08 04 31.2	+0.1
	baz=240						
PPLA	Purkeypile	17.45	40	P	P	08 04 33.4	+2.2
PPLA				IAmb	IAmb	08 04 40.9	
	comp=Z,35nm,1.0s						
O22K	Cooper Landing	17.52	49	P	Pn	08 04 31.3	+0.1
	baz=251						
O22K	Cooper Landing	17.52	49	P	Pn	08 04 30.5	-0.7
O22K				IAmb	IAmb	08 04 54.8	
	comp=Z,46nm,0.7s						
SEW	Seward	17.53	50	P	Pn	08 04 31.1	-0.3
	baz=252						
SEW	Seward	17.53	50	Pn	Pn	08 04 30.0	-1.4
RC01	Rabbit Creek A	17.72	47	P	Pn	08 04 33.7	0.0
	baz=249						
CHUM	Lake Minchumin	17.91	37	P	P	08 04 36.0	0.0
	baz=237						
RDOG	Red Dog Mine	17.97	17	P	P	08 04 37.2	+0.5
CUT	Chulitna	18.01	42	P	Pn	08 04 37.6	+0.4
	baz=244						
KTH	Kantishna Hill	18.27	39	P	Pn	08 04 41.0	+0.6
KTH				IAmb	IAmb	08 05 04.6	
	comp=Z,61nm,1.0s						
TRF	Thorofare Moun	18.47	39	P	P	08 04 42.4	0.0
	baz=242,SNR=12						
TRF	Thorofare Moun	18.47	39	P	Pn	08 04 43.1	+0.1
TRF				IAmb	IAmb	08 05 00.4	
	comp=Z,62nm,1.4s						
BPAW	Bear Paw Mtn.	18.52	37	P	P	08 04 42.2	-0.6
	baz=239						
BPAW	Bear Paw Mtn.	18.52	37	P	P	08 04 42.2	-0.6
SML	Sawmill	18.61	45	P	P	08 04 43.4	-0.5
	baz=249						
IMAR	Indian Mountai	18.66	30	P	Pn	08 04 44.6	-0.5
WAT2	Susitna Watana	18.95	42	P	P	08 04 46.6	-0.9
	baz=245,SNR=12						
RND	Reindeer	19.02	40	P	P	08 04 48.0	-0.4
RND				pmax	pmax		
	comp=Z,28nm,0.8s						
RND	Reindeer	19.02	40	P	P	08 04 48.0	-0.4
RND				IAmb	IAmb	08 04 59.7	
	comp=Z,28nm,0.8s						
SCM	Sheep Creek Mo	19.07	46	P	Pn	08 04 49.8	-0.2
SCM				pmax	pmax		
	comp=Z,11nm,0.7s						
SCM	Sheep Creek Mo	19.07	46	P	Pn	08 04 49.8	-0.2
MLY	Manley	19.11	35	P	P	08 04 48.7	-0.5
	baz=237,SNR=17						
MCK	McKinley	19.14	39	P	P	08 04 48.3	-1.3
	baz=243,SNR=8.7						
WAT6	Susitna Watana	19.15	43	P	P	08 04 48.4	-1.5
	baz=248,SNR=6.3						
EYAK	Cordova Ski Ar	19.43	50	P	P	08 04 52.3	-0.4
	baz=256						
NEA2	Nenana	19.49	37	P	P	08 04 52.6	-0.8
	baz=240,SNR=8.8						
KLU	Klutina	19.60	47	P	P	08 04 54.3	-0.3
	baz=253						
KLU	Klutina	19.60	47	P	Pn	08 04 55.9	-0.5
I23K	Minto, Yukon-K	19.66	35	P	P	08 04 55.0	-0.2
	baz=239,SNR=21						
I23K	Minto, Yukon-K	19.66	35	P	Pn	08 04 56.1	-0.9
I23K				IAmb	IAmb	08 05 18.2	
	comp=Z,24nm,1.0s						
M24K	Tolsona, Glenn	19.67	45	P	P	08 04 54.9	-0.5
	baz=251						
M24K	Tolsona, Glenn	19.67	45	P	Pn	08 04 57.4	+0.2
M24K				IAmb	IAmb	08 05 23.5	
	comp=Z,24nm,0.8s						
WRH	Wood River Hil	19.81	38	P	P	08 04 55.9	-0.9
MA2	Magadan	19.89	307	P	Pn	08 04 59.8	+0.1
	comp=Z,0.3nm,0.3s,baz=97,slow=12,SNR=2.2						
MA2	Magadan	19.89	307	P	Pn	08 04 59.8	+0.1
MA2				pmax	pmax		
	comp=Z,17nm,1.3s						
MDM	Murphy Dome	19.98	37	P	P	08 04 58.4	-0.4
MDM				IAmb	IAmb	08 05 13.6	
	comp=Z,28nm,0.9s						
CCB	Clear Creek Bu	20.00	38	P	P	08 04 57.7	-1.2
SEY	Seymchan	20.02	317	P	P	08 04 59.3	+0.2
	comp=Z,0.1nm,0.3s,baz=108,slow=12,SNR=14						
SEY	Seymchan	20.02	317	*i* P	Pn	08 05 00.4	-0.8
BMRM	Bremner River	20.07	49	P	P	08 04 58.4	-1.5
	baz=256						
TCOL	CIGO, UAF Yank	20.08	37	P	P	08 04 59.5	-0.3
	baz=242						
TCOL	CIGO, UAF Yank	20.08	37	P	P	08 04 59.5	-0.3
TCOL				IAmb	IAmb	08 05 14.1	
	comp=Z,16nm,0.7s						
COLA	College	20.09	37	P	P	08 04 59.3	-0.5
	baz=242						
COLA	College	20.09	37	*i* P	P	08 05 00.3	+0.5
COLA				pmax	pmax		
	comp=Z,12nm,0.7s						
HDA	Harding Lake	20.22	39	P	P	08 05 00.7	-0.6
	baz=244						
HDA	Harding Lake	20.22	39	P	P	08 05 01.4	+0.1
HDA				IAmb	IAmb	08 05 23.3	
	comp=Z,18nm,0.6s						
N25K	Chitina, Valde	20.24	47	P	P	08 05 01.0	-0.7
	baz=254,SNR=8.3						
N25K	Chitina, Valde	20.24	47	P	Pn	08 05 03.4	-0.5
N25K				IAmb	IAmb	08 05 20.0	
	comp=Z,12nm,0.7s						
PAX	Paxson	20.27	43	P	P	08 05 01.2	-0.7
	baz=250,SNR=8.0						
PAX	Paxson	20.27	43	P	P	08 05 02.5	+0.6
PAX				pmax	pmax		
	comp=Z,22nm,1.0s						
PAX	Paxson	20.27	43	P	P	08 05 02.5	+0.6
PAX				IAmb	IAmb	08 05 22.2	
	comp=Z,22nm,1.0s						
POKR	Poker Plat Res	20.36	37	P	P	08 05 01.7	-1.1
	baz=242						
POKR	Poker Plat Res	20.36	37	P	Pn	08 05 04.2	-1.0
IL31		20.41	38	P	P	08 05 02.7	-0.5
ILAR	Eielson Array	20.41	38	P	P	08 05 01.8	-1.5
	comp=Z,2.6nm,0.6s,baz=233,slow=9.5,SNR=34						
ILAR				PcP	PcP	08 09 13.3	-0.5
	comp=Z,0.6nm,0.5s,baz=290,slow=3.4,SNR=8.2						
COLD	Coldfoot	20.55	30	P	P	08 05 04.3	-0.5
	baz=233,SNR=18						
COLD	Coldfoot	20.55	30	P	Pn	08 05 06.0	-1.5
COLD				IAmb	IAmb	08 05 25.0	
	comp=Z,16nm,0.9s						
GLB	Gilahina Butte	20.56	48	P	P	08 05 06.5	+1.4
VRDI	Verde Repeater	20.68	49	P	Pn	08 05 09.0	-0.3
MENT	Mentasta	21.01	44			08 05 12.6	
DOT	Dot Lake	21.10	42	P	P	08 05 10.0	-0.8
DOT				IAmb	IAmb	08 05 13.2	
	comp=Z,19nm,0.7s						
SCRK	Sand Creek	21.24	41	P	P	08 05 11.1	-1.4
	baz=249,SNR=12						
PRP	Porcupine Dome	21.25	37	P	P	08 05 11.2	-1.4
	baz=243						
PRP	Porcupine Dome	21.25	37	P	P	08 05 16.1	+3.5
TOLK	Toolik Lake Re	21.61	27	P	P	08 05 15.1	-1.2
	baz=231						
TOLK	Toolik Lake Re	21.61	27	P	P	08 05 16.5	+0.2
TOLK				IAmb	IAmb	08 05 38.2	
	comp=Z,43nm,1.4s						
CTG	Chitna Glacier	21.63	50	P	P	08 05 15.7	-0.9
	baz=260						
FYU	Fort Yukon	21.84	34	P	P	08 05 18.9	+0.2
FYU				IAmb	IAmb	08 05 41.8	
	comp=Z,14nm,0.8s						
BCAR	Beaver Creek A	21.90	45	P	P	08 05 20.8	+1.4
A21K	Barrow	21.91	17	P	P	08 05 18.6	-0.8
	baz=215						
A21K	Barrow	21.91	17	P	P	08 05 19.4	0.0
A21K					pP	08 05 30.3	-0.6
A21K				IAmb	IAmb	08 05 31.1	
	comp=Z,34nm,1.1s						
BMAR	Burnt Mountain	22.48	33	P	P	08 05 25.0	-0.6
EGAK	Eagle	22.67	40	P	P	08 05 26.3	-1.4
	baz=251,SNR=13						
EGAK	Eagle	22.67	40	P	P	08 05 26.6	-1.0
EGAK				IAmb	IAmb	08 05 48.3	
	comp=Z,15nm,0.8s						
EPYK	Eagle Plains	24.92	38	P	P	08 05 47.2	-1.7
	baz=253						
EPYK	Eagle Plains	24.92	38	P	P	08 05 47.5	-1.4
CRAG	Craig	25.99	64	P	P	08 05 57.7	-0.9
	baz=279						
CRAG	Craig	25.99	64	P	P	08 06 00.1	+1.6
CRAG				IAmb	IAmb	08 06 12.2	
	comp=Z,8.2nm,0.7s						
YSS	Yuzh-Sakhalins	26.55	276	*ce*P	P	08 06 04.6	+0.9
YSS				pmax	pmax		
	comp=Z,25nm,1.3s						
INK	Inuvik	26.68	35	P	P	08 06 03.8	-0.9
	comp=Z,1.1nm,0.4s,baz=240,slow=6.7,SNR=7.8						
INK				PcP	PcP	08 09 27.4	+0.4
	comp=Z,6.8nm,0.9s,baz=255,slow=1.4,SNR=9.2						
INK	Inuvik	26.68	35	PcP	PcP	08 09 27.3	+0.4
DIB	Dawson Inlet,	26.83	69	P	P	08 06 07.4	+1.2
DIB				IAmb	IAmb	08 06 18.9	
	comp=Z,22nm,1.1s						
DLBC	Dease Lake	27.27	57	P	P	08 06 10.3	0.0
	comp=Z,0.7nm,0.5s,baz=272,slow=8.6,SNR=1.6						
JKA	Kamikawa-asahi	27.95	271	P	P	08 06 16.3	0.0
JKA	Kamikawa-asahi	27.95	271	IAmb	IAmb	08 06 17.9	
	comp=Z,15nm,1.0s						
ASAJ	Asahikawa	27.95	271	P	P	08 06 16.3	0.0
	comp=Z,11nm,1.0s,baz=46,slow=6.5,SNR=5.1						
BBB	Bella Bella	29.66	69	P	P	08 06 33.1	+1.7
	comp=Z,12nm,0.9s,baz=334,slow=7.1,SNR=4.0						
BBB	Bella Bella	29.66	69	IAmb	IAmb	08 06 34.3	
	comp=Z,20nm,1.0s						
C36M	Paulatuk	30.25	34	P	P	08 06 35.0	-1.5
	baz=261						
C36M	Paulatuk	30.25	34	P	P	08 06 36.0	-0.4
C36M				PcP	PcP	08 09 35.4	-0.4
YAK	Yakutsk	30.29	311	*i* P	P	08 06 37.5	+0.6
YAK				pmax	pmax		
	comp=Z,6.0nm,0.4s						
TIXI	Tiksi	31.17	330	*i* P	P	08 06 44.5	-0.1
TIXI	Tiksi	31.17	330	PcP	PcP	08 09 37.5	-0.7
KLR	Kul'dur	32.35	287	P	P	08 06 54.6	-0.5
	comp=Z,3.0nm,0.7s,baz=60,slow=8.9,SNR=17						
KLR	Kul'dur	32.35	287	*ce*P	P	08 06 54.1	-1.0
KLR				pmax	pmax		
	comp=Z,8.0nm,1.0s						
H11N2	WAKE ISLAND Hy	34.16	208	T	T	08 43 36.2	
	baz=18,slow=76,SNR=5184						
H11N3	WAKE ISLAND Hy	34.17	208	T	T	08 43 36.9	
	baz=18,slow=76,SNR=5151						
H11N1	WAKE ISLAND Hy	34.18	208	T	T	08 43 37.6	
	baz=18,slow=76,SNR=5179						
YKA	Yellowknife Ar	34.27	47	P	P	08 07 10.7	-1.0
	comp=Z,1.8nm,0.7s,baz=284,slow=7.5,SNR=24						
YKA				PcP	PcP	08 09 47.7	+0.8
	comp=Z,4.8nm,0.8s,baz=289,slow=2.2,SNR=30						
YKA	Yellowknife Ar	34.27	47	*ce*P	P	08 07 11.3	-0.4
YKA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
D03D	Eldon	34.46	75	P	P	08 07 14.4	+0.9
	baz=297						
USA0B	Ussuriysk Arra	34.51	278	P	P	08 07 13.4	-0.6
USA0B				pmax	pmax		
	comp=Z,14nm,1.2s						
USA0B	Ussuriysk Arra	34.51	278	P	P	08 07 13.4	-0.6
USA0B				IAmb	IAmb	08 07 16.4	
	comp=Z,14nm,1.2s						
USRK	Ussuriysk Ar.	34.51	278	P	P	08 07 13.2	-0.8
	comp=Z,5.8nm,0.6s,baz=56,slow=9.3,SNR=20						
USRK	Ussuriysk Ar.	34.51	278	P	P	08 07 12.9	-1.1
B05A	Bryant	34.73	73	P	P	08 07 16.4	+0.6
	baz=296						
MJAR	Matsushiro Arr	35.03	263	P	P	08 07 19.0	+0.4
	comp=Z,4.1nm,0.5s,baz=51,slow=7.7,SNR=12						
MJAR	Matsushiro Arr	35.03	263	P	P	08 07 19.0	+0.4
MAJO	Matsushiro	35.03	263	P	P	08 07 19.5	+0.9
MAJO				pmax	pmax		
	comp=Z,16nm,1.0s						
MAJO	Matsushiro	35.03	263	P	P	08 07 19.5	+0.9
MAT	Matsushiro	35.03	263	P	P	08 07 19.1	+0.5
E04D	Cinebar	35.23	76	P	P	08 07 20.0	-0.2
	baz=298						
D05A	Enumclaw	35.28	75	P	P	08 07 23.0	+2.4
D05A				IAmb	IAmb	08 07 40.9	
	comp=Z,15nm,1.0s						
H11S1	WAKE ISLAND Hy	35.38	208	T	T	08 45 05.1	
	baz=17,slow=76,SNR=2669						
H11S2	WAKE ISLAND Hy	35.39	208	T	T	08 45 09.6	
	baz=17,slow=76,SNR=1168						
H11S3	WAKE ISLAND Hy	35.39	208	T	T	08 45 10.3	
	baz=17,slow=76,SNR=783						
MDJ	Mudanjiang	35.78	281	P	P	08 07 24.3	-0.6
MDJ				pP	pP	08 07 39.5	+2.1
MDJ				sP	sP	08 07 50.0	+6.9
MDJ				S	S	08 12 57.5	-1.1
MDJ				sS	ScP	08 13 27.5	-5.9
MDJ				PcS	PcS	08 13 34.8	-4.1
MDJ	Mudanjiang	35.78	281	ScS	ScS	08 17 34.3	-4.2
MDJ				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,390nm,5.6s						
MDJ				LR	LR		
	comp=N,1µm,13.2s						
MDJ				LR	LR		
	comp=E,1µm,13.2s						
MDJ				LR	LR		
	comp=Z,990nm,13.0s						
MSHR	Mys Shultsa	35.88	277	*ce*P	P	08 07 26.6	+0.8
MSHR				pmax	pmax		
	comp=Z,19nm,1.0s						
B08A	Colville Reser	36.33	72	P	P	08 07 31.4	+1.8
B08A				IAmb	IAmb	08 07 32.8	
	comp=Z,6.3nm,0.7s						
H04A	Detroit Lake	36.38	79	P	P	08 07 32.5	+2.3
H04A				IAmb	IAmb	08 07 45.0	
	comp=Z,8.1nm,0.9s						
G05D	Wamic, OR	36.63	77	P	P	08 07 33.6	+1.4
	baz=300						
I04A	Tendick Farm,	36.71	80	P	P	08 07 34.0	+1.1
	baz=302						
I05D	Terrebonne, OR	37.08	79	P	P	08 07 36.3	+0.2
	baz=301						
HAWA	Hanford	37.14	75	P	P	08 07 38.5	+2.0
HAWA				IAmb	IAmb	08 07 49.2	
	comp=Z,7.9nm,0.7s						
F07A	Phinny Hill Vi	37.15	76	P	P	08 07 39.6	+3.0
F07A				IAmb	IAmb	08 07 41.0	
	comp=Z,7.0nm,0.7s						
NEW	Newport	37.69	71	P	P	08 07 41.6	+0.5
	baz=298,SNR=16						
NEW	Newport	37.69	71	P	P	08 07 42.1	+1.0
NEW				pmax	pmax		
	comp=Z,12nm,0.9s						
NEW	Newport	37.69	71	P	P	08 07 42.1	+1.0
NEW				IAmb	IAmb	08 07 43.6	
	comp=Z,12nm,0.8s						
G08A	Pilot Rock	38.04	76	P	P	08 07 45.8	+1.5
G08A				IAmb	IAmb	08 07 50.3	
	comp=Z,6.6nm,1.4s						
K05A	Summer Lake	38.21	81	P	P	08 07 48.7	+2.8
K05A				IAmb	IAmb	08 08 03.8	
	comp=Z,10nm,1.1s						
I07A	Izee	38.34	78	P	P	08 07 48.5	+1.8
I07A				IAmb	IAmb	08 07 49.4	
	comp=Z,4.3nm,0.7s						
F10A	Beach Ranch, E	38.74	74	P	P	08 07 51.8	+1.6
F10A				IAmb	IAmb	08 08 10.4	
	comp=Z,6.3nm,0.9s						
MOD	Modoc Plateau	39.03	81	P	P	08 07 54.9	+2.2
MOD				IAmb	IAmb	08 08 11.1	
	comp=Z,3.6nm,0.8s						
WALA	Waterton Lakes	39.19	68	P	P	08 07 55.0	+1.1
WALA				IAmb	IAmb	08 07 55.7	
	comp=Z,15nm,1.1s						
BMO	Blue Mountains	39.27	76	P	P	08 07 57.7	+3.1
BMO				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BMO	Blue Mountains	39.27	76	P	P	08 07 57.6	+3.1
J08A	Circle Bar Ran	39.36	78	P	P	08 07 57.3	+2.0
J08A				IAmb	IAmb	08 08 20.7	
	comp=Z,3.7nm,0.7s						
JTMT	Jette	39.61	70	P	P	08 07 58.6	+1.2
JTMT				IAmb	IAmb	08 08 09.1	
	comp=Z,7.2nm,0.9s						
WVOR	Wild Horse Val	39.77	80	P	P	08 08 00.8	+2.1
WVOR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
WVOR	Wild Horse Val	39.77	80	P	P	08 08 00.8	+2.1
WVOR				IAmb	IAmb	08 08 29.5	
	comp=Z,6.3nm,0.8s						
MSO	Missoula	40.27	71	P	P	08 08 03.5	+0.7
	baz=300						
PAHR	Pah Rah Range	40.87	84	P	P	08 08 09.3	+1.4
PAHR				IAmb	IAmb	08 08 36.4	
	comp=Z,8.9nm,1.1s						
KSRS	Korea Array	40.88	272	P	P	08 08 08.1	+0.3
	comp=Z,4.1nm,0.9s,baz=61,slow=7.9,SNR=10						
KSRS				LR	LR	08 26 30.9	
	comp=Z,199nm,18.4s,baz=288,slow=38						
KSAR	Wonju Array Be	40.91	272	P	P	08 08 07.0	-1.1
KSAR	Wonju Array Be	40.91	272	P	P	08 08 07.0	-1.1
MFID	Camas Ranch	40.94	77	P	P	08 08 09.4	+1.0
VCNR	Virginia City	40.95	84	P	P	08 08 10.2	+1.6
PNTR	Pine Nut	41.10	84	P	P	08 08 12.3	+2.4
PNTR				IAmb	IAmb	08 08 37.7	
	comp=Z,10.0nm,0.7s						
YERR	Yerington	41.39	84	P	P	08 08 14.7	+2.4
YERR				IAmb	IAmb	08 08 40.7	
	comp=Z,5.1nm,0.9s						
WAKR	Walker	41.56	85	P	P	08 08 15.9	+2.3
HRY	Holter Researc	41.57	70	P	P	08 08 15.2	+1.6
HLID	Hailey	41.72	75	P	P	08 08 14.8	0.0
	baz=304,SNR=13						
HLID	Hailey	41.72	75	P	P	08 08 15.7	+0.8
JNU	Nakatsue	41.82	265	P	P	08 08 16.2	+0.6
	comp=Z,21nm,0.9s,baz=21,slow=9.1,SNR=8.9						
TJN	Taejon	41.90	271	*ce*P	P	08 08 15.8	-0.4
BCYI	Bear Canyon	41.92	74	P	P	08 08 17.1	+0.6
MCMT	McKenzie Canyo	41.97	73	P	P	08 08 18.0	+1.0
RYN	Ryan	42.05	84	P	P	08 08 19.6	+2.0
RYN				IAmb	IAmb	08 08 46.0	
	comp=Z,7.9nm,1.2s						
EGMT	Eagleton	42.10	67	P	P	08 08 17.5	-0.4
	baz=301,SNR=9.3						
EGMT	Eagleton	42.10	67	P	P	08 08 18.4	+0.5
EGMT				IAmb	IAmb	08 08 19.8	
	comp=Z,12nm,0.7s						
BOZ	Bozeman (W)	42.28	71	P	P	08 08 19.1	-0.3
	baz=302,SNR=19						
BOZ	Bozeman (W)	42.28	71	P	P	08 08 20.0	+0.6
BOZ				pmax	pmax		
	comp=Z,7.0nm,0.7s						
BOZ	Bozeman (W)	42.28	71	P	P	08 08 20.0	+0.6
BOZ				IAmb	IAmb	08 08 21.8	
	comp=Z,6.5nm,0.7s						
NVAR	Mina Array Bea	42.31	84	P	P	08 08 20.3	+0.5

	comp=Z,1.7nm,0.8s,baz=295,slow=8.0,SNR=14						
NVAR				PcP	PcP	08 10 13.5	+0.9
	comp=Z,1.7nm,0.8s,baz=278,slow=2.5,SNR=6.0						
NVAR	**Mina Array Bea**	42.31	84	P	P	08 08 19.7	0.0
MDPB	**Devils Postpil**	42.31	86	P	P	08 08 20.7	+0.8
QLMT	**Earthquake Lak**	42.81	72	P	P	08 08 26.0	+2.2
ELK	**Elko**	42.82	79	P	P	08 08 25.8	+1.8
ELK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ELK	**Elko**	42.82	79	P	P	08 08 25.8	+1.8
YHL	**Hebgen Lake**	42.95	72	P	P	08 08 26.2	+1.2
YHL				lAmb	lAmb	08 08 27.7	
	comp=Z,24nm,1.5s						
YHB	**Horse Butte**	43.00	72	P	P	08 08 26.6	+1.2
YHB				lAmb	lAmb	08 08 28.0	
	comp=Z,6.6nm,0.8s						
YMR	**Madison River**	43.18	72	P	P	08 08 27.3	+0.5
YMR				lAmb	lAmb	08 08 29.6	
	comp=Z,7.7nm,0.8s						
YHH	**Holmes Hill**	43.18	72	P	P	08 08 28.0	+1.1
YHH				lAmb	lAmb	08 08 29.4	
	comp=Z,6.0nm,0.6s						
TPH	**Tonopah**	43.20	84	P	P	08 08 28.8	+1.8
TPH				pmax	pmax		
	comp=Z,16nm,1.0s						
TPH	**Tonopah**	43.20	84	P	P	08 08 28.8	+1.8
TPH				lAmb	lAmb	08 08 56.8	
	comp=Z,16nm,1.0s						
YNR	**Norris Junctio**	43.32	72	P	P	08 08 29.2	+1.3
YNR				lAmb	lAmb	08 08 48.3	
	comp=Z,5.5nm,0.9s						
YNE	**Yellowstone No**	43.56	71	P	P	08 08 31.1	+1.3
H17A	**Grant Village**	43.56	72	P	P	08 08 30.3	+0.4
	baz=304,SNR=10						
H17A	**Grant Village**	43.56	72	P	P	08 08 32.5	+2.6
H17A				lAmb	lAmb	08 08 34.7	
	comp=Z,7.2nm,0.8s						
LKWY	**Lake**	43.57	72	P	P	08 08 32.4	+2.4
LKWY				pmax	pmax		
	comp=Z,7.0nm,1.0s						
LKWY	**Lake**	43.57	72	P	P	08 08 32.4	+2.4
LKWY				lAmb	lAmb	08 08 43.1	
	comp=Z,7.1nm,0.9s						
CWC	**Cottonwood Cre**	43.68	86	P	P	08 08 31.7	+0.8
	baz=309						
HVU	**Hansel Valley**	43.73	77	P	P	08 08 32.8	+1.7
HVU				pmax	pmax		
	comp=Z,5.0nm,1.0s						
HVU	**Hansel Valley**	43.73	77	P	P	08 08 32.8	+1.7
RLMT	**Red Lodge**	43.94	71	P	P	08 08 32.5	-0.3
	baz=303,SNR=20						
RLMT	**Red Lodge**	43.94	71	P	P	08 08 34.2	+1.4
RLMT				lAmb	lAmb	08 08 35.6	
	comp=Z,24nm,1.2s						
R11A	**Troy Canyon, C**	44.05	82	P	P	08 08 33.8	0.0
	baz=308,SNR=5.3						
R11A	**Troy Canyon, C**	44.05	82	P	P	08 08 34.7	+1.0
SPUT	**South Promonto**	44.20	77	P	P	08 08 36.7	+1.7
MPMC	**Manual Prospec**	44.29	86	P	P	08 08 36.6	+0.8
	baz=310						
FURC	**Furnace Creek,**	44.42	85	P	P	08 08 37.8	+1.2
	baz=309						
SPR3	**Spring Creek 3**	44.42	81	P	P	08 08 39.5	+2.5
TPNV	**Topopah Spring**	44.50	84	P	P	08 08 38.2	+0.8
	baz=309,SNR=12						
TPNV	**Topopah Spring**	44.50	84	P	P	08 08 39.2	+1.8
TPNV				pmax	pmax		
	comp=Z,6.0nm,0.8s						
TPNV	**Topopah Spring**	44.50	84	P	P	08 08 39.2	+1.8
TPNV				lAmb	lAmb	08 08 40.1	
	comp=Z,5.9nm,0.8s						
DUG	**Dugway, Tooele**	44.64	78	P	P	08 08 39.4	+1.0
	baz=307						
DUG	**Dugway, Tooele**	44.64	78	P	P	08 08 39.9	+1.5
DUG				pmax	pmax		
	comp=Z,5.0nm,0.8s						
DUG	**Dugway, Tooele**	44.64	78	P	P	08 08 39.9	+1.5
DUG				lAmb	lAmb	08 08 52.4	
	comp=Z,4.6nm,0.8s						
LAO	**LASA Array**	44.85	67	P	P	08 08 40.4	+0.5
	baz=303						
LAO	**LASA Array**	44.85	67	P	P	08 08 41.1	+1.2
NRIK	**Noril'sk**	44.96	330	P	P	08 08 41.3	+0.9
	comp=Z,0.7nm,0.3s,baz=86,slow=7.5,SNR=4.2						
NRIK	**Noril'sk**	44.96	330	*ce*P	P	08 08 39.5	-0.9
NRIK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
PRN	**Pahroc Range**	44.96	83	P	P	08 08 42.3	+1.3
PRN				lAmb	lAmb	08 09 10.7	
	comp=Z,12nm,0.9s						
FCC	**Fort Churchill**	45.00	47	P	P	08 08 39.8	-1.0
FCC				pmax	pmax		
	comp=Z,2.0nm,0.7s						
FCC	**Fort Churchill**	45.00	47	P	P	08 08 39.8	-1.0
PSUT	**Pine Spring**	45.00	81	P	P	08 08 43.0	+1.5
BW06	**Boulder Array**	45.10	74	P	P	08 08 42.3	+0.1
	baz=305,SNR=11						
BW06	**Boulder Array**	45.10	74	P	P	08 08 42.6	+0.5
BW06				lAmb	lAmb	08 08 54.1	
	comp=Z,6.5nm,0.9s						
PD31	**Pinedale Array**	45.10	74	P	P	08 08 43.0	+0.8
PD31				lAmb	lAmb	08 08 54.1	
	comp=Z,6.0nm,0.9s						
PDAR	**Pinedale Array**	45.10	74	P	P	08 08 42.7	+0.6
	comp=Z,5.4nm,0.6s,baz=314,slow=3.3,SNR=57						
PDAR	**Pinedale Array**	45.10	74	P	P	08 08 42.0	-0.2
GSC	**Goldstone, Bar**	45.20	87	P	P	08 08 43.9	+1.0
	baz=310						
GSC	**Goldstone, Bar**	45.20	87	P	P	08 08 43.1	+0.2
GSC				pmax	pmax		
	comp=Z,5.0nm,0.8s						
GSC	**Goldstone, Bar**	45.20	87	P	P	08 08 43.1	+0.2
GSC				lAmb	lAmb	08 08 55.0	
	comp=Z,5.1nm,0.8s						
MPU	**Maple Canyon**	45.47	78	P	P	08 08 46.7	+1.6
HEC	**Hector,Ludlow**	45.80	87	P	P	08 08 48.0	+0.3
	baz=310						
CCUT	**Cedar City**	45.92	82	P	P	08 08 50.5	+1.7
MVU	**Marysvale**	46.03	80	P	P	08 08 51.5	+1.9
MSU	**Marysvale**	46.05	80	P	P	08 08 51.1	+1.4
MSU	**Marysvale**	46.05	80	P	P	08 08 51.1	+1.4
MURC	**Murrieta**	46.07	89	P	P	08 08 50.1	+0.4
	baz=311						
TMUT	**Trail Mountain**	46.16	78	P	P	08 08 53.0	+2.3
TMUT				lAmb	lAmb	08 09 20.7	
	comp=Z,17nm,1.4s						
GMRC	**Granite Mounta**	46.25	86	P	P	08 08 51.9	+0.6
	baz=311						
LCMT	**Little Creek M**	46.33	82	P	P	08 08 53.8	+1.9
LCMT				lAmb	lAmb	08 09 22.1	
	comp=Z,6.2nm,1.0s						
MTPU	**Mount Pierson**	46.34	80	P	P	08 08 54.2	+2.0
P17A	**Butcher Ranch,**	46.34	78	P	P	08 08 54.0	+2.0
P17A				lAmb	lAmb	08 09 20.8	
	comp=Z,3.2nm,0.7s						
BJI	**Beijing**	46.57	283	P	P	08 08 54.0	+0.6
BJI				PP	PP	08 10 41.3	-1.9
BJI				pmax	pmax		
	comp=Z,14nm,0.7s						
BJI				pmax	pmax		
	comp=Z,1µm,12.0s						
BJT	**Baijiatuau**	46.58	283	P	P	08 08 53.9	+0.3
BJT				pmax	pmax		
	comp=Z,11nm,0.8s						
BJT	**Baijiatuau**	46.58	283	P	P	08 08 53.9	+0.3
BJT				lAmb	lAmb	08 08 54.6	
	comp=Z,11nm,0.8s						
SRU	**San Rafael Swe**	46.70	78	P	P	08 08 55.2	+0.5
SRU				pmax	pmax		
	comp=Z,4.0nm,0.7s						
SRU	**San Rafael Swe**	46.70	78	P	P	08 08 55.2	+0.5
SRU				lAmb	lAmb	08 09 23.8	
	comp=Z,3.7nm,0.7s						
K22A	**Casper**	46.98	72	P	P	08 08 56.8	0.0
	baz=306						
W13A	**Hualapai Mount**	47.16	85	P	P	08 08 59.8	+1.3
W13A				lAmb	lAmb	08 09 10.9	
	comp=Z,4.0nm,0.7s						
ULN	**Ulaanbaatar**	47.33	297	*ce*P	P	08 08 58.5	-1.0
ULN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
SWSC	**Sam W. Stewart**	47.38	88	P	P	08 08 59.4	-0.5
	baz=312						
O20A	**White River Ci**	47.46	76	P	P	08 09 00.4	-0.3
	baz=308,SNR=8.5						
O20A	**White River Ci**	47.46	76	P	P	08 09 01.5	+0.8
O20A				lAmb	lAmb	08 09 29.9	
	comp=Z,9.6nm,0.8s						
RSSD	**Black Hills**	47.57	69	P	P	08 09 00.8	-0.7
	baz=306						
RSSD	**Black Hills**	47.57	69	P	P	08 09 01.8	+0.3
RSSD				pmax	pmax		
	comp=Z,6.0nm,0.7s						
RSSD	**Black Hills**	47.57	69	P	P	08 09 01.8	+0.3
RSSD				lAmb	lAmb	08 09 05.3	
	comp=Z,6.3nm,0.7s						
SONM	**Songino Array**	47.71	298	P	P	08 09 03.0	+0.5
	comp=Z,2.9nm,0.7s,baz=54,slow=9.0,SNR=16						
SONM				PcP	PcP	08 10 30.9	-0.1
	comp=Z,5.6nm,0.8s,baz=62,slow=3.2,SNR=15						
SONM	**Songino Array**	47.71	298	P	P	08 09 02.9	+0.5
SONM						08 10 30.6	
SONM				pmax	pmax		
	comp=Z,2.0nm,0.8s						
SONM	**Songino Array**	47.71	298	P	P	08 09 02.9	+0.5
SONM				PcP	PcP	08 10 30.6	-0.5
PV14	**Lion Creek, Pa**	48.08	78	P	P	08 09 06.8	+1.3
PV14				lAmb	lAmb	08 09 26.6	
	comp=Z,5.7nm,0.8s						
PV04	**Paradox Valley**	48.13	78	P	P	08 09 06.1	+0.2
PV04				lAmb	lAmb	08 09 26.1	
	comp=Z,6.5nm,0.8s						
PV17	**East Wray Mesa**	48.17	78	P	P	08 09 07.3	+1.1
PV17				lAmb	lAmb	08 09 10.8	
	comp=Z,8.0nm,0.6s						
PV16	**Nyswonger Mesa**	48.18	78	P	P	08 09 07.4	+1.1
PV16				lAmb	lAmb	08 09 34.1	
	comp=Z,6.0nm,0.8s						
PV11	**David Mesa, Pa**	48.21	78	P	P	08 09 06.6	+0.1
PV18	**Skein Mesa, Pa**	48.22	78	P	P	08 09 07.1	+0.4
PV18				lAmb	lAmb	08 09 26.3	
	comp=Z,7.0nm,0.6s						
PV12	**Saucer Basin,**	48.24	78	P	P	08 09 07.9	+1.1
PV12				lAmb	lAmb	08 09 31.8	
	comp=Z,9.8nm,0.9s						
PV03	**Paradox Valley**	48.26	78	P	P	08 09 07.9	+1.0
PV03				lAmb	lAmb	08 09 26.5	
	comp=Z,9.1nm,1.1s						
PV13	**Radium Mtn., P**	48.33	78	P	P	08 09 08.7	+1.2
PV02	**Paradox Valley**	48.35	78	P	P	08 09 08.8	+1.2
PV02				lAmb	lAmb	08 09 09.3	
	comp=Z,9.3nm,0.8s						
N23A	**Red Feather La**	48.38	73	P	P	08 09 07.7	-0.2
	baz=308						
WUAZ	**Wupatki**	48.45	83	P	P	08 09 08.8	+0.4
	baz=310,SNR=5.6						
WUAZ	**Wupatki**	48.45	83	P	P	08 09 08.5	+0.2
WUAZ				lAmb	lAmb	08 09 21.0	
	comp=Z,7.1nm,0.7s						
PV01	**Paradox Valley**	48.50	78	P	P	08 09 09.2	+0.4
PV01				lAmb	lAmb	08 09 23.7	
	comp=Z,5.7nm,0.7s						
HHC	**Hu-ho-hao-te**	48.85	287	*e*P	P	08 09 12.5	+1.2
HHC				pmax	pmax		
	comp=Z,9.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,350nm,6.4s						
MVCO	**Mesa Verde**	49.13	79	P	P	08 09 14.0	+0.4
	baz=310						
ISCO	**Idaho Springs**	49.25	74	P	P	08 09 14.3	-0.3
	baz=308						
ISCO	**Idaho Springs**	49.25	74	P	P	08 09 16.6	+2.0
ISCO				pmax	pmax		
	comp=Z,3.0nm,1.1s						
ISCO	**Idaho Springs**	49.25	74	P	P	08 09 16.6	+2.0
W18A	**Petrified Fore**	49.72	82	P	P	08 09 18.5	+0.4
	baz=311						
W18A	**Petrified Fore**	49.72	82	P	P	08 09 19.8	+1.7
W18A				lAmb	lAmb	08 09 36.5	
	comp=Z,7.9nm,0.9s						
S22A	**4UR Ranch, Cre**	49.81	77	P	P	08 09 19.2	+0.3
	baz=310						
BTO	**Baotou**	49.93	288	*e*P	P	08 09 19.8	+0.3
NJ2	**Nanjing**	50.05	273	*e*P	P	08 09 21.0	+0.6
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
SDCO	**Great Sand Dun**	50.62	76	P	P	08 09 24.4	-0.7
	baz=310						
SDCO	**Great Sand Dun**	50.62	76	P	P	08 09 26.5	+1.5
TUC	**Tucson**	50.94	85	P	P	08 09 27.4	+0.3
	baz=313						
K31A	**O'Neill**	51.54	67	P	P	08 09 31.6	+0.1
KSCO	**Kaye Shedlock'**	51.55	73	P	P	08 09 32.9	+1.1
T25A	**Trinidad**	51.67	76	P	P	08 09 32.3	-0.6
	baz=310,SNR=9.1						
ANMO	**Albuquerque**	51.86	80	P	P	08 09 33.8	-0.5
	baz=311						
ANMO	**Albuquerque**	51.86	80	*ce*P	P	08 09 33.7	-0.5
ANMO				pmax	pmax		
	comp=Z,3.0nm,1.7s						
ECSD	**EROS Data Cent**	52.08	65	P	P	08 09 34.3	-1.2
	baz=308						
ECSD	**EROS Data Cent**	52.08	65	P	P	08 09 34.3	-1.2
ECSD				lAmb	lAmb	08 09 35.3	
	comp=Z,3.9nm,0.9s						
EYMN	**Ely**	52.27	58	P	P	08 09 36.0	-0.9
	baz=308						
CBKS	**Cedar Bluff**	53.39	72	P	P	08 09 45.4	+0.1
CBKS				pmax	pmax		
	comp=Z,12nm,0.7s						
CBKS	**Cedar Bluff**	53.39	72	P	P	08 09 45.4	+0.1
I37A	**Lemond, Waseca**	53.70	63	P	P	08 09 47.7	+0.2
N35A	**Tabor**	54.46	67	P	P	08 09 53.5	+0.5
SSLB	**Suanglung**	54.56	264	P	P	08 09 54.3	+0.4
MNTX	**Cornudas Mount**	54.71	82	P	P	08 09 55.0	0.0
	baz=313,SNR=11						
MNTX	**Cornudas Mount**	54.71	82	P	P	08 09 56.1	+1.2
MNTX				lAmb	lAmb	08 09 58.3	
	comp=Z,5.0nm,0.9s						
MSTX	**Muleshoe**	54.77	78	P	P	08 09 55.5	0.0
	baz=312						
XAN	**Xi'an**	54.86	282	P	P	08 09 55.3	-0.7
XAN				pP	pP	08 10 07.0	-2.1
XAN				pmax	pmax		
	comp=Z,26nm,1.0s						
XAN	**Xi'an**	54.86	282	P	P	08 09 55.9	-0.1
XAN				pmax	pmax		
	comp=Z,19nm,0.9s						
XAN	**Xi'an**	54.86	282	P	P	08 09 55.9	-0.1
ZALV	**Zalesovo Beam**	54.86	314	PcP	PcP	08 10 57.0	-0.3
	comp=Z,3.4nm,0.9s,baz=43,slow=4.1,SNR=9.3						
KSU1	**Kansas State U**	55.05	69	P	P	08 09 56.3	-1.0
	baz=311						
KSU1	**Kansas State U**	55.05	69	P	P	08 09 56.9	-0.4
U32A	**Winter Ranch,**	55.44	73	P	P	08 10 00.5	+0.3
DGZ	**Jazzator, Alta**	56.45	309	*i* P	P	08 10 07.9	+0.5
DGZ				pmax	pmax		
	comp=Z,2.0nm,1.0s						
P38A	**Dawn**	56.49	67	P	P	08 10 06.7	-0.9
LZH	**Lanzhou**	56.55	287	*e*P	P	08 10 08.0	-0.3
LZH				pP	pP	08 10 25.8	+4.4
LZH				sP	sP	08 10 33.5	+6.7
LZH				pmax	pmax		
	comp=Z,17nm,1.1s						
LZH				pmax	pmax		
	comp=Z,76nm,4.3s						
LZH				LR	LR		
	comp=N,250nm,16.0s						
LZH				LR	LR		
	comp=E,370nm,15.7s						
LZH				LR	LR		
	comp=Z,380nm,17.8s						
WMOK	**Wichita Mounta**	56.68	75	P	P	08 10 08.8	-0.2
	baz=313,SNR=5.8						
WMOK	**Wichita Mounta**	56.68	75	P	P	08 10 09.9	+0.9
WMOK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
WMOK	**Wichita Mounta**	56.68	75	P	P	08 10 09.9	+0.9
WMOK				lAmb	lAmb	08 10 11.1	
	comp=Z,4.2nm,0.8s						
ENH	**Enshi**	57.09	279	P	P	08 10 11.2	-0.9
ENH				lAmb	lAmb	08 10 12.2	
	comp=Z,9.5nm,0.9s						
P40A	**Paris**	57.40	66	P	P	08 10 13.4	-0.6
TX31	**Lajitas Ar. Si**	57.41	83	P	P	08 10 14.2	-0.2
TX32	**Lajitas Array**	57.41	83	P	P	08 10 14.9	+0.5
TX32				lAmb	lAmb	08 10 26.1	
	comp=Z,3.5nm,0.8s						
TXAR	**Lajitas Array**	57.41	83	P	P	08 10 14.8	+0.4
	comp=Z,3.0nm,0.7s,baz=304,slow=5.1,SNR=35						
ABTX	**Abilene, Hawle**	57.60	77	P	P	08 10 15.7	+0.1
	baz=314						
TUL1	**Leonard**	57.67	72	P	P	08 10 15.5	-0.4
	baz=313						
S39A	**Bolivar**	57.91	68	P	P	08 10 16.1	-1.5
S39A				lAmb	lAmb	08 10 17.1	
	comp=Z,6.2nm,0.8s						
R40A	**Maddies Statio**	58.12	67	P	P	08 10 17.8	-1.3
U38A	**Gravette**	58.14	70	P	P	08 10 18.9	-0.4
U38A				lAmb	lAmb	08 10 19.6	
	comp=Z,7.1nm,0.9s						
ARCES	**ARCESS Array B**	58.21	351	P	P	08 10 17.7	-1.6
	comp=Z,4.7nm,1.0s,baz=27,slow=8.2,SNR=1.6						
HDIL	**Hopedale**	58.27	64	P	P	08 10 19.3	-0.8
	baz=313						
X37A	**Clayton**	58.82	72	P	P	08 10 24.4	+0.4
X37A				lAmb	lAmb	08 10 36.4	
	comp=Z,6.4nm,0.9s						
CCM	**Cathedral Cave**	58.87	67	P	P	08 10 23.0	-1.3
	baz=313						
MGMO	**Mountain Grove**	58.89	68	P	P	08 10 22.3	-2.2
U40A	**Yellville**	59.10	69	P	P	08 10 24.8	-1.1
	baz=314,SNR=9.8						
U40A	**Yellville**	59.10	69	P	P	08 10 24.4	-1.5
W39A	**Magazine**	59.35	71	P	P	08 10 27.3	-0.3
	baz=314						
WHTX	**Lake Whitney,**	59.37	76	P	P	08 10 27.3	-0.6
	baz=314						
FVM	**French Village**	59.38	66	P	P	08 10 26.3	-1.6
FVM				pmax	pmax		
	comp=Z,12nm,0.7s						
FVM	**French Village**	59.38	66	P	P	08 10 26.3	-1.6
Q44A	**Meyer Farm, Va**	59.55	65	P	P	08 10 28.8	-0.3
SFIN	**Lafayette**	59.62	62	P	P	08 10 28.9	-0.6
	baz=314						
SFIN	**Lafayette**	59.62	62	P	P	08 10 29.6	+0.1
T42A	**Van Buren**	59.66	68	P	P	08 10 28.5	-1.3
T42A				lAmb	lAmb	08 10 28.9	
	comp=Z,5.3nm,0.7s						
KURK	**Kurchatov**	59.85	315	*i* P	P	08 10 29.8	-1.1
KURK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MIAR	**Mount Ida**	59.92	71	P	P	08 10 31.4	-0.2
	baz=314,SNR=6.9						
MIAR	**Mount Ida**	59.92	71	P	P	08 10 32.2	+0.6
MIAR				pmax	pmax		
	comp=Z,11nm,0.9s						
MIAR	**Mount Ida**	59.92	71	P	P	08 10 32.2	+0.6
CD2	**Chengdu**	60.17	283	P	P	08 10 33.3	-0.1
CD2				pmax	pmax		
	comp=Z,50nm,0.8s						
OLIL	**Olney**	60.19	64	P	P	08 10 33.4	0.0
PBMO	**Poplar Bluff**	60.21	67	P	P	08 10 32.8	-0.8
SIUC	**Southern Illin**	60.26	66	P	P	08 10 32.7	-1.2
W41B	**Gary Mavity, V**	60.27	70	P	P	08 10 33.3	-0.6
	baz=314						
WMQ	**Urumqi**	60.33	304	*e*P	P	08 10 36.8	+2.4
X40A	**Basin Creek Fa**	60.40	71	P	P	08 10 34.6	-0.3
	baz=314						
MK31	**Makanchi Array**	60.94	309	P	P	08 10 39.6	+1.1
MK31				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MK31	**Makanchi Array**	60.94	309	P	P	08 10 39.6	+1.1
MKAR	**Makanchi Array**	60.94	309	P	P	08 10 36.8	-1.7
	comp=Z,0.6nm,0.5s,baz=49,slow=8.0,SNR=9.2						
MKAR	**Makanchi Array**	60.94	309	*ce*P	P	08 10 41.7	+3.2
USIN	**University of**	60.97	65	P	P	08 10 38.8	0.0
P48A	**Milroy**	61.18	62	P	P	08 10 39.5	-0.7
P49A	**Miami Univ. Ec**	61.52	62	P	P	08 10 41.6	-0.8
	baz=315						
GYA	**Guiyang**	61.55	277	⇑P	P	08 10 42.5	-0.4
GYA				pP	pP	08 10 57.3	+1.5
GYA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
WCI	**Wyandotte Cave**	61.56	64	P	P	08 10 42.0	-0.7
	baz=315						
BRVK	**Borovoye**	61.63	321	*ce*P	P	08 10 42.9	-0.1
BRVK				pmax	pmax		
	comp=Z,9.0nm,2.5s						
BRVK	**Borovoye**	61.63	321	P	P	08 10 42.4	-0.6
BRVK				lAmb	lAmb	08 10 43.2	
	comp=Z,3.4nm,0.7s						
ACSO	**Alum Creek Sta**	61.97	60	P	P	08 10 44.2	-1.3
	baz=315						
T47A	**Sharon Grove**	61.97	65	P	P	08 10 43.8	-1.7
W45A	**Hickory Valley**	62.07	68	P	P	08 10 46.7	+0.5
WVT	**Waverly**	62.16	66	P	P	08 10 46.4	-0.4
	baz=315						
OXF	**Oxford**	62.39	69	P	P	08 10 47.9	-0.5
	baz=315,SNR=7.4						
OXF	**Oxford**	62.39	69	P	P	08 10 48.3	-0.1
OXF				pmax	pmax		
	comp=Z,33nm,0.9s						
OXF	**Oxford**	62.39	69	P	P	08 10 48.3	-0.1
G57A	**Newington**	62.61	51	P	P	08 10 48.7	-1.0
	baz=316						
Q51A	**Peebles**	62.63	61	P	P	08 10 49.5	-0.3
PLAL	**Pickwick Lake**	62.83	67	P	P	08 10 50.9	-0.4
J56A	**Wolcott**	63.00	54	P	P	08 10 51.5	-0.7
	baz=316						
V48A	**Smith Brothers**	63.02	66	P	P	08 10 52.1	-0.4
ARU	**Arti**	63.17	329	P	P	08 10 53.5	+0.3
	comp=Z,2.5nm,0.2s,baz=50,slow=9.5,SNR=5.3						
ARU	**Arti**	63.17	329	*c i*P	P	08 10 53.5	+0.3
ARU				S	S	08 19 23.3	+2.7
ARU				SS	SS	08 23 32.6	+6.4
ARU				pmax	pmax		
	comp=Z,16nm,2.3s						
ARU	**Arti**	63.17	329	lAmb	lAmb	08 11 14.5	
	comp=Z,5.3nm,1.0s						
K56A	**Middlesex**	63.19	55	P	P	08 10 53.0	-0.6
	baz=316						
L56A	**Greenwood**	63.47	55	P	P	08 10 54.9	-0.6
	baz=316						
S51A	**Beattyville**	63.48	62	P	P	08 10 55.7	+0.1
K57A	**Scipio Center**	63.57	54	P	P	08 10 55.4	-0.7
	baz=317						
Q53A	**Leroy**	63.74	60	P	P	08 10 56.4	-0.8
	baz=316						
J59A	**Piesco**	64.04	52	P	P	08 10 59.0	-0.2
	baz=317						
Z47A	**Carrollton**	64.11	69	P	P	08 10 59.8	+0.1
BINY	**Binghamton**	64.23	54	P	P	08 11 00.3	-0.1
	baz=317						
W50A	**Signal Mountai**	64.26	65	P	P	08 11 00.6	-0.2
R54A	**Victor**	64.52	60	P	P	08 11 02.4	0.0
	baz=316						
S54A	**Dingess, Beckl**	64.62	61	P	P	08 11 03.2	+0.1
	baz=316						
S54A	**Dingess, Beckl**	64.62	61	P	P	08 11 02.9	-0.1
LRAL	**Lakeview Retre**	64.85	68	P	P	08 11 04.4	-0.2
	baz=316						
KMI	**Kunming**	64.94	279	⇑P	P	08 11 05.5	0.0
KMI				pP	pP	08 11 23.3	+4.8
KMI				pmax	pmax		
	comp=Z,19nm,0.9s						
M59A	**Waymart**	64.99	54	P	P	08 11 05.2	-0.2
	baz=317						
U54A	**Nelsons Funny**	65.27	62	P	P	08 11 07.1	-0.3
	baz=317						
N59A	**State Game Lan**	65.28	55	P	P	08 11 07.4	+0.1
	baz=317						
BLA	**Blacksburg**	65.53	61	P	P	08 11 09.4	+0.4
	baz=317						
S56A	**Natural Bridge**	65.66	60	P	P	08 11 09.9	+0.1
	baz=317						
Q58A	**Fox Den Farm,**	65.74	58	P	P	08 11 09.8	-0.5
	baz=317						
R57A	**Stanardsville**	65.76	59	P	P	08 11 10.3	-0.1
	baz=317						
Y52A	**Lilburn**	65.94	66	P	P	08 11 11.8	+0.2
U56A	**King**	66.18	61	P	P	08 11 12.7	-0.5
	baz=317						
O61A	**Allentown**	66.51	55	P	P	08 11 14.6	-0.5
	baz=318						
V56A	**Mocksville**	66.52	62	P	P	08 11 14.9	-0.4
	baz=317						
KMSC	**Kings Mountain**	66.54	63	P	P	08 11 15.0	-0.4
	baz=317,SNR=6.6						
KMSC	**Kings Mountain**	66.54	63	P	P	08 11 15.7	+0.2
GOGA	**Godfrey**	66.61	65	P	P	08 11 15.1	-0.8
	baz=317						
GOGA	**Godfrey**	66.61	65	P	P	08 11 15.8	-0.1
GOGA				pmax	pmax		
	comp=Z,17nm,1.0s						
GOGA	**Godfrey**	66.61	65	P	P	08 11 15.8	-0.1

U57A	Blanch	66.69	61	P	P	08 11 15.9	-0.5
	baz=318						
V57A	Coltrane Farms	66.85	61	P	P	08 11 16.8	-0.7
	baz=318						
W56A	Indian Trail	66.96	62	P	P	08 11 17.8	-0.3
	baz=318						
SLVN	Son La	67.00	276	P	P	08 11 19.0	+0.3
SLVN				IAmb	IAmb	08 11 20.3	
	comp=Z,6.7nm,0.8s						
X57A	Johnson Farm,	67.73	62	P	P	08 11 23.3	+0.4
	baz=318						
V59A	Middlesex	67.78	60	P	P	08 11 23.1	-0.2
	baz=318						
W58A	Raeford	67.79	61	P	P	08 11 23.6	+0.2
	baz=318						
Z56A	Williston	67.86	64	P	P	08 11 23.4	-0.4
TIGA	Tifton	67.98	67	P	P	08 11 25.0	+0.4
	baz=318						
SIJI	Sorong	68.04	238	P	P	08 11 25.7	+0.6
	comp=Z,27nm,0.8s,baz=33,slow=6.9,SNR=17						
AKTO	Aktyubinsk	68.32	326	P	P	08 11 26.1	-0.3
	comp=Z,5.4nm,0.8s,baz=45,slow=6.5,SNR=11						
ABKAR	Akbulak array	68.61	324	P	P	08 11 27.2	-1.0
ABKAR	Akbulak array	68.61	324	P	P	08 11 27.2	-1.0
ABKAR				IAmb	IAmb	08 11 28.7	
	comp=Z,4.7nm,1.2s						
NHSC	New Hope	68.69	63	P	P	08 11 29.5	+0.5
	baz=318						
X60A	Albert Glenn T	68.81	61	P	P	08 11 30.0	+0.2
	baz=318						
KK31	Karatay Array	69.23	314	P	P	08 11 30.7	-1.6
KK31				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KK31	Karatay Array	69.23	314	P	P	08 11 30.7	-1.6
KKAR	Karatay Array	69.23	314	P	P	08 11 30.6	-1.6
KKAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KKAR	Karatay Array	69.23	314	P	P	08 11 30.7	-1.6
KKAR	Karatay Array	69.23	314	P	P	08 11 30.6	-1.6
KSH	Kashi	69.43	308	P	P	08 11 32.8	-0.9
KSH				PP	PP	08 14 06.5	-0.6
KSH				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KSH				pmax	pmax		
	comp=Z,2µm,16.6s						
KSH				LR	LR		
	comp=N,620nm,12.1s						
KSH				LR	LR		
	comp=E,680nm,16.5s						
OBN	Obninsk	70.22	340	*e*P	P	08 11 39.0	+1.0
OBN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CMAR	Chiang Mai Arr	72.24	277	P	P	08 11 51.0	+0.2
	comp=Z,3.6nm,0.6s,baz=26,slow=7.0,SNR=15						
CMAR	Chiang Mai Arr	72.24	277	*ce*P	P	08 11 50.9	+0.1
CMAR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
TOLI2	Tolitoli	72.26	248	P	P	08 11 49.7	-1.3
AKASG	Malin Array Be	75.83	343	P	P	08 12 09.6	-1.7
	comp=Z,0.2nm,0.3s,baz=20,slow=6.4,SNR=3.3						
MTN	Manton Dam	78.30	232	P	P	08 12 26.2	+0.7
KIV	Kislovodsk	78.98	332	*e*P	P	08 12 29.5	+0.3
KIV				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KBZ	Khabaz	79.13	332	*i* P	P	08 12 30.0	+0.2
KBZ				pmax	pmax		
	comp=Z,2.0nm,0.9s						
WRAB	Tennant Creek	82.94	226	*ce*P	P	08 12 50.5	+0.2
WRAB				pmax	pmax		
	comp=Z,3.0nm,0.8s						
WRA	Warramunga Arr	82.95	226	P	P	08 12 50.2	-0.1
	comp=Z,3.5nm,0.8s,baz=35,slow=6.1,SNR=25						
PSI	Prapat	84.24	267	P	P	08 12 57.5	+0.1
PSI				pmax	pmax		
	comp=Z,17nm,0.9s						
RPSI	Rantau Prapat	84.32	267	P	P	08 12 57.5	-0.1
BRTR	Keskin Array B	85.37	337	P	P	08 13 02.1	-0.7
	comp=Z,2.3nm,0.7s,baz=56,slow=2.1,SNR=10						
BRTR	Keskin Array B	85.37	337	*ce*P	P	08 13 02.5	-0.2
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BRTR	Keskin Array B	85.37	337	P	P	08 13 00.9	-1.8
FITZ	Fitzroy Crossi	85.50	234	P	P	08 13 03.3	0.0
AS31	Alice Springs	86.40	224	P	P	08 13 07.4	-0.3
ASAR	Alice Springs	86.40	224	P	P	08 13 08.3	+0.6
	comp=Z,5.9nm,0.8s,baz=28,slow=4.6,SNR=56						
ASAR	Alice Springs	86.40	224	P	P	08 13 08.0	+0.3
ASAR	Alice Springs	86.40	224	P	P	08 13 08.0	+0.3
STKA	Stephens Creek	90.69	214	P	P	08 13 28.8	+1.0
	comp=Z,4.6nm,0.8s,baz=27,slow=4.5,SNR=15						
STKA	Stephens Creek	90.69	214	P	P	08 13 29.2	+1.4
STKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
STKA	Stephens Creek	90.69	214	P	P	08 13 29.1	+1.4
PSA00	Pilbara Seismi	91.37	236	P	P	08 13 31.4	+0.2
TORD	Torodi Ar. Bea	115.64	2	PKP	PKiKP	08 19 06.4	-1.2
	comp=Z,1.1nm,0.6s,baz=355,slow=1.8,SNR=4.7						
H03N2	Juan Fernandez	119.98	107	T	T	10 30 37.7	
	baz=317,slow=77,SNR=295						
H03N1	Juan Fernandez	119.99	107	T	T	10 30 39.0	
	baz=317,slow=77,SNR=429						
H03N3	Juan Fernandez	119.99	107	T	T	10 30 38.3	
	baz=317,slow=77,SNR=462						
DBIC	Dimbokro	121.68	9	PKP	PKPdf	08 19 18.1	-1.2
	comp=Z,1.8nm,0.6s,baz=90,slow=3.0,SNR=3.9						
BOSA	Boshof	151.81	316	PKPbc	PKPbc	08 20 19.8	-0.1
	comp=Z,13nm,0.7s,baz=40,slow=1.7,SNR=27						

IDC ***25*** *08:08:41.1±0.8, 31.°06N×141.°83E, h0^{km}, mb3.8/8, mb1 3.9/13, mb1mx3.7/44, mbtmp3.8/13, ML3.6/5, MS4.2/1, Ms1 4.2/1, ms1mx3.3/47, Error ellipse: s-maj=26.8km s-min=15.3km az=76.0*

NEIC ***25*** *08:08:43.6±2.1, 31.°08N±0.°07×141.°9E±0.°1, h20^{km}±6^{km}, mb4.1/4, Error ellipse: s-maj=17.1km s-min=9.2km az=72.0*

JMA ***25*** *08:08:43.8±0.1, 31.°18N×141.°99E, h74^{km}, M4.1*

ISC 25 08:08:44.0±0.6**, 31.°14N**±0.°05×**141.°97E**±0.°10**, h24**^{km}**, n38, σ1^{s}97**/44**, mb3.9**/10**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	Mitsune	2.69	318	P	Pn	08 09 25.4	-0.3
JHJ2	Mitsune	2.69	318	Pn	Pn	08 09 25.6	-0.2
JHJ	Hachijo jima 2	2.71	317	Pn	Pn	08 09 25.4	-0.6
	16nm,0.3s,baz=77,slow=23,SNR=8.1						
JHJ				Sn	Sn	08 09 56.4	-1.8
	26nm,0.3s,baz=72,slow=19,SNR=2.2						
BSO1	Boso 1	3.61	347	P	Pn	08 09 38.1	+0.2
BSO1				S	Sn	08 10 20.2	+0.8
BSO3	Boso 3	3.86	342	P	Pn	08 09 41.5	-0.1
CBIJ	Chichi jima	4.03	177	P	Pn	08 09 44.9	+0.7
JCJ	Chichijima	4.03	177	Pn	Pn	08 09 44.5	+0.3
	7.5nm,0.3s,baz=347,slow=20,SNR=10						
JCJ				Sn	Sn	08 10 27.0	-3.7
	11nm,0.3s,baz=213,slow=23,SNR=5.9						
JCJ	Chichijima	4.03	177	Pn	Pn	08 09 42.7	-1.6
JHO	Hitachi	5.58	348	P	Pn	08 10 05.5	-0.1
JHO				S	Sn	08 11 08.4	-0.6
JAG	Ashikaga	5.68	339	P	Pn	08 10 07.3	+0.5
JGF	Kuroka	5.89	320	Pn	Pn	08 10 10.7	+0.8
MJAR	Matsushiro Arr	6.23	331	Pn	Pn	08 10 16.0	+1.5
	0.5nm,0.3s,baz=154,slow=11,SNR=19						
MJAR				Sn	Sn	08 11 27.2	+2.2
	0.3nm,0.3s,baz=217,slow=18,SNR=1.7						
MJAR	Matsushiro Arr	6.23	331		Pn	08 10 15.2	+0.7
MAJO	Matsushiro	6.24	331		Pn	08 10 15.8	+1.3
MAT	Matsushiro	6.24	331	P	Pn	08 10 16.5	+2.0
MAT				*e*S	Sn	08 11 19.4	-5.7
JMM	Marumori	6.78	352		Pn	08 10 22.3	+0.3
JSD	Sado	7.53	337	Pn	Pn	08 10 33.8	+1.5
JTM	Tenmabayashi	9.66	356	Pn	Pn	08 11 00.8	-0.6
ASAJ	Asahikawa	12.97	2	Pn	Pn	08 11 46.3	-0.4
	0.5nm,0.3s,baz=270,slow=9.1,SNR=2.2						
ASAJ				Sn	Sn	08 14 04.5	-5.7
	0.4nm,0.3s,baz=335,slow=19,SNR=1.9						
JKA	Kamikawa-asahi	12.97	2		Pn	08 11 46.3	-0.4
JKA					Sn	08 14 04.5	-5.7
KSRS	Korea Array	13.21	302	Pn	Pn	08 11 52.1	+2.1
	0.2nm,0.3s,baz=116,slow=14,SNR=4.3						
KLR	Kul'dur	19.66	340	P	P	08 13 11.0	+0.1
	0.3nm,0.3s,baz=159,slow=7.4,SNR=6.2						
SONM	Songino Array	31.78	312	P	P	08 15 07.0	+0.5
	1.6nm,0.8s,baz=112,slow=8.0,SNR=6.4						
ZALV	Zalesovo Beam	46.38	317	P	P	08 17 09.0	+0.8
	0.6nm,0.3s,baz=92,slow=10,SNR=3.6						
MK31	Makanchi Array	47.84	307	P	P	08 17 19.9	+0.2
MK31				IAmb	IAmb	08 17 20.6	
	comp=Z,5.1nm,1.5s						
MKAR	Makanchi Array	47.84	307	P	P	08 17 19.6	-0.1
	comp=Z,1.2nm,0.8s,baz=93,slow=8.5,SNR=8.3						
MKAR	Makanchi Array	47.84	307	P	P	08 17 18.2	-1.5
KURK	Kurchatov	50.09	312	P	P	08 17 34.7	-2.2
CTA	Charters Tower	51.10	175	LR	LR	08 36 39.9	
	comp=Z,267nm,20.9s,baz=312,slow=33						
WRA	Warramunga Arr	51.31	189	P	P	08 17 45.9	-0.4
	comp=Z,0.5nm,0.3s,baz=6.7,slow=7.7,SNR=15						
WRA	Warramunga Arr	51.31	189	IAmb	IAmb	08 17 53.4	
	comp=Z,0.2nm,0.9s						
ILAR	Eielson Array	54.29	30	P	P	08 18 09.1	+1.2
	comp=Z,0.4nm,0.7s,baz=268,slow=6.4,SNR=9.0						
ASAR	Alice Springs	55.04	189	P	P	08 18 13.6	-0.2
	comp=Z,0.6nm,0.6s,baz=1.6,slow=4.8,SNR=9.4						
KKAR	Karatay Array	56.63	304	P	P	08 18 25.6	+0.5
ABKAR	Akbulak array	62.19	313	P	P	08 19 03.2	-0.1
ABKAR	Akbulak array	62.19	313	P	P	08 19 03.6	+0.3
ABKAR				IAmb	IAmb	08 19 05.3	
	comp=Z,2.0nm,0.7s						
NVAR	Mina Array Bea	78.18	52	P	P	08 20 43.9	+2.1
	comp=Z,0.4nm,0.7s,baz=273,slow=6.8,SNR=4.0						
TXAR	Lajitas Array	93.33	53	P	P	08 21 59.6	+2.2
	comp=Z,0.3nm,0.7s,baz=316,slow=2.7,SNR=5.6						

IDC ***25*** *08:11:01.1±2.9, 36.°32N×22.°52E, h0^{km}, mb3.7/4, mb1 3.7/6, mb1mx3.5/34, mbtmp3.6/6, ML3.1/2, Error ellipse: s-maj=56.6km s-min=24.1km az=39.0*

ATH ***25*** *08:11:01.2, 35.°90N×22.°37E, h10^{km}±31^{km}, ML3.3/3, Error ellipse: s-maj=31.6km s-min=1.4km az=0.0*

THE ***25*** *08:11:01.0, 35.°89N×22.°37E, h1^{km}±3^{km}, ML3.3/15, Error ellipse: s-maj=4.5km s-min=1.1km az=227.0*

ISC 25 08:11:00.1±1.5**, 35.°88N**±0.°04×**22.°32E**±0.°05**, h7**^{km}±9^{km}**, n45, σ1^{s}22**/65**, mb4.0**/4**, Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTHR	Kythira	0.67	55	P	Pg	08 11 13.1	+0.1
KTHR				S	Sg	08 11 21.4	-0.4
	5µm,0.3s						
KTHA	Kythira Island	0.71	58	P	Pg	08 11 13.6	-0.2
KTHA				S	Sg	08 11 22.8	-0.1
KTHA				AML	AML	08 11 23.7	
	comp=N,4009µm,0.3s						
KTHA				AML	AML	08 11 26.6	
	comp=E,14020µm,0.7s						
KTHA	Kythira Island	0.71	58	P	Pg	08 11 13.6	-0.2
KTHA				S	Sg	08 11 23.3	+0.4
	comp=E,3µm,0.3s						
ANKY	Antikythira Is	0.79	91	P	Pg	08 11 15.1	-0.2
ANKY				S	Sg	08 11 26.2	+0.5
ANKY				AML	AML	08 11 28.6	
	comp=N,3729µm,0.5s						
ANKY				AML	AML	08 11 28.7	
	comp=E,4292µm,0.7s						
ANKY	Antikythira Is	0.79	91	P	Pg	08 11 15.2	-0.2
ANKY				S	Sb	08 11 26.8	-0.5
	comp=E,2µm,0.6s						
VLI	Veliai	0.97	30	P	Pg	08 11 18.6	-0.2
VLI	Veliai	0.97	30	P	Pg	08 11 18.7	-0.2
VLI				S	Sb	08 11 33.7	+1.2
	comp=E,2µm,0.5s						
MNVA	Monemvasia	0.99	35	P	Pg	08 11 19.3	+0.1
PYL	PYLOS	1.12	335	P	Pg	08 11 21.3	-0.3
PYL	PYLOS	1.12	335	P	Pg	08 11 21.6	0.0
PYL				S	Sb	08 11 37.8	+1.2
	comp=E,1µm,0.5s						
IMMV	Iera Moni Meta	1.41	107	P	Pn	08 11 26.0	-0.3
IMMV				AML	AML	08 11 46.9	
	comp=N,2435µm,0.5s						
IMMV				AML	AML	08 11 49.3	
	comp=E,1896µm,0.3s						
IMMV	Iera Moni Meta	1.41	107	P	Pn	08 11 26.2	-0.1
IMMV				S	Sb	08 11 46.1	+1.0
	comp=E,1µm,0.4s						
VLX	Vlachokerasia	1.49	2	P	Pn	08 11 27.5	+0.1
VLX	Vlachokerasia	1.49	2	P	Pn	08 11 27.9	+0.4
VLX				S	Sn	08 11 49.5	+2.2
	comp=E,1µm,0.5s						
VAM	Vamos	1.60	107	P	Pn	08 11 29.9	+1.0
VAM	Vamos	1.60	107	P	Pn	08 11 29.9	+1.0
VAM				S	Sg	08 11 52.0	+0.5
	comp=E,722nm,0.5s						
KRND	KRANIDI	1.64	24	P	Pn	08 11 30.8	+1.3
KRND	KRANIDI	1.64	24	P	Pn	08 11 29.5	0.0
KRND				S	Sb	08 11 52.4	+0.7
	comp=E,705nm,0.6s						
GVD	Gavdhos	1.77	125	P	Pb	08 11 33.7	+0.7
EPID	Epidavros	1.85	20	P	Pb	08 11 34.8	+0.5
EPID	Epidavros	1.85	20	P	Pn	08 11 31.8	-0.5
KLV	Kalavryta, Ach	2.17	356	P	Pb	08 11 40.0	+0.3
KLV	Kalavryta, Ach	2.17	356	P	Pn	08 11 38.2	+1.5
LOUT	Loutraki	2.17	14	P	Pn	08 11 36.3	-0.4
LOUT				S	Sn	08 12 06.4	+2.5
	comp=E,242nm,0.9s						
IDI	Anoyia	2.17	105	Pn	Pn	08 11 39.1	+2.3
	comp=E,12nm,0.3s,baz=303,slow=17,SNR=13						
IDI				Sn	Sb	08 12 07.9	+0.9
	comp=E,14nm,0.3s,baz=276,slow=16,SNR=4.8						
IDI	Anoyia	2.17	105	P	Pn	08 11 38.7	+1.9
LTK	Loutraki	2.20	13	P	Pb	08 11 39.9	-0.4
LTK	Loutraki	2.20	13	P	Pn	08 11 38.0	+0.8
LTK				S	Sn	08 12 06.9	+2.2
	comp=E,270nm,0.6s						
RLS	Riolos of Patr	2.28	343	P	Pn	08 11 39.9	+1.7
RLS				S	Sn	08 12 09.3	+2.7
LAKA	Lakka	2.37	353	P	Pn	08 11 41.2	+1.6
LAKA				S	Sn	08 12 10.0	+1.0
	comp=E,662nm,0.7s						
ALIK	Aliki, Aigiali	2.38	356	P	Pn	08 11 41.0	+1.3
VILL	Villia	2.42	19	P	Pn	08 11 39.8	-0.3
VILL				S	Sn	08 12 11.8	+1.8
TRIZ	Trizonia	2.49	355	P	Pn	08 11 42.6	+1.5
KALE	Kalithea	2.51	357	P	Pb	08 11 45.3	-0.3
KALE	Kalithea	2.51	357	P	Pn	08 11 41.9	+0.4
SERG	Sergoula	2.54	355	P	Pn	08 11 42.3	+0.5
SERG				S	Sn	08 12 14.7	+1.6
	comp=E,152nm,0.6s						
DION	Dionisos Attik	2.55	30	P	Pn	08 11 42.9	+1.0
DION				S	Sn	08 12 14.2	+1.0
	comp=E,445nm,0.8s						
EFP	Efpalio	2.57	353	P	Pn	08 11 43.2	+1.0
EFP				S	Sn	08 12 16.3	+2.6
	comp=E,195nm,0.7s						
AGG	Agios Georgios	3.14	0	P	Pn	08 11 50.5	+0.4
BRTR	Keskin Array B	9.74	63	Pn	Pn	08 13 17.9	-3.0
	comp=E,0.1nm,0.3s,baz=254,slow=10,SNR=1.5						
BELG	Belogornoye	24.35	39	P	P	08 16 17.2	-1.3
	baz=245,slow=14						
ARCES	ARCESS Array B	33.76	2	P	P	08 17 40.5	-1.6
	comp=E,2.3nm,0.8s,baz=187,slow=8.6,SNR=7.4						
MKAR	Makanchi Array	45.31	57	P	P	08 19 17.2	-1.4
	comp=E,1.2nm,0.5s,baz=270,slow=7.6,SNR=14						
ZALV	Zalesovo Beam	46.19	47	P	P	08 19 24.1	-1.3
	comp=E,0.4nm,0.3s,baz=269,slow=8.1,SNR=2.5						
YKA	Yellowknife Ar	76.03	341	P	P	08 22 47.3	-0.6
	comp=E,0.1nm,0.6s,baz=42,slow=6.6,SNR=2.0						

NOU 25 08:15:16.2, 15.°33S×167.°52E, h123^{km}, MLv4.8, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.33	249	P	Pn	08 15 34.7	+1.1
DVP	Devils Point	2.47	165	P	Pn	08 15 55.7	0.0
YATNC	Mamie plateau,	6.72	185	P	Pn	08 16 51.5	-0.9
DZM	Mont Dzumac	6.78	188	P	Pn	08 16 53.1	-0.2
OUENC	Ouen Island, N	7.08	185	P	Pn	08 16 58.2	+1.0

KLM ***25*** *08:29:25, 1.°41N×96.°63E, h10^{km}, mb4.8*

IDC ***25*** *08:29:26.4±0.5, 1.°34N×97.°07E, h0^{km}, mb4.6/29, mb1 4.7/32, mb1mx4.5/63, mbtmp4.6/32, ML4.3/3, MS4.2/8, Ms1 4.2/8, ms1mx3.8/50, Error ellipse: s-maj=16.7km s-min=10.3km az=46.0*

DJA ***25*** *08:29:28.2±1.0, 1°N±3°×9°7E±°, h21^{km}±6^{km}, M4.8/15, mb4.8/11, mB5.1/4, MLv5.0/15, Mw(mB)4.4/4*

BJI ***25*** *08:29:29.1±0.0, 1.°25N×97.°20E, h37^{km}, mB5.4/34, mb4.9/62, Ms4.9/22, Ms7 4.7/21*

NEIC ***25*** *08:29:31.1±1.3, 1.°34N±0.°07×97.°09E±0.°07, h33^{km}±5^{km}, mb4.9/57, Error ellipse: s-maj=12.3km s-min=8.1km az=46.0*

ISC 25 08:29:30.4±0.4**, 1.°33N**±0.°05×**97.°06E**±0.°05**, h28**^{km}**, n216, σ1^{s}36**/217**, mb4.8**/77**, MS4.5**/14**, 5C-1D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSI	Gunungsitoli	0.52	93		Pn	08 29 41.6	-0.4
GSI	Gunungsitoli	0.52	93	P	Pb	08 29 41.3	+0.2
GSI				S	Sn	08 29 49.5	-0.4
PBSI	Pulau Batu	1.84	138	P	Pn	08 30 00.5	+0.3
TPTI		1.92	4	P	Pn	08 29 59.9	-1.4
RPSI	Rantau Prapat	2.31	54		Pn	08 30 06.9	+0.3
RPSI	Rantau Prapat	2.31	54		Pn	08 30 06.7	+0.2
PSI	Prapat	2.37	52	Pn	Pn	08 30 06.9	-0.7
	39nm,0.3s,baz=180,slow=3.7,SNR=166						
PSI				LR	LR	08 30 34.1	
	comp=Z,996nm,22.0s,baz=270,slow=30						
MNSI	Mandailing Nat	2.58	102	P	Pn	08 30 09.5	-0.8
TSI	Tuntungan	2.63	35	P	Pn	08 30 11.0	0.0
MLSI	Meulaboh, Aceh	2.99	347	P	Pn	08 30 15.1	-0.9
SISI	Saibi	3.33	142	P	Pn	08 30 19.4	-1.3
LHMI	Lhok Sumawe	3.87	358	Pn	Pn	08 30 28.5	+0.3
LHMI	Lhok Sumawe	3.87	358	P	Pn	08 30 27.3	-0.9
BKNI	Bangkinang	4.11	104		Pn	08 30 31.2	-0.2
BKNI	Bangkinang	4.11	104	P	Pn	08 30 31.5	+0.1
SDSI	Sungai Dareh	4.92	117	P	Pn	08 30 39.5	-3.0
IPM	Ipoh	5.05	52	Pn	Pn	08 30 44.2	-0.1
IPM	Ipoh	5.05	52	P	Pn	08 30 45.0	+0.6
KULM	Kulim	5.32	42	Pn	Pn	08 30 47.9	-0.3
KULM	Kulim	5.32	42	P	Pn	08 30 48.0	-0.1
PKDT	Phuket	6.64	11	P	Pn	08 31 03.0	-3.2
TRTT	Trang	6.97	22	P	Pn	08 31 08.7	-2.2
	0.4nm7µm98nm,0.4s						
SURT	Suratani	7.77	13	P	Pn	08 31 25.8	+4.1
	1.0nm,1.1s						
MNAI	Manna	8.17	134	Pn	Pn	08 31 26.7	-0.6
LHSI	Lahat	8.25	128	P	Pn	08 31 25.0	-3.3
MDSI	Maura Dua	9.17	129	P	Pn	08 31 39.3	-1.6
	35nm,0.8s						
PPBI	Pangkal Pinang	9.72	111	P	Pn	08 31 53.3	+4.8
KLSI		9.72	128	P	Pn	08 31 47.0	-1.6
	9.4nm,0.8s						
TPI	Tanjungpandan	11.35	111	P	Pn	08 32 11.9	+1.1
	413nm33nm,1.1s						
KSM	Kuching	13.25	89	P	Pn	08 32 40.0	+3.2
SRAK	Srakaew	13.53	21	P	Pn	08 32 44.0	+3.4
	4µm323nm,0.6s						
UTHA	Uthaitani	14.33	9	P	P	08 32 57.4	-1.0
	333nm20nm,0.6s						
UMPA	Umpang Tak	14.89	7	P	P	08 33 03.0	-1.6
	6µm14nm,0.6s						
SBUM	Sibu	15.20	86	Pn	Pn	08 33 03.3	+0.1
SBUM	Sibu	15.20	86	P	Pn	08 33 05.0	+1.7
CHAI	Chaiyaphum	15.27	18	P	P	08 33 08.6	-0.2
	437nm62nm,0.9s						
KHON	Khomkaen	15.96	21	P	P	08 33 16.0	-0.4
	4µm51nm,1.2s						
PHIT	Phitsanulok	16.10	12	P	P	08 33 18.9	+0.9
	94nm,0.8s						
UBPT	Khong Chiam	16.16	30	P	P	08 33 17.2	-1.5
	17nm,0.9s						
UBPT	Khong Chiam	16.16	30	Pn	Pn	08 33 15.5	-0.2
SUKH	Sukhothai	16.25	9	P	Pn	08 33 16.5	-0.3
	41nm,0.9s						
LOEI	Loei	16.60	14	P	Pn	08 33 21.0	-0.3
	1µm25nm,1.1s						
UTTA	Uttaradit	16.67	12	P	Pn	08 33 21.7	-0.5
	19nm,0.7s						
MHMT	Maesarieng	16.76	3	P	Pn	08 33 23.9	+0.5
	1µm17nm,0.8s						
CM05	Chiang Mai Arr	17.07	6	P	Pn	08 33 26.0	-1.2
	110nm13nm,0.9s						
CM04	Chiang Mai Arr	17.07	6	P	Pn	08 33 26.4	-0.8
	162nm20nm,0.8s						
CM13	Chiang Mai Arr	17.08	6	P	Pn	08 33 26.8	-0.6
	126nm17nm,1.0s						
CM01	Chiang Mai Arr	17.09	6	P	P	08 33 29.5	+0.5
	17nm,1.1s						
CM02	Chiang Mai Arr	17.10	6	P	Pn	08 33 27.1	-0.5
	156nm23nm,1.0s						
CM09	Chiang Mai Arr	17.11	6	P	Pn	08 33 26.9	-0.8
	202nm28nm,1.1s						
CM15	Chiang Mai Arr	17.11	6	P	P	08 33 29.4	+0.2
	350nm22nm,0.8s						
CM31	Chiang Mai Arr	17.12	6	P	P	08 33 29.9	+0.6
	653nm,0.8s						
CMAR	Chiang Mai Arr	17.12	6	P	Pn	08 33 27.1	-0.8
	1.3nm,0.3s,baz=194,slow=13,SNR=24						
CMAR				LR	LR	08 41 03.5	
	comp=Z,826nm,18.9s,baz=230,slow=41						
CMAR	Chiang Mai Arr	17.12	6	P	Pn	08 33 27.9	+0.1
CM36	Chiang Mai Arr	17.20	7	P	Pn	08 33 27.0	-1.8
LAMP	Lampang	17.27	8	P	Pn	08 33 29.2	-0.5
CM32	Chiang Mai Arr	17.30	6	P	P	08 33 32.0	+0.6
PALK	Pallekele	17.34	290	P	Pn	08 33 31.3	+0.6
	0.5nm,0.3s,baz=260,slow=12,SNR=2.4						
PALK				LR	LR	08 39 52.8	
	comp=Z,799nm,18.7s,baz=198,slow=36						
PALK	Pallekele	17.34	290	P	Pn	08 33 30.9	+0.3
CM35	Chiang Mai Arr	17.36	7	P	Pn	08 33 29.0	-1.9
CHTO	Chiang Mai	17.47	6	Pn	Pn	08 33 30.5	-1.7
CMMT	Chiang Mai	17.47	6	P	Pn	08 33 29.0	-3.2
	9.7nm,1.0s						
CM33	Chiang Mai Arr	17.48	6	P	Pn	08 33 30.0	-2.3
CM34	Chiang Mai Arr	17.53	7	P	Pn	08 33 31.0	-2.0
NONG	Nongkai	17.67	19	P	P	08 33 35.5	+0.1
	38nm,0.7s						
KKM	Kota Kinabalu	19.68	76	P	P	08 33 57.4	-0.3
KKM				IAmb	IAmb	08 34 03.1	
	comp=Z,34nm,0.7s						
SLVN	Son La	20.97	18	P	P	08 34 11.0	-0.6
SLVN				IAmb	IAmb	08 34 12.9	
	comp=Z,72nm,0.8s						
QIZ	Qiongzhong	21.60	35	P	P	08 34 18.5	+0.2
QIZ				sS	sS	08 38 31.0	+2.6
QIZ				LR	LR		
	comp=Z,990nm,14.9s						
QIZ				LR	LR		
	comp=Z,860nm,12.2s						
QIZ				LR	LR		
	comp=Z,680nm,14.7s						
MYLDM	Lahad Datu	21.74	79	P	P	08 34 20.0	+0.1
MYLDM				IAmb	IAmb	08 34 49.4	
	comp=Z,47nm,0.9s						
KAPI	Kappang	23.53	106	P	P	08 34 38.6	0.0
	comp=Z,7.9nm,0.4s,baz=292,slow=12,SNR=5.6						
KAPI				LR	LR	08 43 30.6	
	comp=Z,502nm,19.1s,baz=298,slow=36						
TOLI2	Tolitoli	23.72	90	P	P	08 34 39.2	-1.2
HYB	Hyderabad	24.22	312	*i* P	P	08 34 46.0	+0.9
KMI	Kunming	24.28	13	⇑P	P	08 34 46.5	+0.7
KMI				pP	pP	08 34 53.5	-0.5
KMI				sP	sP	08 34 59.0	+1.8
KMI				PP	PnPn	08 35 22.0	+5.7
KMI				S	S	08 38 59.5	-3.7
KMI				pmax	pmax		
	comp=Z,59nm,1.2s						
KMI				pmax	pmax		
	comp=Z,260nm,4.5s						
KMI				LR	LR		
	comp=Z,2µm,15.2s						
KMI				LR	LR		
	comp=Z,1µm,13.0s						
KMI				LR	LR		
	comp=Z,2µm,14.2s						
KMI	Kunming	24.28	13	P	P	08 34 47.0	+1.3
KMI				IAmb	IAmb	08 34 47.8	
	comp=Z,82nm,1.2s						
SHL	Shillong	24.61	349	P	P	08 34 48.1	-0.6
LUWI	Luwuk	25.82	95	P	P	08 35 00.8	+1.2
H08S2	Diego Garcia H	26.07	250	T	T	09 02 08.8	
	baz=71,slow=76,SNR=675						
H08S3	Diego Garcia H	26.08	250	T	T	09 02 09.0	
	baz=71,slow=76,SNR=4676						
H08S1	Diego Carcia H	26.09	250	T	T	09 02 10.1	
	baz=71,slow=76,SNR=370						
GYA	Guiyang	26.64	19	⇑P	P	08 35 06.3	-0.7
GYA				pP	pP	08 35 12.8	-2.4
GYA				S	S	08 39 38.5	-2.0
GYA				pmax	pmax		

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      comp=Z,24nm,1.0s
GYA                                LR     LR
      comp=Z,2µm,13.6s
GYA                                LR     LR
      comp=Z,640nm,12.6s
GYA                                LR     LR
      comp=Z,2µm,13.8s
ODAN  Odare             27.03 341 eP      P      08 35 11.8 +1.2
      comp=Z,97nm,0.7s
RAMN  Ramite            27.38 339 eP      P      08 35 15.4 +1.6
      comp=Z,47nm,0.6s
TAPN  Taplejung         27.38 342 eP      P      08 35 15.2 +1.3
      comp=Z,173nm,0.9s
PKI   Pulchoki          28.38 338 eP      P      08 35 23.8 +1.0
      comp=Z,142nm,1.6s
PKIN  Phulchoki         28.39 338 eP      P      08 35 23.6 +0.7
      comp=Z,81nm,1.2s
GUN   Gumba             28.51 339 eP      P      08 35 25.4 +1.3
      comp=Z,77nm,0.6s
DMN   Daman             28.53 337 eP      P      08 35 25.0 +0.9
      comp=Z,44nm,0.9s
LSA   Lhasa             28.77 349  P      P      08 35 27.0 +0.6
LSA                                IAmb   IAmb   08 35 29.1
      comp=Z,16nm,0.8s
BATI  Baumata           28.86 114  LR     LR     08 47 54.6
      comp=Z,991nm,20.1s,baz=227,slow=38
GKN   Gorkha            29.06 337 eP      P      08 35 30.0 +1.3
      comp=Z,159nm,1.1s
CD2   Chengdu           30.10  12  P      P      08 35 36.8 -0.9
CD2                                pmax   pmax
      comp=Z,20nm,0.9s
TPUB  Ta-pu             31.62  45  P      P      08 35 50.9 -0.4
TPUB                               IAmb   IAmb   08 35 52.2
      comp=Z,39nm,1.2s
PSA00 Pilbara Seismi    31.85 137  P      P      08 35 54.0 +0.8
PSA00                              IAmb   IAmb   08 36 12.9
      comp=Z,9.9nm,1.0s
YULB  Yu-li             32.15  45  P      P      08 35 56.3 +0.4
YULB                               IAmb   IAmb   08 35 57.2
      comp=Z,23nm,1.0s
SSLB  Suanglung         32.16  44  P      P      08 35 55.5 -0.5
SSLB                               IAmb   IAmb   08 35 57.6
      comp=Z,22nm,0.8s
WHN   Wuhan             33.37  28 ⇓P      P      08 36 06.5 +0.1
FITZ  Fitzroy Crossi    34.12 126  P      P      08 36 12.3 -0.9
      comp=Z,4.5nm,0.6s,baz=300,slow=5.7,SNR=12
FITZ  Fitzroy Crossi    34.12 126  P      P      08 36 12.3 -0.9
      baz=34,SNR=6.4
FITZ  Fitzroy Crossi    34.12 126  IAmb   IAmb   08 36 21.2
      comp=Z,5.5nm,0.8s
SIJI  Sorong            34.28  93  P      P      08 36 13.7 -0.9
      comp=Z,5.6nm,0.6s,baz=314,slow=13,SNR=2.1
XAN   Xi'an             34.38  18  P      P      08 36 14.0 -1.3
XAN                                pmax   pmax
      comp=Z,54nm,0.9s
XAN   Xi'an             34.38  18  P      P      08 36 13.8 -1.5
LZH   Lanzhou           35.15  10 ⇑P      P      08 36 28.5 +6.5
LZH                                pP     sP     08 36 38.3 +4.8
LZH                                sP     pP     08 36 42.0  +12
LZH                                pmax   pmax
      comp=Z,17nm,1.2s
LZH                                pmax   pmax
      comp=Z,170nm,5.8s
LZH                                LR     LR
      comp=N,610nm,13.6s
LZH                                LR     LR
      comp=E,810nm,13.0s
LZH                                LR     LR
      comp=Z,440nm,12.5s
NJ2   Nanjing           36.83  32 eP      P      08 36 38.5 +2.3
NJ2                                pmax   pmax
      comp=Z,5.0nm,0.5s
GTA   Gaotai            37.98   3 ⇑P      P      08 36 46.0 -0.1
GTA                                pP     pP     08 36 55.5 +1.2
GTA                                sP     sP     08 36 59.5 +1.9
GTA                                pmax   pmax
      comp=Z,12nm,1.0s
GTA                                pmax   pmax
      comp=Z,680nm,10.4s
GTA                                LR     LR
      comp=Z,390nm,13.9s
GTA                                LR     LR
      comp=Z,640nm,13.9s
GTA                                LR     LR
      comp=Z,640nm,13.9s
NIL   Nilore            39.13 328  P      P      08 36 55.8 +0.1
NIL                                IAmb   IAmb   08 37 01.4
      comp=Z,13nm,0.8s
JOW   Kunigami          39.26  47  P      P      08 36 57.0 +0.1
      comp=Z,56nm,0.6s,baz=242,slow=7.5,SNR=21
JOW   Kunigami          39.26  47  P      P      08 36 56.5 -0.4
H01W3 Cape Leeuwin H    39.42 158  T      T      09 18 36.4
      baz=334,slow=76,SNR=27
H01W2 Cape Leeuwin H    39.43 158  T      T      09 18 37.4
      baz=334,slow=76,SNR=28
H01W1 Cape Leeuwin H    39.44 158  T      T      09 18 37.6
      baz=334,slow=76,SNR=17
WRKA  Warakurna         40.03 133  P      P      08 37 03.9 +0.5
      baz=40,SNR=6.6
BTO   Baotou            40.82  15 eP      P      08 37 10.3 +0.5
HHC   Hu-ho-hao-te      41.47  17 eP      P      08 37 16.8 +1.7
HHC                                pmax   pmax
      comp=Z,16nm,1.0s
HHC                                pmax   pmax
      comp=Z,660nm,6.8s
WB0   Warramunga Arr    42.20 122  P      P      08 37 19.8 -1.4
WRA   Warramunga Arr    42.23 122  P      P      08 37 20.9 -0.6
      comp=Z,4.6nm,0.6s,baz=301,slow=9.1,SNR=67
WRA                                LR     LR     08 55 31.6
      comp=Z,308nm,21.5s,baz=300,slow=37
WRA   Warramunga Arr    42.23 122  P      P      08 37 20.2 -1.3
WRAB  Tennant Creek     42.23 122  P      P      08 37 20.7 -0.8
BJT   Baijiatuau        42.25  22  IAmb   IAmb   08 37 23.6
      comp=Z,26nm,0.6s
BJI   Beijing           42.27  22  P      P      08 37 22.0 +0.5
BJI                                pmax   pmax
      comp=Z,33nm,0.7s
WR0   Warramunga Arr    42.41 122  IAmb   IAmb   08 37 23.8
      comp=Z,8.8nm,0.7s
KSH   Kashi             42.59 336  P      P      08 37 23.5 -0.8
KSH                                sP     sP     08 37 40.3 +4.3
KSH                                PP     PP     08 39 05.0 +1.6
KSH                                S      S      08 43 41.8 -3.7
KSH                                pmax   pmax
      comp=Z,4.0nm,0.8s
KSH                                pmax   pmax
      comp=Z,350nm,11.1s
KSH                                LR     LR
      comp=Z,520nm,10.8s
KSH                                LR     LR
      comp=Z,460nm,11.4s
KSH                                LR     LR
      comp=Z,650nm,17.5s
WMQ   Urumqi            43.12 350 eP      P      08 37 29.8 +1.4
WMQ                                sP     sP     08 37 45.3 +5.2
WMQ                                pmax   pmax
      comp=Z,28nm,1.7s
WMQ                                pmax   pmax
      comp=Z,580nm,5.3s
WMQ                                LR     LR
      comp=Z,300nm,29.0s
WMQ                                LR     LR
      comp=Z,740nm,29.0s
WMQ                                LR     LR
      comp=Z,240nm,29.5s
WMQ   Urumqi            43.12 350  P      P      08 37 30.1 +1.6
WMQ                                IAmb   IAmb   08 37 30.8
      comp=Z,34nm,1.2s
FORT  Forrest           43.47 140  P      P      08 37 32.0 +0.6
      baz=44,SNR=11
FORT  Forrest           43.47 140  P      P      08 37 33.0 +1.6
FORT                               IAmb   IAmb   08 37 43.2
      comp=Z,22nm,0.8s
JSU   Suzuyama          43.54  43  P      P      08 37 32.4 +0.5
JSU                                IAmb   IAmb   08 37 32.7
      comp=Z,29nm,1.1s
ASAR  Alice Springs     43.59 127  P      P      08 37 32.4 -0.2
      comp=Z,3.3nm,0.7s,baz=297,slow=8.0,SNR=42
ASAR                               PcP    PcP    08 39 20.6 +0.7
      comp=Z,0.7nm,0.7s,baz=296,slow=3.1,SNR=5.3
ASAR                               ScP    ScP    08 43 12.1 +2.4
      comp=Z,0.4nm,0.9s,baz=298,slow=2.7,SNR=4.1
ASAR  Alice Springs     43.59 127  P      P      08 37 32.1 -0.4
DL2   Dalian            43.63  28  P      P      08 37 32.5  0.0
DL2                                pmax   pmax
      comp=Z,36nm,0.7s
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SHLS  Shalkode          44.51 342 eP      P      08 37 38.5 -1.3
      comp=Z,15nm,1.1s,baz=342
UZB   Uzynbulak         44.65 341 eP      P      08 37 40.1 -0.7
      baz=341
SATY  Saty              44.77 341 eP      P      08 37 41.5 -0.2
      comp=Z,6.5nm,0.8s,baz=340
JNU   Nakatsue          44.80  42  P      P      08 37 41.9 -0.2
      comp=Z,18nm,0.8s,baz=204,slow=2.3,SNR=9.7
JNU   Nakatsue          44.80  42  P      P      08 37 41.0 -1.1
KPKS  Kokpek            45.04 341 eP      P      08 37 44.0 +0.1
      baz=341
MDOK  Medeo             45.33 339 eP      P      08 37 45.6 -0.6
      baz=339
AAA   Alma-Ata          45.41 339 eP      P      08 37 46.9 +0.1
      baz=339
KSAR  Wonju Array Be    45.79  35  P      P      08 37 49.4 -0.4
KSRS  Korea Array       45.82  35  P      P      08 37 49.7 -0.3
      comp=Z,16nm,0.9s,baz=221,slow=9.1,SNR=50
KS19  Wonju Array Si    45.82  35  IAmb   IAmb   08 37 50.7
      comp=Z,23nm,0.8s
AAK   Ala-Archa         45.83 337  P      P      08 37 51.3 +1.1
      comp=Z,1.8nm,0.5s,baz=152,slow=6.3,SNR=5.8
AAK   Ala-Archa         45.83 337  P      P      08 37 50.5 +0.3
CHKK  Chushkaly         45.95 340 eP      P      08 37 51.0 +0.1
      baz=340
KUU   Kurty             46.21 339 eP      P      08 37 52.2 -0.8
      comp=Z,6.5nm,1.0s,baz=339
TDK   Taldyqorghan      46.51 342 eP      P      08 37 54.5 -0.8
      baz=342
QIS   Mount Isa         46.99 120  P      P      08 37 59.6 +0.1
      baz=47,SNR=5.2
SONM  Songino Array     47.02   9  P      P      08 37 59.9 +0.4
      comp=Z,15nm,0.7s,baz=190,slow=9.5,SNR=61
SONM                               PcP    PcP    08 39 32.0 +0.6
      comp=Z,1.4nm,0.6s,baz=194,slow=3.3,SNR=2.0
SONM  Songino Array     47.02   9  P      P      08 37 59.9 +0.4
SONM                               IAmb   IAmb   08 38 00.9
      comp=Z,15nm,0.8s
MK31  Makanchi Array    47.08 346  IAmb   IAmb   08 38 01.5
      comp=Z,12nm,0.9s
MKAR  Makanchi Array    47.08 346  P      P      08 38 00.3 +0.5
      comp=Z,7.2nm,0.5s,baz=158,slow=8.3,SNR=94
MKAR                               LR     LR     09 01 46.8
      comp=Z,324nm,19.0s,baz=44,slow=41
MKAR  Makanchi Array    47.08 346  P      P      08 37 58.5 -1.3
ZSN   Zaisan            47.14 349 eP      P      08 38 00.3  0.0
      comp=Z,16nm,0.8s,baz=348
MAKZ  Makanchi          47.17 346  P      P      08 38 00.5 +0.1
MAKZ                               IAmb   IAmb   08 38 02.1
      comp=Z,13nm,1.0s
IUG   Iuzhnay           47.33 333 eP      P      08 38 01.9 -0.1
      comp=Z,6.6nm,0.8s,baz=332
DZA   Taraz             47.35 334 eP      P      08 38 02.1 +0.2
      baz=334
JHS   Saijyo            47.42  41  P      P      08 38 02.2 -0.4
KKAR  Karatay Array     47.88 334  P      P      08 38 06.0  0.0
KKAR  Karatay Array     47.88 334  IAmb   IAmb   08 38 22.5
      comp=Z,5.0nm,0.8s
BTLS  Baital            48.03 338 eP      P      08 38 07.1 -0.1
      baz=338
COEN  Coen              48.15 110  P      P      08 38 07.9 -0.7
COEN                               IAmb   IAmb   08 38 08.7
      comp=Z,7.6nm,1.1s
CN2   Changchun         49.25  27 eP      P      08 38 16.0 -0.6
CN2                               epP     sP     08 38 27.0 -1.5
CN2                                pmax   pmax
      comp=Z,10.0nm,0.9s
BBOO  Buckleboo         50.07 136  P      P      08 38 23.8 +0.8
      baz=50,SNR=12
MTSU  Mount Surprise    50.35 115  P      P      08 38 26.1 +0.6
      baz=50,SNR=3.9
TLY   Talaya            50.48   5  P      P      08 38 26.6 +0.9
      comp=Z,7.4nm,0.8s,baz=197,slow=5.2,SNR=12
TLY   Talaya            50.48   5  P      P      08 38 26.7 +0.9
TLY                                IAmb   IAmb   08 38 27.2
      comp=Z,7.0nm,0.7s
SEM   Semipalatinsk     50.94 346 eP      P      08 38 28.9 -0.6
      comp=Z,4.7nm,0.8s,baz=346
PMG   Port Moresby      51.02 103  P      P      08 38 30.4 -0.2
      baz=115,slow=14
KURBB Kurchatov Arra    51.57 345  P      P      08 38 34.5 +0.5
      comp=Z,9.6nm,0.7s,baz=166,slow=7.0,SNR=75
KURK  Kurchatov         51.63 345  P      P      08 38 35.0 +0.6
KURK                               IAmb   IAmb   08 38 59.1
      comp=Z,15nm,0.8s
MAT   Matsushiro        51.69  42  P      P      08 38 33.4 -1.8
MJAR  Matsushiro Arr    51.69  42  P      P      08 38 35.4 +0.2
      comp=Z,3.4nm,0.8s,baz=219,slow=6.5,SNR=6.4
MJAR  Matsushiro Arr    51.69  42  IAmb   IAmb   08 38 35.8
      comp=Z,2.0nm,0.8s
MDJ   Mudanjiang        51.82  29  P      P      08 38 36.3 +0.3
MDJ                                ScP    ScP    08 43 36.5 -7.4
MDJ                                PcS    PcS    08 43 45.3 -1.4
MDJ                                S      S      08 45 59.3 +2.7
MDJ                                pmax   pmax
      comp=Z,15nm,1.1s
MDJ                                pmax   pmax
      comp=Z,1µm,12.2s
MDJ                                LR     LR
      comp=Z,430nm,13.2s
MDJ                                LR     LR
      comp=Z,390nm,12.8s
MDJ                                LR     LR
      comp=Z,620nm,13.7s
MDJ   Mudanjiang        51.82  29  IAmb   IAmb   08 38 38.8
      comp=Z,14nm,0.8s
HTT   Hallett           52.41 135  P      P      08 38 41.8 +1.1
      baz=53,SNR=10
CTA   Charters Tower    52.69 117  P      P      08 38 44.1 +1.2
      comp=Z,2.5nm,0.6s,baz=284,slow=8.0,SNR=4.7
USRK  Ussuriysk Ar.     52.73  31  P      P      08 38 43.3 +0.5
      comp=Z,25nm,0.8s,baz=232,slow=5.4,SNR=41
USRK  Ussuriysk Ar.     52.73  31  P      P      08 38 42.8  0.0
BRZS  Berezniki         52.74 340 eP      P      08 38 41.8 -0.9
      baz=340
OPO   Ambohidratompo    52.85 245  P      P      08 38 45.5 +1.2
      comp=Z,2.8nm,0.6s,baz=86,slow=11,SNR=3.0
ZALV  Zalesovo Beam     53.41 351  P      P      08 38 47.9 +0.4
      comp=Z,26nm,0.6s,baz=179,slow=6.6,SNR=90
ZALV  Zalesovo Beam     53.41 351  P      P      08 38 48.0 +0.4
STKA  Stephens Creek    53.55 132  P      P      08 38 50.0 +0.9
      comp=Z,6.0nm,0.7s,baz=298,slow=9.0,SNR=16
STKA                               LR     LR     09 03 24.1
      comp=Z,356nm,21.2s,baz=329,slow=38
STKA  Stephens Creek    53.55 132  P      P      08 38 49.3 +0.3
      baz=54,SNR=10
BVAR  Borovoye Array    56.08 341  P      P      08 39 06.5 -0.4
      comp=Z,6.6nm,0.7s,baz=160,slow=13,SNR=29
BRVK  Borovoye          56.14 341  P      P      08 39 07.3 -0.1
BRVK                               IAmb   IAmb   08 39 08.1
      comp=Z,14nm,1.1s
CMSA  Cobar Meteorol    56.49 130  P      P      08 39 10.3 +0.1
      baz=57,SNR=8.0
RMQ   Roma              56.97 123  P      P      08 39 14.0 +0.1
      baz=57,SNR=8.0
EIDS  Eidsvold          58.57 121  P      P      08 39 25.8 +0.7
      baz=59,SNR=7.2
AKTO  Aktyubinsk        59.05 332  P      P      08 39 27.9  0.0
      comp=Z,5.7nm,0.7s,baz=126,slow=14,SNR=7.7
YSS   Yuzh-Sakhalins    60.32  34  P      P      08 39 37.4 +0.7
PATS  Pohnpei           61.31  83  P      P      08 39 41.8 -2.2
      baz=61,SNR=3.6
ARU   Arti              63.01 337  P      P      08 39 54.3 -0.3
      comp=Z,2.0nm,0.5s,baz=134,slow=3.1,SNR=10
ARU   Arti              63.01 337  P      P      08 39 54.4 -0.3
ARU                                IAmb   IAmb   08 39 55.3
      comp=Z,17nm,1.1s
KBZ   Khabaz            63.88 319  P      P      08 40 00.9 +0.2
      comp=Z,5.5nm,0.8s,baz=120,slow=7.1,SNR=6.1
YAK   Yakutsk           65.33  16  P      P      08 40 09.5 -0.3
NRIK  Noril'sk          68.19 356  P      P      08 40 27.8 -0.1
      comp=Z,7.4nm,0.6s,baz=152,slow=5.7,SNR=21
NRIK  Noril'sk          68.19 356  P      P      08 40 27.8 -0.1
NRIK                               IAmb   IAmb   08 40 28.8
      comp=Z,20nm,1.2s
BRTR  Keskin Array B    68.92 312  P      P      08 40 33.2  0.0
      comp=Z,1.8nm,0.7s,baz=120,slow=7.5,SNR=3.0
MA2   Magadan           71.28  26  P      P      08 40 47.1  0.0
PETK  Petropavlovsk-    71.70  34  P      P      08 40 49.7 -0.1
      comp=Z,3.2nm,0.8s,baz=198,slow=7.3,SNR=3.8
TIXI  Tiksi             73.08  10  P      P      08 40 56.7 -0.9
TIXI                               IAmb   IAmb   08 40 57.8
      comp=Z,11nm,0.9s
AKASG Malin Array Be    75.07 322  P      P      08 41 09.2 -0.5
      comp=Z,3.8nm,0.6s,baz=90,slow=4.9,SNR=6.0
AKASG Malin Array Be    75.07 322  IAmb   IAmb   08 41 17.7
      comp=Z,1.6nm,0.7s
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MNK   Minsk             76.93 326 i P     P      08 41 19.8 -0.4
      comp=E,3.0nm,0.7s
MNK                               i P     P      08 41 19.8 -0.4
      comp=N,32nm,0.8s
MNK                               i P     P      08 41 19.8 -0.4
      comp=Z,28nm,0.8s
MNK                               i PcP   PcP    08 41 30.6 -0.6
MNK                               i PP    PP     08 44 12.6 -0.9
MNK                               i PPP   PPP    08 45 59.9
MNK                               i S     S      08 51 05.8 -0.6
MNK                               i SS    SS     08 56 03.1 -0.3
MNK                               i SSS   SSS    08 59 27.2
MNK                               i LR    LR     09 16 18.3
MNK                               i LRM   MLR    09 17 52.0
      comp=N,158nm,14.9s
MNK                               i LRM   MLR    09 18 02.8
      comp=E,8.0nm,10.8s
MNK                               i LRM   MLR    09 18 17.1
      comp=Z,180nm,16.3s
SYO   Syowa Base        80.08 198⇑eP      P      08 41 36.4 -0.9
ARCES ARCESS Array B    82.36 340  P      P      08 41 49.8 +0.4
      comp=Z,1.2nm,0.4s,baz=95,slow=5.5,SNR=21
GERES GERESS Array B    84.62 319  P      P      08 42 02.1 +0.5
      comp=Z,1.5nm,0.7s,baz=98,slow=5.9,SNR=6.6
GERES GERESS Array B    84.62 319  P      P      08 42 01.8 +0.2
CLL   Collm             85.24 321 eP      P      08 42 05.0 +0.5
IMAR  Indian Mountai    96.52  23  P      P      08 42 57.3 +0.2
NVAR  Mina Array Bea   128.76  36  PKP    PKiKP  08 48 37.1 +0.4
      comp=Z,0.6nm,0.8s,baz=286,slow=2.6,SNR=5.3
TXAR  Lajitas Array    143.63  31  PKP    PKPbc  08 49 01.4 +0.4
      comp=Z,0.8nm,0.8s,baz=96,slow=0.1,SNR=17
CPUP  Villa Florida    145.00 223  PKPbc  PKPdf  08 49 05.8 -0.2
      comp=Z,1.3nm,0.6s,baz=128,slow=3.3,SNR=7.9
SIV   San Ignacio      153.98 235  PKPbc  PKiKP  08 49 32.3 +3.7
      comp=Z,1.7nm,0.6s,baz=316,slow=1.9,SNR=11
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*IDC **25** 08:34:45.4±0.7, 31.°64N×50.°84E, h0^{km}, mb4.3/25,*
mb1 4.4/30, mb1mx4.2/57, mbtmp4.3/30, ML3.7/5, MS4.1/1,
Ms1 4.1/1, ms1mx2.7/55, Error ellipse: s-maj=16.3km
s-min=12.9km az=174.0

*BJI **25** 08:34:45.0±0.0, 31.°50N×51.°00E, h10^{km}, mB5.2/18,*
mb4.4/28, Ms4.6/5, Ms7 4.3/3

*TEH **25** 08:34:45.2, 31.°65N×51.°02E, h8^{km}, ML4.5*

*NEIC **25** 08:34:46.3±2.6, 31.°59N±0.°07×50.°80E±0.°09, h10^{km}±1^{km},*
Error ellipse: s-maj=12.7km s-min=11.7km az=125.0

*MOS **25** 08:34:47.0±1.4, 31.°60N×50.°88E, h26^{km}, mb4.7/22, Error*
ellipse: s-maj=8.0km s-min=5.2km az=98.2

*THR **25** 08:34:49.1±0.4, 31.°86N×50.°98E, h18^{km}±6^{km}, ML4.1*

*OMAN **25** 08:34:49.1, 31.°17N×50.°83E, h10^{km}, mb6.0/21*

*DSN **25** 08:34:52.2±2.4, 31.°10N×51.°11E, h10^{km}, ML4.6/10, Error*
ellipse: s-maj=30.3km s-min=12.1km az=10.0

ISC 25 08:34:47.3±0.3**, 31.°61N**±0.°03×**50.°99E**±0.°03**, h19**^{km}**, n271,**
σ**1^{s}82**/299**, mb4.5**/59**, MS4.3**/5**, 24C-8D, Northern and**
central Iran

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Code  Station Name         Δ°  AZ°   Phase ID          Time     Res
                                    Op     ISC        h  m  s   ISC
IBRJ  Brojen             0.37  38 ePg     Pg     08 34 52.9 -2.4
SHK1  Shahrekord         0.72 353 ePg     Pb     08 34 58.9 -2.5
KLNJ  Kolanjah           0.79 139 ePg     Pb     08 35 00.8 -1.9
KLNJ                              e              08 35 22.7
      comp=Z,99nm,0.6s
IPIR  Pirpir             1.07 355 ePg     Pb     08 35 05.7 -1.7
IGAR  Gharneh            1.19  48 e              08 35 26.3
      comp=Z,99nm,0.4s
IGAR                              ePg     Pn     08 35 08.0 -1.2
ABEH  Behbahan           1.19 212 ePg     Pg     08 35 09.6 -0.8
IRAM  Ramesheh           1.20  80 ePg     Pn     08 35 08.0 -1.3
IZEF  Zefreh             1.71  41 ePn     Pn     08 35 16.8 +0.5
IZEF                              e              08 35 20.3
      comp=Z,99nm,0.4s
IKLH  Kolahrood          1.77  16 ePn     Pn     08 35 18.0 +0.8
IKLH                              e              08 35 20.7
      comp=Z,99nm,0.5s
SHGR  Shooshtar-Gavs     1.93 285 ePn     Pb     08 35 21.9  0.0
SHGR                              eSg     Sg     08 35 48.0 -1.5
SHGR                               IAML          08 36 06.3
      comp=N,2µm,0.5s
SHGR  Shooshtar-Gavs     1.93 285 ePn     Pb     08 35 21.9  0.0
NASN  Na'in              1.94  52 ePn     Pb     08 35 21.6 -0.7
NASN  Na'in              1.94  52 ePn     Pb     08 35 21.6 -0.7
AHWZ  Ahwaz              2.03 263 ePn     Pb     08 35 22.9 -0.6
KAZ1  Kazerun            2.06 164 ePn     Pb     08 35 23.3 -0.8
KAZ1                              e              08 36 10.2
      comp=Z,99nm,0.6s
ISAD  Sadrabad           2.31  82 e       Pg     08 35 37.8 +6.0
      comp=Z,99nm,0.4s
SHI   Shiraz             2.36 146 ePn     Pn     08 35 27.2 +1.9
SHI                               e              08 36 26.8
      comp=Z,99nm,0.9s
GHVR  GHOM               2.87   5 ePn     Pn     08 35 32.7 +0.5
GHVR                              eSg     Sb     08 36 11.1 -1.6
GHVR  GHOM               2.87   5 ePn     Pn     08 35 32.7 +0.5
IKMR  Kamar-syah         2.91 311 ePn     Pn     08 35 33.8 +1.2
IKMR                              e              08 36 43.1
      comp=Z,99nm,1.0s
ICHK  Chekchek           2.97  77 ePn     Pn     08 35 35.9 +2.2
IMEH  Mehriz             3.10  93 ePn     Pn     08 35 37.7 +2.2
YZKH  Yazd               3.15  75 ePn     Pb     08 35 39.8 -3.0
YZKH  Yazd               3.15  75 ePn     Pb     08 35 39.8 -3.0
IDOB  Doab               3.21 313 ePn     Pn     08 35 37.8 +0.8
IQOM  Qom                3.22   1 ePn     Pn     08 35 38.9 +1.8
IKFM  Kafar-mosalman     3.27 306 ePn     Pn     08 35 38.6 +1.1
IKFM                              e              08 36 43.9
      comp=Z,99nm,0.7s
HSAM  Samen              3.28 323 ePn     Pn     08 35 39.9 +2.0
IVRN  Varamin            3.43  10 ePn     Pn     08 35 42.1 +2.3
UMR   Umm Al-Rimmam      3.49 235 eP             08 35 42.2
HAGD  Aghdareh           3.56 335 ePn     Pn     08 35 43.1 +1.4
QIR1  Qir                3.60 150 ePn     Pn     08 35 43.3 +1.2
QIR1                              e              08 36 36.7
      comp=Z,99nm,0.3s
MIB   Mutribah           3.63 241 eP             08 35 43.5
JHRM  Jahrom             3.82 143 ePn     Pn     08 35 47.8 +2.5
IRAZ  Razeghan           3.88 347 ePn     Pn     08 35 47.8 +1.6
RDF   Al-Radifah         4.00 229 eP             08 35 49.2
IALM  Almabolaq          4.01 325 ePn     Pn     08 35 49.5 +1.5
RST   Umm Al-Ruwaisa     4.04 240 eP             08 35 49.5
IMHD  Mahdasht           4.07 356 ePn     Pn     08 35 50.2 +1.5
ILAS  Lasjerd            4.10  23 ePn     Pn     08 35 51.1 +1.9
QABG  Abgarm-Qazvin      4.25 344 ePn     Pn     08 35 51.3  0.0
IGHG  Ghaleghazi         4.60 307 ePn     Pn     08 35 57.6 +1.5
IPRN  Peran              4.75  13 ePn     Pn     08 36 01.7 +3.7
QALM  Alamut, Qazvin     4.81 357 ePn     Pn     08 36 00.6 +1.6
KHGB  Koh Gabri          4.87 103 ePn     Pn     08 36 00.1 +0.3
TPRV  Parvadeh(Tabas     5.02  72 ePn     Pn     08 36 03.0 +1.3
TVBK  TV Kerman          5.22 107 ePn     Pn     08 36 07.7 +3.0
TNSJ  Nastanj            5.28  62 ePn     Pn     08 36 07.5 +2.2
NGRK  Negar Kerman       5.32 110 ePn     Pn     08 36 10.2 +4.1
TKDS  Koohdasht(Taba     5.54  67 ePn     Pn     08 36 11.5 +2.6
JRN   Qarnain Island     6.84 166  P      Pn     08 36 27.4 +0.7
SHME  Shamm              7.15 140  P      Pn     08 36 30.6 -0.3
SHME  Shamm              7.15 140  P      Pn     08 36 31.0 +0.1
SBZV  Sabzevar           7.27  47 ePn     Pn     08 36 36.0 +3.3
BANOM Banah              7.34 139 i P     Pn     08 36 32.8 -0.7
      SNR=19
BANOM                              S      Sn     08 37 52.4 -3.9
BANOM Banah              7.34 139  P      Pn     08 36 33.3 -0.2
      SNR=19
BANOM                              S      Sn     08 37 55.1 -1.1
SLWR  Sila               7.54 175  P      Pn     08 36 37.4 +1.1
MASF  Masafi             7.70 143  P      Pn     08 36 38.6  0.0
      SNR=26
MASF                               S      Sn     08 38 05.4 +0.1
MSFE  Esma-Masafi        7.71 143 i P     Pn     08 36 38.5 -0.2
      SNR=26
NAZ   Nazwa, Dubai       7.78 147 i P     Pn     08 36 40.7 +1.1
      SNR=10
NAZ   Nazwa, Dubai       7.78 147  P      Pn     08 36 40.8 +1.3
      SNR=10
MDH   Madha              7.83 142 i P     Pn     08 36 39.7 -0.6
      SNR=24
MDH   Madha              7.83 142  P      Pn     08 36 40.0 -0.3
      SNR=24
MDH                                S      Sn     08 38 07.3 -1.2
      SNR=24
AJN   Ajban              7.86 152  P      Pn     08 36 42.7 +2.0
AJN                                S      Sn     08 38 07.0 -2.1
ISFR  Sfrayin            7.94  45 ePn     Pn     08 36 45.2 +3.3
ASUD  Al Ashush, Dub     7.94 150 i P     Pn     08 36 42.5 +0.7
      SNR=17
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ASUD	Al Ashush, Dub	7.94	150	P	Pn	08 36 43.3	+1.5
	SNR=17						
ASUD				S	Sn	08 38 10.0	-1.2
FAQ	Al Faqa, Dubai	7.96	148	P	Pn	08 36 42.4	+0.5
FAQ				S	Sn	08 38 09.1	-2.3
	SNR=8.0						
UOSS	Minazif	8.08	144	*i* P	Pn	08 36 42.8	-0.8
	SNR=15						
UOSS	Minazif	8.08	144	Pn	Pn	08 36 43.4	-0.3
UOSS	Minazif	8.08	144	P	Pn	08 36 43.2	-0.4
UOSS				S	Sn	08 38 11.3	-3.2
HATD	Hatta, Dubai	8.14	145	*i* P	Pn	08 36 44.4	-0.1
	SNR=18						
HATD	Hatta, Dubai	8.14	145	P	Pn	08 36 46.3	+1.8
	SNR=18						
HATD				S	Sn	08 38 14.5	-1.5
ASHO	Ashiyiah	8.22	146	*i* P	Pn	08 36 45.4	-0.3
	SNR=22						
ASHO	Ashiyiah	8.22	146	P	Pn	08 36 45.6	-0.1
	SNR=23						
ASHO				S	Sn	08 38 16.0	-2.2
GEYT	Alibeck	8.60	41	Pn	Pn	08 36 54.2	+3.4
	comp=Z,0.7nm,0.3s,baz=220,slow=14,SNR=8.6						
GEYT	Alibeck	8.60	41		Pn	08 36 53.9	+3.1
GYA0B	ALIBECK ARRAY	8.60	41		Pn	08 36 49.7	-1.1
ALNE	Al Ain	8.62	150	P	Pn	08 36 50.7	-0.4
ALNE	Al Ain	8.62	150	P	Pn	08 36 51.0	-0.1
ALNE				S	Sn	08 38 25.5	-2.5
IMYA	Miami	8.91	56	*e*Pn	Pn	08 36 59.3	+4.1
SOHO	SOHO	8.92	145	*i* P	Pn	08 36 53.9	-1.3
	SNR=7.2						
SOHO	SOHO	8.92	145	P	Pn	08 36 54.1	-1.0
SOHO				S	Sn	08 38 31.5	-3.6
RAYN	Ar Rayn	9.41	212	*i* P	Pn	08 37 00.7	-1.3
	SNR=69						
RAYN	Ar Rayn	9.41	212	P	Pn	08 37 00.0	-2.0
RAYN	Ar Rayn	9.41	212	Pn	Pn	08 37 00.0	-2.0
ARQ	Araqi	9.59	148	P	Pn	08 37 03.3	-1.1
	SNR=8.6						
ARQ				S	Sn	08 38 48.8	-3.0
UMZA	Um Al Zommool	9.61	156	P	Pn	08 37 05.8	+1.2
UMZA				S	Sn	08 38 48.6	-3.6
HOQ	Hoqain	9.77	143	P	Pn	08 37 06.1	-0.7
HOQ				S	Sn	08 38 51.9	-4.1
HRA	Herat	9.85	71	Pn	Pn	08 37 10.5	+2.4
GNI	Garni	9.91	331	*i* P	Pn	08 37 09.1	+0.2
MARD	Mardin	10.17	307		Pn	08 37 10.5	-1.8
BIDO	Bidbid	10.25	140	P	Pn	08 37 12.3	-1.0
BIDO				S	Sn	08 39 03.3	-4.4
BSY	Bisya	10.42	146	P	Pn	08 37 14.5	-1.2
SMDO	Samad	10.58	142	P	Pn	08 37 17.6	-0.5
	SNR=11						
SMDO				S	Sn	08 39 11.7	-4.4
WSAR	Wadi Sarin	10.75	139	Pn	Pn	08 37 19.5	-0.8
	comp=Z,3.5nm,0.3s,baz=350,slow=14,SNR=32						
WSAR				Sn	Sn	08 39 15.3	-4.8
	comp=Z,3.3nm,0.3s,baz=299,slow=20,SNR=4.8						
JMDO	Jabal Madar	11.18	144	P	Pn	08 37 26.4	+0.3
WBK	Wadi Bani Khal	11.44	140	P	Pn	08 37 28.0	-1.7
	SNR=12						
WBK				S	Sn	08 39 32.4	-4.6
MHTO	MHTO	12.29	148	P	Pn	08 37 41.8	+0.5
	SNR=30						
ZEI	Tsey	12.50	335	*e*P	Pn	08 37 49.4	+5.1
ZEI				pmax	pmax		
	comp=Z,10.0nm,1.3s						
MMAI	Mount Meron Ar	13.26	280	Pn	Pn	08 37 54.1	-0.5
	comp=Z,0.6nm,0.3s,baz=84,slow=15,SNR=2.5						
KBZ	Khabaz	13.68	334	Pn	Pn	08 38 04.3	+4.2
	comp=Z,0.1nm,0.3s,baz=141,slow=8.0,SNR=6.4						
KBZ	Khabaz	13.68	334	*d i*P	Pn	08 38 02.3	+2.1
KBZ				pmax	pmax		
	comp=Z,4.0nm,1.0s						
SHA1	Shidzhatmaz	13.78	334	*i* P	Pn	08 38 04.9	+3.1
EIL	Elat	13.95	266	Pn	Pn	08 38 06.7	+2.8
	comp=Z,0.6nm,0.3s,baz=78,slow=11,SNR=2.4						
KIV	Kislovodsk	13.95	334	*d i*P	Pn	08 38 04.1	+0.1
KIV				*e*S	Sn	08 40 32.4	-6.0
KIV				pmax	pmax		
	comp=Z,24nm,1.1s						
KIV	Kislovodsk	13.95	334	Pn	P	08 38 08.5	-3.5
SHAO	Shalim	14.17	162	*i* P	Pn	08 38 04.6	-2.4
	SNR=9.4						
BR131	Keskin Array S	16.24	305	P	Pn	08 38 35.2	+0.6
BR131				pmax	pmax		
	comp=Z,18nm,0.8s						
BR131	Keskin Array S	16.24	305		Pn	08 38 35.2	+0.6
BRTR	Keskin Array B	16.24	305	Pn	Pn	08 38 34.3	-0.2
	comp=Z,0.5nm,0.3s,baz=125,slow=12,SNR=29						
BRTR	Keskin Array B	16.24	305	P	P	08 38 36.3	-1.2
BRTR	Keskin Array B	16.24	305		P	08 38 36.3	-1.2
ABKAR	Akbulak array	18.87	18	P	P	08 39 05.5	-0.8
ABKAR	Akbulak array	18.87	18	P	Pn	08 39 06.6	-0.3
ABKAR				IAmb	IAmb	08 39 16.9	
	comp=Z,18nm,0.7s						
AKTO	Aktyubinsk	19.52	14	P	Pn	08 39 14.2	-0.5
	comp=Z,0.4nm,0.3s,baz=195,slow=8.9,SNR=4.3						
SOCY	Socotra	19.53	171	P	P	08 39 10.8	-3.1
SOCY				IAmb	IAmb	08 39 13.9	
	comp=Z,27nm,1.0s						
VRH	Novokhopyorsk	20.74	343	*e*P	P	08 39 26.1	-0.5
VRH				pmax	pmax		
	comp=Z,60nm,0.8s						
BELG	Belogornoye	20.91	354	P	P	08 39 28.6	+0.2
	comp=Z,78nm,0.7s,baz=350,slow=2.5,SNR=20						
BELG	Belogornoye	20.91	354	*c i*P	P	08 39 28.3	-0.2
BELG				pmax	pmax		
	comp=Z,6.0nm,0.8s						
VSR	Storozhevoye	21.45	339	*e*P	P	08 39 32.9	-1.4
VSR				pmax	pmax		
	comp=Z,40nm,0.9s						
AAK	Ala-Archa	21.66	53	P	P	08 39 39.7	+2.9
	comp=Z,2.9nm,0.6s,baz=252,slow=11,SNR=3.5						
KSH	Kashi	21.75	62	P	P	08 39 37.0	-0.8
KSH				pP	pP	08 39 40.5	-3.5
KSH				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KSH				pmax	pmax		
	comp=Z,420nm,13.2s						
KSH				LR	LR		
	comp=Z,250nm,9.7s						
KSH				LR	LR		
	comp=Z,830nm,13.3s						
KSH				LR	LR		
	comp=Z,720nm,14.3s						
TIRR	Tirgusor	21.84	312	⇑P	P	08 39 39.2	+0.6
TIRR	Tirgusor	21.84	312	P	P	08 39 38.1	-0.5
TIRR				pmax	pmax		
	comp=Z,50nm,1.0s						
TIRR	Tirgusor	21.84	312	P	P	08 39 38.1	-0.5
TLCR		21.95	314	⇑P	P	08 39 39.0	-0.7
TPGR	Topolog	22.03	313	⇑P	P	08 39 40.2	-0.4
IDI	Anoyia	22.06	287	P	P	08 39 40.6	-0.5
	comp=Z,13nm,0.9s,baz=213,slow=10,SNR=3.0						
IDI	Anoyia	22.06	287	⇑P	P	08 39 40.1	-1.1
IDI	Anoyia	22.06	287	P	P	08 39 41.0	-0.2
IDI				IAmb	IAmb	08 39 53.4	
	comp=Z,49nm,1.2s						
SGDS	Sogindy	22.08	51	*e*P	P	08 39 41.6	+0.4
	comp=Z,6.7nm,1.4s,baz=51						
SGDS	Sogindy	22.08	51	*e*P	P	08 39 41.6	+0.4
SGDS				pmax	pmax		
	comp=Z,7.0nm,1.4s						
ALN	Alexandroupoli	22.09	302	P	P	08 39 39.9	-1.3
ALN				pmax	pmax		
	comp=Z,14nm,0.9s						
ALN	Alexandroupoli	22.09	302	P	P	08 39 39.9	-1.3
HARR	Harsova	22.25	312	⇓P	P	08 39 41.4	-1.6
CFR	Carcaliu	22.36	314	⇑P	P	08 39 43.5	-0.6
BTLS	Baital	22.41	47	*e*P	P	08 39 45.0	+0.2
	baz=47						
BTLS	Baital	22.41	47	*e*P	P	08 39 45.0	+0.2
RAZG	Razgrad	22.69	309	⇑P	P	08 39 47.8	+0.1
LPSR	Galich'ya Gora	22.74	341	*e*P	P	08 39 47.4	-0.7
LPSR				pmax	pmax		
	comp=Z,30nm,0.8s						
VASR	Vaslui	23.31	317	⇑P	P	08 39 53.9	-0.2
VRI	Vrincioaia	23.56	314	⇑P	P	08 39 56.8	+0.3
MDOK	Medeo	23.60	53	*e*P	P	08 39 57.9	+0.8
	baz=54						
MDOK	Medeo	23.60	53	*e*P	P	08 39 57.9	+0.8
PLOR	Plostina	23.60	314	⇓P	P	08 39 57.5	+0.5
SORM	Soroca	23.83	320	⇓P	P	08 39 58.0	-1.0
MLR	Muntele Rosu	23.87	313	P	P	08 40 01.0	+1.3
	comp=Z,8.5nm,0.8s,baz=86,slow=13,SNR=14						
MLR				LR	LR	08 49 58.2	
	comp=Z,447nm,18.1s,baz=344,slow=38						
MLR	Muntele Rosu	23.87	313	⇑P	P	08 39 59.8	+0.1
MLR	Muntele Rosu	23.87	313	P	P	08 40 00.6	+0.9
MLR				pmax	pmax		
	comp=Z,11nm,0.8s						
MLR	Muntele Rosu	23.87	313	P	P	08 40 00.6	+0.9
MLR				IAmb	IAmb	08 40 11.6	
	comp=Z,11nm,0.8s						
TESR	Tescani	23.92	315	⇑P	P	08 40 00.3	+0.3
VOIR		24.41	312	⇑P	P	08 40 05.4	+0.8
DOPR	Dopca	24.43	313	⇑P	P	08 40 05.3	+0.6
BIZ	Bicaz	24.46	316	⇓P	P	08 40 05.9	+0.9
SATY	Saty	24.50	54	*e*P	P	08 40 06.5	+1.0
	baz=55						
SATY	Saty	24.50	54	*e*P	P	08 40 06.5	+1.0
ARR	Arges	24.65	311	⇓P	P	08 40 06.8	+0.1
UZB	Uzynbulak	24.95	55	*e*P	P	08 40 10.7	+1.0
	comp=Z,5.3nm,0.6s,baz=55						
UZB	Uzynbulak	24.95	55	*e*P	P	08 40 10.7	+1.0
UZB				pmax	pmax		
	comp=Z,5.0nm,0.6s						
AKASG	Malin Array Be	24.98	326	P	P	08 40 09.1	-0.5
	comp=Z,23nm,0.9s,baz=134,slow=8.9,SNR=57						
AKASG	Malin Array Be	24.98	326	P	P	08 40 08.3	-1.3
AKBB	Malin Array Si	24.98	326	P	P	08 40 09.3	-0.3
AKBB				pmax	pmax		
	comp=Z,29nm,0.9s						
AKBB	Malin Array Si	24.98	326	P	P	08 40 09.3	-0.3
TDK	Taldyqorghan	25.18	50	*e*P	P	08 40 12.5	+0.9
	comp=Z,6.5nm,0.6s,baz=50						
TDK	Taldyqorghan	25.18	50	*e*P	P	08 40 12.5	+0.9
TDK				pmax	pmax		
	comp=Z,7.0nm,0.6s						
LOT	Lotru	25.24	311	⇑P	P	08 40 12.0	-0.1
BURAR	Bucovina Array	25.32	317	⇑P	P	08 40 13.7	+0.9
BURAR	Bucovina Array	25.32	317	P	P	08 40 13.2	+0.3
BUR08	Bucovina Ar. S	25.35	317	P	P	08 40 13.5	+0.4
BUR08				IAmb	IAmb	08 40 16.0	
	comp=Z,17nm,0.9s						
FNA	Florina	25.49	299	P	P	08 40 14.7	+0.3
FNA				pmax	pmax		
	comp=Z,14nm,0.9s						
FNA	Florina	25.49	299	P	P	08 40 14.7	+0.3
FNA				IAmb	IAmb	08 40 21.7	
	comp=Z,14nm,0.9s						
ARCR	ARCALIA	25.58	315	⇑P	P	08 40 15.8	+0.6
OBN	Obninsk	25.62	341	P	P	08 40 15.7	+0.4
	comp=Z,5.7nm,0.4s,baz=153,slow=4.5,SNR=4.6						
OBN	Obninsk	25.62	341	*e*P	P	08 40 15.8	+0.4
OBN				pmax	pmax		
	comp=Z,25nm,0.9s						
GZR	Gura Zlata	25.86	310	⇑P	P	08 40 17.4	-0.3
MOS	Moscow	25.89	343	*e*P	P	08 40 17.1	-0.7
HERR	Herculane	25.91	309	⇓P	P	08 40 17.8	-0.3
BOVS	Bovan	25.98	306	⇑P	P	08 40 18.7	-0.1
MDVR	Moldovita	26.34	308	⇑P	P	08 40 22.5	+0.4
DRGR		26.46	313	⇑P	P	08 40 23.2	+0.1
KIRV	Kirov	26.99	358	P	P	08 40 28.1	+0.5
	comp=Z,16nm,0.7s,baz=214,slow=2.8,SNR=5.6						
KIRV	Kirov	26.99	358	*ce*P	P	08 40 28.0	+0.3
UZH	Uzhgorod	27.53	316	*e*P	P	08 40 37.2	+4.6
UZH				*e*		08 40 42.1	
KOLS	Kolonicke sedl	27.68	317	*e*P	P	08 40 36.5	+2.5
KOLS	Kolonicke sedl	27.68	317	*e*P	P	08 40 36.5	+2.5
KWP	Kalwaria Pacla	27.77	319	P	P	08 40 35.6	+0.8
KWP				pmax	pmax		
	comp=Z,24nm,1.4s						
KWP	Kalwaria Pacla	27.77	319	P	P	08 40 35.6	+0.8
KWP				IAmb	IAmb	08 40 55.1	
	comp=Z,24nm,1.4s						
KURBB	Kurchatov Arra	27.87	39	P	P	08 40 38.1	+2.5
	comp=Z,0.5nm,0.5s,baz=244,slow=5.4,SNR=2.2						
KURK	Kurchatov	27.97	39	*c i*P	P	08 40 38.3	+1.7
KURK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
CRVS	Cervenica-Dubn	28.14	316	*e*P	P	08 40 44.9	+6.7
CRVS	Cervenica-Dubn	28.14	316	*e*	P	08 40 44.9	+6.7
MNK	Minsk	28.19	331	*i* P	P	08 40 40.1	+1.6
	comp=E,3.0nm,0.7s						
MNK				*i* P	P	08 40 40.1	+1.6
	comp=N,14nm,0.7s						
MNK				*i* P	P	08 40 40.1	+1.6
	comp=Z,23nm,0.7s						
MNK				*i* PPP	PPP	08 41 33.9	
MNK				*i* PcP	PcP	08 44 02.5	+11
MNK				*i* S	S	08 45 25.9	+3.0
MNK				*i* SS	SnSn	08 46 36.8	-2.6
MNK				*i* SSS	SSS	08 46 51.0	
MNK				*i* LQ	LQ	08 49 27.8	
MNK				*i* LR	LR	08 51 01.9	
MNK				*i* LRM	MLR	08 52 28.8	
	comp=E,28nm,14.5s						
MNK				*i* LRM	MLR	08 52 33.8	
	comp=Z,164nm,12.3s						
MNK				*i* LRM	MLR	08 52 53.4	
	comp=N,178nm,15.2s						
MKAR	Makanchi Array	28.37	49	P	P	08 40 42.6	+2.4
	comp=N,1.4nm,0.7s,baz=248,slow=8.4,SNR=2.4						
MKAR				PcP	PcP	08 43 54.0	+1.5
	comp=N,0.4nm,0.6s,baz=255,slow=2.8,SNR=2.6						
MKAR	Makanchi Array	28.37	49	P	P	08 40 40.7	+0.5
SEM	Semipalatinsk	28.70	41	*e*P	P	08 40 43.9	+0.5
	baz=41						
SEM	Semipalatinsk	28.70	41	*e*P	P	08 40 43.8	+0.5
NACGM	Naroch	28.93	331	*i* P	P	08 40 45.0	0.0
NACGM				*i* P	P	08 40 45.0	0.0
NACGM				*i* P	P	08 40 45.0	0.0
NACGM				*i* PP	PcP	08 43 47.4	-6.2
NACGM				*i* PPP	PPP	08 44 37.9	
NACGM				*i* S	S	08 45 39.5	+5.0
NACGM				*i* SS	SnSn	08 46 49.1	-8.3
NACGM				*i* SSS	SSS	08 48 04.1	
NACGM				*i* LQ	LQ	08 50 10.3	
NACGM				*i* LR	LR	08 52 44.0	
IDID	Didziasalis	29.23	331	*e*P	P	08 40 48.4	+0.7
IIGN	Ignalina	29.47	331	*e*P	P	08 40 50.4	+0.6
ISAL	Salakas	29.66	331	*e*P	P	08 40 52.3	+0.8
SUW	Suwalki	29.95	327	*e*P	P	08 40 54.3	+0.2
KLMR	Klimovskoe	30.21	349	*e*P	P	08 40 54.9	-1.4
KLMR				pmax	pmax		
	comp=Z,24nm,0.9s						
KLMR	Klimovskoe	30.21	349	*e*P	P	08 40 54.9	-1.4
KLMR				AMP		08 40 56.5	
	comp=Z,24nm,0.9s						
PABE	Paberze	30.53	329	*e*P	P	08 40 59.6	+0.4
WMQ	Urumqi	31.24	57	*e*P	P	08 41 09.5	+3.8
WMQ				pmax	pmax		
	comp=Z,11nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,420nm,6.1s						
WMQ				LR	LR		
	comp=Z,710nm,12.1s						
WMQ				LR	LR		
	comp=Z,720nm,15.7s						
DGZ	Jazzator, Alta	32.61	46	*i* P	P	08 41 19.3	+1.5
DGZ				pmax	pmax		
	comp=Z,8.0nm,2.1s						
GERES	GERESS Array B	32.86	312	P	P	08 41 21.0	+1.0
	comp=Z,0.5nm,0.4s,baz=104,slow=8.8,SNR=4.7						
GERES	GERESS Array B	32.86	312	*e*P	P	08 41 21.1	+1.2
GERES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
GERES	GERESS Array B	32.86	312	P	P	08 41 20.3	+0.3
ZALV	Zalesovo Beam	32.89	37	P	P	08 41 22.1	+2.1
	comp=Z,2.0nm,0.5s,baz=256,slow=11,SNR=5.1						
FIA1	FINESS Array S	33.98	339	P	P	08 41 29.0	-0.4
FINES	FINESS Array B	33.98	339	P	P	08 41 29.3	-0.1
	comp=Z,1.9nm,0.5s,baz=167,slow=6.8,SNR=3.5						
BNI	Bardonecchia	36.81	304	P	P	08 41 52.5	-1.6
BNI				pmax	pmax		
	comp=Z,27nm,0.9s						
BNI	Bardonecchia	36.81	304	P	P	08 41 52.5	-1.6
NC405	NORSAR Array S	39.04	331	P	P	08 42 11.1	-1.5
NC405				IAmb	IAmb	08 42 12.6	
	comp=Z,38nm,1.1s						
NB201	NORSAR Array S	39.18	331	P	P	08 42 13.1	-0.7
NB2	NORSAR Subarra	39.21	330	P	P	08 42 12.5	-1.6
	comp=Z,1.9nm,0.5s,baz=122,slow=8.6						
NOA	NORSAR Array B	39.21	330	P	P	08 42 13.2	-0.9
	comp=Z,2.4nm,0.5s,baz=121,slow=8.3,SNR=13						
NOA	NORSAR Array B	39.21	330	*e*P	P	08 42 12.8	-1.3
NOA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
KONO	Kongsberg	39.25	328	*ce*P	P	08 42 17.5	+3.2
KONO				pmax	pmax		
	comp=Z,117nm,2.5s						
NBO00	NORSAR Array S	39.39	330	P	P	08 42 13.7	-1.8
GTA	Gaotai	40.09	65	*e*P	P	08 42 24.0	+2.2
GTA				pP	pP	08 42 28.0	-0.4
GTA				sP	sP	08 42 31.5	+0.6
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,430nm,7.2s						
GTA				LR	LR		
	comp=Z,300nm,13.5s						
GTA				LR	LR		
	comp=Z,340nm,13.9s						
GTA				LR	LR		
	comp=Z,400nm,12.7s						
ARCES	ARCESS Array B	40.61	347	P	P	08 42 26.1	+0.5
	comp=Z,5.9nm,0.8s,baz=154,slow=9.5,SNR=7.0						
ARCES	ARCESS Array B	40.61	347	*e*P	P	08 42 27.5	+2.0
ARCES				pmax	pmax		
	comp=Z,6.0nm,0.8s						
NRIK	Noril'sk	43.04	18	*i* P	P	08 42 46.3	+0.9
NRIK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
LZH	Lanzhou	43.68	69	*e*P	P	08 42 53.3	+2.1
LZH				pP	pP	08 42 57.0	-0.9
LZH				sP	sP	08 43 00.3	0.0
LZH				pmax	pmax		
	comp=Z,11nm,1.1s						
LZH				pmax	pmax		
	comp=Z,130nm,5.0s						
SONM	Songino Array	44.61	52	P	P	08 43 00.6	+2.1
	comp=Z,1.2nm,0.7s,baz=298,slow=4.4,SNR=4.4						
SONM	Songino Array	44.61	52	IAmb	IAmb	08 43 03.6	
	comp=Z,1.3nm,0.8s						
ESDC	Sonseca Array	44.78	296	P	P	08 42 59.6	-0.3
	comp=Z,2.9nm,1.0s,baz=75,slow=9.5,SNR=6.2						
CMAR	Chiang Mai Arr	45.05	95	P	P	08 43 02.4	+0.3
	comp=Z,1.5nm,0.3s,baz=298,slow=7.9,SNR=1.8						
ULN	Ulaanbaatar	45.06	52	*i* P	P	08 43 03.3	+1.2
ULN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MVO	Moncorvo	46.91	299	*e*pP	P	08 43 19.3	+2.7
PBAR	Barrancos	47.38	295	*e*P	P	08 43 20.1	-0.2
PBAR				*e*pP	pP	08 43 23.0	-3.8
MTE	Manteigas	47.40	298	*e*pP	pP	08 43 23.7	-3.4
PCBR	Castelo Branco	47.44	297	*e*P	P	08 43 20.8	+0.1
PCBR				*e*pP	pP	08 43 24.1	-3.1
XAN	Xi'an	48.18	71	P	P	08 43 31.0	+4.4
XAN				pP	sP	08 43 36.8	+1.1
XAN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
PBDV	Barranco-do-Ve	48.26	294	*e*P	P	08 43 26.5	-0.6
GYA	Guiyang	48.51	81	⇑P	P	08 43 30.5	+1.2
GYA				pmax	pmax		
	comp=Z,5.0nm,1.8s						
PNCL	Nicolau / Gran	48.55	295	*e*P	P	08 43 29.2	-0.1
TOA0	Torodi Ar. Sit	48.71	259	P	P	08 43 30.9	0.0
TORD	Torodi Ar. Bea	48.71	259	P	P	08 43 30.7	-0.1
	comp=Z,11nm,1.0s,baz=55,slow=7.3,SNR=20						
TORD	Torodi Ar. Bea	48.71	259	P	P	08 43 30.7	-0.1
TORD				IAmb	IAmb	08 43 36.5	
	comp=Z,7.4nm,0.8s						
BOD	Bodaibo	49.62	39	*e*P	P	08 43 38.1	+0.9
BOD				pmax	pmax		
	comp=Z,7.0nm,1.2s						
KOWA	Kowa	52.87	264	P	P	08 44 01.6	-0.6
KOWA				IAmb	IAmb	08 44 07.9	
	comp=Z,9.8nm,1.1s						
DAG	Danmarks Havn	54.83	345	*i* P	P	08 44 14.5	-1.1
DAG	Danmarks Havn	54.83	345	*i* P	P	08 44 14.5	-1.1
DAG	Danmarks Havn	54.83	345	*i* P	P	08 44 14.6	-1.1
TIXI	Tiksi	56.53	22	*i* P	P	08 44 28.7	+0.8
NJ2	Nanjing	56.73	70	*e*P	P	08 44 29.8	-0.2
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
ZEA	Zeya	57.31	43	*e*P	P	08 44 34.5	+0.7
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
DBIC	Dimbokro	57.59	257	P	P	08 44 38.2	+1.9
	comp=Z,4.2nm,0.9s,baz=59,slow=7.1,SNR=4.8						
KIC	Kosan Boka	57.67	256	*e*P	P	08 44 36.7	-0.1
	comp=Z,18nm,1.1s						
TIC	Toumodi	57.74	257	*e*P	P	08 44 38.3	+0.9
LIC	Lamto	57.98	256	*e*P	P	08 44 38.7	-0.3
	comp=Z,33nm,0.9s						
SUMG	Summit	60.01	340	*i* P	P	08 44 52.0	-0.7
SUMG	Summit	60.01	340	P	P	08 44 53.0	+0.3
SUMG				pmax	pmax		
	comp=Z,6.0nm,0.9s						
SUMG	Summit	60.01	340	P	P	08 44 53.0	+0.3
SUMG				IAmb	IAmb	08 45 03.6	
	comp=Z,5.8nm,0.9s						
SUMG	Summit	60.01	340	*i* P	P	08 44 52.0	-0.7
KLR	Kul'dur	61.07	48	*i* P	P	08 45 00.2	+0.4
KLR				pmax	pmax		
	comp=Z,9.0nm,2.5s						
KSRS	Korea Array	62.00	61	P	P	08 45 08.2	+1.9
	comp=Z,2.1nm,0.6s,baz=280,slow=6.4,SNR=8.1						
KSRS	Korea Array	62.00	61	*e*P	P	08 45 09.7	+3.4
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BOSA	Boshof	64.71	205	P	P	08 45 25.4	+1.0
	comp=Z,4.0nm,0.8s,baz=2.5,slow=7.7,SNR=5.9						
SEY	Seymchan	67.25	29	*i* P	P	08 45 41.6	+1.5
TOLK	Toolik Lake Re	78.89	8		P	08 46 49.8	+0.8
TOLK				IAmb	IAmb	08 46 52.8	
	comp=Z,5.3nm,0.8s						
IMAR	Indian Mountai	80.86	10	P	P	08 47 00.2	+0.6
ILAR	Eielson Array	82.92	8	P	P	08 47 11.6	+1.1
	comp=Z,0.8nm,0.7s,baz=325,slow=4.9,SNR=4.6						
ILAR	Eielson Array	82.92	8	*e*P	P	08 47 13.3	+2.8
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
FCC	Fort Churchill	85.38	343	P	P	08 47 22.8	-0.3
FCC				pmax	pmax		
	comp=Z,4.0nm,1.0s						
FCC	Fort Churchill	85.38	343	P	P	08 47 22.8	-0.3
FCC				IAmb	IAmb	08 47 23.9	
	comp=Z,4.1nm,1.0s						
YKA	Yellowknife Ar	85.51	353	P	P	08 47 23.2	-0.5
	comp=Z,0.6nm,0.7s,baz=21,slow=5.6,SNR=11						
YKA	Yellowknife Ar	85.51	353	*e*P	P	08 47 23.4	-0.3
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
SUA	Susitna One	85.58	10	P	P	08 47 24.1	-0.2
WRA	Warramunga Arr	94.81	110	P	P	08 48 09.9	+1.7
	comp=Z,0.4nm,0.8s,baz=317,slow=3.9,SNR=2.1						
ASAR	Alice Springs	96.41	114	P	P	08 48 16.8	+1.3
	comp=Z,0.3nm,0.7s,baz=300,slow=4.2,SNR=2.3						

IDC 25 08:35:00.0±2.0,**1°.96N**×**128°.01E**,**h0**km,**mb3.6**/3,
mb1 3.7/3,**mb1mx3.3**/48,**mbtmp3.6**/3,**Error ellipse:**
s-maj=169.5km s-min=29.0km az=69.0,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.64	164	P	P	08 40 02.6	-0.2
	0.4nm,0.7s,baz=345,slow=10,SNR=2.5						
SONM	Songino Array	49.37	341	P	P	08 43 52.1	+0.6
	0.8nm,0.7s,baz=151,slow=6.6,SNR=3.1						
MKAR	Makanchi Array	59.72	325	P	P	08 45 06.7	0.0
	0.9nm,0.5s,baz=114,slow=8.1,SNR=9.5						
KURBB	Kurchatov Arra	63.90	327	P	P	08 45 34.4	-0.3
	0.5nm,0.5s,baz=125,slow=6.0,SNR=12						

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*TEH **25** 08:42:56.4, 31°.64N×51°.00E, h8km, ML3.7*
*IDC **25** 08:42:56.3±1.4, 31°.59N×50°.83E, h0km, mb3.9/11,*
mb1 4.0/13, mb1mx3.7/54, mbtmp3.9/13, ML3.8/2, Error
ellipse: s-maj=28.2km s-min=20.6km az=176.0
*THR **25** 08:42:58.0±0.6, 31°.59N×51°.02E, h14km±5km, ML3.7*
ISC 25 08:42:57.5±0.6,**31°.58N**±0°.03×**50°.95E**±0°.04,**h10**km,**n54**,
σ**1s.57**/57,**mb3.8**/11,**Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IBRJ	Brojen	0.43	39	*e*Pg	Pg	08 43 04.2	-1.8
SHK1	Shahrekord	0.75	356	*e*Pg	Pg	08 43 10.2	-1.9
SHK1				*e*		08 43 24.9	
	comp=Z,99nm,0.7s						
KLNJ	Kolanjah	0.79	135	*e*Pg	Pg	08 43 12.3	-0.5

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KLNJ				*e*		08 43 33.3	
	comp=Z,99nm,0.3s						
IPIR	**Pirpir**	**1.11**	**358**	*e*Pg	**Pg**	**08 43 16.8**	**-2.1**
ABEH	**Behbahan**	**1.14**	**212**	*e*Pg	**Pn**	**08 43 20.3**	**+0.7**
IGAR	**Gharneh**	**1.24**	**48**	*e*Pg	**Pn**	**08 43 18.9**	**-2.3**
IGAR				*e*		08 43 24.1	
	comp=Z,99nm,0.2s						
IRAM	**Ramesheh**	**1.24**	**79**	*e*Pg	**Pn**	**08 43 20.0**	**-1.2**
IRAM				*e*		08 43 46.0	
	comp=Z,99nm,0.4s						
IKLH	**Kolahrood**	**1.82**	**17**	*e*Pn	**Pn**	**08 43 29.1**	**0.0**
IKLH				*e*		08 44 00.1	
	comp=Z,99nm,0.6s						
SHGR	**Shooshtar-Gavs**	**1.90**	**287**	*e*Pg	**Pb**	**08 43 33.3**	**+1.0**
SHGR				*e*Sg	**Sg**	**08 43 59.7**	**+1.0**
SHGR	**Shooshtar-Gavs**	**1.90**	**287**	*e*Pn	**Pb**	**08 43 33.3**	**+1.0**
AHWZ	**Ahwaz**	**1.98**	**264**	*e*Pn	**Pb**	**08 43 33.3**	**-0.4**
NASN	**Na'in**	**1.99**	**52**	*e*Pn	**Pn**	**08 43 32.8**	**+1.2**
NASN				*e*Sg	**Sn**	**08 43 59.2**	**+2.4**
NASN	**Na'in**	**1.99**	**52**	*e*Pn	**Pn**	**08 43 32.8**	**+1.2**
KAZ1	**Kazerun**	**2.03**	**163**	*e*Pn	**Pb**	**08 43 35.0**	**+0.4**
KAZ1				*e*		08 44 13.4	
	comp=Z,99nm,1.0s						
SHI	**Shiraz**	**2.35**	**145**	*e*Pn	**Pn**	**08 43 38.5**	**+2.1**
AHBU	**AHRAM**	**2.72**	**174**	*e*Pn	**Pn**	**08 43 43.2**	**+2.0**
ANAR	**Anarak**	**2.85**	**55**	*e*Pn	**Pn**	**08 43 44.9**	**+1.7**
IKMR	**Kamar-syah**	**2.91**	**312**	*e*Pn	**Pn**	**08 43 45.3**	**+1.5**
IKMR				*e*		08 44 51.1	
	comp=Z,99nm,1.0s						
GHVR	**GHOM**	**2.91**	**6**	*e*Pn	**Pn**	**08 43 45.7**	**+1.7**
GHVR				IAML		08 44 35.3	
	comp=E,199nm,0.8s						
GHVR	**GHOM**	**2.91**	**6**	*e*Pn	**Pn**	**08 43 45.7**	**+1.7**
ICHK	**Chekchek**	**3.02**	**76**	*e*Pn	**Pn**	**08 43 47.2**	**+1.6**
IMEH	**Mehriz**	**3.14**	**92**	*e*Pn	**Pn**	**08 43 50.3**	**+3.1**
YZKH	**Yazd**	**3.20**	**74**	*e*Pn	**Pn**	**08 43 49.6**	**+1.6**
YZKH	**Yazd**	**3.20**	**74**	*e*Pn	**Pn**	**08 43 49.6**	**+1.6**
IDOB	**Doab**	**3.21**	**314**	*e*Pn	**Pn**	**08 43 49.1**	**+0.8**
IQOM	**Qom**	**3.26**	**2**	*e*Pn	**Pn**	**08 43 49.5**	**+0.5**
IKFM	**Kafar-mosalman**	**3.26**	**307**	*e*Pn	**Pn**	**08 43 49.9**	**+1.2**
IKFM				*e*		08 44 57.5	
	comp=Z,99nm,0.6s						
HSAM	**Samen**	**3.29**	**324**	*e*Pn	**Pn**	**08 43 51.0**	**+1.7**
HSAM				*e*		08 44 59.1	
	comp=Z,99nm,1.2s						
HAGD	**Aghdareh**	**3.58**	**335**	*e*Pn	**Pn**	**08 43 54.0**	**+0.7**
MIB	**Mutribah**	**3.58**	**241**	*e*P		08 43 55.2	
IRAZ	**Razeghan**	**3.91**	**348**	*e*Pn	**Pn**	**08 43 59.9**	**+2.0**
RDF	**Al-Radifah**	**3.95**	**229**	*e*P		08 44 01.2	
RST	**Umm Al-Ruwaisa**	**3.99**	**240**	*e*P		08 44 00.8	
IALM	**Almabolaq**	**4.02**	**325**	*e*Pn	**Pn**	**08 44 00.7**	**+1.3**
QABG	**Abgarm-Qazvin**	**4.28**	**345**	*e*Pn	**Pn**	**08 44 03.5**	**+0.6**
IFIR	**Firoozkooh**	**4.33**	**20**	*e*Pn	**Pn**	**08 44 05.8**	**+2.2**
IANJ	**Anjilo**	**4.61**	**32**	*e*Pn	**Pn**	**08 44 09.9**	**+2.5**
QALM	**Alamut, Qazvin**	**4.85**	**357**	*e*Pn	**Pn**	**08 44 11.8**	**+1.0**
KHGB	**Koh Gabri**	**4.90**	**103**	*e*Pn	**Pn**	**08 44 14.5**	**+3.1**
IDHR	**Dehrash**	**4.93**	**310**	*e*Pn	**Pn**	**08 44 12.6**	**+0.7**
IDHR				*e*		08 45 18.7	
	comp=Z,99nm,0.3s						
IGLO	**Ghaloghah**	**5.47**	**25**	*e*Pn	**Pn**	**08 44 21.4**	**+2.2**
GENO	**Geno**	**6.17**	**131**	*e*Pn	**Pn**	**08 44 28.9**	**0.0**
WSAR	**Wadi Sarin**	**10.74**	**139**	Pn	**Pn**	**08 45 31.9**	**+0.4**
	comp=Z,1.2nm,0.3s,baz=355,slow=14,SNR=12						
WSAR				Sn	**Sn**	**08 47 27.3**	**-4.6**
	comp=Z,0.4nm,0.3s,baz=337,slow=23,SNR=1.9						
BRTR	**Keskin Array B**	**16.23**	**305**	Pn	**Pn**	**08 46 45.4**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=135,slow=13,SNR=1.9						
BELG	**Belogornoye**	**20.95**	**354**	P	**P**	**08 47 40.3**	**0.0**
	comp=Z,11nm,0.7s,baz=162,slow=13,SNR=4.1						
IDI	**Anoyia**	**22.04**	**287**	P	**P**	**08 47 51.5**	**-0.8**
	comp=Z,5.7nm,0.6s,baz=32,slow=9.5,SNR=1.5						
MLR	**Muntele Rosu**	**23.87**	**313**	P	**P**	**08 48 11.6**	**+0.4**
	comp=Z,2.5nm,0.9s,baz=153,slow=6.8,SNR=2.4						
AKASG	**Malin Array Be**	**24.99**	**326**	P	**P**	**08 48 20.9**	**-0.4**
	comp=Z,2.7nm,0.6s,baz=134,slow=8.9,SNR=7.8						
KURBB	**Kurchatov Arra**	**27.93**	**39**	P	**P**	**08 48 48.9**	**+1.1**
	comp=Z,0.6nm,0.8s,baz=239,slow=8.8,SNR=3.9						
MKAR	**Makanchi Array**	**28.42**	**49**	P	**P**	**08 48 53.2**	**+0.9**
	comp=Z,0.4nm,0.8s,baz=252,slow=7.4,SNR=4.1						
ZALV	**Zalesovo Beam**	**32.95**	**37**	P	**P**	**08 49 33.1**	**+1.0**
	comp=Z,0.4nm,0.4s,baz=262,slow=10.0,SNR=2.3						
FINES	**FINESS Array B**	**34.00**	**339**	P	**P**	**08 49 40.5**	**-0.6**
	comp=Z,2.3nm,0.9s,baz=150,slow=9.7,SNR=2.0						
NB2	**NORSAR Subarra**	**39.23**	**331**	P	**P**	**08 50 24.3**	**-1.5**
	comp=Z,0.5nm,0.5s,baz=120,slow=8.6						
NOA	**NORSAR Array B**	**39.23**	**331**	P	**P**	**08 50 24.9**	**-0.9**
	comp=Z,0.8nm,0.5s,baz=122,slow=8.3,SNR=4.8						
ARCES	**ARCESS Array B**	**40.64**	**347**	P	**P**	**08 50 37.5**	**+0.1**
	comp=Z,3.6nm,0.9s,baz=157,slow=9.8,SNR=3.5						
TORD	**Torodi Ar. Bea**	**48.66**	**259**	P	**P**	**08 51 41.9**	**-0.2**
	comp=Z,1.1nm,0.5s,baz=53,slow=8.7,SNR=7.8						
YKA	**Yellowknife Ar**	**85.54**	**353**	P	**P**	**08 55 35.3**	**-0.2**
	comp=Z,0.2nm,0.6s,baz=22,slow=5.5,SNR=3.2						

IDC ***25*** *08:46:29.5±6.6, 36.°81N×144.°00E, h0^{km}, mb3.6/3, mb1 3.5/5, mb1mx3.3/46, mbtmp3.6/5, ML2.8/2, Error ellipse: s-maj=114.4km s-min=41.6km az=141.0*

JMA ***25*** *08:46:40.7±0.1, 37.°47N×142.°87E, h42^{km}, M3.3*

ISC 25 08:46:44.5±1.7**, 37.°56N**±0.°07×**142.°7E**±0.°1**, h35**^{km}**, n24, σ1**^{s}**01**/28**, mb3.5**/4**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**1.25**	**308**	P	**Pn**	**08 47 04.2**	**-1.2**
JIKH				*e*S	**Sn**	**08 47 21.5**	**+0.5**
JIO	**Ouri**	**1.41**	**310**	P	**Pn**	**08 47 06.7**	**-0.9**
JIO				*e*S	Sn	08 47 25.1	+0.1
JMST	**Minamisoumatoc**	**1.47**	**277**	P	**Pn**	**08 47 06.8**	**-1.6**
JMST				*e*S	**Sn**	**08 47 26.3**	**-0.1**
JFK	**Kawauchi**	**1.48**	**263**	P	**Pn**	**08 47 07.2**	**-1.5**
JFK				*e*S	**Sn**	**08 47 26.4**	**-0.5**
JMM	**Marumori**	**1.56**	**282**	P	**Pn**	**08 47 08.4**	**-1.3**
JMM				*e*S	**Sn**	**08 47 29.3**	**+0.6**
ONAJ	**Iwakimizuishiy**	**1.60**	**254**	P	**Pn**	**08 47 08.8**	**-1.5**
ONAJ				*e*S	**Sn**	**08 47 28.7**	**-1.1**
JOU	**Okura**	**1.82**	**297**	P	**Pn**	**08 47 12.7**	**-0.6**
JMK	**Ichinoseki**	**1.83**	**320**	P	**Pn**	**08 47 12.5**	**-0.9**
JMK				*e*S	**Sn**	**08 47 36.1**	**+0.8**
JFT	**Otama**	**1.90**	**270**	P	**Pn**	**08 47 13.8**	**-0.6**
JOM	**Ohasama**	**2.22**	**330**	P	**Pn**	**08 47 18.1**	**-0.7**
JYK	**Kaneyama**	**2.31**	**307**	P	**Pn**	**08 47 19.7**	**-0.3**
JAG	**Ashikaga**	**2.85**	**248**	P	**Pn**	**08 47 26.8**	**-0.7**
BSO1	**Boso 1**	**3.22**	**207**	P	Pn	08 47 30.0	-2.1
JRY	**Ryogami san**	**3.43**	**245**	P	**Pn**	**08 47 34.7**	**-0.8**
MJAR	**Matsushiro Arr**	**3.75**	**256**	Pn	**Pn**	**08 47 40.8**	**+0.9**
	0.2nm,0.3s,baz=81,slow=14,SNR=7.9						
MJAR				Sn	Sn	08 48 36.9	+14
	0.1nm,0.3s,baz=98,slow=23,SNR=1.5						
MAT	**Matsushiro**	**3.75**	**256**	P	**Pn**	**08 47 40.8**	**+0.9**
MAT				*e*S	**Sn**	**08 48 23.4**	**+0.6**
ASAJ	**Asahikawa**	**6.56**	**359**	Pn	**Pn**	**08 48 18.8**	**+0.4**
	0.3nm,0.3s,baz=166,slow=14,SNR=1.4						
ASAJ				Sn	**Sn**	**08 49 29.6**	**-2.2**
	0.5nm,0.3s,baz=97,slow=26,SNR=3.1						
H11N2	**WAKE ISLAND Hy**	**27.54**	**123**	T	T	09 21 29.7	
	baz=316,slow=76,SNR=10						
H11N1	**WAKE ISLAND Hy**	**27.55**	**123**	T	T	09 21 34.2	
	baz=316,slow=76,SNR=5.6						
H11N3	**WAKE ISLAND Hy**	**27.56**	**123**	T	T	09 21 23.4	
	baz=316,slow=76,SNR=8.3						
SONM	**Songino Array**	**28.37**	**303**	P	**P**	**08 52 36.3**	**+0.9**
	0.3nm,0.3s,baz=107,slow=9.7,SNR=3.1						
ZALV	**Zalesovo Beam**	**42.34**	**312**	P	**P**	**08 54 35.5**	**+0.6**
	0.5nm,0.4s,baz=84,slow=7.7,SNR=2.4						
MKAR	**Makanchi Array**	**44.73**	**302**	P	**P**	**08 54 54.4**	**+0.1**
	0.4nm,0.7s,baz=87,slow=7.4,SNR=4.7						
KURBB	**Kurchatov Arra**	**46.51**	**308**	P	**P**	**08 55 08.0**	**-0.2**
	46nm,0.7s,baz=82,slow=7.9,SNR=12						

JMA ***25*** *08:58:03.5, 36.°58N×140.°97E, h22^{km}±1^{km}, M4.1*

JMA Felt II J1.

NIED ***25*** *08:58:03.5, 36.°58N×140.°97E, h22^{km}, MW4.0, Moment Tensor Solution.   s3   Moment tensor: Scale 10^{15}Nm; M_{rr}-0.70; $M_{\theta\theta}$-0.42; $M_{\phi\phi}$1.12; $M_{r\theta}$0.39; $M_{\theta\phi}$0.13; $M_{\phi r}$-0.21; Fault plane solution: $M_0$1.08000×10^{15} NP1: ϕ_s335.00000°, δ60.00000°, λ-131.00000°.   NP2: ϕ_s216.00000°, δ50.00000°, λ-42.00000°.*

NEIC ***25*** *08:58:05.8±2.5, 36.°61N±0.°05×140.°92E±0.°08, h37^{km}±8^{km}, mb4.3/7 Error ellipse: s-maj=9.5km s-min=6.2km az=119.0*

IDC ***25*** *08:58:08.9±1.9, 36.°47N×140.°88E, h61^{km}±19^{km}, mb3.6/16, mb1 3.8/21, mb1mx3.7/38, mbtmp3.9/21, Error ellipse: s-maj=16.7km s-min=10.8km az=67.0*

ISC 25 08:58:01.6±1.2**, 36.°59N**±0.°04×**140.°99E**±0.°06**, h4**^{km}±7^{km}**, n65, σ1**^{s}**25**/66**, mb4.0**/19**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHO	**Hitachi**	**0.34**	**274**	P	**Pb**	**08 58 10.3**	**+0.1**
JHO				S	**Sb**	**08 58 15.2**	**-0.8**
JHYU	**Hitachinakayam**	**0.41**	**233**	P	**Pb**	**08 58 11.6**	**+0.2**
JHYU				S	**Sb**	**08 58 17.7**	**-0.3**
ONAJ	**Iwakimizuishiy**	**0.53**	**343**	P	**Pb**	**08 58 13.8**	**+0.2**
ONAJ				S	**Sb**	**08 58 21.6**	**-0.1**
JFFD	**Fukushimafurud**	**0.61**	**326**	P	**Pb**	**08 58 15.0**	**+0.2**
JFFD				S	**Sb**	**08 58 23.3**	**-0.4**
JYT	**Yasato**	**0.74**	**241**	P	**Pb**	**08 58 17.0**	**0.0**
JYT				S	**Sb**	**08 58 27.1**	**-0.3**
JYT	**Yasato**	**0.74**	**241**	Pn	**Pb**	**08 58 17.5**	**+0.5**
JFK	**Kawauchi**	**0.78**	**353**	P	**Pg**	**08 58 17.3**	**+0.7**
JMM	**Marumori**	**1.28**	**353**		**Pn**	**08 58 25.6**	**-0.7**
MJAR	**Matsushiro Arr**	**2.24**	**270**	P	**Pn**	**08 58 40.1**	**+0.6**
	1.8nm,0.3s,baz=82,slow=10.0,SNR=77						
MJAR				S	**Sb**	**08 59 09.6**	**-1.1**
	3.4nm,0.3s,baz=88,slow=17,SNR=3.1						
MJAR	**Matsushiro Arr**	**2.24**	**270**		**Pn**	**08 58 39.6**	**+0.1**
MAJO	**Matsushiro**	**2.24**	**270**		**Pn**	**08 58 40.4**	**+0.8**
MAT	**Matsushiro**	**2.24**	**270**	P	**Pn**	**08 58 39.9**	**+0.4**
MAT				*e*S	**Sb**	**08 59 10.2**	**-0.6**
JSD	**Sado**	**2.61**	**304**		**Pn**	**08 58 44.5**	**0.0**
JSG	**Sagara**	**2.98**	**231**	Pn	**Pn**	**08 58 50.8**	**+1.2**
INU	**Inuyama**	**3.45**	**250**		**Pn**	**08 58 58.3**	**+2.2**
JHJ	**Hachijo jima 2**	**3.60**	**196**	P	**Pn**	**08 59 00.2**	**+2.0**
	17nm,0.3s,baz=33,slow=14,SNR=1.6						
JHJ				S	**Sn**	**08 59 39.4**	**-1.8**
	17nm,0.3s,baz=59,slow=19,SNR=2.2						
JHJ2	**Mitsune**	**3.60**	**196**	Pn	**Pn**	**08 58 58.6**	**+0.4**
JTM	**Tenmabayashi**	**4.19**	**1**	Pn	**Pn**	**08 59 07.2**	**+1.0**
JWT	**Wachi**	**4.72**	**256**		**Pn**	**08 59 16.3**	**+2.7**
ERM	**Erimo**	**5.67**	**17**	Pn	**Pn**	**08 59 26.3**	**-0.3**
JEW	**Eniwo**	**6.25**	**3**	Pn	**Pn**	**08 59 34.9**	**+0.3**
JMN	**Monobe**	**6.49**	**246**	Pn	**Pn**	**08 59 39.5**	**+1.6**
JHS	**Saijyo**	**6.59**	**258**		**Pn**	**08 59 40.7**	**+1.3**
ASAJ	**Asahikawa**	**7.62**	**9**	P	**Pn**	**08 59 53.6**	**+0.3**
	0.6nm,0.3s,baz=229,slow=15,SNR=6.8						
ASAJ				S	**Sn**	**09 01 20.6**	**+0.6**
	0.4nm,0.3s,baz=162,slow=20,SNR=1.6						
JKA	**Kamikawa-asahi**	**7.62**	**9**		**Pn**	**08 59 52.6**	**-0.7**
JCJ	**Chichijima**	**9.52**	**174**	P	**Pn**	**09 00 21.4**	**+1.9**
	8.4nm,0.3s,baz=351,slow=19,SNR=5.7						
JCJ				S	Sn	09 01 57.0	-10
	3.4nm,0.3s,baz=270,slow=20,SNR=1.5						
USRK	**Ussuriysk Ar.**	**10.24**	**321**	P	**Pn**	**09 00 32.3**	**+3.1**
	baz=117,slow=12,SNR=7.4						
USRK	**Ussuriysk Ar.**	**10.24**	**321**		**Pn**	**09 00 30.3**	**+1.1**
KSRS	**Korea Array**	**10.48**	**279**	P	**Pn**	**09 00 37.2**	**+4.5**
	0.2nm,0.3s,baz=90,slow=14,SNR=2.9						
SEY	**Seymchan**	**27.29**	**11**	P	**P**	**09 03 48.6**	**+1.7**
	1.3nm,0.6s,baz=218,slow=7.0,SNR=6.5						
SONM	**Songino Array**	**27.75**	**305**	P	**P**	**09 03 50.9**	**-0.5**
	0.7nm,0.6s,baz=109,slow=8.4,SNR=4.1						
SONM	**Songino Array**	**27.75**	**305**	P	**P**	**09 03 50.5**	**-0.9**
H11N2	**WAKE ISLAND Hy**	**28.22**	**119**	T	T	09 33 22.9	
	baz=312,slow=75,SNR=437						
H11N1	**WAKE ISLAND Hy**	**28.23**	**120**	T	T	09 33 26.5	
	baz=312,slow=75,SNR=544						
H11N3	**WAKE ISLAND Hy**	**28.24**	**119**	T	T	09 33 27.3	
	baz=312,slow=75,SNR=519						
H11S1	**WAKE ISLAND Hy**	**28.91**	**122**	T	T	09 34 14.4	
	baz=314,slow=75,SNR=788						
H11S3	**WAKE ISLAND Hy**	**28.91**	**122**	T	T	09 34 16.4	
	baz=314,slow=75,SNR=777						
H11S2	**WAKE ISLAND Hy**	**28.93**	**122**	T	T	09 34 18.6	
	baz=314,slow=75,SNR=702						
ZALV	**Zalesovo Beam**	**41.96**	**313**	P	**P**	**09 05 52.7**	**-0.7**
	4.9nm,0.5s,baz=92,slow=6.8,SNR=6.1						
MK31	**Makanchi Array**	**44.07**	**302**	P	**P**	**09 06 09.3**	**-1.3**
MKAR	**Makanchi Array**	**44.07**	**302**	P	**P**	**09 06 09.9**	**-0.7**
	0.8nm,0.7s,baz=85,slow=10,SNR=8.8						
KURK	**Kurchatov**	**45.94**	**308**	P	**P**	**09 06 24.1**	**-1.2**
ILAR	**Eielson Array**	**50.05**	**32**	P	**P**	**09 06 57.7**	**+0.7**
	0.5nm,0.7s,baz=263,slow=5.4,SNR=12						
INK	**Inuvik**	**54.93**	**27**	P	**P**	**09 07 33.9**	**+0.7**
	0.8nm,0.5s,baz=313,slow=7.0,SNR=4.6						
INK	**Inuvik**	**54.93**	**27**	P	**P**	**09 07 33.4**	**+0.3**
INK				IAmb	IAmb	09 07 35.1	
	comp=Z,5.9nm,1.4s						
WB0	**Warramunga Arr**	**56.40**	**187**	P	**P**	**09 07 42.5**	**-1.7**
WB0				IAmb	IAmb	09 07 49.8	
	comp=Z,2.9nm,0.8s						
WR0	**Warramunga Arr**	**56.57**	**187**	P	**P**	**09 07 43.9**	**-1.5**
WR0				IAmb	IAmb	09 07 50.7	
	comp=Z,2.1nm,0.8s						
WB2	**Warramunga Arr**	**56.58**	**187**	P	**P**	**09 07 44.7**	**-0.7**
WB2				IAmb	IAmb	09 07 51.0	
	comp=Z,2.6nm,0.8s						
WRA	**Warramunga Arr**	**56.58**	**188**	P	**P**	**09 07 44.5**	**-1.0**
	comp=Z,1.7nm,0.7s,baz=4.8,slow=7.5,SNR=12						
ABKAR	**Akbulak array**	**57.97**	**310**	P	**P**	**09 07 53.8**	**-1.2**
ASAR	**Alice Springs**	**60.30**	**187**	P	**P**	**09 08 10.9**	**-0.6**
	comp=Z,0.6nm,0.7s,baz=9.4,slow=7.5,SNR=7.7						
ARCES	**ARCESS Array B**	**64.29**	**339**	P	**P**	**09 08 37.5**	**-0.2**
	comp=Z,3.1nm,0.8s,baz=50,slow=8.4,SNR=1.6						
YKA	**Yellowknife Ar**	**64.36**	**30**	P	**P**	**09 08 39.9**	**+1.7**
	comp=Z,0.2nm,0.6s,baz=300,slow=4.9,SNR=4.9						
TULEG	**Thule**	**65.58**	**7**	*e*	**P**	**09 08 44.6**	**-1.3**
	baz=88,slow=22						
TULEG				*i* P	**pP**	**09 08 45.8**	**-1.5**
TULEG				IAML		09 09 06.8	
	comp=Z,9.9nm,0.3s						
FINES	**FINESS Array B**	**69.05**	**332**	P	**P**	**09 09 08.0**	**-0.1**
	comp=Z,1.0nm,0.6s,baz=61,slow=8.6,SNR=1.9						
FINES	**FINESS Array B**	**69.05**	**332**	P	**P**	**09 09 06.9**	**-1.2**
KBZ	**Khabaz**	**70.93**	**311**	P	**P**	**09 09 19.6**	**-0.4**
	comp=Z,1.6nm,0.8s,baz=38,slow=11,SNR=4.2						
AKASG	**Malin Array Be**	**74.44**	**322**	P	**P**	**09 09 39.6**	**-1.1**
	comp=Z,0.8nm,0.5s,baz=45,slow=6.7,SNR=4.1						
NVAR	**Mina Array Bea**	**75.53**	**53**	P	**P**	**09 09 49.0**	**+1.4**
	comp=Z,0.7nm,0.8s,baz=280,slow=5.4,SNR=6.0						
PDAR	**Pinedale Array**	**78.22**	**45**	P	**P**	**09 10 03.2**	**+0.5**
	comp=Z,0.4nm,0.6s,baz=282,slow=3.4,SNR=5.9						
TXAR	**Lajitas Array**	**90.66**	**52**	P	**P**	**09 11 06.5**	**+0.7**
	comp=Z,0.3nm,0.7s,baz=308,slow=4.8,SNR=4.7						
TXAR	**Lajitas Array**	**90.66**	**52**	P	**P**	**09 11 05.6**	**-0.2**
H03N2	**Juan Fernandez**	**147.31**	**96**	T	T	12 02 23.8	
	baz=291,slow=76,SNR=44						
H03N3	**Juan Fernandez**	**147.32**	**96**	T	T	12 02 23.0	
	baz=291,slow=76,SNR=56						
H03N1	**Juan Fernandez**	**147.33**	**96**	T	T	12 02 28.6	
	baz=291,slow=76,SNR=62						

NOU ***25*** *09:19:47.7, 40.°34S×174.°27E, h116^{km}, MLv3.7, Cook Strait, New Zealand*

WEL 25 09:19:48.3, 40°S±2°×**17°4E**±°**, h106**^{km}±4^{km}**, M3.5**/39**, ML4.0**/6**, MLv3.5**/39**, Error ellipse: s-maj=0.0km s-min=0.0km az=41.8, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DUWZ	**D'Urville Isla**	**0.50**	**209**	P	Pn	09 20 05.2	+0.4
DUWZ				S	Sn	09 20 16.9	-0.2
KIW	**Kapiti Island**	**0.71**	**134**	P	Pn	09 20 06.9	+0.4
KIW				S	Sn	09 20 19.4	-0.7
WAZ	**Wanganui**	**0.84**	**44**	P	Pn	09 20 08.4	+0.8
WAZ				S	Sn	09 20 23.3	+1.2
OHWZ	**Ohakea**	**0.84**	**79**	P	Pn	09 20 08.3	+0.8
OHWZ				S	Sn	09 20 23.3	+1.3
OGWZ	**Otaki Gorge**	**0.84**	**123**	P	Pn	09 20 08.2	+0.6
OGWZ				S	Sn	09 20 21.4	-0.7
TCW	**Tory Channel**	**0.84**	**178**	P	Pn	09 20 08.5	+0.9
TCW				S	Sn	09 20 22.2	+0.1
LREZ	**Lake Rotokare**	**0.91**	**8**	P	Pn	09 20 09.1	+0.8
LREZ				S	Sn	09 20 25.1	+1.8
CAW	**Cannon Point**	**0.97**	**140**	P	Pn	09 20 09.6	+0.7
NMEZ	**Namu Road**	**0.99**	**344**	P	Pn	09 20 09.4	+0.3
NMEZ				S	Sn	09 20 25.1	+0.4
PREZ	**Palmer Road**	**1.02**	**357**	P	Pn	09 20 10.0	+0.4
PREZ				S	Sn	09 20 25.8	+0.4
MRZ	**Mangatainoka R**	**1.06**	**107**	P	Pn	09 20 10.3	+0.4
MRZ				S	Sn	09 20 26.6	+0.5
NNZ	**Nelson**	**1.07**	**217**	P	Pn	09 20 10.6	+0.7
NNZ				S	Sn	09 20 26.4	+0.2
TUWZ	**Tuamarina**	**1.09**	**192**	P	Pn	09 20 10.6	+0.4
TUWZ				S	Sn	09 20 25.8	-0.8
NEZ	**North Egmont**	**1.10**	**354**	P	Pn	09 20 10.4	0.0
NEZ				S	Sn	09 20 26.3	-0.7
HOWZ	**Holdsworth Sta**	**1.11**	**119**	P	Pn	09 20 10.8	+0.4
HOWZ				S	Sn	09 20 26.0	-1.1
BHW	**Baring Head**	**1.15**	**155**	P	Pn	09 20 11.3	+0.5
BHW				S	Sn	09 20 26.7	-1.0
POWZ	**Post Office Ro**	**1.17**	**92**	P	Pn	09 20 11.2	+0.2
PKE	**Pukeiti**	**1.19**	**351**	P	Pn	09 20 11.5	+0.2
PKE				S	Sn	09 20 27.8	-0.8
MTW	**Mount Morrison**	**1.25**	**130**	P	Pn	09 20 12.3	+0.4
MTW				S	Sn	09 20 29.2	-0.5
MHEZ	**Mangahewa**	**1.29**	**3**	P	Pn	09 20 13.1	+0.7
MSWZ	**Moikau Station**	**1.30**	**144**	P	Pn	09 20 13.1	+0.6
MSWZ				S	Sn	09 20 29.9	-1.0
VRZ	**Vera Road**	**1.30**	**18**	P	Pn	09 20 12.9	+0.3
VRZ				S	Sn	09 20 31.6	+0.7
TIWZ	**Tintock**	**1.32**	**109**	P	Pn	09 20 13.1	+0.3
PRWZ	**Pori Road**	**1.34**	**99**	P	Pn	09 20 13.5	+0.5
PRWZ				S	Sn	09 20 32.5	+0.9
TSZ	**Takapari Road**	**1.35**	**78**	P	Pn	09 20 13.1	-0.1
PAWZ	**Paruwai Farm**	**1.36**	**139**	P	Pn	09 20 13.8	+0.5
MTVZ	**Mangateitei**	**1.36**	**45**	P	Pn	09 20 13.4	0.0
PKVZ	**Pokaka**	**1.37**	**39**	P	Pn	09 20 13.6	+0.1
BSWZ	**Blackbirch Sta**	**1.38**	**191**	P	Pn	09 20 14.5	+1.1
QRZ	**Quartz Range**	**1.38**	**250**	P	Pn	09 20 13.1	-0.3
QRZ				S	Sn	09 20 31.2	-1.3
PLWZ	**Palliser**	**1.43**	**148**	P	Pn	09 20 14.5	+0.4
TMWZ	**Te Maipa**	**1.46**	**121**	P	Pn	09 20 14.8	+0.4
TRVZ	**Turoa**	**1.47**	**44**	P	Pn	09 20 14.8	+0.1
WNVZ	**Wahianoa**	**1.47**	**46**	P	Pn	09 20 14.8	+0.1
DVHZ	**Dannevirke**	**1.48**	**88**	P	Pn	09 20 14.5	-0.2
WHVZ	**Whangaehu Hut**	**1.50**	**44**	P	Pn	09 20 15.2	+0.1
FWVZ	**Far West T-bar**	**1.50**	**43**	P	Pn	09 20 15.2	0.0
MOVZ	**Moawhango**	**1.51**	**51**	P	Pn	09 20 14.8	-0.2
TRWZ	**Traveller**	**1.51**	**134**	P	Pn	09 20 15.3	+0.3
TUVZ	**Tukino**	**1.55**	**45**	P	Pn	09 20 15.6	0.0
BFZ	**Birch Farm**	**1.56**	**102**	P	Pn	09 20 15.7	0.0
PNHZ	**Pukenui**	**1.57**	**74**	P	Pn	09 20 15.4	-0.4
NGZ	**Ngauruhoe**	**1.59**	**42**	P	Pn	09 20 15.9	-0.2
TWVZ	**Taurewa**	**1.59**	**36**	P	Pn	09 20 15.9	-0.2
CPWZ	**Castlepoint**	**1.59**	**111**	P	Pn	09 20 16.8	+0.8
WTVZ	**West Tongariro**	**1.63**	**40**	P	Pn	09 20 16.3	-0.3
OTVZ	**Oturere**	**1.63**	**43**	P	Pn	09 20 16.6	-0.1
BHHZ	**Black Hill Sta**	**1.65**	**59**	P	Pn	09 20 16.4	-0.5
KRVZ	**Karewarewa**	**1.67**	**41**	P	Pn	09 20 16.8	-0.3
ETVZ	**East Tongariro**	**1.67**	**43**	P	Pn	09 20 18.0	+0.9
TMVZ	**Te Maari**	**1.68**	**43**	P	Pn	09 20 17.2	-0.1
ANWZ	**Angora Road**	**1.71**	**94**	P	Pn	09 20 17.6	+0.1
WPHZ	**Waipukurau**	**1.71**	**81**	P	Pn	09 20 17.4	-0.1
THZ	**Tophouse**	**1.72**	**215**	P	Pn	09 20 18.1	+0.4
KATZ	**Kakaramea**	**1.79**	**39**	P	Pn	09 20 18.9	+0.3
KRHZ	**Kereru**	**1.79**	**67**	P	Pn	09 20 17.9	-0.6
PRHZ	**Porangahau**	**1.84**	**88**	P	Pn	09 20 19.0	-0.1
RITZ	**Rihia Road**	**1.87**	**43**	P	Pn	09 20 19.4	-0.1
RATZ	**Rangitukua**	**1.91**	**39**	P	Pn	09 20 20.0	-0.1
HIZ	**Hauiti**	**1.91**	**15**	P	Pn	09 20 19.9	-0.1
KWHZ	**Kaweka Forest**	**1.93**	**62**	P	Pn	09 20 19.6	-0.6
WATZ	**Wairara**	**2.02**	**35**	P	Pn	09 20 21.4	-0.1
PXZ	**Pawanui**	**2.04**	**81**	P	Pn	09 20 21.1	-0.5
HATZ	**Hinemaiaia**	**2.05**	**45**	P	Pn	09 20 20.7	-1.1
MCHZ	**McNeill Hill**	**2.10**	**65**	P	Pn	09 20 22.1	-0.4
KAHZ	**Kahuranaki**	**2.10**	**75**	P	Pn	09 20 22.0	-0.5
BKZ	**Black Stump Fm**	**2.11**	**56**	P	Pn	09 20 21.7	-0.9
KHZ	**Kahutara**	**2.12**	**194**	P	Pn	09 20 23.1	+0.6
KUTZ	**Kaahu Road**	**2.24**	**34**	P	Pn	09 20 24.1	-0.1
TLZ	**Tolley Road**	**2.27**	**27**	P	Pn	09 20 24.8	+0.1
MRHZ	**Matea Rd**	**2.27**	**48**	P	Pn	09 20 23.4	-1.4
DSZ	**Denniston Nort**	**2.30**	**232**	P	Pn	09 20 25.0	0.0
NMHZ	**Naumai**	**2.35**	**58**	P	Pn	09 20 25.3	-0.5
ARHZ	**Aropaoanui**	**2.39**	**64**	P	Pn	09 20 25.2	-1.0
MTHZ	**Maungataniwha**	**2.52**	**54**	P	Pn	09 20 26.4	-1.4
RAHZ	**Arahi**	**2.63**	**58**	P	Pn	09 20 28.0	-1.3
WHHZ	**Waihua**	**2.65**	**62**	P	Pn	09 20 28.4	-1.2
RTZ	**Ruatahuna**	**2.75**	**51**	P	Pn	09 20 29.1	-1.9
GVZ	**Greta Valley S**	**2.75**	**199**	P	Pn	09 20 30.6	-0.3
TOZ	**Tahuroa Road**	**2.81**	**21**	P	Pn	09 20 31.0	-0.7
LTZ	**Lake Taylor**	**2.83**	**211**	P	Pn	09 20 31.3	-0.6
KNZ	**Kokohu**	**2.97**	**64**	P	Pn	09 20 31.7	-2.1
AMCZ	**Amberley**	**3.05**	**202**	P	Pn	09 20 34.3	-0.5
URZ	**Urewera**	**3.06**	**48**	P	Pn	09 20 32.7	-2.3
MHGZ	**Mahia Peninsul**	**3.08**	**68**	P	Pn	09 20 33.8	-1.5
RAGZ	**Rawiri**	**3.09**	**54**	P	Pn	09 20 33.9	-1.6
PRGZ	**Paritu Road**	**3.16**	**64**	P	Pn	09 20 34.5	-1.9
RIGZ	**Rimuhau**	**3.19**	**60**	P	Pn	09 20 35.0	-1.8
MWZ	**Matawai**	**3.26**	**53**	P	Pn	09 20 35.4	-2.3
AWAZ	**Awhitu Peninsu**	**3.31**	**6**	P	Pn	09 20 38.4	0.0
MKAZ	**Moumakai**	**3.33**	**13**	P	Pn	09 20 38.2	-0.5
OXZ	**Oxford**	**3.38**	**208**	P	Pn	09 20 38.1	-1.2
TKGZ	**Te Karaka**	**3.40**	**57**	P	Pn	09 20 37.4	-2.0
ETAZ	**East Tamaki Re**	**3.45**	**9**	P	Pn	09 20 40.1	-0.1
OKCZ	**Okains Bay**	**3.47**	**194**	P	Pn	09 20 39.3	-1.2
MQZ	**McQueen's Vall**	**3.54**	**199**	P	Pn	09 20 39.6	-1.8
RUGZ	**Raukumara Rang**	**3.59**	**49**	P	Pn	09 20 39.4	-2.8
RVAZ	**Riverhead Bore**	**3.60**	**4**	P	Pn	09 20 42.2	0.0
CNGZ	**Carnagh Statio**	**3.60**	**60**	P	Pn	09 20 40.3	-2.0
MBAZ	**Motutapu North**	**3.63**	**8**	P	Pn	09 20 42.7	+0.1
TWGZ	**Tauwhareparae**	**3.63**	**54**	P	Pn	09 20 41.0	-1.7
WIAZ	**Waiheke Island**	**3.63**	**11**	P	Pn	09 20 42.5	-0.2
RACZ	**Rakaia**	**3.71**	**204**	P	Pn	09 20 42.4	-1.1
WVZ	**Waitaha Valley**	**3.77**	**223**	P	Pn	09 20 44.5	+0.1
HAZ	**Te Kaha**	**3.79**	**48**	P	Pn	09 20 41.7	-3.1
WMGZ	**Waiomatatini S**	**4.13**	**53**	P	Pn	09 20 46.6	-2.7
GCSZ	**Gaunt Creek Bo**	**4.15**	**223**	P	Pn	09 20 49.2	-0.3
ARCZ	**Arundel**	**4.24**	**211**	P	Pn	09 20 50.3	-0.5
WCZ	**Waipu Caves**	**4.42**	**1**	P	Pn	09 20 54.1	+0.8
FOZ	**Fox Glacier**	**4.57**	**225**	P	Pn	09 20 54.5	-0.7
TMZ	**Timaru**	**4.67**	**210**	P	Pn	09 20 55.8	-0.9
OUZ	**Omahuta**	**5.16**	**354**	P	Pn	09 21 03.4	+0.2
ODZ	**Otahua Downs**	**5.37**	**208**	P	Pn	09 21 04.8	-1.3
JCZ	**Jackson Bay**	**5.49**	**226**	P	Pn	09 21 06.7	-1.0
CTZ	**Chatham Island**	**7.59**	**119**	P	Pn	09 21 36.5	+0.3

IDC 25 09:27:58.3±999.0**, 2.°14S**×**123.°70W, h0**^{km}**, Error ellipse: s-maj=5247.0km s-min=506.9km az=12.0, South Pacific Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I57US	**PINON FLAT INF**	**36.20**	**10**	*i*		13 03 40.0	
	baz=193,slow=316,SNR=5.1						
I56US	**NEWPORT INFRAS**	**50.52**	**6**	*i*		14 39 10.0	
	baz=187,slow=332,SNR=1.2						
I10CA	**LAC DU BONNET**	**57.29**	**21**	*i*		15 24 40.0	
	baz=212,slow=344,SNR=1.5						

NEIC ***25*** *09:38:48, 63.°20N×150.°49W, h132^{km}, Moment Tensor Solution.   Moment tensor: Scale 10^{15}Nm; M_{rr}0.36; $M_{\theta\theta}$0.24; $M_{\phi\phi}$-0.60; $M_{r\theta}$-0.42; $M_{\theta\phi}$-0.64; $M_{\phi r}$1.98; Fault plane solution: $M_0$2.19000×10^{15} NP1:ϕ_s247.00000°, δ21.00000°, λ166.00000°.   NP2:ϕ_s350.00000°, δ85.00000°, λ70.00000°.   Principal axes: T 2.1856, Plg46.0000°, Azm239.0000°; N -0.0004, Plg20.0000°, Azm352.0000°; P -2.1852, Plg37.0000°, Azm98.0000°;*

NEIC ***25*** *09:38:48.4±1.2, 63.°23N±0.°04×150.°48W±0.°07, h123^{km}±4^{km} Error ellipse: s-maj=5.2km s-min=4.6km az=190.0*

AEIC ***25*** *09:38:48±1.2, 63.°19N±0.°04×150.°44W±0.°08, h122^{km}±4^{km}, ML4.1, mb4.5/53(NEIC), ML4.3/84(NEIC), Mwr4.2/17(SLM), Error ellipse: s-maj=5.3km s-min=4.9km az=207.0*

ANF ***25*** *09:38:48.4±0.1, 63.°22N×150.°51W, h117^{km}±1^{km}, ML4.4/40, Error ellipse: s-maj=2.4km s-min=1.6km az=92.0*

IDC ***25*** *09:38:49.3±1.2, 63.°39N×150.°54W, h124^{km}±9^{km}, mb3.8/23, mb1 3.9/28, mb1mx3.8/52, mbtmp4.2/28, Error ellipse: s-maj=12.0km s-min=8.9km az=19.0*

ISC 25 09:38:48.5±0.5**, 63.°22N**±0.°03×**150.°48W**±0.°03**, h124**^{km}±4^{km}**, n428, σ0**^{s}**80**/453**, mb4.3**/49**, Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRF	**Thorofare Moun**	**0.25**	**20**	P	**Pn**	**09 39 06.1**	**0.0**
	baz=194,SNR=1000						
TRF				S	**Sn**	**09 39 18.8**	**-0.5**
	baz=194						
TRF	**Thorofare Moun**	**0.25**	**20**	Pn	**Pn**	**09 39 06.0**	**0.0**
TRF				Sn	**Sn**	**09 39 19.2**	**-0.1**

TRF				IAML		09 39 19.8	
	comp=N,9µm,0.9s						
TRF				IAML		09 39 20.1	
	comp=E,11µm,0.7s						
KTH	Kantishna Hill	0.39	329	Pn	Pn	09 39 06.5	+0.1
KTH				IAML		09 39 19.8	
	comp=N,7µm,0.7s						
KTH	Kantishna Hill	0.39	329		Sn	09 39 19.3	-0.7
HUR	Hurricane	0.45	122		Pn	09 39 06.3	-0.4
CAST	Castle Rocks	0.75	286	P	Pn	09 39 08.5	-0.2
	baz=106,SNR=6.0						
CAST	Castle Rocks	0.75	286	Pn	Pn	09 39 08.4	-0.2
RND	Reindeer	0.76	75		Pn	09 39 08.9	+0.1
RND				Sn	Sn	09 39 24.5	+0.3
RND				IAML		09 39 25.0	
	comp=E,4µm,0.3s						
RND				IAML		09 39 25.0	
	comp=N,5µm,0.6s						
CUT	Chulitna	0.82	173	P	Pn	09 39 09.2	-0.1
	baz=354,SNR=173						
CUT				S	Sn	09 39 24.5	-0.4
	baz=354						
CUT	Chulitna	0.82	173		Pn	09 39 09.3	0.0
CUT					Sn	09 39 25.1	+0.2
PPLA	Purkeypile	0.84	248	P	Pn	09 39 09.4	-0.3
	baz=68,SNR=927						
PPLA				S	Sn	09 39 25.2	-0.4
	baz=68						
PPLA	Purkeypile	0.84	248		Sn	09 39 25.1	-0.4
PPLA	Purkeypile	0.84	248	Pn	Pn	09 39 09.8	+0.1
MCK	McKinley	0.86	53	P	Pn	09 39 09.8	+0.1
	baz=232,SNR=1000						
MCK				S	Sn	09 39 25.4	-0.3
	baz=232						
MCK	McKinley	0.86	53		Pn	09 39 09.9	+0.2
WAT2	Susitna Watana	0.90	106	P	Pn	09 39 09.8	-0.3
	baz=286,SNR=718						
WAT2				S	Sn	09 39 25.7	-0.7
	baz=286						
WAT2	Susitna Watana	0.90	106		Pn	09 39 09.6	-0.5
BPAW	Bear Paw Mtn.	0.91	346	P	Pn	09 39 10.0	-0.1
	baz=164						
BPAW				S	Sn	09 39 25.3	-1.2
	baz=164						
BPAW	Bear Paw Mtn.	0.91	346		Pn	09 39 10.0	-0.1
BPAW				IAML		09 39 25.9	
	comp=N,6µm,0.7s						
BPAW				IAML		09 39 26.3	
	comp=E,6µm,0.9s						
BPAW	Bear Paw Mtn.	0.91	346		Sn	09 39 25.4	-1.2
WAT1	Susitna Watana	0.96	113		Pn	09 39 10.4	-0.2
WAT1					Sn	09 39 27.0	-0.3
BWN	Browne	1.06	25		Pn	09 39 12.0	+0.6
BWN				IAML		09 39 29.8	
	comp=E,4µm,0.9s						
BWN				IAML		09 39 30.5	
	comp=N,4µm,1.4s						
CHUM	Lake Minchumin	1.06	310	P	Pn	09 39 11.4	0.0
	baz=128,SNR=1000						
CHUM				S	Sn	09 39 28.1	-0.7
	baz=128						
CHUM	Lake Minchumin	1.06	310		Pn	09 39 11.4	0.0
SKT	Skwentna	1.33	202	P	Pn	09 39 13.9	-0.4
	baz=22,SNR=205						
SKT				S	Sn	09 39 33.1	-0.9
	baz=22						
SKT	Skwentna	1.33	202		Pn	09 39 13.9	-0.4
SKT				IAML		09 39 36.2	
	comp=E,4µm,0.3s						
SKT				IAML		09 39 36.7	
	comp=N,4µm,0.2s						
WAT6	Susitna Watana	1.41	116	P	Pn	09 39 14.9	-0.4
	baz=298,SNR=336						
WAT6				S	Sn	09 39 34.7	-0.9
	baz=298						
WAT6	Susitna Watana	1.41	116		Pn	09 39 14.9	-0.4
NEA2	Nenana	1.51	24	P	Pn	09 39 16.0	-0.4
	baz=204,SNR=748						
NEA2				S	Sn	09 39 36.0	-1.6
	baz=204						
NEA2	Nenana	1.51	24		Pn	09 39 15.9	-0.4
WRH	Wood River Hil	1.64	39		Pn	09 39 17.8	0.0
SML	Sawmill	1.73	144	P	Pn	09 39 18.5	-0.5
	baz=326,SNR=89						
SML				S	Sn	09 39 42.0	-0.2
	baz=326						
SML	Sawmill	1.73	144		Pn	09 39 18.5	-0.5
SML				IAML		09 39 43.2	
	comp=N,3µm,0.3s						
SML				IAML		09 39 49.9	
	comp=E,2µm,0.6s						
PMR	Palmer	1.75	158	P	Pn	09 39 18.5	-0.5
	baz=340,SNR=164						
PMR				S	Sn	09 39 41.5	-0.9
	baz=340						
PMR	Palmer	1.75	158	Pn	Pn	09 39 18.8	-0.3
SUA	Susitna One	1.77	184	P	Pn	09 39 19.2	-0.2
	baz=4.7,SNR=174						
SUA				S	Sn	09 39 42.8	-0.2
	baz=4.7						
SUA	Susitna One	1.77	184		Pn	09 39 19.3	-0.1
SUA				IAML		09 39 46.3	
	comp=E,2µm,0.6s						
SUA				IAML		09 39 47.2	
	comp=N,2µm,0.7s						
MLY	Manley	1.82	357	P	Pn	09 39 19.9	-0.1
	baz=176,SNR=333						
MLY				S	Sn	09 39 42.4	-1.7
	baz=176						
MLY	Manley	1.82	357		Pn	09 39 19.9	-0.1
STLK	Strandline Lak	1.84	201		Pn	09 39 19.9	-0.4
CCB	Clear Creek Bu	1.86	38		Pn	09 39 20.3	0.0
HDA	Harding Lake	1.97	51	P	Pn	09 39 21.6	-0.2
	baz=233						
HDA				S	Sn	09 39 45.9	-1.3
	baz=233						
HDA				S	Sn	09 39 45.9	-1.3
	baz=233						
HDA	Harding Lake	1.97	51		Pn	09 39 21.6	-0.2
HDA				IAML		09 39 47.5	
	comp=E,2µm,0.6s						
HDA				IAML		09 39 47.8	
	comp=N,3µm,0.8s						
I23K	Minto, Yukon-K	2.00	14	P	Pn	09 39 22.0	0.0
	baz=194,SNR=636						
I23K	Minto, Yukon-K	2.00	14		Pn	09 39 22.1	0.0
MDM	Murphy Dome	2.01	28		Pn	09 39 22.2	0.0
SCM	Sheep Creek Mo	2.02	132		Pn	09 39 21.8	-0.6
SCM				IAML		09 39 52.2	
	comp=N,2µm,0.9s						
SCM				IAML		09 39 56.2	
	comp=E,2µm,0.6s						
TCOL	CIGO, UAF Yank	2.02	34	P	Pn	09 39 22.4	+0.1
	baz=215,SNR=173						
TCOL	CIGO, UAF Yank	2.02	34		Pn	09 39 22.4	+0.1
TCOL				IAML		09 39 47.9	
	comp=E,2µm,0.6s						
COLA	College	2.02	34	P	Pn	09 39 22.4	+0.1
	baz=215						
COLA	College	2.02	34		Pn	09 39 22.4	+0.1
COLA	College	2.02	34	IAML		09 39 47.9	
	comp=E,2µm,0.6s						
FIS	Fire Island	2.09	177		Pn	09 39 23.9	+0.8
PS08	TAPS Pump Stn8	2.10	49		Pn	09 39 22.9	-0.3
CRP	Crater Peak	2.11	203		Pn	09 39 23.8	+0.1
SPCP	Crater Peak Br	2.11	203		Pn	09 39 23.4	-0.2
SPCN	Chakachatna No	2.15	203		Pn	09 39 24.1	0.0
SPBG	Spurr Blockage	2.16	205		Pn	09 39 23.3	-0.9
RC01	Rabbit Creek A	2.17	170	P	Pn	09 39 23.8	-0.3
	baz=352,SNR=47						
RC01	Rabbit Creek A	2.17	170		Pn	09 39 23.9	-0.3
SPCR	Spurr Chakacha	2.18	203	P	Pn	09 39 24.1	-0.4
	baz=22,SNR=57						
SPCR	Spurr Chakacha	2.18	203		Pn	09 39 24.5	0.0
IL31		2.22	44		Pn	09 39 24.7	-0.1
ILAR	Eielson Array	2.22	44	P	Pn	09 39 24.3	-0.5
	comp=E,85nm,0.3s,baz=226,slow=12,SNR=4870						
ILAR				S	Sn	09 39 51.7	-1.1
	comp=E,34nm,0.3s,baz=230,slow=24,SNR=10						
ILAR	Eielson Array	2.22	44		Pn	09 39 24.2	-0.7
PS09	TAPS Pump Stn9	2.23	69		Pn	09 39 24.9	-0.1
M24K	Tolsona, Glenn	2.28	117	P	Pn	09 39 25.8	+0.1
	baz=301,SNR=324						
M24K	Tolsona, Glenn	2.28	117		Pn	09 39 25.8	+0.1
PAX	Paxson	2.29	94	P	Pn	09 39 25.9	+0.1
	baz=278,SNR=542						
PAX	Paxson	2.29	94		Pn	09 39 26.1	+0.3
PS07	TAPS Pump Stn7	2.31	24		Pn	09 39 25.9	-0.1
POKR	Poker Plat Res	2.33	34	P	Pn	09 39 26.4	+0.2
	baz=216,SNR=152						
POKR	Poker Plat Res	2.33	34		Pn	09 39 26.3	+0.2
CAPN	Captain Cook N	2.48	188		Pn	09 39 29.9	+1.8
TTA	Tatalina	2.54	266	P	Pn	09 39 28.4	-0.5
	baz=82,SNR=274						
TTA	Tatalina	2.54	266	Pn	Pn	09 39 28.4	-0.5
TT01	Tatalina	2.54	265		Pn	09 39 28.7	-0.2
PWL	Port Wells	2.57	156		Pn	09 39 28.7	-0.7
PS11	TAPS Pump St11	2.58	114		Pn	09 39 29.7	+0.3
PS06	TAPS Pump Stn6	2.67	7		Pn	09 39 30.7	+0.2
SLKM	Skilak Lake	2.72	177		Pn	09 39 31.0	-0.3
KLU	Klutina	2.74	127	P	Pn	09 39 30.7	-0.8
	baz=311						
KLU	Klutina	2.74	127		Pn	09 39 30.8	-0.8
KLU				IAML		09 40 16.5	
	comp=N,1µm,0.5s						
KLU				IAML		09 40 18.2	
	comp=E,1µm,0.4s						
O22K	Cooper Landing	2.77	172	P	Pn	09 39 31.4	-0.5
	baz=353						
O22K	Cooper Landing	2.77	172		Pn	09 39 31.7	-0.2
DFR	Drift River	2.84	203		Pn	09 39 32.5	-0.3
VMT	TAPS TI Valdez	2.88	136		Pn	09 39 32.2	-1.1
NCT	North Crescent	2.91	205		Pn	09 39 33.7	-0.1
DOT	Dot Lake	2.92	79	Pn	Pn	09 39 33.6	-0.2
RSO	Redoubt South	2.97	202		Pn	09 39 34.6	-0.1
SCRK	Sand Creek	3.00	72	P	Pn	09 39 34.6	-0.3
	baz=258,SNR=681						
SCRK	Sand Creek	3.00	72		Pn	09 39 34.7	-0.3
RED	Redoubt Volcan	3.01	202		Pn	09 39 35.3	+0.2
PS12	TAPS Pump St12	3.04	123		Pn	09 39 34.6	-0.8
DIV	Divide	3.04	131		Pn	09 39 34.1	-1.4
MENT	Mentasta	3.09	92	Pn	Pn	09 39 36.0	0.0
IM03		3.11	335		Pn	09 39 36.1	-0.1
IMAR	Indian Mountai	3.11	335		Pn	09 39 36.0	-0.3
PRP	Porcupine Dome	3.16	41	P	Pn	09 39 36.8	-0.2
	baz=225						
PRP	Porcupine Dome	3.16	41		Pn	09 39 36.6	-0.4
SEW	Seward	3.16	171	P	Pn	09 39 36.3	-0.6
	baz=352,SNR=14						
SEW	Seward	3.16	171	Pn	Pn	09 39 36.4	-0.6
N25K	Chitina, Valde	3.18	118	P	Pn	09 39 36.8	-0.5
	baz=303,SNR=92						
N25K	Chitina, Valde	3.18	118		Pn	09 39 37.0	-0.2
N25K				IAML		09 40 15.7	
	comp=E,632nm,0.7s						
N25K				IAML		09 40 17.4	
	comp=N,698nm,0.6s						
SVW2	Sparrevohn	3.20	231		Pn	09 39 36.9	-0.7
HIN	Hinchinbrook I	3.40	145		Pn	09 39 39.1	-1.1
IVE	Iliamna Volcan	3.43	202		Pn	09 39 40.7	+0.1
BRLK	Bradley Lake	3.47	183		Pn	09 39 40.9	-0.2
BRLK				IAML		09 40 31.5	
	comp=E,409nm,0.8s						
BRLK				IAML		09 40 34.9	
	comp=N,708nm,0.7s						
EYAK	Cordova Ski Ar	3.49	138	P	Pn	09 39 40.6	-0.6
	baz=322,SNR=60						
EYAK	Cordova Ski Ar	3.49	138		Pn	09 39 40.7	-0.6
BRSE	Bradley Lake S	3.49	182	P	Pn	09 39 40.8	-0.5
	baz=2.3						
BRSE	Bradley Lake S	3.49	182		Pn	09 39 40.9	-0.5
ILS	Iliamna Low So	3.50	202		Pn	09 39 41.9	+0.4
BMRM	Bremner River	3.57	127	P	Pn	09 39 41.0	-1.3
	baz=312,SNR=93						
BMRM	Bremner River	3.57	127		Pn	09 39 40.9	-1.5
GLB	Gilahina Butte	3.58	117		Pn	09 39 42.1	-0.5
PS05	TAPS Pump Stn5	3.61	359		Pn	09 39 43.2	+0.4
HOM	Homer	3.62	189	P	Pn	09 39 43.1	+0.2
	baz=8.8						
CNPM	China Poot	3.72	186		Pn	09 39 44.0	-0.4
CNPM				IAML		09 40 39.7	
	comp=N,561nm,0.5s						
GOAT	Goat Mountain	3.79	132		Pn	09 39 44.5	-0.9
OPT	Oil Point	3.81	202		Pn	09 39 46.2	+0.6
VRDI	Verde Repeater	3.85	118		Pn	09 39 45.6	-0.6
VRDI				IAML		09 40 33.4	
	comp=N,630nm,0.8s						
VRDI				IAML		09 40 34.7	
	comp=E,382nm,0.8s						
MCARA	McCarthy VSAT	3.94	115	P	Pn	09 39 47.2	-0.1
	baz=301,SNR=32						
MCARA	McCarthy VSAT	3.94	115		Pn	09 39 47.1	-0.1
BC03		3.95	88		Pn	09 39 46.6	-0.6
BCAR	Beaver Creek A	3.95	88		Pn	09 39 46.3	-1.1
RAGM	Ragged Mountai	3.96	133		Pn	09 39 46.5	-1.0
COLD	Coldfoot	4.03	2	P	Pn	09 39 48.3	-0.1
	baz=182,SNR=101						
COLD	Coldfoot	4.03	2		Pn	09 39 48.5	+0.2
FYU	Fort Yukon	4.04	31		Pn	09 39 48.2	-0.2
AU22	Augustine Moun	4.10	201		Pn	09 39 49.9	+0.4
AUL	Augustine Lava	4.11	202		Pn	09 39 50.1	+0.6
AUW	Augustine West	4.12	202		Pn	09 39 50.0	+0.3
AUCH	Augustine Cone	4.12	202		Pn	09 39 49.6	-0.2
HMT	Hamilton	4.13	132		Pn	09 39 48.8	-1.0
PTPK	Patty Peak	4.27	115		Pn	09 39 51.5	-0.3
BERG	Berg Lake	4.29	128		Pn	09 39 50.8	-1.1
NICHA	Nichawak Mount	4.30	131		Pn	09 39 51.1	-1.0
EGAK	Eagle	4.39	65	P	Pn	09 39 52.6	-0.6
	baz=253,SNR=165						
EGAK	Eagle	4.39	65		Pn	09 39 53.0	-0.2
EGAK				IAML		09 40 47.3	
	comp=E,391nm,0.9s						
EGAK				IAML		09 40 59.7	
	comp=E,364nm,0.9s						
KAIM	Kayak Island	4.39	136	P	Pn	09 39 51.9	-1.4
	baz=321						
KAIM	Kayak Island	4.39	136		Pn	09 39 52.1	-1.1
KAIM				IAML		09 41 09.5	
	comp=N,307nm,0.8s						
KAIM				IAML		09 41 09.6	
	comp=E,410nm,0.7s						
BALM	Baldy	4.40	116		Pn	09 39 52.9	-0.6
BALM				IAML		09 40 50.1	
	comp=E,297nm,0.7s						
BALM				IAML		09 41 04.7	
	comp=N,277nm,0.9s						
KHIT	Khitrov Hills	4.42	126		Pn	09 39 52.7	-0.9
KIAG	Kiagna River	4.46	117		Pn	09 39 53.1	-1.2
BVCY	Beaver Creek	4.49	96		Pn	09 39 54.0	-0.5
SUCK	Suckling Hills	4.49	132		Pn	09 39 53.5	-1.1
SUCK				IAML		09 41 07.1	
	comp=E,405nm,0.8s						
GRIN	Grindle Hills	4.50	128		Pn	09 39 54.1	-0.7
BGLC	Bering Glacier	4.63	129	P	Pn	09 39 55.7	-0.6
	baz=315						
BGLC	Bering Glacier	4.63	129		Pn	09 39 56.1	-0.3
BARN	Barnard Glacie	4.67	114		Pn	09 39 57.3	+0.1
BARN				IAML		09 40 58.1	
	comp=N,200nm,1.0s						
BARN				IAML		09 41 20.1	
	comp=E,226nm,1.0s						
YUK2	White River	4.69	104		Pn	09 39 57.6	+0.2
KULT	Kultieth River	4.74	125		Pn	09 39 57.1	-0.9
CTG	Chitna Glacier	4.85	114	P	Pn	09 39 59.1	-0.4
	baz=302						
CTGM	Chitina Glacie	4.86	114		Pn	09 39 59.6	0.0
CTGM				IAML		09 41 03.7	
	comp=N,150nm,0.8s						
YUK3	Moose Creek	4.87	103		Pn	09 40 00.0	+0.2
BM03	Burnt Mountain	4.88	28		Pn	09 39 59.6	-0.2
BMAR	Burnt Mountain	4.90	28		Pn	09 39 59.9	-0.1
CYK	Cape Yakataga	4.94	126		Pn	09 39 59.9	-0.7
DAWY	Dawson	5.01	75		Pn	09 40 01.4	-0.3
LOGN	Logan Glacier	5.07	114		Pn	09 40 01.8	-0.7
TABL	Table Mountain	5.23	118		Pn	09 40 03.5	-1.1
TABL				IAML		09 41 32.1	
	comp=N,124nm,0.7s						
TABL				IAML		09 41 38.0	
	comp=E,121nm,0.9s						
RKAV	Rock Avalanche	5.23	120		Pn	09 40 04.1	-0.6
KCG	Knife Ck. Glac	5.42	207		Pn	09 40 07.1	-0.1
TOLK	Toolik Lake Re	5.46	3		Pn	09 40 09.7	+2.1
KABU	Katmai Buttres	5.49	208		Pn	09 40 08.1	0.0
KCE	Katmai Mt Cerb	5.50	207		Pn	09 40 08.4	+0.2
KDAK	Kodiak Island	5.55	192	P	Pn	09 40 06.1	-2.7
	comp=E,5.3nm,0.3s,baz=64,slow=9.2,SNR=111						
KDAK				S	Sn	09 41 07.4	-4.0
	comp=E,21nm,0.3s,baz=314,slow=22,SNR=15						
KDAK	Kodiak Island	5.55	192	P	Pn	09 40 06.5	-2.3
	baz=10						
KDAK	Kodiak Island	5.55	192		Pn	09 40 06.7	-2.2
CAHL	Cahill	5.70	207		Pn	09 40 11.2	+0.3
KJL	Kejulik	5.75	208		Pn	09 40 11.7	+0.1
YUK4	Talbot Arm	5.83	103		Pn	09 40 12.4	-0.4
YUK6	Outpost Mounta	6.13	106		Pn	09 40 16.2	-0.6
OHAK	Old Harbor	6.18	194	P	Pn	09 40 14.9	-2.3
	baz=12						
OHAK	Old Harbor	6.18	194		Pn	09 40 14.8	-2.4
PLK2	Peulik 2	6.18	210		Pn	09 40 18.1	+0.7
PLK1	Peulik 1	6.22	212		Pn	09 40 18.1	+0.4
PLK3	Peulik 3	6.24	210		Pn	09 40 18.2	+0.1
YUK5	Granite Creek	6.27	104		Pn	09 40 18.1	-0.5
YUK7	Dusty Glacier	6.43	109		Pn	09 40 20.2	-0.6
HYT	Haines Junctio	6.56	106		Pn	09 40 21.8	-0.7
EPYK	Eagle Plains	6.67	56	P	Pn	09 40 23.1	-0.7
	baz=248,SNR=57						
EPYK	Eagle Plains	6.67	56		Pn	09 40 23.3	-0.5
ANM	Nome	6.71	288	P	Pn	09 40 24.4	0.0
	baz=95						
ANM	Nome	6.71	288		Pn	09 40 24.7	+0.3
RDOG	Red Dog Mine	7.06	319	P	Pn	09 40 29.1	+0.1
	baz=128						
RDOG	Red Dog Mine	7.06	319		Pn	09 40 30.2	+1.1
PLBC	Pleasant Camp	7.76	113		Pn	09 40 37.7	-0.8
WHY	Whitehorse	7.79	102		Pn	09 40 38.8	-0.2
CHGN	Chignik	8.01	214	P	Pn	09 40 40.3	-1.6
	baz=27						
CHGN	Chignik	8.01	214		Pn	09 40 40.1	-1.8
SKAG	Skagway	8.19	111	P	Pn	09 40 43.6	-0.8
	baz=304						
SKAG	Skagway	8.19	111		Pn	09 40 43.5	-0.8
A21K	Barrow	8.47	346	P	Pn	09 40 46.9	-1.1
	baz=161						
A21K	Barrow	8.47	346		Pn	09 40 47.3	-0.7
INK	Inuvik	8.62	46	P	Pn	09 40 50.0	0.0
	comp=E,0.4nm,0.3s,baz=234,slow=18,SNR=31						
INK				S	Sn	09 42 25.2	-0.1
	comp=E,0.2nm,0.3s,baz=206,slow=16,SNR=4.1						
INK	Inuvik	8.62	46		Pn	09 40 48.5	-1.6
BESE	Bessie Mountai	8.91	114		Pn	09 40 52.6	-1.5
JIS	Juneau Island	9.29	115		Pn	09 40 57.6	-1.5
CNBA	Chernabura Isl	9.63	213	Pn	Pn	09 41 02.5	-1.3
DLBC	Dease Lake	11.04	106	P	Pn	09 41 24.6	+1.8
	comp=E,0.7nm,0.3s,baz=273,slow=10,SNR=9.4						
WRAK	Wrangell Islan	11.36	119	P	Pn	09 41 26.9	0.0
	baz=314						
WRAK	Wrangell Islan	11.36	119	Pn	Pn	09 41 26.9	0.0
CRAG	Craig	11.74	123	P	Pn	09 41 31.8	-0.1
	baz=318						
CRAG	Craig	11.74	123	Pn	Pn	09 41 32.9	+1.0
BBB	Bella Bella	16.17	123	P	P	09 42 30.3	+1.2
	comp=E,0.3nm,0.3s,baz=320,slow=11,SNR=7.2						
YKA	Yellowknife Ar	16.25	76	P	Pn	09 42 28.6	-0.7
	comp=E,0.8nm,0.3s,baz=282,slow=12,SNR=43						
YKA				ScP	ScP	09 50 37.0	-0.5
	comp=E,0.0nm,0.3s,baz=278,slow=0.9,SNR=6.6						
ATKA	Atka Island	16.68	240		Pn	09 42 34.2	-0.3
ATKA				IAmb	IAmb	09 42 39.9	
	comp=Z,31nm,0.8s						
ADK	Adak	17.91	243	P	P	09 42 47.8	-0.5
ADK				IAmb	IAmb	09 42 47.8	
	comp=Z,36nm,1.0s						
A04D	Lummi Island	21.02	121	P	P	09 43 22.8	+0.9
	baz=324						
B05A	Bryant	21.63	120	P	P	09 43 29.1	+0.7
	baz=324						
D03D	Eldon	21.85	123	P	P	09 43 32.0	+1.3
	baz=326						
RES	Resolute Bay	21.95	36	P	P	09 43 31.2	-0.4
	comp=Z,3.7nm,0.6s,baz=254,slow=9.0,SNR=23						
RES				S	S	09 47 23.9	-1.5
	comp=Z,1.0nm,0.7s,baz=318,slow=17,SNR=2.6						
E04D	Cinebar	22.86	124	P	P	09 43 41.8	+0.9
	baz=327						
NEW	Newport	23.64	114	P	P	09 43 49.4	+1.3
	comp=Z,3.8nm,0.7s,baz=330,slow=7.7,SNR=10						
NEW	Newport	23.64	114	P	P	09 43 48.1	0.0
	baz=322						
NEW	Newport	23.64	114	P	P	09 43 49.6	+1.6
D08A	Wollman Farm,	23.86	118	P	P	09 43 50.9	+0.8
WALA	Waterton Lakes	24.38	108	P	P	09 43 56.4	+1.4
WALA				IAmb	IAmb	09 43 58.5	
	comp=Z,8.4nm,0.7s						
SEY	Seymchan	25.15	295	P	P	09 44 01.1	-0.5
	comp=Z,5.2nm,0.6s,baz=80,slow=7.3,SNR=30						
JTMT	Jette	25.23	111	P	P	09 44 04.3	+1.7
JTMT				IAmb	IAmb	09 44 07.3	
	comp=Z,11nm,0.8s						
K02D	Willamette Mer	25.79	130	P	P	09 44 08.7	+1.1
	baz=332						
FFC	Flin Flon	25.80	87	P	P	09 44 08.6	+1.0
MSO	Missoula	26.10	112	P	P	09 44 10.6	+0.1
	baz=322						
MSO	Missoula	26.10	112	P	P	09 44 11.4	+1.0
L04D	Klamath Falls	26.69	129	P	P	09 44 16.5	+0.7
	baz=332						
FCC	Fort Churchill	26.93	73	P	P	09 44 18.7	+1.1
EGMT	Eagleton	26.97	105	P	P	09 44 18.7	+0.5
	baz=319						
EGMT	Eagleton	26.97	105	P	P	09 44 19.4	+1.2
EGMT				IAmb	IAmb	09 44 20.6	
	comp=Z,11nm,1.1s						
J08A	Circle Bar Ran	27.12	122	P	P	09 44 21.5	+1.9
M02C	Callahan	27.22	130	P	P	09 44 21.9	+1.4
	baz=333						
M04C	Macdoel	27.23	128	P	P	09 44 21.7	+1.0
	baz=332						
MA2	Magadan	27.50	290	P	P	09 44 22.9	+0.2
	comp=Z,1.4nm,0.3s,baz=63,slow=4.5,SNR=2.8						
N02D	Trinity Center	27.65	131	P	P	09 44 24.9	+0.6
	baz=333						
BOZ	Bozeman (W)	28.05	111	P	P	09 44 28.0	0.0
	baz=323						
PEA0B	Petropavlovsk-	28.35	274	P	P	09 44 29.6	-0.7
PETK	Petropavlovsk-	28.35	274	P	P	09 44 29.9	-0.5
	comp=Z,2.0nm,0.6s,baz=57,slow=13,SNR=2.2						
PETK	Petropavlovsk-	28.35	274	P	P	09 44 30.1	-0.3
HLID	Hailey	28.55	116	P	P	09 44 32.5	0.0
	baz=326						
O03E	Paynes Creek	28.56	130	P	P	09 44 33.1	+0.6
	baz=333						
YHH	Holmes Hill	29.03	111	P	P	09 44 39.2	+2.5
YHH				IAmb	IAmb	09 44 39.7	
	comp=Z,7.3nm,0.8s						
DGMT	Dagmar	29.10	99	P	P	09 44 37.6	+0.5
	baz=318						
RLMT	Red Lodge	29.44	108	P	P	09 44 41.7	+1.4
	baz=323						
REDW	Red Top Meadow	30.18	112	P	P	09 44 49.3	+2.4
BW06	Boulder Array	31.22	111	P	P	09 44 56.7	+0.7
	baz=325						
PDAR	Pinedale Array	31.22	111	P	P	09 44 57.7	+1.6
	comp=Z,3.6nm,0.8s,baz=314,slow=5.6,SNR=36						
NVAR	Mina Array Bea	31.46	127	P	P	09 45 00.2	+2.0
	comp=Z,1.7nm,0.7s,baz=318,slow=8.3,SNR=20						
NVAR	Mina Array Bea	31.46	127	P	P	09 45 00.7	+2.5
ULM	Lac du Bonnet	31.57	88	P	P	09 44 59.8	+1.1
	comp=Z,5.0nm,0.7s,baz=308,slow=8.5,SNR=13						
ULM	Lac du Bonnet	31.57	88	P	P	09 44 59.5	+0.8
ULM				IAmb	IAmb	09 45 00.5	
	comp=Z,5.1nm,0.8s						
DUG	Dugway, Tooele	32.03	118	P	P	09 45 02.8	-0.3
	baz=329						
DUG	Dugway, Tooele	32.03	118	P	P	09 45 04.1	+1.1
RSSD	Black Hills	32.51	104	P	P	09 45 07.3	0.0
	baz=322						
R11A	Troy Canyon, C	32.54	123	P	P	09 45 08.1	+0.6
	baz=331						
K22A	Casper	32.60	108	P	P	09 45 07.8	-0.2
	baz=324						
CWC	Cottonwood Cre	33.31	128	P	P	09 45 14.7	+0.4
	baz=334						
VES	Vestal, Richgr	33.50	130	P	P	09 45 16.2	+0.5
	baz=335						
TPNV	Topopah Spring	33.53	125	P	P	09 45 16.4	+0.3
	baz=333						
MPMC	Manual Prospec	33.87	128	P	P	09 45 19.5	+0.4
	baz=334						
ISA	Isabella, Lake	33.87	129	P	P	09 45 19.5	+0.5
	baz=335						
O20A	White River Ci	33.95	113	P	P	09 45 19.5	-0.3
	baz=327						
LRMC	Laurel Mtn Rad	34.32	128	P	P	09 45 23.4	+0.5
	baz=334						
GSC	Goldstone, Bar	34.79	127	P	P	09 45 26.9	-0.1
	baz=334						

PV23	**Carpenter Ridg**	**35.05**	**115**	P	**P**	**09 45 29.3**	**-0.1**
PV23				IAmb	IAmb	09 45 35.8	
	comp=Z,4.6nm,0.7s						
PV16	**Nyswonger Mesa**	**35.21**	**115**	P	**P**	**09 45 32.3**	**+1.6**
PV16				IAmb	IAmb	09 45 32.4	
	comp=Z,2.9nm,0.6s						
PV17	**East Wray Mesa**	**35.22**	**115**	P	**P**	**09 45 32.1**	**+1.3**
PV17				IAmb	IAmb	09 45 36.3	
	comp=Z,3.5nm,0.8s						
EYMN	**Ely**	**35.23**	**87**	P	**P**	**09 45 31.2**	**+0.8**
	baz=318						
EYMN	**Ely**	**35.23**	**87**	P	**P**	**09 45 31.5**	**+1.0**
PV03	**Paradox Valley**	**35.29**	**115**	P	**P**	**09 45 32.4**	**+1.0**
GMRC	**Granite Mounta**	**35.67**	**126**	P	**P**	**09 45 35.0**	**+0.5**
	baz=334						
F36A	**Milaca**	**35.87**	**92**	P	**P**	**09 45 36.3**	**+0.3**
F36A				IAmb	IAmb	09 45 37.9	
	comp=Z,6.4nm,0.9s						
ECSD	**EROS Data Cent**	**36.12**	**97**	P	**P**	**09 45 38.5**	**+0.3**
	baz=322						
ECSD	**EROS Data Cent**	**36.12**	**97**	P	**P**	**09 45 38.6**	**+0.4**
ECSD				IAmb	IAmb	09 45 39.4	
	comp=Z,6.1nm,1.1s						
E38A	**The Farm, Brul**	**36.20**	**89**	P	**P**	**09 45 39.4**	**+0.6**
E38A				IAmb	IAmb	09 45 40.1	
	comp=Z,4.8nm,0.7s						
Q24A	**Divide**	**36.23**	**110**	P	**P**	**09 45 39.7**	**+0.2**
	baz=327						
BELC	**Belle Mtn. Jos**	**36.25**	**127**	P	**P**	**09 45 40.3**	**+0.8**
	baz=334						
MVCO	**Mesa Verde**	**36.32**	**116**	P	**P**	**09 45 40.7**	**+0.5**
	baz=329						
IRM	**Iron Mountain**	**36.42**	**126**	P	**P**	**09 45 42.1**	**+1.3**
	baz=334						
S22A	**4UR Ranch, Cre**	**36.55**	**113**	P	**P**	**09 45 42.9**	**+0.6**
	baz=328						
WUAZ	**Wupatki**	**36.64**	**120**	P	**P**	**09 45 43.5**	**+0.6**
	baz=332						
SPMN	**Marine on St.**	**36.69**	**92**	P	**P**	**09 45 43.1**	**+0.2**
	baz=320						
SUMG	**Summit**	**36.97**	**28**	P	**P**	**09 45 45.7**	**+0.2**
DAG	**Danmarks Havn**	**37.06**	**17**	*i* P	**P**	**09 45 45.5**	**-0.2**
DAG				*i*		09 45 48.5	
DAG	**Danmarks Havn**	**37.06**	**17**	*i* P	**P**	**09 45 45.5**	**-0.2**
DAG				IAmb	IAmb	09 45 45.9	
	comp=Z,5.9nm,0.6s						
DAG				*i*		09 45 48.5	
MONP2	**Monument Peak**	**37.10**	**129**	P	**P**	**09 45 48.0**	**+1.2**
	baz=335						
SDCO	**Great Sand Dun**	**37.11**	**112**	P	**P**	**09 45 47.6**	**+0.7**
	baz=328						
SWSC	**Sam W. Stewart**	**37.27**	**128**	P	**P**	**09 45 47.4**	**-0.6**
	baz=335						
IKP	**In-Ko-Pah, Jac**	**37.43**	**128**	P	**P**	**09 45 49.8**	**+0.4**
	baz=335						
COWI	**Conover**	**37.68**	**87**	P	**P**	**09 45 51.9**	**+0.6**
COWI				IAmb	IAmb	09 45 52.9	
	comp=Z,14nm,1.2s						
T25A	**Trinidad**	**38.08**	**111**	P	**P**	**09 45 54.8**	**-0.3**
	baz=328						
E43A	**Lone Tree Farm**	**38.44**	**85**	P	**P**	**09 45 58.4**	**+0.8**
E43A				IAmb	IAmb	09 45 59.3	
	comp=Z,7.2nm,0.8s						
SPITS	**Spitsbergen Ar**	**38.61**	**4**	P	**P**	**09 45 58.6**	**-0.2**
	comp=Z,5.5nm,0.7s,baz=52,slow=5.7,SNR=13						
CBKS	**Cedar Bluff**	**38.70**	**105**	P	**P**	**09 45 59.8**	**-0.1**
	baz=326						
DBG	**Daneborg**	**38.91**	**19**	*i* P	**P**	**09 46 01.0**	**-0.2**
DBG				IAmb	IAmb	09 46 01.7	
	comp=Z,2.6nm,0.6s						
ANMO	**Albuquerque**	**39.11**	**115**	P	**P**	**09 46 03.8**	**+0.2**
	baz=330						
214A	**Organ Pipe Nat**	**39.25**	**125**	P	**P**	**09 46 05.2**	**+0.6**
	baz=334						
JFWS	**Jewell Farm**	**39.64**	**92**	P	**P**	**09 46 07.5**	**-0.2**
	baz=322						
E46A	**Sault Ste Mari**	**39.66**	**83**	P	**P**	**09 46 08.6**	**+0.8**
TUC	**Tucson**	**39.70**	**122**	P	**P**	**09 46 08.2**	**-0.2**
	baz=333						
KSU1	**Kansas State U**	**39.84**	**101**	P	**P**	**09 46 09.0**	**-0.4**
	baz=325						
L40A	**Anamosa**	**39.87**	**93**	P	**P**	**09 46 09.9**	**+0.3**
L40A				IAmb	IAmb	09 46 10.7	
	comp=Z,7.5nm,0.6s						
MATQ	**Matagami**	**40.07**	**74**	P	**P**	**09 46 10.5**	**-0.7**
	baz=318						
121A	**Cookes Peak, D**	**40.68**	**119**	P	**P**	**09 46 16.2**	**-0.4**
	baz=332						
GLMI	**Grayling**	**40.70**	**85**	P	**P**	**09 46 16.3**	**-0.1**
	baz=321						
LSQQ	**Lebel-sur-Quev**	**40.88**	**75**	P	**P**	**09 46 17.4**	**-0.4**
	baz=318						
VLDQ	**Val d'Or**	**41.38**	**76**	P	**P**	**09 46 20.1**	**-1.7**
VLDQ				IAmb	IAmb	09 46 21.3	
	comp=Z,8.0nm,0.9s						
MSTX	**Muleshoe**	**41.48**	**112**	P	**P**	**09 46 22.6**	**-0.4**
	baz=330						
MSTX	**Muleshoe**	**41.48**	**112**	P	**P**	**09 46 24.3**	**+1.3**
NRIK	**Noril'sk**	**41.55**	**333**	P	**P**	**09 46 23.4**	**+0.3**
	comp=Z,1.3nm,0.4s,baz=59,slow=5.9,SNR=3.6						
NRIK	**Noril'sk**	**41.55**	**333**	P	**P**	**09 46 23.6**	**+0.6**
M44A	**Midewin, Midew**	**41.85**	**91**	P	**P**	**09 46 26.6**	**+0.8**
HDIL	**Hopedale**	**41.95**	**93**	P	**P**	**09 46 25.8**	**-0.8**
	baz=324						
HDIL	**Hopedale**	**41.95**	**93**	P	**P**	**09 46 26.9**	**+0.3**
HDIL				IAmb	IAmb	09 46 27.3	
	comp=Z,8.7nm,0.6s						
MNTX	**Cornudas Mount**	**42.38**	**116**	P	**P**	**09 46 30.3**	**+0.1**
	baz=332						
KLR	**Kul'dur**	**42.60**	**289**	P	**P**	**09 46 31.1**	**-0.7**
	comp=Z,1.6nm,0.7s,baz=83,slow=9.5,SNR=7.0						
ALGO	**Algonquin Park**	**42.77**	**78**	P	**P**	**09 46 32.4**	**-0.8**
	baz=321						
D55A	**Sainte-Anne-du**	**43.08**	**75**	P	**P**	**09 46 35.3**	**-0.4**
	baz=320						
SFIN	**Lafayette**	**43.08**	**91**	P	**P**	**09 46 35.3**	**-0.5**
	baz=324						
I51A	**Listowel**	**43.11**	**83**	P	**P**	**09 46 35.3**	**-0.7**
	baz=322						
G54A	**Lake Saint Pet**	**43.18**	**79**	P	**P**	**09 46 35.9**	**-0.6**
	baz=321						
N47A	**Urbana**	**43.32**	**89**	P	**P**	**09 46 38.0**	**+0.4**
D56A	**ZEC Mazanza, M**	**43.37**	**75**	P	**P**	**09 46 37.3**	**-0.8**
	baz=320						
FVM	**French Village**	**43.52**	**96**	P	**P**	**09 46 39.5**	**+0.2**
FVM				IAmb	IAmb	09 46 42.3	
	comp=Z,4.1nm,0.8s						
E56A	**St. Veronique**	**43.64**	**75**	P	**P**	**09 46 39.4**	**-0.8**
	baz=321						
ABTX	**Abilene, Hawle**	**43.97**	**110**	P	**P**	**09 46 42.7**	**-0.3**
	baz=330						
LATQ	**La Tuque**	**43.98**	**73**	P	**P**	**09 46 41.9**	**-0.9**
	baz=320						
TRQ	**Mont Tremblant**	**44.10**	**75**	P	**P**	**09 46 44.0**	**0.0**
D58A	**Chemin du LacG**	**44.15**	**73**	P	**P**	**09 46 43.6**	**-0.7**
	baz=321						
PBMO	**Poplar Bluff**	**44.52**	**97**	P	**P**	**09 46 47.4**	**+0.1**
PBMO				IAmb	IAmb	09 46 47.7	
	comp=Z,9.4nm,0.7s						
E58A	**La Victoria**	**44.54**	**74**	P	**P**	**09 46 46.5**	**-0.9**
	baz=321						
G57A	**Newington**	**44.78**	**77**	P	**P**	**09 46 48.5**	**-0.7**
	baz=322						
ERPA	**Erie**	**44.91**	**83**	P	**P**	**09 46 50.2**	**-0.1**
	baz=323						
L53A	**Girard**	**44.92**	**84**	P	**P**	**09 46 50.4**	**0.0**
	baz=323						
MIAR	**Mount Ida**	**44.97**	**102**	P	**P**	**09 46 50.3**	**-0.6**
	baz=328						
JTM	**Tenmabayashi**	**45.05**	**274**	P	**P**	**09 46 51.6**	**+0.2**
ACSO	**Alum Creek Sta**	**45.07**	**88**	P	**P**	**09 46 51.3**	**-0.3**
	baz=324						
H57A	**Richville**	**45.11**	**78**	P	**P**	**09 46 51.3**	**-0.5**
	baz=322						
M53A	**WI Miller and**	**45.14**	**85**	P	**P**	**09 46 51.9**	**-0.2**
	baz=323						
D60A	**Saint Jean D'O**	**45.14**	**72**	P	**P**	**09 46 51.6**	**-0.5**
	baz=321						
TXAR	**Lajitas Array**	**45.15**	**116**	P	**P**	**09 46 54.1**	**+1.6**
	comp=Z,2.9nm,0.7s,baz=326,slow=6.0,SNR=36						
TXAR				ScP	**ScP**	**09 52 12.4**	**+1.2**
	comp=Z,0.5nm,0.9s,baz=241,slow=5.2,SNR=3.7						
G58A	**Ormstown**	**45.16**	**76**	P	**P**	**09 46 51.9**	**-0.3**
	baz=322						
F59A	**Saint Guilaume**	**45.16**	**74**	P	**P**	**09 46 51.6**	**-0.7**
	baz=321						
WCI	**Wyandotte Cave**	**45.19**	**92**	P	**P**	**09 46 51.8**	**-0.8**
	baz=325						
D61A	**St Aubert, Com**	**45.23**	**71**	P	**P**	**09 46 52.4**	**-0.5**
	baz=321						
E60A	**Ste Agathe de**	**45.34**	**73**	P	**P**	**09 46 53.2**	**-0.5**
	baz=321						
F60A	**Warwick**	**45.44**	**74**	P	**P**	**09 46 54.0**	**-0.4**
	baz=322						
WHTX	**Lake Whitney,**	**45.45**	**108**	P	**P**	**09 46 54.3**	**-0.4**
	baz=330						
M54A	**Oil Creek Stat**	**45.54**	**84**	P	**P**	**09 46 54.9**	**-0.4**
	baz=323						
FRNY	**Flat Rock**	**45.61**	**76**	P	**P**	**09 46 55.3**	**-0.5**
FRNY				IAmb	IAmb	09 46 55.9	
	comp=Z,12nm,0.8s						
H58A	**Gabriels**	**45.68**	**77**	P	**P**	**09 46 55.6**	**-0.8**
	baz=322						
E61A	**Lac Etchemin**	**45.71**	**72**	P	**P**	**09 46 55.4**	**-1.1**
	baz=322						
H59A	**Cadyville**	**45.71**	**76**	P	**P**	**09 46 55.7**	**-0.9**
	baz=322						
JCT	**Junction City**	**45.75**	**111**	P	**P**	**09 46 57.4**	**+0.2**
	baz=331						
JCT	**Junction City**	**45.75**	**111**	P	**P**	**09 46 58.3**	**+1.1**
JCT				IAmb	IAmb	09 46 60.0	
	comp=Z,12nm,0.8s						
D62A	**Allapoint, All**	**45.81**	**70**	P	**P**	**09 46 57.0**	**-0.4**
	baz=321						
D62A	**Allapoint, All**	**45.81**	**70**	P	**P**	**09 46 57.8**	**+0.4**
D62A				IAmb	IAmb	09 47 01.5	
	comp=Z,13nm,1.2s						
MOQ	**Mont Orford**	**45.82**	**74**	P	**P**	**09 46 57.5**	**0.0**
N54A	**Moraine State**	**45.83**	**84**	P	**P**	**09 46 57.4**	**-0.2**
	baz=324						
F61A	**St Evariste**	**45.85**	**73**	P	**P**	**09 46 57.2**	**-0.5**
	baz=322						
Q51A	**Peebles**	**45.88**	**89**	P	**P**	**09 46 58.3**	**+0.3**
Q51A				IAmb	IAmb	09 46 58.9	
	comp=Z,9.6nm,0.6s						
I58A	**Old Forge**	**45.90**	**78**	P	**P**	**09 46 57.0**	**-1.1**
	baz=322						
G60A	**Masonville**	**45.95**	**75**	P	**P**	**09 46 57.8**	**-0.7**
	baz=322						
L56A	**Greenwood**	**45.98**	**81**	P	**P**	**09 46 59.0**	**+0.1**
	baz=323						
H60A	**Morristown**	**46.22**	**75**	P	**P**	**09 47 00.1**	**-0.5**
	baz=322						
WVT	**Waverly**	**46.22**	**95**	P	**P**	**09 47 00.4**	**-0.3**
	baz=326						
M56A	**Emporium**	**46.23**	**82**	P	**P**	**09 47 00.5**	**-0.2**
	baz=323						
D63A	**Stockholm**	**46.25**	**70**	P	**P**	**09 47 00.5**	**-0.3**
	baz=322						
O54A	**Avella**	**46.28**	**85**	P	**P**	**09 47 01.7**	**+0.5**
Q52A	**Bidwell**	**46.42**	**88**	P	**P**	**09 47 02.4**	**+0.2**
H61A	**Lyndonville**	**46.57**	**75**	P	**P**	**09 47 02.8**	**-0.6**
	baz=322						
E63A	**Oxbow**	**46.60**	**71**	P	**P**	**09 47 02.0**	**-1.5**
	baz=322						
E63A	**Oxbow**	**46.60**	**71**	P	**P**	**09 47 03.4**	**-0.2**
N56A	**West Decatur**	**46.63**	**83**	P	**P**	**09 47 03.9**	**0.0**
	baz=324						
BINY	**Binghamton**	**46.64**	**80**	P	**P**	**09 47 03.6**	**-0.4**
	baz=323						
G62A	**West of Eustis**	**46.64**	**73**	P	**P**	**09 47 03.7**	**-0.2**
	baz=322						
L58A	**Harry Jones Me**	**46.82**	**80**	P	**P**	**09 47 04.5**	**-0.8**
	baz=323						
Q53A	**Leroy**	**46.84**	**87**	P	**P**	**09 47 05.6**	**+0.1**
	baz=325						
E64A	**Bridgewater**	**46.86**	**70**	P	**P**	**09 47 04.5**	**-1.0**
	baz=322						
OXF	**Oxford**	**46.86**	**98**	P	**P**	**09 47 05.5**	**-0.2**
	baz=327						
F63A	**Nahmakanta, Br**	**46.88**	**72**	P	**P**	**09 47 05.4**	**-0.4**
	baz=322						
BATG	**Bathurst New B**	**46.93**	**68**	P	**P**	**09 47 06.6**	**+0.6**
BATG				IAmb	IAmb	09 47 10.9	
	comp=Z,19nm,1.4s						
J60A	**Lant Hill Farm**	**46.94**	**77**	P	**P**	**09 47 05.4**	**-0.8**
	baz=323						
MCWV	**Mont Chateau**	**46.95**	**85**	P	**P**	**09 47 05.4**	**-0.9**
	baz=324						
V48A	**Smith Brothers**	**47.00**	**95**	P	**P**	**09 47 06.6**	**-0.2**
V48A				IAmb	IAmb	09 47 08.9	
	comp=Z,12nm,1.2s						
O56A	**Blue Knob Stat**	**47.03**	**84**	P	**P**	**09 47 05.2**	**-1.9**
	baz=324						
F64A	**Sherman**	**47.07**	**71**	P	**P**	**09 47 06.3**	**-0.9**
	baz=322						
N57A	**Milroy**	**47.09**	**82**	P	**P**	**09 47 06.3**	**-1.2**
	baz=324						
PKME	**Peaks-Kenny Pk**	**47.14**	**72**	P	**P**	**09 47 07.1**	**-0.6**
	baz=322						
G64A	**Maxfield**	**47.38**	**72**	P	**P**	**09 47 09.2**	**-0.4**
	baz=322						
N58A	**Sunbury**	**47.40**	**82**	P	**P**	**09 47 09.3**	**-0.5**
	baz=324						
O57A	**Amberson**	**47.50**	**83**	P	**P**	**09 47 10.4**	**-0.2**
	baz=324						
ARCES	**ARCESS Array B**	**47.50**	**2**	P	**P**	**09 47 09.8**	**-0.4**
	comp=Z,5.3nm,0.9s,baz=3.3,slow=8.5,SNR=6.1						
P56A	**Dayton Farm, R**	**47.53**	**85**	P	**P**	**09 47 10.9**	**+0.1**
	baz=324						
R54A	**Victor**	**47.63**	**87**	P	**P**	**09 47 11.3**	**-0.4**
	baz=325						
Q56A	**Snyder Ridge,**	**47.75**	**85**	P	**P**	**09 47 12.2**	**-0.3**
	baz=325						
S54A	**Dingess, Beckl**	**47.80**	**88**	P	**P**	**09 47 12.5**	**-0.5**
	baz=325						
O58A	**Lewisberry**	**47.89**	**82**	P	**P**	**09 47 13.2**	**-0.4**
	baz=324						
P57A	**Homestead Farm**	**47.92**	**84**	P	**P**	**09 47 13.5**	**-0.3**
	baz=324						
H65A	**Eastbrook**	**48.04**	**72**	P	**P**	**09 47 13.6**	**-1.1**
	baz=323						
Q57A	**Strasburg**	**48.10**	**85**	P	**P**	**09 47 15.1**	**-0.2**
	baz=325						
O60A	**Telford**	**48.41**	**81**	P	**P**	**09 47 17.5**	**-0.1**
	baz=324						
Q58A	**Fox Den Farm,**	**48.51**	**84**	P	**P**	**09 47 18.2**	**-0.2**
	baz=325						
P59A	**Jarrettsville**	**48.52**	**82**	P	**P**	**09 47 18.4**	**0.0**
	baz=324						
U54A	**Nelsons Funny**	**48.62**	**89**	P	**P**	**09 47 19.1**	**-0.2**
	baz=326						
R57A	**Stanardsville**	**48.65**	**85**	P	**P**	**09 47 18.9**	**-0.6**
	baz=325						
LRAL	**Lakeview Retre**	**49.19**	**97**	P	**P**	**09 47 23.6**	**0.0**
	baz=328						
CBN	**Corbin Frederi**	**49.25**	**84**	P	**P**	**09 47 24.4**	**+0.4**
	baz=325						
GBN	**Guysborough**	**50.32**	**66**	P	**P**	**09 47 32.2**	**+0.2**
250A	**Grady**	**50.41**	**97**	P	**P**	**09 47 33.1**	**+0.3**
GOGA	**Godfrey**	**50.46**	**93**	P	**P**	**09 47 33.0**	**-0.3**
	baz=327						
W58A	**Raeford**	**51.03**	**88**	P	**P**	**09 47 36.8**	**-0.7**
	baz=327						
JHS	**Saijyo**	**53.38**	**276**	P	**P**	**09 47 55.5**	**+0.6**
KSRS	**Korea Array**	**53.66**	**282**	P	**P**	**09 47 57.4**	**+0.6**
	comp=Z,3.1nm,1.0s,baz=35,slow=6.5,SNR=6.5						
SONM	**Songino Array**	**53.88**	**306**	P	**P**	**09 47 59.3**	**+0.8**
	comp=Z,2.7nm,0.8s,baz=21,slow=6.1,SNR=19						
SONM	**Songino Array**	**53.88**	**306**	P	**P**	**09 47 59.6**	**+1.1**
SONM				IAmb	IAmb	09 48 00.2	
	comp=Z,2.4nm,0.8s						
NOA	**NORSAR Array B**	**55.29**	**11**	P	**P**	**09 48 08.4**	**0.0**
	comp=Z,0.5nm,0.6s,baz=352,slow=7.3,SNR=1.6						
ZALV	**Zalesovo Beam**	**55.48**	**324**	P	**P**	**09 48 09.2**	**-0.6**
	comp=Z,0.7nm,0.3s,baz=30,slow=6.0,SNR=4.7						
FINES	**FINESS Array B**	**55.63**	**2**	P	**P**	**09 48 09.9**	**-0.7**
	comp=Z,2.4nm,0.9s,baz=0.0,slow=7.6,SNR=6.0						
HHC	**Hu-ho-hao-te**	**57.77**	**297**	*e*P	**P**	**09 48 28.5**	**+2.2**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,220nm,6.2s						
ARU	**Arti**	**58.58**	**342**	P	**P**	**09 48 31.2**	**-0.3**
	comp=Z,1.3nm,0.2s,baz=341,slow=6.5,SNR=4.8						
MK31	**Makanchi Array**	**62.65**	**322**	P	**P**	**09 48 58.9**	**-0.4**
MKAR	**Makanchi Array**	**62.65**	**322**	P	**P**	**09 48 58.4**	**-0.9**
	comp=Z,0.5nm,0.5s,baz=36,slow=6.8,SNR=15						
WMQ	**Urumqi**	**63.76**	**317**	*e*P	**P**	**09 49 09.3**	**+2.6**
AKTO	**Aktyubinsk**	**64.48**	**340**	P	**P**	**09 49 10.9**	**-0.3**
	comp=Z,1.3nm,0.6s,baz=40,slow=9.3,SNR=3.9						
ABKAR	**Akbulak array**	**65.32**	**339**	P	**P**	**09 49 16.4**	**-0.3**
AKASG	**Malin Array Be**	**66.42**	**0**	P	**P**	**09 49 23.0**	**-0.7**
	comp=Z,0.8nm,0.3s,baz=4.8,slow=6.1,SNR=5.0						
CMAR	**Chiang Mai Arr**	**82.56**	**296**	P	**P**	**09 50 57.4**	**0.0**
	comp=Z,1.2nm,0.4s,baz=8.4,slow=6.2,SNR=4.7						

SOME ***25*** *09:48:43.2, 43°.63N×69°.38E*

NNC 25 09:48:46.5±3.6**, 43°.78N×69°.96E, h0**^{km}**, mb3.5, mpv2.6, 3C-3D, Error ellipse: s-maj=19.6km s-min=11.7km az=139.0, Suspected Mining explosion., Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**0.79**	**149**	⇑P	Pg	09 49 02.2	+0.7
	0.4nm,0.3s,baz=322,slow=17,SNR=9.8						
KK31				⇓S	Sg	09 49 12.7	+1.0
	8.9nm,0.6s,baz=330,slow=35,SNR=94						
AAK	**Ala-Archa**	**3.51**	**107**	⇑Pg	Pb	09 49 47.6	-1.9
	3.7nm,0.5s						
AAK				⇓Lg	Lg	09 50 40.3	
	8.1nm,0.8s						
TKM2	**Tokmak 2**	**4.20**	**100**	⇑Pn	Pn	09 49 52.1	+0.2
	2.3nm,0.5s						
TKM2				⇓Sn	Sn	09 50 40.9	-1.0
	4.9nm,0.6s						

TAP 25 10:04:35.9, 24°.19N×121°.68E, h12^{km}**, ML1.2, D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NACB	**Ninganchiao**	**0.08**	**258**	*i* P	Pg	10 04 39.0	+0.5
	baz=258						
NACB				*i* S	Sg	10 04 41.3	+0.9
	baz=258						
TWD	**Chiawan**	**0.13**	**214**	*i* P	Pg	10 04 39.5	+0.3
	baz=211						
TWD				S	Sg	10 04 42.1	+0.6
	baz=211						
ETLH	**Xiulin Townshi**	**0.18**	**275**	*i* P	Pb	10 04 40.7	-0.5
	baz=275						
ETLH				*i* S	Sg	10 04 44.1	+1.3
	baz=275						
NNSB	**Datong**	**0.36**	**312**	*i* P	Pb	10 04 44.1	-0.2
	baz=311						
NNSB				*i* S	Sb	10 04 49.7	-0.3
	baz=311						
NNSH	**Datong**	**0.36**	**312**	P	Pb	10 04 44.0	-0.3
	baz=311						
NNSH				S	Sb	10 04 49.6	-0.4
	baz=311						
WHF	**Hehuan Shan**	**0.38**	**263**	*i* P	Pb	10 04 44.2	-0.6
	baz=262						
WHF				*i* S	Sb	10 04 50.2	-0.6
	baz=262						
NDT	**Datong Townshi**	**0.44**	**340**	*e*S	Sb	10 04 52.2	+0.1
	baz=340						
ENTT	**Nioudou**	**0.46**	**347**	*e*P	Pb	10 04 46.0	0.0
	baz=348						
ENTT				S	Sb	10 04 52.4	-0.3
	baz=348						
CHGB	**Renai**	**0.48**	**254**	*i* P	Pb	10 04 46.3	-0.1
	baz=254						
CHGB				S	Sb	10 04 53.1	-0.3
	baz=254						
YHNB	**Yeheng**	**0.55**	**330**	*e*P	Pb	10 04 47.8	+0.2
	baz=330						
YHNB				S	Sb	10 04 55.5	+0.1
	baz=330						
NSK	**Sanguang**	**0.56**	**329**	*e*P	Pb	10 04 48.7	+0.9
	baz=329						
NSK				S	Sb	10 04 56.1	+0.3
	baz=329						
NWLT	**Wulai**	**0.61**	**345**	S	Sb	10 04 56.6	-0.4
	baz=344						
VWDT	**VWDT**	**0.65**	**229**	*e*S	Sb	10 04 58.5	+0.2
	baz=228						
WHP	**Taichung City**	**0.67**	**278**	*e*S	Sb	10 04 59.9	+1.0
	baz=277						

JMA 25 10:04:37.0±0.1**, 24°.35N×123°.69E, h15**^{km}±1^{km}**, M1.1, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	**0.04**	**113**	P	Pg	10 04 39.6	-0.1
IRIF				S	Sg	10 04 41.9	+0.4
HATJ	**Hateruma jima**	**0.31**	**160**	P	Pg	10 04 43.2	-0.3
HATJ				*e*S	Sg	10 04 47.8	-0.1
JKRS	**Kuro-shima**	**0.31**	**111**	P	Pg	10 04 43.6	+0.1
JKRS				S	Sb	10 04 48.9	-0.3
JIJ	**Ishigaki jima**	**0.41**	**88**	P	Pg	10 04 45.0	-0.3
JIJ				S	Sg	10 04 51.0	0.0
JISG	**Ishigakijimahi**	**0.61**	**67**	P	Pg	10 04 48.9	-0.1
JISG				*e*S	Sb	10 04 57.6	-0.3

JMA ***25*** *10:05:09.5±0.2, 39°.61N×143°.33E, h27*^{km}*±4*^{km}*, M3.8*

IDC ***25*** *10:05:11.2±5.0, 39°.55N×143°.44E, h33*^{km}*±40*^{km}*, mb3.6/8, mb1 3.7/12, mb1mx3.5/32, mbtmp3.8/12, ML3.0/4, Error ellipse: s-maj=32.4km s-min=17.2km az=98.0*

ISC 25 10:05:08.1±3.5**, 39°.55N**±0°.05×**143°.35E**±0°.07**, h15**^{km}±22^{km}**, n33, σ1**^{s}**.63**/38**, mb3.6**/9**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIYJ	**Miyakonagasawa**	**1.18**	**272**	P	**Pn**	**10 05 30.1**	**0.0**
MIYJ				*e*S	**Sb**	**10 05 45.3**	**0.0**
JTH	**Tanohata**	**1.21**	**289**	P	**Pn**	**10 05 30.6**	**+0.1**
JTH				*e*S	**Sb**	**10 05 45.3**	**-0.8**
OFUJ	**Ofunato**	**1.38**	**251**	P	**Pn**	**10 05 33.5**	**+0.6**
OFUJ				*e*S	**Sn**	**10 05 50.6**	**-0.3**
JKEN	**Kujiedanarisaw**	**1.42**	**298**	P	**Pn**	**10 05 33.3**	**-0.1**
JKEN				*e*S	**Sn**	**10 05 50.9**	**-1.0**
JOM	**Ohasama**	**1.59**	**268**	P	**Pb**	**10 05 36.9**	**-0.3**
JANG	**Nango**	**1.63**	**301**	P	**Pn**	**10 05 36.0**	**-0.3**
JMK	**Ichinoseki**	**1.75**	**251**	P	**Pn**	**10 05 39.1**	**+1.1**
JIO	**Ouri**	**1.90**	**236**	P	**Pn**	**10 05 40.8**	**+0.8**
JTM	**Tenmabayashi**	**2.14**	**306**	P	**Pn**	**10 05 43.8**	**+0.5**
JAH	**Hinai**	**2.18**	**288**	P	**Pn**	**10 05 45.2**	**+1.3**
JAH				*e*S	**Sn**	**10 06 10.8**	**+0.1**
JYK	**Kaneyama**	**2.40**	**256**	P	**Pn**	**10 05 48.6**	**+1.7**
JEM	**Erimo**	**2.47**	**357**	P	**Pn**	**10 05 48.7**	**+0.8**
JEM				*e*S	**Sn**	**10 06 18.0**	**+0.2**
JNBK	**Urakawa-nobuka**	**2.77**	**351**	P	**Pn**	**10 05 53.2**	**+1.3**
ASAJ	**Asahikawa**	**4.60**	**353**	Pn	**Pn**	**10 06 18.8**	**+1.7**
	1.3nm,0.3s,baz=201,slow=6.8,SNR=8.1						
ASAJ				Sn	**Sn**	**10 07 11.8**	**+1.4**
	1.4nm,0.3s,baz=263,slow=22,SNR=3.6						
MAT	**Matsushiro**	**5.04**	**235**	P	**Pn**	**10 06 26.1**	**+2.8**
MAT				*e*S	**Sn**	**10 07 22.4**	**+1.1**
MJAR	**Matsushiro Arr**	**5.04**	**235**	Pn	**Pn**	**10 06 26.4**	**+3.1**
	0.3nm,0.3s,baz=37,slow=12,SNR=18						
JHJ	**Hachijo jima 2**	**7.03**	**205**	Pn	**Pn**	**10 06 50.7**	**+0.2**
	2.7nm,0.3s,baz=238,slow=19,SNR=1.8						
JHJ				Sn	**Sn**	**10 08 04.0**	**-6.2**
	8.8nm,0.3s,baz=250,slow=22,SNR=2.5						
USRK	**Ussuriysk Ar.**	**9.66**	**302**	Pn	**Pn**	**10 07 24.0**	**-2.6**
	baz=105,slow=18,SNR=1.7						
KSRS	**Korea Array**	**12.26**	**265**	Pn	**P**	**10 08 14.2**	**-0.3**
	0.1nm,0.3s,baz=67,slow=13,SNR=3.4						
KLR	**Kul'dur**	**12.73**	**323**	Pn	**Pn**	**10 08 06.7**	**-1.9**
	0.0nm,0.3s,baz=142,slow=12,SNR=1.9						
PETK	**Petropavlovsk-**	**16.75**	**31**	Pn	**Pn**	**10 09 00.8**	**-1.3**
	0.0nm,0.3s,baz=188,slow=8.7,SNR=1.5						
SEY	**Seymchan**	**24.04**	**10**	P	**P**	**10 10 23.5**	**+1.1**
	1.0nm,0.5s,baz=163,slow=6.0,SNR=5.3						
SONM	**Songino Array**	**27.76**	**300**	P	**P**	**10 10 56.9**	**+0.6**
	0.9nm,0.7s,baz=85,slow=8.2,SNR=4.4						
H11N2	**WAKE ISLAND Hy**	**28.30**	**127**	T	T	10 42 01.7	
	baz=318,slow=75,SNR=35						
H11N1	**WAKE ISLAND Hy**	**28.30**	**127**	T	T	10 42 00.6	
	baz=318,slow=75,SNR=21						
H11N3	**WAKE ISLAND Hy**	**28.31**	**127**	T	T	10 41 49.9	
	baz=318,slow=75,SNR=26						
ZALV	**Zalesovo Beam**	**41.40**	**310**	P	**P**	**10 12 54.5**	**+1.0**
	0.8nm,0.4s,baz=90,slow=8.9,SNR=4.0						
CMAR	**Chiang Mai Arr**	**43.62**	**254**	P	**P**	**10 13 12.4**	**+0.3**
	0.7nm,0.3s,baz=73,slow=6.7,SNR=1.4						
MKAR	**Makanchi Array**	**44.12**	**300**	P	**P**	**10 13 16.9**	**+1.0**
	1.1nm,0.6s,baz=84,slow=9.6,SNR=11						
ILAR	**Eielson Array**	**46.56**	**34**	P	P	10 13 44.6	+10
	0.5nm,0.8s,baz=271,slow=5.9,SNR=3.6						
WRA	**Warramunga Arr**	**59.77**	**190**	P	**P**	**10 15 12.6**	**+0.1**
	0.3nm,0.9s,baz=7.6,slow=7.1,SNR=1.8						
ASAR	**Alice Springs**	**63.50**	**190**	P	**P**	**10 15 39.0**	**+1.3**

	0.3nm,0.7s,baz=3.4,slow=4.6,SNR=2.3						
FINES	FINESS Array B	67.30	332	P	P	10 16 01.6	-0.3
	1.6nm,0.8s,baz=69,slow=7.6,SNR=2.0						

*IDC **25** 10:14:32.0±1.3,30°.65N×141°.03E,h0^{km},mb3.4/4, mb1 3.5/6,mb1mx3.4/35,mbtmp3.4/6,ML2.9/2,MS2.8/1, Ms1 2.8/1,ms1mx2.6/29,Error ellipse: s-maj=50.5km s-min=20.8km az=80.0*

ISC 25 10:14:33.2±1.0,30°.7N±0°.1×141°.0E±0°.3,h10^{km},n7, σ0^{s}.71/7,mb3.5/4,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ	Hachijo jima 2	2.68	337	LR	LR	10 16 32.9	
	comp=Z,176nm,18.4s,baz=24,slow=45						
JCJ	Chichijima	3.69	164	Pn	Pn	10 15 29.8	-0.5
	1.6nm,0.3s,baz=272,slow=17,SNR=1.4						
JCJ				Sn	Sn	10 16 13.6	-0.3
	3.9nm,0.3s,baz=272,slow=21,SNR=1.9						
MJAR	Matsushiro Arr	6.32	339	Pn	Pn	10 16 05.6	-0.9
	0.1nm,0.3s,baz=157,slow=11,SNR=2.2						
MKAR	Makanchi Array	47.48	307	P	P	10 23 08.8	+0.5
	0.4nm,0.9s,baz=98,slow=10,SNR=2.7						
WRA	Warramunga Arr	50.72	188	P	P	10 23 33.4	+0.2
	0.3nm,0.4s,baz=3.7,slow=7.5,SNR=3.7						
ASAR	Alice Springs	54.45	188	P	P	10 24 01.4	+0.6
	0.2nm,0.6s,baz=360,slow=4.7,SNR=6.3						
ILAR	Eielson Array	55.10	30	P	P	10 24 05.6	+0.5
	0.4nm,0.9s,baz=251,slow=5.6,SNR=2.6						

*IDC **25** 10:30:39.1±0.9,31°.01N×141°.85E,h0^{km},mb3.6/8, mb1 3.8/11,mb1mx3.6/56,mbtmp3.6/11,ML3.3/3,MS3.7/1, Ms1 3.8/1,ms1mx2.9/27,Error ellipse: s-maj=30.0km s-min=16.6km az=72.0*

ISC 25 10:30:44.1±0.7,30°.95N±0°.08×141°.7E±0°.2,h35^{km},n13, σ1^{s}.27/14,mb3.6/9,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ	Hachijo jima 2	2.70	324	Pn	Pn	10 31 24.6	-0.4
	8.4nm,0.3s,baz=248,slow=19,SNR=1.7						
JHJ				Sn	Sn	10 31 54.5	-2.0
	20nm,0.3s,baz=91,slow=21,SNR=1.7						
JCJ	Chichijima	3.86	173	Pn	Pn	10 31 41.2	+0.2
	7.7nm,0.3s,baz=101,slow=23,SNR=6.3						
JCJ				Sn	Sn	10 32 22.4	-2.8
	8.1nm,0.3s,baz=285,slow=22,SNR=1.8						
MJAR	Matsushiro Arr	6.28	334	Pn	Pn	10 32 14.3	0.0
	0.3nm,0.3s,baz=159,slow=11,SNR=14						
SONM	Songino Array	31.72	312	P	P	10 37 05.5	+0.8
	0.5nm,0.8s,baz=106,slow=5.2,SNR=4.3						
ZALV	Zalesovo Beam	46.34	317	P	P	10 39 07.2	+0.7
	0.4nm,0.4s,baz=77,slow=6.4,SNR=3.5						
MKAR	Makanchi Array	47.75	307	P	P	10 39 18.6	+0.9
	0.6nm,0.8s,baz=94,slow=10,SNR=6.4						
KURBB	Kurchatov Arra	50.09	312	P	P	10 39 35.1	-0.3
	69nm,0.9s,baz=86,slow=7.5,SNR=9.1						
WRA	Warramunga Arr	51.09	189	P	P	10 39 43.9	+0.6
	0.6nm,0.3s,baz=6.2,slow=7.7,SNR=16						
ILAR	Eielson Array	54.58	30	LR	LR	11 05 15.2	
	comp=Z,74nm,19.4s,baz=300,slow=38						
ASAR	Alice Springs	54.81	189	P	P	10 40 11.7	+1.0
	0.4nm,0.6s,baz=354,slow=4.9,SNR=15						
YKA	Yellowknife Ar	68.98	29	P	P	10 41 44.2	-1.3
	0.3nm,0.8s,baz=295,slow=6.0,SNR=2.2						
NVAR	Mina Array Bea	78.50	52	P	P	10 42 42.1	0.0
	0.3nm,0.6s,baz=269,slow=6.3,SNR=2.7						
TXAR	Lajitas Array	93.64	53	P	P	10 43 57.9	+0.6
	0.1nm,0.4s,baz=343,slow=2.8,SNR=2.5						

*NIED **25** 10:31:59.0,39°.34N×143°.63E,h20^{km},MW4.9,Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M$_{rr}$1.75; M$_{\theta\theta}$0.28; M$_{\phi\phi}$-2.03; M$_{r\theta}$0.80; M$_{\theta\phi}$-0.55; M$_{\phi r}$1.39; Fault plane solution: M$_0$2.54000×10^{16} NP1:ϕ$_s$25.00000°, δ65.00000°,λ102.00000°. NP2:ϕ$_s$177.00000°,δ28.00000°, λ65.00000°.*

*BJI **25** 10:31:59.7±0.0,39°.36N×143°.40E,h10^{km},mB5.0/60, mb5.0/81,Ms4.9/75,Ms7 4.8/70*

*JMA **25** 10:31:59.5±0.2,39°.34N×143°.63E,h20^{km}±5^{km},M5.0 JMA Felt II J1.*

*IDC **25** 10:32:00.7±0.5,39°.35N×143°.42E,h0^{km},mb4.7/40, mb1 4.7/48,mb1mx4.6/65,mbtmp4.7/48,ML3.9/7,MS4.3/16, Ms1 4.3/16,ms1mx4.1/27,Error ellipse: s-maj=12.8km s-min=10.7km az=95.0*

*NEIC **25** 10:32:03.4±1.8,39°.36N±0°.04×143°.37E±0°.10,h17^{km}±4^{km}, mb4.9/106,Error ellipse: s-maj=12.3km s-min=3.5km az=117.0*

*MOS **25** 10:32:05.1±1.0,39°.52N×143°.30E,h36^{km},mb5.1/58, MS4.4/13,Error ellipse: s-maj=5.9km s-min=3.8km az=106.9*

*GCMT **25** 10:32:07.4±0.4,39°.29N±0°.03×143°.62E±0°.04,h33^{km}±1^{km}, MW4.9/78,Moment Tensor Solution. s24,c27; s78,c100; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.25±.22; M$_{\theta\theta}$0.04±.13; M$_{\phi\phi}$-2.29±.13; M$_{r\theta}$0.84±.15; M$_{\theta\phi}$-0.22±.07; M$_{\phi r}$2.07±.13; Best double couple: M$_0$3.19200×10^{16} NP1:ϕ$_s$174.00000°,δ24.00000°,λ69.00000°. NP2: ϕ$_s$17.00000°,δ67.00000°,λ99.00000°. Principal axes: T 3.2090, Plg66.0000°, Azm303.0000°; N -0.0340, Plg8.0000°, Azm193.0000°; P -3.1750, Plg22.0000°, Azm100.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BGR **25** 10:32:10.7±0.0,39°.95N×143°.42E,h33^{km},mb4.8*

ISC 25 10:32:02.2±0.3,39°.32N±0°.03×143°.48E±0°.04,h11^{km},n497, σ1^{s}.76/536,mb4.9/188,MS4.7/41,50C-6D,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MIYJ	Miyakonagasawa	1.31	282	⇑P	Pn	10 32 24.5	-2.0
MIYJ				S	Sb	10 32 43.2	-0.5
JTH	Tanohata	1.39	297	⇑P	Pn	10 32 25.5	-2.1
JTH				*e*S	Sn	10 32 45.1	-0.9
OFUJ	Ofunato	1.43	261	⇑P	Pn	10 32 26.4	-1.6
JOM	Ohasama	1.70	276	⇑P	Pn	10 32 30.6	-1.2
JOM				*e*S	Sn	10 32 52.7	-0.9
JMK	Ichinoseki	1.79	259	⇑P	Pn	10 32 31.9	-1.2
JANG	Nango	1.84	306	P	Pn	10 32 31.3	-2.5
JIO	Ouri	1.87	243	P	Pn	10 32 32.7	-1.5
JIO				*e*S	Sn	10 32 57.6	-0.2
JTM	Tenmabayashi	2.36	309	Pn	Pn	10 32 40.7	-0.2
JYK	Kaneyama	2.46	262	P	Pn	10 32 41.7	-0.6
JMM	Marumori	2.56	236		Pn	10 32 42.8	-0.8
ERM	Erimo	2.71	355	*ce*P	Pn	10 32 45.2	-0.4
ERM				pmax	pmax		
	comp=Z,168nm,1.3s						
ERM	Erimo	2.71	355	Pn	Pn	10 32 44.8	-0.9
JOT	Ohata	2.78	319	P	Pn	10 32 46.3	-0.3
JNBK	Urakawa-nobuka	3.01	350	P	Pn	10 32 48.9	-0.9
JCH	Churui	3.30	358	P	Pn	10 32 51.8	-1.9
JEW	Eniwo	3.84	337	Pn	Pn	10 33 01.0	-0.2
JYT	Yasato	4.04	221	Pn	Pn	10 33 02.9	-1.0
JSD	Sado	4.28	254	Pn	Pn	10 33 07.1	-0.1
NMR	Nemuro--Hokkai	4.39	22	⇑*i*P	Pn	10 33 06.5	-2.2
NMR				*i* S	Sn	10 33 54.2	-5.6
GLVR	Golovnino	4.68	18	*e*P	Pn	10 33 11.7	-1.0
GLVR				*i* S	Sn	10 34 02.8	-4.1
GLVR				pmax	pmax		
	comp=Z,269nm,0.5s						
GLVR				pmax	pmax		
	comp=E,64nm,0.4s						
GLVR				pmax	pmax		
	comp=N,57nm,0.1s						
GLVR				smax	smax		
	comp=N,2μm,0.6s						
GLVR				smax	smax		
	comp=E,1μm,0.6s						
ASAJ	Asahikawa	4.84	352	Pn	Pn	10 33 15.1	+0.1
	comp=E,4.3nm,0.3s,baz=200,slow=12,SNR=69						
ASAJ				Sn	Sn	10 34 11.8	+0.8
	comp=E,9.4nm,0.3s,baz=3.4,slow=6.8,SNR=5.4						
ASAJ				LR	LR	10 35 32.8	
	comp=E,2μm,20.4s,baz=186,slow=44						
JKA	Kamikawa-asahi	4.84	352	Pn	Pn	10 33 14.1	-0.9
RUSJ	Misakicho	4.96	15	*e*P	Pn	10 33 15.9	-0.7
RUSJ				*i* S	Sn	10 34 11.5	-2.5
GRPR	Tuman	4.98	19	*e*P	Pn	10 33 15.2	-1.6
GRPR				*i* S	Sn	10 34 08.6	-5.8
GRPR				pmax	pmax		
	comp=Z,200nm,0.3s						
GRPR				pmax	pmax		
	comp=E,48nm,0.1s						
GRPR				pmax	pmax		
	comp=N,88nm,0.3s						
GRPR				smax	smax		
	comp=E,1μm,0.5s						
GRPR				smax	smax		
	comp=N,3μm,0.6s						
MJAR	Matsushiro Arr	5.00	238	Pn	Pn	10 33 18.3	+1.0
	comp=N,4.9nm,0.3s,baz=40,slow=12,SNR=289						
MJAR				LR	LR	10 35 07.2	
	comp=N,1μm,20.3s,baz=55,slow=38						
MJAR	Matsushiro Arr	5.00	238		Pn	10 33 17.8	+0.6
MAJO	Matsushiro	5.00	238	*c i*P	Pn	10 33 17.2	-0.1
MAJO	Matsushiro	5.00	238	Pn	Pn	10 33 18.0	+0.7
MAT	Matsushiro	5.00	238	P	Pn	10 33 17.9	+0.6
MAT				*e*S	Sn	10 34 16.0	+0.9
YUK	Yuzh-Kuril'sk	5.04	20	*c i*P	Pn	10 33 15.5	-2.2
YUK				*i* S	Sn	10 34 10.1	-5.8
YUK				pmax	pmax		
	comp=N,197nm,0.4s						
YUK				pmax	pmax		
	comp=E,106nm,0.4s						
YUK				pmax	pmax		
	comp=Z,266nm,0.4s						
YUK				smax	smax		
	comp=E,932nm,0.7s						
YUK				smax	smax		
	comp=N,2μm,0.5s						
JGF	Kuroka	6.12	235	Pn	Pn	10 33 33.5	+0.9
INU	Inuyama	6.50	234	Pn	Pn	10 33 37.4	-0.3
KUR	Kuril'sk	6.75	27	*e*P	Pn	10 33 40.5	-0.6
KUR				*e*S	Sn	10 34 52.0	-5.9
KUR				pmax	pmax		
	comp=Z,123nm,0.7s						
KUR				pmax	pmax		
	comp=N,35nm,0.3s						
KUR				pmax	pmax		
	comp=E,45nm,1.0s						
KUR				smax	smax		
	comp=N,280nm,0.7s						
KUR				smax	smax		
	comp=E,379nm,0.7s						
KUR				MLR	MLR		
	comp=Z,2μm,12.0s						
JHJ	Hachijo jima 2	6.87	207	Pn	Pn	10 33 42.0	-0.9
	comp=Z,15nm,0.3s,baz=257,slow=9.9,SNR=3.2						
JHJ				Sn	Sn	10 34 54.0	-6.9
	comp=Z,42nm,0.3s,baz=43,slow=21,SNR=6.6						
JHJ				LR	LR	10 36 35.9	
	comp=Z,1μm,21.8s,baz=46,slow=40						
JWT	Wachi	7.59	240	Pn	Pn	10 33 52.9	+0.1
YSS	Yuzh-Sakhalins	7.65	356	*ce*P	Pn	10 33 53.0	-0.5
YSS				pmax	pmax		
	comp=Z,68nm,1.3s						
YSS	Yuzh-Sakhalins	7.65	356	Pn	Pn	10 33 53.5	0.0
TEY	Ternei	7.66	320	⇑*i*P	Pn	10 33 55.6	+1.9
TEY				pmax	pmax		
	comp=E,150nm,0.7s						
TEY				pmax	pmax		
	comp=N,110nm,0.8s						
TEY				pmax	pmax		
	comp=Z,190nm,0.7s						
TEY				MLR	MLR		
	comp=E,300nm,16.0s						
TEY				MLR	MLR		
	comp=N,200nm,13.0s						
TEY				MLR	MLR		
	comp=Z,300nm,15.0s						
JHS	Saijyo	9.33	246	Pn	Pn	10 34 17.9	+1.3
JMN	Monobe	9.53	237	Pn	Pn	10 34 19.4	0.0
UGL	Uglegorsk	9.81	355	*e*P	Pn	10 34 22.8	-0.3
UGL				S	Sn	10 36 04.4	-8.8
UGL				pmax	pmax		
	comp=Z,53nm,1.1s						
UGL				MLR	MLR		
	comp=Z,2μm,13.0s						
UGL				MLR	MLR		
	comp=N,1μm,8.0s						
UGL				MLR	MLR		
	comp=E,2μm,16.0s						
USA0B	Ussuriysk Arra	9.87	303	*c i*P	Pn	10 34 24.7	+0.7
USA0B	Ussuriysk Arra	9.87	303	Pn	Pn	10 34 24.4	+0.4
USRK	Ussuriysk Ar.	9.87	303	Pn	Pn	10 34 26.2	+2.2
	baz=110,slow=13,SNR=74						
USRK				LR	LR	10 38 10.1	
	comp=E,4μm,18.1s,baz=108,slow=38						
USRK	Ussuriysk Ar.	9.87	303	P	Pn	10 34 24.4	+0.4
USRK	Ussuriysk Ar.	9.87	303	Pn	Pn	10 34 24.4	+0.4
TYV	Tymovskoe	11.56	357	*e*P	Pn	10 34 46.4	-0.7
TYV				*e*S	Sn	10 36 56.7	+0.6
TYV				pmax	pmax		
	comp=Z,100nm,3.7s						
TYV				pmax	pmax		
	comp=Z,20nm,0.8s						
TYV				smax	smax		
	comp=N,10.0nm,1.6s						
TYV				MLR	MLR		
	comp=E,3μm,15.0s						
TYV				MLR	MLR		
	comp=Z,2μm,16.0s						
MDJ	Mudanjiang	11.61	302	P	Pn	10 34 48.8	+1.0
MDJ				pP		10 34 51.5	
MDJ				sP		10 34 55.5	
MDJ				S	Sn	10 36 55.0	-2.4
MDJ				SS	SnSn	10 37 07.5	-1.7
MDJ				pmax	pmax		
	comp=Z,24nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,450nm,5.7s						
MDJ				LR	LR		
	comp=Z,2μm,15.2s						
MDJ				LR	LR		
	comp=Z,5μm,15.1s						
MDJ				LR	LR		
	comp=Z,7μm,15.7s						
MDJ	Mudanjiang	11.61	302	Pn	Pn	10 34 47.8	0.0
JNU	Nakatsue	11.90	243	Pn	Pn	10 34 51.8	-0.1
	comp=Z,0.9nm,0.3s,baz=67,slow=9.4,SNR=17						
JNU				LR	LR	10 39 56.1	
	comp=Z,4μm,18.3s,baz=56,slow=40						
JNU	Nakatsue	11.90	243	Pn	Pn	10 34 51.4	-0.4
JTU	Tsushima	12.24	251	Pn	Pn	10 34 54.6	-1.8
KSRS	Korea Array	12.35	266	Pn	Pn	10 34 59.8	+1.8
	comp=Z,0.8nm,0.3s,baz=83,slow=13,SNR=30						
KSRS				Sn	Sn	10 37 24.6	+9.1
	comp=Z,0.2nm,0.3s,baz=71,slow=22,SNR=3.8						
KS19	Wonju Array Si	12.38	266		Pn	10 34 58.4	0.0
KSAR	Wonju Array Be	12.38	266	P	Pn	10 34 58.7	+0.3
KSAR	Wonju Array Be	12.38	266		Pn	10 34 58.7	+0.3
GRNR	Gornyy	12.48	339	⇓*i*P	Pn	10 34 59.7	0.0
GRNR				*e*S	Sn	10 37 20.8	+2.1
GRNR				pmax	pmax		
	comp=E,10.0nm,0.9s						
GRNR				pmax	pmax		
	comp=N,20nm,0.8s						
GRNR				pmax	pmax		
	comp=Z,20nm,0.9s						
GRNR				smax	smax		
	comp=N,3.0nm,0.8s						
GRNR				MLR	MLR		
	comp=E,2μm,15.0s						
GRNR				MLR	MLR		
	comp=N,760nm,18.0s						
GRNR				MLR	MLR		
	comp=Z,2μm,13.0s						
KLR	Kul'dur	12.98	324	Pn	Pn	10 35 05.6	-0.9
	comp=Z,0.2nm,0.3s,baz=131,slow=14,SNR=22						
KLR				LR	LR	10 40 21.9	
	comp=Z,3μm,18.0s,baz=132,slow=39						
KLR	Kul'dur	12.98	324	*ce*P	Pn	10 35 05.7	-0.8
KLR				pmax	pmax		
	comp=Z,18nm,1.3s						
TJN	Taejon	13.07	262	*i* P	Pn	10 35 08.1	+0.3
JSU	Suzuyama	13.16	238	Pn	Pn	10 35 08.6	-0.5
CN2	Changchun	14.22	294	*e*P	Pn	10 35 22.8	-0.7
CN2				*e*sP	P	10 35 29.5	-1.4
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=Z,1μm,15.0s						
CN2				LR	LR		
	comp=Z,3μm,15.0s						
CN2				LR	LR		
	comp=Z,3μm,16.0s						
SNY	Shenyang	15.33	286	⇑P	Pn	10 35 39.5	+1.1
SNY				S	Sn	10 38 35.3	+7.1
SNY				pmax	pmax		
	comp=Z,19nm,1.5s						
SNY				pmax	pmax		
	comp=Z,220nm,4.6s						
SNY				LR	LR		
	comp=Z,890nm,13.4s						
SNY				LR	LR		
	comp=Z,2μm,15.7s						
SNY				LR	LR		
	comp=Z,4μm,16.9s						
PEA0B	Petropavlovsk-	16.90	31	*i* P	Pn	10 35 58.1	-0.4
PETK	Petropavlovsk-	16.90	31	Pn	Pn	10 35 58.5	-0.1
	baz=213,slow=10,SNR=2.8						
PETK				LR	LR	10 41 54.9	
	comp=Z,523nm,21.0s,baz=219,slow=35						
PETK	Petropavlovsk-	16.90	31		Pn	10 35 58.2	-0.3
DL2	Dalian	16.96	276	P	P	10 36 00.5	-0.8
DL2				*e*S	Sn	10 39 10.0	+2.1
DL2				pmax	pmax		
	comp=Z,51nm,1.0s						
DL2				pmax	pmax		
	comp=Z,650nm,5.4s						
DL2				LR	LR		
	comp=Z,1μm,14.0s						
DL2				LR	LR		
	comp=Z,2μm,16.8s						
DL2				LR	LR		
	comp=Z,2μm,16.6s						
PET	Petropavlovsk	17.22	32	*e*P	P	10 36 07.2	+3.1
PET				*e*S	Sn	10 39 15.6	+1.7
PET				pmax	pmax		
	comp=Z,28nm,0.9s						
PET				MLR	MLR		
	comp=Z,900nm,15.0s						
JOW	Kunigami	17.78	230	P	Pn	10 36 08.9	-0.9
	comp=Z,0.8nm,0.3s,baz=65,slow=18,SNR=2.7						
JOW	Kunigami	17.78	230	P	Pn	10 36 08.5	-1.2
ZEA	Zeya	18.18	328	*e*P	Pn	10 36 11.7	-2.7
ZEA				pmax	pmax		
	comp=N,30nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,60nm,1.0s						
ZEA				MLR	MLR		
	comp=E,1μm,14.0s						
ZEA				MLR	MLR		
	comp=N,1μm,17.0s						
ZEA				MLR	MLR		
	comp=Z,1μm,16.0s						
SSE	Sheshan	19.94	253	P	Pn	10 36 35.0	-0.8
SSE				S	S	10 40 18.8	+0.4
SSE				pmax	pmax		
	comp=Z,32nm,1.0s						
SSE				pmax	pmax		
	comp=Z,53nm,3.5s						
SSE				LR	LR		
	comp=Z,710nm,12.6s						
SSE				LR	LR		
	comp=Z,470nm,12.9s						
SSE	Sheshan	19.94	253		P	10 36 32.6	-1.6
SSE				IAmb	IAmb	10 36 36.5	
	comp=Z,60nm,0.9s						
MA2	Magadan	20.80	10	P	P	10 36 43.6	+0.3
	comp=Z,22nm,0.7s,baz=198,slow=9.0,SNR=38						
MA2	Magadan	20.80	10	*ce*P	P	10 36 44.2	+1.0
MA2				pmax	pmax		
	comp=Z,41nm,1.3s						
MA2	Magadan	20.80	10	P	P	10 36 42.6	-0.6
MA2				IAmb	IAmb	10 36 56.2	
	comp=Z,35nm,0.8s						
BJI	Beijing	21.00	281	P	P	10 36 43.3	-2.3
BJI				S	S	10 40 37.3	-2.0
BJI				pmax	pmax		
	comp=Z,45nm,0.8s						
BJI				pmax	pmax		
	comp=Z,180nm,3.5s						
BJI				LR	LR		
	comp=Z,870nm,13.2s						
BJI				LR	LR		
	comp=Z,2μm,15.8s						
BJI				LR	LR		
	comp=Z,1μm,17.1s						
BJT	Baijiatuau	21.01	281	P	P	10 36 42.6	-3.1
BJT				pmax	pmax		
	comp=Z,43nm,0.9s						
BJT	Baijiatuau	21.01	281	P	P	10 36 42.6	-3.1
BJT				IAmb	IAmb	10 36 56.7	
	comp=Z,43nm,0.9s						
TIA	Tai'an	21.04	270	P	P	10 36 44.0	-2.1
TIA				S	S	10 40 42.3	+2.1
TIA				pmax	pmax		
	comp=Z,24nm,0.9s						
TIA				pmax	pmax		
	comp=Z,190nm,4.0s						
TIA				LR	LR		
	comp=Z,660nm,14.1s						
TIA				LR	LR		
	comp=Z,2μm,15.0s						
TIA				LR	LR		
	comp=Z,3μm,14.7s						
NJ2	Nanjing	21.24	258	⇓P	P	10 36 46.3	-1.9
NJ2				pP	pP	10 36 50.5	-0.1
NJ2				sP	pwP	10 36 56.0	+2.3
NJ2				S	S	10 40 41.5	-2.6
NJ2				pmax	pmax		
	comp=Z,12nm,0.7s						
NJ2				LR	LR		
	comp=Z,1μm,14.1s						
NJ2				LR	LR		
	comp=Z,940nm,13.0s						
NJ2				LR	LR		
	comp=Z,2μm,16.2s						
TATO	Taipei	23.39	239	P	P	10 37 10.3	-0.8
YHNB	Yeheng	23.68	238	P	P	10 37 11.7	-2.3
YHNB				IAmb	IAmb	10 37 13.0	
	comp=Z,34nm,0.7s						
YAK	Yakutsk	24.26	344	P	P	10 37 17.7	-1.3
	comp=Z,29nm,0.6s,baz=135,slow=2.4,SNR=5.4						
YAK	Yakutsk	24.26	344	*e*P	P	10 37 17.9	-1.1
YAK				*e**PP	pwP	10 37 28.8	+3.6
YAK				*e*S	S	10 41 34.8	-2.5
YAK				*e*SS	SnSn	10 42 23.4	+3.8
YAK				pmax	pmax		
	comp=Z,63nm,1.1s						
YAK				pmax	pmax		
	comp=N,28nm,0.9s						
YAK				pmax	pmax		
	comp=E,9.0nm,1.0s						
YAK				smax	smax		
	comp=N,145nm,2.4s						
YAK				smax	smax		
	comp=E,148nm,2.5s						
YAK				MLR	MLR		
	comp=Z,867nm,13.0s						
YAK				MLR	MLR		
	comp=N,541nm,12.0s						
YAK	Yakutsk	24.26	344	P	P	10 37 17.4	-1.6
CIT	Chita	24.27	311	*e*P	P	10 37 14.4	-4.9
CIT				*e*		10 37 27.7	
CIT				*e*		10 37 52.3	
CIT				*e*		10 38 00.5	
CIT				pmax	pmax		
	comp=Z,164nm,1.0s						
TIY	Taiyuan	24.29	276	*e*P	P	10 37 20.8	+1.2
TIY				PP	PnPn	10 37 57.3	+7.9
TIY				SS	SnSn	10 42 21.8	+1.0
TIY				pmax	pmax		
	comp=Z,17nm,0.5s						
TIY				pmax	pmax		
	comp=Z,230nm,8.5s						
TIY				LR	LR		
	comp=Z,840nm,13.8s						
TIY				LR	LR		
	comp=Z,1μm,17.1s						
TIY				LR	LR		
	comp=Z,2μm,16.7s						
HHC	Hu-ho-hao-te	24.40	284	*e*P	P	10 37 20.5	-0.2
HHC				pmax	pmax		
	comp=Z,19nm,1.1s						
HHC				pmax	pmax		
	comp=Z,230nm,6.3s						

HHC				LR	LR		
	comp=Z,720nm,11.3s						
HHC				LR	LR		
	comp=Z,3µm,15.3s						
HHC				LR	LR		
	comp=Z,4µm,13.1s						
SSLB	Suanglung	24.56	238	P	P	10 37 20.5	-1.7
YULB	Yu-li	24.62	236	P	P	10 37 18.7	-4.0
YULB				IAmb	IAmb	10 37 41.1	
	comp=Z,23nm,0.8s						
TWG	Pinlang	25.17	236	P	P	10 37 26.3	-1.3
WHN	Wuhan	25.35	259	⇑iP	P	10 37 29.3	+0.1
WHN				S	S	10 41 57.0	+1.6
WHN				LR	LR		
	comp=Z,1µm,11.2s						
WHN				LR	LR		
	comp=Z,4µm,14.5s						
WHN				LR	LR		
	comp=Z,4µm,14.0s						
QZH	Quanzhou	25.38	243	P	P	10 37 28.0	-1.5
QZH				S	S	10 41 52.3	-3.6
QZH				LR	LR		
	comp=Z,1µm,15.2s						
QZH				LR	LR		
	comp=Z,770nm,14.7s						
QZH				LR	LR		
	comp=Z,2µm,14.2s						
BTO	Baotou	25.59	284	eP	P	10 37 30.8	-0.7
KNMB	Chin-men Tao	25.83	242	P	P	10 37 32.8	-0.8
BOD	Bodaibo	26.56	324	eP	P	10 37 39.6	-0.3
BOD				pmax	pmax		
	comp=Z,44nm,1.2s						
ULN	Ulaanbaatar	27.52	300	ceP	P	10 37 48.2	-0.7
ULN				pmax	pmax		
	comp=Z,59nm,1.3s						
ULN	Ulaanbaatar	27.52	300	P	P	10 37 48.4	-0.5
ULN				IAmb	IAmb	10 37 51.0	
	comp=Z,30nm,0.9s						
SONM	Songino Array	27.96	300	P	P	10 37 52.1	-0.7
	comp=Z,16nm,0.7s,baz=96,slow=9.1,SNR=68						
SONM				LR	LR	10 49 33.8	
	comp=Z,2µm,18.7s,baz=82,slow=38						
SONM	Songino Array	27.96	300	P	P	10 37 52.1	-0.7
H11N2	WAKE ISLAND Hy	28.07	127	T	T	11 08 47.0	
	baz=318,slow=75,SNR=140						
H11N1	WAKE ISLAND Hy	28.08	127	T	T	11 08 47.9	
	baz=318,slow=75,SNR=115						
H11N3	WAKE ISLAND Hy	28.09	127	T	T	11 08 51.1	
	baz=318,slow=75,SNR=172						
XAN	Xi'an	28.10	270	P	P	10 37 53.3	-0.7
XAN				pP	pwP	10 38 05.0	+5.2
XAN				pmax	pmax		
	comp=Z,39nm,0.8s						
XAN	Xi'an	28.10	270	P	P	10 37 53.1	-1.0
XAN				pmax	pmax		
	comp=Z,24nm,0.8s						
XAN	Xi'an	28.10	270	P	P	10 37 53.1	-1.0
XAN				IAmb	IAmb	10 37 56.8	
	comp=Z,24nm,0.8s						
ENH	Enshi	29.20	263	P	P	10 38 02.6	-1.2
IRK	Irkutsk	29.86	309	eP	P	10 38 07.6	-1.8
IRK				pmax	pmax		
	comp=Z,35nm,1.4s						
TLY	Talaya	30.15	307	P	P	10 38 12.4	+0.3
	comp=Z,5.2nm,0.6s,baz=101,slow=7.1,SNR=18						
TLY	Talaya	30.15	307	eP	P	10 38 12.3	+0.3
TLY				pmax	pmax		
	comp=Z,44nm,1.1s						
TLY				MLR	MLR		
	comp=Z,2µm,11.0s						
TLY	Talaya	30.15	307	P	P	10 38 12.2	+0.1
TLY				IAmb	IAmb	10 38 24.7	
	comp=Z,14nm,0.9s						
ZAK	Zakamensk	30.22	305	eP	P	10 38 13.0	+0.2
ZAK				pmax	pmax		
	comp=Z,17nm,0.9s						
LZH	Lanzhou	31.35	277	eP	P	10 38 22.0	-1.0
LZH				pP	sP	10 38 27.5	+1.0
LZH				sP	pwP	10 38 30.0	+1.3
LZH				S	S	10 43 37.3	+7.1
LZH				pmax	pmax		
	comp=Z,20nm,1.2s						
LZH				pmax	pmax		
	comp=Z,150nm,4.9s						
LZH				LR	LR		
	comp=Z,1µm,13.6s						
LZH				LR	LR		
	comp=Z,3µm,14.6s						
LZH				LR	LR		
	comp=Z,2µm,14.6s						
MOY	Mondy	31.79	307	eP	P	10 38 26.5	-0.1
MOY				pmax	pmax		
	comp=Z,39nm,2.2s						
GYA	Guiyang	33.24	259	⇑P	P	10 38 39.0	-0.6
GYA				pP	sP	10 38 43.3	+0.2
GYA				PP	PnPn	10 39 45.3	-4.4
GYA				S	S	10 43 56.8	-2.8
GYA				pmax	pmax		
	comp=Z,64nm,1.0s						
GYA				pmax	pmax		
	comp=Z,170nm,4.1s						
GYA				LR	LR		
	comp=Z,570nm,13.5s						
GYA				LR	LR		
	comp=Z,1µm,14.3s						
GYA				LR	LR		
	comp=Z,860nm,14.2s						
TIXI	Tiksi	33.25	352	c iP	P	10 38 38.5	-0.4
TIXI	Tiksi	33.25	352	P	P	10 38 38.4	-0.6
CD2	Chengdu	33.34	268	P	P	10 38 39.0	-1.3
CD2				S	S	10 43 59.0	-2.0
CD2				sS	sS	10 44 05.0	-0.3
CD2				pmax	pmax		
	comp=Z,60nm,0.7s						
CD2				LR	LR		
	comp=Z,2µm,15.8s						
CD2				LR	LR		
	comp=Z,1µm,14.4s						
CD2				LR	LR		
	comp=Z,2µm,14.4s						
GTA	Gaotai	33.51	284	P	P	10 38 41.5	-0.3
GTA				pP	sP	10 38 45.5	+0.1
GTA				sP	pwP	10 38 48.8	+1.2
GTA				PcP	PcP	10 41 24.0	+1.5
GTA				S	S	10 44 03.8	+0.1
GTA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,220nm,8.8s						
GTA				LR	LR		
	comp=Z,880nm,17.1s						
GTA				LR	LR		
	comp=Z,3µm,17.1s						
GTA				LR	LR		
	comp=Z,3µm,17.1s						
QIZ	Qiongzhong	35.36	245	P	P	10 38 57.8	-0.1
QIZ				S	S	10 44 32.5	+0.3
QIZ				pmax	pmax		
	comp=Z,17nm,1.4s						
QIZ				pmax	pmax		
	comp=Z,180nm,11.8s						
QIZ				LR	LR		
	comp=Z,660nm,15.7s						
QIZ				LR	LR		
	comp=Z,700nm,15.7s						
QIZ				LR	LR		
	comp=Z,1µm,15.7s						
KMI	Kunming	36.94	260	⇑P	P	10 39 11.5	-0.1
KMI				pP	pwP	10 39 20.8	+3.0
KMI				sP	sP	10 39 24.5	+9.3
KMI				PP	PnPn	10 40 36.3	+0.5
KMI				S	S	10 44 53.3	-3.5
KMI				sS	sS	10 45 09.0	+7.9
KMI				pmax	pmax		
	comp=Z,140nm,4.0s						
SLVN	Son La	38.22	254	P	P	10 39 22.4	+0.2
ANM	Nome	38.80	32	P	P	10 39 27.9	+1.3
ANM				pmax	pmax		
	comp=Z,13nm,1.2s						
ANM	Nome	38.80	32	P	P	10 39 27.9	+1.3
DGZ	Jazzator, Alta	40.43	304	c iP	P	10 39 41.3	+0.8
DGZ				pmax	pmax		
	comp=Z,46nm,0.7s						
RDOG	Red Dog Mine	40.73	28	P	P	10 39 42.0	-0.6
NONG	Nongkai	40.80	250	P	P	10 39 45.0	+1.3

	comp=Z,5µmcomp=Z,23nm,1.3s						
MYLDM	Lahad Datu	40.80	220	P	P	10 39 44.6	+0.8
MYLDM				IAmb	IAmb	10 39 47.9	
	comp=Z,23nm,1.2s						
UBPT	Khong Chiam	40.96	245	P	P	10 39 46.5	+1.5
UBPT	Khong Chiam	40.96	245	P	P	10 39 44.4	-0.7
DLV	T Lat	41.26	238	P	P	10 39 47.2	-0.6
DLV				IAmb	IAmb	10 39 50.2	
	comp=Z,19nm,0.8s						
WMQ	Urumqi	41.31	295	eP	P	10 39 48.5	+0.7
WMQ				sP	pwP	10 39 57.5	+3.3
WMQ				pmax	pmax		
	comp=Z,46nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,210nm,3.7s						
WMQ				LR	LR		
	comp=Z,650nm,15.9s						
WMQ				LR	LR		
	comp=Z,440nm,9.3s						
WMQ				LR	LR		
	comp=Z,240nm,19.9s						
WMQ	Urumqi	41.31	295	P	P	10 39 48.1	+0.3
WMQ				pmax	pmax		
	comp=Z,35nm,0.9s						
WMQ	Urumqi	41.31	295	P	P	10 39 48.1	+0.3
SMPI	Sarmi	41.34	187	P	P	10 39 47.2	-0.9
SWI	Sorong	41.53	199	P	P	10 39 47.6	-2.1
	comp=Z,16nm,0.8s						
SIJI	Sorong	41.53	199	P	P	10 39 50.1	+0.4
	comp=Z,5.4nm,0.4s,baz=37,slow=24,SNR=5.5						
ZAA0	Zalesovo Array	41.63	311	P	P	10 39 49.6	-0.6
ZAA0				IAmb	IAmb	10 39 58.0	
	comp=Z,21nm,0.8s						
ZALV	Zalesovo Beam	41.63	311	P	P	10 39 49.5	-0.6
	comp=Z,17nm,0.7s,baz=86,slow=7.8,SNR=62						
ZALV	Zalesovo Beam	41.63	311	P	P	10 39 49.2	-1.0
GENI	Genyem	41.81	185	P	P	10 39 48.9	-3.1
	comp=Z,20nm,0.6s						
NRIK	Noril'sk	41.91	334	P	P	10 39 52.1	-0.1
	comp=Z,6.9nm,1.0s,baz=125,slow=8.5,SNR=7.3						
NRIK				LR	LR	10 58 22.5	
	comp=Z,1µm,18.5s,baz=99,slow=38						
NRIK	Noril'sk	41.91	334	ceP	P	10 39 50.4	-1.8
NRIK				pmax	pmax		
	comp=Z,8.0nm,1.1s						
NRIK	Noril'sk	41.91	334	P	P	10 39 52.1	-0.1
ZSN	Zaisan	42.47	301	eP	P	10 39 56.5	-0.6
	comp=Z,20nm,1.2s,baz=300						
ZSN	Zaisan	42.47	301	eP	P	10 39 56.5	-0.6
ZSN				pmax	pmax		
	comp=Z,19nm,1.2s						
KMSI	Cibinong	42.48	210	P	P	10 40 01.6	+4.1
ZIRO	ZIRO	42.58	269	eP	P	10 39 59.3	+0.8
ZIRO				IAmb	IAmb	10 40 02.0	
	comp=Z,37nm,0.9s						
MOKO	MOKOCHONG	42.66	267	eP	P	10 39 59.0	-0.1
GTOI	Gorontalo	42.80	211	P	P	10 40 00.8	+0.7
	comp=Z,8.2nm,0.8s						
UTTA	Uttaradit	42.90	252	P	P	10 40 02.0	+1.1
	comp=Z,187nmcomp=Z,22nm,0.9s						
CHAI	Chaiyaphum	43.04	249	P	P	10 40 03.6	+1.6
	comp=Z,27nm,1.1s						
LAMP	Lampang	43.11	254	P	P	10 40 03.9	+1.3
	comp=Z,312nmcomp=Z,22nm,0.7s						
CM34	Chiang Mai Arr	43.27	255	P	P	10 40 04.7	+0.8
KOHI	KOHIMA	43.28	267	eP	P	10 40 03.8	-0.3
KOHI				IAmb	IAmb	10 40 06.8	
	comp=Z,44nm,0.8s						
CM35	Chiang Mai Arr	43.37	255	P	P	10 40 05.0	+0.3
MRSI	Marisa	43.38	212	P	P	10 40 04.1	-0.7
	comp=Z,30nm,1.4s						
CM33	Chiang Mai Arr	43.44	255	P	P	10 40 05.0	-0.3
CMMT	Chiang Mai	43.44	255	P	P	10 40 04.0	-1.3
	comp=Z,182nmcomp=Z,9.6nm,1.1s						
CHTO	Chiang Mai	43.44	255	P	P	10 40 05.5	+0.2
CHTO				pmax	pmax		
	comp=Z,18nm,1.1s						
CHTO	Chiang Mai	43.44	255	P	P	10 40 05.5	+0.2
CHTO				IAmb	IAmb	10 40 19.7	
	comp=Z,18nm,1.1s						
CM36	Chiang Mai Arr	43.51	255	P	P	10 40 06.0	+0.1
CM32	Chiang Mai Arr	43.61	255	P	P	10 40 08.2	+1.5
CM09	Chiang Mai Arr	43.63	255	P	P	10 40 09.0	+2.1
	comp=Z,9.3nm,0.8s						
LSA	Lhasa	43.65	274	P	P	10 40 07.6	+0.2
LSA				pmax	pmax		
	comp=Z,13nm,0.9s						
LSA	Lhasa	43.65	274	P	P	10 40 07.6	+0.2
CMAR	Chiang Mai Arr	43.66	255	P	P	10 40 07.5	+0.4
	comp=Z,3.1nm,0.5s,baz=45,slow=6.4,SNR=17						
CMAR				LR	LR	10 59 52.9	
	comp=Z,182nm,18.9s,baz=102,slow=38						
CM04	Chiang Mai Arr	43.67	255	P	P	10 40 08.3	+1.1
	comp=Z,74nmcomp=Z,8.3nm,0.8s						
CM01	Chiang Mai Arr	43.67	255	P	P	10 40 08.8	+1.6
	comp=Z,112nmcomp=Z,11nm,0.9s						
CM02	Chiang Mai Arr	43.67	255	P	P	10 40 08.3	+1.2
	comp=Z,9.2nm,0.8s						
CM05	Chiang Mai Arr	43.69	255	P	P	10 40 08.0	+0.7
	comp=Z,96nmcomp=Z,7.4nm,0.7s						
CM13	Chiang Mai Arr	43.71	255	P	P	10 40 09.8	+2.3
	comp=Z,6.1nm,0.7s						
SUKH	Sukhothai	43.75	253	P	P	10 40 09.0	+1.3
	comp=Z,18nm,0.7s						
IMAR	Indian Mountai	43.86	32	P	P	10 40 09.9	+1.8
IMP	Imphal	43.86	266	eP	P	10 40 10.2	+1.4
SANI	Sanana	44.19	206	P	P	10 40 10.5	-0.8
	comp=Z,24nm,0.8s						
SRAK	Srakaew	44.25	247	P	P	10 40 09.7	-2.1
	comp=Z,146nm,1.2s						
MK31	Makanchi Array	44.33	301	ceP	P	10 40 11.5	-0.7
MK31	Makanchi Array	44.33	301	P	P	10 40 11.1	-1.1
MK31				IAmb	IAmb	10 40 13.3	
	comp=Z,22nm,0.9s						
MKAR	Makanchi Array	44.33	301	P	P	10 40 11.2	-1.0
	comp=Z,17nm,0.8s,baz=82,slow=8.4,SNR=85						
MKAR				LR	LR	10 59 31.5	
	comp=Z,1µm,18.2s,baz=71,slow=37						
MKAR	Makanchi Array	44.33	301	P	P	10 40 11.5	-0.7
MKAR	Makanchi Array	44.33	301	P	P	10 40 11.5	-0.7
LUWI	Luwuk	44.43	210	P	P	10 40 17.3	+4.1
MSAI	Masohi	44.52	201	P	P	10 40 16.5	+2.6
	comp=Z,379nm,0.7s						
MAKZ	Makanchi	44.53	301	P	P	10 40 13.0	-0.8
MAKZ				pmax	pmax		
	comp=Z,30nm,1.1s						
MAKZ	Makanchi	44.53	301	P	P	10 40 13.0	-0.8
MAKZ				IAmb	IAmb	10 40 15.1	
	comp=Z,30nm,1.1s						
MHMT	Maesarieng	44.59	255	P	P	10 40 14.8	+0.2
	comp=Z,4µmcomp=Z,21nm,0.8s						
SEM	Semipalatinsk	44.88	306	eP	P	10 40 14.7	-2.1
	comp=Z,6.5nm,0.8s,baz=306						
SEM				LR	LR	10 58 58.4	
	comp=Z,431nm,14.2s,baz=306						
SEM	Semipalatinsk	44.88	306	eP	P	10 40 14.7	-2.1
SEM				pmax	pmax		
	comp=Z,7.0nm,0.8s						
SEM				MLR	MLR		
	comp=Z,431nm,14.0s						
GUWA	GUWAHATI	44.91	269	eP	P	10 40 17.6	+0.6
GUWA				IAmb	IAmb	10 40 18.8	
	comp=Z,21nm,0.5s						
SHL	Shillong	45.08	268	P	P	10 40 17.7	-0.9
SHL				pmax	pmax		
	comp=Z,20nm,0.9s						
SHL	Shillong	45.08	268	eP	P	10 40 18.1	-0.5
SHL	Shillong	45.08	268	P	P	10 40 17.7	-0.9
SHL				IAmb	IAmb	10 40 25.0	
	comp=Z,20nm,0.9s						
UTHA	Uthaitani	45.11	251	P	P	10 40 21.4	+2.7
	comp=Z,229nmcomp=Z,22nm,0.8s						
UMPA	Umpang Tak	45.13	252	P	P	10 40 22.7	+3.9
	comp=Z,3µmcomp=Z,39nm,1.1s						
TOLK	Toolik Lake Re	45.70	28	P	P	10 40 23.7	+0.9
TOLK				IAmb	IAmb	10 40 35.3	
	comp=Z,9.2nm,0.9s						
PMR	Palmer	45.83	38	P	P	10 40 25.5	+1.7
PMR				pmax	pmax		
	comp=Z,12nm,1.0s						
PMR	Palmer	45.83	38	P	P	10 40 25.5	+1.7
PMR				IAmb	IAmb	10 40 35.2	
	comp=Z,12nm,1.0s						
KURK	Kurchatov	45.84	307	P	P	10 40 23.1	-1.0
KURK				pmax	pmax		
	comp=Z,45nm,0.6s						

KURK	Kurchatov	45.84	307	P	P	10 40 23.1	-1.0
SAIH	SAIHA	45.86	264	eP	P	10 40 22.8	-2.0
RND	Reindeer	45.88	35	P	P	10 40 25.6	+1.3
RND				pmax	pmax		
	comp=Z,14nm,1.1s						
RND	Reindeer	45.88	35	P	P	10 40 25.6	+1.3
RND				IAmb	IAmb	10 40 35.8	
	comp=Z,14nm,1.1s						
KURBB	Kurchatov Arra	45.92	307	P	P	10 40 23.8	-0.9
	comp=Z,65nm,0.7s,baz=81,slow=8.2,SNR=158						
MDM	Murphy Dome	46.12	33	P	P	10 40 27.5	+1.4
MDM				IAmb	IAmb	10 40 39.2	
	comp=Z,16nm,1.1s						
SML	Sawmill	46.19	38	P	P	10 40 28.8	+2.0
SML				IAmb	IAmb	10 40 43.8	
	comp=Z,13nm,0.9s						
POKR	Poker Plat Res	46.45	33	P	P	10 40 29.7	+1.0
POKR				IAmb	IAmb	10 40 41.5	
	comp=Z,20nm,1.0s						
SCM	Sheep Creek Mo	46.67	38	P	P	10 40 31.8	+1.3
SCM				pmax	pmax		
	comp=Z,16nm,1.0s						
SCM	Sheep Creek Mo	46.67	38	P	P	10 40 31.8	+1.3
SCM				IAmb	IAmb	10 40 59.5	
	comp=Z,16nm,1.0s						
HDA	Harding Lake	46.68	34	P	P	10 40 31.3	+0.7
HDA				IAmb	IAmb	10 40 42.4	
	comp=Z,8.6nm,0.9s						
IL31		46.70	34	P	P	10 40 30.5	0.0
IL31				IAmb	IAmb	10 40 42.2	
	comp=Z,11nm,1.0s						
ILAR	Eielson Array	46.70	34	P	P	10 40 30.6	-0.1
	comp=Z,1.8nm,0.7s,baz=258,slow=6.2,SNR=14						
ILAR	Eielson Array	46.70	34	P	P	10 40 31.1	+0.5
ILAR	Eielson Array	46.70	34	P	P	10 40 31.1	+0.5
PHET	Kaeng Krachan	46.72	248	P	P	10 40 35.4	+4.0
SHLS	Shalkode	47.25	296	eP	P	10 40 32.2	-3.2
	comp=Z,5.8nm,0.9s,baz=296						
SHLS	Shalkode	47.25	296	eP	P	10 40 32.2	-3.2
SHLS				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KLU	Klutina	47.37	38	P	P	10 40 38.0	+2.0
KLU				IAmb	IAmb	10 40 48.2	
	comp=Z,15nm,1.0s						
TDK	Taldyqorghan	47.41	299	eP	P	10 40 36.0	-0.5
	comp=Z,15nm,0.8s,baz=299						
TDK				LR	LR	11 00 27.7	
	comp=Z,560nm,14.9s,baz=299						
TDK	Taldyqorghan	47.41	299	eP	P	10 40 36.0	-0.5
TDK				pmax	pmax		
	comp=Z,15nm,0.8s						
TDK				MLR	MLR		
	comp=Z,561nm,15.0s						
TAPN	Taplejung	47.43	273	eP	P	10 40 37.7	+0.5
	comp=Z,70nm,1.1s						
UZB	Uzynbulak	47.56	297	eP	P	10 40 37.0	-0.8
	comp=Z,7.9nm,1.5s,baz=296						
UZB	Uzynbulak	47.56	297	eP	P	10 40 37.0	-0.8
UZB				pmax	pmax		
	comp=Z,8.0nm,1.5s						
KPKS	Kokpek	47.69	297	eP	P	10 40 37.6	-1.3
	comp=Z,31nm,1.5s,baz=297						
KPKS	Kokpek	47.69	297	eP	P	10 40 37.5	-1.3
KPKS				pmax	pmax		
	comp=Z,31nm,1.5s						
ODAN	Odare	47.92	273	eP	P	10 40 41.4	+0.5
	comp=Z,78nm,1.0s						
SATY	Saty	48.02	297	eP	P	10 40 40.9	-0.5
	baz=296						
SATY	Saty	48.02	297	eP	P	10 40 40.9	-0.5
SPSI	Sidrap Palu	48.30	212	P	P	10 40 44.5	+0.9
	comp=Z,9.2nm,1.1s						
RAMN	Ramite	48.48	273	eP	P	10 40 44.9	-0.4
	comp=Z,100nm,0.9s						
BNSI	Bone	48.55	212	P	P	10 40 45.3	-0.3
	comp=Z,18nm,1.5s						
GUN	Gumba	48.57	275	eP	P	10 40 46.4	+0.3
	comp=Z,152nm,0.9s						
CHKK	Chushkaly	48.74	298	eP	P	10 40 46.3	-0.6
	baz=298						
CHKK	Chushkaly	48.74	298	eP	P	10 40 46.2	-0.6
MDOK	Medeo	48.92	297	eP	P	10 40 47.9	-0.6
	baz=297						
MDOK				LR	LR	11 01 30.1	
	comp=Z,686nm,15.3s,baz=297						
MDOK	Medeo	48.92	297	eP	P	10 40 47.8	-0.6
MDOK				MLR	MLR		
	comp=Z,686nm,15.0s						
AAA	Alma-Ata	49.00	297	eP	P	10 40 48.4	-0.4
	comp=Z,14nm,0.7s,baz=297						
AAA				LR	LR	11 01 36.0	
	comp=Z,606nm,16.3s,baz=297						
AAA	Alma-Ata	49.00	297	eP	P	10 40 48.4	-0.4
AAA				pmax	pmax		
	comp=Z,14nm,0.7s						
AAA				MLR	MLR		
	comp=Z,606nm,16.0s						
TNSS	Tian-Shan	49.03	297	eP	P	10 40 48.7	-0.8
	baz=297						
TNSS	Tian-Shan	49.03	297	eP	P	10 40 48.7	-0.8
BCAR	Beaver Creek A	49.09	36	P	P	10 40 50.6	+1.3
KKN	Kakani	49.09	275	eP	P	10 40 50.1	+0.1
	comp=Z,46nm,0.5s						
PKI	Pulchoki	49.10	275	eP	P	10 40 50.1	-0.1
	comp=Z,29nm,0.6s						
EGAK	Eagle	49.14	33	P	P	10 40 50.8	+1.3
EGAK				IAmb	IAmb	10 41 20.2	
	comp=Z,21nm,1.5s						
KUU	Kurty	49.17	298	eP	P	10 40 49.2	-1.0
	comp=Z,14nm,0.8s,baz=298						
KUU	Kurty	49.17	298	eP	P	10 40 49.1	-1.0
KUU				pmax	pmax		
	comp=Z,14nm,0.8s						
DMN	Daman	49.32	275	eP	P	10 40 51.5	-0.2
	comp=Z,44nm,0.8s						
GKN	Gorkha	49.49	276	eP	P	10 40 52.7	-0.2
	comp=Z,59nm,0.7s						
BRZS	Berezniki	49.71	307	eP	P	10 40 53.3	-0.8
	comp=Z,6.1nm,0.7s,baz=307						
BRZS	Berezniki	49.71	307	eP	P	10 40 53.3	-0.8
BRZS				pmax	pmax		
	comp=Z,6.0nm,0.7s						
TKM2	Tokmak 2	50.00	297	P	P	10 40 57.6	+0.9
	SNR=20						
BBKI	Banjar Baru	50.08	219	P	P	10 40 56.8	-0.4
	comp=Z,3µmcomp=Z,10.0nm,0.7s						
BVAR	Borovoye Array	50.27	311	P	P	10 40 57.4	-0.9
	comp=Z,9.6nm,0.8s,baz=92,slow=10,SNR=46						
BRVK	Borovoye	50.32	311	ceP	P	10 40 59.2	+0.5
BRVK				pmax	pmax		
	comp=Z,19nm,0.7s						
BRVK	Borovoye	50.32	311	P	P	10 40 58.5	-0.2
BTLS	Baital	50.34	300	eP	P	10 40 58.0	-1.0
	baz=300						
BTLS	Baital	50.34	300	eP	P	10 40 58.0	-1.0
SGDS	Sogindy	50.48	298	eP	P	10 40 59.0	-1.2
	baz=298						
SGDS	Sogindy	50.48	298	eP	P	10 40 59.0	-1.2
KBK	Karagaybulak	50.54	297	P	P	10 41 01.4	+0.7
	SNR=16						
USP	Ospenovka	50.64	298	P	P	10 41 01.6	+0.3
	SNR=9.6						
EPYK	Eagle Plains	50.74	31	IAmb	IAmb	10 41 17.4	
	comp=Z,18nm,1.0s						
AAK	Ala-Archa	50.86	297	P	P	10 41 03.3	+0.1
	comp=Z,1.8nm,0.4s,baz=102,slow=7.2,SNR=8.8						
AAK	Ala-Archa	50.86	297	i P	P	10 41 03.0	-0.1
	SNR=7.3						
AAK	Ala-Archa	50.86	297	ceP	P	10 41 03.2	+0.1
AAK				pmax	pmax		
	comp=Z,44nm,1.7s						
AAK	Ala-Archa	50.86	297	P	P	10 41 03.4	+0.2
KSH	Kashi	50.99	293	P	P	10 41 06.5	+2.4
KSH				sP	pwP	10 41 13.0	+2.6
KSH				PP	PP	10 43 03.0	+2.6
KSH				S	S	10 48 26.8	+5.7
KSH				ScS	ScS	10 50 50.5	-4.4
KSH				pmax	pmax		
	comp=Z,17nm,0.7s						
KSH				pmax	pmax		
	comp=Z,190nm,4.5s						
KSH				LR	LR		
	comp=Z,350nm,6.9s						
KSH				LR	LR		
	comp=Z,960nm,14.6s						
KSH				LR	LR		

	comp=Z,3µm,15.8s						
EKS2	Erkin-Say	51.35	298	P	P	10 41 07.0	+0.3
	SNR=6.5						
DGPR	DIGLIPUR	51.46	254	*e*P	P	10 41 06.9	-0.8
AML	Almayashu	51.60	297	P	P	10 41 10.2	+1.2
	SNR=10						
MMRI	Maumere	51.62	207	P	P	10 41 10.8	+1.9
	comp=Z,75nm,0.7s						
SOEI	Soe	51.99	204	P	P	10 41 15.0	+3.3
DZA	Taraz	52.94	299	*e*P	P	10 41 17.6	-0.8
	baz=298						
DZA	Taraz	52.94	299	*e*P	P	10 41 17.6	-0.8
TPI	Tanjungpandan	53.27	227	P	P	10 41 19.7	-1.4
KK31	Karatay Array	53.41	299	IAmb	IAmb	10 41 37.2	
	comp=Z,10nm,0.9s						
KKAR	Karatay Array	53.41	299	P	P	10 41 20.8	-1.1
KKAR	Karatay Array	53.41	299	P	P	10 41 20.8	-1.1
KKAR	Karatay Array	53.41	299	IAmb	IAmb	10 41 37.2	
	comp=Z,10nm,0.9s						
PPBI	Pangkal Pinang	53.66	229	P	P	10 41 23.9	0.0
SMLA	Simla	53.71	283	*e*P	P	10 41 23.6	-0.6
IUG	Iuzhnay	54.11	298	*e*P	P	10 41 26.4	-0.8
	baz=298						
IUG	Iuzhnay	54.11	298	*e*P	P	10 41 26.3	-0.8
SVE	Sverdlovsk	54.53	318	*e*P	P	10 41 30.8	+0.9
SVE				pmax	pmax		
	comp=Z,60nm,0.9s						
SVE				MLR	MLR		
	comp=Z,2µm,15.0s						
NIL	Nilore	55.46	288	P	P	10 41 37.8	+0.8
NIL				pmax	pmax		
	comp=Z,37nm,0.9s						
NIL	Nilore	55.46	288	P	P	10 41 37.8	+0.8
ARU	Arti	55.74	318	P	P	10 41 38.6	0.0
	comp=Z,11nm,0.8s,baz=53,slow=4.4,SNR=35						
ARU	Arti	55.74	318	*c i*P	P	10 41 39.0	+0.4
ARU						10 43 38.6	
ARU				S	S	10 49 27.5	+2.6
ARU				SS	SS	10 53 01.4	-8.3
ARU				pmax	pmax		
	comp=Z,57nm,1.0s						
ARU				MLR	MLR		
	comp=Z,2µm,15.0s						
ARU	Arti	55.74	318	P	P	10 41 39.0	+0.4
GSI	Gunungsitoli	56.36	240	P	P	10 41 43.0	-0.5
ABKAR	Akbulak array	57.73	310	P	P	10 41 52.5	-0.3
ABKAR	Akbulak array	57.73	310	P	P	10 41 51.5	-1.3
ABKAR				IAmb	IAmb	10 42 07.5	
	comp=Z,18nm,0.7s						
KBL	Kabul	58.13	291	P	P	10 41 54.3	-1.9
KBL				pmax	pmax		
	comp=Z,30nm,1.0s						
KBL	Kabul	58.13	291	P	P	10 41 54.3	-1.9
AKTO	Aktyubinsk	58.37	312	P	P	10 41 57.1	-0.3
	comp=Z,9.2nm,0.8s,baz=69,slow=12,SNR=20						
WB0	Warramunga Arr	59.38	190	P	P	10 42 03.8	-0.8
WB0				IAmb	IAmb	10 42 06.3	
	comp=Z,6.9nm,0.8s						
KIRV	Kirov	59.42	323	P	P	10 42 04.7	+0.3
	comp=Z,24nm,0.8s,baz=52,slow=4.9,SNR=10						
KIRV	Kirov	59.42	323	*ce*P	P	10 42 05.1	+0.7
WR0	Warramunga Arr	59.55	190	IAmb	IAmb	10 42 31.1	
	comp=Z,8.2nm,1.0s						
WRAB	Tennant Creek	59.55	190	*ce*P	P	10 42 07.2	+1.4
WRAB				pmax	pmax		
	comp=Z,6.0nm,1.3s						
WRAB	Tennant Creek	59.55	190	P	P	10 42 05.6	-0.2
WRAB				IAmb	IAmb	10 42 32.0	
	comp=Z,7.5nm,0.9s						
WB2	Warramunga Arr	59.56	190	P	P	10 42 05.7	-0.2
WB2				IAmb	IAmb	10 42 32.0	
	comp=Z,10nm,0.9s						
WRA	Warramunga Arr	59.56	190	P	P	10 42 05.0	-0.8
	comp=Z,4.5nm,0.7s,baz=8.4,slow=7.1,SNR=22						
HYB	Hyderabad	59.89	268	*i* P	P	10 42 08.0	-0.4
YKA	Yellowknife Ar	61.02	31	P	P	10 42 15.9	+0.6
	comp=Z,1.5nm,0.8s,baz=302,slow=6.1,SNR=17						
TMCR	Tamitsa	61.53	331	*e*P	P	10 42 17.4	-1.3
TMCR				pmax	pmax		
	comp=Z,24nm,0.9s						
ARCES	ARCESS Array B	62.43	339	P	P	10 42 24.2	-0.6
	comp=Z,5.7nm,0.9s,baz=40,slow=7.1,SNR=3.9						
ARCES	ARCESS Array B	62.43	339	IAmb	IAmb	10 42 27.7	
	comp=Z,11nm,1.1s						
TULEG	Thule	62.62	8	P	P	10 42 25.7	-0.2
KLMR	Klimovskoe	62.70	328	*e*P	P	10 42 24.5	-2.2
KLMR				*e*		10 44 40.5	
KLMR				pmax	pmax		
	comp=Z,32nm,1.5s						
KLMR	Klimovskoe	62.70	328	*e*P	P	10 42 24.5	-2.2
KLMR				AMP		10 42 27.8	
	comp=Z,32nm,1.5s						
KLMR				*e*PP	PP	10 44 40.5	-3.6
KLMR				LQ	LQ	11 05 02.2	
KLMR				LQ	LQ	11 05 02.2	
KLMR				LR	LR	11 08 46.6	
BELG	Belogornoye	63.24	317	P	P	10 42 30.1	-0.3
	comp=Z,34nm,0.9s,baz=54,slow=3.8,SNR=14						
BELG	Belogornoye	63.24	317	*i* P	P	10 42 30.6	+0.2
BELG				pmax	pmax		
	comp=Z,9.0nm,1.0s						
AS31	Alice Springs	63.29	190	P	P	10 42 31.1	+0.1
ASAR	Alice Springs	63.29	190	P	P	10 42 30.8	-0.2
	comp=Z,2.7nm,0.7s,baz=13,slow=6.5,SNR=29						
ASAR				LR	LR	11 08 49.6	
	comp=Z,64nm,21.7s,baz=9.5,slow=35						
ASAR	Alice Springs	63.29	190	P	P	10 42 30.7	-0.3
DAG	Danmarks Havn	63.64	355	*i* P	P	10 42 32.4	-0.2
	comp=Z,4.9nm,1.2s						
DAG	Danmarks Havn	63.64	355	*i* P	P	10 42 32.4	-0.2
DAG				pmax	pmax		
	comp=Z,5.0nm,1.2s						
DAG	Danmarks Havn	63.64	355	*i* P	P	10 42 32.5	-0.2
DAG				IAmb	IAmb	10 42 34.0	
	comp=Z,4.9nm,1.2s						
GEYT	Alibeck	64.16	299	P	P	10 42 37.1	+0.3
	comp=Z,5.3nm,0.6s,baz=5.7,slow=1.5,SNR=7.7						
GEYT	Alibeck	64.16	299	P	P	10 42 35.5	-1.3
GYA0B	ALIBECK ARRAY	64.16	299		P	10 42 37.0	+0.2
GYA0B				IAmb	IAmb	10 42 56.0	
	comp=Z,11nm,0.8s						
DZM	Mont Dzumac	64.74	156	*e*S	S	10 51 19.5	-1.5
	comp=Z,107nm,25.3s						
DZM	Mont Dzumac	64.74	156	*e*LR	LR	11 02 05.0	
	comp=Z,312nm,22.4s						
B08A	Colville Reser	66.08	46	P	P	10 42 49.6	+0.5
B08A				IAmb	IAmb	10 43 02.2	
	comp=Z,9.4nm,1.4s						
DBG	Daneborg	66.14	355	*i* P	P	10 42 48.7	-0.2
DBG				IAmb	IAmb	10 42 51.3	
	comp=Z,1.4nm,1.2s						
MOS	Moscow	66.39	324	*e*P	P	10 42 50.2	-0.6
MOS				MLR	MLR		
	comp=Z,900nm,16.0s						
C09A	Chrisman Ranch	66.98	46	P	P	10 42 55.8	+0.9
C09A				IAmb	IAmb	10 43 08.4	
	comp=Z,9.8nm,1.1s						
VRH	Novokhopyorsk	66.98	318	*e*P	P	10 42 51.5	-3.2
VRH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
OBN	Obninsk	67.24	323	P	P	10 42 56.3	0.0
	comp=Z,5.6nm,0.4s,baz=121,slow=5.9,SNR=3.4						
OBN	Obninsk	67.24	323	*ce*P	P	10 42 56.7	+0.4
OBN				*i*		10 43 09.1	
OBN				*i*		10 43 23.5	
OBN				*i*		10 45 25.3	
OBN				pmax	pmax		
	comp=Z,12nm,0.5s						
OBN				MLR	MLR		
	comp=Z,940nm,15.0s						
FIA1	FINESS Array S	67.55	333	P	P	10 42 58.1	0.0
FINES	FINESS Array B	67.55	333	P	P	10 42 57.7	-0.4
	comp=Z,8.6nm,0.7s,baz=60,slow=9.1,SNR=20						
LPSR	Galich'ya Gora	67.59	320	*e*P	P	10 42 56.9	-1.7
LPSR				pmax	pmax		
	comp=Z,20nm,1.1s						
VSR	Storozhevoye	68.28	319	*e*P	P	10 43 01.1	-1.9
VSR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
MAK	Makhachkala	68.33	308	*e*P	P	10 42 58.0	-5.4
MAK				*e*		10 45 28.6	
MAK				*e*S	S	10 51 55.3	-8.9
MAK				pmax	pmax		
	comp=Z,373nm,1.5s						
MAK				MLR	MLR		
	comp=Z,409nm,14.0s						
VORD	Divnogorie	68.37	319	*e*P	P	10 43 02.1	-1.4
VORD				pmax	pmax		
	comp=Z,10.0nm,1.1s						
SUMG	Summit	68.40	1	*i* P	P	10 43 04.4	+0.6
	comp=Z,16nm,0.7s						
SUMG	Summit	68.40	1	*i* P	P	10 43 04.4	+0.6
SUMG				pmax	pmax		
	comp=Z,16nm,0.7s						
SUMG	Summit	68.40	1	P	P	10 43 04.3	+0.5
SUMG				IAmb	IAmb	10 43 11.6	
	comp=Z,7.0nm,0.9s						
SUMG	Summit	68.40	1	*i* P	P	10 43 04.4	+0.6
SUMG				IAmb	IAmb	10 43 07.6	
	comp=Z,16nm,0.7s						
BMO	Blue Mountains	69.19	49	P	P	10 43 11.7	+2.8
BMO				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BMO	Blue Mountains	69.19	49	P	P	10 43 11.7	+2.8
JTMT	Jette	69.22	45	P	P	10 43 11.6	+2.5
JTMT				IAmb	IAmb	10 43 23.4	
	comp=Z,6.4nm,0.9s						
GOF	Gofitskoye	69.78	312	⇑*e*P	P	10 43 13.6	+1.2
GOF				pmax	pmax		
	comp=Z,30nm,0.6s						
BEKR	Beckworth	70.19	54	P	P	10 43 15.8	+0.5
ZEI	Tsey	70.60	310	*e*P	P	10 43 16.9	-0.8
ZEI				pmax	pmax		
	comp=Z,12nm,1.0s						
KVAR	Kislovodsk Arr	70.63	311	P	P	10 43 19.2	+1.5
	comp=Z,16nm,0.8s,baz=261,slow=19,SNR=5.7						
KIV	Kislovodsk	70.64	311	⇑P	P	10 43 18.9	+1.2
KIV	Kislovodsk	70.64	311	*i* P	P	10 43 19.4	+1.7
	SNR=8.4						
KIV	Kislovodsk	70.64	311	*ce*P	P	10 43 18.5	+0.7
KIV				*i*		10 43 34.5	
KIV				*i*		10 43 39.3	
KIV				*e*		10 45 54.6	
KIV				*e*S	S	10 52 34.2	+2.6
KIV				pmax	pmax		
	comp=Z,57nm,1.0s						
KIV	Kislovodsk	70.64	311	P	P	10 43 18.1	+0.4
KBZ	Khabaz	70.65	311	P	P	10 43 18.6	+0.9
	comp=Z,19nm,0.8s,baz=46,slow=3.9,SNR=35						
KBZ	Khabaz	70.65	311	*ce*P	P	10 43 18.5	+0.9
KBZ				pmax	pmax		
	comp=Z,20nm,0.9s						
STKA	Stephens Creek	70.85	182	P	P	10 43 20.0	+1.1
	comp=Z,0.8nm,0.3s,baz=25,slow=6.3,SNR=4.5						
STKA				LR	LR	11 13 45.9	
	comp=Z,74nm,21.4s,baz=22,slow=35						
STKA	Stephens Creek	70.85	182	P	P	10 43 20.0	+1.1
STKA	Stephens Creek	70.85	182	P	P	10 43 17.6	-1.3
PAHR	Pah Rah Range	70.90	54	P	P	10 43 21.4	+1.9
PAHR				IAmb	IAmb	10 43 42.0	
	comp=Z,8.4nm,1.1s						
FFC	Flin Flon	70.91	34	P	P	10 43 19.5	+0.4
FFC				pmax	pmax		
	comp=Z,6.0nm,1.0s						
FFC	Flin Flon	70.91	34	P	P	10 43 19.5	+0.4
NEY	Neytrino	71.03	311	*i* P	P	10 43 20.2	-0.1
NEY				pmax	pmax		
	comp=Z,2.0nm,0.8s						
FCC	Fort Churchill	71.23	28	P	P	10 43 22.3	+1.3
FCC				pmax	pmax		
	comp=Z,13nm,1.4s						
FCC	Fort Churchill	71.23	28	P	P	10 43 22.3	+1.3
FCC				IAmb	IAmb	10 43 32.8	
	comp=Z,13nm,1.4s						
CMB	Columbia Colle	71.23	56	P	P	10 43 22.5	+1.1
CMB				pmax	pmax		
	comp=Z,8.0nm,1.4s						
CMB	Columbia Colle	71.23	56	P	P	10 43 22.5	+1.1
LRM	Limekiln Ridge	71.38	46	P	P	10 43 23.8	+1.3
YERR	Yerington	71.41	55	P	P	10 43 24.3	+1.6
DLMT	Dillon	71.58	46	P	P	10 43 24.6	+1.0
HLID	Hailey	71.63	48	P	P	10 43 24.2	+0.2
GNI	Garni	71.64	307	P	P	10 43 24.6	+0.6
	comp=Z,3.7nm,0.4s,baz=198,slow=4.0,SNR=4.9						
GNI	Garni	71.64	307	*ce*P	P	10 43 26.3	+2.3
GNI				pmax	pmax		
	comp=Z,12nm,1.3s						
GNI	Garni	71.64	307	P	P	10 43 23.5	-0.5
GNI				IAmb	IAmb	10 43 50.2	
	comp=Z,16nm,1.0s						
AKH	Akhalkalaki	71.66	309	⇑P	P	10 43 24.5	+0.3
NACGM	Naroch	71.71	327	*i* P	P	10 43 23.1	-0.8
NACGM				*i* P	P	10 43 23.1	-0.8
NACGM				*i* P	P	10 43 23.1	-0.8
NACGM				*i* Pb	pP	10 43 25.8	-0.8
	comp=Z,30nm,1.0s						
NACGM				*i* PcP	PcP	10 43 41.2	-1.8
NACGM				*i* PP	PP	10 46 10.0	+7.5
NACGM				*i* PPP	PPP	10 47 53.3	
NACGM				*i* S	S	10 52 48.4	+5.0
NACGM				*i* SS	SS	10 57 20.7	+2.7
NACGM				*i* SSS	SSS	11 01 00.7	
NACGM				*i* LQ	LQ	11 08 42.1	
NACGM				*i* LR	LR	11 13 21.8	
ICESG	Greenland Ices	71.89	1	*i* P	P	10 43 25.8	+0.6
ICESG				IAmb	IAmb	10 43 28.7	
	comp=Z,5.2nm,0.7s						
BOZ	Bozeman (W)	71.98	46	P	P	10 43 27.1	+1.1
BOZ				pmax	pmax		
	comp=Z,10.0nm,1.3s						
BOZ	Bozeman (W)	71.98	46	P	P	10 43 27.1	+1.1
BANOM	Banah	72.02	289	P	P	10 43 26.0	-0.4
NVAR	Mina Array Bea	72.33	55	P	P	10 43 29.2	+0.9
	comp=Z,1.6nm,0.9s,baz=298,slow=6.0,SNR=6.8						
NVAR				LR	LR	11 12 49.2	
	comp=Z,71nm,19.0s,baz=327,slow=34						
NVAR	Mina Array Bea	72.33	55	P	P	10 43 28.4	+0.2
MSFE	Esma-Masafi	72.44	289	P	P	10 43 28.5	-0.4
SOC	Sochi	72.58	312	*e*P	P	10 43 28.9	-0.4
SOC				*e*		10 46 06.3	
SOC				*e*S	S	10 52 56.0	+2.2
SOC				pmax	pmax		
	comp=Z,8.0nm,0.5s						
SOC				MLR	MLR		
	comp=Z,460nm,18.0s						
NC204	NORSAR Array S	72.64	338	P	P	10 43 28.9	-0.6
UOSS	Minazif	72.65	288	*i* P	P	10 43 29.3	-0.8
	SNR=6.8						
UOSS	Minazif	72.65	288	P	P	10 43 28.3	-1.8
HFS	Hagfors	72.67	336	P	P	10 43 28.8	-0.8
	comp=Z,8.0nm,0.7s,baz=69,slow=8.1,SNR=7.8						
NB2	NORSAR Subarra	72.70	338	P	P	10 43 29.5	-0.3
	comp=Z,21nm,1.0s,baz=38,slow=6.2						
NOA	NORSAR Array B	72.70	338	P	P	10 43 29.7	-0.1
	comp=Z,8.7nm,0.9s,baz=38,slow=6.0,SNR=17						
HATD	Hatta, Dubai	72.78	288	P	P	10 43 31.2	+0.3
SOHO	SOHO	72.88	287	*i* P	P	10 43 31.2	-0.3
	SNR=6.7						
ASHO	Ashiyiah	72.91	288	P	P	10 43 32.0	+0.3
FAQ	Al Faqa, Dubai	73.22	288	P	P	10 43 32.1	-1.4
AKASG	Malin Array Be	73.48	323	P	P	10 43 32.9	-1.6
	comp=Z,6.8nm,0.8s,baz=42,slow=6.6,SNR=14						
AKASG	Malin Array Be	73.48	323	P	P	10 43 34.4	-0.1
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.9s						
AKASG	Malin Array Be	73.48	323	P	P	10 43 34.4	-0.1
AKBB	Malin Array Si	73.48	323	*ce*P	P	10 43 34.4	-0.1
AKBB	Malin Array Si	73.48	323	P	P	10 43 34.1	-0.4
AKBB				IAmb	IAmb	10 43 50.5	
	comp=Z,10.0nm,0.9s						
ASUD	Al Ashush, Dub	73.48	288	P	P	10 43 34.4	-0.7
PDAR	Pinedale Array	74.91	47	P	P	10 43 44.6	+1.3
	comp=Z,0.6nm,0.6s,baz=283,slow=1.7,SNR=7.7						
PDAR	Pinedale Array	74.91	47	P	P	10 43 43.7	+0.3
SORM	Soroca	75.65	321	⇓P	P	10 43 46.9	-0.3
ULM	Lac du Bonnet	76.70	35	P	P	10 43 53.2	0.0
	comp=Z,1.0nm,0.6s,baz=294,slow=6.9,SNR=2.9						
TLCR		77.45	319	⇑P	P	10 43 57.8	+0.4
BUR08	Bucovina Ar. S	77.50	322	P	P	10 43 57.2	-0.6
BUR08				IAmb	IAmb	10 44 16.3	
	comp=Z,8.9nm,0.9s						
BURAR	Bucovina Array	77.52	322	⇑P	P	10 43 58.6	+0.6
BURAR	Bucovina Array	77.52	322	P	P	10 43 57.8	-0.2
BIZ	Bicaz	77.57	321	⇑P	P	10 43 58.8	+0.7
TESR	Tescani	77.61	321	⇑P	P	10 43 58.7	+0.4
CFR	Carcaliu	77.80	319	⇓P	P	10 44 00.3	+0.9
TPGR	Topolog	77.88	319	⇑P	P	10 44 00.8	+0.9
KOLS	Kolonicke sedl	77.92	325	*e*P	P	10 44 01.3	+1.3
KOLS				pmax	pmax		
	comp=Z,18nm,1.9s						
KOLS	Kolonicke sedl	77.92	325	*e*P	P	10 44 01.3	+1.3
VRI	Vrincioaia	78.03	320	⇑P	P	10 44 02.2	+1.5
OJC	Ojcow	78.04	327	P	P	10 44 01.3	+0.7
OJC				pmax	pmax		
	comp=Z,30nm,1.2s						
OJC	Ojcow	78.04	327	P	P	10 44 01.3	+0.7
PLOR	Plostina	78.08	320	⇓P	P	10 44 02.7	+1.7
UZH	Uzhgorod	78.13	325	*e*P	P	10 44 04.8	+3.6
UZH				*e*		10 44 10.7	
BRTR	Keskin Array B	78.54	312	P	P	10 44 04.3	+0.5
	comp=Z,6.0nm,1.1s,baz=116,slow=2.9,SNR=12						
BRTR	Keskin Array B	78.54	312	P	P	10 44 03.7	-0.1
MLR	Muntele Rosu	78.68	320	P	P	10 44 02.9	-1.5
	comp=Z,2.2nm,0.8s,baz=104,slow=5.8,SNR=4.5						
MLR	Muntele Rosu	78.68	320	P	P	10 44 03.5	-1.0
MLR				pmax	pmax		
	comp=Z,16nm,1.5s						
MLR	Muntele Rosu	78.68	320	P	P	10 44 03.5	-1.0
MLR				IAmb	IAmb	10 44 07.1	
	comp=Z,16nm,1.5s						
LANS	Liptovska Anna	78.98	326	*e*P	P	10 44 07.4	+1.4
LANS				pmax	pmax		
	comp=Z,7.0nm,1.2s						
LANS	Liptovska Anna	78.98	326	*e*P	P	10 44 07.4	+1.4
VOIR		79.16	321	⇑P	P	10 44 08.7	+1.7
OSTC	Ostas	79.26	329	*e*P	P	10 44 07.0	-0.4
DRGR		79.29	323	⇓P	P	10 44 08.3	+0.6
CHVC	Chvalec	79.30	329	*e*P	P	10 44 08.4	+0.8
MORC	Moravsky Berou	79.32	328	⇑P	P	10 44 08.3	+0.5
MORC	Moravsky Berou	79.32	328	*e*P	P	10 44 08.5	+0.7
MORC	Moravsky Berou	79.32	328	P	P	10 44 07.0	-0.8
MORC				pmax	pmax		
	comp=Z,19nm,1.2s						
MORC	Moravsky Berou	79.32	328	P	P	10 44 07.0	-0.8
MORC				IAmb	IAmb	10 44 09.8	
	comp=Z,19nm,1.2s						
DPC	Dobruska-Polom	79.38	329	*e*P	P	10 44 08.8	+0.7
DPC				*e*		10 44 21.1	
DPC	Dobruska-Polom	79.38	329	*e*P	P	10 44 08.8	+0.7
DPC				*e*x	x	10 44 21.1	
KRLC	Kraliky	79.40	328	*e*P	P	10 44 08.8	+0.6
KRLC	Kraliky	79.40	328	*e*P	P	10 44 08.8	+0.6
KRLC				*e*x	x	10 44 30.2	
MDUB	Mudurnu	79.42	314	P	P	10 44 08.3	-0.3
BRG	Berggiesshubel	79.90	330	*i* P	P	10 44 11.6	+0.8
BRG				Amp		10 44 12.5	
	comp=Z,6.5nm,1.2s						
BRG				Amp		11 23 24.0	
	comp=E,0.7nm,7.7s						
BRG				Amp		11 23 32.0	
	comp=N,0.7nm,6.8s						
BRG				Amp		11 23 49.0	
	comp=Z,1.6nm,7.2s						
CLL	Collm	79.91	331	*i* P	P	10 44 11.1	+0.2
	comp=Z,14nm,1.2s						
CLL				*e*PP	PP	10 47 11.0	-0.7
CLL				*e*S	S	10 54 24.0	+10
CLL				Lm	MLR	11 22 00.0	
	comp=Z,400nm,19.5s						
CLL	Collm	79.91	331	*i* P	P	10 44 11.1	+0.2
CLL				pmax	pmax		
	comp=Z,14nm,1.2s						
CLL				MLR	MLR		
	comp=Z,400nm,19.5s						
CLL	Collm	79.91	331	P	P	10 44 11.0	+0.2
CLL				IAmb	IAmb	10 44 12.2	
	comp=Z,13nm,1.1s						
JAVC	Velka Javorina	79.97	327	*e*P	P	10 44 13.3	+1.9
VRAC	Vranov	80.08	328	P	P	10 44 13.1	+1.3
	comp=Z,9.3nm,0.9s,baz=56,slow=2.9,SNR=5.9						
VRAC	Vranov	80.08	328	*e*P	P	10 44 12.9	+1.1
RAR	Rarotonga	80.22	128	P	P	10 44 13.6	+0.7
	comp=Z,6.1nm,0.3s,baz=310,slow=17,SNR=1.7						
GZR	Gura Zlata	80.29	322	⇑P	P	10 44 13.8	+0.7
KRUC	Moravsky	80.35	328	*e*P	P	10 44 14.2	+0.9
PRU	Pruhonice	80.37	329	*e*P	P	10 44 14.3	+0.9
PRU				*e*		10 44 23.8	
PRU	Pruhonice	80.37	329	*e*P	P	10 44 14.3	+0.9
PRU				*e*x	x	10 44 23.8	
HERR	Herculane	80.84	322	⇑P	P	10 44 16.3	+0.3
MDVR	Moldovita	81.25	322	⇑P	P	10 44 18.6	+0.4
RAYN	Ar Rayn	81.28	293	*i* P	P	10 44 19.0	+0.2
	SNR=7.8						
RAYN	Ar Rayn	81.28	293	P	P	10 44 18.7	-0.1
RAYN				pmax	pmax		
	comp=Z,11nm,1.0s						
RAYN	Ar Rayn	81.28	293	P	P	10 44 18.7	-0.1
RAYN				IAmb	IAmb	10 44 20.0	
	comp=Z,11nm,0.9s						
KHC	Kasperske Hory	81.43	329	*ce*P	P	10 44 20.3	+1.2
KHC				pmax	pmax		
	comp=Z,24nm,1.0s						
KHC	Kasperske Hory	81.43	329	*e*P	P	10 44 19.2	+0.1
KHC				*e*x	x	10 44 37.9	
KHC	Kasperske Hory	81.43	329	IAmb	IAmb	10 44 21.1	
	comp=Z,15nm,1.2s						
CONA	Conrad Observa	81.46	327	*e*P	P	10 44 19.6	+0.2
	comp=Z,5.9nm,0.8s,SNR=4.6						
GERES	GERESS Array B	81.61	329	P	P	10 44 19.7	-0.5
	comp=Z,2.1nm,0.7s,baz=46,slow=5.8,SNR=12						
GERES	GERESS Array B	81.61	329	P	P	10 44 20.0	-0.2
GERES	GERESS Array B	81.61	329	P	P	10 44 20.0	-0.2
FRGS	Fruska Gora	81.86	323	⇑P	P	10 44 21.7	+0.2
GRF	Grafenberg Arr	81.89	331	*e*P	P	10 44 23.0	+1.5
	comp=Z,7.8nm,0.8s,baz=38,slow=4.5						
MMAI	Mount Meron Ar	81.95	306	P	P	10 44 22.8	+0.6
	comp=Z,7.7nm,0.8s,baz=71,slow=8.0,SNR=6.0						
SOCY	Socotra	82.00	279	P	P	10 44 21.1	-1.6
VTS	Vitosha	82.11	320	⇑P	P	10 44 24.2	+1.3
VTS	Vitosha	82.11	320	P	P	10 44 22.6	-0.4
VTS				pmax	pmax		
	comp=Z,9.0nm,0.9s						
VTS	Vitosha	82.11	320	P	P	10 44 22.6	-0.4
VTS				IAmb	IAmb	10 44 25.1	
	comp=Z,9.4nm,0.9s						
ARSA	Arzberg	82.13	327	*e*P	P	10 44 23.6	+0.7
	comp=Z,8.6nm,1.2s						
SOKA	Soboth	82.79	327	*e*P	P	10 44 26.8	+0.5
	comp=Z,9.4nm,0.8s						
KBA	Koelnbreinsper	83.17	328	*e*P	P	10 44 29.8	+1.3
	comp=Z,7.1nm,0.8s						
ABTA	Abfaltersbach	83.78	329	*e*P	P	10 44 31.8	+0.4
	comp=Z,9.7nm,1.2s						
MOTA	Moosalm	83.85	330	*e*P	P	10 44 32.6	+0.7
	comp=Z,12nm,1.0s						
RETA	Reutte	83.87	330	*i* P	P	10 44 33.0	+1.1
	comp=Z,12nm,1.0s,SNR=4.5						
PPT	Papeete	84.23	118	LR	LR	11 21 56.4	
	comp=Z,175nm,18.7s,baz=316,slow=36						
PPT2	Papeete2	84.25	118	*e*LR	LR	11 11 01.4	
	comp=Z,324nm,22.5s,baz=314						
FETA	Feichten	84.26	330	*e*P	P	10 44 34.6	+0.5
	comp=Z,8.5nm,0.8s,SNR=5.6						
DAVA	Damuels	84.37	330	*e*P	P	10 44 35.3	+0.7
	comp=Z,13nm,0.9s						
TAOE	Nuku Hiva Isla	85.17	105	*e*LR	LR	11 11 39.6	
	comp=Z,340nm,23.1s						
TXAR	Lajitas Array	87.45	54	P	P	10 44 50.6	+0.5
	comp=Z,0.3nm,0.7s,baz=293,slow=4.7,SNR=3.6						
TBI	Tubuai	88.33	122	*e*LR	LR	11 12 58.6	
	comp=Z,180nm,21.8s						
TBI	Tubuai	88.33	122	*e*T	T	12 22 10.2	
	comp=Z,7.3nm,0.4s						
ESDC	Sonseca Array	95.93	335	LR	LR	11 34 13.8	
	comp=Z,328nm,18.8s,baz=350,slow=39						
RKT	Rikitea	98.13	113	*e*LR	LR	11 17 29.5	
	comp=Z,255nm,24.2s						
TORD	Torodi Ar. Bea	116.81	318	PP	PP	10 51 54.1	-0.6
	comp=Z,3.6nm,1.0s,baz=23,slow=7.2,SNR=7.4						
MATP	Matopo	121.75	269	PKP	PKPdf	10 50 56.5	-0.2
	comp=Z,1.5nm,0.7s,baz=200,slow=4.5,SNR=3.0						
SNAA	Sanae	143.41	197	PKPdf	PKPbc	10 51 32.6	-0.3
LPAZ	La Paz	144.13	59	PKP	PKPdf	10 51 40.7	+1.5
	comp=Z,1.7nm,0.8s,baz=26,slow=5.2,SNR=2.0						
PRPB	Parauapebas	144.89	23	*e*P	PKiKP	10 51 48.0	+4.3
VNA2	Neumayer--Watz	144.96	196	PKPdf	PKPbc	10 51 37.9	+0.3
VNA3	Neumayer Olymp	145.19	195	PKPdf	PKPbc	10 51 38.3	0.0
VNA1	Neumayer--Stat	145.36	196	PKPdf	PKPab	10 51 40.2	+1.2
NBPA	Parau_RN	146.58	1	*e*P	PKiKP	10 51 51.0	+3.9
LVC	Limon Verde	147.84	68	*e*P	PKPab	10 51 54.8	+4.3
SNDB	Serra Nova Dou	149.78	30	*e*P	PKPab	10 51 56.5	-1.4
PEXB	Peixe	150.95	24	*e*P	PKiKP	10 51 58.6	+2.5

IDC 25 10:47:28.3±3.0,10°.78S×163°.73E,h0km,mb3.5/3, mb1 3.8/5,mb1mx3.5/38,mbtmp3.7/5,ML3.6/2,Error ellipse: s-maj=56.9km s-min=43.8km az=79.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.53	167	Pn	Pn	10 50 14.4	0.0
	0.4nm,0.3s,baz=341,slow=9.6,SNR=6.7						
CTA	Charters Tower	19.20	239	P	P	10 51 54.4	+0.4
	0.1nm,0.3s,baz=51,slow=6.5,SNR=2.9						
WRA	Warramunga Arr	29.72	249	P	P	10 53 36.6	0.0
	0.4nm,0.5s,baz=79,slow=8.9,SNR=5.5						
H11N1	WAKE ISLAND Hy	30.46	6	T	T	11 26 01.0	
	baz=183						
H11N3	WAKE ISLAND Hy	30.46	6	T	T	11 26 02.5	
	baz=183						
H11N2	WAKE ISLAND Hy	30.48	6	T	T	11 25 58.9	
	baz=183						
ASAR	Alice Springs	31.16	242	P	P	10 53 49.0	-0.2
	0.2nm,0.4s,baz=63,slow=10,SNR=11						
MKAR	Makanchi Array	91.97	317	P	P	11 00 39.1	0.0
	0.1nm,0.5s,baz=103,slow=3.1,SNR=1.4						

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*IDC **25** 10:54:52.1±3.0,30°.75N×140°.75E,h0km,mb3.6/5, mb1 3.7/7,mb1mx3.5/35,mbtmp3.6/7,ML3.2/2,Error ellipse: s-maj=126.7km s-min=18.5km az=69.0*

ISC 25 10:54:52.7±1.7,30°.8N±0°.2×141°.0E±0°.6,h10km,n8, σ1ˢ.16/9,mb3.7/5,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2	2.53	336	Sn	Sn	10 56 04.2	-0.7
	6.4nm,0.3s,baz=58,slow=19,SNR=1.9						
JCJ	Chichijima	3.83	164	Pn	Pn	10 55 53.3	+1.5
	9.0nm,0.3s,baz=293,slow=23,SNR=9.2						
JCJ				Sn	Sn	10 56 34.7	-2.3
	4.8nm,0.3s,baz=291,slow=23,SNR=1.7						
MJAR	Matsushiro Arr	6.18	339	Pn	Pn	10 56 23.7	-0.4
	0.1nm,0.3s,baz=151,slow=11,SNR=4.0						
SONM	Songino Array	31.39	313	P	P	11 01 13.9	+0.1
	0.6nm,0.7s,baz=114,slow=7.6,SNR=4.0						
ZALV	Zalesovo Beam	46.05	317	P	P	11 03 16.1	-0.3
	0.6nm,0.5s,baz=89,slow=11,SNR=4.1						
MKAR	Makanchi Array	47.37	307	P	P	11 03 26.9	0.0
	0.4nm,0.6s,baz=86,slow=11,SNR=5.3						
WRA	Warramunga Arr	50.86	188	P	P	11 03 54.0	+0.2
	0.3nm,0.2s,baz=6.6,slow=7.7,SNR=15						
ASAR	Alice Springs	54.58	188	P	P	11 04 21.6	+0.2
	0.3nm,0.4s,baz=2.0,slow=4.8,SNR=16						

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*IDC **25** 10:56:18.7±1.0,58°.75S×25°.47W,h0km,mb3.9/2, mb1 3.9/2,mb1mx3.7/17,mbtmp3.8/2,Error ellipse: s-maj=68.0km s-min=53.7km az=85.0*

ISC 25 10:56:19.7±0.9,59°.1S±0°.2×25°.1W±0°.4,h10km,n17, σ2ˢ.01/16,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	13.55	156	P	P	10 59 39.7	-1.0
VNA1				S	Sn	11 02 05.8	+3.9
VNA3	Neumayer Olymp	13.74	159	P	P	10 59 42.2	-0.8
VNA3				S	Sn	11 02 04.2	-2.5
VNA2	Neumayer--Watz	13.95	155	P	P	10 59 44.5	-0.7
	baz=316,slow=14						
VNA2				S	Sn	11 02 10.7	-1.0
SNAA	Sanae	15.51	153	P	P	11 00 06.0	+3.4
SNAA				S	Sn	11 02 46.9	-2.8
H10S2	ASCENSION HYDR	50.66	13	T	T	11 59 33.4	
	baz=187,slow=74,SNR=4.1						
H10S3	ASCENSION HYDR	50.66	13	T	T	11 59 35.6	
	baz=33,slow=74,SNR=7.6						
H10N1	ASCENSION HYDR	51.78	13	T	T	12 01 01.0	
	baz=192						
H10N3	ASCENSION HYDR	51.78	13	T	T	12 01 11.5	
	baz=192						
H10N2	ASCENSION HYDR	51.80	13	T	T	12 01 03.3	
	baz=192						
TORD	Torodi Ar. Bea	75.22	27	P	P	11 08 01.6	-0.7
	0.3nm,0.4s,baz=197,slow=5.4,SNR=2.4						
ASAR	Alice Springs	95.74	161	P	P	11 09 48.0	+2.3
	0.2nm,0.6s,baz=183,slow=3.6,SNR=6.0						
PDAR	Pinedale Array	122.86	299	PKP	PKPdf	11 15 14.1	-1.1
	0.2nm,0.4s,baz=133,slow=6.3,SNR=2.7						
NVAR	Mina Array Bea	123.55	290	PKP	PKiKP	11 15 17.8	+0.9
	0.2nm,0.5s,baz=196,slow=9.0,SNR=2.4						
YKA	Yellowknife Ar	139.15	315	PKP	PKPdf	11 15 45.1	+0.1
	0.6nm,0.6s,baz=124,slow=2.9,SNR=14						
INK	Inuvik	148.83	317	PKPbc	PKPbc	11 16 05.0	-0.7
	2.6nm,0.7s,baz=105,slow=4.6,SNR=9.3						
SONM	Songino Array	149.71	90	PKPbc	PKiKP	11 16 09.6	-0.1
	0.3nm,0.4s,baz=259,slow=2.9,SNR=2.9						
ILAR	Eielson Array	152.91	307	PKPbc	PKiKP	11 16 14.9	-0.6
	1.4nm,0.6s,baz=140,slow=5.7,SNR=27						

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*IDC **25** 11:07:32.2±0.6,30°.98N×141°.97E,h0km,mb3.9/15, mb1 4.1/19,mb1mx4.0/35,mbtmp3.9/19,ML3.5/4,MS3.0/1, Ms1 3.0/1,ms1mx2.4/45,Error ellipse: s-maj=21.2km s-min=14.5km az=87.0*

*NEIC **25** 11:07:34.5±2.2,31°.05N±0°.06×141°.9E±0°.1,h16km±5km, mb4.3/14,Error ellipse: s-maj=14.7km s-min=8.3km az=69.0*

*JMA **25** 11:07:34.2±0.2,31°.09N×142°.17E,h48km,M3.9*

ISC 25 11:07:35.5±0.5,31°.03N±0°.05×141°.96E±0°.09,h24km,n63, σ1ˢ.33/67,mb4.0/21,1C-1D,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	Mitsune	2.75	319	P	Pn	11 08 18.3	+0.1
JHJ2	Mitsune	2.75	319	Pn	Pn	11 08 13.8	-4.4
JHJ	Hachijo jima 2	2.78	319	Pn	Pn	11 08 18.7	+0.1
	10nm,0.3s,baz=72,slow=20,SNR=1.9						
JHJ				Sn	Sn	11 08 51.0	-0.3
	17nm,0.3s,baz=54,slow=22,SNR=1.9						
BSO1	Boso 1	3.70	347	P	Pn	11 08 30.9	+0.2
CBIJ	Chichi jima	3.93	177	P	Pn	11 08 34.4	0.0
JCJ	Chichijima	3.93	177	Pn	Pn	11 08 34.1	-0.2
	13nm,0.3s,baz=50,slow=22,SNR=19						
JCJ				Sn	Sn	11 09 17.1	-2.7
	15nm,0.3s,baz=307,slow=21,SNR=6.8						
JCJ	Chichijima	3.93	177		Pn	11 08 32.9	-1.5
BSO3	Boso 3	3.95	342	P	Pn	11 08 33.6	-0.8
BSO4	Boso 4	4.17	341	P	Pn	11 08 37.4	-0.2
JOD2	Odawara 2	4.85	331	P	Pn	11 08 48.3	+1.2
JYT	Yasato	5.38	345	Pn	Pn	11 08 54.9	+0.6
JRY	Ryogami san	5.58	334	P	Pn	11 08 57.7	+0.6
JRY				S	Sn	11 10 00.5	-0.1
JHO	Hitachi	5.68	349	P	Pn	11 08 56.9	-1.5
JAG	Ashikaga	5.77	339	P	Pn	11 08 59.8	+0.2
JAG				*e*S	Sn	11 10 03.8	-1.2
JGF	Kuroka	5.96	321	Pn	Pn	11 09 01.9	-0.4
MJAR	Matsushiro Arr	6.32	331	Pn	Pn	11 09 08.4	+1.3
	0.6nm,0.3s,baz=159,slow=11,SNR=35						
MJAR	Matsushiro Arr	6.32	331		Pn	11 09 07.9	+0.8
MAJO	Matsushiro	6.32	331		Pn	11 09 08.8	+1.6
MAT	Matsushiro	6.32	331	P	Pn	11 09 08.7	+1.5
MAT				S	Sn	11 10 16.1	-2.5
JMM	Marumori	6.88	352	Pn	Pn	11 09 13.7	-1.2
JSD	Sado	7.62	337	Pn	Pn	11 09 24.7	-0.4
JMK	Ichinoseki	7.92	356	P	Pn	11 09 26.2	-3.0
JTM	Tenmabayashi	9.76	356	Pn	Pn	11 09 52.7	-1.6
ERM	Erimo	11.00	5	Pn	Pn	11 10 11.0	-0.4
JEM	Erimo	11.00	5	Pn	Pn	11 10 37.2	+26
ASAJ	Asahikawa	13.07	2	Pn	Pn	11 10 36.5	-3.1
	0.5nm,0.3s,baz=294,slow=14,SNR=4.5						
KSRS	Korea Array	13.25	303	LR	LR	11 15 42.8	
	comp=Z,66nm,18.8s,baz=39,slow=37						
KLR	Kul'dur	19.75	340	P	P	11 12 03.2	-0.2
	0.1nm,0.3s,baz=144,slow=17,SNR=2.2						
YULB	Yu-li	19.87	253	P	P	11 12 05.1	0.0
YULB				IAmb	IAmb	11 12 15.2	
	comp=Z,19nm,1.1s						
SONM	Songino Array	31.84	312	P	P	11 13 59.7	+1.1
	comp=Z,0.4nm,0.6s,baz=106,slow=11,SNR=1.7						
SONM	Songino Array	31.84	312	P	P	11 13 57.8	-0.8
KWAJ	Kwajalein Atol	32.57	127	P	P	11 14 04.9	-0.2
COEN	Coen	44.75	178	P	P	11 15 48.5	+1.4
ZALV	Zalesovo Beam	46.44	317	P	P	11 16 00.9	+0.7
	comp=Z,0.6nm,0.6s,baz=140,slow=5.1,SNR=2.6						
ZALV				PcP	PcP	11 17 35.4	+0.8
	comp=Z,0.7nm,0.5s,baz=92,slow=4.3,SNR=2.6						
MKAR	Makanchi Array	47.88	307	P	P	11 16 12.2	+0.5
	comp=Z,0.7nm,0.8s,baz=88,slow=9.5,SNR=6.7						
MKAR	Makanchi Array	47.88	307	P	P	11 16 12.9	+1.2
OHAK	Old Harbor	50.98	39	P	P	11 16 35.4	+0.4
WB0	Warramunga Arr	51.03	189	P	P	11 16 36.0	+0.2
WB0				IAmb	IAmb	11 16 38.4	
	comp=Z,4.6nm,0.9s						
WR0	Warramunga Arr	51.20	189	P	P	11 16 36.9	-0.2
WR0				IAmb	IAmb	11 17 01.8	
	comp=Z,7.3nm,1.4s						
WB2	Warramunga Arr	51.21	189	P	P	11 16 37.0	-0.1
WB2				IAmb	IAmb	11 16 37.8	
	comp=Z,3.3nm,0.8s						
WRA	Warramunga Arr	51.21	189	P	P	11 16 36.5	-0.6
	comp=Z,1.5nm,0.4s,baz=6.6,slow=7.7,SNR=32						
WRA	Warramunga Arr	51.21	189	P	P	11 16 36.7	-0.5
FITZ	Fitzroy Crossi	51.31	200	P	P	11 16 37.8	0.0
KDAK	Kodiak Island	51.38	39	P	P	11 16 38.1	+0.1
	comp=Z,10nm,1.0s,baz=310,slow=4.8,SNR=5.1						
KDAK	Kodiak Island	51.38	39	P	P	11 16 38.6	+0.6
ILAR	Eielson Array	54.39	30	P	P	11 17 00.6	+0.4
	comp=Z,1.0nm,0.7s,baz=264,slow=5.8,SNR=10						
AS31	Alice Springs	54.93	189	P	P	11 17 04.1	-0.4
AS31				IAmb	IAmb	11 17 09.9	
	comp=Z,0.7nm,0.5s						
ASAR	Alice Springs	54.93	189	P	P	11 17 04.2	-0.4
	comp=Z,0.9nm,0.5s,baz=3.0,slow=5.6,SNR=31						
ASAR	Alice Springs	54.93	189	P	P	11 17 04.5	0.0
EPYK	Eagle Plains	58.56	28	P	P	11 17 31.7	+1.8
INK	Inuvik	59.55	25	P	P	11 17 37.2	+0.6
	comp=Z,1.4nm,1.0s,baz=262,slow=5.8,SNR=2.1						
KBL	Kabul	60.15	295	P	P	11 17 38.5	-3.1
AB31	Akbulak array	62.24	313	⇑Pn	P	11 17 53.5	-1.7
	comp=Z,0.5nm,0.5s,baz=350,slow=12,SNR=20						
AB31				⇓Lg	Lg	11 18 44.2	
	comp=Z,0.8nm,0.3s,baz=354,slow=28,SNR=6.5						
ABKAR	Akbulak array	62.24	313	P	P	11 17 53.6	-1.7
ABKAR				IAmb	IAmb	11 18 04.6	
	comp=Z,2.6nm,1.0s						
ABKAR	Akbulak array	62.24	313	P	P	11 17 53.3	-1.9
STKA	Stephens Creek	62.57	180	P	P	11 17 58.0	+0.5
	comp=Z,0.6nm,0.3s,baz=24,slow=10.0,SNR=1.7						
YKA	Yellowknife Ar	68.79	29	P	P	11 18 38.0	+0.7
	comp=Z,0.7nm,0.8s,baz=296,slow=6.0,SNR=8.1						
FINES	FINESS Array B	74.34	333	P	P	11 19 11.7	+0.9
	comp=Z,2.2nm,0.9s,baz=46,slow=8.0,SNR=2.5						
NVAR	Mina Array Bea	78.26	52	P	P	11 19 35.2	+1.4
	comp=Z,0.8nm,0.7s,baz=294,slow=5.4,SNR=9.1						
AKASG	Malin Array Be	79.34	323	P	P	11 19 39.9	+0.7
	comp=Z,0.3nm,0.3s,baz=46,slow=5.4,SNR=3.0						
PDAR	Pinedale Array	81.57	45	P	P	11 19 52.1	+0.5
	comp=Z,0.5nm,0.8s,baz=288,slow=3.4,SNR=3.8						
TXAR	Lajitas Array	93.40	53	P	P	11 20 51.0	+1.8
	comp=Z,0.8nm,0.7s,baz=310,slow=3.3,SNR=9.9						
TXAR	Lajitas Array	93.40	53	P	P	11 20 50.9	+1.6

IDC 25 11:11:24.4±6.9,28°.85S×178°.08W,h0km,mb3.5/2, mb1 3.7/2,mb1mx3.5/19,mbtmp3.5/2,Error ellipse: s-maj=413.6km s-min=90.8km az=165.0,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	43.14	265	P	P	11 19 26.5	-0.5
	0.5nm,1.0s,baz=104,slow=6.9,SNR=5.8						
WRA	Warramunga Arr	43.99	271	P	P	11 19 34.1	+0.3
	0.4nm,0.4s,baz=110,slow=8.0,SNR=2.6						
FINES	FINESS Array B	143.67	341	PKP	PKPdf	11 31 00.1	-0.6
	0.6nm,0.3s,baz=57,slow=5.1,SNR=5.9						

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*IDC **25** 11:29:03.1±1.2,31°.41N×138°.13E,h418km±14km,mb2.4/7, mb1 2.7/11,mb1mx2.6/44,mbtmp3.4/11,Error ellipse: s-maj=24.2km s-min=17.1km az=74.0*

ISC 25 11:29:01.7±0.8,31°.30N±0°.09×138°.2E±0°.1,h400km,n11, σ1ˢ.79/13,mb2.8/7,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2	2.25	36	P	Pn	11 30 02.7	+3.5
	8.6nm,0.3s,baz=147,slow=23,SNR=6.4						
JHJ				S	S	11 30 45.8	0.0
	7.3nm,0.3s,baz=51,slow=23,SNR=1.8						
MJAR	Matsushiro Arr	5.23	360	P	Pn	11 30 26.2	+0.2
	baz=169,slow=11,SNR=1.9						
JCJ	Chichijima	5.44	139	P	Pn	11 30 30.4	+2.0
	4.1nm,0.3s,baz=276,slow=15,SNR=2.3						
JCJ				S	S	11 31 37.3	-1.6
	6.3nm,0.3s,baz=230,slow=20,SNR=1.7						
KSRS	Korea Array	10.48	309	P	Pn	11 31 26.1	+0.9
	0.4nm,0.3s,baz=124,slow=10,SNR=14						
SONM	Songino Array	29.30	313	P	P	11 34 28.5	-0.7
	0.3nm,0.5s,baz=120,slow=8.5,SNR=1.7						
MKAR	Makanchi Array	45.16	307	P	P	11 36 38.1	-2.3
	0.2nm,0.5s,baz=83,slow=10,SNR=4.2						
WRA	Warramunga Arr	51.08	185	P	P	11 37 26.8	+1.4
	0.1nm,0.3s,baz=0.2,slow=7.6,SNR=1.0						
ASAR	Alice Springs	54.81	185	P	P	11 37 52.2	0.0
	0.2nm,0.8s,baz=2.3,slow=11,SNR=2.4						
ILAR	Eielson Array	55.76	30	P	P	11 37 56.5	-1.9
	0.1nm,0.5s,baz=268,slow=6.3,SNR=1.5						
YKA	Yellowknife Ar	70.10	28	P	P	11 39 31.6	0.0
	0.2nm,0.6s,baz=303,slow=6.0,SNR=3.8						
PDAR	Pinedale Array	83.61	43	P	P	11 40 47.7	+0.9
	0.3nm,0.8s,baz=289,slow=2.8,SNR=2.1						

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*IDC **25** 11:35:34.1±2.8,36°.24N×141°.16E,h0km,mb3.3/2, mb1 3.4/4,mb1mx3.2/48,mbtmp3.4/4,ML2.8/2,MS3.5/1, Ms1 3.5/1,ms1mx2.4/21,Error ellipse: s-maj=47.8km s-min=27.3km az=58.0*

*JMA **25** 11:35:37.4±0.1,36°.34N×141°.05E,h44km±2km,M3.3*

ISC 25 11:35:35.3±2.2,36°.34N±0°.05×141°.10E±0°.07,h11km±16km, n21,σ1ˢ.03/24,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHYU	Hitachinakayam	0.42	270	P	Pn	11 35 46.9	-0.4
JHYU				S	Sb	11 35 53.1	+2.0
JHO	Hitachi	0.51	302	P	Pn	11 35 47.6	-1.0
JIHU	Itakohorinouch	0.60	232	P	Pn	11 35 49.8	0.0
CHOJ	Chosi	0.67	197	P	Pn	11 35 50.1	-0.6
JYT	Yasato	0.74	262	P	Pn	11 35 51.0	-0.8
JYT				S	Sb	11 36 00.0	-0.5
ONAJ	Iwakimizuishiy	0.80	342	P	Pb	11 35 51.8	+0.5
ONAJ				S	Sg	11 36 01.5	+0.2
JFK	Kawauchi	1.04	350	P	Pb	11 35 55.3	-0.1
JFT	Otama	1.33	333	P	Pb	11 36 00.6	+0.3
JFT				S	Sn	11 36 16.5	-1.1
JAG	Ashikaga	1.33	274	P	Pn	11 35 59.6	-0.3
JAG				S	Sb	11 36 15.5	-2.0
JKT	Katashina	1.55	286	P	Pb	11 36 03.6	-0.6
JKT				S	Sn	11 36 22.1	-1.1
MJAR	Matsushiro Arr	2.34	276	Pn	Pn	11 36 14.7	+0.9
	0.6nm,0.3s,baz=118,slow=8.7,SNR=29						
MJAR				Sn	Sn	11 36 43.4	+0.7
	0.9nm,0.3s,baz=101,slow=19,SNR=8.3						
MAT	Matsushiro	2.34	276	P	Pn	11 36 14.5	+0.6
MAT				*e*S	Sn	11 36 42.4	-0.3
JHJ	Hachijo jima 2	3.39	199	Pn	Pn	11 36 27.1	-1.2
	12nm,0.3s,baz=52,slow=20,SNR=1.9						
JHJ				Sn	Sn	11 37 09.8	+1.3
	8.9nm,0.3s,baz=131,slow=22,SNR=1.9						
H11N2	WAKE ISLAND Hy	28.02	119	T	T	12 10 49.4	
	baz=308						
H11N1	WAKE ISLAND Hy	28.02	119	T	T	12 10 45.6	
	baz=308						
H11N3	WAKE ISLAND Hy	28.04	119	T	T	12 10 48.2	
	baz=308						
H11S1	WAKE ISLAND Hy	28.70	121	T	T	12 11 44.5	
	baz=314,slow=75,SNR=19						
H11S3	WAKE ISLAND Hy	28.70	121	T	T	12 11 44.8	
	baz=314,slow=75,SNR=12						
H11S2	WAKE ISLAND Hy	28.72	121	T	T	12 11 36.9	
	baz=314,slow=75,SNR=11						
MKAR	Makanchi Array	44.28	303	P	P	11 43 46.4	+1.4
	0.2nm,0.5s,baz=80,slow=10,SNR=2.4						
MKAR				LR	LR	12 01 29.4	
	comp=Z,59nm,20.1s,baz=333,slow=35						
WRA	Warramunga Arr	56.34	188	P	P	11 45 15.8	-0.6
	0.4nm,0.8s,baz=4.7,slow=8.1,SNR=2.1						

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*OSPL **25** 11:39:11.1±1.3,19°.42N×69°.10W,h32km±999km,ML2.8*

*NEIC **25** 11:39:12.1±1.2,19°.5N±0°.3×69°.1W±0°.1,h51km±80km, Error ellipse: s-maj=45.0km s-min=3.5km az=206.0*

*RSPR **25** 11:39:14.0,19°.42N×68°.86W,h134km±3km,MD3.8/7*

ISC 25 11:39:11.0±1.2,19°.44N±0°.06×69°.21W±0°.03,h50km,n39, σ0ˢ.93/44,2C-6D,Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SDD	Santo Domingo	1.19	214	*i* P	Pn	11 39 30.6	-0.7
SDD				*e*S	Sn	11 39 44.9	-1.4
SDD				*e*S		11 39 45.1	
BON1	Bonao	1.23	246	*e*S	Sn	11 39 46.6	-0.7
SC01	Santiago de lo	1.43	270	*i* P	Pn	11 39 35.9	+1.2
SC01				IAML		11 40 03.3	
	comp=Z,139nm,0.3s						
BANI	BANI	1.51	226	*i* P	Pn	11 39 35.7	0.0
BANI				*e*S	Sn	11 39 54.5	+0.2
BANI				IAML		11 39 59.9	
	comp=Z,113nm,0.8s						
SDDR	Presa de Saban	2.02	257	*i* P	Pn	11 39 43.4	+0.8
SDDR				*e*S	Sn	11 40 07.1	+0.4
SDDR				IAML		11 40 11.4	
	comp=Z,67nm,0.7s						
AGPR	Aguadilla, PR	2.21	116	⇓*e*P	Pn	11 39 47.1	+1.8
AGPR	Aguadilla, PR	2.21	116	*e*S	Sn	11 40 12.2	+0.9
AGPR	Aguadilla, PR	2.21	116		Pn	11 39 47.1	+1.8
MPR	Mayaguez	2.31	122	Pn	Pn	11 39 47.2	+0.6
MLPR	Magueyes Islan	2.52	125	⇑*e*P	Pn	11 39 50.7	+1.2
MLPR	Magueyes Islan	2.52	125	*e*S	Sn	11 40 19.9	+0.8
MLPR	Magueyes Islan	2.52	125		Pn	11 39 49.9	+0.4
MLPR				IAML		11 40 19.8	
	comp=E,71nm,0.8s						
MLPR				IAML		11 40 20.4	
	comp=N,77nm,0.3s						
AOPR	Arecibo Observ	2.57	115	⇓*e*P	Pn	11 39 51.3	+1.0
AOPR	Arecibo Observ	2.57	115	*e*S	Sn	11 40 20.5	+0.2
AOPR	Arecibo Observ	2.57	115		Pn	11 39 51.2	+1.0
AOPR				IAML		11 40 23.7	
	comp=N,171nm,0.2s						
EMPR	Esperanza - Ma	2.71	110	⇓*e*P	Pn	11 39 53.0	+0.9
EMPR	Esperanza - Ma	2.71	110	*e*S	Sn	11 40 23.5	-0.2
EMPR	Esperanza - Ma	2.71	110		Pn	11 39 50.6	-1.5
EMPR				IAML		11 40 27.8	
	comp=N,109nm,1.1s						
EMPR				IAML		11 40 31.0	
	comp=E,124nm,0.5s						
GRTK	Grand Turk	2.74	319	*i* P	Pn	11 39 52.4	0.0
GRTK				*e*S	Sn	11 40 23.8	-0.5
GRTK				IAML		11 40 24.4	
	comp=Z,72nm,1.6s						
OBIP	Obispado Ponce	2.83	119	*e*S	Sn	11 40 26.8	+0.1
OBIP	Obispado Ponce	2.83	119	Pn	Pn	11 39 54.8	+1.0
CELP	Cerrillos	2.84	118	⇓*e*P	Pn	11 39 54.8	+0.9
CELP	Cerrillos	2.84	118	*e*S	Sn	11 40 26.8	-0.1
CELP	Cerrillos	2.84	118		Pn	11 39 54.8	+0.9
CELP					Sn	11 40 26.8	-0.1
GCPR	Guaynabo City	3.17	110	*e*S	Sn	11 40 34.0	-0.9
GCPR	Guaynabo City	3.17	110	Pn	Pn	11 39 58.8	+0.4
GCPR				IAML		11 40 34.7	
	comp=E,48nm,0.3s						
SJG	San Juan	3.19	114	Pn	Pn	11 39 58.6	0.0
SJG				IAML		11 40 35.8	
	comp=E,97nm,0.2s						
SJG				IAML		11 40 36.4	
	comp=E,95nm,0.2s						
IGPR	InterUniversit	3.29	116	*e*S	Sn	11 40 36.9	-1.0
CBYP	Canovanas	3.38	110	⇓*e*P	Pn	11 40 01.7	+0.3
CBYP	Canovanas	3.38	110	*e*S	Sn	11 40 38.9	-1.5
CBYP	Canovanas	3.38	110		Pn	11 40 01.5	+0.1
HUMP	Col San Antoni	3.44	112	*e*S	Sn	11 40 40.4	-1.2
HUMP	Col San Antoni	3.44	112	Pn	Pn	11 40 02.5	+0.5
MTP	Monte Pirata	3.71	111	⇑*e*P	Pn	11 40 06.2	+0.3
MTP	Monte Pirata	3.71	111	*e*S	Sn	11 40 47.0	-1.4
MTP	Monte Pirata	3.71	111	Pn	Pn	11 40 06.5	+0.7
MTP				IAML		11 40 54.6	
	comp=N,39nm,0.2s						
MTP				IAML		11 40 55.3	
	comp=E,47nm,0.2s						
CUPR	Culebra, Puert	3.89	106	⇓*e*P	Pn	11 40 08.4	+0.1
CUPR	Culebra, Puert	3.89	106	*e*S	Sn	11 40 50.6	-2.0
CUPR	Culebra, Puert	3.89	106		Pn	11 40 07.8	-0.5

IDC 25 11:41:53.7±1.8,3°.42S×144°.88E,h0km,mb3.2/2, mb1 3.5/3,mb1mx3.3/39,mbtmp3.2/3,ML3.0/1,Error ellipse: s-maj=264.1km s-min=29.7km az=117.0,Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	19.37	211	P	Pn	11 46 21.8	-0.5
	0.1nm,0.3s,baz=26,slow=12,SNR=3.3						
ASAR	Alice Springs	22.75	207	P	P	11 46 57.4	-0.3
	0.3nm,0.6s,baz=40,slow=7.8,SNR=9.0						
H11S3	WAKE ISLAND Hy	30.59	44	T	T	12 19 28.8	
	baz=223						
H11S2	WAKE ISLAND Hy	30.60	44	T	T	12 19 27.6	
	baz=223						
H11S1	WAKE ISLAND Hy	30.61	44	T	T	12 19 30.7	
	baz=223						
ILAR	Eielson Array	83.97	24	P	P	11 54 25.6	0.0
	0.3nm,0.7s,baz=253,slow=4.4,SNR=5.8						

NOU 25 11:57:49.0,15°.92S×167°.77E,h101km,MLv4.8,Vanuatu Islands,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.72	311	P	Pn	11 58 07.7	+1.0
DVP	Devils Point	1.84	168	P	Pn	11 58 19.6	0.0
YATNC	Mamie plateau,	6.16	188	P	Pn	11 59 17.1	-0.4
DZM	Mont Dzumac	6.25	191	P	Pn	11 59 18.5	-0.2
ONTNC	Ouen Toro	6.47	191	P	Pn	11 59 22.4	+0.6
OUENC	Ouen Island, N	6.52	188	P	Pn	11 59 22.4	0.0
PINNC	Pines Island,	6.67	183	P	Pn	11 59 24.4	+0.1

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*ISK **25** 11:57:59.3,34°.09N×32°.58E,h7km,ML3.7/12*

*NIC **25** 11:58:05.6±0.0,34°.42N×32°.67E,h21km,Ml3.5/5*

*IDC **25** 11:58:05.8±1.6,34°.36N×32°.75E,h0km,mb3.3/3, mb1 3.5/8,mb1mx3.3/44,mbtmp3.4/8,ML3.5/5,Error ellipse: s-maj=30.5km s-min=17.8km az=55.0*

*GII **25** 11:58:07.1±0.0,34°.46N×32°.73E,h9km,MD3.1/3,Mm3.1/7*

ISC 25 11:58:05.1±1.4,34°.41N±0°.03×32°.66E±0°.03,h5km±10km, n47,σ1ˢ.10/70,mb3.1/3,3C-3D,Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NATA	Nata	0.38	349	⇑P	Pg	11 58 13.7	+1.3
NATA				S	Sb	11 58 20.0	-0.5
NATA				AML	AML	11 58 23.5	
	44nm,0.9s						
NATA				AML	AML	11 58 23.5	
	44nm,0.9s						
NATA				AML	AML	11 58 25.9	
	46nm,0.4s						
NATA				AML	AML	11 58 25.9	
	46nm,0.4s						
SZAC	Souni	0.39	28	⇓P	Pb	11 58 13.8	-0.7
SZAC				S	Sb	11 58 20.5	-0.4
SZAC				AML	AML	11 58 21.6	
	40nm,0.8s						
SZAC				AML	AML	11 58 21.6	
	40nm,0.8s						
SZAC				AML	AML	11 58 25.6	
	28nm,0.4s						
SZAC				AML	AML	11 58 25.6	
	28nm,0.4s						
ASGA	Asgata	0.61	52	⇑P	Pb	11 58 17.4	-0.9
ASGA				S	Sb	11 58 27.7	+0.4
ASGA				AML	AML	11 58 31.8	
	10nm,0.6s						
ASGA				AML	AML	11 58 31.8	
	10nm,0.6s						
ASGA				AML	AML	11 58 33.4	
	7.9nm,0.6s						
ASGA				AML	AML	11 58 33.4	
	7.9nm,0.6s						
AKMS	Akamas	0.66	336	⇓P	Pg	11 58 17.9	+0.1
AKMS				S	Sb	11 58 28.9	+0.2
AKMS				AML	AML	11 58 33.2	
	6.2nm,0.4s						

AKMS				AML	AML	11 58 33.2	
	6.2nm,0.4s						
AKMS				AML	AML	11 58 37.8	
	5.7nm,0.5s						
AKMS				AML	AML	11 58 37.8	
	5.7nm,0.5s						
LEF	Lefka	0.73	15	PG	Pg	11 58 19.9	+0.7
ALFC	Alefka	0.75	356	⇑P	Pg	11 58 19.5	+0.1
ALFC				S	Sb	11 58 31.0	-0.1
ALFC				AML	AML	11 58 41.7	
	8.4nm,0.3s						
ALFC				AML	AML	11 58 41.7	
	8.4nm,0.3s						
ALFC				AML	AML	11 58 41.8	
	6.5nm,0.4s						
ALFC				AML	AML	11 58 41.8	
	6.5nm,0.4s						
CSS	Mathiatis	0.78	45	PG	Pg	11 58 19.8	-0.3
CSS				SG	Sn	11 58 35.6	+0.7
CSS	Mathiatis	0.78	45	Pg	Pg	11 58 19.8	-0.3
CSS				Sg	Sb	11 58 30.4	-1.7
CSS	Mathiatis	0.78	45	⇓P	Pg	11 58 20.3	+0.2
CSS				S	Sb	11 58 32.1	0.0
AKIN	Akıncılar- Kıb	0.90	48	PN	Pb	11 58 23.0	-0.2
AKDN	Akdeniz- Kıbrı	0.92	16	PN	Pb	11 58 23.4	-0.2
ATHAL	Athalassa	0.95	40	S	Sn	11 58 37.2	-1.8
MVOU	Mavrovouni	1.00	53	P	Pg	11 58 24.2	-0.2
OSC2	CSNet OBS 4	1.37	194	P	Pn	11 58 29.8	-1.0
OSC2				S	Sb	11 58 47.9	-1.2
OSC1	CSNet OBS 1	1.46	232	P	Pn	11 58 31.2	-0.9
OSC1				S	Sn	11 58 50.5	-1.2
EREN	Erenkoy	1.67	48	PN	Pn	11 58 33.8	-1.2
BOZY	Bozyazi-Mersin	1.71	9	PN	Pn	11 58 35.0	-0.6
TEKE	Tekeli-Mersin	1.77	12	PN	Pn	11 58 35.3	-1.1
AKKU	Akkuyu-Mersin	1.89	22	PN	Pn	11 58 37.5	-0.5
AKKU				SN	Sg	11 59 04.9	-1.0
YESI	Yesilovacik-Me	1.95	24	PN	Pn	11 58 38.6	-0.3
KARG	Kargicak-Mersi	1.98	25	PN	Pn	11 58 38.6	-0.7
BERE	Bereket-Mersin	1.99	13	PN	Pn	11 58 39.3	-0.2
BERE				SN	Sb	11 59 07.8	+0.8
TEVE	Tevekalti-Mers	2.12	17	PN	Pn	11 58 40.9	-0.4
TEVE				SN	Sb	11 59 11.1	+0.4
KEBE	Keben-Mersin	2.21	23	PN	Pn	11 58 42.0	-0.5
KEBE				SN	Sb	11 59 13.2	0.0
SILI	Silifke-Mersin	2.21	28	PN	Pn	11 58 41.9	-0.5
KIZK	Mersin	2.40	30	PN	Pn	11 58 44.5	-0.5
OFRI	`Ofer	2.64	132	Pn	Pn	11 58 49.2	+0.8
OFRI				Sn	Sn	11 59 21.2	+0.4
MMA0B	Mount Meron ar	2.68	121	Pn	Pn	11 58 48.5	-0.4
MMA0B				Sn	Sn	11 59 21.7	-0.1
MMAI	Mount Meron Ar	2.68	121	Pn	Pn	11 58 48.4	-0.5
	7.4nm,0.3s,baz=300,slow=13,SNR=14						
MMAI				Sn	Sb	11 59 23.3	-3.4
	24nm,0.3s,baz=314,slow=24,SNR=3.8						
GEM	Giv'at Ha'Em	2.77	115	Pn	Pn	11 58 50.3	+0.1
GEM				Sn	Sn	11 59 23.4	-0.6
NATI	Neve Ativ	2.81	113	Pn	Pn	11 58 51.3	+0.7
NATI				Sn	Sn	11 59 25.1	+0.3
SLTI	Sal'it	2.94	137	Sn	Sn	11 59 28.3	+0.1
MMLI	Mount Malkishu	3.03	130	Pn	Pn	11 58 54.7	+0.9
MMLI				Sn	Sn	11 59 30.6	+0.1
HMDT	Nahal Hemdat	3.22	131	Pn	Pn	11 58 56.8	+0.4
HMDT				Sn	Sn	11 59 36.3	+1.2
DSI	Dead Sea	3.64	140	Pn	Pn	11 59 03.5	+1.4
DSI				Sn	Sn	11 59 46.6	+1.2
YTIR	Yattir	3.67	145	Pn	Pn	11 59 04.3	+1.6
PRNI	Paran	4.51	153	Pn	Pn	11 59 15.2	+1.1
MBRI	Mt Berech	4.98	157	Pn	Pn	11 59 22.4	+1.7
MBRI				Sn	Sn	12 00 19.9	+1.2
EIL	Elat	5.11	157	Pn	Pn	11 59 23.9	+1.5
	2.1nm,0.3s,baz=346,slow=5.2,SNR=15						
EIL				Sn	Sn	12 00 21.4	-0.3
	2.3nm,0.3s,baz=269,slow=24,SNR=5.5						
EIL	Elat	5.11	157	Pn	Pn	11 59 23.6	+1.3
BRTR	Keskin Array B	5.36	8	Pn	Pn	11 59 28.3	+2.4
	0.2nm,0.3s,baz=191,slow=14,SNR=5.3						
IDI	Anoyia	6.45	280	Pn	Pn	11 59 41.3	+0.5
	0.9nm,0.3s,baz=97,slow=8.1,SNR=1.3						
IDI				Sn	Sn	12 00 51.0	-3.8
	1.4nm,0.3s,baz=315,slow=8.1,SNR=6.5						
AKASG	Malin Array Be	16.47	352	Pn	Pn	12 01 58.1	+1.3
	1.0nm,0.3s,baz=173,slow=11,SNR=6.7						
GERES	GERESS Array B	20.14	321	P	Pn	12 02 43.8	+1.9
	1.0nm,0.7s,baz=126,slow=9.9,SNR=4.0						
MKAR	Makanchi Array	39.04	56	P	P	12 05 32.8	0.0
	0.1nm,0.5s,baz=282,slow=2.8,SNR=2.3						
ZALV	Zalesovo Beam	41.10	45	P	P	12 05 51.3	+1.6
	0.3nm,0.3s,baz=280,slow=8.3,SNR=1.9						
SONM	Songino Array	55.13	52	P	P	12 07 44.4	+5.9
	0.1nm,0.5s,baz=297,slow=6.3,SNR=1.6						

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*SJA **25** 11:58:36.2±0.7, 19°.07S×67°.79W, h310^{km}±14^{km}, ML4.2, MW3.9*

*IDC **25** 11:58:37.6±0.7, 19°.06S×67°.20W, h223^{km}±7^{km}, mb3.1/8, mb1 3.4/15, mb1mx3.4/38, mbtmp3.9/15, Error ellipse: s-maj=16.4km s-min=8.3km az=92.0*

*VAO **25** 11:58:38.8±0.4, 19°.03S×67°.26W, h227^{km}±9^{km}, mb4.1*

*NEIC **25** 11:58:38.1±1.6, 19°.09S±0°.04×67°.2W±0°.1, h230^{km}±7^{km}, mb4.2/3, Error ellipse: s-maj=17.6km s-min=5.3km az=86.0*

*SCB **25** 11:58:41.9±2.6, 19°.08S×67°.40W, h211^{km}±22^{km}, ML3.9/3, Error ellipse: s-maj=10.1km s-min=6.2km az=1.0*

ISC 25 11:58:38.4±0.6**, 19°.08S**±0°.04×**67°.34W**±0°.05**, h238**^{km}±6^{km}**, n121, σ1^{s}.50**/158**, mb3.7**/9**, 5C-3D, Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB08	IPOC Station P	2.01	238	⇑*i*P	Pn	11 59 21.6	+1.1
PB08				*i* S	S	11 59 52.6	-0.7
PB08				IAML		12 00 03.7	
	comp=E,126nm,0.1s						
PB08	IPOC Station P	2.01	238		Pn	11 59 21.5	+1.1
PB08	IPOC Station P	2.01	238	P	Pn	11 59 21.9	+1.5
PB08	IPOC Station P	2.01	238	*e*P	Pn	11 59 21.5	+1.1
PB08				*e*S	S	11 59 57.2	+3.9
MNMC	Minye Minye	2.13	268	⇑*i*P	Pn	11 59 22.1	+0.6
MNMC				*e*S	S	11 59 53.9	-1.3
MNMC	Minye Minye	2.13	268		Pn	11 59 21.8	+0.3
MNMC	Minye Minye	2.13	268	P	Pn	11 59 22.0	+0.6
MNMC				S	S	11 59 51.9	-3.3
MNMCX	Minye Minye	2.13	268	*e*P	Pn	11 59 22.0	+0.6
MNMCX				*e*S	S	11 59 56.2	+1.0
BBOE	La Paz, Chanca	2.33	345	P	Pn	11 59 24.8	+1.0
PSGC	Pisagua	2.68	258	*e*P	Pn	11 59 26.7	0.0
PSGC				*e*S	S	12 00 02.6	-2.2
PSGC	Pisagua	2.68	258	P	Pn	11 59 27.0	+0.2
PSGCX	Pisagua	2.68	258		Pn	11 59 26.4	-0.3
PSGCX	Pisagua	2.68	258	*e*P	Pn	11 59 26.4	-0.3
PSGCX				*e*S	S	12 00 02.8	-2.0
HMBC	Humberstone	2.68	243	⇓*i*P	Pn	11 59 26.8	0.0
HMBC				*i* S	S	12 00 03.6	-1.3
MOCB	Mochara	2.69	144	P	Pn	11 59 28.7	+1.4
MOCB				S	S	12 00 04.6	-1.1
MOCB				IAML		12 00 10.7	
	comp=E,186nm,0.5s						
BBOD	La Paz, Gloria	2.71	334	P	Pn	11 59 28.5	+0.9
PB01	IPOC Station P	2.81	226	⇑*i*P	Pn	11 59 28.7	+0.5
PB01				*i* S	S	12 00 06.5	-0.9
PB01				IAML		12 00 07.6	
	comp=N,369nm,0.4s						
PB01	IPOC Station P	2.81	226		Pn	11 59 28.6	+0.5
PB01	IPOC Station P	2.81	226	P	Pn	11 59 29.0	+0.9
PB01				S	S	12 00 05.1	-2.3
PB01				IAML		12 00 14.1	
	comp=N,239nm,0.2s						
PB01	IPOC Station P	2.81	226	*e*P	Pn	11 59 28.7	+0.5
PB01				*e*S	S	12 00 07.0	-0.4
LPAZ	La Paz	2.88	345	P	Pn	11 59 29.7	+0.2
	comp=N,19nm,0.3s,baz=153,slow=7.4,SNR=421						
LPAZ				S	S	12 00 07.5	-2.2
	comp=N,7.8nm,0.3s,baz=308,slow=18,SNR=8.1						
AP01	Chacalluta	2.93	283	⇑*i*P	Pn	11 59 29.4	0.0
AP01	Chacalluta	2.93	283		Pn	11 59 29.4	0.0
BBOB	La Paz, Bander	3.02	345	P	Pn	11 59 31.0	+0.1
BBOB				S	S	12 00 08.2	-4.1
TA01	Diego Aracena	3.06	241	⇑*i*P	Pn	11 59 31.2	+0.4
TA01				*i* S	S	12 00 09.3	-2.7
TA01	Diego Aracena	3.06	241		Pn	11 59 30.8	0.0
PATCX	Punta Patache	3.16	236	*e*P	Pn	11 59 32.9	+0.8
PATCX	Punta Patache	3.16	236		Pn	11 59 32.8	+0.8
PB09	IPOC Station P	3.24	213	⇓*i*P	Pn	11 59 34.6	+1.6
PB09				*e*S	S	12 00 16.6	+0.5
PB09	IPOC Station P	3.24	213	Pn	Pn	11 59 35.1	+2.1
PB09	IPOC Station P	3.24	213	P	Pn	11 59 34.8	+1.8
PB09	IPOC Station P	3.24	213	*e*P	Pn	11 59 34.6	+1.6
PB09				*e*S	S	12 00 17.6	+1.5
PB09				IAML		12 00 20.5	
	comp=Z,210nm,0.7s						
YJA	Yavi	3.52	151	P	Pn	11 59 37.9	+1.4
YJA	Yavi	3.52	151	*e*P	Pn	11 59 37.9	+1.4
YJA				*e*S	S	12 00 23.2	+0.8
PB07	IPOC Station P	3.56	222	⇓*i*P	Pn	11 59 37.1	+0.5
PB07				*i* S	S	12 00 20.9	-1.7
PB07	IPOC Station P	3.56	222		Pn	11 59 36.9	+0.3
PB07	IPOC Station P	3.56	222	*e*P	Pn	11 59 37.1	+0.5
PB07				*e*S	S	12 00 21.1	-1.5
PB07				IAML		12 00 24.6	
	comp=Z,254nm,0.7s						
LVC	Limon Verde	3.81	202	P	Pn	11 59 40.9	+1.1
	comp=Z,11nm,0.3s,baz=29,slow=11,SNR=76						
LVC				S	S	12 00 27.1	-1.2
	comp=Z,17nm,0.3s,baz=132,slow=20,SNR=36						
LVC	Limon Verde	3.81	202	*e*P	Pn	11 59 40.8	+1.1
LVC				*e*S	S	12 00 28.0	-0.3
LVC	Limon Verde	3.81	202	*e*P	Pn	11 59 40.5	+0.8
LVC				*e*S	S	12 00 28.9	+0.6
PB06	IPOC Station P	4.17	210		Pn	11 59 44.4	+0.5
PB06	IPOC Station P	4.17	210	P	Pn	11 59 44.8	+1.0
PB06	IPOC Station P	4.17	210	*e*P	Pn	11 59 44.6	+0.8
PB06				*e*S	S	12 00 34.7	-1.0
PB04	IPOC Station P	4.17	219		Pn	11 59 44.6	+0.7
PB04	IPOC Station P	4.17	219	P	Pn	11 59 44.6	+0.7
PB04				S	S	12 00 31.6	-4.1
PB04				IAML		12 00 36.9	
	comp=Z,253nm,0.5s						
PB04	IPOC Station P	4.17	219	*e*P	Pn	11 59 44.8	+0.9
PB04				*e*S	S	12 00 33.5	-2.2
PB04				IAML		12 00 35.5	
	comp=Z,256nm,0.8s						
PB15	IPOC Station P	4.56	205		Pn	11 59 49.7	+1.1
PB15	IPOC Station P	4.56	205	*e*P	Pn	11 59 49.7	+1.1
PB15				*e*S	S	12 00 43.7	-0.7
PB05	IPOC Station P	4.61	215	*e*P	Pn	11 59 49.8	+0.6
PB05				*e*S	S	12 00 42.1	-3.2
PB05				IAML		12 00 46.0	
	comp=Z,208nm,1.1s						
PB10	IPOC Station P	5.33	214	Pn	Pn	11 59 57.9	0.0
PB10	IPOC Station P	5.33	214	P	Pn	11 59 58.2	+0.3
PB10	IPOC Station P	5.33	214	*e*P	Pn	11 59 57.7	-0.2
PB10				*e*S	S	12 00 56.6	-4.7
PB10				IAML		12 01 00.0	
	comp=Z,83nm,0.7s						
AZAP	Zapla	5.54	158	*e*P	Pn	12 00 01.0	+0.2
AZAP				IAML		12 01 07.9	
	comp=Z,66nm,0.5s						
ASTB	Santa Barbara	5.54	151	*e*P	Pn	12 00 01.0	+0.3
ASTB				*e*S	S	12 01 04.0	-2.3
SLA	San Lorenzo	5.87	163	P	Pn	12 00 06.2	+1.4
SLA	San Lorenzo	5.87	163	*e*P	Pn	12 00 05.9	+1.2
SLA				*e*S	S	12 01 10.8	-2.9
PB14	IPOC Station P	6.21	207	Pn	Pn	12 00 09.2	0.0
PB14	IPOC Station P	6.21	207	*e*P	Pn	12 00 09.0	-0.2
PB14				*e*S	S	12 01 19.3	-2.4
GO02	Mina Guanaco	6.40	199		Pn	12 00 11.7	+0.1
SIV	San Ignacio	6.72	64	P	Pn	12 00 13.1	-2.4
	comp=Z,24nm,0.3s,baz=268,slow=9.5,SNR=235						
FSA	Cafayete	7.11	170	*e*P	Pn	12 00 21.1	+0.6
FSA				*e*S	S	12 01 44.6	+2.4
AC01	Pan de Azucar	7.65	203	Pn	Pn	12 00 25.9	-1.2
AHML	Horco Molle	7.89	167	*e*P	Pn	12 00 31.4	+1.1
AC02	Maricunga	7.89	192	Pn	Pn	12 00 30.8	+0.1
GO03	Copiap	8.88	197	Pn	Pn	12 00 41.0	-1.9
GO03	Copiap	8.88	197	*e*P	Pn	12 00 41.7	-1.2
GO03				*e*S	S	12 02 19.9	-3.4
VILB	Vilhena	9.18	49	*e*P	Pn	12 00 45.7	-1.0
ETMB	Extrema	9.27	7	*e*P	Pn	12 00 46.7	-1.3
VCA	Vinchina	9.65	185	*e*P	Pn	12 00 53.1	+0.4
AC04	Llanos de Chal	9.71	200	Pn	Pn	12 00 51.5	-1.8
AC05	El Transito	10.08	195		Pn	12 00 58.0	-0.2
ACLC	CERRO LA CRUZ	10.31	178	*e*P	Pn	12 01 00.7	-0.4
LCO	Las Campanas	10.35	197	Pn	Pn	12 01 01.1	-0.7
AGUA	GUANDACOL	10.41	186	*e*P	Pn	12 01 03.2	+0.8
AGUA				*e*S	S	12 03 01.5	+2.2
AQDB	Aquidauana	11.05	99	*e*P	Pn	12 01 10.6	+0.2
CO01	Juntas del Tor	11.14	192	Pn	Pn	12 01 12.4	+0.8
AROD	Rodeo	11.21	190	*e*P	Pn	12 01 14.3	+1.7
AROD				*e*S	S	12 03 14.5	-2.9
GO04	Tololo Observa	11.48	195	Pn	Pn	12 01 15.0	-1.0
AVFE	Valle Fertil	11.53	180	*e*P	Pn	12 01 15.6	-0.8
AVFE				*e*S	S	12 03 20.1	-4.5
NNA	Nana	11.55	306	P	Pn	12 01 16.0	-0.8
	comp=Z,2.1nm,0.3s,baz=157,slow=13,SNR=3.0						
NNA				S	S	12 03 17.9	-7.4
	comp=Z,1.4nm,0.3s,baz=109,slow=9.9,SNR=1.7						
ACCO	Cerro Coronel	11.56	187	*e*P	Pn	12 01 17.9	+0.8
ACCO				*e*S	S	12 03 21.6	-4.2
CPUP	Villa Florida	11.72	130	P	Pn	12 01 18.0	-0.7
	comp=Z,0.1nm,0.3s,baz=297,slow=8.1,SNR=5.1						
CPUP	Villa Florida	11.72	130		Pn	12 01 17.0	-1.8
ACHE	Chepes	12.05	177	*e*P	Pn	12 01 23.0	+0.1
ACHE				*e*S	S	12 03 25.0	-12
CO03	El Pedregal	12.10	194	Pn	Pn	12 01 24.5	+1.0
RTLL	Cerro Villicun	12.24	185	*e*P	P	12 01 26.8	-1.5
CZSB	Cruzeiro do Su	12.43	335	*e*P	Pn	12 01 29.2	+1.5
SJA	San Juan	12.45	185	*e*P	Pn	12 01 15.4	-12
CO02	Combarbal	12.52	195	Pn	Pn	12 01 28.2	-0.5
RTCV	Cerro Valdivia	12.78	185	*e*P	P	12 01 33.5	-0.7
AUSP	Uspallata	13.22	188	*e*P	P	12 01 39.9	+0.5
ITQB	Itaqui	14.36	139	*e*P	P	12 01 52.7	+1.0
MT02	Curacav	14.53	193		P	12 01 53.4	-0.2
PTGB	Pitanga	15.24	114	*e*P	Pn	12 02 03.0	+0.9
RFA	San Rafael	15.66	183	*e*P	Pn	12 02 09.4	+2.4
ATAH	Atahualpa	16.01	316	P	P	12 02 11.6	+1.0
	comp=Z,0.2nm,0.3s,baz=134,slow=19,SNR=1.6						
NPGB	Novo Progresso	16.70	46	*e*P	Pn	12 02 18.4	-1.0
CPSB	Cacapava Do Su	16.91	134	*e*P	Pn	12 02 20.2	-1.5
FRTB	Fartura	17.11	107	*e*P	Pn	12 02 22.8	-1.4
PLTB	Pedras Altas	17.68	138	*e*P	P	12 02 28.3	0.0
CNLB	Canela	18.15	127	*e*P	P	12 02 33.4	0.0
IPMB	Ipameri, GO	18.17	90	*e*P	Pn	12 02 35.0	-1.8
PTGA	Pitinga	19.62	22	P	P	12 02 48.5	-0.7
	comp=Z,0.4nm,0.3s,baz=198,slow=19,SNR=2.0						
PTGA	Pitinga	19.62	22	P	P	12 02 48.0	-1.2
PTGA				IAmb	IAmb	12 03 09.4	
	comp=Z,4.3nm,1.1s						
PLCA	Paso Flores	21.76	187	P	P	12 03 13.3	+2.3
	comp=Z,1.0nm,0.5s,baz=14,slow=13,SNR=5.5						
PLCA	Paso Flores	21.76	187	P	P	12 03 12.5	+1.4
PLCA				IAmb	IAmb	12 03 36.0	
	comp=Z,12nm,1.4s						
JANB	Januaria	22.37	83	*e*P	P	12 03 17.1	+0.1
TXAR	Lajitas Array	59.54	323	P	P	12 08 18.1	+1.0
	comp=Z,0.2nm,0.6s,baz=148,slow=11,SNR=2.2						
WMOK	Wichita Mounta	61.30	331	P	P	12 08 29.7	+0.9
WMOK				IAmb	IAmb	12 08 32.9	
	comp=Z,4.5nm,0.8s						
DBIC	Dimbokro	66.64	74	P	P	12 09 03.6	-0.3
	comp=Z,1.1nm,0.6s,baz=242,slow=12,SNR=1.2						
QSPA	South Pole Qui	71.10	180	P	P	12 09 30.6	-0.1
	comp=Z,0.6nm,0.4s,baz=347,slow=1.6,SNR=12						
PDAR	Pinedale Array	72.78	329	P	P	12 09 42.7	+1.7
	comp=Z,0.1nm,0.4s,baz=125,slow=10,SNR=2.4						
NVAR	Mina Array Bea	74.53	321	P	P	12 09 52.6	+1.3
	comp=Z,0.2nm,0.5s,baz=153,slow=6.1,SNR=2.2						
TORD	Torodi Ar. Bea	75.16	70	P	P	12 09 54.1	-1.0
	comp=Z,0.3nm,0.4s,baz=252,slow=5.8,SNR=5.0						
YKA	Yellowknife Ar	89.41	340	P	P	12 11 08.6	+0.9
	comp=Z,0.7nm,0.7s,baz=129,slow=5.1,SNR=17						
ASAR	Alice Springs	132.73	207	PKP	PKiKP	12 17 27.3	+0.5
	comp=Z,0.2nm,0.5s,baz=142,slow=2.2,SNR=8.9						
WRA	Warramunga Arr	135.78	210	PKP	PKiKP	12 17 33.3	+0.2
	comp=Z,0.8nm,0.9s,baz=157,slow=1.6,SNR=5.1						
ZALV	Zalesovo Beam	139.15	25	PKP	PKiKP	12 17 38.8	0.0
	comp=Z,0.3nm,0.4s,baz=324,slow=7.1,SNR=2.4						
MKAR	Makanchi Array	142.82	35	PKP	PKPdf	12 17 44.2	+0.8
	comp=Z,0.3nm,0.6s,baz=318,slow=1.9,SNR=1.8						
USRK	Ussuriysk Ar.	150.18	331	PKPbc	PKiKP	12 18 02.2	+0.4
	comp=Z,2.3nm,1.0s,baz=358,slow=1.8,SNR=4.1						
SONM	Songino Array	150.87	9	PKPbc	PKiKP	12 18 03.9	+0.6
	comp=Z,1.2nm,0.6s,baz=317,slow=1.6,SNR=9.8						

IDC 25 12:11:22.5±421.0**, 67°.25N**×**46°.29E, h0**^{km}**, Error ellipse: s-maj=263.8km s-min=152.7km az=46.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I31KZ	AKTYUBINSK INF	17.89	155	*i*		14 00 20.0	
	baz=342,slow=332,SNR=0.8						
I46RU	ZALESOVO INFRA	22.64	107	*i*		14 31 00.0	
	baz=320,slow=344,SNR=1.0						
I18DK	QAANAAQ INFRAS	30.41	337	*i*		15 16 50.0	
	baz=36,slow=348,SNR=0.6						

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*WEL **25** 12:29:00, 45°.45S×166°.77E, h15^{km}, ML4.8, Mw4.2, Moment Tensor Solution. s7 Moment tensor: Scale 10^{15} Nm; M$_{rr}$0.63; M$_{\theta\theta}$1.39; M$_{\phi\phi}$-2.03; M$_{r\theta}$1.15; M$_{\theta\phi}$-1.08; M$_{\phi r}$0.41; Fault plane solution: M$_{0}$2.42000×10^{15} NP1: φ$_{s}$155.00000°, δ57.00000°, λ14.00000°. NP2: φ$_{s}$57.00000°, δ78.00000°, λ146.00000°. Principal axes: T -251.3400, Plg32.0000°, Azm11.0000°; N 232.2800, Plg54.0000°, Azm219.0000°; P 19.0600, Plg14.0000°, Azm110.0000°;*

*NEIC **25** 12:29:53.0±2.2, 45°.32S±0°.05×166°.61E±0°.06, h10^{km}±2^{km}, mb4.3/6 Error ellipse: s-maj=11.4km s-min=3.0km az=216.0*

*WEL **25** 12:29:53.1±0.8, 45°S±3°×16°7E±°, h5^{km}, M4.8/13, ML5.0/13, MLv4.8/13, Error ellipse: s-maj=0.0km s-min=0.0km az=102.7*

*IDC **25** 12:29:53.2±0.8, 45°.13S×166°.76E, h0^{km}, mb3.6/5, mb1 3.8/6, mb1mx3.8/23, mbtmp3.7/6, ML4.6/2, MS3.4/1, Ms1 3.4/1, ms1mx2.8/16, Error ellipse: s-maj=27.6km s-min=21.4km az=178.0*

ISC 25 12:29:53.3±1.4**, 45°.30S**±0°.04×**166°.73E**±0°.04**, h6**^{km}±9^{km}**, n128, σ1^{s}.89**/125**, mb4.2**/10**, Off west coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DCZ	Deep Cove	0.34	119		Pb	12 30 02.5	+0.7
DCZ	Deep Cove	0.34	119	P	Pb	12 30 02.4	+0.6
DCZ				S	Sb	12 30 07.0	-0.5
PYZ	Puysegur Point	0.86	182		Pg	12 30 09.8	-0.1
PYZ				Sg	Sg	12 30 19.5	-1.5
PYZ	Puysegur Point	0.86	182	P	Pg	12 30 09.7	-0.1
PYZ				S	Sg	12 30 19.6	-1.5
MLZ	Mavora Lakes	0.98	94		Pb	12 30 13.3	+0.5
MLZ	Mavora Lakes	0.98	94	P	Pb	12 30 13.1	+0.4
MLZ				S	Sb	12 30 26.1	+0.1
WHZ	Wether Hill Ro	1.04	125		Pb	12 30 13.7	-0.1
WHZ	Wether Hill Ro	1.04	125	P	Pb	12 30 13.6	-0.1
WHZ				S	Sg	12 30 27.1	+0.4
MSZ	Milford Sound	1.06	54	P	Pg	12 30 13.6	0.0
WKZ	Wanaka	1.69	75	Pn	Pb	12 30 25.1	+0.2
WKZ	Wanaka	1.69	75	P	Pb	12 30 24.4	-0.4
APZ	The Paps	1.77	151	P	Pn	12 30 25.0	+0.6
APZ				S	Sn	12 30 47.6	+0.4
EAZ	Earnscleugh	1.82	89	P	Pb	12 30 26.4	-0.7
JCZ	Jackson Bay	1.92	51	P	Pn	12 30 26.9	+0.4
SYZ	Scrubby Hill	2.09	127	P	Pn	12 30 29.2	+0.4
SYZ				S	Sn	12 30 56.4	+1.3
TUZ	Tuapeka	2.14	109	P	Pn	12 30 30.2	+0.7
LBZ	Lake Benmore	2.63	71	Pn	Pn	12 30 36.9	+0.6
LBZ	Lake Benmore	2.63	71	P	Pn	12 30 36.8	+0.6
HHSZ	Highcliff Hill	2.78	103	P	Pn	12 30 39.1	+0.7
ODZ	Otahua Downs	2.78	86		Pn	12 30 38.7	+0.3
ODZ	Otahua Downs	2.78	86	P	Pn	12 30 38.7	+0.3
FOZ	Fox Glacier	2.83	52	Pn	Pn	12 30 40.6	+1.6
FOZ	Fox Glacier	2.83	52	P	Pn	12 30 38.8	-0.2
GCSZ	Gaunt Creek Bo	3.26	54	P	Pn	12 30 44.9	0.0
RPZ	Rata Peaks	3.48	64	Pn	Pn	12 30 48.0	0.0
	220nm,0.3s,baz=242,slow=2.7,SNR=216						
RPZ				Sn	Sn	12 31 30.5	+1.0
	157nm,0.3s,baz=23,slow=18,SNR=14						
RPZ	Rata Peaks	3.48	64	Pn	Pn	12 30 48.0	0.0
RPZ	Rata Peaks	3.48	64	P	Pn	12 30 48.0	0.0
WVZ	Waitaha Valley	3.64	54	P	Pn	12 30 49.9	-0.3
INZ	Inchbonnie	4.27	55	P	Pn	12 30 59.5	+0.7
OXZ	Oxford	4.29	64	Pn	Pn	12 30 58.5	-0.7
OXZ	Oxford	4.29	64	P	Pn	12 30 58.3	-0.8
OXZ				S	Sn	12 31 49.9	+0.3
MQZ	McQueen’s Vall	4.53	71	Pn	Pn	12 31 01.5	-0.9
MQZ	McQueen’s Vall	4.53	71	P	Pn	12 31 01.6	-0.8
MQZ				S	Sn	12 31 53.6	-1.7
LTZ	Lake Taylor	4.72	60	Pn	Pn	12 31 04.8	-0.3
LTZ	Lake Taylor	4.72	60	P	Pn	12 31 04.8	-0.3
OKCZ	Okains Bay	4.80	73	P	Pn	12 31 05.8	-0.2
DSZ	Denniston Nort	5.13	48	P	Pn	12 31 10.2	-0.4
DSZ				S	Sn	12 32 10.0	-0.1
KHZ	Kahutara	5.71	62	Pn	Pn	12 31 18.6	+0.1
KHZ	Kahutara	5.71	62	P	Pn	12 31 18.4	-0.1
THZ	Tophouse	5.72	54	Pn	Pn	12 31 19.0	+0.2
THZ	Tophouse	5.72	54	P	Pn	12 31 18.8	0.0
QRZ	Quartz Range	6.17	46		Pn	12 31 24.6	-0.4
QRZ	Quartz Range	6.17	46	P	Pn	12 31 24.5	-0.4
BSWZ	Blackbirch Sta	6.32	58	P	Pn	12 31 29.6	+2.7
NNZ	Nelson	6.34	52	P	Pn	12 31 31.1	+3.8
TUWZ	Tuamarina	6.53	56	P	Pn	12 31 32.5	+2.7
TCW	Tory Channel	6.86	56	P	Pn	12 31 38.3	+3.9
DUWZ	D’Urville Isla	6.93	52	P	Pn	12 31 37.4	+2.1
CAW	Cannon Point	7.39	58	P	Pn	12 31 42.2	+0.4
KIW	Kapiti Island	7.45	56	P	Pn	12 31 43.7	+1.1
MTW	Mount Morrison	7.63	60	P	Pn	12 31 46.8	+1.9
HOWZ	Holdsworth Sta	7.79	59	P	Pn	12 31 49.0	+1.8
NMEZ	Namu Road	7.91	44	P	Pn	12 31 51.8	+2.9
MRZ	Mangatainoka R	7.98	58	P	Pn	12 31 48.7	-1.0
NBEZ	Newall Road No	8.02	44	P	Pn	12 31 50.4	+0.1
KHEZ	Kahui Hut	8.07	45	P	Pn	12 31 51.6	+0.5
PREZ	Palmer Road	8.11	45	P	Pn	12 31 53.2	+1.6
NEZ	North Egmont	8.13	45	P	Pn	12 31 53.2	+1.3
PKE	Pukeiti	8.14	44	P	Pn	12 31 52.6	+0.7
LREZ	Lake Rotokare	8.14	47	P	Pn	12 31 53.7	+1.7
WAZ	Wanganui	8.24	51	P	Pn	12 31 56.6	+3.2
PRWZ	Pori Road	8.28	58	P	Pn	12 31 56.4	+2.5
BFZ	Birch Farm	8.37	60	P	Pn	12 31 55.2	+0.2
MHEZ	Mangahewa	8.39	45	P	Pn	12 32 00.4	+5.0
DVHZ	Dannevirke	8.55	58	P	Pn	12 32 00.5	+2.9
VRZ	Vera Road	8.58	47	P	Pn	12 31 59.4	+1.4
TSZ	Takapari Road	8.58	56	P	Pn	12 31 59.7	+1.7
MTVZ	Mangateitei	8.77	51	P	Pn	12 32 06.8	+6.2
PKVZ	Pokaka	8.77	50	P	Pn	12 32 03.0	+2.4
PNHZ	Pukenui	8.82	56	P	Pn	12 32 04.2	+2.9
TRVZ	Turoa	8.87	51	P	Pn	12 32 08.1	+6.0
WNVZ	Wahianoa	8.88	51	P	Pn	12 32 06.0	+3.8
FWVZ	Far West T-bar	8.90	50	P	Pn	12 32 06.5	+3.9
MOVZ	Moawhango	8.90	52	P	Pn	12 32 06.2	+3.6
TWVZ	Taurewa	8.97	49	P	Pn	12 32 05.7	+2.2
NGZ	Ngauruhoe	8.99	50	P	Pn	12 32 06.4	+2.7
BHHZ	Black Hill Sta	9.02	53	P	Pn	12 32 05.9	+1.8
WTVZ	West Tongariro	9.02	50	P	Pn	12 32 06.4	+2.2
OTVZ	Oturere	9.03	50	P	Pn	12 32 06.7	+2.4
KRVZ	Karewarewa	9.07	50	P	Pn	12 32 08.5	+3.7
TMVZ	Te Maari	9.08	50	P	Pn	12 32 09.5	+4.5
HIZ	Hauiti	9.09	45	P	Pn	12 32 05.0	0.0
KRHZ	Kereru	9.09	55	P	Pn	12 32 10.9	+5.8
KATZ	Kakaramea	9.18	50	P	Pn	12 32 09.6	+3.3
KWHZ	Kaweka Forest	9.27	54	P	Pn	12 32 12.4	+4.9
RATZ	Rangitukua	9.30	49	P	Pn	12 32 10.5	+2.5
WATZ	Wairara	9.40	49	P	Pn	12 32 12.8	+3.6
BKZ	Black Stump Fm	9.49	53	P	Pn	12 32 12.8	+2.4
TLZ	Tolley Road	9.58	46	P	Pn	12 32 12.8	+1.1
MTHZ	Maungataniwha	9.90	53	P	Pn	12 32 20.0	+4.0
HSRZ	Hossack Road	9.96	49	P	Pn	12 32 24.4	+7.5
RAHZ	Arahi	9.99	54	P	Pn	12 32 23.7	+6.3
TOZ	Tahuroa Road	10.02	44	P	Pn	12 32 20.0	+2.3
AWAZ	Awhitu Peninsu	10.16	39	P	Pn	12 32 20.3	+0.7
SNGZ	Shannon Statio	10.23	54	P	Pn	12 32 24.9	+4.2
WTAZ	Waiatarua	10.24	38	P	Pn	12 32 21.0	+0.2
RVAZ	Riverhead Bore	10.38	38	P	Pn	12 32 24.8	+2.2
URZ	Urewera	10.46	51	Pn	Pn	12 32 23.6	-0.2
	1.1nm,0.3s,baz=250,slow=8.7,SNR=11						
URZ				Sn	Sn	12 34 12.8	-8.5
	0.4nm,0.3s,baz=59,slow=19,SNR=1.3						
URZ	Urewera	10.46	51	P	Pn	12 32 23.6	-0.2
MBAZ	Motutapu North	10.52	39	P	Pn	12 32 25.8	+1.3
MWZ	Matawai	10.64	53	P	Pn	12 32 27.2	+0.9
TAU	Tasmania Unive	14.15	273	Pn	Pn	12 33 13.4	-0.7
CAN	Canberra	16.77	300		Pn	12 33 48.8	+0.1
CAN				IAmb	IAmb	12 34 05.9	
	comp=Z,44nm,1.4s						

TOO	Toolangi	17.66	288	P	P	12 34 01.2	+0.3
STKA	Stephens Creek	23.66	296	P	P	12 35 07.1	+1.7
	comp=Z,0.6nm,0.5s,baz=42,slow=16,SNR=1.5						
STKA				LR	LR	12 43 14.6	
	comp=Z,95nm,18.9s,baz=197,slow=34						
ASAR	Alice Springs	34.25	298	P	P	12 36 40.2	+0.1
	comp=Z,0.3nm,0.8s,baz=155,slow=5.9,SNR=4.2						
WR0	Warramunga Arr	36.65	303	P	P	12 37 01.2	+0.5
WR0				IAmb	IAmb	12 37 06.7	
	comp=Z,8.3nm,1.5s						
WB2	Warramunga Arr	36.78	303	P	P	12 36 59.4	-2.4
WB2				IAmb	IAmb	12 37 05.7	
	comp=Z,7.4nm,1.4s						
WRA	Warramunga Arr	36.78	303	P	P	12 37 01.9	0.0
	comp=Z,0.4nm,0.8s,baz=136,slow=8.1,SNR=3.2						
WRAB	Tennant Creek	36.79	303	P	P	12 37 00.8	-1.0
WRAB				IAmb	IAmb	12 37 15.0	
	comp=Z,4.6nm,1.1s						
H01W1	Cape Leeuwin H	40.88	266	T	T	13 20 58.0	
	baz=121,slow=75,SNR=2209						
H01W2	Cape Leeuwin H	40.90	266	T	T	13 20 58.8	
	baz=121,slow=75,SNR=1785						
H01W3	Cape Leeuwin H	40.90	266	T	T	13 20 59.1	
	baz=121,slow=75,SNR=24						
QSPA	South Pole Qui	44.82	180	P	P	12 38 11.1	+3.2
	comp=Z,2.6nm,1.0s,baz=83,slow=1.1,SNR=8.2						
FAKI	Fak Fak	51.91	314	P	P	12 39 00.8	-2.0
H08S2	Diego Garcia H	87.59	262	T	T	14 19 10.9	
	baz=136,slow=76,SNR=70						
H08S1	Diego Carcia H	87.61	262	T	T	14 19 16.3	
	baz=136,slow=76,SNR=31						
H08S3	Diego Garcia H	87.61	262	T	T	14 19 11.7	
	baz=136,slow=76,SNR=144						
CMAR	Chiang Mai Arr	88.26	298	P	P	12 42 47.0	+1.5
	comp=Z,0.4nm,0.3s,baz=170,slow=2.9,SNR=8.0						
LZH	Lanzhou	98.91	313	*e*P	Pdif	12 43 35.5	+1.1
LZH				pP	pwP	12 43 40.5	+2.4
LZH				sP	sP	12 43 42.3	+6.2
LZH				pmax	pmax		
	comp=Z,15nm,1.2s						
HHC	Hu-ho-hao-te	98.96	321	*e*P	Pdif	12 43 34.5	+0.1
HHC				pmax	pmax		
	comp=Z,7.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,110nm,7.1s						
MKAR	Makanchi Array	117.89	309	PKP	PKPdf	12 48 38.6	-1.5
	comp=Z,0.1nm,0.6s,baz=91,slow=3.4,SNR=1.9						
YKA	Yellowknife Ar	124.27	33	PKP	PKPdf	12 48 51.0	-0.7
	comp=Z,0.2nm,0.7s,baz=253,slow=0.7,SNR=4.4						
BRTR	Keskin Array B	145.36	278	PKPbc	PKPab	12 49 32.5	+0.6
	comp=Z,2.0nm,0.8s,baz=123,slow=4.6,SNR=7.4						
TORD	Torodi Ar. Bea	145.52	206	PKPbc	PKPdf	12 49 32.2	-0.4
	comp=Z,7.7nm,0.7s,baz=145,slow=2.1,SNR=23						
ARCES	ARCESS Array B	148.95	335	PKPbc	PKPbc	12 49 40.9	+0.2
	comp=Z,7.5nm,1.1s,baz=75,slow=2.4,SNR=7.0						
AKASG	Malin Array Be	151.36	296	PKPbc	PKPbc	12 49 47.3	+0.2
	comp=Z,0.4nm,0.3s,baz=85,slow=2.3,SNR=7.3						
FINES	FINESS Array B	152.07	319	PKPbc	PKPbc	12 49 48.5	+0.1
	comp=Z,1.5nm,0.6s,baz=120,slow=2.6,SNR=5.9						

*WEL **25** 12:40:00, 41°.91S×173°.35E, h7^{km}, ML4.6, Mw4.3, Moment Tensor Solution. s6 Moment tensor: Scale 10^{15} Nm; M_{rr}-1.03; $M_{\theta\theta}$0.63; $M_{\phi\phi}$0.40; $M_{r\theta}$0.66; $M_{\theta\phi}$-3.27; $M_{\phi r}$1.25; Fault plane solution: $M_0$3.66000×10^{15} NP1: ϕ_s273.00000°, δ66.00000°, λ-162.00000°. NP2: ϕ_s175.00000°, δ74.00000°, λ-25.00000°. Principal axes: T 381.9700, Plg5.0000°, Azm225.0000°; N -350.7100, Plg60.0000°, Azm324.0000°; P -31.2700, Plg29.0000°, Azm132.0000°;*

*IDC **25** 12:40:36.5±1.0, 41°.71S×173°.43E, h0^{km}, mb4.0/4, mb1 4.3/6, mb1mx4.0/22, mbtmp4.1/6, ML4.2/2, MS3.6/6, Ms1 3.6/6, ms1mx3.2/24 Error ellipse: s-maj=28.0km s-min=23.0km az=117.0*

*WEL **25** 12:40:38.6, 41°.9S±0°.9×17°3E±°, h22^{km}±2^{km}, M4.6/14, ML4.9/14, MLv4.6/14, Error ellipse: s-maj=0.0km s-min=0.0km az=99.4*

*NEIC **25** 12:40:38.7±1.4, 41°.94S±0°.03×173°.39E±0°.02, h14^{km}±5^{km}, mb4.2/7, Error ellipse: s-maj=5.1km s-min=1.2km az=163.0*

ISC 25 12:40:38.7±1.1, **41°.93S**±0°.02×**173°.41E**±0°.02, **h15**^{km}±7^{km}, **n197**, σ1^s**54**/212, **mb4.2**/7, **MS3.3**/3, **South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THZ	Tophouse	0.41	293	Pg	Pb	12 40 47.0	-0.6
THZ				Sg	Sb	12 40 52.9	-0.8
THZ	Tophouse	0.41	293	P	Pb	12 40 47.0	-0.6
THZ				S	Sb	12 40 52.7	-1.0
BSWZ	Blackbirch Sta	0.41	59		Pg	12 40 47.1	+0.1
BSWZ	Blackbirch Sta	0.41	59	P	Pg	12 40 47.0	+0.1
BSWZ				S	Sb	12 40 54.9	+1.2
KHZ	Kahutara	0.50	169	Pg	Pb	12 40 49.4	+0.2
KHZ	Kahutara	0.50	169	P	Pb	12 40 49.3	+0.2
KHZ				S	Sb	12 40 56.8	+0.4
CMWZ	Cape Campbell	0.63	74		Pn	12 40 52.7	-0.5
CMWZ	Cape Campbell	0.63	74	P	Pn	12 40 52.6	-0.5
CMWZ				S	Sn	12 41 03.5	+0.6
TUWZ	Tuamarina	0.64	39		Pb	12 40 51.5	-0.1
TUWZ				Sg	Sb	12 41 01.0	+0.8
TUWZ	Tuamarina	0.64	39	P	Pb	12 40 51.4	-0.1
TUWZ				S	Sb	12 41 00.5	+0.2
NNZ	Nelson	0.71	358		Pb	12 40 52.4	-0.4
NNZ				Sg	Sb	12 41 02.8	+0.5
NNZ	Nelson	0.71	358	P	Pb	12 40 52.3	-0.4
NNZ				S	Sb	12 41 01.9	-0.3
TCW	Tory Channel	0.97	43	P	Pb	12 40 56.7	-0.4
TCW				S	Sn	12 41 11.4	+0.2
SNZO	South Karori	1.15	58	Pn	Pn	12 41 00.5	+0.3
DUWZ	D'Urville Isla	1.19	19	P	Pn	12 41 00.5	-0.3
DUWZ				S	Sg	12 41 17.7	+0.6
LTZ	Lake Taylor	1.20	224		Pn	12 41 00.4	-0.6
LTZ	Lake Taylor	1.20	224	P	Pn	12 41 00.3	-0.7
LTZ				S	Sb	12 41 16.8	+0.3
WEL	Wellington	1.21	58	P	Pb	12 41 01.5	+0.3
WEL				S	Sg	12 41 19.5	+1.9
DSZ	Denniston Nort	1.21	278	P	Pg	12 41 01.8	-0.3
DSZ				S	Sn	12 41 16.8	-0.4
BHW	Baring Head	1.21	65		Pg	12 41 01.9	-0.1
BHW	Baring Head	1.21	65	P	Pg	12 41 02.0	-0.1
QRZ	Quartz Range	1.28	329	Pn	Pb	12 41 02.3	-0.2
QRZ	Quartz Range	1.28	329	P	Pb	12 41 02.3	-0.2
QRZ				S	Sg	12 41 19.4	-0.7
AMCZ	Amberley	1.37	204	P	Pn	12 41 03.6	+0.3
PLWZ	Palliser	1.43	76		Pn	12 41 04.5	+0.3
PLWZ	Palliser	1.43	76	P	Pn	12 41 04.2	+0.1
MSWZ	Moikau Station	1.47	70		Pn	12 41 05.0	+0.3
MSWZ	Moikau Station	1.47	70	P	Pn	12 41 04.8	+0.1
MSWZ				S	Sb	12 41 25.1	+0.8
CAW	Cannon Point	1.49	57	P	Pb	12 41 05.6	-0.5
CAW				S	Sg	12 41 26.6	-0.2
KIW	Kapiti Island	1.55	47	P	Pb	12 41 06.5	-0.7
PAWZ	Paruwai Farm	1.61	71	P	Pn	12 41 06.8	+0.2
INZ	Inchbonnie	1.66	241	P	Pn	12 41 07.6	+0.3
OXZ	Oxford	1.73	215		Pn	12 41 08.0	-0.2
OXZ	Oxford	1.73	215	P	Pn	12 41 08.0	-0.2
OGWZ	Otaki Gorge	1.73	51	P	Pb	12 41 09.3	-0.8
MTW	Mount Morrison	1.75	65	P	Pn	12 41 08.3	-0.2
TRWZ	Traveller	1.79	74	P	Pn	12 41 08.9	-0.2
OKCZ	Okains Bay	1.81	188	P	Pn	12 41 09.1	-0.3
MQZ	McQueen's Vall	1.86	197	Pn	Pn	12 41 08.9	-1.2
MQZ	McQueen's Vall	1.86	197	P	Pn	12 41 08.9	-1.2
HOWZ	Holdsworth Sta	1.89	58	P	Pn	12 41 10.4	0.0
RACZ	Rakaia	2.03	207	P	Pn	12 41 11.6	-0.7
TMWZ	Te Maipa	2.04	67	P	Pn	12 41 12.0	-0.5
MRZ	Mangatainoka R	2.07	53	P	Pn	12 41 13.1	+0.2
MHCZ	Mount Hutt	2.10	220	P	Pn	12 41 13.4	+0.1
TIWZ	Tintock	2.19	59	P	Pn	12 41 14.8	+0.1
OHWZ	Ohakea	2.24	41	P	Pb	12 41 17.6	-1.3
WVZ	Waitaha Valley	2.28	239	P	Pn	12 41 16.9	+1.1
WACZ	Wakanui South	2.32	209	P	Pn	12 41 15.7	-0.7
POWZ	Post Office Ro	2.35	50	P	Pn	12 41 17.1	+0.3
PRWZ	Pori Road	2.37	56	P	Pn	12 41 17.1	+0.1
BFZ	Birch Farm	2.48	61	Pn	Pn	12 41 18.2	-0.2
BFZ	Birch Farm	2.48	61	P	Pn	12 41 17.5	-1.0
WAZ	Wanganui	2.48	29	P	Pb	12 41 20.7	-2.3
RPZ	Rata Peaks	2.49	223	Pn	Pn	12 41 18.6	-0.1
	98nm,0.3s,baz=234,slow=0.7,SNR=1107						
RPZ				Sn	Sn	12 41 49.3	+0.5
	58nm,0.3s,baz=336,slow=24,SNR=8.4						
RPZ				LR	LR	12 42 40.6	
	comp=Z,998nm,19.9s,baz=356,slow=47						
RPZ	Rata Peaks	2.49	223	P	Pn	12 41 18.2	-0.5
NMEZ	Namu Road	2.54	8	P	Pb	12 41 22.3	-1.6
LREZ	Lake Rotokare	2.58	17	P	Pb	12 41 23.2	-1.4
ARCZ	Arundel	2.60	218	P	Pn	12 41 19.5	-0.7
PREZ	Palmer Road	2.64	13	P	Pb	12 41 24.3	-1.5
DVHZ	Dannevirke	2.64	53	P	Pn	12 41 20.3	-0.5
GCSZ	Gaunt Creek Bo	2.66	238	P	Pn	12 41 22.0	+0.9
KHEZ	Kahui Hut	2.67	10	P	Pb	12 41 23.8	-2.4
NBEZ	Newall Road No	2.68	8	P	Pb	12 41 24.1	-2.2
TSZ	Takapari Road	2.69	47	P	Pn	12 41 21.6	+0.1
NEZ	North Egmont	2.70	11	P	Pb	12 41 24.2	-2.7
ANWZ	Angora Road	2.74	59	P	Pn	12 41 21.5	-0.6
PKE	Pukeiti	2.76	9	P	Pb	12 41 25.1	-2.7
PNHZ	Pukenui	2.92	47	P	Pn	12 41 24.4	-0.2
MHEZ	Mangahewa	2.93	14	P	Pb	12 41 28.4	-2.2
WPHZ	Waipukurau	2.96	52	P	Pn	12 41 24.6	-0.5
VRZ	Vera Road	2.98	21	P	Pn	12 41 28.2	+2.7
MTVZ	Mangateitei	2.98	32	P	Pn	12 41 28.2	+2.7
PKVZ	Pokaka	3.02	30	P	Pn	12 41 28.3	+2.3
TMZ	Timaru	3.02	215	P	Pn	12 41 25.2	-0.8
MOVZ	Moawhango	3.08	36	P	Pn	12 41 28.3	+1.4
WNVZ	Wahianoa	3.08	33	P	Pn	12 41 29.5	+2.5
TRVZ	Turoa	3.09	33	P	Pn	12 41 29.6	+2.4
FOZ	Fox Glacier	3.09	238	Pn	Pn	12 41 27.6	+0.6
FOZ	Fox Glacier	3.09	238	P	Pn	12 41 27.5	+0.6
DRZ	Dome Shelter	3.12	33	P	Pb	12 41 31.0	-2.9
WHVZ	Whangaehu Hut	3.12	33	P	Pn	12 41 29.9	+2.4
FWVZ	Far West T-bar	3.13	32	P	Pn	12 41 29.9	+2.2
TUVZ	Tukino	3.16	34	P	Pn	12 41 30.1	+2.1
BHHZ	Black Hill Sta	3.16	41	P	Pn	12 41 28.9	+0.9
KRHZ	Kereru	3.20	46	P	Pn	12 41 28.3	-0.3
NGZ	Ngauruhoe	3.22	32	P	Pn	12 41 31.2	+2.4
PXZ	Pawanui	3.23	55	P	Pn	12 41 27.8	-1.0
TWVZ	Taurewa	3.25	29	P	Pn	12 41 31.5	+2.3
OTVZ	Oturere	3.25	33	P	Pn	12 41 31.4	+2.1
WTVZ	West Tongariro	3.26	31	P	Pn	12 41 31.6	+2.1
ETVZ	East Tongariro	3.29	33	P	Pn	12 41 32.0	+2.1
KRVZ	Karewarewa	3.30	32	P	Pn	12 41 32.3	+2.3
TMVZ	Te Maari	3.31	33	P	Pn	12 41 32.1	+2.1
KAHZ	Kahuranaki	3.38	52	P	Pn	12 41 30.1	-0.9
KWHZ	Kaweka Forest	3.39	44	P	Pn	12 41 31.0	-0.1
LBZ	Lake Benmore	3.41	223	Pn	Pn	12 41 31.4	+0.1
LBZ	Lake Benmore	3.41	223	P	Pn	12 41 31.0	-0.3
KATZ	Kakaramea	3.42	31	P	Pn	12 41 34.1	+2.4
RITZ	Rihia Road	3.49	33	P	Pn	12 41 34.3	+1.9
MCHZ	McNeill Hill	3.52	46	P	Pn	12 41 32.4	-0.4
RATZ	Rangitukua	3.55	31	P	Pn	12 41 36.3	+3.0
HIZ	Hauiti	3.58	19		Pn	12 41 36.4	+2.7
HIZ	Hauiti	3.58	19	P	Pn	12 41 36.0	+2.3
BKZ	Black Stump Fm	3.62	41	P	Pn	12 41 34.0	-0.3
HATZ	Hinemaiaia	3.66	35	P	Pn	12 41 35.8	+1.0
WATZ	Wairara	3.67	30	P	Pn	12 41 37.1	+2.1
ODZ	Otahua Downs	3.71	212		Pn	12 41 34.4	-1.1
ODZ	Otahua Downs	3.71	212	P	Pn	12 41 34.3	-1.1
NMHZ	Naumai	3.83	44	P	Pn	12 41 37.1	-0.2
MRHZ	Matea Rd	3.85	38	P	Pn	12 41 37.4	0.0
KUTZ	Kaahu Road	3.90	29	P	Pb	12 41 45.4	-1.8
TLZ	Tolley Road	3.95	25	P	Pn	12 41 40.7	+2.0
WPRZ	Whakapapatarin	4.00	33	P	Pb	12 41 46.0	-2.9
JCZ	Jackson Bay	4.01	236	P	Pn	12 41 39.2	-0.5
MTHZ	Maungataniwha	4.04	42	P	Pn	12 41 39.3	-0.7
ALRZ	Allen Road	4.04	35	P	Pn	12 41 40.3	+0.2
RAHZ	Arahi	4.11	44	P	Pn	12 41 40.0	-1.0
PRRZ	Plateau Road	4.12	35	P	Pn	12 41 41.2	+0.2
HRRZ	Handcock Road	4.16	33	P	Pn	12 41 43.5	+1.8
HSRZ	Hossack Road	4.21	32	P	Pn	12 41 44.6	+2.2
RTZ	Ruatahuna	4.29	41	P	Pn	12 41 43.3	-0.2
MUGZ	Murupara	4.30	38	P	Pn	12 41 44.5	+0.9
RRRZ	Republican Roa	4.30	35	P	Pb	12 41 51.3	-2.7
HLRZ	Highlands Stat	4.31	33	P	Pb	12 41 51.6	-2.5
WKZ	Wanaka	4.32	226		Pn	12 41 42.6	-1.3
WKZ	Wanaka	4.32	226	P	Pn	12 41 42.2	-1.6
TARZ	Mount Tarawera	4.38	34	P	Pn	12 41 47.2	+2.4
MHGZ	Mahia Peninsul	4.41	53	P	Pn	12 41 44.1	-1.0
OMRZ	Omania	4.44	32	P	Pn	12 41 49.6	+4.0
EAZ	Earnscleugh	4.45	221	P	Pn	12 41 44.3	-1.3
HHSZ	Highcliff Hill	4.45	206	P	Pn	12 41 45.3	-0.3
MKRZ	Makatiti	4.45	33	P	Pn	12 41 50.6	+4.8
TOZ	Tahuroa Road	4.49	22	P	Pn	12 41 48.5	+2.4
URZ	Urewera	4.63	39	Pn	Pn	12 41 46.8	-1.4
	6.2nm,0.3s,baz=233,slow=7.9,SNR=37						
URZ				Sn	Sn	12 42 37.1	-4.6
	12nm,0.3s,baz=56,slow=8.0,SNR=1.1						
URZ				LR	LR	12 43 51.8	
	comp=Z,638nm,19.6s,baz=208,slow=44						
URZ	Urewera	4.63	39	P	Pn	12 41 46.9	-1.2
MARZ	Manawahe	4.67	34	P	Pn	12 41 51.0	+2.3
TGRZ	Tauranga	4.73	29	P	Pn	12 41 50.8	+1.3
OPRZ	Ohinepanea	4.74	32	P	Pn	12 41 50.1	+0.5
MSZ	Milford Sound	4.85	234	P	Pn	12 41 50.5	-0.6
TUZ	Tuapeka	4.86	213	P	Pn	12 41 51.0	-0.3
AWAZ	Awhitu Peninsu	4.95	12	P	Pn	12 41 55.0	+2.5
MKAZ	Moumakai	5.00	16	P	Pn	12 41 55.5	+2.3
WTAZ	Waiatarua	5.07	11	P	Pn	12 41 57.0	+2.8
ETAZ	East Tamaki Re	5.10	14	P	Pn	12 41 57.0	+2.4
TWGZ	Tauwhareparae	5.13	45	P	Pn	12 41 53.7	-1.3
RUGZ	Raukumara Rang	5.14	41	P	Pn	12 41 53.6	-1.6
EPAZ	Eden Park BICE	5.15	12	P	Pn	12 41 58.8	+3.6
MLZ	Mavora Lakes	5.15	226		Pn	12 41 53.6	-1.7
MLZ	Mavora Lakes	5.15	226	P	Pn	12 41 53.7	-1.6
HBAZ	Herne Bay Bore	5.17	12	P	Pn	12 41 59.3	+3.8
RVAZ	Riverhead Bore	5.23	10	P	Pn	12 41 58.7	+2.4
MBAZ	Motutapu North	5.28	13	P	Pn	12 41 59.9	+2.9
WIAZ	Waiheke Island	5.30	15	P	Pn	12 41 59.6	+2.4
HAZ	Te Kaha	5.36	40	P	Pn	12 41 56.9	-1.2
PUZ	Puketiti	5.36	46	P	Pn	12 41 57.1	-1.0
PUZ				P	Pb	12 42 02.2	-10
ABAZ	Army Bay	5.43	12	P	Pn	12 42 01.9	+2.8
KUZ	Kuaotunu	5.47	20	P	Pn	12 42 01.6	+1.9
SYZ	Scrubby Hill	5.54	212	P	Pn	12 42 00.3	-0.2
WHZ	Wether Hill Ro	5.59	223		Pn	12 41 59.1	-2.2
WHZ	Wether Hill Ro	5.59	223	P	Pn	12 41 59.1	-2.2
DCZ	Deep Cove	5.75	230		Pn	12 42 01.2	-2.3
DCZ	Deep Cove	5.75	230	P	Pn	12 42 01.4	-2.0
GRZ	Great Barrier	5.89	16	P	Pn	12 42 08.3	+2.9
WCZ	Waipu Caves	6.02	7	P	Pn	12 42 09.7	+2.5
APZ	The Paps	6.25	217	P	Pn	12 42 08.8	-1.6
PYZ	Puysegur Point	6.44	227		Pn	12 42 12.9	0.0
PYZ	Puysegur Point	6.44	227	P	Pn	12 42 11.8	-1.1
OUZ	Omahuta	6.70	1		Pn	12 42 18.8	+2.4
OUZ	Omahuta	6.70	1	P	Pn	12 42 19.0	+2.5
CTZ	Chatham Island	7.55	107	P	Pn	12 42 26.5	-1.7
RAO	Raoul Island	14.47	32	LR	LR	12 49 11.7	
	comp=Z,166nm,20.2s,baz=27,slow=36						
RIV	Riverview	19.30	287	P	Pn	12 45 04.0	0.0
	baz=19						
DZM	Mont Dzumac	20.64	341	LR	LR	12 52 03.2	
	comp=Z,107nm,18.3s,baz=150,slow=34						
ARMA	Armidale	20.93	296	P	P	12 45 21.6	+0.6
	baz=21						
ARMA	Armidale	20.93	296	P	P	12 45 21.7	+0.8
ARMA				IAmb	IAmb	12 45 40.4	
	comp=Z,3.5nm,1.0s						
YNG	Young	21.05	283	P	P	12 45 23.5	+1.3
	baz=21						
RAR	Rarotonga	30.59	56	LR	LR	12 57 21.1	
	comp=Z,64nm,19.0s,baz=216,slow=33						
BBOO	Buckleboo	30.84	275	P	P	12 46 53.8	-0.4
ASAR	Alice Springs	37.47	287	P	P	12 47 51.9	+0.2
	comp=Z,0.6nm,0.5s,baz=123,slow=6.8,SNR=13						
WR0	Warramunga Arr	39.42	292	P	P	12 48 08.8	+0.6
WR0				IAmb	IAmb	12 48 14.4	
	comp=Z,3.5nm,1.0s						
WB2	Warramunga Arr	39.57	291	P	P	12 48 09.7	+0.3
	baz=40						
WB2	Warramunga Arr	39.57	291	P	P	12 48 10.0	+0.6
WB2				IAmb	IAmb	12 48 16.0	
	comp=Z,4.8nm,0.7s						
WRAB	Tennant Creek	39.58	291	P	P	12 48 10.1	+0.7
WRAB				IAmb	IAmb	12 48 15.4	
	comp=Z,5.0nm,0.9s						
WRA	Warramunga Arr	39.58	291	P	P	12 48 09.8	+0.3
	comp=Z,1.2nm,0.5s,baz=128,slow=7.9,SNR=23						
WRA	Warramunga Arr	39.58	291		P	12 48 10.8	+1.3
WRA				IAmb	IAmb	12 48 15.5	
	comp=Z,0.3nm,0.9s						
WRKA	Warakurna	40.72	280	P	P	12 48 18.3	-0.7
	baz=41,SNR=7.1						
MEEK	Meekatharra	47.00	271	P	P	12 49 09.2	-0.2
	baz=47,SNR=5.5						
QSPA	South Pole Qui	48.20	180	P	P	12 49 21.5	+3.1
	comp=Z,2.7nm,0.8s,baz=48,slow=3.5,SNR=12						
QSPA	South Pole Qui	48.20	180	P	P	12 49 21.6	+3.2
QSPA				IAmb	IAmb	12 49 23.0	
	comp=Z,5.4nm,1.1s						
MAW	Mawson	59.03	205	LR	LR	13 15 14.2	
	comp=Z,129nm,18.1s,baz=83,slow=35						
CMAR	Chiang Mai Arr	91.13	294	P	P	12 53 42.9	-0.2
	comp=Z,0.5nm,0.4s,baz=120,slow=4.7,SNR=4.2						
ARCES	ARCESS Array B	147.72	340	PKPbc	PKPbc	13 00 20.4	-1.1
	comp=Z,2.0nm,0.9s,baz=96,slow=1.2,SNR=6.0						
TORD	Torodi Ar. Bea	150.44	197	PKPbc	PKPbc	13 00 30.1	+0.2
	comp=Z,1.5nm,0.5s,baz=161,slow=2.1,SNR=8.7						
TORD	Torodi Ar. Bea	150.44	197		PKPdf	13 00 23.8	-0.9
TORD				PKPbc	PKiKP	13 00 30.7	0.0
FINES	FINESS Array B	152.33	326	PKPbc	PKPbc	13 00 30.6	-2.3
	comp=Z,1.6nm,0.8s,baz=52,slow=2.3,SNR=2.1						
FINES	FINESS Array B	152.33	326		PKPbc	13 00 31.7	-1.2

*IDC **25** 13:39:06.4±3.2, 52°.88N×176°.55E, h0^{km}, mb3.6/6, mb1 3.8/7, mb1mx3.5/49, mbtmp3.8/7, ML4.5/1, Error ellipse: s-maj=101.1km s-min=20.1km az=163.0*

*NEIC **25** 13:39:16.3±2.0, 52°.2N±0°.2×176°.9E±0°.1, h114^{km}±12^{km}, mb4.0/19, ML3.4(AEIC), Error ellipse: s-maj=34.2km s-min=8.0km az=189.0*

*AEIC **25** 13:39:16±3.1, 51°.9N±0°.2×176°.7E±0°.1, h120^{km}±7^{km}, Error ellipse: s-maj=30.0km s-min=8.5km az=189.0*

ISC 25 13:39:15.5±0.9, **52°.3N**±0°.1×**176°.84E**±0°.06, **h100**^{km}, **n43**, σ1^s**34**/43, **mb3.8**/11, **Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSNW	Little Sitkin	1.08	106		Pn	13 39 38.6	+1.8
LSSA	Little Sitkin	1.08	107		Pn	13 39 38.9	+2.0
LSPA	Little Sitkin	1.12	106		Pn	13 39 39.2	+2.0
CEAP	Semis' Anvil P	1.71	98		Pn	13 39 45.8	+1.5
CESW	Semis' Southwe	1.72	102		Pn	13 39 45.5	+1.0
SMY	Shemya	1.73	286		Pn	13 39 46.4	+1.8
AMKA	Amchitka	1.78	120		Pn	13 39 44.9	-0.3
CERAA	Semis' Rag'd T	1.79	101		Pn	13 39 46.4	+1.0
ADK	Adak	4.01	93	Pn	Pn	13 40 16.6	+1.8
ATKA	Atka Island	5.51	87		Pn	13 40 36.9	+1.9
NIKH	Nikolski High	8.73	80	Pn	Pn	13 41 20.7	+1.9
UNV	Unalaska Valle	10.15	75	Pn	Pn	13 41 40.5	+2.4
CNBA	Chernabura Isl	14.22	70	Pn	Pn	13 42 33.6	+1.6
CHGN	Chignik	14.96	65	P	P	13 42 45.5	+0.9
OHAK	Old Harbor	17.85	62	P	P	13 43 14.6	-1.8
TTA	Tatalina	17.87	43	P	Pn	13 43 17.3	-0.1
KDAK	Kodiak Island	18.26	60	P	P	13 43 19.5	-1.4
	1.7nm,0.3s,baz=234,slow=1.6,SNR=22						
KDAK	Kodiak Island	18.26	60	P	P	13 43 19.5	-1.4
RSO	Redoubt South	18.57	52	P	Pn	13 43 26.1	+0.2
RDOG	Red Dog Mine	18.59	24	P	Pn	13 43 26.1	+0.3
RDOG				IAmb	IAmb	13 43 26.6	
	comp=Z,4.9nm,0.7s						
CNPM	China Poot	19.16	55	P	P	13 43 30.2	-0.5
BRLK	Bradley Lake	19.37	55	P	P	13 43 32.5	-0.5
BRLK				IAmb	IAmb	13 43 40.5	
	comp=Z,23nm,1.3s						
IMAR	Indian Mountai	20.12	36	P	P	13 43 39.5	-1.6
SEW	Seward	20.13	54	P	P	13 43 41.0	-0.1
KTH	Kantishna Hill	20.25	44	P	P	13 43 42.3	-0.2
KTH				IAmb	IAmb	13 43 43.5	
	comp=Z,4.8nm,1.3s						
TRF	Thorofare Moun	20.48	44	P	P	13 43 43.2	-2.0
TRF				IAmb	IAmb	13 44 11.8	
	comp=Z,9.4nm,1.5s						
SML	Sawmill	20.95	49	P	P	13 43 50.7	+0.6
SML				IAmb	IAmb	13 44 03.8	
	comp=Z,20nm,1.5s						
ILAR	Eielson Array	22.30	42	P	P	13 44 03.1	-1.2
	comp=Z,1.2nm,1.3s,baz=246,slow=8.7,SNR=2.4						
RAGM	Ragged Mountai	22.53	54	P	P	13 44 06.8	0.0
RAGM				IAmb	IAmb	13 44 21.6	
	comp=Z,9.3nm,0.9s						
N25K	Chitina, Valde	22.68	51	P	P	13 44 07.1	-1.2
N25K				IAmb	IAmb	13 44 19.8	
	comp=Z,3.8nm,1.1s						
TOLK	Toolik Lake Re	22.83	31	P	P	13 44 09.6	-0.1
GLB	Gilahina Butte	23.04	51	P	P	13 44 11.9	+0.1
GLB				IAmb	IAmb	13 44 39.1	
	comp=Z,6.1nm,1.2s						
VRDI	Verde Repeater	23.19	52	P	P	13 44 13.2	-0.3
MCARA	McCarthy VSAT	23.41	51	P	P	13 44 17.4	+2.2
MCARA				IAmb	IAmb	13 44 18.0	
	comp=Z,11nm,1.3s						
ASAJ	Asahikawa	24.06	264	P	P	13 44 22.4	+1.2
	comp=Z,2.6nm,0.6s,baz=62,slow=16,SNR=5.9						
EGAK	Eagle	24.69	43	P	P	13 44 25.6	-1.2
HYT	Haines Junctio	26.07	53	P	P	13 44 40.8	+1.4
HYT				IAmb	IAmb	13 44 44.3	
	comp=Z,3.4nm,0.9s						
KLR	Kul'dur	28.34	282	P	P	13 44 59.2	-0.4
	comp=Z,0.9nm,0.5s,baz=51,slow=5.6,SNR=6.1						
YKA	Yellowknife Ar	36.57	46	P	P	13 46 10.2	-1.0
	comp=Z,0.1nm,0.4s,baz=288,slow=7.1,SNR=1.9						
SONM	Songino Array	43.81	293	P	P	13 47 11.4	+0.1
	comp=Z,1.2nm,0.5s,baz=64,slow=7.8,SNR=15						
SONM	Songino Array	43.81	293	P	P	13 47 11.3	0.0
SONM				IAmb	IAmb	13 47 12.2	
	comp=Z,0.9nm,0.6s						
MCMT	McKenzie Canyo	45.44	70	P	P	13 47 22.8	-1.6
MKAR	Makanchi Array	57.33	306	P	P	13 48 51.3	-1.5
	comp=Z,0.4nm,0.4s,baz=41,slow=6.2,SNR=24						

*IDC **25** 13:48:30.4±0.6, 40°.21S×16°.34W, h0^{km}, mb4.4/16, mb1 4.5/16, mb1mx4.4/36, mbtmp4.4/16, MS4.6/17, Ms1 4.6/17, ms1mx4.6/17, Error ellipse: s-maj=24.2km s-min=14.4km az=0.0*

*NEIC **25** 13:48:31.1±1.9, 40°.1S±0°.1×16°.4W±0°.1, h10^{km}±1^{km}, mb5.0/41, Error ellipse: s-maj=19.3km s-min=17.2km az=174.0*

*GCMT **25** 13:48:36.1±0.1, 40°.24S±0°.01×16°.33W±0°.01, h12^{km}, MW5.2/153, Moment Tensor Solution. s87,c115; s153,c252; Duration: 1^{s}0 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.90±.01; $M_{\theta\theta}$0.13±.01; $M_{\phi\phi}$0.77±.01; $M_{r\theta}$0.13±.04; $M_{\theta\phi}$-0.26±.01; $M_{\phi r}$-0.25±.04; Best double couple: $M_0$0.92900×10^{17} NP1: ϕ_s163.00000°, δ36.00000°, λ-86.00000°. NP2: ϕ_s338.00000°, δ54.00000°, λ-93.00000°. Principal axes: T 0.9100, Plg9.0000°, Azm71.0000°; N 0.0390, Plg2.0000°, Azm340.0000°; P -0.9480, Plg81.0000°, Azm235.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 25 13:48:31.5±0.3, **40°.10S**±0°.09×**16°.37W**±0°.07, **h10**^{km}, **n161**, σ1^s**14**/131, **mb4.9**/33, **MS4.8**/26, **Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H09N1	TRISTAN DA CUN	4.38	48	T	T	13 53 53.8	
	SNR=29						
RIB01	Linhares ES	29.24	308	*e*P	P	13 54 34.0	+0.4
SJMB	Sao Joao De Ma	30.18	308	*e*P	P	13 54 42.0	0.0
BSCB	Bom Sucesso	30.80	300	*e*P	P	13 54 48.2	+0.7
VNA1	Neumayer--Stat	30.91	175	P	P	13 54 49.8	+1.9
VAO	Valinhos	30.95	294	*e*P	P	13 54 49.0	+0.2
H10S2	ASCENSION HYDR	31.04	3	T	T	14 27 34.6	
	baz=38,slow=74,SNR=25						
H10S3	ASCENSION HYDR	31.05	3	T	T	14 27 26.3	
	baz=182,slow=74,SNR=65						
PLTB	Pedras Altas	31.10	274	*e*P	P	13 54 52.1	+2.0
VNA2	Neumayer--Watz	31.24	174	P	P	13 54 52.3	+1.4
	baz=344,slow=11						
VNA3	Neumayer Olymp	31.41	176	P	P	13 54 53.5	+1.2
CPSB	Cacapava Do Su	31.59	276	*e*P	P	13 54 54.8	+0.5
DIAM	Diamantina, MG	32.03	305	*e*P	P	13 54 59.7	+1.2
H10N1	ASCENSION HYDR	32.16	4	T	T	14 28 56.6	
	baz=181,slow=72,SNR=4.6						
H10N3	ASCENSION HYDR	32.16	3	T	T	14 28 59.6	
	baz=181,slow=72,SNR=48						
H10N2	ASCENSION HYDR	32.17	3	T	T	14 28 57.2	
	baz=181,slow=72,SNR=8.9						
ITAB	Concordia	32.19	282	*e*P	P	13 55 00.3	+0.6
SNAA	Sanae	32.38	172	P	P	13 55 03.8	+2.8
SNAA	Sanae	32.38	172	P	P	13 55 01.1	+0.2
	3.6nm,0.9s,baz=308,slow=10,SNR=5.8						
SNAA	Sanae	32.38	172	P	P	13 55 01.5	+0.6
FRTB	Fartura	32.57	291	*e*P	P	13 55 02.9	-0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
GDU01	Guandu, BA	33.24	316	*e*P	P	13 55 09.7	+0.8
BB19B	Bebedouro	33.30	295	*e*P	P	13 55 08.5	-1.0
PCMB	Pacaembu	34.88	291	*e*P	P	13 55 21.7	-1.5
JANB	Januaria	34.88	308	*e*P	P	13 55 22.7	-0.6
IPMB	Ipameri, GO	35.21	299	*e*P	P	13 55 25.9	-0.1
ITRB	Iturama	35.49	295	*e*P	P	13 55 28.1	-0.3
TSUM	Tsumeb	35.80	64	P	P	13 55 29.3	-1.9
BOSA	Boshof	35.92	85	P	P	13 55 32.5	+0.3
	12nm,1.0s,baz=244,slow=8.4,SNR=9.8						
BOSA				LR	LR	14 07 27.8	
	comp=Z,2µm,19.9s,baz=243,slow=32						
BOSA	Boshof	35.92	85	P	P	13 55 30.3	-1.9
BOSA				IAmb	IAmb	13 55 35.8	
	comp=Z,22nm,1.2s						
CPUP	Villa Florida	36.59	279	P	P	13 55 38.7	+0.9
	comp=Z,7.5nm,0.9s,baz=122,slow=6.2,SNR=8.8						
CPUP				LR	LR	14 09 01.5	
	comp=Z,2µm,18.6s,baz=130,slow=34						
CPUP	Villa Florida	36.59	279	P	P	13 55 37.8	0.0
BDFB	Brasilia	36.77	302	P	P	13 55 41.2	+1.7
	comp=Z,4.7nm,0.8s,baz=108,slow=10,SNR=3.4						
BDFB				LR	LR	14 07 55.4	
	comp=Z,662nm,19.3s,baz=134,slow=32						
BDFB	Brasilia	36.77	302	P	P	13 55 37.6	-1.9
SDBA	SAO DESIDERIO	37.31	310	*e*P	P	13 55 42.9	-1.1
LBTB	Lobatse	38.07	80	P	P	13 55 50.9	+0.4
	comp=Z,4.5nm,1.0s,baz=234,slow=11,SNR=4.4						
LBTB	Lobatse	38.07	80	IAmb	IAmb	13 55 58.7	
	comp=Z,9.9nm,1.1s						
BELA	Belgrano 2	38.65	186	P	P	13 55 54.7	+0.1
BELA				IAmb	IAmb	13 56 06.8	
	comp=Z,62nm,1.3s						
AQDB	Aquidauana	38.80	288	*e*P	P	13 55 56.5	0.0
ARAG	Araguaiana, MT	39.24	298	*e*P	P	13 55 59.6	-0.7
PEXB	Peixe	39.61	306	*e*P	P	13 56 02.0	-1.3
GO09	Cerro Castillo	39.75	235	P	P	13 56 03.2	-1.0
GO09				IAmb	IAmb	13 56 12.9	
	comp=Z,30nm,1.2s						
PP1B	Ponte de Pedra	40.07	293	*e*P	P	13 56 06.7	-0.4
PLCA	Paso Flores	40.70	251	P	P	13 56 12.9	+0.7
	comp=Z,5.0nm,0.8s,baz=88,slow=6.2,SNR=5.1						
PLCA				LR	LR	14 10 00.1	
	comp=Z,2µm,21.6s,baz=121,slow=32						
PLCA	Paso Flores	40.70	251	P	P	13 56 11.5	-0.8
PLCA				IAmb	IAmb	13 56 24.4	
	comp=Z,37nm,1.3s						
SNDB	Serra Nova Dou	41.61	302	*e*P	P	13 56 19.4	-0.5
SMTB	Santa Maria do	41.72	310	*e*P	P	13 56 20.4	-0.4
NBPS	Pedro II - PI	42.13	321	*e*P	P	13 56 23.6	-0.6
MATP	Matopo	42.90	76	P	P	13 56 30.2	-0.3
	comp=Z,4.0nm,0.9s,baz=248,slow=7.7,SNR=6.6						
BO02	Sierra Bellavi	42.96	259	P	P	13 56 29.0	-1.9
BO02				IAmb	IAmb	13 56 36.9	
	comp=Z,38nm,1.5s						
PEL	Peldehue	43.57	261	P	P	13 56 34.3	-1.5
VA03	San Esteban	43.63	262	P	P	13 56 35.0	-1.4
VA03				IAmb	IAmb	13 56 51.9	
	comp=Z,24nm,1.1s						
MT02	Curacav	43.87	261	P	P	13 56 38.4	+0.3
MT02				IAmb	IAmb	13 56 40.8	
	comp=Z,29nm,1.2s						
CO01	Juntas del Tor	44.54	266	P	P	13 56 45.1	+1.2
CO01				IAmb	IAmb	13 56 53.3	
	comp=Z,11nm,0.7s						
GO04	Tololo Observa	44.99	265	P	P	13 56 47.6	+0.2
GO04				IAmb	IAmb	13 56 59.2	
	comp=Z,32nm,1.1s						
PRPB	Parauapebas	45.18	309	*e*P	P	13 56 48.5	-0.1
AC02	Maricunga	45.35	270	P	P	13 56 49.6	-0.9
CLDB	Colider	45.39	299	*e*P	P	13 56 51.3	+0.9
LSZ	Lusaka	45.93	70	P	P	13 56 53.7	-1.1
LSZ				IAmb	IAmb	13 56 58.5	
	comp=Z,17nm,1.0s						
AC04	Llanos de Chal	46.15	267	P	P	13 56 55.9	-0.4
GO02	Mina Guanaco	46.57	272	P	P	13 56 59.3	-0.7
AC01	Pan de Azucar	46.83	270	P	P	13 57 01.6	-0.1
VILB	Vilhena	46.97	293	*e*P	P	13 57 02.2	-0.6
LIC	Lamto	47.26	15	*e*P	P	13 57 06.5	+1.5
	comp=Z,38nm,0.9s						
KIC	Kosan Boka	47.45	16	*e*P	P	13 57 07.3	+0.8
	comp=Z,34nm,1.0s						
PB14	IPOC Station P	47.48	272	P	P	13 57 05.0	-2.1
TIC	Toumodi	47.67	15	*e*P	P	13 57 09.8	+1.6
DBIC	Dimbokro	47.73	16	P	P	13 57 09.7	+1.1
	comp=Z,7.0nm,1.0s,baz=149,slow=15,SNR=3.4						
DBIC				LR	LR	14 12 45.6	
	comp=Z,221nm,18.8s,baz=170,slow=30						
DBIC	Dimbokro	47.73	16	P	P	13 57 09.6	+1.0
DBIC				IAmb	IAmb	13 57 24.6	
	comp=Z,24nm,1.4s						
PB06	IPOC Station P	47.90	275	P	P	13 57 10.3	+0.1
NPGB	Novo Progresso	47.94	303	*e*P	P	13 57 11.7	+1.4
PB09	IPOC Station P	48.16	276	P	P	13 57 12.4	+0.3
PB04	IPOC Station P	48.55	275	P	P	13 57 15.5	+0.3
PB07	IPOC Station P	48.69	276	P	P	13 57 15.1	-1.2
PB01	IPOC Station P	48.77	277	P	P	13 57 16.3	-0.6
PB01				IAmb	IAmb	13 57 23.7	
	comp=Z,19nm,0.9s						
PB08	IPOC Station P	49.04	278	P	P	13 57 19.2	0.0
TA01	Diego Aracena	49.58	277	P	P	13 57 22.6	-0.3
TA01				IAmb	IAmb	13 57 31.4	
	comp=Z,17nm,0.8s						
MAW	Mawson	49.65	150	LR	LR	14 14 26.2	
	comp=Z,532nm,20.4s,baz=258,slow=31						
PSGCX	Pisagua	50.10	278	P	P	13 57 26.6	-0.4
PSGCX				IAmb	IAmb	13 57 34.3	
	comp=Z,15nm,0.9s						
QSPA	South Pole Qui	50.16	180	P	P	13 57 27.1	+0.2
ITTB	Itaituba	50.22	305	*e*P	P	13 57 27.2	-0.6
PB16	IPOC Station P	50.38	279	P	P	13 57 27.7	-2.0
PB16				IAmb	IAmb	13 57 37.1	
	comp=Z,18nm,0.7s						
LPAZ	La Paz	50.60	283	P	P	13 57 30.6	-0.9
	comp=Z,7.2nm,0.9s,baz=112,slow=5.7,SNR=8.4						
LPAZ				LR	LR	14 18 28.2	
	comp=Z,976nm,20.2s,baz=138,slow=36						
LPAZ	La Paz	50.60	283	P	P	13 57 29.2	-2.2
LPAZ				IAmb	IAmb	13 57 36.5	
	comp=Z,16nm,1.1s						
MALB	Monte Alegre	51.27	308	*e*P	P	13 57 36.0	+0.3
SAML	Samuel	51.84	294	*e*P	P	13 57 40.7	+0.7
ETMB	Extrema	53.40	290	*e*P	P	13 57 50.6	-0.9
KOWA	Kowa	55.51	15	P	P	13 58 06.5	-0.3
TOA0	Torodi Ar. Sit	55.57	21	P	P	13 58 06.7	-0.5
TORD	Torodi Ar. Bea	55.57	21	P	P	13 58 08.6	+1.4
	comp=Z,4.2nm,1.0s,baz=205,slow=7.5,SNR=6.5						
TORD				LR	LR	14 16 51.2	
	comp=Z,458nm,20.4s,baz=150,slow=31						
TORD	Torodi Ar. Bea	55.57	21	P	P	13 58 06.3	-0.9
PTGA	Pitinga	55.70	303	P	P	13 58 09.7	+1.4
	comp=Z,1.4nm,0.3s,baz=330,slow=23,SNR=1.7						
PTGA	Pitinga	55.70	303	P	P	13 58 08.9	+0.6
PTGA				IAmb	IAmb	13 58 20.4	
	comp=Z,22nm,1.2s						
PTGA	Pitinga	55.70	303	*e*P	P	13 58 10.0	+1.7
ABPO	Ambohimpanom	57.96	89	P	P	13 58 23.2	-1.3
ABPO				IAmb	IAmb	13 58 29.4	
	comp=Z,18nm,1.3s						
MBAR	Mbarara	58.08	60	P	P	13 58 26.4	+1.1
MBAR				IAmb	IAmb	13 58 30.9	
	comp=Z,20nm,1.2s						
KMBO	Kilima Mbogo	62.13	66	LR	LR	14 23 44.9	
	comp=Z,2µm,18.1s,baz=229,slow=34						
VNDA	Vanda	62.65	180	LR	LR	14 22 50.9	
	comp=Z,225nm,21.7s,baz=166,slow=33						
ATAH	Atahualpa	64.14	283	P	P	13 59 08.2	+1.4
	comp=Z,1.3nm,0.4s,baz=3.5,slow=12,SNR=1.3						
CASY	Casey	66.40	159	P	P	13 59 19.8	-0.4
PLCV	Puerto La Cruz	67.00	307	P	P	13 59 24.7	-0.1
PCRV	Puerto La Cruz	67.04	307	P	P	13 59 24.7	-0.4
	comp=Z,10nm,0.9s,baz=70,slow=4.3,SNR=4.4						
OTAV	Otavalo	69.11	289	P	P	13 59 37.5	-1.2
OTAV				IAmb	IAmb	13 59 50.6	
	comp=Z,12nm,1.3s						
OTAV	Otavalo	69.11	289	*e*P	P	13 59 38.0	-0.7
ROSC	El Rosal	69.40	296	LR	LR	14 28 39.7	
	comp=Z,2µm,20.0s,baz=158,slow=35						
SDV	Santo Domingo	69.86	301	P	P	13 59 43.6	+0.7
	comp=Z,1.8nm,0.3s,baz=102,slow=0.9,SNR=3.2						
SDV	Santo Domingo	69.86	301	*e*P	P	13 59 42.9	0.0
KEST	Kesra	79.09	21	LR	LR	14 31 27.6	
	comp=Z,667nm,21.6s,baz=152,slow=32						
ESDC	Sonseca Array	80.19	10	P	P	14 00 44.4	+2.6
	comp=Z,2.5nm,1.1s,baz=182,slow=4.5,SNR=5.4						
ESDC				LR	LR	14 32 31.1	
	comp=Z,117nm,21.7s,baz=195,slow=33						
BRTR	Keskin Array B	91.61	36	P	P	14 01 39.9	+1.3
	comp=Z,1.3nm,0.7s,baz=199,slow=7.5,SNR=2.8						
BRTR				LR	LR	14 43 12.9	
	comp=Z,150nm,18.7s,baz=209,slow=36						
GERES	GERESS Array B	92.47	19	LR	LR	14 40 07.3	
	comp=Z,298nm,21.7s,baz=212,slow=34						
H01W2	Cape Leeuwin H	92.53	141	T	T	15 45 33.3	
	baz=216,slow=75,SNR=6.3						
H01W1	Cape Leeuwin H	92.54	141	T	T	15 45 28.4	
	baz=216,slow=75,SNR=7.3						
H01W3	Cape Leeuwin H	92.54	141	T	T	15 45 40.5	
	baz=216,slow=75,SNR=5.2						
RKT	Rikitea	95.03	234	*e*PS	PS	14 14 29.7	+3.0
	comp=Z,322nm,28.5s						
RKT	Rikitea	95.03	234	*e*LR	LR	14 32 37.8	
	comp=Z,415nm,25.0s						
AKASG	Malin Array Be	98.84	27	LR	LR	14 45 17.2	
	comp=Z,148nm,21.7s,baz=310,slow=34						
KBZ	Khabaz	99.07	39	LR	LR	14 45 05.4	
	comp=Z,192nm,21.6s,baz=204,slow=34						
TBI	Tubuai	103.23	224	*e*SS	SS	14 21 32.3	+4.0
	comp=Z,139nm,29.5s						
TBI	Tubuai	103.23	224	*e*LR	LR	14 36 20.1	
	comp=Z,708nm,30.0s,baz=144						
PPT2	Papeete2	107.95	227	*e*SS	SS	14 22 42.0	+8.7
	comp=Z,148nm,26.5s						
PPT2	Papeete2	107.95	227	*e*LR	LR	14 38 30.2	
	comp=Z,773nm,32.0s,baz=141						
TAOE	Nuku Hiva Isla	108.87	240	*e*LR	LR	14 39 06.7	
	comp=Z,483nm,23.6s						
KSH	Kashi	115.52	59	PKP	PKPdf	14 07 11.5	-2.1
KSH				PP	PP	14 08 18.5	+2.4
KSH				AMB	AMB		
	comp=Z,140nm,4.7s						
DZM	Mont Dzumac	118.10	183	*e*LR	LR	14 43 11.2	
	comp=Z,264nm,23.2s						
CMAR	Chiang Mai Arr	120.88	91	PKP	PKiKP	14 07 24.6	+0.1
	comp=Z,1.4nm,0.8s,baz=224,slow=4.0,SNR=7.9						
MK31	Makanchi Array	123.06	54		PKiKP	14 07 28.0	+0.1
MKAR	Makanchi Array	123.06	54	PKP	PKPdf	14 07 27.3	-0.4
	comp=Z,0.8nm,0.9s,baz=258,slow=4.8,SNR=6.4						
WMQ	Urumqi	125.28	59	*e*PKP	PKiKP	14 07 32.5	0.0
WMQ				LR	LR		
	comp=Z,720nm,29.2s						
WMQ				LR	LR		
	comp=Z,1µm,28.9s						
WMQ				LR	LR		
	comp=Z,250nm,19.1s						
RES	Resolute Bay	125.31	341	PKP	PKiKP	14 07 31.4	-0.1
	comp=Z,2.2nm,0.9s,baz=344,slow=3.1,SNR=7.1						
ZALV	Zalesovo Beam	127.26	47	PKP	PKiKP	14 07 35.5	-0.4
	comp=Z,0.5nm,0.5s,baz=248,slow=1.6,SNR=5.4						
ZALV	Zalesovo Beam	127.26	47	PKPdf	PKiKP	14 07 35.9	0.0
YKA	Yellowknife Ar	128.26	324	PKP	PKiKP	14 07 37.4	-0.4
	comp=Z,1.5nm,0.8s,baz=105,slow=2.7,SNR=13						
QIZ	Qiongzhong	129.54	98	PKP	PKPdf	14 07 40.5	-0.4
QIZ				PP	PP	14 09 54.8	+3.7
QIZ				SS	SS	14 27 15.5	+1.6
QIZ				LR	LR		
	comp=Z,240nm,19.6s						
QIZ				LR	LR		
	comp=Z,260nm,18.6s						
QIZ				LR	LR		
	comp=Z,290nm,19.6s						
CD2	Chengdu	131.21	81	PKP	PKPdf	14 07 43.0	-0.8
NRIK	Noril'sk	131.70	27	PKP	PKiKP	14 07 44.9	+0.4
	comp=Z,0.9nm,0.3s,baz=272,slow=0.4,SNR=3.9						
GTA	Gaotai	131.90	69	*e*PKP	PKiKP	14 07 47.0	+1.0
GTA				LR	LR		
	comp=Z,160nm,16.7s						
GTA				LR	LR		
	comp=Z,240nm,19.1s						
GTA				LR	LR		
	comp=Z,280nm,18.3s						
LZH	Lanzhou	133.54	75	*e*PKP	PKPdf	14 07 44.0	-4.2
LZH				LR	LR		
	comp=Z,280nm,18.4s						
LZH				LR	LR		
	comp=Z,280nm,17.9s						
LZH				LR	LR		
	comp=Z,250nm,20.2s						
INK	Inuvik	136.53	331	PKP	PKPdf	14 07 52.3	-0.2
	comp=Z,3.0nm,0.9s,baz=20,slow=3.7,SNR=6.1						
SONM	Songino Array	138.92	60	PKP	PKiKP	14 07 58.6	-1.4
	comp=Z,1.8nm,0.9s,baz=236,slow=1.8,SNR=10						
SONM	Songino Array	138.92	60		PKPdf	14 07 57.4	-0.4
HHC	Hu-ho-hao-te	140.87	71	*e*PKP	PKiKP	14 08 03.0	-1.2
TOLK	Toolik Lake Re	142.12	334		PKPpre	14 07 56.5	
ILAR	Eielson Array	142.49	328	PKhKP	PKPpre	14 07 59.5	
	comp=Z,2.2nm,1.0s,baz=101,slow=1.5,SNR=5.7						
ILAR	Eielson Array	142.49	328	PKPpre	PKPpre	14 07 58.1	
COLD	Coldfoot	142.91	332		PKPdf	14 08 03.3	-0.9
NJ2	Nanjing	143.24	88	*e*PKP	PKPdf	14 08 04.8	-1.1
I23K	Minto, Yukon-K	143.37	329		PKPdf	14 08 04.5	-0.5
RND	Reindeer	143.71	326		PKPdf	14 08 05.5	-0.3
BWN	Browne	143.74	327		PKPdf	14 08 04.8	-0.9
TIXI	Tiksi	143.91	18	PKPdf	PKPdf	14 08 05.3	-0.5
TRF	Thorofare Moun	144.31	326	PKPdf	PKPbc	14 08 05.6	+0.2
BPAW	Bear Paw Mtn.	144.39	328	PKPdf	PKPab	14 08 05.2	+0.1
KTH	Kantishna Hill	144.55	327	PKPdf	PKPbc	14 08 06.1	+0.2
PPLA	Purkeypile	145.31	326		PKPbc	14 08 08.4	-0.1
RSO	Redoubt South	146.35	322		PKPab	14 08 12.4	-0.3
TTA	Tatalina	146.92	327		PKPab	14 08 14.6	-0.1
CN2	Changchun	151.53	70	*e*PKPbc	PKPdf	14 08 20.0	+0.8
KSAR	Wonju Array Be	152.12	84		PKPbc	14 08 26.3	-0.6
KSRS	Korea Array	152.15	84	PKPbc	PKPbc	14 08 26.6	-0.4
	comp=Z,2.4nm,0.8s,baz=242,slow=2.2,SNR=5.6						
KLR	Kul'dur	155.71	57	PKPbc	PKPdf	14 08 34.4	+9.4
	comp=Z,2.4nm,1.0s,baz=295,slow=3.6,SNR=5.4						

IDC 25 13:51:13.7±2.6**,7°.64S×129°.71E,h75**^{km}±33^{km}**,mb2.9**/1**,**
mb1 3.2/5**,mb1mx3.0**/37**,mbtmp3.4**/5**,Error ellipse:**
s-maj=29.8km s-min=23.5km az=137.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	6.49	246	P	Pn	13 52 46.1	-0.6
	3.2nm,0.3s,baz=110,slow=17,SNR=3.0						
BATI				S	Sn	13 54 01.8	+2.3
	0.9nm,0.3s,baz=106,slow=21,SNR=1.2						
SIJI	Sorong	6.90	13	P	Pn	13 52 52.9	+0.5
	0.4nm,0.3s,baz=126,slow=16,SNR=2.5						
SIJI				S	Sn	13 54 00.9	-8.6
	0.4nm,0.3s,baz=262,slow=23,SNR=1.5						
WRA	Warramunga Arr	13.03	160	P	Pn	13 54 14.8	-1.1
	0.1nm,0.3s,baz=335,slow=14,SNR=6.3						
WRA				S	Sn	13 56 36.2	-2.9
	0.5nm,0.3s,baz=336,slow=22,SNR=9.5						
ASAR	Alice Springs	16.44	166	P	P	13 55 01.2	-0.1
	0.1nm,0.3s,baz=338,slow=9.5,SNR=2.9						
ASAR				S	Sn	13 57 57.4	-4.3
	0.1nm,0.3s,baz=346,slow=26,SNR=2.1						
MKAR	Makanchi Array	68.60	327	P	P	14 02 08.2	-0.5
	0.1nm,0.3s,baz=116,slow=6.6,SNR=1.6						

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*IDC **25** 13:54:18.6±10.0,50°.91N×174°.09W,h0^{km},mb3.4/4,*
mb1 3.6/6,mb1mx3.3/69,mbtmp3.5/6,ML3.1/2,Error
ellipse: s-maj=273.1km s-min=26.2km az=161.0
*AEIC **25** 13:54:25±2.6,51°.3N±0°.1×173°.9W±0°.1,h17^{km}±7^{km},Error*
ellipse: s-maj=15.2km s-min=9.4km az=172.0
*NEIC **25** 13:54:28.8±2.2,51°.50N±0°.09×174°.0W±0°.1,h48^{km}±13^{km},*
mb3.8/25,ML3.2(AEIC),Error ellipse: s-maj=13.5km
s-min=9.9km az=163.0
ISC 25 13:54:26.9±1.0**,51°.4N**±0°.1×**174°.12W**±0°.06**,h35**^{km}**,n56,**
σ**1**^{s}**.15**/49**,mb3.6**/5**,Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATKA	Atka Island	0.77	356		Pn	13 54 41.5	+0.3
KOFP	Korovin Flat P	0.84	1		Pn	13 54 43.3	+1.0
KOKL	Mount Kliuchef	0.89	357		Pn	13 54 43.9	+0.9
KOWE	Korovin West	0.94	355		Pn	13 54 45.1	+1.6
ADK	Adak	1.66	287		Pn	13 54 52.7	-0.8
NIKH	Nikolski High	3.58	63		Pn	13 55 20.8	+0.9
AMKA	Amchitka	4.12	272		Pn	13 55 30.1	+2.8
MAPS	Pakushin South	4.98	59		Pn	13 55 39.9	+0.8
MGOD	Makushin Gods	5.01	59		Pn	13 55 40.3	+0.8
MSW	Makushin Switc	5.11	58		Pn	13 55 42.3	+1.4
UNV	Unalaska Valle	5.23	60		Pn	13 55 44.4	+2.0
OHAK	Old Harbor	13.44	56	Pn	Pn	13 57 33.8	-1.0
ANM	Nome	13.94	16	Pn	Pn	13 57 43.4	+1.8
SVW2	Sparrevohn	14.08	39	Pn	Pn	13 57 42.9	-0.7
RSO	Redoubt South	14.93	44	P	P	13 57 59.2	-1.3
TTA	Tatalina	15.06	33	P	P	13 58 02.5	+0.7
CNPM	China Poot	15.23	49	P	P	13 58 04.4	+0.8
BRLK	Bradley Lake	15.48	48	P	P	13 58 07.0	+0.6
PET	Petropavlovsk	16.72	286	P	P	13 58 23.2	+3.0
PMR	Palmer	17.01	44	P	P	13 58 23.4	0.0
PMR				IAmb	IAmb	13 58 39.2	
	comp=Z,9.8nm,1.5s						
KTH	Kantishna Hill	17.27	36	Pn	Pn	13 58 24.7	-0.3
KTH				IAmb	IAmb	13 58 44.0	
	comp=Z,12nm,1.5s						
PETK	Petropavlovsk-	17.29	287	P	Pn	13 58 25.3	0.0
	comp=Z,0.1nm,0.3s,baz=94,slow=15,SNR=1.6						
TRF	Thorofare Moun	17.45	37	P	P	13 58 28.4	0.0
TRF				IAmb	IAmb	13 58 53.4	
	comp=Z,6.8nm,1.4s						
SML	Sawmill	17.45	44	P	Pn	13 58 27.3	0.0
SML				IAmb	IAmb	13 58 46.3	
	comp=Z,20nm,1.4s						
IMAR	Indian Mountai	17.88	28	P	P	13 58 33.7	+0.9
SCM	Sheep Creek Mo	17.90	44		Pn	13 58 32.1	-0.7
SCM				IAmb	IAmb	13 58 40.3	
	comp=Z,16nm,1.4s						
RND	Reindeer	17.98	38		Pn	13 58 33.2	-0.5
BWN	Browne	18.15	36	P	P	13 58 37.0	+1.2
BWN				IAmb	IAmb	13 58 56.9	
	comp=Z,14nm,1.3s						
EYAK	Cordova Ski Ar	18.16	49		Pn	13 58 34.5	-1.5
EYAK				IAmb	IAmb	13 58 54.5	
	comp=Z,13nm,1.2s						
M24K	Tolsona, Glenn	18.50	44	P	P	13 58 39.5	-0.4
I23K	Minto, Yukon-K	18.73	33	P	Pn	13 58 43.8	+0.9
HMT	Hamilton	18.81	50	P	P	13 58 42.3	-0.9
WRH	Wood River Hil	18.81	36	P	P	13 58 42.5	-0.7
WRH				IAmb	IAmb	13 58 55.9	
	comp=Z,6.0nm,1.5s						
CCB	Clear Creek Bu	19.01	36	P	P	13 58 44.5	-0.8
MDM	Murphy Dome	19.02	35	P	P	13 58 44.5	-1.0
N25K	Chitina, Valde	19.03	46	P	Pn	13 58 46.3	-0.2
N25K				IAmb	IAmb	13 59 03.5	
	comp=Z,12nm,1.4s						
HDA	Harding Lake	19.21	37	P	P	13 58 47.2	-0.2
HDA				IAmb	IAmb	13 59 07.1	
	comp=Z,8.5nm,1.5s						
GLB	Gilahina Butte	19.33	47	P	P	13 58 48.5	-0.4
GLB				IAmb	IAmb	13 59 10.8	
	comp=Z,8.2nm,1.4s						
IL31		19.41	36	P	Pn	13 58 50.2	-0.8
ILAR	Eielson Array	19.41	36	P	Pn	13 58 50.6	-0.4
	comp=Z,0.3nm,0.3s,baz=236,slow=8.7,SNR=21						
PRP	Porcupine Dome	20.29	35	P	P	13 58 59.5	+0.1
BCAR	Beaver Creek A	20.75	43	Pn	Pn	13 59 06.6	-0.2
EGAK	Eagle	21.61	39	P	P	13 59 14.5	+1.0
EGAK				IAmb	IAmb	13 59 15.1	
	comp=Z,3.3nm,0.6s						
INK	Inuvik	25.75	34	P	P	13 59 54.6	+0.8
	comp=Z,0.4nm,0.6s,baz=254,slow=5.7,SNR=5.6						
INK	Inuvik	25.75	34	P	P	13 59 54.5	+0.7
INK				IAmb	IAmb	14 00 15.9	
	comp=Z,6.2nm,1.5s						
KLR	Kul'dur	33.97	288	P	P	14 01 06.0	-0.8
	comp=Z,0.8nm,0.5s,baz=68,slow=9.3,SNR=6.5						
H11N2	WAKE ISLAND Hy	34.99	212	T	T	14 38 59.8	
	baz=20,slow=76,SNR=4.7						
H11N3	WAKE ISLAND Hy	34.99	212	T	T	14 39 02.1	
	baz=20,slow=76,SNR=4.3						
H11N1	WAKE ISLAND Hy	35.00	212	T	T	14 38 56.3	
	baz=20,slow=76,SNR=4.0						
USA0B	Ussuriysk Arra	36.19	280	P	P	14 01 25.4	-0.4
USRK	Ussuriysk Ar.	36.19	280	P	P	14 01 26.0	+0.2
H11S1	WAKE ISLAND Hy	36.19	212	T	T	14 40 31.4	
	baz=20,slow=75,SNR=12						
H11S2	WAKE ISLAND Hy	36.20	212	T	T	14 40 26.6	
	baz=20,slow=75,SNR=11						
H11S3	WAKE ISLAND Hy	36.21	212	T	T	14 40 34.1	
	baz=20,slow=75,SNR=6.3						
SONM	Songino Array	49.21	299	P	P	14 03 08.5	-3.1
	comp=Z,0.1nm,0.3s,baz=53,slow=7.4,SNR=1.7						
MKAR	Makanchi Array	62.25	311	P	P	14 04 44.3	-0.6
	comp=Z,0.1nm,0.3s,baz=46,slow=6.9,SNR=4.8						

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*MOS **25** 14:12:11.2±1.1,39°.21N×77°.14E,h33^{km},mb4.3/14,Error*
ellipse: s-maj=12.5km s-min=4.2km az=93.4
*IDC **25** 14:12:13.2±0.8,40°.11N×77°.40E,h0^{km},mb4.0/16,*
mb1 4.1/21,mb1mx3.9/48,mbtmp4.0/21,ML3.4/6,MS3.5/3,
Ms1 3.5/3,ms1mx2.8/50,Error ellipse: s-maj=14.8km
s-min=12.1km az=49.0
*KRNET **25** 14:12:14.3±0.1,40°.13N×77°.65E,mb4.6*
*SOME **25** 14:12:14.5,40°.22N×77°.33E,h10^{km},MS3.9*
*BJI **25** 14:12:14.0±0.0,40°.23N×77°.45E,h8^{km},mB4.3/11,*
mb4.1/23,ML4.1/8,Ms3.7/9,Ms7 3.6/8
*NNC **25** 14:12:17.2±0.9,40°.29N×77°.44E,h0^{km},mb5.0,mpv4.8,*
Error ellipse: s-maj=6.5km s-min=5.1km az=160.0
*NEIC **25** 14:12:19.4±1.1,40°.20N±0°.08×77°.47E±0°.10,h42^{km}±7^{km},*
mb4.3/27,Error ellipse: s-maj=11.8km s-min=9.9km
az=146.0
ISC 25 14:12:15.0±1.1**,40°.18N**±0°.03×**77°.69E**±0°.03**,h6**^{km}±7^{km}**,**
n228,σ**2**^{s}**.05**/266**,mb4.3**/36**,43C-19D,**
Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSH	Kashi	1.48	244	Pn	Pg	14 12 47.3	+3.9
KSH				Sn	Sg	14 13 07.5	+4.9
KSH				smax	smax		
	comp=N,740nm,0.4s						
KSH				smax	smax		
	comp=E,850nm,0.5s						
KDJ	Kajisay	1.98	349	⇑*e*P	Pb	14 12 50.6	-1.1
	baz=50						
KDJ				⇑*i*S	Sb	14 13 16.9	+0.2
	baz=50						
ULHL	Ulahol	2.33	333	⇓*e*P	Pb	14 12 55.7	-1.9
	baz=34						
ULHL				⇓*i*S	Sb	14 13 25.5	-1.3
	baz=34						
ULHL	Ulahol	2.33	333	P	Pb	14 12 56.5	-1.2
	SNR=47						
PRZ	Przheval'sk	2.36	13	⇑*i*P	Pb	14 12 56.6	-1.5
	baz=13						
PRZ				⇑*i*S	Sb	14 13 27.3	-0.2
	baz=13						
ANVS	Anan'yevo	2.60	360	⇑*i*P	Pn	14 12 59.6	+1.8
	baz=0.0						
ANVS				⇑*i*S	Sb	14 13 32.4	-2.0
	baz=0.0						
BOOM	Boomskoye usch	2.66	331	⇓*i*P	Pn	14 13 00.0	+1.5
	baz=32						
BOOM				⇓*i*S	Sb	14 13 33.2	-2.8
	baz=32						
TNSS	Tian-Shan	2.91	349	*e*P	Pb	14 13 08.0	+0.5
	1µm,0.5s						
TNSS				*e*S	Sb	14 13 46.2	+2.8
	668nm,0.5s						
TNSS	Tian-Shan	2.91	349	Pg	Pb	14 13 08.0	+0.5
	1µm,0.5s						
TNSS				Lg	Lg	14 13 46.2	
	668nm,0.5s						
TNSS	Tian-Shan	2.91	349	*e*PN	Pb	14 13 08.0	+0.5
SATY	Saty	2.92	10	*e*P	Pb	14 13 09.5	+1.8
	371nm,0.4s						
SATY				*e*S	Sg	14 13 49.0	0.0
	1µm,0.6s						
SATY	Saty	2.92	10	Pg	Pb	14 13 09.5	+1.8
	371nm,0.4s						
SATY				Lg	Lg	14 13 49.0	
	1µm,0.6s						
SATY	Saty	2.92	10	*e*PN	Pb	14 13 09.5	+1.8
IZV	Izvestkoviy	2.96	345	*e*P	Pb	14 13 08.5	+0.2
	545nm,0.5s						
IZV				*e*S	Sb	14 13 47.5	+2.6
	2µm,0.5s						
IZV	Izvestkoviy	2.96	345	Pg	Pb	14 13 08.5	+0.2
	545nm,0.5s						
IZV				Lg	Lg	14 13 47.5	
	2µm,0.5s						
IZV	Izvestkoviy	2.96	345	*e*PN	Pb	14 13 08.5	+0.2
MDOK	Medeo	3.02	351	*e*P	Pb	14 13 10.0	+0.8
	486nm,0.5s						
MDOK				*e*S	Sb	14 13 49.5	+3.1
	906nm,0.5s						
MDOK	Medeo	3.02	351	⇑Pn	Pb	14 13 06.2	-3.1
	438nm,0.6s						

MDOK				⇑Lg	Lg	14 13 49.6	
	2µm,0.5s						
MDOK	Medeo	3.02	351	Pg	Pb	14 13 10.0	+0.8
	486nm,0.5s						
MDOK				Lg	Lg	14 13 49.5	
	906nm,0.5s						
MDOK	Medeo	3.02	351	ePN	Pb	14 13 10.0	+0.8
ARLS	Aral	3.05	304	⇑iP	Pn	14 13 04.7	+0.7
	baz=6.0						
ARLS				⇑iS	Sn	14 13 41.8	+0.9
	baz=6.0						
AAA	Alma-Ata	3.08	349	eP	Pb	14 13 11.4	+1.2
	1µm,0.4s						
AAA				eS	Sg	14 13 52.3	-1.6
	2µm,0.5s						
AAA	Alma-Ata	3.08	349	Pg	Pb	14 13 11.4	+1.2
	1µm,0.4s						
AAA				Lg	Lg	14 13 52.3	
	2µm,0.5s						
AAA	Alma-Ata	3.08	349	ePN	Pb	14 13 11.4	+1.2
KOTS	Kotyrbulak	3.08	352	eP	Pb	14 13 11.4	+1.1
	1µm,0.4s						
KOTS				eS	Sg	14 13 52.2	-1.8
	6µm,0.4s						
KOTS	Kotyrbulak	3.08	352	Pg	Pb	14 13 11.4	+1.1
	1µm,0.4s						
KOTS				Lg	Lg	14 13 52.2	
	6µm,0.4s						
KOTS	Kotyrbulak	3.08	352	ePN	Pb	14 13 11.4	+1.1
KNDC	Almaty	3.08	350	⇑Pn	Pb	14 13 07.7	-2.6
	723nm,0.5s						
KNDC				⇑Lg	Lg	14 13 52.5	
	6µm,0.5s						
MTBS	Maitube	3.09	343	eP	Pb	14 13 10.5	0.0
	226nm,0.4s						
MTBS				eS	Sb	14 13 51.3	+2.8
	1µm,0.5s						
MTBS	Maitube	3.09	343	Pg	Pb	14 13 10.5	0.0
	226nm,0.4s						
MTBS				Lg	Lg	14 13 51.3	
	1µm,0.5s						
MTBS	Maitube	3.09	343	ePN	Pb	14 13 10.5	0.0
UZB	Uzynbulak	3.13	18	eP	Pg	14 13 13.8	-1.1
	152nm,0.5s						
UZB				eS	Sg	14 13 56.4	+1.0
	498nm,0.5s						
UZB	Uzynbulak	3.13	18	Pg	Pg	14 13 13.8	-1.1
	152nm,0.5s						
UZB				Lg	Lg	14 13 56.4	
	498nm,0.5s						
UZB	Uzynbulak	3.13	18	ePN	Pg	14 13 13.8	-1.1
KST	Kastek	3.14	336	eP	Pb	14 13 11.0	-0.3
	284nm,0.6s						
KST				eS	Sb	14 13 51.6	+1.8
	1µm,0.6s						
KST	Kastek	3.14	336	Pg	Pb	14 13 11.0	-0.3
	284nm,0.6s						
KST				Lg	Lg	14 13 52.4	
	1µm,0.6s						
KST	Kastek	3.14	336	ePN	Pb	14 13 11.0	-0.3
UCH	Uchtor	3.15	311	P	Pn	14 13 07.5	+1.9
	SNR=20						
TKM2	Tokmak 2	3.16	331	⇓iP	Pn	14 13 06.7	+1.3
	baz=32						
TKM2				⇓iS	Sn	14 13 45.0	+1.5
	baz=32						
TKM2	Tokmak 2	3.16	331	P	Pn	14 13 07.7	+2.2
	SNR=119						
TKM2	Tokmak 2	3.16	331	⇓Pn	Pn	14 13 07.4	+2.0
	224nm,0.9s						
TKM2				⇑Lg	Lg	14 13 52.3	
	422nm,0.7s						
TKM2	Tokmak 2	3.16	331	i PN	Pn	14 13 07.4	+2.0
TKM2				pmax	pmax		
	comp=Z,224nm,0.9s						
SHLS	Shalkode	3.25	23	eP	Pg	14 13 17.6	+0.2
	comp=Z,358nm,0.6s						
SHLS				eS	Sg	14 14 02.8	+3.2
	comp=Z,511nm,0.6s						
SHLS	Shalkode	3.25	23	Pg	Pg	14 13 18.3	+0.9
	comp=Z,358nm,0.6s						
SHLS				Lg	Lg	14 14 05.2	
	comp=Z,511nm,0.6s						
SHLS	Shalkode	3.25	23	ePN	Pg	14 13 17.6	+0.2
KURS	Kuram	3.32	6	eP	Pb	14 13 15.2	+0.8
	comp=Z,235nm,0.5s						
KURS				eS	Sg	14 13 59.2	-2.6
	comp=Z,506nm,0.8s						
KURS	Kuram	3.32	6	Pg	Pb	14 13 15.7	+1.3
	comp=Z,235nm,0.5s						
KURS				Lg	Lg	14 14 00.3	
	comp=Z,506nm,0.8s						
KURS	Kuram	3.32	6	ePN	Pb	14 13 15.2	+0.8
KPKS	Kokpek	3.36	12	eP	Pb	14 13 17.1	+2.0
	comp=Z,399nm,0.5s						
KPKS				eS	Sg	14 14 02.1	-1.0
	comp=Z,4µm,8.0s						
KPKS	Kokpek	3.36	12	ePN	Pb	14 13 17.1	+2.0
DGS	Degeres	3.38	335	eP	Pb	14 13 15.4	0.0
	comp=Z,184nm,0.7s						
DGS				eS	Sb	14 13 59.5	+2.8
	comp=Z,810nm,0.6s						
DGS	Degeres	3.38	335	Pg	Pb	14 13 15.4	0.0
	comp=Z,184nm,0.7s						
DGS				Lg	Lg	14 13 59.5	
	comp=Z,810nm,0.6s						
DGS	Degeres	3.38	335	ePN	Pb	14 13 15.4	0.0
PDGK	Podgornoye	3.42	23	Pg	Pb	14 13 18.4	+2.3
	comp=Z,117nm,0.4s						
PDGK				Lg	Lg	14 14 03.9	
	comp=Z,422nm,0.8s						
PDGK	Podgornoye	3.42	23	⇑Pn	Pb	14 13 12.9	-3.2
	comp=Z,173nm,0.6s						
PDGK				⇑Lg	Lg	14 14 04.0	
	comp=Z,1µm,0.8s						
PDGK	Podgornoye	3.42	23	i PN	Pb	14 13 12.9	-3.2
PDGK				pmax	pmax		
	comp=Z,173nm,0.5s						
AAK	Ala-Archa	3.44	317	Pn	Pn	14 13 10.3	+1.1
	comp=Z,6.4nm,0.3s,baz=142,slow=7.2,SNR=45						
AAK				Pg	Pb	14 13 14.4	-1.9
	comp=Z,14nm,0.3s,baz=146,slow=12,SNR=63						
AAK				Lg	Lg	14 13 59.6	
	comp=Z,28nm,0.3s,baz=32,slow=22,SNR=13						
AAK				LR	LR	14 14 41.9	
	comp=Z,293nm,21.6s,baz=142,slow=44						
AAK	Ala-Archa	3.44	317	cePN	Pn	14 13 11.0	+1.8
AAK				pmax	pmax		
	comp=Z,170nm,0.6s						
AAK	Ala-Archa	3.44	317	Pn	Pn	14 13 10.8	+1.5
FRU1	Bishkek	3.49	320	⇑iP	Pn	14 13 11.5	+1.6
	baz=21						
FRU1				⇑iS	Sn	14 13 53.8	+2.2
	baz=21						
CHMS	Chumysh	3.58	323	⇑iP	Pn	14 13 12.8	+1.8
	baz=24						
CHMS				⇑iS	Sn	14 13 55.5	+1.9
	baz=24						
CHMS	Chumysh	3.58	323	P	Pn	14 13 13.0	+2.0
	SNR=10.0						
AML	Almayashu	3.59	304	P	Pn	14 13 12.9	+1.3
	SNR=126						
KTBS	Karatobe	3.61	348	eP	Pb	14 13 19.7	+0.5
	comp=Z,129nm,0.8s						
KTBS				eS	Sb	14 14 06.5	+3.2
	comp=Z,2µm,0.7s						
KTBS	Karatobe	3.61	348	Pg	Pb	14 13 19.7	+0.5
	comp=Z,129nm,0.8s						
KTBS				Lg	Lg	14 14 06.5	
	comp=Z,2µm,0.7s						
KTBS	Karatobe	3.61	348	ePN	Pb	14 13 19.7	+0.5
CHKK	Chushkaly	3.71	352	eP	Pb	14 13 21.9	+1.0
	comp=Z,158nm,0.5s						
CHKK				eS	Sb	14 14 09.9	+3.8
	comp=Z,1µm,0.3s						
CHKK	Chushkaly	3.71	352	Pg	Pb	14 13 21.9	+1.0
	comp=Z,158nm,0.5s						
CHKK				Lg	Lg	14 14 09.9	
	comp=Z,1µm,0.3s						
CHKK	Chushkaly	3.71	352	ePN	Pb	14 13 21.9	+1.0
ARSB	Arslanbob	3.75	289	⇓iP	Pn	14 13 14.2	+0.6
	baz=90						
ARSB				⇓iS	Sn	14 13 58.6	+0.4
	baz=90						
KRBS	Karabastau	3.82	337	eP	Pb	14 13 23.9	+1.0
	comp=Z,111nm,0.8s						
KRBS				eS	Sb	14 14 13.2	+3.8
	comp=Z,557nm,0.7s						
KRBS	Karabastau	3.82	337	Pg	Pb	14 13 23.9	+1.0
	comp=Z,111nm,0.8s						
KRBS				Lg	Lg	14 14 13.2	
	comp=Z,557nm,0.7s						
KRBS	Karabastau	3.82	337	ePN	Pb	14 13 23.9	+1.0
KTMS	Ketmen	3.82	30	eP	Pb	14 13 25.6	+2.7
	comp=Z,3.5nm,0.3s						
KTMS				eS	Sg	14 14 16.2	-1.4
	comp=Z,315nm,0.6s						
KTMS	Ketmen	3.82	30	Pg	Pb	14 13 25.6	+2.7
	comp=Z,3.5nm,0.3s						
KTMS				Lg	Lg	14 14 16.3	
	comp=Z,315nm,0.6s						
KTMS	Ketmen	3.82	30	ePN	Pb	14 13 25.6	+2.7
KUU	Kurty	3.84	345	eP	Pb	14 13 23.8	+0.6
	comp=Z,80nm,0.6s						
KUU				eS	Sb	14 14 13.3	+3.3
	comp=Z,921nm,0.7s						
KUU	Kurty	3.84	345	Pg	Pb	14 13 23.8	+0.6
	comp=Z,80nm,0.6s						
KUU				Lg	Lg	14 14 13.3	
	comp=Z,921nm,0.7s						
KUU	Kurty	3.84	345	ePN	Pb	14 13 23.8	+0.6
EKS2	Erkin-Say	3.85	311	⇓iP	Pn	14 13 16.4	+1.5
	baz=12						
EKS2				⇓iS	Sn	14 14 01.3	+0.9
	baz=12						
EKS2	Erkin-Say	3.85	311	P	Pn	14 13 16.6	+1.8
	SNR=56						
USP	Ospenovka	3.90	323	⇑iP	Pn	14 13 17.5	+2.0
	baz=24						
USP				⇑iS	Sn	14 14 02.9	+1.3
	baz=24						
USP	Ospenovka	3.90	323	P	Pn	14 13 18.2	+2.7
	SNR=13						
MNBS	Baschi	3.93	7	eP	Pb	14 13 27.4	+2.6
	comp=Z,214nm,0.6s						
MNBS				eS	Sg	14 14 19.3	-1.9
	comp=Z,706nm,0.5s						
MNBS	Baschi	3.93	7	Pg	Pb	14 13 27.4	+2.6
	comp=Z,214nm,0.6s						
MNBS				Lg	Lg	14 14 19.3	
	comp=Z,706nm,0.5s						
MNBS	Baschi	3.93	7	ePN	Pb	14 13 27.4	+2.6
SGDS	Sogindy	3.99	326	Pg	Pb	14 13 25.8	0.0
	comp=Z,114nm,0.7s						
SGDS				Lg	Lg	14 14 16.8	
	comp=Z,376nm,0.7s						
ARXS	Arharly	4.03	1	eP	Pb	14 13 28.8	+2.4
	comp=Z,231nm,0.5s						
ARXS				eS	Sg	14 14 21.9	-2.5
	comp=Z,677nm,0.5s						
ARXS	Arharly	4.03	1	Pg	Pb	14 13 28.8	+2.4
	comp=Z,231nm,0.5s						
ARXS				Lg	Lg	14 14 21.9	
	comp=Z,677nm,0.5s						
ARXS	Arharly	4.03	1	ePN	Pb	14 13 28.8	+2.4
MRKS	Merke	4.22	309	eP	Pb	14 13 28.8	-0.9
	comp=Z,60nm,0.6s						
MRKS				eS	Sb	14 14 21.7	+0.7
	comp=Z,150nm,0.6s						
MRKS	Merke	4.22	309	Pg	Pb	14 13 28.8	-0.9
	comp=Z,60nm,0.6s						
MRKS				Lg	Lg	14 14 21.7	
	comp=Z,150nm,0.6s						
DJR	Jarkent	4.43	20	eP	Pg	14 13 37.4	-2.5
	comp=Z,51nm,0.5s						
DJR				eS	Sg	14 14 36.3	-1.0
	comp=Z,281nm,0.5s						
DJR	Jarkent	4.43	20	Pg	Pg	14 13 37.4	-2.5
	comp=Z,51nm,0.5s						
DJR				Lg	Lg	14 14 36.3	
	comp=Z,281nm,0.5s						
MNAS	Manas	4.53	302	⇑eP	Pn	14 13 25.5	+1.2
	baz=3.0						
MNAS				⇑iS	Sn	14 14 18.1	+0.7
	baz=3.0						
TDK	Taldyqorghan	4.85	6	eP	Pb	14 13 43.2	+2.9
	comp=Z,231nm,0.5s						
TDK				eS	Sg	14 14 46.3	-4.3
	comp=Z,812nm,0.6s						
TDK	Taldyqorghan	4.85	6	Pg	Pb	14 13 43.2	+2.9
	comp=Z,231nm,0.5s						
TDK				Lg	Lg	14 14 46.3	
	comp=Z,812nm,0.6s						
DZA	Taraz	5.49	302	eP	Pb	14 13 51.9	+0.6
	comp=Z,116nm,0.1s						
DZA				eS	Sb	14 15 01.9	+4.5
	comp=Z,153nm,0.3s						
DZA	Taraz	5.49	302	Pg	Pg	14 13 54.9	-5.2
	comp=Z,120nm,0.1s						
DZA				Lg	Lg	14 15 06.5	
	comp=Z,153nm,0.3s						
BTLS	Baital	5.55	332	eP	Pb	14 13 54.4	+2.1
	comp=Z,94nm,0.9s						
BTLS				eS	Sb	14 15 05.5	+6.5
	comp=Z,16nm,0.5s						
BTLS	Baital	5.55	332	Pg	Pb	14 13 54.4	+2.1
	comp=Z,94nm,0.9s						
BTLS				Lg	Lg	14 15 05.5	
	comp=Z,16nm,0.5s						
IUG	Iuzhnay	6.11	291	eP	Pb	14 14 03.3	+1.5
	comp=Z,39nm,0.8s						
IUG				eS	Sb	14 15 21.2	+6.1
	comp=Z,130nm,1.1s						
IUG	Iuzhnay	6.11	291	Pg	Pb	14 14 04.9	+3.1
	comp=Z,39nm,0.8s						
IUG				Lg	Lg	14 15 23.5	
	comp=Z,130nm,1.1s						
KK31	Karatay Array	6.12	301	⇑Pn	Pn	14 13 46.1	+0.1
	comp=Z,3.0nm,0.9s,baz=114,slow=13,SNR=13						
KK31				⇓Pg	Pb	14 14 04.1	+2.1
	comp=Z,19nm,0.8s,baz=133,slow=14,SNR=4.6						
KK31				⇓Lg	Lg	14 15 27.5	
	comp=Z,46nm,0.7s,baz=110,slow=27,SNR=6.7						
KK31	Karatay Array	6.12	301	PN	Pn	14 13 45.6	-0.4
KK31	Karatay Array	6.12	301		Pn	14 13 45.6	-0.4
KKAR	Karatay Array	6.12	301	PN	Pn	14 13 44.9	-1.1
KKAR	Karatay Array	6.12	301	Pn	Pn	14 13 45.5	-0.5
KKAR	Karatay Array	6.12	301	Pn	Pn	14 13 44.9	-1.1
MAKZ	Makanchi	7.32	24	⇑Pn	Pn	14 14 06.1	+3.7
	comp=Z,8.8nm,0.9s						
MAKZ				⇑Lg	Lg	14 16 06.7	
	comp=Z,78nm,1.8s						
MAKZ	Makanchi	7.32	24	P	Pn	14 14 04.2	+1.8
MAKZ	Makanchi	7.32	24	Pn	Pn	14 14 04.2	+1.8
MK31	Makanchi Array	7.41	25	⇑Pn	Pn	14 14 06.3	+2.7
	comp=Z,3.7nm,0.5s,baz=206,slow=14,SNR=85						
MK31				⇓Sn	Sn	14 15 30.9	+2.9
	comp=Z,10nm,0.5s						
MK31				⇓Lg	Lg	14 16 09.3	
	comp=Z,32nm,0.6s,baz=210,slow=27						
MK31	Makanchi Array	7.41	25	ceP	Pn	14 14 06.4	+2.7
MK31	Makanchi Array	7.41	25		Pn	14 14 05.7	+2.1
MKAR	Makanchi Array	7.41	25	Pn	Pn	14 14 06.5	+2.8
	comp=Z,1.3nm,0.3s,baz=207,slow=15,SNR=56						
MKAR				Sn	Sn	14 15 28.1	+0.2
	comp=Z,2.1nm,0.3s,baz=201,slow=23,SNR=5.3						
MKAR				Lg	Lg	14 16 12.8	
	comp=Z,3.3nm,0.3s,baz=209,slow=28,SNR=3.9						
MKAR	Makanchi Array	7.41	25	Pn	Pn	14 14 05.8	+2.1
NIL	Nilore	7.42	210	Pn	Pn	14 14 04.1	+0.2
CEP	Cherat	7.85	218	P	Pn	14 14 07.2	-2.7
WMQ	Urumqi	8.29	61	eP	Pn	14 14 20.0	+4.2
WMQ				S	Sn	14 15 53.5	+3.8
WMQ				smax	smax		
	comp=Z,51nm,0.9s						
WMQ				smax	smax		
	comp=Z,31nm,0.5s						
WMQ	Urumqi	8.29	61	P	Pn	14 14 17.6	+1.8
WMQ	Urumqi	8.29	61	Pn	Pn	14 14 17.6	+1.8
THW	Thamme Wali	8.79	215	P	Pn	14 14 21.6	-1.0
ZSN	Zaisan	8.92	33	Pg	Pg	14 14 55.2	-11
	comp=Z,4.6nm,0.5s						
ZSN				Lg	Lg	14 16 51.1	
	comp=Z,15nm,1.2s						
SEM	Semipalatinsk	10.38	9	Pg	Pn	14 15 27.1	+42
	comp=Z,2.5nm,0.1s						
SEM				Lg	Lg	14 17 44.5	
	comp=Z,45nm,0.8s						
KURBB	Kurchatov Arra	10.46	3	Pn	Pn	14 14 45.2	-0.1
	comp=Z,0.3nm,0.3s,baz=192,slow=12,SNR=53						
KURBB				Sn	Sn	14 16 30.6	-12
	comp=Z,0.1nm,0.3s,baz=328,slow=25,SNR=4.7						
KURBB				Lg	Lg	14 17 42.4	
	comp=Z,0.2nm,0.3s,baz=34,slow=19,SNR=4.6						
KURBB	Kurchatov Arra	10.46	3	⇑Pn	Pn	14 14 46.2	+0.8
	comp=Z,8.5nm,0.7s						
KURBB				⇓Lg	Lg	14 17 46.2	
	comp=Z,146nm,1.2s						
KURK	Kurchatov	10.55	3	⇑Pn	Pn	14 14 46.7	0.0
	comp=Z,12nm,0.8s						
KURK				⇑Lg	Lg	14 17 49.1	
	comp=Z,112nm,1.1s						
KURK	Kurchatov	10.55	3	ceP	Pn	14 14 48.0	+1.3
KURK				pmax	pmax		
	comp=Z,12nm,0.8s						
KURK	Kurchatov	10.55	3	Pn	Pn	14 14 46.0	-0.7
DGZ	Jazzator, Alta	11.74	33	i P	Pn	14 15 05.9	+2.7
DGZ				pmax	pmax		
	comp=Z,7.0nm,0.6s						
GKN	Gorkha	13.44	153	eP	Pn	14 15 21.8	-4.5
	comp=Z,11nm,0.4s						
BVAR	Borovoye Array	13.78	341	Pn	Pn	14 15 27.7	-3.1
	comp=Z,0.2nm,0.3s,baz=162,slow=20,SNR=13						
BVAR				Sn	Sn	14 17 49.7	-14
	comp=Z,0.2nm,0.3s,baz=147,slow=25,SNR=1.9						
BVAR				Lg	Lg	14 19 26.2	
	comp=Z,0.4nm,0.3s,baz=137,slow=22,SNR=10						
BRVK	Borovoye	13.84	341	⇑Pn	Pn	14 15 29.3	-2.3
	comp=Z,8.6nm,0.8s						
BRVK				⇑Lg	Lg	14 19 32.4	
	comp=Z,112nm,1.1s						
BRVK	Borovoye	13.84	341	ceP	Pn	14 15 33.8	+2.2
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BRVK	Borovoye	13.84	341	Pn	Pn	14 15 30.3	-1.3
DMN	Daman	13.96	152	eP	Pn	14 15 28.4	-5.2
GUN	Gumba	13.99	149	eP	Pn	14 15 31.7	-2.4
	comp=Z,47nm,1.1s						
PKIN	Phulchoki	14.10	151	eP	Pn	14 15 31.4	-4.1
	comp=Z,16nm,0.6s						
PKI	Pulchoki	14.11	151	eP	Pn	14 15 31.9	-3.8
ZAA0	Zalesovo Array	14.59	17	Pn	Pn	14 15 40.6	-1.3
ZALV	Zalesovo Beam	14.59	17	Pn	Pn	14 15 41.8	-0.1
	comp=Z,0.3nm,0.3s,baz=210,slow=12,SNR=21						
ZALV				Sn	Sn	14 18 32.6	+8.9
	comp=Z,0.1nm,0.3s,baz=207,slow=22,SNR=1.5						
ZALV				Lg	Lg	14 20 02.6	
	comp=Z,0.1nm,0.3s,baz=187,slow=24,SNR=3.6						
ZALV				LR	LR	14 20 37.9	
	comp=Z,51nm,19.2s,baz=233,slow=34						
ZALV	Zalesovo Beam	14.59	17	i P	Pn	14 15 43.4	+1.5
ZALV				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ZALV	Zalesovo Beam	14.59	17	Pn	Pn	14 15 39.8	-2.1
RAMN	Ramite	15.13	148	eP	Pn	14 15 45.2	-4.3
	comp=Z,53nm,1.0s						
TAPN	Taplejung	15.26	144	eP	Pn	14 15 50.7	-0.5
	comp=Z,9.6nm,0.8s						
AB31	Akbulak array	15.51	312	⇑Pn	Pn	14 15 52.4	-1.8
	comp=Z,2.2nm,0.7s,baz=110,slow=13,SNR=18						
AB31				⇓Sn	Sn	14 18 43.0	-3.2
	comp=Z,2.6nm,1.0s,baz=131,slow=22,SNR=3.8						
ABKAR	Akbulak array	15.51	312	Pn	Pn	14 15 51.7	-2.4
AB08	Akbulak array	15.51	312	Pn	Pn	14 15 51.9	-2.2
AB04	Akbulak array	15.51	312	Pn	Pn	14 15 51.9	-2.3
ODAN	Odare	15.54	146	eP	Pn	14 15 51.2	-3.7
	comp=Z,14nm,0.8s						
GTA	Gaotai	17.02	85	eP	Pn	14 16 13.5	-0.2
GTA				pP	pP	14 16 18.0	+0.1
GTA				sP	sP	14 16 20.8	+1.9
GTA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
AKTO	Aktyubinsk	17.17	313	P	Pn	14 16 13.6	-1.8
	comp=Z,0.1nm,0.3s,baz=122,slow=12,SNR=3.5						
AKTO	Aktyubinsk	17.17	313	⇑Pn	Pn	14 16 14.5	-1.0
	comp=Z,6.1nm,0.8s						
AKTO				⇑Sn	S	14 19 30.4	-5.7
	comp=Z,3.5nm,1.0s						
ARU	Arti	20.53	329	P	P	14 16 52.4	-1.5
	comp=Z,2.0nm,0.5s,baz=152,slow=15,SNR=3.6						
ARU				Lg	Lg	14 22 54.0	
	comp=Z,0.5nm,0.3s,baz=221,slow=14,SNR=3.8						
ARU	Arti	20.53	329	d iP	Pn	14 16 57.1	+1.1
ARU						14 17 12.1	
ARU				S	Sn	14 20 45.6	-1.9
ARU				SS	SnSn	14 21 04.6	+2.6
ARU				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ARU	Arti	20.53	329	P	P	14 16 52.7	-1.1
ZAK	Zakamensk	20.60	52	eP	Pn	14 16 59.4	+2.4
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
LZH	Lanzhou	20.95	93	eP	Pn	14 17 01.0	-0.2
LZH				pP	sP	14 17 10.5	+8.5
LZH				sP	pP	14 17 14.5	+14
LZH				PP	PnPn	14 17 22.0	+4.9
LZH				pmax	pmax		
	comp=Z,18nm,1.0s						
LZH				pmax	pmax		
	comp=Z,68nm,5.4s						
SONM	Songino Array	21.93	60	P	P	14 17 11.4	+2.2
	comp=Z,2.5nm,0.9s,baz=258,slow=10,SNR=14						
SONM	Songino Array	21.93	60	P	P	14 17 11.2	+2.1
SONM				pmax	pmax		
	comp=Z,4.0nm,1.2s						
SONM	Songino Array	21.93	60	P	P	14 17 11.2	+2.1
ULN	Ulaanbaatar	22.37	60	ceP	P	14 17 19.7	+5.8
ULN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ULN	Ulaanbaatar	22.37	60	P	P	14 17 16.4	+2.5
ULN				IAmb	IAmb	14 17 29.8	
	comp=Z,8.1nm,1.0s						
BELG	Belogornoye	23.91	311	P	P	14 17 27.3	-2.0
	comp=Z,17nm,0.9s,baz=110,slow=3.7,SNR=5.4						
BELG	Belogornoye	23.91	311	i P	P	14 17 28.0	-1.4
BELG				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GNI	Garni	25.10	281	i P	P	14 17 43.9	+3.3
GNI				pmax	pmax		
	comp=Z,12nm,2.0s						
HHC	Hu-ho-hao-te	25.67	77	eP	P	14 17 47.5	+1.8
HHC				pmax	pmax		
	comp=Z,11nm,1.1s						
HHC				pmax	pmax		
	comp=Z,78nm,6.5s						
KIRV	Kirov	25.73	325	P	P	14 17 44.7	-1.2
	comp=Z,12nm,0.6s,baz=217,slow=0.8,SNR=4.8						
KMI	Kunming	25.77	118	⇓P	P	14 17 50.0	+3.1
KMI				pmax	pmax		
	comp=Z,8.0nm,1.0s						
CMAR	Chiang Mai Arr	28.36	134	P	P	14 18 10.6	+0.6
	comp=Z,0.2nm,0.3s,baz=317,slow=8.9,SNR=1.5						
BJT	Baijiatuau	29.28	78	P	P	14 18 19.1	+1.2
BJT				pmax	pmax		
	comp=Z,4.0nm,1.1s						
BJT	Baijiatuau	29.28	78	P	P	14 18 19.1	+1.2
NRIK	Noril'sk	29.69	7	i P	P	14 18 24.0	+2.8
NRIK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
OBN	Obninsk	30.95	313	eP	P	14 18 34.2	+1.7
OBN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KLMR	Klimovskoe	31.21	324	eP	P	14 18 32.9	-1.9
KLMR				pmax	pmax		
	comp=Z,11nm,1.1s						
KLMR	Klimovskoe	31.21	324	eP	P	14 18 32.9	-1.9
KLMR				AMP		14 18 38.1	
	comp=Z,11nm,1.1s						
RAYN	Ar Rayn	31.77	248	P	P	14 18 39.0	-1.1
RAYN				pmax	pmax		
	comp=Z,2.0nm,0.6s						
RAYN	Ar Rayn	31.77	248	P	P	14 18 39.0	-1.1
RAYN				IAmb	IAmb	14 18 43.0	
	comp=Z,2.0nm,0.6s						
BRTR	Keskin Array B	33.51	284	P	P	14 18 52.6	-2.8
	comp=Z,0.4nm,0.4s,baz=302,slow=37,SNR=3.0						
BRTR	Keskin Array B	33.51	284	ceP	P	14 18 57.5	+2.1
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BRTR	Keskin Array B	33.51	284	P	P	14 18 53.1	-2.3
ANTO	Ankara	34.10	284	P	P	14 18 58.5	-1.9
ANTO	Ankara	34.10	284	P	P	14 18 58.5	-1.9
FIA1	FINESS Array S	37.61	322	P	P	14 19 28.7	-1.4
FINES	FINESS Array B	37.61	322	P	P	14 19 28.6	-1.4
	comp=Z,2.6nm,0.7s,baz=114,slow=7.8,SNR=6.9						
ARCES	ARCESS Array B	39.93	334	P	P	14 19 49.0	-0.5
	comp=Z,5.6nm,0.8s,baz=90,slow=4.9,SNR=8.4						
TIXI	Tiksi	40.38	22	ceP	P	14 19 57.7	+4.5
TIXI				pmax	pmax		
	comp=Z,14nm,1.3s						
TIXI	Tiksi	40.38	22	P	P	14 19 52.7	-0.5

TIXI				IAmb	IAmb	14 19 58.0	
	comp=Z,3.6nm,0.7s						
NC405	NORSAR Array S	44.50	321	P	P	14 20 25.6	-1.3
NB2	NORSAR Subarra	44.74	321	P	P	14 20 27.4	-1.5
	comp=Z,0.8nm,0.6s,baz=87,slow=7.9						
NOA	NORSAR Array B	44.74	321	P	P	14 20 27.3	-1.6
	comp=Z,1.3nm,0.8s,baz=88,slow=7.9,SNR=3.8						
NC204	NORSAR Array S	44.95	321	P	P	14 20 28.7	-1.8
GERES	GERESS Array B	45.22	303	P	P	14 20 31.3	-1.5
	comp=Z,1.7nm,0.8s,baz=72,slow=8.6,SNR=9.2						
KHC	Kasperske Hory	45.23	304	*ce*P	P	14 20 35.8	+2.9
KHC				pmax	pmax		
	comp=Z,12nm,1.7s						
KBS	Kingsbay	46.26	346	P	P	14 20 40.8	+0.2
KBS				pmax	pmax		
	comp=Z,32nm,1.4s						
KBS	Kingsbay	46.26	346	P	P	14 20 40.8	+0.2
DAG	Danmarks Havn	52.71	343	*i* P	P	14 21 29.0	-0.8
	comp=Z,3.9nm,0.7s						
DAG	Danmarks Havn	52.71	343	*i* P	P	14 21 29.0	-0.8
DAG				pmax	pmax		
	comp=Z,4.0nm,0.7s						
DAG	Danmarks Havn	52.71	343	*i* P	P	14 21 29.0	-0.8
DAG				IAmb	IAmb	14 21 30.0	
	comp=Z,3.9nm,0.7s						
DBG	Daneborg	53.86	340	*i* P	P	14 21 37.7	-0.6
DBG				IAmb	IAmb	14 21 42.1	
	comp=Z,2.0nm,0.7s						
SCO	Scoresbysund	55.79	336	P	P	14 21 51.9	-0.4
SCO				pmax	pmax		
	comp=Z,21nm,1.4s						
SCO	Scoresbysund	55.79	336	P	P	14 21 51.9	-0.4
SUMG	Summit	59.26	342	P	P	14 22 17.3	0.0
SUMG	Summit	59.26	342	P	P	14 22 17.2	0.0
EUNU	Eureka	59.68	357	P	P	14 22 20.0	+0.3
EUNU				IAmb	IAmb	14 22 26.9	
	comp=Z,1.7nm,0.9s						
PFVI	Vila Bisbo	64.94	298	P	P	14 22 52.9	-2.6
TOLK	Toolik Lake Re	65.95	17	P	P	14 23 00.8	-0.7
TOLK				IAmb	IAmb	14 23 05.1	
	comp=Z,2.4nm,0.8s						
COLD	Coldfoot	66.92	18	P	P	14 23 07.2	-0.5
COLD				IAmb	IAmb	14 23 11.4	
	comp=Z,1.8nm,0.9s						
BPAW	Bear Paw Mtn.	69.19	21	P	P	14 23 21.1	-1.0
BPAW				IAmb	IAmb	14 23 40.5	
	comp=Z,5.3nm,1.4s						
MDM	Murphy Dome	69.22	19	P	P	14 23 21.2	-1.0
MDM				IAmb	IAmb	14 23 48.7	
	comp=Z,5.3nm,1.4s						
INK	Inuvik	69.33	12	P	P	14 23 21.9	-0.9
	comp=Z,1.6nm,0.9s,baz=17,slow=4.5,SNR=7.8						
INK	Inuvik	69.33	12	P	P	14 23 22.3	-0.5
INK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
INK	Inuvik	69.33	12	P	P	14 23 22.3	-0.5
INK				IAmb	IAmb	14 23 26.0	
	comp=Z,2.4nm,0.9s						
C36M	Paulatuk	69.61	8	P	P	14 23 22.9	-1.5
C36M				IAmb	IAmb	14 23 26.9	
	comp=Z,3.6nm,0.6s						
KTH	Kantishna Hill	69.64	21	P	P	14 23 24.3	-0.6
ILAR	Eielson Array	69.71	19	P	P	14 23 24.1	-1.2
	comp=Z,0.5nm,0.8s,baz=324,slow=4.4,SNR=7.8						
PPLA	Purkeypile	69.81	22	P	P	14 23 25.5	-0.5
SKT	Skwentna	70.72	22	P	P	14 23 30.9	-0.6
TOA0	Torodi Ar. Sit	70.98	271	P	P	14 23 30.9	-2.9
TOA0				IAmb	IAmb	14 23 40.5	
	comp=Z,4.5nm,1.0s						
TORD	Torodi Ar. Bea	70.98	271	P	P	14 23 31.0	-2.8
	comp=Z,2.2nm,0.7s,baz=44,slow=5.7,SNR=8.1						
TORD	Torodi Ar. Bea	70.98	271	P	P	14 23 31.2	-2.6
TORD				IAmb	IAmb	14 23 35.4	
	comp=Z,2.3nm,0.8s						
BALM	Baldy	73.98	19	P	P	14 23 51.1	0.0
BALM				IAmb	IAmb	14 24 12.6	
	comp=Z,6.5nm,1.2s						
HYT	Haines Junctio	75.32	17	P	P	14 23 58.1	-0.7
YKA	Yellowknife Ar	77.19	6	P	P	14 24 08.3	-1.0
	comp=Z,0.7nm,0.7s,baz=354,slow=5.2,SNR=12						
WRA	Warramunga Arr	79.73	127	P	P	14 24 25.1	+1.3
	comp=Z,0.5nm,0.9s,baz=326,slow=4.6,SNR=3.5						
PMG	Port Moresby	80.75	111	LR	LR	15 02 22.5	
	comp=Z,224nm,20.1s,baz=193,slow=37						
ASAR	Alice Springs	82.29	130	P	P	14 24 37.4	-0.1
	comp=Z,0.4nm,0.7s,baz=328,slow=4.8,SNR=4.7						

THR ***25*** *14:43:26.5±0.4, 29°.53N×56°.78E, $h26^{km}\pm7^{km}$, ML3.1*
TEH ***25*** *14:43:27.6, 29°.52N×56°.76E, $h95^{km}$, ML3.0*
KISR ***25*** *14:43:30.2±0.4, 29°.57N×55°.74E, $h7^{km}\pm999^{km}$, ML4.4, Hypocentre not reviewed by the ISC*
DSN ***25*** *14:43:32.3±0.7, 29°.02N×56°.99E, $h10^{km}$, ML3.8/8, Error ellipse: s-maj=33.6km s-min=6.1km az=105.0*
OMAN ***25*** *14:43:33.1, 29°.12N×56°.68E, $h25^{km}$, mb4.8/1, ml3.6/10*
ISC 25 14:43:28.1±1.3**, 29°.46N**±0°.04×**56°.78E**±0°.05**, $h87^{km}\pm13^{km}$, n45, $\sigma1^{s}37$**/58**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NGRK	Negar Kerman	0.18	348	*e*P	Pn	14 43 41.7	+0.5
KRBR	Kerman	0.52	359	IAML		14 43 57.6	
	comp=E,549nm,0.6s						
TVBK	TV Kerman	0.52	359	*e*P	Pn	14 43 43.8	+0.7
CHMN	Cheshme madani	0.78	59	*e*P	Pn	14 43 46.4	+0.9
KHGB	Koh Gabri	0.95	344	*e*P	Pn	14 43 47.1	-0.1
KBAM	BAM	1.50	102	*e*P	Pn	14 43 55.2	+1.4
GENO	Geno	2.12	195	*e*P	Pn	14 44 03.5	+1.5
BNDS	Bandar-Abbas	2.12	195	*e*Pn	Pn	14 44 03.6	+1.6
BNDS				*e*S	Sn	14 44 30.4	+2.5
BNDS				IAML		14 44 31.4	
	comp=N,199nm,0.3s						
BNDS				IAML		14 44 34.4	
	comp=E,169nm,0.6s						
BNDS	Bandar-Abbas	2.12	195	*e*P	Pn	14 44 03.6	+1.6
IMEH	Mehriz	2.68	316	*e*		14 44 09.9	
	comp=Z,99nm,0.3s						
IMEH				*e*P	Pn	14 44 09.6	+0.2
BSRN	Basiran	3.21	38	*e*Pn	Pn	14 44 16.6	+0.1
BSRN	Basiran	3.21	38	*e*P	Pn	14 44 16.6	+0.1
NHDN	Nehbandan	3.42	55	*e*P	Pn	14 44 20.1	+0.8
ICHK	Chekchek	3.44	324	*e*P	Pn	14 44 20.3	+0.6
SHME	Shamm	3.45	190	*i* P	Pn	14 44 20.3	+0.7
	SNR=26						
SHME				S	Sn	14 44 58.5	-0.9
SHME	Shamm	3.45	190	P	Pn	14 44 20.5	+0.9
	SNR=26						
SHME				S	Sn	14 44 58.0	-1.4
YZKH	Yazd	3.47	328	*e*Pn	Pn	14 44 20.4	+0.4
YZKH				*e*S	Sn	14 44 60.0	-0.1
YZKH	Yazd	3.47	328	*e*P	Pn	14 44 20.4	+0.4
ZHSF	Zahedan	3.49	87	*e*Pn	Pn	14 44 21.4	+1.1
ZHSF	Zahedan	3.49	87	*e*P	Pn	14 44 21.4	+1.1
IKOO	Kooshah	3.52	32	*e*P	Pn	14 44 20.7	-0.1
IKOO				*e*		14 45 06.3	
	comp=Z,99nm,0.4s						
BANOM	Banah	3.55	187	*i* P	Pn	14 44 22.4	+1.3
	SNR=74						
BANOM	Banah	3.55	187	P	Pn	14 44 21.7	+0.7
	SNR=74						
BANOM				S	Sn	14 45 00.7	-1.3
TPRV	Parvadeh(Tabas	3.56	359	*e*P	Pn	14 44 21.5	+0.4
ISAD	Sadrabad	3.61	313	*e*P	Pn	14 44 23.0	+0.9
ISAD				*e*		14 44 23.5	
	comp=Z,99nm,0.3s						
MASF	Masafi	4.11	188	P	Pn	14 44 30.1	+1.5
	SNR=11						
MASF				S	Sn	14 45 14.7	-0.9
MSFE	Esma-Masafi	4.12	188	*i* P	Pn	14 44 30.2	+1.4
	SNR=11						
TKDS	Koohdasht(Taba	4.15	4	*e*P	Pn	14 44 29.7	+0.5
MDH	Madha	4.17	186	P	Pn	14 44 30.6	+1.2
MDH	Madha	4.17	186	P	Pn	14 44 29.9	+0.5
MDH				S	Sn	14 45 15.6	-1.4
IMON	Monand	4.47	33	*e*P	Pn	14 44 34.4	+0.8
IMON				*e*		14 44 36.6	
	comp=Z,99nm,0.2s						
UOSS	Minazif	4.53	187	*i* P	Pn	14 44 34.9	+0.7
	SNR=8.3						
UOSS	Minazif	4.53	187	P	Pn	14 44 35.0	+0.7
UOSS				S	Sn	14 45 24.3	-1.4
NAZ	Nazwa, Dubai	4.57	193	P	Pn	14 44 36.6	+1.8
HATD	Hatta, Dubai	4.65	187	P	Pn	14 44 37.3	+1.3
	SNR=7.5						
HATD				S	Sn	14 45 27.7	-1.2
ASHO	Ashiyiah	4.80	188	*i* P	Pn	14 44 39.4	+1.3
	SNR=44						
ASHO	Ashiyiah	4.80	188	P	Pn	14 44 39.4	+1.3
	SNR=44						
ASHO				S	Sn	14 45 32.0	-0.5
FAQ	Al Faqa, Dubai	4.81	193	*i* P	Pn	14 44 40.0	+1.8
	SNR=6.0						
FAQ	Al Faqa, Dubai	4.81	193	P	Pn	14 44 39.5	+1.4
	SNR=6.0						
FAQ				S	Sn	14 45 31.4	-1.3
ASUD	Al Ashush, Dub	4.99	195	*i* P	Pn	14 44 42.2	+1.7
	SNR=9.1						
ASUD	Al Ashush, Dub	4.99	195	P	Pn	14 44 42.2	+1.7
	SNR=9.1						
ASUD				S	Sn	14 45 34.9	-2.0
AJN	Ajban	5.13	199	P	Pn	14 44 43.7	+1.2
AJN				S	Sn	14 45 38.5	-2.0
SOHO	SOHO	5.31	182	P	Pn	14 44 44.3	-0.7
ARQ	Araqi	6.11	182	P	Pn	14 44 57.4	+1.6
	SNR=6.1						
UMZA	Um Al Zommool	6.88	193	P	Pn	14 45 06.3	0.0
UMZA				S	Sn	14 46 18.2	-4.8
UMR	Umm Al-Rimmam	7.90	273	*e*P		14 45 18.4	
UMR				*e*S		14 46 39.1	
RDF	Al-Radifah	8.08	268	*e*P		14 45 20.9	
RDF				*e*S		14 46 43.9	
RDF				IAML		14 46 46.2	
	comp=Z,64nm,0.3s						
MIB	Mutribah	8.22	275	*e*P		14 45 22.4	
RST	Umm Al-Ruwaisa	8.52	273	*e*P		14 45 27.1	
RST				*e*S		14 46 54.8	

IDC 25 14:44:29.7±59.0**, 19°.02S**×**179°.28E, $h0^{km}$, mb3.7**/3**, mb1 3.9**/3**, mb1mx3.6**/33**, mbtmp3.7**/3**, Error ellipse: s-maj=1054.0km s-min=150.7km az=80.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	36.17	242	P	P	14 51 34.5	+0.3
	1.2nm,0.5s,baz=80,slow=11,SNR=5.2						
WRA	Warramunga Arr	42.28	261	P	P	14 52 25.1	-0.3
	0.1nm,0.3s,baz=96,slow=7.6,SNR=7.9						
ASAR	Alice Springs	42.38	255	P	P	14 52 25.9	-0.3
	1.0nm,0.7s,baz=94,slow=8.0,SNR=25						

IDC ***25*** *14:50:55.8±2.8, 15°.93S×172°.73W, $h0^{km}$, mb3.8/5, mb1 4.1/5, mb1mx3.8/35, mbtmp3.8/5, MS3.6/3, Ms1 3.6/3, ms1mx3.1/28, Error ellipse: s-maj=149.6km s-min=24.1km az=142.0*
NEIC ***25*** *14:51:02.9±1.0, 16°.2S±0°.1×172°.5W±0°.2, $h64^{km}\pm9^{km}$, mb4.4/16, Error ellipse: s-maj=23.4km s-min=20.3km az=123.0*
ISC 25 14:50:59.0±0.7**, 16°.1S**±0°.1×**172°.6W**±0°.1**, $h24^{km}$, n32, $\sigma0^{s}60$**/26**, mb4.3**/12**, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	Niue	3.95	139		Pn	14 51 58.2	+0.1
RAR	Rarotonga	13.22	115	LR	LR	14 57 58.8	
	comp=Z,88nm,19.0s,baz=292,slow=32						
DZM	Mont Dzumac	20.64	250	LR	LR	15 02 15.6	
	comp=Z,119nm,19.4s,baz=71,slow=33						
ARMA	Armidale	35.63	240	P	P	14 57 54.8	-0.4
H11N3	WAKE ISLAND Hy	40.86	330	T	T	15 41 15.8	
	baz=150,slow=76,SNR=2.4						
H11N1	WAKE ISLAND Hy	40.86	330	T	T	15 41 16.1	
	baz=150,slow=76,SNR=2.6						
H11N2	WAKE ISLAND Hy	40.88	330	T	T	15 41 17.1	
	baz=150,slow=76,SNR=3.4						
STKA	Stephens Creek	44.34	241	P	P	14 59 07.5	0.0
	1.5nm,0.7s,baz=100,slow=11,SNR=4.9						
STKA	Stephens Creek	44.34	241	P	P	14 59 08.0	+0.5
BBOO	Buckleboo	49.11	240	P	P	14 59 45.5	+0.7
WB0	Warramunga Arr	50.37	257	P	P	14 59 55.1	+0.6
WB0				IAmb	IAmb	14 59 55.8	
	comp=Z,3.1nm,1.1s						
WB2	Warramunga Arr	50.39	257	P	P	14 59 54.8	+0.1
WB2				IAmb	IAmb	14 59 55.8	
	comp=Z,8.9nm,1.5s						
WRAB	Tennant Creek	50.40	257	P	P	14 59 54.9	+0.1
WRAB				IAmb	IAmb	15 00 02.8	
	comp=Z,4.7nm,1.4s						
WRA	Warramunga Arr	50.41	257	P	P	14 59 54.7	-0.1
	comp=Z,0.6nm,0.6s,baz=92,slow=7.5,SNR=11						
AS31	Alice Springs	50.60	252	P	P	14 59 56.1	-0.2
ASAR	Alice Springs	50.60	252	P	P	14 59 56.5	+0.2
	comp=Z,1.7nm,0.7s,baz=88,slow=7.8,SNR=34						
ASAR	Alice Springs	50.60	252	P	P	14 59 56.1	-0.3
FAKI	Fak Fak	55.73	278	P	P	15 00 35.0	+0.8
FORT	Forrest	55.77	244	P	P	15 00 34.8	+0.6
PSA00	Pilbara Seismi	63.71	254	P	P	15 01 27.4	-1.7
PSA00				IAmb	IAmb	15 01 32.1	
	comp=Z,13nm,1.3s						
SDPT	Sand Point	71.89	7	P	P	15 02 19.8	+0.1
NVAR	Mina Array Bea	74.34	42	P	P	15 02 35.4	+0.4
	comp=Z,0.1nm,0.3s,baz=233,slow=6.7,SNR=2.0						
UGM	Wanagama	75.25	266	P	P	15 02 40.9	+0.3
KSRS	Korea Array	77.15	315	LR	LR	15 32 36.1	
	comp=Z,129nm,19.8s,baz=44,slow=32						
USA0B	Ussuriysk Arra	78.36	323	P	P	15 02 57.5	+0.1
USA0B				IAmb	IAmb	15 03 07.2	
	comp=Z,4.0nm,1.0s						
USRK	Ussuriysk Ar.	78.36	323	P	P	15 02 58.0	+0.7
WRH	Wood River Hil	82.48	10	P	P	15 03 18.6	-0.5
WRH				IAmb	IAmb	15 03 21.6	
	comp=Z,3.6nm,1.0s						
CCB	Clear Creek Bu	82.69	11	P	P	15 03 19.3	-0.8
CCB				IAmb	IAmb	15 03 32.2	
	comp=Z,2.9nm,1.1s						
ILAR	Eielson Array	82.97	11	P	P	15 03 21.1	-0.5
	comp=Z,0.6nm,0.6s,baz=228,slow=6.1,SNR=15						
ILAR	Eielson Array	82.97	11	P	P	15 03 20.8	-0.8
GERES	GERESS Array B	146.91	352	PKPbc	PKPbc	15 10 39.8	+0.3
	comp=Z,0.5nm,0.6s,baz=39,slow=3.8,SNR=2.5						
BRTR	Keskin Array B	147.14	321	PKPbc	PKPab	15 10 41.5	-0.6
	comp=Z,0.4nm,0.4s,baz=205,slow=3.0,SNR=3.0						

SJA ***25*** *14:55:57.4±0.7, 31°.21S×69°.00W, $h118^{km}\pm2^{km}$, ML4.0, MW3.9*
NEIC ***25*** *14:55:58.5±1.7, 31°.18S±0°.05×69°.07W±0°.09, $h122^{km}\pm3^{km}$, mb4.6/16, Md4.1(SJA), Error ellipse: s-maj=11.3km s-min=6.8km az=86.0*
IDC ***25*** *14:55:58.3±0.8, 31°.13S×68°.99W, $h115^{km}\pm6^{km}$, mb3.7/8, mb1 3.8/13, mb1mx3.7/30, mbtmp4.0/13, Error ellipse: s-maj=23.2km s-min=15.6km az=81.0*
GUC ***25*** *14:55:58.2±1.1, 31°.17S×69°.08W, $h114^{km}\pm6^{km}$, ML4.5*
ISC 25 14:55:57.9±0.5**, 31°.17S**±0°.03×**69°.00W**±0°.03**, $h116^{km}\pm4^{km}$, n102, $\sigma1^{s}28$**/132**, mb4.3**/13**, 7C-1D, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZON	Zonda	0.47	144	Pn	Pn	14 56 15.7	+0.4
ZON	Zonda	0.47	144	*e*P	Pn	14 56 15.7	+0.4
ZON				*e*S	Sn	14 56 28.5	+0.1
ZON				IAML		14 56 29.7	
	comp=Z,6μm,0.5s						
RTLL	Cerro Villicun	0.48	110	⇓*i*P	Pn	14 56 15.6	+0.3
RTLL				*i* S	Sn	14 56 28.2	-0.3
RTLL				IAML		14 56 31.0	
	comp=E,11μm,0.5s						
RTLL	Cerro Villicun	0.48	110	*e*P	Pn	14 56 15.7	+0.3
RTLL				*e*P		14 56 15.7	
RTLL				*e*S	Sn	14 56 29.1	+0.7
RTLL				IAML		14 56 29.7	
	comp=Z,7μm,0.5s						
SJA	San Juan	0.52	134	*e*P	Pn	14 56 16.4	+0.8
SJA				*e*S	Sn	14 56 29.8	+0.9
SJA				IAML		14 56 30.9	
	comp=Z,4μm,0.2s						
ACCO	Cerro Coronel	0.58	354	*e*P	Pn	14 56 17.1	+0.7
ACCO				IAML		14 56 33.6	
	comp=Z,2μm,3.1s						
RTLS	Leoncito	0.68	202	*e*P	Pn	14 56 17.4	+0.3
RTLS				*e*S	Sn	14 56 32.1	+0.6
RTLS				IAML		14 56 34.0	
	comp=Z,2μm,0.5s						
RTCV	Cerro Valdivia	0.80	151	*e*P	Pn	14 56 18.4	+0.7
ACDV	Cuesta del Vie	1.00	354	*e*P	Pn	14 56 20.8	+1.0
ACDV				*e*S	Sn	14 56 38.3	+2.1
ACDV				IAML		14 56 38.8	
	comp=Z,2μm,0.3s						
AROD	Rodeo	1.08	337	*e*P	Pn	14 56 21.8	+1.1
AROD				*e*S	Sn	14 56 40.6	+2.6
AUSP	Uspallata	1.11	197	*e*P	Pn	14 56 21.5	+0.5
AVFE	Valle Fertil	1.42	70	*e*P	Pn	14 56 25.2	+1.0
AVFE				*e*S	Sn	14 56 45.4	+1.3
AVFE				IAML		14 56 46.9	
	comp=Z,4μm,0.5s						
CO03	El Pedregal	1.49	282	⇑*i*P	Pn	14 56 25.6	+0.5
CO03				*i* S	Sn	14 56 46.0	+0.4
CO03				IAML		14 56 47.4	
	comp=E,13μm,0.3s						
CO03	El Pedregal	1.49	282		Pn	14 56 25.5	+0.5
CO01	Juntas del Tor	1.52	321	⇑*i*P	Pn	14 56 27.2	+1.7
CO01				*i* S	Sn	14 56 48.4	+1.9
CO01	Juntas del Tor	1.52	321		Pn	14 56 27.1	+1.6
CO02	Combarbal	1.72	268		Pn	14 56 27.8	0.0
GO04	Tololo Observa	1.84	302	⇑*i*P	Pn	14 56 29.5	+0.1
GO04				*e*S	Sn	14 56 53.7	+0.2
GO04				IAML		14 56 57.0	
	comp=N,8μm,0.3s						
GO04	Tololo Observa	1.84	302	Pn	Pn	14 56 29.4	-0.1
GO04	Tololo Observa	1.84	302	*e*P	Pn	14 56 29.5	+0.1
GO04				*e*S	Sn	14 56 55.6	+2.1
ACHE	Chepes	2.00	90	*e*P	Pn	14 56 32.3	+1.0
VA03	San Esteban	2.07	219	*e*P	Pn	14 56 32.7	+0.6
VA03				*i* S	Sn	14 56 59.4	+1.0
VA03	San Esteban	2.07	219		Pn	14 56 32.5	+0.3
PEL	Peldehue	2.44	216	⇑*i*P	Pn	14 56 36.9	+0.1
PEL				*i* S	Sn	14 57 06.7	0.0
PEL	Peldehue	2.44	216		Pn	14 56 36.8	+0.1
PEL	Peldehue	2.44	216	*e*P	Pn	14 56 37.0	+0.2
PEL				*e*S	Sn	14 57 07.0	+0.4
ACLC	CERRO LA CRUZ	2.48	46	*e*P	Pn	14 56 38.2	+0.8
ACLC				*e*S	Sn	14 57 09.2	+1.5
ACLC				IAML		14 57 12.5	
	comp=Z,956nm,0.2s						
VCA	Vinchina	2.52	16	*e*P	Pn	14 56 39.6	+1.6
VCA				*e*S	Sn	14 57 11.5	+2.9
VCA				IAML		14 57 15.8	
	comp=Z,503nm,0.3s						
AC05	El Transito	2.57	334	⇑*i*P	Pn	14 56 40.0	+1.4
AC05				*i* S	Sn	14 57 11.0	+1.1
AC05				IAML		14 57 13.4	
	comp=E,1μm,0.4s						
AC05	El Transito	2.57	334		Pn	14 56 39.9	+1.3
LCO	Las Campanas	2.60	325	Pn	Pn	14 56 39.2	0.0
MT03	Universidad Ad	2.65	208	⇑*i*P	Pn	14 56 40.4	+0.7
MT03				*i* S	Sn	14 57 12.8	+1.1
MT03				IAML		14 57 15.5	
	comp=E,2μm,0.4s						
MT05	Renca	2.67	213	⇑*i*P	Pn	14 56 40.0	+0.2
MT05				*i* S	Sn	14 57 12.1	+0.1
MT05				IAML		14 57 13.8	
	comp=E,2μm,0.4s						
MT05	Renca	2.67	213	Pn	Pn	14 56 39.8	+0.1
MT02	Curacav	2.77	220		Pn	14 56 39.8	-1.2
MRA	San Martin	3.06	115	*e*P	Pn	14 56 45.8	+0.8
MRA				*e*S	Sn	14 57 20.8	-0.4
MT09	Talagante	3.10	212	*e*P	Pn	14 56 44.6	-0.9
MT09				*i* S	Sn	14 57 21.5	-0.8
MT09				IAML		14 57 26.3	
	comp=E,880nm,0.3s						
AC04	Llanos de Chal	3.46	328	Pn	Pn	14 56 49.3	-0.9
RFA	San Rafael	3.62	173	*e*P	Pn	14 56 52.0	-0.4
RFA				*e*S	Sn	14 57 33.3	-1.3
RFA				IAML		14 57 37.2	
	comp=Z,221nm,0.4s						
GO03	Copiap	3.72	343		Pn	14 56 53.4	-0.3
GO03	Copiap	3.72	343	*e*P	Pn	14 56 53.8	0.0
GO03				*e*S	Sn	14 57 35.8	-1.1
BO02	Sierra Bellavi	3.92	202	Pn	Pn	14 56 55.7	-0.6
AC02	Maricunga	4.32	358	Pn	Pn	14 57 03.0	+0.9
EDS3	Malargue	4.61	184	*e*P	Pn	14 57 06.0	+0.4
AC01	Pan de Azucar	5.19	344	Pn	Pn	14 57 12.4	-1.0
AHML	Horco Molle	5.42	37	*e*P	Pn	14 57 15.8	-0.7
AHML				*e*S	Sn	14 58 17.0	-0.7
AHML				IAML		14 58 22.4	
	comp=Z,30nm,0.6s						
FSA	Cafayete	5.69	29	*e*P	Pn	14 57 21.3	+1.0
BI02	San Fabin de	5.80	198	Pn	Pn	14 57 19.0	-2.7
GO02	Mina Guanaco	6.00	355	Pn	Pn	14 57 23.7	-1.0
PB14	IPOC Station P	6.63	349	Pn	Pn	14 57 30.6	-2.6
PB14	IPOC Station P	6.63	349	*e*P	Pn	14 57 31.0	-2.2
PB10	IPOC Station P	7.75	349	Pn	Pn	14 57 44.8	-3.2
PB15	IPOC Station P	7.94	357		Pn	14 57 48.7	-2.1
PB06	IPOC Station P	8.44	356	Pn	Pn	14 57 56.2	-1.4
LVC	Limon Verde	8.52	1	P	Pn	14 57 56.7	-2.1
	comp=Z,0.7nm,0.3s,baz=184,slow=5.4,SNR=10						
LVC				S	Sn	14 59 27.4	-6.1
	comp=Z,0.7nm,0.3s,baz=202,slow=19,SNR=1.6						
LVC	Limon Verde	8.52	1	Pn	Pn	14 57 56.4	-2.5
PB09	IPOC Station P	9.33	359	Pn	Pn	14 58 07.3	-2.3
PB07	IPOC Station P	9.43	355	Pn	Pn	14 58 08.5	-2.5
PLCA	Paso Flores	9.63	187	P	Pn	14 58 11.3	-2.1
	comp=Z,0.1nm,0.3s,baz=295,slow=19,SNR=1.8						
PLCA	Paso Flores	9.63	187	Pn	Pn	14 58 12.3	-1.1
PB01	IPOC Station P	10.09	357	Pn	Pn	14 58 17.1	-2.7
CPUP	Villa Florida	11.31	68	P	Pn	14 58 33.4	-2.7
	comp=Z,0.5nm,0.3s,baz=242,slow=11,SNR=8.0						
CPUP	Villa Florida	11.31	68		Pn	14 58 33.6	-2.5
MNMC	Minye Minye	11.99	357	Pn	Pn	14 58 44.9	-0.5
PB16	IPOC Station P	12.78	358	Pn	Pn	14 58 56.1	+0.1
AP01	Chacalluta	12.80	354	Pn	Pn	14 58 55.4	-0.3
LPAZ	La Paz	14.83	3	P	P	14 59 27.0	+1.6
	comp=Z,0.5nm,0.3s,baz=162,slow=6.8,SNR=8.4						
LPAZ	La Paz	14.83	3	P	P	14 59 24.6	-0.8
SIV	San Ignacio	16.75	27	P	P	14 59 46.6	+0.7
	comp=Z,0.5nm,0.3s,baz=224,slow=12,SNR=21						
SAML	Samuel	22.76	15	P	P	15 00 49.7	-0.8
SNAA	Sanae	53.26	159	P	P	15 05 04.9	+0.6
	comp=Z,2.0nm,0.9s,baz=225,slow=20,SNR=1.7						
SNAA	Sanae	53.26	159	P	P	15 05 04.6	+0.3
SNAA				IAmb	IAmb	15 05 24.3	
	comp=Z,7.8nm,1.4s						
TEIG	Tepich	54.35	338	P	P	15 05 12.9	+0.3
QSPA	South Pole Qui	59.07	180	P	P	15 05 46.1	+0.4
QSPA				IAmb	IAmb	15 05 55.9	
	comp=Z,8.3nm,1.4s						
VNDA	Vanda	67.36	191	P	P	15 06 39.5	-0.6
TXAR	Lajitas Array	68.62	328	P	P	15 06 49.3	+0.7
	comp=Z,0.7nm,0.7s,baz=156,slow=9.1,SNR=7.5						
WVT	Waverly	69.24	344	P	P	15 06 52.6	+0.5
MNTX	Cornudas Mount	71.40	328	P	P	15 07 05.5	0.0
FVM	French Village	71.64	342	P	P	15 07 07.4	+0.7
FVM				IAmb	IAmb	15 07 08.2	
	comp=Z,6.4nm,0.8s						
DBIC	Dimbokro	71.82	70	P	P	15 07 09.1	+0.7
	comp=Z,2.7nm,0.8s,baz=222,slow=7.2,SNR=3.7						
DBIC	Dimbokro	71.82	70	P	P	15 07 09.0	+0.7
DBIC				IAmb	IAmb	15 07 09.2	
	comp=Z,12nm,1.3s						
CCM	Cathedral Cave	71.93	342	P	P	15 07 08.7	+0.3
S39A	Bolivar	72.17	340	P	P	15 07 10.7	+0.7
R40A	Maddies Statio	72.43	341	P	P	15 07 10.9	-0.5
R40A				IAmb	IAmb	15 07 13.0	
	comp=Z,9.9nm,0.8s						
P40A	Paris	73.53	342	P	P	15 07 18.4	+0.5
P40A				IAmb	IAmb	15 07 19.5	
	comp=Z,15nm,1.2s						
E63A	Oxbow	77.23	0	P	P	15 07 39.5	+0.7
D62A	Allapoint, All	77.88	360	P	P	15 07 43.3	+0.8
D62A				IAmb	IAmb	15 07 59.8	
	comp=Z,23nm,1.5s						
BOSA	Boshof	79.08	117	P	P	15 07 50.2	+0.3
	comp=Z,1.7nm,0.7s,baz=159,slow=3.5,SNR=3.2						
BOSA	Boshof	79.08	117	IAmb	IAmb	15 07 59.9	
	comp=Z,15nm,1.5s						
TORD	Torodi Ar. Bea	80.81	69	P	P	15 07 59.5	+0.4
	comp=Z,2.1nm,0.6s,baz=280,slow=6.8,SNR=10						
TORD				pP	pP	15 08 30.0	+1.0
	comp=Z,1.3nm,0.8s,baz=272,slow=5.6,SNR=3.7						
PDAR	Pinedale Array	82.46	331	P	P	15 08 07.7	+0.2
	comp=Z,0.3nm,0.5s,baz=134,slow=6.4,SNR=3.9						
NVAR	Mina Array Bea	83.09	323	P	P	15 08 12.0	+1.2
	comp=Z,0.5nm,0.7s,baz=180,slow=4.4,SNR=3.5						
ULM	Lac du Bonnet	84.49	343	P	P	15 08 16.9	-0.5
	comp=Z,2.6nm,0.9s,baz=199,slow=1.7,SNR=5.4						
ASAR	Alice Springs	121.23	205	PKP	PKPdf	15 14 37.4	-0.4
	comp=Z,0.4nm,0.4s,baz=132,slow=1.7,SNR=17						
WRA	Warramunga Arr	124.46	207	PKP	PKPdf	15 14 44.0	0.0

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=Z,1.3nm,0.4s,baz=160,slow=1.8,SNR=43						
WRA	Warramunga Arr	124.46	207		PKPdf	15 14 43.1	-0.9
KSH	Kashi	150.38	64	PKPbc	PKiKP	15 15 37.0	+0.5
KSH				PP	PP	15 19 13.3	+0.5
KSH				AMB	AMB		
	comp=Z,200nm,6.6s						
ZALV	Zalesovo Beam	150.47	32	PKPbc	PKiKP	15 15 36.3	+0.3
	comp=Z,3.3nm,0.4s,baz=303,slow=3.0,SNR=17						
ZALV				pPKPbc	pPKPbc	15 16 07.1	-0.2
	comp=Z,2.1nm,0.5s,baz=311,slow=3.6,SNR=5.8						
ZALV	Zalesovo Beam	150.47	32		PKPbc	15 15 35.8	+0.4
MKAR	Makanchi Array	152.96	47	PKPbc	PKiKP	15 15 41.9	+0.4
	comp=Z,0.7nm,0.6s,baz=307,slow=2.0,SNR=12						
MKAR				PKPab	PKPab	15 15 53.5	+0.4
	comp=Z,1.1nm,0.7s,baz=302,slow=3.4,SNR=10.0						
MKAR				pPKPbc	pPKPbc	15 16 12.4	-1.0
	comp=Z,0.3nm,0.6s,baz=310,slow=2.4,SNR=3.0						
MKAR	Makanchi Array	152.96	47		PKPbc	15 15 41.5	+0.2
SONM	Songino Array	162.98	11	PKPab	PKPab	15 16 36.8	+0.5
	comp=Z,0.1nm,0.4s,baz=142,slow=42,SNR=2.7						

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*IDC **25** 15:25:19.9±3.0, 14.°66S×174.°00W, h0^{km}, mb3.8/4, mb1 4.2/4, mb1mx3.8/28, mbtmp3.8/4, MS3.2/1, Ms1 3.2/1, ms1mx2.7/28, Error ellipse: s-maj=168.8km s-min=26.4km az=146.0*

*NEIC **25** 15:25:21.0±1.7, 15.°2S±0.°1×173.°7W±0.°1, h10^{km}±1^{km}, mb4.1/9, Error ellipse: s-maj=24.4km s-min=17.9km az=262.0*

ISC 25 15:25:21.0±0.7**, 15.°1S**±0.°1×**173.°7W**±0.°1**, h10^{km}, n26, σ1^s.13**/18**, mb4.1**/9**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	5.33	138		Pn	15 26 39.7	-0.9
KNTN	Kanton	12.42	9	Pn	Pn	15 28 18.1	+0.1
DZM	Mont Dzumac	20.05	247	LR	LR	15 36 01.2	
	comp=Z,63nm,19.0s,baz=71,slow=32						
SNZO	South Karori	27.97	199	P	P	15 31 06.8	-5.0
WHZ	Wether Hill Ro	34.34	203	P	P	15 32 09.1	+1.2
H11S2	WAKE ISLAND Hy	38.59	329	T	T	16 13 33.6	
	baz=147,slow=76,SNR=4.3						
H11S3	WAKE ISLAND Hy	38.60	329	T	T	16 13 36.9	
	baz=147,slow=76,SNR=5.4						
H11S1	WAKE ISLAND Hy	38.60	329	T	T	16 13 16.8	
	baz=147,slow=76,SNR=3.9						
H11N3	WAKE ISLAND Hy	39.53	331	T	T	16 14 50.0	
	baz=159						
H11N1	WAKE ISLAND Hy	39.54	331	T	T	16 15 01.2	
	baz=159						
H11N2	WAKE ISLAND Hy	39.55	331	T	T	16 14 59.9	
	baz=159						
STKA	Stephens Creek	43.94	240	P	P	15 33 28.3	-0.1
WR0	Warramunga Arr	49.45	257	P	P	15 34 11.1	-0.7
WR0				IAmb	IAmb	15 34 23.8	
	comp=Z,2.4nm,1.2s						
WB0	Warramunga Arr	49.60	257	P	P	15 34 12.9	0.0
WB0				IAmb	IAmb	15 34 14.0	
	comp=Z,1.8nm,0.9s						
WB2	Warramunga Arr	49.63	257	P	P	15 34 12.8	-0.4
WB2				IAmb	IAmb	15 34 27.9	
	comp=Z,2.5nm,1.0s						
WRA	Warramunga Arr	49.64	257	P	P	15 34 12.7	-0.6
	comp=Z,0.6nm,0.6s,baz=96,slow=8.2,SNR=15						
WRA	Warramunga Arr	49.64	257	P	P	15 34 12.6	-0.6
AS31	Alice Springs	49.93	252	P	P	15 34 14.7	-0.7
AS31				IAmb	IAmb	15 34 15.8	
	comp=Z,0.8nm,0.6s						
ASAR	Alice Springs	49.94	252	P	P	15 34 14.6	-0.8
	comp=Z,3.0nm,0.7s,baz=85,slow=8.1,SNR=75						
ASAR	Alice Springs	49.94	252	P	P	15 34 14.5	-1.0
FORT	Forrest	55.30	243	P	P	15 34 54.2	-0.8
NVAR	Mina Array Bea	74.31	42	P	P	15 36 59.9	+0.8
	comp=Z,0.7nm,0.7s,baz=225,slow=8.9,SNR=5.4						
NVAR	Mina Array Bea	74.31	42	P	P	15 37 00.3	+1.2
QSPA	South Pole Qui	74.92	180	P	P	15 37 02.9	+0.8
QSPA				IAmb	IAmb	15 37 22.2	
	comp=Z,4.1nm,1.2s						
ILAR	Eielson Array	82.23	11	P	P	15 37 39.1	-2.9
	comp=Z,0.4nm,0.8s,baz=216,slow=5.8,SNR=4.8						
IMAR	Indian Mountai	82.24	8	P	P	15 37 43.3	+1.3

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*THR **25** 15:31:27.7±0.4, 30.°82N×56.°80E, h14^{km}±5^{km}, ML3.3*
*TEH **25** 15:31:27.3, 30.°81N×56.°76E, h10^{km}, ML3.5*

ISC 25 15:31:28.2±1.0**, 30.°77N**±0.°05×**56.°77E**±0.°04**, h10^{km}, n28, σ0^s.90**/30**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHGB	Koh Gabri	0.46	213	*e*Pg	Pg	15 31 37.2	-0.1
KHGB				*e*Sg	Sg	15 31 43.9	+0.4
TVBK	TV Kerman	0.78	180	*e*Pg	Pb	15 31 43.5	-0.6
TVBK				*e*		15 31 56.6	
	comp=Z,99nm,0.2s						
KRBR	Kerman	0.78	180	*e*Pg	Pb	15 31 43.7	-0.4
KRBR				IAML		15 31 57.9	
	comp=E,983nm,0.2s						
KRBR	Kerman	0.78	180	*e*Pg	Pb	15 31 43.7	-0.4
NGRK	Negar Kerman	1.12	182	*e*Pg	Pn	15 31 49.8	-0.5
NGRK				*e*		15 32 10.2	
	comp=Z,99nm,0.2s						
CHMN	Cheshme madani	1.12	143	*e*Pg	Pb	15 31 49.2	-0.7
IBAF	Bafgh	1.32	309	*e*Pg	Pn	15 31 51.3	-1.6
IBAF				*e*		15 31 54.0	
	comp=Z,99nm,0.2s						
IMEH	Mehriz	1.95	289	*e*		15 32 04.8	
	comp=Z,99nm,0.3s						
IMEH				*e*Pn	Pn	15 32 02.4	+0.7
KBAM	BAM	2.19	138	*e*		15 32 46.9	
	comp=Z,99nm,0.4s						
KBAM				*e*Pn	Pb	15 32 07.1	-0.8
TPRV	Parvadeh(Tabas	2.26	358	*e*		15 32 40.6	
	comp=Z,99nm,0.3s						
TPRV				*e*Pn	Pn	15 32 06.1	+0.4
BSRN	Basiran	2.34	59	*e*Pn	Pn	15 32 07.3	+0.3
BSRN				*e*Sg	Sb	15 32 39.8	0.0
BSRN	Basiran	2.34	59	*e*Pn	Pn	15 32 07.3	+0.3
YZKH	Yazd	2.46	312	*e*Pn	Pn	15 32 09.4	+0.8
YZKH				IAML		15 32 50.4	
	comp=N,128nm,0.3s						
YZKH	Yazd	2.46	312	*e*Pn	Pn	15 32 09.4	+0.8
ICHK	Chekchek	2.50	307	*e*Pn	Pn	15 32 10.0	+0.8
ICHK				*e*		15 32 16.3	
	comp=Z,99nm,0.3s						
IKOO	Kooshah	2.52	49	*e*		15 32 49.4	
	comp=Z,99nm,0.5s						
IKOO				*e*Pn	Pn	15 32 09.7	+0.1
ITEG	Tejag	2.71	38	*e*Pn	Pn	15 32 12.3	+0.2
TKDS	Koohdasht(Taba	2.86	6	*e*Pn	Pn	15 32 14.1	+0.1
TKDS				*e*		15 33 00.4	
	comp=Z,99nm,0.3s						
ISAD	Sadrabad	2.88	294	*e*Pn	Pn	15 32 15.8	+1.4
ISAD				*e*		15 33 03.8	
	comp=Z,99nm,0.3s						
NHDN	Nehbandan	2.88	77	*e*Pn	Pn	15 32 16.5	+2.1
NHDN				*e*		15 33 06.5	
	comp=Z,99nm,0.6s						
TNSJ	Nastanj	3.19	358	*e*Pn	Pn	15 32 17.8	-0.8
AFRZ	Afriz	3.27	35	*e*Pn	Pn	15 32 19.5	-0.2
IDAH	Dahanechah	3.29	53	*e*Pn	Pn	15 32 21.7	+1.6
IMON	Monand	3.45	45	*e*Pn	Pn	15 32 23.3	+1.0
ANAR	Anarak	3.54	314	*e*Pn	Pn	15 32 24.3	+0.9
IRAM	Ramesheh	3.90	287	*e*Pn	Pn	15 32 29.2	+0.8
IZEF	Zefreh	4.33	300	*e*Pn	Pn	15 32 35.7	+1.3
SBZV	Sabzevar	5.65	7	*e*Pn	Pn	15 32 51.8	-0.7

IDC 25 15:37:57.3±2.2**, 9.°31S**×**111.°93E, h0^{km}, mb3.4**/5**, mb1 3.5**/5**, mb1mx3.4**/27**, mbtmp3.4**/5**, Error ellipse: s-maj=84.7km s-min=22.0km az=53.0, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.09	119	P	P	15 43 14.8	0.0
	0.2nm,0.5s,baz=293,slow=11,SNR=10						
ASAR	Alice Springs	25.40	127	P	P	15 43 26.6	-0.1
	0.5nm,0.5s,baz=303,slow=9.4,SNR=12						
KSRS	Korea Array	48.87	17	P	P	15 46 45.5	+0.7
	0.5nm,0.6s,baz=204,slow=9.4,SNR=1.0						
SONM	Songino Array	57.10	356	P	P	15 47 45.7	+0.1
	0.2nm,0.5s,baz=155,slow=6.2,SNR=2.3						
MKAR	Makanchi Array	61.79	337	P	P	15 48 17.3	-0.6
	0.2nm,0.3s,baz=143,slow=7.2,SNR=8.2						

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*IDC **25** 15:59:52.6±1.7, 6.°77S×128.°61E, h277^{km}±25^{km}, mb2.7/1, mb1 3.2/6, mb1mx2.9/38, mbtmp3.8/6, Error ellipse: s-maj=33.1km s-min=18.7km az=92.0*

ISC 25 15:59:51.6±0.9**, 6.°76S**±0.°07×**128.°6E**±0.°1**, h300^{km}, n6, σ3^s.56**/11**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	5.95	234	P	Pn	16 01 20.4	0.0
	2.8nm,0.3s,baz=117,slow=9.0,SNR=8.7						
BATI				S	S	16 02 27.0	-5.0
	2.7nm,0.3s,baz=95,slow=20,SNR=6.6						
SIJI	Sorong	6.43	25	P	Pn	16 01 26.9	+0.7
	0.4nm,0.3s,baz=266,slow=19,SNR=9.7						
SIJI				S	S	16 02 38.6	-4.0
	1.0nm,0.3s,baz=201,slow=22,SNR=11						
FITZ	Fitzroy Crossi	11.63	194	P	P	16 02 32.5	+1.0
	0.3nm,0.3s,baz=32,slow=9.8,SNR=8.1						
FITZ				S	S	16 04 39.5	0.0
	0.0nm,0.3s,baz=131,slow=20,SNR=1.6						
WRA	Warramunga Arr	14.25	157	P	Pn	16 03 00.8	-0.4
	0.4nm,0.3s,baz=332,slow=13,SNR=25						
WRA				S	S	16 05 32.8	-4.6
	0.0nm,0.3s,baz=329,slow=24,SNR=2.7						
ASAR	Alice Springs	17.58	164	P	Pn	16 03 39.0	-1.3
	0.6nm,0.3s,baz=342,slow=11,SNR=123						
ASAR				S	S	16 06 48.8	+5.0
	0.0nm,0.3s,baz=332,slow=17,SNR=2.6						
MKAR	Makanchi Array	67.26	327	P	P	16 10 17.8	+3.5
	0.2nm,0.6s,baz=118,slow=6.4,SNR=1.8						

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*IDC **25** 16:01:33.7±15.0, 35.°79N×72.°51E, h269^{km}±276^{km}, mb3.0/2, mb1 2.7/3, mb1mx2.4/44, mbtmp3.4/3, ML2.4/1, Error ellipse: s-maj=767.2km s-min=76.8km az=130.0*

ISC 25 16:01:07.2±1.9**, 35.°4N**±0.°1×**72.°2E**±0.°2**, h10^{km}, n5, σ1^s.19**/7**, 1D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	7.84	351	P	Pn	16 03 02.2	+1.0
	1.1nm,0.4s,baz=184,slow=13,SNR=34						
KK31				⇓S	Sn	16 04 29.0	-1.0
	0.9nm,0.7s,baz=194,slow=24,SNR=3.6						
TKM2	Tokmak 2	8.00	18	P	Pn	16 03 02.6	-1.0
	0.5nm,0.5s						
TKM2				S	Sn	16 04 34.0	-0.3
	0.4nm,0.5s						
MKAR	Makanchi Array	13.71	31	P	P	16 04 31.3	+0.9
	0.0nm,0.3s,baz=219,slow=12,SNR=2.0						
ZALV	Zalesovo Beam	20.58	22	P	P	16 05 47.2	+1.2
	1.1nm,0.4s,baz=213,slow=10,SNR=7.3						
TORD	Torodi Ar. Bea	66.66	270	P	P	16 11 57.8	-0.7
	0.6nm,0.7s,baz=56,slow=4.5,SNR=1.8						

IDC 25 16:33:15.7±7.8**, 12.°47N**×**145.°89E, h0^{km}, mb3.5**/5**, mb1 3.7**/5**, mb1mx3.4**/36**, mbtmp3.5**/5**, MS3.1**/1**, Ms1 3.1**/1**, ms1mx2.5**/21**, Error ellipse: s-maj=216.9km s-min=49.8km az=1.0, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PETK	Petropavlovsk-	41.62	11	LR	LR	16 58 04.9	
	comp=Z,23nm,19.9s,baz=30,slow=36						
SONM	Songino Array	48.22	325	P	P	16 41 57.7	-0.6
	0.2nm,0.6s,baz=126,slow=7.3,SNR=2.5						
MKAR	Makanchi Array	62.98	316	P	P	16 43 45.6	+1.2
	0.1nm,0.3s,baz=101,slow=7.5,SNR=1.8						
ILAR	Eielson Array	69.15	25	P	P	16 44 23.3	-0.4
	0.2nm,0.4s,baz=247,slow=5.8,SNR=7.7						
YKA	Yellowknife Ar	83.39	27	P	P	16 45 45.8	+1.2
	0.3nm,0.7s,baz=284,slow=4.3,SNR=3.4						
FINES	FINESS Array B	92.59	335	P	P	16 46 27.5	-1.5
	0.8nm,0.7s,baz=46,slow=4.0,SNR=4.7						

IDC 25 17:04:05.9±3.6**, 39.°82S**×**91.°62W, h0^{km}, mb3.8**/3**, mb1 4.2**/3**, mb1mx3.9**/19**, mbtmp3.8**/3**, MS3.9**/14**, Ms1 3.9**/14**, ms1mx3.7**/24**, Error ellipse: s-maj=111.6km s-min=57.9km az=3.0, West Chile Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H03S2	Juan Fernandez	11.79	64	T	T	17 19 32.9	
	baz=233,slow=73,SNR=285						
H03S1	Juan Fernandez	11.80	64	T	T	17 19 30.3	
	baz=233,slow=73,SNR=201						
H03S3	Juan Fernandez	11.81	64	T	T	17 19 36.0	
	baz=233,slow=73,SNR=165						
H03N3	Juan Fernandez	12.01	62	T	T	17 19 46.8	
	baz=235,slow=71,SNR=2774						
H03N2	Juan Fernandez	12.01	62	T	T	17 19 41.5	
	baz=235,slow=71,SNR=2296						
H03N1	Juan Fernandez	12.02	62	T	T	17 19 48.1	
	baz=235,slow=71,SNR=3238						
PLCA	Paso Flores	16.11	100	LR	LR	17 12 34.6	
	comp=Z,374nm,19.3s,baz=268,slow=32						
LPAZ	La Paz	31.11	48	P	P	17 10 26.9	0.0
	0.6nm,0.5s,baz=201,slow=8.6,SNR=1.9						
LPAZ				LR	LR	17 20 15.1	
	comp=Z,232nm,21.7s,baz=216,slow=31						
CPUP	Villa Florida	31.52	75	LR	LR	17 21 38.4	
	comp=Z,222nm,20.1s,baz=228,slow=33						
RKT	Rikitea	40.13	281	*e*LR	LR	17 22 30.8	
	comp=Z,365nm,26.5s						
BDFB	Brasilia	44.91	70	LR	LR	17 30 41.2	
	comp=Z,436nm,18.9s,baz=240,slow=36						
ROSC	El Rosal	47.21	24	LR	LR	17 31 49.5	
	comp=Z,98nm,18.1s,baz=132,slow=35						
TBI	Tubuai	51.09	271	*e*S	S	17 20 15.1	-14
	61nm,29.2s						
TBI				*e*LR	LR	17 27 32.0	
	comp=Z,558nm,28.0s,baz=131						
PPT2	Papeete2	54.46	276	*e*S	S	17 21 02.8	-12
	100nm,25.2s						
PPT2				*e*LR	LR	17 29 12.4	
	comp=Z,363nm,27.2s						
PPT	Papeete	54.47	276	LR	LR	17 29 41.7	
	comp=Z,121nm,19.8s,baz=123,slow=28						
VNDA	Vanda	54.91	195	LR	LR	17 32 18.5	
	comp=Z,81nm,19.4s,baz=224,slow=31						
TXAR	Lajitas Array	69.71	349	LR	LR	17 40 58.0	
	comp=Z,70nm,18.9s,baz=0.0,slow=32						
MAW	Mawson	71.17	170	LR	LR	17 44 51.1	
	comp=Z,206nm,18.2s,baz=58,slow=34						
NVAR	Mina Array Bea	81.62	339	P	P	17 16 26.1	+0.3
	0.1nm,0.3s,baz=172,slow=7.3,SNR=1.7						
PDAR	Pinedale Array	83.80	347	P	P	17 16 36.8	-0.2
	1.4nm,0.9s,baz=156,slow=5.7,SNR=8.3						
PDAR				LR	LR	17 50 01.9	
	comp=Z,41nm,18.9s,baz=126,slow=33						
DZM	Mont Dzumac	84.81	246	*e*LR	LR	17 42 57.0	
	comp=Z,141nm,30.9s						
SADO	Sadowa	84.95	9	LR	LR	17 50 38.0	
	comp=Z,48nm,18.4s,baz=240,slow=33						
BOSA	Boshof	90.13	128	LR	LR	17 55 50.2	
	comp=Z,45nm,18.3s,baz=195,slow=34						
DBIC	Dimbokro	91.74	83	LR	LR	17 56 21.9	
	comp=Z,62nm,18.0s,baz=206,slow=34						
STKA	Stephens Creek	93.28	223	LR	LR	17 51 08.0	
	comp=Z,42nm,18.7s,baz=202,slow=30						
KBZ	Khabaz	146.18	68	PKPbc	PKPdf	17 23 47.0	+0.4
	1.6nm,0.9s,baz=263,slow=6.3,SNR=2.6						

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*NEIC **25** 17:13:53.7±1.3, 26.°39S±0.°07×27.°61E±0.°05, h5^{km}±1^{km}, mb4.4/2, Error ellipse: s-maj=12.3km s-min=8.0km az=191.0*

*PRE **25** 17:13:53.3±0.9, 26.°44S×27.°48E, h2^{km}, ML3.1*

*IDC **25** 17:13:54.2±1.1, 26.°39S×27.°53E, h0^{km}, mb4.1/5, mb1 4.3/11, mb1mx4.0/33, mbtmp4.3/11, ML4.1/4, Error ellipse: s-maj=18.4km s-min=16.8km az=65.0*

ISC 25 17:13:53.6±0.8**, 26.°41S**±0.°03×**27.°48E**±0.°03**, h6^{km}**±5^{km}**, n36, σ2^s.00**/57**, mb4.2**/6**, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WDLM	Western Deep L	0.05	257	*e*P	Pg	17 13 54.7	-0.5
WDLM				*e*S	Sg	17 13 55.3	-1.0
WDLM				AML	AML	17 14 01.9	
	comp=Z,8μm,0.2s						
KLOF	Kloof	0.13	62	*e*P	Pg	17 13 56.8	+0.4
KLOF				*e*S	Sg	17 13 58.0	-0.3
KLOF				AML	AML	17 13 59.2	
	comp=Z,20μm,0.2s						
PRYS	Parys	0.52	192	*e*P	Pg	17 14 02.9	-0.8
PRYS				*e*S	Sg	17 14 10.0	-0.6
PRYS				AML	AML	17 14 20.5	
	comp=Z,355nm,0.4s						
ERPM	east rand prop	0.69	84	*e*P	Pb	17 14 07.0	-1.1
ERPM				*e*S	Sb	17 14 16.6	-1.3
ERPM				AML	AML	17 14 21.8	
	comp=Z,464nm,0.4s						
KSR	Koster	0.77	317	*e*P	Pg	17 14 08.2	-0.1
KSR				*e*S	Sg	17 14 18.8	+0.6
KSR				AML	AML	17 14 34.5	
	comp=Z,1μm,0.2s						
SWZ	Schweizer	2.07	248	*e*P	Pn	17 14 30.1	+1.0
SWZ				*e*S	Sn	17 14 55.9	+0.6
SWZ				AML	AML	17 15 03.3	
	comp=Z,241nm,0.1s						
LBTB	Lobatse	2.19	309	Pn	Pb	17 14 33.7	-0.1
	comp=Z,95nm,0.3s,baz=132,slow=17,SNR=384						
LBTB				Pg	Pg	17 14 35.2	-0.5
	comp=Z,95nm,0.3s,baz=132,slow=14,SNR=878						
LBTB				Lg	Lg	17 15 03.9	
	comp=Z,168nm,0.3s,baz=32,slow=21,SNR=50						
LBTB	Lobatse	2.19	309	*e*P	Pn	17 14 32.2	+1.4
LBTB	Lobatse	2.19	309	Pn	Pb	17 14 33.5	-0.3
BOSA	Boshof	2.95	221	Pn	Pn	17 14 42.0	+0.8
	comp=Z,8.0nm,0.3s,baz=48,slow=13,SNR=130						
BOSA				Pg	Pb	17 14 48.9	+2.2
	comp=Z,10nm,0.3s,baz=46,slow=15,SNR=27						
BOSA				Sn	Sn	17 15 16.8	-0.3
	comp=Z,9.7nm,0.3s,baz=319,slow=18,SNR=6.7						
BOSA				Lg	Lg	17 15 24.7	
	comp=Z,28nm,0.3s,baz=313,slow=19,SNR=19						
UPI	Upington	5.87	249	*e*P	Pn	17 15 22.2	+0.9
UPI				*e*S	Sn	17 16 26.2	-2.7
UPI				AML	AML	17 17 11.4	
	comp=Z,34nm,0.5s						
MATP	Matopo	6.03	9	Pn	Pn	17 15 24.6	+1.0
	comp=Z,7.7nm,0.3s,baz=190,slow=13,SNR=131						
MATP				Sn	Sn	17 16 30.4	-2.6
	comp=Z,5.0nm,0.3s,baz=53,slow=18,SNR=10.0						
MATP				Lg	Lg	17 16 58.5	
	comp=Z,19nm,0.3s,baz=282,slow=23,SNR=22						
KEIM	Keimoes	6.21	247	*e*P	Pn	17 15 26.7	+0.6
KEIM				*e*S	Sn	17 16 34.3	-3.1
KEIM				AML	AML	17 17 20.3	
	comp=Z,43nm,0.4s						
SOE	Somerset East	6.50	194	*e*P	Pn	17 15 30.3	+0.4
SOE				*e*S	Sn	17 16 41.0	-3.3
SOE				AML	AML	17 16 58.1	
	comp=Z,18nm,0.5s						
AUGR	Augrabies	6.70	249	*e*P	Pn	17 15 34.4	+1.6
AUGR				*e*S	Sn	17 16 46.7	-2.8
AUGR				AML	AML	17 17 03.1	
	comp=Z,19nm,0.9s						
GRAN	Grantham	7.48	217	*e*P	Pn	17 15 44.4	+1.0
GRAN				*e*S	Sn	17 17 05.0	-3.6
GRAN				AML	AML	17 17 12.0	
	comp=Z,7.5nm,0.3s						
ROSN	Rosenhof	8.08	198	*e*P	Pn	17 15 52.0	+0.6
ROSN				*e*S	Sn	17 17 18.4	-4.8
ROSN				AML	AML	17 17 23.2	
	comp=Z,50nm,0.8s						
SUR	Sutherland	8.32	223	Pn	Pn	17 15 56.6	+1.7
	comp=Z,3.0nm,0.3s,baz=37,slow=10,SNR=76						
SUR				Sn	Sn	17 17 26.8	-2.6
	comp=Z,1.8nm,0.3s,baz=338,slow=19,SNR=6.8						
SUR				Lg	Lg	17 18 10.7	
	comp=Z,5.3nm,0.3s,baz=132,slow=22,SNR=7.8						
SUR	Sutherland	8.32	223		Pn	17 15 56.8	+1.8
CVNA	Calvinia	8.44	231	*e*P	Pn	17 15 57.7	+1.1
CVNA				*e*S	Sn	17 17 27.4	-4.9
CVNA				AML	AML	17 18 21.7	
	comp=Z,59nm,0.6s						
AUSN	Aus	10.05	266	*e*P	Pn	17 16 19.1	+0.3
AUSN				*e*S	Sn	17 18 07.0	-5.0
AUSN				AML	AML	17 18 40.3	
	comp=Z,6.2nm,0.5s						
LSZ	Lusaka	11.10	4	Pn	Pn	17 16 32.8	-0.3
	comp=Z,1.8nm,0.3s,baz=184,slow=13,SNR=24						
LSZ				Sn	Sn	17 18 31.9	-5.8
	comp=Z,1.0nm,0.3s,baz=94,slow=15,SNR=6.7						
LSZ				Lg	Lg	17 19 37.6	
	comp=Z,0.9nm,0.3s,baz=303,slow=16,SNR=4.6						
LSZ	Lusaka	11.10	4		Pn	17 16 32.4	-0.7
TSUM	Tsumeb	11.61	306	Pn	Pn	17 16 41.1	+1.1
	comp=Z,1.8nm,0.3s,baz=123,slow=11,SNR=19						
TSUM				Sn	Sn	17 18 50.0	-0.1
	comp=Z,0.3nm,0.3s,baz=74,slow=19,SNR=1.3						
TSUM				Lg	Lg	17 19 56.1	
	comp=Z,1.0nm,0.3s,baz=232,slow=19,SNR=3.8						
TSUM	Tsumeb	11.61	306		Pn	17 16 40.8	+0.8
TORD	Torodi Ar. Bea	46.64	324	P	P	17 22 24.0	+0.9
	comp=Z,2.5nm,0.6s,baz=143,slow=6.4,SNR=15						
TORD	Torodi Ar. Bea	46.64	324	P	P	17 22 23.6	+0.5
TORD				IAmb	IAmb	17 22 24.8	
	comp=Z,2.1nm,0.8s						
ESDC	Sonseca Array	71.99	335	P	P	17 25 20.0	+1.8
	comp=Z,1.1nm,0.6s,baz=155,slow=5.7,SNR=6.0						
AKASG	Malin Array Be	76.79	1	P	P	17 25 46.9	+1.2
	comp=Z,1.1nm,0.7s,baz=168,slow=4.7,SNR=3.2						
LSA	Lhasa	82.65	52	P	P	17 26 18.6	-0.1
LSA				IAmb	IAmb	17 26 21.3	
	comp=Z,2.5nm,0.8s						
FINES	FINESS Array B	87.55	359	P	P	17 26 43.4	+1.5
	comp=Z,1.4nm,0.8s,baz=152,slow=6.3,SNR=5.7						
FINES	FINESS Array B	87.55	359	P	P	17 26 43.5	+1.6
MKAR	Makanchi Array	88.07	34	P	P	17 26 45.5	+0.6
	comp=Z,0.5nm,0.7s,baz=232,slow=4.3,SNR=5.9						
MKAR	Makanchi Array	88.07	34	P	P	17 26 45.7	+0.8
WHAR	Wooly Hollow	128.22	295		PKPdf	17 33 01.5	+0.3
NVAR	Mina Array Bea	148.90	301	PKPbc	PKiKP	17 33 45.5	+1.3
	comp=Z,0.6nm,0.6s,baz=79,slow=4.7,SNR=5.0						

IDC 25 17:20:54.9±351.0**, 57.°90N**×**32.°73E, h0^{km}, Error ellipse: s-maj=122.5km s-min=55.0km az=125.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I43RU	DUBNA INFRASON	2.71	114	*i*		17 40 50.0	
	baz=295,slow=319,SNR=3.5						
I37NO	I37NO	12.81	337	*i*		18 34 20.0	
	baz=143,slow=333,SNR=0.7						
I46RU	ZALESOVO INFRA	28.85	75	*i*		20 16 33.2	
	baz=298,slow=335						
I34MN	SONGINO INFRAS	43.48	70	*i*		21 45 10.0	
	baz=313,slow=341,SNR=0.6						

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*JMA **25** 17:29:53.6±0.1, 30.°90N×142.°40E, h45^{km}, M3.6*

*IDC **25** 17:29:58.3±3.0, 30.°80N×141.°14E, h0^{km}, mb3.5/4, mb1 3.6/7, mb1mx3.4/35, mbtmp3.5/7, ML3.2/3, MS2.5/1, Ms1 2.5/1, ms1mx2.2/35, Error ellipse: s-maj=123.6km s-min=18.1km az=71.0*

ISC 25 17:29:58.6±1.3**, 30.°96N**±0.°09×**141.°8E**±0.°2**, h24^{km}, n14, σ2^s.43**/15**, mb3.6**/4**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAOM	Aogashimamukai	2.31	311	*e*S	Sb	17 31 08.0	+0.2
JHJ	Hachijo jima 2	2.77	322	Pn	Pn	17 30 40.9	-0.5
	8.4nm,0.3s,baz=105,slow=20,SNR=2.3						
JHJ				Sn	Sn	17 31 10.4	-3.7
	5.1nm,0.3s,baz=242,slow=22,SNR=1.2						
BSO1	Boso 1	3.75	349	P	Pn	17 30 53.1	-1.4
CBIJ	Chichi jima	3.86	175	S	Sn	17 31 34.7	-6.4
JCJ	Chichijima	3.86	175	Pn	Pn	17 30 59.2	+2.7
	6.1nm,0.3s,baz=101,slow=24,SNR=9.6						
JCJ				Sn	Sn	17 31 40.2	-1.0
	3.7nm,0.3s,baz=292,slow=21,SNR=2.0						
JOD2	Odawara 2	4.87	332	P	Pn	17 31 10.6	+0.3
JRY	Ryogami san	5.61	335	P	Pn	17 31 20.8	+0.3
JAG	Ashikaga	5.80	341	P	Pn	17 31 22.6	-0.5
MJAR	Matsushiro Arr	6.33	333	Pn	Pn	17 31 30.8	+0.4
	0.2nm,0.3s,baz=158,slow=11,SNR=8.4						
KSRS	Korea Array	13.20	303	LR	LR	17 37 29.2	
	comp=Z,20nm,19.6s,baz=155,slow=35						
SONM	Songino Array	31.81	312	P	P	17 36 22.5	+1.1
	0.6nm,0.9s,baz=115,slow=6.8,SNR=4.0						
MKAR	Makanchi Array	47.85	307	P	P	17 38 34.7	+0.3
	0.1nm,0.4s,baz=90,slow=9.8,SNR=3.1						
WRA	Warramunga Arr	51.12	189	P	P	17 39 00.7	+1.2
	0.4nm,0.2s,baz=6.6,slow=7.8,SNR=19						

ASAR	**Alice Springs**	**54.85**	**189**	P	**P**	**17 39 28.4**	**+1.4**
	0.3nm,0.3s,baz=6.0,slow=5.4,SNR=17						

IDC 25 17:36:48.9±2.4,3°.04N×126°.07E,h0^{km},mb3.0/3, mb1 3.2/3,mb1mx3.1/30,mbtmp3.0/3,Error ellipse: s-maj=206.4km s-min=30.0km az=65.0,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.24**	**161**	P	P	17 42 06.8	-0.9
	0.3nm,0.7s,baz=340,slow=11,SNR=2.1						
ASAR	**Alice Springs**	**27.62**	**164**	P	P	17 42 39.7	+1.3
	0.1nm,0.2s,baz=344,slow=12,SNR=1.7						
MKAR	**Makanchi Array**	**57.75**	**326**	P	P	17 46 41.3	-0.5
	0.1nm,0.4s,baz=127,slow=7.1,SNR=1.8						

IDC 25 17:49:27.2±2.0,30°.60N×140°.58E,h0^{km},mb3.2/3, mb1 3.3/6,mb1mx3.2/51,mbtmp3.3/6,ML2.8/3,Error ellipse: s-maj=94.6km s-min=20.7km az=74.0, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ	**Hachijo jima 2**	**2.60**	**345**	Pn	Pn	17 50 10.7	+0.2
	1.6nm,0.3s,baz=107,slow=19,SNR=1.0						
JHJ				Sn	Sn	17 50 39.5	-3.3
	10nm,0.3s,baz=90,slow=20,SNR=1.4						
JCJ	**Chichijima**	**3.77**	**158**	Pn	Pn	17 50 25.4	-1.2
	3.8nm,0.3s,baz=318,slow=19,SNR=1.9						
JCJ				Sn	Sn	17 51 08.3	-3.4
	4.4nm,0.3s,baz=263,slow=22,SNR=1.4						
MJAR	**Matsushiro Arr**	**6.24**	**342**	Pn	Pn	17 51 00.8	+0.1
	0.2nm,0.3s,baz=161,slow=12,SNR=8.1						
SONM	**Songino Array**	**31.25**	**313**	P	P	17 55 48.1	-0.7
	0.3nm,0.8s,baz=125,slow=7.2,SNR=2.3						
WRA	**Warramunga Arr**	**50.61**	**188**	P	P	17 58 28.0	-0.1
	0.2nm,0.4s,baz=5.8,slow=7.6,SNR=1.5						
ASAR	**Alice Springs**	**54.34**	**188**	P	P	17 58 56.2	+0.5
	0.3nm,0.8s,baz=0.6,slow=4.9,SNR=1.5						

*TUL **25** 17:58:06.6±1.1,36°.25N±0°.01×97°.60W±0°.02,h4^{km}±7^{km}, ML3.1,mb_Lg3.1/84(NEIC),Error ellipse: s-maj=3.0km s-min=0.4km az=61.0*

*NEIC **25** 17:58:06.5±1.2,36°.245N±0°.009×97°.62W±0°.01,h5^{km}±2^{km}, Error ellipse: s-maj=3.0km s-min=2.3km az=139.0*

*ANF **25** 17:58:06.7±0.7,36°.26N×97°.60W,h5^{km},ML3.9/8,Error ellipse: s-maj=8.7km s-min=6.9km az=159.0*

ISC 25 17:58:05.6±1.1,36°.29N±0°.02×97°.65W±0°.02,h8^{km}±10^{km}, n81,σ1^{s}40/71,Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CROK	**Carrier**	**0.34**	**308**	Pg	**Pb**	**17 58 14.6**	**+0.7**
CROK				Sg	**Sb**	**17 58 19.8**	**+0.3**
OK029	**Liberty Lake**	**0.52**	**162**		**Pg**	**17 58 15.8**	**0.0**
BCOK	**Bluff Creek, N**	**0.64**	**177**	Pg	**Pg**	**17 58 18.1**	**+0.1**
BCOK				Sg	**Sg**	**17 58 25.8**	**-0.5**
BCOK				IAmb_Lg		17 58 26.8	
	comp=Z,234nm,0.8s						
KAN14	**Manchester OK**	**0.71**	**339**		**Pb**	**17 58 21.2**	**+1.0**
KAN14				Sg	**Sn**	**17 58 31.6**	**-1.4**
KAN13	**South Haven SW**	**0.73**	**11**		**Pb**	**17 58 21.4**	**+0.8**
KAN13				Sg	**Sn**	**17 58 32.0**	**-1.6**
OK031	**S. Brethren Rd**	**0.74**	**117**		**Pg**	**17 58 19.9**	**0.0**
OK031				Sg	**Sg**	**17 58 29.1**	**-0.6**
OK025	**Westminster Rd**	**0.76**	**160**		**Pg**	**17 58 20.0**	**-0.2**
QUOK	**Quay**	**0.77**	**99**		**Pg**	**17 58 20.6**	**0.0**
QUOK				Sg	**Sg**	**17 58 30.3**	**-0.3**
OK030	**Cody Creek RV**	**0.79**	**117**		**Pg**	**17 58 20.8**	**-0.1**
OK030				Sg	**Sg**	**17 58 30.7**	**-0.6**
KAN05	**Bluff City Nor**	**0.83**	**348**		**Pn**	**17 58 23.4**	**-0.3**
KAN05				Sg	**Sn**	**17 58 35.0**	**-1.1**
KAN01	**Argonia South**	**0.86**	**354**		**Pn**	**17 58 23.8**	**-0.2**
OKCFA	**Oklahoma City**	**0.89**	**169**		**Pb**	**17 58 22.6**	**-0.8**
KAN10	**Anthony SW Sta**	**0.90**	**337**		**Pn**	**17 58 24.6**	**0.0**
KAN10				Sg	**Sn**	**17 58 37.6**	**-0.2**
OKCSW	**OKLAHOMA CITY**	**0.90**	**169**		**Pb**	**17 58 22.9**	**-0.7**
KAN08	**Anthony NE Sta**	**0.96**	**345**		**Pn**	**17 58 25.9**	**+0.4**
KAN12	**Harper NE Stat**	**1.04**	**345**		**Pg**	**17 58 27.2**	**+1.6**
FNO	**Franklin**	**1.05**	**169**		**Pb**	**17 58 25.9**	**-0.3**
U32A	**Winter Ranch,**	**1.09**	**275**		**Pn**	**17 58 27.7**	**+0.5**
U32A	**Winter Ranch,**	**1.09**	**275**	P		17 58 27.9	
	baz=96						
U32A				S		17 58 43.8	
	baz=96						
T35A	**Sooner Cattle**	**1.11**	**56**		**Pg**	**17 58 27.3**	**+0.4**
T35B	**Sooner Cattle**	**1.11**	**56**	P		17 58 27.5	
	baz=233						
T35B				S		17 58 42.9	
	baz=233						
TUL1	**Leonard**	**1.56**	**104**	P	**Pb**	**17 58 34.2**	**-0.5**
	baz=283						
TUL1				S	**Sb**	**17 58 54.6**	**+0.1**
	baz=283						
TUL1	**Leonard**	**1.56**	**104**		**Pn**	**17 58 33.8**	**+0.2**
TUL1				IAmb_Lg		17 58 56.6	
	comp=Z,100nm,0.9s						
TUL1	**Leonard**	**1.56**	**104**	P		17 58 33.9	
	baz=283						
TUL1				S		17 58 54.5	
	baz=283						
WMOK	**Wichita Mounta**	**1.81**	**211**	P	**Pn**	**17 58 38.4**	**+1.4**
	baz=32						
WMOK				S	**Sb**	**17 59 02.3**	**+0.6**
	baz=32						
WMOK	**Wichita Mounta**	**1.81**	**211**	Pn	**Pn**	**17 58 38.1**	**+1.1**
WMOK	**Wichita Mounta**	**1.81**	**211**	P		17 58 38.3	
	baz=32						
WMOK				S		17 59 02.5	
	baz=32						
R32A	**Long Quarter,**	**2.29**	**339**		**Pb**	**17 58 47.3**	**+0.2**
R32A	**Long Quarter,**	**2.29**	**339**	P		17 58 47.7	
	baz=158						
X37A	**Clayton**	**2.52**	**132**		**Pn**	**17 58 48.1**	**+1.2**
X37A	**Clayton**	**2.52**	**132**	P		17 58 48.2	
	baz=313						
U38A	**Gravette**	**2.64**	**86**		**Pb**	**17 58 51.2**	**-2.0**
KSU1	**Kansas State U**	**2.92**	**16**	P	**Pn**	**17 58 54.7**	**+2.3**
	baz=196						
KSU1				S	**Sb**	**17 59 30.6**	**-3.2**
	baz=196						
KSU1	**Kansas State U**	**2.92**	**16**	Pn	**Pb**	**17 58 55.9**	**-2.0**
KSU1				IAmb_Lg		17 59 47.2	
	comp=Z,51nm,0.8s						
Z35A	**Perchaven, San**	**2.98**	**174**	Pn	**Pn**	**17 58 54.5**	**+1.4**
Z35A	**Perchaven, San**	**2.98**	**174**	P		17 58 54.8	
	baz=354						
HHAR	**Hobbs**	**3.00**	**89**		**Pn**	**17 58 55.0**	**+1.6**
CBKS	**Cedar Bluff**	**3.01**	**327**	P	**Pn**	**17 58 56.5**	**+2.8**
	baz=146						
CBKS				S	**Sb**	**17 59 33.3**	**-3.1**
	baz=146						
CBKS	**Cedar Bluff**	**3.01**	**327**	Pn	**Pb**	**17 58 57.0**	**-2.5**
W39A	**Magazine**	**3.33**	**108**	P	**Pn**	**17 58 59.6**	**+1.6**
	baz=290						
W39A				S	**Sn**	**17 59 38.7**	**+1.0**
	baz=290						
W39A	**Magazine**	**3.33**	**108**	Pn	**Pn**	**17 58 60.0**	**+1.9**
AMTX	**Amarillo**	**3.57**	**248**	P	**Pn**	**17 59 03.3**	**+1.9**
	baz=66						
AMTX	**Amarillo**	**3.57**	**248**	Pn	**Pn**	**17 59 03.1**	**+1.7**
AMTX				IAmb_Lg		18 00 06.1	
	comp=Z,70nm,0.9s						
S39A	**Bolivar**	**3.74**	**67**		**Pn**	**17 59 05.3**	**+1.7**
S39A				IAmb_Lg		18 00 09.1	
	comp=Z,30nm,0.8s						
S39A	**Bolivar**	**3.74**	**67**	P		17 59 05.3	
	baz=248						
Z38A	**Mt. Pleasant**	**3.74**	**143**	Pn	**Pn**	**17 59 04.6**	**+1.0**
Z38A				IAmb_Lg		18 00 13.4	
	comp=Z,66nm,0.8s						
MIAR	**Mount Ida**	**3.76**	**116**	P	**Pn**	**17 59 05.2**	**+1.3**
	baz=298						
MIAR				S	**Sn**	**17 59 49.1**	**+0.8**
	baz=298						
MIAR	**Mount Ida**	**3.76**	**116**	Pn	**Pn**	**17 59 05.4**	**+1.5**
MIAR				IAmb_Lg		18 00 10.2	
	comp=Z,57nm,1.1s						
MIAR	**Mount Ida**	**3.76**	**116**	P		17 59 05.2	
	baz=298						
MIAR				S		17 59 49.1	
	baz=298						
U40A	**Yellville**	**3.88**	**88**	P	**Pn**	**17 59 06.6**	**+1.1**
	baz=270						
U40A	**Yellville**	**3.88**	**88**		**Pn**	**17 59 07.1**	**+1.6**
ABTX	**Abilene, Hawle**	**4.01**	**205**	Pn	**Pn**	**17 59 07.9**	**+0.4**
ABTX				IAmb_Lg		18 00 15.2	
	comp=Z,40nm,1.0s						
WHTX	**Lake Whitney,**	**4.29**	**178**		**Pn**	**17 59 10.5**	**-0.8**
X40A	**Basin Creek Fa**	**4.33**	**113**		**Pn**	**17 59 10.7**	**-1.0**
X40A				IAmb_Lg		18 00 29.0	
	comp=Z,47nm,0.7s						
MGMO	**Mountain Grove**	**4.41**	**77**		**Pn**	**17 59 12.4**	**-0.5**
MGMO				IAmb_Lg		18 00 27.1	
	comp=Z,45nm,0.8s						
N33A	**J Bar K, Exete**	**4.44**	**2**	IAmb_Lg		18 00 29.7	
	comp=Z,28nm,0.7s						
WHAR	**Wooly Hollow**	**4.47**	**101**		**Pn**	**17 59 15.3**	**+1.6**
WHAR				IAmb_Lg		18 00 38.9	
	comp=Z,39nm,0.9s						
FCAR	**Ozark Folk Cen**	**4.50**	**94**		**Pn**	**17 59 15.0**	**+1.0**
FCAR				IAmb_Lg		18 00 36.8	
	comp=Z,25nm,0.8s						
W41B	**Gary Mavity, V**	**4.54**	**103**	S		18 00 07.2	
	baz=285						
WLAR	**White Oak Lake**	**4.55**	**124**	Pn	**Pn**	**17 59 13.5**	**-1.2**
WLAR				IAmb_Lg		18 00 36.9	
	comp=Z,35nm,0.7s						
P38A	**Dawn**	**4.65**	**43**		**Pn**	**17 59 18.7**	**+2.5**
R40A	**Maddies Statio**	**4.73**	**64**		**Pn**	**17 59 18.0**	**+0.7**
R40A				IAmb_Lg		18 00 41.1	
	comp=Z,27nm,1.0s						
KSCO	**Kaye Shedlock’**	**4.79**	**306**		**Pn**	**17 59 20.4**	**+2.2**
KSCO				IAmb_Lg		18 00 53.9	
	comp=Z,30nm,0.7s						
MSTX	**Muleshoe**	**4.79**	**243**		**Pn**	**17 59 18.5**	**+0.3**
N35A	**Tabor**	**4.82**	**18**		**Pn**	**17 59 19.2**	**+0.7**
LCAR	**Lake Charles**	**5.26**	**91**	IAmb_Lg		18 00 53.2	
	comp=Z,24nm,0.8s						
T42A	**Van Buren**	**5.33**	**80**		**Pb**	**17 59 42.6**	**+3.7**
T42A				IAmb_Lg		18 01 01.1	
	comp=Z,36nm,0.8s						
CCAR	**Cane Creek**	**5.37**	**114**	Pn	**Pn**	**17 59 25.2**	**-0.9**
CCAR				IAmb_Lg		18 01 07.1	
	comp=Z,48nm,0.9s						
P40A	**Paris**	**5.48**	**52**	IAmb_Lg		18 01 05.1	
	comp=Z,28nm,0.9s						
435B	**Jarrell**	**5.50**	**179**	IAmb_Lg		18 01 07.9	
	comp=Z,35nm,1.1s						
N38A	**Joes South For**	**5.67**	**36**	IAmb_Lg		18 01 10.8	
	comp=Z,34nm,0.8s						
OGNE	**Ogallala**	**5.77**	**325**	IAmb_Lg		18 01 17.0	
	comp=Z,30nm,0.8s						
PBMO	**Poplar Bluff**	**5.84**	**83**	IAmb_Lg		18 01 16.4	
	comp=Z,46nm,0.7s						
FVM	**French Village**	**6.01**	**72**	IAmb_Lg		18 01 16.2	
	comp=Z,30nm,0.9s						
JCT	**Junction City**	**6.07**	**198**	IAmb_Lg		18 01 32.9	
	comp=Z,42nm,0.8s						
143A	**Socs Landing,**	**6.28**	**123**	IAmb_Lg		18 01 28.2	
	comp=Z,22nm,0.7s						
SLM	**Saint Louis**	**6.35**	**66**	IAmb_Lg		18 01 26.7	
	comp=Z,35nm,0.8s						
S44A	**Carbondale**	**6.87**	**76**	IAmb_Lg		18 01 39.6	
	comp=Z,30nm,0.9s						
SIUC	**Southern Illin**	**6.90**	**76**	IAmb_Lg		18 01 45.6	
	comp=Z,32nm,0.7s						
N41A	**Harden Midland**	**6.92**	**48**	IAmb_Lg		18 01 52.5	
	comp=Z,33nm,0.8s						
OXF	**Oxford**	**6.96**	**102**	IAmb_Lg		18 01 50.8	
	comp=Z,29nm,0.8s						
W45A	**Hickory Valley**	**6.98**	**97**	IAmb_Lg		18 01 54.8	
	comp=Z,30nm,0.7s						
P43A	**Skaggs, Pawnee**	**7.24**	**60**	IAmb_Lg		18 02 06.9	
	comp=Z,34nm,1.1s						
L40A	**Anamosa**	**7.62**	**39**	IAmb_Lg		18 02 19.4	
	comp=Z,20nm,0.8s						
HDIL	**Hopedale**	**7.82**	**55**	IAmb_Lg		18 02 22.5	
	comp=Z,27nm,0.8s						
PHWY	**Pilot Hill**	**7.88**	**312**	IAmb_Lg		18 02 27.1	
	comp=Z,13nm,0.8s						
PLAL	**Pickwick Lake**	**7.91**	**97**	IAmb_Lg		18 02 15.4	
	comp=Z,14nm,0.8s						
OLIL	**Olney**	**7.97**	**69**	IAmb_Lg		18 02 34.4	
	comp=Z,29nm,1.1s						
JFWS	**Jewell Farm**	**8.74**	**39**	IAmb_Lg		18 02 43.4	
	comp=Z,18nm,0.8s						
P46A	**Rosedale**	**8.89**	**65**	IAmb_Lg		18 02 47.0	
	comp=Z,22nm,0.8s						
WCI	**Wyandotte Cave**	**9.26**	**75**	IAmb_Lg		18 03 05.4	
	comp=Z,13nm,0.7s						

IDC 25 17:58:31.9±7.0,6°.94S×128°.96E,h145^{km}±87^{km},mb2.6/1, mb1 3.3/4,mb1mx3.0/28,mbtmp3.6/4,Error ellipse: s-maj=144.1km s-min=24.4km az=80.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**6.45**	**21**	P	Pn	18 00 05.0	+0.3
	1.3nm,0.3s,baz=209,slow=18,SNR=39						
SIJI				S	Sn	18 01 14.1	-3.3
	1.0nm,0.3s,baz=221,slow=23,SNR=8.4						
WRA	**Warramunga Arr**	**13.94**	**159**	P	Pn	18 01 41.4	-2.0
	0.3nm,0.3s,baz=342,slow=12,SNR=14						
WRA				S	Sn	18 04 07.2	-11
	0.2nm,0.3s,baz=332,slow=22,SNR=1.8						
ASAR	**Alice Springs**	**17.30**	**165**	P	Pn	18 02 25.5	+0.8
	1.1nm,0.3s,baz=339,slow=9.6,SNR=231						
ASAR				S	S	18 05 28.6	-8.3
	0.1nm,0.3s,baz=337,slow=18,SNR=1.6						
MKAR	**Makanchi Array**	**67.61**	**327**	P	P	18 09 12.9	-0.2
	0.1nm,0.5s,baz=131,slow=7.9,SNR=1.5						

IDC 25 18:14:30.2±1.4,3°.25N×126°.37E,h0^{km},mb3.5/4, mb1 3.6/5,mb1mx3.4/42,mbtmp3.5/5,ML3.5/1,MS3.0/1, Ms1 3.0/1,ms1mx2.3/27,Error ellipse: s-maj=92.5km s-min=22.3km az=60.0,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**6.38**	**130**	Pn	Pn	18 16 06.1	+0.6
	1.2nm,0.3s,baz=338,slow=19,SNR=6.2						
SIJI				Sn	Sn	18 17 16.8	-2.4
	0.4nm,0.3s,baz=190,slow=21,SNR=1.5						
JAY	**Jayapura**	**15.43**	**112**	LR	LR	18 23 15.1	
	comp=Z,56nm,18.9s,baz=189,slow=34						
WRA	**Warramunga Arr**	**24.34**	**162**	P	P	18 19 49.6	-0.4
	1.0nm,0.8s,baz=342,slow=10,SNR=7.4						
ASAR	**Alice Springs**	**27.75**	**165**	P	P	18 20 20.9	+0.2
	0.1nm,0.3s,baz=344,slow=7.5,SNR=2.1						
STKA	**Stephens Creek**	**37.82**	**159**	P	P	18 21 48.7	+0.1
	0.4nm,0.3s,baz=349,slow=10,SNR=2.9						
MKAR	**Makanchi Array**	**57.74**	**326**	P	P	18 24 22.9	-0.1
	0.3nm,0.5s,baz=121,slow=7.4,SNR=12						

*JMA **25** 18:20:42.1±0.2,40°.94N×143°.13E,h22^{km}±5^{km},M3.6*

*NIED **25** 18:20:42.2,40°.94N×143°.13E,h22^{km},MW3.6,Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}1.59; $M_{\theta\theta}$0.39; $M_{\phi\phi}$-1.98; $M_{r\theta}$0.86; $M_{\theta\phi}$-0.61; $M_{\phi r}$1.62; Fault plane solution: $M_0$2.62000×10^{14} NP1:ϕ_s26.00000°, δ68.00000°,λ102.00000°. NP2:ϕ_s177.00000°,δ25.00000°, λ63.00000°.*

*IDC **25** 18:20:45.0±2.5,40°.96N×143°.16E,h48^{km}±22^{km},mb3.4/6, mb1 3.5/9,mb1mx3.3/40,mbtmp3.6/9,ML2.6/3,MS2.7/1, Ms1 2.7/1,ms1mx2.1/26 Error ellipse: s-maj=39.0km s-min=16.5km az=90.0*

ISC 25 18:20:40.8±1.7,40°.92N±0°.04×143°.24E±0°.06,h17^{km}±10^{km}, n35,σ1^{s}23/41,mb3.6/6,1D,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JEM	**Erimo**	**1.10**	**357**	P	**Pg**	**18 21 01.9**	**-0.1**
JEM				*e*S	**Sg**	**18 21 16.2**	**-0.2**
JKEN	**Kujiedanarisaw**	**1.36**	**239**	P	**Pn**	**18 21 04.9**	**-0.2**
JKEN				*e*S	**Sb**	**18 21 21.9**	**-1.1**
JTHR	**Tokachihiroo**	**1.37**	**2**	P	**Pn**	**18 21 05.9**	**+0.7**
JTHR				*e*S	**Sb**	**18 21 23.2**	**-0.1**
JNBK	**Urakawa-nobuka**	**1.41**	**345**	P	**Pn**	**18 21 06.3**	**+0.6**
JANG	**Nango**	**1.42**	**248**	P	**Pn**	**18 21 05.8**	**0.0**
JARK	**Aomorirokkasho**	**1.42**	**274**	P	**Pn**	**18 21 05.3**	**-0.5**
JARK				*e*S	**Sb**	**18 21 22.6**	**-2.0**
JTM	**Tenmabayashi**	**1.65**	**266**	P	**Pn**	**18 21 09.3**	**+0.3**
JCH	**Churui**	**1.70**	**3**	P	**Pn**	**18 21 10.5**	**+0.8**
JCH				*e*S	**Sn**	**18 21 30.5**	**-0.5**
JOT	**Ohata**	**1.72**	**286**	P	**Pn**	**18 21 10.0**	**+0.1**
JOT				*e*S	**Sn**	**18 21 30.8**	**-0.6**
JKB	**Kayabe**	**1.92**	**301**	P	**Pn**	**18 21 13.0**	**+0.3**
JKB				*e*S	**Sn**	**18 21 35.9**	**-0.5**
JIAM	**Iburiatsuma**	**1.97**	**330**	P	**Pn**	**18 21 16.0**	**+2.7**
JBT2	**Biratori 2**	**1.97**	**341**	P	**Pn**	**18 21 14.9**	**+1.5**
JOM	**Ohasama**	**2.07**	**227**	P	**Pn**	**18 21 16.7**	**+1.9**
JFR	**Furan**	**2.29**	**348**	P	**Pn**	**18 21 19.4**	**+1.5**
JFR				*e*S	**Sn**	**18 21 45.3**	**-0.4**
JEW	**Eniwo**	**2.34**	**326**	P	**Pn**	**18 21 20.4**	**+1.9**
JEW				*e*S	**Sn**	**18 21 49.0**	**+2.2**
JAK	**Akkeshi**	**2.34**	**27**	⇓P	**Pn**	**18 21 19.1**	**+0.6**
JAK				*e*S	**Sn**	**18 21 45.7**	**-1.2**
JAR	**Ashorobuto**	**2.41**	**9**	P	**Pn**	**18 21 19.8**	**+0.3**
JAR				*e*S	**Sn**	**18 21 47.1**	**-1.5**
JMK	**Ichinoseki**	**2.50**	**219**	P	**Pn**	**18 21 22.6**	**+1.9**
JOMM	**Oshimamatsumae**	**2.51**	**285**	P	**Pn**	**18 21 22.3**	**+1.5**
JOMM				*e*S	**Sn**	**18 21 52.5**	**+1.5**
ASAJ	**Asahikawa**	**3.23**	**352**	P	**Pn**	**18 21 32.2**	**+1.5**
	1.4nm,0.3s,baz=204,slow=18,SNR=36						
ASAJ				S	**Sn**	**18 22 09.8**	**+0.9**
	1.6nm,0.3s,baz=177,slow=32,SNR=5.8						
MJAR	**Matsushiro Arr**	**5.88**	**224**	P	**Pn**	**18 22 08.9**	**+1.8**
	0.1nm,0.3s,baz=38,slow=12,SNR=2.6						
USRK	**Ussuriysk Ar.**	**8.92**	**295**	P	**Pn**	**18 22 50.8**	**+1.9**
	baz=94,slow=13,SNR=5.7						
MA2	**Magadan**	**19.27**	**12**	LR	LR	18 32 59.4	
	comp=Z,25nm,21.1s,baz=70,slow=38						
SONM	**Songino Array**	**27.03**	**297**	P	**P**	**18 26 21.3**	**-0.8**
	0.3nm,0.4s,baz=99,slow=9.2,SNR=2.6						
H11N2	**WAKE ISLAND Hy**	**29.21**	**129**	T	T	18 57 43.1	
	baz=322,slow=75,SNR=24						
H11N1	**WAKE ISLAND Hy**	**29.22**	**129**	T	T	18 57 31.6	
	baz=322,slow=75,SNR=16						
H11N3	**WAKE ISLAND Hy**	**29.23**	**129**	T	T	18 57 39.6	
	baz=322,slow=75,SNR=12						
H11S1	**WAKE ISLAND Hy**	**30.06**	**131**	T	T	18 58 38.7	
	baz=321,slow=76						
H11S3	**WAKE ISLAND Hy**	**30.06**	**131**	T	T	18 58 41.2	
	baz=321,slow=76						
H11S2	**WAKE ISLAND Hy**	**30.08**	**131**	T	T	18 58 46.6	
	baz=321,slow=76						
ZALV	**Zalesovo Beam**	**40.46**	**309**	P	**P**	**18 28 18.3**	**+0.2**
	0.7nm,0.5s,baz=97,slow=9.8,SNR=4.2						
MKAR	**Makanchi Array**	**43.37**	**299**	P	**P**	**18 28 41.7**	**-0.5**
	0.5nm,0.7s,baz=84,slow=9.4,SNR=5.9						
WRA	**Warramunga Arr**	**61.11**	**190**	P	**P**	**18 30 54.1**	**+0.1**
	0.4nm,0.7s,baz=7.3,slow=6.7,SNR=3.2						
ASAR	**Alice Springs**	**64.84**	**189**	P	**P**	**18 31 19.4**	**+0.6**
	0.3nm,0.6s,baz=10,slow=7.4,SNR=6.3						
FINES	**FINESS Array B**	**66.05**	**332**	P	**P**	**18 31 25.7**	**-0.5**
	3.2nm,1.1s,baz=41,slow=6.1,SNR=4.0						

IDC 25 18:22:17.6±1.7,22°.90S×112°.22W,h0^{km},mb3.6/3, mb1 3.9/3,mb1mx3.7/30,mbtmp3.6/3,Error ellipse: s-maj=62.6km s-min=42.6km az=21.0,Easter Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H03N2	**Juan Fernandez**	**31.05**	**117**	T	T	19 01 10.7	
	baz=285,slow=75,SNR=9.2						
H03N3	**Juan Fernandez**	**31.06**	**117**	T	T	19 01 09.4	
	baz=285,slow=75,SNR=13						
H03N1	**Juan Fernandez**	**31.06**	**117**	T	T	19 01 11.7	
	baz=285,slow=75,SNR=19						
LPAZ	**La Paz**	**41.93**	**89**	P	P	18 30 11.1	-0.1
	0.4nm,0.3s,baz=263,slow=8.1,SNR=3.7						
NVAR	**Mina Array Bea**	**61.27**	**355**	P	P	18 32 35.1	+0.3
	0.4nm,0.6s,baz=185,slow=10.0,SNR=3.7						
YKA	**Yellowknife Ar**	**85.12**	**359**	P	P	18 34 54.9	-0.1
	0.2nm,0.7s,baz=168,slow=5.5,SNR=3.6						
ZALV	**Zalesovo Beam**	**146.43**	**342**	PKPbc	PKPdf	18 41 58.8	-0.2
	0.5nm,0.6s,baz=50,slow=2.3,SNR=2.8						
CMAR	**Chiang Mai Arr**	**150.54**	**267**	PKPbc	PKPbc	18 42 12.0	-0.2
	0.8nm,0.8s,baz=106,slow=0.9,SNR=9.1						

*IDC **25** 18:26:18.1±3.2,14°.23N×92°.92W,h0^{km},mb3.9/3, mb1 4.1/6,mb1mx3.8/35,mbtmp3.8/6,ML3.7/3,MS2.7/2, Ms1 2.7/2,ms1mx2.4/32,Error ellipse: s-maj=62.1km s-min=45.9km az=5.0*

*MEX **25** 18:26:19.7±1.1,13°.92N×93°.29W,h16^{km}±321^{km},MD4.3*

ISC 25 18:26:22.8±1.6,14°.2N±0°.1×93°.11W±0°.06,h37^{km},n12, σ1^{s}98/19,mb4.0/3,Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		**1.11**	**47**	*e*P	**Pn**	**18 26 40.3**	**-1.5**
THIG				*i* S	**Sn**	**18 26 56.9**	**+1.1**
PCIG		**1.55**	**356**	*i* P	**Pn**	**18 26 45.8**	**-2.0**
PCIG				*i* S	**Sn**	**18 27 07.0**	**+0.3**
CCIG	**Comitan**	**2.32**	**24**	*e*P	**Pn**	**18 26 59.1**	**+0.6**
CCIG				*i* S	**Sn**	**18 27 28.5**	**+2.6**
TGIG		**2.61**	**360**	*e*P	**Pn**	**18 27 03.1**	**+0.6**
TGIG				*i* S	**Sn**	**18 27 35.0**	**+2.0**
CMIG	**Matias Romero**	**3.38**	**330**	Pn	**Pn**	**18 27 11.9**	**-1.1**
	3.0nm,0.3s,baz=144,slow=9.9,SNR=16						
CMIG				Sn	**Sn**	**18 27 49.4**	**-2.6**
	6.0nm,0.3s,baz=132,slow=14,SNR=6.0						
CMIG				LR	LR	18 28 36.6	
	comp=Z,57nm,21.2s,baz=33,slow=40						
CMIG	**Matias Romero**	**3.38**	**330**	*e*P	**Pn**	**18 27 11.2**	**-1.9**
CMIG				*i* S	**Sn**	**18 27 50.9**	**-1.1**
TEIG	**Tepich**	**7.61**	**37**	Pn	**Pn**	**18 28 08.5**	**-2.5**
	7.7nm,0.3s,baz=214,slow=4.6,SNR=33						
TEIG				Sn	**Sn**	**18 29 31.5**	**-4.5**
	0.1nm,0.3s,baz=9.8,slow=21,SNR=1.5						
TEIG				LR	LR	18 31 31.6	
	comp=Z,140nm,20.7s,baz=228,slow=42						
TXAR	**Lajitas Array**	**17.99**	**329**	P	**P**	**18 30 31.0**	**+0.6**
	0.0nm,0.3s,baz=162,slow=13,SNR=4.5						
NVAR	**Mina Array Bea**	**32.88**	**322**	P	**P**	**18 32 55.4**	**+1.9**
	0.7nm,0.7s,baz=128,slow=8.2,SNR=3.1						
YKA	**Yellowknife Ar**	**50.64**	**347**	P	**P**	**18 35 18.0**	**+0.1**
	2.2nm,0.8s,baz=149,slow=7.8,SNR=25						
INK	**Inuvik**	**59.99**	**344**	P	**P**	**18 36 25.3**	**+0.1**
	0.7nm,0.5s,baz=150,slow=5.6,SNR=2.3						
CMAR	**Chiang Mai Arr**	**145.49**	**340**	PKPbc	**PKPab**	**18 45 58.5**	**+0.4**
	1.1nm,1.0s,baz=348,slow=3.6,SNR=7.2						

*IDC **25** 18:33:06.5±1.3,3°.45N×126°.84E,h0^{km},mb3.7/5, mb1 3.8/5,mb1mx3.6/25,mbtmp3.7/5,Error ellipse: s-maj=122.1km s-min=19.4km az=68.0*

ISC 25 18:33:13.2±1.0,3°.3N±0°.1×126°.8E±0°.2,h48^{km},n8, σ0^{s}95/10,mb3.8/5,1C,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**3.64**	**352**	*e*P	**Pn**	**18 34 07.2**	**+0.2**
MATI				*e*S	**Sn**	**18 34 48.7**	**0.0**
SKMP	**Bagumbayan, Su**	**3.87**	**325**	*e*P	**Pn**	**18 34 10.0**	**-0.2**
SKMP				*e*S	**Sn**	**18 34 54.4**	**+0.1**
KCP	**Kidapawan**	**4.02**	**336**	⇑*e*P	**Pn**	**18 34 14.3**	**+2.0**
WRA	**Warramunga Arr**	**24.29**	**162**	P	**P**	**18 38 27.1**	**+0.8**
	2.2nm,0.8s,baz=342,slow=10,SNR=13						
ASAR	**Alice Springs**	**27.71**	**166**	P	**P**	**18 38 58.0**	**+0.8**
	0.2nm,0.5s,baz=345,slow=7.6,SNR=12						
STKA	**Stephens Creek**	**37.74**	**159**	P	**P**	**18 40 24.1**	**-0.4**
	0.8nm,0.6s,baz=0.0,slow=7.1,SNR=3.5						
SONM	**Songino Array**	**47.69**	**342**	P	**P**	**18 41 44.2**	**-0.9**
	0.3nm,0.6s,baz=162,slow=7.9,SNR=2.5						
MKAR	**Makanchi Array**	**57.90**	**325**	P	**P**	**18 42 59.9**	**-0.5**
	0.7nm,0.5s,baz=124,slow=7.2,SNR=22						

*IDC **25** 19:05:37.5±11.0,20°.96S×178°.04W,h544^{km}±96^{km}, mb3.3/4,mb1 3.5/5,mb1mx3.1/22,mbtmp4.3/5,Error ellipse: s-maj=113.1km s-min=75.9km az=126.0*

*NEIC **25** 19:05:49.5±0.9,21°.1S±0°.2×179°.5W±0°.2,h578^{km}±13^{km}, mb4.1/16,Error ellipse: s-maj=23.0km s-min=22.5km az=156.0*

ISC 25 19:05:49.7±0.9,21°.0S±0°.1×179°.3W±0°.1,h600^{km},n27, σ1^{s}09/26,mb4.1/11,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.09**	**322**	P	**P**	**19 07 14.2**	**-1.8**
NIUE	**Niue**	**9.05**	**79**	P	**P**	**19 07 59.8**	**+0.6**
DZM	**Mont Dzumac**	**13.28**	**263**	P	**P**	**19 08 43.1**	**+1.5**
	0.2nm,0.3s,baz=143,slow=15,SNR=1.7						
DZM	**Mont Dzumac**	**13.28**	**263**	P	**P**	**19 08 39.4**	**-2.1**

SANVU	Saraoutou	13.93	291	P	P	19 08 43.1	-5.0
OUZ	Omahuta	15.46	202	P	P	19 09 02.7	+0.8
QRZ	Quartz Range	20.93	198	P	P	19 09 50.6	-1.0
LTZ	Lake Taylor	22.82	196	P	P	19 10 08.3	-0.2
CTAO	Charters Tower	32.20	265	P	P	19 11 32.1	+1.7
STKA	Stephens Creek	36.44	245	P	P	19 12 05.1	-0.4
	1.3nm,0.5s,baz=78,slow=11,SNR=4.4						
STKA	Stephens Creek	36.44	245	P	P	19 12 05.8	+0.3
BBOO	Buckleboo	41.20	244	P	P	19 12 44.5	+0.7
BBOO				IAmb	IAmb	19 12 44.8	
	comp=Z,12nm,1.4s						
WAKE	Wake Island	42.34	340	P	P	19 12 54.2	+1.6
WR0	Warramunga Arr	43.11	263	P	P	19 12 58.7	-0.1
WR0				IAmb	IAmb	19 13 03.2	
	comp=Z,4.5nm,1.2s						
AS31	Alice Springs	43.19	257		P	19 12 59.9	+0.4
ASAR	Alice Springs	43.19	257	P	P	19 13 00.1	+0.7
	comp=Z,4.4nm,0.6s,baz=90,slow=7.6,SNR=141						
ASAR				PcP	PcP	19 14 32.6	-2.4
	comp=Z,0.3nm,0.5s,baz=109,slow=3.8,SNR=3.0						
ASAR	Alice Springs	43.19	257		P	19 12 59.9	+0.4
WB0	Warramunga Arr	43.28	263	P	P	19 13 00.4	+0.2
WB2	Warramunga Arr	43.28	263	P	P	19 13 00.4	+0.2
WB2				IAmb	IAmb	19 13 01.0	
	comp=Z,6.5nm,1.0s						
WRAB	Tennant Creek	43.29	263	P	P	19 13 00.1	-0.2
WRAB				IAmb	IAmb	19 13 01.0	
	comp=Z,4.3nm,0.9s						
WRA	Warramunga Arr	43.30	263	P	P	19 13 00.4	+0.1
	comp=Z,2.3nm,0.3s,baz=96,slow=7.2,SNR=98						
WRA	Warramunga Arr	43.30	263	P	P	19 13 00.2	-0.1
FITZ	Fitzroy Crossi	51.73	263	P	P	19 14 04.0	+0.9
FITZ				IAmb	IAmb	19 14 06.7	
	comp=Z,11nm,1.4s						
SOEI	Soe	55.27	273	P	P	19 14 28.1	-0.3
SOEI				IAmb	IAmb	19 14 30.4	
	comp=Z,10nm,0.7s						
PSA00	Pilbara Seismi	56.34	258	P	P	19 14 35.5	+0.1
PSA00				IAmb	IAmb	19 15 02.1	
	comp=Z,13nm,1.4s						
CMAR	Chiang Mai Arr	89.11	290	P	P	19 17 41.7	-1.1
	comp=Z,0.8nm,1.0s,baz=142,slow=3.1,SNR=5.5						
AKASG	Malin Array Be	142.84	330	PKP	PKPdf	19 24 08.2	-7.5
	comp=Z,0.8nm,0.4s,baz=46,slow=4.3,SNR=9.9						

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*NOU **25** 19:09:02.6, 17°.72S×178°.47W, h576^{km}, mb4.8, Fiji Islands Region*

*NEIC **25** 19:09:03.5±1.6, 17°.9S±0°.1×178°.6W±0°.1, h574^{km}±8^{km}, mb4.5/136, Error ellipse: s-maj=21.6km s-min=15.1km az=155.0*

*IDC **25** 19:09:04.1±2.2, 17°.63S×178°.74W, h570^{km}±22^{km}, mb3.9/11, mb1 4.1/12, mb1mx3.9/22, mbtmp4.8/12, Error ellipse: s-maj=31.5km s-min=13.4km az=146.0*

ISC 25 19:09:03.2±0.4**, 17°.85S**±0°.09×**178°.60W**±0°.06**, h574**^{km}**,**
n419, σ0^{s}94/423**, mb4.5**/79**, 14C-13D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.20	272	P	P	19 10 21.9	+0.4
MSVF	Nonsavu	3.20	272	P	P	19 10 22.9	+1.4
NIUE	Niue	8.32	100	P	P	19 11 04.1	-0.7
	baz=8.2,SNR=8.1						
NIUE				S	S	19 12 44.8	+0.3
	baz=8.2						
NIUE	Niue	8.32	100	P	P	19 11 04.0	-0.8
NIUE	Niue	8.32	100	P	P	19 11 04.0	-0.8
DVP	Devils Point	12.59	269	P	P	19 11 48.6	+0.6
	142µm,0.7s						
SANVU	Saraoutou	13.82	278	P	P	19 12 00.1	-0.5
SANVU	Saraoutou	13.82	278	P	P	19 12 01.2	+0.6
YATNC	Mamie plateau,	14.27	251	P	P	19 12 04.9	-0.2
OUENC	Ouen Island, N	14.41	249	P	P	19 12 06.0	-0.4
DZM	Mont Dzumac	14.68	251	P	P	19 12 08.5	-0.7
	2.4nm,0.3s,baz=74,slow=23,SNR=21						
DZM	Mont Dzumac	14.68	251	P	P	19 12 08.8	-0.3
DZM	Mont Dzumac	14.68	251	P	P	19 12 08.7	-0.5
ONTNC	Ouen Toro	14.73	250	P	P	19 12 09.7	+0.2
KOUNC	Koumac, New Ca	16.39	258	P	P	19 12 26.3	+0.9
KNTN	Kanton	16.43	25	P	P	19 12 24.4	-1.4
HNR	Honiara	22.45	289	P	P	19 13 21.1	+0.8
	58nm,0.7s,baz=174,slow=17,SNR=3.7						
HNR	Honiara	22.45	289	P	P	19 13 20.3	0.0
LTZ	Lake Taylor	26.04	195	P	P	19 13 50.9	-0.9
RPZ	Rata Peaks	27.23	197	P	P	19 14 01.6	-0.5
FOZ	Fox Glacier	27.42	199	P	P	19 14 03.1	-0.6
EIDS	Eidsvold	29.12	250	P	P	19 14 19.0	+0.2
	baz=29,SNR=7.4						
EIDS	Eidsvold	29.12	250	P	P	19 14 19.0	+0.2
ARMA	Armidale	29.82	240	P	P	19 14 26.2	+1.3
	baz=30,SNR=30						
ARMA	Armidale	29.82	240	P	P	19 14 26.0	+1.1
MGCD	Mangrove Creek	31.18	235	P	P	19 14 38.0	+1.6
	baz=31,SNR=4.6						
RMQ	Roma	31.36	248	P	P	19 14 39.1	+1.0
	baz=31,SNR=27						
CTAO	Charters Tower	33.28	260	P	P	19 14 54.2	-0.2
CNB	Canberra Magne	33.32	232	P	P	19 14 56.1	+1.4
	baz=33,SNR=44						
CAN	Canberra	33.60	232	P	P	19 14 58.1	+1.1
YNG	Young	33.68	234	P	P	19 14 58.3	+0.6
	baz=34						
PMG	Port Moresby	34.27	280	P	P	19 15 03.6	+0.8
PMG	Port Moresby	34.27	280	P	P	19 15 04.3	+1.5
CMSA	Cobar Meteorol	35.02	240	P	P	19 15 09.7	+0.9
	baz=35,SNR=55						
MTSU	Mount Surprise	35.24	264	P	P	19 15 11.1	+0.3
	baz=35,SNR=28						
QLP	Quilpie	35.39	249	P	P	19 15 12.4	+0.5
	baz=36,SNR=20						
MANU	Manus Island	36.91	291	P	P	19 15 25.3	+0.6
COEN	Coen	36.93	270	P	P	19 15 24.8	0.0
	baz=37						
COEN	Coen	36.93	270	P	P	19 15 25.4	+0.7
TOO	Toolangi	37.07	231	P	P	19 15 26.9	+1.2
	baz=37,SNR=25						
TOO	Toolangi	37.07	231	P	P	19 15 26.8	+1.2
STKA	Stephens Creek	38.50	241	P	P	19 15 38.6	+1.3
	26nm,0.5s,baz=93,slow=10,SNR=96						
STKA	Stephens Creek	38.50	241	P	P	19 15 38.6	+1.3
	baz=39,SNR=77						
STKA	Stephens Creek	38.50	241	P	P	19 15 37.7	+0.4
STKA				IAmb	IAmb	19 15 39.4	
	comp=Z,10nm,1.1s						
QIS	Mount Isa	39.49	259	P	P	19 15 45.4	-0.1
	baz=40,SNR=4.0						
ARPS	Mount Arapiles	39.54	233	P	P	19 15 46.5	+0.9
	baz=40,SNR=14						
HTT	Hallett	41.02	239	P	P	19 15 58.6	+1.1
	baz=41,SNR=65						
BBOO	Buckleboo	43.28	241	P	P	19 16 15.9	+0.8
	baz=43,SNR=188						
BBOO	Buckleboo	43.28	241	P	P	19 16 15.7	+0.5
WR0	Warramunga Arr	44.28	259	P	P	19 16 22.4	-0.6
WR0				IAmb	IAmb	19 16 23.7	
	comp=Z,17nm,1.2s						
WB0	Warramunga Arr	44.43	260	P	P	19 16 23.4	-0.9
WB0				IAmb	IAmb	19 16 24.8	
	comp=Z,16nm,0.7s						
WB2	Warramunga Arr	44.46	259	P	P	19 16 23.9	-0.6
	baz=44						
WRAB	Tennant Creek	44.46	260	P	P	19 16 23.8	-0.7
WRAB				IAmb	IAmb	19 16 25.0	
	comp=Z,16nm,0.7s						
WRA	Warramunga Arr	44.47	259	P	P	19 16 24.1	-0.4
	comp=Z,14nm,0.7s,baz=92,slow=6.9,SNR=159						
WRA				ScP	ScP	19 20 55.0	+1.6
	comp=Z,1.4nm,1.1s,baz=96,slow=4.1,SNR=4.5						
WRA				S	S	19 22 15.5	-3.3
	comp=Z,0.4nm,0.9s,baz=96,slow=13,SNR=2.0						
WRA	Warramunga Arr	44.47	259	P	P	19 16 23.8	-0.8
AS31	Alice Springs	44.63	254	P	P	19 16 26.0	+0.2
ASAR	Alice Springs	44.64	254	P	P	19 16 26.2	+0.4
	comp=Z,123nm,0.6s,baz=88,slow=8.3,SNR=2009						
ASAR				ScP	ScP	19 20 55.9	+1.9
	comp=Z,1.2nm,0.8s,baz=99,slow=4.1,SNR=6.2						
ASAR				S	S	19 22 17.3	-3.8
	comp=Z,0.8nm,0.9s,baz=89,slow=14,SNR=5.4						
ASAR	Alice Springs	44.64	254	P	P	19 16 25.5	-0.3
ASPA	Alice Springs	44.64	254	P	P	19 16 25.3	-0.6
	baz=45						
SMPI	Sarmi	44.76	286	P	P	19 16 28.1	+1.3
	comp=Z,30nm,1.0s						
KDU	Kakadu	47.38	269	P	P	19 16 46.9	+0.3
	baz=48,SNR=10						
WRKA	Warakurna	49.69	252	P	P	19 17 03.9	+0.2
	baz=50,SNR=147						
FORT	Forrest	49.87	245	P	P	19 17 05.2	+0.3
	baz=50,SNR=8.4						
FORT	Forrest	49.87	245	P	P	19 17 04.4	-0.4
FAKI	Fak Fak	50.39	281	P	P	19 17 09.1	+0.2
	comp=Z,31nm,1.2s						
SWI	Sorong	52.06	283	P	P	19 17 22.0	+1.1
	comp=Z,80nm,0.9s						
FITZ	Fitzroy Crossi	52.86	261	P	P	19 17 27.2	+0.6
	baz=53,SNR=22						
FITZ	Fitzroy Crossi	52.86	261	P	P	19 17 26.8	+0.2
FITZ				IAmb	IAmb	19 17 29.3	
	comp=Z,34nm,1.9s						
SOEI	Soe	55.89	270	P	P	19 17 49.8	+1.7
SOEI	Soe	55.89	270	P	P	19 17 50.1	+2.0
	comp=Z,68nm,0.8s						
TNTI	Ternate	56.28	283	P	P	19 17 50.6	+0.1
TNTI				IAmb	IAmb	19 17 52.2	
	comp=Z,18nm,0.8s						
SANI	Sanana	56.56	280	P	P	19 17 52.7	+0.2
	comp=Z,30nm,1.1s						
PSA00	Pilbara Seismi	57.75	255	P	P	19 18 00.1	-0.5
PSA00				IAmb	IAmb	19 18 01.4	
	comp=Z,20nm,0.8s						
MEEK	Meekatharra	58.29	249	P	P	19 18 03.9	-0.2
	baz=58,SNR=6.1						
KLBR	Kellerberrin	58.70	244	P	P	19 18 06.8	0.0
	baz=59,SNR=6.4						
BLDU	Ballidu	59.65	245	P	P	19 18 13.2	+0.1
	baz=60,SNR=9.7						
MORW	Morawa	60.34	246	P	P	19 18 17.7	0.0
	baz=60,SNR=4.5						
APSI	Ampana	61.02	279	P	P	19 18 23.6	+1.2
	comp=Z,327nmcomp=Z,26nm,1.1s						
BNSI	Bone	61.36	275	P	P	19 18 26.4	+1.8
	comp=Z,14nm,1.1s						
SPSI	Sidrap Palu	61.81	275	P	P	19 18 27.0	-0.6
	comp=Z,12nm,0.8s						
JAGI	Jajag, Banyuwa	65.86	269	P	P	19 18 52.0	-1.3
MJAR	Matsushiro Arr	67.75	323	P	P	19 19 02.7	-1.7
	comp=Z,1.2nm,0.6s,baz=156,slow=5.4,SNR=3.4						
NIKH	Nikolski High	71.03	6	P	P	19 19 22.0	-1.6
	baz=190						
TPUB	Ta-pu	72.08	303	P	P	19 19 29.9	-0.5
UNV	Unalaska Valle	72.15	7	P	P	19 19 28.9	-1.2
	baz=192						
PETK	Petropavlovsk-	73.58	345	P	P	19 19 38.5	+0.2
	comp=Z,6.0nm,0.6s,baz=110,slow=7.4,SNR=15						
PETK	Petropavlovsk-	73.58	345	P	P	19 19 38.4	+0.1
SII	Sitkinak Islan	76.91	14	P	P	19 19 57.4	+0.6
	baz=204						
MWC	Mount Wilson	77.43	48	P	P	19 19 59.6	-0.8
MWC				IAmb	IAmb	19 20 01.9	
	comp=Z,9.5nm,0.6s						
VES	Vestal, Richgr	77.58	46	P	P	19 20 01.9	+1.0
	baz=237						
O02D	Mt. Diablo Mer	77.62	40	P	P	19 20 02.9	+1.8
	baz=234						
MURC	Murrieta	77.72	49	P	P	19 20 02.6	+0.9
	baz=239						
BFSC	Mount Baldy Ra	77.72	48	P	P	19 20 03.2	+1.3
	baz=238						
ESJX	Sierra Juarez	77.81	51	P	P	19 20 03.5	+1.1
EDW2	Edwards Air Fo	77.82	47	P	P	19 20 03.4	+1.1
	baz=238,SNR=8.2						
ISA	Isabella, Lake	77.90	46	P	P	19 20 04.5	+1.8
	baz=238,SNR=9.6						
ISA	Isabella, Lake	77.90	46	P	P	19 20 03.9	+1.2
ISA				IAmb	IAmb	19 20 05.2	
	comp=Z,13nm,0.9s						
MONP2	Monument Peak	77.91	50	P	P	19 20 04.5	+1.5
	baz=239						
CMB	Columbia Colle	77.92	43	P	P	19 20 03.0	+0.3
IKP	In-Ko-Pah, Jac	78.02	50	P	P	19 20 04.9	+1.5
	baz=240						
AFDM	Forest Hills D	78.06	42	P	P	19 20 04.0	+0.6
ORV	Oroville	78.06	42	P	P	19 20 04.1	+0.7
N02D	Trinity Center	78.14	40	P	P	19 20 04.8	+0.9
	baz=234						
TPFO	Pinon Flats	78.25	49	P	P	19 20 05.6	+0.9
	baz=239						
M02C	Callahan	78.30	39	P	P	19 20 06.1	+1.3
	baz=233						
O03E	Paynes Creek	78.30	41	P	P	19 20 06.0	+1.2
	baz=234						
L02E	Cave Junction	78.31	38	P	P	19 20 05.5	+0.8
	baz=233						
LRMC	Laurel Mtn Rad	78.35	47	P	P	19 20 06.2	+1.0
	baz=238						
SWSC	Sam W. Stewart	78.39	50	P	P	19 20 06.7	+1.5
	baz=240						
MDPB	Devils Postpil	78.56	44	P	P	19 20 07.4	+1.0
CWC	Cottonwood Cre	78.59	46	P	P	19 20 07.5	+1.0
	baz=238						
YBH	Yreka Blue Hor	78.59	39	P	P	19 20 07.6	+1.3
OMMB	Old Mammoth Mi	78.60	44	P	P	19 20 07.5	+0.8
K02D	Willamette Mer	78.60	38	P	P	19 20 07.6	+1.3
	baz=233						
BELC	Belle Mtn. Jos	78.78	49	P	P	19 20 08.8	+1.3
	baz=239						
MPMC	Manual Prospec	78.79	46	P	P	19 20 08.9	+1.2
	baz=238,SNR=5.1						
WAKR	Walker	78.80	43	P	P	19 20 09.0	+1.4
WAKR				IAmb	IAmb	19 20 10.2	
	comp=Z,12nm,0.9s						
GSC	Goldstone, Bar	78.87	47	P	P	19 20 09.0	+1.1
	baz=239						
HEC	Hector,Ludlow	78.96	48	P	P	19 20 09.3	+0.9
	baz=239						
BEKR	Beckworth	78.97	42	P	P	19 20 09.4	+1.0
HUMO	Hull Mountain	78.97	38	P	P	19 20 09.8	+1.7
BC3	Big Chuckawall	79.00	49	P	P	19 20 09.9	+1.3
	baz=240						
PNTR	Pine Nut	79.02	43	P	P	19 20 08.2	-0.6
PNTR				IAmb	IAmb	19 20 11.2	
	comp=Z,23nm,0.8s						
L04D	Klamath Falls	79.12	39	P	P	19 20 10.5	+1.4
	baz=234						
M04C	Macdoel	79.15	40	P	P	19 20 10.5	+1.3
	baz=234						
GLA	Glamis	79.15	50	P	P	19 20 10.6	+1.3
	baz=240						
GLA	Glamis	79.15	50	P	P	19 20 08.6	-0.8
YERR	Yerington	79.19	43	P	P	19 20 09.1	-0.6
YERR				IAmb	IAmb	19 20 11.8	
	comp=Z,12nm,0.7s						
LHV	Little Huntoon	79.28	44	P	P	19 20 11.5	+1.7
LHV				IAmb	IAmb	19 20 12.7	
	comp=Z,16nm,1.0s						
I02D	Swisshome	79.36	37	P	P	19 20 11.5	+1.4
	baz=232						
GRAC	Grapevine Rang	79.37	46	P	P	19 20 11.9	+1.4
	baz=238						
I03D	Drain, OR	79.39	37	P	P	19 20 11.7	+1.4
	baz=233						
GMRC	Granite Mounta	79.42	48	P	P	19 20 12.3	+1.4
	baz=240						
RYN	Ryan	79.47	44	P	P	19 20 11.4	+0.3
IRM	Iron Mountain	79.47	49	P	P	19 20 12.4	+1.3
	baz=240						
NVAR	Mina Array Bea	79.50	44	P	P	19 20 12.4	+1.0
	comp=Z,6.4nm,0.7s,baz=225,slow=8.7,SNR=34						
NVAR	Mina Array Bea	79.50	44	P	P	19 20 12.0	+0.6
NV11	Mina Array Sit	79.60	44	P	P	19 20 12.7	+0.9
J04D	Umpqua Nationa	79.84	38	P	P	19 20 14.2	+1.2
	baz=234						
KVN	Kaiserville	79.97	43	P	P	19 20 14.4	+0.7
KVN				IAmb	IAmb	19 20 15.8	
	comp=Z,14nm,1.2s						
I04A	Tendick Farm,	79.99	38	P	P	19 20 14.3	+0.7
	baz=233						
TPH	Tonopah	80.03	45	P	P	19 20 14.9	+0.8
TPNV	Topopah Spring	80.11	46	P	P	19 20 15.8	+1.3
	baz=239,SNR=6.8						
TPNV	Topopah Spring	80.11	46	P	P	19 20 15.6	+1.1
214A	Organ Pipe Nat	80.12	52	P	P	19 20 16.1	+1.6
	baz=242						
214A	Organ Pipe Nat	80.12	52	P	P	19 20 16.0	+1.6
MOD	Modoc Plateau	80.15	40	P	P	19 20 14.8	+0.3
MOD				IAmb	IAmb	19 20 16.8	
	comp=Z,11nm,0.7s						
H04D	Lebanon	80.24	37	P	P	19 20 15.9	+1.1
	baz=233						
PDMCI	Parker Dam,Lak	80.26	49	P	P	19 20 17.0	+1.9
	baz=241						
K05A	Summer Lake	80.27	39	P	P	19 20 16.4	+1.2
K05A				IAmb	IAmb	19 20 17.8	
	comp=Z,23nm,1.1s						
HOM	Homer	80.30	14	P	P	19 20 14.8	+0.1
	baz=206						
J05D	Fort Rock, OR	80.39	39	P	P	19 20 17.1	+1.4
	baz=234						
BRSE	Bradley Lake S	80.57	14	P	P	19 20 16.5	+0.3
	baz=207						
SHPR	Sheep Range	80.63	47	P	P	19 20 18.6	+1.4
H04A	Detroit Lake	80.65	37	P	P	19 20 18.0	+1.0
H04A				IAmb	IAmb	19 20 18.6	
	comp=Z,8.1nm,0.6s						
PINE	Pine Mountain	80.86	38	P	P	19 20 19.2	+0.9
PINE				IAmb	IAmb	19 20 20.9	
	comp=Z,16nm,0.9s						
I05D	Terrebonne, OR	80.94	38	P	P	19 20 19.4	+0.9
	baz=234						
PRN	Pahroc Range	81.16	46	P	P	19 20 20.9	+1.0
PRN				IAmb	IAmb	19 20 22.6	
	comp=Z,12nm,0.9s						
R11A	Troy Canyon, C	81.28	45	P	P	19 20 21.6	+1.1
	baz=239						
R11A	Troy Canyon, C	81.28	45	P	P	19 20 21.3	+0.8
O22K	Cooper Landing	81.47	14	P	P	19 20 20.6	-0.1
	baz=208						
WVOR	Wild Horse Val	81.48	40	P	P	19 20 22.4	+1.0
WVOR				IAmb	IAmb	19 20 23.8	
	comp=Z,17nm,1.1s						
G05D	Wamic, OR	81.48	37	P	P	19 20 21.6	+0.4
	baz=234						
E04D	Cinebar	81.56	35	P	P	19 20 22.6	+1.1
	baz=233						
F05D	White Salmon	81.78	36	P	P	19 20 24.2	+1.5
	baz=234						
TUC	Tucson	81.80	52	P	P	19 20 25.2	+2.0
	baz=243						
TUC	Tucson	81.80	52	P	P	19 20 24.7	+1.5
TUC				IAmb	IAmb	19 20 26.5	
	comp=Z,11nm,1.1s						
D04E	Lakebay	81.82	35	P	P	19 20 24.6	+1.8
	baz=233						
D03D	Eldon	81.87	34	P	P	19 20 23.4	+0.4
	baz=232						
I07A	Izee	81.87	39	P	P	19 20 24.5	+1.2
I07A				IAmb	IAmb	19 20 25.7	
	comp=Z,10nm,0.8s						
RC01	Rabbit Creek A	82.00	14	P	P	19 20 23.5	+0.1
	baz=208						
J08A	Circle Bar Ran	82.09	40	P	P	19 20 25.6	+1.2
J08A				IAmb	IAmb	19 20 26.7	
	comp=Z,23nm,1.2s						
SUA	Susitna One	82.12	13	P	P	19 20 23.7	-0.4
	baz=207,SNR=7.9						
SUA	Susitna One	82.12	13	P	P	19 20 23.8	-0.4
SUA				IAmb	IAmb	19 20 25.3	
	comp=Z,13nm,0.8s						
LCMT	Little Creek M	82.22	47	P	P	19 20 25.9	+0.6
CCUT	Cedar City	82.40	47	P	P	19 20 27.9	+1.6
GLI	Glacier Island	82.44	15	P	P	19 20 25.8	+0.1
	baz=210						
TTA	Tatalina	82.45	10	P	P	19 20 26.4	+0.7
	baz=202						
TTA	Tatalina	82.45	10	P	P	19 20 26.0	+0.3
SPR3	Spring Creek 3	82.45	45	P	P	19 20 26.9	+0.3
EYAK	Cordova Ski Ar	82.50	16	P	P	19 20 25.9	+0.1
	baz=211						
KNB	Kanab	82.52	47	P	P	19 20 26.3	-0.6
319A	Douglas	82.53	54	P	P	19 20 26.8	-0.2
319A				IAmb	IAmb	19 20 30.2	
	comp=Z,12nm,0.8s						
PSUT	Pine Spring	82.55	46	P	P	19 20 27.8	+0.8
SZCU	Shurtz Canyon	82.61	47	P	P	19 20 28.5	+1.2
ELK	Elko	82.74	43	P	P	19 20 28.4	+0.5
ANM	Nome	82.78	6	P	P	19 20 28.1	+0.9
	baz=193						
A04D	Lummi Island	82.79	34	P	P	19 20 28.9	+1.2
	baz=233						
WUAZ	Wupatki	82.84	49	P	P	19 20 30.2	+1.8
	baz=242						
WUAZ	Wupatki	82.84	49	P	P	19 20 29.8	+1.3
WUAZ				IAmb	IAmb	19 20 31.2	
	comp=Z,9.6nm,0.9s						
B05A	Bryant	82.84	34	P	P	19 20 29.0	+1.1
	baz=233						
G08A	Pilot Rock	82.87	38	P	P	19 20 29.4	+1.1
G08A				IAmb	IAmb	19 20 30.4	
	comp=Z,15nm,1.3s						
SML	Sawmill	82.96	14	P	P	19 20 28.2	-0.1
	baz=209						
LTY	Liberty	83.02	36	P	P	19 20 29.8	+0.8
CUT	Chulitna	83.06	13	P	P	19 20 28.2	-0.4
	baz=207,SNR=7.1						
E07A	Sunnyside	83.08	36	P	P	19 20 29.7	+0.5
E07A				IAmb	IAmb	19 20 30.9	
	comp=Z,8.2nm,0.7s						
PPLA	Purkeypile	83.11	12	P	P	19 20 29.3	+0.2
	baz=205						
BMRM	Bremner River	83.15	16	P	P	19 20 29.5	+0.2
	baz=212						
HAWA	Hanford	83.16	37	P	P	19 20 30.3	+0.7
HAWA				IAmb	IAmb	19 20 31.8	
	comp=Z,15nm,1.1s						
SCM	Sheep Creek Mo	83.22	14	P	P	19 20 29.9	+0.3
KLU	Klutina	83.26	15	P	P	19 20 29.6	-0.2
	baz=211						
MTPU	Mount Pierson	83.45	47	P	P	19 20 33.5	+1.8
E08A	Dider Farm, El	83.49	37	P	P	19 20 31.9	+0.7
E08A				IAmb	IAmb	19 20 33.3	
	comp=Z,9.4nm,0.7s						
WRAK	Wrangell Islan	83.53	24	P	P	19 20 31.6	+0.5
	baz=224						
BMO	Blue Mountains	83.61	39	P	P	19 20 32.8	+0.8
N25K	Chitina, Valde	83.69	16	P	P	19 20 32.3	+0.3
	baz=212						
N25K	Chitina, Valde	83.69	16	P	P	19 20 32.0	0.0
M24K	Tolsona, Glenn	83.73	15	P	P	19 20 32.7	+0.6
	baz=211						
MFID	Camas Ranch	83.74	41	P	P	19 20 33.3	+0.6
MFID				IAmb	IAmb	19 20 34.9	
	comp=Z,8.7nm,1.1s						
GLB	Gilahina Butte	83.76	16	P	P	19 20 32.3	0.0
GLB				IAmb	IAmb	19 20 33.4	
	comp=Z,13nm,0.6s						
WAT6	Susitna Watana	83.77	14	P	P	19 20 32.4	0.0
	baz=209						
BALM	Baldy	83.81	17	P	P	19 20 33.0	+0.4
BALM				IAmb	IAmb	19 20 33.8	
	comp=Z,12nm,0.7s						
W18A	Petrified Fore	83.85	50	P	P	19 20 34.8	+1.3
	baz=243						
D08A	Wollman Farm,	83.89	36	P	P	19 20 33.6	+0.4
D08A				IAmb	IAmb	19 20 35.3	
	comp=Z,10nm,0.9s						
MCARA	McCarthy VSAT	83.92	16	P	P	19 20 34.5	+1.5
	baz=214						
MCARA	McCarthy VSAT	83.92	16	P	P	19 20 32.7	-0.3
MCARA				IAmb	IAmb	19 20 36.0	
	comp=Z,14nm,0.8s						
WAT2	Susitna Watana	83.92	13	P	P	19 20 32.8	-0.3
	baz=209						
KTH	Kantishna Hill	83.96	12	P	P	19 20 32.5	-0.8
KTH				IAmb	IAmb	19 20 33.3	
	comp=Z,12nm,0.9s						
CHUM	Lake Minchumin	83.98	11	P	P	19 20 32.6	-0.6
	baz=205						
TRF	Thorofare Moun	83.99	12	P	P	19 20 33.0	-0.6
	baz=207,SNR=12						
TRF	Thorofare Moun	83.99	12	P	P	19 20 32.9	-0.6
DUG	Dugway, Tooele	84.06	45	P	P	19 20 35.5	+1.1
	baz=241						
121A	Cookes Peak, D	84.18	53	P	P	19 20 36.5	+1.3
	baz=245						
121A	Cookes Peak, D	84.18	53	P	P	19 20 33.3	-1.9
RND	Reindeer	84.25	13	P	P	19 20 34.2	-0.5
F10A	Beach Ranch, E	84.26	38	P	P	19 20 35.3	+0.2
F10A				IAmb	IAmb	19 20 36.8	
	comp=Z,16nm,1.0s						
B08A	Colville Reser	84.39	35	P	P	19 20 35.7	0.0
B08A				IAmb	IAmb	19 20 37.0	
	comp=Z,7.8nm,0.8s						
BPAW	Bear Paw Mtn.	84.44	12	P	P	19 20 35.1	-0.4
	baz=206						
MCK	McKinley	84.52	13	P	P	19 20 35.0	-0.9
	baz=208,SNR=7.7						
PAX	Paxson	84.64	15	P	P	19 20 36.1	-0.5

	baz=212						
C09A	Chrisman Ranch	84.67	36	P	P	19 20 37.5	+0.5
C09A				IAmb	IAmb	19 20 38.6	
	comp=Z,10nm,1.1s						
HLID	Hailey	84.70	41	P	P	19 20 38.9	+1.4
	baz=239						
HLID	Hailey	84.70	41	P	P	19 20 38.0	+0.5
HLID				IAmb	IAmb	19 20 40.0	
	comp=Z,6.3nm,0.8s						
SKAG	Skagway	84.71	21	P	P	19 20 37.8	+0.9
	baz=221						
MENT	Mentasta	85.04	15	P	P	19 20 38.3	-0.2
SRU	San Rafael Swe	85.11	46	P	P	19 20 39.6	0.0
NEA2	Nenana	85.26	12	P	P	19 20 38.6	-0.9
	baz=208						
MLY	Manley	85.32	11	P	P	19 20 39.3	-0.5
	baz=206						
WRH	Wood River Hil	85.35	13	P	P	19 20 39.2	-0.6
WRH				IAmb	IAmb	19 20 40.6	
	comp=Z,21nm,1.4s						
TCUT	Toone Canyon	85.44	44	P	P	19 20 41.8	+0.5
HDA	Harding Lake	85.54	13	P	P	19 20 40.4	-0.4
	baz=210						
HDA	Harding Lake	85.54	13	P	P	19 20 40.7	-0.1
HDA				IAmb	IAmb	19 20 42.8	
	comp=Z,17nm,1.4s						
DOT	Dot Lake	85.55	15	P	P	19 20 40.8	-0.2
DOT				IAmb	IAmb	19 20 42.1	
	comp=Z,5.7nm,0.8s						
CCB	Clear Creek Bu	85.57	13	P	P	19 20 40.3	-0.6
CCB				IAmb	IAmb	19 20 41.5	
	comp=Z,15nm,1.2s						
NEW	Newport	85.57	36	P	P	19 20 41.9	+0.5
	baz=237						
NEW	Newport	85.57	36	P	P	19 20 41.7	+0.3
PV05	Paradox Valley	85.63	48	P	P	19 20 42.7	+0.5
MNTX	Cornudas Mount	85.69	55	P	P	19 20 43.5	+1.2
	baz=246						
MNTX	Cornudas Mount	85.69	55	P	P	19 20 43.1	+0.8
I23K	Minto, Yukon-K	85.69	12	P	P	19 20 40.9	-0.5
	baz=208						
MDM	Murphy Dome	85.75	12	P	P	19 20 41.0	-0.8
MDM				IAmb	IAmb	19 20 42.2	
	comp=Z,7.1nm,1.0s						
TCOL	CIGO, UAF Yank	85.75	13	P	P	19 20 41.3	-0.5
	baz=209						
TCOL	CIGO, UAF Yank	85.75	13	P	P	19 20 40.5	-1.3
COLA	College	85.75	13	P	P	19 20 41.4	-0.4
	baz=209						
COLA	College	85.75	13	P	P	19 20 40.8	-1.0
PV14	Lion Creek, Pa	85.82	48	P	P	19 20 41.5	-1.6
SCRK	Sand Creek	85.85	15	P	P	19 20 42.7	+0.3
	baz=213,SNR=5.8						
IL31		85.87	13	P	P	19 20 41.6	-0.7
ILAR	Eielson Array	85.87	13	P	P	19 20 41.9	-0.5
	comp=Z,2.5nm,0.4s,baz=221,slow=5.1,SNR=52						
PV12	Saucer Basin,	85.95	48	P	P	19 20 44.3	+0.6
PV12				IAmb	IAmb	19 20 46.5	
	comp=Z,5.2nm,0.8s						
PV01	Paradox Valley	86.03	48	P	P	19 20 44.7	+0.6
POKR	Poker Plat Res	86.06	13	P	P	19 20 42.7	-0.6
	baz=210						
TX31	Lajitas Ar. Si	86.11	58	P	P	19 20 45.6	+1.2
TX32	Lajitas Array	86.11	58	P	P	19 20 45.4	+0.9
TX32				IAmb	IAmb	19 20 47.8	
	comp=Z,11nm,0.9s						
TXAR	Lajitas Array	86.11	58	P	P	19 20 46.8	+2.3
	comp=Z,7.5nm,0.8s,baz=217,slow=6.1,SNR=49						
TXAR	Lajitas Array	86.11	58	P	P	19 20 45.0	+0.5
ANMO	Albuquerque	86.20	52	P	P	19 20 46.0	+1.0
	baz=245						
ANMO	Albuquerque	86.20	52	P	P	19 20 45.9	+1.0
MCMT	McKenzie Canyo	86.31	41	P	P	19 20 46.0	+0.8
MSO	Missoula	86.65	38	P	P	19 20 47.5	+0.9
	baz=240						
PRP	Porcupine Dome	86.81	13	P	P	19 20 46.4	-0.6
	baz=211						
PRP	Porcupine Dome	86.81	13	P	P	19 20 46.6	-0.4
REDW	Red Top Meadow	86.87	43	P	P	19 20 48.8	+0.9
REDW				IAmb	IAmb	19 20 50.3	
	comp=Z,8.0nm,0.9s						
SNOW	Snow King Moun	86.97	42	P	P	19 20 49.0	+0.6
SNOW				IAmb	IAmb	19 20 50.9	
	comp=Z,12nm,1.0s						
S22A	4UR Ranch, Cre	87.10	49	P	P	19 20 50.7	+1.5
	baz=245						
HHC	Hu-ho-hao-te	87.11	315	eP	P	19 20 47.3	-1.6
HHC				pmax	pmax		
	comp=Z,3.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,110nm,6.9s						
O20A	White River Ci	87.14	46	P	P	19 20 50.4	+1.2
	baz=244						
O20A	White River Ci	87.14	46	P	P	19 20 49.4	+0.2
O20A				IAmb	IAmb	19 20 53.2	
	comp=Z,6.3nm,1.1s						
LOHW	Long Hollow	87.14	42	P	P	19 20 50.1	+0.9
LOHW				IAmb	IAmb	19 20 50.9	
	comp=Z,4.0nm,0.7s						
QLMT	Earthquake Lak	87.19	41	P	P	19 20 50.7	+1.3
EGAK	Eagle	87.20	15	P	P	19 20 48.9	+0.2
	baz=215						
EGAK	Eagle	87.20	15	P	P	19 20 48.8	+0.2
FLWY	Flagg Ranch	87.30	42	P	P	19 20 50.9	+1.1
FLWY				IAmb	IAmb	19 20 52.6	
	comp=Z,9.6nm,0.9s						
YHB	Horse Butte	87.30	41	P	P	19 20 51.3	+1.4
YHL	Hebgen Lake	87.36	41	P	P	19 20 51.2	+1.0
COLD	Coldfoot	87.39	11	P	P	19 20 50.1	+0.6
	baz=207						
COLD	Coldfoot	87.39	11	P	P	19 20 49.3	-0.2
COLD				IAmb	IAmb	19 20 50.7	
	comp=Z,4.8nm,0.6s						
YMR	Madison River	87.41	41	P	P	19 20 49.4	-1.0
PD31	Pinedale Array	87.43	43	P	P	19 20 50.2	-0.4
PD31				IAmb	IAmb	19 20 52.2	
	comp=Z,4.4nm,0.7s						
PDAR	Pinedale Array	87.43	43	P	P	19 20 51.5	+0.9
	comp=Z,3.8nm,0.6s,baz=221,slow=3.5,SNR=47						
PDAR				PP	PP	19 24 23.9	-2.4
	comp=Z,0.4nm,0.7s,baz=256,slow=6.0,SNR=4.0						
PDAR	Pinedale Array	87.43	43	P	P	19 20 50.5	-0.1
BOZ	Bozeman (W)	87.44	40	P	P	19 20 51.6	+1.2
	baz=241						
BOZ	Bozeman (W)	87.44	40	P	P	19 20 51.0	+0.6
BOZ				IAmb	IAmb	19 20 53.3	
	comp=Z,15nm,1.9s						
H17A	Grant Village	87.53	42	P	P	19 20 53.2	+2.2
	baz=242,SNR=6.6						
H17A	Grant Village	87.53	42	P	P	19 20 52.3	+1.3
H17A				IAmb	IAmb	19 20 54.5	
	comp=Z,7.0nm,0.8s						
YHH	Holmes Hill	87.54	41	P	P	19 20 52.3	+1.2
WALA	Waterton Lakes	87.80	37	P	P	19 20 52.0	+0.1
WALA				IAmb	IAmb	19 20 53.7	
	comp=Z,4.8nm,0.8s						
SDCO	Great Sand Dun	88.06	49	P	P	19 20 54.3	+0.7
	baz=246						
YNE	Yellowstone No	88.17	41	P	P	19 20 52.9	-1.0
MSTX	Muleshoe	88.60	54	P	P	19 20 57.0	+0.9
	baz=247						
T25A	Trinidad	88.61	50	P	P	19 20 57.5	+1.3
	baz=246						
RLMT	Red Lodge	88.69	41	P	P	19 20 57.3	+0.9
	baz=243						
CMAR	Chiang Mai Arr	88.70	290	P	P	19 20 56.5	-0.2
	comp=Z,1.2nm,0.9s,baz=102,slow=3.1,SNR=7.9						
TOLK	Toolik Lake Re	88.76	10	P	P	19 20 56.0	+0.1
	baz=208						
ISCO	Idaho Springs	88.82	47	P	P	19 20 58.2	+1.0
	baz=246						
N23A	Red Feather La	89.05	46	P	P	19 20 59.1	+0.9
	baz=245						
K22A	Casper	89.39	45	P	P	19 21 00.4	+0.8
	baz=245						
EPYK	Eagle Plains	89.59	16	P	P	19 20 59.7	-0.1
	baz=220						
EPYK	Eagle Plains	89.59	16	P	P	19 20 59.8	0.0
JCT	Junction City	89.65	58	P	P	19 21 01.7	+0.8
	baz=249						
EGMT	Eagleton	89.71	39	P	P	19 21 01.5	+0.7
	baz=243						
AMTX	Amarillo	89.78	53	P	P	19 21 02.5	+1.0
	baz=248						
ABTX	Abilene, Hawle	90.54	56	P	P	19 21 05.6	+0.6
	baz=249						
ABTX	Abilene, Hawle	90.54	56	P	P	19 21 05.0	+0.1
RSSD	Black Hills	91.65	44	P	P	19 21 10.5	+0.4
	baz=247						
RSSD	Black Hills	91.65	44	P	P	19 21 10.3	+0.2
RSSD				IAmb	IAmb	19 21 11.5	
	comp=Z,5.3nm,0.9s						
INK	Inuvik	91.88	15	P	P	19 21 10.1	-0.1
INK				IAmb	IAmb	19 21 11.1	
	comp=Z,6.0nm,0.9s						
DGMT	Dagmar	93.26	40	P	P	19 21 18.0	+0.9
	baz=247						
SONM	Songino Array	93.39	319	P	P	19 21 19.0	+1.2
	comp=Z,0.2nm,0.6s,baz=134,slow=4.2,SNR=1.7						
SONM	Songino Array	93.39	319	P	P	19 21 17.9	+0.1
KAN12	Harper NE Stat	93.42	52	P	P	19 21 18.1	0.0
YKA	Yellowknife Ar	94.35	25	P	P	19 21 21.4	-0.3
	comp=Z,2.5nm,0.9s,baz=238,slow=3.9,SNR=25						
MDND	Maddock	95.89	42	P	P	19 21 29.5	+0.5
	baz=250						
ECSD	EROS Data Cent	96.52	46	P	P	19 21 31.9	0.0
	baz=252						
ZALV	Zalesovo Beam	108.08	322	PKiKP	PKiKP	19 26 25.2	-0.9
	comp=Z,0.4nm,0.5s,baz=79,slow=3.1,SNR=2.3						
MKAR	Makanchi Array	108.97	314	PKiKP	PKiKP	19 26 27.2	-0.9
	comp=Z,0.2nm,0.5s,baz=112,slow=1.7,SNR=4.3						
ARCES	ARCESS Array B	126.23	350	PKP	PKPdf	19 27 00.1	-0.4
	comp=Z,3.8nm,0.9s,baz=352,slow=2.5,SNR=6.6						
FINES	FINESS Array B	133.08	344	PKhKP	PKPpre	19 27 07.8	
	comp=Z,2.0nm,1.0s,baz=63,slow=0.6,SNR=1.4						
FINES				PKP	PKPdf	19 27 12.4	-1.2
	comp=Z,1.2nm,0.7s,baz=60,slow=3.7,SNR=4.5						
BSEG	Bad Segeberg	143.33	351	ePKPbc	PKPbc	19 27 32.0	+0.9
	baz=17,slow=2.8						
KWP	Kalwaria Pacla	143.95	336		PKPbc	19 27 33.4	+0.2
VASR	Vaslui	143.97	329	⇓P	PKPdf	19 27 34.6	+0.7
TLCR		144.43	326	⇑P	PKPab	19 27 36.2	+0.9
BUR08	Bucovina Ar. S	144.46	332	PKPdf	PKPab	19 27 36.0	+0.5
BURAR	Bucovina Array	144.48	332	⇑P	PKPab	19 27 37.0	+1.4
BURAR	Bucovina Array	144.48	332	PKPdf	PKPdf	19 27 35.0	0.0
BIZ	Bicaz	144.57	330	⇓P	PKPab	19 27 36.8	+1.0
BRTR	Keskin Array B	144.62	315	PKP	PKPdf	19 27 34.2	-1.2
	comp=Z,1.2nm,0.5s,baz=122,slow=4.6,SNR=7.7						
BRTR	Keskin Array B	144.62	315		PKPdf	19 27 33.7	-1.8
KOLS	Kolonicke sedl	144.68	336	ePKP	PKPab	19 27 36.5	+0.3
FLTG	Flechtingen	144.73	350	ePKPbc	PKPab	19 27 36.3	+0.1
	baz=17,slow=2.8						
NRDL	Niedersach Rie	144.76	351	ePKPbc	PKPab	19 27 36.4	+0.2
	baz=17,slow=2.8						
CFR	Carcaliu	144.79	327	⇓P	PKPab	19 27 37.0	+0.3
TPGR	Topolog	144.85	326	⇓P	PKPab	19 27 37.5	+0.5
VRI	Vrincioaia	145.04	329	⇓P	PKPab	19 27 37.8	+0.1
PLOR	Plostina	145.09	329	⇑P	PKPab	19 27 37.9	0.0
IBBN	Ibbenburen	145.25	353	ePKPbc	PKPbc	19 27 37.7	+0.6
	baz=17,slow=2.8						
OSTC	Ostas	145.28	343	ePKP	PKPab	19 27 38.4	-0.1
CHVC	Chvalec	145.30	344	ePKP	PKPbc	19 27 38.1	+0.8
CLZ	Clausthal	145.35	350	ePKPbc	PKPbc	19 27 38.0	+0.6
	baz=17,slow=2.8						
CLL	Collm	145.37	347	⇑iPKPbc	PKPbc	19 27 38.1	+0.7
	comp=Z,15nm,1.0s						
CLL	Collm	145.37	347	PKPdf	PKPdf	19 27 36.2	0.0
CLL	Collm	145.37	347	ePKPbc	PKPbc	19 27 38.2	+0.8
	baz=17,slow=2.8						
UPC	Upice	145.38	344	ePKP	PKPbc	19 27 38.5	+1.0
DPC	Dobruska-Polom	145.44	343	ePKP	PKPbc	19 27 38.1	+0.4
LANS	Liptovska Anna	145.52	339	ePKP	PKPab	19 27 40.1	+0.6
KRLC	Kraliky	145.56	342	ePKP	PKPbc	19 27 39.0	+0.9
BRG	Berggiesshubel	145.57	346	i PKP	PKPbc	19 27 38.7	+0.7
BRG				Amp		19 27 40.6	
	comp=Z,7.5nm,0.9s						
BRG	Berggiesshubel	145.57	346	ePKPbc	PKPab	19 27 39.2	-0.4
	baz=17,slow=2.8						
MORC	Moravsky Berou	145.60	341	⇑P	PKPbc	19 27 39.1	+0.9
DOPR	Dopca	145.62	330	⇑P	PKPbc	19 27 39.3	+0.9
FBE	Freiberg	145.66	347	ePKPbc	PKPbc	19 27 39.4	+1.1
	baz=17,slow=2.8						
GTTG	Gottingen	145.70	351	ePKPbc	PKPbc	19 27 39.1	+0.7
	baz=17,slow=2.8						
NEUB	Neuenburg	145.71	348	ePKPbc	PKPbc	19 27 39.4	+1.0
	baz=17,slow=2.8						
PVCC	Panska Ves	145.74	345	ePKP	PKPab	19 27 39.8	-0.4
CJR	Cluj-Napoca	145.88	332	⇑P	PKPab	19 27 40.5	-0.5
VOIR		146.17	330	⇑P	PKPbc	19 27 41.3	+1.3
DRGR		146.21	333	⇑P	PKPbc	19 27 41.5	+1.5
PRU	Pruhonice	146.24	345	ePKP	PKPbc	19 27 40.6	+0.7
KASTN	Kahler Asten	146.26	352	ePKPbc	PKPbc	19 27 40.7	+0.7
	baz=17,slow=2.8						
KASTN				epPKPbc	PKPab	19 27 54.7	+12
MOX	Moxa	146.28	348	ePKPbc	PKPbc	19 27 41.1	+1.1
	baz=17,slow=2.8						
MOX				epPKPbc	PKPab	19 27 55.2	+13
VRAC	Vranov	146.30	342	⇓P	PKPab	19 27 44.0	+1.4
TANN	Tannenbergstha	146.32	347	ePKPbc	PKPbc	19 27 41.3	+1.0
	baz=17,slow=2.8						
WERD	Werda	146.33	347	ePKPbc	PKPbc	19 27 41.1	+0.9
	baz=17,slow=2.8						
JAVC	Velka Javorina	146.37	340	ePKP	PKiKP	19 27 42.4	-0.2
GUNZ	Gunzen	146.40	347	ePKPbc	PKPbc	19 27 41.5	+1.1
	baz=17,slow=2.8						
ARR	Arges	146.42	330	⇓P	PKiKP	19 27 43.0	+0.1
WERN	Wernitzgruen	146.46	347	ePKPbc	PKPbc	19 27 41.7	+1.1
	baz=17,slow=2.8						
NKC	Novy Kostel	146.50	347	ePKP	PKPbc	19 27 41.6	+0.9
KRUC	Moravsky	146.58	342	ePKP	PKPbc	19 27 41.7	+0.8
TREC	Trest	146.63	343	ePKP	PKPbc	19 27 41.3	+0.2
MANZ	Manzenberg	146.80	347	ePKPbc	PKPbc	19 27 42.6	+1.1
	baz=17,slow=2.8						
MODS	Modra-Piesok	146.92	340	ePKP	PKPbc	19 27 42.9	+1.0
ROTZ	Rotzenmuhle	146.99	347	ePKPbc	PKPbc	19 27 43.0	+1.0
	baz=17,slow=2.8						
SIRR	Siria	147.07	334	⇑P	PKPbc	19 27 43.4	+1.1
MEM	Membach	147.11	355	dPKiKP	PKPbc	19 27 42.8	+0.6
BTNL	Ternell	147.12	354	dPKiKP	PKPbc	19 27 43.2	+0.9
BSTI	Sart Tilman	147.17	355	dPKiKP	PKPbc	19 27 43.5	+1.2
TNS	Taunus Mts	147.21	352	ePKPbc	PKPbc	19 27 43.1	+0.5
	baz=17,slow=2.8						
GZR	Gura Zlata	147.26	332	⇑P	PKPbc	19 27 43.4	+0.5
GRF	Grafenberg Arr	147.26	348	ePKPbc	PKPbc	19 27 43.7	+1.0
	baz=17,slow=2.8						
GRF				epPKPbc	PKPab	19 27 58.0	+12
KHC	Kasperske Hory	147.28	345	ePKP	PKPbc	19 27 43.2	+0.4
KHC	Kasperske Hory	147.28	345		PKPbc	19 27 43.2	+0.4
CKRC	Cesky Krumlov	147.38	344	ePKP	PKPbc	19 27 43.7	+0.7
GEC2	GERESS Array S	147.51	345		PKPbc	19 27 43.8	+0.3
GEC2	GERESS Array S	147.51	345	ePKPbc	PKPbc	19 27 44.4	+0.9
	baz=17,slow=2.8						
GERES	GERESS Array B	147.51	345	PKPbc	PKPbc	19 27 43.9	+0.4
	comp=Z,4.7nm,0.6s,baz=27,slow=3.3,SNR=28						
GERES	GERESS Array B	147.51	345		PKPbc	19 27 44.0	+0.5
BZS	Buzias	147.60	333	⇓P	PKPbc	19 27 44.5	+0.9
DOU	Dourbes	147.73	356	dPKiKP	PKPbc	19 27 44.4	+0.5
CONA	Conrad Observa	147.75	342	eP	PKiKP	19 27 45.3	-0.2
	comp=Z,5.0nm,0.6s						
HERR	Herculane	147.82	331	⇑P	PKPbc	19 27 44.8	+0.6
WLF	Walferdange	148.03	354	dPKiKP	PKiKP	19 27 46.2	+0.3
WLF	Walferdange	148.03	354	ePKPbc	PKiKP	19 27 46.3	+0.3
	baz=17,slow=2.8						
MDVR	Moldovita	148.21	332	⇑P	PKPbc	19 27 44.9	-0.4
MORH	Mrgy, Hungar	148.31	337	⇑P	PKPbc	19 27 45.6	+0.2
RJOB	Jochberg	148.76	345	ePKPbc	PKiKP	19 27 47.5	-0.1
	baz=17,slow=2.8						
BFO	Black Forest	149.08	351	ePKPbc	PKPbc	19 27 48.0	+0.7
	baz=17,slow=2.8						
UBR	Ueberruh	149.40	348	ePKPbc	PKiKP	19 27 49.1	+0.2
	baz=17,slow=2.8						
WATA	Walderalm	149.43	346	eP	PKPbc	19 27 48.9	+0.6
	comp=Z,4.0nm,0.6s						
WTTA	Wattenberg	149.48	346	i P	PKPbc	19 27 49.1	+0.6
	comp=Z,8.0nm,0.6s,SNR=7.6						
DIVS	Divibare	149.51	333		PKPbc	19 27 48.6	+0.1
MOTA	Moosalm	149.52	347	eP	PKPbc	19 27 49.0	+0.4
	comp=Z,6.4nm,0.9s						
MYKA	Terra Mystica	149.57	343	eP	PKPbc	19 27 49.0	+0.4
	comp=Z,9.9nm,1.1s						
SQTA	Sankt Quirin	149.62	347	eP	PKiKP	19 27 49.5	0.0
	comp=Z,6.2nm,0.5s						
ABTA	Abfaltersbach	149.76	345	i P	PKPbc	19 27 49.1	+0.1
	comp=Z,7.5nm,0.6s,SNR=8.3						
DAVA	Damuels	149.82	348	eP	PKiKP	19 27 50.4	+0.4
	comp=Z,13nm,1.6s						
TUE	Stuetta	150.71	349		PKPbc	19 27 51.1	-0.3
FNA	Florina	151.40	327		PKPbc	19 27 53.0	0.0
ESDC	Sonseca Array	157.76	11	PKPab	PKPab	19 28 31.0	-0.2
	comp=Z,1.1nm,0.8s,baz=337,slow=4.6,SNR=4.6						

NOU ***25*** *19:26:16.2, 36°.54S×177°.43E, h0^{km}, MLv4.4, Off E. Coast of N. Island, N.Z.*

WEL ***25*** *19:26:19.1±0.8, 37°S±6°×17°7E±°, h12^{km}, M3.7/21, ML3.9/20, MLv3.7/21, Error ellipse: s-maj=0.0km s-min=0.0km az=41.8*

IDC ***25*** *19:26:20.2±1.9, 36°.99S×176°.68E, h0^{km}, mb3.5/3, mb1 3.7/3, mb1mx3.6/30, mbtmp3.4/3, Error ellipse: s-maj=55.6km s-min=20.1km az=59.0*

ISC 25 19:26:18.4±0.9**, 36°.71S**±0°.04×**177°.10E**±0°.04**, h10^{km}, n82, σ1^{s}.43**/82**, mb3.1**/3**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WSRZ	White Island S	0.81	176	P	Pn	19 26 36.8	+0.8
WSRZ				S	Sn	19 26 46.6	-1.6
WIZ	White Island	0.82	175	P	Pn	19 26 36.9	+0.8
WIZ				S	Sb	19 26 46.5	+0.5
MYRZ	Mayor Island	0.90	230	P	Pn	19 26 37.0	-0.2
KUZ	Kuaotunu	1.11	268	P	Pb	19 26 39.3	-0.4
KUZ				S	Sn	19 26 54.0	-1.3
HAZ	Te Kaha	1.18	153	P	Pb	19 26 39.7	-1.3
HAZ				S	Sb	19 26 55.1	-1.2
OPRZ	Ohinepanea	1.22	201	P	Pn	19 26 41.8	+0.3
TGRZ	Tauranga	1.22	213	P	Pn	19 26 42.4	+0.8
MXZ	Matakaoa Point	1.29	132	P	Pn	19 26 41.5	-1.1
MARZ	Manawahe	1.32	195	P	Pn	19 26 42.6	-0.4
RUGZ	Raukumara Rang	1.34	160	P	Pn	19 26 42.8	-0.5
GRZ	Great Barrier	1.40	288	P	Pb	19 26 44.8	+0.2
GRZ				S	Sg	19 27 03.5	+0.1
PKGZ	Pakihiroa	1.42	147	P	Pn	19 26 43.3	-1.0
EDRZ	Edgecumbe	1.43	191	P	Pb	19 26 44.7	-0.5
KMRZ	Kaimai	1.47	219	P	Pg	19 26 46.5	-0.1
KARZ	Kaharoa	1.48	207	P	Pg	19 26 52.8	+5.9
OMRZ	Omania	1.51	202	P	Pg	19 26 52.5	+5.0
MKRZ	Makatiti	1.52	199	P	Pg	19 26 54.3	+6.7
WMGZ	Waiomatatini S	1.53	137	P	Pn	19 26 46.8	+1.0
URZ	Urewera	1.55	180	Pn	Pn	19 26 45.9	-0.2
	28nm,0.3s,baz=349,slow=8.1,SNR=62						
URZ				Sn	Sn	19 27 04.9	-1.4
	29nm,0.3s,baz=348,slow=18,SNR=5.6						
URZ	Urewera	1.55	180	P	Pn	19 26 45.9	-0.2
WIAZ	Waiheke Island	1.58	266	P	Pb	19 26 46.9	-0.8
TARZ	Mount Tarawera	1.60	197	P	Pn	19 26 43.8	-3.1
MKAZ	Moumakai	1.60	255	P	Pb	19 26 47.1	-1.0
TWGZ	Tauwhareparae	1.63	155	P	Pb	19 26 48.8	+0.2
TOZ	Tahuroa Road	1.64	231	P	Pg	19 26 55.6	+5.8
UTU	Utuhina	1.64	206	P	Pg	19 26 51.7	+1.9
PUZ	Puketiti	1.65	146	P	Pb	19 26 49.3	+0.4
MWZ	Matawai	1.66	168	P	Pn	19 26 47.4	-0.2
ETAZ	East Tamaki Re	1.76	261	P	Pg	19 26 51.2	-1.0
MBAZ	Motutapu North	1.77	267	P	Pg	19 26 51.3	-1.1
RAGZ	Rawiri	1.80	172	P	Pn	19 26 50.4	+0.7
ABAZ	Army Bay	1.82	273	P	Pb	19 26 51.3	-0.6
TKGZ	Te Karaka	1.83	161	P	Pb	19 26 51.8	-0.2
RTZ	Ruatahuna	1.91	183	P	Pn	19 26 51.3	+0.2
CNGZ	Carnagh Statio	1.98	154	P	Pb	19 26 54.2	-0.4
AWAZ	Awhitu Peninsu	2.00	259	P	Pb	19 26 53.7	-1.2
WTAZ	Waiatarua	2.04	263	P	Pb	19 26 54.1	-1.5
TLZ	Tolley Road	2.04	217	P	Pb	19 26 54.7	-0.9
KUTZ	Kaahu Road	2.05	209	P	Pb	19 26 55.0	-0.8
RIGZ	Rimuhau	2.06	165	P	Pb	19 26 55.2	-0.9
SNGZ	Shannon Statio	2.08	175	P	Pb	19 26 56.1	-0.2
MTHZ	Maungataniwha	2.15	185	P	Pb	19 26 57.5	0.0
RAHZ	Arahi	2.21	180	P	Pg	19 27 00.1	-0.7
PRGZ	Paritu Road	2.30	165	P	Pb	19 27 01.3	+1.3
WCZ	Waipu Caves	2.35	288	P	Pg	19 27 02.2	-1.3
NMHZ	Naumai	2.40	185	P	Pb	19 27 02.4	+0.7
BKZ	Black Stump Fm	2.50	191	P	Pb	19 27 03.2	-0.3
HIZ	Hauiti	2.54	224	P	Pn	19 27 01.1	+1.4
TMVZ	Te Maari	2.65	204	P	Pg	19 27 08.0	-1.2
KRVZ	Karewarewa	2.65	205	P	Pg	19 27 08.7	-0.6
ETVZ	East Tongariro	2.66	204	P	Pg	19 27 08.3	-1.2
WTVZ	West Tongariro	2.69	206	P	Pg	19 27 08.7	-1.2
OTVZ	Oturere	2.70	204	P	Pg	19 27 08.2	-2.1
TWVZ	Taurewa	2.70	209	P	Pg	19 27 08.3	-1.9
NGZ	Ngauruhoe	2.73	205	P	Pg	19 27 09.6	-1.3
MCHZ	McNeill Hill	2.75	186	P	Pb	19 27 07.7	-0.1
KWHZ	Kaweka Forest	2.77	191	P	Pb	19 27 07.4	-0.6
TUVZ	Tukino	2.80	204	P	Pg	19 27 11.2	-1.0
FWVZ	Far West T-bar	2.82	205	P	Pb	19 27 09.9	+0.8
TRVZ	Turoa	2.86	205	P	Pg	19 27 10.9	-2.5
WNVZ	Wahianoa	2.87	204	P	Pb	19 27 10.1	+0.2
BHHZ	Black Hill Sta	2.90	196	P	Pb	19 27 09.1	-1.2
MOVZ	Moawhango	2.90	201	P	Pb	19 27 09.1	-1.2
PKVZ	Pokaka	2.93	208	P	Pg	19 27 14.5	-0.1
KRHZ	Kereru	2.99	191	P	Pb	19 27 11.4	-0.4
VRZ	Vera Road	3.04	217	P	Pb	19 27 12.2	-0.5
KAHZ	Kahuranaki	3.09	183	P	Pb	19 27 10.9	-2.6
OUZ	Omahuta	3.21	297	P	Pn	19 27 09.9	+1.0
PNHZ	Pukenui	3.28	192	P	Pb	19 27 13.2	-3.5
TSZ	Takapari Road	3.46	195	P	Pn	19 27 15.5	+3.0
NEZ	North Egmont	3.49	222	P	Pb	19 27 18.6	-1.8
KHEZ	Kahui Hut	3.55	222	P	Pb	19 27 19.3	-2.1
BFZ	Birch Farm	4.03	189	P	Pn	19 27 22.7	+2.6
HOWZ	Holdsworth Sta	4.36	196	P	Pn	19 27 28.1	+3.3
KIW	Kapiti Island	4.49	202	P	Pn	19 27 30.6	+4.0
THZ	Tophouse	6.01	212	P	Pb	19 27 56.8	-6.5
KHZ	Kahutara	6.33	205	P	Pn	19 27 55.7	+3.9
LTZ	Lake Taylor	7.12	210	P	Pn	19 28 09.1	+6.5
ASAR	Alice Springs	39.22	277	P	P	19 33 48.2	+1.1
	0.3nm,0.8s,baz=119,slow=8.0,SNR=4.9						
WRA	Warramunga Arr	40.81	282	P	P	19 34 01.3	+1.1
	0.3nm,0.8s,baz=121,slow=7.5,SNR=1.8						
CMAR	Chiang Mai Arr	91.76	292	P	P	19 39 27.5	+0.9
	0.5nm,0.8s,baz=152,slow=4.1,SNR=4.1						
FINES	FINESS Array B	149.29	333	PKPbc	PKPab	19 46 10.8	-0.3
	3.0nm,1.1s,baz=64,slow=4.4,SNR=4.6						

WEL ***25*** *19:33:00, 36°.58S×177°.28E, h6^{km}, ML4.8, Mw5.3, Moment Tensor Solution. s13 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.96; M$_{\theta\theta}$0.52; M$_{\phi\phi}$0.44; M$_{r\theta}$0.29; M$_{\theta\phi}$0.43; M$_{\phi r}$0.42; Fault plane solution: M$_0$1.06000×10^{17} NP1: φ$_s$53.00000°, δ31.00000°, λ-80.00000°. NP2:φ$_s$222.00000°, δ59.00000°, λ-96.00000°. Principal axes: T 10307.3400, Plg14.0000°, Azm316.0000°; N 610.2800, Plg5.0000°, Azm224.0000°; P -10917.6100, Plg75.0000°, Azm116.0000°;*

IDC ***25*** *19:33:05.3±0.8, 36°.49S×177°.73E, h0^{km}, mb4.5/9, mb1 4.6/11, mb1mx4.4/32, mbtmp4.5/11, ML4.0/2, MS4.5/31, Ms1 4.5/31, ms1mx4.5/35 Error ellipse: s-maj=26.2km s-min=19.6km az=58.0*

NEIC ***25*** *19:33:06.7, 36°.44S×177°.41E, h5^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M$_{rr}$-5.96; M$_{\theta\theta}$3.77; M$_{\phi\phi}$2.20; M$_{r\theta}$1.72; M$_{\theta\phi}$2.58; M$_{\phi r}$0.75; Fault plane solution: M$_0$6.12000×10^{16} NP1:φ$_s$237.20000°, δ53.81000°, λ-85.67000°. NP2:φ$_s$49.89000°, δ36.41000°, λ-95.90000°. Principal axes: T 5.9578, Plg9.0000°, Azm324.0000°; N 0.3109, Plg3.0000°, Azm55.0000°; P -6.2687, Plg81.0000°, Azm166.0000°;*

NEIC ***25*** *19:33:07.0±2.4, 36°.59S±0°.07×177°.39E±0°.10, h4^{km}±4^{km} Error ellipse: s-maj=13.0km s-min=7.2km az=54.0*

BJI ***25*** *19:33:06.0±0.0, 36°.60S×177°.40E, h5^{km}, mB5.6/5, mb4.9/12, Ms4.8/2, Ms7 4.5/2*

WEL ***25*** *19:33:08.9±0.9, 37°S±6°×17°7E±°, h12^{km}, M4.8/27, ML5.0/27, MLv4.8/27, Error ellipse: s-maj=0.0km s-min=0.0km az=32.2*

NOU ***25*** *19:33:08.7, 36°.46S×177°.57E, h91^{km}, MLv5.2, Off E. Coast of N. Island, N.Z.*

GCMT ***25*** *19:33:11.8±0.1, 36°.50S±0°.01×177°.35E±0°.01, h12^{km}, MW5.3/140, Moment Tensor Solution. s99,c159; s140,c239; Duration: 1^{s}.1 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-1.08±.01; M$_{\theta\theta}$0.61±.01; M$_{\phi\phi}$0.46±.01; M$_{r\theta}$0.36±.04; M$_{\theta\phi}$0.63±.01; M$_{\phi r}$0.30±.04; Best double couple: M$_0$1.22200×10^{17} NP1:φ$_s$47.00000°, δ34.00000°, λ-91.00000°. NP2:φ$_s$229.00000°, δ56.00000°, λ-89.00000°. Principal axes: T 1.2670, Plg11.0000°, Azm318.0000°; N -0.0940, Plg1.0000°, Azm48.0000°; P -1.1760, Plg79.0000°, Azm142.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***25*** *19:33:12, 36°.51S×177°.43E, h12^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$-1.13;*

Mθθ0.63; Mφφ0.51; Mrθ0.24; Mθφ0.66; Mφr-0.08; Fault plane solution: M₀1.21000×10¹⁷ NP1:φs36.00000°, δ43.00000°,λ-107.00000°. NP2:φs239.00000°, δ49.00000°,λ-75.00000°. Principal axes: T 1.2294, Plg3.0000°, Azm318.0000°; N -0.0464, Plg12.0000°, Azm49.0000°; P -1.1830, Plg78.0000°, Azm214.0000°;

ISC 25 19:33:08.6±0.4**,36°.61S**±0°.04×**177°.32E**±0°.04**,h10km,n275,** σ**1ˢ67**/247**,mb4.8**/27**,MS4.5**/32**,5C-3D,Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WSRZ	White Island S	0.91	187	P	Pb	19 33 27.0	+0.5
WIZ	White Island	0.92	187	P	Pb	19 33 27.0	+0.4
WIZ				S	Sn	19 33 40.3	-0.5
MYRZ	Mayor Island	1.10	232	P	Pb	19 33 29.8	+0.1
HAZ	Te Kaha	1.20	162	P	Pb	19 33 30.5	-0.9
HAZ				S	Sb	19 33 46.4	-0.6
MXZ	Matakaoa Point	1.23	141		Pn	19 33 30.6	-1.3
MXZ	Matakaoa Point	1.23	141	P	Pn	19 33 30.6	-1.3
MXZ				S	Sb	19 33 47.1	-0.8
WHRZ	Whale Island	1.27	193	P	Pg	19 33 33.4	+0.3
KUZ	Kuaotunu	1.30	264	P	Pn	19 33 31.3	-1.4
KUZ				S	Sb	19 33 46.4	-3.3
OPRZ	Ohinepanea	1.38	206	P	Pn	19 33 33.8	0.0
RUGZ	Raukumara Rang	1.38	168	P	Pn	19 33 34.0	0.0
RUGZ				S	Sb	19 33 52.4	+0.1
TGRZ	Tauranga	1.40	217	P	Pn	19 33 34.2	0.0
PKGZ	Pakihiroa	1.41	155	P	Pn	19 33 33.7	-0.6
MARZ	Manawahe	1.47	200	P	Pn	19 33 35.4	+0.3
WMGZ	Waiomatatini S	1.49	145	P	Pb	19 33 36.6	+0.4
EDRZ	Edgecumbe	1.56	197	P	Pn	19 33 37.0	+0.5
LIRZ	Lichensteins R	1.58	208	P	Pn	19 33 36.9	+0.3
PUZ	Puketiti	1.64	153	P	Pb	19 33 39.3	+0.4
TWGZ	Tauwhareparae	1.65	162	P	Pb	19 33 39.7	+0.7
KARZ	Kaharoa	1.65	211	P	Pn	19 33 38.1	+0.5
URZ	Urewera	1.65	186	Pn	Pn	19 33 37.8	+0.2
	159nm,0.3s,baz=270,slow=2.7,SNR=204						
URZ				Sn	Sn	19 33 59.1	+0.2
	250nm,0.3s,baz=74,slow=2.2,SNR=7.0						
URZ				LR	LR	19 34 25.1	
	comp=Z,23µm,18.2s,baz=298,slow=44						
URZ	Urewera	1.65	186		Pn	19 33 37.5	-0.2
URZ					Sn	19 33 57.5	-1.5
URZ	Urewera	1.65	186	P	Pn	19 33 37.9	+0.2
KMRZ	Kaimai	1.66	221	P	Pn	19 33 38.0	+0.3
MKRZ	Makatiti	1.67	204	P	Pb	19 33 39.8	+0.4
OMRZ	Omania	1.68	207	P	Pb	19 33 39.3	-0.2
MWZ	Matawai	1.73	175	P	Pn	19 33 39.1	+0.4
TARZ	Mount Tarawera	1.75	202	P	Pb	19 33 40.3	-0.5
WIAZ	Waiheke Island	1.77	263	P	Pn	19 33 38.4	-0.8
WIAZ				S	Sn	19 33 59.5	-2.3
MKAZ	Moumakai	1.80	254	P	Pn	19 33 38.0	-1.7
UTU	Utuhina	1.80	210	P	Pn	19 33 41.0	+1.3
TOZ	Tahuroa Road	1.84	232	P	Pn	19 33 40.6	+0.5
RRRZ	Republican Roa	1.84	200	P	Pb	19 33 42.7	+0.4
TKGZ	Te Karaka	1.87	167	P	Pb	19 33 42.9	0.0
MUGZ	Murupara	1.92	193	P	Pn	19 33 41.7	+0.4
ETAZ	East Tamaki Re	1.95	259	P	Pn	19 33 41.6	-0.2
ETAZ				S	Sn	19 34 04.6	-1.7
MBAZ	Motutapu North	1.96	265	P	Pn	19 33 41.4	-0.4
MBAZ				S	Sn	19 34 05.0	-1.4
HRRZ	Handcock Road	1.96	205	P	Pn	19 33 43.2	+1.3
GRRZ	Galatos Road	1.99	209	P	Pn	19 33 43.4	+1.1
CNGZ	Carnagh Statio	2.00	160	P	Pb	19 33 45.1	+0.1
ABAZ	Army Bay	2.00	270	P	Pn	19 33 42.0	-0.5
RTZ	Ruatahuna	2.02	188	P	Pn	19 33 43.4	+0.7
PRRZ	Plateau Road	2.02	201	P	Pn	19 33 43.7	+1.0
EPAZ	Eden Park BICE	2.09	262	P	Pn	19 33 44.0	+0.4
ALRZ	Allen Road	2.10	202	P	Pb	19 33 45.9	-0.9
HBAZ	Herne Bay Bore	2.10	263	P	Pn	19 33 44.3	+0.6
RIGZ	Rimuhau	2.12	171	P	Pb	19 33 47.4	+0.3
SNGZ	Shannon Statio	2.17	180	P	Pn	19 33 46.3	+1.6
AWAZ	Awhitu Peninsu	2.20	257	P	Pn	19 33 45.2	+0.1
RVAZ	Riverhead Bore	2.21	265	P	Pn	19 33 45.7	+0.4
KUTZ	Kaahu Road	2.22	212	P	Pn	19 33 46.5	+1.0
TLZ	Tolley Road	2.23	219	P	Pn	19 33 46.2	+0.6
WTAZ	Waiatarua	2.23	261	P	Pn	19 33 45.8	+0.2
MTHZ	Maungataniwha	2.27	190	P	Pn	19 33 47.2	+1.0
RAHZ	Arahi	2.31	185	P	Pn	19 33 48.1	+1.4
BKZ	Black Stump Fm	2.63	194	Pn	Pn	19 33 52.1	+0.9
HIZ	Hauiti	2.73	225	Pn	Pn	19 33 53.3	+0.8
HIZ	Hauiti	2.73	225	P	Pn	19 33 53.5	+1.0
OUZ	Omahuta	3.33	294	Pn	Pn	19 33 59.0	-1.7
KHEZ	Kahui Hut	3.74	223	P	Pn	19 34 08.4	+1.9
DVHZ	Dannevirke	3.79	194	P	Pn	19 34 08.6	+1.5
NBEZ	Newall Road No	3.81	225	P	Pn	19 34 09.3	+2.1
ANWZ	Angora Road	3.90	190	P	Pn	19 34 10.8	+2.2
NMEZ	Namu Road	3.90	223	P	Pn	19 34 12.5	+3.9
OHWZ	Ohakea	3.92	203	P	Pb	19 34 14.1	-3.6
POWZ	Post Office Ro	3.97	197	P	Pn	19 34 12.0	+2.5
PRWZ	Pori Road	4.08	195	P	Pn	19 34 12.9	+2.0
BFZ	Birch Farm	4.15	191		Pn	19 34 12.2	+0.2
BFZ	Birch Farm	4.15	191	P	Pn	19 34 12.4	+0.4
MRZ	Mangatainoka R	4.27	198	P	Pn	19 34 14.2	+0.7
TIWZ	Tintock	4.31	195	P	Pn	19 34 15.8	+1.6
CPWZ	Castlepoint	4.38	191	P	Pn	19 34 17.6	+2.5
HOWZ	Holdsworth Sta	4.51	198	P	Pn	19 34 17.0	+0.1
OGWZ	Otaki Gorge	4.53	201	P	Pn	19 34 18.4	+1.3
TMWZ	Te Maipa	4.63	194	P	Pn	19 34 19.0	+0.4
KIW	Kapiti Island	4.64	203	P	Pn	19 34 19.9	+1.2
MTW	Mount Morrison	4.76	197	P	Pn	19 34 20.7	+0.3
CAW	Cannon Point	4.82	201	P	Pn	19 34 22.3	+1.1
TRWZ	Traveller	4.95	194	P	Pn	19 34 23.5	+0.6
DUWZ	D'Urville Isla	4.96	211	P	Pn	19 34 25.1	+2.0
PAWZ	Paruwai Farm	4.99	197	P	Pn	19 34 23.5	0.0
MSWZ	Moikau Station	5.06	198		Pn	19 34 23.9	-0.6
MSWZ	Moikau Station	5.06	198	P	Pn	19 34 24.3	-0.2
SNZO	South Karori	5.12	203	Pn	Pn	19 34 23.2	-2.0
BHW	Baring Head	5.16	201		Pn	19 34 25.4	-0.4
BHW	Baring Head	5.16	201	P	Pn	19 34 26.0	+0.2
TCW	Tory Channel	5.17	206	P	Pn	19 34 26.6	+0.6
PLWZ	Palliser	5.21	197	Pn	Pn	19 34 25.5	-1.0
PLWZ	Palliser	5.21	197	P	Pn	19 34 26.1	-0.4
TUWZ	Tuamarina	5.49	208		Pn	19 34 30.7	+0.4
TUWZ	Tuamarina	5.49	208	P	Pn	19 34 32.9	+2.6
NNZ	Nelson	5.53	213		Pn	19 34 33.4	+2.5
NNZ	Nelson	5.53	213	P	Pn	19 34 34.3	+3.4
QRZ	Quartz Range	5.64	220	Pn	Pn	19 34 33.4	+1.0
QRZ	Quartz Range	5.64	220	P	Pn	19 34 33.6	+1.2
CMWZ	Cape Campbell	5.67	204	Pn	Pn	19 34 34.1	+1.2
BSWZ	Blackbirch Sta	5.76	207		Pn	19 34 36.1	+2.1
BSWZ	Blackbirch Sta	5.76	207	P	Pn	19 34 36.5	+2.4
THZ	Tophouse	6.18	212	Pn	Pn	19 34 40.5	+0.6
THZ	Tophouse	6.18	212	P	Pn	19 34 41.0	+1.0
KHZ	Kahutara	6.49	206	Pn	Pn	19 34 43.5	-0.6
KHZ	Kahutara	6.49	206	P	Pn	19 34 43.6	-0.5
DSZ	Denniston Nort	6.68	218	P	Pn	19 34 49.8	+3.0
GVZ	Greta Valley S	7.16	206	P	Pn	19 34 52.9	-0.4
LTZ	Lake Taylor	7.29	211	Pn	Pn	19 34 55.9	+0.8
LTZ	Lake Taylor	7.29	211	P	Pn	19 34 56.6	+1.5
INZ	Inchbonnie	7.60	215	P	Pn	19 35 01.6	+2.2
OXZ	Oxford	7.84	210	Pn	Pn	19 35 02.5	-0.1
OXZ	Oxford	7.84	210	P	Pn	19 35 03.1	+0.5
MQZ	McQueen's Vall	7.94	205	Pn	Pn	19 35 01.9	-2.0
WVZ	Waitaha Valley	8.20	216	P	Pn	19 35 10.2	+2.6
RAO	Raoul Island	8.36	30	LR	LR	19 37 37.0	
	comp=Z,2µm,18.9s,baz=208,slow=34						
WACZ	Wakanui South	8.44	208	P	Pn	19 35 12.1	+1.3
CTZ	Chatham Island	8.49	149	P	Pn	19 35 11.8	+0.3
RPZ	Rata Peaks	8.56	212	Pn	Pn	19 35 14.2	+1.6
	4.6nm,0.3s,baz=71,slow=2.8,SNR=13						
RPZ				Sn	Sn	19 36 46.8	-2.4
	2.2nm,0.3s,baz=298,slow=13,SNR=5.9						
RPZ				LR	LR	19 39 04.9	
	comp=Z,4µm,19.5s,baz=34,slow=41						
RPZ	Rata Peaks	8.56	212	Pn	Pn	19 35 11.6	-1.0
RPZ	Rata Peaks	8.56	212	P	Pn	19 35 15.1	+2.5
GCSZ	Gaunt Creek Bo	8.58	217	P	Pn	19 35 14.1	+1.3
ARCZ	Arundel	8.70	211	P	Pn	19 35 16.2	+1.7
FOZ	Fox Glacier	8.99	217	Pn	Pn	19 35 19.6	+1.2
FOZ	Fox Glacier	8.99	217	P	Pn	19 35 20.5	+2.1
TMZ	Timaru	9.13	210	P	Pn	19 35 19.9	-0.4
LBZ	Lake Benmore	9.48	213	Pn	Pn	19 35 23.6	-1.5
LBZ	Lake Benmore	9.48	213	P	Pn	19 35 26.6	+1.6
ODZ	Otahua Downs	9.82	209	Pn	Pn	19 35 29.0	-0.8
JCZ	Jackson Bay	9.90	219	P	Pn	19 35 32.7	+1.8
WKZ	Wanaka	10.34	215	Pn	Pn	19 35 36.4	-0.6
MLZ	Mavora Lakes	11.17	216	Pn	Pn	19 35 46.0	-2.3
MLZ	Mavora Lakes	11.17	216	P	Pn	19 35 52.5	+4.2
WHZ	Wether Hill Ro	11.64	214	Pn	Pn	19 35 54.0	-0.7
SYZ	Scrubby Hill	11.65	209	P	Pn	19 35 56.8	+2.0
DCZ	Deep Cove	11.70	218	Pn	Pn	19 35 55.5	-0.1
APZ	The Paps	12.36	211	P	Pn	19 36 08.8	+4.4
DZM	Mont Dzumac	17.30	324	*e*LR	LR	19 41 04.7	
	comp=Z,8µm,25.4s						
DZM	Mont Dzumac	17.30	324	P	Pn	19 37 10.6	+0.3
	0.2nm,0.3s,baz=112,slow=20,SNR=2.6						
DZM				LR	LR	19 42 33.2	
	comp=Z,6µm,19.2s,baz=145,slow=33						
MSVF	Nonsavu	18.82	2	P	P	19 37 28.7	+0.2
MSVF				IAmb	IAmb	19 37 50.8	
	comp=Z,84nm,1.2s						
AFI	Afiamalu	24.62	26	LR	LR	19 47 27.8	
	comp=Z,447nm,19.1s,baz=203,slow=35						
RAR	Rarotonga	25.15	59	LR	LR	19 48 06.1	
	comp=Z,378nm,19.4s,baz=218,slow=36						
STKA	Stephens Creek	29.80	269	P	P	19 39 17.2	+1.6
	comp=Z,1.3nm,0.5s,baz=94,slow=10,SNR=3.6						
STKA				LR	LR	19 50 25.8	
	comp=Z,1µm,18.7s,baz=106,slow=34						
STKA	Stephens Creek	29.80	269	P	P	19 39 15.2	-0.4
HNR	Honiara	31.32	325	LR	LR	19 50 21.1	
	comp=Z,678nm,19.3s,baz=148,slow=33						
TBI	Tubuai	31.49	75	*e*S	S	19 44 29.9	-8.9
	comp=Z,158nm,25.8s						
TBI				*e*LQ	LQ	19 46 17.5	
	comp=Z,879nm,25.8s						
TBI				*e*LR	LR	19 47 39.2	
	comp=Z,1µm,31.5s,baz=234						
TBI	Tubuai	31.49	75	*e*T	T	20 12 12.0	
	comp=Z,106nm,0.4s						
CTA	Charters Tower	31.73	293	P	P	19 39 32.1	-0.6
	comp=Z,4.5nm,0.8s,baz=94,slow=7.6,SNR=4.3						
CTA				LR	LR	19 52 00.8	
	comp=Z,2µm,18.5s,baz=126,slow=36						
PAE	Paea	34.74	66	*e*T	T	20 16 13.4	
	comp=Z,6.8nm,0.3s						
PPT2	Papeete2	34.79	66	*e*S	S	19 45 21.2	-9.0
	comp=Z,134nm,25.0s						
PPT2				*e*LQ	LQ	19 47 42.1	
	comp=Z,469nm,22.2s						
PPT2				*e*LR	LR	19 49 08.8	
	comp=Z,1µm,27.2s,baz=226						
PPT2	Papeete2	34.79	66	*e*T	T	20 16 18.0	
	comp=Z,15nm,0.3s						
PPT	Papeete	34.80	66	LR	LR	19 53 00.7	
	comp=Z,204nm,19.4s,baz=236,slow=35						
TVO	Taravao	34.90	67	*e*T	T	20 16 25.5	
	comp=Z,5.3nm,0.3s						
TIAR	Tiarei	34.98	66	*e*T	T	20 16 31.4	
	comp=Z,3.8nm,0.3s						
MEH	Mehetia	35.73	68	*e*T	T	20 17 27.7	
	comp=Z,28nm,0.3s						
VAH	Vaihoa	37.73	65	*e*T	T	20 19 56.9	
	comp=Z,27nm,0.2s						
COEN	Coen	37.93	298	P	P	19 40 26.5	+0.2
COEN				IAmb	IAmb	19 40 41.1	
	comp=Z,22nm,1.4s						
PMG	Port Moresby	38.48	307	P	P	19 40 30.7	-0.2
	comp=Z,19nm,1.3s,baz=163,slow=11,SNR=2.2						
PMG				LR	LR	19 56 00.9	
	comp=Z,981nm,18.7s,baz=165,slow=36						
PMG	Port Moresby	38.48	307	IAmb	IAmb	19 40 44.1	
	comp=Z,14nm,1.0s						
AS31	Alice Springs	39.39	277	P	P	19 40 39.0	+0.4
ASAR	Alice Springs	39.39	277	P	P	19 40 39.6	+1.1
	comp=Z,4.5nm,0.5s,baz=121,slow=8.2,SNR=43						
ASAR				LR	LR	19 56 59.7	
	comp=Z,1µm,18.3s,baz=122,slow=36						
ASAR	Alice Springs	39.39	277	P	P	19 40 39.1	+0.5
RABL	Rabaul	39.70	318	P	P	19 40 38.0	-3.1
WR0	Warramunga Arr	40.80	282	P	P	19 40 50.0	-0.3
WB2	Warramunga Arr	40.96	282	P	P	19 40 52.1	+0.5
WB2				IAmb	IAmb	19 41 18.8	
	comp=Z,12nm,0.9s						
WRAB	Tennant Creek	40.97	282	P	P	19 40 51.0	-0.6
WRAB				IAmb	IAmb	19 41 17.7	
	comp=Z,11nm,0.9s						
WRA	Warramunga Arr	40.97	282	P	P	19 40 52.3	+0.6
	comp=Z,5.1nm,0.6s,baz=120,slow=7.8,SNR=36						
WRA				PcP	PcP	19 42 51.7	-0.2
	comp=Z,0.6nm,0.7s,baz=125,slow=3.1,SNR=1.6						
WRA				LR	LR	19 58 10.5	
	comp=Z,2µm,18.4s,baz=125,slow=36						
WRA	Warramunga Arr	40.97	282	P	P	19 40 49.4	-2.3
WB0	Warramunga Arr	41.02	282	P	P	19 40 48.9	-3.2
FORT	Forrest	41.04	263	P	P	19 40 52.0	-0.2
FORT				IAmb	IAmb	19 41 15.1	
	comp=Z,30nm,0.8s						
VNDA	Vanda	41.56	185	LR	LR	19 56 42.6	
	comp=Z,520nm,18.1s,baz=30,slow=34						
RKT	Rikitea	43.08	85	*e*S	S	19 47 27.0	-8.0
	comp=Z,322nm,28.2s						
RKT				*e*LQ	LQ	19 51 04.0	
	comp=Z,1µm,32.2s						
RKT				*e*LR	LR	19 53 01.0	
	comp=Z,1µm,28.5s						
MMPI	Merauke	43.70	301	P	P	19 41 16.2	+2.3
	comp=Z,336nm,0.8s						
CASY	Casey	47.83	210	P	P	19 41 44.9	-1.1
JAY	Jayapura	47.85	307	LR	LR	19 59 43.2	
	comp=Z,285nm,20.3s,baz=136,slow=33						
NWAO	Narrogin (SRO)	48.80	256	LR	LR	20 03 08.3	
	comp=Z,320nm,18.2s,baz=110,slow=37						
NWAO	Narrogin (SRO)	48.80	256		P	19 41 54.1	+0.2
NWAO				IAmb	IAmb	19 42 20.8	
	comp=Z,30nm,1.4s						
NWAO	Narrogin (SRO)	48.80	256	P	P	19 41 54.2	+0.2
NWAO				IAmb	IAmb	19 42 20.8	
	comp=Z,37nm,1.4s						
FITZ	Fitzroy Crossi	48.87	278	LR	LR	20 03 02.2	
	comp=Z,847nm,18.1s,baz=121,slow=36						
FITZ	Fitzroy Crossi	48.87	278	P	P	19 41 55.7	+1.1
MORW	Morawa	51.28	260	P	P	19 42 12.6	-0.3
MORW				IAmb	IAmb	19 42 25.8	
	comp=Z,9.9nm,0.8s						
PSA00	Pilbara Seismi	51.71	270	P	P	19 42 14.0	-2.1
PSA00				IAmb	IAmb	19 42 14.7	
	comp=Z,5.9nm,0.8s						
QSPA	South Pole Qui	53.51	180	P	P	19 42 29.8	+0.7
QSPA				IAmb	IAmb	19 42 40.1	
	comp=Z,22nm,0.9s						
BATI	Baumata	54.98	284	LR	LR	20 07 40.2	
	comp=Z,2µm,18.3s,baz=151,slow=38						
SIJI	Sorong	55.44	299	LR	LR	20 08 05.4	
	comp=Z,363nm,19.1s,baz=148,slow=38						
KAPI	Kappang	61.22	286	LR	LR	20 11 06.2	
	comp=Z,900nm,18.4s,baz=135,slow=37						
BELA	Belgrano 2	64.15	173	P	P	19 43 42.3	-0.3
BELA				IAmb	IAmb	19 44 02.6	
	comp=Z,10nm,0.9s						
MAW	Mawson	65.11	203	LR	LR	20 11 27.3	
	comp=Z,530nm,18.3s,baz=106,slow=35						
CISI	Cisompet, Garu	69.09	276	P	P	19 44 14.6	-0.6
DBJI	Dramaga	70.54	276	P	P	19 44 24.6	+0.6
SNAA	Sanae	72.02	180	P	P	19 44 31.9	-0.2
SNAA	Sanae	72.02	180	P	P	19 44 32.3	+0.2
SNAA				IAmb	IAmb	19 44 50.7	
	comp=Z,32nm,1.4s						
VNA3	Neumayer Olymp	72.33	178	P	P	19 44 33.7	-0.3
VNA2	Neumayer--Watz	72.71	178	P	P	19 44 36.0	-0.2
	baz=181,slow=4.8						
KASI	Kota Agung	72.95	276	P	P	19 44 49.4	+11
VNA1	Neumayer--Stat	72.97	178	P	P	19 44 37.2	-0.5
LWLI	Liwa	73.60	276	P	P	19 44 44.2	+1.7
	comp=Z,2µmcomp=Z,32nm,0.6s						
PPBI	Pangkal Pinang	73.65	280	P	P	19 44 45.0	+2.4
SSLB	Suanglung	80.21	309	P	P	19 45 18.8	-0.5
SSLB				IAmb	IAmb	19 45 29.0	
	comp=Z,18nm,0.9s						
H03S2	Juan Fernandez	80.22	125	T	T	21 14 09.7	
	baz=231,slow=74,SNR=18						
H03S1	Juan Fernandez	80.22	125	T	T	21 14 07.3	
	baz=231,slow=74,SNR=20						
H03S3	Juan Fernandez	80.23	125	T	T	21 13 51.7	
	baz=231,slow=74,SNR=18						
H03N3	Juan Fernandez	80.45	125	T	T	21 14 12.1	
	baz=235,slow=72,SNR=83						
H03N2	Juan Fernandez	80.45	125	T	T	21 14 16.7	
	baz=235,slow=72,SNR=65						
H03N1	Juan Fernandez	80.47	125	T	T	21 13 51.7	
	baz=235,slow=72,SNR=75						
PLCA	Paso Flores	81.04	135	P	P	19 45 22.9	-1.0
	comp=Z,2.0nm,0.8s,baz=260,slow=6.4,SNR=3.7						
PLCA				LR	LR	20 13 02.7	
	comp=Z,350nm,21.1s,baz=220,slow=30						
MJAR	Matsushiro Arr	81.33	329	LR	LR	20 18 02.5	
	comp=Z,124nm,21.9s,baz=145,slow=33						
JNU	Nakatsue	81.82	322	P	P	19 45 26.6	-1.2
	comp=Z,7.2nm,0.9s,baz=160,slow=3.5,SNR=3.6						
GSI	Gunungsitoli	82.55	277	P	P	19 45 33.1	+1.1
GSI	Gunungsitoli	82.55	277	P	P	19 45 33.7	+1.7
QIZ	Qiongzhong	84.31	299	P	P	19 45 41.3	+0.4
QIZ				S	S	19 56 10.0	+3.1
QIZ				SS	SS	20 01 42.0	+4.8
QIZ				pmax	pmax		
	comp=Z,160nm,6.3s						
QIZ				LR	LR		
	comp=Z,160nm,21.6s						
QIZ				LR	LR		
	comp=Z,190nm,25.5s						
QIZ				LR	LR		
	comp=Z,260nm,28.4s						
KSRS	Korea Array	86.72	323	P	P	19 45 52.2	-0.2
	comp=Z,2.0nm,0.8s,baz=141,slow=5.5,SNR=5.7						
KSRS				LR	LR	20 23 24.2	
	comp=Z,75nm,18.6s,baz=148,slow=35						
NJ2	Nanjing	87.50	314	*e*P	P	19 45 57.8	+1.4
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.5s						
NONG	Nongkai	88.53	294	P	P	19 46 12.0	+10
USRK	Ussuriysk Ar.	90.33	329	LR	LR	20 22 24.2	
	comp=Z,130nm,21.9s,baz=151,slow=33						
PETK	Petropavlovsk-	90.96	348	LR	LR	20 20 04.9	
	comp=Z,328nm,21.7s,baz=155,slow=31						
GYA	Guiyang	91.39	302	⇑P	P	19 46 17.0	+2.0
GYA				sP	pwP	19 46 21.3	+0.8
GYA				S	S	19 57 19.5	+5.1
GYA				pmax	pmax		
	comp=Z,6.0nm,1.4s						
GYA				pmax	pmax		
	comp=Z,170nm,5.0s						
CM36	Chiang Mai Arr	91.82	292	P	P	19 46 20.0	+3.0
CM04	Chiang Mai Arr	91.83	292	P	P	19 46 19.2	+2.2
CM09	Chiang Mai Arr	91.85	292	P	P	19 46 21.2	+4.0
CM05	Chiang Mai Arr	91.86	291	P	P	19 46 19.3	+2.1
CM01	Chiang Mai Arr	91.86	292	P	P	19 46 19.0	+1.8
CM02	Chiang Mai Arr	91.88	292	P	P	19 46 19.0	+1.7
CM31	Chiang Mai Arr	91.89	292	P	P	19 46 27.0	+10
CMAR	Chiang Mai Arr	91.89	292	P	P	19 46 17.6	+0.3
	comp=Z,2.4nm,0.7s,baz=146,slow=3.5,SNR=24						
CMAR				LR	LR	20 30 04.1	
	comp=Z,258nm,20.1s,baz=198,slow=37						
CMAR	Chiang Mai Arr	91.89	292	P	P	19 46 18.3	+0.9
CM13	Chiang Mai Arr	91.90	291	P	P	19 46 19.0	+1.6
CM15	Chiang Mai Arr	91.91	292	P	P	19 46 19.0	+1.6
CM32	Chiang Mai Arr	92.09	292	P	P	19 46 25.0	+6.8
CMMT	Chiang Mai	92.11	292	P	P	19 46 19.0	+0.6
PFO	Pinyon Flats O	93.23	50	LR	LR	20 18 43.9	
	comp=Z,337nm,19.8s,baz=276,slow=30						
NVAR	Mina Array Bea	95.41	45	LR	LR	20 22 23.0	
	comp=Z,149nm,19.8s,baz=249,slow=31						
CD2	Chengdu	96.19	304	P	P	19 46 36.3	-0.6
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HHC	Hu-ho-hao-te	97.83	316	*e*P	P	19 46 43.8	-0.3
HHC				pmax	pmax		
	comp=Z,3.0nm,0.8s						
TXAR	Lajitas Array	98.94	60	LR	LR	20 26 05.3	
	comp=Z,54nm,18.7s,baz=0.0,slow=32						
LPAZ	La Paz	98.94	118	LR	LR	20 22 24.6	
	comp=Z,200nm,22.0s,baz=198,slow=30						
CPUP	Villa Florida	98.96	132	LR	LR	20 24 44.4	
	comp=Z,857nm,19.9s,baz=226,slow=31						
LZH	Lanzhou	99.38	308	*e*P	Pdif	19 46 51.8	+0.5
LZH				pP	sP	19 46 55.3	+0.5
LZH				sP	pwP	19 46 57.8	+1.0
LZH				pmax	pmax		
	comp=Z,18nm,1.0s						
SONM	Songino Array	105.17	319	PKKPbc	PKKPbc	20 02 57.8	-0.2
	comp=Z,0.2nm,0.5s,baz=321,slow=1.8,SNR=2.8						
WMQ	Urumqi	113.95	308	*e*PKP	PKiKP	19 51 46.5	-1.0
MKAR	Makanchi Array	118.68	309	PKP	PKPdf	19 51 54.6	-1.9
	comp=Z,0.3nm,0.8s,baz=108,slow=3.8,SNR=2.7						
MKAR				PKKPab	PKKPbc	20 02 13.1	+0.4
	comp=Z,0.2nm,0.5s,baz=286,slow=3.8,SNR=5.6						
KURK	Kurchatov	122.40	312		PKPdf	19 52 01.6	-1.8
KURBB	Kurchatov Arra	122.42	312	PKP	PKPdf	19 52 01.2	-2.2
	comp=Z,59nm,0.8s,baz=116,slow=1.7,SNR=9.7						
ARCES	ARCESS Array B	143.64	344	PKP	PKPbc	19 52 40.8	+0.7
	comp=Z,3.2nm,0.7s,baz=44,slow=2.7,SNR=4.3						
ARCES	ARCESS Array B	143.64	344		PKPbc	19 52 41.0	+1.0
VANB	Van	143.74	287	P	PKPab	19 52 39.7	-1.0
AKH	Akhalkalaki	144.14	292	⇑P	PKiKP	19 53 01.7	+14
KARS	Kars	144.34	291	P	PKPab	19 52 43.1	+0.2
MLAZ	Malazgirt-MUS	144.49	288	P	PKPab	19 52 42.7	-0.9
GURO	Guroymak-BITLI	144.78	287	P	PKPab	19 52 44.2	-0.4
KBZ	Khabaz	144.82	296	PKPbc	PKPab	19 52 43.9	-0.5
	comp=Z,2.6nm,0.7s,baz=84,slow=4.3,SNR=10						
SENK	Senkaya-Erzuru	144.87	290	P	PKPab	19 52 45.0	0.0
VRTB	Varto-Mus	145.33	288	P	PKPab	19 52 47.3	+0.6
SVAN	Silvan-Diyarba	145.34	286	P	PKPbc	19 52 46.8	+0.4
BNGB	Bingl	145.90	287	P	PKPab	19 52 49.0	+0.3
YEDI	Yedisu-Bingol	146.07	288	P	PKPbc	19 52 48.9	+0.1
DYBB	Diyarbakir	146.12	285	P	PKPdf	19 52 48.5	+0.5
CHOM	Cayeli-Rize	146.14	291	P	PKPbc	19 52 49.1	+0.3
FINES	FINESS Array B	149.28	333	PKPbc	PKPbc	19 52 54.8	-1.8
	comp=Z,2.7nm,0.6s,baz=46,slow=3.7,SNR=13						
CEYT	Ceyhan	149.37	282	P	PKPdf	19 52 53.1	-0.1
BNN	Bunyan	149.60	286	P	PKPdf	19 52 56.2	+2.5
LIC	Lamto	149.68	175	*e*PKIKP	PKPbc	19 52 59.3	+0.2
	comp=Z,65nm,1.3s						
KIC	Kosan Boka	149.83	176	*e*PKIKP	PKPbc	19 52 59.8	+0.3
	comp=Z,50nm,1.0s						
TIC	Toumodi	150.10	175	*e*PKIKP	PKPbc	19 52 59.6	-0.5
DBIC	Dimbokro	150.13	176	PKPbc	PKPdf	19 52 57.3	+2.2
	comp=Z,2.3nm,0.5s,baz=180,slow=4.0,SNR=6.7						
BRTR	Keskin Array B	151.40	287	PKPbc	PKPbc	19 53 01.6	-1.0
	comp=Z,0.9nm,0.7s,baz=126,slow=3.7,SNR=3.2						
BRTR				PKPab	PKPab	19 53 10.2	-0.8
	comp=Z,2.7nm,0.8s,baz=123,slow=4.6,SNR=9.1						
AKASG	Malin Array Be	153.21	312	PKPbc	PKPbc	19 53 03.9	-2.2
	comp=Z,0.7nm,0.5s,baz=72,slow=2.6,SNR=2.7						
SRCK	Saricakaya, Es	153.74	288	P	PKPdf	19 52 56.7	-3.1
NOA	NORSAR Array B	154.01	345	PKPbc	PKPbc	19 53 04.2	-3.4
	comp=Z,0.9nm,1.0s,baz=35,slow=2.1,SNR=2.2						
HARR	Harsova	155.53	299	⇓P	PKPab	19 53 33.8	+5.8
SLVT	Silivri	155.60	290	P	PKPdf	19 52 47.3	-15
TESR	Tescani	156.05	304	⇑P	PKPab	19 53 31.4	+1.1
PLOR	Plostina	156.20	302	⇑P	PKPab	19 53 32.8	+1.9
TORD	Torodi Ar. Bea	156.31	191	PKP	PKPdf	19 53 02.7	-1.3
	comp=Z,0.5nm,0.8s,baz=122,slow=3.0,SNR=1.8						
TORD				PKPbc	sPKPdf	19 53 13.1	+5.6
	comp=Z,0.5nm,0.6s,baz=188,slow=0.6,SNR=2.7						
TORD				PKPab	PKPab	19 53 30.6	-1.3
	comp=Z,2.1nm,0.6s,baz=189,slow=2.8,SNR=8.6						
TORD	Torodi Ar. Bea	156.31	191	PKPdf	PKPdf	19 53 01.7	-2.4
TORD					PKPab	19 53 30.6	-1.3
NEHR	Nehoiu	156.53	301	⇓P	PKPab	19 53 33.8	+1.4
BURAR	Bucovina Array	156.69	307	⇑P	PKPab	19 53 35.3	+2.3
MLR	Muntele Rosu	156.76	301	⇓P	PKPab	19 53 34.4	+0.9
CLL	Collm	161.53	328	*e*PKPab	PKPab	19 53 56.0	+2.3
GERES	GERESS Array B	162.89	321	PKPab	PKPab	19 53 58.0	-2.0
	comp=Z,0.3nm,0.5s,baz=33,slow=2.3,SNR=2.9						

BGR ***25*** *19:36:54.4±0.0, 18°.76S×173°.47W, h33km*

NEIC ***25*** *19:36:56.2±1.4, 18°.71S±0°.09×174°.96W±0°.08, h45km±6km, mb4.9/77, Error ellipse: s-maj=13.5km s-min=10.4km az=168.0*

BJI ***25*** *19:36:57.0±0.0, 19°.11S×175°.13W, h64km, mB5.5/11, mb4.7/22, Ms5.0/7, Ms7 4.7/4*

IDC ***25*** *19:37:00.3±2.7, 18°.76S×174°.82W, h86km±23km, mb4.2/18, mb1 4.4/21, mb1mx4.3/35, mbtmp4.6/21, Error ellipse: s-maj=22.3km s-min=13.0km az=150.0*

NOU ***25*** *19:37:06.1, 18°.53S×174°.06W, h200km, mb4.4, Tonga Islands*

ISC 25 19:37:07.3±0.4**, 18°.94S**±0°.09×**174°.91W**±0°.08**, h147km, n242,** σ**1ˢ30**/237**, mb4.6**/57**, 23C-10D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	4.72	92	Pn	Pn	19 38 06.5	-10
NIUE	Niue	4.72	92	P	Pn	19 38 07.3	-10
AFI	Afiamalu	5.84	31	P	Pn	19 38 21.3	-11
	16nm,0.3s,baz=197,slow=3.0,SNR=11						
AFI				S	Sn	19 39 16.5	-22
	13nm,0.3s,baz=33,slow=22,SNR=2.9						
AFI	Afiamalu	5.84	31	Pn	Pn	19 38 16.4	-16

AFI	Afiamalu	5.84	31	P	Pn	19 38 22.1	-10
MSVF	Nonsavu	6.79	279	Pn	Pn	19 38 31.2	-13
MSVF	Nonsavu	6.79	279	P	Pn	19 38 54.0	+9.3
RAR	Rarotonga	14.40	102	P	Pn	19 40 18.7	-5.8
	6.9nm,0.3s,baz=260,slow=4.9,SNR=8.1						
RAR				S	Sn	19 42 43.0	-21
	0.5nm,0.3s,baz=285,slow=15,SNR=1.5						
RAR	Rarotonga	14.40	102		Pn	19 40 18.5	-5.9
RAR	Rarotonga	14.40	102	P	Pn	19 40 12.5	-12
KNTN	Kanton	16.37	11	Pn	Pn	19 40 38.9	-10
KNTN				IAmb	IAmb	19 40 41.8	
	comp=Z,63nm,1.2s						
YATNC	Mamie plateau,	17.33	257	P	Pn	19 41 04.2	+3.8
OUENC	Ouen Island, N	17.42	255	P	Pn	19 41 05.8	+4.3
DZM	Mont Dzumac	17.74	257	P	P	19 41 02.9	-1.2
	comp=Z,0.3nm,0.3s,baz=71,slow=6.0,SNR=2.6						
DZM	Mont Dzumac	17.74	257	P	P	19 40 59.1	-5.0
DZM	Mont Dzumac	17.74	257	P	Pn	19 41 08.5	+3.1
ONTNC	Ouen Toro	17.76	256	P	Pn	19 41 08.5	+3.0
URZ	Urewera	20.47	198	P	P	19 41 33.2	-0.1
	comp=Z,6.1nm,0.4s,baz=21,slow=8.6,SNR=2.3						
BFZ	Birch Farm	22.96	197	P	P	19 41 56.4	-2.5
BFZ				IAmb	IAmb	19 42 23.0	
	comp=Z,86nm,1.3s						
QRZ	Quartz Range	24.33	204	P	P	19 42 11.3	0.0
QRZ				IAmb	IAmb	19 42 22.0	
	comp=Z,74nm,1.4s						
TUWZ	Tuamarina	24.36	201	P	P	19 42 10.8	-0.8
NNZ	Nelson	24.36	202	P	P	19 42 10.8	-0.8
NNZ				IAmb	IAmb	19 42 37.3	
	comp=Z,84nm,1.5s						
KHZ	Kahutara	25.37	200	P	P	19 42 18.5	-2.2
KHZ				IAmb	IAmb	19 42 24.1	
	comp=Z,32nm,1.1s						
HNR	Honiara	26.11	288	P	P	19 42 27.3	-0.5
	comp=Z,23nm,0.3s,baz=84,slow=9.2,SNR=1.3						
LTZ	Lake Taylor	26.13	202	P	P	19 42 26.4	-1.2
LTZ				IAmb	IAmb	19 42 51.5	
	comp=Z,30nm,1.4s						
FOZ	Fox Glacier	27.68	204	P	P	19 42 41.7	+0.2
FOZ				IAmb	IAmb	19 43 01.2	
	comp=Z,48nm,1.4s						
EIDS	Eidsvold	32.08	252	P	P	19 43 20.5	-0.1
EIDS				IAmb	IAmb	19 43 43.6	
	comp=Z,11nm,1.2s						
ARMA	Armidale	32.36	243	P	P	19 43 23.4	+0.3
CTA	Charters Tower	36.57	262	P	P	19 43 60.0	+0.7
	comp=Z,12nm,0.6s,baz=89,slow=9.9,SNR=27						
CTAO	Charters Tower	36.57	262	P	P	19 43 59.6	+0.3
CTAO				IAmb	IAmb	19 44 00.6	
	comp=Z,19nm,0.9s						
COEN	Coen	40.43	271	P	P	19 44 32.6	+1.0
COEN				IAmb	IAmb	19 44 35.7	
	comp=Z,16nm,1.2s						
STKA	Stephens Creek	41.09	243	P	P	19 44 36.8	+0.1
	comp=Z,1.9nm,0.6s,baz=102,slow=8.2,SNR=5.6						
STKA	Stephens Creek	41.09	243	P	P	19 44 36.7	-0.1
BBOO	Buckleboo	45.84	242	P	P	19 45 14.0	-0.9
WR0	Warramunga Arr	47.53	260	P	P	19 45 27.6	-0.5
WR0				IAmb	IAmb	19 45 31.2	
	comp=Z,6.9nm,1.0s						
WB0	Warramunga Arr	47.69	260	P	P	19 45 29.1	-0.4
WB0				IAmb	IAmb	19 45 30.5	
	comp=Z,10nm,0.6s						
WB2	Warramunga Arr	47.71	260	P	P	19 45 29.4	-0.1
WB2				IAmb	IAmb	19 45 29.9	
	comp=Z,11nm,0.8s						
WRAB	Tennant Creek	47.71	260	P	P	19 45 27.0	-2.6
WRAB				IAmb	IAmb	19 45 30.3	
	comp=Z,9.1nm,0.6s						
WRA	Warramunga Arr	47.72	260	P	P	19 45 28.8	-0.8
	comp=Z,7.3nm,0.4s,baz=96,slow=8.8,SNR=49						
WRA				PcP	PcP	19 46 57.3	+0.6
	comp=Z,0.7nm,0.7s,baz=90,slow=4.2,SNR=1.9						
WRA				S	S	19 52 13.0	-1.9
	comp=Z,0.5nm,0.8s,baz=99,slow=13,SNR=4.3						
WRA	Warramunga Arr	47.72	260		S	19 52 13.0	-1.9
AS31	Alice Springs	47.72	255	P	P	19 45 29.6	-0.1
AS31				IAmb	IAmb	19 45 31.2	
	comp=Z,4.4nm,0.5s						
ASAR	Alice Springs	47.72	255	P	P	19 45 29.5	-0.1
	comp=Z,15nm,0.5s,baz=91,slow=7.6,SNR=218						
ASAR				PcP	PcP	19 46 57.3	+0.6
	comp=Z,1.4nm,0.7s,baz=104,slow=4.0,SNR=2.9						
ASAR				S	S	19 52 14.0	-0.9
	comp=Z,0.4nm,1.0s,baz=87,slow=18,SNR=3.3						
ASAR	Alice Springs	47.72	255	P	P	19 45 29.1	-0.6
FORT	Forrest	52.58	245	P	P	19 46 05.2	-0.9
FORT				IAmb	IAmb	19 46 05.8	
	comp=Z,12nm,0.7s						
FITZ	Fitzroy Crossi	56.13	261	P	P	19 46 31.7	-0.3
SOEI	Soe	59.39	270	P	P	19 46 55.8	+0.9
PSA00	Pilbara Seismi	60.86	255	P	P	19 47 04.4	-0.3
MORW	Morawa	63.11	246	P	P	19 47 19.5	-0.1
MORW				IAmb	IAmb	19 47 21.7	
	comp=Z,10nm,1.1s						
MJAR	Matsushiro Arr	70.75	321	P	P	19 48 06.2	-1.4
	comp=Z,2.6nm,0.5s,baz=156,slow=5.8,SNR=9.3						
MJAR	Matsushiro Arr	70.75	321	P	P	19 48 07.2	-0.3
MAJO	Matsushiro	70.75	321	P	P	19 48 07.6	0.0
MAJO				IAmb	IAmb	19 48 08.9	
	comp=Z,4.7nm,0.6s						
MAT	Matsushiro	70.75	321	P	P	19 48 06.9	-0.7
QSPA	South Pole Qui	71.12	180	P	P	19 48 11.2	+1.6
QSPA				IAmb	IAmb	19 48 12.1	
	comp=Z,7.9nm,0.7s						
KKM	Kota Kinabalu	72.21	283	P	P	19 48 16.7	-0.3
UNV	Unalaska Valle	72.84	5	P	P	19 48 17.7	-2.0
UNV				IAmb	IAmb	19 48 18.8	
	comp=Z,12nm,0.7s						
UGM	Wanagama	72.92	267	P	P	19 48 21.1	-0.1
JNU	Nakatsue	73.20	315	P	P	19 48 21.4	-0.9
	comp=Z,6.9nm,0.7s,baz=244,slow=2.9,SNR=4.3						
JNU	Nakatsue	73.20	315	P	P	19 48 21.2	-1.1
YULB	Yu-li	75.13	301	P	P	19 48 32.6	-1.1
YULB				IAmb	IAmb	19 48 34.2	
	comp=Z,8.4nm,0.7s						
NACB	Ninganchiao	75.26	302	P	P	19 48 34.1	-0.2
PEA0B	Petropavlovsk-	75.57	343	P	P	19 48 35.1	-0.4
PETK	Petropavlovsk-	75.57	343	P	P	19 48 34.4	-1.1
	comp=Z,3.4nm,0.7s,baz=119,slow=8.9,SNR=7.0						
PETK	Petropavlovsk-	75.57	343	P	P	19 48 35.3	-0.2
SSLB	Suanglung	75.59	302	P	P	19 48 35.7	-0.6
SSLB				IAmb	IAmb	19 48 37.2	
	comp=Z,18nm,1.0s						
TPUB	Ta-pu	75.62	301	P	P	19 48 35.7	-0.8
KSRS	Korea Array	77.70	317	P	P	19 48 47.8	0.0
	comp=Z,2.1nm,0.8s,baz=139,slow=6.6,SNR=5.9						
NVAR	Mina Array Bea	77.91	42	P	P	19 48 48.9	-0.4
	comp=Z,0.4nm,0.4s,baz=225,slow=10,SNR=5.2						
NVAR	Mina Array Bea	77.91	42	P	P	19 48 49.3	0.0
KNMB	Chin-men Tao	77.98	301	P	P	19 48 50.6	+0.9
KNMB				IAmb	IAmb	19 48 50.9	
	comp=Z,27nm,1.5s						
TPNV	Topopah Spring	78.39	44	P	P	19 48 51.8	-0.1
TPH	Tonopah	78.39	43	P	P	19 48 51.7	-0.2
TPH				IAmb	IAmb	19 48 52.8	
	comp=Z,17nm,0.9s						
KVN	Kaiserville	78.40	42	P	P	19 48 51.8	-0.1
MOD	Modoc Plateau	78.78	38	P	P	19 48 54.1	+0.2
SHPR	Sheep Range	78.87	45	P	P	19 48 54.9	+0.3
W13A	Hualapai Mount	78.97	47	P	P	19 48 54.9	-0.3
USRK	Ussuriysk Ar.	79.36	324	P	P	19 48 57.4	+0.6
PINE	Pine Mountain	79.59	37	P	P	19 48 58.2	-0.1
TUC	Tucson	79.74	51	P	P	19 48 59.6	+0.4
BELA	Belgrano 2	80.71	172	P	P	19 49 04.4	+0.7
NJ2	Nanjing	81.17	308	*e*P	P	19 49 08.5	+1.8
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.6s						
G08A	Pilot Rock	81.63	36	P	P	19 49 08.6	-0.4
SUA	Susitna One	82.43	11	P	P	19 49 12.2	-0.7
SUA				IAmb	IAmb	19 49 12.7	
	comp=Z,10nm,0.8s						
CN2	Changchun	82.89	321	*e*P	P	19 49 17.5	+2.1
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
TTA	Tatalina	82.95	9	P	P	19 49 15.4	0.0
F10A	Beach Ranch, E	83.01	36	P	P	19 49 15.7	-0.5
SCM	Sheep Creek Mo	83.45	13	P	P	19 49 17.7	-0.4
MNTX	Cornudas Mount	83.48	53	P	P	19 49 18.6	-0.2
TX31	Lajitas Ar. Si	83.77	56	P	P	19 49 21.5	+1.0
TX32	Lajitas Array	83.77	56	P	P	19 49 21.0	+0.6
TX32				IAmb	IAmb	19 49 22.5	
	comp=Z,9.9nm,1.4s						
TXAR	Lajitas Array	83.77	56	P	P	19 49 20.3	-0.2
	comp=Z,1.6nm,0.9s,baz=219,slow=7.6,SNR=10						
TXAR	Lajitas Array	83.77	56	P	P	19 49 20.7	+0.2
N25K	Chitina, Valde	83.85	14	P	P	19 49 19.6	-0.5
N25K				IAmb	IAmb	19 49 20.5	
	comp=Z,9.3nm,0.7s						
GLB	Gilahina Butte	83.89	14	P	P	19 49 19.9	-0.3
GLB				IAmb	IAmb	19 49 20.5	
	comp=Z,8.0nm,1.0s						
PV14	Lion Creek, Pa	84.00	46	P	P	19 49 21.2	-0.4
ANMO	Albuquerque	84.17	50	P	P	19 49 22.9	+0.4
ANMO				IAmb	IAmb	19 49 24.1	
	comp=Z,6.6nm,1.2s						
TRF	Thorofare Moun	84.35	11	P	P	19 49 21.7	-1.0
TRF				IAmb	IAmb	19 49 22.3	
	comp=Z,6.5nm,0.7s						
H03S2	Juan Fernandez	84.45	124	T	T	21 22 19.1	
	baz=249,slow=75,SNR=20						
H03S1	Juan Fernandez	84.47	124	T	T	21 22 17.2	
	baz=249,slow=75,SNR=19						
H03S3	Juan Fernandez	84.47	124	T	T	21 22 15.8	
	baz=249,slow=75,SNR=19						
RND	Reindeer	84.57	11	P	P	19 49 23.1	-0.6
RND				IAmb	IAmb	19 49 24.1	
	comp=Z,9.6nm,0.7s						
MENT	Mentasta	85.21	14	P	P	19 49 26.5	-0.3
WRH	Wood River Hil	85.68	11	P	P	19 49 28.2	-0.9
DOT	Dot Lake	85.76	13	P	P	19 49 29.4	-0.2
BCAR	Beaver Creek A	85.77	14	P	P	19 49 29.4	-0.2
IPM	Ipoh	85.84	276	P	P	19 49 30.3	-0.8
IPM				IAmb	IAmb	19 49 32.9	
	comp=Z,7.4nm,0.6s						
HDA	Harding Lake	85.84	12	P	P	19 49 29.1	-0.7
PDAR	Pinedale Array	85.85	42	P	P	19 49 29.9	-0.8
	comp=Z,0.9nm,0.8s,baz=222,slow=2.0,SNR=8.1						
CCB	Clear Creek Bu	85.90	11	P	P	19 49 29.4	-0.7
I23K	Minto, Yukon-K	86.07	11	P	P	19 49 29.9	-1.0
I23K				IAmb	IAmb	19 49 31.0	
	comp=Z,6.4nm,1.2s						
TCOL	CIGO, UAF Yank	86.09	11	P	P	19 49 29.8	-1.3
COLA	College	86.09	11	P	P	19 49 29.8	-1.3
MDM	Murphy Dome	86.10	11	P	P	19 49 29.9	-1.3
IMAR	Indian Mountai	86.16	9	P	P	19 49 30.9	-0.5
IL31		86.18	12	P	P	19 49 30.6	-0.9
ILAR	Eielson Array	86.18	12	P	P	19 49 30.4	-1.1
	comp=Z,3.8nm,0.7s,baz=226,slow=6.1,SNR=74						
POKR	Poker Plat Res	86.39	11	P	P	19 49 31.7	-0.9
POKR				IAmb	IAmb	19 49 32.6	
	comp=Z,9.8nm,1.0s						
PRP	Porcupine Dome	87.11	12	P	P	19 49 35.8	-0.4
PRP				IAmb	IAmb	19 49 36.8	
	comp=Z,6.2nm,1.0s						
EGAK	Eagle	87.38	14	P	P	19 49 37.0	-0.3
EGAK				IAmb	IAmb	19 49 38.1	
	comp=Z,5.9nm,0.8s						
ENH	Enshi	87.61	303	P	P	19 49 39.2	0.0
ENH				IAmb	IAmb	19 49 42.2	
	comp=Z,7.1nm,0.9s						
BMAR	Burnt Mountain	88.98	11	P	P	19 49 45.0	+0.1
SNAA	Sanae	89.46	177	P	P	19 49 47.9	+0.6
VNA3	Neumayer Olymp	89.47	175	P	P	19 49 47.9	+0.6
VNA2	Neumayer--Watz	89.95	176	P	P	19 49 50.6	+1.1
	baz=188,slow=3.3						
VNA1	Neumayer--Stat	90.16	176	P	P	19 49 50.4	-0.1
HHC	Hu-ho-hao-te	90.38	313	*e*P	P	19 49 53.0	+0.9
HHC				pmax	pmax		
	comp=Z,4.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,93nm,6.2s						
INK	Inuvik	92.03	14	P	P	19 49 58.7	-0.2
INK				IAmb	IAmb	19 49 59.4	
	comp=Z,3.2nm,0.7s						
CMAR	Chiang Mai Arr	92.36	289	P	P	19 50 02.8	+1.2
	comp=Z,2.1nm,0.8s,baz=90,slow=2.5,SNR=15						
CMAR	Chiang Mai Arr	92.36	289	P	P	19 50 02.9	+1.3
CD2	Chengdu	92.42	302	P	P	19 50 01.8	0.0
CHTO	Chiang Mai	92.47	289	P	P	19 50 03.7	+1.5
CHTO				IAmb	IAmb	19 50 04.6	
	comp=Z,4.7nm,0.7s						
YKA	Yellowknife Ar	93.90	24	P	P	19 50 06.6	-1.2
	comp=Z,0.8nm,0.8s,baz=236,slow=4.1,SNR=14						
LZH	Lanzhou	94.16	307	*e*P	P	19 50 11.0	+1.2
LZH				pP	PcP	19 50 23.3	+13
LZH				sP	pP	19 50 29.3	-17
LZH				pmax	pmax		
	comp=Z,13nm,1.2s						
SONM	Songino Array	96.51	318	P	P	19 50 20.2	0.0
	comp=Z,0.3nm,0.8s,baz=129,slow=3.9,SNR=2.6						
WMQ	Urumqi	108.11	311	*e*P	Pdif	19 51 12.5	+0.6
WMQ				pmax	pmax		
	comp=Z,190nm,5.3s						
WMQ				LR	LR		
	comp=N,590nm,29.0s						
WMQ				LR	LR		
	comp=E,1µm,29.2s						
WMQ				LR	LR		
	comp=Z,240nm,28.9s						
MKAR	Makanchi Array	112.24	314	PKiKP	PKiKP	19 55 24.9	-0.7
	comp=Z,0.8nm,0.7s,baz=81,slow=1.5,SNR=9.1						
KURBB	Kurchatov Arra	114.87	318	PKP	PKPdf	19 55 29.5	-0.9
	comp=Z,0.7nm,0.5s,baz=90,slow=1.7,SNR=11						
BVAR	Borovoye Array	119.74	321	PKP	PKPdf	19 55 39.0	-0.7
	comp=Z,1.3nm,0.5s,baz=175,slow=22,SNR=10.0						
ARU	Arti	125.54	327	PKP	PKPdf	19 55 49.2	-1.6
	comp=Z,1.2nm,0.6s,baz=139,slow=3.1,SNR=5.9						
ARU	Arti	125.54	327		PKPdf	19 55 50.5	-0.3
ARCES	ARCESS Array B	127.88	351	PKP	PKPdf	19 55 54.4	-0.5
	comp=Z,5.0nm,0.8s,baz=19,slow=2.6,SNR=14						
ARCES	ARCESS Array B	127.88	351		PKPdf	19 55 54.8	-0.1
FINES	FINESS Array B	135.04	346	PKP	PKiKP	19 56 09.9	-0.2
	comp=Z,1.5nm,0.5s,baz=41,slow=4.4,SNR=6.6						
FINES	FINESS Array B	135.04	346		PKiKP	19 56 09.7	-0.4
NOA	NORSAR Array B	137.72	356	PKP	PKPdf	19 56 14.4	+0.7
	comp=Z,1.3nm,1.1s,baz=17,slow=3.7,SNR=3.2						
MNK	Minsk	140.44	339	*i* PKP	PKPdf	19 56 14.4	-4.3
	comp=E,4.0nm,1.0s						
MNK				*i* PKP	PKPdf	19 56 14.4	-4.3
	comp=N,11nm,0.7s						
MNK				*i* PKP	PKPdf	19 56 14.4	-4.3
	comp=Z,5.0nm,0.7s						
MNK				*i* pPKP	PKiKP	19 56 34.5	+13
MNK				*i* PP	PP	19 59 13.3	-5.2
MNK				*i* PPP	PPP	20 02 18.0	
MNK				*i* SKS	SKSdf	20 03 18.3	+3.1
MNK				*i* SKKS	SKKSdf	20 12 44.0	+1.3
MNK				*i* SS	SS	20 17 32.6	+2.1
MNK				*i* SSS	SSS	20 22 46.9	
MNK				*i* LQ	LQ	20 51 10.3	
MNK				*i* LR	LR	20 54 12.6	
MNK				*i* LRM	MLR	20 58 04.2	
	comp=N,160nm,20.6s						
MNK				*i* LRM	MLR	20 58 30.4	
	comp=E,15nm,20.0s						
AKASG	Malin Array Be	142.97	334	PKhKP	PKPpre	19 56 19.5	
	comp=E,1.8nm,0.5s,baz=41,slow=4.2,SNR=11						
AKASG	Malin Array Be	142.97	334		PKPpre	19 56 19.4	
BSEG	Bad Segeberg	144.84	355	*e*PKPbc	PKPdf	19 56 26.7	+0.2
	baz=8.6,slow=2.7						
SORM	Soroca	145.29	332	⇑P	PKPdf	19 56 27.0	-0.5
MILM	Milestii Mici	145.99	330	⇓P	PKPab	19 56 30.2	-0.3
NRDL	Niedersach Rie	146.28	354	*e*PKPbc	PKPbc	19 56 30.5	+0.2
	baz=8.6,slow=2.7						
FLTG	Flechtingen	146.33	353	*e*PKPbc	PKPbc	19 56 31.0	+0.4
	baz=8.6,slow=2.7						
ASSE	Asse, Remlinge	146.59	354	*e*PKPbc	PKPbc	19 56 31.6	+0.3
	baz=8.6,slow=2.7						
IBBN	Ibbenburen	146.63	357	*e*PKPbc	PKPbc	19 56 31.8	+0.3
	baz=8.6,slow=2.7						
VASR	Vaslui	146.66	331	⇑P	PKPab	19 56 32.7	-0.4
CLZ	Clausthal	146.91	354	*e*PKPbc	PKPbc	19 56 32.6	+0.3
	baz=8.6,slow=2.7						
BUR08	Bucovina Ar. S	147.00	335	PKPdf	PKPbc	19 56 31.8	-1.0
KOLS	Kolonicke sedl	147.02	339	*e*PKP	PKPbc	19 56 33.5	+0.8
BURAR	Bucovina Array	147.02	335	⇑P	PKPab	19 56 34.5	-0.2
CLL	Collm	147.10	351	*i* PKPbc	PKPbc	19 56 33.2	+0.4
	comp=Z,22nm,1.1s						
CLL				*e*SKPdf	SKiKP	20 00 04.0	+6.3
CLL				*e*SS	SS	20 18 54.0	+7.6
CLL				*e*SSS	SSS	20 24 30.0	
CLL				*e*		20 32 42.0	
CLL				LmH		21 02 00.0	
	comp=N,100nm,21.1s						
CLL				LmH		21 02 00.0	
	comp=E,100nm,19.3s						
CLL				LmV		21 08 00.0	
	comp=Z,300nm,20.6s						
CLL	Collm	147.10	351	*e*PKPbc	PKPbc	19 56 33.4	+0.6
	baz=8.6,slow=2.7						
BIZ	Bicaz	147.18	333	⇑P	PKPab	19 56 34.5	-0.8
OSTC	Ostas	147.23	347	*e*PKP	PKPbc	19 56 33.9	+0.6
TLCR		147.24	328	⇑P	PKPbc	19 56 34.1	+0.7
GTTG	Gottingen	147.24	354	*e*PKPbc	PKPbc	19 56 33.4	+0.2
	baz=8.6,slow=2.7						
GHRR		147.27	331	⇑P	PKPab	19 56 35.1	-0.5
TESR	Tescani	147.28	332	⇑P	PKPbc	19 56 34.1	+0.6
UPC	Upice	147.32	347	*e*PKP	PKPbc	19 56 34.3	+0.8
NEUB	Neuenburg	147.37	352	*e*PKPbc	PKPbc	19 56 33.9	+0.4
	baz=8.6,slow=2.7						
BRG	Berggiesshubel	147.37	350	*i* PKP	PKPbc	19 56 34.3	+0.7
BRG				Amp		19 56 35.9	
	comp=Z,3.9nm,1.1s						
BRG	Berggiesshubel	147.37	350	*e*PKPbc	PKPbc	19 56 34.3	+0.7
	baz=8.6,slow=2.7						
DPC	Dobruska-Polom	147.40	347	*e*PKP	PKPbc	19 56 34.5	+0.7
FBE	Freiberg	147.42	350	*e*PKPbc	PKPbc	19 56 34.4	+0.7
	baz=8.6,slow=2.7						
KRLC	Kraliky	147.56	346	*e*PKP	PKPbc	19 56 34.5	+0.3
CFR	Carcaliu	147.58	329	⇓P	PKPbc	19 56 35.1	+0.8
PVCC	Panska Ves	147.59	349	*e*PKP	PKPbc	19 56 34.8	+0.6
BMR	Baia Mare	147.65	336	⇑P	PKPbc	19 56 35.4	+0.9
MORC	Moravsky Berou	147.65	345	⇑P	PKPbc	19 56 35.4	+0.9
MORC	Moravsky Berou	147.65	345	*e*PKP	PKPbc	19 56 35.0	+0.5
TPGR	Topolog	147.67	328	⇑P	PKiKP	19 56 35.6	-0.9
VRI	Vrincioaia	147.73	331	⇑P	PKPbc	19 56 35.3	+0.5
PLOR	Plostina	147.78	331	⇑P	PKPdf	19 56 32.8	+0.9
ARCR	ARCALIA	147.79	335	⇑P	PKiKP	19 56 35.9	-0.8
BRTR	Keskin Array B	147.84	316	PKPbc	PKPbc	19 56 35.3	-0.1
	comp=Z,4.2nm,0.8s,baz=150,slow=4.6,SNR=13						
MOX	Moxa	147.94	352	*e*PKPbc	PKPbc	19 56 35.6	+0.4
	baz=8.6,slow=2.7						
TANN	Tannenbergstha	148.05	351	*e*PKPbc	PKPbc	19 56 36.0	+0.5
	baz=8.6,slow=2.7						
PRU	Pruhonice	148.11	348	*e*PKP	PKPbc	19 56 35.6	0.0
GUNZ	Gunzen	148.12	351	*e*PKPbc	PKPbc	19 56 36.3	+0.6
	baz=8.6,slow=2.7						
WERN	Wernitzgruen	148.19	351	*e*PKPbc	PKPbc	19 56 36.3	+0.5
	baz=8.6,slow=2.7						
NKC	Novy Kostel	148.23	351	*e*PKP	PKPab	19 56 39.3	0.0
VRAC	Vranov	148.32	346	⇑P	PKiKP	19 56 37.1	-0.7
VRAC	Vranov	148.32	346	*e*PKP	PKPbc	19 56 36.6	+0.4
MLR	Muntele Rosu	148.37	331	⇓P	PKPbc	19 56 35.0	-1.6
MEM	Membach	148.39	359	*d*PKPbc	PKPbc	19 56 36.5	+0.2
CJR	Cluj-Napoca	148.40	335	⇑P	PKPdf	19 56 34.3	+1.4
JAVC	Velka Javorina	148.47	344	*e*PKP	PKiKP	19 56 38.3	+0.2
MANZ	Manzenberg	148.52	351	*e*PKPbc	PKPbc	19 56 37.3	+0.5
	baz=8.6,slow=2.7						
KRUC	Moravsky	148.60	346	*e*PKP	PKPbc	19 56 37.3	+0.4
TNS	Taunus Mts	148.67	356	*e*PKPbc	PKPbc	19 56 37.4	+0.2
	baz=8.6,slow=2.7						
DRGR		148.68	336	⇓P	PKiKP	19 56 38.3	-0.3
BMRD	Maredsous	148.71	0	*d*PKPbc	PKPbc	19 56 37.5	+0.4
ROTZ	Rotzenmuhle	148.72	351	*e*PKPbc	PKPbc	19 56 37.8	+0.6
	baz=8.6,slow=2.7						
VOIR		148.81	332	⇑P	PKiKP	19 56 38.9	-0.1
GRF	Grafenberg Arr	148.93	352	*e*PKPbc	PKiKP	19 56 38.4	-0.6
	baz=8.6,slow=2.7						
MODS	Modra-Piesok	149.02	344	*e*PKP	PKPbc	19 56 38.4	+0.4
ARR	Arges	149.05	333	⇑P	PKiKP	19 56 39.7	+0.3
KHC	Kasperske Hory	149.11	349	*e*PKP	PKPbc	19 56 37.9	-0.3
WET	Wettzell	149.22	350	*e*PKPbc	PKiKP	19 56 39.4	-0.3
	baz=8.6,slow=2.7						
CKRC	Cesky Krumlov	149.27	348	*e*PKP	PKiKP	19 56 39.2	-0.5
WLF	Walferdange	149.34	359	*d*PKiKP	PKiKP	19 56 39.9	0.0
WLF	Walferdange	149.34	359	*e*PKPbc	PKiKP	19 56 39.8	0.0
	baz=8.6,slow=2.7						
GEC2	GERESS Array S	149.37	349	PKPdf	PKPdf	19 56 35.1	+0.7
GEC2	GERESS Array S	149.37	349	*e*PKPbc	PKiKP	19 56 39.7	-0.4
	baz=8.6,slow=2.7						
GERES	GERESS Array B	149.37	349	PKPbc	PKPbc	19 56 38.8	-0.1
	comp=Z,4.5nm,0.7s,baz=30,slow=3.0,SNR=38						
SIRR	Siria	149.51	337	⇓P	PKiKP	19 56 39.9	-0.4
CONA	Conrad Observa	149.78	346	*i* P	PKiKP	19 56 40.6	-0.3
	comp=Z,6.3nm,0.7s,SNR=7.1						
GZR	Gura Zlata	149.81	335	⇑P	PKPbc	19 56 40.4	+0.3
BZS	Buzias	150.08	336	⇑P	PKiKP	19 56 41.2	-0.3
MOA	Molln	150.21	348	*e*P	PKiKP	19 56 41.4	-0.3
	comp=Z,4.2nm,0.6s						
HERR	Herculane	150.37	335	⇑P	PKiKP	19 56 41.9	-0.2
FUR	Furstenfeldbru	150.42	352	*e*PKPbc	PKiKP	19 56 41.9	-0.3
	baz=8.6,slow=2.7						
BFO	Black Forest	150.56	356	*e*PKPbc	PKiKP	19 56 42.4	-0.1
	baz=8.6,slow=2.7						
MORH	Mrgy, Hungar	150.59	341	⇑P	PKiKP	19 56 42.3	-0.2
PLVB	Pleven	150.59	330	⇑P	PKPbc	19 56 41.5	-0.4
RJOB	Jochberg	150.60	349	*e*PKPbc	PKiKP	19 56 42.5	-0.1
	baz=8.6,slow=2.7						
MDVR	Moldovita	150.74	335	⇓P	PKPbc	19 56 42.4	0.0
UBR	Ueberruh	151.04	353	*e*PKPbc	PKiKP	19 56 43.5	0.0
	baz=8.6,slow=2.7						
KBA	Koelnbreinsper	151.13	348	*e*P	PKPbc	19 56 43.2	-0.1
	comp=Z,6.3nm,0.5s						
RETA	Reutte	151.15	352	*e*P	PKiKP	19 56 43.8	0.0
	comp=Z,5.4nm,0.7s						
SOKA	Soboth	151.15	346	*i* P	PKPbc	19 56 43.3	+0.1
	comp=Z,9.0nm,1.0s,SNR=4.1						
WATA	Walderalm	151.18	351	*e*P	PKiKP	19 56 43.8	-0.1
	comp=Z,7.4nm,0.6s						
MOTA	Moosalm	151.24	351	*i* P	PKiKP	19 56 43.9	-0.1
	comp=Z,13nm,0.9s,SNR=7.9						
WTTA	Wattenberg	151.25	351	*e*P	PKPbc	19 56 43.7	+0.1
	comp=Z,19nm,0.5s,SNR=18						
SQTA	Sankt Quirin	151.35	351	*i* P	PKiKP	19 56 44.2	0.0
	comp=Z,12nm,0.8s,SNR=5.3						
OBKA	Obir	151.42	346	*e*P	PKPbc	19 56 43.5	-0.4
	comp=Z,22nm,1.8s						
DAVA	Damuels	151.46	353	*e*P	PKiKP	19 56 45.0	+0.5
	comp=Z,16nm,0.9s						
MYKA	Terra Mystica	151.50	348	*e*P	PKPbc	19 56 43.8	-0.3
	comp=Z,7.6nm,0.6s						
ABTA	Abfaltersbach	151.60	349	*i* P	PKPbc	19 56 44.2	-0.1
	comp=Z,14nm,0.6s,SNR=11						
FETA	Feichten	151.61	352	*e*P	PKiKP	19 56 45.1	+0.2
	comp=Z,14nm,0.9s						
BOVS	Bovan	151.69	334	⇓P	PKPbc	19 56 44.0	-0.5
VTS	Vitosha	151.83	331	⇑P	PKiKP	19 56 45.8	+0.4
TORD	Torodi Ar. Bea	173.38	150	PKPab	PKPab	19 58 29.2	+0.2
	comp=Z,0.6nm,0.8s,baz=196,slow=2.6,SNR=2.8						

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*IDC **25** 19:39:32.7±2.0, 36°.40N×140°.80E, h46^{km}±21^{km}, mb3.1/4, mb1 3.4/7, mb1mx3.1/45, mbtmp3.5/7, ML3.4/3, Error ellipse: s-maj=20.0km s-min=11.7km az=64.0*

*JMA **25** 19:39:33.4±0.1, 36°.36N×140°.78E, h52^{km}±1^{km}, M3.7*

JMA Felt I J1.

*NIED **25** 19:39:33.5, 36°.36N×140°.78E, h52^{km}, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}0.79; $M_{\theta\theta}$1.64; $M_{\phi\phi}$-2.43; $M_{r\theta}$0.83; $M_{\theta\phi}$-1.31; $M_{\phi r}$0.28; Fault plane solution: $M_0$2.62000×10^{14} NP1:ϕ_s58.00000°, δ78.00000°, λ156.00000°. NP2:ϕ_s153.00000°, δ66.00000°, λ13.00000°.*

ISC 25 19:39:32.7±1.0, **36°.39N**±0°.04×**140°.87E**±0°.07, **h51**^{km}±8^{km}, **n25,** σ1^{s}**23**/26, **mb3.3**/5, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHYU	Hitachinakayam	0.24	258	P	Pn	19 39 41.7	+0.3
JHYU				S	Sn	19 39 47.5	-0.1
JHO	Hitachi	0.33	312	P	Pn	19 39 42.6	+0.4
JIHU	Itakohorinouch	0.51	214	P	Pn	19 39 44.7	+0.6
JYT	Yasato	0.57	254	P	Pn	19 39 44.6	-0.3
JYT				S	Sn	19 39 52.5	-1.1
JSMT	Sammumatsuo	0.82	205	P	Pn	19 39 48.6	+0.5
JFK	Kawauchi	0.98	0	P	Pn	19 39 50.4	+0.2
JAG	Ashikaga	1.15	272	P	Pn	19 39 52.4	-0.1
JFT	Otama	1.21	339	P	Pn	19 39 54.5	+1.2
JFT				S	Sn	19 40 10.2	+1.6
JKT	Katashina	1.36	287	P	Pn	19 39 56.0	+0.6
JFY	Yanaizu	1.38	318	P	Pn	19 39 56.5	+0.8
MJAR	Matsushiro Arr	2.15	275	P	Pn	19 40 06.0	-0.2
	3.2nm,0.3s,baz=86,slow=20,SNR=122						
MJAR				S	Sn	19 40 30.2	-1.5
	1.9nm,0.3s,baz=32,slow=19,SNR=3.8						
MAT	Matsushiro	2.16	275	P	Pn	19 40 06.7	+0.5
MAT				*e*S	Sn	19 40 32.9	+1.1
JHJ	Hachijo jima 2	3.38	196	P	Pn	19 40 22.9	-0.2
	7.5nm,0.3s,baz=45,slow=8.6,SNR=6.3						
JHJ				S	Sn	19 41 01.5	-0.4

	20nm,0.3s,baz=100,slow=21,SNR=6.4						
ASAJ	Asahikawa	7.83	9	P	Pn	19 41 23.4	-0.6
	1.3nm,0.3s,baz=206,slow=14,SNR=16						
ASAJ				S	Sn	19 42 47.3	-3.9
	0.2nm,0.3s,baz=29,slow=24,SNR=1.2						
SONM	Songino Array	27.79	305	P	P	19 45 15.1	-1.8
	0.2nm,0.5s,baz=107,slow=9.9,SNR=2.1						
H11N2	WAKE ISLAND Hy	28.20	119	T	T	20 15 04.4	
	baz=312						
H11N1	WAKE ISLAND Hy	28.21	119	T	T	20 15 19.0	
	baz=312,slow=74						
H11N3	WAKE ISLAND Hy	28.22	119	T	T	20 14 54.7	
	baz=312,slow=74						
H11S1	WAKE ISLAND Hy	28.89	121	T	T	20 16 01.7	
	baz=314,slow=74						
H11S3	WAKE ISLAND Hy	28.89	121	T	T	20 16 14.0	
	baz=314,slow=74						
H11S2	WAKE ISLAND Hy	28.90	121	T	T	20 16 14.7	
	baz=314						
MKAR	Makanchi Array	44.10	303	P	P	19 47 35.7	-0.1
	0.3nm,0.7s,baz=88,slow=11,SNR=4.6						
KURBB	Kurchatov Arra	46.06	308	P	P	19 47 51.0	-0.3
	54nm,0.8s,baz=81,slow=7.3,SNR=9.8						
ILAR	Eielson Array	50.27	32	P	P	19 48 24.8	+1.2
	0.4nm,0.6s,baz=278,slow=6.6,SNR=4.5						
WRA	Warramunga Arr	56.36	187	P	P	19 49 09.9	+1.2
	0.1nm,0.3s,baz=2.0,slow=7.7,SNR=1.3						

JMA 25 19:47:44.3±0.4, 28°.33N×128°.18E, h15^{km}±5^{km}, M2.1, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTK	Tokunoshima	0.87	128	P	Pb	19 48 00.6	-0.5
JTK				S	Sb	19 48 12.2	-0.4
JAMN	Amaminishikomi	0.88	95	P	Pb	19 48 01.0	-0.3
JAMN				S	Sb	19 48 12.5	-0.4
JOKE	Okinoerabujima	1.02	160	P	Pb	19 48 03.2	-0.6
JOKE				S	Sb	19 48 17.0	0.0
JAM	Amami Oshima	1.26	86	P	Pn	19 48 07.5	+0.2
JAM				S	Sb	19 48 23.7	0.0
JYRO	Yoronjima	1.32	169	P	Pn	19 48 07.9	-0.3
JYRO				eS	Sn	19 48 25.1	-0.5
JOW	Kunigami	1.49	177	P	Pb	19 48 11.5	-0.3
	8.3nm,0.4s,baz=90,slow=16,SNR=1.8						
JOW	Kunigami	1.49	177	P	Pn	19 48 10.9	+0.3
JOW				eS	Sn	19 48 29.7	-0.2
JOW	Kunigami	1.49	177	P	Pb	19 48 11.3	-0.5

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*IDC **25** 19:51:10.1±6.3, 36°.81N×71°.25E, h214^{km}±51^{km}, mb3.0/1, mb1 3.0/5, mb1mx2.6/56, mbtmp3.7/5, MS2.9/1, Ms1 2.9/1, ms1mx2.3/21, Error ellipse: s-maj=75.9km s-min=36.2km az=148.0*

*NNC **25** 19:51:10.6±10.0, 36°.93N×70°.78E, h159^{km}±126^{km}, mb3.0, mpv3.8, Error ellipse: s-maj=85.2km s-min=54.1km az=22.0*

ISC 25 19:51:04.7±1.7, 36°.6N±0°.1×71°.0E±0°.1, h150^{km}, n12, σ2^s.06/16, 5C-3D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSH	Kashi	4.90	52	Pn	Pn	19 52 14.8	-2.0
KSH				Sn	Sn	19 53 03.5	-10
KSH				smax	smax		
	comp=N,62nm,0.3s						
KSH				smax	smax		
	comp=E,33nm,0.3s						
KK31	Karatay Array	6.51	357	⇓P	Pn	19 52 41.1	+3.0
	comp=E,5.7nm,0.6s,baz=174,slow=12,SNR=26						
KK31				⇑S	Sn	19 53 50.5	-0.8
	comp=E,5.4nm,0.5s,baz=184,slow=23,SNR=15						
AAK	Ala-Archa	6.61	23	P	Pn	19 52 42.6	+3.0
	comp=E,1.9nm,0.3s,baz=204,slow=5.3,SNR=34						
AAK				S	Sn	19 53 53.9	-0.1
	comp=E,1.6nm,0.3s,baz=20,slow=20,SNR=17						
TKM2	Tokmak 2	7.24	28	⇓P	Pn	19 52 50.1	+1.9
	comp=E,3.7nm,0.7s						
TKM2				⇑S	Sn	19 54 09.6	+0.3
	comp=E,3.7nm,0.8s						
MKAR	Makanchi Array	13.22	36	P	Pn	19 54 07.2	+0.6
	comp=E,0.0nm,0.3s,baz=239,slow=11,SNR=2.4						
AB31	Akbulak array	14.99	331	⇑P	Pn	19 54 30.2	+1.4
	comp=E,0.4nm,0.3s,baz=151,slow=10,SNR=20						
AB31				⇓S	Sn	19 57 14.9	-0.4
	comp=E,0.5nm,0.5s						
KURBB	Kurchatov Arra	15.03	19	P	Pn	19 54 28.9	-0.5
	comp=E,0.0nm,0.3s,baz=207,slow=10,SNR=4.2						
AKTO	Aktyubinsk	16.69	330	P	Pn	19 54 51.4	+1.7
	comp=E,0.5nm,0.3s,baz=140,slow=13,SNR=6.1						
AKTO	Aktyubinsk	16.69	330	⇑P	Pn	19 54 50.8	+1.2
	comp=E,2.4nm,0.8s						
AKTO				⇑S	S	19 57 50.9	-4.1
	comp=E,2.3nm,1.4s						
ZALV	Zalesovo Beam	19.83	25	P	P	19 55 21.4	-2.1
	comp=E,0.3nm,0.3s,baz=221,slow=12,SNR=7.7						
TLY	Talaya	27.58	47	LR	LR	20 07 11.0	
	comp=E,24nm,19.9s,baz=58,slow=35						
TORD	Torodi Ar. Bea	65.71	269	P	P	20 01 32.9	-0.6
	comp=E,0.2nm,0.4s,baz=46,slow=8.2,SNR=2.1						

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*MDD **25** 20:03:40.5±0.7, 37°.09N×3°.03E, h23^{km}±21^{km}, mb3.9/9, Error ellipse: s-maj=20.3km s-min=9.2km az=152.0, PRXIMO*

*CRAAG **25** 20:03:41.1, 37°.02N×3°.13E, Ml2.5*

ISC 25 20:03:42.5±2.4, 37°.44N±0°.09×2°.70E±0°.09, h10^{km}, n26, σ1^s.35/38, Western Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABA	Alger-Bouzarea	0.69	157	P	Pg	20 03 46.7	-9.2
ABA	Alger-Bouzarea	0.69	157	P	Pg	20 03 46.7	-9.2
ABMS	Boumerdes	0.93	138	P	Pg	20 03 49.9	-10
ABMS	Boumerdes	0.93	138	P	Pg	20 03 49.9	-10
EIBI	Ibiza	1.91	326	P	Pn	20 04 16.8	+1.6
	4.8nm,0.1s,SNR=7.9						
EIBI				S	Sg	20 04 41.7	-2.3
	78nm,0.3s,SNR=9.2						
ETOS	Mallorca	2.33	2	P	Pn	20 04 21.1	+0.2
	2.1nm,0.1s,SNR=7.9						
ETOS				S	Sn	20 04 49.6	+0.1
	29nm,0.8s,SNR=7.9						
EBEN2	Beniarda presa	2.60	299	S	Sn	20 04 56.2	-0.1
	43nm,0.4s,SNR=7.9						
EMUR	La Murta	3.16	278	P	Pn	20 04 32.7	+0.4
	1.1nm,0.2s,SNR=7.9						
EMUR				S	Sn	20 05 08.2	-1.9
	8.4nm,0.5s,SNR=7.9						
ETOB	Tobarra	3.57	291	P	Pn	20 04 39.6	+1.6
	1.8nm,0.2s,SNR=10						
ETOB				S	Sn	20 05 20.8	+0.5
	25nm,0.7s,SNR=5.3						
ECHE	Chera	3.59	308	P	Pn	20 04 40.6	+2.3
	1.4nm,0.2s,SNR=7.9						
ECHE				S	Sn	20 05 21.9	+1.1
	8.2nm,0.5s,SNR=7.9						
EMOS	Mosqueruela	3.83	321	P	Pn	20 04 43.5	+1.8
	0.3nm,0.1s,SNR=7.9						
EMOS				S	Sn	20 05 28.3	+1.5
	4.5nm,0.7s,SNR=7.9						
ERTA	Horta de San J	3.96	333	S	Sn	20 05 30.3	+0.3
	12nm,0.7s,SNR=7.9						
EPOB	Poblet	4.11	343	P	Pn	20 04 46.7	+1.3
	0.2nm,0.1s,SNR=7.9						
EPOB				S	Sn	20 05 32.5	-1.0
	11nm,0.6s,SNR=7.9						
SESP	Santiago Espad	4.21	281	P	Pn	20 04 47.3	+0.3
	1.0nm,0.1s,SNR=7.9						
SESP				S	Sn	20 05 34.8	-1.5
	9.7nm,0.5s,SNR=7.9						
CFON	Fontmartina	4.32	357	P	Pn	20 04 48.8	+0.4
	5.1nm,0.2s,SNR=10						
CFON				S	Sn	20 05 36.5	-2.4
	19nm,0.5s,SNR=7.9						
EQES	Quesada	4.60	276	P	Pn	20 04 53.0	+0.8
	1.0nm,0.1s,SNR=7.9						
EQES				S	Sn	20 05 45.8	0.0
	12nm,0.6s,SNR=7.9						
EQUE	Quentar	4.90	269	P	Pn	20 04 58.3	+1.9
	0.6nm,0.1s,SNR=7.9						
EQUE				S	Sn	20 05 52.1	-1.1
	0.6nm,0.2s,SNR=7.9						
EJON	La Jonquera	5.00	2	P	Pn	20 04 58.4	+0.7
	1.1nm,0.1s,SNR=7.9						
EJON				S	Sn	20 05 53.9	-1.7
	1.2nm,0.4s,SNR=7.9						
ETOR	Torete	5.01	314	S	Sn	20 05 55.2	-0.6
	4.9nm,0.6s,SNR=7.9						
SJAF	Saint Jean de	5.04	1	P	Pn	20 04 59.3	+1.1
	0.5nm,0.1s,SNR=7.9						
SJAF				S	Sn	20 05 55.2	-1.2
	0.7nm,0.3s,SNR=7.9						
CLLI	Llivia	5.06	354	P	Pn	20 05 00.7	+2.0
	0.5nm,0.1s,SNR=6.0						
CLLI				S	Sn	20 05 56.9	-0.3
	6.7nm,0.8s,SNR=7.9						
CSOR	Sort	5.08	347	P	Pn	20 05 00.9	+2.1
	0.5nm,0.1s,SNR=7.4						
CSOR				S	Sn	20 05 58.2	+0.7
	4.0nm,0.9s,SNR=7.9						
ECHI	Chisagues Biel	5.56	341	S	Sn	20 06 09.4	-0.1
	0.8nm,0.5s,SNR=7.9						
ESDC	Sonseca Array	5.68	295	P	Pn	20 05 07.6	+0.6
	SNR=7.9						
PAB	San Pablo	5.92	293	P	Pn	20 05 11.2	+0.9
	2.8nm,0.3s,SNR=7.9						
PAB				S	Sn	20 06 16.1	-2.1
	0.2nm,0.2s,SNR=7.9						
ATE	Arette	6.21	336	S	Sn	20 06 25.4	+0.1
	0.7nm,0.5s,SNR=7.9						

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*MDD **25** 20:31:55.8±0.5, 37°.17N×2°.92E, h0^{km}, mb4.2/7, Error ellipse: s-maj=8.7km s-min=4.4km az=56.0, PRXIMO*

MDD EMS: I-II INTENSIDAD MAXIMA - ESPAA.

*CRAAG **25** 20:31:56.9, 37°.00N×3°.10E, Ml2.8*

ISC 25 20:31:56.3±2.9, 37°.3N±0°.1×2°.9E±0°.1, h10^{km}, n28, σ1^s.70/41, Western Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABA	Alger-Bouzarea	0.50	162	P	Pg	20 32 03.0	-3.1
ABA	Alger-Bouzarea	0.50	162	P	Pg	20 32 03.0	-3.1
ABMS	Boumerdes	0.73	136	P	Pg	20 32 06.4	-4.1
ABMS	Boumerdes	0.73	136	P	Pg	20 32 06.4	-4.1
EIBI	Ibiza	2.11	326	P	Pn	20 32 33.0	+1.4
	5.5nm,0.2s,SNR=6.9						
EIBI				S	Sn	20 32 57.8	-0.2
	3.2nm,0.3s						
ETOS	Mallorca	2.48	359	P	Pn	20 32 37.2	+0.4
	6.9nm,0.1s,SNR=25						
ETOS				S	Sn	20 33 06.0	-1.2
	0.0nm,0.4s,SNR=7.9						
EBEN2	Beniarda presa	2.77	301	S	Sn	20 33 12.7	-1.7
	3.2nm,0.4s,SNR=7.9						
ETRV	Los Montesinos	2.96	286	S	Sn	20 33 17.4	-1.4
	15nm,0.2s,SNR=7.9						
AFON	Font Roja	3.01	298	P	Pn	20 32 44.0	-0.2
	4.6nm,0.1s,SNR=4.0						
EMUR	La Murta	3.29	281	P	Pn	20 32 47.4	-0.7
	0.8nm,0.2s,SNR=7.9						
EMUR				S	Sn	20 33 25.4	-1.9
	0.5nm,0.4s,SNR=7.9						
ETOB	Tobarra	3.73	293	P	Pn	20 32 56.1	+2.0
	2.7nm,0.1s,SNR=7.9						
ETOB				S	Sn	20 33 38.3	+0.2
	3.0nm,0.4s,SNR=7.9						
ECHE	Chera	3.78	309	P	Pn	20 32 56.9	+2.2
	0.3nm,0.1s,SNR=7.9						
ECHE				S	Sn	20 33 40.1	+0.8
	0.5nm,0.4s,SNR=7.9						
EMOS	Mosqueruela	4.02	321	P	Pn	20 32 59.7	+1.6
	0.4nm,0.0s,SNR=7.9						
EMOS				S	Sn	20 33 44.6	-0.8
	1.5nm,0.1s,SNR=7.9						
ERTA	Horta de San J	4.16	333	P	Pn	20 33 00.3	+0.4
	0.3nm,0.1s,SNR=7.9						
ERTA				S	Sn	20 33 47.2	-1.4
	0.6nm,0.3s,SNR=7.9						
EPOB	Poblet	4.29	342	P	Pn	20 33 03.0	+1.3
	0.3nm,0.1s,SNR=7.9						
EPOB				S	Sn	20 33 49.6	-2.3
	0.6nm,0.3s,SNR=7.9						
SESP	Santiago Espad	4.36	283	P	Pn	20 33 03.7	+1.0
	1.4nm,0.2s,SNR=7.9						
SESP				S	Sn	20 33 52.4	-1.2
	0.5nm,0.4s,SNR=7.9						
CFON	Fontmartina	4.49	356	P	Pn	20 33 05.2	+0.7
	2.0nm,0.1s,SNR=16						
CFON				S	Sn	20 33 52.7	-4.0
	4.0nm,0.5s,SNR=7.9						
EQES	Quesada	4.73	278	P	Pn	20 33 09.4	+1.6
	0.5nm,0.1s,SNR=7.9						
EQES				S	Sn	20 34 02.9	+0.1
	0.4nm,0.4s,SNR=7.9						
EJON	La Jonquera	5.16	0	P	Pn	20 33 15.1	+1.4
	1.0nm,0.1s,SNR=7.9						
SJAF	Saint Jean de	5.20	0	P	Pn	20 33 15.7	+1.6
	0.5nm,0.1s,SNR=7.9						
SJAF				S	Sn	20 34 12.9	-1.3
	0.5nm,0.2s,SNR=7.9						
ETOR	Torete	5.20	314	S	Sn	20 34 15.7	+1.4
	0.2nm,0.4s,SNR=7.9						
CLLI	Llivia	5.24	353	P	Pn	20 33 16.9	+2.1
	0.5nm,0.1s,SNR=7.9						
CLLI				S	Sn	20 34 13.4	-1.8
	0.7nm,0.2s,SNR=7.9						
CSOR	Sort	5.26	346	P	Pn	20 33 17.4	+2.3
	1.6nm,0.2s,SNR=12						
CSOR				S	Sn	20 34 14.5	-1.3
	0.3nm,0.3s,SNR=7.9						
ECHI	Chisagues Biel	5.75	340	P	Pn	20 33 24.1	+2.3
	0.1nm,0.0s,SNR=7.9						
ECHI				S	Sn	20 34 25.8	-2.1
	0.5nm,0.2s,SNR=7.9						
ESDC	Sonseca Array	5.85	296	P	Pn	20 33 24.2	+1.0
	0.5nm,0.1s,baz=112,slow=14,SNR=7.9						
ESDC				S	Sn	20 34 28.9	-1.4
	0.0nm,0.3s,baz=111,slow=24,SNR=7.9						
EADA	Adamuz	5.95	281	S	Sn	20 34 30.5	-2.3
	0.4nm,0.2s,SNR=7.9						
PAB	San Pablo	6.08	294	P	Pn	20 33 27.5	+1.1
	0.5nm,0.1s,SNR=7.9						
PAB				S	Sn	20 34 32.6	-3.5
	0.1nm,0.3s,SNR=7.9						
ATE	Arette	6.40	336	S	Sn	20 34 43.3	-0.5
	2.3nm,0.2s,SNR=7.9						

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*SOME **25** 20:44:32.2, 38°.88N×71°.43E, h5^{km}*

*KRNET **25** 20:44:35.5±0.1, 38°.85N×70°.47E, mb3.3*

*NNC **25** 20:44:37.5±5.3, 39°.04N×70°.04E, h0^{km}, mb3.8, mpv3.6, Error ellipse: s-maj=41.6km s-min=30.0km az=35.0*

ISC 25 20:44:39.6±2.7, 39°.0N±0°.1×70°.51E±0°.08, h10^{km}, n22, σ2^s.35/35, 17C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTK	Batken	1.10	12	⇑iP	Pb	20 44 59.1	-1.8
	baz=13						
BTK				⇑iS	Sn	20 45 16.3	-0.3
	baz=13						
DRK	Karamyk	1.12	63	⇑eP	Pg	20 44 58.7	-2.5
	baz=58						
DRK				⇑iS	Sb	20 45 15.6	-0.5
	baz=58						
OHH	Osh	2.34	48	⇑eP	Pn	20 45 18.5	+0.3
	baz=46						
OHH				⇑iS	Sb	20 45 50.1	-0.7
	baz=46						
TRKS	Terek-Say	2.59	11	⇑eP	Pn	20 45 21.9	+0.1
	baz=11						
TRKS				⇑iS	Sn	20 45 55.6	+2.1
	baz=11						
IUG	Iuzhnay	3.19	354	eP	Pb	20 45 36.1	-0.3
	8.4nm,0.3s						
IUG				eS	Sg	20 46 21.4	-0.6
	55nm,0.4s						
IUG	Iuzhnay	3.19	354	Pg	Pn	20 45 31.8	+1.9
	5.0nm,0.1s						
IUG				Lg	Lg	20 46 15.6	
	55nm,0.4s						
MNAS	Manas	3.82	23	⇑iP	Pn	20 45 39.6	+1.0
	baz=22						
MNAS				⇑iS	Sn	20 46 26.6	+2.9
	baz=22						
AML	Almayashu	3.98	37	⇑iP	Pn	20 45 41.7	+0.7
	baz=36						
AML				⇑iS	Sn	20 46 30.4	+2.5
	baz=36						
AML	Almayashu	3.98	37	P	Pn	20 45 43.3	+2.3
	SNR=5.5						
BRLS	Borolday	4.08	353	eP	Pb	20 45 48.3	-3.2
	14nm,0.3s						
BRLS				eS	Sb	20 46 42.5	+1.5
	6.5nm,0.4s						
BRLS	Borolday	4.08	353	Pg	Pn	20 45 44.5	+2.4
	17nm,0.2s						
BRLS				Lg	Lg	20 46 37.3	
	6.5nm,0.4s						
ARLS	Aral	4.09	44	⇓eP	Pn	20 45 43.3	+0.9
	baz=43						
ARLS				⇓iS	Sn	20 46 33.2	+2.7
	baz=43						
KK31	Karatay Array	4.12	0	Pn	Pn	20 45 43.3	+0.6
	0.9nm,0.3s,baz=180,slow=13,SNR=25						
KK31				Lg	Lg	20 46 51.0	
	11nm,0.6s,baz=176,slow=26,SNR=11						
MRKS	Merke	4.29	28	eP	Pn	20 45 48.8	+3.7
	3.7nm,0.3s						
MRKS				eS	Sb	20 46 43.2	-3.9
	7.6nm,0.4s						
MRKS	Merke	4.29	28	Pg	Pn	20 45 46.8	+1.8
	3.9nm,0.5s						
MRKS				Lg	Lg	20 46 41.8	
	7.6nm,0.4s						
EKS2	Erkin-Say	4.44	33	⇑eP	Pn	20 45 48.5	+1.4
	baz=32						
EKS2				⇑iS	Sn	20 46 41.4	+2.5
	baz=32						
UCH	Uchtor	4.45	42	⇑iP	Pn	20 45 48.8	+1.2
	baz=41						
UCH				⇑iS	Sn	20 46 41.8	+2.1
	baz=41						
UCH	Uchtor	4.45	42	P	Pn	20 45 50.4	+2.8
	SNR=5.2						
CHMS	Chumysh	5.14	37	P	Pn	20 45 58.9	+2.3
	SNR=7.5						
USP	Ospenovka	5.24	34	P	Pn	20 46 00.0	+2.0
	SNR=13						
TKM2	Tokmak 2	5.51	43	P	Pn	20 46 04.7	+2.8
	SNR=9.5						
TKM2	Tokmak 2	5.51	43	⇑Pn	Pn	20 46 03.4	+1.5
	7.3nm,0.5s						
TKM2				⇓Sn	Sn	20 47 11.4	+6.0
	3.2nm,0.7s						

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*IDC **25** 21:02:52.6±2.3, 43°.30N×105°.28W, h0^{km}, mb1 3.9/3, mb1mx3.3/60, mbtmp3.6/3, ML3.5/3, Error ellipse: s-maj=49.4km s-min=9.4km az=156.0*

*NEIC **25** 21:02:56.0±1.6, 43°.67N±0°.03×105°.26W±0°.09, h0^{km}±2^{km}, ML3.6/52, Error ellipse: s-maj=10.6km s-min=5.7km az=87.0*

ISC 25 21:02:55.6±1.1, 43°.69N±0°.06×105°.23W±0°.07, h0^{km}, n46, σ0^s.84/46, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	0.96	63	Pg	Pb	21 03 14.5	-0.8
K22A	Casper	1.41	223	Pn	Pn	21 03 19.6	-3.0
K22A				IAML		21 03 43.9	
	comp=N,624nm,0.3s						
K22A				IAML		21 03 45.3	
	comp=E,678nm,0.4s						
PHWY	Pilot Hill	2.39	184		Pn	21 03 35.8	-0.5
RWWY	Rawlins	2.48	217		Pn	21 03 37.4	-0.1
RWWY				IAML		21 04 15.7	
	comp=E,402nm,0.9s						
LAO	LASA Array	3.08	347	Pn	Pn	21 03 46.4	+0.8
LAO				IAML		21 04 55.3	
	comp=E,268nm,0.9s						
RLMT	Red Lodge	3.23	298	Pn	Pn	21 03 47.4	-0.4
RLMT				IAML		21 04 46.4	
	comp=E,93nm,0.7s						
PD31	Pinedale Array	3.30	255	Pn	Pn	21 03 47.8	-0.9
PDAR	Pinedale Array	3.30	255	Pn	Pn	21 03 47.8	-0.9
	comp=E,3.6nm,0.3s,baz=82,slow=16,SNR=36						
PDAR				Lg	Lg	21 04 31.2	
	comp=E,26nm,0.3s,baz=83,slow=29,SNR=17						
PDAR	Pinedale Array	3.30	255	Pn	Pn	21 03 48.4	-0.3
OGNE	Ogallala	3.62	138	Pn	Pn	21 03 53.7	+0.7
YNE	Yellowstone No	3.67	293		Pn	21 03 53.3	-0.6
YMP	Mirror Lake Pl	3.70	288		Pn	21 03 54.3	+0.1
GCMT	Greycliff	3.80	305		Pn	21 03 55.4	-0.1
LKWY	Lake	3.83	285		Pn	21 03 56.2	+0.2
LKWY				IAML		21 05 04.3	
	comp=E,122nm,1.6s						
LKWY				IAML		21 05 10.8	
	comp=E,88nm,2.5s						
ISCO	Idaho Springs	3.90	184	Pn	Pn	21 03 56.7	-0.3
LOHW	Long Hollow	3.90	271		Pn	21 03 57.9	+0.9
H17A	Grant Village	3.92	282		Pn	21 03 58.1	+0.9
H17A				IAML		21 05 00.8	
	comp=N,71nm,1.0s						
H17A				IAML		21 05 01.1	
	comp=E,73nm,2.5s						
FLWY	Flagg Ranch	3.98	278		Pn	21 03 58.6	+0.6
FLWY				IAML		21 05 54.1	
	comp=E,109nm,1.9s						
SNOW	Snow King Moun	4.02	269		Pn	21 04 00.1	+1.5
SNOW				IAML		21 05 15.3	
	comp=E,106nm,0.9s						
SNOW				IAML		21 05 22.1	
	comp=E,114nm,1.6s						
YPP	Pitchstone Pla	4.07	280		Pn	21 03 59.2	-0.1
REDW	Red Top Meadow	4.10	267		Pn	21 03 59.2	-0.5
REDW				IAML		21 05 17.2	
	comp=E,99nm,0.7s						
YMR	Madison River	4.24	285		Pn	21 04 01.7	0.0
E28A	Huff	4.32	46		Pn	21 04 03.3	+0.8
AHID	Auburn Hatcher	4.39	260		Pn	21 04 04.5	+0.8
AHID				IAML		21 05 20.0	
	comp=N,93nm,0.9s						
RDMU	Red Mountain	4.49	227		Pn	21 04 05.8	+0.8
QLMT	Earthquake Lak	4.60	287		Pn	21 04 07.0	+0.4
DGMT	Dagmar	4.84	8	Pn	Pn	21 04 10.8	+1.2
BOZ	Bozeman (W)	4.95	295		Pn	21 04 10.6	-0.8
BOZ				IAML		21 06 05.9	
	comp=N,33nm,2.0s						
BOZ				IAML		21 06 10.2	
	comp=N,25nm,1.9s						
KSCO	Kaye Shedlock'	5.07	156		Pn	21 04 12.5	-0.4
TCUT	Toone Canyon	5.25	243		Pn	21 04 15.5	0.0
EGMT	Eagleton	5.37	325	Pn	Pn	21 04 17.4	+0.4
HRY	Holter Researc	5.56	305		Pn	21 04 19.9	+0.2
LRM	Limekiln Ridge	5.57	295	Pn	Pn	21 04 20.0	+0.1
MDND	Maddock	5.72	41		Pn	21 04 21.5	-0.3
PV22	Blue Mesa, Par	5.81	209		Pn	21 04 24.0	+0.8
SPUT	South Promonto	5.84	248		Pn	21 04 23.9	+0.2
P17A	Butcher Ranch,	5.90	226		Pn	21 04 24.1	-0.3
SDCO	Great Sand Dun	5.94	182	Pn	Pn	21 04 25.8	+0.7
PV12	Saucer Basin,	6.01	208		Pn	21 04 26.8	+0.9
PV16	Nyswonger Mesa	6.05	209		Pn	21 04 26.6	0.0
PV03	Paradox Valley	6.08	208	Pn	Pn	21 04 27.1	+0.1
PV18	Skein Mesa, Pa	6.11	208	Pn	Pn	21 04 27.2	-0.1
ECSD	EROS Data Cent	6.24	87		Pn	21 04 29.1	+0.1
DUG	Dugway, Tooele	6.64	241	Pn	Pn	21 04 33.6	-1.0
ULM	Lac du Bonnet	9.16	41	Pn	Pn	21 05 07.2	-1.6
	comp=N,1.7nm,0.3s,baz=230,slow=12,SNR=13						
ULM				Pg		21 05 43.5	
	comp=N,1.2nm,0.3s,baz=221,slow=13,SNR=5.1						
ULM				Lg	Lg	21 07 40.0	
	comp=N,0.2nm,0.3s,baz=307,slow=18,SNR=4.3						
YKA	Yellowknife Ar	19.62	347	P	Pn	21 07 28.1	+1.5
	comp=N,0.2nm,0.3s,baz=155,slow=9.1,SNR=6.5						

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*NEIC **25** 21:44:35.9±0.9, 5°.02S±0°.06×102°.83E±0°.09, h56^{km}±7^{km}, mb4.1/12, Error ellipse: s-maj=14.1km s-min=7.5km az=69.0*

*DJA **25** 21:44:36.7±0.5, 5°S±3°×10°3E±°, h23^{km}±6^{km}, M4.2/11, mb4.4/4, mB5.0/1, MLv4.1/11, Mw(mB)4.4/1*

*IDC **25** 21:44:39.5±4.5, 4°.87S×103°.00E, h82^{km}±37^{km}, mb3.7/14, mb1 3.8/15, mb1mx3.6/43, mbtmp4.0/15, Error ellipse: s-maj=45.9km s-min=13.0km az=57.0*

ISC 25 21:44:36.9±0.6, 4°.96S±0°.07×102°.94E±0°.07, h59^{km}, n56, σ0^s.84/59, mb4.0/20, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNAI	Manna	0.59	2		Pn	21 44 49.8	-0.1
MNAI				Sn	Sn	21 45 00.3	+1.0
MNAI	Manna	0.59	2	P	Pn	21 44 50.2	+0.4
MNAI				S	Sn	21 44 59.1	-0.2

LWLI	Liwa	1.12	93	P	Pn	21 44 56.0	-0.5
LWLI				S	Sn	21 45 09.7	-1.5
LHSI	Lahat	1.27	27	P	Pn	21 44 59.4	+1.0
MDSI	Maura Dua	1.32	69	P	Pn	21 44 59.2	0.0
MDSI				S	Sn	21 45 16.1	+0.2
KASI	Kota Agung	1.65	110	P	Pn	21 45 03.2	-0.4
BLSI	Bandar Lampung	2.33	100	P	Pn	21 45 12.5	-0.4
PMBI	Palembang	2.73	42	Pn	Pn	21 45 17.2	-1.0
TNG	Tangerang	3.88	108	P	Pn	21 45 32.1	-2.0
PPBI	Pangkal Pinang	4.23	49	P	Pn	21 45 39.7	+0.8
LEM	Lembang	5.01	112	P	Pn	21 45 54.1	+4.4
	2.5nm,0.3s,baz=243,slow=11,SNR=3.7						
LEM				S	Sn	21 46 49.1	+2.6
	0.8nm,0.3s,baz=323,slow=20,SNR=1.5						
CISI	Cisompet, Garu	5.49	118	Pn	Pn	21 45 56.0	-0.2
CISI	Cisompet, Garu	5.49	118	P	Pn	21 45 56.1	-0.1
	0.3nm1μm31nm,0.7s						
XMIS	Christmas Isla	6.11	154	Pn	Pn	21 46 03.6	-1.0
UGM	Wanagama	8.09	112	Pn	Pn	21 46 31.7	-0.1
UGM	Wanagama	8.09	112	P	Pn	21 46 33.3	+1.5
GSI	Gunungsitoli	8.21	319	Pn	Pn	21 46 31.8	-1.6
GSI	Gunungsitoli	8.21	319	P	Pn	21 46 34.8	+1.4
	13nm,0.9s						
JAGI	Jajag, Banyuwa	11.67	108	Pn	Pn	21 47 20.7	0.0
JAGI	Jajag, Banyuwa	11.67	108	P	Pn	21 47 21.1	+0.3
CMAR	Chiang Mai Arr	23.60	350	P	P	21 49 41.9	-0.7
	0.5nm,0.4s,baz=185,slow=8.3,SNR=4.9						
FITZ	Fitzroy Crossi	25.75	122	P	P	21 50 02.0	-0.2
	1.6nm,0.5s,baz=324,slow=8.1,SNR=13						
H01W3	Cape Leeuwin H	31.53	162	T	T	22 24 18.1	
	baz=340,slow=76,SNR=3.9						
H01W2	Cape Leeuwin H	31.54	162	T	T	22 24 15.1	
	baz=340,slow=76,SNR=3.3						
H01W1	Cape Leeuwin H	31.55	162	T	T	22 24 12.8	
	baz=340,slow=76,SNR=3.7						
WB0	Warramunga Arr	33.97	118	P	P	21 51 14.9	-0.2
WB0				IAmb	IAmb	21 51 15.4	
	comp=Z,2.6nm,0.8s						
WRA	Warramunga Arr	33.99	119	P	P	21 51 14.8	-0.5
	comp=Z,0.8nm,0.5s,baz=301,slow=9.0,SNR=27						
WRA				PcP	PcP	21 53 51.9	-0.5
	comp=Z,0.2nm,0.5s,baz=311,slow=2.3,SNR=2.4						
WR0	Warramunga Arr	34.17	119	P	P	21 51 16.6	-0.3
ASAR	Alice Springs	35.16	125	P	P	21 51 25.7	+0.4
	comp=Z,1.1nm,0.4s,baz=294,slow=7.2,SNR=25						
ASAR				PcP	PcP	21 53 56.2	+0.5
	comp=Z,0.4nm,0.6s,baz=297,slow=3.0,SNR=3.6						
ASAR	Alice Springs	35.16	125	P	P	21 51 25.5	+0.2
AS31	Alice Springs	35.16	125	P	P	21 51 25.4	+0.1
AS31				IAmb	IAmb	21 51 25.9	
	comp=Z,1.1nm,0.3s						
LSA	Lhasa	36.27	343	P	P	21 51 35.3	+0.1
LSA				IAmb	IAmb	21 51 36.0	
	comp=Z,1.4nm,1.0s						
CTAO	Charters Tower	44.71	114	P	P	21 52 44.7	+0.1
STKA	Stephens Creek	45.01	131	P	P	21 52 47.5	+0.7
	comp=Z,1.4nm,0.5s,baz=310,slow=7.7,SNR=6.1						
STKA	Stephens Creek	45.01	131	P	P	21 52 47.5	+0.7
NIL	Nilore	47.57	326	P	P	21 53 06.3	-0.6
NIL				IAmb	IAmb	21 53 15.4	
	comp=Z,3.9nm,1.2s						
KSRS	Korea Array	48.19	27	P	P	21 53 11.5	+0.1
	comp=Z,0.8nm,0.7s,baz=229,slow=5.8,SNR=2.2						
SONM	Songino Array	52.66	3	P	P	21 53 45.6	+0.4
	comp=Z,0.6nm,0.4s,baz=180,slow=9.7,SNR=11						
MK31	Makanchi Array	54.68	343	P	P	21 53 59.4	-0.5
MKAR	Makanchi Array	54.68	343	P	P	21 53 59.6	-0.3
	comp=Z,1.1nm,0.8s,baz=144,slow=8.3,SNR=11						
MKAR	Makanchi Array	54.68	343	P	P	21 53 59.2	-0.7
MAKZ	Makanchi	54.78	342	P	P	21 54 00.2	-0.4
MAKZ				IAmb	IAmb	21 54 02.0	
	comp=Z,2.0nm,1.4s						
USRK	Ussuriysk Ar.	55.47	25	P	P	21 54 04.4	-1.2
	comp=Z,1.7nm,0.6s,baz=205,slow=4.5,SNR=5.8						
USRK	Ussuriysk Ar.	55.47	25	P	P	21 54 05.0	-0.6
ZAA0	Zalesovo Array	60.63	348	P	P	21 54 40.7	-0.8
ZALV	Zalesovo Beam	60.63	348	P	P	21 54 41.1	-0.4
	comp=Z,1.6nm,0.4s,baz=156,slow=6.0,SNR=15						
ZALV	Zalesovo Beam	60.63	348	P	P	21 54 40.8	-0.7
BVAR	Borovoye Array	63.97	339	P	P	21 55 02.1	-1.8
	comp=Z,0.8nm,0.6s,baz=98,slow=11,SNR=8.8						
BRVK	Borovoye	64.03	339	P	P	21 55 03.5	-0.8
ABKAR	Akbulak array	65.63	331	P	P	21 55 14.3	-0.4
ABKAR				IAmb	IAmb	21 55 16.2	
	comp=Z,2.5nm,1.2s						
KBZ	Khabaz	72.45	319	P	P	21 55 57.3	+0.2
	comp=Z,0.9nm,0.7s,baz=104,slow=4.2,SNR=2.5						
BURAR	Bucovina Array	85.40	318	P	P	21 57 09.3	+1.1
FINES	FINESS Array B	88.08	332	P	P	21 57 21.3	+0.6
	comp=Z,0.8nm,0.5s,baz=118,slow=5.2,SNR=9.7						
FINES	FINESS Array B	88.08	332	P	P	21 57 21.2	+0.5
ARCES	ARCESS Array B	90.24	340	P	P	21 57 30.8	+0.1
	comp=Z,3.6nm,1.0s,baz=29,slow=2.8,SNR=3.8						
TXAR	Lajitas Array	145.05	43	PKP	PKPab	22 04 08.2	+0.2
	comp=Z,0.4nm,0.4s,baz=243,slow=2.4,SNR=5.0						

TAP 25 22:02:33.4, 24°.18N×121°.72E, h12^{km}, ML2.1, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NACB	Ninganchiao	0.11	265	P	Pg	22 02 36.2	-0.1
	baz=264						
NACB				iS	Sg	22 02 38.4	0.0
	baz=264						
TWD	Chiawan	0.15	226	P	Pg	22 02 36.7	-0.2
	baz=224						
TWD				iS	Sg	22 02 39.3	-0.1
	baz=224						
ETLH	Xiulin Townshi	0.21	276	iP	Pg	22 02 37.9	-0.1
	baz=276						
ETLH				iS	Sg	22 02 41.4	+0.2
	baz=276						
ENA	Nanau	0.24	6	iP	Pg	22 02 38.4	-0.1
	baz=7.0						
ENA				iS	Sg	22 02 42.2	+0.2
	baz=7.0						
EWUT	Wuta	0.27	13	eP	Pg	22 02 38.5	-0.4
	baz=12						
EWUT				eS	Sg	22 02 42.2	-0.4
	baz=12						
NNSB	Datong	0.39	309	eP	Pg	22 02 41.1	-0.1
	baz=308						
NNSH	Datong	0.39	309	eP	Pg	22 02 41.0	-0.2
	baz=308						
NNS	Nan Shan	0.40	309	eP	Pg	22 02 41.3	-0.1
	baz=309						
NNS				eS	Sg	22 02 47.2	+0.3
	baz=309						
WHF	Hehuan Shan	0.41	265	eP	Pg	22 02 41.5	-0.2
	baz=264						
FUSS	Fushou	0.43	278	eP	Pg	22 02 42.1	0.0
	baz=278						
NDS	Dongshan	0.45	0	eP	Pg	22 02 42.1	-0.1
NDS				eS	Sg	22 02 48.4	+0.1
ESL	Shilin	0.45	215	eP	Pg	22 02 41.6	-0.6
	baz=213						
NDT	Datong Townshi	0.46	336	eP	Pg	22 02 42.4	0.0
	baz=336						
NDT				eS	Sg	22 02 48.8	+0.3
	baz=336						
ENTT	Nioudou	0.47	343	eP	Pg	22 02 42.8	0.0
	baz=344						
ENTT				eS	Sg	22 02 49.5	+0.5
	baz=344						
TWT	Tachien	0.50	278	eP	Pg	22 02 43.6	+0.4
	baz=277						
TWT				eS	Sg	22 02 50.4	+0.5
	baz=277						
CHGB	Renai	0.51	256	P	Pg	22 02 43.3	-0.1
	baz=255						
CHGB				eS	Sg	22 02 50.3	+0.1
	baz=255						
TDCB	Techi	0.51	278	eP	Pg	22 02 43.5	0.0
	baz=277						
TDCB				eS	Sg	22 02 49.9	-0.5
	baz=277						
TWE	Neicheng	0.54	355	eP	Pg	22 02 43.8	-0.2
	baz=356						
YHNB	Yeheng	0.57	327	eP	Pg	22 02 44.7	0.0
	baz=327						
YHNB				eS	Sg	22 02 52.4	+0.1
	baz=327						
NSK	Sanguang	0.59	326	eP	Pg	22 02 44.9	0.0
	baz=326						
NSK				eS	Sg	22 02 53.0	+0.3
	baz=326						
NWLT	Wulai	0.62	342	eP	Pg	22 02 45.6	+0.1
	baz=341						
NWLT				eS	Sg	22 02 53.5	-0.3
	baz=341						
VWDT	VWDT	0.68	231	eP	Pg	22 02 46.6	+0.1
	baz=230						
WHP	Taichung City	0.71	278	eP	Pg	22 02 47.3	+0.1
	baz=277						
SSLB	Suanglung	0.80	241	eP	Pg	22 02 48.4	-0.5
	baz=240						
YULB	Yu-li	0.88	206	eP	Pg	22 02 48.8	-1.5
	baz=205						

TAP 25 22:02:38.5, 24°.19N×121°.72E, h12^{km}, ML2.2, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NACB	Ninganchiao	0.11	263	eP	Pg	22 02 41.3	-0.1
	baz=262						
NACB				eS	Sg	22 02 43.6	0.0
	baz=262						
TWD	Chiawan	0.15	226	eP	Pg	22 02 41.7	-0.4
	baz=224						
TWD				eS	Sg	22 02 44.5	-0.1
	baz=224						
ETLH	Xiulin Townshi	0.22	275	eP	Pg	22 02 43.3	+0.1
	baz=275						
ETLH				S	Sg	22 02 46.4	+0.1
	baz=275						
ENA	Nanau	0.24	5	eP	Pg	22 02 43.3	-0.2
	baz=6.0						
ENA				eS	Sg	22 02 47.1	+0.1
	baz=6.0						
EWUT	Wuta	0.26	12	eP	Pg	22 02 44.0	+0.1
	baz=12						
EWUT				eS	Sg	22 02 47.6	0.0
	baz=12						
NNSB	Datong	0.39	308	eP	Pg	22 02 46.2	-0.1
	baz=308						
NNSB				eS	Sg	22 02 51.6	+0.1
	baz=308						
NNSB	Datong	0.39	308	eS	Pg	22 02 46.1	-0.2
	baz=308						
NNSH	Datong	0.39	308	eP	Pg	22 02 46.2	-0.1
	baz=308						
NNSH				eS	Sg	22 02 51.6	+0.1
	baz=308						
NNSH	Datong	0.39	308	eS	Pg	22 02 46.2	-0.1
	baz=308						
NNS	Nan Shan	0.40	309	eP	Pg	22 02 46.2	-0.3
	baz=309						
NNS				eS	Sg	22 02 52.4	+0.5
	baz=309						
WHF	Hehuan Shan	0.41	264	eP	Pg	22 02 46.7	-0.2
	baz=263						
WHF				eS	Sg	22 02 52.4	-0.1
	baz=263						
WHF	Hehuan Shan	0.41	264	eS	Pg	22 02 46.7	-0.1
	baz=264						
FUSS	Fushou	0.44	278	eP	Pg	22 02 47.3	+0.1
	baz=277						
FUSS				eS	Sg	22 02 52.9	-0.2
	baz=277						
FUSS	Fushou	0.44	278	eS	Pg	22 02 47.4	+0.2
	baz=278						
NDS	Dongshan	0.44	360	eP	Pg	22 02 47.2	-0.1
	baz=359						
NDS				eS	Sg	22 02 53.3	+0.1
	baz=359						
NDT	Datong Townshi	0.45	336	eP	Pg	22 02 47.4	0.0
	baz=335						
NDT				eS	Sg	22 02 54.1	+0.7
	baz=335						
ESL	Shilin	0.45	215	eP	Pg	22 02 47.5	0.0
	baz=214						
ESL				eS	Sg	22 02 53.9	+0.4
	baz=214						
ENTT	Nioudou	0.47	343	eP	Pg	22 02 47.9	+0.1
	baz=343						
ENTT				eS	Sg	22 02 54.6	+0.5
	baz=343						
TWT	Tachien	0.50	278	eP	Pg	22 02 48.6	+0.2
	baz=276						
TWT				eS	Sg	22 02 55.7	+0.8
	baz=276						
CHGB	Renai	0.51	256	eP	Pg	22 02 48.2	-0.4
	baz=255						
CHGB				eS	Sg	22 02 55.4	-0.1
	baz=255						
TDCB	Techi	0.51	277	eP	Pg	22 02 48.5	-0.1
	baz=277						
TDCB				eS	Sg	22 02 55.5	+0.1
	baz=277						
TWE	Neicheng	0.53	355	eP	Pg	22 02 48.7	-0.2
	baz=356						
TWE				eS	Sg	22 02 55.1	-0.9
	baz=356						
YHNB	Yeheng	0.57	327	eP	Pg	22 02 49.8	+0.1
	baz=327						
YHNB				eS	Sg	22 02 57.6	+0.3
	baz=327						
NSK	Sanguang	0.59	326	eP	Pg	22 02 50.0	0.0
	baz=326						
NSK				eS	Sg	22 02 57.5	-0.2
	baz=326						
NWLT	Wulai	0.62	342	eP	Pg	22 02 50.4	-0.2
	baz=341						
NWLT				eS	Sg	22 02 58.8	0.0
	baz=341						
VWDT	VWDT	0.68	231	eP	Pg	22 02 51.2	-0.5
	baz=230						
WHP	Taichung City	0.71	277	eS	Sg	22 03 01.7	+0.1
	baz=277						
HGSD	Ruisui	0.74	201	eP	Pg	22 02 52.9	0.0
	baz=201						
TIPB	Shuangxi	0.79	7	eS	Sg	22 03 03.4	-0.6
	baz=7.0						

IDC 25 22:13:00.1±4.9**, 2°.53S×138°.95E, h0^{km}, mb3.0**/2**, mb1 3.3**/3**, mb1mx3.2**/24**, mbtmp3.1**/3**, ML3.3**/1**, Error ellipse: s-maj=198.3km s-min=30.8km az=87.0, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	17.88	194	P	Pn	22 17 10.4	-0.1
	0.1nm,0.3s,baz=16,slow=13,SNR=8.3						
ASAR	Alice Springs	21.57	193	P	P	22 17 51.7	+0.1
	0.2nm,0.5s,baz=21,slow=9.8,SNR=4.5						
MKAR	Makanchi Array	69.79	322	P	P	22 24 12.4	0.0
	0.2nm,0.6s,baz=109,slow=7.4,SNR=4.3						

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*MDD **25** 22:47:53.9±1.1, 37°.13N×3°.03E, h15^{km}±21^{km}, mb3.8/7, Error ellipse: s-maj=15.1km s-min=10.5km az=155.0, PRXIMO*

*CRAAG **25** 22:47:55.2, 36°.94N×3°.12E, Ml2.8*

ISC 25 22:47:51.8±0.9**, 37°.22N**±0°.05×**3°.02E**±0°.06**, h12^{km}, n22, σ2^{s}02**/35**, Western Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ABA	Alger-Bouzarea	0.42	178	P	Pg	22 48 00.2	+0.1
ABA	Alger-Bouzarea	0.42	178	P	Pg	22 48 00.2	+0.1
ABMS	Boumerdes	0.60	142	P	Pb	22 48 03.5	-0.6
ABMS	Boumerdes	0.60	142	P	Pb	22 48 03.5	-0.6
ADJB	Djebel Djouab	1.11	162	P	Pb	22 48 12.5	-0.5
ADJB	Djebel Djouab	1.11	162	P	Pb	22 48 12.5	-0.5
EIBI	Ibiza	2.23	324	P	Pn	22 48 30.3	+1.6
	3.0nm,0.1s						
EIBI				S	Sn	22 48 55.2	-1.0
	36nm,0.9s,SNR=6.7						
ETOS	Mallorca	2.55	356	P	Pn	22 48 35.0	+2.1
	2.1nm,0.2s,SNR=9.1						
ETOS				S	Sn	22 49 02.5	-1.3
	4.5nm,0.3s,SNR=7.9						
EMUR	La Murta	3.44	282	P	Pn	22 48 46.3	+1.1
	1.8nm,0.2s,SNR=6.2						
EMUR				S	Sn	22 49 23.2	-2.8
	21nm,1.1s,SNR=4.0						
ETOB	Tobarra	3.88	293	P	Pn	22 48 53.1	+1.8
	1.3nm,0.1s,SNR=14						
ETOB				S	Sn	22 49 35.3	-1.6
	55nm,1.6s						
ECHE	Chera	3.92	308	P	Pn	22 48 54.2	+2.3
	0.2nm,0.0s,SNR=7.9						
EMOS	Mosqueruela	4.16	320	P	Pn	22 48 57.2	+2.0
	1.4nm,0.1s,SNR=7.9						
EMOS				S	Sn	22 49 42.1	-1.7
	0.8nm,0.2s,SNR=7.9						
ERTA	Horta de San J	4.28	332	S	Sn	22 49 44.2	-2.3
	3.1nm,0.4s,SNR=7.9						
EPOB	Poblet	4.39	341	P	Pn	22 49 00.8	+2.4
	0.1nm,0.0s,SNR=7.9						
EPOB				S	Sn	22 49 47.0	-2.4
	2.6nm,0.3s,SNR=7.9						
CFON	Fontmartina	4.56	354	P	Pn	22 49 02.5	+1.9
	2.4nm,0.1s,SNR=6.0						
CFON				S	Sn	22 49 50.4	-3.1
	0.1nm,0.2s,SNR=7.9						
EQES	Quesada	4.88	279	P	Pn	22 49 06.2	+1.1
	1.5nm,0.2s,SNR=7.9						
EQES				S	Sn	22 50 01.1	-0.3
	2.6nm,0.4s,SNR=7.9						
EJON	La Jonquera	5.22	359	P	Pn	22 49 12.1	+2.4
	0.4nm,0.1s,SNR=7.9						
EJON				S	Sn	22 50 07.6	-2.2
	1.7nm,0.3s,SNR=7.9						
SJAF	Saint Jean de	5.26	359	P	Pn	22 49 12.6	+2.4
	0.1nm,0.1s,SNR=7.9						
SJAF				S	Sn	22 50 06.7	-4.0
	0.2nm,0.6s,SNR=4.0						
CLLI	Llivia	5.31	352	P	Pn	22 49 13.6	+2.6
	0.5nm,0.3s,SNR=7.9						
CLLI				S	Sn	22 50 10.2	-2.0
	0.0nm,0.1s,SNR=7.9						
CSOR	Sort	5.35	345	P	Pn	22 49 15.2	+3.7
	0.3nm,0.1s,SNR=7.9						
CSOR				S	Sn	22 50 12.3	-0.8
	1.8nm,0.5s,SNR=7.9						
EADA	Adamuz	6.10	281	P	Pn	22 49 22.9	+1.1
	0.2nm,0.1s,SNR=7.9						
EADA				S	Sn	22 50 31.9	+0.5
	0.3nm,0.3s,SNR=7.9						
PAB	San Pablo	6.24	294	P	Pn	22 49 24.7	+1.0
	0.4nm,0.1s,SNR=7.9						

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*BGS **25** 22:55:07.6±0.9, 49°.09N×2°.38W, h13^{km}±6^{km}, ML3.0*

*NEIC **25** 22:55:07.3±1.7, 49°.04N±0°.04×2°.38W±0°.07, h10^{km}±6^{km}, Error ellipse: s-maj=7.3km s-min=5.4km az=128.0*

*STR **25** 22:55:07.0±0.2, 49°N±2°×°±°, h0^{km}, MLv3.6/10, MLv4.4/5, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/haslach_taup-2.11 preliminary*

*LDG **25** 22:55:07.6±0.1, 49°.08N×2°.46W, h6^{km}, Md3.6/2, Ml3.6/61, Error ellipse: s-maj=1.4km s-min=1.3km az=168.0*

ISC 25 22:55:06.2±0.9**, 49°.12N**±0°.02×**2°.44W**±0°.02**, h20^{km}**±5^{km}**, n145, σ2^{s}00**/188**, 7C-18D, France**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JVM	Valle D.L. Mar	0.18	58	⇑iP	Pb	22 55 11.6	+0.8
JVM	Valle D.L. Mar	0.18	58	⇑iP	Pb	22 55 11.6	+0.8
JVM	Valle D.L. Mar	0.18	58		Pb	22 55 11.7	+0.8
JSA	Saint Aubin	0.19	70	⇑iP	Pb	22 55 10.6	-0.3
JSA				eS	Sb	22 55 13.3	-0.9
JSA				IAML		22 55 13.7	
	comp=N,4μm,0.2s						
JSA				IAML		22 55 14.1	
	comp=E,2μm,0.2s						
JSA	Saint Aubin	0.19	70	Pg	Pb	22 55 10.6	-0.3
JSA				Sg	Sb	22 55 13.4	-0.7
JSA	Saint Aubin	0.19	70		Pb	22 55 10.6	-0.3
JSA					Sb	22 55 13.5	-0.7
JRS	Jersey	0.24	73	eP	Pb	22 55 12.4	+0.6
JRS				eS	Sb	22 55 15.8	+0.2
JRS	Jersey	0.24	73	eP	Pb	22 55 12.4	+0.6
JRS				eS	Sb	22 55 15.8	+0.2
JRS	Jersey	0.24	73		Pb	22 55 12.4	+0.6
JRS					Sb	22 55 15.8	+0.2
JLP	Les Platons	0.25	61	⇑iP	Pb	22 55 12.8	+0.8
JLP	Les Platons	0.25	61	⇑iP	Pb	22 55 12.8	+0.8
JLP	Les Platons	0.25	61		Pb	22 55 12.8	+0.8
JLP					Sb	22 55 16.5	+0.6
JQE	Queens East	0.27	74	⇑iP	Pb	22 55 13.0	+0.6
JQE	Queens East	0.27	74	⇑iP	Pb	22 55 13.0	+0.6
JQE	Queens East	0.27	74		Pb	22 55 13.0	+0.6
JQE					Sb	22 55 16.9	+0.3
SGMF	Saint Gilles	0.87	185	ePg	Pn	22 55 23.0	-0.3
SGMF	Saint Gilles	0.87	185	ePn	Pn	22 55 23.9	+0.6
SGMF	Saint Gilles	0.87	185	eP	Pn	22 55 24.6	+1.3
SGMF				eSg	Sb	22 55 34.0	+0.1
	comp=E,433nm,0.2s						
ROSF	Rostrenen	0.96	215	eP	Pn	22 55 25.1	+0.6
ROSF				eS	Sn	22 55 38.0	+0.4
ROSF				IAML		22 55 39.0	
	comp=E,240nm,0.3s						
ROSF				IAML		22 55 39.9	
	comp=N,234nm,0.1s						
ROSF	Rostrenen	0.96	215	eP	Pn	22 55 25.1	+0.6
ROSF				eS	Sn	22 55 38.0	+0.4
ROSF				IAML		22 55 39.0	
	comp=E,240nm,0.3s						
ROSF				IAML		22 55 39.9	
	comp=N,234nm,0.1s						
ROSF	Rostrenen	0.96	215	ePg	Pn	22 55 25.0	+0.5
ROSF	Rostrenen	0.96	215	eP	Pn	22 55 26.4	+1.9
ROSF				eSn	Sn	22 55 38.2	+0.6
	comp=N,434nm,0.2s						
ROSF	Rostrenen	0.96	215	Sg	Sn	22 55 37.9	+0.3
ROSF	Rostrenen	0.96	215	Pg	Pn	22 55 24.8	+0.2
RENF	Rennes	1.14	152	eP	Pb	22 55 28.2	+1.0
RENF	Rennes	1.14	152	eP	Pb	22 55 28.2	+1.0
RENF	Rennes	1.14	152	Pg	Pb	22 55 28.2	+1.0
RENF				Sg	Sn	22 55 42.8	+0.9
GRR	Gorron	1.28	125	ePn	Pb	22 55 30.0	+0.5
GRR	Gorron	1.28	125	ePg	Pb	22 55 31.2	+1.7
GRR				eSn	Sb	22 55 46.4	+0.9
GRR				eSg	Sn	22 55 48.0	+2.6
	comp=N,704nm,0.3s						
QUIF	Quistinic	1.30	202	ePn	Pb	22 55 30.1	+0.2
QUIF	Quistinic	1.30	202	ePg	Pb	22 55 31.2	+1.3
QUIF				eSg	Sb	22 55 47.6	+1.5
	comp=N,156nm,0.2s						
FLN	La Foliniere	1.34	105	ePn	Pb	22 55 31.1	+0.5
	baz=283						
FLN	La Foliniere	1.34	105	ePg	Pb	22 55 32.7	+2.1
	baz=283						
FLN				eSg	Sb	22 55 49.8	+2.5
	comp=N,341nm,0.2s,baz=282						
LDF	La Druitiere	1.62	108	ePn	Pb	22 55 34.9	-0.4
LDF	La Druitiere	1.62	108	eP	Pb	22 55 36.7	+1.4
LDF	La Druitiere	1.62	108	ePg	Pb	22 55 37.7	+2.4
LDF				eSg	Sb	22 55 58.3	+3.0
	comp=N,187nm,0.3s						
DYA	Yadsworthy	1.63	324	eP	Pb	22 55 35.2	-0.4
DYA				eS	Sb	22 55 57.1	+1.4
DYA				IAML		22 56 02.6	
	comp=E,216nm,0.5s						
DYA				IAML		22 56 02.9	
	comp=N,284nm,0.5s						
DYA	Yadsworthy	1.63	324	eP	Pb	22 55 35.2	-0.4
DYA				eS	Sb	22 55 57.1	+1.4
DYA				IAML		22 56 02.6	
	comp=E,216nm,0.5s						
DYA				IAML		22 56 02.9	
	comp=N,284nm,0.5s						
DYA	Yadsworthy	1.63	324	P	Pb	22 55 35.1	-0.4
DYA				Pn	Pn	22 55 36.1	+2.4
DYA	Yadsworthy	1.63	324	Sn	Sb	22 55 59.5	+3.8
DYA	Yadsworthy	1.63	324		Pb	22 55 35.2	-0.4
DYA					Sb	22 55 59.0	+3.3
CAMF	Camaret-sur-Me	1.68	240	Pn	Pb	22 55 36.4	+0.1
CAMF				Pg	Pn	22 55 38.1	+3.8
CAMF				Sn	Sb	22 55 59.1	+2.1
CCA1	Carnmenellis	2.10	301	eP	Pn	22 55 41.5	+1.2
CCA1				IAML		22 56 17.2	
	comp=N,60nm,0.5s						
CCA1				IAML		22 56 19.4	
	comp=E,45nm,0.3s						
CCA1	Carnmenellis	2.10	301	eP	Pn	22 55 41.5	+1.2
CCA1				IAML		22 56 17.2	
	comp=N,60nm,0.5s						
CCA1				IAML		22 56 19.4	
	comp=E,45nm,0.3s						
CCA1	Carnmenellis	2.10	301	P	Pn	22 55 41.4	+1.2
CCA1				Pn	Pb	22 55 41.7	-1.9
HTL	Hartland	2.29	326	eP	Pb	22 55 45.7	-1.1
HTL				IAML		22 56 24.6	
	comp=N,154nm,0.7s						

HTL				IAML		22 56 25.0	
	comp=E,119nm,0.6s						
HTL	Hartland	2.29	326	*e*P	Pb	22 55 45.7	-1.1
HTL				IAML		22 56 24.6	
	comp=N,154nm,0.7s						
HTL				IAML		22 56 25.0	
	comp=E,119nm,0.6s						
HTL	Hartland	2.29	326	Pn	Pb	22 55 45.3	-1.5
HTL	Hartland	2.29	326	Sn	Sb	22 56 16.3	+1.7
WOL	Wolverton	2.33	19	*e*P	Pb	22 55 45.5	-1.9
WOL				IAML		22 56 29.1	
	comp=E,56nm,0.4s						
WOL				IAML		22 56 29.5	
	comp=N,38nm,0.4s						
WOL	Wolverton	2.33	19	*e*P	Pb	22 55 45.5	-1.9
WOL				IAML		22 56 29.1	
	comp=E,56nm,0.4s						
WOL				IAML		22 56 29.5	
	comp=N,38nm,0.4s						
HMNX	Herstmonceux	2.50	45	*e*P	Pn	22 55 47.0	+1.3
HMNX	Herstmonceux	2.50	45	*e*P	Pn	22 55 47.0	+1.3
MONM	Monmouth	2.73	355	*e*P	Pn	22 55 50.3	+1.5
MONM				IAML		22 56 37.2	
	comp=E,55nm,0.4s						
MONM				IAML		22 56 39.9	
	comp=N,92nm,0.7s						
MONM	Monmouth	2.73	355	*e*P	Pn	22 55 50.3	+1.5
MONM				IAML		22 56 37.2	
	comp=E,55nm,0.4s						
MONM				IAML		22 56 39.9	
	comp=N,92nm,0.7s						
MCH1	Michaelchurch	2.90	353	*e*P	Pn	22 55 52.7	+1.5
MCH1				IAML		22 56 42.5	
	comp=E,42nm,0.5s						
MCH1				IAML		22 56 44.5	
	comp=N,43nm,0.3s						
MCH1	Michaelchurch	2.90	353	*e*P	Pn	22 55 52.7	+1.5
MCH1				IAML		22 56 42.5	
	comp=E,42nm,0.5s						
MCH1				IAML		22 56 44.5	
	comp=N,43nm,0.3s						
MFF	Saint Martin d	2.96	148	*e*Pn	Pn	22 55 53.0	+1.0
MFF	Saint Martin d	2.96	148	*e*Pg	Pb	22 56 01.5	+3.3
MFF				*e*Sn	Sn	22 56 26.5	-0.3
MFF				*e*Sg	Sb	22 56 38.5	+4.7
	comp=N,70nm,0.3s						
MFF	Saint Martin d	2.96	148	Pn	Pn	22 55 53.8	+1.8
ELSH	Elham, Standar	3.06	47	*e*P	Pn	22 55 55.6	+2.2
ELSH				IAML		22 56 32.3	
	comp=E,36nm,0.3s						
ELSH				IAML		22 56 52.2	
	comp=N,45nm,0.3s						
ELSH	Elham, Standar	3.06	47	*e*P	Pn	22 55 55.6	+2.2
ELSH				IAML		22 56 32.3	
	comp=E,36nm,0.3s						
ELSH				IAML		22 56 52.2	
	comp=N,45nm,0.3s						
ELSH	Elham, Standar	3.06	47	Pn	Pn	22 55 55.5	+2.2
CHIF	Chize	3.29	155	Pn	Pn	22 55 57.8	+1.3
MENF	Mencas	3.30	62	Pn	Pn	22 55 58.9	+2.2
CLF	Chambon-Foret	3.31	108		Pn	22 55 58.9	+2.2
CLF				Sg	Sb	22 56 51.8	+7.9
HLM1	Long Mynd	3.41	355	*e*P	Pn	22 56 00.6	+2.4
HLM1				IAML		22 56 57.2	
	comp=N,21nm,0.3s						
HLM1				IAML		22 56 57.3	
	comp=E,34nm,0.4s						
HLM1	Long Mynd	3.41	355	*e*P	Pn	22 56 00.6	+2.4
HLM1				IAML		22 56 57.2	
	comp=N,21nm,0.3s						
HLM1				IAML		22 56 57.3	
	comp=E,34nm,0.4s						
HYF	Humbligny	3.87	117	*e*Pn	Pn	22 56 05.8	+1.3
HYF	Humbligny	3.87	117	*e*Pg	Pb	22 56 19.5	+5.8
HYF				*e*Sn	Sn	22 56 48.8	-0.6
HYF				*e*Sg	Sb	22 57 09.1	+9.0
WACR	West Acre	4.09	27	*e*P	Pn	22 56 09.0	+1.4
WACR	West Acre	4.09	27	*e*P	Pn	22 56 09.0	+1.4
TCF	Toulx Ste Croi	4.23	130	*e*Pn	Pn	22 56 09.7	+0.2
TCF	Toulx Ste Croi	4.23	130	*e*Pg	Pb	22 56 26.1	+6.2
TCF				*e*Sn	Sn	22 56 57.7	-0.6
	comp=E,11nm,0.3s						
TCF				*e*Sg	Sb	22 57 20.3	+10
	comp=E,53nm,0.5s						
BGF	Bois d'Agland	4.39	124	*e*Pn	Pn	22 56 12.5	+0.9
BGF				*e*Sn	Sn	22 57 00.9	-1.2
	comp=E,25nm,0.4s						
BGF				*e*Sg	Sb	22 57 24.5	+10
	comp=E,102nm,0.4s						
LRVF	chteau la Riv	4.42	160	Pn	Pn	22 56 13.6	+1.5
BAIF	Baives	4.42	75	*e*Pn	Pn	22 56 13.7	+1.6
BAIF	Baives	4.42	75	*e*Pg	Pb	22 56 29.7	+6.6
BAIF				*e*Sn	Sn	22 57 00.5	-2.5
	comp=E,9.7nm,0.2s						
BAIF				*e*Sg	Sb	22 57 26.4	+10
	comp=E,56nm,0.8s						
SSF	Saint Saulge	4.49	115	*e*Pn	Pn	22 56 13.4	+0.4
SSF	Saint Saulge	4.49	115	*e*Pg	Pb	22 56 30.5	+6.3
SSF				*e*Sn	Sn	22 57 04.0	-0.6
	comp=E,5.9nm,0.2s						
SSF				*e*Sg	Sb	22 57 27.4	+10
	comp=E,37nm,0.4s						
AVF	Avril sur Loir	4.54	119	*e*Pn	Pn	22 56 14.1	+0.4
AVF	Avril sur Loir	4.54	119	*e*P	Pn	22 56 18.1	+4.4
AVF	Avril sur Loir	4.54	119	*e*Pg	Pb	22 56 30.9	+5.8
AVF				*e*Sn	Sn	22 57 05.2	-0.6
AVF				*e*Sg	Sb	22 57 30.5	+11
	comp=E,23nm,0.4s						
SNF	Seneffe	4.57	70	*d*Pn	Pn	22 56 12.1	-2.0
LOR	Lormes	4.60	111	*e*Pn	Pn	22 56 15.3	+0.7
	baz=290						
LOR	Lormes	4.60	111	*e*Pg	Pb	22 56 32.8	+6.6
	baz=290						
LOR				*e*Sn	Sn	22 57 06.5	-0.9
	comp=E,12nm,0.3s,baz=293						
LOR				*e*Sg	Sb	22 57 32.8	+12
	comp=E,27nm,0.3s,baz=290						
LOR	Lormes	4.60	111	Pn	Pn	22 56 15.1	+0.5
RJF	Les Rejaudoux	4.67	143	*e*Pn	Pn	22 56 16.0	+0.4
RJF	Les Rejaudoux	4.67	143	*e*Pg	Pb	22 56 34.4	+7.0
RJF				*e*Sn	Sn	22 57 04.9	-4.3
RJF				*e*Sg	Sb	22 57 32.0	+8.7
	comp=E,63nm,0.3s						
DOU	Dourbes	4.68	75	*d*Pn	Pn	22 56 17.8	+2.2
DOU				*d*Sn	Sn	22 57 06.9	-2.3
DOU	Dourbes	4.68	75	Pn	Pn	22 56 17.6	+2.1
UCC	Uccle	4.70	67	Pn	Pn	22 56 17.9	+2.1
LFF	La Frestale	4.72	151	*e*Pn	Pn	22 56 16.5	+0.4
LFF	La Frestale	4.72	151	*e*Pg	Pb	22 56 35.2	+7.1
LFF				*e*Sn	Sn	22 57 06.4	-3.8
	comp=E,69nm,0.4s						
LFF				*e*Sg	Sb	22 57 34.4	+10
	comp=E,69nm,0.4s						
DSB	Dublin	4.81	331	Pn	Pn	22 56 21.8	+4.3
BMRD	Maredsous	4.82	73	*d*Pn	Pn	22 56 19.3	+1.8
BMRD				*d*Sn	Sn	22 57 10.9	-1.9
GIVF	Givet	4.82	76	*e*Pn	Pn	22 56 20.2	+2.6
GIVF	Givet	4.82	76	*e*Pg	Pb	22 56 37.3	+7.4
GIVF				*e*Sn	Sn	22 57 10.6	-2.2
	comp=E,16nm,0.3s						
GIVF				*e*Sg	Sb	22 57 38.5	+11
	comp=E,60nm,0.7s						
AGO	Saint Agoulin	4.86	127	Pn	Pn	22 56 19.0	+0.9
SMF	Signal de Mont	4.90	118	*e*Pn	Pn	22 56 19.0	+0.3
SMF	Signal de Mont	4.90	118	*e*Pg	Pb	22 56 37.7	+6.5
SMF				*e*Sn	Sn	22 57 13.8	-0.9
SMF				*e*Sg	Sb	22 57 41.4	+12
	comp=E,29nm,0.5s						
MEZF	Maizieres J'vi	4.99	94	*e*Pn	Pn	22 56 20.3	+0.4
	baz=274						
MEZF				*e*Sn	Sn	22 57 16.1	-0.8
	comp=E,10nm,0.3s						
MEZF				*e*Sg	Sb	22 57 44.1	+12
	comp=E,49nm,0.5s						
PYM	Petit Puy Mans	5.00	130	Pn	Pn	22 56 21.0	+0.8
SAVF	Savonnieres en	5.02	93	*e*Pn	Pn	22 56 20.8	+0.5
	baz=272						
SAVF	Savonnieres en	5.02	93	*e*Pg	Pb	22 56 40.5	+7.3
	baz=270						
SAVF				*e*Sn	Sn	22 57 16.5	-1.1
	comp=E,9.7nm,0.3s,baz=269						
SAVF				*e*Sg	Sb	22 57 45.4	+12
	comp=E,44nm,0.5s,baz=265						
BGES	Gesves	5.04	73	*d*Pn	Pn	22 56 22.4	+1.9
BGES				*d*Sn	Sn	22 57 14.6	-3.5
SFTF	Sexfontaines	5.04	98	*e*Pn	Pn	22 56 21.3	+0.7
	baz=277						
SFTF	Sexfontaines	5.04	98	*e*Pg	Pb	22 56 41.7	+8.1
	baz=289						
SFTF				*e*Sn	Sn	22 57 16.7	-1.5
	comp=E,19nm,0.4s						
SFTF				*e*Sg	Sb	22 57 45.5	+12
	comp=E,23nm,0.3s,baz=276						
RCHB	Rochefort	5.09	75	*d*Pn	Pn	22 56 23.1	+1.9
RCHB				*d*Sn	Sn	22 57 16.5	-2.8
BCLA	Clavier	5.18	73	*d*Pn	Pn	22 56 24.2	+1.7
BCLA				*d*Sn	Sn	22 57 17.9	-3.8
CAF	Calviac	5.21	142	*e*Pn	Pn	22 56 23.2	+0.3
CAF				*e*Sn	Sn	22 57 17.5	-4.9
	comp=E,7.7nm,0.2s						
CAF				*e*Sg	Sb	22 57 50.2	+12
	comp=E,42nm,0.4s						
PAGF	Fort de Pagny	5.42	93	*e*Pn	Pn	22 56 26.6	+0.8
PAGF	Fort de Pagny	5.42	93	*e*Pg	Pb	22 56 47.4	+7.3
	baz=268						
PAGF				*e*Sn	Sn	22 57 26.2	-1.4
	comp=E,34nm,0.8s						
PAGF				*e*Sg	Sb	22 57 58.0	+13
	comp=E,62nm,0.7s						
BEBN	Eben Emael	5.50	69	*d*Pn	Pn	22 56 28.3	+1.5
BHOU	Houvegnez	5.61	74	*d*P	Pn	22 56 29.5	+1.1
BHOU				*d*Sn	Sn	22 57 28.8	-3.5
WLF	Walferdange	5.64	81	Pn	Pn	22 56 31.3	+2.6
MEM	Membach	5.66	72	*d*Pn	Pn	22 56 30.8	+1.8
MEM				*d*Sn	Sn	22 57 30.3	-3.1
BTNL	Ternell	5.73	72	*d*Pn	Pn	22 56 31.5	+1.4
BTNL				*d*Sn	Sn	22 57 31.0	-4.3
HAU	Haudompre	5.94	98	*e*Pn	Pn	22 56 33.4	+0.4
HAU	Haudompre	5.94	98	*e*Pg	Pb	22 56 57.7	+8.7
HAU				*e*Sn	Sn	22 57 38.4	-2.0
	comp=E,9.9nm,0.3s						
HAU				*e*Sg	Sb	22 58 14.1	+14
	comp=E,32nm,0.4s						
SJPF	Ste Jean	6.07	172	*e*Pn	Pn	22 56 34.6	-0.2
SJPF	Ste Jean	6.07	172	*e*Pg	Pb	22 56 58.4	+7.2
SJPF				*e*Sn	Sn	22 57 38.4	-5.2
	comp=E,5.8nm,0.2s						
SJPF				*e*Sg	Sb	22 58 17.5	+14
	comp=E,4.3nm,0.3s						
ESK	Eskdalemuir	6.22	356	Pn	Pn	22 56 42.1	+5.4
CABF	La Chapelle	6.26	110	*e*Pn	Pn	22 56 38.3	+0.8
CABF	La Chapelle	6.26	110	*e*Pg	Pb	22 57 03.3	+8.8
CABF				*e*Sn	Sn	22 57 46.5	-1.9
CABF				*e*Sg	Sb	22 58 24.2	+15
	comp=E,16nm,0.5s						
HINF	Hinteralfeld	6.32	98	*e*Pn	Pn	22 56 38.2	+0.1
HINF	Hinteralfeld	6.32	98	*e*Pg	Pb	22 57 05.7	+10
HINF				*e*Sn	Sn	22 57 47.7	-2.0
	comp=E,3.7nm,0.2s						
HINF				*e*Sg	Sb	22 58 26.5	+16
	comp=E,25nm,0.5s						
ETSF	Etsaut	6.36	167	*e*Pn	Pn	22 56 37.7	-1.1
ETSF				*e*Sn	Sn	22 57 47.9	-3.0
	comp=E,7.6nm,0.3s						
EPF	Esparros	6.39	161	*e*Pn	Pn	22 56 38.7	-0.5
EPF				*e*Sn	Sn	22 57 44.7	-6.9
	comp=E,7.1nm,0.2s						
EPF				*e*Sg	Sb	22 58 27.4	+15
	comp=E,30nm,0.7s						
ECH	Echery	6.42	95	Pn	Pn	22 56 40.7	+1.1
CDF	Champ du Feu	6.46	93	*e*Pn	Pn	22 56 40.5	+0.3
CDF	Champ du Feu	6.46	93	*e*Pg	Pb	22 57 11.8	+14
CDF				*e*Sn	Sn	22 57 51.3	-2.0
	comp=E,3.8nm,0.3s						
CDF				*e*Sg	Sb	22 58 30.6	+16
	comp=E,16nm,0.6s						
VIVF	Saint-Julien-l	6.47	129	*e*Pn	Pn	22 56 40.6	+0.3
VIVF	Saint-Julien-l	6.47	129	*e*Pg	Pb	22 57 06.2	+8.2
VIVF				*e*Sn	Sn	22 57 52.2	-1.3
VIVF				*e*Sg	Sb	22 58 30.0	+15
	comp=E,20nm,0.7s						
MTLF	Montolieu	6.62	149	*e*Pn	Pn	22 56 42.4	+0.1
MTLF				*e*Sn	Sn	22 57 49.9	-7.3
	comp=E,6.1nm,0.3s						
MTLF				*e*Sg	Sb	22 58 35.4	+16
	comp=E,36nm,0.8s						
LASF	Ste Croix	6.65	137	*e*Pn	Pn	22 56 43.0	+0.2
LASF				*e*Sg	Sb	22 58 35.6	+15
	comp=E,11nm,0.5s						
ORIF	Oris-en-Rattie	7.07	123	*e*Pn	Pn	22 56 50.3	+1.7
ORIF				*e*Sg	Sb	22 58 49.5	+17
	comp=E,3.6nm,0.5s						
SENIN	Lac Senin/Sane	7.12	109	Pn	Pn	22 56 50.3	+0.9
BFO	Black Forest	7.17	92	Pn	Pn	22 56 50.3	+0.5
LPG	La Plagne	7.22	117	*e*Pn	Pn	22 56 52.4	+1.6
LPG				*e*Sn	Sn	22 58 10.0	-2.3
	comp=E,1.0nm,0.3s						
BNI	Bardonecchia	7.43	120	Pn	Pn	22 56 54.3	+0.7
SMRF	Simiane la Rot	7.55	130	*e*Pn	Pn	22 56 56.1	+1.0
SMRF				*e*Sn	Sn	22 58 16.3	-3.7
SMRF				*e*Sg	Sb	22 59 04.1	+18
	comp=E,1.3nm,0.4s						
MBDF	Montbardon	7.69	121	*e*Pn	Pn	22 56 58.3	+1.3
MBDF				*e*Sn	Sn	22 58 20.8	-2.7
	comp=E,0.6nm,0.3s						
TUE	Stuetta	8.37	104	Pn	Pn	22 57 08.8	+2.3
LMR	La Mourre	8.48	130	*e*Pn	Pn	22 57 07.9	+0.1

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*IDC **25** 23:20:21.5±0.7, 31°.08N×141°.82E, h0^{km}, mb3.9/16, mb1 4.1/22, mb1mx4.0/37, mbtmp3.9/22, ML3.6/5, MS3.2/9, Ms1 3.3/9, ms1mx3.0/37, Error ellipse: s-maj=23.5km s-min=14.8km az=75.0*

*NEIC **25** 23:20:23.1±1.0, 31°.16N±0°.04×141°.90E±0°.06, h10^{km}±1^{km}, mb4.4/24, Error ellipse: s-maj=11.1km s-min=3.4km az=126.0*

*JMA **25** 23:20:23.7±0.2, 31°.31N×142°.61E, h77^{km}, M3.9*

*NIED **25** 23:20:23.8, 31°.31N×142°.61E, h77^{km}, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$1.00; M$_{\theta\theta}$0.16; M$_{\phi\phi}$-1.15; M$_{r\theta}$-1.23; M$_{\theta\phi}$0.50; M$_{\phi r}$3.43; Fault plane solution: M$_0$3.82000×10^{15} NP1: ϕ_s340.00000°, δ81.00000°, λ90.00000°. NP2: ϕ_s163.00000°, δ9.00000°, λ93.00000°.*

ISC 25 23:20:25.1±0.5**, 31°.14N**±0°.06×**141°.88E**±0°.08**, h24^{km}, n74, σ1^{s}09**/77**, mb4.2**/28**, MS3.4**/4**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	Mitsune	2.63	319	Pn	Pn	23 21 06.3	+0.2
JHJ	Hachijo jima 2	2.66	319	Pn	Pn	23 21 05.7	-0.7
	8.8nm,0.3s,baz=108,slow=20,SNR=1.8						
JHJ				Sn	Sn	23 21 37.1	-0.8
	15nm,0.3s,baz=72,slow=20,SNR=2.1						
JHJ				LR	LR	23 21 44.2	
	comp=Z,96nm,19.5s,baz=114,slow=31						
BSO1	Boso 1	3.59	348	P	Pn	23 21 18.6	-0.1
CBIJ	Chichi jima	4.04	176	P	Pn	23 21 26.8	+1.4
JCJ	Chichijima	4.04	176	Pn	Pn	23 21 24.6	-0.8
	7.8nm,0.3s,baz=8.4,slow=19,SNR=8.6						
JCJ				Sn	Sn	23 22 09.0	-3.0
	12nm,0.3s,baz=287,slow=20,SNR=2.3						
JCJ				LR	LR	23 22 55.4	
	comp=Z,239nm,18.1s,baz=70,slow=39						
JCJ	Chichijima	4.04	176		Pn	23 21 25.4	0.0
JOD2	Odawara 2	4.73	331	P	Pn	23 21 37.0	+2.0
JRY	Ryogami san	5.46	334	P	Pn	23 21 46.4	+1.4
JRY				*e*S	Sn	23 22 49.2	+2.1
JHO	Hitachi	5.57	349	P	Pn	23 21 45.5	-0.9
JHO				*e*S	Sn	23 22 45.7	-3.9
JAG	Ashikaga	5.65	340	P	Pn	23 21 48.2	+0.7
JGF	Kuroka	5.84	321		Pn	23 21 50.2	0.0
MJAR	Matsushiro Arr	6.19	331	Pn	Pn	23 21 55.9	+0.8
	0.5nm,0.3s,baz=159,slow=11,SNR=26						
MJAR	Matsushiro Arr	6.19	331		Pn	23 21 54.2	-0.8
MAJO	Matsushiro	6.19	331		Pn	23 21 55.5	+0.5
MAT	Matsushiro	6.20	331	P	Pn	23 21 56.9	+1.8
MAT				*e*S	Sn	23 23 05.0	-0.2
JMM	Marumori	6.77	353		Pn	23 22 02.3	-0.7
JWT	Wachi	6.82	309	Pn	Pn	23 22 06.4	+2.7
JSD	Sado	7.50	338	Pn	Pn	23 22 13.2	+0.2
JTM	Tenmabayashi	9.65	356	Pn	Pn	23 22 41.1	-1.4
ERM	Erimo	10.90	5	Pn	Pn	23 22 58.1	-1.5
JOW	Kunigami	12.65	254	LR	LR	23 27 59.7	
	comp=Z,161nm,19.0s,baz=302,slow=36						
ASAJ	Asahikawa	12.97	2	Pn	Pn	23 23 28.7	+0.9
	0.8nm,0.3s,baz=204,slow=20,SNR=1.8						
KSRS	Korea Array	13.14	302	Pn	P	23 23 37.2	-2.8
	0.2nm,0.3s,baz=109,slow=14,SNR=4.2						
KSRS				LR	LR	23 28 29.9	
	comp=Z,72nm,20.8s,baz=114,slow=37						
USRK	Ussuriysk Ar.	15.19	332	Pn	Pn	23 23 56.3	-1.7
	baz=114,slow=13,SNR=2.6						
USRK				LR	LR	23 30 21.8	
	comp=Z,73nm,18.4s,baz=123,slow=39						
KLR	Kul'dur	19.62	340	P	P	23 24 51.0	-0.7
	0.3nm,0.3s,baz=180,slow=5.5,SNR=12						
YULB	Yu-li	19.83	252	P	P	23 24 53.5	-0.8
SSLB	Suanglung	19.94	254	P	P	23 24 55.1	-0.3
BJT	Baijiatuau	22.65	300	P	P	23 25 22.6	-1.9
ULN	Ulaanbaatar	31.31	312	P	P	23 26 43.6	+0.1
ULN				IAmb	IAmb	23 26 45.4	
	comp=Z,6.3nm,1.0s						
SONM	Songino Array	31.71	312	P	P	23 26 47.5	+0.4
	comp=Z,3.5nm,1.0s,baz=119,slow=8.2,SNR=21						
SONM				LR	LR	23 38 55.6	
	comp=Z,57nm,19.8s,baz=306,slow=35						
SONM	Songino Array	31.71	312	P	P	23 26 47.0	0.0
CMAR	Chiang Mai Arr	40.73	262	LR	LR	23 46 32.2	
	comp=Z,46nm,18.0s,baz=156,slow=39						
ZAA0	Zalesovo Array	46.32	317	P	P	23 28 48.8	0.0
ZAA0				IAmb	IAmb	23 28 49.9	
	comp=Z,6.1nm,1.2s						
ZALV	Zalesovo Beam	46.32	317	P	P	23 28 48.5	-0.3
	comp=Z,1.7nm,0.5s,baz=85,slow=8.6,SNR=10						
ZALV				PcP	PcP	23 30 24.0	+0.2
	comp=Z,1.3nm,0.6s,baz=117,slow=3.1,SNR=5.7						
ZALV	Zalesovo Beam	46.32	317	P	P	23 28 48.6	-0.2
MK31	Makanchi Array	47.77	307	P	P	23 28 60.0	-0.3
MKAR	Makanchi Array	47.77	307	P	P	23 29 00.2	-0.1
	comp=Z,2.1nm,0.8s,baz=86,slow=9.9,SNR=36						
MKAR	Makanchi Array	47.77	307	P	P	23 28 59.7	-0.6
MAKZ	Makanchi	47.98	307	P	P	23 29 02.3	+0.3
MAKZ				IAmb	IAmb	23 29 03.2	
	comp=Z,6.3nm,1.4s						
NRIK	Noril'sk	48.81	337	P	P	23 29 07.9	-0.1
	comp=Z,2.8nm,0.9s,baz=109,slow=9.1,SNR=3.8						
KURK	Kurchatov	50.02	312	P	P	23 29 17.7	+0.3
WB0	Warramunga Arr	51.12	189	P	P	23 29 25.6	-0.4
WB0				IAmb	IAmb	23 29 38.2	
	comp=Z,2.6nm,0.7s						
WB2	Warramunga Arr	51.30	189	P	P	23 29 26.9	-0.4
WB2				IAmb	IAmb	23 29 44.7	
	comp=Z,9.5nm,1.4s						
WRA	Warramunga Arr	51.30	189	P	P	23 29 26.8	-0.6
	comp=Z,0.7nm,0.3s,baz=6.3,slow=7.6,SNR=30						
WRA	Warramunga Arr	51.30	189	P	P	23 29 26.6	-0.8
FITZ	Fitzroy Crossi	51.38	200	P	P	23 29 28.5	+0.5
FITZ				IAmb	IAmb	23 29 43.5	
	comp=Z,4.8nm,1.2s						
IMAR	Indian Mountai	51.59	28	P	P	23 29 29.9	+0.8
PPLA	Purkeypile	51.86	32	P	P	23 29 31.1	-0.3
PPLA				IAmb	IAmb	23 29 39.0	
	comp=Z,6.4nm,1.4s						
SUA	Susitna One	52.43	34	P	P	23 29 35.7	+0.2
SUA				IAmb	IAmb	23 29 52.9	
	comp=Z,7.5nm,1.4s						
ILAR	Eielson Array	54.33	30	P	P	23 29 49.2	-0.1
	comp=Z,0.3nm,0.9s,baz=247,slow=6.7,SNR=1.9						
AS31	Alice Springs	55.02	189	P	P	23 29 55.2	+0.4
ASAR	Alice Springs	55.02	189	P	P	23 29 53.9	-0.9
	comp=Z,0.5nm,0.4s,baz=357,slow=4.7,SNR=12						
ASAR	Alice Springs	55.02	189	P	P	23 29 54.8	0.0
KK31	Karatay Array	56.56	304	P	P	23 30 06.0	+0.3
KK31				IAmb	IAmb	23 30 07.1	
	comp=Z,4.3nm,0.8s						
KKAR	Karatay Array	56.56	304	P	P	23 30 06.0	+0.3
KKAR				IAmb	IAmb	23 30 07.1	
	comp=Z,4.3nm,0.8s						
KKAR	Karatay Array	56.56	304	P	P	23 30 06.0	+0.3
NIL	Nilore	57.01	292	P	P	23 30 09.3	+0.3
EPYK	Eagle Plains	58.50	28	P	P	23 30 20.2	+1.2
EPYK				IAmb	IAmb	23 30 22.3	
	comp=Z,6.0nm,1.4s						
ARU	Arti	61.10	321	P	P	23 30 37.3	+0.3
ABKAR	Akbulak array	62.12	313	P	P	23 30 44.5	+0.4
ABKAR				IAmb	IAmb	23 30 45.1	
	comp=Z,2.4nm,0.8s						
ABKAR	Akbulak array	62.12	313	P	P	23 30 44.2	+0.2
YKA	Yellowknife Ar	68.74	29	P	P	23 31 26.7	+0.2
	comp=Z,0.2nm,0.5s,baz=300,slow=6.2,SNR=3.8						
YBH	Yreka Blue Hor	73.70	51	LR	LR	23 58 15.4	
	comp=Z,25nm,21.1s,baz=260,slow=31						
FINES	FINESS Array B	74.22	333	P	P	23 32 00.0	+0.4
	comp=Z,1.5nm,0.8s,baz=56,slow=5.7,SNR=5.4						
FINES	FINESS Array B	74.22	333	P	P	23 31 59.7	0.0
KBZ	Khabaz	75.08	312	P	P	23 32 05.7	+0.8
	comp=Z,1.6nm,0.7s,baz=99,slow=3.0,SNR=4.6						
NVAR	Mina Array Bea	78.25	52	P	P	23 32 24.3	+1.0
	comp=Z,0.8nm,0.6s,baz=295,slow=5.7,SNR=3.6						
AKASG	Malin Array Be	79.22	323	P	P	23 32 28.2	+0.1
	comp=Z,0.4nm,0.3s,baz=48,slow=5.2,SNR=2.7						
AKASG	Malin Array Be	79.22	323	P	P	23 32 28.5	+0.4
NOA	NORSAR Array B	79.77	338	P	P	23 32 30.7	-0.2
	comp=Z,0.5nm,0.6s,baz=42,slow=5.4,SNR=2.6						
NOA				LR	LR	00 11 15.0	
	comp=Z,32nm,18.6s,baz=350,slow=38						
PDAR	Pinedale Array	81.54	45	P	P	23 32 42.3	+1.2
	comp=Z,0.2nm,0.5s,baz=276,slow=2.6,SNR=2.2						
BRTR	Keskin Array B	83.07	312	P	P	23 32 49.8	+0.8
	comp=Z,1.6nm,0.8s,baz=149,slow=2.6,SNR=7.6						
RAYN	Ar Rayn	83.29	293	P	P	23 32 51.4	+1.1
TXAR	Lajitas Array	93.39	53	P	P	23 33 40.3	+1.5
	comp=Z,0.5nm,0.8s,baz=31,slow=3.7,SNR=3.4						

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*IDC **25** 23:23:17.0±5.2, 52°.82S×22°.82E, h0^{km}, mb4.0/4, mb1 4.1/4, mb1mx3.8/23, mbtmp4.0/4, MS3.6/10, Ms1 3.6/10, ms1mx3.4/28, Error ellipse: s-maj=429.5km s-min=36.1km az=53.0*

*NEIC **25** 23:23:18.0±1.1, 53°.0S±0°.1×22°.3E±0°.2, h10^{km}±1^{km}, mb4.5/8, Error ellipse: s-maj=24.0km s-min=19.4km az=34.0*

ISC 25 23:23:17.9±0.7**, 53°.0S**±0°.1×**22°.2E**±0°.2**, h10^{km}, n38, σ0^{s}60**/27**, mb4.2**/8**, MS3.7**/10**, South of Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SUR	Sutherland	20.59	357	P	Pn	23 27 57.8	-1.6
SUR				IAmb	IAmb	23 28 14.8	
	comp=Z,24nm,1.4s						
SNAA	Sanae	21.75	201	P	P	23 28 10.8	+1.6
SNAA	Sanae	21.75	201	P	P	23 28 09.1	-0.1
SNAA				IAmb	IAmb	23 28 18.3	
	comp=Z,27nm,1.1s						
VNA2	Neumayer--Watz	22.34	205	P	P	23 28 15.0	-0.4
	baz=37,slow=9.1						
VNA1	Neumayer--Stat	22.40	206	P	P	23 28 16.0	-0.1
VNA3	Neumayer Olymp	23.12	206	P	P	23 28 22.9	-0.8
MAW	Mawson	24.31	143	LR	LR	23 36 52.9	
	comp=Z,230nm,18.1s,baz=18,slow=34						
BOSA	Boshof	24.43	7	LR	LR	23 36 32.3	
	comp=Z,175nm,19.6s,baz=182,slow=33						
LBTB	Lobatse	28.03	7	P	P	23 29 08.8	-0.4
LBTB				IAmb	IAmb	23 29 12.3	
	comp=Z,5.7nm,1.1s						
BELA	Belgrano 2	31.98	200	P	P	23 29 43.5	0.0
QSPA	South Pole Qui	37.26	180	P	P	23 30 30.0	+0.4
QSPA				IAmb	IAmb	23 30 43.9	
	comp=Z,31nm,1.4s						
PMSA	Palmer Station	42.57	219	LR	LR	23 47 07.4	
	comp=Z,94nm,18.9s,baz=155,slow=33						
VNDA	Vanda	47.40	169	LR	LR	23 51 51.9	
	comp=Z,84nm,18.5s,baz=222,slow=36						
KMBO	Kilima Mbogo	53.16	19	LR	LR	23 53 50.9	
	comp=Z,67nm,19.4s,baz=90,slow=35						
PLCA	Paso Flores	60.29	241	LR	LR	23 57 05.0	
	comp=Z,47nm,18.4s,baz=170,slow=33						
DBIC	Dimbokro	63.69	330	LR	LR	23 55 25.6	
	comp=Z,45nm,21.9s,baz=147,slow=30						
MT05	Renca	65.78	246	P	P	23 34 02.2	-0.8
TORD	Torodi Ar. Bea	68.16	338	P	P	23 34 18.8	+0.7
	comp=Z,0.9nm,0.9s,baz=183,slow=7.1,SNR=3.4						
TORD				LR	LR	00 00 25.4	
	comp=Z,20nm,18.8s,baz=340,slow=33						
STKA	Stephens Creek	80.45	131	P	P	23 35 30.1	+0.3
	comp=Z,1.7nm,0.7s,baz=214,slow=3.5,SNR=5.1						
LEM	Lembang	81.84	90	LR	LR	00 01 57.6	
	comp=Z,36nm,20.8s,baz=122,slow=28						
ASAR	Alice Springs	83.53	121	P	P	23 35 45.1	-1.0
	comp=Z,1.3nm,1.0s,baz=199,slow=5.3,SNR=7.7						
ASAR	Alice Springs	83.53	121	P	P	23 35 45.9	-0.2
AS31	Alice Springs	83.53	121	P	P	23 35 46.5	+0.3

PSI	Prapat	84.26	78	LR	LR	00 07 26.4	
	comp=Z,37nm,18.2s,baz=238,slow=32						
WRA	Warramunga Arr	86.82	119	P	P	23 36 01.9	-0.7
	comp=Z,0.9nm,0.9s,baz=200,slow=6.9,SNR=6.3						
WB0	Warramunga Arr	86.99	119	P	P	23 36 02.6	-0.8
WB0				IAmb	IAmb	23 36 06.2	
	comp=Z,3.4nm,1.1s						
SONM	Songino Array	123.18	53	PKP	PKiKP	23 42 14.0	-0.2
	comp=Z,0.6nm,1.1s,baz=209,slow=1.1,SNR=3.3						
TIXI	Tiksi	144.12	31	PKPdf	PKPbc	23 42 50.3	0.0
FCC	Fort Churchill	145.00	305		PKPbc	23 42 53.4	0.0
KNB	Kanab	145.06	261	PKPbc	PKPbc	23 42 54.8	+0.2
SZCU	Shurtz Canyon	145.61	262	PKPdf	PKPdf	23 42 56.5	+0.4
MSU	Marysvale	145.66	264	PKPdf	PKPdf	23 42 56.6	+0.4
CCUT	Cedar City	145.74	261		PKPdf	23 42 56.6	+0.2
SHPR	Sheep Range	146.11	258		PKPdf	23 42 57.0	0.0
GSC	Goldstone, Bar	146.25	255		PKPdf	23 42 57.8	+0.7
MPU	Maple Canyon	146.27	266	PKPdf	PKPbc	23 42 58.5	+0.2
JLU	Jordanelle	146.52	267	PKPdf	PKPdf	23 42 58.2	+0.6
TPNV	Topopah Spring	147.06	258		PKPbc	23 43 00.5	-0.2

JMA 25 23:24:40.5±0.1**, 35°.52N×139°.90E, h22**^{km}±2^{km}**, M2.5, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCN	Nagara	0.27	112	P	Pb	23 24 47.0	+0.2
JSMT	Sammumatsuo	0.46	75	S	Sn	23 24 58.0	-1.4
JHU	Hanno	0.60	304	S	Sb	23 25 00.8	+0.3
BSO4	Boso 4	0.64	146	P	Pb	23 24 53.4	+0.5
JYT	Yasato	0.74	19	P	Pb	23 24 54.5	-0.3
JYT				S	Sb	23 25 04.6	+0.1
MAT	Matsushiro	1.71	307	P	Pb	23 25 10.9	-0.3
MAT				*e*S	Sb	23 25 33.8	+1.5

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*IDC **25** 23:42:31.3±3.1, 39°.88N×144°.00E, h0^{km}, mb3.4/4, mb1 3.5/5, mb1mx3.3/38, mbtmp3.4/5, ML2.5/1, Error ellipse: s-maj=73.8km s-min=33.0km az=72.0*
*JMA **25** 23:42:35.8±0.2, 39°.88N×143°.56E, h31^{km}, M3.1*
ISC 25 23:42:37.6±1.2**, 39°.86N**±0°.07×**143°.60E**±0°.08**, h35**^{km}**, n23,** σ**1^{s}.10**/23**, mb3.3**/4**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTH	Tanohata	1.33	274	P	Pn	23 42 58.4	-1.3
MIYJ	Miyakonagasawa	1.40	259	P	Pn	23 42 59.7	-0.9
JKEN	Kujiedanarisaw	1.49	284	P	Pn	23 43 00.5	-1.3
JKEN				*e*S	Sn	23 43 18.3	-1.7
JANG	Nango	1.68	288	P	Pn	23 43 03.3	-1.1
JOM	Ohasama	1.82	258	P	Pn	23 43 06.3	-0.1
JOM				*e*S	Sn	23 43 27.8	-0.4
JMK	Ichinoseki	2.05	245	P	Pn	23 43 09.0	-0.5
JMK				*e*S	Sn	23 43 33.0	-0.9
JTM	Tenmabayashi	2.14	296	P	Pn	23 43 10.6	-0.2
JNBK	Urakawa-nobuka	2.50	345	P	Pn	23 43 16.4	+0.7
JNBK				*e*S	Sn	23 43 46.5	+1.5
JYK	Kaneyama	2.68	250	P	Pn	23 43 18.6	+0.4
JCH	Churui	2.76	356	P	Pn	23 43 18.6	-0.7
JCH				*e*S	Sn	23 43 49.9	-1.4
JKB	Kayabe	2.81	317	P	Pn	23 43 21.2	+1.3
JAK	Akkeshi	3.24	14	P	Pn	23 43 24.8	-1.1
JAK				*e*S	Sn	23 44 01.8	-1.4
MJAR	Matsushiro Arr	5.38	234	Pn	Pn	23 43 56.4	+1.0
	0.2nm,0.3s,baz=44,slow=12,SNR=5.2						
SONM	Songino Array	27.77	299	P	P	23 48 24.4	+1.3
	0.3nm,0.6s,baz=86,slow=9.6,SNR=3.8						
H11N2	WAKE ISLAND Hy	28.33	128	T	T	00 18 06.4	
	baz=320,slow=76						
H11N1	WAKE ISLAND Hy	28.34	128	T	T	00 18 05.9	
	baz=320,slow=76						
H11N3	WAKE ISLAND Hy	28.35	128	T	T	00 18 02.9	
	baz=320,slow=76						
H11S1	WAKE ISLAND Hy	29.16	130	T	T	00 19 12.1	
	baz=322						
H11S3	WAKE ISLAND Hy	29.16	130	T	T	00 19 12.0	
	baz=322						
H11S2	WAKE ISLAND Hy	29.18	130	T	T	00 19 16.6	
	baz=322						
ZALV	Zalesovo Beam	41.34	310	P	P	23 50 20.9	+1.1
	0.4nm,0.5s,baz=82,slow=10,SNR=2.0						
MKAR	Makanchi Array	44.13	300	P	P	23 50 42.6	+0.1
	0.3nm,0.8s,baz=85,slow=9.0,SNR=3.9						
WRA	Warramunga Arr	60.12	190	P	P	23 52 40.9	-0.5
	0.2nm,0.5s,baz=7.8,slow=6.7,SNR=2.1						

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*JMA **25** 23:48:39.7±0.2, 35°.65N×140°.04E, h69^{km}±2^{km}, M3.1*
JMA Felt I J1.
*IDC **25** 23:48:42.6±2.0, 35°.37N×139°.53E, h84^{km}±12^{km}, mb3.5/3, mb1 3.6/4, mb1mx3.1/42, mbtmp3.8/4, Error ellipse: s-maj=50.1km s-min=7.2km az=68.0*
ISC 25 23:48:40.0±0.9**, 35°.58N**±0°.05×**140°.03E**±0°.05**, h73**^{km}±7^{km}**, n18,** σ**0^{s}.71**/26**, mb3.8**/3**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCN	Nagara	0.21	140	P	Pn	23 48 51.1	0.0
JCN				S	Sn	23 49 00.0	+0.9
JSMT	Sammumatsuo	0.34	80	P	Pn	23 48 51.5	-0.3
JOD2	Odawara 2	0.83	248	P	Pn	23 48 56.4	-0.3
JOD2				*e*S	Sn	23 49 08.6	-0.5
BSO3	Boso 3	0.87	153	P	Pn	23 48 56.4	-0.5
BSO3				S	Sn	23 49 10.1	+0.7
JAG	Ashikaga	0.96	331	P	Pn	23 48 57.5	-0.8
JIM2	Oshima 3	0.99	210	P	Pn	23 48 58.0	-0.6
JRY	Ryogami san	1.02	296	P	Pn	23 48 59.0	+0.1
JFNN	Fujinakano	1.17	251	P	Pn	23 49 00.9	+0.1
BSO1	Boso 1	1.21	140	P	Pn	23 49 00.2	-0.6
BSO1				*e*S	Sn	23 49 16.3	-0.1
JYN	Shimob	1.22	266	P	Pn	23 49 01.5	0.0
JIZS	Izushimoda	1.28	228	P	Pn	23 49 02.1	-0.1
JIZS				S	Sn	23 49 18.6	-0.3
JKT	Katashina	1.34	332	P	Pn	23 49 02.4	-0.7
MJAR	Matsushiro Arr	1.76	303	P	Pn	23 49 08.8	+0.2
	3.7nm,0.3s,baz=147,slow=14,SNR=63						
MJAR				S	Sn	23 49 28.5	-1.7
	2.0nm,0.3s,baz=153,slow=11,SNR=3.8						
MAT	Matsushiro	1.76	303	P	Pn	23 49 09.0	+0.4
MAT				S	Sn	23 49 31.3	+1.0
JHJ	Hachijo jima 2	2.47	185	P	Pn	23 49 18.6	+0.6
	24nm,0.3s,baz=5.2,slow=21,SNR=7.7						
JHJ				S	Sn	23 49 45.8	-1.3
	44nm,0.3s,baz=109,slow=23,SNR=7.1						
MKAR	Makanchi Array	43.96	303	P	P	23 56 40.5	+0.8
	0.7nm,0.8s,baz=87,slow=9.4,SNR=8.0						
WRA	Warramunga Arr	55.48	187	P	P	23 58 07.0	-0.4
	0.4nm,0.4s,baz=1.1,slow=7.6,SNR=16						
FINES	FINESS Array B	69.57	332	P	P	23 59 40.9	+0.1
	2.4nm,0.9s,baz=46,slow=8.0,SNR=3.8						

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*IDC **25** 23:52:41.5±0.6, 31°.03N×141°.89E, h0^{km}, mb4.1/20, mb1 4.2/24, mb1mx4.1/48, mbtmp4.1/24, ML3.7/4, MS3.2/6, Ms1 3.3/6, ms1mx2.8/41, Error ellipse: s-maj=18.1km s-min=14.0km az=85.0*
*JMA **25** 23:52:43.5±0.3, 31°.31N×142°.71E, h42^{km}, M4.1*
*NIED **25** 23:52:43.5, 31°.31N×142°.71E, h42^{km}, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.79; $M_{\theta\theta}$0.05; $M_{\phi\phi}$-0.84; $M_{r\theta}$-0.98; $M_{\theta\phi}$0.22; $M_{\phi r}$2.60; Fault plane solution: $M_0$2.90000×10^{15} NP1: ϕ_s340.00000°, δ82.00000°, λ88.00000°. NP2: ϕ_s176.00000°, δ9.00000°, λ106.00000°.*
*NEIC **25** 23:52:45.5±1.1, 31°.04N±0°.07×141°.8E±0°.1, h22^{km}±5^{km}, mb4.4/41 Error ellipse: s-maj=16.3km s-min=9.7km az=80.0*
ISC 25 23:52:45.3±0.5**, 31°.10N**±0°.05×**142°.00E**±0°.08**, h24**^{km}**, n97,** σ**1^{s}.40**/99**, mb4.4**/36**, MS3.4**/3**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSO3	Boso 3	3.90	342	P	Pn	23 53 43.0	-0.5
CBIJ	Chichi jima	3.99	178	P	Pn	23 53 47.4	+2.4
JCJ	Chichijima	4.00	178	Pn	Pn	23 53 44.7	-0.4
	15nm,0.3s,baz=42,slow=3.1,SNR=7.6						
JCJ				Sn	Sn	23 54 27.0	-4.1
	11nm,0.3s,baz=338,slow=22,SNR=2.3						
JOD2	Odawara 2	4.82	330	P	Pn	23 53 58.1	+1.8
JHU	Hanno	5.25	335	*e*S	Sn	23 55 02.3	+0.1
JNY	Yasuok	5.48	322	P	Pn	23 54 09.0	+3.5
JRY	Ryogami san	5.54	333	P	Pn	23 54 07.6	+1.3
JRY				*e*S	Sn	23 55 11.3	+2.0
JHO	Hitachi	5.62	348	P	Pn	23 54 06.0	-1.4
JHO				S	Sn	23 55 08.1	-3.1
JAG	Ashikaga	5.72	339	P	Pn	23 54 08.7	0.0
JGF	Kuroka	5.94	320	Pn	Pn	23 54 12.7	+1.0
MJAR	Matsushiro Arr	6.28	331	Pn	Pn	23 54 16.9	+0.4
	0.7nm,0.3s,baz=151,slow=11,SNR=30						
MJAR	Matsushiro Arr	6.28	331		Pn	23 54 16.3	-0.1
MAJO	Matsushiro	6.28	331	Pn	Pn	23 54 17.4	+1.0
MAT	Matsushiro	6.28	331	P	Pn	23 54 17.4	+1.0
MAT				*e*S	Sn	23 55 28.2	+0.8
JMM	Marumori	6.82	352		Pn	23 54 22.6	-1.3
JSD	Sado	7.58	337	Pn	Pn	23 54 32.9	-1.3
JNU	Nakatsue	9.65	285	LR	LR	23 58 42.6	
	comp=Z,195nm,18.9s,baz=100,slow=38						
ASAJ	Asahikawa	13.00	2	Sn	Sn	23 58 05.5	-6.8
	0.4nm,0.3s,baz=194,slow=8.3,SNR=3.0						
KSRS	Korea Array	13.25	302	Pn	Pn	23 55 50.4	-1.5
	0.2nm,0.3s,baz=306,slow=33,SNR=1.4						
KSRS				LR	LR	00 01 23.9	
	comp=Z,75nm,18.7s,baz=128,slow=40						
NACB	Ninganchiao	19.34	254	P	P	23 57 07.7	-1.3
NACB				IAmb	IAmb	23 57 11.5	
	comp=Z,13nm,0.7s						
KLR	Kul'dur	19.70	340	P	P	23 57 11.7	-1.1
	comp=Z,0.3nm,0.3s,baz=177,slow=6.7,SNR=13						
KLR				LR	LR	00 04 38.3	
	comp=Z,16nm,18.5s,baz=138,slow=36						
YULB	Yu-li	19.93	252	P	P	23 57 14.3	-1.2
YULB				IAmb	IAmb	23 57 15.5	
	comp=Z,23nm,0.9s						
SSLB	Suanglung	20.03	254	P	P	23 57 15.7	-1.0
SSLB				IAmb	IAmb	23 57 17.5	
	comp=Z,23nm,0.9s						
BJT	Baijiatuau	22.76	300	P	P	23 57 43.5	-2.4
BJT				IAmb	IAmb	23 57 44.8	
	comp=Z,13nm,1.2s						
XAN	Xi'an	27.96	285	P	P	23 58 32.2	-1.9
ULN	Ulaanbaatar	31.41	312	P	P	23 59 04.5	-0.2
ULN				IAmb	IAmb	23 59 06.0	
	comp=Z,6.7nm,1.1s						
SONM	Songino Array	31.82	312	P	P	23 59 08.2	0.0
	comp=Z,2.8nm,0.9s,baz=99,slow=7.3,SNR=21						
SONM	Songino Array	31.82	312	P	P	23 59 08.4	+0.2
TLY	Talaya	34.81	317	P	P	23 59 35.3	+1.2
TLY				IAmb	IAmb	23 59 44.4	
	comp=Z,4.4nm,0.5s						
CMAR	Chiang Mai Arr	40.83	262	LR	LR	00 18 42.7	
	comp=Z,37nm,18.2s,baz=162,slow=38						
WMQ	Urumqi	44.20	303	P	P	00 00 52.6	+0.1
WMQ				IAmb	IAmb	00 00 53.8	
	comp=Z,7.6nm,1.2s						
COEN	Coen	44.81	178	P	P	00 00 58.5	+1.1
ZAA0	Zalesovo Array	46.42	317	P	P	00 01 09.7	-0.1
ZAA0				IAmb	IAmb	00 01 10.5	
	comp=Z,4.7nm,1.1s						
ZALV	Zalesovo Beam	46.42	317	P	P	00 01 09.4	-0.4
	comp=Z,3.8nm,0.8s,baz=94,slow=6.7,SNR=16						
ZALV				PcP	PcP	00 02 44.4	+0.1
	comp=Z,2.0nm,0.7s,baz=97,slow=3.5,SNR=7.9						
ZALV	Zalesovo Beam	46.42	317	P	P	00 01 09.6	-0.2
MK31	Makanchi Array	47.88	307	P	P	00 01 20.6	-0.7
MKAR	Makanchi Array	47.88	307	P	P	00 01 21.1	-0.2
	comp=Z,2.4nm,0.8s,baz=90,slow=9.2,SNR=23						
MKAR				LR	LR	00 21 53.3	
	comp=Z,41nm,18.5s,baz=352,slow=37						
MKAR	Makanchi Array	47.88	307	P	P	00 01 20.8	-0.6
MAKZ	Makanchi	48.09	307	P	P	00 01 22.5	-0.5
MAKZ				IAmb	IAmb	00 01 23.8	
	comp=Z,5.3nm,1.3s						
NRIK	Noril'sk	48.89	337	P	P	00 01 28.9	+0.2
	comp=Z,0.9nm,0.2s,baz=107,slow=9.8,SNR=6.7						
NRIK	Noril'sk	48.89	337	P	P	00 01 28.8	0.0
NRIK				IAmb	IAmb	00 01 30.3	
	comp=Z,3.4nm,0.8s						
SVW2	Sparrevohn	50.04	34	P	P	00 01 39.3	+1.5
SVW2				IAmb	IAmb	00 01 52.4	
	comp=Z,4.5nm,1.2s						
KURK	Kurchatov	50.13	312	P	P	00 01 38.2	-0.3
WB0	Warramunga Arr	51.10	189	P	P	00 01 46.0	-0.1
WB0				IAmb	IAmb	00 02 03.7	
	comp=Z,6.0nm,1.2s						
WR0	Warramunga Arr	51.27	189	P	P	00 01 46.9	-0.5
WR0				IAmb	IAmb	00 01 53.5	
	comp=Z,6.4nm,1.2s						
WRA	Warramunga Arr	51.28	189	P	P	00 01 45.6	-1.8
	comp=Z,1.8nm,0.6s,baz=6.0,slow=7.6,SNR=28						
WRA	Warramunga Arr	51.28	189	P	P	00 01 47.0	-0.5
KDAK	Kodiak Island	51.30	39	P	P	00 01 47.8	+0.6
	comp=Z,9.3nm,0.8s,baz=309,slow=14,SNR=1.9						
KDAK	Kodiak Island	51.30	39	P	P	00 01 47.9	+0.6
FITZ	Fitzroy Crossi	51.38	200	P	P	00 01 47.6	-0.6
	comp=Z,1.1nm,0.7s,baz=356,slow=12,SNR=1.9						
FITZ	Fitzroy Crossi	51.38	200	P	P	00 01 47.2	-1.0
IMAR	Indian Mountai	51.57	28	P	P	00 01 50.9	+1.7
PPLA	Purkeypile	51.84	32	P	P	00 01 53.4	+2.1
PPLA				IAmb	IAmb	00 02 03.5	
	comp=Z,11nm,1.5s						
SUA	Susitna One	52.40	34	P	P	00 01 56.4	+0.9
SUA				IAmb	IAmb	00 01 58.9	
	comp=Z,8.0nm,1.2s						
MDM	Murphy Dome	53.74	30	P	P	00 02 07.1	+1.8
IL31		54.31	30	P	P	00 02 10.7	+1.4
ILAR	Eielson Array	54.31	30	P	P	00 02 09.6	+0.2
	comp=Z,1.1nm,0.7s,baz=264,slow=6.2,SNR=15						
AS31	Alice Springs	55.01	189	P	P	00 02 14.7	-0.1
ASAR	Alice Springs	55.01	189	P	P	00 02 13.8	-1.1
	comp=Z,1.0nm,0.5s,baz=0.8,slow=5.0,SNR=22						
ASAR	Alice Springs	55.01	189	P	P	00 02 14.5	-0.3
BRVK	Borovoye	55.09	316	P	P	00 02 15.7	+0.5
BMAR	Burnt Mountain	55.34	27	P	P	00 02 19.0	+2.2
MCARA	McCarthy VSAT	56.11	34	P	P	00 02 24.3	+1.9
BCAR	Beaver Creek A	56.59	32	P	P	00 02 27.6	+1.8
KK31	Karatay Array	56.67	304	P	P	00 02 26.8	0.0
KK31				IAmb	IAmb	00 02 27.6	
	comp=Z,6.3nm,0.9s						
KKAR	Karatay Array	56.67	304	P	P	00 02 26.8	0.0
EGAK	Eagle	56.76	30	P	P	00 02 28.2	+1.2
NIL	Nilore	57.12	292	P	P	00 02 29.2	-0.9
HYT	Haines Junctio	58.84	34	P	P	00 02 44.2	+2.5
HYT				IAmb	IAmb	00 02 51.6	
	comp=Z,6.8nm,1.3s						
INK	Inuvik	59.48	25	P	P	00 02 46.6	+0.7
	comp=Z,1.4nm,0.6s,baz=294,slow=3.8,SNR=5.9						
INK	Inuvik	59.48	25	P	P	00 02 46.6	+0.7
KBL	Kabul	60.16	295	P	P	00 02 50.2	-1.2
ARU	Arti	61.20	321	P	P	00 02 57.5	-0.3
ABKAR	Akbulak array	62.23	313	P	P	00 03 04.8	-0.1
ABKAR				IAmb	IAmb	00 03 05.7	
	comp=Z,3.5nm,0.9s						
ABKAR	Akbulak array	62.23	313	P	P	00 03 04.8	-0.1
FORT	Forrest	62.95	193	P	P	00 03 09.8	0.0
AFI	Afiamalu	63.03	128	LR	LR	00 28 21.9	
	comp=Z,35nm,18.4s,baz=170,slow=34						
GEYT	Alibeck	67.24	301	P	P	00 03 38.1	+0.2
RES	Resolute Bay	68.22	14	P	P	00 03 43.6	+0.3
	comp=Z,1.1nm,0.8s,baz=331,slow=4.2,SNR=6.4						
YKA	Yellowknife Ar	68.72	29	P	P	00 03 47.3	+0.6
	comp=Z,0.7nm,0.7s,baz=295,slow=5.6,SNR=11						
FINES	FINESS Array B	74.30	333	P	P	00 04 20.2	-0.2
	comp=Z,0.9nm,0.6s,baz=66,slow=5.1,SNR=9.3						
KBZ	Khabaz	75.19	312	P	P	00 04 25.8	0.0
	comp=Z,3.4nm,0.8s,baz=63,slow=3.5,SNR=8.7						
NVAR	Mina Array Bea	78.19	52	P	P	00 04 44.0	+0.8
	comp=Z,0.7nm,0.6s,baz=295,slow=4.8,SNR=7.5						
NVAR	Mina Array Bea	78.19	52	P	P	00 04 44.3	+1.1
AKASG	Malin Array Be	79.31	323	P	P	00 04 47.8	-0.9
	comp=Z,2.3nm,0.7s,baz=47,slow=5.9,SNR=7.5						
NC204	NORSAR Array S	79.81	338	P	P	00 04 51.8	+0.4
NB2	NORSAR Subarra	79.84	338	P	P	00 04 51.6	0.0
	comp=Z,0.8nm,0.6s,baz=40,slow=5.6						
NOA	NORSAR Array B	79.84	338	P	P	00 04 51.5	0.0
	comp=Z,1.1nm,0.7s,baz=40,slow=5.4,SNR=6.6						
PDAR	Pinedale Array	81.49	45	P	P	00 05 01.9	+0.9
	comp=Z,0.6nm,0.7s,baz=318,slow=2.0,SNR=4.1						
BRTR	Keskin Array B	83.18	313	P	P	00 05 10.4	+0.6
	comp=Z,2.2nm,0.8s,baz=132,slow=2.1,SNR=10.0						
BUR08	Bucovina Ar. S	83.27	323	P	P	00 05 10.6	+0.5
BUR08				IAmb	IAmb	00 05 11.5	
	comp=Z,2.1nm,0.9s						
BURAR	Bucovina Array	83.28	323	P	P	00 05 10.6	+0.5
RAYN	Ar Rayn	83.40	293	P	P	00 05 11.8	+0.7
MLR	Muntele Rosu	84.24	321	P	P	00 05 16.0	+0.9
MLR				IAmb	IAmb	00 05 20.5	
	comp=Z,2.5nm,1.1s						
TXAR	Lajitas Array	93.33	53	P	P	00 06 00.0	+1.3
	comp=Z,0.8nm,0.7s,baz=314,slow=2.8,SNR=9.5						
TXAR	Lajitas Array	93.33	53	P	P	00 06 00.7	+1.9
LPAZ	La Paz	148.84	69	PKPbc	PKPbc	00 12 33.0	+0.7
	comp=Z,1.1nm,0.6s,baz=20,slow=3.5,SNR=5.1						

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*IDC **26** 00:01:25.1±1.1, 11°.55S×117°.67E, h0^{km}, mb3.8/6, mb1 3.9/11, mb1mx3.8/30, mbtmp3.9/11, ML3.8/5, MS2.8/2, Ms1 2.8/2, ms1mx2.4/35, Error ellipse: s-maj=34.9km s-min=18.2km az=60.0*
*NEIC **26** 00:01:25.5±1.4, 11°.65S±0°.05×117°.65E±0°.08, h10^{km}±1^{km}, mb4.0/10, Error ellipse: s-maj=13.5km s-min=8.7km az=265.0*
ISC 26 00:01:28.5±0.6**, 11°.69S**±0°.06×**117°.69E**±0°.07**, h34**^{km}**, n33,** σ**2^{s}.24**/36**, mb4.1**/9**, South of Sumbawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAGI	Jajag, Banyuwa	4.73	312	Pn	Pn	00 02 36.1	-1.4
BATI	Baumata	6.04	76	Pn	Pn	00 02 56.5	+0.9
	4.3nm,0.3s,baz=273,slow=19,SNR=2.3						
BATI				Sn	Sn	00 04 03.4	-0.2
	7.6nm,0.3s,baz=30,slow=13,SNR=2.3						
SOEI	Soe	6.74	74	Pn	Pn	00 03 06.1	+0.9
KAPI	Kappang	6.94	17	Pn	Pn	00 03 08.3	+0.4
	2.2nm,0.3s,baz=194,slow=3.6,SNR=6.5						
KAPI				Sn	Sn	00 04 20.3	-5.3
	4.7nm,0.3s,baz=109,slow=23,SNR=9.0						
KAPI				LR	LR	00 05 34.0	
	comp=Z,36nm,18.3s,baz=178,slow=36						
KAPI	Kappang	6.94	17		Pn	00 03 07.5	-0.3
UGM	Wanagama	8.00	297	Pn	Pn	00 03 21.6	-0.9
FITZ	Fitzroy Crossi	9.98	131	Pn	Pn	00 03 49.7	+0.2
	0.7nm,0.3s,baz=314,slow=11,SNR=45						
FITZ				Sn	Sn	00 05 35.4	-5.0
	1.6nm,0.3s,baz=187,slow=20,SNR=9.3						
FITZ	Fitzroy Crossi	9.98	131		Pn	00 03 49.9	+0.3
PSA00	Pilbara Seismi	10.04	168	Pn	Pn	00 03 49.1	-1.3
GIRL	Giralia	11.38	196	Pn	Pn	00 04 08.3	-0.4
MORW	Morawa	17.36	185	Pn	Pn	00 05 28.7	+0.4
WB0	Warramunga Arr	17.96	119	Pn	Pn	00 05 34.4	-1.3
WB0				IAmb	IAmb	00 05 50.6	
	comp=Z,6.2nm,1.2s						
WRA	Warramunga Arr	17.98	119	P	Pn	00 05 35.9	-0.1
	comp=Z,0.3nm,0.3s,baz=287,slow=14,SNR=13						
WRA				S	Sn	00 08 44.4	-11
	comp=Z,0.3nm,0.3s,baz=295,slow=24,SNR=7.3						
WRA	Warramunga Arr	17.98	119	P	Pn	00 05 35.9	-0.1
AS31	Alice Springs	19.48	130	P	Pn	00 05 54.9	+0.8
ASAR	Alice Springs	19.48	130	P	Pn	00 05 55.6	+1.4
	comp=Z,0.3nm,0.3s,baz=308,slow=11,SNR=25						
ASAR				S	S	00 09 21.6	-10
	comp=Z,0.2nm,0.3s,baz=309,slow=24,SNR=7.7						
NWAO	Narrogin (SRO)	21.14	181	P	P	00 06 15.0	+4.4
	comp=Z,6.9nm,0.8s,baz=11,slow=9.2,SNR=2.3						
NWAO				S	S	00 09 56.3	-7.7
	comp=Z,5.2nm,0.4s,baz=162,slow=5.9,SNR=6.5						
NWAO	Narrogin (SRO)	21.14	181	P	P	00 06 13.4	+2.8
FORT	Forrest	21.29	155	P	P	00 06 14.8	+2.6
PSI	Prapat	23.57	307	LR	LR	00 16 36.3	
	comp=Z,43nm,18.3s,baz=96,slow=39						
BBOO	Buckleboo	26.95	144	P	P	00 07 08.4	+1.5
BBOO				IAmb	IAmb	00 07 09.7	
	comp=Z,6.0nm,1.2s						
KSRS	Korea Array	49.82	11	P	P	00 10 19.4	+1.3
	comp=Z,0.4nm,0.3s,baz=206,slow=25,SNR=1.8						
USRK	Ussuriysk Ar.	57.12	12	P	P	00 11 12.7	+1.1
	comp=Z,0.6nm,0.3s,baz=189,slow=7.3,SNR=2.3						
USRK	Ussuriysk Ar.	57.12	12	P	P	00 11 11.9	+0.3
SONM	Songino Array	60.11	351	P	P	00 11 32.7	+0.2
	comp=Z,0.3nm,0.4s,baz=172,slow=7.9,SNR=5.8						
SONM	Songino Array	60.11	351	P	P	00 11 32.4	-0.1
KBL	Kabul	65.13	317	P	P	00 12 06.7	+0.2
KBL				IAmb	IAmb	00 12 07.5	
	comp=Z,1.2nm,0.9s						
MK31	Makanchi Array	66.28	334	P	P	00 12 13.2	-0.1
MK31				IAmb	IAmb	00 12 24.7	
	comp=Z,2.3nm,1.4s						
MKAR	Makanchi Array	66.28	334	P	P	00 12 14.4	+1.0
	comp=Z,0.3nm,0.5s,baz=145,slow=6.7,SNR=10						
MKAR	Makanchi Array	66.28	334	P	P	00 12 13.5	+0.1
ZALV	Zalesovo Beam	71.10	340	P	P	00 12 43.5	+0.3
	comp=Z,1.1nm,0.5s,baz=143,slow=5.3,SNR=7.6						
ZALV	Zalesovo Beam	71.10	340	P	P	00 12 43.1	-0.1
ABKAR	Akbulak array	79.03	326	P	P	00 13 29.8	+0.8

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*NEIC **26** 00:10:47.6±1.3, 8°.25N±0°.06×72°.13W±0°.06, h10^{km}±1^{km}, Error ellipse: s-maj=11.6km s-min=8.5km az=151.0*
*FUNV **26** 00:10:49.5, 8°.24N×72°.09W, h2^{km}, MW4.1*
*RSNC **26** 00:10:49.5±2.4, 8°.39N×72°.15W, h0^{km}±10^{km}, ML4.1, Mw4.2, Fault plane solution: NP1: ϕ_s127.00000°, δ68.00000°, λ-30.00000°.*
*CAR **26** 00:10:49.5±1.2, 8°.23N±0°.06×72°.13W±0°.06, h5^{km}±4^{km}, Mwr4.1, mb4.7/76(NEIC), Error ellipse: s-maj=9.6km s-min=7.2km az=153.0*
*IDC **26** 00:10:49.0±2.6, 8°.30N×72°.09W, h21^{km}±16^{km}, mb4.2/20, mb1 4.4/24, mb1mx4.3/30, mbtmp4.3/24, ML4.1/3, MS3.2/12, Ms1 3.2/12, ms1mx3.0/32, Error ellipse: s-maj=14.3km s-min=11.6km az=72.0*
*VAO **26** 00:10:51.7±0.5, 7°.95N×71°.84W, h10^{km}, mb4.5*
ISC 26 00:10:47.3±1.1**, 8°.24N**±0°.02×**72°.15W**±0°.02**, h11**^{km}±7^{km}**, n248,** σ**1^{s}.73**/295**, mb4.6**/61**, MS3.2**/6**, 10C-11D, Fault plane solution: NP1:**ϕ_s137.96318°, δ72.40386°, λ-9.76370°. **NP2:**ϕ_s230.94103°**,** δ80.69730°, λ-162.16153°. **Principal axes:** T Plg5.7080°, Azm3.5091°**;** N Plg69.9518°, Azm257.6125°**;** P Plg19.1515°, Azm95.4984°**; Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAPV	Capacho	0.41	203	*e*P	Pn	00 10 57.5	-1.8
CAPV				*e*S	Sb	00 11 03.8	+0.9
PAMC	Pamplona, Colo	1.05	211	*e*P	Pn	00 11 11.4	+3.1
PAMC				*e*S	Sn	00 11 27.9	+4.7
PAMC				*i*		00 11 30.9	
	comp=Z,9µm,0.4s						
OCAC	Ocana	1.16	270⇓	*e*P	Pn	00 11 10.2	+0.6
OCAC				*e*S	Sn	00 11 26.2	+0.7
OCAC				*i*		00 11 33.0	
	comp=Z,3µm,0.4s						
SOCV	Socops	1.28	88⇓	*i*P	Pn	00 11 11.9	+0.7
SOCV				*e*S	Sn	00 11 30.7	+2.2
SOCV	Socops	1.28	88	*e*P	Pn	00 11 11.8	+0.5
SOCV				*e*S	Sn	00 11 30.0	+1.5
SDV	Santo Domingo	1.63	67	Pg	Pb	00 11 17.8	+0.2
	comp=Z,420nm,0.3s,baz=195,slow=8.9,SNR=1053						
SDV				Lg	Lg	00 11 37.9	
	comp=Z,943nm,0.3s,baz=260,slow=23,SNR=23						
SDV	Santo Domingo	1.63	67	Pn	Pb	00 11 17.7	+0.1
SDV				Sn	Sn	00 11 38.3	+1.0
SDV	Santo Domingo	1.63	67⇓	*e*P	Pb	00 11 17.7	+0.1
SDV				*e*S	Sn	00 11 38.3	+1.0
SDV				*i*		00 11 42.4	
	comp=Z,3µm,0.5s						
SDV	Santo Domingo	1.63	67	*e*P	Pb	00 11 17.6	+0.1
SDV	Santo Domingo	1.63	67	*e*P	Pb	00 11 17.8	+0.2
SDV				*e*S	Sn	00 11 38.7	+1.4
TAMC	Tame, Arauca	1.83	169	*e*P	Pg	00 11 22.0	-0.4
TAMC				*e*S	Sg	00 11 48.3	+2.1
TAMC				*i*		00 11 51.4	
	comp=Z,3µm,0.6s						
MCQV	Machiques	1.84	348	*e*P	Pb	00 11 21.3	+0.3
MCQV				*e*S	Sg	00 11 45.6	-0.9
BRRC	Barranca, Sant	1.91	234	*e*P	Pg	00 11 24.1	0.0
BRRC				*e*S	Sg	00 11 51.0	+2.1
BRRC				*i*		00 11 55.9	
	comp=Z,2µm,0.4s						
BARC	Barichara	1.93	212	*e*P	Pg	00 11 24.6	+0.2
BARC				*i*		00 11 55.6	
	comp=Z,3µm,0.3s						
SMLC	San Martn de	1.98	286	*e*P	Pb	00 11 22.5	-0.9
SMLC				*e*S	Sg	00 11 48.3	-2.7
CVALL	Valledupar, Ce	2.50	334	*e*P	Pn	00 11 28.8	+0.7
CVALL				*e*S	Sb	00 12 01.2	-2.0
CVALL				*i*		00 12 06.0	
	comp=Z,1µm,0.8s						
RUSC	La Rusia	2.51	202	*e*P	Pb	00 11 32.3	-0.4
RUSC				*e*S	Sg	00 12 09.3	+1.2

RUSC				i		00 12 11.7	
	comp=Z,921nm,0.7s						
RUSC	La Rusia	2.51	202	eP	Pb	00 11 31.7	-1.0
RUSC				eS	Sb	00 12 02.1	-1.7
ARGC	Ariguani, Magd	2.62	308	eP	Pn	00 11 31.3	+1.7
ARGC				eS	Sg	00 12 11.3	-0.3
ARGC				i		00 12 30.1	
	comp=Z,442nm,0.5s						
CURV	Curarigua	2.79	51	eP	Pn	00 11 34.5	+2.5
CURV				eS	Sn	00 12 06.7	+0.9
PTBC	PUERTO BERRIO,	2.84	234	⇑eP	Pb	00 11 35.4	-2.8
PTBC				eS	Sb	00 12 13.1	+0.2
PTBC				i		00 12 19.9	
	comp=Z,803nm,0.7s						
SANV	Sanarito	2.87	64	eP	Pn	00 11 35.7	+2.5
SANV				eS	Sn	00 12 07.5	-0.3
ELOV	Elorza	2.92	115	eP	Pn	00 11 35.7	+2.0
ELOV				eS	Sg	00 12 19.4	-1.7
ELOV	Elorza	2.92	115	eP	Pn	00 11 35.7	+2.0
ELOV				eS	Sn	00 12 09.2	+0.4
DABV	Dabajuro	3.06	29	eP	Pn	00 11 36.5	+0.8
DABV				eS	Sg	00 12 26.5	+1.0
DABV	Dabajuro	3.06	29	eP	Pn	00 11 36.7	+1.1
DABV				eS	Sn	00 12 13.3	+1.1
SPBC	San Pablo de B	3.20	217	⇑eP	Pb	00 11 41.6	-2.7
SPBC				eS	Sb	00 12 22.2	-1.2
SPBC				i		00 12 33.3	
	comp=Z,580nm,0.7s						
SIQV	Siquisique	3.33	44	eP	Pn	00 11 41.2	+1.8
SIQV				eS	Sn	00 12 19.4	+0.4
UREC	San Jos de Ur	3.38	262	eP	Pb	00 11 44.0	-3.4
UREC				eS	Sb	00 12 25.6	-2.9
URIC	Uribia, Colomb	3.44	3	eP	Pn	00 11 39.8	-1.2
URIC				eS	Sb	00 12 30.1	-0.2
URIC				i		00 12 57.5	
	comp=Z,375nm,0.5s						
MOTC	Monteria, Cord	3.52	279	eP	Pb	00 11 45.3	-4.3
MOTC				eS	Sg	00 12 42.4	+2.1
MOTC				i		00 12 49.8	
	comp=Z,404nm,0.6s						
SMRC	Santa Marta, M	3.55	325	eP	Pn	00 11 42.2	-0.2
SMRC				eS	Sn	00 12 21.8	-2.7
SMRC				i		00 12 39.7	
	comp=Z,419nm,0.5s						
NORC	Norcasia	3.79	226	eP	Pn	00 11 48.0	+2.2
NORC				eS	Sb	00 12 38.4	-1.9
NORC				i		00 12 48.7	
	comp=Z,577nm,0.4s						
CHIC	Chingaza	3.92	204	⇑eP	Pn	00 11 51.2	+3.4
CHIC				eS	Sg	00 12 51.6	-1.6
CHIC				i		00 13 06.3	
	comp=Z,192nm,0.5s						
MAPV	Macapo	3.98	66	eP	Pn	00 11 50.1	+1.8
MAPV				eS	Sn	00 12 34.0	-1.0
ROSC	El Rosal	4.01	213	Pn	Pb	00 11 55.4	-2.8
	comp=Z,13nm,0.3s,baz=128,slow=4.4,SNR=20						
ROSC				Lg	Lg	00 13 00.4	
	comp=Z,32nm,0.3s,baz=275,slow=22,SNR=2.8						
ROSC	El Rosal	4.01	213	Pn	Pn	00 11 52.6	+3.5
ROSC	El Rosal	4.01	213	eP	Pb	00 11 53.9	-4.3
ROSC				eS	Sb	00 12 46.9	0.0
ROSC				i		00 13 18.7	
	comp=Z,188nm,0.5s						
BAUV	El Baul	4.12	80	eP	Pn	00 11 51.1	+0.8
BAUV				eS	Sn	00 12 36.9	-1.7
MONV	Montecano	4.27	30	eP	Pn	00 11 52.8	+0.5
MONV				eS	Sn	00 12 41.4	-0.9
JACV	Jacura	4.33	49	eP	Pn	00 11 54.6	+1.4
JACV				eS	Sn	00 12 42.5	-1.2
GUY2C	Guyana, Caldas	4.38	227	⇑eP	Pn	00 11 58.1	+3.9
GUY2C				eS	Sb	00 12 52.7	-5.0
GUY2C				i		00 13 18.3	
	comp=Z,298nm,0.7s						
RREF	El Recreo	4.59	224	eP	Pn	00 12 01.3	+4.0
RREF				eS	Sn	00 12 51.8	+0.8
RREF				i		00 13 23.1	
	comp=Z,273nm,0.8s						
TURV	Turiamo	4.79	62	eP	Pn	00 12 00.5	+1.0
TURV				eS	Sn	00 12 52.4	-2.5
TOLC	Tolima	4.81	221	eP	Pn	00 12 04.2	+4.2
TOLC				eS	Sb	00 13 02.3	-7.5
ANIL	Santa Ana	4.93	221	eP	Pn	00 12 06.3	+4.7
PRAC	Prado	5.25	211	eP	Pn	00 12 08.5	+2.6
PRAC				eS	Sn	00 13 12.8	+6.2
PRAC				i		00 13 58.7	
	comp=Z,148nm,0.6s						
PAYV	Puerto Ayacuch	5.27	122	eP	Pn	00 12 07.1	+1.0
PAYV				eS	Sn	00 13 03.9	-2.9
PLMC	San Jos del P	5.28	231	eP	Pn	00 12 10.7	+4.5
PLMC				eS	Sn	00 13 13.5	+6.4
PLMC				i		00 13 23.8	
	comp=Z,81nm,0.7s						
ORTC	Ortega, Tolima	5.29	216	eP	Pn	00 12 10.0	+3.6
ORTC				eS	Sn	00 13 11.5	+4.1
ORTC				i		00 13 50.9	
	comp=Z,123nm,0.6s						
TACV	Tcata	5.40	69	eP	Pn	00 12 08.6	+0.7
TACV				eS	Sn	00 13 07.8	-2.4
SOLC	Bahia Solano	5.59	249	eP	Pn	00 12 13.8	+3.4
GUVC	San Jose del G	5.68	185	eP	Pn	00 12 12.2	+0.5
GUVC				eS	Sn	00 13 16.7	-0.3
PTAC	Punta Ardita,	5.71	259	eP	Pn	00 12 15.5	+3.4
PTAC				eS	Sn	00 13 19.6	+1.8
PTAC				i		00 13 25.9	
	comp=Z,77nm,0.4s						
YOTC	Yotoco, Valle	5.94	225	eP	Pn	00 12 19.5	+4.1
YOTC				eS	Sn	00 13 26.6	+3.1
PIZC	Pizarro, Choco	6.11	238	eS	Sn	00 13 35.2	+7.6
PIZC				i		00 14 02.2	
	comp=Z,55nm,0.6s						
BIRV	Birongo	6.21	69	eP	Pn	00 12 19.6	+0.6
BIRV				eS	Sn	00 13 25.3	-4.9
MACC	Macarena, Meta	6.29	196	eP	Pn	00 12 22.6	+2.6
BETC	Betania	6.42	211	eP	Pn	00 12 24.0	+2.0
BETC				eS	Sn	00 13 38.7	+3.4
GARC	Garzon, Huila	6.87	209	eP	Pn	00 12 30.6	+2.3
GARC				i		00 15 05.9	
	comp=Z,95nm,0.1s						
POPC	Popayan, Colom	7.24	219	eP	Pn	00 12 37.0	+3.6
PCON	Cinco Dias	7.24	216	eP	Pn	00 12 37.6	+4.0
PCON				i		00 14 55.6	
	comp=Z,29nm,0.6s						
FLOC	Florencia	7.48	208	eP	Pn	00 12 39.2	+2.8
FLOC				i		00 15 07.9	
	comp=Z,30nm,0.5s						
BCIP	Isla Barro Col	7.66	277	Pn	Pn	00 12 41.2	+2.4
PCRV	Puerto La Cruz	7.66	75	Pn	Pn	00 12 40.0	+1.0
	comp=Z,4.6nm,0.3s,baz=294,slow=1.6,SNR=13						
PCRV				Sn	Sn	00 14 06.9	+0.9
	comp=Z,30nm,0.3s,baz=300,slow=20,SNR=17						
PCRV				Lg	Lg	00 14 39.2	
	comp=Z,2.6nm,0.3s,baz=316,slow=22,SNR=1.3						
PCRV	Puerto La Cruz	7.66	75	eP	Pn	00 12 40.0	+1.0
PCRV				eS	Sn	00 14 01.2	-4.7
OTAV	Otavalo	10.13	219	Pn	Pn	00 13 15.6	+2.4
OTAV	Otavalo	10.13	219	eP	Pn	00 13 17.2	+4.0
RIOV	Rio Grande	10.23	90	eS	Sn	00 14 59.5	-10
SDDR	Presa de Saban	10.71	4	Pn	Pn	00 13 21.3	+0.5
MTDJ	Mount Denham	11.22	333	Pn	Pn	00 13 29.9	+2.0
SJG	San Juan	11.42	30	Pn	Pn	00 13 30.4	0.0
	comp=Z,3.6nm,0.3s,baz=211,slow=12,SNR=11						
SJG				LR	LR	00 18 49.1	
	comp=Z,124nm,18.4s,baz=262,slow=42						
SJG	San Juan	11.42	30		Pn	00 13 30.3	-0.2
GCPR	Guaynabo City	11.62	30	Pn	Pn	00 13 33.0	-0.2
ESPN	Las Esperanzas	12.59	289	Pn	Pn	00 13 47.4	+1.0
JTS	Las Juntas de	12.80	280	LR	LR	00 20 34.5	
	comp=Z,29nm,19.9s,baz=163,slow=46						
BOAV	Boa Vista	12.95	116	eP	Pn	00 13 50.6	-0.8
BOAV				eS	Sn	00 16 11.1	-4.6
PTGA	Pitinga	15.06	126	Pn	Pn	00 14 17.8	-2.5
	comp=Z,1.6nm,0.3s,baz=300,slow=15,SNR=28						
PTGA				Lg	Lg	00 18 42.4	
	comp=Z,4.8nm,0.3s,baz=189,slow=21,SNR=4.6						
PTGA				LR	LR	00 20 39.2	
	comp=Z,77nm,19.4s,baz=302,slow=39						
PTGA	Pitinga	15.06	126	Pn	Pn	00 14 18.1	-2.2
PTGA				IAmb	IAmb	00 14 19.5	
	comp=Z,17nm,0.8s						
PTGA	Pitinga	15.06	126	eP	Pn	00 14 17.9	-2.4
CZSB	Cruzeiro do Su	15.87	182	eP	Pn	00 14 30.8	-0.1
MACA	Manacapuru-AM	16.10	134	eP	Pn	00 14 33.0	-0.7
ATAH	Atahualpa	16.49	202	Pn	Pn	00 14 39.5	+0.3
	comp=Z,0.0nm,0.3s,baz=15,slow=13,SNR=1.5						
ATAH				Lg	Lg	00 19 36.6	
	comp=Z,1.8nm,0.3s,baz=35,slow=4.3,SNR=20						
ATAH				LR	LR	00 22 03.7	
	comp=Z,104nm,20.8s,baz=12,slow=41						
MTO3	Montecristo	17.94	291		P	00 15 00.3	+2.5
ETMB	Extrema	18.89	162	eP	P	00 15 08.0	+0.1
SAML	Samuel	19.27	152	P	P	00 15 11.8	-0.4
SAML	Samuel	19.27	152	eP	P	00 15 11.9	-0.2
MDP	Montagnes des	19.62	98	P	P	00 15 17.2	+1.2
	comp=Z,0.2nm,0.3s,baz=277,slow=8.6,SNR=2.3						
MDP				LR	LR	00 22 22.7	
	comp=Z,70nm,19.4s,baz=313,slow=35						
TEIG	Tepich	19.63	309	LR	LR	00 24 07.5	
	comp=Z,30nm,18.2s,baz=99,slow=41						
MALB	Monte Alegre	20.46	119	eP	P	00 15 26.5	+1.3
NNA	Nana	20.63	193	LR	LR	00 24 51.7	
	comp=Z,115nm,18.6s,baz=9.5,slow=41						
CCIG	Comitan	21.09	294	P	P	00 15 34.0	+1.9
CCIG				IAmb	IAmb	00 15 40.0	
	comp=Z,21nm,0.9s						
MCPB	Macapa, AP	21.77	112	eP	P	00 15 39.6	+0.3
NPGB	Novo Progresso	22.60	132	eP	P	00 15 48.7	+0.5
CMIG	Matias Romero	23.84	294	LR	LR	00 24 46.6	
	comp=Z,44nm,21.0s,baz=17,slow=35						
VILB	Vilhena	24.17	150	eP	P	00 16 05.8	+1.9
LPAZ	La Paz	24.69	171	P	P	00 16 11.1	+1.8
	comp=Z,6.8nm,0.7s,baz=350,slow=9.8,SNR=22						
LPAZ	La Paz	24.69	171	P	P	00 16 10.4	+1.1
LPAZ				IAmb	IAmb	00 16 20.6	
	comp=Z,14nm,0.9s						
LPAZ	La Paz	24.69	171	eP	P	00 16 09.9	+0.6
CLDB	Colider	25.01	139	eP	P	00 16 11.4	-0.1
SIV	San Ignacio	26.46	155	P	P	00 16 26.2	+1.6
	comp=Z,10nm,0.9s,baz=345,slow=8.4,SNR=38						
SIV				LR	LR	00 28 24.4	
	comp=Z,42nm,21.6s,baz=240,slow=40						
PB16	IPOC Station P	26.54	174	P	P	00 16 27.5	+1.6
HODGE	Hodges	27.49	342	P	P	00 16 34.5	+0.8
HODGE				IAmb	IAmb	00 16 40.4	
	comp=Z,8.9nm,0.7s						
PSGCX	Pisagua	27.73	176	P	P	00 16 36.1	-0.1
SNDB	Serra Nova Dou	28.87	134	eP	P	00 16 47.1	+0.9
TKL	Tuckaleechee C	29.29	340	P	P	00 16 50.1	+0.3
	comp=Z,5.0nm,1.1s,baz=194,slow=12,SNR=1.8						
TKL				LR	LR	00 29 46.7	
	comp=Z,61nm,18.9s,baz=134,slow=39						
SMTB	Santa Maria do	29.79	124	eP	P	00 16 56.5	+2.0
V48A	Smith Brothers	30.48	336	P	P	00 17 01.6	+1.3
V48A				IAmb	IAmb	00 17 07.4	
	comp=Z,9.1nm,0.8s						
LVC	Limon Verde	30.82	174	P	P	00 17 03.9	0.0
LVC	Limon Verde	30.82	174	eP	P	00 17 04.2	+0.3
W45A	Hickory Valley	31.01	332	P	P	00 17 05.9	+0.9
PEXB	Peixe	31.16	130	eP	P	00 17 07.6	+1.1
ARAG	Araguaiana, MT	31.18	140	eP	P	00 17 07.5	+0.8
N59A	State Game Lan	32.70	355	P	P	00 17 20.5	+0.6
N59A				IAmb	IAmb	00 17 27.2	
	comp=Z,9.3nm,0.8s						
AQDB	Aquidauana	32.80	151	eP	P	00 17 22.6	+1.7
M55A	Ridgway	33.61	351	P	P	00 17 28.6	+0.8
BDFB	Brasilia	33.69	135	P	P	00 17 29.6	+0.8
	comp=Z,3.8nm,0.9s,baz=353,slow=8.2,SNR=5.0						
BDFB	Brasilia	33.69	135	P	P	00 17 29.1	+0.2
BDFB				IAmb	IAmb	00 17 31.1	
	comp=Z,7.5nm,1.2s						
SDBA	SAO DESIDERIO	33.97	127	eP	P	00 17 32.4	+1.1
P46A	Rosedale	34.03	339	P	P	00 17 32.3	+0.9
CCM	Cathedral Cave	34.33	333	P	P	00 17 34.9	+0.8
CCM				IAmb	IAmb	00 17 40.5	
	comp=Z,7.3nm,0.8s						
WVNY	West Valley, N	34.50	352	P	P	00 17 36.9	+1.3
SFIN	Lafayette	34.67	340	P	P	00 17 37.9	+0.9
SFIN				IAmb	IAmb	00 17 43.9	
	comp=Z,11nm,0.8s						
P43A	Skaggs, Pawnee	34.92	336	P	P	00 17 39.3	+0.1
IPMB	Ipameri, GO	35.18	138	eP	P	00 17 42.5	+0.8
JANB	Januaria	36.02	130	eP	P	00 17 49.6	+0.6
PCMB	Pacaembu	36.06	146	eP	P	00 17 49.9	+0.7
AC04	Llanos de Chal	36.24	178	P	P	00 17 50.5	-0.1
TX32	Lajitas Array	36.27	310	P	P	00 17 51.8	+0.7
TXAR	Lajitas Array	36.27	310	P	P	00 17 51.7	+0.6
	comp=Z,1.2nm,0.5s,baz=128,slow=8.9,SNR=16						
TXAR				PcP	PcP	00 20 16.9	+0.8
	comp=Z,1.0nm,0.6s,baz=126,slow=6.4,SNR=6.5						
N41A	Harden Midland	36.37	336	P	P	00 17 51.4	-0.1
N41A				IAmb	IAmb	00 17 56.8	
	comp=Z,15nm,1.1s						
P38A	Dawn	36.65	332	P	P	00 17 53.8	-0.2
P38A				IAmb	IAmb	00 18 03.4	
	comp=Z,6.1nm,0.7s						
G62A	West of Eustis	36.87	2	P	P	00 17 56.6	+0.8
G62A				IAmb	IAmb	00 18 02.2	
	comp=Z,25nm,1.2s						
AC05	El Transito	36.90	177	P	P	00 17 57.0	+0.6
AC05				IAmb	IAmb	00 18 04.0	
	comp=Z,7.7nm,0.9s						
GGN	Saint George	37.03	6	P	P	00 17 57.4	+0.3
K43A	Burlington	37.16	340	P	P	00 17 58.4	+0.1
BB19B	Bebedouro	37.24	142	eP	P	00 17 60.0	+0.7
CPUP	Villa Florida	37.26	158	P	P	00 17 58.1	-1.2
	comp=Z,0.7nm,0.3s,baz=341,slow=8.6,SNR=3.2						
JFWS	Jewell Farm	38.02	338	P	P	00 18 05.5	0.0
JFWS				IAmb	IAmb	00 18 11.2	
	comp=Z,15nm,0.8s						
PTGB	Pitanga	38.16	150	eP	P	00 18 07.6	+0.5
FRTB	Fartura	38.38	145	eP	P	00 18 09.8	+0.9
I42A	Draeger Farm,	38.41	340	P	P	00 18 09.0	+0.1
G45A	Suttons Bay	38.49	345	P	P	00 18 10.4	+0.9
MNTX	Cornudas Mount	38.72	312	P	P	00 18 12.4	+0.8
RCBR	Riachuelo	38.76	110	P	P	00 18 12.1	-0.1
RCBR				IAmb	IAmb	00 18 21.9	
	comp=Z,24nm,1.2s						
RCBR	Riachuelo	38.76	110	eP	P	00 18 12.7	+0.5
CO03	El Pedregal	38.88	178	P	P	00 18 13.6	+0.6
I40A	Norwalk	39.00	339	P	P	00 18 13.8	0.0
I40A				IAmb	IAmb	00 18 19.4	
	comp=Z,16nm,0.8s						
GDU01	Guandu, BA	39.01	124	eP	P	00 18 15.2	+0.9
BATG	Bathurst New B	39.24	7	P	P	00 18 16.1	+0.3
BATG				IAmb	IAmb	00 18 34.3	
	comp=Z,18nm,1.2s						
E46A	Sault Ste Mari	39.40	347	P	P	00 18 17.9	+0.8
E46A				IAmb	IAmb	00 18 23.8	
	comp=Z,15nm,0.7s						
E43A	Lone Tree Farm	40.08	344	P	P	00 18 22.8	+0.1
E43A				IAmb	IAmb	00 18 28.1	
	comp=Z,6.7nm,0.6s						
PET01	Itanhaem-SP	40.43	144	eP	P	00 18 27.0	+1.0
COWI	Conover	40.45	342	P	P	00 18 26.9	+1.0
121A	Cookes Peak, D	40.91	311	P	P	00 18 30.4	+0.3
BSFB	Barra de Sao F	40.95	131	eP	P	00 18 31.8	+1.5
VAS01	Vassouras-RJ	41.37	138	eP	P	00 18 33.2	-0.6
RIB01	Linhares ES	41.58	132	eP	P	00 18 35.7	+0.2
F36A	Milaca	41.76	338	P	P	00 18 36.1	-0.5
SDCO	Great Sand Dun	42.08	319	P	P	00 18 40.7	+0.9
BO02	Sierra Bellavi	42.82	178	P	P	00 18 45.4	-0.1
BO02				IAmb	IAmb	00 18 53.6	
	comp=Z,20nm,1.5s						
EYMN	Ely	42.84	341	P	P	00 18 45.4	0.0
ISCO	Idaho Springs	43.37	322	P	P	00 18 51.3	+1.1
B35A	Bob, Littlefor	43.95	339	P	P	00 18 54.4	+0.1
B35A				IAmb	IAmb	00 18 59.4	
	comp=Z,12nm,1.1s						
PV13	Radium Mtn., P	44.48	318	P	P	00 19 00.1	+1.0
PV13				IAmb	IAmb	00 19 06.1	
	comp=Z,6.8nm,0.7s						
PV17	East Wray Mesa	44.64	318	P	P	00 19 00.9	+0.6
AGMN	Agassiz Nation	44.67	338	P	P	00 19 00.3	+0.1
AGMN				IAmb	IAmb	00 19 07.0	
	comp=Z,6.9nm,0.7s						
WUAZ	Wupatki	44.94	313	P	P	00 19 03.5	+0.8
WUAZ				IAmb	IAmb	00 19 09.8	
	comp=Z,6.3nm,0.8s						
ULM	Lac du Bonnet	46.30	339	P	P	00 19 12.6	-0.5
	comp=Z,9.0nm,0.9s,baz=141,slow=7.9,SNR=20						
ULM	Lac du Bonnet	46.30	339	P	P	00 19 12.5	-0.5
MSU	Marysvale	46.93	316	P	P	00 19 19.3	+0.9
PD31	Pinedale Array	47.52	323	P	P	00 19 23.4	+0.4
PD31				IAmb	IAmb	00 19 24.4	
	comp=Z,4.8nm,1.1s						
PDAR	Pinedale Array	47.52	323	P	P	00 19 22.6	-0.4
	comp=Z,1.7nm,0.7s,baz=126,slow=9.8,SNR=14						
PDAR				PcP	PcP	00 20 52.7	-0.4
	comp=Z,0.5nm,0.6s,baz=123,slow=4.6,SNR=2.4						
PDAR	Pinedale Array	47.52	323	P	P	00 19 23.4	+0.4
DGMT	Dagmar	48.35	332	P	P	00 19 29.5	+0.5
LOHW	Long Hollow	48.63	323	P	P	00 19 32.2	+0.6
LOHW				IAmb	IAmb	00 19 38.1	
	comp=Z,3.4nm,0.7s						
BGU	Big Grassy Mou	48.70	319	P	P	00 19 32.6	+0.6
BGU				IAmb	IAmb	00 19 34.1	
	comp=Z,3.7nm,0.8s						
PLCA	Paso Flores	48.75	178	P	P	00 19 32.4	+0.1
	comp=Z,2.1nm,0.8s,baz=7.0,slow=7.0,SNR=4.3						
PLCA	Paso Flores	48.75	178	P	P	00 19 31.8	-0.4
PLCA				IAmb	IAmb	00 19 32.1	
	comp=Z,10nm,1.4s						
YMP	Mirror Lake Pl	49.03	324	P	P	00 19 35.7	+1.0
YMP				IAmb	IAmb	00 19 54.1	
	comp=Z,6.8nm,0.7s						
TPNV	Topopah Spring	49.11	312	P	P	00 19 35.8	+0.5
GCMT	Greycliff	49.38	326	P	P	00 19 38.3	+1.1
BOZ	Bozeman (W)	50.37	325	P	P	00 19 45.1	+0.3
HLID	Hailey	50.93	321	P	P	00 19 49.4	+0.4
HRY	Holter Researc	51.13	326	P	P	00 19 51.3	+0.9
NVAR	Mina Array Bea	51.20	313	P	P	00 19 52.3	+1.1
	comp=Z,0.9nm,0.5s,baz=118,slow=6.8,SNR=7.7						
NVAR				PcP	PcP	00 21 06.8	+0.3
	comp=Z,0.9nm,0.6s,baz=129,slow=3.4,SNR=4.8						
NVAR				LR	LR	00 43 59.9	
	comp=Z,22nm,18.4s,baz=3.0,slow=39						
NVAR	Mina Array Bea	51.20	313	P	P	00 19 51.6	+0.4
FFC	Flin Flon	52.11	339	P	P	00 19 56.9	-0.5
I07A	Izee	54.41	319	P	P	00 20 15.3	+0.6
G08A	Pilot Rock	54.62	321	P	P	00 20 16.7	+0.5
G08A				IAmb	IAmb	00 20 22.3	
	comp=Z,3.7nm,0.7s						
PINE	Pine Mountain	55.22	318	P	P	00 20 21.7	+1.0
PINE				IAmb	IAmb	00 20 23.1	
	comp=Z,6.3nm,0.8s						
H04A	Detroit Lake	56.41	319	P	P	00 20 29.0	+0.1
H04A				IAmb	IAmb	00 20 32.8	
	comp=Z,6.8nm,0.9s						
YKA	Yellowknife Ar	62.28	339	P	P	00 21 08.9	-0.2
	comp=Z,6.8nm,0.8s,baz=127,slow=7.6,SNR=89						
DBIC	Dimbokro	66.67	86	P	P	00 21 37.9	-1.0
	comp=Z,1.6nm,0.5s,baz=256,slow=7.1,SNR=4.6						
DBIC	Dimbokro	66.67	86	P	P	00 21 37.3	-1.6
DBIC				IAmb	IAmb	00 21 51.6	
	comp=Z,7.0nm,1.0s						
SUMG	Summit	67.43	10	i P	P	00 21 42.7	-0.3
SUMG	Summit	67.43	10	P	P	00 21 43.3	+0.3
SUMG				IAmb	IAmb	00 21 57.8	
	comp=Z,6.3nm,1.0s						
SUMG	Summit	67.43	10	i P	P	00 21 42.8	-0.3
ESDC	Sonseca Array	68.01	51	P	P	00 21 46.6	-0.4
	comp=Z,0.9nm,0.9s,baz=324,slow=7.3,SNR=4.0						
TULEG	Thule	68.29	1	i P	P	00 21 47.0	-0.9
TULEG				IAmb	IAmb	00 21 48.3	
	comp=Z,6.0nm,0.7s						
INK	Inuvik	72.03	340	P	P	00 22 11.2	+0.2
INK				IAmb	IAmb	00 22 17.4	
	comp=Z,4.8nm,0.7s						
EPYK	Eagle Plains	72.44	338	P	P	00 22 14.1	+0.5
TORD	Torodi Ar. Bea	72.52	79	P	P	00 22 13.4	-1.5
	comp=Z,1.0nm,0.7s,baz=288,slow=4.6,SNR=4.4						
DAG	Danmarks Havn	74.09	11	i P	P	00 22 22.7	-0.3
DAG	Danmarks Havn	74.09	11	i P	P	00 22 22.8	-0.3
ILAR	Eielson Array	76.09	335	P	P	00 22 33.9	-0.9
	comp=Z,1.4nm,0.5s,baz=102,slow=4.1,SNR=7.7						
ILAR				LR	LR	00 56 47.5	
	comp=Z,29nm,18.8s,baz=126,slow=36						
RND	Reindeer	76.73	333	P	P	00 22 39.0	+0.4
SENIN	Lac Senin/Sane	76.81	44	P	P	00 22 39.5	0.0
SENIN				IAmb	IAmb	00 22 45.9	
	comp=Z,5.2nm,0.8s						
TUE	Stuetta	78.23	44	P	P	00 22 46.0	-1.5
TUE				IAmb	IAmb	00 22 55.9	
	comp=Z,6.7nm,0.8s						
DAVA	Damuels	78.60	43	eP	P	00 22 49.9	+0.5
	comp=Z,5.1nm,0.8s						
IMAR	Indian Mountai	79.10	336	P	P	00 22 51.8	+0.1
FETA	Feichten	79.18	44	eP	P	00 22 53.0	+0.3
	comp=Z,4.6nm,0.9s						
ZCCA	Zocca	79.39	46	P	P	00 22 53.1	-0.6
MOTA	Moosalm	79.43	43	eP	P	00 22 53.9	-0.1
	comp=Z,3.2nm,0.6s						
SQTA	Sankt Quirin	79.50	44	eP	P	00 22 54.3	-0.1
	comp=Z,2.8nm,0.6s						
NOA	NORSAR Array B	79.63	29	P	P	00 22 55.2	+0.5
	comp=Z,4.2nm,0.8s,baz=269,slow=5.6,SNR=14						
WTTA	Wattenberg	79.79	43	eP	P	00 22 55.8	-0.2
	comp=Z,2.4nm,0.5s						
ABTA	Abfaltersbach	80.41	44	eP	P	00 22 59.3	+0.1
	comp=Z,2.0nm,0.6s						
CLL	Collm	80.60	39	eP	P	00 23 04.0	+4.0
GERES	GERESS Array B	81.13	42	P	P	00 23 02.5	-0.5
	comp=Z,1.9nm,0.8s,baz=256,slow=3.9,SNR=11						
GERES	GERESS Array B	81.13	42	P	P	00 23 02.8	-0.3
MYKA	Terra Mystica	81.19	44	eP	P	00 23 03.2	-0.1
	comp=Z,4.0nm,0.6s						
OBKA	Obir	81.82	44	eP	P	00 23 07.7	+0.9
	comp=Z,3.6nm,1.0s						
CONA	Conrad Observa	82.62	43	eP	P	00 23 11.3	+0.4
	comp=Z,1.4nm,0.6s						
MORH	Mrgy, Hungar	84.67	44	⇓P	P	00 23 21.7	+0.4
ARCES	ARCESS Array B	85.02	20	P	P	00 23 23.0	+0.4
	comp=Z,6.1nm,1.1s,baz=282,slow=4.3,SNR=1.8						
ARCES	ARCESS Array B	85.02	20	P	P	00 23 22.1	-0.5
SIRR	Siria	86.74	44	⇑P	P	00 23 31.9	+0.3
FINES	FINESS Array B	86.74	28	P	P	00 23 31.9	+0.5
	comp=Z,3.4nm,0.8s,baz=209,slow=2.0,SNR=6.4						
FINES	FINESS Array B	86.74	28	P	P	00 23 31.2	-0.1
BZS	Buzias	86.80	45	⇑P	P	00 23 32.1	+0.2
MDVR	Moldovita	86.99	45	⇑P	P	00 23 32.5	-0.5
GZR	Gura Zlata	87.64	45	⇓P	P	00 23 36.5	+0.3
BUR08	Bucovina Ar. S	88.90	42	P	P	00 23 42.4	+0.3
BURAR	Bucovina Array	88.91	42	⇑P	P	00 23 43.3	+1.1
BURAR	Bucovina Array	88.91	42	P	P	00 23 42.2	+0.1
VOIR		89.21	44	⇓P	P	00 23 44.6	+1.0
MLR	Muntele Rosu	89.82	44	⇓P	P	00 23 46.8	+0.3
MLR	Muntele Rosu	89.82	44	P	P	00 23 46.1	-0.4
AKASG	Malin Array Be	90.82	39	P	P	00 23 50.5	-0.3
	comp=Z,0.3nm,0.3s,baz=274,slow=4.1,SNR=5.4						
SORM	Soroca	90.87	41	⇓P	P	00 23 51.0	-0.2
MKAR	Makanchi Array	120.67	20	PKP	PKPdf	00 29 38.8	-0.9
	comp=Z,0.1nm,0.5s,baz=304,slow=1.8,SNR=1.6						
KSH	Kashi	124.05	30	PKP	PKPdf	00 29 44.3	-2.2
SONM	Songino Array	124.16	1	PKP	PKPdf	00 29 45.2	-1.2
	comp=Z,0.1nm,0.3s,baz=342,slow=0.5,SNR=2.2						
STKA	Stephens Creek	140.81	228	PKP	PKPdf	00 30 17.9	0.0
	comp=Z,1.5nm,0.7s,baz=117,slow=2.3,SNR=5.5						
ASAR	Alice Springs	150.71	235	PKP	PKPdf	00 30 35.2	+0.2
	comp=Z,1.3nm,0.8s,baz=104,slow=1.6,SNR=17						
ASAR				PKPbc	PKPbc	00 30 39.9	-0.7
	comp=Z,1.1nm,0.6s,baz=115,slow=3.0,SNR=14						
WRA	Warramunga Arr	151.85	243	PKP	PKPdf	00 30 36.5	-0.4
	comp=Z,1.3nm,1.0s,baz=95,slow=0.9,SNR=6.3						
WRA				PKPbc	PKPbc	00 30 42.5	-0.8
	comp=Z,4.7nm,0.7s,baz=110,slow=2.3,SNR=48						
CMAR	Chiang Mai Arr	152.05	18	PKPbc	PKPbc	00 30 43.4	-0.4
	comp=Z,1.1nm,0.4s,baz=310,slow=3.3,SNR=6.9						

RSNC 26 00:14:08.2±1.3, 8°.39N×72°.14W, h0^{km}±7^{km}, ML2.8
FUNV 26 00:14:09.3, 7°.94N×72°.24W, h45^{km}, MW3.1
ISC 26 00:14:07.3±1.3, **8°.23N**±0°.04×**72°.14W**±0°.03, **h1**^{km}±11^{km},
n15, σ1^{s}.**17**/29, **Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAPV	Capacho	0.40	206	eP	Pb	00 14 16.8	-0.6
CAPV				eS	Sb	00 14 22.2	-1.9
PAMC	Pamplona, Colo	1.04	212	eP	Pn	00 14 30.0	+0.4
PAMC				eS	Sn	00 14 46.1	+1.1
PAMC				i		00 14 50.0	
	comp=Z,239nm,0.4s						
OCAC	Ocana	1.17	270	eP	Pg	00 14 29.2	-0.5
OCAC				eS	Sg	00 14 45.5	+0.5
OCAC				i		00 14 48.7	
	comp=Z,114nm,0.6s						
SOCV	Socops	1.27	88	eP	Pg	00 14 30.9	-0.9
SOCV				eS	Sb	00 14 48.4	-0.6
SOCV	Socops	1.27	88	eP	Pg	00 14 31.4	-0.4
SOCV				eS	Sb	00 14 48.5	-0.5
SDV	Santo Domingo	1.62	66	eP	Pn	00 14 37.1	-0.2
SDV				eS	Sn	00 14 57.8	-1.2
SDV				i		00 15 00.7	

	comp=Z,63nm,0.3s						
TAMC	Tame, Arauca	1.82	169	eP	Pb	00 14 41.2	-0.3
TAMC				eS	Sg	00 15 08.9	+3.1
MCQV	Machiques	1.85	348	eP	Pn	00 14 41.1	+0.9
MCQV				eS	Sn	00 15 05.6	+1.4
BRRC	Barranca, Sant	1.92	235	eP	Pn	00 14 42.0	+0.9
BRRC				eS	Sg	00 15 09.3	+0.3
BRRC				i		00 15 14.8	
	comp=Z,47nm,0.6s						
BARC	Barichara	1.93	213	eP	Pb	00 14 42.7	-0.7
BARC				eS	Sg	00 15 10.3	+0.9
BARC				i		00 15 14.5	
	comp=Z,83nm,0.2s						
SMLC	San Martn de	1.99	287	eP	Pn	00 14 41.6	-0.6
SMLC				eS	Sn	00 15 09.3	+1.5
SMLC				i		00 15 10.5	
	comp=Z,247nm,0.3s						
RUSC	La Rusia	2.50	202	eP	Pg	00 14 54.5	-0.9
CURV	Curarigua	2.79	50	eP	Pn	00 14 54.6	+1.4
CURV				eS	Sn	00 15 27.5	0.0
SANV	Sanarito	2.87	64	eP	Pn	00 14 55.3	+1.0
SANV				eS	Sn	00 15 29.2	-0.3
SIQV	Siquisique	3.33	44	eP	Pn	00 15 02.1	+1.5
SIQV				eS	Sn	00 15 39.5	-1.3

HEL ***26*** *00:47:29.9, 67°.82N×20°.19E, h0^{km}, ML1.8, Explosion*

UPP 26 00:47:29.8±0.5**, 67°.82N×20°.20E, h1^{km}**±3^{km}**, ML2.2, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUA	Kurravaara	0.14	22	P	Pg	00 47 32.6	+0.1
KUA				S	Sg	00 47 34.6	+0.2
KUA	Kurravaara	0.14	22	iP	Pg	00 47 32.6	+0.1
KUA				iS	Sg	00 47 34.6	+0.2
RATU	Laukkuluspa	0.23	271	P	Pg	00 47 34.2	+0.1
RATU	Laukkuluspa	0.23	271	iP	Pg	00 47 34.2	+0.1
KOVU	Salmi	0.40	358	P	Pg	00 47 37.4	-0.1
KOVU	Salmi	0.40	358	iP	Pg	00 47 37.4	-0.1
NIKU	Nikkaluokta	0.44	277	P	Pg	00 47 38.2	-0.1
NIKU	Nikkaluokta	0.44	277	iP	Pg	00 47 38.2	-0.1
LANU	Lannavaara	0.71	70	P	Pg	00 47 43.1	-0.3
LANU	Lannavaara	0.71	70	eP	Pg	00 47 43.0	-0.4
LANU				eS	Sg	00 47 52.6	-0.1
DUNU	Dundret	0.72	168	P	Pg	00 47 43.2	-0.3
DUNU	Dundret	0.72	168	iP	Pg	00 47 43.2	-0.3
KIF	Kilpisjarvi	1.21	10	eP	Pg	00 47 52.7	-0.2
KIF	Kilpisjarvi	1.21	10	ePB	Pg	00 47 53.0	0.0
	baz=187						
KIF				MSG		00 48 07.8	
	comp=Z,8.8nm,0.2s						
KIF				eS	Sg	00 48 08.7	+0.1
PAJU	Pajala	1.38	124	P	Pn	00 47 54.9	-1.3
PAJU	Pajala	1.38	124	eP	Pn	00 47 54.9	-1.3
HARU	Harads	1.69	169	P	Pn	00 48 00.3	-0.2
HARU	Harads	1.69	169	eP	Pn	00 48 00.3	-0.2
KALU	Kalix	2.33	146	P	Pn	00 48 10.3	+1.0
KALU	Kalix	2.33	146	eP	Pn	00 48 10.2	+1.0
KALU				eSG	Sb	00 48 41.9	+0.1
TOF	Tornio	2.39	135	ePB	Pn	00 48 11.3	+1.4
TOF				MSG		00 48 40.4	
	comp=Z,3.7nm,0.2s						
TOF				eSG	Sb	00 48 43.3	-0.1
SJUU	Sjulsmark	2.39	166	P	Pn	00 48 11.1	+1.0
SJUU	Sjulsmark	2.39	166	eP	Pn	00 48 11.1	+1.0
SGF	Sodankyl	2.45	96	ePB	Pb	00 48 12.8	-1.8
	baz=283						
SGF				eSB	Sb	00 48 44.5	-0.8
RNF	Rovaniemi	2.57	116	ePB	Pn	00 48 14.3	+1.8
RNF				eSB	Sb	00 48 48.0	-0.7
ARA0	ARCESS Array S	2.59	46	eP	Pn	00 48 13.2	+0.3
ARA0	ARCESS Array S	2.59	46	eP	Pn	00 48 14.1	+1.2
ARA0				eSG	Sb	00 48 50.0	+0.6
OUL	Oulu	3.58	138	eP	Pn	00 48 27.8	+1.5
OBF0	Syolatti, Pyha	3.72	152	eSB	Sb	00 49 19.0	-2.6
OLKF	Oulanka, Finla	3.90	108	eSG	Sb	00 49 30.6	+3.6

UPP 26 00:47:50.8±0.1**, 67°.86N×20°.19E, h0^{km}, ML1.6, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUA	Kurravaara	0.11	30	P	Pg	00 47 53.2	+0.3
KUA				S	Sg	00 47 54.9	+0.5
RATU	Laukkuluspa	0.23	262	P	Pg	00 47 55.3	+0.2
KOVU	Salmi	0.37	358	P	Pg	00 47 57.8	0.0
NIKU	Nikkaluokta	0.44	272	P	Pg	00 47 59.3	+0.1

IDC 26 00:47:54.5±1.3**, 0°.29N×125°.01E, h0^{km}, mb3.3**/4**, mb1 3.5**/4**, mb1mx3.4**/31**, mbtmp3.3**/4**, Error ellipse: s-maj=154.4km s-min=21.9km az=67.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	22.08	156	P	P	00 52 51.8	+0.3
	0.3nm,0.5s,baz=338,slow=9.6,SNR=3.9						
ASAR	Alice Springs	25.33	161	P	P	00 53 23.1	-0.2
	0.4nm,0.5s,baz=340,slow=8.0,SNR=9.3						
SONM	Songino Array	50.05	344	P	P	00 56 52.9	+1.8
	0.2nm,0.7s,baz=152,slow=9.5,SNR=2.0						
MKAR	Makanchi Array	59.45	327	P	P	00 57 58.1	-1.1
	0.2nm,0.3s,baz=131,slow=8.7,SNR=11						

UPA ***26*** *00:53:01.9±1.8, 6°.98N×82°.64W, h10^{km}±20^{km}, MW4.4*

UCR ***26*** *00:53:01.6±1.4, 6°.84N×82°.63W, h34^{km}±348^{km}, MW3.8*

ISC 26 00:52:59.1±3.8**, 6°.9N**±0°.1×**82°.74W**±0°.06**, h15^{km}**±26^{km}**, n20,** σ**1^s.54**/31**, 2D, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GMAL	Guarumal, Vera	1.75	59	eP	Pn	00 53 29.6	+0.5
GMAL				eS	Sn	00 53 50.3	-0.9
BCO2	Palmira	1.87	6	eP	Pn	00 53 31.8	+0.9
BCO2				eS	Sn	00 53 54.5	+0.1
CACAO	El Cacao, Vera	1.93	75	⇓iP	Pn	00 53 32.0	+0.5
CACAO				eS	Sn	00 53 53.4	-2.2
BRU2	Volcan	1.94	2	eP	Pn	00 53 32.9	+1.1
BRU2				eS	Sn	00 53 56.4	+0.5
BRU2	Volcan	1.94	2	eP	Pn	00 53 32.9	+1.1
BRU2				eS	Sn	00 53 56.5	+0.5
RIOS	Rincon, Osa	2.00	338	eP	Pn	00 53 32.5	+0.1
RIOS				eS	Sn	00 53 57.9	+0.8
DRK0	Durika	2.45	348	eP	Pn	00 53 40.2	+1.4
DRK0				eS	Sn	00 54 07.3	-1.5
DRK0	Durika	2.45	348	eP	Pn	00 53 40.2	+1.4
CNI2	El Empalme, Bo	2.58	6	eP	Pb	00 53 44.2	-0.9
CNI2				eS	Sb	00 54 16.6	-0.1
AZU	Azuero	2.62	69	⇓iP	Pn	00 53 42.5	+1.4
AZU				eS	Sn	00 54 11.4	-1.2
AZU	Azuero	2.62	69	eP	Pn	00 53 42.4	+1.4
AZU				eS	Sn	00 54 11.2	-1.5
RGM0	Gandoca	2.73	3	eS	Sb	00 54 18.8	-2.3
PNME	Penonome	2.90	56	eP	Pn	00 53 47.3	+2.5
PNME				eS	Sn	00 54 21.4	+2.0
PNME	Penonome	2.90	56	eP	Pn	00 53 46.9	+2.1
JACO	JACO, Garabito	3.38	326	eP	Pn	00 53 52.5	+1.0
HDC	Heredia	3.42	337	eS	Sn	00 54 34.3	+1.9
BCIP	Isla Barro Col	3.69	51	eP	Pn	00 53 57.6	+1.9
JTS	Las Juntas de	4.06	328	eP	Pn	00 54 02.3	+1.4
JTS				eS	Sn	00 54 46.2	-2.1
PTAC	Punta Ardita,	4.91	86	eS	Sn	00 54 58.0	-11
MOTC	Monteria, Cord	7.27	74	eP	Pn	00 54 47.2	+2.3

IDC ***26*** *00:54:46.3±4.5, 5°.06S×151°.11E, h156^{km}±33^{km}, mb3.3/5, mb1 3.5/6, mb1mx3.3/30, mbtmp3.8/6, MS4.1/1, Ms1 4.1/1, ms1mx2.8/17, Error ellipse: s-maj=64.4km s-min=25.3km az=114.0*

ISC 26 00:54:43.1±1.0**, 5°.3S**±0°.1×**151°.6E**±0°.1**, h150^{km}, n14,** σ**2^s.49**/13**, mb3.8**/6**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	6.04	227	P	Pn	00 56 10.9	+0.5
	2.3nm,0.3s,baz=39,slow=8.1,SNR=4.7						
PMG				S	Sn	00 57 18.5	-0.1
	5.9nm,0.3s,baz=89,slow=9.7,SNR=15						

SANVU	Saraoutou	18.34	125	P	Pn	00 58 52.3	+4.3
DZM	Mont Dzumac	22.01	141	ePn	P	00 59 22.3	-3.3
	6.5nm,0.2s						
DZM	Mont Dzumac	22.01	141	P	P	00 59 22.2	-3.3
ONTNC	Ouen Toro	22.19	141	P	P	00 59 26.8	-0.5
WRA	Warramunga Arr	22.26	228	P	P	00 59 28.2	+0.2
	1.3nm,0.3s,baz=50,slow=10.0,SNR=26						
YATNC	Mamie plateau,	22.29	140	P	P	00 59 20.2	-8.0
OUENC	Ouen Island, N	22.52	141	P	P	00 59 26.1	-4.3
ASAR	Alice Springs	25.02	221	P	P	00 59 54.4	+1.0
	1.3nm,0.5s,baz=58,slow=8.9,SNR=19						
FITZ	Fitzroy Crossi	28.41	241	P	P	01 00 23.6	-0.1
	0.9nm,0.3s,baz=47,slow=8.1,SNR=24						
RAR	Rarotonga	49.66	113	LR	LR	01 21 44.8	
	comp=Z,217nm,21.1s,baz=138,slow=32						
SONM	Songino Array	66.11	328	P	P	01 05 14.5	+0.2
	0.3nm,0.5s,baz=153,slow=5.7,SNR=3.9						
MKAR	Makanchi Array	79.92	319	P	P	01 06 35.2	-0.2
	0.1nm,0.5s,baz=97,slow=6.4,SNR=2.0						
TORD	Torodi Ar. Bea	149.33	287	PKPbc	PKPbc	01 14 14.5	-0.8
	0.3nm,0.3s,baz=91,slow=2.0,SNR=4.3						

IDC 26 01:07:36.8±3.1**, 28°.18N×141°.97E, h0^{km}, mb3.5**/4**, mb1 3.6**/4**, mb1mx3.2**/43**, mbtmp3.5**/4**, Error ellipse: s-maj=128.3km s-min=33.4km az=75.0, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	48.41	190	P	P	01 16 20.7	-0.1
	0.3nm,0.9s,baz=5.9,slow=7.9,SNR=1.8						
MKAR	Makanchi Array	49.64	309	P	P	01 16 29.9	-0.3
	0.2nm,0.6s,baz=93,slow=10.0,SNR=1.9						
KURBB	Kurchatov Arra	52.15	314	P	P	01 16 49.4	+0.5
	64nm,0.9s,baz=90,slow=8.4,SNR=5.3						
BVAR	Borovoye Array	57.12	317	P	P	01 17 25.0	-0.1
	0.4nm,0.4s,baz=215,slow=12,SNR=6.2						
FINES	FINESS Array B	76.89	334	P	P	01 19 30.2	-0.3
	1.7nm,1.0s,baz=46,slow=5.5,SNR=5.1						

BJI ***26*** *01:11:22.4±0.0, 38°.45N×141°.98E, h58^{km}, mB4.9/61, mb4.7/75, Ms4.6/74, Ms7 4.4/69*

NEIC ***26*** *01:11:23.8, 38°.48N×142°.05E, h50^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.85; M$_{\theta\theta}$-0.62; M$_{\phi\phi}$-0.23; M$_{r\theta}$0.53; M$_{\theta\phi}$-1.75; M$_{\phi r}$-3.09; Fault plane solution: M$_0$3.67000×10^{16} NP1:φ$_s$81.10000°, δ31.21000°, λ166.18000°. NP2:φ$_s$182.98000°, δ82.89000°, λ59.53000°. Principal axes: T 3.9754, Plg44.0000°, Azm63.0000°; N -0.7101, Plg30.0000°, Azm187.0000°; P -3.2653, Plg31.0000°, Azm298.0000°;*

NIED ***26*** *01:11:23.8, 38°.46N×142°.10E, h50^{km}, MW5.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M$_{rr}$1.40; M$_{\theta\theta}$-0.97; M$_{\phi\phi}$-0.44; M$_{r\theta}$-0.20; M$_{\theta\phi}$-3.03; M$_{\phi r}$-3.33; Fault plane solution: M$_0$4.67000×10^{16} NP1: φ$_s$190.00000°, δ79.00000°, λ51.00000°. NP2:φ$_s$87.00000°, δ41.00000°, λ163.00000°.*

NEIC ***26*** *01:11:23.8±0.7, 38°.48N±0°.05×142°.04E±0°.09, h52^{km}±5^{km}, mb4.7/155, Mwr5.0/20 Error ellipse: s-maj=10.6km s-min=6.0km az=118.0*

JMA ***26*** *01:11:23.7±0.1, 38°.46N×142°.10E, h50^{km}±1^{km}, M5.0*

JMA Felt IV J1.

IDC ***26*** *01:11:24.7±1.6, 38°.50N×141°.98E, h55^{km}±13^{km}, mb4.3/33, mb1 4.4/40, mb1mx4.3/55, mbtmp4.6/40, MS4.1/17, Ms1 4.1/17, ms1mx3.9/22, Error ellipse: s-maj=11.6km s-min=9.5km az=124.0*

GCMT ***26*** *01:11:25.8±0.2, 38°.41N±0°.01×142°.00E±0°.01, h36^{km}±1^{km}, MW5.1/126, Moment Tensor Solution. s60,c82; s126,c202; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.95±.13; M$_{\theta\theta}$-1.03±.10; M$_{\phi\phi}$0.08±.10; M$_{r\theta}$0.02±.10; M$_{\theta\phi}$-2.96±.07; M$_{\phi r}$-4.86±.22; Best double couple: M$_0$5.76000×10^{16} NP1:φ$_s$89.00000°, δ32.00000°, λ170.00000°. NP2:φ$_s$187.00000°, δ85.00000°, λ58.00000°. Principal axes: T 6.0110, Plg42.0000°, Azm67.0000°; N -0.4960, Plg32.0000°, Azm190.0000°; P -5.5100, Plg32.0000°, Azm303.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 26 01:11:24.4±0.5**, 38°.45N**±0°.03×**142°.08E**±0°.04**, h57^{km}**±3^{km}**, h57^{km}:pP-P, n520,** σ**1^s.36**/505**, mb4.7**/137**, MS4.3**/27**, 30C-31D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	Ishinomakikobu	0.50	254	⇑P	Pn	01 11 35.2	-0.9
JIKH				S	Sn	01 11 43.5	-1.0
JIO	Ouri	0.57	271	⇑P	Pn	01 11 36.1	-0.8
JIO				S	Sn	01 11 44.7	-1.3
JKMT	Kesennumamotoy	0.59	307	⇓P	Pn	01 11 36.3	-0.8
JKMT				eS	Sn	01 11 45.1	-1.3
OFUJ	Ofunato	0.70	333	⇓P	Pn	01 11 37.6	-0.9
OFUJ				S	Sn	01 11 47.5	-1.3
JMK	Ichinoseki	0.84	307	⇓P	Pn	01 11 39.6	-0.6
JMK				S	Sn	01 11 51.0	-0.7
JOU	Okura	1.11	266	⇓P	Pn	01 11 43.4	-0.4
JOU				eS	Sn	01 11 58.4	+0.1
MIYJ	Miyakonagasawa	1.14	350	⇓P	Pn	01 11 43.2	-1.0
JMM	Marumori	1.17	240	⇑P	Pn	01 11 43.7	-0.8
JMM				eS	Sn	01 11 58.3	-1.2
JMM	Marumori	1.17	240	Pn	Pn	01 11 43.8	-0.7
JMM				Sn	Sn	01 11 58.4	-1.2
JMST	Minamisoumatoc	1.19	233	⇑P	Pn	01 11 44.1	-0.6
JMST				S	Sn	01 11 59.1	-0.8
JOM	Ohasama	1.19	329	⇓P	Pn	01 11 44.5	-0.3
JOM				eS	Sn	01 11 59.5	-0.6
JYK	Kaneyama	1.42	290	⇓P	Pn	01 11 47.8	-0.2
JYK				S	Sn	01 12 06.1	+0.4
JFK	Kawauchi	1.44	222	⇑P	Pn	01 11 47.5	-0.7
JFK				eS	Sn	01 12 05.2	-0.9
JRG	Rokugo	1.47	310	⇓P	Pn	01 11 48.2	-0.4
JTH	Tanohata	1.50	354	⇓P	Pn	01 11 48.0	-0.9
JYS	Shirataka	1.60	262	⇑P	Pn	01 11 50.4	+0.1
JFT	Otama	1.66	236	⇑P	Pn	01 11 51.3	+0.1
JFT				S	Sn	01 12 11.7	+0.3
ONAJ	Iwakimizuishiy	1.69	217	⇑P	Pn	01 11 50.8	-0.8
JYYZ	Yamagatayuza	1.77	289	⇓P	Pn	01 11 53.4	+0.8
JFFD	Fukushimafurud	1.81	222	⇑P	Pn	01 11 52.9	-0.4
JFY	Yanaizu	2.15	242	⇑P	Pn	01 11 58.3	+0.5
JHO	Hitachi	2.19	214	⇑P	Pn	01 11 57.4	-1.0
JAW	Awa shima	2.22	271	⇓P	Pn	01 11 59.1	+0.3
JNS	Sasagawa	2.27	255	P	Pn	01 11 59.9	+0.5
JNTW	Noshirotokiwa	2.35	321	⇓P	Pn	01 12 00.9	+0.4
JTM	Tenmabayashi	2.46	342	Pn	Pn	01 12 02.0	0.0
JTM				Sn	Sn	01 12 29.9	-1.0
JYT	Yasato	2.68	215	Pn	Pn	01 12 04.1	-0.9
JYT				Sn	Sn	01 12 35.2	-1.1
JOG3	Oga3	2.75	303	⇓P	Pn	01 11 59.4	-6.6
JAG	Ashikaga	2.91	227	⇑P	Pn	01 12 08.6	+0.4
JSD	Sado	3.03	263	Pn	Pn	01 12 08.7	-1.2
JSD				Sn	Sn	01 12 53.8	+8.8
JGK	Kuni	3.32	236	P	Pn	01 12 15.4	+1.5
JJN	Nakama	3.38	248	⇑P	Pn	01 12 16.1	+1.4
JRY	Ryogami san	3.51	227	⇑P	Pn	01 12 16.9	+0.4
JKUC	kamogawauchiur	3.61	205	P	Pn	01 12 18.0	+0.1
MJAR	Matsushiro Arr	3.62	239	P	Pn	01 12 19.2	+1.3
	6.8nm,0.3s,baz=35,slow=14,SNR=33						
MJAR				LR	LR	01 13 57.6	
	comp=Z,6µm,20.5s,baz=55,slow=43						
MJAR	Matsushiro Arr	3.62	239		Pn	01 12 18.8	+0.8
MAJO	Matsushiro	3.62	239	Pn	Pn	01 12 18.2	+0.2
MAT	Matsushiro	3.62	239	P	Pn	01 12 19.4	+1.5
MAT				eS	Sn	01 13 03.2	+3.8
MAT	Matsushiro	3.62	239	P	Pn	01 12 19.5	+1.5
MJB9	Matsu-Tunnel	3.62	240		Pn	01 12 17.9	0.0
ERM	Erimo	3.66	13	Pn	Pn	01 12 17.0	-1.4
ERM				Sn	Sn	01 12 59.1	-1.0
JEM	Erimo	3.66	13	Pn	Pn	01 12 18.5	+0.1
BSO4	Boso 4	3.73	203	P	Pn	01 12 19.7	+0.4
JNG	Nsakai	3.77	238	P	Pn	01 12 21.4	+1.4
JNT	Takato	4.06	232	P	Pn	01 12 25.9	+1.8
JYN	Shimob	4.09	225	P	Pn	01 12 25.8	+1.4
JGN	Niukaw	4.40	241	P	Pn	01 12 31.1	+2.4
JEW	Eniwo	4.41	354	Pn	Pn	01 12 27.8	-1.0
JIZS	Izushimoda	4.53	216	P	Pn	01 12 30.6	+0.2
JNY	Yasuok	4.58	229	P	Pn	01 12 32.9	+1.8
SHZ3	Shizuoka 3	4.59	224	P	Pn	01 12 32.7	+1.4
JOB	Onbets	4.64	16	⇑P	Pn	01 12 30.0	-1.9
JGF	Kuroka	4.73	234	⇓P	Pn	01 12 35.3	+2.1
JGF	Kuroka	4.73	234	Pn	Pn	01 12 32.9	-0.3
JSG	Sagara	4.90	221		Pn	01 12 34.9	-0.6
JYZW	Yoshizawa	4.91	227	P	Pn	01 12 36.4	+0.9
JAO	Obara	5.00	232	P	Pn	01 12 38.7	+1.8
JAR	Ashorobuto	5.01	14	⇑P	Pn	01 12 34.5	-2.4
INU	Inuyama	5.10	234	Pn	Pn	01 12 37.9	-0.3
JYTA	Yamagatataniai	5.14	238	P	Pn	01 12 40.7	+2.0
JHJ2	Mitsune	5.64	200		Pn	01 12 44.2	-1.3
JHJ	Hachijo jima 2	5.64	200	P	Pn	01 12 44.4	-1.2
	94nm,0.3s,baz=116,slow=23,SNR=17						
JHJ				S	Sn	01 13 44.7	-4.3
	205nm,0.3s,baz=244,slow=23,SNR=8.8						
JHJ				LR	LR	01 15 20.9	
	comp=Z,1µm,21.4s,baz=46,slow=42						
NEM2	Nemuro 2	5.64	28	P	Pn	01 12 42.4	-3.1
ASAJ	Asahikawa	5.67	4	P	Pn	01 12 45.9	-0.2
	28nm,0.3s,baz=212,slow=20,SNR=32						
ASAJ				S	Sn	01 13 48.8	-1.0
	17nm,0.3s,baz=108,slow=33,SNR=2.1						
JKA	Kamikawa-asahi	5.67	4	Pn	Pn	01 12 44.7	-1.4
JFM	Mihama	5.68	241	P	Pn	01 12 49.0	+2.8
JWT	Wachi	6.22	241	Pn	Pn	01 12 52.8	-0.7
JHS	Saijyo	7.98	247	Pn	Pn	01 13 17.3	-0.3
JMN	Monobe	8.14	237	Pn	Pn	01 13 19.4	-0.4
YSS	Yuzh-Sakhalins	8.51	3	Pn	Pn	01 13 24.0	-0.8
USA0B	Ussuriysk Arra	9.51	310	Pn	Pn	01 13 37.8	-0.8
USRK	Ussuriysk Ar.	9.51	310	P	Pn	01 13 39.2	+0.6
	baz=115,slow=14,SNR=52						
USRK				LR	LR	01 17 12.0	
	comp=Z,2µm,18.7s,baz=116,slow=37						
USRK	Ussuriysk Ar.	9.51	310	Pn	Pn	01 13 37.8	-0.8
JNU	Nakatsue	10.53	243	P	Pn	01 13 53.4	+0.8
	0.7nm,0.3s,baz=58,slow=9.3,SNR=13						
JNU				LR	LR	01 18 08.3	
	comp=Z,3µm,21.7s,baz=55,slow=38						
JNU	Nakatsue	10.53	243	Pn	Pn	01 13 51.9	-0.7
MDJ	Mudanjiang	11.20	307	P	Pn	01 14 02.5	+0.9
MDJ				pmax	pmax		
	comp=Z,23nm,1.5s						
MDJ				pmax	pmax		
	comp=Z,440nm,3.6s						
MDJ				LR	LR		
	comp=N,910nm,14.7s						
MDJ				LR	LR		
	comp=E,1µm,15.6s						
MDJ				LR	LR		
	comp=Z,3µm,20.0s						
MDJ	Mudanjiang	11.20	307	Pn	Pn	01 14 00.5	-1.1
KSRS	Korea Array	11.22	269	P	Pn	01 14 06.2	+4.2
	1.6nm,0.3s,baz=81,slow=14,SNR=14						
KSRS				LR	LR	01 18 03.8	
	comp=Z,1µm,20.9s,baz=70,slow=36						
KSAR	Wonju Array Be	11.26	269		Pn	01 14 00.6	-1.8
JCJ	Chichijima	11.32	180	P	Pn	01 14 00.5	-3.0
	10nm,0.3s,baz=292,slow=21,SNR=9.6						
JCJ				S	Sn	01 15 57.2	-11
	31nm,0.3s,baz=282,slow=22,SNR=6.3						
KLR	Kul'dur	13.09	329	P	Pn	01 14 25.4	-1.9
	1.1nm,0.3s,baz=152,slow=16,SNR=18						
KLR				LR	LR	01 19 29.7	
	comp=Z,1µm,19.8s,baz=141,slow=37						
CN2	Changchun	13.62	298	eP	Pn	01 14 36.0	+1.3
CN2				pmax	pmax		
	comp=Z,20nm,0.9s						
CN2				pmax	pmax		
	comp=Z,400nm,7.0s						
CN2				LR	LR		
	comp=N,800nm,18.0s						
CN2				LR	LR		
	comp=E,1µm,18.0s						
CN2				LR	LR		
	comp=Z,1µm,19.0s						
DL2	Dalian	15.98	278	P	P	01 15 06.3	-1.7
DL2				S	Sn	01 18 04.5	+3.0
DL2				sS	S	01 18 14.0	+1.3
DL2				SS	SnSn	01 18 20.3	+5.4
DL2				pmax	pmax		
	comp=Z,84nm,1.0s						
DL2				pmax	pmax		
	comp=Z,580nm,4.4s						
DL2				LR	LR		
	comp=N,580nm,18.0s						
DL2				LR	LR		
	comp=E,990nm,19.2s						
DL2				LR	LR		
	comp=Z,1µm,23.8s						
JOW	Kunigami	16.39	229	LR	LR	01 22 05.7	
	comp=Z,216nm,19.4s,baz=300,slow=39						
PETK	Petropavlovsk-	18.20	31	P	Pn	01 15 33.2	+0.4
	0.8nm,0.3s,baz=195,slow=10,SNR=6.5						
PETK	Petropavlovsk-	18.20	31	P	P	01 15 32.1	-0.4
SSE	Sheshan	18.64	253	P	Pn	01 15 37.8	-0.5
SSE				S	Sn	01 19 05.0	-1.0
SSE				pmax	pmax		
	comp=Z,21nm,0.9s						
SSE				LR	LR		
	comp=N,290nm,16.5s						
SSE				LR	LR		
	comp=E,340nm,14.7s						
SSE	Sheshan	18.64	253	P	P	01 15 36.9	-0.5
SSE				IAmb	IAmb	01 15 39.0	
	comp=Z,77nm,1.0s						
TIA	Tai'an	19.95	271	P	P	01 15 50.3	-1.5
TIA				pmax	pmax		
	comp=Z,19nm,1.1s						
TIA				pmax	pmax		
	comp=Z,260nm,4.9s						
TIA				LR	LR		
	comp=Z,130nm,7.0s						
TIA				LR	LR		
	comp=Z,580nm,12.6s						
TIA				LR	LR		
	comp=Z,480nm,13.4s						
NJ2	Nanjing	19.99	258	eP	P	01 15 49.5	-2.6
NJ2				pP	pP	01 16 00.8	-3.8
NJ2				S	S	01 19 35.0	+1.2
NJ2				sS	sS	01 19 51.5	-2.4
NJ2				pmax	pmax		
	comp=Z,27nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,190nm,5.2s						
NJ2				LR	LR		
	comp=Z,820nm,16.1s						
NJ2				LR	LR		
	comp=Z,940nm,19.9s						
NJ2				LR	LR		
	comp=Z,1µm,19.9s						
BJI	Beijing	20.11	283	P	P	01 15 51.3	-2.0
BJI				sP	sP	01 16 14.0	+1.0
BJI				pmax	pmax		
	comp=Z,10.0nm,1.1s						
BJI				pmax	pmax		
	comp=Z,240nm,3.5s						
BJI				LR	LR		
	comp=Z,690nm,15.5s						
BJI				LR	LR		
	comp=Z,310nm,26.5s						
BJI				LR	LR		
	comp=Z,730nm,28.4s						
BJT	Baijiatuau	20.11	283	P	P	01 15 52.1	-1.4
MA2	Magadan	21.86	12	P	P	01 16 11.6	-0.5
	comp=Z,15nm,0.6s,baz=190,slow=9.4,SNR=6.8						
MA2	Magadan	21.86	12	P	P	01 16 11.5	-0.5
MA2				IAmb	IAmb	01 16 15.6	
	comp=Z,17nm,0.7s						
TIY	Taiyuan	23.30	277	eP	P	01 16 28.8	+1.4
TIY				pP	pP	01 16 42.5	+2.0
TIY				SS	Sn	01 21 16.3	+18
TIY				pmax	pmax		
	comp=Z,28nm,1.1s						
TIY				pmax	pmax		
	comp=Z,74nm,5.8s						
TIY				LR	LR		
	comp=Z,490nm,14.2s						
TIY				LR	LR		
	comp=Z,300nm,10.1s						
TIY				LR	LR		
	comp=Z,780nm,17.0s						
HHC	Hu-ho-hao-te	23.56	286	eP	P	01 16 28.0	-1.8
HHC				pP	pP	01 16 39.8	-3.5
HHC				S	S	01 20 36.5	-3.3
HHC				pmax	pmax		
	comp=Z,16nm,1.0s						
HHC				pmax	pmax		

	comp=Z,130nm,5.4s						
HHC				LR	LR		
	comp=Z,910nm,16.5s						
HHC				LR	LR		
	comp=Z,1µm,15.5s						
HHC				LR	LR		
	comp=Z,1µm,15.8s						
WHN	Wuhan	24.11	259	⇓P	P	01 16 33.5	-1.3
WHN				S	S	01 20 39.8	-8.7
WHN				LR	LR		
	comp=Z,1µm,16.4s						
WHN				LR	LR		
	comp=Z,1µm,14.9s						
WHN				LR	LR		
	comp=Z,2µm,21.8s						
BTO	Baotou	24.75	285	*e*P	P	01 16 37.5	-3.1
YAK	Yakutsk	24.81	346	P	P	01 16 40.4	-0.5
	comp=Z,24nm,0.3s,baz=144,slow=4.5,SNR=9.6						
SEY	Seymchan	25.30	11	P	P	01 16 46.3	+1.1
	comp=Z,8.9nm,0.6s,baz=182,slow=8.2,SNR=19						
XAN	Xi'an	27.02	271	P	P	01 17 00.3	-0.8
XAN				pP	pP	01 17 14.3	-0.8
XAN				sP	sP	01 17 21.5	-0.4
XAN				S	S	01 21 33.0	-1.7
XAN				SS	SnSn	01 22 51.3	+6.0
XAN				pmax	pmax		
	comp=Z,24nm,1.1s						
XAN				pmax	pmax		
	comp=Z,87nm,3.7s						
XAN				LR	LR		
	comp=Z,520nm,18.4s						
XAN				LR	LR		
	comp=Z,640nm,17.3s						
XAN				LR	LR		
	comp=Z,770nm,17.3s						
XAN	Xi'an	27.02	271	P	P	01 17 00.6	-0.5
XAN				IAmb	IAmb	01 17 01.5	
	comp=Z,21nm,1.1s						
ULN	Ulaanbaatar	27.03	302	P	P	01 17 01.0	-0.3
ULN				IAmb	IAmb	01 17 04.8	
	comp=Z,6.0nm,0.5s						
SONM	Songino Array	27.46	302	P	P	01 17 05.5	+0.4
	comp=Z,3.3nm,0.4s,baz=103,slow=9.2,SNR=35						
SONM				ScP	ScP	01 23 58.5	+0.6
	comp=Z,0.6nm,1.1s,baz=107,slow=1.5,SNR=4.4						
SONM	Songino Array	27.46	302	P	P	01 17 04.8	-0.3
SONM					ScP	01 23 58.5	+0.6
ENH	Enshi	28.00	263	P	P	01 17 09.7	-0.3
H11N2	WAKE ISLAND Hy	28.46	124	T	T	01 47 44.1	
	baz=316,slow=75,SNR=470						
H11N1	WAKE ISLAND Hy	28.47	124	T	T	01 47 32.6	
	baz=316,slow=75,SNR=784						
H11N3	WAKE ISLAND Hy	28.48	124	T	T	01 47 34.4	
	baz=316,slow=75,SNR=566						
H11S1	WAKE ISLAND Hy	29.22	126	T	T	01 48 32.4	
	baz=318,slow=76,SNR=377						
H11S3	WAKE ISLAND Hy	29.23	126	T	T	01 48 32.6	
	baz=318,slow=76,SNR=709						
H11S2	WAKE ISLAND Hy	29.24	126	T	T	01 48 38.5	
	baz=318,slow=76,SNR=366						
TLY	Talaya	29.83	309	P	P	01 17 25.9	-0.1
	comp=Z,5.8nm,0.6s,baz=116,slow=7.9,SNR=11						
TLY	Talaya	29.83	309	P	P	01 17 25.9	-0.1
TLY				IAmb	IAmb	01 17 28.3	
	comp=Z,22nm,1.1s						
LZH	Lanzhou	30.38	278	*e*P	P	01 17 31.0	-0.1
LZH				pP	pP	01 17 48.3	+3.0
LZH				sP	sP	01 17 56.0	+4.0
LZH				S	S	01 22 28.0	+0.2
LZH				sS	sS	01 22 50.8	-0.9
LZH				pmax	pmax		
	comp=Z,17nm,1.3s						
LZH				pmax	pmax		
	comp=Z,120nm,4.9s						
LZH				LR	LR		
	comp=Z,760nm,15.9s						
LZH				LR	LR		
	comp=Z,700nm,17.3s						
LZH				LR	LR		
	comp=Z,870nm,17.3s						
GYA	Guiyang	32.00	259	⇑P	P	01 17 44.5	-0.9
GYA				pP	pP	01 17 56.8	-2.8
GYA				PP	PP	01 18 56.0	-2.5
GYA				S	S	01 22 54.5	+1.3
GYA				pmax	pmax		
	comp=Z,25nm,1.0s						
GYA				pmax	pmax		
	comp=Z,160nm,4.1s						
GYA				LR	LR		
	comp=Z,230nm,9.9s						
GYA				LR	LR		
	comp=Z,430nm,19.1s						
GYA				LR	LR		
	comp=Z,530nm,17.8s						
CD2	Chengdu	32.22	268	P	P	01 17 45.8	-1.5
CD2				S	S	01 22 52.5	-4.0
CD2				pmax	pmax		
	comp=Z,30nm,0.9s						
CD2				LR	LR		
	comp=Z,540nm,21.1s						
CD2				LR	LR		
	comp=Z,710nm,20.1s						
CD2				LR	LR		
	comp=Z,820nm,18.0s						
GTA	Gaotai	32.67	285	P	P	01 17 51.5	+0.2
GTA				pP	pP	01 18 04.3	-1.2
GTA				sP	sP	01 18 11.5	-0.6
GTA				PP	PnPn	01 19 00.5	-0.3
GTA				S	S	01 23 06.8	+3.3
GTA				ScP	ScP	01 24 16.8	+1.8
GTA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,110nm,5.5s						
GTA				LR	LR		
	comp=Z,400nm,18.5s						
GTA				LR	LR		
	comp=Z,1µm,19.6s						
GTA				LR	LR		
	comp=Z,1µm,19.3s						
TIXI	Tiksi	33.95	353	P	P	01 18 01.5	-0.3
TIXI				IAmb	IAmb	01 18 02.5	
	comp=Z,4.6nm,0.8s						
QIZ	Qiongzhong	34.00	244	P	P	01 18 03.3	+0.5
QIZ				sP	sP	01 18 24.5	+0.8
QIZ				S	S	01 23 24.8	+0.6
QIZ				LR	LR		
	comp=Z,410nm,21.6s						
QIZ				LR	LR		
	comp=Z,370nm,20.6s						
QIZ				LR	LR		
	comp=Z,320nm,26.5s						
KMI	Kunming	35.71	260	⇓P	P	01 18 17.0	-0.8
KMI				pP	pP	01 18 29.8	-2.3
KMI				sP	sP	01 18 36.8	-1.9
KMI				S	S	01 23 47.5	-3.3
KMI				ScS	ScS	01 28 31.5	0.0
KMI				pmax	pmax		
	comp=Z,27nm,1.0s						
KMI				pmax	pmax		
	comp=Z,80nm,3.5s						
KMI				LR	LR		
	comp=Z,470nm,14.6s						
KMI				LR	LR		
	comp=Z,450nm,16.6s						
KMI				LR	LR		
	comp=Z,600nm,19.1s						
SLVN	Son La	36.92	254	P	P	01 18 27.7	-0.3
ANM	Nome	40.12	32	P	P	01 18 55.4	+1.2
	baz=255						
ANM	Nome	40.12	32	P	P	01 18 54.3	+0.2
ANM				IAmb	IAmb	01 19 00.2	
	comp=Z,11nm,1.1s						
WMQ	Urumqi	40.69	296	P	P	01 19 00.3	+1.0
WMQ				pP	pP	01 19 15.5	+1.7
WMQ				sP	sP	01 19 22.3	+1.9
WMQ				pmax	pmax		
	comp=Z,53nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,340nm,4.7s						
WMQ				LR	LR		
	comp=Z,690nm,16.7s						
WMQ				LR	LR		
	comp=Z,370nm,24.3s						
WMQ				LR	LR		
	comp=Z,460nm,27.5s						
WMQ	Urumqi	40.69	296	P	P	01 18 58.8	-0.4
ZAA0	Zalesovo Array	41.37	311	P	P	01 19 04.1	-0.5
ZALV	Zalesovo Beam	41.37	311	P	P	01 19 04.1	-0.5
	comp=Z,16nm,0.4s,baz=97,slow=7.6,SNR=70						
ZALV	Zalesovo Beam	41.37	311	P	P	01 19 03.9	-0.7
UTTA	Uttaradit	41.60	252	P	P	01 19 08.0	+1.1
CHNA	Chernabura Isl	41.96	47	P	P	01 19 10.0	+0.6
	baz=272						
ZSN	Zaisan	41.98	301	*e*P	P	01 19 08.3	-1.4
	comp=Z,84nm,1.7s,baz=301						
CM34	Chiang Mai Arr	41.98	255	P	P	01 19 10.0	-0.1
RDOG	Red Dog Mine	42.01	27	P	P	01 19 10.4	+0.8
	baz=254						
RDOG	Red Dog Mine	42.01	27	P	P	01 19 09.7	0.0
CHTO	Chiang Mai	42.16	255	P	P	01 19 11.2	-0.3
CHTO				IAmb	IAmb	01 19 19.5	
	comp=Z,5.8nm,0.6s						
NRIK	Noril'sk	42.21	335	P	P	01 19 10.9	-0.4
	comp=Z,7.2nm,0.3s,baz=115,slow=5.8,SNR=28						
NRIK	Noril'sk	42.21	335	P	P	01 19 11.3	+0.1
CMAR	Chiang Mai Arr	42.38	254	P	P	01 19 13.3	+0.1
	comp=Z,0.9nm,0.3s,baz=43,slow=6.1,SNR=8.7						
CMAR				LR	LR	01 38 02.0	
	comp=Z,190nm,19.2s,baz=50,slow=38						
CMAR	Chiang Mai Arr	42.38	254	P	P	01 19 12.9	-0.3
CM04	Chiang Mai Arr	42.38	254	P	P	01 19 15.8	+2.5
CM05	Chiang Mai Arr	42.41	254	P	P	01 19 15.0	+1.5
SUKH	Sukhothai	42.45	253	P	P	01 19 14.7	+0.9
LSA	Lhasa	42.62	274	P	P	01 19 17.0	+1.3
LSA				pmax	pmax		
	comp=Z,56nm,1.6s						
LSA	Lhasa	42.62	274	P	P	01 19 14.9	-0.8
LSA				IAmb	IAmb	01 19 18.5	
	comp=Z,13nm,1.0s						
UMPA	Umpang Tak	43.82	252	P	P	01 19 27.2	+2.3
MK31	Makanchi Array	43.83	301	P	P	01 19 24.2	-0.5
MK31				IAmb	IAmb	01 19 28.1	
	comp=Z,10nm,1.1s						
MKAR	Makanchi Array	43.83	301	P	P	01 19 24.6	-0.1
	comp=Z,3.2nm,0.4s,baz=82,slow=10,SNR=95						
MKAR	Makanchi Array	43.83	301	P	P	01 19 24.4	-0.3
TTA	Tatalina	43.96	36	P	P	01 19 26.5	+0.9
	baz=266						
TTA	Tatalina	43.96	36	P	P	01 19 25.7	+0.1
SHL	Shillong	43.96	268	P	P	01 19 25.5	-0.7
SHL				IAmb	IAmb	01 19 28.1	
	comp=Z,31nm,1.1s						
MAKZ	Makanchi	44.04	301	P	P	01 19 26.0	-0.3
MAKZ				IAmb	IAmb	01 19 29.1	
	comp=Z,10nm,1.1s						
SVW2	Sparrevohn	44.08	38	P	P	01 19 26.6	+0.1
SVW2				IAmb	IAmb	01 19 29.6	
	comp=Z,14nm,1.1s						
SEM	Semipalatinsk	44.51	306	*e*P	P	01 19 28.0	-2.4
	baz=306						
IMAR	Indian Mountai	45.17	31	P	P	01 19 35.4	+0.3
RSO	Redoubt South	45.47	39	P	P	01 19 37.9	+0.1
KURK	Kurchatov	45.49	307	P	P	01 19 37.6	-0.2
KURBB	Kurchatov Arra	45.56	307	P	P	01 19 38.1	-0.2
	comp=Z,29nm,0.4s,baz=81,slow=8.2,SNR=82						
KDAK	Kodiak Island	45.70	43	P	P	01 19 39.8	+0.5
	baz=274						
PPLA	Purkeypile	45.71	36	P	P	01 19 40.9	+1.3
	baz=270						
PPLA	Purkeypile	45.71	36	P	P	01 19 39.6	+0.1
PPLA				IAmb	IAmb	01 19 47.6	
	comp=Z,6.5nm,0.9s						
BPAW	Bear Paw Mtn.	46.25	34	P	P	01 19 44.6	+0.9
	baz=270						
BPAW	Bear Paw Mtn.	46.25	34	P	P	01 19 43.2	-0.5
KTH	Kantishna Hill	46.28	35	P	P	01 19 44.2	+0.3
MLY	Manley	46.37	33	P	P	01 19 46.0	+1.3
	baz=269,SNR=10						
TAPN	Taplejung	46.38	273	*e*P	P	01 19 45.7	+0.2
	comp=Z,18nm,0.4s						
SUA	Susitna One	46.41	38	P	P	01 19 45.5	+0.5
	baz=272						
BRSE	Bradley Lake S	46.51	40	P	P	01 19 47.1	+1.4
	baz=274						
CUT	Chulitna	46.60	36	P	P	01 19 46.5	+0.1
	baz=272						
SHLS	Shalkode	46.66	297	*e*P	P	01 19 43.7	-3.6
	baz=296						
COLD	Coldfoot	46.66	30	P	P	01 19 48.1	+1.2
	baz=267						
ODAN	Odare	46.86	273	*e*P	P	01 19 49.3	+0.1
	comp=Z,20nm,0.3s						
TDK	Taldyqorghan	46.88	299	*e*P	P	01 19 47.9	-1.0
	baz=299						
RC01	Rabbit Creek A	46.92	38	P	P	01 19 49.5	+0.6
	baz=274						
BWN	Browne	46.92	34	P	P	01 19 49.5	+0.7
I23K	Minto, Yukon-K	46.96	33	P	P	01 19 50.2	+1.1
	baz=270,SNR=5.7						
I23K	Minto, Yukon-K	46.96	33	P	P	01 19 49.3	+0.2
O22K	Cooper Landing	46.97	39	P	P	01 19 49.8	+0.5
	baz=274						
UZB	Uzynbulak	46.97	297	*e*P	P	01 19 48.8	-0.9
	comp=Z,5.0nm,1.3s,baz=297						
TOLK	Toolik Lake Re	46.97	28	P	P	01 19 50.3	+1.1
	baz=267,SNR=5.3						
TOLK	Toolik Lake Re	46.97	28	P	P	01 19 49.8	+0.5
TOLK				IAmb	IAmb	01 19 52.0	
	comp=Z,11nm,1.1s						
NEA2	Nenana	47.09	33	P	P	01 19 51.2	+1.0
	baz=271,SNR=11						
KPKS	Kokpek	47.12	297	*e*P	P	01 19 50.1	-0.7
	comp=Z,4.0nm,1.1s,baz=297						
SEW	Seward	47.13	39	P	P	01 19 50.9	+0.4
	baz=275						
MCK	McKinley	47.17	35	P	P	01 19 51.5	+0.6
	baz=272,SNR=5.0						
RND	Reindeer	47.21	35	P	P	01 19 51.2	-0.1
SATY	Saty	47.43	297	*e*P	P	01 19 50.6	-2.7
	baz=297						
MDM	Murphy Dome	47.44	33	P	P	01 19 52.8	-0.1
MDM				IAmb	IAmb	01 20 10.7	
	comp=Z,9.0nm,1.2s						
RAMN	Ramite	47.44	273	*e*P	P	01 19 53.5	-0.2
	comp=Z,28nm,0.4s						
WRH	Wood River Hil	47.51	33	P	P	01 19 53.6	+0.2
WRH				IAmb	IAmb	01 19 56.3	
	comp=Z,4.1nm,0.8s						
WRH					PcP	01 21 22.9	+0.2
SML	Sawmill	47.54	37	P	P	01 19 54.0	+0.2
	baz=274						
GUN	Gumba	47.55	275	*e*P	P	01 19 54.8	+0.1
	comp=Z,62nm,0.3s						
POKR	Poker Plat Res	47.77	33	P	P	01 19 56.7	+1.2
	baz=272,SNR=6.1						
POKR	Poker Plat Res	47.77	33	IAmb	IAmb	01 20 12.7	
	comp=Z,14nm,1.1s						
HDA	Harding Lake	48.01	34	P	P	01 19 58.1	+0.8
	baz=273						
HDA	Harding Lake	48.01	34	IAmb	IAmb	01 19 58.8	
	comp=Z,15nm,1.1s						
IL31		48.02	33	IAmb	IAmb	01 19 59.1	
	comp=Z,9.6nm,0.9s						
ILAR	Eielson Array	48.02	33	P	P	01 19 57.5	+0.2
	comp=Z,4.5nm,0.8s,baz=264,slow=6.5,SNR=34						
ILAR	Eielson Array	48.02	33	P	P	01 19 57.8	+0.4
KKN	Kakani	48.08	275	*e*P	P	01 19 58.9	+0.3
	comp=Z,38nm,0.4s						
PKI	Pulchoki	48.08	275	*e*P	P	01 19 58.3	-0.5
	comp=Z,20nm,0.4s						
PKIN	Phulchoki	48.09	275	*e*P	P	01 19 58.2	-0.5
	comp=Z,24nm,0.4s						
CHKK	Chushkaly	48.18	298	*e*P	P	01 19 58.0	-1.0
	baz=298						
DMN	Daman	48.30	275	*e*P	P	01 20 00.0	-0.4
	comp=Z,20nm,0.3s						
GKN	Gorkha	48.48	276	*e*P	P	01 20 01.6	-0.1
	comp=Z,27nm,0.3s						
M24K	Tolsona, Glenn	48.53	37	P	P	01 20 02.8	+1.4
	baz=276						
PRP	Porcupine Dome	48.55	32	P	P	01 20 02.7	+1.0
	baz=273						
PRP	Porcupine Dome	48.55	32	IAmb	IAmb	01 20 04.1	
	comp=Z,4.4nm,0.8s						
KUU	Kurty	48.62	299	*e*P	P	01 20 01.2	-1.1
	baz=298						
FYU	Fort Yukon	48.62	31	IAmb	IAmb	01 20 20.6	
	comp=Z,7.8nm,1.0s						
KLU	Klutina	48.72	37	P	P	01 20 04.2	+1.2
	baz=276						
KLU	Klutina	48.72	37	IAmb	IAmb	01 20 05.2	
	comp=Z,16nm,1.1s						
PAX	Paxson	48.77	35	P	P	01 20 04.7	+1.3
	baz=276						
BMAR	Burnt Mountain	48.84	29	P	P	01 20 04.3	+0.5
EYAK	Cordova Ski Ar	48.92	39	P	P	01 20 04.7	+0.4
	baz=278						
N25K	Chitina, Valde	49.33	37	P	P	01 20 08.8	+1.2
	baz=278						
SCRK	Sand Creek	49.34	34	P	P	01 20 07.8	+0.1
	baz=276,SNR=11						
DOT	Dot Lake	49.34	34	IAmb	IAmb	01 20 27.3	
	comp=Z,4.2nm,0.7s						
BRZS	Berezniki	49.36	307	*e*P	P	01 20 06.6	-1.3
	baz=307						
BMRM	Bremner River	49.42	38	P	P	01 20 09.8	+1.6
	baz=278						
BTLS	Baital	49.84	301	*e*P	P	01 20 09.1	-2.5
	comp=Z,5.2nm,1.8s,baz=300						
SGDS	Sogindy	49.93	298	*e*P	P	01 20 11.7	-0.7
	baz=298						
BRVK	Borovoye	50.07	312	P	P	01 20 13.1	-0.1
BRVK				IAmb	IAmb	01 20 21.7	
	comp=Z,5.2nm,0.5s						
MCARA	McCarthy VSAT	50.11	37	P	P	01 20 15.0	+1.5
	baz=279						
AAK	Ala-Archa	50.29	298	P	P	01 20 14.7	-0.6
AAK				IAmb	IAmb	01 20 16.9	
	comp=Z,8.2nm,1.1s						
KSH	Kashi	50.32	293	P	P	01 20 19.8	+4.3
KSH				pP	sP	01 20 35.5	-1.4
KSH				PcP	PcP	01 21 38.5	+5.0
KSH				S	S	01 27 27.8	+3.5
KSH				pmax	pmax		
	comp=Z,26nm,1.3s						
KSH				pmax	pmax		
	comp=Z,360nm,5.9s						
KSH				LR	LR		
	comp=Z,290nm,6.3s						
KSH				LR	LR		
	comp=Z,350nm,7.0s						
BCAR	Beaver Creek A	50.43	35	P	P	01 20 15.9	0.0
EGAK	Eagle	50.46	33	P	P	01 20 17.0	+1.0
	baz=278						
HNR	Honiara	50.47	157	LR	LR	01 40 27.9	
	comp=Z,283nm,20.1s,baz=338,slow=34						
EPYK	Eagle Plains	52.04	30	P	P	01 20 29.2	+1.3
	baz=280,SNR=9.7						
KK31	Karatay Array	52.88	299	IAmb	IAmb	01 20 36.5	
	comp=Z,12nm,1.1s						
KKAR	Karatay Array	52.88	299	P	P	01 20 33.7	-0.8
KKAR	Karatay Array	52.88	299	IAmb	IAmb	01 20 36.5	
	comp=Z,12nm,1.1s						
INK	Inuvik	52.89	28	P	P	01 20 34.9	+0.9
	comp=Z,1.8nm,0.4s,baz=278,slow=5.6,SNR=9.5						
INK	Inuvik	52.89	28	P	P	01 20 34.1	+0.1
IUG	Iuzhnay	53.56	298	*e*P	P	01 20 39.2	-0.3
	comp=Z,10nm,1.5s,baz=298						
NIL	Nilore	54.68	288	P	P	01 20 47.2	-0.5
ARU	Arti	55.66	318	P	P	01 20 54.2	-0.1
C36M	Paulatuk	55.92	25	P	P	01 20 56.4	+0.4
	baz=289,SNR=10						
C36M	Paulatuk	55.92	25	IAmb	IAmb	01 20 58.2	
	comp=Z,15nm,1.1s						
DLBC	Dease Lake	57.19	39	P	P	01 21 06.9	+1.6
	comp=Z,3.7nm,0.9s,baz=280,slow=5.2,SNR=7.4						
ABKAR	Akbulak array	57.44	310	P	P	01 21 06.8	-0.3
ABKAR	Akbulak array	57.44	310	IAmb	IAmb	01 21 07.2	
	comp=Z,5.9nm,0.7s						
FITZ	Fitzroy Crossi	58.33	198	P	P	01 21 14.1	+0.6
WB0	Warramunga Arr	58.36	189	P	P	01 21 13.7	-0.1
WRAB	Tennant Creek	58.53	189	P	P	01 21 14.6	-0.3
WB2	Warramunga Arr	58.53	189	P	P	01 21 14.7	-0.3
WB2				IAmb	IAmb	01 21 32.6	
	comp=Z,11nm,0.9s						
WRA	Warramunga Arr	58.54	189	P	P	01 21 14.5	-0.5
	comp=Z,3.0nm,0.5s,baz=6.6,slow=7.4,SNR=56						
WRA				LR	LR	01 45 38.7	
	comp=Z,55nm,20.9s,baz=15,slow=35						
WRA	Warramunga Arr	58.54	189	P	P	01 21 14.9	-0.1
SPA0	Spitsbergen Ar	59.24	349	*e*P	P	01 21 21.0	+1.8
ASAR	Alice Springs	62.26	188	P	P	01 21 40.6	+0.2
	comp=Z,1.2nm,0.7s,baz=14,slow=6.6,SNR=14						
ASAR				LR	LR	01 48 27.3	
	comp=Z,19nm,18.4s,baz=8.0,slow=36						
ASAR	Alice Springs	62.26	188	P	P	01 21 40.4	0.0
YKA	Yellowknife Ar	62.32	31	P	P	01 21 40.7	+0.3
	comp=Z,2.0nm,0.6s,baz=299,slow=6.0,SNR=37						
YKA				LR	LR	01 50 48.4	
	comp=Z,69nm,20.1s,baz=0.0,slow=38						
HRA	Herat	62.44	293	P	P	01 21 41.6	-0.3
HRA				IAmb	IAmb	01 21 42.9	
	comp=Z,7.7nm,1.0s						
HAMF	Hammerfest	62.66	341	*e*P	P	01 21 42.0	-0.5
KLMR	Klimovskoe	62.84	328	*e*P	P	01 21 41.3	-2.6
KLMR				AMP		01 21 45.8	
	comp=Z,11nm,1.2s						
KLMR				*e*PP	PP	01 23 59.9	-2.2
ARA0	ARCESS Array S	62.86	339	*e*P	P	01 21 44.1	+0.3
ARCES	ARCESS Array B	62.86	339	P	P	01 21 43.1	-0.8
	comp=Z,2.4nm,0.5s,baz=44,slow=7.8,SNR=14						
GEYT	Alibeck	63.62	299	P	P	01 21 49.3	-0.2
	comp=Z,2.4nm,0.7s,baz=256,slow=16,SNR=5.4						
GEYT	Alibeck	63.62	299	P	P	01 21 49.0	-0.4
KTK1	Kautokeino	63.82	339	*e*P	P	01 21 50.3	+0.1
DZM	Mont Dzumac	64.40	155	*e*LR	LR	01 40 50.8	
	comp=Z,396nm,21.5s						
DAG	Danmarks Havn	64.41	355	*i* P	P	01 21 53.8	-0.1
DAG	Danmarks Havn	64.41	355	*i* P	P	01 21 53.8	-0.1
TRO	Tromso	64.55	341	*e*P	P	01 21 54.4	-0.5
A04D	Lummi Island	65.37	47	P	P	01 22 01.8	+1.2
	baz=301						
NLWA	Neilton Lookou	65.38	48	P	P	01 22 00.8	0.0
D03D	Eldon	65.76	48	P	P	01 22 04.7	+1.5
	baz=301,SNR=13						
B05A	Bryant	65.95	47	P	P	01 22 05.5	+1.1
	baz=301,SNR=6.7						
B06A	Marblemount	66.17	46	IAmb	IAmb	01 22 08.6	
	comp=Z,7.8nm,0.7s						
E04D	Cinebar	66.57	48	P	P	01 22 10.1	+1.7
	baz=302,SNR=5.7						
STEI	Steigen	66.70	341	*e*P	P	01 22 09.8	+0.9
LON	Longmire	66.91	48	IAmb	IAmb	01 22 14.3	
	comp=Z,4.6nm,0.9s						
LOF	Lofoten	66.99	341	*e*P	P	01 22 10.7	0.0
FAUS	Fauske	67.09	340	*e*P	P	01 22 12.3	+1.0
H04D	Lebanon	67.54	50	P	P	01 22 16.1	+1.4
	baz=302						
F05D	White Salmon	67.58	49	P	P	01 22 16.2	+1.4
	baz=303						
I03D	Drain, OR	67.61	51	P	P	01 22 16.2	+1.1
	baz=302,SNR=6.8						
FIA1	FINESS Array S	67.81	332	P	P	01 22 15.5	-0.4
FIA1				IAmb	IAmb	01 22 17.8	
	comp=Z,12nm,1.1s						
FINES	FINESS Array B	67.81	332	P	P	01 22 15.8	-0.1
	comp=Z,4.7nm,0.6s,baz=25,slow=10,SNR=42						
G05D	Wamic, OR	68.01	49	P	P	01 22 18.8	+1.3
	baz=303						
I04A	Tendick Farm,	68.13	51	P	P	01 22 19.3	+0.9
	baz=303,SNR=8.2						
E07A	Sunnyside	68.15	47	IAmb	IAmb	01 22 37.6	
	comp=Z,4.7nm,1.0s						
L02E	Cave Junction	68.28	53	P	P	01 22 20.9	+1.6
	baz=303						
D08A	Wollman Farm,	68.41	47	IAmb	IAmb	01 22 22.4	
	comp=Z,9.2nm,0.9s						
HAWA	Hanford	68.43	47	IAmb	IAmb	01 22 39.2	
	comp=Z,5.6nm,1.1s						
I05D	Terrebonne, OR	68.48	50	P	P	01 22 21.7	+1.1
	baz=303						
J04D	Umpqua Nationa	68.62	51	P	P	01 22 22.8	+1.2
	baz=303						
NEW	Newport	68.75	45	P	P	01 22 23.0	+0.8
	comp=Z,6.3nm,0.8s,baz=313,slow=4.9,SNR=10						
NEW	Newport	68.75	45	P	P	01 22 23.1	+1.0
	baz=304,SNR=8.4						
NEW	Newport	68.75	45	IAmb	IAmb	01 22 24.4	
	comp=Z,16nm,1.1s						
L04D	Klamath Falls	69.05	52	P	P	01 22 25.9	+1.6
	baz=303,SNR=5.5						
YBH	Yreka Blue Hor	69.07	53	P	P	01 22 25.4	+1.1
	comp=Z,6.6nm,1.0s,baz=94,slow=3.1,SNR=6.7						
YBH	Yreka Blue Hor	69.07	53	P	P	01 22 24.3	0.0
J05D	Fort Rock, OR	69.13	51	P	P	01 22 25.7	+1.0
	baz=304,SNR=8.8						
E09A	Wood Farm, Sta	69.16	47	IAmb	IAmb	01 22 43.7	

	comp=Z,7.1nm,1.1s						
M02C	Callahan	69.16	53	P	P	01 22 26.2	+1.3
	baz=303						
K04D	Chiloquin, OR	69.17	52	P	P	01 22 25.8	+0.8
	baz=304						
SUMG	Summit	69.27	0	*i* P	P	01 22 26.0	+0.6
	comp=Z,13nm,0.4s						
SUMG	Summit	69.27	0	P	P	01 22 25.0	-0.4
SUMG				IAmb	IAmb	01 22 27.0	
	comp=Z,5.1nm,0.6s						
SUMG	Summit	69.27	0	*i* P	P	01 22 26.1	+0.6
SUMG				IAmb	IAmb	01 22 27.0	
	comp=Z,13nm,0.4s						
N02D	Trinity Center	69.48	54	P	P	01 22 28.4	+1.5
	baz=304						
M04C	Macdoel	69.58	53	P	P	01 22 29.0	+1.4
	baz=304						
I07A	Izee	69.73	49	P	P	01 22 28.3	-0.1
WDC	Whiskeytown Da	69.81	54	P	P	01 22 28.4	-0.3
O02D	Mt. Diablo Mer	69.87	54	P	P	01 22 30.5	+1.2
	baz=304						
STKA	Stephens Creek	69.97	180	P	P	01 22 32.0	+2.4
	comp=Z,0.9nm,0.3s,baz=188,slow=22,SNR=1.5						
STKA				LR	LR	01 51 54.9	
	comp=Z,72nm,22.0s,baz=20,slow=35						
NSS	Namsos	70.14	339	*e*P	P	01 22 30.2	-0.2
KIV	Kislovodsk	70.38	311	⇑P	P	01 22 33.4	+1.1
KIV	Kislovodsk	70.38	311	P	P	01 22 31.9	-0.4
KBZ	Khabaz	70.38	311	P	P	01 22 32.3	+0.1
	comp=Z,1.8nm,0.4s,baz=287,slow=8.9,SNR=12						
O03E	Paynes Creek	70.43	54	P	P	01 22 32.7	0.0
	baz=304,SNR=6.5						
MTSE	Matsula	70.47	331	*e*P	P	01 22 28.9	-3.6
JTMT	Jette	70.61	44	IAmb	IAmb	01 22 36.2	
	comp=Z,13nm,0.9s						
GNI	Garni	71.28	307	P	P	01 22 37.7	-0.3
GNI				IAmb	IAmb	01 22 45.7	
	comp=Z,6.7nm,1.1s						
MSO	Missoula	71.34	45	P	P	01 22 38.3	+0.2
	baz=307,SNR=6.4						
MSO	Missoula	71.34	45	IAmb	IAmb	01 22 40.2	
	comp=Z,9.1nm,1.1s						
AKH	Akhalkalaki	71.34	308	⇓P	P	01 22 39.0	+0.7
CHVG	Ch'k'valeri	71.45	310	⇓P	P	01 22 39.2	+0.5
MNK	Minsk	71.62	326	*i* P	P	01 22 33.9	-5.6
	comp=E,2.0nm,1.2s						
MNK				*i* P	P	01 22 33.9	-5.6
	comp=N,16nm,1.2s						
MNK				*i* P	P	01 22 33.9	-5.6
	comp=Z,13nm,1.0s						
MNK				*i* pP	pP	01 22 50.3	-4.8
MNK				*i* PcP	PcP	01 22 54.2	-4.3
MNK				*i* PP	PP	01 25 10.9	-7.5
MNK				*i* PPP	PPP	01 26 54.0	
MNK				*i* S	S	01 31 42.7	-12
MNK				*i* sS	SKiKP	01 32 12.5	-0.4
MNK				*i* SS	SS	01 36 25.8	-3.8
MNK				*i* SSS	SSS	01 39 37.0	
MNK				*i* LQ	LQ	01 48 35.3	
MNK				*i* LR	LR	01 54 33.5	
MNK				*i* LRM	MLR	01 56 54.6	
	comp=Z,254nm,20.8s						
MNK				*i* LRM	MLR	01 56 59.2	
	comp=N,264nm,18.1s						
MNK				*i* LRM	MLR	01 57 08.2	
	comp=E,15nm,17.2s						
ISAL	Salakas	71.67	327	*e*P	P	01 22 41.1	+1.3
IIGN	Ignalina	71.77	327	*e*P	P	01 22 40.6	+0.1
NACGM	Naroch	71.83	327	*i* P	P	01 22 40.7	-0.1
NACGM				*i* P	P	01 22 40.7	-0.1
NACGM				*i* P	P	01 22 40.7	-0.1
NACGM				*i* pP	pP	01 22 56.9	+0.5
NACGM				*i* PP	PP	01 25 18.3	-1.9
NACGM				*i* PPP	PPP	01 27 05.2	
NACGM				*i* S	S	01 31 58.4	+1.6
NACGM				*i* sS	sS	01 32 29.4	+6.2
NACGM				*i* SS	SS	01 36 47.9	+15
NACGM				*i* SSS	SSS	01 40 29.0	
NACGM				*i* LQ	LQ	01 50 12.7	
NACGM				*i* LR	LR	01 56 08.0	
UOSS	Minazif	71.88	288	P	P	01 22 41.2	-0.4
UOSS				IAmb	IAmb	01 22 41.9	
	comp=Z,4.7nm,0.9s						
FFC	Flin Flon	72.23	33	P	P	01 22 43.3	+0.1
FFC				IAmb	IAmb	01 22 45.4	
	comp=Z,9.5nm,1.0s						
PAHR	Pah Rah Range	72.29	53	IAmb	IAmb	01 22 46.5	
	comp=Z,17nm,1.2s						
PABE	Paberze	72.61	328	*e*P	P	01 22 45.2	-0.2
EGMT	Eagleton	72.86	42	P	P	01 22 47.6	+0.4
	baz=309,SNR=7.4						
DOMB	Dombas	72.92	339	*e*P	P	01 22 47.5	+0.3
DLMT	Dillon	72.97	45	IAmb	IAmb	01 22 50.3	
	comp=Z,14nm,1.0s						
HLID	Hailey	73.03	48	P	P	01 22 49.5	+1.1
	baz=307,SNR=6.2						
NB2	NORSAR Subarra	73.08	337	P	P	01 22 48.3	+0.1
	comp=Z,2.2nm,0.5s,baz=36,slow=6.2						
NOA	NORSAR Array B	73.08	337	P	P	01 22 48.2	+0.1
	comp=Z,0.3nm,0.5s,baz=276,slow=9.1,SNR=17						
NC602	NORSAR Array S	73.22	337	*e*P	P	01 22 49.1	+0.2
BOZ	Bozeman (W)	73.36	45	P	P	01 22 51.1	+0.8
	baz=308,SNR=13						
BOZ	Bozeman (W)	73.36	45	IAmb	IAmb	01 22 53.3	
	comp=Z,3.7nm,0.7s						
AKASG	Malin Array Be	73.50	322	P	P	01 22 50.0	-0.7
	comp=Z,3.2nm,0.3s,baz=45,slow=6.0,SNR=24						
AKASG	Malin Array Be	73.50	322	P	P	01 22 50.3	-0.4
AKBB	Malin Array Si	73.50	322	P	P	01 22 50.6	-0.2
AKBB				IAmb	IAmb	01 22 51.0	
	comp=Z,8.2nm,0.9s						
NVAR	Mina Array Bea	73.72	54	P	P	01 22 53.9	+1.2
	comp=Z,1.4nm,0.5s,baz=289,slow=4.5,SNR=6.5						
NVAR	Mina Array Bea	73.72	54	P	P	01 22 52.5	-0.1
SUW	Suwalki	73.98	327	*e*P	P	01 22 53.6	+0.1
YHL	Hebgen Lake	74.07	45	IAmb	IAmb	01 22 57.3	
	comp=Z,9.2nm,1.0s						
OSL	Oslo	74.11	337	*e*P	P	01 22 53.6	-0.5
YHB	Horse Butte	74.13	45	IAmb	IAmb	01 22 57.5	
	comp=Z,10nm,1.0s						
SKAR	Skarslia	74.23	338	*e*P	P	01 22 55.6	+0.7
ELK	Elko	74.24	50	P	P	01 22 56.8	+1.2
	comp=Z,1.2nm,0.4s,baz=267,slow=2.4,SNR=5.5						
YMR	Madison River	74.31	45	IAmb	IAmb	01 22 58.7	
	comp=Z,10nm,1.1s						
YNR	Norris Junctio	74.44	45	IAmb	IAmb	01 22 60.0	
	comp=Z,11nm,1.2s						
YNE	Yellowstone No	74.62	44	IAmb	IAmb	01 23 00.2	
	comp=Z,6.3nm,1.0s						
YPP	Pitchstone Pla	74.65	45	IAmb	IAmb	01 23 01.6	
	comp=Z,6.5nm,1.1s						
KONO	Kongsberg	74.68	337	*e*P	P	01 22 58.4	+0.9
H17A	Grant Village	74.69	45	P	P	01 23 00.7	+2.5
	baz=309,SNR=15						
YMP	Mirror Lake Pl	74.71	45	IAmb	IAmb	01 23 19.6	
	comp=Z,7.1nm,1.1s						
VES	Vestal, Richgr	74.75	56	P	P	01 22 59.4	+1.1
	baz=307						
FLWY	Flagg Ranch	74.82	45	IAmb	IAmb	01 23 04.6	
	comp=Z,8.2nm,1.1s						
PKM	Mcpherson Peak	74.84	57	P	P	01 23 00.5	+1.4
	baz=306						
RLMT	Red Lodge	74.96	44	P	P	01 23 00.1	+0.5
	baz=310,SNR=8.3						
CWC	Cottonwood Cre	75.05	55	P	P	01 23 01.1	+0.8
	baz=307						
HVU	Hansel Valley	75.07	48	IAmb	IAmb	01 23 03.1	
	comp=Z,9.0nm,1.0s						
GRAC	Grapevine Rang	75.17	55	P	P	01 23 02.0	+1.2
	baz=307						
ISA	Isabella, Lake	75.26	56	P	P	01 23 01.8	+0.4
	baz=307						
BER	Bergen	75.32	339	*e*P	P	01 23 00.8	-0.3
DGMT	Dagmar	75.41	39	P	P	01 23 02.3	+0.4
	baz=312						
R11A	Troy Canyon, C	75.48	53	P	P	01 23 03.8	+1.1
	baz=308,SNR=5.9						
LAO	LASA Array	75.56	41	P	P	01 23 03.9	+1.0
	baz=311,SNR=7.3						
SORM	Soroca	75.63	321	⇓P	P	01 23 02.5	-0.6
MPMC	Manual Prospec	75.66	55	P	P	01 23 04.8	+1.0
	baz=307						
OSI	Osito Audit: C	75.72	57	P	P	01 23 05.1	+1.1
	baz=307						
FURC	Furnace Creek,	75.81	55	P	P	01 23 05.7	+1.3
	baz=308						
LRMC	Laurel Mtn Rad	75.88	56	P	P	01 23 05.5	+0.4
	baz=307						
TPNV	Topopah Spring	75.91	54	P	P	01 23 06.0	+0.8
	baz=308						
TPNV	Topopah Spring	75.91	54	IAmb	IAmb	01 23 14.3	
	comp=Z,7.5nm,1.1s						
DUG	Dugway, Tooele	76.03	50	P	P	01 23 06.8	+1.0
	baz=309						
EDW2	Edwards Air Fo	76.04	57	P	P	01 23 06.6	+0.8
	baz=307						
BW06	Boulder Array	76.30	46	P	P	01 23 07.8	+0.4
	baz=310,SNR=9.3						
PDAR	Pinedale Array	76.30	46	P	P	01 23 07.9	+0.5
	comp=Z,3.7nm,0.5s,baz=300,slow=0.7,SNR=60						
PDAR	Pinedale Array	76.30	46	P	P	01 23 06.8	-0.6
SHOC	Shoshone, Teco	76.54	55	P	P	01 23 09.1	+0.6
	baz=308						
NLU	North Lily Min	76.63	49	IAmb	IAmb	01 23 11.9	
	comp=Z,10nm,1.1s						
BFSC	Mount Baldy Ra	76.65	57	P	P	01 23 10.3	+0.9
	baz=308						
CIS	Catalina Islan	76.65	58	P	P	01 23 10.7	+1.4
	baz=307						
VASR	Vaslui	76.92	320	⇑P	P	01 23 11.2	+0.7
HEC	Hector,Ludlow	77.15	56	P	P	01 23 13.0	+0.8
	baz=308						
KWP	Kalwaria Pacla	77.28	324	IAmb	IAmb	01 23 13.9	
	comp=Z,16nm,1.1s						
BURAR	Bucovina Array	77.53	322	⇓P	P	01 23 14.5	+0.5
BURAR	Bucovina Array	77.53	322	P	P	01 23 13.7	-0.4
BIZ	Bicaz	77.56	321	⇑P	P	01 23 15.1	+1.0
TESR	Tescani	77.58	320	⇑P	P	01 23 14.2	-0.1
GMRC	Granite Mounta	77.62	55	P	P	01 23 15.3	+0.5
	baz=308						
CFR	Carcaliu	77.74	319	⇑P	P	01 23 14.9	-0.2
TPGR	Topolog	77.81	318	⇑P	P	01 23 16.1	+0.6
PFO	Pinyon Flats O	77.82	57	P	P	01 23 16.4	+0.5
	baz=308						
TPFO	Pinon Flats	77.83	57	P	P	01 23 16.8	+0.8
	baz=308						
KOLS	Kolonicke sedl	77.98	324	*e*P	P	01 23 17.6	+1.2
ULM	Lac du Bonnet	78.03	34	P	P	01 23 16.1	-0.5
	comp=Z,4.0nm,0.8s,baz=312,slow=6.6,SNR=9.2						
ULM				LR	LR	02 00 51.5	
	comp=Z,55nm,18.7s,baz=340,slow=38						
ULM	Lac du Bonnet	78.03	34	IAmb	IAmb	01 23 17.9	
	comp=Z,8.4nm,0.9s						
MDND	Maddock	78.06	37	P	P	01 23 17.4	+0.5
	baz=315						
K22A	Casper	78.07	45	P	P	01 23 17.5	+0.3
	baz=312						
K22A	Casper	78.07	45	IAmb	IAmb	01 23 29.3	
	comp=Z,7.4nm,1.1s						
OJC	Ojcow	78.16	326	IAmb	IAmb	01 23 18.6	
	comp=Z,7.6nm,0.9s						
BISRR	Bisoca	78.22	320	⇓P	P	01 23 18.3	+0.5
MONP2	Monument Peak	78.29	57	P	P	01 23 19.8	+1.2
	baz=308						
BRTR	Keskin Array B	78.31	312	P	P	01 23 18.8	+0.2
	comp=Z,1.4nm,0.5s,baz=106,slow=3.6,SNR=11						
BRTR	Keskin Array B	78.31	312	P	P	01 23 18.0	-0.6
ARCR	ARCALIA	78.32	322	⇑P	P	01 23 19.1	+0.8
RWWY	Rawlins	78.33	46	IAmb	IAmb	01 23 20.8	
	comp=Z,11nm,0.8s						
IRM	Iron Mountain	78.34	56	P	P	01 23 19.5	+0.8
	baz=309						
RSSD	Black Hills	78.42	42	P	P	01 23 19.9	+0.6
	baz=313						
RSSD	Black Hills	78.42	42	P	P	01 23 19.0	-0.3
RSSD				IAmb	IAmb	01 23 21.0	
	comp=Z,9.7nm,1.1s						
BC3	Big Chuckawall	78.45	56	P	P	01 23 20.5	+1.0
	baz=309						
AMRR	Amara	78.54	319	⇓P	P	01 23 20.6	+1.1
ICOR	Ion Corvin	78.63	318	⇑P	P	01 23 21.3	+1.2
IKP	In-Ko-Pah, Jac	78.64	57	P	P	01 23 21.4	+1.0
	baz=309						
MLR	Muntele Rosu	78.64	320	⇓P	P	01 23 21.0	+0.7
O20A	White River Ci	78.76	47	P	P	01 23 21.9	+0.7
	baz=311						
PDMCI	Parker Dam,Lak	78.90	55	P	P	01 23 22.8	+1.1
	baz=309						
VOIR		79.13	320	⇓P	P	01 23 23.9	+1.0
GLA	Glamis	79.24	56	P	P	01 23 24.4	+0.8
	baz=309						
MORC	Moravsky Berou	79.46	327	⇓P	P	01 23 25.2	+0.7
DPC	Dobruska-Polom	79.54	328	*e*P	P	01 23 25.7	+0.7
UPC	Upice	79.55	328	*e*P	P	01 23 25.7	+0.7
KRLC	Kraliky	79.56	328	*e*P	P	01 23 25.9	+0.8
N23A	Red Feather La	79.57	46	P	P	01 23 26.7	+1.1
	baz=312,SNR=6.7						
DEV	Deva	79.88	322	⇓P	P	01 23 26.5	-0.3
WUAZ	Wupatki	79.88	53	P	P	01 23 28.6	+1.3
	baz=310						
COPA	Copaceanca	79.96	319	⇑P	P	01 23 27.0	-0.3
CLL	Collm	80.13	330	*i* P	P	01 23 28.0	-0.1
CLL				*e*pP	pP	01 23 42.0	-1.9
CLL				LmH		02 00 00.0	
	comp=N,100nm,21.9s						
CLL				LmH		02 00 00.0	
	comp=E,300nm,19.6s						
SIRR	Siria	80.20	323	⇑P	P	01 23 29.2	+0.7
VRAC	Vranov	80.22	327	⇑P	P	01 23 29.7	+1.0
GZR	Gura Zlata	80.29	321	⇓P	P	01 23 29.3	+0.2
ISCO	Idaho Springs	80.49	46	P	P	01 23 31.8	+1.1
	baz=313,SNR=5.1						
MVCO	Mesa Verde	80.53	50	P	P	01 23 31.6	+0.7
	baz=312						
RAYN	Ar Rayn	80.61	292	P	P	01 23 30.6	-0.6
BZS	Buzias	80.69	322	⇓P	P	01 23 31.4	+0.2
BAIL	Bailesti	80.99	320	⇑P	P	01 23 34.0	+1.1
F33A	5 Mile Ranch,	81.08	37	IAmb	IAmb	01 23 34.8	
	comp=Z,13nm,1.1s						
W18A	Petrified Fore	81.16	52	P	P	01 23 35.0	+0.8
	baz=311						
S22A	4UR Ranch, Cre	81.17	48	P	P	01 23 35.4	+1.1
	baz=312						
214A	Organ Pipe Nat	81.25	56	P	P	01 23 35.7	+1.2
	baz=310						
MDVR	Moldovita	81.25	322	⇑P	P	01 23 34.1	-0.2
CKRC	Cesky Krumlov	81.55	328	*e*P	P	01 23 36.1	+0.3
KHC	Kasperske Hory	81.61	329	*e*P	P	01 23 36.3	+0.2
KHC				*e*pP	pP	01 23 51.1	-0.9
EYMN	Ely	81.66	33	P	P	01 23 36.5	0.0
	baz=320,SNR=5.4						
EYMN	Ely	81.66	33	P	P	01 23 36.4	0.0
EYMN				IAmb	IAmb	01 23 37.6	
	comp=Z,5.7nm,0.9s						
GERES	GERESS Array B	81.78	328	P	P	01 23 37.2	+0.1
	comp=Z,0.6nm,0.4s,baz=39,slow=6.8,SNR=11						
SDCO	Great Sand Dun	81.95	48	P	P	01 23 38.8	+0.4
	baz=313						
VTS	Vitosha	82.06	319	⇓P	P	01 23 39.7	+1.0
VTS	Vitosha	82.06	319	IAmb	IAmb	01 23 40.0	
	comp=Z,4.9nm,0.9s						
TUC	Tucson	82.33	55	P	P	01 23 41.1	+0.9
	baz=311						
ECSD	EROS Data Cent	82.48	39	P	P	01 23 40.8	0.0
	baz=318,SNR=5.4						
ECSD	EROS Data Cent	82.48	39	IAmb	IAmb	01 23 42.1	
	comp=Z,9.6nm,1.1s						
E38A	The Farm, Brul	82.67	34	IAmb	IAmb	01 23 42.7	
	comp=Z,9.0nm,0.9s						
KSCO	Kaye Shedlock’	82.71	45	P	P	01 23 42.8	+0.7
	baz=314						
SOKA	Soboth	82.91	326	*e*P	P	01 23 43.4	+0.5
	comp=Z,1.6nm,0.7s						
T25A	Trinidad	82.99	48	P	P	01 23 44.7	+0.9
	baz=314						
BTNL	Ternell	83.26	333	*d*PcP	PcP	01 23 48.7	-0.3
ANMO	Albuquerque	83.28	50	P	P	01 23 46.4	+1.2
	comp=Z,6.9nm,1.1s,baz=283,slow=5.9,SNR=6.7						
ANMO	Albuquerque	83.28	50	P	P	01 23 46.4	+1.2
	baz=313						
KBA	Koelnbreinsper	83.32	328	*e*P	P	01 23 46.0	+0.8
	comp=Z,1.5nm,0.5s						
MYKA	Terra Mystica	83.55	327	*e*P	P	01 23 46.0	-0.3
	comp=Z,2.2nm,0.5s						
BMRD	Maredsous	83.97	334	*d*PcP	PcP	01 23 50.7	-1.4
RETA	Reutte	84.06	329	*e*P	P	01 23 48.9	0.0
	comp=Z,1.0nm,0.4s						
121A	Cookes Peak, D	84.08	53	P	P	01 23 50.6	+1.2
	baz=312						
FETA	Feichten	84.45	329	*e*P	P	01 23 51.2	+0.2
	comp=Z,1.7nm,0.8s						
DAVA	Damuels	84.57	330	*e*P	P	01 23 52.2	+0.6
	comp=Z,6.0nm,1.1s						
PPT	Papeete	84.80	117	LR	LR	01 53 46.7	
	comp=Z,109nm,21.9s,baz=340,slow=30						
PPT2	Papeete2	84.82	117	*e*LR	LR	01 50 00.6	
	comp=Z,566nm,25.5s,baz=315						
PPT2	Papeete2	84.82	117	*e*T	T	02 56 40.2	
	comp=Z,12nm,0.3s						
PAE	Paea	84.86	117	*e*T	T	02 56 42.9	
	comp=Z,2.3nm,0.2s						
TIAR	Tiarei	84.96	117	*e*T	T	02 56 49.8	
	comp=Z,4.1nm,0.2s						
TVO	Taravao	85.17	117	*e*T	T	02 57 06.8	
	comp=Z,0.9nm,0.3s						
MATQ	Matagami	85.43	25	P	P	01 23 55.9	+0.3
	baz=330						
KSU1	Kansas State U	85.90	42	P	P	01 23 58.6	+0.4
	baz=318						
TAOE	Nuku Hiva Isla	86.01	104	*e*T	T	02 58 09.5	
	comp=Z,27nm,0.2s						
MEH	Mehetia	86.07	116	*e*T	T	02 58 13.0	
	comp=Z,61nm,0.3s						
JFWS	Jewell Farm	86.12	36	P	P	01 23 59.0	-0.1
	baz=322						
MNTX	Cornudas Mount	86.14	52	P	P	01 23 59.8	+0.3
	baz=314						
AMTX	Amarillo	86.15	48	P	P	01 24 00.5	+1.0
	baz=315						
MSTX	Muleshoe	86.15	49	P	P	01 24 00.2	+0.6
	baz=315						
MSTX	Muleshoe	86.15	49	IAmb	IAmb	01 24 02.0	
	comp=Z,3.9nm,0.8s						
LSQQ	Lebel-sur-Quev	86.25	25	P	P	01 23 59.8	+0.1
	baz=330						
WMOK	Wichita Mounta	87.91	46	P	P	01 24 09.1	+1.0
	baz=317						
WMOK	Wichita Mounta	87.91	46	IAmb	IAmb	01 24 10.6	
	comp=Z,4.2nm,1.1s						
HDIL	Hopedale	88.42	37	P	P	01 24 10.9	+0.7
	baz=322						
S39A	Bolivar	88.66	41	IAmb	IAmb	01 24 12.4	
	comp=Z,5.7nm,0.9s						
TUL1	Leonard	88.70	43	P	P	01 24 11.9	+0.2
	baz=318						
D56A	ZEC Mazanza, M	88.73	24	P	P	01 24 11.8	+0.2
	baz=332						
R40A	Maddies Statio	88.74	40	IAmb	IAmb	01 24 30.3	
	comp=Z,3.9nm,0.7s						
TBI	Tubuai	88.80	121	*e*LR	LR	01 51 38.9	
	comp=Z,222nm,22.5s						
TBI	Tubuai	88.80	121	*e*T	T	03 01 39.1	
	comp=Z,178nm,0.3s						
TX32	Lajitas Array	88.84	53	P	P	01 24 11.8	-0.8
TX32				IAmb	IAmb	01 24 14.6	
	comp=Z,2.8nm,0.8s						
TXAR	Lajitas Array	88.84	53	P	P	01 24 13.3	+0.7
	comp=Z,2.2nm,0.6s,baz=300,slow=3.2,SNR=30						
ABTX	Abilene, Hawle	88.95	48	P	P	01 24 13.9	+0.9
	baz=316						
ABTX	Abilene, Hawle	88.95	48	P	P	01 24 12.5	-0.5
ABTX				IAmb	IAmb	01 24 15.6	
	comp=Z,3.5nm,0.8s						
E56A	St. Veronique	89.09	25	P	P	01 24 13.7	+0.4
	baz=332						
CCM	Cathedral Cave	89.43	39	P	P	01 24 15.7	+0.6
	baz=321						
CCM	Cathedral Cave	89.43	39	P	P	01 24 15.0	-0.1
H53A	Bobcaygeon	89.57	28	P	P	01 24 15.7	+0.1
	baz=329						
E58A	La Victoria	89.80	24	P	P	01 24 16.8	+0.2
	baz=333						
U40A	Yellville	89.92	41	P	P	01 24 17.8	+0.4
	baz=320						
D60A	Saint Jean D’O	90.03	22	P	P	01 24 18.2	+0.5
	baz=335						
F59A	Saint Guilaume	90.42	24	P	P	01 24 19.8	+0.3
	baz=333						
MIAR	Mount Ida	90.92	43	P	P	01 24 22.7	+0.6
	baz=320						
H06N1	SOCORRO T-PHAS	91.01	65	T	T	03 05 43.8	
	SNR=4.1						
H06E1	SOCORRO T-PHAS	91.10	65	T	T	03 06 12.3	
	SNR=20						
P49A	Miami Univ. Ec	91.32	34	P	P	01 24 24.8	+0.9
	baz=325						
X40A	Basin Creek Fa	91.36	43	P	P	01 24 25.2	+1.1
	baz=320						
KEST	Kesra	94.21	323	LR	LR	02 12 05.4	
	comp=Z,251nm,18.9s,baz=328,slow=39						
TKL	Tuckaleechee C	94.93	36	P	P	01 24 40.3	-0.2
	comp=Z,2.0nm,0.5s,baz=186,slow=4.0,SNR=5.3						
ESDC	Sonseca Array	96.25	334	LR	LR	02 13 13.6	
	comp=Z,257nm,18.9s,baz=355,slow=39						
RKT	Rikitea	98.80	112	*e*LR	LR	01 56 29.3	
	comp=Z,450nm,29.5s						
LPAZ	La Paz	145.51	59	PKPbc	PKPbc	01 30 57.6	+0.2
	comp=Z,4.8nm,0.6s,baz=0.9,slow=4.4,SNR=17						
LPAZ	La Paz	145.51	59	PKPdf	PKPdf	01 30 56.3	-0.9
H03N2	Juan Fernandez	146.62	94	T	T	04 15 38.8	
	baz=291,slow=76,SNR=24						
H03N3	Juan Fernandez	146.64	94	T	T	04 15 42.0	
	baz=291,slow=76,SNR=28						
H03N1	Juan Fernandez	146.64	94	T	T	04 15 42.8	
	baz=291,slow=76,SNR=36						
PLCA	Paso Flores	154.83	106	PKPab	PKPab	01 31 35.5	+1.0
	comp=Z,3.1nm,1.0s,baz=316,slow=2.3,SNR=4.2						
PLCA	Paso Flores	154.83	106	PKPdf	PKPdf	01 31 10.6	+0.2

ANF ***26*** *01:18:36.4±0.1, 33°.93N×116°.03W, h9^{km}±1^{km}, ML3.7/30, Error ellipse: s-maj=1.1km s-min=0.9km az=170.0*

IDC ***26*** *01:18:36.3±0.8, 33°.90N×115°.99W, h0^{km}, mb1 3.5/5, mb1mx3.4/44, mbtmp3.2/5, ML3.5/5, Error ellipse: s-maj=11.4km s-min=6.2km az=131.0*

SCEDC ***26*** *01:18:37.5, 33°.94N×116°.03W, h4^{km}*

NEIC ***26*** *01:18:37.0±0.8, 33°.942N±0°.010×116°.038W±0°.008, h16^{km}±1^{km}, Error ellipse: s-maj=1.5km s-min=1.0km az=175.0*

PAS ***26*** *01:18:37.5±0.9, 33°.938N±0°.009×116°.03W±0°.01, h4^{km}±6^{km}, ML3.7/213, ML3.4/80(NEIC), Error ellipse: s-maj=1.4km s-min=1.3km az=46.0*

ISC 26 01:18:37.2±0.8**, 33°.94N**±0°.01×**116°.02W**±0°.01**, h10**^{km}±5^{km}**, n163,** σ0^{s}**.85**/222**, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
BELC	Belle Mtn. Jos	0.07	19	P	Pg	01 18 39.0	-0.5
	baz=202,SNR=1000						
BELC				S	Sg	01 18 40.2	-1.0
	baz=202						
BELC	Belle Mtn. Jos	0.07	19		Pg	01 18 39.0	-0.5
TPC	Twentynine Pal	0.17	353		Pg	01 18 40.7	-0.2
CTCC	Cactus City	0.28	174		Pg	01 18 43.2	+0.4
CTCC					Sg	01 18 47.8	+1.1
CTW	Cottonwood Mou	0.29	154		Pg	01 18 43.4	+0.4
CTW					Sg	01 18 47.6	+0.7
EW2	E Wide Canyon	0.32	271		Pg	01 18 43.6	0.0
BLAC	Blackrock camp	0.33	294		Sg	01 18 48.2	-0.1
HAY	Hayfield	0.36	129		Pb	01 18 45.2	-0.6
HAY					Sb	01 18 50.7	-0.8
PMD	Palm Desert	0.41	226		Pg	01 18 45.1	-0.2
PMD					Sg	01 18 50.4	-0.2
GTM	Goat Mountain	0.45	323		Pg	01 18 46.1	+0.1
GTM					Sg	01 18 52.3	+0.3
DEVC	Devers	0.46	270		Pg	01 18 46.4	+0.3
DEVC					Sb	01 18 53.3	-1.0
XPFO	Pion Flat	0.48	228		Pg	01 18 46.4	-0.3
XPFO					Sg	01 18 52.8	-0.2
PFO	Pinyon Flats O	0.49	228	Pg	Pg	01 18 46.1	-0.5
	81nm,0.3s,baz=38,slow=18,SNR=1763						
PFO				Lg	Lg	01 18 52.4	
	443nm,0.3s,baz=308,slow=23,SNR=52						
PFO	Pinyon Flats O	0.49	228	P	Pg	01 18 46.4	-0.2
	baz=48,SNR=281						
PFO				S	Sg	01 18 52.6	-0.5
	baz=48						
PFO	Pinyon Flats O	0.49	228		Pg	01 18 46.4	-0.2
PFO					Sg	01 18 52.8	-0.2
PFO	Pinyon Flats O	0.49	228	Pg	Pg	01 18 46.4	-0.2
PFO				Sg	Sg	01 18 52.9	-0.2
PFO				IAML		01 18 55.6	
	2µm,0.3s						
PFO				IAML		01 18 58.0	
	2µm,0.1s						
BC3	Big Chuckawall	0.55	120	P	Pg	01 18 48.3	+0.4
	baz=301,SNR=938						

BC3				S	Sg	01 18 55.7	+0.5
	baz=301						
BC3	Big Chuckawall	0.55	120		Pg	01 18 48.3	+0.4
BC3					Sg	01 18 56.0	+0.8
GVDA	Garner Valley	0.60	244		Pg	01 18 48.6	-0.3
GVDA					Sg	01 18 56.8	0.0
FRK	Frink	0.62	149		Pg	01 18 49.4	+0.2
SNDA	J Saunders Pla	0.62	232		Pg	01 18 49.1	-0.1
SNDA					Sg	01 18 57.5	+0.1
DNR	Dunn Ranch,Anz	0.62	234		Pg	01 18 49.2	-0.1
DNR					Sg	01 18 57.9	+0.4
FRD	Ford Ranch, An	0.65	228		Pg	01 18 49.6	-0.2
FRD					Sg	01 18 58.2	-0.1
FRD	Ford Ranch, An	0.65	228		Pg	01 18 49.6	-0.2
FRD					Sg	01 18 58.3	-0.1
SALN	Salton City	0.66	177		Pg	01 18 50.0	+0.1
SALN					Sb	01 18 59.5	-0.4
BZNA	Buzz No.'s Pla	0.69	231		Pg	01 18 50.5	-0.1
BZNA					Sg	01 18 59.6	-0.1
CRY	Cary Ranch	0.70	238		Pg	01 18 50.5	-0.2
CRY					Sg	01 18 59.9	0.0
BORC	Borrego Spring	0.74	206		Pg	01 18 51.4	-0.1
BORC					Sg	01 19 01.1	-0.1
IRM	Iron Mountain	0.76	73	P	Pg	01 18 51.7	-0.2
	baz=254,SNR=918						
IRM				S	Sg	01 19 02.0	+0.2
	baz=254						
IRM	Iron Mountain	0.76	73		Pg	01 18 51.7	-0.2
IRM					Sg	01 19 02.3	+0.4
SLH	Sleepy Hollow	0.77	195		Pg	01 18 51.9	-0.1
SLH					Sg	01 19 02.3	+0.4
SIL	Silver Peak	0.78	302		Pg	01 18 50.7	-1.6
POB	Polly Butte	0.79	252		Pg	01 18 52.1	-0.3
POB					Sg	01 19 02.9	+0.2
BBSC	Beaumont Base	0.80	269		Pg	01 18 52.4	-0.1
BBRC	Big Bear Solar	0.81	294	P	Pg	01 18 52.7	-0.1
	baz=114,SNR=55						
BBRC				S	Sg	01 19 03.6	+0.1
	baz=114						
BBRC	Big Bear Solar	0.81	294		Pg	01 18 52.7	-0.1
BBRC					Sg	01 19 03.6	+0.1
ERRC	Elmore Ranch	0.83	168		Pg	01 18 53.4	+0.2
HMTC	Hemet	0.85	255		Pg	01 18 53.0	-0.5
HMTC					Sg	01 19 04.4	-0.2
DGR	Domenigoni Val	0.87	251		Pg	01 18 53.5	-0.4
DGR					Sg	01 19 04.9	-0.3
BTL	Butler Peak	0.87	292		Pg	01 18 54.0	0.0
DANC	Danby, Needles	0.88	37		Pg	01 18 54.0	-0.1
GMRC	Granite Mounta	0.90	20	P	Pg	01 18 54.1	-0.4
	baz=200,SNR=1000						
GMRC				S	Sg	01 19 05.9	-0.4
	baz=200						
GMRC	Granite Mounta	0.90	20		Pg	01 18 54.0	-0.4
GMRC					Sg	01 19 06.0	-0.2
MATG	Mataguay Scout	0.90	215		Pg	01 18 54.2	-0.3
MATG					Sg	01 19 06.3	+0.1
BACC	Bachelor Mtn.	0.91	249		Pg	01 18 54.1	-0.5
BACC					Sg	01 19 05.9	-0.5
CFT	Crafton Hills	0.91	277		Pg	01 18 54.3	-0.4
SVD	Seven Oaks Dam	0.91	281		Pg	01 18 54.2	-0.5
PLM	Palomar	0.91	230		Pg	01 18 54.3	-0.4
PLM					Sg	01 19 06.4	-0.2
HEC	Hector,Ludlow	0.93	344	P	Pg	01 18 54.6	-0.5
	baz=164,SNR=268						
HEC				S	Sg	01 19 07.5	+0.3
	baz=164						
HEC	Hector,Ludlow	0.93	344		Pg	01 18 54.6	-0.5
PEC	Perris	0.95	268		Pg	01 18 54.9	-0.5
PEC					Sg	01 19 07.3	-0.4
SWSC	Sam W. Stewart	1.01	169	P	Pg	01 18 55.5	-1.0
	baz=349,SNR=89						
SWSC				S	Sg	01 19 08.9	-0.7
	baz=349						
SWSC	Sam W. Stewart	1.01	169		Pg	01 18 55.5	-1.0
SWSC					Sg	01 19 09.4	-0.2
HLNC	Highland	1.01	281		Pg	01 18 56.0	-0.6
MURC	Murrieta	1.03	251	P	Pg	01 18 56.3	-0.7
	baz=70,SNR=410						
MURC				S	Sg	01 19 10.4	0.0
	baz=70						
MURC	Murrieta	1.03	251		Pg	01 18 56.3	-0.7
MURC					Sg	01 19 10.5	+0.1
CRR	Carrizo Plain	1.05	177		Pg	01 18 56.2	-1.1
CBKC	Canebrake	1.05	190		Pg	01 18 56.4	-1.0
CFSC	Central Fire S	1.06	280		Pg	01 18 57.4	-0.1
RSBC	Riverside Bore	1.08	272		Pg	01 18 57.1	-0.9
RSBC	Riverside Bore	1.08	272		Pg	01 18 57.1	-0.9
RSBC					Sg	01 19 11.7	-0.4
MONP2	Monument Peak	1.09	198	P	Pg	01 18 57.5	-0.7
	baz=17,SNR=201						
MONP2				S	Sg	01 19 11.9	-0.6
	baz=17						
MONP2	Monument Peak	1.09	198		Pg	01 18 57.4	-0.7
MONP2					Sg	01 19 11.8	-0.6
SME	Santa Rosa Min	1.11	265		Pg	01 18 57.5	-1.0
RVR	Riverside	1.12	273		Pg	01 18 57.9	-0.9
CSP	Cedar Springs	1.16	288		Pg	01 18 58.9	-0.6
HWB	Hans Werner Br	1.20	221		Pg	01 18 59.0	-1.2
HWB					Sg	01 19 14.7	-1.1
ELS	Elsinore Mount	1.20	257		Pg	01 18 59.1	-1.2
ELS					Sg	01 19 14.7	-1.2
DSCC	Desert Studies	1.21	357		Pg	01 18 59.3	-1.0
DPP	Dos Picos Cty	1.21	220		Pg	01 18 59.1	-1.3
DPP					Sg	01 19 15.3	-0.8
RRX	Edison Barstow	1.23	320	S	Sb	01 19 16.9	+0.3
	baz=139						
RRX	Edison Barstow	1.23	320		Pn	01 19 01.4	+0.9
VTV	Victorville	1.25	300		Pg	01 19 00.5	-0.6
BLYC	Blythe	1.26	98		Pg	01 18 59.9	-1.6
GORC	Green Oak Ranc	1.27	233		Pg	01 19 00.2	-1.4
MLSC	Mira Loma	1.28	273		Pg	01 19 00.7	-1.0
IKP	In-Ko-Pah, Jac	1.28	183	P	Pg	01 18 59.8	-2.0
	baz=3.0,SNR=47						
IKP	In-Ko-Pah, Jac	1.28	183		Pg	01 18 59.8	-2.0
YUH	Yuha Desert	1.29	176		Pg	01 18 59.6	-2.3
RUN	Ruthven	1.30	137		Pb	01 19 02.4	+0.7
COA	Coachella	1.31	145		Pn	01 19 00.2	-1.3
ADO	Adelanto Recei	1.32	298		Pg	01 19 02.1	-0.4
RMX	La Rumorosa	1.33	182		Pn	01 19 01.1	-0.8
RMX				IAML		01 19 21.6	
	comp=E,376nm,0.4s						
GLA	Glamis	1.33	131	P	Pn	01 19 00.9	-1.0
	baz=312,SNR=128						
GLA				S	Sg	01 19 20.0	-0.1
	baz=312						
GLA	Glamis	1.33	131		Pn	01 19 00.9	-1.0
BAR	Barrett	1.36	204	Pn	Pn	01 19 01.3	-1.0
109C	Camp Elliot, M	1.38	221	P	Pn	01 19 01.7	-0.8
	baz=40,SNR=53						
109C				S	Sb	01 19 19.9	-0.9
	baz=40						
109C	Camp Elliot, M	1.38	221		Pn	01 19 02.4	-0.1
BFSC	Mount Baldy Ra	1.39	283	P	Pn	01 19 02.3	-0.5
	baz=102,SNR=297						
BFSC				S	Sg	01 19 21.2	-0.7
	baz=102						
BFSC	Mount Baldy Ra	1.39	283		Pn	01 19 02.7	-0.1
SDRC	San Diego Road	1.42	213		Pn	01 19 02.3	-0.8
NEE2	Needles Airpor	1.43	54	P	Pn	01 19 02.5	-0.7
	baz=235,SNR=102						
NEE2				S	Sb	01 19 22.6	+0.5
	baz=235						
NEE2	Needles Airpor	1.43	54		Pn	01 19 02.5	-0.7
TKX	Tecate	1.45	200		Pn	01 19 03.8	+0.3
TKX				IAML		01 19 23.8	
	comp=N,715nm,0.1s						
EMSC	East Mesa	1.48	144		Pn	01 19 03.3	-0.5
PSRC	Puddingstone R	1.49	276		Pn	01 19 03.9	-0.1
TUQ	Turquoise Moun	1.50	3		Pn	01 19 03.6	-0.6
HYS	Haystack Butte	1.58	306		Pn	01 19 04.9	-0.4
PDMCI	Parker Dam,Lak	1.60	76	P	Pn	01 19 04.6	-1.0
	baz=257,SNR=406						
PDMCI				S	Sn	01 19 25.9	-0.4
	baz=257						
CPBX	Cerro Prieto	1.63	158		Pn	01 19 06.7	+0.8
CPBX				IAML		01 20 02.4	
	comp=E,620nm,0.5s						
CPBX				IAML		01 20 02.4	
	comp=N,551nm,0.6s						
TJX	Tijuana	1.66	212		Pn	01 19 07.1	+0.7
CBX	Cerro Bola	1.71	199		Pn	01 19 07.1	0.0
CBX				IAML		01 19 33.0	
	comp=E,401nm,0.5s						
CBX				IAML		01 19 33.6	
	comp=N,314nm,0.3s						
MWC	Mount Wilson	1.71	280		Pn	01 19 08.0	+0.8
PASC	Pasadena Art C	1.81	278	Pn	Pn	01 19 09.1	+0.7
PASC				IAML		01 19 36.1	
	comp=E,495nm,0.3s						
PASC				IAML		01 19 38.2	
	comp=N,346nm,0.8s						
EDW2	Edwards Air Fo	1.88	301	P	Pn	01 19 08.8	-0.7
	baz=120						
EDW2				Sb	Sb	01 19 36.0	+0.7
	baz=120						
FMP	Fort Macarthur	1.90	264	Pb	Pn	01 19 11.0	+1.3
	baz=82						
ESJX	Sierra Juarez	1.93	178		Pn	01 19 09.6	-0.6
DECC	Green Verdugo	1.94	280	Pb	Pb	01 19 12.1	-0.6
	baz=99						
DECC				Sb	Sb	01 19 37.9	+0.9
	baz=99						
SHOC	Shoshone, Teco	1.97	354	P	Pn	01 19 10.2	-0.5
	baz=174,SNR=107						
SHOC				Sb	Sg	01 19 39.6	-0.9
	baz=174						
LRMC	Laurel Mtn Rad	2.06	319	P	Pn	01 19 11.3	-0.7
	baz=138,SNR=31						
CIS	Catalina Islan	2.06	256	P	Pn	01 19 11.2	-0.7
	baz=74,SNR=18						
CIS				Sb	Sb	01 19 41.2	+0.7
	baz=74						
W13A	Hualapai Mount	2.11	56		Pn	01 19 12.4	-0.4
W13A				IAML		01 19 46.7	
	comp=N,395nm,0.5s						
CCX	Cicese	2.13	195	Pn	Pn	01 19 13.7	+0.9
CCX				IAML		01 19 43.3	
	comp=N,377nm,0.4s						
OSI	Osito Audit: C	2.33	288	Pb	Pb	01 19 19.0	-0.4
	baz=106						
OSI	Osito Audit: C	2.33	288	Pn	Pn	01 19 16.6	+0.9
OSI				IAML		01 19 54.6	
	comp=E,294nm,0.8s						
MPMC	Manual Prospec	2.43	331	P	Pn	01 19 16.7	-0.5
	baz=150,SNR=51						
MPMC				Sb	Sb	01 19 53.3	+1.9
	baz=150						
ARVC	Arvin	2.60	298	Sb	Sb	01 19 58.2	+2.2
	baz=116						
ISA	Isabella, Lake	2.65	311	Pg	Pg	01 19 27.5	-0.5
	baz=130						
ISA				Sb	Sb	01 19 59.3	+1.8
	baz=130						
ISA	Isabella, Lake	2.65	311		Pn	01 19 20.9	+0.8
ISA				IAML		01 20 03.5	
	comp=E,134nm,0.9s						
ISA				IAML		01 20 07.6	
	comp=N,123nm,0.7s						
SHPR	Sheep Range	2.66	15		Pn	01 19 20.4	+0.1
SHPR				IAML		01 20 07.3	
	comp=E,87nm,1.3s						
SPX	San Pedro Mart	2.93	171	Pn	Pn	01 19 24.8	+0.7
TPNV	Topopah Spring	3.01	357	P	Pn	01 19 25.6	+0.5
	baz=176,SNR=15						
TPNV	Topopah Spring	3.01	357		Pn	01 19 25.6	+0.5
TPNV				IAML		01 20 17.1	
	comp=E,96nm,0.5s						
TPNV				IAML		01 20 19.4	
	comp=E,92nm,0.6s						
PIX	Pinacate	3.21	137	Pn	Pn	01 19 28.2	+0.6
GRAC	Grapevine Rang	3.24	341	P	Pn	01 19 28.8	+0.6
	baz=160,SNR=36						
214A	Organ Pipe Nat	3.35	125	Pn	Pn	01 19 28.5	-1.0
214A				IAML		01 20 25.6	
	comp=E,74nm,0.3s						
214A				IAML		01 20 29.9	
	comp=N,91nm,1.2s						
PRN	Pahroc Range	3.55	13		Pn	01 19 33.4	+0.8
PRN				IAML		01 20 35.1	
	comp=E,108nm,0.8s						
PRN				IAML		01 20 44.3	
	comp=N,96nm,0.6s						
LCMT	Little Creek M	3.82	36		Pn	01 19 36.9	+0.7
LCMT				IAML		01 20 46.7	
	comp=N,47nm,1.2s						
LCMT				IAML		01 20 47.8	
	comp=E,53nm,1.6s						
PAGB	Antelope Grade	3.91	298	Pn	Pn	01 19 38.2	+0.9
PAGB				IAML		01 20 48.5	
	comp=N,45nm,1.1s						
PAGB				IAML		01 21 08.8	
	comp=E,58nm,1.0s						
KNB	Kanab	4.03	39		Pn	01 19 40.0	+0.8
WUAZ	Wupatki	4.14	66	Pn	Pn	01 19 41.5	+0.9
CCUT	Cedar City	4.21	30		Pn	01 19 42.3	+0.7
CCUT				IAML		01 21 02.8	
	comp=E,31nm,1.4s						
TPH	Tonopah	4.24	347	Pn	Pn	01 19 42.6	+0.6
TPH	Tonopah	4.24	347	IAML		01 20 52.8	
	comp=N,28nm,0.9s						
TPH				IAML		01 20 53.1	
	comp=E,24nm,1.1s						
OMMB	Old Mammoth Mi	4.39	327		Pn	01 19 44.8	+0.6
R11A	Troy Canyon, C	4.42	4		Pn	01 19 45.1	+0.6
TUC	Tucson	4.69	109	P	Pn	01 19 46.7	-1.4
	baz=292						
TUC	Tucson	4.69	109	Pn	Pn	01 19 46.7	-1.4
TUC				IAML		01 21 07.0	
	comp=E,26nm,0.8s						
LHV	Little Huntoon	4.75	336		Pn	01 19 49.5	+0.6
LHV				IAML		01 21 19.3	
	comp=N,23nm,3.0s						
LHV				IAML		01 21 44.8	
	comp=E,23nm,2.1s						
NV11	Mina Array Sit	4.81	340		Pn	01 19 50.4	+0.7
NVAR	Mina Array Bea	4.85	338	Pn	Pn	01 19 51.2	+0.8
	comp=E,1.9nm,0.3s,baz=160,slow=15,SNR=13						
NVAR				Pg	Pg	01 20 07.0	-3.0
	comp=E,1.7nm,0.3s,baz=159,slow=18,SNR=13						
NVAR				Lg	Lg	01 21 10.8	
	baz=141,slow=23,SNR=1.5						
NVAR	Mina Array Bea	4.85	338		Pn	01 19 50.9	+0.5
PSUT	Pine Spring	4.91	20		Pn	01 19 51.9	+0.6
PSUT				IAML		01 21 21.8	
	comp=N,32nm,0.8s						
PSUT				IAML		01 21 23.5	
	comp=E,35nm,0.8s						
RYN	Ryan	5.10	337	Pn	Pn	01 19 54.4	+0.6
MTPU	Mount Pierson	5.14	36		Pn	01 19 55.1	+0.5
MTPU				IAML		01 21 26.9	
	comp=N,30nm,1.4s						
MTPU				IAML		01 21 33.9	
	comp=E,19nm,1.3s						
SPR3	Spring Creek 3	5.23	15	Pn	Pn	01 19 55.3	-0.5
SPR3				IAML		01 21 24.1	
	comp=N,17nm,1.1s						
SPR3				IAML		01 21 26.0	
	comp=E,20nm,1.1s						
KVN	Kaiserville	5.37	342		Pn	01 19 58.1	+0.5
PNTR	Pine Nut	5.89	332	Pn	Pn	01 20 05.3	+0.6
ELK	Elko	6.83	5	Pn	Pn	01 20 19.0	+1.4
	comp=E,0.3nm,0.3s,baz=215,slow=7.8,SNR=5.4						
ELK				Pg	Pg	01 20 44.2	-3.6
	comp=E,0.4nm,0.3s,baz=214,slow=15,SNR=13						
ELK				Lg	Lg	01 22 12.0	
	comp=E,0.2nm,0.3s,baz=252,slow=12,SNR=2.2						
ELK	Elko	6.83	5	Pn	Pn	01 20 18.2	+0.6
PV05	Paradox Valley	6.97	52	Pn	Pn	01 20 21.8	+2.2
121A	Cookes Peak, D	7.04	99	P	Pn	01 20 20.8	+0.2
	baz=284,SNR=8.7						
121A	Cookes Peak, D	7.04	99	Pn	Pn	01 20 21.1	+0.5
PV19	Morning Glory	7.18	51	Pn	Pn	01 20 22.4	0.0
PV14	Lion Creek, Pa	7.19	50	Pn	Pn	01 20 20.8	-1.7
PV13	Radium Mtn., P	7.20	52	Pn	Pn	01 20 23.2	+0.5
PV12	Saucer Basin,	7.30	51	Pn	Pn	01 20 24.7	+0.7
ANMO	Albuquerque	7.97	80	Pn	Pn	01 20 34.4	+1.2
	comp=E,0.1nm,0.3s,baz=253,slow=17,SNR=1.8						
ANMO				Pg	Pg	01 21 03.6	-6.1
	comp=E,0.4nm,0.3s,baz=266,slow=14,SNR=8.9						
ANMO				Lg	Lg	01 22 45.6	
	comp=E,0.1nm,0.3s,baz=159,slow=18,SNR=1.7						
ANMO	Albuquerque	7.97	80		Pn	01 20 33.8	+0.6
MNTX	Cornudas Mount	9.23	101	Pn	Pn	01 20 50.9	+0.5
PDAR	Pinedale Array	10.17	28	Pn	Pn	01 21 07.1	+3.7
	comp=E,0.1nm,0.3s,baz=199,slow=16,SNR=3.2						
TXAR	Lajitas Array	11.48	110	Pn	Pn	01 21 23.0	+1.6
	comp=E,0.4nm,0.3s,baz=290,slow=12,SNR=30						
TXAR	Lajitas Array	11.48	110		Pn	01 21 22.2	+0.8

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*INET **26** 01:20:02.2, 8°.19N×83°.44W, h15^{km}, MW2.7*

UCR 26 01:19:42.3±1.7**, 6°.98N×82°.73W, h17^{km}**±11^{km}**, MW4.2, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PIRO	Carate, Puerto	1.54	337	*e*P	Pn	01 20 08.0	-1.0
PIRO				*e*S	Sn	01 20 28.4	-0.3
BRU2	Volcan	1.81	1	*e*P	Pn	01 20 12.9	0.0
BRU2				*e*S	Sn	01 20 36.2	+0.7
RIOS	Rincon, Osa	1.88	336	*e*P	Pn	01 20 12.4	-1.3
RIOS				*e*S	Sn	01 20 37.9	+0.8
DRK0	Durika	2.33	347	*e*P	Pn	01 20 20.5	+0.4
PEZE	Perez Zeledon,	2.57	339	*e*P	Pn	01 20 23.7	+0.4
CDM	Cerro de Muert	2.76	338	*e*P	Pn	01 20 26.6	+0.3
RIMA	Rio Macho	2.99	338	*e*P	Pn	01 20 30.0	+0.8
LCR2	La Lucha 2	3.02	336	*e*P	Pn	01 20 29.9	+0.2
JACO	JACO, Garabito	3.28	325	*e*P	Pn	01 20 32.5	-0.5
LAFE	Finca La Fe, P	3.54	323	*e*P	Pn	01 20 36.4	-0.2
JTS	Las Juntas de	3.96	326	*e*P	Pn	01 20 42.5	+0.2
GRZA	Playa Garza	4.10	316	*e*P	Pn	01 20 44.5	+0.3

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*NOU **26** 01:48:39.5, 39°.86S×177°.25E, h0^{km}, MLv3.5, Off E. Coast of N. Island, N.Z.*

WEL 26 01:48:43.1, 39°.8S±1°.0×**17°7E**±°**, h29^{km}**±3^{km}**, M3.2**/17**, ML3.5**/17**, MLv3.2**/17**, Error ellipse: s-maj=0.0km s-min=0.0km az=75.8, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAHZ	Kahuranaki	0.09	67	P	Pb	01 48 48.3	-0.1
KAHZ				S	Sb	01 48 52.9	+0.9
PXZ	Pawanui	0.21	162	P	Pn	01 48 49.9	-0.4
PXZ				S	Sb	01 48 56.2	+2.4
CKHZ	Cape Kidnapper	0.29	54	P	Pb	01 48 50.6	+0.2
CKHZ				S	Sn	01 48 57.3	+0.6
WPHZ	Waipukurau	0.35	227	P	Pn	01 48 52.0	-0.3
WPHZ				S	Sn	01 48 59.6	+1.3
KRHZ	Kereru	0.36	300	P	Pb	01 48 51.3	-0.2
MCHZ	McNeill Hill	0.39	351	P	Pb	01 48 52.1	+0.3
MCHZ				S	Sn	01 48 59.6	+0.4
PNHZ	Pukenui	0.45	259	P	Pb	01 48 53.0	+0.2
PNHZ				S	Sn	01 49 01.1	+0.3
PRHZ	Porangahau	0.45	194	P	Pn	01 48 53.4	-0.2
PRHZ				S	Sn	01 49 02.0	+1.2
KWHZ	Kaweka Forest	0.49	326	P	Pb	01 48 53.2	-0.1
ARHZ	Aropaoanui	0.59	17	P	Pn	01 48 55.4	-0.1
BHHZ	Black Hill Sta	0.65	301	P	Pb	01 48 55.7	-0.3
DVHZ	Dannevirke	0.66	225	P	Pb	01 48 56.4	+0.1
TSZ	Takapari Road	0.67	249	P	Pb	01 48 56.3	0.0
ANWZ	Angora Road	0.67	200	P	Pb	01 48 56.4	0.0
BKZ	Black Stump Fm	0.70	342	P	Pb	01 48 56.5	-0.3
NMHZ	Naumai	0.73	2	P	Pn	01 48 57.5	0.0
WHHZ	Waihua	0.83	26	P	Pb	01 48 59.0	0.0
MOVZ	Moawhango	0.89	298	P	Pn	01 48 59.9	+0.1
BFZ	Birch Farm	0.94	205	P	Pn	01 48 59.8	-0.7
PRWZ	Pori Road	0.95	220	P	Pn	01 49 00.5	0.0
POWZ	Post Office Ro	0.96	234	P	Pb	01 49 01.0	-0.2
MTHZ	Maungataniwha	0.97	3	P	Pn	01 49 00.5	-0.3
MRHZ	Matea Rd	1.03	344	P	Pn	01 49 01.8	+0.2
TUVZ	Tukino	1.03	302	P	Pb	01 49 02.7	+0.2
WNVZ	Wahianoa	1.04	298	P	Pb	01 49 02.7	0.0
KNZ	Kokohu	1.06	41	P	Pn	01 49 00.8	-1.2
WHVZ	Whangaehu Hut	1.07	300	P	Pb	01 49 03.3	+0.1
ETVZ	East Tongariro	1.07	310	P	Pb	01 49 03.2	-0.1
HATZ	Hinemaiaia	1.07	330	P	Pb	01 49 02.8	-0.4
OTVZ	Oturere	1.08	307	P	Pb	01 49 03.4	0.0
TRVZ	Turoa	1.08	299	P	Pb	01 49 03.6	+0.1
TMVZ	Te Maari	1.09	310	P	Pb	01 49 03.3	-0.2
MTVZ	Mangateitei	1.10	293	P	Pb	01 49 03.9	+0.2
FWVZ	Far West T-bar	1.10	301	P	Pb	01 49 03.7	-0.1
MHGZ	Mahia Peninsul	1.10	53	P	Pn	01 49 01.6	-1.0
RITZ	Rihia Road	1.11	320	P	Pb	01 49 03.8	+0.1
NGZ	Ngauruhoe	1.12	305	P	Pb	01 49 04.0	0.0
SNGZ	Shannon Statio	1.13	23	P	Pn	01 49 02.5	-0.5
KRVZ	Karewarewa	1.14	309	P	Pb	01 49 04.3	-0.1
WTVZ	West Tongariro	1.16	307	P	Pb	01 49 04.6	-0.1
TIWZ	Tintock	1.17	215	P	Pn	01 49 02.9	-0.6
KATZ	Kakaramea	1.19	315	P	Pb	01 49 05.1	-0.1
RTZ	Ruatahuna	1.22	8	P	Pn	01 49 03.9	-0.4
PKVZ	Pokaka	1.23	295	P	Pb	01 49 06.0	+0.2
RATZ	Rangitukua	1.23	321	P	Pb	01 49 06.2	+0.3
MRZ	Mangatainoka R	1.24	227	P	Pn	01 49 03.8	-0.7
TWVZ	Taurewa	1.28	306	P	Pn	01 49 05.9	+0.7
WHTZ	Whakaora	1.32	331	P	Pb	01 49 07.9	+0.5
MUGZ	Murupara	1.35	360	P	Pn	01 49 05.7	-0.3
RIGZ	Rimuhau	1.36	35	P	Pn	01 49 05.3	-0.8
WATZ	Wairara	1.38	324	P	Pn	01 49 06.9	+0.5
WAZ	Wanganui	1.38	272	P	Pb	01 49 07.9	-0.4
RAGZ	Rawiri	1.42	21	P	Pn	01 49 05.6	-1.5
HOWZ	Holdsworth Sta	1.44	222	P	Pn	01 49 06.1	-1.1
TMWZ	Te Maipa	1.45	208	P	Pn	01 49 06.0	-1.4
OGWZ	Otaki Gorge	1.58	231	P	Pn	01 49 08.4	-0.7
URZ	Urewera	1.59	10	P	Pn	01 49 08.5	-0.8
MWZ	Matawai	1.60	22	P	Pn	01 49 08.3	-1.2
TARZ	Mount Tarawera	1.60	352	P	Pn	01 49 09.8	+0.2
MTW	Mount Morrison	1.65	216	P	Pn	01 49 08.2	-1.8
VRZ	Vera Road	1.71	294	P	Pb	01 49 14.7	+0.7
KIW	Kapiti Island	1.76	233	P	Pn	01 49 11.2	-0.5
TLZ	Tolley Road	1.78	327	P	Pn	01 49 13.5	+1.6
CAW	Cannon Point	1.83	225	P	Pn	01 49 11.7	-0.9
PAWZ	Paruwai Farm	1.86	213	P	Pn	01 49 11.3	-1.8
LREZ	Lake Rotokare	1.87	281	P	Pb	01 49 17.5	+0.9
MSWZ	Moikau Station	1.97	216	P	Pn	01 49 12.7	-1.8
HIZ	Hauiti	1.99	311	P	Pb	01 49 17.4	-1.2
RUGZ	Raukumara Rang	1.99	21	P	Pn	01 49 13.8	-1.1
PLWZ	Palliser	2.09	213	P	Pn	01 49 13.8	-2.4
NEZ	North Egmont	2.15	284	P	Pb	01 49 23.0	+1.6
PKGZ	Pakihiroa	2.19	28	P	Pn	01 49 16.6	-0.9
KHEZ	Kahui Hut	2.20	283	P	Pb	01 49 23.4	+1.1
HAZ	Te Kaha	2.21	21	P	Pn	01 49 17.1	-0.7
TCW	Tory Channel	2.35	233	P	Pn	01 49 18.2	-1.6

IDC 26 01:56:05.7±3.6**, 29°.95N×87°.52E, h0^{km}, mb3.4**/2**, mb1 3.6**/4**, mb1mx3.3**/34**, mbtmp3.4**/4**, ML3.0**/1**, MS3.1**/1**, Ms1 3.1**/1**, ms1mx2.4**/32**, Error ellipse: s-maj=95.5km s-min=32.2km az=79.0, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	15.46	135	Pn	Pn	01 59 46.3	+1.0
	baz=322,slow=13,SNR=1.1						
MKAR	Makanchi Array	17.30	348	P	Pn	02 00 09.2	+0.5
	0.1nm,0.3s,baz=165,slow=12,SNR=2.8						
SONM	Songino Array	23.02	34	P	P	02 01 12.3	-0.1
	1.0nm,0.8s,baz=226,slow=9.5,SNR=8.6						
KLR	Kul'dur	38.48	47	LR	LR	02 19 56.7	
	comp=Z,29nm,19.3s,baz=193,slow=37						
ASAR	Alice Springs	69.47	135	P	P	02 07 16.0	-0.2
	0.1nm,0.3s,baz=316,slow=5.2,SNR=2.4						

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*IDC **26** 02:05:06.5±0.6, 34°.69N×36°.70W, h0^{km}, mb3.9/17, mb1 4.1/17, mb1mx3.9/48, mbtmp3.9/17, MS3.5/10, Ms1 3.5/10, ms1mx3.2/37, Error ellipse: s-maj=17.3km s-min=16.0km az=174.0*

*NEIC **26** 02:05:08.5±0.7, 34°.7N±0°.1×36°.7W±0°.1, h15^{km}±5^{km}, mb4.6/14, Error ellipse: s-maj=17.6km s-min=14.6km az=123.0*

ISC 26 02:05:08.4±0.5**, 34°.70N**±0°.10×**36°.71W**±0°.09**, h13^{km}, n47,** $\sigma 0^{s}.82$/37**, mb4.1**/20**, MS3.6**/10**, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATG	Bathurst New B	25.30	309	P	P	02 10 34.6	0.0
P61A	Hammonton	30.59	291	P	P	02 11 23.4	+1.5
KOWA	Kowa	35.65	116	P	P	02 12 05.9	-0.4
	1.7nm,1.0s,baz=342,slow=6.4,SNR=2.2						
KOWA	Kowa	35.65	116	P	P	02 12 05.4	-0.9
KOWA				IAmb	IAmb	02 12 13.0	
	comp=Z,7.1nm,1.1s						
SUMG	Summit	37.95	359	P	P	02 12 25.2	-0.5
GERES	GERESS Array B	39.44	53	P	P	02 12 38.5	+0.4
	comp=Z,0.8nm,0.9s,baz=235,slow=4.7,SNR=5.1						
GERES	GERESS Array B	39.44	53	P	P	02 12 38.1	-0.1
NOA	NORSAR Array B	40.20	34	LR	LR	02 25 32.2	
	comp=Z,20nm,20.6s,baz=225,slow=30						

D41A	Chassel	40.41	304	P	P	02 12 43.9	-2.3
DBIC	Dimbokro	40.49	126	LR	LR	02 27 24.9	
	comp=Z,84nm,20.8s,baz=348,slow=33						
TORD	Torodi Ar. Bea	40.80	112	P	P	02 12 48.7	-1.0
	comp=Z,2.7nm,1.1s,baz=308,slow=5.8,SNR=4.4						
TORD	Torodi Ar. Bea	40.80	112	P	P	02 12 49.0	-0.7
PTGA	Pitinga	41.44	217	P	P	02 12 54.4	-0.5
	comp=Z,1.3nm,0.3s,baz=26,slow=11,SNR=4.8						
PTGA	Pitinga	41.44	217	P	P	02 12 54.8	-0.1
PTGA				IAmb	IAmb	02 12 57.3	
	comp=Z,27nm,1.9s						
T42A	Van Buren	43.63	289	P	P	02 13 11.9	-0.7
ULM	Lac du Bonnet	45.12	309	P	P	02 13 23.8	-0.5
	comp=Z,1.4nm,0.7s,baz=72,slow=7.7,SNR=4.6						
ULM				LR	LR	02 32 17.3	
	comp=Z,64nm,18.9s,baz=72,slow=36						
ULM	Lac du Bonnet	45.12	309	P	P	02 13 23.8	-0.5
ULM				IAmb	IAmb	02 13 40.4	
	comp=Z,25nm,1.9s						
H10N2	ASCENSION HYDR	47.23	149	T	T	03 03 55.5	
	baz=335,slow=75,SNR=175						
H10N3	ASCENSION HYDR	47.24	149	T	T	03 03 55.9	
	baz=335,slow=75,SNR=142						
H10N1	ASCENSION HYDR	47.25	149	T	T	03 03 56.9	
	baz=335,slow=75,SNR=151						
H10S3	ASCENSION HYDR	48.17	150	T	T	03 05 02.2	
	baz=335,slow=74,SNR=52						
H10S2	ASCENSION HYDR	48.19	150	T	T	03 05 04.3	
	baz=245,slow=74,SNR=30						
RES	Resolute Bay	48.56	342	P	P	02 13 51.1	+0.2
	comp=Z,1.5nm,0.8s,baz=96,slow=8.8,SNR=9.3						
AKASG	Malin Array Be	49.38	50	P	P	02 13 56.7	-0.8
	comp=Z,2.2nm,0.8s,baz=276,slow=7.1,SNR=7.8						
AKASG	Malin Array Be	49.38	50	P	P	02 13 57.6	+0.1
BDFB	Brasilia	51.21	194	P	P	02 14 12.8	+1.0
	comp=Z,1.4nm,0.5s,baz=8.7,slow=7.3,SNR=3.1						
YKA	Yellowknife Ar	54.40	326	P	P	02 14 34.7	0.0
	comp=Z,0.6nm,0.8s,baz=86,slow=8.1,SNR=9.4						
YKA				LR	LR	02 36 39.2	
	comp=Z,56nm,19.9s,baz=0.0,slow=35						
PDAR	Pinedale Array	55.78	302	P	P	02 14 45.2	-0.2
	comp=Z,0.4nm,0.7s,baz=79,slow=9.2,SNR=4.4						
PDAR				LR	LR	02 37 49.8	
	comp=Z,59nm,20.6s,baz=60,slow=35						
TX31	Lajitas Ar. Si	56.10	285	P	P	02 14 47.6	-0.1
TX32	Lajitas Array	56.10	285	P	P	02 14 47.5	-0.2
TX32				IAmb	IAmb	02 14 54.4	
	comp=Z,8.8nm,1.8s						
TXAR	Lajitas Array	56.10	285	P	P	02 14 48.4	+0.7
	comp=Z,1.1nm,0.7s,baz=90,slow=7.1,SNR=17						
TXAR				LR	LR	02 37 22.3	
	comp=Z,52nm,19.1s,baz=0.0,slow=34						
TXAR	Lajitas Array	56.10	285	P	P	02 14 47.9	+0.2
LPAZ	La Paz	58.85	216	P	P	02 15 08.2	+0.6
	comp=Z,2.0nm,1.0s,baz=24,slow=5.2,SNR=4.7						
KBZ	Khabaz	60.12	55	P	P	02 15 17.3	+1.8
	comp=Z,2.8nm,0.9s,baz=357,slow=3.1,SNR=6.9						
KVN	Kaiserville	63.15	300	P	P	02 15 36.3	0.0
KVN				IAmb	IAmb	02 15 38.5	
	comp=Z,2.2nm,0.7s						
NVAR	Mina Array Bea	63.55	300	P	P	02 15 38.1	-0.9
	comp=Z,0.7nm,0.8s,baz=73,slow=5.3,SNR=6.1						
NVAR				LR	LR	02 43 58.1	
	comp=Z,41nm,18.1s,baz=264,slow=37						
K05A	Summer Lake	63.60	305	P	P	02 15 38.9	-0.3
K05A				IAmb	IAmb	02 15 41.8	
	comp=Z,6.2nm,0.9s						
CPUP	Villa Florida	63.77	201	P	P	02 15 39.6	-0.4
	comp=Z,0.5nm,0.4s,baz=0.0,slow=5.1,SNR=3.0						
ILAR	Eielson Array	67.03	334	P	P	02 16 02.5	+1.8
	comp=Z,0.5nm,0.8s,baz=38,slow=6.0,SNR=4.8						
ILAR				LR	LR	02 44 18.8	
	comp=Z,25nm,21.0s,baz=94,slow=35						
ILAR	Eielson Array	67.03	334	P	P	02 16 01.3	+0.5
KDAK	Kodiak Island	73.38	330	LR	LR	02 49 17.1	
	comp=Z,57nm,18.6s,baz=80,slow=36						
H09W1	TRISTAN DA CUN	74.95	160	T	T	03 38 35.3	
	SNR=9.6						
MK31	Makanchi Array	82.10	37	P	P	02 17 28.5	-0.2
MKAR	Makanchi Array	82.10	37	P	P	02 17 28.1	-0.6
	comp=Z,0.6nm,0.8s,baz=316,slow=5.1,SNR=8.6						
MKAR	Makanchi Array	82.10	37	P	P	02 17 28.0	-0.7
PETK	Petropavlovsk-	91.66	351	LR	LR	02 59 25.9	
	comp=Z,29nm,19.0s,baz=41,slow=36						
ODZ	Otahua Downs	156.71	235		PKPdf	02 25 02.7	-0.3

THE ***26*** *02:07:03.7, 38°.43N×21°.88E, h10^{km}±1^{km}, ML2.2/9, Error ellipse: s-maj=1.8km s-min=0.6km az=165.0*

ATH 26 02:07:03.6, 38°.43N×21°.87E, h10^{km}±1^{km}, ML2.2/7, Error ellipse: s-maj=1.6km s-min=0.8km az=108.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EFP	Efpalio	0.03	103	P	Pg	02 07 05.2	-0.3
EFP				S	Sg	02 07 06.5	-0.3
EFP				AML	AML	02 07 06.7	
	comp=E,28746µm,0.1s						
EFP				AML	AML	02 07 07.0	
	comp=N,33526µm,0.3s						
EFP	Efpalio	0.03	103	P	Pg	02 07 05.2	-0.2
EFP				S	Sg	02 07 06.7	0.0
	comp=N,16µm,0.2s						
UPR	University Cam	0.16	204	P	Pg	02 07 06.9	-0.3
UPR				S	Sg	02 07 10.2	+0.6
TRIZ	Trizonia	0.17	113	P	Pg	02 07 07.2	-0.1
TRIZ				S	Sg	02 07 10.1	+0.2
TRIZ	Trizonia	0.17	113	P	Pg	02 07 07.2	-0.1
TRIZ				S	Sg	02 07 10.2	+0.3
	comp=N,1µm,0.2s						
LAKA	Lakka	0.21	156	P	Pg	02 07 07.9	-0.1
LAKA	Lakka	0.21	156	P	Pg	02 07 07.9	-0.1
LAKA				S	Sg	02 07 11.4	+0.4
KALE	Kalithea	0.22	101	P	Pg	02 07 07.9	-0.3
KALE				S	Sg	02 07 11.4	+0.2
KALE				AML	AML	02 07 13.3	
	comp=N,1948µm,0.2s						
KALE				AML	AML	02 07 13.6	
	comp=E,761µm,0.3s						
KALE	Kalithea	0.22	101	P	Pg	02 07 07.8	-0.3
KALE				S	Sg	02 07 11.8	+0.6
	comp=E,690nm,0.2s						
ALIK	Aliki, Aigiali	0.26	132	P	Pg	02 07 08.8	0.0
ALIK				S	Sb	02 07 13.7	-1.1
KLV	Kalavryta, Ach	0.45	150	P	Pg	02 07 11.8	-0.6
KLV				S	Sg	02 07 18.9	+0.6
KLV				AML	AML	02 07 20.3	
	comp=N,492µm,0.1s						
KLV				AML	AML	02 07 20.4	
	comp=E,493µm,0.2s						
KLV	Kalavryta, Ach	0.45	150	P	Pg	02 07 11.8	-0.6
KLV				S	Sg	02 07 19.0	+0.7
EVR	Evrytania	0.48	354	P	Pg	02 07 12.5	-0.6
EVR				S	Sg	02 07 20.5	+0.9
EVR				AML	AML	02 07 21.5	
	comp=E,757µm,0.2s						
EVR				AML	AML	02 07 21.6	
	comp=N,1133µm,0.2s						
EVR	Evrytania	0.48	354	P	Pg	02 07 12.7	-0.4
EVR				S	Sg	02 07 20.4	+0.8
	comp=N,475nm,0.2s						
RLS	Riolos of Patr	0.49	220	P	Pg	02 07 12.9	-0.3
RLS				S	Sb	02 07 20.9	-0.7
RLS				AML	AML	02 07 22.6	
	comp=E,341µm,0.2s						
RLS				AML	AML	02 07 22.8	
	comp=N,417µm,0.2s						
RLS	Riolos of Patr	0.49	220	P	Pg	02 07 13.0	-0.2
RLS				S	Sb	02 07 21.1	-0.5
	comp=N,190nm,0.1s						
PDO	Prodromos	0.56	287	P	Pg	02 07 13.7	-0.9
PDO				S	Sb	02 07 23.1	-0.6
PDO				AML	AML	02 07 25.3	
	comp=N,772µm,0.3s						
PDO				AML	AML	02 07 26.4	
	comp=E,543µm,0.2s						
PDO	Prodromos	0.56	287	P	Pg	02 07 14.8	+0.2
PDO				S	Sb	02 07 24.0	+0.3
	comp=E,475nm,0.3s						
MAKR	Makrakomi, Fth	0.61	19	P	Pg	02 07 15.3	-0.3
MAKR				S	Sg	02 07 24.1	+0.5
MAKR	Makrakomi, Fth	0.61	19	P	Pg	02 07 15.3	-0.3
MAKR				S	Sb	02 07 25.3	+0.1
	comp=E,772nm,0.3s						
AGG	Agios Georgios	0.69	31	P	Pg	02 07 15.8	-1.2
AGG				S	Sg	02 07 26.4	+0.4
AGG				AML	AML	02 07 28.5	
	comp=N,251µm,0.2s						
AGG				AML	AML	02 07 28.9	
	comp=E,329µm,0.3s						
AGG	Agios Georgios	0.69	31	P	Pg	02 07 15.9	-1.1
AGG				S	Sb	02 07 26.9	-0.5
	comp=E,145nm,0.2s						
AXAR	Agios Charalam	0.70	61	P	Pg	02 07 16.3	-0.9
AXAR				S	Sb	02 07 27.4	-0.3
AXAR	Agios Charalam	0.70	61	P	Pg	02 07 16.3	-0.9
AXAR				S	Sb	02 07 28.5	+0.8
THAL	Thalero	0.74	122	P	Pg	02 07 17.6	-0.3
THAL	Thalero	0.74	122	P	Pg	02 07 17.4	-0.5
THAL				S	Sb	02 07 28.9	+0.2
LKR	Lokris	0.91	76	P	Pg	02 07 20.4	-0.8
LKR	Lokris	0.91	76	P	Pg	02 07 19.9	-1.3
LKR				S	Sb	02 07 34.0	+0.3
	comp=E,70nm,0.1s						
ATAL	Atalanti	0.94	74	P	Pg	02 07 21.2	-0.5
LTK	Loutraki	0.96	115	P	Pg	02 07 21.6	-0.4
NYDR	Nydri-Lefkada	0.96	287	P	Pg	02 07 21.2	-0.9
NYDR	Nydri-Lefkada	0.96	287	P	Pg	02 07 21.3	-0.8
EVGI	Lefkada island	0.97	281	P	Pg	02 07 21.7	-0.6
LOUT	Loutraki	0.98	117	P	Pb	02 07 22.6	-0.1
LKD2	Lefkada island	1.01	291	P	Pg	02 07 22.7	-0.5
VIL2	Platees	1.12	101	P	Pn	02 07 26.0	+0.6
THL	Klokotos Trika	1.14	6	P	Pb	02 07 24.8	-0.6
VLX	Vlachokerasia	1.14	159	P	Pb	02 07 24.0	-1.4
ITM	Ithomi	1.25	178	P	Pn	02 07 26.5	-0.8
NEO	Neokhori	1.37	50	P	Pn	02 07 28.5	-0.3
XOR	Xorichti	1.39	48	P	Pn	02 07 29.0	-0.2
KRND	KRANIDI	1.46	136	P	Pn	02 07 30.4	+0.3
PYL	PYLOS	1.54	184	P	Pn	02 07 31.4	+0.3

BUC 26 02:09:47.9±0.3, 45°.15N×22°.98E, h16^{km}±1^{km}, ml0.7/1, 6C-10D, Error ellipse: s-maj=2.3km s-min=1.4km az=143.0, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GZR	Gura Zlata	0.29	329	⇑P	Pg	02 09 54.1	0.0
GZR				⇑S	Sg	02 09 58.5	+0.2
GZR	Gura Zlata	0.29	329	⇑P	Pg	02 09 54.1	0.0
GZR				⇑S	Sg	02 09 58.5	+0.2
HERR	Herculane	0.48	237	⇓P	Pb	02 09 57.8	-0.1
HERR				⇓S	Sb	02 10 04.5	-0.3
HERR	Herculane	0.48	237	⇓P	Pb	02 09 57.8	-0.1
HERR				⇓S	Sb	02 10 04.5	-0.3
LOT	Lotru	0.63	61	⇑S	Sb	02 10 09.4	+0.2
LOT	Lotru	0.63	61	⇑S	Sb	02 10 09.4	+0.2
MDVR	Moldovita	0.97	248	⇓S	Sg	02 10 19.4	-0.1
MDVR	Moldovita	0.97	248	⇓S	Sg	02 10 19.4	-0.1
BZS	Buzias	1.07	297	⇓P	Pb	02 10 08.0	0.0
BZS				⇓S	Sg	02 10 22.5	-0.2
BZS	Buzias	1.07	297	⇓P	Pb	02 10 08.0	0.0
BZS				⇓S	Sg	02 10 22.5	-0.2

BJI ***26*** *02:14:50.3±0.0, 45°.02N×146°.80E, h147^{km}, mB4.8/5, mb4.4/18*

MOS ***26*** *02:14:53.5±0.9, 44°.89N×146°.58E, h162^{km}, mb4.2/18, Error ellipse: s-maj=9.0km s-min=5.8km az=68.2*

SKHL ***26*** *02:14:53.5±0.2, 44°.80N×146°.70E, h151^{km}±1^{km}, mb4.8/11, msha5.3/3*

NEIC ***26*** *02:14:54.3±0.7, 44°.82N±0°.09×146°.6E±0°.1, h153^{km}±7^{km}, mb4.3/48, Error ellipse: s-maj=14.3km s-min=9.7km az=151.0*

NIED ***26*** *02:14:55.1, 44°.63N×146°.65E, h157^{km}, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-0.55; M$_{\theta\theta}$0.71; M$_{\phi\phi}$-0.16; M$_{r\theta}$0.67; M$_{\theta\phi}$-0.21; M$_{\phi r}$-1.23; Fault plane solution: M$_0$1.54000×10^{15} NP1: φ$_s$323.00000°, δ81.00000°, λ-71.00000°. NP2: φ$_s$79.00000°, δ21.00000°, λ-153.00000°.*

IDC ***26*** *02:14:55.4±1.2, 44°.92N×146°.54E, h162^{km}±11^{km}, mb3.6/24, mb1 3.8/33, mb1mx3.8/45, mbtmp4.1/33, MS2.9/2, Ms1 2.9/2, ms1mx2.4/43 Error ellipse: s-maj=12.0km s-min=9.0km az=129.0*

JMA ***26*** *02:14:55.0±0.5, 44°.63N×146°.65E, h157^{km}±4^{km}, M4.1*

ISC 26 02:14:54.2±0.6**, 44°.78N**±0°.05**×146°.65E**±0°.05**, h158**^{km}±5^{km}**, n204, σ1^{s}.14**/219**, mb4.2**/60**, 1C-4D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YUK	Yuzh-Kuril'sk	0.94	217	c iPN	Pn	02 15 19.0	-0.2
YUK	Yuzh-Kuril'sk	0.94	217	eP	Pn	02 15 19.2	0.0
YUK				AMB	AMB	02 15 19.7	
	4µm,0.4s						
YUK				eS	Sn	02 15 38.2	-0.1
YUK				A	A	02 15 39.5	
	2µm,0.6s						
YUK				A	A	02 15 39.5	
	3µm,0.6s						
KUR	Kuril'sk	0.98	62	d iPN	Pn	02 15 20.0	+0.5
KUR				S	Sn	02 15 40.3	+1.5
KUR				pmax	pmax		
	comp=Z,2µm,0.4s						
KUR				pmax	pmax		
	comp=E,506nm,0.3s						
KUR				pmax	pmax		
	comp=N,345nm,0.4s						
KUR				smax	smax		
	comp=Z,2µm,5.0s						
KUR				smax	smax		
	comp=N,1µm,6.0s						
KUR	Kuril'sk	0.98	62	eP	Pn	02 15 19.9	+0.5
KUR				AMB	AMB	02 15 20.4	
	comp=N,2µm,0.4s						
KUR				eS	Sn	02 15 39.8	+1.0
KUR				A	A	02 15 41.4	
	comp=N,460nm,0.5s						
KUR				A	A	02 15 41.4	
	comp=N,190nm,0.5s						
GRPR	Tuman	1.01	219	ePN	Pn	02 15 19.5	-0.3
GRPR				eS	Sn	02 15 40.9	+1.6
GRPR	Tuman	1.01	219	eP	Pn	02 15 20.1	+0.3
GRPR				eS	Sn	02 15 40.0	+0.7
RUSJ	Misakicho	1.21	236	ePN	Pn	02 15 21.3	-0.2
GLVR	Golovnino	1.32	218	ePN	Pn	02 15 22.8	+0.2
GLVR				S	Sn	02 15 47.5	+3.2
GLVR	Golovnino	1.32	218	eP	Pn	02 15 23.1	+0.5
GLVR				eS	Sn	02 15 45.5	+1.2
JRA	Rausu	1.38	233	P	Pn	02 15 23.1	0.0
JNSB	Nemuroshibetsu	1.55	230	P	Pn	02 15 25.0	+0.1
NEM2	Nemuro 2	1.56	205	P	Pn	02 15 24.0	-1.0
NEM2				eS	Sn	02 15 46.3	-2.2
NMR	Nemuro--Hokkai	1.56	205	ePN	Pn	02 15 24.0	-1.0
NMR				eS	Sn	02 15 46.6	-1.9
NMR	Nemuro--Hokkai	1.56	205	eP	Pn	02 15 24.0	-1.0
NMR				eS	Sn	02 15 47.0	-1.5
JNK	Nakash	1.83	230	P	Pn	02 15 28.0	+0.1
JKHN	Kushirohamanak	2.01	213	P	Pn	02 15 29.2	-0.7
JKHN				eS	Sn	02 15 55.7	-1.6
JTKR	Abashiri--Toko	2.12	249	P	Pn	02 15 31.4	+0.2
JAK	Akkeshi	2.27	219	P	Pn	02 15 32.4	-0.6
JAK				eS	Sn	02 16 01.3	-1.6
JMP	Maruseppu	2.48	253	P	Pn	02 15 35.7	+0.2
JAR	Ashorobuto	2.55	235	P	Pn	02 15 36.8	+0.5
JOB	Onbets	2.77	228	P	Pn	02 15 39.2	+0.2
JOB				eS	Sn	02 16 12.7	-0.9
JSE	Soyaes	2.90	275	P	Pn	02 15 41.3	+0.8
JKK2	Kamakawa 2	2.94	253	P	Pn	02 15 41.9	+0.8
JKA	Kamikawa-asahi	2.97	258	Pn	Pn	02 15 42.3	+0.8
JKA				Sn	Sn	02 16 19.0	+0.9
JKA	Kamikawa-asahi	2.97	258	eP	Pn	02 15 42.8	+1.3
ASAJ	Asahikawa	2.98	259	P	Pn	02 15 42.8	+1.2
	comp=N,56nm,0.3s,baz=84,slow=15,SNR=183						
ASAJ				S	Sn	02 16 19.1	+0.8
	comp=N,3.5nm,0.3s,baz=214,slow=15,SNR=8.4						
ASAJ				LR	LR	02 16 46.4	
	comp=N,100nm,20.9s,baz=120,slow=38						
JCH	Churui	3.22	229	P	Pn	02 15 44.4	-0.2
JCH				eS	Sn	02 16 21.0	-2.7
JFR	Furan	3.34	242	P	Pn	02 15 47.2	+1.0
JWK2	Keihoku	3.41	281	P	Pn	02 15 49.0	+2.0
YSS	Yuzh-Sakhalins	3.48	310	ePN	Pn	02 15 48.6	+0.7
YSS				pmax	pmax		
	comp=Z,20nm,1.0s						
YSS	Yuzh-Sakhalins	3.48	310	eP	Pn	02 15 48.6	+0.7
YSS				AMB	AMB	02 15 49.4	
	comp=Z,20nm,0.8s						
ERM	Erimo	3.76	224	d iPN	Pn	02 15 52.1	+0.6
ERM	Erimo	3.76	224	Pn	Pn	02 15 51.4	-0.1
ERM	Erimo	3.76	224	eP	Pn	02 15 52.1	+0.6
JNBK	Urakawa-nobuka	3.78	230	P	Pn	02 15 50.7	-1.1
JNBK				eS	Sn	02 16 30.6	-5.9
JRBN	Rebuntou	4.00	281	P	Pn	02 15 55.9	+1.3
JEW	Eniwo	4.23	245	Pn	Pn	02 15 57.4	-0.3
JEW					Sn	02 16 46.8	-0.3
UGL	Uglegorsk	5.32	326	eP	Pn	02 16 12.2	+0.3
UGL				AMB	AMB	02 16 12.6	
	comp=Z,25nm,0.4s						
JTM	Tenmabayashi	5.73	228	Pn	Pn	02 16 15.6	-1.8
TYV	Tymovskoe	6.65	338	eP	Pn	02 16 30.1	+0.6
TYV				AMB	AMB	02 16 35.5	
	comp=Z,7.0nm,0.4s						
TEY	Ternei	7.14	276	eP	Pn	02 16 37.0	+1.0
TEY				AMB	AMB	02 16 40.7	
	comp=Z,6.0nm,0.7s						
SKR	Severo-Kuril’s	8.69	44	ePN	Pn	02 16 55.1	-1.5
SKR				eS	Sn	02 18 29.5	-3.6
SKR				pmax	pmax		
	comp=Z,128nm,0.4s						
SKR				pmax	pmax		
	comp=Z,500nm,2.5s						
SKR				smax	smax		
	comp=E,52nm,0.6s						
SKR				smax	smax		
	comp=N,68nm,0.7s						
SKR	Severo-Kuril’s	8.69	44	eP	Pn	02 16 56.8	+0.2
SKR				AMB	AMB	02 16 59.0	
	comp=N,60nm,0.7s						
SKR				eS	Sn	02 18 33.5	+0.4
SKR				A	A	02 18 36.4	
	comp=N,30nm,0.4s						
SKR				A	A	02 18 36.4	
	comp=N,30nm,0.4s						
JSD	Sado	9.22	226	Pn	Pn	02 17 02.4	-1.4
PAU	Pauzhetka	9.53	42	eP	Pn	02 17 07.1	-0.6
PAU				AMB	AMB	02 17 08.8	
	comp=N,60nm,0.6s						
MJA0	Matsu Arr-Jizo	10.41	221	ePN	Pn	02 17 22.2	+2.7
MJA0				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MJAR	Matsushiro Arr	10.43	221	P	Pn	02 17 21.0	+1.3
	comp=Z,0.1nm,0.3s,baz=30,slow=13,SNR=5.4						
MJAR	Matsushiro Arr	10.43	221	PN	Pn	02 17 21.0	+1.3
MJAR	Matsushiro Arr	10.43	221	eP	Pn	02 17 22.0	+2.3
USRK	Ussuriysk Ar.	10.49	272	P	Pn	02 17 20.5	0.0
	baz=82,slow=14,SNR=10						
USRK	Ussuriysk Ar.	10.49	272		Pn	02 17 19.8	-0.7
PEA0B	Petropavlovsk-	11.04	37	PN	Pn	02 17 27.7	+0.1
PEA0B	Petropavlovsk-	11.04	37	Pn	Pn	02 17 27.7	+0.1
PETK	Petropavlovsk-	11.04	37	P	Pn	02 17 27.6	0.0
	comp=Z,1.5nm,0.3s,baz=214,slow=7.8,SNR=19						
KLR	Kul'dur	11.10	299	P	Pn	02 17 29.2	+0.8
	comp=Z,0.1nm,0.3s,baz=106,slow=14,SNR=5.4						
KLR	Kul'dur	11.10	299	i PN	Pn	02 17 26.4	-2.0
KLR				pmax	pmax		
	comp=Z,14nm,3.2s						
KLR	Kul'dur	11.10	299	eP	Pn	02 17 26.4	-2.0
PET	Petropavlovsk	11.41	39	i PN	Pn	02 17 32.1	-0.3
PET				pmax	pmax		
	comp=Z,153nm,1.1s						
PET	Petropavlovsk	11.41	39	eP	Pn	02 17 33.5	+1.1
JGF	Kuroka	11.59	221	Pn	Pn	02 17 35.2	+0.2
EKMR	Ekimchan	12.23	318	eP	Pn	02 17 43.5	+0.5
JWT	Wachi	12.80	226	Pn	Pn	02 17 50.3	-0.3
MA2	Magadan	15.03	8	P	Pn	02 18 17.6	-0.8
	comp=Z,0.9nm,0.3s,baz=197,slow=17,SNR=2.3						
MA2	Magadan	15.03	8	i P	Pn	02 18 17.5	-0.8
MA2				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MA2	Magadan	15.03	8	eP	Pn	02 18 17.5	-0.8
BMKR	Bomnak	15.16	317	eP	Pn	02 18 20.0	0.0
BMKR				AMB	AMB	02 18 24.0	
	comp=Z,5.0nm,0.9s						
KSRS	Korea Array	15.88	249	P	Pn	02 18 28.1	-0.8
	comp=Z,0.3nm,0.3s,baz=54,slow=11,SNR=5.5						
KSRS	Korea Array	15.88	249	eP	P	02 18 31.0	+1.5
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KSRS	Korea Array	15.88	249	eP	P	02 18 31.0	+1.5
KROS	Kirovskiy	15.95	314	eP	P	02 18 30.5	+0.4
JNU	Nakatsue	16.88	232	P	Pn	02 18 42.4	+1.2
	comp=Z,0.9nm,0.3s,baz=306,slow=1.2,SNR=4.8						
SEY	Seymchan	18.48	8	P	P	02 18 55.9	-2.0
	comp=Z,0.9nm,0.3s,baz=196,slow=12,SNR=7.4						
SEY	Seymchan	18.48	8	i P	P	02 18 56.3	-1.5
SEY	Seymchan	18.48	8	eP	P	02 18 56.3	-1.5
ADK	Adak	25.18	60	P	P	02 20 05.2	+0.4
ADK				pmax	pmax		
	comp=Z,42nm,1.1s						
ADK	Adak	25.18	60	P	P	02 20 05.2	+0.4
ULN	Ulaanbaatar	27.31	291	i P	P	02 20 23.1	-1.1
ULN				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ULN	Ulaanbaatar	27.31	291	eP	P	02 20 23.1	-1.1
SONM	Songino Array	27.75	291	P	P	02 20 28.1	0.0
	comp=Z,1.4nm,0.6s,baz=80,slow=8.6,SNR=14						
SONM	Songino Array	27.75	291	P	P	02 20 27.5	-0.5
TIXI	Tiksi	28.28	348	i P	P	02 20 30.9	-1.3
TIXI	Tiksi	28.28	348	eP	P	02 20 30.9	-1.3
WHN	Wuhan	29.04	252	⇓P	P	02 20 34.8	-4.6
TLY	Talaya	29.12	299	P	P	02 20 40.9	+1.0
	comp=Z,2.0nm,0.4s,baz=240,slow=13,SNR=3.7						
TLY	Talaya	29.12	299	i P	P	02 20 38.4	-1.6
TLY				pmax	pmax		
	comp=Z,2.0nm,0.3s						
TLY	Talaya	29.12	299	P	P	02 20 39.5	-0.5
TLY				IAmb	IAmb	02 20 47.1	
	comp=Z,2.4nm,0.5s						
TLY	Talaya	29.12	299	eP	P	02 20 38.4	-1.6
H11N2	WAKE ISLAND Hy	30.12	139	T	T	02 52 11.0	
	baz=329,slow=75,SNR=94						
H11N1	WAKE ISLAND Hy	30.13	140	T	T	02 52 11.4	
	baz=329,slow=75,SNR=83						
H11N3	WAKE ISLAND Hy	30.14	139	T	T	02 52 06.3	
	baz=329,slow=75,SNR=69						
XAN	Xi'an	30.81	263	P	P	02 20 55.0	-0.1
XAN				pmax	pmax		
	comp=Z,5.0nm,0.7s						
H11S1	WAKE ISLAND Hy	31.09	141	T	T	02 53 16.0	
	baz=331,slow=76,SNR=89						
H11S3	WAKE ISLAND Hy	31.10	141	T	T	02 53 17.9	
	baz=331,slow=76,SNR=85						
H11S2	WAKE ISLAND Hy	31.11	141	T	T	02 53 15.9	
	baz=331,slow=76,SNR=41						
ANM	Nome	32.96	36	P	P	02 21 14.1	+0.6
ANM				pmax	pmax		
	comp=Z,6.0nm,1.2s						
ANM	Nome	32.96	36	P	P	02 21 14.1	+0.6
ANM				IAmb	IAmb	02 21 20.5	
	comp=Z,6.4nm,1.2s						
GTA	Gaotai	34.78	278	eP	P	02 21 30.5	+0.8
GTA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
TTA	Tatalina	36.86	40	P	P	02 21 47.7	+0.7
TTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
TTA	Tatalina	36.86	40	P	P	02 21 47.7	+0.7
TTA				IAmb	IAmb	02 21 48.5	
	comp=Z,5.2nm,1.0s						
SVW2	Sparrevohn	37.05	43	P	P	02 21 49.8	+1.2
SVW2				IAmb	IAmb	02 21 52.5	
	comp=Z,5.5nm,1.2s						
IMAR	Indian Mountai	38.00	35	P	P	02 21 56.2	-0.2
OHAK	Old Harbor	38.52	49	P	P	02 22 01.1	+0.3
PPLA	Purkeypile	38.61	40	P	P	02 22 02.8	+1.0
PPLA				IAmb	IAmb	02 22 05.1	
	comp=Z,7.3nm,1.0s						
KDAK	Kodiak Island	38.82	48	P	P	02 22 03.7	+0.3
KDAK				pmax	pmax		
	comp=Z,14nm,1.0s						
KDAK	Kodiak Island	38.82	48	P	P	02 22 03.7	+0.3
BPAW	Bear Paw Mtn.	39.13	38	P	P	02 22 06.4	+0.5
BRLK	Bradley Lake	39.46	45	P	P	02 22 08.9	+0.3
BRLK				IAmb	IAmb	02 22 25.3	
	comp=Z,5.3nm,1.1s						
DGZ	Jazzator, Alta	39.60	299	i P	P	02 22 08.5	-1.6
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.9s						
I23K	Minto, Yukon-K	39.81	36	P	P	02 22 11.9	+0.5
I23K				IAmb	IAmb	02 22 12.6	

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,3.8nm,0.6s						
QIZ	**Qiongzhong**	**39.92**	**242**	P	**P**	**02 22 14.1**	**+1.2**
ZALV	**Zalesovo Beam**	**40.09**	**306**	P	**P**	**02 22 13.3**	**-0.7**
	comp=Z,0.5nm,0.3s,baz=91,slow=6.6,SNR=3.1						
ZALV				PcP	**PcP**	**02 24 15.8**	**+0.6**
	comp=Z,1.4nm,0.5s,baz=68,slow=4.7,SNR=7.2						
ZALV	**Zalesovo Beam**	**40.09**	**306**	P	**P**	**02 22 13.2**	**-0.8**
ZALV					**PcP**	**02 24 16.1**	**+0.9**
RND	**Reindeer**	**40.10**	**39**	P	**P**	**02 22 14.6**	**+0.6**
RND				pmax	pmax		
	comp=Z,4.0nm,0.8s						
RND	**Reindeer**	**40.10**	**39**	P	**P**	**02 22 14.6**	**+0.6**
RND				IAmb	IAmb	02 22 16.3	
	comp=Z,3.7nm,0.8s						
MDM	**Murphy Dome**	**40.29**	**37**	P	**P**	**02 22 16.2**	**+0.7**
MDM				IAmb	IAmb	02 22 16.6	
	comp=Z,3.2nm,0.7s						
WRH	**Wood River Hil**	**40.38**	**37**	P	**P**	**02 22 17.0**	**+0.9**
WRH				IAmb	IAmb	02 22 17.8	
	comp=Z,3.0nm,0.6s						
SML	**Sawmill**	**40.48**	**42**	P	**P**	**02 22 18.2**	**+1.1**
HDA	**Harding Lake**	**40.87**	**37**	P	**P**	**02 22 20.4**	**+0.2**
HDA				IAmb	IAmb	02 22 24.4	
	comp=Z,4.0nm,0.4s						
IL31		**40.87**	**37**	P	**P**	**02 22 20.7**	**+0.5**
ILAR	**Eielson Array**	**40.87**	**37**	P	**P**	**02 22 20.6**	**+0.4**
	comp=Z,3.0nm,0.7s,baz=270,slow=8.2,SNR=26						
PRP	**Porcupine Dome**	**41.40**	**36**	P	**P**	**02 22 25.5**	**+0.9**
PRP				IAmb	IAmb	02 22 25.9	
	comp=Z,5.9nm,0.8s						
FYU	**Fort Yukon**	**41.45**	**34**	P	**P**	**02 22 25.8**	**+0.9**
FYU				IAmb	IAmb	02 22 26.2	
	comp=Z,9.2nm,0.9s						
BMAR	**Burnt Mountain**	**41.66**	**33**	P	**P**	**02 22 27.0**	**+0.3**
KLU	**Klutina**	**41.66**	**42**	P	**P**	**02 22 27.6**	**+0.9**
KLU				IAmb	IAmb	02 22 29.4	
	comp=Z,9.1nm,1.0s						
DOT	**Dot Lake**	**42.22**	**38**	P	**P**	**02 22 32.0**	**+0.8**
EGAK	**Eagle**	**43.31**	**36**	P	**P**	**02 22 40.2**	**+0.2**
BCAR	**Beaver Creek A**	**43.32**	**39**	P	**P**	**02 22 41.2**	**+1.1**
BARN	**Barnard Glacie**	**43.76**	**42**	P	**P**	**02 22 44.7**	**+0.9**
BARN				IAmb	IAmb	02 22 45.7	
	comp=Z,4.6nm,0.6s						
MK31	**Makanchi Array**	**43.80**	**296**	P	**P**	**02 22 43.7**	**-0.4**
MK31				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MK31	**Makanchi Array**	**43.80**	**296**	P	**P**	**02 22 43.7**	**-0.4**
MKAR	**Makanchi Array**	**43.80**	**296**	P	**P**	**02 22 43.9**	**-0.3**
	comp=Z,1.6nm,0.7s,baz=76,slow=8.7,SNR=21						
MKAR				PcP	**PcP**	**02 24 28.3**	**+0.5**
	comp=Z,0.3nm,0.4s,baz=62,slow=3.1,SNR=4.9						
MKAR	**Makanchi Array**	**43.80**	**296**	P	**P**	**02 22 44.0**	**-0.1**
MKAR	**Makanchi Array**	**43.80**	**296**	*e*P	**P**	**02 22 43.8**	**-0.3**
MAKZ	**Makanchi**	**43.99**	**297**	P	**P**	**02 22 45.6**	**-0.1**
MAKZ				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MAKZ	**Makanchi**	**43.99**	**297**	P	**P**	**02 22 45.6**	**-0.1**
KURK	**Kurchatov**	**44.66**	**303**	*i* P	**P**	**02 22 49.6**	**-1.2**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KURK	**Kurchatov**	**44.66**	**303**	*e*P	**P**	**02 22 49.6**	**-1.2**
EPYK	**Eagle Plains**	**44.86**	**34**	P	**P**	**02 22 53.0**	**+0.7**
EPYK				IAmb	IAmb	02 22 53.4	
	comp=Z,4.6nm,0.4s						
INK	**Inuvik**	**45.70**	**31**	LR	LR	02 43 05.5	
	comp=Z,604nm,21.2s,baz=136,slow=37						
INK	**Inuvik**	**45.70**	**31**	P	**P**	**02 22 58.3**	**-0.4**
INK				pmax	pmax		
	comp=Z,3.0nm,0.5s						
INK	**Inuvik**	**45.70**	**31**	P	**P**	**02 22 58.3**	**-0.4**
INK				IAmb	IAmb	02 22 59.3	
	comp=Z,2.8nm,0.5s						
HYT	**Haines Junctio**	**45.79**	**42**	P	**P**	**02 23 00.9**	**+1.1**
CHTO	**Chiang Mai**	**47.23**	**253**	P	**P**	**02 23 11.8**	**+0.4**
CHTO				pmax	pmax		
	comp=Z,9.0nm,0.8s						
CHTO	**Chiang Mai**	**47.23**	**253**	P	**P**	**02 23 11.8**	**+0.4**
CMAR	**Chiang Mai Arr**	**47.48**	**252**	P	**P**	**02 23 14.8**	**+1.5**
	comp=Z,2.3nm,0.4s,baz=39,slow=6.8,SNR=8.9						
CMAR	**Chiang Mai Arr**	**47.48**	**252**	*e*P	**P**	**02 23 14.8**	**+1.5**
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**47.48**	**252**	P	**P**	**02 23 13.8**	**+0.4**
SHL	**Shillong**	**47.75**	**265**	P	**P**	**02 23 15.8**	**+0.3**
SHL				pmax	pmax		
	comp=Z,5.0nm,0.6s						
SHL	**Shillong**	**47.75**	**265**	P	**P**	**02 23 15.8**	**+0.3**
SHL				IAmb	IAmb	02 23 16.6	
	comp=Z,5.4nm,0.6s						
C36M	**Paulatuk**	**48.74**	**28**	P	**P**	**02 23 21.4**	**-0.9**
C36M				IAmb	IAmb	02 23 24.5	
	comp=Z,4.2nm,0.5s						
AAK	**Ala-Archa**	**50.59**	**295**	P	**P**	**02 23 37.0**	**+0.1**
	comp=Z,0.4nm,0.3s,baz=60,slow=8.1,SNR=1.6						
AAK	**Ala-Archa**	**50.59**	**295**	P	**P**	**02 23 37.0**	**+0.1**
AAK	**Ala-Archa**	**50.59**	**295**	*e*P	**P**	**02 23 37.0**	**+0.1**
KKAR	**Karatay Array**	**52.92**	**297**	P	**P**	**02 23 53.8**	**-0.2**
KKAR	**Karatay Array**	**52.92**	**297**	P	**P**	**02 23 53.8**	**-0.2**
ARU	**Arti**	**53.35**	**316**	*i* P	**P**	**02 23 56.0**	**-0.8**
ARU				pmax	pmax		
	comp=Z,3.0nm,1.2s						
ARU	**Arti**	**53.35**	**316**	*e*P	**P**	**02 23 56.0**	**-0.8**
YKA	**Yellowknife Ar**	**55.15**	**34**	P	**P**	**02 24 10.2**	**+0.4**
	comp=Z,1.8nm,0.7s,baz=303,slow=6.3,SNR=17						
ABKAR	**Akbulak array**	**56.14**	**308**	P	**P**	**02 24 16.9**	**-0.1**
ARCES	**ARCESS Array B**	**58.16**	**339**	P	**P**	**02 24 28.9**	**-2.0**
	comp=Z,4.0nm,0.9s,baz=47,slow=6.9,SNR=5.9						
ARCES	**ARCESS Array B**	**58.16**	**339**	*e*P	**P**	**02 24 29.7**	**-1.2**
ARCES				pmax	pmax		
	comp=Z,7.0nm,1.1s						
COEN	**Coen**	**58.54**	**184**	P	**P**	**02 24 35.1**	**+1.0**
BELG	**Belogornoye**	**60.90**	**316**	*i* P	**P**	**02 24 51.3**	**+1.5**
BELG				pmax	pmax		
	comp=Z,1.0nm,1.0s						
GEYT	**Alibeck**	**63.63**	**298**	P	**P**	**02 25 08.7**	**+0.3**
	comp=Z,1.7nm,0.6s,baz=32,slow=14,SNR=4.1						
GEYT	**Alibeck**	**63.63**	**298**	P	**P**	**02 25 08.5**	**+0.1**
FINES	**FINESS Array B**	**63.79**	**333**	P	**P**	**02 25 07.1**	**-1.8**
	comp=Z,1.1nm,0.5s,baz=44,slow=7.6,SNR=17						
FINES	**FINESS Array B**	**63.79**	**333**	P	**P**	**02 25 07.3**	**-1.6**
MSO	**Missoula**	**64.51**	**49**	P	**P**	**02 25 14.7**	**+0.7**
MSO				IAmb	IAmb	02 25 16.0	
	comp=Z,3.6nm,0.9s						
BEKR	**Beckworth**	**65.19**	**58**	P	**P**	**02 25 18.7**	**+0.1**
FCC	**Fort Churchill**	**65.31**	**30**	P	**P**	**02 25 19.1**	**+0.3**
FCC				pmax	pmax		
	comp=Z,6.0nm,0.6s						
FCC	**Fort Churchill**	**65.31**	**30**	P	**P**	**02 25 19.1**	**+0.3**
WRA	**Warramunga Arr**	**65.38**	**193**	P	**P**	**02 25 19.9**	**+0.2**
	comp=Z,2.5nm,0.5s,baz=8.7,slow=6.7,SNR=46						
FITZ	**Fitzroy Crossi**	**65.44**	**202**	P	**P**	**02 25 21.5**	**+1.4**
	comp=Z,1.2nm,0.6s,baz=357,slow=6.1,SNR=12						
HRY	**Holter Researc**	**65.70**	**48**	P	**P**	**02 25 22.6**	**+0.8**
YERR	**Yerington**	**66.42**	**58**	P	**P**	**02 25 27.2**	**+0.7**
BOZ	**Bozeman (W)**	**66.53**	**49**	P	**P**	**02 25 27.8**	**+0.7**
BOZ				pmax	pmax		
	comp=Z,6.0nm,0.7s						
BOZ	**Bozeman (W)**	**66.53**	**49**	P	**P**	**02 25 27.8**	**+0.7**
KVN	**Kaiserville**	**67.06**	**57**	P	**P**	**02 25 31.1**	**+0.5**
KVN				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KVN	**Kaiserville**	**67.06**	**57**	P	**P**	**02 25 31.1**	**+0.5**
KVN				IAmb	IAmb	02 25 33.5	
	comp=Z,4.0nm,1.1s						
YHL	**Hebgen Lake**	**67.25**	**49**	P	**P**	**02 25 32.5**	**+0.6**
NVAR	**Mina Array Bea**	**67.34**	**58**	P	**P**	**02 25 34.1**	**+1.7**
	comp=Z,1.7nm,0.8s,baz=292,slow=6.5,SNR=12						
NVAR	**Mina Array Bea**	**67.34**	**58**	P	**P**	**02 25 33.0**	**+0.6**
YHH	**Holmes Hill**	**67.47**	**49**	P	**P**	**02 25 33.9**	**+0.7**
AKT	**Akhty**	**67.65**	**307**⇓	*e*P	P	02 25 24.2	-10
AKT				pmax	pmax		
	comp=Z,4.0nm,0.2s						
NB2	**NORSAR Subarra**	**68.51**	**338**	P	**P**	**02 25 37.6**	**-1.4**
	comp=Z,0.4nm,0.4s,baz=31,slow=6.5						
NOA	**NORSAR Array B**	**68.51**	**338**	P	**P**	**02 25 37.7**	**-1.4**
	comp=Z,0.9nm,0.5s,baz=32,slow=6.6,SNR=12						
KBZ	**Khabaz**	**68.85**	**311**	P	**P**	**02 25 42.8**	**+1.4**
	comp=Z,1.5nm,0.6s,baz=65,slow=3.8,SNR=6.4						
KBZ	**Khabaz**	**68.85**	**311**	*e*P	**P**	**02 25 42.8**	**+1.4**
ASAR	**Alice Springs**	**69.10**	**193**	P	**P**	**02 25 44.3**	**+1.2**
	comp=Z,0.9nm,0.5s,baz=10,slow=5.8,SNR=19						
ASAR	**Alice Springs**	**69.10**	**193**	P	**P**	**02 25 44.1**	**+1.0**
BW06	**Boulder Array**	**69.52**	**50**	P	**P**	**02 25 46.6**	**+0.8**
BW06				IAmb	IAmb	02 25 47.6	
	comp=Z,3.5nm,0.7s						
PD31	**Pinedale Array**	**69.52**	**50**	P	**P**	**02 25 46.5**	**+0.7**
PD31				IAmb	IAmb	02 25 47.7	
	comp=Z,3.0nm,0.7s						
PDAR	**Pinedale Array**	**69.52**	**50**	P	**P**	**02 25 46.9**	**+1.0**
	comp=Z,2.6nm,0.5s,baz=283,slow=0.9,SNR=46						
PDAR	**Pinedale Array**	**69.52**	**50**	P	**P**	**02 25 46.5**	**+0.7**
AKASG	**Malin Array Be**	**70.54**	**323**	P	**P**	**02 25 50.4**	**-1.2**
	comp=Z,0.3nm,0.4s,baz=39,slow=6.4,SNR=2.1						
ULM	**Lac du Bonnet**	**70.89**	**37**	P	**P**	**02 25 53.4**	**-0.4**
	comp=Z,0.8nm,0.3s,baz=336,slow=3.6,SNR=2.9						
STKA	**Stephens Creek**	**76.43**	**184**	P	**P**	**02 26 27.2**	**+1.2**
	comp=Z,0.8nm,0.4s,baz=344,slow=17,SNR=3.0						
STKA	**Stephens Creek**	**76.43**	**184**	P	**P**	**02 26 26.8**	**+0.8**
STKA	**Stephens Creek**	**76.43**	**184**	P	**P**	**02 26 26.8**	**+0.8**
BRTR	**Keskin Array B**	**76.57**	**313**	P	**P**	**02 26 27.6**	**+0.4**
	comp=Z,0.5nm,0.7s,baz=62,slow=3.4,SNR=1.0						
GERES	**GERESS Array B**	**78.08**	**330**	P	**P**	**02 26 35.1**	**-0.3**
	comp=Z,0.3nm,0.5s,baz=66,slow=9.8,SNR=2.3						
TXAR	**Lajitas Array**	**82.38**	**56**	P	**P**	**02 27 00.0**	**+1.3**
	comp=Z,0.7nm,0.7s,baz=291,slow=3.6,SNR=11						
TXAR				LR	LR	03 01 06.4	
	comp=Z,15nm,20.9s,baz=0.0,slow=34						
TXAR	**Lajitas Array**	**82.38**	**56**	P	**P**	**02 26 59.6**	**+0.9**
TXAR	**Lajitas Array**	**82.38**	**56**	P	**P**	**02 26 59.6**	**+0.9**

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*UCR **26** 02:38:13.1±1.8, 6.°85N×82.°70W, h36^{km}±999^{km}, MW4.2*
*UPA **26** 02:38:13.3±1.8, 6.°91N×82.°66W, h22^{km}±20^{km}, MW4.2*
*INET **26** 02:38:15.1, 7.°04N×82.°75W, h15^{km}, MW3.5*
ISC 26 02:38:10.2±1.6, **6.°84N**±0.°08×**82.°73W**±0.°05, **h10**^{km}, **n67**,
σ**1.^{s}29**/87, **2D, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CCOL	**Caracol de Cor**	**1.57**	**351**	*e*P	**Pn**	**02 38 38.3**	**+0.1**
CCOL				*e*S	**Sn**	**02 38 58.8**	**+0.1**
DVD	**David**	**1.61**	**10**	*i* P	**Pn**	**02 38 38.7**	**0.0**
DVD				*e*S	**Sn**	**02 38 57.8**	**-1.7**
PIRO	**Carate, Puerto**	**1.67**	**339**	*i* P	**Pn**	**02 38 39.1**	**-0.4**
PIRO	**Carate, Puerto**	**1.67**	**339**	*e*P	**Pn**	**02 38 38.5**	**-1.0**
PIRO				*e*S	**Sn**	**02 38 59.5**	**-1.4**
CDITO	**Canoas**	**1.73**	**355**	*i* P	**Pn**	**02 38 40.2**	**-0.1**
CDITO				*e*S	**Sn**	**02 38 59.9**	**-2.6**
GMAL	**Guarumal, Vera**	**1.74**	**58**	*i* P	**Pn**	**02 38 40.3**	**-0.3**
GMAL				*e*S	**Sn**	**02 39 01.0**	**-1.9**
GMAL	**Guarumal, Vera**	**1.74**	**58**	*e*P	**Pn**	**02 38 40.4**	**-0.1**
BCO2	**Palmira**	**1.88**	**6**	*i* P	**Pn**	**02 38 42.8**	**+0.3**
BCO2				*e*S	**Sn**	**02 39 05.5**	**-0.8**
CACAO	**El Cacao, Vera**	**1.92**	**75**	*i* P	**Pn**	**02 38 42.6**	**-0.4**
CACAO				*e*S	**Sn**	**02 39 04.8**	**-2.5**
BRU2	**Volcan**	**1.94**	**1**	*i* P	**Pn**	**02 38 43.8**	**+0.4**
BRU2				*e*S	**Sn**	**02 39 07.1**	**-0.9**
BRU2	**Volcan**	**1.94**	**1**	*e*P	**Pn**	**02 38 43.8**	**+0.4**
BRU2				*e*S	**Sn**	**02 39 07.0**	**-0.9**
EDSV	**San Vito**	**1.98**	**353**	*e*P	**Pn**	**02 38 44.7**	**+0.7**
EDSV				*e*S	**Sn**	**02 39 09.8**	**+0.9**
RIOS	**Rincon, Osa**	**2.00**	**337**	*e*P	**Pn**	**02 38 43.3**	**-0.8**
RIOS				*e*S	**Sn**	**02 39 07.7**	**-1.6**
EDPN	**Palmar Norte**	**2.23**	**341**	*e*P	**Pn**	**02 38 47.5**	**+0.3**
EDPN				*e*S	**Sn**	**02 39 14.2**	**-0.5**
EDBA	**Buenos Aires**	**2.37**	**347**	*e*P	**Pn**	**02 38 50.1**	**+0.9**
EDBA				*e*S	**Sn**	**02 39 18.9**	**+0.5**
DRK0	**Durika**	**2.46**	**348**	*i* P	**Pn**	**02 38 51.1**	**+0.5**
DRK0				*e*S	**Sn**	**02 39 21.1**	**+0.3**
DRK0	**Durika**	**2.46**	**348**	*e*P	**Pn**	**02 38 51.0**	**+0.4**
EDLM	**Las Mercedes**	**2.57**	**341**	*e*P	**Pn**	**02 38 52.8**	**+0.8**
CNI2	**El Empalme, Bo**	**2.58**	**6**	*i* P	**Pn**	**02 38 53.5**	**+1.5**
CNI2				*e*S	**Sb**	**02 39 26.1**	**-2.2**
AZU	**Azuero**	**2.61**	**69**⇓	*i*P	**Pn**	**02 38 53.1**	**+0.5**
AZU			⇓	*e*S	**Sn**	**02 39 22.3**	**-2.0**
AZU	**Azuero**	**2.61**	**69**	*e*P	**Pn**	**02 38 53.0**	**+0.5**
EDDO	**Dominical**	**2.65**	**335**	*e*P	**Pn**	**02 38 53.3**	**+0.3**
PEZE	**Perez Zeledon,**	**2.69**	**340**	*e*P	**Pn**	**02 38 54.4**	**+0.6**
RGM0	**Gandoca**	**2.73**	**3**	*e*P	**Pn**	**02 38 57.1**	**+2.9**
PNME	**Penonome**	**2.89**	**55**	*e*P	**Pn**	**02 38 57.9**	**+1.6**
RIMA	**Rio Macho**	**3.12**	**339**	*e*P	**Pn**	**02 39 00.4**	**+0.8**
LCR2	**La Lucha 2**	**3.15**	**336**	*e*P	**Pn**	**02 39 00.7**	**+0.7**
CVTR	**Volcan Turrial**	**3.32**	**342**	*e*P	**Pn**	**02 39 03.7**	**+1.1**
VTUC	**Crater, Volcan**	**3.32**	**342**	*e*P	**Pn**	**02 39 04.8**	**+2.1**
SJS	**Escuela Geolog**	**3.34**	**337**	*e*P	**Pn**	**02 39 04.2**	**+1.4**
JACO	**JACO, Garabito**	**3.39**	**326**	*e*P	**Pn**	**02 39 03.3**	**+0.1**
HDC	**Heredia**	**3.42**	**337**	*i* P	**Pn**	**02 39 05.2**	**+1.4**
HDC				*e*S	**Sn**	**02 39 45.4**	**+0.8**
HDC	**Heredia**	**3.42**	**337**	*e*P	**Pn**	**02 39 05.0**	**+1.2**
HDC3	**Heredia 3**	**3.42**	**337**	*e*P	**Pn**	**02 39 05.0**	**+1.2**
ZANG	**Zanguenga, Cho**	**3.53**	**53**	*e*P	**Pn**	**02 39 06.8**	**+1.6**
LAFE	**Finca La Fe, P**	**3.65**	**324**	*e*P	**Pn**	**02 39 07.3**	**+0.4**
BCIP	**Isla Barro Col**	**3.68**	**51**	*e*P	**Pn**	**02 39 08.0**	**+0.8**
BCIP	**Isla Barro Col**	**3.68**	**51**	*e*P	**Pn**	**02 39 08.3**	**+1.1**
BCIP				*e*S	**Sn**	**02 39 52.4**	**+1.7**
INDI	**Punta indio, G**	**4.07**	**318**	*e*P	**Pn**	**02 39 12.8**	**+0.2**
JTS	**Las Juntas de**	**4.07**	**327**	*i* P	**Pn**	**02 39 13.3**	**+0.6**
JTS				*e*S	**Sn**	**02 39 59.5**	**-0.9**
JTS	**Las Juntas de**	**4.07**	**327**	*e*P	**Pn**	**02 39 13.2**	**+0.6**
FORC	**Fortuna**	**4.08**	**332**	*i* P	**Pn**	**02 39 14.4**	**+1.7**
FORC				*i* S	**Sn**	**02 40 02.0**	**+1.3**
CASO	**Castillo**	**4.08**	**331**	*i* P	**Pn**	**02 39 14.6**	**+1.8**
ARE1	**Arenal 1**	**4.10**	**331**	*e*P	**Pn**	**02 39 15.3**	**+2.3**
CEDE	**Laguna Cedeo**	**4.11**	**332**	*e*P	**Pn**	**02 39 15.8**	**+2.5**
COVE	**Coope Vega, Sa**	**4.19**	**337**	*e*P	**Pn**	**02 39 15.6**	**+1.3**
GRZA	**Playa Garza**	**4.20**	**317**	*e*P	**Pn**	**02 39 14.6**	**+0.3**
DUNO	**Dulce Nombre,**	**4.22**	**320**	*e*P	**Pn**	**02 39 15.1**	**+0.4**
PLVR	**Palo Verde**	**4.34**	**324**	*e*P	**Pn**	**02 39 15.5**	**-1.0**
SAJU	**San Juanillo,**	**4.36**	**318**	*e*P	**Pn**	**02 39 16.5**	**0.0**
GUAI	**GUAI**	**4.38**	**321**	*i* P	**Pn**	**02 39 17.3**	**+0.5**
ORTG	**Ortega, Santa**	**4.42**	**323**	*e*P	**Pn**	**02 39 18.0**	**+0.6**
CUI	**Cuipilapa**	**4.49**	**328**	*e*P	**Pn**	**02 39 19.7**	**+1.2**
COLC	**Colonia**	**4.52**	**327**	*i* P	**Pn**	**02 39 19.9**	**+1.1**
HORNC	**Hornillas**	**4.54**	**328**	*i* P	**Pn**	**02 39 20.4**	**+1.2**
GUAB	**Guayabo de Bag**	**4.57**	**327**	*i* P	**Pn**	**02 39 21.0**	**+1.6**
GPS2	**Hotel Rincn d**	**4.67**	**326**	*e*P	**Pn**	**02 39 22.2**	**+1.3**
LAPC	**Finca la Perla**	**4.73**	**326**	*i* P	**Pn**	**02 39 22.9**	**+1.2**
BUEV	**Buena Vista**	**4.74**	**326**	*i* P	**Pn**	**02 39 23.0**	**+1.1**
GBS3	**Finca Las Img**	**4.75**	**326**	*i* P	**Pn**	**02 39 23.2**	**+1.2**
HZTE	**Horizontes, Gu**	**4.78**	**324**	*e*P	**Pn**	**02 39 24.5**	**+2.1**
ESPN	**Las Esperanzas**	**5.54**	**344**	*e*P	**Pn**	**02 39 33.8**	**+1.0**
ACON	**Acoyapa**	**5.64**	**335**	*e*P	**Pn**	**02 39 35.5**	**+1.4**
BBAC	**Balboa, Cauca**	**7.27**	**131**	*e*P	**Pn**	**02 39 57.8**	**+1.0**
PCON	**Cinco Dias**	**7.74**	**125**	*e*P	**Pn**	**02 40 06.4**	**+2.8**
GCUF	**Volcan Galeras**	**7.74**	**136**	*e*P	**Pn**	**02 40 04.9**	**+1.4**
ORTC	**Ortega, Tolima**	**8.00**	**111**	*e*P	**Pn**	**02 40 09.4**	**+2.8**

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*MOS **26** 03:06:42.2±1.6, 56.°01N×113.°66E, h8^{km}, mb3.8/5, Error ellipse: s-maj=10.8km s-min=6.9km az=73.0*
MOS Felt (II-III) at Severomuisk.
*BYKL **26** 03:06:42.6±0.1, 56.°13N×113.°73E, h8^{km}±1^{km}, FELT I=II-III MSK at Severomuisk*
*IDC **26** 03:06:44.4±1.5, 55.°98N×113.°48E, h0^{km}, mb3.4/4, mb1 3.6/8, mb1mx3.3/55, mbtmp3.5/8, ML3.2/4, Error ellipse: s-maj=28.2km s-min=20.4km az=145.0*
ISC 26 03:06:42.7±0.9, **56.°01N**±0.°02×**113.°65E**±0.°02, **h4**^{km}±6^{km},
n68, σ**2.^{s}54**/125, **mb3.6**/7, **5C-1D, East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	**0.12**	**334**⇑	*i*Pg	**Pg**	**03 06 44.8**	**-0.3**
SVKR				Pmax		03 06 45.4	
	14μm,0.1s						
SVKR				*e*Sg	**Sg**	**03 06 46.7**	**+0.1**
SVKR				Smax		03 06 47.1	
	100μm,0.1s						
SVKR	**Severomuysk**	**0.12**	**334**⇑	*i*PG	**Pg**	**03 06 44.7**	**-0.3**
SVKR				*e*S	**Sg**	**03 06 46.8**	**+0.1**
SVKR	**Severomuysk**	**0.12**	**334**⇑	*i*Pg		03 06 31.9	
SVKR				*e*Sg		03 06 33.9	
SVKR				Pmax			
	9μm,0.2s						
SVKR				Smax			
	46μm,0.4s						
UKT	**Uakit**	**0.52**	**182**	*e*Pg	**Pb**	**03 06 53.5**	**-1.0**
UKT				Pmax		03 06 55.7	
	512nm,0.5s						
UKT				*e*Sg	**Sb**	**03 07 01.8**	**-0.7**
UKT				Smax		03 07 02.8	
	2μm,0.7s						
UKT	**Uakit**	**0.52**	**182**	*e*Pg		03 06 40.9	
UKT				*e*Sg		03 06 49.3	
UKT				Pmax			
	109nm,0.6s						
UKT				Smax			
	735nm,1.0s						
YOA	**Uoyan**	**1.09**	**277**	*e*Pg	**Pg**	**03 07 03.2**	**-0.3**
YOA				Pmax		03 07 06.1	
	1μm,0.3s						
YOA				*e*Sg	**Sb**	**03 07 18.6**	**0.0**
YOA				Smax		03 07 22.3	
	5μm,0.5s						
YOA	**Uoyan**	**1.09**	**277**	*e*PG	**Pg**	**03 07 03.2**	**-0.3**
YOA				*i*		03 07 19.4	
YOA				pmax	pmax		
	comp=Z,896nm,0.2s						
YOA				smax	smax		
	comp=N,5μm,0.4s						
YOA	**Uoyan**	**1.09**	**277**	*e*Pg		03 06 50.3	
YOA				*e*Sg		03 07 04.7	
YOA				Pmax			
	comp=N,278nm,0.2s						
YOA				Smax			
	comp=N,3μm,0.7s						
NLYR	**Nelyaty**	**1.24**	**66**	*e*Pg	**Pn**	**03 07 03.4**	**-3.5**
NLYR				max		03 07 04.4	
	comp=N,373nm,0.3s						
NLYR				*e*Pb	**Pb**	**03 07 05.9**	**-0.8**
NLYR				*e*Sg	**Sb**	**03 07 18.6**	**-4.5**
NLYR				*e*		03 07 23.5	
NLYR				max		03 07 23.8	
	comp=N,1μm,0.6s						
NLYR	**Nelyaty**	**1.24**	**66**	*e*PG	**Pn**	**03 07 03.3**	**-3.6**
NLYR				*e*		03 07 19.7	
NLYR				pmax	pmax		
	comp=Z,713nm,0.6s						
NLYR				smax	smax		
	comp=E,1μm,1.1s						
NLYR	**Nelyaty**	**1.24**	**66**⇓	*i*Pg		03 06 50.8	
NLYR				*e*Pb		03 06 52.8	
NLYR				*e*Sg		03 07 06.5	
NLYR				*e*Sb		03 07 10.3	
NLYR				max			
	comp=E,202nm,0.5s						
NLYR				max			
	comp=E,840nm,0.5s						
KMO	**Kumora**	**1.38**	**266**	*e*Pg	**Pn**	**03 07 08.5**	**-0.3**
KMO				*e*Pb	**Pg**	**03 07 10.0**	**+0.8**
KMO				max		03 07 10.4	
	comp=E,1μm,0.4s						
KMO				*e*Sg	**Sg**	**03 07 27.1**	**0.0**
KMO				*e*		03 07 31.7	
KMO				max		03 07 32.2	
	comp=E,3μm,1.1s						
KMO	**Kumora**	**1.38**	**266**	*e*PG	**Pn**	**03 07 08.1**	**-0.7**
KMO				*e*		03 07 28.3	
KMO				pmax	pmax		
	comp=Z,1μm,0.6s						
KMO				smax	smax		
	comp=N,3μm,1.4s						
KMO	**Kumora**	**1.38**	**266**	*e*Pg		03 06 55.7	
KMO				*e*Pb		03 06 57.1	
KMO				*e*Sg		03 07 14.3	
KMO				*e*		03 07 18.2	
KMO				max			
	comp=N,208nm,0.4s						
KMO				max			
	comp=N,1μm,1.1s						
YLYR	**Ulyunkhan**	**1.82**	**232**	*e*Pn	**Pg**	**03 07 16.9**	**-0.6**
YLYR				*e*Pg	**Pb**	**03 07 17.4**	**+0.9**
YLYR				Pmax		03 07 18.0	
	comp=N,536nm,0.3s						
YLYR				*e*Sg	**Sg**	**03 07 42.6**	**+1.6**
YLYR				Smax		03 07 45.1	
	comp=N,2μm,0.3s						
YLYR	**Ulyunkhan**	**1.82**	**232**	*e*PN	**Pg**	**03 07 16.9**	**-0.6**
YLYR				*e*		03 07 42.9	
YLYR				pmax	pmax		
	comp=Z,541nm,0.4s						
YLYR				smax	smax		
	comp=E,3μm,0.4s						
YLYR	**Ulyunkhan**	**1.82**	**232**	*e*Pn		03 07 03.3	
YLYR				*e*Pg		03 07 04.0	
YLYR				*e*Sg		03 07 30.0	
YLYR				Pmax			
	comp=E,146nm,0.3s						
YLYR				Smax			
	comp=E,232nm,0.3s						
BOD	**Bodaibo**	**1.82**	**6**	*e*Pg	**Pn**	**03 07 13.4**	**-1.4**
BOD				Pmax		03 07 14.3	
	comp=E,335nm,0.2s						
BOD				*e*Sg	**Sn**	**03 07 36.0**	**-2.3**
BOD				Smax		03 07 37.0	
	comp=E,1μm,0.3s						
BOD	**Bodaibo**	**1.82**	**6**	*e*PN	**Pn**	**03 07 13.0**	**-1.8**
BOD				*e*		03 07 35.8	
BOD				pmax	pmax		
	comp=Z,334nm,0.2s						
BOD				smax	smax		
	comp=E,1μm,0.3s						
BOD	**Bodaibo**	**1.82**	**6**	*e*Pg		03 07 00.4	
BOD				*e*Sg		03 07 23.3	
BOD				Pmax			
	comp=E,113nm,0.6s						
BOD				Smax			
	comp=E,783nm,0.4s						
NIZ	**Nizh Angarsk**	**2.33**	**266**	*e*Pn	**Pn**	**03 07 22.6**	**+0.8**
NIZ				*e*Pg	**Pb**	**03 07 25.6**	**+0.4**
NIZ				Pmax		03 07 30.0	
	comp=E,142nm,0.5s						
NIZ				*e*Sn	**Sb**	**03 07 52.5**	**-1.8**
NIZ				*e*Sg	**Sg**	**03 07 57.0**	**-0.3**
NIZ				Smax		03 07 59.7	
	comp=E,711nm,0.6s						
NIZ				*e*		03 08 01.3	
NIZ	**Nizh Angarsk**	**2.33**	**266**	*e*Pn		03 07 10.1	
NIZ				*e*Pg		03 07 12.8	
NIZ				*e*Sg		03 07 44.5	
NIZ				Pmax			
	comp=E,39nm,0.8s						
NIZ				Smax			
	comp=E,245nm,0.5s						
CRS	**Chara**	**2.71**	**69**	*e*Pn	**Pn**	**03 07 26.0**	**-1.1**
CRS				*e*Pg	**Pb**	**03 07 30.0**	**-1.8**
CRS				Pmax		03 07 35.2	
	comp=E,275nm,0.8s						
CRS				*e*Sg	**Sb**	**03 08 04.7**	**-0.7**
CRS				Smax		03 08 08.6	
	comp=E,1μm,1.7s						
CRS	**Chara**	**2.71**	**69**	*e*PN	**Pb**	**03 07 30.5**	**-1.3**
CRS				*e*		03 08 04.2	
CRS				pmax	pmax		
	comp=Z,258nm,0.5s						
CRS				smax	smax		
	comp=E,1μm,1.7s						
CRS	**Chara**	**2.71**	**69**	*e*Pn		03 07 12.8	
CRS				*e*Pg		03 07 17.7	
CRS				*e*Sg		03 07 51.9	
CRS				Pmax			
	comp=E,302nm,0.9s						
CRS				Smax			
	comp=E,214nm,0.7s						
SYVR	**Suvo**	**3.17**	**223**	*e*Pn	**Pn**	**03 07 35.5**	**+2.2**
SYVR				*e*Pg	**Pg**	**03 07 42.0**	**-1.3**
SYVR				*e*PgPg	**PbPb**	**03 07 44.3**	**+1.7**
SYVR				max		03 07 45.4	
	comp=E,115nm,0.6s						
SYVR				*e*Sn	**Sn**	**03 08 13.9**	**+2.4**
SYVR				*e*Sg	**Sg**	**03 08 24.7**	**+0.4**
SYVR				Smax		03 08 35.8	
	comp=E,549nm,0.8s						
SYVR	**Suvo**	**3.17**	**223**	*e*PN	**Pg**	**03 07 42.5**	**-0.8**
SYVR				*e*		03 08 23.3	
SYVR				pmax	pmax		
	comp=Z,117nm,0.6s						
SYVR				smax	smax		
	comp=E,628nm,0.8s						
SYVR	**Suvo**	**3.17**	**223**	*e*Pn		03 07 21.7	
SYVR				*e*Pg		03 07 28.6	
SYVR				*e*		03 08 06.0	
SYVR				*e*Sg		03 08 10.3	
SYVR				Pmax			
	comp=E,31nm,0.7s						
SYVR				Smax			
	comp=E,132nm,0.6s						
VTMR	**Vitim**	**3.49**	**351**	*e*Pn	**Pn**	**03 07 36.6**	**-1.1**
VTMR				*e*Pg	**Pb**	**03 07 43.4**	**-1.5**
VTMR				*e*		03 08 12.3	
VTMR				*e*Sg	**Sb**	**03 08 26.6**	**-1.0**

VTMR	Vitim	3.49	351	ePn		03 07 23.1	
VTMR				ePg		03 07 30.5	
VTMR				eSg		03 08 13.6	
KHNR	Khani	3.63	73	ePn	Pn	03 07 38.0	-1.6
KHNR				ePg	Pb	03 07 45.6	-1.7
KHNR				eSn	Sn	03 08 19.2	-3.7
KHNR				eSg	Sb	03 08 32.0	+0.3
TUP	Tupik	3.94	111	ePn	Pn	03 07 43.7	-0.3
TUP				ePg	Pb	03 07 54.0	+1.3
TUP				Pmax		03 07 58.3	
	comp=E,72nm,0.5s						
TUP				eSn	Sn	03 08 28.9	-1.8
TUP				eSg	Sg	03 08 45.1	-4.1
TUP				e		03 08 50.3	
TUP				max		03 08 53.9	
	comp=E,698nm,1.4s						
TUP	Tupik	3.94	111	ePn		03 07 30.8	
TUP				ePg		03 07 40.9	
TUP				eSn		03 08 15.6	
TUP				eSg		03 08 31.9	
TUP				Pmax			
	comp=E,10.0nm,0.4s						
TUP				Smax			
	comp=E,231nm,1.4s						
MXMB	Maximikha	3.96	228	ePn	Pn	03 07 46.2	+2.0
MXMB				ePg	Pb	03 07 55.6	+2.5
MXMB				eSn	Sn	03 08 32.3	+1.1
MXMB				eSg	Sg	03 08 48.7	-1.2
MXMB	Maximikha	3.96	228	ePn		03 07 33.6	
MXMB				e		03 07 41.2	
MXMB				ePg		03 07 44.1	
MXMB				eSg		03 08 36.9	
CIT	Chita	4.00	181	eSg	Sg	03 08 49.4	-1.6
CIT				Smax		03 08 55.7	
	comp=E,740nm,0.4s						
CIT	Chita	4.00	181	ePN	Pn	03 07 43.9	-0.9
CIT				e		03 07 56.0	
CIT				e		03 08 48.7	
CIT				pmax	pmax		
	comp=Z,84nm,1.5s						
CIT				smax	smax		
	comp=E,773nm,1.7s						
OGRR	Ongureny	4.23	238	ePn	Pn	03 07 48.7	+0.8
OGRR				ePg	Pb	03 08 00.0	+2.4
OGRR				Pmax		03 08 03.2	
	comp=E,69nm,0.6s						
OGRR				eSn	Sn	03 08 38.9	+1.2
OGRR				eSg	Sg	03 08 55.8	-2.6
OGRR				e		03 08 58.5	
OGRR				max		03 09 06.0	
	comp=E,304nm,1.4s						
OGRR	Ongureny	4.23	238	ePN	Pn	03 07 48.0	+0.1
OGRR				e		03 07 59.6	
OGRR				e		03 08 55.8	
OGRR				pmax	pmax		
	comp=Z,107nm,1.6s						
OGRR				smax	smax		
	comp=E,301nm,1.9s						
OGRR	Ongureny	4.23	238	ePn		03 07 37.1	
OGRR				ePg		03 07 47.1	
OGRR				eSn		03 08 25.2	
OGRR				eSg		03 08 44.2	
OGRR				Pmax			
	comp=E,30nm,0.5s						
OGRR				Smax			
	comp=E,80nm,1.0s						
YKLR	Yuktali	4.50	79	ePn	Pn	03 07 50.5	-1.0
YKLR				ePg	Pb	03 08 01.7	-0.4
YKLR				eSn	Sn	03 08 40.2	-4.0
YKLR				eSg	Sb	03 08 58.7	+2.1
YKLR	Yuktali	4.50	79	ePn		03 07 37.1	
YKLR				ePg		03 07 48.2	
YKLR				eSg		03 08 46.8	
ZRHB	Zarechye	5.15	230	ePg	Pb	03 08 16.6	+3.4
ZRHB				Pmax		03 08 23.9	
	comp=E,66nm,0.7s						
ZRHB				eSn	Sn	03 09 00.0	-0.3
ZRHB				eSg	Sg	03 09 25.7	-2.1
ZRHB				Smax		03 09 38.6	
	comp=E,762nm,1.6s						
TRG	Tyrgan	5.37	236	ePg	Pb	03 08 20.9	+3.9
TRG				Pmax		03 08 25.8	
	comp=E,29nm,1.4s						
TRG				eSn	Sn	03 09 07.1	+1.3
TRG				eSg	Sg	03 09 31.2	-3.7
TRG				Smax		03 09 36.6	
	comp=E,95nm,0.4s						
TRG	Tyrgan	5.37	236	ePN	Pn	03 08 04.9	+1.3
TRG				e		03 08 20.2	
TRG				eS	Sn	03 09 05.9	+0.1
TRG				e		03 09 30.2	
TRG				pmax	pmax		
	comp=Z,29nm,0.9s						
TRG				smax	smax		
	comp=E,95nm,0.4s						
UUDB	Ulan-Yde	5.45	223	ePn	Pn	03 08 06.8	+2.1
UUDB				ePg	Pg	03 08 23.5	-3.6
UUDB				Pmax		03 08 26.0	
	comp=E,43nm,0.6s						
UUDB				eSn	Sn	03 09 07.8	-0.1
UUDB				eSg	Sg	03 09 35.5	-2.2
UUDB				Smax		03 09 40.9	
	comp=E,588nm,1.2s						
FFNB	Fofonovo	5.68	228	ePg	Pb	03 08 26.4	+4.1
FFNB				eSn	Sn	03 09 13.2	-0.2
FFNB				eSg	Sg	03 09 41.5	-3.4
KAB	Kabansk	5.72	229	ePg	Pg	03 08 28.3	-3.9
KAB				Pmax		03 08 29.7	
	comp=E,219nm,0.5s						
KAB				eSg	Sg	03 09 44.0	-2.3
KAB				Smax		03 10 11.9	
	comp=E,801nm,1.2s						
HRMR	Khuramsha	5.92	225	ePn	Pn	03 08 12.4	+1.3
HRMR				ePg	Pg	03 08 31.4	-4.5
HRMR				eSn	Sn	03 09 18.8	-0.5
HRMR				Smax		03 09 32.8	
	comp=E,64nm,0.5s						
HRMR				eSg	Sg	03 09 49.5	-3.0
HRMR				Smax		03 10 03.9	
	comp=E,670nm,0.9s						
IENR	Iengra	6.27	83	eSg	Sb	03 09 55.1	+7.4
BGT	Bolshoye Golou	6.27	234	ePg	Pb	03 08 37.0	+4.6
BGT				Pmax		03 08 39.7	
	comp=E,16nm,0.7s						
BGT				eSn	Sn	03 09 28.4	+0.3
BGT				eSg	Sg	03 10 00.0	-4.0
BGT				Smax		03 10 27.0	
	comp=E,110nm,1.7s						
CLNS	Chul'man	6.29	78	ePg	Pb	03 08 35.0	+2.3
CLNS				eSn	Sn	03 09 24.1	-4.5
CLNS				eSg	Sb	03 09 55.2	+6.9
KPC	Khapcheranga	6.37	187	ePn	Pn	03 08 18.6	+1.3
KPC				ePg	Pg	03 08 39.8	-4.7
KPC				Pmax		03 09 00.1	
	comp=E,13nm,0.6s						
KPC				eSn	Sn	03 09 31.3	+0.9
KPC				eSg	Sg	03 10 03.3	-3.6
KPC				Smax		03 10 12.9	
	comp=E,457nm,1.5s						
KPC	Khapcheranga	6.37	187	ePN	Pn	03 08 18.0	+0.7
KPC				e		03 08 37.4	
KPC				e		03 10 00.6	
KPC				pmax	pmax		
	comp=Z,8.0nm,0.4s						
KPC				smax	smax		
	comp=E,458nm,1.7s						
KPC	Khapcheranga	6.37	187	ePn		03 08 04.7	
KPC				ePg		03 08 26.2	
KPC				eSn		03 09 17.0	
KPC				eSg		03 09 50.4	
KPC				Pmax			
	comp=E,5.0nm,0.5s						
KPC				Smax			
	comp=E,100nm,1.7s						
LSTR	Listvyanka	6.66	235	ePg	Pg	03 08 44.6	-5.5
LSTR				Pmax		03 08 48.2	
	comp=E,20nm,1.6s						
LSTR				eSn	Sn	03 09 37.9	+0.4
LSTR				eSg	Sg	03 10 11.2	-5.0
LSTR				Smax		03 10 18.9	
	comp=E,146nm,1.6s						
IRK	Irkutsk	6.68	239	ePN	Pn	03 08 10.7	-11
IRK				e		03 08 45.7	
IRK				e		03 10 12.9	
IRK				pmax	pmax		
	comp=Z,168nm,0.1s						
IRK				smax	smax		
	comp=N,208nm,0.6s						
TLY	Talaya	7.34	238	Pg	Pb	03 08 44.5	-6.0
	comp=N,0.0nm,0.3s,baz=255,slow=12,SNR=3.7						
TLY				Lg	Lg	03 10 21.8	
	comp=N,0.0nm,0.3s,baz=288,slow=13,SNR=5.2						
TLY	Talaya	7.34	238	ePG	Pb	03 08 53.0	+2.5
TLY				e		03 10 33.7	
TLY				pmax	pmax		
	comp=Z,6.0nm,0.5s						
TLY				smax	smax		
	comp=E,75nm,1.3s						
ZEA	Zeya	8.17	101	ePG	Pb	03 09 03.2	-1.4
ZAK	Zakamensk	8.39	232	eSg	Sg	03 11 06.5	-5.5
ZAK				Smax		03 12 05.4	
	comp=E,119nm,1.6s						
ZAK	Zakamensk	8.39	232	ePG	Pb	03 09 14.4	+5.9
MOY	Mondy	8.65	245	ePN	Pn	03 08 50.2	+1.5
MOY				e		03 09 19.3	
MOY				e		03 11 13.4	
ORL	Orlik	8.81	253	ePn	Pn	03 08 51.8	+0.9
ORL				ePg	Pg	03 09 23.1	-8.2
ORL				Pmax		03 09 45.3	
	comp=E,20nm,1.2s						
ORL				e		03 11 11.1	
ORL				eSg	Sg	03 11 18.2	-7.1
ORL				Smax		03 11 27.0	
	comp=E,73nm,1.6s						
ORL	Orlik	8.81	253	ePN	Pn	03 08 51.4	+0.5
ORL				e		03 09 22.5	
ORL				eS	Sn	03 10 28.9	-1.7
ORL				e		03 11 16.6	
ORL				pmax	pmax		
	comp=Z,8.0nm,0.7s						
ORL				smax	smax		
	comp=N,73nm,1.8s						
ULN	Ulaanbaatar	9.12	209	i P	Pn	03 08 55.7	+0.6
SONM	Songino Array	9.33	212	Pn	Pn	03 08 59.1	+1.1
	comp=N,0.2nm,0.3s,baz=24,slow=12,SNR=5.3						
SONM				Lg	Lg	03 11 39.5	
	comp=N,4.3nm,0.3s,baz=28,slow=29,SNR=13						
KLR	Kul'dur	12.90	114	Pn	Pn	03 09 49.2	+2.6
	comp=N,0.4nm,0.3s,baz=315,slow=15,SNR=9.6						
KLR				Lg	Lg	03 13 27.4	
	comp=N,0.2nm,0.3s,baz=347,slow=4.4,SNR=8.3						
ZALV	Zalesovo Beam	16.62	275	Pn	P	03 10 37.3	-1.6
	comp=N,0.1nm,0.3s,baz=45,slow=11,SNR=2.1						
TIXI	Tiksi	16.97	17	i P	Pn	03 10 38.9	-1.7
DGZ	Jazzator, Alta	16.98	259	i P	P	03 10 43.0	0.0
DGZ				pmax	pmax		
	comp=Z,6.0nm,1.9s						
NRIK	Noril'sk	17.72	329	P	P	03 10 51.2	+0.3
	comp=Z,0.3nm,0.3s,baz=107,slow=13,SNR=4.0						
NRIK	Noril'sk	17.72	329	i P	P	03 10 50.4	-0.5
NRIK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
SEY	Seymchan	20.58	55	P	Pn	03 11 25.7	+1.3
	comp=Z,0.7nm,0.5s,baz=234,slow=13,SNR=4.1						
KURK	Kurchatov	21.40	270	ceP	P	03 11 31.6	+0.4
KURK				pmax	pmax		
	comp=Z,7.0nm,2.5s						
MK31	Makanchi Array	21.46	258	ceP	P	03 11 33.7	+1.8
MKAR	Makanchi Array	21.46	258	P	P	03 11 33.2	+1.3
	comp=Z,0.8nm,0.6s,baz=48,slow=8.1,SNR=9.9						
KURBB	Kurchatov Arra	21.50	270	P	P	03 11 33.9	+1.7
	comp=Z,60nm,0.8s,baz=65,slow=11,SNR=17						
BVAR	Borovoye Array	24.98	281	P	P	03 12 08.2	+1.1
	comp=Z,0.4nm,0.6s,baz=128,slow=12,SNR=3.7						
ARU	Arti	29.94	294	i P	P	03 12 53.4	+1.9
ARU				pmax	pmax		
	comp=Z,3.0nm,1.2s						
FINES	FINESS Array B	42.52	315	P	P	03 14 40.7	+2.0
	comp=Z,1.0nm,0.7s,baz=68,slow=6.8,SNR=4.3						
FINES	FINESS Array B	42.52	315	i P	P	03 14 41.9	+3.2
FINES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MNK	Minsk	45.87	306	i P	P	03 14 59.6	-6.0
	comp=E,1.0nm,0.9s						
MNK				i P	P	03 14 59.6	-6.0
	comp=N,12nm,1.0s						
MNK				i P	P	03 14 59.6	-6.0
	comp=Z,4.0nm,0.9s						
MNK				i PP	PcP	03 16 46.8	+4.1
MNK				i PPP	PPP	03 17 26.5	
MNK				i PcS	PcS	03 20 31.6	-5.1
MNK				i S	S	03 21 41.9	-8.1
MNK				i SS	ScS	03 25 06.2	+4.4
MNK				i SSS	SSS	03 25 57.8	
MNK				i LQ	LQ	03 29 57.6	
MNK				i LR	LR	03 33 13.7	
MNK				i LRM	MLR	03 36 02.6	
	comp=Z,117nm,24.4s						
MNK				i LRM	MLR	03 36 10.8	
	comp=E,8.0nm,16.3s						
MNK				i LRM	MLR	03 36 19.6	
	comp=N,86nm,16.3s						
AKASG	Malin Array Be	47.68	301	i P	P	03 15 23.2	+3.3

NOU 26 03:18:55.6, 16°.32S×166°.54E, h0^{km}, MLv4.8, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	1.08	36	P	Pg	03 19 16.4	+0.1
DVP	Devils Point	2.11	132	P	Pn	03 19 32.9	+0.8
KOUNC	Koumac, New Ca	4.72	207	P	Pn	03 20 08.8	+0.7
DZM	Mont Dzumac	5.72	181	P	Pn	03 20 21.0	-1.0
ONTNC	Ouen Toro	5.96	181	P	Pn	03 20 24.5	-0.6
OUENC	Ouen Island, N	6.07	177	P	Pn	03 20 26.3	-0.4

*MOS **26** 03:25:47.2±0.0, 42°.77N×44°.20E, h24^{km}, MPVA3.3*
*NORS **26** 03:25:47.4±0.0, 42°.73N×44°.21E, h18^{km}, MPVA3.4*
*TIF **26** 03:25:47.1, 42°.80N×44°.26E, h12^{km}±1^{km}*
ISC 26 03:25:47.3±0.9**, 42°.78N**±0°.02×**44°.21E**±0°.02**, h17^{km}**±8^{km}**,**
n35, σ0^{s}.92/67**, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZEI	Tsey	0.22	273	i Pg	Pb	03 25 53.1	+0.1
	439nm,0.1s						
ZEI				eSg	Sb	03 25 57.1	+0.2
	1µm,0.1s						
KORR	Kora	0.33	342	ePg	Pb	03 25 54.9	+0.2
	19nm,0.1s						
KORR				eSg	Sb	03 26 00.7	+1.0
	507nm,0.4s						
PNSH	Pansheti	0.33	115	P	Pg	03 25 53.9	-0.5
PNSH				S	Sg	03 25 58.1	-1.1
GUDG	Gudauri	0.37	147	P	Pb	03 25 56.1	+0.6
GUDG				S	Sb	03 26 01.7	+0.5
ARNR	Ardon	0.41	8	ePg	Pb	03 25 56.4	+0.3
	36nm,0.2s						
ARNR				eSg	Sb	03 26 03.1	+1.1
	296nm,0.3s						
VLKR	Vladikavkaz	0.44	52	ePg	Pb	03 25 56.6	-0.1
	9.9nm,0.3s						
VLKR				eSg	Sb	03 26 03.5	+0.5
	39nm,0.3s						
DIGR	Digorskoe uzhe	0.48	285	i Pg	Pb	03 25 57.3	0.0
	56nm,0.1s						
DIGR				eSg	Sb	03 26 04.1	-0.1
	258nm,0.1s						
KMGR	Komgaron	0.56	60	ePg	Pb	03 25 58.7	0.0
	23nm,0.2s						
KMGR				eSg	Sb	03 26 07.8	+1.3
	243nm,0.4s						
LSNR	Lesken	0.57	331	ePg	Pb	03 25 59.5	+0.6
	28nm,0.1s						
LSNR				eSg	Sb	03 26 08.3	+1.4
	124nm,0.2s						
ONI	Oni	0.59	252	P	Pn	03 25 59.9	-1.0
ONI				S	Sn	03 26 08.7	-1.4
ONI	Oni	0.59	252	ePg	Pn	03 25 59.9	-1.0
ONI				eSg	Sn	03 26 08.6	-1.6
STDR	Stavd-Durt	0.60	350	ePg	Pn	03 26 00.7	-0.4
	28nm,0.4s						
STDR				eSg	Sn	03 26 10.8	+0.3
BTKR	Batakoyurt	0.64	22	i Pg	Pn	03 26 01.2	-0.5
	38nm,0.3s						
BTKR				eSg	Sb	03 26 09.8	+0.9
	159nm,0.2s						
NCK	Nalchik	0.85	328	ePg	Pn	03 26 04.5	0.0
NCK				eSg	Sn	03 26 16.5	-0.1
TRKR	Terskaya	1.02	22	ePg	Pn	03 26 06.9	0.0
TRKR				eSg	Sn	03 26 22.2	+1.4
BKRG	Bakuriani	1.14	207	P	Pg	03 26 09.8	+0.5
BKRG				S	Sg	03 26 26.4	+2.2
BTNK	Botanikuri	1.18	158	P	Pg	03 26 11.6	+1.6
BTNK				S	Sg	03 26 27.2	+1.8
NEY	Neytrino	1.19	294	ePg	Pg	03 26 09.9	-0.3
NEY				eSg	Sb	03 26 24.6	0.0
BRNG	Burnasheti	1.19	194	P	Pg	03 26 10.0	-0.2
BRNG				S	Sg	03 26 27.8	+2.1
GROC	Groznyy	1.24	69	ePg	Pb	03 26 10.5	+0.2
GROC				eSg	Sg	03 26 28.0	+0.6
KBZ	Khabaz	1.35	315	ePg	Pb	03 26 12.0	-0.1
KBZ				eSg	Sg	03 26 30.5	-0.3
KZRT	Kazreti	1.40	174	P	Pb	03 26 13.2	+0.2
DVE	Vedeno	1.42	82	ePg	Pb	03 26 13.4	0.0
DVE				eSg	Sb	03 26 32.0	+0.7
DMNI	Dmanisi	1.45	180	P	Pg	03 26 14.3	-0.9
ABS	Abastumani	1.45	226	P	Pg	03 26 15.5	+0.2
ABS				S	Sg	03 26 36.0	+1.8
SHA1	Shidzhatmaz	1.48	311	i Pg	Pb	03 26 14.5	-0.1
	8.4nm,0.4s						
SHA1				eSg	Sb	03 26 34.0	+0.8
	46nm,0.4s						
BTLR	Botlikh	1.49	94	ePg	Pb	03 26 14.3	-0.3
BTLR				eSg	Sg	03 26 34.2	-1.1
PYA1	Pyatigorsk	1.52	328	ePg	Pb	03 26 14.7	-0.3
PYA1				eSg	Sb	03 26 34.1	+0.1
BGD	Bogdanovka	1.58	197	P	Pg	03 26 17.6	-0.1
BGD				S	Sg	03 26 39.6	+1.4
BEYR	Belyy Ugol+	1.60	321	ePg	Pb	03 26 16.2	-0.2
BEYR				eSg	Sg	03 26 37.7	-1.1
KIV0	Kislovodsk Arr	1.61	317	ePg	Pb	03 26 17.3	+0.6
KIV0				eSg	Sb	03 26 37.6	+0.7
KIV	Kislovodsk	1.62	317	ePg	Pb	03 26 17.2	+0.5
KIV				eSg	Sg	03 26 38.5	-1.0
LGD	Lagodekhi	1.78	121	P	Pb	03 26 19.6	+0.1
LGD				S	Sg	03 26 43.8	-0.8
DDFL	Dedoflistskaro	1.95	132	P	Pg	03 26 23.6	-1.1
GNI	Garni	2.66	171	ePn	Pb	03 26 34.0	-0.5
GNI				eSn	Sb	03 27 04.9	-2.0

*IDC **26** 03:28:39.0±1.7, 51°.88N×179°.41W, h0^{km}, mb3.7/9, mb1 3.9/9, mb1mx3.6/35, mbtmp3.7/9, Error ellipse: s-maj=60.7km s-min=18.6km az=5.0*
*AEIC **26** 03:28:47±2.2, 51°.5N±0°.2×179°.31W±0°.07, h64^{km}±8^{km}, ML3.9, Error ellipse: s-maj=24.0km s-min=5.9km az=176.0*
*NEIC **26** 03:28:48.1±1.5, 51°.5N±0°.2×179°.31W±0°.08, h51^{km}±23^{km}, Error ellipse: s-maj=25.5km s-min=6.8km az=172.0*
ISC 26 03:28:45.3±0.9**, 51°.4N**±0°.1×**179°.33W**±0°.04**, h50^{km}, n44,**
σ2^{s}.35/36**, mb3.7**/9**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CERAA	Semis' Rag'd T	0.83	313		Pn	03 29 02.9	+2.2
AMKA	Amchitka	0.86	272		Pn	03 29 04.0	+2.9
AMKA	Amchitka	0.86	272	Sn	Sn	03 29 16.0	+3.4
CERB	Semis' Cerberu	0.87	312		Pn	03 29 03.3	+2.1
CESW	Semis' Southwe	0.88	309		Pn	03 29 03.4	+2.0
CEAP	Semis' Anvil P	0.94	314		Pn	03 29 04.2	+2.0
CETU	Semis' Tuman	0.95	311		Pn	03 29 04.7	+2.3
LSSE	Little Sitkin	1.43	295		Pn	03 29 11.0	+2.2
LSPA	Little Sitkin	1.44	296		Pn	03 29 11.1	+2.1
LSSA	Little Sitkin	1.47	295		Pn	03 29 11.4	+2.0
LSNW	Little Sitkin	1.48	296		Pn	03 29 11.3	+1.8
ADK	Adak	1.73	71		Pn	03 29 15.1	+2.1
ADK	Adak	1.73	71	Sn	Sn	03 29 34.9	+1.0
ATKA	Atka Island	3.30	73		Pn	03 29 36.7	+2.3
ATKA	Atka Island	3.30	73	Sn	Sn	03 30 13.1	+0.8
KOKL	Mount Kliuchef	3.33	71		Pn	03 29 37.2	+2.3
KOFP	Korovin Flat P	3.38	72		Pn	03 29 38.2	+2.7
SMY	Shemya	4.28	291		Pn	03 29 48.5	+0.7
NIKH	Nikolski High	6.65	72		Pn	03 30 21.2	+0.9
OKWE	Okmok W'ng Wal	7.11	68		Pn	03 30 30.1	+3.5
SPIA	Saint Paul Isl	7.89	39		Pn	03 30 40.1	+2.8
MAPS	Pakushin South	7.94	67		Pn	03 30 40.6	+2.7
MGOD	Makushin Gods	7.98	67		Pn	03 30 41.0	+2.5
MREP	Makushin Rep't	8.05	67		Pn	03 30 42.5	+2.9
MSW	Makushin Switc	8.05	67		Pn	03 30 42.3	+2.7
MNAT	Makushin Natee	8.11	67		Pn	03 30 43.1	+2.9
UNV	Unalaska Valle	8.20	67		Pn	03 30 44.1	+2.6
ZRO	Akutan Zero	8.56	66		Pn	03 30 49.5	+3.1
AKLV	Akutan Long Va	8.59	66		Pn	03 30 50.0	+3.1
USRK	Ussuriysk Ar.	32.97	277	P	P	03 35 14.0	-1.0
	0.9nm,0.7s,baz=57,slow=7.9,SNR=2.0						
H11N2	WAKE ISLAND Hy	33.37	204	T	T	04 10 54.7	
	baz=16,slow=76,SNR=9.5						
H11N3	WAKE ISLAND Hy	33.38	204	T	T	04 11 06.4	
	baz=16,slow=76,SNR=7.7						
H11N1	WAKE ISLAND Hy	33.39	204	T	T	04 10 56.1	
	baz=16,slow=76,SNR=6.3						
H11S1	WAKE ISLAND Hy	34.59	204	T	T	04 12 26.0	
	baz=16,slow=76,SNR=7.7						
H11S2	WAKE ISLAND Hy	34.60	204	T	T	04 12 47.2	
	baz=16,slow=76,SNR=4.7						
H11S3	WAKE ISLAND Hy	34.61	204	T	T	04 12 24.6	
	baz=16,slow=76,SNR=3.8						
YKA	Yellowknife Ar	35.49	46	P	P	03 35 34.4	-2.2
	0.1nm,0.4s,baz=282,slow=6.4,SNR=2.2						
NVAR	Mina Array Bea	43.89	82	P	P	03 36 47.5	+0.6
	0.3nm,0.5s,baz=297,slow=6.5,SNR=4.1						
SONM	Songino Array	46.36	296	P	P	03 37 05.3	-1.0
	1.1nm,0.5s,baz=65,slow=8.5,SNR=14						
PDAR	Pinedale Array	46.63	72	P	P	03 37 08.0	-0.7
	0.5nm,0.5s,baz=296,slow=3.1,SNR=7.0						
ARCES	ARCESS Array B	58.06	350	P	P	03 38 29.7	-2.9
	3.1nm,1.0s,baz=1.3,slow=8.1,SNR=0.8						
TXAR	Lajitas Array	58.99	81	P	P	03 38 39.4	-0.3
	0.3nm,0.7s,baz=301,slow=6.0,SNR=4.2						
MKAR	Makanchi Array	59.79	308	P	P	03 38 42.6	-2.4
	0.3nm,0.3s,baz=49,slow=7.2,SNR=16						
AKASG	Malin Array Be	75.47	342	P	P	03 40 20.6	-3.0
	0.6nm,0.3s,baz=23,slow=7.3,SNR=3.2						

*IDC **26** 03:45:03.3±2.8, 43°.02N×46°.04E, h0^{km}, mb3.5/2, mb1 3.5/2, mb1mx3.0/42, mbtmp3.5/2, Error ellipse: s-maj=46.3km s-min=24.3km az=19.0*
*MOS **26** 03:45:13.8±0.0, 43°.15N×46°.01E, h95^{km}±2^{km}, MPVA3.9*
*NORS **26** 03:45:13.8±0.0, 43°.03N×46°.02E, h94^{km}±2^{km}, MPVA3.9*
*TIF **26** 03:45:13.6, 43°.19N×45°.97E, h97^{km}±1^{km}*
*DRS **26** 03:45:14.3±0.0, 42°.99N×46°.56E, h64^{km}, ML3.4/10*
ISC 26 03:45:14.5±0.8**, 43°.19N**±0°.03×**46°.02E**±0°.02**, h95^{km}**±5^{km}**,**
n99, σ1^{s}.22/170**, 13C-29D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GROC	Groznyy	0.17	274	eP	Pn	03 45 28.3	+0.4
GROC				e		03 45 37.9	
GROC				pmax	pmax		
	comp=Z,515nm,0.3s						
GROC				smax	smax		
	comp=N,2µm,0.4s						
GROC				smax	smax		
	comp=E,1µm,0.4s						
GROC				smax	smax		
	comp=E,1µm,0.5s						
GROC	Groznyy	0.17	274	⇓iPg	Pn	03 45 28.4	+0.5
	comp=E,424nm,0.2s						
GROC				eSg	Sn	03 45 39.2	+1.2
	comp=E,1µm,0.4s						
DVE	Vedeno	0.25	162	d iP	Pn	03 45 27.9	-0.4
DVE				eS	Sn	03 45 37.9	-0.7
DVE				pmax	pmax		
	comp=Z,787nm,0.3s						
DVE				smax	smax		
	comp=N,854nm,0.5s						
DVE	Vedeno	0.25	162	i Pg	Pn	03 45 28.0	-0.4
	comp=N,787nm,0.3s						
DVE				eSg	Sn	03 45 37.9	-0.7
	comp=N,2µm,0.5s						
DLMR	Dylym	0.46	105	⇓iP	Pn	03 45 29.1	-0.3
DLMR				i S	Sn	03 45 40.2	-0.4
DLMR				pmax	pmax		
	comp=Z,790nm,0.4s						
DLMR	Dylym	0.46	105	⇓iPg	Pn	03 45 29.1	-0.3
	comp=Z,790nm,0.4s						
DLMR				⇑iSg	Sn	03 45 40.2	-0.4

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                comp=Z,3µm,0.5s
BTLR  Botlikh         0.55 164⇓iP     Pn     03 45 30.0 -0.1
BTLR                           eS     Sn     03 45 41.3 -0.5
BTLR                            pmax  pmax
                comp=Z,257nm,0.6s
BTLR  Botlikh         0.55 164⇓iPg    Pn     03 45 30.1 -0.1
                comp=Z,257nm,0.6s
BTLR                          ⇑iSg    Sn     03 45 41.4 -0.5
                comp=Z,485nm,0.3s
DBC   Dubki           0.62 106⇓iP     Pn     03 45 30.3 -0.4
DBC                            i S    Sn     03 45 41.9 -1.0
DBC                             pmax  pmax
                comp=Z,279nm,0.5s
DBC   Dubki           0.62 106⇓iPg    Pn     03 45 30.4 -0.4
                comp=Z,279nm,0.5s
DBC                           ⇑eSg    Sn     03 45 41.9 -1.0
                comp=Z,465nm,0.5s
KRNR  Karanay         0.74 119⇓iP     Pn     03 45 31.5 -0.4
KRNR                           eS     Sn     03 45 44.3 -0.7
KRNR                            pmax  pmax
                comp=Z,107nm,0.7s
KRNR  Karanay         0.74 119⇓iPg    Pn     03 45 31.6 -0.4
                comp=Z,107nm,0.3s
KRNR                          ⇓iSg    Sn     03 45 44.3 -0.7
                comp=Z,535nm,0.4s
XNZR  Khunzakh        0.82 142⇓ePg    Pn     03 45 33.0 +0.3
                comp=Z,2µm,0.4s
XNZR                           eSg    Sn     03 45 46.2 -0.3
KMGR  Komgaron        0.86 261 eP     Pn     03 45 34.1 +1.1
KMGR                           eS     Sn     03 45 49.5 +2.6
KMGR  Komgaron        0.86 261 ePg    Pn     03 45 34.1 +1.1
KMGR                           eSg    Sn     03 45 48.3 +1.4
BUJR  Buynaksk        0.88 114⇓iP     Pn     03 45 33.6 +0.5
BUJR                           eS     Sn     03 45 48.2 +1.0
BUJR                            pmax  pmax
                comp=Z,248nm,0.5s
BUJR  Buynaksk        0.88 114⇓iPg    Pn     03 45 33.7 +0.5
                comp=Z,248nm,0.5s
BUJR                           i Sg   Sn     03 45 47.7 +0.5
ARKR  Arakani         0.93 129⇓eP     Pn     03 45 33.9 +0.2
ARKR                           e             03 45 48.2
ARKR                            pmax  pmax
                comp=Z,241nm,0.5s
ARKR                            smax  smax
                comp=N,724nm,0.6s
ARKR  Arakani         0.93 129⇓ePg    Pn     03 45 34.0 +0.2
                comp=N,241nm,0.5s
ARKR                          ⇓eSg    Sn     03 45 48.2  0.0
                comp=N,724nm,0.6s
VLKR  Vladikavkaz     0.99 262 eP     Pn     03 45 35.5 +1.0
VLKR                           eS     Sn     03 45 50.6 +1.1
VLKR  Vladikavkaz     0.99 262 ePg    Pn     03 45 34.9 +0.4
VLKR                           eSg    Sn     03 45 50.3 +0.7
GNBR  Gunib           1.06 139⇑iP     Pn     03 45 35.8 +0.6
GNBR                           e             03 45 51.8
GNBR                            pmax  pmax
                comp=Z,113nm,0.4s
GNBR                            smax  smax
                comp=N,940nm,0.9s
GNBR  Gunib           1.06 139⇑iPg    Pn     03 45 35.8 +0.6
                comp=N,113nm,0.4s
GNBR                          ⇑eSg    Sn     03 45 51.9 +1.0
                comp=N,940nm,0.9s
KANR  Karaman         1.07   89 ePg   Pn     03 45 35.0 -0.2
KANR                           eSg    Sn     03 45 52.6 +1.7
TRKR  Terskaya        1.08 300 eP     Pn     03 45 36.8 +1.4
TRKR                           eS     Sn     03 45 53.6 +2.5
TRKR  Terskaya        1.08 300 ePg    Pn     03 45 36.6 +1.2
TRKR                           eSg    Sn     03 45 53.4 +2.3
BTKR  Batakoyurt      1.10 280⇑iP     Pn     03 45 36.9 +1.3
BTKR                           eS     Sn     03 45 53.9 +2.4
BTKR  Batakoyurt      1.10 280 i Pg   Pn     03 45 36.9 +1.3
                comp=N,25nm,0.4s
BTKR                           eSg    Sn     03 45 54.4 +2.8
                comp=N,533nm,0.5s
MAK   Makhachkala     1.11 101 eP     Pn     03 45 36.5 +0.8
MAK                            e             03 45 52.3
MAK                             pmax  pmax
                comp=Z,111nm,0.4s
MAK                             smax  smax
                comp=N,1µm,0.4s
MAK                             smax  smax
                comp=N,1µm,0.4s
MAK   Makhachkala     1.11 101 ePg    Pn     03 45 36.1 +0.4
MAK                            eSg    Sn     03 45 52.7 +1.0
PNSH  Pansheti        1.17 242  P     Pn     03 45 36.5 -0.2
PNSH                            S     Sn     03 45 52.5 -0.9
PNSH  Pansheti        1.17 242  P     Pn     03 45 36.5 -0.2
PNSH                            S     Sn     03 45 52.5 -0.9
ARNR  Ardon           1.27 270 eP     Pn     03 45 38.7 +1.1
ARNR                            pmax  pmax
                comp=Z,27nm,0.3s
ARNR  Ardon           1.27 270 ePg    Pn     03 45 38.7 +1.1
                comp=Z,27nm,0.3s
ARNR                           eSg    Sn     03 45 57.3 +2.1
GUDG  Gudauri         1.35 238  P     Pn     03 45 40.0 +1.2
GUDG                            S     Sn     03 45 58.0 +0.8
GUDG  Gudauri         1.35 238  P     Pn     03 45 40.0 +1.2
GUDG                            S     Sn     03 45 58.0 +0.8
LGD   Lagodekhi       1.36 173  P     Pn     03 45 39.1 +0.3
LGD                             S     Sn     03 45 57.9 +0.7
LGD   Lagodekhi       1.36 173  P     Pn     03 45 39.1 +0.3
LGD                             S     Sn     03 45 57.8 +0.7
PRTR  Priterechnaya   1.39 294⇓iP     Pn     03 45 40.3 +1.3
PRTR                           eS     Sn     03 46 00.2 +2.6
PRTR  Priterechnaya   1.39 294 ePg    Pn     03 45 40.3 +1.3
PRTR                           eSg    Sn     03 46 00.2 +2.6
SGKR  Sergokala       1.41 121⇓iP     Pn     03 45 40.5 +1.2
SGKR                           i S    Sn     03 46 01.2 +3.1
SGKR                            pmax  pmax
                comp=Z,84nm,0.5s
SGKR  Sergokala       1.41 121⇓iPg    Pn     03 45 40.5 +1.2
                comp=Z,84nm,0.5s
SGKR                          ⇓iSg    Sn     03 46 01.3 +3.1
                comp=Z,496nm,0.7s
KORR  Kora            1.43 266 eP     Pn     03 45 40.7 +1.0
KORR                           eS     Sn     03 46 00.0 +1.3
KORR  Kora            1.43 266 ePg    Pn     03 45 40.5 +0.8
KORR                           eSg    Sn     03 45 58.8 +0.1
STDR  Stavd-Durt      1.44 278 eP     Pn     03 45 40.9 +1.2
STDR                           eS     Sn     03 46 00.2 +1.4
STDR  Stavd-Durt      1.44 278 ePg    Pn     03 45 40.9 +1.2
                comp=Z,13nm,0.2s
STDR                           eSg    Sn     03 45 59.5 +0.7
                comp=Z,211nm,0.4s
URKR  Urkarakh        1.57 130⇓eP     Pn     03 45 42.1 +0.7
URKR                           eS     Sn     03 46 03.2 +1.3
URKR                            pmax  pmax
                comp=Z,60nm,0.5s
URKR  Urkarakh        1.57 130⇑ePg    Pn     03 45 42.1 +0.7
                comp=Z,60nm,0.6s
URKR                          ⇑eSg    Sn     03 46 03.8 +2.0
                comp=Z,264nm,0.6s
LSNR  Lesken          1.61 274⇓iP     Pn     03 45 42.6 +0.8
LSNR                           eS     Sn     03 46 03.8 +1.2
LSNR  Lesken          1.61 274 ePg    Pn     03 45 42.6 +0.8
                comp=Z,12nm,0.1s
LSNR                           eSg    Sn     03 46 03.8 +1.2
                comp=Z,220nm,0.3s
ZEI   Tsey            1.61 256 eP     Pn     03 45 41.6 -0.4
ZEI                            eS     Sn     03 46 01.4 -1.4
ZEI   Tsey            1.61 256 ePg    Pn     03 45 41.6 -0.4
                comp=Z,23nm,0.1s
ZEI                            eSg    Sn     03 46 01.4 -1.4
                comp=Z,214nm,0.2s
DDFL  Dedoflistskaro  1.75 178  P     Pn     03 45 44.8 +1.1
DDFL                            S     Sn     03 46 09.2 +3.4
DDFL  Dedoflistskaro  1.75 178  P     Pn     03 45 44.8 +1.1
DDFL                            S     Sn     03 46 09.1 +3.4
BTNK  Botanikuri      1.76 211  P     Pn     03 45 45.0 +1.2
BTNK                            S     Sn     03 46 07.5 +1.5
BTNK  Botanikuri      1.76 211  P     Pn     03 45 45.0 +1.2
BTNK                            S     Sn     03 46 07.5 +1.5
NCK   Nalchik         1.80 281 eP     Pn     03 45 45.1 +0.9
NCK                             pmax  pmax
                comp=Z,75nm,0.2s
NCK   Nalchik         1.80 281 ePg    Pn     03 45 45.1 +0.9
                comp=Z,75nm,0.2s
NCK                            eSg    Sn     03 46 07.1 +0.2
                comp=Z,728nm,0.4s
DIGR  Digorskoe uzhe  1.81 262 eP     Pn     03 45 44.4 -0.2
DIGR                           eS     Sn     03 46 06.2 -1.4
DIGR  Digorskoe uzhe  1.81 262 ePg    Pn     03 45 44.4 -0.2
DIGR                           eSg    Sn     03 46 06.1 -1.4
ONI   Oni             1.98 253  P     Pn     03 45 48.0 +1.4
ONI   Oni             1.98 253  P     Pn     03 45 48.0 +1.4
ONI   Oni             1.98 253 ePg    Pn     03 45 48.2 +1.6
ONI                            eSg    Sn     03 46 11.8 +0.6
AKT   Akhty           2.13 143⇓iP     Pn     03 45 49.1 +0.5
AKT                            i             03 46 16.5
AKT                             pmax  pmax
                comp=Z,91nm,0.4s
AKT                             smax  smax
                comp=N,337nm,0.3s
AKT   Akhty           2.13 143⇓iPg    Pn     03 45 49.1 +0.5
                comp=N,91nm,0.4s
AKT                           ⇓iSg    Sn     03 46 16.2 +1.5
                comp=N,337nm,0.3s
SEKA  Sheki           2.17 156  P     Pn     03 45 48.7 -0.4
KZRT  Kazreti         2.17 214  P     Pn     03 45 48.1 -1.0
KZRT                            S     Sn     03 46 14.5 -1.0
KZRT  Kazreti         2.17 214  P     Pn     03 45 48.1 -1.0
KZRT                            S     Sn     03 46 14.5 -1.0
BRNG  Burnasheti      2.26 227  P     Pn     03 45 52.6 +2.2
PYA1  Pyatigorsk      2.30 293 ePn    Pn     03 45 50.9 +0.2
PYA1                           eSn    Sn     03 46 17.0 -1.6
DMNI  Dmanisi         2.31 217  P     Pn     03 45 50.7 -0.2
DMNI                            S     Sn     03 46 18.1 -0.8
DMNI  Dmanisi         2.31 217  P     Pn     03 45 50.7 -0.2
DMNI                            S     Sn     03 46 18.0 -0.8
BKRG  Bakuriani       2.34 233  P     Pn     03 45 52.1 +0.7
BKRG                            S     Sn     03 46 21.9 +2.1
BKRG  Bakuriani       2.34 233  P     Pn     03 45 52.1 +0.7
BKRG                            S     Sn     03 46 21.8 +2.1
KBZ   Khabaz          2.34 284  Pg    Pn     03 45 50.7 -0.5
                comp=N,5.5nm,0.3s,baz=89,slow=3.3,SNR=147
KBZ                             Lg    Lg     03 46 17.6
                comp=N,17nm,0.3s,baz=291,slow=19,SNR=47
KBZ   Khabaz          2.34 284 i P    Pn     03 45 51.0 -0.2
KBZ                             pmax  pmax
                comp=Z,5.0nm,0.3s
KBZ   Khabaz          2.34 284 ePn    Pn     03 45 51.1 -0.2
KBZ                            eSn    Sn     03 46 17.6 -1.8
NEY   Neytrino        2.41 272 i P    Pn     03 45 53.4 +1.0
NEY                             pmax  pmax
                comp=Z,1.0nm,0.5s
NEY   Neytrino        2.41 272 ePn    Pn     03 45 52.7 +0.3
NEY                            eSn    Sn     03 46 20.4 -1.1
SHA1  Shidzhatmaz     2.51 284⇑iP     Pn     03 45 53.7 -0.1
SHA1                           eS     Sn     03 46 22.2 -1.7
SHA1  Shidzhatmaz     2.51 284 i Pn   Pn     03 45 53.7 -0.1
                comp=Z,36nm,0.3s
SHA1                           eSn    Sn     03 46 21.0 -2.9
                comp=Z,151nm,0.4s
KIV0  Kislovodsk Arr  2.54 289 i Pn   Pn     03 45 54.0  0.0
KIV0                           eSn    Sn     03 46 22.6 -1.7
KIV   Kislovodsk      2.54 289c iP    Pn     03 45 54.0  0.0
KIV                            i S    Sn     03 46 24.8 +0.4
KIV                             pmax  pmax
                comp=Z,24nm,0.5s
KIV   Kislovodsk      2.54 289 ePn    Pn     03 45 54.0  0.0
KIV                            eSn    Sn     03 46 22.8 -1.6
MNGR  Mingechevir, A  2.54 161  P     Pn     03 45 53.8 -0.2
GANJ  Ganja           2.55 175  P     Pn     03 45 53.3 -0.9
GOF   Gofitskoye      2.84 312⇑iP     Pn     03 45 58.3 +0.4
GOF                            eS     Sn     03 46 31.5 +0.1
GOF                             pmax  pmax
                comp=Z,88nm,0.3s
GOF                             smax  smax
                comp=E,211nm,0.3s
GOF                             smax  smax
                comp=N,126nm,0.2s
GOF   Gofitskoye      2.84 312 i Pn   Pn     03 45 58.4 +0.4
GOF                            eSn    Sn     03 46 31.5 +0.1
GNI   Garni           3.19 198 i P    Pn     03 46 03.6 +0.8
GNI                             pmax  pmax
                comp=Z,7.0nm,0.5s
GNI   Garni           3.19 198 i Pn   Pn     03 46 03.3 +0.5
GNI                            eSn    Sn     03 46 37.8 -2.2
BELG  Belogornoye     9.27    6 i P   Pn     03 47 24.6 -0.5
BELG                            pmax  pmax
                comp=Z,1.0nm,0.4s
AKTO  Aktyubinsk     10.95   44 ⇑P    Pn     03 47 44.6 -3.4
                comp=Z,4.2nm,1.4s
AKTO                            ⇓S    Sn     03 49 38.4  -10
                comp=Z,2.0nm,0.7s
AB31  Akbulak array  11.38   53 ⇓P    Pn     03 47 51.6 -2.3
                comp=Z,0.5nm,0.5s,baz=249,slow=14,SNR=12
AB31                            ⇓S    Sn     03 49 50.8 -8.1
                comp=Z,1.0nm,0.5s,baz=245,slow=22,SNR=2.5
OBN   Obninsk        13.42 336 i P    Pn     03 48 17.8 -3.0
OBN                             pmax  pmax
                comp=Z,6.0nm,1.0s
ARU   Arti           15.49   27 i P   Pn     03 48 48.6 +1.2
ARU                             pmax  pmax
                comp=Z,47nm,4.6s
BRVK  Borovoye       18.88   50 i P   P      03 49 28.1 +1.0
BRVK                            pmax  pmax
                comp=Z,6.0nm,2.3s
FINES FINESS Array B 21.81 334  P     P      03 49 57.9 -0.6
                comp=Z,1.1nm,0.7s,baz=142,slow=10,SNR=6.6
FINES FINESS Array B 21.81 334 i P    P      03 49 59.7 +1.2
TORD  Torodi Ar. Bea 48.41 246  P     P      03 53 46.2 -0.9
                comp=Z,0.7nm,0.8s,baz=45,slow=8.4,SNR=2.6
```

IDC ***26*** *03:46:11.6±6.9, 6°.59S×147°.60E, h55km±54km, mb3.9/3, mb1 4.0/5, mb1mx3.5/45, mbtmp4.0/5, ML4.0/1, MS2.7/2, Ms1 2.7/2, ms1mx2.5/33, Error ellipse: s-maj=54.6km s-min=46.3km az=83.0*

ISC 26 03:46:12.9±3.0**, 6°.6S**±0°.2×**147°.4E**±0°.4**, h63**km**, n6,** σ1s.**16**/7**, mb3.9**/3**, Eastern New Guinea region**

```
Code  Station Name        Δ°   AZ°   Phase ID          Time     Res
                                    Op      ISC       h  m  s   ISC
PMG   Port Moresby      2.78 185    P       Pn       03 46 53.7 -1.3
                7.6nm,0.3s,baz=2.1,slow=7.9,SNR=7.6
PMG                                 S       Sn       03 47 28.7 +1.4
                16nm,0.3s,baz=210,slow=20,SNR=2.0
PMG                                 LR      LR       03 48 30.0
                comp=Z,48nm,18.0s,baz=128,slow=49
WRA   Warramunga Arr   18.35 223    P       Pn       03 50 22.2 -0.9
                0.6nm,0.3s,baz=52,slow=10,SNR=23
ASAR  Alice Springs    21.35 216    P       P        03 50 55.2 +0.2
                1.3nm,0.3s,baz=52,slow=9.0,SNR=31
FITZ  Fitzroy Crossi   24.10 240    P       P        03 51 23.2 +0.4
                2.8nm,0.3s,baz=59,slow=7.3,SNR=51
FITZ                                LR      LR       04 01 30.5
                comp=Z,46nm,18.3s,baz=128,slow=38
STKA  Stephens Creek   25.71 191    P       P        03 51 37.8 +0.5
                1.7nm,0.4s,baz=354,slow=7.9,SNR=6.4
TORD  Torodi Ar. Bea  145.65 284    PKPbc   PKPab    04 05 46.6 +0.7
                0.4nm,0.4s,baz=80,slow=3.1,SNR=1.9
```

BJI ***26*** *03:49:30.3±0.0, 56°.46N×114°.12E, h6km, mB4.5/12, mb4.0/17, Ms4.4/13, Ms7 4.1/14*

MOS ***26*** *03:49:32.9±1.2, 56°.06N×113°.79E, h9km, mb4.3/11, Error ellipse: s-maj=8.2km s-min=5.9km az=65.8*

MOS Felt (III-IV) at Severomuisk.

IDC ***26*** *03:49:32.8±0.7, 56°.12N×113°.82E, h0km, mb3.9/14, mb1 4.0/18, mb1mx3.8/48, mbtmp3.9/18, ML3.1/4, MS3.7/25, Ms1 3.7/25, ms1mx3.5/50, Error ellipse: s-maj=17.1km s-min=11.8km az=153.0*

BYKL ***26*** *03:49:33.8±0.1, 56°.13N×113°.74E, h8km±2km, Mw4.6/13(IEC), #STATIONS COLA KDAK MA2 PET MAJO TATO ENH KMI WMQ AAK LVZ KEV ALE FELT I=II-III MSK at Severomuisk*

NEIC ***26*** *03:49:39.9±1.3, 56°.85N±0°.08×113°.0E±0°.1, h18km±5km, mb4.2/15, Error ellipse: s-maj=14.3km s-min=8.5km az=133.0*

ISC 26 03:49:33.2±0.9**, 56°.03N**±0°.02×**113°.71E**±0°.02**, h5**km±5km**, n147,** σ2s.**63**/193**, mb4.0**/28**, MS3.8**/21**, 10C-16D, East of Lake Baykal**

```
Code  Station Name        Δ°   AZ°   Phase ID          Time     Res
                                    Op      ISC       h  m  s   ISC
SVKR  Severomuysk     0.12 315⇓iPg    Pg     03 49 35.8  0.0
SVKR                            Pmax         03 49 36.1
                18µm,0.2s
SVKR                           eSg    Sg     03 49 37.7 +0.3
SVKR                            Smax         03 49 38.0
                374µm,0.6s
SVKR  Severomuysk     0.12 315⇓iPG    Pg     03 49 35.7  0.0
SVKR  Severomuysk     0.12 315 eSg           03 49 45.2
SVKR                            Smax         03 49 45.5
                228µm,0.4s
UKT   Uakit           0.55 185⇑iPg    Pb     03 49 44.9 -0.4
UKT                             Pmax         03 49 47.7
                540nm,0.3s
UKT                            eSg    Sb     03 49 53.6 +0.1
UKT                             Smax         03 50 15.8
                7µm,0.7s
UKT   Uakit           0.55 185⇑iPG    Pb     03 49 44.9 -0.4
UKT                            e             03 49 53.4
UKT                             pmax  pmax
                comp=Z,387nm,0.2s
UKT                             smax  smax
                comp=E,4µm,0.6s
UKT   Uakit           0.55 185 eSg           03 50 01.1
UKT                             Smax         03 50 02.0
                comp=E,4µm,0.7s
YOA   Uoyan           1.12 276 ePg    Pg     03 49 54.3 -0.3
YOA                             Pmax         03 49 58.8
                comp=E,2µm,0.2s
YOA                            eSg    Sg     03 50 09.3 +0.2
YOA                            e             03 50 14.1
YOA                             max          03 50 18.0
                comp=E,18µm,0.3s
YOA   Uoyan           1.12 276⇓iPG    Pg     03 49 54.4 -0.2
YOA                            i             03 50 10.5
YOA                             pmax  pmax
                comp=Z,715nm,0.2s
YOA                             smax  smax
                comp=N,19µm,0.6s
NLYR  Nelyaty         1.20   67⇓iPg   Pg     03 49 54.6 -1.6
                comp=N,348nm,0.8s
NLYR                          ⇓iPg    Pg     03 49 54.6 -1.6
                comp=N,387nm,0.8s
NLYR                          ⇓iPg    Pg     03 49 54.6 -1.6
                comp=N,2µm,0.8s
NLYR                           ePb    Pn     03 49 56.9 +0.2
NLYR                            max          03 49 57.8
                comp=N,4µm,0.3s
NLYR                           e             03 50 01.9
NLYR                           eSg    Sg     03 50 10.6 -1.2
NLYR                           eSb    Sn     03 50 14.5 +1.1
NLYR                            max          03 50 14.9
                comp=N,21µm,0.8s
NLYR  Nelyaty         1.20   67⇓iPG   Pg     03 49 54.6 -1.6
NLYR                           e             03 50 09.5
NLYR                            pmax  pmax
                comp=Z,5µm,0.6s
NLYR                            smax  smax
                comp=N,21µm,0.8s
NLYR  Nelyaty         1.20   67 ePg          03 50 02.5
NLYR                           ePb           03 50 04.6
NLYR                           eSg           03 50 17.4
KMO   Kumora          1.42 265⇓iPg    Pn     03 49 59.7  0.0
KMO                            ePb    Pg     03 50 01.2 +0.8
KMO                             max          03 50 02.1
                comp=N,1µm,0.3s
KMO                            eSg    Sn     03 50 19.4 +0.7
KMO                            eSb    Sg     03 50 22.1 +3.4
KMO                             max          03 50 23.1
                comp=N,13µm,0.9s
KMO   Kumora          1.42 265⇓iPG    Pn     03 49 59.6 -0.1
KMO                            e             03 50 20.1
KMO                             pmax  pmax
                comp=Z,1µm,0.4s
KMO                             smax  smax
                comp=N,3µm,0.8s
BOD   Bodaibo         1.80    5⇑iPg   Pn     03 50 04.3 -0.6
BOD                             Pmax         03 50 05.7
                comp=N,723nm,0.3s
BOD                            eSg    Sn     03 50 26.7 -1.4
BOD                             Smax         03 50 29.2
                comp=N,6µm,0.7s
BOD   Bodaibo         1.80    5⇑iPN   Pn     03 50 04.3 -0.6
BOD                            e             03 50 26.8
BOD                             pmax  pmax
                comp=Z,2µm,0.6s
BOD                             smax  smax
                comp=E,6µm,0.8s
BOD   Bodaibo         1.80    5 ePg          03 50 11.7
BOD                             Pmax         03 50 16.6
                comp=E,1µm,0.8s
BOD                            eSg           03 50 34.5
BOD                             Smax         03 50 37.4
                comp=E,3µm,0.5s
YLYR  Ulyunkhan       1.86 232⇓iPn    Pb     03 50 08.1 +0.5
YLYR                           ePg    Pg     03 50 08.9 +0.2
YLYR                            Pmax         03 50 11.1
                comp=E,2µm,0.7s
YLYR                           eSg    Sg     03 50 34.0 +1.2
YLYR                            Smax         03 50 42.9
                comp=E,12µm,1.5s
YLYR  Ulyunkhan       1.86 232⇓iPN    Pb     03 50 08.1 +0.5
YLYR                           e             03 50 34.2
YLYR                            pmax  pmax
                comp=Z,1µm,0.7s
YLYR                            smax  smax
                comp=E,7µm,1.0s
YLYR  Ulyunkhan       1.86 232 ePg           03 50 15.6
YLYR                            Pmax         03 50 19.0
                comp=E,942nm,0.6s
YLYR                           eSg           03 50 41.1
YLYR                            Smax         03 50 43.3
                comp=E,5µm,0.5s
NIZ   Nizh Angarsk    2.36 265 ePn    Pn     03 50 14.4 +1.8
NIZ                            ePg    Pb     03 50 16.6 +0.4
NIZ                             Pmax         03 50 18.8
                comp=E,911nm,1.4s
NIZ                            eSg    Sb     03 50 46.6 +1.0
NIZ                             Smax         03 50 50.5
                comp=E,2µm,0.4s
NIZ   Nizh Angarsk    2.36 265 ePN    Pn     03 50 14.0 +1.4
NIZ                            e             03 50 16.8
NIZ                            e             03 50 49.0
NIZ                             pmax  pmax
                comp=Z,911nm,2.0s
NIZ                             smax  smax
                comp=N,3µm,1.0s
CRS   Chara           2.67   69⇓iPn   Pn     03 50 17.3 +0.4
CRS                           ⇓iPg    Pb     03 50 21.5  0.0
CRS                             Pmax         03 50 22.2
                comp=N,3µm,0.7s
CRS                            eSg    Sb     03 50 55.7 +1.0
CRS                             Smax         03 51 00.8
                comp=N,3µm,0.9s
SYVR  Suvo            3.20 224 ePn    Pn     03 50 26.3 +2.1
SYVR                           ePg    Pg     03 50 33.5 -1.0
SYVR                           ePgPg  Pb     03 50 35.9 +5.4
SYVR                           e             03 50 37.8
SYVR                            max          03 50 38.2
                comp=N,672nm,0.8s
SYVR                           eSn    Sn     03 51 04.7 +2.0
SYVR                           eSg    Sg     03 51 15.6 -0.4
SYVR                           e             03 51 25.1
SYVR                            max          03 51 27.0
                comp=N,5µm,1.9s
SYVR  Suvo            3.20 224 ePN    Pn     03 50 26.3 +2.1
SYVR                           e             03 50 34.3
SYVR                           e             03 51 15.6
SYVR                            pmax  pmax
                comp=Z,679nm,1.0s
SYVR                            smax  smax
                comp=E,5µm,1.9s
VTMR  Vitim           3.47 350 ePn    Pn     03 50 26.9 -1.0
VTMR                           ePg    Pb     03 50 34.9 -0.2
VTMR                           eSn    Sn     03 51 06.0 -3.3
VTMR                           eSg    Sb     03 51 18.7 +1.1
TUP   Tupik           3.92 112⇓iPn    Pn     03 50 34.6 +0.6
TUP                            ePg    Pb     03 50 44.9 +2.1
TUP                             Pmax         03 50 45.9
                comp=E,271nm,0.6s
TUP                            eSn    Sn     03 51 20.0 -0.5
TUP                            eSg    Sg     03 51 37.1 -1.9
TUP                             Smax         03 51 43.0
                comp=E,3µm,1.4s
TUP   Tupik           3.92 112⇓iPN    Pn     03 50 34.6 +0.6
TUP                            e             03 50 44.6
TUP                            eS     Sn     03 51 19.9 -0.5
TUP                            e             03 51 36.1
TUP                             pmax  pmax
                comp=Z,271nm,0.6s
TUP                             smax  smax
                comp=E,3µm,1.0s
MXMB  Maximikha       4.00 228 ePn    Pn     03 50 36.7 +1.6
MXMB                           ePg    Pg     03 50 47.4 -2.4
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MXMB                            eSg      Sg       03 51 41.3 -0.3
CIT   Chita             4.02 181 ePn      Pn       03 50 36.5 +1.1
CIT                             ePg      Pg       03 50 46.8 -3.4
CIT                              Pmax             03 50 49.1
      comp=E,174nm,0.1s
CIT                             eSg      Sg       03 51 41.2 -1.0
CIT                              Smax             03 51 47.3
      comp=E,2µm,0.8s
CIT   Chita             4.02 181 ePN      Pn       03 50 35.5 +0.1
CIT                             e                 03 50 46.4
CIT                             eS       Sn       03 51 25.6 +2.7
CIT                             e                 03 51 40.7
CIT                              pmax    pmax
      comp=Z,432nm,1.4s
CIT                              smax    smax
      comp=E,2µm,1.4s
OGRR  Ongureny          4.27 238 ePn      Pn       03 50 41.5 +2.7
OGRR                            ePg      Pb       03 50 51.9 +3.2
OGRR                            e                 03 50 53.7
OGRR                             max              03 50 55.6
      comp=E,583nm,1.6s
OGRR                            eSn      Sn       03 51 29.5 +0.5
OGRR                            eSg      Sg       03 51 47.8 -2.4
OGRR                             Smax             03 51 55.2
      comp=E,2µm,1.9s
OGRR  Ongureny          4.27 238 ePN      Pn       03 50 41.5 +2.7
OGRR                            e                 03 50 52.6
OGRR                            e                 03 51 47.6
OGRR                             pmax    pmax
      comp=Z,580nm,2.0s
OGRR                             smax    smax
      comp=N,2µm,2.8s
YKLR  Yuktali           4.46  79 ePn      Pn       03 50 42.0 +0.6
YKLR                            ePg      Pb       03 50 52.2 +0.3
YKLR                            eSg      Sb       03 51 49.8 +3.9
ZRHB  Zarechye          5.18 231 ePg      Pg       03 51 08.8 -3.7
ZRHB                             Pmax             03 51 14.4
      comp=N,319nm,1.1s
ZRHB                            eSg      Sg       03 52 18.1 -1.5
ZRHB                             Smax             03 52 38.5
      comp=N,4µm,1.7s
TRG   Tyrgan            5.41 236 ePn      Pn       03 50 55.7 +1.2
TRG                             ePg      Pb       03 51 11.8 +3.7
TRG                              Pmax             03 51 19.6
      comp=N,176nm,1.4s
TRG                             eSg      Sg       03 52 22.1 -4.6
TRG                              Smax             03 52 39.5
      comp=N,1µm,2.0s
TRG   Tyrgan            5.41 236 ePN      Pn       03 50 56.5 +2.0
TRG                             e                 03 51 12.1
TRG                             eS       Sn       03 51 57.7 +0.6
TRG                             e                 03 52 22.1
TRG                              pmax    pmax
      comp=Z,177nm,1.3s
TRG                              smax    smax
      comp=N,1µm,1.9s
FFNB  Fofonovo          5.72 229 ePn      Pn       03 51 00.3 +1.6
FFNB                            ePg      Pb       03 51 17.2 +3.9
FFNB                            e                 03 51 22.3
FFNB                            eSg      Sg       03 52 32.8 -3.8
STDB  Stepnoy Dvoret    5.80 231 ePn      Pn       03 51 02.5 +2.7
STDB                            ePg      Pg       03 51 20.4 -3.8
STDB                            e                 03 51 22.7
STDB                            e                 03 51 26.9
STDB                            eSg      Sg       03 52 36.8 -2.5
HRMR  Khuramsha         5.95 225 ePn      Pn       03 51 04.2 +2.2
HRMR                            ePg      Pg       03 51 22.8 -4.3
HRMR                             Pmax             03 51 25.8
      comp=N,186nm,0.6s
HRMR                            eSg      Sg       03 52 41.7 -2.5
HRMR                             Smax             03 53 04.4
      comp=N,3µm,1.6s
IENR  Iengra            6.24  84 ePg      Pb       03 51 26.0 +3.8
IENR                            eSg      Sg       03 52 46.5 -6.8
BGT   Bolshoye Golou    6.31 234 ePn      Pn       03 51 08.6 +1.7
BGT                             ePg      Pg       03 51 29.3 -4.7
BGT                              Pmax             03 51 32.7
      comp=N,77nm,1.6s
BGT                             eSg      Sg       03 52 52.1 -3.6
BGT                              Smax             03 53 19.4
      comp=N,471nm,2.0s
KPC   Khapcheranga      6.39 188 ePn      Pn       03 51 09.1 +1.1
KPC                             e                 03 51 20.1
KPC                             ePg      Pg       03 51 30.1 -5.4
KPC                              Pmax             03 51 38.8
      comp=N,46nm,1.1s
KPC                             eSg      Sg       03 52 55.0 -3.2
KPC                              Smax             03 53 04.3
      comp=N,1µm,2.0s
KPC   Khapcheranga      6.39 188 ePN      Pn       03 51 09.1 +1.1
KPC                             e                 03 51 29.9
KPC                             e                 03 52 54.1
KPC                              pmax    pmax
      comp=Z,46nm,1.3s
KPC                              smax    smax
      comp=E,1µm,1.8s
LSTR  Listvyanka        6.70 235 ePn      Pn       03 51 14.9 +2.8
LSTR                            ePg      Pb       03 51 35.3 +5.3
LSTR                             Pmax             03 51 39.7
      comp=E,69nm,2.2s
LSTR                            eSg      Sg       03 53 03.0 -5.0
LSTR                             Smax             03 53 10.8
      comp=E,750nm,1.7s
IRK   Irkutsk           6.72 240 eSg      Sg       03 53 03.2 -5.5
IRK                              Smax             03 53 11.6
      comp=E,883nm,1.3s
IRK   Irkutsk           6.72 240 ePG      Pb       03 51 34.4 +4.0
IRK                             e                 03 53 03.7
IRK                              pmax    pmax
      comp=Z,183nm,0.1s
IRK                              smax    smax
      comp=N,879nm,1.4s
TLY   Talaya            7.38 238  Pn      Pn       03 51 24.1 +2.6
      comp=N,0.0nm,0.3s,baz=58,slow=9.5,SNR=1.8
TLY                              Pg      Pb       03 51 36.9 -4.7
      comp=N,0.0nm,0.3s,baz=15,slow=7.7,SNR=4.5
TLY                              Lg      Lg       03 53 23.0
      comp=N,0.1nm,0.3s,baz=286,slow=16,SNR=8.8
TLY                              LR      LR       03 54 11.9
      comp=N,911nm,21.4s,baz=42,slow=37
TLY   Talaya            7.38 238 ePn      Pn       03 51 22.4 +0.9
TLY                             ePg      Pb       03 51 47.3 +5.7
TLY                              Pmax             03 51 53.6
      comp=N,31nm,1.3s
TLY                             eSg      Sg       03 53 22.8 -7.0
TLY                              Smax             03 53 35.1
      comp=N,416nm,1.3s
TLY   Talaya            7.38 238 ePG      Pb       03 51 45.4 +3.8
TLY                             eS       Sg       03 53 22.8 -7.0
TLY                              smax    smax
      comp=E,412nm,1.4s
TLY   Talaya            7.38 238  Pn      Pn       03 51 28.9 +7.5
TLY                              Sn      Sn       03 52 56.0  +11
ARS   Arshan            7.82 243 ePn      Pn       03 51 30.0 +2.4
ARS                             ePg      Pb       03 51 54.9 +5.7
ARS                              Pmax             03 51 59.0
      comp=E,47nm,0.9s
ARS                             eSg      Sg       03 53 37.3 -6.8
ARS                              Smax             03 53 48.2
      comp=E,656nm,2.1s
ZEA   Zeya              8.14 101 ePN      Pn       03 51 33.6 +1.7
ZEA                             e                 03 52 02.5
ZEA                             eS       Sn       03 53 05.5 +1.3
ZEA                              pmax    pmax
      comp=Z,20nm,0.6s
ZEA                              smax    smax
      comp=E,170nm,0.6s
ZEA                              smax    smax
      comp=N,260nm,0.8s
ZEA                              smax    smax
      comp=E,500nm,1.8s
ZAK   Zakamensk         8.43 232 e        Pn       03 51 41.7 +5.7
ZAK                              max              03 51 43.9
      comp=E,33nm,1.6s
ZAK                             e                 03 52 23.2
ZAK                             eSg      Sg       03 53 56.8 -6.9
ZAK                              Smax             03 54 09.8
      comp=E,410nm,1.6s
ZAK   Zakamensk         8.43 232 ePN      Pn       03 51 41.1 +5.1
ZAK                             e                 03 53 54.4
ZAK                              pmax    pmax
      comp=Z,32nm,1.3s
ZAK                              smax    smax
      comp=N,602nm,1.9s
MOY   Mondy             8.69 245 ePn      Pn       03 51 41.0 +1.4
MOY                             e                 03 51 52.0
MOY                              max              03 51 57.5
      comp=N,107nm,1.3s
MOY                             ePg      Pg       03 52 11.8 -7.7
MOY                             eSg      Sg       03 54 04.3 -7.7
MOY                              Smax             03 54 10.3
      comp=N,903nm,1.6s
MOY   Mondy             8.69 245 ePN      Pn       03 51 40.4 +0.8
MOY                             e                 03 52 09.5
MOY                             eS       Sn       03 53 23.9 +5.9
MOY                             i                 03 54 10.3
ORL   Orlik             8.85 253 ePn      Pn       03 51 42.4 +0.6
ORL                             e                 03 51 52.9
ORL                              max              03 51 57.7
      comp=N,81nm,1.1s
ORL                             ePg      Pg       03 52 14.3 -8.2
ORL                             eSn      Sn       03 53 18.4 -3.5
ORL                             eSg      Sg       03 54 07.7 -9.3
ORL                              Smax             03 54 42.7
      comp=N,339nm,1.7s
ORL   Orlik             8.85 253 ePN      Pn       03 51 43.0 +1.2
ORL                             e                 03 52 13.7
ORL                             eS       Sn       03 53 17.6 -4.3
ORL                             e                 03 54 08.3
ORL                              pmax    pmax
      comp=Z,88nm,0.8s
ORL                              smax    smax
      comp=N,327nm,1.7s
ULN   Ulaanbaatar       9.15 209 i P      Pn       03 51 47.8 +1.9
ULN   Ulaanbaatar       9.15 209          Pn       03 51 57.7  +12
ULN                              Sn      Sn       03 53 43.4  +14
SONM  Songino Array     9.37 212  Pn      Pn       03 51 50.8 +2.0
      comp=N,0.2nm,0.3s,baz=21,slow=13,SNR=9.9
SONM                             Pg               03 52 26.8
      comp=N,0.7nm,0.3s,baz=16,slow=15,SNR=6.7
SONM                             Lg      Lg       03 54 30.9
      comp=N,5.1nm,0.3s,baz=22,slow=25,SNR=17
SONM                             LR      LR       03 55 37.4
      comp=N,164nm,21.6s,baz=72,slow=38
SONM  Songino Array     9.37 212  Pn      Pn       03 52 00.4  +12
YAK   Yakutsk          10.17  47  Sn      Sn       03 53 45.3 -8.7
      comp=N,0.4nm,0.3s,baz=66,slow=20,SNR=6.1
YAK                              Lg      Lg       03 54 42.6
      comp=N,0.4nm,0.3s,baz=331,slow=23,SNR=8.7
YAK                              LR      LR       03 55 52.0
      comp=N,287nm,18.9s,baz=258,slow=38
YAK   Yakutsk          10.17  47 i P      Pn       03 52 00.2 +0.5
YAK   Yakutsk          10.17  47  Pn      Pn       03 52 03.0 +3.3
YAK                              Sn      Sn       03 53 53.1 -0.9
KLR   Kul'dur          12.88 114  Pn      Pn       03 52 37.6 +0.9
      comp=N,0.6nm,0.3s,baz=305,slow=13,SNR=18
KLR                              Sn      Sn       03 54 51.0 -9.3
      comp=N,0.2nm,0.3s,baz=7.5,slow=18,SNR=3.7
KLR                              Lg      Lg       03 56 18.2
      comp=N,0.5nm,0.3s,baz=202,slow=8.6,SNR=7.3
KLR                              LR      LR       03 57 11.1
      comp=N,185nm,18.6s,baz=310,slow=36
KLR   Kul'dur          12.88 114ceP       Pn       03 52 37.8 +1.1
KLR                              pmax    pmax
      comp=Z,2.0nm,0.4s
CN2   Changchun        14.36 144 eP       P        03 53 09.0 +4.8
CN2                             eS       S        03 55 54.0 -2.9
CN2                              pmax    pmax
      comp=Z,10.0nm,0.8s
CN2                              LR      LR
      comp=N,900nm,10.0s
CN2                              LR      LR
      comp=E,2µm,10.0s
CN2                              LR      LR
      comp=Z,700nm,11.0s
USA0B Ussuriysk Arra   16.60 128 i P      P        03 53 28.5 -0.5
USRK  Ussuriysk Ar.    16.60 128  Lg      Lg       03 58 14.3
      baz=158,slow=42,SNR=2.9
USRK                             LR      LR       03 59 06.5
      comp=Z,134nm,18.6s,baz=309,slow=35
ZAA0  Zalesovo Array   16.66 275  Pn      Pn       03 53 26.3 -0.8
ZALV  Zalesovo Beam    16.66 275  Pn      Pn       03 53 26.4 -0.7
      comp=Z,0.3nm,0.3s,baz=80,slow=11,SNR=7.3
ZALV                             Lg      Lg       03 58 07.2
      comp=Z,0.1nm,0.3s,baz=74,slow=16,SNR=4.1
ZALV                             LR      LR       04 00 05.8
      comp=Z,358nm,18.1s,baz=70,slow=38
ZALV  Zalesovo Beam    16.66 275 i P      Pn       03 53 28.3 +1.2
ZALV                             pmax    pmax
      comp=Z,1.0nm,0.4s
ZALV  Zalesovo Beam    16.66 275  P       Pn       03 53 26.8 -0.3
TIXI  Tiksi            16.94  17⇑iP       Pn       03 53 26.1 -4.5
TIXI  Tiksi            16.94  17  P       Pn       03 53 25.3 -5.3
TIXI                             IAmb    IAmb     03 53 34.0
      comp=Z,11nm,0.7s
TIXI                             Sn      Sn       03 56 23.1  -16
OKH   Okha             16.98  86deP       Pn       03 53 24.5 -6.6
OKH                              MLR     MLR
      comp=E,1µm,11.0s
OKH                              MLR     MLR
      comp=Z,600nm,19.0s
OKH                              MLR     MLR
      comp=N,400nm,7.0s
DGZ   Jazzator, Alta   17.02 259 i P      Pn       03 53 32.7 +0.8
DGZ                              pmax    pmax
      comp=Z,10.0nm,1.4s
NRIK  Noril'sk         17.72 329  P       Pn       03 53 34.5 -5.9
      comp=Z,1.0nm,0.3s,baz=113,slow=12,SNR=14
NRIK                             S       Sn       03 56 37.5  -20
      comp=Z,0.6nm,0.3s,baz=336,slow=23,SNR=4.2
NRIK                             LR      LR       04 00 48.0
      comp=Z,445nm,18.9s,baz=138,slow=38
NRIK  Noril'sk         17.72 329 i P      Pn       03 53 35.4 -5.0
NRIK                             pmax    pmax
      comp=Z,8.0nm,0.8s
NRIK  Noril'sk         17.72 329  Pn      Pn       03 53 33.1 -7.3
NRIK                             IAmb    IAmb     03 53 50.9
      comp=Z,8.8nm,0.7s
NRIK                                     Sn       03 56 39.0  -19
MA2   Magadan          19.88  64 i P      Pn       03 54 07.0 +0.4
MA2                              pmax    pmax
      comp=Z,19nm,2.1s
SEY   Seymchan         20.54  55  P       P        03 54 12.6 +0.4
      comp=Z,2.4nm,0.6s,baz=295,slow=11,SNR=11
SEY                              Lg      Lg       04 00 12.8
      comp=Z,4.4nm,0.7s,baz=336,slow=17,SNR=5.8
WMQ   Urumqi           20.58 245  P       Pn       03 54 17.7 +2.6
WMQ                              pmax    pmax
      comp=Z,20nm,1.0s
WMQ   Urumqi           20.58 245  P       Pn       03 54 17.7 +2.6
KSRS  Korea Array      20.90 147  Lg      Lg       04 00 38.9
      comp=Z,1.3nm,0.8s,baz=349,slow=29,SNR=2.7
KSRS                             LR      LR       04 03 10.5
      comp=Z,196nm,18.8s,baz=342,slow=39
KURK  Kurchatov        21.44 270ceP       P        03 54 24.2 +2.3
KURK                             pmax    pmax
      comp=Z,20nm,1.2s
KURK  Kurchatov        21.44 270  P       P        03 54 22.4 +0.5
MK31  Makanchi Array   21.50 258  P       P        03 54 23.6 +1.0
MK31                             pmax    pmax
      comp=Z,6.0nm,1.0s
MK31  Makanchi Array   21.50 258  P       P        03 54 23.6 +1.0
MKAR  Makanchi Array   21.50 258  P       P        03 54 23.9 +1.3
      comp=Z,2.3nm,0.8s,baz=60,slow=10,SNR=20
MKAR                             Lg      Lg       04 00 54.3
      comp=Z,0.5nm,0.7s,baz=51,slow=30,SNR=3.0
MKAR  Makanchi Array   21.50 258 i P      P        03 54 23.8 +1.2
MKAR                             pmax    pmax
      comp=Z,2.0nm,0.8s
MKAR  Makanchi Array   21.50 258  P       P        03 54 23.4 +0.8
KURBB Kurchatov Arra   21.53 270  P       P        03 54 25.2 +2.3
      comp=Z,21nm,1.1s,baz=68,slow=11,SNR=26
MAKZ  Makanchi         21.66 258  P       P        03 54 26.9 +2.5
MAKZ                             pmax    pmax
      comp=Z,13nm,1.0s
MAKZ  Makanchi         21.66 258  P       P        03 54 26.9 +2.5
MAKZ                             IAmb    IAmb     03 54 30.7
      comp=Z,13nm,1.0s
XAN   Xi'an            22.24 191  P       P        03 54 35.0 +4.3
XAN                              pP      sP       03 54 43.0  +10
XAN                              S       Sn       03 58 41.5 -5.6
XAN                              pmax    pmax
      comp=Z,6.0nm,1.5s
XAN                              pmax    pmax
      comp=Z,180nm,6.1s
XAN                              LR      LR
      comp=Z,460nm,14.1s
XAN                              LR      LR
      comp=Z,520nm,17.3s
BVAR  Borovoye Array   25.01 281  P       P        03 54 58.6 +0.9
      comp=Z,3.0nm,0.9s,baz=65,slow=8.1,SNR=14
BRVK  Borovoye         25.06 282ceP       P        03 54 59.7 +1.6
BRVK                             pmax    pmax
      comp=Z,12nm,1.1s
BRVK  Borovoye         25.06 282  P       P        03 54 58.0 -0.1
PETK  Petropavlovsk-   25.34  78  P       P        03 55 00.4 -0.3
      comp=Z,3.3nm,0.9s,baz=313,slow=3.2,SNR=2.9
PETK                             LR      LR       04 04 53.4
      comp=Z,225nm,20.2s,baz=302,slow=36
JNU   Nakatsue         25.82 145  LR      LR       04 06 14.1
      comp=Z,242nm,18.4s,baz=346,slow=39
PET   Petropavlovsk    25.90  78ceP       P        03 55 06.5 +0.8
PET                              pmax    pmax
      comp=Z,392nm,1.4s
AAK   Ala-Archa        28.42 259 i P      P        03 55 30.3 +1.6
AAK                              pmax    pmax
      comp=Z,20nm,1.4s
AAK   Ala-Archa        28.42 259  P       P        03 55 31.7 +3.0
ARU   Arti             29.96 294  LR      LR       04 07 35.8
      comp=Z,81nm,19.1s,baz=64,slow=36
ARU   Arti             29.96 294  P       P        03 55 42.6 +0.6
ARU                                               03 56 36.0
ARU                              S       S        04 00 39.4 -0.5
KKAR  Karatay Array    30.32 263  P       P        03 55 47.9 +2.5
KKAR  Karatay Array    30.32 263  P       P        03 55 47.9 +2.5
BELG  Belogornoye      37.49 293 i P      P        03 56 49.0 +1.6
BELG                             pmax    pmax
      comp=Z,2.0nm,0.9s
ARCES ARCESS Array B   38.66 326  LR      LR       04 15 55.6
      comp=Z,53nm,19.2s,baz=75,slow=41
CMAR  Chiang Mai Arr   39.14 203  LR      LR       04 12 49.8
      comp=Z,75nm,21.2s,baz=345,slow=36
GEYT  Alibeck          40.76 268  P       P        03 57 19.2 +4.2
      comp=Z,1.4nm,0.4s,baz=35,slow=17,SNR=4.4
GEYT  Alibeck          40.76 268  P       P        03 57 17.1 +2.1
OBN   Obninsk          41.48 302 i P      P        03 57 16.6 -4.0
OBN                             i                 03 58 59.4
OBN                             i                 03 59 19.0
OBN                              pmax    pmax
      comp=Z,14nm,0.9s
TGY   Tagaytay City    42.21 170  LR      LR       04 16 51.4
      comp=Z,201nm,18.2s,baz=303,slow=39
FINES FINESS Array B   42.53 315  P       P        03 57 28.2 -0.9
      comp=Z,1.9nm,0.6s,baz=54,slow=4.9,SNR=8.6
FINES FINESS Array B   42.53 315 i P      P        03 57 31.6 +2.5
FINES                            pmax    pmax
      comp=Z,2.0nm,0.6s
FINES FINESS Array B   42.53 315  P       P        03 57 27.4 -1.7
BMAR  Burnt Mountain   43.99  33  P       P        03 57 42.2 +1.2
IL31                   44.89  37  P       P        03 57 49.8 +1.8
IL31                             IAmb    IAmb     03 57 58.8
      comp=Z,2.6nm,1.0s
ILAR  Eielson Array    44.89  37  P       P        03 57 47.2 -0.9
      comp=Z,1.9nm,1.0s,baz=289,slow=8.1,SNR=16
ILAR                             LR      LR       04 20 28.3
      comp=Z,68nm,18.9s,baz=330,slow=41
ILAR  Eielson Array    44.89  37  P       P        03 57 49.8 +1.7
ILAR  Eielson Array    44.89  37  P       P        03 57 49.8 +1.7
KIV   Kislovodsk       45.23 286 i P      P        03 57 52.6 +1.4
KIV                             i                 03 57 58.8
KIV                             i                 03 59 31.8
KIV                             i                 03 59 38.8
KIV                              pmax    pmax
      comp=Z,6.0nm,0.9s
KIV                              MLR     MLR
      comp=Z,92nm,17.0s
RSO   Redoubt South    45.44  44  P       P        03 57 54.8 +2.1
NEY   Neytrino         45.68 285 i P      P        03 57 57.2 +2.3
NEY                              pmax    pmax
      comp=Z,1.0nm,0.9s
MNK   Minsk            45.89 306 i P      P        03 57 52.1 -3.9
      comp=E,1.0nm,0.9s
MNK                             i P      P        03 57 52.1 -3.9
      comp=N,5.0nm,0.7s
MNK                             i P      P        03 57 52.1 -3.9
      comp=Z,6.0nm,0.9s
MNK                             i PP     PP       03 59 39.4 -3.8
MNK                             i PPP    PPP      04 00 19.3
MNK                             i ScP    ScP      04 03 22.7 -3.7
MNK                             i PcS    PcS      04 03 28.5 +1.4
MNK                             i S      S        04 04 35.0 -5.5
MNK                             i SS     SS       04 08 02.1 -2.4
MNK                             i SSS    SSS      04 08 51.0
MNK                             i LQ     LQ       04 13 23.3
MNK                             i LR     LR       04 17 19.6
MNK                             i LRM    MLR      04 18 56.4
      comp=Z,27nm,6.8s
MNK                             i LRM    MLR      04 19 00.3
      comp=E,4.0nm,7.2s
MNK                             i LRM    MLR      04 19 00.3
      comp=N,192nm,14.9s
DOT   Dot Lake         46.56  37  P       P        03 58 02.8 +1.4
DOT                              IAmb    IAmb     03 58 08.6
      comp=Z,4.1nm,1.0s
INK   Inuvik           46.56  28  P       P        03 58 02.4 +1.2
      comp=Z,3.9nm,1.1s,baz=323,slow=6.9,SNR=5.2
INK   Inuvik           46.56  28  P       P        03 58 02.2 +0.9
INK                              pmax    pmax
      comp=Z,3.0nm,1.1s
INK   Inuvik           46.56  28  P       P        03 58 02.2 +0.9
INK                              IAmb    IAmb     03 58 10.4
      comp=Z,2.5nm,1.1s
AKASG Malin Array Be   47.70 301  P       P        03 58 09.6 -0.7
      comp=Z,0.2nm,0.2s,baz=42,slow=9.0,SNR=5.5
AKASG Malin Array Be   47.70 301  P       P        03 58 09.4 -0.9
AKASG                            pmax    pmax
      comp=Z,1.0nm,0.9s
AKASG Malin Array Be   47.70 301  P       P        03 58 09.4 -0.9
BCAR  Beaver Creek A   47.72  37  P       P        03 58 12.2 +1.8
NOA   NORSAR Array B   48.41 321  LR      LR       04 19 53.1
      comp=Z,90nm,20.7s,baz=35,slow=38
BRTR  Keskin Array B   53.03 288  LR      LR       04 24 17.3
      comp=Z,47nm,18.6s,baz=39,slow=39
CLL   Collm            54.63 311 eP       P        03 59 06.0 +3.6
CLL                              LmH              04 19 00.0
      comp=N,200nm,20.5s
CLL                              LmH              04 19 00.0
      comp=E,200nm,20.7s
CLL   Collm            54.63 311 eP       P        03 59 06.0 +3.6
DLBC  Dease Lake       55.02  35  LR      LR       04 23 43.4
      comp=E,109nm,19.3s,baz=320,slow=37
YKA   Yellowknife Ar   55.97  25  P       P        03 59 10.8 -1.0
      comp=E,1.5nm,0.8s,baz=335,slow=6.4,SNR=12
GERES GERESS Array B   56.16 308  P       P        03 59 13.5 -0.1
      comp=E,0.6nm,0.8s,baz=37,slow=8.7,SNR=2.1
GERES                            LR      LR       04 27 31.0
      comp=E,127nm,18.7s,baz=39,slow=41
BBB   Bella Bella      60.73  38  LR      LR       04 27 43.7
      comp=E,45nm,19.0s,baz=296,slow=38
ESDC  Sonseca Array    71.03 314  P       P        04 00 52.4 +0.5
      comp=E,2.3nm,1.1s,baz=37,slow=7.1,SNR=5.9
ESDC                             LR      LR       04 36 33.2
      comp=E,62nm,18.5s,baz=110,slow=40
ULM   Lac du Bonnet    71.27  20  LR      LR       04 34 04.3
      comp=E,51nm,18.8s,baz=343,slow=38
PDAR  Pinedale Array   74.99  32  LR      LR       04 38 56.7
      comp=E,47nm,19.2s,baz=337,slow=40
WRA   Warramunga Arr   77.67 160  P       P        04 01 30.1 -0.4
      comp=E,0.9nm,0.9s,baz=352,slow=6.4,SNR=7.0
ASAR  Alice Springs    81.22 161  P       P        04 01 51.2 +1.4
      comp=E,0.3nm,0.8s,baz=340,slow=4.9,SNR=2.6
ANMO  Albuquerque      83.13  32ceP       P        04 02 01.5 +1.3
ANMO                             pmax    pmax
      comp=Z,1.0nm,1.1s
TXAR  Lajitas Array    89.20  32  LR      LR       04 47 00.4
      comp=Z,42nm,20.2s,baz=0.0,slow=39
DBIC  Dimbokro         99.85 298  LR      LR       04 51 32.0
      comp=Z,25nm,18.1s,baz=22,slow=37
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IDC 26 04:02:27.7±1.9, 5°.49S×152°.32E, h0km, mb3.4/4, mb1 3.7/4, mb1mx3.5/21, mbtmp3.5/4, Error ellipse: s-maj=82.1km s-min=26.7km az=121.0, New Britain region

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Code  Station Name      Δ°   AZ°    Phase ID            Time      Res
                                  Op      ISC        h  m  s    ISC
WRA   Warramunga Arr   22.64 229  P       P        04 07 29.8 -0.8
      0.7nm,0.8s,baz=54,slow=10,SNR=4.9
ASAR  Alice Springs    25.32 223  P       P        04 07 56.6 +0.2
      0.5nm,0.6s,baz=58,slow=9.0,SNR=8.7
SONM  Songino Array    66.65 328  P       P        04 13 20.5  0.0
      0.3nm,0.6s,baz=145,slow=5.4,SNR=3.1
ILAR  Eielson Array    82.97  22  P       P        04 14 54.2 -0.3
      0.5nm,0.7s,baz=252,slow=5.0,SNR=7.2
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TORD	Torodi Ar. Bea	150.06	287	PKPbc	PKPbc	04 22 21.9	+0.3
	0.7nm,0.7s,baz=36,slow=0.9,SNR=1.6						

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*IDC **26** 04:13:07.5±1.6, 4.°01N×126.°58E, h104km±18km, mb3.6/9, mb1 3.7/11, mb1mx3.5/53, mbtmp4.0/11, MS3.3/2, Ms1 3.4/2, ms1mx2.6/36, Error ellipse: s-maj=43.1km s-min=9.2km az=64.0*

*DJA **26** 04:13:07.5±0.8, 4°N±7°×12°7E±°, h92km±7km, M4.5/12, mb4.7/6, mB4.9/7, MLv4.6/12, Mw(mB)4.2/7*

*MAN **26** 04:13:07.0, 4.°09N×126.°47E, h21km, mb4.8, ML3.7, MS3.7*

ISC 26 04:13:07.1±0.7**, 3.°97N**±0.°05×**126.°48E**±0.°07**, h100km, n27, σ1.s89**/32**, mb3.8**/9**, 1C, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	0.99	254	P	Pn	04 13 27.9	+0.5
SGSI				S	Sn	04 13 42.9	+0.1
DDMP	Don Marcelino,	2.26	340	*e*P	Pn	04 13 42.1	-1.0
DDMP				*e*S	Sn	04 14 08.6	-2.0
SKMP	Bagumbayan, Su	3.19	323	*e*P	Pn	04 13 55.1	-0.3
SKMP				*e*S	Sn	04 14 32.5	-0.2
DAV	Davao City (W)	3.21	344	P	Pn	04 13 55.7	-0.1
	107nm,0.3s,baz=302,slow=11,SNR=2.2						
DAV				S	Sn	04 14 34.6	+1.4
	48nm,0.3s,baz=85,slow=18,SNR=1.5						
TNTI	Ternate	3.29	164	P	Pn	04 13 56.5	-0.3
KCP	Kidapawan	3.33	335	⇑*i*P	Pn	04 13 58.5	+1.2
BUKP	Musuan	4.14	340	*e*P	Pn	04 14 08.9	+0.7
BUKP				*e*S	Sn	04 14 59.9	+4.3
GTOI	Gorontalo	4.79	226	P	Pn	04 14 17.6	+0.6
PAGZ	Pagadian	4.94	321	*e*P	Pn	04 14 18.0	-1.0
PAGZ				*e*S	Sn	04 15 07.9	-7.1
MRSI	Marisa	5.71	233	P	Pn	04 14 30.9	+1.4
	1.0nm3μm246nm,0.5s						
GLSP	General Luna,	5.79	357	*e*P	Pn	04 14 31.2	+0.6
SANI	Sanana	6.00	185	P	Pn	04 14 30.9	-2.5
	0.5nm5μm52nm,0.5s						
LUWI	Luwuk	6.21	217	P	Pn	04 14 38.3	+2.1
	0.5nm65nm,0.7s						
SIJI	Sorong	6.78	135	P	Pn	04 14 44.4	+0.4
	6.9nm,0.3s,baz=340,slow=20,SNR=6.5						
SIJI				S	Sn	04 15 58.1	-1.6
	4.2nm,0.3s,baz=191,slow=23,SNR=5.6						
APSI	Ampana	6.84	225	P	Pn	04 14 46.6	+1.7
	0.1nm418nm33nm,1.0s						
NLAI	Namlea	7.18	175	P	Pn	04 14 48.5	-1.0
	1.0nm6μm186nm,0.5s						
FITZ	Fitzroy Crossi	21.94	182	P	P	04 17 52.2	-0.4
	2.3nm,0.9s,baz=13,slow=10,SNR=11						
JOW	Kunigami	22.80	4	LR	LR	04 27 17.0	
	comp=Z,80nm,19.2s,baz=306,slow=37						
WRA	Warramunga Arr	24.98	162	P	P	04 18 22.1	+0.5
	2.4nm,0.7s,baz=343,slow=10,SNR=21						
ASAR	Alice Springs	28.40	166	P	P	04 18 53.1	+0.8
	0.2nm,0.5s,baz=345,slow=7.0,SNR=5.7						
CMAR	Chiang Mai Arr	30.54	300	P	P	04 19 12.2	+0.9
	0.7nm,0.3s,baz=103,slow=6.4,SNR=4.2						
STKA	Stephens Creek	38.44	159	P	P	04 20 19.7	+0.5
	1.7nm,0.7s,baz=335,slow=8.1,SNR=6.4						
SONM	Songino Array	47.00	342	P	P	04 21 28.0	-0.3
	0.5nm,0.4s,baz=150,slow=10,SNR=4.5						
MKAR	Makanchi Array	57.22	325	P	P	04 22 43.3	-0.7
	1.6nm,0.4s,baz=117,slow=7.5,SNR=36						
ZALV	Zalesovo Beam	60.27	333	P	P	04 23 03.8	-1.1
	0.6nm,0.4s,baz=119,slow=6.2,SNR=2.7						
NRIK	Noril'sk	70.14	346	P	P	04 24 09.2	+0.8
	1.2nm,0.4s,baz=143,slow=5.1,SNR=1.9						
NOA	NORSAR Array B	98.47	334	LR	LR	05 13 53.6	
	comp=Z,12nm,19.6s,baz=285,slow=37						

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*NEIC **26** 04:28:40.4±1.9, 6.°3S±0.°2×149.°0E±0.°2, h89km±6km, mb4.2/9, Error ellipse: s-maj=38.5km s-min=10.2km az=129.0*

*IDC **26** 04:28:41.5±7.5, 6.°03S×148.°55E, h75km±60km, mb3.8/2, mb1 4.1/4, mb1mx3.4/35, mbtmp4.2/4, ML4.5/1, Error ellipse: s-maj=70.9km s-min=51.9km az=120.0*

ISC 26 04:28:40.9±0.9**, 6.°3S**±0.°2×**149.°0E**±0.°2**, h100km, n20, σ1.s02**/22**, mb4.1**/3**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.60	210	P	Pn	04 29 34.7	0.0
	13nm,0.3s,baz=30,slow=16,SNR=14						
PMG				S	Sn	04 30 18.7	+2.4
	11nm,0.3s,baz=31,slow=17,SNR=6.9						
PMG	Port Moresby	3.60	210	Pn	Pn	04 29 34.4	-0.3
PMG				Sn	Sn	04 30 15.9	-0.4
RABL	Rabaul	3.79	57	Pn	Pn	04 29 38.5	+1.2
COEN	Coen	9.54	216	Pn	Pn	04 30 52.9	-2.4
PATS	Pohnpei	16.01	36	Pn	Pn	04 32 19.3	-1.1
EIDS	Eidsvold	19.10	174	P	P	04 32 54.9	-1.0
WB0	Warramunga Arr	19.51	225	P	P	04 33 00.6	+0.1
WB0				IAmb	IAmb	04 33 02.0	
	comp=Z,4.5nm,0.5s						
WR0	Warramunga Arr	19.54	224	P	P	04 33 00.8	+0.1
WR0				IAmb	IAmb	04 33 01.8	
	comp=Z,5.5nm,0.5s						
WRAB	Tennant Creek	19.65	225	P	P	04 33 02.2	+0.2
WRAB				IAmb	IAmb	04 33 03.0	
	comp=Z,10nm,0.5s						
WB2	Warramunga Arr	19.66	225	P	P	04 33 02.1	+0.1
WRA	Warramunga Arr	19.67	225	P	P	04 33 02.8	+0.6
	comp=Z,1.5nm,0.3s,baz=52,slow=11,SNR=122						
WRA	Warramunga Arr	19.67	225	P	P	04 33 01.4	-0.7
AS31	Alice Springs	22.57	218	P	P	04 33 33.4	+0.4
ASAR	Alice Springs	22.57	218	P	P	04 33 34.0	+0.9
	comp=Z,2.0nm,0.4s,baz=33,slow=12,SNR=40						
ASAR	Alice Springs	22.57	218	P	P	04 33 33.7	+0.7
FITZ	Fitzroy Crossi	25.62	241	P	P	04 34 01.5	+0.3
	comp=Z,4.1nm,0.6s,baz=55,slow=10,SNR=34						
FITZ	Fitzroy Crossi	25.62	241	P	P	04 34 01.4	+0.3
FITZ				IAmb	IAmb	04 34 03.3	
	comp=Z,4.3nm,0.8s						
FORT	Forrest	31.30	216	P	P	04 34 52.9	+1.3
FORT				IAmb	IAmb	04 34 54.2	
	comp=Z,5.7nm,0.8s						
VLC	Villacollemand	127.72	323	PKPdf	PKiKP	04 47 35.9	+0.4
TORD	Torodi Ar. Bea	147.05	284	PKPbc	PKiKP	04 48 15.9	+0.2
	comp=Z,0.2nm,0.3s,baz=54,slow=3.7,SNR=1.5						

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*WEL **26** 05:13:00, 46.°49S×166.°37E, h17km, ML4.5, Mw4.1, Moment Tensor Solution. s4 Moment tensor: Scale 10^{15} Nm; M_{rr}0.79; $M_{\theta\theta}$0.15; $M_{\phi\phi}$-0.94; $M_{r\theta}$0.26; $M_{\theta\phi}$0.23; $M_{\phi r}$-1.22; Fault plane solution: $M_0$1.53000×10^{15} NP1: ϕ_s350.00000°, δ18.00000°, λ92.00000°. NP2: ϕ_s168.00000°, δ72.00000°, λ90.00000°. Principal axes: T -162.7400, Plg63.0000°, Azm77.0000°; N 19.7100, Plg1.0000°, Azm168.0000°; P 143.0300, Plg27.0000°, Azm258.0000°;*

WEL 26 05:13:48.8, 46°S±12°×**16°6E**±°**, h5km**±10km**, M4.5**/19**, ML4.7**/19**, MLv4.5**/19 **Error ellipse: s-maj=0.0km s-min=0.0km az=15.5, Off west coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PYZ	Puysegur Point	0.43	42	P	Pb	05 13 58.2	-0.6
PYZ				S	Sb	05 14 05.2	-0.3
DCZ	Deep Cove	1.19	31	P	Pg	05 14 07.4	-4.2
DCZ				S	Sg	05 14 21.0	-6.0
APZ	The Paps	1.23	107	P	Pn	05 14 12.8	+0.2
APZ				S	Sn	05 14 31.1	+1.5
WHZ	Wether Hill Ro	1.31	64	P	Pn	05 14 12.7	-0.9
WHZ				S	Sg	05 14 30.2	-0.5
MLZ	Mavora Lakes	1.71	50	P	Pn	05 14 18.8	-0.4
MLZ				S	Sn	05 14 41.6	+0.3
SYZ	Scrubby Hill	1.98	92	P	Pn	05 14 23.6	+0.7
SYZ				S	Sb	05 14 49.9	-0.2
MSZ	Milford Sound	2.15	33	P	Pn	05 14 25.0	-0.2
TUZ	Tuapeka	2.39	78	P	Pn	05 14 28.7	+0.2
TUZ				S	Sn	05 14 59.7	+1.5
EAZ	Earnscleugh	2.46	60	P	Pn	05 14 29.6	0.0
EAZ				S	Sn	05 15 00.6	+0.6
WKZ	Wanaka	2.54	50	P	Pn	05 14 31.4	+0.8
JCZ	Jackson Bay	3.00	37	P	Pn	05 14 37.3	+0.4
HHSZ	Highcliff Hill	3.06	80	P	Pn	05 14 37.7	-0.1
ODZ	Otahua Downs	3.38	66	P	Pn	05 14 40.5	-1.7
LBZ	Lake Benmore	3.46	54	P	Pn	05 14 41.8	-1.5
FOZ	Fox Glacier	3.88	42	P	Pn	05 14 47.6	-1.3
FOZ				S	Sn	05 15 33.4	-1.5
TMZ	Timaru	3.94	59	P	Pn	05 14 48.7	-1.1
GCSZ	Gaunt Creek Bo	4.28	44	P	Pn	05 14 53.8	-0.7
ARCZ	Arundel	4.30	56	P	Pn	05 14 52.8	-1.9
RPZ	Rata Peaks	4.38	52	P	Pn	05 14 53.2	-2.6
WVZ	Waitaha Valley	4.66	45	P	Pn	05 14 59.3	-0.4
WACZ	Wakanui South	4.68	59	P	Pn	05 15 00.7	+0.7
WACZ				S	Sn	05 15 49.9	-4.8
OXZ	Oxford	5.17	54	P	Pn	05 15 04.9	-1.9
OXZ				S	Sn	05 16 00.3	-6.5
INZ	Inchbonnie	5.27	46	P	Pn	05 15 05.6	-2.4
MQZ	McQueen's Vall	5.30	61	P	Pn	05 15 07.6	-0.9
LTZ	Lake Taylor	5.66	51	P	Pn	05 15 12.7	-0.8
DSZ	Denniston Nort	6.19	42	P	Pn	05 15 18.9	-1.8
KHZ	Kahutara	6.60	55	P	Pn	05 15 27.7	+1.3
THZ	Tophouse	6.71	48	P	Pn	05 15 27.6	-0.4
QRZ	Quartz Range	7.25	41	P	Pn	05 15 34.3	-1.0
NNZ	Nelson	7.36	47	P	Pn	05 15 38.0	+1.3
DUWZ	D'Urville Isla	7.94	47	P	Pn	05 15 45.3	+0.5
CAW	Cannon Point	8.33	53	P	Pn	05 15 50.3	+0.2
KIW	Kapiti Island	8.41	51	P	Pn	05 15 50.7	-0.5
HOWZ	Holdsworth Sta	8.72	53	P	Pn	05 15 56.1	+0.7
MRZ	Mangatainoka R	8.91	53	P	Pn	05 15 55.8	-2.3
KHEZ	Kahui Hut	9.16	41	P	Pn	05 16 01.8	+0.3
PRWZ	Pori Road	9.20	53	P	Pn	05 16 01.3	-0.8
NEZ	North Egmont	9.21	41	P	Pn	05 16 02.3	0.0
PKVZ	Pokaka	9.80	46	P	Pn	05 16 11.8	+1.5
WNVZ	Wahianoa	9.89	47	P	Pn	05 16 13.6	+1.9
WTVZ	West Tongariro	10.05	46	P	Pn	05 16 14.5	+0.7
OTVZ	Oturere	10.05	47	P	Pn	05 16 12.3	-1.5
HIZ	Hauiti	10.18	42	P	Pn	05 16 14.6	-0.8
URZ	Urewera	11.47	48	P	Pn	05 16 33.9	+0.8
MWZ	Matawai	11.63	50	P	Pn	05 16 35.0	-0.4
RUGZ	Raukumara Rang	11.99	49	P	Pn	05 16 39.8	-0.5
WCZ	Waipu Caves	12.16	33	P	Pn	05 16 39.7	-2.8

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*SOME **26** 05:27:53.6, 41.°32N×84.°00E, h0km*

*NNC **26** 05:27:59.2±3.7, 41.°50N×83.°92E, h0km, mb3.7, mpv3.3, Error ellipse: s-maj=30.0km s-min=18.0km az=167.0*

ISC 26 05:28:05.0±2.7**, 41.°6N**±0.°1×**83.°71E**±0.°09**, h10km, n17, σ1.s28**/25**, 4C-2D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	Shalkode	3.49	297	*e*P	Pn	05 29 01.6	+2.2
	5.5nm,0.2s						
SHLS				*e*S	Sb	05 29 50.9	+1.4
	46nm,0.6s						
SHLS	Shalkode	3.49	297	Pg	Pn	05 29 01.5	+2.1
	12nm,0.6s						
SHLS				Lg	Lg	05 29 51.8	
	46nm,0.6s						
PDGK	Podgornoye	3.55	300	Pg	Pb	05 29 07.4	-0.5
	1.3nm,0.3s						
PDGK				Lg	Lg	05 30 01.4	
	12nm,0.5s						
PDGK	Podgornoye	3.55	300	⇑Pg	Pg	05 29 11.8	-1.2
	6.4nm,0.8s						
PDGK				⇑Lg	Lg	05 29 58.2	
	34nm,0.8s						
UZB	Uzynbulak	3.78	295	*e*P	Pb	05 29 11.3	-0.7
	5.2nm,0.2s						
UZB				*e*S	Sg	05 30 07.8	+1.3
	16nm,0.5s						
UZB	Uzynbulak	3.78	295	Pg	Pb	05 29 11.4	-0.6
	4.7nm,0.6s						
UZB				Lg	Lg	05 30 07.9	
	14nm,0.6s						
DJR	Jarkent	3.94	314	*e*P	Pb	05 29 13.8	-0.8
	1.5nm,0.3s						
DJR				*e*S	Sg	05 30 12.2	+0.8
	9.2nm,0.5s						
DJR	Jarkent	3.94	314	Pg	Pb	05 29 12.8	-1.8
	4.4nm,0.5s						
DJR				Lg	Lg	05 30 11.1	
	8.2nm,0.6s						
KPKS	Kokpek	4.14	298	*e*P	Pb	05 29 16.1	-1.9
	3.6nm,0.1s						
KPKS				*e*S	Sg	05 30 16.2	-1.6
	19nm,0.3s						
SATY	Saty	4.18	292	*e*P	Pb	05 29 17.9	-0.7
	2.8nm,0.2s						
SATY				*e*S	Sg	05 30 18.9	-0.2
	17nm,0.4s						
SATY	Saty	4.18	292	Pg	Pb	05 29 17.9	-0.7
	2.5nm,0.4s						
SATY				Lg	Lg	05 30 19.0	
	11nm,0.3s						
ARXS	Arharly	5.03	303	*e*P	Pb	05 29 33.7	+0.6
	4.7nm,0.6s						
ARXS				*e*S	Sg	05 30 46.4	0.0
	10nm,0.5s						
ARXS	Arharly	5.03	303	Pg	Pb	05 29 33.7	+0.6
	4.7nm,0.6s						
ARXS				Lg	Lg	05 30 46.4	
	10nm,0.5s						
TNSS	Tian-Shan	5.20	288	*e*P	Pb	05 29 36.5	+0.2
	1.0nm,0.2s						
TNSS				*e*S	Sg	05 30 50.7	-1.3
	5.0nm,0.7s						
TNSS	Tian-Shan	5.20	288	Pg	Pb	05 29 36.5	+0.2
	1.8nm,0.3s						
TNSS				Lg	Lg	05 30 50.7	
	1.8nm,0.3s						
MK31	Makanchi Array	5.25	349	Pn	Pn	05 29 21.7	-1.9
	0.1nm,0.2s,baz=143,slow=11,SNR=8.2						
MK31				⇑Pg	Pb	05 29 37.6	+0.7
	0.5nm,0.3s,baz=174,slow=16,SNR=8.5						
MK31				⇑Lg	Lg	05 30 48.8	
	4.2nm,0.6s,baz=178,slow=27,SNR=3.8						
MAKZ	Makanchi	5.32	347	⇓Pg	Pb	05 29 39.6	+1.6
	2.0nm,0.5s						
MAKZ				⇓Lg	Lg	05 30 51.9	
	4.0nm,0.7s						

IDC 26 05:34:08.8±3.5**, 55.°58N**×**86.°08E, h0km, mb1 2.6**/1**, mb1mx2.6**/47**, mbtmp2.6**/1**, ML2.7**/2**, Error ellipse: s-maj=27.3km s-min=24.8km az=49.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.79	205	*i*		05 44 10.0	
	baz=21,slow=339,SNR=5.9						
ZALV	Zalesovo Beam	1.79	205	Pg	Pn	05 34 39.6	-1.3
	3.8nm,0.3s,baz=26,slow=16,SNR=49						
ZALV				Lg	Lg	05 35 06.6	
	2.5nm,0.3s,baz=26,slow=27,SNR=7.5						
KURBB	Kurchatov Arra	6.73	226	Pn	Pn	05 35 48.9	+0.2
	0.2nm,0.3s,baz=46,slow=14,SNR=5.3						
KURBB				Lg	Lg	05 37 41.2	
	baz=42,slow=31,SNR=2.8						
MKAR	Makanchi Array	9.11	197	Pn	Pn	05 36 21.6	+0.2
	0.1nm,0.3s,baz=21,slow=14,SNR=1.7						
MKAR				Lg	Lg	05 38 58.9	
	0.0nm,0.3s,baz=24,slow=32,SNR=5.3						

JMA 26 05:37:28.4±0.3**, 25.°24N**×**123.°37E, h173km**±4km**, M2.9, Northeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.84	203	P	Pn	05 37 54.7	+0.4
YOJ				*e*S	Sn	05 38 14.5	+0.3
IRIF	Iriomote-Funau	0.96	160	P	Pn	05 37 55.1	0.0
IRIF				S	Sn	05 38 15.4	-0.3
JISG	Ishigakijimahi	1.07	127	P	Pn	05 37 56.6	+0.6
JISG				S	Sn	05 38 17.9	+0.7
JIJ	Ishigaki jima	1.12	141	P	Pn	05 37 56.4	0.0
JIJ				S	Sn	05 38 17.4	-0.5
JKRS	Kuro-shima	1.16	150	P	Pn	05 37 57.0	+0.3
JKRS				S	Sn	05 38 18.9	+0.5
HATJ	Hateruma jima	1.24	161	P	Pn	05 37 58.0	+0.6
HATJ				*e*S	Sn	05 38 20.3	+0.5
JTJ	Tarama	1.35	116	P	Pn	05 37 58.7	+0.4
JTJ				S	Sn	05 38 21.1	-0.3
JIRB	Irabujima	1.69	104	P	Pn	05 38 01.4	-0.2
JIRB				*e*S	Sn	05 38 26.2	-1.1
JIKM	Ikemajima	1.73	100	*e*S	Sn	05 38 28.2	+0.1

TAP 26 05:38:23.6, 24.°31N×**121.°62E, h24km, ML1.3, C, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NACB	Ninganchiao	0.13	190	*e*P	Pb	05 38 28.9	+0.4
	baz=189						
NACB				S	Sb	05 38 31.5	-0.1
	baz=189						
ETLH	Xiulin Townshi	0.16	232	*e*P	Pb	05 38 28.6	-0.2
	baz=233						
ETLH				S	Sb	05 38 32.9	+0.7
	baz=233						
ENA	Nanau	0.17	42	*e*P	Pb	05 38 29.2	+0.5
	baz=45						
NNSB	Datong	0.25	300	*e*S	Sb	05 38 34.4	+0.2
	baz=305						
FUSS	Fushou	0.35	261	*e*P	Pb	05 38 31.4	-0.1
	baz=261						
FUSS				S	Sb	05 38 38.1	+1.2
	baz=261						
WHF	Hehuan Shan	0.36	244	*e*P	Pn	05 38 33.1	-0.6
	baz=243						
WHF				S	Sb	05 38 37.8	+0.4
	baz=243						
TWT	Tachien	0.41	263	S	Sb	05 38 38.6	+0.3
	baz=259						
TDCB	Techi	0.42	263	*e*S	Sb	05 38 38.7	0.0
	baz=260						
YHNB	Yeheng	0.42	329	*e*P	Pb	05 38 32.4	-0.3
	baz=334						
NSK	Sanguang	0.44	327	*e*P	Pb	05 38 32.4	-0.5
	baz=334						
CHGB	Renai	0.47	239	*e*P	Pb	05 38 33.9	+0.4
	baz=240						
CHGB				*e*S	Sb	05 38 40.7	+0.5
	baz=240						

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*IDC **26** 05:39:03.2±1.1, 39.°93N×143.°82E, h0km, mb3.5/7, mb1 3.8/9, mb1mx3.6/49, mbtmp3.7/9, ML3.4/2, MS2.9/5, Ms1 2.9/5, ms1mx2.5/47, Error ellipse: s-maj=29.2km s-min=21.7km az=104.0*

*JMA **26** 05:39:06.7±0.2, 39.°87N×143.°43E, h24km, M3.8*

*NIED **26** 05:39:06.8, 39.°87N×143.°43E, h24km, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}2.93; $M_{\theta\theta}$-0.08; $M_{\phi\phi}$-2.85; $M_{r\theta}$1.70; $M_{\theta\phi}$-1.14; $M_{\phi r}$2.21; Fault plane solution: $M_0$4.17000×10^{14} NP1:ϕ_s32.00000°, δ66.00000°, λ101.00000°. NP2:ϕ_s186.00000°, δ26.00000°, λ67.00000°.*

ISC 26 05:39:04.0±0.9**, 39.°88N**±0.°05×**143.°55E**±0.°09**, h6km, n34, σ1.s44**/28**, mb3.6**/7**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	1.29	273	P	Pn	05 39 28.1	-0.6
MIYJ	Miyakonagasawa	1.37	258	P	Pn	05 39 29.5	-0.1
JKEN	Kujiedanarisaw	1.45	284	P	Pn	05 39 30.2	-0.5
JANG	Nango	1.63	288	P	Pn	05 39 33.2	-0.1
JOM	Ohasama	1.79	258	P	Pn	05 39 36.1	+0.7
JOM				*e*S	Sn	05 39 57.5	-0.9
JMK	Ichinoseki	2.03	243	P	Pn	05 39 38.9	+0.2
JTM	Tenmabayashi	2.10	296	P	Pn	05 39 40.7	+1.0
JTM				*e*S	Sn	05 40 05.7	-0.4
JIO	Ouri	2.22	231	P	Pn	05 39 41.1	-0.3
JAH	Hinai	2.25	279	P	Pn	05 39 43.1	+1.2
JNBK	Urakawa-nobuka	2.47	346	P	Pb	05 39 48.1	-0.7
JYK	Kaneyama	2.65	250	P	Pn	05 39 48.1	+0.8
JCH	Churui	2.73	357	P	Pb	05 39 51.0	-2.3
JCH				*e*S	Sn	05 40 22.9	+1.1
JKB	Kayabe	2.77	317	P	Pn	05 39 51.2	+2.3
JKB				*e*S	Sn	05 40 23.5	+0.9
ASAJ	Asahikawa	4.29	351	Pn	Pn	05 40 12.8	+3.0
	1.5nm,0.3s,baz=190,slow=12,SNR=2.8						
ASAJ				Sn	Sb	05 41 09.1	-2.8
	1.4nm,0.3s,baz=260,slow=34,SNR=1.5						
MJAR	Matsushiro Arr	5.36	233	Pn	Pn	05 40 26.6	+1.9
	0.2nm,0.3s,baz=34,slow=12,SNR=5.5						
MJAR				LR	LR	05 42 30.2	
	comp=Z,44nm,19.5s,baz=50,slow=37						
JHJ	Hachijo jima 2	7.40	205	Pn	Pn	05 40 52.7	+0.2
	8.0nm,0.3s,baz=78,slow=20,SNR=2.3						
USRK	Ussuriysk Ar.	9.62	300	Pn	Pn	05 41 28.4	+5.4
	baz=96,slow=14,SNR=6.8						
KSRS	Korea Array	12.45	264	LR	LR	05 46 29.3	
	comp=Z,62nm,18.1s,baz=98,slow=35						
KLR	Kul'dur	12.56	322	LR	LR	05 46 44.3	
	comp=Z,32nm,20.9s,baz=84,slow=36						
SONM	Songino Array	27.73	299	P	P	05 44 54.5	+1.2
	0.7nm,0.7s,baz=90,slow=11,SNR=4.8						
H11N2	WAKE ISLAND Hy	28.38	128	T	T	06 15 51.7	
	baz=318,slow=75,SNR=34						
H11N1	WAKE ISLAND Hy	28.39	128	T	T	06 15 58.8	
	baz=318,slow=75,SNR=31						
H11N3	WAKE ISLAND Hy	28.40	128	T	T	06 16 03.2	
	baz=318,slow=75,SNR=27						
H11S1	WAKE ISLAND Hy	29.20	130	T	T	06 16 06.0	
	baz=321,slow=76,SNR=6.3						
H11S3	WAKE ISLAND Hy	29.21	130	T	T	06 16 03.7	
	baz=321,slow=76,SNR=4.3						
H11S2	WAKE ISLAND Hy	29.22	130	T	T	06 16 05.3	
	baz=321,slow=76,SNR=4.9						
ZALV	Zalesovo Beam	41.30	310	P	P	05 46 51.6	+1.5
	1.3nm,0.4s,baz=96,slow=9.1,SNR=5.9						
NRIK	Noril'sk	41.42	334	LR	LR	06 04 12.3	
	comp=Z,40nm,19.2s,baz=22,slow=36						
CMAR	Chiang Mai Arr	43.86	254	LR	LR	06 05 40.8	
	comp=Z,18nm,19.3s,baz=211,slow=36						
MKAR	Makanchi Array	44.09	300	P	P	05 47 14.2	+1.3
	0.8nm,0.8s,baz=82,slow=9.8,SNR=5.4						
ILAR	Eielson Array	46.20	34	P	P	05 47 28.2	-1.1
	0.3nm,0.7s,baz=266,slow=6.9,SNR=2.2						
WRA	Warramunga Arr	60.13	190	P	P	05 49 12.8	+0.5
	0.5nm,0.7s,baz=7.0,slow=6.9,SNR=3.2						
YKA	Yellowknife Ar	60.51	31	P	P	05 49 12.9	-1.6
	0.1nm,0.7s,baz=286,slow=4.4,SNR=1.9						
ASAR	Alice Springs	63.85	190	P	P	05 49 39.1	+1.8
	0.3nm,0.8s,baz=10,slow=5.8,SNR=2.7						

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*DRS **26** 05:39:05.4±0.0, 42.°47N×48.°90E, h10km, ML2.8/10*

MOS 26 05:39:11.6±0.0**, 42.°28N**×**48.°52E, h6km, MPVA3.8, 10C-15D, Caspian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGKR	Sergokala	0.66	286	*e*PG	Pn	05 39 26.5	-1.0
SGKR				*e*S	Sn	05 39 39.1	+0.9
SGKR				pmax	pmax		
	comp=Z,48nm,0.2s						
SGKR	Sergokala	0.66	286	⇑*e*Pg	Pn	05 39 26.6	-0.9
	comp=Z,48nm,0.2s						
SGKR				⇓*e*Sg	Sn	05 39 39.1	+0.9
	comp=Z,320nm,0.1s						
URKR	Urkarakh	0.67	261	*e*PG	Pn	05 39 27.3	-0.3
URKR				*e*S	Sn	05 39 39.3	+0.9
URKR				pmax	pmax		
	comp=Z,124nm,0.5s						
URKR	Urkarakh	0.67	261	⇑*e*Pg	Pn	05 39 27.3	-0.3
	comp=Z,124nm,0.5s						
URKR				⇓*e*Sg	Sn	05 39 37.9	-0.5
	comp=Z,187nm,0.1s						
AKT	Akhty	0.99	217	⇓*i*PG	Pn	05 39 31.9	-0.2
AKT				*i* S	Sn	05 39 47.9	+1.5
AKT				pmax	pmax		
	comp=Z,132nm,0.3s						
AKT	Akhty	0.99	217	⇓*i*Pg	Pn	05 39 32.0	-0.1
	comp=Z,132nm,0.3s						
AKT				⇑*i*Sg	Sn	05 39 47.9	+1.5
	comp=Z,330nm,0.3s						
MAK	Makhachkala	1.01	313	*e*PG	Pn	05 39 32.4	+0.2
MAK				*e*		05 39 48.1	
MAK				pmax	pmax		
	comp=Z,113nm,0.3s						
MAK				smax	smax		
	comp=E,445nm,0.6s						
MAK				smax	smax		
	comp=E,557nm,0.6s						
MAK	Makhachkala	1.01	313	*e*Pg	Pn	05 39 34.2	+2.0
MAK				*e*Sg	Sn	05 39 47.5	+0.8
GNBR	Gunib	1.16	276	⇓*e*PG	Pn	05 39 34.8	+0.5
GNBR				*e*S	Sn	05 39 54.0	+3.6
GNBR				pmax	pmax		
	comp=Z,41nm,0.5s						
GNBR	Gunib	1.16	276	⇓*e*Pg	Pn	05 39 34.9	+0.6
	comp=Z,41nm,0.5s						
GNBR				⇑*e*Sg	Sn	05 39 54.1	+3.7
	comp=Z,138nm,0.1s						

ARKR	**Arakani**	**1.17**	**287**	⇓*i*PG	Pn	05 39 35.6	+1.1
ARKR				*e*S	Sn	05 39 53.1	+2.3
ARKR				pmax	pmax		
	comp=Z,11nm,0.5s						
ARKR	**Arakani**	**1.17**	**287**	⇓*i*Pg	Pn	05 39 35.6	+1.1
	comp=Z,10nm,0.5s						
ARKR				⇑*e*Sg	Sn	05 39 53.1	+2.3
	comp=Z,145nm,0.5s						
BUJR	**Buynaksk**	**1.17**	**298**	⇓*e*PG	Pn	05 39 35.8	+1.3
BUJR				*e*S	Sn	05 39 53.3	+2.5
BUJR				pmax	pmax		
	comp=Z,58nm,0.3s						
BUJR	**Buynaksk**	**1.17**	**298**	⇓*e*Pg	Pn	05 39 35.9	+1.3
	comp=Z,58nm,0.2s						
BUJR				⇓*e*Sg	Sn	05 39 53.3	+2.4
	comp=Z,347nm,0.5s						
KANR	**Karaman**	**1.19**	**321**	*e*Pg	Pn	05 39 35.6	+0.9
KANR				*e*Sg	Sn	05 39 54.7	+3.6
KRNR	**Karanay**	**1.31**	**295**	⇓*e*PG	Pg	05 39 36.9	+0.2
KRNR				*e*S	Sn	05 39 57.2	+2.9
KRNR				pmax	pmax		
	comp=Z,14nm,0.4s						
KRNR	**Karanay**	**1.31**	**295**	⇓*e*Pg	Pg	05 39 36.9	+0.2
	comp=Z,14nm,0.4s						
KRNR				⇑*e*Sg	Sn	05 39 57.2	+3.0
	comp=Z,70nm,0.3s						
DBC	**Dubki**	**1.45**	**301**	*e*PN	Pb	05 39 39.1	+0.1
DBC				pmax	pmax		
	comp=Z,16nm,0.4s						
DBC	**Dubki**	**1.45**	**301**	⇑*e*Pg	Pb	05 39 39.1	+0.1
	comp=Z,16nm,0.4s						
DBC				⇑*e*Sg	Sg	05 39 59.4	+1.3
	comp=Z,71nm,0.4s						
DLMR	**Dylym**	**1.60**	**300**	*e*PN	Pb	05 39 41.7	+0.2
DLMR				pmax	pmax		
	comp=Z,39nm,0.3s						
DLMR	**Dylym**	**1.60**	**300**	⇑*e*Pg	Pb	05 39 41.8	+0.2
	comp=Z,39nm,0.3s						
DLMR				⇑*e*Sg	Sg	05 40 06.0	+3.0
	comp=Z,291nm,0.4s						
BTLR	**Botlikh**	**1.74**	**284**	*e*PN	Pb	05 39 44.0	+0.1
BTLR	**Botlikh**	**1.74**	**284**	⇓*e*Pg	Pg	05 39 45.5	+0.6
	comp=Z,18nm,0.5s						
BTLR				⇓*e*Sg	Sg	05 40 10.5	+3.0
	comp=Z,23nm,0.3s						
DVE	**Vedeno**	**1.89**	**292**	*e*PN	Pb	05 39 46.3	-0.2
DVE	**Vedeno**	**1.89**	**292**	*e*Pg	Pg	05 39 48.3	+0.5
DVE				*e*Sg	Sg	05 40 13.3	+1.0
GNI	**Garni**	**3.55**	**234**	*i* PN	Pn	05 40 08.8	+1.4
KBZ	**Khabaz**	**4.37**	**291**	*i* PN	Pn	05 40 19.1	+0.7
SHA1	**Shidzhatmaz**	**4.54**	**291**	*i* PN	Pn	05 40 21.8	+0.9
KIV	**Kislovodsk**	**4.58**	**293**	*i* PN	Pn	05 40 22.4	+0.9
KIV				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KURK	**Kurchatov**	**22.25**	**57**	*i* P	P	05 44 03.7	-5.2
KURK				pmax	pmax		
	comp=Z,2.0nm,1.3s						

IDC 26 05:42:48.0±51.0**, 11°.90S**×**169°.89E, h0km, mb3.9**/3**, mb1 4.1**/3**, mb1mx3.6**/38**, mbtmp3.9**/3**, Error ellipse: s-maj=873.7km s-min=124.9km az=64.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**32.77**	**228**	P	P	05 49 23.3	+0.3
	0.8nm,0.4s,baz=61,slow=13,SNR=3.9						
WRA	**Warramunga Arr**	**35.05**	**252**	P	P	05 49 43.4	+0.4
	0.4nm,0.4s,baz=84,slow=8.7,SNR=8.3						
ASAR	**Alice Springs**	**36.11**	**246**	P	P	05 49 51.4	-0.7
	1.4nm,0.5s,baz=74,slow=9.3,SNR=22						

IDC 26 05:59:54.6±2.8**, 30°.17S**×**177°.21W, h0km, mb3.5**/2**, mb1 3.7**/2**, mb1mx3.6**/23**, mbtmp3.5**/2**, Error ellipse: s-maj=60.2km s-min=31.2km az=74.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.10**	**326**	Pn	Pb	06 00 16.1	-0.4
	82nm,0.3s,baz=81,slow=20,SNR=2.1						
RAO				Sn	Sn	06 00 35.8	+2.6
	70nm,0.3s,baz=282,slow=22,SNR=3.6						
RAO				LR	LR	06 00 46.7	
	comp=Z,175nm,22.0s,baz=122,slow=47						
ASAR	**Alice Springs**	**43.80**	**266**	P	P	06 08 02.1	-0.4
	0.3nm,0.8s,baz=100,slow=7.7,SNR=4.2						
WRA	**Warramunga Arr**	**44.77**	**271**	P	P	06 08 10.4	+0.2
	0.4nm,0.4s,baz=112,slow=7.8,SNR=4.4						
FINES	**FINESS Array B**	**145.16**	**341**	PKPbc	PKPbc	06 19 32.4	-0.5
	1.5nm,0.9s,baz=40,slow=3.2,SNR=4.8						

IDC 26 06:00:43.4±3.1**, 12°.34S**×**169°.11E, h690km**±43km**, mb2.9**/6**, mb1 3.3**/6**, mb1mx2.9**/29**, mbtmp3.9**/6**, Error ellipse: s-maj=97.7km s-min=14.3km az=151.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**34.19**	**253**	P	P	06 06 36.3	0.0
	1.4nm,0.5s,baz=85,slow=8.6,SNR=19						
WRA				S	S	06 11 18.6	+0.6
	0.6nm,0.7s,baz=84,slow=14,SNR=4.6						
ASAR	**Alice Springs**	**35.23**	**246**	P	P	06 06 44.6	-0.1
	1.6nm,0.5s,baz=75,slow=9.4,SNR=40						
ASAR				S	S	06 11 33.6	+0.3
	0.3nm,0.7s,baz=81,slow=16,SNR=4.2						
ILAR	**Eielson Array**	**83.72**	**17**	P	P	06 12 02.1	-0.3
	1.1nm,0.8s,baz=227,slow=5.3,SNR=12						
NVAR	**Mina Array Bea**	**84.37**	**49**	P	P	06 12 06.7	+0.2
	0.4nm,0.7s,baz=237,slow=8.2,SNR=3.3						
TXAR	**Lajitas Array**	**93.57**	**61**	P	P	06 12 48.9	-0.4
	0.1nm,0.6s,baz=227,slow=3.6,SNR=1.5						
YKA	**Yellowknife Ar**	**94.62**	**27**	P	P	06 12 53.2	+0.2
	0.3nm,0.6s,baz=250,slow=4.0,SNR=7.8						
ARCES	**ARCESS Array B**	**118.39**	**346**	PKP	PKPdf	06 18 14.6	0.0
	2.5nm,0.9s,baz=48,slow=1.8,SNR=11						

*IDC **26** 06:26:51.1±0.4, 19°.98S×173°.65W, h0km, mb4.8/22, mb1 4.9/24, mb1mx4.9/29, mbtmp4.8/24, ML5.2/3, MS4.9/29, Ms1 4.9/29, ms1mx4.7/38, Error ellipse: s-maj=17.1km s-min=12.8km az=156.0*

*NEIC **26** 06:26:52.2±1.0, 19°.98S±0°.08×173°.78W±0°.05, h9km±2km, mb5.2/242, Ms_20 5.3/206, Mwb5.4/57, Error ellipse: s-maj=11.4km s-min=5.9km az=161.0*

*NEIC **26** 06:26:52.3, 19°.98S×173°.77W, h11km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-1.40; $M_{\theta\theta}$0.92; $M_{\phi\phi}$0.48; $M_{r\theta}$-0.14; $M_{\theta\phi}$1.17; $M_{\phi r}$-0.49; Fault plane solution: $M_0$1.77000×10^{17} NP1:ϕ_s36.13000°, δ54.01000°, λ-108.82000°. NP2:ϕ_s246.24000°, δ40.02000°, λ-66.05000°. Principal axes: T 1.9441, Plg7.0000°, Azm139.0000°; N -0.4165, Plg15.0000°, Azm47.0000°; P -1.5276, Plg73.0000°, Azm254.0000°;*

*MOS **26** 06:26:54.0±1.0, 20°.08S×173°.73W, h30km, mb5.3/45, MS5.1/14 Error ellipse: s-maj=9.7km s-min=7.5km az=48.7*

*BJI **26** 06:26:56.8±0.0, 19°.85S×173°.09W, h52km, mB5.6/45, mb5.1/49, Ms5.3/43, Ms7 5.0/39*

*NOU **26** 06:26:56.3, 19°.77S×173°.05W, h73km, mb5.1, Tonga Islands*

*BGR **26** 06:26:56.5±0.0, 19°.72S×173°.33W, h33km*

*GCMT **26** 06:26:58.2±0.1, 20°.09S±0°.01×173°.17W, h12km, MW5.4/156, Moment Tensor Solution. s122, c206; s156, c285; Duration: 1s2 Moment tensor: Scale 10^{17} Nm; M_{rr}-1.39±.01; $M_{\theta\theta}$0.21±.01; $M_{\phi\phi}$1.18±.01; $M_{r\theta}$-0.09±.04; $M_{\theta\phi}$0.37±.01; $M_{\phi r}$-0.37±.04; Best double couple: $M_0$1.40100×10^{17} NP1:ϕ_s200.00000°, δ37.00000°, λ-88.00000°. NP2:ϕ_s17.00000°, δ53.00000°, λ-92.00000°. Principal axes: T 1.3580, Plg8.0000°, Azm108.0000°; N 0.0810, Plg1.0000°, Azm18.0000°; P -1.4430, Plg82.0000°, Azm280.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 26 06:26:54.3±0.2**, 20°.19S**±0°.04×**173°.50W**±0°.04**, h25km, n862,** σ1s71/793**, mb5.2**/190**, MS5.2**/153**, 42C-28D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**3.55**	**72**	P	Pn	06 27 40.4	-7.4
	baz=3.3						
NIUE	**Niue**	**3.55**	**72**	P	Pn	06 27 40.7	-7.1
AFI	**Afiamalu**	**6.46**	**15**	Pn	Pn	06 28 21.2	-6.7
	14nm,0.3s,baz=271,slow=22,SNR=22						
AFI				Sn	Sn	06 29 26.4	-15
	16nm,0.3s,baz=59,slow=21,SNR=1.0						
AFI	**Afiamalu**	**6.46**	**15**	P	Pn	06 28 23.0	-4.9
AFI	**Afiamalu**	**6.46**	**15**		Pn	06 28 23.0	-5.0
AFI	**Afiamalu**	**6.46**	**15**	P	Pn	06 28 21.3	-6.6
MSVF	**Nonsavu**	**8.36**	**286**	*i* P	**Pn**	**06 28 57.6**	**+3.6**
MSVF	**Nonsavu**	**8.36**	**286**	P	Pn	06 28 59.5	+5.5
RAO	**Raoul Island**	**9.87**	**203**	Pn	**Pn**	**06 29 16.5**	**+1.8**
	63nm,0.3s,baz=287,slow=19,SNR=2.0						
RAO				Sn	**Sn**	**06 31 04.0**	**-0.7**
	80nm,0.3s,baz=132,slow=21,SNR=6.3						
RAO				LR	LR	06 33 20.5	
	comp=Z,4µm,18.4s,baz=27,slow=39						
RAO	**Raoul Island**	**9.87**	**203**		**Pn**	**06 29 15.5**	**+0.8**
GLKZ	**Green Lake**	**9.88**	**203**	P	**Pn**	**06 29 15.3**	**+0.5**
GLKZ				S	**Sn**	**06 31 03.6**	**-1.3**
RAR	**Rarotonga**	**12.89**	**97**	Pn	Pn	06 29 50.4	-5.6
	8.7nm,0.3s,baz=301,slow=5.9,SNR=21						
RAR				Sn	Sn	06 32 01.8	-17
	1.6nm,0.3s,baz=75,slow=16,SNR=1.7						
RAR	**Rarotonga**	**12.89**	**97**	P	**Pn**	**06 29 52.4**	**-3.6**
FUNA	**Funafuti**	**13.58**	**328**	Pn	Pn	06 29 58.7	-6.7
MARNC	**Mare, Loyalty**	**17.31**	**262**	P	**P**	**06 31 00.0**	**+4.4**
	1.9nm,0.8s						
KNTN	**Kanton**	**17.40**	**6**	Pn	**Pn**	**06 30 51.7**	**-3.7**
KNTN				IAmb	IAmb	06 30 58.0	
	comp=Z,196nm,1.4s						
DVP	**Devils Point**	**17.49**	**275**	P	**P**	**06 31 01.5**	**+3.9**
PINNC	**Pines Island,**	**17.90**	**259**	P	**P**	**06 31 04.0**	**+1.9**
YATNC	**Mamie plateau,**	**18.39**	**261**	P	**Pn**	**06 31 08.4**	**+0.8**
DZM	**Mont Dzumac**	**18.80**	**261**	*e*P	**Pn**	**06 31 13.9**	**+1.2**
	comp=Z,177nm,0.8s						
DZM				*e*S	**Sn**	**06 34 40.8**	**-1.7**
	comp=Z,2µm,20.4s						
DZM				*e*LQ	LQ	06 34 51.6	
	comp=Z,14µm,24.7s						
DZM				*e*LR	LR	06 35 40.0	
	comp=Z,8µm,25.1s						
DZM	**Mont Dzumac**	**18.80**	**261**	P	**Pn**	**06 31 12.8**	**+0.1**
	comp=Z,2.7nm,0.3s,baz=85,slow=15,SNR=34						
DZM	**Mont Dzumac**	**18.80**	**261**		**P**	**06 31 10.0**	**-2.2**
DZM				IAmb	IAmb	06 31 17.6	
	comp=Z,76nm,0.7s						
DZM	**Mont Dzumac**	**18.80**	**261**	P	**Pn**	**06 31 13.3**	**+0.6**
ONTNC	**Ouen Toro**	**18.80**	**260**	P	**Pn**	**06 31 16.2**	**+3.6**
	comp=Z,176nm,1.9s						
OUZ	**Omahuta**	**18.80**	**215**	P	**Pn**	**06 31 14.1**	**+1.6**
OUZ	**Omahuta**	**18.80**	**215**	P	**Pn**	**06 31 15.1**	**+2.6**
SANVU	**Saraoutou**	**18.96**	**281**	P	**P**	**06 31 10.4**	**-3.4**
SANVU				IAmb	IAmb	06 31 23.3	
	comp=Z,132nm,1.2s						
SANVU	**Saraoutou**	**18.96**	**281**	P	**Pn**	**06 31 16.4**	**+1.8**
	comp=Z,166nm,2.4s						
URZ	**Urewera**	**19.76**	**202**	P	**Pn**	**06 31 25.3**	**+1.3**
	comp=Z,4.5nm,0.3s,baz=359,slow=2.5,SNR=17						
URZ				S	**S**	**06 34 56.3**	**-7.5**
	comp=Z,1.0nm,0.3s,baz=1.6,slow=16,SNR=1.7						
URZ				LR	LR	06 38 32.3	
	comp=Z,2µm,19.9s,baz=22,slow=35						
NMHZ	**Naumai**	**20.61**	**202**	P	Pn	06 31 36.6	+2.5
NMHZ				S	**S**	**06 35 13.1**	**-8.0**
BKZ	**Black Stump Fm**	**20.78**	**202**	P	**P**	**06 31 34.5**	**+0.9**
BKZ	**Black Stump Fm**	**20.78**	**202**	P	Pn	06 31 38.4	+2.3
BKZ				S	**S**	**06 35 19.0**	**-5.5**
HIZ	**Hauiti**	**20.85**	**206**	P	**P**	**06 31 35.5**	**+1.2**
HIZ				IAmb	IAmb	06 31 40.9	
	comp=Z,84nm,0.8s						
HIZ	**Hauiti**	**20.85**	**206**	P	Pn	06 31 35.9	-1.0
MCHZ	**McNeill Hill**	**20.96**	**202**	P	Pn	06 31 39.6	+1.5
TMVZ	**Te Maari**	**21.03**	**204**	P	**P**	**06 31 39.3**	**+2.9**
KWHZ	**Kaweka Forest**	**21.04**	**202**	P	**P**	**06 31 39.9**	**+3.6**
KWHZ				S	**S**	**06 35 26.3**	**-3.1**
ETVZ	**East Tongariro**	**21.05**	**204**	P	**P**	**06 31 38.7**	**+2.2**
OTVZ	**Oturere**	**21.09**	**204**	P	**P**	**06 31 38.1**	**+1.1**
KAHZ	**Kahuranaki**	**21.21**	**201**	P	**P**	**06 31 42.4**	**+4.2**
BHHZ	**Black Hill Sta**	**21.23**	**203**	P	**P**	**06 31 44.1**	**+5.7**
BHHZ				S	**S**	**06 35 26.6**	**-6.6**
WNVZ	**Wahianoa**	**21.26**	**204**	P	**P**	**06 31 41.1**	**+2.3**
PKVZ	**Pokaka**	**21.32**	**204**	P	**P**	**06 31 38.9**	**-0.5**
PNHZ	**Pukenui**	**21.55**	**202**	P	**P**	**06 31 43.9**	**+2.1**
BFZ	**Birch Farm**	**22.22**	**201**	P	**P**	**06 31 51.2**	**+2.2**
BFZ				IAmb	IAmb	06 32 18.4	
	comp=Z,128nm,1.4s						
BFZ	**Birch Farm**	**22.22**	**201**	P	**P**	**06 31 51.6**	**+2.6**
BFZ				S	**S**	**06 35 47.7**	**-4.6**
MRZ	**Mangatainoka R**	**22.43**	**202**	P	**P**	**06 31 52.4**	**+1.1**
MRZ				S	**S**	**06 35 50.0**	**-6.2**
TBI	**Tubuai**	**22.54**	**102**	*e*P	**P**	**06 31 53.9**	**+1.3**
	comp=Z,237nm,1.2s						
TBI				*e*S	**S**	**06 35 54.3**	**-4.2**
	comp=Z,1µm,26.5s						
TBI				*e*LR	LR	06 36 56.8	
	comp=Z,8µm,30.2s,baz=271						
TBI	**Tubuai**	**22.54**	**102**	*e*T	T	06 54 54.0	
	comp=Z,6.2nm,0.3s						
HOWZ	**Holdsworth Sta**	**22.66**	**202**	P	**P**	**06 31 55.9**	**+2.1**
HOWZ				S	**S**	**06 35 56.6**	**-3.9**
TMWZ	**Te Maipa**	**22.72**	**201**	P	**P**	**06 31 58.1**	**+3.7**
TMWZ				S	**S**	**06 35 57.6**	**-3.9**
PAE	**Paea**	**22.77**	**88**	*e*P	**P**	**06 31 54.6**	**-0.4**
	comp=Z,11nm,1.0s						
PAE	**Paea**	**22.77**	**88**	*e*T	T	06 55 04.0	
	comp=Z,2.3nm,0.3s						
PPT2	**Papeete2**	**22.78**	**87**	*e*P	**P**	**06 31 55.3**	**+0.1**
	comp=Z,134nm,1.5s						
PPT2				*e*S	**S**	**06 35 57.9**	**-5.1**
	comp=Z,4µm,24.8s						
PPT2				*e*LR	LR	06 37 13.4	
	comp=Z,9µm,26.0s,baz=257						
PPT2	**Papeete2**	**22.78**	**87**	*e*T	T	06 55 06.1	
	comp=Z,3.2nm,0.4s						
PPT	**Papeete**	**22.79**	**87**	P	**P**	**06 31 56.5**	**+1.3**
	comp=Z,52nm,1.0s,baz=330,slow=10,SNR=4.0						
PPT				LR	LR	06 39 08.0	
	comp=Z,4µm,18.2s,baz=257,slow=32						
TIAR	**Tiarei**	**23.00**	**88**	*e*P	**P**	**06 31 57.2**	**-0.3**
	comp=Z,12nm,0.8s						
SNZO	**South Karori**	**23.32**	**203**	P	**P**	**06 32 00.1**	**-0.3**
SNZO				IAmb	IAmb	06 32 17.4	
	comp=Z,87nm,0.9s						
BHW	**Baring Head**	**23.34**	**202**	P	**P**	**06 32 01.4**	**+0.8**
TUWZ	**Tuamarina**	**23.71**	**204**	P	**P**	**06 32 04.4**	**+0.2**
TUWZ	**Tuamarina**	**23.71**	**204**	P	**P**	**06 32 04.5**	**+0.3**
TUWZ				S	**S**	**06 36 18.9**	**+1.1**
BSWZ	**Blackbirch Sta**	**23.98**	**204**	P	**P**	**06 32 08.1**	**+1.3**
THZ	**Tophouse**	**24.40**	**205**	P	**P**	**06 32 12.4**	**+1.7**
THZ				IAmb	IAmb	06 32 24.6	
	comp=Z,41nm,0.9s						
KHZ	**Kahutara**	**24.71**	**203**	P	**P**	**06 32 15.5**	**+2.1**
KHZ				IAmb	IAmb	06 32 26.1	
	comp=Z,60nm,1.0s						
DSZ	**Denniston Nort**	**24.84**	**207**	P	**P**	**06 32 21.2**	**+6.5**
GVZ	**Greta Valley S**	**25.37**	**204**	P	P	06 32 31.1	+12
LTZ	**Lake Taylor**	**25.51**	**205**	P	**P**	**06 32 21.5**	**+0.8**
LTZ				IAmb	IAmb	06 32 34.9	
	comp=Z,43nm,0.8s						
INZ	**Inchbonnie**	**25.80**	**206**	P	**P**	**06 32 24.7**	**+1.4**
OXZ	**Oxford**	**26.06**	**205**	P	**P**	**06 32 27.0**	**+1.3**
OXZ	**Oxford**	**26.06**	**205**	P	**P**	**06 32 28.2**	**+2.5**
WVZ	**Waitaha Valley**	**26.38**	**207**	P	**P**	**06 32 32.2**	**+3.6**
GCSZ	**Gaunt Creek Bo**	**26.75**	**207**	P	**P**	**06 32 38.2**	**+6.3**
RPZ	**Rata Peaks**	**26.77**	**205**	P	**P**	**06 32 34.3**	**+2.1**
	comp=Z,23nm,0.7s,baz=335,slow=0.8,SNR=5.8						
RPZ				LR	LR	06 44 06.9	
	comp=Z,5µm,18.0s,baz=21,slow=38						
RPZ	**Rata Peaks**	**26.77**	**205**	P	**P**	**06 32 33.8**	**+1.6**
RPZ				IAmb	IAmb	06 32 44.9	
	comp=Z,50nm,0.8s						
RPZ	**Rata Peaks**	**26.77**	**205**	P	**P**	**06 32 38.6**	**+6.4**
ARCZ	**Arundel**	**26.92**	**205**	P	**P**	**06 32 39.8**	**+6.3**
XMAS	**Kiritimati**	**27.14**	**37**	IAMs_20	IAMs_20	06 44 29.1	
	comp=Z,6µm,18.0s						
FOZ	**Fox Glacier**	**27.14**	**207**	IAMs_20	IAMs_20	06 42 47.9	
	comp=Z,6µm,18.0s						
FOZ	**Fox Glacier**	**27.14**	**207**	P	**P**	**06 32 39.3**	**+3.9**
TMZ	**Timaru**	**27.35**	**205**	P	P	06 32 45.5	+8.2
LBZ	**Lake Benmore**	**27.68**	**206**	IAMs_20	IAMs_20	06 44 06.4	
	comp=Z,9µm,18.0s						
HNR	**Honiara**	**27.76**	**289**	LR	LR	06 42 19.8	
	comp=Z,3µm,18.5s,baz=120,slow=34						
EIDS	**Eidsvold**	**32.99**	**254**	P	**P**	**06 33 26.4**	**-1.1**
	baz=33,SNR=4.0						
EIDS	**Eidsvold**	**32.99**	**254**	P	**P**	**06 33 25.5**	**-2.0**
ARMA	**Armidale**	**33.01**	**245**	P	**P**	**06 33 27.2**	**-0.5**
	baz=33,SNR=5.5						
ARMA	**Armidale**	**33.01**	**245**	P	**P**	**06 33 26.8**	**-0.9**
MGCD	**Mangrove Creek**	**34.00**	**240**	P	**P**	**06 33 36.6**	**+0.4**
	baz=34,SNR=4.5						
TAOE	**Nuku Hiva Isla**	**34.13**	**76**	*e*S	**S**	**06 39 00.4**	**-2.1**
	comp=Z,391nm,24.0s						
TAOE				*e*LR	LR	06 42 35.0	
	comp=Z,2µm,22.6s						
RMQ	**Roma**	**35.12**	**252**	P	**P**	**06 33 45.5**	**-0.5**
	baz=35,SNR=14						
RKT	**Rikitea**	**35.86**	**102**	*e*LR	LR	06 43 13.2	
	comp=Z,7µm,27.8s						
CNB	**Canberra Magne**	**35.92**	**237**	P	**P**	**06 33 52.4**	**-0.4**
	baz=36,SNR=13						
CAN	**Canberra**	**36.21**	**237**	P	**P**	**06 33 55.3**	**0.0**
CAN				pmax	pmax		
	comp=Z,25nm,0.8s						
CAN				MLR	MLR		
	comp=Z,2µm,18.0s						
CAN	**Canberra**	**36.21**	**237**	P	**P**	**06 33 55.3**	**0.0**
CAN				IAmb	IAmb	06 33 57.1	
	comp=Z,25nm,0.8s						
YNG	**Young**	**36.45**	**239**	P	**P**	**06 33 57.2**	**0.0**
	baz=37,SNR=11						
CTA	**Charters Tower**	**37.72**	**263**	LR	LR	06 49 18.2	
	comp=Z,3µm,18.6s,baz=88,slow=36						
CTAO	**Charters Tower**	**37.72**	**263**	P	**P**	**06 34 07.0**	**-1.2**
CTAO				pmax	pmax		
	comp=Z,28nm,1.0s						
CTAO				MLR	MLR		
	comp=Z,3µm,18.0s						
CTAO	**Charters Tower**	**37.72**	**263**	P	**P**	**06 34 07.0**	**-1.2**
CTAO				IAmb	IAmb	06 34 09.6	
	comp=Z,28nm,0.9s						
CMSA	**Cobar Meteorol**	**38.22**	**244**	P	**P**	**06 34 10.9**	**-1.4**
	baz=38,SNR=26						
PMG	**Port Moresby**	**39.42**	**280**	P	**P**	**06 34 22.9**	**+0.4**
	comp=Z,46nm,0.9s,baz=103,slow=8.8,SNR=6.7						
PMG	**Port Moresby**	**39.42**	**280**	*ce*P	**P**	**06 34 22.7**	**+0.2**
PMG				pmax	pmax		
	comp=Z,31nm,0.9s						
PMG	**Port Moresby**	**39.42**	**280**	P	**P**	**06 34 19.4**	**-3.1**
PMG				IAmb	IAmb	06 34 29.6	
	comp=Z,44nm,0.8s						
PMG	**Port Moresby**	**39.42**	**280**	P	**P**	**06 34 22.5**	**0.0**
TOO	**Toolangi**	**39.51**	**235**	P	**P**	**06 34 23.0**	**0.0**
	baz=40,SNR=12						
TOO	**Toolangi**	**39.51**	**235**	P	**P**	**06 34 22.5**	**-0.6**
TOO				pmax	pmax		
	comp=Z,21nm,0.7s						
TOO	**Toolangi**	**39.51**	**235**	P	**P**	**06 34 22.5**	**-0.6**
MTSU	**Mount Surprise**	**39.82**	**266**	P	**P**	**06 34 24.1**	**-1.8**
	baz=40,SNR=36						
TAU	**Tasmania Unive**	**39.85**	**226**	P	**P**	**06 34 23.1**	**-2.7**
TAU				pmax	pmax		
	comp=Z,38nm,1.1s						
TAU				MLR	MLR		
	comp=Z,3µm,18.0s						
TAU	**Tasmania Unive**	**39.85**	**226**	P	**P**	**06 34 23.1**	**-2.7**
TAU				IAmb	IAmb	06 34 30.2	
	comp=Z,38nm,1.1s						
TAU	**Tasmania Unive**	**39.85**	**226**	IAMs_20	IAMs_20	06 49 59.5	
	comp=Z,3µm,18.0s						
MCQ	**Macquarie Isla**	**40.14**	**205**	P	**P**	**06 34 28.7**	**+0.7**
MCQ				pmax	pmax		
	comp=Z,178nm,1.3s						
MCQ	**Macquarie Isla**	**40.14**	**205**	P	**P**	**06 34 28.7**	**+0.7**
STKA	**Stephens Creek**	**41.72**	**244**	P	**P**	**06 34 40.5**	**-0.9**
	comp=Z,12nm,0.8s,baz=94,slow=10,SNR=36						
STKA				LR	LR	06 49 56.7	
	comp=Z,2µm,19.1s,baz=76,slow=33						
STKA	**Stephens Creek**	**41.72**	**244**	P	**P**	**06 34 40.5**	**-0.9**
	baz=42,SNR=24						
STKA	**Stephens Creek**	**41.72**	**244**	P	**P**	**06 34 40.6**	**-0.9**
STKA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
STKA	**Stephens Creek**	**41.72**	**244**	P	**P**	**06 34 40.6**	**-0.9**
COEN	**Coen**	**41.78**	**271**	P	**P**	**06 34 39.8**	**-2.3**
ARPS	**Mount Arapiles**	**42.18**	**237**	P	**P**	**06 34 45.1**	**0.0**
	baz=42,SNR=6.7						
HTT	**Hallett**	**44.10**	**242**	P	**P**	**06 34 59.9**	**-0.9**
	baz=44,SNR=9.1						
BBOO	**Buckleboo**	**46.46**	**244**	P	**P**	**06 35 18.2**	**-1.2**
	baz=47,SNR=16						
BBOO	**Buckleboo**	**46.46**	**244**	P	**P**	**06 35 17.9**	**-1.5**
BBOO				IAmb	IAmb	06 35 21.8	
	comp=Z,30nm,1.2s						
JAY	**Jayapura**	**47.99**	**285**	P	**P**	**06 35 30.9**	**-0.6**
	comp=Z,34nm,0.6s,baz=199,slow=3.1,SNR=8.8						
JAY	**Jayapura**	**47.99**	**285**	P	**P**	**06 35 31.0**	**-0.6**
GENI	**Genyem**	**48.44**	**285**	P	**P**	**06 35 36.9**	**+1.9**
	comp=Z,3µmcomp=Z,118nm,1.1s						
WR0	**Warramunga Arr**	**48.63**	**261**	P	**P**	**06 35 35.3**	**-1.1**
WR0				IAmb	IAmb	06 35 39.5	
	comp=Z,23nm,1.1s						
AS31	**Alice Springs**	**48.69**	**256**	P	**P**	**06 35 34.9**	**-2.0**
ASAR	**Alice Springs**	**48.69**	**256**	P	**P**	**06 35 35.0**	**-1.9**
	comp=Z,20nm,0.8s,baz=89,slow=8.2,SNR=127						
ASAR				PcP	**PcP**	**06 37 03.8**	**+1.7**
	comp=Z,8.1nm,0.8s,baz=98,slow=4.4,SNR=7.4						
ASAR				LR	LR	06 55 09.8	
	comp=Z,2µm,18.4s,baz=95,slow=35						
ASAR	**Alice Springs**	**48.69**	**256**	P	**P**	**06 35 34.7**	**-2.2**
ASPA	**Alice Springs**	**48.69**	**256**	P	**P**	**06 35 35.0**	**-1.9**
	baz=49						
WC3	**Warramunga Arr**	**48.78**	**261**	P	**P**	**06 35 35.8**	**-1.8**
	baz=49						
WB0	**Warramunga Arr**	**48.80**	**261**	P	**P**	**06 35 36.2**	**-1.5**
WB0				IAmb	IAmb	06 35 49.8	
	comp=Z,28nm,0.8s						
WB2	**Warramunga Arr**	**48.81**	**261**	P	**P**	**06 35 36.4**	**-1.4**
WRAB	**Tennant Creek**	**48.81**	**261**	*ce*P	**P**	**06 35 36.1**	**-1.7**
WRAB				pmax	pmax		
	comp=Z,12nm,0.7s						
WRAB	**Tennant Creek**	**48.81**	**261**	P	**P**	**06 35 36.2**	**-1.6**
WRAB				IAmb	IAmb	06 35 49.9	
	comp=Z,33nm,0.9s						
WRA	**Warramunga Arr**	**48.82**	**261**	P	**P**	**06 35 36.2**	**-1.7**
	comp=Z,9.6nm,0.7s,baz=98,slow=8.6,SNR=46						
WRA				PcP	**PcP**	**06 37 03.7**	**+1.2**
	comp=Z,5.1nm,0.8s,baz=96,slow=3.7,SNR=4.8						
WRA				LR	LR	06 54 57.1	
	comp=Z,2µm,18.2s,baz=140,slow=35						
FORT	**Forrest**	**53.28**	**246**	P	**P**	**06 36 12.1**	**+0.8**
	baz=54,SNR=10.0						
FORT	**Forrest**	**53.28**	**246**	P	**P**	**06 36 09.7**	**-1.6**
FORT				IAmb	IAmb	06 36 24.8	
	comp=Z,37nm,0.8s						
MTN	**Manton Dam**	**53.38**	**269**	P	**P**	**06 36 10.4**	**-1.9**
WRKA	**Warakurna**	**53.60**	**253**	P	**P**	**06 36 12.2**	**-1.6**
	baz=54,SNR=13						
FITZ	**Fitzroy Crossi**	**57.25**	**261**	P	**P**	**06 36 38.8**	**-1.2**
	baz=58,SNR=9.7						
FITZ	**Fitzroy Crossi**	**57.25**	**261**	P	**P**	**06 36 38.8**	**-1.2**
FITZ				IAmb	IAmb	06 36 43.6	
	comp=Z,25nm,1.1s						
SIJI	**Sorong**	**57.26**	**282**	P	**P**	**06 36 38.4**	**-1.9**
	comp=Z,60nm,0.7s,baz=72,slow=8.0,SNR=4.3						
SWI	**Sorong**	**57.27**	**282**	P	**P**	**06 36 39.6**	**-0.7**
	comp=Z,2µmcomp=Z,139nm,1.0s						
VNDA	**Vanda**	**58.63**	**186**	P	**P**	**06 36 46.5**	**-2.3**
	comp=Z,6.8nm,1.1s,baz=52,slow=13,SNR=2.9						
VNDA				LR	LR	07 02 02.5	
	comp=Z,726nm,18.0s,baz=14,slow=36						
SOEI	**Soe**	**60.71**	**270**	P	**P**	**06 37 03.4**	**-0.9**
SOEI	**Soe**	**60.71**	**270**	P	**P**	**06 37 04.9**	**+0.6**
	comp=Z,2µmcomp=Z,269nm,0.8s						
BATI	**Baumata**	**61.15**	**269**	P	**P**	**06 37 07.3**	**+0.1**
	baz=123,slow=4.9						
TNTI	**Ternate**	**61.49**	**282**	P	**P**	**06 37 07.9**	**-1.5**
TNTI	**Ternate**	**61.49**	**282**	P	**P**	**06 37 09.8**	**+0.4**
	comp=Z,4µmcomp=Z,88nm,0.9s						
SANI	**Sanana**	**61.69**	**279**	P	**P**	**06 37 09.4**	**-1.4**
	comp=Z,792nmcomp=Z,47nm,0.8s						
PSA00	**Pilbara Seismi**	**61.84**	**256**	P	**P**	**06 37 10.4**	**-1.3**
PSA00				IAmb	IAmb	06 37 23.9	
	comp=Z,32nm,1.2s						
PSA00	**Pilbara Seismi**	**61.84**	**256**	P	**P**	**06 37 08.5**	**-3.2**
PSA00				IAmb	IAmb	06 37 36.9	
	comp=Z,10nm,0.8s						

MEEK	**Meekatharra**	**61.99**	**250**	P	**P**	**06 37 12.2**	**-0.6**
	baz=62,SNR=3.6						
KLBR	**Kellerberrin**	**62.00**	**244**	P	**P**	**06 37 12.7**	**0.0**
	baz=62,SNR=19						
NWAO	**Narrogin (SRO)**	**62.27**	**243**	P	**P**	**06 37 14.8**	**+0.4**
	baz=62,SNR=4.9						
NWAO	**Narrogin (SRO)**	**62.27**	**243**	P	**P**	**06 37 13.2**	**-1.2**
NWAO				pmax	pmax		
	comp=Z,53nm,1.5s						
NWAO	**Narrogin (SRO)**	**62.27**	**243**	P	**P**	**06 37 13.2**	**-1.2**
MMRI	**Maumere**	**62.96**	**270**	P	**P**	**06 37 16.8**	**-2.6**
BLDU	**Ballidu**	**63.02**	**245**	P	**P**	**06 37 19.6**	**+0.1**
	baz=63,SNR=5.0						
MUN	**Mundaring**	**63.25**	**244**	P	**P**	**06 37 21.5**	**+0.5**
	baz=64,SNR=5.8						
MORW	**Morawa**	**63.84**	**247**	P	**P**	**06 37 24.8**	**-0.1**
	baz=64,SNR=6.8						
MORW	**Morawa**	**63.84**	**247**	P	**P**	**06 37 24.1**	**-0.8**
MORW				IAmb	IAmb	06 37 28.5	
	comp=Z,13nm,0.9s						
H01W1	**Cape Leeuwin H**	**64.56**	**240**	P	**P**	**06 37 32.5**	**+3.2**
	baz=107,slow=8.9,SNR=6.9						
H01W2	**Cape Leeuwin H**	**64.57**	**240**	P	**P**	**06 37 27.8**	**-1.6**
	baz=107,slow=8.9,SNR=3.4						
H01W3	**Cape Leeuwin H**	**64.57**	**240**	P	**P**	**06 37 32.9**	**+3.5**
	baz=107,slow=8.9,SNR=4.1						
LUWI	**Luwuk**	**65.04**	**279**	P	**P**	**06 37 31.8**	**-1.2**
LUWI	**Luwuk**	**65.04**	**279**	P	**P**	**06 37 34.5**	**+1.5**
	comp=Z,2µmcomp=Z,79nm,0.8s						
CASY	**Casey**	**66.05**	**205**	P	**P**	**06 37 40.6**	**+1.9**
APSI	**Ampana**	**66.13**	**278**	P	**P**	**06 37 41.7**	**+1.6**
	comp=Z,664nmcomp=Z,57nm,1.2s						
BNSI	**Bone**	**66.34**	**274**	P	**P**	**06 37 42.4**	**+1.0**
	comp=Z,35nm,1.2s						
KAPI	**Kappang**	**66.47**	**273**	P	**P**	**06 37 40.9**	**-1.3**
KAPI				pmax	pmax		
	comp=Z,23nm,1.0s						
KAPI	**Kappang**	**66.47**	**273**	P	**P**	**06 37 40.9**	**-1.3**
KAPI				IAmb	IAmb	06 37 51.6	
	comp=Z,23nm,0.9s						
SPSI	**Sidrap Palu**	**66.81**	**274**	P	**P**	**06 37 43.2**	**-1.2**
	comp=Z,18nm,0.8s						
PLAI	**Plampang**	**67.09**	**269**	P	**P**	**06 37 45.3**	**-0.9**
	comp=Z,1µmcomp=Z,126nm,0.8s						
TOLI2	**Tolitoli**	**67.69**	**280**	P	**P**	**06 37 46.4**	**-3.6**
TWSI	**Taliwang, Sumb**	**67.96**	**269**	P	**P**	**06 37 51.2**	**-0.5**
	comp=Z,61nm,1.0s						
SRBI	**Singaraja**	**69.73**	**269**	P	**P**	**06 38 01.8**	**-0.9**
	comp=Z,68nm,1.2s						
QSPA	**South Pole Qui**	**69.88**	**180**	P	**P**	**06 38 05.9**	**+3.0**
QSPA				IAmb	IAmb	06 38 31.7	
	comp=Z,36nm,1.2s						
QSPA	**South Pole Qui**	**69.88**	**180**	IAMs_20	IAMs_20	07 12 20.0	
	comp=Z,2µm,18.0s						
JAGI	**Jajag, Banyuwa**	**70.61**	**268**	P	**P**	**06 38 05.6**	**-2.5**
JAGI	**Jajag, Banyuwa**	**70.61**	**268**	P	**P**	**06 38 07.7**	**-0.4**
	comp=Z,53nm,0.8s						
KMMI	**Kalianget**	**71.23**	**269**	P	**P**	**06 38 15.4**	**+3.5**
MYLDM	**Lahad Datu**	**71.35**	**283**	P	**P**	**06 38 11.2**	**-1.4**
MYLDM				IAmb	IAmb	06 38 28.7	
	comp=Z,23nm,0.8s						
BBKI	**Banjar Baru**	**71.60**	**273**	P	**P**	**06 38 15.4**	**+1.3**
MTKI	**Muara Teweh, K**	**72.42**	**276**	P	**P**	**06 38 21.0**	**+2.0**
	comp=Z,5µmcomp=Z,41nm,0.7s						
MJAR	**Matsushiro Arr**	**72.55**	**321**	P	**P**	**06 38 18.1**	**-1.1**
	comp=Z,13nm,0.8s,baz=159,slow=5.9,SNR=19						
MJAR				LR	LR	07 05 16.6	
	comp=Z,508nm,21.7s,baz=170,slow=32						
MJAR	**Matsushiro Arr**	**72.55**	**321**	P	**P**	**06 38 18.4**	**-0.9**
MJAR				pmax	pmax		
	comp=Z,12nm,0.8s						
MJAR	**Matsushiro Arr**	**72.55**	**321**	P	**P**	**06 38 18.4**	**-0.9**
MJAR				IAmb	IAmb	06 38 24.0	
	comp=Z,12nm,0.8s						
MAJO	**Matsushiro**	**72.55**	**321**	P	**P**	**06 38 18.2**	**-1.1**
MAJO				pmax	pmax		
	comp=Z,19nm,0.9s						
MAJO	**Matsushiro**	**72.55**	**321**	P	**P**	**06 38 18.2**	**-1.1**
MAJO				IAmb	IAmb	06 38 24.1	
	comp=Z,19nm,0.9s						
MAT	**Matsushiro**	**72.55**	**321**	P	**P**	**06 38 18.3**	**-1.0**
MAT				S	**S**	**06 47 44.4**	**+2.0**
JSD	**Sado**	**73.53**	**322**	P	**P**	**06 38 24.1**	**-1.0**
JSD				IAmb	IAmb	06 38 38.5	
	comp=Z,28nm,0.9s						
ERM	**Erimo**	**73.72**	**328**	P	**P**	**06 38 24.6**	**-1.4**
ERM				pmax	pmax		
	comp=Z,21nm,1.1s						
ERM	**Erimo**	**73.72**	**328**	P	**P**	**06 38 24.6**	**-1.4**
ERM				IAmb	IAmb	06 38 38.6	
	comp=Z,21nm,1.1s						
ERM	**Erimo**	**73.72**	**328**	IAMs_20	IAMs_20	07 16 29.4	
	comp=Z,972nm,19.0s						
KKM	**Kota Kinabalu**	**73.78**	**283**	P	**P**	**06 38 26.0**	**-1.2**
KUR	**Kuril'sk**	**74.00**	**333**	*e*P	**P**	**06 38 30.7**	**+3.1**
KUR				*e*S	**S**	**06 48 04.5**	**+6.2**
KUR				pmax	pmax		
	comp=Z,1µm,4.5s						
KUR				MLR	MLR		
	comp=Z,510nm,13.0s						
SAO	**San Andreas Ge**	**74.97**	**41**	IAMs_20	IAMs_20	07 10 38.9	
	comp=Z,2µm,18.0s						
MCCM	**Marconi Confer**	**75.00**	**39**	IAMs_20	IAMs_20	07 15 52.4	
	comp=Z,2µm,18.0s						
PAGB	**Antelope Grade**	**75.06**	**42**	P	**P**	**06 38 34.3**	**+0.2**
PAGB				IAmb	IAmb	06 38 40.3	
	comp=Z,32nm,1.4s						
CCX	**Cicese**	**75.11**	**47**	P	**P**	**06 38 35.3**	**+0.9**
CCX				IAmb	IAmb	06 38 40.5	
	comp=Z,19nm,1.1s						
TJX	**Tijuana**	**75.22**	**47**	P	**P**	**06 38 33.8**	**-1.2**
HOPS	**Hopland Field**	**75.45**	**38**	IAMs_20	IAMs_20	07 10 40.1	
	comp=Z,1µm,18.0s						
SKR	**Severo-Kuril's**	**75.48**	**341**	*e*P	P	06 38 48.1	+12
SKR				*e*S	S	06 48 37.7	+23
SKR				pmax	pmax		
	comp=Z,800nm,6.9s						
SKR				pmax	pmax		
	comp=Z,400nm,7.2s						
SKR				pmax	pmax		
	comp=Z,65nm,1.3s						
SKR				MLR	MLR		
	comp=Z,200nm,17.0s						
JKA	**Kamikawa-asahi**	**75.55**	**329**	P	**P**	**06 38 34.8**	**-1.8**
ASAJ	**Asahikawa**	**75.55**	**329**	P	**P**	**06 38 34.8**	**-1.8**
ASAJ				pmax	pmax		
	comp=Z,14nm,1.0s						
TKX	**Tecate**	**75.56**	**47**	P	**P**	**06 38 38.0**	**+0.9**
TKX				IAmb	IAmb	06 39 01.1	
	comp=Z,9.7nm,0.5s						
CNBA	**Chernabura Isl**	**75.65**	**8**	IAMs_20	IAMs_20	07 09 21.9	
	comp=Z,2µm,19.0s						
ESJX	**Sierra Juarez**	**75.69**	**48**	P	**P**	**06 38 38.7**	**+0.8**
SLBS	**Sierra La Lagu**	**75.74**	**58**	IAMs_20	IAMs_20	07 05 37.0	
	comp=Z,1µm,19.0s						
MURC	**Murrieta**	**75.77**	**46**	P	**P**	**06 38 39.7**	**+1.5**
	baz=234						
BFSC	**Mount Baldy Ra**	**75.83**	**45**	P	**P**	**06 38 38.7**	**0.0**
	baz=234						
VES	**Vestal, Richgr**	**75.88**	**43**	P	**P**	**06 38 39.1**	**+0.4**
	baz=232						
MONP2	**Monument Peak**	**75.88**	**47**	P	**P**	**06 38 40.7**	**+1.6**
	baz=235						
SFX	**San Felipe**	**75.91**	**49**	P	**P**	**06 38 39.5**	**+0.5**
IKP	**In-Ko-Pah, Jac**	**75.95**	**47**	P	**P**	**06 38 41.1**	**+1.8**
	baz=235						
EDW2	**Edwards Air Fo**	**76.00**	**44**	P	**P**	**06 38 40.0**	**+0.5**
	baz=233						
SBUM	**Sibu**	**76.13**	**278**	P	**P**	**06 38 39.9**	**-0.7**
SBUM				IAmb	IAmb	06 38 55.3	
	comp=Z,16nm,1.0s						
SBUM	**Sibu**	**76.13**	**278**	P	**P**	**06 38 41.0**	**+0.4**
ISA	**Isabella, Lake**	**76.16**	**43**	P	**P**	**06 38 40.7**	**+0.3**
	baz=233						
ISA	**Isabella, Lake**	**76.16**	**43**	P	**P**	**06 38 41.3**	**+0.9**
ISA				pmax	pmax		
	comp=Z,33nm,1.5s						
ISA	**Isabella, Lake**	**76.16**	**43**	P	**P**	**06 38 41.3**	**+0.9**
ISA				IAmb	IAmb	06 38 56.1	
	comp=Z,33nm,1.5s						
PFO	**Pinyon Flats O**	**76.27**	**46**	P	**P**	**06 38 41.9**	**+0.8**
	baz=234						
PFO	**Pinyon Flats O**	**76.27**	**46**	*i* P	**P**	**06 38 41.8**	**+0.6**
PFO				pmax	pmax		
	comp=Z,6.0nm,1.2s						
PFO	**Pinyon Flats O**	**76.27**	**46**	P	**P**	**06 38 42.4**	**+1.2**
PFO				IAmb	IAmb	06 38 45.2	
	comp=Z,22nm,1.4s						
PFO	**Pinyon Flats O**	**76.27**	**46**	IAMs_20	IAMs_20	07 13 25.2	
	comp=Z,976nm,18.0s						
TPFO	**Pinon Flats**	**76.27**	**46**	P	**P**	**06 38 41.8**	**+0.6**
	baz=234						
XPFO	**Pion Flat**	**76.27**	**46**	IAMs_20	IAMs_20	07 13 25.2	
	comp=Z,980nm,18.0s						
SWSC	**Sam W. Stewart**	**76.33**	**47**	P	**P**	**06 38 42.7**	**+1.3**
	baz=235						
O02D	**Mt. Diablo Mer**	**76.40**	**38**	P	**P**	**06 38 43.0**	**+1.3**
	baz=229						
CMB	**Columbia Colle**	**76.43**	**41**	P	**P**	**06 38 42.6**	**+0.7**
CMB				pmax	pmax		
	comp=Z,17nm,1.5s						
CMB	**Columbia Colle**	**76.43**	**41**	P	**P**	**06 38 42.6**	**+0.7**
CMB				IAMs_20	IAMs_20	07 10 28.4	
	comp=Z,1µm,18.0s						
LRMC	**Laurel Mtn Rad**	**76.56**	**44**	P	**P**	**06 38 42.6**	**-0.2**
	baz=233						
ORV	**Oroville**	**76.74**	**39**	P	**P**	**06 38 44.2**	**+0.7**
ORV				pmax	pmax		
	comp=Z,9.0nm,1.3s						
ORV	**Oroville**	**76.74**	**39**	P	**P**	**06 38 44.2**	**+0.7**
PET	**Petropavlovsk**	**76.81**	**343**	*e*P	**P**	**06 38 45.2**	**+1.7**
PET				*e*S	**S**	**06 48 28.8**	**-0.4**
WDC	**Whiskeytown Da**	**76.81**	**37**	P	**P**	**06 38 44.3**	**+0.5**
WDC				pmax	pmax		
	comp=Z,21nm,1.5s						
WDC	**Whiskeytown Da**	**76.81**	**37**	P	**P**	**06 38 44.3**	**+0.5**
WDC				IAmb	IAmb	06 38 49.7	
	comp=Z,21nm,1.5s						
WDC				IAMs_20	IAMs_20	07 10 18.8	
	comp=Z,1µm,18.0s						
BELC	**Belle Mtn. Jos**	**76.81**	**46**	P	**P**	**06 38 45.6**	**+1.3**
	baz=235						
TWG	**Pinlang**	**76.81**	**300**	P	**P**	**06 38 42.1**	**-2.2**
CISI	**Cisompet, Garu**	**76.84**	**267**	P	**P**	**06 38 43.5**	**-1.3**
CISI	**Cisompet, Garu**	**76.84**	**267**	P	**P**	**06 38 46.9**	**+2.1**
	comp=Z,3µmcomp=Z,84nm,1.8s						
CWC	**Cottonwood Cre**	**76.88**	**43**	P	**P**	**06 38 45.2**	**+0.6**
	baz=233						
YULB	**Yu-li**	**76.91**	**301**	P	**P**	**06 38 43.1**	**-1.7**
N02D	**Trinity Center**	**76.97**	**37**	P	**P**	**06 38 45.5**	**+0.6**
	baz=228						
BC3	**Big Chuckawall**	**76.98**	**47**	P	**P**	**06 38 45.2**	**0.0**
	baz=235						
MDPB	**Devils Postpil**	**76.98**	**42**	P	**P**	**06 38 45.9**	**+0.6**
OMMB	**Old Mammoth Mi**	**77.02**	**42**	P	**P**	**06 38 46.3**	**+0.8**
MPMC	**Manual Prospec**	**77.03**	**44**	P	**P**	**06 38 45.8**	**+0.3**
	baz=233						
O03E	**Paynes Creek**	**77.04**	**38**	P	**P**	**06 38 47.6**	**+2.3**
	baz=229						
NACB	**Ninganchiao**	**77.05**	**302**	P	**P**	**06 38 43.0**	**-2.6**
HEC	**Hector,Ludlow**	**77.06**	**45**	P	**P**	**06 38 46.4**	**+0.8**
	baz=234						
GLA	**Glamis**	**77.06**	**47**	P	**P**	**06 38 46.2**	**+0.7**
	baz=236						
GLA	**Glamis**	**77.06**	**47**	P	**P**	**06 38 46.8**	**+1.2**
GLA				pmax	pmax		
	comp=Z,41nm,1.5s						
GLA	**Glamis**	**77.06**	**47**	P	**P**	**06 38 46.8**	**+1.2**
GLA				IAmb	IAmb	06 38 50.8	
	comp=Z,41nm,1.4s						
PETK	**Petropavlovsk-**	**77.14**	**343**	P	**P**	**06 38 43.9**	**-1.6**
	comp=Z,8.7nm,0.8s,baz=111,slow=8.1,SNR=8.3						
PETK				LR	LR	07 09 13.9	
	comp=Z,265nm,19.8s,baz=172,slow=33						
PETK	**Petropavlovsk-**	**77.14**	**343**	P	**P**	**06 38 44.3**	**-1.2**
TIN	**Tinemaha, Big**	**77.16**	**42**	P	**P**	**06 38 47.1**	**+1.0**
	baz=232						
M02C	**Callahan**	**77.17**	**37**	P	**P**	**06 38 47.5**	**+1.5**
	baz=228						
PIX	**Pinacate**	**77.19**	**49**	P	**P**	**06 38 47.1**	**+0.9**
RUBR	**Rubicon Trail**	**77.22**	**40**	P	**P**	**06 38 47.2**	**+0.7**
RUBR				IAmb	IAmb	06 38 59.0	
	comp=Z,35nm,1.4s						
CHGN	**Chignik**	**77.25**	**9**	P	**P**	**06 38 47.7**	**+1.8**
	baz=195						
WAKR	**Walker**	**77.31**	**41**	P	**P**	**06 38 47.6**	**+0.6**
SSLB	**Suanglung**	**77.37**	**301**	P	**P**	**06 38 45.9**	**-1.6**
TPUB	**Ta-pu**	**77.40**	**301**	P	**P**	**06 38 46.4**	**-1.3**
YHNB	**Yeheng**	**77.46**	**302**	P	**P**	**06 38 46.0**	**-2.0**
YBH	**Yreka Blue Hor**	**77.47**	**36**	P	**P**	**06 38 48.4**	**+0.7**
YBH				pmax	pmax		
	comp=Z,9.0nm,1.1s						
YBH	**Yreka Blue Hor**	**77.47**	**36**	P	**P**	**06 38 48.4**	**+0.7**
YBH				IAMs_20	IAMs_20	07 11 05.4	
	comp=Z,1µm,18.0s						
IRM	**Iron Mountain**	**77.48**	**46**	P	**P**	**06 38 49.1**	**+1.3**
	baz=235						
GMRC	**Granite Mounta**	**77.49**	**46**	P	**P**	**06 38 48.8**	**+0.8**
	baz=235						
KSM	**Kuching**	**77.56**	**276**	P	**P**	**06 38 48.3**	**-0.4**
KSM	**Kuching**	**77.56**	**276**	P	**P**	**06 38 48.0**	**-0.7**
PNTR	**Pine Nut**	**77.57**	**40**	P	**P**	**06 38 48.0**	**-0.5**
PNTR				IAmb	IAmb	06 39 01.1	
	comp=Z,27nm,1.3s						
YSS	**Yuzh-Sakhalins**	**77.59**	**331**	*e*P	**P**	**06 38 48.4**	**+0.3**
YSS				*e**SP	**pwP**	**06 39 04.7**	**+3.3**
YSS				*e*		06 41 44.9	
YSS				*e*S	**S**	**06 48 37.3**	**-0.7**
YSS				*e*PS	**PnS**	**06 49 15.8**	**-4.3**
YSS				pmax	pmax		
	comp=Z,300nm,6.8s						
YSS				pmax	pmax		
	comp=Z,40nm,1.2s						
YSS				MLR	MLR		
	comp=Z,400nm,19.0s						
YSS				MLR	MLR		
	comp=N,300nm,16.0s						
YSS	**Yuzh-Sakhalins**	**77.59**	**331**	P	**P**	**06 38 48.0**	**0.0**
BEKR	**Beckworth**	**77.61**	**39**	P	**P**	**06 38 48.7**	**0.0**
VCNR	**Virginia City**	**77.67**	**40**	P	**P**	**06 38 49.3**	**+0.3**
VCNR				IAmb	IAmb	06 38 58.7	
	comp=Z,20nm,1.4s						
GRAC	**Grapevine Rang**	**77.68**	**43**	P	**P**	**06 38 51.0**	**+2.1**
	baz=233						
FURC	**Furnace Creek,**	**77.68**	**44**	P	**P**	**06 38 51.0**	**+2.2**
	baz=234						
LHV	**Little Huntoon**	**77.72**	**41**	P	**P**	**06 38 50.6**	**+1.6**
LHV				IAmb	IAmb	06 39 02.0	
	comp=Z,43nm,1.4s						
SHOC	**Shoshone, Teco**	**77.73**	**44**	P	**P**	**06 38 51.8**	**+2.6**
	baz=234						
214A	**Organ Pipe Nat**	**77.87**	**49**	P	**P**	**06 38 50.7**	**+0.6**
	baz=237						
214A	**Organ Pipe Nat**	**77.87**	**49**	P	**P**	**06 38 50.6**	**+0.5**
214A				IAmb	IAmb	06 39 05.2	
	comp=Z,32nm,1.4s						
HUMO	**Hull Mountain**	**77.92**	**36**	IAMs_20	IAMs_20	07 11 26.1	
	comp=Z,1µm,18.0s						
RYN	**Ryan**	**77.94**	**41**	P	**P**	**06 38 51.3**	**+0.8**
RYN				IAmb	IAmb	06 39 03.0	
	comp=Z,25nm,1.4s						
NVAR	**Mina Array Bea**	**77.96**	**41**	P	**P**	**06 38 50.8**	**+0.2**
	comp=Z,4.0nm,0.8s,baz=224,slow=9.2,SNR=21						
NVAR				LR	LR	07 10 23.4	
	comp=Z,650nm,18.2s,baz=222,slow=34						
M04C	**Macdoel**	**78.00**	**37**	P	**P**	**06 38 52.7**	**+2.0**
	baz=229						
L04D	**Klamath Falls**	**78.02**	**36**	P	**P**	**06 38 52.3**	**+1.4**
	baz=229						
NV11	**Mina Array Sit**	**78.05**	**41**	P	**P**	**06 38 51.4**	**+0.3**
NV11				IAmb	IAmb	06 38 55.1	
	comp=Z,20nm,1.2s						
PAHR	**Pah Rah Range**	**78.09**	**40**	P	**P**	**06 38 51.2**	**0.0**
CBJI	**Citeko**	**78.12**	**267**	P	**P**	**06 38 52.8**	**+1.0**
	comp=Z,133nm,1.0s						
PDMCI	**Parker Dam,Lak**	**78.24**	**47**	P	**P**	**06 38 53.5**	**+1.5**
	baz=236						
TPNV	**Topopah Spring**	**78.37**	**43**	P	**P**	**06 38 53.6**	**+0.7**
TPNV				pmax	pmax		
	comp=Z,38nm,1.5s						
TPNV	**Topopah Spring**	**78.37**	**43**	P	**P**	**06 38 53.6**	**+0.7**
TPNV				IAmb	IAmb	06 39 08.7	
	comp=Z,38nm,1.5s						
TPNV				IAMs_20	IAMs_20	07 12 25.2	
	comp=Z,1µm,18.0s						
TPH	**Tonopah**	**78.42**	**42**	P	**P**	**06 38 53.8**	**+0.6**
TPH				pmax	pmax		
	comp=Z,161nm,1.5s						
TPH	**Tonopah**	**78.42**	**42**	P	**P**	**06 38 53.8**	**+0.6**
I03D	**Drain, OR**	**78.44**	**35**	P	**P**	**06 38 55.1**	**+2.2**
	baz=228						
I02D	**Swisshome**	**78.46**	**34**	P	**P**	**06 38 55.8**	**+2.8**
	baz=227						
KVN	**Kaiserville**	**78.46**	**41**	P	**P**	**06 38 53.8**	**+0.4**
KVN				pmax	pmax		
	comp=Z,22nm,1.4s						
KVN	**Kaiserville**	**78.46**	**41**	P	**P**	**06 38 53.8**	**+0.4**
KVN				IAmb	IAmb	06 39 05.8	
	comp=Z,22nm,1.4s						
TPI	**Tanjungpandan**	**78.58**	**271**	P	**P**	**06 38 56.6**	**+2.2**
	comp=Z,659nmcomp=Z,31nm,1.8s						
J04D	**Umpqua Nationa**	**78.81**	**36**	P	**P**	**06 38 56.0**	**+0.8**
	baz=229						
SHPR	**Sheep Range**	**78.82**	**44**	P	**P**	**06 38 56.6**	**+1.2**
W13A	**Hualapai Mount**	**78.86**	**46**	P	**P**	**06 38 56.6**	**+0.8**
MOD	**Modoc Plateau**	**78.95**	**38**	P	**P**	**06 38 56.1**	**+0.2**
MOD				IAMs_20	IAMs_20	07 11 58.5	
	comp=Z,1µm,18.0s						
I04A	**Tendick Farm,**	**79.01**	**35**	P	**P**	**06 38 57.1**	**+1.0**
	baz=228						
K05A	**Summer Lake**	**79.14**	**37**	P	**P**	**06 38 56.8**	**-0.3**
K05A				IAmb	IAmb	06 39 02.0	
	comp=Z,28nm,1.3s						
BELA	**Belgrano 2**	**79.29**	**172**	P	**P**	**06 38 59.1**	**+1.9**
J05D	**Fort Rock, OR**	**79.32**	**36**	P	**P**	**06 38 59.0**	**+1.0**
	baz=229						
H04D	**Lebanon**	**79.33**	**34**	P	**P**	**06 39 00.9**	**+3.1**
	baz=228						
PRN	**Pahroc Range**	**79.41**	**44**	P	**P**	**06 38 59.5**	**+1.0**
PRN				IAmb	IAmb	06 39 11.8	
	comp=Z,40nm,1.5s						
TUC	**Tucson**	**79.51**	**50**	P	**P**	**06 39 00.2**	**+1.0**
TUC				pmax	pmax		
	comp=Z,27nm,1.3s						
TUC	**Tucson**	**79.51**	**50**	P	**P**	**06 39 00.2**	**+1.0**
TUC				IAmb	IAmb	06 39 04.0	
	comp=Z,27nm,1.3s						
TUC	**Tucson**	**79.51**	**50**	IAMs_20	IAMs_20	07 11 03.6	
	comp=Z,996nm,18.0s						
KSRS	**Korea Array**	**79.51**	**316**	P	**P**	**06 39 00.1**	**+1.2**
	comp=Z,8.5nm,0.9s,baz=136,slow=5.5,SNR=12						
KSRS				LR	LR	07 11 17.5	
	comp=Z,339nm,18.7s,baz=116,slow=34						
KSAR	**Wonju Array Be**	**79.53**	**316**	P	**P**	**06 38 58.7**	**-0.4**
KSAR	**Wonju Array Be**	**79.53**	**316**	P	**P**	**06 38 58.6**	**-0.4**
KDAK	**Kodiak Island**	**79.61**	**11**	LR	LR	07 08 13.9	
	comp=Z,711nm,21.3s,baz=233,slow=31						
R11A	**Troy Canyon, C**	**79.62**	**43**	P	**P**	**06 39 00.0**	**+0.3**
	baz=234						
R11A	**Troy Canyon, C**	**79.62**	**43**	P	**P**	**06 38 60.0**	**+0.3**
H04A	**Detroit Lake**	**79.73**	**34**	P	**P**	**06 39 00.2**	**+0.2**
PINE	**Pine Mountain**	**79.81**	**36**	P	**P**	**06 39 01.1**	**+0.4**
PINE				IAmb	IAmb	06 39 13.3	
	comp=Z,32nm,1.4s						
I05D	**Terrebonne, OR**	**79.95**	**35**	P	**P**	**06 39 04.3**	**+3.0**
	baz=229						
319A	**Douglas**	**80.12**	**51**	P	**P**	**06 39 02.8**	**+0.3**
PPBI	**Pangkal Pinang**	**80.21**	**271**	P	**P**	**06 39 05.4**	**+2.1**
	comp=Z,18µmcomp=Z,36nm,0.9s						
WVOR	**Wild Horse Val**	**80.24**	**38**	P	**P**	**06 39 02.9**	**0.0**
WVOR				pmax	pmax		
	comp=Z,14nm,1.2s						
WVOR	**Wild Horse Val**	**80.24**	**38**	P	**P**	**06 39 02.9**	**0.0**
WVOR				IAMs_20	IAMs_20	07 12 31.8	
	comp=Z,1µm,18.0s						
LCMT	**Little Creek M**	**80.37**	**45**	P	**P**	**06 39 05.0**	**+1.3**
TYV	**Tymovskoe**	**80.56**	**334**	*e*P	**P**	**06 39 07.9**	**+3.6**
TYV				*e*		06 49 15.5	
TYV				pmax	pmax		
	comp=Z,20nm,1.5s						
CCUT	**Cedar City**	**80.59**	**44**	P	**P**	**06 39 06.0**	**+0.9**
KASI	**Kota Agung**	**80.62**	**268**	P	**P**	**06 39 05.4**	**-0.1**
	comp=Z,121nm,1.0s						
KNB	**Kanab**	**80.65**	**45**	P	**P**	**06 39 06.0**	**+0.7**
KNB				pmax	pmax		
	comp=Z,35nm,1.5s						
KNB	**Kanab**	**80.65**	**45**	P	**P**	**06 39 06.0**	**+0.7**
KNB				IAmb	IAmb	06 39 18.6	
	comp=Z,35nm,1.5s						
KLSI		**80.68**	**268**	P	**P**	**06 39 06.1**	**+0.3**
	comp=Z,4.4nm,0.8s						
HPIG		**80.69**	**57**	P	**P**	**06 39 05.5**	**-0.3**
SSE	**Sheshan**	**80.78**	**308**	P	**P**	**06 39 05.3**	**-0.6**
SSE				S	**S**	**06 49 06.3**	**-6.3**
SSE				pmax	pmax		
	comp=Z,4.0nm,0.8s						
SSE				pmax	pmax		
	comp=Z,170nm,4.6s						
SSE				LR	LR		
	comp=Z,150nm,16.8s						
SSE				LR	LR		
	comp=Z,130nm,19.2s						
E04D	**Cinebar**	**80.78**	**33**	P	**P**	**06 39 06.8**	**+1.2**
	baz=228						
SPR3	**Spring Creek 3**	**80.79**	**43**	P	**P**	**06 39 06.8**	**+0.6**
I07A	**Izee**	**80.79**	**36**	P	**P**	**06 39 05.3**	**-0.6**
SZCU	**Shurtz Canyon**	**80.80**	**44**	P	**P**	**06 39 07.5**	**+1.3**
WUAZ	**Wupatki**	**80.81**	**47**	P	**P**	**06 39 06.9**	**+0.7**
WUAZ				IAmb	IAmb	06 39 10.9	
	comp=Z,26nm,1.4s						
PSUT	**Pine Spring**	**80.83**	**43**	P	**P**	**06 39 07.1**	**+0.7**
J08A	**Circle Bar Ran**	**80.91**	**37**	P	**P**	**06 39 06.9**	**+0.4**
USRK	**Ussuriysk Ar.**	**81.15**	**324**	P	**P**	**06 39 07.2**	**-0.3**
	comp=Z,2.7nm,0.9s,baz=136,slow=5.2,SNR=1.9						
USRK				LR	LR	07 10 36.1	
	comp=Z,937nm,20.5s,baz=128,slow=32						
LWLI	**Liwa**	**81.20**	**268**	P	**P**	**06 39 11.8**	**+3.1**
PKCU	**Pink Cliffs**	**81.23**	**45**	P	**P**	**06 39 10.4**	**+1.8**
PKCU				IAmb	IAmb	06 39 22.0	
	comp=Z,34nm,1.2s						
ELK	**Elko**	**81.24**	**41**	P	**P**	**06 39 07.8**	**-0.7**
ELK				pmax	pmax		
	comp=Z,11nm,1.5s						
ELK	**Elko**	**81.24**	**41**	P	**P**	**06 39 07.8**	**-0.7**
MDSI	**Maura Dua**	**81.27**	**268**	P	**P**	**06 39 07.8**	**-1.1**
	comp=Z,563nmcomp=Z,46nm,1.2s						
ZAIG	**Zacatecas**	**81.31**	**62**	P	**P**	**06 39 11.1**	**+1.8**
CNPM	**China Poot**	**81.50**	**11**	IAMs_20	IAMs_20	07 13 07.6	
	comp=Z,1µm,20.0s						
MTPU	**Mount Pierson**	**81.64**	**44**	P	**P**	**06 39 11.8**	**+1.0**
MTPU				IAmb	IAmb	06 39 27.8	
	comp=Z,19nm,1.2s						
W18A	**Petrified Fore**	**81.73**	**48**	P	**P**	**06 39 11.9**	**+0.8**
	baz=238						
W18A	**Petrified Fore**	**81.73**	**48**	P	**P**	**06 39 12.0**	**+0.8**
W18A				IAmb	IAmb	06 39 24.6	
	comp=Z,29nm,1.4s						
TCRU	**Three Creeks R**	**81.78**	**44**	P	**P**	**06 39 13.3**	**+1.9**
TCRU				IAmb	IAmb	06 39 24.9	
	comp=Z,20nm,1.3s						
121A	**Cookes Peak, D**	**81.80**	**51**	P	**P**	**06 39 11.9**	**+0.3**
	baz=240						
121A	**Cookes Peak, D**	**81.80**	**51**	P	**P**	**06 39 13.7**	**+2.1**
121A				IAmb	IAmb	06 39 17.4	
	comp=Z,32nm,1.4s						
G08A	**Pilot Rock**	**81.86**	**36**	P	**P**	**06 39 11.9**	**+0.4**
MVU	**Marysvale**	**81.88**	**44**	P	**P**	**06 39 13.6**	**+1.6**
MSU	**Marysvale**	**81.91**	**44**	P	**P**	**06 39 13.7**	**+1.7**
MSU	**Marysvale**	**81.91**	**44**	P	**P**	**06 39 13.7**	**+1.7**
LHSI	**Lahat**	**82.10**	**269**	P	P	06 39 23.9	+11
B05A	**Bryant**	**82.17**	**32**	P	**P**	**06 39 11.9**	**-0.9**
	baz=228						
E07A	**Sunnyside**	**82.19**	**34**	P	**P**	**06 39 14.1**	**+1.0**
BBB	**Bella Bella**	**82.20**	**26**	LR	LR	07 11 24.6	
	comp=Z,447nm,18.3s,baz=257,slow=33						
LTY	**Liberty**	**82.22**	**33**	P	**P**	**06 39 13.4**	**+0.1**
DSRI	**Dabo**	**82.25**	**272**	P	**P**	**06 39 14.7**	**+0.6**
	comp=Z,3µmcomp=Z,15nm,0.7s						
HAWA	**Hanford**	**82.26**	**34**	P	**P**	**06 39 13.1**	**-0.3**
HAWA				IAmb	IAmb	06 39 17.1	
	comp=Z,20nm,1.4s						
EPT	**El Paso**	**82.37**	**52**	IAMs_20	IAMs_20	07 12 38.6	
	comp=Z,1µm,18.0s						
DUG	**Dugway, Tooele**	**82.44**	**42**	P	**P**	**06 39 15.6**	**+0.9**
DUG				pmax	pmax		
	comp=Z,13nm,1.4s						
DUG				MLR	MLR		
	comp=Z,1µm,18.0s						
DUG	**Dugway, Tooele**	**82.44**	**42**	P	**P**	**06 39 15.6**	**+0.9**
DUG				IAMs_20	IAMs_20	07 15 13.7	
	comp=Z,1µm,18.0s						
MFID	**Camas Ranch**	**82.47**	**38**	P	**P**	**06 39 15.3**	**+0.5**
BMO	**Blue Mountains**	**82.50**	**37**	P	**P**	**06 39 14.5**	**-0.4**
BMO				pmax	pmax		
	comp=Z,15nm,1.4s						
BMO				MLR	MLR		
	comp=Z,1µm,18.0s						

BMO	**Blue Mountains**	**82.50**	**37**	P	**P**	**06 39 14.4**	**-0.4**
BMO				IAMs_20	IAMs_20	07 15 54.4	
	comp=Z,1µm,18.0s						
E08A	**Dider Farm, El**	**82.57**	**35**	P	**P**	**06 39 15.2**	**+0.1**
E08A				IAmb	IAmb	06 39 18.7	
	comp=Z,18nm,1.4s						
H03S2	**Juan Fernandez**	**82.66**	**123**	T	T	08 11 46.0	
	baz=249,slow=75,SNR=6.8						
O22K	**Cooper Landing**	**82.67**	**12**	IAMs_20	IAMs_20	07 16 11.7	
	comp=Z,909nm,18.0s						
H03S1	**Juan Fernandez**	**82.67**	**123**	T	T	08 11 50.9	
	baz=249,slow=75,SNR=6.6						
H03S3	**Juan Fernandez**	**82.68**	**123**	T	T	08 11 49.0	
	baz=249,slow=75,SNR=5.3						
BGU	**Big Grassy Mou**	**82.71**	**42**	P	**P**	**06 39 17.2**	**+1.1**
UNM	**Universidad Na**	**82.72**	**66**	IAMs_20	IAMs_20	07 10 12.2	
	comp=Z,1µm,18.0s						
MDJ	**Mudanjiang**	**82.75**	**323**	IAMs_20	IAMs_20	07 11 56.3	
	comp=Z,848nm,19.0s						
H03N2	**Juan Fernandez**	**82.79**	**123**	T	T	08 12 01.3	
	baz=260,slow=74						
H03N3	**Juan Fernandez**	**82.79**	**123**	T	T	08 12 00.1	
	baz=260,slow=74						
H03N1	**Juan Fernandez**	**82.80**	**123**	T	T	08 12 05.3	
	baz=260						
TMUT	**Trail Mountain**	**82.97**	**44**	P	**P**	**06 39 19.3**	**+1.6**
NJ2	**Nanjing**	**82.98**	**308**	*e*P	**P**	**06 39 17.8**	**+0.3**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.7s						
D08A	**Wollman Farm,**	**83.00**	**34**	P	**P**	**06 39 17.8**	**+0.5**
D08A				IAmb	IAmb	06 39 21.1	
	comp=Z,29nm,1.4s						
E09A	**Wood Farm, Sta**	**83.07**	**35**	P	**P**	**06 39 18.0**	**+0.4**
E09A				IAmb	IAmb	06 39 21.8	
	comp=Z,15nm,1.2s						
DLV	**T Lat**	**83.08**	**285**	P	**P**	**06 39 18.6**	**0.0**
NKL	**Nikolayevsk**	**83.08**	**334**	*e*P	**P**	**06 39 18.2**	**+0.7**
NKL				pmax	pmax		
	comp=E,115nm,0.7s						
NKL				pmax	pmax		
	comp=N,8.0nm,1.1s						
NKL				pmax	pmax		
	comp=Z,14nm,1.5s						
MPU	**Maple Canyon**	**83.09**	**43**	P	**P**	**06 39 18.4**	**+0.2**
MNTX	**Cornudas Mount**	**83.17**	**53**	P	**P**	**06 39 19.4**	**+0.9**
MNTX				IAmb	IAmb	06 39 23.1	
	comp=Z,32nm,1.5s						
Y22D	**IRIS PASSCAL I**	**83.19**	**50**	IAMs_20	IAMs_20	07 13 43.2	
	comp=Z,843nm,18.0s						
RC01	**Rabbit Creek A**	**83.23**	**11**	P	**P**	**06 39 17.4**	**-0.7**
	baz=203						
F10A	**Beach Ranch, E**	**83.24**	**36**	P	**P**	**06 39 18.1**	**-0.5**
F10A				IAmb	IAmb	06 39 32.5	
	comp=Z,30nm,1.4s						
GRNR	**Gornyy**	**83.24**	**331**	⇓*i*P	**P**	**06 39 22.4**	**+4.0**
GRNR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
GRNR				MLR	MLR		
	comp=E,150nm,17.0s						
GRNR				MLR	MLR		
	comp=N,180nm,18.0s						
GRNR				MLR	MLR		
	comp=Z,260nm,17.0s						
HIN	**Hinchinbrook I**	**83.24**	**13**	IAMs_20	IAMs_20	07 17 29.0	
	comp=Z,1µm,18.0s						
MAW	**Mawson**	**83.25**	**199**	LR	LR	07 15 56.9	
	comp=Z,1µm,18.6s,baz=103,slow=35						
MAW	**Mawson**	**83.25**	**199**	P	**P**	**06 39 15.7**	**-2.6**
	baz=83,SNR=7.8						
SRU	**San Rafael Swe**	**83.31**	**44**	P	**P**	**06 39 20.0**	**+0.7**
SRU	**San Rafael Swe**	**83.31**	**44**	P	**P**	**06 39 20.0**	**+0.7**
SRU				IAmb	IAmb	06 39 23.8	
	comp=Z,25nm,1.1s						
HVU	**Hansel Valley**	**83.35**	**41**	P	**P**	**06 39 19.7**	**+0.3**
HVU				pmax	pmax		
	comp=Z,17nm,1.5s						
HVU	**Hansel Valley**	**83.35**	**41**	P	**P**	**06 39 19.7**	**+0.3**
HVU				IAmb	IAmb	06 39 31.3	
	comp=Z,17nm,1.5s						
TX31	**Lajitas Ar. Si**	**83.37**	**56**	P	**P**	**06 39 20.9**	**+1.2**
TX32	**Lajitas Array**	**83.37**	**56**	P	**P**	**06 39 20.9**	**+1.2**
TX32				IAmb	IAmb	06 39 35.2	
	comp=Z,24nm,1.4s						
TXAR	**Lajitas Array**	**83.37**	**56**	P	**P**	**06 39 20.8**	**+1.1**
	comp=Z,4.0nm,1.0s,baz=214,slow=5.7,SNR=18						
TXAR				LR	LR	07 10 22.4	
	comp=Z,385nm,18.8s,baz=0.0,slow=31						
CTU	**Camp Tracy**	**83.39**	**42**	P	**P**	**06 39 20.6**	**+0.9**
CTU				IAmb	IAmb	06 39 30.5	
	comp=Z,17nm,1.3s						
HLID	**Hailey**	**83.39**	**39**	P	**P**	**06 39 20.1**	**+0.5**
HLID				IAMs_20	IAMs_20	07 19 42.3	
	comp=Z,915nm,18.0s						
SUA	**Susitna One**	**83.40**	**11**	P	**P**	**06 39 17.7**	**-1.4**
	baz=202						
SUA	**Susitna One**	**83.40**	**11**	IAMs_20	IAMs_20	07 13 45.8	
	comp=Z,1µm,19.0s						
BNM	**Barren Site**	**83.44**	**50**	P	**P**	**06 39 20.9**	**+0.8**
GLI	**Glacier Island**	**83.56**	**13**	IAMs_20	IAMs_20	07 13 33.2	
	comp=Z,824nm,19.0s						
FID	**Port Fidalgo**	**83.57**	**13**	IAMs_20	IAMs_20	07 13 32.4	
	comp=Z,1µm,19.0s						
B08A	**Colville Reser**	**83.62**	**33**	P	**P**	**06 39 19.5**	**-1.0**
PV05	**Paradox Valley**	**83.71**	**46**	P	**P**	**06 39 23.0**	**+1.5**
SKT	**Skwentna**	**83.75**	**10**	IAMs_20	IAMs_20	07 10 18.0	
	comp=Z,993nm,20.0s						
C09A	**Chrisman Ranch**	**83.82**	**34**	P	**P**	**06 39 21.6**	**+0.1**
TCUT	**Toone Canyon**	**83.84**	**42**	P	**P**	**06 39 22.6**	**+0.6**
PV10	**Paradox Valley**	**83.91**	**45**	P	**P**	**06 39 23.4**	**+0.9**
PV17	**East Wray Mesa**	**83.91**	**46**	P	**P**	**06 39 23.2**	**+0.8**
ANMO	**Albuquerque**	**83.96**	**50**	*ce*P	**P**	**06 39 24.2**	**+1.5**
ANMO				pmax	pmax		
	comp=Z,40nm,1.5s						
ANMO	**Albuquerque**	**83.96**	**50**	P	**P**	**06 39 23.6**	**+0.8**
PV11	**David Mesa, Pa**	**83.98**	**46**	P	**P**	**06 39 23.1**	**+0.4**
TTA	**Tatalina**	**83.99**	**8**	P	**P**	**06 39 21.7**	**-0.4**
TTA				pmax	pmax		
	comp=Z,14nm,1.2s						
TTA	**Tatalina**	**83.99**	**8**	P	**P**	**06 39 21.7**	**-0.4**
TTA				IAmb	IAmb	06 39 36.5	
	comp=Z,14nm,1.2s						
PV04	**Paradox Valley**	**84.01**	**46**	P	**P**	**06 39 23.6**	**+0.7**
PV04				IAmb	IAmb	06 39 27.4	
	comp=Z,25nm,1.1s						
PV12	**Saucer Basin,**	**84.04**	**46**	P	**P**	**06 39 23.7**	**+0.6**
MESA	**MESA**	**84.09**	**15**	IAMs_20	IAMs_20	07 13 21.9	
	comp=Z,1µm,19.0s						
PV01	**Paradox Valley**	**84.10**	**46**	P	**P**	**06 39 23.8**	**+0.3**
PV01				IAmb	IAmb	06 39 27.7	
	comp=Z,20nm,1.0s						
PV22	**Blue Mesa, Par**	**84.16**	**45**	P	**P**	**06 39 24.2**	**+0.5**
PV22				IAmb	IAmb	06 39 30.1	
	comp=Z,37nm,1.5s						
GDL2	**Guadalupe Moun**	**84.17**	**53**	P	**P**	**06 39 24.4**	**+0.7**
PV07	**Paradox Valley**	**84.20**	**46**	P	**P**	**06 39 24.3**	**+0.4**
PV07				IAmb	IAmb	06 39 28.2	
	comp=Z,29nm,1.2s						
PV15	**Paradox Valley**	**84.27**	**46**	P	**P**	**06 39 24.7**	**+0.5**
PV15				IAmb	IAmb	06 39 28.4	
	comp=Z,21nm,1.1s						
KLU	**Klutina**	**84.35**	**13**	IAMs_20	IAMs_20	07 19 32.4	
	comp=Z,941nm,18.0s						
SCM	**Sheep Creek Mo**	**84.38**	**12**	IAMs_20	IAMs_20	07 14 11.9	
	comp=Z,948nm,20.0s						
BCYI	**Bear Canyon**	**84.42**	**39**	P	**P**	**06 39 25.0**	**+0.1**
DL2	**Dalian**	**84.45**	**315**	P	P	06 39 35.5	+11
KLR	**Kul'dur**	**84.47**	**327**	P	**P**	**06 39 25.8**	**+1.0**
	comp=Z,1.0nm,0.7s,baz=104,slow=4.2,SNR=3.2						
KLR	**Kul'dur**	**84.47**	**327**	*i* P	**P**	**06 39 26.3**	**+1.6**
KLR				pmax	pmax		
	comp=Z,16nm,2.3s						
TABL	**Table Mountain**	**84.52**	**15**	IAMs_20	IAMs_20	07 22 39.2	
	comp=Z,1µm,18.0s						
QIZ	**Qiongzhong**	**84.61**	**292**	P	**P**	**06 39 26.0**	**-0.1**
QIZ				S	**S**	**06 49 51.3**	**-0.9**
QIZ				SS	**SS**	**06 55 25.0**	**+0.9**
QIZ				pmax	pmax		
	comp=Z,220nm,7.7s						
QIZ				LR	LR		
	comp=Z,180nm,18.1s						
QIZ				LR	LR		
	comp=Z,320nm,17.2s						
QIZ				LR	LR		
	comp=Z,290nm,21.6s						
VRDI	**Verde Repeater**	**84.66**	**14**	IAMs_20	IAMs_20	07 17 36.6	
	comp=Z,991nm,18.0s						
MA2	**Magadan**	**84.68**	**343**	*i* P	**P**	**06 39 25.3**	**-0.2**
CN2	**Changchun**	**84.69**	**320**	*e*P	**P**	**06 39 29.8**	**+3.9**
CN2				*e*S	**S**	**06 49 54.8**	**+2.8**
CN2				pmax	pmax		
	comp=Z,20nm,1.1s						
CN2				pmax	pmax		
	comp=Z,500nm,6.0s						
CN2				LR	LR		
	comp=Z,300nm,15.0s						
CN2				LR	LR		
	comp=Z,300nm,15.0s						
CN2				LR	LR		
	comp=Z,400nm,20.0s						
NEW	**Newport**	**84.71**	**34**	LR	LR	07 13 44.0	
	comp=Z,2µm,18.1s,baz=224,slow=33						
RDMU	**Red Mountain**	**84.72**	**43**	P	**P**	**06 39 26.9**	**+0.5**
RDMU				IAmb	IAmb	06 39 30.4	
	comp=Z,17nm,1.2s						
N25K	**Chitina, Valde**	**84.74**	**13**	P	**P**	**06 39 25.5**	**-0.4**
	baz=207						
N25K	**Chitina, Valde**	**84.74**	**13**	IAMs_20	IAMs_20	07 18 08.7	
	comp=Z,949nm,18.0s						
BALM	**Baldy**	**84.75**	**15**	P	**P**	**06 39 25.2**	**-0.8**
BALM				IAmb	IAmb	06 39 29.4	
	comp=Z,17nm,1.2s						
BALM				IAMs_20	IAMs_20	07 17 00.1	
	comp=Z,824nm,19.0s						
GLB	**Gilahina Butte**	**84.77**	**14**	IAMs_20	IAMs_20	07 17 41.5	
	comp=Z,900nm,19.0s						
M24K	**Tolsona, Glenn**	**84.86**	**13**	P	**P**	**06 39 27.0**	**+0.6**
	baz=206						
MCARA	**McCarthy VSAT**	**84.89**	**14**	IAMs_20	IAMs_20	07 14 36.9	
	comp=Z,833nm,19.0s						
CTG	**Chitna Glacier**	**84.93**	**15**	P	**P**	**06 39 26.5**	**-0.5**
	baz=210						
AHID	**Auburn Hatcher**	**84.93**	**41**	P	**P**	**06 39 28.1**	**+0.6**
AHID				IAmb	IAmb	06 39 37.1	
	comp=Z,23nm,1.3s						
AHID				IAMs_20	IAMs_20	07 19 20.6	
	comp=Z,1µm,18.0s						
MCMT	**McKenzie Canyo**	**85.04**	**39**	P	**P**	**06 39 28.7**	**+0.6**
S22A	**4UR Ranch, Cre**	**85.09**	**47**	P	**P**	**06 39 29.6**	**+1.1**
	baz=240						
KTH	**Kantishna Hill**	**85.32**	**10**	P	**P**	**06 39 29.3**	**+0.5**
KTH				IAmb	IAmb	06 39 47.9	
	comp=Z,16nm,1.2s						
KTH				IAMs_20	IAMs_20	07 15 28.5	
	comp=Z,2µm,20.0s						
TRF	**Thorofare Moun**	**85.33**	**10**	P	**P**	**06 39 28.5**	**-0.4**
	baz=202						
TRF	**Thorofare Moun**	**85.33**	**10**	P	**P**	**06 39 28.6**	**-0.3**
TRF				IAmb	IAmb	06 39 56.7	
	comp=Z,15nm,1.0s						
O20A	**White River Ci**	**85.35**	**44**	P	**P**	**06 39 29.5**	**-0.1**
	baz=239						
O20A	**White River Ci**	**85.35**	**44**	P	**P**	**06 39 30.1**	**+0.5**
O20A				IAmb	IAmb	06 39 42.3	
	comp=Z,30nm,1.4s						
REDW	**Red Top Meadow**	**85.41**	**41**	P	**P**	**06 39 30.4**	**+0.4**
REDW				IAmb	IAmb	06 39 33.8	
	comp=Z,24nm,1.4s						
REDW				IAMs_20	IAMs_20	07 17 07.2	
	comp=Z,1µm,18.0s						
DLMT	**Dillon**	**85.49**	**38**	P	**P**	**06 39 30.7**	**+0.5**
SNOW	**Snow King Moun**	**85.53**	**40**	P	**P**	**06 39 30.2**	**-0.3**
SNOW				IAmb	IAmb	06 39 38.0	
	comp=Z,27nm,1.2s						
SNOW				IAMs_20	IAMs_20	07 16 55.2	
	comp=Z,1µm,18.0s						
RND	**Reindeer**	**85.54**	**11**	P	**P**	**06 39 29.6**	**-0.3**
RND				pmax	pmax		
	comp=Z,23nm,1.0s						
RND	**Reindeer**	**85.54**	**11**	P	**P**	**06 39 29.6**	**-0.3**
RND				IAmb	IAmb	06 39 58.7	
	comp=Z,23nm,1.0s						
MSO	**Missoula**	**85.57**	**36**	P	**P**	**06 39 30.5**	**+0.1**
MSO				IAMs_20	IAMs_20	07 15 23.5	
	comp=Z,1µm,19.0s						
LOHW	**Long Hollow**	**85.70**	**40**	P	**P**	**06 39 31.8**	**+0.4**
LOHW				IAMs_20	IAMs_20	07 16 51.8	
	comp=Z,1µm,18.0s						
WHN	**Wuhan**	**85.70**	**305**	⇓P	**P**	**06 39 32.0**	**+0.7**
WHN				pmax	pmax		
	comp=Z,880nm,7.4s						
WHN				LR	LR		
	comp=Z,480nm,9.5s						
WHN				LR	LR		
	comp=Z,820nm,17.1s						
WHN				LR	LR		
	comp=Z,2µm,27.5s						
SMCO	**Snowmass**	**85.70**	**46**	P	**P**	**06 39 33.3**	**+1.6**
SMCO				IAmb	IAmb	06 39 58.8	
	comp=Z,29nm,1.4s						
PAX	**Paxson**	**85.78**	**12**	P	**P**	**06 39 29.5**	**-1.6**
	baz=206						
HYT	**Haines Junctio**	**85.80**	**17**	P	**P**	**06 39 30.2**	**-1.0**
HYT				IAmb	IAmb	06 39 35.2	
	comp=Z,20nm,1.4s						
BPAW	**Bear Paw Mtn.**	**85.82**	**10**	P	**P**	**06 39 29.8**	**-1.4**
	baz=201						
BPAW	**Bear Paw Mtn.**	**85.82**	**10**	IAMs_20	IAMs_20	07 15 31.8	
	comp=Z,988nm,18.0s						
MCK	**McKinley**	**85.82**	**11**	P	**P**	**06 39 30.6**	**-0.6**
	baz=203						
QLMT	**Earthquake Lak**	**85.88**	**39**	P	**P**	**06 39 33.0**	**+0.8**
BW06	**Boulder Array**	**85.89**	**42**	P	**P**	**06 39 32.2**	**-0.1**
BW06				IAMs_20	IAMs_20	07 16 42.0	
	comp=Z,956nm,18.0s						
PD31	**Pinedale Array**	**85.89**	**42**	P	**P**	**06 39 32.0**	**-0.3**
PDAR	**Pinedale Array**	**85.89**	**42**	P	**P**	**06 39 32.6**	**+0.3**
	comp=Z,2.6nm,0.8s,baz=199,slow=4.1,SNR=12						
PDAR				LR	LR	07 15 25.9	
	comp=Z,415nm,18.9s,baz=264,slow=34						
PDAR	**Pinedale Array**	**85.89**	**42**	P	**P**	**06 39 32.1**	**-0.2**
FLWY	**Flagg Ranch**	**85.90**	**40**	P	**P**	**06 39 31.4**	**-0.9**
FLWY				IAmb	IAmb	06 39 36.6	
	comp=Z,26nm,1.4s						
YPP	**Pitchstone Pla**	**85.94**	**40**	P	**P**	**06 39 33.7**	**+1.1**
YHL	**Hebgen Lake**	**86.03**	**39**	P	**P**	**06 39 33.8**	**+0.8**
YHL				IAmb	IAmb	06 39 46.1	
	comp=Z,36nm,1.4s						
YMR	**Madison River**	**86.06**	**39**	P	**P**	**06 39 33.5**	**+0.4**
YMR				IAmb	IAmb	06 39 37.7	
	comp=Z,21nm,1.4s						
MENT	**Mentasta**	**86.11**	**13**	P	**P**	**06 39 32.5**	**-0.1**
MENT				IAmb	IAmb	06 39 48.6	
	comp=Z,26nm,1.5s						
BWN	**Browne**	**86.14**	**10**	P	**P**	**06 39 31.5**	**-1.2**
H17A	**Grant Village**	**86.14**	**40**	P	**P**	**06 39 34.7**	**+1.2**
	baz=237						
MSTX	**Muleshoe**	**86.17**	**52**	P	**P**	**06 39 34.4**	**+0.6**
	baz=243						
MSTX	**Muleshoe**	**86.17**	**52**	P	**P**	**06 39 34.3**	**+0.6**
DLBC	**Dease Lake**	**86.17**	**21**	LR	LR	07 11 23.2	
	comp=Z,267nm,21.0s,baz=143,slow=31						
BOZ	**Bozeman (W)**	**86.18**	**38**	P	**P**	**06 39 34.1**	**+0.5**
BOZ				pmax	pmax		
	comp=Z,24nm,1.5s						
BOZ	**Bozeman (W)**	**86.18**	**38**	P	**P**	**06 39 34.1**	**+0.5**
BOZ				IAmb	IAmb	06 39 46.2	
	comp=Z,24nm,1.4s						
BOZ				IAMs_20	IAMs_20	07 13 05.2	
	comp=Z,901nm,20.0s						
TIA	**Tai'an**	**86.23**	**311**	P	**P**	**06 39 33.8**	**0.0**
TIA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
YNR	**Norris Junctio**	**86.26**	**39**	P	**P**	**06 39 34.5**	**+0.4**
YNR				IAmb	IAmb	06 39 47.6	
	comp=Z,15nm,1.3s						
833A	**Chaparral WMA,**	**86.29**	**58**	P	**P**	**06 39 34.8**	**+0.5**
	baz=245						
LKWY	**Lake**	**86.34**	**40**	IAMs_20	IAMs_20	07 18 45.6	
	comp=Z,1µm,18.0s						
PLCA	**Paso Flores**	**86.39**	**132**	P	**P**	**06 39 37.3**	**+2.5**
	comp=Z,6.7nm,1.0s,baz=228,slow=3.9,SNR=7.8						
PLCA				LR	LR	07 12 15.1	
	comp=Z,1µm,18.0s,baz=232,slow=31						
PLCA	**Paso Flores**	**86.39**	**132**	P	**P**	**06 39 36.6**	**+1.8**
PLCA				pmax	pmax		
	comp=Z,13nm,1.1s						
PLCA	**Paso Flores**	**86.39**	**132**	P	**P**	**06 39 36.5**	**+1.8**
PLCA				IAmb	IAmb	06 39 39.9	
	comp=Z,13nm,1.1s						
T25A	**Trinidad**	**86.47**	**48**	P	**P**	**06 39 34.9**	**-0.4**
	baz=242						
WRH	**Wood River Hil**	**86.65**	**11**	P	**P**	**06 39 35.0**	**-0.2**
DOT	**Dot Lake**	**86.67**	**13**	P	**P**	**06 39 35.2**	**-0.2**
DOT				IAmb	IAmb	06 40 03.9	
	comp=Z,12nm,1.0s						
MLY	**Manley**	**86.73**	**9**	P	**P**	**06 39 35.0**	**-0.7**
	baz=202						
HDA	**Harding Lake**	**86.80**	**11**	P	**P**	**06 39 35.2**	**-0.8**
	baz=205						
HDA	**Harding Lake**	**86.80**	**11**	P	**P**	**06 39 36.0**	**+0.1**
HDA				IAmb	IAmb	06 40 04.0	
	comp=Z,20nm,1.0s						
YNE	**Yellowstone No**	**86.82**	**39**	P	**P**	**06 39 37.8**	**+0.9**
YNE				IAmb	IAmb	06 39 50.6	
	comp=Z,18nm,1.5s						
RWWY	**Rawlins**	**86.82**	**43**	P	**P**	**06 39 37.5**	**+0.6**
Q24A	**Divide**	**86.83**	**47**	P	**P**	**06 39 37.4**	**+0.2**
	baz=241						
CCB	**Clear Creek Bu**	**86.86**	**11**	P	**P**	**06 39 35.8**	**-0.4**
CCB				IAmb	IAmb	06 40 04.1	
	comp=Z,19nm,1.0s						
JCT	**Junction City**	**86.88**	**56**	IAMs_20	IAMs_20	07 12 05.9	
	comp=Z,681nm,18.0s						
ISCO	**Idaho Springs**	**86.93**	**46**	P	**P**	**06 39 39.2**	**+1.6**
ISCO				pmax	pmax		
	comp=Z,7.0nm,1.3s						
ISCO	**Idaho Springs**	**86.93**	**46**	P	**P**	**06 39 39.2**	**+1.6**
SCRK	**Sand Creek**	**86.98**	**13**	P	**P**	**06 39 36.8**	**-0.2**
	baz=208						
TCOL	**CIGO, UAF Yank**	**87.06**	**11**	P	**P**	**06 39 36.4**	**-0.8**
	baz=204						
TCOL	**CIGO, UAF Yank**	**87.06**	**11**	P	**P**	**06 39 36.1**	**-1.0**
TCOL				IAMs_20	IAMs_20	07 16 01.6	
	comp=Z,781nm,20.0s						
I23K	**Minto, Yukon-K**	**87.06**	**10**	P	**P**	**06 39 37.0**	**-0.2**
	baz=203						
I23K	**Minto, Yukon-K**	**87.06**	**10**	P	**P**	**06 39 37.2**	**0.0**
I23K				IAmb	IAmb	06 40 05.1	
	comp=Z,17nm,1.1s						
COLA	**College**	**87.06**	**11**	*i* P	**P**	**06 39 36.0**	**-1.2**
COLA				pmax	pmax		
	comp=Z,12nm,1.1s						
COLA	**College**	**87.06**	**11**	P	**P**	**06 39 36.3**	**-0.9**
MDM	**Murphy Dome**	**87.08**	**10**	P	**P**	**06 39 36.8**	**-0.5**
MDM				IAmb	IAmb	06 40 00.9	
	comp=Z,35nm,1.4s						
MDM				IAMs_20	IAMs_20	07 16 21.0	
	comp=Z,1µm,19.0s						
SEY	**Seymchan**	**87.10**	**345**	*i* P	**P**	**06 39 37.5**	**+0.1**
IL31		**87.14**	**11**	P	**P**	**06 39 37.2**	**-0.3**
IL31				IAmb	IAmb	06 40 06.3	
	comp=Z,15nm,1.2s						
ILAR	**Eielson Array**	**87.14**	**11**	P	**P**	**06 39 37.0**	**-0.6**
	comp=Z,1.4nm,0.9s,baz=210,slow=5.4,SNR=12						
ILAR				LR	LR	07 17 27.0	
	comp=Z,332nm,18.2s,baz=194,slow=35						
KVTX	**Kingsville**	**87.17**	**59**	IAMs_20	IAMs_20	07 20 39.0	
	comp=Z,1µm,18.0s						
IMAR	**Indian Mountai**	**87.20**	**8**	P	**P**	**06 39 38.3**	**+0.4**
N23A	**Red Feather La**	**87.25**	**45**	P	**P**	**06 39 38.6**	**-0.5**
	baz=241						
IPM	**Ipoh**	**87.29**	**276**	P	**P**	**06 39 39.8**	**+0.2**
IPM	**Ipoh**	**87.29**	**276**	P	**P**	**06 39 41.0**	**+1.4**
POKR	**Poker Plat Res**	**87.36**	**11**	P	**P**	**06 39 38.6**	**-0.1**
	baz=205						
POKR	**Poker Plat Res**	**87.36**	**11**	P	**P**	**06 39 37.6**	**-1.1**
POKR				IAmb	IAmb	06 40 06.7	
	comp=Z,30nm,1.4s						
MNSI	**Mandailing Nat**	**87.38**	**272**	P	**P**	**06 39 41.8**	**+1.8**
	comp=Z,7µmcomp=Z,23nm,0.7s						
AMTX	**Amarillo**	**87.39**	**51**	P	**P**	**06 39 40.5**	**+0.8**
BI02	**San Fabin de**	**87.48**	**128**	P	**P**	**06 39 41.9**	**+1.7**
BI02				IAmb	IAmb	06 39 55.7	
	comp=Z,20nm,1.1s						
K22A	**Casper**	**87.74**	**43**	P	**P**	**06 39 41.1**	**-0.2**
	baz=240						
SYO	**Syowa Base**	**87.91**	**191**	⇓*e*P	**P**	**06 39 41.4**	**0.0**
SYO	**Syowa Base**	**87.91**	**191**	⇑*e*pP	pP	06 39 45.4	-2.4
KULM	**Kulim**	**87.92**	**276**	P	**P**	**06 39 41.8**	**-0.8**
KULM	**Kulim**	**87.92**	**276**	P	**P**	**06 39 42.0**	**-0.5**
ABTX	**Abilene, Hawle**	**87.92**	**54**	P	**P**	**06 39 43.2**	**+1.0**
	baz=245						
ABTX	**Abilene, Hawle**	**87.92**	**54**	P	**P**	**06 39 42.8**	**+0.7**
PRP	**Porcupine Dome**	**88.06**	**11**	P	**P**	**06 39 41.9**	**-0.3**
PRP				IAmb	IAmb	06 40 06.6	
	comp=Z,15nm,1.2s						
PRP				IAMs_20	IAMs_20	07 16 48.2	
	comp=Z,797nm,19.0s						
VNA3	**Neumayer Olymp**	**88.12**	**175**	P	**P**	**06 39 44.1**	**+1.6**
SNAA	**Sanae**	**88.15**	**177**	P	**P**	**06 39 44.5**	**+1.8**
SNAA	**Sanae**	**88.15**	**177**	*ce*P	**P**	**06 39 43.8**	**+1.1**
SNAA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
SNAA	**Sanae**	**88.15**	**177**	P	**P**	**06 39 43.5**	**+0.8**
SNAA				IAmb	IAmb	06 39 46.6	
	comp=Z,11nm,1.0s						
SNAA				IAMs_20	IAMs_20	07 21 55.0	
	comp=Z,1µm,18.0s						
EGAK	**Eagle**	**88.28**	**13**	P	**P**	**06 39 43.3**	**+0.2**
EGAK				IAmb	IAmb	06 39 55.3	
	comp=Z,23nm,1.4s						
EGAK				IAMs_20	IAMs_20	07 16 13.2	
	comp=Z,944nm,20.0s						
VNA2	**Neumayer--Watz**	**88.61**	**175**	P	**P**	**06 39 46.6**	**+1.8**
	baz=197,slow=2.8						
RPSI	**Rantau Prapat**	**88.64**	**273**	P	**P**	**06 39 45.1**	**-0.9**
PSI	**Prapat**	**88.68**	**273**	LR	LR	07 21 31.9	
	comp=Z,217nm,18.3s,baz=94,slow=37						
PSI	**Prapat**	**88.68**	**273**	P	**P**	**06 39 45.1**	**-1.2**
PSI				pmax	pmax		
	comp=Z,36nm,1.2s						
BJI	**Beijing**	**88.68**	**314**	P	**P**	**06 39 49.5**	**+4.0**
BJI				S	**S**	**06 50 30.0**	**-0.8**
BJI				SS	**SS**	**06 56 21.5**	**-1.6**
435B	**Jarrell**	**88.74**	**57**	IAMs_20	IAMs_20	07 13 19.2	
	comp=Z,947nm,19.0s						
VNA1	**Neumayer--Stat**	**88.81**	**175**	P	**P**	**06 39 48.6**	**+2.9**
COLD	**Coldfoot**	**88.87**	**9**	P	**P**	**06 39 48.0**	**+2.2**
	baz=202						
PEL	**Peldehue**	**89.32**	**125**	P	**P**	**06 39 50.1**	**+1.1**
PEL				pmax	pmax		
	comp=Z,23nm,1.0s						
PEL				MLR	MLR		
	comp=Z,1µm,18.0s						
PEL	**Peldehue**	**89.32**	**125**	P	**P**	**06 39 50.1**	**+1.1**
PEL				IAmb	IAmb	06 39 53.5	
	comp=Z,23nm,1.0s						
PEL				IAMs_20	IAMs_20	07 19 19.8	
	comp=Z,1µm,18.0s						
WHTX	**Lake Whitney,**	**89.34**	**56**	P	**P**	**06 39 49.5**	**+0.7**
WHTX				IAmb	IAmb	06 39 53.7	
	comp=Z,34nm,1.5s						
ENH	**Enshi**	**89.39**	**303**	P	**P**	**06 39 49.4**	**+0.2**
GSI	**Gunungsitoli**	**89.43**	**272**	P	**P**	**06 39 49.4**	**-0.3**
GSI				IAMs_20	IAMs_20	07 19 42.5	
	comp=Z,978nm,20.0s						
GSI	**Gunungsitoli**	**89.43**	**272**	P	**P**	**06 39 52.1**	**+2.4**
	comp=Z,67nm,1.0s						
ZEA	**Zeya**	**89.47**	**329**	*e*P	**P**	**06 39 50.0**	**+1.1**
ZEA				*e*S	**S**	**06 50 40.3**	**+2.7**
ZEA				pmax	pmax		
	comp=N,20nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,20nm,1.1s						
ZEA				pmax	pmax		
	comp=Z,200nm,5.6s						
ZEA				smax	smax		
	comp=N,100nm,8.0s						
ZEA				smax	smax		
	comp=E,200nm,14.3s						
VA03	**San Esteban**	**89.58**	**125**	P	**P**	**06 39 53.0**	**+2.8**
VA03				IAmb	IAmb	06 40 05.9	
	comp=Z,30nm,1.3s						
HKT	**Hockley**	**89.79**	**58**	P	**P**	**06 39 52.6**	**+1.7**
HKT				pmax	pmax		
	comp=Z,14nm,1.5s						
HKT				MLR	MLR		
	comp=Z,800nm,19.0s						
HKT	**Hockley**	**89.79**	**58**	P	**P**	**06 39 52.6**	**+1.7**
HKT				IAmb	IAmb	06 40 12.6	
	comp=Z,14nm,1.4s						
HKT	**Hockley**	**89.79**	**58**	IAMs_20	IAMs_20	07 19 48.3	
	comp=Z,815nm,19.0s						
CO02	**Combarbal**	**89.85**	**123**	P	**P**	**06 39 52.8**	**+1.2**
OGNE	**Ogallala**	**89.88**	**46**	IAMs_20	IAMs_20	07 25 49.4	
	comp=Z,892nm,18.0s						
BMAR	**Burnt Mountain**	**89.95**	**11**	P	**P**	**06 39 50.6**	**-0.3**
U32A	**Winter Ranch,**	**90.00**	**51**	IAMs_20	IAMs_20	07 17 24.7	

	comp=Z,1μm,18.0s						
Z35A	Perchaven, San	90.04	54	P	P	06 39 53.1	+1.0
Z35A				IAmb	IAmb	06 39 56.1	
	comp=Z,24nm,1.4s						
RSSD	Black Hills	90.05	42	P	P	06 39 51.2	-0.9
RSSD				pmax	pmax		
	comp=Z,14nm,1.4s						
RSSD				MLR	MLR		
	comp=Z,1μm,18.0s						
RSSD	Black Hills	90.05	42	P	P	06 39 51.2	-0.9
RSSD				IAmb	IAmb	06 39 55.4	
	comp=Z,14nm,1.4s						
RSSD	Black Hills	90.05	42	IAMs_20	IAMs_20	07 20 03.1	
	comp=Z,1μm,18.0s						
GYA	Guiyang	90.19	298	⇓P	P	06 39 57.8	+4.7
GYA				sP	pwP	06 40 10.0	+3.6
GYA				PP	PP	06 43 25.0	-2.2
GYA				S	S	06 50 50.5	+4.6
GYA				SS	SS	06 56 47.0	+1.2
GYA				pmax	pmax		
	comp=Z,11nm,1.5s						
GYA				pmax	pmax		
	comp=Z,200nm,5.5s						
GYA				LR	LR		
	comp=Z,300nm,24.3s						
TOLK	Toolik Lake Re	90.27	9	P	P	06 39 52.8	+0.4
	baz=203						
GO04	Tololo Observa	90.42	122	P	P	06 39 55.4	+1.0
TPTI		90.47	273	P	P	06 39 55.1	+0.6
	comp=Z,14nm,0.8s						
CBKS	Cedar Bluff	90.52	49	IAMs_20	IAMs_20	07 21 03.8	
	comp=Z,751nm,20.0s						
EPYK	Eagle Plains	90.62	14	P	P	06 39 53.9	-0.2
	baz=214						
EPYK	Eagle Plains	90.62	14	P	P	06 39 55.3	+1.2
FNO	Franklin	90.72	53	P	P	06 39 55.4	+0.1
OK025	Westminster Rd	90.90	52	IAMs_20	IAMs_20	07 18 28.6	
	comp=Z,1μm,18.0s						
OK029	Liberty Lake	90.90	52	IAMs_20	IAMs_20	07 21 15.5	
	comp=Z,1μm,19.0s						
CO01	Juntas del Tor	91.06	122	P	P	06 39 59.1	+1.7
CO01				IAmb	IAmb	06 40 15.3	
	comp=Z,22nm,1.2s						
TGUH	Tegucigalpa,Un	91.31	76	P	P	06 39 59.7	+1.1
TGUH				IAMs_20	IAMs_20	07 14 44.2	
	comp=Z,1μm,18.0s						
XAN	Xi'an	91.34	306	P	P	06 39 58.8	+0.6
XAN				pP	pwP	06 40 10.5	-1.0
XAN				sP	sP	06 40 16.3	+9.4
XAN				PP	PP	06 43 41.0	+4.9
XAN				sS	sS	06 51 21.0	+14
XAN				pmax	pmax		
	comp=Z,19nm,1.5s						
XAN				pmax	pmax		
	comp=Z,200nm,4.9s						
XAN				LR	LR		
	comp=Z,280nm,19.5s						
XAN				LR	LR		
	comp=Z,440nm,20.6s						
XAN	Xi'an	91.34	306	P	P	06 39 57.4	-0.8
XAN				pmax	pmax		
	comp=Z,51nm,1.4s						
XAN	Xi'an	91.34	306	P	P	06 39 57.4	-0.8
AC05	El Transito	91.37	121	P	P	06 40 00.3	+1.5
OK031	S. Brethren Rd	91.42	52	P	P	06 39 55.9	-2.6
NATX	Nacogdoches	91.43	57	IAMs_20	IAMs_20	07 18 57.3	
	comp=Z,1μm,19.0s						
ZON	Zonda	91.52	124	P	P	06 40 01.2	+1.9
ZON				pmax	pmax		
	comp=Z,40nm,1.5s						
ZON	Zonda	91.52	124	P	P	06 40 01.2	+1.9
X37A	Clayton	91.98	54	IAMs_20	IAMs_20	07 18 54.4	
	comp=Z,1μm,18.0s						
DGMT	Dagmar	92.02	39	P	P	06 40 01.3	+0.4
DGMT				IAmb	IAmb	06 40 21.4	
	comp=Z,20nm,1.2s						
A21K	Barrow	92.02	5	IAMs_20	IAMs_20	07 16 29.9	
	comp=Z,822nm,22.0s						
NNA	Nana	92.05	103	IAMs_20	IAMs_20	07 15 32.7	
	comp=Z,878nm,18.0s						
JTS	Las Juntas de	92.15	80	*i* P	P	06 40 04.2	+1.9
JTS				pmax	pmax		
	comp=Z,37nm,1.3s						
JTS	Las Juntas de	92.15	80	P	P	06 40 02.3	0.0
MATN	Matagalpa	92.16	77	P	P	06 40 02.9	+0.5
TUL1	Leonard	92.18	53	P	P	06 40 03.0	+1.0
	baz=247						
HHC	Hu-ho-hao-te	92.20	313	*e*P	P	06 39 59.3	-2.8
HHC				S	S	06 50 55.8	-7.7
HHC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,160nm,6.7s						
HHC				LR	LR		
	comp=Z,250nm,19.0s						
HHC				LR	LR		
	comp=Z,370nm,17.9s						
HHC				LR	LR		
	comp=Z,510nm,18.8s						
KSU1	Kansas State U	92.86	49	IAMs_20	IAMs_20	07 22 51.8	
	comp=Z,998nm,18.0s						
INK	Inuvik	92.92	14	P	P	06 40 04.6	0.0
INK				pmax	pmax		
	comp=Z,8.0nm,1.2s						
INK	Inuvik	92.92	14	P	P	06 40 04.6	0.0
INK				IAmb	IAmb	06 40 33.9	
	comp=Z,8.0nm,1.1s						
KMI	Kunming	93.00	296	⇓P	P	06 40 09.0	+2.7
KMI				pP	pwP	06 40 18.5	-1.4
KMI				sP	sP	06 40 23.5	+8.6
KMI				S	S	06 51 11.8	+0.3
KMI				SS	SS	06 57 30.0	+3.5
KMI				pmax	pmax		
	comp=Z,16nm,0.8s						
KMI				pmax	pmax		
	comp=Z,170nm,3.7s						
KMI				LR	LR		
	comp=Z,340nm,17.4s						
KMI				LR	LR		
	comp=Z,430nm,18.9s						
KMI				LR	LR		
	comp=Z,470nm,20.0s						
BTO	Baotou	93.16	312	*e*P	P	06 40 08.5	+2.0
PB10	IPOC Station P	93.27	116	IAMs_20	IAMs_20	07 15 41.8	
	comp=Z,1μm,18.0s						
W39A	Magazine	93.42	54	P	P	06 40 08.5	+0.8
	baz=248						
U38A	Gravette	93.44	52	P	P	06 40 08.2	+0.4
U38A				IAmb	IAmb	06 40 19.9	
	comp=Z,18nm,1.4s						
YAK	Yakutsk	93.45	337	P	P	06 40 07.5	+0.4
	comp=Z,11nm,0.4s,baz=119,slow=0.1,SNR=2.3						
YAK	Yakutsk	93.45	337	*ce*P	P	06 40 08.2	+1.1
YAK				pmax	pmax		
	comp=Z,20nm,0.8s						
HHAR	Hobbs	93.71	53	P	P	06 40 10.7	+1.7
HHAR				IAmb	IAmb	06 40 13.4	
	comp=Z,17nm,1.5s						
X40A	Basin Creek Fa	93.88	55	IAMs_20	IAMs_20	07 23 36.8	
	comp=Z,768nm,18.0s						
CMAR	Chiang Mai Arr	94.01	288	P	P	06 40 12.9	+2.1
	comp=Z,9.6nm,0.9s,baz=122,slow=2.8,SNR=32						
CMAR				LR	LR	07 21 59.7	
	comp=Z,205nm,19.0s,baz=160,slow=35						
CMAR	Chiang Mai Arr	94.01	288	*ce*P	P	06 40 12.8	+2.0
CMAR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PB04	IPOC Station P	94.09	115	IAMs_20	IAMs_20	07 15 17.3	
	comp=Z,1μm,20.0s						
CHTO	Chiang Mai	94.13	288	P	P	06 40 11.0	-0.3
CHTO				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CHTO	Chiang Mai	94.13	288	P	P	06 40 11.0	-0.3
CHTO				IAmb	IAmb	06 40 15.5	
	comp=Z,9.8nm,0.8s						
PB15	IPOC Station P	94.31	116	IAMs_20	IAMs_20	07 16 15.2	
	comp=Z,1μm,18.0s						
PB06	IPOC Station P	94.42	116	IAMs_20	IAMs_20	07 15 49.3	
	comp=Z,923nm,20.0s						
MDND	Maddock	94.48	40	P	P	06 40 12.8	+0.5
	baz=245						
MDND	Maddock	94.48	40	P	P	06 40 12.6	+0.3
YKA	Yellowknife Ar	94.51	24	P	P	06 40 11.1	-0.9
	comp=Z,1.2nm,0.9s,baz=227,slow=3.6,SNR=9.7						
YKA				PP	PP	06 43 60.0	-0.2
	comp=Z,0.2nm,0.6s,baz=232,slow=7.7,SNR=2.2						
U40A	Yellville	94.55	53	P	P	06 40 11.9	-1.0
	baz=249						
ECSD	EROS Data Cent	94.70	45	P	P	06 40 13.4	0.0
LVC	Limon Verde	95.02	116	IAMs_20	IAMs_20	07 15 59.1	
	comp=Z,1μm,18.0s						
PB09	IPOC Station P	95.07	115	IAMs_20	IAMs_20	07 15 40.5	
	comp=Z,995nm,19.0s						
PB01	IPOC Station P	95.17	114	IAMs_20	IAMs_20	07 16 51.0	
	comp=Z,879nm,19.0s						
PSGCX	Pisagua	95.19	113	IAMs_20	IAMs_20	07 19 50.8	
	comp=Z,711nm,18.0s						
MGMO	Mountain Grove	95.28	52	P	P	06 40 17.3	+1.1
MGMO				IAmb	IAmb	06 40 20.6	
	comp=Z,10nm,1.1s						
R40A	Maddies Statio	95.69	51	P	P	06 40 18.3	+0.3
F33A	5 Mile Ranch,	95.74	43	P	P	06 40 18.1	0.0
F33A				IAmb	IAmb	06 40 22.0	
	comp=Z,12nm,1.1s						
LZH	Lanzhou	95.96	306	*e*P	P	06 40 22.8	+3.2
LZH				pP	pwP	06 40 32.0	-0.9
LZH				sP	sP	06 40 36.3	+8.0
LZH				SS	SS	06 58 03.0	-5.3
LZH				pmax	pmax		
	comp=Z,17nm,1.0s						
LZH				pmax	pmax		
	comp=Z,170nm,5.7s						
LZH				LR	LR		
	comp=Z,300nm,16.3s						
LZH				LR	LR		
	comp=Z,240nm,15.3s						
LZH				LR	LR		
	comp=Z,330nm,16.8s						
C36M	Paulatuk	95.97	16	P	P	06 40 18.7	+0.2
	baz=226						
OXF	Oxford	96.53	56	IAMs_20	IAMs_20	07 18 35.3	
	comp=Z,1μm,20.0s						
F36A	Milaca	97.54	44	P	Pdif	06 40 27.0	+0.7
ULM	Lac du Bonnet	97.69	39	LR	LR	07 22 45.1	
	comp=Z,896nm,18.1s,baz=258,slow=34						
ULM	Lac du Bonnet	97.69	39	P	P	06 40 26.2	-0.6
ULM				pmax	pmax		
	comp=Z,5.0nm,1.3s						
ULM	Lac du Bonnet	97.69	39	P	P	06 40 26.2	-0.6
ULM				IAmb	IAmb	06 40 39.0	
	comp=Z,5.0nm,1.2s						
PLAL	Pickwick Lake	97.72	56	IAMs_20	IAMs_20	07 20 50.8	
	comp=Z,740nm,19.0s						
LRAL	Lakeview Retre	97.94	58	IAMs_20	IAMs_20	07 21 19.9	
	comp=Z,726nm,20.0s						
LPAZ	La Paz	98.25	111	P	Pdif	06 40 33.6	+2.7
	comp=Z,1.9nm,1.1s,baz=241,slow=5.2,SNR=2.4						
LPAZ				LR	LR	07 17 46.9	
	comp=Z,683nm,18.0s,baz=265,slow=31						
B35A	Bob, Littlefor	98.31	42	P	Pdif	06 40 30.7	+1.0
B35A				IAmb	IAmb	06 40 32.4	
	comp=Z,10nm,1.4s						
SONM	Songino Array	98.32	318	P	P	06 40 29.8	-0.1
	comp=Z,0.7nm,0.9s,baz=101,slow=7.5,SNR=2.6						
SONM				PP	PP	06 44 26.9	-3.3
	comp=Z,0.3nm,0.7s,baz=123,slow=11,SNR=3.7						
SONM				LR	LR	07 20 52.3	
	comp=Z,259nm,21.9s,baz=112,slow=33						
SONM	Songino Array	98.32	318	P	P	06 40 27.9	-2.0
SONM				pmax	pmax		
	comp=Z,1.0nm,0.9s						
SONM	Songino Array	98.32	318	P	P	06 40 27.9	-2.0
TIXI	Tiksi	99.56	344	*ce*P	Pdif	06 40 34.4	-0.3
EYMN	Ely	99.57	42	IAMs_20	IAMs_20	07 26 10.0	
	comp=Z,1μm,18.0s						
HQIL	Hanson Quary C	100.05	49	IAMs_20	IAMs_20	07 23 30.3	
	comp=Z,912nm,20.0s						
GTA	Gaotai	100.07	308	*e*P	Pdif	06 40 40.8	+2.9
GTA				pP	pwP	06 40 50.0	-1.3
GTA				sP	sP	06 40 54.3	+7.6
GTA				pmax	pmax		
	comp=Z,2.0nm,1.5s						
GTA				pmax	pmax		
	comp=Z,41nm,6.2s						
GTA				LR	LR		
	comp=Z,170nm,17.4s						
GTA				LR	LR		
	comp=Z,220nm,18.2s						
GTA				LR	LR		
	comp=Z,190nm,18.2s						
ACSO	Alum Creek Sta	103.14	52	IAMs_20	IAMs_20	07 33 04.4	
	comp=Z,1μm,18.0s						
AAM	Ann Arbor	103.19	50	IAMs_20	IAMs_20	07 27 17.4	
	comp=Z,917nm,18.0s						
P52A	Corning	103.61	53	IAMs_20	IAMs_20	07 26 15.2	
	comp=Z,1μm,18.0s						
S57A	Dark Hollow, R	105.56	55	IAMs_20	IAMs_20	07 31 45.3	
	comp=Z,978nm,18.0s						
CBN	Corbin Frederi	106.88	55	IAMs_20	IAMs_20	07 35 19.1	
	comp=Z,751nm,18.0s						
PALK	Pallekele	107.26	272	IAMs_20	IAMs_20	07 28 59.2	
	comp=Z,675nm,20.0s						
SDDR	Presa de Saban	107.40	76	IAMs_20	IAMs_20	07 18 43.4	
	comp=Z,631nm,20.0s						
N58A	Sunbury	107.92	52	IAMs_20	IAMs_20	07 28 23.2	
	comp=Z,988nm,19.0s						
WSPT	Westport, CT	110.50	52	IAMs_20	IAMs_20	07 26 43.6	
	comp=Z,973nm,20.0s						
MK31	Makanchi Array	114.06	313	*c i*PKIKP	PKiKP	06 45 32.5	+1.2
MKAR	Makanchi Array	114.06	313	Pdiff	Pdif	06 41 41.0	+1.2
	comp=Z,0.4nm,1.0s,baz=64,slow=3.4,SNR=2.2						
MKAR				PKiKP	PKPdf	06 45 30.9	-0.4
	comp=Z,0.9nm,0.7s,baz=52,slow=2.0,SNR=9.9						
MKAR				PP	PP	06 46 26.4	+0.3
	comp=Z,0.3nm,0.8s,baz=98,slow=4.6,SNR=1.0						
MKAR				PKKPbc	PKKPbc	06 56 14.8	+1.2
	comp=Z,0.4nm,0.8s,baz=289,slow=3.7,SNR=4.3						
MKAR	Makanchi Array	114.06	313	*i* PKIKP	PKPdf	06 45 30.7	-0.6
MKAR	Makanchi Array	114.06	313		PKPdf	06 45 30.7	-0.6
KURK	Kurchatov	116.62	317	PKIKP	PKPdf	06 45 35.6	-0.4
KURK	Kurchatov	116.62	317		PKiKP	06 45 36.0	0.0
KURBB	Kurchatov Arra	116.68	317	PKP	PKPdf	06 45 35.6	-0.6
	comp=Z,1.1nm,0.7s,baz=99,slow=1.9,SNR=13						
KURBB				PP	PP	06 46 37.2	-7.1
	comp=Z,0.2nm,0.6s,baz=94,slow=5.5,SNR=4.1						
KURBB				PKKPbc	PKKPab	06 56 05.8	-0.5
	comp=Z,0.4nm,0.8s,baz=265,slow=4.3,SNR=4.4						
KSH	Kashi	118.17	305	PKP	PKiKP	06 45 39.8	+0.2
KSH				sPKP		06 45 59.8	
KSH				AMB	AMB		
	comp=Z,84nm,5.1s						
AAK	Ala-Archa	119.42	308	PKP	PKiKP	06 45 42.2	+0.2
	comp=Z,1.8nm,0.7s,baz=201,slow=9.7,SNR=4.1						
AAK	Ala-Archa	119.42	308	PKIKP	PKPdf	06 45 41.1	-0.8
AAK	Ala-Archa	119.42	308		PKPdf	06 45 41.1	-0.8
BVAR	Borovoye Array	121.54	320	PKP	PKPdf	06 45 45.3	-0.2
	comp=Z,0.6nm,0.6s,baz=59,slow=32,SNR=4.1						
BRVK	Borovoye	121.60	321	*c i*PKIKP	PKiKP	06 45 47.9	+2.2
BRVK				pmax	pmax		
	comp=Z,9.0nm,1.7s						
KKAR	Karatay Array	122.34	309	PKIKP	PKPdf	06 45 46.9	-0.5
KKAR	Karatay Array	122.34	309	PKPdf	PKPdf	06 45 46.9	-0.5
KBL	Kabul	123.44	299	PKIKP	PKPdf	06 45 49.9	-0.1
KBL	Kabul	123.44	299		PKPdf	06 45 49.9	-0.1
ARU	Arti	127.31	327	PKP	PKPdf	06 45 56.3	-0.1
	comp=Z,0.5nm,0.3s,baz=161,slow=19,SNR=3.9						
ARU	Arti	127.31	327	*i* PKIKP	PKiKP	06 45 57.1	+0.2
ARU						06 47 58.0	
ARU						06 53 05.4	
ARU				SS	SS	07 05 06.8	+2.9
ARU				MLR	MLR		
	comp=Z,545nm,18.0s						
BOSA	Boshof	128.21	201	PKP	PKiKP	06 46 00.0	+0.2
	comp=Z,2.4nm,0.8s,baz=142,slow=3.7,SNR=4.0						
ABKAR	Akbulak array	128.74	318	PKPdf	PKiKP	06 45 59.9	-0.1
ARCES	ARCESS Array B	129.31	351	PKP	PKPdf	06 45 59.6	-0.2
	comp=Z,3.1nm,0.9s,baz=15,slow=7.5,SNR=6.7						
AKTO	Aktyubinsk	129.61	319	PKP	PKiKP	06 46 03.4	+1.7
	comp=Z,0.5nm,0.5s,baz=191,slow=4.9,SNR=3.6						
GEYT	Alibeck	132.16	303	PKP	PKiKP	06 46 10.5	+3.2
	comp=Z,1.3nm,0.3s,baz=357,slow=5.8,SNR=1.8						
SOCY	Socotra	133.83	268	IAMs_20	IAMs_20	07 38 43.0	
	comp=Z,555nm,20.0s						
BELG	Belogornoye	134.81	325	PKP	PKPdf	06 46 10.9	+0.3
	comp=Z,8.7nm,0.8s,baz=104,slow=4.2,SNR=2.8						
FINES	FINESS Array B	136.56	346	PKP	PKPdf	06 46 14.3	+0.6
	comp=Z,0.9nm,0.6s,baz=85,slow=3.2,SNR=1.9						
HFS	Hagfors	139.77	354	PKhKP	PKPpre	06 46 15.9	
	comp=Z,3.3nm,1.0s,baz=352,slow=8.7,SNR=2.1						
MNK	Minsk	142.08	340	*i* PKP	PKPdf	06 46 24.2	+0.3
	comp=E,1.0nm,1.0s						
MNK				*i* PKP	PKPdf	06 46 24.2	+0.3
	comp=N,22nm,1.0s						
MNK				*i* PKP	PKPdf	06 46 24.2	+0.3
	comp=Z,10.0nm,1.0s						
MNK				*i* PP	PP	06 49 29.9	+0.7
MNK				*i* SKP		06 49 56.1	
MNK				*i* PKS		06 50 08.3	
MNK				*i* PPP	PPP	06 52 37.1	
MNK				*i* SKS	SKSdf	06 53 31.5	-0.7
MNK				*i* SKKS	SKKSdf	07 02 21.0	-33
MNK				*i* SS	SS	07 08 01.2	+0.5
MNK				*i* SSS	SSS	07 14 50.0	
MNK				*i* LQ	LQ	07 39 10.7	
MNK				*i* LR	LR	07 42 54.0	
MNK				*i* LRM	MLR	07 49 08.9	
	comp=Z,164nm,19.5s						
MNK				*i* LRM	MLR	07 51 25.6	
	comp=E,48nm,19.5s						
MNK				*i* LRM	MLR	07 51 28.5	
	comp=N,328nm,19.5s						
NACGM	Naroch	142.09	341	*i* PKP	PKPdf	06 46 20.8	-3.1
NACGM				*i* PKP	PKPdf	06 46 20.8	-3.1
NACGM				*i* PKP	PKPdf	06 46 20.8	-3.1
NACGM				*i* PP	PP	06 49 03.4	-26
NACGM				*i* PPP	PPP	06 52 08.5	
NACGM				*i* SKS	SKSdf	06 54 07.8	+36
NACGM				*i* SKKS	SKKSac	06 55 57.2	-24
NACGM				*i* SS	SS	07 07 54.3	-6.4
NACGM				*i* SSS	SSS	07 12 08.3	
NACGM				*i* LQ	LQ	07 29 37.2	
NACGM				*i* LR	LR	07 43 17.4	
KMBO	Kilima Mbogo	143.16	239	PKP	PKPdf	06 46 26.2	-1.3
	comp=N,3.0nm,0.8s,baz=66,slow=4.0,SNR=6.5						
GEVA	Gevas	143.64	308	PKPdf	PKPdf	06 46 26.4	-1.1
SOC	Sochi	143.78	318	*e*PKIKP	PKPab	06 46 24.3	+0.1
SOC				*e*		06 49 36.9	
SOC				*e*PPP	PPP	06 52 50.5	
SOC				*e*SSS	SSS	07 13 43.5	
SOC				MLR	MLR		
	comp=Z,294nm,22.0s						
ATD	Arta Tunnel	144.06	262	IAMs_20	IAMs_20	07 57 36.9	
	comp=Z,363nm,19.0s						
ATD	Arta Tunnel	144.06	262	*e*P	PKPab	06 46 17.9	-8.3
EKA	Eskdalemuir Ar	144.16	9	PKP	PKPbc	06 46 26.2	+0.5
	comp=Z,2.1nm,0.8s,baz=323,slow=1.1,SNR=2.1						
AKASG	Malin Array Be	144.66	335	PKP	PKPab	06 46 27.3	0.0
	comp=Z,5.9nm,0.8s,baz=41,slow=4.9,SNR=28						
AKASG	Malin Array Be	144.66	335	PKPdf	PKPab	06 46 27.1	-0.2
AKBB	Malin Array Si	144.66	335	PKIKP	PKPab	06 46 26.9	-0.4
AKBB	Malin Array Si	144.66	335	PKPdf	PKPab	06 46 26.9	-0.4
MARD	Mardin	145.68	307		PKPdf	06 46 30.9	-0.1
TEND	Ethiopian Broa	145.85	261	*e*P	PKPdf	06 46 23.8	-8.0
BSEG	Bad Segeberg	146.19	356	*e*PKPbc	PKPab	06 46 33.3	+0.5
	baz=3.9,slow=2.6						
LNIZ	Loecknitz	146.23	352	*e*PKPbc	PKPab	06 46 33.3	+0.4
	baz=3.9,slow=2.6						
ANKE	Ethiopia-Afar	146.26	257	*e*P	PKiKP	06 46 38.2	+1.0
DESE	Dese	146.90	259	*e*P	PKPdf	06 46 19.1	-15
AAE	Adis Abeba	146.93	255	*e*P	PKPdf	06 46 22.2	-12
FURI	Furi	146.96	255	*e*P	PKiKP	06 46 40.2	+1.6
SORM	Soroca	147.01	333	⇓P	PKPbc	06 46 35.3	+0.6
SORM	Soroca	147.01	333	⇓PKP2	PKPbc	06 46 35.3	+0.6
LVV	L'vov	147.30	339	*e*PKP2	PKPbc	06 46 35.5	0.0
NRDL	Niedersach Rie	147.64	356	*e*PKPbc	PKPbc	06 46 36.1	-0.1
	baz=3.9,slow=2.6						
FLTG	Flechtingen	147.71	355	*e*PKPbc	PKPbc	06 46 36.6	+0.1
	baz=3.9,slow=2.6						
KWP	Kalwaria Pacla	147.90	340	PKP2	PKiKP	06 46 38.2	-0.9
KWP	Kalwaria Pacla	147.90	340		PKiKP	06 46 38.2	-0.9
ASSE	Asse, Remlinge	147.96	355	*e*PKPbc	PKPbc	06 46 37.2	+0.1
	baz=3.9,slow=2.6						
OJC	Ojcow	148.23	344	PKP2	PKiKP	06 46 38.9	-0.8
OJC	Ojcow	148.23	344		PKiKP	06 46 38.9	-0.8
CLZ	Clausthal	148.27	355	*e*PKPbc	PKPbc	06 46 38.0	-0.1
	baz=3.9,slow=2.6						
MBAR	Mbarara	148.52	232	*c i*PKP2	PKiKP	06 46 41.7	0.0
MBAR				pmax	pmax		
	comp=Z,25nm,1.7s						
MBAR	Mbarara	148.52	232	IAMs_20	IAMs_20	07 53 02.5	
	comp=Z,480nm,19.0s						
CLL	Collm	148.53	352	*e*PKPbc	PKPbc	06 46 39.0	+0.3
	comp=Z,19nm,1.1s						
CLL				*i* pPKPbc	PKPab	06 46 42.0	-0.1
	comp=Z,164nm,2.2s						
CLL				*e*PKPlp		06 46 45.0	
	comp=Z,400nm,18.9s						
CLL				*i*		06 46 47.6	
CLL				*e*PP	PP	06 50 06.0	-1.4
CLL				*e*PPP	PPP	06 53 24.0	
CLL				*e*PSKS		07 00 24.0	
CLL				*e*SS	SS	07 09 18.0	+4.1
CLL				*e*PSPS		07 10 18.0	
CLL				*e*SSS	SSS	07 14 48.0	
CLL				*e*SSSS		07 19 06.0	
CLL				Lm	MLR	08 01 00.0	
	comp=Z,400nm,18.0s						
CLL	Collm	148.53	352	*e*PKP2	PKPbc	06 46 39.0	+0.3
CLL				pmax	pmax		
	comp=Z,19nm,1.1s						
CLL				MLR	MLR		
	comp=Z,400nm,18.0s						
CLL	Collm	148.53	352		PKPbc	06 46 39.1	+0.3
CLL	Collm	148.53	352	*e*PKPbc	PKPbc	06 46 39.1	+0.4
	baz=3.9,slow=2.6						
GTTG	Gottingen	148.59	356	*e*PKPbc	PKPbc	06 46 39.1	+0.2
	baz=3.9,slow=2.6						
KOLS	Kolonicke sedl	148.65	340	*e*PKP2	PKiKP	06 46 40.7	0.0
KOLS	Kolonicke sedl	148.65	340	*e*PKP	PKiKP	06 46 40.7	0.0
BUR08	Bucovina Ar. S	148.69	335		PKiKP	06 46 40.9	0.0
BURAR	Bucovina Array	148.71	335	⇑P	PKiKP	06 46 41.1	+0.2
BURAR	Bucovina Array	148.71	335	⇑PKP2	PKiKP	06 46 41.1	+0.2
BURAR	Bucovina Array	148.71	335		PKiKP	06 46 40.3	-0.7
OSTC	Ostas	148.74	348	⇑*e*PKP	PKiKP	06 46 40.6	-0.2
CHVC	Chvalec	148.74	348	⇑*e*PKP	PKiKP	06 46 40.7	-0.1
NEUB	Neuenburg	148.77	354	*e*PKPbc	PKPbc	06 46 39.7	+0.4
	baz=3.9,slow=2.6						
BUG	Bochum--Univer	148.81	359	*e*PKPbc	PKPbc	06 46 39.5	0.0
	baz=3.9,slow=2.6						
BRG	Berggiesshubel	148.82	351	*e*PKP	PKPbc	06 46 39.4	-0.2
BRG				Amp		06 46 41.8	
	comp=Z,8.7nm,0.8s						
BRG				*i* x	x	06 46 44.8	
BRG				Amp		06 46 45.8	
	comp=Z,31nm,1.3s						
BRG	Berggiesshubel	148.82	351	*e*PKPbc	PKiKP	06 46 40.8	-0.2
	baz=3.9,slow=2.6						
FBE	Freiberg	148.86	352	*e*PKPbc	PKiKP	06 46 40.8	-0.2
	baz=3.9,slow=2.6						
BIZ	Bicaz	148.89	334	⇓P	PKiKP	06 46 41.5	+0.3
UZH	Uzhgorod	148.91	340	*e*PKP2	PKPbc	06 46 39.9	+0.1
DPC	Dobruska-Polom	148.91	348	*e*PKP2	PKiKP	06 46 40.6	-0.6
DPC	Dobruska-Polom	148.91	348	⇑*e*PKP	PKiKP	06 46 40.6	-0.6
CRVS	Cervenica-Dubn	148.94	341	*e*PKP2	PKPab	06 46 45.1	+1.2
CRVS	Cervenica-Dubn	148.94	341	*e*PKP	PKPab	06 46 45.1	+1.2
TESR	Tescani	149.00	332	⇑P	PKiKP	06 46 41.5	0.0
KASTN	Kahler Asten	149.01	358	*e*PKPbc	PKPbc	06 46 40.7	+0.6
	baz=3.9,slow=2.6						
KRLC	Kraliky	149.08	347	*e*PKP2	PKiKP	06 46 41.4	-0.2
KRLC	Kraliky	149.08	347	⇑*e*PKP	PKiKP	06 46 41.4	-0.2
KRLC				*e*pPKP	pPKPab	06 46 50.5	-0.5
MORC	Moravsky Berou	149.19	346	*e*PKP	PKiKP	06 46 42.2	+0.4
LANS	Liptovska Anna	149.29	343	*e*PKP2	PKiKP	06 46 42.0	0.0
LANS	Liptovska Anna	149.29	343	*e*PKP	PKiKP	06 46 42.0	0.0
UBBA	Unterbreizbach	149.31	356	*e*PKPbc	PKiKP	06 46 41.4	-0.4
	baz=3.9,slow=2.6						
CFR	Carcaliu	149.32	329	⇑P	PKiKP	06 46 41.7	-0.4
CFR	Carcaliu	149.32	329	⇑PKP2	PKiKP	06 46 41.7	-0.4
MOX	Moxa	149.34	354	*e*PKPbc	PKiKP	06 46 41.5	-0.6
	baz=3.9,slow=2.6						
TPGR	Topolog	149.42	329	⇓P	PKiKP	06 46 42.5	+0.1
WERD	Werda	149.46	353	*e*PKPbc	PKiKP	06 46 42.0	-0.3
	baz=3.9,slow=2.6						
VRI	Vrincioaia	149.46	332	⇑P	PKiKP	06 46 42.6	+0.1
VRI	Vrincioaia	149.46	332	⇑PKP2	PKiKP	06 46 42.6	+0.1
TANN	Tannenbergstha	149.47	352	*e*PKPbc	PKiKP	06 46 42.4	0.0
	baz=3.9,slow=2.6						
PLOR	Plostina	149.51	332	⇑P	PKiKP	06 46 42.2	-0.4
PLOR	Plostina	149.51	332	⇑PKP2	PKiKP	06 46 42.2	-0.4
GUNZ	Gunzen	149.54	353	*e*PKPbc	PKiKP	06 46 42.4	-0.1
	baz=3.9,slow=2.6						
PRU	Pruhonice	149.59	350	*e*PKP2	PKiKP	06 46 42.5	0.0
PRU	Pruhonice	149.59	350	⇑*e*PKP	PKiKP	06 46 42.5	0.0
WERN	Wernitzgruen	149.61	353	*e*PKPbc	PKiKP	06 46 42.5	-0.1
	baz=3.9,slow=2.6						

MEM	Membach	149.64	1	*d*PKPab	PKPab	06 46 45.5	-1.2
NKC	Novy Kostel	149.65	352	*e*PKP2	PKiKP	06 46 42.8	+0.1
NKC	Novy Kostel	149.65	352	⇑*e*PKP	PKiKP	06 46 42.8	+0.1
BRTR	Keskin Array B	149.66	316	PKPbc	PKPbc	06 46 42.2	0.0
	comp=Z,12nm,0.8s,baz=128,slow=2.0,SNR=11						
BTNL	Ternell	149.67	0	*d*PKPab	PKPab	06 46 45.6	-1.2
OZUR		149.69	333	⇑P	PKPbc	06 46 41.3	-0.6
TIRR	Tirgusor	149.71	328	⇑P	PKiKP	06 46 42.8	-0.2
TIRR	Tirgusor	149.71	328	⇑PKP2	PKiKP	06 46 42.8	-0.2
HARR	Harsova	149.78	329	⇑P	PKiKP	06 46 43.1	0.0
HARR	Harsova	149.78	329	⇑PKP2	PKiKP	06 46 43.1	0.0
BCLA	Clavier	149.82	2	*d*PKPdf	PKPdf	06 46 35.1	-2.1
BCLA				*d*PKPab	pPKPdf	06 46 45.1	+1.1
VRAC	Vranov	149.84	347	PKPbc	PKiKP	06 46 42.9	-0.2
	comp=Z,1.3nm,0.3s,baz=49,slow=3.3,SNR=11						
VRAC	Vranov	149.84	347	*e*PKP	PKiKP	06 46 43.0	-0.1
BGES	Gesves	149.85	2	*d*PKPab	PKiKP	06 46 45.0	+2.0
BMRD	Maredsous	149.92	2	*d*PKiKP	PKiKP	06 46 43.4	+0.2
MANZ	Manzenberg	149.94	353	*e*PKPbc	PKiKP	06 46 43.5	+0.2
	baz=3.9,slow=2.6						
DOPR	Dopca	149.96	333	⇑P	PKiKP	06 46 43.7	+0.2
TNS	Taunus Mts	149.99	357	*e*PKPbc	PKiKP	06 46 43.4	0.0
	baz=3.9,slow=2.6						
JAVC	Velka Javorina	150.02	345	*e*PKP	PKiKP	06 46 44.5	+0.9
KOLL	Kolacno	150.10	344	*e*PKP	PKiKP	06 46 44.3	+0.7
MLR	Muntele Rosu	150.10	332	PKPbc	PKPbc	06 46 43.1	0.0
	comp=Z,15nm,1.0s,baz=318,slow=8.3,SNR=18						
MLR	Muntele Rosu	150.10	332	⇑P	PKiKP	06 46 43.5	-0.4
MLR	Muntele Rosu	150.10	332	⇑PKP2	PKiKP	06 46 43.5	-0.4
MLR	Muntele Rosu	150.10	332		PKPbc	06 46 42.8	-0.2
ISR	Istrita	150.12	331	⇓P	PKiKP	06 46 44.1	+0.3
ISR	Istrita	150.12	331	⇓PKP2	PKiKP	06 46 44.1	+0.3
KRUC	Moravsky	150.12	347	*e*PKP	PKPbc	06 46 43.2	+0.4
DOU	Dourbes	150.12	2	*d*PKiKP	PKPbc	06 46 43.1	+0.3
ROTZ	Rotzenmuhle	150.14	353	*e*PKPbc	PKiKP	06 46 44.2	+0.5
	baz=3.9,slow=2.6						
PSZ	Piszkesteto	150.29	342	PKIKP	PKPab	06 46 47.5	-2.0
PSZ	Piszkesteto	150.29	342	PKPab	PKPab	06 46 47.5	-2.0
GRF	Grafenberg Arr	150.32	354	*e*PKPbc	PKiKP	06 46 44.1	0.0
	baz=3.9,slow=2.6						
DRGR		150.34	337	⇓P	PKiKP	06 46 44.3	0.0
DRGR		150.34	337	⇓PKIKP	PKiKP	06 46 44.3	0.0
VOIR		150.53	333	⇓P	PKiKP	06 46 45.6	+0.9
VOIR		150.53	333	⇓PKIKP	PKiKP	06 46 45.6	+0.9
MODS	Modra-Piesok	150.57	345	*e*PKIKP	PKiKP	06 46 46.0	+1.4
MODS	Modra-Piesok	150.57	345	*e*PKP	PKiKP	06 46 46.0	+1.4
KHC	Kasperske Hory	150.57	351	*c i*PKIKP	PKiKP	06 46 45.3	+0.6
KHC				pmax	pmax		
	comp=Z,80nm,1.7s						
KHC	Kasperske Hory	150.57	351	⇑*e*PKP	PKiKP	06 46 44.9	+0.2
KHC				*e*pPKP	sPKPbc	06 46 52.2	-0.7
KHC	Kasperske Hory	150.57	351		PKiKP	06 46 44.8	+0.2
WLF	Walferdange	150.59	0	*d*PKP	PKiKP	06 46 45.8	+1.1
WLF	Walferdange	150.59	0	*e*PKPbc	PKiKP	06 46 44.5	-0.1
	baz=3.9,slow=2.6						
CKRC	Cesky Krumlov	150.75	349	⇑*e*PKP	PKiKP	06 46 45.2	+0.2
CKRC				*e*x	x	06 46 52.9	
ARR	Arges	150.76	333	⇑P	PKiKP	06 46 46.0	+0.8
MDUB	Mudurnu	150.79	319		PKPbc	06 46 44.9	+0.1
GEC2	GERESS Array S	150.83	350		PKiKP	06 46 45.3	0.0
GEC2	GERESS Array S	150.83	350	*e*PKPbc	PKiKP	06 46 45.3	0.0
	baz=3.9,slow=2.6						
GERES	GERESS Array B	150.83	350	PKPbc	PKiKP	06 46 45.5	+0.2
	comp=Z,4.5nm,0.9s,baz=40,slow=2.3,SNR=16						
GERES	GERESS Array B	150.83	350	PKIKP	PKiKP	06 46 45.0	-0.3
GERES	GERESS Array B	150.83	350		PKiKP	06 46 45.0	-0.3
LOT	Lotru	151.06	334	⇑P	PKPbc	06 46 44.7	-0.6
SIRR	Siria	151.17	338	⇓P	PKiKP	06 46 46.5	+0.6
MMAI	Mount Meron Ar	151.27	302	PKPbc	PKiKP	06 46 46.8	+0.2
	comp=Z,10.0nm,0.8s,baz=69,slow=4.6,SNR=9.4						
CONA	Conrad Observa	151.31	347	*e*P	PKPbc	06 46 43.4	-2.3
	comp=Z,37nm,1.8s						
GZR	Gura Zlata	151.49	336	⇑P	PKiKP	06 46 46.5	-0.2
GZR	Gura Zlata	151.49	336	⇑PKIKP	PKiKP	06 46 46.5	-0.2
MOA	Molln	151.70	349	*e*P	PKPab	06 46 51.3	-4.0
	comp=Z,22nm,1.4s						
BZS	Buzias	151.74	337	⇓P	PKiKP	06 46 46.9	-0.2
BZS	Buzias	151.74	337	⇓PKIKP	PKiKP	06 46 46.9	-0.2
BFO	Black Forest	151.89	357	PKIKP	PKiKP	06 46 47.4	+0.1
BFO	Black Forest	151.89	357		PKiKP	06 46 47.4	+0.1
BFO	Black Forest	151.89	357	*e*PKPbc	PKiKP	06 46 47.5	+0.1
	baz=3.9,slow=2.6						
CLF	Chambon-Foret	152.02	6		PKiKP	06 46 48.1	+0.5
ARSA	Arzberg	152.02	347	*e*P	PKiKP	06 46 52.0	+4.3
	comp=Z,9.4nm,1.3s						
RJOB	Jochberg	152.05	351	*e*PKPbc	PKiKP	06 46 48.6	+0.8
	baz=3.9,slow=2.6						
HERR	Herculane	152.06	335	⇓P	PKiKP	06 46 48.2	+0.4
MORH	Mrgy, Hungar	152.19	342	⇓P	PKPbc	06 46 46.2	-1.5
MDVR	Moldovita	152.42	336	⇑P	PKPbc	06 46 48.3	-0.1
UBR	Ueberruh	152.42	355	*e*PKPbc	PKiKP	06 46 48.7	+0.2
	baz=3.9,slow=2.6						
SLE	Schleitheim	152.45	357	*e*PKPbc	PKiKP	06 46 48.8	+0.2
	baz=3.9,slow=2.6						
RETA	Reutte	152.55	354	*e*P	PKiKP	06 46 51.9	+3.1
	comp=Z,5.1nm,0.9s						
EIL	Elat	152.59	296	PKPbc	PKiKP	06 46 51.0	+1.6
	comp=Z,6.3nm,0.8s,baz=357,slow=8.6,SNR=5.1						
KBA	Koelnbreinsper	152.60	350	*e*P	PKiKP	06 46 50.0	+0.9
	comp=Z,13nm,1.5s						
WATA	Walderalm	152.61	352	*e*P	PKiKP	06 46 53.4	+4.3
	comp=Z,18nm,1.2s						
MOTA	Moosalm	152.66	353	*e*P	PKiKP	06 46 50.8	+1.7
	comp=Z,15nm,1.3s						
WTTA	Wattenberg	152.67	352	*e*P	PKiKP	06 46 51.8	+2.6
	comp=Z,26nm,1.0s						
SQTA	Sankt Quirin	152.76	353	*e*P	PKiKP	06 46 53.4	+4.1
	comp=Z,15nm,1.2s						
WILA	Wila	152.77	356	*e*PKPbc	PKiKP	06 46 49.6	+0.3
	baz=3.9,slow=2.6						
DAVA	Damuels	152.83	355	*e*P	PKiKP	06 46 50.7	+1.1
	comp=Z,25nm,1.4s						
BALST	Balsthal	152.91	358	*e*PKPbc	PKiKP	06 46 50.5	+0.9
	baz=3.9,slow=2.6						
MYKA	Terra Mystica	152.99	349	*e*P	PKiKP	06 46 54.1	+4.3
	comp=Z,14nm,1.4s						
FETA	Feichten	153.01	354	*e*P	PKiKP	06 46 51.2	+1.3
	comp=Z,15nm,1.4s						
ABTA	Abfaltersbach	153.06	351	*e*P	PKiKP	06 46 50.4	+0.4
	comp=Z,17nm,1.2s						
DAVOX	Davos/Dischmat	153.33	355	PKPbc	PKiKP	06 46 51.6	+1.0
	comp=Z,5.8nm,0.9s,baz=330,slow=8.3,SNR=7.3						
DIVS	Divibare	153.64	338	PKPab	PKPab	06 47 03.4	-0.3
TUE	Stuetta	153.68	356		PKiKP	06 46 52.5	+1.1
IDI	Anoyia	157.89	317	PKPab	PKPab	06 47 15.9	-6.3
	comp=Z,6.1nm,0.9s,baz=146,slow=3.8,SNR=3.6						
ESDC	Sonseca Array	158.60	23	PKPab	PKPab	06 47 29.8	+4.8
	comp=Z,0.8nm,0.4s,baz=336,slow=6.0,SNR=3.9						
KEST	Kesra	164.31	351	PKPab	PKPab	06 47 49.2	-0.9
	comp=Z,2.4nm,0.4s,baz=71,slow=5.8,SNR=5.1						
KOWA	Kowa	168.48	118	PKPab	PKPab	06 48 09.6	+0.5
	comp=Z,3.1nm,0.9s,baz=265,slow=10,SNR=3.9						
KOWA	Kowa	168.48	118		PKPdf	06 46 58.0	-1.8
TOA0	Torodi Ar. Sit	171.62	146		PKPab	06 48 25.1	+2.3
TORD	Torodi Ar. Bea	171.62	146	PKP	PKPdf	06 47 01.9	+0.3
	comp=Z,1.7nm,1.0s,baz=297,slow=3.1,SNR=7.0						
TORD				PKPab	PKPab	06 48 24.5	+1.7
	comp=Z,3.8nm,1.2s,baz=274,slow=4.3,SNR=5.5						
TORD	Torodi Ar. Bea	171.62	146		PKPdf	06 47 01.1	-0.5
TORD					PKPab	06 48 24.8	+2.0

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*IDC **26** 06:37:15.0±2.1, 7°.04S×150°.90E, h0^{km}, mb3.6/4, mb1 3.9/4, mb1mx3.5/37, mbtmp3.7/4, MS4.2/3, Ms1 4.2/3, ms1mx3.5/36, Error ellipse: s-maj=89.7km s-min=26.7km az=126.0*

ISC 26 06:37:20.2±1.8**, 7°.2S**±0°.4×**151°.0E**±0°.4**, h40^{km}, n10, σ0^{s}.57**/7**, mb3.7**/3**, MS4.0**/3**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	4.41	239	Sn	Sn	06 39 15.2	+0.5
	3.4nm,0.3s,baz=311,slow=22,SNR=8.0						
WRA	Warramunga Arr	20.56	230	P	P	06 41 55.3	-0.4
	1.2nm,0.6s,baz=56,slow=11,SNR=14						
SIJI	Sorong	20.64	287	LR	LR	06 51 46.4	
	comp=Z,449nm,18.6s,baz=288,slow=42						
ASAR	Alice Springs	23.21	223	P	P	06 42 23.9	-0.1
	0.4nm,0.5s,baz=59,slow=9.6,SNR=8.5						
FITZ	Fitzroy Crossi	26.99	244	P	P	06 42 58.4	-0.1
	1.2nm,0.6s,baz=69,slow=10,SNR=2.4						
KAPI	Kappang	31.14	272	LR	LR	06 57 26.8	
	comp=Z,268nm,18.2s,baz=338,slow=39						
SEY	Seymchan	69.89	1	LR	LR	07 18 52.9	
	comp=Z,325nm,18.8s,baz=350,slow=36						
KURBB	Kurchatov Arra	84.54	322	P	P	06 49 48.7	-0.4
	33nm,0.6s,baz=117,slow=3.8,SNR=2.8						
ILAR	Eielson Array	85.00	22	P	P	06 49 51.9	+0.7
	0.6nm,0.7s,baz=258,slow=4.7,SNR=4.5						
TORD	Torodi Ar. Bea	149.22	284	PKPbc	PKiKP	06 57 06.3	-0.5
	0.4nm,0.5s,baz=54,slow=2.3,SNR=4.3						

IDC 26 06:44:37.8±2.4**, 54°.23N**×**85°.90E, h0^{km}, mb1 3.7**/2**, mb1mx3.1**/60**, mbtmp3.7**/2**, ML2.4**/2**, Error ellipse: s-maj=18.4km s-min=10.6km az=54.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	0.69	246	*i*		06 49 10.0	
	baz=62,slow=338,SNR=1.8						
ZALV	Zalesovo Beam	0.69	246	Pg	Pg	06 44 49.8	-1.3
	0.4nm,0.3s,baz=66,slow=16,SNR=11						
ZALV				Lg	Lg	06 45 01.3	
	0.5nm,0.3s,baz=70,slow=28,SNR=7.1						
ZALV				Rg	Rg	06 45 05.0	
	3.6nm,0.3s,baz=63,slow=30,SNR=14						
KURBB	Kurchatov Arra	5.78	234	Pn	Pn	06 46 06.0	+1.3
	0.1nm,0.3s,baz=51,slow=13,SNR=9.9						
MKAR	Makanchi Array	7.79	199	Pn	Pn	06 46 33.1	+0.7
	0.1nm,0.3s,baz=27,slow=14,SNR=12						

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*IDC **26** 06:49:29.3±2.8, 7°.07S×129°.50E, h134^{km}±28^{km}, mb3.7/4, mb1 3.8/7, mb1mx3.5/39, mbtmp4.2/7, Error ellipse: s-maj=48.4km s-min=18.3km az=80.0*

ISC 26 06:49:28.8±0.8**, 7°.22S**±0°.06×**129°.88E**±0°.10**, h150^{km}, n11, σ3^{s}.78**/16**, mb3.9**/5**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	6.46	12	P	Pn	06 51 01.2	-0.5
	3.9nm,0.3s,baz=93,slow=2.6,SNR=3.8						
SIJI				S	Sn	06 52 08.8	-5.7
	4.3nm,0.3s,baz=268,slow=23,SNR=6.8						
BATI	Baumata	6.82	244	P	Pn	06 51 07.9	+1.4
	11nm,0.3s,baz=206,slow=0.5,SNR=6.1						
BATI				S	Sn	06 52 20.1	-3.0
	9.5nm,0.3s,baz=135,slow=21,SNR=2.6						
FITZ	Fitzroy Crossi	11.57	201	P	Pn	06 52 10.2	+0.6
	0.9nm,0.3s,baz=17,slow=9.8,SNR=24						
FITZ				S	Sn	06 54 11.3	-6.2
	2.6nm,0.3s,baz=289,slow=12,SNR=8.3						
WRA	Warramunga Arr	13.37	162	P	Pn	06 52 34.4	+1.7
	0.5nm,0.3s,baz=338,slow=13,SNR=28						
WRA				S	Sn	06 54 53.8	-7.0
	1.9nm,0.3s,baz=336,slow=22,SNR=8.7						
ASAR	Alice Springs	16.80	167	P	Pn	06 53 20.3	+4.9
	1.2nm,0.3s,baz=341,slow=8.7,SNR=90						
ASAR				S	S	06 56 21.2	-1.1
	0.7nm,0.3s,baz=356,slow=26,SNR=4.8						
STKA	Stephens Creek	26.86	158	P	P	06 55 00.1	+4.7
	1.0nm,0.5s,baz=343,slow=9.9,SNR=3.5						
MKAR	Makanchi Array	68.34	327	P	P	07 00 14.8	+0.8
	2.4nm,0.5s,baz=116,slow=8.4,SNR=53						
KURBB	Kurchatov Arra	72.63	329	P	P	07 00 40.1	+0.3
	52nm,0.8s,baz=125,slow=4.4,SNR=14						
BVAR	Borovoye Array	78.18	328	P	P	07 01 11.7	+0.3
	1.0nm,0.8s,baz=131,slow=4.3,SNR=7.0						
AKTO	Aktyubinsk	84.17	322	P	P	07 01 43.5	+0.3
	1.2nm,0.6s,baz=135,slow=7.1,SNR=3.1						
PDAR	Pinedale Array	117.13	45	PKP	PKiKP	07 07 58.6	+2.0
	0.4nm,0.8s,baz=225,slow=0.5,SNR=2.5						

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*NNC **26** 06:52:19.6±4.6, 41°.41N×79°.35E, h0^{km}, mb3.0, mpv2.6, Error ellipse: s-maj=31.2km s-min=23.3km az=154.0*

*SOME **26** 06:52:22.1, 41°.52N×79°.38E, h5^{km}*

*KRNET **26** 06:52:32.0±0.1, 41°.75N×79°.11E, h1^{km}, mb2.5*

ISC 26 06:52:24.3±2.6**, 41°.64N**±0°.09×**79°.45E**±0°.07**, h0^{km}**±13^{km}**, n27, σ1^{s}.37**/46**, 14C-6D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRZ	Przheval'sk	1.15	318	⇑*i*P	Pn	06 52 49.8	+2.0
	baz=25						
PRZ				⇑*i*S	Sb	06 53 01.8	-0.8
	baz=25						
SHLS	Shalkode	1.52	0	*e*P	Pg	06 52 53.2	-0.2
	5.6nm,0.3s						
SHLS				*e*S	Sg	06 53 15.5	+2.5
	6.2nm,0.2s						
SATY	Saty	1.61	332	*e*P	Pn	06 52 53.4	-0.7
	2.8nm,0.1s						
SATY				*e*S	Sg	06 53 16.1	-0.1
	12nm,0.1s						
SATY	Saty	1.61	332	P	Pn	06 52 53.2	-0.9
	1.2nm,0.3s						
SATY				S	Sg	06 53 16.1	-0.1
	12nm,0.1s						
PDGK	Podgornoye	1.69	1	P	Pb	06 52 55.6	-0.6
	0.4nm,0.3s						
PDGK				S	Sg	06 53 19.8	+1.2
	0.8nm,0.3s						
PDGK	Podgornoye	1.69	1	⇑Pg	Pn	06 52 53.2	-1.9
	5.2nm,1.2s						
PDGK				⇑Lg	Lg	06 53 20.3	
	4.1nm,0.6s						
ANVS	Anan'yevo	1.75	311	⇑*i*P	Pg	06 52 59.9	+2.1
	baz=14						
ANVS				⇑*i*S	Sg	06 53 21.1	+0.7
	baz=14						
KDJ	Kajisay	1.76	287	⇑*i*P	Pg	06 53 00.3	+2.3
	baz=85						
KDJ				⇑*i*S	Sg	06 53 21.0	+0.1
	baz=85						
MDOK	Medeo	2.34	311	*e*P	Pb	06 53 06.9	-0.5
	3.4nm,0.4s						
MDOK				*e*S	Sg	06 53 39.3	-0.1
	9.4nm,0.4s						
MDOK	Medeo	2.34	311	⇓Pg	Pn	06 53 00.6	-3.5
	2.4nm,0.6s						
MDOK				⇑Lg	Lg	06 53 33.5	
	7.5nm,0.6s						
MDOK	Medeo	2.34	311	Pg	Pb	06 53 06.9	-0.5
	1.9nm,0.3s						
MDOK				Lg	Lg	06 53 39.3	
	6.9nm,0.6s						
KOTS	Kotyrbulak	2.35	313	*e*P	Pb	06 53 07.0	-0.6
	5.8nm,0.4s						
KOTS				*e*S	Sg	06 53 39.4	-0.3
	20nm,0.4s						
KOTS	Kotyrbulak	2.35	313	Pg	Pb	06 53 07.0	-0.6
	5.8nm,0.4s						
KOTS				Lg	Lg	06 53 39.4	
	20nm,0.4s						
ULHL	Ulahol	2.47	285	⇓*e*P	Pg	06 53 12.1	+0.6
	baz=84						
ULHL				⇓*i*S	Sb	06 53 41.4	+0.8
	baz=84						
MNBS	Baschi	2.56	343	*e*P	Pb	06 53 11.1	+0.1
	2.2nm,0.2s						
MNBS				*e*S	Sg	06 53 46.6	+0.2
	11nm,0.2s						
MNBS	Baschi	2.56	343	Pg	Pb	06 53 11.1	+0.1
	2.2nm,0.2s						
MNBS				Lg	Lg	06 53 46.6	
	11nm,0.2s						
MTBS	Maitube	2.69	305	*e*P	Pb	06 53 13.4	+0.1
	3.9nm,0.6s						
MTBS				*e*S	Sg	06 53 50.1	-0.4
	7.4nm,0.3s						
BOOM	Boomskoye usch	2.75	289	⇓*i*P	Pg	06 53 16.2	-0.7
	baz=88						
BOOM				⇓*i*S	Sb	06 53 48.1	-0.5
	baz=88						
ARXS	Arharly	2.83	336	*e*P	Pb	06 53 15.6	-0.1
	3.5nm,0.5s						
ARXS				*e*S	Sg	06 53 54.3	-1.0
	4.6nm,0.4s						
KTBS	Karatobe	2.91	316	*e*P	Pb	06 53 16.6	-0.3
	1.0nm,0.7s						
KTBS				*e*S	Sg	06 53 56.0	-1.6
	10nm,0.4s						
KTBS	Karatobe	2.91	316	Pg	Pb	06 53 16.6	-0.3
	1.0nm,0.7s						
KTBS				Lg	Lg	06 53 56.0	
	10nm,0.4s						
TKM2	Tokmak 2	3.13	295	⇑*i*P	Pb	06 53 21.8	+0.9
	baz=95						
TKM2				⇑*i*S	Sb	06 53 58.3	-1.4
	baz=95						
TKM2	Tokmak 2	3.13	295	⇑Pg	Pn	06 53 16.8	+1.7
	4.7nm,1.2s						
TKM2				⇓Lg	Lg	06 53 59.9	
	4.5nm,0.6s						
DGS	Degeres	3.16	302	*e*P	Pb	06 53 21.2	-0.1
	0.8nm,1.1s						
DGS				*e*S	Sg	06 54 03.8	-1.9
	3.4nm,0.4s						
DGS	Degeres	3.16	302	Pg	Pb	06 53 21.2	-0.1
	1.8nm,0.5s						
DGS				Lg	Lg	06 54 03.8	
	3.9nm,0.4s						
KRBS	Karabastau	3.46	308	*e*P	Pb	06 53 26.2	-0.2
	0.3nm,0.5s						
KRBS				*e*S	Sg	06 54 12.2	-3.2
	2.8nm,0.2s						
ARLS	Aral	3.84	275	⇑*i*P	Pb	06 53 30.6	-2.4
	baz=73						
ARLS				⇑*i*S	Sn	06 54 13.1	+2.5
	baz=73						

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*IDC **26** 07:06:56.6±1.6, 7°.77S×131°.07E, h0^{km}, mb3.9/3, mb1 4.0/7, mb1mx3.7/40, mbtmp4.0/7, ML3.9/3, MS4.1/1, Ms1 4.1/1, ms1mx3.1/37, Error ellipse: s-maj=49.1km s-min=26.3km az=87.0*

ISC 26 07:06:56.5±0.9**, 8°.03S**±0°.07×**131°.1E**±0°.1**, h10^{km}, n9, σ3^{s}.43**/11**, mb4.0**/3**, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	7.11	1	Pn	Pn	07 08 38.1	-2.6
	3.5nm,0.3s,baz=214,slow=21,SNR=3.1						
SIJI				Sn	Sn	07 09 49.1	-12
	3.3nm,0.3s,baz=293,slow=23,SNR=2.6						
BATI	Baumata	7.68	253	Pn	Pn	07 08 51.7	+3.2
	baz=79,slow=16						
BATI				Sn	Sn	07 10 12.6	-3.1
	3.4nm,0.3s,baz=327,slow=21,SNR=1.3						
FITZ	Fitzroy Crossi	11.35	208	Sn	Sn	07 11 42.0	-3.7
	1.1nm,0.3s,baz=208,slow=17,SNR=8.1						
WRA	Warramunga Arr	12.25	166	Pn	Pn	07 09 55.5	+4.3
	0.5nm,0.3s,baz=343,slow=13,SNR=6.3						
WRA				Sn	Sn	07 12 03.1	-4.8
	0.3nm,0.3s,baz=352,slow=22,SNR=1.5						
ASAR	Alice Springs	15.78	171	Pn	P	07 10 43.5	+0.6
	0.5nm,0.3s,baz=9.5,slow=12,SNR=41						
ASAR				Sn	Sn	07 13 30.7	-3.4
	0.2nm,0.3s,baz=0.0,slow=26,SNR=5.2						
AFI	Afiamalu	56.26	101	LR	LR	07 39 24.4	
	comp=Z,164nm,21.8s,baz=306,slow=35						
SONM	Songino Array	59.76	341	P	P	07 17 02.3	+0.5
	0.4nm,0.4s,baz=132,slow=6.0,SNR=2.9						
MKAR	Makanchi Array	69.69	327	P	P	07 18 06.8	+0.4
	1.2nm,0.5s,baz=114,slow=8.5,SNR=21						
ZALV	Zalesovo Beam	72.99	333	P	P	07 18 25.5	-0.7
	0.3nm,0.3s,baz=129,slow=4.1,SNR=2.6						

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*DJA **26** 07:12:46.1±0.6, 7°S±5°×13°0E±°, h163^{km}±11^{km}, M4.7/11, mB5.2/6, mb4.8/7, MLv4.8/11, Mw(mB)4.5/6*

*IDC **26** 07:12:46.7±1.5, 6°.97S×129°.72E, h108^{km}±13^{km}, mb3.9/12, mb1 4.0/17, mb1mx3.9/41, mbtmp4.4/17, MS3.9/1, Ms1 3.9/1, ms1mx3.0/43, Error ellipse: s-maj=14.0km s-min=11.6km az=97.0*

*NEIC **26** 07:12:48.0±1.2, 7°.05S±0°.07×129°.80E±0°.08, h126^{km}±4^{km}, mb4.4/17, Error ellipse: s-maj=12.0km s-min=9.3km az=69.0*

ISC 26 07:12:46.2±0.4**, 7°.02S**±0°.05×**129°.76E**±0°.05**, h104^{km}, n60, σ1^{s}.71**/59**, mb4.3**/19**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.80	122	Pn	Pn	07 13 19.2	+2.8
SAUI				Sn	Sn	07 13 42.2	+2.8
SAUI	Saumlaki	1.80	122	P	Pn	07 13 18.6	+2.2
SAUI				S	Sn	07 13 41.1	+1.7
BNDI	Bandanaira	2.49	3	P	Pn	07 13 30.8	+5.5
NLAI	Namlea	4.60	325	P	Pn	07 14 03.9	+10
FAKI	Fak Fak	4.77	31	Pn	Pn	07 13 56.4	+0.5
FAKI	Fak Fak	4.77	31	P	Pn	07 13 56.2	+0.3
SOEI	Soe	6.08	243	Pn	Pn	07 14 16.4	+2.7
SOEI	Soe	6.08	243	P	Pn	07 14 15.3	+1.6
	2.7nm3µm263nm,0.5s						
SANI	Sanana	6.21	323	P	Pn	07 14 19.2	+3.9
	0.1nm43nm,0.8s						
SIJI	Sorong	6.29	14	P	Pn	07 14 17.6	+1.1
	19nm,0.3s,baz=240,slow=23,SNR=25						
SIJI				S	Sn	07 15 23.8	-3.3
	23nm,0.3s,baz=228,slow=22,SNR=12						
SWI	Sorong	6.30	14	P	Pn	07 14 17.6	+1.0
	0.7nm2µm52nm,0.4s						
BATI	Baumata	6.81	242	P	Pn	07 14 25.8	+2.2
	66nm,0.3s,baz=129,slow=1.1,SNR=54						
BATI				S	Sn	07 15 38.5	-1.1
	80nm,0.3s,baz=80,slow=24,SNR=12						
BATI	Baumata	6.81	242	P	Pn	07 14 25.1	+1.6
	1.0nm3µm161nm,0.8s						
BAKI	Biak	8.58	48	P	Pn	07 14 48.4	+0.8
KAPI	Kappang	10.15	281	P	Pn	07 15 18.3	+9.3
	0.7nm,0.3s,baz=110,slow=7.5,SNR=6.4						
MRSI	Marisa	10.79	313	P	Pn	07 15 23.3	+5.7
FITZ	Fitzroy Crossi	11.72	200	P	Pn	07 15 27.0	-3.1
	3.0nm,0.3s,baz=24,slow=9.7,SNR=32						
FITZ				S	Sn	07 17 26.7	-12
	5.1nm,0.3s,baz=87,slow=20,SNR=11						
JAY	Jayapura	11.79	68	P	Pn	07 15 32.3	+1.2
	2.3nm,0.3s,baz=220,slow=7.4,SNR=4.3						
WB0	Warramunga Arr	13.44	161	Pn	Pn	07 15 48.3	-4.5
WRA	Warramunga Arr	13.59	161	P	Pn	07 15 51.0	-3.7
	2.3nm,0.3s,baz=352,slow=13,SNR=13						
WRA				S	Sn	07 18 11.3	-13
	4.8nm,0.3s,baz=341,slow=23,SNR=20						
COEN	Coen	14.88	119	Pn	Pn	07 16 11.1	-0.2
BBKI	Banjar Baru	15.27	283	P	P	07 16 22.9	+4.1
AS31	Alice Springs	17.02	167	P	Pn	07 16 37.0	-0.9
ASAR	Alice Springs	17.02	167	P	Pn	07 16 37.0	-1.0
	1.1nm,0.3s,baz=340,slow=8.8,SNR=37						
ASAR				S	Sn	07 19 33.4	-14
	1.3nm,0.3s,baz=358,slow=27,SNR=6.2						
ASAR				ScP	ScP	07 24 39.8	-3.6
	0.5nm,0.3s,baz=352,slow=2.1,SNR=12						
ASAR	Alice Springs	17.02	167	P	Pn	07 16 37.2	-0.7
PSA00	Pilbara Seismi	17.35	213	P	Pn	07 16 42.4	+0.5
PMG	Port Moresby	17.38	99	P	Pn	07 16 44.6	+2.2
	1.4nm,0.3s,baz=83,slow=7.4,SNR=5.8						
SBUM	Sibu	19.88	298	P	Pn	07 17 12.1	+0.2
CTA	Charters Tower	20.61	131	P	Pn	07 17 18.2	-2.2
	1.3nm,0.4s,baz=304,slow=11,SNR=2.0						
KSM	Kuching	21.17	293	P	P	07 17 24.6	+1.4
KSM				IAmb	IAmb	07 17 28.5	
	comp=Z,11nm,0.9s						
FORT	Forrest	23.69	184	P	P	07 17 48.5	+0.1
FORT				IAmb	IAmb	07 17 49.5	
	comp=Z,13nm,0.6s						
MORW	Morawa	25.46	209	P	P	07 18 04.1	-0.6
MORW				IAmb	IAmb	07 18 28.5	
	comp=Z,18nm,1.4s						
STKA	Stephens Creek	27.08	157	P	P	07 18 19.0	-0.2
	comp=Z,2.7nm,0.4s,baz=343,slow=8.4,SNR=11						
STKA	Stephens Creek	27.08	157	P	P	07 18 18.8	-0.4
RPSI	Rantau Prapat	32.26	286	P	P	07 19 05.7	+0.6
RPSI	Rantau Prapat	32.26	286	P	P	07 19 05.4	+0.3
PSI	Prapat	32.29	287	P	P	07 19 05.4	-0.2
	comp=Z,7.4nm,0.8s,baz=180,slow=3.3,SNR=7.0						
CMAR	Chiang Mai Arr	39.56	310	P	P	07 20 07.6	+0.1
	comp=Z,1.6nm,0.3s,baz=134,slow=7.3,SNR=11						
CHTO	Chiang Mai	39.78	311	P	P	07 20 08.8	-0.4
CHTO				IAmb	IAmb	07 20 10.6	
	comp=Z,7.5nm,1.2s						
JWT	Wachi	42.41	7	P	P	07 20 30.7	+0.2
KSRS	Korea Array	44.28	358	LR	LR	07 37 14.3	
	comp=Z,153nm,19.8s,baz=50,slow=33						
USRK	Ussuriysk Ar.	51.02	2	P	P	07 21 37.3	-0.2
	comp=Z,1.1nm,0.4s,baz=180,slow=7.6,SNR=5.6						
SONM	Songino Array	58.39	342	P	P	07 22 30.9	0.0
	comp=Z,1.3nm,0.5s,baz=164,slow=5.5,SNR=6.6						
SONM	Songino Array	58.39	342	P	P	07 22 30.8	0.0
PETK	Petropavlovsk-	64.42	18	P	P	07 23 11.6	+0.4
	comp=Z,2.7nm,0.9s,baz=74,slow=2.2,SNR=5.1						
MK31	Makanchi Array	68.11	327	P	P	07 23 34.6	-0.4
MK31				IAmb	IAmb	07 23 35.8	

	comp=Z,3.3nm,0.6s						
MKAR	Makanchi Array	68.11	327	P	P	07 23 34.8	-0.2
	comp=Z,4.2nm,0.4s,baz=114,slow=8.8,SNR=159						
MAKZ	Makanchi	68.29	327	P	P	07 23 36.4	+0.3
MAKZ				IAmb	IAmb	07 23 36.7	
	comp=Z,4.2nm,0.5s						
ZAA0	Zalesovo Array	71.50	334	P	P	07 23 54.9	-0.6
ZALV	Zalesovo Beam	71.50	334	P	P	07 23 54.2	-1.2
	comp=Z,2.5nm,0.6s,baz=140,slow=6.0,SNR=12						
ZALV	Zalesovo Beam	71.50	334	P	P	07 23 54.1	-1.4
SEY	Seymchan	71.87	11	P	P	07 23 57.9	+0.4
	comp=Z,0.7nm,0.3s,baz=344,slow=15,SNR=5.0						
KURK	Kurchatov	72.41	329	P	P	07 24 00.3	-0.7
KURK				IAmb	IAmb	07 24 02.9	
	comp=Z,4.6nm,0.8s						
ABKAR	Akbulak array	82.38	322	P	P	07 24 55.7	-0.9
ABKAR				IAmb	IAmb	07 24 58.0	
	comp=Z,2.3nm,0.5s						
QSPA	South Pole Qui	82.95	180	P	P	07 24 58.5	-1.0
AKTO	Aktyubinsk	83.94	322	P	P	07 25 04.3	-0.4
	comp=Z,1.4nm,0.4s,baz=114,slow=5.6,SNR=7.4						
ILAR	Eielson Array	93.47	25	P	P	07 25 49.8	0.0
	comp=Z,0.3nm,0.7s,baz=270,slow=4.5,SNR=2.7						
TORD	Torodi Ar. Bea	128.58	281	PKP	PKPdf	07 31 41.9	-0.2
	comp=Z,0.7nm,0.5s,baz=74,slow=1.8,SNR=3.6						
CPUP	Villa Florida	146.14	169	PKPbc	PKPbc	07 32 14.9	-0.2
	comp=Z,3.4nm,0.6s,baz=145,slow=2.3,SNR=9.8						
LPAZ	La Paz	150.85	143	PKPbc	PKiKP	07 32 28.8	-0.2
	comp=Z,1.2nm,0.3s,baz=55,slow=2.0,SNR=12						

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*TAP **26** 07:14:32.6, 24°.20N×121°.70E, h10^{km}, ML2.6, C*
*JMA **26** 07:14:32.2±0.1, 24°.17N×121°.76E, h0^{km}*
ISC 26 07:14:32.7±0.9**, 24°.19N**±0°.02×**121°.74E**±0°.03**, h14**^{km}±6^{km}**,**
n42, σ0^{s}.49/83**, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NACB	Ninganchiao	0.13	265	P	Pg	07 14 36.1	-0.2
	baz=256						
NACB				S	Sg	07 14 38.3	-0.4
	baz=256						
TWD	Chiawan	0.17	231	P	Pg	07 14 36.5	-0.2
	baz=217						
TWD				*i* S	Sg	07 14 39.2	-0.3
	baz=217						
ETLH	Xiulin Townshi	0.24	275	P	Pg	07 14 37.8	-0.1
	baz=272						
ETLH				S	Sg	07 14 41.3	-0.2
	baz=272						
ENA	Nanau	0.24	0	*i* P	Pb	07 14 38.4	-0.4
	baz=10.0						
ENA				S	Sb	07 14 42.1	-0.8
	baz=10.0						
HWA	Hwalien	0.24	211	*e*P	Pg	07 14 38.6	+0.7
	baz=199						
HWA				*e*S	Sg	07 14 42.7	+1.2
	baz=199						
EWUT	Wuta	0.26	8	*i* P	Pg	07 14 38.4	+0.1
	baz=15						
EWUT				S	Sb	07 14 42.6	-0.8
	baz=15						
NNSB	Datong	0.41	307	*i* P	Pg	07 14 41.1	+0.2
	baz=308						
NNSB				S	Sg	07 14 46.6	+0.1
	baz=308						
NNSH	Datong	0.41	307	P	Pg	07 14 41.0	+0.2
	baz=308						
NNSH				*e*S	Sg	07 14 46.8	+0.3
	baz=308						
NNS	Nan Shan	0.42	307	P	Pg	07 14 41.2	+0.1
	baz=309						
NNS				*i* S	Sg	07 14 47.3	+0.4
	baz=309						
TWC	Suao	0.43	13	P	Pb	07 14 42.3	+0.2
	baz=19						
TWC				S	Sb	07 14 48.5	+0.1
	baz=19						
WHF	Hehuan Shan	0.44	265	P	Pg	07 14 41.4	-0.2
	baz=262						
WHF				S	Sg	07 14 47.3	-0.3
	baz=262						
NDS	Dongshan	0.45	357	*i* P	Pb	07 14 42.1	-0.2
	baz=1.0						
NDS				S	Sb	07 14 48.5	-0.3
	baz=1.0						
FUSS	Fushou	0.46	278	*i* P	Pg	07 14 42.0	+0.1
	baz=276						
FUSS				S	Sg	07 14 48.3	+0.2
	baz=276						
NDT	Datong Townshi	0.46	333	*i* P	Pb	07 14 42.5	-0.1
	baz=336						
NDT				*i* S	Sb	07 14 49.4	0.0
	baz=336						
ESL	Shilin	0.47	217	P	Pg	07 14 41.6	-0.3
	baz=211						
ESL				S	Sb	07 14 49.2	-0.1
	baz=211						
ENTT	Nioudou	0.48	341	P	Pb	07 14 42.9	0.0
	baz=345						
ENTT				S	Sb	07 14 49.6	-0.2
	baz=345						
TWT	Tachien	0.52	278	P	Pb	07 14 43.5	-0.1
	baz=275						
TWT				S	Sg	07 14 50.5	+0.6
	baz=275						
CHGB	Renai	0.53	257	P	Pb	07 14 43.3	-0.6
	baz=254						
CHGB				*e*S	Sg	07 14 50.2	-0.2
	baz=254						
TDCB	Techi	0.54	277	P	Pb	07 14 43.5	-0.4
	baz=276						
TDCB				S	Sg	07 14 50.4	0.0
	baz=276						
TWE	Neicheng	0.54	353	*e*P	Pb	07 14 43.6	-0.2
	baz=358						
TWE				*e*S	Sb	07 14 51.6	+0.2
	baz=358						
YHNB	Yeheng	0.58	325	P	Pb	07 14 44.8	+0.1
	baz=327						
YHNB				S	Sb	07 14 52.8	-0.1
	baz=327						
NSK	Sanguang	0.60	325	P	Pb	07 14 45.2	+0.2
	baz=327						
NSK				*i* S	Sg	07 14 52.8	+0.4
	baz=327						
NWLT	Wulai	0.63	340	P	Pb	07 14 45.7	+0.2
	baz=342						
NWLT				S	Sg	07 14 53.8	+0.4
	baz=342						
NTC	Toucheng	0.67	7	*e*P	Pb	07 14 46.1	0.0
	baz=10.0						
NTC				*e*S	Sb	07 14 55.8	+0.5
	baz=10.0						
VWDT	VWDT	0.70	232	*e*P	Pb	07 14 46.2	-0.3
	baz=229						
VWDT				*e*S	Sb	07 14 57.4	+1.4
	baz=229						
WHP	Taichung City	0.73	277	*e*P	Pb	07 14 47.1	-0.1
	baz=276						
WHP				S	Sb	07 14 57.3	+0.2
	baz=276						
HGSD	Ruisui	0.75	203	*e*P	Pb	07 14 47.9	+0.4
	baz=199						
HGSD				*e*S	Sn	07 14 59.0	-0.9
	baz=199						
DPDB	Guoxing	0.76	259	*e*P	Pb	07 14 47.6	0.0
	baz=256						
DPDB				*e*S	Sb	07 14 58.3	+0.4
	baz=256						
WCS	Beigang Elemen	0.77	261	*e*P	Pb	07 14 47.5	-0.3
	baz=258						
WCS				*e*S	Sb	07 14 57.8	-0.2
	baz=258						
EHY	Hungye	0.78	210	*e*P	Pb	07 14 47.7	-0.2
	baz=206						
EHY				S	Sb	07 14 59.6	+1.2
	baz=206						
TIPB	Shuangxi	0.79	6	*e*P	Pn	07 14 49.4	0.0
	baz=8.0						
TIPB				*e*S	Sb	07 14 59.2	+0.6
	baz=8.0						
LIOB	Emei	0.80	305	*e*P	Pn	07 14 49.4	-0.1
	baz=305						
LIOB				*e*S	Sg	07 14 57.4	-1.5
	baz=305						
NSTT	Nanjuang	0.81	303	*e*P	Pb	07 14 48.9	+0.5
	baz=304						
NSTT				S	Sg	07 14 59.2	+0.3
	baz=304						
SSLB	Suanglung	0.82	241	*e*P	Pb	07 14 48.4	-0.4
	baz=239						
SSLB				*e*S	Sg	07 14 59.2	-0.2
	baz=239						
SMLT	Sun Moon Lake	0.83	249	*e*P	Pb	07 14 48.9	+0.1
	baz=246						
SMLT				S	Sb	07 15 00.3	+0.5
	baz=246						
TWB1	Santiao Chiao	0.85	15	*e*P	Pb	07 14 49.2	+0.1
	baz=18						
TWB1				S	Sb	07 15 00.8	+0.3
	baz=18						
NWF	Wu-fen Shan	0.88	2	*e*P	Pn	07 14 50.4	-0.3
	baz=4.0						
NWF				S	Sb	07 15 02.7	+1.2
	baz=4.0						
WFSB	Wu-fen Shan	0.88	2	*e*S	Sn	07 15 03.5	+0.3
	baz=4.0						
YULB	Yu-li	0.89	207	*e*P	Pn	07 14 50.3	-0.4
	baz=204						
YULB				*e*S	Sb	07 15 02.5	+0.9
	baz=204						
TWF1	Yuli	0.92	206	*e*P	Pn	07 14 51.0	-0.2
	baz=203						
TWF1				*e*S	Sn	07 15 04.0	-0.3
	baz=203						
YM01	YM01	0.97	351	*e*P	Pn	07 14 52.2	+0.4
	baz=352						
YM01				*e*S	Sb	07 15 04.9	+1.0
	baz=352						
IRIF	Iriomote-Funau	1.82	85	P	Pb	07 15 05.1	-0.7
IRIF				S	Sb	07 15 28.6	+0.2

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*IDC **26** 07:26:33.1±0.7, 44°.06N×148°.81E, h0^{km}, mb4.1/25, mb1 4.2/29, mb1mx4.1/60, mbtmp4.0/29, ML3.4/3, MS3.6/7, Ms1 3.6/7, ms1mx3.1/55, Error ellipse: s-maj=18.8km s-min=13.9km az=132.0*
*SKHL **26** 07:26:34.6±0.5, 43°.80N×149°.20E, h36^{km}, mb4.8/11*
*JMA **26** 07:26:34.3±0.5, 44°.14N×149°.10E, h30^{km}, M4.3*
*NIED **26** 07:26:34.3, 44°.14N×149°.10E, h30^{km}, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$3.51; M$_{\theta\theta}$-0.21; M$_{\phi\phi}$-3.31; M$_{r\theta}$0.19; M$_{\theta\phi}$-0.79; M$_{\phi r}$0.73; Fault plane solution: M$_0$3.59000×10^{15} NP1:φ$_s$14.00000°, δ51.00000°, λ90.00000°. NP2:φ$_s$193.00000°, δ39.00000°, λ90.00000°.*
*MOS **26** 07:26:35.1±1.2, 43°.89N×148°.94E, h33^{km}, mb4.7/21 Error ellipse: s-maj=8.9km s-min=7.0km az=36.1*
*NEIC **26** 07:26:37.9±0.9, 43°.6N±0°.1×149°.0E±0°.1, h60^{km}±9^{km}, mb4.6/18, Error ellipse: s-maj=19.5km s-min=12.4km az=165.0*
ISC 26 07:26:36.5±0.5**, 43°.78N**±0°.05×**148°.98E**±0°.06**, h35**^{km}**, n178,**
σ1^{s}.77/196**, mb4.4**/51**, MS4.1**/7**, 13C, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	1.66	331	*ce*PN	Pn	07 27 01.2	-1.8
KUR				*i* S	Sn	07 27 21.2	-1.8
KUR				pmax	pmax		
	comp=Z,694nm,0.6s						
KUR				pmax	pmax		
	comp=N,421nm,0.4s						
KUR				pmax	pmax		
	comp=E,314nm,0.4s						
KUR				smax	smax		
	comp=N,8µm,1.9s						
KUR				smax	smax		
	comp=E,3µm,1.9s						
KUR				smax	smax		
	comp=N,2µm,0.3s						
KUR				smax	smax		
	comp=E,1µm,0.6s						
KUR	Kuril'sk	1.66	331	*e*P	Pn	07 27 01.0	-2.0
KUR				AMB	AMB	07 27 12.6	
	comp=E,1µm,0.6s						
KUR				*i* S	Sn	07 27 21.0	-2.0
KUR				A	A	07 27 23.3	
	comp=E,8µm,2.0s						
KUR				A	A	07 27 23.3	
	comp=E,3µm,2.0s						
KUR				A	A	07 27 27.3	
	comp=E,2µm,0.5s						
KUR				A	A	07 27 27.3	
	comp=E,2µm,0.5s						
YUK	Yuzh-Kuril'sk	2.27	277	*i* PN	Pn	07 27 11.0	-0.5
YUK	Yuzh-Kuril'sk	2.27	277	*e*P	Pn	07 27 11.0	-0.5
YUK				AMB	AMB	07 27 13.4	
	comp=E,370nm,0.5s						
YUK				*e*S	Sn	07 27 38.6	+0.4
YUK				A	A	07 27 44.2	
	comp=E,2µm,0.7s						
YUK				A	A	07 27 44.2	
	comp=E,3µm,0.7s						
GRPR	Tuman	2.33	276	*e*PN	Pn	07 27 11.8	-0.5
GRPR	Tuman	2.33	276	*e*P	Pn	07 27 11.8	-0.5
NEM2	Nemuro 2	2.39	261	P	Pn	07 27 12.7	-0.4
NEM2				*e*S	Sn	07 27 40.6	-0.6
GLVR	Golovnino	2.51	270	*i* PN	Pn	07 27 14.9	+0.1
GLVR	Golovnino	2.51	270	*e*P	Pn	07 27 14.9	+0.1
JRA	Rausu	2.80	274	P	Pn	07 27 19.1	+0.4
JNK	Nakash	3.10	268	P	Pn	07 27 22.9	0.0
JNK				*e*S	Sn	07 27 58.6	-0.1
JAK	Akkeshi	3.22	257	P	Pn	07 27 24.4	-0.2
JAK				*e*S	Sn	07 28 01.3	-0.4
JTKR	Abashiri--Toko	3.67	275	P	Pn	07 27 31.7	+0.9
JAR	Ashorobuto	3.82	264	P	Pn	07 27 33.6	+0.8
JOB	Onbets	3.86	259	P	Pn	07 27 33.7	+0.4
JOB				*e*S	Sn	07 28 17.1	-0.3
JMP	Maruseppu	4.07	275	P	Pn	07 27 37.3	+1.0
HRK	Horoka	4.26	268	*e*P	Pn	07 27 40.4	+1.5
JCH	Churui	4.27	256	P	Pn	07 27 40.1	+1.1
JCH				*e*S	Sn	07 28 28.4	+0.8
MYR	Moyori	4.44	252	*e*P	Pn	07 27 42.8	+1.6
MYR				*e*S	Sn	07 28 32.5	+0.9
JKK2	Kamakawa 2	4.51	273	P	Pn	07 27 43.7	+1.4
JKA	Kamikawa-asahi	4.62	276	Pn	Pn	07 27 46.2	+2.4
JKA	Kamikawa-asahi	4.62	276	*e*P	Pn	07 27 46.2	+2.4
ASAJ	Asahikawa	4.62	276	Pn	Pn	07 27 45.1	+1.3
	comp=E,1.8nm,0.3s,baz=72,slow=16,SNR=10						
ASAJ				Lg	Lg	07 28 50.8	
	comp=E,1.3nm,0.3s,baz=29,slow=18,SNR=1.4						
ASAJ				LR	LR	07 29 37.8	
	comp=E,648nm,19.2s,baz=133,slow=41						
ASAJ	Asahikawa	4.62	276	P	Pn	07 27 45.7	+1.9
ASAJ	Asahikawa	4.62	276	PN	Pn	07 27 46.2	+2.4
ERM	Erimo	4.63	250	*ce*PN	Pn	07 27 46.0	+2.1
ERM				pmax	pmax		
	comp=Z,197nm,1.3s						
ERM	Erimo	4.63	250	Pn	Pn	07 27 45.0	+1.0
ERM				Sn	Sn	07 28 36.6	+0.2
ERM	Erimo	4.63	250	*e*P	Pn	07 27 46.0	+2.1
JEM	Erimo	4.63	250		Pn	07 27 46.0	+2.1
JEM				Sn	Sn	07 28 39.9	+3.5
JFR	Furan	4.69	265	P	Pn	07 27 46.2	+1.4
JNBK	Urakawa-nobuka	4.81	254	P	Pn	07 27 46.9	+0.5
JAB	Ashibetsu	4.92	269	P	Pn	07 27 50.1	+2.3
JBT2	Biratori 2	4.94	261	P	Pn	07 27 48.5	+0.4
JWK2	Keihoku	5.29	289	P	Pn	07 27 55.6	+2.6
YSS	Yuzh-Sakhalins	5.41	308	*e*PN	Pn	07 27 56.6	+2.0
YSS				*e*S	Sn	07 28 57.4	+1.7
YSS				smax	smax		
	comp=N,40nm,0.8s						
YSS	Yuzh-Sakhalins	5.41	308	*e*P	Pn	07 27 56.0	+1.4
YSS				AMB	AMB	07 28 04.5	
	comp=N,22nm,0.4s						
YSS				*e*S	Sn	07 28 56.3	+0.6
JEW	Eniwo	5.58	263	P	Pn	07 27 59.6	+2.7
JEW	Eniwo	5.58	263	Pn	Pn	07 27 59.2	+2.2
JRBN	Rebuntou	5.89	289	P	Pn	07 28 02.7	+1.6
JNB	Noboribetsu	5.96	260	P	Pn	07 28 03.0	+0.8
JNB				*e*S	Sn	07 29 09.3	+0.1
JKB	Kayabe	6.15	255	P	Pn	07 28 05.3	+0.6
JKB				*e*S	Sn	07 29 11.1	-2.6
JANG	Nango	6.52	241	P	Pn	07 28 08.9	-1.0
JANG				*e*S	Sn	07 29 17.9	-5.0
JTH	Tanohata	6.56	237	P	Pn	07 28 09.2	-1.2
JTH				*e*S	Sn	07 29 17.4	-6.5
JTM	Tenmabayashi	6.59	246	P	Pn	07 28 10.8	0.0
JTM				*e*S	Sn	07 29 20.7	-4.0
JTM	Tenmabayashi	6.59	246	Pn	Pn	07 28 11.3	+0.5
JOSM	Okushiri--Mats	7.18	260	P	Pn	07 28 20.1	+1.1
OFUJ	Ofunato	7.23	232	P	Pn	07 28 18.6	-1.0
OFUJ				*e*S	Sn	07 29 35.0	-5.5
JRG	Rokugo	7.64	238	P	Pn	07 28 25.4	+0.2
JRG				*e*S	Sn	07 29 47.1	-3.4
JIO	Ouri	7.84	230	P	Pn	07 28 27.3	-0.7
JIO				*e*S	Sn	07 29 48.1	-7.4
TYV	Tymovskoe	8.28	331	*e*P	Pn	07 28 34.8	+0.8
TYV				AMB	AMB	07 28 36.3	
	comp=N,6.0nm,0.6s						
SKR	Severo-Kuril’s	8.43	33	*e*P	Pn	07 28 35.2	-0.8
SKR				AMB	AMB	07 28 49.5	
	comp=N,50nm,0.7s						
SKR				*e*S	Sn	07 30 03.3	-6.6
SKR				A	A	07 30 07.3	
	comp=N,40nm,0.4s						
SKR				A	A	07 30 07.3	
	comp=N,30nm,0.4s						
JYA	Atsumi	8.70	237	P	Pn	07 28 39.7	-0.1
PAU	Pauzhetka	9.32	32	*e*P	Pn	07 28 48.6	+0.4
PAU				AMB	AMB	07 28 58.2	
	comp=N,10.0nm,0.5s						
JSD	Sado	9.94	238	Pn	Pn	07 28 56.5	-0.2
OKH	Okha	10.56	340	*e*P	Pn	07 29 06.4	+1.3
OKH				AMB	AMB	07 29 10.1	
	comp=N,45nm,0.4s						
MJAR	Matsushiro Arr	10.96	232	Pn	Pn	07 29 10.9	+0.1
	comp=N,0.2nm,0.3s,baz=31,slow=14,SNR=6.9						
MAJO	Matsushiro	10.96	232	*i* PN	Pn	07 29 11.0	+0.2
MAJO	Matsushiro	10.96	232	*e*P	Pn	07 29 11.1	+0.3
MAT	Matsushiro	10.96	232	P	Pn	07 29 11.1	+0.3
PETK	Petropavlovsk-	10.97	29	Pn	Pn	07 29 11.5	+0.7
	comp=N,0.2nm,0.3s,baz=229,slow=11,SNR=1.9						
PETK				LR	LR	07 33 29.6	
	comp=N,331nm,18.9s,baz=223,slow=39						
JGF	Kuroka	12.11	232	Pn	Pn	07 29 25.9	-0.7
USRK	Ussuriysk Ar.	12.25	278	Pn	Pn	07 29 28.1	-0.3
	baz=120,slow=15,SNR=4.3						
USRK				LR	LR	07 34 30.7	
	comp=N,252nm,18.2s,baz=85,slow=40						
KLR	Kul'dur	13.05	301	Pn	Pn	07 29 42.1	+2.9
	comp=N,0.1nm,0.3s,baz=136,slow=12,SNR=4.3						
KLR				LR	LR	07 34 29.5	
	comp=N,180nm,21.7s,baz=86,slow=37						
KLR	Kul'dur	13.05	301	*ce*PN	Pn	07 29 37.4	-1.9
KLR	Kul'dur	13.05	301	*e*P	Pn	07 29 37.4	-1.9
EKMR	Ekimchan	14.10	317	*e*P	Pn	07 29 50.0	-3.6
EKMR				AMB	AMB	07 30 03.9	
	comp=N,11nm,1.0s						
BMKR	Bomnak	17.03	317	*e*P	Pn	07 30 28.0	-3.7
BMKR				AMB	AMB	07 30 33.8	
	comp=N,7.0nm,0.4s						
KSRS	Korea Array	17.17	256	P	Pn	07 30 34.0	+0.4
	comp=N,0.1nm,0.3s,baz=61,slow=12,SNR=3.0						
KSRS	Korea Array	17.17	256	*e*P	Pn	07 30 34.0	+0.4
JNU	Nakatsue	17.69	239	LR	LR	07 37 02.8	
	comp=N,186nm,19.3s,baz=37,slow=36						
KROS	Kirovskiy	17.84	314	*e*P	Pn	07 30 38.0	-3.8
KROS				AMB	AMB	07 30 41.8	
	comp=N,2.0nm,0.5s						
SEY	Seymchan	19.29	5	P	P	07 30 55.7	-2.2
	comp=N,0.2nm,0.3s,baz=185,slow=8.3,SNR=8.8						
YAK	Yakutsk	21.51	335	P	P	07 31 18.9	-3.1
	comp=N,7.6nm,0.4s,baz=304,slow=4.2,SNR=4.6						
YAK	Yakutsk	21.51	335	*e*P	P	07 31 18.4	-3.6
YAK				pmax	pmax		
	comp=Z,18nm,0.8s						
YAK				pmax	pmax		
	comp=N,2.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,3.0nm,0.9s						
BJI	Beijing	24.61	273	P	P	07 31 52.8	-0.5
BJI				pmax	pmax		
	comp=Z,6.0nm,1.2s						
BJI				pmax	pmax		
	comp=Z,86nm,4.1s						
BJT	Baijiatuau	24.62	273	P	P	07 31 52.9	-0.5
BJT				pmax	pmax		
	comp=Z,16nm,1.5s						
BJT	Baijiatuau	24.62	273	P	P	07 31 52.9	-0.5
BJT	Baijiatuau	24.62	273	*e*P	P	07 31 52.9	-0.5
TIA	Tai'an	25.44	264	P	P	07 32 02.8	+1.9
TIA				pmax	pmax		
	comp=Z,28nm,0.8s						
NJ2	Nanjing	26.35	254	*e*P	P	07 32 08.3	-0.9
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.6s						
HHC	Hu-ho-hao-te	27.67	277	*e*P	P	07 32 21.5	+0.4
HHC				pmax	pmax		
	comp=Z,7.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,220nm,7.7s						
H11N2	WAKE ISLAND Hy	28.29	142	T	T	08 03 30.6	
	baz=332,slow=75,SNR=38						
H11N1	WAKE ISLAND Hy	28.30	142	T	T	08 03 31.1	
	baz=332,slow=75,SNR=37						
H11N3	WAKE ISLAND Hy	28.30	142	T	T	08 03 31.2	
	baz=332,slow=75,SNR=47						
ULN	Ulaanbaatar	29.24	293	*ce*P	P	07 32 35.4	+0.3
ULN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ULN	Ulaanbaatar	29.24	293	P	P	07 32 35.2	+0.1
ULN				IAmb	IAmb	07 32 36.6	
	comp=Z,15nm,1.4s						
ULN	Ulaanbaatar	29.24	293	*e*P	P	07 32 35.4	+0.3
H11S1	WAKE ISLAND Hy	29.28	144	T	T	08 04 44.8	
	baz=334,slow=76,SNR=34						
H11S3	WAKE ISLAND Hy	29.29	144	T	T	08 04 46.9	
	baz=334,slow=76,SNR=36						
H11S2	WAKE ISLAND Hy	29.30	144	T	T	08 04 45.7	
	baz=334,slow=76,SNR=44						
SONM	Songino Array	29.68	293	P	P	07 32 39.3	+0.3
	comp=Z,1.5nm,0.6s,baz=80,slow=8.6,SNR=10						
SONM	Songino Array	29.68	293	P	P	07 32 38.2	-0.8
SONM				pmax	pmax		
	comp=Z,3.0nm,1.0s						
SONM	Songino Array	29.68	293	P	P	07 32 38.2	-0.8
TLY	Talaya	31.07	301	LR	LR	07 46 15.7	
	comp=Z,165nm,18.5s,baz=77,slow=38						
XAN	Xi'an	32.38	266	P	P	07 33 11.5	+8.7
XAN				pP	pwP	07 33 20.3	+3.4
XAN				pmax	pmax		
	comp=Z,6.0nm,1.1s						
XAN				LR	LR		
	comp=E,280nm,15.2s						
XAN				LR	LR		
	comp=Z,300nm,17.3s						
LZH	Lanzhou	35.10	273	*e*P	P	07 33 28.0	+1.5
LZH				pP	pwP	07 33 40.5	-0.3
LZH				sP	sP	07 33 46.8	+7.7
LZH				pmax	pmax		
	comp=Z,20nm,1.1s						
GTA	Gaotai	36.60	281	*e*P	P	07 33 40.5	+1.2
GTA				pP	pwP	07 33 53.0	-2.1
GTA				sP	sP	07 33 58.5	+7.3
GTA				SS	SS	07 41 45.8	-14
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,150nm,5.5s						
GTA				LR	LR		
	comp=N,180nm,15.6s						
GTA				LR	LR		
	comp=E,210nm,15.6s						
GTA				LR	LR		
	comp=Z,210nm,17.1s						
SEW	Seward	39.69	44	P	P	07 34 03.5	-1.4
TOLK	Toolik Lake Re	39.79	30	P	P	07 34 06.2	+0.6
ILAR	Eielson Array	40.67	36	P	P	07 34 13.5	+0.5
	comp=Z,0.4nm,0.9s,baz=262,slow=11,SNR=3.1						
DGZ	Jazzator, Alta	41.55	301	*i* P	P	07 34 21.5	+0.9
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BMAR	Burnt Mountain	41.60	32	P	P	07 34 20.5	-0.1
ZALV	Zalesovo Beam	42.04	307	P	P	07 34 24.6	+0.3
	comp=Z,0.3nm,0.4s,baz=90,slow=7.2,SNR=2.0						
ZALV				PcP	PcP	07 36 19.6	+0.9
	comp=Z,0.8nm,0.6s,baz=64,slow=3.4,SNR=4.6						
BCAR	Beaver Creek A	43.04	39	P	P	07 34 33.6	+1.1
WMQ	Urumqi	43.31	292	P	P	07 34 36.5	+1.6
WMQ				pP	sP	07 34 46.5	-0.9
WMQ				sP	pwP	07 34 53.0	+3.3
WMQ				pmax	pmax		
	comp=Z,19nm,0.9s						
WMQ				pmax	pmax		

	comp=Z,360nm,6.5s						
WMQ				LR	LR		
	comp=E,460nm,19.7s						
WMQ				LR	LR		
	comp=Z,230nm,20.3s						
WMQ	Urumqi	43.31	292	P	P	07 34 34.7	-0.2
WMQ				pmax	pmax		
	comp=Z,11nm,0.9s						
WMQ	Urumqi	43.31	292	P	P	07 34 34.7	-0.2
WMQ				IAmb	IAmb	07 34 36.6	
	comp=Z,11nm,0.9s						
INK	Inuvik	45.70	30	P	P	07 34 54.8	+1.3
	comp=Z,1.3nm,0.5s,baz=280,slow=6.0,SNR=6.7						
INK	Inuvik	45.70	30	P	P	07 34 54.4	+0.9
INK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
INK	Inuvik	45.70	30	P	P	07 34 54.4	+0.9
MK31	Makanchi Array	45.74	298	P	P	07 34 53.8	-0.4
MK31				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MK31	Makanchi Array	45.74	298	P	P	07 34 53.8	-0.4
MK31				IAmb	IAmb	07 34 55.1	
	comp=Z,5.8nm,0.8s						
MKAR	Makanchi Array	45.74	298	P	P	07 34 54.4	+0.2
	comp=Z,6.0nm,0.8s,baz=78,slow=8.5,SNR=36						
MKAR	Makanchi Array	45.74	298	P	P	07 34 53.3	-0.9
MKAR	Makanchi Array	45.74	298	eP	P	07 34 54.4	+0.2
MAKZ	Makanchi	45.94	298	P	P	07 34 55.5	-0.2
MAKZ				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MAKZ	Makanchi	45.94	298	P	P	07 34 55.5	-0.2
MAKZ				IAmb	IAmb	07 34 56.7	
	comp=Z,6.2nm,0.8s						
KURK	Kurchatov	46.61	305	ceP	P	07 35 00.1	-0.8
KURK				pmax	pmax		
	comp=Z,2.0nm,0.5s						
KURK	Kurchatov	46.61	305	P	P	07 35 00.6	-0.3
KURK				IAmb	IAmb	07 35 00.9	
	comp=Z,7.5nm,1.4s						
KURK	Kurchatov	46.61	305	eP	P	07 35 00.1	-0.8
KURBB	Kurchatov Arra	46.70	304	PcP	PcP	07 36 35.7	+1.0
	comp=Z,0.7nm,0.8s,baz=67,slow=3.9,SNR=4.3						
CMAR	Chiang Mai Arr	48.81	255	P	P	07 35 20.6	+2.2
	comp=Z,0.8nm,0.3s,baz=34,slow=6.9,SNR=1.1						
CMAR				LR	LR	07 57 30.9	
	comp=Z,57nm,18.2s,baz=60,slow=38						
C36M	Paulatuk	48.83	28	P	P	07 35 18.1	+0.4
C36M				IAmb	IAmb	07 35 18.6	
	comp=Z,9.3nm,1.2s						
SHL	Shillong	49.36	268	P	P	07 35 22.2	-0.5
SHL				pmax	pmax		
	comp=Z,7.0nm,1.1s						
SHL	Shillong	49.36	268	P	P	07 35 22.2	-0.5
SHL				IAmb	IAmb	07 35 23.8	
	comp=Z,7.4nm,1.1s						
BRVK	Borovoye	50.55	310	ceP	P	07 35 30.5	-0.7
BRVK				pmax	pmax		
	comp=Z,8.0nm,2.5s						
BRVK	Borovoye	50.55	310	P	P	07 35 31.2	+0.1
BRVK	Borovoye	50.55	310	eP	P	07 35 31.2	+0.1
AAK	Ala-Archa	52.54	296	ceP	P	07 35 46.6	+0.2
AAK				pmax	pmax		
	comp=Z,17nm,1.3s						
AAK	Ala-Archa	52.54	296	eP	P	07 35 46.6	+0.2
KSH	Kashi	53.08	292	P	P	07 35 57.8	+7.4
KSH				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KSH				pmax	pmax		
	comp=Z,430nm,5.7s						
RES	Resolute Bay	54.55	17	P	P	07 36 00.5	+0.1
	comp=Z,2.0nm,0.7s,baz=310,slow=6.4,SNR=8.4						
KKAR	Karatay Array	54.87	299	P	P	07 36 02.2	-1.0
KKAR				pmax	pmax		
	comp=Z,9.0nm,1.4s						
KKAR	Karatay Array	54.87	299	P	P	07 36 02.2	-1.0
KKAR	Karatay Array	54.87	299	P	P	07 36 02.5	-0.8
KKAR				IAmb	IAmb	07 36 04.3	
	comp=Z,9.3nm,1.4s						
YKA	Yellowknife Ar	55.03	34	P	P	07 36 04.7	+0.6
	comp=Z,0.7nm,0.9s,baz=299,slow=6.4,SNR=7.1						
YKA	Yellowknife Ar	55.03	34	ceP	P	07 36 05.5	+1.4
YKA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ARU	Arti	55.23	317	c iP	P	07 36 04.0	-1.6
ARU						07 38 05.5	
ARU				S	S	07 43 45.2	-1.1
ARU				SS	SS	07 47 27.7	-2.4
ARU				pmax	pmax		
	comp=Z,13nm,2.4s						
ARU	Arti	55.23	317	eP	P	07 36 04.0	-1.6
NIL	Nilore	58.05	288	P	P	07 36 26.1	+0.1
NIL				pmax	pmax		
	comp=Z,10.0nm,0.7s						
NIL	Nilore	58.05	288	P	P	07 36 26.1	+0.1
ABKAR	Akbulak array	58.07	309	P	P	07 36 25.8	-0.2
AKTO	Aktyubinsk	58.52	311	P	P	07 36 29.1	+0.1
	comp=Z,1.1nm,0.4s,baz=65,slow=4.7,SNR=4.7						
ARCES	ARCESS Array B	59.67	340	P	P	07 36 35.5	-1.2
	comp=Z,3.3nm,0.9s,baz=36,slow=7.8,SNR=1.5						
PSI	Prapat	60.14	242	P	P	07 36 42.6	+1.9
	comp=Z,2.1nm,0.3s,baz=0.0,slow=12,SNR=1.4						
KBL	Kabul	60.42	291	P	P	07 36 41.8	-0.8
KBL				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KBL	Kabul	60.42	291	P	P	07 36 41.8	-0.8
WRA	Warramunga Arr	64.82	195	P	P	07 37 14.2	+2.5
	comp=Z,0.9nm,1.0s,baz=26,slow=6.7,SNR=2.4						
FITZ	Fitzroy Crossi	65.19	205	P	P	07 37 18.1	+4.0
	comp=Z,1.0nm,0.5s,baz=0.0,slow=8.1,SNR=1.7						
FINES	FINESS Array B	65.44	334	P	P	07 37 14.3	-1.0
	comp=Z,4.8nm,0.6s,baz=38,slow=7.3,SNR=21						
FINES	FINESS Array B	65.44	334	i P	P	07 37 14.6	-0.7
FINES				pmax	pmax		
	comp=Z,5.0nm,0.6s						
FINES	FINESS Array B	65.44	334	P	P	07 37 14.6	-0.7
GEYT	Alibeck	65.58	300	P	P	07 37 17.8	+1.1
	comp=Z,2.7nm,0.8s,baz=36,slow=13,SNR=4.0						
GEYT	Alibeck	65.58	300	P	P	07 37 16.6	-0.1
NVAR	Mina Array Bea	66.43	59	P	P	07 37 24.1	+1.8
	comp=Z,0.2nm,0.6s,baz=273,slow=8.9,SNR=1.8						
ASAR	Alice Springs	68.53	195	P	P	07 37 38.0	+2.7
	comp=Z,0.5nm,0.7s,baz=13,slow=6.0,SNR=4.6						
PDAR	Pinedale Array	68.87	51	P	P	07 37 40.9	+3.2
	comp=Z,0.3nm,0.7s,baz=340,slow=4.1,SNR=2.2						
MNK	Minsk	70.01	328	i P	P	07 37 43.0	-1.2
	comp=E,2.0nm,0.9s						
MNK				i P	P	07 37 43.0	-1.2
	comp=N,24nm,0.9s						
MNK				i P	P	07 37 43.0	-1.2
	comp=Z,8.0nm,0.9s						
MNK				i PcP	PcP	07 38 04.3	-1.9
MNK				i PP	PP	07 40 18.5	-0.2
MNK				i PPP	PPP	07 42 01.0	
MNK				i S	S	07 46 52.3	+0.4
MNK				i SS	SS	07 51 15.3	-5.2
MNK				i SSS	SSS	07 52 59.8	
MNK				i LQ	LQ	08 02 47.2	
MNK				i LR	LR	08 06 34.4	
MNK				i LRM	MLR	08 11 36.7	
	comp=N,60nm,19.3s						
MNK				i LRM	MLR	08 11 39.3	
	comp=E,8.0nm,19.3s						
MNK				i LRM	MLR	08 11 41.9	
	comp=Z,132nm,19.3s						
NB2	NORSAR Subarra	70.04	340	P	P	07 37 44.2	-0.1
	comp=Z,1.4nm,0.5s,baz=30,slow=6.5						
NOA	NORSAR Array B	70.04	340	P	P	07 37 43.8	-0.5
	comp=Z,5.3nm,0.8s,baz=32,slow=6.6,SNR=12						
KIV	Kislovodsk	70.72	313	i P	P	07 37 50.2	+1.3
KIV				i		07 38 02.4	
KIV				i		07 38 09.0	
KIV				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KIV				MLR	MLR		
	comp=Z,195nm,16.0s						
KIV	Kislovodsk	70.72	313	eP	P	07 37 50.2	+1.3
KBZ	Khabaz	70.76	312	P	P	07 37 50.4	+1.4
	comp=Z,5.6nm,0.8s,baz=57,slow=4.7,SNR=14						
KBZ	Khabaz	70.76	312	ceP	P	07 37 50.6	+1.6
KBZ	Khabaz	70.76	312	eP	P	07 37 50.6	+1.6
AKASG	Malin Array Be	72.33	325	P	P	07 37 57.1	-1.2
	comp=Z,1.3nm,0.5s,baz=37,slow=6.7,SNR=10						
AKASG	Malin Array Be	72.33	325	ceP	P	07 37 58.2	-0.1
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKBB	Malin Array Si	72.33	325	ceP	P	07 37 58.1	-0.2
LVV	L'vov	75.14	327	eP	P	07 38 24.1	+9.3
CLL	Collm	77.89	334	eP	P	07 38 30.0	-0.3
CLL				i (pP)	sP	07 38 44.2	+1.5
	comp=Z,9.0nm,0.9s						
CLL	Collm	77.89	334	eP	P	07 38 30.0	-0.3
CLL				i		07 38 44.2	
BRTR	Keskin Array B	78.47	315	P	P	07 38 34.8	+0.8
	comp=Z,0.5nm,0.6s,baz=46,slow=10,SNR=2.1						
KHC	Kasperske Hory	79.56	332	ceP	P	07 38 41.5	+1.9
KHC				pmax	pmax		
	comp=Z,25nm,2.5s						
GERES	GERESS Array B	79.77	332	P	P	07 38 41.4	+0.5
	comp=Z,1.6nm,0.8s,baz=43,slow=6.0,SNR=5.7						
MMAI	Mount Meron Ar	82.50	309	P	P	07 38 57.8	+2.2
	comp=Z,0.3nm,0.3s,baz=116,slow=3.4,SNR=1.6						
H03N2	Juan Fernandez	141.63	91	T	T	10 24 51.3	
	baz=304,slow=77,SNR=4.4						
H03N3	Juan Fernandez	141.65	91	T	T	10 24 57.8	
	baz=304,slow=77,SNR=5.3						
H03N1	Juan Fernandez	141.65	91	T	T	10 24 55.4	
	baz=304,slow=77,SNR=4.8						

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*NOU **26** 07:26:42.5, 31°.07S×175°.76W, h406^{km}, mb4.3, Kermadec Islands Region*

*IDC **26** 07:27:06.8±0.9, 31°.76S×179°.84W, h349^{km}±8^{km}, mb3.7/4, mb1 3.8/8, mb1mx3.5/38, mbtmp4.5/8, Error ellipse: s-maj=24.2km s-min=12.6km az=132.0*

*NEIC **26** 07:27:09.2±1.9, 31°.9S±0°.1×179°.8E±0°.2, h354^{km}±9^{km}, mb4.3/13, Error ellipse: s-maj=21.3km s-min=18.6km az=214.0*

*WEL **26** 07:27:12.5±0.8, 32°S±6°×18°0W±1°6, h277^{km}±14^{km}, M4.8/13, mB4.9/6, MLv5.2/13, Mw(mB)4.2/6, Error ellipse: s-maj=0.0km s-min=0.0km az=109.3*

ISC 26 07:27:07.5±0.5**, 31°.71S**±0°.06×**179°.98W**±0°.08**, h350**^{km}**, n75, σ2^{s}03**/90**, mb4.2**/10**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.02	37	P	Pn	07 28 05.7	-1.4
GLKZ				S	S	07 28 50.5	-4.5
RAO	Raoul Island	3.03	36	P	Pn	07 28 06.8	-0.4
	51nm,0.3s,baz=73,slow=20,SNR=1.9						
RAO				S	S	07 28 54.0	-1.1
	110nm,0.3s,baz=89,slow=23,SNR=2.7						
RIZ	Raoul Island	3.03	36	S	S	07 28 52.7	-2.5
MXZ	Matakaoa Point	6.01	193	P	Pn	07 28 40.8	+2.5
MXZ				S	S	07 29 50.2	-1.7
WMGZ	Waiomatatini S	6.24	192	P	Pn	07 28 44.1	+3.2
WMGZ				S	S	07 29 56.4	-0.3
HAZ	Te Kaha	6.31	196	P	Pn	07 28 43.9	+2.2
HAZ				S	S	07 29 57.4	-0.8
WCZ	Waipu Caves	6.33	227	P	Pn	07 28 46.5	+4.5
PKGZ	Pakihiroa	6.37	194	P	Pn	07 28 46.7	+4.2
PKGZ				S	S	07 29 58.0	-1.6
OUZ	Omahuta	6.41	235	P	Pn	07 28 46.7	+3.8
PUZ	Puketiti	6.51	192	P	Pn	07 28 44.8	+0.8
PUZ				S	S	07 30 00.7	-1.8
RUGZ	Raukumara Rang	6.53	197	P	Pn	07 28 47.1	+2.7
RUGZ				S	S	07 30 00.5	-2.6
WHRZ	Whale Island	6.62	201	P	S	07 30 08.4	+3.5
TWGZ	Tauwhareparae	6.67	194	P	Pn	07 28 49.9	+4.0
TWGZ				S	S	07 30 06.3	+0.4
MWZ	Matawai	6.92	197	P	Pn	07 28 49.4	+0.5
MWZ				S	S	07 30 09.9	-1.4
TKGZ	Te Karaka	6.95	194	P	Pn	07 28 49.4	+0.3
TKGZ				S	S	07 30 09.9	-1.9
URZ	Urewera	6.96	199	P	Pn	07 28 49.2	0.0
	8.7nm,0.3s,baz=268,slow=2.6,SNR=45						
URZ				S	S	07 30 10.5	-1.5
	12nm,0.3s,baz=317,slow=4.2,SNR=6.2						
URZ	Urewera	6.96	199	Pn	Pn	07 28 47.8	-1.5
URZ	Urewera	6.96	199	P	Pn	07 28 49.3	0.0
URZ				P	S	07 30 10.8	-1.1
RAGZ	Rawiri	7.10	197	P	Pn	07 28 54.4	+3.4
RAGZ				P	S	07 30 08.2	-6.9
RIGZ	Rimuhau	7.22	194	P	Pn	07 28 54.4	+2.0
PRGZ	Paritu Road	7.41	193	P	Pn	07 28 56.5	+2.0
MTHZ	Maungataniwha	7.59	199	P	Pn	07 28 59.1	+2.4
BKZ	Black Stump Fm	7.98	200	Pn	Pn	07 29 00.1	-1.2
BFZ	Birch Farm	9.46	198		Pn	07 29 17.9	-1.0
MSWZ	Moikau Station	10.42	200		Pn	07 29 29.9	-0.4
SNZO	South Karori	10.49	203	P	Pn	07 29 29.9	-1.2
BHW	Baring Head	10.53	202		Pn	07 29 30.5	-1.1
PLWZ	Palliser	10.56	200		Pn	07 29 31.1	-0.9
TUWZ	Tuamarina	10.86	205	P	Pn	07 29 34.0	-1.6
NNZ	Nelson	10.89	208	P	Pn	07 29 34.5	-1.4
QRZ	Quartz Range	10.92	212	P	Pn	07 29 35.6	-0.7
BSWZ	Blackbirch Sta	11.13	205	P	Pn	07 29 38.3	-0.6
THZ	Tophouse	11.54	208	P	Pn	07 29 43.2	-0.5
KHZ	Kahutara	11.87	204	P	P	07 29 46.4	-1.1
RPZ	Rata Peaks	13.92	208	P	P	07 30 09.3	-0.8
	0.6nm,0.3s,baz=0.0,slow=4.0,SNR=1.1						
RPZ				S	S	07 32 33.6	-7.9
	1.2nm,0.3s,baz=353,slow=21,SNR=10						
OUENC	Ouen Island, N	14.94	305	P	Pn	07 30 23.5	-0.3
	35nm,2.0s						
YATNC	Mamie plateau,	15.14	306	P	Pn	07 30 26.7	+0.6
DZM	Mont Dzumac	15.44	305	P	Pn	07 30 28.4	-1.3
	0.7nm,0.3s,baz=179,slow=18,SNR=11						
DZM	Mont Dzumac	15.44	305	P	Pn	07 30 28.6	-1.1
DZM				IAmb	IAmb	07 30 30.4	
	comp=Z,29nm,1.5s						
DZM	Mont Dzumac	15.44	305	P	Pn	07 30 29.1	-0.6
EIDS	Eidsvold	26.15	277	P	P	07 32 12.2	+1.1
EIDS				IAmb	IAmb	07 32 12.7	
	comp=Z,14nm,1.1s						
CTAO	Charters Tower	32.38	283	P	P	07 33 07.0	+1.1
STKA	Stephens Creek	32.55	259	P	P	07 33 08.9	+1.7
	comp=Z,4.1nm,0.3s,baz=98,slow=11,SNR=16						
STKA	Stephens Creek	32.55	259	P	P	07 33 08.5	+1.3
BBOO	Buckleboo	37.00	256	P	P	07 33 45.3	+0.4
BBOO				IAmb	IAmb	07 33 46.0	
	comp=Z,21nm,1.4s						
ASAR	Alice Springs	41.37	269	P	P	07 34 20.6	-0.2
	comp=Z,2.3nm,0.6s,baz=108,slow=7.7,SNR=30						
WB2	Warramunga Arr	42.47	275	P	P	07 34 29.2	-0.5
WB2				IAmb	IAmb	07 34 29.7	
	comp=Z,7.9nm,0.5s						
WRA	Warramunga Arr	42.48	275	P	P	07 34 29.1	-0.6
	comp=Z,4.0nm,0.4s,baz=113,slow=7.8,SNR=19						
WRA	Warramunga Arr	42.48	275	P	P	07 34 29.0	-0.7
PTCN	Pitcairn Islan	44.07	94	P	P	07 34 45.6	+3.3
FORT	Forrest	44.09	257	P	P	07 34 42.1	-0.2
FORT				IAmb	IAmb	07 34 42.4	
	comp=Z,16nm,0.6s						
FITZ	Fitzroy Crossi	50.69	272	P	P	07 35 32.4	-0.4
	comp=Z,2.9nm,0.7s,baz=120,slow=8.1,SNR=4.7						
FITZ	Fitzroy Crossi	50.69	272	P	P	07 35 32.6	-0.2
QSPA	South Pole Qui	58.40	180	P	P	07 36 28.9	+1.8
QSPA				IAmb	IAmb	07 36 30.4	
	comp=Z,9.3nm,0.9s						
BELA	Belgrano 2	68.71	173	P	P	07 37 35.0	+1.4
SNAA	Sanae	76.89	179	P	P	07 38 22.3	+1.0
SNAA	Sanae	76.89	179	P	P	07 38 22.4	+1.0
SNAA				IAmb	IAmb	07 38 22.8	
	comp=Z,3.6nm,0.9s						
VNA3	Neumayer Olymp	77.11	177	P	P	07 38 23.5	+1.0
VNA2	Neumayer--Watz	77.52	178	P	P	07 38 26.1	+1.3
	baz=187,slow=4.7						
VNA1	Neumayer--Stat	77.76	177	P	P	07 38 27.4	+1.3
YKA	Yellowknife Ar	107.36	26	Pdiff	Pdif	07 40 45.9	+0.5
	comp=Z,0.2nm,0.6s,baz=268,slow=6.2,SNR=2.8						
MKAR	Makanchi Array	117.31	310	PKP	PKPdf	07 45 10.1	-1.3
	comp=Z,0.5nm,0.6s,baz=104,slow=1.1,SNR=5.6						
NRIK	Noril'sk	120.14	336	PKP	PKPdf	07 45 14.9	-1.2
	comp=Z,1.7nm,0.5s,baz=129,slow=6.5,SNR=3.7						
KURBB	Kurchatov Arra	120.76	313	PKP	PKPdf	07 45 16.8	-1.0
	comp=Z,23nm,0.5s,baz=106,slow=2.0,SNR=14						
BVAR	Borovoye Array	126.15	315	PKP	PKPdf	07 45 27.6	-0.5
	comp=Z,0.5nm,0.3s,baz=184,slow=10,SNR=10						
ARU	Arti	133.00	320	PKP	PKiKP	07 45 41.9	-0.4
	comp=Z,0.7nm,0.3s,baz=209,slow=8.0,SNR=3.6						
ARCES	ARCESS Array B	139.49	347	PKhKP	PKPpre	07 45 44.4	
	comp=Z,0.6nm,0.4s,baz=53,slow=1.8,SNR=14						
ARCES				PKP	PKPdf	07 45 53.7	+1.0
	comp=Z,2.0nm,0.5s,baz=45,slow=1.5,SNR=11						
BELG	Belogornoye	139.95	315	PKP	PKiKP	07 45 56.0	-0.5
	comp=Z,9.2nm,0.7s,baz=192,slow=9.3,SNR=2.4						
FIA1	FINESS Array S	145.75	338		PKPbc	07 46 04.5	-0.6
FINES	FINESS Array B	145.75	338	PKPbc	PKPbc	07 46 04.3	-0.8
	comp=Z,13nm,0.5s,baz=45,slow=4.6,SNR=112						
NB2	NORSAR Subarra	149.75	349	PKP	PKPbc	07 46 15.2	-0.5
	comp=Z,2.3nm,0.5s,baz=17,slow=2.6						
NOA	NORSAR Array B	149.75	349	PKPbc	PKPbc	07 46 15.3	-0.5
	comp=Z,3.9nm,0.6s,baz=17,slow=4.2,SNR=16						
NBO00	NORSAR Array S	149.83	350	PKPbc	PKPbc	07 46 15.8	0.0
AKASG	Malin Array Be	151.26	320	PKPbc	PKPbc	07 46 18.9	-0.6
	comp=Z,2.5nm,0.6s,baz=58,slow=2.7,SNR=12						
BRTR	Keskin Array B	151.69	296	PKPbc	PKPbc	07 46 19.9	-1.2
	comp=Z,1.1nm,0.5s,baz=170,slow=3.8,SNR=5.5						

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*MAN **26** 07:28:08.2, 5°.38N×126°.43E, h129^{km}, mb4.8, ML3.7, MS3.6*

*DJA **26** 07:28:13.8±1.6, 5°N±15°×12°7E±°, h167^{km}±6^{km}, M4.3/7, mb4.4/6, mB4.8/4, MLv4.4/7, Mw(mB)4.0/4*

*IDC **26** 07:28:15.6±1.6, 5°.55N×126°.02E, h167^{km}±15^{km}, mb3.6/9, mb1 3.7/9, mb1mx3.3/50, mbtmp4.1/9, Error ellipse: s-maj=29.4km s-min=11.6km az=74.0*

ISC 26 07:28:12.2±0.8**, 5°.57N**±0°.05×**126°.26E**±0°.10**, h136**^{km}±7^{km}**, n26, σ1^{s}54**/35**, mb3.9**/10**, 2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	0.76	314	eP	Pn	07 28 32.1	-1.5
DDMP				eS	Sn	07 28 48.9	-1.0
MATI	Mati	1.36	360	eP	Pn	07 28 38.6	-0.7
MATI				eS	Sn	07 28 59.6	-0.3
DAV	Davao City (W)	1.63	336	P	Pn	07 28 47.5	+5.3
	72nm,0.3s,baz=80,slow=12,SNR=2.0						
DAV				S	Sn	07 29 08.1	+2.9
	164nm,0.3s,baz=135,slow=18,SNR=8.5						
KCP	Kidapawan	1.84	321	⇓eP	Pn	07 28 46.4	+1.7
KCP				i S	Sn	07 29 12.2	+2.6
SKMP	Bagumbayan, Su	1.95	299	eP	Pn	07 28 45.0	-0.9
SKMP				eS	Sn	07 29 09.6	-2.1
SGSI	Sangihe	2.01	201	P	Pn	07 28 48.0	+1.3
SGSI				S	Sn	07 29 15.3	+2.2
BUKP	Musuan	2.58	333	eP	Pn	07 28 53.1	-0.7
BUKP				eS	Sn	07 29 27.5	+1.8
CGP	Cagayan de Oro	3.26	332	⇓eP	Pn	07 29 01.8	-0.6
CGP				eS	Sn	07 29 42.3	+1.1
PAGZ	Pagadian	3.65	308	eP	Pn	07 29 06.9	-0.5
GLSP	General Luna,	4.18	358	eP	Pn	07 29 13.9	-0.7
GTOI	Gorontalo	5.88	214	P	Pn	07 29 38.5	+1.3
	0.1nm390nm39nm,0.8s						
MRSI	Marisa	6.65	221	P	Pn	07 29 49.7	+2.1
	0.3nm1μm54nm,0.5s						
LUWI	Luwuk	7.44	208	P	Pn	07 29 58.4	+0.2
	0.4nm40nm,0.6s						
SANI	Sanana	7.58	182	P	Pn	07 29 57.6	-2.4
	0.3nm971nm23nm,0.8s						
NLAI	Namlea	8.79	175	P	Pn	07 30 13.3	-3.1
FITZ	Fitzroy Crossi	23.53	181	P	P	07 33 10.9	+0.7
	2.2nm,0.4s,baz=11,slow=8.9,SNR=7.8						
WRA	Warramunga Arr	26.57	163	P	P	07 33 37.7	-0.1
	0.4nm,0.3s,baz=340,slow=10,SNR=6.1						
PSI	Prapat	27.40	265	P	P	07 33 43.9	-1.5
	2.2nm,0.4s,baz=180,slow=17,SNR=2.1						
ASAR	Alice Springs	30.00	166	P	P	07 34 08.7	+0.4
	1.3nm,0.5s,baz=343,slow=7.0,SNR=43						
ASAR				PcP	PcP	07 37 07.8	+0.5
	0.9nm,0.6s,baz=349,slow=2.8,SNR=8.3						
USRK	Ussuriysk Ar.	38.80	7	P	P	07 35 24.6	+1.0
	1.4nm,0.4s,baz=185,slow=7.4,SNR=7.8						
STKA	Stephens Creek	40.01	160	P	P	07 35 35.0	+1.2
	3.3nm,0.4s,baz=333,slow=9.3,SNR=8.8						
MKAR	Makanchi Array	55.79	325	P	P	07 37 34.7	-0.5
	0.7nm,0.5s,baz=115,slow=7.0,SNR=12						
MKAR				PcP	PcP	07 38 32.2	-0.4
	0.6nm,0.7s,baz=112,slow=5.6,SNR=3.2						
KURBB	Kurchatov Arra	59.95	327	P	P	07 38 01.9	-2.2
	0.4nm,0.6s,baz=119,slow=7.8,SNR=4.1						
ILAR	Eielson Array	83.65	26	P	P	07 40 25.0	-0.4
	0.2nm,0.5s,baz=247,slow=5.2,SNR=4.8						
FINES	FINESS Array B	90.00	332	P	P	07 40 55.7	-0.4
	0.6nm,0.5s,baz=346,slow=0.8,SNR=3.5						
TXAR	Lajitas Array	120.83	51	PKP	PKiKP	07 46 50.3	+1.0
	0.2nm,0.7s,baz=357,slow=1.8,SNR=2.1						

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*IDC **26** 07:33:32.2±0.9, 13°.56N×57°.49E, h0^{km}, mb4.0/15, mb1 4.1/16, mb1mx3.8/48, mbtmp3.9/16, ML3.3/1, Error ellipse: s-maj=21.0km s-min=19.8km az=122.0*

*OMAN **26** 07:33:35.9, 13°.73N×57°.13E, h15^{km}, mb5.0/2, ml3.3/4, ms3.1/1*

ISC 26 07:33:33.4±0.8**, 13°.56N**±0°.08×**57°.30E**±0°.08**, h10**^{km}**, n27, σ1^{s}94**/28**, mb3.9**/15**, Owen Fracture Zone region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCY	Socotra	3.51	247	P	Pn	07 34 26.9	-1.2
	SNR=29						
SOCY				S	Sn	07 35 04.2	-5.6
DMTO	DMTO	4.71	332	P	Pn	07 34 45.4	+0.8
	SNR=36						
DMTO				S	Sn	07 35 36.6	-2.8
	SNR=8.6						
SHAO	Shalim	4.72	340	P	Pn	07 34 44.5	-0.3
	SNR=30						
SHAO				S	Sn	07 35 36.0	-3.6
ABTO	Aybut	5.39	315	P	Pn	07 34 53.6	-0.5
WHFO	Wadi Hawf	5.50	322	P	Pn	07 34 57.3	+1.7
DOK	Doka	5.88	329	P	Pn	07 35 01.8	+1.2
DQM	DQM	6.33	2	P	Pn	07 35 06.2	-0.7
JLN	Jalan Bani Buh	8.77	13	P	Pn	07 35 38.1	-2.3
JLN				P	Pn	07 35 38.1	-2.3
WSAR	Wadi Sarin	9.71	7	Pn	Pn	07 35 54.2	+0.9
	0.3nm,0.3s,baz=249,slow=4.8,SNR=2.8						
WSAR				Sn	Sn	07 37 27.5	-15
	baz=151,slow=4.6,SNR=1.1						
GEYT	Alibeck	24.28	2	P	P	07 38 51.9	+0.9
	2.2nm,0.7s,baz=228,slow=18,SNR=4.1						
KMBO	Kilima Mbogo	24.66	235	P	P	07 38 57.4	+2.5
	8.4nm,0.7s,baz=44,slow=13,SNR=18						
KBZ	Khabaz	32.51	340	P	P	07 40 06.9	+2.6
	2.3nm,0.9s,baz=138,slow=1.2,SNR=3.9						
AKTO	Aktyubinsk	36.77	1	P	P	07 40 40.1	-1.0
	1.0nm,0.5s,baz=195,slow=12,SNR=3.0						
MKAR	Makanchi Array	39.20	27	P	P	07 41 01.8	0.0
	1.0nm,1.0s,baz=213,slow=8.6,SNR=6.5						
CMAR	Chiang Mai Arr	40.26	77	P	P	07 41 10.5	-0.4
	1.2nm,0.4s,baz=273,slow=9.0,SNR=4.9						
AKASG	Malin Array Be	43.49	334	P	P	07 41 37.8	+0.9
	0.2nm,0.2s,baz=142,slow=7.1,SNR=1.9						
ZALV	Zalesovo Beam	45.75	22	P	P	07 41 55.0	+0.1
	0.7nm,0.4s,baz=218,slow=9.1,SNR=1.2						
FINES	FINESS Array B	52.85	342	P	P	07 42 49.3	+0.3
	1.4nm,0.7s,baz=125,slow=12,SNR=2.1						
SONM	Songino Array	53.04	40	P	P	07 42 50.2	-0.7
	0.2nm,0.4s,baz=233,slow=6.7,SNR=2.1						
TORD	Torodi Ar. Bea	54.00	276	P	P	07 42 59.8	+1.5
	1.5nm,0.7s,baz=87,slow=7.4,SNR=5.2						
NOA	NORSAR Array B	57.87	336	P	P	07 43 26.0	+0.7
	0.2nm,0.3s,baz=120,slow=13,SNR=2.2						
ARCES	ARCESS Array B	59.41	348	P	P	07 43 35.1	-0.7
	4.3nm,0.9s,baz=148,slow=7.1,SNR=4.8						
H01W3	Cape Leeuwin H	72.26	134	T	T	09 03 44.0	
	baz=302,slow=75,SNR=9.1						
H01W2	Cape Leeuwin H	72.27	134	T	T	09 03 34.9	
	baz=302,slow=75,SNR=9.2						
H01W1	Cape Leeuwin H	72.28	134	T	T	09 03 43.6	
	baz=302,slow=75,SNR=8.3						
WRA	Warramunga Arr	82.75	112	P	P	07 45 58.7	+0.5
	0.4nm,0.8s,baz=306,slow=4.4,SNR=2.4						
ASAR	Alice Springs	83.48	116	P	P	07 46 00.2	-1.8
	0.8nm,0.9s,baz=286,slow=5.5,SNR=8.1						

IDC 26 07:43:37.6±2.9**, 53°.64N**×**87°.82E, h0**^{km}**, mb1 3.6**/2**, mb1mx3.2**/55**, mbtmp3.6**/2**, ML2.6**/2**, Error ellipse: s-maj=24.6km s-min=16.1km az=54.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.80	281	i		07 56 10.0	
	baz=96,slow=273,SNR=9.1						
ZALV	Zalesovo Beam	1.80	281	Pn	Pn	07 44 10.4	+0.5
	0.5nm,0.3s,baz=106,slow=15,SNR=5.9						
ZALV				Lg	Lg	07 44 34.0	
	2.0nm,0.3s,baz=101,slow=28,SNR=12						
KURBB	Kurchatov Arra	6.47	246	Pn	Pn	07 45 14.4	+0.5
	0.1nm,0.3s,baz=61,slow=14,SNR=4.3						
KURBB				Sn	Sn	07 46 28.4	0.0
	0.0nm,0.3s,baz=322,slow=12,SNR=1.2						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURBB	0.0nm,0.3s,baz=61,slow=31,SNR=6.1			Lg	Lg	07 47 02.7	
MKAR	**Makanchi Array** 0.2nm,0.3s,baz=30,slow=13,SNR=8.6	**7.72**	**210**	Pn	Pn	07 45 32.2	+1.1
MKAR	0.1nm,0.3s,baz=38,slow=28,SNR=4.7			Sn	Sn	07 46 59.0	-0.2
MKAR	0.1nm,0.3s,baz=36,slow=31,SNR=6.0			Lg	Lg	07 47 36.5	

IDC 26 08:01:22.8±297.0**,50°.57N**×**59°.93E,h0^{km},Error ellipse: s-maj=107.8km s-min=26.1km az=83.0,Western Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I31KZ	**AKTYUBINSK INF** baz=82,slow=334,SNR=6.7	**1.22**	**263**	*i*		08 08 30.0	
I46RU	**ZALESOVO INFRA** baz=269,slow=335,SNR=1.0	**15.59**	**68**	*i*		09 37 30.0	
I34MN	**SONGINO INFRAS** baz=294,slow=333,SNR=0.8	**30.12**	**77**	*i*		11 06 01.7	

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*BJI **26** 08:02:31.6±0.0,40°.66N×79°.74E,h8^{km},ML3.4/8*
*SOME **26** 08:02:32.4,40°.70N×79°.42E,h15^{km}*
*KRNET **26** 08:02:32.5±0.1,40°.79N×79°.64E,h11^{km},mb3.8*
*NNC **26** 08:02:35.5±1.1,40°.88N×79°.60E,h0^{km},mb4.3,mpv4.0, Error ellipse: s-maj=8.1km s-min=6.5km az=156.0*
ISC 26 08:02:33.6±2.9**,40°.62N**±0°.05×**79°.68E**±0°.04**,h5^{km}**±20^{km}**, n51,**σ1^s.**88**/75**,18C-9D,Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRZ	**Przheval'sk** baz=32	**2.09**	**333**	⇑*i*P	**Pn**	**08 03 09.2**	**-0.4**
PRZ	baz=32			⇑*i*S	**Sn**	**08 03 35.1**	**-1.1**
KDJ	**Kajisay** baz=7.0	**2.41**	**310**	⇑*e*P	**Pn**	**08 03 14.1**	**+0.1**
KDJ	baz=7.0			⇑*i*S	**Sn**	**08 03 43.4**	**-0.6**
SHLS	**Shalkode** 124nm,0.2s	**2.54**	**356**	*e*P	**Pn**	**08 03 17.7**	**+2.1**
SHLS	377nm,0.5s			*e*S	**Sn**	**08 03 49.8**	**+2.8**
SHLS	**Shalkode** 124nm,0.2s	**2.54**	**356**	Pg	**Pn**	**08 03 17.4**	**+1.7**
SHLS	276nm,0.6s			Lg	Lg	08 03 49.8	
UZB	**Uzynbulak** 24nm,0.3s	**2.57**	**349**	*e*P	**Pn**	**08 03 16.2**	**+0.1**
UZB	485nm,0.4s			*e*S	**Sn**	**08 03 48.2**	**+0.3**
UZB	**Uzynbulak** 53nm,0.4s	**2.57**	**349**	Pg	**Pn**	**08 03 16.2**	**+0.1**
UZB	485nm,0.4s			Lg	Lg	08 03 48.2	
SATY	**Saty** 109nm,0.5s	**2.62**	**339**	*e*P	**Pn**	**08 03 18.9**	**+2.2**
SATY	629nm,0.7s			*e*S	**Sb**	**08 03 52.6**	**-1.0**
SATY	**Saty** 182nm,0.7s	**2.62**	**339**	Pg	**Pn**	**08 03 18.9**	**+2.2**
SATY	629nm,0.7s			Lg	Lg	08 03 52.6	
ANVS	**Anan'yevo** baz=24	**2.63**	**326**	⇑*i*P	**Pn**	**08 03 16.9**	**-0.1**
ANVS	baz=24			⇑*i*S	**Sn**	**08 03 48.9**	**-0.6**
PDGK	**Podgornoye** 44nm,0.5s	**2.71**	**357**	⇑Pn	**Pn**	**08 03 17.8**	**-0.2**
PDGK	557nm,0.7s			⇑Lg	Lg	08 03 52.4	
KPKS	**Kokpek** 106nm,0.2s	**2.94**	**346**	*e*P	**Pn**	**08 03 24.2**	**+3.1**
KPKS	1µm,0.5s			*e*S	**Sb**	**08 04 01.8**	**-1.0**
ULHL	**Ulahol** baz=1.0	**3.05**	**303**	⇑*e*P	**Pn**	**08 03 23.2**	**+0.4**
ULHL	baz=1.0			⇑*i*S	**Sn**	**08 03 59.9**	**+0.1**
KURS	**Kuram** 68nm,0.6s	**3.08**	**339**	*e*P	**Pb**	**08 03 27.2**	**-1.7**
KURS	225nm,0.8s			*e*S	**Sb**	**08 04 06.9**	**+0.1**
KURS	**Kuram** 68nm,0.6s	**3.08**	**339**	Pg	**Pb**	**08 03 27.2**	**-1.7**
KURS	225nm,0.8s			Lg	Lg	08 04 06.9	
TNSS	**Tian-Shan** 20nm,0.4s	**3.16**	**321**	*e*P	**Pn**	**08 03 27.9**	**+3.4**
TNSS	68nm,0.7s			*e*S	**Sb**	**08 04 08.0**	**-1.6**
TNSS	**Tian-Shan** 20nm,0.4s	**3.16**	**321**	Pg	**Pn**	**08 03 27.9**	**+3.4**
TNSS	68nm,0.7s			Lg	Lg	08 04 08.0	
MDOK	**Medeo** 36nm,0.8s	**3.21**	**323**	*e*P	**Pb**	**08 03 29.6**	**-1.6**
MDOK	98nm,0.9s			*e*S	**Sb**	**08 04 10.8**	**+0.1**
MDOK	**Medeo** 17nm,0.5s	**3.21**	**323**	⇑Pn	**Pn**	**08 03 25.0**	**+0.1**
MDOK	36nm,0.5s			⇓Pg	**Pb**	**08 03 29.9**	**-1.4**
MDOK	108nm,0.6s			⇑Lg	Lg	08 04 10.1	
AAA	**Alma-Ata** 54nm,0.2s	**3.31**	**322**	*e*P	**Pb**	**08 03 32.3**	**-0.6**
AAA	214nm,0.5s			*e*S	**Sb**	**08 04 15.4**	**+2.0**
AAA	**Alma-Ata** 54nm,0.2s	**3.31**	**322**	Pg	**Pb**	**08 03 32.3**	**-0.6**
AAA	214nm,0.5s			Lg	Lg	08 04 15.4	
BOOM	**Boomskoye usch** baz=3.0	**3.37**	**305**	⇑*i*P	**Pn**	**08 03 27.6**	**+0.5**
BOOM	baz=3.0			⇑*i*S	**Sn**	**08 04 07.5**	**-0.1**
MTBS	**Maitube** 24nm,0.3s	**3.49**	**317**	*e*P	**Pn**	**08 03 29.9**	**+1.3**
MTBS	54nm,0.7s			*e*S	**Sn**	**08 04 10.9**	**+0.4**
MNBS	**Baschi** 32nm,0.4s	**3.58**	**345**	*e*P	**Pb**	**08 03 35.5**	**-2.0**
MNBS	191nm,0.4s			*e*S	**Sb**	**08 04 21.3**	**-0.1**
MNBS	**Baschi** 32nm,0.4s	**3.58**	**345**	Pg	**Pb**	**08 03 35.5**	**-2.0**
MNBS	191nm,0.4s			Lg	Lg	08 04 21.3	
KST	**Kastek** 22nm,0.4s	**3.68**	**312**	*e*P	**Pb**	**08 03 37.9**	**-1.4**
KST	131nm,0.6s			*e*S	**Sb**	**08 04 24.9**	**+0.6**
KST	**Kastek** 22nm,0.4s	**3.68**	**312**	Pg	**Pb**	**08 03 37.9**	**-1.4**
KST	131nm,0.6s			Lg	Lg	08 04 24.9	
DJR	**Jarkent** 5.4nm,0.4s	**3.71**	**1**	*e*P	**Pb**	**08 03 36.6**	**-3.1**
DJR	88nm,0.3s			*e*S	**Sb**	**08 04 22.8**	**-2.2**
DJR	**Jarkent** 5.4nm,0.4s	**3.71**	**1**	Pg	**Pb**	**08 03 36.6**	**-3.1**
DJR	88nm,0.3s			Lg	Lg	08 04 22.8	
CHKK	**Chushkaly** 25nm,0.3s	**3.80**	**329**	*e*P	**Pb**	**08 03 40.1**	**-1.1**
CHKK	142nm,0.4s			*e*S	**Sb**	**08 04 28.4**	**+0.9**
CHKK	**Chushkaly** 25nm,0.3s	**3.80**	**329**	Pg	**Pb**	**08 03 40.1**	**-1.1**
CHKK	142nm,0.4s			Lg	Lg	08 04 28.4	
KTBS	**Karatobe** 14nm,0.3s	**3.81**	**325**	*e*P	**Pb**	**08 03 39.6**	**-1.7**
KTBS	185nm,0.4s			*e*S	**Sb**	**08 04 28.2**	**+0.3**
KTBS	**Karatobe** 14nm,0.3s	**3.81**	**325**	Pg	**Pb**	**08 03 39.6**	**-1.7**
KTBS	185nm,0.4s			Lg	Lg	08 04 28.2	
TKM2	**Tokmak 2** 12nm,0.6s	**3.82**	**308**	⇑Pn	**Pn**	**08 03 33.5**	**+0.2**
TKM2	30nm,0.6s			⇓Lg	Lg	08 04 29.0	
ARXS	**Arharly** 50nm,0.4s	**3.84**	**340**	*e*P	**Pb**	**08 03 40.1**	**-1.8**
ARXS	156nm,0.5s			*e*S	**Sb**	**08 04 29.2**	**+0.4**
ARXS	**Arharly** 50nm,0.4s	**3.84**	**340**	Pg	**Pb**	**08 03 40.1**	**-1.8**
ARXS	156nm,0.5s			Lg	Lg	08 04 29.2	
DGS	**Degeres** 23nm,0.4s	**3.92**	**313**	*e*P	**Pb**	**08 03 39.9**	**-3.4**
DGS	77nm,0.5s			*e*S	**Sb**	**08 04 27.9**	**-3.2**
DGS	**Degeres** 23nm,0.4s	**3.92**	**313**	Pg	**Pb**	**08 03 40.1**	**-3.2**
DGS	77nm,0.5s			Lg	Lg	08 04 29.6	
KRBS	**Karabastau** 6.9nm,0.3s	**4.28**	**317**	*e*P	**Pb**	**08 03 48.1**	**-1.3**
KRBS	43nm,0.6s			*e*S	**Sb**	**08 04 42.7**	**+1.3**
KRBS	**Karabastau** 6.9nm,0.3s	**4.28**	**317**	Pg	**Pb**	**08 03 48.1**	**-1.3**
KRBS	43nm,0.6s			Lg	Lg	08 04 42.7	
TDK	**Taldyqorghan** 55nm,0.4s	**4.48**	**348**	*e*P	**Pb**	**08 03 53.2**	**+0.4**
TDK	99nm,0.9s			*e*S	**Sb**	**08 04 51.1**	**+4.1**
TDK	**Taldyqorghan** 55nm,0.4s	**4.48**	**348**	Pg	**Pb**	**08 03 53.2**	**+0.4**
TDK	99nm,0.9s			Lg	Lg	08 04 51.1	
BTLS	**Baital** 2.0nm,0.3s	**6.05**	**319**	Pg	**Pb**	**08 04 20.7**	**+1.1**
BTLS	8.2nm,0.8s			Lg	Lg	08 05 38.4	
MAKZ	**Makanchi** 1.1nm,0.3s	**6.40**	**14**	⇑Pn	**Pn**	**08 04 07.7**	**-1.0**
MAKZ	2.6nm,0.4s			⇑Sn	**Sn**	**08 05 19.4**	**-2.7**
MAKZ	14nm,1.1s			⇓Lg	Lg	08 05 48.3	
MK31	**Makanchi Array** 0.5nm,0.2s,baz=199,slow=13,SNR=87	**6.45**	**16**	⇓Pn	**Pn**	**08 04 08.4**	**-1.0**
MK31	2.7nm,0.4s,baz=201,slow=22,SNR=4.9			⇓Sn	**Sn**	**08 05 20.0**	**-3.3**
MK31	11nm,0.8s,baz=190,slow=27,SNR=3.5			⇓Lg	Lg	08 05 50.0	
WMQ	**Urumqi**	**6.75**	**59**	*e*Pn	**Pn**	**08 04 13.0**	**-0.5**
WMQ				Sn	**Sn**	**08 05 31.8**	**+1.0**
WMQ	comp=N,24nm,0.9s			smax	smax		
WMQ	comp=E,25nm,0.7s			smax	smax		
KK31	**Karatay Array** 1.4nm,0.6s,baz=100,slow=16,SNR=11	**7.28**	**293**	⇓Pg	Pg	08 04 47.7	-5.3
KK31	1.4nm,0.5s,baz=100,slow=27,SNR=4.5			⇓Lg	Lg	08 06 20.5	
CEP	**Cherat**	**9.19**	**225**	P	**Pn**	**08 04 47.6**	**+0.6**
CEP				S	**Sn**	**08 06 27.0**	**-3.8**
KURBB	**Kurchatov Arra** 27nm,0.8s	**10.03**	**356**	⇑Lg	Lg	08 07 45.4	
KURK	**Kurchatov** 12nm,1.1s	**10.12**	**356**	⇓Lg	Lg	08 07 49.0	
GTA	**Gaotai**	**15.48**	**88**	*e*P	**P**	**08 06 22.5**	**+5.2**
GTA				pP	Pn	08 06 29.0	+16
GTA				sP	sP	08 06 32.8	+13
GTA	comp=Z,2.0nm,1.1s			pmax	pmax		
XAN	**Xi'an**	**24.09**	**96**	P	P	08 08 02.5	+12
XAN	comp=Z,4.0nm,1.2s			pmax	pmax		

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*IDC **26** 08:03:59.5±0.9,3°.65N×127°.34E,h0^{km},mb3.8/7, mb1 3.9/7,mb1mx3.6/46,mbtmp3.8/7,MS3.2/1,Ms1 3.2/1, ms1mx2.4/49,Error ellipse: s-maj=66.6km s-min=17.0km az=72.0*
ISC 26 08:04:07.3±1.0**,2°.8N**±0°.1×**125°.4E**±0°.3**,h50^{km},n12,** σ**2^s.05**/11**,mb3.7**/8**,1C,Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**3.31**	**5**	*e*P	**Pn**	**08 04 56.1**	**-0.5**
SKMP	**Bagumbayan, Su**	**3.81**	**347**	*e*P	**Pn**	**08 05 02.8**	**-0.7**
KCP	**Kidapawan**	**4.21**	**355**	⇑*e*P	**Pn**	**08 05 06.9**	**-2.1**
KCP				*i* S	**Sn**	**08 06 00.0**	**+3.1**
WRA	**Warramunga Arr** 1.0nm,0.5s,baz=342,slow=11,SNR=9.7	**24.23**	**159**	P	**P**	**08 09 18.3**	**-1.4**
PMG	**Port Moresby** comp=Z,57nm,20.4s,baz=350,slow=35	**24.82**	**119**	LR	LR	08 17 52.8	
ASAR	**Alice Springs** 0.3nm,0.5s,baz=347,slow=7.8,SNR=8.5	**27.56**	**163**	P	**P**	**08 09 51.9**	**+2.1**
STKA	**Stephens Creek** 1.8nm,0.7s,baz=329,slow=10,SNR=7.5	**37.74**	**157**	P	**P**	**08 11 19.1**	**+0.6**
SONM	**Songino Array** 0.2nm,0.5s,baz=141,slow=9.3,SNR=2.1	**47.78**	**343**	P	**P**	**08 12 37.8**	**-2.1**
PETK	**Petropavlovsk-** 5.2nm,1.0s,baz=212,slow=5.1,SNR=3.6	**56.79**	**23**	P	P	08 13 34.3	-12
MKAR	**Makanchi Array** 0.3nm,0.5s,baz=120,slow=7.2,SNR=5.3	**57.59**	**326**	P	**P**	**08 13 53.2**	**+1.1**
ZALV	**Zalesovo Beam** 0.3nm,0.4s,baz=151,slow=6.6,SNR=1.8	**60.84**	**334**	P	**P**	**08 14 13.2**	**-1.2**
KURBB	**Kurchatov Arra** 41nm,0.7s,baz=130,slow=6.9,SNR=1.7	**61.83**	**328**	P	**P**	**08 14 23.5**	**+2.3**

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*SOME **26** 08:12:11.8,39°.65N×74°.30E,h5^{km}*
*KRNET **26** 08:12:13.6±0.1,39°.62N×74°.18E,h14^{km},mb3.1*
*NNC **26** 08:12:17.1±3.6,39°.84N×74°.31E,h0^{km},mb3.9,mpv3.5, Error ellipse: s-maj=27.0km s-min=13.2km az=169.0*
ISC 26 08:12:10.8±1.5**,39°.59N**±0°.06×**74°.28E**±0°.04**,h10^{km},n33,** σ**1^s.66**/57**,30C-2D,Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan** baz=8.0	**0.73**	**306**	⇑*i*P	**Pn**	**08 12 26.3**	**-1.2**
SFK	baz=8.0			⇑*i*S	**Sb**	**08 12 35.9**	**-0.1**
DRK	**Karamyk** baz=67	**1.92**	**268**	⇑*i*P	**Pg**	**08 12 48.0**	**+0.3**
DRK	baz=67			⇑*i*S	**Sg**	**08 13 13.2**	**+0.6**
ARSB	**Arslanbob** baz=32	**2.00**	**331**	⇑*i*P	**Pg**	**08 12 49.7**	**+0.6**
ARSB	baz=32			⇑*i*S	**Sg**	**08 13 15.8**	**+0.8**
ARLS	**Aral** baz=3.0	**2.27**	**1**	⇑*e*P	**Pg**	**08 12 54.4**	**+0.1**
ARLS	baz=3.0			⇑*i*S	**Sg**	**08 13 24.1**	**+0.3**
AML	**Almayashu** baz=52	**2.58**	**350**	⇑*i*P	**Pg**	**08 12 58.5**	**-1.8**
AML	baz=52			⇑*i*S	**Sb**	**08 13 30.8**	**+1.5**
UCH	**Uchtor** baz=5.0	**2.64**	**4**	⇑*i*P	**Pb**	**08 12 59.4**	**+0.9**
UCH	baz=5.0			⇑*i*S	**Sb**	**08 13 32.5**	**+1.3**
BTK	**Batken** baz=81	**2.71**	**281**	⇑*i*P	**Pb**	**08 12 59.5**	**+0.1**
BTK	baz=81			⇑*i*S	**Sb**	**08 13 33.1**	**+0.4**
ULHL	**Ulahol** baz=30	**3.04**	**29**	⇑*e*P	**Pb**	**08 13 05.4**	**+0.2**
ULHL	baz=30			⇑*i*S	**Sb**	**08 13 43.3**	**+0.9**
TRKS	**Terek-Say** baz=10.0	**3.08**	**310**	⇑*i*P	**Pb**	**08 13 03.8**	**-2.0**
TRKS	baz=10.0			⇑*i*S	**Sb**	**08 13 40.4**	**-3.1**
EKS2	**Erkin-Say** baz=54	**3.09**	**353**	⇑*i*P	**Pb**	**08 13 05.4**	**-0.6**
EKS2	baz=54			⇑*i*S	**Sb**	**08 13 43.1**	**-0.7**
BOOM	**Boomskoye usch** baz=24	**3.16**	**23**	⇑*i*P	**Pb**	**08 13 07.6**	**+0.5**
BOOM	baz=24			⇑*i*S	**Sb**	**08 13 46.5**	**+0.7**
MNAS	**Manas** baz=37	**3.19**	**336**	⇑*i*P	**Pb**	**08 13 06.3**	**-1.4**
MNAS	baz=37			⇑*i*S	**Sb**	**08 13 45.1**	**-1.6**
MRKS	**Merke** 4.1nm,0.3s	**3.25**	**346**	*e*P	**Pb**	**08 13 09.1**	**+0.4**
MRKS	14nm,0.4s			*e*S	**Sb**	**08 13 50.2**	**+1.9**
MRKS	**Merke** 4.1nm,0.3s	**3.25**	**346**	Pg	**Pb**	**08 13 09.1**	**+0.4**
MRKS	14nm,0.4s			Lg	Lg	08 13 50.2	
TKM2	**Tokmak 2** baz=17	**3.47**	**16**	⇑*e*P	**Pb**	**08 13 11.1**	**-1.4**
TKM2	baz=17			⇑*i*S	**Sb**	**08 13 53.4**	**-1.5**
TKM2	**Tokmak 2** 20nm,1.4s	**3.47**	**16**	⇓Pg	**Pb**	**08 13 12.8**	**+0.2**
TKM2	14nm,0.9s			⇑Lg	Lg	08 13 55.6	
KST	**Kastek** 13nm,0.2s	**3.68**	**20**	*e*P	**Pb**	**08 13 16.4**	**+0.5**
KST	16nm,0.7s			*e*S	**Sb**	**08 14 02.9**	**+2.3**
DGS	**Degeres** 7.8nm,0.7s	**3.82**	**17**	*e*P	**Pg**	**08 13 22.3**	**-1.6**
DGS	13nm,0.6s			*e*S	**Sg**	**08 14 12.9**	**-0.5**
DGS	**Degeres** 8.2nm,0.6s	**3.82**	**17**	Pg	**Pg**	**08 13 22.8**	**-1.2**
DGS	13nm,0.6s			Lg	Lg	08 14 12.9	
MTBS	**Maitube** 2.0nm,0.2s	**3.89**	**24**	*e*P	**Pg**	**08 13 21.9**	**-3.4**
MTBS	70nm,0.1s			*e*S	**Sg**	**08 14 11.8**	**-3.9**
TNSS	**Tian-Shan** 7.7nm,0.3s	**3.99**	**29**	*e*P	**Pg**	**08 13 26.8**	**-0.4**
TNSS	4.7nm,0.5s			*e*S	**Sg**	**08 14 20.6**	**+1.7**
TNSS	**Tian-Shan** 8.3nm,0.3s	**3.99**	**29**	Pg	**Pg**	**08 13 26.7**	**-0.4**
TNSS	4.7nm,0.5s			Lg	Lg	08 14 20.6	
IUG	**Iuzhnay** 2.7nm,0.3s	**4.11**	**310**	*e*P	**Pg**	**08 13 28.1**	**-1.5**
IUG	18nm,0.5s			*e*S	**Sg**	**08 14 22.9**	**0.0**
IUG	**Iuzhnay** 11nm,0.2s	**4.11**	**310**	Pg	**Pb**	**08 13 20.5**	**-2.9**
IUG	19nm,0.4s			Lg	Lg	08 14 09.7	
MDOK	**Medeo** 10nm,0.5s	**4.13**	**29**	*e*P	**Pg**	**08 13 29.3**	**-0.7**
MDOK	9.7nm,0.8s			*e*S	**Sg**	**08 14 25.0**	**+1.5**
MDOK	**Medeo** 10nm,0.5s	**4.13**	**29**	Pg	**Pg**	**08 13 29.3**	**-0.7**
MDOK	9.7nm,0.8s			Lg	Lg	08 14 25.0	
KOTS	**Kotyrbulak** 12nm,0.3s	**4.22**	**29**	*e*P	**Pg**	**08 13 30.4**	**-1.2**
KOTS	12nm,0.7s			*e*S	**Sg**	**08 14 26.8**	**+0.6**
KOTS	**Kotyrbulak** 12nm,0.3s	**4.22**	**29**	Pg	**Pg**	**08 13 30.5**	**-1.2**
KOTS	12nm,0.7s			Lg	Lg	08 14 26.8	
KRBS	**Karabastau** 2.2nm,0.3s	**4.24**	**14**	*e*P	**Pg**	**08 13 29.9**	**-2.1**
KRBS	12nm,0.4s			*e*S	**Sg**	**08 14 25.6**	**-1.1**
KRBS	**Karabastau** 2.2nm,0.3s	**4.24**	**14**	Pg	**Pg**	**08 13 29.9**	**-2.1**
KRBS	12nm,0.4s			Lg	Lg	08 14 25.6	
KTBS	**Karatobe** 2.8nm,0.5s	**4.50**	**23**	*e*P	**Pg**	**08 13 35.3**	**-1.6**
KTBS	17nm,0.4s			*e*S	**Sg**	**08 14 35.1**	**0.0**
KTBS	**Karatobe** 2.8nm,0.5s	**4.50**	**23**	Pg	**Pg**	**08 13 35.3**	**-1.6**
KTBS	17nm,0.4s			Lg	Lg	08 14 35.1	
KK31	**Karatay Array** 0.4nm,0.2s,baz=138,slow=12,SNR=12	**4.51**	**322**	⇓Pn	Pb	08 13 24.4	-5.7
KK31	0.4nm,0.3s,baz=149,slow=16,SNR=4.7			⇑Pg	**Pg**	**08 13 38.4**	**+1.2**
KK31	1.7nm,0.4s			⇑Sn	**Sn**	**08 14 17.9**	**+6.1**
KK31	3.0nm,0.5s,baz=144,slow=28,SNR=2.9			⇑Lg	Lg	08 14 33.9	

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*IDC **26** 08:17:18.9±2.0,21°.60N×143°.23E,h266^{km}±19^{km}, mb3.4/14,mb1 3.5/16,mb1mx3.3/50,mbtmp4.1/16,Error ellipse: s-maj=21.2km s-min=9.5km az=95.0*
ISC 26 08:17:17.0±0.7**,21°.53N**±0°.08×**143°.3E**±0°.2**,h250^{km},n17,** σ**1^s.03**/18**,mb3.7**/13**,Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	**Chichijima** 4.0nm,0.3s,baz=157,slow=15,SNR=2.7	**5.63**	**350**	P	**Pn**	**08 18 42.6**	**+2.1**
JCJ	7.7nm,0.3s,baz=287,slow=21,SNR=2.1			S	**S**	**08 19 47.6**	**+0.3**
MJAR	**Matsushiro Arr** 0.2nm,0.3s,baz=172,slow=10,SNR=6.0	**15.60**	**345**	P	**Pn**	**08 20 43.4**	**-1.0**
KSRS	**Korea Array** 1.1nm,0.4s,baz=142,slow=8.6,SNR=4.7	**20.71**	**323**	P	**P**	**08 21 39.8**	**+1.3**
KLR	**Kul'dur** 6.9nm,0.7s,baz=160,slow=7.9,SNR=34	**29.13**	**344**	P	**P**	**08 22 54.6**	**-0.2**
SONM	**Songino Array** 0.4nm,0.4s,baz=142,slow=8.7,SNR=1.8	**39.53**	**321**	P	**P**	**08 24 22.5**	**-1.5**
WRA	**Warramunga Arr** 3.5nm,0.6s,baz=16,slow=8.7,SNR=28	**42.14**	**193**	P	**P**	**08 24 46.1**	**+0.9**
FITZ	**Fitzroy Crossi** 1.4nm,0.5s,baz=29,slow=10.0	**43.01**	**205**	P	**P**	**08 24 52.5**	**+0.3**
ASAR	**Alice Springs** 1.1nm,0.6s,baz=17,slow=13,SNR=35	**45.84**	**192**	P	**P**	**08 25 14.9**	**+0.3**
STKA	**Stephens Creek** 1.2nm,0.4s,baz=356,slow=10.0,SNR=7.3	**53.13**	**182**	P	**P**	**08 26 09.7**	**+0.4**
MKAR	**Makanchi Array** 0.3nm,0.3s,baz=89,slow=8.4,SNR=9.2	**54.88**	**313**	P	**P**	**08 26 22.4**	**+0.5**
KDAK	**Kodiak Island** 1.9nm,0.5s,baz=244,slow=2.0,SNR=7.7	**58.28**	**35**	P	**P**	**08 26 46.1**	**+0.6**
ILAR	**Eielson Array** 0.8nm,0.7s,baz=255,slow=6.3,SNR=7.3	**62.14**	**27**	P	**P**	**08 27 10.8**	**-0.8**
INK	**Inuvik** 0.3nm,0.4s,baz=249,slow=6.6,SNR=3.4	**67.68**	**24**	P	**P**	**08 27 46.8**	**-0.2**
YKA	**Yellowknife Ar** 1.0nm,0.6s,baz=294,slow=4.9,SNR=16	**76.56**	**28**	P	**P**	**08 28 39.5**	**-0.1**
ARCES	**ARCESS Array B** 3.7nm,0.9s,baz=64,slow=8.2,SNR=8.2	**79.11**	**342**	P	**P**	**08 28 52.8**	**-0.7**
FINES	**FINESS Array B** 1.1nm,0.5s,baz=83,slow=6.0,SNR=6.9	**83.37**	**335**	P	**P**	**08 29 13.9**	**-2.0**
PLCA	**Paso Flores** 2.3nm,0.6s,baz=259,slow=3.6,SNR=14	**145.57**	**132**	PKPbc	**PKPab**	**08 36 27.1**	**0.0**

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*NOU **26** 09:09:21.8,14°.05S×172°.14W,h112^{km},MLv2.6,Samoa Islands*
IDC 26 09:08:34.4±3.5**,16°.40S**×**174°.06W,h0^{km},mb3.5**/4**, mb1 3.8**/4**,mb1mx3.6**/34**,mbtmp3.5**/4**,Error ellipse: s-maj=186.2km s-min=29.7km az=146.0,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.31**	**42**	P	Pg	09 09 39.4	+1.4
WRA	**Warramunga Arr** 0.2nm,0.6s,baz=96,slow=7.1,SNR=1.5	**49.01**	**258**	P	P	09 17 22.9	-0.5
ASAR	**Alice Springs** 0.5nm,0.6s,baz=89,slow=8.2,SNR=16	**49.20**	**253**	P	P	09 17 25.0	+0.1
PDAR	**Pinedale Array** 0.1nm,0.5s,baz=225,slow=3.7,SNR=3.6	**83.43**	**42**	P	P	09 21 04.3	+0.2
ILAR	**Eielson Array** 0.3nm,0.5s,baz=224,slow=3.6,SNR=9.3	**83.55**	**11**	P	P	09 21 03.8	-0.1

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*SOME **26** 09:09:44.7,43°.50N×69°.68E*
NNC 26 09:09:45.7±2.0**,43°.45N**×**69°.66E,h0^{km},mb3.5,mpv3.2, 2C-1D,Error ellipse: s-maj=10.8km s-min=6.2km az=135.0,Suspected Mining explosion.,Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRLS	**Borolday** 7.9nm,0.1s	**0.43**	**163**	P	Pn	09 09 58.7	-0.6
BRLS	16nm,0.2s			S	Sb	09 10 08.5	+5.2
KK31	**Karatay Array** 3.8nm,0.3s,baz=292,slow=16,SNR=52	**0.71**	**119**	⇓P	Pg	09 09 58.8	-0.5
KK31				⇑S	Sg	09 10 09.5	+1.1

	13nm,0.4s,baz=296,slow=30,SNR=51						
IUG	Iuzhnay	1.33	168	P	Pn	09 10 11.8	+0.2
	10.0nm,0.2s						
IUG				S	Sn	09 10 31.8	+1.8
	38nm,0.3s						
MRKS	Merke	2.70	104	Pg	Pb	09 10 35.5	+0.6
	6.9nm,0.4s						
MRKS				Lg	Lg	09 11 11.5	
	4.0nm,0.3s						
AAK	Ala-Archa	3.63	101	Pg	Pb	09 10 51.3	+0.5
	2.3nm,0.7s						
AAK				Lg	Lg	09 11 39.0	
	3.1nm,0.5s						
TKM2	Tokmak 2	4.37	95	⇑Lg	Lg	09 12 02.7	
	3.2nm,0.5s						
KST	Kastek	4.62	93	Pg	Pb	09 11 09.5	+1.8
	2.1nm,0.2s						
KST				Lg	Lg	09 12 10.8	
	12nm,0.5s						
KTBS	Karatobe	5.11	85	Pg	Pb	09 11 18.0	+2.1
	1.4nm,0.4s						
KTBS				Lg	Lg	09 12 24.6	
	7.6nm,0.4s						

IDC ***26*** *09:24:10.4±1.1, 39°53N×51°52E, h0^{km}, mb3.8/12, mb1 4.0/21, mb1mx3.9/40, mbtmp3.9/21, ML3.7/8, MS3.1/1, Ms1 3.1/1, ms1mx2.5/52, Error ellipse: s-maj=22.6km s-min=11.0km az=172.0*

AZER ***26*** *09:24:16.4±0.1, 39°51N×51°49E, h58^{km}±9^{km}, ml3.8/29, Error ellipse: s-maj=2.1km s-min=0.8km az=270.0*

NNC ***26*** *09:24:19.1±3.7, 40°12N×52°55E, h0^{km}, mb4.3, Error ellipse: s-maj=40.6km s-min=11.2km az=64.0*

ISC 26 09:24:13.7±1.5**, 39°64N**±0°05×**51°66E**±0°04**, h24**^{km}±11^{km}**, n54, σ**2^{s}**13**/92**, mb3.7**/12**, 3C-3D, Caspian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NDR	Nardaran	1.59	307	Pn	Pb	09 24 43.7	+1.4
NDR				Sn	Sb	09 25 05.5	+3.6
GOBA	Gobu	1.66	298	Pn	Pb	09 24 45.0	+1.4
GOBA				Sn	Sb	09 25 04.7	+0.6
ALIB	Äli-Bayra	2.07	280	Pn	Pb	09 24 51.5	+0.9
	SNR=10						
ALIB				Sn	Sb	09 25 15.1	-0.7
ATGJ	Altiaghaj	2.41	301	Pn	Pb	09 24 55.7	-0.7
	SNR=8.9						
ATGJ				Sn	Sb	09 25 24.0	-1.8
LKRN	Lenkeran, Azer	2.42	248	Pn	Pn	09 24 53.0	+1.2
	SNR=9.3						
LKRN				Sn	Sn	09 25 20.5	-0.1
ASTR	Astara	2.48	245	Pn	Pn	09 24 52.8	+0.2
	SNR=6.9						
ASTR				Sn	Sn	09 25 21.3	-0.7
SAAT	Saatly	2.50	276	Pn	Pb	09 24 56.9	-1.0
	SNR=4.2						
SAAT				Sn	Sb	09 25 28.6	+0.4
SIZA	Siyzn	2.55	305	Pn	Pb	09 24 57.5	-1.3
	SNR=5.7						
SIZA				Sn	Sb	09 25 27.4	-2.3
GLBA	Clilabad	2.56	262	Pn	Pn	09 24 55.0	+1.3
	SNR=5.1						
GLBA				Sn	Sn	09 25 24.5	+0.5
PQL	Pirkuli	2.61	297	Pn	Pb	09 24 57.6	-2.3
	SNR=15						
PQL				Sn	Sn	09 25 27.8	+2.2
YRD	Yardimli	2.75	256	Pn	Pn	09 24 56.8	+0.4
	SNR=40						
YRD				Sn	Sn	09 25 28.1	-0.9
LRK	Lerik	2.77	250	Pn	Pn	09 24 57.0	+0.4
	SNR=19						
LRK				Sn	Sn	09 25 27.7	-1.7
IML	Ismayilli	2.90	294	Pn	Pn	09 25 00.8	+2.4
	SNR=3.8						
IML				Sn	Sn	09 25 33.8	+1.4
QUBA	Quba, Azerbaij	2.96	306	Pn	Pb	09 25 02.9	-2.8
	SNR=3.1						
QUBA				Sn	Sn	09 25 36.4	+2.5
XNQ	Khinaliq	3.09	301	Pn	Pn	09 25 03.8	+2.7
	SNR=55						
XNQ				Sn	Sn	09 25 38.9	+1.5
ZRD	Zardab	3.12	283	Pn	Pn	09 25 03.9	+2.5
	SNR=20						
ZRD				Sn	Sn	09 25 40.8	+3.0
BLQ	Beylaqan	3.16	273	Pn	Pn	09 25 03.1	+1.1
	SNR=3.7						
BLQ				Sn	Sn	09 25 38.7	-0.2
QSAR	Qusar	3.19	307	Pn	Pn	09 25 05.8	+3.4
	SNR=26						
QSAR				Sn	Sn	09 25 42.0	+2.3
QBL	Gabala	3.20	295	Pn	Pn	09 25 04.4	+1.9
	SNR=5.8						
QBL				Sn	Sn	09 25 41.5	+1.6
QRD	Qoradiz	3.36	268	Pn	Pn	09 25 06.0	+1.4
	SNR=4.8						
QRD				Sn	Sn	09 25 42.6	-1.1
AGDM	Agdam	3.53	279	Pn	Pn	09 25 08.4	+1.4
	SNR=8.2						
AGDM				Sn	Sn	09 25 48.6	+0.5
SEKA	Sheki	3.75	296	Pn	Pn	09 25 12.3	+2.3
	SNR=4.5						
SEKA				Sn	Sn	09 25 52.9	-0.5
GANJ	Ganja	4.21	285	Pn	Pn	09 25 17.1	+0.7
	SNR=15						
GANJ				Sn	Sn	09 26 03.4	-1.4
ZKTA	Zakatala	4.32	299	Pn	Pn	09 25 21.5	+3.6
	SNR=5.2						
ZKTA				Sn	Sn	09 26 09.0	+1.6
ORD	Ordubad	4.45	263	Pn	Pn	09 25 21.0	+1.2
	SNR=14						
ORD				Sn	Sn	09 26 10.4	-0.5
GDB	GEDABAY	4.65	285	Pn	Pn	09 25 23.3	+0.8
	SNR=38						
GDB				Sn	Sn	09 26 14.0	-1.8
SBZ	Shahbuz	4.73	269	Pn	Pn	09 25 26.0	+2.5
	SNR=7.0						
SBZ				Sn	Sn	09 26 18.1	+0.5
NAX	Nakhchivan	4.79	266	Pn	Pn	09 25 25.3	+0.8
NAX				Sn	Sn	09 26 19.5	+0.2
QZX	Qazax, Azerbai	5.00	288	Pn	Pn	09 25 29.0	+1.6
	SNR=13						
QZX				Sn	Sn	09 26 23.3	-1.1
GEYT	Alibeck	5.33	107	Pn	Pn	09 25 33.0	+1.2
	4.2nm,0.3s,baz=276,slow=16,SNR=26						
GEYT				Sn	Sn	09 26 36.5	+4.1
	2.7nm,0.3s,baz=186,slow=24,SNR=4.7						
GYA0B	ALIBECK ARRAY	5.33	107	⇑P	Pn	09 25 33.0	+1.2
GYA0B				⇑S	Sn	09 26 31.8	-0.6
GNI	Garni	5.34	278	Pn	Pn	09 25 32.8	+0.8
	3.0nm,0.3s,baz=244,slow=1.5,SNR=6.7						
GNI				Sn	Sn	09 26 34.7	+1.8
	1.2nm,0.3s,baz=208,slow=6.6,SNR=3.3						
DMNI	Dmanisi	5.94	289	P	Pn	09 25 34.8	-5.4
DMNI				S	Pn	09 25 36.9	-3.3
KBZ	Khabaz	7.72	305	Pn	Pn	09 26 05.8	+1.3
	0.2nm,0.3s,baz=107,slow=7.8,SNR=6.3						
KBZ				Sn	Sn	09 27 31.9	+0.7
	1.1nm,0.3s,baz=242,slow=20,SNR=4.1						
AB31	Akbulak array	11.28	29	⇓P	Pn	09 26 51.8	-1.5
	3.1nm,0.8s,baz=209,slow=14,SNR=19						
AB31				⇓S	Sn	09 28 51.3	-7.2
	2.4nm,0.5s,baz=217,slow=27,SNR=6.8						
AKTO	Aktyubinsk	11.68	20	Pn	Pn	09 26 58.6	-0.2
	1.5nm,0.3s,baz=201,slow=10,SNR=20						
AKTO				Sn	Sn	09 29 04.8	-3.5
	2.1nm,0.3s,baz=112,slow=11,SNR=5.8						
AKTO	Aktyubinsk	11.68	20	⇑P	Pn	09 26 57.9	-0.9
	6.1nm,0.7s						
AKTO				⇓S	Sn	09 29 02.1	-6.3
	13nm,0.9s						
BELG	Belogornoye	13.05	349	Pn	Pn	09 27 16.8	-0.7
	1.5nm,0.3s,baz=318,slow=8.5,SNR=5.2						
BELG				Sn	Sn	09 29 35.9	-5.9
	1.7nm,0.3s,baz=279,slow=19,SNR=6.7						
ARU	Arti	17.40	13	P	Pn	09 28 14.1	-0.5
	0.0nm,0.3s,baz=129,slow=6.7,SNR=6.1						
AAK	Ala-Archa	17.45	73	P	Pn	09 28 15.9	+0.3
	0.3nm,0.3s,baz=216,slow=6.6,SNR=5.2						
BVAR	Borovoye Array	18.53	38	P	P	09 28 28.0	-0.3
	1.0nm,0.3s,baz=207,slow=19,SNR=8.0						
BVAR				S	Sn	09 31 48.7	-6.2
	0.4nm,0.3s,baz=232,slow=42,SNR=4.4						
AKASG	Malin Array Be	19.22	313	P	P	09 28 35.4	-0.4
	0.9nm,0.3s,baz=120,slow=11,SNR=4.6						
IDI	Anoyia	21.65	267	P	P	09 29 02.5	+0.1
	3.6nm,0.4s,baz=101,slow=18,SNR=1.8						
KURBB	Kurchatov Arra	21.79	51	P	P	09 29 05.0	+1.4
	1.7nm,0.6s,baz=252,slow=11,SNR=3.2						
MKAR	Makanchi Array	23.34	62	P	P	09 29 20.9	+0.9
	1.1nm,0.6s,baz=259,slow=10.0,SNR=6.0						
MKAR				LR	LR	09 39 23.4	
	comp=Z,46nm,19.5s,baz=254,slow=39						
ZALV	Zalesovo Beam	26.54	46	P	P	09 29 51.2	+1.9
	1.4nm,0.6s,baz=263,slow=10,SNR=7.2						
FINES	FINESS Array B	26.88	333	P	P	09 29 53.2	+0.9
	1.6nm,0.7s,baz=141,slow=11,SNR=4.2						
NOA	NORSAR Array B	32.74	324	P	P	09 30 45.9	+1.6
	0.6nm,0.6s,baz=112,slow=9.6,SNR=1.8						
ARCES	ARCESS Array B	33.00	343	P	P	09 30 47.5	+1.1
	8.5nm,1.0s,baz=150,slow=8.1,SNR=4.4						
SONM	Songino Array	39.65	60	P	P	09 31 45.6	+1.9
	0.4nm,0.6s,baz=284,slow=12,SNR=2.5						
ESDC	Sonseca Array	42.22	289	P	P	09 32 04.8	0.0
	0.5nm,0.5s,baz=61,slow=8.0,SNR=2.7						
TORD	Torodi Ar. Bea	51.14	253	P	P	09 33 14.2	-0.6
	0.5nm,0.8s,baz=42,slow=7.2,SNR=1.9						
KSRS	Korea Array	57.95	66	P	P	09 34 05.2	+1.2
	1.1nm,0.5s,baz=291,slow=6.8,SNR=2.4						
YKA	Yellowknife Ar	77.61	354	P	P	09 36 08.6	+1.1
	0.8nm,0.5s,baz=15,slow=5.8,SNR=15						

VAO 26 09:39:00.4±0.4**, 22°08S**×**40°73W, h0**^{km}**, mbR3.4, Brazil**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAM01	Campos-RJ	0.90	286	*e*P	Pb	09 39 18.2	-0.6
CAM01				*e*S	Sg	09 39 30.2	+0.9
ALF01	Guarapari-ES	1.45	0	*e*P	Pn	09 39 27.6	-0.3
ALF01				*e*S	Sg	09 39 46.9	-0.2
DUB01	Friburgo-RJ	1.52	270	*e*P	Pn	09 39 28.3	-0.7
DUB01				*e*S	Sg	09 39 47.9	-1.6
VAS01	Vassouras-RJ	2.52	265	*e*P	Pn	09 39 40.8	-1.9
VAS01				*e*S	Sn	09 40 13.3	-0.9
RIB01	Linhares ES	2.77	7	*e*P	Pn	09 39 46.3	+0.3
RIB01				*e*S	Sn	09 40 20.9	+0.8
MAN01	Angra dos Reis	3.09	255	*e*P	Pn	09 39 50.6	+0.1
MAN01				*e*S	Sn	09 40 28.9	+0.6
BSFB	Barra de Sao F	3.23	358	*e*P	Pn	09 39 53.0	+0.6
SJMB	Sao Joao De Ma	3.38	353	*e*P	Pn	09 39 54.9	+0.4
BSCB	Bom Sucesso	3.91	285	*e*P	Pn	09 40 02.2	+0.3
NAN01	Guarapari, ES	4.25	8	*e*P	Pn	09 40 06.3	-0.1
DIAM	Diamantina, MG	4.67	323	*e*P	Pn	09 40 12.4	+0.1
PARB	Paraibuna	4.69	254	*e*P	Pn	09 40 14.4	+1.8
JANB	Januaria	7.76	333	*e*P	Pn	09 40 53.4	-1.4
IPMB	Ipameri, GO	8.13	299	*e*P	Pn	09 40 58.6	-1.2
TIJ01	Guaruva-PR	8.24	245	*e*S	Sn	09 42 34.4	-0.9
GDU01	Guandu, BA	8.38	8	*e*P	Pn	09 41 03.1	-0.1
GDU01				*e*S	Sn	09 42 39.5	+0.8
ITRB	Iturama	9.31	283	*e*P	Pn	09 41 15.9	0.0
PCMB	Pacaembu	9.79	271	*e*P	Pn	09 41 23.6	+0.9
PCMB				*e*S	Sn	09 43 14.2	+0.9
TER01	Tubaro-SC	9.95	228	*e*P	Pn	09 41 24.2	-0.5
TER01				*e*S	Sn	09 43 18.1	+0.9
SDBA	SAO DESIDERIO	10.41	337	*e*P	Pn	09 41 29.1	-2.0
PTGB	Pitanga	10.74	254	*e*S	Sn	09 43 35.5	-1.1
TRCB	Terra Rica	11.03	264	*e*S	Sn	09 43 45.0	+1.1
ITAB	Concordia	11.57	241	*e*S	Sn	09 43 56.8	0.0
CNLB	Canela	11.62	230	*e*P	Pn	09 41 47.5	-0.2
CNLB				*e*S	Sn	09 44 00.6	+2.3
ARAG	Araguaiana, MT	12.25	299	*e*P	Pn	09 41 56.0	-0.2
ARAG				*e*S	Sn	09 44 14.7	+1.0
PEXB	Peixe	12.27	323	*e*P	Pn	09 41 53.7	-2.8
AQDB	Aquidauana	14.05	274	*e*P	Pn	09 42 21.2	+0.4
AQDB				*e*S	Sn	09 44 59.0	+1.5
SNDB	Serra Nova Dou	14.24	313	*e*P	Pn	09 42 22.8	-0.7
SNDB				*e*S	Sn	09 45 03.1	+0.9
SMTB	Santa Maria do	14.70	332	*e*P	Pn	09 42 28.9	-0.9
CPUP	Villa Florida	15.72	251	*e*P	Pn	09 42 43.2	-0.2
NPGB	Novo Progresso	20.55	314	*e*S	S	09 47 32.6	+0.9

IDC ***26*** *09:45:33.9±0.3, 50°00N×175°92W, h0^{km}, mb5.1/46, mb1 5.2/47, mb1mx5.1/60, mbtmp5.1/47, ML4.3/1, MS4.3/42, Ms1 4.3/42, ms1mx4.2/60, Error ellipse: s-maj=12.0km s-min=8.9km az=155.0*

AEIC ***26*** *09:45:36±2.2, 50°18N±0°07×175°92W±0°09, h40^{km}±4^{km}, Error ellipse: s-maj=10.9km s-min=7.7km az=167.0*

GCMT ***26*** *09:45:36.4±0.1, 50°08N±0°01×175°84W±0°02, h12^{km}, MW5.2/125, Moment Tensor Solution. s64,c90; s125,c203; Duration: $1^{s}0$ Moment tensor: Scale 10^{17} Nm; M_{rr}-0.64±.01; $M_{\theta\theta}$0.78±.01; $M_{\phi\phi}$-0.14±.01; $M_{r\theta}$-0.17±.03; $M_{\theta\phi}$0.22±.01; $M_{\phi r}$0.11±.04; Best double couple: $M_0$0.76800×10^{17} NP1:ϕ_s241.00000°, δ42.00000°, λ-114.00000°. NP2:ϕ_s92.00000°, δ52.00000°, λ-70.00000°. Principal axes: T 0.8460, Plg6.0000°, Azm168.0000°; N -0.1570, Plg16.0000°, Azm259.0000°; P -0.6890, Plg73.0000°, Azm59.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

MOS ***26*** *09:45:37.7±1.1, 50°11N×175°87W, h34^{km}, mb5.5/87, MS4.3/9 Error ellipse: s-maj=7.4km s-min=4.4km az=102.5*

BJI ***26*** *09:45:37.1±0.0, 50°15N×176°18W, h29^{km}, mB5.2/56, mb5.1/74, Ms4.9/52, Ms7 4.5/47*

NEIC ***26*** *09:45:39.4±2.2, 50°14N±0°06×175°80W±0°08, h35^{km}±1^{km}, mb5.4/553, ML4.9(AEIC), Error ellipse: s-maj=11.3km s-min=8.3km az=161.0*

BGR ***26*** *09:45:42.6±0.0, 50°21N×175°73W, h33^{km}, mb5.2*

ISC 26 09:45:37.8±0.5**, 50°09N**±0°04×**175°83W**±0°03**, h24**^{km}±3^{km}**, h24**^{km}**:pP-P, n1378, σ**1^{s}**21**/1218**, mb5.4**/457**, MS4.4**/65**, 39C-51D, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ADK	Adak	1.88	344	P	Pn	09 46 06.6	-1.9
ADK						09 46 29.4	
ADK	Adak	1.88	344		Pn	09 46 06.5	-1.9
ADK					Sn	09 46 29.4	-2.0
ATKA	Atka Island	2.36	25		Pn	09 46 13.2	-1.8
ATKA	Atka Island	2.36	25		Sn	09 46 40.6	-2.5
KOFP	Korovin Flat P	2.45	26		Pn	09 46 15.2	-1.2
KOWE	Korovin West	2.49	23		Pn	09 46 16.1	-0.8
AMKA	Amchitka	3.35	295	Pn	Pn	09 46 27.1	-1.6
CERAA	Semis' Rag'd T	3.37	304		Pn	09 46 28.0	-1.0
CESW	Semis' Southwe	3.43	304		Pn	09 46 28.6	-1.1
CEAP	Semis' Anvil P	3.48	305		Pn	09 46 29.6	-0.8
LSPA	Little Sitkin	4.00	300		Pn	09 46 36.7	-0.9
LSPA					Sn	09 47 21.5	-2.2
LSSA	Little Sitkin	4.03	300		Pn	09 46 37.1	-0.9
LSNW	Little Sitkin	4.04	300		Pn	09 46 36.9	-1.2
NIKH	Nikolski High	5.23	54	P	Pn	09 46 53.3	-1.1
	baz=240,SNR=20						
NIKH	Nikolski High	5.23	54	Pn	Pn	09 46 53.4	-1.0
OKSP	Okmok Steeple	5.66	53		Pn	09 47 00.5	0.0
OKSO	Okmok South	5.78	53		Pn	09 47 01.5	-0.6
OKSO					Sn	09 48 07.3	-0.4
OKFG	Magazine Ridge	5.94	53		Pn	09 47 03.6	-0.6
OKFG					Sn	09 48 11.0	-0.4
MAPS	Pakushin South	6.64	52		Pn	09 47 13.7	-0.2
MGOD	Makushin Gods	6.67	53		Pn	09 47 14.0	-0.2
MREP	Makushin Rep't	6.74	53		Pn	09 47 15.2	-0.1
MSW	Makushin Switc	6.77	52		Pn	09 47 15.7	0.0
MNAT	Makushin Natee	6.81	53		Pn	09 47 16.1	0.0
MNAT					Sn	09 48 32.5	-0.3
SMY	Shemya	6.83	297	P	Pn	09 47 16.7	+0.2
SMY	Shemya	6.83	297	Pn	Pn	09 47 16.7	+0.2
UNV	Unalaska Valle	6.88	53	P	Pn	09 47 17.0	-0.1
	baz=242,SNR=42						
UNV	Unalaska Valle	6.88	53	Pn	Pn	09 47 17.0	-0.1
AKRB	Akutan Reef Bi	7.25	52		Pn	09 47 22.4	+0.2
AKMO	Akutan Morgan	7.26	53		Pn	09 47 22.7	+0.4
AKBBA	Akutan Broad B	7.30	53		Pn	09 47 22.9	0.0
AKLV	Akutan Long Va	7.32	52		Pn	09 47 23.8	+0.6
AKUT	Akutan	7.40	53	Pn	Pn	09 47 24.5	+0.3
AKSA	Akutan Strait	7.44	53		Pn	09 47 24.8	-0.1
SPIA	Saint Paul Isl	7.84	23	Pn	Pn	09 47 31.6	+1.3
WESP	Westdahl Peak	8.11	53		Pn	09 47 34.4	+0.3
WEBT	Westdahl Beart	8.14	52		Pn	09 47 34.8	+0.3
WTUG	Tugumak	8.46	51		Pn	09 47 38.7	-0.1
SSLW	Shishaldin Wes	8.55	52		Pn	09 47 40.3	+0.2
SSLS	Shishaldin Sou	8.59	53		Pn	09 47 41.0	+0.4
SSLN	Shishaldin Nor	8.64	52		Pn	09 47 42.3	+1.0
FALS	False Pass	8.95	53	P	Pn	09 47 45.4	-0.1
	baz=244						
FALS	False Pass	8.95	53	Pn	Pn	09 47 45.4	-0.1
DT1	Dutton Round H	9.65	53		Pn	09 47 54.5	-0.6
HAG	Hague Volcano	9.94	53	P	Pn	09 47 59.1	+0.1
HAG	Hague Volcano	9.94	53		Pn	09 47 59.1	+0.1
PS4A	Pavlof South-4	9.97	53		Pn	09 47 59.4	-0.1
PVV	Pavlof Volcano	10.02	53		Pn	09 47 60.0	-0.2
SDPT	Sand Point	10.69	55	P	Pn	09 48 08.1	-1.2
	baz=247,SNR=68						
SDPT	Sand Point	10.69	55	Pn	Pn	09 48 08.3	-1.0
CNBA	Chernabura Isl	10.98	58		Pn	09 48 11.8	-1.4
CHNA	Chernabura Isl	10.98	58	P	Pn	09 48 11.4	-1.9
	baz=252,SNR=22						
CHGN	Chignik	12.14	52	P	Pn	09 48 27.0	-2.1
	baz=247,SNR=16						
CHGN	Chignik	12.14	52		Pn	09 48 27.2	-1.9
SII	Sitkinak Islan	14.43	55	P	Pn	09 48 56.3	-4.2
	baz=253						
SII	Sitkinak Islan	14.43	55		Pn	09 48 57.1	-3.3
OHAK	Old Harbor	15.11	53	P	Pn	09 49 04.7	-4.7
	baz=252						
OHAK	Old Harbor	15.11	53	Pn	Pn	09 49 04.9	-4.5
OHAK				IAmb	IAmb	09 49 16.6	
	comp=Z,156nm,1.1s						
ANM	Nome	15.54	17	P	Pn	09 49 10.4	-4.7
	baz=206						
ANM	Nome	15.54	17	P	Pn	09 49 15.4	+0.3
ANM				pmax	pmax		
	comp=Z,249nm,1.0s						
ANM	Nome	15.54	17	P	Pn	09 49 15.4	+0.3
ANM				IAmb	IAmb	09 49 22.3	
	comp=Z,249nm,1.0s						
KDAK	Kodiak Island	15.65	52	Pn	Pn	09 49 12.2	-4.3
	comp=Z,5.6nm,0.3s,baz=287,slow=7.1,SNR=35						
KDAK				Sn	S	09 52 18.0	-5.8
	comp=Z,3.3nm,0.3s,baz=32,slow=20,SNR=9.6						
KDAK				LR	LR	09 55 27.3	
	comp=Z,1µm,21.6s,baz=266,slow=38						
KDAK	Kodiak Island	15.65	52	P	Pn	09 49 11.5	-5.1
	baz=251						
KDAK	Kodiak Island	15.65	52	P	Pn	09 49 12.4	-4.1
KDAK				pmax	pmax		
	comp=Z,165nm,0.9s						
KDAK	Kodiak Island	15.65	52	Pn	Pn	09 49 12.4	-4.1
KDAK				IAmb	IAmb	09 49 25.4	
	comp=Z,165nm,0.8s						
SVW2	Sparrevohn	15.81	38	Pn	Pn	09 49 18.1	-0.6
PET	Petropavlovsk	16.11	290	*e*P	P	09 49 26.5	+0.9
PET				*e*S	Sn	09 52 21.7	+1.4
PET				pmax	pmax		
	comp=Z,180nm,0.7s						
PET				MLR	MLR		
	comp=Z,1µm,15.0s						
PET				MLR	MLR		
	comp=Z,2µm,16.0s						
PET	Petropavlovsk	16.11	290	Pn	Pn	09 49 23.0	+0.5
RSO	Redoubt South	16.66	43		Pn	09 49 28.4	-1.3
PEA0B	Petropavlovsk-	16.69	291	P	P	09 49 32.1	0.0
PEA0B				pmax	pmax		
	comp=Z,188nm,0.9s						
PEA0B	Petropavlovsk-	16.69	291	P	P	09 49 32.1	0.0
PEA0B				IAmb	IAmb	09 49 49.4	
	comp=Z,188nm,0.8s						
PETK	Petropavlovsk-	16.69	291	Pn	Pn	09 49 29.3	-0.6
	comp=Z,5.9nm,0.3s,baz=85,slow=18,SNR=58						
PETK				LR	LR	09 55 59.1	
	comp=Z,618nm,19.4s,baz=102,slow=38						
PETK	Petropavlovsk-	16.69	291	P	P	09 49 31.9	-0.2
PETK	Petropavlovsk-	16.69	291	P	P	09 49 31.9	-0.2
TTA	Tatalina	16.79	32	P	Pn	09 49 30.2	-0.9
	baz=229,SNR=42						
TTA	Tatalina	16.79	32	P	Pn	09 49 31.4	+0.3
TTA				pmax	pmax		
	comp=Z,66nm,0.9s						
TTA	Tatalina	16.79	32	P	Pn	09 49 31.4	+0.3
CNPM	China Poot	16.94	47		Pn	09 49 30.0	-3.0
BRLK	Bradley Lake	17.20	46	P	Pn	09 49 34.0	-2.3
SPCR	Spurr Chakacha	17.25	41	P	Pn	09 49 34.5	-2.5
	baz=241,SNR=14						
BRSE	Bradley Lake S	17.26	46	P	Pn	09 49 34.5	-2.5
	baz=247						
SKR	Severo-Kuril's	17.86	283	*e*P	Pn	09 49 27.7	-17
SKR				pmax	pmax		
	comp=Z,400nm,4.5s						
SKR				pmax	pmax		
	comp=Z,300nm,5.6s						
SKT	Skwentna	17.92	39	P	Pn	09 49 44.8	-0.4
	baz=240,SNR=51						
SEW	Seward	18.00	46	P	Pn	09 49 42.3	-3.7
	baz=248,SNR=8.6						
SUA	Susitna One	18.00	41	P	Pn	09 49 42.4	-3.8
	baz=242,SNR=9.2						
SUA	Susitna One	18.00	41	P	Pn	09 49 44.6	-1.6
O22K	Cooper Landing	18.02	45	P	Pn	09 49 43.0	-3.3
	baz=247,SNR=12						
O22K	Cooper Landing	18.02	45	P	Pn	09 49 43.7	-2.6
O22K				IAmb	IAmb	09 49 54.8	
	comp=Z,211nm,0.6s						
PPLA	Purkeypile	18.16	36	P	Pn	09 49 45.7	-2.5
	baz=236,SNR=47						
RC01	Rabbit Creek A	18.27	43	P	Pn	09 49 47.5	-1.8
	baz=245,SNR=7.0						
CUT	Chulitna	18.65	39	P	P	09 49 53.4	-0.2
	baz=241						
CHUM	Lake Minchumin	18.68	33	P	P	09 49 54.3	+0.4
	baz=234,SNR=30						
RDOG	Red Dog Mine	19.13	15	IAmb	IAmb	09 50 02.9	
	comp=Z,370nm,2.0s						
TRF	Thorofare Moun	19.18	36	P	P	09 49 58.6	-1.0
	baz=238,SNR=38						
TRF	Thorofare Moun	19.18	36	P	Pn	09 50 00.5	-0.1
SML	Sawmill	19.18	42	P	P	09 49 59.0	-0.5
	baz=245,SNR=53						
SML	Sawmill	19.18	42	P	P	09 49 58.9	-0.7
Q23K	Middleton Isla	19.26	50	P	P	09 49 59.5	-0.8
	baz=254,SNR=5.4						
MID	Middleton Isla	19.26	50	P	P	09 49 59.6	-0.7
MID				pmax	pmax		
	comp=Z,569nm,1.0s						
MID	Middleton Isla	19.26	50	P	P	09 49 59.6	-0.7
BPAW	Bear Paw Mtn.	19.28	34	P	P	09 50 00.8	+0.2
	baz=235						
BPAW	Bear Paw Mtn.	19.28	34	P	P	09 50 01.1	+0.5
BPAW				IAmb	IAmb	09 50 03.4	
	comp=Z,302nm,1.2s						
GLI	Glacier Island	19.37	45	P	P	09 49 59.0	-2.5
	baz=249						
GLI	Glacier Island	19.37	45	P	P	09 50 00.2	-1.3
HIN	Hinchinbrook I	19.48	47	P	P	09 50 01.5	-1.3
IMAR	Indian Mountai	19.58	27	P	P	09 50 03.6	-0.2
RND	Reindeer	19.71	37	IAmb	IAmb	09 50 12.3	
	comp=Z,208nm,0.7s						
MCK	McKinley	19.85	36	P	P	09 50 05.3	-1.5
	baz=239,SNR=66						
EYAK	Cordova Ski Ar	19.88	47	P	P	09 50 06.3	-0.8
	baz=252						
BWN	Browne	19.88	35	IAmb	IAmb	09 50 38.9	
	comp=Z,382nm,1.2s						
MLY	Manley	19.92	32	P	P	09 50 07.7	+0.1
	baz=234,SNR=141						
KLU	Klutina	20.12	44	P	P	09 50 09.2	-0.6
	baz=249						
M24K	Tolsona, Glenn	20.24	42	P	P	09 50 11.3	+0.2
	baz=247,SNR=48						
M24K	Tolsona, Glenn	20.24	42	IAmb	IAmb	09 50 17.8	
	comp=Z,153nm,0.8s						
NEA2	Nenana	20.25	34	P	P	09 50 09.8	-1.3
	baz=237,SNR=80						
KAIM	Kayak Island	20.34	49	P	P	09 50 10.8	-1.3
	baz=255						
KAIM	Kayak Island	20.34	49	P	Pn	09 50 13.7	-0.4
RAGM	Ragged Mountai	20.34	48	IAmb	IAmb	09 50 16.4	
	comp=Z,356nm,1.1s						
I23K	Minto, Yukon-K	20.46	33	P	P	09 50 12.9	-0.4
	baz=236,SNR=146						
BMRM	Bremner River	20.54	46	P	P	09 50 13.6	-0.8
	baz=252,SNR=28						
WRH	Wood River Hil	20.55	35	P	P	09 50 11.9	-2.4
WRH				IAmb	IAmb	09 50 19.0	
	comp=Z,416nm,1.8s						
SUCK	Suckling Hills	20.68	49	P	P	09 50 17.1	+1.2
N25K	Chitina, Valde	20.75	44	P	P	09 50 16.6	-0.1
	baz=251,SNR=44						
MDM	Murphy Dome	20.75	34	IAmb	IAmb	09 50 29.8	
	comp=Z,219nm,1.2s						
TCOL	CIGO, UAF Yank	20.84	34	P	P	09 50 17.5	+0.1

	baz=238,SNR=19						
TCOL	**CIGO, UAF Yank**	**20.84**	**34**	P	**P**	**09 50 17.3**	**-0.1**
TCOL				IAmb	IAmb	09 50 31.2	
	comp=Z,174nm,0.9s						
COLA	**College**	**20.85**	**34**	P	**P**	**09 50 17.3**	**-0.2**
	baz=238						
COLA	**College**	**20.85**	**34**	*i* P	**P**	**09 50 17.9**	**+0.4**
COLA	**College**	**20.85**	**34**	P	**P**	**09 50 16.9**	**-0.6**
COLA				IAmb	IAmb	09 50 31.3	
	comp=Z,160nm,0.9s						
PAX	**Paxson**	**20.88**	**40**	P	**P**	**09 50 17.9**	**-0.1**
	baz=246,SNR=66						
BGLC	**Bering Glacier**	**20.94**	**49**	P	**P**	**09 50 18.1**	**-0.4**
	baz=256						
HDA	**Harding Lake**	**20.94**	**36**	P	**P**	**09 50 17.7**	**-0.9**
	baz=241						
HDA	**Harding Lake**	**20.94**	**36**	IAmb	IAmb	09 50 23.6	
	comp=Z,168nm,0.8s						
GLB	**Gilahina Butte**	**21.06**	**45**	IAmb	IAmb	09 50 25.3	
	comp=Z,190nm,1.2s						
POKR	**Poker Plat Res**	**21.12**	**34**	P	**P**	**09 50 19.6**	**-1.0**
	baz=238,SNR=26						
IL31		**21.15**	**35**	IAmb	IAmb	09 50 24.9	
	comp=Z,89nm,0.8s						
ILAR	**Eielson Array**	**21.15**	**35**	P	**P**	**09 50 19.9**	**-0.9**
	comp=Z,39nm,0.8s,baz=225,slow=8.6,SNR=78						
ILAR				S	**S**	**09 54 12.4**	**-2.2**
	comp=Z,4.3nm,1.0s,baz=240,slow=16,SNR=5.0						
ILAR				PcP	**PcP**	**09 54 25.2**	**-0.4**
	comp=Z,3.1nm,0.7s,baz=268,slow=3.2,SNR=4.5						
ILAR				LR	LR	09 58 45.4	
	comp=Z,758nm,19.3s,baz=248,slow=37						
ILAR				P3KPbc		10 24 17.7	
	comp=Z,1.3nm,1.1s,baz=57,slow=3.7,SNR=5.6						
ILAR	**Eielson Array**	**21.15**	**35**	P	**P**	**09 50 18.7**	**-2.1**
VRDI	**Verde Repeater**	**21.16**	**46**	P	**P**	**09 50 21.4**	**+0.3**
MA2	**Magadan**	**21.23**	**309**	*ce*P	**P**	**09 50 21.1**	**-0.7**
MA2				pmax	pmax		
	comp=Z,65nm,1.0s						
MA2	**Magadan**	**21.23**	**309**	P	**P**	**09 50 21.7**	**-0.1**
MCARA	**McCarthy VSAT**	**21.40**	**46**	P	**P**	**09 50 23.3**	**-0.2**
	baz=253,SNR=19						
MCARA	**McCarthy VSAT**	**21.40**	**46**	P	**P**	**09 50 23.8**	**+0.3**
COLD	**Coldfoot**	**21.47**	**27**	P	**P**	**09 50 24.3**	**+0.1**
	baz=230,SNR=268						
SEY	**Seymchan**	**21.47**	**319**	P	**P**	**09 50 23.7**	**-0.5**
	comp=Z,67nm,0.9s,baz=114,slow=8.9,SNR=67						
SEY				LR	LR	09 58 23.3	
	comp=Z,1µm,20.6s,baz=112,slow=36						
SEY	**Seymchan**	**21.47**	**319**	*i* P	**P**	**09 50 24.2**	**0.0**
MESA	**MESA**	**21.60**	**49**	P	**P**	**09 50 25.7**	**-0.2**
MENT	**Mentasta**	**21.61**	**41**	IAmb	IAmb	09 50 32.7	
	comp=Z,194nm,1.1s						
BALM	**Baldy**	**21.62**	**47**	IAmb	IAmb	09 50 30.4	
	comp=Z,151nm,1.2s						
MIDW	**Midway**	**21.87**	**184**	P	**P**	**09 50 29.2**	**+0.4**
MIDW				IAmb	IAmb	09 50 31.1	
	comp=Z,223nm,1.0s						
SCRK	**Sand Creek**	**21.90**	**39**	P	**P**	**09 50 27.4**	**-1.7**
	baz=246,SNR=274						
BARN	**Barnard Glacie**	**21.95**	**47**	IAmb	IAmb	09 50 34.1	
	comp=Z,240nm,1.2s						
PRP	**Porcupine Dome**	**22.02**	**34**	P	**P**	**09 50 29.9**	**-0.4**
	baz=240						
PRP	**Porcupine Dome**	**22.02**	**34**	P	**P**	**09 50 28.2**	**-2.1**
TABL	**Table Mountain**	**22.05**	**49**	P	**P**	**09 50 31.2**	**+0.4**
CTGM	**Chitina Glacie**	**22.08**	**47**	IAmb	IAmb	09 50 34.8	
	comp=Z,162nm,0.9s						
BCAR	**Beaver Creek A**	**22.48**	**42**	P	**P**	**09 50 35.5**	**+0.3**
TOLK	**Toolik Lake Re**	**22.58**	**25**	P	**P**	**09 50 35.9**	**-0.3**
	baz=228,SNR=64						
FYU	**Fort Yukon**	**22.66**	**32**	IAmb	IAmb	09 51 32.9	
	comp=Z,190nm,1.6s						
A21K	**Barrow**	**23.06**	**16**	P	**P**	**09 50 40.1**	**-1.0**
	baz=213,SNR=8.3						
A21K	**Barrow**	**23.06**	**16**	P	**P**	**09 50 39.6**	**-1.4**
BMAR	**Burnt Mountain**	**23.34**	**30**	P	**P**	**09 50 43.4**	**-0.6**
EGAK	**Eagle**	**23.35**	**38**	P	**P**	**09 50 43.3**	**-0.8**
	baz=248,SNR=210						
HYT	**Haines Junctio**	**23.88**	**49**	P	**P**	**09 50 49.3**	**-0.1**
KUR	**Kuril'sk**	**24.76**	**273**	*e*P	**P**	**09 51 00.3**	**+2.9**
KUR				pmax	pmax		
	comp=Z,148nm,1.4s						
KUR				pmax	pmax		
	comp=N,68nm,1.2s						
KUR				pmax	pmax		
	comp=E,76nm,1.2s						
SKAG	**Skagway**	**24.80**	**52**	P	**P**	**09 50 58.4**	**+0.7**
	baz=266,SNR=44						
SKAG	**Skagway**	**24.80**	**52**	P	**P**	**09 50 58.9**	**+1.2**
SKAG				IAmb	IAmb	09 51 01.1	
	comp=Z,164nm,0.9s						
JIS	**Juneau Island**	**25.24**	**55**	IAmb	IAmb	09 51 05.1	
	comp=Z,195nm,1.1s						
EPYK	**Eagle Plains**	**25.65**	**36**	P	**P**	**09 51 05.9**	**+0.5**
	baz=250,SNR=91						
EPYK	**Eagle Plains**	**25.65**	**36**	IAmb	IAmb	09 51 07.1	
	comp=Z,122nm,1.0s						
CRAG	**Craig**	**26.06**	**62**	P	**P**	**09 51 10.9**	**+1.8**
	baz=276,SNR=14						
CRAG	**Craig**	**26.06**	**62**	P	**P**	**09 51 11.6**	**+2.5**
WRAK	**Wrangell Islan**	**26.41**	**59**	P	**P**	**09 51 13.7**	**+1.5**
	baz=275,SNR=32						
WRAK	**Wrangell Islan**	**26.41**	**59**	IAmb	IAmb	09 51 16.2	
	comp=Z,179nm,1.1s						
NKL	**Nikolayevsk**	**26.87**	**293**	*e*P	**P**	**09 51 17.3**	**+0.9**
NKL				*e*S	**S**	**09 55 44.7**	**-6.6**
NKL				pmax	pmax		
	comp=E,37nm,0.9s						
NKL				pmax	pmax		
	comp=N,11nm,0.8s						
NKL				pmax	pmax		
	comp=Z,24nm,1.1s						
NKL				MLR	MLR		
	comp=E,623nm,12.0s						
NKL				MLR	MLR		
	comp=N,30nm,13.0s						
NKL				MLR	MLR		
	comp=Z,361nm,15.0s						
YSS	**Yuzh-Sakhalins**	**27.36**	**280**	*ce*P	**P**	**09 51 21.3**	**+0.5**
YSS				pmax	pmax		
	comp=Z,57nm,1.3s						
YSS	**Yuzh-Sakhalins**	**27.36**	**280**	P	**P**	**09 51 20.4**	**-0.4**
INK	**Inuvik**	**27.48**	**33**	P	**P**	**09 51 22.6**	**+0.9**
	comp=Z,36nm,0.5s,baz=240,slow=6.3,SNR=170						
INK				PcP	**PcP**	**09 54 39.6**	**+0.3**
	comp=Z,10.0nm,0.8s,baz=242,slow=3.7,SNR=4.1						
INK				LR	LR	10 04 14.5	
	comp=Z,807nm,18.2s,baz=243,slow=41						
INK	**Inuvik**	**27.48**	**33**	P	**P**	**09 51 21.6**	**-0.1**
INK				pmax	pmax		
	comp=Z,148nm,1.3s						
INK	**Inuvik**	**27.48**	**33**	P	**P**	**09 51 21.6**	**-0.1**
INK				IAmb	IAmb	09 51 24.7	
	comp=Z,148nm,1.2s						
DLBC	**Dease Lake**	**27.54**	**55**	P	**P**	**09 51 23.6**	**+1.2**
	comp=Z,78nm,0.9s,baz=279,slow=10.0,SNR=77						
DLBC				LR	LR	10 03 48.2	
	comp=Z,571nm,18.4s,baz=285,slow=40						
JKA	**Kamikawa-asahi**	**28.63**	**274**	P	**P**	**09 51 32.4**	**+0.2**
ASAJ	**Asahikawa**	**28.63**	**274**	P	**P**	**09 51 31.9**	**-0.4**
	comp=Z,14nm,0.8s,baz=318,slow=3.2,SNR=9.6						
ASAJ	**Asahikawa**	**28.63**	**274**	P	**P**	**09 51 32.4**	**+0.1**
ASAJ				pmax	pmax		
	comp=Z,43nm,1.1s						
BBB	**Bella Bella**	**29.59**	**67**	P	**P**	**09 51 42.0**	**+1.4**
	comp=Z,38nm,1.1s,baz=321,slow=4.8,SNR=3.9						
GRNR	**Gornyy**	**30.01**	**290**⇑	*i*P	**P**	**09 51 44.4**	**-0.1**
GRNR				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GRNR				MLR	MLR		
	comp=E,200nm,19.0s						
GRNR				MLR	MLR		
	comp=N,480nm,14.0s						
GRNR				MLR	MLR		
	comp=Z,290nm,17.0s						
C36M	**Paulatuk**	**31.07**	**33**	P	**P**	**09 51 54.5**	**+1.0**
	baz=259,SNR=84						
C36M	**Paulatuk**	**31.07**	**33**	IAmb	IAmb	09 51 56.0	
	comp=Z,111nm,0.9s						
YAK	**Yakutsk**	**31.69**	**313**	*e*P	**P**	**09 51 56.7**	**-2.3**
YAK				*e*PPP	PPP	09 53 10.6	
YAK				*e*		09 54 47.0	
YAK				*e*S	**S**	**09 57 06.9**	**+0.1**
YAK				*e*SS	**SnSn**	**09 58 50.7**	**-3.0**
YAK				*e*SSS	SSS	09 59 11.7	
YAK				pmax	pmax		
	comp=Z,21nm,0.9s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,38nm,1.5s						
YAK				pmax	pmax		
	comp=E,34nm,1.9s						
YAK				smax	smax		
	comp=N,84nm,2.6s						
YAK				smax	smax		
	comp=E,78nm,2.6s						
YAK				MLR	MLR		
	comp=Z,257nm,18.0s						
YAK				MLR	MLR		
	comp=N,188nm,17.0s						
YAK				MLR	MLR		
	comp=E,155nm,17.0s						
TEY	**Ternei**	**32.05**	**280**⇑	*e*P	**P**	**09 52 02.4**	**-0.1**
TEY				*e*		09 52 11.3	
TEY				pmax	pmax		
	comp=N,10.0nm,0.8s						
TEY				pmax	pmax		
	comp=E,20nm,0.8s						
TEY				pmax	pmax		
	comp=Z,20nm,0.8s						
TIXI	**Tiksi**	**32.69**	**331**	*ce*P	**P**	**09 52 07.4**	**-0.3**
TIXI	**Tiksi**	**32.69**	**331**	P	**P**	**09 52 08.1**	**+0.3**
H11N2	**WAKE ISLAND Hy**	**33.26**	**211**	T	T	10 27 17.2	
	baz=28						
H11N3	**WAKE ISLAND Hy**	**33.27**	**211**	T	T	10 27 16.0	
	baz=28,slow=74,SNR=11						
H11N1	**WAKE ISLAND Hy**	**33.28**	**211**	T	T	10 27 16.8	
	baz=28,slow=74,SNR=13						
KLR	**Kul'dur**	**33.37**	**289**	*ce*P	**P**	**09 52 12.9**	**-1.1**
PGC	**Sidney**	**33.56**	**72**	P	**P**	**09 52 15.8**	**+0.2**
NLWA	**Neilton Lookou**	**33.81**	**74**	P	**P**	**09 52 16.9**	**-1.0**
NLWA				IAmb	IAmb	09 52 21.2	
	comp=Z,83nm,1.1s						
A04D	**Lummi Island**	**33.99**	**71**	P	**P**	**09 52 19.8**	**+0.4**
	baz=293						
D03D	**Eldon**	**34.23**	**73**	P	**P**	**09 52 22.6**	**+1.1**
	baz=295,SNR=27						
E03A	**Lebam**	**34.35**	**75**	IAmb	IAmb	09 52 25.6	
	comp=Z,95nm,1.1s						
H11S1	**WAKE ISLAND Hy**	**34.47**	**210**	T	T	10 28 40.6	
	baz=20,slow=76,SNR=24						
H11S2	**WAKE ISLAND Hy**	**34.48**	**210**	T	T	10 28 43.8	
	baz=20,slow=76,SNR=26						
H11S3	**WAKE ISLAND Hy**	**34.49**	**210**	T	T	10 28 43.3	
	baz=20,slow=76,SNR=24						
ZEA	**Zeya**	**34.50**	**298**	*e*P	**P**	**09 52 22.7**	**-1.0**
ZEA				*e*S	**S**	**09 57 44.3**	**-6.3**
ZEA				*e*		10 00 34.1	
ZEA				pmax	pmax		
	comp=Z,200nm,5.9s						
ZEA				pmax	pmax		
	comp=E,30nm,0.9s						
ZEA				pmax	pmax		
	comp=N,20nm,0.7s						
ZEA				pmax	pmax		
	comp=Z,30nm,1.1s						
ZEA				smax	smax		
	comp=E,200nm,5.5s						
ZEA				smax	smax		
	comp=N,400nm,8.8s						
ZEA				MLR	MLR		
	comp=Z,300nm,12.0s						
B05A	**Bryant**	**34.55**	**72**	P	**P**	**09 52 25.5**	**+1.4**
	baz=294,SNR=16						
D04E	**Lakebay**	**34.58**	**74**	P	**P**	**09 52 24.0**	**-0.4**
	baz=295,SNR=7.3						
YKA	**Yellowknife Ar**	**34.77**	**46**	P	**P**	**09 52 26.8**	**+0.8**
	comp=Z,75nm,1.1s,baz=276,slow=5.6,SNR=61						
YKA				PcP	**PcP**	**09 54 58.8**	**0.0**
	comp=Z,6.1nm,0.9s,baz=291,slow=1.9,SNR=6.2						
YKA				LR	LR	10 10 22.0	
	comp=Z,568nm,18.0s,baz=0.0,slow=43						
YKA				P3KPbc		10 23 20.9	
	comp=Z,0.5nm,0.9s,baz=100,slow=5.2,SNR=5.9						
F04D	**Rainier, OR**	**34.90**	**76**	P	**P**	**09 52 28.1**	**+0.8**
	baz=296						
E04D	**Cinebar**	**34.97**	**75**	P	**P**	**09 52 28.3**	**+0.5**
	baz=296,SNR=28						
D05A	**Enumclaw**	**35.06**	**73**	P	**P**	**09 52 30.9**	**+2.3**
G03D	**McMinnville, O**	**35.13**	**77**	P	**P**	**09 52 28.4**	**-0.9**
	baz=298,SNR=8.3						
I02D	**Swisshome**	**35.28**	**79**	P	**P**	**09 52 29.4**	**-1.2**
	baz=299,SNR=6.4						
USRK	**Ussuriysk Ar.**	**35.36**	**281**	P	**P**	**09 52 30.1**	**-1.1**
	comp=Z,4.6nm,0.7s,baz=65,slow=6.0,SNR=10.0						
USRK				PcP	**PcP**	**09 55 00.9**	**+0.1**
	comp=Z,7.8nm,0.9s,baz=96,slow=1.6,SNR=5.2						
USRK				LR	LR	10 09 26.7	
	comp=Z,151nm,19.2s,baz=64,slow=41						
C06D	**Leavenworth**	**35.42**	**72**	P	**P**	**09 52 30.4**	**-1.3**
	baz=295						
MJAR	**Matsushiro Arr**	**35.51**	**265**	P	**P**	**09 52 31.2**	**-1.4**
	comp=Z,5.8nm,0.8s,baz=44,slow=7.5,SNR=17						
MJAR				PcP	**PcP**	**09 55 01.2**	**-0.3**
	comp=Z,7.5nm,0.8s,baz=92,slow=1.5,SNR=9.2						
MJAR				LR	LR	10 04 55.7	
	comp=Z,273nm,21.5s,baz=90,slow=33						
MJAR	**Matsushiro Arr**	**35.51**	**265**	P	**P**	**09 52 35.1**	**+2.5**
MJAR						09 55 01.9	
MJAR				pmax	pmax		
	comp=Z,26nm,1.5s						
MJAR	**Matsushiro Arr**	**35.51**	**265**	P	**P**	**09 52 35.1**	**+2.5**
MJAR					**PcP**	**09 55 01.9**	**+0.4**
MAJO	**Matsushiro**	**35.51**	**265**	P	**P**	**09 52 35.1**	**+2.5**
MAJO				pmax	pmax		
	comp=Z,62nm,1.3s						
MAJO	**Matsushiro**	**35.51**	**265**	P	**P**	**09 52 35.1**	**+2.5**
MAJO				IAmb	IAmb	09 52 42.9	
	comp=Z,62nm,1.3s						
MAT	**Matsushiro**	**35.51**	**265**	P	**P**	**09 52 34.9**	**+2.3**
MAT				S	**S**	**09 58 08.0**	**+1.5**
KEBM	**Edson Butte**	**35.58**	**81**	P	**P**	**09 52 33.4**	**+0.2**
J01E	**Myrtle Point**	**35.69**	**81**	P	**P**	**09 52 32.8**	**-1.2**
	baz=300						
H04D	**Lebanon**	**35.79**	**78**	P	**P**	**09 52 35.2**	**+0.3**
	baz=298,SNR=12						
I03D	**Drain, OR**	**35.80**	**80**	P	**P**	**09 52 35.1**	**+0.1**
	baz=299,SNR=17						
F05D	**White Salmon**	**35.96**	**75**	P	**P**	**09 52 36.1**	**-0.3**
	baz=297,SNR=7.4						
KBO	**Bosley Butte**	**35.98**	**82**	P	**P**	**09 52 37.5**	**+0.9**
K02D	**Willamette Mer**	**36.09**	**81**	P	**P**	**09 52 38.4**	**+0.7**
	baz=301,SNR=14						
G05D	**Wamic, OR**	**36.34**	**76**	P	**P**	**09 52 41.3**	**+1.6**
	baz=298,SNR=16						
I04A	**Tendick Farm,**	**36.34**	**79**	P	**P**	**09 52 41.3**	**+1.6**
	baz=300,SNR=43						
L02E	**Cave Junction**	**36.40**	**82**	P	**P**	**09 52 42.2**	**+2.0**
	baz=301,SNR=13						
KRMB	**Red Mountain**	**36.54**	**83**	IAmb	IAmb	09 52 44.9	
	comp=Z,58nm,1.3s						
HUMO	**Hull Mountain**	**36.59**	**81**	P	**P**	**09 52 41.1**	**-0.7**
HUMO				IAmb	IAmb	09 52 45.1	
	comp=Z,70nm,1.4s						
JGF	**Kuroka**	**36.62**	**265**	IAmb	IAmb	09 52 52.9	
	comp=Z,31nm,0.7s						
E07A	**Sunnyside**	**36.65**	**73**	IAmb	IAmb	09 52 44.9	
	comp=Z,65nm,1.4s						
I05D	**Terrebonne, OR**	**36.75**	**77**	P	**P**	**09 52 44.6**	**+1.4**
	baz=299,SNR=36						
J04D	**Umpqua Nationa**	**36.81**	**80**	P	**P**	**09 52 45.6**	**+1.7**
	baz=300,SNR=29						
F07A	**Phinny Hill Vi**	**36.90**	**74**	IAmb	IAmb	09 52 47.1	
	comp=Z,86nm,1.2s						
HAWA	**Hanford**	**36.92**	**73**	IAmb	IAmb	09 52 47.1	
	comp=Z,65nm,1.1s						
KHMM	**Horse Mountain**	**36.99**	**84**	IAmb	IAmb	09 52 49.1	
	comp=Z,116nm,1.5s						
C09A	**Chrisman Ranch**	**37.07**	**71**	IAmb	IAmb	09 52 47.8	
	comp=Z,58nm,1.4s						
E08A	**Dider Farm, El**	**37.17**	**73**	P	**P**	**09 52 47.1**	**+0.4**
E08A				IAmb	IAmb	09 52 49.0	
	comp=Z,70nm,1.3s						
YBH	**Yreka Blue Hor**	**37.19**	**82**	IAmb	IAmb	09 52 50.6	
	comp=Z,59nm,1.3s						
L04D	**Klamath Falls**	**37.20**	**81**	P	**P**	**09 52 48.8**	**+1.6**
	baz=301,SNR=23						
M02C	**Callahan**	**37.28**	**83**	P	**P**	**09 52 49.8**	**+2.0**
	baz=302,SNR=13						
J05D	**Fort Rock, OR**	**37.34**	**79**	P	**P**	**09 52 50.0**	**+1.7**
	baz=300,SNR=37						
NEW	**Newport**	**37.57**	**69**	P	**P**	**09 52 50.1**	**0.0**
	baz=296,SNR=22						
N02D	**Trinity Center**	**37.60**	**83**	P	**P**	**09 52 52.3**	**+1.8**
	baz=303,SNR=11						
E09A	**Wood Farm, Sta**	**37.72**	**73**	IAmb	IAmb	09 52 53.4	
	comp=Z,56nm,1.2s						
M04C	**Macdoel**	**37.72**	**81**	P	**P**	**09 52 53.1**	**+1.6**
	baz=302,SNR=31						
KCPM	**Cahto Peak**	**37.74**	**85**	IAmb	IAmb	09 52 54.7	
	comp=Z,76nm,1.3s						
K05A	**Summer Lake**	**37.84**	**80**	P	**P**	**09 52 54.2**	**+1.6**
WDC	**Whiskeytown Da**	**37.91**	**84**	IAmb	IAmb	09 52 56.2	
	comp=Z,66nm,1.4s						
O02D	**Mt. Diablo Mer**	**37.98**	**84**	P	**P**	**09 52 55.0**	**+1.3**
	baz=304,SNR=15						
I07A	**Izee**	**38.03**	**77**	IAmb	IAmb	09 52 56.8	
	comp=Z,78nm,1.1s						
O03E	**Paynes Creek**	**38.54**	**83**	P	**P**	**09 52 59.5**	**+1.1**
	baz=304,SNR=29						
MOD	**Modoc Plateau**	**38.64**	**80**	IAmb	IAmb	09 53 02.2	
	comp=Z,125nm,1.3s						
J08A	**Circle Bar Ran**	**39.04**	**77**	IAmb	IAmb	09 53 05.2	
	comp=Z,148nm,1.3s						
JCJ	**Chichijima**	**39.34**	**250**	P	**P**	**09 53 04.1**	**-1.0**
	comp=Z,29nm,0.5s,baz=97,slow=21,SNR=4.4						
WVOR	**Wild Horse Val**	**39.41**	**79**	IAmb	IAmb	09 53 08.4	
	comp=Z,105nm,1.1s						
CN2	**Changchun**	**39.67**	**284**	*e*P	**P**	**09 53 06.8**	**-0.9**
CN2				pmax	pmax		
	comp=Z,30nm,0.8s						
CN2				LR	LR		
	comp=Z,700nm,14.0s						
CN2				LR	LR		
	comp=Z,500nm,14.0s						
CN2				LR	LR		
	comp=Z,400nm,14.0s						
MSO	**Missoula**	**40.14**	**70**	P	**P**	**09 53 11.8**	**+0.1**
	baz=298,SNR=15						
MSO	**Missoula**	**40.14**	**70**	P	**P**	**09 53 11.4**	**-0.3**
BOD	**Bodaibo**	**40.26**	**309**	*e*P	**P**	**09 53 11.1**	**-1.3**
BOD				pmax	pmax		
	comp=Z,37nm,2.4s						
RUBR	**Rubicon Trail**	**40.29**	**84**	IAmb	IAmb	09 53 23.0	
	comp=Z,79nm,1.3s						
PAHR	**Pah Rah Range**	**40.41**	**83**	IAmb	IAmb	09 53 16.8	
	comp=Z,116nm,1.2s						
VCNR	**Virginia City**	**40.48**	**83**	IAmb	IAmb	09 53 17.6	
	comp=Z,82nm,1.2s						
PNTR	**Pine Nut**	**40.62**	**84**	IAmb	IAmb	09 53 18.8	
	comp=Z,58nm,0.9s						
SAO	**San Andreas Ge**	**40.79**	**88**	P	**P**	**09 53 18.5**	**+1.4**
SAO				pmax	pmax		
	comp=Z,52nm,1.3s						
SAO	**San Andreas Ge**	**40.79**	**88**	P	**P**	**09 53 18.5**	**+1.4**
YERR	**Yerington**	**40.91**	**83**	IAmb	IAmb	09 53 21.1	
	comp=Z,91nm,1.3s						
WAKR	**Walker**	**41.06**	**84**	P	**P**	**09 53 20.2**	**+0.7**
WAKR				IAmb	IAmb	09 53 22.5	
	comp=Z,72nm,1.3s						
HLID	**Hailey**	**41.47**	**75**	P	**P**	**09 53 23.6**	**+0.7**
	baz=302,SNR=74						
PMPB	**Monarch Peak**	**41.54**	**88**	IAmb	IAmb	09 53 34.5	
	comp=Z,64nm,1.1s						
KSRS	**Korea Array**	**41.58**	**274**	P	**P**	**09 53 22.8**	**-0.8**
	comp=Z,8.2nm,0.9s,baz=60,slow=8.0,SNR=13						
KSRS				PcP	**PcP**	**09 55 20.6**	**+0.3**
	comp=Z,4.4nm,0.8s,baz=74,slow=3.3,SNR=5.6						
KSRS				LR	LR	10 09 01.5	
	comp=Z,165nm,19.1s,baz=62,slow=34						
KSAR	**Wonju Array Be**	**41.61**	**274**	P	**P**	**09 53 23.4**	**-0.4**
KSAR	**Wonju Array Be**	**41.61**	**274**	P	**P**	**09 53 23.4**	**-0.4**
MDPB	**Devils Postpil**	**41.80**	**85**	P	**P**	**09 53 26.7**	**+1.0**
MDPB				IAmb	IAmb	09 53 28.6	
	comp=Z,64nm,1.0s						
LHV	**Little Huntoon**	**41.81**	**84**	IAmb	IAmb	09 53 28.7	
	comp=Z,95nm,1.3s						
NVAR	**Mina Array Bea**	**41.83**	**83**	P	**P**	**09 53 27.2**	**+1.3**
	comp=Z,27nm,1.0s,baz=293,slow=8.0,SNR=110						
NVAR				PcP	**PcP**	**09 55 21.3**	**-0.2**
	comp=Z,12nm,0.8s,baz=275,slow=2.6,SNR=12						
NVAR				ScP	**ScP**	**09 59 10.8**	**+0.7**
	comp=Z,1.9nm,1.0s,baz=280,slow=5.0,SNR=4.7						
NVAR				LR	LR	10 07 44.6	
	comp=Z,216nm,18.7s,baz=312,slow=32						
NVAR	**Mina Array Bea**	**41.83**	**83**	P	**P**	**09 53 26.7**	**+0.8**
NVAR				PcP	**PcP**	**09 55 22.1**	**+0.6**
MLAC	**Mammoth, Mammo**	**41.96**	**85**	P	**P**	**09 53 28.7**	**+1.8**
	baz=306,SNR=7.7						
EGMT	**Eagleton**	**42.07**	**66**	P	**P**	**09 53 27.2**	**-0.4**
	baz=299,SNR=23						
BOZ	**Bozeman (W)**	**42.14**	**70**	P	**P**	**09 53 28.3**	**0.0**
	baz=300,SNR=30						
BOZ	**Bozeman (W)**	**42.14**	**70**	IAmb	IAmb	09 53 29.8	
	comp=Z,103nm,1.9s						
PAGB	**Antelope Grade**	**42.19**	**88**	IAmb	IAmb	09 53 31.2	
	comp=Z,108nm,1.3s						
JNU	**Nakatsue**	**42.34**	**267**	P	**P**	**09 53 30.7**	**+0.8**
	comp=Z,20nm,1.0s,baz=344,slow=19,SNR=5.0						
JNU	**Nakatsue**	**42.34**	**267**	P	**P**	**09 53 32.0**	**+2.1**
JNU				IAmb	IAmb	09 53 40.4	
	comp=Z,60nm,1.0s						
VOG	**Valley Oaks Go**	**42.39**	**87**	P	**P**	**09 53 29.9**	**-0.2**
	baz=308						
ELK	**Elko**	**42.47**	**79**	P	**P**	**09 53 32.3**	**+1.2**
ELK				pmax	pmax		
	comp=Z,42nm,1.0s						
ELK	**Elko**	**42.47**	**79**	P	**P**	**09 53 32.2**	**+1.2**
SMMC	**Simmler**	**42.61**	**88**	P	**P**	**09 53 33.3**	**+1.3**
	baz=308,SNR=7.0						
TIN	**Tinemaha, Big**	**42.69**	**85**	P	**P**	**09 53 33.9**	**+1.2**
	baz=307,SNR=8.1						
YHL	**Hebgen Lake**	**42.79**	**71**	P	**P**	**09 53 33.5**	**-0.2**
CIT	**Chita**	**42.82**	**301**	*e*P	**P**	**09 53 33.7**	**+0.1**
CIT				*e*		09 53 40.1	
CIT				*e*		09 53 50.5	
CIT				*e*		09 55 16.3	
CIT				pmax	pmax		
	comp=Z,129nm,0.9s						
VES	**Vestal, Richgr**	**42.87**	**87**	P	**P**	**09 53 33.7**	**-0.3**
	baz=308,SNR=22						
PKM	**Mcpherson Peak**	**42.99**	**89**	P	**P**	**09 53 35.5**	**+0.2**
	baz=309,SNR=10						
CWC	**Cottonwood Cre**	**43.15**	**86**	P	**P**	**09 53 37.3**	**+0.7**
	baz=308						
GRAC	**Grapevine Rang**	**43.28**	**85**	P	**P**	**09 53 38.8**	**+1.3**
	baz=307,SNR=24						
SBC	**Santa Barbara**	**43.33**	**89**	P	**P**	**09 53 39.4**	**+1.6**
	baz=309						
FFC	**Flin Flon**	**43.37**	**54**	P	**P**	**09 53 38.4**	**+0.5**
FFC				pmax	pmax		
	comp=Z,63nm,1.2s						
FFC	**Flin Flon**	**43.37**	**54**	P	**P**	**09 53 38.4**	**+0.5**
FFC				IAmb	IAmb	09 53 39.5	
	comp=Z,63nm,1.2s						
ISA	**Isabella, Lake**	**43.37**	**87**	P	**P**	**09 53 38.7**	**+0.4**
	baz=308,SNR=38						
ISA	**Isabella, Lake**	**43.37**	**87**	IAmb	IAmb	09 53 39.9	
	comp=Z,60nm,1.1s						
H17A	**Grant Village**	**43.40**	**71**	P	**P**	**09 53 40.2**	**+1.6**
	baz=302,SNR=23						
FLWY	**Flagg Ranch**	**43.49**	**72**	P	**P**	**09 53 39.9**	**+0.7**
R11A	**Troy Canyon, C**	**43.62**	**82**	P	**P**	**09 53 41.1**	**+0.7**
	baz=306,SNR=40						
R11A	**Troy Canyon, C**	**43.62**	**82**	IAmb	IAmb	09 53 42.4	
	comp=Z,60nm,1.2s						
MPMC	**Manual Prospec**	**43.76**	**86**	P	**P**	**09 53 42.5**	**+1.0**
	baz=308,SNR=24						
RLMT	**Red Lodge**	**43.81**	**70**	P	**P**	**09 53 42.4**	**+0.5**
	baz=302,SNR=20						
RLMT	**Red Lodge**	**43.81**	**70**	P	**P**	**09 53 42.3**	**+0.4**
OSI	**Osito Audit: C**	**43.86**	**88**	P	**P**	**09 53 43.2**	**+1.0**
	baz=309,SNR=6.9						
OSI	**Osito Audit: C**	**43.86**	**88**	P	**P**	**09 53 43.1**	**+1.0**
OSI				IAmb	IAmb	09 53 44.4	
	comp=Z,46nm,0.8s						
FURC	**Furnace Creek,**	**43.92**	**85**	P	**P**	**09 53 43.5**	**+1.0**
	baz=308,SNR=44						
LRMC	**Laurel Mtn Rad**	**43.99**	**86**	P	**P**	**09 53 43.8**	**+0.5**
	baz=308,SNR=24						
TPNV	**Topopah Spring**	**44.02**	**84**	P	**P**	**09 53 44.5**	**+1.0**
	baz=307,SNR=72						
TPNV	**Topopah Spring**	**44.02**	**84**	IAmb	IAmb	09 53 45.8	
	comp=Z,65nm,0.9s						
SPR3	**Spring Creek 3**	**44.04**	**80**	P	**P**	**09 53 45.2**	**+1.3**
EDW2	**Edwards Air Fo**	**44.16**	**87**	P	**P**	**09 53 45.4**	**+0.8**
	baz=309,SNR=16						
SNCC	**San Nicolas Is**	**44.20**	**90**	P	**P**	**09 53 45.4**	**+0.5**

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              baz=310
DUG    Dugway, Tooele    44.31  78   P      P      09 53 46.8 +1.0
              baz=305,SNR=88
DUG    Dugway, Tooele    44.31  78   IAmb   IAmb   09 53 48.1
              comp=Z,97nm,1.1s
DECC   Green Verdugo     44.34  88   P      P      09 53 46.1 +0.2
              baz=309
MWC    Mount Wilson      44.53  88   IAmb   IAmb   09 53 50.5
              comp=Z,91nm,1.3s
PSUT   Pine Spring       44.61  80   P      P      09 53 48.7 +0.4
PSUT                                 IAmb   IAmb   09 53 50.3
              comp=Z,47nm,1.2s
SHOC   Shoshone, Teco    44.64  85   P      P      09 53 49.3 +1.0
              baz=308,SNR=30
GSC    Goldstone, Bar    44.67  86   P      P      09 53 49.6 +1.0
              baz=308,SNR=69
GSC    Goldstone, Bar    44.67  86   IAmb   IAmb   09 53 50.8
              comp=Z,108nm,1.1s
TCUT   Toone Canyon      44.67  76   IAmb   IAmb   09 53 50.9
              comp=Z,62nm,1.0s
CTU    Camp Tracy        44.69  77   IAmb   IAmb   09 53 50.8
              comp=Z,66nm,1.1s
FMP    Fort Macarthur    44.70  89   P      P      09 53 49.5 +0.7
              baz=310
DL2    Dalian            44.75 280  eP      P      09 53 53.5 +4.4
DL2                                  S      S      10 00 28.5 +4.0
DL2                                  pmax   pmax
              comp=Z,42nm,1.0s
DL2                                  pmax   pmax
              comp=Z,230nm,5.1s
DL2                                  LR     LR
              comp=N,270nm,13.0s
DL2                                  LR     LR
              comp=E,270nm,11.3s
DL2                                  LR     LR
              comp=Z,310nm,16.3s
BFSC   Mount Baldy Ra    44.78  88   P      P      09 53 50.1 +0.5
              baz=309,SNR=30
RRX    Edison Barstow    44.81  87   P      P      09 53 50.4 +0.7
              baz=309,SNR=5.6
CIS    Catalina Islan    44.82  89   P      P      09 53 50.0 +0.2
              baz=310,SNR=5.2
LAO    LASA Array        44.82  66   P      P      09 53 50.1 +0.4
              baz=301
BW06   Boulder Array     44.90  73   P      P      09 53 50.8 +0.2
              baz=304,SNR=43
BW06   Boulder Array     44.90  73   IAmb   IAmb   09 53 52.2
              comp=Z,57nm,1.2s
PD31   Pinedale Array    44.90  73   IAmb   IAmb   09 53 52.2
              comp=Z,51nm,1.2s
PDAR   Pinedale Array    44.90  73   P      P      09 53 50.9 +0.3
              comp=Z,25nm,1.0s,baz=305,slow=4.1,SNR=110
PDAR                                 LR     LR     10 09 47.7
              comp=Z,255nm,18.6s,baz=330,slow=32
PDAR   Pinedale Array    44.90  73   P      P      09 53 50.0  -0.6
NLU    North Lily Min    44.91  78   IAmb   IAmb   09 53 52.8
              comp=Z,61nm,1.1s
JLU    Jordanelle        44.93  76   IAmb   IAmb   09 53 53.1
              comp=Z,78nm,1.1s
SHPR   Sheep Range       44.99  84   P      P      09 53 51.7 +0.5
SCI2   San Clemente I    45.01  90   P      P      09 53 51.7 +0.4
              baz=310
DGMT   Dagmar            45.09  63   P      P      09 53 51.7  -0.1
              baz=301,SNR=6.7
DGMT   Dagmar            45.09  63   IAmb   IAmb   09 55 33.4
              comp=Z,45nm,1.1s
MPU    Maple Canyon      45.15  77   IAmb   IAmb   09 53 54.6
              comp=Z,40nm,1.1s
BBRC   Big Bear Solar    45.24  87   P      P      09 53 54.3 +0.9
              baz=309,SNR=35
HEC    Hector,Ludlow     45.26  86   P      P      09 53 54.2 +0.8
              baz=309,SNR=25
TCRU   Three Creeks R    45.46  79   IAmb   IAmb   09 54 00.4
              comp=Z,42nm,1.0s
MURC   Murrieta          45.48  88   P      P      09 53 55.8 +0.7
              baz=310,SNR=17
CCUT   Cedar City        45.50  81   IAmb   IAmb   09 53 57.9
              comp=Z,50nm,1.2s
TULEG  Thule             45.62  18  i P     P      09 53 57.4 +1.9
SZCU   Shurtz Canyon     45.65  81   P      P      09 53 57.0 +0.4
GMRC   Granite Mounta    45.72  86   P      P      09 53 57.6 +0.5
              baz=309,SNR=32
TMUT   Trail Mountain    45.84  78   IAmb   IAmb   09 54 00.4
              comp=Z,66nm,1.1s
LCMT   Little Creek M    45.90  82   IAmb   IAmb   09 54 00.9
              comp=Z,66nm,1.1s
PFO    Pinyon Flats O    45.95  88   P      P      09 53 59.4 +0.5
              baz=310,SNR=19
PFO    Pinyon Flats O    45.95  88   P      P      09 53 59.5 +0.6
PFO                                                09 55 36.3
PFO                                  pmax   pmax
              comp=Z,38nm,1.2s
PFO    Pinyon Flats O    45.95  88   P      P      09 53 59.5 +0.6
PFO                                  IAmb   IAmb   09 54 00.8
              comp=Z,38nm,1.1s
PFO                                  PcP    PcP    09 55 36.3 +0.9
TPFO   Pinon Flats       45.95  88   P      P      09 53 59.5 +0.5
              baz=310,SNR=16
MTPU   Mount Pierson     45.96  80   IAmb   IAmb   09 54 01.8
              comp=Z,54nm,1.2s
109C   Camp Elliot, M    45.99  89   P      P      09 53 59.5 +0.5
              baz=310,SNR=8.3
109C   Camp Elliot, M    45.99  89   IAmb   IAmb   09 54 01.2
              comp=Z,60nm,1.1s
BELC   Belle Mtn. Jos    46.00  87   P      P      09 53 59.5 +0.2
              baz=310,SNR=24
P17A   Butcher Ranch,    46.03  77   IAmb   IAmb   09 54 01.6
              comp=Z,85nm,1.2s
KNB    Kanab             46.17  81   IAmb   IAmb   09 54 03.2
              comp=Z,89nm,1.2s
PKCU   Pink Cliffs       46.24  81   IAmb   IAmb   09 54 03.9
              comp=Z,54nm,1.2s
SRU    San Rafael Swe    46.38  78   P      P      09 54 02.7 +0.4
SRU                                  pmax   pmax
              comp=Z,88nm,1.1s
SRU    San Rafael Swe    46.38  78   P      P      09 54 02.7 +0.4
SRU                                  IAmb   IAmb   09 54 05.2
              comp=Z,88nm,1.1s
NEE2   Needles Airpor    46.40  85   P      P      09 54 02.4 +0.1
              baz=309
BAR    Barrett           46.41  89   IAmb   IAmb   09 54 04.4
              comp=Z,42nm,1.1s
MONP2  Monument Peak     46.43  88   P      P      09 54 03.4 +0.7
              baz=310,SNR=14
IRM    Iron Mountain     46.45  86   P      P      09 54 03.2 +0.5
              baz=310,SNR=22
NRIK   Noril'sk          46.47 331   P      P      09 54 03.0 +0.7
              comp=Z,29nm,0.9s,baz=77,slow=7.9,SNR=45
NRIK                                 LR     LR     10 15 12.8
              comp=Z,306nm,19.9s,baz=54,slow=38
NRIK   Noril'sk          46.47 331ceP       P      09 54 02.9 +0.6
NRIK                                 pmax   pmax
              comp=Z,89nm,1.3s
NRIK   Noril'sk          46.47 331   P      P      09 54 03.0 +0.7
NRIK                                 IAmb   IAmb   09 54 04.2
              comp=Z,89nm,1.2s
BC3    Big Chuckawall    46.57  87   P      P      09 54 03.9 +0.1
              baz=310,SNR=11
IKP    In-Ko-Pah, Jac    46.79  88   P      P      09 54 06.2 +0.8
              baz=310,SNR=12
SWSC   Sam W. Stewart    46.80  88   P      P      09 54 05.7 +0.3
              baz=310,SNR=9.3
K22A   Casper            46.82  71   P      P      09 54 05.2  -0.5
              baz=304,SNR=7.9
CCX    Cicese            46.94  90   IAmb   IAmb   09 54 08.5
              comp=Z,37nm,1.1s
RWWY   Rawlins           46.95  73   IAmb   IAmb   09 54 07.9
              comp=Z,60nm,1.4s
PDMCI  Parker Dam,Lak    47.00  85   P      P      09 54 07.5 +0.5
              baz=309,SNR=20
O20A   White River Ci    47.20  75   P      P      09 54 08.6  -0.1
              baz=306,SNR=46
ESJX   Sierra Juarez     47.31  89   IAmb   IAmb   09 54 11.8
              comp=Z,38nm,1.3s
GLA    Glamis            47.35  87   P      P      09 54 10.4 +0.6
              baz=310,SNR=11
GLA    Glamis            47.35  87   P      P      09 54 10.4 +0.6
GLA                                  pmax   pmax
              comp=Z,55nm,1.2s
GLA    Glamis            47.35  87   P      P      09 54 10.4 +0.6
GLA                                  IAmb   IAmb   09 54 11.7
              comp=Z,55nm,1.1s
RSSD   Black Hills       47.50  68   P      P      09 54 10.3  -0.6
              baz=304
RSSD   Black Hills       47.50  68   P      P      09 54 10.4  -0.6
RSSD                                 pmax   pmax
              comp=Z,24nm,1.2s
RSSD   Black Hills       47.50  68   P      P      09 54 10.4  -0.6
IRK    Irkutsk           47.73 305  eP      P      09 54 11.3  -1.1
IRK                                  pmax   pmax
              comp=Z,126nm,3.8s
PV14   Lion Creek, Pa    47.76  77   IAmb   IAmb   09 54 14.5
              comp=Z,64nm,1.0s
PV20   West Nyswonger    47.81  77   IAmb   IAmb   09 54 14.9
              comp=Z,71nm,1.0s
PV04   Paradox Valley    47.82  77   P      P      09 54 13.3  -0.3
PV19   Morning Glory     47.82  77   IAmb   IAmb   09 54 14.9
              comp=Z,64nm,0.9s
PV07   Paradox Valley    47.95  77   P      P      09 54 14.4  -0.2
PV07                                 IAmb   IAmb   09 54 15.9
              comp=Z,80nm,1.2s
WUAZ   Wupatki           48.01  82   P      P      09 54 15.8 +0.8
              baz=309,SNR=41
WUAZ   Wupatki           48.01  82   IAmb   IAmb   09 54 17.2
              comp=Z,62nm,1.1s
MDND   Maddock           48.04  62   P      P      09 54 14.4  -0.5
              baz=303
E28A   Huff              48.11  64   IAmb   IAmb   09 54 16.1
              comp=Z,29nm,0.8s
N23A   Red Feather La    48.18  73   P      P      09 54 16.8 +0.4
              baz=306,SNR=25
TLY    Talaya            48.35 305   LR     LR     10 16 12.1
              comp=Z,181nm,20.2s,baz=50,slow=38
TLY    Talaya            48.35 305  eP      P      09 54 17.6 +0.3
TLY                                 eS      S      10 01 17.4 +1.5
TLY                                  pmax   pmax
              comp=Z,77nm,1.4s
TLY                                  MLR    MLR
              comp=Z,541nm,17.0s
TLY    Talaya            48.35 305   P      P      09 54 18.0 +0.7
TLY                                  IAmb   IAmb   09 54 37.9
              comp=Z,45nm,1.4s
ULN    Ulaanbaatar       48.53 299ceP       P      09 54 18.6  -0.3
ULN                                  pmax   pmax
              comp=Z,16nm,0.8s
ULN    Ulaanbaatar       48.53 299   P      P      09 54 19.2 +0.3
SMCO   Snowmass          48.56  75   P      P      09 54 19.3  -0.2
MVCO   Mesa Verde        48.79  78   P      P      09 54 21.4 +0.3
              baz=308,SNR=57
ULM    Lac du Bonnet     48.81  57   P      P      09 54 20.5  -0.3
              comp=Z,15nm,0.8s,baz=304,slow=7.8,SNR=29
ULM                                  LR     LR     10 15 24.9
              comp=Z,367nm,21.1s,baz=320,slow=37
SONM   Songino Array     48.92 299   P      P      09 54 22.3 +0.4
              comp=Z,14nm,0.8s,baz=52,slow=8.5,SNR=67
SONM                                 PcP    PcP    09 55 45.4  -0.4
              comp=Z,12nm,1.1s,baz=85,slow=2.7,SNR=3.6
SONM                                 LR     LR     10 16 21.7
              comp=Z,518nm,19.9s,baz=49,slow=38
SONM   Songino Array     48.92 299   P      P      09 54 21.8   0.0
SONM                                 pmax   pmax
              comp=Z,26nm,1.2s
SONM   Songino Array     48.92 299   P      P      09 54 21.8   0.0
ISCO   Idaho Springs     49.03  74   P      P      09 54 23.5 +0.5
              baz=307,SNR=16
ISCO   Idaho Springs     49.03  74   IAmb   IAmb   09 54 25.0
              comp=Z,35nm,1.2s
KULLO  Kullorsuaq        49.12  18  i P     P      09 54 24.0 +1.2
              comp=Z,104nm,0.9s
KULLO  Kullorsuaq        49.12  18  i P     P      09 54 24.0 +1.2
KULLO                                pmax   pmax
              comp=Z,100nm,0.9s
KULLO  Kullorsuaq        49.12  18  i P     P      09 54 24.0 +1.2
KULLO                                IAmb   IAmb   09 54 24.9
              comp=Z,104nm,0.9s
PIX    Pinacate          49.20  88   IAmb   IAmb   09 54 25.6
              comp=Z,37nm,1.3s
TIA    Tai'an            49.23 280   P      P      09 54 23.5  -0.7
TIA                                  pmax   pmax
              comp=Z,16nm,0.9s
ZAK    Zakamensk         49.24 303  eP      P      09 54 24.3 +0.1
ZAK                                  pmax   pmax
              comp=Z,30nm,1.0s
W18A   Petrified Fore    49.31  81   P      P      09 54 25.6 +0.6
              baz=309,SNR=20
W18A   Petrified Fore    49.31  81   IAmb   IAmb   09 54 27.1
              comp=Z,66nm,1.1s
214A   Organ Pipe Nat    49.36  87   P      P      09 54 25.7 +0.4
              baz=311,SNR=31
214A   Organ Pipe Nat    49.36  87   IAmb   IAmb   09 54 27.1
              comp=Z,48nm,1.1s
S22A   4UR Ranch, Cre    49.52  77   P      P      09 54 27.7 +1.0
              baz=308,SNR=71
MOY    Mondy             49.75 306  eP      P      09 54 28.2 +0.1
MOY                                  pmax   pmax
              comp=Z,50nm,1.8s
Q24A   Divide            49.82  74   P      P      09 54 28.2  -0.9
              baz=308,SNR=10
HHC    Hu-ho-hao-te      49.88 289  eP      P      09 54 30.0 +0.8
HHC                                  sS     sS     10 01 51.5 +4.2
HHC                                  pmax   pmax
              comp=Z,25nm,0.9s
HHC                                  pmax   pmax
              comp=Z,140nm,4.6s
HHC                                  LR     LR
              comp=Z,620nm,17.8s
HHC                                  LR     LR
              comp=Z,400nm,17.5s
HHC                                  LR     LR
              comp=Z,450nm,14.4s
SSE    Sheshan           49.90 272   P      P      09 54 29.0  -0.3
SSE                                  S      S      10 01 36.8  -1.2
SSE                                  pmax   pmax
              comp=Z,8.0nm,1.3s
SSE                                  LR     LR
              comp=Z,190nm,15.5s
SSE    Sheshan           49.90 272   IAmb   IAmb   09 54 32.7
              comp=Z,29nm,0.9s
SUSD   Miller            50.32  65   P      P      09 54 30.7  -1.7
              baz=306
SDCO   Great Sand Dun    50.35  76   P      P      09 54 33.5 +0.5
              baz=308,SNR=37
SDCO   Great Sand Dun    50.35  76   IAmb   IAmb   09 54 35.0
              comp=Z,55nm,1.1s
TUC    Tucson            50.43  85   P      P      09 54 34.1 +0.6
              baz=311
TUC    Tucson            50.43  85   P      P      09 54 33.8 +0.3
TUC                                  pmax   pmax
              comp=Z,53nm,1.2s
TUC    Tucson            50.43  85   P      P      09 54 33.8 +0.3
TUC                                  IAmb   IAmb   09 54 35.4
              comp=Z,53nm,1.2s
OGNE   Ogallala          50.54  70   P      P      09 54 34.1  -0.1
              baz=307
UPNV   Upernavik         50.57  20⇓iP       P      09 54 35.1 +1.3
UPNV                                 IAmb   IAmb   09 54 35.9
              comp=Z,158nm,0.7s
NJ2    Nanjing           50.77 275  eP      P      09 54 35.0  -0.9
NJ2                                  pmax   pmax
              comp=Z,18nm,0.5s
BTO    Baotou            50.96 289  eP      P      09 54 37.3  -0.1
KBS    Kingsbay          51.17 358ceP       P      09 54 40.4 +2.1
KBS                                  pmax   pmax
              comp=Z,67nm,1.3s
KBS    Kingsbay          51.17 358   P      P      09 54 40.0 +1.8
KBS    Kingsbay          51.17 358  eP      P      09 54 40.1 +1.8
KBS    Kingsbay          51.17 358  i P     P      09 54 39.8 +1.5
KBS                                  IAmb   IAmb   09 54 40.9
              comp=Z,78nm,0.7s
TIY    Taiyuan           51.24 285  eP      P      09 54 40.5 +1.0
TIY                                  pP     pwP    09 54 51.5  -0.9
TIY                                  S      S      10 01 57.3 +0.6
TIY                                  sS     sS     10 02 09.5 +3.3
TIY                                  pmax   pmax
              comp=Z,130nm,3.7s
TIY                                  LR     LR
              comp=Z,240nm,7.4s
TIY                                  LR     LR
              comp=Z,110nm,8.5s
TIY                                  LR     LR
              comp=Z,210nm,12.0s
KSCO   Kaye Shedlock'    51.35  73   P      P      09 54 41.0 +0.7
              baz=308,SNR=16
KSCO   Kaye Shedlock'    51.35  73   IAmb   IAmb   09 54 42.4
              comp=Z,44nm,0.8s
T25A   Trinidad          51.40  76   P      P      09 54 41.5 +0.6
              baz=309,SNR=68
ANMO   Albuquerque       51.50  79   P      P      09 54 41.7 +0.1
              baz=310
ANMO   Albuquerque       51.50  79ceP       P      09 54 41.0  -0.6
ANMO                                 pmax   pmax
              comp=Z,47nm,1.4s
ANMO   Albuquerque       51.50  79   P      P      09 54 41.8 +0.2
ANMO                                 IAmb   IAmb   09 54 43.4
              comp=Z,46nm,1.3s
K31A   O'Neill           51.51  67   IAmb   IAmb   09 55 56.2
              comp=Z,43nm,1.1s
Y22D   IRIS PASSCAL I    51.76  80   P      P      09 54 43.2  -0.3
              baz=310
Y22D   IRIS PASSCAL I    51.76  80   IAmb   IAmb   09 54 48.9
              comp=Z,59nm,1.1s
SPA0   Spitsbergen Ar    51.79 357   P      P      09 54 43.8 +0.8
SPA0   Spitsbergen Ar    51.79 357  eP      P      09 54 43.0 +0.1
SPITS  Spitsbergen Ar    51.79 357   P      P      09 54 43.1 +0.1
              comp=Z,36nm,0.8s,baz=106,slow=8.8,SNR=33
319A   Douglas           52.01  85   IAmb   IAmb   09 54 47.2
              comp=Z,78nm,1.6s
NUUG   Nuugaatsiaq       52.09  20  i P     P      09 54 46.5 +1.2
NUUG                                 IAmb   IAmb   09 54 47.6
              comp=Z,139nm,0.9s
ECSD   EROS Data Cent    52.10  64   P      P      09 54 44.6  -1.1
              baz=307,SNR=9.9
ECSD   EROS Data Cent    52.10  64   P      P      09 54 44.0  -1.7
121A   Cookes Peak, D    52.21  82   P      P      09 54 47.4 +0.5
              baz=311,SNR=19
121A   Cookes Peak, D    52.21  82   IAmb   IAmb   09 54 48.8
              comp=Z,66nm,1.4s
EYMN   Ely               52.49  58   P      P      09 54 47.9  -0.6
              baz=306,SNR=24
EYMN   Ely               52.49  58   IAmb   IAmb   09 54 49.2
              comp=Z,44nm,1.1s
DAG    Danmarks Havn     52.59   6  i P     P      09 54 49.1 +0.3
              comp=Z,90nm,1.0s
DAG    Danmarks Havn     52.59   6  i P     P      09 54 49.1 +0.3
DAG                                  pmax   pmax
              comp=Z,90nm,1.0s
DAG    Danmarks Havn     52.59   6  i P     P      09 54 49.1 +0.3
DAG                                  IAmb   IAmb   09 54 50.2
              comp=Z,90nm,1.0s
BGNE   Belgrade          52.60  68   P      P      09 54 48.6  -1.0
              baz=308
HOPEN  Hopen             52.98 354  eP      P      09 54 52.0 +0.2
HSPB   Hornsund (broa    52.98 357  eP      P      09 54 52.7 +0.9
HSPB   Hornsund (broa    52.98 357  eP      P      09 54 51.9 +0.1
CBKS   Cedar Bluff       53.24  71   P      P      09 54 54.2  -0.1
              baz=309,SNR=9.1
CBKS   Cedar Bluff       53.24  71   IAmb   IAmb   09 54 55.6
              comp=Z,82nm,1.1s
E38A   The Farm, Brul    53.25  59   IAmb   IAmb   09 54 54.5
              comp=Z,34nm,0.8s
L34A   Svendsen Farm,    53.31  66   IAmb   IAmb   09 55 03.9
              comp=Z,60nm,0.9s
SPMN   Marine on St.     53.39  61   P      P      09 54 54.4  -0.8
              baz=307
I37A   Lemond, Waseca    53.78  62   IAmb   IAmb   09 54 59.0
              comp=Z,48nm,0.9s
SUMG   Summit            54.09  15⇓iP       P      09 55 01.9 +1.5
              comp=Z,349nm,0.8s
SUMG   Summit            54.09  15⇓iP       P      09 55 01.9 +1.5
SUMG                                 pmax   pmax
              comp=Z,350nm,0.8s
SUMG   Summit            54.09  15   P      P      09 55 01.9 +1.5
SUMG   Summit            54.09  15⇓iP       P      09 55 02.0 +1.5
SUMG                                 IAmb   IAmb   09 55 02.7
              comp=Z,350nm,0.8s
R32A   Long Quarter,     54.11  71   IAmb   IAmb   09 55 01.4
              comp=Z,57nm,1.2s
MNTX   Cornudas Mount    54.29  82   P      P      09 55 02.4 +0.4
              baz=312,SNR=57
MNTX   Cornudas Mount    54.29  82   IAmb   IAmb   09 55 03.9
              comp=Z,51nm,1.2s
ILULI  Ilulissat         54.30  21  i P     P      09 55 02.6 +1.1
              comp=Z,74nm,0.8s
ILULI  Ilulissat         54.30  21   P      P      09 55 01.9 +0.4
ILULI                                pmax   pmax
              comp=Z,82nm,0.9s
ILULI  Ilulissat         54.30  21   P      P      09 55 01.9 +0.4
ILULI  Ilulissat         54.30  21  i P     P      09 55 02.6 +1.1
ILULI                                IAmb   IAmb   09 55 03.7
              comp=Z,74nm,0.8s
N35A   Tabor             54.43  67   IAmb   IAmb   09 55 44.9
              comp=Z,44nm,1.0s
MSTX   Muleshoe          54.45  78   P      P      09 55 03.1  -0.1
              baz=311
AMTX   Amarillo          54.54  76   P      P      09 55 03.8  -0.1
              baz=311
AMTX   Amarillo          54.54  76   IAmb   IAmb   09 55 05.2
              comp=Z,49nm,1.1s
D41A   Chassel           54.60  57   IAmb   IAmb   09 55 05.3
              comp=Z,63nm,1.1s
WHN    Wuhan             54.66 277 ⇓P       P      09 55 03.8  -0.8
WHN                                  pmax   pmax
              comp=Z,76nm,1.0s
DBG    Daneborg          54.81   8  i P     P      09 55 05.2 +0.1
DBG                                  IAmb   IAmb   09 55 06.2
              comp=Z,106nm,1.0s
KSU1   Kansas State U    54.96  69   P      P      09 55 05.8  -0.9
              baz=310,SNR=7.2
KSU1   Kansas State U    54.96  69   IAmb   IAmb   09 55 07.1
              comp=Z,46nm,1.1s
SSLB   Suanglung         55.06 266   P      P      09 55 08.9 +1.2
SSLB                                 IAmb   IAmb   09 55 26.3
              comp=Z,56nm,1.0s
SCIA   State Center      55.20  64   P      P      09 55 07.6  -0.8
              baz=309
U32A   Winter Ranch,     55.24  73   IAmb   IAmb   09 55 09.8
              comp=Z,43nm,1.0s
I40A   Norwalk           55.44  61   P      P      09 55 08.2  -2.0
I40A                                 IAmb   IAmb   09 55 18.1
              comp=Z,40nm,1.4s
F42A   Maple Grove Fa    55.65  58   IAmb   IAmb   09 55 12.6
              comp=Z,79nm,1.4s
XAN    Xi'an             55.78 284   P      P      09 55 11.8  -1.0
XAN                                  pP     sP     09 55 23.0 +2.4
XAN                                  sP     pwP    09 55 27.8 +2.1
XAN                                  PcP    PcP    09 56 14.0 +2.3
XAN                                  ScS    ScS    10 04 56.5  -3.9
XAN                                  pmax   pmax
              comp=Z,19nm,1.4s
XAN                                  LR     LR
              comp=Z,250nm,15.2s
XAN                                  LR     LR
              comp=Z,270nm,18.4s
XAN                                  LR     LR
              comp=Z,340nm,13.0s
XAN    Xi'an             55.78 284   IAmb   IAmb   09 55 36.8
              comp=Z,30nm,1.2s
E43A   Lone Tree Farm    55.88  57   IAmb   IAmb   09 55 14.2
              comp=Z,57nm,1.1s
SFJD   Kangerlussuaq     56.13  23   P      P      09 55 15.6 +0.9
              comp=Z,78nm,1.0s,baz=329,slow=7.9,SNR=20
SFJD   Kangerlussuaq     56.13  23  i P     P      09 55 15.3 +0.7
              comp=Z,6.6nm,1.1s
SFJD   Kangerlussuaq     56.13  23   P      P      09 55 16.1 +1.4
SFJD                                 pmax   pmax
              comp=Z,112nm,1.1s
SFJD   Kangerlussuaq     56.13  23   P      P      09 55 16.1 +1.4
SFJD   Kangerlussuaq     56.13  23  i P     P      09 55 15.4 +0.7
SFJD                                 IAmb   IAmb   09 55 16.5
              comp=Z,6.6nm,1.1s
ZAA0   Zalesovo Array    56.28 315   IAmb   IAmb   09 55 51.6
              comp=Z,30nm,0.7s
ZALV   Zalesovo Beam     56.28 315   P      P      09 55 15.4  -0.6
              comp=Z,5.5nm,0.7s,baz=38,slow=7.1,SNR=24
ZALV                                 LR     LR     10 20 31.0
              comp=Z,241nm,20.8s,baz=44,slow=37
ZALV   Zalesovo Beam     56.28 315   P      P      09 55 15.1  -1.0
I42A   Draeger Farm,     56.40  60   IAmb   IAmb   09 55 17.5
              comp=Z,34nm,0.9s
T35A   Sooner Cattle     56.42  71   P      P      09 55 15.2  -2.0
T35A                                 IAmb   IAmb   09 55 17.6
              comp=Z,34nm,1.1s
WMOK   Wichita Mounta    56.44  74   P      P      09 55 17.0  -0.5
              baz=311,SNR=10
OK029  Liberty Lake      56.57  73   IAmb   IAmb   09 55 19.2
              comp=Z,46nm,1.2s
OK025  Westminster Rd    56.78  73   IAmb   IAmb   09 55 20.7
              comp=Z,50nm,1.3s
ICESG  Greenland Ices    56.84  17  i P     P      09 55 20.5 +0.3
ICESG                                IAmb   IAmb   09 55 21.8
              comp=Z,171nm,0.9s
SLBS   Sierra La Lagu    56.85  92   P      P      09 55 21.4 +0.8
SLBS                                 IAmb   IAmb   09 55 21.6
              comp=Z,30nm,1.0s
FNO    Franklin          56.96  73   IAmb   IAmb   09 55 22.8
              comp=Z,60nm,1.2s
TX32   Lajitas Array     56.97  83   IAmb   IAmb   09 55 23.4
              comp=Z,62nm,1.2s
TXAR   Lajitas Array     56.97  83   P      P      09 55 21.3  -0.1
              comp=Z,27nm,1.0s,baz=302,slow=4.1,SNR=117
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TXAR				PcP	**PcP**	**09 56 16.7**	**+0.3**
	comp=Z,10nm,0.8s,baz=238,slow=1.4,SNR=11						
TXAR				P4KPbc		10 32 36.5	
	comp=Z,0.4nm,0.8s,baz=270,slow=3.8,SNR=4.3						
TXAR	**Lajitas Array**	56.97	83	P	**P**	**09 55 20.6**	**-0.7**
L42A	**Oliver, Polo**	57.18	62	IAmb	IAmb	09 55 30.5	
	comp=Z,35nm,1.1s						
ABTX	**Abilene, Hawle**	57.30	77	P	**P**	**09 55 23.2**	**-0.4**
	baz=312,SNR=21						
ABTX	**Abilene, Hawle**	57.30	77	P	**P**	**09 55 22.9**	**-0.7**
E46A	**Sault Ste Mari**	57.32	55	IAmb	IAmb	09 55 24.2	
	comp=Z,35nm,0.8s						
HPIG		57.33	86	IAmb	IAmb	09 55 25.3	
	comp=Z,46nm,1.1s						
P40A	**Paris**	57.40	66	IAmb	IAmb	09 55 24.7	
	comp=Z,81nm,1.4s						
G45A	**Suttons Bay**	57.45	57	IAmb	IAmb	09 55 24.7	
	comp=Z,23nm,0.8s						
TUL1	**Leonard**	57.51	71	P	**P**	**09 55 24.2**	**-0.9**
	baz=312,SNR=8.0						
TUL1	**Leonard**	57.51	71	IAmb	IAmb	09 55 25.7	
	comp=Z,39nm,1.1s						
LZH	**Lanzhou**	57.57	289	*e*P	**P**	**09 55 26.0**	**+0.3**
LZH				pP	sP	09 55 35.5	+2.0
LZH				sP	pwP	09 55 42.5	+3.9
LZH				S	**S**	**10 03 24.0**	**+1.9**
LZH				pmax	pmax		
	comp=Z,33nm,1.2s						
LZH				pmax	pmax		
	comp=Z,190nm,4.3s						
LZH				LR	LR		
	comp=Z,600nm,13.6s						
LZH				LR	LR		
	comp=Z,490nm,14.8s						
LZH				LR	LR		
	comp=Z,640nm,15.2s						
GTA	**Gaotai**	57.81	294	⇓P	**P**	**09 55 27.0**	**-0.2**
GTA				pP	sP	09 55 36.5	+1.4
GTA				sP	pwP	09 55 41.0	+0.8
GTA				S	**S**	**10 03 28.0**	**+2.9**
GTA				pmax	pmax		
	comp=Z,22nm,1.0s						
GTA				pmax	pmax		
	comp=Z,90nm,6.5s						
GTA				LR	LR		
	comp=Z,390nm,15.3s						
GTA				LR	LR		
	comp=Z,350nm,16.4s						
GTA				LR	LR		
	comp=Z,310nm,16.4s						
DGZ	**Jazzator, Alta**	57.82	310	*i* P	**P**	**09 55 26.8**	**-0.4**
DGZ				pmax	pmax		
	comp=Z,16nm,0.7s						
ENH	**Enshi**	57.94	280	IAmb	IAmb	09 55 44.4	
	comp=Z,36nm,1.0s						
L44A	**Lake County Fo**	58.06	61	P	**P**	**09 55 27.6**	**-1.1**
	baz=311						
GLMI	**Grayling**	58.15	57	P	**P**	**09 55 29.0**	**-0.4**
	baz=311,SNR=6.0						
SCO	**Scoresbysund**	58.27	10	*i* P	**P**	**09 55 30.7**	**+1.0**
SCO	**Scoresbysund**	58.27	10	P	**P**	**09 55 29.4**	**-0.3**
SCO				pmax	pmax		
	comp=Z,90nm,1.1s						
SCO	**Scoresbysund**	58.27	10	P	**P**	**09 55 29.4**	**-0.3**
SCO	**Scoresbysund**	58.27	10	*i* P	**P**	**09 55 30.7**	**+1.0**
HDIL	**Hopedale**	58.33	63	P	**P**	**09 55 29.3**	**-1.4**
	baz=311						
HDIL	**Hopedale**	58.33	63	P	**P**	**09 55 29.6**	**-1.0**
MATQ	**Matagami**	58.49	49	P	**P**	**09 55 31.6**	**0.0**
	baz=312,SNR=34						
M44A	**Midewin, Midew**	58.50	62	IAmb	IAmb	09 55 32.4	
	comp=Z,67nm,1.3s						
X37A	**Clayton**	58.65	72	IAmb	IAmb	09 55 34.1	
	comp=Z,40nm,1.1s						
JCT	**Junction City**	58.65	79	P	**P**	**09 55 32.3**	**-0.8**
	baz=313,SNR=23						
JCT	**Junction City**	58.65	79	IAmb	IAmb	09 55 34.1	
	comp=Z,68nm,1.3s						
HAMF	**Hammerfest**	58.76	353	*e*P	**P**	**09 55 33.2**	**0.0**
P43A	**Skaggs, Pawnee**	58.80	64	IAmb	IAmb	09 55 34.2	
	comp=Z,34nm,1.1s						
MGMO	**Mountain Grove**	58.82	68	IAmb	IAmb	09 56 24.0	
	comp=Z,28nm,1.1s						
CCM	**Cathedral Cave**	58.84	67	P	**P**	**09 55 33.8**	**-0.5**
	baz=312						
CCM	**Cathedral Cave**	58.84	67	P	**P**	**09 55 31.8**	**-2.4**
CCM				pmax	pmax		
	comp=Z,22nm,1.2s						
CCM	**Cathedral Cave**	58.84	67	P	**P**	**09 55 31.8**	**-2.4**
U40A	**Yellville**	59.00	69	P	**P**	**09 55 33.9**	**-1.6**
	baz=312,SNR=11						
U40A	**Yellville**	59.00	69	P	**P**	**09 55 33.5**	**-1.9**
U40A				IAmb	IAmb	09 55 35.2	
	comp=Z,26nm,1.1s						
O44A	**Mansfield**	59.07	63	IAmb	IAmb	09 55 35.5	
	comp=Z,28nm,1.1s						
J47A	**Sunmer**	59.08	58	IAmb	IAmb	09 55 36.8	
	comp=Z,52nm,1.1s						
WHTX	**Lake Whitney,**	59.10	76	P	**P**	**09 55 36.2**	**+0.1**
	baz=313,SNR=21						
W39A	**Magazine**	59.21	71	P	**P**	**09 55 36.0**	**-0.9**
	baz=312,SNR=8.7						
W39A	**Magazine**	59.21	71	IAmb	IAmb	09 55 37.6	
	comp=Z,68nm,1.4s						
LSQQ	**Lebel-sur-Quev**	59.28	49	P	**P**	**09 55 36.7**	**-0.4**
	baz=312						
KEV	**Kevo**	59.31	351	P	**P**	**09 55 37.5**	**+0.5**
KEV				pmax	pmax		
	comp=Z,122nm,1.1s						
KEV	**Kevo**	59.31	351	P	**P**	**09 55 37.5**	**+0.5**
FVM	**French Village**	59.37	66	IAmb	IAmb	09 55 37.9	
	comp=Z,79nm,1.5s						
Q44A	**Meyer Farm, Va**	59.58	65	IAmb	IAmb	09 56 22.0	
	comp=Z,75nm,1.6s						
ARA0	**ARCESS Array S**	59.67	351	*e*P	**P**	**09 55 40.0**	**+0.4**
ARCES	**ARCESS Array B**	59.67	351	P	**P**	**09 55 40.0**	**+0.4**
	comp=Z,80nm,0.7s,baz=26,slow=8.4,SNR=207						
ARCES				LR	LR	10 22 00.2	
	comp=Z,292nm,21.1s,baz=350,slow=37						
ARCES	**ARCESS Array B**	59.67	351	P	**P**	**09 55 40.0**	**+0.4**
ARCES	**ARCESS Array B**	59.67	351	IAmb	IAmb	09 55 40.9	
	comp=Z,75nm,0.8s						
SFIN	**Lafayette**	59.70	62	P	**P**	**09 55 38.5**	**-1.7**
	baz=312						
SFIN	**Lafayette**	59.70	62	IAmb	IAmb	09 55 48.4	
	comp=Z,45nm,1.1s						
FCAR	**Ozark Folk Cen**	59.75	69	P	**P**	**09 55 39.1**	**-1.5**
FCAR				IAmb	IAmb	09 55 40.2	
	comp=Z,40nm,1.1s						
MIAR	**Mount Ida**	59.77	71	P	**P**	**09 55 40.3**	**-0.5**
	baz=313,SNR=19						
MIAR	**Mount Ida**	59.77	71	P	**P**	**09 55 40.1**	**-0.7**
MIAR				pmax	pmax		
	comp=Z,54nm,1.1s						
MIAR	**Mount Ida**	59.77	71	P	**P**	**09 55 40.1**	**-0.7**
MIAR				IAmb	IAmb	09 55 41.6	
	comp=Z,54nm,1.1s						
435B	**Jarrell**	59.84	77	P	**P**	**09 55 41.0**	**-0.2**
	baz=313,SNR=5.9						
WHAR	**Wooly Hollow**	60.05	70	P	**P**	**09 55 41.8**	**-0.8**
WHAR				IAmb	IAmb	09 55 42.8	
	comp=Z,38nm,1.1s						
JETT	**Jettan, Norway**	60.08	353	*e*P	**P**	**09 55 43.1**	**+0.7**
TRO	**Tromso**	60.11	354	*e*P	**P**	**09 55 42.3**	**-0.2**
LVZ	**Lovozero**	60.14	347	*ce*P	**P**	**09 55 43.0**	**+0.2**
LVZ				pmax	pmax		
	comp=Z,401nm,1.0s						
LVZ	**Lovozero**	60.14	347	P	**P**	**09 55 43.0**	**+0.2**
L48A	**N Adams**	60.16	59	IAmb	IAmb	09 55 44.7	
	comp=Z,73nm,1.4s						
W41B	**Gary Mavity, V**	60.16	70	P	**P**	**09 55 42.2**	**-1.1**
	baz=313,SNR=10.0						
N47A	**Urbana**	60.16	61	IAmb	IAmb	09 55 43.4	
	comp=Z,64nm,1.4s						
PBMO	**Poplar Bluff**	60.17	67	P	**P**	**09 55 41.7**	**-1.7**
PBMO				IAmb	IAmb	09 55 43.3	
	comp=Z,35nm,1.2s						
OLIL	**Olney**	60.23	64	IAmb	IAmb	09 55 52.2	
	comp=Z,33nm,1.1s						
ANGG	**Ammassalik, Gr**	60.23	19	*i* P	**P**	**09 55 43.6**	**+0.2**
X40A	**Basin Creek Fa**	60.27	71	P	**P**	**09 55 43.5**	**-0.6**
	baz=313,SNR=7.6						
X40A	**Basin Creek Fa**	60.27	71	IAmb	IAmb	09 55 45.2	
	comp=Z,32nm,1.2s						
AAM	**Ann Arbor**	60.35	59	P	**P**	**09 55 44.8**	**+0.2**
	baz=312						
833A	**Chaparral WMA,**	60.38	80	P	**P**	**09 55 44.7**	**-0.4**
	baz=314,SNR=10						
KTK1	**Kautokeino**	60.39	352	*e*P	**P**	**09 55 44.9**	**+0.5**
ZSN	**Zaisan**	60.59	310	*e*P	**P**	**09 55 44.8**	**-1.4**
	comp=Z,5.3nm,0.7s,baz=310						
ZSN	**Zaisan**	60.59	310	*e*P	**P**	**09 55 44.8**	**-1.4**
ZSN				pmax	pmax		
	comp=Z,5.0nm,0.7s						
APA	**Apatity**	60.62	348	⇓*i*P	**P**	**09 55 45.2**	**-0.9**
APA				pmax	pmax		
	comp=Z,37nm,1.0s						
APA				MLR	MLR		
	comp=Z,700nm,16.0s						
SEM	**Semipalatinsk**	60.75	315	*e*P	**P**	**09 55 45.2**	**-2.4**
	baz=315						
SEM				*e*S	**S**	**10 04 00.6**	**-2.4**
	baz=315						
SEM	**Semipalatinsk**	60.75	315	*e*P	**P**	**09 55 45.1**	**-2.4**
SEM				*e*S	**S**	**10 04 00.6**	**-2.4**
I51A	**Listowel**	60.76	56	P	**P**	**09 55 47.9**	**+0.5**
	baz=313,SNR=21						
BLO	**Bloomington**	60.84	63	IAmb	IAmb	09 55 49.2	
	comp=Z,64nm,1.4s						
ALGO	**Algonquin Park**	60.85	52	P	**P**	**09 55 48.2**	**+0.3**
	baz=313,SNR=38						
HBAR	**Harrisburg**	60.86	68	IAmb	IAmb	09 55 49.0	
	comp=Z,54nm,1.0s						
N49A	**Columbus Grove**	60.98	60	P	**P**	**09 55 48.3**	**-0.6**
N49A				IAmb	IAmb	09 55 49.5	
	comp=Z,37nm,1.1s						
NATX	**Nacogdoches**	60.99	74	P	**P**	**09 55 47.7**	**-1.5**
	baz=314						
NATX	**Nacogdoches**	60.99	74	P	**P**	**09 55 48.6**	**-0.6**
USIN	**University of**	60.99	65	P	**P**	**09 55 48.0**	**-1.1**
USIN				IAmb	IAmb	09 55 58.6	
	comp=Z,46nm,1.0s						
SADO	**Sadowa**	61.09	54	IAmb	IAmb	09 55 50.4	
	comp=Z,30nm,0.9s						
CD2	**Chengdu**	61.11	285	P	**P**	**09 55 48.3**	**-1.7**
CD2				pmax	pmax		
	comp=Z,20nm,0.7s						
Z41A	**Richland Creek**	61.12	72	P	**P**	**09 55 48.6**	**-1.4**
	baz=313						
G54A	**Lake Saint Pet**	61.21	53	P	**P**	**09 55 50.5**	**+0.1**
	baz=314,SNR=25						
KURK	**Kurchatov**	61.27	316	*i* P	**P**	**09 55 50.6**	**-0.1**
KURK				pmax	pmax		
	comp=Z,45nm,0.7s						
KURK	**Kurchatov**	61.27	316	P	**P**	**09 55 50.8**	**0.0**
P48A	**Milroy**	61.27	62	IAmb	IAmb	09 55 58.9	
	comp=Z,26nm,0.8s						
O49A	**Covington**	61.40	61	IAmb	IAmb	09 55 52.1	
	comp=Z,54nm,1.5s						
D55A	**Sainte-Anne-du**	61.41	50	P	**P**	**09 55 51.1**	**-0.6**
	baz=314,SNR=34						
X43A	**Marvell**	61.43	69	P	**P**	**09 55 51.3**	**-0.7**
	baz=313						
HKT	**Hockley**	61.51	77	P	**P**	**09 55 52.1**	**-0.4**
HKT				pmax	pmax		
	comp=Z,108nm,1.7s						
HKT	**Hockley**	61.51	77	P	**P**	**09 55 52.1**	**-0.4**
E55A	**Montcerf-Lytto**	61.51	51	P	**P**	**09 55 52.2**	**-0.2**
	baz=314,SNR=14						
H53A	**Bobcaygeon**	61.52	54	P	**P**	**09 55 52.9**	**+0.4**
	baz=314,SNR=10						
WCI	**Wyandotte Cave**	61.61	64	P	**P**	**09 55 52.7**	**-0.5**
	baz=313						
WCI	**Wyandotte Cave**	61.61	64	P	**P**	**09 55 52.9**	**-0.3**
WCI				pmax	pmax		
	comp=Z,29nm,1.2s						
WCI	**Wyandotte Cave**	61.61	64	P	**P**	**09 55 52.9**	**-0.3**
WCI				IAmb	IAmb	09 56 35.6	
	comp=Z,29nm,1.1s						
P49A	**Miami Univ. Ec**	61.62	61	P	**P**	**09 55 53.1**	**-0.2**
	baz=313						
P49A	**Miami Univ. Ec**	61.62	61	IAmb	IAmb	09 56 00.6	
	comp=Z,20nm,0.9s						
WMQ	**Urumqi**	61.63	305	*e*P	**P**	**09 55 53.8**	**+0.4**
WMQ				pP	sP	09 56 03.3	+2.0
WMQ				sP	pwP	09 56 09.0	+2.7
WMQ				pmax	pmax		
	comp=Z,17nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,210nm,6.1s						
WMQ				LR	LR		
	comp=Z,1µm,22.5s						
WMQ				LR	LR		
	comp=Z,970nm,28.5s						
WMQ				LR	LR		
	comp=Z,250nm,29.7s						
D56A	**ZEC Mazanza, M**	61.74	50	P	**P**	**09 55 53.7**	**-0.3**
	baz=314,SNR=18						
LOF	**Lofoten**	61.90	356	*e*P	**P**	**09 55 54.8**	**+0.1**
N2IH	**Innhavet**	61.94	355	*e*P	**P**	**09 55 54.7**	**-0.2**
E56A	**St. Veronique**	61.95	50	P	**P**	**09 55 55.2**	**-0.2**
	baz=314,SNR=13						
T47A	**Sharon Grove**	61.99	65	IAmb	IAmb	09 55 56.4	
	comp=Z,37nm,1.0s						
N51A	**Ashland**	61.99	59	IAmb	IAmb	09 55 56.5	
	comp=Z,46nm,1.1s						
STEI	**Steigen**	62.02	355	*e*P	**P**	**09 55 56.0**	**+0.5**
M52A	**Chesterland**	62.12	58	IAmb	IAmb	09 55 57.6	
	comp=Z,40nm,1.1s						
ACSO	**Alum Creek Sta**	62.12	60	P	**P**	**09 55 56.1**	**-0.6**
	baz=314						
WVT	**Waverly**	62.15	66	P	**P**	**09 55 56.1**	**-0.7**
	baz=314						
WVT	**Waverly**	62.15	66	P	**P**	**09 55 56.6**	**-0.3**
WVT				pmax	pmax		
	comp=Z,111nm,2.0s						
WVT	**Waverly**	62.15	66	P	**P**	**09 55 56.6**	**-0.3**
WVT				IAmb	IAmb	09 57 02.5	
	comp=Z,111nm,2.0s						
N2SV	**S¸rv¥gen**	62.16	356	*e*P	**P**	**09 55 56.6**	**+0.2**
ZAIG	**Zacatecas**	62.25	87	P	**P**	**09 55 57.3**	**-0.8**
ZAIG				IAmb	IAmb	09 55 59.4	
	comp=Z,36nm,1.1s						
MK31	**Makanchi Array**	62.31	311	*i* P	**P**	**09 55 56.9**	**-1.0**
MK31				pmax	pmax		
	comp=Z,17nm,0.9s						
MK31	**Makanchi Array**	62.31	311	P	**P**	**09 55 56.7**	**-1.1**
MKAR	**Makanchi Array**	62.31	311	P	**P**	**09 55 57.1**	**-0.8**
	comp=Z,12nm,0.7s,baz=54,slow=6.6,SNR=134						
MKAR				LR	LR	10 25 43.1	
	comp=Z,134nm,18.3s,baz=28,slow=39						
OXF	**Oxford**	62.32	69	P	**P**	**09 55 57.3**	**-0.7**
	baz=314,SNR=12						
143A	**Socs Landing,**	62.35	71	IAmb	IAmb	09 55 59.4	
	comp=Z,40nm,1.2s						
GYA	**Guiyang**	62.36	279	⇑P	**P**	**09 55 58.0**	**-0.6**
GYA				pP	sP	09 56 07.0	+0.6
GYA				sP	pwP	09 56 14.5	+2.9
GYA				S	**S**	**10 04 21.8**	**-2.0**
GYA				SS	**SS**	**10 08 24.5**	**-2.6**
GYA				pmax	pmax		
	comp=Z,18nm,1.1s						
GYA				pmax	pmax		
	comp=Z,160nm,3.5s						
GYA				LR	LR		
	comp=Z,120nm,16.5s						
N2TV	**T¥rnvik**	62.38	355	*e*P	**P**	**09 55 58.4**	**+0.5**
J54A	**Appleton**	62.38	55	IAmb	IAmb	09 56 00.0	
	comp=Z,69nm,1.2s						
N2VA	**Vr¸y**	62.40	356	*e*P	**P**	**09 55 58.0**	**0.0**
L53A	**Girard**	62.43	57	P	**P**	**09 55 58.8**	**+0.1**
	baz=314,SNR=6.9						
MAKZ	**Makanchi**	62.46	311	P	**P**	**09 55 58.1**	**-0.7**
MAKZ				pmax	pmax		
	comp=Z,16nm,0.9s						
MAKZ	**Makanchi**	62.46	311	P	**P**	**09 55 58.1**	**-0.7**
LATQ	**La Tuque**	62.46	48	P	**P**	**09 55 58.4**	**-0.4**
	baz=315,SNR=13						
LATQ	**La Tuque**	62.46	48	IAmb	IAmb	09 55 59.8	
	comp=Z,31nm,1.0s						
ERPA	**Erie**	62.47	57	P	**P**	**09 55 58.8**	**-0.1**
	baz=314,SNR=12						
M53A	**WI Miller and**	62.56	58	P	**P**	**09 55 58.5**	**-1.1**
	baz=314,SNR=8.0						
N2RO	**R¸st**	62.57	357	*e*P	**P**	**09 55 59.9**	**+0.7**
N2ST	**Straumen**	62.57	355	*e*P	**P**	**09 56 00.1**	**+1.0**
NBB08	**Skaug oppvekst**	62.59	355	*e*P	**P**	**09 55 59.7**	**+0.4**
D58A	**Chemin du LacG**	62.62	49	P	**P**	**09 55 59.4**	**-0.5**
	baz=315,SNR=14						
F57A	**Harrington**	62.64	51	P	**P**	**09 55 58.4**	**-1.5**
	baz=315						
Y45A	**Yeager Farm, C**	62.68	69	P	**P**	**09 55 59.2**	**-1.2**
ALLY	**Alegheny Colle**	62.70	57	P	**P**	**09 56 00.1**	**-0.4**
Q51A	**Peebles**	62.75	61	P	**P**	**09 56 00.8**	**0.0**
Q51A				IAmb	IAmb	09 56 01.9	
	comp=Z,56nm,1.1s						
PLAL	**Pickwick Lake**	62.79	67	IAmb	IAmb	09 56 01.3	
	comp=Z,24nm,0.9s						
J55A	**Hilton**	62.82	54	IAmb	IAmb	09 56 02.8	
	comp=Z,42nm,0.9s						
O52A	**Adamsville**	62.84	59	IAmb	IAmb	09 56 02.3	
	comp=Z,54nm,1.0s						
N53A	**Lisbon**	62.91	58	IAmb	IAmb	09 56 02.9	
	comp=Z,61nm,1.2s						
E58A	**La Victoria**	62.94	49	P	**P**	**09 56 01.5**	**-0.5**
	baz=315,SNR=7.6						
NBB05	**Inndyr**	62.97	356	*e*P	**P**	**09 56 02.5**	**+0.7**
G57A	**Newington**	62.99	51	P	**P**	**09 56 02.1**	**-0.2**
	baz=315,SNR=8.2						
P52A	**Corning**	63.01	60	P	**P**	**09 56 01.4**	**-1.2**
	baz=314						
V48A	**Smith Brothers**	63.01	66	IAmb	IAmb	09 57 00.6	
	comp=Z,56nm,1.8s						
TMCR	**Tamitsa**	63.05	344	*e*P	**P**	**09 56 00.9**	**-1.5**
TMCR				pmax	pmax		
	comp=Z,111nm,0.9s						
CLTN	**Cedars of Leba**	63.05	65	IAmb	IAmb	09 56 03.6	
	comp=Z,36nm,1.3s						
M54A	**Oil Creek Stat**	63.06	57	P	**P**	**09 56 02.7**	**-0.3**
	baz=314,SNR=6.1						
M54A	**Oil Creek Stat**	63.06	57	P	**P**	**09 56 02.6**	**-0.3**
M54A				IAmb	IAmb	09 56 04.1	
	comp=Z,44nm,1.1s						
O53A	**New Philadelph**	63.09	59	P	**P**	**09 56 03.2**	**+0.1**
	baz=314,SNR=5.7						
O53A	**New Philadelph**	63.09	59	IAmb	IAmb	09 56 03.9	
	comp=Z,43nm,1.1s						
BRVK	**Borovoye**	63.10	322	*i* P	**P**	**09 56 03.4**	**+0.4**
BRVK				pmax	pmax		
	comp=Z,92nm,1.6s						
BRVK	**Borovoye**	63.10	322	P	**P**	**09 56 03.6**	**+0.6**
MMNY	**Mt. Morris Dam**	63.15	55	IAmb	IAmb	09 56 04.9	
	comp=Z,47nm,1.0s						
D59A	**Saint-Raymond**	63.19	48	P	**P**	**09 56 03.2**	**-0.4**
	baz=316,SNR=13						
VBMS	**Vicksburg**	63.23	71	P	**P**	**09 56 02.9**	**-1.2**
	baz=314						
H57A	**Richville**	63.23	52	P	**P**	**09 56 04.0**	**+0.1**
	baz=315,SNR=15						
E59A	**St. Maurice**	63.24	49	P	**P**	**09 56 03.0**	**-0.9**
	baz=316						
N54A	**Moraine State**	63.27	58	P	**P**	**09 56 04.1**	**-0.1**
	baz=314,SNR=8.1						
T50A	**Nancy**	63.28	64	IAmb	IAmb	09 56 06.0	
	comp=Z,94nm,1.7s						
J56A	**Wolcott**	63.31	54	P	**P**	**09 56 03.9**	**-0.6**
	baz=315,SNR=10						
G58A	**Ormstown**	63.42	51	P	**P**	**09 56 04.9**	**-0.3**
	baz=315,SNR=9.0						
K56A	**Middlesex**	63.48	55	P	**P**	**09 56 06.1**	**+0.5**
	baz=315,SNR=18						
LONY	**Lake Ozonia**	63.53	51	P	**P**	**09 56 05.6**	**-0.4**
	baz=315,SNR=6.5						
LONY	**Lake Ozonia**	63.53	51	P	**P**	**09 56 04.8**	**-1.2**
LONY				IAmb	IAmb	09 56 06.8	
	comp=Z,41nm,1.2s						
KONS	**Konsvik**	63.55	356	*e*P	**P**	**09 56 06.5**	**+0.8**
F59A	**Saint Guilaume**	63.55	50	P	**P**	**09 56 05.6**	**-0.4**
	baz=316,SNR=8.8						
M55A	**Ridgway**	63.57	56	P	**P**	**09 56 06.4**	**+0.1**
SVE	**Sverdlovsk**	63.69	329	⇑*e*P	**P**	**09 56 07.9**	**+1.1**
SVE				pmax	pmax		
	comp=Z,32nm,0.9s						
D60A	**Saint Jean D'O**	63.69	48	P	**P**	**09 56 06.6**	**-0.3**
	baz=316,SNR=7.3						
STOK	**Stokkvaagen**	63.72	356	*e*P	**P**	**09 56 07.8**	**+1.0**
L56A	**Greenwood**	63.75	55	P	**P**	**09 56 07.9**	**+0.4**
	baz=315,SNR=15						
D61A	**St Aubert, Com**	63.83	47	P	**P**	**09 56 07.8**	**0.0**
	baz=316,SNR=17						
E60A	**Ste Agathe de**	63.83	48	P	**P**	**09 56 07.6**	**-0.3**
	baz=316,SNR=8.8						
F60A	**Warwick**	63.87	49	P	**P**	**09 56 07.7**	**-0.4**
	baz=316,SNR=6.7						
M56A	**Emporium**	63.88	56	P	**P**	**09 56 08.5**	**+0.2**
	baz=315,SNR=6.3						
M56A	**Emporium**	63.88	56	IAmb	IAmb	09 56 09.6	
	comp=Z,68nm,1.2s						
K57A	**Scipio Center**	63.88	54	P	**P**	**09 56 08.6**	**+0.4**
	baz=315,SNR=9.5						
H58A	**Gabriels**	63.88	51	P	**P**	**09 56 07.9**	**-0.3**
	baz=316,SNR=5.1						
Q53A	**Leroy**	63.88	60	P	**P**	**09 56 08.0**	**-0.4**
	baz=315						
H59A	**Cadyville**	63.96	51	P	**P**	**09 56 08.4**	**-0.4**
	baz=316,SNR=12						
I58A	**Old Forge**	63.99	52	P	**P**	**09 56 09.2**	**+0.1**
	baz=316,SNR=15						
R53A	**Hurricane**	64.02	61	IAmb	IAmb	09 56 20.1	
	comp=Z,67nm,1.3s						
Z47A	**Carrollton**	64.03	69	P	**P**	**09 56 07.9**	**-1.5**
Z47A				IAmb	IAmb	09 56 09.5	
	comp=Z,39nm,1.0s						
NCB	**Newcomb**	64.18	52	P	**P**	**09 56 09.8**	**-0.4**
NCB				IAmb	IAmb	09 56 12.5	
	comp=Z,24nm,0.8s						
Q54A	**Coxs Mills**	64.18	60	IAmb	IAmb	09 56 11.6	
	comp=Z,61nm,1.2s						
N56A	**West Decatur**	64.21	57	P	**P**	**09 56 10.7**	**+0.2**
	baz=315,SNR=7.3						
L57A	**Andrews Acres**	64.22	55	P	**P**	**09 56 10.9**	**+0.4**
	baz=315,SNR=9.5						
E61A	**Lac Etchemin**	64.24	48	P	**P**	**09 56 10.5**	**-0.1**
	baz=317						
MCWV	**Mont Chateau**	64.26	58	P	**P**	**09 56 10.8**	**0.0**
	baz=315						
K58A	**Earlville**	64.31	54	P	**P**	**09 56 11.4**	**+0.3**
	baz=316,SNR=8.4						
G60A	**Masonville**	64.31	50	P	**P**	**09 56 11.0**	**-0.1**
	baz=316						
F61A	**St Evariste**	64.33	48	P	**P**	**09 56 11.5**	**+0.3**
	baz=316,SNR=10						
J59A	**Piesco**	64.39	52	P	**P**	**09 56 11.4**	**-0.3**
	baz=316,SNR=15						
J59A	**Piesco**	64.39	52	IAmb	IAmb	09 56 12.3	
	comp=Z,37nm,0.7s						
BRZS	**Berezniki**	64.42	318	*e*P	**P**	**09 56 10.5**	**-1.3**
	comp=Z,19nm,1.0s,baz=318						
BRZS				*e*S	**S**	**10 04 47.5**	**-1.2**
	baz=318						
BRZS	**Berezniki**	64.42	318	*e*P	**P**	**09 56 10.4**	**-1.3**
BRZS				*e*S	**S**	**10 04 47.5**	**-1.2**
BRZS				pmax	pmax		
	comp=Z,19nm,1.0s						
H60A	**Morristown**	64.52	50	P	**P**	**09 56 12.1**	**-0.4**
	baz=316,SNR=6.5						
O56A	**Blue Knob Stat**	64.52	57	P	**P**	**09 56 12.3**	**-0.3**
	baz=315						
O56A	**Blue Knob Stat**	64.52	57	IAmb	IAmb	09 56 13.6	
	comp=Z,39nm,1.2s						
BINY	**Binghamton**	64.53	54	P	**P**	**09 56 12.9**	**+0.3**
	baz=316,SNR=7.2						
BINY	**Binghamton**	64.53	54	P	**P**	**09 56 13.1**	**+0.5**
BINY				IAmb	IAmb	09 56 14.3	
	comp=Z,60nm,1.1s						
M57A	**Sunshine Farm,**	64.54	56	P	**P**	**09 56 13.0**	**+0.3**
	baz=315,SNR=7.4						
M57A	**Sunshine Farm,**	64.54	56	P	**P**	**09 56 10.9**	**-1.8**
M57A				IAmb	IAmb	09 56 13.6	
	comp=Z,27nm,0.8s						
FPAL	**Fort Paine**	64.55	66	IAmb	IAmb	09 56 12.5	
	comp=Z,35nm,1.1s						
G61A	**St-Isidore-de-**	64.57	49	P	**P**	**09 56 12.7**	**-0.1**
	baz=316,SNR=6.9						
R54A	**Victor**	64.66	60	P	**P**	**09 56 13.2**	**-0.3**
	baz=315						
ARU	**Arti**	64.68	330	P	**P**	**09 56 13.9**	**+0.6**
	comp=Z,12nm,0.6s,baz=8.8,slow=3.6,SNR=53						
ARU				LR	LR	10 26 27.2	
	comp=Z,446nm,22.0s,baz=34,slow=38						
ARU	**Arti**	64.68	330	*c i*P	**P**	**09 56 13.8**	**+0.5**
ARU						09 58 33.1	
ARU				S	**S**	**10 04 53.3**	**+1.6**
ARU				SS	**SS**	**10 08 59.5**	**-2.2**
ARU				pmax	pmax		
	comp=Z,44nm,0.8s						
ARU	**Arti**	64.68	330	P	**P**	**09 56 13.9**	**+0.6**
ARU				IAmb	IAmb	09 56 15.5	
	comp=Z,36nm,0.8s						

K59A	Cooperstown	64.71	53	P	P	09 56 14.2	+0.5
	baz=316,SNR=9.5						
L58A	Harry Jones Me	64.71	54	P	P	09 56 14.4	+0.6
	baz=316,SNR=11						
N57A	Milroy	64.73	56	P	P	09 56 13.7	-0.1
	baz=315,SNR=7.2						
I60A	Shoreham	64.74	51	P	P	09 56 13.8	0.0
	baz=316						
S54A	Dingess, Beckl	64.75	61	P	P	09 56 13.1	-1.0
	baz=315						
LRAL	Lakeview Retre	64.78	68	P	P	09 56 13.5	-0.8
	baz=315						
V52A	Sevierville	64.82	64	IAmb	IAmb	09 56 14.8	
	comp=Z,36nm,1.2s						
M58A	Price's Panora	64.87	55	P	P	09 56 14.9	+0.1
	baz=316,SNR=7.0						
H61A	Lyndonville	64.92	50	P	P	09 56 15.0	-0.1
	baz=317,SNR=5.8						
D63A	Stockholm	64.92	46	P	P	09 56 14.8	-0.2
	baz=318,SNR=11						
L59A	Walton	65.03	54	P	P	09 56 16.2	+0.3
	baz=316,SNR=8.4						
Q56A	Snyder Ridge,	65.05	59	P	P	09 56 15.2	-0.9
	baz=315						
O57A	Amberson	65.07	57	P	P	09 56 16.3	+0.2
	baz=316,SNR=7.8						
J60A	Lant Hill Farm	65.10	52	P	P	09 56 16.5	+0.2
	baz=316,SNR=13						
G62A	West of Eustis	65.11	49	P	P	09 56 16.5	+0.2
	baz=317,SNR=9.3						
N58A	Sunbury	65.11	56	P	P	09 56 16.4	0.0
	baz=316,SNR=6.3						
N58A	Sunbury	65.11	56	IAmb	IAmb	09 56 17.7	
	comp=Z,38nm,1.0s						
LBNH	Lisbon	65.13	50	P	P	09 56 15.9	-0.5
	baz=317						
LBNH	Lisbon	65.13	50	IAmb	IAmb	09 56 17.7	
	comp=Z,45nm,1.1s						
E63A	Oxbow	65.23	47	P	P	09 56 16.7	-0.3
	baz=318,SNR=10.0						
H62A	Milan	65.27	50	P	P	09 56 17.6	+0.2
	baz=317,SNR=16						
H62A	Milan	65.27	50	P	P	09 56 17.2	-0.1
M59A	Waymart	65.29	54	P	P	09 56 17.7	+0.2
	baz=316,SNR=9.5						
K60A	Five Rivers En	65.32	53	P	P	09 56 17.5	-0.2
	baz=316						
HNH	Hanover	65.34	51	P	P	09 56 18.1	+0.3
HNH				IAmb	IAmb	09 56 39.1	
	comp=Z,74nm,1.5s						
TRY	Troy	65.35	52	IAmb	IAmb	09 56 18.8	
	comp=Z,28nm,0.8s						
MOIG	Morelia	65.37	88	P	P	09 56 19.3	+0.7
P57A	Homestead Farm	65.38	57	P	P	09 56 17.1	-1.0
	baz=316						
P57A	Homestead Farm	65.38	57	IAmb	IAmb	09 56 19.3	
	comp=Z,31nm,1.0s						
F63A	Nahmakanta, Br	65.44	48	P	P	09 56 18.4	0.0
	baz=318,SNR=5.8						
J61A	Chester	65.47	51	P	P	09 56 18.4	-0.2
	baz=317,SNR=7.4						
Q57A	Strasburg	65.48	58	P	P	09 56 18.1	-0.7
	baz=316						
TDK	Taldyqorghan	65.49	311	*e*P	P	09 56 18.0	-0.8
	comp=Z,28nm,0.8s,baz=311						
TDK	Taldyqorghan	65.49	311	*e*P	P	09 56 18.0	-0.8
TDK				pmax	pmax		
	comp=Z,28nm,0.8s						
E64A	Bridgewater	65.51	46	P	P	09 56 18.5	-0.3
	baz=318,SNR=11						
O58A	Lewisberry	65.51	56	P	P	09 56 18.7	-0.2
	baz=316,SNR=5.1						
KIRV	Kirov	65.54	336	P	P	09 56 19.8	+1.0
	comp=Z,39nm,0.6s,baz=31,slow=2.6,SNR=18						
KIRV	Kirov	65.54	336	*ce*P	P	09 56 19.7	+0.9
PAGS	Pennsylvania G	65.55	56	IAmb	IAmb	09 56 20.1	
	comp=Z,36nm,1.2s						
N59A	State Game Lan	65.56	55	P	P	09 56 19.1	-0.2
	baz=316,SNR=7.4						
N59A	State Game Lan	65.56	55	IAmb	IAmb	09 56 20.2	
	comp=Z,26nm,0.8s						
NSS	Namsos	65.56	356	*e*P	P	09 56 19.4	+0.6
K61A	Williamstown	65.59	52	P	P	09 56 19.3	-0.2
	baz=317						
L60A	Shokan	65.60	53	P	P	09 56 20.0	+0.5
	baz=316,SNR=6.2						
G63A	Kingsbury	65.62	48	P	P	09 56 19.7	+0.1
	baz=317,SNR=5.1						
QIZ	Qiongzhong	65.64	271	P	P	09 56 19.5	-0.5
QIZ				S	S	10 05 05.0	+0.7
QIZ				LR	LR		
	comp=Z,240nm,14.3s						
QIZ				LR	LR		
	comp=Z,230nm,13.7s						
QIZ				LR	LR		
	comp=Z,140nm,19.6s						
BLA	Blacksburg	65.66	61	P	P	09 56 20.1	0.0
	baz=316						
BLA	Blacksburg	65.66	61	IAmb	IAmb	09 56 21.3	
	comp=Z,42nm,1.1s						
PKME	Peaks-Kenny Pk	65.67	48	P	P	09 56 19.1	-0.8
	baz=318						
F64A	Sherman	65.67	47	P	P	09 56 19.2	-0.7
	baz=318						
F64A	Sherman	65.67	47	IAmb	IAmb	09 56 20.5	
	comp=Z,37nm,0.9s						
BATG	Bathurst New B	65.68	45	P	P	09 56 20.3	+0.3
BATG				IAmb	IAmb	09 56 21.6	
	comp=Z,62nm,1.2s						
I62A	Tamworth	65.69	50	P	P	09 56 19.4	-0.7
	baz=317						
H63A	New Sharon	65.75	49	P	P	09 56 20.2	-0.2
	baz=317						
O59A	Robesonia	65.77	56	P	P	09 56 20.7	+0.1
	baz=316,SNR=7.9						
L61A	Hillsdale 1, H	65.79	53	P	P	09 56 21.3	+0.5
	baz=317,SNR=7.9						
KMI	Kunming	65.80	281⇑	*e*P	P	09 56 21.3	0.0
KMI				pP	pwP	09 56 32.5	-1.9
KMI				PP	PP	09 58 45.5	-0.4
KMI				S	S	10 05 04.5	-2.2
KMI				pmax	pmax		
	comp=Z,19nm,1.1s						
KMI				pmax	pmax		
	comp=Z,190nm,4.6s						
KMI				LR	LR		
	comp=Z,150nm,24.5s						
KMI				LR	LR		
	comp=Z,230nm,18.2s						
KMI				LR	LR		
	comp=Z,190nm,18.0s						
S56A	Natural Bridge	65.81	60	P	P	09 56 20.5	-0.4
	baz=316						
KLMR	Klimovskoe	65.81	342	*e*P	P	09 56 18.9	-1.6
KLMR				pmax	pmax		
	comp=Z,115nm,1.3s						
KLMR	Klimovskoe	65.81	342	*e*P	P	09 56 18.9	-1.6
KLMR				AMP		09 56 22.7	
	comp=Z,115nm,1.3s						
KLMR				LQ	LQ	10 21 49.4	
KLMR				LQ	LQ	10 21 49.4	
KLMR				LR	LR	10 22 29.6	
M60A	Port Jervis	65.86	54	P	P	09 56 21.5	+0.3
	baz=316,SNR=14						
MVL	Millersville	65.91	56	IAmb	IAmb	09 56 22.5	
	comp=Z,24nm,1.0s						
J62A	Henniker	65.93	51	P	P	09 56 21.7	+0.1
	baz=317						
G64A	Maxfield	65.93	48	P	P	09 56 21.5	-0.1
	baz=318						
I63A	Otisfield	65.93	50	P	P	09 56 21.0	-0.7
	baz=317						
N60A	Cedar Hill Far	65.94	55	P	P	09 56 21.9	+0.2
	baz=316,SNR=6.7						
R57A	Stanardsville	65.95	59	P	P	09 56 21.7	-0.1
	baz=316						
Q58A	Fox Den Farm,	65.95	58	P	P	09 56 21.7	-0.1
	baz=316,SNR=5.7						
LUPA	Lehigh Univers	66.00	55	IAmb	IAmb	09 56 23.0	
	comp=Z,25nm,0.7s						
T56A	Rocky Mt	66.01	61	P	P	09 56 21.6	-0.7
	baz=316						
ODNJ	Ogdensburg	66.05	54	IAmb	IAmb	09 56 23.7	
	comp=Z,39nm,0.9s						
L61B	Northampton	66.05	52	P	P	09 56 22.1	-0.3
	baz=317						
BRAL	Brewton	66.07	70	P	P	09 56 22.6	0.0
	baz=316						
S57A	Dark Hollow, R	66.09	59	P	P	09 56 22.5	-0.2
	baz=316						
K62A	Royalston	66.12	52	P	P	09 56 22.7	-0.2
	baz=317						
P59A	Jarrettsville	66.14	56	P	P	09 56 23.0	0.0
	baz=316,SNR=8.3						
H64A	Troy	66.16	48	P	P	09 56 22.8	-0.2
	baz=318						
KSCT	Kent School, K	66.17	53	IAmb	IAmb	09 56 24.6	
	comp=Z,43nm,1.0s						
PDGK	Podgornoye	66.18	310	*i* P	P	09 56 22.8	-0.6
PDGK				pmax	pmax		
	comp=Z,28nm,1.0s						
O60A	Telford	66.18	55	P	P	09 56 23.0	-0.3
	baz=316						
R58A	Rapidan	66.23	58	P	P	09 56 23.6	0.0
	baz=316,SNR=5.1						
J63A	Strafford	66.25	50	P	P	09 56 23.8	+0.1
	baz=317						
U56A	King	66.30	61	P	P	09 56 23.7	-0.4
	baz=316						
SHLS	Shalkode	66.32	309	*e*P	P	09 56 21.8	-2.5
	comp=Z,20nm,0.8s,baz=309						
SHLS	Shalkode	66.32	309	*e*P	P	09 56 21.8	-2.5
SHLS				pmax	pmax		
	comp=Z,20nm,0.8s						
M61A	Granite Spring	66.32	54	P	P	09 56 24.3	+0.2
	baz=317,SNR=5.5						
BRNJ	Basking Ridge	66.36	55	IAmb	IAmb	09 56 26.0	
	comp=Z,59nm,1.0s						
L62A	Suffield	66.37	52	P	P	09 56 24.7	+0.3
	baz=317						
TAOE	Nuku Hiva Isla	66.41	141	*e*LR	LR	10 16 12.8	
	comp=Z,726nm,24.9s						
P60A	Greenville	66.42	56	P	P	09 56 24.3	-0.6
	baz=316						
N61A	South Mountain	66.45	54	P	P	09 56 25.0	0.0
	baz=317						
K63A	Dunstable	66.46	51	P	P	09 56 24.1	-0.9
	baz=317						
K63A	Dunstable	66.46	51	IAmb	IAmb	09 56 26.5	
	comp=Z,56nm,1.2s						
T57A	Hurt	66.47	60	P	P	09 56 24.8	-0.4
	baz=316						
PAL	Palisades	66.47	54	P	P	09 56 25.1	0.0
	baz=317,SNR=7.5						
PAL	Palisades	66.47	54	P	P	09 56 25.0	-0.1
PAL				pmax	pmax		
	comp=Z,83nm,1.0s						
PAL	Palisades	66.47	54	P	P	09 56 25.0	-0.1
KPKS	Kokpek	66.48	310	*e*P	P	09 56 24.5	-0.8
	comp=Z,15nm,0.5s,baz=310						
KPKS	Kokpek	66.48	310	*e*P	P	09 56 24.4	-0.8
KPKS				pmax	pmax		
	comp=Z,15nm,0.5s						
I64A	Boothbay	66.49	49	P	P	09 56 25.0	-0.2
	baz=318						
G65A	Princeton	66.54	47	P	P	09 56 25.1	-0.4
	baz=318						
G65A	Princeton	66.54	47	IAmb	IAmb	09 56 26.2	
	comp=Z,34nm,0.9s						
R58B	Mineral	66.54	59	P	P	09 56 25.7	+0.2
	baz=316,SNR=6.8						
R58B	Mineral	66.54	59	IAmb	IAmb	09 56 27.0	
	comp=Z,34nm,1.1s						
UZB	Uzynbulak	66.55	310	*e*P	P	09 56 24.5	-1.3
	comp=Z,7.5nm,0.6s,baz=310						
UZB	Uzynbulak	66.55	310	*e*P	P	09 56 24.5	-1.3
UZB				pmax	pmax		
	comp=Z,7.0nm,0.6s						
Q59A	Harwood	66.56	57	P	P	09 56 25.0	-0.7
	baz=316						
HRV	Adam Dziewonsk	66.58	51	P	P	09 56 25.6	-0.2
	baz=317						
H65A	Eastbrook	66.59	48	P	P	09 56 25.1	-0.7
	baz=318						
CPNY	Central Park	66.60	54	IAmb	IAmb	09 56 27.4	
	comp=Z,37nm,0.8s						
GOGA	Godfrey	66.61	66	P	P	09 56 25.0	-1.2
	baz=316						
KMSC	Kings Mountain	66.62	63	P	P	09 56 25.5	-0.6
	baz=316						
V56A	Mocksville	66.62	62	P	P	09 56 25.0	-1.1
	baz=316						
WSPT	Westport, CT	66.65	53	IAmb	IAmb	09 56 27.5	
	comp=Z,54nm,0.9s						
M62A	Hamden	66.68	53	P	P	09 56 25.5	-0.9
	baz=317						
S58A	Poland Farm, P	66.70	59	P	P	09 56 26.5	-0.1
	baz=316						
N62A	Caumsett State	66.75	54	P	P	09 56 26.9	0.0
	baz=317						
UCCT	U. Connecticut	66.76	52	IAmb	IAmb	09 56 28.4	
	comp=Z,50nm,0.9s						
R59A	King George, V	66.79	58	P	P	09 56 27.2	+0.1
	baz=316						
WES	Weston	66.79	51	IAmb	IAmb	09 56 27.9	
	comp=Z,31nm,0.8s						
O61A	Allentown	66.80	55	P	P	09 56 26.9	-0.3
	baz=317						
U57A	Blanch	66.83	61	P	P	09 56 27.6	+0.1
	baz=316						
T58A	Grand View Acr	66.91	60	P	P	09 56 27.6	-0.4
	baz=316						
SATY	Saty	66.92	310	*e*P	P	09 56 26.7	-1.4
	comp=Z,16nm,1.1s,baz=310						
SATY				*e*S	S	10 05 18.1	-1.5
	baz=310						
SATY	Saty	66.92	310	*e*P	P	09 56 26.7	-1.4
SATY				*e*S	S	10 05 18.1	-1.5
SATY				pmax	pmax		
	comp=Z,16nm,1.1s						
H66A	Whiting	66.97	47	P	P	09 56 28.0	-0.2
	baz=319						
S59A	Mechanicsville	67.00	58	P	P	09 56 28.2	-0.4
	baz=316						
CHKK	Chushkaly	67.02	311	*e*P	P	09 56 27.2	-1.4
	baz=311						
CHKK	Chushkaly	67.02	311	*e*P	P	09 56 27.2	-1.4
L63A	North Scituate	67.03	52	P	P	09 56 28.4	-0.2
	baz=318						
W56A	Indian Trail	67.05	62	P	P	09 56 28.4	-0.5
	baz=316						
M63A	Gales Ferry	67.14	52	P	P	09 56 28.9	-0.4
	baz=318,SNR=6.3						
L64A	Middleborough	67.36	51	P	P	09 56 30.7	0.0
	baz=318						
FINES	FINESS Array B	67.44	349	P	P	09 56 31.0	0.0
	comp=Z,19nm,0.7s,baz=23,slow=8.1,SNR=39						
FINES				LR	LR	10 27 42.0	
	comp=Z,245nm,21.1s,baz=18,slow=37						
FINES	FINESS Array B	67.44	349	P	P	09 56 31.2	+0.3
FINES	FINESS Array B	67.44	349	P	P	09 56 31.2	+0.3
M64A	Tiverton	67.46	52	P	P	09 56 30.9	-0.4
	baz=318						
PMG	Port Moresby	67.46	220	P	P	09 56 31.0	-0.6
	comp=Z,29nm,1.2s,baz=354,slow=12,SNR=3.5						
PMG	Port Moresby	67.46	220	P	P	09 56 31.0	-0.6
PMG	Port Moresby	67.46	220	IAmb	IAmb	09 56 34.5	
	comp=Z,47nm,1.3s						
MDOK	Medeo	67.51	311	*e*P	P	09 56 30.9	-1.0
	baz=311						
MDOK	Medeo	67.51	311	*e*P	P	09 56 30.9	-1.0
BTLS	Baital	67.53	314	*e*P	P	09 56 30.5	-1.2
	comp=Z,10nm,0.9s,baz=314						
BTLS	Baital	67.53	314	*e*P	P	09 56 30.5	-1.2
BTLS				pmax	pmax		
	comp=Z,11nm,0.9s						
AAA	Alma-Ata	67.54	311	*e*P	P	09 56 30.3	-1.6
	comp=Z,29nm,0.8s,baz=311						
AAA	Alma-Ata	67.54	311	*e*P	P	09 56 30.3	-1.6
AAA				pmax	pmax		
	comp=Z,29nm,0.8s						
MOL	Molde	67.66	358	*e*P	P	09 56 32.3	0.0
SLVN	Son La	67.78	277	P	P	09 56 33.2	-0.5
SLVN				IAmb	IAmb	09 56 44.1	
	comp=Z,19nm,0.7s						
DRLN	Deer Lake	67.82	39	P	P	09 56 34.5	+0.9
SWI	Sorong	67.85	239	P	P	09 56 33.7	-0.4
	comp=Z,62nm,1.2s						
W58A	Raeford	67.90	62	P	P	09 56 33.2	-1.1
	baz=317						
V59A	Middlesex	67.92	60	P	P	09 56 33.6	-0.8
	baz=317						
U60A	Pendleton	68.01	59	P	P	09 56 35.0	+0.1
	baz=317						
DOMB	Dombas	68.15	358	*e*P	P	09 56 34.9	-0.6
TKM2	Tokmak 2	68.39	312	P	P	09 56 38.2	+0.7
	SNR=8.1						
TKM2	Tokmak 2	68.39	312	*i* P	P	09 56 37.1	-0.4
TKM2				pmax	pmax		
	comp=Z,30nm,1.1s						
X59A	McDuffie Farm,	68.58	62	P	P	09 56 38.1	-0.4
	baz=317						
TLIG	Tlapa	68.60	88	P	P	09 56 38.2	-0.8
TLIG				IAmb	IAmb	09 56 40.7	
	comp=Z,47nm,1.5s						
USP	Ospenovka	68.66	312	P	P	09 56 39.8	+0.8
	SNR=30						
CHMS	Chumysh	68.74	312	P	P	09 56 40.1	+0.6
	SNR=7.0						
KBK	Karagaybulak	68.90	312	P	P	09 56 41.4	+0.7
	SNR=12						
NB2	NORSAR Subarra	69.08	356	P	P	09 56 41.6	+0.3
	comp=Z,10nm,0.7s,baz=5.0,slow=6.5						
NOA	NORSAR Array B	69.08	356	P	P	09 56 42.0	+0.7
	comp=Z,11nm,0.7s,baz=5.6,slow=6.5,SNR=52						
NOA				LR	LR	10 24 50.6	
	comp=Z,174nm,22.0s,baz=355,slow=34						
NOA	NORSAR Array B	69.08	356	P	P	09 56 42.0	+0.7
AAK	Ala-Archa	69.14	312	LR	LR	10 28 57.6	
	comp=Z,235nm,20.4s,baz=36,slow=38						
AAK	Ala-Archa	69.14	312	P	P	09 56 42.8	+0.7
	SNR=14						
AAK	Ala-Archa	69.14	312	*i* P	P	09 56 42.6	+0.5
AAK				pmax	pmax		
	comp=Z,67nm,0.8s						
AAK	Ala-Archa	69.14	312	P	P	09 56 42.7	+0.7
AAK				IAmb	IAmb	09 56 43.6	
	comp=Z,22nm,0.8s						
AAL	Aland	69.35	352	*e*P	P	09 56 42.8	0.0
NC602	NORSAR Array S	69.37	356	IAmb	IAmb	09 58 31.9	
	comp=Z,114nm,1.8s						
NC602	NORSAR Array S	69.37	356	*e*P	P	09 56 43.4	+0.4
UCH	Uchtor	69.44	312	P	P	09 56 45.1	+0.8
	SNR=7.3						
EKS2	Erkin-Say	69.46	312	P	P	09 56 44.9	+0.8
	SNR=16						
SKAR	Skarslia	69.54	358	*e*P	P	09 56 45.4	+1.3
LSA	Lhasa	69.67	292	P	P	09 56 47.0	+1.1
LSA				pP	pwP	09 56 57.0	-2.0
LSA				S	S	10 05 58.0	+4.6
LSA				pmax	pmax		
	comp=Z,180nm,1.0s						
LSA	Lhasa	69.67	292	IAmb	IAmb	09 56 48.2	
	comp=Z,33nm,0.7s						
AKTO	Aktyubinsk	69.82	327	LR	LR	10 32 13.0	
	comp=Z,293nm,18.2s,baz=33,slow=40						
UPP	Uppsala	69.87	353	*e*P	P	09 56 46.5	+0.5
AML	Almayashu	69.91	312	P	P	09 56 47.9	+0.8
	SNR=16						
ABKAR	Akbulak array	70.10	325	P	P	09 56 47.5	-0.1
ABKAR	Akbulak array	70.10	325	IAmb	IAmb	09 56 49.5	
	comp=Z,55nm,1.1s						
OSL	Oslo	70.21	356	*e*P	P	09 56 49.0	+0.9
VSU	Vasula	70.24	348	*e*P	P	09 56 48.9	+0.5
VSU	Vasula	70.24	348	*i* P	P	09 56 49.0	+0.6
VSU				pmax	pmax		
	comp=Z,147nm,0.8s						
MTSE	Matsula	70.38	349	*e*P	P	09 56 49.3	+0.1
KONO	Kongsberg	70.53	357	*ce*P	P	09 56 52.1	+1.9
KONO				pmax	pmax		
	comp=Z,22nm,0.7s						
KONO	Kongsberg	70.53	357	P	P	09 56 50.0	-0.1
KONO				IAmb	IAmb	09 56 59.1	
	comp=Z,60nm,1.1s						
KONO	Kongsberg	70.53	357	*e*P	P	09 56 50.7	+0.5
MYLDM	Lahad Datu	70.55	254	P	P	09 56 51.5	+0.6
KK31	Karatay Array	70.64	315	IAmb	IAmb	09 56 52.3	
	comp=Z,34nm,0.8s						
KKAR	Karatay Array	70.64	315	P	P	09 56 50.7	-0.5
KKAR	Karatay Array	70.64	315	P	P	09 56 50.7	-0.5
KKAR	Karatay Array	70.64	315	IAmb	IAmb	09 56 52.3	
	comp=Z,34nm,0.8s						
KSH	Kashi	70.78	309	P	P	09 56 56.0	+3.8
KSH				sP	PcP	09 57 09.5	-3.4
KSH				PP	PP	09 59 30.8	+2.2
KSH				S	S	10 06 08.5	+3.0
KSH				pmax	pmax		
	comp=Z,47nm,0.8s						
KSH				pmax	pmax		
	comp=Z,700nm,4.7s						
KSH				LR	LR		
	comp=Z,520nm,7.3s						
KSH				LR	LR		
	comp=Z,640nm,7.5s						
MOS	Moscow	70.92	341	*e*P	P	09 56 51.5	-1.1
MOS				pmax	pmax		
	comp=Z,79nm,0.8s						
PPT	Papeete	71.24	154	LR	LR	10 19 55.8	
	comp=Z,425nm,21.7s,baz=347,slow=29						
PPT2	Papeete2	71.26	154	*e*S	S	10 06 07.3	-3.7
	comp=Z,908nm,25.5s						
PPT2	Papeete2	71.26	154	*e*LR	LR	10 18 27.0	
	comp=Z,918nm,28.8s,baz=346						
BELG	Belogornoye	71.47	334	P	P	09 56 56.5	+0.6
	comp=Z,90nm,1.0s,baz=129,slow=1.9,SNR=18						
BELG	Belogornoye	71.47	334	*i* P	P	09 56 56.2	+0.3
BELG				pmax	pmax		
	comp=Z,13nm,0.9s						
IUG	Iuzhnay	71.61	314	*e*P	P	09 56 55.9	-1.3
	comp=Z,18nm,1.0s,baz=314						
IUG	Iuzhnay	71.61	314	*e*P	P	09 56 55.8	-1.3
IUG				pmax	pmax		
	comp=Z,18nm,1.0s						
OBN	Obninsk	71.73	341	LR	LR	10 34 05.9	
	comp=Z,68nm,18.1s,baz=1.5,slow=41						
OBN	Obninsk	71.73	341	*i* P	P	09 56 56.8	-0.6
OBN				*i*		09 57 13.1	
OBN				*i*		09 57 20.9	
OBN				pmax	pmax		
	comp=Z,64nm,0.8s						
OBN				MLR	MLR		
	comp=Z,321nm,18.0s						
OBN	Obninsk	71.73	341	P	P	09 56 58.2	+0.8
DLV	T Lat	71.75	267	IAmb	IAmb	09 57 08.7	
	comp=Z,38nm,1.4s						
SANI	Sanana	71.81	243	P	P	09 56 59.0	+0.5
	comp=Z,37nm,1.0s						
SNART	Snartemo	71.91	358	*e*P	P	09 56 59.6	+1.2
SNART	Snartemo	71.91	358	*i* P	P	09 56 59.9	+1.4
HOMB	Homborsund	71.95	358	*i* P	P	09 56 59.0	+0.3
MRSI	Marisa	72.15	248	P	P	09 57 02.3	+1.7
	comp=Z,946nmcomp=Z,94nm,1.0s						
TOLI2	Tolitoli	72.35	250	P	P	09 57 01.2	-0.6
TOLI2				IAmb	IAmb	09 57 11.1	
	comp=Z,54nm,1.1s						
CHTO	Chiang Mai	72.78	279	P	P	09 57 03.9	-0.4
CHTO				pmax	pmax		
	comp=Z,20nm,1.2s						
CHTO	Chiang Mai	72.78	279	P	P	09 57 03.9	-0.4
LUWI	Luwuk	72.87	247	P	P	09 57 03.7	-1.2
LUWI	Luwuk	72.87	247	P	P	09 57 05.7	+0.9
	comp=Z,4µmcomp=Z,165nm,1.1s						
CMAR	Chiang Mai Arr	73.05	279	P	P	09 57 05.6	-0.3
	comp=Z,5.0nm,0.4s,baz=28,slow=6.7,SNR=5.4						
CMAR				LR	LR	10 29 46.3	
	comp=Z,59nm,20.5s,baz=90,slow=36						
ISAL	Salakas	73.13	347	*e*P	P	09 57 06.0	+0.2
COEN	Coen	73.22	222	P	P	09 57 06.3	-0.5
PBUR	Paburge	73.23	350	*e*P	P	09 57 06.2	-0.1
IIGN	Ignalina	73.33	347	*e*P	P	09 57 07.2	+0.2
APSI	Ampana	73.43	248	P	P	09 57 09.5	+1.3
	comp=Z,557nmcomp=Z,25nm,1.1s						
TAPN	Taplejung	73.44	293	*e*P	P	09 57 09.1	+0.6
	comp=Z,322nm,0.9s						
PABE	Paberze	73.49	348	*e*P	P	09 57 07.9	0.0
DZM	Mont Dzumac	73.53	197	*e*P	P	09 57 07.6	-1.0
	comp=Z,86nm,1.4s						
DZM				*e*S	S	10 06 28.2	-8.8
	comp=Z,133nm,23.6s						
DZM	Mont Dzumac	73.53	197	*e*LR	LR	10 19 23.6	
	comp=Z,882nm,32.8s						
DZM	Mont Dzumac	73.53	197	P	P	09 57 08.6	0.0
	comp=Z,24nm,1.1s,baz=66,slow=11,SNR=8.3						
DZM				LR	LR	10 27 06.0	
	comp=Z,476nm,18.3s,baz=23,slow=34						
DZM	Mont Dzumac	73.53	197	P	P	09 57 08.9	+0.3
DZM				IAmb	IAmb	09 57 12.4	
	comp=Z,65nm,1.4s						
DZM	Mont Dzumac	73.53	197	P	P	09 57 09.5	+0.9
LPSR	Galich'ya Gora	73.54	339	*e*P	P	09 57 08.1	-0.2

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LPSR                              pmax    pmax
       comp=Z,40nm,1.1s
CCIG   Comitan         73.67  84  IAmb    IAmb     09 57 11.6
       comp=Z,38nm,1.3s
NACGM  Naroch          73.68 347 i P      P        09 57 09.5 +0.4
NACGM                            i P      P        09 57 09.5 +0.4
NACGM                            i P      P        09 57 09.5 +0.4
NACGM                            i PP     PP       09 59 52.7  0.0
NACGM                            i PPP    PPP      10 01 39.9
NACGM                            i S      SKiKP    10 06 32.7 -4.0
NACGM                            i SS     SS       10 11 24.4 +4.4
NACGM                            i SSS    SSS      10 14 46.3
NACGM                            i LQ     LQ       10 24 42.6
NACGM                            i LR     LR       10 27 07.6
LAWE   Loch Awe, Argy  73.72   6 eP       P        09 57 10.1 +0.8
LAWE                              IAmb    IAmb     09 57 11.3
       comp=Z,134nm,1.1s
MUD    Monsted U'grnd  73.75 357 i P      P        09 57 10.7 +1.3
MUD    Monsted U'grnd  73.75 357 i P      P        09 57 10.7 +1.3
MUD    Monsted U'grnd  73.75 357 i P      P        09 57 10.8 +1.3
EAB    Aberfoyle       73.86   5 eP       P        09 57 10.9 +0.8
MNK    Minsk           73.90 346 i P      P        09 57 10.1 -0.3
       comp=E,2.0nm,0.9s
MNK                              i P      P        09 57 10.1 -0.3
       comp=N,15nm,0.9s
MNK                              i P      P        09 57 10.1 -0.3
       comp=Z,66nm,0.9s
MNK                              i PcP    PcP      09 57 25.1 -0.6
MNK                              i PP     PP       09 59 55.0 +0.4
MNK                              i PPP    PPP      10 01 40.2
MNK                              i S      S        10 06 40.8 +0.4
MNK                              i ScS    ScS      10 07 53.1  +35
MNK                              i SS     SS       10 10 13.6  -70
MNK                              i SSS    SSS      10 14 47.7
MNK                              i LQ     LQ       10 21 55.5
MNK                              i LR     LR       10 26 53.3
MNK                              i LRM    MLR      10 30 45.3
       comp=N,274nm,19.7s
MNK                              i LRM    MLR      10 30 56.4
       comp=Z,270nm,19.6s
MNK                              i LRM    MLR      10 31 38.2
       comp=E,19nm,20.0s
ODAN   Odare           73.99 293 eP       P        09 57 11.7  0.0
       comp=E,84nm,0.9s
GUN    Gumba           74.10 294 eP       P        09 57 13.1 +0.7
       comp=E,234nm,0.7s
VRH    Novokhopyorsk   74.14 337 eP       P        09 57 11.1 -0.7
VRH                               pmax    pmax
       comp=Z,60nm,1.0s
PGBU   Glenifferbraes  74.23   5 eP       P        09 57 13.3 +1.0
PGBU                              IAmb    IAmb     09 57 13.4
       comp=Z,143nm,0.9s
COP    Copenhagen      74.37 355 i P      P        09 57 14.7 +1.7
COP    Copenhagen      74.37 355 i P      P        09 57 14.7 +1.7
COP    Copenhagen      74.37 355 eP       P        09 57 14.8 +1.7
COP                              i P      P        09 57 14.8 +1.7
RAMN   Ramite          74.39 293 eP       P        09 57 14.3 +0.3
       comp=Z,230nm,0.8s
KKN    Kakani          74.54 295 eP       P        09 57 15.2 +0.4
       comp=Z,78nm,0.7s
PKI    Pulchoki        74.63 295 eP       P        09 57 15.4 -0.1
       comp=Z,87nm,0.9s
PKIN   Phulchoki       74.63 295 eP       P        09 57 15.6 +0.2
       comp=Z,65nm,0.8s
PETF   Flores          74.66  82  IAmb    IAmb     09 57 16.6
       comp=Z,34nm,1.0s
GKN    Gorkha          74.76 295 eP       P        09 57 16.2 +0.2
       comp=Z,124nm,0.8s
VSR    Storozhevoye    74.77 338 eP       P        09 57 15.1 -0.4
VSR                               pmax    pmax
       comp=Z,50nm,1.3s
DMN    Daman           74.78 295 eP       P        09 57 16.7 +0.4
       comp=Z,116nm,1.0s
BSD    Bornholm Skovb  74.79 354 i P      P        09 57 15.8 +0.3
       comp=Z,19nm,0.7s
BSD    Bornholm Skovb  74.79 354 eP       P        09 57 16.0 +0.5
BSD    Bornholm Skovb  74.79 354 i P      P        09 57 15.8 +0.3
BSD                               pmax    pmax
       comp=Z,19nm,0.7s
BSD    Bornholm Skovb  74.79 354 i P      P        09 57 15.8 +0.3
BSD                               IAmb    IAmb     09 57 17.5
       comp=Z,19nm,0.7s
ESK    Eskdalemuir     74.79   4 eP       P        09 57 16.0 +0.5
ESK                               IAmb    IAmb     09 57 17.5
       comp=Z,85nm,1.1s
ESK    Eskdalemuir     74.79   4  P       P        09 57 16.2 +0.7
ESK                               pmax    pmax
       comp=Z,78nm,1.1s
ESK    Eskdalemuir     74.79   4  P       P        09 57 16.2 +0.7
ESK                               IAmb    IAmb     09 57 17.7
       comp=Z,78nm,1.1s
NEWG   New Galloway    74.93   5 eP       P        09 57 17.0 +0.7
NEWG                              IAmb    IAmb     09 57 17.5
       comp=Z,109nm,1.4s
SUW    Suwalki         75.05 349 eP       P        09 57 16.6 -0.4
SUW    Suwalki         75.05 349 eP       P        09 57 16.7 -0.4
GAL1   Galloway        75.16   5 eP       P        09 57 18.3 +0.7
GAL1                              IAmb    IAmb     09 57 20.1
       comp=Z,75nm,1.0s
EDMD   Edmundbyers     75.33   4 eP       P        09 57 19.3 +0.6
EDMD                              IAmb    IAmb     09 57 20.9
       comp=Z,66nm,1.1s
RGN    Rugen           75.46 355 eP       P        09 57 20.6 +1.3
       comp=Z,131nm,1.1s,baz=5.7,slow=5.5
IOMK   Kirk Michael    75.77   5 eP       P        09 57 21.5 +0.3
IOMK                              IAmb    IAmb     09 57 23.5
       comp=Z,105nm,0.9s
WIM    Isle of Man     75.87   5 eP       P        09 57 23.0 +1.2
BSEG   Bad Segeberg    76.22 356 eP       P        09 57 24.8 +1.0
       comp=Z,48nm,0.9s,baz=5.7,slow=5.5
TTSI   Tana Toraja     76.23 248  P       P        09 57 25.4 +1.1
       comp=Z,969nmcomp=Z,67nm,1.5s
LNIZ   Loecknitz       76.45 354 eP       P        09 57 25.2 +0.2
       comp=Z,22nm,0.8s,baz=5.7,slow=5.5
SBUM   Sibu            76.59 258  IAmb    IAmb     09 57 30.1
       comp=Z,83nm,1.9s
SBUM   Sibu            76.59 258  P       P        09 57 26.0 -0.4
NIL    Nilore          76.70 307  P       P        09 57 27.4 +0.5
NIL                               pmax    pmax
       comp=Z,28nm,0.8s
NIL    Nilore          76.70 307  P       P        09 57 27.4 +0.5
NIL                               IAmb    IAmb     09 57 49.7
       comp=Z,28nm,0.8s
TBI    Tubuai          76.76 155 eS       S        10 07 12.4 -0.2
       comp=Z,132nm,28.5s
TBI    Tubuai          76.76 155 eLR      LR       10 20 56.9
       comp=Z,947nm,31.2s,baz=341
LBWR   Ladybower, Pea  76.77   4 eP       P        09 57 27.6 +0.8
LBWR                              IAmb    IAmb     09 57 30.4
       comp=Z,67nm,1.1s
SPSI   Sidrap Palu     76.99 247  P       P        09 57 30.9 +2.3
       comp=Z,32nm,1.1s
BNSI   Bone            77.14 247  P       P        09 57 32.2 +2.8
       comp=Z,32nm,1.3s
FOEL   Foel Wylfa      77.21   5 eP       P        09 57 29.7 +0.3
FOEL                              IAmb    IAmb     09 57 30.5
       comp=Z,64nm,1.0s
AKASG  Malin Array Be  77.34 344  P       P        09 57 30.1  0.0
       comp=Z,19nm,0.6s,baz=18,slow=5.9,SNR=72
AKASG                             LR      LR       10 34 02.9
       comp=Z,211nm,21.9s,baz=355,slow=38
AKASG  Malin Array Be  77.34 344  P       P        09 57 30.0  0.0
AKBB   Malin Array Si  77.34 344ceP       P        09 57 30.0 -0.1
AKBB   Malin Array Si  77.34 344  IAmb    IAmb     09 57 31.3
       comp=Z,68nm,1.2s
CTA    Charters Tower  77.50 216  P       P        09 57 30.5 -0.8
       comp=Z,10nm,0.9s,baz=10,slow=6.4,SNR=7.6
CTAO   Charters Tower  77.50 216  P       P        09 57 30.8 -0.5
CTAO                              pmax    pmax
       comp=Z,27nm,1.2s
CTAO   Charters Tower  77.50 216  P       P        09 57 30.8 -0.5
NRDL   Niedersach Rie  77.67 356 eP       P        09 57 32.8 +0.9
       comp=Z,24nm,0.9s,baz=5.7,slow=5.5
FLTG   Flechtingen     77.78 356 eP       P        09 57 33.0 +0.4
       comp=Z,21nm,0.8s,baz=5.7,slow=5.5
KAPI   Kappang         77.84 247  P       P        09 57 32.8 -0.6
       comp=Z,4.6nm,0.3s,baz=14,slow=3.2,SNR=7.6
KAPI   Kappang         77.84 247  P       P        09 57 35.0 +1.7
KAPI                              pmax    pmax
       comp=Z,47nm,1.2s
KAPI   Kappang         77.84 247  P       P        09 57 35.0 +1.7
KAPI                              IAmb    IAmb     09 57 48.3
       comp=Z,47nm,1.1s
IBBN   Ibbenburen      77.94 358 eP       P        09 57 34.7 +1.3
       comp=Z,45nm,0.9s,baz=5.7,slow=5.5
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ASSE   Asse, Remlinge  78.01 356 eP       P        09 57 34.9 +1.2
       comp=Z,26nm,1.0s,baz=5.7,slow=5.5
RSBS   Rosebush, Pemb  78.06   6 eP       P        09 57 34.8 +0.7
MCH1   Michaelchurch   78.11   5 eP       P        09 57 35.4 +1.0
MCH1                              IAmb    IAmb     09 57 36.2
       comp=Z,56nm,1.0s
KBL    Kabul           78.12 310  P       P        09 57 34.2 -0.9
KBL                               pmax    pmax
       comp=Z,17nm,0.9s
KBL    Kabul           78.12 310  P       P        09 57 34.2 -0.9
MONM   Monmouth        78.28   4 eP       P        09 57 36.4 +1.1
MONM                              IAmb    IAmb     09 57 37.3
       comp=Z,46nm,1.0s
CLZ    Clausthal       78.31 356 eP       P        09 57 36.6 +1.0
       comp=Z,31nm,0.8s,baz=5.7,slow=5.5
STRD   Stroud          78.37   4 eP       P        09 57 37.2 +1.4
TGUH   Tegucigalpa,Un  78.44  82 eP       P        09 57 37.0  0.0
KSM    Kuching         78.55 258  IAmb    IAmb     09 57 48.1
       comp=Z,41nm,1.1s
KSM    Kuching         78.55 258  P       P        09 57 37.0 -0.4
GTTG   Gottingen       78.63 356 eP       P        09 57 38.4 +1.1
       comp=Z,35nm,0.9s,baz=5.7,slow=5.5
CLL    Collm           78.70 354 i P      P        09 57 37.5 -0.2
       comp=Z,57nm,1.5s
CLL                              i PcP    sP       09 57 45.0 -0.7
CLL                              i pP     PcP      09 57 46.3 -0.2
       comp=Z,30nm,1.3s
CLL                              i sP     pwP      09 57 51.2 +0.5
CLL                              i pPcP            09 57 55.5
CLL                              eS       S        10 07 42.0 +8.8
CLL                              eSS      SS       10 12 41.0 +5.0
CLL                              eSSS     SSS      10 16 18.0
CLL                              eSSSS             10 18 30.0
CLL                               LmV              10 34 00.0
       comp=Z,300nm,21.3s
CLL    Collm           78.70 354 i P      P        09 57 37.5 -0.2
CLL                              i                 09 57 46.3
CLL                              i                 09 57 51.2
CLL                               pmax    pmax
       comp=Z,57nm,1.5s
CLL                               MLR     MLR
       comp=Z,300nm,21.3s
CLL    Collm           78.70 354  P       P        09 57 37.4 -0.2
CLL                               IAmb    IAmb     09 57 39.2
       comp=Z,66nm,1.6s
CLL    Collm           78.70 354 eP       P        09 57 38.4 +0.7
       comp=Z,11nm,0.9s,baz=5.7,slow=5.5
BUG    Bochum--Univer  78.82 358 eP       P        09 57 39.5 +1.2
       comp=Z,14nm,0.8s,baz=5.7,slow=5.5
NEUB   Neuenburg       78.88 355 eP       P        09 57 39.6 +0.9
       comp=Z,62nm,1.0s,baz=5.7,slow=5.5
KSP    Ksiaz           78.92 352 eP       P        09 57 39.3 +0.4
RAO    Raoul Island    79.00 182  LR      LR       10 28 25.0
       comp=Z,457nm,18.6s,baz=15,slow=33
KASTN  Kahler Asten    79.03 357 eP       P        09 57 40.3 +0.7
       baz=5.7,slow=5.5
LVV    L'vov           79.03 347 eP       P        09 57 39.7 +0.2
SOEI   Soe             79.07 240  P       P        09 57 45.5 +5.2
FBE    Freiberg        79.07 354 eP       P        09 57 40.6 +0.9
       comp=Z,22nm,0.9s,baz=5.7,slow=5.5
BRG    Berggiesshubel  79.08 354 i P      P        09 57 40.2 +0.4
BRG                               Amp              09 57 41.5
       comp=Z,41nm,1.3s
BRG                              ex       x        09 57 56.0
BRG                               Amp              09 57 57.7
       comp=Z,12nm,0.9s
BRG    Berggiesshubel  79.08 354 eP       P        09 57 40.3 +0.6
       comp=Z,16nm,0.9s,baz=5.7,slow=5.5
OJC    Ojcow           79.18 350 eP       P        09 57 40.9 +0.6
OJC    Ojcow           79.18 350  IAmb    IAmb     09 57 42.0
       comp=Z,45nm,1.4s
CHVC   Chvalec         79.19 352 eP       P        09 57 41.0 +0.6
OSTC   Ostas           79.21 352 eP       P        09 57 41.3 +0.8
UPC    Upice           79.28 352 eP       P        09 57 41.3 +0.4
UPC    Upice           79.28 352 eP       P        09 57 41.3 +0.4
UBBA   Unterbreizbach  79.35 356 eP       P        09 57 42.1 +1.0
       comp=Z,9.8nm,1.0s,baz=5.7,slow=5.5
GOF    Gofitskoye      79.39 333⇑iP       P        09 57 42.5 +0.9
GOF                               pmax    pmax
       comp=Z,110nm,0.8s
DPC    Dobruska-Polom  79.41 352 eP       P        09 57 42.4 +0.8
DPC                              e                 09 57 50.8
DPC    Dobruska-Polom  79.41 352 eP       P        09 57 42.4 +0.8
DPC                              epP      PcP      09 57 50.8 +1.1
MOX    Moxa            79.45 355 eP       P        09 57 42.7 +0.9
       comp=Z,17nm,1.1s,baz=5.7,slow=5.5
TANN   Tannenbergstha  79.63 355 eP       P        09 57 43.3 +0.5
       comp=Z,23nm,1.2s,baz=5.7,slow=5.5
KRLC   Kraliky         79.64 352 eP       P        09 57 43.4 +0.5
KRLC                             e                 09 57 51.3
KRLC   Kraliky         79.64 352 eP       P        09 57 43.4 +0.5
KRLC                             ex       x        09 57 51.3
MEM    Membach         79.67 359 dP       P        09 57 44.0 +1.0
       comp=Z,31nm,1.1s
GUNZ   Gunzen          79.69 355 eP       P        09 57 43.8 +0.7
       comp=Z,12nm,1.0s,baz=5.7,slow=5.5
BTNL   Ternell         79.69 359 dP       P        09 57 43.9 +0.8
       comp=Z,36nm,1.4s
BSTI   Sart Tilman     79.70 359 κP       P        09 57 44.4 +1.2
AHRW   Bad Neuenahr-A  79.72 358 eP       P        09 57 44.4 +1.1
       comp=Z,26nm,0.8s,baz=5.7,slow=5.5
WERN   Wernitzgruen    79.76 355 eP       P        09 57 44.3 +0.7
       comp=Z,29nm,1.0s,baz=5.7,slow=5.5
SNF    Seneffe         79.78 360 dP       P        09 57 44.5 +0.9
NKC    Novy Kostel     79.81 355 eP       P        09 57 44.6 +0.8
NKC    Novy Kostel     79.81 355 eP       P        09 57 44.6 +0.8
MORC   Moravsky Berou  79.86 351 ⇑P       P        09 57 44.6 +0.5
MORC   Moravsky Berou  79.86 351 eP       P        09 57 44.5 +0.4
BCLA   Clavier         79.87 359 dP       P        09 57 44.7 +0.6
       comp=Z,30nm,1.3s
BGES   Gesves          79.91 359 κP       P        09 57 44.8 +0.6
       comp=Z,36nm,1.4s
PRU    Pruhonice       79.91 353 eP       P        09 57 44.9 +0.6
PRU    Pruhonice       79.91 353 eP       P        09 57 44.9 +0.6
NIE    Niedzica        79.91 349 eP       P        09 57 45.4 +1.0
SORM   Soroca          79.97 344 ⇑P       P        09 57 45.1 +0.5
BMRD   Maredsous       79.99 360 dP       P        09 57 45.8 +1.1
       comp=Z,69nm,1.3s
TNS    Taunus Mts      80.00 357 eP       P        09 57 45.7 +0.8
       baz=5.7,slow=5.5
MANZ   Manzenberg      80.08 355 eP       P        09 57 45.9 +0.7
       baz=5.7,slow=5.5
KOLS   Kolonicke sedl  80.14 348 eP       P        09 57 46.6 +1.0
KOLS                              pmax    pmax
       comp=Z,35nm,1.4s
KOLS   Kolonicke sedl  80.14 348 eP       P        09 57 46.6 +1.0
MATN   Matagalpa       80.15  82  IAmb    IAmb     09 57 46.9
       comp=Z,30nm,0.9s
DOU    Dourbes         80.20 360 κP       P        09 57 46.7 +0.8
       comp=Z,37nm,1.8s
GROC   Groznyy         80.23 330 eP       P        09 57 46.4 +0.2
GROC                             e                 09 57 53.4
GROC                             eS       S        10 07 44.4 -5.3
GROC                              pmax    pmax
       comp=Z,44nm,1.2s
PBCC   Pribram         80.25 354 eP       P        09 57 46.9 +0.7
LANS   Liptovska Anna  80.28 350 eP       P        09 57 48.1 +1.7
LANS                              pmax    pmax
       comp=Z,27nm,1.1s
LANS   Liptovska Anna  80.28 350 eP       P        09 57 48.1 +1.7
CRVS   Cervenica-Dubn  80.28 349 eP       P        09 57 47.4 +1.1
CRVS                              pmax    pmax
       comp=Z,28nm,0.9s
CRVS   Cervenica-Dubn  80.28 349 eP       P        09 57 47.4 +1.1
ROTZ   Rotzenmuhle     80.29 355 eP       P        09 57 47.1 +0.8
       comp=Z,25nm,1.2s,baz=5.7,slow=5.5
GEYT   Alibeck         80.31 320  P       P        09 57 46.1 -0.6
       comp=Z,15nm,1.0s,baz=304,slow=3.4,SNR=15
GEYT                              PP      PP       10 00 48.2 -0.7
       comp=Z,5.7nm,0.8s,baz=359,slow=8.9,SNR=3.9
GEYT                              LR      LR       10 35 41.0
       comp=Z,419nm,21.9s,baz=35,slow=37
GEYT   Alibeck         80.31 320  IAmb    IAmb     09 57 48.3
       comp=Z,14nm,1.1s
VRAC   Vranov          80.41 352 ⇓P       P        09 57 48.0 +0.9
VRAC   Vranov          80.41 352 eP       P        09 57 47.8 +0.7
GRF    Grafenberg Arr  80.42 355 eP       P        09 57 48.4 +1.4
       baz=5.7,slow=5.5
GRFO   Grafenberg      80.42 355  P       P        09 57 48.7 +1.6
GRFO                              pmax    pmax
       comp=Z,29nm,1.5s
GRFO   Grafenberg      80.42 355  P       P        09 57 48.7 +1.6
UZH    Uzhgorod        80.44 348 eP       P        09 57 44.8 -2.3
UZH                              i                 09 57 56.5
KVAR   Kislovodsk Arr  80.50 333  LR      LR       10 39 11.5
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       comp=Z,184nm,20.1s,baz=274,slow=40
KIV    Kislovodsk      80.50 333 ⇑P       P        09 57 48.6 +0.8
KIV    Kislovodsk      80.50 333d iP      P        09 57 48.3 +0.6
KIV                              i                 09 57 55.6
KIV                              i                 09 58 05.5
KIV                              i                 10 00 49.3
KIV                              i SS     SS       10 13 11.5 +8.0
KIV                               pmax    pmax
       comp=Z,18nm,0.7s
KIV                               MLR     MLR
       comp=Z,250nm,20.0s
KIV    Kislovodsk      80.50 333  P       P        09 57 47.8  0.0
WLF    Walferdange     80.62 359 dP       P        09 57 49.0 +0.9
       comp=Z,31nm,1.4s
WLF    Walferdange     80.62 359  IAmb    IAmb     09 57 50.6
       comp=Z,38nm,1.0s
WLF    Walferdange     80.62 359 eP       P        09 57 49.8 +1.7
       baz=5.7,slow=5.5
KBZ    Khabaz          80.65 333  P       P        09 57 48.5 +0.1
       comp=Z,18nm,0.9s,baz=55,slow=2.3,SNR=38
KBZ                               LR      LR       10 40 49.3
       comp=Z,87nm,18.6s,baz=18,slow=41
KBZ    Khabaz          80.65 333ceP       P        09 57 48.6 +0.3
KBZ                               pmax    pmax
       comp=Z,18nm,0.9s
BOAB   BOACO BROADBAN80.67    82  IAmb    IAmb     09 57 49.7
       comp=Z,39nm,0.8s
KRUC   Moravsky        80.68 352 eP       P        09 57 48.8 +0.4
JAVC   Velka Javorina  80.75 351 eP       P        09 57 50.7 +1.7
KECS   Kecovo          80.81 349 eP       P        09 57 50.2 +1.0
KECS                              pmax    pmax
       comp=Z,17nm,0.9s
KECS   Kecovo          80.81 349 eP       P        09 57 50.2 +1.0
KHC    Kasperske Hory  80.83 354ceP       P        09 57 49.4  0.0
KHC                               pmax    pmax
       comp=Z,33nm,0.9s
KHC    Kasperske Hory  80.83 354 eP       P        09 57 50.2 +0.8
KHC    Kasperske Hory  80.83 354  IAmb    IAmb     09 57 51.6
       comp=Z,43nm,1.2s
WET    Wettzell        80.87 354 eP       P        09 57 50.5 +0.9
       baz=5.7,slow=5.5
JSA    Saint Aubin     80.96   4 eP       P        09 57 49.9  0.0
JSA                               IAmb    IAmb     09 57 50.7
       comp=Z,89nm,1.0s
BUR08  Bucovina Ar. S  80.97 346  IAmb    IAmb     09 57 52.2
       comp=Z,36nm,0.9s
BURAR  Bucovina Array  81.00 346 ⇓P       P        09 57 51.3 +1.0
BURAR  Bucovina Array  81.00 346  P       P        09 57 51.1 +0.8
MILM   Milestii Mici   81.05 343 ⇓P       P        09 57 50.9 +0.5
CKRC   Cesky Krumlov   81.09 353 eP       P        09 57 51.3 +0.6
GEC2   GERESS Array S  81.11 354 eP       P        09 57 51.8 +0.9
       baz=5.7,slow=5.5
GERES  GERESS Array B  81.11 354  P       P        09 57 51.2 +0.3
       comp=Z,8.0nm,0.8s,baz=22,slow=4.6,SNR=47
GERES                             LR      LR       10 37 27.5
       comp=Z,104nm,18.7s,baz=10.0,slow=38
SMOL   Smolenice       81.12 351 eP       P        09 57 52.6 +1.8
SMOL                              pmax    pmax
       comp=Z,17nm,1.1s
SMOL   Smolenice       81.12 351 eP       P        09 57 52.6 +1.8
NEY    Neytrino        81.14 333 i P      P        09 57 52.2 +1.0
NEY                               pmax    pmax
       comp=Z,4.0nm,1.2s
ZEI    Tsey            81.20 332 eP       P        09 57 49.6 -2.0
ZEI                               pmax    pmax
       comp=Z,40nm,1.0s
MODS   Modra-Piesok    81.27 351 eP       P        09 57 52.2 +0.5
MODS                              pmax    pmax
       comp=Z,67nm,1.3s
MODS   Modra-Piesok    81.27 351 eP       P        09 57 52.2 +0.5
ACON   Acoyapa         81.35  82  IAmb    IAmb     09 58 27.9
       comp=Z,37nm,0.5s
RKT    Rikitea         81.38 142 eLR      LR       10 23 14.0
       comp=Z,828nm,30.5s
PSZ    Piszkesteto     81.44 349 ⇓P       P        09 57 52.1 -0.5
PSZ    Piszkesteto     81.44 349  P       P        09 57 53.1 +0.5
PSZ                               pmax    pmax
       comp=Z,49nm,1.1s
PSZ    Piszkesteto     81.44 349  P       P        09 57 53.1 +0.5
PSZ                               IAmb    IAmb     09 57 55.7
       comp=Z,49nm,1.1s
ZST    Bratislava      81.47 351 eP       P        09 57 54.2 +1.5
ZST                               pmax    pmax
       comp=Z,120nm,1.3s
ZST    Bratislava      81.47 351 eP       P        09 57 54.2 +1.5
HRA    Herat           81.47 315  P       P        09 57 52.5 -0.8
VASR   Vaslui          81.51 344 ⇓P       P        09 57 53.6 +0.7
BIZ    Bicaz           81.51 345 ⇓P       P        09 57 54.2 +1.2
ARCR   ARCALIA         81.65 346 ⇓P       P        09 57 55.3 +1.6
SOC    Sochi           81.69 335 eP       P        09 57 51.7 -2.2
SOC                              e                 10 00 59.7
SOC                              i S      S        10 08 02.0 -2.8
SOC                              eSS      SS       10 13 21.8 +0.8
SOC                              eSSS     SSS      10 16 51.6
SOC                               MLR     MLR
       comp=Z,192nm,21.0s
SRO    Srobarova       81.72 350 eP       P        09 57 56.0 +2.0
SRO    Srobarova       81.72 350 eP       P        09 57 56.0 +2.0
TESR   Tescani         81.83 345 ⇓P       P        09 57 55.5 +0.8
CONA   Conrad Observa  81.85 352 i P      P        09 57 56.1 +1.3
       comp=Z,40nm,1.2s,SNR=14
BFO    Black Forest    81.90 357  P       P        09 57 55.2 +0.2
BFO                               pmax    pmax
       comp=Z,32nm,1.3s
BFO    Black Forest    81.90 357  P       P        09 57 55.2 +0.2
BFO    Black Forest    81.90 357 eP       P        09 57 55.8 +0.8
       baz=5.7,slow=5.5
ECH    Echery          82.05 358  IAmb    IAmb     09 57 57.6
       comp=Z,36nm,1.1s
MOA    Molln           82.06 353 eP       P        09 57 56.6 +0.8
       comp=Z,11nm,1.2s
CJR    Cluj-Napoca     82.13 347 ⇓P       P        09 57 56.9 +0.6
GHRR                   82.14 344 ⇓P       P        09 57 57.5 +1.3
DRGR                   82.18 347 ⇑P       P        09 57 57.4 +0.9
IPM    Ipoh            82.18 268  P       P        09 57 56.0 -1.0
RJOB   Jochberg        82.28 354 eP       P        09 57 57.6 +0.6
       baz=5.7,slow=5.5
OZUR                   82.38 345 ⇓P       P        09 57 58.7 +1.1
WRAB   Tennant Creek   82.43 226ceP       P        09 57 57.3 -0.6
WRAB                              pmax    pmax
       comp=Z,40nm,1.7s
WRAB   Tennant Creek   82.43 226  P       P        09 57 56.8 -1.2
WRA    Warramunga Arr  82.44 226  P       P        09 57 56.5 -1.5
       comp=Z,11nm,0.9s,baz=35,slow=6.2,SNR=31
VRI    Vrincioaia      82.44 344 ⇓P       P        09 57 58.8 +1.0
PLOR   Plostina        82.47 344 ⇑P       P        09 57 59.2 +1.2
UBR    Ueberruh        82.48 356 eP       P        09 57 58.6 +0.5
       baz=5.7,slow=5.5
ARSA   Arzberg         82.55 352 i P      P        09 57 59.7 +1.3
       comp=Z,32nm,1.1s,SNR=8.5
DOPR   Dopca           82.57 345 ⇑P       P        09 58 00.1 +1.6
RETA   Reutte          82.64 355 eP       P        09 57 59.7 +0.7
       comp=Z,19nm,1.0s
TLCR                   82.72 343 ⇓P       P        09 57 59.9 +0.6
WATA   Walderalm       82.75 355 i P      P        09 58 00.4 +0.8
       comp=Z,38nm,1.1s,SNR=8.5
BISRR  Bisoca          82.76 344 ⇓P       P        09 58 01.6 +2.0
JTS    Las Juntas de   82.76  83  P       P        09 57 59.3 -0.7
JTS                               pmax    pmax
       comp=Z,34nm,1.7s
JTS    Las Juntas de   82.76  83  P       P        09 57 59.3 -0.7
JTS    Las Juntas de   82.76  83 eP       P        09 57 59.0 -1.0
MOTA   Moosalm         82.77 355 i P      P        09 58 00.7 +0.9
       comp=Z,41nm,1.0s,SNR=10.0
WTTA   Wattenberg      82.82 355 i P      P        09 58 01.1 +1.0
       comp=Z,34nm,1.0s,SNR=10.0
SIRR   Siria           82.84 348 ⇑P       P        09 58 01.0 +1.1
CFR    Carcaliu        82.86 343 ⇓P       P        09 58 00.4 +0.4
GRER                   82.87 344 ⇓P       P        09 58 01.4 +1.3
DAVA   Damuels         82.88 356 eP       P        09 58 00.9 +0.6
       comp=Z,19nm,0.9s
SQTA   Sankt Quirin    82.89 355 i P      P        09 58 01.2 +1.0
       comp=Z,25nm,0.9s,SNR=6.7
KBA    Koelnbreinsper  82.89 354 i P      P        09 58 01.7 +1.3
       comp=Z,74nm,0.8s,SNR=27
MLR    Muntele Rosu    82.94 345 ⇓P       P        09 58 02.0 +1.4
MLR    Muntele Rosu    82.94 345  IAmb    IAmb     09 58 05.9
       comp=Z,44nm,0.8s
NEHR   Nehoiu          82.94 344 ⇓P       P        09 58 01.3 +0.8
BATM   Batumi          82.95 333 ⇓P       P        09 58 00.7 +0.1
FETA   Feichten        83.11 355 i P      P        09 58 02.6 +1.1
       comp=Z,35nm,1.1s,SNR=9.4
TPGR   Topolog         83.11 343 ⇓P       P        09 58 01.3 -0.1
VOIR                   83.14 345 ⇓P       P        09 58 02.8 +1.2
SOKA   Soboth          83.16 352 i P      P        09 58 02.7 +1.0
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	comp=Z,62nm,1.1s,SNR=19						
PERS	Pernice	83.19	352	*i* P	P	09 58 02.7	+0.9
ISR	Istrita	83.20	344	⇑P	P	09 58 03.1	+1.3
MORH	Mrgy, Hungar	83.26	350	⇓P	P	09 58 02.4	+0.3
MORH	Mrgy, Hungar	83.26	350	*e*P	P	09 58 02.0	-0.1
ABTA	Abfaltersbach	83.28	354	*i* P	P	09 58 03.0	+0.7
	comp=Z,37nm,1.1s,SNR=8.6						
ARR	Arges	83.28	346	⇑P	P	09 58 03.9	+1.6
MYKA	Terra Mystica	83.32	353	*e*P	P	09 58 03.5	+1.0
	comp=Z,15nm,0.8s						
GNI	Garni	83.33	330	P	P	09 58 02.5	-0.3
	comp=Z,9.5nm,0.6s,baz=220,slow=1.3,SNR=11						
GNI				LR	LR	10 40 14.3	
	comp=Z,181nm,19.2s,baz=29,slow=39						
GNI	Garni	83.33	330	*ce*P	P	09 58 04.4	+1.6
GNI				pmax	pmax		
	comp=Z,53nm,1.7s						
GNI	Garni	83.33	330	P	P	09 58 04.6	+1.8
GNI				IAmb	IAmb	09 58 30.2	
	comp=Z,34nm,0.8s						
GROS	Grobnik	83.33	352	*e*P	P	09 58 02.9	+0.4
MTUR	Matau	83.35	345	⇑P	P	09 58 04.7	+2.0
SECR		83.36	345	⇑P	P	09 58 03.6	+1.0
HARR	Harsova	83.36	343	⇑P	P	09 58 03.1	+0.5
OBKA	Obir	83.37	353	*i* P	P	09 58 03.5	+0.7
	comp=Z,27nm,1.0s,SNR=7.0						
BZS	Buzias	83.48	348	⇓P	P	09 58 04.0	+0.8
TIRR	Tirgusor	83.50	343	⇓P	P	09 58 04.2	+0.9
GZR	Gura Zlata	83.54	347	⇓P	P	09 58 04.8	+1.2
DSRI	Dabo	83.68	262	P	P	09 58 16.0	+11
SENIN	Lac Senin/Sane	83.89	358	P	P	09 58 05.9	+0.3
SENIN				IAmb	IAmb	09 58 31.2	
	comp=Z,51nm,1.7s						
CRES	Cresnjev	83.97	352	*e*P	P	09 58 05.7	0.0
PPBI	Pangkal Pinang	83.98	259	P	P	09 58 08.6	+2.4
	comp=Z,10µmcomp=Z,32nm,1.0s						
CTI	Castel Tesino	84.03	355	P	P	09 58 05.4	-0.8
CTI				pmax	pmax		
	comp=Z,85nm,1.7s						
CTI	Castel Tesino	84.03	355	P	P	09 58 05.4	-0.8
CTI				IAmb	IAmb	09 58 07.6	
	comp=Z,85nm,1.7s						
KTUT	Trabzon	84.08	334	⇓P	P	09 58 06.5	+0.2
HERR	Herculane	84.09	347	⇓P	P	09 58 06.9	+0.5
CEY	Cerknica	84.14	353	*e*P	P	09 58 04.4	-2.3
MDVR	Moldovita	84.29	348	⇑P	P	09 58 07.8	+0.4
BOJS	Bojanci	84.31	352	*e*P	P	09 58 07.6	+0.2
GBRS	Gornja Briga	84.32	353	*e*P	P	09 58 07.8	+0.3
DIKM	Dikmen	84.67	337	⇑P	P	09 58 09.8	+0.4
PSI	Prapat	84.81	268	P	P	09 58 10.2	-0.4
	comp=Z,29nm,0.9s,baz=359,slow=1.2,SNR=12						
BLY	Banja Luka	84.87	351	*e*P	P	09 58 10.3	0.0
RPSI	Rantau Prapat	84.89	268	IAmb	IAmb	09 58 20.5	
	comp=Z,37nm,0.9s						
DIVS	Divibare	85.19	349	⇓*i*P	P	09 58 12.0	0.0
ARMA	Armidale	85.19	208	P	P	09 58 12.5	+0.5
ARMA				IAmb	IAmb	09 58 16.0	
	comp=Z,29nm,1.1s						
FITZ	Fitzroy Crossi	85.20	234	P	P	09 58 11.4	-0.7
	comp=Z,35nm,1.0s,baz=43,slow=5.5,SNR=29						
FITZ	Fitzroy Crossi	85.20	234	IAmb	IAmb	09 58 22.5	
	comp=Z,31nm,0.8s						
MGRS	Mrkonjic Grad	85.21	351	*e*P	P	09 58 13.3	+1.2
PLVB	Pleven	85.21	345	⇑P	P	09 58 12.7	+0.7
HAPS	Han Pijesak,BI	85.33	349	*e*P	P	09 58 12.8	0.0
OUZ	Omahuta	85.45	189	P	P	09 58 13.4	+0.4
OUZ				IAmb	IAmb	09 58 16.9	
	comp=Z,37nm,1.3s						
BBLS	Lazići	85.49	349	⇓*i*P	P	09 58 13.9	+0.4
ASAR	Alice Springs	85.86	225	P	P	09 58 14.4	-0.9
	comp=Z,9.0nm,1.0s,baz=32,slow=4.3,SNR=30						
ASAR				LR	LR	10 32 53.0	
	comp=Z,165nm,20.4s,baz=16,slow=33						
ASAR	Alice Springs	85.86	225	P	P	09 58 14.6	-0.8
VTS	Vitosha	86.18	346	⇓P	P	09 58 16.9	-0.2
UPM	Unac-Piva	86.20	349	*e*P	P	09 58 17.2	0.0
HYB	Hyderabad	86.45	293	*i* P	P	09 58 16.0	-2.6
BRY	Bratogost	86.55	349	⇓*i*P	P	09 58 18.4	-0.4
OSSC	Osservatorio P	86.57	355	IAmb	IAmb	09 58 19.7	
	comp=Z,29nm,0.8s						
TREB	Trebinje	86.75	350	*e*P	P	09 58 18.0	-1.7
KLSI		86.82	259	P	P	09 58 21.4	+1.1
	comp=Z,5.2nm,1.2s						
BR131	Keskin Array S	86.88	338	IAmb	IAmb	09 58 21.9	
	comp=Z,17nm,0.7s						
BRTR	Keskin Array B	86.88	338	P	P	09 58 20.4	-0.2
	comp=Z,10nm,0.7s,baz=59,slow=2.2,SNR=44						
BRTR				LR	LR	10 44 05.2	
	comp=Z,118nm,18.5s,baz=13,slow=40						
BRTR	Keskin Array B	86.88	338	P	P	09 58 19.8	-0.8
PDG	Podgorica	86.92	349	⇑P	P	09 58 21.3	+0.8
PDG	Podgorica	86.92	349	*e*P	P	09 58 20.6	+0.1
HCY	Herceg Novi	87.00	349	*e*P	P	09 58 18.3	-2.6
MDSI	Maura Dua	87.01	259	P	P	09 58 21.4	+0.1
	comp=Z,12nm,1.3s						
SKO	Skopje	87.08	347	*i* P	P	09 58 21.9	+0.6
DRME	Dracevica, Mon	87.17	349	*e*P	P	09 58 21.4	-0.3
STIP	Stip	87.25	347	*i* P	P	09 58 21.4	-0.6
VAY	Valandovo	87.55	346	*i* P	P	09 58 23.8	+0.2
PCAB	Cabril	87.96	9	*e*P	P	09 58 25.6	0.0
PBRG	Braganca	87.99	8	*e*P	P	09 58 25.9	+0.2
URZ	Urewera	88.19	186	LR	LR	10 30 22.9	
	comp=Z,327nm,21.3s,baz=31,slow=30						
POLO	Lamas de Olo	88.32	9	*e*P	P	09 58 27.5	+0.1
PVRL	Vila Real	88.42	9	*e*P	P	09 58 28.5	+0.7
MVO	Moncorvo	88.60	8	*e*P	P	09 58 28.9	+0.2
	comp=Z,52nm,1.8s						
PVIS	Viseu	88.96	9	*e*P	P	09 58 30.5	+0.2
MTE	Manteigas	89.31	9	*e*P	P	09 58 32.2	+0.2
PCAS	Casmilo, Conde	89.55	10	*e*P	P	09 58 33.0	-0.1
MOTC	Monteria, Cord	89.79	77	*e*P	P	09 58 34.7	+0.1
PCBR	Castelo Branco	89.87	9	*e*P	P	09 58 34.4	-0.1
STKA	Stephens Creek	89.91	215	P	P	09 58 34.5	0.0
	comp=Z,17nm,1.0s,baz=11,slow=6.5,SNR=21						
STKA				LR	LR	10 33 11.9	
	comp=Z,265nm,21.0s,baz=24,slow=32						
ESDC	Sonseca Array	90.33	6	P	P	09 58 36.0	-0.7
	comp=Z,17nm,1.0s,baz=350,slow=4.5,SNR=44						
ESDC				LR	LR	10 37 35.8	
	comp=Z,130nm,22.0s,baz=350,slow=34						
ESDC	Sonseca Array	90.33	6	P	P	09 58 36.5	-0.3
TIP	Timpagrande	90.42	350	IAmb	IAmb	09 58 38.3	
	comp=Z,37nm,1.2s						
UREC	San Jos de Ur	90.67	77	*e*P	P	09 58 38.3	-0.3
SMLC	San Martn de	90.77	75	*e*P	P	09 58 39.0	-0.1
DBBC	Dabeiba	90.80	78	*e*P	P	09 58 40.3	+0.9
PESTR	Estremoz	90.82	9	*e*P	P	09 58 38.7	-0.3
OCAC	Ocana	91.67	75	*e*P	P	09 58 44.0	+0.5
CBOC	Ciudad Bolivar	91.81	79	*e*P	P	09 58 44.2	0.0
BRRC	Barranca, Sant	92.30	76	*e*P	P	09 58 46.5	+0.3
PLMC	San Jos del P	92.38	80	*e*P	P	09 58 45.8	-0.8
GUY2C	Guyana, Caldas	92.71	79	*e*P	P	09 58 48.6	-0.1
MMAI	Mount Meron Ar	92.75	334	P	P	09 58 47.5	-0.7
	comp=Z,0.7nm,0.4s,baz=343,slow=4.5,SNR=3.8						
PAMC	Pamplona, Colo	92.76	75	*e*P	P	09 58 48.6	-0.2
NORC	Norcasia	92.77	78	*e*P	P	09 58 48.4	0.0
SDV	Santo Domingo	92.84	73	P	P	09 58 47.8	-1.1
SDV				IAmb	IAmb	09 58 50.0	
	comp=Z,14nm,0.8s						
SDV	Santo Domingo	92.84	73	*e*P	P	09 58 48.9	0.0
SDV	Santo Domingo	92.84	73	*e*P	P	09 58 49.5	+0.6
RREF	El Recreo	92.97	79	*e*P	P	09 58 50.6	+0.5
BARC	Barichara	93.03	76	*e*P	P	09 58 49.9	+0.1
YOTC	Yotoco, Valle	93.05	80	*e*P	P	09 58 50.5	+0.7
SPBC	San Pablo de B	93.20	77	*e*P	P	09 58 50.1	-0.3
TOLC	Tolima	93.23	79	*e*P	P	09 58 51.9	+1.0
ANIL	Santa Ana	93.25	79	*e*P	P	09 58 46.0	-4.9
RUSC	La Rusia	93.64	76	*e*P	P	09 58 52.6	-0.3
ORTC	Ortega, Tolima	93.80	79	*e*P	P	09 58 52.8	-0.4
BBAC	Balboa, Cauca	93.97	82	*e*P	P	09 58 54.2	0.0
RPZ	Rata Peaks	94.12	189	LR	LR	10 36 40.8	
	comp=Z,381nm,19.3s,baz=24,slow=33						
MARP	Paez Belalcaza	94.17	81	*e*P	P	09 58 55.3	+0.1
PRAC	Prado	94.18	79	*e*P	P	09 58 54.0	-0.9
CHIC	Chingaza	94.20	78	*e*P	P	09 58 54.8	-0.6
KEST	Kesra	94.43	356	LR	LR	10 40 02.9	
	comp=Z,89nm,21.9s,baz=330,slow=35						
OTAV	Otavalo	94.56	84	P	P	09 58 54.7	-2.5
OTAV				pmax	pmax		
	comp=Z,8.0nm,1.2s						
OTAV	Otavalo	94.56	84	P	P	09 58 54.7	-2.5
OTAV	Otavalo	94.56	84	*e*P	P	09 58 58.5	+1.3
GARC	Garzon, Huila	94.96	81	*e*P	P	09 58 59.0	+0.3
RAYN	Ar Rayn	98.07	322	P	P	09 59 10.5	-2.0
RAYN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
RAYN	Ar Rayn	98.07	322	P	P	09 59 10.5	-2.0
TORD	Torodi Ar. Bea	117.00	3	PKP	PKPdf	10 04 19.3	-1.5
	comp=Z,2.4nm,0.5s,baz=340,slow=2.5,SNR=7.4						
TORD				PP	PP	10 05 35.7	+6.6
	comp=Z,2.6nm,0.9s,baz=2.0,slow=5.8,SNR=4.4						
TORD				PKKPbc	PKKPab	10 14 48.6	-3.9
	comp=Z,3.1nm,1.0s,baz=176,slow=2.7,SNR=6.3						
TORD	Torodi Ar. Bea	117.00	3		PKPdf	10 04 19.6	-1.2
H03N2	Juan Fernandez	118.96	108	T	T	12 14 41.5	
	baz=312,slow=74,SNR=4.4						
H03N1	Juan Fernandez	118.97	108	T	T	12 14 39.3	
	baz=312						
H03N3	Juan Fernandez	118.98	108	T	T	12 14 41.0	
	baz=312,slow=74,SNR=5.2						
NBMO	Morrinhos-CE	120.32	54	*e*P	PKiKP	10 04 29.0	+1.7
NBPS	Pedro II - PI	120.50	56	*e*P	PKiKP	10 04 29.3	+1.6
SMTB	Santa Maria do	120.74	65	*e*P	PKPdf	10 04 28.0	0.0
SNDB	Serra Nova Dou	121.00	70	*e*P	PKiKP	10 04 30.0	+1.4
AC05	El Transito	121.24	99		PKPdf	10 04 28.5	-0.1
PEXB	Peixe	122.90	67	*e*P	PKiKP	10 04 33.8	+1.5
DBIC	Dimbokro	122.94	11	PKP	PKPdf	10 04 31.4	-0.8
	comp=Z,5.9nm,0.7s,baz=314,slow=4.4,SNR=7.0						
TIC	Toumodi	122.94	11	*e*PKIKP	PKPdf	10 04 31.0	-1.3
KIC	Kosan Boka	123.25	11	*e*PKIKP	PKPdf	10 04 31.5	-1.4
	comp=Z,17nm,0.8s						
LIC	Lamto	123.36	11	*e*PKIKP	PKPdf	10 04 31.7	-1.4
	comp=Z,38nm,0.9s						
KMBO	Kilima Mbogo	123.68	319	PKP	PKPdf	10 04 33.3	-0.7
	comp=Z,1.1nm,0.4s,baz=58,slow=4.5,SNR=6.3						
NBPA	Parau_RN	123.91	52	*e*P	PKiKP	10 04 35.9	+1.6
RCBR	Riachuelo	124.58	51	*e*P	PKiKP	10 04 37.1	+1.4
AQDB	Aquidauana	124.69	80	*e*P	PKiKP	10 04 37.2	+1.5
SDBA	SAO DESIDERIO	125.14	65	*e*P	PKiKP	10 04 38.4	+1.6
NBLI	Livramento-PB	125.36	53	*e*P	PKiKP	10 04 38.4	+1.1
NBPV	Pedro Velho	125.39	51	*e*P	PKiKP	10 04 38.9	+1.7
BDFB	Brasilia	125.84	70	PKP	PKPdf	10 04 37.6	-0.1
	comp=Z,7.0nm,0.9s,baz=278,slow=4.2,SNR=6.7						
BDFB	Brasilia	125.84	70	PKPdf	PKPdf	10 04 36.2	-1.6
ITRB	Iturama	127.48	75	*e*P	PKiKP	10 04 42.5	+1.2
IPMB	Ipameri, GO	127.51	72	*e*P	PKiKP	10 04 42.7	+1.3
JANB	Januaria	127.59	66	*e*P	PKiKP	10 04 42.3	+0.7
CPUP	Villa Florida	127.83	87	PKP	PKPdf	10 04 40.4	-0.8
	comp=Z,6.7nm,0.9s,baz=312,slow=2.2,SNR=14						
TRCB	Terra Rica	128.32	80	*e*P	PKiKP	10 04 44.1	+1.2
PLCA	Paso Flores	128.77	110	PKP	PKPdf	10 04 42.2	-0.4
	comp=Z,6.9nm,0.9s,baz=272,slow=2.6,SNR=13						
PLCA	Paso Flores	128.77	110	PKPdf	PKPdf	10 04 41.4	-1.2
PLCA	Paso Flores	128.77	110	*e*P	PKiKP	10 04 44.1	+0.8
GDU01	Guandu, BA	129.24	60	*e*P	PKiKP	10 04 45.5	+0.7
BB19B	Bebedouro	129.64	75	*e*P	PKiKP	10 04 46.4	+0.8
PTGB	Pitanga	130.06	81	*e*P	PKiKP	10 04 47.6	+1.2
FRTB	Fartura	130.66	78	*e*P	PKiKP	10 04 48.4	+0.8
ITAB	Concordia	131.79	83	*e*P	PKiKP	10 04 50.1	+0.5
BSCB	Bom Sucesso	131.90	71	*e*P	PKiKP	10 04 50.9	+0.7
NAN01	Guarapari, ES	132.23	64	*e*P	PKPdf	10 04 50.1	+0.4
SJMB	Sao Joao De Ma	132.29	66	*e*P	PKiKP	10 04 51.1	+0.2
TIJ01	Guaruva-PR	132.44	79	*e*P	PKiKP	10 04 52.1	+0.9
BSFB	Barra de Sao F	132.59	65	*e*P	PKiKP	10 04 51.5	0.0
CPSB	Cacapava Do Su	133.10	88	*e*P	PKiKP	10 04 52.9	+0.6
VAS01	Vassouras-RJ	133.68	71	*e*P	PKiKP	10 04 54.0	+0.4
MAN01	Angra dos Reis	133.79	72	*e*P	PKiKP	10 04 54.0	+0.1
ALF01	Guarapari-ES	134.04	67	*e*P	PKiKP	10 04 55.0	+0.6
QSPA	South Pole Qui	139.84	180		PKPpre	10 04 58.1	
MAW	Mawson	146.59	216	PKPbc	PKPbc	10 05 15.8	0.0
	comp=Z,44nm,1.1s,baz=53,slow=4.4,SNR=3.3						
TSUM	Tsumeb	147.38	336	PKPdf	PKPdf	10 05 17.4	+0.2
BOSA	Boshof	153.23	315	PKPbc	PKPbc	10 05 32.2	-1.3
	comp=Z,8.6nm,0.8s,baz=18,slow=2.1,SNR=15						
BOSA	Boshof	153.23	315		PKPbc	10 05 33.2	-0.4
VNA3	Neumayer Olymp	157.83	168	PKPab	PKPab	10 06 08.1	+4.3
VNA3	Neumayer Olymp	157.83	168	PKPdf	PKPdf	10 05 30.3	-0.6
SNAA	Sanae	158.10	174	PKPab	PKPab	10 06 05.6	+0.6
SNAA	Sanae	158.10	174	PKPdf	PKPdf	10 05 29.8	-1.4
SNAA	Sanae	158.10	174	PKIKP	PKPdf	10 05 31.8	+0.6
SNAA	Sanae	158.10	174	PKPdf	PKPdf	10 05 31.8	+0.6
VNA2	Neumayer--Watz	158.41	170	PKPab	PKPab	10 06 08.2	+1.9
VNA2	Neumayer--Watz	158.41	170	PKPdf	PKPdf	10 05 29.4	-2.1

IDC 26 09:45:44.0±2.0**, 1°.59S**×**135°.63E, h0**^{km}**, mb3.7**/2**,**
mb1 3.9/3**, mb1mx3.6**/40**, mbtmp3.6**/3**, ML3.4**/1**, MS3.5**/1**,**
Ms1 3.5/1**, ms1mx2.6**/39**, Error ellipse: s-maj=125.6km**
s-min=28.8km az=100.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.28	184	P	Pn	09 49 58.1	-1.2
	0.1nm,0.3s,baz=5.5,slow=12,SNR=9.1						
CTA	Charters Tower	21.11	151	LR	LR	09 59 33.7	
	comp=Z,151nm,21.2s,baz=41,slow=39						
ASAR	Alice Springs	22.01	184	P	P	09 50 40.6	+0.5
	0.9nm,0.8s,baz=7.5,slow=11,SNR=14						
ILAR	Eielson Array	86.10	25	P	P	09 58 26.6	0.0
	1.2nm,0.7s,baz=260,slow=3.8,SNR=9.6						

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*HEL **26** 10:00:22.4±0.1, 64°.75N×30°.69E, h0^{km}, ML2.1, Explosion*
*KOLA **26** 10:00:22.9, 64°.77N×30°.10E, h0^{km}, ML2.4,*
Karelia,Finland, Oulu area
*NAO **26** 10:00:24.5±1.6, 64°.80N×30°.50E, ML2.7*
*BER **26** 10:00:25.3±3.9, 64°.83N×30°.36E, h0^{km}, ML2.7(NAO),*
Suspected explosion
*IDC **26** 10:00:25.2±1.8, 64°.80N×30°.46E, h0^{km}, mb1 3.2/3,*
mb1mx2.9/50, mbtmp3.1/3, ML2.2/3, Error ellipse:
s-maj=26.0km s-min=7.8km az=98.0
ISC 26 10:00:23.9±0.9**, 64°.87N**±0°.03×**30°.49E**±0°.05**, h0**^{km}**, n36,**
σ**1**^{s}**.73**/58**, Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KU6	Riekki	1.19	348	PG	Pg	10 00 46.2	-0.4
KU6				MSG		10 01 02.3	
	comp=Z,11nm,0.2s						
KU6				SB	Sb	10 01 03.6	+0.4
MSF	Maaselka	1.21	330	PG	Pg	10 00 46.9	-0.2
MSF				SN	Sn	10 01 07.3	+2.1
OLKF	Oulanka, Finla	1.52	343	PG	Pn	10 00 52.4	-0.1
OLKF				SN	Sn	10 01 15.8	+2.9
OUL	Oulu	1.97	278	PG	Pb	10 00 59.5	-1.0
OUL				SG	Sb	10 01 25.8	+0.3
JOF	Joensuu	1.99	169	PG	Pn	10 00 55.8	-3.0
JOF				SG	Sn	10 01 22.3	-2.1
OUF	Merijarvi	2.53	261	PG	Pn	10 01 07.9	+1.7
	baz=83						
OUF				MSG		10 01 39.1	
	comp=Z,16nm,0.2s						
OUF				SG	Sb	10 01 42.6	+0.8
RNF	Rovaniemi	2.54	315	PB	Pb	10 01 08.6	-1.7
	baz=130						
RNF				SB	Sb	10 01 42.9	+0.8
OBF0	Syolatti, Pyha	2.71	265	PG	Pb	10 01 11.9	-1.4
OBF0				SG	Sg	10 01 51.7	+0.7
TOF	Tornio	2.84	298	PG	Pb	10 01 14.2	-1.3
TOF				MSG		10 01 50.0	
	comp=Z,5.9nm,0.2s						
TOF				SB	Sb	10 01 50.8	0.0
SUF	Sumiainen	2.89	224	PB	Pn	10 01 11.9	+0.7
SUF				MSG		10 01 46.9	
	comp=Z,7.7nm,0.2s						
SUF				SG	Sb	10 01 51.9	-0.4
VRF	Varrio	2.91	353	PB	Pn	10 01 13.4	+1.9
VRF				MSG		10 01 51.8	
	comp=Z,4.1nm,0.2s						
APA0	Apatity Array	2.93	19	Pn	Pn	10 01 11.8	+0.1
	baz=187,slow=12						
APA0				Lg	Lg	10 01 59.0	
	baz=200,slow=28						
APA0	Apatity Array	2.93	19	Pn	Pn	10 01 11.8	+0.1
	baz=187,slow=12						
APA0				Sg	Sg	10 01 59.0	+1.2
	baz=200,slow=28						
APA0	Apatity Array	2.93	19	P	Pn	10 01 12.0	+0.3
APA0				S	Sn	10 01 49.0	+1.5
APA	Apatity	2.96	22	P	Pn	10 01 12.7	+0.6
APA				S	Sn	10 01 49.7	+1.5
SGF	Sodankyl	3.04	330	PN	Pn	10 01 14.4	+1.1
SGF				SB	Sb	10 01 56.9	+0.4
KALU	Kalix	3.15	292	PB	Pn	10 01 16.9	+2.3
KAF	Kangasniemi	3.34	216	PB	Pn	10 01 18.9	+1.5
KAF				SG	Sb	10 02 06.7	+1.5
KEF	Keuruu	3.70	225	PB	Pn	10 01 22.9	+0.6
PAJU	Pajala	3.71	309	PN	Pn	10 01 23.8	+1.4
PAJU				SG	Sg	10 02 20.7	-2.4
VAF	Ylistaro	3.91	246	PB	Pn	10 01 27.0	+1.9
	baz=63						
BURU	Burvik	3.92	270	PB	Pn	10 01 29.4	+4.1
FIA0	FINESS Array S	3.98	212	Pn	Pn	10 01 25.4	-0.6
	baz=50,slow=11						
FIA0				Lg	Lg	10 02 26.6	
	baz=36,slow=28						
FIA0	FINESS Array S	3.98	212	Pn	Pn	10 01 25.4	-0.6
	baz=50,slow=11						
FIA0				Sg	Sb	10 02 26.6	+3.2
	baz=36,slow=28						
FIA0	FINESS Array S	3.98	212	PN	Pn	10 01 25.6	-0.5
	baz=29						
FIA0				SG	Sb	10 02 26.4	+3.0
FINES	FINESS Array B	3.98	212	Pn	Pn	10 01 25.3	-0.8
	comp=Z,0.2nm,0.3s,baz=30,slow=15,SNR=8.7						
FINES				Pg	Pb	10 01 34.7	-0.2
	comp=Z,0.4nm,0.3s,baz=27,slow=15,SNR=10						
FINES				Lg	Lg	10 02 26.4	
	comp=Z,2.0nm,0.3s,baz=30,slow=27,SNR=14						
VJF	Virojoki	4.55	199	SG	Sb	10 02 43.1	+3.2
ARA0	ARCESS Array S	5.07	340	Pn	Pn	10 01 41.1	+0.1
	baz=153,slow=14						
ARA0				Sn	Sn	10 02 39.2	-1.0
	baz=158,slow=28						
ARA0				Lg	Lg	10 03 01.6	
	baz=153,slow=37						
ARA0	ARCESS Array S	5.07	340	Pn	Pn	10 01 41.1	+0.1
	baz=153,slow=14						
ARA0				Sn	Sn	10 02 39.2	-1.0
	baz=158,slow=28						
ARA0				Sg	Sg	10 03 01.6	-5.0
	baz=153,slow=37						
ARCES	ARCESS Array B	5.07	340	Pn	Pn	10 01 41.4	+0.3
	baz=154,slow=13,SNR=51						
ARCES				Sn	Sn	10 02 40.1	-0.1
	baz=157,slow=26,SNR=6.0						
ARCES				Lg	Lg	10 03 02.9	
	baz=150,slow=32,SNR=8.0						
I43RU	DUBNA INFRASON	8.81	155	*i*		10 56 50.0	
	baz=348,slow=332,SNR=2.9						
HFS	Hagfors	9.09	246	Pn	Pn	10 02 33.9	-2.3
	baz=57,slow=14						
HFS				Lg	Lg	10 05 05.7	
	baz=63,slow=37						
HFS	Hagfors	9.09	246	Pn	Pn	10 02 33.9	-2.3
	baz=57,slow=14						
HFS				Sg	Sg	10 05 05.7	
	baz=63,slow=37						
NOA	NORSAR Array B	9.57	255	Pn	Pn	10 02 40.7	-2.0
	comp=Z,0.0nm,0.3s,baz=63,slow=12,SNR=1.7						
NOA				Lg	Lg	10 05 22.6	
	comp=Z,0.0nm,0.3s,baz=36,slow=17,SNR=4.0						
NRA0	NORESS Array S	9.60	253	Pn	Pn	10 02 43.7	+0.6
	baz=54,slow=12						
NRA0	NORESS Array S	9.60	253	Pn	Pn	10 02 43.7	+0.6
	baz=54,slow=12						

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*ISK **26** 10:06:19.8, 39°.91N×40°.83E, h5^{km}, ML3.5/29*
*DDA **26** 10:06:20.3, 39°.91N×40°.84E, h2^{km}, MW3.8*
*IDC **26** 10:06:26.3±1.4, 40°.09N×40°.81E, h0^{km}, mb3.2/2,*
mb1 3.3/7, mb1mx3.1/59, mbtmp3.3/7, ML2.4/4, MS2.9/2,
Ms1 2.9/2, ms1mx2.3/35, Error ellipse: s-maj=25.3km
s-min=13.9km az=178.0
ISC 26 10:06:19.8±1.1**, 39°.94N**±0°.02×**40°.91E**±0°.02**, h0**^{km}±10^{km}**,**
n94, σ**1**^{s}**.23**/114**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
ECAT	Cat-ERZURUM	0.33	172	*i* P	Pb	10 06 27.6	-1.1
ECAT				*i* S	Sb	10 06 32.6	-2.1
ECAT				IAML		10 06 33.0	
	comp=E,4µm,0.5s						
ECAT				IAML		10 06 34.0	
	comp=N,2µm,0.5s						
KRIK	Erzurum-spir	0.40	1	*i* P	Pb	10 06 29.9	-0.1
KRIK				*i* S	Sb	10 06 36.3	-0.5
KRIK				IAML		10 06 40.0	
	comp=E,483nm,0.5s						
KRIK				IAML		10 06 40.0	
	comp=N,400nm,0.8s						
YEDI	Yedisu-Bingol	0.57	210	PG	Pg	10 06 31.0	+0.2
YEDI				SG	Sg	10 06 39.1	+0.9
BAYB	BAYBURT	0.60	303	*i* P	Pg	10 06 32.0	+0.7
BAYB				*i* S	Sg	10 06 40.4	+1.3
BAYB				IAML		10 06 41.0	
	comp=E,2µm,0.4s						
BAYB				IAML		10 06 42.0	
	comp=N,2µm,0.6s						
KARO	Karliova-Bingo	0.63	170	PG	Pb	10 06 33.3	-0.6
KARO				SG	Sb	10 06 42.8	-0.6
KOPR	Koprukoy-ERZUR	0.72	85	PG	Pn	10 06 36.1	-1.4
KOPR				SG	Sn	10 06 48.1	-1.3
HOMI	Horasan	0.77	81	*i* P	Pb	10 06 35.8	-0.4
HOMI				IAML		10 06 51.0	
	comp=N,1µm,0.3s						
HOMI				IAML		10 06 56.0	
	comp=E,2µm,0.4s						
VRTB	Varto-Mus	0.88	151	PG	Pn	10 06 38.3	-1.3
VRTB	Varto-Mus	0.88	151	*i* P	Pb	10 06 37.5	-0.5
VRTB				IAML		10 06 59.0	
	comp=E,2µm,0.6s						
VRTB				IAML		10 07 03.0	
	comp=N,1µm,0.6s						
BNGB	Bingl	0.96	191	PG	Pg	10 06 38.2	0.0
BNGB				SG	Sb	10 06 52.3	-0.4
EUZM	Uzumlu	0.96	257	*i* P	Pg	10 06 37.0	-1.2
EUZM				IAML		10 06 57.0	
	comp=N,187nm,0.4s						
EUZM				IAML		10 06 59.0	
	comp=E,314nm,0.6s						
SLHN	Bingol, Solhan	0.98	175	*i* P	Pn	10 06 39.5	-1.5
SLHN				*i* S	Sn	10 06 53.3	-2.3
SLHN				IAML		10 06 56.0	
	comp=N,960nm,0.5s						
SLHN				IAML		10 07 00.0	
	comp=E,2µm,0.8s						
EKAR	Karacoban	1.12	127	*i* P	Pn	10 06 42.5	-0.5
EKAR				IAML		10 07 06.0	
	comp=N,1µm,0.6s						
EKAR				IAML		10 07 18.0	
	comp=E,1µm,0.6s						
CHAY	Cayeli-Rize	1.16	353	PN	Pn	10 06 43.3	0.0
CHOM	Cayeli-Rize	1.17	354	PN	Pn	10 06 43.6	+0.2
EATA	Eleskirt	1.22	93	*i* P	Pn	10 06 45.4	+1.1
EATA				IAML		10 07 09.0	
	comp=E,408nm,0.4s						
EATA				IAML		10 07 09.0	
	comp=N,570nm,1.1s						
DBAD	Bademkaya	1.24	29	*i* P	Pg	10 06 44.5	+1.0
DBAD				*i* S	Sn	10 07 00.2	-1.7
DBAD				IAML		10 07 07.0	
	comp=E,557nm,0.7s						
DBAD				IAML		10 07 09.0	
	comp=N,574nm,0.6s						
SENK	Senkaya-Erzuru	1.27	60	PN	Pg	10 06 46.0	+1.9
KELT	Kelkit	1.29	280	*i* P	Pn	10 06 43.6	-1.7
KELT				*i* S	Sb	10 07 00.1	-2.2
KELT				IAML		10 07 02.0	
	comp=N,455nm,0.5s						
KELT				IAML		10 07 04.0	
	comp=E,388nm,0.5s						
MUSM	Mu-Merkez	1.29	159	*i* P	Pg	10 06 44.7	+0.1
MUSM				*i* S	Sn	10 07 04.0	+0.6
MUSM				IAML		10 07 07.0	
	comp=E,235nm,0.5s						
MUSM				IAML		10 07 07.0	
	comp=N,188nm,0.9s						
MACK	Trabzon	1.33	319	*i* P	Pb	10 06 45.4	-0.4
MACK				IAML		10 07 07.0	
	comp=E,708nm,0.3s						
MACK				IAML		10 07 08.0	
	comp=N,936nm,0.3s						
TNCL	Tunceli-Merkez	1.34	233	*i* P	Pn	10 06 44.2	-1.7
TNCL				IAML		10 07 07.0	
	comp=N,675nm,0.5s						
TNCL				IAML		10 07 09.0	
	comp=E,957nm,0.9s						
KTUT	Trabzon	1.37	321	PN	Pb	10 06 46.1	-0.2
MLAZ	Malazgirt-MUS	1.49	122	PN	Pg	10 06 49.5	+1.1

KOVA	Elazig, Kovanc	1.50	215	*i* P	Pn	10 06 47.2	-0.8
KOVA				*i* S	Sn	10 07 06.0	-2.3
KOVA				IAML		10 07 12.0	
	comp=N,344nm,0.8s						
KOVA				IAML		10 07 14.0	
	comp=E,429nm,0.7s						
DBOC	Borcka	1.52	22	*i* P	Pg	10 06 49.2	+0.3
DBOC				IAML		10 07 07.0	
	comp=N,0.2nm,1.0s						
DBOC				*i* S	Sg	10 07 08.4	-0.3
DBOC				IAML		10 07 14.0	
	comp=E,270nm,0.3s						
HANI	Diyarbakir_Han	1.57	195	*i* P	Pg	10 06 49.8	-0.1
HANI				*i* S	Sg	10 07 11.5	+1.2
HANI				IAML		10 07 14.0	
	comp=N,248nm,0.7s						
HANI				IAML		10 07 21.0	
	comp=E,305nm,0.7s						
GURO	Guroymak-BITLI	1.63	147	PN	Pg	10 06 51.2	+0.1
AGRB	Hanur-Agry	1.64	102	PN	Pg	10 06 51.9	+0.6
ALUC	Giresun/Alucra	1.69	285	*i* P	Pn	10 06 50.3	-0.5
ALUC				*i* S	Sg	10 07 14.7	+0.5
ALUC				IAML		10 07 21.0	
	comp=N,474nm,0.6s						
ALUC				IAML		10 07 22.0	
	comp=E,439nm,0.6s						
REFA	Refahiye_ERZN	1.74	253	*i* P	Pn	10 06 50.7	-0.8
REFA				*i* S	Sn	10 07 12.8	-1.7
REFA				IAML		10 07 21.0	
	comp=E,146nm,1.0s						
REFA				IAML		10 07 21.0	
	comp=N,120nm,1.0s						
KOTA	Agri, Merkez-K	1.77	94	*i* P	Pg	10 06 54.7	+0.9
KOTA				IAML		10 07 32.0	
	comp=E,101nm,0.8s						
KOTA				IAML		10 07 34.0	
	comp=N,63nm,0.7s						
BATM	Batumi	1.77	19	P	Pg	10 06 53.5	-0.3
BATM	Batumi	1.77	19	PN	Pg	10 06 53.5	-0.3
BATM	Batumi	1.77	19	*i* P	Pg	10 06 53.6	-0.1
BATM				*i* S	Sb	10 07 14.0	-1.9
BLIS	Bitlis-Merkez	1.78	148	*i* P	Pg	10 06 53.9	-0.1
BLIS				*i* S	Sg	10 07 17.2	+0.2
BLIS				IAML		10 07 20.0	
	comp=E,615nm,0.4s						
BLIS				IAML		10 07 21.0	
	comp=N,397nm,0.4s						
ILIC	ilic-Erzincan	1.87	256	PN	Pn	10 06 53.3	+0.1
ESPY	Espiye-Giresun	1.94	301	PN	Pb	10 06 54.7	-1.3
DIGO	Kars	1.94	75	*i* P	Pb	10 06 55.4	-0.9
KEMA	Kemaliye	1.98	251	*i* P	Pn	10 06 54.8	+0.1
KEMA				IAML		10 07 26.0	
	comp=N,124nm,0.5s						
KEMA				IAML		10 07 32.0	
	comp=E,126nm,0.7s						
BTMN	Batman	2.06	172	*i* P	Pg	10 06 59.2	0.0
BTMN				*i* S	Sg	10 07 26.2	+0.3
BTMN				IAML		10 07 32.0	
	comp=E,350nm,1.0s						
BTMN				IAML		10 07 35.0	
	comp=N,238nm,0.6s						
DYBB	Diyarbakir	2.07	197	PN	Pb	10 06 56.6	-1.7
ELZG	Elazig	2.08	227	*i* P	Pb	10 06 58.5	0.0
EPOS	Posof	2.09	41	*i* P	Pb	10 06 57.0	-1.6
EPOS				IAML		10 07 38.0	
	comp=E,60nm,0.5s						
EPOS				IAML		10 07 38.0	
	comp=N,104nm,0.9s						
SRTM	Siirt_Merkez	2.09	158	*i* P	Pb	10 06 58.3	-0.4
SRTM				IAML		10 07 32.0	
	comp=N,287nm,0.7s						
SRTM				IAML		10 07 41.0	
	comp=E,113nm,0.6s						
SUSE	Susehri	2.10	278	*i* P	Pn	10 06 56.6	+0.2
SUSE				*i* S	Sn	10 07 23.1	-0.1
SUSE				IAML		10 07 30.0	
	comp=E,138nm,0.9s						
SUSE				IAML		10 07 35.0	
	comp=N,148nm,0.9s						
DIYA	Diyarbakir	2.10	197	*i* P	Pb	10 06 58.9	0.0
EAK	Akyaka	2.19	69	*i* P	Pg	10 07 01.2	-0.6
EAK				IAML		10 07 48.0	
	comp=E,119nm,0.9s						
EAK				IAML		10 07 50.0	
	comp=N,147nm,1.2s						
VMUR	Van-Muradiye	2.26	114	*i* P	Pg	10 07 03.7	+0.5
VMUR				IAML		10 07 38.0	
	comp=E,181nm,0.7s						
VMUR				IAML		10 07 38.0	
	comp=N,108nm,0.6s						
AKDM	Akdamar-Van	2.27	134	PN	Pb	10 07 00.5	-1.3
ABS	Abastumani	2.32	38	P	Pb	10 07 01.4	-1.2
GEVA	Gevas	2.33	133	*i* P	Pb	10 07 02.1	-0.6
VANB	Van	2.34	124	PN	Pb	10 07 02.5	-0.5
PERV	Siirt/Pervari-	2.36	147	*i* P	Pg	10 07 04.8	-0.2
TVAN	Van	2.39	125	*i* P	Pg	10 07 05.9	+0.3
CUZAR	Zara_SIVAS	2.42	270	*i* P	Pb	10 07 03.5	-0.8
CUZAR				*i* S	Sg	10 07 36.7	-0.8
CUZAR				IAML		10 07 41.0	
	comp=N,128nm,1.1s						
CUZAR				IAML		10 07 42.0	
	comp=E,176nm,1.5s						
BGD	Bogdanovka	2.44	56	P	Pg	10 07 07.1	+0.5
AKH	Akhalkalaki	2.45	52	P	Pg	10 07 06.9	+0.1
AKH	Akhalkalaki	2.45	52	PN	Pb	10 07 03.5	-1.4
CLDR	Caldiran	2.45	108	PN	Pb	10 07 03.4	-1.5
CLDR	Caldiran	2.45	108	*i* P	Pg	10 07 05.6	-1.2
HEKM	Malatya_Hekimh	2.52	246	*i* P	Pb	10 07 06.2	+0.1
MALT	Malatya	2.52	231	PN	Pn	10 07 02.7	+0.6
MIDY	Mardin/Midyat-	2.55	171	*i* P	Pb	10 07 07.0	+0.4
MIDY				IAML		10 07 47.0	
	comp=E,183nm,0.5s						
MIDY				IAML		10 07 52.0	
	comp=N,154nm,0.9s						
TASB	TASBURUN-IGDIR	2.56	88	PN	Pb	10 07 04.9	-1.7
ORDU	Ordu-Boztepe	2.56	295	*i* P	Pb	10 07 06.2	-0.5
ORDU				IAML		10 07 33.0	
	comp=E,69nm,1.6s						
ORDU				IAML		10 07 42.0	
	comp=N,160nm,0.7s						
MARD	Mardin	2.62	182	*i* P	Pb	10 07 07.7	0.0
MARD				IAML		10 07 46.0	
	comp=E,251nm,0.9s						
MARD				IAML		10 07 47.0	
	comp=N,224nm,0.6s						
BKRG	Bakuriani	2.69	46	P	Pg	10 07 10.9	-0.5
SIRN	Sırnak	2.70	154	*i* P	Pg	10 07 10.3	-1.3
SIRN				IAML		10 07 52.0	
	comp=E,268nm,0.8s						
SIRN				IAML		10 08 02.0	
	comp=N,213nm,0.8s						
OZAP	Van, Ozalp-Mer	2.71	117	*i* P	Pg	10 07 11.9	+0.2
CUKAN	kangal_SIVAS	2.73	258	*i* P	Pb	10 07 08.1	-1.6
BRNG	Burnasheti	2.78	52	P	Pg	10 07 11.8	-1.4
RSDY	Resadiye-TOKAT	2.79	281	PN	Pn	10 07 06.7	+1.0
AKCD	Akcadag	2.84	236	*i* P	Pn	10 07 06.7	+0.1
AKCD				IAML		10 07 58.0	
	comp=N,66nm,0.8s						
AKCD				IAML		10 08 05.0	
	comp=E,63nm,1.0s						
CHVG	Ch'k'valeri	2.92	17	P	Pg	10 07 15.4	-0.3
GNI	Garni	2.95	85	Pn	Pg	10 07 16.9	+0.7
	comp=E,2.9nm,0.3s,baz=210,slow=13,SNR=5.8						
GNI	Garni	2.95	85	PN	Pb	10 07 10.7	-2.6
DARE	Darende-Malaty	2.99	244	PN	Pn	10 07 09.3	+0.7
ERBA	Erbaa	3.27	285	*i* P	Pb	10 07 19.3	+0.6
ERBA				*i* S	Sb	10 07 58.4	-0.6
ONI	Oni	3.27	35	P	Pg	10 07 20.6	-1.9
ONI				S	Sg	10 08 05.2	+0.3
TOKT	Tokat	3.37	278	PN	Pn	10 07 14.9	+1.1
CUKT	Cukurca	3.41	141	PN	Pn	10 07 16.5	+2.1
CUSAR	Sarkisla-SIVAS	3.64	263	*i* P	Pb	10 07 23.0	-2.1
CUSAR				IAML		10 08 27.0	
	comp=E,29nm,1.5s						
CUSAR				IAML		10 08 30.0	
	comp=N,30nm,2.1s						
SARI	SarD1z-Kayseri	3.81	248	PN	Pn	10 07 21.0	+1.1
KMRS	Kahramanmaras	3.97	234	PN	Pn	10 07 23.2	+1.3
GAZ	Gaziantep	4.00	228	PN	Pn	10 07 23.9	+1.4
KBZ	Khabaz	4.07	21	Pn	Pb	10 07 30.6	-1.7
	comp=N,0.4nm,0.3s,baz=211,slow=5.3,SNR=6.0						
CTAK	Corum_Osmancik	4.74	281	*i* P	Pb	10 07 41.0	-2.8
BRTR	Keskin Array B	5.60	270	Pn	Pb	10 07 52.2	-6.3
	comp=N,0.1nm,0.3s,baz=96,slow=14,SNR=4.0						
BRTR				LR	LR	10 10 15.6	
	comp=N,122nm,19.6s,baz=338,slow=42						
MMAI	Mount Meron Ar	8.21	214	LR	LR	10 12 12.4	
	comp=N,81nm,18.2s,baz=60,slow=42						
AKASG	Malin Array Be	13.53	327	Pn	Pn	10 09 33.6	+0.7
	comp=N,0.6nm,0.3s,baz=132,slow=13,SNR=2.9						
AKTO	Aktyubinsk	15.95	43	Pn	P	10 10 08.7	-0.5
	comp=N,0.1nm,0.3s,baz=239,slow=16,SNR=2.9						
FINES	FINESS Array B	23.38	342	P	P	10 11 35.8	+6.0
	comp=N,0.8nm,0.6s,baz=152,slow=15,SNR=1.1						
MKAR	Makanchi Array	30.57	63	P	P	10 12 40.8	+5.7
	comp=N,0.1nm,0.4s,baz=261,slow=8.2,SNR=1.6						

IDC 26 10:11:42.4±999.0, 56°.89N×27°.79E, h0^{km}, Error ellipse: s-maj=1443.0km s-min=109.6km az=88.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I43RU	DUBNA INFRASON	5.18	88	*i*		10 47 10.0	
	baz=274,slow=321,SNR=0.4						
I31KZ	AKTYUBINSK INF	18.95	97	*i*		12 08 20.0	
	baz=307,slow=328,SNR=2.0						
I46RU	ZALESOVO INFRA	31.70	71	*i*		13 24 00.5	
	baz=309,slow=288						
I34MN	SONGINO INFRAS	46.34	66	*i*		14 54 00.0	
	baz=313,slow=339,SNR=0.4						

NNC 26 10:23:02.5±1.0, 51°.81N×75°.53E, h0^{km}, mb3.3, mpv2.9, Error ellipse: s-maj=30.6km s-min=5.7km az=30.0, Suspected Mining explosion.

IDC 26 10:23:05.8±0.9, 51°.51N×75°.34E, h0^{km}, mb1 3.1/6, mb1mx3.0/49, mbtmp3.1/6, ML2.7/6, Error ellipse: s-maj=19.1km s-min=8.2km az=24.0

ISC 26 10:23:03.4±1.0, 51°.7N±0°.1×75°.13E±0°.08, h0^{km}, n11, σ1^{s}42/12, 7C-2D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURBB	Kurchatov Arra	2.38	114	Pn	Pn	10 23 43.4	-0.1
	0.7nm,0.3s,baz=298,slow=19,SNR=37						
KURBB				Lg	Lg	10 24 13.9	
	0.7nm,0.3s,baz=107,slow=8.1,SNR=6.4						
KURK	Kurchatov	2.39	112	⇑Pg	Pn	10 23 43.7	0.0
	3.9nm,0.6s						
KURK				⇑Lg	Lg	10 24 11.8	
	18nm,0.6s						
BVAR	Borovoye Array	3.22	297	Pn	Pb	10 23 59.7	-1.6
	0.5nm,0.3s,baz=121,slow=17,SNR=7.8						
BVAR				Lg	Lg	10 24 51.3	
	2.6nm,0.3s,baz=118,slow=27,SNR=8.1						
BRVK	Borovoye	3.29	297	⇑Pg	Pg	10 24 05.7	-0.7
	3.7nm,0.5s						
BRVK				⇓Lg	Lg	10 24 50.3	
	26nm,0.7s						
I46RU	ZALESOVO INFRA	6.31	65	*i*		11 02 30.0	
	baz=251,slow=324,SNR=1.1						
ZALV	Zalesovo Beam	6.31	65	Pn	Pn	10 24 38.2	+0.7
	0.6nm,0.3s,baz=256,slow=14,SNR=10						
ZALV				Lg	Lg	10 26 25.0	
	0.2nm,0.3s,baz=246,slow=25,SNR=3.6						
MAKZ	Makanchi	6.60	135	⇓Sn	Sn	10 25 57.1	-0.4
	2.0nm,0.9s						
MAKZ				⇑Lg	Lg	10 26 28.0	
	5.1nm,0.8s						
MK31	Makanchi Array	6.75	133	⇑Pn	Pn	10 24 41.6	-2.1
	0.5nm,0.6s,baz=316,slow=11,SNR=9.6						
MK31				⇑Sn	Sn	10 26 00.5	-0.8
	0.6nm,0.5s,baz=312,slow=24,SNR=4.7						
MK31				⇑Lg	Lg	10 26 32.5	
	3.9nm,0.6s,baz=322,slow=27,SNR=5.1						
MKAR	Makanchi Array	6.75	133	Pn	Pn	10 24 43.8	+0.1
	0.1nm,0.3s,baz=313,slow=12,SNR=10						
MKAR				Sn	Sn	10 26 02.4	+1.2
	0.2nm,0.3s,baz=322,slow=23,SNR=5.0						
MKAR				Lg	Lg	10 26 32.3	
	0.4nm,0.3s,baz=315,slow=26,SNR=7.8						
AAK	Ala-Archa	9.03	183	Pn	Pn	10 25 14.8	-0.2
	0.2nm,0.3s,baz=0.0,slow=10,SNR=1.7						
AKTO	Aktyubinsk	10.85	270	Pn	Pn	10 25 42.6	+2.9
	0.2nm,0.3s,baz=99,slow=12,SNR=5.8						

BUC 26 10:29:49.0±0.2, 46°.05N×22°.06E, h3^{km}, ml1.6/6, 14C-16D, Error ellipse: s-maj=1.7km s-min=1.5km az=81.0, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIRR	Siria	0.36	308	⇑P	Pg	10 29 55.8	-0.1
SIRR				⇑S	Sg	10 30 00.0	-0.5
BZS	Buzias	0.53	216	⇓P	Pg	10 29 59.7	+0.5
BZS				⇑S	Sg	10 30 06.6	+0.5
BZS	Buzias	0.53	216	⇓P	Pg	10 29 59.7	+0.5
BZS				⇑S	Sg	10 30 06.6	+0.5
GZR	Gura Zlata	0.82	142	⇓P	Pg	10 30 04.9	+0.1
GZR				⇓S	Sg	10 30 16.3	+0.9
GZR	Gura Zlata	0.82	142	⇓P	Pg	10 30 04.9	+0.1
GZR				⇓S	Sg	10 30 16.3	+0.9
DRGR		0.87	31	⇑P	Pb	10 30 06.4	-0.4
DRGR				⇑S	Sg	10 30 17.9	+0.8
DRGR		0.87	31	⇑P	Pb	10 30 06.4	-0.4
DRGR				⇑S	Sg	10 30 17.9	+0.8
HERR	Herculane	1.19	168	⇑P	Pb	10 30 12.3	0.0
HERR				⇓S	Sg	10 30 27.7	+0.4
HERR	Herculane	1.19	168	⇑P	Pb	10 30 12.3	0.0
HERR				⇓S	Sg	10 30 27.7	+0.4
MDVR	Moldovita	1.29	191	⇓P	Pn	10 30 14.5	+0.5
MDVR				⇑S	Sn	10 30 31.4	-0.4
MDVR	Moldovita	1.29	191	⇓P	Pn	10 30 14.5	+0.5
MDVR				⇑S	Sn	10 30 31.4	-0.4
LOT	Lotru	1.34	116	⇓P	Pg	10 30 14.6	-0.1
LOT				⇓S	Sn	10 30 33.2	+0.1
LOT	Lotru	1.34	116	⇓P	Pg	10 30 14.6	-0.1
LOT				⇓S	Sn	10 30 33.2	+0.1
VOIR		2.18	105	⇑P	Pn	10 30 26.5	+0.2
VOIR				⇓S	Sn	10 30 54.6	+0.9
VOIR		2.18	105	⇑P	Pn	10 30 26.5	+0.2
VOIR				⇓S	Sn	10 30 54.6	+0.9

BJI 26 10:35:50.5±0.0, 2°.33N×126°.78E, h44^{km}, mB5.1/30, mb4.7/51, Ms4.5/8, Ms7 4.3/8

NEIC 26 10:35:54.0±2.1, 2°.51N±0°.07×126°.71E±0°.08, h50^{km}±7^{km}, mb4.7/61, Error ellipse: s-maj=12.8km s-min=8.9km az=48.0

DJA 26 10:35:53.8±0.3, 3°N±3°×12°7E±°, h50^{km}±4^{km}, M4.6/26, mB5.2/6, mb4.7/26, MLv4.5/14, Mw(mB)4.6/6

IDC 26 10:35:54.1±2.2, 2°.46N×126°.53E, h50^{km}±20^{km}, mb4.3/26, mb1 4.3/28, mb1mx4.2/48, mbtmp4.5/28, ML4.2/2, MS3.2/4, Ms1 3.3/4, ms1mx2.9/39, Error ellipse: s-maj=19.9km s-min=10.4km az=80.0

KLM 26 10:35:56, 2°.74N×126°.95E, h104^{km}, mb4.6

ISC 26 10:35:54.7±0.3, 2°.51N±0°.04×126°.65E±0°.06, h55^{km}, n167, σ1^{s}42/178, mb4.7/77, 2C, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	1.62	316	P	Pn	10 36 19.7	-1.3
SGSI				S	Sn	10 36 39.7	-1.0
TNTI	Ternate	1.87	157		Pn	10 36 23.6	-0.8
TNTI	Ternate	1.87	157	P	Pn	10 36 23.4	-1.0
TNTI				S	Sn	10 36 47.2	+0.3
KMSI	Cibinong	3.29	234	P	Pn	10 36 45.6	+1.8
DDMP	Don Marcelino,	3.69	345	*e*P	Pn	10 36 47.7	-1.6
DDMP				*e*S	Sn	10 37 31.0	-0.6
GTOI	Gorontalo	4.09	243	P	Pn	10 36 56.0	+1.2
MATI	Mati	4.42	355	*e*P	Pn	10 36 59.6	+0.2
MATI				*e*S	Sn	10 37 52.3	+2.7
SKMP	Bagumbayan, Su	4.50	332	*e*P	Pn	10 36 59.1	-1.4
SKMP				*e*S	Sn	10 37 49.4	-2.2
SANI	Sanana	4.58	188	P	Pn	10 37 00.5	-1.0
MRSI	Marisa	5.12	247	P	Pn	10 37 10.4	+1.4
	1.4nm4µm335nm,0.5s						
LUWI	Luwuk	5.24	228		Pn	10 37 09.2	-1.4
LUWI	Luwuk	5.24	228	P	Pn	10 37 13.3	+2.7
	1.3nm3µm156nm,0.5s						
BUKP	Musuan	5.56	344	*e*P	Pn	10 37 16.0	+1.0
BUKP				*e*S	Sn	10 38 19.8	+2.1
SWI	Sorong	5.70	126	P	Pn	10 37 16.2	-0.7
	0.1nm29nm,0.8s						
SIJI	Sorong	5.71	126	P	Pn	10 37 17.9	+0.9
	8.7nm,0.3s,baz=330,slow=16,SNR=23						
NLAI	Namlea	5.73	176	P	Pn	10 37 17.5	+0.2
	0.2nm25nm,0.4s						
TOLI2	Tolitoli	6.03	257	Pn	Pn	10 37 21.3	-0.1
APSI	Ampana	6.05	236	P	Pn	10 37 24.3	+2.7
	0.5nm2µm151nm,0.7s						
PAGZ	Pagadian	6.22	329	*e*P	Pn	10 37 22.6	-1.5
PAGZ				*e*S	Sn	10 38 28.8	-5.0
FAKI	Fak Fak	7.77	134	Pn	Pn	10 37 43.5	-1.9
MYLDM	Lahad Datu	8.55	288	Pn	Pn	10 37 58.1	+2.1
TTSI	Tana Toraja	8.78	231	P	Pn	10 38 01.3	+2.2
	1µm44nm,0.8s						
SPSI	Sidrap Palu	9.42	227	P	Pn	10 38 16.8	+9.0
BNSI	Bone	9.48	224	P	Pn	10 38 09.2	+0.5
	19nm,0.6s						
KAPI	Kappang	10.17	223	P	Pn	10 38 17.2	-0.9
	1.2nm,0.3s,baz=36,slow=21,SNR=4.1						
KAPI				LR	LR	10 42 20.3	
	comp=Z,93nm,21.7s,baz=42,slow=38						
KAPI	Kappang	10.17	223	Pn	Pn	10 38 20.5	+2.4
KKM	Kota Kinabalu	10.98	289	Pn	Pn	10 38 31.6	+2.3
PLAI	Plampang	14.32	218	P	P	10 39 25.9	+5.6
TWSI	Taliwang, Sumb	14.82	221	P	P	10 39 24.2	-1.7
	35nm,1.1s						
KSM	Kuching	16.36	267	P	P	10 39 44.0	+1.0
FITZ	Fitzroy Crossi	20.50	183	P	P	10 40 28.5	+0.1
	10nm,0.6s,baz=15,slow=8.1,SNR=40						
FITZ	Fitzroy Crossi	20.50	183	P	P	10 40 28.6	+0.2
FITZ					Sn	10 44 22.1	+0.5
TWG	Pinlang	20.90	345	P	P	10 40 30.6	-2.1
TWG				IAmb	IAmb	10 40 39.3	
	comp=Z,23nm,0.5s						
YULB	Yu-li	21.39	346	P	P	10 40 33.9	-4.1
TPUB	Ta-pu	21.47	345	P	P	10 40 35.6	-3.2
TPUB				IAmb	IAmb	10 40 36.1	
	comp=Z,26nm,0.9s						
SSLB	Suanglung	21.86	346	P	P	10 40 40.8	-2.2
SSLB				IAmb	IAmb	10 40 42.5	
	comp=Z,55nm,1.5s						
YHNB	Yeheng	22.61	347	P	P	10 40 47.7	-3.4
YHNB				IAmb	IAmb	10 41 09.5	
	comp=Z,66nm,1.5s						
KLSI		23.04	252	P	P	10 40 57.2	+1.6
	comp=Z,4.2nm,1.0s						
COEN	Coen	23.16	135	P	P	10 40 54.8	-1.9
WB0	Warramunga Arr	23.41	161	P	P	10 40 57.6	-1.5
WB0				IAmb	IAmb	10 40 58.4	
	comp=Z,20nm,0.5s						
WRAB	Tennant Creek	23.55	162	P	P	10 40 58.8	-1.6
WRAB				IAmb	IAmb	10 41 08.2	
	comp=Z,17nm,0.7s						
WRA	Warramunga Arr	23.56	162	P	P	10 40 58.9	-1.6
	comp=Z,8.5nm,0.5s,baz=342,slow=11,SNR=195						
WRA				S	S	10 45 10.3	-0.4
	comp=Z,1.3nm,0.8s,baz=329,slow=16,SNR=4.6						
WRA	Warramunga Arr	23.56	162	P	P	10 40 57.4	-3.0
WB2	Warramunga Arr	23.56	162	P	P	10 40 59.0	-1.5
WB2				IAmb	IAmb	10 41 08.3	
	comp=Z,25nm,0.6s						
WR0	Warramunga Arr	23.64	161	P	P	10 40 59.8	-1.4
WR0				IAmb	IAmb	10 41 23.7	
	comp=Z,10nm,0.7s						
JOW	Kunigami	24.23	4	P	P	10 41 07.2	+0.6
	comp=Z,44nm,0.8s,baz=210,slow=10,SNR=6.2						
UBPT	Khong Chiam	24.43	303	P	P	10 41 08.5	0.0
PSA00	Pilbara Seismi	24.84	195	P	P	10 41 12.7	+0.5
PSA00	Pilbara Seismi	24.84	195	P	P	10 41 10.5	-1.7
PSA00				IAmb	IAmb	10 41 30.3	
	comp=Z,4.4nm,0.7s						
AS31	Alice Springs	26.96	165	P	P	10 41 30.5	-0.9
ASAR	Alice Springs	26.96	165	P	P	10 41 30.2	-1.1
	comp=Z,2.9nm,0.5s,baz=347,slow=7.1,SNR=94						
ASAR				PcP	PcP	10 44 53.0	+0.7
	comp=Z,1.0nm,0.7s,baz=3.1,slow=2.3,SNR=4.1						
ASAR				S	S	10 46 07.8	+2.8
	comp=Z,0.5nm,0.7s,baz=347,slow=20,SNR=4.2						
ASAR	Alice Springs	26.96	165	P	P	10 41 30.5	-0.9
GSI	Gunungsitoli	29.08	268	P	P	10 41 51.1	+0.7
GSI				IAmb	IAmb	10 41 52.1	
	comp=Z,10nm,0.5s						
WHN	Wuhan	30.21	339	⇑P	P	10 42 01.5	+1.3
NJ2	Nanjing	30.29	347	*e*P	P	10 42 03.0	+2.2
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
JNU	Nakatsue	30.71	7	P	P	10 42 04.8	+0.3
CM36	Chiang Mai Arr	31.33	302	P	P	10 42 10.0	-0.2
CM04	Chiang Mai Arr	31.38	302	P	P	10 42 12.0	+1.4
	comp=Z,3.1nm,0.9s						
CM09	Chiang Mai Arr	31.39	302	P	P	10 42 14.2	+3.5
	comp=Z,5.2nm,0.4s						
CM05	Chiang Mai Arr	31.41	302	P	P	10 42 12.4	+1.5
	comp=Z,2.5nm,0.9s						
CM02	Chiang Mai Arr	31.42	302	P	P	10 42 15.0	+4.0
	comp=Z,3.7nm,1.0s						
CMAR	Chiang Mai Arr	31.43	302	P	P	10 42 10.1	-1.1
	comp=Z,2.3nm,0.7s,baz=118,slow=6.5,SNR=18						
CMAR				LR	LR	10 54 33.3	
	comp=Z,39nm,21.9s,baz=149,slow=36						
CM13	Chiang Mai Arr	31.45	302	P	P	10 42 12.0	+0.7
	comp=Z,4.9nm,0.9s						
CMMT	Chiang Mai	31.59	303	P	P	10 42 11.0	-1.5
	comp=Z,3.1nm,0.7s						
CHTO	Chiang Mai	31.59	303	P	P	10 42 12.6	0.0
CM32	Chiang Mai Arr	31.60	302	P	P	10 42 16.0	+3.4
ENH	Enshi	32.04	331	P	P	10 42 15.5	-0.9
ENH				IAmb	IAmb	10 42 16.6	
	comp=Z,9.1nm,0.8s						
MHMT	Maesarieng	32.17	301	P	P	10 42 17.0	-0.6
FORT	Forrest	33.13	178	P	P	10 42 25.1	-0.7
JWT	Wachi	33.60	13	P	P	10 42 30.3	+0.4
JGF	Kuroka	34.39	16	P	P	10 42 37.2	+0.4
JGF				IAmb	IAmb	10 42 54.2	
	comp=Z,14nm,1.2s						
KSRS	Korea Array	34.79	2	P	P	10 42 41.0	+0.9
	comp=Z,9.6nm,0.6s,baz=179,slow=10.0,SNR=35						
KS19	Wonju Array Si	34.84	2	P	P	10 42 41.2	+0.7
XAN	Xi'an	35.47	334	⇑P	P	10 42 45.0	-1.1
XAN				pP	pP	10 42 56.0	-3.6
XAN				sP	pwP	10 43 02.0	+0.2
XAN				pmax	pmax		
	comp=Z,10.0nm,0.6s						
XAN	Xi'an	35.47	334	P	P	10 42 45.4	-0.7
XAN				IAmb	IAmb	10 42 46.4	
	comp=Z,5.8nm,0.7s						
MAT	Matsushiro	35.51	16	P	P	10 42 45.9	-0.4
MJAR	Matsushiro Arr	35.51	16	P	P	10 42 46.0	-0.3
	comp=Z,4.4nm,0.7s,baz=192,slow=9.0,SNR=11						
MJAR				LR	LR	10 58 19.9	
	comp=Z,22nm,19.4s,baz=100,slow=38						
BBOO	Buckleboo	36.24	167	P	P	10 42 52.0	-0.6
BBOO				IAmb	IAmb	10 42 52.5	
	comp=Z,6.4nm,0.7s						
EIDS	Eidsvold	36.45	141	P	P	10 42 53.8	-0.8
EIDS				IAmb	IAmb	10 43 02.8	
	comp=Z,11nm,1.3s						
DL2	Dalian	36.51	353	P	P	10 42 56.0	+1.1
DL2				pmax	pmax		
	comp=Z,39nm,0.7s						
JSD	Sado	36.92	15	P	P	10 42 57.6	-0.7
STKA	Stephens Creek	37.03	159	P	P	10 42 58.9	-0.4
	comp=Z,3.8nm,0.5s,baz=334,slow=9.8,SNR=18						
STKA	Stephens Creek	37.03	159	P	P	10 42 59.0	-0.4
BJT	Baijiatuau	38.53	347	P	P	10 43 12.6	+0.6
BJT				IAmb	IAmb	10 43 13.0	
	comp=Z,9.8nm,0.7s						
BJI	Beijing	38.55	347	P	P	10 43 12.0	0.0
BJI				pmax	pmax		
	comp=Z,13nm,0.6s						
BJI				pmax	pmax		
	comp=Z,220nm,4.6s						
LZH	Lanzhou	39.51	330	*e*P	P	10 43 21.0	+0.6
LZH				pP	pP	10 43 30.3	-3.8
LZH				sP	pwP	10 43 35.5	-0.8
LZH				pmax	pmax		
	comp=Z,14nm,1.0s						
JTM	Tenmabayashi	40.27	17	P	P	10 43 27.8	+1.4
ARMA	Armidale	40.50	146	P	P	10 43 29.3	+0.6
HHC	Hu-ho-hao-te	40.52	342	*e*P	P	10 43 30.5	+1.8
HHC				pmax	pmax		
	comp=Z,8.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,160nm,5.9s						
USA0B	Ussuriysk Arra	41.78	6	P	P	10 43 40.0	+1.3
USA0B				IAmb	IAmb	10 43 40.9	

	comp=Z,13nm,0.8s						
USRK	Ussuriysk Ar.	41.78	6	P	P	10 43 39.8	+1.0
	comp=Z,11nm,0.7s,baz=187,slow=5.7,SNR=25						
USRK	Ussuriysk Ar.	41.78	6	P	P	10 43 39.9	+1.1
GTA	Gaotai	44.10	330	eP	P	10 43 57.5	-0.3
GTA				pP	pP	10 44 05.5	-6.2
GTA				PcP	PcP	10 45 43.8	+1.5
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,140nm,4.7s						
GTA				LR	LR		
	comp=Z,210nm,13.8s						
GTA				LR	LR		
	comp=Z,160nm,16.0s						
GTA				LR	LR		
	comp=Z,130nm,16.4s						
TAPN	Taplejung	44.68	307	eP	P	10 44 02.2	-0.6
	comp=Z,8.4nm,0.6s						
ODAN	Odare	44.72	307	eP	P	10 44 03.2	+0.1
	comp=Z,17nm,0.5s						
RAMN	Ramite	45.39	306	eP	P	10 44 08.0	-0.5
	comp=Z,16nm,0.7s						
GUN	Gumba	46.38	307	eP	P	10 44 13.9	-2.5
	comp=Z,22nm,0.5s						
PKI	Pulchoki	46.61	306	eP	P	10 44 16.7	-1.5
	comp=Z,8.2nm,0.5s						
PKIN	Phulchoki	46.63	306	eP	P	10 44 16.8	-1.4
DMN	Daman	46.87	306	eP	P	10 44 17.8	-2.3
	comp=Z,9.4nm,0.4s						
ULN	Ulaanbaatar	48.25	342	P	P	10 44 31.3	+1.0
ULN				IAmb	IAmb	10 44 32.9	
	comp=Z,5.6nm,1.0s						
SONM	Songino Array	48.42	342	P	P	10 44 31.6	0.0
	comp=Z,4.3nm,0.7s,baz=156,slow=9.6,SNR=17						
SONM				PcP	PcP	10 45 57.9	+0.6
	comp=Z,1.4nm,0.4s,baz=153,slow=4.2,SNR=5.3						
SONM	Songino Array	48.42	342	P	P	10 44 32.6	+0.9
SONM				IAmb	IAmb	10 44 36.3	
	comp=Z,3.2nm,0.7s						
WMQ	Urumqi	53.67	326	eP	P	10 45 13.5	+2.4
WMQ				pmax	pmax		
	comp=Z,11nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,120nm,5.5s						
PETK	Petropavlovsk-	56.58	22	P	P	10 45 32.7	+0.9
	comp=Z,1.7nm,0.5s,baz=189,slow=3.8,SNR=15						
PETK	Petropavlovsk-	56.58	22	P	P	10 45 33.3	+1.6
ZSN	Zaisan	57.48	328	eP	P	10 45 38.9	+0.6
	baz=328						
SHLS	Shalkode	58.23	321	eP	P	10 45 42.4	-1.3
	comp=Z,3.7nm,1.0s,baz=321						
MK31	Makanchi Array	58.51	326	P	P	10 45 45.3	-0.2
MK31				IAmb	IAmb	10 45 45.9	
	comp=Z,2.3nm,0.7s						
MKAR	Makanchi Array	58.51	326	P	P	10 45 44.9	-0.6
	comp=Z,3.1nm,0.5s,baz=123,slow=8.5,SNR=53						
MKAR				PcP	PcP	10 46 35.5	0.0
	comp=Z,1.8nm,0.6s,baz=113,slow=4.7,SNR=5.7						
MKAR				ScP	ScP	10 50 32.2	+0.8
	comp=Z,0.6nm,1.0s,baz=142,slow=4.6,SNR=3.5						
MKAR	Makanchi Array	58.51	326	P	P	10 45 45.3	-0.2
MAKZ	Makanchi	58.69	326	P	P	10 45 46.7	0.0
MAKZ				IAmb	IAmb	10 45 48.4	
	comp=Z,3.0nm,0.6s						
KSH	Kashi	58.85	316	P	P	10 45 50.0	+1.9
KSH				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KSH				pmax	pmax		
	comp=Z,760nm,5.8s						
SATY	Saty	58.85	320	eP	P	10 45 47.7	-0.4
	comp=Z,5.4nm,1.1s,baz=320						
KPKS	Kokpek	58.88	321	eP	P	10 45 47.3	-0.9
	comp=Z,3.0nm,0.8s,baz=321						
YAK	Yakutsk	59.42	2	P	P	10 45 51.3	-0.1
	comp=Z,14nm,0.7s,baz=160,slow=2.5						
YAK	Yakutsk	59.42	2	IAmb	IAmb	10 45 52.9	
	comp=Z,29nm,0.7s						
TNSS	Tian-Shan	59.78	320	eP	P	10 45 53.5	-1.3
	baz=320						
MA2	Magadan	59.90	14	P	P	10 45 56.5	+1.7
CHKK	Chushkaly	60.14	321	eP	P	10 45 56.9	+0.1
	baz=321						
RPZ	Rata Peaks	60.82	144	P	P	10 46 00.9	-0.5
	comp=Z,4.8nm,0.7s,baz=315,slow=1.4,SNR=1.5						
ZAA0	Zalesovo Array	61.63	333	P	P	10 46 06.4	-0.3
ZAA0				IAmb	IAmb	10 46 10.2	
	comp=Z,7.1nm,1.4s						
ZALV	Zalesovo Beam	61.63	333	P	P	10 46 05.7	-0.9
	comp=Z,2.9nm,0.5s,baz=126,slow=6.1,SNR=20						
ZALV	Zalesovo Beam	61.63	333	P	P	10 46 05.5	-1.2
SEM	Semipalatinsk	61.69	328	eP	P	10 46 05.6	-1.8
	baz=328						
BTLS	Baital	62.56	321	eP	P	10 46 12.5	-0.5
	baz=321						
KURK	Kurchatov	62.72	328	P	P	10 46 13.7	-0.3
SEY	Seymchan	63.23	13	P	P	10 46 18.1	+0.9
	comp=Z,6.7nm,0.9s,baz=214,slow=5.4,SNR=24						
IUG	Iuzhnay	64.03	316	eP	P	10 46 22.4	-0.7
	baz=316						
KK31	Karatay Array	64.07	317	P	P	10 46 23.2	0.0
KKAR	Karatay Array	64.07	317	P	P	10 46 22.8	-0.3
KKAR	Karatay Array	64.07	317	P	P	10 46 23.2	0.0
KKAR				IAmb	IAmb	10 46 27.3	
	comp=Z,3.7nm,1.1s						
BRZS	Berezniki	65.63	325	eP	P	10 46 31.9	-1.3
	baz=325						
BRVK	Borovoye	68.36	327	P	P	10 46 50.4	0.0
BRVK				IAmb	IAmb	10 46 55.3	
	comp=Z,3.4nm,0.7s						
TIXI	Tiksi	69.05	1	P	P	10 46 54.2	-0.1
TIXI				IAmb	IAmb	10 46 55.2	
	comp=Z,7.5nm,0.8s						
NRIK	Noril'sk	71.59	346	P	P	10 47 10.3	+0.5
NRIK				IAmb	IAmb	10 47 11.9	
	comp=Z,5.6nm,0.5s						
SOCY	Socotra	72.53	282	P	P	10 47 14.9	-1.8
ABKAR	Akbulak array	73.04	321	P	P	10 47 18.5	-0.4
ABKAR	Akbulak array	73.04	321	P	P	10 47 18.4	-0.5
ARU	Arti	75.92	328	P	P	10 47 35.3	-0.2
TTA	Tatalina	82.02	27	P	P	10 48 10.6	+1.8
TTA				IAmb	IAmb	10 48 10.9	
	comp=Z,16nm,1.5s						
VNDA	Vanda	82.24	173	P	P	10 48 10.0	+0.4
	comp=Z,1.6nm,0.5s,baz=320,slow=4.6,SNR=5.7						
VNDA	Vanda	82.24	173	P	P	10 48 10.1	+0.5
KDAK	Kodiak Island	82.95	32	P	P	10 48 14.8	+1.1
	comp=Z,3.9nm,0.6s,baz=272,slow=3.8,SNR=6.3						
KDAK	Kodiak Island	82.95	32	P	P	10 48 15.6	+1.9
KDAK				IAmb	IAmb	10 48 20.6	
	comp=Z,13nm,1.2s						
IMAR	Indian Mountai	83.48	24	P	P	10 48 17.5	+1.2
KBZ	Khabaz	83.75	314	P	P	10 48 18.6	+0.5
	comp=Z,2.0nm,0.7s,baz=144,slow=6.0,SNR=6.0						
KBZ				LR	LR	11 31 07.1	
	comp=Z,51nm,18.6s,baz=346,slow=40						
SKT	Skwentna	83.94	28	P	P	10 48 19.1	+0.3
SKT				IAmb	IAmb	10 48 19.8	
	comp=Z,7.4nm,0.7s						
SUA	Susitna One	84.26	29	P	P	10 48 21.1	+0.6
COLD	Coldfoot	85.04	23	P	P	10 48 26.2	+2.0
COLD				IAmb	IAmb	10 48 27.7	
	comp=Z,7.3nm,1.1s						
I23K	Minto, Yukon-K	85.20	25	P	P	10 48 25.0	+0.1
I23K				IAmb	IAmb	10 48 46.5	
	comp=Z,9.7nm,1.5s						
TOLK	Toolik Lake Re	85.40	21	P	P	10 48 27.3	+1.2
TOLK				IAmb	IAmb	10 48 28.9	
	comp=Z,4.2nm,0.8s						
SML	Sawmill	85.44	28	P	P	10 48 27.6	+1.3
ILAR	Eielson Array	86.23	25	P	P	10 48 29.4	-0.7
	comp=Z,0.9nm,0.6s,baz=235,slow=5.4,SNR=21						
ILAR	Eielson Array	86.23	25	P	P	10 48 29.9	-0.3
BMAR	Burnt Mountain	87.22	23	P	P	10 48 35.8	+0.8
BCAR	Beaver Creek A	88.49	27	P	P	10 48 41.9	+0.8
BRTR	Keskin Array B	90.73	310	P	P	10 48 51.3	-1.0
	comp=Z,1.5nm,0.4s,baz=169,slow=8.5,SNR=5.7						
INK	Inuvik	91.32	21	P	P	10 48 53.6	-0.5
	comp=Z,1.2nm,0.6s,baz=314,slow=3.8,SNR=5.4						
ARCES	ARCESS Array B	91.56	340	P	P	10 48 54.6	-0.6
	comp=Z,3.7nm,0.6s,baz=77,slow=5.5,SNR=11						
SPITS	Spitsbergen Ar	91.65	349	P	P	10 48 54.6	-1.0
	comp=Z,3.1nm,0.6s,baz=140,slow=23,SNR=6.0						
AKASG	Malin Array Be	92.78	321	P	P	10 49 00.2	-1.1
	comp=Z,0.6nm,0.5s,baz=66,slow=4.3,SNR=3.0						
FINES	FINESS Array B	92.86	332	P	P	10 49 00.3	-1.1
	comp=Z,1.1nm,0.7s,baz=60,slow=8.2,SNR=5.8						
C36M	Paulatuk	94.38	20	P	P	10 49 08.7	+0.5
C36M				IAmb	IAmb	10 49 11.3	
	comp=Z,4.5nm,0.9s						
YKA	Yellowknife Ar	100.63	24	P	Pdif	10 49 37.0	+0.5
	comp=Z,0.5nm,0.7s,baz=301,slow=3.9,SNR=8.7						
TXAR	Lajitas Array	122.40	53	PKP	PKiKP	10 54 45.3	+0.4
	comp=Z,0.2nm,0.7s,baz=211,slow=3.2,SNR=2.6						
TORD	Torodi Ar. Bea	123.21	287	PKP	PKiKP	10 54 47.0	+0.3
	comp=Z,0.9nm,0.7s,baz=64,slow=3.4,SNR=2.3						

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*IDC **26** 10:42:34.2±6.9, 14°.59S×167°.18E, h109km±68km, mb3.6/7, mb1 3.8/8, mb1mx3.5/42, mbtmp4.0/8, MS3.1/1, Ms1 3.1/1, ms1mx2.6/24, Error ellipse: s-maj=68.6km s-min=25.1km az=157.0*

ISC 26 10:42:33.3±1.0, **14°.7S**±0°.1×**167°.3E**±0°.2, **h100**km, **n10**, σ**1**s**42**/11, **mb3.8**/6, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	7.42	186	P	Pn	10 44 20.3	+1.3
	4.4nm,0.3s,baz=97,slow=8.6,SNR=45						
DZM				S	Sn	10 45 39.8	-1.7
	3.2nm,0.3s,baz=156,slow=22,SNR=7.1						
CTA	Charters Tower	20.78	252	P	P	10 47 07.4	+1.0
	1.9nm,0.7s,baz=81,slow=14,SNR=2.5						
JAY	Jayapura	28.87	292	LR	LR	10 58 58.6	
	comp=Z,41nm,21.8s,baz=191,slow=34						
STKA	Stephens Creek	29.05	229	P	P	10 48 24.7	+0.5
	8.2nm,0.5s,baz=54,slow=9.3,SNR=23						
WRA	Warramunga Arr	31.86	256	P	P	10 48 47.5	-1.6
	0.4nm,0.7s,baz=84,slow=9.0,SNR=2.6						
ASAR	Alice Springs	32.71	249	P	P	10 48 54.9	-1.7
	1.0nm,0.7s,baz=74,slow=9.3,SNR=9.4						
ASAR				pP	pwP	10 49 20.9	+1.7
	0.9nm,0.8s,baz=79,slow=9.2,SNR=5.1						
ILAR	Eielson Array	86.45	18	P	P	10 55 03.8	-0.5
	0.8nm,0.8s,baz=238,slow=5.0,SNR=8.4						
NVAR	Mina Array Bea	87.21	49	P	P	10 55 09.4	+0.5
	0.1nm,0.4s,baz=255,slow=6.4,SNR=2.2						
MKAR	Makanchi Array	97.16	316	P	P	10 55 54.8	+0.3
	0.5nm,0.7s,baz=87,slow=6.8,SNR=6.0						
ARCES	ARCESS Array B	120.19	345	PKP	PKPdf	11 01 10.8	-1.2
	5.5nm,1.1s,baz=60,slow=3.2,SNR=4.7						

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*IDC **26** 10:47:12.1±1.8, 54°.53N×164°.81E, h0km, mb3.6/5, mb1 3.8/6, mb1mx3.4/54, mbtmp3.6/6, ML2.3/1, Error ellipse: s-maj=71.7km s-min=20.5km az=170.0*

*KRSC **26** 10:47:13.1±1.1, 54°.70N×164°.42E, h46km±23km, ML3.8*

ISC 26 10:47:12.1±1.8, **54°.75N**±0°.05×**164°.41E**±0°.07, **h6**km±17km, **n34**, σ**1**s**79**/50, **mb3.6**/5, **Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	Bering	1.01	62	eP	Pg	10 47 32.0	+0.6
BKI				eS	Sg	10 47 44.1	-0.4
MKZ	Mys Kozlova	1.57	264	eP	Pn	10 47 41.1	+0.7
MKZ				eS	Sn	10 47 59.3	-1.7
KBTR	Krutoberegovo	1.72	329	eP	Pn	10 47 42.2	-0.3
KBG	Krutoberegovo	1.79	328	eP	Pn	10 47 43.8	+0.3
KBG				S	Sn	10 48 04.7	-1.9
KZV	Kizimen	2.40	280	eP	Pn	10 47 53.5	+1.4
KZV				eS	Sn	10 48 20.5	-1.4
SMKR	Semkarok	2.48	319	eP	Pn	10 47 55.1	+2.0
SMKR				eS	Sn	10 48 25.3	+1.6
TUMR	Tumrok	2.51	284	eP	Pn	10 47 55.7	+2.2
TUMR				eS	Sn	10 48 25.2	+0.7
BDR	Baidarnaya	2.57	316	eP	Pn	10 47 56.2	+1.9
BDR				eS	Sn	10 48 27.2	+1.2
KMNR	Kamenistaya	2.59	295	eP	Pb	10 47 57.1	-1.9
KMNR				eS	Sn	10 48 27.8	+1.3
SRKR	Sorokina	2.65	317	eP	Pb	10 47 58.0	-1.9
SRKR				S	Sn	10 48 29.7	+1.9
KLY	Klyuchi	2.65	308	eP	Pn	10 47 55.8	+0.5
KLY				eS	Sn	10 48 26.8	-0.9
SPN	Mys Shipunski	3.08	239	P	Pn	10 48 01.4	+0.2
SRDR	Sredinnyy	3.10	302	P	Pn	10 48 04.0	+2.5
SDLR	Sedlovina	3.58	248	eP	Pn	10 48 09.7	+1.5
SDLR				eS	Sn	10 48 49.4	-1.4
SMAR	Somma	3.63	248	eP	Pn	10 48 11.0	+2.0
SMAR				eS	Sn	10 48 51.3	-0.9
KRER	Koryakskii	3.64	249	eP	Pn	10 48 10.9	+1.8
KRER				eS	Sn	10 48 50.7	-1.7
UGLR	Uglovaya	3.64	247	eP	Pn	10 48 11.0	+2.0
UGLR				eS	Sn	10 48 51.8	-0.5
AVH	Avacha	3.66	248	eP	Pn	10 48 11.9	+2.6
AVH				eS	Sn	10 48 51.7	-1.1
KRX	Arik	3.67	250	eP	Pn	10 48 11.5	+2.0
KRX				eS	Sn	10 48 51.5	-1.6
KOK	Koryaka	3.71	249	eP	Pn	10 48 12.1	+2.2
DALK	Dalny	3.76	245	eP	Pn	10 48 12.6	+2.0
DALK				eS	Sn	10 48 53.6	-1.5
GNL	Ganaly	3.94	257	eP	Pn	10 48 15.8	+2.6
KRMR	Karymshinskiy	4.19	245	P	Pn	10 48 19.8	+3.3
KRMR				S	Sn	10 49 04.8	-0.9
RUS	Russkaya	4.21	239	eP	Pn	10 48 18.2	+1.5
PETK	Petropavlovsk-	4.29	250	Pn	Pn	10 48 20.1	+2.2
	0.8nm,0.3s,baz=76,slow=17,SNR=55						
PETK				Sn	Sn	10 49 08.4	+0.1
	1.7nm,0.3s,baz=280,slow=19,SNR=10						
MTVR	Mutnovka	4.35	241	eP	Pn	10 48 20.6	+1.8
GRL	Gorelyy	4.37	242	eP	Pn	10 48 21.4	+2.4
APC	Apacha	4.67	250	P	Pn	10 48 26.4	+3.4
KDTR	Khodutka, Kamc	4.81	235	P	Pn	10 48 27.4	+2.5
KDAK	Kodiak Island	23.77	65	P	P	10 52 24.1	-0.9
	6.3nm,0.9s,baz=281,slow=3.9,SNR=4.8						
ILAR	Eielson Array	25.82	48	P	P	10 52 44.0	+0.3
	0.9nm,0.7s,baz=257,slow=8.8,SNR=12						
SONM	Songino Array	36.00	284	P	P	10 54 17.2	+3.5
	0.3nm,0.4s,baz=67,slow=11,SNR=1.2						
ZALV	Zalesovo Beam	44.02	303	P	P	10 55 23.1	+3.1
	0.2nm,0.4s,baz=72,slow=9.3,SNR=1.9						
TXAR	Lajitas Array	67.66	71	P	P	10 58 10.7	+0.8
	0.3nm,0.5s,baz=304,slow=4.6,SNR=7.4						

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*GCG **26** 10:48:32.0±0.7, 13°.32N×92°.38W, h32km±999km, MD4.0*

*IDC **26** 10:48:34.1±4.9, 13°.45N×91°.80W, h0km, mb3.6/3, mb1 3.9/6, mb1mx3.7/40, mbtmp3.6/6, ML3.6/3, Error ellipse: s-maj=81.2km s-min=42.0km az=154.0*

*MEX **26** 10:48:44.7±0.5, 14°.22N×91°.90W, h109km±24km, MD3.9*

ISC 26 10:48:41.6±1.7, **13°.7N**±0°.1×**92°.06W**±0°.06, **h37**km, **n12**, σ**2**s**19**/16, **mb3.6**/3, **Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		1.26	351	i P	Pn	10 49 02.3	-0.3
THIG				i S	Sn	10 49 15.4	-2.9
FUG	Fuego 3	1.42	56	eP	Pn	10 49 02.3	-2.8
FUG				eS	Sn	10 49 26.1	+3.4
PCG	Pacaya	1.59	62	eP	Pn	10 49 04.7	-2.8
PCG				eS	Sn	10 49 30.6	+3.6
NBG	Las Nubes	1.91	61	eP	Pn	10 49 10.6	-1.2
PCIG		2.32	331	eP	Pn	10 49 16.4	-1.0
MRL	Marmol	2.71	58	eP	Pn	10 49 21.1	-1.7
MRL				eS	Sn	10 49 57.9	+3.5
CMIG	Matias Romero	4.37	322	Pn	Pn	10 49 45.2	-0.2
	0.7nm,0.3s,baz=151,slow=13,SNR=16						
TEIG	Tepich	7.47	28	Pn	Pn	10 50 26.6	-1.5
	4.0nm,0.3s,baz=20,slow=3.5,SNR=33						
TEIG				Sn	Sn	10 51 53.2	+1.6
	baz=49,slow=21,SNR=2.1						
TXAR	Lajitas Array	18.95	327	P	Pn	10 53 00.3	-0.3
	0.0nm,0.3s,baz=153,slow=8.4,SNR=6.3						
NVAR	Mina Array Bea	33.90	321	P	P	10 55 23.2	+1.9
	0.5nm,0.7s,baz=125,slow=10,SNR=3.7						
YKA	Yellowknife Ar	51.34	347	P	P	10 57 41.1	-1.0
	0.8nm,0.7s,baz=143,slow=8.0,SNR=18						
ILAR	Eielson Array	63.13	337	P	P	10 59 05.3	0.0
	0.5nm,1.0s,baz=103,slow=6.2,SNR=3.0						

IDC 26 11:18:59.6±8.2, **56°.50S**×**151°.35W**, **h0**km, **mb3.3**/1, **mb1 3.5**/1, **mb1mx3.3**/14, **mbtmp3.3**/1, **Error ellipse: s-maj=919.7km s-min=114.2km az=168.0, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H03S2	Juan Fernandez	53.09	97	T	T	12 25 08.4	
	baz=219,slow=74,SNR=4.6						
H03S1	Juan Fernandez	53.09	97	T	T	12 25 11.0	
	baz=219,slow=74,SNR=3.8						
H03S3	Juan Fernandez	53.10	97	T	T	12 25 09.6	
	baz=219,slow=74,SNR=5.1						
H03N3	Juan Fernandez	53.38	97	T	T	12 25 27.1	
	baz=222,slow=72,SNR=37						
H03N2	Juan Fernandez	53.38	97	T	T	12 25 25.2	
	baz=222,slow=72,SNR=25						
H03N1	Juan Fernandez	53.39	97	T	T	12 25 25.3	
	baz=222,slow=72,SNR=44						
ASAR	Alice Springs	62.23	269	P	P	11 29 23.1	0.0
	0.3nm,0.7s,baz=142,slow=6.5,SNR=2.0						
MKAR	Makanchi Array	146.15	277	PKPbc	PKPdf	11 38 40.0	+0.2
	0.7nm,0.8s,baz=122,slow=4.6,SNR=8.1						
ZALV	Zalesovo Beam	148.62	289	PKPbc	PKPbc	11 38 46.7	-0.6
	0.3nm,0.3s,baz=108,slow=1.8,SNR=1.7						

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*IDC **26** 11:46:07.6±3.3, 6°.90N×126°.58E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.3/31, mbtmp3.2/3, Error ellipse: s-maj=287.9km s-min=27.2km az=66.0*

*MAN **26** 11:46:22.8, 6°.78N×126°.87E, h129km, mb4.3, ML3.1, MS2.8*

ISC 26 11:46:19.1±1.5, **7°.0N**±0°.1×**127°.4E**±0°.1, **h100**km, **n6**, σ**2**s**79**/9, **mb3.0**/3, **Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	Mati	1.10	270	eP	Pn	11 46 43.9	+3.3
MATI				eS	Sn	11 47 00.0	+3.2
DDMP	Don Marcelino,	1.84	243	eP	Pn	11 46 49.9	+0.3
DDMP				eS	Sn	11 47 10.2	-2.8
BUKP	Musuan	2.46	292	eP	Pn	11 46 58.5	+0.8
BUKP				eS	Sn	11 47 25.9	-1.5
WRA	Warramunga Arr	27.59	166	P	P	11 51 60.0	+2.9
	0.2nm,0.8s,baz=349,slow=13,SNR=1.1						
ASAR	Alice Springs	31.09	168	P	P	11 52 27.3	-0.8
	0.1nm,0.3s,baz=340,slow=7.2,SNR=5.3						
MKAR	Makanchi Array	55.32	324	P	P	11 55 40.1	-2.3
	0.2nm,0.5s,baz=121,slow=6.7,SNR=7.2						

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*KRNET **26** 12:12:14.9±0.1, 41°.07N×69°.71E, mb2.7*

ISC 26 12:12:19.0±1.8, **40°.98N**±0°.05×**69°.90E**±0°.09, **h10**km, **n9**, σ**1**s**43**/18, **10C-7D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRKS	Terek-Say	1.08	59	⇑iP	Pg	12 12 37.2	-2.6
	baz=70						
TRKS				⇑iS	Sg	12 12 53.4	-0.5
	baz=70						
BTK	Batken	1.16	143	⇑iP	Pg	12 12 40.1	-1.2
	baz=40						
BTK				⇑iS	Sn	12 12 58.0	+0.7
	baz=40						
KK31	Karatay Array	2.17	12	⇓Pn	Pn	12 12 55.5	+0.4
	1.7nm,0.3s,baz=202,slow=14,SNR=26						
KK31				Sn	Sb	12 13 26.0	+0.8
	6.2nm,0.4s,baz=202,slow=21,SNR=16						
ARSB	Arslanbob	2.35	81	⇑iP	Pn	12 12 58.6	+0.8
	baz=83						
ARSB				⇑iS	Sb	12 13 30.4	-0.3
	baz=83						
MNAS	Manas	2.46	52	⇓iP	Pn	12 12 58.7	-0.6
	baz=55						
MNAS				⇓iS	Sn	12 13 31.1	+1.6
	baz=55						
AML	Almayashu	3.07	67	⇓iP	Pn	12 13 07.9	0.0
	baz=69						
AML				⇓iS	Sn	12 13 46.5	+1.6
	baz=69						
EKS2	Erkin-Say	3.35	59	⇑iP	Pn	12 13 12.0	+0.5
	baz=61						
EKS2				⇑iS	Sn	12 13 53.7	+2.3
	baz=61						
ARLS	Aral	3.44	74	⇓iP	Pn	12 13 13.6	+0.8
	baz=76						
ARLS				⇓iS	Sn	12 13 56.4	+2.7
	baz=76						
UCH	Uchtor	3.68	69	⇑eP	Pn	12 13 16.2	-0.1
	baz=71						
UCH				⇑iS	Sn	12 14 01.0	+1.1
	baz=71						

IDC 26 12:21:52.1±3.1, **17°.95S**×**177°.01W**, **h0**km, **mb4.0**/3, **mb1 4.1**/4, **mb1mx3.7**/39, **mbtmp4.0**/4, **ML3.9**/1, **Error ellipse: s-maj=191.0km s-min=31.4km az=149.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	6.44	52	Pn	Pn	12 23 28.4	0.0
	2.8nm,0.3s,baz=220,slow=3.6,SNR=9.0						
AFI				Sn	Sn	12 24 28.0	-15
	2.3nm,0.3s,baz=68,slow=18,SNR=2.4						
STKA	Stephens Creek	39.78	242	P	P	12 29 27.1	+0.1
	1.7nm,1.0s,baz=51,slow=6.5,SNR=3.8						
WRA	Warramunga Arr	45.93	259	P	P	12 30 17.0	-0.1
	0.4nm,0.3s,baz=96,slow=7.1,SNR=18						
ASAR	Alice Springs	46.06	254	P	P	12 30 17.8	-0.3
	3.2nm,0.7s,baz=91,slow=7.7,SNR=53						

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*SOME **26** 13:30:55.0, 43°.38N×85°.77E, h0km*

*NNC **26** 13:31:21.6±1.8, 43°.59N×84°.83E, h0km, mb2.9, mpv2.6, Error ellipse: s-maj=16.0km s-min=8.4km az=121.0*

ISC 26 13:31:14.6±2.7, **43°.5N**±0°.1×**85°.0E**±0°.1, **h10**km, **n11**, σ**2**s**44**/20, **4C-4D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTMS	Ketmen	3.35	270	eP	Pn	13 32 07.5	+0.4
	1.7nm,1.2s						
KTMS				eS	Sg	13 32 59.8	-2.3
	12nm,0.3s						
MK31	Makanchi Array	3.79	331	⇑Pn	Pb	13 32 19.5	-2.0
	0.1nm,0.2s,baz=155,slow=15,SNR=26						
MK31				⇑Pg	Pg	13 32 29.0	+2.0
	0.4nm,0.3s,baz=153,slow=15,SNR=36						
MK31				⇓Lg	Lg	13 33 18.4	
	0.8nm,0.2s,baz=150,slow=28,SNR=7.8						
DJR	Jarkent	3.82	284	eP	Pb	13 32 18.4	-3.7
	1.5nm,0.4s						
DJR				eS	Sg	13 33 18.6	+1.4
	6.5nm,0.3s						
MAKZ	Makanchi	3.91	328	⇓Pg	Pg	13 32 31.2	+1.7
	3.8nm,1.2s						
MAKZ				⇑Lg	Lg	13 33 22.5	
	2.1nm,0.5s						
PDGK	Podgornoye	3.98	269	⇑Pn	Pb	13 32 22.6	-2.3
PDGK				⇓Pg	Pg	13 32 34.1	+3.2
	3.1nm,0.8s						
PDGK				⇓Lg	Lg	13 33 23.8	
	4.5nm,0.6s						
SHLS	Shalkode	4.02	267	eP	Pn	13 32 16.8	+0.5
	3.0nm,0.3s						
SHLS				eS	Sb	13 33 15.4	+1.2
	15nm,0.4s						
UZB	Uzynbulak	4.34	267	eP	Pb	13 32 28.4	-2.7
	4.2nm,0.2s						
UZB				eS	Sg	13 33 35.3	+1.4
	4.2nm,0.3s						
KPKS	Kokpek	4.56	272	eP	Pb	13 32 31.0	-3.7
	2.1nm,0.2s						
KPKS				eS	Sg	13 33 40.1	-0.9
	6.5nm,0.7s						
MNBS	Baschi	4.78	279	eP	Pb	13 32 33.1	-5.3
	1.4nm,0.3s						
MNBS				eS	Sg	13 33 43.8	-4.1
	5.6nm,0.4s						
SATY	Saty	4.80	267	eP	Pb	13 32 36.4	-2.4
	1.0nm,0.1s						
SATY				eS	Sg	13 33 49.5	+0.9
	5.6nm,0.3s						
ARXS	Arharly	5.20	280	eP	Pb	13 32 44.3	-1.3
	2.2nm,0.2s						
ARXS				eS	Sg	13 34 02.9	+1.5
	7.7nm,0.4s						

WEL 26 13:33:06.1±1.4, **33°S**±15°×**17°9W**±3°7, **h17**km±13km, **M4.0**/16, **mB4.6**/6, **ML4.3**/16, **MLv4.1**/16, **Mw(mB)3.8**/6, **Error ellipse: s-maj=0.1km s-min=0.0km az=111.4, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	4.16	18	P	Pn	13 34 03.9	-4.9
RIZ	Raoul Island	4.17	18	P	Pn	13 34 13.9	+4.9
MXZ	Matakaoa Point	4.71	203	P	Pn	13 34 17.0	+0.6
WMGZ	Waiomatatini S	4.91	201	P	Pn	13 34 20.3	+1.1
WMGZ				S	Sn	13 35 18.3	+2.7
HAZ	Te Kaha	5.07	207	P	Pn	13 34 21.3	+0.1
HAZ				S	Sn	13 35 21.8	+2.3
PKGZ	Pakihiroa	5.08	203	P	Pn	13 34 20.8	-0.7
PKGZ				S	Sn	13 35 19.7	-0.2
PUZ	Puketiti	5.19	201	P	Pn	13 34 23.5	+0.4
PUZ				S	Sn	13 35 21.2	-1.4
RUGZ	Raukumara Rang	5.29	206	P	Pn	13 34 25.5	+1.0
RUGZ				S	Sn	13 35 25.9	+0.7
TWGZ	Tauwhareparae	5.38	203	P	Pn	13 34 25.6	0.0
TWGZ				S	Sn	13 35 28.4	+1.2
CNGZ	Carnagh Statio	5.59	200	P	Pn	13 34 27.6	-0.9
MWZ	Matawai	5.67	206	P	Pn	13 34 29.1	-0.6
MWZ				S	Sn	13 35 35.0	+0.5
URZ	Urewera	5.77	209	P	Pn	13 34 31.1	+0.2
URZ				S	Sn	13 35 36.9	+0.2
RIGZ	Rimuhau	5.93	202	P	Pn	13 34 32.2	-0.9
MUGZ	Murupara	6.09	210	P	Pn	13 34 35.3	-0.1
RTZ	Ruatahuna	6.13	208	P	Pn	13 34 35.6	-0.4
SNGZ	Shannon Statio	6.14	205	P	Pn	13 34 36.4	+0.4
RAHZ	Arahi	6.35	206	P	Pn	13 34 38.6	-0.3
MTHZ	Maungataniwha	6.38	208	P	Pn	13 34 39.6	+0.2
MTHZ				S	Sn	13 35 53.2	+1.2
MRHZ	Matea Rd	6.54	210	P	Pn	13 34 41.5	-0.1
BKZ	Black Stump Fm	6.79	208	P	Pn	13 34 43.9	-1.2

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*KRSC **26** 13:35:31.9±1.8, 51°.74N×159°.15E, h40^{km}±21^{km}, ML4.8*
*MOS **26** 13:35:34.1±1.4, 51°.79N×158°.85E, h57^{km}, mb4.2/9, Error ellipse: s-maj=9.1km s-min=3.5km az=86.1*
*NEIC **26** 13:35:35.9±1.9, 51°.85N±0°.10×158°.9E±0°.1, h58^{km}±7^{km}, mb4.4/35, Error ellipse: s-maj=14.4km s-min=11.4km az=184.0*
*IDC **26** 13:35:39.4±1.6, 51°.96N×158°.75E, h82^{km}±12^{km}, mb3.9/22, mb1 4.0/27, mb1mx3.9/56, mbtmp4.1/27, MS3.1/5, Ms1 3.2/5, ms1mx2.9/52, Error ellipse: s-maj=16.6km s-min=9.9km az=135.0*
ISC 26 13:35:34.5±0.9, **51°.77N**±0°.04×**159°.01E**±0°.04, **h45**^{km}±8^{km}, **n195**, σ**1^{s}52**/203, **mb4.3**/43, **4C-2D**, **Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDTR	Khodutka, Kamc	0.58	274	PN	Pn	13 35 46.5	0.0
KDTR				S	Sn	13 35 54.9	-0.2
KDTR	Khodutka, Kamc	0.58	274	*e*P	Pn	13 35 46.5	0.0
KDTR				*e*S	Sn	13 35 54.9	-0.2
RUS	Russkaya	0.73	335	PN	Pn	13 35 47.8	-0.7
RUS				S	Sn	13 35 57.2	-1.3
RUS	Russkaya	0.73	335	*e*P	Pn	13 35 47.8	-0.7
RUS				*e*S	Sn	13 35 57.2	-1.3
MTVR	Mutnovka	0.88	325	PN	Pn	13 35 50.3	-0.3
MTVR	Mutnovka	0.88	325	*e*P	Pn	13 35 50.3	-0.3
GRL	Gorelyy	0.97	324	PN	Pn	13 35 52.1	+0.2
GRL	Gorelyy	0.97	324	*e*P	Pn	13 35 52.1	+0.2
KRMR	Karymshinskiy	1.19	333	PN	Pn	13 35 55.2	+0.5
KRMR				S	Sn	13 36 09.8	+0.1
KRMR	Karymshinskiy	1.19	333	*e*P	Pn	13 35 55.2	+0.5
KRMR				*e*S	Sn	13 36 09.8	+0.1
DALK	Dalny	1.27	353	PN	Pn	13 35 55.3	-0.5
DALK				S	Sn	13 36 10.5	-1.1
DALK	Dalny	1.27	353	*e*P	Pn	13 35 55.3	-0.5
DALK				*e*S	Sn	13 36 10.5	-1.1
PET	Petropavlovsk	1.27	350	⇓*i*PN	Pn	13 35 55.2	-0.6
PET				*e*S	Sn	13 36 10.5	-1.2
PET				pmax	pmax		
	comp=Z,709nm,0.4s						
PET				smax	smax		
	comp=N,4µm,0.5s						
PET				smax	smax		
	comp=E,3µm,0.5s						
PET	Petropavlovsk	1.27	350	*e*P	Pn	13 35 55.2	-0.6
PET				*e*S	Sn	13 36 10.9	-0.8
PET	Petropavlovsk	1.27	350		Pn	13 35 54.8	-1.0
PAU	Pauzhetka	1.41	258	PN	Pn	13 35 58.1	+0.4
PAU	Pauzhetka	1.41	258	*e*P	Pn	13 35 58.1	+0.4
NLC	Nalytchevo	1.41	8	PN	Pn	13 35 56.4	-1.4
NLC	Nalytchevo	1.41	8	*e*P	Pn	13 35 56.4	-1.4
UGLR	Uglovaya	1.44	355	PN	Pn	13 35 58.0	-0.3
UGLR	Uglovaya	1.44	355	*e*P	Pn	13 35 58.0	-0.3
SPN	Mys Shipunski	1.46	25	PN	Pn	13 35 58.9	+0.4
SPN				S	Sn	13 36 18.0	+1.6
SPN	Mys Shipunski	1.46	25	*e*P	Pn	13 35 58.9	+0.4
SPN				*e*S	Sn	13 36 18.0	+1.6
SMAR	Somma	1.50	355	PN	Pn	13 35 58.4	-0.7
SMAR	Somma	1.50	355	*e*P	Pn	13 35 58.4	-0.7
AVH	Avacha	1.50	354	PN	Pn	13 35 59.1	0.0
AVH	Avacha	1.50	354	*e*P	Pn	13 35 59.1	0.0
SDLR	Sedlovina	1.51	357	PN	Pn	13 35 58.4	-0.8
SDLR	Sedlovina	1.51	357	*e*P	Pn	13 35 58.4	-0.8
KOK	Koryaka	1.54	352	PN	Pn	13 35 59.7	+0.1
KOK	Koryaka	1.54	352	*e*P	Pn	13 35 59.7	+0.1
KRER	Koryakskii	1.54	354	PN	Pn	13 35 59.5	-0.2
KRER	Koryakskii	1.54	354	*e*P	Pn	13 35 59.5	-0.2
I44RU	PETROPAVLOVSK-	1.55	330	P	Pn	13 36 00.4	+0.7
	baz=115,slow=15,SNR=15						
PEA0B	Petropavlovsk-	1.56	329	*d i*PN	Pn	13 36 00.5	+0.7
PEA0B	Petropavlovsk-	1.56	329		Pn	13 36 00.6	+0.8
PETK	Petropavlovsk-	1.56	329	P	Pn	13 36 00.6	+0.8
	comp=E,419nm,0.3s,baz=128,slow=17,SNR=9836						
PETK				S	Sn	13 36 20.2	+1.4
	comp=E,87nm,0.3s,baz=226,slow=24,SNR=9.0						
PETK				LR	LR	13 36 48.2	
	comp=E,723nm,18.1s,baz=94,slow=52						
PETK	Petropavlovsk-	1.56	329		Pn	13 36 00.4	+0.6
KRX	Arik	1.60	352	PN	Pn	13 36 00.4	-0.1
KRX	Arik	1.60	352	*e*P	Pn	13 36 00.4	-0.1
APC	Apacha	1.62	316	PN	Pn	13 36 01.5	+0.9
APC				S	Sn	13 36 22.5	+2.3
APC	Apacha	1.62	316	*e*P	Pn	13 36 01.5	+0.9
APC				*e*S	Sn	13 36 22.5	+2.3
GNL	Ganaly	2.03	342	PN	Pn	13 36 06.9	+0.5
GNL	Ganaly	2.03	342	*e*P	Pn	13 36 06.9	+0.5
SKR	Severo-Kuril's	2.12	240	*e*PN	Pn	13 36 08.3	+0.8
SKR				*e*S	Sn	13 36 32.8	+0.2
SKR				pmax	pmax		
	comp=Z,117nm,0.6s						
SKR				pmax	pmax		
	comp=Z,600nm,3.4s						
SKR				smax	smax		
	comp=E,2µm,0.6s						
SKR				smax	smax		
	comp=N,1µm,0.6s						
SKR				MLR	MLR		
	comp=Z,200nm,14.0s						
SKR	Severo-Kuril's	2.12	240	*e*P	Pn	13 36 08.2	+0.8
SKR				*e*S	Sn	13 36 33.4	+0.8
KII	Karymskiy	2.28	6	PN	Pn	13 36 10.7	+0.9
KII	Karymskiy	2.28	6	*e*P	Pn	13 36 10.7	+0.9
MKZ	Mys Kozlova	3.23	29	PN	Pn	13 36 22.6	-0.1
MKZ				S	Sn	13 36 58.6	-1.2
MKZ	Mys Kozlova	3.23	29	*e*P	Pn	13 36 22.6	-0.1
MKZ				*e*S	Sn	13 36 58.6	-1.2
KZV	Kizimen	3.43	12	PN	Pn	13 36 27.4	+1.8
KZV	Kizimen	3.43	12	*e*P	Pn	13 36 27.4	+1.8
TUMD	Tumrok D	3.53	13	*e*P	Pn	13 36 28.3	+1.4
TUMR	Tumrok	3.58	10	PN	Pn	13 36 29.8	+2.2
TUMR	Tumrok	3.58	10	*e*P	Pn	13 36 29.8	+2.2
KMNR	Kamenistaya	4.05	10	PN	Pn	13 36 37.5	+3.4
KMNR	Kamenistaya	4.05	10	*e*P	Pn	13 36 37.5	+3.4
ESO	Esso	4.16	358	PN	Pn	13 36 37.3	+1.8
ESO	Esso	4.16	358	*e*P	Pn	13 36 37.3	+1.8
KOZ	Kozyrevsk	4.32	6	PN	Pn	13 36 40.8	+3.1
KOZ	Kozyrevsk	4.32	6	*e*P	Pn	13 36 40.8	+3.1
SRDR	Sredinnyy	4.57	5	PN	Pn	13 36 43.6	+2.5
SRDR	Sredinnyy	4.57	5	*e*P	Pn	13 36 43.6	+2.5
KLY	Klyuchi	4.65	11	PN	Pn	13 36 45.4	+3.3
KLY	Klyuchi	4.65	11	*e*P	Pn	13 36 45.4	+3.3
BDR	Baidarnaya	4.97	14	PN	Pn	13 36 51.2	+4.5
BDR	Baidarnaya	4.97	14	*e*P	Pn	13 36 51.2	+4.5
KBTR	Krutoberegovo	4.98	25	PN	Pn	13 36 47.4	+0.8
KBTR	Krutoberegovo	4.98	25	*e*P	Pn	13 36 47.4	+0.8
KBG	Krutoberegovo	4.99	24	PN	Pn	13 36 48.2	+1.4
KBG	Krutoberegovo	4.99	24	*e*P	Pn	13 36 48.2	+1.4
SMKR	Semkarok	5.03	16	PN	Pn	13 36 50.1	+2.7
SMKR				S	Sn	13 37 48.5	+4.3
SMKR	Semkarok	5.03	16	*e*P	Pn	13 36 50.1	+2.7
SMKR				*e*S	Sn	13 37 48.5	+4.3
SRKR	Sorokina	5.05	14	PN	Pn	13 36 51.3	+3.6
SRKR	Sorokina	5.05	14	*e*P	Pn	13 36 51.3	+3.6
BKI	Bering	5.39	48	*e*S	Sn	13 37 46.7	-6.3
OSSR	Ossora	7.84	15	PN	Pn	13 37 31.0	+5.2
OSSR	Ossora	7.84	15	*e*P	Pn	13 37 31.0	+5.2
MA2	Magadan	9.09	332	LR	LR	13 41 25.1	
	comp=Z,84nm,20.4s,baz=156,slow=39						
SMY	Shemya	9.31	78	PN	Pn	13 37 47.5	+1.6
SMY	Shemya	9.31	78	Pn	Pn	13 37 47.5	+1.6
YSS	Yuzh-Sakhalins	11.64	252	*i* PN	Pn	13 38 17.2	-0.7
SEY	Seymchan	11.74	345	P	Pn	13 38 20.1	+1.0
	comp=Z,0.1nm,0.3s,baz=78,slow=22,SNR=4.4						
ASAJ	Asahikawa	13.39	242	P	Pn	13 38 44.1	+2.4
	comp=Z,0.5nm,0.3s,baz=81,slow=11,SNR=4.8						
ERM	Erimo	14.56	234	*i* P	Pn	13 38 55.9	-1.6
KLR	Kul'dur	17.49	272	P	P	13 39 36.5	+0.9
	comp=Z,0.4nm,0.3s,baz=67,slow=12,SNR=8.7						
KLR				LR	LR	13 46 16.4	
	comp=Z,73nm,19.1s,baz=54,slow=37						
YAK	Yakutsk	18.85	314	P	P	13 39 50.0	-0.5
	comp=Z,0.1nm,0.3s,baz=286,slow=2.3,SNR=5.6						
YAK				LR	LR	13 47 24.1	
	comp=Z,44nm,19.6s,baz=93,slow=38						
YAK	Yakutsk	18.85	314	*ce*P	P	13 39 49.6	-0.8
YAK				pmax	pmax		
	comp=Z,9.0nm,0.6s						
YAK	Yakutsk	18.85	314		P	13 39 49.9	-0.5
YAK				IAmb	IAmb	13 39 53.2	
	comp=Z,13nm,0.7s						
JMM	Marumori	18.91	230	P	P	13 39 52.1	+0.9
JMM				IAmb	IAmb	13 39 58.4	
	comp=Z,25nm,1.1s						
USRK	Ussuriysk Ar.	19.53	258	P	P	13 39 57.9	-0.2
	baz=58,slow=12,SNR=4.6						
USRK	Ussuriysk Ar.	19.53	258	P	P	13 39 57.4	-0.6
USRK	Ussuriysk Ar.	19.53	258	P	P	13 39 57.4	-0.6
MJAR	Matsushiro Arr	21.21	232	P	P	13 40 18.2	+1.9
	comp=Z,11nm,0.9s,baz=23,slow=11,SNR=18						
MJAR	Matsushiro Arr	21.21	232	P	P	13 40 15.8	-0.5
MJAR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MJAR	Matsushiro Arr	21.21	232	P	P	13 40 15.8	-0.5
MAJO	Matsushiro	21.21	232	*i* P	P	13 40 17.9	+1.6
MAJO				pmax	pmax		
	comp=Z,4.0nm,0.5s						
MAJO	Matsushiro	21.21	232	P	P	13 40 17.0	+0.7
MAJO				IAmb	IAmb	13 40 18.7	
	comp=Z,19nm,0.8s						
MAT	Matsushiro	21.21	232	P	P	13 40 18.0	+1.7
MAT				*e*S	S	13 44 07.8	-1.8
JGF	Kuroka	22.38	232	P	P	13 40 28.5	-0.3
TIXI	Tiksi	24.02	337	*e*P	P	13 40 43.8	-0.9
TIXI	Tiksi	24.02	337	P	P	13 40 43.6	-1.2
TIXI				IAmb	IAmb	13 40 45.9	
	comp=Z,8.5nm,0.6s						
RDOG	Red Dog Mine	24.50	34	P	P	13 40 47.6	-1.6
RDOG				IAmb	IAmb	13 40 51.4	
	comp=Z,8.3nm,0.8s						
KSRS	Korea Array	26.11	249	P	P	13 41 05.0	+1.0
	comp=Z,1.8nm,0.6s,baz=46,slow=9.1,SNR=7.1						
KSRS				LR	LR	13 52 29.9	
	comp=Z,38nm,18.8s,baz=30,slow=39						
TTA	Tatalina	26.13	47	P	P	13 41 03.9	-0.2
TTA	Tatalina	26.13	47	P	P	13 41 03.9	-0.2
IMAR	Indian Mountai	27.43	41	P	P	13 41 14.5	-1.1
SUA	Susitna One	28.58	50	P	P	13 41 25.5	-0.6
BRLK	Bradley Lake	28.66	54	P	P	13 41 26.7	0.0
TRF	Thorofare Moun	28.74	46	P	P	13 41 27.1	-0.5
TRF				IAmb	IAmb	13 41 29.8	
	comp=Z,5.9nm,1.0s						
COLD	Coldfoot	29.00	38	P	P	13 41 28.8	-0.8
TOLK	Toolik Lake Re	29.42	36	P	P	13 41 33.6	+0.2
TOLK	Toolik Lake Re	29.42	36		P	13 41 33.8	+0.4
WRH	Wood River Hil	29.71	44	P	P	13 41 36.6	+0.7
WRH				IAmb	IAmb	13 41 37.4	
	comp=Z,7.8nm,1.3s						
SML	Sawmill	29.71	50	P	P	13 41 36.5	+0.4
SCM	Sheep Creek Mo	30.18	49	P	P	13 41 40.6	+0.4
SCM				pmax	pmax		
	comp=Z,27nm,1.5s						
SCM	Sheep Creek Mo	30.18	49	P	P	13 41 40.6	+0.4
HDA	Harding Lake	30.20	44	P	P	13 41 40.5	+0.2
HDA				IAmb	IAmb	13 41 41.0	
	comp=Z,2.8nm,0.4s						
IL31		30.22	44	P	P	13 41 40.4	0.0
ILAR	Eielson Array	30.22	44	P	P	13 41 40.0	-0.4
	comp=Z,1.2nm,0.8s,baz=260,slow=8.0,SNR=16						
ILAR	Eielson Array	30.22	44	P	P	13 41 41.6	+1.2
ILAR	Eielson Array	30.22	44	P	P	13 41 41.6	+1.2
PRP	Porcupine Dome	30.79	42	P	P	13 41 43.5	-2.1
PRP				IAmb	IAmb	13 41 48.7	
	comp=Z,3.0nm,0.7s						
EYAK	Cordova Ski Ar	31.10	52	P	P	13 41 47.3	-0.9
EYAK				IAmb	IAmb	13 41 47.9	
	comp=Z,11nm,1.2s						
BMAR	Burnt Mountain	31.18	38	P	P	13 41 49.9	+1.0
N25K	Chitina, Valde	31.50	50	P	P	13 41 51.7	-0.1
N25K				IAmb	IAmb	13 41 55.2	
	comp=Z,10nm,1.4s						
DOT	Dot Lake	31.51	46	P	P	13 41 50.8	-1.1
VRDI	Verde Repeater	32.10	50	P	P	13 41 57.3	0.0
MCARA	McCarthy VSAT	32.28	50	P	P	13 42 00.4	+1.8
MCARA				IAmb	IAmb	13 42 02.2	
	comp=Z,5.9nm,1.0s						
H11N2	WAKE ISLAND Hy	32.57	166	T	T	14 17 04.3	
	baz=351,slow=76,SNR=1133						
H11N3	WAKE ISLAND Hy	32.59	166	T	T	14 17 05.4	
	baz=351,slow=76,SNR=1186						
H11N1	WAKE ISLAND Hy	32.59	166	T	T	14 17 05.5	
	baz=351,slow=76,SNR=1128						
BALM	Baldy	32.66	50	P	P	13 42 02.6	+0.5
BALM				IAmb	IAmb	13 42 17.5	
	comp=Z,9.4nm,1.3s						
EGAK	Eagle	32.67	43	P	P	13 42 02.1	+0.2
EGAK				IAmb	IAmb	13 42 02.4	
	comp=Z,3.6nm,0.8s						
BARN	Barnard Glacie	32.99	50	P	P	13 42 05.9	+0.9
BARN				IAmb	IAmb	13 42 07.1	
	comp=Z,4.1nm,0.6s						
CTGM	Chitina Glacie	33.16	50	P	P	13 42 07.3	+0.8
CTGM				IAmb	IAmb	13 42 09.4	
	comp=Z,4.5nm,0.6s						
ULN	Ulaanbaatar	33.16	284	*i* P	P	13 42 04.1	-2.6
ULN				pmax	pmax		
	comp=Z,1.0nm,0.9s						
SONM	Songino Array	33.58	285	PcP	PcP	13 44 50.5	+0.8
	comp=Z,0.4nm,0.3s,baz=99,slow=2.0,SNR=4.1						
H11S1	WAKE ISLAND Hy	33.74	167	T	T	14 18 30.9	
	baz=351,slow=76,SNR=194						
H11S3	WAKE ISLAND Hy	33.76	167	T	T	14 18 35.0	
	baz=351,slow=76,SNR=276						
H11S2	WAKE ISLAND Hy	33.76	167	T	T	14 18 31.2	
	baz=351,slow=76,SNR=90						
INK	Inuvik	35.32	36	P	P	13 42 26.1	+1.2
	comp=Z,5.6nm,0.8s,baz=294,slow=6.5,SNR=30						
INK	Inuvik	35.32	36	P	P	13 42 26.0	+1.2
INK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
INK	Inuvik	35.32	36	P	P	13 42 26.0	+1.2
INK				IAmb	IAmb	13 42 26.6	
	comp=Z,4.6nm,0.8s						
C36M	Paulatuk	38.51	34	P	P	13 42 52.8	+0.9
DLBC	Dease Lake	39.37	52	P	P	13 43 01.0	+1.6
	comp=Z,3.3nm,1.0s,baz=305,slow=8.9,SNR=3.3						
ZALV	Zalesovo Beam	42.94	303	PcP	PcP	13 45 18.6	+0.2
	comp=Z,0.5nm,0.3s,baz=48,slow=4.6,SNR=4.8						
EUNU	Eureka	43.39	13	P	P	13 43 33.0	+0.9
DGZ	Jazzator, Alta	43.67	297	*i* P	P	13 43 33.7	-1.0
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.8s						
YKA	Yellowknife Ar	44.59	41	P	P	13 43 42.7	+1.0
	comp=Z,0.7nm,0.7s,baz=302,slow=7.4,SNR=11						
RES	Resolute Bay	44.80	21	P	P	13 43 43.5	+0.3
	comp=Z,1.9nm,0.7s,baz=305,slow=8.9,SNR=8.7						
KURK	Kurchatov	47.87	302	*i* P	P	13 44 04.6	-3.1
KURK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KURK	Kurchatov	47.87	302	P	P	13 44 06.2	-1.4
KURK				IAmb	IAmb	13 44 07.5	
	comp=Z,4.7nm,1.1s						
MK31	Makanchi Array	48.14	296	P	P	13 44 07.7	-2.1
MK31				pmax	pmax		
	comp=Z,2.0nm,1.5s						
MK31	Makanchi Array	48.14	296	P	P	13 44 07.7	-2.1
MKAR	Makanchi Array	48.14	296	P	P	13 44 07.6	-2.2
	comp=Z,0.6nm,0.5s,baz=58,slow=6.7,SNR=24						
MKAR	Makanchi Array	48.14	296	P	P	13 44 07.4	-2.5
SPITS	Spitsbergen Ar	48.33	350	P	P	13 44 10.4	-0.4
	comp=Z,4.0nm,0.5s,baz=99,slow=8.9,SNR=29						
BRVK	Borovoye	50.73	309	*i* P	P	13 44 27.3	-2.1
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ARU	Arti	53.92	317	P	P	13 44 50.9	-2.1
ARCES	ARCESS Array B	54.34	342	P	P	13 44 54.2	-1.6
	comp=Z,2.3nm,0.8s,baz=39,slow=7.6,SNR=6.5						
CHTO	Chiang Mai	56.99	258	P	P	13 45 16.4	+0.8
CHTO				pmax	pmax		
	comp=Z,6.0nm,0.7s						
CHTO	Chiang Mai	56.99	258	P	P	13 45 16.4	+0.8
CMAR	Chiang Mai Arr	57.26	258	P	P	13 45 18.9	+1.4
	comp=Z,3.0nm,0.8s,baz=26,slow=6.8,SNR=20						
CMAR				LR	LR	14 13 07.8	
	comp=Z,40nm,19.0s,baz=46,slow=39						
PD31	Pinedale Array	58.76	59	P	P	13 45 29.6	+1.6
PD31				IAmb	IAmb	13 45 30.6	
	comp=Z,3.9nm,1.1s						
PDAR	Pinedale Array	58.76	59	P	P	13 45 29.9	+1.9
	comp=Z,1.7nm,0.8s,baz=338,slow=1.9,SNR=15						
PDAR	Pinedale Array	58.76	59	P	P	13 45 29.3	+1.4
ULM	Lac du Bonnet	60.21	46	P	P	13 45 38.3	+0.7
	comp=Z,1.1nm,0.5s,baz=313,slow=7.2,SNR=3.0						
FINES	FINESS Array B	61.07	336	P	P	13 45 42.2	-1.0
	comp=Z,0.9nm,0.4s,baz=34,slow=7.8,SNR=4.2						
NB2	NORSAR Subarra	64.62	343	P	P	13 46 06.5	-0.5
	comp=Z,2.4nm,0.5s,baz=22,slow=6.9						
NOA	NORSAR Array B	64.62	343	P	P	13 46 06.4	-0.5
	comp=Z,3.1nm,0.6s,baz=28,slow=6.4,SNR=12						
AKASG	Malin Array Be	69.40	329	P	P	13 46 36.4	-1.0
	comp=Z,2.6nm,0.4s,baz=31,slow=6.7,SNR=7.4						
AKASG	Malin Array Be	69.40	329	P	P	13 46 36.0	-1.3
AKASG				pmax	pmax		
	comp=Z,2.0nm,1.2s						
AKASG	Malin Array Be	69.40	329	P	P	13 46 36.0	-1.3
TXAR	Lajitas Array	71.77	66	P	P	13 46 53.7	+1.4
	comp=Z,1.2nm,0.4s,baz=306,slow=4.9,SNR=8.8						
TXAR	Lajitas Array	71.77	66	P	P	13 46 51.9	-0.4
TXAR	Lajitas Array	71.77	66	P	P	13 46 51.9	-0.4
CLL	Collm	73.35	339	*e*P	P	13 47 01.0	-0.1
CLL	Collm	73.35	339	*e*P	P	13 47 01.0	-0.1
BURAR	Bucovina Array	73.38	329	P	P	13 46 59.4	-2.1
CFR	Carcaliu	74.56	326	⇑P	P	13 47 08.9	+0.6
WRA	Warramunga Arr	74.60	204	P	P	13 47 09.7	+0.9
	comp=Z,1.0nm,0.7s,baz=19,slow=6.0,SNR=9.1						
VOIR		75.36	328	⇑P	P	13 47 13.8	+0.7
FITZ	Fitzroy Crossi	75.43	213	P	P	13 47 14.5	+1.0
	comp=Z,0.7nm,0.5s,baz=346,slow=8.3,SNR=1.8						
GERES	GERESS Array B	75.48	337	P	P	13 47 13.8	0.0
	comp=Z,1.3nm,0.6s,baz=35,slow=4.9,SNR=8.7						
ASAR	Alice Springs	78.28	203	P	P	13 47 31.4	+1.9
	comp=Z,0.5nm,0.5s,baz=16,slow=5.0,SNR=16						
ASAR	Alice Springs	78.28	203	P	P	13 47 29.6	0.0
ASAR	Alice Springs	78.28	203	P	P	13 47 29.6	0.0
VTS	Vitosha	78.47	328	⇑P	P	13 47 30.9	+0.3
ESDC	Sonseca Array	87.72	347	P	P	13 48 17.5	-0.9
	comp=Z,0.5nm,0.6s,baz=2.3,slow=3.3,SNR=7.2						
H03N2	Juan Fernandez	134.87	89	T	T	16 25 08.6	
	baz=314,slow=77,SNR=387						
H03N1	Juan Fernandez	134.88	89	T	T	16 25 08.0	
	baz=314,slow=77,SNR=446						
H03N3	Juan Fernandez	134.88	89	T	T	16 25 09.2	
	baz=314,slow=77,SNR=372						
QSPA	South Pole Qui	141.52	180	PKhKP	PKPpre	13 54 53.6	
	comp=Z,0.5nm,0.5s,baz=207,slow=1.3,SNR=13						
PLCA	Paso Flores	144.64	92	PKP	PKPbc	13 55 04.5	-0.1
	comp=Z,4.2nm,1.2s,baz=18,slow=3.8,SNR=4.9						

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*NNC **26** 13:58:06.7±1.7, 36°.65N×70°.64E, h0^{km}, mb5.5, mpv5.4, Error ellipse: s-maj=16.4km s-min=8.9km az=161.0*
*IDC **26** 13:58:07.9±0.6, 36°.27N×71°.01E, h106^{km}±5^{km}, mb4.4/34, mb1 4.4/40, mb1mx4.2/63, mbtmp4.7/40, MS3.8/2, Ms1 3.8/2, ms1mx2.7/50, Error ellipse: s-maj=11.5km s-min=8.6km az=19.0*
*MOS **26** 13:58:10.6±1.0, 36°.54N×71°.09E, h134^{km}, mb4.8/33, Error ellipse: s-maj=6.0km s-min=3.7km az=88.5*
*BJI **26** 13:58:11.9±0.0, 36°.67N×71°.24E, h109^{km}, mB4.8/19, mb4.6/27*
*NEIC **26** 13:58:12.1±2.6, 36°.45N±0°.07×70°.99E±0°.06, h144^{km}±6^{km}, mb4.7/37, Error ellipse: s-maj=9.9km s-min=7.0km az=172.0*
ISC 26 13:58:11.7±0.3, **36°.38N**±0°.03×**70°.97E**±0°.03, **h140**^{km}±3^{km}, **h140**^{km}**:pP-P**, **n378**, σ**1^{s}97**/432, **mb4.6**/71, **41C-16D**, **Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	Kabul	2.42	221	PN	Pn	13 58 52.8	+1.2
KBL	Kabul	2.42	221	Pn	Pn	13 58 52.8	+1.2
KBL	Kabul	2.42	221	P	Pn	13 58 52.7	+1.2
KBL				S	Sn	13 59 23.3	+1.1
CEP	Cherat	2.67	163	P	Pn	13 58 56.2	+1.6
CEP				S	Sn	13 59 29.0	+1.4
NIL	Nilore	3.31	145	PN	Pn	13 59 04.3	+1.6
NIL	Nilore	3.31	145	Pn	Pn	13 59 04.3	+1.6
NIL	Nilore	3.31	145	P	Pn	13 59 04.3	+1.6
NIL				S	Sn	13 59 40.9	-1.1
THW	Thamme Wali	3.64	170	P	Pn	13 59 08.5	+1.5
SARP	Sargodha	4.67	162	P	Pn	13 59 21.2	+0.7
IUG	Iuzhnay	5.80	353	*e*P	Pn	13 59 34.5	-1.2
	baz=351						
IUG	Iuzhnay	5.80	353	*e*PN	Pn	13 59 34.5	-1.2
DHRM	DHARAMSHALA	6.03	132	*e*P	Pn	13 59 38.0	-1.0
DHRM				*e*S	Sn	14 00 43.7	-3.4
DHRM				IAML		14 00 44.9	
	comp=E,2µm,0.5s						
DHRM				IAML		14 00 46.2	
	comp=N,3µm,0.4s						
AML	Almayashu	6.12	19	P	Pn	13 59 39.0	-1.2
	SNR=497						
UCH	Uchtor	6.45	24	P	Pn	13 59 43.4	-1.2
	SNR=250						
EKS2	Erkin-Say	6.63	18	P	Pn	13 59 45.9	-0.9
	SNR=169						
BRLS	Borolday	6.70	353	*i* P	Pn	13 59 42.7	-4.8
	comp=N,57nm,0.7s,baz=350						
BRLS	Borolday	6.70	353	*i* PN	Pn	13 59 42.7	-4.9
BRLS				pmax	pmax		
	comp=Z,57nm,0.7s						
KK31	Karatay Array	6.72	357	⇓P	Pn	13 59 44.4	-3.5
	comp=Z,237nm,0.5s,baz=184,slow=13,SNR=3576						
KK31				⇓S	Sn	14 00 58.6	-4.6
	comp=Z,586nm,0.8s,baz=196,slow=20,SNR=15						
KK31	Karatay Array	6.72	357	PN	Pn	13 59 46.7	-1.2
KK31	Karatay Array	6.72	357		Pn	13 59 46.7	-1.2
KKAR	Karatay Array	6.72	357	PN	Pn	13 59 46.8	-1.1
KKAR	Karatay Array	6.72	357	Pn	Pn	13 59 46.8	-1.1
KKAR	Karatay Array	6.72	357	Pn	Pn	13 59 46.5	-1.3
AAK	Ala-Archa	6.81	22	P	Pn	13 59 48.2	-1.0
	comp=Z,38nm,0.3s,baz=199,slow=7.5,SNR=153						
AAK				S	Sn	14 01 02.6	-3.0
	comp=Z,33nm,0.3s,baz=334,slow=22,SNR=13						
AAK	Ala-Archa	6.81	22	*i* P	Pn	13 59 48.1	-1.0
	SNR=155						
AAK	Ala-Archa	6.81	22	Pn	Pn	13 59 48.1	-1.2
AAK	Ala-Archa	6.81	22	P	Pn	13 59 48.3	-1.0
AAK				S	Sn	14 01 02.7	-3.0
ULHL	Ulahol	7.14	33	P	Pn	13 59 52.4	-1.3
	SNR=9.8						
CHMS	Chumysh	7.22	23	P	Pn	13 59 53.2	-1.4
	SNR=217						
SMLA	Simla	7.35	134	*e*P	Pn	13 59 55.1	-1.2
SMLA				*e*S	Sn	14 01 12.0	-6.4
USP	Ospenovka	7.39	20	P	Pn	13 59 56.5	-0.3
	SNR=14						
HRA	Herat	7.40	257	Pn	Pn	13 59 57.6	+0.3
TKM2	Tokmak 2	7.44	27	P	Pn	13 59 56.4	-1.3
	SNR=72						
TKM2	Tokmak 2	7.44	27	⇑P	Pn	13 59 56.1	-1.6
	comp=Z,94nm,0.5s						
TKM2				⇑S	Sn	14 01 19.5	-1.2
	comp=Z,224nm,0.8s						
SGDS	Sogindy	7.60	21	*e*P	Pn	13 59 57.2	-2.5
	comp=Z,17nm,0.5s,baz=21						
SGDS	Sogindy	7.60	21	*e*PN	Pn	13 59 57.1	-2.5

SGDS				pmax	pmax		
	comp=Z,17nm,0.5s						
TNSS	**Tian-Shan**	**8.08**	**33**	*e*P	**Pn**	**14 00 04.3**	**-2.2**
	baz=34						
TNSS	**Tian-Shan**	**8.08**	**33**	*e*PN	**Pn**	**14 00 04.3**	**-2.2**
AAA	**Alma-Ata**	**8.21**	**32**	*e*P	**Pn**	**14 00 06.6**	**-1.2**
	comp=Z,38nm,0.6s,baz=33						
AAA	**Alma-Ata**	**8.21**	**32**	*e*PN	**Pn**	**14 00 06.6**	**-1.2**
AAA				pmax	pmax		
	comp=Z,38nm,0.6s						
MDOK	**Medeo**	**8.23**	**33**	*e*P	**Pn**	**14 00 06.9**	**-1.3**
	baz=34						
MDOK	**Medeo**	**8.23**	**33**	⇑P	**Pn**	**14 00 06.7**	**-1.5**
	comp=Z,120nm,0.8s						
MDOK				⇑S	**Sn**	**14 01 42.5**	**+2.8**
	comp=Z,59nm,0.7s						
MDOK	**Medeo**	**8.23**	**33**	*e*PN	**Pn**	**14 00 06.9**	**-1.3**
DDI	**Dehra Dun**	**8.46**	**134**	*e*P	**Pn**	**14 00 10.7**	**-0.6**
DDI				*e*S	**Sn**	**14 01 39.8**	**-5.6**
DDI				IAML		14 01 43.0	
	comp=N,826nm,0.5s						
KUU	**Kurty**	**8.55**	**27**	*e*P	**Pn**	**14 00 09.2**	**-3.3**
	comp=N,15nm,0.8s,baz=28						
KUU	**Kurty**	**8.55**	**27**	*e*PN	**Pn**	**14 00 09.1**	**-3.3**
KUU				pmax	pmax		
	comp=Z,15nm,0.8s						
CHKK	**Chushkaly**	**8.77**	**30**	*e*P	**Pn**	**14 00 12.6**	**-2.7**
	baz=31						
CHKK	**Chushkaly**	**8.77**	**30**	*e*PN	**Pn**	**14 00 12.6**	**-2.7**
SATY	**Saty**	**8.79**	**38**	*e*P	**Pn**	**14 00 13.1**	**-2.6**
	comp=Z,23nm,0.9s,baz=40						
SATY	**Saty**	**8.79**	**38**	*e*PN	**Pn**	**14 00 13.0**	**-2.6**
SATY				pmax	pmax		
	comp=Z,23nm,0.9s						
BTLS	**Baital**	**8.96**	**14**	*e*P	**Pn**	**14 00 15.1**	**-2.8**
	comp=Z,4.6nm,0.4s,baz=14						
BTLS	**Baital**	**8.96**	**14**	*e*PN	**Pn**	**14 00 15.0**	**-2.8**
BTLS				pmax	pmax		
	comp=Z,5.0nm,0.4s						
UZB	**Uzynbulak**	**9.16**	**40**	*e*P	**Pn**	**14 00 18.4**	**-2.3**
	comp=Z,26nm,0.7s,baz=41						
UZB	**Uzynbulak**	**9.16**	**40**	*e*PN	**Pn**	**14 00 18.4**	**-2.3**
UZB				pmax	pmax		
	comp=Z,26nm,0.7s						
KPKS	**Kokpek**	**9.22**	**38**	*e*P	**Pn**	**14 00 18.9**	**-2.6**
	comp=Z,46nm,0.8s,baz=39						
KPKS	**Kokpek**	**9.22**	**38**	*e*P	**Pn**	**14 00 18.8**	**-2.6**
KPKS				pmax	pmax		
	comp=Z,46nm,0.8s						
NDI	**New Delhi**	**9.31**	**144**	*e*P	**Pn**	**14 00 22.0**	**-0.7**
NDI				*e*S	**Sn**	**14 02 00.0**	**-5.8**
SHLS	**Shalkode**	**9.40**	**41**	*e*P	**Pn**	**14 00 24.2**	**+0.3**
	comp=Z,38nm,0.9s,baz=44						
SHLS	**Shalkode**	**9.40**	**41**	*e*P	**Pn**	**14 00 24.2**	**+0.3**
SHLS				pmax	pmax		
	comp=Z,38nm,0.9s						
AYAN	**Aya Nagar**	**9.44**	**145**	*e*P	**Pn**	**14 00 22.6**	**-1.7**
AYAN				*e*S	Sn	14 01 59.8	-9.0
KUDL	**Kundal**	**9.45**	**149**	*e*P	**Pn**	**14 00 22.6**	**-1.9**
KUDL				*e*S	Sn	14 01 59.6	-9.5
PDGK	**Podgornoye**	**9.53**	**41**	⇑P	**Pn**	**14 00 23.3**	**-2.4**
	comp=Z,86nm,0.8s						
PDGK				⇓S	**Sn**	**14 02 15.1**	**+3.9**
	comp=Z,110nm,0.8s						
SONA	**Sohna**	**9.61**	**146**	*e*P	**Pn**	**14 00 26.3**	**-0.4**
SONA				*e*S	Sn	14 02 04.3	-8.8
TDK	**Taldyqorghan**	**10.29**	**31**	*e*P	**Pn**	**14 00 32.4**	**-3.2**
	comp=Z,33nm,0.8s,baz=32						
TDK	**Taldyqorghan**	**10.29**	**31**	*e*P	**Pn**	**14 00 32.4**	**-3.2**
TDK				pmax	pmax		
	comp=Z,33nm,0.8s						
GEYT	**Alibeck**	**10.38**	**282**	P	**Pn**	**14 00 34.6**	**-2.2**
	comp=Z,16nm,0.3s,baz=116,slow=10,SNR=75						
GEYT				S	**Sn**	**14 02 26.7**	**-4.8**
	comp=Z,13nm,0.3s,baz=110,slow=13,SNR=6.7						
GEYT	**Alibeck**	**10.38**	**282**	Pn	**Pn**	**14 00 35.6**	**-1.3**
GYA0B	**ALIBECK ARRAY**	**10.38**	**282**	⇑P	**Pn**	**14 00 34.9**	**-2.0**
GYA0B				⇓S	**Sn**	**14 02 26.5**	**-5.0**
GYA0B	**ALIBECK ARRAY**	**10.38**	**282**	Pn	**Pn**	**14 00 35.4**	**-1.4**
BHUJ	**Bhuj**	**13.13**	**185**	*e*P	**Pn**	**14 01 11.4**	**-1.5**
BHUJ				*e*x	x	14 03 28.4	
BHUJ				*e*S	**Sn**	**14 03 32.4**	**-5.8**
MAKZ	**Makanchi**	**13.26**	**35**	⇑P	**Pn**	**14 01 14.0**	**-0.5**
	comp=Z,21nm,0.6s						
MAKZ	**Makanchi**	**13.26**	**35**	P	**Pn**	**14 01 12.3**	**-2.2**
MAKZ	**Makanchi**	**13.26**	**35**	Pn	**Pn**	**14 01 12.3**	**-2.2**
MK31	**Makanchi Array**	**13.40**	**36**	P	**Pn**	**14 01 16.8**	**+0.6**
	comp=Z,11nm,0.5s,baz=223,slow=10,SNR=271						
MK31	**Makanchi Array**	**13.40**	**36**	*ce*P	**Pn**	**14 01 13.5**	**-2.7**
MK31	**Makanchi Array**	**13.40**	**36**		**Pn**	**14 01 14.8**	**-1.4**
MKAR	**Makanchi Array**	**13.40**	**36**	P	**Pn**	**14 01 13.8**	**-2.4**
	comp=Z,1.0nm,0.3s,baz=215,slow=8.8,SNR=93						
MKAR	**Makanchi Array**	**13.40**	**36**	*c i*P	**Pn**	**14 01 13.8**	**-2.4**
MKAR				pmax	pmax		
	comp=Z,8.0nm,0.7s						
MKAR	**Makanchi Array**	**13.40**	**36**	Pn	**Pn**	**14 01 14.4**	**-1.8**
BRZS	**Berezniki**	**13.65**	**5**	*e*P	**Pn**	**14 01 16.0**	**-3.4**
	comp=Z,11nm,0.9s,baz=4.3						
BRZS	**Berezniki**	**13.65**	**5**	*e*P	**Pn**	**14 01 15.9**	**-3.4**
BRZS				pmax	pmax		
	comp=Z,11nm,0.9s						
BHPL	**Bhopal**	**14.24**	**155**	*e*P	**Pn**	**14 01 25.0**	**-2.0**
BHPL				*i* x	x	14 01 31.4	
BHPL				IAmb	IAmb	14 01 31.6	
	comp=Z,44nm,0.6s						
BHPL				*e*S	Sn	14 03 53.4	-11
BHPL				*e*S	Sn	14 03 53.5	-11
GKN	**Gorkha**	**14.26**	**122**	*e*P	**Pn**	**14 01 25.0**	**-2.4**
	comp=Z,197nm,0.6s						
WMQ	**Urumqi**	**14.78**	**55**	P	**Pn**	**14 01 32.6**	**-1.2**
WMQ	**Urumqi**	**14.78**	**55**	Pn	**Pn**	**14 01 32.5**	**-1.2**
DMN	**Daman**	**14.83**	**122**	*e*P	**Pn**	**14 01 33.2**	**-1.5**
	comp=Z,87nm,0.5s						
KKN	**Kakani**	**14.84**	**121**	*e*P	**Pn**	**14 01 32.3**	**-2.4**
	comp=Z,157nm,0.5s						
PKIN	**Phulchoki**	**15.05**	**122**	*e*P	**Pn**	**14 01 35.7**	**-1.8**
	comp=Z,131nm,0.5s						
PKI	**Pulchoki**	**15.06**	**122**	*e*P	**Pn**	**14 01 36.0**	**-1.7**
	comp=Z,140nm,0.6s						
ZSN	**Zaisan**	**15.11**	**39**	*e*P	**Pn**	**14 01 36.0**	**-1.8**
	baz=39						
ZSN	**Zaisan**	**15.11**	**39**	*e*P	**Pn**	**14 01 36.0**	**-1.8**
AB31	**Akbulak array**	**15.18**	**331**	⇑P	**Pn**	**14 01 36.3**	**-2.3**
	comp=Z,37nm,0.6s,baz=146,slow=12,SNR=583						
AB31				⇓S	**Sn**	**14 04 21.2**	**-5.6**
	comp=Z,51nm,0.7s,baz=146,slow=24,SNR=13						
ABKAR	**Akbulak array**	**15.18**	**331**	Pn	**Pn**	**14 01 36.6**	**-2.0**
ABKAR	**Akbulak array**	**15.18**	**331**	Pn	**Pn**	**14 01 36.7**	**-1.8**
ABKAR				IAmb	IAmb	14 01 39.2	
	comp=Z,52nm,0.6s						
GUN	**Gumba**	**15.18**	**120**	*e*P	**Pn**	**14 01 37.0**	**-2.1**
	comp=Z,87nm,0.4s						
KURBB	**Kurchatov Arra**	**15.24**	**19**	P	**Pn**	**14 01 35.8**	**-3.6**
	comp=Z,0.2nm,0.3s,baz=210,slow=12,SNR=70						
KURBB				S	**Sn**	**14 04 29.6**	**+1.3**
	comp=Z,0.0nm,0.3s,baz=206,slow=19,SNR=7.7						
KURBB	**Kurchatov Arra**	**15.24**	**19**	⇑P	**Pn**	**14 01 39.1**	**-0.2**
	comp=Z,85nm,0.8s						
KURK	**Kurchatov**	**15.35**	**19**	⇓P	**Pn**	**14 01 40.8**	**+0.1**
	comp=Z,77nm,0.9s						
KURK	**Kurchatov**	**15.35**	**19**	*ce*P	**Pn**	**14 01 37.0**	**-3.7**
KURK				pmax	pmax		
	comp=Z,14nm,1.0s						
KURK	**Kurchatov**	**15.35**	**19**	Pn	**Pn**	**14 01 38.3**	**-2.4**
KURK				IAmb	IAmb	14 01 43.8	
	comp=Z,66nm,0.8s						
KURK	**Kurchatov**	**15.35**	**19**	P	**Pn**	**14 01 36.9**	**-3.7**
SEM	**Semipalatinsk**	**15.54**	**23**	*e*P	**Pn**	**14 01 39.5**	**-3.7**
	baz=23						
SEM	**Semipalatinsk**	**15.54**	**23**	*e*P	**Pn**	**14 01 39.5**	**-3.7**
RAMN	**Ramite**	**16.27**	**121**	*e*P	**Pn**	**14 01 51.5**	**-1.0**
	comp=Z,94nm,0.4s						
BANOM	**Banah**	**16.30**	**234**	*i* P	**P**	**14 01 55.1**	**+2.0**
	SNR=15						
BANOM	**Banah**	**16.30**	**234**	P	**P**	**14 01 53.7**	**+0.6**
	SNR=16						
SHME	**Shamm**	**16.32**	**235**	P	**P**	**14 01 55.2**	**+2.0**
SHME	**Shamm**	**16.32**	**235**	P	**P**	**14 01 55.5**	**+2.3**
	SNR=5.6						
BVAR	**Borovoye Array**	**16.64**	**359**	P	**P**	**14 01 54.2**	**-2.3**
	comp=Z,4.8nm,0.3s,baz=139,slow=8.6,SNR=42						
BVAR				S	**S**	**14 04 59.6**	**-2.6**
	comp=Z,1.0nm,0.3s,baz=163,slow=21,SNR=3.7						
BRVK	**Borovoye**	**16.68**	**359**	⇓P	**P**	**14 01 55.8**	**-1.1**
	comp=Z,73nm,1.3s						
BRVK				⇓S	**S**	**14 05 02.9**	**-0.1**
	comp=Z,36nm,1.1s						
BRVK	**Borovoye**	**16.68**	**359**	*ce*P	**P**	**14 01 56.1**	**-0.8**
BRVK				pmax	pmax		
	comp=Z,90nm,1.7s						
BRVK	**Borovoye**	**16.68**	**359**	P	**P**	**14 01 54.5**	**-2.4**
BRVK				IAmb	IAmb	14 01 59.4	
	comp=Z,48nm,1.1s						
BRVK	**Borovoye**	**16.68**	**359**	P	**P**	**14 01 56.2**	**-0.8**
MDH	**Madha**	**16.74**	**233**	P	**Pn**	**14 01 58.4**	**+0.5**
MDH	**Madha**	**16.74**	**233**	P	**Pn**	**14 01 58.5**	**+0.5**
	SNR=5.3						
MASF	**Masafi**	**16.78**	**233**	P	**Pn**	**14 01 59.5**	**+1.0**
	SNR=10						
MSFE	**Esma-Masafi**	**16.79**	**233**	*i* P	**Pn**	**14 01 59.7**	**+1.2**
	SNR=10						
TAPN	**Taplejung**	**16.81**	**118**	*e*P	**P**	**14 01 57.4**	**-1.5**
	comp=Z,94nm,0.5s						
AKTO	**Aktyubinsk**	**16.87**	**330**	P	**P**	**14 01 58.9**	**-0.2**
	comp=Z,11nm,0.3s,baz=130,slow=11,SNR=178						
AKTO				S	**S**	**14 04 58.5**	**-9.0**
	comp=Z,2.1nm,0.3s,baz=220,slow=24,SNR=7.0						
AKTO	**Aktyubinsk**	**16.87**	**330**	⇑P	**P**	**14 01 58.9**	**-0.2**
	comp=Z,168nm,0.9s						
AKTO				⇑S	**S**	**14 05 04.0**	**-3.4**
	comp=Z,64nm,0.8s						
ODAN	**Odare**	**16.88**	**120**	*e*P	**P**	**14 01 58.7**	**-0.9**
	comp=Z,169nm,0.6s						
WSAR	**Wadi Sarin**	**16.90**	**223**	P	**P**	**14 01 58.6**	**-1.0**
	comp=Z,0.5nm,0.3s,baz=70,slow=10,SNR=12						
UOSS	**Minazif**	**17.05**	**232**	P	**P**	**14 02 00.7**	**-0.5**
UOSS				IAmb	IAmb	14 02 05.6	
	comp=Z,21nm,0.7s						
UOSS	**Minazif**	**17.05**	**232**	P	**P**	**14 02 00.3**	**-0.9**
HATD	**Hatta, Dubai**	**17.18**	**232**	P	**Pn**	**14 02 05.1**	**+1.8**
HATD	**Hatta, Dubai**	**17.18**	**232**	P	**Pn**	**14 02 03.9**	**+0.6**
	SNR=9.3						
WBK	**Wadi Bani Khal**	**17.23**	**220**	P	**Pn**	**14 02 06.3**	**+2.4**
	SNR=14						
ASHO	**Ashiyiah**	**17.33**	**232**	*i* P	**Pn**	**14 02 06.1**	**+1.1**
	SNR=30						
ASHO	**Ashiyiah**	**17.33**	**232**	P	**Pn**	**14 02 06.2**	**+1.1**
	SNR=30						
SMDO	**Samad**	**17.36**	**224**	P	**Pn**	**14 02 07.6**	**+2.0**
HOQ	**Hoqain**	**17.38**	**227**	P	**Pn**	**14 02 07.2**	**+1.5**
JLN	**Jalan Bani Buh**	**17.38**	**218**	P	**Pn**	**14 02 07.3**	**+1.5**
	SNR=5.0						
SOHO	**SOHO**	**17.43**	**230**	P	**P**	**14 02 05.8**	**+0.4**
ASUD	**Al Ashush, Dub**	**17.83**	**233**	*i* P	**Pn**	**14 02 11.3**	**+0.2**
	SNR=5.9						
ASUD	**Al Ashush, Dub**	**17.83**	**233**	P	**Pn**	**14 02 12.1**	**+1.0**
	SNR=5.9						
JMDO	**Jabal Madar**	**17.88**	**222**	P	**Pn**	**14 02 15.0**	**+3.2**
	SNR=11						
DGZ	**Jazzator, Alta**	**17.89**	**37**	*c i*P	**P**	**14 02 10.6**	**+0.2**
DGZ				pmax	pmax		
	comp=Z,44nm,0.5s						
BOK	**Bokaro**	**17.97**	**130**	*e*P	**Pn**	**14 02 13.0**	**+0.3**
BOK				*e*S	S	14 05 19.6	-11
ALNE	**Al Ain**	**17.97**	**231**	*i* P	**Pn**	**14 02 13.4**	**+0.7**
	SNR=7.0						
ALNE	**Al Ain**	**17.97**	**231**	P	**Pn**	**14 02 13.4**	**+0.7**
	SNR=6.9						
BSY	**Bisya**	**18.09**	**225**	P	**Pn**	**14 02 16.5**	**+2.3**
	SNR=8.7						
LSA	**Lhasa**	**18.17**	**106**	P	**Pn**	**14 02 17.3**	**+1.8**
LSA				pmax	pmax		
	comp=Z,51nm,0.9s						
UMZA	**Um Al Zommool**	**19.32**	**230**	P	**Pn**	**14 02 27.7**	**-0.9**
UMZA				S	**S**	**14 05 55.8**	**-1.5**
ZAA0	**Zalesovo Array**	**20.03**	**24**	P	**P**	**14 02 33.4**	**0.0**
ZALV	**Zalesovo Beam**	**20.03**	**24**	P	**P**	**14 02 33.0**	**-0.4**
	comp=Z,55nm,0.5s,baz=224,slow=9.9,SNR=225						
ZALV				S	**S**	**14 06 08.4**	**-2.3**
	comp=Z,2.9nm,0.7s,baz=214,slow=17,SNR=2.7						
ZALV	**Zalesovo Beam**	**20.03**	**24**	P	**P**	**14 02 33.5**	**+0.1**
ZALV	**Zalesovo Beam**	**20.03**	**24**	P	**P**	**14 02 33.5**	**+0.1**
HYB	**Hyderabad**	**20.05**	**158**	*i* P	**P**	**14 02 35.0**	**+1.0**
HYB				*e*sP	**sP**	**14 03 24.0**	**+6.9**
HYB				*e*S	Sn	14 06 29.0	+5.0
HYB	**Hyderabad**	**20.05**	**158**	IAmb	IAmb	14 02 38.0	
	comp=N,9.5nm,0.6s						
HYB				*e*x	**P**	**14 02 34.7**	**+0.7**
HYB				*e*S	**S**	**14 06 09.2**	**-2.6**
GROC	**Groznyy**	**20.47**	**297**	*e*P	**P**	**14 02 40.0**	**+1.8**
GROC				*e**SP	**sP**	**14 03 20.7**	**-0.3**
GROC				*e*S	**S**	**14 06 24.1**	**+4.5**
GROC				*e**SS	**sS**	**14 07 02.7**	**-0.5**
GROC				pmax	pmax		
	comp=Z,37nm,0.6s						
BWNR	**Bhubaneshwar**	**20.63**	**137**	*e*x	**P**	**14 02 43.0**	**+2.9**
BWNR				*e*x	**S**	**14 06 24.0**	**+0.9**
GNI	**Garni**	**20.91**	**288**	P	**P**	**14 02 44.0**	**+0.8**
	comp=Z,40nm,0.9s,baz=106,slow=1.3,SNR=22						
GNI	**Garni**	**20.91**	**288**	*ce*P	Pn	14 02 45.8	-1.6
GNI				pmax	pmax		
	comp=Z,65nm,1.0s						
GNI	**Garni**	**20.91**	**288**	P	Pn	14 02 46.1	-1.3
SVE	**Sverdlovsk**	**21.60**	**344**	⇓*e*P	**P**	**14 02 50.3**	**+0.1**
SVE				*e*S	**S**	**14 06 47.0**	**+6.5**
SVE				pmax	pmax		
	comp=Z,64nm,0.9s						
ARU	**Arti**	**21.74**	**341**	P	**P**	**14 02 52.2**	**+0.5**
	comp=Z,17nm,0.7s,baz=152,slow=7.3,SNR=59						
ARU	**Arti**	**21.74**	**341**	*c i*P	**P**	**14 02 51.5**	**-0.1**
ARU				*PP	**pP**	**14 03 18.2**	**+0.6**
ARU				S	**S**	**14 06 41.4**	**-1.5**
ARU				SS	**SnSn**	**14 07 31.6**	**+8.9**
ARU				pmax	pmax		
	comp=Z,107nm,1.0s						
ARU	**Arti**	**21.74**	**341**	P	**P**	**14 02 51.8**	**+0.2**
ZEI	**Tsey**	**21.77**	**295**	*e*P	**P**	**14 02 53.0**	**+0.6**
ZEI				pmax	pmax		
	comp=Z,21nm,1.0s						
KBZ	**Khabaz**	**22.64**	**298**	P	**P**	**14 03 00.8**	**+0.1**
	comp=Z,9.3nm,0.8s,baz=128,slow=7.7,SNR=23						
KBZ				S	Sn	14 07 13.4	-12
	comp=Z,5.6nm,0.8s,baz=115,slow=17,SNR=3.0						
KBZ	**Khabaz**	**22.64**	**298**	*ce*P	**P**	**14 03 00.7**	**0.0**
KBZ				pmax	pmax		
	comp=Z,10.0nm,0.8s						
NEY	**Neytrino**	**22.69**	**296**	*i* P	**P**	**14 03 03.9**	**+2.4**
NEY				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GOF	**Gofitskoye**	**22.79**	**301**	⇑*e*P	**P**	**14 03 03.5**	**+1.3**
GOF				pmax	pmax		
	comp=Z,40nm,0.6s						
KIV	**Kislovodsk**	**22.82**	**298**	*i* P	**P**	**14 03 03.1**	**+0.4**
KIV				*i* *PP	**pP**	**14 03 29.6**	**+0.5**
KIV				pmax	pmax		
	comp=Z,12nm,0.8s						
GTA	**Gaotai**	**22.92**	**74**	*e*P	**P**	**14 03 05.0**	**+1.4**
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,190nm,5.1s						
GTA				LR	LR		
	comp=Z,120nm,16.0s						
GTA				LR	LR		
	comp=Z,150nm,12.7s						
GTA				LR	LR		
	comp=Z,140nm,14.9s						
BELG	**Belogornoye**	**22.97**	**322**	P	**P**	**14 03 03.4**	**-0.3**
	comp=Z,140nm,0.9s,baz=306,slow=5.1,SNR=26						
BELG	**Belogornoye**	**22.97**	**322**	*c i*P	**P**	**14 03 04.6**	**+0.9**
BELG				pmax	pmax		
	comp=Z,34nm,1.0s						
SOC	**Sochi**	**24.90**	**296**	*e*P	**P**	**14 03 23.4**	**+1.9**
SOC				*e**PP	**pP**	**14 03 51.9**	**+0.8**
SOC				*e*		14 04 03.9	
SOC				*e*S	**S**	**14 07 36.2**	**+1.9**
SOC				pmax	pmax		
	comp=Z,11nm,0.5s						
RAYN	**Ar Rayn**	**25.43**	**247**	*i* P	**P**	**14 03 26.9**	**+0.3**
	SNR=7.3						
RAYN	**Ar Rayn**	**25.43**	**247**	P	**P**	**14 03 26.0**	**-0.5**
RAYN				pmax	pmax		
	comp=Z,12nm,1.2s						
RAYN	**Ar Rayn**	**25.43**	**247**	P	**P**	**14 03 26.0**	**-0.5**
VRH	**Novokhopyorsk**	**25.58**	**315**	*e*P	**P**	**14 03 26.4**	**-1.1**
VRH				pmax	pmax		
	comp=Z,70nm,1.4s						
MOY	**Mondy**	**26.20**	**45**	*e*P	**P**	**14 03 38.9**	**+5.6**
KIRV	**Kirov**	**26.34**	**334**	P	**P**	**14 03 33.9**	**-0.3**
	comp=Z,32nm,0.6s,baz=134,slow=4.4,SNR=12						
KIRV	**Kirov**	**26.34**	**334**	*ce*P	**P**	**14 03 34.6**	**+0.4**
LZH	**Lanzhou**	**26.45**	**81**	*e*P	**P**	**14 03 40.3**	**+4.6**
VORD	**Divnogorie**	**26.90**	**313**	*e*P	**P**	**14 03 39.5**	**+0.1**
VORD				pmax	pmax		
	comp=Z,20nm,1.1s						
VSR	**Storozhevoye**	**27.07**	**313**	*e*P	**P**	**14 03 40.3**	**-0.6**
VSR				pmax	pmax		
	comp=Z,40nm,1.0s						
ZAK	**Zakamensk**	**27.08**	**49**	*e*P	**P**	**14 03 42.1**	**+0.9**
ZAK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
LPSR	**Galich'ya Gora**	**27.72**	**316**	*e*P	**P**	**14 03 47.0**	**+0.3**
LPSR				pmax	pmax		
	comp=Z,50nm,0.9s						
TLY	**Talaya**	**27.74**	**46**	*i* P	**P**	**14 03 48.0**	**+1.1**
TLY				pmax	pmax		
	comp=Z,1.0nm,0.8s						
SONM	**Songino Array**	**28.42**	**55**	P	**P**	**14 03 53.6**	**+0.5**
	comp=Z,3.7nm,0.7s,baz=255,slow=9.9,SNR=13						
ULN	**Ulaanbaatar**	**28.86**	**55**	*ce*P	**P**	**14 03 59.0**	**+1.9**
ULN				pmax	pmax		
	comp=Z,12nm,2.1s						
BR131	**Keskin Array S**	**29.45**	**288**	P	**P**	**14 04 01.8**	**-0.6**
BR131				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BR131	**Keskin Array S**	**29.45**	**288**	P	**P**	**14 04 01.8**	**-0.6**
BRTR	**Keskin Array B**	**29.45**	**288**	P	**P**	**14 04 03.1**	**+0.8**
	comp=Z,2.6nm,0.7s,baz=97,slow=9.1,SNR=9.3						
BRTR	**Keskin Array B**	**29.45**	**288**	*ce*P	**P**	**14 04 04.3**	**+1.9**
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MOS	**Moscow**	**29.74**	**321**	*e*P	**P**	**14 04 04.6**	**+0.1**
MOS				pmax	pmax		
	comp=Z,60nm,1.2s						
OBN	**Obninsk**	**30.01**	**320**	P	**P**	**14 04 08.0**	**+1.1**
	comp=Z,6.1nm,0.5s,baz=178,slow=6.1,SNR=6.5						
OBN	**Obninsk**	**30.01**	**320**	*i* P	**P**	**14 04 07.4**	**+0.5**
OBN				*i* *PP	**pP**	**14 04 39.5**	**+2.3**
OBN				*i*		14 05 15.3	
OBN				pmax	pmax		
	comp=Z,86nm,1.5s						
CMAR	**Chiang Mai Arr**	**30.42**	**118**	P	**P**	**14 04 11.1**	**+0.1**
	comp=Z,1.5nm,0.9s,baz=300,slow=8.4,SNR=14						
CMAR				pP	**pP**	**14 04 35.0**	**-7.1**
	comp=Z,1.9nm,0.7s,baz=309,slow=10.0,SNR=5.9						
CMAR				PP	**PnPn**	**14 05 12.7**	**-3.2**
	comp=Z,3.1nm,0.8s,baz=304,slow=10,SNR=5.5						
CMAR	**Chiang Mai Arr**	**30.42**	**118**	*ce*P	P	14 04 18.1	+7.2
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**30.42**	**118**	P	**P**	**14 04 11.0**	**+0.1**
XAN	**Xi'an**	**30.96**	**83**	P	**P**	**14 04 18.5**	**+2.9**
XAN				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KLMR	**Klimovskoe**	**31.57**	**331**	*e*P	**P**	**14 04 19.7**	**-0.9**
KLMR				pmax	pmax		
	comp=Z,24nm,0.8s						
KLMR	**Klimovskoe**	**31.57**	**331**	*e*P	**P**	**14 04 19.7**	**-0.9**
KLMR				AMP		14 04 21.3	
	comp=Z,24nm,0.8s						
MILM	**Milestii Mici**	**32.85**	**302**	⇑P	**P**	**14 04 33.2**	**+1.2**
AKASG	**Malin Array Be**	**33.00**	**309**	P	**P**	**14 04 33.1**	**-0.1**
	comp=Z,27nm,0.6s,baz=81,slow=7.0,SNR=39						
AKASG				PP	**PnPn**	**14 05 45.9**	**-2.0**
	comp=Z,2.1nm,0.6s,baz=93,slow=13,SNR=4.5						
AKASG	**Malin Array Be**	**33.00**	**309**	*ce*P	**P**	**14 04 33.9**	**+0.7**
AKASG				pmax	pmax		
	comp=Z,27nm,0.6s						
AKASG	**Malin Array Be**	**33.00**	**309**	P	**P**	**14 04 33.8**	**+0.6**
AKASG				IAmb	IAmb	14 04 34.6	
	comp=Z,8.1nm,0.8s						
AKBB	**Malin Array Si**	**33.00**	**309**	P	**P**	**14 04 34.1**	**+0.9**
AKBB				pmax	pmax		
	comp=Z,26nm,0.7s						
AKBB	**Malin Array Si**	**33.00**	**309**	P	**P**	**14 04 34.0**	**+0.9**
TPGR	**Topolog**	**33.08**	**298**	⇓P	**P**	**14 04 35.4**	**+1.4**
SORM	**Soroca**	**33.25**	**304**	⇓P	**P**	**14 04 35.9**	**+0.6**
CFR	**Carcaliu**	**33.28**	**299**	⇓P	**P**	**14 04 37.0**	**+1.4**
TMCR	**Tamitsa**	**34.14**	**335**	*e*P	**P**	**14 04 42.0**	**-0.9**
TMCR				pmax	pmax		
	comp=Z,41nm,0.4s						
NRIK	**Noril'sk**	**34.24**	**10**	P	**P**	**14 04 44.6**	**+0.9**
	comp=Z,12nm,0.6s,baz=199,slow=5.4,SNR=18						
NRIK	**Noril'sk**	**34.24**	**10**	*ce*P	**P**	**14 04 44.5**	**+0.8**
NRIK				pmax	pmax		
	comp=Z,23nm,1.1s						
NRIK	**Noril'sk**	**34.24**	**10**	P	**P**	**14 04 43.4**	**-0.3**
NRIK				IAmb	IAmb	14 04 45.5	
	comp=Z,14nm,0.8s						
VRI	**Vrincioaia**	**34.27**	**300**	⇑P	**P**	**14 04 46.7**	**+2.5**
PLOR	**Plostina**	**34.32**	**300**	⇓P	**P**	**14 04 47.2**	**+2.5**
TESR	**Tescani**	**34.33**	**301**	⇑P	**P**	**14 04 46.2**	**+1.5**
MNK	**Minsk**	**34.57**	**315**	*i* P	**P**	**14 04 46.8**	**+0.2**
	comp=E,5.0nm,0.9s						
MNK				*i* P	**P**	**14 04 46.8**	**+0.2**
	comp=N,14nm,0.9s						
MNK				*i* P	**P**	**14 04 46.8**	**+0.2**
	comp=Z,49nm,0.9s						
MNK				*i* pP	**pP**	**14 05 19.0**	**+1.7**
MNK				*i* sP	**sP**	**14 05 36.5**	**+3.0**
MNK				*i* PP	**PnPn**	**14 06 06.6**	**-0.5**
MNK				*i* PcP	**PcP**	**14 07 19.8**	**+1.8**
MNK				*i* S	**S**	**14 10 02.5**	**-2.6**
MNK				*i* sS	**sS**	**14 11 00.1**	**-0.1**
MNK				*i* SS	SS	14 13 07.2	+28
MNK				*i* ScS	ScS	14 15 20.1	+27
MNK				*i* LRM	MLR	14 20 09.3	
	comp=Z,48nm,18.9s						
MNK				*i* LRM	MLR	14 20 09.9	
	comp=N,109nm,18.9s						
MNK				*i* LRM	MLR	14 20 15.1	
	comp=E,3.0nm,18.9s						
MLR	**Muntele Rosu**	**34.82**	**299**	P	**P**	**14 04 50.8**	**+1.6**
	comp=E,19nm,0.8s,baz=62,slow=3.4,SNR=22						
MLR	**Muntele Rosu**	**34.82**	**299**	⇑P	**P**	**14 04 51.5**	**+2.4**
DOPR	**Dopca**	**35.20**	**300**	⇑P	**P**	**14 04 54.2**	**+2.0**
NACGM	**Naroch**	**35.28**	**316**	*i* P	**P**	**14 04 54.0**	**+1.3**
NACGM				*i* P	**P**	**14 04 54.0**	**+1.3**
NACGM				*i* P	**P**	**14 04 54.0**	**+1.3**
NACGM				*i* PP	**PnPn**	**14 06 15.8**	**0.0**
NACGM				*i* S	**S**	**14 10 23.5**	**+7.4**
NACGM				*i* SS	**SS**	**14 12 59.7**	**+7.4**
NACGM				*i* LQ	LQ	14 16 44.3	
NACGM				*i* LR	LR	14 20 30.5	
BURAR	**Bucovina Array**	**35.33**	**303**	⇓P	**P**	**14 04 55.0**	**+1.6**
BURAR	**Bucovina Array**	**35.33**	**303**	P	**P**	**14 04 54.1**	**+0.7**
BUR08	**Bucovina Ar. S**	**35.34**	**303**	P	**P**	**14 04 54.5**	**+1.0**
VOIR		**35.45**	**299**	⇓P	**P**	**14 04 55.9**	**+1.5**
IIGN	**Ignalina**	**35.70**	**316**	*e*P	**P**	**14 04 57.0**	**+0.7**
ISAL	**Salakas**	**35.80**	**317**	*e*P	**P**	**14 04 58.2**	**+0.9**
APE	**Apeiranthos**	**36.16**	**285**	⇑P	**P**	**14 05 01.9**	**+1.3**
LVV	**L'vov**	**36.21**	**307**	*e*P	**P**	**14 05 01.5**	**+0.7**
VSU	**Vasula**	**36.26**	**322**	*e*P	**P**	**14 05 01.8**	**+0.7**
PABE	**Paberze**	**36.99**	**316**	*e*P	**P**	**14 05 08.3**	**+1.1**
GZR	**Gura Zlata**	**37.05**	**299**	⇑P	**P**	**14 05 09.5**	**+1.5**
KWP	**Kalwaria Pacla**	**37.06**	**306**	*e*P	**P**	**14 05 10.1**	**+2.0**
SUW	**Suwalki**	**37.18**	**314**	*e*P	**P**	**14 05 09.4**	**+0.5**
KOLS	**Kolonicke sedl**	**37.33**	**305**	*e*P	**P**	**14 05 11.8**	**+1.5**
KOLS				pmax	pmax		
	comp=Z,10.0nm,1.2s						
KOLS	**Kolonicke sedl**	**37.33**	**305**	*e*P	**P**	**14 05 11.8**	**+1.5**
KOLS				*e*PP	**PnPn**	**14 06 40.8**	**+0.3**
LVZ	**Lovozero**	**37.56**	**338**	P	**P**	**14 05 12.9**	**+0.9**
LVZ				pmax	pmax		
	comp=Z,20nm,0.7s						
LVZ	**Lovozero**	**37.56**	**338**	P	**P**	**14 05 12.9**	**+0.9**
LVZ				IAmb	IAmb	14 05 13.3	
	comp=Z,20nm,0.7s						
FIA1	**FINESS Array S**	**37.57**	**326**	P	**P**	**14 05 12.0**	**0.0**
FIA1				IAmb	IAmb	14 05 13.2	
	comp=Z,16nm,0.6s						
FINES	**FINESS Array B**	**37.57**	**326**	P	**P**	**14 05 12.8**	**+0.7**
	comp=Z,9.3nm,0.4s,baz=115,slow=9.1,SNR=64						
FINES	**FINESS Array B**	**37.57**	**326**	P	**P**	**14 05 12.4**	**+0.3**
MTSE	**Matsula**	**37.80**	**321**	*e*P	**P**	**14 05 15.1**	**+1.0**
MDVR	**Moldovita**	**37.85**	**298**	⇑P	**P**	**14 05 16.5**	**+1.8**
PBUR	**Paburge**	**38.21**	**317**	*e*P	**P**	**14 05 18.5**	**+0.9**
NIE	**Niedzica**	**38.63**	**306**	*e*P	**P**	**14 05 23.7**	**+2.5**
LANS	**Liptovska Anna**	**39.17**	**306**	*e*P	**P**	**14 05 27.9**	**+2.2**
LANS	**Liptovska Anna**	**39.17**	**306**	*e*P	**P**	**14 05 27.9**	**+2.2**
MORH	**Mrgy, Hungar**	**39.88**	**301**	⇓P	**P**	**14 05 33.2**	**+1.7**
JAVC	**Velka Javorina**	**40.36**	**305**	*e*P	**P**	**14 05 37.9**	**+2.3**
MORC	**Moravsky Berou**	**40.41**	**307**	*e*P	**P**	**14 05 37.4**	**+1.4**
MORC	**Moravsky Berou**	**40.41**	**307**	P	**P**	**14 05 36.7**	**+0.7**
MORC				pmax	pmax		

	comp=Z,9.0nm,0.7s						
MORC	Moravsky Berou	40.41	307	P	P	14 05 36.7	+0.7
MORC				IAmb	IAmb	14 05 38.4	
	comp=Z,8.9nm,0.7s						
GKP	Gorka Klasztor	40.63	312	eP	P	14 05 37.7	+0.1
KRLC	Kraliky	40.90	307	eP	P	14 05 41.1	+1.1
KRLC	Kraliky	40.90	307	eP	P	14 05 41.1	+1.1
KEV	Kevo	40.90	338	P	P	14 05 40.5	+0.9
KEV				pmax	pmax		
	comp=Z,21nm,1.0s						
KEV	Kevo	40.90	338	P	P	14 05 40.5	+0.9
KEV				IAmb	IAmb	14 05 41.2	
	comp=Z,21nm,1.0s						
VRAC	Vranov	41.05	306	P	P	14 05 42.3	+1.1
	comp=Z,7.3nm,0.7s,baz=86,slow=7.4,SNR=8.3						
VRAC	Vranov	41.05	306	eP	P	14 05 43.0	+1.8
UPP	Uppsala	41.15	322	eP	P	14 05 41.9	+0.1
DPC	Dobruska-Polom	41.19	307	eP	P	14 05 44.1	+1.8
DPC	Dobruska-Polom	41.19	307	eP	P	14 05 44.1	+1.8
KRUC	Moravsky	41.19	306	eP	P	14 05 43.9	+1.6
ARA0	ARCESS Array S	41.24	338	eP	P	14 05 42.8	+0.3
ARCES	ARCESS Array B	41.24	338	P	P	14 05 43.3	+0.8
	comp=Z,20nm,0.6s,baz=109,slow=8.2,SNR=86						
ARCES				LR	LR	14 24 59.8	
	comp=Z,110nm,20.7s,baz=260,slow=39						
ARCES	ARCESS Array B	41.24	338	P	P	14 05 43.5	+1.0
ARCES				pmax	pmax		
	comp=Z,18nm,0.7s						
ARCES	ARCESS Array B	41.24	338	P	P	14 05 43.5	+1.0
ARCES				IAmb	IAmb	14 05 44.2	
	comp=Z,18nm,0.7s						
CHVC	Chvalec	41.35	308	eP	P	14 05 45.3	+1.7
UPC	Upice	41.38	308	eP	P	14 05 45.1	+1.3
UPC	Upice	41.38	308	eP	P	14 05 45.1	+1.3
KTK1	Kautokeino	41.72	336	eP	P	14 05 47.0	+0.7
TREC	Trest	41.77	306	eP	P	14 05 48.9	+1.8
TREC	Trest	41.77	306	eP	P	14 05 48.9	+1.8
BSD	Bornholm Skovb	42.08	315	iP	P	14 05 49.3	-0.1
BSD	Bornholm Skovb	42.08	315	iP	P	14 05 49.3	-0.1
BSD	Bornholm Skovb	42.08	315	iP	P	14 05 49.3	-0.1
HAMF	Hammerfest	42.33	339	eP	P	14 05 52.5	+1.3
PRU	Pruhonice	42.35	307	eP	P	14 05 53.3	+1.6
PRU	Pruhonice	42.35	307	eP	P	14 05 53.3	+1.6
PBCC	Pribram	42.72	307	eP	P	14 05 56.1	+1.4
GERES	GERES Array B	42.98	305	P	P	14 05 58.2	+1.2
	comp=Z,1.3nm,0.6s,baz=78,slow=7.4,SNR=7.1						
GERES				PP	PP	14 07 41.2	+1.8
	comp=Z,1.9nm,0.8s,baz=74,slow=9.9,SNR=6.1						
KHC	Kasperske Hory	43.03	306	ceP	P	14 05 58.3	+1.0
KHC				pmax	pmax		
	comp=Z,28nm,2.5s						
KHC	Kasperske Hory	43.03	306	eP	P	14 05 58.0	+0.7
KHC				epP	pP	14 06 26.5	-2.5
HFS	Hagfors	43.15	322	P	P	14 05 58.3	+0.4
	comp=Z,47nm,0.7s,baz=106,slow=9.4,SNR=65						
CLL	Collm	43.25	309	iP	P	14 05 59.5	+0.6
	comp=Z,12nm,1.0s						
CLL				iPP	PcP	14 07 44.0	-1.5
CLL				i		14 07 50.2	
TRO	Tromso	43.37	336	eP	P	14 06 00.3	+0.7
N2ST	Straumen	43.77	333	eP	P	14 06 03.6	+0.8
N2IH	Innhavet	43.83	333	eP	P	14 06 04.1	+0.8
FAUS	Fauske	43.90	333	eP	P	14 06 04.2	+0.3
N2TV	T¥rnvik	44.01	333	eP	P	14 06 05.5	+0.8
N2NF	Nordfold	44.02	333	eP	P	14 06 05.4	+0.5
STEI	Steigen	44.07	333	eP	P	14 06 06.0	+0.9
YAK	Yakutsk	44.07	35	P	P	14 06 04.5	-0.9
	comp=Z,5.1nm,0.6s,baz=207,slow=0.4,SNR=6.8						
YAK	Yakutsk	44.07	35	ceP	P	14 06 04.7	-0.6
YAK				pmax	pmax		
	comp=Z,11nm,0.9s						
YAK	Yakutsk	44.07	35	P	P	14 06 03.2	-2.2
YAK				IAmb	IAmb	14 06 08.3	
	comp=Z,12nm,0.8s						
NC405	NORSAR Array S	44.23	323	P	P	14 06 07.1	+0.5
MNSI	Mandailing Nat	44.23	137	P	P	14 06 09.8	+2.7
NC602	NORSAR Array S	44.27	323	P	P	14 06 06.9	0.0
NC602	NORSAR Array S	44.27	323	eP	P	14 06 07.1	+0.2
NBB30	Finnes	44.38	332	eP	P	14 06 08.4	+0.8
NC303	NORSAR Array S	44.40	323	P	P	14 06 08.6	+0.5
NB201	NORSAR Array S	44.42	323	P	P	14 06 08.5	+0.3
NB2	NORSAR Subarra	44.46	323	P	P	14 06 08.5	0.0
	comp=Z,19nm,0.6s,baz=94,slow=7.9						
NOA	NORSAR Array B	44.46	323	P	P	14 06 08.4	0.0
	comp=Z,33nm,0.8s,baz=96,slow=7.8,SNR=98						
KONS	Konsvik	44.50	331	eP	P	14 06 09.3	+0.6
STOK	Stokkvaagen	44.51	331	eP	P	14 06 09.5	+0.8
NSS	Namsos	44.59	328	eP	P	14 06 09.4	+0.1
NAO01	NORSAR Array S	44.60	323	P	P	14 06 10.0	+0.4
OSL	Oslo	44.61	322	eP	P	14 06 10.0	+0.4
NBO00	NORSAR Array S	44.67	323	P	P	14 06 10.1	-0.1
NC204	NORSAR Array S	44.70	323	P	P	14 06 10.8	+0.4
LOF	Lofoten	44.74	333	eP	P	14 06 11.2	+0.7
KSRS	Korea Array	44.94	71	P	P	14 06 12.8	+0.3
	comp=Z,1.5nm,0.7s,baz=275,slow=6.7,SNR=5.8						
HOPEN	Hopen	45.11	346	eP	P	14 06 15.0	+1.6
N2RO	R,st	45.12	332	eP	P	14 06 12.9	-0.6
KONO	Kongsberg	45.16	321	ceP	P	14 06 15.6	+1.6
KONO				pmax	pmax		
	comp=Z,53nm,1.7s						
KONO	Kongsberg	45.16	321	eP	P	14 06 13.5	-0.5
KLR	Kul'dur	45.23	54	P	P	14 06 16.1	+1.4
	comp=Z,1.2nm,0.5s,baz=304,slow=7.9,SNR=5.3						
DOMB	Dombas	45.58	324	eP	P	14 06 16.3	-1.0
HOMB	Homborsund	45.69	319	eP	P	14 06 18.9	+0.7
DAVOX	Davos/Dischmat	45.80	303	P	P	14 06 20.0	+0.5
	comp=Z,3.4nm,0.6s,baz=34,slow=5.6,SNR=5.1						
DAVOX				LR	LR	14 29 44.4	
	comp=Z,108nm,18.7s,baz=80,slow=41						
DAVOX	Davos/Dischmat	45.80	303	P	P	14 06 20.0	+0.5
SKAR	Skarslia	45.86	322	eP	P	14 06 20.0	+0.5
TIXI	Tiksi	45.89	22	ceP	P	14 06 19.2	-0.3
TIXI	Tiksi	45.89	22	P	P	14 06 19.4	-0.2
SNART	Snartemo	46.38	319	eP	P	14 06 24.6	+1.1
AKN	Aaknes	46.55	324	eP	P	14 06 25.2	+0.3
ODD1	Odda	46.67	321	eP	P	14 06 27.1	+1.2
BLS5	Blasjo	46.76	321	eP	P	14 06 26.2	-0.3
HYA	Hoyanger	46.91	323	eP	P	14 06 28.4	+0.8
BER	Bergen	47.32	322	eP	P	14 06 31.6	+0.8
ASK	Askoy	47.39	322	eP	P	14 06 32.3	+1.0
FOO	Floro	47.44	324	eP	P	14 06 32.5	+0.6
SPA0	Spitsbergen Ar	47.60	347	P	P	14 06 34.3	+1.5
SPA0				IAmb	IAmb	14 06 35.0	
	comp=Z,26nm,1.0s						
SPA0	Spitsbergen Ar	47.60	347	eP	P	14 06 34.4	+1.5
SPITS	Spitsbergen Ar	47.60	347	P	P	14 06 33.9	+1.1
	comp=Z,9.8nm,0.6s,baz=141,slow=16,SNR=25						
SENIN	Lac Senin/Sane	47.63	303	P	P	14 06 34.1	+0.4
KBS	Kingsbay	48.72	347	ceP	P	14 06 43.2	+1.8
KBS				pmax	pmax		
	comp=Z,53nm,2.5s						
KBS	Kingsbay	48.72	347	eP	P	14 06 41.6	+0.3
KMBO	Kilima Mbogo	48.74	228	ceP	P	14 06 50.4	+7.8
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
EKA	Eskdalemuir Ar	52.36	316	P	P	14 07 09.2	+0.3
	comp=Z,15nm,0.8s,baz=90,slow=7.4,SNR=14						
EKA				PP	PP	14 09 08.1	-0.7
	comp=Z,1.6nm,0.6s,baz=85,slow=9.6,SNR=3.5						
ESK	Eskdalemuir	52.38	316	P	P	14 07 07.5	-1.7
ESK	Eskdalemuir	52.38	316	P	P	14 07 07.5	-1.7
YSS	Yuzh-Sakhalins	52.91	55	eP	P	14 07 12.0	-1.1
DAG	Danmarks Havn	54.84	344	iP	P	14 07 27.0	+0.3
	comp=Z,20nm,0.8s						
DAG	Danmarks Havn	54.84	344	iP	P	14 07 27.0	+0.3
DAG				pmax	pmax		
	comp=Z,20nm,0.8s						
DAG	Danmarks Havn	54.84	344	iP	P	14 07 27.0	+0.3
DAG				IAmb	IAmb	14 07 28.5	
	comp=Z,20nm,0.8s						
DBG	Daneborg	55.69	341	iP	P	14 07 34.0	+1.2
DBG				IAmb	IAmb	14 07 35.9	
	comp=Z,3.5nm,0.7s						
ESDC	Sonseca Array	57.49	298	P	P	14 07 46.5	+0.3
	comp=Z,1.2nm,0.8s,baz=55,slow=8.3,SNR=5.9						
ESDC				pP	pP	14 08 10.8	-8.9
	comp=Z,0.8nm,0.6s,baz=48,slow=6.7,SNR=3.0						
ESDC	Sonseca Array	57.49	298	P	P	14 07 44.4	-1.8
MRSI	Marisa	59.13	115	P	P	14 07 59.9	+2.1
	comp=Z,1μmcomp=Z,50nm,0.6s						
APSI	Ampana	59.87	117	P	P	14 08 01.9	-0.9
	comp=Z,2μmcomp=Z,86nm,0.6s						
SUMG	Summit	61.16	341	iP	P	14 08 12.3	+1.0
	comp=Z,40nm,0.9s						
SUMG	Summit	61.16	341	P	P	14 08 11.4	+0.1
SUMG				pmax	pmax		
	comp=Z,16nm,0.8s						
SUMG	Summit	61.16	341	P	P	14 08 11.3	+0.1
SUMG				IAmb	IAmb	14 08 13.4	
	comp=Z,16nm,0.8s						
SUMG	Summit	61.16	341	iP	P	14 08 12.3	+1.0
SUMG				IAmb	IAmb	14 08 13.5	
	comp=Z,40nm,0.9s						
ICESG	Greenland Ices	63.31	338	iP	P	14 08 26.6	+1.0
ICESG				IAmb	IAmb	14 08 27.1	
	comp=Z,7.9nm,0.9s						
TOA0	Torodi Ar. Sit	65.69	269	P	P	14 08 39.8	-1.7
TOA0				IAmb	IAmb	14 08 42.0	
	comp=Z,5.0nm,0.6s						
TORD	Torodi Ar. Bea	65.69	269	P	P	14 08 39.9	-1.6
	comp=Z,3.1nm,0.4s,baz=49,slow=5.7,SNR=22						
TORD	Torodi Ar. Bea	65.69	269	P	P	14 08 39.6	-1.9
TORD				IAmb	IAmb	14 08 42.0	
	comp=Z,3.6nm,0.6s						
KOWA	Kowa	69.55	273	P	P	14 09 04.4	-1.3
KOWA				IAmb	IAmb	14 09 05.4	
	comp=Z,5.4nm,0.7s						
TOLK	Toolik Lake Re	71.04	15	P	P	14 09 14.2	+0.3
TOLK				IAmb	IAmb	14 09 14.8	
	comp=Z,5.8nm,0.6s						
IMAR	Indian Mountai	72.29	18	P	P	14 09 21.0	-0.4
BMAR	Burnt Mountain	73.06	14	P	P	14 09 26.6	+0.6
C36M	Paulatuk	74.00	5	P	P	14 09 31.5	+0.2
INK	Inuvik	74.02	9	P	P	14 09 31.7	+0.2
	comp=Z,8.8nm,0.8s,baz=355,slow=6.9,SNR=34						
INK	Inuvik	74.02	9	P	P	14 09 32.0	+0.5
INK				pmax	pmax		
	comp=Z,15nm,1.1s						
INK	Inuvik	74.02	9	P	P	14 09 32.0	+0.5
INK				IAmb	IAmb	14 09 32.9	
	comp=Z,14nm,1.1s						
BPAW	Bear Paw Mtn.	74.51	18	P	P	14 09 33.1	-1.3
ILAR	Eielson Array	74.90	16	P	P	14 09 36.1	-0.5
	comp=Z,2.5nm,0.9s,baz=313,slow=4.6,SNR=16						
BCAR	Beaver Creek A	77.48	15	P	P	14 09 51.3	0.0
BOSA	Boshof	77.64	220	P	P	14 09 52.8	+0.1
	comp=Z,5.5nm,0.8s,baz=47,slow=3.2,SNR=13						
HYT	Haines Junctio	80.37	14	P	P	14 10 06.1	-1.1
YKA	Yellowknife Ar	81.36	3	P	P	14 10 12.4	+0.2
	comp=Z,4.0nm,0.6s,baz=356,slow=5.1,SNR=77						
WRA	Warramunga Arr	81.95	122	P	P	14 10 14.8	-1.1
	comp=Z,3.7nm,0.7s,baz=323,slow=4.9,SNR=48						
WRA				sP	pP	14 10 54.0	+1.5
	comp=Z,1.2nm,0.7s,baz=324,slow=5.0,SNR=3.4						
AS31	Alice Springs	84.20	125	P	P	14 10 26.8	-0.7
ASAR	Alice Springs	84.20	125	P	P	14 10 26.6	-1.0
	comp=Z,4.8nm,0.7s,baz=309,slow=5.0,SNR=133						
ASAR				sP	pP	14 11 05.2	+1.0
	comp=Z,1.3nm,0.8s,baz=315,slow=5.1,SNR=3.2						
ASAR	Alice Springs	84.20	125	P	P	14 10 26.7	-0.8
ASAR	Alice Springs	84.20	125	P	P	14 10 26.7	-0.8
ULM	Lac du Bonnet	92.96	352	P	P	14 11 07.9	-1.0
	comp=Z,1.3nm,0.6s,baz=331,slow=5.2,SNR=4.8						
PLCA	Paso Flores	149.77	250	PKPbc	PKPbc	14 17 45.0	0.0
	comp=Z,2.4nm,0.9s,baz=135,slow=2.4,SNR=5.2						
PLCA	Paso Flores	149.77	250	PKHKP	PKPpre	14 17 45.0	

IDC 26 14:55:14.6±4.2**, 48°.21S**×**120°.19E, h0^{km}, mb3.5**/3**, mb1 3.7**/3**, mb1mx3.5**/25**, mbtmp3.6**/3**, MS3.5**/4**, Ms1 3.5**/4**, ms1mx3.1**/19**, Error ellipse: s-maj=121.8km s-min=74.3km az=127.0, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	23.01	53	P	P	15 00 21.1	+0.1
	0.6nm,0.5s,baz=192,slow=19,SNR=3.7						
STKA				LR	LR	15 07 54.4	
	comp=Z,68nm,19.0s,baz=207,slow=33						
ASAR	Alice Springs	26.81	29	P	P	15 00 56.9	+0.4
	1.1nm,1.0s,baz=201,slow=8.5,SNR=13						
ASAR				LR	LR	15 10 25.1	
	comp=Z,123nm,21.4s,baz=194,slow=34						
FITZ	Fitzroy Crossi	30.36	10	LR	LR	15 12 41.3	
	comp=Z,58nm,21.8s,baz=209,slow=34						
WRA	Warramunga Arr	30.43	27	P	P	15 01 28.2	-0.6
	0.3nm,0.9s,baz=195,slow=8.2,SNR=1.8						
VNDA	Vanda	33.46	165	LR	LR	15 14 01.3	
	comp=Z,126nm,18.6s,baz=296,slow=34						
YKA	Yellowknife Ar	146.87	44	PKPbc	PKPbc	15 14 56.8	-0.8
	0.2nm,0.5s,baz=245,slow=2.9,SNR=2.6						

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*TEH **26** 15:04:13.6, 33°.24N×54°.10E, h9^{km}, ML3.7*

*THR **26** 15:04:13.9±0.4, 33°.25N×54°.12E, h14^{km}±9^{km}, ML3.6*

ISC 26 15:04:15.2±0.9**, 33°.20N**±0°.04×**54°.09E**±0°.03**, h10^{km}, n49,** σ0^{s}92/49**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANAR	Anarak	0.30	269	ePg	Pg	15 04 20.2	-1.0
ANAR				e		15 04 25.1	
	comp=Z,99nm,0.2s						
YZKH	Yazd	0.91	152	ePg	Pg	15 04 31.9	-0.8
YZKH	Yazd	0.91	152	ePg	Pg	15 04 31.9	-0.8
ICHK	Chekchek	0.99	164	ePg	Pg	15 04 34.0	-0.2
ICHK				e		15 04 50.3	
	comp=Z,99nm,0.2s						
NASN	Na'in	1.14	250	ePg	Pg	15 04 36.1	-1.1
NASN				eSg	Sb	15 04 52.5	+0.2
NASN	Na'in	1.14	250	ePg	Pg	15 04 36.1	-1.1
ISAD	Sadrabad	1.32	195	ePg	Pn	15 04 39.6	-0.4
ISAD				e		15 04 41.8	
	comp=Z,99nm,0.2s						
IZEF	Zefreh	1.50	259	ePg	Pn	15 04 42.4	-0.1
IZEF				e		15 05 04.8	
	comp=Z,99nm,0.2s						
IMEH	Mehriz	1.85	166	ePn	Pb	15 04 48.7	-0.6
IMEH				e		15 05 18.9	
	comp=Z,99nm,0.2s						
IGAR	Gharneh	1.89	246	ePn	Pn	15 04 48.8	+1.0
IGAR				e		15 05 16.9	
	comp=Z,99nm,0.2s						
IRAM	Ramesheh	2.00	227	ePn	Pb	15 04 50.5	-1.2
IRAM				e		15 05 20.3	
	comp=Z,99nm,0.3s						
IBAF	Bafgh	2.03	142	ePn	Pb	15 04 51.1	-1.2
IBAF				e		15 05 22.2	
	comp=Z,99nm,0.2s						
IKLH	Kolahrood	2.10	274	ePn	Pn	15 04 51.8	+1.1
IKLH				e		15 05 21.6	
	comp=Z,99nm,0.3s						
TPRV	Parvadeh(Tabas	2.19	94	ePn	Pn	15 04 51.7	0.0
TPRV				e		15 05 27.6	
	comp=Z,99nm,0.3s						
TNSJ	Nastanj	2.24	69	ePn	Pn	15 04 53.2	+0.7
TNSJ				e		15 05 28.7	
	comp=Z,99nm,0.5s						
IANJ	Anjilo	2.27	356	ePn	Pn	15 04 52.8	-0.2
IANJ				e		15 05 26.3	
	comp=Z,99nm,0.4s						
ILAS	Lasjerd	2.37	337	ePn	Pn	15 04 54.4	0.0
TKDS	Koohdasht(Taba	2.57	80	ePn	Pn	15 04 56.8	-0.2
TKDS				e		15 05 51.6	
	comp=Z,99nm,0.5s						
GHVR	GHOM	2.65	300	IAML		15 05 49.8	
	comp=E,181nm,0.6s						
IVRN	Varamin	2.66	313	ePn	Pn	15 04 57.9	-0.2
IVRN				e		15 05 40.0	
	comp=Z,99nm,0.3s						
IFIR	Firoozkooh	2.68	336	e	Sg	15 05 44.2	+3.0
	comp=Z,99nm,0.3s						
SHK1	Shahrekord	2.83	253	ePn	Pn	15 05 02.0	+1.3
DAMV	Damavand	2.99	325	ePn	Pn	15 05 02.8	-0.1
DAMV	Damavand	2.99	325	ePn	Pn	15 05 02.8	-0.1
IQOM	Qom	2.99	304	ePn	Pn	15 05 02.8	-0.1
KLNJ	Kolanjah	3.04	225	ePn	Pn	15 05 04.4	+0.8
KLNJ				e		15 06 04.7	
	comp=Z,99nm,0.8s						
IHSB	Hasanabad	3.23	315	ePn	Pn	15 05 06.8	+0.8
IGLO	Ghaloghah	3.31	356	ePn	Pn	15 05 08.1	+0.9
IPRN	Peran	3.36	335	ePn	Pn	15 05 08.1	+0.2
KHGB	Koh Gabri	3.47	143	ePn	Pn	15 05 10.8	+1.3
ASAO	Ashtian	3.64	293	ePn	Pn	15 05 12.4	+0.6
ASAO	Ashtian	3.64	293	ePn	Pn	15 05 12.4	+0.6
IMHD	Mahdasht	3.76	312	ePn	Pn	15 05 13.7	+0.4
ITEG	Tejag	3.93	93	ePn	Pn	15 05 16.2	+0.5
TVBK	TV Kerman	3.93	144	ePn	Pn	15 05 16.8	+0.9
IRAZ	Razeghan	4.08	304	ePn	Pn	15 05 18.0	+0.1
AFRZ	Afriz	4.13	85	ePn	Pn	15 05 18.5	0.0
AFRZ				e		15 05 32.0	
	comp=Z,99nm,0.4s						
IKOO	Kooshah	4.21	99	ePn	Pn	15 05 20.1	+0.4
QALM	Alamut, Qazvin	4.29	320	ePn	Pn	15 05 21.4	+0.6
SBZV	Sabzevar	4.31	41	ePn	Pn	15 05 21.0	0.0
BSRN	Basiran	4.43	105	ePn	Pn	15 05 22.5	-0.1
BSRN	Basiran	4.43	105	ePn	Pn	15 05 22.5	-0.1
CHMN	Cheshme madani	4.44	138	ePn	Pn	15 05 25.0	+2.0
QABG	Abgarm-Qazvin	4.49	305	ePn	Pn	15 05 22.7	-0.7
IMON	Monand	4.68	89	ePn	Pn	15 05 27.0	+0.9
HSAM	Samen	4.68	284	ePn	Pn	15 05 27.2	+1.1
IDAH	Dahanechah	4.88	94	ePn	Pn	15 05 30.3	+1.4
IPAY	Payeh	5.18	50	ePn	Pn	15 05 33.4	+0.4
IKFM	Kafar-mosalman	5.23	275	ePn	Pn	15 05 34.8	+1.4

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*IDC **26** 15:04:15.3±4.7, 1°.30N×125°.46E, h94^{km}±45^{km}, mb3.9/8, mb1 3.9/10, mb1mx3.6/34, mbtmp4.2/10, Error ellipse: s-maj=44.2km s-min=13.4km az=80.0*

*BJI **26** 15:04:15.3±0.0, 1°.37N×125°.37E, h97^{km}, mB5.1/9, mb4.6/9*

*NEIC **26** 15:04:16.5±2.7, 1°.39N±0°.08×125°.76E±0°.03, h107^{km}±7^{km}, mb4.7/42, Error ellipse: s-maj=12.4km s-min=2.0km az=195.0*

*DJA **26** 15:04:18.5±0.3, 1°N±2°×12°6E±°, h86^{km}±6^{km}, M4.3/12, mb4.3/3, mB5.0/2, MLv4.3/12, Mw(mB)4.3/2*

ISC 26 15:04:17.7±0.8**, 1°.34N**±0°.04×**125°.79E**±0°.04**, h117^{km}**±8^{km}**, n78,** σ1^{s}**36**/85**, mb4.6**/31**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	1.68	110	Pn	Pn	15 04 46.9	-0.1
TNTI				Sn	Sn	15 05 08.2	-1.1
TNTI	Ternate	1.68	110	P	Pn	15 04 47.0	0.0
TNTI				S	Sn	15 05 08.1	-1.2
KMSI	Cibinong	1.96	247	P	Pn	15 04 50.5	+0.1
KMSI				S	Sn	15 05 15.2	-0.3
SGSI	Sangihe	2.34	354	P	Pn	15 04 55.3	0.0
SGSI				S	Sn	15 05 23.6	-0.6
GTOI	Gorontalo	2.86	256	P	Pn	15 05 03.3	+1.3
GTOI				S	Sn	15 05 37.4	+1.2
SANI	Sanana	3.37	177	P	Pn	15 05 07.4	-1.4
SANI				S	Sn	15 05 43.8	-4.5
LUWI	Luwuk	3.83	232	Pn	Pn	15 05 15.8	+0.9
LUWI	Luwuk	3.83	232	P	Pn	15 05 16.6	+1.7
MRSI	Marisa	3.94	257	P	Pn	15 05 16.5	+0.2
APSI	Ampana	4.70	242	P	Pn	15 05 28.7	+2.1
NLAI	Namlea	4.74	164	P	Pn	15 05 27.0	0.0
TOLI2	Tolitoli	5.01	267	Pn	Pn	15 05 30.5	-0.2
TOLI2				Sn	Sn	15 06 24.4	-3.1
SIJI	Sorong	5.90	112	P	Pn	15 05 44.1	+1.3
	1.0nm,0.3s,baz=148,slow=23,SNR=5.6						
FAKI	Fak Fak	7.72	123	Pn	Pn	15 06 07.6	+0.1
FAKI				Sn	Sn	15 07 32.1	-1.2
MYLDM	Lahad Datu	8.21	298	Pn	Pn	15 06 15.3	+1.3
KKM	Kota Kinabalu	10.63	296	Pn	Pn	15 06 49.2	+2.3
SZP	Santa	16.94	342	P	P	15 08 08.0	+0.3
SZP				IAmb	IAmb	15 08 37.7	
	comp=Z,48nm,1.3s						
FITZ	Fitzroy Crossi	19.32	180	P	P	15 08 33.8	+0.1
	comp=Z,0.5nm,0.3s,baz=18,slow=9.6,SNR=16						
FITZ	Fitzroy Crossi	19.32	180	P	P	15 08 33.9	+0.1
TWG	Pinlang	21.84	348	P	P	15 08 59.8	-1.0
TWG				IAmb	IAmb	15 09 01.1	
	comp=Z,18nm,0.6s						
YULB	Yu-li	22.35	349	P	P	15 09 03.9	-2.3
YULB				IAmb	IAmb	15 09 17.6	
	comp=Z,61nm,1.7s						
TPUB	Ta-pu	22.39	347	P	P	15 09 02.2	-4.4
TPUB				IAmb	IAmb	15 09 03.3	
	comp=Z,54nm,1.3s						
WB0	Warramunga Arr	22.61	158	P	P	15 09 08.0	-0.9
WB0				IAmb	IAmb	15 09 11.1	
	comp=Z,7.7nm,0.5s						
WRAB	Tennant Creek	22.75	159	P	P	15 09 09.8	-0.4
WRA	Warramunga Arr	22.75	159	P	P	15 09 09.6	-0.7
	comp=Z,3.4nm,0.4s,baz=336,slow=11,SNR=90						
WB2	Warramunga Arr	22.76	159	P	P	15 09 09.9	-0.4
SSLB	Suanglung	22.80	349	P	P	15 09 07.5	-3.1
SSLB				IAmb	IAmb	15 09 42.1	
	comp=Z,85nm,1.8s						
WR0	Warramunga Arr	22.84	158	P	P	15 09 10.5	-0.6
WR0				IAmb	IAmb	15 09 12.7	
	comp=Z,35nm,1.7s						
COEN	Coen	22.98	132	P	P	15 09 11.3	-1.1
XMIS	Christmas Isla	23.22	239	P	P	15 09 13.9	-0.8
XMIS				IAmb	IAmb	15 09 19.6	
	comp=Z,18nm,0.8s						
YHNB	Yeheng	23.58	350	P	P	15 09 16.3	-1.7
YHNB				IAmb	IAmb	15 09 37.4	
	comp=Z,65nm,1.5s						
AS31	Alice Springs	26.08	163	P	P	15 09 40.8	+0.3
ASAR	Alice Springs	26.08	163	P	P	15 09 40.9	+0.3
	comp=Z,2.2nm,0.7s,baz=339,slow=7.4,SNR=88						
ASAR				PcP	PcP	15 13 06.0	+0.5
	comp=Z,0.4nm,0.4s,baz=348,slow=2.2,SNR=7.5						
ASAR	Alice Springs	26.08	163	P	P	15 09 40.7	+0.1
JCJ	Chichijima	30.06	30	P	P	15 10 14.5	-1.4
NJ2	Nanjing	31.24	349	eP	P	15 10 26.3	+0.1
FORT	Forrest	32.02	176	P	P	15 10 33.7	+0.7
FORT				IAmb	IAmb	15 10 34.9	
	comp=Z,13nm,0.8s						
JWT	Wachi	34.94	14	P	P	15 10 58.6	+0.2
BBOO	Buckleboo	35.33	165	P	P	15 11 01.9	+0.2
BBOO				IAmb	IAmb	15 11 34.5	
	comp=Z,16nm,1.6s						
STKA	Stephens Creek	36.28	157	P	P	15 11 10.7	+0.8
	comp=Z,3.5nm,0.5s,baz=331,slow=9.2,SNR=12						
STKA	Stephens Creek	36.28	157	P	P	15 11 10.7	+0.8
JSD	Sado	38.28	16	P	P	15 11 26.8	+0.1
JMM	Marumori	38.88	19	P	P	15 11 31.9	+0.2
ARMA	Armidale	40.05	144	P	P	15 11 42.9	+1.2
ARMA				IAmb	IAmb	15 11 49.0	
	comp=Z,36nm,1.8s						
HHC	Hu-ho-hao-te	41.38	344	eP	P	15 11 52.0	-0.5
HHC				pmax	pmax		
	comp=Z,5.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,150nm,7.1s						
KWAJ	Kwajalein Atol	42.28	78	P	P	15 12 00.0	-0.1
CAN	Canberra	42.44	151	P	P	15 12 02.6	+1.4
CAN				IAmb	IAmb	15 12 08.5	
	comp=Z,30nm,1.4s						
TOO	Toolangi	42.80	157	P	P	15 12 05.9	+2.0
TOO				IAmb	IAmb	15 12 39.1	
	comp=Z,15nm,1.4s						
USA0B	Ussuriysk Arra	43.03	7	P	P	15 12 05.8	+0.1
USA0B				IAmb	IAmb	15 12 28.1	
	comp=Z,46nm,1.8s						
USRK	Ussuriysk Ar.	43.03	7	P	P	15 12 06.3	+0.7
	comp=Z,2.9nm,0.5s,baz=189,slow=7.8,SNR=14						
USRK	Ussuriysk Ar.	43.03	7	P	P	15 12 06.0	+0.4
ASAJ	Asahikawa	45.14	17	P	P	15 12 23.4	+0.9
	comp=Z,6.7nm,0.9s,baz=232,slow=11,SNR=6.6						
JKA	Kamikawa-asahi	45.14	17	P	P	15 12 23.4	+0.9
JKA	Kamikawa-asahi	45.14	17	IAmb	IAmb	15 12 28.2	
	comp=Z,20nm,1.1s						
ULN	Ulaanbaatar	49.10	343	P	P	15 12 53.9	+0.5
ULN				IAmb	IAmb	15 12 55.0	
	comp=Z,5.4nm,1.5s						
SONM	Songino Array	49.27	343	P	P	15 12 54.0	-0.6
	comp=Z,0.9nm,0.6s,baz=162,slow=9.9,SNR=4.1						
SONM	Songino Array	49.27	343	IAmb	IAmb	15 12 56.2	
	comp=Z,1.1nm,0.8s						
WMQ	Urumqi	54.16	327	eP	P	15 13 32.5	+1.5
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,190nm,4.9s						
MK31	Makanchi Array	58.99	327	P	P	15 14 03.8	-1.3
MKAR	Makanchi Array	58.99	327	P	P	15 14 03.9	-1.2
	comp=Z,1.2nm,0.4s,baz=121,slow=7.1,SNR=77						
MAKZ	Makanchi	59.17	326	P	P	15 14 05.1	-1.3
MAKZ				IAmb	IAmb	15 14 07.8	
	comp=Z,6.4nm,1.3s						
QRZ	Quartz Range	59.69	140	P	P	15 14 11.7	+1.8
LBZ	Lake Benmore	60.27	145	P	P	15 14 14.9	+1.1
THZ	Tophouse	60.43	141	P	P	15 14 15.5	+0.5
TUWZ	Tuamarina	60.91	140	P	P	15 14 18.2	-0.1

KHZ	Kahutara	61.18	141	P	P	15 14 20.5	+0.5
BKZ	Black Stump Fm	61.47	137	P	P	15 14 22.9	+0.7
BKZ				IAmb	IAmb	15 14 43.1	
	comp=Z,12nm,1.2s						
BHW	Baring Head	61.50	140	P	P	15 14 22.3	+0.1
BFZ	Birch Farm	62.04	138	P	P	15 14 28.6	+2.7
BFZ				IAmb	IAmb	15 15 02.3	
	comp=Z,26nm,1.1s						
ZALV	Zalesovo Beam	62.29	334	P	P	15 14 26.3	-1.0
	comp=Z,0.4nm,0.3s,baz=124,slow=7.4,SNR=3.3						
KURK	Kurchatov	63.25	329	P	P	15 14 32.5	-1.2
KURK				IAmb	IAmb	15 14 35.4	
	comp=Z,5.3nm,0.6s						
KK06	Karatay Array	64.33	318	P	P	15 14 39.5	-1.5
TIXI	Tiksi	70.23	1	P	P	15 15 17.1	-0.5
AB06	Akbulak array	73.39	321	P	P	15 15 35.6	-1.4
AB01	Akbulak array	73.40	321	P	P	15 15 35.7	-1.3
ABKAR	Akbulak array	73.40	321	P	P	15 15 35.8	-1.3
SDPT	Sand Point	79.69	34	P	P	15 16 13.3	+1.1
TTA	Tatalina	83.44	27	P	P	15 16 33.9	+1.9
TTA				IAmb	IAmb	15 17 04.7	
	comp=Z,8.2nm,1.5s						

IDC 26 15:19:54.1±4.5**, 30°.82N**×**141°.43E, h0^{km}, mb3.2**/3**, mb1 3.4**/4**, mb1mx3.2**/42**, mbtmp3.2**/4**, ML2.3**/1**, Error ellipse: s-maj=178.2km s-min=27.9km az=72.0, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MJAR	Matsushiro Arr	6.30	336	Pn	Pn	15 21 27.1	-1.2
	0.1nm,0.3s,baz=157,slow=11,SNR=4.3						
MKAR	Makanchi Array	47.65	307	P	P	15 28 32.5	+0.4
	0.2nm,0.8s,baz=93,slow=7.5,SNR=2.4						
WRA	Warramunga Arr	50.93	189	P	P	15 28 57.2	-0.1
	0.2nm,0.3s,baz=6.5,slow=7.7,SNR=5.1						
ASAR	Alice Springs	54.66	188	P	P	15 29 24.5	-0.3
	0.2nm,0.7s,baz=358,slow=4.7,SNR=1.5						

IDC 26 15:30:36.8±999.0**, 57°.13N**×**23°.41E, h0^{km}, Error ellipse: s-maj=1822.0km s-min=156.6km az=87.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I43RU	DUBNA INFRASON	7.57	87	*i*		16 20 00.0	
	baz=277,slow=311,SNR=0.5						
I31KZ	AKTYUBINSK INF	21.36	94	*i*		17 40 20.0	
	baz=307,slow=326,SNR=5.4						
I46RU	ZALESOVO INFRA	33.86	69	*i*		18 57 30.0	
	baz=301,slow=332,SNR=2.2						

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*IDC **26** 15:33:33.0±0.8, 55°.44S×28°.08W, h0^{km}, mb4.2/5, mb1 4.4/6, mb1mx4.1/23, mbtmp4.3/6, ML4.5/1, MS3.6/7, Ms1 3.6/7, ms1mx3.4/21, Error ellipse: s-maj=37.3km s-min=20.0km az=76.0*

*NEIC **26** 15:33:38.5±1.1, 55°.5S±0°.1×28°.4W±0°.2, h33^{km}±6^{km}, mb4.4/11, Error ellipse: s-maj=17.7km s-min=12.1km az=156.0*

ISC 26 15:33:38.2±0.6**, 55°.5S**±0°.1×**28°.3W**±0°.1**, h35^{km}, n30, σ0^{s}.71**/24**, mb4.4**/6**, MS3.6**/6**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	Hope Point	4.87	281	Pn	Pn	15 34 48.6	-0.3
VNA3	Neumayer Olymp	17.71	160	P	Pn	15 37 41.5	-0.2
VNA2	Neumayer--Watz	17.93	158	P	P	15 37 44.7	0.0
	baz=317,slow=12						
SNAA	Sanae	19.49	156	P	P	15 38 01.3	-0.6
SNAA	Sanae	19.49	156	P	P	15 38 01.6	-0.3
	1.5nm,0.3s,baz=300,slow=9.9,SNR=78						
SNAA	Sanae	19.49	156	P	P	15 38 01.4	-0.5
PMSA	Palmer Station	19.78	228	LR	LR	15 44 09.4	
	comp=Z,150nm,19.4s,baz=104,slow=32						
BELA	Belgrano 2	22.57	183	P	P	15 38 34.7	-0.2
USHA	Ushuaia	22.70	255	LR	LR	15 46 04.1	
	comp=Z,792nm,19.6s,baz=320,slow=33						
QSPA	South Pole Qui	34.74	180	P	P	15 40 25.4	+0.7
	4.5nm,0.6s,baz=206,slow=2.9,SNR=51						
QSPA	South Pole Qui	34.74	180	P	P	15 40 25.3	+0.7
CPUP	Villa Florida	35.98	312	P	P	15 40 35.2	-0.3
	1.2nm,0.7s,baz=114,slow=6.2,SNR=3.3						
CPUP				LR	LR	15 54 53.4	
	comp=Z,38nm,19.6s,baz=164,slow=36						
CPUP	Villa Florida	35.98	312	IAmb	IAmb	15 40 41.3	
	comp=Z,5.4nm,1.2s						
BDFB	Brasilia	42.58	331	LR	LR	15 55 44.0	
	comp=Z,73nm,21.3s,baz=97,slow=31						
PB01	IPOC Station P	46.09	301	P	P	15 41 59.5	+0.7
BOSA	Boshof	46.47	77	P	P	15 42 02.7	+0.9
VNDA	Vanda	47.08	183	P	P	15 42 06.3	+0.5
	comp=Z,4.2nm,0.9s,baz=179,slow=5.6,SNR=7.0						
MNMC	Minye Minye	47.77	303	P	P	15 42 13.3	+1.1
LPAZ	La Paz	49.55	306	P	P	15 42 27.0	+0.8
	comp=Z,1.1nm,0.6s,baz=164,slow=3.9,SNR=5.0						
LPAZ				LR	LR	16 02 30.3	
	comp=Z,39nm,21.5s,baz=115,slow=35						
LPAZ	La Paz	49.55	306	P	P	15 42 26.8	+0.6
LPAZ				IAmb	IAmb	15 42 32.9	
	comp=Z,2.8nm,0.8s						
TOA0	Torodi Ar. Sit	72.91	31	P	P	15 45 04.1	+0.5
TOA0				IAmb	IAmb	15 45 04.4	
	comp=Z,3.3nm,0.7s						
TORD	Torodi Ar. Bea	72.91	31	P	P	15 45 03.5	-0.1
	comp=Z,3.2nm,0.7s,baz=201,slow=6.6,SNR=15						
TORD				LR	LR	16 11 37.3	
	comp=Z,34nm,18.8s,baz=345,slow=31						
TORD	Torodi Ar. Bea	72.91	31	P	P	15 45 03.6	-0.1
TORD				IAmb	IAmb	15 45 04.4	
	comp=Z,2.6nm,0.7s						
KMBO	Kilima Mbogo	75.45	70	LR	LR	16 17 20.4	
	comp=Z,39nm,18.6s,baz=91,slow=35						
YKA	Yellowknife Ar	135.35	319	PKP	PKiKP	15 52 53.3	-0.9
	comp=Z,0.4nm,0.8s,baz=116,slow=2.8,SNR=4.0						
ZALV	Zalesovo Beam	142.71	64	PKP	PKPdf	15 53 04.8	-1.6
	comp=Z,0.4nm,0.4s,baz=292,slow=4.5,SNR=2.1						
ZALV	Zalesovo Beam	142.71	64	PKPpre	PKPpre	15 53 02.8	
ILAR	Eielson Array	149.28	313	PKPbc	PKPbc	15 53 21.5	-0.1
	comp=Z,1.5nm,0.9s,baz=105,slow=1.3,SNR=12						
ILAR	Eielson Array	149.28	313		PKPbc	15 53 21.6	0.0
SONM	Songino Array	151.33	86	PKPbc	PKPbc	15 53 26.0	-1.2
	comp=Z,0.7nm,0.6s,baz=209,slow=3.8,SNR=3.2						

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*SJA **26** 15:40:00.3±0.6, 30°.30S×71°.84W, h11^{km}±9^{km}, ML4.0, MW3.7*

*NEIC **26** 15:40:03.8±2.5, 30°.29S±0°.03×71°.66W±0°.07, h41^{km}±18^{km}, ML4.0(GUC), Error ellipse: s-maj=10.0km s-min=2.2km az=69.0*

*GUC **26** 15:40:04.2±0.6, 30°.30S×71°.47W, h40^{km}±3^{km}, ML4.2*

ISC 26 15:40:00.1±0.9**, 30°.21S**±0°.03×**71°.82W**±0°.05**, h10^{km}, n69, σ1^{s}.77**/96**, 4C-3D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GO04	Tololo Observa	0.88	88	⇓*i*P	Pg	15 40 17.7	+0.5
GO04				*i* S	Sg	15 40 27.8	-0.8
GO04				IAML		15 40 32.4	
	comp=N,17µm,0.3s						
GO04	Tololo Observa	0.88	88	Pn	Pg	15 40 17.6	+0.5
GO04					Sg	15 40 27.9	-0.8
CO03	El Pedregal	1.16	123	⇓*i*P	Pb	15 40 21.1	-1.3
CO03				*i* S	Sg	15 40 33.9	-3.7
CO03				IAML		15 40 34.7	
	comp=N,7µm,0.3s						
CO03	El Pedregal	1.16	123		Pb	15 40 21.0	-1.3
CO03					Sg	15 40 33.6	-4.0
CO01	Juntas del Tor	1.51	82	*e*P	Pn	15 40 27.8	+0.3
CO01				*i* S	Sn	15 40 45.3	-2.1
CO01				IAML		15 40 47.3	
	comp=N,4µm,0.5s						
CO01	Juntas del Tor	1.51	82		Pn	15 40 27.8	+0.3
CO01					Sn	15 40 45.0	-2.4
LCO	Las Campanas	1.54	40		Pn	15 40 28.7	+0.8
LCO					Sn	15 40 47.7	-0.3
AC05	El Transito	1.92	45	⇑*i*P	Pn	15 40 34.6	+1.7
AC05				*e*S	Sb	15 40 58.6	-0.7
AC05	El Transito	1.92	45		Pn	15 40 34.5	+1.6
AROD	Rodeo	2.03	90	*e*P	Pb	15 40 36.8	-0.5
AROD				*e*S	Sg	15 41 05.1	-0.3
AC04	Llanos de Chal	2.10	18	⇓*e*P	Pn	15 40 37.4	+2.1
AC04				*e*S	Sg	15 41 06.5	-1.0
AC04	Llanos de Chal	2.10	18		Pn	15 40 37.3	+2.0
ACCO	Cerro Coronel	2.41	100	*e*P	Pb	15 40 42.9	-0.9
ACCO				IAML		15 41 19.6	
	comp=Z,400nm,0.6s						
RTLS	Leoncito	2.68	127	*e*P	Pn	15 40 46.0	+2.3
RTLS				IAML		15 41 27.2	
	comp=Z,311nm,1.0s						
VA03	San Esteban	2.77	157	*e*P	Pn	15 40 46.2	+1.5
VA03				*e*S	Sn	15 41 18.9	+0.6
VA03				IAML		15 41 33.3	
	comp=E,1µm,0.7s						
VA03	San Esteban	2.77	157		Pn	15 40 45.9	+1.2
ROCH	El Roble	2.84	166	*e*P	Pn	15 40 46.9	+1.1
ROCH				IAML		15 41 33.7	
	comp=E,1µm,0.2s						
ROC1	El Roble	2.85	166	*e*P	Pn	15 40 46.9	+1.1
AUSP	Uspallata	2.90	135	*e*P	Pn	15 40 48.9	+2.3
GO03	Copiap	2.95	28	*e*P	Pn	15 40 49.8	+2.7
GO03				*e*S	Sb	15 41 26.7	-2.3
GO03				IAML		15 41 37.5	
	comp=E,628nm,0.6s						
GO03	Copiap	2.95	28		Pn	15 40 48.4	+1.3
GO03	Copiap	2.95	28	*e*P	Pb	15 40 51.1	-1.7
GO03				*e*S	Sb	15 41 28.8	-0.2
AGUA	GUANDACOL	2.98	77	*e*P	Pb	15 40 51.8	-1.5
AGUA				*e*S	Sb	15 41 29.7	-0.1
AGUA				IAML		15 41 36.5	
	comp=Z,682nm,0.8s						
ZON	Zonda	3.01	117		Pn	15 40 46.7	-1.2
ZON	Zonda	3.01	117	*e*P	Pn	15 40 51.9	+3.9
ZON				*e*S	Sb	15 41 31.1	+0.3
ZON				IAML		15 41 39.9	
	comp=Z,247nm,0.5s						
PEL	Peldehue	3.08	162	⇑*i*P	Pn	15 40 50.4	+1.4
PEL				*i* S	Sn	15 41 26.2	+0.2
PEL	Peldehue	3.08	162		Pn	15 40 49.4	+0.5
PEL	Peldehue	3.08	162	*e*P	Pn	15 40 50.8	+1.8
PEL				*e*S	Sb	15 41 32.8	-0.1
RTLL	Cerro Villicun	3.09	112	*e*P	Pn	15 40 51.5	+2.5
RTLL				*e*S	Sn	15 41 29.4	+3.4
RTLL				IAML		15 41 45.0	
	comp=Z,443nm,0.9s						
MT02	Curacav	3.10	169	*e*P	Pn	15 40 50.2	+1.1
MT02				*i* S	Sb	15 41 31.9	-1.3
MT02				IAML		15 41 45.1	
	comp=E,272nm,0.4s						
MT02	Curacav	3.10	169		Pn	15 40 49.1	0.0
RTCV	Cerro Valdivia	3.26	121	*e*P	Pn	15 40 54.0	+2.6
RTCV				IAML		15 41 45.3	
	comp=Z,224nm,1.4s						
MT05	Renca	3.31	164	*e*P	Pn	15 40 54.2	+2.2
MT05				*i* S	Sn	15 41 32.4	+1.0
MT05				IAML		15 41 44.5	
	comp=E,1µm,0.4s						
MT05	Renca	3.31	164		Pn	15 40 53.4	+1.3
VA05	Santo Domingo	3.45	177	*e*P	Pn	15 40 57.4	+3.5
MT03	Universidad Ad	3.46	162	*e*P	Pn	15 40 55.8	+1.6
MT03				*i* S	Sn	15 41 35.3	0.0
MT03				IAML		15 41 48.0	
	comp=N,826nm,0.4s						
VCA	Vinchina	3.47	66	*e*P	Pb	15 40 59.2	-2.6
VCA				*e*S	Sb	15 41 43.1	-1.0
MT09	Talagante	3.63	169	⇑*i*P	Pn	15 40 57.9	+1.4
MT09				IAML		15 41 54.0	
	comp=E,673nm,0.8s						
LMEL	Las Melosas	3.88	160	*e*P	Pn	15 41 02.5	+2.4
LMEL				*i* S	Sn	15 41 46.8	+1.0
AC02	Maricunga	4.11	36	⇑*i*P	Pn	15 41 05.8	+2.4
AC02				*i* S	Sn	15 41 55.9	+4.1
AC02	Maricunga	4.11	36		Pn	15 41 03.1	-0.3
AC01	Pan de Azucar	4.18	15	*e*P	Pn	15 41 04.6	+0.5
AC01	Pan de Azucar	4.18	15	Pn	Pn	15 41 04.5	+0.5
BO03	Pichilemu	4.28	182	*e*P	Pn	15 41 05.2	-0.1
ACLC	CERRO LA CRUZ	4.30	81	*e*P	Pn	15 41 08.2	+2.5
ACLC				*e*S	Sn	15 41 58.3	+2.2
ACLC				IAML		15 42 08.5	
	comp=Z,377nm,0.4s						
BO02	Sierra Bellavi	4.66	169	*e*P	Pn	15 41 11.9	+1.3
BO02				*i* S	Sn	15 42 05.5	+0.8
BO02	Sierra Bellavi	4.66	169		Pn	15 41 11.0	+0.4
RFA	San Rafael	5.36	149	*e*P	Pn	15 41 22.2	+1.9
RFA				IAML		15 42 54.9	
	comp=Z,61nm,1.3s						
GO02	Mina Guanaco	5.40	22	Pn	Pn	15 41 22.3	+1.3
MRA	San Martin	5.67	114	*e*P	Pn	15 41 25.1	+0.6
MRA				*e*S	Sn	15 42 34.2	+4.5
MRA				IAML		15 42 35.0	
	comp=Z,148nm,1.0s						
PB14	IPOC Station P	5.70	13		Pn	15 41 27.5	+2.4
BI02	San Fabin de	6.46	176	Pn	Pn	15 41 36.0	+0.7
FSA	Cafayete	6.57	53	*e*P	Pn	15 41 40.4	+3.3
BI03	Tigo	6.70	188	Pn	Pn	15 41 40.0	+1.4
PB10	IPOC Station P	6.76	10	Pn	Pn	15 41 40.6	+1.1
PB15	IPOC Station P	7.28	17	Pn	Pn	15 41 46.9	+0.1
PB06	IPOC Station P	7.74	16	Pn	Pn	15 41 54.9	+1.9
PB04	IPOC Station P	7.98	11	Pn	Pn	15 41 58.2	+1.8
LVC	Limon Verde	8.00	20	Pn	Pn	15 41 59.2	+2.4
PB07	IPOC Station P	8.62	12	Pn	Pn	15 42 05.7	+0.6
PB09	IPOC Station P	8.69	16	Pn	Pn	15 42 05.4	-0.6
PB01	IPOC Station P	9.36	13	Pn	Pn	15 42 15.5	+0.2
PATCX	Punta Patache	9.46	10	Pn	Pn	15 42 17.5	+0.9
TA01	Diego Aracena	9.71	9	Pn	Pn	15 42 19.1	-0.9
PB08	IPOC Station P	10.31	14	Pn	Pn	15 42 30.2	+1.8
PLCA	Paso Flores	10.55	175	Pn	Pn	15 42 31.2	-0.3
PSGCX	Pisagua	10.67	9	Pn	Pn	15 42 32.5	-0.8
MNMC	Minye Minye	11.21	11	Pn	Pn	15 42 41.5	+0.7
PB16	IPOC Station P	12.00	11	Pn	Pn	15 42 52.4	+0.6

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*TIR **26** 15:45:01.9, 42°.08N×20°.60E, h8^{km}±2^{km}, Md3.0, Ml3.0*

*SKO **26** 15:45:02.8, 42°.13N×20°.58E, h15^{km}*

*RHSSO **26** 15:45:03.4±0.6, 42°.11N×20°.62E, h5^{km}±4^{km}, ML2.9/9*

*PDG **26** 15:45:03.2±0.3, 42°.11N×20°.56E, h10^{km}, MD3.3/1, ML3.0/14, Error ellipse: s-maj=0.4km s-min=0.4km az=0.0*

*BEO **26** 15:45:04.2±0.4, 42°.11N×20°.53E, h5^{km}±4^{km}, ML2.5/10*

*THE **26** 15:45:04.5, 42°.03N×20°.50E, h7^{km}±2^{km}, ML2.6/3, Error ellipse: s-maj=4.2km s-min=1.4km az=285.0*

ISC 26 15:45:03.5±1.0**, 42°.10N**±0°.01×**20°.55E**±0°.01**, h7^{km}**±8^{km}**, n99, σ1^{s}.17**/164**, 18C-15D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRZK	Prizren	0.19	54	⇓*i*Pg	Pg	15 45 07.9	+0.5
PRZK				*i* Sg	Sg	15 45 11.6	+1.5
PHP	Peshkopia	0.42	191	P	Pg	15 45 10.6	-1.1
PHP				S	Sg	15 45 16.2	-1.0
PHP	Peshkopia	0.42	191	P	Pg	15 45 10.6	-1.1
	baz=198						
PHP				S	Sg	15 45 16.5	-0.7
	baz=198						
PHP				AMP			
	comp=N,7.2nm,0.1s,baz=198						
BCI	Bajram Curri	0.45	307	P	Pg	15 45 12.1	-0.1
	baz=307						
BCI				S	Sg	15 45 19.4	+1.4
	baz=307						
BCI				AMP			
	comp=E,25nm,0.2s,baz=307						
PUK	Puka	0.49	264	P	Pg	15 45 12.2	-0.9
	baz=267						
PUK				S	Sg	15 45 20.8	+1.3
	baz=267						
PUK				AMP			
	comp=E,8.5nm,0.3s,baz=267						
PEJK	Peje	0.58	340	*i* Pg	Pg	15 45 14.1	-0.6
PEJK				*i* Sg	Sn	15 45 26.1	-2.0
PVY	Plav	0.66	319	⇓*i*Pg	Pg	15 45 15.6	-0.7
PVY				*i* Sg	Sg	15 45 25.4	+0.5
SKO	Skopje	0.68	100	⇑*i*Pg	Pg	15 45 16.0	-0.5
SKO				*i* Sg	Sb	15 45 26.7	-0.5
SMRK	Smrekonice	0.83	20	*i* Pg	Pb	15 45 20.3	+0.1
SMRK				*i* Sg	Sn	15 45 33.6	-0.5
TIR	Tirane	0.91	215	P	Pg	15 45 20.3	-0.6
TIR	Tirane	0.91	215	*e*Pg	Pg	15 45 20.3	-0.6
TIR				*e*Sg	Sb	15 45 34.3	+0.4
TIR	Tirane	0.91	215	⇑P	Pg	15 45 20.5	-0.5
TIR				⇓S	Sb	15 45 34.0	+0.2
TIR	Tirane	0.91	215	P	Pg	15 45 20.4	-0.5
	baz=218						
TIR				S	Sg	15 45 33.7	+1.0
	baz=218						
TIR				AMP			
	comp=E,0.6nm,0.3s,baz=218						
BEY	Berane	0.91	328	*i* Pg	Pg	15 45 20.3	-0.7
IVA	Berane	0.91	328	⇓*i*Pg	Pg	15 45 20.2	-0.9
IVA				*i* Sg	Sb	15 45 34.3	+0.2
ULC	Ulcinj	0.98	263	⇓*i*Pg	Pg	15 45 21.5	-0.8
ULC				*i* Sg	Sb	15 45 37.3	+1.3
PDG	Podgorica	1.02	289	*e*Pg	Pg	15 45 21.3	-1.7
PDG	Podgorica	1.02	289	⇓P	Pg	15 45 21.4	-1.6
PDG				⇓S	Sg	15 45 35.7	-0.5
PDG	Podgorica	1.02	289	*e*Pg	Pg	15 45 21.4	-1.6
PDG				*e*Sg	Sb	15 45 37.2	+0.2
PDG	Podgorica	1.02	289	⇓*i*Pg	Pg	15 45 21.6	-1.4
TTG	Podgorica	1.02	289	*e*Pg	Pg	15 45 21.5	-1.6
TTG				*i* Sg	Sn	15 45 38.3	-0.4
DRME	Dracevica, Mon	1.02	275	*e*Pg	Pg	15 45 22.0	-1.1
DRME				*e*Sg	Sb	15 45 37.6	+0.5
DRME	Dracevica, Mon	1.02	275	⇑*i*Pg	Pg	15 45 22.0	-1.1
DRME				*i* Sg	Sb	15 45 38.2	+1.1
KOME	Kolasin	1.07	315	*e*Pg	Pg	15 45 23.2	-0.9
KOME				*i* Sg	Sn	15 45 40.2	-0.1
PRVS	Prvonek	1.20	70	*e*Pg	Pg	15 45 26.0	-0.6
PRVS				*e*Sg	Sn	15 45 43.9	+0.5
BUM	Brajici-Budva	1.25	280	*e*Pg	Pn	15 45 26.4	-1.0
BUM				*i* Sg	Sn	15 45 46.1	+1.6
STIP	Stip	1.29	108	*i* Pg	Pg	15 45 29.6	+1.4
STIP				*i* Sg	Sn	15 45 50.6	+5.2
CEME	Cevo	1.29	291	*e*Pg	Pn	15 45 26.4	-1.6
CEME				*i* Sg	Sn	15 45 47.5	+1.9
NKY	Niksic	1.35	302	*e*Pg	Pn	15 45 28.5	-0.5
NKY				*i* Sg	Sg	15 45 49.8	+2.7
NKME	Niksic	1.36	300	*e*Pg	Pn	15 45 28.4	-0.5
NKME				*i* Sg	Sg	15 45 49.7	+2.5
FNA	Florina	1.45	154	P	Pn	15 45 29.3	-0.9
FNA				S	Sg	15 45 50.8	+0.6
	comp=E,320nm,0.5s						
FNA	Florina	1.45	154	*i* Pg	Pn	15 45 29.3	-0.9
FNA				*i* Sg	Sg	15 45 51.5	+1.3
KBN	Korca	1.48	173	P	Pb	15 45 31.5	0.0
KBN				S	Sn	15 45 49.9	-0.5
	comp=E,160nm,0.9s						
KBN	Korca	1.48	173	P	Pb	15 45 31.5	0.0
	baz=174						
KBN				S	Sg	15 45 51.2	0.0
	baz=174						
KBN				AMP			
	comp=N,0.6nm,0.8s,baz=174						
BOSS	Bosilegrad	1.49	74	*e*Pg	Pb	15 45 30.8	-0.7
BOSS				*e*Sg	Sg	15 45 50.7	-0.6
PLE	Pljevlja	1.50	326	*e*Pg	Pn	15 45 30.7	-0.2
PLE				*i* Sg	Sg	15 45 53.7	+2.0
IVAS	Ivanjica	1.51	349	*e*Pn	Pn	15 45 30.7	-0.3
IVAS				*e*Sn	Sg	15 45 51.7	-0.2
HCY	Herceg Novi	1.56	284	*e*Pn	Pn	15 45 31.7	0.0
HCY				*e*Sn	Sb	15 45 53.0	+0.2
HCY	Herceg Novi	1.56	284	*e*Pg	Pn	15 45 32.1	+0.4
HCY				*i* Sg	Sg	15 45 55.4	+1.6
UPM	Unac-Piva	1.64	313	*e*Pn	Pn	15 45 33.5	+0.5
UPM				*e*Sn	Sb	15 45 55.1	-0.1
UPM	Unac-Piva	1.64	313	*e*Pn	Pn	15 45 33.5	+0.5
UPM				*i* Sn	Sg	15 45 57.2	+1.0
BRY	Bratogost	1.69	299	*e*Pn	Pn	15 45 33.9	+0.4
BRY				*e*Sn	Sb	15 45 56.7	+0.2
BRY	Bratogost	1.69	299	*e*Pn	Pn	15 45 34.0	+0.4
BRY				*i* Sn	Sg	15 45 58.3	+0.5
VAY	Valandovo	1.70	116	*e*Pn	Pb	15 45 34.3	-0.8
VAY	Valandovo	1.70	116	*i* Pg	Pb	15 45 34.0	-1.1
VAY				*i* Sg	Sg	15 45 57.1	-1.0
VAY				*e*Lg	Lg	15 45 58.4	
	comp=E,45nm,0.6s						
VAY				*e*Lg	Lg	15 45 59.4	
	comp=N,26nm,0.4s						
NEST	Nestorio	1.72	167	P	Pn	15 45 34.3	+0.3
NEST				S	Sn	15 45 55.2	-1.1
	comp=N,125nm,0.6s						
TREB	Trebinje	1.74	292	*e*Pn	Pb	15 45 35.2	-0.6
TREB				*e*Sn	Sb	15 45 57.8	-0.1
RUDO	Rudo	1.75	331	*e*Pn	Pn	15 45 34.5	+0.2
RUDO				*e*Sn	Sb	15 45 57.9	-0.2
BOVS	Bovan	1.76	29	*e*Pn	Pb	15 45 35.3	-0.7
GRUS	Gruza	1.79	4	*e*Pn	Pn	15 45 35.0	+0.1
GRUS				*e*Sn	Sb	15 45 59.5	+0.1
GRG	Griva	1.80	129	P	Pn	15 45 35.5	+0.5
GRG				S	Sb	15 45 59.7	+0.2
GRG	Griva	1.80	129	⇑*i*Pg	Pn	15 45 35.5	+0.5
DBRK	Dubrovnik	1.87	289	*e*Pn	Pb	15 45 37.3	-0.6
DBRK				Sn	Sg	15 46 04.5	+1.0
ZAPS	Zavoj	1.93	52	*e*Pn	Pb	15 45 37.9	-1.2
ZAPS				*e*Sn	Sb	15 46 01.6	-1.9
LSK	Leskovik	1.95	179	P	Pb	15 45 39.0	-0.3
	baz=181						
BBLS	Lazići	1.96	335	*e*Pn	Pn	15 45 37.6	+0.4
BBLS				*e*Sn	Sn	15 46 02.5	+0.5
BBLS	Lazići	1.96	335	⇓*i*Pn	Pn	15 45 37.3	+0.1
BBLS				*e*Sn	Sn	15 46 02.0	0.0
KZN	Kozani	2.01	152	P	Pn	15 45 38.5	+0.5
DIVS	Divibare	2.04	349	*e*Pn	Pn	15 45 38.3	-0.1
DIVS				*e*Sn	Sb	15 46 05.4	-1.2
DIVS	Divibare	2.04	349	⇓*i*Pn	Pn	15 45 38.2	-0.1
DIVS				*e*Sn	Sn	15 46 03.5	-0.6
VTS	Vitosha	2.06	74	⇓P	Pb	15 45 40.2	-1.1
VTS				⇑S	Sb	15 46 06.3	-0.8
ZAGS	Zajecar	2.11	35	*e*Pn	Pn	15 45 39.8	+0.5
TRUS	Trudelj	2.13	357	*e*Pn	Pn	15 45 40.2	+0.7
TRUS				*e*Sn	Sb	15 46 07.3	-1.7
BLKB	Belogradchik	2.18	45	⇑S	Sb	15 46 09.0	-1.6
SVIS	Svilajnac	2.22	12	*e*Pn	Pn	15 45 41.4	+0.7
STON	Ston	2.25	291	*e*Pn	Pn	15 45 42.5	+1.5
SRN	Sarande	2.25	191	P	Pb	15 45 43.3	-1.2
	baz=192						
HAPS	Han Pijesak,Bl	2.31	330	*e*Pn	Pn	15 45 41.9	-0.1
HAPS				*e*Sn	Sn	15 46 11.5	+0.8
KUBS	Kucevo	2.46	19	*e*Pn	Pn	15 45 44.1	+0.1
LIT	Litokhoron	2.48	143	*i* Pn	Pn	15 45 45.0	+0.7
TEKS	Tekeris	2.56	343	*e*Pn	Pn	15 45 46.2	+0.8
TEKS				*e*Sn	Sn	15 46 16.7	-0.2
IGT	Igoumenitsa	2.57	184	P	Pn	15 45 44.9	-0.6
LSTV	Lastovo	2.79	285	*e*Pn	Pb	15 45 52.2	-1.4
MDVR	Moldovita	2.81	17	⇑P	Pn	15 45 49.7	+0.7
MDVR				⇓S	Sn	15 46 25.0	+1.9
RICI	Ricice	2.88	300	*e*Pn	Pn	15 45 50.4	+0.6
HERR	Herculane	3.10	25	⇑P	Pn	15 45 53.4	+0.6
HERR				⇓S	Sn	15 46 32.2	+2.2
FRGS	Fruska Gora	3.10	350	⇓P	Pn	15 45 53.2	+0.3
FRGS				⇑S	Sn	15 46 30.4	+0.2
FRGS	Fruska Gora	3.10	350	*e*Pn	Pn	15 45 53.1	+0.2
FRGS				*e*Sn	Sn	15 46 29.9	-0.4
HVAR	Hvar	3.21	291	*e*Pn	Pn	15 45 55.6	+1.3
PLVB	Pleven	3.26	65	⇑P	Pn	15 45 55.8	+0.7
MGRS	Mrkonjic Grad	3.43	314	*e*Pn	Pn	15 45 58.1	+0.7
MGRS				*e*Sn	Sn	15 46 38.7	+0.3
KIJV	Kijevo	3.58	304	*e*Pn	Pn	15 46 02.8	+3.3
BZS	Buzias	3.60	12	⇑P	Pn	15 46 00.4	+0.7
BLY	Banja Luka	3.61	318	*e*Pn	Pn	15 46 00.2	+0.4
GZR	Gura Zlata	3.67	25	⇑P	Pn	15 46 01.2	+0.5
ZIRJ	Zirje	3.93	295	*i* Pn	Pn	15 46 06.3	+2.1
MORI	Morici	3.97	298	*i* Pn	Pn	15 46 07.1	+2.4
TIP	Timpagrande	4.10	226	⇑P	Pn	15 46 07.4	+0.7
TIP				⇑S	Sn	15 46 56.6	+1.7
UDBI	Udbina	4.25	306	*e*Pn	Pn	15 46 12.4	+3.7
MORH	Mrgy, Hungar	4.34	342	⇑P	Pn	15 46 09.9	+0.1
MORH	Mrgy, Hungar	4.34	342	*e*Pn	Pn	15 46 09.8	0.0
DUGI	Dugi Otok	4.45	297	*e*Pn	Pn	15 46 13.4	+2.0
VOIR		4.66	43	⇑P	Pn	15 46 15.1	+0.6
NVLJ	Novalja	4.82	303	*e*Pn	Pn	15 46 18.4	+2.0
NVLJ				Sn	Sn	15 47 14.4	+1.9
MLR	Muntele Rosu	5.17	47	⇓P	Pn	15 46 21.4	0.0
CRES	Cresnjev	5.23	317	*e*Pn	Pn	15 46 22.2	0.0
CRES				*e*Sn	Sn	15 47 21.1	-1.6
CEY	Cerknica	5.73	312	*e*Pn	Pn	15 46 29.1	+0.2
CEY				*e*Sn	Sn	15 47 33.0	-1.9
PSZ	Piszkesteto	5.84	356	⇑P	Pn	15 46 31.2	+0.7
PSZ				⇑S	Sn	15 47 38.8	+1.1
ZST	Bratislava	6.57	339	*e*PN	Pn	15 46 37.5	-2.9

IDC 26 16:01:13.4±2.2**, 1°.08N**×**127°.32E, h0^{km}, mb3.6**/3**, mb1 3.8**/3**, mb1mx3.5**/32**, mbtmp3.7**/3**, Error ellipse:**

s-maj=180.3km s-min=25.1km az=66.0,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	22.00	162	P	P	16 06 08.4	-0.9
	1.2nm,0.8s,baz=341,slow=11,SNR=7.0						
ASAR	**Alice Springs**	25.42	166	P	P	16 06 43.5	+0.6
	1.6nm,0.9s,baz=347,slow=10,SNR=15						
MKAR	**Makanchi Array**	60.06	326	P	P	16 11 22.2	-0.1
	1.0nm,0.9s,baz=118,slow=8.1,SNR=7.1						

NOU 26 16:03:46.1,21°.23S×169°.84E,h0^{km},MLv4.0,Southeast of Loyalty Islands,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	1.71	261	P	Pn	16 04 16.2	-0.9
PINNC	**Pines Island,**	2.61	238	P	Pn	16 04 29.5	-0.1
YATNC	**Mamie plateau,**	2.87	253	P	Pn	16 04 32.1	-1.0
OUENC	**Ouen Island, N**	3.03	246	P	Pn	16 04 35.5	+0.2
DZM	**Mont Dzumac**	3.27	255	P	Pn	16 04 38.7	0.0
ONTNC	**Ouen Toro**	3.33	251	P	Pn	16 04 39.4	0.0
DVP	**Devils Point**	3.82	336	P	Pn	16 04 46.0	-0.2
KOUNC	**Koumac, New Ca**	5.24	276	P	Pn	16 05 06.0	+0.3

IDC ***26*** *16:05:06.5±2.1,29°.48N×131°.64E,h0^{km},mb3.3/3, mb1 3.4/4,mb1mx3.3/43,mbtmp3.3/4,ML2.9/1,Error ellipse: s-maj=45.3km s-min=32.3km az=66.0*

JMA ***26*** *16:05:07.3±0.1,29°.77N×131°.84E,h66^{km}±3^{km},M2.8*

ISC 26 16:05:06.0±2.1**,29°.72N**±0°.04×**131°.78E**±0°.08**,h11**^{km}±11^{km}**, n16,**σ**1ˢ.52**/25**,mb3.2**/3**,Southeast of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMTN	**Minamitane**	1.02	312	P	**Pb**	**16 05 26.1**	**+0.5**
JMTN				S	**Sb**	**16 05 40.3**	**+1.3**
JTN	**Tanegashima 3**	1.16	324	P	**Pg**	**16 05 27.7**	**-0.5**
JTN				*e*S	**Sg**	**16 05 43.0**	**-0.3**
JYAK	**Yakushimahirau**	1.21	295	P	**Pg**	**16 05 29.0**	**-0.3**
JYAK				S	**Sg**	**16 05 45.2**	**+0.1**
JKC	**Kuchinoerabu**	1.56	299	*e*S	**Sn**	**16 05 53.8**	**0.0**
JTSR	**Tashiro 2**	1.62	333	P	**Pn**	**16 05 34.0**	**-0.5**
JTSR				S	**Sn**	**16 05 53.9**	**-1.5**
JNAR	**Kushima--Naru**	1.85	347	P	**Pn**	**16 05 37.4**	**-0.3**
JNAR				S	**Sn**	**16 05 59.1**	**-2.0**
JSU	**Suzuyama**	2.11	328	P	**Pn**	**16 05 40.8**	**-0.5**
JSU				*e*S	**Sn**	**16 06 05.7**	**-1.9**
JTZ	**Takazaki**	2.25	345	P	**Pn**	**16 05 43.2**	**0.0**
JTZ				S	**Sn**	**16 06 09.7**	**-1.3**
JAM	**Amami Oshima**	2.31	236	*e*S	**Sn**	**16 06 11.0**	**-1.3**
JTSN	**Tsuno**	2.53	355	P	**Pn**	**16 05 46.2**	**-0.8**
JTSN				S	**Sn**	**16 06 15.9**	**-1.9**
JSJ	**Shimokoshiki**	2.64	318	*e*S	**Sn**	**16 06 18.1**	**-2.4**
JIU3	**Izumi3**	2.94	344	*e*S	**Sn**	**16 06 25.9**	**-2.0**
JOW	**Kunigami**	4.22	228	Pn	**Pn**	**16 06 09.7**	**-0.6**
	1.6nm,0.3s,baz=113,slow=22,SNR=7.7						
JOW				Sn	**Sn**	**16 06 56.4**	**-3.2**
	2.7nm,0.3s,baz=111,slow=26,SNR=6.7						
MKAR	**Makanchi Array**	41.70	308	P	**P**	**16 12 57.3**	**+2.6**
	0.5nm,1.0s,baz=101,slow=6.0,SNR=3.4						
WRA	**Warramunga Arr**	49.44	177	P	**P**	**16 13 55.7**	**-0.4**
	0.3nm,0.7s,baz=355,slow=8.1,SNR=2.7						
ASAR	**Alice Springs**	53.12	178	P	**P**	**16 14 24.6**	**+0.9**
	0.2nm,0.6s,baz=7.8,slow=14,SNR=8.6						

IDC ***26*** *16:13:30.9±2.2,42°.13N×126°.64W,h0^{km},mb3.4/5, mb1 3.7/7,mb1mx3.5/48,mbtmp3.5/7,ML3.0/2,MS3.6/18, Ms1 3.7/18,ms1mx3.5/27,Error ellipse: s-maj=50.9km s-min=16.8km az=33.0*

ANF ***26*** *16:13:30.7±1.4,41°.89N×126°.61W,h5^{km},ML3.2/13,Error ellipse: s-maj=15.8km s-min=6.4km az=82.0*

NEIC ***26*** *16:13:31.7±3.6,41°.79N±0°.07×126°.7W±0°.2,h13^{km}±8^{km}, mb4.0/8,Error ellipse: s-maj=18.5km s-min=9.5km az=80.0*

GCMT ***26*** *16:13:31.0±0.5,41°.77N±0°.06×127°.23W±0°.04,h20^{km}±1^{km}, MW4.7/66,Moment Tensor Solution. s22,c24; s66,c92; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.50±.21; $M_{\theta\theta}$-0.05±.12; $M_{\phi\phi}$1.54±.13; $M_{r\theta}$-0.48±.31; $M_{\theta\phi}$0.10±.06; $M_{\phi r}$0.10±.18; Best double couple: $M_0$1.59900×10^{16} NP1:ϕ_s20.00000°,δ46.00000°,λ-66.00000°. NP2: ϕ_s167.00000°,δ49.00000°,λ-113.00000°. Principal axes: T 1.5480, Plg1.0000°, Azm273.0000°; N 0.0940, Plg17.0000°, Azm183.0000°; P -1.6510, Plg73.0000°, Azm8.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 26 16:13:31.4±1.2**,41°.89N**±0°.07×**126°.76W**±0°.10**,h10**^{km}**, n125,**σ**1ˢ.62**/109**,mb3.5**/5**,MS3.6**/10**,Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBO	**Bosley Butte**	1.91	80	Pn	**Pn**	**16 14 02.1**	**-2.0**
KEBM	**Edson Butte**	2.04	61		**Pn**	**16 14 04.0**	**-1.8**
KRMB	**Red Mountain**	2.16	99		**Pn**	**16 14 05.8**	**-1.7**
JCC	**Jacoby Creek,**	2.32	117		**Pn**	**16 14 06.5**	**-3.0**
L02E	**Cave Junction**	2.36	83	P	**Pn**	**16 14 08.4**	**-1.9**
	baz=264,SNR=26						
K02D	**Willamette Mer**	2.43	70	P	**Pn**	**16 14 09.5**	**-1.7**
	baz=251,SNR=46						
K02D				S	**Sn**	**16 14 38.9**	**-2.1**
	baz=251						
J01E	**Myrtle Point**	2.44	58	P	**Pn**	**16 14 09.3**	**-1.9**
	baz=238,SNR=16						
J01E				S	**Sn**	**16 14 39.2**	**-2.0**
	baz=238						
KHMM	**Horse Mountain**	2.49	113		**Pn**	**16 14 10.2**	**-1.9**
KMRM	**Mail Ridge**	2.84	125	Pn	**Pn**	**16 14 14.9**	**-2.0**
HUMO	**Hull Mountain**	2.91	75		**Pn**	**16 14 16.4**	**-1.3**
M02C	**Callahan**	2.97	98	P	**Pn**	**16 14 17.2**	**-1.3**
	baz=281,SNR=24						
YBH	**Yreka Blue Hor**	3.03	92	Pn	**Pn**	**16 14 18.9**	**-0.5**
	1.4nm,0.3s,baz=265,slow=13,SNR=32						
YBH				LR	LR	16 15 23.0	
	comp=Z,1μm,20.7s,baz=266,slow=38						
YBH	**Yreka Blue Hor**	3.03	92		**Pn**	**16 14 18.5**	**-0.9**
I02D	**Swisshome**	3.07	43	P	**Pn**	**16 14 18.8**	**-1.1**
	baz=223,SNR=19						
I02D				S	**Sn**	**16 14 56.0**	**-0.7**
	baz=223						
I03D	**Drain, OR**	3.09	53	P	**Pn**	**16 14 18.7**	**-1.5**
	baz=234,SNR=18						
I03D				S	**Sn**	**16 14 57.4**	**+0.3**
	baz=234						
N02D	**Trinity Center**	3.18	105	P	**Pn**	**16 14 19.8**	**-1.7**
	baz=289,SNR=9.3						
KCPM	**Cahto Peak**	3.27	131	Pn	**Pn**	**16 14 20.1**	**-2.6**
L04D	**Klamath Falls**	3.33	83	P	**Pn**	**16 14 21.3**	**-2.3**
	baz=266,SNR=14						
WDC	**Whiskeytown Da**	3.44	111	Pn	**Pn**	**16 14 23.9**	**-1.1**
O02D	**Mt. Diablo Mer**	3.46	118	P	**Pn**	**16 14 23.1**	**-2.2**
	baz=302,SNR=5.6						
M04C	**Macdoel**	3.67	90	P	**Pn**	**16 14 26.9**	**-1.5**
	baz=273,SNR=12						
J04D	**Umpqua Nationa**	3.69	67	P	**Pn**	**16 14 29.1**	**+0.5**
	baz=249,SNR=12						
COR	**Corvallis**	3.69	42	Pn	**Pn**	**16 14 28.0**	**-0.4**
I04A	**Tendick Farm,**	3.72	58	P	**Pn**	**16 14 27.7**	**-1.1**
	baz=240,SNR=16						
H04D	**Lebanon**	3.94	47	P	**Pn**	**16 14 28.8**	**-3.1**
	baz=228						
HOPS	**Hopland Field**	4.04	135	Pn	**Pn**	**16 14 31.1**	**-2.1**
O03E	**Paynes Creek**	4.07	111	P	**Pn**	**16 14 32.3**	**-1.5**
	baz=295,SNR=5.7						
J05D	**Fort Rock, OR**	4.31	69	P	**Pn**	**16 14 36.1**	**-0.9**
	baz=252						
H04A	**Detroit Lake**	4.35	49		**Pn**	**16 14 37.0**	**-0.5**
K05A	**Summer Lake**	4.43	77		**Pn**	**16 14 37.7**	**-1.0**
ORV	**Oroville**	4.62	119	Pn	**Pn**	**16 14 40.2**	**-1.1**
PINE	**Pine Mountain**	4.68	64		**Pn**	**16 14 42.2**	**0.0**
MOD	**Modoc Plateau**	4.81	88		**Pn**	**16 14 41.2**	**-2.9**
BEKR	**Beckworth**	5.25	111		**Pn**	**16 14 47.6**	**-2.5**
AFDM	**Forest Hills D**	5.30	122	Pn	**Pn**	**16 14 50.6**	**-0.1**
I07A	**Izee**	5.75	65	Pn	**Pn**	**16 14 57.0**	**+0.2**
PAHR	**Pah Rah Range**	6.00	109	Pn	**Pn**	**16 15 00.8**	**+0.4**
LON	**Longmire**	6.01	34		**Pn**	**16 15 01.5**	**+1.1**
WVOR	**Wild Horse Val**	6.06	82	Pn	**Pn**	**16 15 00.9**	**-0.2**
PNTR	**Pine Nut**	6.13	115		**Pn**	**16 15 02.6**	**+0.4**
CMB	**Columbia Colle**	6.23	126	Pn	**Pn**	**16 15 02.0**	**-1.3**
D05A	**Enumclaw**	6.29	31	Pn	**Pn**	**16 15 03.6**	**-0.6**
YERR	**Yerington**	6.42	114		**Pn**	**16 15 06.6**	**+0.4**
SAO	**San Andreas Ge**	6.57	140	Pn	**Pn**	**16 15 06.8**	**-1.2**
G08A	**Pilot Rock**	6.60	56	Pn	**Pn**	**16 15 08.1**	**-0.4**
LTY	**Liberty**	6.90	37		**Pn**	**16 15 13.5**	**+0.9**
PGC	**Sidney**	7.15	18	Pn	**Pn**	**16 15 16.1**	**+0.2**
KVN	**Kaiserville**	7.18	110		**Pn**	**16 15 15.0**	**-1.6**
E08A	**Dider Farm, El**	7.19	48	Pn	**Pn**	**16 15 16.5**	**0.0**
MDPB	**Devils Postpil**	7.28	123	Pn	**Pn**	**16 15 16.6**	**-1.4**
NVAR	**Mina Array Bea**	7.34	115	LR	LR	16 18 27.7	
	comp=Z,834nm,18.7s,baz=268,slow=40						
OMMB	**Old Mammoth Mi**	7.34	123	Pn	**Pn**	**16 15 17.2**	**-1.8**
BMO	**Blue Mountains**	7.49	64	Pn	**Pn**	**16 15 21.1**	**+0.3**
ELK	**Elko**	8.74	94	LR	LR	16 19 22.8	
	comp=Z,694nm,20.6s,baz=280,slow=41						
ISA	**Isabella, Lake**	8.97	131		**Pn**	**16 15 40.1**	**-0.9**
NEW	**Newport**	9.32	44	LR	LR	16 19 40.2	
	comp=Z,581nm,18.8s,baz=231,slow=41						
TPNV	**Topopah Spring**	9.51	118	Pn	**Pn**	**16 15 47.5**	**-1.0**
SPR3	**Spring Creek 3**	9.90	103		**Pn**	**16 15 55.9**	**+1.9**
BCYI	**Bear Canyon**	10.06	72	Pn	**Pn**	**16 15 54.3**	**-1.8**
PRN	**Pahroc Range**	10.07	113	Pn	**Pn**	**16 15 54.3**	**-1.9**
BBB	**Bella Bella**	10.34	355	LR	LR	16 18 57.5	
	comp=Z,100nm,18.2s,baz=104,slow=32						
BGU	**Big Grassy Mou**	10.36	91	Pn	**Pn**	**16 15 59.5**	**-0.6**
PSUT	**Pine Spring**	10.42	105	Pn	**Pn**	**16 16 01.4**	**+0.3**
HVU	**Hansel Valley**	10.44	86		**Pn**	**16 16 01.1**	**-0.1**
DUG	**Dugway, Tooele**	10.67	95	Pn	**Pn**	**16 16 04.2**	**-0.1**
CCUT	**Cedar City**	11.19	108	Pn	**Pn**	**16 16 12.2**	**+0.7**
SZCU	**Shurtz Canyon**	11.36	108		**Pn**	**16 16 15.0**	**+1.1**
TCRU	**Three Creeks R**	11.41	102	Pn	**Pn**	**16 16 15.8**	**+1.2**
JLU	**Jordanelle**	11.60	91	Pn	**Pn**	**16 16 18.1**	**+0.9**
PFO	**Pinyon Flats O**	11.60	132	LR	LR	16 20 41.9	
	comp=Z,335nm,18.5s,baz=301,slow=37						
PFO	**Pinyon Flats O**	11.60	132	Pn	**Pn**	**16 16 16.8**	**-0.3**
MVU	**Marysvale**	11.62	102	Pn	**Pn**	**16 16 17.9**	**+0.3**
MSU	**Marysvale**	11.65	102		**Pn**	**16 16 17.1**	**-0.8**
YHB	**Horse Butte**	11.69	71	Pn	**Pn**	**16 16 19.8**	**+1.4**
YHL	**Hebgen Lake**	11.71	70	Pn	**Pn**	**16 16 20.6**	**+1.9**
KNB	**Kanab**	11.82	110	Pn	**Pn**	**16 16 22.7**	**+2.6**
YHH	**Holmes Hill**	11.94	71	Pn	**Pn**	**16 16 23.4**	**+1.6**
PKCU	**Pink Cliffs**	11.98	107	Pn	**Pn**	**16 16 21.5**	**-1.0**
TMUT	**Trail Mountain**	12.10	97	Pn	**Pn**	**16 16 24.8**	**+0.7**
P17A	**Butcher Ranch,**	12.40	96	Pn	**Pn**	**16 16 30.3**	**+2.3**
SRU	**San Rafael Swe**	12.66	97	Pn	**Pn**	**16 16 33.5**	**+1.9**
PV23	**Carpenter Ridg**	13.99	98	Pn	**Pn**	**16 16 51.5**	**+1.6**
PV14	**Lion Creek, Pa**	14.01	99	Pn	**Pn**	**16 16 53.9**	**+3.7**
PV19	**Morning Glory**	14.06	99	Pn	**Pn**	**16 16 53.5**	**+2.6**
PV20	**West Nyswonger**	14.07	99	Pn	**Pn**	**16 16 52.7**	**+1.8**
PV17	**East Wray Mesa**	14.09	99	Pn	**Pn**	**16 16 53.7**	**+2.5**
PV04	**Paradox Valley**	14.09	98	Pn	**Pn**	**16 16 53.5**	**+2.3**
PV16	**Nyswonger Mesa**	14.11	99	Pn	**Pn**	**16 16 55.0**	**+3.5**
PV22	**Blue Mesa, Par**	14.13	98		**Pn**	**16 16 54.1**	**+2.3**
PV18	**Skein Mesa, Pa**	14.14	99	Pn	**Pn**	**16 16 53.3**	**+1.4**
PV11	**David Mesa, Pa**	14.15	99	Pn	**Pn**	**16 16 55.4**	**+3.4**
PV03	**Paradox Valley**	14.18	99		**Pn**	**16 16 53.6**	**+1.2**
PV07	**Paradox Valley**	14.27	98	Pn	**Pn**	**16 16 54.6**	**+1.0**
PV15	**Paradox Valley**	14.42	98	Pn	**Pn**	**16 16 56.6**	**+0.8**
PV01	**Paradox Valley**	14.43	99	Pn	**Pn**	**16 16 58.5**	**+2.6**
MVCO	**Mesa Verde**	14.84	102	Pn	**Pn**	**16 17 03.8**	**+2.4**
LAO	**LASA Array**	15.45	65	P	**Pn**	**16 17 10.7**	**+1.3**
TUC	**Tucson**	15.91	122	P	**Pn**	**16 17 16.4**	**+1.0**
TUC				IAmb	IAmb	16 17 23.3	
	comp=Z,8.9nm,1.4s						
DLBC	**Dease Lake**	16.69	354	LR	LR	16 21 59.5	
	comp=Z,71nm,20.5s,baz=96,slow=31						
SDCO	**Great Sand Dun**	16.84	97	P	**Pn**	**16 17 28.7**	**+1.3**
SDCO				IAmb	IAmb	16 17 32.0	
	comp=Z,20nm,1.5s						
ANMO	**Albuquerque**	17.33	107	P	**P**	**16 17 35.8**	**+0.9**
	comp=Z,0.1nm,0.3s,baz=322,slow=12,SNR=1.7						
ANMO				LR	LR	16 24 44.5	
	comp=Z,346nm,19.6s,baz=296,slow=39						
ANMO	**Albuquerque**	17.33	107	P	**P**	**16 17 35.1**	**+0.2**
BNM	**Barren Site**	17.62	109	P	**Pn**	**16 17 38.3**	**+1.2**
121A	**Cookes Peak, D**	17.73	116	P	**P**	**16 17 40.9**	**+1.5**
121A				IAmb	IAmb	16 17 49.4	
	comp=Z,30nm,1.6s						
MNTX	**Cornudas Mount**	19.86	114		**P**	**16 18 04.2**	**+1.6**
MNTX				IAmb	IAmb	16 18 09.4	
	comp=Z,18nm,1.7s						
FFC	**Flin Flon**	20.75	43	P	**P**	**16 18 12.2**	**+0.1**
FFC				IAmb	IAmb	16 18 28.5	
	comp=Z,6.6nm,1.1s						
AMTX	**Amarillo**	20.82	101	P	Pn	16 18 15.1	-0.4
YKA	**Yellowknife Ar**	21.86	15	P	**P**	**16 18 23.1**	**-0.8**
	comp=Z,0.9nm,0.9s,baz=204,slow=10,SNR=7.0						
LPIG	**La Paz**	22.40	137	LR	LR	16 26 04.4	
	comp=Z,186nm,20.0s,baz=333,slow=34						
TXAR	**Lajitas Array**	22.49	116	P	**P**	**16 18 34.2**	**+3.2**
	comp=Z,0.6nm,0.6s,baz=300,slow=8.1,SNR=6.2						
TXAR				LR	LR	16 28 13.7	
	comp=Z,307nm,18.8s,baz=0.0,slow=39						
KDAK	**Kodiak Island**	22.82	323	LR	LR	16 24 51.7	
	comp=Z,301nm,21.6s,baz=129,slow=30						
ULM	**Lac du Bonnet**	22.86	58	P	**P**	**16 18 34.7**	**0.0**
	comp=Z,0.6nm,0.3s,baz=282,slow=9.3,SNR=2.0						
ULM				LR	LR	16 27 58.1	
	comp=Z,236nm,20.0s,baz=280,slow=38						
ILAR	**Eielson Array**	25.64	340	P	**P**	**16 19 00.3**	**-0.5**
	comp=Z,1.0nm,0.9s,baz=154,slow=7.1,SNR=9.8						
ILAR				LR	LR	16 27 17.4	
	comp=Z,136nm,20.9s,baz=160,slow=32						
INK	**Inuvik**	26.72	354	LR	LR	16 29 18.4	
	comp=Z,66nm,20.8s,baz=41,slow=36						
PETK	**Petropavlovsk-**	49.98	310	LR	LR	16 40 10.6	
	comp=Z,61nm,20.2s,baz=34,slow=32						
ROSC	**El Rosal**	59.38	113	LR	LR	16 51 26.2	
	comp=Z,23nm,21.8s,baz=88,slow=38						
H11N3	**WAKE ISLAND Hy**	59.64	270	T	T	17 27 55.0	
	baz=52,slow=75,SNR=31						
H11N2	**WAKE ISLAND Hy**	59.64	270	T	T	17 27 55.1	
	baz=52,slow=75,SNR=47						
H11N1	**WAKE ISLAND Hy**	59.66	270	T	T	17 27 56.2	
	baz=52,slow=75,SNR=47						
H11S1	**WAKE ISLAND Hy**	60.53	269	T	T	17 29 02.7	
	baz=52,slow=75,SNR=211						
H11S2	**WAKE ISLAND Hy**	60.54	269	T	T	17 28 57.7	
	baz=52,slow=75,SNR=107						
H11S3	**WAKE ISLAND Hy**	60.55	269	T	T	17 28 58.1	
	baz=52,slow=75,SNR=97						
PPT	**Papeete**	62.81	205	LR	LR	16 45 39.4	
	comp=Z,35nm,19.4s,baz=190,slow=31						
SONM	**Songino Array**	79.05	327	P	**P**	**16 25 34.9**	**-0.8**
	comp=Z,0.4nm,0.3s,baz=19,slow=4.9,SNR=2.8						
ESDC	**Sonseca Array**	83.63	41	LR	LR	16 59 12.5	
	comp=Z,73nm,20.2s,baz=330,slow=33						

GII ***26*** *16:13:39.7±0.0,33°.63N×34°.92E,h12^{km}±1^{km},Mm2.2/5*

GRAL ***26*** *16:13:41.4±0.3,33°.71N×35°.00E,h32^{km}±1^{km},MD2.9*

ISC 26 16:13:38.7±1.8**,33°.68N**±0°.07×**34°.97E**±0°.08**,h14**^{km}±11^{km}**, n18,**σ**0ˢ.65**/31**,Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DQRL	**Deir Qamar**	0.50	87	*e*P	**Pn**	**16 13 51.1**	**-0.4**
DQRL				*e*S	**Sb**	**16 13 58.2**	**+1.6**
QRWL	**Qaraoun**	0.61	103	*e*P	**Pn**	**16 13 52.8**	**-0.3**
BHL	**Bhannes**	0.61	69	*e*P	**Pn**	**16 13 52.5**	**-0.6**
GEM	**Giv'at Ha'Em**	0.75	129	Pg	**Pn**	**16 13 54.3**	**-0.5**
GEM				Sg	**Sn**	**16 14 05.0**	**-1.0**
RCY	**Rachaya**	0.75	104	*e*P	**Pn**	**16 13 54.8**	**-0.2**
RCY				*e*S	**Sb**	**16 14 04.8**	**+1.0**
MMC7	**Mount Meron ar**	0.75	152	Pg	**Pb**	**16 13 54.0**	**+0.5**
MMA0B	**Mount Meron ar**	0.76	151	Pg	**Pb**	**16 13 54.1**	**+0.4**
MMA0B				Sg	**Sb**	**16 14 04.3**	**+0.3**
NATI	**Neve Ativ**	0.77	123	Pg	**Pn**	**16 13 54.7**	**-0.4**
NATI				Sg	**Sn**	**16 14 05.5**	**-0.9**
BLGI	**Bet Lehem HaGe**	0.97	169	Pg	**Pb**	**16 13 57.5**	**+0.3**
BLGI				Sg	**Sg**	**16 14 09.5**	**-0.4**
HWQ	**Hawqa**	1.01	54	*e*P	**Pg**	**16 13 58.1**	**0.0**
OFRI	**\`Ofer**	1.06	179	Pg	**Pb**	**16 13 58.2**	**-0.6**
OFRI				Sg	**Sg**	**16 14 12.8**	**-0.1**
MMLI	**Mount Malkishu**	1.30	163	Pg	**Pn**	**16 14 02.1**	**-0.4**
MMLI				Sg	**Sb**	**16 14 18.9**	**-0.6**
SLTI	**Sal'it**	1.44	178	Pn	**Pn**	**16 14 04.5**	**+0.1**
SLTI				Sn	**Sb**	**16 14 23.4**	**-0.1**
HMDT	**Nahal Hemdat**	1.50	162	Pn	**Pn**	**16 14 05.4**	**+0.2**
HMDT				Sn	**Sn**	**16 14 24.5**	**-0.1**
DSI	**Dead Sea**	2.14	170	Pn	**Pn**	**16 14 14.9**	**+1.0**
AMAZ	**Amatzia**	2.15	181	Pn	**Pn**	**16 14 14.2**	**+0.1**
AMAZ				Sn	**Sn**	**16 14 41.0**	**+0.5**
KZIT	**Kziot**	2.81	190	Pn	**Pn**	**16 14 23.2**	**0.0**
KZIT				Sn	**Sn**	**16 14 55.8**	**-1.1**
PRNI	**Paran**	3.32	179	Pn	**Pn**	**16 14 31.0**	**+0.7**
PRNI				Sn	**Sn**	**16 15 09.9**	**+0.3**

IDC ***26*** *16:46:19.3±3.5,35°.84N×142°.10E,h0^{km},mb3.5/4, mb1 3.5/5,mb1mx3.3/53,mbtmp3.4/5,ML2.3/1,MS2.7/2, Ms1 2.7/2,ms1mx2.4/33,Error ellipse: s-maj=103.9km s-min=26.7km az=57.0*

JMA ***26*** *16:46:19.4±0.2,36°.20N×142°.42E,h58^{km},M3.0*

ISC 26 16:46:19.0±1.4**,36°.25N**±0°.08×**142°.33E**±0°.10**,h10**^{km}**,n19,** σ**1ˢ.31**/19**,mb3.5**/4**,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	1.31	246	P	**Pn**	**16 46 42.7**	**-0.7**
JHYU	**Hitachinakayam**	1.41	274	P	**Pb**	**16 46 44.5**	**-0.9**
JHO	**Hitachi**	1.46	285	P	**Pb**	**16 46 45.2**	**-1.1**
JHO				*e*S	**Sn**	**16 47 04.0**	**-0.7**
ONAJ	**Iwakimizuishiy**	1.49	305	P	**Pb**	**16 46 45.8**	**-1.1**
JFK	**Kawauchi**	1.61	314	P	**Pn**	**16 46 47.0**	**-0.6**
JFT	**Otama**	2.04	309	P	**Pb**	**16 46 54.3**	**-1.8**
JAG	**Ashikaga**	2.33	275	P	**Pn**	**16 46 57.2**	**-0.2**
JRY	**Ryogami san**	2.78	266	P	**Pn**	**16 47 03.4**	**-0.3**
JMK	**Ichinoseki**	2.84	342	P	**Pn**	**16 47 03.8**	**-0.6**
JYK	**Kaneyama**	3.09	330	P	**Pn**	**16 47 08.0**	**+0.2**
JOM	**Ohasama**	3.32	346	P	**Pn**	**16 47 10.3**	**-0.7**
MJAR	**Matsushiro Arr**	3.33	276	Pn	**Pn**	**16 47 11.0**	**-0.2**
	0.3nm,0.3s,baz=92,slow=16,SNR=6.1						
MAT	**Matsushiro**	3.33	276	P	**Pn**	**16 47 12.5**	**+1.2**
MAT				*e*S	**Sn**	**16 47 50.4**	**-0.5**
ASAJ	**Asahikawa**	7.86	1	LR	LR	16 51 04.2	
	comp=Z,23nm,20.6s,baz=200,slow=34						
JOW	**Kunigami**	15.21	236	LR	LR	16 55 06.3	
	comp=Z,72nm,18.5s,baz=348,slow=36						
SONM	**Songino Array**	28.83	305	P	**P**	**16 52 18.6**	**+1.1**
	0.5nm,0.7s,baz=112,slow=11,SNR=2.6						
MKAR	**Makanchi Array**	45.16	303	P	**P**	**16 54 39.1**	**+3.3**
	0.4nm,0.7s,baz=89,slow=9.6,SNR=5.8						
WRA	**Warramunga Arr**	56.40	189	P	**P**	**16 55 58.5**	**-2.1**
	0.8nm,1.0s,baz=6.8,slow=7.5,SNR=4.2						
ASAR	**Alice Springs**	60.12	189	P	**P**	**16 56 26.4**	**-0.3**
	0.3nm,0.8s,baz=20,slow=8.2,SNR=3.0						

NEIC ***26*** *16:50:02.8±1.6,24°.68N±0°.05×122°.33E±0°.04, h101^{km}±3^{km},mb4.5/44,Mwr4.4/23,Error ellipse: s-maj=7.3km s-min=5.3km az=184.0*

NIED ***26*** *16:50:03.2,24°.62N×122°.29E,h99^{km},MW4.3,Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M_{rr}0.98; $M_{\theta\theta}$0.29; $M_{\phi\phi}$-1.28; $M_{r\theta}$-1.03; $M_{\theta\phi}$-1.02; $M_{\phi r}$-2.79; Fault plane solution: $M_0$3.28000×10^{15} NP1: ϕ_s200.00000°,δ78.00000°,λ85.00000°. NP2:ϕ_s41.00000°, δ13.00000°,λ111.00000°.*

BJI ***26*** *16:50:03.3±0.0,24°.77N×122°.17E,h79^{km},mB4.6/22, mb4.4/36,Ms4.1/13,Ms7 3.8/9*

TAP ***26*** *16:50:03.4,24°.69N×122°.31E,h98^{km},ML5.2,B*

JMA ***26*** *16:50:03.1±0.2,24°.62N×122°.29E,h99^{km}±2^{km},M4.1*

NEIC ***26*** *16:50:03.3,24°.68N×122°.33E,h96^{km},Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}3.03; $M_{\theta\theta}$-2.52; $M_{\phi\phi}$-0.51; $M_{r\theta}$-1.47; $M_{\theta\phi}$-0.73; $M_{\phi r}$-3.94; Fault plane solution: $M_0$5.11000×10^{15} NP1:ϕ_s213.43000°, δ74.23000°,λ73.33000°. NP2:ϕ_s81.21000°,δ22.79000°, λ135.46000°. Principal axes: T 5.6693, Plg58.0000°, Azm101.0000°; N -1.4144, Plg16.0000°, Azm218.0000°; P -4.2550, Plg27.0000°, Azm317.0000°;*

ASIES ***26*** *16:50:03.4,24°.68N×122°.29E,h79^{km},MW4.3*

IDC ***26*** *16:50:04.3±0.7,24°.77N×122°.39E,h108^{km}±6^{km},mb3.9/24, mb1 4.0/28,mb1mx3.9/58,mbtmp4.3/28,MS3.0/3, Ms1 3.1/3,ms1mx2.7/44,Error ellipse: s-maj=11.9km s-min=8.6km az=70.0*

ISC 26 16:50:03.3±0.4**,24°.71N**±0°.02×**122°.31E**±0°.02**,h102**^{km}±3^{km}**, h102**^{km}**:pP-P,n300,**σ**1ˢ.48**/491**,mb4.4**/56**,83C-8D,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	0.42	316	⇑*i*P	**Pn**	**16 50 18.6**	**-0.2**
	baz=312						
TWB1				*i* S	**Sn**	**16 50 29.6**	**-0.7**
	baz=312						
TWC	**Suao**	0.43	257	⇑*i*P	**Pn**	**16 50 18.4**	**-0.4**
	baz=259						
TWC				*e*S	**Sn**	**16 50 28.2**	**-2.1**
	baz=259						
NTC	**Toucheng**	0.46	289	⇑*i*P	**Pn**	**16 50 18.8**	**-0.2**
	baz=291						
NTC				S	**Sn**	**16 50 30.0**	**-0.7**
	baz=291						
TIPB	**Shuangxi**	0.51	301	⇑*i*P	**Pn**	**16 50 19.3**	**0.0**
	baz=300						
TIPB				*i* S	**Sn**	**16 50 30.3**	**-1.1**
	baz=300						
ILA	**Ilan**	0.51	277	⇑*i*P	**Pn**	**16 50 19.5**	**+0.2**
	baz=284						
ILA				S	**Sn**	**16 50 31.1**	**-0.2**
	baz=284						
TWE	**Neicheng**	0.58	272	⇑*i*P	**Pn**	**16 50 19.9**	**+0.1**
	baz=276						
TWE				*e*S	**Sn**	**16 50 31.9**	**-0.4**
	baz=276						
ENA	**Nanau**	0.59	242	⇑*i*P	**Pn**	**16 50 19.9**	**0.0**
	baz=243						
ENA				S	**Sn**	**16 50 31.8**	**-0.5**
	baz=243						
NWF	**Wu-fen Shan**	0.60	307	⇑*i*P	**Pn**	**16 50 20.2**	**0.0**
	baz=301						
NWF				*i* S	**Sn**	**16 50 32.2**	**-0.5**
	baz=301						
WFSB	**Wu-fen Shan**	0.60	307	⇑*i*P	**Pn**	**16 50 20.2**	**+0.1**
	baz=301						
WFSB				S	**Sn**	**16 50 32.0**	**-0.5**
	baz=301						
JYNG	**Yonagunijimaku**	0.63	114	P	**Pn**	**16 50 20.1**	**-0.2**
JYNG				S	**Sn**	**16 50 32.0**	**-1.0**
TNOU	**National Taiwa**	0.66	312	⇑*i*P	**Pn**	**16 50 20.4**	**-0.1**
	baz=305						
TNOU				S	**Sn**	**16 50 32.7**	**-0.6**
	baz=305						
ENTT	**Nioudou**	0.68	265	⇑*i*P	**Pn**	**16 50 21.0**	**+0.3**
	baz=268						
ENTT				*e*S	**Sn**	**16 50 34.3**	**+0.5**
	baz=268						
YOJ	**Yonaguni jima**	0.68	111	⇓*i*P	**Pn**	**16 50 20.5**	**-0.2**
	baz=115						
YOJ				*i* S	**Sn**	**16 50 32.9**	**-0.9**
	baz=115						
YOJ	**Yonaguni jima**	0.68	111	P	**Pn**	**16 50 20.5**	**-0.2**
YOJ				S	**Sn**	**16 50 32.7**	**-1.0**
YOJ	**Yonaguni jima**	0.68	111		**Pn**	**16 50 20.4**	**-0.2**
YOJ				Sn	**Sn**	**16 50 32.8**	**-1.0**
TWA	**Mucha**	0.71	293	⇑*i*P	**Pn**	**16 50 20.8**	**-0.1**
	baz=288						
TWA				S	**Sn**	**16 50 33.2**	**-1.1**
	baz=288						
NDT	**Datong Townshi**	0.73	262	⇑*i*P	**Pn**	**16 50 21.7**	**+0.6**
	baz=263						
NDT				S	**Sn**	**16 50 35.2**	**+0.6**
	baz=263						
NWLT	**Wulai**	0.74	276	⇑*i*P	**Pn**	**16 50 21.2**	**-0.1**
	baz=282						
NWLT				*e*S	**Sn**	**16 50 34.5**	**-0.2**
	baz=282						
NHDH	**Xindian Distri**	0.76	290	⇑*i*P	**Pn**	**16 50 21.2**	**-0.1**
	baz=286						
NHDH				*e*S	**Sn**	**16 50 33.7**	**-1.2**
	baz=286						
TAP1	**Taipei**	0.79	295	*e*P	**Pn**	**16 50 21.6**	**0.0**
	baz=296						
TAP1				*e*S	**Sn**	**16 50 34.5**	**-0.9**
	baz=296						
TATO	**Taipei**	0.79	290	*e*P	**Pn**	**16 50 20.8**	**-0.9**
	baz=291						
TATO				*e*S	**Sn**	**16 50 34.1**	**-1.5**
	baz=291						
TATO	**Taipei**	0.79	290		**Pn**	**16 50 21.3**	**-0.4**
TATO				Sn	**Sn**	**16 50 33.9**	**-1.7**
TAP	**Taipei**	0.80	295	⇑*i*P	**Pn**	**16 50 21.7**	**-0.1**
	baz=296						
TAP				*e*S	**Sn**	**16 50 34.5**	**-1.1**
	baz=296						

YM01	**YM01** baz=298	0.80	303	⇑*e*P	Pn	16 50 20.8	-1.0
YM01	baz=298			*e*S	Sn	16 50 34.0	-1.8
YM11	**YM11** baz=299	0.81	305	*e*P	Pn	16 50 21.9	0.0
YM11	baz=299			*e*S	Sn	16 50 35.0	-1.0
YM08	**YM08** baz=300	0.81	306	⇑P	Pn	16 50 21.7	-0.2
YM08	baz=300			*e*S	Sn	16 50 34.6	-1.3
YM10	**YM10** baz=298	0.81	303	⇑*e*P	Pn	16 50 21.9	0.0
YM10	baz=298			*e*S	Sn	16 50 35.1	-0.9
YM05	**YM05** baz=299	0.81	304	⇑*e*P	Pn	16 50 21.8	-0.2
YM05	baz=299			*e*S	Sn	16 50 34.9	-1.2
YM04	**YM04** baz=297	0.83	303	⇑*e*P	Pn	16 50 22.0	-0.1
YM04	baz=297			*e*S	Sn	16 50 35.0	-1.2
BACT	**New Taipei Cit** baz=291	0.84	290	*e*P	Pn	16 50 22.1	0.0
BACT	baz=291			*e*S	Sn	16 50 37.5	+1.1
NACB	**Ninganchiao** baz=226	0.84	231	⇑*i*P	Pn	16 50 21.4	-0.8
NACB	baz=226			*e*S	Sn	16 50 34.7	-1.7
NACB	**Ninganchiao**	0.84	231		Pn	16 50 21.3	-0.8
NACB				Sn	Sn	16 50 34.8	-1.7
YM03	**YM03** baz=297	0.84	304	⇑*e*P	Pn	16 50 22.1	-0.2
YM03	baz=297			*e*S	Sn	16 50 35.6	-0.9
YHNB	**Yeheng** baz=276	0.85	268	⇑P	Pn	16 50 22.6	+0.2
YHNB	baz=276			*e*S	Sn	16 50 36.4	-0.3
YHNB	**Yeheng**	0.85	268		Pn	16 50 21.9	-0.5
YHNB				Sn	Sn	16 50 36.2	-0.5
TWY	**Chenhua** baz=305	0.86	311	⇑*i*P	Pn	16 50 22.7	+0.3
TWY	baz=305			*i* S	Sn	16 50 36.8	+0.2
ANP	**Anpu** baz=297	0.86	304	⇑P	Pn	16 50 22.2	-0.3
ANP	baz=297			*e*S	Sn	16 50 35.9	-1.1
NSK	**Sanguang** baz=276	0.87	268	⇑*i*P	Pn	16 50 22.7	+0.2
NSK	baz=276			S	Sn	16 50 36.5	-0.4
NNSB	**Datong** baz=248	0.89	252	⇑P	Pn	16 50 22.9	+0.1
NNSB	baz=248			*e*S	Sn	16 50 37.2	-0.3
NNSH	**Datong** baz=248	0.89	252	⇑*i*P	Pn	16 50 23.0	+0.2
NNSH	baz=248			*e*S	Sn	16 50 37.1	-0.3
NNS	**Nan Shan** baz=248	0.89	253	⇑*i*P	Pn	16 50 23.0	+0.2
NNS	baz=248			*e*S	Sn	16 50 37.2	-0.4
TWS1	**Kuangyinshan** baz=303	0.90	296	⇑*i*P	Pn	16 50 22.9	+0.2
TWS1	baz=303			*e*S	Sn	16 50 37.0	-0.4
TWD	**Chiawan** baz=226	0.90	226	⇑*i*P	Pn	16 50 22.1	-0.7
TWD	baz=226			*e*S	Sn	16 50 36.4	-1.1
ETLH	**Xiulin Townshi** baz=237	0.90	237	⇑*i*P	Pn	16 50 22.6	-0.3
ETLH	baz=237			*e*S	Sn	16 50 37.1	-0.6
NTST	**Danshui** baz=301	0.90	300	⇑P	Pn	16 50 23.1	+0.3
NTST	baz=301			*e*S	Sn	16 50 36.9	-0.6
PCYT	**Pengchaiyu** baz=340	0.94	347	⇑*i*P	Pn	16 50 23.9	+0.6
PCYT	baz=340			S	Sn	16 50 39.1	+0.8
NTY	**Taoyuan** baz=289	0.96	288	P	Pn	16 50 23.7	+0.2
NTY	baz=289			*e*S	Sn	16 50 38.7	0.0
HWA	**Hwalien** baz=221	0.97	222	⇑*i*P	Pn	16 50 23.4	-0.1
HWA	baz=221			*e*S	Sn	16 50 39.2	+0.5
NCU	**National Centr** baz=277	1.05	285	P	Pn	16 50 24.7	+0.3
NCU	baz=277			*e*S	Sn	16 50 41.1	+0.8
NCUH	**Zhongli** baz=277	1.05	284	⇑P	Pn	16 50 24.8	+0.3
NCUH	baz=277			*e*S	Sn	16 50 40.8	+0.5
FUSS	**Fushou** baz=240	1.07	245	⇑P	Pn	16 50 25.4	+0.5
FUSS	baz=240			*e*S	Sn	16 50 40.7	-0.4
WHF	**Hehuan Shan** baz=235	1.10	240	⇑*i*P	Pn	16 50 25.4	0.0
WHF	baz=235			S	Sn	16 50 41.4	-0.7
TWT	**Tachien** baz=241	1.13	247	⇑*i*P	Pn	16 50 26.2	+0.8
TWT	baz=241			S	Sn	16 50 42.1	0.0
TDCB	**Techi** baz=241	1.14	247	⇑P	Pn	16 50 26.2	+0.7
TDCB	baz=241			*e*S	Sn	16 50 42.1	-0.3
HSN1	**Hsinchu** baz=274	1.18	274	⇑P	Pn	16 50 26.3	+0.5
HSN1	baz=274			*e*S	Sn	16 50 42.9	+0.1
LIOB	**Emei** baz=268	1.18	267	⇑*i*P	Pn	16 50 26.2	+0.4
LIOB	baz=268			*e*S	Sn	16 50 42.8	-0.1
NSTT	**Nanjuang** baz=267	1.19	267	⇑*i*P	Pn	16 50 26.2	+0.3
NSTT	baz=267			*e*S	Sn	16 50 42.9	-0.2
ESL	**Shilin** baz=230	1.20	222	⇑*i*P	Pn	16 50 25.1	-0.9
ESL	baz=230			*e*S	Sn	16 50 41.0	-2.2
SBCB	**Hsinchu** baz=275	1.21	274	⇑P	Pn	16 50 26.6	+0.5
SBCB	baz=275			*e*S	Sn	16 50 43.6	+0.2
CHGB	**Renai** baz=233	1.22	238	⇑P	Pn	16 50 26.9	+0.4
CHGB	baz=233			*e*S	Sn	16 50 43.5	-0.6
HSN	**Hsinchu** baz=277	1.22	275	⇑*i*P	Pn	16 50 26.4	+0.1
HSN	baz=277			*e*S	Sn	16 50 43.1	-0.6
EGFH	**Guangfu** baz=227	1.31	218	⇑P	Pn	16 50 26.6	-0.8
EGFH	baz=227			*e*S	Sn	16 50 43.9	-1.6
WHP	**Taichung City** baz=259	1.31	251	⇑*i*P	Pn	16 50 28.5	+1.0
WHP	baz=259			*e*S	Sn	16 50 46.4	+0.6
IRIF	**Iriomote-Funau**	1.35	106	P	Pn	16 50 27.4	-0.3
IRIF				S	Sn	16 50 45.4	-0.9
NMLH	**Miaoli** baz=264	1.39	263	⇑P	Pn	16 50 29.0	+0.7
NMLH	baz=264			*e*S	Sn	16 50 47.4	+0.1
WPL	**Puli Township** baz=237	1.41	241	*e*P	Pn	16 50 29.5	+0.9
WPL	baz=237			*e*S	Sn	16 50 48.2	+0.4
DPDB	**Guoxing** baz=237	1.43	242	⇑P	Pn	16 50 29.8	+0.9
DPDB	baz=237			*e*S	Sn	16 50 49.1	+0.9
VWDT	**VWDT** baz=223	1.43	229	⇑P	Pn	16 50 29.0	+0.3
VWDT	baz=223			*e*S	Sn	16 50 47.6	-0.4
NSY	**Sanyi** baz=259	1.44	259	⇑*i*P	Pn	16 50 29.6	+0.7
NSY	baz=259			*e*S	Sn	16 50 48.9	+0.5
TWQ1	**Liyutan** baz=256	1.44	256	⇑*i*P	Pn	16 50 29.5	+0.5
TWQ1	baz=256			*e*S	Sn	16 50 47.8	-0.6
HGSD	**Ruisui** baz=208	1.46	214	⇑P	Pn	16 50 28.6	-0.5
HGSD	baz=208			*e*S	Sn	16 50 47.0	-1.6
EHY	**Hungye** baz=225	1.50	217	⇑P	Pn	16 50 28.4	-1.3
EHY	baz=225			*e*S	Sn	16 50 47.0	-2.6
HATJ	**Hateruma jima**	1.51	115	P	Pn	16 50 30.0	+0.3
HATJ				S	Sn	16 50 49.1	-0.7
SMLT	**Sun Moon Lake** baz=233	1.53	238	⇑*i*P	Pn	16 50 30.8	+0.7
SMLT	baz=233			*e*S	Sn	16 50 52.0	+1.7
SSLB	**Suanglung** baz=231	1.54	234	⇑P	Pn	16 50 30.4	+0.2
SSLB	baz=231			*e*S	Sn	16 50 50.5	0.0
SSLB	**Suanglung**	1.54	234		Pn	16 50 30.3	+0.2
SSLB				Sn	Sn	16 50 49.8	-0.8
TYC	**Yuchr** baz=239	1.55	239	⇑*i*P	Pn	16 50 31.1	+0.9
TYC	baz=239			*e*S	Sn	16 50 52.0	+1.3
WDJ	**Dajia District** baz=257	1.56	257	⇑P	Pn	16 50 31.1	+0.7
WDJ	baz=257			*e*S	Sn	16 50 51.1	+0.1
TCU	**Taichung** baz=250	1.59	250	*e*P	Pn	16 50 31.4	+0.6
TCU	baz=250			*e*S	Sn	16 50 51.7	+0.1
YULB	**Yu-li** baz=223	1.60	215	⇑*e*P	Pn	16 50 29.7	-1.3
YULB	baz=223			*e*S	Sn	16 50 49.4	-2.5
YULB	**Yu-li**	1.60	215		Pn	16 50 29.6	-1.3
WWF	**Wufeng** baz=255	1.61	246	⇑*i*P	Pn	16 50 31.8	+0.8
WWF	baz=255			*e*S	Sn	16 50 52.6	+0.5
JKRS	**Kuro-shima**	1.62	106	P	Pn	16 50 31.3	+0.2
JKRS				S	Sn	16 50 52.1	-0.1
TWF1	**Yuli** baz=222	1.64	215	⇑P	Pn	16 50 30.2	-1.1
TWF1	baz=222			*e*S	Sn	16 50 50.1	-2.6
WHYT	**Xinyi Township** baz=233	1.67	233	*e*P	Pn	16 50 32.8	+1.0
WHYT	baz=233			*e*S	Sn	16 50 55.1	+1.7
WNT1	**Nantou City** baz=242	1.69	242	*e*P	Pn	16 50 32.8	+0.9
WNT1	baz=242			*e*S	Sn	16 50 54.2	+0.5
WJS	**Zhushan** baz=248	1.69	239	⇑*e*P	Pn	16 50 33.0	+1.0
WJS	baz=248			*e*S	Sn	16 50 55.2	+1.3
WNT	**Mingjian** baz=241	1.70	241	⇑*e*P	Pn	16 50 32.9	+0.8
WNT	baz=241			*e*S	Sn	16 50 54.5	+0.5
JIJ	**Ishigaki jima**	1.70	101	P	Pn	16 50 31.9	-0.3
JIJ				S	Sn	16 50 52.9	-1.2
WCHH	**Zhanghua** baz=249	1.71	249	*e*P	Pn	16 50 32.7	+0.4
WCHH	baz=249			*e*S	Sn	16 50 53.8	-0.6
YUS	**Yu-Shan** baz=219	1.73	226	⇑P	Pn	16 50 33.3	+0.2
YUS	baz=219			*e*S	Sn	16 50 55.0	-0.6
FULB	**Fuli** baz=221	1.77	212	⇑*e*P	Pn	16 50 32.5	-0.5
FULB	baz=221			*e*S	Sn	16 50 54.5	-1.1
ALS	**Alishan** baz=223	1.82	229	⇑P	Pn	16 50 34.8	+0.9
ALS	baz=223			*e*S	Sn	16 50 58.2	+1.1
CHKT	**Chengkung** baz=201	1.82	209	*e*P	Pn	16 50 32.6	-1.0
CHKT	baz=201			*e*S	Sn	16 50 53.9	-2.8
JISG	**Ishigakijimahi**	1.82	93	P	Pn	16 50 33.7	0.0
JISG				S	Sn	16 50 56.3	-0.5
CHN5	**Tsauling** baz=244	1.85	234	⇑P	Pn	16 50 35.0	+0.8
CHN5	baz=244			*e*S	Sn	16 50 59.2	+1.5
WGK	**Gukeng** baz=248	1.89	238	*e*P	Pn	16 50 35.5	+0.9
WGK	baz=248			*e*S	Sn	16 50 59.9	+1.6
WDLH	**Douliu** baz=238	1.91	238	⇑*e*P	Pn	16 50 35.6	+0.8
WDLH	baz=238			*e*S	Sn	16 50 59.5	+0.7
ELDTW	**Lidau** baz=211	1.92	218	⇑P	Pn	16 50 34.2	-0.8
ELDTW	baz=211			*e*S	Sn	16 50 57.5	-1.7
RLNB	**Erlin** baz=252	1.96	246	⇑*e*P	Pn	16 50 35.7	+0.4
EDH	**Donghe** baz=203	1.96	208	⇑*e*P	Pn	16 50 34.7	-0.7
EDH	baz=203			*e*S	Sn	16 50 57.3	-2.6
WTK	**Tuku** baz=240	2.03	240	*e*P	Pn	16 50 36.8	+0.5
WTK	baz=240			*e*S	Sn	16 51 02.3	+0.8
WTCT	**Ta-ch'eng** baz=253	2.03	246	⇑*e*P	Pn	16 50 36.5	+0.1
WTCT	baz=253			*e*S	Sn	16 51 01.2	-0.4
CHN2	**Minshiung** baz=245	2.04	235	*e*P	Pn	16 50 37.6	+1.1
CHN2	baz=245			*e*S	Sn	16 51 03.2	+1.3
CHN4	**Tsaushan** baz=230	2.07	230	*e*P	Pn	16 50 37.5	+0.6
CHN4	baz=230			*e*S	Sn	16 51 03.5	+1.0
TPUB	**Ta-pu** baz=228	2.08	228	⇑*e*P	Pn	16 50 37.8	+0.8
TPUB	baz=228			*e*S	Sn	16 51 03.1	+0.4
TPUB	**Ta-pu**	2.08	228		Pn	16 50 37.7	+0.8
TPUB				Sn	Sn	16 51 02.8	+0.1
LONT	**Longtian** baz=211	2.09	211	*e*P	Pn	16 50 35.9	-1.3
LONT	baz=211			*e*S	Sn	16 51 00.5	-2.6
STYT	**Tauyuan** baz=223	2.09	223	⇑*e*P	Pn	16 50 38.0	+0.8
STYT	baz=223			*e*S	Sn	16 51 04.1	+1.0
CHY	**Chiayi** baz=245	2.10	235	*e*P	Pn	16 50 38.1	+0.8
CHY	baz=245			*e*S	Sn	16 51 03.4	+0.2
WMLT	**Mailiao** baz=245	2.11	245	*e*P	Pn	16 50 37.8	+0.6
WMLT	baz=245			*e*S	Sn	16 51 02.9	-0.3
WTP	**Ta-pu** baz=227	2.13	227	⇑*e*P	Pn	16 50 38.4	+0.7
WTP	baz=227			*e*S	Sn	16 51 04.2	+0.4
LDUT	**Ludao** baz=200	2.17	201	*e*P	Pn	16 50 37.0	-1.1
LDUT	baz=200			*e*S	Sn	16 51 01.2	-3.5
JTJ	**Tarama**	2.18	91	P	Pn	16 50 38.7	+0.5
JTJ				S	Sn	16 51 05.0	+0.1
WSF	**Szhu** baz=241	2.18	241	*e*P	Pn	16 50 38.3	+0.1
WSF	baz=241			*e*S	Sn	16 51 05.2	+0.2
TWGBT	**Beinan** baz=210	2.19	211	*e*P	Pn	16 50 37.0	-1.5
TWGBT	baz=210			*e*S	Sn	16 51 02.6	-2.8
TWG	**Pinlang** baz=210	2.19	211	*e*P	Pn	16 50 37.0	-1.5
TWG	baz=210			*e*S	Sn	16 51 02.4	-2.9
TWG	**Pinlang**	2.19	211		Pn	16 50 36.9	-1.5
TWG				Sn	Sn	16 51 02.1	-3.3
TWK	**Hsinying** baz=229	2.20	230	⇑*e*P	Pn	16 50 39.1	+0.6
TWK	baz=229			*e*S	Sn	16 51 06.5	+1.0
TTN	**Taitung** baz=215	2.22	209	*e*P	Pn	16 50 38.9	+0.1
TTN	baz=215			*e*S	Sn	16 51 05.4	-0.4
SNST	**Tainan City** baz=228	2.22	229	*e*P	Pn	16 50 39.6	+0.7
SNST	baz=228			*e*S	Sn	16 51 06.7	+0.7
CHN1	**Nanshi** baz=227	2.23	227	⇑*e*P	Pn	16 50 39.6	+0.8
CHN1	baz=227			*e*S	Sn	16 51 06.7	+0.5
SGST	**Jiashian** baz=224	2.26	225	*e*P	Pn	16 50 39.4	0.0
SGST	baz=224			*e*S	Sn	16 51 07.1	+0.1
SLGT	**Liugui** baz=231	2.29	222	*e*P	Pn	16 50 41.1	+1.4
SLGT	baz=231			*e*S	Sn	16 51 08.6	+1.1
ICHU	**Yijhu** baz=235	2.29	235	⇑*e*P	Pn	16 50 40.1	+0.4
ICHU	baz=235			*e*S	Sn	16 51 07.1	-0.5
CHN8	**Yiju** baz=235	2.35	235	*e*P	Pn	16 50 40.9	+0.4
CHN8	baz=235			*e*S	Sn	16 51 09.1	+0.2
CHN3	**Shinhua** baz=228	2.41	228	*e*P	Pn	16 50 42.0	+0.8
CHN3	baz=228			*e*S	Sn	16 51 11.8	+1.4
PTTC	**Pingtan** baz=289	2.43	289	⇓*e*P	Pn	16 50 41.4	-0.2
PTTC	baz=289			*e*S	Sn	16 51 08.5	-2.4
ECL	**Taimali** baz=210	2.44	211	*e*P	Pn	16 50 40.3	-1.4
ECL	baz=210			*e*S	Sn	16 51 08.2	-2.9
SCST	**Cishan** baz=222	2.46	223	*e*P	Pn	16 50 43.5	+1.5
SCST	baz=222			*e*S	Sn	16 51 11.7	+0.1
SCLT	**Jiali** baz=241	2.46	232	*e*P	Pn	16 50 42.7	+0.8
SCLT	baz=241			*e*S	Sn	16 51 12.3	+0.7
SSD	**Sandimen** baz=229	2.48	219	*e*P	Pn	16 50 42.8	+0.5
SSD	baz=229			*e*S	Sn	16 51 13.2	+1.0
TSMG	**Majia** baz=229	2.51	218	*e*P	Pn	16 50 43.5	+0.9
TSMG	baz=229			*e*S	Sn	16 51 13.4	+0.6
TAI1	**Yung-k'ang** baz=240	2.53	229	*e*P	Pn	16 50 43.8	+1.1
TAI1	baz=240			*e*S	Sn	16 51 14.0	+0.9
TWM1	**Shoushan** baz=222	2.55	223	*e*P	Pn	16 50 44.8	+1.7
MATB	**Ma-tsu** baz=304	2.58	304	*e*P	Pn	16 50 43.1	-0.3
MATB	baz=304			*e*S	Sn	16 51 11.5	-2.8
SGLT	**Jiouru** baz=208	2.58	221	*e*P	Pn	16 50 45.8	+2.3
SGLT	baz=208			*e*S	Sn	16 51 17.1	+2.7
MASBT	**Mashibuluo** baz=216	2.59	217	*e*P	Pn	16 50 44.2	+0.5
MASBT	baz=216			*e*S	Sn	16 51 15.0	+0.3
MSUT	**Lienchiang** baz=304	2.60	305	*e*P	Pn	16 50 44.0	+0.2
MSUT	baz=304			*e*S	Sn	16 51 14.3	-0.6
JIRB	**Irabujima**	2.61	87	P	Pn	16 50 44.2	+0.4
JIRB				S	Sn	16 51 14.1	-0.9
VWUC	**VWUC** baz=276	2.61	277	*e*P	Pn	16 50 43.7	-0.2
VWUC	baz=276			*e*S	Sn	16 51 12.6	-2.6
TSPT	**Pingtung City** baz=208	2.62	220	*e*P	Pn	16 50 46.2	+2.2
TSPT	baz=208			*e*S	Sn	16 51 18.1	+2.9
SNJT	**Kaohsiung City** baz=223	2.66	223	*e*P	Pn	16 50 45.3	+0.8
SNJT	baz=223			*e*S	Sn	16 51 17.5	+1.3
EAST	**Anshuo** baz=205	2.67	210	*e*P	Pn	16 50 43.9	-0.9
EAST	baz=205			*e*S	Sn	16 51 14.2	-2.5
TAW	**Tawu** baz=204	2.67	209	*e*P	Pn	16 50 44.0	-0.8
TAW	baz=204			*e*S	Sn	16 51 14.2	-2.4
JIKM	**Ikemajima**	2.68	85	P	Pn	16 50 45.8	+1.0
JIKM				S	Sn	16 51 16.8	+0.1
JMJ	**Miyako jima 2** baz=94	2.71	87	*e*P	Pn	16 50 46.6	+1.4
JMJ	baz=94			*e*S	Sn	16 51 18.5	+0.9
SSPT	**Xinbi** baz=215	2.73	216	*e*P	Pn	16 50 47.3	+1.8
SSPT	baz=215			*e*S	Sn	16 51 20.0	+2.1
JMJ2	**Miyako jima3**	2.75	89	P	Pn	16 50 46.7	+1.0
JMJ2				S	Sn	16 51 18.9	+0.6
LAY	**Lan-yu** baz=193	2.75	195	*e*P	Pn	16 50 44.6	-1.2
LAY	baz=193			*e*S	Sn	16 51 13.9	-4.5
PNG	**Penghu** baz=247	2.76	246	*e*P	Pn	16 50 45.2	-0.7
PNG	baz=247			*e*S	Sn	16 51 15.7	-3.0
PHUB	**P'eng-hu** baz=246	2.77	245	⇑*e*P	Pn	16 50 45.3	-0.7
PHUB	baz=246			*e*S	Sn	16 51 16.0	-2.9
SCZT	**Fangliau** baz=213	2.79	214	*e*P	Pn	16 50 47.2	+0.9
SCZT	baz=213			*e*S	Sn	16 51 20.3	+0.8
JOGS	**Gusukube**	2.82	88	P	Pn	16 50 47.6	+1.0
JOGS				S	Sn	16 51 20.2	+0.2
WDGT	**Dungji** baz=231	2.82	240	*e*P	Pn	16 50 46.4	-0.3
WDGT	baz=231			*e*S	Sn	16 51 18.0	-2.0
SLIU	**Shizi** baz=205	2.84	210	*e*P	Pn	16 50 45.4	-1.6
PTMZ	**Houxiangcun** baz=277	2.92	277	*e*P	Pn	16 50 47.7	-0.2
PTMZ	baz=277			*e*S	Sn	16 51 19.6	-2.7
XPSS	**Dashiqiu** baz=320	2.92	320	⇓*e*P	Pn	16 50 47.7	-0.3
WLCH	**Liuqiu** baz=228	2.94	217	*e*P	Pn	16 50 51.2	+2.9
LYJJ	**Jianjiangzhen** baz=309	2.94	309	⇓*e*P	Pn	16 50 48.1	-0.2
LYJJ				*e*S	Sn	16 51 22.1	-0.8

	baz=309						
VCHM	Qimei	3.03	241	eP	Pn	16 50 49.0	-0.5
	baz=233						
VCHM				eS	Sn	16 51 23.1	-2.0
	baz=233						
HEN	Hengchun	3.05	209	eP	Pn	16 50 50.4	+0.6
	baz=218						
HEN				eS	Sn	16 51 24.9	-0.7
	baz=218						
TWKBT	Hengchun	3.08	207	eP	Pn	16 50 50.2	+0.1
	baz=214						
TWKBT				eS	Sn	16 51 25.6	-0.7
	baz=214						
TWK1	Hengchun	3.08	207	eP	Pn	16 50 50.3	+0.2
	baz=214						
TWK1				eS	Sn	16 51 26.3	0.0
	baz=214						
TSEB	Hengchuen, Pin	3.08	205	eP	Pn	16 50 49.4	-0.7
	baz=199						
TSEB				eS	Sn	16 51 25.4	-0.9
	baz=199						
MHZQ	Yeshan	3.27	296	eP	Pn	16 50 52.6	-0.1
	baz=296						
QZH	Quanzhou	3.39	275	i P	Pn	16 50 54.0	-0.2
QZH				S	Sn	16 51 30.5	-3.1
QZH				smax	smax		
	comp=N,680nm,0.8s						
QZH				smax	smax		
	comp=E,320nm,0.5s						
KNM	Kinmen	3.54	266	eP	Pn	16 50 57.6	+1.3
	baz=266						
KNM				eS	Sn	16 51 34.1	-3.2
	baz=266						
KNMB	Chin-men Tao	3.58	267	eP	Pn	16 50 56.3	-0.5
	baz=267						
KNMB				eS	Sn	16 51 33.1	-5.1
	baz=267						
KNMB	Chin-men Tao	3.58	267	Pn	Pn	16 50 56.4	-0.5
AXDP	Jialang	3.95	274	⇓eP	Pn	16 51 01.9	+0.1
	baz=273						
AXDP				eS	Sn	16 51 44.2	-2.9
	baz=273						
ZPLA	Ao Xicun	4.23	260	eP	Pn	16 51 05.6	0.0
	baz=261						
ZPLA				eS	Sn	16 51 50.9	-3.1
	baz=261						
ZZJH	Jiuhuzhen	4.27	268	eP	Pn	16 51 06.0	-0.1
	baz=267						
ZZJH				eS	Sn	16 51 51.7	-3.1
	baz=267						
JOW	Kunigami	5.78	67	P	Pn	16 51 26.0	-0.6
	18nm,0.3s,baz=303,slow=26,SNR=66						
JOW				S	Sn	16 52 28.9	-2.7
	8.0nm,0.3s,baz=0.4,slow=24,SNR=5.6						
JOW	Kunigami	5.78	67	eP	Pn	16 51 25.5	-1.0
	baz=70						
JOW				eS	Sn	16 52 28.3	-3.2
	baz=70						
JOW	Kunigami	5.78	67	Pn	Pn	16 51 25.9	-0.6
JOW				Sn	Sn	16 52 27.4	-4.2
SSE	Sheshan	6.44	351	Pn	Pn	16 51 35.5	0.0
VDOS	Pratas Island	6.51	233	eP	Pn	16 51 38.2	+1.6
	baz=234						
SZP	Santa	7.33	194		Pn	16 51 46.0	-1.6
JMZ	Minamidaito 2	8.14	80	Pn	Pn	16 51 56.9	-1.8
GZH	Guangzhou	8.36	261	P	Pn	16 51 57.5	-4.2
GZH				S	Sn	16 53 27.3	-7.1
WHN	Wuhan	9.14	311	⇓P	Pn	16 52 14.0	+1.7
WHN				S	Sn	16 53 49.5	-3.8
WHN				LR	LR		
	comp=N,1µm,5.6s						
WHN				LR	LR		
	comp=E,660nm,12.6s						
WHN				LR	LR		
	comp=Z,630nm,9.9s						
JNU	Nakatsue	11.25	40	Pn	Pn	16 52 41.8	+0.9
JTU	Tsushima	11.56	31	Pn	Pn	16 52 45.7	+0.7
ENH	Enshi	12.66	299	Pn	Pn	16 52 59.4	-0.2
QIZ	Qiongzhong	12.88	246	P	Pn	16 52 59.5	-3.1
QIZ				S	Sn	16 55 24.0	-0.2
QIZ				LR	LR		
	comp=N,100nm,8.4s						
QIZ				LR	LR		
	comp=E,160nm,13.2s						
QIZ				LR	LR		
	comp=Z,140nm,11.8s						
KSRS	Korea Array	13.58	19	P	Pn	16 53 12.8	+1.1
	0.2nm,0.3s,baz=195,slow=13,SNR=10						
KS19	Wonju Array Si	13.61	19	P	P	16 53 16.9	-0.5
GYA	Guiyang	14.23	280	⇑P	P	16 53 23.5	-1.0
GYA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
XAN	Xi'an	14.91	312	P	P	16 53 33.0	+1.1
XAN				pmax	pmax		
	comp=Z,20nm,1.3s						
XAN	Xi'an	14.91	312	P	P	16 53 31.8	-0.2
KMI	Kunming	17.76	275	⇓eP	Pn	16 54 06.8	+2.5
KMI				pP	pP	16 54 22.5	-0.2
KMI				PP	sP	16 54 26.5	-9.1
KMI				pmax	pmax		
	comp=Z,11nm,0.9s						
MAT	Matsushiro	18.04	45	P	P	16 54 04.7	-1.7
MAT				eS	Sn	16 57 28.4	-0.2
MJAR	Matsushiro Arr	18.04	45	P	P	16 54 05.5	-1.0
	0.1nm,0.3s,baz=229,slow=9.4,SNR=7.6						
MJAR				LR	LR	17 00 56.6	
	comp=Z,46nm,19.8s,baz=335,slow=36						
MJAR	Matsushiro Arr	18.04	45	IAmb	IAmb	16 54 08.6	
	comp=Z,13nm,1.8s						
JCJ	Chichijima	18.04	78	P	P	16 54 05.8	-0.7
	comp=Z,1.8nm,0.3s,baz=295,slow=13,SNR=4.2						
JCJ	Chichijima	18.04	78	IAmb	IAmb	16 54 11.1	
	comp=Z,77nm,0.8s						
UBPT	Khong Chiam	18.38	242	P	Pn	16 54 16.4	+4.9
	comp=Z,4.6nm,1.4s						
HHC	Hu-ho-hao-te	18.43	333	eP	Pn	16 54 14.0	+1.9
HHC				pmax	pmax		
	comp=Z,14nm,0.9s						
HHC				pmax	pmax		
	comp=Z,260nm,7.0s						
NONG	Nongkai	19.02	253	P	Pn	16 54 25.1	+6.0
	comp=Z,16nm,1.0s						
LZH	Lanzhou	19.52	310	eP	Pn	16 54 25.0	0.0
LZH				pP	pP	16 54 40.5	-1.4
LZH				sP	sP	16 54 48.0	-6.7
LZH				pmax	pmax		
	comp=Z,20nm,1.2s						
CHAI	Chaiyaphum	20.96	249	P	Pn	16 54 41.0	-0.8
	comp=Z,28nm,0.9s						
USRK	Ussuriysk Ar.	20.99	20	P	P	16 54 38.8	+0.5
	comp=Z,2.1nm,0.4s,baz=200,slow=8.6,SNR=24						
SRAK	Srakaew	21.85	245	P	P	16 54 45.7	-2.1
	comp=Z,143nm,1.0s						
CMMT	Chiang Mai	22.46	259	P	P	16 54 54.7	+0.5
	comp=Z,4.4nm,0.8s						
CHTO	Chiang Mai	22.46	259	P	P	16 54 53.8	-0.4
CM04	Chiang Mai Arr	22.57	258	P	P	16 54 57.0	+1.7
	comp=Z,41nmcomp=Z,3.9nm,0.8s						
CM31	Chiang Mai Arr	22.59	259	P	P	16 54 59.0	+3.6
	comp=Z,119nm,0.7s						
CMAR	Chiang Mai Arr	22.59	259	P	P	16 54 56.8	+1.3
	comp=Z,1.7nm,0.7s,baz=61,slow=7.9,SNR=24						
CMAR				pP	pP	16 55 18.9	+3.2
	comp=Z,2.3nm,0.8s,baz=57,slow=8.2,SNR=6.8						
CMAR				PcP	PcP	16 58 46.0	+0.7
	comp=Z,0.4nm,0.5s,baz=66,slow=0.6,SNR=5.3						
CMAR				ScP	ScP	17 02 14.2	+0.5
	comp=Z,0.5nm,0.8s,baz=40,slow=1.0,SNR=6.0						
CMAR				LR	LR	17 03 30.2	
	comp=Z,31nm,18.9s,baz=70,slow=36						
CM13	Chiang Mai Arr	22.63	259	P	P	16 54 57.9	+1.9
	comp=Z,29nmcomp=Z,3.2nm,0.9s						
UTHA	Uthaitani	23.29	251	P	P	16 55 04.7	+2.4
	comp=Z,14nm,1.0s						
UMPA	Umpang Tak	23.52	253	P	P	16 55 07.8	+3.5
GTA	Gaotai	23.96	313	⇓P	P	16 55 09.3	+1.0
GTA				pP	pP	16 55 31.0	+1.1
GTA				sP	sP	16 55 43.3	+0.8
GTA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,140nm,5.1s						
GTA				LR	LR		
	comp=Z,160nm,15.3s						
GTA				LR	LR		
	comp=Z,140nm,14.5s						
GTA				LR	LR		
	comp=Z,150nm,14.5s						
SBUM	Sibu	24.18	205	P	P	16 55 09.4	-0.8
SBUM	Sibu	24.18	205	P	P	16 55 11.0	+0.7
TNTI	Ternate	24.29	168	P	P	16 55 10.6	-0.7
TNTI	Ternate	24.29	168	P	P	16 55 12.6	+1.3
	comp=Z,648nmcomp=Z,53nm,0.9s						
ASAJ	Asahikawa	25.47	35	P	P	16 55 20.7	-1.1
	comp=Z,3.0nm,0.3s,baz=231,slow=10,SNR=20						
JKA	Kamikawa-asahi	25.47	36	P	P	16 55 20.7	-1.1
JKA	Kamikawa-asahi	25.47	36	IAmb	IAmb	16 56 15.8	
	comp=Z,45nm,1.4s						
KLR	Kul'dur	25.57	14	P	P	16 55 22.3	-0.3
	comp=Z,2.6nm,0.6s,baz=198,slow=8.1,SNR=16						
ULN	Ulaanbaatar	26.08	336	P	P	16 55 27.6	+0.1
SONM	Songino Array	26.30	335	P	P	16 55 29.8	+0.4
	comp=Z,7.5nm,0.7s,baz=150,slow=10.0,SNR=46						
SONM				pP	pP	16 55 54.3	+2.5
	comp=Z,2.8nm,0.8s,baz=150,slow=8.4,SNR=4.2						
SONM				PcP	PcP	16 58 52.7	-0.4
	comp=Z,0.4nm,0.6s,baz=149,slow=4.2,SNR=2.4						
SONM	Songino Array	26.30	335	IAmb	IAmb	16 55 30.7	
	comp=Z,5.9nm,0.8s						
SANI	Sanana	26.84	172	P	P	16 55 35.2	+0.9
	comp=Z,23nm,0.7s						
SHL	Shillong	27.53	278	P	P	16 55 41.3	+0.5
SHL				IAmb	IAmb	16 55 42.3	
	comp=Z,9.9nm,0.7s						
LSA	Lhasa	28.11	287	P	P	16 55 47.3	+1.1
LSA				S	S	17 00 16.0	-8.2
LSA				pmax	pmax		
	comp=Z,28nm,0.9s						
LSA	Lhasa	28.11	287	P	P	16 55 46.5	+0.3
LSA				IAmb	IAmb	16 55 48.6	
	comp=Z,5.4nm,0.6s						
KULM	Kulim	28.38	231	P	P	16 55 45.0	-3.1
MYKOM	Kota Tinggi	28.93	221	P	P	16 55 50.0	-3.0
TLY	Talaya	30.48	337	P	P	16 56 07.0	+0.6
	comp=Z,3.4nm,0.6s,baz=202,slow=5.3,SNR=8.7						
TLY	Talaya	30.48	337	P	P	16 56 06.0	-0.5
TLY				IAmb	IAmb	16 56 07.9	
	comp=Z,5.0nm,0.8s						
PSI	Prapat	31.35	230	LR	LR	17 08 21.5	
	comp=Z,31nm,19.7s,baz=0.0,slow=35						
WMQ	Urumqi	34.04	313	eP	P	16 56 39.8	+2.1
MK31	Makanchi Array	38.69	315	P	P	16 57 16.8	-0.3
MK31				IAmb	IAmb	16 57 18.2	
	comp=Z,9.3nm,1.6s						
MK31					ScP	17 03 04.0	-2.0
MKAR	Makanchi Array	38.69	315	P	P	16 57 17.3	+0.2
	comp=Z,2.8nm,0.7s,baz=100,slow=11,SNR=30						
MKAR				pP	pP	16 57 41.5	+1.0
	comp=Z,2.1nm,0.7s,baz=103,slow=10,SNR=7.1						
MKAR				ScP	ScP	17 03 04.2	-1.8
	comp=Z,0.9nm,0.7s,baz=102,slow=5.4,SNR=10						
MKAR	Makanchi Array	38.69	315	P	P	16 57 16.6	-0.5
MKAR					ScP	17 03 03.2	-2.8
PETK	Petropavlovsk-	38.86	34	P	P	16 57 17.5	-1.0
	comp=Z,1.3nm,0.7s,baz=335,slow=6.6,SNR=4.3						
MAKZ	Makanchi	38.89	315	P	P	16 57 18.6	-0.3
MAKZ				IAmb	IAmb	16 57 20.0	
	comp=Z,12nm,1.5s						
SHLS	Shalkode	39.53	309	eP	P	16 57 22.2	-2.1
	comp=Z,4.1nm,0.7s,baz=308						
SHLS				epP	pP	16 57 43.3	-4.4
	baz=308						
SHLS				i sP	sP	16 57 53.9	-5.5
	baz=308						
SHLS				i S	S	17 03 16.8	-2.6
	baz=308						
UZB	Uzynbulak	39.84	308	eP	P	16 57 26.7	-0.2
	comp=Z,4.5nm,0.6s,baz=308						
KPKS	Kokpek	40.16	309	eP	P	16 57 29.2	-0.3
	baz=308						
ZAA0	Zalesovo Array	40.37	326	P	P	16 57 29.5	-1.5
ZAA0					pP	16 57 55.4	+1.0
ZALV	Zalesovo Beam	40.37	326	P	P	16 57 30.3	-0.6
	comp=Z,2.2nm,0.5s,baz=116,slow=9.1,SNR=14						
ZALV				pP	pP	16 57 55.4	+1.0
	comp=Z,2.6nm,0.8s,baz=118,slow=8.6,SNR=4.7						
ZALV				ScP	ScP	17 03 09.2	-3.0
	comp=Z,1.4nm,0.8s,baz=112,slow=2.6,SNR=6.5						
ZALV	Zalesovo Beam	40.37	326	P	P	16 57 30.1	-0.8
ZALV					pP	16 57 55.0	+0.6
ZALV					ScP	17 03 09.9	-2.4
TDK	Taldyqorghan	40.72	311	eP	P	16 57 34.9	+0.8
	comp=Z,7.4nm,0.8s,baz=311						
SEM	Semipalatinsk	41.28	319	eP	P	16 57 37.4	-1.4
	baz=319						
AAA	Alma-Ata	41.36	308	eP	P	16 57 40.2	+0.8
	baz=308						
CHKK	Chushkaly	41.44	309	eP	P	16 57 40.2	+0.3
	baz=309						
KSH	Kashi	41.48	302	P	P	16 57 44.5	+4.1
KSH				pP	pP	16 58 08.5	+4.4
KSH				PcP	PcP	16 59 41.0	+4.7
KSH				S	S	17 03 55.0	+6.5
KSH				SS	SS	17 06 54.5	-2.1
KSH				pmax	pmax		
	comp=Z,15nm,1.0s						
KSH				pmax	pmax		
	comp=Z,510nm,5.8s						
KSH				LR	LR		
	comp=Z,370nm,9.8s						
KSH				LR	LR		
	comp=Z,350nm,8.3s						
PMG	Port Moresby	41.68	141	P	P	16 57 41.8	-0.3
	comp=Z,26nm,0.9s,baz=323,slow=6.6,SNR=4.8						
KUU	Kurty	41.91	309	eP	P	16 57 44.0	+0.3
	comp=Z,4.0nm,0.7s,baz=309						
KURK	Kurchatov	42.36	319	P	P	16 57 46.8	-0.4
FITZ	Fitzroy Crossi	42.67	175	P	P	16 57 49.4	-0.6
	comp=Z,1.1nm,0.4s,baz=340,slow=4.7,SNR=7.3						
FITZ	Fitzroy Crossi	42.67	175	IAmb	IAmb	16 59 16.4	
	comp=Z,8.9nm,1.4s						
AAK	Ala-Archa	43.01	307	P	P	16 57 52.9	0.0
	comp=Z,2.2nm,0.6s,baz=133,slow=8.1,SNR=8.7						
AAK	Ala-Archa	43.01	307	P	P	16 57 52.4	-0.5
NIL	Nilore	43.41	294	P	P	16 57 56.0	0.0
NIL				IAmb	IAmb	16 57 58.5	
	comp=Z,6.7nm,0.8s						
COEN	Coen	43.49	150	P	P	16 57 56.5	-0.2
COEN				IAmb	IAmb	16 57 58.4	
	comp=Z,6.2nm,0.8s						
BTLS	Baital	43.75	310	eP	P	16 57 58.1	-0.4
	baz=310						
WB0	Warramunga Arr	45.74	164	P	P	16 58 14.4	-0.1
BRZS	Berezniki	45.75	317	eP	P	16 58 13.9	-0.5
	baz=316						
WRAB	Tennant Creek	45.89	164	P	P	16 58 15.8	0.0
WRA	Warramunga Arr	45.90	164	P	P	16 58 16.0	+0.2
	comp=Z,38nm,0.7s,baz=346,slow=8.5,SNR=311						
WRA	Warramunga Arr	45.90	164	P	P	16 58 14.6	-1.2
WB2	Warramunga Arr	45.90	164	P	P	16 58 15.4	-0.4
WR0	Warramunga Arr	45.97	164	P	P	16 58 16.2	-0.1
KK31	Karatay Array	45.98	307	P	P	16 58 16.5	+0.2
KK31				IAmb	IAmb	16 58 18.3	
	comp=Z,11nm,1.6s						
KKAR	Karatay Array	45.98	307	P	P	16 58 16.6	+0.4
KKAR				IAmb	IAmb	16 58 18.3	
	comp=Z,11nm,1.6s						
PSA00	Pilbara Seismi	46.06	183	P	P	16 58 15.6	-1.4
PSA00				IAmb	IAmb	16 59 44.8	
	comp=Z,5.0nm,0.7s						
IUG	Iuzhnay	46.23	305	eP	P	16 58 19.0	+0.5
	baz=305						
KBL	Kabul	46.87	295	P	P	16 58 23.9	+0.3
KBL				IAmb	IAmb	16 58 26.2	
	comp=Z,12nm,0.8s						
TIXI	Tiksi	47.12	3	P	P	16 58 23.8	-0.9
TIXI				IAmb	IAmb	16 58 24.4	
	comp=Z,3.8nm,0.8s						
TIXI				PcP	PcP	16 59 53.5	-1.3
NRIK	Noril'sk	49.17	344		P	16 58 41.1	+0.6
NRIK				IAmb	IAmb	16 59 07.6	
	comp=Z,5.3nm,1.2s						
AS31	Alice Springs	49.38	166	P	P	16 58 42.9	+0.2
AS31				IAmb	IAmb	16 58 44.4	
	comp=Z,4.0nm,0.7s						
ASAR	Alice Springs	49.38	166	P	P	16 58 43.1	+0.4
	comp=Z,12nm,0.7s,baz=342,slow=8.1,SNR=147						
ASAR				PcP	PcP	17 00 03.5	-0.3
	comp=Z,2.0nm,0.9s,baz=341,slow=4.2,SNR=4.4						
ASAR	Alice Springs	49.38	166	P	P	16 58 42.2	-0.5
ASAR				PcP	PcP	17 00 03.3	-0.5
CTA	Charters Tower	50.26	150	P	P	16 58 50.6	+1.2
	comp=Z,4.2nm,0.7s,baz=346,slow=6.8,SNR=5.2						
CTA				PcP	PcP	17 00 07.7	+0.7
	comp=Z,0.8nm,0.5s,baz=247,slow=4.7,SNR=5.0						
ABKAR	Akbulak array	53.81	314	P	P	16 59 15.5	+0.1
ABKAR				IAmb	IAmb	16 59 16.6	
	comp=Z,4.8nm,0.9s						
ABKAR	Akbulak array	53.81	314	P	P	16 59 15.2	-0.2
ABKAR				PcP	PcP	17 00 19.7	-0.3
GEYT	Alibeck	55.42	300	P	P	16 59 28.4	+1.1
	comp=Z,3.3nm,0.9s,baz=194,slow=5.6,SNR=4.5						
GEYT				pP	pP	16 59 53.1	+0.9
	comp=Z,2.6nm,0.6s,baz=97,slow=3.4,SNR=3.8						
GEYT	Alibeck	55.42	300	P	P	16 59 28.0	+0.7
GEYT				IAmb	IAmb	16 59 29.6	
	comp=Z,3.1nm,1.0s						
BBOO	Buckleboo	58.68	166	P	P	16 59 49.6	-0.5
STKA	Stephens Creek	59.21	161	P	P	16 59 54.0	+0.3
	comp=Z,2.6nm,0.7s,baz=336,slow=9.9,SNR=9.7						
STKA	Stephens Creek	59.21	161	P	P	16 59 53.5	-0.2
SANVU	Saraoutou	59.25	128	P	P	16 59 53.5	-0.8
DZM	Mont Dzumac	63.24	134	P	P	17 00 22.3	+1.0
	comp=Z,8.2nm,0.6s,baz=346,slow=17,SNR=10						
KBZ	Khabaz	65.95	309	P	P	17 00 39.9	+1.3
	comp=Z,1.0nm,0.8s,baz=101,slow=7.1,SNR=3.7						
RND	Reindeer	67.70	29	P	P	17 00 48.4	-1.1
RND				IAmb	IAmb	17 00 49.8	
	comp=Z,5.8nm,0.8s						
ILAR	Eielson Array	68.28	27	P	P	17 00 53.9	+0.9
	comp=Z,0.6nm,0.8s,baz=291,slow=7.5,SNR=1.6						
MSVF	Nonsavu	68.77	122	P	P	17 00 58.1	+1.4
	comp=Z,8.2nm,0.8s,baz=310,slow=11,SNR=4.7						
FINES	FINESS Array B	71.51	330	P	P	17 01 13.0	+0.2
	comp=Z,0.8nm,0.7s,baz=93,slow=8.9,SNR=6.7						
FINES				LR	LR	17 36 45.0	
	comp=Z,228nm,20.6s,baz=282,slow=39						
INK	Inuvik	72.36	22	P	P	17 01 16.9	-0.8
	comp=Z,1.4nm,0.7s,baz=299,slow=9.6,SNR=6.0						
INK	Inuvik	72.36	22	IAmb	IAmb	17 02 27.3	
	comp=Z,19nm,1.9s						
C36M	Paulatuk	74.97	20	P	P	17 01 31.9	-1.0
YKA	Yellowknife Ar	82.09	23	P	P	17 02 11.6	-0.6
	comp=Z,1.6nm,0.8s,baz=318,slow=4.4,SNR=21						
B08A	Colville Reser	88.76	36	P	P	17 02 45.9	+0.2
B08A				IAmb	IAmb	17 02 47.0	
	comp=Z,5.6nm,0.8s						
PINE	Pine Mountain	90.56	40	P	P	17 02 55.0	+0.6
PINE				IAmb	IAmb	17 02 56.6	
	comp=Z,8.9nm,1.0s						
MOD	Modoc Plateau	92.05	42	P	P	17 03 01.2	-0.1
NVAR	Mina Array Bea	95.35	43	P	P	17 03 17.2	+0.7
	comp=Z,1.0nm,0.7s,baz=286,slow=5.5,SNR=5.9						

IDC 26 16:57:22.3±36.0**, 21°.06N**×**145°.10E, h323**^{km}±279^{km}**, mb3.0**/7**, mb1 3.1**/7**, mb1mx2.8**/53**, mbtmp3.7**/7**, Error ellipse: s-maj=252.7km s-min=38.8km az=171.0, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSRS	Korea Array	22.11	321	P	P	17 01 51.3	0.0
	1.5nm,0.9s,baz=149,slow=9.4,SNR=2.6						
KLR	Kul'dur	30.05	342	P	P	17 03 02.5	+0.3
	0.9nm,0.3s,baz=160,slow=12,SNR=4.5						
ZALV	Zalesovo Beam	55.81	322	P	P	17 06 26.6	+0.1
	0.5nm,0.4s,baz=98,slow=6.3,SNR=2.4						
MKAR	Makanchi Array	56.44	313	P	P	17 06 31.1	-0.1
	0.1nm,0.4s,baz=94,slow=7.7,SNR=4.1						
ILAR	Eielson Array	61.79	27	P	P	17 07 06.4	-0.8
	0.4nm,0.9s,baz=263,slow=4.5,SNR=2.6						
YKA	Yellowknife Ar	76.17	28	P	P	17 08 35.8	+0.7
	0.3nm,0.5s,baz=294,slow=4.8,SNR=4.2						
FINES	FINESS Array B	84.51	335	P	P	17 09 18.8	-0.3
	0.6nm,0.4s,baz=66,slow=5.4,SNR=8.0						

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*IDC **26** 16:59:35.9±4.5, 5°.39S×151°.67E, h127^{km}±38^{km}, mb3.5/8, mb1 3.7/10, mb1mx3.5/40, mbtmp3.9/10, MS3.1/2, Ms1 3.1/2, ms1mx2.7/20, Error ellipse: s-maj=44.1km s-min=25.1km az=113.0*

*NEIC **26** 16:59:35.1±1.9, 5°.27S±0°.07×151°.60E±0°.09, h119^{km}±6^{km}, mb4.2/15, Error ellipse: s-maj=13.4km s-min=8.9km az=115.0*

ISC 26 16:59:33.9±0.5**, 5°.28S**±0°.07×**151°.61E**±0°.08**, h100**^{km}**, n38, σ1^{s}40**/39**, mb3.9**/15**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	1.21	27		Pn	16 59 59.0	+2.3
RABL				Sn	Sn	17 00 16.8	+2.7
PMG	Port Moresby	6.03	227	P	Pn	17 01 03.5	+2.9
	4.1nm,0.3s,baz=55,slow=5.0,SNR=13						
PMG				S	Sn	17 02 08.6	+0.4
	21nm,0.3s,baz=359,slow=22,SNR=20						
PMG	Port Moresby	6.03	227	Pn	Pn	17 01 02.0	+1.4
PMG				Sn	Sn	17 02 09.0	+0.8
HNR	Honiara	9.24	117	LR	LR	17 05 02.4	
	comp=Z,46nm,18.8s,baz=222,slow=36						
HNR	Honiara	9.24	117	Pn	Pn	17 01 42.2	-2.1
COEN	Coen	11.98	223	Pn	Pn	17 02 22.8	+1.4
CTA	Charters Tower	15.62	199	P	P	17 03 10.0	-0.6
	0.2nm,0.3s,baz=22,slow=10,SNR=2.3						
MTN	Manton Dam	21.56	248	P	P	17 04 16.9	+1.4
DZM	Mont Dzumac	22.02	141	LR	LR	17 11 11.6	
	comp=Z,97nm,18.2s,baz=290,slow=32						
DZM	Mont Dzumac	22.02	141	P	P	17 04 22.9	+2.6
DZM				IAmb	IAmb	17 04 52.2	
	comp=Z,26nm,1.5s						
WB0	Warramunga Arr	22.10	228	P	P	17 04 21.7	+0.5
WB0				IAmb	IAmb	17 04 23.7	
	comp=Z,4.5nm,0.9s						
WR0	Warramunga Arr	22.11	227	P	P	17 04 21.4	+0.1
WRAB	Tennant Creek	22.23	228	P	P	17 04 21.9	-0.7
WRAB				IAmb	IAmb	17 04 24.5	
	comp=Z,6.6nm,1.0s						
WB2	Warramunga Arr	22.24	228	P	P	17 04 22.0	-0.7
WB2				IAmb	IAmb	17 04 24.6	
	comp=Z,7.0nm,1.1s						
WRA	Warramunga Arr	22.25	228	P	P	17 04 22.0	-0.7
	comp=Z,4.3nm,0.8s,baz=50,slow=10,SNR=28						
WRA	Warramunga Arr	22.25	228	P	P	17 04 21.7	-1.0
AS31	Alice Springs	25.00	221	P	P	17 04 50.2	+1.5
ASAR	Alice Springs	25.00	221	P	P	17 04 48.4	-0.3
	comp=Z,2.0nm,0.6s,baz=58,slow=8.5,SNR=31						
ASAR	Alice Springs	25.00	221	P	P	17 04 48.6	-0.1
ARMA	Armidale	25.01	180	P	P	17 04 51.1	+2.5
ARMA				IAmb	IAmb	17 04 52.4	
	comp=Z,9.3nm,1.1s						
FITZ	Fitzroy Crossi	28.39	241	P	P	17 05 17.9	-1.2
	comp=Z,4.1nm,0.7s,baz=38,slow=11,SNR=23						
FITZ	Fitzroy Crossi	28.39	241	P	P	17 05 17.9	-1.2
FITZ				IAmb	IAmb	17 05 21.2	
	comp=Z,18nm,1.6s						
BBOO	Buckleboo	31.00	206	P	P	17 05 41.5	-0.5
BBOO				IAmb	IAmb	17 05 47.1	
	comp=Z,12nm,1.4s						
GIRL	Giralia	40.00	241	P	P	17 06 59.5	+0.4
MORW	Morawa	41.13	231	P	P	17 07 07.0	-1.4
JMM	Marumori	44.09	348	P	P	17 07 29.8	-2.3
CMAR	Chiang Mai Arr	57.01	296	P	P	17 09 10.2	+0.5
	comp=Z,1.0nm,1.0s,baz=121,slow=4.6,SNR=8.9						
CMAR	Chiang Mai Arr	57.01	296	P	P	17 09 09.5	-0.3
SONM	Songino Array	66.10	328	P	P	17 10 11.1	+0.6
	comp=Z,0.6nm,0.6s,baz=154,slow=4.6,SNR=5.8						
SONM	Songino Array	66.10	328	P	P	17 10 11.1	+0.6
SONM				IAmb	IAmb	17 10 11.5	
	comp=Z,3.9nm,1.6s						
TTA	Tatalina	78.65	22	P	P	17 11 24.9	+0.2
CNPM	China Poot	78.66	26	P	P	17 11 24.8	0.0
MKAR	Makanchi Array	79.91	319	P	P	17 11 30.8	-1.1
	comp=Z,0.2nm,0.5s,baz=104,slow=7.0,SNR=6.2						
ZALV	Zalesovo Beam	80.90	327	P	P	17 11 35.8	-1.1
	comp=Z,0.5nm,0.5s,baz=103,slow=6.7,SNR=3.8						
ZALV	Zalesovo Beam	80.90	327	P	P	17 11 35.6	-1.3
IMAR	Indian Mountai	81.23	20	P	P	17 11 37.0	-1.5
ILAR	Eielson Array	83.05	22	P	P	17 11 46.5	-1.5
	comp=Z,0.3nm,0.5s,baz=255,slow=5.0,SNR=5.4						
QSPA	South Pole Qui	84.68	180	P	P	17 11 55.9	-0.6
QSPA				IAmb	IAmb	17 11 59.6	
	comp=Z,5.3nm,1.4s						

IDC 26 17:43:34.6±1.2**, 28°.08N**×**104°.75E, h0**^{km}**, mb3.6**/4**, mb1 3.6**/5**, mb1mx3.4**/41**, mbtmp3.5**/5**, ML3.3**/1**, MS3.2**/1**,**

Ms1 3.2/1,ms1mx2.6/44,Error ellipse: s-maj=90.1km s-min=20.4km az=62.0,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	Songino Array	19.77	3	P	P	17 48 06.6	+0.3
	0.1nm,0.3s,baz=194,slow=8.6,SNR=2.5						
MKAR	Makanchi Array	25.68	323	P	P	17 49 06.2	0.0
	0.5nm,0.8s,baz=121,slow=12,SNR=7.4						
MKAR				LR	LR	17 58 45.9	
	comp=Z,54nm,19.9s,baz=334,slow=36						
ZALV	Zalesovo Beam	29.70	336	P	P	17 49 41.9	-0.2
	0.4nm,0.6s,baz=150,slow=12,SNR=2.5						
WRA	Warramunga Arr	55.66	146	P	P	17 53 12.3	-0.4
	0.9nm,0.8s,baz=334,slow=8.2,SNR=8.0						
ASAR	Alice Springs	58.62	148	P	P	17 53 33.9	+0.2
	0.6nm,0.7s,baz=328,slow=6.4,SNR=11						

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*IDC **26** 17:45:27.0±3.6, 41.°66N×126.°93W, h0km, mb3.0/3, mb1 3.4/4, mb1mx3.3/42, mbtmp3.0/4, ML2.7/1, MS2.9/5, Ms1 2.9/5, ms1mx2.8/7, Error ellipse: s-maj=69.1km s-min=23.2km az=35.0*

*NEIC **26** 17:45:28.8±0.5, 41.°70N±0.°09×126.°8W±0.°2, h11km±5km, ML2.5/18, Error ellipse: s-maj=21.2km s-min=11.8km az=72.0*

*ANF **26** 17:45:31.2±1.0, 41.°94N×126.°58W, h5km, ML2.6/1, Error ellipse: s-maj=12.3km s-min=5.4km az=123.0*

ISC 26 17:45:29.3±1.8**, 41.°78N**±0.°09×**126.°7W**±0.°1**, h10km, n27, σ0ˢ.84**/22**, mb2.9**/3**, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBO	Bosley Butte	1.91	76	Pn	Pn	17 46 02.1	0.0
KBO				IAML		17 46 43.2	
	comp=E,48nm,2.2s						
KBO				IAML		17 47 02.2	
	comp=N,37nm,2.5s						
KEBM	Edson Butte	2.08	58	Pn	Pn	17 46 04.2	-0.2
KEBM				IAML		17 46 34.0	
	comp=N,31nm,1.7s						
KEBM				IAML		17 47 28.8	
	comp=E,35nm,3.1s						
KRMB	Red Mountain	2.13	96	Pn	Pn	17 46 05.4	+0.4
KRMB				IAML		17 46 25.6	
	comp=N,20nm,2.6s						
KRMB				IAML		17 47 08.8	
	comp=E,25nm,2.2s						
JCC	Jacoby Creek,	2.25	114	Pn	Pn	17 46 06.5	0.0
JCC				IAML		17 46 47.0	
	comp=N,30nm,1.8s						
JCC				IAML		17 47 14.7	
	comp=E,38nm,3.3s						
L02E	Cave Junction	2.36	80	P	Pn	17 46 08.4	+0.3
	baz=265,SNR=7.9						
K02D	Willamette Mer	2.45	67	P	Pn	17 46 09.6	+0.2
	baz=252,SNR=26						
K02D				S	Sn	17 46 38.4	-1.1
	baz=252						
J01E	Myrtle Point	2.49	55	P	Pn	17 46 09.5	-0.4
	baz=239,SNR=10						
J01E				S	Sn	17 46 39.4	-0.8
	baz=239						
HUMO	Hull Mountain	2.92	72		Pn	17 46 16.7	+0.8
M02C	Callahan	2.93	96	P	Pn	17 46 17.1	+1.1
	baz=282,SNR=11						
YBH	Yreka Blue Hor	3.00	90	Pn	Pn	17 46 18.8	+1.7
	comp=E,0.8nm,0.3s,baz=259,slow=13,SNR=9.7						
YBH				LR	LR	17 47 23.1	
	comp=E,142nm,19.6s,baz=322,slow=37						
YBH	Yreka Blue Hor	3.00	90		Pn	17 46 17.4	+0.3
I03D	Drain, OR	3.14	51	P	Pn	17 46 18.9	0.0
	baz=234,SNR=10						
I02D	Swisshome	3.14	41	P	Pn	17 46 18.7	-0.2
	baz=224,SNR=9.7						
L04D	Klamath Falls	3.32	81	P	Pn	17 46 22.8	+1.3
	baz=266,SNR=7.9						
WDC	Whiskeytown Da	3.38	109	Pn	Pn	17 46 21.6	-0.5
WDC				IAML		17 46 58.5	
	comp=E,7.7nm,4.1s						
WDC				IAML		17 47 28.0	
	comp=N,9.7nm,5.0s						
H04A	Detroit Lake	4.41	47	Pn	Pn	17 46 37.6	+1.3
PINE	Pine Mountain	4.71	63	Pn	Pn	17 46 42.2	+1.6
NVAR	Mina Array Bea	7.27	115	LR	LR	17 49 21.9	
	comp=N,33nm,21.1s,baz=100,slow=32						
ELK	Elko	8.71	93	LR	LR	17 50 17.1	
	comp=N,56nm,21.3s,baz=319,slow=33						
PFO	Pinyon Flats O	11.51	132	LR	LR	17 52 19.8	
	comp=N,92nm,18.6s,baz=36,slow=36						
ANMO	Albuquerque	17.28	107	LR	LR	17 56 53.2	
	comp=N,102nm,21.9s,baz=12,slow=39						
YKA	Yellowknife Ar	21.96	15	P	P	17 50 23.2	+0.3
	comp=N,0.4nm,0.8s,baz=207,slow=12,SNR=3.9						
TXAR	Lajitas Array	22.42	116	P	P	17 50 28.0	-0.3
	comp=N,0.2nm,0.4s,baz=315,slow=10,SNR=2.5						
ILAR	Eielson Array	25.76	340	P	P	17 50 59.8	-0.1
	comp=N,0.5nm,0.9s,baz=149,slow=11,SNR=4.1						
H11N3	WAKE ISLAND Hy	59.66	270	T	T	18 59 51.0	
	baz=52,slow=75,SNR=11						
H11N2	WAKE ISLAND Hy	59.66	270	T	T	18 59 52.9	
	baz=52,slow=75,SNR=7.9						
H11N1	WAKE ISLAND Hy	59.68	270	T	T	18 59 48.0	
	baz=52,slow=75,SNR=9.0						

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*IDC **26** 17:52:57.2±1.5, 29.°23S×61.°14E, h0km, mb3.7/7, mb1 3.8/7, mb1mx3.5/43, mbtmp3.7/7, MS3.6/3, Ms1 3.6/3, ms1mx3.0/41, Error ellipse: s-maj=54.4km s-min=26.8km az=32.0*

ISC 26 17:52:59.1±1.5**, 29.°2S**±0.°4×**61.°2E**±0.°2**, h10km, n16, σ0ˢ.62**/10**, mb3.8**/8**, MS3.5**/3**, Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOSA	Boshof	31.36	262	LR	LR	18 09 37.9	
	comp=Z,75nm,18.4s,baz=100,slow=32						
MAW	Mawson	38.42	179	LR	LR	18 14 09.7	
	comp=Z,155nm,18.1s,baz=286,slow=33						
ATD	Arta Tunnel	44.21	334	LR	LR	18 16 09.2	
	comp=Z,59nm,21.4s,baz=89,slow=32						
H01W2	Cape Leeuwin H	44.82	111	T	T	18 49 33.2	
	baz=261,slow=75,SNR=4.6						
H01W3	Cape Leeuwin H	44.83	111	T	T	18 49 33.8	
	baz=261,slow=75,SNR=3.6						
H01W1	Cape Leeuwin H	44.84	111	T	T	18 49 36.0	
	baz=261,slow=75,SNR=4.3						
CMAR	Chiang Mai Arr	59.81	42	P	P	18 03 05.4	+0.6
	0.4nm,0.5s,baz=231,slow=7.0,SNR=6.3						
ASAR	Alice Springs	64.43	104	P	P	18 03 35.5	-0.5
	0.5nm,0.8s,baz=244,slow=6.5,SNR=9.6						
WRA	Warramunga Arr	66.25	100	P	P	18 03 48.0	+0.2
	0.5nm,0.7s,baz=246,slow=5.7,SNR=4.6						
TORD	Torodi Ar. Bea	71.17	298	P	P	18 04 18.4	0.0
	0.4nm,0.6s,baz=132,slow=4.1,SNR=2.3						
BRTR	Keskin Array B	73.23	338	P	P	18 04 30.6	+0.2
	0.9nm,0.7s,baz=169,slow=7.4,SNR=3.9						
MKAR	Makanchi Array	78.04	15	P	P	18 04 56.9	-0.7
	0.4nm,0.7s,baz=183,slow=4.9,SNR=6.0						
KURBB	Kurchatov Arra	80.97	11	P	P	18 05 13.0	-0.4
	0.5nm,0.8s,baz=202,slow=6.1,SNR=4.2						
ZALV	Zalesovo Beam	85.33	14	P	P	18 05 35.0	-0.9
	0.4nm,0.4s,baz=234,slow=4.8,SNR=3.1						
ILAR	Eielson Array	140.31	18	PKP	PKPdf	18 12 28.2	+0.7
	0.2nm,0.6s,baz=248,slow=4.8,SNR=1.7						
YKA	Yellowknife Ar	146.61	356	PKPbc	PKPdf	18 12 38.8	+0.2
	0.7nm,0.6s,baz=4.6,slow=3.2,SNR=12						

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*HEL **26** 18:01:57.9±0.1, 67.°06N×20.°93E, h0km, ML1.8(UPP), Explosion*

*UPP **26** 18:01:57.2±0.1, 67.°06N×20.°91E, h0km, ML1.8, Explosion*

*IDC **26** 18:01:59.3±1.2, 67.°12N×21.°38E, h0km, mb1 2.9/3, mb1mx2.7/44, mbtmp2.8/3, ML1.8/3, Error ellipse: s-maj=21.6km s-min=8.5km az=106.0*

*NAO **26** 18:01:59.6±0.8, 67.°08N×21.°62E, ML2.5*

*BER **26** 18:02:01.5±4.0, 67.°05N×20.°93E, h0km, ML1.7, Suspected explosion*

ISC 26 18:01:57.4±0.8**, 67.°09N**±0.°03×**21.°05E**±0.°03**, h0km, n40, σ1ˢ.25**/50**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MASU	Masugnsbyn	0.52	45	P	Pb	18 02 08.2	-1.2
MASU	Masugnsbyn	0.52	45	*i* P	Pb	18 02 08.2	-1.2
PAJU	Pajala	0.81	94	P	Pg	18 02 13.1	+0.2
PAJU				S	Sb	18 02 25.6	-0.3
PAJU	Pajala	0.81	94	*i* P	Pg	18 02 13.1	+0.2
PAJU				*i* S	Sb	18 02 25.6	-0.3
KUA	Kurravaara	0.91	343	P	Pg	18 02 14.4	-0.4
KUA	Kurravaara	0.91	343	*e*P	Pg	18 02 14.4	-0.4
RATU	Laukkuluspa	0.92	323	P	Pg	18 02 14.3	-0.8
RATU				S	Sb	18 02 28.5	-0.7
RATU	Laukkuluspa	0.92	323	*e*P	Pg	18 02 14.3	-0.8
RATU				*e*S	Sb	18 02 28.5	-0.7
HARU	Harads	0.93	182	P	Pg	18 02 14.1	-1.2
HARU	Harads	0.93	182	*e*P	Pg	18 02 14.1	-1.2
LANU	Lannavaara	1.03	20	P	Pb	18 02 17.2	-0.8
LANU	Lannavaara	1.03	20	*e*P	Pb	18 02 17.2	-0.8
SALU	Saltoluokta	1.03	287	*e*P	Pb	18 02 17.8	-0.4
NIKU	Nikkaluokta	1.10	316	P	Pg	18 02 17.4	-1.0
NIKU	Nikkaluokta	1.10	316	*e*P	Pg	18 02 17.4	-1.0
KOVU	Salmi	1.19	344	P	Pg	18 02 19.7	-0.4
KOVU	Salmi	1.19	344	*e*P	Pg	18 02 19.7	-0.4
KALU	Kalix	1.55	142	*e*PN	Pn	18 02 26.3	+0.1
TOF	Tornio	1.66	126	*e*P	Pn	18 02 28.0	+0.3
KIF	Kilpisjarvi	1.92	357	Pn	Pg	18 02 33.6	-0.6
KIF				Sn	Sg	18 03 01.4	+2.3
KIF	Kilpisjarvi	1.92	357	Pn	Pg	18 02 33.6	-0.6
KIF				Sn	Sg	18 03 01.4	+2.3
RNF	Rovaniemi	2.02	102	*e*	Pg	18 02 45.4	+9.3
KTK1	Kautokeino	2.10	22	Pn	Pb	18 02 35.6	-0.7
KTK1				Sn	Sb	18 03 01.9	-0.9
KTK1	Kautokeino	2.10	22	*e*P	Pb	18 02 35.8	-0.5
KTK1				*e*S	Sg	18 03 03.0	-1.6
KTK1				IAML		18 03 22.1	
	comp=Z,10nm,0.2s						
JETT	Jettan, Norway	2.49	355	Pn	Pg	18 02 43.8	-1.2
OUL	Oulu	2.82	133	*e*PB	Pb	18 02 47.2	-1.4
ARA0	ARCESS Array S	2.96	32	Pn	Pn	18 02 46.5	+0.9
	baz=214,slow=16						
ARA0	ARCESS Array S	2.96	32	Pn	Pn	18 02 46.5	+0.9
	baz=214,slow=16						
ARCES	ARCESS Array B	2.96	32	Pn	Pn	18 02 46.6	+1.0
	baz=210,slow=14,SNR=16						
ARCES				Lg	Lg	18 03 29.4	
	baz=214,slow=30,SNR=6.3						
OUF	Merijarvi	3.13	149	*e*PB	Pb	18 02 52.8	-1.1
FIA0	FINESS Array S	6.08	157	Pn	Pn	18 03 30.1	+1.7
	baz=350,slow=16						
FIA0				Sn	Sn	18 04 37.5	-1.1
	baz=5.2,slow=16						
FIA0	FINESS Array S	6.08	157	Pn	Pn	18 03 30.1	+1.7
	baz=350,slow=16						
FIA0				Sn	Sn	18 04 37.5	-1.1
	baz=5.2,slow=16						
FINES	FINESS Array B	6.08	157	Pn	Pn	18 03 30.2	+1.8
	comp=Z,0.1nm,0.3s,baz=348,slow=14,SNR=15						
FINES				Sn	Sn	18 04 40.5	+1.9
	comp=Z,0.1nm,0.3s,baz=347,slow=24,SNR=1.3						
NB2	NORSAR Subarra	7.44	220	Pn	Pn	18 03 48.0	+0.8
	baz=30,slow=14						
NB2	NORSAR Subarra	7.44	220	Pn	Pn	18 03 48.0	+0.8
	baz=30,slow=14						
NOA	NORSAR Array B	7.44	220	Pn	Pn	18 03 49.0	+1.8
	comp=Z,0.0nm,0.3s,baz=19,slow=18,SNR=4.1						
NRA0	NORESS Array S	7.62	218	Pn	Pn	18 03 52.0	+2.4
	baz=36,slow=11						
NRA0	NORESS Array S	7.62	218	Pn	Pn	18 03 52.0	+2.4
	baz=36,slow=11						
HFS	Hagfors	7.71	209	Pn	Pn	18 03 52.8	+2.0
	baz=24,slow=14						
HFS	Hagfors	7.71	209	Pn	Pn	18 03 52.8	+2.0
	baz=24,slow=14						

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*MAN **26** 18:22:17.4, 6.°62N×127.°18E, h32km, mb4.5, ML3.4, MS3.2*

*IDC **26** 18:23:19.6±1.9, 6.°58N×127.°01E, h88km±18km, mb3.4/11, mb1 3.5/12, mb1mx3.4/39, mbtmp3.7/12, MS3.3/2, Ms1 3.3/2, ms1mx2.8/17, Error ellipse: s-maj=28.4km s-min=12.0km az=62.0*

ISC 26 18:23:17.5±0.6**, 6.°46N**±0.°07×**127.°09E**±0.°08**, h74km, n18, σ1ˢ.87**/25**, mb3.7**/11**, 1D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	1.41	256	*e*P	Pn	18 23 39.5	-2.0
DDMP				*e*S	Sn	18 23 56.7	-2.9
DAV	Davao City (W)	1.62	292	P	Pn	18 23 44.6	+0.4
	72nm,0.3s,baz=336,slow=1.0,SNR=5.8						
DAV				S	Sn	18 24 05.0	+0.6
	174nm,0.3s,baz=282,slow=23,SNR=7.6						
DAV				LR	LR	18 24 11.6	
	comp=Z,87nm,21.0s,baz=98,slow=34						
BUKP	Musuan	2.46	305	*e*P	Pn	18 23 55.5	0.0
BUKP				*e*S	Sn	18 24 25.1	+0.5
CGP	Cagayan de Oro	3.10	310⇓	*e*P	Pn	18 24 05.5	+1.4
CGP				*e*S	Sn	18 24 40.3	+0.3
PAGZ	Pagadian	3.93	291	*e*P	Pn	18 24 15.7	+0.2
MSLP	Maasin	4.27	329	*e*P	Pn	18 24 19.8	-0.3
MSLP				*e*S	Sn	18 25 08.1	-0.5
SIJI	Sorong	8.39	150	P	Pn	18 25 18.6	+2.2
	3.0nm,0.3s,baz=127,slow=11,SNR=33						
SIJI				S	Sn	18 26 44.1	-5.4
	1.1nm,0.3s,baz=210,slow=23,SNR=1.4						
FITZ	Fitzroy Crossi	24.44	183	P	P	18 28 31.6	+2.1
	1.9nm,0.9s,baz=51,slow=18,SNR=2.5						
WRA	Warramunga Arr	27.19	165	P	P	18 28 57.4	+3.1
	0.2nm,0.4s,baz=348,slow=10,SNR=5.3						
WRA				LR	LR	18 41 47.5	
	comp=Z,38nm,21.6s,baz=225,slow=40						
CMAR	Chiang Mai Arr	29.90	296	P	P	18 29 18.0	-0.6
	0.2nm,0.7s,baz=102,slow=8.8,SNR=2.1						
ASAR	Alice Springs	30.67	168	P	P	18 29 27.6	+2.4
	0.3nm,0.6s,baz=357,slow=7.5,SNR=3.6						
USRK	Ussuriysk Ar.	37.84	6	P	P	18 30 26.4	-0.5
	0.7nm,0.5s,baz=172,slow=6.4,SNR=4.7						
STKA	Stephens Creek	40.55	161	P	P	18 30 51.0	+1.3
	0.4nm,0.3s,baz=338,slow=11,SNR=1.8						
SONM	Songino Array	44.86	340	P	P	18 31 24.6	+0.1
	0.1nm,0.4s,baz=157,slow=8.5,SNR=2.0						
SONM				LR	LR	18 49 37.3	
	comp=Z,71nm,18.1s,baz=354,slow=35						
PETK	Petropavlovsk-	52.79	23	P	P	18 32 26.1	+1.0
	0.9nm,0.5s,baz=180,slow=4.2,SNR=5.8						
MKAR	Makanchi Array	55.55	324	P	P	18 32 44.8	-0.5
	1.0nm,0.6s,baz=124,slow=8.0,SNR=19						
MKAR				PcP	PcP	18 33 43.8	-0.6
	0.5nm,0.6s,baz=112,slow=4.2,SNR=4.6						
ZALV	Zalesovo Beam	58.35	332	P	P	18 33 03.6	-1.2
	0.6nm,0.4s,baz=116,slow=6.8,SNR=5.0						
ARCES	ARCESS Array B	88.03	340	P	P	18 35 57.9	-1.5
	4.1nm,1.0s,baz=104,slow=0.5,SNR=3.7						

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*IDC **26** 18:48:24.8±0.6, 0.°48S×135.°75E, h0km, mb4.2/10, mb1 4.5/15, mb1mx4.2/49, mbtmp4.3/15, ML4.5/4, MS3.9/13, Ms1 3.9/13, ms1mx3.6/45, Error ellipse: s-maj=22.8km s-min=13.4km az=77.0*

*DJA **26** 18:48:30.7±0.6, 1˚S±4˚×13˚6E±˚, h32km±7km, M4.7/19, mB5.1/10, mb4.8/19, MLv5.1/8, Mw(mB)4.5/10*

*NEIC **26** 18:48:36.6±1.9, 0.°90S±0.°07×135.°3E±0.°1, h74km±5km, mb4.6/27, Error ellipse: s-maj=16.8km s-min=10.3km az=91.0*

ISC 26 18:48:29.7±0.5**, 0.°64S**±0.°05×**135.°73E**±0.°05**, h26km, n91, σ1ˢ.97**/83**, mb4.6**/25**, MS4.0**/8**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BAKI	Biak	0.67	145	P	Pb	18 48 42.6	-0.1
SRPI	Serui, Papua	1.33	157	P	Pn	18 48 52.6	+0.1
SRPI				S	Sb	18 49 12.0	+1.5
SMPI	Sarmi	3.27	114	P	Pn	18 49 17.9	-1.4
SMPI				S	Sn	18 49 56.7	-0.7
KMPI	Kaimana, Papua	3.62	214	S	Sn	18 50 07.8	+1.8
FAKI	Fak Fak	4.15	237	Pn	Pn	18 49 31.4	+0.1
FAKI	Fak Fak	4.15	237	P	Pn	18 49 31.5	+0.1
FAKI				S	Sn	18 50 20.7	+1.6
SIJI	Sorong	4.47	267	Pn	Pn	18 49 35.8	0.0
	8.9nm,0.3s,baz=235,slow=23,SNR=65						
SIJI				Sn	Sn	18 50 27.8	+0.8
	8.0nm,0.3s,baz=72,slow=13,SNR=5.0						
SIJI				LR	LR	18 51 24.1	
	comp=Z,2μm,18.9s,baz=69,slow=40						
SWI	Sorong	4.47	267	P	Pn	18 49 36.3	+0.5
GENI	Genyem	4.84	114	P	Pn	18 49 39.5	-1.4
BNDI	Bandanaira	6.98	236	P	Pn	18 50 11.5	+1.2
	1.9nm166nm,0.9s						
BNDI				S	Sn	18 51 30.3	+1.4
	1.9nm166nm,0.9s						
TNTI	Ternate	8.48	279	Pn	Pn	18 50 29.7	-1.2
TNTI	Ternate	8.48	279	P	Pn	18 50 33.3	+2.4
	658nm35nm,0.9s						
SAUI	Saumlaki	8.53	211	Pn	Pn	18 50 28.0	-3.6
GTOI	Gorontalo	12.78	276	P	Pn	18 51 33.9	+4.1
	388nm34nm,1.1s						
MTN	Manton Dam	12.95	200		Pn	18 51 33.0	+0.8
PMG	Port Moresby	14.33	128	Pn	Pn	18 51 50.5	-0.4
	0.3nm,0.3s,baz=335,slow=19,SNR=2.5						
PMG				LR	LR	18 59 22.7	
	comp=Z,310nm,19.2s,baz=302,slow=46						
SOEI	Soe	14.56	231	Pn	Pn	18 51 50.9	-3.4
SOEI	Soe	14.56	231	P	Pn	18 51 56.3	+2.0
	45nm,0.7s						
TOLI2	Tolitoli	15.05	277	Pn	Pn	18 52 01.8	+1.1
COEN	Coen	15.15	151		Pn	18 52 01.3	-0.8
BATI	Baumata	15.31	231	Pn	Pn	18 52 02.6	-1.5
	3.1nm,0.3s,baz=184,slow=1.2,SNR=7.1						
BATI				LR	LR	18 59 22.4	
	comp=Z,165nm,19.0s,baz=62,slow=43						
BATI	Baumata	15.31	231	P	Pn	18 52 06.3	+2.1
	48nm,0.9s						
BNSI	Bone	16.05	256	P	P	18 52 19.5	+2.6
	886nm61nm,1.1s						
TTSI	Tana Toraja	16.08	261	P	P	18 52 18.2	+0.9
	765nm65nm,1.0s						
SPSI	Sidrap Palu	16.28	258	P	P	18 52 21.6	+2.0
	31nm,1.5s						
KNRA	Kununurra	16.45	204	P	P	18 52 21.2	-0.1
KAPI	Kappang	16.54	254	Pn	Pn	18 52 19.6	-0.4
	1.2nm,0.3s,baz=81,slow=8.9,SNR=7.1						
KAPI				LR	LR	19 00 49.0	
	comp=Z,159nm,19.4s,baz=66,slow=45						
KAPI	Kappang	16.54	254		Pn	18 52 19.5	-0.5
MYLDM	Lahad Datu	18.15	289		P	18 52 42.0	+1.7
WRAB	Tennant Creek	19.22	184		P	18 52 51.5	-0.5
WRAB				IAmb	IAmb	18 53 00.6	
	comp=Z,27nm,0.6s						
WRA	Warramunga Arr	19.23	184	P	P	18 52 51.9	-0.2
	comp=Z,2.3nm,0.3s,baz=0.7,slow=11,SNR=105						
WRA				LR	LR	19 00 56.9	
	comp=Z,324nm,18.8s,baz=350,slow=39						
PLAI	Plampang	19.64	245	P	P	18 52 55.8	-0.8
	comp=Z,919nmcomp=Z,103nm,0.9s						
FITZ	Fitzroy Crossi	19.98	209	P	P	18 53 00.6	+0.3
	comp=Z,7.6nm,0.8s,baz=40,slow=10,SNR=13						
FITZ				S	S	18 56 38.0	-6.0
	comp=Z,6.0nm,0.7s,baz=117,slow=9.8,SNR=3.5						
FITZ				LR	LR	19 01 41.5	
	comp=Z,306nm,21.1s,baz=36,slow=40						
FITZ	Fitzroy Crossi	19.98	209		P	18 52 59.5	-0.7
FITZ				IAmb	IAmb	18 53 07.2	
	comp=Z,24nm,0.8s						
TWSI	Taliwang, Sumb	20.42	246	P	P	18 53 01.7	-3.4
	comp=Z,25nm,1.0s						
BBKI	Banjar Baru	21.06	262	P	P	18 53 13.6	+1.6
	comp=Z,2μmcomp=Z,33nm,1.8s						
CTA	Charters Tower	21.90	153	P	P	18 53 22.8	+1.7
	comp=Z,18nm,0.8s,baz=328,slow=11,SNR=24						
CTAO	Charters Tower	21.90	153	P	P	18 53 22.8	+1.7
CTAO				IAmb	IAmb	18 53 27.2	
	comp=Z,37nm,1.1s						
ABJI	Asem Bagus	22.57	251	P	P	18 53 36.8	+8.5
AS31	Alice Springs	22.96	184	P	P	18 53 31.5	-0.8
AS31				IAmb	IAmb	18 53 38.5	
	comp=Z,14nm,0.8s						
ASAR	Alice Springs	22.96	184	P	P	18 53 32.0	-0.3
	comp=Z,16nm,0.5s,baz=12,slow=11,SNR=152						
ASAR				S	S	18 57 45.1	+4.0
	comp=Z,3.0nm,0.9s,baz=8.7,slow=21,SNR=4.7						
ASAR				LR	LR	19 04 06.8	
	comp=Z,452nm,18.7s,baz=359,slow=41						
ASAR	Alice Springs	22.96	184	P	P	18 53 31.5	-0.8
SBUM	Sibu	23.70	278	P	P	18 53 39.2	-0.5
PBKI	Pangkalan Bun	24.13	265	P	P	18 53 44.5	+0.7
HNR	Honiara	25.64	111	LR	LR	19 04 57.6	
	comp=Z,108nm,19.5s,baz=282,slow=39						
EIDS	Eidsvold	28.71	150	P	P	18 54 27.0	+2.0
STKA	Stephens Creek	31.56	170	P	P	18 54 49.5	-0.5
	comp=Z,14nm,0.8s,baz=346,slow=8.3,SNR=40						
STKA				LR	LR	19 08 55.4	
	comp=Z,503nm,18.6s,baz=355,slow=39						
STKA	Stephens Creek	31.56	170	P	P	18 54 49.4	-0.7
BBOO	Buckleboo	32.00	179	P	P	18 54 53.6	-0.4
BBOO				IAmb	IAmb	18 54 54.2	
	comp=Z,9.0nm,0.9s						
INU	Inuyama	35.82	2		pP	18 55 52.2	+18
H11S3	WAKE ISLAND Hy	35.88	56	T	T	19 33 30.0	
	baz=240,slow=75,SNR=52						
H11S2	WAKE ISLAND Hy	35.89	56	T	T	19 33 31.0	
	baz=240,slow=75,SNR=24						
H11S1	WAKE ISLAND Hy	35.90	56	T	T	19 33 31.2	
	baz=240,slow=75,SNR=33						
H11N1	WAKE ISLAND Hy	36.64	55	T	T	19 34 29.6	
	baz=245,slow=75,SNR=30						
H11N2	WAKE ISLAND Hy	36.65	55	T	T	19 34 29.6	
	baz=245,slow=75,SNR=31						
H11N3	WAKE ISLAND Hy	36.66	55	T	T	19 34 29.0	
	baz=245,slow=75,SNR=36						
UTTA	Uttaradit	39.14	300	P	P	18 56 03.3	+7.8
XAN	Xi'an	42.70	326	P	P	18 56 23.3	-1.3
XAN				pP	pP	18 56 31.5	-0.8
XAN				pmax	pmax		
	comp=Z,5.0nm,1.4s						
XAN				LR	LR		
	comp=N,230nm,16.3s						
XAN				LR	LR		
	comp=E,230nm,14.1s						
LZH	Lanzhou	47.06	324	*e*P	P	18 56 59.3	-0.2
LZH				pP	pP	18 57 02.5	-4.8
LZH				sP	sP	18 57 04.8	-5.3
LZH				pmax	pmax		
	comp=Z,16nm,1.2s						
KLR	Kul'dur	49.79	357	P	P	18 57 18.1	-2.0
	comp=Z,1.5nm,0.6s,baz=198,slow=5.0,SNR=6.3						
GTA	Gaotai	51.65	325	P	P	18 57 33.3	-1.2
GTA				pP	pP	18 57 41.5	-0.7
GTA				sP	sP	18 57 45.8	+0.6
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ULN	Ulaanbaatar	54.37	337	P	P	18 57 58.3	+3.9
ULN				IAmb	IAmb	18 58 02.0	
	comp=Z,4.5nm,1.1s						
SONM	Songino Array	54.61	336	P	P	18 57 54.2	-1.9
	comp=Z,0.4nm,0.8s,baz=153,slow=4.1,SNR=3.5						
PETK	Petropavlovsk-	56.62	16	LR	LR	19 19 48.0	
	comp=Z,64nm,20.5s,baz=220,slow=33						
MK31	Makanchi Array	66.34	323	P	P	18 59 14.6	-1.6
MK31				IAmb	IAmb	18 59 24.5	
	comp=Z,13nm,1.4s						
MKAR	Makanchi Array	66.34	323	P	P	18 59 15.1	-1.1
	comp=Z,1.3nm,0.4s,baz=107,slow=8.4,SNR=64						
MKAR	Makanchi Array	66.34	323	P	P	18 59 14.3	-1.9
MAKZ	Makanchi	66.54	323	P	P	18 59 15.7	-1.7
MAKZ				IAmb	IAmb	18 59 25.1	
	comp=Z,8.5nm,0.9s						
ZAA0	Zalesovo Array	68.67	330	P	P	18 59 28.9	-1.8
ZAA0				IAmb	IAmb	18 59 37.6	
	comp=Z,5.0nm,0.9s						
ZALV	Zalesovo Beam	68.67	330	P	P	18 59 28.8	-1.9
	comp=Z,0.6nm,0.5s,baz=115,slow=6.7,SNR=6.3						
KURK	Kurchatov	70.33	325	P	P	18 59 39.2	-1.8
KURK				IAmb	IAmb	18 59 48.2	
	comp=Z,8.9nm,0.8s						
KURBB	Kurchatov Arra	70.33	325	P	P	18 59 39.5	-1.5
	comp=Z,4.8nm,1.0s,baz=114,slow=5.4,SNR=25						
NRIK	Noril'sk	76.92	344	P	P	19 00 17.7	-1.6
	comp=Z,0.9nm,0.6s,baz=4.6,slow=2.7,SNR=3.8						
NRIK	Noril'sk	76.92	344	P	P	19 00 22.5	+3.2
NRIK				IAmb	IAmb	19 00 26.5	
	comp=Z,11nm,1.3s						
VNDA	Vanda	78.11	174	LR	LR	19 34 17.1	
	comp=Z,163nm,18.9s,baz=338,slow=35						
TTA	Tatalina	80.82	25	P	P	19 00 43.6	+2.6
TTA				IAmb	IAmb	19 00 50.2	
	comp=Z,8.6nm,1.3s						
ABKAR	Akbulak array	81.23	320	P	P	19 00 41.6	-1.8
ABKAR	Akbulak array	81.23	320	P	P	19 00 41.5	-1.9
ABKAR				IAmb	IAmb	19 00 53.2	
	comp=Z,3.6nm,0.8s						
IMAR	Indian Mountai	82.74	23	P	P	19 00 55.9	+4.9
KTH	Kantishna Hill	83.20	26	P	P	19 00 57.8	+4.3
KTH				IAmb	IAmb	19 01 01.8	
	comp=Z,11nm,1.2s						

SML	**Sawmill**	**83.94**	**28**	P	P	19 01 02.5	+5.2
RND	**Reindeer**	**84.06**	**26**	P	**P**	**19 00 59.6**	**+1.7**
SCM	**Sheep Creek Mo**	**84.41**	**28**	P	**P**	**19 01 01.1**	**+1.4**
CCB	**Clear Creek Bu**	**84.79**	**25**	P	**P**	**19 01 04.1**	**+2.6**
TOLK	**Toolik Lake Re**	**85.05**	**21**	P	**P**	**19 01 05.7**	**+3.0**
TOLK				IAmb	IAmb	19 01 12.3	
	comp=Z,5.9nm,0.9s						
IL31		**85.20**	**25**	P	**P**	**19 01 07.7**	**+4.2**
IL31				IAmb	IAmb	19 01 11.0	
	comp=Z,10nm,1.2s						
ILAR	**Eielson Array**	**85.20**	**25**	P	**P**	**19 01 01.5**	**-2.1**
	comp=Z,0.6nm,0.9s,baz=288,slow=4.5,SNR=5.5						
ILAR				LR	LR	19 35 11.3	
	comp=Z,56nm,19.6s,baz=294,slow=33						
QSPA	**South Pole Qui**	**89.30**	**180**	P	**P**	**19 01 23.2**	**-0.2**
YKA	**Yellowknife Ar**	**99.56**	**26**	LR	LR	19 46 57.9	
	comp=Z,56nm,19.2s,baz=0.0,slow=35						
CPUP	**Villa Florida**	**150.38**	**156**	PKPbc	**PKPbc**	**19 08 19.3**	**-0.3**
	comp=Z,4.0nm,0.7s,baz=177,slow=2.7,SNR=8.7						
LPAZ	**La Paz**	**151.06**	**127**	PKPbc	**PKPbc**	**19 08 22.0**	**-0.3**
	comp=Z,4.5nm,0.9s,baz=34,slow=1.8,SNR=12						

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*IDC **26** 18:52:29.2±0.7, 9°.62N×90°.25E, h0^{km}, mb4.1/13, mb1 4.1/15, mb1mx3.9/49, mbtmp4.1/15, ML4.1/2, MS3.7/6, Ms1 3.7/6, ms1mx3.4/40, Error ellipse: s-maj=23.0km s-min=15.2km az=61.0*

*DJA **26** 18:52:31.7±0.4, 10°N±5°×9°0E±°, h10^{km}, M4.4/8, mB4.9/3, mb4.4/8, Mw(mB)4.2/3*

*NEIC **26** 18:52:32.8±2.7, 9°.66N±0°.09×90°.33E±0°.08, h29^{km}±6^{km}, mb4.4/14, Error ellipse: s-maj=13.8km s-min=11.3km az=165.0*

ISC 26 18:52:33.8±0.5**, 9°.62N**±0°.06×**90°.28E**±0°.05**, h35**^{km}**, n84,** σ**2**^{s}**.12**/75**, mb4.2**/26**, MS3.8**/6**, 1C-1D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBA	**Port Blair**	**3.15**	**50**	Pn	Pn	18 53 18.8	-2.2
LHMI	**Lhok Sumawe**	**7.92**	**123**	Pn	**Pn**	**18 54 25.6**	**-0.9**
LHMI	**Lhok Sumawe**	**7.92**	**123**	P	**Pn**	**18 54 25.8**	**-0.7**
	131nm,0.9s						
LHMI				S	**Sn**	**18 56 02.7**	**+7.8**
	131nm,0.9s						
TPTI		**9.32**	**132**	P	**Pn**	**18 54 41.8**	**-3.9**
	418nm29nm,0.6s						
TPTI				S	**Sn**	**18 56 22.6**	**-6.8**
	418nm29nm,0.6s						
PALK	**Pallekele**	**9.76**	**257**	Pn	**Pn**	**18 54 48.8**	**-3.0**
	1.2nm,0.3s,baz=175,slow=13,SNR=11						
PALK				Sn	Sn	18 56 28.4	-12
	8.5nm,0.3s,baz=95,slow=22,SNR=9.3						
PALK				LR	LR	18 58 24.1	
	comp=Z,278nm,18.8s,baz=173,slow=36						
PALK	**Pallekele**	**9.76**	**257**	Pn	**Pn**	**18 54 51.1**	**-0.7**
PSI	**Prapat**	**10.94**	**128**	LR	LR	18 59 37.7	
	comp=Z,307nm,21.8s,baz=222,slow=39						
MHMT	**Maesarieng**	**11.29**	**40**	P	**Pn**	**18 55 11.6**	**-1.1**
IPM	**Ipoh**	**11.82**	**115**		**Pn**	**18 55 17.1**	**-2.9**
CM13	**Chiang Mai Arr**	**12.10**	**43**	P	**Pn**	**18 55 24.8**	**+0.9**
	0.0nm76nm11nm,0.9s						
CM05	**Chiang Mai Arr**	**12.12**	**43**	P	**Pn**	**18 55 24.4**	**+0.4**
	0.0nm69nm7.9nm,0.8s						
CM04	**Chiang Mai Arr**	**12.14**	**43**	P	**Pn**	**18 55 24.9**	**+0.5**
	0.0nm110nm9.4nm,0.7s						
CM01	**Chiang Mai Arr**	**12.14**	**43**	P	**Pn**	**18 55 25.0**	**+0.6**
	0.0nm91nm13nm,0.8s						
CM15	**Chiang Mai Arr**	**12.14**	**43**	P	**Pn**	**18 55 25.2**	**+0.9**
	0.0nm94nm8.9nm,0.8s						
CM02	**Chiang Mai Arr**	**12.14**	**43**	P	**Pn**	**18 55 24.9**	**+0.5**
	0.0nm81nm9.9nm,0.9s						
CM31	**Chiang Mai Arr**	**12.15**	**43**	P	**Pn**	**18 55 26.2**	**+1.6**
	1.2nm3μm250nm,0.8s						
CM31	**Chiang Mai Arr**	**12.15**	**43**		**Pn**	**18 55 22.0**	**-2.6**
CMAR	**Chiang Mai Arr**	**12.15**	**43**	Pn	**Pn**	**18 55 22.8**	**-1.8**
	0.5nm,0.3s,baz=234,slow=14,SNR=21						
CMAR				Sn	**Sn**	**18 57 40.0**	**+1.1**
	0.2nm,0.3s,baz=238,slow=31,SNR=4.3						
CMAR				LR	LR	19 00 47.9	
	comp=Z,267nm,20.7s,baz=264,slow=41						
CMAR	**Chiang Mai Arr**	**12.15**	**43**	Pn	**Pn**	**18 55 21.6**	**-3.0**
CM09	**Chiang Mai Arr**	**12.18**	**43**	P	**Pn**	**18 55 26.0**	**+1.1**
	0.0nm111nm14nm,0.8s						
CM32	**Chiang Mai Arr**	**12.23**	**42**	P	**Pn**	**18 55 25.0**	**-0.6**
CM36	**Chiang Mai Arr**	**12.30**	**43**	P	P	18 55 33.0	-5.3
CHTO	**Chiang Mai**	**12.41**	**42**	Pn	**Pn**	**18 55 25.4**	**-2.7**
CMMT	**Chiang Mai**	**12.41**	**42**	P	**Pn**	**18 55 26.5**	**-1.6**
	0.0nm5.6nm,0.8s						
CM33	**Chiang Mai Arr**	**12.41**	**42**	P	**Pn**	**18 55 27.0**	**-1.1**
CM35	**Chiang Mai Arr**	**12.45**	**43**	P	**Pn**	**18 55 28.0**	**-0.6**
CM34	**Chiang Mai Arr**	**12.57**	**42**	P	**Pn**	**18 55 35.0**	**+4.7**
LAMP	**Lampang**	**12.67**	**45**	P	**P**	**18 55 41.7**	**-0.7**
HYB	**Hyderabad**	**13.79**	**305**	i P	**Pn**	**18 55 44.0**	**-2.9**
HYB				eS	**Sn**	**18 58 24.0**	**+5.1**
UBPT	**Khong Chiam**	**15.86**	**68**	P	**Pn**	**18 56 15.7**	**+1.1**
SHL	**Shillong**	**15.94**	**5**	Pn	**Pn**	**18 56 13.0**	**-2.7**
SHL				IAmb	IAmb	18 56 22.8	
	comp=Z,36nm,0.6s						
RAMN	**Ramite**	**17.59**	**349**	eP	**Pn**	**18 56 36.0**	**-0.5**
	comp=Z,49nm,0.3s						
TAPN	**Taplejung**	**17.81**	**352**	eP	**Pn**	**18 56 35.6**	**-3.7**
	comp=Z,72nm,0.5s						
PKI	**Pulchoki**	**18.44**	**346**	eP	**P**	**18 56 46.9**	**+0.1**
	comp=Z,38nm,0.3s						
PKIN	**Phulchoki**	**18.45**	**346**	eP	**P**	**18 56 46.5**	**-0.3**
	comp=Z,50nm,0.3s						
DMN	**Daman**	**18.55**	**345**	eP	**Pn**	**18 56 48.5**	**+0.2**
	comp=Z,63nm,0.5s						
GUN	**Gumba**	**18.66**	**348**	eP	**P**	**18 56 48.4**	**-0.9**
	comp=Z,32nm,0.4s						
KKN	**Kakani**	**18.68**	**346**	eP	**Pn**	**18 56 49.6**	**-0.3**
	comp=Z,28nm,0.4s						
GKN	**Gorkha**	**19.05**	**345**	eP	**P**	**18 56 53.3**	**0.0**
	comp=Z,64nm,0.4s						
MDSI	**Maura Dua**	**19.70**	**135**	P	**Pn**	**18 57 07.5**	**+5.6**
	comp=Z,9.4nm,1.0s						
LWLI	**Liwa**	**20.00**	**136**	P	Pn	18 57 22.1	+17
LSA	**Lhasa**	**20.00**	**2**		**P**	**18 57 03.5**	**-0.4**
KLSI		**20.23**	**134**	P	Pn	18 57 13.2	+5.0
	comp=Z,5.8nm,0.8s						
KASI	**Kota Agung**	**20.66**	**136**	P	Pn	18 57 23.9	+11
QIZ	**Qiongzhong**	**21.11**	**62**	P	**P**	**18 57 12.5**	**-3.2**
QIZ				S	**S**	**19 01 09.0**	**+0.1**
QIZ				LR	LR		
	comp=N,330nm,21.6s						
QIZ				LR	LR		
	comp=E,210nm,15.2s						
QIZ				LR	LR		
	comp=Z,190nm,16.2s						
GYA	**Guiyang**	**22.83**	**41**	⇑P	**P**	**18 57 34.5**	**+0.4**
GYA				pP	pP	18 57 40.3	-2.1
GYA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
GYA				pmax	pmax		
	comp=Z,140nm,4.1s						
SBUM	**Sibu**	**22.93**	**107**	P	**P**	**18 57 33.9**	**-1.3**
SBUM				IAmb	IAmb	18 57 49.5	
	comp=Z,10nm,1.0s						
H08S3	**Diego Garcia H**	**24.65**	**227**	T	T	19 23 32.7	
	baz=47						
H08S2	**Diego Garcia H**	**24.66**	**227**	T	T	19 23 28.9	
	baz=47,SNR=3.5						
H08S1	**Diego Carcia H**	**24.67**	**227**	T	T	19 23 35.2	
	baz=47						
ENH	**Enshi**	**27.27**	**38**	P	**P**	**18 58 14.0**	**-1.0**
ENH				IAmb	IAmb	18 58 29.5	
	comp=Z,12nm,1.0s						
XAN	**Xi'an**	**29.73**	**32**	P	**P**	**18 58 36.0**	**-0.9**
XAN				pP	pP	18 58 46.8	+0.8
XAN				pmax	pmax		
	comp=Z,9.0nm,1.1s						
XAN				LR	LR		
	comp=E,190nm,20.6s						
GTA	**Gaotai**	**30.87**	**14**	⇓P	**P**	**18 58 47.5**	**+0.5**
GTA				pP	pP	18 58 56.3	+0.2
GTA				sP	pwP	18 59 00.5	0.0
GTA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,55nm,4.4s						
GTA				LR	LR		
	comp=N,200nm,15.3s						
GTA				LR	LR		
	comp=E,220nm,15.6s						
GTA				LR	LR		
	comp=Z,160nm,16.4s						
KSH	**Kashi**	**32.40**	**339**	P	**P**	**18 58 59.0**	**-1.5**
KSH				pmax	pmax		
	comp=Z,15nm,1.0s						
KSH				pmax	pmax		
	comp=Z,310nm,4.5s						
WMQ	**Urumqi**	**34.15**	**357**	eP	**P**	**18 59 17.5**	**+1.9**
WMQ				pP	pP	18 59 25.3	+0.6
WMQ				sP	sP	18 59 27.3	-1.3
WMQ				pmax	pmax		
	comp=Z,15nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,370nm,5.3s						
AAK	**Ala-Archa**	**35.68**	**340**	P	**P**	**18 59 30.3**	**+1.3**
	comp=Z,2.3nm,0.9s,baz=202,slow=2.2,SNR=4.7						
HHC	**Hu-ho-hao-te**	**36.37**	**28**	eP	**P**	**18 59 35.0**	**+0.2**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,52nm,6.7s						
KK31	**Karatay Array**	**37.56**	**336**	P	**P**	**18 59 45.6**	**+0.7**
KK31				IAmb	IAmb	19 00 00.9	
	comp=Z,4.2nm,0.8s						
KKAR	**Karatay Array**	**37.56**	**336**	P	**P**	**18 59 45.2**	**+0.3**
KKAR	**Karatay Array**	**37.56**	**336**	P	**P**	**18 59 45.9**	**+1.0**
KKAR				IAmb	IAmb	19 00 00.9	
	comp=Z,4.2nm,0.8s						
MKAR	**Makanchi Array**	**37.67**	**351**	P	**P**	**18 59 46.4**	**+0.7**
	comp=Z,2.7nm,0.4s,baz=168,slow=8.9,SNR=34						
TNTI	**Ternate**	**37.92**	**101**	P	P	18 59 43.0	-5.2
GEYT	**Alibeck**	**40.39**	**319**	P	**P**	**19 00 07.9**	**-0.7**
	comp=Z,0.8nm,0.4s,baz=147,slow=8.6,SNR=1.9						
SONM	**Songino Array**	**40.45**	**17**	P	**P**	**19 00 10.0**	**+0.9**
	comp=Z,2.8nm,0.6s,baz=198,slow=9.9,SNR=22						
SONM	**Songino Array**	**40.45**	**17**	P	**P**	**19 00 09.4**	**+0.3**
ULN	**Ulaanbaatar**	**40.67**	**17**	P	**P**	**19 00 11.3**	**+0.4**
KURBB	**Kurchatov Arra**	**42.02**	**349**	P	**P**	**19 00 22.0**	**+0.3**
	comp=Z,3.2nm,0.8s,baz=177,slow=7.0,SNR=10						
KURK	**Kurchatov**	**42.09**	**349**	P	**P**	**19 00 22.5**	**+0.2**
KURK				IAmb	IAmb	19 00 24.9	
	comp=Z,10nm,1.2s						
TLY	**Talaya**	**43.34**	**12**	LR	LR	19 22 10.1	
	comp=Z,121nm,19.8s,baz=150,slow=41						
ZALV	**Zalesovo Beam**	**44.43**	**355**	P	**P**	**19 00 41.2**	**0.0**
	comp=Z,0.8nm,0.4s,baz=154,slow=6.4,SNR=5.9						
ZALV				LR	LR	19 21 27.8	
	comp=Z,126nm,19.4s,baz=186,slow=39						
FITZ	**Fitzroy Crossi**	**44.46**	**128**	P	**P**	**19 00 42.4**	**+0.5**
	comp=Z,2.7nm,1.0s,baz=333,slow=14,SNR=1.9						
RAYN	**Ar Rayn**	**44.90**	**294**	P	**P**	**19 00 45.6**	**+0.1**
RAYN				IAmb	IAmb	19 00 47.8	
	comp=Z,4.8nm,0.8s						
H01W3	**Cape Leeuwin H**	**49.69**	**154**	T	T	19 54 49.4	
	baz=330,slow=76,SNR=9.5						
H01W2	**Cape Leeuwin H**	**49.70**	**154**	T	T	19 54 52.7	
	baz=330,slow=76,SNR=11						
H01W1	**Cape Leeuwin H**	**49.70**	**154**	T	T	19 54 55.4	
	baz=330,slow=76,SNR=7.7						
WRA	**Warramunga Arr**	**52.38**	**124**	P	**P**	**19 01 43.1**	**+0.2**
	comp=Z,0.8nm,0.8s,baz=307,slow=8.3,SNR=6.1						
ASAR	**Alice Springs**	**53.96**	**129**	P	**P**	**19 01 55.2**	**+0.6**
	comp=Z,0.6nm,0.8s,baz=299,slow=8.1,SNR=5.4						
STKA	**Stephens Creek**	**64.08**	**132**	P	**P**	**19 03 06.2**	**+1.6**
	comp=Z,1.3nm,0.6s,baz=292,slow=14,SNR=4.0						
STKA				LR	LR	19 31 54.7	
	comp=Z,46nm,20.4s,baz=37,slow=37						
TIXI	**Tiksi**	**66.32**	**12**	P	**P**	**19 03 18.0**	**-0.4**
FINES	**FINESS Array B**	**69.41**	**332**	P	**P**	**19 03 38.4**	**+0.4**
	comp=Z,2.3nm,0.9s,baz=124,slow=3.4,SNR=3.5						
ARCES	**ARCESS Array B**	**72.35**	**340**	P	**P**	**19 03 55.7**	**-0.1**
	comp=Z,2.7nm,1.0s,baz=84,slow=8.4,SNR=4.1						
BOSA	**Boshof**	**73.32**	**236**	P	**P**	**19 04 03.5**	**+1.0**
	comp=Z,2.2nm,0.9s,baz=90,slow=5.1,SNR=2.4						
TORD	**Torodi Ar. Bea**	**86.49**	**283**	P	**P**	**19 05 15.1**	**+1.3**
	comp=Z,1.1nm,0.8s,baz=95,slow=4.0,SNR=4.3						
CPUP	**Villa Florida**	**145.14**	**237**	PKPbc	**PKPdf**	**19 12 08.8**	**+0.4**
	comp=Z,2.7nm,0.8s,baz=124,slow=5.8,SNR=5.0						

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*NIED **26** 18:55:27.9, 34°.00N×136°.27E, h32^{km}, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}0.07; $M_{\theta\theta}$-2.65; $M_{\phi\phi}$2.58; $M_{r\theta}$-0.98; $M_{\theta\phi}$-0.12; $M_{\phi r}$0.98; Fault plane solution: $M_0$2.96000×10^{14} NP1: ϕ_s313.00000°, δ89.00000°, λ152.00000°. NP2: ϕ_s44.00000°, δ62.00000°, λ1.00000°.*

JMA 26 18:55:27.8, 34°.00N×136°.27E, h32^{km}**, M3.9, 6C-5D Broadband fault plane solution: P waves. NP1:** ϕ_s48.00000°**,** δ65.00000°**,** λ16.00000°. **NP2:**ϕ_s311.00000°**,** δ76.00000°**,** λ154.00000°. **Principal axes:** T Plg28.0000°**,** Azm267.0000°**;** N Plg61.0000°**,** Azm104.0000°**;** P Plg7.0000°**,** Azm1.0000°**; Western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKN2	**Miekihoku**	**0.24**	**1**	⇓P	Pb	18 55 34.5	-0.2
JKN2				S	Sb	18 55 39.3	-0.1
JMMH	**Miemihama**	**0.27**	**229**	⇓P	Pb	18 55 34.8	-0.3
JMMH				S	Sb	18 55 39.8	-0.2
JNTK	**Naratenkawa**	**0.42**	**310**	⇓P	Pb	18 55 36.9	-0.3
JNTK				S	Sb	18 55 43.6	0.0
JIE	**Ise**	**0.53**	**43**	⇑P	Pb	18 55 38.6	-0.3
JIE				S	Sb	18 55 46.1	-0.3
TTO1	**TONANKAI O.B.S**	**0.57**	**131**	⇑P	Pb	18 55 38.9	-0.4
JTNC	**Tanabenakahech**	**0.58**	**252**	⇑P	Pb	18 55 39.2	-0.4
JTNC				S	Sb	18 55 47.5	-0.2
JWY	**Kouya**	**0.60**	**291**	⇑P	Pb	18 55 39.8	-0.2
JWY				S	Sb	18 55 48.5	+0.1
TTO2	**TONANKAI O.B.S**	**0.68**	**113**	⇑P	Pn	18 55 40.5	-0.5
TSUJ	**Tsu 2**	**0.72**	**10**	⇓P	Pn	18 55 41.3	-0.4
TSUJ				eS	Sb	18 55 51.0	-0.5
JWM	**Minabe**	**0.78**	**259**	⇑P	Pn	18 55 42.3	-0.2
JWM				eS	Sn	18 55 52.7	-0.4
JHE	**Heguri**	**0.81**	**324**	⇓P	Pn	18 55 42.8	-0.2
JHE				eS	Sn	18 55 53.8	-0.2
MAT	**Matsushiro**	**2.99**	**31**	P	Pn	18 56 13.3	+0.3
MAT				S	Sb	18 56 55.4	-1.1

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*BJI **26** 19:15:46.8±0.0, 36°.03N×142°.18E, h31^{km}, mB5.1/44, mb4.6/60, Ms4.6/47, Ms7 4.3/43*

*IDC **26** 19:15:48.5±4.1, 35°.82N×142°.30E, h33^{km}±31^{km}, mb4.1/26, mb1 4.2/31, mb1mx4.1/47, mbtmp4.3/31, ML3.5/5, MS3.7/8, Ms1 3.8/8, ms1mx3.3/49, Error ellipse: s-maj=15.1km s-min=13.1km az=127.0*

*NIED **26** 19:15:48.1, 35°.95N×142°.16E, h57^{km}, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}4.28; $M_{\theta\theta}$0.43; $M_{\phi\phi}$-4.71; $M_{r\theta}$0.09; $M_{\theta\phi}$-1.83; $M_{\phi r}$-1.68; Fault plane solution: $M_0$5.09000×10^{15} NP1: ϕ_s189.00000°, δ55.00000°, λ79.00000°. NP2:ϕ_s28.00000°, δ37.00000°, λ105.00000°.*

*JMA **26** 19:15:48.1±0.4, 35°.95N×142°.16E, h57^{km}, M4.5*

*NEIC **26** 19:15:48.6±1.3, 35°.92N±0°.06×142°.24E±0°.09, h32^{km}±4^{km}, mb4.6/76, Error ellipse: s-maj=10.6km s-min=8.2km az=106.0*

ISC 26 19:15:46.4±0.4**, 35°.94N**±0°.04×**142°.29E**±0°.04**, h18**^{km}**, n218,** σ**1**^{s}**.41**/219**, mb4.6**/93**, MS4.1**/12**, 2C-2D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.18**	**259**	P	**Pn**	**19 16 07.4**	**-0.7**
CHOJ				eS	**Sb**	**19 16 20.9**	**-2.4**
JIHU	**Itakohorinouch**	**1.43**	**271**	P	**Pn**	**19 16 11.6**	**+0.2**
JHYU	**Hitachinakayam**	**1.43**	**287**	P	**Pn**	**19 16 11.1**	**-0.4**
JSMT	**Sammumatsuo**	**1.52**	**259**	P	**Pn**	**19 16 12.9**	**+0.2**
JHO	**Hitachi**	**1.54**	**296**	P	**Pn**	**19 16 12.1**	**-0.9**
BSO1	**Boso 1**	**1.67**	**220**	P	**Pn**	**19 16 13.6**	**-0.7**
JYT	**Yasato**	**1.72**	**280**	Pn	**Pn**	**19 16 14.8**	**-0.6**
JFK	**Kawauchi**	**1.82**	**322**	P	**Pn**	**19 16 16.0**	**-0.8**
JFK				eS	**Sn**	**19 16 37.1**	**-2.3**
BSO3	**Boso 3**	**1.84**	**232**	P	**Pn**	**19 16 16.8**	**-0.1**
JFT	**Otama**	**2.22**	**316**	P	**Pn**	**19 16 22.5**	**+0.2**
JMM	**Marumori**	**2.26**	**329**		**Pn**	**19 16 22.1**	**-0.8**
JAG	**Ashikaga**	**2.34**	**283**	P	**Pn**	**19 16 23.7**	**-0.3**
JOD2	**Odawara 2**	**2.69**	**256**	P	**Pn**	**19 16 28.4**	**-0.4**
JRY	**Ryogami san**	**2.75**	**272**	P	**Pn**	**19 16 29.5**	**-0.1**
JFNN	**Fujinakano**	**3.03**	**257**	P	**Pn**	**19 16 32.5**	**-0.9**
JYN	**Shimob**	**3.08**	**263**	P	**Pn**	**19 16 34.1**	**-0.1**
MJAR	**Matsushiro Arr**	**3.35**	**281**	Pn	**Pn**	**19 16 38.5**	**+0.7**
	4.6nm,0.3s,baz=101,slow=8.5,SNR=153						
MJAR				Sn	**Sn**	**19 17 14.4**	**-2.8**
	2.0nm,0.3s,baz=100,slow=13,SNR=5.0						
MJAR				LR	LR	19 17 58.2	
	comp=Z,381nm,18.3s,baz=115,slow=39						
MJAR	**Matsushiro Arr**	**3.35**	**281**		**Pn**	**19 16 37.6**	**-0.2**
MAJO	**Matsushiro**	**3.35**	**281**	Pn	**Pn**	**19 16 38.7**	**+0.8**
MAT	**Matsushiro**	**3.35**	**281**	P	**Pn**	**19 16 38.4**	**+0.5**
MAT				eS	**Sn**	**19 17 14.9**	**-2.3**
MJB9	**Matsu-Tunnel**	**3.35**	**282**		**Pn**	**19 16 38.8**	**+0.9**
JHJ2	**Mitsune**	**3.48**	**216**	Pn	**Pn**	**19 16 39.8**	**+0.1**
JHJ	**Hachijo jima 2**	**3.49**	**217**	Pn	**Pn**	**19 16 38.6**	**-1.3**
	59nm,0.3s,baz=287,slow=18,SNR=12						
JHJ				Sn	**Sn**	**19 17 18.3**	**-2.4**
	116nm,0.3s,baz=209,slow=23,SNR=6.5						
JSG	**Sagara**	**3.58**	**250**		**Pn**	**19 16 40.9**	**-0.1**
JSD	**Sado**	**3.84**	**304**		**Pn**	**19 16 44.9**	**+0.3**
JGF	**Kuroka**	**4.02**	**267**	Pn	**Pn**	**19 16 48.8**	**+1.6**
INU	**Inuyama**	**4.33**	**264**	Pn	**Pn**	**19 16 53.0**	**+1.6**
JTM	**Tenmabayashi**	**4.93**	**349**	Pn	**Pn**	**19 17 00.2**	**+0.7**
JWT	**Wachi**	**5.65**	**265**	Pn	**Pn**	**19 17 10.5**	**+1.1**
ERM	**Erimo**	**6.10**	**6**	Pn	**Pn**	**19 17 13.9**	**-1.7**
JEW	**Eniwo**	**6.92**	**355**	Pn	**Pn**	**19 17 27.1**	**+0.3**
JMN	**Monobe**	**7.26**	**255**		**Pn**	**19 17 33.5**	**+1.9**
JHS	**Saijyo**	**7.54**	**265**	Pn	**Pn**	**19 17 37.2**	**+1.8**
ASAJ	**Asahikawa**	**8.17**	**2**	Pn	**Pn**	**19 17 42.0**	**-2.0**
	3.1nm,0.3s,baz=229,slow=7.6,SNR=22						
ASAJ				Sn	**Sn**	**19 19 10.0**	**-5.8**
	0.7nm,0.3s,baz=168,slow=28,SNR=1.5						
JKA	**Kamikawa-asahi**	**8.17**	**2**	Pn	**Pn**	**19 17 41.9**	**-2.1**
JKA	**Kamikawa-asahi**	**8.17**	**2**		**Sn**	**19 19 10.0**	**-5.8**
JCJ	**Chichijima**	**8.82**	**181**	Pn	**Pn**	**19 17 49.1**	**-4.0**
	20nm,0.3s,baz=92,slow=24,SNR=15						
JCJ				Sn	Sn	19 19 21.8	-10
	19nm,0.3s,baz=344,slow=22,SNR=6.3						
JCJ	**Chichijima**	**8.82**	**181**	Pn	**Pn**	**19 17 50.0**	**-3.1**
JNU	**Nakatsue**	**9.82**	**257**	Pn	**Pn**	**19 18 07.5**	**+0.7**
	0.5nm,0.3s,baz=41,slow=6.3,SNR=5.5						
JNU	**Nakatsue**	**9.82**	**257**		**Pn**	**19 18 07.4**	**+0.6**
YSS	**Yuzh-Sakhalins**	**11.01**	**2**		**Pn**	**19 18 20.9**	**-2.0**
USA0B	**Ussuriysk Arra**	**11.40**	**319**	Pn	**Pn**	**19 18 29.4**	**+1.1**
USRK	**Ussuriysk Ar.**	**11.40**	**319**	Pn	**Pn**	**19 18 29.5**	**+1.2**
	baz=121,slow=12,SNR=11						
USRK	**Ussuriysk Ar.**	**11.40**	**319**	Pn	**Pn**	**19 18 28.1**	**-0.2**
KSRS	**Korea Array**	**11.63**	**282**	Pn	**Pn**	**19 18 33.1**	**+1.7**
	0.3nm,0.3s,baz=102,slow=13,SNR=16						
KSRS				LR	LR	19 22 30.5	
	comp=Z,238nm,20.8s,baz=95,slow=34						
CN2	**Changchun**	**15.11**	**306**	eP	**P**	**19 19 22.3**	**-1.6**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				LR	LR		
	comp=N,1μm,12.0s						
CN2				LR	LR		
	comp=E,1μm,12.0s						
CN2				LR	LR		
	comp=Z,1μm,11.0s						
KLR	**Kul'dur**	**15.36**	**333**	Pn	**Pn**	**19 19 19.9**	**-2.2**
	0.4nm,0.3s,baz=147,slow=9.1,SNR=14						
DL2	**Dalian**	**16.67**	**286**	P	P	19 19 52.5	+11
DL2				eS	S	19 23 07.0	+12
DL2				pmax	pmax		
	comp=Z,29nm,0.7s						
DL2				LR	LR		
	comp=N,1μm,12.1s						
DL2				LR	LR		
	comp=E,870nm,11.3s						
DL2				LR	LR		
	comp=Z,960nm,11.6s						
SSE	**Sheshan**	**18.23**	**261**	P	**Pn**	**19 19 56.5**	**-2.0**
SSE				S	**Sn**	**19 23 21.8**	**+0.1**
SSE				pmax	pmax		
	comp=Z,4.0nm,0.9s						
SSE				pmax	pmax		
	comp=Z,90nm,3.3s						
SSE				LR	LR		
	comp=Z,420nm,15.8s						
SSE				LR	LR		
	comp=Z,450nm,13.7s						
NJ2	**Nanjing**	**19.80**	**265**	eP	**P**	**19 20 15.8**	**0.0**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
NJ2				LR	LR		
	comp=Z,480nm,10.3s						
NJ2				LR	LR		
	comp=Z,890nm,13.2s						
NJ2				LR	LR		
	comp=Z,640nm,15.2s						
PETK	**Petropavlovsk-**	**20.30**	**28**	P	Pn	19 20 22.9	-0.3
	comp=Z,3.9nm,0.8s,baz=188,slow=9.0,SNR=4.2						
PETK				LR	LR	19 29 43.7	
	comp=Z,85nm,18.8s,baz=221,slow=41						
BJT	**Baijiatuau**	**20.96**	**289**	P	**P**	**19 20 27.0**	**-1.3**
WHN	**Wuhan**	**23.93**	**265**	⇓P	**P**	**19 20 57.8**	**-1.6**
MA2	**Magadan**	**24.28**	**11**	P	**P**	**19 21 01.4**	**-1.0**
HHC	**Hu-ho-hao-te**	**24.50**	**291**	eP	**P**	**19 21 05.5**	**+0.8**
HHC				sP	pwP	19 21 17.8	+3.2
HHC				PP	**PnPn**	**19 21 39.0**	**+3.3**
HHC				S	**S**	**19 25 24.8**	**+0.5**
HHC				sS	sS	19 25 37.8	+6.8
HHC				pmax	pmax		
	comp=Z,22nm,0.8s						
HHC				pmax	pmax		
	comp=Z,95nm,7.4s						
HHC				LR	LR		
	comp=Z,590nm,11.8s						
HHC				LR	LR		
	comp=Z,660nm,11.8s						
HHC				LR	LR		
	comp=Z,630nm,12.4s						
BTO	**Baotou**	**25.67**	**290**	eP	**P**	**19 21 14.8**	**-0.5**
H11N2	**WAKE ISLAND Hy**	**26.99**	**120**	T	T	19 49 30.7	
	baz=312,slow=75,SNR=33						
H11N1	**WAKE ISLAND Hy**	**27.00**	**120**	T	T	19 49 31.2	
	baz=312,slow=75,SNR=45						
H11N3	**WAKE ISLAND Hy**	**27.01**	**120**	T	T	19 49 35.5	
	baz=312,slow=75,SNR=33						
YAK	**Yakutsk**	**27.29**	**347**	P	**P**	**19 21 30.1**	**+0.6**
	comp=Z,5.5nm,0.6s,baz=353,slow=1.7,SNR=10						
YAK	**Yakutsk**	**27.29**	**347**	P	**P**	**19 21 28.9**	**-0.7**
XAN	**Xi'an**	**27.33**	**276**	P	**P**	**19 21 29.8**	**-0.5**
XAN				pP	pwP	19 21 42.8	+2.7
XAN				pmax	pmax		
	comp=Z,13nm,1.0s						
XAN				LR	LR		
	comp=Z,580nm,13.0s						
XAN				LR	LR		
	comp=Z,840nm,14.1s						
XAN	**Xi'an**	**27.33**	**276**	P	**P**	**19 21 29.8**	**-0.5**
XAN				IAmb	IAmb	19 21 48.5	
	comp=Z,8.7nm,0.8s						
H11S1	**WAKE ISLAND Hy**	**27.68**	**122**	T	T	19 50 16.6	
	baz=314,slow=75,SNR=74						
H11S3	**WAKE ISLAND Hy**	**27.68**	**122**	T	T	19 50 22.8	
	baz=314,slow=75,SNR=69						
H11S2	**WAKE ISLAND Hy**	**27.70**	**122**	T	T	19 50 25.4	
	baz=314,slow=75,SNR=46						
SEY	**Seymchan**	**27.73**	**10**	P	**P**	**19 21 34.4**	**+0.9**
	comp=Z,0.8nm,0.3s,baz=166,slow=7.7,SNR=6.1						
ENH	**Enshi**	**27.97**	**268**	P	**P**	**19 21 35.2**	**-0.8**
ULN	**Ulaanbaatar**	**28.55**	**306**	P	**P**	**19 21 40.8**	**-0.5**
ULN				IAmb	IAmb	19 21 55.2	
	comp=Z,11nm,0.9s						
SONM	**Songino Array**	**28.98**	**305**	P	**P**	**19 21 45.9**	**+0.9**
	comp=Z,12nm,0.9s,baz=106,slow=8.7,SNR=28						
SONM	**Songino Array**	**28.98**	**305**	P	**P**	**19 21 45.4**	**+0.4**
LZH	**Lanzhou**	**30.96**	**282**	eP	**P**	**19 22 03.3**	**+0.6**
LZH				pP	pwP	19 22 15.0	+2.4
LZH				sP	sP	19 22 20.5	+12
LZH				pmax	pmax		
	comp=Z,14nm,1.0s						
LZH				pmax	pmax		
	comp=Z,67nm,4.9s						
LZH				LR	LR		
	comp=Z,350nm,15.2s						
LZH				LR	LR		
	comp=Z,360nm,15.2s						
LZH				LR	LR		
	comp=Z,320nm,17.3s						
TLY	**Talaya**	**31.58**	**312**	P	**P**	**19 22 08.1**	**+0.3**
	comp=Z,6.3nm,0.7s,baz=135,slow=2.1,SNR=11						
TLY	**Talaya**	**31.58**	**312**	P	**P**	**19 22 08.1**	**+0.3**
GYA	**Guiyang**	**31.75**	**263**	⇑P	**P**	**19 22 09.8**	**+0.1**
GYA				pP	pwP	19 22 18.3	-1.3
GYA				S	**S**	**19 27 18.5**	**-0.5**
GYA				SS	**SnSn**	**19 29 07.8**	**+1.5**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
GYA				pmax	pmax		
	comp=Z,9.0nm,1.2s						
GYA				pmax	pmax		
	comp=Z,170nm,5.1s						
GYA				LR	LR		
	comp=Z,310nm,11.5s						
GYA				LR	LR		
	comp=Z,280nm,10.6s						
GYA				LR	LR		
	comp=Z,280nm,13.8s						
QIZ	Qiongzhong	33.15	248	P	P	19 22 20.5	-1.3
QIZ				S	S	19 27 36.5	-4.0
QIZ				LR	LR		
	comp=Z,270nm,15.7s						
QIZ				LR	LR		
	comp=Z,250nm,14.7s						
QIZ				LR	LR		
	comp=Z,220nm,14.2s						
GTA	Gaotai	33.57	289	⇑P	P	19 22 26.5	+1.0
GTA				pP	pwP	19 22 35.8	+0.4
GTA				sP	sP	19 22 40.0	+8.6
GTA				PcP	PcP	19 25 09.5	+3.7
GTA				pmax	pmax		
	comp=Z,14nm,0.9s						
GTA				pmax	pmax		
	comp=Z,91nm,6.2s						
GTA				LR	LR		
	comp=Z,390nm,13.1s						
GTA				LR	LR		
	comp=Z,350nm,13.1s						
GTA				LR	LR		
	comp=Z,340nm,14.2s						
KMI	Kunming	35.51	263	⇓P	P	19 22 42.5	-0.1
KMI				sP	pwP	19 22 56.0	+3.6
KMI				pmax	pmax		
	comp=Z,8.0nm,1.3s						
SLVN	Son La	36.45	257	P	P	19 22 51.2	+0.8
TIXI	Tiksi	36.45	353	P	P	19 22 49.8	0.0
MRSI	Marisa	40.03	213	P	P	19 23 21.3	+0.8
	comp=Z,34nm,1.3s						
CHAI	Chaiyaphum	41.01	252	P	P	19 23 30.1	+1.5
	comp=Z,16nm,0.9s						
UTTA	Uttaradit	41.05	255	P	P	19 23 29.9	+0.9
	comp=Z,13nm,0.8s						
CMMT	Chiang Mai	41.72	258	P	P	19 23 34.1	-0.4
	comp=Z,2.7nm,1.2s						
CHTO	Chiang Mai	41.72	258	P	P	19 23 34.6	0.0
CM09	Chiang Mai Arr	41.89	257	P	P	19 23 38.9	+3.0
	comp=Z,42nmcomp=Z,4.4nm,0.8s						
CM31	Chiang Mai Arr	41.92	257	P	P	19 23 39.0	+2.9
	comp=Z,2µmcomp=Z,139nm,0.8s						
CM31	Chiang Mai Arr	41.92	257	P	P	19 23 36.5	+0.3
CMAR	Chiang Mai Arr	41.92	257	P	P	19 23 36.8	+0.6
	comp=Z,1.9nm,0.7s,baz=47,slow=6.8,SNR=21						
CMAR				LR	LR	19 42 13.5	
	comp=Z,87nm,19.3s,baz=88,slow=38						
CMAR	Chiang Mai Arr	41.92	257	P	P	19 23 36.4	+0.2
CM04	Chiang Mai Arr	41.92	257	P	P	19 23 37.6	+1.5
	comp=Z,40nmcomp=Z,4.8nm,0.8s						
CM02	Chiang Mai Arr	41.93	257	P	P	19 23 37.2	+1.0
	comp=Z,48nmcomp=Z,6.5nm,0.8s						
CM15	Chiang Mai Arr	41.94	257	P	P	19 23 37.2	+1.0
	comp=Z,47nmcomp=Z,5.2nm,0.8s						
CM05	Chiang Mai Arr	41.95	257	P	P	19 23 39.6	+3.3
	comp=Z,31nmcomp=Z,4.0nm,0.7s						
WMQ	Urumqi	41.96	298	*e*P	P	19 23 39.3	+3.0
WMQ				pP	pwP	19 23 46.5	+0.3
WMQ				sP	sP	19 23 51.8	+10
WMQ				pmax	pmax		
	comp=Z,20nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,170nm,5.1s						
WMQ	Urumqi	41.96	298	P	P	19 23 36.4	+0.1
WMQ				IAmb	IAmb	19 24 03.9	
	comp=Z,14nm,0.8s						
CM13	Chiang Mai Arr	41.97	257	P	P	19 23 38.0	+1.4
	comp=Z,43nmcomp=Z,5.7nm,0.8s						
SRAK	Srakaew	42.11	249	P	P	19 23 35.0	-2.6
	comp=Z,132nm,0.9s						
ANM	Nome	42.17	31	P	P	19 23 39.1	+1.5
ANM				IAmb	IAmb	19 24 02.2	
	comp=Z,16nm,1.5s						
MHMT	Maesarieng	42.88	258	P	P	19 23 44.6	+0.8
	comp=Z,16nm,1.3s						
LSA	Lhasa	43.02	277	P	P	19 23 46.0	+0.4
ZAA0	Zalesovo Array	43.17	313	P	P	19 23 46.1	+0.3
ZAA0				IAmb	IAmb	19 24 01.0	
	comp=Z,8.1nm,0.8s						
ZALV	Zalesovo Beam	43.17	313	P	P	19 23 46.8	+0.9
	comp=Z,6.7nm,0.7s,baz=91,slow=6.8,SNR=34						
ZALV				LR	LR	19 40 40.5	
	comp=Z,64nm,18.9s,baz=3.5,slow=34						
ZALV	Zalesovo Beam	43.17	313	P	P	19 23 46.0	+0.2
UMPA	Umpang Tak	43.25	255	P	P	19 23 49.9	+2.9
	comp=Z,312nmcomp=Z,11nm,0.8s						
SBUM	Sibu	43.41	227	P	P	19 23 48.0	-0.2
SHL	Shillong	44.11	271	P	P	19 23 51.7	-2.3
NRIK	Noril'sk	44.55	336	P	P	19 23 55.8	-0.9
NRIK				IAmb	IAmb	19 24 11.8	
	comp=Z,14nm,1.4s						
PHET	Kaeng Krachan	44.63	250	P	P	19 24 09.0	+11
MK31	Makanchi Array	45.30	303	P	P	19 24 02.9	-0.1
MK31				IAmb	IAmb	19 24 07.3	
	comp=Z,8.5nm,0.8s						
MKAR	Makanchi Array	45.30	303	P	P	19 24 03.6	+0.6
	comp=Z,9.6nm,0.8s,baz=89,slow=9.8,SNR=39						
MKAR	Makanchi Array	45.30	303	P	P	19 24 03.2	+0.1
MAKZ	Makanchi	45.51	303	P	P	19 24 05.0	+0.3
TAPN	Taplejung	46.73	275	*e*P	P	19 24 15.4	+0.5
	comp=Z,15nm,0.7s						
BBKI	Banjar Baru	46.86	219	P	P	19 24 15.2	-0.4
	comp=Z,12nm,1.1s						
KURK	Kurchatov	47.16	309	P	P	19 24 17.6	0.0
KURBB	Kurchatov Arra	47.23	309	P	P	19 24 18.5	+0.4
	comp=Z,7.4nm,0.8s,baz=84,slow=7.8,SNR=69						
KDAK	Kodiak Island	47.45	41	P	P	19 24 20.6	+0.9
	comp=Z,4.7nm,0.8s,baz=0.0,slow=4.0,SNR=2.3						
KDAK	Kodiak Island	47.45	41	P	P	19 24 20.4	+0.7
KDAK				IAmb	IAmb	19 24 26.5	
	comp=Z,8.1nm,1.0s						
RAMN	Ramite	47.80	276	*e*P	P	19 24 21.1	-2.1
	comp=Z,43nm,0.7s						
GUN	Gumba	47.97	277	*e*P	P	19 24 26.3	+1.6
	comp=Z,29nm,0.9s						
PKI	Pulchoki	48.49	277	*e*P	P	19 24 28.7	0.0
PKIN	Phulchoki	48.50	277	*e*P	P	19 24 28.4	-0.2
	comp=Z,8.6nm,0.7s						
KKN	Kakani	48.51	277	*e*P	P	19 24 29.2	+0.6
	comp=Z,14nm,0.8s						
SOEI	Soe	48.53	204	P	P	19 24 30.0	+1.4
	comp=Z,36nm,1.0s						
GKN	Gorkha	48.94	278	*e*P	P	19 24 32.3	+0.5
	comp=Z,18nm,0.7s						
IPM	Ipoh	49.19	240	P	P	19 24 33.1	-0.7
MDM	Murphy Dome	49.47	32	P	P	19 24 35.8	+0.6
MDM				IAmb	IAmb	19 24 46.5	
	comp=Z,8.4nm,1.2s						
COEN	Coen	49.64	179	P	P	19 24 37.4	+0.4
COEN				IAmb	IAmb	19 24 42.7	
	comp=Z,5.9nm,1.1s						
HDA	Harding Lake	50.02	32	P	P	19 24 39.9	+0.5
HDA				IAmb	IAmb	19 24 44.1	
	comp=Z,10nm,1.3s						
IL31		50.04	32	P	P	19 24 40.6	+1.1
ILAR	Eielson Array	50.04	32	P	P	19 24 40.8	+1.2
	comp=Z,1.7nm,0.8s,baz=266,slow=5.9,SNR=17						
KSH	Kashi	51.50	295	P	P	19 24 55.8	+4.7
KSH				PcP	PcP	19 26 07.0	+1.8
KSH				S	S	19 32 11.3	+0.7
KSH				pmax	pmax		
	comp=Z,9.0nm,1.3s						
KSH				pmax	pmax		
	comp=Z,400nm,6.2s						
KSH				LR	LR		
	comp=Z,420nm,6.9s						
KSH				LR	LR		
	comp=Z,400nm,6.1s						
AAK	Ala-Archa	51.63	299	P	P	19 24 52.9	+0.8
	comp=Z,1.0nm,0.5s,baz=79,slow=5.3,SNR=3.5						
AAK				LR	LR	19 49 08.4	
	comp=Z,123nm,18.1s,baz=66,slow=39						
BRVK	Borovoye	51.88	313	P	P	19 24 53.7	+0.2
BRVK				IAmb	IAmb	19 24 58.6	
	comp=Z,5.4nm,0.9s						
GSI	Gunungsitoli	53.86	241	P	P	19 25 09.1	+0.4
EPYK	Eagle Plains	54.12	29	P	P	19 25 10.8	+0.8
EPYK				IAmb	IAmb	19 25 16.8	
	comp=Z,9.7nm,1.1s						
KK31	Karatay Array	54.28	301	P	P	19 25 12.0	+0.5
KK31				IAmb	IAmb	19 25 37.6	
	comp=Z,9.0nm,1.0s						
KKAR	Karatay Array	54.28	301	P	P	19 25 11.7	+0.3
KKAR				IAmb	IAmb	19 25 37.6	
	comp=Z,9.0nm,1.0s						
KKAR	Karatay Array	54.28	301	P	P	19 25 11.8	+0.4
INK	Inuvik	55.04	27	P	P	19 25 17.1	+0.6
	comp=Z,1.6nm,0.6s,baz=308,slow=6.5,SNR=8.3						
INK	Inuvik	55.04	27	P	P	19 25 17.1	+0.6
WB0	Warramunga Arr	55.91	189	P	P	19 25 22.5	-0.8
WB0				IAmb	IAmb	19 25 42.2	
	comp=Z,11nm,1.2s						
FITZ	Fitzroy Crossi	56.01	199	P	P	19 25 22.5	-1.5
FITZ				IAmb	IAmb	19 25 47.8	
	comp=Z,4.6nm,0.9s						
WRAB	Tennant Creek	56.08	189	P	P	19 25 24.4	-0.1
WR0	Warramunga Arr	56.08	189	P	P	19 25 23.7	-0.8
WB2	Warramunga Arr	56.09	189	P	P	19 25 23.2	-1.4
WB2				IAmb	IAmb	19 25 38.7	
	comp=Z,7.1nm,0.8s						
WRA	Warramunga Arr	56.09	189	P	P	19 25 23.4	-1.2
	comp=Z,2.6nm,0.8s,baz=7.9,slow=7.5,SNR=21						
SANVU	Saraoutou	56.29	151	P	P	19 25 24.4	-1.6
ARU	Arti	57.64	319	P	P	19 25 35.1	-0.1
ABKAR	Akbulak array	59.18	311	P	P	19 25 45.4	-0.7
ABKAR	Akbulak array	59.18	311	P	P	19 25 45.8	-0.3
ABKAR				IAmb	IAmb	19 25 52.8	
	comp=Z,5.1nm,0.8s						
AS31	Alice Springs	59.81	189	P	P	19 25 52.3	+1.6
ASAR	Alice Springs	59.81	189	P	P	19 25 49.5	-1.1
	comp=Z,0.7nm,0.6s,baz=5.6,slow=8.3,SNR=12						
ASAR	Alice Springs	59.81	189	P	P	19 25 49.9	-0.8
HRA	Herat	63.60	295	P	P	19 26 16.7	+0.2
HRA				IAmb	IAmb	19 26 18.5	
	comp=Z,5.7nm,0.9s						
YKA	Yellowknife Ar	64.40	30	P	P	19 26 21.4	+0.4
	comp=Z,1.9nm,0.8s,baz=300,slow=6.2,SNR=18						
ARCES	ARCESS Array B	65.26	340	P	P	19 26 27.7	+1.1
	comp=Z,4.1nm,0.9s,baz=358,slow=5.5,SNR=3.6						
ARCES				LR	LR	19 58 36.1	
	comp=Z,106nm,18.4s,baz=285,slow=39						
AFI	Afiamalu	65.90	130	P	P	19 26 31.3	-0.1
DAG	Danmarks Havn	66.92	355	*i* P	P	19 26 38.1	+1.1
DAG	Danmarks Havn	66.92	355	*i* P	P	19 26 38.1	+1.1
B08A	Colville Reser	69.11	45	P	P	19 26 52.7	+1.4
B08A				IAmb	IAmb	19 26 55.8	
	comp=Z,6.5nm,1.1s						
FIA1	FINESS Array S	70.10	333	P	P	19 26 57.6	+0.4
FIA1				IAmb	IAmb	19 27 10.8	
	comp=Z,7.1nm,0.9s						
FINES	FINESS Array B	70.10	333	P	P	19 26 57.6	+0.4
	comp=Z,2.6nm,0.8s,baz=79,slow=9.9,SNR=7.6						
FINES	FINESS Array B	70.10	333	P	P	19 26 57.0	-0.1
PINE	Pine Mountain	70.51	50	P	P	19 26 59.8	-0.4
K05A	Summer Lake	71.09	51	P	P	19 27 05.5	+1.6
SUMG	Summit	71.77	0	*i* P	P	19 27 09.4	+1.8
	comp=Z,11nm,0.9s						
SUMG	Summit	71.77	0	P	P	19 27 06.2	-1.4
SUMG	Summit	71.77	0	*i* P	P	19 27 09.4	+1.8
SUMG				IAmb	IAmb	19 27 10.2	
	comp=Z,11nm,0.9s						
WALA	Waterton Lakes	71.77	42	P	P	19 27 09.5	+1.8
WALA				IAmb	IAmb	19 27 14.1	
	comp=Z,4.5nm,0.9s						
KBZ	Khabaz	72.14	311	P	P	19 27 11.3	+1.5
	comp=Z,5.8nm,0.9s,baz=61,slow=4.4,SNR=17						
KIV	Kislovodsk	72.15	312	P	P	19 27 10.6	+0.5
KIV				IAmb	IAmb	19 27 15.5	
	comp=Z,7.8nm,0.8s						
BEKR	Beckworth	72.95	53	P	P	19 27 16.6	+1.6
FFC	Flin Flon	74.24	33	P	P	19 27 22.7	+0.6
FFC				IAmb	IAmb	19 27 25.3	
	comp=Z,4.8nm,1.0s						
HRY	Holter Researc	74.26	43	P	P	19 27 23.0	+0.5
LRM	Limekiln Ridge	74.43	44	P	P	19 27 24.4	+0.8
EGMT	Eagleton	74.62	41	P	P	19 27 24.2	-0.3
EGMT				IAmb	IAmb	19 27 28.6	
	comp=Z,6.6nm,0.9s						
FCC	Fort Churchill	74.66	27	P	P	19 27 24.9	+0.6
BOZ	Bozeman (W)	75.03	44	P	P	19 27 27.4	+0.3
NVAR	Mina Array Bea	75.08	53	P	P	19 27 28.8	+1.3
	comp=Z,1.3nm,0.7s,baz=291,slow=5.7,SNR=6.1						
ICESG	Greenland Ices	75.27	1	*i* P	P	19 27 30.3	+2.1
ICESG				IAmb	IAmb	19 27 32.9	
	comp=Z,8.2nm,0.7s						
NC204	NORSAR Array S	75.41	338	P	P	19 27 28.8	-0.1
NB2	NORSAR Subarra	75.46	338	P	P	19 27 29.5	+0.4
	comp=Z,3.4nm,0.8s,baz=39,slow=5.9						
NOA	NORSAR Array B	75.46	338	P	P	19 27 29.9	+0.8
	comp=Z,3.0nm,0.8s,baz=39,slow=5.7,SNR=9.1						
AKASG	Malin Array Be	75.59	323	P	P	19 27 30.0	+0.1
	comp=Z,1.5nm,0.5s,baz=46,slow=6.1,SNR=8.4						
AKBB	Malin Array Si	75.59	323	P	P	19 27 30.0	+0.1
AKBB				IAmb	IAmb	19 27 45.1	
	comp=Z,3.9nm,0.8s						
NBO00	NORSAR Array S	75.60	338	P	P	19 27 29.6	-0.2
H17A	Grant Village	76.35	45	P	P	19 27 35.2	+0.4
H17A				IAmb	IAmb	19 27 56.5	
	comp=Z,4.8nm,1.1s						
HVU	Hansel Valley	76.62	48	P	P	19 27 37.0	+0.8
BW06	Boulder Array	77.93	46	P	P	19 27 43.2	-0.4
PD31	Pinedale Array	77.93	46	P	P	19 27 43.8	+0.2
PDAR	Pinedale Array	77.93	46	P	P	19 27 43.9	+0.3
	comp=Z,1.1nm,0.6s,baz=262,slow=1.9,SNR=12						
BORG	Borgarnes	78.81	353	P	P	19 27 47.2	-0.5
RDMU	Red Mountain	79.27	47	P	P	19 27 52.2	+1.1
BUR08	Bucovina Ar. S	79.59	322	P	P	19 27 53.5	+1.0
SRU	San Rafael Swe	79.60	49	P	P	19 27 53.5	+0.7
SRU				IAmb	IAmb	19 28 06.4	
	comp=Z,5.0nm,0.9s						
BURAR	Bucovina Array	79.60	322	P	P	19 27 53.0	+0.5
BRTR	Keskin Array B	80.10	312	P	P	19 27 56.4	+1.0
	comp=Z,1.5nm,0.8s,baz=140,slow=4.7,SNR=3.3						
KOLS	Kolonicke sedl	80.11	325	*e*P	P	19 27 58.0	+2.8
PV20	West Nyswonger	81.03	49	P	P	19 28 00.5	0.0
PV20				IAmb	IAmb	19 28 12.2	
	comp=Z,5.9nm,0.9s						
PV17	East Wray Mesa	81.07	49	P	P	19 28 00.9	+0.1
PV17				IAmb	IAmb	19 28 05.3	
	comp=Z,8.2nm,0.9s						
PV16	Nyswonger Mesa	81.08	49	P	P	19 28 01.8	+0.9
PV16				IAmb	IAmb	19 28 12.6	
	comp=Z,6.4nm,0.9s						
PV03	Paradox Valley	81.16	49	P	P	19 28 02.3	+1.1
PV03				IAmb	IAmb	19 28 21.5	
	comp=Z,11nm,1.5s						
PV13	Radium Mtn., P	81.23	49	P	P	19 28 02.0	+0.4
PV13				IAmb	IAmb	19 28 04.3	
	comp=Z,5.9nm,1.1s						
MORC	Moravsky Berou	81.65	327	IAmb	IAmb	19 28 07.8	
	comp=Z,12nm,1.5s						
RAYN	Ar Rayn	81.72	293	P	P	19 28 04.0	-0.3
RAYN				IAmb	IAmb	19 28 05.8	
	comp=Z,6.0nm,1.1s						
GERES	GERESS Array B	84.00	329	P	P	19 28 14.7	-1.0
	comp=Z,0.5nm,0.6s,baz=51,slow=5.3,SNR=4.1						
GERES	GERESS Array B	84.00	329	P	P	19 28 13.8	-1.9
VTS	Vitosha	84.06	320	P	P	19 28 16.1	-0.1
VTS				IAmb	IAmb	19 28 18.4	
	comp=Z,3.8nm,0.8s						
ANMO	Albuquerque	84.75	50	P	P	19 28 19.9	+0.1
	comp=Z,0.7nm,0.4s,baz=314,slow=13,SNR=3.5						
TXAR	Lajitas Array	90.22	53	P	P	19 28 45.5	-0.7
	comp=Z,0.9nm,0.7s,baz=308,slow=3.0,SNR=6.3						
KEST	Kesra	96.31	323	P	P	19 29 12.7	-1.4
	comp=Z,8.6nm,1.1s,baz=14,slow=23,SNR=2.4						
ESDC	Sonseca Array	98.58	334	LR	LR	20 18 21.9	
	comp=Z,196nm,18.1s,baz=340,slow=38						
H03N2	Juan Fernandez	146.19	98	T	T	22 18 34.4	
	baz=291,slow=76,SNR=4.6						
H03N3	Juan Fernandez	146.21	98	T	T	22 18 35.5	
	baz=291,slow=76,SNR=8.9						
H03N1	Juan Fernandez	146.21	98	T	T	22 18 41.1	
	baz=291,slow=76,SNR=4.5						
LPAZ	La Paz	146.61	62	PKPbc	PKPdf	19 35 26.8	+0.2
	comp=Z,2.3nm,0.7s,baz=24,slow=4.3,SNR=8.1						

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*ANF **26** 19:17:47.2±0.6, 41°.73N×119°.56W, h0^{km}, ML3.6/13, Error ellipse: s-maj=5.5km s-min=3.4km az=85.0*

*NEIC **26** 19:17:48.7±2.2, 41°.90N±0°.03×119°.54W±0°.03, h7^{km}±5^{km}, Error ellipse: s-maj=5.0km s-min=2.7km az=158.0*

*REN **26** 19:17:48.4±1.7, 41°.91N±0°.02×119°.57W±0°.05, h8^{km}±6^{km}, ML3.5/5, ML3.5/51(SEA), ML3.2/98(NEIC), Error ellipse: s-maj=5.3km s-min=3.5km az=93.0*

*IDC **26** 19:17:49.4±0.7, 41°.95N×119°.65W, h0^{km}, mb3.5/3, mb1 3.6/9, mb1mx3.5/39, mbtmp3.3/9, ML3.0/6, MS2.4/2, Ms1 2.4/2, ms1mx2.3/37, Error ellipse: s-maj=11.7km s-min=6.7km az=7.0*

*SEA **26** 19:17:49.6±3.0, 41°.88N±0°.03×119°.56W±0°.04, h0^{km}±5^{km}, Error ellipse: s-maj=5.5km s-min=3.6km az=136.0*

ISC 26 19:17:49.9±0.7, **41°.94N**±0°.02×**119°.55W**±0°.02, **h10**^{km}, **n105**, σ1^{s}.**63**/111, **mb4.2**/3, **2D**, **Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOD	Modoc Plateau	0.56	267	Pg	Pg	19 17 59.3	-1.5
MOD	Modoc Plateau	0.56	267		Sg	19 18 07.5	-0.8
MOD	Modoc Plateau	0.56	267	IAML		19 18 08.3	
	comp=N,3µm,0.6s						
MOD				IAML		19 18 11.4	
	comp=E,4µm,0.5s						
LKVW	Lakeview	0.67	296		Pg	19 18 01.3	-1.5
LKVW					Sg	19 18 10.9	-0.7
WVOR	Wild Horse Val	0.84	53		Pg	19 18 05.0	-1.2
WVOR					Sb	19 18 17.3	-0.9
WVOR	Wild Horse Val	0.84	53	IAML		19 18 26.4	
	comp=E,630nm,0.9s						
K05A	Summer Lake	1.27	309	Pn	Pn	19 18 12.5	-1.4
K05A	Summer Lake	1.27	309		Sn	19 18 31.4	+0.3
K05A	Summer Lake	1.27	309	IAML		19 18 34.1	
	comp=E,1µm,1.2s						
K05A				IAML		19 18 34.2	
	comp=N,1µm,1.3s						
LASM	Arnica Sink	1.55	258		Pn	19 18 16.7	-1.1
J08A	Circle Bar Ran	1.63	29	Pn	Pn	19 18 17.8	-1.0
J08A				IAML		19 18 47.7	
	comp=E,346nm,0.5s						
J08A				IAML		19 18 51.7	
	comp=N,426nm,0.8s						
HOG	Hogback Mounta	1.63	282		Pn	19 18 18.1	-0.7
HOG					Sg	19 18 42.6	+0.2
LTIM	Timbered Crate	1.64	243		Pn	19 18 17.9	-1.0
LTIM					Sg	19 18 41.8	-0.8
M04C	Macdoel	1.71	266	P	Pn	19 18 18.8	-1.2
	baz=85,SNR=156						
M04C				S	Sb	19 18 42.5	-0.7
	baz=85						
M04C	Macdoel	1.71	266		Pn	19 18 18.8	-1.2
LBCM	Butte Creek Ri	1.74	232		Pn	19 18 19.2	-1.1
K04D	Chiloquin, OR	1.77	294	P	Pb	19 18 20.8	-1.7
	baz=113						
K04D				S	Sb	19 18 44.9	0.0
	baz=113						
K04D	Chiloquin, OR	1.77	294		Pb	19 18 21.1	-1.5
J05D	Fort Rock, OR	1.83	318	P	Pb	19 18 22.5	-1.1
	baz=138,SNR=231						
J05D				S	Sg	19 18 48.4	-0.5
	baz=138						
J05D	Fort Rock, OR	1.83	318		Pb	19 18 22.6	-1.0
WVA	Winnemucca Val	2.00	186		Pb	19 18 25.1	-1.3
LHEM	Herd Peak	2.02	262		Pb	19 18 25.1	-1.7
L04D	Klamath Falls	2.07	279	P	Pn	19 18 23.4	-1.5
	baz=98,SNR=46						
L04D				Sb	Sg	19 18 54.4	-2.0
	baz=98						
L04D	Klamath Falls	2.07	279		Pn	19 18 23.7	-1.1
SVIC	Surveyors Ice	2.12	324		Pb	19 18 27.5	-0.9
PINE	Pine Mountain	2.12	332		Pb	19 18 26.4	-2.1
PINE				IAML		19 19 10.9	
	comp=N,208nm,1.3s						
I07A	Izee	2.15	1		Pn	19 18 24.8	-1.1
I07A				IAML		19 18 59.1	
	comp=E,149nm,0.7s						
I07A	Izee	2.15	1		LR	19 18 58.1	
BEKR	Beckworth	2.16	197		Pn	19 18 25.1	-1.0
BEKR				IAML		19 19 07.8	
	comp=N,112nm,1.0s						
BEKR				IAML		19 19 11.3	
	comp=E,136nm,1.1s						
PAHR	Pah Rah Range	2.23	177		Pn	19 18 26.0	-1.1
J04D	Umpqua Nationa	2.29	305	P	Pn	19 18 28.3	+0.3
	baz=124,SNR=48						
J04D				Sb	Sg	19 19 03.9	+0.2
	baz=124						
LOY	Loyalton	2.33	193		Pb	19 18 30.8	-1.4
PEAR	Peavine Mounta	2.35	188		Pb	19 18 31.6	-0.8
O03E	Paynes Creek	2.36	227	Pb	Pn	19 18 28.0	-0.8
	baz=45						
O03E				Sg	Sb	19 19 01.9	+0.1
	baz=45						
YBH	Yreka Blue Hor	2.37	266	Pn	Pn	19 18 27.6	-1.3
	comp=E,2.7nm,0.3s,baz=58,slow=9.5,SNR=19						
YBH				Lg	Lg	19 19 02.6	
	comp=E,25nm,0.3s,baz=184,slow=7.4,SNR=17						
YBH				LR	LR	19 19 10.8	
	comp=E,40nm,19.6s,baz=33,slow=36						
YBH	Yreka Blue Hor	2.37	266	Pn	Pn	19 18 27.9	-1.1
YBH				IAML		19 19 12.6	
	comp=N,98nm,1.1s						
KBF	Kyburz Flat	2.48	192		Pb	19 18 32.5	-2.1
VPK	Verdi Peak	2.49	189		Pb	19 18 34.1	-0.7
M02C	Callahan	2.53	259	S	Sn	19 19 01.9	-0.2
	baz=77						
N02D	Trinity Center	2.56	249	Pb	Pb	19 18 33.3	-2.7
	baz=67,SNR=21						
N02D				Sg	Sg	19 19 09.3	-2.7
	baz=67						
IND	Independence	2.56	193		Pb	19 18 35.6	-0.5
HUMO	Hull Mountain	2.61	286	Pn	Pn	19 18 31.3	-0.9
HUMO				IAML		19 19 10.4	
	comp=N,96nm,1.3s						
WDC	Whiskeytown Da	2.63	240		Pn	19 18 30.9	-1.4
WDC				IAML		19 19 11.3	
	comp=N,76nm,0.7s						
VCNR	Virginia City	2.64	182		Pb	19 18 35.8	-1.6
ORV	Oroville	2.80	213		Pn	19 18 34.4	-0.3
PNTR	Pine Nut	2.84	181	Pn	Pn	19 18 34.6	-1.0
PNTR					Pb	19 18 39.9	-1.0
PNTR				IAML		19 19 40.8	
	comp=E,108nm,0.9s						
RUBR	Rubicon Trail	2.92	189		Pn	19 18 36.2	-0.3
RUBR				IAML		19 19 34.6	
	comp=E,103nm,1.0s						
RUBR				IAML		19 19 40.9	
	comp=N,93nm,1.0s						
YERR	Yerington	2.96	175		Pn	19 18 35.9	-1.2
YERR				IAML		19 19 30.3	
	comp=E,119nm,1.0s						
O02D	Mt. Diablo Mer	3.01	235	Sg	Sb	19 19 21.9	+1.3
	baz=53						
L02E	Cave Junction	3.02	276	P	Pn	19 18 37.1	-0.7
	baz=93						
KVN	Kaiserville	3.09	158		Pn	19 18 38.4	-0.5
KVN				IAML		19 19 29.9	
	comp=N,64nm,0.8s						
KVN				IAML		19 19 38.2	
	comp=E,54nm,1.4s						
MFID	Camas Ranch	3.12	60	Pn	Pn	19 18 38.8	-0.5
MFID				IAML		19 19 40.5	
	comp=E,110nm,0.7s						
MFID				IAML		19 19 49.9	
	comp=E,93nm,0.8s						
K02D	Willamette Mer	3.14	285	P	Pn	19 18 39.6	0.0
	baz=103						
K02D				S	Sn	19 19 19.5	+2.4
	baz=103						
AFDM	Forest Hills D	3.17	200		Pn	19 18 39.2	-0.7
KRMB	Red Mountain	3.29	264	Pn	Pn	19 18 38.1	-3.4
KRMB				IAML		19 19 54.1	
	comp=N,43nm,1.3s						
KHMM	Horse Mountain	3.32	253		Pn	19 18 40.5	-1.5
KHMM				IAML		19 19 45.7	
	comp=E,91nm,0.9s						
KHMM				IAML		19 19 55.9	
	comp=N,75nm,1.1s						
BMO	Blue Mountains	3.34	29	Pn	Pn	19 18 41.2	-1.1
BMO				IAML		19 19 51.2	
	comp=N,37nm,0.9s						
H04A	Detroit Lake	3.35	326		Pn	19 18 41.3	-1.1
G08A	Pilot Rock	3.38	7	Pn	Pn	19 18 41.0	-1.9
RYN	Ryan	3.40	166	Pn	Pn	19 18 41.3	-1.8
RYN				IAML		19 19 40.1	
	comp=E,61nm,1.0s						
RYN				IAML		19 19 40.9	

	comp=N,42nm,0.8s						
WAKR	Walker	3.43	178		Pn	19 18 41.2	-2.4
ELK	Elko	3.46	109	Pn	Pb	19 18 47.6	-3.8
	comp=N,6.2nm,0.3s,baz=297,slow=16,SNR=48						
ELK				Lg	Lg	19 19 35.3	
	comp=N,10nm,0.3s,baz=193,slow=21,SNR=11						
ELK				LR	LR	19 20 24.5	
	comp=N,126nm,21.7s,baz=326,slow=44						
ELK	Elko	3.46	109	Pn	Pn	19 18 42.7	-1.3
ELK				IAML		19 19 40.5	
	comp=N,36nm,0.5s						
J01E	Myrtle Point	3.46	292	S	Sn	19 19 27.8	+3.0
	baz=110						
KBO	Bosley Butte	3.49	276		Pn	19 18 43.7	-0.7
KBO				IAML		19 19 50.8	
	comp=N,83nm,1.2s						
NVAR	Mina Array Bea	3.63	164	Pn	Pn	19 18 48.4	+2.0
	comp=N,0.6nm,0.3s,baz=351,slow=14,SNR=12						
NVAR				Lg	Lg	19 19 43.8	
	comp=N,3.3nm,0.3s,baz=330,slow=29,SNR=4.0						
NVAR	Mina Array Bea	3.63	164		Pn	19 18 45.3	-1.1
NV11	Mina Array Sit	3.66	163		Pn	19 18 45.5	-1.2
NV11				IAML		19 19 55.3	
	comp=N,33nm,0.7s						
KEBM	Edson Butte	3.66	286		Pn	19 18 45.2	-1.5
LHV	Little Huntoon	3.77	167		Pn	19 18 45.6	-2.4
LHV				IAML		19 20 08.0	
	comp=N,66nm,0.8s						
CMB	Columbia Colle	3.95	190		Pb	19 18 57.5	-2.1
CMB				IAML		19 20 05.7	
	comp=E,25nm,0.9s						
HLID	Hailey	4.12	65	P	Pn	19 18 52.5	-0.6
	baz=248						
HLID	Hailey	4.12	65	Pn	Pn	19 18 52.3	-0.7
HLID				IAML		19 20 00.2	
	comp=E,34nm,0.8s						
HLID				IAML		19 20 05.8	
	comp=E,29nm,0.8s						
TPH	Tonopah	4.25	154		Pn	19 18 54.5	-0.4
TPH	Tonopah	4.25	154	IAML		19 20 12.9	
	comp=N,35nm,0.7s						
TPH				IAML		19 20 21.3	
	comp=E,34nm,1.2s						
OMMB	Old Mammoth Mi	4.34	174		Pn	19 18 54.0	-2.2
F10A	Beach Ranch, E	4.37	22	Pg	Pb	19 19 04.4	-2.5
F10A				IAML		19 20 25.5	
	comp=N,26nm,2.0s						
F10A				IAML		19 20 29.7	
	comp=E,24nm,1.4s						
HAWA	Hanford	4.46	0	Pn	Pn	19 18 54.9	-2.6
HAWA				IAML		19 20 24.9	
	comp=E,22nm,1.6s						
E08A	Dider Farm, El	4.57	4		Pn	19 18 58.9	-0.1
E08A				IAML		19 20 30.6	
	comp=N,19nm,3.5s						
E08A				IAML		19 20 36.6	
	comp=E,26nm,1.2s						
E07A	Sunnyside	4.63	357	Pn	Pn	19 18 57.2	-2.6
E07A				IAML		19 20 37.3	
	comp=E,26nm,1.7s						
E07A				IAML		19 20 38.1	
	comp=N,28nm,2.2s						
E09A	Wood Farm, Sta	4.69	12	Pn	Pn	19 18 57.6	-3.1
E09A				IAML		19 22 03.7	
	comp=E,30nm,0.1s						
R11A	Troy Canyon, C	4.70	138		Pn	19 18 59.4	-1.6
R11A				IAML		19 20 20.6	
	comp=N,16nm,0.7s						
R11A				IAML		19 20 27.9	
	comp=E,24nm,2.2s						
BGU	Big Grassy Mou	5.01	99	Pn	Pn	19 19 04.6	-0.7
BGU				IAML		19 20 34.6	
	comp=N,21nm,1.4s						
BGU				IAML		19 20 41.4	
	comp=E,25nm,2.2s						
HVU	Hansel Valley	5.06	90		Pn	19 19 05.0	-1.0
BCYI	Bear Canyon	5.09	60	Pn	Pn	19 19 05.4	-1.0
SPUT	South Promonto	5.36	94	Pn	Pn	19 19 08.3	-1.8
DUG	Dugway, Tooele	5.38	107	Pn	Pn	19 19 09.7	-0.7
PSUT	Pine Spring	5.53	126		Pn	19 19 09.3	-3.1
TPNV	Topopah Spring	5.60	152	Pn	Pn	19 19 10.1	-3.2
MCMT	McKenzie Canyo	5.68	57	Pn	Pn	19 19 13.3	-1.2
PRN	Pahroc Range	5.70	141	Pn	Pn	19 19 15.3	+0.5
MSO	Missoula	6.33	38	Pn	Pn	19 19 22.3	-1.1
CCUT	Cedar City	6.47	131		Pn	19 19 23.0	-2.4
REDW	Red Top Meadow	6.57	75		Pb	19 19 42.3	-2.1
SNOW	Snow King Moun	6.66	74		Pn	19 19 27.2	-0.8
YHL	Hebgen Lake	6.76	62	Pn	Pn	19 19 27.9	-1.5
LOHW	Long Hollow	6.79	73	Pg	Pb	19 19 46.6	-1.6
FLWY	Flagg Ranch	6.83	69	Pg	Pb	19 19 47.4	-1.5
PDAR	Pinedale Array	7.45	80	Pn	Pn	19 19 42.2	+3.3
	comp=E,0.1nm,0.3s,baz=262,slow=10,SNR=4.1						
TXAR	Lajitas Array	17.99	129	P	P	19 22 03.5	+2.9
	comp=E,0.1nm,0.3s,baz=311,slow=15,SNR=1.5						
ULM	Lac du Bonnet	18.35	55	P	P	19 22 06.1	+1.8
	comp=E,0.1nm,0.3s,baz=269,slow=4.1,SNR=3.0						
YKA	Yellowknife Ar	20.80	6	P	Pn	19 22 32.8	-0.6
	comp=E,0.4nm,0.8s,baz=182,slow=11,SNR=7.2						
ILAR	Eielson Array	27.67	335	P	P	19 23 39.0	+1.3
	comp=E,0.5nm,0.9s,baz=147,slow=7.7,SNR=5.7						
SADO	Sadowa	29.31	71	P	P	19 23 55.9	+3.5
	comp=E,3.0nm,0.8s,baz=292,slow=5.4,SNR=1.5						
MK31	Makanchi Array	89.55	345	⇓Pg	P	19 30 54.7	+7.3
	comp=E,3.4nm,1.4s,baz=52,slow=16						
MK31				⇓Lg	Lg	19 31 51.8	
	comp=E,0.3nm,0.5s,baz=43,slow=31						

PRU 26 19:27:28.8±0.0**, 50°.25N**×**19°.01E, h0km, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OJC	Ojcow	0.51	93	*e*Pg	Pg	19 27 38.1	-0.4
OJC				*e*Sg	Sg	19 27 45.3	+0.2
MORC	Moravsky Berou	1.06	244	*e*PG	Pg	19 27 49.1	0.0
MORC				*e*SG	Sg	19 28 03.3	+0.5
MORC	Moravsky Berou	1.06	244	P	Sg	19 28 03.3	+0.5
LANS	Liptovska Anna	1.14	165	*e*PG	Pg	19 27 51.0	+0.4
LANS				*e*SG	Sg	19 28 05.0	-0.4
LANS				*e*LG	Lg	19 28 10.8	
DPC	Dobruska-Polom	1.73	274	*e*PG	Pn	19 28 00.0	-0.1
DPC				*e*SG	Sg	19 28 25.0	+0.8
CHVC	Chvalec	1.92	281	*e*SG	Sg	19 28 31.3	+0.8

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*IDC **26** 19:36:52.6±1.5, 5°.58N×125°.70E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.3/56, mbtmp3.6/4, Error ellipse: s-maj=133.1km s-min=17.2km az=83.0*

*MAN **26** 19:36:58.8, 6°.50N×126°.16E, h142km, mb4.3, ML3.1, MS2.9*

*NEIC **26** 19:37:00.8±2.0, 6°.36N±0°.09×125°.9E±0°.2, h135km±10km, mb4.0/10, Error ellipse: s-maj=23.7km s-min=11.1km az=72.0*

ISC 26 19:37:00.9±0.8**, 6°.33N**±0°.06×**125°.94E**±0°.09**, h129**km±7km**, n24,** σ**1ˢ.03**/29**, mb3.8**/9**, 1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	Don Marcelino,	0.32	225	*e*P	Pn	19 37 19.1	+0.1
DDMP				*e*S	Sn	19 37 32.1	-0.7
MATI	Mati	0.69	28	*e*P	Pn	19 37 19.8	-1.4
MATI				*e*S	Sn	19 37 37.0	+0.5
DAV	Davao City (W)	0.82	334	Pn	Pn	19 37 21.2	-1.0
	90nm,0.3s,baz=250,slow=7.1,SNR=8.7						
DAV				Sn	Sn	19 37 40.4	+2.1
	108nm,0.3s,baz=99,slow=22,SNR=10.0						
DAV	Davao City (W)	0.82	334		Pn	19 37 22.1	0.0
BUKP	Musuan	1.77	331	*e*P	Pn	19 37 31.4	-0.8
BUKP				*e*S	Sn	19 37 56.1	+0.1
CGP	Cagayan de Oro	2.44	330	⇓*e*P	Pn	19 37 39.4	-1.1
CGP				*e*S	Sn	19 38 13.0	+2.3
TNTI	Ternate	5.70	165		Pn	19 38 23.4	-0.1
TOLI2	Tolitoli	7.30	225	Pn	Pn	19 38 44.6	-0.4
MYLDM	Lahad Datu	7.49	262	Pn	Pn	19 38 45.8	-1.7
FITZ	Fitzroy Crossi	24.28	181	P	P	19 42 05.4	-0.9
	1.3nm,0.5s,baz=359,slow=9.0,SNR=6.5						
FITZ	Fitzroy Crossi	24.28	181	P	P	19 42 06.6	+0.3
FITZ				IAmb	IAmb	19 42 24.0	
	comp=Z,4.7nm,1.2s						
WB0	Warramunga Arr	27.24	162	P	P	19 42 32.7	-0.4
WB0				IAmb	IAmb	19 42 35.5	
	comp=Z,3.6nm,1.2s						
WRAB	Tennant Creek	27.38	163	P	P	19 42 34.0	-0.4
WRAB				IAmb	IAmb	19 43 00.6	
	comp=Z,1.5nm,0.9s						
WRA	Warramunga Arr	27.39	163	P	P	19 42 34.1	-0.3
	comp=Z,0.4nm,0.8s,baz=339,slow=9.4,SNR=1.5						
WB2	Warramunga Arr	27.39	163	P	P	19 42 33.8	-0.6
WB2				IAmb	IAmb	19 42 37.4	
	comp=Z,4.1nm,1.4s						
AS31	Alice Springs	30.81	166	P	P	19 43 03.5	-1.3
ASAR	Alice Springs	30.81	166	P	P	19 43 04.1	-0.6
	comp=Z,0.5nm,0.5s,baz=341,slow=7.1,SNR=14						
ASAR	Alice Springs	30.81	166	P	P	19 43 03.7	-1.1
NWAO	Narrogin (SRO)	39.91	191	P	P	19 44 22.8	+0.4
NWAO				IAmb	IAmb	19 44 24.4	
	comp=Z,13nm,1.1s						
BBOO	Buckleboo	40.10	167	P	P	19 44 24.6	+0.6
BBOO				IAmb	IAmb	19 44 50.3	
	comp=Z,7.8nm,1.3s						
STKA	Stephens Creek	40.83	159	P	P	19 44 30.5	+0.6
	comp=Z,0.6nm,0.3s,baz=338,slow=12,SNR=4.4						
STKA	Stephens Creek	40.83	159	P	P	19 44 30.4	+0.4
BFZ	Birch Farm	65.69	140	P	P	19 47 33.0	+1.3
AKUT	Akutan	72.25	35	P	P	19 48 11.3	-0.7

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*IDC **26** 19:38:58.2±3.2, 25°.33S×176°.48W, h0km, mb4.0/5, mb1 4.2/6, mb1mx3.9/39, mbtmp4.1/6, ML5.9/1, MS3.2/4, Ms1 3.2/4, ms1mx2.9/33, Error ellipse: s-maj=68.5km s-min=46.3km az=120.0*

*NEIC **26** 19:38:59±1.3, 25°.24S±0°.04×175°.9W±0°.1, h30km±6km, mb4.3/12, Error ellipse: s-maj=17.9km s-min=3.0km az=106.0*

ISC 26 19:39:03.1±1.6**, 25°.3S**±0°.1×**176°.4W**±0°.2**, h35km, n28,** σ**0ˢ.90**/25**, mb4.3**/8**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	4.13	199	Pn	Pn	19 40 03.8	+0.1
NIUE	Niue	8.65	45	Pn	Pn	19 40 57.2	-8.7
MSVF	Nonsavu	9.14	325	Pn	Pn	19 41 13.0	+0.3
	4.3nm,0.3s,baz=162,slow=17,SNR=5.4						
MSVF				LR	LR	19 44 16.8	
	comp=Z,130nm,18.3s,baz=331,slow=35						
MSVF	Nonsavu	9.14	325		Pn	19 41 12.7	0.0
AFI	Afiamalu	12.17	22	Pn	Pn	19 41 42.2	-12
DZM	Mont Dzumac	16.03	278	Pn	P	19 42 50.2	+1.0
	0.2nm,0.3s,baz=106,slow=20,SNR=2.5						
DZM				LR	LR	19 47 51.4	
	comp=Z,61nm,18.2s,baz=52,slow=33						
DZM	Mont Dzumac	16.03	278	P	P	19 42 50.0	+0.9
DZM				IAmb	IAmb	19 43 14.2	
	comp=Z,35nm,1.5s						
BFZ	Birch Farm	16.49	200		Pn	19 42 51.9	+0.2
NNZ	Nelson	17.97	206	P	P	19 43 11.3	+0.9
NNZ				IAmb	IAmb	19 43 22.4	
	comp=Z,23nm,1.1s						
KHZ	Kahutara	18.95	203		P	19 43 20.6	-0.4
HNR	Honiara	27.47	301	LR	LR	19 53 26.9	
	comp=Z,82nm,21.0s,baz=253,slow=32						
CTA	Charters Tower	34.75	271	P	P	19 45 50.6	+0.4
	comp=Z,2.6nm,0.6s,baz=89,slow=11,SNR=7.4						
CTAO	Charters Tower	34.75	271	P	P	19 45 50.4	+0.1
STKA	Stephens Creek	37.26	250	P	P	19 46 10.3	-1.4
	comp=Z,0.4nm,0.2s,baz=94,slow=13,SNR=1.3						
STKA				LR	LR	19 59 51.5	
	comp=Z,41nm,19.5s,baz=27,slow=34						
BBOO	Buckleboo	41.92	248	P	P	19 46 51.0	+0.6
BBOO				IAmb	IAmb	19 47 03.0	
	comp=Z,7.1nm,1.1s						
AS31	Alice Springs	45.03	261	P	P	19 47 16.1	+0.4
ASAR	Alice Springs	45.03	261	P	P	19 47 16.1	+0.4
	comp=Z,1.2nm,0.8s,baz=93,slow=8.4,SNR=14						
ASAR	Alice Springs	45.03	261	P	P	19 47 15.5	-0.1
WR0	Warramunga Arr	45.38	266	P	P	19 47 17.2	-1.3
WB2	Warramunga Arr	45.55	266	P	P	19 47 18.7	-1.1
WRAB	Tennant Creek	45.56	266	P	P	19 47 17.6	-2.2
WRAB				IAmb	IAmb	19 47 19.9	
	comp=Z,4.0nm,1.0s						
WB0	Warramunga Arr	45.56	267	P	P	19 47 18.4	-1.5
WB0				IAmb	IAmb	19 47 23.8	
	comp=Z,4.4nm,0.9s						
WRA	Warramunga Arr	45.56	266	P	P	19 47 18.7	-1.3
	comp=Z,1.4nm,0.5s,baz=100,slow=8.5,SNR=23						
FITZ	Fitzroy Crossi	53.97	265	P	P	19 48 23.9	0.0
	comp=Z,2.1nm,0.8s,baz=114,slow=8.7,SNR=11						
FITZ	Fitzroy Crossi	53.97	265	P	P	19 48 23.7	-0.2
FITZ				IAmb	IAmb	19 48 30.4	
	comp=Z,4.8nm,1.1s						
AKASG	Malin Array Be	147.91	329	PKPbc	PKPbc	19 58 44.2	-0.1
	comp=Z,0.8nm,0.5s,baz=43,slow=4.1,SNR=5.2						
AKASG	Malin Array Be	147.91	329		PKPdf	19 58 41.4	+0.1
CLL	Collm	153.08	347	*e*PKPbc	PKPbc	19 58 57.0	+0.3

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*IDC **26** 20:21:32.8±1.8, 7°.14S×129°.77E, h82km±21km, mb3.6/2, mb1 3.5/7, mb1mx3.3/39, mbtmp3.7/7, Error ellipse: s-maj=23.9km s-min=13.0km az=105.0*

ISC 26 20:21:33.2±0.9**, 7°.25S**±0°.06×**129°.88E**±0°.10**, h100km, n7,** σ**2ˢ.70**/12**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	6.49	12	P	Pn	20 23 06.5	+0.3
	1.6nm,0.3s,baz=229,slow=19,SNR=18						
SIJI				S	Sn	20 24 15.6	-3.3
	1.2nm,0.3s,baz=211,slow=22,SNR=9.9						
BATI	Baumata	6.81	244	P	Pn	20 23 10.0	-0.5
	1.9nm,0.3s,baz=74,slow=20,SNR=1.4						
BATI				S	Sn	20 24 26.6	0.0
	2.3nm,0.3s,baz=66,slow=22,SNR=1.7						
FITZ	Fitzroy Crossi	11.54	201	P	Pn	20 24 15.6	+0.7
	0.2nm,0.3s,baz=26,slow=12,SNR=23						
FITZ				S	Sn	20 26 18.8	-3.1
	0.9nm,0.3s,baz=144,slow=20,SNR=8.1						
WRA	Warramunga Arr	13.34	162	P	Pn	20 24 39.7	+1.1
	0.3nm,0.3s,baz=345,slow=13,SNR=16						
WRA				S	Sn	20 27 01.1	-4.3
	0.9nm,0.3s,baz=331,slow=22,SNR=15						
ASAR	Alice Springs	16.77	167	P	P	20 25 24.1	+1.4
	0.2nm,0.3s,baz=342,slow=9.1,SNR=27						
ASAR				S	Sn	20 28 25.9	-2.5
	0.3nm,0.3s,baz=348,slow=27,SNR=7.3						
STKA	Stephens Creek	26.83	157	P	P	20 27 08.3	+4.0
	0.5nm,0.4s,baz=333,slow=6.8,SNR=3.1						
MKAR	Makanchi Array	68.37	327	P	P	20 32 24.4	+0.4
	0.5nm,0.4s,baz=117,slow=7.6,SNR=19						

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*IDC **26** 21:27:01.9±2.1, 6°.27S×147°.10E, h0km, mb3.6/5, mb1 3.7/7, mb1mx3.6/34, mbtmp3.6/7, ML3.6/1, Error ellipse: s-maj=63.8km s-min=20.8km az=94.0*

ISC 26 21:27:08.8±1.5**, 6°.35S**±0°.10×**147°.0E**±0°.3**, h49km, n8,** σ**1ˢ.69**/9**, mb3.5**/5**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	3.04	177	Pn	Pn	21 27 52.9	-1.6
	7.2nm,0.3s,baz=336,slow=4.6,SNR=10						
PMG				Sn	Sn	21 28 32.1	+2.5
	16nm,0.3s,baz=9.6,slow=22,SNR=8.2						
WRA	Warramunga Arr	18.28	221	P	Pn	21 31 17.7	-1.3
	0.2nm,0.3s,baz=49,slow=11,SNR=9.1						
ASAR	Alice Springs	21.34	215	P	P	21 31 51.8	-0.2
	0.9nm,0.3s,baz=54,slow=8.6,SNR=23						
FITZ	Fitzroy Crossi	23.89	239	P	P	21 32 19.2	+1.1
	1.0nm,0.6s,baz=65,slow=11,SNR=6.4						
SONM	Songino Array	64.71	331	P	P	21 37 43.8	+1.8
	0.4nm,0.8s,baz=113,slow=6.6,SNR=2.1						
MKAR	Makanchi Array	77.77	321	P	P	21 39 01.0	+0.1
	0.4nm,0.9s,baz=120,slow=5.5,SNR=2.3						
ZALV	Zalesovo Beam	79.31	328	P	P	21 39 07.6	-1.5
	0.6nm,0.5s,baz=97,slow=7.4,SNR=2.8						
TORD	Torodi Ar. Bea	145.18	284	PKPbc	PKPbc	21 46 41.3	-0.4
	0.9nm,0.5s,baz=93,slow=5.9,SNR=4.1						

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*IDC **26** 21:31:18.7±1.8, 43°.82N×105°.57W, h0km, mb1 3.5/3, mb1mx3.3/40, mbtmp3.2/3, ML3.2/3, Error ellipse: s-maj=45.8km s-min=9.0km az=149.0*

*NEIC **26** 21:31:19.3±1.2, 43°.77N±0°.05×105°.30W±0°.05, h0km±2km, ML3.2/60, Error ellipse: s-maj=8.1km s-min=6.8km az=184.0*

ISC 26 21:31:18.8±1.1**, 43°.78N**±0°.06×**105°.34W**±0°.06**, h0km, n68,** σ**1ˢ.09**/68**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	Black Hills	1.00	70		Pg	21 31 38.2	+0.2
K22A	Casper	1.42	218		Pn	21 31 44.7	-1.3
K22A				IAML		21 32 07.0	
	comp=E,272nm,0.6s						
K22A				IAML		21 32 09.2	
	comp=N,318nm,0.3s						
PHWY	Pilot Hill	2.48	182		Pn	21 32 01.1	+0.5
RWWY	Rawlins	2.50	214		Pn	21 32 01.9	+1.0
RWWY				IAML		21 32 36.8	
	comp=N,94nm,0.8s						
RWWY				IAML		21 32 37.7	
	comp=N,123nm,0.8s						
LAO	LASA Array	2.98	348	Pn	Pn	21 32 07.5	+0.2
LAO				IAML		21 33 00.4	
	comp=N,96nm,0.8s						
RLMT	Red Lodge	3.12	297		Pn	21 32 09.9	+0.6
RLMT				IAML		21 33 07.8	
	comp=N,39nm,0.8s						
BW06	Boulder Array	3.24	253		Pn	21 32 11.8	+0.7
PD31	Pinedale Array	3.24	253		Pn	21 32 11.7	+0.5
PDAR	Pinedale Array	3.24	253	Pn	Pn	21 32 11.6	+0.5
	comp=N,2.9nm,0.3s,baz=78,slow=16,SNR=45						
PDAR				Lg	Lg	21 32 56.1	
	comp=N,5.8nm,0.3s,baz=68,slow=36,SNR=5.4						
PDAR	Pinedale Array	3.24	253		Pn	21 32 11.8	+0.7
YNE	Yellowstone No	3.56	292		Pn	21 32 16.1	+0.5
YMP	Mirror Lake Pl	3.59	287		Pn	21 32 17.3	+1.3
GCMT	Greycliff	3.68	305		Pn	21 32 18.1	+1.0
LKWY	Lake	3.72	284		Pn	21 32 19.6	+1.9
LKWY				IAML		21 32 40.1	
	comp=N,36nm,0.9s						
LKWY				IAML		21 33 37.7	
	comp=N,21nm,1.4s						
OGNE	Ogallala	3.74	138		Pn	21 32 18.1	+0.3
LOHW	Long Hollow	3.82	269		Pn	21 32 20.4	+1.4
H17A	Grant Village	3.82	281		Pn	21 32 21.4	+2.3
H17A				IAML		21 33 24.7	
	comp=N,25nm,0.8s						
FLWY	Flagg Ranch	3.88	276		Pn	21 32 21.2	+1.3
FLWY				IAML		21 33 54.8	
	comp=N,30nm,3.1s						
FLWY				IAML		21 33 57.3	
	comp=N,26nm,4.7s						
SNOW	Snow King Moun	3.94	267		Pn	21 32 20.8	0.0
SNOW				IAML		21 33 27.9	
	comp=N,24nm,1.9s						
SNOW				IAML		21 33 33.4	
	comp=N,24nm,3.5s						
YNR	Norris Junctio	3.95	286		Pn	21 32 20.1	-0.7
YPP	Pitchstone Pla	3.97	279		Pn	21 32 21.7	+0.5
ISCO	Idaho Springs	3.98	183		Pn	21 32 22.3	+1.0
REDW	Red Top Meadow	4.03	266		Pn	21 32 22.7	+0.8
REDW				IAML		21 33 28.7	
	comp=N,29nm,1.2s						
REDW				IAML		21 33 32.0	
	comp=N,35nm,1.3s						
YHH	Holmes Hill	4.08	286		Pn	21 32 24.5	+1.8
YMR	Madison River	4.14	284		Pn	21 32 24.6	+1.1
O20A	White River Ci	4.23	212		Pn	21 32 25.3	+0.6
O20A				IAML		21 33 35.8	
	comp=N,38nm,4.2s						
O20A				IAML		21 35 09.7	
	comp=E,49nm,4.4s						
YHB	Horse Butte	4.32	285	Pn	Pn	21 32 29.8	+3.9
AHID	Auburn Hatcher	4.33	258		Pn	21 32 25.6	-0.3
AHID				IAML		21 33 01.0	
	comp=E,44nm,0.1s						
YHL	Hebgen Lake	4.33	286	Pn	Pn	21 32 26.5	+0.4
ECR	Eagle Creek	4.45	263		Pn	21 32 30.4	+2.7
RDMU	Red Mountain	4.49	226		Pn	21 32 28.2	0.0
QLMT	Earthquake Lak	4.50	286	Pn	Pn	21 32 28.0	-0.3
SMCO	Snowmass	4.76	195	Pn	Pn	21 32 34.4	+2.3
SMCO				IAML		21 33 47.7	
	comp=E,19nm,2.9s						
SMCO				IAML		21 33 52.3	
	comp=E,19nm,3.8s						
DGMT	Dagmar	4.76	9	Pn	Pn	21 32 32.4	+0.6
BOZ	Bozeman (W)	4.84	294		Pn	21 32 33.0	0.0
BOZ				IAML		21 34 06.5	
	comp=E,12nm,2.8s						
BOZ				IAML		21 34 10.8	
	comp=E,12nm,4.2s						
KSCO	Kaye Shedlock’	5.18	156	Pn	Pn	21 32 36.8	-0.9
EGMT	Eagleton	5.25	326		Pn	21 32 39.0	+0.5
CTU	Camp Tracy	5.67	239	Pn	Pn	21 32 44.6	+0.2
SPUT	South Promonto	5.80	247	Pn	Pn	21 32 47.1	+0.9
HVU	Hansel Valley	5.82	253	Pn	Pn	21 32 45.5	-1.0
PV22	Blue Mesa, Par	5.85	208	Pn	Pn	21 32 47.6	+0.7
PV07	Paradox Valley	5.89	206	Pn	Pn	21 32 48.1	+0.6
P17A	Butcher Ranch,	5.90	225	Pn	Pn	21 32 46.1	-1.5
PV15	Paradox Valley	5.93	205		Pn	21 32 48.7	+0.7
PV23	Carpenter Ridg	6.00	209	Pn	Pn	21 32 50.0	+1.0
PV04	Paradox Valley	6.01	208	Pn	Pn	21 32 50.0	+0.8
SDCO	Great Sand Dun	6.03	181	Pn	Pn	21 32 49.5	+0.1
PV12	Saucer Basin,	6.05	207	Pn	Pn	21 32 50.9	+1.3
PV14	Lion Creek, Pa	6.07	208	Pn	Pn	21 32 50.6	+0.6
SRU	San Rafael Swe	6.07	222	Pn	Pn	21 32 50.3	+0.4
PV10	Paradox Valley	6.08	209	Pn	Pn	21 32 50.2	+0.2
PV11	David Mesa, Pa	6.09	207		Pn	21 32 51.0	+0.8
PV16	Nyswonger Mesa	6.09	208	Pn	Pn	21 32 51.4	+1.1
PV19	Morning Glory	6.12	208	Pn	Pn	21 32 49.4	-1.2
PV03	Paradox Valley	6.12	207		Pn	21 32 51.4	+0.8
PV02	Paradox Valley	6.13	206		Pn	21 32 51.4	+0.6
PV17	East Wray Mesa	6.13	208	Pn	Pn	21 32 51.4	+0.5
PV18	Skein Mesa, Pa	6.15	207	Pn	Pn	21 32 52.5	+1.5
PV13	Radium Mtn., P	6.20	206	Pn	Pn	21 32 52.2	+0.4
ECSD	EROS Data Cent	6.32	87	Pn	Pn	21 32 52.7	-0.5
PV05	Paradox Valley	6.36	208	Pn	Pn	21 32 52.9	-1.1
BGU	Big Grassy Mou	6.37	246	Pn	Pn	21 32 54.4	+0.4
CBKS	Cedar Bluff	6.51	138	Pn	Pn	21 32 54.7	-1.1
Q16A	Castle Valley	6.54	224	Pn	Pn	21 32 56.5	+0.1
DUG	Dugway, Tooele	6.62	240	Pn	Pn	21 32 57.0	-0.4
F33A	5 Mile Ranch,	6.76	69	Pn	Pn	21 32 59.6	+0.5
ULM	Lac du Bonnet	9.14	42	Pn	Pn	21 33 31.0	-0.9
	comp=E,0.9nm,0.3s,baz=234,slow=11,SNR=11						
ULM				Pg		21 34 03.8	
	comp=E,0.5nm,0.3s,baz=221,slow=14,SNR=5.2						
ULM				Lg	Lg	21 35 59.9	
	comp=E,0.2nm,0.3s,baz=139,slow=17,SNR=3.4						
YKA	Yellowknife Ar	19.52	347	P	Pn	21 35 48.2	-0.3
	comp=E,0.1nm,0.3s,baz=160,slow=12,SNR=3.3						

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*IDC **26** 21:36:09.0±1.1, 6°.03S×123°.60E, h0km, mb3.6/4, mb1 3.8/8, mb1mx3.7/32, mbtmp3.7/8, ML3.4/4, MS2.8/4, Ms1 2.8/4, ms1mx2.6/32, Error ellipse: s-maj=49.4km s-min=19.0km az=65.0*

*DJA **26** 21:36:13.9±1.3, 6°S±3°×12°3E±°, h30km±19km, M4.2/14, mb4.6/6, mB4.9/2, MLv4.0/14, Mw(mB)4.2/2*

*NEIC **26** 21:36:14.1±2.6, 6°.19S±0°.06×123°.46E±0°.03, h34km±9km, mb4.0/11, Error ellipse: s-maj=8.8km s-min=4.7km az=166.0*

ISC 26 21:36:14.1±0.6**, 6°.17S**±0°.06×**123°.50E**±0°.06**, h35km, n44,** σ**1ˢ.49**/47**, mb4.1**/6**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDI	Kendari	2.36	338	P	Pn	21 36 47.1	-3.3
MMRI	Maumere	2.75	207	Pn	Pn	21 36 55.4	-0.4
BSSI	Bau Bau, Buton	2.99	270	P	Pn	21 36 59.0	-0.1
BSSI				S	Sn	21 37 33.8	0.0
SOEI	Soe	3.65	168		Pn	21 37 09.1	+0.9
SOEI	Soe	3.65	168	P	Pn	21 37 11.0	+2.8
BNSI	Bone	3.81	297	P	Pn	21 37 09.0	-1.3
BNSI				S	Sn	21 37 52.4	-1.5
KAPI	Kappang	3.90	287	Pn	Pn	21 37 10.3	-1.3
	4.4nm,0.3s,baz=148,slow=3.9,SNR=26						
KAPI				Sn	Sn	21 37 56.0	-0.2
	16nm,0.3s,baz=219,slow=19,SNR=15						
KAPI				LR	LR	21 38 46.3	
	comp=Z,78nm,21.7s,baz=94,slow=40						
KAPI	Kappang	3.90	287		Pn	21 37 11.3	-0.3
KAPI					Sn	21 37 55.5	-0.7
BATI	Baumata	4.02	178	Pn	Pn	21 37 15.4	+2.2
	3.3nm,0.3s,baz=234,slow=20,SNR=2.3						
BATI				LR	LR	21 38 55.5	
	comp=Z,145nm,21.6s,baz=72,slow=40						
BATI	Baumata	4.02	178	P	Pn	21 37 15.7	+2.5
SPSI	Sidrap Palu	4.31	300	P	Pn	21 37 16.8	-0.4
SPSI				S	Sn	21 38 07.4	+1.1

NLAI	Namlea	4.62	51	P	Pn	21 37 20.8	-0.6
SANI	Sanana	4.78	31	P	Pn	21 37 23.2	-0.5
TTSI	Tana Toraja	4.80	310	P	Pn	21 37 24.5	+0.5
LUWI	Luwuk	5.14	352	Pn	Pn	21 37 27.9	-0.7
LUWI	Luwuk	5.14	352	P	Pn	21 37 27.3	-1.3
	0.5nm2µm130nm,0.9s						
APSI	Ampana	5.54	340	P	Pn	21 37 33.2	-0.9
	0.2nm687nm39nm,0.7s						
GTOI	Gorontalo	6.77	356	P	Pn	21 37 52.0	+0.9
	0.1nm20nm,0.9s						
MRSI	Marisa	6.78	347	P	Pn	21 37 49.2	-2.0
	0.1nm24nm,0.7s						
TOLI2	Tolitoli	7.72	339	Pn	Pn	21 38 04.0	-0.1
FAKI	Fak Fak	9.30	70	Pn	Pn	21 38 26.6	+0.8
JAGI	Jajag, Banyuwa	9.55	256	Pn	Pn	21 38 29.0	-0.2
FITZ	Fitzroy Crossi	12.04	170	Pn	Pn	21 39 01.6	-1.7
	0.1nm,0.3s,baz=342,slow=9.6,SNR=2.1						
FITZ				LR	LR	21 43 56.3	
	comp=Z,51nm,19.3s,baz=350,slow=38						
FITZ	Fitzroy Crossi	12.04	170	Pn	Pn	21 39 01.9	-1.5
MYLDM	Lahad Datu	12.33	336	Pn	Pn	21 39 07.4	+0.2
MBWA	Marble Bar	15.35	193	Pn	Pn	21 39 47.1	-1.0
PSA00	Pilbara Seismi	15.72	193	Pn	Pn	21 39 52.9	-0.1
PSA00				IAmb	IAmb	21 40 07.7	
	comp=Z,38nm,1.4s						
LEM	Lembang	15.79	267	LR	LR	21 46 56.0	
	comp=Z,45nm,18.4s,baz=50,slow=41						
WB0	Warramunga Arr	17.17	143		Pn	21 40 09.4	-2.1
WB0				IAmb	IAmb	21 40 17.5	
	comp=Z,3.4nm,0.8s						
WRAB	Tennant Creek	17.27	143	Pn	Pn	21 40 12.6	-0.1
WRAB				IAmb	IAmb	21 40 17.6	
	comp=Z,4.4nm,0.8s						
WRA	Warramunga Arr	17.28	143	P	Pn	21 40 10.7	-2.0
	comp=Z,0.2nm,0.3s,baz=320,slow=13,SNR=18						
WB2	Warramunga Arr	17.28	143		Pn	21 40 10.5	-2.4
WB2				IAmb	IAmb	21 40 17.6	
	comp=Z,4.4nm,0.8s						
WR0	Warramunga Arr	17.41	143	Pn	Pn	21 40 11.9	-2.5
AS31	Alice Springs	20.07	151	P	P	21 40 46.4	+1.8
ASAR	Alice Springs	20.07	151	P	P	21 40 45.9	+1.2
	comp=Z,1.7nm,0.7s,baz=340,slow=15,SNR=16						
ASAR	Alice Springs	20.07	151	P	Pn	21 40 47.3	+0.7
MORW	Morawa	23.85	196	P	P	21 41 24.3	+0.1
MORW				IAmb	IAmb	21 41 37.5	
	comp=Z,14nm,1.3s						
KULM	Kulim	25.49	296	P	P	21 41 41.4	+2.0
KULM				IAmb	IAmb	21 41 56.8	
	comp=Z,14nm,1.4s						
NWAO	Narrogin (SRO)	27.26	192	P	P	21 41 51.9	-3.2
BBOO	Buckleboo	28.98	158	P	P	21 42 10.3	-0.1
BBOO				IAmb	IAmb	21 42 11.9	
	comp=Z,9.5nm,1.5s						
CM31	Chiang Mai Arr	34.43	316	P	P	21 43 00.6	+2.0
SONM	Songino Array	55.85	346	P	P	21 45 48.2	0.0
	comp=Z,0.3nm,0.6s,baz=155,slow=8.3,SNR=1.7						
MKAR	Makanchi Array	64.13	330	P	P	21 46 45.1	+0.2
	comp=Z,0.7nm,0.7s,baz=131,slow=8.6,SNR=9.0						
ZALV	Zalesovo Beam	68.12	337	P	P	21 47 09.4	-0.9
	comp=Z,0.5nm,0.5s,baz=157,slow=4.5,SNR=3.8						

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*NEIC **26** 21:41:01.9±1.8, 16°.2N±0°.1×99°.6W±0°.1, $h1^{km}\pm7^{km}$, Error ellipse: s-maj=21.4km s-min=7.3km az=218.0*
*MEX **26** 21:41:03.8±1.0, 16°.23N×99°.66W, $h15^{km}$, MD4.3*
*IDC **26** 21:41:10.8±4.7, 17°.66N×98°.77W, $h0^{km}$, mb3.9/5, mb1 4.3/5, mb1mx3.8/32, mbtmp3.9/5, ML2.7/1, MS3.3/3, Ms1 3.3/3, ms1mx2.9/43, Error ellipse: s-maj=112.9km s-min=33.0km az=27.0*
ISC 26 21:41:01.5±1.6**, 16°.27N**±0°.05×**99°.63W**±0°.04**,** $\mathbf{h1}^{km}\pm10^{km}$**, n165, σ1ˢ.99**/195**, mb4.3**/39**, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACP2	Acapulco	0.65	338	*e*P	Pg	21 41 14.1	+0.1
ACP2				*e*S	Sg	21 41 22.3	-0.1
ACP2	Acapulco	0.65	338		Pg	21 41 14.1	+0.1
CAIG	El Cayaco	0.99	322	*e*P	Pb	21 41 19.1	-2.3
CAIG				*e*S	Sb	21 41 31.8	-3.2
CAIG	El Cayaco	0.99	322		Pb	21 41 19.2	-2.2
PNIG	Pinotepa	1.45	85	*e*P	Pn	21 41 26.1	-2.8
PNIG				*i* S	Sn	21 41 43.2	-5.3
MEIG	Mezcala	1.65	0	*e*P	Pn	21 41 29.2	-2.5
MEIG				*e*S	Sn	21 41 49.3	-4.3
MEIG	Mezcala	1.65	0		Pn	21 41 30.1	-1.6
TXIG	Tlaxiaco	2.03	61	*e*P	Pn	21 41 35.1	-2.1
TXIG				*e*S	Sn	21 41 59.5	-3.9
YOIG	Yosondua	2.08	73	*e*P	Pn	21 41 35.9	-1.9
YOIG				*i* S	Sn	21 41 59.8	-4.8
ARIG	Puente Sto Nin	2.11	341	*e*P	Pn	21 41 36.3	-1.7
ARIG				*i* S	Sn	21 42 00.6	-4.4
ARIG	Puente Sto Nin	2.11	341		Pn	21 41 36.3	-1.7
PLIG	Platanillo	2.11	3	*e*P	Pn	21 41 36.2	-1.9
PLIG				*e*S	Sn	21 42 01.6	-3.5
PLIG	Platanillo	2.11	3		Pn	21 41 36.2	-1.9
FTIG	Fresnillo de T	2.17	41	*i* P	Pn	21 41 36.8	-2.1
FTIG				*i* S	Sn	21 42 03.1	-3.4
ZIIG	Zihuatanejo	2.20	307	*e*P	Pn	21 41 36.5	-2.7
ZIIG				*i* S	Sn	21 42 02.9	-4.3
ZIIG	Zihuatanejo	2.20	307		Pb	21 41 42.5	+0.4
HLIG	Huajuapan de L	2.33	48	*e*P	Pn	21 41 38.6	-2.6
HLIG				*e*S	Sn	21 42 07.2	-3.5
PEIG	Puerto Escondi	2.40	96	*i* P	Pn	21 41 40.0	-1.9
PEIG				*i* S	Sn	21 42 06.1	-5.9
YAIG	Yautepec	2.63	12	*i* P	Pn	21 41 44.1	-1.2
YAIG				*e*S	Sn	21 42 14.6	-3.4
MAVM	Malinalco, Edo	2.67	3	*e*P	Pn	21 41 44.0	-2.0
MAVM				*i* S	Sn	21 42 16.0	-3.1
VHO	Vista Hermosa	2.89	74	*e*P	Pn	21 41 46.1	-2.7
VHO				*i* S	Sn	21 42 21.5	-2.8
PPM	Popocatepetl	2.94	19	*e*P	Pn	21 41 47.4	-2.4
PPM				*i* S	Sn	21 42 22.9	-3.2
AMVM	AMECAMECA	2.96	16	*e*P	Pn	21 41 48.1	-1.8
AMVM				*e*S	Sn	21 42 23.4	-2.8
TOVM	TOLUCA	3.00	359	*e*P	Pn	21 41 48.8	-1.6
TOVM				*e*S	Sn	21 42 24.7	-2.5
TPIG	Tehuac#an	3.04	45	*i* S	Sn	21 42 25.8	-2.3
TOIG	Toxpalan	3.05	53	*e*P	Pn	21 41 48.8	-2.2
TOIG				*i* S	Sn	21 42 25.6	-2.7
UNM	Universidad Na	3.07	8	*e*P	Pn	21 41 50.8	-0.7
UNM				*e*S	Sn	21 42 26.9	-2.2
UNM	Universidad Na	3.07	8	Pn	Pb	21 41 56.7	-0.4
CVM	Colonia del Va	3.12	8	*i* P	Pb	21 41 56.6	-1.3
CVM				*i* S	Sn	21 42 28.7	-1.1
PBVM	Pinon	3.19	9	*e*P	Pn	21 41 51.9	-1.0
PBVM				*e*S	Sn	21 42 28.8	-2.8
PTVM	Pico Tres Padr	3.34	8	*e*P	Pn	21 41 53.6	-1.5
HUIG	Huatulco	3.42	98	*e*P	Pn	21 41 54.6	-1.4
HUIG				*e*S	Sn	21 42 34.2	-3.1
ATVM	ATLACOMULCO	3.48	357	*e*P	Pn	21 41 55.7	-1.4
ATVM				*i* S	Sn	21 42 37.0	-2.1
VTVM	Tizayuca	3.57	13	*e*P	Pn	21 41 57.4	-1.0
VTVM				*e*S	Sn	21 42 39.2	-2.3
ZUVM	ZUMPANGO	3.58	8	*e*P	Pn	21 41 56.8	-1.6
ZUVM				*i* S	Sn	21 42 38.8	-2.7
ACIG	Acambay	3.70	356	*e*P	Pn	21 41 59.0	-1.0
ACIG				*e*S	Sn	21 42 42.3	-2.0
MOIG	Morelia	3.70	337	*e*P	Pn	21 41 58.6	-1.4
MOIG				*e*S	Sn	21 42 41.2	-3.3
MOIG	Morelia	3.70	337	Pn	Pn	21 42 03.7	+3.6
DEIG	Demacu	4.05	8	*e*S	Sn	21 42 51.0	-2.1
MMIG	Aquila	4.08	300	*e*P	Pn	21 42 04.0	-1.1
MMIG				*e*S	Sn	21 42 48.6	-4.9
CMIG	Matias Romero	4.62	79	Pn	Pn	21 42 10.1	-2.4
	0.6nm,0.3s,baz=257,slow=13,SNR=6.1						
CMIG				Lg	Lg	21 43 15.2	
	3.6nm,0.3s,baz=55,slow=18,SNR=5.7						
CMIG	Matias Romero	4.62	79	*e*P	Pn	21 42 08.8	-3.7
CMIG				*e*S	Sn	21 43 04.8	-2.0
IGIG	Irapuato, Guan	4.74	340	*e*S	Sn	21 43 07.1	-3.0
COIG	Colima	4.83	307	*e*S	Sn	21 43 09.3	-3.0
EZ5V		4.95	311	*e*P	Pn	21 42 16.1	-1.2
EZ5V				*e*S	Sn	21 43 12.1	-3.3
R15V		5.05	305	*e*P	Pn	21 42 16.9	-1.6
R15V				*e*S	Sn	21 43 14.4	-3.2
TGIG		6.26	84	*e*S	Sn	21 43 45.5	-1.9
ZAIG	Zacatecas	7.03	337	*e*S	Sn	21 44 05.2	-1.6
ZAIG	Zacatecas	7.03	337	Pn	Pn	21 42 48.4	+2.5
CCIG	Comitan	7.19	89	*i* S	Sn	21 44 08.0	-2.6
CCIG	Comitan	7.19	89	Pn	Pn	21 42 52.2	+4.2
TEIG	Tepich	11.48	68	LR	LR	21 48 21.9	
	comp=Z,161nm,18.0s,baz=246,slow=42						
TX32	Lajitas Array	13.52	345	Pn	Pn	21 44 15.5	+0.9
TX31	Lajitas Ar. Si	13.52	345	Pn	Pn	21 44 15.7	+1.0
ESPN	Las Esperanzas	15.40	103	Pn	Pn	21 44 43.0	+2.8
JTS	Las Juntas de	15.47	111	Pn	P	21 44 44.8	-0.9
JTS				IAmb	IAmb	21 44 50.4	
	comp=Z,18nm,1.4s						
WHTX	Lake Whitney,	15.78	7	Pn	Pn	21 44 46.0	+1.1
WHTX				IAmb	IAmb	21 44 49.9	
	comp=Z,17nm,0.8s						
SRIG	Santa Rosalia	16.05	315	Pn	Pn	21 44 49.5	+1.0
ABTX	Abilene, Hawle	16.28	360	Pn	Pn	21 44 53.1	+1.6
HSIG		16.42	323	Pn	Pn	21 44 52.2	-1.1
GDL2	Guadalupe Moun	16.43	346	Pn	Pn	21 44 54.7	+1.1
FSCY	Frank Sound, G	17.82	77	Pn	Pn	21 45 10.1	-0.8
BRAL	Brewton	18.75	35	P	Pn	21 45 23.9	+1.7
BNM	Barren Site	18.89	342	P	P	21 45 24.5	+0.8
TUC	Tucson	18.91	330	P	P	21 45 23.8	+0.1
LENM	Lemitar	19.00	341	P	P	21 45 21.6	-3.3
ANMO	Albuquerque	19.58	343	LR	LR	21 52 36.7	
	comp=Z,93nm,21.8s,baz=140,slow=37						
ANMO	Albuquerque	19.58	343	P	P	21 45 30.7	-0.5
214A	Organ Pipe Nat	19.68	325	P	P	21 45 33.1	+0.9
PIX	Pinacate	19.75	323	P	P	21 45 34.0	+1.1
TUL1	Leonard	19.86	9	P	P	21 45 34.4	+0.4
TUL1				IAmb	IAmb	21 45 46.2	
	comp=Z,15nm,1.1s						
OXF	Oxford	20.35	25	P	P	21 45 41.2	+1.9
T35A	Sooner Cattle	20.75	7	P	P	21 45 42.9	-0.8
T35A				IAmb	IAmb	21 45 50.3	
	comp=Z,10nm,1.0s						
W18A	Petrified Fore	20.84	336	P	P	21 45 45.5	+0.6
GLA	Glamis	21.63	323	P	P	21 45 54.5	+1.1
GLA				IAmb	IAmb	21 45 56.7	
	comp=Z,10nm,1.1s						
WUAZ	Wupatki	21.85	334		P	21 45 56.3	+0.5
WUAZ				IAmb	IAmb	21 46 13.9	
	comp=Z,14nm,1.1s						
MVCO	Mesa Verde	22.29	341		P	21 46 00.8	+0.2
MVCO				IAmb	IAmb	21 46 04.8	
	comp=Z,8.8nm,1.0s						
W13A	Hualapai Mount	22.68	328	P	P	21 46 05.1	+0.3
PV01	Paradox Valley	23.16	342	P	P	21 46 09.9	+0.2
PV15	Paradox Valley	23.32	342	P	P	21 46 12.5	+1.1
PV18	Skein Mesa, Pa	23.37	341	P	P	21 46 11.6	-0.2
PV18				IAmb	IAmb	21 46 13.6	
	comp=Z,7.9nm,1.1s						
PV12	Saucer Basin,	23.40	342	P	P	21 46 14.1	+1.9
PV12				IAmb	IAmb	21 46 14.2	
	comp=Z,18nm,1.4s						
PV17	East Wray Mesa	23.41	341	P	P	21 46 13.0	+0.7
PV19	Morning Glory	23.45	341	P	P	21 46 13.8	+1.1
PV19				IAmb	IAmb	21 46 27.6	
	comp=Z,13nm,0.7s						
PV04	Paradox Valley	23.50	341	P	P	21 46 12.9	-0.2
PV04				IAmb	IAmb	21 46 32.5	
	comp=Z,6.2nm,0.6s						
PV10	Paradox Valley	23.52	341	P	P	21 46 13.3	-0.1
PV22	Blue Mesa, Par	23.59	342	P	P	21 46 14.5	+0.4
PV22				IAmb	IAmb	21 46 16.2	
	comp=Z,8.1nm,1.2s						
SMCO	Snowmass	23.71	346		P	21 46 15.9	+0.5
SMCO				IAmb	IAmb	21 46 25.5	
	comp=Z,8.6nm,1.2s						
KNB	Kanab	23.74	333		P	21 46 17.6	+2.1
PKCU	Pink Cliffs	23.89	334	P	P	21 46 18.0	+0.9
LCMT	Little Creek M	23.92	332	P	P	21 46 17.9	+0.6
ISCO	Idaho Springs	24.02	349		P	21 46 16.3	-2.0
SZCU	Shurtz Canyon	24.34	333	P	P	21 46 22.6	+1.3
MTPU	Mount Pierson	24.34	335		P	21 46 23.3	+1.9
MWC	Mount Wilson	24.37	321	P	P	21 46 21.9	+0.3
MWC				IAmb	IAmb	21 46 26.1	
	comp=Z,9.0nm,1.1s						
GSC	Goldstone, Bar	24.39	324	P	P	21 46 22.4	+0.8
GSC				IAmb	IAmb	21 46 25.5	
	comp=Z,9.6nm,1.4s						
SHPR	Sheep Range	24.42	329	P	P	21 46 23.8	+1.8
SRU	San Rafael Swe	24.67	339	P	P	21 46 25.0	+0.8
OGNE	Ogallala	24.68	356	P	P	21 46 25.0	+0.9
Q16A	Castle Valley	24.73	338	P	P	21 46 25.3	+0.6
MSU	Marysvale	24.75	336	P	P	21 46 26.2	+1.3
MVU	Marysvale	24.75	336	P	P	21 46 26.0	+1.0
WCI	Wyandotte Cave	24.82	26	P	P	21 46 26.4	+1.1
WCI				IAmb	IAmb	21 46 43.6	
	comp=Z,12nm,1.0s						
O20A	White River Ci	24.93	344	P	P	21 46 26.8	+0.2
O20A				IAmb	IAmb	21 46 32.6	
	comp=Z,12nm,0.7s						
TMUT	Trail Mountain	25.08	338	P	P	21 46 28.5	+0.5
BGNE	Belgrade	25.08	3	P	P	21 46 27.4	-0.2
PRN	Pahroc Range	25.08	330		P	21 46 28.5	+0.7
PRN				IAmb	IAmb	21 46 32.7	
	comp=Z,8.4nm,1.2s						
TPNV	Topopah Spring	25.32	328		P	21 46 30.9	+0.9
TPNV				IAmb	IAmb	21 46 39.1	
	comp=Z,17nm,1.4s						
RDMU	Red Mountain	25.70	342	P	P	21 46 33.6	+0.1
LGNH	Logne	25.88	81	P	P	21 46 35.0	0.0
NLU	North Lily Min	25.97	338	P	P	21 46 35.5	-0.5
R11A	Troy Canyon, C	26.09	331	P	P	21 46 37.9	+0.9
K31A	O'Neill	26.27	1	P	P	21 46 37.2	-1.2
K31A				IAmb	IAmb	21 46 45.9	
	comp=Z,9.0nm,0.7s						
DUG	Dugway, Tooele	26.45	337	P	P	21 46 41.1	+0.8
TCUT	Toone Canyon	26.77	340	P	P	21 46 43.5	+0.2
BGU	Big Grassy Mou	27.17	337	P	P	21 46 48.0	+1.2
P51A	Williamsport	27.28	29	P	P	21 46 47.8	+0.3
OMMB	Old Mammoth Mi	27.28	325	P	P	21 46 49.0	+1.1
NV11	Mina Array Sit	27.43	327	P	P	21 46 49.7	+0.6
NV11				IAmb	IAmb	21 46 59.1	
	comp=Z,5.3nm,1.1s						
NVAR	Mina Array Bea	27.50	327	P	P	21 46 52.3	+2.5
	comp=Z,2.4nm,0.8s,baz=149,slow=12,SNR=9.6						
NVAR	Mina Array Bea	27.50	327	P	P	21 46 51.1	+1.2
L44A	Lake County Fo	27.71	19	P	P	21 46 51.5	+0.1
JFWS	Jewell Farm	27.74	15	P	P	21 46 53.0	+1.4
JFWS				IAmb	IAmb	21 46 55.5	
	comp=Z,10nm,1.3s						
BW06	Boulder Array	27.74	344	P	P	21 46 52.3	+0.4
BW06				IAmb	IAmb	21 46 57.0	
	comp=Z,10.0nm,1.2s						
PD31	Pinedale Array	27.74	344	P	P	21 46 52.2	+0.3
PD31				IAmb	IAmb	21 46 57.0	
	comp=Z,8.1nm,1.2s						
PDAR	Pinedale Array	27.74	344	P	P	21 46 52.5	+0.6
	comp=Z,3.1nm,1.0s,baz=141,slow=9.6,SNR=11						
PDAR				LR	LR	21 58 18.5	
	comp=Z,60nm,19.8s,baz=9.5,slow=39						
PDAR	Pinedale Array	27.74	344		P	21 46 52.1	+0.2
RYN	Ryan	27.77	327	P	P	21 46 48.7	-3.4
RYN				IAmb	IAmb	21 46 49.2	
	comp=Z,5.2nm,1.1s						
K43A	Burlington	28.06	18	P	P	21 46 53.6	-0.9
JSRW	J. Sargeant Re	28.69	38	P	P	21 46 59.7	-0.5
LOHW	Long Hollow	28.81	343		P	21 47 01.8	+0.4
LOHW				IAmb	IAmb	21 47 02.7	
	comp=Z,5.0nm,1.3s						
I42A	Draeger Farm,	29.00	16	P	P	21 47 03.0	+0.2
I42A				IAmb	IAmb	21 47 13.2	
	comp=Z,17nm,1.2s						
PAHR	Pah Rah Range	29.02	327	P	P	21 47 03.9	+0.7
PAHR				IAmb	IAmb	21 47 07.5	
	comp=Z,5.4nm,0.9s						
GDXM	Geysers	30.27	322	P	P	21 47 13.7	-0.5
GDXM				IAmb	IAmb	21 47 22.9	
	comp=Z,15nm,1.3s						
BCYI	Bear Canyon	30.29	340	P	P	21 47 15.4	+0.9
MFID	Camas Ranch	30.37	336	P	P	21 47 15.6	+0.5
MFID				IAmb	IAmb	21 47 32.8	
	comp=Z,6.3nm,1.4s						
MCMT	McKenzie Canyo	30.57	341	P	P	21 47 18.4	+1.3
ERPA	Erie	30.79	29	P	P	21 47 21.4	+2.7
BOZ	Bozeman (W)	30.92	343	P	P	21 47 21.0	+1.0
BOZ				IAmb	IAmb	21 47 28.6	
	comp=Z,3.5nm,1.1s						
DLMT	Dillon	30.98	342	P	P	21 47 21.4	+0.8
DLMT				IAmb	IAmb	21 47 23.3	
	comp=Z,8.4nm,1.2s						
KMRM	Mail Ridge	31.73	324	P	P	21 47 26.7	-0.5
HRY	Holter Researc	32.00	344	P	P	21 47 29.8	+0.3
CBYP	Canovanas	32.28	81	P	P	21 47 34.3	+2.1
MSO	Missoula	32.71	342	P	P	21 47 37.0	+1.3
MSO				IAmb	IAmb	21 47 40.2	
	comp=Z,4.8nm,1.1s						
EGMT	Eagleton	32.74	347	P	P	21 47 36.9	+1.0
CDVI	St. Croix	33.34	82	P	P	21 47 42.9	+1.5
WSPT	Westport, CT	33.63	37	P	P	21 47 45.0	+1.4
JTMT	Jette	33.63	342	P	P	21 47 44.7	+0.9
JTMT				IAmb	IAmb	21 47 45.3	
	comp=Z,4.3nm,1.2s						
ULM	Lac du Bonnet	34.03	4	P	P	21 47 44.1	-2.9
	comp=Z,1.3nm,0.6s,baz=205,slow=10,SNR=4.1						
ULM	Lac du Bonnet	34.03	4	P	P	21 47 45.1	-1.9
ULM				IAmb	IAmb	21 47 53.7	
	comp=Z,4.2nm,1.1s						
FFD	Franklin Falls	36.06	35	P	P	21 48 06.3	+1.7
TRQ	Mont Tremblant	36.45	30	P	P	21 48 08.1	+0.1
I62A	Tamworth	36.49	35	P	P	21 48 10.9	+2.6
I62A				IAmb	IAmb	21 48 12.6	
	comp=Z,13nm,1.1s						
FFC	Flin Flon	38.42	358	P	P	21 48 24.9	+0.4
LPAZ	La Paz	44.86	135	P	P	21 49 19.7	+1.3
LPAZ				IAmb	IAmb	21 49 32.4	
	comp=Z,5.3nm,1.4s						
YKA	Yellowknife Ar	47.36	351	P	P	21 49 36.1	-0.7
	comp=Z,2.2nm,0.9s,baz=156,slow=7.7,SNR=15						
GLB	Gilahina Butte	54.89	336	P	P	21 50 35.1	+1.5
GLB				IAmb	IAmb	21 50 36.5	
	comp=Z,4.6nm,1.0s						
GLI	Glacier Island	55.91	334	P	P	21 50 41.3	+0.4
INK	Inuvik	56.30	346	P	P	21 50 44.8	+1.4
INK				IAmb	IAmb	21 50 55.9	
	comp=Z,5.9nm,1.4s						
SUA	Susitna One	57.74	334	P	P	21 50 54.6	+0.6
SUA				IAmb	IAmb	21 50 56.2	
	comp=Z,9.2nm,1.2s						
RND	Reindeer	57.93	336	P	P	21 50 56.8	+1.6
ILAR	Eielson Array	57.93	338	P	P	21 50 57.9	+2.7
	comp=Z,0.5nm,0.8s,baz=134,slow=6.2,SNR=4.2						
ILAR	Eielson Array	57.93	338	P	P	21 50 56.8	+1.6
TULEG	Thule	62.36	8	P	P	21 51 27.2	+1.9
A21K	Barrow	64.39	343	P	P	21 51 38.6	-0.2

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*NEIC **26** 21:47:37.3±1.2, 10°.05N±0°.07×126°.59E±0°.03, $h35^{km}\pm2^{km}$, mb4.5/28, Error ellipse: s-maj=11.7km s-min=3.3km az=162.0*
*MAN **26** 21:47:38.6, 9°.87N×126°.36E, $h7^{km}$, mb5.1, ML4.1, MS4.1*
*IDC **26** 21:47:42.4±4.3, 9°.99N×126°.63E, $h85^{km}\pm39^{km}$, mb3.8/15, mb1 3.8/16, mb1mx3.6/47, mbtmp4.1/16, MS3.8/2, Ms1 3.8/2, ms1mx3.3/39, Error ellipse: s-maj=43.0km s-min=12.5km az=66.0*
ISC 26 21:47:33.5±1.6**, 10°.02N**±0°.04×**126°.62E**±0°.05**,** $\mathbf{h10}^{km}\pm9^{km}$**, n72, σ1ˢ.06**/78**, mb4.3**/28**, 2C-2D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLSP	General Luna,	0.54	244	*e*P	Pg	21 47 44.1	+0.1
GLSP				*e*S	Sg	21 47 52.1	+1.0
BUTP	Butuan	1.43	223	*e*P	Pn	21 47 58.6	-1.0
BUTP				*e*S	Sn	21 48 17.2	-1.4
MSLP	Maasin	1.73	274	*e*P	Pb	21 48 05.4	-0.1
MSLP				*e*S	Sb	21 48 28.4	+1.0
OCLP	Ormoc	2.23	298	*e*P	Pb	21 48 14.8	+0.9
OCLP				*e*S	Sg	21 48 44.8	-0.4
CGP	Cagayan de Oro	2.45	231⇓	*e*P	Pn	21 48 13.5	-0.2
CGP				*e*S	Sn	21 48 44.3	+0.6
BUKP	Musuan	2.62	216	*e*P	Pb	21 48 19.2	-1.5
BUKP				*e*S	Sn	21 48 48.9	+0.8
LLP	Lapu-Lapu	2.63	277⇓	*e*P	Pb	21 48 19.7	-1.0
LLP				*e*S	Sb	21 48 52.4	-0.7
MATI	Mati	3.07	187	*e*P	Pb	21 48 29.4	+1.0
DAV	Davao City (W)	3.10	199	P	Pb	21 48 30.3	+1.4
	baz=92,slow=6.6,SNR=0.9						
DAV				S	Sn	21 49 01.1	+1.3
	31nm,0.3s,baz=195,slow=20,SNR=1.2						
DAV	Davao City (W)	3.10	199		Pb	21 48 27.6	-1.3
DAV					Sn	21 49 02.0	+2.1
CNOP	Candoni, Negro	3.92	268	*e*P	Pn	21 48 35.2	+1.3
CNOP				*e*S	Sn	21 49 21.3	+1.2
DDMP	Don Marcelino,	3.99	193	*e*P	Pg	21 48 48.7	-1.4
SKMP	Bagumbayan, Su	4.04	211	*e*P	Pn	21 48 37.4	+1.9
JAP	San Jose, Anti	4.65	279⇑	*e*P	Pb	21 48 52.4	-2.9
JCNP	Jose Panganiba	5.72	318	*e*P	Pn	21 49 04.8	+6.2
LQP	Lukban	6.42	310⇑	*e*P	Pn	21 49 12.0	+3.6
TGY	Tagaytay City	6.88	307	LR	LR	21 52 15.6	
	comp=Z,993nm,19.4s,baz=234,slow=40						
TNTI	Ternate	9.22	175	Pn	Pn	21 49 47.6	+0.9
MYLDM	Lahad Datu	9.37	240	Pn	Pn	21 49 50.3	+1.5
TOLI2	Tolitoli	10.58	214	Pn	Pn	21 50 05.3	-0.1
LUWI	Luwuk	11.63	199	Pn	Pn	21 50 20.7	+0.9
TWG	Pinlang	13.79	338	Pn	Pn	21 50 48.6	-0.7
YULB	Yu-li	14.24	340	Pn	Pn	21 50 56.2	+0.9
SBUM	Sibu	16.16	243	Pn	Pn	21 51 22.2	+1.2
KAPI	Kappang	16.43	205		P	21 51 27.9	+0.8
SOEI	Soe	19.78	187	P	Pn	21 52 05.4	-0.4
SOEI				IAmb	IAmb	21 52 49.5	
	comp=Z,32nm,0.9s						
UBPT	Khong Chiam	21.28	286	P	P	21 52 20.4	0.0
UBPT				IAmb	IAmb	21 52 27.0	
	comp=Z,19nm,1.5s						
SSE	Sheshan	21.57	347	P	P	21 52 23.7	+0.4
SSE				IAmb	IAmb	21 52 59.7	
	comp=Z,96nm,1.9s						
JCJ	Chichijima	22.46	39	P	P	21 52 33.5	+0.5
MYKOM	Kota Tinggi	24.06	252	P	P	21 52 48.5	-0.8
IPM	Ipoh	25.97	260	P	P	21 53 06.7	+0.1
IPM				IAmb	IAmb	21 53 08.7	
	comp=Z,7.8nm,0.8s						
KMI	Kunming	27.20	307	P	P	21 53 18.2	+0.3
KMI				IAmb	IAmb	21 54 03.1	
	comp=Z,9.1nm,1.3s						
FITZ	Fitzroy Crossi	27.95	182	P	P	21 53 25.3	+0.9
FITZ				IAmb	IAmb	21 53 28.4	
	comp=Z,21nm,1.4s						
CM31	Chiang Mai Arr	28.07	290	P	P	21 53 25.2	-0.4
CMAR	Chiang Mai Arr	28.07	290	P	P	21 53 25.7	+0.1
	comp=Z,0.5nm,0.4s,baz=106,slow=8.2,SNR=4.3						
CMAR	Chiang Mai Arr	28.07	290	P	P	21 53 25.2	-0.3
CHTO	Chiang Mai	28.16	291	P	P	21 53 26.4	0.0
MJAR	Matsushiro Arr	28.42	20	LR	LR	22 05 32.6	
	comp=Z,162nm,18.8s,baz=205,slow=38						
RPSI	Rantau Prapat	28.45	257		P	21 53 28.7	-0.3
RPSI				IAmb	IAmb	21 53 49.5	
	comp=Z,13nm,1.6s						
XAN	Xi'an	28.90	329	P	P	21 53 33.1	+0.4
XAN				IAmb	IAmb	21 53 33.7	
	comp=Z,5.4nm,0.8s						
WRA	Warramunga Arr	30.73	166	P	P	21 53 48.5	-0.5
	comp=Z,0.7nm,0.7s,baz=345,slow=9.3,SNR=7.6						
PBA	Port Blair	33.30	276	P	P	21 54 10.4	-1.3
ASAR	Alice Springs	34.23	168	P	P	21 54 19.1	-0.6
	comp=Z,0.6nm,0.4s,baz=357,slow=7.6,SNR=11						
ASAR	Alice Springs	34.23	168	P	P	21 54 18.0	-1.7
CTA	Charters Tower	35.62	147	P	P	21 54 32.0	+0.3
	comp=Z,1.5nm,0.4s,baz=321,slow=11,SNR=5.5						
MORW	Morawa	40.18	194	P	P	21 55 10.1	0.0
ULN	Ulaanbaatar	41.17	340	P	P	21 55 19.2	+0.8
ULN				IAmb	IAmb	21 55 41.2	
	comp=Z,6.9nm,1.1s						
SONM	Songino Array	41.37	339	P	P	21 55 20.4	+0.4
	comp=Z,1.6nm,0.7s,baz=159,slow=8.9,SNR=10						
SONM	Songino Array	41.37	339	P	P	21 55 20.9	+0.9
BBOO	Buckleboo	43.53	168	P	P	21 55 37.5	0.0
BBOO				IAmb	IAmb	21 55 39.9	
	comp=Z,27nm,1.5s						
NWAO	Narrogin (SRO)	43.63	191	P	P	21 55 38.7	+0.3
	comp=Z,3.0nm,0.4s,baz=16,slow=6.6,SNR=6.1						
NWAO	Narrogin (SRO)	43.63	191	P	P	21 55 35.5	-2.9
STKA	Stephens Creek	44.06	162	P	P	21 55 40.9	-0.9
	comp=Z,1.2nm,0.3s,baz=309,slow=6.5,SNR=1.4						
MK31	Makanchi Array	52.43	323	P	P	21 56 46.4	0.0
MKAR	Makanchi Array	52.43	323	P	P	21 56 46.9	+0.5
	comp=Z,1.8nm,0.7s,baz=123,slow=8.1,SNR=22						
MKAR	Makanchi Array	52.43	323	P	P	21 56 46.4	0.0
MAKZ	Makanchi	52.63	323	P	P	21 56 48.3	+0.4
MAKZ				IAmb	IAmb	21 57 07.4	
	comp=Z,10nm,1.9s						
ZALV	Zalesovo Beam	55.01	331	P	P	21 57 04.5	-0.6
	comp=Z,0.4nm,0.4s,baz=104,slow=6.1,SNR=2.9						
ZALV	Zalesovo Beam	55.01	331	P	P	21 57 04.6	-0.5
KURK	Kurchatov	56.47	325	P	P	21 57 15.3	-0.3
KURK				IAmb	IAmb	21 57 20.4	
	comp=Z,12nm,1.6s						
KURBB	Kurchatov Arra	56.47	325	P	P	21 57 15.9	+0.2

	comp=Z,1.3nm,0.8s,baz=124,slow=6.6,SNR=2.6						
KK31	Karatay Array	58.67	315	P	P	21 57 31.1	-0.3
KK31				IAmb	IAmb	21 57 55.2	
	comp=Z,5.9nm,1.4s						
KKAR	Karatay Array	58.67	315	P	P	21 57 30.7	-0.7
KKAR	Karatay Array	58.67	315	P	P	21 57 31.8	+0.5
KKAR				IAmb	IAmb	21 57 55.2	
	comp=Z,5.9nm,1.4s						
NRIK	Noril'sk	64.34	346	P	P	21 58 07.5	-1.6
	comp=Z,2.3nm,0.6s,baz=133,slow=7.3,SNR=4.7						
NRIK	Noril'sk	64.34	346	P	P	21 58 09.6	+0.4
NRIK				IAmb	IAmb	21 58 11.7	
	comp=Z,14nm,1.4s						
ARU	Arti	69.62	327	P	P	21 58 42.5	-0.5
	comp=Z,0.5nm,0.4s,baz=119,slow=10						
ARCES	ARCESS Array B	84.55	340	P	P	22 00 06.2	-0.5
	comp=Z,5.9nm,0.9s,baz=81,slow=6.5,SNR=14						
FINES	FINESS Array B	86.27	332	P	P	22 00 15.8	+0.3
	comp=Z,0.9nm,0.4s,baz=70,slow=5.1,SNR=16						
FINES	FINESS Array B	86.27	332	P	P	22 00 14.4	-1.0
YKA	Yellowknife Ar	93.85	24	P	P	22 00 51.1	+0.1
	comp=Z,0.3nm,0.8s,baz=290,slow=3.3,SNR=3.9						
PLCA	Paso Flores	145.84	156	PKPbc	PKPdf	22 07 12.7	-0.4
	comp=Z,1.9nm,1.0s,baz=342,slow=6.4,SNR=1.7						

NDI ***26*** *21:59:00.4±3.9, 34.°99N×72.°83E, h29^{km}±32^{km}, mb5.3, ML5.2, mb5.4(NEIC)*

IDC ***26*** *21:59:00.8±0.3, 34.°66N×73.°21E, h0^{km}, mb5.2/58, mb1 5.3/65, mb1mx5.2/74, mbtmp5.2/65, ML5.0/7, MS4.4/35, Ms1 4.4/35, ms1mx4.2/57, Error ellipse: s-maj=9.1km s-min=7.1km az=19.0*

MOS ***26*** *21:59:03.4±0.9, 34.°70N×73.°25E, h29^{km}, mb5.5/41, MS4.6/11, Error ellipse: s-maj=4.8km s-min=3.1km az=96.6*

BGR ***26*** *21:59:04.0±0.0, 34.°69N×73.°35E, h33^{km}, mb5.2*

BJI ***26*** *21:59:04.0±0.0, 34.°70N×73.°30E, h30^{km}, mB5.3/56, mb5.3/75, ML5.2/4, Ms5.1/78, Ms7 4.8/74*

GCMT ***26*** *21:59:05.1±0.2, 34.°57N±0.°01×73.°28E±0.°02, h20^{km}, MW5.1/103, Moment Tensor Solution. s69,c85; s103,c165; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$4.77±.15; M$_{\theta\theta}$-3.65±.11; M$_{\phi\phi}$-1.12±.10; M$_{r\theta}$1.08±.20; M$_{\theta\phi}$2.77±.07; M$_{\phi r}$-0.86±.20; Best double couple: M$_0$5.28500×10^{16} NP1:φ$_s$301.00000°,δ37.00000°, λ87.00000°. NP2:φ$_s$125.00000°,δ53.00000°,λ92.00000°. Principal axes: T 4.9570, Plg82.0000°, Azm47.0000°; N 0.6560, Plg2.0000°, Azm303.0000°; P -5.6130, Plg8.0000°, Azm213.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***26*** *21:59:05.1±1.8, 34.°67N±0.°03×73.°28E±0.°08, h30^{km}±3^{km}, mb5.4/270 Error ellipse: s-maj=9.2km s-min=4.0km az=79.0*

NNC ***26*** *21:59:09.4±3.0, 35.°40N×72.°70E, h0^{km}, mb5.8, mpv5.7, Error ellipse: s-maj=25.5km s-min=16.4km az=1.0*

ISC 26 21:59:04.9±0.4**, 34.°71N**±0.°03×**73.°24E**±0.°02**, h30**^{km}±2^{km}**, h30**^{km}**:pP-P, n1127,** σ1.^{s}**81**/1200**, mb5.4**/351**, MS4.6**/65**, 95C-46D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIL	Nilore	1.05	180	P	Pn	21 59 22.6	-1.1
NIL						21 59 37.7	
NIL	Nilore	1.05	180		Pn	21 59 22.6	-1.1
NIL				Sn	Sn	21 59 37.7	+0.3
NIL	Nilore	1.05	180	P	Pn	21 59 22.7	-1.1
CEP	Cherat	1.41	232	⇓P	Pn	21 59 28.1	-0.6
THW	Thamme Wali	2.28	214	⇓P	Pn	21 59 42.2	+1.6
SARP	Sargodha	2.82	190	⇓P	Pn	21 59 48.8	+0.9
KBL	Kabul	3.47	268	P	Pn	21 59 59.4	+2.3
KBL	Kabul	3.47	268	Pn	Pn	21 59 59.4	+2.3
KBL	Kabul	3.47	268	P	Pn	21 59 60.0	+2.9
	SNR=1860						
KBL				S	Sb	22 00 44.8	-2.7
DHRM	DHARAMSHALA	3.54	133	eP	Pn	21 59 59.1	+1.0
DHRM				eS	Sn	22 00 43.5	+4.5
DHRM				IAML		22 00 45.8	
	comp=E,13μm,0.3s						
DHRM				IAML		22 00 46.0	
	comp=N,7μm,0.1s						
SMLA	Simla	4.86	136	eP	Pn	22 00 18.1	+2.1
SMLA				eS	Sn	22 01 15.0	+3.8
KSH	Kashi	5.28	24	Pn	Pn	22 00 23.0	+1.2
KSH				Sn	Sn	22 01 19.3	-2.4
KSH				smax	smax		
	comp=N,4μm,0.4s						
KSH				smax	smax		
	comp=E,2μm,0.5s						
KKR	Kurukshetra	5.62	146	eP	Pn	22 00 28.1	+1.6
DDI	Dehra Dun	5.97	136	eP	Pn	22 00 33.0	+1.7
DDI				eS	Sn	22 01 39.5	+0.8
NDI	New Delhi	6.89	149	eP	Pn	22 00 46.0	+2.0
NDI				ex	Sn	22 02 00.0	-1.4
AYAN	Aya Nagar	7.03	151	eP	Pn	22 00 46.5	+0.7
AYAN				eS	Sn	22 02 04.5	-0.4
KUDL	Kundal	7.11	156	eS	Sn	22 02 00.9	-5.7
SONA	Sohna	7.22	152	eP	Pn	22 00 48.8	+0.3
SONA				eS	Sn	22 02 08.6	-0.9
TAS	Tashkent	7.30	336	P	Pn	22 00 51.4	+1.8
TAS	Tashkent	7.30	336	Pn	Pn	22 00 51.4	+1.8
AML	Almayashu	7.42	3	P	Pn	22 00 55.0	+3.5
	SNR=330						
UCH	Uchtor	7.58	7	P	Pn	22 00 57.4	+3.7
	SNR=411						
IUG	Iuzhnay	7.84	342	eP	Pn	22 00 57.1	0.0
	baz=343						
IUG				eS	Sn	22 02 26.3	+1.4
	baz=343						
IUG	Iuzhnay	7.84	342	eP	Pn	22 00 57.1	0.0
IUG				eS	Sn	22 02 26.3	+1.4
ULHL	Ulahol	7.89	16	P	Pn	22 01 02.1	+4.3
	SNR=14						
EKS2	Erkin-Say	7.96	3	P	Pn	22 01 02.5	+3.9
	SNR=231						
AAK	Ala-Archa	7.98	7	Pn	Pn	22 01 01.5	+2.5
	comp=E,15nm,0.3s,baz=185,slow=8.4,SNR=150						
AAK				Sn	Sn	22 02 28.1	-0.2
	comp=E,28nm,0.3s,baz=285,slow=24,SNR=7.2						
AAK				LR	LR	22 04 26.2	
	comp=E,5μm,20.2s,baz=196,slow=40						
AAK	Ala-Archa	7.98	7	i P	Pn	22 01 02.8	+3.7
	SNR=113						
AAK	Ala-Archa	7.98	7	c iP	Pn	22 01 02.7	+3.7
AAK	Ala-Archa	7.98	7	Pn	Pn	22 01 02.1	+3.0
AAK					Sn	22 02 29.6	+1.2
AAK	Ala-Archa	7.98	7	P	Pn	22 01 02.9	+3.9
AAK				S	Sn	22 02 30.2	+1.8
DZA	Taraz	8.31	350	eP	Pn	22 01 03.6	+0.2
	baz=351						
DZA				LR	LR	22 03 57.2	
	comp=E,1μm,10.9s,baz=351						
DZA	Taraz	8.31	350	eP	Pn	22 01 03.6	+0.2
DZA				MLR	MLR		
	comp=Z,1μm,11.0s						
CHMS	Chumysh	8.36	8	P	Pn	22 01 07.7	+3.5
	SNR=100						
TKM2	Tokmak 2	8.41	12	P	Pn	22 01 08.7	+3.8
	SNR=110						
TKM2	Tokmak 2	8.41	12	⇑P	Pn	22 01 07.0	+2.1
	comp=Z,373nm,1.2s						
TKM2				⇓S	Sn	22 02 37.3	-1.6
	comp=Z,509nm,0.6s						
TKM2	Tokmak 2	8.41	12	P	Pn	22 01 08.0	+3.1
TKM2				S	Sn	22 02 39.0	+0.1
USP	Ospenovka	8.61	6	P	Pn	22 01 10.6	+3.1
	SNR=70						
KK07	Karatay Array	8.64	347	Pn	Pn	22 01 10.7	+2.8
KK06	Karatay Array	8.64	347	Pn	Pn	22 01 10.3	+2.4
KK02	Karatay Array	8.65	347	Pn	Pn	22 01 10.2	+2.2
KK31	Karatay Array	8.65	347	⇓P	Pn	22 01 09.1	+1.0
	comp=Z,199nm,0.3s,baz=161,slow=14,SNR=9641						
KK31				S	Sn	22 02 39.9	-4.7
	comp=Z,283nm,0.5s,baz=168,slow=23,SNR=9.6						
KK31	Karatay Array	8.65	347	P	Pn	22 01 10.3	+2.2
KK31	Karatay Array	8.65	347		Pn	22 01 10.3	+2.2
KKAR	Karatay Array	8.65	347	P	Pn	22 01 09.8	+1.7
KKAR				S	Sn	22 02 45.0	+0.4
KKAR	Karatay Array	8.65	347	Pn	Pn	22 01 10.2	+2.2
KKAR	Karatay Array	8.65	347	Pn	Pn	22 01 10.5	+2.4
KK03	Karatay Array	8.65	347	Pn	Pn	22 01 10.8	+2.7
KK01	Karatay Array	8.65	347	Pn	Pn	22 01 10.8	+2.7
KK08	Karatay Array	8.66	346	Pn	Pn	22 01 10.8	+2.7
KK04	Karatay Array	8.66	347	Pn	Pn	22 01 10.4	+2.3
KK05	Karatay Array	8.66	347	Pn	Pn	22 01 10.6	+2.4
KK09	Karatay Array	8.67	347	Pn	Pn	22 01 11.0	+2.7
BRLS	Borolday	8.72	343	eP	Pn	22 01 06.5	-2.6
	baz=343						
BRLS				eS	Sn	22 02 43.1	-3.3
	baz=343						
BRLS	Borolday	8.72	343	eP	Pn	22 01 06.5	-2.6
BRLS				eS	Sn	22 02 43.1	-3.3
SGDS	Sogindy	8.80	7	eP	Pn	22 01 11.0	+0.8
	baz=7.1						
SGDS	Sogindy	8.80	7	eP	Pn	22 01 10.9	+0.8
TNSS	Tian-Shan	8.81	18	eP	Pn	22 01 11.5	+0.9
	baz=18						
TNSS	Tian-Shan	8.81	18	eP	Pn	22 01 11.4	+0.9
MDOK	Medeo	8.95	18	eP	Pn	22 01 13.5	+1.1
	baz=19						
MDOK				LR	LR	22 03 56.8	
	comp=Z,6μm,9.2s,baz=19						
MDOK	Medeo	8.95	18	⇑P	Pn	22 01 15.2	+2.9
	comp=Z,141nm,0.6s						
MDOK				⇓S	Sn	22 02 49.7	-2.4
	comp=Z,478nm,1.1s						
MDOK	Medeo	8.95	18	eP	Pn	22 01 13.4	+1.1
MDOK				MLR	MLR		
	comp=Z,6μm,9.0s						
AAA	Alma-Ata	8.96	18	eP	Pn	22 01 14.9	+2.6
	baz=18						
AAA				LR	LR	22 03 59.4	
	comp=Z,4μm,9.4s,baz=18						
AAA	Alma-Ata	8.96	18	eP	Pn	22 01 14.8	+2.5
AAA				MLR	MLR		
	comp=Z,4μm,9.0s						
KNDC	Almaty	8.98	18	⇓P	Pn	22 01 16.4	+3.8
	comp=Z,445nm,0.6s						
KNDC				⇑S	Sn	22 02 53.1	+0.4
	comp=Z,882nm,1.1s						
KNDC	Almaty	8.98	18	P	Pn	22 01 15.0	+2.4
HRA	Herat	9.08	271	Pn	Pn	22 01 16.3	+2.2
SATY	Saty	9.26	24	eP	Pn	22 01 18.2	+1.6
	comp=Z,71nm,1.5s,baz=25						
SATY	Saty	9.26	24	eP	Pn	22 01 18.1	+1.6
SATY				pmax	pmax		
	comp=Z,71nm,1.5s						
KUU	Kurty	9.48	14	eP	Pn	22 01 19.4	0.0
	comp=Z,200nm,1.6s,baz=14						
KUU	Kurty	9.48	14	eP	Pn	22 01 19.4	0.0
KUU				pmax	pmax		
	comp=Z,200nm,1.6s						
UZB	Uzynbulak	9.55	26	eP	Pn	22 01 21.2	+0.6
	comp=Z,74nm,1.2s,baz=27						
UZB	Uzynbulak	9.55	26	eP	Pn	22 01 21.2	+0.6
UZB				pmax	pmax		
	comp=Z,74nm,1.2s						
CHKK	Chushkaly	9.59	16	eP	Pn	22 01 21.8	+0.9
	baz=17						
CHKK	Chushkaly	9.59	16	eP	Pn	22 01 21.7	+0.9
KPKS	Kokpek	9.71	24	eP	Pn	22 01 23.5	+0.7
	baz=24						
KPKS	Kokpek	9.71	24	eP	Pn	22 01 23.4	+0.7
SHLS	Shalkode	9.73	28	eP	Pn	22 01 26.0	+3.1
	comp=Z,140nm,1.6s,baz=30						
SHLS	Shalkode	9.73	28	eP	Pn	22 01 26.0	+3.1
SHLS				pmax	pmax		
	comp=Z,140nm,1.6s						
PDGK	Podgornoye	9.88	28	⇓P	Pn	22 01 27.6	+2.5
	comp=Z,323nm,1.1s						
PDGK				⇑S	Sn	22 03 14.7	-0.4
	comp=Z,721nm,0.9s						
PDGK	Podgornoye	9.88	28	P	Pn	22 01 27.0	+1.9
DANN	Dangsing	10.98	122	eSn	Sn	22 03 38.5	-3.8
	comp=Z,1μm,0.6s						
TDK	Taldyqorghan	11.02	20	LR	LR	22 05 36.5	
	comp=Z,3μm,8.1s,baz=20						
GKN	Gorkha	11.81	121	ePn	Pn	22 01 48.9	-2.6
GKN				eSn	Sn	22 03 55.5	-6.8
	comp=Z,922nm,0.5s						
GKN	Gorkha	11.81	121	ePn	Pn	22 01 49.9	-1.6
GKN				eSn	Sn	22 03 56.0	-6.3
	comp=Z,922nm,0.5s						
GKN				eSn	Sn	22 03 56.3	-6.0
	comp=Z,993nm,0.5s						
BHUJ	Bhuj	11.83	196	eP	Pn	22 01 48.9	-2.8
BHUJ				IAmb	IAmb	22 01 50.9	
	comp=Z,366nm,0.7s						
BHUJ				eS	Sn	22 03 52.5	-10
BHPL	Bhopal	11.99	161	ex	Pn	22 01 50.1	-3.8
BHPL				IAmb	IAmb	22 01 53.4	
	comp=Z,240nm,0.3s						
BHPL				ex	Sn	22 03 57.1	-10
DMN	Daman	12.38	122	ePn	Pn	22 01 56.3	-3.0
DMN				eSn	Sn	22 04 09.4	-7.0
	comp=Z,1μm,0.7s						
DMN	Daman	12.38	122	ePn	Pn	22 01 57.3	-2.0
KKN	Kakani	12.39	121	ePn	Pn	22 01 56.3	-3.2
KKN				eSn	Sn	22 04 09.2	-7.4
	comp=Z,1μm,0.9s						
KKN	Kakani	12.39	121	ePn	Pn	22 01 57.2	-2.3
KKN				eSn	Sn	22 04 11.1	-5.5
	comp=Z,1μm,0.9s						
ASHT	Ashkhabad	12.41	289	P	Pn	22 02 00.4	+0.9
ASHT	Ashkhabad	12.41	289	Pn	Pn	22 02 00.3	+0.9
PKIN	Phulchoki	12.60	121	ePn	Pn	22 01 59.0	-3.4
PKIN				eSn	Sn	22 04 14.6	-7.2
	comp=Z,509nm,0.5s						
PKIN	Phulchoki	12.60	121	ePn	Pn	22 02 00.2	-2.2
GYB1	ALIBECK ARRAY	12.61	289	Pn	Pn	22 02 01.4	-0.8
PKI	Pulchoki	12.61	121	ePn	Pn	22 01 59.0	-3.6
PKI				eSn	Sn	22 04 14.7	-7.5
	comp=Z,448nm,0.4s						
PKI	Pulchoki	12.61	121	ePn	Pn	22 02 00.3	-2.3
PKI				eSn	Sn	22 04 13.9	-8.3
	comp=Z,448nm,0.4s						
GYA2	ALIBECK ARRAY	12.61	289	Pn	Pn	22 02 01.4	-1.0
GYA1	ALIBECK ARRAY	12.61	289	Pn	Pn	22 02 01.8	-0.6
GEYT	Alibeck	12.62	289	Pn	Pn	22 02 01.6	-0.7
	comp=Z,4.4nm,0.3s,baz=106,slow=9.4,SNR=47						
GEYT				Sn	Sn	22 04 18.7	-3.2
	comp=Z,2.8nm,0.3s,baz=123,slow=10,SNR=2.3						
GEYT				LR	LR	22 07 48.7	
	comp=Z,1μm,19.4s,baz=80,slow=42						
GEYT	Alibeck	12.62	289	Pn	Pn	22 02 01.4	-1.0
GYA0	ALIBECK ARRAY	12.62	289	P	Pn	22 02 01.8	-0.6
GYA0	ALIBECK ARRAY	12.62	289	Pn	Pn	22 02 01.8	-0.6
GYA0B	ALIBECK ARRAY	12.62	289	⇓P	Pn	22 02 01.7	-0.6
GYA0B				⇓S	Sn	22 04 20.5	-1.3
GYA0B	ALIBECK ARRAY	12.62	289	Pn	Pn	22 02 01.8	-0.6
GYA3	ALIBECK ARRAY	12.62	289	Pn	Pn	22 02 01.7	-0.7
GYB4	ALIBECK ARRAY	12.63	289	Pn	Pn	22 02 02.0	-0.6
GUN	Gumba	12.75	119	ePn	Pn	22 02 01.3	-3.2
GUN				eSn	Sn	22 04 18.4	-7.2
	comp=Z,418nm,0.4s						
GUN	Gumba	12.75	119	ePn	Pn	22 02 02.7	-1.8
MAKZ	Makanchi	13.77	26	⇓P	Pn	22 02 18.6	+0.5
	comp=Z,102nm,0.6s						
MAKZ	Makanchi	13.77	26	P	Pn	22 02 18.8	+0.7
MAKZ	Makanchi	13.77	26	Pn	Pn	22 02 18.8	+0.7
RAMN	Ramite	13.83	120	ePn	Pn	22 02 15.5	-3.7
RAMN				eSn	Sn	22 04 43.4	-8.5
	comp=Z,474nm,0.4s						
RAMN	Ramite	13.83	120	ePn	Pn	22 02 16.7	-2.5
MK31	Makanchi Array	13.87	27	P	Pn	22 02 20.3	+0.8
	comp=Z,48nm,0.7s,baz=209,slow=12,SNR=653						
MK31	Makanchi Array	13.87	27	ceP	Pn	22 02 20.1	+0.6
MK31	Makanchi Array	13.87	27		Pn	22 02 20.0	+0.6
MKAR	Makanchi Array	13.87	27	Pn	Pn	22 02 20.1	+0.6
	comp=Z,6.2nm,0.3s,baz=203,slow=12,SNR=222						
MKAR	Makanchi Array	13.87	27	i P	Pn	22 02 20.1	+0.6
MKAR				pmax	pmax		
	comp=Z,34nm,0.6s						
MKAR	Makanchi Array	13.87	27		Pn	22 02 19.2	-0.2
TAPN	Taplejung	14.40	117	ePn	Pn	22 02 22.6	-4.4
TAPN				eSn	Sn	22 04 56.0	-10
	comp=Z,612nm,0.7s						
TAPN	Taplejung	14.40	117	ePn	Pn	22 02 23.9	-3.1
WMQ	Urumqi	14.41	47	eP	Pn	22 02 26.0	-0.9
WMQ				pP	P	22 02 36.0	+2.6
WMQ				sP		22 02 39.5	
WMQ				S	Sn	22 05 02.0	-3.7
WMQ				sS	S	22 05 17.5	-7.5
WMQ				pmax	pmax		
	comp=Z,370nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,680nm,4.9s						
WMQ				LR	LR		
	comp=Z,5μm,11.9s						
WMQ				LR	LR		
	comp=Z,4μm,14.3s						
WMQ				LR	LR		
	comp=Z,3μm,17.9s						
WMQ	Urumqi	14.41	47	P	Pn	22 02 25.6	-1.3
WMQ	Urumqi	14.41	47	Pn	Pn	22 02 25.6	-1.3
ODAN	Odare	14.45	119	ePn	Pn	22 02 24.6	-3.0
ODAN				eSn	Sn	22 04 58.7	-8.3
	comp=Z,264nm,0.4s						
ODAN	Odare	14.45	119	ePn	Pn	22 02 24.7	-2.9
GTK	Tadong	15.08	115	ex	Pn	22 02 30.5	-5.5
GTK				IAmb	IAmb	22 02 37.4	
	comp=Z,152nm,1.3s						
GTK				i x	P	22 02 42.6	+1.6
GTK				ex	x	22 05 09.1	
ZSN	Zaisan	15.43	31	LR	LR	22 08 38.0	
	comp=Z,706nm,9.0s,baz=31						
BOK	Bokaro	15.47	131	ex	x	22 05 16.3	
LSA	Lhasa	15.96	103	P	Pn	22 02 44.5	-3.2
LSA				pP	P	22 02 52.3	+1.2
LSA				PP	sP	22 03 03.0	-0.8
LSA				pmax	pmax		
	comp=Z,140nm,1.0s						
LSA				LR	LR		
	comp=Z,2μm,8.5s						
LSA				LR	LR		
	comp=Z,4μm,7.8s						
LSA				LR	LR		
	comp=Z,8μm,10.0s						
LSA	Lhasa	15.96	103	i P	Pn	22 02 43.7	-4.0
	SNR=23						
LSA	Lhasa	15.96	103	P	Pn	22 02 44.9	-2.8
POO	Poona	16.12	178	eP	Pn	22 02 46.5	-3.0
POO				IAmb	IAmb	22 02 48.9	
	comp=N,61nm,0.8s						
KURBB	Kurchatov Arra	16.37	12	Pn	Pn	22 02 50.5	-1.8
	comp=N,1.0nm,0.3s,baz=199,slow=12,SNR=159						
KURBB				Sn	S	22 06 00.7	-4.0
	baz=196,slow=20,SNR=6.3						
KURBB	Kurchatov Arra	16.37	12	⇑P	Pn	22 02 50.2	-2.2
	comp=N,147nm,1.0s						
KURK	Kurchatov	16.47	12	⇓P	Pn	22 02 51.8	-1.9
	comp=N,171nm,1.1s						
KURK	Kurchatov	16.47	12	ceP	Pn	22 02 52.0	-1.8
KURK				pmax	pmax		
	comp=Z,246nm,2.5s						
KURK	Kurchatov	16.47	12	Pn	Pn	22 02 51.9	-1.8
KURK	Kurchatov	16.47	12	P	Pn	22 02 52.0	-1.8
BANOM	Banah	17.03	244	i P	Pn	22 03 00.7	-0.2
	SNR=11						
BANOM	Banah	17.03	244	P	P	22 03 02.3	-0.3
	SNR=7.0						
SHME	Shamm	17.07	244	P	P	22 03 03.0	0.0
WSAR	Wadi Sarin	17.12	232	P	Pn	22 03 00.5	-1.6
	comp=Z,5.3nm,0.3s,baz=90,slow=8.2,SNR=23						
WSAR				S	Sn	22 06 00.0	-12
	comp=Z,1.5nm,0.3s,baz=308,slow=18,SNR=6.5						
WSAR				LR	LR	22 11 05.7	
	comp=Z,966nm,21.4s,baz=84,slow=42						
BIDO	Bidbid	17.26	234	P	P	22 03 06.0	+1.0
	SNR=23						
WBK	Wadi Bani Khal	17.36	230	P	Pn	22 03 04.7	-0.3
	SNR=46						
WBK				P	Pn	22 03 04.7	-0.3
	SNR=46						
MDH	Madha	17.39	242	i P	Pn	22 03 04.7	-0.8
	SNR=5.8						
MDH	Madha	17.39	242	P	P	22 03 07.3	+0.8
JLN	Jalan Bani Buh	17.42	228	P	Pn	22 03 05.4	-0.5
	SNR=17						
JLN				P	Pn	22 03 05.4	-0.5
	SNR=17						
MASF	Masafi	17.45	242	P	P	22 03 08.6	+1.4
	SNR=11						
MSFE	Esma-Masafi	17.46	242	i P	P	22 03 07.6	+0.3
	SNR=29						
AB31	Akbulak array	17.54	330	⇑P	Pn	22 03 05.3	-1.8
	comp=Z,43nm,0.5s						
AB31				⇑S	Sn	22 06 11.4	-10
	comp=Z,37nm,0.6s,baz=50,slow=67,SNR=14						
ABKAR	Akbulak array	17.54	330		Pn	22 03 05.4	-1.7
ABKAR	Akbulak array	17.54	330	Pn	Pn	22 03 05.3	-1.7
SMDO	Samad	17.63	233	P	Pn	22 03 08.2	-0.3
	SNR=76						
SMDO				P	Pn	22 03 08.2	-0.3
	SNR=76						
UOSS	Minazif	17.67	241	P	Pn	22 03 07.9	-1.1
UOSS	Minazif	17.67	241		Pn	22 03 08.5	-0.3
UOSS	Minazif	17.67	241	P	Pn	22 03 08.6	-0.3
UOSS				P	Pn	22 03 08.6	-0.3
HOQ	Hoqain	17.76	236	P	Pn	22 03 09.7	-0.4
	SNR=14						
HATD	Hatta, Dubai	17.80	241	P	Pn	22 03 10.5	+0.1
HYB	Hyderabad	17.86	163	i P	Pn	22 03 06.0	-5.3
	comp=Z,200nm,1.2s						
HYB				eS	S	22 06 35.0	-0.6
HYB	Hyderabad	17.86	163	ex	x	22 03 06.0	
HYB				IAmb	IAmb	22 03 09.4	
	comp=Z,104nm,0.2s						
ASHO	Ashiyiah	17.94	241	P	P	22 03 12.8	+0.2
SOHO	SOHO	17.94	238	i P	Pn	22 03 11.8	-0.4
	SNR=19						
SOHO	SOHO	17.94	238	P	P	22 03 13.0	+0.4
SOHO				P	P	22 03 13.0	+0.4
GUWA	GUWAHATI	18.01	113	ex	Pn	22 03 07.2	-5.8
NAZ	Nazwa, Dubai	18.04	242	i P	P	22 03 14.2	+0.5
	SNR=19						
NAZ	Nazwa, Dubai	18.04	242	P	P	22 03 15.8	+2.1
	SNR=8.9						
NAZ				P	P	22 03 15.8	+2.1
	SNR=8.9						
JMDO	Jabal Madar	18.08	231	P	Pn	22 03 14.0	0.0
	SNR=52						
FAQ	Al Faqa, Dubai	18.24	242	i P	P	22 03 16.8	+0.9
	SNR=9.1						
DGZ	Jazzator, Alta	18.25	31	i P	P	22 03 15.8	-0.3
DGZ				pmax	pmax		
	comp=Z,297nm,0.6s						
BSY	Bisya	18.41	234	P	Pn	22 03 18.7	+0.8
	SNR=33						
BSY				P	Pn	22 03 18.7	+0.8
	SNR=33						
BVAR	Borovoye Array	18.43	355	P	P	22 03 16.9	-0.8
	comp=Z,24nm,0.3s,baz=111,slow=9.3,SNR=233						
ARQ	Araqi	18.47	237	P	Pn	22 03 19.9	+1.2
	SNR=22						
BRVK	Borovoye	18.47	354	⇑P	P	22 03 17.6	-0.6
	comp=Z,306nm,1.1s						
BRVK	Borovoye	18.47	354	ceP	P	22 03 17.6	-0.6
BRVK				pmax	pmax		
	comp=Z,207nm,0.7s						
BRVK	Borovoye	18.47	354	P	P	22 03 17.3	-0.9
BRVK				IAmb	IAmb	22 03 20.6	
	comp=Z,212nm,0.7s						
BRVK	Borovoye	18.47	354	P	Pn	22 03 18.8	+0.4
SHL	Shillong	18.50	114	P	P	22 03 14.0	-4.9
SHL				pmax	pmax		
	comp=Z,164nm,0.9s						
SHL	Shillong	18.50	114	IAmb	IAmb	22 03 20.2	
	comp=Z,140nm,0.9s						
SHL				ex	P	22 03 12.7	-6.2
SHL	Shillong	18.50	114	P	P	22 03 14.0	-4.9
SHL	Shillong	18.50	114	P	P	22 03 14.2	-4.7
	SNR=68						
ASUD	Al Ashush, Dub	18.50	242	i P	Pn	22 03 21.3	+2.3
	SNR=7.0						
ALNE	Al Ain	18.55	240	i P	Pn	22 03 20.8	+1.2
	SNR=16						
ALNE	Al Ain	18.55	240	P	Pn	22 03 21.4	+1.8
	SNR=12						
AJN	Ajban	18.79	242	P	Pn	22 03 25.4	+2.9
	SNR=5.5						
AGT	Agartala	19.02	120	eP	P	22 03 24.1	-0.3
AGT				IAmb	IAmb	22 03 28.3	
	comp=Z,436nm,1.2s						
GOA	Goa	19.14	178	eP	Pn	22 03 27.5	+0.8
GOA				IAmb	IAmb	22 03 30.8	
	comp=Z,115nm,1.3s						
MHTO	MHTO	19.18	229	P	Pn	22 03 27.5	+0.2
	SNR=36						
AKTO	Aktyubinsk	19.25	329	P	Pn	22 03 27.4	-0.5
	comp=Z,30nm,0.3s,baz=135,slow=10,SNR=404						
AKTO				S	Sn	22 06 54.4	-8.3

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      comp=Z,2.2nm,0.3s,baz=249,slow=20,SNR=4.0
AKTO                                LR      LR        22 11 18.6
      comp=Z,804nm,18.9s,baz=144,slow=38
AKTO  Aktyubinsk       19.25 329 ⇑P      Pn        22 03 27.4  -0.5
      comp=Z,399nm,0.7s
AKTO                             ⇑S      Sn        22 06 52.1   -11
      comp=Z,155nm,1.1s
BELO  BELONIA          19.56 121 eP      P         22 03 30.3  -0.1
MOKO  MOKOCHONG        20.12 109 eP      P         22 03 35.0  -1.6
DQM   DQM              20.24 227  P      Pn        22 03 40.3  +0.5
      SNR=21
DQM                               P      Pn        22 03 40.3  +0.5
      SNR=21
LKP   Lekhapani        20.69 105 eP      P         22 03 42.3  -0.4
LKP                               IAmb   IAmb      22 03 46.1
      comp=Z,249nm,1.0s
LKP                              eS      Sn        22 07 36.9  -1.0
ZAA0  Zalesovo Array   20.89  19 ⇑P      P         22 03 44.7  +0.1
      comp=Z,89nm,1.1s
ZAA0  Zalesovo Array   20.89  19  P      P         22 03 44.7  +0.1
ZALV  Zalesovo Beam    20.89  19  P      P         22 03 44.7  +0.1
      comp=Z,255nm,0.6s,baz=212,slow=10,SNR=958
ZALV                              S      S         22 07 35.2  -0.6
      comp=Z,27nm,0.9s,baz=206,slow=18,SNR=5.7
ZALV                              ScS    ScS       22 15 14.2  +4.6
      comp=Z,2.0nm,0.6s,baz=216,slow=11,SNR=6.9
ZALV  Zalesovo Beam    20.89  19  P      P         22 03 43.8  -0.8
SLWR  Sila             21.52 246  P      P         22 03 52.9  +1.3
MAK   Makhachkala      21.62 300 eP      P         22 03 50.9  -1.6
MAK                              eS      S         22 07 49.1  -1.2
MAK                               pmax   pmax
      comp=Z,289nm,1.2s
MAK                               MLR    MLR
      comp=Z,1µm,14.0s
GTA   Gaotai           21.69  70 ⇑P      P         22 03 54.5  +1.1
GTA                               pP     pP        22 04 02.5  +0.1
GTA                               sP     sP        22 04 06.5  -0.1
GTA                               S      S         22 07 54.0  +2.0
GTA                               PcP    PcP       22 07 59.3  +5.5
GTA                               ScS    ScS       22 15 14.5  +1.3
GTA                               pmax   pmax
      comp=Z,150nm,1.2s
GTA                               pmax   pmax
      comp=Z,700nm,4.7s
GTA                               LR     LR
      comp=Z,1µm,15.3s
GTA                               LR     LR
      comp=Z,1µm,16.4s
GTA                               LR     LR
      comp=Z,2µm,15.6s
UMR   Umm Al-Rimmam    22.19 264 eP                22 03 59.3
MIB   Mutribah         22.42 265 eP                22 04 01.4
MDRS  Chennai          22.46 162 eP      P         22 04 03.5  +1.9
MDRS                              IAmb   IAmb      22 04 10.9
      comp=Z,159nm,1.3s
MDRS                             ex      x         22 08 04.4
RDF   Al-Radifah       22.55 262 eP                22 04 02.8
DVE   Vedeno           22.60 299c iP     P         22 04 05.0  +1.9
RST   Umm Al-Ruwaisa   22.80 264 eP                22 04 05.4
SHAO  Shalim           22.86 228 i P     P         22 04 07.3  +1.4
      SNR=21
SHAO  Shalim           22.86 228  P      P         22 04 07.5  +1.5
      SNR=28
GROC  Groznyy          22.89 300 eP      P         22 04 06.4  +0.3
GROC                             e                 22 04 30.5
GROC                             eS      S         22 08 14.9  +1.1
GROC                              pmax   pmax
      comp=Z,348nm,1.2s
GNI   Garni            23.22 292  P      P         22 04 10.8  +1.2
      comp=Z,88nm,0.9s,baz=15,slow=2.3,SNR=80
GNI                               LR     LR        22 15 08.6
      comp=Z,533nm,18.7s,baz=87,slow=42
GNI   Garni            23.22 292c iP     P         22 04 11.7  +2.0
GNI                               pmax   pmax
      comp=Z,188nm,1.1s
GNI   Garni            23.22 292  P      P         22 04 12.1  +2.5
GNI   Garni            23.22 292  P      P         22 04 12.6  +3.0
DOK   Doka             23.35 232  P      P         22 04 12.0  +1.1
      SNR=59
DOK                               P      P         22 04 12.0  +1.1
      SNR=59
DMTO  DMTO             23.50 229  P      P         22 04 14.0  +1.6
      SNR=49
DMTO                              P      P         22 04 14.0  +1.6
      SNR=49
SVE   Sverdlovsk       23.73 343deP      P         22 04 15.1  +0.9
SVE                              eS      S         22 08 29.1  +1.7
SVE                               pmax   pmax
      comp=Z,302nm,1.0s
SVE                               MLR    MLR
      comp=Z,3µm,12.0s
ARU   Arti             23.93 340  P      P         22 04 17.2  +1.0
      comp=Z,73nm,0.7s,baz=153,slow=5.8,SNR=314
ARU                               LR     LR        22 14 51.7
      comp=Z,1µm,19.9s,baz=141,slow=40
ARU   Arti             23.93 340c iP     P         22 04 17.3  +1.1
ARU                               PPP    PPP       22 04 51.9
ARU                               S      S         22 08 33.3  +2.7
ARU                               SS     SnSn      22 09 12.4  +0.8
ARU                               pmax   pmax
      comp=Z,181nm,0.7s
ARU                               MLR    MLR
      comp=Z,3µm,13.0s
ARU   Arti             23.93 340  P      P         22 04 17.0  +0.8
WHFO  Wadi Hawf        24.09 231  P      P         22 04 18.7  +0.6
      SNR=38
WHFO                              P      P         22 04 18.7  +0.6
      SNR=38
RBK   Rabkut           24.13 230  P      P         22 04 19.6  +1.2
      SNR=36
RBK                               P      P         22 04 19.6  +1.2
      SNR=36
ZEI   Tsey             24.18 298 eP      P         22 04 20.0  +1.2
ZEI                               pmax   pmax
      comp=Z,56nm,0.8s
GEVA  Gevas            24.47 287  P      P         22 04 23.0  +1.5
ABTO  Aybut            24.82 231  P      P         22 04 26.0  +1.4
      SNR=38
ABTO                              P      P         22 04 26.0  +1.4
      SNR=38
LZH   Lanzhou          24.94  78 eP      P         22 04 27.5  +1.7
LZH                               pP     sP        22 04 38.5  -0.7
LZH                               S      S         22 08 52.0  +4.5
LZH                               sS     sS        22 09 04.0  +0.2
LZH                               ScP    ScP       22 11 40.8  +3.2
LZH                               pmax   pmax
      comp=Z,180nm,1.0s
LZH                               pmax   pmax
      comp=Z,1µm,5.4s
LZH                               LR     LR
      comp=Z,1µm,14.1s
LZH                               LR     LR
      comp=Z,1µm,14.3s
LZH                               LR     LR
      comp=Z,1µm,15.6s
KBZ   Khabaz           25.06 300  P      P         22 04 26.7  +0.1
      comp=Z,20nm,1.0s,baz=123,slow=6.7,SNR=40
KBZ                               LR     LR        22 16 28.2
      comp=Z,503nm,21.1s,baz=93,slow=42
KBZ   Khabaz           25.06 300ceP      P         22 04 26.5  -0.1
KBZ                               pmax   pmax
      comp=Z,24nm,0.9s
NEY   Neytrino         25.10 299 i P     P         22 04 28.6  +1.4
GOF   Gofitskoye       25.24 303⇑iP      P         22 04 30.3  +2.1
GOF                               pmax   pmax
      comp=Z,135nm,0.9s
KVAR  Kislovodsk Arr   25.25 301  P      P         22 04 28.7  +0.2
      comp=Z,4.0nm,0.7s,baz=107,slow=19,SNR=4.5
KVAR                              LR     LR        22 16 40.6
      comp=Z,620nm,18.9s,baz=224,slow=42
KIV   Kislovodsk       25.26 301 i P     P         22 04 29.0  +0.5
      SNR=28
KIV   Kislovodsk       25.26 301c iP     P         22 04 28.9  +0.4
KIV                              i                 22 05 01.6
KIV                              i S     S         22 08 42.8   -10
KIV                               pmax   pmax
      comp=Z,39nm,1.1s
KIV                               MLR    MLR
      comp=Z,694nm,17.0s
KIV   Kislovodsk       25.26 301  P      P         22 04 28.9  +0.4
BELG  Belogornoye      25.43 322  P      P         22 04 30.3  +0.6
      comp=Z,288nm,0.9s,baz=9.5,slow=0.6,SNR=40
BELG                              LR     LR        22 15 44.4
      comp=Z,434nm,21.4s,baz=146,slow=39
BELG  Belogornoye      25.43 322 i P     P         22 04 29.8   0.0
BELG                              pmax   pmax
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      comp=Z,54nm,0.9s
CD2   Chengdu          25.88  90  P      P         22 04 33.3  -0.9
CD2                               sP     sP        22 04 47.0  -0.5
CD2                               SS               22 10 04.8
CD2                               pmax   pmax
      comp=Z,200nm,1.1s
CD2                               pmax   pmax
      comp=Z,530nm,7.3s
CD2                               LR     LR
      comp=Z,2µm,17.3s
CD2                               LR     LR
      comp=Z,2µm,12.2s
CD2                               LR     LR
      comp=Z,2µm,9.4s
MOY   Mondy            26.17  41 eP      P         22 04 38.6  +1.9
MOY                               pmax   pmax
      comp=Z,157nm,1.8s
MNCI  Minicoy          26.30 180  P      P         22 04 38.5  +0.6
MNCI                              IAmb   IAmb      22 04 47.4
      comp=Z,180nm,1.3s
MARD  Mardin           26.32 285  P      P         22 04 39.3  +1.1
MARD                              IAmb   IAmb      22 04 48.2
      comp=Z,151nm,1.0s
KOPT  Kop Dagi         26.47 291  P      P         22 04 41.8  +2.1
KOPT                              IAmb   IAmb      22 04 50.8
      comp=Z,94nm,1.3s
RAYN  Ar Rayn          26.59 253 i P     P         22 04 40.6   0.0
      SNR=29
RAYN  Ar Rayn          26.59 253  P      P         22 04 40.7   0.0
RAYN                              pmax   pmax
      comp=Z,72nm,1.1s
RAYN  Ar Rayn          26.59 253  P      P         22 04 40.7   0.0
KMI   Kunming          27.21 103 ⇑P      P         22 04 46.0  -0.5
KMI                               pP     pP        22 04 53.8  -2.3
KMI                               sP     sP        22 04 58.5  -1.7
KMI                               S      S         22 09 28.8  +5.0
KMI                               sS     sS        22 09 42.3  +2.7
KMI                               pmax   pmax
      comp=Z,47nm,1.0s
KMI                               pmax   pmax
      comp=Z,440nm,8.6s
KMI                               LR     LR
      comp=Z,640nm,9.1s
KMI                               LR     LR
      comp=Z,1µm,14.8s
KMI                               LR     LR
      comp=Z,1µm,12.8s
SOC   Sochi            27.32 299 eP      P         22 04 46.8  -0.2
SOC                              e                 22 05 32.2
SOC                              eS      S         22 09 26.8  +2.1
SOC                              eSS     SnSn      22 10 34.9  +0.4
SOC                              eSSS    SSS       22 10 52.2
SOC                               MLR    MLR
      comp=Z,917nm,20.0s
MHMT  Maesarieng       27.45 121  P      P         22 04 48.0  -0.4
      comp=Z,2µmcomp=Z,251nm,0.7s
TLY   Talaya           27.63  43  P      P         22 04 51.3  +1.5
      comp=Z,5.6nm,0.7s,baz=234,slow=9.6,SNR=8.8
TLY                               LR     LR        22 17 17.0
      comp=Z,2µm,20.4s,baz=222,slow=40
TLY   Talaya           27.63  43 eP      P         22 04 52.0  +2.2
TLY                              eS      S         22 09 29.1  -0.5
TLY                              eSS     SnSn      22 10 41.0  -1.0
TLY                               pmax   pmax
      comp=Z,127nm,1.8s
TLY                               MLR    MLR
      comp=Z,5µm,13.0s
TLY   Talaya           27.63  43  P      P         22 04 51.8  +2.0
CM33  Chiang Mai Arr   27.76 118  P      P         22 04 51.0  -0.2
CHTO  Chiang Mai       27.77 118  P      P         22 04 51.3  +0.1
CHTO                              pmax   pmax
      comp=Z,194nm,1.1s
CHTO  Chiang Mai       27.77 118  P      P         22 04 51.3  +0.1
CHTO  Chiang Mai       27.77 118  P      P         22 04 52.1  +0.8
CMMT  Chiang Mai       27.77 118  P      P         22 04 50.4  -0.8
      comp=Z,1µmcomp=Z,117nm,1.1s
CM32  Chiang Mai Arr   27.80 119  P      P         22 04 51.0  -0.5
DGPR  DIGLIPUR         27.88 135 eP      P         22 04 53.0  +0.8
DGPR                              IAmb   IAmb      22 04 54.5
      comp=Z,36nm,0.6s
CM34  Chiang Mai Arr   27.89 118  P      P         22 04 52.0  -0.3
SONM  Songino Array    27.93  52  P      P         22 04 54.3  +1.7
      comp=Z,33nm,1.1s,baz=249,slow=9.5,SNR=106
SONM                              ScP    ScP       22 11 48.9  +2.8
      comp=Z,4.0nm,1.1s,baz=254,slow=10,SNR=4.9
SONM                              P3KPbc           22 37 19.7
      comp=Z,0.7nm,0.9s,baz=66,slow=3.6,SNR=3.9
SONM  Songino Array    27.93  52  P      P         22 04 53.7  +1.1
SONM                              pmax   pmax
      comp=Z,35nm,1.2s
SONM  Songino Array    27.93  52  P      P         22 04 53.7  +1.1
CM15  Chiang Mai Arr   27.98 119  P      P         22 04 53.8  +0.6
      comp=Z,1µmcomp=Z,106nm,1.1s
CM13  Chiang Mai Arr   27.99 119  P      P         22 04 53.8  +0.5
      comp=Z,1µmcomp=Z,120nm,1.1s
CM31  Chiang Mai Arr   27.99 119  P      P         22 04 54.5  +1.2
      comp=Z,32µmcomp=Z,3µm,1.2s
CMAR  Chiang Mai Arr   27.99 119  P      P         22 04 53.9  +0.6
      comp=Z,129nm,1.1s,baz=301,slow=8.7,SNR=147
CMAR                              ScP    ScP       22 11 49.2  +2.6
      comp=Z,3.5nm,0.9s,baz=294,slow=4.3,SNR=6.7
CMAR                              LR     LR        22 18 17.2
      comp=Z,634nm,19.6s,baz=313,slow=41
CMAR  Chiang Mai Arr   27.99 119  P      P         22 04 53.3  +0.1
CMAR  Chiang Mai Arr   27.99 119  P      P         22 04 53.3  +0.1
CM35  Chiang Mai Arr   28.00 118  P      P         22 04 53.0  -0.3
CM02  Chiang Mai Arr   28.01 119  P      P         22 04 54.0  +0.6
      comp=Z,68nmcomp=Z,1µmcomp=Z,140nm,1.1s
CM01  Chiang Mai Arr   28.03 119  P      P         22 04 54.0  +0.4
      comp=Z,1µmcomp=Z,142nm,1.1s
CM05  Chiang Mai Arr   28.03 119  P      P         22 04 54.0  +0.5
      comp=Z,788nmcomp=Z,63nm,1.0s
CM09  Chiang Mai Arr   28.04 119  P      P         22 04 54.5  +0.9
      comp=Z,1µmcomp=Z,121nm,1.1s
CM04  Chiang Mai Arr   28.06 119  P      P         22 04 54.0  +0.2
      comp=Z,846nmcomp=Z,95nm,1.1s
CM36  Chiang Mai Arr   28.06 118  P      P         22 04 53.0  -0.9
VRH   Novokhopyorsk    28.07 316 eP      P         22 04 52.1  -1.5
VRH                               pmax   pmax
      comp=Z,20nm,1.0s
PALK  Pallekele        28.15 164  P      P         22 04 55.7  +1.0
      comp=Z,13nm,0.7s,baz=82,slow=8.1,SNR=13
PALK                              LR     LR        22 16 46.1
      comp=Z,1µm,18.1s,baz=98,slow=38
PALK  Pallekele        28.15 164  P      P         22 04 54.5  -0.2
PALK                              pmax   pmax
      comp=Z,35nm,1.1s
PALK  Pallekele        28.15 164  P      P         22 04 54.5  -0.2
IRK   Irkutsk          28.23  42 eP      P         22 04 56.6  +1.5
IRK                               pmax   pmax
      comp=Z,86nm,2.4s
ULN   Ulaanbaatar      28.36  52ceP      P         22 04 57.1  +0.6
ULN                               pmax   pmax
      comp=Z,17nm,1.1s
ULN   Ulaanbaatar      28.36  52  P      P         22 04 57.9  +1.4
SOCY  Socotra          28.43 223  P      P         22 04 56.5  -0.8
LAMP  Lampang          28.45 118  P      P         22 04 58.0  +0.6
      comp=Z,520nmcomp=Z,48nm,0.8s
KIRV  Kirov            28.65 334  P      P         22 04 59.8  +1.1
      comp=Z,229nm,0.7s,baz=129,slow=6.0,SNR=134
KIRV                              LR     LR        22 17 34.0
      comp=Z,582nm,19.2s,baz=138,slow=39
PBA   Port Blair       29.00 138  P      P         22 05 02.6  +0.4
PBA                               IAmb   IAmb      22 05 03.8
      comp=Z,148nm,1.4s
ANN   Anapa            29.11 301 eP      P         22 05 03.7  +0.8
ANN                              eS      S         22 09 58.2  +5.4
ANN                               pmax   pmax
      comp=Z,52nm,1.6s
ANN                               MLR    MLR
      comp=Z,2µm,16.0s
SUKH  Sukhothai        29.12 119  P      P         22 05 04.2  +0.9
      comp=Z,66nm,1.1s
GAZ   Gaziantep        29.17 285  P      P         22 05 05.8  +2.1
XAN   Xi'an            29.36  81 ⇑P      P         22 05 05.5  +0.1
XAN                               pP     sP        22 05 17.8  -1.1
XAN                               sP     pP        22 05 22.5  +7.6
XAN                               PP     PnPn      22 06 02.0  +2.5
XAN                               PcP    PcP       22 08 11.8  +0.6
XAN                               SS     SS        22 11 25.0   -37
XAN                               ScP    ScP       22 11 53.3  +2.5
XAN                               pmax   pmax
      comp=Z,61nm,1.4s
XAN                               pmax   pmax
      comp=Z,360nm,5.0s
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XAN                               LR     LR
      comp=Z,720nm,10.8s
XAN                               LR     LR
      comp=Z,2µm,14.1s
XAN                               LR     LR
      comp=Z,2µm,15.2s
XAN   Xi'an            29.36  81  IAmb   IAmb      22 05 07.2
      comp=Z,56nm,1.1s
VORD  Divnogorie       29.40 314 eP      P         22 05 04.6  -0.8
VORD                              pmax   pmax
      comp=Z,20nm,1.4s
UMPA  Umpang Tak       29.43 122  P      P         22 05 08.6  +2.5
      comp=Z,437nmcomp=Z,48nm,0.8s
TOKA  Tokat            29.55 292  P      P         22 05 08.1  +1.1
BTO   Baotou           29.56  68 eP      P         22 05 06.8  -0.3
BTO                               S      S         22 10 00.5  +0.3
VSR   Storozhevoye     29.56 314 eP      P         22 05 04.7  -2.2
VSR                               pmax   pmax
      comp=Z,30nm,1.1s
UTTA  Uttaradit        29.62 118  P      P         22 05 08.4  +0.7
      comp=Z,395nmcomp=Z,36nm,0.6s
GYA   Guiyang          29.82  97 ⇑P      P         22 05 09.3  -0.3
GYA                               pP     pP        22 05 16.0  -3.2
GYA                               sP     sP        22 05 22.5  -0.7
GYA                               PcP    PcP       22 08 12.8  +0.3
GYA                               S      S         22 10 08.0  +3.4
GYA                               pmax   pmax
      comp=Z,27nm,1.0s
GYA                               pmax   pmax
      comp=Z,170nm,6.1s
GYA                               LR     LR
      comp=Z,950nm,12.9s
GYA                               LR     LR
      comp=Z,640nm,16.0s
GYA                               LR     LR
      comp=Z,990nm,18.2s
PHIT  Phitsanulok      29.88 119  P      P         22 05 11.0  +1.0
      comp=Z,150nm,1.0s
LPSR  Galich'ya Gora   30.21 317 eP      P         22 05 12.7  +0.1
LPSR                              pmax   pmax
      comp=Z,40nm,0.9s
UTHA  Uthaitani        30.28 122  P      P         22 05 15.2  +1.6
      comp=Z,291nmcomp=Z,35nm,0.9s
HHC   Hu-ho-hao-te     30.73  67 eP      P         22 05 19.3  +1.8
HHC                               sP     sP        22 05 33.5  +2.2
HHC                               S      S         22 10 25.0  +6.4
HHC                               pmax   pmax
      comp=Z,24nm,1.0s
HHC                               pmax   pmax
      comp=Z,200nm,4.6s
HHC                               LR     LR
      comp=Z,1µm,12.7s
HHC                               LR     LR
      comp=Z,1µm,11.2s
HHC                               LR     LR
      comp=Z,2µm,11.9s
ENH   Enshi            30.78  88  IAmb   IAmb      22 05 26.3
      comp=Z,107nm,1.0s
NONG  Nongkai          31.34 114  P      P         22 05 23.0  +0.1
      comp=Z,78nm,1.3s
MMAI  Mount Meron Ar   31.35 278  P      P         22 05 23.1  +0.2
      comp=Z,7.5nm,0.8s,baz=82,slow=7.0,SNR=5.4
MMAI                              PcP    PcP       22 08 18.0  +1.6
      comp=Z,14nm,0.8s,baz=81,slow=5.4,SNR=6.0
MMAI                              LR     LR        22 19 48.9
      comp=Z,501nm,19.2s,baz=45,slow=40
TIY   Taiyuan          31.61  73 eP      P         22 05 23.0  -2.2
TIY                               pP     pP        22 05 32.3  -2.4
TIY                               sP     sP        22 05 43.0  +4.3
TIY                               S      S         22 10 32.0  -0.4
TIY                               sS     sS        22 10 48.0  -0.4
TIY                               pmax   pmax
      comp=Z,150nm,6.1s
TIY                               LR     LR
      comp=Z,710nm,7.6s
TIY                               LR     LR
      comp=Z,830nm,12.5s
TIY                               LR     LR
      comp=Z,860nm,13.3s
BR131 Keskin Array S   31.75 291  IAmb   IAmb      22 05 33.7
      comp=Z,46nm,1.1s
BRTR  Keskin Array B   31.75 291  P      P         22 05 27.0  +0.5
      comp=Z,7.5nm,0.9s,baz=94,slow=7.6,SNR=34
BRTR                              PcP    PcP       22 08 19.0  +1.5
      comp=Z,5.7nm,0.9s,baz=148,slow=3.2,SNR=2.8
BRTR                              LR     LR        22 19 25.7
      comp=Z,252nm,20.0s,baz=90,slow=39
BRTR  Keskin Array B   31.75 291 i P     P         22 05 27.7  +1.2
BRTR                              pmax   pmax
      comp=Z,9.0nm,0.8s
BRTR  Keskin Array B   31.75 291  P      P         22 05 27.3  +0.8
CHAI  Chaiyaphum       31.86 119  P      P         22 05 29.2  +1.8
      comp=Z,1µmcomp=Z,144nm,1.0s
MOS   Moscow           32.20 322 eP      P         22 05 29.5  -0.5
MOS                              e                 22 06 38.0
MOS                              eS      S         22 10 42.1  +1.2
MOS                               pmax   pmax
      comp=Z,112nm,1.6s
MOS                               MLR    MLR
      comp=Z,600nm,16.0s
PHET  Kaeng Krachan    32.28 126  P      P         22 05 32.0  +0.8
      comp=Z,541nmcomp=Z,42nm,1.0s
OBN   Obninsk          32.48 320  P      P         22 05 33.3  +0.7
      comp=Z,7.4nm,0.5s,baz=332,slow=1.9,SNR=14
OBN   Obninsk          32.48 320 ⇑P      P         22 05 32.5  -0.1
OBN   Obninsk          32.48 320c iP     P         22 05 32.5  -0.1
OBN                              i                 22 06 46.7
OBN                               pmax   pmax
      comp=Z,97nm,1.3s
OBN                               MLR    MLR
      comp=Z,628nm,18.0s
OBN   Obninsk          32.48 320  P      P         22 05 33.1  +0.6
OBN                               IAmb   IAmb      22 05 40.2
      comp=Z,56nm,0.9s
EIL   Elat             32.66 272  P      P         22 05 34.2  -0.2
      comp=Z,15nm,1.0s,baz=108,slow=3.6,SNR=13
LEF   Lefka            32.93 283 ⇑P      P         22 05 40.1  +3.3
SRAK  Srakaew          33.16 121  P      P         22 05 44.6  +5.7
      comp=Z,4µmcomp=Z,335nm,1.0s
CIT   Chita            33.51  46 eP      P         22 05 43.0  +1.4
CIT                              e                 22 06 55.0
CIT                               pmax   pmax
      comp=Z,91nm,2.0s
MDUB  Mudurnu          33.57 292  P      P         22 05 42.8  +0.4
KLMR  Klimovskoe       33.94 331 eP      P         22 05 43.4  -1.7
KLMR                              pmax   pmax
      comp=Z,253nm,1.3s
KLMR  Klimovskoe       33.94 331 eP      P         22 05 43.5  -1.7
KLMR                              AMP              22 05 50.9
      comp=Z,253nm,1.3s
KLMR                              LQ     LQ        22 16 38.6
KLMR                              LQ     LQ        22 16 38.6
KLMR                              LR     LR        22 19 08.2
BJT   Baijiatuau       34.28  68  P      P         22 05 50.1  +1.7
BJT                               pmax   pmax
      comp=Z,25nm,0.9s
BJT   Baijiatuau       34.28  68  P      P         22 05 50.1  +1.7
BJI   Beijing          34.28  68  P      P         22 05 50.5  +2.1
WHN   Wuhan            34.70  85 ⇑P      P         22 05 53.3  +1.2
WHN                               pP     pP        22 05 58.8  -3.0
WHN                               pmax   pmax
      comp=Z,190nm,0.9s
WHN                               LR     LR
      comp=Z,2µm,11.4s
WHN                               LR     LR
      comp=Z,1µm,9.5s
WHN                               LR     LR
      comp=Z,2µm,11.2s
SURT  Suratani         34.71 132  P      P         22 05 54.5  +2.1
UBPT  Khong Chiam      34.81 116  P      P         22 05 52.5  -0.7
      comp=Z,523nmcomp=Z,50nm,0.9s
UBPT  Khong Chiam      34.81 116  IAmb   IAmb      22 05 53.9
      comp=Z,56nm,0.7s
JURR  Jurilovca        35.18 300 ⇓P      P         22 05 56.8  +0.7
TLCR                   35.23 301 ⇑P      P         22 05 57.4  +0.8
PKDT  Phuket           35.27 133  P      P         22 05 58.0  +0.8
MILM  Milestii Mici    35.32 304 ⇑P      P         22 05 57.9  +0.6
MANR  Mangalia         35.38 299 ⇑P      P         22 05 59.5  +1.6
AKASG Malin Array Be   35.49 310  P      P         22 05 58.0  -0.8
      comp=Z,16nm,0.7s,baz=85,slow=7.0,SNR=44
AKASG                             PP     PP        22 07 17.8  -1.7
      comp=Z,16nm,0.9s,baz=96,slow=13,SNR=5.3
AKASG                             LR     LR        22 23 07.0
      comp=Z,575nm,20.0s,baz=120,slow=41
AKASG Malin Array Be   35.49 310 i P     P         22 05 58.5  -0.2
AKASG                             pmax   pmax
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	comp=Z,16nm,0.6s						
AKASG	Malin Array Be	35.49	310	P	P	22 05 58.4	-0.4
AKBB	Malin Array Si	35.49	310	IAmb	IAmb	22 06 03.9	
	comp=Z,40nm,1.1s						
MFTR	Murfatlar	35.50	299	⇑P	P	22 06 00.7	+1.8
TPGR	Topolog	35.51	300	⇑P	P	22 05 59.5	+0.5
TIA	Tai'an	35.55	75	P	P	22 06 01.0	+1.6
TIA				pmax	pmax		
	comp=Z,17nm,1.0s						
NRIK	Noril'sk	35.59	9	P	P	22 06 00.8	+1.5
	comp=Z,74nm,1.0s,baz=198,slow=6.6,SNR=80						
NRIK				LR	LR	22 22 14.7	
	comp=Z,1µm,18.8s,baz=200,slow=39						
NRIK	Noril'sk	35.59	9	P	P	22 06 00.8	+1.5
NRIK				pmax	pmax		
	comp=Z,125nm,1.1s						
NRIK	Noril'sk	35.59	9	P	P	22 06 00.8	+1.5
BOD	Bodaibo	35.64	37	eP	P	22 06 01.1	+1.2
BOD				pmax	pmax		
	comp=Z,58nm,0.9s						
CFR	Carcaliu	35.71	301	⇑P	P	22 06 01.3	+0.6
SORM	Soroca	35.73	306	⇑P	P	22 06 01.0	+0.2
MANT	Manisa	35.81	289	P	P	22 06 02.2	+0.3
HARR	Harsova	35.85	300	⇑P	P	22 06 02.4	+0.5
VARL	Varlezi	35.93	302	⇑P	P	22 06 04.3	+1.7
ICOR	Ion Corvin	35.95	299	⇑P	P	22 06 04.0	+1.3
QIZ	Qiongzhong	35.96	106	P	P	22 06 02.8	-0.3
QIZ				S	S	22 11 40.0	+0.1
QIZ				sS	sS	22 11 56.5	+0.3
QIZ				pmax	pmax		
	comp=Z,26nm,2.0s						
QIZ				LR	LR		
	comp=Z,340nm,10.8s						
QIZ				LR	LR		
	comp=Z,410nm,11.3s						
QIZ				LR	LR		
	comp=Z,570nm,13.2s						
QIZ	Qiongzhong	35.96	106	P	P	22 06 02.6	-0.5
ATD	Arta Tunnel	36.00	238	P	P	22 06 04.9	+1.4
	comp=Z,18nm,1.1s,baz=303,slow=2.7,SNR=2.9						
ATD	Arta Tunnel	36.00	238	P	P	22 06 03.9	+0.4
ATD				IAmb	IAmb	22 06 10.8	
	comp=Z,63nm,1.1s						
VASR	Vaslui	36.00	303	⇑P	P	22 06 04.3	+1.1
TRTT	Trang	36.14	132	P	P	22 06 04.4	-0.2
GHRR		36.24	302	⇑P	P	22 06 06.6	+1.3
AMRR	Amara	36.28	300	⇑P	P	22 06 07.7	+2.1
PETR	Petresti	36.36	302	⇑P	P	22 06 08.1	+1.9
TMCR	Tamitsa	36.45	335	eP	P	22 06 06.1	-0.6
TMCR				pmax	pmax		
	comp=Z,184nm,0.8s						
ODBI	Odobesti	36.48	302	⇑P	P	22 06 09.4	+2.2
VRI	Vrincioaia	36.72	302	⇓P	P	22 06 10.5	+1.2
BISRR	Bisoca	36.72	301	⇓P	P	22 06 11.6	+2.2
PLOR	Plostina	36.77	302	⇑P	P	22 06 11.3	+1.5
TESR	Tescani	36.78	303	⇑P	P	22 06 10.3	+0.4
ISR	Istrita	36.84	301	⇑P	P	22 06 12.4	+1.9
RAZG	Razgrad	36.90	298	⇑P	P	22 06 12.5	+1.7
NEHR	Nehoiu	37.01	301	⇑P	P	22 06 14.1	+2.2
MNK	Minsk	37.06	316	eP	P	22 06 11.0	-1.0
MNK				e		22 07 36.0	
MNK				eS	S	22 11 54.0	-1.8
MNK	Minsk	37.06	316	i P	P	22 06 10.7	-1.4
	comp=E,4.0nm,0.9s						
MNK				i P	P	22 06 10.7	-1.4
	comp=N,9.0nm,0.8s						
MNK				i P	P	22 06 10.7	-1.4
	comp=Z,35nm,0.9s						
MNK				i PP	PP	22 07 35.7	-0.9
MNK				i PPP	PPP	22 07 52.7	
MNK				i PcP	PcP	22 08 30.4	-1.8
MNK				i S	S	22 11 52.5	-3.4
MNK				i SS	SS	22 14 32.1	-6.4
MNK				i SSS	SSS	22 14 49.6	
MNK				i ScS	ScS	22 16 21.6	-2.6
MNK				i LQ	LQ	22 18 42.5	
MNK				i LRM	MLR	22 21 03.5	
	comp=N,209nm,16.8s						
MNK				i LR	LR	22 21 06.1	
MNK				i LRM	MLR	22 24 24.4	
	comp=E,34nm,16.8s						
MNK				i LRM	MLR	22 24 29.6	
	comp=Z,321nm,16.8s						
PRAR	RASCA	37.10	304	⇑P	P	22 06 13.5	+0.9
BIZ	Bicaz	37.17	304	⇑P	P	22 06 13.7	+0.5
SECR		37.18	301	⇑P	P	22 06 13.9	+0.6
MLR	Muntele Rosu	37.26	301	P	P	22 06 15.1	+1.1
	comp=Z,93nm,0.9s						
MLR	Muntele Rosu	37.26	301	⇓P	P	22 06 16.3	+2.2
MLR	Muntele Rosu	37.26	301	P	P	22 06 15.2	+1.1
MLR				pmax	pmax		
	comp=Z,165nm,1.0s						
MLR	Muntele Rosu	37.26	301	IAmb	IAmb	22 06 20.9	
	comp=Z,165nm,1.0s						
SGRR	Singureni	37.26	299	⇑P	P	22 06 15.7	+1.8
OZUR		37.37	302	⇑P	P	22 06 15.9	+1.0
PUL	Pulkovo	37.43	325	ceP	P	22 06 17.0	+1.9
PUL				pmax	pmax		
	comp=Z,233nm,1.7s						
ALN	Alexandroupoli	37.44	294	P	P	22 06 15.8	+0.3
ALN				pmax	pmax		
	comp=Z,51nm,1.3s						
ALN	Alexandroupoli	37.44	294	P	P	22 06 15.8	+0.3
DOPR	Dopca	37.65	302	⇑P	P	22 06 18.3	+1.1
NACGM	Naroch	37.77	317	i P	P	22 06 18.4	+0.3
NACGM				i P	P	22 06 18.4	+0.3
NACGM				i P	P	22 06 18.4	+0.3
NACGM				i PP	PP	22 07 40.3	-4.2
NACGM				i PPP	PPP	22 07 56.9	
NACGM				i S	S	22 12 00.1	-6.6
NACGM				i PS	PcS	22 12 28.3	+5.5
NACGM				i SS	SS	22 14 32.5	-20
NACGM				i SSS	SSS	22 15 04.3	
NACGM				i LQ	LQ	22 18 39.7	
NACGM				i LQ	LQ	22 18 43.5	
NACGM				i LR	LR	22 21 15.1	
BURAR	Bucovina Array	37.80	305	⇑P	P	22 06 18.8	+0.3
BURAR	Bucovina Array	37.80	305	P	P	22 06 18.6	+0.1
COPA	Copaceanca	37.81	299	⇑P	P	22 06 19.8	+1.2
MTUR	Matau	37.88	301	⇓P	P	22 06 20.9	+1.6
IDID	Didziasalis	37.89	318	eP	P	22 06 19.5	+0.5
VOIR		37.89	301	⇑P	P	22 06 20.0	+0.6
NJ2	Nanjing	37.94	81	⇑P	P	22 06 20.8	+1.0
NJ2				pP	pP	22 06 26.0	-3.4
NJ2				sP	sP	22 06 29.0	-4.4
NJ2				pmax	pmax		
	comp=Z,38nm,1.2s						
NJ2				LR	LR		
	comp=Z,710nm,10.0s						
NJ2				LR	LR		
	comp=Z,930nm,12.7s						
NJ2				LR	LR		
	comp=Z,990nm,12.8s						
HUMR	Humele	37.96	300	⇓P	P	22 06 21.4	+1.5
IIGN	Ignalina	38.18	317	eP	P	22 06 22.1	+0.5
ARR	Arges	38.19	301	⇓P	P	22 06 23.4	+1.5
ISAL	Salakas	38.29	318	eP	P	22 06 22.8	+0.4
ARCR	ARCALIA	38.37	304	⇓P	P	22 06 25.2	+1.9
SANT	Santorini	38.61	287	P	P	22 06 26.2	+0.8
SANT				IAmb	IAmb	22 06 29.1	
	comp=Z,98nm,1.1s						
DL2	Dalian	38.61	69	P	P	22 06 27.5	+2.1
DL2				sP	sP	22 06 43.0	+3.7
DL2				eS	S	22 12 21.5	+1.7
DL2				pmax	pmax		
	comp=Z,63nm,0.9s						
DL2				pmax	pmax		
	comp=Z,440nm,6.2s						
DL2				LR	LR		
	comp=Z,870nm,10.8s						
DL2				LR	LR		
	comp=Z,840nm,12.6s						
DL2				LR	LR		
	comp=Z,900nm,12.9s						
LVV	L'vov	38.70	308	eP	P	22 06 25.9	-0.1
KULM	Kulim	38.72	133	P	P	22 06 26.4	-0.1
KULM				IAmb	IAmb	22 06 28.2	
	comp=Z,62nm,1.2s						
VSU	Vasula	38.72	322	eP	P	22 06 26.4	+0.4
LOT	Lotru	38.79	301	⇓P	P	22 06 27.5	+0.5
CJR	Cluj-Napoca	38.89	303	⇑P	P	22 06 29.0	+1.3
BMR	Baia Mare	38.96	305	⇓P	P	22 06 29.9	+1.7
BAIL	Bailesti	39.16	299	⇑P	P	22 06 31.9	+1.9
DLV	T Lat	39.19	117	P	P	22 06 30.8	+0.1
SRS	Serrai	39.26	295	P	P	22 06 31.6	+0.8
SRS				pmax	pmax		
	comp=Z,35nm,1.2s						
IDI	Anoyia	39.30	285	P	P	22 06 31.9	+0.6
	comp=Z,11nm,1.0s,baz=76,slow=17,SNR=2.9						
VTS	Vitosha	39.36	297	⇓P	P	22 06 32.6	+0.9
DEV	Deva	39.39	302	⇓P	P	22 06 33.0	+1.2
PUNG	Punghina	39.44	300	⇓P	P	22 06 33.6	+1.4
PABE	Paberze	39.47	317	eP	P	22 06 32.9	+0.6
GZR	Gura Zlata	39.49	301	⇑P	P	22 06 32.9	+0.1
DRGR		39.50	303	⇑P	P	22 06 33.7	+0.8
KWP	Kalwaria Pacla	39.55	308	eP	P	22 06 33.9	+0.8
KWP				eL	L	22 26 51.0	
	comp=Z,341nm,20.5s						
KWP	Kalwaria Pacla	39.55	308	IAmb	IAmb	22 06 38.6	
	comp=Z,65nm,1.0s						
IPM	Ipoh	39.59	133	P	P	22 06 31.9	-1.9
IPM				IAmb	IAmb	22 06 34.8	
	comp=Z,64nm,1.0s						
IPM	Ipoh	39.59	133	P	P	22 06 34.0	+0.2
SUW	Suwalki	39.67	315	eP	P	22 06 34.2	+0.2
SUW				ePP	PP	22 08 06.1	+0.8
SUW				eL	L	22 25 48.7	
	comp=Z,2µm,14.3s						
SUW	Suwalki	39.67	315	eP	P	22 06 33.8	-0.2
SUW	Suwalki	39.67	315	IAmb	IAmb	22 06 39.8	
	comp=Z,57nm,1.1s						
SNY	Shenyang	39.68	64	⇓P	P	22 06 36.0	+1.7
SNY				pmax	pmax		
	comp=Z,46nm,1.2s						
SNY				pmax	pmax		
	comp=Z,440nm,7.3s						
SNY				LR	LR		
	comp=Z,1µm,13.7s						
SNY				LR	LR		
	comp=Z,2µm,16.8s						
SNY				LR	LR		
	comp=Z,2µm,17.1s						
PSI	Prapat	39.73	137	LR	LR	22 25 11.4	
	comp=Z,257nm,18.9s,baz=271,slow=40						
PSI	Prapat	39.73	137	P	P	22 06 33.6	-1.4
PSI				pmax	pmax		
	comp=Z,50nm,1.4s						
HERR	Herculane	39.77	301	⇑P	P	22 06 35.5	+0.5
UZH	Uzhgorod	39.79	306	⇑iP	P	22 06 32.8	-2.3
UZH				i		22 06 40.4	
LVZ	Lovozero	39.80	338	ceP	P	22 06 36.0	+1.0
LVZ				pmax	pmax		
	comp=Z,183nm,1.0s						
LVZ	Lovozero	39.80	338	P	P	22 06 36.0	+1.0
KOLS	Kolonicke sedl	39.81	307	eP	P	22 06 35.6	+0.3
KOLS				e		22 08 12.5	
KOLS	Kolonicke sedl	39.81	307	eP	P	22 06 35.6	+0.3
KOLS				ePP	PP	22 08 12.5	+5.6
RPSI	Rantau Prapat	39.81	137	P	P	22 06 33.6	-2.0
FIA1	FINESS Array S	39.98	327	P	P	22 06 36.8	+0.2
FINES	FINESS Array B	39.98	327	P	P	22 06 36.9	+0.3
	comp=Z,18nm,0.7s,baz=124,slow=8.8,SNR=55						
FINES				LR	LR	22 24 01.4	
	comp=Z,978nm,18.9s,baz=105,slow=38						
FINES	FINESS Array B	39.98	327	i P	P	22 06 37.4	+0.9
FINES				pmax	pmax		
	comp=Z,18nm,0.7s						
FINES	FINESS Array B	39.98	327	P	P	22 06 36.7	+0.2
APA	Apatity	39.99	338	⇓iP	P	22 06 35.4	-1.1
APA				i		22 08 12.8	
APA				i S	S	22 12 33.0	-6.8
APA				i SS	SS	22 15 32.0	-5.0
APA				pmax	pmax		
	comp=Z,33nm,0.9s						
APA				MLR	MLR		
	comp=Z,4µm,10.0s						
VAY	Valandovo	39.99	295	i P	P	22 06 37.8	+0.9
SSE	Sheshan	40.12	81	P	P	22 06 36.0	-2.1
SSE				S	S	22 12 37.0	-5.6
SSE				pmax	pmax		
	comp=Z,4.0nm,0.8s						
SSE				LR	LR		
	comp=Z,330nm,14.6s						
SSE				LR	LR		
	comp=Z,330nm,15.9s						
SSE	Sheshan	40.12	81	P	P	22 06 38.3	+0.2
SSE				IAmb	IAmb	22 06 40.8	
	comp=Z,77nm,1.0s						
STIP	Stip	40.23	296	i P	P	22 06 38.2	-0.7
SIRR	Siria	40.24	303	⇓P	P	22 06 40.5	+1.6
GSI	Gunungsitoli	40.24	140	P	P	22 06 38.3	-0.9
GSI				IAmb	IAmb	22 06 50.3	
	comp=Z,49nm,0.7s						
GSI	Gunungsitoli	40.24	140	P	P	22 06 47.4	+8.2
MTSE	Matsula	40.26	322	eP	P	22 06 39.2	+0.4
KNMB	Chin-men Tao	40.28	92	P	P	22 06 36.0	-3.5
KNMB				IAmb	IAmb	22 06 41.1	
	comp=Z,72nm,1.1s						
MDVR	Moldovita	40.28	300	⇑P	P	22 06 40.2	+0.9
BZS	Buzias	40.30	302	⇑P	P	22 06 40.3	+1.0
CRVS	Cervenica-Dubn	40.34	307	eP	P	22 06 40.8	+1.1
CRVS				e		22 08 16.6	
CRVS	Cervenica-Dubn	40.34	307	eP	P	22 06 40.8	+1.1
CRVS				ePP	PnPn	22 08 16.6	+0.1
BOVS	Bovan	40.38	299	⇑P	P	22 06 40.4	+0.4
AGG	Agios Georgios	40.53	292	P	P	22 06 40.8	-0.6
AGG				pmax	pmax		
	comp=Z,45nm,1.3s						
AGG	Agios Georgios	40.53	292	P	P	22 06 40.8	-0.6
BANR	Banloc	40.65	301	⇑P	P	22 06 43.9	+1.6
PBUR	Paburge	40.70	318	eP	P	22 06 43.1	+0.6
SKO	Skopje	40.75	296	i P	P	22 06 43.9	+0.8
FURI	Furi	40.76	239	P	P	22 06 46.6	+2.8
FURI				IAmb	IAmb	22 06 52.1	
	comp=Z,79nm,1.2s						
CN2	Changchun	40.84	61	eP	P	22 06 45.3	+1.4
CN2				PcP	PcP	22 08 45.5	+1.2
CN2				pmax	pmax		
	comp=Z,30nm,1.2s						
CN2				LR	LR		
	comp=Z,1µm,13.0s						
CN2				LR	LR		
	comp=Z,2µm,13.0s						
CN2				LR	LR		
	comp=Z,2µm,14.0s						
AMBH	Ambrzfalva	40.88	303	⇑P	P	22 06 45.9	+1.7
KECS	Kecovo	40.99	306	eP	P	22 06 45.8	+0.8
KECS	Kecovo	40.99	306	eP	P	22 06 45.8	+0.8
NIE	Niedzica	41.11	308	eP	P	22 06 47.2	+1.1
NIE				eL	L	22 28 22.3	
	comp=Z,373nm,17.5s						
PSZ	Piszkesteto	41.39	305	⇑P	P	22 06 48.7	+0.3
OJC	Ojcow	41.45	309	eP	P	22 06 48.7	-0.1
DIVS	Divibare	41.56	300	⇑iP	P	22 06 50.2	+0.3
FRGS	Fruska Gora	41.60	301	⇑P	P	22 06 50.5	+0.4
FRGS	Fruska Gora	41.60	301	⇑iP	P	22 06 50.5	+0.4
LANS	Liptovska Anna	41.65	307	eP	P	22 06 51.9	+1.4
LANS	Liptovska Anna	41.65	307	eP	P	22 06 51.9	+1.4
MNSI	Mandailing Nat	41.75	138	P	P	22 06 51.7	+0.1
	comp=Z,986nmcomp=Z,65nm,0.9s						
TEKS	Tekeris	41.85	300	⇑iP	P	22 06 53.1	+0.9
ZEA	Zeya	41.97	46	eP	P	22 06 55.7	+2.7
ZEA				eS	S	22 13 11.4	+1.9
ZEA				pmax	pmax		
	comp=Z,30nm,1.0s						
ZEA				smax	smax		
	comp=E,200nm,15.8s						
ZEA				MLR	MLR		
	comp=E,800nm,11.0s						
ZEA				MLR	MLR		
	comp=Z,1µm,11.0s						
BBLS	Lazići	42.01	299	eP	P	22 06 51.8	-1.8
PDG	Podgorica	42.30	297	⇑iP	P	22 06 55.4	-0.4
HAPS	Han Pijesak,Bl	42.31	300	⇑iP	P	22 06 56.0	-0.1
MORH	Mrgy, Hungar	42.33	303	⇑P	P	22 06 56.7	+0.6
MORH	Mrgy, Hungar	42.33	303	⇑iP	P	22 06 56.3	+0.3
DRME	Dracevica, Mon	42.39	297	eP	P	22 06 55.7	-0.9
UPM	Unac-Piva	42.45	298	eP	P	22 06 58.2	+0.9
SRO	Srobarova	42.46	305	eP	P	22 06 58.5	+1.5
SRO	Srobarova	42.46	305	eP	P	22 06 58.5	+1.5
AAL	Aland	42.50	324	eP	P	22 06 56.5	-0.7
TATO	Taipei	42.62	90	P	P	22 06 58.4	-0.2
TPUB	Ta-pu	42.63	92	P	P	22 06 59.6	+0.8
YHNB	Yeheng	42.65	90	P	P	22 06 58.2	-0.8
YHNB				IAmb	IAmb	22 07 02.3	
	comp=Z,77nm,1.2s						
SSLB	Suanglung	42.68	92	P	P	22 06 58.1	-1.1
SSLB				IAmb	IAmb	22 07 02.1	
	comp=Z,47nm,0.8s						
INCN	Inchon	42.75	70	P	P	22 06 56.7	-3.0
INCN				pmax	pmax		
	comp=Z,36nm,1.0s						
INCN	Inchon	42.75	70	P	P	22 06 56.6	-3.0
BRY	Bratogost	42.76	298	eP	P	22 06 59.5	-0.2
JAVC	Velka Javorina	42.84	307	eP	P	22 07 01.5	+1.2
HCY	Herceg Novi	42.85	297	eP	P	22 07 03.9	+3.5
MORC	Moravsky Berou	42.90	308	⇑P	P	22 07 01.3	+0.6
MORC	Moravsky Berou	42.90	308	eP	P	22 07 01.0	+0.3
TREB	Trebinje	42.92	298	eP	P	22 06 59.9	-1.0
BKNI	Bangkinang	42.95	137	P	P	22 07 01.2	-0.1
SMOL	Smolenice	43.02	306	eP	P	22 07 02.0	+0.4
SMOL				e		22 08 45.3	
SMOL	Smolenice	43.02	306	eP	P	22 07 02.0	+0.4
SMOL				ePP	PP	22 08 45.3	+3.7
NACB	Ninganchiao	43.04	91	P	P	22 07 01.9	-0.2
NACB				IAmb	IAmb	22 07 05.6	
	comp=Z,91nm,1.2s						
MODS	Modra-Piesok	43.12	306	eP	P	22 07 02.7	+0.2
MODS				e		22 08 51.4	
MODS	Modra-Piesok	43.12	306	eP	P	22 07 02.7	+0.2
MODS				ePP	PcP	22 08 51.4	-0.4
GKP	Gorka Klasztor	43.13	313	eP	P	22 07 03.0	+0.6
GKP				eL	L	22 28 12.4	
	comp=Z,1µm,18.9s						
GKP	Gorka Klasztor	43.13	313	eP	P	22 07 02.5	+0.1
KEV	Kevo	43.14	338	P	P	22 07 03.5	+1.2
KEV				pmax	pmax		
	comp=Z,88nm,0.9s						
KEV	Kevo	43.14	338	P	P	22 07 03.5	+1.2
KEV				IAmb	IAmb	22 07 04.3	
	comp=Z,88nm,0.9s						
YULB	Yu-li	43.14	92	P	P	22 07 03.2	+0.3
YULB				IAmb	IAmb	22 07 06.2	
	comp=Z,72nm,1.0s						
TWG	Pinlang	43.21	93	P	P	22 07 04.3	+0.9
ZST	Bratislava	43.25	306	eP	P	22 07 04.4	+0.9
ZST				e		22 08 49.3	
ZST	Bratislava	43.25	306	eP	P	22 07 04.4	+0.9
ZST				ePP	PcP	22 08 49.2	-3.0
KRLC	Kraliky	43.39	309	eP	P	22 07 05.0	+0.4
KRLC	Kraliky	43.39	309	⇓eP	P	22 07 05.0	+0.4
MYKOM	Kota Tinggi	43.42	132	P	P	22 07 05.6	+0.4
MYKOM	Kota Tinggi	43.42	132	P	P	22 07 06.0	+0.8
BLY	Banja Luka	43.49	301	⇑iP	P	22 07 05.5	0.0
ARA0	ARCESS Array S	43.49	338	eP	P	22 07 06.3	+1.1
ARCES	ARCESS Array B	43.49	338	P	P	22 07 06.6	+1.4
	comp=Z,100nm,0.8s,baz=117,slow=7.9,SNR=143						
ARCES				LR	LR	22 26 38.1	
	comp=Z,1µm,22.0s,baz=125,slow=38						
ARCES	ARCESS Array B	43.49	338	P	P	22 07 06.1	+0.9
ARCES				pmax	pmax		
	comp=Z,128nm,0.9s						
ARCES	ARCESS Array B	43.49	338	P	P	22 07 06.1	+0.9
VRAC	Vranov	43.53	307	P	P	22 07 06.5	+0.7
	comp=Z,17nm,0.8s,baz=93,slow=8.3,SNR=23						
VRAC	Vranov	43.53	307	⇑P	P	22 07 06.7	+0.9
VRAC	Vranov	43.53	307	eP	P	22 07 06.3	+0.5
BEHE	Becsehely	43.60	303	eP	P	22 07 05.9	-0.4
UPP	Uppsala	43.60	323	eP	P	22 07 05.8	-0.4
MGRS	Mrkonjic Grad	43.60	300	eP	P	22 07 07.2	+0.8
DPC	Dobruska-Polom	43.67	309	⇓iP	P	22 07 08.0	+1.1
DPC	Dobruska-Polom	43.67	309	⇓iP	P	22 07 08.0	+1.1
KRUC	Moravsky	43.67	307	eP	P	22 07 07.2	+0.3
KSP	Ksiaz	43.68	310	eP	P	22 07 07.2	+0.2
KSP				eL	L	22 29 31.4	
	comp=Z,627nm,17.9s						
RICI	Ricice	43.69	299	P	P	22 07 06.5	-0.7
KS19	Wonju Array Si	43.70	70	P	P	22 07 07.0	-0.4
MDJ	Mudanjiang	43.72	59	P	P	22 07 10.3	+3.0
MDJ				pmax	pmax		
	comp=Z,100nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,480nm,3.9s						
MDJ	Mudanjiang	43.72	59	P	P	22 07 08.5	+1.2
MDJ				IAmb	IAmb	22 07 11.1	
	comp=Z,105nm,1.1s						
KSAR	Wonju Array Be	43.73	70	P	P	22 07 07.3	-0.2
KSAR	Wonju Array Be	43.73	70	P	P	22 07 07.3	-0.2
OSTC	Ostas	43.74	309	⇓iP	P	22 07 07.9	+0.5
KSRS	Korea Array	43.76	70	P	P	22 07 08.7	+1.0
	comp=Z,13nm,1.0s,baz=274,slow=7.2,SNR=19						
MAKA	Makarska	43.80	299	i P	P	22 07 07.2	-0.8
CHVC	Chvalec	43.84	309	eP	P	22 07 08.9	+0.7
CHVC				ex	x	22 08 54.6	
KALN	Kalnik	43.85	303	i P	P	22 07 09.0	+0.6
UPC	Upice	43.87	309	eP	P	22 07 09.3	+0.9
UPC	Upice	43.87	309	⇓eP	P	22 07 09.3	+0.9
LSTV	Lastovo	43.98	298	i P	P	22 07 09.0	-0.3
KTK1	Kautokeino	43.99	337	eP	P	22 07 09.5	+0.4
YOJ	Yonaguni jima	44.09	90	P	P	22 07 10.3	-0.2
YOJ				pmax	pmax		
	comp=Z,263nm,1.3s						
YOJ	Yonaguni jima	44.09	90	P	P	22 07 10.3	-0.2
CONA	Conrad Observa	44.10	306	i P	P	22 07 11.1	+0.7
	comp=Z,19nm,0.9s,SNR=20						
PTJ	Puntijarka	44.21	303	P	P	22 07 11.7	+0.3
HVAR	Hvar	44.23	299	i P	P	22 07 11.4	-0.1
TREC	Trest	44.26	307	eP	P	22 07 12.2	+0.6
TREC	Trest	44.26	307	⇓eP	P	22 07 12.2	+0.6
ARSA	Arzberg	44.38	305	eP	P	22 07 13.3	+0.6
	comp=Z,8.5nm,0.9s						
YAK	Yakutsk	44.39	34	c iP	P	22 07 13.1	+0.7
YAK				e*PP	pP	22 07 23.3	+1.0
YAK				e		22 08 56.5	
YAK				ePPP	PPP	22 09 34.7	
YAK				eS	S	22 13 44.4	-0.4
YAK				e*SS	sS	22 14 05.3	+3.7
YAK				eSS	SS	22 16 55.8	-8.2
YAK				e		22 17 08.7	
YAK				pmax	pmax		
	comp=Z,181nm,0.8s						
YAK				pmax	pmax		
	comp=N,13nm,0.9s						
YAK				pmax	pmax		
	comp=E,12nm,0.8s						
YAK				smax	smax		
	comp=N,60nm,1.8s						
YAK				smax	smax		
	comp=E,38nm,1.8s						
YAK	Yakutsk	44.39	34	P	P	22 07 13.1	+0.7
GOLS	Golise	44.44	303	i P	P	22 07 13.6	+0.5
HAMF	Hammerfest	44.56	339	eP	P	22 07 14.7	+1.1
CRES	Cresnjev	44.58	303	eP	P	22 07 14.4	+0.3
CRES	Cresnjev	44.58	303	⇑iP	P	22 07 14.5	+0.3
MORI	Morici	44.66	300	i P	P	22 07 14.3	-0.6
TIP	Timpagrande	44.75	293	⇑P	P	22 07 16.3	+0.6
TIP	Timpagrande	44.75	293	IAmb	IAmb	22 07 20.7	
	comp=Z,46nm,1.2s						
KLR	Kul'dur	44.76	53	ceP	P	22 07 16.7	+1.2
KLR				pmax	pmax		
	comp=Z,11nm,0.5s						
SOKA	Soboth	44.77	304	i P	P	22 07 16.7	+0.9
	comp=Z,20nm,0.8s,SNR=25						
PVCC	Panska Ves	44.79	309	eP	P	22 07 16.7	+0.9
PVCC	Panska Ves	44.79	309	⇓eP	P	22 07 16.7	+0.9
PRU	Pruhonice	44.83	309	eP	P	22 07 16.6	+0.5
PRU	Pruhonice	44.83	309	⇓eP	P	22 07 16.6	+0.5
SGRT	San Giovanni R	44.99	297	P	P	22 07 16.9	-0.7
SGRT				IAmb	IAmb	22 07 18.0	
	comp=Z,111nm,1.2s						
CKRC	Cesky Krumlov	45.06	307	eP	P	22 07 18.3	+0.3
CKRC				ex	x	22 07 34.3	
DUGI	Dugi Otok	45.11	300	i P	P	22 07 17.8	-0.7
OBKA	Obir	45.12	304	i P	P	22 07 19.6	+1.0
	comp=Z,16nm,1.0s,SNR=10						
NVLJ	Novalja	45.16	301	i P	P	22 07 18.2	-0.5
BRG	Berggiesshubel	45.17	310	⇓iP	P	22 07 19.5	+0.7
BRG				Amp		22 07 21.0	
	comp=Z,28nm,1.0s						
BRG				ex	x	22 07 23.2	
BRG				Amp		22 07 25.4	
	comp=Z,41nm,1.1s						
BRG				PP	PcP	22 08 58.2	-0.5
BRG				Amp		22 09 04.8	
	comp=Z,34nm,1.5s						
BRG	Berggiesshubel	45.17	310	eP	P	22 07 19.4	+0.7
	comp=Z,20nm,0.9s,baz=85,slow=7.8						
MOA	Molln	45.18	306	i P	P	22 07 19.4	+0.5
	comp=Z,19nm,0.9s,SNR=15						

LJU	Ljubljana	45.20	303	iP	P	22 07 19.9	+0.8
LJU	Ljubljana	45.20	303	⇑iP	P	22 07 19.5	+0.4
RUE	Ruedersdorf	45.22	312	eP	P	22 07 19.7	+0.6
	comp=Z,34nm,1.0s,baz=85,slow=7.8						
SZP	Santa	45.27	100	P	P	22 07 19.4	-0.5
SZP				IAmb	IAmb	22 07 22.8	
	comp=Z,48nm,0.9s						
CEY	Cerknica	45.30	303	⇑iP	P	22 07 20.4	+0.4
GERES	GERESS Array B	45.46	307	P	P	22 07 21.1	-0.1
	comp=Z,5.3nm,0.9s,baz=87,slow=7.0,SNR=24						
GERES				PcP	PcP	22 09 00.3	+0.4
	comp=Z,10nm,1.1s,baz=98,slow=6.9,SNR=4.5						
GERES				LR	LR	22 29 39.2	
	comp=Z,380nm,20.1s,baz=298,slow=40						
USRK	Ussuriysk Ar.	45.48	60	P	P	22 07 22.0	+0.7
	comp=Z,12nm,0.9s,baz=270,slow=7.3,SNR=26						
USRK	Ussuriysk Ar.	45.48	60	P	P	22 07 21.4	+0.1
KHC	Kasperske Hory	45.52	307	⇓iP	P	22 07 22.0	+0.3
KHC				e		22 09 14.0	
KHC	Kasperske Hory	45.52	307	⇓iP	P	22 07 22.0	+0.3
KHC				ePP	PP	22 09 14.0	+5.7
FBE	Freiberg	45.54	310	eP	P	22 07 22.6	+0.9
	comp=Z,28nm,0.9s,baz=85,slow=7.8						
HFS	Hagfors	45.60	323	P	P	22 07 21.8	-0.3
	comp=Z,42nm,0.6s,baz=99,slow=9.6,SNR=139						
TRO	Tromso	45.64	337	eP	P	22 07 23.1	+0.9
VOJS	Vojsko	45.64	303	iP	P	22 07 23.0	+0.3
MYKA	Terra Mystica	45.73	304	eP	P	22 07 24.1	+0.6
	comp=Z,9.1nm,0.9s						
CLL	Collm	45.74	310	iP	P	22 07 23.3	0.0
	comp=Z,15nm,1.0s						
CLL				i		22 07 26.9	
	comp=Z,19nm,1.2s						
CLL				ePP	PP	22 09 13.0	+2.5
CLL	Collm	45.74	310	iP	P	22 07 23.3	0.0
CLL				pmax	pmax		
	comp=Z,15nm,1.0s						
CLL	Collm	45.74	310	eP	P	22 07 23.8	+0.5
	comp=Z,9.6nm,0.8s,baz=85,slow=7.8						
TRI	Trieste	45.77	303	P	P	22 07 23.1	-0.5
TRI				pmax	pmax		
	comp=Z,24nm,0.9s						
TRI	Trieste	45.77	303	P	P	22 07 23.1	-0.5
ROBS	Robic	45.87	303	iP	P	22 07 24.4	0.0
KBA	Koelnbreinsper	45.88	305	eP	P	22 07 25.1	+0.3
	comp=Z,11nm,1.0s						
WET	Wettzell	45.97	307	eP	P	22 07 25.7	+0.5
	baz=85,slow=7.8						
PAOL	Paolisi	46.00	296	P	P	22 07 24.6	-0.9
PAOL				IAmb	IAmb	22 07 30.7	
	comp=Z,48nm,1.3s						
N2ST	Straumen	46.11	333	eP	P	22 07 27.1	+1.2
TANN	Tannenbergstha	46.14	309	eP	P	22 07 27.4	+0.8
	comp=Z,8.5nm,0.9s,baz=85,slow=7.8						
N2IH	Innhavet	46.15	334	eP	P	22 07 27.5	+1.2
NKC	Novy Kostel	46.16	309	eP	P	22 07 27.8	+1.1
NKC	Novy Kostel	46.16	309	⇓eP	P	22 07 27.8	+1.1
NKC				ex	x	22 07 45.3	
RJOB	Jochberg	46.17	306	eP	P	22 07 27.0	+0.1
	baz=85,slow=7.8						
ZOU	Zoufplan	46.20	304	P	P	22 07 25.2	-2.0
WERN	Wernitzgruen	46.20	309	eP	P	22 07 27.6	+0.6
	baz=85,slow=7.8						
GUNZ	Gunzen	46.23	309	eP	P	22 07 27.8	+0.6
	comp=Z,8.4nm,0.8s,baz=85,slow=7.8						
FAUS	Fauske	46.23	333	eP	P	22 07 27.6	+0.6
WERD	Werda	46.23	309	eP	P	22 07 27.9	+0.6
	comp=Z,7.4nm,0.8s,baz=85,slow=7.8						
INTR	Introdacqua	46.29	298	IAmb	IAmb	22 07 32.7	
	comp=Z,49nm,1.2s						
N2TV	T¥rnvik	46.34	333	eP	P	22 07 29.6	+1.8
N2NF	Nordfold	46.35	334	eP	P	22 07 29.0	+1.2
ROTZ	Rotzenmuhle	46.35	308	eP	P	22 07 29.2	+1.0
	comp=Z,10nm,1.0s,baz=85,slow=7.8						
STEI	Steigen	46.39	334	eP	P	22 07 29.0	+0.8
MANZ	Manzenberg	46.40	309	eP	P	22 07 29.7	+1.1
	baz=85,slow=7.8						
NBB08	Skaug oppvekst	46.48	333	eP	P	22 07 27.4	-1.5
ABTA	Abfaltersbach	46.49	304	eP	P	22 07 29.1	-0.3
	comp=Z,12nm,0.8s						
NBB28	Valnes	46.49	333	eP	P	22 07 30.1	+1.1
NEUB	Neuenburg	46.52	310	eP	P	22 07 30.1	+0.7
	comp=Z,29nm,0.8s,baz=85,slow=7.8						
MOX	Moxa	46.66	310	eP	P	22 07 31.3	+0.7
	comp=Z,6.8nm,0.8s,baz=85,slow=7.8						
NC602	NORSAR Array S	46.72	324	IAmb	IAmb	22 07 45.0	
	comp=Z,69nm,1.1s						
NC602	NORSAR Array S	46.72	324	eP	P	22 07 31.2	+0.4
NBB30	Finnes	46.72	332	eP	P	22 07 31.5	+0.7
TIXI	Tiksi	46.77	21	c iP	P	22 07 32.0	+0.9
TIXI	Tiksi	46.77	21	P	P	22 07 31.6	+0.5
TIXI				IAmb	IAmb	22 07 33.2	
	comp=Z,55nm,1.0s						
FLTG	Flechtingen	46.78	312	eP	P	22 07 31.5	+0.1
	comp=Z,40nm,0.8s,baz=85,slow=7.8						
KONS	Konsvik	46.86	332	eP	P	22 07 30.8	-1.0
STOK	Stokkvaagen	46.87	331	eP	P	22 07 32.8	+0.9
NB2	NORSAR Subarra	46.91	324	P	P	22 07 31.9	-0.5
	comp=Z,26nm,0.7s,baz=96,slow=7.9						
NOA	NORSAR Array B	46.91	324	P	P	22 07 32.1	-0.2
	comp=Z,19nm,0.6s,baz=96,slow=7.7,SNR=73						
NOA				LR	LR	22 30 15.6	
	comp=Z,339nm,18.0s,baz=105,slow=40						
LODK	Lodwar	46.94	237	P	P	22 07 35.8	+2.5
	SNR=12						
VAE	Valguarnera	46.95	291	P	P	22 07 34.4	+1.3
	comp=Z,16nm,0.9s,baz=2.8,slow=23,SNR=2.6						
NSS	Namsos	46.98	329	eP	P	22 07 32.4	-0.4
GRA1	Grafenberg Arr	47.00	308	IAmb	IAmb	22 07 39.3	
	comp=Z,82nm,1.4s						
GRF	Grafenberg Arr	47.00	308	eP	P	22 07 34.0	+0.7
	baz=85,slow=7.8						
GRFO	Grafenberg	47.00	308	P	P	22 07 34.8	+1.5
GRFO				pmax	pmax		
	comp=Z,73nm,1.3s						
GRFO	Grafenberg	47.00	308	P	P	22 07 34.8	+1.5
GRFO				IAmb	IAmb	22 07 39.2	
	comp=Z,73nm,1.3s						
WTTA	Wattenberg	47.01	305	iP	P	22 07 33.2	-0.4
	comp=Z,16nm,0.9s,SNR=13						
WATA	Walderalm	47.04	305	iP	P	22 07 33.4	-0.4
	comp=Z,18nm,0.9s,SNR=12						
RAFF	Raffo Rosso	47.05	291	P	P	22 07 34.0	+0.2
LOF	Lofoten	47.06	334	eP	P	22 07 34.8	+1.4
OSL	Oslo	47.07	322	eP	P	22 07 34.3	+0.7
FUR	Furstenfeldbru	47.14	306	eP	P	22 07 34.9	+0.6
	baz=85,slow=7.8						
HOPEN	Hopen	47.17	346	eP	P	22 07 36.2	+2.0
CTI	Castel Tesino	47.18	303	IAmb	IAmb	22 07 46.8	
	comp=Z,34nm,1.1s						
N2SV	S¸rv¥gen	47.20	333	eP	P	22 07 35.3	+0.8
BSEG	Bad Segeberg	47.25	314	eP	P	22 07 36.2	+1.1
	comp=Z,27nm,0.8s,baz=85,slow=7.8						
TEOL	Teolo	47.28	302	IAmb	IAmb	22 07 40.4	
	comp=Z,66nm,1.0s						
JNU	Nakatsue	47.29	75	LR	LR	22 29 21.2	
	comp=Z,291nm,18.9s,baz=197,slow=38						
JNU	Nakatsue	47.29	75	P	P	22 07 37.0	+1.2
JNU				IAmb	IAmb	22 07 38.2	
	comp=Z,62nm,1.1s						
SQTA	Sankt Quirin	47.31	305	iP	P	22 07 35.3	-0.5
	comp=Z,5.8nm,0.5s,SNR=10.0						
CLZ	Clausthal	47.34	311	eP	P	22 07 36.5	+0.5
	baz=85,slow=7.8						
MOTA	Moosalm	47.36	305	iP	P	22 07 35.7	-0.6
	comp=Z,18nm,0.9s,SNR=10.0						
JOW	Kunigami	47.44	84	P	P	22 07 37.2	+0.2
	comp=Z,21nm,0.4s,baz=299,slow=6.3,SNR=5.5						
NRDL	Niedersach Rie	47.46	312	eP	P	22 07 37.5	+0.8
	comp=Z,17nm,0.8s,baz=85,slow=7.8						
BJO1	Bjornoya	47.52	343	eP	P	22 07 38.1	+1.2
RETA	Reutte	47.57	305	eP	P	22 07 37.5	-0.3
	comp=Z,12nm,1.0s						
GTTG	Gottingen	47.62	311	eP	P	22 07 38.4	+0.3
	comp=Z,28nm,0.8s,baz=85,slow=7.8						
KONO	Kongsberg	47.62	322	P	P	22 07 38.9	+1.0
KONO				pmax	pmax		
	comp=Z,88nm,1.3s						
KONO	Kongsberg	47.62	322	P	P	22 07 38.9	+1.0
KONO				IAmb	IAmb	22 07 43.0	
	comp=Z,88nm,1.3s						
KONO	Kongsberg	47.62	322	eP	P	22 07 39.0	+1.0
GRNR	Gornyy	47.63	50	⇑iP	P	22 07 39.7	+1.5
GRNR				pmax	pmax		
	comp=Z,30nm,1.1s						
GRNR				MLR	MLR		
	comp=E,2µm,14.0s						
GRNR				MLR	MLR		
	comp=N,700nm,12.0s						
GRNR				MLR	MLR		
	comp=Z,3µm,15.0s						
FETA	Feichten	47.66	305	iP	P	22 07 38.0	-0.6
	comp=Z,10.0nm,0.8s,SNR=8.1						
LHSI	Lahat	47.75	137	P	P	22 07 38.3	-1.1
	comp=Z,668nmcomp=Z,49nm,1.0s						
KSM	Kuching	47.80	126	P	P	22 07 40.7	+0.8
KSM				IAmb	IAmb	22 07 42.0	
	comp=Z,38nm,0.7s						
MNAI	Manna	47.88	138	P	P	22 07 39.6	-0.9
OSSC	Osservatorio P	47.91	300	IAmb	IAmb	22 07 50.5	
	comp=Z,32nm,1.1s						
PPBI	Pangkal Pinang	47.93	133	P	P	22 07 41.7	+0.9
	comp=Z,65nm,1.3s						
ZCCA	Zocca	47.94	301	P	P	22 07 41.9	+1.3
ZCCA				IAmb	IAmb	22 07 58.2	
	comp=Z,38nm,1.1s						
UBR	Ueberruh	47.98	306	eP	P	22 07 41.1	+0.1
	baz=85,slow=7.8						
DOMB	Dombas	48.01	325	eP	P	22 07 41.3	+0.3
SALO	Salr	48.03	303	P	P	22 07 41.5	+0.2
HOMB	Homborsund	48.16	320	eP	P	22 07 42.0	-0.1
HOMB	Homborsund	48.16	320	eP	P	22 07 42.8	+0.7
DAVA	Damuels	48.19	305	iP	P	22 07 42.5	-0.2
	comp=Z,28nm,0.7s,SNR=21						
DAVOX	Davos/Dischmat	48.27	305	P	P	22 07 42.7	-0.7
	comp=Z,12nm,0.8s,baz=103,slow=6.4,SNR=20						
DAVOX				PcP	PcP	22 09 10.6	+0.6
	comp=Z,15nm,0.8s,baz=128,slow=4.8,SNR=3.6						
SKAR	Skarslia	48.31	323	eP	P	22 07 43.8	+0.6
PRMA	PARMA	48.33	302	P	P	22 07 43.9	+0.3
PRMA				IAmb	IAmb	22 07 50.2	
	comp=Z,60nm,1.1s						
CASP	Castiglione de	48.33	299	P	P	22 07 44.4	+0.7
VLC	Villacollemand	48.39	301	IAmb	IAmb	22 07 58.3	
	comp=Z,94nm,1.4s						
SBUM	Sibu	48.40	123	IAmb	IAmb	22 07 47.0	
	comp=Z,37nm,0.9s						
SBUM	Sibu	48.40	123	P	P	22 07 46.0	+1.5
STU	Stuttgart	48.43	307	IAmb	IAmb	22 07 51.8	
	comp=Z,37nm,1.0s						
STU	Stuttgart	48.43	307	eP	P	22 07 44.8	+0.4
	baz=85,slow=7.8						
KASTN	Kahler Asten	48.62	311	eP	P	22 07 46.1	+0.3
	baz=85,slow=7.8						
MDSI	Maura Dua	48.66	137	P	P	22 07 43.7	-2.7
	comp=Z,651nmcomp=Z,24nm,1.1s						
HLG	Helgoland	48.67	315	eP	P	22 07 45.9	-0.1
	comp=Z,167nm,0.8s,baz=85,slow=7.8						
TNS	Taunus Mts	48.72	309	eP	P	22 07 47.2	+0.6
	baz=85,slow=7.8						
MOL	Molde	48.75	326	eP	P	22 07 47.5	+1.0
SNART	Snartemo	48.85	320	eP	P	22 07 48.4	+1.1
IBBN	Ibbenburen	48.91	312	eP	P	22 07 48.6	+0.7
	comp=Z,26nm,0.7s,baz=85,slow=7.8						
MSSA	Maissana	48.97	301	IAmb	IAmb	22 07 50.9	
	comp=Z,26nm,0.9s						
AKN	Aaknes	48.99	325	eP	P	22 07 50.1	+1.6
LWLI	Liwa	49.03	137	P	P	22 07 47.6	-1.8
	comp=Z,4µmcomp=Z,68nm,0.5s						
KMBO	Kilima Mbogo	49.05	231	P	P	22 07 50.5	+0.8
	comp=Z,15nm,0.9s,baz=29,slow=11,SNR=20						
KMBO				LR	LR	22 31 31.0	
	comp=Z,386nm,18.7s,baz=88,slow=40						
KMBO	Kilima Mbogo	49.05	231	iP	P	22 07 52.2	+2.5
KMBO				pmax	pmax		
	comp=Z,15nm,0.9s						
BFO	Black Forest	49.06	307	P	P	22 07 50.5	+1.2
BFO				pmax	pmax		
	comp=Z,15nm,1.1s						
BFO	Black Forest	49.06	307	P	P	22 07 50.5	+1.2
BFO	Black Forest	49.06	307	eP	P	22 07 49.8	+0.6
	baz=85,slow=7.8						
ODD1	Odda	49.13	322	eP	P	22 07 50.0	+0.4
KLSI		49.14	137	P	P	22 07 47.3	-2.8
BLS5	Blasjo	49.22	322	eP	P	22 07 50.8	+0.5
BUG	Bochum--Univer	49.31	311	eP	P	22 07 51.8	+0.8
	comp=Z,14nm,0.8s,baz=85,slow=7.8						
TPI	Tanjungpandan	49.32	132	P	P	22 07 52.5	+1.0
	comp=Z,730nmcomp=Z,54nm,1.4s						
HSPB	Hornsund (broa	49.33	345	eP	P	22 07 52.5	+1.6
HSPB				eL	L	22 30 32.7	
	comp=Z,575nm,19.9s						
HSPB	Hornsund (broa	49.33	345	eP	P	22 07 52.3	+1.5
HYA	Hoyanger	49.35	324	eP	P	22 07 51.7	+0.6
KIBK	Kibwezi	49.48	229	P	P	22 07 55.5	+2.6
	SNR=9.1						
AHRW	Bad Neuenahr-A	49.55	310	eP	P	22 07 53.8	+0.9
	comp=Z,13nm,0.8s,baz=85,slow=7.8						
SPA0	Spitsbergen Ar	49.65	347	eP	P	22 07 54.6	+1.3
KASI	Kota Agung	49.69	137	P	P	22 07 51.8	-2.5
	comp=Z,64nm,0.9s						
BER	Bergen	49.77	323	eP	P	22 07 55.4	+1.0
ASK	Askoy	49.84	323	eP	P	22 07 56.5	+1.6
ECH	Echery	49.85	307	P	P	22 07 57.0	+1.7
ECH				pmax	pmax		
	comp=Z,15nm,1.2s						
ECH	Echery	49.85	307	P	P	22 07 57.0	+1.7
FOO	Floro	49.90	325	eP	P	22 07 56.1	+0.7
BLSI	Bandar Lampung	49.99	136	P	P	22 07 54.8	-1.8
	comp=Z,80nm,0.5s						
SUE	Sulen	50.04	324	eP	P	22 07 56.6	+0.2
SENIN	Lac Senin/Sane	50.10	304	IAmb	IAmb	22 08 06.7	
	comp=Z,34nm,1.0s						
BTNL	Ternell	50.14	310	dP	P	22 07 57.8	+0.4
JWT	Wachi	50.16	70	P	P	22 07 58.4	+0.6
JWT				IAmb	IAmb	22 08 00.6	
	comp=Z,61nm,1.0s						
MEM	Membach	50.21	310	dP	P	22 07 58.0	+0.1
WLF	Walferdange	50.27	309	dP	P	22 07 59.0	+0.6
WLF	Walferdange	50.27	309	P	P	22 07 58.6	+0.3
WLF				pmax	pmax		
	comp=Z,31nm,1.0s						
WLF	Walferdange	50.27	309	P	P	22 07 58.6	+0.3
WLF				IAmb	IAmb	22 08 03.9	
	comp=Z,31nm,1.0s						
WLF	Walferdange	50.27	309	eP	P	22 07 59.5	+1.2
	comp=Z,12nm,0.8s,baz=85,slow=7.8						
KBS	Kingsbay	50.76	347	P	P	22 08 02.8	+1.1
KBS				pmax	pmax		
	comp=Z,65nm,1.0s						
KBS	Kingsbay	50.76	347	P	P	22 08 02.8	+1.1
KBS				IAmb	IAmb	22 08 08.1	
	comp=Z,65nm,0.9s						
KBS	Kingsbay	50.76	347	eP	P	22 08 03.0	+1.3
KBS	Kingsbay	50.76	347	iP	P	22 08 02.5	+0.8
BMRD	Maredsous	51.04	310	dP	P	22 08 04.0	-0.1
MYLDM	Lahad Datu	51.07	115	P	P	22 08 05.9	+1.1
DOU	Dourbes	51.19	310	dP	P	22 08 05.6	+0.4
KEST	Kesra	51.36	291	P	P	22 08 07.1	+0.2
	comp=Z,29nm,0.8s,baz=298,slow=0.5,SNR=21						
KEST				LR	LR	22 33 39.4	
	comp=Z,163nm,18.8s,baz=310,slow=40						
KEST	Kesra	51.36	291	P	P	22 08 07.0	+0.2
KEST				IAmb	IAmb	22 08 20.2	
	comp=Z,50nm,0.9s						
JSD	Sado	51.50	66	P	P	22 08 04.8	-3.0
COCO	West Island	51.74	150	P	P	22 08 10.1	+0.5
COCO				pmax	pmax		
	comp=Z,236nm,1.5s						
COCO	West Island	51.74	150	P	P	22 08 10.1	+0.5
DBJI	Dramaga	51.81	136	P	P	22 08 08.3	-2.0
	comp=Z,27nm,1.3s						
PBKI	Pangkalan Bun	51.82	128	P	P	22 08 12.0	+1.6
	comp=Z,4µmcomp=Z,306nm,1.0s						
MJB9	Matsu-Tunnel	51.92	68	P	P	22 08 11.2	+0.2
MJB9				IAmb	IAmb	22 08 12.6	
	comp=Z,73nm,0.9s						
MAJO	Matsushiro	51.92	68	P	P	22 08 11.0	0.0
MAJO				pmax	pmax		
	comp=Z,69nm,0.9s						
MAJO	Matsushiro	51.92	68	P	P	22 08 11.0	0.0
MAJO				IAmb	IAmb	22 08 12.6	
	comp=Z,69nm,0.9s						
MAT	Matsushiro	51.92	68	P	P	22 08 11.2	+0.2
MAT				eS	S	22 15 21.2	-11
MJAR	Matsushiro Arr	51.92	68	P	P	22 08 12.2	+1.1
	comp=Z,55nm,1.0s,baz=290,slow=9.4,SNR=49						
MJAR	Matsushiro Arr	51.92	68	P	P	22 08 10.9	-0.1
MJAR				pmax	pmax		
	comp=Z,26nm,1.1s						
MJAR	Matsushiro Arr	51.92	68	P	P	22 08 10.9	-0.1
YSS	Yuzh-Sakhalins	52.38	54	eP	P	22 08 15.5	+1.3
YSS				e		22 09 30.6	
YSS				pmax	pmax		
	comp=Z,50nm,0.7s						
YSS				MLR	MLR		
	comp=Z,2µm,15.0s						
YSS				MLR	MLR		
	comp=E,1µm,14.0s						
YSS	Yuzh-Sakhalins	52.38	54	P	P	22 08 15.2	+1.0
MTKI	Muara Teweh, K	52.68	123	P	P	22 08 17.9	+1.1
	comp=E,3µmcomp=E,27nm,0.8s						
JTM	Tenmabayashi	52.78	62	P	P	22 08 16.3	-0.9
ASAJ	Asahikawa	52.96	58	LR	LR	22 33 22.8	
	comp=E,859nm,18.1s,baz=335,slow=39						
MBAR	Mbarara	53.03	238	P	P	22 08 20.8	+1.2
	comp=E,80nm,0.9s,baz=23,slow=9.6,SNR=24						
MBAR	Mbarara	53.03	238	c iP	P	22 08 20.5	+0.9
MBAR				pmax	pmax		
	comp=Z,63nm,0.9s						
MBAR	Mbarara	53.03	238	P	P	22 08 20.7	+1.2
CLF	Chambon-Foret	53.11	307	P	P	22 08 19.5	-0.1
CLF				IAmb	IAmb	22 08 26.0	
	comp=Z,114nm,1.5s						
CISI	Cisompet, Garu	53.24	135	IAmb	IAmb	22 08 22.0	
	comp=Z,45nm,1.0s						
CISI	Cisompet, Garu	53.24	135	P	P	22 08 19.9	-1.0
	comp=Z,2µmcomp=Z,44nm,0.6s						
JMM	Marumori	53.46	66	P	P	22 08 22.1	-0.2
SMRI	Semarang	54.39	132	P	P	22 08 34.1	+4.8
	comp=Z,61nm,0.8s						
XMIS	Christmas Isla	54.43	140	P	P	22 08 28.1	-1.5
XMIS				IAmb	IAmb	22 08 29.5	
	comp=Z,45nm,0.9s						
BBKI	Banjar Baru	54.48	125	P	P	22 08 31.0	+1.0
	comp=Z,96nm,1.0s						
MA2	Magadan	54.66	38	P	P	22 08 32.1	+1.4
	comp=Z,36nm,0.8s,baz=272,slow=6.5,SNR=20						
MA2	Magadan	54.66	38	c iP	P	22 08 32.0	+1.3
MA2				pmax	pmax		
	comp=Z,66nm,1.0s						
MA2	Magadan	54.66	38	P	P	22 08 31.5	+0.8
MA2				IAmb	IAmb	22 08 33.4	
	comp=Z,66nm,1.0s						
SEY	Seymchan	54.90	33	P	P	22 08 34.1	+1.7
	comp=Z,35nm,0.9s,baz=278,slow=8.7,SNR=83						
KBKI	Kotabaru	55.26	124	P	P	22 08 37.4	+1.8
	comp=Z,861nmcomp=Z,74nm,1.2s						
DAV	Davao City (W)	55.33	107	P	P	22 08 37.7	+1.5
	comp=Z,94nm,0.3s,baz=50,slow=3.9,SNR=7.5						
DAV	Davao City (W)	55.33	107	IAmb	IAmb	22 08 39.4	
	comp=Z,358nm,1.4s						
TOLI2	Tolitoli	55.46	116	IAmb	IAmb	22 08 40.2	
	comp=Z,30nm,0.9s						
KMMI	Kalianget	56.59	129	P	P	22 08 46.5	+1.4
	comp=Z,46nm,0.5s						
MRSI	Marisa	56.74	116	P	P	22 08 47.2	+0.9
	comp=Z,2µmcomp=Z,236nm,1.1s						
DAG	Danmarks Havn	56.96	344	iP	P	22 08 47.5	+0.6
	comp=Z,58nm,0.9s						
DAG	Danmarks Havn	56.96	344	iP	P	22 08 47.5	+0.6
DAG				pmax	pmax		
	comp=Z,58nm,0.9s						
DAG	Danmarks Havn	56.96	344	iP	P	22 08 47.5	+0.6
DAG				IAmb	IAmb	22 08 48.7	
	comp=Z,58nm,0.9s						
ABJI	Asem Bagus	57.33	129	P	P	22 08 50.1	-0.3
	comp=Z,2µmcomp=Z,74nm,0.8s						
GTOI	Gorontalo	57.43	115	P	P	22 08 50.9	-0.2
	comp=Z,756nmcomp=Z,83nm,1.0s						
APSI	Ampana	57.46	117	P	P	22 08 53.1	+1.8
	comp=Z,1µmcomp=Z,90nm,1.4s						
TTSI	Tana Toraja	57.62	121	P	P	22 08 53.1	+0.7
	comp=Z,30nm,1.4s						
JAGI	Jajag, Banyuwa	57.79	130	IAmb	IAmb	22 08 52.9	
	comp=Z,42nm,0.8s						
JAGI	Jajag, Banyuwa	57.79	130	P	P	22 08 52.2	-1.4
	comp=Z,64nm,0.8s						
DBG	Daneborg	57.87	341	iP	P	22 08 54.9	+1.4
DBG				IAmb	IAmb	22 08 55.7	
	comp=Z,16nm,0.6s						
SRBI	Singaraja	58.17	129	P	P	22 08 56.9	+0.6
	comp=Z,62nm,1.2s						
BNSI	Bone	58.77	122	P	P	22 09 00.6	+0.1
	comp=Z,20nm,1.3s						
ABPO	Ambohimpanom	58.87	209	P	P	22 09 01.1	-0.2
ABPO				pmax	pmax		
	comp=Z,25nm,1.2s						
ABPO	Ambohimpanom	58.87	209	P	P	22 09 01.1	-0.2
KAPI	Kappang	58.96	122	P	P	22 09 01.3	-0.5
	comp=Z,28nm,1.0s,baz=275,slow=4.0,SNR=9.8						
KAPI	Kappang	58.96	122	P	P	22 09 01.3	-0.5
KAPI				IAmb	IAmb	22 09 02.6	
	comp=Z,43nm,1.1s						
SCO	Scoresbysund	59.42	337	iP	P	22 09 06.0	+1.8
	comp=Z,15nm,0.9s						
SCO	Scoresbysund	59.42	337	iP	P	22 09 06.0	+1.8
SCO				pmax	pmax		
	comp=Z,15nm,0.9s						
SCO	Scoresbysund	59.42	337	iP	P	22 09 06.1	+1.8
SCO				IAmb	IAmb	22 09 06.8	
	comp=Z,15nm,0.9s						
TAM	Tamanrasset	59.56	278	P	P	22 09 05.8	-0.4
TAM				pmax	pmax		
	comp=Z,39nm,1.5s						
TAM	Tamanrasset	59.56	278	P	P	22 09 05.8	-0.4
TAM				IAmb	IAmb	22 09 13.0	
	comp=Z,39nm,1.5s						
TWSI	Taliwang, Sumb	59.74	128	P	P	22 09 18.8	+12
ESBB	Sonseca Array	59.92	300	IAmb	IAmb	22 09 13.1	
	comp=Z,30nm,1.0s						
ESDC	Sonseca Array	59.92	300	P	P	22 09 08.1	-0.2
	comp=Z,17nm,0.8s,baz=61,slow=7.0,SNR=82						
ESDC	Sonseca Array	59.92	300	P	P	22 09 07.8	-0.4
PEA0B	Petropavlovsk-	59.99	44	P	P	22 09 08.9	+0.5
PEA0B				pmax	pmax		
	comp=Z,45nm,1.2s						
PEA0B	Petropavlovsk-	59.99	44	P	P	22 09 08.9	+0.5
PEA0B				IAmb	IAmb	22 09 23.0	
	comp=Z,45nm,1.2s						
PETK	Petropavlovsk-	59.99	44	P	P	22 09 08.3	-0.1
	comp=Z,6.0nm,0.8s,baz=216,slow=1.7,SNR=9.9						
PETK				LR	LR	22 38 19.0	
	comp=Z,511nm,18.2s,baz=282,slow=39						
PETK	Petropavlovsk-	59.99	44	P	P	22 09 08.6	+0.1
PETK	Petropavlovsk-	59.99	44	P	P	22 09 08.6	+0.1
PAB	San Pablo	60.24	300	P	P	22 09 10.8	+0.3
PAB				pmax	pmax		
	comp=Z,35nm,1.2s						
PAB	San Pablo	60.24	300	P	P	22 09 10.8	+0.3
PAB				IAmb	IAmb	22 09 15.5	
	comp=Z,35nm,1.1s						
PET	Petropavlovsk	60.56	44	eP	P	22 09 12.1	-0.2
PET				eS	S	22 17 22.0	-4.1
PET				pmax	pmax		
	comp=Z,38nm,1.3s						
PET				pmax	pmax		
	comp=Z,100nm,14.6s						
PET				MLR	MLR		
	comp=Z,500nm,20.0s						
PET				MLR	MLR		
	comp=Z,700nm,18.0s						
PET	Petropavlovsk	60.56	44	P	P	22 09 11.4	-0.9
PET				IAmb	IAmb	22 09 12.9	
	comp=Z,24nm,0.9s						
TNTI	Ternate	60.64	112	P	P	22 09 14.4	+1.0
	comp=Z,2µmcomp=Z,186nm,1.3s						
SANI	Sanana	61.43	115	P	P	22 09 19.1	+0.4
	comp=Z,2µmcomp=Z,146nm,1.3s						
MVO	Moncorvo	61.53	302	eP	P	22 09 19.9	+0.7
	comp=Z,73nm,1.1s						
VOI	Vohitsoka	61.66	208	P	P	22 09 21.2	+1.0
	SNR=5.4						
PVRL	Vila Real	61.96	303	eP	P	22 09 22.6	+0.5
POLO	Lamas de Olo	61.98	303	eP	P	22 09 22.6	+0.3
PCAB	Cabril	62.01	303	eP	P	22 09 23.2	+0.8
	comp=Z,90nm,1.7s						
PGAV	Gavieira, Arco	62.08	303	eP	P	22 09 23.6	+0.7
	comp=Z,95nm,1.1s						
MTE	Manteigas	62.18	302	eP	P	22 09 24.3	+0.7
	comp=Z,112nm,1.3s						
PVIS	Viseu	62.30	302	eP	P	22 09 25.5	+1.1
	comp=Z,99nm,1.1s						
PCBR	Castelo Branco	62.36	301	eP	P	22 09 25.2	+0.5
	comp=Z,34nm,1.5s						
PMRV	Marv??o	62.46	300	eP	P	22 09 26.0	+0.6
	comp=Z,49nm,1.8s						

PBAR	Barrancos	62.71	299	*e*P	P	22 09 27.6	+0.5
	comp=Z,67nm,1.9s						
PESTR	Estremoz	62.83	300	P	P	22 09 28.1	+0.2
COI	Coimbra	62.87	302	P	P	22 09 27.5	-0.6
COI				pmax	pmax		
	comp=Z,60nm,0.8s						
COI	Coimbra	62.87	302	P	P	22 09 27.5	-0.6
COI	Coimbra	62.87	302	*e*P	P	22 09 29.3	+1.2
	comp=Z,99nm,1.1s						
PCAS	Casmilo, Conde	62.99	302	*e*P	P	22 09 29.8	+0.8
PMTG	Montargil	63.20	300	*e*P	P	22 09 30.3	0.0
	comp=Z,37nm,1.6s						
MMRI	Maumere	63.26	123	P	P	22 09 28.7	-2.2
MMRI				IAmb	IAmb	22 09 38.4	
	comp=Z,49nm,0.9s						
EVO	Evora	63.27	300	*e*P	P	22 09 31.7	+0.9
	comp=Z,64nm,1.2s						
SUMG	Summit	63.34	342	*i* P	P	22 09 32.2	+1.0
	comp=Z,186nm,0.9s						
SUMG	Summit	63.34	342	P	P	22 09 32.4	+1.2
SUMG				pmax	pmax		
	comp=Z,143nm,1.1s						
SUMG	Summit	63.34	342	P	P	22 09 32.4	+1.2
SUMG	Summit	63.34	342	*i* P	P	22 09 32.2	+1.0
SUMG				IAmb	IAmb	22 09 34.5	
	comp=Z,187nm,0.9s						
PSBE	So Bento	63.42	301	*e*P	P	22 09 33.0	+1.2
	comp=Z,115nm,1.0s						
PVAQ	Vaqueiros	63.52	299	P	P	22 09 32.0	-0.5
PVAQ				IAmb	IAmb	22 09 33.7	
	comp=Z,36nm,1.0s						
PVAQ	Vaqueiros	63.52	299	*e*P	P	22 09 33.0	+0.5
	comp=Z,60nm,2.0s						
MESJ	Messejana	63.70	299	*e*P	P	22 09 34.3	+0.7
MESJ				AMb	AMB	22 09 35.2	
	comp=Z,58nm,1.1s						
MESJ	Messejana	63.70	299	*e*P	P	22 09 34.6	+0.9
	comp=Z,59nm,1.5s						
PBDV	Barranco-do-Ve	63.74	298	*e*P	P	22 09 34.9	+0.9
	comp=Z,72nm,1.4s						
PNCL	Nicolau / Gran	63.81	300	*e*P	P	22 09 35.2	+0.8
	comp=Z,46nm,1.8s						
PMAFR	Mafra	63.99	301	*e*P	P	22 09 36.4	+0.8
PFVI	Vila Bisbo	64.44	299	P	P	22 09 38.6	+0.1
SWI	Sorong	64.67	110	P	P	22 09 40.9	+0.6
	comp=Z,1µmcomp=Z,93nm,1.2s						
SIJI	Sorong	64.68	110	P	P	22 09 40.9	+0.5
	comp=Z,57nm,1.0s,baz=320,slow=7.7,SNR=24						
EUNU	Eureka	64.92	356	P	P	22 09 42.1	+1.0
EUNU				IAmb	IAmb	22 09 56.1	
	comp=Z,40nm,1.2s						
BATI	Baumata	65.36	123	P	P	22 09 44.3	-0.5
	comp=Z,20nm,0.5s,baz=330,slow=3.6,SNR=4.5						
BATI	Baumata	65.36	123	P	P	22 09 47.4	+2.7
	comp=Z,28nm,1.2s						
SOEI	Soe	65.46	123	P	P	22 09 45.1	-0.4
	comp=Z,2µmcomp=Z,191nm,1.0s						
ICESG	Greenland Ices	65.55	339	*i* P	P	22 09 46.7	+1.1
ICESG				IAmb	IAmb	22 09 51.9	
	comp=Z,80nm,0.9s						
LSZ	Lusaka	65.59	229	P	P	22 09 46.3	0.0
LSZ				pmax	pmax		
	comp=Z,65nm,1.3s						
LSZ	Lusaka	65.59	229	P	P	22 09 46.3	0.0
LSZ				IAmb	IAmb	22 09 51.9	
	comp=Z,65nm,1.2s						
KULLO	Kullorsuaq	66.23	347	*i* P	P	22 09 50.7	+1.2
	comp=Z,36nm,0.8s						
KULLO	Kullorsuaq	66.23	347	*i* P	P	22 09 50.7	+1.2
KULLO				pmax	pmax		
	comp=Z,36nm,0.8s						
KULLO	Kullorsuaq	66.23	347	*i* P	P	22 09 50.7	+1.2
KULLO				IAmb	IAmb	22 09 55.8	
	comp=Z,36nm,0.8s						
TULEG	Thule	66.50	351	IAmb	IAmb	22 09 57.0	
	comp=Z,49nm,1.3s						
TULEG	Thule	66.50	351	*i* P	P	22 09 50.7	-0.5
FAKI	Fak Fak	66.73	111	P	P	22 09 54.0	+0.3
FAKI	Fak Fak	66.73	111	P	P	22 09 54.8	+1.2
	comp=Z,714nmcomp=Z,64nm,1.3s						
ANGG	Ammassalik, Gr	66.81	335	P	P	22 09 53.8	+0.4
ANGG	Ammassalik, Gr	66.81	335	*i* P	P	22 09 52.9	-0.4
ANGG				IAmb	IAmb	22 09 55.1	
	comp=Z,36nm,1.0s						
ISOG	Isortoq, Green	67.31	335	*i* P	P	22 09 55.8	-0.7
ISOG				IAmb	IAmb	22 09 57.4	
	comp=Z,12nm,1.0s						
UPNV	Upernavik	67.33	346	*i* P	P	22 09 57.3	+0.7
UPNV				IAmb	IAmb	22 10 02.3	
	comp=Z,33nm,0.9s						
TORD	Torodi Ar. Bea	67.53	271	P	P	22 09 58.3	-0.5
	comp=Z,48nm,0.6s,baz=46,slow=5.8,SNR=176						
TORD				LR	LR	22 43 13.2	
	comp=Z,622nm,18.3s,baz=40,slow=39						
TORD	Torodi Ar. Bea	67.53	271	P	P	22 09 58.1	-0.6
A21K	Barrow	68.57	15	P	P	22 10 05.4	+1.1
	baz=317						
A21K	Barrow	68.57	15	P	P	22 10 04.7	+0.4
ILULI	Ilulissat	68.69	342	*i* P	P	22 10 05.6	+0.5
	comp=Z,60nm,1.1s						
ILULI	Ilulissat	68.69	342	*i* P	P	22 10 05.6	+0.5
ILULI				pmax	pmax		
	comp=Z,60nm,1.1s						
ILULI	Ilulissat	68.69	342	*i* P	P	22 10 05.6	+0.5
ILULI				IAmb	IAmb	22 10 11.3	
	comp=Z,60nm,1.1s						
SAUI	Saumlaki	69.30	116	P	P	22 10 10.6	+0.9
SAUI	Saumlaki	69.30	116	P	P	22 10 11.9	+2.2
	comp=Z,7µmcomp=Z,615nm,1.1s						
SFJD	Kangerlussuaq	70.08	340	*i* P	P	22 10 14.3	+0.6
	comp=Z,1.9nm,1.0s						
SFJD	Kangerlussuaq	70.08	340	P	P	22 10 13.7	0.0
SFJD				pmax	pmax		
	comp=Z,55nm,1.1s						
SFJD	Kangerlussuaq	70.08	340	P	P	22 10 13.7	0.0
SFJD				IAmb	IAmb	22 10 19.0	
	comp=Z,55nm,1.1s						
SFJD	Kangerlussuaq	70.08	340	*i* P	P	22 10 14.3	+0.6
SFJD				IAmb	IAmb	22 10 19.3	
	comp=Z,1.9nm,1.0s						
RES	Resolute Bay	70.60	357	P	P	22 10 17.8	+0.9
	comp=Z,4.5nm,0.5s,baz=23,slow=8.4,SNR=41						
ANM	Nome	70.98	23	P	P	22 10 21.4	+2.1
	baz=312						
ANM	Nome	70.98	23	P	P	22 10 20.6	+1.3
ANM				pmax	pmax		
	comp=Z,62nm,0.9s						
ANM	Nome	70.98	23	P	P	22 10 20.6	+1.3
SMPI	Sarmi	71.20	106	P	P	22 10 23.8	+2.4
	comp=Z,60nm,1.3s						
PSA00	Pilbara Seismi	71.36	134	P	P	22 10 21.1	-1.0
PSA00				IAmb	IAmb	22 10 23.8	
	comp=Z,27nm,0.7s						
PSA00	Pilbara Seismi	71.36	134	P	P	22 10 21.7	-0.4
PSA00				IAmb	IAmb	22 10 23.1	
	comp=Z,86nm,1.2s						
KOWA	Kowa	71.52	275	P	P	22 10 23.4	+0.1
TOLK	Toolik Lake Re	72.18	15	P	P	22 10 27.5	+1.0
	baz=324						
TOLK	Toolik Lake Re	72.18	15	IAmb	IAmb	22 10 29.8	
	comp=Z,58nm,0.8s						
NRS	Narsarsuaq	72.30	333	*i* P	P	22 10 27.4	+0.2
	comp=Z,46nm,0.8s						
NRS	Narsarsuaq	72.30	333	*i* P	P	22 10 27.4	+0.2
NRS				pmax	pmax		
	comp=Z,46nm,0.8s						
NRS	Narsarsuaq	72.30	333	*i* P	P	22 10 27.4	+0.2
NRS				IAmb	IAmb	22 10 33.2	
	comp=Z,46nm,0.8s						
FITZ	Fitzroy Crossi	72.35	128	P	P	22 10 28.6	+0.4
	comp=Z,26nm,1.0s,baz=339,slow=4.6,SNR=28						
FITZ	Fitzroy Crossi	72.35	128	IAmb	IAmb	22 10 29.9	
	comp=Z,49nm,1.1s						
AMKA	Amchitka	72.61	39	P	P	22 10 29.5	+0.2
GENI	Genyem	72.72	106	P	P	22 10 32.8	+2.3
	comp=Z,3µmcomp=Z,100nm,1.4s						
COLD	Coldfoot	73.19	16	P	P	22 10 33.8	+1.3
	baz=324						
COLD	Coldfoot	73.19	16	IAmb	IAmb	22 10 34.9	
	comp=Z,36nm,1.0s						
IMAR	Indian Mountai	73.31	18	P	P	22 10 33.7	+0.5
MLY	Manley	74.84	18	P	P	22 10 43.3	+1.0
	baz=324,SNR=25						
FYU	Fort Yukon	74.84	15	P	P	22 10 42.8	+0.7
FYU				IAmb	IAmb	22 10 52.5	
	comp=Z,61nm,1.1s						
TTA	Tatalina	75.05	21	P	P	22 10 44.8	+1.3
	baz=320						
TTA	Tatalina	75.05	21	P	P	22 10 44.1	+0.6
TTA				pmax	pmax		
	comp=Z,20nm,1.1s						
TTA	Tatalina	75.05	21	P	P	22 10 44.0	+0.6
I23K	Minto, Yukon-K	75.08	17	P	P	22 10 44.7	+1.2
	baz=325,SNR=25						
I23K	Minto, Yukon-K	75.08	17	P	P	22 10 44.4	+0.9
I23K				IAmb	IAmb	22 10 46.2	
	comp=Z,58nm,1.2s						
MORW	Morawa	75.21	142	IAmb	IAmb	22 10 45.7	
	comp=Z,42nm,0.9s						
TSUM	Tsumeb	75.29	234	P	P	22 10 46.3	+0.7
TSUM				IAmb	IAmb	22 10 51.3	
	comp=Z,60nm,1.0s						
CHUM	Lake Minchumin	75.35	19	P	P	22 10 46.3	+1.2
	baz=323,SNR=7.9						
INK	Inuvik	75.36	10	P	P	22 10 46.1	+1.1
	comp=Z,60nm,0.9s,baz=343,slow=7.7,SNR=150						
INK				LR	LR	22 48 12.7	
	comp=Z,158nm,19.1s,baz=358,slow=39						
ATKA	Atka Island	75.39	36	P	P	22 10 44.4	-1.1
C36M	Paulatuk	75.47	6	P	P	22 10 46.2	+0.5
	baz=345						
MDM	Murphy Dome	75.51	17	IAmb	IAmb	22 10 48.5	
	comp=Z,52nm,1.1s						
BPAW	Bear Paw Mtn.	75.53	18	P	P	22 10 46.9	+0.7
	baz=324						
BPAW	Bear Paw Mtn.	75.53	18	IAmb	IAmb	22 10 48.1	
	comp=Z,25nm,0.8s						
POKR	Poker Plat Res	75.57	17	P	P	22 10 47.7	+1.3
	baz=326,SNR=20						
NEA2	Nenana	75.61	17	P	P	22 10 47.4	+0.8
	baz=325,SNR=37						
PRP	Porcupine Dome	75.67	16	P	P	22 10 48.0	+0.9
TCOL	CIGO, UAF Yank	75.67	17	P	P	22 10 47.4	+0.5
	baz=326,SNR=6.2						
TCOL	CIGO, UAF Yank	75.67	17	IAmb	IAmb	22 10 49.2	
	comp=Z,45nm,0.9s						
COLA	College	75.68	17	P	P	22 10 47.4	+0.5
	baz=326						
COLA	College	75.68	17	P	P	22 10 48.4	+1.5
COLA				pmax	pmax		
	comp=Z,40nm,0.8s						
COLA	College	75.68	17	P	P	22 10 48.4	+1.5
COLA				IAmb	IAmb	22 10 49.2	
	comp=Z,40nm,0.8s						
CCB	Clear Creek Bu	75.88	17	P	P	22 10 48.0	-0.1
KTH	Kantishna Hill	75.99	19	IAmb	IAmb	22 10 51.0	
	comp=Z,60nm,1.0s						
IL31		75.99	17	IAmb	IAmb	22 10 50.3	
	comp=Z,39nm,1.2s						
ILAR	Eielson Array	75.99	17	P	P	22 10 49.2	+0.4
	comp=Z,6.9nm,0.7s,baz=312,slow=4.7,SNR=58						
ILAR				PKPPKP	P'P'df	22 38 05.7	-6.8
	comp=Z,0.7nm,1.0s,baz=89,slow=1.3,SNR=4.6						
ILAR				LR	LR	22 48 41.5	
	comp=Z,260nm,19.0s,baz=322,slow=39						
ILAR	Eielson Array	75.99	17	P	P	22 10 48.7	-0.1
ILAR	Eielson Array	75.99	17	P	P	22 10 48.7	-0.1
PPLA	Purkeypile	76.17	20	P	P	22 10 50.3	+0.3
	baz=323,SNR=9.2						
PPLA	Purkeypile	76.17	20	P	P	22 10 50.5	+0.5
PPLA				IAmb	IAmb	22 11 06.5	
	comp=Z,48nm,1.3s						
TRF	Thorofare Moun	76.24	19	P	P	22 10 50.5	+0.1
	baz=324						
HDA	Harding Lake	76.28	17	P	P	22 10 50.0	-0.4
	baz=327						
HDA	Harding Lake	76.28	17	IAmb	IAmb	22 10 51.5	
	comp=Z,40nm,1.4s						
MCK	McKinley	76.36	18	P	P	22 10 50.8	-0.1
	baz=325						
DBIC	Dimbokro	76.46	269	P	P	22 10 52.3	+0.1
	comp=Z,63nm,1.0s,baz=36,slow=6.4,SNR=36						
DBIC				LR	LR	22 47 57.1	
	comp=Z,680nm,19.0s,baz=38,slow=38						
DBIC	Dimbokro	76.46	269	P	P	22 10 52.3	+0.1
KIC	Kosan Boka	76.53	268	*e*P	P	22 10 52.7	0.0
	comp=Z,156nm,1.0s						
SVW2	Sparrevohn	76.59	22	P	P	22 10 52.9	+0.6
TIC	Toumodi	76.61	269	*e*P	P	22 10 52.9	-0.2
RND	Reindeer	76.65	18	P	P	22 10 52.7	+0.1
RND				pmax	pmax		
	comp=Z,86nm,1.5s						
RND	Reindeer	76.65	18	P	P	22 10 52.7	+0.1
RND				IAmb	IAmb	22 10 53.9	
	comp=Z,86nm,1.5s						
LIC	Lamto	76.84	268	*e*P	P	22 10 54.3	-0.1
	comp=Z,212nm,1.2s						
SKT	Skwentna	77.09	20	P	P	22 10 55.2	+0.2
	baz=324,SNR=23						
SKT	Skwentna	77.09	20	IAmb	IAmb	22 10 56.6	
	comp=Z,39nm,0.8s						
CUT	Chulitna	77.10	19	P	P	22 10 54.6	-0.4
	baz=324						
EGAK	Eagle	77.24	14	P	P	22 10 55.9	+0.1
	baz=332						
EGAK	Eagle	77.24	14	IAmb	IAmb	22 10 58.1	
	comp=Z,61nm,1.3s						
SCRK	Sand Creek	77.33	16	P	P	22 10 56.6	+0.1
	baz=329,SNR=30						
SPCR	Spurr Chakacha	77.53	21	P	P	22 10 57.8	+0.2
	baz=323						
BOSA	Boshof	77.60	222	P	P	22 10 58.6	+0.2
	comp=Z,82nm,0.8s,baz=29,slow=3.5,SNR=121						
BOSA				LR	LR	22 42 54.1	
	comp=Z,220nm,21.9s,baz=18,slow=34						
SUA	Susitna One	77.73	20	P	P	22 10 58.6	-0.2
	baz=324,SNR=13						
SUA	Susitna One	77.73	20	IAmb	IAmb	22 11 00.5	
	comp=Z,30nm,1.1s						
UNV	Unalaska Valle	77.84	32	P	P	22 10 58.7	-0.7
	baz=313						
PAX	Paxson	77.85	17	P	P	22 10 59.8	+0.4
	baz=328,SNR=24						
PAX	Paxson	77.85	17	IAmb	IAmb	22 11 02.2	
	comp=Z,43nm,1.1s						
SML	Sawmill	78.11	19	P	P	22 11 01.1	+0.3
	baz=326,SNR=18						
SML	Sawmill	78.11	19	P	P	22 11 01.2	+0.4
SML				IAmb	IAmb	22 11 03.6	
	comp=Z,49nm,0.8s						
RC01	Rabbit Creek A	78.32	20	P	P	22 11 02.2	+0.3
	baz=325,SNR=10						
SCM	Sheep Creek Mo	78.35	18	P	P	22 11 02.2	0.0
SCM				pmax	pmax		
	comp=Z,52nm,1.2s						
SCM	Sheep Creek Mo	78.35	18	P	P	22 11 02.2	0.0
SCM				IAmb	IAmb	22 11 13.3	
	comp=Z,52nm,1.2s						
M24K	Tolsona, Glenn	78.41	18	P	P	22 11 03.6	+1.1
	baz=328,SNR=8.0						
M24K	Tolsona, Glenn	78.41	18	P	P	22 11 02.5	+0.1
M24K				IAmb	IAmb	22 11 06.3	
	comp=Z,76nm,1.1s						
O22K	Cooper Landing	78.82	20	P	P	22 11 05.1	+0.5
	baz=325						
O22K	Cooper Landing	78.82	20	IAmb	IAmb	22 11 22.9	
	comp=Z,43nm,1.1s						
NWAO	Narrogin (SRO)	78.94	143	P	P	22 11 03.3	-2.3
NWAO				pmax	pmax		
	comp=Z,27nm,0.9s						
NWAO	Narrogin (SRO)	78.94	143	P	P	22 11 04.3	-1.3
NWAO				IAmb	IAmb	22 11 05.9	
	comp=Z,33nm,0.8s						
NWAO	Narrogin (SRO)	78.94	143	P	P	22 11 03.3	-2.3
NWAO				IAmb	IAmb	22 11 05.9	
	comp=Z,27nm,0.8s						
KLU	Klutina	79.00	18	P	P	22 11 06.8	+1.1
	baz=328						
KLU	Klutina	79.00	18	P	P	22 11 06.7	+0.9
BRLK	Bradley Lake	79.07	21	IAmb	IAmb	22 11 08.4	
	comp=Z,30nm,0.7s						
BRSE	Bradley Lake S	79.14	21	P	P	22 11 07.0	+0.6
	baz=324						
SEW	Seward	79.21	20	P	P	22 11 07.1	+0.3
	baz=325						
SEW	Seward	79.21	20	IAmb	IAmb	22 11 26.4	
	comp=Z,65nm,1.4s						
GLI	Glacier Island	79.21	19	P	P	22 11 07.1	+0.3
	baz=327						
GLI	Glacier Island	79.21	19	P	P	22 11 08.1	+1.3
GLI				IAmb	IAmb	22 11 09.7	
	comp=Z,37nm,0.9s						
N25K	Chitina, Valde	79.23	17	P	P	22 11 08.3	+1.3
	baz=329,SNR=13						
N25K	Chitina, Valde	79.23	17	IAmb	IAmb	22 11 10.0	
	comp=Z,75nm,1.4s						
CHGN	Chignik	79.30	26	P	P	22 11 07.6	+0.3
	baz=319						
WB0	Warramunga Arr	79.41	123	IAmb	IAmb	22 11 10.1	
	comp=Z,49nm,1.0s						
FID	Port Fidalgo	79.49	19	P	P	22 11 09.5	+1.2
FID				IAmb	IAmb	22 11 14.2	
	comp=Z,24nm,0.8s						
WRA	Warramunga Arr	79.49	123	P	P	22 11 09.1	+0.2
	comp=Z,33nm,0.8s,baz=325,slow=5.5,SNR=197						
WRA				PKKPbc	PKKPbc	22 29 58.3	+1.0
	comp=Z,0.8nm,0.5s,baz=128,slow=2.2,SNR=25						
WRAB	Tennant Creek	79.49	123	P	P	22 11 09.4	+0.5
WRAB				pmax	pmax		
	comp=Z,62nm,0.9s						
WRAB	Tennant Creek	79.49	123	P	P	22 11 09.4	+0.5
WRAB				IAmb	IAmb	22 11 10.6	
	comp=Z,62nm,0.9s						
WB2	Warramunga Arr	79.50	123	IAmb	IAmb	22 11 10.6	
	comp=Z,60nm,0.8s						
WR0	Warramunga Arr	79.64	123	IAmb	IAmb	22 11 11.2	
	comp=Z,36nm,0.8s						
HIN	Hinchinbrook I	79.78	19	P	P	22 11 10.9	+1.0
HIN				IAmb	IAmb	22 11 20.4	
	comp=Z,52nm,1.4s						
BMRM	Bremner River	79.78	18	P	P	22 11 10.8	+0.8
	baz=329,SNR=10						
MCARA	McCarthy VSAT	79.81	17	P	P	22 11 10.8	+0.8
	baz=330,SNR=7.3						
MCARA	McCarthy VSAT	79.81	17	P	P	22 11 10.8	+0.8
VRDI	Verde Repeater	79.84	17	P	P	22 11 11.2	+0.7
VRDI				IAmb	IAmb	22 11 13.7	
	comp=Z,35nm,1.0s						
EYAK	Cordova Ski Ar	79.85	18	P	P	22 11 11.6	+1.3
	baz=328,SNR=10						
EYAK	Cordova Ski Ar	79.85	18	P	P	22 11 10.3	+0.1
EYAK				IAmb	IAmb	22 11 13.8	
	comp=Z,40nm,0.8s						
CHNA	Chernabura Isl	79.96	28	P	P	22 11 11.5	+0.6
	baz=318						
CNBA	Chernabura Isl	79.97	28	P	P	22 11 10.9	-0.1
CNBA				IAmb	IAmb	22 11 12.7	
	comp=Z,59nm,0.9s						
KDAK	Kodiak Island	80.15	23	P	P	22 11 13.5	+1.5
	comp=Z,31nm,0.7s,baz=346,slow=4.5,SNR=33						
KDAK	Kodiak Island	80.15	23	P	P	22 11 13.4	+1.5
	baz=323						
KDAK	Kodiak Island	80.15	23	P	P	22 11 12.2	+0.3
KDAK				pmax	pmax		
	comp=Z,47nm,0.9s						
KDAK	Kodiak Island	80.15	23	P	P	22 11 12.2	+0.3
KDAK				IAmb	IAmb	22 11 15.3	
	comp=Z,47nm,0.8s						
RAGM	Ragged Mountai	80.26	18	P	P	22 11 13.8	+1.2
RAGM				IAmb	IAmb	22 11 15.7	
	comp=Z,98nm,1.4s						
BALM	Baldy	80.27	17	P	P	22 11 13.7	+1.0
BALM				IAmb	IAmb	22 11 15.4	
	comp=Z,100nm,1.4s						
OHAK	Old Harbor	80.37	24	P	P	22 11 14.4	+1.3
	baz=323						
OHAK	Old Harbor	80.37	24	P	P	22 11 13.7	+0.6
OHAK				IAmb	IAmb	22 11 25.7	
	comp=Z,50nm,1.0s						
HMT	Hamilton	80.41	18	P	P	22 11 14.1	+0.8
HMT				IAmb	IAmb	22 11 17.4	
	comp=Z,30nm,1.0s						
SII	Sitkinak Islan	80.60	24	P	P	22 11 15.5	+1.1
	baz=322						
SII	Sitkinak Islan	80.60	24	P	P	22 11 15.3	+0.9
SII				IAmb	IAmb	22 11 18.2	
	comp=Z,56nm,1.1s						
SUCK	Suckling Hills	80.76	18	P	P	22 11 15.9	+0.7
SUCK				IAmb	IAmb	22 11 26.8	
	comp=Z,52nm,1.2s						
HYT	Haines Junctio	81.54	15	P	P	22 11 20.0	+0.5
HYT				IAmb	IAmb	22 11 22.3	
	comp=Z,54nm,1.0s						
ASAR	Alice Springs	81.73	126	P	P	22 11 21.1	+0.3
	comp=Z,33nm,1.0s,baz=321,slow=5.6,SNR=190						
ASAR				PKKPbc	PKKPbc	22 29 53.8	+1.3
	comp=Z,0.4nm,0.5s,baz=111,slow=2.3,SNR=4.7						
ASAR	Alice Springs	81.73	126	P	P	22 11 20.3	-0.6
ASAR	Alice Springs	81.73	126	P	P	22 11 20.3	-0.6
COEN	Coen	82.03	113	P	P	22 11 22.7	+0.1
PMG	Port Moresby	82.35	107	P	P	22 11 24.8	+0.6
	comp=Z,14nm,0.5s,baz=0.2,slow=13,SNR=5.4						
PMG	Port Moresby	82.35	107	P	P	22 11 24.3	0.0
PMG				pmax	pmax		
	comp=Z,28nm,0.9s						
PMG	Port Moresby	82.35	107	P	P	22 11 24.2	0.0
PMG				IAmb	IAmb	22 11 26.3	
	comp=Z,28nm,0.8s						
YKA	Yellowknife Ar	82.93	4	P	P	22 11 27.0	+0.4
	comp=Z,18nm,0.6s,baz=354,slow=5.0,SNR=298						
YKA				PP	PP	22 14 37.8	+1.4
	comp=Z,5.3nm,1.1s,baz=357,slow=7.7,SNR=4.1						
YKA				PKKPbc	PKKPbc	22 29 48.9	-0.4
	comp=Z,0.9nm,0.6s,baz=156,slow=2.6,SNR=11						
YKA				LR	LR	22 52 30.4	
	comp=Z,376nm,18.4s,baz=0.0,slow=39						
YKA	Yellowknife Ar	82.93	4	P	P	22 11 27.0	+0.4
SUR	Sutherland	82.94	223	P	P	22 11 27.2	+0.1
FORT	Forrest	83.11	135	P	P	22 11 27.5	-0.3
SKAG	Skagway	83.23	14	P	P	22 11 29.5	+1.3
	baz=337						
SKAG	Skagway	83.23	14	P	P	22 11 29.2	+1.0
SKAG				IAmb	IAmb	22 11 31.0	
	comp=Z,31nm,1.2s						
BESE	Bessie Mountai	84.14	14	P	P	22 11 33.6	+0.6
BESE				IAmb	IAmb	22 11 35.7	
	comp=Z,45nm,1.2s						
JIS	Juneau Island	84.52	14	P	P	22 11 35.2	+0.5
JIS				IAmb	IAmb	22 11 37.8	
	comp=Z,51nm,1.2s						
DLBC	Dease Lake	85.19	12	P	P	22 11 39.1	+0.9
	comp=Z,17nm,0.9s,baz=343,slow=5.7,SNR=26						
DRLN	Deer Lake	85.65	330	P	P	22 11 40.9	+0.3
DRLN				IAmb	IAmb	22 11 42.0	
	comp=Z,30nm,0.8s						
FCC	Fort Churchill	86.28	353	P	P	22 11 43.8	+0.3
FCC				pmax	pmax		
	comp=Z,16nm,1.0s						
FCC	Fort Churchill	86.28	353	P	P	22 11 43.8	+0.3
WRAK	Wrangell Islan	86.66	14	P	P	22 11 46.6	+1.2
	baz=339						
CRAG	Craig	87.39	15	P	P	22 11 50.2	+1.2
	baz=338						
CTAO	Charters Tower	88.12	116	P	P	22 11 53.1	+0.1
CTAO				pmax	pmax		
	comp=Z,34nm,1.1s						
CTAO	Charters Tower	88.12	116	P	P	22 11 53.1	+0.1
CTAO				IAmb	IAmb	22 11 54.3	
	comp=Z,34nm,1.1s						
GBN	Guysborough	90.36	330	P	P	22 12 03.6	+0.4
FFC	Flin Flon	90.84	357	P	P	22 12 05.6	+0.4
FFC				pmax	pmax		
	comp=Z,20nm,1.0s						
FFC	Flin Flon	90.84	357	P	P	22 12 05.6	+0.4
FFC				IAmb	IAmb	22 12 06.8	
	comp=Z,20nm,1.0s						
MATQ	Matagami	92.03	342	P	P	22 12 11.4	+0.5
	baz=24						
STKA	Stephens Creek	92.25	128	P	P	22 12 12.4	+0.3
	comp=Z,3.1nm,0.7s,baz=284,slow=2.5,SNR=5.6						
STKA				LR	LR	23 01 42.3	
	comp=Z,55nm,18.7s,baz=1.7,slow=41						
STKA	Stephens Creek	92.25	128	P	P	22 12 12.0	0.0
STKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
STKA	Stephens Creek	92.25	128	P	P	22 12 12.0	0.0
LSQQ	Lebel-sur-Quev	92.49	341	P	P	22 12 13.6	+0.6
	baz=24						
LATQ	La Tuque	92.78	338	P	P	22 12 14.8	+0.4
	baz=27						
G65A	Princeton	92.90	333	P	P	22 12 15.6	+0.7
	baz=31						
D58A	Chemin du LacG	93.07	338	P	P	22 12 15.9	+0.2
	baz=27						
VLDQ	Val d'Or	93.48	341	P	P	22 12 17.8	+0.2
VLDQ				IAmb	IAmb	22 12 19.2	
	comp=Z,16nm,0.8s						
D56A	ZEC Mazanza, M	93.68	339	P	P	22 12 18.9	+0.4
	baz=26						

E58A	La Victoria	93.83	337	P	P	22 12 19.6	+0.3
	baz=27						
D55A	Sainte-Anne-du	93.92	339	P	P	22 12 19.9	+0.2
	baz=25						
E56A	St. Veronique	94.22	339	P	P	22 12 21.5	+0.5
	baz=26						
TRQ	Mont Tremblant	94.36	338	P	P	22 12 20.6	-1.2
MOQ	Mont Orford	94.44	336	P	P	22 12 22.3	+0.1
E55A	Montcerf-Lytto	94.60	339	P	P	22 12 23.6	+0.8
	baz=25						
ULM	Lac du Bonnet	94.87	353	P	P	22 12 23.6	-0.3
	comp=Z,7.7nm,0.9s,baz=351,slow=4.8,SNR=18						
ULM				LR	LR	22 57 32.5	
	comp=Z,259nm,21.5s,baz=11,slow=37						
ULM	Lac du Bonnet	94.87	353	IAmb	IAmb	22 12 24.9	
	comp=Z,10nm,0.9s						
G58A	Ormstown	95.17	337	P	P	22 12 25.5	+0.1
	baz=26						
H60A	Morristown	95.25	336	P	P	22 12 26.3	+0.4
	baz=28						
LBNH	Lisbon	95.28	336	P	P	22 12 25.8	-0.1
	baz=28						
G57A	Newington	95.50	338	P	P	22 12 27.1	+0.2
	baz=26						
ALGO	Algonquin Park	95.63	340	P	P	22 12 27.8	+0.3
	baz=23						
LONY	Lake Ozonia	95.81	338	P	P	22 12 28.7	+0.3
	baz=26						
I60A	Shoreham	96.09	336	P	P	22 12 29.8	+0.2
	baz=27						
G54A	Lake Saint Pet	96.15	340	P	P	22 12 30.1	+0.2
	baz=23						
B05A	Bryant	96.27	10	P	P	22 12 30.9	+0.6
	baz=347						
J61A	Chester	96.28	336	P	P	22 12 31.0	+0.4
	baz=28						
WALA	Waterton Lakes	96.36	5	IAmb	IAmb	22 12 32.4	
	comp=Z,11nm,1.1s						
B08A	Colville Reser	96.55	8	P	P	22 12 31.5	-0.1
EYMN	Ely	96.59	350	P	P	22 12 31.5	-0.3
	baz=13						
EYMN	Ely	96.59	350	IAmb	IAmb	22 12 32.8	
	comp=Z,13nm,1.1s						
AGMN	Agassiz Nation	96.80	353	IAmb	IAmb	22 12 37.7	
	comp=Z,14nm,1.2s						
J59A	Piesco	96.82	337	P	P	22 12 32.9	-0.1
	baz=26						
NEW	Newport	96.88	7	P	P	22 12 33.3	+0.2
	comp=Z,4.6nm,0.8s,baz=8.9,slow=2.5,SNR=8.2						
NEW	Newport	96.88	7	P	P	22 12 33.4	+0.2
	baz=351						
NEW	Newport	96.88	7	P	P	22 12 33.2	0.0
NEW				pmax	pmax		
	comp=Z,8.0nm,1.0s						
NEW	Newport	96.88	7	P	P	22 12 33.2	0.0
DGMT	Dagmar	97.16	358	P	P	22 12 34.4	-0.1
	baz=2.1						
C09A	Chrisman Ranch	97.22	8	P	Pdif	22 12 35.3	+0.6
C09A				IAmb	IAmb	22 12 36.6	
	comp=Z,16nm,1.3s						
JTMT	Jette	97.64	5	P	P	22 12 36.4	-0.4
JTMT				IAmb	IAmb	22 12 43.4	
	comp=Z,14nm,1.5s						
K58A	Earlville	97.82	337	P	Pdif	22 12 37.6	0.0
	baz=25						
K57A	Scipio Center	98.12	338	P	P	22 12 38.5	-0.3
	baz=25						
M61A	Granite Spring	98.50	335	P	P	22 12 39.6	-1.0
	baz=27						
N58A	Sunbury	99.90	337	P	Pdif	22 12 45.7	-1.1
	baz=25						
PDAR	Pinedale Array	102.86	2	P	Pdif	22 13 01.1	+0.9
	comp=Z,0.2nm,0.4s,baz=46,slow=4.3,SNR=4.1						
PDAR				PP	PP	22 17 14.2	+1.1
	comp=Z,1.2nm,1.0s,baz=41,slow=4.7,SNR=4.7						
PDAR				PKiKP	PKiKP	22 17 20.6	+0.1
	comp=Z,0.9nm,0.8s,baz=94,slow=2.6,SNR=4.0						
NVAR	Mina Array Bea	106.45	9	PKiKP	PKiKP	22 17 28.5	+1.3
	comp=Z,0.4nm,0.2s,baz=20,slow=4.9,SNR=4.4						
JCT	Junction City	114.83	353	P	PKiKP	22 17 42.7	-0.3
	baz=6.2						
TXAR	Lajitas Array	116.24	357	PKP	PKPdf	22 17 46.6	+0.8
	comp=Z,0.9nm,0.8s,baz=0.0,slow=1.3,SNR=4.7						
TXAR				PP	PP	22 18 48.8	-1.2
	comp=Z,0.9nm,0.8s,baz=20,slow=4.0,SNR=3.5						
TXAR				PKKPbc	PKKPbc	22 28 15.3	+0.5
	comp=Z,2.6nm,0.9s,baz=184,slow=7.3,SNR=5.9						
SNAA	Sanae	118.36	200	PKPdf	PKPdf	22 17 48.4	0.0
VNA2	Neumayer--Watz	119.42	202	PKPdf	PKiKP	22 17 50.8	+0.4
	baz=25,slow=3.0						
VNA1	Neumayer--Stat	119.59	202	PKPdf	PKiKP	22 17 50.9	+0.2
VNA3	Neumayer Olymp	120.22	202	PKPdf	PKiKP	22 17 52.1	+0.1
SMTB	Santa Maria do	120.27	281	*e*P	PKiKP	22 17 55.3	+1.5
ALF01	Guarapari-ES	120.79	265	*e*P	PKiKP	22 17 55.9	+1.3
JANB	Januaria	120.96	273	*e*P	PKiKP	22 17 56.4	+1.3
MALB	Monte Alegre	121.30	292	*e*P	PKiKP	22 17 57.2	+1.3
VNDA	Vanda	123.29	165	PKP	PKPdf	22 17 57.5	-0.2
	comp=Z,5.6nm,0.8s,baz=246,slow=6.1,SNR=1.9						
SDV	Santo Domingo	124.79	315	PKP	PKPdf	22 18 02.4	-0.3
	comp=Z,2.7nm,0.6s,baz=18,slow=6.0,SNR=3.3						
SDV	Santo Domingo	124.79	315	*e*P	PKiKP	22 18 03.9	+0.9
NPGB	Novo Progresso	125.40	288	*e*P	PKiKP	22 18 05.0	+1.1
CMIG	Matias Romero	127.27	346	PKP	PKPdf	22 18 07.0	-0.1
	comp=Z,2.5nm,0.7s,baz=5.6,slow=9.9,SNR=4.2						
BELA	Belgrano 2	127.40	195	PKPdf	PKPdf	22 18 05.5	0.0
SPB	Sao Paulo	127.67	265	*e*P	PKiKP	22 18 09.2	+1.1
CLDB	Colider	128.02	284	*e*P	PKiKP	22 18 09.8	+0.7
FRTB	Fartura	129.31	267	*e*P	PKiKP	22 18 12.2	+0.6
ROSC	El Rosal	130.19	316	PKIKP	PKPdf	22 18 12.0	-1.3
ROSC	El Rosal	130.19	316	PKPdf	PKPdf	22 18 12.0	-1.3
PP1B	Ponte de Pedra	130.95	277	*e*P	PKiKP	22 18 15.3	+0.4
TER01	Tubaro-SC	131.10	260	*e*P	PKiKP	22 18 15.3	+0.3
PTGB	Pitanga	131.97	267	*e*P	PKiKP	22 18 17.1	+0.1
VILB	Vilhena	132.73	286	*e*P	PKiKP	22 18 19.0	+0.3
CNLB	Canela	132.80	260	*e*P	PKiKP	22 18 18.5	+0.1
CPSB	Cacapava Do Su	135.28	260	*e*P	PKiKP	22 18 23.1	-0.3
ETMB	Extrema	135.48	294	*e*P	PKiKP	22 18 24.0	-0.2
PLTB	Pedras Altas	135.87	258	*e*P	PKiKP	22 18 24.2	-0.3
CPUP	Villa Florida	136.96	267	PKhKP	PKPpre	22 18 16.4	
	comp=Z,3.1nm,0.9s,baz=325,slow=1.1,SNR=5.9						
CPUP				PKP	PKPdf	22 18 24.3	-0.7
	comp=Z,2.0nm,0.7s,baz=27,slow=3.2,SNR=4.9						
CPUP	Villa Florida	136.96	267	PKIKP	PKPdf	22 18 20.4	-4.7
CPUP	Villa Florida	136.96	267	PKPdf	PKPdf	22 18 20.4	-4.7
CPUP	Villa Florida	136.96	267	*e*P	PKiKP	22 18 26.3	-0.5
ITQB	Itaqui	137.62	262	*e*P	PKiKP	22 18 27.4	-0.7
CZSB	Cruzeiro do Su	138.78	303	*e*P	PKiKP	22 18 30.0	-1.0
PMSA	Palmer Station	140.49	207	*e*P	PKPdf	22 18 31.4	+1.2
LPAZ	La Paz	140.90	288	PKhKP	PKPpre	22 18 26.2	
	comp=Z,1.8nm,0.8s,baz=12,slow=2.7,SNR=3.0						
LPAZ				PKP	PKPdf	22 18 31.2	-2.1
	comp=Z,2.2nm,0.9s,baz=60,slow=10.0,SNR=6.3						
LPAZ	La Paz	140.90	288	PKIKP	PKPdf	22 18 31.8	-1.5
LPAZ	La Paz	140.90	288	PKPdf	PKPdf	22 18 31.8	-1.5
LPAZ	La Paz	140.90	288	*e*P	PKPdf	22 18 33.6	+0.3
ATAH	Atahualpa	142.13	310	PKP	PKPdf	22 18 33.6	-1.8
	comp=Z,4.9nm,0.7s,baz=150,slow=3.2,SNR=3.2						
NNA	Nana	144.66	302	PKIKP	PKPbc	22 18 38.3	+0.2
NNA	Nana	144.66	302	PKPdf	PKPbc	22 18 38.3	+0.2
LVC	Limon Verde	144.87	280	PKIKP	PKPbc	22 18 39.1	+0.1
LVC	Limon Verde	144.87	280	PKPdf	PKPbc	22 18 39.1	0.0
LVC	Limon Verde	144.87	280	*e*P	PKPbc	22 18 39.0	0.0
TA01	Diego Aracena	144.87	284	PKPdf	PKPdf	22 18 40.0	+0.5
CO01	Juntas del Tor	148.78	268		PKiKP	22 18 51.9	+0.5
LCO	Las Campanas	148.96	270	PKIKP	PKPbc	22 18 48.5	-2.0
LCO	Las Campanas	148.96	270	PKPdf	PKPbc	22 18 48.5	-2.0
VA03	San Esteban	149.93	263	PKPab	PKPab	22 18 58.0	-0.3
GO09	Cerro Castillo	150.22	226	PKPab	PKPab	22 18 56.6	-2.1
PLCA	Paso Flores	150.88	247	PKPbc	PKPbc	22 18 53.8	-0.8
	comp=Z,18nm,1.0s,baz=118,slow=6.6,SNR=11						
PLCA	Paso Flores	150.88	247	*e*P	PKPdf	22 18 49.7	+0.8

IDC 26 22:01:26.9±285.0**,68°.21N×147°.79W,h0^{km},Error ellipse: s-maj=132.3km s-min=73.7km az=176.0, Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I53US	FAIRBANKS INFR	3.35	181	*i*		22 24 50.0	
	baz=358,slow=325,SNR=20						
I18DK	QAANAAQ INFRAS	22.84	33	*i*		00 22 00.0	
	baz=282,slow=343,SNR=5.3						
I56US	NEWPORT INFRAS	25.21	127	*i*		00 35 40.0	
	baz=335,slow=331,SNR=2.5						
I10CA	LAC DU BONNET	30.77	99	*i*		01 05 00.0	
	baz=324,slow=333,SNR=4.9						

*NEIC **26** 22:07:46.0±1.7, 16°.41N±0°.06×99°.47W±0°.06, h1^{km}±3^{km}, Error ellipse: s-maj=9.6km s-min=7.1km az=208.0*

*MEX **26** 22:07:48.1±1.5, 16°.30N×99°.61W, h15^{km}±21^{km}, MD4.2*

*IDC **26** 22:07:52.4±6.0, 17°.33N×99°.00W, h0^{km}, mb3.9/4, mb1 4.2/5, mb1mx3.8/45, mbtmp3.8/5, ML3.0/2, MS3.2/7, Ms1 3.3/7, ms1mx3.1/43, Error ellipse: s-maj=144.9km s-min=34.4km az=27.0*

ISC 26 22:07:44.8±1.4**, 16°.33N**±0°.04×**99°.52W**±0°.03**, h6**^{km}±9^{km}**, n113,** σ1^{s}.**88**/141**, mb4.2**/23**, MS3.5**/4**, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRIG	Cruz Grande	0.55	43	*e*P	Pn	22 07 58.1	-1.1
CRIG				*e*S	Sn	22 08 06.7	-2.0
ACP2	Acapulco	0.64	327	*i* P	Pg	22 07 58.0	+0.8
ACP2				*i* S	Sg	22 08 05.7	+0.1
ACP2	Acapulco	0.64	327		Pg	22 07 58.0	+0.8
ACP2					Sg	22 08 05.7	+0.1
CAIG	El Cayaco	1.01	315	*i* P	Pb	22 08 02.9	-1.9
CAIG				*e*S	Sb	22 08 16.0	-2.3
CAIG	El Cayaco	1.01	315		Pb	22 08 02.9	-1.9
CAIG					Sb	22 08 16.0	-2.3
PNIG	Pinotepa	1.34	87	*i* P	Pn	22 08 10.3	+0.2
PNIG				*e*S	Sb	22 08 26.1	-1.7
PNIG	Pinotepa	1.34	87		Pn	22 08 10.3	+0.2
PNIG					Sb	22 08 26.1	-1.7
MEIG	Mezcala	1.59	357	*e*P	Pn	22 08 12.9	-0.7
MEIG				*e*S	Sn	22 08 32.6	-1.9
MEIG	Mezcala	1.59	357		Pn	22 08 12.9	-0.7
MEIG					Sn	22 08 32.6	-1.9
TXIG	Tlaxiaco	1.91	61	*e*P	Pn	22 08 19.0	+0.7
TXIG				*e*S	Sb	22 08 42.4	-2.2
PLIG	Platanillo	2.05	0	*e*P	Pn	22 08 20.1	+0.1
PLIG				*i* S	Sn	22 08 44.0	-1.9
PLIG	Platanillo	2.05	0		Pn	22 08 20.1	+0.1
PLIG					Sb	22 08 45.5	-2.7
ARIG	Puente Sto Nin	2.09	338	*e*P	Pn	22 08 20.2	-0.2
ARIG				*e*S	Sn	22 08 43.2	-3.7
ARIG	Puente Sto Nin	2.09	338		Pn	22 08 20.2	-0.2
ARIG					Sn	22 08 43.2	-3.7
ZIIG	Zihuatanejo	2.25	305	*e*P	Pn	22 08 21.0	-1.6
ZIIG				*i* S	Sn	22 08 46.8	-3.9
ZIIG	Zihuatanejo	2.25	305		Pn	22 08 21.0	-1.6
ZIIG					Sn	22 08 50.9	+0.1
PEIG	Puerto Escondi	2.31	98	*e*P	Pn	22 08 23.4	0.0
PEIG				*i* S	Sn	22 08 44.5	-7.6
YAIG	Yautepec	2.55	10	*e*P	Pn	22 08 27.4	+0.5
YAIG				*e*S	Sb	22 09 02.4	-0.5
YAIG	Yautepec	2.55	10		Pn	22 08 28.3	+1.4
YAIG					Sb	22 09 02.4	-0.5
MAVM	Malinalco, Edo	2.61	1	*e*P	Pn	22 08 29.0	+1.2
MAVM				*i* S	Sn	22 09 00.2	+0.3
PPM	Popocatepetl	2.85	17	*i* P	Pn	22 08 31.5	+0.1
PPM				*e*S	Sb	22 09 06.6	-5.2
AMVM	AMECAMECA	2.87	14	*e*P	Pn	22 08 31.9	+0.4
AMVM				*i* S	Sn	22 09 06.2	-0.3
TPIG	Tehuac#an	2.92	45	*e*S	Sn	22 09 07.7	0.0
TPIG	Tehuac#an	2.92	45		Sn	22 09 07.7	0.0
TOIG	Toxpalan	2.93	53	*e*P	Pn	22 08 32.6	+0.5
TOVM	TOLUCA	2.94	357	*e*P	Pn	22 08 32.2	-0.2
TOVM				*e*S	Sn	22 09 07.4	-0.8
UNM	Universidad Na	3.00	6		Pb	22 08 36.8	-2.0
CVM	Colonia del Va	3.05	6	*e*P	Pn	22 08 34.4	+0.8
CVM				*e*S	Sn	22 09 10.2	-0.2
PBVM	Pinon	3.12	8	*e*P	Pn	22 08 33.9	-0.6
PBVM				*e*S	Sn	22 09 12.3	+0.1
HUIG	Huatulco	3.33	99	*e*P	Pn	22 08 38.1	+0.6
HUIG				*e*S	Sn	22 09 17.2	-0.2
HUIG	Huatulco	3.33	99		Pn	22 08 40.1	+2.6
HUIG					Sb	22 09 21.2	-3.9
ATVM	ATLACOMULCO	3.42	355	*e*P	Pn	22 08 38.6	-0.5
ATVM				*e*S	Sn	22 09 19.8	-0.4
VTVM	Tizayuca	3.49	12	*e*P	Pn	22 08 40.2	+0.2
VTVM				*e*S	Sb	22 09 25.0	-5.0
ZUVM	ZUMPANGO	3.50	7	*e*P	Pn	22 08 40.2	+0.1
ZUVM				*e*S	Sn	22 09 21.8	-0.2
ACIG	Acambay	3.64	355	*e*P	Pn	22 08 42.1	+0.1
ACIG				*e*S	Sn	22 09 25.0	-0.4
MOIG	Morelia	3.69	335	*e*P	Pn	22 08 42.9	+0.3
MOIG				*i* S	Sn	22 09 24.8	-1.8
MOIG	Morelia	3.69	335		Pn	22 08 42.0	-0.6
DEIG	Demacu	3.97	7	*e*S	Sn	22 09 33.4	-0.2
CMIG	Matias Romero	4.51	80	Pn	Pn	22 08 55.1	+1.4
	0.5nm,0.3s,baz=263,slow=16,SNR=4.7						
CMIG				Lg	Lg	22 10 09.7	
	6.2nm,0.3s,baz=328,slow=20,SNR=12						
CMIG				LR	LR	22 10 10.3	
	comp=Z,56nm,21.4s,baz=284,slow=35						
IGIG	Irapuato, Guan	4.72	339	*e*S	Sn	22 09 50.9	-1.1
COIG	Colima	4.88	306	*i* P	Pn	22 08 58.7	-0.2
COIG				*e*S	Sn	22 09 53.4	-2.4
EZ5V		4.99	309	*i* P	Pn	22 09 00.7	+0.2
EZ5V				*e*S	Sn	22 09 56.9	-1.8
R15V		5.10	304	*e*P	Pn	22 09 03.1	+1.2
R15V				*e*S	Sn	22 10 00.8	-0.5
ZAIG	Zacatecas	7.02	336	Pn	Pn	22 09 33.0	+4.6
TEIG	Tepich	11.36	68	LR	LR	22 15 38.9	
	comp=Z,148nm,18.6s,baz=281,slow=44						
TXAR	Lajitas Array	13.49	344	LR	LR	22 16 10.4	
	comp=Z,116nm,20.6s,baz=0.0,slow=39						
GDL2	Guadalupe Moun	16.40	345	Pn	P	22 11 38.0	-0.6
HSIG		16.43	322	Pn	P	22 11 39.1	+0.1
319A	Douglas	17.42	331	Pn	P	22 11 50.5	+0.5
121A	Cookes Peak, D	17.78	337	Pn	Pn	22 11 53.8	+0.5
MSTX	Muleshoe	17.80	351		P	22 11 55.4	+1.2
ANMO	Albuquerque	19.55	343	P	P	22 12 13.8	+0.3
	0.1nm,0.3s,baz=154,slow=15,SNR=2.5						
ANMO				LR	LR	22 19 36.5	
	comp=Z,114nm,18.2s,baz=132,slow=38						
ANMO	Albuquerque	19.55	343	P	Pn	22 12 14.6	-0.2
214A	Organ Pipe Nat	19.69	325	P	Pn	22 12 16.6	+0.2
PIX	Pinacate	19.77	323		Pn	22 12 18.1	+0.9
OXF	Oxford	20.25	25	P	P	22 12 21.0	+0.1
FCAR	Ozark Folk Cen	20.56	17	P	P	22 12 24.3	0.0
FCAR				IAmb	IAmb	22 12 27.1	
	comp=Z,23nm,1.6s						
SPX	San Pedro Mart	20.64	318	P	P	22 12 27.4	+1.9
SPX				IAmb	IAmb	22 12 29.9	
	comp=Z,10.0nm,1.1s						
KAN10	Anthony SW Sta	20.75	3	P	Pn	22 12 28.1	-0.6
KAN01	Argonia South	20.80	4	P	P	22 12 24.5	-2.4
ESJX	Sierra Juarez	21.59	319	P	P	22 12 37.4	+1.8
ESJX				IAmb	IAmb	22 12 42.0	
	comp=Z,15nm,1.6s						
GLA	Glamis	21.64	323	P	P	22 12 37.3	+1.2
GLA				IAmb	IAmb	22 12 40.2	
	comp=Z,9.8nm,0.9s						
WUAZ	Wupatki	21.84	333	P	P	22 12 40.1	+1.8
WUAZ				IAmb	IAmb	22 12 44.4	
	comp=Z,17nm,1.1s						
MVCO	Mesa Verde	22.26	341	P	P	22 12 44.0	+1.1
MVCO				IAmb	IAmb	22 12 47.4	
	comp=Z,13nm,1.4s						
W13A	Hualapai Mount	22.68	328	P	P	22 12 51.8	+4.5
W13A				IAmb	IAmb	22 12 59.7	
	comp=Z,11nm,1.3s						
PV13	Radium Mtn., P	23.23	341	P	P	22 12 54.9	+1.8
PV13				IAmb	IAmb	22 13 25.5	
	comp=Z,18nm,1.9s						
PV02	Paradox Valley	23.25	341	P	P	22 12 54.3	+1.1
PV02				IAmb	IAmb	22 12 57.3	
	comp=Z,7.0nm,1.1s						
PV15	Paradox Valley	23.30	342	P	P	22 12 55.0	+1.2
PV15				IAmb	IAmb	22 12 55.9	
	comp=Z,9.7nm,1.4s						
PV07	Paradox Valley	23.44	342	P	P	22 12 56.8	+1.6
PV04	Paradox Valley	23.47	341	P	P	22 12 56.9	+1.5
PV04				IAmb	IAmb	22 12 58.7	
	comp=Z,7.6nm,1.1s						
PV22	Blue Mesa, Par	23.57	342	P	P	22 12 58.7	+2.3
SMCO	Snowmass	23.68	345	P	P	22 12 59.6	+1.9
SMCO				IAmb	IAmb	22 13 01.9	
	comp=Z,8.4nm,1.2s						
KNB	Kanab	23.73	333	P	P	22 12 59.4	+1.4
LCMT	Little Creek M	23.92	332	P	P	22 13 00.8	+1.0
MTPU	Mount Pierson	24.33	335	P	P	22 13 06.0	+2.2
CCUT	Cedar City	24.42	333	P	P	22 13 06.5	+2.0
SHPR	Sheep Range	24.43	328	P	P	22 13 05.9	+1.4
SHPR				IAmb	IAmb	22 13 09.0	
	comp=Z,10nm,1.4s						
MSU	Marysvale	24.73	336	P	P	22 13 01.3	-6.0
P43A	Skaggs, Pawnee	24.81	19	P	P	22 13 07.9	+0.2
P17A	Butcher Ranch,	25.05	339	P	P	22 13 12.5	+2.4
TMUT	Trail Mountain	25.06	338	P	P	22 13 11.3	+0.9
PRN	Pahroc Range	25.08	330		P	22 13 12.5	+2.1
PRN				IAmb	IAmb	22 13 16.3	
	comp=Z,11nm,1.3s						
TPNV	Topopah Spring	25.32	327		P	22 13 14.7	+2.1
N41A	Harden Midland	25.42	15	P	P	22 13 13.9	+0.7
PSUT	Pine Spring	25.45	333	P	P	22 13 15.6	+1.8
ISA	Isabella, Lake	25.62	322	P	P	22 13 15.3	+0.1
ISA				IAmb	IAmb	22 13 21.0	
	comp=Z,8.0nm,1.2s						
NLU	North Lily Min	25.95	338	P	P	22 13 19.5	+1.2
R11A	Troy Canyon, C	26.08	330	P	P	22 13 20.8	+1.2
R11A				IAmb	IAmb	22 13 25.4	
	comp=Z,6.1nm,1.1s						
RWWY	Rawlins	26.12	347	P	P	22 13 21.9	+2.0
PAGB	Antelope Grade	26.73	320	P	P	22 13 27.4	+2.2
TCUT	Toone Canyon	26.75	340	P	P	22 13 27.2	+1.6
NVAR	Mina Array Bea	27.51	327	P	P	22 13 36.9	+4.5
	comp=Z,2.2nm,0.9s,baz=136,slow=12,SNR=6.7						
NVAR	Mina Array Bea	27.51	327	P	P	22 13 34.1	+1.7
BW06	Boulder Array	27.71	344	IAmb	IAmb	22 13 40.5	
	comp=Z,6.6nm,1.1s						
PD31	Pinedale Array	27.71	344	P	P	22 13 35.9	+1.7
PD31				IAmb	IAmb	22 13 40.5	
	comp=Z,6.0nm,1.1s						
PDAR	Pinedale Array	27.71	344	P	P	22 13 36.2	+2.0
	comp=Z,3.0nm,1.0s,baz=152,slow=10,SNR=14						
PDAR				LR	LR	22 24 30.1	
	comp=Z,140nm,18.1s,baz=21,slow=37						
PDAR	Pinedale Array	27.71	344	P	P	22 13 34.7	+0.5
KVN	Kaiserville	27.87	328	P	P	22 13 38.3	+2.7
KVN				IAmb	IAmb	22 13 47.2	
	comp=Z,5.0nm,1.2s						
ELK	Elko	27.88	334	LR	LR	22 24 52.4	
	comp=Z,94nm,19.2s,baz=41,slow=38						
RSSD	Black Hills	27.96	353	P	P	22 13 37.7	+1.3
RSSD				IAmb	IAmb	22 13 43.7	
	comp=Z,4.5nm,1.1s						
LOHW	Long Hollow	28.78	343	P	P	22 13 45.0	+1.2
SDV	Santo Domingo	29.12	101	LR	LR	22 24 56.1	
	comp=Z,41nm,19.2s,baz=8.5,slow=36						
BCYI	Bear Canyon	30.26	340	P	P	22 13 56.9	+0.1
MFID	Camas Ranch	30.36	336	P	P	22 13 58.5	+1.0
MFID				IAmb	IAmb	22 14 17.2	
	comp=Z,7.0nm,1.4s						
DLMT	Dillon	30.95	342	P	P	22 14 04.9	+2.0
DLMT				IAmb	IAmb	22 14 06.8	
	comp=Z,5.1nm,1.0s						
J08A	Circle Bar Ran	31.40	333	P	P	22 14 08.0	+1.2
GCPR	Guaynabo City	31.96	82	P	P	22 14 10.8	-1.0
HRY	Holter Researc	31.97	344	P	P	22 14 12.9	+1.1
AGMN	Agassiz Nation	32.02	5	P	P	22 14 13.3	+1.3
MTP	Monte Pirata	32.47	82	P	P	22 14 18.3	+2.0
YKA	Yellowknife Ar	47.31	351	P	P	22 16 19.9	+0.9
	comp=Z,1.7nm,0.8s,baz=156,slow=7.9,SNR=6.1						
ILAR	Eielson Array	57.91	338	P	P	22 17 39.0	+1.4
	comp=Z,0.6nm,0.9s,baz=141,slow=4.4,SNR=3.0						
RES	Resolute Bay	58.41	1	LR	LR	22 43 11.5	
	comp=Z,343nm,20.5s,baz=260,slow=37						

*MAN **26** 22:08:52.2, 9°.96N×126°.52E, h7^{km}, mb5.0, ML4.0, MS4.0*

*NEIC **26** 22:09:01.3±1.1, 9°.83N±0°.08×126°.2E±0°.1, h92^{km}±9^{km}, mb4.4/26, Error ellipse: s-maj=17.0km s-min=11.1km az=83.0*

*IDC **26** 22:09:03.3±2.9, 9°.89N×126°.18E, h108^{km}±27^{km}, mb3.9/20, mb1 3.9/21, mb1mx3.7/54, mbtmp4.2/21, MS3.6/3, Ms1 3.6/3, ms1mx3.1/54, Error ellipse: s-maj=28.4km s-min=11.6km az=75.0*

ISC 26 22:09:02.1±0.4**, 9°.81N**±0°.04×**126°.23E**±0°.07**, h100**^{km}**, n74,** σ1^{s}.**41**/74**, mb4.2**/28**, 3D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUTP	Butuan	1.03	216	*e*P	Pn	22 09 15.5	-7.4
BUTP				*e*S	Sn	22 09 35.5	-2.9
CGP	Cagayan de Oro	2.03	229⇓	*e*P	Pn	22 09 30.6	-4.4
CGP				*e*S	Sn	22 10 00.9	+0.7
LLP	Lapu-Lapu	2.29	283⇓	*e*P	Pn	22 09 36.5	-2.0
LLP				*e*S	Sn	22 10 09.6	+3.3
DAV	Davao City (W)	2.79	193	P	Pn	22 09 49.3	+4.1
	51nm,0.3s,baz=271,slow=5.2,SNR=3.8						
DAV				S	Sn	22 10 19.5	+1.2
	45nm,0.3s,baz=280,slow=11,SNR=5.5						
DAV				LR	LR	22 11 23.4	
	comp=Z,2µm,18.6s,baz=20,slow=49						
DAV	Davao City (W)	2.79	193	Pn	Pn	22 09 44.3	-0.9
MATI	Mati	2.84	179	*e*P	Pn	22 09 41.3	-4.6
CNOP	Candoni, Negro	3.54	271	*e*P	Pn	22 09 52.6	-2.5
CNOP				*e*S	Sn	22 10 34.2	-2.0
SKMP	Bagumbayan, Su	3.67	207	*e*P	Pn	22 09 55.5	-1.4
GUIM	Jordan	3.68	283	*e*P	Pn	22 09 55.0	-1.9
GUIM				*e*S	Sn	22 10 42.3	+2.9
DDMP	Don Marcelino,	3.71	188	*e*P	Pn	22 09 57.3	-0.2
DDMP				*e*S	Sn	22 10 41.3	+0.9
JAP	San Jose, Anti	4.32	283⇓	*e*P	Pn	22 10 06.8	+1.1
JCNP	Jose Panganiba	5.64	323	*e*P	Pn	22 10 18.3	-5.3
MYLDM	Lahad Datu	8.94	240	Pn	Pn	22 11 06.1	-2.3
KKM	Kota Kinabalu	10.60	250	Pn	Pn	22 11 30.1	-1.1
LUWI	Luwuk	11.31	198	Pn	Pn	22 11 41.9	+1.1
FAKI	Fak Fak	13.99	154	Pn	Pn	22 12 15.8	-0.3
YULB	Yu-li	14.31	341	Pn	Pn	22 12 19.3	-0.8
TPUB	Ta-pu	14.45	339	Pn	Pn	22 12 22.6	+0.7
SSLB	Suanglung	14.79	341	Pn	Pn	22 12 25.7	-0.6
YOJ	Yonaguni jima	14.89	349	Pn	Pn	22 12 25.9	-1.6
KAPI	Kappang	16.08	204	LR	LR	22 20 26.1	
	comp=Z,153nm,19.3s,baz=36,slow=42						
KNMB	Chin-men Tao	16.38	334		Pn	22 12 46.2	0.0
KNMB				IAmb	IAmb	22 12 60.0	
	comp=Z,36nm,1.1s						
SOEI	Soe	19.53	186	P	P	22 13 22.3	+0.3
SOEI				IAmb	IAmb	22 13 34.7	
	comp=Z,19nm,1.0s						
BATI	Baumata	20.05	187	P	P	22 13 28.2	+0.7
	comp=Z,49nm,0.6s,baz=260,slow=1.3,SNR=6.1						
BATI				LR	LR	22 22 15.4	
	comp=Z,136nm,18.4s,baz=332,slow=39						
MYKOM	Kota Tinggi	23.63	252	P	P	22 14 07.3	+2.8
MYKOM				IAmb	IAmb	22 14 07.9	
	comp=Z,14nm,0.7s						
JWT	Wachi	26.70	17	P	P	22 14 32.5	+0.4
JWT				IAmb	IAmb	22 14 32.5	
	comp=Z,15nm,1.0s						
FITZ	Fitzroy Crossi	27.73	181	P	P	22 14 41.2	-0.1
	comp=Z,2.2nm,0.5s,baz=12,slow=7.2,SNR=5.7						
FITZ	Fitzroy Crossi	27.73	181	P	P	22 14 41.5	+0.1
CMAR	Chiang Mai Arr	27.79	291	P	P	22 14 42.5	+0.5
	comp=Z,1.0nm,0.3s,baz=101,slow=7.4,SNR=4.5						
XAN	Xi'an	28.88	329		P	22 14 50.1	-1.5
XAN				IAmb	IAmb	22 14 50.6	
	comp=Z,7.0nm,0.8s						
COEN	Coen	28.98	144	P	P	22 14 52.6	0.0
GSI	Gunungsitoli	29.72	255	P	P	22 15 00.5	+1.3
WRA	Warramunga Arr	30.62	165	P	P	22 15 07.8	+0.8
	comp=Z,1.2nm,0.9s,baz=343,slow=9.8,SNR=1.4						
PSA00	Pilbara Seismi	31.81	191	P	P	22 15 17.5	+0.1
PSA00				IAmb	IAmb	22 15 22.4	
	comp=Z,9.4nm,1.0s						
ASAR	Alice Springs	34.10	167	P	P	22 15 37.1	-0.3
	comp=Z,0.4nm,0.3s,baz=349,slow=7.2,SNR=4.8						
ASAR				PcP	PcP	22 18 14.6	+1.7
	comp=Z,0.3nm,0.5s,baz=344,slow=2.6,SNR=1.6						
USA0B	Ussuriysk Arra	34.63	7	P	P	22 15 42.4	+0.7
USRK	Ussuriysk Ar.	34.63	7	P	P	22 15 40.5	-1.2
	comp=Z,1.7nm,0.9s,baz=184,slow=9.8,SNR=1.7						
USRK	Ussuriysk Ar.	34.63	7	P	P	22 15 41.3	-0.4
CTAO	Charters Tower	35.65	146	P	P	22 15 52.2	+1.4
CTAO				IAmb	IAmb	22 15 55.5	
	comp=Z,2.7nm,0.8s						
KLR	Kul'dur	39.57	6	P	P	22 16 22.6	-0.8
	comp=Z,1.0nm,0.7s,baz=192,slow=4.8,SNR=4.3						
MORW	Morawa	39.88	194	P	P	22 16 25.9	-0.4
FORT	Forrest	40.39	178	P	P	22 16 29.8	-0.7
H11N1	WAKE ISLAND Hy	40.44	71	T	T	22 59 59.2	
	baz=265,slow=74,SNR=36						
H11N2	WAKE ISLAND Hy	40.45	71	T	T	22 59 49.1	

	baz=265,slow=74,SNR=28						
H11N3	WAKE ISLAND Hy	40.46	71	T	T	22 59 50.0	
	baz=265,slow=74,SNR=42						
ULN	Ulaanbaatar	41.24	340	P	P	22 16 37.9	+0.4
ULN				IAmb	IAmb	22 16 38.4	
	comp=Z,5.2nm,0.7s						
SONM	Songino Array	41.44	340	P	P	22 16 38.0	-1.0
	comp=Z,1.9nm,0.5s,baz=159,slow=10,SNR=16						
SONM	Songino Array	41.44	340	P	P	22 16 39.0	0.0
NWAO	Narrogin (SRO)	43.35	191	P	P	22 16 55.3	+0.7
BBOO	Buckleboo	43.40	168	P	P	22 16 54.1	-0.8
BBOO				IAmb	IAmb	22 16 59.1	
	comp=Z,6.0nm,0.7s						
STKA	Stephens Creek	43.98	161	P	P	22 17 01.4	+1.8
	comp=Z,1.4nm,0.6s,baz=336,slow=10,SNR=4.0						
TLY	Talaya	45.66	340	P	P	22 17 13.5	+0.9
	comp=Z,4.6nm,0.8s,baz=60,slow=0.7,SNR=3.9						
PEA0B	Petropavlovsk-	50.07	24	P	P	22 17 46.1	-0.6
PETK	Petropavlovsk-	50.07	24	P	P	22 17 46.4	-0.3
	comp=Z,2.7nm,0.9s,baz=196,slow=3.7,SNR=2.0						
MK31	Makanchi Array	52.37	323	P	P	22 18 03.8	-0.3
MK31				IAmb	IAmb	22 18 18.0	
	comp=Z,1.9nm,0.8s						
MKAR	Makanchi Array	52.37	323	P	P	22 18 03.9	-0.1
	comp=Z,2.1nm,0.7s,baz=122,slow=8.0,SNR=21						
MAKZ	Makanchi	52.56	323	P	P	22 18 05.4	0.0
ZALV	Zalesovo Beam	55.01	331	P	P	22 18 20.8	-2.3
	comp=Z,0.7nm,0.3s,baz=127,slow=6.9,SNR=4.9						
KURK	Kurchatov	56.43	326	P	P	22 18 32.9	-0.4
KURK	Kurchatov	56.43	326	IAmb	IAmb	22 18 36.8	
	comp=Z,6.0nm,1.1s						
KURBB	Kurchatov Arra	56.43	326	P	P	22 18 32.9	-0.4
	comp=Z,0.5nm,0.3s,baz=164,slow=2.9,SNR=12						
KBL	Kabul	57.56	305	P	P	22 18 41.7	-0.2
KBL				IAmb	IAmb	22 18 57.3	
	comp=Z,2.2nm,0.8s						
KK31	Karatay Array	58.55	315	P	P	22 18 48.4	0.0
KKAR	Karatay Array	58.55	315	P	P	22 18 48.1	-0.3
HRA	Herat	63.09	304	P	P	22 19 18.8	-0.8
NRIK	Noril'sk	64.45	346	P	P	22 19 27.8	+0.2
	comp=Z,2.9nm,0.5s,baz=119,slow=7.1,SNR=5.9						
NRIK	Noril'sk	64.45	346	P	P	22 19 27.8	+0.2
NRIK				IAmb	IAmb	22 19 27.9	
	comp=Z,6.0nm,1.1s						
GEYT	Alibeck	66.79	307	P	P	22 19 41.4	-2.0
	comp=Z,2.0nm,0.8s,baz=0.0,slow=1.9,SNR=3.6						
GEYT	Alibeck	66.79	307	P	P	22 19 43.3	0.0
ARCES	ARCESS Array B	84.61	340	P	P	22 21 24.5	+0.3
	comp=Z,2.5nm,0.5s,baz=78,slow=6.7,SNR=27						
FINES	FINESS Array B	86.28	332	P	P	22 21 32.5	-0.1
	comp=Z,1.4nm,0.5s,baz=77,slow=4.9,SNR=20						
HFS	Hagfors	92.44	332	P	P	22 22 01.7	+0.1
	comp=Z,2.9nm,0.7s,baz=99,slow=4.7,SNR=7.3						
YKA	Yellowknife Ar	94.19	24	P	P	22 22 09.4	-0.2
	comp=Z,0.5nm,0.9s,baz=303,slow=3.6,SNR=3.1						
PLCA	Paso Flores	145.80	157	PKPbc	PKPab	22 28 31.6	+0.9
	comp=Z,4.2nm,1.2s,baz=171,slow=7.4,SNR=3.1						

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*IDC **26** 22:25:30.3±1.1, 44°.95N×106°.79W, h0km, mb1 3.5/3, mb1mx3.2/53, mbtmp3.2/3, ML3.0/3, Error ellipse: s-maj=35.2km s-min=7.6km az=136.0*
*NEIC **26** 22:25:31.7±2.4, 45°.17N±0°.04×106°.87W±0°.05, h0km±2km, ML2.7/44, Error ellipse: s-maj=8.6km s-min=3.1km az=46.0*
ISC 26 22:25:30.3±1.2**, 45°.19N**±0°.05×**106°.78W**±0°.06**, h0**km**, n31,** σ**1s.33**/31**, Montana**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LAO	LASA Array	1.55	14	Pn	Pn	22 26 00.2	+1.0
LAO				IAML		22 26 25.4	
	80nm,0.6s						
LAO				IAML		22 26 25.7	
	56nm,0.5s						
RLMT	Red Lodge	1.76	269	Pn	Pn	22 26 01.0	-1.3
RLMT				IAML		22 26 28.4	
	60nm,0.6s						
GCMT	Greycliff	2.12	288	Pn	Pn	22 26 06.6	-0.5
RSSD	Black Hills	2.23	118		Pn	22 26 10.2	+1.5
RSSD				IAML		22 26 42.8	
	33nm,0.5s						
RSSD				IAML		22 26 43.3	
	58nm,0.5s						
YNE	Yellowstone No	2.30	267		Pn	22 26 08.2	-1.4
YMP	Mirror Lake Pl	2.44	261		Pn	22 26 10.5	-1.2
K22A	Casper	2.54	176		Pn	22 26 13.2	+0.2
K22A				IAML		22 27 36.2	
	comp=N,34nm,0.2s						
LKWY	Lake	2.65	258	Pn	Pn	22 26 13.8	-0.8
LKWY				IAML		22 26 54.7	
	comp=N,30nm,3.8s						
YNR	Norris Junctio	2.81	262		Pn	22 26 17.2	+0.5
H17A	Grant Village	2.82	255		Pn	22 26 18.3	+1.4
YHH	Holmes Hill	2.92	264		Pn	22 26 18.7	+0.4
FLWY	Flagg Ranch	3.01	250		Pn	22 26 20.1	+0.6
FLWY				IAML		22 26 49.0	
	comp=N,26nm,3.5s						
FLWY				IAML		22 27 28.0	
	comp=N,27nm,4.7s						
YPP	Pitchstone Pla	3.01	254		Pn	22 26 21.2	+1.6
YMR	Madison River	3.02	262	Pn	Pn	22 26 20.2	+0.6
YHL	Hebgen Lake	3.14	265		Pn	22 26 22.8	+1.5
BW06	Boulder Array	3.15	221		Pn	22 26 22.3	+0.9
PD31	Pinedale Array	3.15	221		Pn	22 26 22.3	+1.0
PDAR	Pinedale Array	3.15	221	Pn	Pn	22 26 21.6	+0.3
	comp=N,0.9nm,0.3s,baz=53,slow=18,SNR=30						
PDAR				Lg	Lg	22 27 02.1	
	comp=N,1.8nm,0.3s,baz=48,slow=35,SNR=13						
PDAR	Pinedale Array	3.15	221		Pn	22 26 22.0	+0.7
LOHW	Long Hollow	3.16	241		Pn	22 26 19.6	-2.0
LOHW				IAML		22 27 55.5	
	comp=N,16nm,4.2s						
LOHW				IAML		22 28 13.5	
	comp=N,14nm,4.8s						
YHB	Horse Butte	3.17	264		Pn	22 26 21.7	+0.1
QLMT	Earthquake Lak	3.32	265		Pn	22 26 23.5	-0.2
BOZ	Bozeman (W)	3.44	279		Pn	22 26 26.9	+1.5
BOZ				IAML		22 28 36.2	
	comp=N,15nm,4.9s						
REDW	Red Top Meadow	3.45	239	Pn	Pn	22 26 27.0	+1.5
REDW				IAML		22 28 31.4	
	comp=N,17nm,4.3s						
REDW				IAML		22 28 35.3	
	comp=N,21nm,4.7s						
EGMT	Eagleton	3.50	325	Pn	Pn	22 26 26.8	+0.7
RWWY	Rawlins	3.51	185	Pn	Pn	22 26 27.0	+0.6
DGMT	Dagmar	3.73	27	Pn	Pn	22 26 31.1	+1.9
HRY	Holter Researc	3.84	295		Pn	22 26 33.3	+2.5
I10CA	LAC DU BONNET	8.81	51	*i*		23 22 20.0	
	baz=233,slow=333,SNR=3.8						
ULM	Lac du Bonnet	8.92	52	Pn	Pn	22 27 40.6	+0.3
	comp=N,0.3nm,0.3s,baz=240,slow=14,SNR=8.9						
ULM				Sn	Sn	22 29 18.3	-3.2
	comp=N,0.1nm,0.3s,baz=200,slow=15,SNR=1.8						
ULM				Lg	Lg	22 30 11.0	
	comp=N,0.1nm,0.3s,baz=329,slow=9.9,SNR=1.0						
TXAR	Lajitas Array	16.02	170	Pn	Pn	22 29 16.8	-0.2
	comp=N,0.1nm,0.3s,baz=357,slow=14,SNR=1.7						

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*IDC **26** 22:32:13.6±0.5, 28°.14N×131°.15E, h0km, mb4.3/21, mb1 4.4/28, mb1mx4.3/49, mbtmp4.3/28, ML4.2/6, MS3.7/6, Ms1 3.8/6, ms1mx3.3/43, Error ellipse: s-maj=15.7km s-min=11.6km az=80.0*
*BJI **26** 22:32:14.9±0.0, 27°.98N×131°.33E, h22km, mB4.9/37, mb4.4/50, Ms4.2/31, Ms7 4.1/25*
*NEIC **26** 22:32:15.2±1.5, 28°.06N±0°.04×131°.24E±0°.06, h10km±1km, mb4.7/79, Error ellipse: s-maj=9.3km s-min=6.8km az=94.0*
*NIED **26** 22:32:15.9, 28°.05N×131°.23E, h93km, MW4.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-4.50; $M_{\theta\theta}$0.89; $M_{\phi\phi}$3.61; $M_{r\theta}$-4.25; $M_{\theta\phi}$1.24; $M_{\phi r}$-3.48; Fault plane solution: $M_0$6.93000×10^{15} NP1:ϕ_s43.00000°, δ72.00000°, λ-78.00000°. NP2:ϕ_s189.00000°, δ22.00000°, λ-122.00000°.*
*JMA **26** 22:32:15.9±0.1, 28°.05N×131°.23E, h93km±2km, M4.3*
JMA Felt I J1.
*MOS **26** 22:32:16.2±1.1, 28°.14N×131°.34E, h28km, mb4.9/18, Error ellipse: s-maj=8.7km s-min=5.3km az=106.5*
ISC 26 22:32:17.3±1.0**, 28°.06N**±0°.03×**131°.25E**±0°.04**, h25**km±6km**, n295,** σ**1s.42**/324**, mb4.7**/97**, MS4.0**/9**, 24C-14D, Southeast of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JZK	Kikaishima	1.15	283	P	Pn	22 32 37.8	-0.1
JZK				S	Sb	22 32 54.3	+1.1
JAM	Amami Oshima	1.49	284	P	Pn	22 32 42.0	-0.5
JAM				*e*S	Sn	22 33 00.3	-0.8
JAMN	Amaminishikomi	1.84	276	P	Pn	22 32 46.5	-0.8
JAMN				S	Sn	22 33 08.8	-0.9
JTK	Tokunoshima	2.05	263	P	Pn	22 32 49.2	-1.0
JTK				*e*S	Sn	22 33 13.8	-1.2
JTAJ	Takarajima	2.10	302	P	Pn	22 32 50.0	-0.9
JTAJ				S	Sn	22 33 14.8	-1.5
JKDJ	Kitadaitoujima	2.10	179	P	Pn	22 32 49.9	-1.0
JKDJ				S	Sn	22 33 14.2	-2.1
JNN	Nakanoshima	2.14	326	P	Pn	22 32 50.7	-0.8
JNN				S	Sn	22 33 16.5	-0.8
JMZ	Minamidaito 2	2.23	181	P	Pn	22 32 51.6	-1.1
JMZ				S	Sn	22 33 17.1	-2.3
JMZ	Minamidaito 2	2.23	181	Pn	Pn	22 32 51.8	-0.9
JMZ				Sn	Sn	22 33 17.2	-2.3
JYAK	Yakushimahirau	2.27	344	P	Pn	22 32 52.4	-0.8
JYAK				S	Sn	22 33 18.6	-1.7
JMTN	Minamitane	2.35	353	P	Pn	22 32 53.4	-0.9
JMTN				*e*S	Sn	22 33 21.1	-1.3
JOKE	Okinoerabujima	2.47	254	P	Pn	22 32 55.0	-1.0
JOKE				*e*S	Sn	22 33 23.3	-2.1
JKC	Kuchinoerabu	2.56	339	P	Pn	22 32 56.6	-0.7
JKC				*e*S	Sn	22 33 25.7	-2.0
JTN	Tanegashima 3	2.60	355	P	Pn	22 32 56.6	-1.2
JTN				*e*S	Sn	22 33 26.2	-2.3
JYRO	Yoronjima	2.69	248	P	Pn	22 32 57.6	-1.4
JYRO				*e*S	Sn	22 33 28.7	-2.0
JOW	Kunigami	2.91	246	Pn	Pn	22 33 00.9	-1.2
	89nm,0.3s,baz=103,slow=28,SNR=234						
JOW				Sn	Sn	22 33 33.3	-2.9
	146nm,0.3s,baz=77,slow=18,SNR=9.7						
JOW	Kunigami	2.91	246	P	Pn	22 33 00.7	-1.4
JOW				*e*S	Sn	22 33 34.5	-1.8
JOW	Kunigami	2.91	246	Pn	Pn	22 33 01.2	-0.8
JIH	Iheya	3.08	251	P	Pn	22 33 03.3	-1.1
JIH				S	Sn	22 33 38.2	-2.3
JNTH	Nagotoyohara	3.25	243	P	Pn	22 33 05.3	-1.5
JNTH				S	Sn	22 33 42.0	-2.7
JSU	Suzuyama	3.50	349	Pn	Pn	22 33 10.1	-0.1
JSU				Sn	Sn	22 33 46.6	-4.3
JJT3	Tamagusuku3	3.63	239	P	Pn	22 33 10.9	-1.0
JJT3				*e*S	Sn	22 33 51.7	-2.3
JTZ	Takazaki	3.83	358	P	Pn	22 33 13.9	-0.8
JTZ				*e*S	Sn	22 33 57.2	-1.8
JSJ	Shimokoshiki	3.84	340	P	Pn	22 33 13.8	-1.1
JSJ				*e*S	Sn	22 33 55.5	-3.8
JAGN	Aguni-jima	3.85	249	P	Pn	22 33 13.6	-1.4
JAGN				*e*S	Sn	22 33 57.2	-2.2
JKE	Kume jima 2	4.33	248	P	Pn	22 33 19.6	-2.0
JIU3	Izumi3	4.49	355	P	Pn	22 33 23.0	-0.8
JNU	Nakatsue	5.06	356	Pn	Pn	22 33 31.2	-0.4
	17nm,0.3s,baz=194,slow=11,SNR=80						
JNU				Sn	Sn	22 34 26.2	-3.0
	16nm,0.3s,baz=282,slow=18,SNR=8.7						
JNU	Nakatsue	5.06	356		Pn	22 33 31.4	-0.2
JNU				Sn	Sn	22 34 25.6	-3.6
JMN	Monobe	6.09	21		Pn	22 33 45.3	-0.4
JTU	Tsushima	6.64	347	Pn	Pn	22 33 53.7	+0.5
JHS	Saijyo	7.10	13	Pn	Pn	22 34 00.3	+0.6
JWT	Wachi	8.02	25	Pn	Pn	22 34 11.3	-1.0
INU	Inuyama	8.77	33	Pn	Pn	22 34 23.1	+0.6
JHJ	Hachijo jima 2	8.92	53	Pn	Pn	22 34 26.1	+1.5
	37nm,0.3s,baz=101,slow=20,SNR=8.3						
JHJ2	Mitsune	8.94	54	Pn	Pn	22 34 26.0	+1.1
JGF	Kuroka	9.14	33	Pn	Pn	22 34 28.1	+0.4
TATO	Taipei	9.26	253	Pn	Pn	22 34 28.7	-0.6
SSE	Sheshan	9.27	291	P	Pn	22 34 30.0	+0.7
SSE				S	Sn	22 36 14.8	+2.0
SSE				pmax	pmax		
	comp=Z,8.0nm,1.0s						
SSE				pmax	pmax		
	comp=Z,110nm,3.6s						
SSE				LR	LR		
	comp=N,270nm,11.7s						
SSE				LR	LR		
	comp=E,340nm,9.3s						
SSE	Sheshan	9.27	291	Pn	Pn	22 34 29.6	+0.3
YHNB	Yeheng	9.47	251	Pn	Pn	22 34 31.4	-0.9
NACB	Ninganchiao	9.50	248	Pn	Pn	22 34 28.7	-3.9
JCJ	Chichijima	9.75	93	Pn	Pn	22 34 36.6	+0.6
	11nm,0.3s,baz=352,slow=18,SNR=7.9						
JCJ	Chichijima	9.75	93	Pn	Pn	22 34 35.0	-1.0
KSRS	Korea Array	9.78	344	Pn	Pn	22 34 36.0	-0.3
	0.2nm,0.3s,baz=158,slow=14,SNR=1.6						
KSRS				LR	LR	22 38 50.5	
	comp=Z,119nm,19.2s,baz=192,slow=41						
YULB	Yu-li	10.10	245	Pn	Pn	22 34 35.1	-5.8
SSLB	Suanglung	10.19	248		Pn	22 34 38.6	-3.6
MAJO	Matsushiro	10.30	33	P	Pn	22 34 45.9	+2.3
MAJO	Matsushiro	10.30	33	Pn	Pn	22 34 45.9	+2.3
MAT	Matsushiro	10.30	33	P	Pn	22 34 44.2	+0.6
MAT				*e*S	Sn	22 36 36.4	-1.9
MJAR	Matsushiro Arr	10.30	33	Pn	Pn	22 34 44.4	+0.8
	0.3nm,0.3s,baz=174,slow=25,SNR=6.6						
MJAR	Matsushiro Arr	10.30	33	P	Pn	22 34 42.9	-0.7
MJAR	Matsushiro Arr	10.30	33		Pn	22 34 42.9	-0.7
MJB9	Matsu-Tunnel	10.30	33	Pn	Pn	22 34 43.0	-0.6
TPUB	Ta-pu	10.68	246	Pn	Pn	22 34 44.8	-4.0
NJ2	Nanjing	11.45	293	*e*P	Pn	22 34 58.5	-0.7
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.5s						
WHN	Wuhan	14.95	284	⇑P	P	22 35 57.8	+5.4
WHN				pmax	pmax		
	comp=Z,46nm,1.0s						
USA0B	Ussuriysk Arra	16.12	2	P	Pn	22 36 01.1	-1.0
USA0B				pmax	pmax		
	comp=Z,19nm,1.2s						
USA0B	Ussuriysk Arra	16.12	2	Pn	Pn	22 36 01.1	-1.0
USRK	Ussuriysk Ar.	16.12	2	Pn	Pn	22 36 02.1	-0.1
	baz=176,slow=20,SNR=2.9						
CN2	Changchun	16.39	345	*e*P	P	22 36 09.5	+1.2
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				LR	LR		
	comp=Z,200nm,11.0s						
CN2				LR	LR		
	comp=Z,300nm,11.0s						
ERM	Erimo	16.97	32	*i* P	Pn	22 36 10.0	-3.0
BJT	Baijiatuau	17.25	318	P	Pn	22 36 17.1	+0.7
BJT				pmax	pmax		
	comp=Z,15nm,1.0s						
BJT	Baijiatuau	17.25	318		Pn	22 36 17.1	+0.7
BJI	Beijing	17.26	318	P	P	22 36 18.0	+0.1
BJI				S	Sn	22 39 26.3	-1.5
BJI				pmax	pmax		
	comp=Z,6.0nm,1.4s						
BJI				LR	LR		
	comp=Z,280nm,8.4s						
BJI				LR	LR		
	comp=Z,390nm,11.2s						
ASAJ	Asahikawa	18.43	27	LR	LR	22 44 01.8	
	comp=Z,187nm,18.2s,baz=206,slow=38						
ENH	Enshi	19.13	282	P	P	22 36 39.6	+0.9
ENH				IAmb	IAmb	22 36 47.6	
	comp=Z,26nm,1.0s						
XAN	Xi'an	20.02	293	⇑P	P	22 36 47.8	-0.6
XAN				pP	pwP	22 37 00.3	+0.9
XAN				sP	sP	22 37 06.5	+10
XAN				S	S	22 40 27.5	-4.8
XAN				pmax	pmax		
	comp=Z,55nm,1.5s						
XAN				LR	LR		
	comp=Z,280nm,14.1s						
XAN				LR	LR		
	comp=Z,420nm,14.1s						
XAN				LR	LR		
	comp=Z,450nm,10.8s						
XAN	Xi'an	20.02	293	P	P	22 36 48.3	0.0
XAN				pmax	pmax		
	comp=Z,37nm,0.8s						
XAN	Xi'an	20.02	293	P	P	22 36 48.3	0.0
XAN				IAmb	IAmb	22 36 58.7	
	comp=Z,37nm,0.8s						
HHC	Hu-ho-hao-te	20.59	313	*e*P	Pn	22 36 57.0	+0.1
HHC				pmax	pmax		
	comp=Z,5.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,260nm,5.6s						
YSS	Yuzh-Sakhalins	20.91	23	*i* P	P	22 36 55.8	-2.0
KLR	Kul'dur	21.14	1	P	P	22 36 59.3	-1.0
	comp=Z,1.2nm,0.4s,baz=178,slow=12,SNR=4.2						
KLR	Kul'dur	21.14	1	*ce*P	P	22 36 58.9	-1.4
BTO	Baotou	21.47	311	*e*P	P	22 37 05.5	+1.4
QIZ	Qiongzhong	21.56	250	P	P	22 37 06.1	+1.1
QIZ				IAmb	IAmb	22 37 14.6	
	comp=Z,24nm,1.1s						
GYA	Guiyang	21.91	272	⇑P	P	22 37 10.8	+1.9
GYA				pP	sP	22 37 18.5	+1.3
GYA				sP	pwP	22 37 22.5	+2.3
GYA				S	S	22 41 07.0	-2.8
GYA				pmax	pmax		
	comp=Z,9.0nm,0.7s						
GYA				pmax	pmax		
	comp=Z,99nm,4.6s						
GYA				LR	LR		
	comp=Z,240nm,10.5s						
GYA				LR	LR		
	comp=Z,300nm,13.1s						
GYA				LR	LR		
	comp=Z,390nm,13.5s						
LZH	Lanzhou	24.50	296	*e*P	P	22 37 38.5	+3.6
LZH				pP	pP	22 37 41.5	+0.3
LZH				sP	sP	22 37 44.0	+0.2
LZH				pmax	pmax		
	comp=Z,24nm,1.1s						
KMI	Kunming	25.63	270	⇓P	P	22 37 46.5	+1.2
KMI				pP	pP	22 37 52.3	+0.7
KMI				sP	sP	22 37 55.5	+1.3
KMI				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KMI				LR	LR		
	comp=Z,210nm,8.8s						
KMI				LR	LR		
	comp=Z,170nm,10.8s						
KMI				LR	LR		
	comp=Z,260nm,13.0s						
KMI	Kunming	25.63	270	P	P	22 37 45.7	+0.4
KMI				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KMI	Kunming	25.63	270	P	P	22 37 45.7	+0.4
KMI				IAmb	IAmb	22 37 56.5	
	comp=Z,8.2nm,1.0s						
SLVN	Son La	25.69	261	P	P	22 37 46.0	+0.4
MYLDM	Lahad Datu	25.78	210	P	P	22 37 45.4	-1.0
MYLDM				IAmb	IAmb	22 38 01.9	
	comp=Z,15nm,1.1s						
ZEA	Zeya	25.82	355	*e*P	P	22 37 48.5	+2.1
ZEA				pmax	pmax		
	comp=Z,20nm,1.3s						
UBPT	Khong Chiam	27.05	247	P	P	22 38 06.0	+8.1
UBPT	Khong Chiam	27.05	247	P	P	22 37 58.0	+0.1
ULN	Ulaanbaatar	27.28	323	*i* P	P	22 37 59.5	-0.4
ULN				pmax	pmax		
	comp=Z,7.0nm,2.0s						
ULN	Ulaanbaatar	27.28	323	P	P	22 37 59.8	-0.1
SONM	Songino Array	27.62	322	P	P	22 38 01.3	-1.5
	comp=Z,0.9nm,0.6s,baz=138,slow=10,SNR=7.3						
SONM				LR	LR	22 48 59.9	
	comp=Z,162nm,18.4s,baz=192,slow=37						
SONM	Songino Array	27.62	322	P	P	22 38 02.2	-0.6
SONM				pmax	pmax		
	comp=Z,2.0nm,1.0s						
SONM	Songino Array	27.62	322	P	P	22 38 02.2	-0.6
GTA	Gaotai	28.35	302	*e*P	P	22 38 10.8	+1.3
GTA				pP	pP	22 38 15.0	-0.8
GTA				sP	sP	22 38 18.0	-0.4
GTA				PcP	PcP	22 41 23.3	+1.4
GTA				pmax	pmax		
	comp=Z,2.0nm,1.5s						
GTA				pmax	pmax		
	comp=Z,100nm,6.9s						
GTA				LR	LR		
	comp=Z,250nm,16.4s						
GTA				LR	LR		
	comp=Z,340nm,16.7s						
GTA				LR	LR		
	comp=Z,460nm,15.3s						
TOLI2	Tolitoli	28.61	202	P	P	22 38 11.6	-0.2
TOLI2				IAmb	IAmb	22 38 13.1	
	comp=Z,13nm,1.0s						
CHAI	Chaiyaphum	29.62	252	P	P	22 38 27.6	+6.8
	comp=Z,24nm,0.7s						
LAMP	Lampang	30.47	259	P	P	22 38 35.1	+6.7
	comp=Z,14nm,1.0s						
SRAK	Srakaew	30.53	249	P	P	22 38 32.0	+3.1
	comp=Z,2µmcomp=Z,253nm,1.0s						
CM34	Chiang Mai Arr	30.76	260	P	P	22 38 35.0	+4.1
FAKI	Fak Fak	30.82	178	P	P	22 38 31.7	+0.4
FAKI				IAmb	IAmb	22 38 32.8	
	comp=Z,14nm,0.9s						
CM36	Chiang Mai Arr	30.94	259	P	P	22 38 37.0	+4.5
CM33	Chiang Mai Arr	30.95	260	P	P	22 38 34.0	+1.4
CMMT	Chiang Mai	30.95	260	P	P	22 38 33.0	+0.4
	comp=Z,3.2nm,0.7s						
CHTO	Chiang Mai	30.95	260	P	P	22 38 32.7	+0.1
CHTO				pmax	pmax		
	comp=Z,11nm,1.2s						
CHTO	Chiang Mai	30.95	260	P	P	22 38 32.7	+0.1
CHTO				IAmb	IAmb	22 38 39.3	
	comp=Z,10nm,1.1s						
CM04	Chiang Mai Arr	31.09	259	P	P	22 38 40.0	+6.2
	comp=Z,48nmcomp=Z,3.6nm,0.9s						
CMAR	Chiang Mai Arr	31.10	259	P	P	22 38 33.5	-0.3
	comp=Z,0.9nm,0.3s,baz=53,slow=7.2,SNR=6.7						
CMAR				PcP	PcP	22 41 29.9	+0.8
	comp=Z,0.9nm,0.3s,baz=26,slow=1.2,SNR=7.0						
CMAR				LR	LR	22 51 41.7	
	comp=Z,56nm,18.3s,baz=60,slow=38						
CMAR	Chiang Mai Arr	31.10	259	*i* P	P	22 38 35.5	+1.6
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CMAR	Chiang Mai Arr	31.10	259	P	P	22 38 36.0	+2.1
CM01	Chiang Mai Arr	31.10	259	P	P	22 38 41.0	+7.1
	comp=Z,4.3nm,1.0s						
CM02	Chiang Mai Arr	31.10	259	P	P	22 38 40.9	+7.0
	comp=Z,4.3nm,1.0s						
CM13	Chiang Mai Arr	31.14	259	P	P	22 38 43.5	+9.2
	comp=Z,3.5nm,0.8s						
SBUM	Sibu	31.28	219	P	P	22 38 36.2	+0.8
PETK	Petropavlovsk-	31.75	31	P	P	22 38 39.4	+0.2
PETK	Petropavlovsk-	31.75	31	P	P	22 38 39.4	+0.2
PETK	Petropavlovsk-	31.75	31	PKPPKP	P	22 38 38.9	-0.3
	comp=Z,4.2nm,0.9s,baz=119,slow=1.9,SNR=4.0						
UTHA	Uthaitani	31.93	254	P	P	22 38 54.5	+13
UMPA	Umpang Tak	32.13	255	P	P	22 38 52.3	+9.3
	comp=Z,936nmcomp=Z,9.4nm,0.5s						
KSM	Kuching	33.17	221	P	P	22 38 52.5	+0.5
KSM				IAmb	IAmb	22 38 54.7	
	comp=Z,15nm,0.9s						
H11N2	WAKE ISLAND Hy	33.54	96	T	T	23 14 36.4	
	baz=293,slow=74,SNR=2.8						
H11N1	WAKE ISLAND Hy	33.54	96	T	T	23 14 39.0	
	baz=293						
H11N3	WAKE ISLAND Hy	33.55	96	T	T	23 14 41.1	
	baz=293,slow=74,SNR=2.3						
YAK	Yakutsk	33.99	359	*i* P	P	22 38 57.2	-1.4
YAK				pmax	pmax		
	comp=Z,6.0nm,0.6s						
MA2	Magadan	34.24	18	*ce*P	P	22 38 58.8	-2.1
MA2				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MA2	Magadan	34.24	18	P	P	22 39 00.2	-0.6
LSA	Lhasa	35.03	282	P	P	22 39 08.5	-0.2
LSA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
LSA	Lhasa	35.03	282	P	P	22 39 08.5	-0.2
SHL	Shillong	35.12	275	P	P	22 39 09.0	-0.1
SHL				pmax	pmax		
	comp=Z,9.0nm,0.8s						
SHL	Shillong	35.12	275	P	P	22 39 09.0	-0.1
SHL				IAmb	IAmb	22 39 16.0	
	comp=Z,8.6nm,0.8s						
SURT	Suratani	35.98	244	P	P	22 39 25.2	+8.8
KULM	Kulim	36.83	238	P	P	22 39 23.9	+0.3
KULM				IAmb	IAmb	22 39 26.3	
	comp=Z,10nm,1.0s						
WMQ	Urumqi	38.14	306	*e*P	P	22 39 35.8	+1.2
WMQ				pmax	pmax		
	comp=Z,11nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,110nm,6.7s						

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SOEI  Soe               38.19 191    P      P      22 39 35.7 +0.5
SOEI                                 IAmb   IAmb   22 39 40.5
      comp=Z,20nm,1.1s
DGZ   Jazzator, Alta    39.65 315  i P      P      22 39 47.7 +0.5
DGZ                                  pmax   pmax
      comp=Z,2.0nm,0.8s
JAGI  Jajag, Banyuwa    39.90 207    P      P      22 39 48.7 -0.8
JAGI                                 IAmb   IAmb   22 39 51.2
      comp=Z,19nm,1.0s
UGM   Wanagama          40.99 212    P      P      22 39 58.4 -0.1
CISI  Cisompet, Garu    42.03 216    P      P      22 40 06.4 -0.6
CISI                                 IAmb   IAmb   22 40 08.3
      comp=Z,17nm,0.8s
MNAI  Manna             42.21 225    P      P      22 40 08.2 -0.3
MK31  Makanchi Array    42.38 310 ceP      P      22 40 09.3 -0.3
MK31  Makanchi Array    42.38 310    P      P      22 40 09.6 +0.1
MKAR  Makanchi Array    42.38 310    P      P      22 40 08.9 -0.6
      comp=Z,0.9nm,0.5s,baz=91,slow=9.8,SNR=14
MKAR                                 PcP    PcP    22 42 02.9 +0.3
      comp=Z,1.8nm,0.9s,baz=90,slow=5.6,SNR=6.3
MKAR  Makanchi Array    42.38 310    P      P      22 40 10.3 +0.7
MKAR                                               22 42 02.7
MKAR  Makanchi Array    42.38 310    P      P      22 40 10.3 +0.7
MKAR                                        PcP    22 42 02.7 +0.1
ZAA0  Zalesovo Array    42.48 321    P      P      22 40 09.8 -0.5
ZALV  Zalesovo Beam     42.48 321    P      P      22 40 09.2 -1.1
      comp=Z,4.2nm,0.8s,baz=101,slow=7.7,SNR=16
ZALV                                 PcP    PcP    22 42 02.8  0.0
      comp=Z,3.5nm,1.0s,baz=110,slow=2.2,SNR=6.3
ZALV  Zalesovo Beam     42.48 321  i P      P      22 40 10.1 -0.1
ZALV                                 pmax   pmax
      comp=Z,4.0nm,0.8s
ZALV  Zalesovo Beam     42.48 321    P      P      22 40 10.2 -0.1
ZALV                                        PcP    22 42 02.6  0.0
COEN  Coen              43.34 163    P      P      22 40 17.6 +0.1
TIXI  Tiksi             43.65 359 ceP      P      22 40 18.0 -1.5
TIXI                                 pmax   pmax
      comp=Z,32nm,2.5s
KURK  Kurchatov         45.39 315 ceP      P      22 40 33.7  0.0
KURK                                 pmax   pmax
      comp=Z,6.0nm,0.8s
KURK  Kurchatov         45.39 315    P      P      22 40 34.4 +0.7
KURK                                 IAmb   IAmb   22 40 35.5
      comp=Z,8.8nm,0.9s
FITZ  Fitzroy Crossi    46.20 187    P      P      22 40 40.9 +0.6
FITZ                                 IAmb   IAmb   22 40 42.3
      comp=Z,11nm,0.9s
KSH   Kashi             46.69 299    P      P      22 40 49.8 +5.6
KSH                                  pmax   pmax
      comp=Z,2.0nm,0.8s
KSH                                  pmax   pmax
      comp=Z,470nm,5.5s
AAK   Ala-Archa         47.67 303  i P      P      22 40 53.8 +1.9
AAK                                  pmax   pmax
      comp=Z,27nm,1.7s
WRAB  Tennant Creek     47.80 176 ceP      P      22 40 53.3 +0.5
WRAB                                 pmax   pmax
      comp=Z,28nm,0.7s
WRAB  Tennant Creek     47.80 176    P      P      22 40 53.6 +0.8
WRA   Warramunga Arr    47.81 176    P      P      22 40 53.5 +0.6
      comp=Z,26nm,0.7s,baz=354,slow=8.6,SNR=249
NRIK  Noril'sk          48.37 341    P      P      22 40 56.2 -0.5
      comp=Z,1.6nm,0.4s,baz=124,slow=7.8,SNR=4.7
NRIK  Noril'sk          48.37 341 ceP      P      22 40 56.0 -0.7
NRIK                                 pmax   pmax
      comp=Z,4.0nm,1.1s
NRIK  Noril'sk          48.37 341    P      P      22 40 56.7  0.0
NRIK                                 IAmb   IAmb   22 40 58.0
      comp=Z,4.3nm,0.9s
NIL   Nilore            49.55 292    P      P      22 41 06.2 -0.1
NIL                                  pmax   pmax
      comp=Z,9.0nm,0.6s
NIL   Nilore            49.55 292    P      P      22 41 06.2 -0.1
CTAO  Charters Tower    50.02 161    P      P      22 41 10.5 +0.7
CTAO                                 pmax   pmax
      comp=Z,12nm,0.7s
CTAO  Charters Tower    50.02 161    P      P      22 41 10.5 +0.7
PSA00 Pilbara Seismi    50.56 194    P      P      22 41 14.7 +0.8
KK31  Karatay Array     50.58 304    IAmb   IAmb   22 41 16.4
      comp=Z,9.5nm,0.8s
KKAR  Karatay Array     50.58 304    P      P      22 41 15.6 +1.6
KKAR  Karatay Array     50.58 304    P      P      22 41 15.6 +1.6
KKAR  Karatay Array     50.58 304    IAmb   IAmb   22 41 16.4
      comp=Z,9.5nm,0.8s
BRVK  Borovoye          50.80 317 ceP      P      22 41 16.3 +0.9
BRVK                                 pmax   pmax
      comp=Z,14nm,0.7s
BRVK  Borovoye          50.80 317    P      P      22 41 16.4 +0.9
AS31  Alice Springs     51.49 177    P      P      22 41 22.4 +1.5
AS31                                 IAmb   IAmb   22 41 23.5
      comp=Z,5.3nm,0.7s
ASAR  Alice Springs     51.49 177    P      P      22 41 21.8 +0.9
      comp=Z,13nm,0.7s,baz=9.6,slow=13,SNR=160
ASAR                                 PcP    PcP    22 42 36.2 +1.2
      comp=Z,2.5nm,0.9s,baz=356,slow=4.2,SNR=4.5
ASAR  Alice Springs     51.49 177    P      P      22 41 22.0 +1.1
KBL   Kabul             52.82 294    P      P      22 41 31.6 +0.5
KBL                                  pmax   pmax
      comp=Z,12nm,1.2s
KBL   Kabul             52.82 294    P      P      22 41 31.6 +0.5
KBL                                  IAmb   IAmb   22 41 39.3
      comp=Z,12nm,1.1s
SDPT  Sand Point        55.19  40    P      P      22 41 49.5 +1.8
EIDS  Eidsvold          56.45 158    P      P      22 41 57.1 +0.1
EIDS                                 IAmb   IAmb   22 41 59.0
      comp=Z,8.1nm,1.1s
SVE   Sverdlovsk        56.48 322  eP      P      22 41 58.1 +1.1
SVE                                  pmax   pmax
      comp=Z,23nm,1.6s
ABKAR Akbulak array     57.38 313    P      P      22 42 03.7 +0.2
ABKAR Akbulak array     57.38 313    P      P      22 42 03.6 +0.2
ABKAR                                IAmb   IAmb   22 42 04.4
      comp=Z,3.9nm,0.8s
ARU   Arti              57.64 321 d iP      P      22 42 04.9 -0.3
ARU                                  S      S      22 50 03.4 +1.5
ARU                                  SS     SS     22 53 48.5 -3.3
ARU                                  pmax   pmax
      comp=Z,7.0nm,1.0s
ARU   Arti              57.64 321    P      P      22 42 05.5 +0.3
ARU                                  IAmb   IAmb   22 42 23.1
      comp=Z,4.7nm,0.9s
HRA   Herat             58.34 295    P      P      22 42 11.1 +0.3
HRA                                  IAmb   IAmb   22 42 18.6
      comp=Z,9.1nm,1.1s
FORT  Forrest           58.59 183    P      P      22 42 12.8 +0.7
KDAK  Kodiak Island     59.45  37    P      P      22 42 17.7 -0.1
KDAK                                 pmax   pmax
      comp=Z,6.0nm,1.0s
KDAK  Kodiak Island     59.45  37    P      P      22 42 17.7 -0.1
KDAK                                 IAmb   IAmb   22 42 18.4
      comp=Z,6.2nm,0.9s
DZM   Mont Dzumac       60.33 142    P      P      22 42 24.7 +0.4
      comp=Z,4.9nm,0.6s,baz=264,slow=6.0,SNR=7.6
DZM   Mont Dzumac       60.33 142    P      P      22 42 24.5 +0.2
DZM                                  IAmb   IAmb   22 42 26.5
      comp=Z,6.4nm,0.7s
STKA  Stephens Creek    60.41 170    P      P      22 42 25.3 +0.7
      comp=Z,4.1nm,0.7s,baz=339,slow=7.6,SNR=12
STKA  Stephens Creek    60.41 170    P      P      22 42 24.9 +0.3
BBOO  Buckleboo         60.71 175    P      P      22 42 27.4 +0.8
BBOO                                 IAmb   IAmb   22 42 41.6
      comp=Z,5.7nm,1.1s
GEYT  Alibeck           60.71 300    P      P      22 42 27.9 +1.0
GEYT                                 IAmb   IAmb   22 42 34.8
      comp=Z,5.0nm,1.1s
GYA0B ALIBECK ARRAY     60.71 300    P      P      22 42 27.4 +0.6
GYA0B                                IAmb   IAmb   22 42 34.8
      comp=Z,11nm,1.1s
RND   Reindeer          60.82  30    P      P      22 42 26.8 -0.4
RND                                  pmax   pmax
      comp=Z,7.0nm,1.0s
RND   Reindeer          60.82  30    P      P      22 42 26.8 -0.4
RND                                  IAmb   IAmb   22 42 27.6
      comp=Z,6.6nm,1.0s
MDM   Murphy Dome       60.96  29    P      P      22 42 28.9 +0.8
MDM                                  IAmb   IAmb   22 42 29.5
      comp=Z,6.4nm,1.0s
POKR  Poker Plat Res    61.29  28    P      P      22 42 30.7 +0.4
POKR                                 IAmb   IAmb   22 42 31.9
      comp=Z,8.0nm,1.1s
ILAR  Eielson Array     61.55  29    P      P      22 42 30.9 -1.1
      comp=Z,0.7nm,0.8s,baz=280,slow=6.0,SNR=7.7
HDA   Harding Lake      61.56  29    P      P      22 42 31.8 -0.4
BMAR  Burnt Mountain    62.21  26    P      P      22 42 36.5  0.0
DOT   Dot Lake          62.92  30    P      P      22 42 41.1 -0.2
DOT                                  IAmb   IAmb   22 42 41.7
      comp=Z,5.3nm,1.2s
MENT  Mentasta          63.19  31    P      P      22 42 43.3 +0.2
MENT                                 IAmb   IAmb   22 42 50.9
      comp=Z,2.2nm,0.8s
GLB   Gilahina Butte    63.40  32    P      P      22 42 45.4 +0.9
ZEI   Tsey              69.71 308  eP      P      22 43 24.8 -0.5
ZEI                                  pmax   pmax
      comp=Z,8.0nm,1.1s
GNI   Garni             70.01 306 ceP      P      22 43 27.8 +0.6
GNI                                  pmax   pmax
      comp=Z,5.0nm,1.0s
GNI   Garni             70.01 306    P      P      22 43 28.4 +1.2
GNI                                  IAmb   IAmb   22 43 35.3
      comp=Z,8.5nm,1.1s
KBZ   Khabaz            70.08 310    P      P      22 43 27.6 +0.3
      comp=Z,7.2nm,0.9s,baz=93,slow=4.6,SNR=20
KBZ   Khabaz            70.08 310 ceP      P      22 43 27.2 -0.1
KBZ                                  pmax   pmax
      comp=Z,8.0nm,1.0s
KIV   Kislovodsk        70.14 310 d iP      P      22 43 28.5 +0.6
KIV                                i                22 43 49.5
KIV                                  pmax   pmax
      comp=Z,18nm,1.3s
KIV   Kislovodsk        70.14 310    P      P      22 43 28.4 +0.6
KIV                                  IAmb   IAmb   22 43 30.7
      comp=Z,10nm,1.0s
EUNU  Eureka            70.17   6    P      P      22 43 27.9 +0.5
FINES FINESS Array B    72.59 331    P      P      22 43 40.9 -1.2
      comp=Z,2.5nm,0.7s,baz=66,slow=6.5,SNR=9.7
SOCY  Socotra           73.22 275    P      P      22 43 44.2 -2.6
RES   Resolute Bay      73.24  12    P      P      22 43 45.2 -0.6
      comp=Z,3.0nm,0.9s,baz=324,slow=6.7,SNR=8.8
MNK   Minsk             74.87 324  i P      P      22 43 54.8 -0.9
      comp=E,2.0nm,1.0s
MNK                                i P      P      22 43 54.8 -0.9
      comp=N,10.0nm,1.0s
MNK                                i P      P      22 43 54.8 -0.9
      comp=Z,10.0nm,1.0s
MNK                                i PcP    pwP    22 44 08.5 +1.3
MNK                                i PP     PP     22 46 41.9 -0.9
MNK                                i PPP    PPP    22 48 27.5
MNK                                i S      S      22 53 29.5 -1.6
MNK                                i ScS    ScS    22 54 05.3 -0.7
MNK                                i SS     SS     22 58 36.8  +18
MNK                                i SSS    SSS    23 01 24.4
MNK                                i LQ     LQ     23 11 02.5
MNK                                i LR     LR     23 13 21.7
MNK                                i LRM    MLR    23 18 53.8
      comp=N,93nm,17.1s
MNK                                i LRM    MLR    23 18 55.7
      comp=E,15nm,17.1s
MNK                                i LRM    MLR    23 18 56.4
      comp=Z,119nm,17.1s
NACGM Naroch            75.25 325  i P      P      22 43 56.0 -1.8
NACGM                              i P      P      22 43 56.0 -1.8
NACGM                              i P      P      22 43 56.0 -1.8
NACGM                              i PcP    PcP    22 44 11.4 +0.2
NACGM                              i PP     PP     22 46 36.1  -10
NACGM                              i PPP    PPP    22 48 15.8
NACGM                              i S      SKiKP  22 53 25.2 +6.0
NACGM                              i SS     SS     22 58 04.1  -20
NACGM                              i SSS    SSS    23 01 37.4
NACGM                              i LQ     LQ     23 11 10.0
NACGM                              i LR     LR     23 17 04.3
YKA   Yellowknife Ar    75.73  26    P      P      22 44 00.8 +0.4
      comp=Z,3.1nm,0.9s,baz=304,slow=4.8,SNR=22
RAYN  Ar Rayn           75.76 289    P      P      22 44 01.4 -0.1
RAYN                                 pmax   pmax
      comp=Z,9.0nm,1.1s
RAYN  Ar Rayn           75.76 289    P      P      22 44 01.4 -0.1
RAYN                                 IAmb   IAmb   22 44 03.4
      comp=Z,9.2nm,1.1s
AKASG Malin Array Be    75.87 320    P      P      22 44 01.1 -0.4
      comp=Z,1.9nm,0.7s,baz=52,slow=6.5,SNR=12
AKASG Malin Array Be    75.87 320    IAmb   IAmb   22 44 02.7
      comp=Z,3.2nm,1.1s
AKBB  Malin Array Si    75.87 320 ceP      P      22 44 02.0 +0.5
AKBB  Malin Array Si    75.87 320    P      P      22 44 01.0 -0.5
AKBB                                 IAmb   IAmb   22 44 02.2
      comp=Z,8.4nm,1.1s
GAZ   Gaziantep         76.59 305    P      P      22 44 06.0  0.0
GAZ                                  IAmb   IAmb   22 44 07.8
      comp=Z,7.4nm,0.9s
SUW   Suwalki           77.53 325    P      P      22 44 09.9 -0.9
SUW                                  pmax   pmax
      comp=Z,29nm,1.1s
SUW   Suwalki           77.53 325    P      P      22 44 09.8 -0.9
SORM  Soroca            77.57 318  ⇑P      P      22 44 11.1  0.0
SORM  Soroca            77.57 318  ⇑P      P      22 44 11.1  0.0
BRTR  Keskin Array B    78.02 309    P      P      22 44 13.5 -0.5
      comp=Z,2.8nm,0.6s,baz=72,slow=7.9,SNR=11
BRTR                                 LR     LR     23 23 29.7
      comp=Z,153nm,18.1s,baz=319,slow=40
NC405 NORSAR Array S    78.61 334    P      P      22 44 16.3 -0.4
NB2   NORSAR Subarra    78.84 335    P      P      22 44 17.2 -0.8
      comp=Z,1.2nm,0.6s,baz=49,slow=5.6
NOA   NORSAR Array B    78.84 335    P      P      22 44 17.2 -0.8
      comp=Z,3.7nm,0.9s,baz=50,slow=5.5,SNR=5.8
NOA                                  LR     LR     23 24 34.6
      comp=Z,137nm,18.1s,baz=285,slow=40
TPGR  Topolog           79.08 315  ⇓P      P      22 44 20.9 +1.3
CFR   Carcaliu          79.11 315  ⇑P      P      22 44 20.4 +0.8
CFR   Carcaliu          79.11 315  ⇑P      P      22 44 20.4 +0.8
TLBR  Topalu            79.47 315  ⇑P      P      22 44 23.2 +1.6
BIZ   Bicaz             79.48 318  ⇑P      P      22 44 22.5 +0.8
VRI   Vrincioaia        79.63 317  ⇓P      P      22 44 24.4 +1.8
VRI   Vrincioaia        79.63 317  ⇓P      P      22 44 24.4 +1.8
BUR08 Bucovina Ar. S    79.66 319    P      P      22 44 23.3 +0.5
BUR08                                IAmb   IAmb   22 44 24.4
      comp=Z,6.2nm,1.1s
BURAR Bucovina Array    79.66 319  ⇓P      P      22 44 23.9 +1.1
BURAR Bucovina Array    79.66 319  ⇓P      P      22 44 23.9 +1.1
BURAR Bucovina Array    79.66 319    P      P      22 44 23.2 +0.4
BISRR Bisoca            79.80 316  ⇓P      P      22 44 25.6 +2.0
KWP   Kalwaria Pacla    80.05 321  eP      P      22 44 26.1 +1.4
KWP   Kalwaria Pacla    80.05 321    P      P      22 44 25.0 +0.2
KWP                                  pmax   pmax
      comp=Z,20nm,1.1s
KWP   Kalwaria Pacla    80.05 321    P      P      22 44 25.0 +0.2
OZUR                    80.09 317  ⇓P      P      22 44 26.7 +1.6
DOPR  Dopca             80.39 317  ⇑P      P      22 44 27.9 +1.2
KOLS  Kolonicke sedl    80.66 321  eP      P      22 44 28.6 +0.5
KOLS  Kolonicke sedl    80.66 321  eP      P      22 44 28.6 +0.5
VOIR                    80.87 317  ⇑P      P      22 44 30.4 +1.1
VOIR                    80.87 317  ⇑P      P      22 44 30.4 +1.1
OJC   Ojcow             81.31 323  eP      P      22 44 32.8 +1.3
OJC   Ojcow             81.31 323    P      P      22 44 31.5  0.0
OJC                                  pmax   pmax
      comp=Z,16nm,1.1s
OJC   Ojcow             81.31 323    P      P      22 44 31.5  0.0
NIE   Niedzica          81.49 322  eP      P      22 44 34.4 +1.9
DRGR                    81.55 319  ⇓P      P      22 44 33.7 +0.8
DRGR                    81.55 319  ⇓P      P      22 44 33.7 +0.8
LANS  Liptovska Anna    82.09 322  eP      P      22 44 40.4 +4.7
LANS  Liptovska Anna    82.09 322  eP      P      22 44 40.4 +4.7
MORC  Moravsky Berou    82.77 323  eP      P      22 44 40.3 +1.1
KSP   Ksiaz             82.79 325  eP      P      22 44 40.7 +1.5
KRLC  Kraliky           82.99 324  eP      P      22 44 41.3 +0.9
KRLC  Kraliky           82.99 324  eP      P      22 44 41.3 +0.9
OSTC  Ostas             83.00 324  eP      P      22 44 42.2 +1.8
DPC   Dobruska-Polom    83.07 324  eP      P      22 44 41.8 +1.0
DPC   Dobruska-Polom    83.07 324  eP      P      22 44 41.8 +1.0
JAVC  Velka Javorina    83.23 322  eP      P      22 44 44.0 +2.4
VTS   Vitosha           83.46 315  ⇓P      P      22 44 44.7 +1.6
VTS   Vitosha           83.46 315  ⇓P      P      22 44 44.7 +1.6
VRAC  Vranov            83.54 323  eP      P      22 44 44.6 +1.4
SMOL  Smolenice         83.56 322  eP      P      22 44 45.0 +1.7
SMOL                                 pmax   pmax
      comp=Z,7.0nm,1.1s
SMOL  Smolenice         83.56 322  eP      P      22 44 45.0 +1.7
MODS  Modra-Piesok      83.72 322  eP      P      22 44 44.8 +0.7
MODS                                 pmax   pmax
      comp=Z,18nm,1.2s
MODS  Modra-Piesok      83.72 322  eP      P      22 44 44.8 +0.7
KRUC  Moravsky          83.79 323  eP      P      22 44 45.7 +1.3
BRG   Berggiesshubel    83.96 326  i P      P      22 44 46.2 +0.9
BRG                                  Amp           22 44 47.1
      comp=Z,8.6nm,1.1s
CLL   Collm             84.16 326  i P      P      22 44 46.8 +0.5
      comp=Z,22nm,1.2s
CLL   Collm             84.16 326  i P      P      22 44 46.8 +0.5
CLL                                  pmax   pmax
      comp=Z,22nm,1.2s
CLL   Collm             84.16 326    P      P      22 44 46.1 -0.1
PRU   Pruhonice         84.20 325  eP      P      22 44 47.6 +1.1
PRU   Pruhonice         84.20 325  eP      P      22 44 47.6 +1.1
BMO   Blue Mountains    84.31  42    P      P      22 44 48.3 +0.9
BMO                                  pmax   pmax
      comp=Z,3.0nm,1.1s
BMO   Blue Mountains    84.31  42    P      P      22 44 48.2 +0.9
CKRC  Cesky Krumlov     85.03 324  eP      P      22 44 52.3 +1.5
KHC   Kasperske Hory    85.22 324 ceP      P      22 44 53.2 +1.5
KHC                                  pmax   pmax
      comp=Z,15nm,1.7s
KHC   Kasperske Hory    85.22 324  eP      P      22 44 52.8 +1.1
GERES GERESS Array B    85.34 324    P      P      22 44 52.3 -0.1
      comp=Z,0.9nm,0.7s,baz=46,slow=3.9,SNR=7.5
GERES GERESS Array B    85.34 324    P      P      22 44 51.9 -0.5
FRB   Frobisher Bay     87.17   9    P      P      22 45 00.6 -0.4
      comp=Z,3.7nm,0.8s,baz=356,slow=4.3,SNR=6.4
NVAR  Mina Array Bea    87.30  47    P      P      22 45 03.5 +1.1
      comp=Z,0.8nm,0.8s,baz=306,slow=5.0,SNR=4.1
ELK   Elko              87.92  44    P      P      22 45 04.3 -1.1
ELK   Elko              87.92  44    P      P      22 45 04.3 -1.1
ZCCA  Zocca             89.63 322    P      P      22 45 13.9 +0.8
PDAR  Pinedale Array    90.05  40    P      P      22 45 16.0 +0.6
      comp=Z,1.9nm,1.1s,baz=298,slow=3.2,SNR=8.8
```

IDC 26 22:41:27.2±14.0, 38°.39S×93°.92W, h0^{km}, mb3.9/4, mb1 4.3/4, mb1mx4.1/17, mbtmp3.9/4, Error ellipse: s-maj=394.2km s-min=52.7km az=1.0, West Chile Rise

```
Code  Station Name       Δ°   AZ°   Phase ID        Time      Res
                                    Op     ISC     h  m  s   ISC
H03S2 Juan Fernandez    12.94  74   T      T      22 57 44.0
      baz=244,slow=74,SNR=24
H03S1 Juan Fernandez    12.95  74   T      T      22 57 46.5
      baz=244,slow=74,SNR=34
H03S3 Juan Fernandez    12.96  74   T      T      22 57 49.7
      baz=244,slow=74,SNR=34
H03N2 Juan Fernandez    13.11  72   T      T      22 57 56.9
      baz=249,slow=72,SNR=50
H03N3 Juan Fernandez    13.11  73   T      T      22 57 56.9
      baz=249,slow=72,SNR=54
H03N1 Juan Fernandez    13.12  72   T      T      22 57 52.1
      baz=249,slow=72,SNR=78
LPAZ  La Paz            31.58  53   P      P      22 47 52.2  0.0
      0.9nm,0.8s,baz=207,slow=4.5,SNR=4.2
TXAR  Lajitas Array     67.98 351   P      P      22 52 28.0  0.0
      0.4nm,0.6s,baz=157,slow=12,SNR=2.6
NVAR  Mina Array Bea    79.67 341   P      P      22 53 36.8 +0.3
      0.8nm,0.6s,baz=176,slow=6.1,SNR=4.7
PDAR  Pinedale Array    82.02 348   P      P      22 53 48.9 -0.2
      1.0nm,0.7s,baz=159,slow=5.4,SNR=8.8
```

IDC 26 22:43:38.3±2.9, 30°.12S×177°.60W, h0^{km}, mb3.8/3, mb1 4.0/3, mb1mx3.8/28, mbtmp3.8/3, Error ellipse: s-maj=59.1km s-min=25.0km az=97.0, Kermadec Islands

```
Code  Station Name       Δ°   AZ°   Phase ID        Time      Res
                                    Op     ISC     h  m  s   ISC
RAO   Raoul Island       0.91 342   Pn     Pn     22 43 59.7 +1.3
      61nm,0.3s,baz=116,slow=22,SNR=2.2
RAO                                 Sn     Sn     22 44 11.4 -0.8
      133nm,0.3s,baz=70,slow=18,SNR=9.6
CTA   Charters Tower    34.09 279   P      P      22 50 25.9 +1.1
      1.4nm,0.5s,baz=116,slow=7.3,SNR=2.7
ASAR  Alice Springs     43.47 266   P      P      22 51 42.9 -0.6
      0.4nm,0.5s,baz=97,slow=7.6,SNR=4.7
WRA   Warramunga Arr    44.43 272   P      P      22 51 50.6 -0.7
      0.7nm,0.4s,baz=108,slow=7.9,SNR=3.4
FINES FINESS Array B   145.00 340   PKPbc  PKPbc  23 03 14.8 -1.3
      2.3nm,0.8s,baz=27,slow=1.6,SNR=7.4
```

IDC 26 22:45:45.9±5.5, 7°.63S×128°.99E, h200^{km}±57^{km}, mb2.7/1, mb1 2.9/5, mb1mx2.8/27, mbtmp3.4/5, Error ellipse: s-maj=54.7km s-min=22.2km az=52.0, Banda Sea

```
Code  Station Name       Δ°   AZ°   Phase ID        Time      Res
                                    Op     ISC     h  m  s   ISC
BATI  Baumata            5.85 244   P      Pn     22 47 12.2 +0.8
      4.0nm,0.3s,baz=45,slow=22,SNR=2.0
BATI                                S      Sn     22 48 18.9  0.0
      4.7nm,0.3s,baz=150,slow=13,SNR=2.2
FITZ  Fitzroy Crossi    10.90 197   P      Pn     22 48 17.2 +0.4
      0.2nm,0.3s,baz=24,slow=8.7,SNR=19
FITZ                                S      Sn     22 50 18.1 -0.4
      0.5nm,0.3s,baz=282,slow=22,SNR=5.6
WRA   Warramunga Arr    13.29 158   P      Pn     22 48 45.7 -1.5
      0.4nm,0.3s,baz=335,slow=14,SNR=27
WRA                                 S      S      22 51 07.5 -7.9
      0.7nm,0.3s,baz=325,slow=27,SNR=11
ASAR  Alice Springs     16.63 164   P      Pn     22 49 27.6 -0.3
      0.1nm,0.3s,baz=338,slow=10,SNR=1.8
ASAR                                S      S      22 52 31.3 +0.8
      0.1nm,0.3s,baz=343,slow=25,SNR=4.7
MKAR  Makanchi Array    68.21 327   P      P      22 56 24.8  0.0
      0.1nm,0.6s,baz=123,slow=5.3,SNR=2.1
```

IDC ***26*** *22:47:09.4±15.0, 38°.67S×93°.65W, h0^{km}, mb3.8/4, mb1 4.2/4, mb1mx4.0/17, mbtmp3.8/4, MS3.9/3, Ms1 4.0/3, ms1mx3.4/30, Error ellipse: s-maj=408.2km s-min=55.5km az=0.0*

NEIC ***26*** *22:47:11.2±1.3, 38°.61S±0°.06×93°.1W±0°.2, h10^{km}±2^{km}, mb4.2/10, Error ellipse: s-maj=29.4km s-min=10.6km az=264.0*

ISC 26 22:47:11.0±1.2, 38°.7S±0°.2×93°.1W±0°.2, h10^{km}, n21, σ1^{s}.06/16, mb4.0/9, MS4.0/3, West Chile Rise

```
Code  Station Name       Δ°   AZ°   Phase ID        Time      Res
                                    Op     ISC     h  m  s   ISC
H03S2 Juan Fernandez    12.44  72   T      T      23 03 31.8
      baz=244,slow=74,SNR=65
H03S1 Juan Fernandez    12.45  72   T      T      23 03 33.4
      baz=244,slow=74,SNR=74
H03S3 Juan Fernandez    12.46  72   T      T      23 03 32.2
      baz=244,slow=74,SNR=94
LL01  San Ignacio de    16.18 110   Pn     Pn     22 50 57.6 -0.9
PLCA  Paso Flores       17.50 104          P      22 51 16.2 -0.1
MT05  Renca             18.85  81   P      P      22 51 31.0 -0.2
MT05                                IAmb   IAmb   22 51 34.4
      comp=Z,17nm,0.6s
LCO   Las Campanas      20.93  69   P      P      22 51 52.7 -1.5
GO10  Punta Arenas      21.00 141   P      P      22 51 55.0 +0.5
ZON   Zonda             21.20  78   P      P      22 51 55.8 -1.0
AC01  Pan de Azucar     22.69  63   P      P      22 52 13.3 +0.5
AC01                                IAmb   IAmb   22 52 31.7
      comp=Z,6.8nm,1.1s
AC02  Maricunga         23.31  67   P      P      22 52 19.8  0.0
AC02                                IAmb   IAmb   22 52 35.4
      comp=Z,5.0nm,0.8s
PB14  IPOC Station P    23.80  61   P      P      22 52 24.8 +0.4
PB14                                IAmb   IAmb   22 52 44.2
      comp=Z,4.9nm,1.0s
PB04  IPOC Station P    25.53  57   P      P      22 52 41.3 +1.2
PB04                                IAmb   IAmb   22 52 44.9
      comp=Z,9.5nm,1.0s
LPAZ  La Paz            31.27  51   P      P      22 53 34.5 +2.7
      comp=Z,1.8nm,0.9s,baz=214,slow=7.3,SNR=3.4
LPAZ                                LR     LR     23 03 27.2
      comp=Z,97nm,19.6s,baz=218,slow=31
BELA  Belgrano 2        46.00 165   P      P      22 55 34.5 +0.5
BELA                                IAmb   IAmb   22 55 46.1
      comp=Z,1.1nm,0.8s
RAR   Rarotonga         59.10 267   LR     LR     23 14 36.6
      comp=Z,137nm,21.7s,baz=28,slow=28
RCBR  Riachuelo         61.04  73   P      P      22 57 24.7 -0.5
TXAR  Lajitas Array     68.36 350   P      P      22 58 12.2 -0.4
      comp=Z,0.3nm,0.7s,baz=165,slow=11,SNR=1.7
NVAR  Mina Array Bea    80.14 340   P      P      22 59 20.9 -0.3
      comp=Z,0.7nm,0.7s,baz=173,slow=9.1,SNR=3.5
PDAR  Pinedale Array    82.42 348   P      P      22 59 32.6 -0.7
      comp=Z,1.0nm,1.0s,baz=158,slow=7.5,SNR=4.0
KOWA  Kowa              98.23  78   LR     LR     23 41 34.4
      comp=Z,112nm,20.5s,baz=20,slow=33
```

IDC ***26*** *23:06:59.0±0.5, 28°.20N×131°.25E, h0^{km}, mb4.1/19, mb1 4.3/21, mb1mx4.1/55, mbtmp4.1/21, ML4.6/2, MS3.1/2, Ms1 3.2/2, ms1mx2.8/42, Error ellipse: s-maj=20.3km s-min=12.8km az=67.0*

JMA ***26*** *23:07:01.5±0.1, 28°.04N×131°.25E, h92^{km}±3^{km}, M4.0*

*NIED **26** 23:07:01.6, 28°.04N×131°.25E, h92km, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-2.12; $M_{\theta\theta}$0.15; $M_{\phi\phi}$1.97; $M_{r\theta}$-1.07; $M_{\theta\phi}$-0.11; $M_{\phi r}$0.15; Fault plane solution: $M_0$2.27000×10^{15} NP1: ϕ_s155.00000°, δ52.00000°, λ-117.00000°. NP2: ϕ_s16.00000°, δ46.00000°, λ-59.00000°.*

*NEIC **26** 23:07:04.3±2.9, 28°.01N±0°.05×131°.18E±0°.06, h38km±6km, mb4.6/22 Error ellipse: s-maj=8.1km s-min=7.8km az=133.0*

ISC 26 23:07:02.3±1.6**, 28°.06N**±0°.03×**131°.27E**±0°.04**, h23**km±11km**, n100, σ1s.78**/127**, mb4.4**/29**, Southeast of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JZK	Kikaishima	1.17	283	P	Pb	23 07 23.7	-0.2
JZK				*e*S	Sb	23 07 40.4	+1.8
JAM	Amami Oshima	1.51	284	P	Pn	23 07 27.7	-0.2
JAM				*e*S	Sb	23 07 46.5	-1.8
JAMN	Amaminishikomi	1.85	276	P	Pn	23 07 32.2	-0.5
JAMN				*e*S	Sn	23 07 54.6	-0.9
JTK	Tokunoshima	2.07	263	P	Pn	23 07 35.3	-0.4
JTK				*e*S	Sn	23 07 59.8	-0.9
JKDJ	Kitadaitoujima	2.10	179	P	Pn	23 07 35.3	-0.8
JKDJ				*e*S	Sn	23 07 59.4	-2.2
JTAJ	Takarajima	2.12	301	P	Pn	23 07 35.9	-0.4
JTAJ				*e*S	Sn	23 08 00.6	-1.3
JNN	Nakanoshima	2.15	326	P	Pn	23 07 36.6	-0.3
JNN				*e*S	Sn	23 08 01.4	-1.5
JMZ	Minamidaito 2	2.23	181	P	Pn	23 07 37.1	-0.8
JMZ				S	Sn	23 08 02.3	-2.5
JMZ	Minamidaito 2	2.23	181	Pn	Pn	23 07 37.2	-0.7
JMZ				Sn	Sn	23 08 02.3	-2.5
JYAK	Yakushimahirau	2.27	343	P	Pn	23 07 38.2	-0.2
JYAK				*e*S	Sn	23 08 04.1	-1.6
JMTN	Minamitane	2.35	352	P	Pn	23 07 39.2	-0.4
JMTN				S	Sn	23 08 06.1	-1.6
JOKE	Okinoerabujima	2.49	254	P	Pn	23 07 40.7	-0.8
JKC	Kuchinoerabu	2.57	339	P	Pn	23 07 42.5	-0.1
JKC				*e*S	Sn	23 08 10.9	-2.2
JTN	Tanegashima 3	2.60	355	P	Pn	23 07 42.5	-0.5
JTN				*e*S	Sn	23 08 11.7	-2.1
JYRO	Yoronjima	2.70	248	P	Pn	23 07 43.4	-1.0
JYRO				*e*S	Sn	23 08 14.4	-2.0
JOW	Kunigami	2.93	246	Pn	Pn	23 07 46.9	-0.6
	103nm,0.3s,baz=121,slow=27,SNR=257						
JOW				Sn	Sn	23 08 18.4	-3.5
	68nm,0.3s,baz=29,slow=30,SNR=7.0						
JOW	Kunigami	2.93	246	P	Pn	23 07 46.4	-1.1
JOW				*e*S	Sn	23 08 20.2	-1.8
JOW	Kunigami	2.93	246	Pn	Pn	23 07 47.1	-0.4
JIH	Iheya	3.10	252	P	Pn	23 07 49.2	-0.7
JIH				*e*S	Sn	23 08 24.1	-2.2
JSU	Suzuyama	3.50	349	Pn	Pn	23 07 55.9	+0.4
JJT3	Tamagusuku3	3.64	239	P	Pn	23 07 56.7	-0.7
JJT3				S	Sn	23 08 38.2	-1.5
JTZ	Takazaki	3.83	358	P	Pn	23 07 59.8	-0.1
JTZ				*e*S	Sn	23 08 42.3	-2.0
JSJ	Shimokoshiki	3.85	340	P	Pn	23 07 59.4	-0.8
JSJ				*e*S	Sn	23 08 43.2	-1.5
JAGN	Aguni-jima	3.87	249	P	Pn	23 08 00.0	-0.4
JAGN				*e*S	Sn	23 08 41.8	-3.4
JKE	Kume jima 2	4.35	248	P	Pn	23 08 05.3	-1.7
JKE				*e*S	Sn	23 08 55.2	-1.8
JIU3	Izumi3	4.49	355	P	Pn	23 08 08.7	-0.3
JIU3				S	Sn	23 08 56.9	-3.6
JTO	Tosashimizu	4.96	15	P	Pn	23 08 14.9	-0.6
JTO				S	Sn	23 09 06.8	-5.4
JNU	Nakatsue	5.06	356	Pn	Pn	23 08 16.7	-0.1
	8.0nm,0.3s,baz=219,slow=2.7,SNR=40						
JNU				Sn	Sn	23 09 08.1	-6.4
	5.3nm,0.3s,baz=171,slow=12,SNR=4.8						
JNU	Nakatsue	5.06	356		Pn	23 08 17.1	+0.3
JMN	Monobe	6.08	21	Pn	Pn	23 08 31.0	+0.2
JTU	Tsushima	6.64	347	Pn	Pn	23 08 38.9	+0.4
JHS	Saijyo	7.09	12	Pn	Pn	23 08 46.9	+2.1
JWT	Wachi	8.02	25	Pn	Pn	23 08 58.2	+0.9
YOJ	Yonaguni jima	8.23	246	Pn	Pn	23 08 59.0	-1.4
INU	Inuyama	8.76	33	Pn	Pn	23 09 10.2	+2.6
JHJ	Hachijo jima 2	8.90	53	Pn	Pn	23 09 13.8	+4.2
	21nm,0.3s,baz=69,slow=21,SNR=1.9						
JHJ2	Mitsune	8.92	54	Pn	Pn	23 09 13.1	+3.2
JGF	Kuroka	9.13	33	Pn	Pn	23 09 15.0	+2.3
TATO	Taipei	9.28	253	Pn	Pn	23 09 14.2	-0.6
SSE	Sheshan	9.28	291	Pn	Pn	23 09 17.3	+2.6
YHNB	Yeheng	9.49	251	Pn	Pn	23 09 16.5	-1.2
NACB	Ninganchiao	9.51	248	Pn	Pn	23 09 13.8	-4.1
JCJ	Chichijima	9.74	93	Pn	Pn	23 09 22.1	+1.0
	8.7nm,0.3s,baz=290,slow=20,SNR=4.8						
JCJ	Chichijima	9.74	93		Pn	23 09 22.3	+1.2
KSRS	Korea Array	9.78	344	Pn	Pn	23 09 22.2	+0.6
	0.4nm,0.3s,baz=158,slow=15,SNR=3.5						
YULB	Yu-li	10.12	245	Pn	Pn	23 09 20.6	-5.7
SSLB	Suanglung	10.21	248	Pn	Pn	23 09 23.1	-4.4
MAJO	Matsushiro	10.29	33	Pn	Pn	23 09 30.7	+2.0
MJAR	Matsushiro Arr	10.29	33	Pn	Pn	23 09 30.2	+1.6
	0.2nm,0.3s,baz=235,slow=12,SNR=1.5						
MJAR				LR	LR	23 12 39.7	
	comp=Z,59nm,19.9s,baz=25,slow=33						
MJB9	Matsu-Tunnel	10.29	33	Pn	Pn	23 09 30.5	+1.8
TPUB	Ta-pu	10.70	246	Pn	Pn	23 09 31.1	-3.1
USRK	Ussuriysk Ar.	16.12	2	Pn	P	23 10 52.2	+1.7
	baz=176,slow=8.0,SNR=2.6						
USRK	Ussuriysk Ar.	16.12	2	P	P	23 10 51.8	+1.3
BJT	Baijiatuau	17.26	318		P	23 11 03.2	0.0
XAN	Xi'an	20.03	293	P	P	23 11 34.1	+0.3
XAN				IAmb	IAmb	23 11 44.2	
	comp=Z,14nm,0.7s						
KLR	Kul'dur	21.14	1	P	P	23 11 48.7	+3.1
	comp=Z,3.2nm,0.7s,baz=203,slow=6.6,SNR=9.1						
SONM	Songino Array	27.62	322	P	P	23 12 47.5	-0.7
	comp=Z,0.4nm,0.4s,baz=138,slow=11,SNR=4.8						
CMAR	Chiang Mai Arr	31.11	259	P	P	23 13 20.4	+1.0
	comp=Z,0.7nm,0.3s,baz=56,slow=8.8,SNR=1.4						
CMAR				LR	LR	23 25 55.7	
	comp=Z,50nm,19.0s,baz=11,slow=36						
MK31	Makanchi Array	42.39	310	P	P	23 14 55.6	+0.7
MKAR	Makanchi Array	42.39	310	P	P	23 14 53.6	-1.4
	comp=Z,0.7nm,0.6s,baz=92,slow=9.6,SNR=11						
MKAR				PcP	PcP	23 16 48.5	+0.5
	comp=Z,0.8nm,0.9s,baz=92,slow=4.9,SNR=4.0						
MKAR	Makanchi Array	42.39	310	P	P	23 14 54.9	-0.1
ZAA0	Zalesovo Array	42.49	321	P	P	23 14 55.0	-0.6
ZALV	Zalesovo Beam	42.49	321	P	P	23 14 54.1	-1.6
	comp=Z,2.5nm,0.8s,baz=106,slow=8.2,SNR=10						
ZALV				PcP	PcP	23 16 48.0	-0.1
	comp=Z,0.7nm,0.7s,baz=122,slow=1.9,SNR=3.7						
KURK	Kurchatov	45.41	315	P	P	23 15 19.9	+0.9
FITZ	Fitzroy Crossi	46.21	187	P	P	23 15 25.8	+0.2
FITZ				IAmb	IAmb	23 15 37.9	
	comp=Z,8.5nm,1.4s						
WB0	Warramunga Arr	47.64	176	P	P	23 15 37.6	+0.7
WB0				IAmb	IAmb	23 15 38.7	
	comp=Z,8.8nm,0.7s						
WRAB	Tennant Creek	47.80	176	P	P	23 15 37.6	-0.5
WRA	Warramunga Arr	47.81	176	P	P	23 15 39.2	+1.0
	comp=Z,7.5nm,0.8s,baz=354,slow=8.5,SNR=23						
WB2	Warramunga Arr	47.81	176	P	P	23 15 39.1	+0.9
WB2				IAmb	IAmb	23 15 40.0	
	comp=Z,10.0nm,0.7s						
WR0	Warramunga Arr	47.84	176	P	P	23 15 39.5	+1.1
WR0				IAmb	IAmb	23 15 40.4	
	comp=Z,12nm,0.8s						
TARA	Tarawa	47.85	116	P	P	23 15 36.9	-1.8
NRIK	Noril'sk	48.38	341	P	P	23 15 39.8	-2.3
	comp=Z,1.5nm,0.5s,baz=147,slow=7.9,SNR=3.7						
NRIK	Noril'sk	48.38	341	P	P	23 15 40.6	-1.4
NRIK				IAmb	IAmb	23 15 43.6	
	comp=Z,5.5nm,1.2s						
CTA	Charters Tower	50.01	162	P	P	23 15 56.2	+1.1
	comp=Z,3.3nm,0.6s,baz=330,slow=10,SNR=6.2						
KKAR	Karatay Array	50.59	304	P	P	23 16 01.4	+2.0
BRVK	Borovoye	50.81	317	P	P	23 16 02.0	+1.2
BRVK				IAmb	IAmb	23 16 02.8	
	comp=Z,7.2nm,0.7s						
AS31	Alice Springs	51.49	177	P	P	23 16 07.5	+1.3
AS31				IAmb	IAmb	23 16 09.3	
	comp=Z,2.3nm,0.5s						
ASAR	Alice Springs	51.49	177	P	P	23 16 07.7	+1.5
	comp=Z,5.0nm,0.7s,baz=10,slow=13,SNR=43						
ASAR				PcP	PcP	23 17 20.4	+0.1
	comp=Z,0.7nm,0.8s,baz=14,slow=5.3,SNR=1.8						
ASAR	Alice Springs	51.49	177	P	P	23 16 07.3	+1.1
ABKAR	Akbulak array	57.39	313	P	P	23 16 49.5	+0.6
ARU	Arti	57.65	321	P	P	23 16 50.9	+0.3
ARU				IAmb	IAmb	23 16 56.9	
	comp=Z,8.9nm,1.5s						
SVW2	Sparrevohn	57.76	33	P	P	23 16 54.4	+3.1
DZM	Mont Dzumac	60.31	142	P	P	23 17 11.0	+1.4
	comp=Z,3.3nm,0.5s,baz=194,slow=18,SNR=7.9						
STKA	Stephens Creek	60.41	170	P	P	23 17 09.6	-0.3
	comp=Z,2.0nm,0.7s,baz=344,slow=6.6,SNR=3.1						
ILAR	Eielson Array	61.54	29	P	P	23 17 15.5	-1.8
	comp=Z,0.2nm,0.6s,baz=289,slow=5.6,SNR=2.2						
NWAO	Narrogin (SRO)	62.10	193	P	P	23 17 20.7	-0.7
BMAR	Burnt Mountain	62.20	26	P	P	23 17 23.1	+1.4
Q23K	Middleton Isla	62.48	35	P	P	23 17 21.3	-2.3
MID	Middleton Isla	62.48	35	P	P	23 17 21.3	-2.3
GLB	Gilahina Butte	63.39	32	P	P	23 17 30.6	+0.9
GLB				IAmb	IAmb	23 17 30.9	
	comp=Z,3.9nm,1.1s						
VRDI	Verde Repeater	63.60	33	P	P	23 17 28.4	-2.9
VRDI				IAmb	IAmb	23 17 34.9	
	comp=Z,5.8nm,1.3s						
INK	Inuvik	66.14	24	P	P	23 17 47.0	-0.5
	comp=Z,0.6nm,0.5s,baz=275,slow=4.7,SNR=3.7						
KBZ	Khabaz	70.09	310	P	P	23 18 13.8	+1.1
	comp=Z,2.7nm,0.8s,baz=75,slow=3.2,SNR=8.6						
FINES	FINESS Array B	72.59	331	P	P	23 18 27.1	-0.4
	comp=Z,1.0nm,0.5s,baz=90,slow=7.6,SNR=9.7						
YKA	Yellowknife Ar	75.72	26	P	P	23 18 46.4	+0.7
	comp=Z,1.0nm,0.8s,baz=308,slow=4.7,SNR=9.8						
AKASG	Malin Array Be	75.88	320	P	P	23 18 46.8	-0.1
	comp=Z,0.3nm,0.3s,baz=49,slow=6.2,SNR=5.2						
BRTR	Keskin Array B	78.03	309	P	P	23 19 00.4	+1.0
	comp=Z,1.3nm,0.7s,baz=90,slow=4.3,SNR=3.2						
NOA	NORSAR Array B	78.85	335	P	P	23 19 02.6	-0.8
	comp=Z,1.6nm,0.8s,baz=49,slow=5.5,SNR=3.1						
CLL	Collm	84.17	326	*e*P	P	23 19 32.0	+0.4
GERES	GERESS Array B	85.34	324	P	P	23 19 36.9	-0.9
	comp=Z,0.2nm,0.3s,baz=70,slow=5.6,SNR=3.5						

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*IDC **26** 23:09:09.1±0.7, 7°.11S×154°.86E, h0km, mb4.3/13, mb1 4.4/16, mb1mx4.2/47, mbtmp4.2/16, ML3.9/2, MS3.4/4, Ms1 3.3/4, ms1mx3.0/35, Error ellipse: s-maj=24.1km s-min=15.7km az=124.0*

*NEIC **26** 23:09:12.8±2.0, 7°.23S±0°.09×155°.00E±0°.08, h35km±2km, mb4.6/20, Error ellipse: s-maj=15.1km s-min=12.2km az=203.0*

ISC 26 23:09:13.9±0.5**, 7°.24S**±0°.08×**154°.96E**±0°.07**, h41**km**, n59, σ1s.09**/58**, mb4.5**/29**, MS3.3**/3**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	4.11	317	Pn	Pn	23 10 13.0	-1.3
RABL	Rabaul	4.11	317	P	Pn	23 10 25.3	+11
HNR	Honiara	5.40	114	LR	LR	23 12 39.4	
	comp=Z,134nm,21.3s,baz=270,slow=38						
HNR	Honiara	5.40	114	Pn	Pn	23 10 30.5	-1.4
PMG	Port Moresby	8.01	254	Pn	Pn	23 11 05.1	-2.8
	baz=272,slow=21,SNR=1.1						
PMG				Sn	Sn	23 12 38.8	+1.5
	2.0nm,0.3s,baz=201,slow=2.9,SNR=5.7						
PMG	Port Moresby	8.01	254		Pn	23 11 08.4	+0.5
PMG					Sn	23 12 38.3	+0.9
COEN	Coen	13.37	239	Pn	Pn	23 12 19.6	-1.6
CTA	Charters Tower	15.31	213	Pn	Pn	23 12 46.7	-0.6
	0.7nm,0.3s,baz=46,slow=16,SNR=1.8						
CTAO	Charters Tower	15.31	213	Pn	Pn	23 12 46.5	-0.9
DZM	Mont Dzumac	18.45	144	P	Pn	23 13 27.8	+1.2
	0.2nm,0.3s,baz=110,slow=21,SNR=1.8						
WR0	Warramunga Arr	23.50	235	P	P	23 14 19.7	-0.6
WR0				IAmb	IAmb	23 14 45.0	
	comp=Z,7.6nm,0.9s						
WB0	Warramunga Arr	23.52	236	P	P	23 14 19.9	-0.7
WB2	Warramunga Arr	23.64	236	P	P	23 14 21.3	-0.4
WRA	Warramunga Arr	23.65	236	P	P	23 14 20.7	-1.1
	comp=Z,6.3nm,0.9s,baz=59,slow=9.8,SNR=28						
ASAR	Alice Springs	25.99	229	P	P	23 14 43.4	+0.2
	comp=Z,2.2nm,0.8s,baz=58,slow=9.8,SNR=17						
ASAR				LR	LR	23 23 45.6	
	comp=Z,85nm,19.9s,baz=57,slow=34						
ASAR	Alice Springs	25.99	229	P	P	23 14 42.6	-0.6
STKA	Stephens Creek	27.50	205	P	P	23 14 59.2	+2.6
	comp=Z,5.6nm,0.8s,baz=21,slow=13,SNR=13						
STKA				LR	LR	23 24 39.0	
	comp=Z,81nm,20.3s,baz=26,slow=34						
STKA	Stephens Creek	27.50	205	P	P	23 14 57.5	+0.8
FITZ	Fitzroy Crossi	30.52	246	P	P	23 15 23.6	0.0
	comp=Z,3.4nm,0.9s,baz=53,slow=5.1,SNR=4.1						
FITZ	Fitzroy Crossi	30.52	246	P	P	23 15 22.6	-1.0
FITZ				IAmb	IAmb	23 15 24.3	
	comp=Z,7.6nm,1.2s						
BBOO	Buckleboo	30.91	212	P	P	23 15 26.7	-0.2
BBOO				IAmb	IAmb	23 15 29.4	
	comp=Z,10nm,1.2s						
FORT	Forrest	34.39	224	P	P	23 15 56.1	-1.3
TUWZ	Tuamarina	38.00	157	P	P	23 16 27.6	-0.5
NWAO	Narrogin (SRO)	43.31	229	P	P	23 17 12.4	+0.4
NWAO				IAmb	IAmb	23 18 16.9	
	comp=Z,23nm,1.3s						
SSE	Sheshan	49.97	321	P	P	23 18 03.1	-1.1
IPM	Ipoh	55.07	281	P	P	23 18 41.0	-1.3
IPM				IAmb	IAmb	23 18 42.3	
	comp=Z,14nm,1.4s						
USRK	Ussuriysk Ar.	55.24	340	P	P	23 18 42.7	-0.3
	comp=Z,3.0nm,1.0s,baz=127,slow=5.2,SNR=1.8						
PSI	Prapat	56.80	278	LR	LR	23 46 21.4	
	comp=Z,56nm,18.8s,baz=86,slow=39						
ENH	Enshi	57.38	313	P	P	23 18 58.2	-0.3
ENH				IAmb	IAmb	23 18 59.7	
	comp=Z,7.3nm,0.9s						
XAN	Xi'an	59.85	316	P	P	23 19 15.1	-0.5
XAN				IAmb	IAmb	23 19 16.6	
	comp=Z,4.6nm,0.6s						
CMAR	Chiang Mai Arr	60.86	296	P	P	23 19 24.1	+1.3
	comp=Z,2.7nm,0.4s,baz=117,slow=5.1,SNR=12						
CMAR	Chiang Mai Arr	60.86	296	P	P	23 19 24.6	+1.8
CHTO	Chiang Mai	60.98	296	P	P	23 19 24.7	+1.1
CHTO				IAmb	IAmb	23 19 36.7	
	comp=Z,2.3nm,0.7s						
GSTR	Great Sitkin T	64.09	19	P	P	23 19 42.1	-1.6
SONM	Songino Array	69.52	327	P	P	23 20 19.1	+0.6
	comp=Z,2.2nm,0.8s,baz=138,slow=6.3,SNR=10						
SONM	Songino Array	69.52	327	P	P	23 20 17.5	-1.0
TAPN	Taplejung	73.50	301	*e*P	P	23 20 44.6	+1.4
	comp=Z,12nm,0.8s						
GUN	Gumba	75.21	301	*e*P	P	23 20 54.1	+0.9
	comp=Z,16nm,0.7s						
PKI	Pulchoki	75.52	301	*e*P	P	23 20 56.0	+1.1
	comp=Z,6.3nm,0.7s						
KKN	Kakani	75.69	301	*e*P	P	23 20 57.1	+1.3
	comp=Z,9.6nm,0.7s						
DMN	Daman	75.79	301	*e*P	P	23 20 57.7	+1.3
	comp=Z,13nm,0.6s						
GKN	Gorkha	76.29	301	*e*P	P	23 21 00.4	+1.2
	comp=Z,14nm,0.9s						
SEW	Seward	80.06	25	P	P	23 21 19.3	+0.3
IMAR	Indian Mountai	81.97	19	P	P	23 21 29.0	-0.1
MK31	Makanchi Array	83.56	319	P	P	23 21 37.3	-0.6
MK31				IAmb	IAmb	23 21 39.5	
	comp=Z,2.1nm,0.8s						
MKAR	Makanchi Array	83.56	319	P	P	23 21 38.7	+0.8
	comp=Z,2.1nm,0.7s,baz=104,slow=5.5,SNR=27						
MKAR	Makanchi Array	83.56	319	P	P	23 21 37.5	-0.3
ILAR	Eielson Array	83.61	21	P	P	23 21 37.4	-0.3
	comp=Z,0.5nm,0.3s,baz=235,slow=5.3,SNR=14						
MAKZ	Makanchi	83.77	319	P	P	23 21 38.7	-0.2
MAKZ				IAmb	IAmb	23 21 40.5	
	comp=Z,3.5nm,0.8s						
BARN	Barnard Glacie	83.86	26	P	P	23 21 39.7	+0.4
BARN				IAmb	IAmb	23 21 42.1	
	comp=Z,7.5nm,0.8s						
ZALV	Zalesovo Beam	84.36	326	P	P	23 21 40.9	-0.9
	comp=Z,0.8nm,0.4s,baz=114,slow=5.5,SNR=5.0						
HYT	Haines Junctio	85.60	27	P	P	23 21 49.1	+1.1
INK	Inuvik	89.95	21	P	P	23 22 09.2	+0.6
	comp=Z,0.9nm,0.5s,baz=284,slow=4.3,SNR=6.5						
NVAR	Mina Array Bea	91.90	52	P	P	23 22 20.0	+1.4
	comp=Z,0.2nm,0.4s,baz=280,slow=5.4,SNR=2.3						
YKA	Yellowknife Ar	96.56	28	P	P	23 22 40.3	+1.2
	comp=Z,2.4nm,0.9s,baz=266,slow=4.0,SNR=21						
GERES	GERESS Array B	127.24	329	PKP	PKiKP	23 28 16.0	+1.3
	comp=Z,0.2nm,0.3s,baz=76,slow=4.1,SNR=2.2						
BDFB	Brasilia	147.84	135	PKPbc	PKiKP	23 28 57.6	-0.1
	comp=Z,0.9nm,0.4s,baz=164,slow=5.2,SNR=2.0						
MDT	Midelt	148.25	326	PKPbc	PKiKP	23 28 58.3	+0.2
	comp=Z,3.1nm,0.8s,baz=38,slow=3.4,SNR=4.0						
TORD	Torodi Ar. Bea	153.05	285	PKPbc	PKiKP	23 29 09.1	+0.7
	comp=Z,0.8nm,0.5s,baz=47,slow=2.0,SNR=4.7						

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*IDC **26** 23:19:46.4±1.9, 43°.56N×105°.40W, h0km, mb1 3.2/4, mb1mx3.1/49, mbtmp3.0/4, ML3.0/4, Error ellipse: s-maj=44.1km s-min=8.7km az=151.0*

*NEIC **26** 23:19:48.7±2.1, 43°.66N±0°.03×105°.17W±0°.03, h0km±2km, ML3.2/58, Error ellipse: s-maj=6.2km s-min=3.0km az=324.0*

ISC 26 23:19:48.6±1.0**, 43°.68N**±0°.05×**105°.28W**±0°.05**, h0**km**, n64, σ1s.26**/64**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	1.00	64	Pn	Pg	23 20 08.1	+0.3
K22A	Casper	1.37	222	Pn	Pg	23 20 13.4	-1.6
PHWY	Pilot Hill	2.38	183	Pn	Pn	23 20 29.8	+0.6
PHWY					Sn	23 21 02.2	+3.0
RWWY	Rawlins	2.45	216		Pn	23 20 31.6	+1.5
RWWY				IAML		23 21 05.6	
	170nm,0.8s						
RWWY				IAML		23 21 10.2	
	146nm,0.9s						
LAO	LASA Array	3.08	348	Pn	Pn	23 20 40.1	+1.6
LAO				IAML		23 21 38.0	
	83nm,1.0s						
LAO				IAML		23 21 44.4	
	63nm,2.7s						
RLMT	Red Lodge	3.20	298		Pn	23 20 40.8	+0.5
BW06	Boulder Array	3.26	255		Pn	23 20 41.7	+0.6
BW06				IAML		23 21 29.2	
	34nm,0.6s						
PD31	Pinedale Array	3.26	255		Pn	23 20 41.6	+0.4
PDAR	Pinedale Array	3.26	255	Pn	Pn	23 20 41.6	+0.4
	1.8nm,0.3s,baz=73,slow=16,SNR=31						
PDAR				Lg	Lg	23 21 23.9	
	4.5nm,0.3s,baz=75,slow=32,SNR=11						
YNE	Yellowstone No	3.64	293		Pn	23 20 46.5	0.0
YMP	Mirror Lake Pl	3.66	288		Pn	23 20 47.7	+0.9
GCMT	Greycliff	3.77	306	Pn	Pn	23 20 48.9	+0.8
LKWY	Lake	3.79	285	Pn	Pn	23 20 49.9	+1.3
LKWY				IAML		23 21 14.0	
	33nm,2.4s						
LKWY				IAML		23 22 35.9	
	22nm,4.2s						
LOHW	Long Hollow	3.86	271	Pn	Pn	23 20 50.0	+0.5
LOHW				IAML		23 21 26.0	
	21nm,4.8s						
LOHW				IAML		23 22 01.5	
	21nm,4.8s						
H17A	Grant Village	3.88	282		Pn	23 20 50.4	+0.6
H17A				IAML		23 21 55.2	
	comp=N,23nm,2.6s						
ISCO	Idaho Springs	3.89	184		Pn	23 20 49.6	-0.3
ISCO				IAML		23 21 52.6	
	comp=N,30nm,5.0s						
FLWY	Flagg Ranch	3.94	278		Pn	23 20 52.4	+1.9
FLWY				IAML		23 22 02.0	
	comp=N,40nm,1.3s						
SNOW	Snow King Moun	3.98	269		Pn	23 20 52.2	+1.0
SNOW				IAML		23 21 57.0	
	comp=N,45nm,3.9s						
SNOW				IAML		23 22 05.9	
	comp=N,56nm,1.2s						
YNR	Norris Junctio	4.02	287		Pn	23 20 52.5	+0.9
YPP	Pitchstone Pla	4.03	280		Pn	23 20 53.1	+1.3
REDW	Red Top Meadow	4.06	267		Pn	23 20 53.2	+0.9
REDW				IAML		23 22 02.9	
	comp=N,41nm,1.1s						
REDW				IAML		23 22 05.3	
	comp=N,38nm,1.4s						
YHH	Holmes Hill	4.15	287	Pn	Pn	23 20 54.3	+0.7
O20A	White River Ci	4.17	213		Pn	23 20 53.8	0.0
O20A				IAML		23 22 04.1	
	comp=N,49nm,5.0s						
O20A				IAML		23 22 58.1	
	comp=E,45nm,4.8s						
YMR	Madison River	4.21	286	Pn	Pn	23 20 53.5	-0.7
E28A	Huff	4.35	47	Pn	Pn	23 20 55.3	-0.6
YHB	Horse Butte	4.38	286		Pn	23 20 57.0	+0.4
YHL	Hebgen Lake	4.40	287	Pn	Pn	23 20 58.2	+1.3
RDMU	Red Mountain	4.45	227		Pn	23 20 57.2	-0.4
DGMT	Dagmar	4.85	9	Pn	Pn	23 21 04.1	+1.2
K31A	O'Neill	4.89	100	Pn	Pn	23 21 00.6	-2.8
BOZ	Bozeman (W)	4.92	295	Pn	Pn	23 21 04.2	+0.2
BOZ				IAML		23 22 08.3	
	comp=E,18nm,4.9s						
BOZ				IAML		23 23 27.3	
	comp=E,12nm,4.6s						
KSCO	Kaye Shedlock’	5.08	156	Pn	Pn	23 21 05.0	-1.1
TCUT	Toone Canyon	5.21	243		Pn	23 21 10.2	+2.1
JLU	Jordanelle	5.52	238	Pn	Pn	23 21 13.0	+0.7
LRM	Limekiln Ridge	5.54	295	Pn	Pn	23 21 12.5	0.0
MCMT	McKenzie Canyo	5.55	285	Pn	Pn	23 21 13.6	+0.8
CTU	Camp Tracy	5.66	240	Pn	Pn	23 21 13.6	-0.5
PV22	Blue Mesa, Par	5.78	208	Pn	Pn	23 21 17.3	+1.4
SPUT	South Promonto	5.80	248	Pn	Pn	23 21 17.6	+1.5
PV07	Paradox Valley	5.82	207	Pn	Pn	23 21 18.5	+2.1
P17A	Butcher Ranch,	5.87	226	Pn	Pn	23 21 18.3	+1.4
BCYI	Bear Canyon	5.89	279	Pn	Pn	23 21 19.3	+1.9
SDCO	Great Sand Dun	5.93	182	Pn	Pn	23 21 18.9	+0.9
PV23	Carpenter Ridg	5.94	210	Pn	Pn	23 21 18.6	+0.6
PV04	Paradox Valley	5.95	209	Pn	Pn	23 21 19.2	+1.0
PV14	Lion Creek, Pa	6.01	209	Pn	Pn	23 21 19.5	+0.5
PV20	West Nyswonger	6.02	209	Pn	Pn	23 21 20.5	+1.4
PV11	David Mesa, Pa	6.02	208		Pn	23 21 20.0	+0.9
PV16	Nyswonger Mesa	6.03	208	Pn	Pn	23 21 20.1	+0.8
SRU	San Rafael Swe	6.03	223	Pn	Pn	23 21 20.6	+1.3
PV19	Morning Glory	6.05	209	Pn	Pn	23 21 20.7	+1.1
PV03	Paradox Valley	6.05	208	Pn	Pn	23 21 21.0	+1.4
PV02	Paradox Valley	6.06	207	Pn	Pn	23 21 20.5	+0.8
PV17	East Wray Mesa	6.07	209	Pn	Pn	23 21 19.1	-0.7
PV01	Paradox Valley	6.07	205	Pn	Pn	23 21 20.6	+0.7
PV18	Skein Mesa, Pa	6.08	208	Pn	Pn	23 21 19.5	-0.4
PV13	Radium Mtn., P	6.13	207	Pn	Pn	23 21 21.8	+1.1
TMUT	Trail Mountain	6.24	227	Pn	Pn	23 21 23.5	+1.2
PV05	Paradox Valley	6.30	209	Pn	Pn	23 21 21.9	-1.1
CBKS	Cedar Bluff	6.41	137	Pn	Pn	23 21 24.6	+0.3
ELK	Elko	7.95	252	Pn	Pn	23 21 42.7	-3.0
	comp=E,0.1nm,0.3s,baz=53,slow=20,SNR=1.5						
I10CA	LAC DU BONNET	9.09	41	*i*		00 18 10.0	
	baz=223,slow=339,SNR=2.0						
ULM	Lac du Bonnet	9.19	41	Pn	Pn	23 21 59.6	-2.7
	comp=E,1.0nm,0.3s,baz=222,slow=12,SNR=12						
ULM				Lg	Lg	23 24 34.2	
	comp=E,0.2nm,0.3s,baz=151,slow=19,SNR=1.2						
YKA	Yellowknife Ar	19.62	347	P	P	23 24 17.6	-0.7
	comp=E,0.0nm,0.3s,baz=158,slow=13,SNR=2.3						

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*IDC **26** 23:25:57.2±4.9, 28°.02N×139°.78E, h413km±52km, mb2.9/6, mb1 3.1/7, mb1mx2.7/48, mbtmp3.7/7, Error ellipse: s-maj=49.5km s-min=21.8km az=84.0*

ISC 26 23:25:55.9±1.2**, 28°.0N**±0°.2×**139°.8E**±0°.3**, h400**km**, n7, σ0s.46**/7**, mb3.2**/6**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
USRK	Ussuriysk Ar.	17.33	341	P	P	23 29 33.8	+0.6
	baz=132,slow=7.5,SNR=1.8						
WRA	Warramunga Arr	47.96	187	P	P	23 33 56.5	+0.1
	0.2nm,0.5s,baz=5.0,slow=7.5,SNR=5.0						
MKAR	Makanchi Array	48.27	309	P	P	23 33 58.5	0.0
	0.2nm,0.8s,baz=95,slow=8.2,SNR=2.1						
ARCES	ARCESS Array B	71.98	340	P	P	23 36 36.5	-0.4
	1.9nm,0.8s,baz=46,slow=8.2,SNR=4.2						
YKA	Yellowknife Ar	72.34	28	P	P	23 36 39.3	+0.2
	0.2nm,0.6s,baz=298,slow=5.5,SNR=3.4						
FINES	FINESS Array B	76.19	333	P	P	23 37 01.4	+0.3
	0.6nm,0.3s,baz=65,slow=5.3,SNR=8.7						
NOA	NORSAR Array B	81.97	337	P	P	23 37 31.7	-0.4
	0.7nm,0.6s,baz=47,slow=4.9,SNR=2.3						

IDC 26 23:32:48.5±436.0**, 58°.01N**×**145°.63W, h0**km**, Error ellipse: s-maj=194.9km s-min=131.3km az=28.0, Gulf of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I53US	FAIRBANKS INFR	6.97	352	*i*		00 13 10.0	

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	baz=171,slow=324,SNR=0.9						
I56US	NEWPORT INFRAS	19.54	108	*i*		01 35 20.0	
	baz=313,slow=323,SNR=3.3						
I18DK	QAANAAQ INFRAS	31.40	24	*i*		02 48 20.0	
	baz=274,slow=345,SNR=0.9						

IDC ***26*** *23:36:04.9±1.1, 19°.18N×66°.95W, h0^{km}, mb3.8/5, mb1 4.0/7, mb1mx3.6/41, mbtmp3.8/7, ML3.3/2, MS3.1/2, Ms1 3.1/2, ms1mx2.8/40, Error ellipse: s-maj=26.7km s-min=18.9km az=60.0*

NEIC ***26*** *23:36:08.2±1.7, 19°.15N±0°.05×66°.92W±0°.04, h25^{km}±12^{km}, Error ellipse: s-maj=7.3km s-min=5.2km az=167.0*

RSPR ***26*** *23:36:09.1, 19°.22N×66°.91W, h49^{km}±7^{km}, MD3.3/15*

ISC 26 23:36:08.2±0.7**, 19°.14N**±0°.05×**66°.93W**±0°.04**, h29^{km}, n93, σ1^{s}41**/100**, mb4.1**/5**, 10C-7D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGPR	Aguadilla, PR	0.69	194	⇓*e*P	Pb	23 36 21.7	-0.1
AGPR	Aguadilla, PR	0.69	194	*e*S	Sb	23 36 30.8	-0.2
AGPR	Aguadilla, PR	0.69	194		Pb	23 36 21.8	0.0
AGPR	Aguadilla, PR	0.69	194		Sb	23 36 30.8	-0.2
AGPR	Aguadilla, PR	0.69	194	IAML		23 36 31.6	
	comp=E,8µm,0.4s						
AGPR				IAML		23 36 37.1	
	comp=N,6µm,0.4s						
EMPR	Esperanza - Ma	0.76	150	⇓*e*P	Pb	23 36 23.8	+0.8
EMPR	Esperanza - Ma	0.76	150	*e*S	Sn	23 36 34.5	+0.9
EMPR	Esperanza - Ma	0.76	150		Pn	23 36 23.5	+0.4
EMPR					Sn	23 36 34.7	+1.1
EMPR				IAML		23 36 35.5	
	comp=E,5µm,0.9s						
EMPR				IAML		23 36 46.1	
	comp=N,4µm,0.6s						
AOPR	Arecibo Observ	0.81	168	⇑*e*P	Pn	23 36 24.5	+0.8
AOPR	Arecibo Observ	0.81	168	*e*S	Sn	23 36 36.6	+1.8
AOPR	Arecibo Observ	0.81	168		Pn	23 36 23.6	-0.1
AOPR					Sb	23 36 34.5	+0.1
MPR	Mayaguez	0.94	192	⇑*e*P	Pn	23 36 25.7	+0.1
MPR	Mayaguez	0.94	192		Pn	23 36 25.4	-0.2
LSP	Las Mesas	0.97	189	⇑*e*P	Pn	23 36 26.2	+0.2
LSP	Las Mesas	0.97	189	*e*S	Sn	23 36 40.2	+1.4
LSP	Las Mesas	0.97	189		Pn	23 36 26.2	+0.2
LSP					Sn	23 36 40.2	+1.4
CELP	Cerrillos	1.11	162	⇓*e*P	Pn	23 36 28.4	+0.6
CELP	Cerrillos	1.11	162	*e*S	Sn	23 36 43.6	+1.3
CELP	Cerrillos	1.11	162		Pn	23 36 28.4	+0.6
CELP					Sn	23 36 43.6	+1.3
OBIP	Obispado Ponce	1.14	164	⇓*e*P	Pn	23 36 27.9	-0.3
OBIP	Obispado Ponce	1.14	164	*e*S	Sn	23 36 43.1	+0.3
OBIP	Obispado Ponce	1.14	164		Pn	23 36 27.9	-0.3
OBIP					Sn	23 36 43.1	+0.3
OBIP	Obispado Ponce	1.14	164	IAML		23 36 46.1	
	comp=E,3µm,0.3s						
OBIP				IAML		23 36 47.2	
	comp=N,3µm,0.5s						
GCPR	Guaynabo City	1.15	136	⇑*e*P	Pn	23 36 28.4	0.0
GCPR	Guaynabo City	1.15	136	*e*S	Sn	23 36 43.7	+0.5
GCPR	Guaynabo City	1.15	136		Pn	23 36 28.4	0.0
GCPR					Sn	23 36 43.7	+0.5
GBPR	Guanica, Bosqu	1.16	177	⇑*e*P	Pn	23 36 29.3	+0.7
GBPR	Guanica, Bosqu	1.16	177	*e*S	Sn	23 36 45.0	+1.6
GBPR	Guanica, Bosqu	1.16	177		Pn	23 36 29.3	+0.7
GBPR					Sn	23 36 45.0	+1.6
MLPR	Magueyes Islan	1.17	185	⇑*e*P	Pn	23 36 28.9	+0.3
MLPR	Magueyes Islan	1.17	185	*e*S	Sn	23 36 44.9	+1.2
MLPR	Magueyes Islan	1.17	185		Pn	23 36 27.8	-0.9
MLPR	Magueyes Islan	1.17	185		Sn	23 36 44.9	+1.2
MLPR	Magueyes Islan	1.17	185	IAML		23 36 46.4	
	comp=E,1µm,0.5s						
MLPR				IAML		23 36 50.5	
	comp=N,1µm,0.5s						
SJG	San Juan	1.27	144	Pn	Pn	23 36 30.1	+0.1
	comp=N,88nm,0.3s,baz=318,slow=11,SNR=93						
SJG				Sn	Sn	23 36 44.9	-1.1
	comp=N,174nm,0.3s,baz=58,slow=23,SNR=11						
SJG				LR	LR	23 37 08.2	
	comp=N,258nm,18.4s,baz=294,slow=49						
SJG	San Juan	1.27	144		Pn	23 36 30.1	+0.1
SJG				IAML		23 36 53.7	
	comp=N,2µm,0.3s						
SJG				IAML		23 36 54.0	
	comp=N,2µm,0.4s						
ICMP	Isla Caja de M	1.31	163	⇓*e*P	Pn	23 36 31.8	+1.2
ICMP	Isla Caja de M	1.31	163	*e*S	Sb	23 36 49.6	+1.1
ICMP	Isla Caja de M	1.31	163		Pn	23 36 31.8	+1.2
ICMP					Sb	23 36 49.6	+1.1
ICMP	Isla Caja de M	1.31	163	IAML		23 36 57.1	
	comp=E,2µm,0.7s						
ICMP				IAML		23 36 58.3	
	comp=N,2µm,0.8s						
CBYP	Canovanas	1.34	130	⇑*e*P	Pn	23 36 30.9	-0.1
CBYP	Canovanas	1.34	130	*e*S	Sn	23 36 47.9	0.0
CBYP	Canovanas	1.34	130		Pn	23 36 30.9	-0.1
CBYP	Canovanas	1.34	130		Sn	23 36 46.3	-1.6
CBYP				IAML		23 36 58.2	
	comp=N,3µm,0.2s						
CBYP				IAML		23 36 58.5	
	comp=E,4µm,0.2s						
IGPR	InterUniversit	1.41	146	⇓*e*P	Pn	23 36 32.5	+0.6
IGPR	InterUniversit	1.41	146	*e*S	Sn	23 36 50.0	+0.5
IGPR	InterUniversit	1.41	146	Pn	Pn	23 36 33.2	+1.3
IGPR					Sn	23 36 51.1	+1.6
PDPR	Patillas Dam,	1.41	142	⇑*e*P	Pn	23 36 32.6	+0.6
PDPR	Patillas Dam,	1.41	142		Pn	23 36 32.6	+0.6
PDPR	Patillas Dam,	1.41	142	IAML		23 36 56.7	
	comp=E,1µm,0.4s						
HUMP	Col San Antoni	1.43	134	⇑*e*P	Pn	23 36 32.6	+0.4
HUMP	Col San Antoni	1.43	134	*e*S	Sn	23 36 50.0	-0.1
HUMP	Col San Antoni	1.43	134		Pn	23 36 32.6	+0.4
HUMP					Sn	23 36 50.0	-0.1
HUMP	Col San Antoni	1.43	134	IAML		23 36 59.5	
	comp=E,2µm,0.4s						
MTP	Monte Pirata	1.67	128	⇓*e*P	Pn	23 36 35.7	+0.2
MTP	Monte Pirata	1.67	128		Pn	23 36 35.7	+0.2
CUPR	Culebra, Puert	1.77	118	⇑*e*P	Pn	23 36 36.9	-0.1
CUPR	Culebra, Puert	1.77	118	*e*S	Sn	23 36 57.9	-0.6
CUPR	Culebra, Puert	1.77	118		Pn	23 36 36.9	-0.1
CUPR					Sn	23 36 57.9	-0.6
CDVI	St. Croix	2.48	124		Pn	23 36 49.0	+2.4
SDDR	Presa de Saban	4.12	269		Pn	23 37 11.3	+2.0
SKI	Saint Kitts	4.37	114	Pn	Pn	23 37 13.4	+0.6
GRTK	Grand Turk	4.59	302	Pn	Pn	23 37 14.1	-1.6
GRTK				IAML		23 38 09.9	
	comp=E,103nm,1.9s						
GRTK				IAML		23 39 24.3	
	comp=E,97nm,2.7s						
PCRV	Puerto La Cruz	9.19	166	Pn	Pn	23 38 20.9	+2.0
	comp=E,0.9nm,0.3s,baz=343,slow=20,SNR=1.6						
PCRV				Sn	Sn	23 39 59.1	-2.3
	comp=E,1.0nm,0.3s,baz=233,slow=20,SNR=1.5						
PLCV	Puerto La Cruz	9.21	165		Pn	23 38 20.9	+1.7
PLCV					Sn	23 39 59.1	-2.8
SDV	Santo Domingo	10.81	200	Pn	Pn	23 38 42.8	+1.5
	comp=E,0.6nm,0.3s,baz=304,slow=14,SNR=1.6						
SDV				Sn	Sn	23 40 39.2	-2.3
	comp=E,0.8nm,0.3s,baz=325,slow=18,SNR=2.4						
SDV				LR	LR	23 43 58.9	
	comp=E,68nm,20.1s,baz=9.0,slow=44						
SMLC	San Martn de	12.39	215	*e*P	Pn	23 39 01.4	-1.4
OCAC	Ocana	12.48	211	*e*P	Pn	23 39 04.6	+0.4
PAMC	Pamplona, Colo	13.00	206	*e*P	Pn	23 39 10.0	-1.6
UREC	San Jos de Ur	14.07	218	*e*P	Pn	23 39 24.1	-1.6
RUSC	La Rusia	14.47	205	*e*P	Pn	23 39 29.1	-2.5
PTBC	PUERTO BERRIO,	14.51	211	*e*P	Pn	23 39 31.3	-0.4
SPBC	San Pablo de B	15.11	208	*e*P	Pn	23 39 40.5	+0.7
NORC	Norcasia	15.55	211	*e*P	Pn	23 39 43.7	-2.0
CHIC	Chingaza	15.88	206	*e*P	Pn	23 39 45.1	-5.1
CBOC	Ciudad Bolivar	15.89	215	*e*P	Pn	23 39 49.2	-0.9
ROSC	El Rosal	15.94	208	Pn	P	23 39 54.8	+0.4
	comp=E,1.7nm,0.3s,baz=52,slow=23,SNR=2.0						
GUY2C	Guyana, Caldas	16.09	212	*e*P	Pn	23 39 51.7	-1.3
RREF	El Recreo	16.36	211	*e*P	Pn	23 39 55.9	-0.7
TOLC	Tolima	16.62	211	*e*P	Pn	23 39 57.8	-1.8
ANIL	Santa Ana	16.74	211	*e*P	Pn	23 39 57.4	-3.8
PLMC	San Jos del P	16.83	214	*e*P	Pn	23 40 01.0	-1.0
ORTC	Ortega, Tolima	17.18	209	*e*P	Pn	23 40 06.0	-0.4
PRAC	Prado	17.19	208	*e*P	Pn	23 40 04.2	-2.3
POPC	Popayan, Colom	19.06	211	*e*P	P	23 40 23.4	-5.3
SOTA	Rioblanco	19.38	210	*e*P	Pn	23 40 36.5	+2.8
PTGA	Pitinga	20.90	160	P	P	23 40 48.6	+0.1
	comp=E,1.2nm,0.3s,baz=326,slow=22,SNR=1.4						
TKL	Tuckaleechee C	22.18	321	P	P	23 41 16.1	+14
	comp=E,4.4nm,0.6s,baz=145,slow=13,SNR=8.6						
ATAH	Atahualpa	28.45	204	LR	LR	23 55 01.5	
	comp=E,44nm,18.4s,baz=13,slow=40						
TXAR	Lajitas Array	34.87	294	P	P	23 42 58.5	+1.2
	comp=E,1.7nm,0.7s,baz=111,slow=10,SNR=9.3						
YKA	Yellowknife Ar	54.25	335	P	P	23 45 31.1	-0.1
	comp=E,0.2nm,0.6s,baz=121,slow=8.8,SNR=2.7						
ESDC	Sonseca Array	57.40	55	P	P	23 45 55.6	+1.3
	comp=E,2.1nm,0.9s,baz=272,slow=7.2,SNR=9.2						
TORD	Torodi Ar. Bea	65.84	84	P	P	23 46 52.4	+0.8
	comp=E,0.6nm,0.7s,baz=282,slow=6.9,SNR=2.4						

IDC 26 23:37:17.1±2.6**, 5°.68S**×**129°.17E, h314^{km}**±41^{km}**, mb2.5**/1**, mb1 2.8**/5**, mb1mx2.7**/39**, mbtmp3.5**/5**, Error ellipse: s-maj=71.5km s-min=17.3km az=84.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	5.22	24	P	Pn	23 38 39.5	+1.8
	0.9nm,0.3s,baz=261,slow=19,SNR=1.6						
SIJI				S	S	23 39 42.1	-0.7
	1.6nm,0.3s,baz=266,slow=23,SNR=1.9						
FITZ	Fitzroy Crossi	12.81	195	P	Pn	23 40 07.0	-2.1
	0.1nm,0.3s,baz=32,slow=13,SNR=1.4						
WRA	Warramunga Arr	15.04	161	P	P	23 40 34.0	+0.1
	0.2nm,0.3s,baz=341,slow=12,SNR=13						
ASAR	Alice Springs	18.45	166	P	P	23 41 11.2	+0.3
	0.2nm,0.3s,baz=347,slow=12,SNR=11						
MKAR	Makanchi Array	66.68	327	P	P	23 47 34.6	-0.1
	0.1nm,0.5s,baz=117,slow=8.8,SNR=4.0						

IDC ***26*** *23:39:04.3±2.3, 7°.05S×129°.35E, h138^{km}±28^{km}, mb3.1/1, mb1 3.3/6, mb1mx3.1/43, mbtmp3.7/6, Error ellipse: s-maj=39.1km s-min=21.9km az=93.0*

ISC 26 23:39:02.5±0.9**, 7°.18S**±0°.06×**129°.53E**±0°.10**, h139^{km}, n6, σ3^{s}34**/11**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	6.51	15	P	Pn	23 40 36.8	+0.9
	0.5nm,0.3s,baz=198,slow=20,SNR=1.5						
SIJI				S	Sn	23 41 45.5	-3.5
	1.0nm,0.3s,baz=230,slow=22,SNR=1.4						
BATI	Baumata	6.53	242	P	Pn	23 40 37.2	+0.9
	4.1nm,0.3s,baz=31,slow=12,SNR=2.1						
BATI				S	Sn	23 41 47.3	-2.4
	2.9nm,0.3s,baz=185,slow=12,SNR=1.8						
FITZ	Fitzroy Crossi	11.49	199	P	Pn	23 41 44.9	+2.4
	0.1nm,0.3s,baz=28,slow=13,SNR=1.6						
FITZ				S	Sn	23 43 46.1	-3.3
	0.3nm,0.3s,baz=165,slow=21,SNR=1.8						
WRA	Warramunga Arr	13.51	160	P	Pn	23 42 11.1	+2.3
	0.2nm,0.3s,baz=336,slow=12,SNR=4.7						
WRA				S	Sn	23 44 34.7	-3.5
	0.6nm,0.3s,baz=338,slow=22,SNR=6.7						
ASAR	Alice Springs	16.92	166	P	Pn	23 42 56.2	+5.1
	0.4nm,0.3s,baz=345,slow=9.9,SNR=24						
ASAR				S	S	23 45 57.0	-3.0
	0.1nm,0.3s,baz=321,slow=16,SNR=1.9						
MKAR	Makanchi Array	68.13	327	P	P	23 49 48.0	+0.5
	0.2nm,0.4s,baz=114,slow=9.0,SNR=5.5						

BJI ***26*** *23:44:51.1±0.0, 5°.27S×153°.22E, h11^{km}, mB5.2/36, mb4.9/56, Ms4.9/24, Ms7 4.5/23*

IDC ***26*** *23:44:53.1±0.5, 5°.37S×152°.70E, h0^{km}, mb4.8/31, mb1 4.8/33, mb1mx4.7/46, mbtmp4.7/33, ML2.1/1, MS4.2/19, Ms1 4.2/19, ms1mx4.0/38, Error ellipse: s-maj=15.5km s-min=10.0km az=114.0*

NEIC ***26*** *23:44:53.8±1.5, 5°.46S±0°.05×152°.88E±0°.08, h11^{km}±4^{km}, mb5.1/138, Error ellipse: s-maj=11.5km s-min=7.6km az=90.0*

MOS ***26*** *23:44:55.2±1.0, 5°.26S×152°.65E, h23^{km}, mb5.2/31, Error ellipse: s-maj=8.9km s-min=6.2km az=108.3*

GCMT ***26*** *23:44:59.8±0.3, 5°.58S±0°.02×152°.75E±0°.02, h22^{km}, MW5.0/87, Moment Tensor Solution. s58,c71; s87,c119; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.72±.14; $M_{\theta\theta}$-2.45±.10; $M_{\phi\phi}$-0.27±.09; $M_{r\theta}$2.10±.15; $M_{\theta\phi}$-0.44±.06; $M_{\phi r}$0.67±.16; Best double couple: $M_0$3.42800×10^{16} NP1:ϕ_s263.00000°, δ25.00000°, λ97.00000°. NP2: ϕ_s75.00000°, δ65.00000°, λ87.00000°. Principal axes: T 3.5270, Plg70.0000°, Azm338.0000°; N -0.1990, Plg3.0000°, Azm76.0000°; P -3.3290, Plg20.0000°, Azm167.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

DJA ***26*** *23:45:00.9±0.6, 5°S±3°×15°3E±°, h54^{km}±4^{km}, M5.1/33, mB5.3/8, mb5.0/33, MLv5.5/3, Mw(mB)4.7/8*

ISC 26 23:44:58.2±0.3**, 5°.41S**±0°.04×**152°.81E**±0°.05**, h37^{km}, n431, σ1^{s}10**/428**, mb5.0**/149**, MS4.3**/28**, 22C-2D, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	1.37	332	Pn	Pn	23 45 21.4	+0.6
RABL				Sn	Sn	23 45 41.1	+3.4
MANU	Manus Island	6.38	301	Pn	Pn	23 46 30.6	+0.9
PMG	Port Moresby	6.86	234	Pn	Pn	23 46 36.4	+0.1
	2.4nm,0.3s,baz=6.0,slow=7.1,SNR=18						
PMG				Sn	Sn	23 47 53.4	+0.2
	12nm,0.3s,baz=104,slow=9.5,SNR=3.7						
PMG				LR	LR	23 48 45.1	
	comp=Z,582nm,21.5s,baz=72,slow=34						
PMG	Port Moresby	6.86	234	*ce*P	Pn	23 46 37.7	+1.4
PMG				pmax	pmax		
	comp=Z,84nm,0.8s						
PMG	Port Moresby	6.86	234	Pn	Pn	23 46 37.2	+0.9
PMG				Sn	Sn	23 47 55.5	+2.3
COEN	Coen	12.73	227	Pn	Pn	23 47 57.8	+1.1
PATS	Pohnpei	13.35	24	Pn	Pn	23 48 03.6	-1.6
SMPI	Sarmi	14.47	283	P	P	23 48 28.5	+1.8
	comp=Z,4µmcomp=Z,68nm,1.5s						
CTA	Charters Tower	15.92	203	Pn	Pn	23 48 38.6	-0.9
	baz=30,slow=13,SNR=17						
CTAO	Charters Tower	15.92	203	P	Pn	23 48 40.1	+0.6
CTAO				pmax	pmax		
	comp=Z,34nm,1.1s						
CTAO	Charters Tower	15.92	203	P	Pn	23 48 40.1	+0.6
SANVU	Saraoutou	17.30	126	P	Pn	23 48 55.0	-2.0
SANVU				IAmb	IAmb	23 49 05.1	
	comp=Z,120nm,1.0s						
EIDS	Eidsvold	19.91	185	P	P	23 49 24.8	-1.9
GUMO	Guam	20.46	337	P	P	23 49 31.5	-1.2
GUMO				pmax	pmax		
	comp=Z,254nm,1.1s						
GUMO	Guam	20.46	337	P	P	23 49 31.5	-1.2
FAKI	Fak Fak	20.65	276		P	23 49 33.7	-1.2
FAKI	Fak Fak	20.65	276	P	Pn	23 49 53.8	+16
DZM	Mont Dzumac	21.18	143	*e*P	P	23 49 44.0	+3.5
	comp=Z,153nm,1.4s						
DZM				*e*LR	LR	23 54 47.0	
	comp=Z,1µm,26.8s						
DZM	Mont Dzumac	21.18	143	P	P	23 49 41.6	+1.0
	comp=Z,29nm,0.9s,baz=349,slow=7.0,SNR=17						
DZM				LR	LR	23 57 05.7	
	comp=Z,629nm,20.4s,baz=307,slow=34						
DZM	Mont Dzumac	21.18	143	P	P	23 49 39.3	-1.2
TARA	Tarawa	21.19	72	P	P	23 49 37.4	-3.3
SIJI	Sorong	21.97	281	P	P	23 49 46.6	-2.4
	comp=Z,8.0nm,0.7s,baz=216,slow=23,SNR=4.8						
SWI	Sorong	21.98	281	P	P	23 49 52.5	+3.4
	comp=Z,72nm,0.9s						
WB0	Warramunga Arr	22.91	230	P	P	23 49 58.6	-0.4
WR0	Warramunga Arr	22.91	229	P	P	23 49 58.6	-0.4
WR0				IAmb	IAmb	23 50 18.1	
	comp=Z,44nm,1.0s						
WRAB	Tennant Creek	23.04	230	*ce*P	P	23 50 00.1	-0.2
WRAB				pmax	pmax		
	comp=Z,64nm,1.3s						
WRAB	Tennant Creek	23.04	230	P	P	23 50 01.3	+0.9
WB2	Warramunga Arr	23.04	230		P	23 50 00.8	+0.4
WRA	Warramunga Arr	23.05	230	P	P	23 49 59.4	-1.1
	comp=Z,8.5nm,0.8s,baz=54,slow=9.2,SNR=30						
WRA				S	S	23 54 06.8	-2.2
	comp=Z,3.6nm,1.2s,baz=56,slow=14,SNR=5.4						
WRA				LR	LR	23 59 41.2	
	comp=Z,476nm,18.1s,baz=55,slow=39						
ARMA	Armidale	24.90	182	P	P	23 50 16.7	-1.1
AS31	Alice Springs	25.71	223	P	P	23 50 25.7	+0.6
ASAR	Alice Springs	25.71	223	P	P	23 50 25.3	+0.1
	comp=Z,9.1nm,0.8s,baz=58,slow=8.9,SNR=39						
ASAR				S	S	23 54 54.8	+3.1
	comp=Z,0.3nm,0.6s,baz=40,slow=16,SNR=0.9						
ASAR	Alice Springs	25.71	223	P	P	23 50 24.6	-0.6
ASAR	Alice Springs	25.71	223	P	P	23 50 24.6	-0.6
MSVF	Nonsavu	27.55	118	LR	LR	00 01 03.4	
	comp=Z,652nm,19.1s,baz=312,slow=35						
STKA	Stephens Creek	28.35	200	P	P	23 50 48.3	-0.4
	comp=Z,4.9nm,0.7s,baz=15,slow=9.9,SNR=17						
STKA				LR	LR	00 02 41.6	
	comp=Z,547nm,18.5s,baz=14,slow=38						
STKA	Stephens Creek	28.35	200	P	P	23 50 47.9	-0.8
STKA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
STKA	Stephens Creek	28.35	200	P	P	23 50 47.9	-0.8
SOEI	Soe	28.61	260	P	P	23 50 51.2	-0.3
BATI	Baumata	29.25	259	P	P	23 50 57.4	+0.4
	comp=Z,9.1nm,0.3s,baz=188,slow=9.3,SNR=5.9						
FITZ	Fitzroy Crossi	29.38	242	P	P	23 50 57.9	-0.2
	comp=Z,15nm,1.0s,baz=94,slow=6.7,SNR=7.0						
FITZ	Fitzroy Crossi	29.38	242	P	P	23 50 58.4	+0.4
LUWI	Luwuk	30.29	277	P	P	23 51 03.2	-3.1
GTOI	Gorontalo	30.36	281	P	P	23 51 14.1	+7.3
	comp=Z,24nm,0.8s						
BBOO	Buckleboo	31.42	208	P	P	23 51 15.5	-0.5
BBOO				IAmb	IAmb	23 51 20.4	
	comp=Z,20nm,1.1s						
TOLI2	Tolitoli	32.63	281	P	P	23 51 26.8	-0.1
TOLI2				IAmb	IAmb	23 51 35.3	
	comp=Z,12nm,0.8s						
KAPI	Kappang	32.92	269	P	P	23 51 27.7	-1.7
KAPI				pmax	pmax		
	comp=Z,15nm,1.2s						
KAPI	Kappang	32.92	269	P	P	23 51 27.6	-1.7
JCJ	Chichijima	33.91	343	P	P	23 51 36.6	-1.1
FORT	Forrest	34.32	220	P	P	23 51 40.4	-0.9
PSA00	Pilbara Seismi	35.73	240	P	P	23 51 52.9	-0.7
PSA00				IAmb	IAmb	23 51 59.1	
	comp=Z,22nm,1.1s						
PSA00	Pilbara Seismi	35.73	240	P	P	23 51 53.0	-0.7
PSA00				IAmb	IAmb	23 51 58.1	
	comp=Z,7.7nm,0.9s						
PSAB3	Pilbara Seismi	35.73	240	P	P	23 51 54.8	+1.2
PSAB3				IAmb	IAmb	23 52 00.4	
	comp=Z,40nm,1.1s						
PSAC1	Pilbara Seismi	35.75	240	P	P	23 51 56.4	+2.7
PSAC1				IAmb	IAmb	23 52 06.8	
	comp=Z,28nm,1.1s						
MYLDM	Lahad Datu	35.84	287	P	P	23 51 55.0	+0.3
MYLDM				IAmb	IAmb	23 52 12.2	
	comp=Z,18nm,0.9s						
KKM	Kota Kinabalu	38.26	287	P	P	23 52 14.1	-1.3
KKM				IAmb	IAmb	23 52 29.9	
	comp=Z,23nm,1.0s						
HIZ	Hauiti	38.55	152	P	P	23 52 15.7	-1.7
HIZ				IAmb	IAmb	23 52 27.3	
	comp=Z,27nm,1.1s						
QRZ	Quartz Range	39.45	156	P	P	23 52 21.9	-2.9
JOW	Kunigami	39.89	325	P	P	23 52 27.5	-1.2
JOW				IAmb	IAmb	23 52 30.2	
	comp=Z,60nm,1.1s						
TUWZ	Tuamarina	40.53	155	P	P	23 52 33.3	-0.5
BFZ	Birch Farm	40.93	152	P	P	23 52 35.7	-1.4
LTZ	Lake Taylor	41.02	158	P	P	23 52 37.3	-0.6
SBUM	Sibu	41.29	280	P	P	23 52 40.4	0.0
RPZ	Rata Peaks	41.40	160	P	P	23 52 41.5	+0.6
	comp=Z,12nm,0.8s,baz=321,slow=1.1,SNR=8.5						
OXZ	Oxford	41.41	159	P	P	23 52 39.3	-1.6
YOJ	Yonaguni jima	41.52	317	P	P	23 52 38.7	-3.4
YOJ				pmax	pmax		
	comp=Z,125nm,1.1s						
YOJ	Yonaguni jima	41.52	317	P	P	23 52 38.7	-3.4
MQZ	McQueen's Vall	41.96	158	P	P	23 52 43.6	-1.9
MORW	Morawa	41.97	232	P	P	23 52 45.9	+0.1
NACB	Ninganchiao	42.31	315	P	P	23 52 48.4	-0.1
TPUB	Ta-pu	42.45	313	P	P	23 52 49.4	-0.3
NWAO	Narrogin (SRO)	42.97	226	P	P	23 52 53.1	-0.8
	comp=Z,6.1nm,0.8s,baz=233,slow=5.6,SNR=2.2						
JNU	Nakatsue	43.61	333	P	P	23 52 58.1	-0.8
	comp=Z,27nm,0.9s,baz=110,slow=6.9,SNR=5.8						
JNU	Nakatsue	43.61	333	P	P	23 52 58.4	-0.6
MJAR	Matsushiro Arr	43.91	343	P	P	23 52 59.1	-2.2
	comp=Z,4.7nm,0.9s,baz=170,slow=7.6,SNR=5.0						
MJAR				LR	LR	00 09 19.8	
	comp=Z,184nm,21.7s,baz=245,slow=34						
TJN	Taejon	47.91	332	*ce*P	P	23 53 32.3	-0.6
MDSI	Maura Dua	48.45	269	P	P	23 53 36.8	-0.6
	comp=Z,8.9nm,1.2s						
KSRS	Korea Array	48.55	333	P	P	23 53 37.6	-0.1
	comp=Z,4.0nm,0.9s,baz=150,slow=8.5,SNR=6.8						
KSAR	Wonju Array Be	48.55	333	P	P	23 53 37.3	-0.5
KSAR	Wonju Array Be	48.55	333	P	P	23 53 37.3	-0.5
QIZ	Qiongzhong	48.79	301	P	P	23 53 40.5	+0.6
QIZ				LR	LR		
	comp=Z,190nm,16.2s						
QIZ				LR	LR		
	comp=Z,180nm,15.7s						
QIZ				LR	LR		
	comp=Z,250nm,20.6s						
INCN	Inchon	49.15	332	P	P	23 53 41.7	-0.8
INCN				pmax	pmax		
	comp=Z,49nm,1.1s						
INCN	Inchon	49.15	332	P	P	23 53 41.6	-0.8
NJ2	Nanjing	49.32	321	*e*P	P	23 53 46.3	+2.5
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
ASAJ	Asahikawa	50.15	350	P	P	23 53 50.2	+0.3
	comp=Z,16nm,0.9s,baz=237,slow=15,SNR=5.0						
WHN	Wuhan	51.30	317	⇓P	P	23 53 59.5	+0.7
IPM	Ipoh	52.64	280	P	P	23 54 07.7	-1.5
USRK	Ussuriysk Ar.	52.83	341	P	P	23 54 09.9	0.0
	comp=Z,5.0nm,0.8s,baz=177,slow=8.1,SNR=10						
USRK	Ussuriysk Ar.	52.83	341	P	P	23 54 09.5	-0.4
USRK	Ussuriysk Ar.	52.83	341	P	P	23 54 09.5	-0.4
YSS	Yuzh-Sakhalins	52.89	351	*ce*P	P	23 54 10.2	-0.1
YSS				pmax	pmax		
	comp=Z,31nm,1.7s						
YSS	Yuzh-Sakhalins	52.89	351	P	P	23 54 09.7	-0.6
YSS				IAmb	IAmb	23 54 20.4	
	comp=Z,14nm,0.4s						
NONG	Nongkai	54.25	297	P	P	23 54 21.0	+0.1
	comp=Z,27nm,0.9s						
RPSI	Rantau Prapat	54.42	277	P	P	23 54 20.1	-2.0
RPSI	Rantau Prapat	54.42	277	P	P	23 54 21.1	-1.1
PSI	Prapat	54.44	277	P	P	23 54 21.1	-1.4
	comp=Z,5.1nm,0.3s,baz=180,slow=5.4,SNR=4.8						
PSI	Prapat	54.44	277	P	P	23 54 21.1	-1.4
PSI				pmax	pmax		
	comp=Z,6.0nm,0.9s						
GYA	Guiyang	54.77	308	*e*P	P	23 54 25.0	+0.3
GYA				pP	pP	23 54 35.3	+0.5
GYA				PP	PP	23 56 24.0	-3.7
GYA				pmax	pmax		
	comp=Z,6.0nm,1.4s						
GYA				pmax	pmax		
	comp=Z,140nm,5.3s						
GYA				LR	LR		
	comp=Z,340nm,14.7s						
SLVN	Son La	54.81	301	P	P	23 54 24.5	-0.5
CN2	Changchun	54.86	336	*e*P	P	23 54 25.5	+0.7
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
GSI	Gunungsitoli	55.56	275	P	P	23 54 27.9	-2.5
GSI				IAmb	IAmb	23 54 29.4	
	comp=Z,20nm,0.9s						
UTHA	Uthaitani	56.79	292	P	P	23 54 40.0	+0.8
	comp=Z,1µmcomp=Z,14nm,0.8s						
XAN	Xi'an	57.07	317	⇑P	P	23 54 40.5	-0.4
XAN				pmax	pmax		
	comp=Z,19nm,1.1s						
XAN				LR	LR		
	comp=Z,270nm,21.7s						
XAN				LR	LR		
	comp=Z,430nm,21.7s						
XAN	Xi'an	57.07	317	P	P	23 54 39.8	-1.1
XAN				pmax	pmax		
	comp=Z,12nm,0.9s						
XAN	Xi'an	57.07	317	P	P	23 54 39.8	-1.1
XAN				IAmb	IAmb	23 54 40.9	
	comp=Z,12nm,0.9s						
KMI	Kunming	57.33	304	⇑P	P	23 54 43.5	+0.4
KMI				S	S	00 02 37.0	-0.5
KMI				pmax	pmax		

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             comp=Z,12nm,1.0s
KMI                                 pmax    pmax
             comp=Z,65nm,3.8s
KMI                                 LR      LR
             comp=Z,140nm,17.0s
KMI                                 LR      LR
             comp=Z,220nm,18.3s
KMI                                 LR      LR
             comp=Z,250nm,16.6s
KMI    Kunming            57.33 304 P       P       23 54 42.8 -0.3
KMI                                 pmax    pmax
             comp=Z,11nm,0.9s
KMI    Kunming            57.33 304 P       P       23 54 42.8 -0.3
KMI                                 IAmb    IAmb    23 54 44.9
             comp=Z,11nm,0.9s
KLR    Kul'dur            57.43 344 P       P       23 54 42.9 -0.1
             comp=Z,7.5nm,0.9s,baz=167,slow=2.8,SNR=17
KLR    Kul'dur            57.43 344ceP      P       23 54 42.6 -0.5
KLR                                 pmax    pmax
             comp=Z,24nm,1.3s
PPT2   Papeete2           57.54 107 eLR     LR      00 11 42.3
             comp=Z,162nm,21.8s
LAMP   Lampang            57.55 296 P       P       23 54 45.7 +1.2
             comp=Z,15nm,0.7s
CM04   Chiang Mai Arr     58.09 295 P       P       23 54 49.2 +0.9
             comp=Z,93nmcomp=Z,11nm,1.0s
CM01   Chiang Mai Arr     58.12 295 P       P       23 54 49.0 +0.5
             comp=Z,94nmcomp=Z,9.4nm,0.9s
CM05   Chiang Mai Arr     58.12 295 P       P       23 54 49.0 +0.5
             comp=Z,68nmcomp=Z,7.4nm,1.1s
CM02   Chiang Mai Arr     58.13 295 P       P       23 54 49.8 +1.2
             comp=Z,12nm,1.0s
CMAR   Chiang Mai Arr     58.14 296 P       P       23 54 49.1 +0.4
             comp=Z,5.2nm,0.8s,baz=113,slow=5.4,SNR=37
CMAR                                LR      LR      00 20 43.4
             comp=Z,85nm,18.1s,baz=166,slow=37
CMAR   Chiang Mai Arr     58.14 296 i P     P       23 54 49.0 +0.4
CMAR                                pmax    pmax
             comp=Z,4.0nm,0.6s
CMAR   Chiang Mai Arr     58.14 296 P       P       23 54 48.4 -0.2
CMMT   Chiang Mai         58.25 296 P       P       23 54 49.0 -0.5
             comp=Z,6.1nm,1.2s
CHTO   Chiang Mai         58.26 296 P       P       23 54 48.6 -0.9
CHTO                                pmax    pmax
             comp=Z,14nm,1.2s
CHTO   Chiang Mai         58.26 296 P       P       23 54 48.6 -0.9
CHTO                                IAmb    IAmb    23 54 50.8
             comp=Z,14nm,1.1s
TBI    Tubuai             58.30 114 eLR     LR      00 12 02.7
             comp=Z,159nm,25.2s
PET    Petropavlovsk      58.42   4 eP      P       23 54 50.5 +0.6
PET                                 eS      S       00 02 50.1 -0.2
PET                                 pmax    pmax
             comp=Z,31nm,1.1s
PET    Petropavlovsk      58.42   4 P       P       23 54 49.2 -0.8
PET                                 IAmb    IAmb    23 54 51.4
             comp=Z,26nm,1.1s
PEA0B  Petropavlovsk-     58.45   3ceP      P       23 54 50.2 +0.1
PEA0B  Petropavlovsk-     58.45   3 P       P       23 54 50.2 +0.1
PEA0B                               IAmb    IAmb    23 54 51.4
             comp=Z,26nm,1.0s
PETK   Petropavlovsk-     58.45   3 P       P       23 54 51.0 +0.8
             comp=Z,21nm,1.0s,baz=164,slow=7.1,SNR=16
PETK                                PcP     PcP     23 55 42.0 +1.5
             comp=Z,10nm,1.0s,baz=96,slow=1.5,SNR=3.9
PETK                                LR      LR      00 15 56.5
             comp=Z,177nm,21.6s,baz=195,slow=32
PETK   Petropavlovsk-     58.45   3 P       P       23 54 50.5 +0.4
PETK   Petropavlovsk-     58.45   3 P       P       23 54 50.5 +0.4
HHC    Hu-ho-hao-te       59.55 325 eP      P       23 54 59.5 +1.4
HHC                                 pmax    pmax
             comp=Z,15nm,1.1s
HHC                                 pmax    pmax
             comp=Z,230nm,7.5s
LZH    Lanzhou            61.67 316 eP      P       23 55 14.0 +1.2
LZH                                 pP      pP      23 55 23.8 +0.7
LZH                                 pmax    pmax
             comp=Z,24nm,1.0s
LZH                                 pmax    pmax
             comp=Z,76nm,4.3s
LZH                                 LR      LR
             comp=Z,250nm,14.1s
LZH                                 LR      LR
             comp=Z,250nm,14.1s
LZH                                 LR      LR
             comp=Z,390nm,13.6s
MA2    Magadan            64.80 359ceP      P       23 55 32.8 -0.1
MA2                                 pmax    pmax
             comp=Z,15nm,0.7s
MA2    Magadan            64.80 359 P       P       23 55 32.6 -0.3
GTA    Gaotai             66.11 317 P       P       23 55 42.5 +0.6
GTA                                 pP      pP      23 55 53.3 +1.0
GTA                                 sP      sP      23 55 57.0 +0.4
GTA                                 PcP     PcP     23 56 13.5 +1.4
GTA                                 pmax    pmax
             comp=Z,8.0nm,1.2s
GTA                                 pmax    pmax
             comp=Z,110nm,5.1s
GTA                                 LR      LR
             comp=Z,170nm,14.9s
GTA                                 LR      LR
             comp=Z,140nm,16.0s
GTA                                 LR      LR
             comp=Z,220nm,18.9s
ULN    Ulaanbaatar        66.52 328ceP      P       23 55 45.4 +1.0
ULN                                 pmax    pmax
             comp=Z,13nm,1.2s
ULN    Ulaanbaatar        66.52 328 P       P       23 55 44.9 +0.5
ULN                                 IAmb    IAmb    23 55 46.4
             comp=Z,12nm,1.1s
SHL    Shillong           66.62 301 P       P       23 55 45.2 -0.3
SHL                                 pmax    pmax
             comp=Z,26nm,1.0s
SHL    Shillong           66.62 301 P       P       23 55 45.2 -0.3
SONM   Songino Array      66.84 328 P       P       23 55 47.3 +0.9
             comp=Z,8.8nm,1.1s,baz=137,slow=4.9,SNR=29
SONM                                LR      LR      00 23 05.0
             comp=Z,132nm,21.4s,baz=164,slow=34
SONM   Songino Array      66.84 328 P       P       23 55 46.9 +0.5
SONM                                pmax    pmax
             comp=Z,12nm,1.2s
SONM   Songino Array      66.84 328 P       P       23 55 46.9 +0.5
SEY    Seymchan           68.15 360 P       P       23 55 54.2  0.0
             comp=Z,2.4nm,0.7s,baz=185,slow=5.8,SNR=8.6
SEY    Seymchan           68.15 360 i P     P       23 55 54.8 +0.6
LSA    Lhasa              68.59 305 P       P       23 55 57.5 -0.7
LSA                                 pmax    pmax
             comp=Z,9.0nm,1.0s
LSA    Lhasa              68.59 305 P       P       23 55 57.5 -0.7
LSA                                 IAmb    IAmb    23 55 60.0
             comp=Z,8.8nm,1.0s
SPIA   Saint Paul Isl     69.22  20 P       P       23 56 00.7 -0.3
YAK    Yakutsk            69.57 349ceP      P       23 56 03.8 +0.8
YAK                                 pmax    pmax
             comp=Z,40nm,1.7s
ZAK    Zakamensk          70.02 329 eP      P       23 56 05.8 -0.4
ZAK                                 pmax    pmax
             comp=Z,16nm,1.1s
BOD    Bodaibo            70.36 339 eP      P       23 56 07.5 -0.5
BOD                                 pmax    pmax
             comp=Z,10.0nm,1.2s
TLY    Talaya             70.61 330 eP      P       23 56 10.3 +0.6
TLY                                 pmax    pmax
             comp=Z,17nm,1.0s
TLY                                 MLR     MLR
             comp=Z,413nm,10.0s
TAPN   Taplejung          70.73 301 eP      P       23 56 11.1 -0.2
             comp=Z,22nm,0.9s
ODAN   Odare              70.86 301 eP      P       23 56 12.4 +0.4
RAMN   Ramite             71.56 301 eP      P       23 56 16.4 +0.1
SDPT   Sand Point         71.76  26 P       P       23 56 16.1 -0.4
             baz=230
CNBA   Chernabura Isl     71.81  27 P       P       23 56 15.3 -1.5
CNBA                                IAmb    IAmb    23 56 33.3
             comp=Z,20nm,1.2s
CHNA   Chernabura Isl     71.82  27 P       P       23 56 15.8 -1.0
             baz=231
MOY    Mondy              71.94 329 eP      P       23 56 16.7 -1.1
MOY                                 pmax    pmax
             comp=Z,22nm,1.7s
VNDA   Vanda              72.22 178 LR      LR      00 23 32.3
             comp=Z,84nm,19.9s,baz=273,slow=32
PKIN   Phulchoki          72.76 301 eP      P       23 56 23.0 -0.5
             comp=Z,38nm,1.2s
KKN    Kakani             72.92 301 eP      P       23 56 23.9 -0.4
             comp=Z,38nm,1.0s
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CHGN   Chignik            73.27  26 P       P       23 56 24.4 -1.0
             baz=231
CHGN   Chignik            73.27  26 P       P       23 56 24.1 -1.3
CHGN                                IAmb    IAmb    23 56 26.2
             comp=Z,22nm,1.0s
GKN    Gorkha             73.52 301 eP      P       23 56 27.4 -0.4
             comp=Z,89nm,1.2s
SII    Sitkinak Islan     75.31  27 P       P       23 56 36.8 -0.6
             baz=235
SII    Sitkinak Islan     75.31  27 P       P       23 56 37.4 +0.1
OHAK   Old Harbor         76.09  27 P       P       23 56 42.2 +0.5
             baz=236
OHAK   Old Harbor         76.09  27 P       P       23 56 41.5 -0.3
WMQ    Urumqi             76.19 317 P       P       23 56 43.8 +1.0
WMQ                                 pmax    pmax
             comp=Z,21nm,1.3s
WMQ                                 pmax    pmax
             comp=Z,410nm,5.9s
WMQ    Urumqi             76.19 317 P       P       23 56 43.1 +0.3
WMQ                                 pmax    pmax
             comp=Z,14nm,1.2s
WMQ    Urumqi             76.19 317 P       P       23 56 43.1 +0.3
WMQ                                 IAmb    IAmb    23 56 51.8
             comp=Z,14nm,1.2s
ANM    Nome               76.35  17 P       P       23 56 44.3 +1.1
             baz=223
ANM    Nome               76.35  17 P       P       23 56 42.8 -0.4
ANM                                 pmax    pmax
             comp=Z,27nm,1.1s
ANM    Nome               76.35  17 P       P       23 56 42.8 -0.4
ANM                                 IAmb    IAmb    23 56 46.6
             comp=Z,27nm,1.1s
HYB    Hyderabad          76.70 289 i P     P       23 56 45.0 -1.1
KDAK   Kodiak Island      76.72  27 P       P       23 56 46.0 +0.7
             comp=Z,16nm,1.0s,baz=145,slow=4.7,SNR=7.5
KDAK   Kodiak Island      76.72  27 P       P       23 56 45.6 +0.3
             baz=236
KDAK   Kodiak Island      76.72  27 P       P       23 56 45.6 +0.3
KDAK                                pmax    pmax
             comp=Z,20nm,1.1s
KDAK   Kodiak Island      76.72  27 P       P       23 56 45.6 +0.3
KDAK                                IAmb    IAmb    23 56 52.2
             comp=Z,20nm,1.1s
SVW2   Sparrevohn         77.38  23 P       P       23 56 49.1  0.0
SVW2                                IAmb    IAmb    23 56 51.8
             comp=Z,17nm,0.9s
RSO    Redoubt South      78.14  24 P       P       23 56 53.2 -0.3
HOM    Homer              78.16  25 P       P       23 56 53.7 +0.4
             baz=237
CNPM   China Poot         78.26  26 P       P       23 56 53.7 -0.3
TTA    Tatalina           78.33  21 P       P       23 56 55.0 +0.6
             baz=232
TTA    Tatalina           78.33  21 P       P       23 56 54.8 +0.4
TTA                                 pmax    pmax
             comp=Z,16nm,0.9s
TTA    Tatalina           78.33  21 P       P       23 56 54.8 +0.4
TTA                                 IAmb    IAmb    23 56 56.8
             comp=Z,16nm,0.9s
TIXI   Tiksi              78.50 352ceP      P       23 56 54.2 -0.8
TIXI                                pmax    pmax
             comp=Z,46nm,1.3s
TIXI   Tiksi              78.50 352 P       P       23 56 54.6 -0.4
BRLK   Bradley Lake       78.54  25 P       P       23 56 55.9 +0.3
BRLK                                IAmb    IAmb    23 57 07.2
             comp=Z,24nm,1.0s
DGZ    Jazzator, Alta     78.57 323⇓eP      P       23 56 56.5 +0.4
DGZ                                 pmax    pmax
             comp=Z,23nm,1.3s
BRSE   Bradley Lake S     78.59  26 P       P       23 56 56.3 +0.5
             baz=238
CAPN   Captain Cook N     78.97  25 P       P       23 56 58.0 +0.2
             baz=237
SEW    Seward             79.33  26 P       P       23 56 60.0 +0.2
             baz=239
SEW    Seward             79.33  26 P       P       23 56 59.4 -0.4
SEW                                 IAmb    IAmb    23 57 01.7
             comp=Z,28nm,1.0s
ZSN    Zaisan             79.34 320 eP      P       23 56 59.6 -0.7
             comp=Z,11nm,1.5s,baz=320
ZSN    Zaisan             79.34 320 eP      P       23 56 59.5 -0.7
ZSN                                 pmax    pmax
             comp=Z,11nm,1.5s
O22K   Cooper Landing     79.41  25 P       P       23 57 01.1 +0.8
             baz=238
O22K   Cooper Landing     79.41  25 P       P       23 56 59.4 -0.8
SKT    Skwentna           79.48  23 P       P       23 57 00.4 -0.3
             baz=237
SKT    Skwentna           79.48  23 P       P       23 56 59.6 -1.0
SUA    Susitna One        79.51  24 P       P       23 57 00.1 -0.9
             baz=237,SNR=22
SUA    Susitna One        79.51  24 P       P       23 57 00.1 -0.9
SUA                                 IAmb    IAmb    23 57 02.6
             comp=Z,22nm,0.8s
RDOG   Red Dog Mine       79.57  15 P       P       23 57 02.4 +1.4
RC01   Rabbit Creek A     79.72  25 P       P       23 57 02.4 +0.4
             baz=238,SNR=9.7
PPLA   Purkeypile         79.73  22 P       P       23 57 02.2 +0.1
             baz=236
CHUM   Lake Minchumin     80.24  22 P       P       23 57 05.3 +0.6
             baz=236,SNR=21
KTH    Kantishna Hill     80.57  22 P       P       23 57 06.4 -0.2
KTH                                 IAmb    IAmb    23 57 07.6
             comp=Z,22nm,0.9s
SML    Sawmill            80.67  24 P       P       23 57 07.8 +0.7
             baz=240,SNR=16
SML    Sawmill            80.67  24 P       P       23 57 06.8 -0.4
GLI    Glacier Island     80.73  25 P       P       23 57 07.9 +0.5
             baz=241
GLI    Glacier Island     80.73  25 P       P       23 57 06.9 -0.5
GLI                                 IAmb    IAmb    23 57 09.2
             comp=Z,29nm,1.0s
TRF    Thorofare Moun     80.76  22 P       P       23 57 07.6  0.0
             baz=238,SNR=8.2
TRF    Thorofare Moun     80.76  22 P       P       23 57 06.7 -1.0
TRF                                 IAmb    IAmb    23 57 08.5
             comp=Z,11nm,0.9s
MK31   Makanchi Array     80.79 319ceP      P       23 57 09.1 +1.1
MKAR   Makanchi Array     80.79 319 P       P       23 57 08.8 +0.8
             comp=Z,6.8nm,0.9s,baz=101,slow=6.4,SNR=46
MKAR                                LR      LR      00 35 33.2
             comp=Z,109nm,18.1s,baz=355,slow=38
MKAR   Makanchi Array     80.79 319 P       P       23 57 08.2 +0.1
BPAW   Bear Paw Mtn.      80.85  22 P       P       23 57 07.9 -0.1
             baz=237
BPAW   Bear Paw Mtn.      80.85  22 P       P       23 57 07.5 -0.5
IMAR   Indian Mountai     80.95  19 P       P       23 57 09.5 +1.1
MAKZ   Makanchi           81.00 319 P       P       23 57 09.8 +0.7
MAKZ                                pmax    pmax
             comp=Z,18nm,1.1s
MAKZ   Makanchi           81.00 319 P       P       23 57 09.8 +0.7
MAKZ                                IAmb    IAmb    23 57 10.9
             comp=Z,18nm,1.1s
SCM    Sheep Creek Mo     81.10  25 P       P       23 57 09.3 -0.1
SCM                                 pmax    pmax
             comp=Z,26nm,1.0s
SCM    Sheep Creek Mo     81.10  25 P       P       23 57 09.3 -0.1
SCM                                 IAmb    IAmb    23 57 11.6
             comp=Z,26nm,1.0s
EYAK   Cordova Ski Ar     81.16  26 P       P       23 57 10.4 +0.7
             baz=242
RND    Reindeer           81.28  23 P       P       23 57 09.5 -0.9
RND                                 pmax    pmax
             comp=Z,30nm,0.9s
RND    Reindeer           81.28  23 P       P       23 57 09.5 -0.9
MCK    McKinley           81.42  22 P       P       23 57 10.9 -0.1
             baz=239,SNR=29
MLY    Manley             81.45  21 P       P       23 57 11.7 +0.5
             baz=237,SNR=27
BWN    Browne             81.45  22 P       P       23 57 11.4 +0.3
KAIM   Kayak Island       81.46  27 P       P       23 57 11.9 +0.6
             baz=243
KLU    Klutina            81.52  25 P       P       23 57 13.0 +1.3
             baz=242
KLU    Klutina            81.52  25 P       P       23 57 12.2 +0.5
RAGM   Ragged Mountai     81.56  26 P       P       23 57 11.1 -0.7
RAGM                                IAmb    IAmb    23 57 17.6
             comp=Z,29nm,1.1s
ZAA0   Zalesovo Array     81.66 326 P       P       23 57 11.9 -0.5
ZAA0                                IAmb    IAmb    23 57 13.1
             comp=Z,9.5nm,0.8s
ZALV   Zalesovo Beam      81.66 326 P       P       23 57 12.2 -0.3
             comp=Z,8.4nm,0.8s,baz=108,slow=5.6,SNR=34
ZALV                                LR      LR      00 33 23.7
             comp=Z,114nm,20.3s,baz=39,slow=36
ZALV   Zalesovo Beam      81.66 326 P       P       23 57 11.7 -0.8
SHLS   Shalkode           81.67 315 eP      P       23 57 10.7 -2.3
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             comp=Z,19nm,1.4s,baz=315
SHLS                                eS      S       00 07 22.1 -1.0
             baz=315
SHLS   Shalkode           81.67 315 eP      P       23 57 10.6 -2.3
SHLS                                eS      S       00 07 22.0 -1.0
SHLS                                pmax    pmax
             comp=Z,19nm,1.4s
M24K   Tolsona, Glenn     81.71  25 P       P       23 57 14.0 +1.3
             baz=242,SNR=11
M24K   Tolsona, Glenn     81.71  25 P       P       23 57 12.0 -0.6
HMT    Hamilton           81.72  27 P       P       23 57 11.8 -0.8
HMT                                 IAmb    IAmb    23 57 14.9
             comp=Z,24nm,1.1s
NEA2   Nenana             81.82  22 P       P       23 57 12.8 -0.3
             baz=238,SNR=21
BMRM   Bremner River      81.85  26 P       P       23 57 13.5 +0.1
             baz=243,SNR=5.7
UZB    Uzynbulak          81.97 315 eP      P       23 57 14.0 -0.6
             comp=Z,13nm,1.1s,baz=315
UZB    Uzynbulak          81.97 315 eP      P       23 57 14.0 -0.6
UZB                                 pmax    pmax
             comp=Z,13nm,1.1s
I23K   Minto, Yukon-K     82.00  21 P       P       23 57 14.2 +0.2
             baz=238,SNR=6.9
I23K   Minto, Yukon-K     82.00  21 P       P       23 57 14.0  0.0
WRH    Wood River Hil     82.12  22 P       P       23 57 13.9 -0.7
WRH                                 IAmb    IAmb    23 57 15.8
             comp=Z,24nm,1.0s
N25K   Chitina, Valde     82.14  25 P       P       23 57 15.2 +0.3
             baz=243,SNR=7.7
N25K   Chitina, Valde     82.14  25 P       P       23 57 14.7 -0.3
N25K                                IAmb    IAmb    23 57 17.4
             comp=Z,22nm,1.1s
KPKS   Kokpek             82.29 315 eP      P       23 57 15.4 -0.8
             comp=Z,7.0nm,1.2s,baz=315
KPKS   Kokpek             82.29 315 eP      P       23 57 15.3 -0.8
KPKS                                pmax    pmax
             comp=Z,7.0nm,1.2s
CCB    Clear Creek Bu     82.31  22 IAmb    IAmb    23 57 16.5
             comp=Z,20nm,1.0s
MDM    Murphy Dome        82.32  22 P       P       23 57 15.4 -0.4
MDM                                 IAmb    IAmb    23 57 16.8
             comp=Z,19nm,1.2s
SATY   Saty               82.39 315 eP      P       23 57 15.9 -0.8
             comp=Z,13nm,1.8s,baz=314
SATY   Saty               82.39 315 eP      P       23 57 15.9 -0.8
SATY                                pmax    pmax
             comp=Z,13nm,1.8s
GLB    Gilahina Butte     82.41  26 P       P       23 57 16.6 +0.3
PAX    Paxson             82.41  24 P       P       23 57 16.1 -0.3
             baz=242,SNR=6.5
PAX    Paxson             82.41  24 P       P       23 57 15.8 -0.5
PAX                                 pmax    pmax
             comp=Z,11nm,1.0s
PAX    Paxson             82.41  24 P       P       23 57 15.8 -0.5
PAX                                 IAmb    IAmb    23 57 18.1
             comp=Z,11nm,1.0s
TCOL   CIGO, UAF Yank     82.41  22 P       P       23 57 15.8 -0.3
             baz=240,SNR=6.3
TCOL   CIGO, UAF Yank     82.41  22 P       P       23 57 15.8 -0.3
COLA   College            82.41  22 P       P       23 57 15.9 -0.2
             baz=240
COLA   College            82.41  22c iP     P       23 57 15.7 -0.4
COLA                                pmax    pmax
             comp=Z,34nm,0.9s
COLA   College            82.41  22 P       P       23 57 15.8 -0.2
VRDI   Verde Repeater     82.47  26 P       P       23 57 17.0 +0.2
VRDI                                IAmb    IAmb    23 57 18.9
             comp=Z,23nm,1.0s
HDA    Harding Lake       82.52  22 P       P       23 57 16.6 -0.2
             baz=240
HDA    Harding Lake       82.52  22 P       P       23 57 16.0 -0.7
HDA                                 IAmb    IAmb    23 57 17.2
             comp=Z,11nm,1.0s
POKR   Poker Plat Res     82.69  22 P       P       23 57 17.2 -0.4
             baz=240,SNR=5.5
POKR   Poker Plat Res     82.69  22 P       P       23 57 16.6 -1.0
POKR                                IAmb    IAmb    23 57 18.4
             comp=Z,11nm,0.9s
IL31                      82.72  22 IAmb    IAmb    23 57 18.5
             comp=Z,19nm,0.9s
ILAR   Eielson Array      82.72  22 P       P       23 57 17.2 -0.6
             comp=Z,13nm,0.8s,baz=252,slow=5.2,SNR=99
ILAR                                LR      LR      00 33 57.3
             comp=Z,119nm,18.5s,baz=248,slow=36
MCARA  McCarthy VSAT      82.72  26 P       P       23 57 18.5 +0.7
             baz=244,SNR=11
MCARA  McCarthy VSAT      82.72  26 P       P       23 57 17.8 -0.1
IL18   Eielson Array      82.75  22 P       P       23 57 17.1 -0.9
COLD   Coldfoot           82.83  19 P       P       23 57 19.8 +1.5
             baz=237,SNR=6.3
COLD   Coldfoot           82.83  19 P       P       23 57 18.5 +0.2
COLD                                IAmb    IAmb    23 57 20.5
             comp=Z,9.1nm,1.0s
BALM   Baldy              82.87  26 P       P       23 57 19.0 +0.2
BALM                                IAmb    IAmb    23 57 20.9
             comp=Z,17nm,1.0s
TDK    Taldyqorghan       82.88 316 eP      P       23 57 18.6 -0.5
             comp=Z,34nm,1.3s,baz=316
TDK    Taldyqorghan       82.88 316 eP      P       23 57 18.6 -0.5
TDK                                 pmax    pmax
             comp=Z,33nm,1.3s
MENT   Mentasta           83.11  24 P       P       23 57 19.7 -0.2
MENT                                IAmb    IAmb    23 57 25.9
             comp=Z,14nm,1.0s
TABL   Table Mountain     83.16  27 P       P       23 57 20.1 -0.4
TABL                                IAmb    IAmb    23 57 22.6
             comp=Z,18nm,1.0s
SEM    Semipalatinsk      83.17 322 eP      P       23 57 18.4 -2.3
             baz=322
SEM    Semipalatinsk      83.17 322 eP      P       23 57 18.4 -2.3
BARN   Barnard Glacie     83.18  26 P       P       23 57 20.2 -0.3
DOT    Dot Lake           83.28  24 P       P       23 57 21.0 +0.2
CTGM   Chitina Glacie     83.29  27 P       P       23 57 20.7 -0.3
KSH    Kashi              83.34 311 P       P       23 57 24.3 +2.6
KSH                                 pP      sP      23 57 35.0 -1.0
KSH                                 S       S       00 07 42.3 +2.0
KSH                                 pmax    pmax
             comp=Z,63nm,1.3s
KSH                                 pmax    pmax
             comp=Z,290nm,8.0s
KSH                                 LR      LR
             comp=Z,220nm,6.8s
KSH                                 LR      LR
             comp=Z,310nm,11.2s
MDOK   Medeo              83.38 314 eP      P       23 57 21.5 -0.4
             baz=314
MDOK   Medeo              83.38 314 eP      P       23 57 21.4 -0.4
A21K   Barrow             83.40  15 P       P       23 57 22.0 +0.9
             baz=231
A21K   Barrow             83.40  15 P       P       23 57 21.6 +0.5
TNSS   Tian-Shan          83.42 314 eP      P       23 57 23.6 +1.1
             baz=314
TNSS   Tian-Shan          83.42 314 eP      P       23 57 23.5 +1.1
SCRK   Sand Creek         83.46  23 P       P       23 57 22.2 +0.4
             baz=243,SNR=12
CHKK   Chushkaly          83.58 315 eP      P       23 57 22.8  0.0
             baz=315
CHKK   Chushkaly          83.58 315 eP      P       23 57 22.7  0.0
PRP    Porcupine Dome     83.58  22 P       P       23 57 21.7 -0.8
TOLK   Toolik Lake Re     83.79  18 P       P       23 57 24.5 +1.2
             baz=238,SNR=12
TOLK   Toolik Lake Re     83.79  18 P       P       23 57 23.9 +0.6
TOLK                                IAmb    IAmb    23 57 25.3
             comp=Z,13nm,0.9s
BCAR   Beaver Creek A     83.96  25 P       P       23 57 25.3 +1.0
KUU    Kurty              84.05 315 eP      P       23 57 24.7 -0.4
             comp=Z,38nm,1.1s,baz=315
KUU    Kurty              84.05 315 eP      P       23 57 24.7 -0.4
KUU                                 pmax    pmax
             comp=Z,38nm,1.1s
FYU    Fort Yukon         84.19  21 P       P       23 57 25.6 +0.3
FYU                                 IAmb    IAmb    23 57 27.8
             comp=Z,17nm,1.0s
KURK   Kurchatov          84.25 322ceP      P       23 57 25.9  0.0
KURK                                pmax    pmax
             comp=Z,23nm,1.3s
KURK   Kurchatov          84.25 322 P       P       23 57 25.9  0.0
KURK                                IAmb    IAmb    23 57 28.0
             comp=Z,17nm,1.1s
NIL    Nilore             84.33 304 P       P       23 57 27.2 +0.4
NIL                                 pmax    pmax
             comp=Z,37nm,0.9s
NIL    Nilore             84.33 304 P       P       23 57 27.2 +0.4
TKM2   Tokmak 2           84.36 314 P       P       23 57 28.3 +1.3
             SNR=12
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QSPA	South Pole Qui	84.55	180	P	P	23 57 28.6	+1.2
QSPA				IAmb	IAmb	23 57 33.7	
	comp=Z,7.7nm,0.9s						
BMAR	Burnt Mountain	84.81	20	P	P	23 57 29.4	+0.9
EGAK	Eagle	84.92	23	P	P	23 57 30.3	+1.3
	baz=246						
EGAK	Eagle	84.92	23	P	P	23 57 29.9	+0.9
EGAK				IAmb	IAmb	23 57 31.5	
	comp=Z,18nm,1.0s						
HYT	Haines Junctio	84.97	27	P	P	23 57 30.0	+0.4
CHMS	Chumysh	84.98	314	P	P	23 57 30.7	+0.8
	SNR=24						
UCH	Uchtor	84.99	313	P	P	23 57 31.8	+1.3
	SNR=28						
MAW	Mawson	85.01	203	LR	LR	00 33 51.5	
	comp=Z,157nm,19.0s,baz=66,slow=35						
AAK	Ala-Archa	85.09	314	c*e*P	P	23 57 31.4	+0.8
AAK				pmax	pmax		
	comp=Z,142nm,1.7s						
AAK	Ala-Archa	85.09	314	P	P	23 57 31.5	+0.8
SGDS	Sogindy	85.16	314	*e*P	P	23 57 30.7	-0.1
	comp=Z,9.1nm,1.1s,baz=314						
SGDS	Sogindy	85.16	314	*e*P	P	23 57 30.7	-0.1
SGDS				pmax	pmax		
	comp=Z,9.0nm,1.1s						
USP	Ospenovka	85.22	314	P	P	23 57 31.5	+0.4
	SNR=26						
AML	Almayashu	85.57	313	P	P	23 57 34.9	+1.6
	SNR=30						
EKS2	Erkin-Say	85.61	313	P	P	23 57 34.3	+1.1
	SNR=16						
JIS	Juneau Island	85.64	30	P	P	23 57 33.1	+0.4
JIS				IAmb	IAmb	23 57 52.5	
	comp=Z,17nm,1.2s						
BTLS	Baital	85.90	316	*e*P	P	23 57 33.4	-1.0
	comp=Z,7.0nm,0.7s,baz=316						
BTLS	Baital	85.90	316	*e*P	P	23 57 33.4	-1.0
BTLS				pmax	pmax		
	comp=Z,7.0nm,0.7s						
NRIK	Noril'sk	86.54	341	P	P	23 57 37.0	+0.1
	comp=Z,8.5nm,0.6s,baz=116,slow=4.6,SNR=36						
NRIK	Noril'sk	86.54	341	c*e*P	P	23 57 36.4	-0.6
NRIK				pmax	pmax		
	comp=Z,9.0nm,0.6s						
NRIK	Noril'sk	86.54	341	IAmb	IAmb	23 57 39.2	
	comp=Z,12nm,0.8s						
DZA	Taraz	87.42	313	*e*P	P	23 57 41.6	-0.4
	comp=Z,9.5nm,1.0s,baz=313						
DZA	Taraz	87.42	313	*e*P	P	23 57 41.5	-0.4
DZA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
DLBC	Dease Lake	87.90	31	P	P	23 57 45.4	+1.5
	comp=Z,11nm,1.1s,baz=242,slow=4.1,SNR=8.6						
KBL	Kabul	87.91	305	P	P	23 57 44.1	-0.6
KBL				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KBL	Kabul	87.91	305	P	P	23 57 44.1	-0.6
KBL				IAmb	IAmb	23 57 44.7	
	comp=Z,6.6nm,0.8s						
KK06	Karatay Array	88.04	313	P	P	23 57 44.6	-0.3
KK05	Karatay Array	88.05	313	P	P	23 57 44.6	-0.3
KK02	Karatay Array	88.05	313	P	P	23 57 45.2	+0.3
KK31	Karatay Array	88.05	313	IAmb	IAmb	23 57 46.9	
	comp=Z,8.4nm,0.8s						
KKAR	Karatay Array	88.05	313	P	P	23 57 44.8	-0.1
KKAR	Karatay Array	88.05	313	P	P	23 57 44.8	-0.1
KKAR	Karatay Array	88.05	313	IAmb	IAmb	23 57 46.9	
	comp=Z,8.4nm,0.8s						
KK01	Karatay Array	88.06	313	P	P	23 57 44.9	0.0
KK04	Karatay Array	88.06	313	P	P	23 57 45.0	0.0
KK07	Karatay Array	88.06	313	P	P	23 57 45.1	+0.1
KK03	Karatay Array	88.06	313	P	P	23 57 44.8	-0.1
KK08	Karatay Array	88.07	313	P	P	23 57 44.6	-0.4
IUG	Iuzhnay	88.25	312	*e*P	P	23 57 45.5	-0.5
	comp=Z,2.7nm,0.8s,baz=312						
IUG	Iuzhnay	88.25	312	*e*P	P	23 57 45.5	-0.5
IUG				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KHMM	Horse Mountain	88.57	49	P	P	23 57 45.9	-1.7
KHMM				IAmb	IAmb	23 57 59.5	
	comp=Z,11nm,1.1s						
TAS	Tashkent	88.68	312	P	P	23 57 48.3	+0.4
TAS				pmax	pmax		
	comp=Z,49nm,0.4s						
TAS	Tashkent	88.68	312	P	P	23 57 48.3	+0.4
INK	Inuvik	89.02	21	P	P	23 57 49.7	+0.9
	comp=Z,10nm,1.0s,baz=240,slow=4.7,SNR=22						
INK				LR	LR	00 33 43.2	
	comp=Z,176nm,19.6s,baz=196,slow=33						
INK	Inuvik	89.02	21	P	P	23 57 49.1	+0.3
INK				pmax	pmax		
	comp=Z,22nm,1.2s						
INK	Inuvik	89.02	21	P	P	23 57 49.1	+0.3
M02C	Callahan	89.30	48	P	P	23 57 53.2	+2.3
	baz=262						
BRVK	Borovoye	89.80	323	c*e*P	P	23 57 51.7	-1.1
BRVK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BRVK	Borovoye	89.80	323	P	P	23 57 52.3	-0.5
BRVK				IAmb	IAmb	23 57 54.4	
	comp=Z,11nm,0.8s						
H04D	Lebanon	89.81	45	P	P	23 57 55.1	+2.0
	baz=262						
M04C	Macdoel	90.11	48	P	P	23 57 56.8	+2.0
	baz=263						
A04D	Lummi Island	90.39	41	P	P	23 57 56.9	+1.2
	baz=262						
J05D	Fort Rock, OR	90.73	47	P	P	23 57 58.6	+0.9
	baz=263						
PINE	Pine Mountain	91.00	46	P	P	23 57 57.8	-1.1
PINE				IAmb	IAmb	23 58 01.1	
	comp=Z,9.5nm,1.1s						
NVAR	Mina Array Bea	92.45	52	P	P	23 58 07.3	+1.4
	comp=Z,2.7nm,0.9s,baz=256,slow=5.0,SNR=12						
NVAR				LR	LR	00 33 05.9	
	comp=Z,210nm,20.1s,baz=278,slow=31						
NVAR	Mina Array Bea	92.45	52	P	P	23 58 06.2	+0.3
CWC	Cottonwood Cre	92.46	54	P	P	23 58 07.5	+1.7
	baz=265						
C36M	Paulatuk	92.60	21	P	P	23 58 06.6	+1.1
	baz=262						
BFSC	Mount Baldy Ra	92.62	56	P	P	23 58 08.4	+1.8
	baz=265						
KVN	Kaiserville	92.67	51	P	P	23 58 05.5	-1.3
KVN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KVN	Kaiserville	92.67	51	P	P	23 58 05.5	-1.3
LRMC	Laurel Mtn Rad	92.71	55	P	P	23 58 08.7	+1.8
	baz=265						
MPMC	Manual Prospec	92.91	54	P	P	23 58 09.3	+1.4
	baz=265						
SYO	Syowa Base	93.10	199	⇑*e*pP	P	23 58 10.4	+2.6
GSC	Goldstone, Bar	93.41	55	P	P	23 58 12.1	+2.0
	baz=266						
HRA	Herat	93.48	304	IAmb	IAmb	23 58 11.2	
	comp=Z,12nm,1.0s						
MONP2	Monument Peak	93.55	57	P	P	23 58 13.0	+2.1
	baz=266						
BMO	Blue Mountains	93.70	45	P	P	23 58 10.3	-1.0
BMO				pmax	pmax		
	comp=Z,5.0nm,1.1s						
BMO	Blue Mountains	93.70	45	P	P	23 58 10.3	-1.0
F10A	Beach Ranch, E	93.83	44	P	P	23 58 11.4	-0.4
F10A				IAmb	IAmb	23 58 13.2	
	comp=Z,5.7nm,1.0s						
SHOC	Shoshone, Teco	93.88	54	P	P	23 58 13.7	+1.5
	baz=266						
TPNV	Topopah Spring	93.97	53	P	P	23 58 14.1	+1.4
	baz=266						
BELC	Belle Mtn. Jos	93.98	56	P	P	23 58 15.0	+2.2
	baz=266						
NEW	Newport	94.04	42	P	P	23 58 13.3	+0.7
	baz=266						
GMRC	Granite Mounta	94.31	56	P	P	23 58 16.2	+1.9
	baz=266						
R11A	Troy Canyon, C	94.58	52	P	P	23 58 17.1	+1.6
	baz=267						
IRM	Iron Mountain	94.70	56	P	P	23 58 18.2	+2.2
	baz=267						
HLID	Hailey	95.71	47	P	P	23 58 22.8	+2.2
	baz=268						
ABKAR	Akbulak array	95.93	319	P	P	23 58 19.9	-1.3
ABKAR	Akbulak array	95.93	319	IAmb	IAmb	23 58 27.6	
	comp=Z,3.8nm,0.8s						
YKA	Yellowknife Ar	95.96	28	P	P	23 58 22.2	+1.1
	comp=Z,5.1nm,0.9s,baz=269,slow=4.0,SNR=62						
YKA				LR	LR	00 37 42.8	
	comp=Z,180nm,20.2s,baz=0.0,slow=33						
WALA	Waterton Lakes	96.20	41	P	P	23 58 21.1	-1.5
WALA				IAmb	IAmb	23 58 24.9	
	comp=Z,6.3nm,0.9s						
ARU	Arti	96.83	326	c *i*P	P	23 58 23.8	-1.3
ARU						00 02 17.2	
ARU				S	SKSac	00 09 00.3	+1.2
ARU				pmax	pmax		
	comp=Z,14nm,1.7s						
GEYT	Alibeck	96.99	307	P	P	23 58 26.3	-0.1
	comp=Z,2.2nm,0.7s,baz=91,slow=12,SNR=4.0						
BOZ	Bozeman (W)	97.73	45	P	Pdif	23 58 30.6	+0.8
	baz=270						
LPIG	La Paz	98.46	67	LR	LR	00 35 53.0	
	comp=Z,131nm,19.2s,baz=307,slow=31						
H17A	Grant Village	98.49	46	P	Pdif	23 58 35.1	+1.8
	baz=271						
PDAR	Pinedale Array	99.25	48	P	Pdif	23 58 36.4	-0.3
	comp=Z,0.6nm,0.9s,baz=249,slow=1.5,SNR=3.9						
PDAR				PP	PP	00 02 45.6	+5.9
	comp=Z,0.7nm,0.9s,baz=246,slow=4.4,SNR=4.7						
PDAR				LR	LR	00 38 16.2	
	comp=Z,160nm,19.3s,baz=302,slow=32						
N23A	Red Feather La	102.03	49	P	Pdif	23 58 50.5	+1.4
	baz=273						
DGMT	Dagmar	102.65	42	P	Pdif	23 58 53.0	+1.6
	baz=276						
AKASG	Malin Array Be	114.99	324	PKP	PKiKP	00 03 35.0	-0.2
	comp=Z,0.5nm,0.4s,baz=52,slow=2.6,SNR=4.5						
AKBB	Malin Array Si	114.99	324	c *i*PKIKP	PKPdf	00 03 36.3	+1.1
KOLS	Kolonicke sedl	119.81	325	*e*PKIKP	PKiKP	00 03 46.3	+1.6
KRLC	Kraliky	122.23	328	*e*PKIKP	PKiKP	00 03 50.2	+0.8
KRLC	Kraliky	122.23	328	*e*PKP	PKiKP	00 03 50.2	+0.8
SRO	Srobarova	122.65	325	*e*PKIKP	PKiKP	00 03 51.5	+1.3
MODS	Modra-Piesok	122.92	326	*e*PKIKP	PKiKP	00 03 51.5	+0.7
CLL	Collm	123.39	331	*e*PKIKP	PKiKP	00 03 52.0	+0.4
CKRC	Cesky Krumlov	124.27	328	*e*PKP	PKiKP	00 03 54.2	+0.7
NKC	Novy Kostel	124.34	330	*e*PKIKP	PKiKP	00 03 54.3	+0.7
NKC	Novy Kostel	124.34	330	*e*PKP	PKiKP	00 03 54.3	+0.7
KHC	Kasperske Hory	124.46	329	c *i*PKIKP	PKiKP	00 03 55.8	+1.9
KHC				pmax	pmax		
	comp=Z,11nm,1.3s						
KHC	Kasperske Hory	124.46	329	*e*PKP	PKiKP	00 03 54.4	+0.5
GERES	GERESS Array B	124.58	328	PKP	PKiKP	00 03 54.4	+0.2
	comp=Z,2.3nm,0.8s,baz=90,slow=2.7,SNR=16						
GERES	GERESS Array B	124.58	328	PKIKP	PKiKP	00 03 54.7	+0.5
GERES	GERESS Array B	124.58	328	PKPdf	PKiKP	00 03 54.7	+0.5
ABTA	Abfaltersbach	126.49	327	*e*P	PKiKP	00 03 58.0	0.0
	comp=Z,1.9nm,0.7s						
WTTA	Wattenberg	126.64	328	*e*P	PKiKP	00 03 59.0	+0.6
	comp=Z,3.1nm,0.6s						
MOTA	Moosalm	126.87	328	*e*P	PKiKP	00 03 59.2	+0.4
	comp=Z,2.1nm,0.5s						
SQTA	Sankt Quirin	126.90	328	*i* P	PKiKP	00 03 60.0	+1.1
	comp=Z,1.2nm,0.3s						
FETA	Feichten	127.28	328	*e*P	PKiKP	00 04 00.5	+0.8
	comp=Z,2.7nm,0.7s						
LPAZ	La Paz	134.12	119	PKP	PKiKP	00 04 15.5	+0.6
	comp=Z,1.8nm,0.9s,baz=270,slow=2.0,SNR=2.4						
LPAZ	La Paz	134.12	119	PKIKP	PKPdf	00 04 14.1	+0.5
LPAZ	La Paz	134.12	119		PKPdf	00 04 14.1	+0.5
ESDC	Sonseca Array	139.97	332	PKP	PKPdf	00 04 22.3	-0.8
	comp=Z,0.4nm,0.8s,baz=51,slow=2.5,SNR=2.1						
TOA0	Torodi Ar. Sit	150.50	287		PKPbc	00 04 47.3	+0.3
TORD	Torodi Ar. Bea	150.50	287	PKPbc	PKPbc	00 04 47.3	+0.3
	comp=Z,5.6nm,0.8s,baz=46,slow=2.1,SNR=15						
BDFB	Brasilia	150.63	136	PKPbc	PKiKP	00 04 48.9	+0.7
	comp=Z,3.2nm,0.6s,baz=59,slow=1.8,SNR=7.3						
KIC	Kosan Boka	157.65	274	*e*P	PKPab	00 05 24.9	+0.8
	comp=Z,14nm,1.0s						
DBIC	Dimbokro	157.75	274	PKPab	PKPab	00 05 24.3	-0.2
	comp=Z,9.5nm,1.2s,baz=104,slow=4.2,SNR=2.6						
TIC	Toumodi	157.91	274	*e*P	PKPab	00 05 27.0	+1.8
LIC	Lamto	157.93	273	*e*P	PKPab	00 05 24.8	-0.5
	comp=Z,81nm,1.7s						

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*IDC **27** 00:40:23.6±1.1, 44°.77N×147°.57E, h0^{km}, mb3.6/8, mb1 3.9/11, mb1mx3.6/42, mbtmp3.6/11, ML3.0/3, MS3.1/1, Ms1 3.1/1, ms1mx2.6/47, Error ellipse: s-maj=34.0km s-min=18.0km az=156.0*

*MOS **27** 00:40:24.9±0.8, 44°.01N×147°.53E, h46^{km}, mb4.0/6, Error ellipse: s-maj=13.1km s-min=9.4km az=142.8*

*JMA **27** 00:40:24.4±0.2, 43°.73N×147°.43E, h13^{km}, M4.3*

*SKHL **27** 00:40:25.6±0.6, 43°.90N×147°.60E, h55^{km}±4^{km}, mb4.5/5*

*NEIC **27** 00:40:27.5±1.2, 43°.69N±0°.09×147°.5E±0°.1, h73^{km}±8^{km}, mb4.1/28, Error ellipse: s-maj=14.4km s-min=12.2km az=118.0*

ISC 27 00:40:20.3±1.6**, 43°.80N**±0°.05×**147°.61E**±0°.04**, h7**^{km}±9^{km}**, n111,** σ1^{s}**70**/122**, mb4.0**/24**, 2C-1D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YUK	Yuzh-Kuril'sk	1.28	281	⇓*i*PN	Pg	00 40 45.6	+0.7
YUK				*e*S	Sb	00 41 00.5	-0.9
YUK				pmax	pmax		
	comp=N,143nm,0.1s						
YUK				pmax	pmax		
	comp=E,244nm,0.1s						
YUK				pmax	pmax		
	comp=Z,484nm,0.1s						
YUK				smax	smax		
	comp=E,4µm,0.3s						
YUK				smax	smax		
	comp=N,3µm,0.2s						
YUK	Yuzh-Kuril'sk	1.28	281	*i* P	Pg	00 40 45.7	+0.8
YUK				AMB	AMB	00 40 48.5	
	comp=N,290nm,0.6s						
YUK				*e*S	Sg	00 41 00.8	-0.7
YUK				A	A	00 41 01.0	
	comp=N,4µm,0.5s						
YUK				A	A	00 41 01.0	
	comp=N,4µm,0.5s						
GRPR	Tuman	1.34	279	*e*PN	Pg	00 40 46.5	+0.6
GRPR				*e*S	Sb	00 41 01.8	-1.3
GRPR				pmax	pmax		
	comp=Z,312nm,0.1s						
GRPR				pmax	pmax		
	comp=N,302nm,0.2s						
GRPR				smax	smax		
	comp=N,5µm,0.2s						
GRPR				smax	smax		
	comp=E,3µm,0.2s						
GRPR	Tuman	1.34	279	*e*P	Pg	00 40 46.6	+0.6
GRPR				AMB	AMB	00 40 49.0	
	comp=E,312nm,0.5s						
GRPR				*e*S	Sn	00 41 02.8	-0.6
GRPR				A	A	00 41 04.0	
	comp=E,3µm,0.6s						
GRPR				A	A	00 41 04.0	
	comp=E,3µm,0.6s						
NEM2	Nemuro 2	1.43	253	P	Pg	00 40 47.7	+0.1
NEM2				*e*S	Sb	00 41 04.7	-0.7
NMR	Nemuro--Hokkai	1.43	253	⇑*i*PN	Pg	00 40 47.9	+0.1
NMR				*e*S	Sn	00 41 04.4	-1.3
NMR	Nemuro--Hokkai	1.43	253	*i* P	Pg	00 40 47.9	+0.1
NMR				*e*S	Sn	00 41 04.9	-0.8
KUR	Kuril'sk	1.44	7	c *i*PN	Pg	00 40 47.1	-0.8
KUR				*i* S	Sb	00 41 02.7	-3.3
KUR				pmax	pmax		
	comp=Z,151nm,0.1s						
KUR				smax	smax		
	comp=N,806nm,0.2s						
KUR				smax	smax		
	comp=E,803nm,0.4s						
KUR	Kuril'sk	1.44	7	*i* P	Pb	00 40 47.0	-0.4
KUR				AMB	AMB	00 40 48.7	
	comp=E,170nm,0.5s						
KUR				*i* S	Sb	00 41 02.0	-4.0
KUR				A	A	00 41 03.9	
	comp=E,530nm,0.4s						
KUR				A	A	00 41 03.9	
	comp=E,851nm,0.4s						
GLVR	Golovnino	1.52	268	*e*PN	Pg	00 40 49.4	+0.1
GLVR				*e*S	Sb	00 41 08.1	+0.1
GLVR				pmax	pmax		
	comp=Z,907nm,0.3s						
GLVR				pmax	pmax		
	comp=E,237nm,0.1s						
GLVR				pmax	pmax		
	comp=N,308nm,0.3s						
GLVR				smax	smax		
	comp=E,989nm,0.2s						
GLVR				smax	smax		
	comp=N,3µm,0.3s						
GLVR	Golovnino	1.52	268	*e*P	Pg	00 40 49.5	+0.1
GLVR				AMB	AMB	00 40 50.0	
	comp=N,91nm,0.3s						
GLVR				*e*S	Sn	00 41 07.3	-0.4
GLVR				A	A	00 41 09.0	
	comp=N,3µm,0.6s						
GLVR				A	A	00 41 09.0	
	comp=N,989nm,0.6s						
RUSJ	Misakicho	1.73	281	*e*PN	Pg	00 40 53.0	-0.5
RUSJ				*e*S	Sb	00 41 14.2	-0.1
JRA	Rausu	1.80	275	P	Pb	00 40 53.8	+0.2
JRA				*e*S	Sb	00 41 15.5	-0.9
JNSB	Nemuroshibetsu	1.89	270	P	Pb	00 40 55.0	0.0
JNSB				*e*S	Sn	00 41 17.1	+0.2
JKHN	Kushirohamanak	1.92	249	P	Pb	00 40 55.1	-0.5
JKHN				*e*S	Sn	00 41 17.2	-0.6
JNK	Nakash	2.11	265	P	Pb	00 40 57.7	-1.1
JNK				*e*S	Sn	00 41 21.6	-0.8
JAK	Akkeshi	2.27	250	P	Pn	00 40 59.9	+1.8
JAK				*e*S	Sn	00 41 25.7	-0.6
JTKR	Abashiri--Toko	2.68	275	P	Pb	00 41 06.5	-2.0
JAR	Ashorobuto	2.84	261	P	Pb	00 41 08.7	-2.5
JAR				*e*S	Sn	00 41 41.6	+1.3
JOB	Onbets	2.90	253	P	Pn	00 41 09.3	+2.6
JOB				*e*S	Sn	00 41 41.9	+0.1
JMP	Maruseppu	3.08	275	P	Pb	00 41 12.2	-3.1
HRK	Horoka	3.27	266	*e*P	Pb	00 41 15.6	-3.0
JCH	Churui	3.32	251	P	Pn	00 41 14.9	+2.3
JCH				*e*S	Sn	00 41 52.8	+0.5
JKK2	Kamakawa 2	3.52	273	P	Pb	00 41 20.8	-2.0
JKA	Kamikawa-asahi	3.63	277		Pb	00 41 21.2	-3.5
JKA	Kamikawa-asahi	3.63	277	*e*P	Pb	00 41 21.0	-3.7
ASAJ	Asahikawa	3.63	277	Pn	Pb	00 41 21.0	-3.8
	comp=N,4.9nm,0.3s,baz=82,slow=14,SNR=15						
ASAJ				Sn	Sb	00 42 06.5	-2.6
	comp=N,1.0nm,0.3s,baz=22,slow=19,SNR=1.0						
ERM	Erimo	3.73	243	*i* PN	Pb	00 41 23.2	-3.2
ERM	Erimo	3.73	243	Pn	Pb	00 41 23.6	-2.8
ERM	Erimo	3.73	243	*e*P	Pn	00 41 22.5	+4.3
JEM	Erimo	3.73	243	P	Pb	00 41 23.2	-3.1
JEM	Erimo	3.73	243		Pb	00 41 23.4	-3.0
JNBK	Urakawa-nobuka	3.87	249	P	Pn	00 41 22.0	+1.8
JEW	Eniwo	4.60	260	Pn	Pn	00 41 34.0	+3.9
YSS	Yuzh-Sakhalins	4.65	314	Pn	Pn	00 41 34.8	+3.9
JTM	Tenmabayashi	5.71	240	Pn	Pn	00 41 49.1	+3.7
JTM				Sn	Sn	00 42 51.6	+0.5
JMM	Marumori	7.86	223	Pn	Pn	00 42 16.7	+1.8
JMM				Sn	Sn	00 43 39.7	-4.5
SKR	Severo-Kuril's	8.99	37	*i* PN	Pn	00 42 32.8	+2.5
SKR	Severo-Kuril's	8.99	37	*e*P	Pn	00 42 32.9	+2.6
SKR				AMB	AMB	00 42 35.6	
	comp=N,13nm,0.3s						
JSD	Sado	9.12	234	Pn	Pn	00 42 33.8	+1.5
USRK	Ussuriysk Ar.	11.26	277	Pn	Pn	00 43 03.7	+2.2
	baz=145,slow=42,SNR=3.0						
USRK	Ussuriysk Ar.	11.26	277	PN	Pn	00 43 04.5	+3.0
USRK	Ussuriysk Ar.	11.26	277		Pn	00 43 04.5	+3.0
PETK	Petropavlovsk-	11.46	32	Pn	Pn	00 42 58.5	-5.7
	comp=N,0.1nm,0.3s,baz=92,slow=18,SNR=2.0						
PETK	Petropavlovsk-	11.46	32	*e*PN	Pn	00 43 05.5	+1.3
JWT	Wachi	12.68	232		Pn	00 43 23.4	+2.4
KSRS	Korea Array	16.22	254	LR	LR	00 51 04.1	
	comp=N,61nm,18.3s,baz=355,slow=39						
H11N2	WAKE ISLAND Hy	28.93	140	T	T	01 16 57.7	
	baz=330,slow=75						
H11N1	WAKE ISLAND Hy	28.94	140	T	T	01 17 02.2	
	baz=330,slow=75						
H11N3	WAKE ISLAND Hy	28.94	140	T	T	01 17 01.0	
	baz=330,slow=75						
H11S1	WAKE ISLAND Hy	29.90	141	T	T	01 18 07.7	
	baz=332,slow=76						
H11S3	WAKE ISLAND Hy	29.91	142	T	T	01 18 15.1	
	baz=332,slow=76						
H11S2	WAKE ISLAND Hy	29.92	141	T	T	01 18 16.2	
	baz=332,slow=76						
TTA	Tatalina	37.18	39	P	P	00 47 32.5	+0.9
TTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
TTA	Tatalina	37.18	39	P	P	00 47 32.5	+0.9
TTA				IAmb	IAmb	00 47 47.7	
	comp=Z,2.8nm,1.2s						
SVW2	Sparrevohn	37.30	42	P	P	00 47 34.0	+1.4
SVW2				IAmb	IAmb	00 47 34.3	
	comp=Z,1.8nm,0.7s						
IMAR	Indian Mountai	38.41	34	P	P	00 47 42.5	+0.6
PPLA	Purkeypile	38.93	39	P	P	00 47 48.0	+1.5
PPLA				IAmb	IAmb	00 47 50.8	
	comp=Z,4.3nm,1.2s						
KTH	Kantishna Hill	39.50	38	P	P	00 47 51.4	+0.2
KTH				IAmb	IAmb	00 47 52.8	
	comp=Z,4.4nm,0.8s						
CNPM	China Poot	39.51	45	P	P	00 47 51.7	+0.4
SUA	Susitna One	39.63	41	P	P	00 47 52.7	+0.4
SUA				IAmb	IAmb	00 47 55.1	
	comp=Z,1.6nm,1.0s						
BRLK	Bradley Lake	39.67	44	P	P	00 47 53.1	+0.6
TRF	Thorofare Moun	39.79	38	P	P	00 47 54.2	+0.5
RND	Reindeer	40.43	38	P	P	00 47 59.4	+0.5
RND	Reindeer	40.43	38	P	P	00 47 59.4	+0.5
MDM	Murphy Dome	40.67	36	P	P	00 48 01.7	+0.9
WRH	Wood River Hil	40.74	37	P	P	00 48 01.7	+0.4
WRH				IAmb	IAmb	00 48 03.5	
	comp=Z,1.6nm,0.9s						
SML	Sawmill	40.76	41	P	P	00 48 01.9	+0.3
POKR	Poker Plat Res	41.01	36	P	P	00 48 04.6	+1.1
POKR				IAmb	IAmb	00 48 16.4	
	comp=Z,3.3nm,0.9s						
HDA	Harding Lake	41.24	37	P	P	00 48 05.3	-0.1
HDA				IAmb	IAmb	00 48 06.3	
	comp=Z,3.5nm,0.6s						
IL31		41.25	36	P	P	00 48 05.3	-0.2
ILAR	Eielson Array	41.25	36	P	P	00 48 04.6	-0.9
	comp=Z,0.8nm,0.8s,baz=264,slow=8.1,SNR=7.6						
ILAR	Eielson Array	41.25	36	*e*P	P	00 48 05.8	+0.3
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ILAR	Eielson Array	41.25	36	P	P	00 48 06.2	+0.6
GLI	Glacier Island	41.44	42	P	P	00 48 06.2	-1.0
DOT	Dot Lake	42.56	38	P	P	00 48 15.8	-0.5
DOT				IAmb	IAmb	00 48 34.2	
	comp=Z,2.2nm,1.0s						
VRDI	Verde Repeater	43.15	41	P	P	00 48 21.8	+0.5
VRDI				IAmb	IAmb	00 48 34.7	
	comp=Z,2.1nm,1.0s						
TGL	Tana Glacier	43.53	42	P	P	00 48 25.7	+1.4
TGL				IAmb	IAmb	00 48 37.8	
	comp=Z,3.6nm,1.0s						
BCAR	Beaver Creek A	43.65	38	P	P	00 48 26.2	+1.1
EGAK	Eagle	43.69	36	P	P	00 48 26.1	+0.7
BALM	Baldy	43.71	41	P	P	00 48 26.4	+0.7
BALM				IAmb	IAmb	00 48 31.8	
	comp=Z,3.1nm,1.1s						
BARN	Barnard Glacie	44.04	41	P	P	00 48 28.8	+0.3
CTGM	Chitina Glacie	44.21	41	P	P	00 48 30.6	+0.8
TABL	Table Mountain	44.41	42	P	P	00 48 32.2	+0.7
TABL				IAmb	IAmb	00 48 34.7	
	comp=Z,5.5nm,1.0s						
MK31	Makanchi Array	44.85	298	P	P	00 48 34.4	-0.6
MK31	Makanchi Array	44.85	298	P	P	00 48 34.4	-0.6
MKAR	Makanchi Array	44.85	298	P	P	00 48 34.8	-0.2
	comp=Z,0.2nm,0.6s,baz=77,slow=8.2,SNR=2.4						
MKAR	Makanchi Array	44.85	298	P	P	00 48 33.9	-1.1
MKAR	Makanchi Array	44.85	298	*e*P	P	00 48 34.8	-0.2
HYT	Haines Junctio	46.07	41	P	P	00 48 46.1	+1.5
HYT				IAmb	IAmb	00 48 46.9	
	comp=Z,3.8nm,0.9s						
BRVK	Borovoye	49.77	310	*i* P	P	00 49 12.5	-0.6
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BRVK	Borovoye	49.77	310	*e*P	P	00 49 12.5	-0.6
YKA	Yellowknife Ar	55.57	34	P	P	00 49 55.6	-0.3
	comp=Z,0.9nm,0.6s,baz=299,slow=6.4,SNR=18						
YKA	Yellowknife Ar	55.57	34	*e*P	P	00 49 56.0	+0.1
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ABKAR	Akbulak array	57.29	309	P	P	00 50 08.8	+0.5
ABKAR	Akbulak array	57.29	309	P	P	00 50 08.1	-0.2
ABKAR				IAmb	IAmb	00 50 15.4	
	comp=Z,0.7nm,0.8s						
COEN	Coen	57.62	185	P	P	00 50 09.7	-1.2
COEN				IAmb	IAmb	00 50 28.2	

	comp=Z,2.6nm,1.1s						
KRMB	Red Mountain	61.97	58	P	P	00 50 40.7	-0.2
KMRM	Mail Ridge	62.84	59	P	P	00 50 44.8	-1.9
WRA	Warramunga Arr	64.59	194	P	P	00 51 09.7	+12
	comp=Z,0.5nm,0.8s,baz=13,slow=7.0,SNR=3.5						
GEYT	Alibeck	64.70	299	P	P	00 50 57.7	-1.3
FINES	FINESS Array B	64.98	333	P	P	00 50 59.1	-1.1
	comp=Z,0.9nm,0.8s,baz=48,slow=6.2,SNR=4.3						
FINES	FINESS Array B	64.98	333	eP	P	00 51 01.4	+1.1
FINES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
NVAR	Mina Array Bea	67.27	58	P	P	00 51 16.5	+0.8
	comp=Z,0.5nm,0.5s,baz=312,slow=8.0,SNR=3.9						
PDAR	Pinedale Array	69.62	50	P	P	00 51 29.9	-0.5
	comp=Z,0.4nm,0.7s,baz=166,slow=0.7,SNR=3.9						
CLL	Collm	77.42	333	eP	P	00 52 16.0	+0.2
CLL	Collm	77.42	333	eP	P	00 52 16.0	+0.2
TXAR	Lajitas Array	82.34	57	P	P	00 52 43.3	+0.3
	comp=Z,0.3nm,0.5s,baz=316,slow=5.0,SNR=3.9						
H03N2	Juan Fernandez	142.63	90	T	T	03 38 47.6	
	baz=304,slow=77						
H03N3	Juan Fernandez	142.65	90	T	T	03 38 55.3	
	baz=304,slow=77						
H03N1	Juan Fernandez	142.65	90	T	T	03 38 53.4	
	baz=304,slow=77						

NEIC **27** *00:43:43.7±2.7, 32°.18N±0°.02×117°.77W±0°.04, $h16^{km}\pm6^{km}$, Error ellipse: s-maj=6.1km s-min=2.1km az=60.0*
PAS **27** *00:43:45.8±2.0, 32°.22N±0°.04×117°.69W±0°.04, $h21^{km}\pm7^{km}$, ML3.4/124, ML3.0/42(NEIC), Error ellipse: s-maj=6.6km s-min=3.8km az=204.0*
SCEDC **27** *00:43:45.8, 32°.22N×117°.69W, $h21^{km}$*
ANF **27** *00:43:45.0±0.7, 32°.25N×117°.71W, $h22^{km}\pm4^{km}$, ML3.3/15, Error ellipse: s-maj=5.2km s-min=2.4km az=0.0*
ECX **27** *00:43:46.5±0.6, 32°.20N×117°.64W, $h16^{km}\pm5^{km}$, MD3.1, ML3.3, Fault plane solution: NP1:ϕ_s344.90000°, δ75.52000°, λ-26.57000°.*
ISC 27 00:43:44.3±1.4**, 32°.19N**±0°.04×**117°.71W**±0°.03**, $h14^{km}\pm9^{km}$, n76, $\sigma0^{s}99$**/106**, 12C-2D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TJX	Tijuana	0.64	60		Pg	00 43 57.5	+0.6
TJX					Sg	00 44 05.8	+0.5
TJX	Tijuana	0.64	60	⇑eP	Pg	00 43 57.4	+0.6
TJX				eS	Sg	00 44 05.4	+0.1
OLP	Otay Lakes Par	0.78	57		Pg	00 43 59.4	-0.1
OLP					Sg	00 44 09.2	-0.6
OLP	Otay Lakes Par	0.78	57	⇑eP	Pg	00 43 59.4	-0.1
OLP				eS	Sg	00 44 09.1	-0.6
SDRC	San Diego Road	0.85	50		Pb	00 44 00.4	-0.3
SDRC					Sb	00 44 11.2	-0.8
SDRC	San Diego Road	0.85	50	⇑eP	Pb	00 44 00.5	-0.3
SDRC				eS	Sb	00 44 11.2	-0.8
109C	Camp Elliot, M	0.86	36	P	Pb	00 44 00.5	-0.6
	baz=217,SNR=31						
109C				S	Sb	00 44 11.7	-0.8
	baz=217						
109C	Camp Elliot, M	0.86	36		Pb	00 44 00.8	-0.4
CPE	Camp Elliot	0.86	36		Pb	00 44 00.7	-0.4
CPE					Sb	00 44 11.6	-1.0
CBX	Cerro Bola	0.89	82		Pb	00 44 01.4	-0.3
CBX					Sb	00 44 13.6	+0.1
CBX				IAML		00 44 16.4	
	comp=E,933nm,0.5s						
CBX				IAML		00 44 18.1	
	comp=N,739nm,0.4s						
CBX	Cerro Bola	0.89	82	⇑eP	Pb	00 44 01.3	-0.3
CBX				eS	Sb	00 44 13.0	-0.5
CBX				e		00 44 15.5	
CBX				IAML		00 44 15.5	
	comp=N,1μm,0.5s						
CBX				IAML		00 44 16.5	
	comp=E,2μm,0.5s						
CBX				⇓e		00 44 16.5	
TJIG	Tijuana	0.91	74	⇑eP	Pb	00 44 01.4	-0.5
TJIG				eS	Sb	00 44 13.2	-0.7
CCX	Cicese	0.94	110		Pb	00 44 01.8	-0.6
CCX				IAML		00 44 15.4	
	comp=E,300nm,0.3s						
CCX				IAML		00 44 16.9	
	comp=N,261nm,0.3s						
CCX	Cicese	0.94	110	eP	Pb	00 44 01.9	-0.5
CCX				eS	Sb	00 44 14.1	-0.7
BAR	Barrett	1.00	60		Sb	00 44 15.8	-0.8
BAR	Barrett	1.00	60		Pb	00 44 03.2	-0.3
BAR	Barrett	1.00	60		Pb	00 44 02.7	-0.8
BAR	Barrett	1.00	60		Sb	00 44 15.2	-1.4
BAR	Barrett	1.00	60	⇑eP	Pb	00 44 02.7	-0.8
BAR				eS	Sb	00 44 15.2	-1.4
TKX	Tecate	1.01	68		Pb	00 44 02.9	-0.7
TKX					Sb	00 44 15.8	-0.8
TKX	Tecate	1.01	68	⇑eP	Pb	00 44 03.2	-0.4
TKX				eS	Sb	00 44 15.5	-1.2
DPP	Dos Picos Cty	1.04	38		Pb	00 44 03.1	-1.0
DPP					Sb	00 44 15.9	-1.6
GORC	Green Oak Ranc	1.04	23		Pb	00 44 03.0	-1.2
GORC					Sb	00 44 16.0	-1.7
HWB	Hans Werner Br	1.05	37		Pb	00 44 03.2	-1.0
HWB					Sb	00 44 16.5	-1.4
SCI2	San Clemente I	1.06	318	P	Pb	00 44 04.0	-0.5
	baz=136,SNR=22						
SCI2				S	Sb	00 44 18.4	+0.2
	baz=136						
MONP2	Monument Peak	1.29	57	P	Pn	00 44 07.3	-0.8
	baz=238,SNR=20						
MONP2				S	Sb	00 44 23.2	-1.9
	baz=238						
MONP2	Monument Peak	1.29	57		Pn	00 44 07.3	-0.8
MONP2					Sb	00 44 23.1	-1.9
MONP2	Monument Peak	1.29	57	⇑eP	Pn	00 44 07.4	-0.8
MONP2				eS	Sb	00 44 23.2	-1.9
MATG	Mataguay Scout	1.35	41		Pn	00 44 08.0	-0.8
CIAC	Catalina I. Ai	1.35	334		Pn	00 44 07.2	-1.6
CIS	Catalina Islan	1.35	334	P	Pn	00 44 07.2	-1.6
	baz=153						
PLM	Palomar	1.36	31		Pn	00 44 08.0	-1.1
PLM					Sb	00 44 26.2	-0.9
CBKC	Canebrake	1.42	60		Pn	00 44 09.7	-0.1
IKP	In-Ko-Pah, Jac	1.43	71	P	Pn	00 44 09.7	-0.2
	baz=253,SNR=82						
IKP				S	Sn	00 44 28.2	-0.3
	baz=253						
IKP	In-Ko-Pah, Jac	1.43	71		Pn	00 44 09.8	-0.2
IKP					Sn	00 44 28.1	-0.5
IKP	In-Ko-Pah, Jac	1.43	71	⇑eP	Pn	00 44 09.8	-0.2
RMX	La Rumorosa	1.44	73		Pn	00 44 10.9	+0.8
RMX				IAML		00 44 30.9	
	comp=E,307nm,0.3s						
RMX				IAML		00 44 31.5	
	comp=N,397nm,0.5s						
RMX	La Rumorosa	1.44	73	⇑eP	Pn	00 44 11.0	+0.9
MURC	Murrieta	1.47	17	P	Pn	00 44 09.5	-0.9
	baz=197,SNR=32						
MURC				S	Sn	00 44 28.9	-0.7
	baz=197						
ELS	Elsinore Mount	1.48	9		Pn	00 44 09.3	-1.2
ESJX	Sierra Juarez	1.50	97		Pn	00 44 10.6	-0.4
SJX	San Joaquin	1.55	105	⇑eP	Pn	00 44 10.7	-0.7
PEC	Perris	1.76	15		Pn	00 44 14.7	+0.2
TPFO	Pinon Flats	1.76	36	Sb	Sn	00 44 38.5	+1.6
	baz=217						
PFO	Pinyon Flats O	1.77	36	P	Pn	00 44 14.6	0.0
	baz=217,SNR=22						
PFO				Sb	Sn	00 44 38.5	+1.5
	baz=217						
PFO	Pinyon Flats O	1.77	36		Pn	00 44 14.9	+0.3
PFO				IAML		00 44 39.3	
	comp=N,128nm,0.2s						
PFO				IAML		00 44 39.3	
	comp=N,178nm,0.3s						
SWSC	Sam W. Stewart	1.78	64	P	Pn	00 44 14.5	-0.1
	baz=246,SNR=49						
SWSC				Sb	Sb	00 44 39.7	+0.8
	baz=246						
SWSC	Sam W. Stewart	1.78	64	⇑eP	Pn	00 44 15.9	+1.3
SNCC	San Nicolas Is	1.86	305	P	Pn	00 44 15.1	-0.7
	baz=123						
SNCC	San Nicolas Is	1.86	305	Pn	Pn	00 44 15.3	-0.5
SNCC	San Nicolas Is	1.86	305		Pn	00 44 15.5	-0.3
SNCC	San Nicolas Is	1.86	305	IAML		00 44 38.5	
	comp=N,117nm,0.6s						
SNCC				IAML		00 44 46.7	
	comp=E,166nm,0.6s						
PASC	Pasadena Art C	2.02	349	Pn	Pn	00 44 18.0	0.0
PASC	Pasadena Art C	2.02	349		Pn	00 44 20.1	+2.1
BFSC	Mount Baldy Ra	2.05	1	Pb	Pn	00 44 20.8	+2.3
	baz=181						
BFSC				Sb	Sb	00 44 47.2	+0.5
	baz=181						
MWC	Mount Wilson	2.05	352		Pn	00 44 19.6	+1.0
MWC				IAML		00 44 50.9	
	comp=N,57nm,0.2s						
MWC				IAML		00 44 52.0	
	comp=E,63nm,0.7s						
EW2	E Wide Canyon	2.06	32		Pb	00 44 21.8	+0.2
BBRC	Big Bear Solar	2.17	17	Sb	Sb	00 44 50.4	0.0
	baz=198						
BLAC	Blackrock camp	2.18	30		Pb	00 44 23.9	+0.3
SPIG	San Pedro Mart	2.23	120	⇓eP	Pn	00 44 22.6	+1.5
SPX	San Pedro Mart	2.23	120		Pn	00 44 21.6	+0.4
BELC	Belle Mtn. Jos	2.31	38	Pb	Pb	00 44 25.5	-0.3
	baz=219						
BELC				Sb	Sb	00 44 54.9	+0.7
	baz=219						
BELC	Belle Mtn. Jos	2.31	38		Pb	00 44 27.1	+1.3
BC3	Big Chuckawall	2.40	52	Pb	Pn	00 44 26.1	+2.9
	baz=233						
BC3				Sb	Sb	00 44 57.4	+0.6
	baz=233						
OSI	Osito Audit: C	2.56	341		Pn	00 44 25.7	+0.2
OSI				IAML		00 45 07.1	
	comp=E,35nm,1.9s						
OSI				IAML		00 45 16.2	
	comp=N,47nm,0.8s						
GLA	Glamis	2.58	70	P	Pn	00 44 25.1	-0.6
	baz=252						
GLA	Glamis	2.58	70		Pn	00 44 25.6	-0.1
GLA				IAML		00 45 05.4	
	comp=N,66nm,0.6s						
GLA				IAML		00 45 14.5	
	comp=E,106nm,0.7s						
GSC	Goldstone, Bar	3.19	13		Pn	00 44 34.9	+0.7
GSC				IAML		00 45 32.3	
	comp=E,39nm,0.9s						
GSC				IAML		00 45 44.0	
	comp=N,27nm,0.8s						
ISA	Isabella, Lake	3.52	350	Pn	Pn	00 44 39.8	+1.1
PIX	Pinacate	3.67	99	Pn	Pn	00 44 42.5	+1.9
214A	Organ Pipe Nat	4.16	92	Pn	Pn	00 44 47.5	+0.1
214A				IAML		00 46 13.6	
	comp=E,8.3nm,4.2s						
214A				IAML		00 46 29.8	
	comp=N,9.9nm,3.8s						
PMPB	Monarch Peak	4.76	328	Pn	Pn	00 44 56.4	+0.7
TPNV	Topopah Spring	4.90	14		Pn	00 44 59.9	+2.2
TPNV				IAML		00 47 35.2	
	comp=N,12nm,4.6s						
TPNV				IAML		00 47 44.1	
	comp=N,12nm,4.7s						
SAO	San Andreas Ge	5.51	327	Pn	Pn	00 45 06.5	+0.6
OMMB	Old Mammoth Mi	5.52	349	Pn	Pn	00 45 06.6	+0.3
PRN	Pahroc Range	5.65	22	Pn	Pn	00 45 09.3	+1.4

IDC **27** *00:47:35.6±0.8, 38°.41S×93°.92W, $h0^{km}$, mb4.4/15, mb1 4.6/16, mb1mx4.5/27, mbtmp4.4/16, ML3.8/1, MS4.6/16, Ms1 4.6/16, ms1mx4.4/21, Error ellipse: s-maj=27.5km s-min=18.4km az=5.0*
MOS **27** *00:47:37.4±1.2, 37°.93S×93°.87W, $h10^{km}$, mb5.4/35, Error ellipse: s-maj=12.8km s-min=9.3km az=81.8*
NEIC **27** *00:47:38.0±1.7, 38°.16S±0°.09×93°.9W±0°.1, $h10^{km}\pm1^{km}$, mb5.3/190, Error ellipse: s-maj=15.9km s-min=15.0km az=206.0*
GCMT **27** *00:47:39.0±0.1, 38°.22S±0°.01×93°.75W±0°.01, $h12^{km}$, MW5.3/147, Moment Tensor Solution. s101,c142; s147,c238; Duration: $1^{s}0$ Moment tensor: Scale 10^{17} Nm; M_{rr}-0.84±.01; $M_{\theta\theta}$-0.01±.01; $M_{\phi\phi}$0.85±.01; $M_{r\theta}$0.35±.04; $M_{\theta\phi}$-0.28±.01; $M_{\phi r}$-0.15±.04; Best double couple: $M_0$0.97100×10^{17} NP1:ϕ_s181.00000°, δ40.00000°, λ-62.00000°. NP2:ϕ_s326.00000°, δ55.00000°, λ-112.00000°. Principal axes: T 0.9700, Plg8.0000°, Azm71.0000°; N 0.0030, Plg18.0000°, Azm338.0000°; P -0.9730, Plg70.0000°, Azm184.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 27 00:47:40.2±0.3**, 38°.21S**±0°.07×**93°.85W**±0°.06**, $h25^{km}$, n558,** σ**$1^{s}61$**/517**, mb5.2**/105**, MS4.8**/18**, 13C-3D, West Chile Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H03S2	Juan Fernandez	12.85	75	T	T	01 03 56.7	
	baz=244,slow=74						
H03S1	Juan Fernandez	12.86	75	T	T	01 03 57.8	
	baz=244,slow=74						
H03S3	Juan Fernandez	12.86	75	T	T	01 04 01.5	
	baz=244,slow=74						
VA04	Juan Fernndez	13.00	74	Pn	Pn	00 50 42.1	-1.2
H03N3	Juan Fernandez	13.01	73	T	T	01 04 04.9	
	baz=249,slow=72						
H03N2	Juan Fernandez	13.01	73	T	T	01 04 03.6	
	baz=249,slow=72						
H03N1	Juan Fernandez	13.02	73	T	T	01 04 05.5	
	baz=249,slow=72						
GO07	Milladeo Hill,	16.08	114	Pn	Pn	00 51 24.2	-0.3
GO07				IAmb	IAmb	00 51 42.8	
	comp=Z,201nm,1.3s						
BI03	Tigo	16.58	92	Pn	Pn	00 51 29.9	-1.0
LL01	San Ignacio de	16.87	111	Pn	Pn	00 51 33.9	-0.7
RPN	Rapa Nui	17.06	306	LR	LR	00 56 22.3	
	comp=Z,3μm,18.6s,baz=132,slow=31						
RPN	Rapa Nui	17.06	306	P	Pn	00 51 34.4	-2.6
RPN				pmax	pmax		
	comp=Z,127nm,1.2s						
RPN	Rapa Nui	17.06	306	Pn	Pn	00 51 34.4	-2.6
BI02	San Fabin de	18.00	92	eP	P	00 51 50.4	+1.3
BI02	San Fabin de	18.00	92	P	P	00 51 48.6	-0.4
BO03	Pichilemu	18.01	85	eP	Pn	00 51 47.2	-1.6
PLCA	Paso Flores	18.16	105	P	P	00 51 50.9	+0.1
	comp=Z,0.1nm,0.3s,baz=272,slow=9.5,SNR=5.6						
PLCA				LR	LR	00 57 03.7	
	comp=Z,3μm,20.4s,baz=268,slow=31						
PLCA	Paso Flores	18.16	105	P	P	00 51 50.5	-0.3
PLCA				pmax	pmax		
	comp=Z,26nm,1.2s						
PLCA	Paso Flores	18.16	105	P	P	00 51 50.5	-0.3
PLCA	Paso Flores	18.16	105	eP	P	00 51 51.2	+0.4
BO02	Sierra Bellavi	18.85	87		Pn	00 51 59.1	+0.1
MT09	Talagante	19.01	84	⇑iP	P	00 52 00.1	-0.1
MT09				⇑iP	P	00 52 00.1	-0.1
MT02	Curacav	19.08	82	⇑iP	Pn	00 52 01.0	-0.7
MT02	Curacav	19.08	82	P	Pn	00 52 01.2	-0.5
ROCH	El Roble	19.28	81	⇑iP	P	00 52 02.6	-0.7
MT05	Renca	19.34	83	eP	Pn	00 52 04.7	-0.3
MT05	Renca	19.34	83	Pn	Pn	00 52 04.9	0.0
PEL	Peldehue	19.47	82	⇑iP	Pn	00 52 06.4	-0.1
PEL	Peldehue	19.47	82	P	Pn	00 52 06.6	+0.1
PEL				pmax	pmax		
	comp=Z,78nm,1.5s						
PEL	Peldehue	19.47	82		Pn	00 52 06.6	+0.1
LMEL	Las Melosas	19.60	84	eP	Pn	00 52 08.1	-0.1
VA03	San Esteban	19.72	81	eP	Pn	00 52 09.0	-0.5
VA03	San Esteban	19.72	81		Pn	00 52 09.0	-0.5
GO09	Cerro Castillo	20.01	138	P	Pn	00 52 13.2	+0.4
CO02	Combarbal	20.02	76	⇑iP	Pn	00 52 12.5	-0.6
CO02	Combarbal	20.02	76	P	Pn	00 52 12.1	-1.0
CO02				IAmb	IAmb	00 52 28.7	
	comp=Z,136nm,1.4s						
CO03	El Pedregal	20.42	76	P	Pn	00 52 16.9	-0.9
GO04	Tololo Observa	20.65	74	⇑iP	P	00 52 17.8	-0.5
GO04	Tololo Observa	20.65	74	P	P	00 52 18.5	+0.3
CO01	Juntas del Tor	21.28	74	P	P	00 52 26.4	+1.3
LCO	Las Campanas	21.31	71	P	P	00 52 25.5	+0.1
LCO				pmax	pmax		
	comp=Z,143nm,1.4s						
LCO	Las Campanas	21.31	71	P	P	00 52 25.5	+0.1
LCO				IAmb	IAmb	00 52 39.3	
	comp=Z,143nm,1.4s						
AC04	Llanos de Chal	21.46	69	P	P	00 52 26.7	-0.1
ZON	Zonda	21.66	80	P	P	00 52 29.5	+0.6
ZON				pmax	pmax		
	comp=Z,131nm,1.3s						
ZON	Zonda	21.66	80	P	P	00 52 29.5	+0.6
ZON				IAmb	IAmb	00 52 42.5	
	comp=Z,131nm,1.3s						
GO10	Punta Arenas	21.71	141	P	P	00 52 27.9	-1.4
AC05	El Transito	21.72	72	eP	P	00 52 27.9	-1.7
AC05	El Transito	21.72	72	P	P	00 52 30.1	+0.4
AC05				IAmb	IAmb	00 52 32.7	
	comp=Z,136nm,1.4s						
GO03	Copiap	22.42	69	P	P	00 52 36.0	-1.1
GO03				IAmb	IAmb	00 52 40.9	
	comp=Z,104nm,1.4s						
AC01	Pan de Azucar	23.00	65	P	P	00 52 42.2	-0.9
AC02	Maricunga	23.66	69	⇑iP	P	00 52 51.6	+1.4
AC02	Maricunga	23.66	69	P	P	00 52 49.8	-0.5
AC02				IAmb	IAmb	00 53 04.0	
	comp=Z,59nm,1.1s						
PB14	IPOC Station P	24.08	63	⇑iP	P	00 52 54.8	+0.8
PB14	IPOC Station P	24.08	63	P	P	00 52 53.9	-0.1
GO02	Mina Guanaco	24.32	65	P	P	00 52 56.3	+0.1
GO02				IAmb	IAmb	00 53 10.2	
	comp=Z,67nm,1.4s						
PB10	IPOC Station P	24.70	60	eP	P	00 52 58.2	-1.1
PB10	IPOC Station P	24.70	60	P	P	00 52 58.7	-0.7
PB15	IPOC Station P	25.64	61	P	P	00 53 08.4	+0.2
PB15				IAmb	IAmb	00 53 24.4	
	comp=Z,141nm,1.3s						
PB04	IPOC Station P	25.77	59	P	P	00 53 09.1	-0.1
PB04				IAmb	IAmb	00 53 23.4	
	comp=Z,111nm,1.4s						
PB06	IPOC Station P	25.91	60	P	P	00 53 10.1	-0.4
PB06				IAmb	IAmb	00 53 26.5	
	comp=Z,60nm,1.2s						
PB07	IPOC Station P	26.36	58	P	P	00 53 15.2	+0.6
PB07				IAmb	IAmb	00 53 31.2	
	comp=Z,80nm,1.5s						
LVC	Limon Verde	26.43	61	P	P	00 53 15.9	+0.5
	comp=Z,23nm,1.1s,baz=223,slow=8.3,SNR=16						
LVC				LR	LR	01 01 02.9	
	comp=Z,3μm,19.8s,baz=218,slow=30						
LVC	Limon Verde	26.43	61	ceP	P	00 53 17.3	+1.9
LVC				pmax	pmax		
	comp=Z,49nm,1.3s						
LVC	Limon Verde	26.43	61	P	P	00 53 16.1	+0.7
LVC				IAmb	IAmb	00 53 30.1	
	comp=Z,61nm,1.2s						
LVC	Limon Verde	26.43	61	eP	P	00 53 16.7	+1.3
PB09	IPOC Station P	26.75	59	P	P	00 53 18.3	+0.2
PB09				IAmb	IAmb	00 53 32.4	
	comp=Z,79nm,1.3s						
PATCX	Punta Patache	26.82	56	P	P	00 53 18.4	-0.2
TA01	Diego Aracena	26.98	56	P	P	00 53 19.3	-0.6
PB01	IPOC Station P	27.10	58	P	P	00 53 20.5	-0.7
PSGCX	Pisagua	27.71	55	P	P	00 53 25.5	-1.2
PB08	IPOC Station P	27.95	57	P	P	00 53 28.8	-0.4
MNMC	Minye Minye	28.39	55	P	P	00 53 32.5	-0.5
MNMC				IAmb	IAmb	00 53 47.3	
	comp=Z,65nm,1.2s						
NNA	Nana	30.20	35	P	P	00 53 49.2	+0.4
	comp=Z,2.9nm,0.3s,baz=227,slow=8.0,SNR=1.5						
NNA				LR	LR	01 02 41.2	
	comp=Z,2μm,21.2s,baz=206,slow=30						
NNA	Nana	30.20	35	i P	P	00 53 49.5	+0.7
NNA				pmax	pmax		
	comp=Z,53nm,1.1s						
NNA	Nana	30.20	35	P	P	00 53 47.8	-1.0
LPAZ	La Paz	31.43	53	P	P	00 54 01.1	+0.9
	comp=Z,5.2nm,0.7s,baz=186,slow=6.7,SNR=19						
LPAZ				LR	LR	01 04 29.8	
	comp=Z,680nm,19.1s,baz=218,slow=32						
LPAZ	La Paz	31.43	53	P	P	00 53 59.4	-0.8
LPAZ				pmax	pmax		
	comp=Z,28nm,1.1s						
LPAZ	La Paz	31.43	53	P	P	00 53 59.4	-0.8
LPAZ				IAmb	IAmb	00 54 15.0	
	comp=Z,28nm,1.1s						
LPAZ	La Paz	31.43	53	eP	P	00 54 01.9	+1.7
ITQB	Itaqui	31.87	86	eP	P	00 54 03.0	-0.3
CPUP	Villa Florida	32.87	80	P	P	00 54 10.2	-2.0
	comp=Z,0.9nm,0.3s,baz=238,slow=11,SNR=6.0						
CPUP				LR	LR	01 06 08.1	
	comp=Z,2μm,18.8s,baz=251,slow=34						
CPUP	Villa Florida	32.87	80	P	P	00 54 12.1	0.0
CPUP					P	00 54 12.2	+0.1
PLTB	Pedras Altas	33.40	91	eP	P	00 54 17.3	+0.5
ATAH	Atahualpa	33.95	28	P	P	00 54 23.8	+1.7
	comp=Z,12nm,0.7s,baz=206,slow=6.6,SNR=16						
CPSB	Cacapava Do Su	34.07	89	eP	P	00 54 23.6	+1.1
CZSB	Cruzeiro do Su	35.86	38	eP	P	00 54 39.5	+1.4
ITAB	Concordia	36.49	85	eP	P	00 54 43.6	+0.2
CNLB	Canela	36.56	89	eP	P	00 54 45.0	+0.9
AQDB	Aquidauana	37.34	73	eP	P	00 54 51.2	+0.5
PAYG	Puerto Ayora	37.49	6	P	P	00 54 49.8	-2.2
PAYG				IAmb	IAmb	00 55 06.1	
	comp=Z,110nm,1.4s						
ETMB	Extrema	37.61	49	eP	P	00 54 53.8	+0.8
PTGB	Pitanga	37.79	82	eP	P	00 54 54.2	-0.4
TRCB	Terra Rica	38.36	78	eP	P	00 54 59.3	-0.1
VILB	Vilhena	39.06	59	eP	P	00 55 05.7	+0.5
TIJ01	Guaruva-PR	39.87	85	eP	P	00 55 10.6	-1.5
PCMB	Pacaembu	40.08	78	eP	P	00 55 14.9	+1.3
SAML	Samuel	40.12	51	P	P	00 55 13.7	-0.4
SAML				pmax	pmax		
	comp=Z,13nm,1.3s						
SAML	Samuel	40.12	51	P	P	00 55 13.7	-0.4
FRTB	Fartura	40.45	82	eP	P	00 55 17.9	+1.1
OTAV	Otavalo	40.80	24	P	P	00 55 18.8	-1.4
OTAV				pmax	pmax		
	comp=Z,57nm,1.3s						
OTAV	Otavalo	40.80	24	P	P	00 55 18.8	-1.4
OTAV				IAmb	IAmb	00 55 30.0	
	comp=Z,57nm,1.2s						
OTAV	Otavalo	40.80	24	eP	P	00 55 18.6	-1.6
PET01	Itanhaem-SP	41.75	84	eP	P	00 55 27.2	-0.2
ITRB	Iturama	41.85	76	eP	P	00 55 29.3	+1.0
SPB	Sao Paulo	41.98	83	P	P	00 55 29.7	+0.4
SPB	Sao Paulo	41.98	83	eP	P	00 55 31.0	+1.7
PTLC	Puerto Leguiza	42.03	29	eP	P	00 55 26.1	-3.7
GCUF	Volcan Galeras	42.09	25	eP	P	00 55 31.0	+0.2
BB19B	Bebedouro	42.49	80	eP	P	00 55 34.4	+0.9
BBAC	Balboa, Cauca	42.87	25	eP	P	00 55 32.1	-4.7
FLOC	Florencia	43.01	27	eP	P	00 55 37.7	0.0
ARAG	Araguaiana, MT	43.18	70	eP	P	00 55 40.0	+0.9
PCON	Cinco Dias	43.44	26	eP	P	00 55 39.9	-1.9
PARB	Paraibuna	43.53	84	eP	P	00 55 42.5	+0.5
POPC	Popayan, Colom	43.55	25	eP	P	00 55 41.1	-1.2
CLDB	Colider	43.55	62	eP	P	00 55 42.5	+0.4
MACC	Macarena, Meta	44.20	29	eP	P	00 55 46.3	-1.0
IPMB	Ipameri, GO	44.50	76	eP	P	00 55 49.0	-0.8
YOTC	Yotoco, Valle	45.01	25	eP	P	00 55 53.3	-0.5
ORTC	Ortega, Tolima	45.31	27	eP	P	00 55 55.1	-1.1
VAS01	Vassouras-RJ	45.80	85	eP	P	00 56 01.8	+1.7
ANIL	Santa Ana	45.80	26	eP	P	00 55 59.9	-0.5
TOLC	Tolima	45.92	26	eP	P	00 56 01.3	0.0
SNDB	Serra Nova Dou	45.99	67	eP	P	00 56 01.9	+0.3
BDFB	Brasilia	46.07	74	P	P	00 56 03.3	+1.0
	comp=Z,3.4nm,0.8s,baz=303,slow=7.3,SNR=3.4						
BDFB				LR	LR	01 14 19.6	
	comp=Z,1μm,19.0s,baz=253,slow=35						
BDFB	Brasilia	46.07	74	P	P	00 56 02.4	+0.1
BDFB				pmax	pmax		
	comp=Z,30nm,1.5s						
BDFB	Brasilia	46.07	74	P	P	00 56 02.4	+0.1
BDFB				IAmb	IAmb	00 56 14.6	
	comp=Z,30nm,1.5s						
MACA	Manacapuru-AM	46.20	49	eP	P	00 56 03.4	+0.2
RREF	El Recreo	46.20	26	eP	P	00 56 03.9	0.0
ROSC	El Rosal	46.51	27	P	P	00 56 07.2	+1.2
	comp=Z,3.2nm,0.4s,baz=122,slow=9.1,SNR=12						
ROSC				LR	LR	01 13 27.2	
	comp=Z,914nm,18.3s,baz=225,slow=33						
ROSC	El Rosal	46.51	27	P	P	00 56 06.5	+0.5
ROSC				pmax	pmax		
	comp=Z,98nm,1.4s						
ROSC	El Rosal	46.51	27	P	P	00 56 06.5	+0.5
ROSC	El Rosal	46.51	27	eP	P	00 56 07.0	+0.9
CHIC	Chingaza	46.53	28	eP	P	00 56 04.9	-1.3
BELA	Belgrano 2	46.59	166	P	P	00 56 06.4	+0.9
NPGB	Novo Progresso	46.60	58	eP	P	00 56 06.7	+0.3
DUB01	Friburgo-RJ	46.74	85	eP	P	00 56 09.0	+1.5
CBOC	Ciudad Bolivar	46.88	25	eP	P	00 56 08.2	-0.5
DIAM	Diamantina, MG	47.82	80	eP	P	00 56 17.1	+1.1
RUSC	La Rusia	47.94	28	eP	P	00 56 16.1	-1.2
PTBC	PUERTO BERRIO,	48.04	26	eP	P	00 56 10.9	-6.6

PEXB	Peixe	48.10	70	*e*P	P	00 56 19.0	+1.0
ITTB	Itaituba	48.35	55	*e*P	P	00 56 20.4	+0.5
PTGA	Pitinga	48.57	48	P	P	00 56 20.9	-0.7
PTGA	Pitinga	48.57	48	*e*P	P	00 56 22.9	+1.3
JTS	Las Juntas de	48.95	12	P	P	00 56 25.4	+0.9
JTS				pmax	pmax		
	comp=Z,103nm,1.5s						
JTS	Las Juntas de	48.95	12	P	P	00 56 25.4	+0.9
JANB	Januaria	49.24	76	*e*P	P	00 56 27.9	+1.0
TBI	Tubuai	49.33	271	*e*S	S	01 03 32.7	+0.2
	comp=Z,565nm,27.0s						
TBI				*e*LR	LR	01 10 28.2	
	comp=Z,4µm,27.2s,baz=121						
MOTC	Monteria, Cord	49.73	24	*e*P	P	00 56 28.6	-1.8
SDBA	SAO DESIDERIO	50.44	73	*e*P	P	00 56 35.4	-0.5
ACON	Acoyapa	50.57	11	P	P	00 56 36.9	+0.1
ACON				IAmb	IAmb	00 56 45.2	
	comp=Z,70nm,1.3s						
SMTB	Santa Maria do	50.77	67	*e*P	P	00 56 39.2	+0.8
TAOE	Nuku Hiva Isla	50.79	293	*e*S	S	01 03 54.9	+1.6
	comp=Z,474nm,24.5s						
TAOE				*e*LR	LR	01 11 07.7	
	comp=Z,1µm,26.2s						
BOAV	Boa Vista	50.80	45	*e*P	P	00 56 39.2	+0.6
ESPN	Las Esperanzas	50.93	12	P	P	00 56 39.3	-0.2
BOAB	BOACO BROADBA	50.97	10	P	P	00 56 39.6	-0.1
MALB	Monte Alegre	51.20	55	*e*P	P	00 56 42.5	+0.8
MATN	Matagalpa	51.41	10	P	P	00 56 42.9	-0.2
MATN				IAmb	IAmb	00 56 51.5	
	comp=Z,81nm,1.4s						
SDV	Santo Domingo	51.62	30	P	P	00 56 43.6	-1.3
SDV				IAmb	IAmb	00 56 51.6	
	comp=Z,57nm,1.5s						
SDV	Santo Domingo	51.62	30	*e*P	P	00 56 44.3	-0.6
SDV	Santo Domingo	51.62	30	*e*P	P	00 56 43.9	-1.0
QSPA	South Pole Qui	52.02	180	P	P	00 56 47.4	+0.1
QSPA				IAmb	IAmb	00 56 55.5	
	comp=Z,38nm,1.3s						
TGUH	Tegucigalpa,Un	52.35	8	P	P	00 56 48.7	-1.5
MTO3	Montecristo	52.49	5	P	P	00 56 50.5	-0.9
MTO3				IAmb	IAmb	00 57 00.1	
	comp=Z,64nm,1.3s						
VNA3	Neumayer Olymp	52.51	156	P	P	00 56 50.0	-0.8
PPT2	Papeete2	52.54	277	*e*S	S	01 04 18.0	+0.8
	comp=Z,755nm,25.0s						
PPT2				*e*LR	LR	01 11 55.9	
	comp=Z,2µm,25.2s,baz=126						
PPT	Papeete	52.55	277	LR	LR	01 13 09.2	
	comp=Z,788nm,18.9s,baz=159,slow=29						
ESQI	Esquipulas	52.66	5	P	P	00 56 52.2	-0.2
ESQI				IAmb	IAmb	00 57 04.7	
	comp=Z,55nm,1.2s						
VNA1	Neumayer--Stat	53.07	155	P	P	00 56 54.3	-0.5
VNA2	Neumayer--Watz	53.30	156	P	P	00 56 55.7	-0.8
	baz=262,slow=4.9						
MCPB	Macapa, AP	53.76	56	*e*P	P	00 57 00.7	0.0
CCIG	Comitan	54.22	2	P	P	00 57 02.6	-1.5
CCIG				IAmb	IAmb	00 57 12.9	
	comp=Z,54nm,1.3s						
SNAA	Sanae	54.56	157	P	P	00 57 04.8	-1.1
SNAA	Sanae	54.56	157	*i* P	P	00 57 06.2	+0.4
SNAA				pmax	pmax		
	comp=Z,38nm,1.3s						
SNAA	Sanae	54.56	157	P	P	00 57 04.4	-1.4
SNAA				IAmb	IAmb	00 57 18.0	
	comp=Z,34nm,1.2s						
VNDA	Vanda	56.02	195	LR	LR	01 17 12.9	
	comp=Z,227nm,19.8s,baz=110,slow=32						
MTDJ	Mount Denham	58.19	18	P	P	00 57 30.6	-1.7
NVL	N'lazarevskaya	59.30	158	*e*P	P	00 57 45.5	+6.2
NVL				pmax	pmax		
	comp=Z,12nm,0.8s						
GTBY	Guantanamo Bay	60.45	20	P	P	00 57 46.5	-1.1
ZAIG	Zacatecas	61.20	351	P	P	00 57 53.1	-0.1
ZAIG				IAmb	IAmb	00 58 03.2	
	comp=Z,24nm,1.3s						
OBIP	Obispado Ponce	61.52	30	P	P	00 57 55.2	+0.1
PDPR	Patillas Dam,	61.73	30	P	P	00 57 55.0	-1.4
CBYP	Canovanas	62.03	30	P	P	00 57 57.5	-1.1
SLBS	Sierra La Lagu	63.39	343	P	P	00 58 06.8	-0.8
061Z	Ochoppi	64.88	13	P	P	00 58 17.1	0.0
833A	Chaparral WMA,	66.38	355	P	P	00 58 27.5	+0.7
	baz=175						
DWPF	Disney Wildern	66.99	12	P	P	00 58 32.1	+1.5
	baz=191						
SYO	Syowa Base	67.71	164	⇓*i*P	P	00 58 31.0	-3.8
TX32	Lajitas Array	67.81	351	P	P	00 58 36.6	+0.6
TX32				IAmb	IAmb	00 58 45.3	
	comp=Z,31nm,1.2s						
TXAR	Lajitas Array	67.81	351	P	P	00 58 36.2	+0.2
	comp=Z,4.1nm,1.1s,baz=177,slow=7.5,SNR=10						
TXAR				LR	LR	01 23 32.8	
	comp=Z,204nm,18.7s,baz=0.0,slow=32						
HKT	Hockley	67.83	358	*i* P	P	00 58 34.8	-1.1
HKT				pmax	pmax		
	comp=Z,41nm,1.9s						
HKT	Hockley	67.83	358	P	P	00 58 36.8	+0.9
HKT				IAmb	IAmb	00 58 44.9	
	comp=Z,29nm,1.5s						
JCT	Junction City	68.56	354	P	P	00 58 40.9	+0.3
	baz=175						
435B	Jarrell	68.72	357	P	P	00 58 42.1	+0.5
	baz=177						
342A	Flagon Creek P	69.24	1	P	P	00 58 45.5	+0.8
BRAL	Brewton	69.31	6	P	P	00 58 45.8	+0.6
	baz=186						
NATX	Nacogdoches	69.61	359	P	P	00 58 48.6	+1.5
	baz=179						
NATX	Nacogdoches	69.61	359	P	P	00 58 48.3	+1.2
352A	Blakely	69.83	8	P	P	00 58 47.2	-1.2
WHTX	Lake Whitney,	69.92	357	P	P	00 58 49.3	+0.4
	baz=177						
TIGA	Tifton	69.94	9	P	P	00 58 49.3	+0.2
	baz=189						
VBMS	Vicksburg	70.13	3	P	P	00 58 51.2	+1.0
	baz=183						
MNTX	Cornudas Mount	70.37	350	P	P	00 58 51.3	-0.4
	baz=170						
MNTX	Cornudas Mount	70.37	350	IAmb	IAmb	00 58 59.5	
	comp=Z,19nm,1.2s						
143A	Socs Landing,	70.58	2	P	P	00 58 53.1	+0.1
ABTX	Abilene, Hawle	70.67	355	P	P	00 58 53.6	0.0
	baz=175						
ABTX	Abilene, Hawle	70.67	355	IAmb	IAmb	00 59 01.9	
	comp=Z,38nm,1.2s						
319A	Douglas	70.70	346	P	P	00 58 53.5	-0.4
319A				IAmb	IAmb	00 59 03.4	
	comp=Z,42nm,1.5s						
Z41A	Richland Creek	71.11	1	P	P	00 58 56.5	+0.3
	baz=181						
LRAL	Lakeview Retre	71.16	6	P	P	00 58 57.0	+0.5
	baz=186						
LRAL	Lakeview Retre	71.16	6	P	P	00 58 55.8	-0.7
LRAL				IAmb	IAmb	00 59 04.8	
	comp=Z,36nm,1.2s						
Z47A	Carrollton	71.25	5	P	P	00 58 56.6	-0.4
WLAR	White Oak Lake	71.53	1	P	P	00 58 58.0	-0.7
121A	Cookes Peak, D	71.56	348	P	P	00 58 59.3	+0.2
	baz=168						
121A	Cookes Peak, D	71.56	348	P	P	00 58 58.5	-0.7
Z51A	Franklin	71.61	8	P	P	00 58 59.2	0.0
Z51A				IAmb	IAmb	00 59 06.8	
	comp=Z,46nm,1.4s						
PIX	Pinacate	71.78	342	P	P	00 58 59.8	-0.5
SPX	San Pedro Mart	71.78	341	P	P	00 59 00.3	-0.4
GOGA	Godfrey	71.91	9	P	P	00 59 02.4	+1.4
	baz=189						
TUC	Tucson	71.91	345	P	P	00 59 01.8	+0.7
	baz=166						
TUC	Tucson	71.91	345	P	P	00 59 01.0	-0.2
TUC				pmax	pmax		
	comp=Z,22nm,1.3s						
TUC	Tucson	71.91	345	P	P	00 59 01.0	-0.2
TUC				IAmb	IAmb	00 59 10.5	
	comp=Z,22nm,1.3s						
214A	Organ Pipe Nat	72.00	343	P	P	00 59 02.6	+0.9
	baz=164						
214A	Organ Pipe Nat	72.00	343	IAmb	IAmb	00 59 11.2	
	comp=Z,24nm,1.2s						
NHSC	New Hope	72.08	12	P	P	00 59 03.4	+1.4
	baz=191						
MSTX	Muleshoe	72.29	352	P	P	00 59 04.1	+0.7
	baz=173						
X40A	Basin Creek Fa	72.33	1	P	P	00 59 04.3	+0.8
	baz=181						
MIAR	Mount Ida	72.39	0	P	P	00 59 02.9	-0.9
	baz=180,SNR=7.5						
MIAR	Mount Ida	72.39	0	P	P	00 59 03.8	0.0
MIAR				pmax	pmax		
	comp=Z,30nm,1.2s						
MIAR	Mount Ida	72.39	0	P	P	00 59 03.8	0.0
MIAR				IAmb	IAmb	00 59 12.1	
	comp=Z,30nm,1.2s						
OXF	Oxford	72.47	4	P	P	00 59 05.4	+1.1
	baz=184						
WMOK	Wichita Mounta	72.72	356	P	P	00 59 06.7	+0.8
	baz=176						
WMOK	Wichita Mounta	72.72	356	P	P	00 59 05.3	-0.6
WMOK				pmax	pmax		
	comp=Z,13nm,1.2s						
WMOK	Wichita Mounta	72.72	356	P	P	00 59 05.2	-0.6
Y22D	IRIS PASSCAL I	72.93	349	P	P	00 59 07.8	+0.5
	baz=169						
BNM	Barren Site	72.96	349	P	P	00 59 07.1	-0.5
W41B	Gary Mavity, V	73.03	1	P	P	00 59 08.6	+1.0
	baz=181						
W39A	Magazine	73.03	0	P	P	00 59 08.3	+0.6
	baz=180,SNR=5.2						
AMTX	Amarillo	73.08	353	P	P	00 59 08.8	+0.7
	baz=174						
AMTX	Amarillo	73.08	353	P	P	00 59 08.0	-0.1
W45A	Hickory Valley	73.12	4	P	P	00 59 07.5	-0.7
IKP	In-Ko-Pah, Jac	73.48	341	P	P	00 59 11.0	+0.5
	baz=162						
BG3	Lake Jocassee	73.53	9	P	P	00 59 10.8	+0.1
BG3				IAmb	IAmb	00 59 19.8	
	comp=Z,43nm,1.3s						
GLA	Glamis	73.53	342	P	P	00 59 11.6	+0.8
	baz=163						
BCOK	Bluff Creek, N	73.58	357	P	P	00 59 11.0	+0.2
SWSC	Sam W. Stewart	73.68	341	P	P	00 59 12.3	+0.8
	baz=162						
ANMO	Albuquerque	73.72	349	P	P	00 59 12.2	+0.2
	comp=Z,0.7nm,0.5s,baz=150,slow=5.7,SNR=6.1						
ANMO	Albuquerque	73.72	349	P	P	00 59 13.0	+1.0
	baz=170						
ANMO	Albuquerque	73.72	349	*i* P	P	00 59 11.2	-0.8
ANMO				pmax	pmax		
	comp=Z,25nm,1.3s						
ANMO	Albuquerque	73.72	349	P	P	00 59 12.4	+0.5
ANMO				IAmb	IAmb	00 59 21.0	
	comp=Z,23nm,1.2s						
TUL1	Leonard	73.77	358	P	P	00 59 12.7	+0.7
	baz=178,SNR=8.1						
X59A	McDuffie Farm,	73.78	13	P	P	00 59 13.4	+1.3
	baz=192						
MONP2	Monument Peak	73.79	340	P	P	00 59 13.3	+0.8
	baz=162						
V48A	Smith Brothers	73.86	6	P	P	00 59 12.7	+0.2
V48A				IAmb	IAmb	00 59 20.0	
	comp=Z,43nm,1.4s						
KMSC	Kings Mountain	73.90	11	P	P	00 59 14.2	+1.4
	baz=190						
X60A	Albert Glenn T	73.90	14	P	P	00 59 13.5	+0.8
	baz=193						
109C	Camp Elliot, M	73.97	340	P	P	00 59 13.2	-0.1
	baz=161						
W56A	Indian Trail	74.00	11	P	P	00 59 13.2	-0.2
	baz=191						
WVT	Waverly	74.17	5	P	P	00 59 14.4	+0.1
	baz=185						
WVT	Waverly	74.17	5	P	P	00 59 14.7	+0.4
WVT				pmax	pmax		
	comp=Z,36nm,1.5s						
WVT	Waverly	74.17	5	P	P	00 59 14.7	+0.4
WVT				IAmb	IAmb	00 59 22.4	
	comp=Z,36nm,1.4s						
U40A	Yellville	74.20	1	P	P	00 59 15.2	+0.7
	baz=181						
U40A	Yellville	74.20	1	P	P	00 59 13.8	-0.7
U40A				IAmb	IAmb	00 59 22.5	
	comp=Z,42nm,1.4s						
BC3	Big Chuckawall	74.26	341	P	P	00 59 15.7	+0.6
	baz=162						
U38A	Gravette	74.28	360	IAmb	IAmb	00 59 23.6	
	comp=Z,33nm,1.1s						
W18A	Petrified Fore	74.43	347	P	P	00 59 16.8	+0.6
	baz=167						
CROK	Carrier	74.44	357	P	P	00 59 16.1	+0.2
SCI2	San Clemente I	74.46	339	P	P	00 59 16.5	+0.4
	baz=160						
TPFO	Pinon Flats	74.47	341	P	P	00 59 16.5	+0.1
	baz=162						
PFO	Pinyon Flats O	74.48	341	P	P	00 59 17.2	+0.8
	comp=Z,1.4nm,0.7s,baz=283,slow=1.7,SNR=4.5						
PFO	Pinyon Flats O	74.48	341	P	P	00 59 16.6	+0.3
	baz=162						
PFO	Pinyon Flats O	74.48	341	*i* P	P	00 59 15.4	-1.0
PFO				pmax	pmax		
	comp=Z,25nm,1.3s						
PFO	Pinyon Flats O	74.48	341	P	P	00 59 16.3	-0.1
PDMCI	Parker Dam,Lak	74.56	343	P	P	00 59 17.5	+0.8
	baz=164						
IRM	Iron Mountain	74.66	342	P	P	00 59 17.8	+0.5
	baz=163						
MURC	Murrieta	74.67	340	P	P	00 59 17.7	+0.4
	baz=161						
W61A	Ground Anchor	74.67	14	P	P	00 59 18.0	+0.8
	baz=194						
V56A	Mocksville	74.68	11	P	P	00 59 18.2	+0.9
	baz=191						
U49A	Red Boiling Sp	74.72	7	IAmb	IAmb	00 59 25.9	
	comp=Z,58nm,1.2s						
T35A	Sooner Cattle	74.79	358	P	P	00 59 18.1	+0.2
T35A				IAmb	IAmb	00 59 26.5	
	comp=Z,37nm,1.1s						
CIS	Catalina Islan	74.82	339	P	P	00 59 18.5	+0.3
	baz=160						
V57A	Coltrane Farms	74.87	12	P	P	00 59 18.9	+0.5
	baz=191						
MGMO	Mountain Grove	75.00	1	P	P	00 59 19.2	0.0
MGMO				IAmb	IAmb	00 59 27.1	
	comp=Z,25nm,1.1s						
WUAZ	Wupatki	75.13	345	P	P	00 59 20.9	+0.8
	baz=166						
WUAZ	Wupatki	75.13	345	P	P	00 59 20.4	+0.2
WUAZ				IAmb	IAmb	00 59 29.1	
	comp=Z,34nm,1.5s						
W13A	Hualapai Mount	75.27	343	P	P	00 59 19.7	-1.3
GMRC	Granite Mounta	75.39	342	P	P	00 59 22.2	+0.6
	baz=162						
BFSC	Mount Baldy Ra	75.39	340	P	P	00 59 21.9	+0.2
	baz=161						
S39A	Bolivar	75.53	0	IAmb	IAmb	00 59 30.1	
	comp=Z,29nm,1.1s						
T25A	Trinidad	75.60	351	P	P	00 59 23.9	+1.1
	baz=172						
CCM	Cathedral Cave	75.92	2	P	P	00 59 25.4	+1.0
	baz=182						
CCM	Cathedral Cave	75.92	2	P	P	00 59 24.6	+0.2
CCM				pmax	pmax		
	comp=Z,36nm,1.1s						
CCM	Cathedral Cave	75.92	2	P	P	00 59 24.6	+0.2
CCM				IAmb	IAmb	00 59 32.3	
	comp=Z,36nm,1.1s						
T56A	Rocky Mt	75.94	11	P	P	00 59 25.4	+0.9
	baz=191						
T57A	Hurt	76.04	12	P	P	00 59 26.4	+1.3
	baz=192						
EDW2	Edwards Air Fo	76.09	340	P	P	00 59 26.6	+1.0
	baz=161						
T58A	Grand View Acr	76.11	13	P	P	00 59 27.0	+1.6
	baz=192						
GSC	Goldstone, Bar	76.17	341	P	P	00 59 27.1	+1.1
	baz=162						
GSC	Goldstone, Bar	76.17	341	P	P	00 59 26.9	+0.9
GSC				pmax	pmax		
	comp=Z,24nm,1.3s						
GSC	Goldstone, Bar	76.17	341	P	P	00 59 26.9	+0.9
GSC				IAmb	IAmb	00 59 35.7	
	comp=Z,24nm,1.2s						
MVCO	Mesa Verde	76.25	348	P	P	00 59 27.3	+0.6
	baz=168						
SDCO	Great Sand Dun	76.34	351	P	P	00 59 27.9	+0.7
	baz=171						
SDCO	Great Sand Dun	76.34	351	P	P	00 59 27.6	+0.4
WCI	Wyandotte Cave	76.38	6	P	P	00 59 26.3	-0.7
WCI				pmax	pmax		
	comp=Z,24nm,1.1s						
WCI	Wyandotte Cave	76.38	6	P	P	00 59 26.2	-0.7
WCI				IAmb	IAmb	00 59 34.0	
	comp=Z,24nm,1.1s						
S22A	4UR Ranch, Cre	76.52	349	P	P	00 59 29.3	+1.1
	baz=170						
LRMC	Laurel Mtn Rad	76.57	340	P	P	00 59 29.4	+1.1
	baz=161						
PKM	Mcpherson Peak	76.61	338	P	P	00 59 29.7	+1.1
	baz=159						
T60A	Surry	76.62	14	P	P	00 59 30.0	+1.6
	baz=194						
S57A	Dark Hollow, R	76.83	12	P	P	00 59 31.0	+1.5
	baz=192						
KNB	Kanab	76.87	345	P	P	00 59 30.6	+0.5
KNB				pmax	pmax		
	comp=Z,47nm,1.4s						
KNB	Kanab	76.87	345	P	P	00 59 30.6	+0.5
SHPR	Sheep Range	76.91	343	P	P	00 59 30.8	+0.6
SHPR				IAmb	IAmb	00 59 40.2	
	comp=Z,51nm,1.4s						
R54A	Victor	76.93	10	P	P	00 59 32.4	+2.3
	baz=190						
ISA	Isabella, Lake	76.95	340	P	P	00 59 31.8	+1.4
	baz=160						
ISA	Isabella, Lake	76.95	340	P	P	00 59 31.1	+0.7
ISA				pmax	pmax		
	comp=Z,23nm,1.2s						
ISA	Isabella, Lake	76.95	340	P	P	00 59 31.1	+0.7
ISA				IAmb	IAmb	00 59 40.2	
	comp=Z,23nm,1.2s						
KSU1	Kansas State U	76.97	358	P	P	00 59 32.3	+2.0
	baz=178						
KSU1	Kansas State U	76.97	358	P	P	00 59 29.6	-0.7
KSU1				IAmb	IAmb	00 59 38.8	
	comp=Z,46nm,1.2s						
MPMC	Manual Prospec	77.06	341	P	P	00 59 32.4	+1.2
	baz=161						
R58B	Mineral	77.21	13	P	P	00 59 33.6	+1.9
	baz=193						
KSCO	Kaye Shedlock’	77.26	353	P	P	00 59 33.5	+1.3
	baz=173						
KSCO	Kaye Shedlock’	77.26	353	P	P	00 59 31.4	-0.8
KSCO				IAmb	IAmb	00 59 41.6	
	comp=Z,43nm,1.2s						
VES	Vestal, Richgr	77.29	339	P	P	00 59 33.2	+1.0
	baz=160						
PV18	Skein Mesa, Pa	77.33	348	P	P	00 59 32.5	-0.2
PV18				IAmb	IAmb	00 59 41.7	
	comp=Z,31nm,1.3s						
R57A	Stanardsville	77.43	12	P	P	00 59 34.8	+1.9
	baz=192						
P38A	Dawn	77.45	0	P	P	00 59 32.0	-1.0
P38A				IAmb	IAmb	00 59 45.7	
	comp=Z,39nm,1.2s						
CCUT	Cedar City	77.50	344	P	P	00 59 33.7	+0.1
Q53A	Leroy	77.52	10	P	P	00 59 35.2	+1.8
	baz=190						
P43A	Skaggs, Pawnee	77.57	3	P	P	00 59 33.1	-0.5
P43A				IAmb	IAmb	00 59 41.9	
	comp=Z,33nm,1.1s						
R59A	King George, V	77.58	13	P	P	00 59 35.6	+1.9
	baz=193						
CWC	Cottonwood Cre	77.58	340	P	P	00 59 35.1	+1.1
	baz=161						
TPNV	Topopah Spring	77.59	342	P	P	00 59 35.4	+1.3
	baz=162						
TPNV	Topopah Spring	77.59	342	P	P	00 59 33.8	-0.3
TPNV				pmax	pmax		
	comp=Z,30nm,1.3s						
TPNV	Topopah Spring	77.59	342	P	P	00 59 33.8	-0.3
TPNV				IAmb	IAmb	00 59 44.1	
	comp=Z,30nm,1.2s						
MTPU	Mount Pierson	77.73	345	P	P	00 59 34.7	-0.4
PRN	Pahroc Range	77.74	343	P	P	00 59 35.0	+0.2
PRN				IAmb	IAmb	00 59 45.0	
	comp=Z,53nm,1.3s						
R60A	Leonardtown, M	77.75	14	P	P	00 59 36.3	+1.6
	baz=194						
P49A	Miami Univ. Ec	77.82	7	P	P	00 59 36.7	+1.6
	baz=187						
SMCO	Snowmass	77.95	350	P	P	00 59 37.5	+1.2
SMCO				IAmb	IAmb	00 59 45.9	
	comp=Z,43nm,1.3s						
P52A	Corning	78.21	9	P	P	00 59 38.8	+1.6
	baz=189						
Q61A	Milford	78.58	15	P	P	00 59 40.6	+1.4
	baz=195						
ACSO	Alum Creek Sta	78.69	8	P	P	00 59 41.6	+1.7
	baz=189						
R11A	Troy Canyon, C	78.76	343	P	P	00 59 41.7	+1.1
	baz=163						
R11A	Troy Canyon, C	78.76	343	P	P	00 59 41.4	+0.9
R11A				IAmb	IAmb	00 59 50.5	
	comp=Z,23nm,1.2s						
OMMB	Old Mammoth Mi	78.93	340	P	P	00 59 41.4	-0.3
OMMB				IAmb	IAmb	00 59 51.1	
	comp=Z,29nm,1.4s						
O53A	New Philadelph	78.93	10	P	P	00 59 42.4	+1.2
	baz=190						
O20A	White River Ci	79.07	349	P	P	00 59 43.4	+1.2
	baz=168						
O20A	White River Ci	79.07	349	IAmb	IAmb	00 59 51.6	
	comp=Z,39nm,1.1s						
OGNE	Ogallala	79.13	354	P	P	00 59 43.4	+1.1
	baz=174						
OGNE	Ogallala	79.13	354	P	P	00 59 42.7	+0.3
N49A	Columbus Grove	79.25	7	P	P	00 59 42.5	-0.4
BGNE	Belgrade	79.33	357	P	P	00 59 43.3	-0.1
	baz=177,SNR=7.3						
O58A	Lewisberry	79.48	13	P	P	00 59 45.3	+1.1
	baz=194						
N23A	Red Feather La	79.50	351	P	P	00 59 45.5	+0.9
	baz=170						
NVAR	Mina Array Bea	79.51	341	P	P	00 59 46.3	+1.6
	comp=Z,5.2nm,0.8s,baz=169,slow=5.8,SNR=27						
NVAR				LR	LR	01 27 35.2	
	comp=Z,144nm,20.1s,baz=74,slow=30						
NVAR	Mina Array Bea	79.51	341	P	P	00 59 45.5	+0.8
N53A	Lisbon	79.53	10	P	P	00 59 43.9	-0.5
N54A	Moraine State	79.80	11	P	P	00 59 47.0	+1.0
	baz=191						
L40A	Anamosa	79.93	2	P	P	00 59 45.6	-0.9
L40A				IAmb	IAmb	00 59 54.0	
	comp=Z,48nm,1.4s						
DUG	Dugway, Tooele	79.94	345	P	P	00 59 48.4	+1.6
	baz=165						
L48A	N Adams	80.23	7	P	P	00 59 47.6	-0.6
L48A				IAmb	IAmb	00 59 55.9	
	comp=Z,45nm,1.3s						
M54A	Oil Creek Stat	80.39	11	P	P	00 59 51.5	+2.4
	baz=191						
M56A	Emporium	80.59	12	P	P	00 59 52.7	+2.5
	baz=192						
M58A	Price’s Panora	80.78	13	P	P	00 59 53.1	+1.9
	baz=194						
JFWS	Jewell Farm	80.81	3	P	P	00 59 53.5	+2.2
	baz=183						
JFWS	Jewell Farm	80.81	3	P	P	00 59 51.0	-0.3
JFWS				pmax	pmax		
	comp=Z,15nm,1.0s						
JFWS	Jewell Farm	80.81	3	P	P	00 59 51.0	-0.3
ERPA	Erie	80.94	10	P	P	00 59 53.8	+1.8
	baz=191						
ERPA	Erie	80.94	10	P	P	00 59 50.7	-1.3
ERPA				IAmb	IAmb	00 59 59.0	
	comp=Z,23nm,1.1s						
ELK	Elko	80.97	344	P	P	00 59 53.6	+1.1
	comp=Z,3.3nm,0.9s,baz=151,slow=6.0,SNR=9.8						
PAHR	Pah Rah Range	81.00	340	IAmb	IAmb	01 00 02.4	
	comp=Z,21nm,1.1s						
M60A	Port Jervis	81.08	15	P	P	00 59 55.1	+2.3
	baz=195						
M59A	Waymart	81.13	14	P	P	00 59 55.1	+2.0
	baz=195						
K22A	Casper	81.30	351	P	P	00 59 55.8	+1.6
	baz=170						
L56A	Greenwood	81.33	12	P	P	00 59 55.8	+1.7
	baz=193						
ECSD	EROS Data Cent	81.60	358	P	P	00 59 56.6	+1.1
	baz=178						
ECSD	EROS Data Cent	81.60	358	IAmb	IAmb	01 00 03.9	
	comp=Z,33nm,1.2s						
BW06	Boulder Array	81.85	348	P	P	00 59 57.4	+0.3
	baz=168,SNR=6.8						
PDAR	Pinedale Array	81.85	348	P	P	00 59 57.5	+0.4
	comp=Z,4.0nm,0.6s,baz=162,slow=6.1,SNR=48						
PDAR	Pinedale Array	81.85	348	P	P	00 59 57.4	+0.3
M65A	Busby, Falmout	82.17	17	P	P	01 00 00.4	+2.0
	baz=198						
KCPM	Cahto Peak	82.17	337	P	P	00 59 58.2	-0.6

O03E	Paynes Creek	82.21	339	P	P	01 00 00.4	+1.5
	baz=158						
K58A	Earlville	82.27	13	P	P	01 00 00.8	+1.7
	baz=194						
O02D	Mt. Diablo Mer	82.39	338	P	P	01 00 01.2	+1.4
	baz=157						
RSSD	Black Hills	82.46	353	P	P	01 00 01.6	+1.2
	baz=172						
RSSD	Black Hills	82.46	353	P	P	01 00 01.5	+1.2
RSSD				pmax	pmax		
	comp=Z,29nm,1.2s						
RSSD	Black Hills	82.46	353	P	P	01 00 01.5	+1.2
RSSD				IAmb	IAmb	01 00 09.5	
	comp=Z,29nm,1.2s						
KMRM	Mail Ridge	82.70	337	P	P	01 00 00.9	-0.6
LOHW	Long Hollow	82.84	348	IAmb	IAmb	01 00 11.3	
	comp=Z,23nm,1.1s						
HRV	Adam Dziewonsk	82.86	16	P	P	01 00 04.1	+2.1
	baz=198						
K62A	Royalston	82.86	16	P	P	01 00 03.7	+1.6
	baz=197						
K63A	Dunstable	83.04	16	P	P	01 00 04.6	+1.6
	baz=198						
N02D	Trinity Center	83.10	338	P	P	01 00 04.4	+0.9
	baz=158,SNR=5.9						
G40A	Rib Lake	83.16	3	IAmb	IAmb	01 00 11.5	
	comp=Z,26nm,1.1s						
J60A	Lant Hill Farm	83.17	15	P	P	01 00 05.7	+2.1
	baz=196						
KHMM	Horse Mountain	83.31	338	P	P	01 00 04.8	+0.1
HLID	Hailey	83.50	345	P	P	01 00 06.7	+1.1
	baz=164,SNR=9.3						
M02C	Callahan	83.53	338	P	P	01 00 06.9	+1.2
	baz=158,SNR=5.5						
H17A	Grant Village	83.60	348	P	P	01 00 08.0	+1.8
	baz=167						
M04C	Macdoel	83.60	339	P	P	01 00 07.1	+1.0
	baz=158,SNR=6.3						
MFID	Camas Ranch	83.65	344	IAmb	IAmb	01 00 14.8	
	comp=Z,26nm,1.5s						
F36A	Milaca	83.69	0	IAmb	IAmb	01 00 14.1	
	comp=Z,24nm,1.1s						
J63A	Strafford	83.70	17	P	P	01 00 08.9	+2.5
	baz=198						
YBH	Yreka Blue Hor	83.80	339	P	P	01 00 07.4	+0.3
	comp=Z,0.8nm,0.6s,baz=76,slow=6.7,SNR=4.0						
DZM	Mont Dzumac	83.86	247	*e*LR	LR	01 26 24.2	
	comp=Z,2µm,27.6s						
YHH	Holmes Hill	84.03	348	P	P	01 00 08.9	+0.5
RLMT	Red Lodge	84.11	349	P	P	01 00 09.9	+1.2
	baz=168,SNR=7.0						
RLMT	Red Lodge	84.11	349	P	P	01 00 09.5	+0.7
RLMT				IAmb	IAmb	01 00 18.1	
	comp=Z,25nm,1.1s						
L04D	Klamath Falls	84.13	339	P	P	01 00 09.5	+0.7
	baz=158,SNR=5.8						
YHL	Hebgen Lake	84.14	348	P	P	01 00 09.7	+0.6
H58A	Gabriels	84.14	14	P	P	01 00 10.7	+2.0
	baz=195						
J08A	Circle Bar Ran	84.20	342	P	P	01 00 10.1	+1.0
PLVO	Plevna	84.24	12	P	P	01 00 08.6	-0.5
PLVO				IAmb	IAmb	01 00 16.9	
	comp=Z,30nm,1.3s						
LONY	Lake Ozonia	84.26	14	P	P	01 00 11.1	+1.8
	baz=195						
K04D	Chiloquin, OR	84.36	340	P	P	01 00 10.1	+0.1
	baz=158						
MCMT	McKenzie Canyo	84.41	347	P	P	01 00 11.9	+1.5
G54A	Lake Saint Pet	84.43	11	P	P	01 00 12.1	+2.0
	baz=192						
E46A	Sault Ste Mari	84.63	7	P	P	01 00 11.4	+0.3
HUMO	Hull Mountain	84.68	339	P	P	01 00 11.2	-0.2
J05D	Fort Rock, OR	84.83	340	P	P	01 00 13.6	+1.2
	baz=159,SNR=8.7						
BOZ	Bozeman (W)	84.94	348	P	P	01 00 14.6	+1.7
	baz=166						
J04D	Umpqua Nationa	85.03	340	P	P	01 00 14.6	+1.1
	baz=158						
I07A	Izee	85.14	342	P	P	01 00 15.0	+1.1
LAO	LASA Array	85.24	351	P	P	01 00 15.6	+1.4
	baz=170						
LAO	LASA Array	85.24	351	IAmb	IAmb	01 00 22.9	
	comp=Z,46nm,1.4s						
I04A	Tendick Farm,	85.62	340	P	P	01 00 17.2	+1.0
	baz=158						
EYMN	Ely	85.80	2	P	P	01 00 18.1	+1.3
	baz=182						
EYMN	Ely	85.80	2	IAmb	IAmb	01 00 24.2	
	comp=Z,20nm,1.1s						
MDND	Maddock	85.83	356	P	P	01 00 17.4	+0.3
I05D	Terrebonne, OR	85.84	341	P	P	01 00 17.6	+0.3
	baz=159,SNR=5.4						
G08A	Pilot Rock	86.14	343	IAmb	IAmb	01 00 28.6	
	comp=Z,46nm,1.3s						
B35A	Bob, Littlefor	86.19	0	IAmb	IAmb	01 00 26.2	
	comp=Z,32nm,1.4s						
E58A	La Victoria	86.20	14	P	P	01 00 20.7	+1.8
	baz=196						
H04A	Detroit Lake	86.39	340	P	P	01 00 20.4	+0.5
H04A				IAmb	IAmb	01 00 29.3	
	comp=Z,20nm,1.3s						
F10A	Beach Ranch, E	86.39	344	IAmb	IAmb	01 00 33.8	
	comp=Z,25nm,1.2s						
D55A	Sainte-Anne-du	86.43	12	P	P	01 00 21.7	+1.7
	baz=194						
MSO	Missoula	86.55	346	P	P	01 00 22.4	+1.6
	baz=164						
DGMT	Dagmar	86.79	353	P	P	01 00 22.7	+0.9
EGMT	Eagleton	87.01	349	P	P	01 00 24.2	+1.3
	baz=168,SNR=6.2						
VLDQ	Val d'Or	87.17	11	P	P	01 00 22.9	-0.7
VLDQ				IAmb	IAmb	01 00 30.6	
	comp=Z,17nm,1.1s						
E63A	Oxbow	87.28	17	P	P	01 00 26.1	+1.9
	baz=200						
E08A	Dider Farm, El	87.30	343	P	P	01 00 24.1	-0.1
E08A				IAmb	IAmb	01 00 33.6	
	comp=Z,31nm,1.2s						
HAWA	Hanford	87.31	343	IAmb	IAmb	01 00 34.1	
	comp=Z,27nm,1.2s						
JTMT	Jette	87.49	346	P	P	01 00 26.5	+1.2
JTMT				IAmb	IAmb	01 00 34.4	
	comp=Z,29nm,1.4s						
D08A	Wollman Farm,	87.80	343	IAmb	IAmb	01 00 36.1	
	comp=Z,20nm,1.2s						
ULM	Lac du Bonnet	88.10	359	P	P	01 00 27.0	-1.0
	comp=Z,3.1nm,0.8s,baz=179,slow=4.0,SNR=5.6						
ULM	Lac du Bonnet	88.10	359	*i* P	P	01 00 26.8	-1.2
ULM	Lac du Bonnet	88.10	359	IAmb	IAmb	01 00 35.4	
	comp=Z,31nm,1.2s						
C09A	Chrisman Ranch	88.35	344	P	P	01 00 30.1	+0.8
C09A				IAmb	IAmb	01 00 38.2	
	comp=Z,27nm,1.3s						
NEW	Newport	88.55	345	LR	LR	01 36 07.6	
	comp=Z,147nm,18.3s,baz=41,slow=33						
NEW	Newport	88.55	345	P	P	01 00 31.4	+1.2
	baz=162						
NEW	Newport	88.55	345	P	P	01 00 31.3	+1.0
NEW				pmax	pmax		
	comp=Z,25nm,1.4s						
NEW	Newport	88.55	345	P	P	01 00 31.3	+1.0
NEW				IAmb	IAmb	01 00 39.3	
	comp=Z,25nm,1.4s						
BATG	Bathurst New B	88.66	19	P	P	01 00 30.0	-0.7
WALA	Waterton Lakes	88.69	347	P	P	01 00 32.2	+1.2
B08A	Colville Reser	89.12	343	P	P	01 00 32.4	-0.5
BOSA	Boshof	92.50	130	LR	LR	01 36 18.8	
	comp=Z,151nm,20.6s,baz=247,slow=32						
FFC	Flin Flon	92.83	355	P	P	01 00 49.9	0.0
FFC				pmax	pmax		
	comp=Z,22nm,1.4s						
FFC	Flin Flon	92.83	355	P	P	01 00 49.9	0.0
FFC				IAmb	IAmb	01 00 58.1	
	comp=Z,22nm,1.4s						
STKA	Stephens Creek	93.23	225	LR	LR	01 35 54.1	
	comp=Z,323nm,19.2s,baz=188,slow=31						
DBIC	Dimbokro	93.29	84	LR	LR	01 40 30.4	
	comp=Z,360nm,18.0s,baz=214,slow=34						
YKA	Yellowknife Ar	101.74	350	*i* P	Pdif	01 01 32.5	+2.5
H11S2	WAKE ISLAND Hy	108.47	279	T	T	03 03 31.2	
	baz=126,slow=76,SNR=14						
H11S1	WAKE ISLAND Hy	108.48	279	T	T	03 03 33.0	
	baz=126,slow=76,SNR=16						
H11S3	WAKE ISLAND Hy	108.48	279	T	T	03 03 30.6	
	baz=126,slow=76,SNR=13						
TOLK	Toolik Lake Re	114.24	341	P	PKiKP	01 06 17.2	+0.8
	baz=134						
DAVA	Damuels	125.34	54	*e*P	PKiKP	01 06 46.1	+7.2
	comp=Z,16nm,1.6s						
STU	Stuttgart	125.42	52	*e*PKPdf	PKiKP	01 06 45.8	+7.1
	baz=250,slow=1.8						
KASTN	Kahler Asten	125.74	49	*e*PKPdf	PKiKP	01 06 46.4	+7.0
	baz=250,slow=1.8						
FETA	Feichten	125.80	55	*e*P	PKiKP	01 06 41.3	+1.5
	comp=Z,16nm,1.3s						
RETA	Reutte	125.98	54	P	PKiKP	01 06 43.2	+3.2
	comp=Z,23nm,1.6s						
MOTA	Moosalm	126.15	54	*e*P	PKPdf	01 06 39.9	-0.2
	comp=Z,21nm,1.2s						
SQTA	Sankt Quirin	126.17	55	*e*P	PKiKP	01 06 46.5	+6.1
	comp=Z,20nm,1.3s						
GTTG	Gottingen	126.77	49	*e*PKPdf	PKiKP	01 06 48.5	+7.2
	baz=250,slow=1.8						
ABTA	Abfaltersbach	126.86	56	*e*P	PKiKP	01 06 43.8	+2.0
	comp=Z,11nm,1.4s						
GRF	Grafenberg Arr	126.97	52	*e*PKPdf	PKiKP	01 06 49.0	+7.1
	baz=250,slow=1.8						
CLZ	Clausthal	127.10	49	*e*PKPdf	PKiKP	01 06 49.3	+7.2
	baz=250,slow=1.8						
NEUB	Neuenburg	127.76	50	*e*PKPdf	PKiKP	01 06 50.1	+6.8
	baz=250,slow=1.8						
PLN	Plauen	127.78	51	*e*PKPdf	PKiKP	01 06 50.2	+6.8
	baz=250,slow=1.8						
GUNZ	Gunzen	127.86	51	*e*PKPdf	PKiKP	01 06 50.5	+6.9
	baz=250,slow=1.8						
WERD	Werda	127.86	51	*e*PKPdf	PKiKP	01 06 50.4	+6.7
	baz=250,slow=1.8						
GEC2	GERESS Array S	128.27	53	*e*PKPdf	PKiKP	01 06 50.7	+6.2
	baz=250,slow=1.8						
GERES	GERESS Array B	128.27	53	PKP	PKPdf	01 06 43.3	-0.7
	comp=Z,0.3nm,0.5s,baz=205,slow=2.1,SNR=4.3						
GERES	GERESS Array B	128.27	53	PKIKP	PKiKP	01 06 44.8	+0.2
GERES	GERESS Array B	128.27	53	PKPdf	PKiKP	01 06 44.8	+0.2
KHC	Kasperske Hory	128.28	53	*e*PKIKP	PKiKP	01 06 45.3	+0.8
KHC				*e*		01 06 51.1	
KHC	Kasperske Hory	128.28	53	*e*PKP	PKiKP	01 06 45.3	+0.8
KHC				*e*x	x	01 06 51.1	
CLL	Collm	128.53	50	*e*PKPdf	PKPdf	01 06 44.0	-0.2
CLL				*i* pPKiKP	pPKPdf	01 06 50.4	-1.0
	comp=Z,25nm,1.7s						
CLL				*e*		01 06 55.0	
CLL	Collm	128.53	50	*e*PKIKP	PKPdf	01 06 44.0	-0.2
CLL				*i*		01 06 50.4	
CLL	Collm	128.53	50	PKPdf	PKPdf	01 06 42.9	-1.3
CLL	Collm	128.53	50	*e*PKPdf	PKiKP	01 06 51.5	+6.6
	baz=250,slow=1.8						
FBE	Freiberg	128.63	51	*e*PKPdf	PKiKP	01 06 51.8	+6.7
	baz=250,slow=1.8						
BRG	Berggiesshubel	128.98	51	*e*PKPdf	PKiKP	01 06 52.2	+6.4
	baz=250,slow=1.8						
PETK	Petropavlovsk-	129.92	312	PKP	PKPdf	01 06 46.4	-0.4
	comp=Z,1.4nm,0.6s,baz=158,slow=12,SNR=1.9						
KRLC	Kraliky	130.54	53	*e*PKP	PKPdf	01 06 38.4	-10
SUW	Suwalki	135.12	48	PKIKP	PKPdf	01 06 53.8	-2.8
SUW	Suwalki	135.12	48	PKPdf	PKPdf	01 06 53.8	-2.8
BUR08	Bucovina Ar. S	135.44	57	PKPdf	PKiKP	01 06 58.9	-0.3
BURAR	Bucovina Array	135.44	57	PKPdf	PKiKP	01 07 00.9	+1.8
MLR	Muntele Rosu	135.49	61	PKIKP	PKiKP	01 07 00.7	+1.4
MLR	Muntele Rosu	135.49	61	PKPdf	PKiKP	01 07 00.7	+1.4
AKASG	Malin Array Be	138.48	54	PKP	PKPdf	01 07 03.4	+0.4
	comp=Z,0.4nm,0.5s,baz=272,slow=3.4,SNR=5.9						
TIXI	Tiksi	140.13	340	PKPdf	PKPdf	01 07 02.1	-3.2
TMCR	Tamitsa	141.64	32	*e*PKIKP	PKPdf	01 07 06.3	-1.9
TMCR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
OBN	Obninsk	142.90	46⇓	*e*PKIKP	PKPdf	01 07 09.0	-1.7
OBN				*i*		01 07 13.2	
OBN				pmax	pmax		
	comp=Z,36nm,1.7s						
OBN				pmax	pmax		
	comp=Z,35nm,1.7s						
KLMR	Klimovskoe	143.31	37	*e*PKIKP	PKiKP	01 07 14.8	+0.2
KLMR				pmax	pmax		
	comp=Z,29nm,1.4s						
KLMR	Klimovskoe	143.31	37	*e*PKPdf	PKiKP	01 07 14.8	+0.2
KLMR				AMP		01 07 19.3	
	comp=Z,29nm,1.4s						
MOS	Moscow	143.42	45	*i* PKHKP	PKPpre	01 07 07.2	
MOS				pmax	pmax		
	comp=Z,91nm,1.9s						
YAK	Yakutsk	144.33	326	*e*PKIKP	PKPab	01 07 09.8	-1.4
YAK				pmax	pmax		
	comp=Z,29nm,1.1s						
YAK				pmax	pmax		
	comp=N,8.0nm,1.3s						
YAK				pmax	pmax		
	comp=E,10.0nm,1.5s						
YAK				pmax	pmax		
	comp=Z,150nm,4.5s						
YAK				pmax	pmax		
	comp=N,145nm,4.8s						
YAK				pmax	pmax		
	comp=E,72nm,3.4s						
YAK	Yakutsk	144.33	326	PKPdf	PKPbc	01 07 11.5	0.0
MARD	Mardin	144.40	77	PKPdf	PKPbc	01 07 12.9	+0.2
LPSR	Galich'ya Gora	144.53	50	*e*PKIKP	PKPbc	01 07 12.6	+0.2
LPSR				pmax	pmax		
	comp=Z,110nm,1.1s						
VSR	Storozhevoye	144.78	53	*e*PKIKP	PKPab	01 07 11.2	-1.9
VSR				pmax	pmax		
	comp=Z,130nm,1.3s						
SOC	Sochi	144.86	66	*e*PKIKP	PKPab	01 07 13.5	-0.2
SOC				*i*		01 07 17.5	
SOC				*e*		01 10 36.9	
SOC				*e*SS	SS	01 29 20.3	-0.3
SOC				*e*SSS	SSS	01 34 46.7	
USRK	Ussuriysk Ar.	145.35	295	PKPbc	PKPbc	01 07 14.7	-0.6
	comp=Z,5.7nm,0.7s,baz=118,slow=3.1,SNR=12						
VRH	Novokhopyorsk	146.38	53	*e*PKIKP	PKPdf	01 07 16.9	0.0
VRH				pmax	pmax		
	comp=Z,50nm,1.1s						
KIV	Kislovodsk	147.03	66*d*	*i*PKP2	PKPdf	01 07 19.3	+0.9
KIV				*e*SS	SS	01 29 39.0	-6.6
KIV				*e*SSS	SSS	01 35 18.4	
KIV				pmax	pmax		
	comp=Z,42nm,2.8s						
KIV				pmax	pmax		
	comp=Z,41nm,1.3s						
KIV	Kislovodsk	147.03	66		PKPbc	01 07 20.4	-0.2
KBZ	Khabaz	147.17	66	PKPbc	PKPbc	01 07 20.9	+0.1
	comp=Z,2.7nm,0.9s,baz=258,slow=1.4,SNR=11						
KSRS	Korea Array	147.19	282	PKPbc	PKPbc	01 07 21.3	+0.3
	comp=Z,1.3nm,0.8s,baz=101,slow=3.5,SNR=4.4						
GOF	Gofitskoye	147.37	64⇑	*e*PKP2	PKPbc	01 07 21.9	+0.6
GOF				pmax	pmax		
	comp=Z,81nm,1.0s						
ZEI	Tsey	147.80	68	*e*PKP2	PKPbc	01 07 23.6	+0.8
ZEI				pmax	pmax		
	comp=Z,38nm,1.9s						
ZEA	Zeya	148.01	313	*e*PKP2	PKPab	01 07 27.7	+2.2
ZEA				pmax	pmax		
	comp=Z,20nm,1.4s						
GNI	Garni	148.05	73	PKPbc	PKPbc	01 07 23.7	+0.2
	comp=Z,2.3nm,0.8s,baz=277,slow=2.2,SNR=9.3						
GNI	Garni	148.05	73*c*	*i*PKP2	PKPab	01 07 25.8	-0.5
GNI				pmax	pmax		
	comp=Z,41nm,2.5s						
GNI	Garni	148.05	73		PKPbc	01 07 23.0	-0.5
NRIK	Noril'sk	148.80	359	PKPbc	PKPbc	01 07 24.1	-0.3
	comp=Z,3.3nm,0.8s,baz=359,slow=3.4,SNR=13						
NRIK	Noril'sk	148.80	359	PKP2	PKPbc	01 07 24.5	+0.2
NRIK	Noril'sk	148.80	359		PKPbc	01 07 24.5	+0.2
KIRV	Kirov	148.80	37	PKPbc	PKPbc	01 07 24.1	-0.5
	comp=Z,5.8nm,0.6s,baz=294,slow=4.3,SNR=9.1						
PALK	Pallekele	148.81	170	PKIKP	PKPbc	01 07 25.1	-1.0
PALK	Pallekele	148.81	170	PKPdf	PKPbc	01 07 25.1	-1.0
GROC	Groznyy	149.22	68	*e*PKHKP	PKPpre	01 07 20.8	
GROC				*e*		01 10 59.4	
GROC				pmax	pmax		
	comp=Z,66nm,1.4s						
BELG	Belogornoye	149.82	49	PKPbc	PKPbc	01 07 26.2	-1.1
	comp=Z,24nm,1.0s,baz=65,slow=4.1,SNR=10						
NJ2	Nanjing	152.65	267	*e*PKPbc	PKPdf	01 07 27.5	0.0
BOD	Bodaibo	153.26	326	*e*PKIKP	PKPbc	01 07 33.1	-2.0
BOD				pmax	pmax		
	comp=Z,22nm,1.5s						
ARU	Arti	154.16	36	PKPbc	PKPbc	01 07 35.7	-1.4
	comp=Z,0.6nm,0.6s,baz=204,slow=0.7,SNR=5.7						
ARU	Arti	154.16	36	*i* PKIKP	PKPdf	01 07 31.9	+3.0
ARU	Arti	154.16	36		PKPbc	01 07 35.6	-1.5
HHC	Hu-ho-hao-te	160.24	286	*e*PKP	PKPdf	01 07 39.0	+1.7
KMI	Kunming	160.81	232⇑	*e*PKP	PKPdf	01 07 38.3	-0.2
KMI				sPKP		01 07 43.0	
ULN	Ulaanbaatar	161.97	309	PKP2	PKPab	01 08 27.4	+2.2
ULN	Ulaanbaatar	161.97	309	PKPab	PKPab	01 08 27.4	+2.2
SONM	Songino Array	162.39	310	PKPab	PKPab	01 08 26.1	-1.0
	comp=Z,1.8nm,1.0s,baz=48,slow=2.1,SNR=5.2						
ZAK	Zakamensk	162.77	320	*e*PKP2	PKPab	01 08 27.6	-1.0
ZAK				pmax	pmax		
	comp=Z,13nm,1.4s						
ZAA0	Zalesovo Array	164.23	3	PKPdf	PKPdf	01 07 39.8	-0.9
ZALV	Zalesovo Beam	164.23	3	PKP	PKPdf	01 07 38.5	-2.1
	comp=Z,0.5nm,0.7s,baz=324,slow=2.0,SNR=4.1						
ZALV				PKPab	PKPab	01 08 33.6	-1.0
	comp=Z,0.3nm,0.4s,baz=336,slow=6.6,SNR=1.6						
ZALV	Zalesovo Beam	164.23	3	PKIKP	PKPdf	01 07 40.4	-0.3
ZALV	Zalesovo Beam	164.23	3	PKPdf	PKPdf	01 07 40.4	-0.3
KURK	Kurchatov	166.40	21	PKIKP	PKPdf	01 07 41.8	-0.8
KURK	Kurchatov	166.40	21		PKPdf	01 07 41.8	-0.8
KURBB	Kurchatov Arra	166.46	21	PKP	PKPdf	01 07 41.4	-1.3
	comp=Z,0.5nm,0.2s,baz=327,slow=1.4,SNR=9.0						
GTA	Gaotai	169.26	281	PKP	PKPdf	01 07 51.0	+5.8
GTA				PKPab	pPKPab	01 09 03.0	-1.7
GTA				LR	LR		
	comp=N,280nm,19.3s						
GTA				LR	LR		
	comp=E,210nm,16.4s						
GTA				LR	LR		
	comp=Z,280nm,18.5s						
MKAR	Makanchi Array	170.96	17	PKP	PKPdf	01 07 44.3	-1.5
	comp=Z,0.7nm,0.9s,baz=59,slow=3.2,SNR=3.3						
MKAR				PKPab	PKPab	01 09 03.6	-1.0
	comp=Z,0.2nm,0.6s,baz=7.6,slow=2.2,SNR=1.2						
WMQ	Urumqi	174.27	349	*e*PKP	PKPdf	01 07 47.5	+0.2
WMQ				AMB	AMB		
	comp=Z,520nm,5.5s						
WMQ				LR	LR		
	comp=Z,500nm,23.9s						
WMQ				LR	LR		
	comp=Z,280nm,23.9s						

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*PGC **27** 00:49:29.5±0.1, 50°.52N×130°.36W, h10^{km}, MLSn3.3/33, Mw3.9/33, 208km west of Pt. Hardy, Bc Vancouver Island, Canada Region*

*IDC **27** 00:49:32.9±1.2, 50°.78N×129°.71W, h0^{km}, mb3.3/2, mb1 3.7/9, mb1mx3.5/43, mbtmp3.5/9, ML3.6/6, MS3.1/5, Ms1 3.1/5, ms1mx2.9/25, Error ellipse: s-maj=13.7km s-min=8.8km az=92.0*

ISC 27 00:49:31.3±2.7**, 50°.65N**±0°.06×**130°.14W**±0°.05**, h5**^{km}±18^{km}**, n89,** σ1^{s}.**97**/64**, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOLB	Holberg	1.28	90	P	Pg	00 49 53.3	-2.5
HOLB				S	Sg	00 50 09.7	-2.6
PHC	Port Hardy	1.72	87	Pn	Pn	00 49 59.7	-2.2
PHC				Sn	Sn	00 50 21.0	-3.2
HG4B	Hotspring	1.77	338	Pn	Pn	00 49 58.9	-3.6
HG4B				Sn	Sn	00 50 21.2	-4.2
MAYB	Maynard	1.91	96	Pn	Pn	00 50 02.0	-2.6
BBB	Bella Bella	1.99	39	Pg	Pn	00 50 03.9	-1.7
	13nm,0.3s,baz=221,slow=6.8,SNR=638						
BBB				Lg	Lg	00 50 27.4	
	79nm,0.3s,baz=72,slow=20,SNR=8.9						
BBB				LR	LR	00 50 56.8	
	comp=Z,119nm,18.2s,baz=150,slow=49						
BBB	Bella Bella	1.99	39	Pn	Pn	00 50 04.2	-1.4
BBB				Sn	Sn	00 50 27.8	-3.0
FHRB	Fair Harbour	2.03	106	Pn	Pn	00 50 02.9	-3.1
EDB	Eliza Dome	2.09	111	Pn	Pn	00 50 03.8	-3.1
BNB	Barry Inlet	2.17	333	Pn	Pn	00 50 04.8	-3.3
WOSB	Woss	2.34	101	Pn	Pn	00 50 08.3	-2.0
HG1B	Mitchell Dam	2.60	332	Sn	Sn	00 50 42.3	-3.4
NCRB	Newcastle Ridg	2.62	94	Pn	Pn	00 50 12.2	-2.1
ETB	Estevan Point	2.65	117	Pn	Pn	00 50 11.4	-3.2
MOBC	Moresby Island	2.74	336	Pn	Pn	00 50 12.7	-3.3
MOBC				Sn	Sn	00 50 45.6	-3.8
GDR	Gold River	2.78	107	Pn	Pn	00 50 13.7	-2.6
BNAB	Bonilla	2.86	354	Pn	Pn	00 50 15.3	-2.2
BNAB				Sn	Sn	00 50 48.6	-3.6
DIB	Dawson Inlet,	2.94	331	Pn	Pn	00 50 15.3	-3.2
DIB				Sn	Sn	00 50 50.2	-3.9
VIB	Van Inlet	3.00	331	Pn	Pn	00 50 16.4	-3.1
VIB				Sn	Sn	00 50 51.6	-4.2
TOFB	Tofino	3.12	117	Pn	Pn	00 50 17.7	-3.4
CBB	Campbell River	3.12	100	Pn	Pn	00 50 19.4	-1.7
CBB				Sn	Sn	00 50 55.2	-3.5
GRNB	Grenville Isla	3.20	2	Pn	Pn	00 50 20.5	-1.7
GRNB				Sn	Sn	00 50 58.1	-2.6
BTB	Buttle Lake	3.20	110	Pn	Pn	00 50 19.9	-2.5
B012	Ucluelet	3.44	118	Sn	Sn	00 51 02.1	-4.6
OZB	Mount Ozzard	3.45	118	Pn	Pn	00 50 22.4	-3.4
KITB	Kitimat	3.55	14	Pn	Pn	00 50 25.9	-1.0
KITB				Sn	Sn	00 51 06.3	-2.9
MASB	Masset	3.56	342	Pn	Pn	00 50 24.4	-2.7
RUBB	Prince Rupert	3.68	359	Pn	Pn	00 50 27.4	-1.3
RUBB				Sn	Sn	00 51 10.8	-1.6
NDB	Naden	3.73	334	Pn	Pn	00 50 26.6	-2.9
TXB	Texada	3.79	102	Pn	Pn	00 50 28.5	-1.8
MGB	Mount Grey	3.90	113	Pn	Pn	00 50 29.2	-2.7
LIB	Langara Island	4.03	335	Pn	Pn	00 50 31.1	-2.4
SHB	Sechelt	4.17	102	Pn	Pn	00 50 34.0	-1.6
NLLB	Nanaimo Lost L	4.22	107	Pn	Pn	00 50 35.1	-1.1
OCP	Olym-Cheeka Pk	4.30	121	Pn	Pn	00 50 35.2	-2.1
B926	Mesachie Lake	4.31	113	Pn	Pn	00 50 36.7	-0.7
UBRB	Upper Baezaeko	4.38	57	Pn	Pn	00 50 39.3	+0.9
UBRB				Sn	Sn	00 51 30.3	+0.5
WPB	Watts Point	4.57	100	Pn	Pn	00 50 40.1	-0.9
BIB	Bowen Island	4.58	103	Pn	Pn	00 50 39.7	-1.4
GOBB	Galiano Island	4.62	109	Pn	Pn	00 50 41.5	-0.2
WSLR	Whistler	4.65	94	Pn	Pn	00 50 41.5	-0.6
OBC	Olympics--Boni	4.75	121	Pn	Pn	00 50 42.6	-0.9
B009	North Saanich	4.79	112	Pn	Pn	00 50 42.3	-1.6
B010	North Saanich	4.79	112	Pn	Pn	00 50 42.7	-1.2
PGC	Sidney	4.79	112	Pn	Pn	00 50 42.3	-1.6
B011	North Saanich	4.79	112	Pn	Pn	00 50 42.8	-1.1
PA12	PA12 Sannich	4.79	112	Pn	Pn	00 50 42.9	-1.0
STW	Striped Peak	4.91	118	Pn	Pn	00 50 44.3	-1.4
VGZ	Gonzales	4.97	114	Pn	Pn	00 50 45.7	-0.8
MCW	Mount Constitu	5.14	110	Pn	Pn	00 50 48.9	0.0
LLLB	Lillooet	5.26	87	Pn	Pn	00 50 50.0	-0.4
A05A	Maple Falls	5.47	105	Pn	Pn	00 50 53.9	+0.5
WISH	Wishkah	5.49	128	Pn	Pn	00 50 53.1	-0.5
MBW	Mount Baker	5.66	106	Pn	Pn	00 50 56.3	+0.1
CMW	Cultus Mountai	5.68	110	Pn	Pn	00 50 56.4	+0.1
HOPB	Hope	5.76	99	Pn	Pn	00 50 56.1	-1.2
JCW	Jim Creek	5.89	112	Pn	Pn	00 50 58.7	-0.5
E03A	Lebam	5.99	131	Pn	Pn	00 51 00.0	-0.5
B06A	Marblemount	6.02	107	Pn	Pn	00 51 00.9	0.0
RPW	Rockport	6.03	108	Pn	Pn	00 51 01.1	-0.1
D05A	Enumclaw	6.39	120	Pn	Pn	00 51 06.9	+0.9
GPW	Glacier Peak	6.40	110	Pn	Pn	00 51 06.0	-0.4
FMW	Mount Fremont	6.72	120	Pn	Pn	00 51 10.6	-0.1
LON	Longmire	6.75	122	Pn	Pn	00 51 11.3	+0.2
PNT	Penticton	6.92	97	Pn	Pn	00 51 13.5	+0.2
LTY	Liberty	7.10	115	Pn	Pn	00 51 16.1	+0.3
BMBC	Bull Mountain	7.22	38	Pn	Pn	00 51 18.8	+1.3
BMBC				Sn	Sn	00 52 40.5	+0.7
B08A	Colville Reser	7.40	104	Pn	Pn	00 51 19.9	0.0
NBC4	NorthernBC 4	7.60	45	Sn	Sn	00 52 47.8	-1.3
DLBC	Dease Lake	7.80	0	Pn	Pn	00 51 26.6	+1.2
	0.9nm,0.3s,baz=181,slow=10,SNR=31						
DLBC				Sn	Sn	00 52 55.7	+1.7
	0.3nm,0.3s,baz=330,slow=20,SNR=1.4						
DLBC				Lg	Lg	00 53 37.5	
	0.1nm,0.3s,baz=41,slow=20,SNR=2.4						
DLBC				LR	LR	00 54 26.0	
	comp=Z,213nm,18.1s,baz=108,slow=38						
DLBC	Dease Lake	7.80	0	Pn	Pn	00 51 27.2	+1.8
NBC5	NorthernBC 5	8.16	30	Pn	Pn	00 51 32.0	+1.7
NBC5				Sn	Sn	00 53 03.3	+0.5
NEW	Newport	8.81	101	Pn	Pn	00 51 38.5	-0.7
	0.7nm,0.3s,baz=292,slow=13,SNR=7.2						
NEW				Lg	Lg	00 54 03.2	
	0.1nm,0.3s,baz=179,slow=3.7,SNR=1.3						
NEW				LR	LR	00 55 20.9	
	comp=Z,118nm,20.1s,baz=346,slow=41						
NBC6	NorthernBC 6	9.44	29	Sn	Sn	00 53 32.6	-1.5
YBH	Yreka Blue Hor	10.30	147	Pn	Pn	00 52 02.1	+2.5
	0.0nm,0.3s,baz=329,slow=8.4,SNR=3.5						
YBH				LR	LR	00 55 26.8	
	comp=Z,53nm,18.5s,baz=359,slow=34						
WHY	Whitehorse	10.38	347	Pn	Pn	00 52 00.8	+0.1

BSMT	Bassoo Peak	10.42	100	Pn	Pn	00 52 02.0	+0.6
YKA	Yellowknife Ar	14.58	30	Pn	Pn	00 52 53.4	-4.5
	0.1nm,0.3s,baz=219,slow=12,SNR=8.2						
YKA				Sn	Sn	00 55 32.2	-7.5
	0.1nm,0.3s,baz=222,slow=22,SNR=5.4						
NVAR	Mina Array Bea	14.83	141	Pn	Pn	00 53 05.8	+4.2
	0.1nm,0.3s,baz=328,slow=15,SNR=2.1						
KDAK	Kodiak Island	14.89	307	LR	LR	00 57 12.0	
	comp=Z,93nm,20.9s,baz=109,slow=30						
PDAR	Pinedale Array	16.13	111	Pn	Pn	00 53 19.9	+1.0
	0.1nm,0.3s,baz=312,slow=12,SNR=12						
PDAR				LR	LR	00 59 40.3	
	comp=Z,109nm,21.4s,baz=346,slow=38						
ILAR	Eielson Array	16.66	334	Pn	P	00 53 29.6	+2.0
	0.0nm,0.3s,baz=146,slow=11,SNR=11						
ULM	Lac du Bonnet	21.71	78	P	P	00 54 21.8	-1.2
	4.1nm,0.9s,baz=282,slow=11,SNR=6.0						
H11N2	WAKE ISLAND Hy	57.90	262	T	T	02 01 48.0	
	baz=41,slow=76						
H11N3	WAKE ISLAND Hy	57.90	262	T	T	02 01 49.2	
	baz=41,slow=76						
H11N1	WAKE ISLAND Hy	57.92	262	T	T	02 01 51.9	
	baz=41,slow=76						
H11S1	WAKE ISLAND Hy	58.93	261	T	T	02 03 07.8	
	baz=41,slow=74						
H11S2	WAKE ISLAND Hy	58.94	261	T	T	02 03 05.4	
	baz=41,slow=74						
H11S3	WAKE ISLAND Hy	58.95	261	T	T	02 03 04.1	
	baz=41,slow=74						
MKAR	Makanchi Array	78.98	338	P	P	01 01 36.9	+1.2
	0.1nm,0.6s,baz=28,slow=3.7,SNR=1.5						

PRU 27 01:03:16.9±0.0**, 50°.27N×19°.00E, h0^{km}, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MORC	Moravsky Berou	1.06	243	*e*PG	Pg	01 03 37.4	+0.2
MORC				*e*SG	Sg	01 03 51.5	+0.5
KRLC	Kraliky	1.44	263	*e*PG	Pn	01 03 43.2	-1.1
KRLC				*e*SG	Sg	01 04 02.6	-0.5
DPC	Dobruska-Polom	1.72	274	*e*PG	Pn	01 03 47.8	-0.3
DPC				*e*SG	Sg	01 04 11.9	-0.2
CHVC	Chvalec	1.91	281	*e*SG	Sg	01 04 18.8	+0.6

*IDC **27** 01:04:33.7±1.1, 34°.54N×73°.30E, h0^{km}, mb3.8/8, mb1 3.9/13, mb1mx3.6/45, mbtmp3.8/13, ML3.6/5, Error ellipse: s-maj=28.3km s-min=18.9km az=82.0*

*NEIC **27** 01:04:38.7±1.3, 34°.59N±0°.06×73°.38E±0°.10, h33^{km}±6^{km}, mb4.2/6, Error ellipse: s-maj=11.7km s-min=8.2km az=71.0*

*NNC **27** 01:04:45.9±2.2, 35°.25N×73°.30E, h0^{km}, mb4.5, mpv4.2, Error ellipse: s-maj=19.4km s-min=17.9km az=47.0*

ISC 27 01:04:37.3±0.8**, 34°.59N**±0°.07×**73°.31E**±0°.08**, h22^{km}, n40,** σ**1^{s}.75**/41**, mb3.9**/7**, 4C-2D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIL	Nilore	0.94	183		Pn	01 04 55.8	+0.6
KBL	Kabul	3.52	270	Pn	Pn	01 05 33.6	+2.7
IUG	Iuzhnay	7.98	342	Lg	Lg	01 08 00.8	
	12nm,0.3s						
AAK	Ala-Archa	8.09	6	Pn	Pn	01 06 36.2	+2.5
	0.8nm,0.3s,baz=189,slow=9.8,SNR=14						
AAK				Sn	Sn	01 08 05.7	+1.2
	0.4nm,0.3s,baz=136,slow=2.2,SNR=4.4						
AAK	Ala-Archa	8.09	6		Pn	01 06 34.8	+1.1
TKM2	Tokmak 2	8.51	11	⇓P	Pn	01 06 42.6	+3.1
	2.3nm,0.4s						
TKM2				⇑S	Sn	01 08 13.4	-1.4
	7.6nm,0.6s						
KK31	Karatay Array	8.78	346	⇑P	Pn	01 06 44.2	+1.3
	5.9nm,0.3s,baz=152,slow=11,SNR=244						
KK31				⇓S	Sn	01 08 19.1	-2.1
	3.4nm,0.5s,baz=169,slow=22,SNR=13						
KK31	Karatay Array	8.78	346		Pn	01 06 44.3	+1.3
KKAR	Karatay Array	8.78	346	Pn	Pn	01 06 44.0	+1.0
MTBS	Maitube	8.87	15	P	Pn	01 06 47.1	+2.9
	4.0nm,0.3s						
TNSS	Tian-Shan	8.90	17	P	Pn	01 06 47.6	+2.6
	6.3nm,0.4s						
KOTS	Kotyrbulak	9.13	18	P	Pn	01 06 50.8	+3.0
	12nm,0.5s						
HRA	Herat	9.14	272	Pn	Pn	01 06 47.6	-0.5
KRBS	Karabastau	9.28	11	P	Pn	01 06 51.9	+2.1
	2.3nm,0.7s						
PDGK	Podgornoye	9.96	27	⇑P	Pn	01 07 01.9	+2.7
	4.1nm,0.8s						
PDGK				⇑S	Sn	01 08 48.6	-1.9
	6.8nm,1.1s						
GEYT	Alibeck	12.71	290	Pn	Pn	01 07 34.7	-2.1
GYA0B	ALIBECK ARRAY	12.71	290	Pn	Pn	01 07 34.2	-2.5
MAKZ	Makanchi	13.85	26	Pn	Pn	01 07 46.0	-6.3
MK31	Makanchi Array	13.95	26		Pn	01 07 51.0	-2.7
MKAR	Makanchi Array	13.95	26	Pn	Pn	01 07 54.3	+0.6
	0.1nm,0.3s,baz=213,slow=14,SNR=8.5						
MKAR				Sn	Sn	01 10 28.6	+0.7
	0.1nm,0.3s,baz=179,slow=15,SNR=2.6						
MKAR	Makanchi Array	13.95	26		Pn	01 07 51.0	-2.7
WMQ	Urumqi	14.45	46	Pn	Pn	01 07 57.9	-2.7
KURBB	Kurchatov Arra	16.47	12	Pn	Pn	01 08 25.1	-1.8
	0.1nm,0.3s,baz=200,slow=11,SNR=7.7						
KURK	Kurchatov	16.58	12		Pn	01 08 28.4	+0.1
BVAR	Borovoye Array	18.55	354	P	P	01 08 52.5	+0.1
	0.4nm,0.3s,baz=151,slow=9.2,SNR=4.0						
AKTO	Aktyubinsk	19.38	329	P	P	01 09 01.2	-0.3
	0.4nm,0.3s,baz=131,slow=10,SNR=11						
ZAA0	Zalesovo Array	20.99	19	P	P	01 09 18.3	-0.6
ZAA0				IAmb	IAmb	01 09 19.7	
	comp=Z,6.7nm,0.6s						
ZALV	Zalesovo Beam	20.99	19	P	P	01 09 18.5	-0.4
	comp=Z,7.4nm,0.6s,baz=215,slow=10,SNR=38						
ARU	Arti	24.07	340	P	P	01 09 50.9	+0.1
	comp=Z,0.5nm,0.3s,baz=27,slow=18,SNR=3.5						
ARU	Arti	24.07	340	IAmb	IAmb	01 09 56.7	
	comp=Z,13nm,1.5s						
TLY	Talaya	27.68	43	P	P	01 10 23.4	-0.2
FINES	FINESS Array B	40.12	327	P	P	01 12 10.9	-0.1
	comp=Z,2.9nm,1.1s,baz=126,slow=7.1,SNR=1.4						
ARCES	ARCESS Array B	43.63	338	P	P	01 12 40.0	+0.3
	comp=Z,2.2nm,0.8s,baz=108,slow=7.3,SNR=7.8						
ARCES	ARCESS Array B	43.63	338	IAmb	IAmb	01 12 41.6	
	comp=Z,18nm,1.4s						
CLL	Collm	45.86	311	*e*P	P	01 12 59.0	+1.3
CLL				*e*pP	pP	01 13 05.0	-0.1
TORD	Torodi Ar. Bea	67.59	271	P	P	01 15 32.3	-0.3
	comp=Z,0.8nm,0.6s,baz=45,slow=6.1,SNR=2.6						
TORD	Torodi Ar. Bea	67.59	271	IAmb	IAmb	01 15 33.3	
	comp=Z,0.9nm,0.9s						
WRA	Warramunga Arr	79.37	123	P	P	01 16 41.4	-0.4
	comp=Z,0.4nm,0.7s,baz=326,slow=5.1,SNR=5.6						
ASAR	Alice Springs	81.61	126	P	P	01 16 54.0	+0.3
	comp=Z,0.2nm,0.3s,baz=312,slow=5.7,SNR=2.6						
YKA	Yellowknife Ar	83.05	4	P	P	01 17 00.9	+0.2
	comp=Z,0.4nm,0.5s,baz=356,slow=4.6,SNR=7.8						

*NEIC **27** 01:29:21.3±2.6, 34°.55N±0°.06×73°.3E±0°.1, h27^{km}±5^{km}, mb4.0/7, Error ellipse: s-maj=13.4km s-min=7.7km az=71.0*

*IDC **27** 01:29:24.9±3.4, 34°.70N×73°.14E, h53^{km}±31^{km}, mb3.6/13, mb1 3.7/18, mb1mx3.4/54, mbtmp3.9/18, ML3.9/5, MS4.1/3, Ms1 4.1/3, ms1mx3.2/44, Error ellipse: s-maj=21.5km s-min=17.1km az=39.0*

*NNC **27** 01:29:27.7±2.9, 34°.90N×73°.19E, h75^{km}±30^{km}, mb3.8, mpv4.2, Error ellipse: s-maj=24.9km s-min=19.6km az=148.0*

ISC 27 01:29:22.1±0.6**, 34°.59N**±0°.06×**73°.39E**±0°.06**, h35^{km}, n51,** σ**2^{s}.04**/55**, mb3.8**/12**, MS4.1**/3**, 4C-5D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIL	Nilore	0.94	187		Pn	01 29 39.2	+0.4
KBL	Kabul	3.58	270	Pn	Pn	01 30 16.2	+0.9
AAK	Ala-Archa	8.08	6	P	Pn	01 31 19.7	+2.7
	2.3nm,0.3s,baz=181,slow=8.7,SNR=32						
AAK				S	Sn	01 32 48.9	+1.6
	0.6nm,0.3s,baz=324,slow=16,SNR=3.6						
AAK	Ala-Archa	8.08	6	Pn	Pn	01 31 18.4	+1.4
TKM2	Tokmak 2	8.50	11	⇑P	Pn	01 31 25.2	+2.4
	2.7nm,0.5s						
TKM2				⇑S	Sn	01 32 56.7	-0.8
	7.2nm,0.5s						
KK31	Karatay Array	8.79	346	⇑P	Pn	01 31 27.1	+0.4
	10nm,0.4s,baz=162,slow=12,SNR=207						
KK31				S	Sn	01 33 01.6	-2.9
	5.4nm,0.6s,baz=170,slow=23,SNR=6.4						
KK31	Karatay Array	8.79	346		Pn	01 31 27.1	+0.4
KKAR	Karatay Array	8.79	346	Pn	Pn	01 31 27.2	+0.5
KKAR	Karatay Array	8.79	346	Pn	Pn	01 31 26.9	+0.2
PDGK	Podgornoye	9.93	27	⇓P	Pn	01 31 45.3	+2.9
	3.6nm,0.7s						
PDGK				⇓S	Sn	01 33 32.6	-0.1
	12nm,1.1s						
GKN	Gorkha	11.64	121	*e*Pn	Pn	01 32 07.7	+1.8
GKN				*e*Sn	Sn	01 34 11.4	-3.3
	29nm,0.4s						
DMN	Daman	12.21	122	*e*Pn	Pn	01 32 15.7	+1.9
DMN				*e*Sn	Sn	01 34 25.7	-3.1
	16nm,0.5s						
PKIN	Phulchoki	12.44	121	*e*Pn	Pn	01 32 19.0	+2.2
PKIN				*e*Sn	Sn	01 34 29.5	-4.8
	12nm,0.5s						
PKI	Pulchoki	12.45	121	*e*Pn	Pn	01 32 19.1	+2.0
PKI				*e*Sn	Sn	01 34 29.8	-4.9
	23nm,0.7s						
GUN	Gumba	12.59	119	*e*Pn	Pn	01 32 19.7	+0.7
GEYT	Alibeck	12.77	290	P	Pn	01 32 20.6	-0.5
	0.2nm,0.3s,baz=113,slow=9.6,SNR=1.6						
RAMN	Ramite	13.67	120	*e*Pn	Pn	01 32 34.3	+0.7
RAMN				*e*Sn	Sn	01 34 58.1	-6.2
	9.8nm,0.2s						
MAKZ	Makanchi	13.82	25	⇓P	Pn	01 32 35.9	+0.4
	1.5nm,0.4s						
MAKZ	Makanchi	13.82	25	Pn	Pn	01 32 36.4	+0.9
MK31	Makanchi Array	13.93	26	⇓P	Pn	01 32 38.0	+1.1
	0.6nm,0.5s,baz=207,slow=14,SNR=7.4						
MK31	Makanchi Array	13.93	26		Pn	01 32 37.5	+0.7
MKAR	Makanchi Array	13.93	26	P	Pn	01 32 37.5	+0.7
	0.1nm,0.3s,baz=208,slow=15,SNR=11						
TAPN	Taplejung	14.24	117	*e*Pn	Pn	01 32 40.5	-1.0
TAPN				*e*Sn	Sn	01 35 09.1	-9.3
	8.3nm,0.6s						
KURK	Kurchatov	16.56	12	Pn	Pn	01 33 10.8	-0.7
AB31	Akbulak array	17.70	330	P	Pn	01 33 22.1	-3.6
	0.7nm,0.4s,baz=149,slow=9.2,SNR=47						
ABKAR	Akbulak array	17.70	330	Pn	Pn	01 33 23.7	-1.9
BVAR	Borovoye Array	18.55	354	P	P	01 33 34.6	-1.1
	0.9nm,0.3s,baz=175,slow=24,SNR=19						
BRVK	Borovoye	18.60	354	⇑P	P	01 33 36.2	0.0
	3.2nm,0.6s						
BRVK	Borovoye	18.60	354		P	01 33 35.1	-1.0
BRVK				IAmb	IAmb	01 33 37.0	
	comp=Z,4.1nm,0.6s						
AKTO	Aktyubinsk	19.41	329	P	P	01 33 44.4	-0.7
	comp=Z,0.9nm,0.3s,baz=134,slow=11,SNR=21						
AKTO	Aktyubinsk	19.41	329	⇓P	P	01 33 44.4	-0.7
	comp=Z,5.5nm,0.6s						
ZAA0	Zalesovo Array	20.96	19	P	P	01 34 00.6	-1.3
ZAA0				IAmb	IAmb	01 34 02.5	
	comp=Z,6.7nm,0.6s						
ZALV	Zalesovo Beam	20.96	19	P	P	01 34 01.6	-0.2
	comp=Z,7.8nm,0.5s,baz=213,slow=11,SNR=36						
ARU	Arti	24.08	340	P	P	01 34 33.9	-0.1
	comp=Z,1.1nm,0.5s,baz=155,slow=5.9,SNR=6.8						
ARU	Arti	24.08	340	IAmb	IAmb	01 34 34.7	
	comp=Z,3.4nm,0.6s						
CMAR	Chiang Mai Arr	27.83	119	P	P	01 35 12.4	+4.2
	comp=Z,2.2nm,0.3s,baz=308,slow=10,SNR=4.7						
CMAR	Chiang Mai Arr	27.83	119	P	P	01 35 08.9	+0.6
SONM	Songino Array	27.91	52	P	P	01 35 11.1	+2.2
	comp=Z,0.3nm,0.6s,baz=260,slow=8.6,SNR=1.8						
SONM	Songino Array	27.91	52	IAmb	IAmb	01 35 20.7	
	comp=Z,0.8nm,1.1s						
FINES	FINESS Array B	40.15	327	P	P	01 36 53.8	-0.5
	comp=Z,1.2nm,0.7s,baz=120,slow=8.5,SNR=4.0						
ARCES	ARCESS Array B	43.65	338	P	P	01 37 22.4	-0.5
	comp=Z,2.1nm,0.8s,baz=114,slow=7.5,SNR=11						
USRK	Ussuriysk Ar.	45.43	60	LR	LR	01 58 02.2	
	comp=Z,252nm,21.9s,baz=109,slow=38						
NOA	NORSAR Array B	47.07	324	P	P	01 37 49.3	-0.8
	comp=Z,0.2nm,0.6s,baz=90,slow=6.7,SNR=1.4						
JNU	Nakatsue	47.20	75	LR	LR	02 00 19.3	
	comp=Z,174nm,19.8s,baz=140,slow=39						
JOW	Kunigami	47.33	84	LR	LR	01 59 09.3	
	comp=Z,247nm,20.3s,baz=80,slow=38						
TORD	Torodi Ar. Bea	67.66	271	P	P	01 40 15.0	-0.9
	comp=Z,0.9nm,0.5s,baz=50,slow=6.1,SNR=6.7						
INK	Inuvik	75.46	10	P	P	01 41 03.1	+1.1
	comp=Z,0.3nm,0.4s,baz=346,slow=8.7,SNR=3.0						
BOSA	Boshof	77.59	222	P	P	01 41 15.5	+0.8
	comp=Z,1.5nm,0.6s,baz=72,slow=6.4,SNR=2.0						
WRA	Warramunga Arr	79.32	123	P	P	01 41 26.0	+1.7
	comp=Z,0.8nm,0.8s,baz=325,slow=4.7,SNR=7.7						
ASAR	Alice Springs	81.56	126	P	P	01 41 37.9	+1.5
	comp=Z,0.4nm,0.9s,baz=314,slow=4.8,SNR=2.7						
YKA	Yellowknife Ar	83.04	4	P	P	01 41 43.7	+0.2
	comp=Z,0.3nm,0.5s,baz=352,slow=5.4,SNR=7.9						

*MEX **27** 01:48:49.1±0.7, 27°.44N×111°.43W, h5^{km}, MD4.2*

*IDC **27** 01:48:56.3±3.9, 28°.26N×110°.86W, h0^{km}, mb3.5/1, mb1 3.6/4, mb1mx3.4/49, mbtmp3.1/4, ML3.3/3, MS3.4/9, Ms1 3.4/9, ms1mx3.3/29, Error ellipse: s-maj=52.2km s-min=17.2km az=20.0*

ISC 27 01:48:47.1±1.4**, 27°.44N**±0°.08×**111°.55W**±0°.05**, h10^{km}, n17,** σ**1^{s}.76**/16**, MS3.5**/4**, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SRIG	Santa Rosalia	0.63	259	*e*P	Pn	01 49 01.9	-0.2
SRIG				*e*S	Sn	01 49 12.1	-0.1
HSIG		1.66	18	*i* P	Pn	01 49 15.7	-0.6
HSIG				*i* S	Sn	01 49 35.1	-2.5
NZIG	Nacozari, Sono	3.40	30	*e*P	Pn	01 49 40.4	0.0
NZIG				*e*S	Sn	01 50 19.4	-1.6
LPIG	La Paz	3.51	161	LR	LR	01 51 03.4	
	comp=Z,282nm,19.0s,baz=320,slow=30						
CGIG		4.28	46	*e*P	Pn	01 49 55.0	+2.6
CGIG				*i* S	Sn	01 50 44.0	+1.6
214A	Organ Pipe Nat	4.63	347	*i* P	Pn	01 49 57.0	-0.2
214A				*i* S	Sn	01 50 52.0	+0.9
TUC	Tucson	4.90	8	*i* P	Pn	01 49 59.5	-1.4
TUC				*i* S	Sn	01 51 00.2	+2.5
TXAR	Lajitas Array	7.19	73	Pn	Pn	01 50 32.8	+0.3
	0.1nm,0.3s,baz=255,slow=14,SNR=3.0						
TXAR				Sn	Sn	01 51 51.7	-2.5
	0.2nm,0.3s,baz=248,slow=16,SNR=1.8						
TXAR				Lg	Lg	01 52 17.5	
	0.2nm,0.3s,baz=259,slow=17,SNR=1.9						
PFO	Pinyon Flats O	7.47	327	LR	LR	01 53 17.0	
	comp=Z,128nm,20.8s,baz=108,slow=36						
NVAR	Mina Array Bea	12.34	334	Pn	Pn	01 51 49.7	+6.7
	0.1nm,0.3s,baz=150,slow=17,SNR=3.7						
ELK	Elko	13.62	348	LR	LR	01 57 13.3	
	comp=Z,173nm,20.5s,baz=198,slow=38						
PDAR	Pinedale Array	15.38	6	Pn	P	01 52 27.6	-1.4
	0.0nm,0.3s,baz=192,slow=11,SNR=1.6						
PDAR				Lg	Lg	01 56 33.7	
	0.1nm,0.3s,baz=110,slow=30,SNR=2.0						
PDAR				LR	LR	01 58 25.5	
	comp=Z,126nm,19.0s,baz=50,slow=39						
YBH	Yreka Blue Hor	16.94	330	LR	LR	01 58 39.1	
	comp=Z,112nm,21.6s,baz=174,slow=35						
NEW	Newport	21.24	350	P	P	01 53 35.1	+1.9
	1.5nm,0.6s,baz=166,slow=13,SNR=4.8						
NEW				LR	LR	02 01 54.8	
	comp=Z,134nm,20.6s,baz=108,slow=38						
TEIG	Tepich	22.44	104	LR	LR	02 04 34.4	
	comp=Z,137nm,18.6s,baz=335,slow=42						
TKL	Tuckaleechee C	24.98	64	LR	LR	02 04 55.4	
	comp=Z,220nm,18.1s,baz=12,slow=40						
YKA	Yellowknife Ar	35.11	358	LR	LR	02 10 01.7	
	comp=Z,129nm,20.5s,baz=0.0,slow=37						

IDC 27 02:17:37.7±7.0**, 16°.39S×177°.88W, h0^{km}, mb4.0**/3**, mb1 4.3**/3**, mb1mx3.7**/26**, mbtmp4.0**/3**, Error ellipse: s-maj=311.7km s-min=34.5km az=141.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	45.42	258	P	P	02 25 58.6	0.0
	0.5nm,0.3s,baz=92,slow=7.3,SNR=24						
ASAR	Alice Springs	45.70	253	P	P	02 26 00.7	-0.2
	4.3nm,0.5s,baz=88,slow=8.5,SNR=84						
ILAR	Eielson Array	84.30	13	P	P	02 30 11.1	0.0
	0.4nm,0.9s,baz=202,slow=6.8,SNR=3.0						

*IDC **27** 02:24:45.5±0.7, 33°.41N×60°.73E, h0^{km}, mb4.0/20, mb1 4.2/24, mb1mx4.0/42, mbtmp4.0/24, ML3.7/4, MS3.6/3, Ms1 3.6/3, ms1mx3.0/49, Error ellipse: s-maj=14.2km s-min=13.2km az=30.0*

*THR **27** 02:24:47.6±0.3, 33°.65N×60°.73E, h16^{km}±4^{km}, ML4.6*

*TEH **27** 02:24:48.0, 33°.61N×60°.69E, h12^{km}, ML4.6*

*NEIC **27** 02:24:49.8±1.7, 33°.57N±0°.06×60°.74E±0°.05, h23^{km}±5^{km}, Error ellipse: s-maj=8.9km s-min=6.1km az=163.0*

*MOS **27** 02:24:49.3±1.4, 33°.57N×60°.71E, h34^{km}, mb4.5/16, Error ellipse: s-maj=7.9km s-min=5.9km az=109.5*

*NNC **27** 02:24:57.8±4.1, 34°.24N×60°.90E, h32^{km}±31^{km}, mb4.2, Error ellipse: s-maj=29.8km s-min=19.1km az=176.0*

ISC 27 02:24:48.1±0.4**, 33°.65N**±0°.04×**60°.75E**±0°.04**, h10^{km}, n188,** σ**1^{s}.66**/190**, mb4.3**/39**, 9C-8D, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHRT	Shahrakht	0.39	270	*e*Pg	Pg	02 24 55.2	-0.5
SHRT				*e*Sg	Sg	02 25 00.8	0.0
SHRT	Shahrakht	0.39	270	Pg	Pg	02 24 55.2	-0.5
SHRT	Shahrakht	0.39	270	*e*Pg	Pg	02 24 55.2	-0.5
IMON	Monand	1.01	244	*e*Sg	Sg	02 25 21.4	+0.5
IMON				*e*Pg	Pg	02 25 07.0	-0.6
IDAH	Dahanechah	1.17	220	*e*		02 25 30.6	
	comp=Z,99nm,0.2s						
IDAH				*e*Pg	Pb	02 25 09.1	-1.5
HRA	Herat	1.44	59		Pn	02 25 15.2	+0.7
AFRZ	Afriz	1.47	262		Pn	02 25 15.4	+0.6
AFRZ	Afriz	1.47	262	*e*Pg	Pn	02 25 15.4	+0.6
ITEG	Tejag	1.84	247	*e*Pn	Pn	02 25 20.3	+0.4
ITEG				*e*		02 25 53.0	
	comp=Z,99nm,0.4s						
IKOO	Kooshah	1.91	231	*e*Pn	Pn	02 25 21.7	+0.8
IKOO				*e*		02 25 24.9	
	comp=Z,99nm,0.4s						
NHDN	Nehbandan	2.32	195	*e*Pn	Pn	02 25 26.8	+0.3
NHDN				*e*		02 26 18.5	
	comp=Z,99nm,0.6s						
IMYA	Miami	2.74	349	*e*Pn	Pn	02 25 33.1	+0.8
IMYA				*e*		02 26 26.3	
	comp=Z,99nm,0.4s						
TKDS	Koohdasht(Taba	3.03	270	*e*Pn	Pn	02 25 37.1	+0.9
TKDS				*e*		02 26 28.6	
	comp=Z,99nm,0.5s						
IPAY	Payeh	3.15	333	*e*Pn	Pn	02 25 39.5	+1.6
IPAY				*e*		02 26 36.5	
	comp=Z,99nm,0.8s						
IKRD	Kardeh	3.28	342	*e*Pn	Pn	02 25 41.0	+1.2
IKRD				*e*		02 26 41.3	
	comp=Z,99nm,0.6s						
IAKL	Akhelmad	3.37	332	*e*Pn	Pn	02 25 42.7	+1.6
TPRV	Parvadeh(Tabas	3.46	261	Pn	Pn	02 25 42.9	+0.8
TPRV	Parvadeh(Tabas	3.46	261	*e*Pn	Pn	02 25 43.0	+0.8
TPRV				*e*		02 26 47.8	
	comp=Z,99nm,0.6s						
TNSJ	Nastanj	3.46	276	*e*Pn	Pn	02 25 43.1	+0.9
TNSJ				*e*		02 26 46.5	
	comp=Z,99nm,0.6s						
SBZV	Sabzevar	3.76	318	Pn	Pn	02 25 47.7	+1.4
SBZV	Sabzevar	3.76	318	*e*Pn	Pn	02 25 47.8	+1.4
ZHSF	Zahedan	4.02	180	*e*Pn	Pn	02 25 50.8	+0.8
ZHSF	Zahedan	4.02	180	Pn	Pn	02 25 50.7	+0.8
ZHSF	Zahedan	4.02	180	*e*Pn	Pn	02 25 50.8	+0.8
CHMN	Cheshme madani	4.66	217	*e*Pn	Pn	02 26 00.1	+1.2
CHMN				*e*		02 26 54.6	
	comp=Z,99nm,0.4s						
ASHT	Ashkhabad	4.70	337	P	Pn	02 26 01.0	+2.0
ASHT	Ashkhabad	4.70	337	Pn	Pn	02 26 01.0	+2.0
GEYT	Alibeck	4.78	334	Pn	Pn	02 26 01.3	+1.1
	comp=Z,6.9nm,0.3s,baz=161,slow=14,SNR=62						
GEYT				Pg	Pg	02 26 17.8	-1.9
	comp=Z,8.4nm,0.3s,baz=144,slow=18,SNR=20						
GEYT				Lg	Lg	02 27 24.7	
	comp=Z,11nm,0.3s,baz=158,slow=32,SNR=6.4						
GEYT	Alibeck	4.78	334	Pn	Pn	02 26 01.5	+1.3
GEYT	Alibeck	4.78	334	*e*Pn	Pn	02 26 01.5	+1.3
GYA0B	ALIBECK ARRAY	4.78	334	⇓Pn	Pn	02 26 01.5	+1.3
GYA0B				⇑Pg	Pg	02 26 17.1	-2.6
GYA0B				⇑Lg	Lg	02 27 15.8	
GYA0B	ALIBECK ARRAY	4.78	334	Pn	Pn	02 26 01.8	+1.6
KHGB	Koh Gabri	4.88	229	Pn	Pn	02 26 03.5	+1.8
KHGB	Koh Gabri	4.88	229	*e*Pn	Pn	02 26 03.6	+1.8
KHGB				*e*		02 27 03.3	
	comp=Z,99nm,0.7s						
KBAM	BAM	4.91	204	*e*Pn	Pn	02 26 02.8	+0.8
TVBK	TV Kerman	4.99	224	*e*Pn	Pn	02 26 05.2	+1.9
TVBK				*e*		02 27 06.6	
	comp=Z,99nm,0.4s						
NGRK	Negar Kerman	5.26	222	*e*Pn	Pn	02 26 08.9	+1.8
NGRK				*e*		02 27 13.7	
	comp=Z,99nm,0.3s						
YZKH	Yazd	5.32	258	*e*Pn	Pn	02 26 08.7	+0.9
YZKH				IAML		02 27 55.8	
	comp=E,203nm,0.6s						
YZKH	Yazd	5.32	258	*e*Pn	Pn	02 26 08.7	+0.9
ICHK	Chekchek	5.51	257	*e*Pn	Pn	02 26 11.5	+1.0
ICHK				*e*		02 26 36.3	
	comp=Z,99nm,0.5s						
IMEH	Mehriz	5.65	248	*e*Pn	Pn	02 26 14.1	+1.7
IMND	Minoodasht	5.66	311	*e*Pn	Pn	02 26 13.3	+1.1
ANAR	Anarak	5.89	267	*e*Pn	Pn	02 26 16.6	+1.0
IANJ	Anjilo	5.93	290	*e*Pn	Pn	02 26 17.7	+1.6
KHNJ	Kahnooj	6.26	206	*e*Pn	Pn	02 26 22.1	+1.6
IGLO	Ghaloghah	6.35	299	*e*Pn	Pn	02 26 24.1	+2.2
ILAS	Lasjerd	6.66	287	*e*Pn	Pn	02 26 28.3	+2.0
NASN	Na'in	6.71	265	*e*Pn	Pn	02 26 27.7	+0.7
NASN	Na'in	6.71	265	Pn	Pn	02 26 27.7	+0.7
NASN	Na'in	6.71	265	*e*Pn	Pn	02 26 27.7	+0.7
IFIR	Firoozkooh	6.89	289	*e*Pn	Pn	02 26 30.4	+1.1
KBL	Kabul	6.94	80	P	Pn	02 26 31.1	+1.1
KBL	Kabul	6.94	80	Pn	Pn	02 26 31.1	+1.1
KBL	Kabul	6.94	80	*e*Pn	Pn	02 26 32.9	+2.9
IZEF	Zefreh	7.09	266	*e*Pn	Pn	02 26 33.6	+1.4
IRAM	Ramesheh	7.29	258	*e*Pn	Pn	02 26 36.1	+1.3
IPRN	Peran	7.38	293	*e*Pn	Pn	02 26 37.6	+1.6
IKLH	Kolahrood	7.67	270	*e*Pn	Pn	02 26 41.5	+1.4
KLNJ	Kolanjah	8.19	254	*e*Pn	Pn	02 26 49.2	+1.9
IPIR	Pirpir	8.32	266	*e*Pn	Pn	02 26 52.3	+3.2
SHK1	Shahrekord	8.39	264	*e*Pn	Pn	02 26 52.4	+2.4
QALM	Alamut, Qazvin	8.74	291	*e*Pn	Pn	02 26 56.7	+1.9
IRAZ	Razeghan	9.10	284	*e*Pn	Pn	02 27 00.6	+0.9
QABG	Abgarm-Qazvin	9.43	286	*e*Pn	Pn	02 27 03.9	-0.3
HSAM	Samen	10.11	277	*e*Pn	Pn	02 27 16.3	+2.7
TAS	Tashkent	10.23	39	P	Pn	02 27 15.3	+0.3
TAS	Tashkent	10.23	39	Pn	Pn	02 27 15.3	+0.3
NIL	Nilore	10.42	87	P	Pn	02 27 17.6	0.0
NIL	Nilore	10.42	87	Pn	Pn	02 27 17.6	0.0
NIL	Nilore	10.42	87	*e*Pn	Pn	02 27 19.2	+1.6
WSAR	Wadi Sarin	10.54	191	Pn	Pn	02 27 14.9	-4.3
	comp=Z,0.1nm,0.3s,baz=194,slow=4.2,SNR=2.0						
ISRB	Sarab	11.42	295	*e*Pn	Pn	02 27 32.8	+1.4
IHRS	Heris	12.04	297	*e*Pn	Pn	02 27 41.8	+1.8
KK31	Karatay Array	12.15	36	P	Pn	02 27 39.3	-1.9
	comp=Z,5.0nm,0.5s,baz=225,slow=15,SNR=59						
KK31				⇓S	Sn	02 29 50.8	-5.9
	comp=Z,6.7nm,0.7s,baz=222,slow=23,SNR=5.2						
KK31	Karatay Array	12.15	36	P	Pn	02 27 39.3	-1.9
KK31	Karatay Array	12.15	36		Pn	02 27 39.3	-1.9
KKAR	Karatay Array	12.15	36	P	Pn	02 27 39.3	-1.9
KKAR	Karatay Array	12.15	36	Pn	Pn	02 27 39.3	-1.9
KKAR	Karatay Array	12.15	36	Pn	Pn	02 27 39.5	-1.7
IMRD	Marand	13.16	297	*e*Pn	Pn	02 27 58.1	+2.9
KSH	Kashi	13.56	60	P	Pn	02 27 58.0	-2.5
KSH				sP	P	02 28 05.3	-4.4
KSH				S	Sn	02 30 30.0	-1.3
KSH				PcP	PcP	02 33 28.8	+1.8
KSH				pmax	pmax		
	comp=Z,4.0nm,0.4s						
KSH				pmax	pmax		
	comp=Z,490nm,9.8s						
DDFL	Dedoflistskaro	13.97	308	P	Pn	02 28 07.0	+0.9
AAK	Ala-Archa	14.04	46	Pn	Pn	02 28 05.2	-1.9
	comp=Z,0.7nm,0.3s,baz=233,slow=7.6,SNR=13						
AAK				Sn	Sn	02 30 38.4	-4.7
	comp=Z,0.2nm,0.3s,baz=0.0,slow=20,SNR=4.6						
AAK				LR	LR	02 34 11.3	
	comp=Z,172nm,20.8s,baz=350,slow=40						
AAK	Ala-Archa	14.04	46	*ce*P	Pn	02 28 05.7	-1.5
AAK				pmax	pmax		
	comp=Z,15nm,0.6s						
AAK	Ala-Archa	14.04	46	Pn	Pn	02 28 05.1	-2.1

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GNI   Garni              14.35 301 i P    Pn     02 28 09.8 -1.7
GNI   Garni              14.35 301   P    Pn     02 28 14.2 +2.8
TKM2  Tokmak 2           14.87  47 ⇓P     Pn     02 28 19.4 +0.9
      comp=Z,9.6nm,0.8s
TKM2                               ⇓S     Sn     02 30 59.7 -3.7
      comp=Z,3.7nm,0.8s
GROC  Groznyy            15.09 314 eP     Pn     02 28 21.2 -0.1
GROC                                pmax  pmax
      comp=Z,23nm,1.1s
AB31  Akbulak array      15.61 358  P     Pn     02 28 24.2 -3.8
      comp=Z,11nm,1.1s,baz=190,slow=14,SNR=40
ABKAR Akbulak array      15.61 358  Pn    Pn     02 28 28.0  0.0
KARS  Kars               15.71 301  P     P      02 28 34.6 +1.0
MARD  Mardin             16.67 288  Pn    Pn     02 28 39.6 -2.3
RAYN  Ar Rayn            16.75 237  P     Pn     02 28 40.6 -2.3
RAYN                                pmax  pmax
      comp=Z,7.0nm,1.2s
RAYN  Ar Rayn            16.75 237  Pn    Pn     02 28 40.6 -2.3
AKTO  Aktyubinsk         16.90 354  P     Pn     02 28 42.5 -2.0
      comp=Z,0.4nm,0.3s,baz=165,slow=14,SNR=8.8
AKTO                                S     Sn     02 31 39.9  -12
      comp=Z,0.2nm,0.3s,baz=66,slow=19,SNR=3.6
AKTO  Aktyubinsk         16.90 354 ⇓P     Pn     02 28 42.8 -1.7
      comp=Z,3.7nm,0.7s
KBZ   Khabaz             17.16 311  P     Pn     02 28 47.4 -0.5
      comp=Z,0.3nm,0.3s,baz=97,slow=8.1,SNR=16
KBZ   Khabaz             17.16 311ceP     Pn     02 28 47.3 -0.5
KBZ                                 pmax  pmax
      comp=Z,6.0nm,0.8s
KOPT  Kop Dagi           17.40 297  Pn    Pn     02 28 48.2 -3.0
KIV   Kislovodsk         17.41 312⇓eP     Pn     02 28 51.5 +0.4
KIV                                 pmax  pmax
      comp=Z,19nm,1.7s
KIV                                 MLR   MLR
      comp=Z,120nm,15.0s
KIV   Kislovodsk         17.41 312  Pn    Pn     02 28 48.6 -2.4
ASF   Jabal al Asfar     20.08 272  LR    LR     02 37 10.8
      comp=Z,5.5nm,18.1s,baz=198,slow=37
TOKA  Tokat              20.47 296  P     P      02 29 26.4 +0.4
TOKA                                IAmb  IAmb   02 29 29.2
      comp=Z,17nm,1.0s
BVAR  Borovoye Array     20.56  17  P     P      02 29 27.7 +0.9
      comp=Z,5.2nm,0.7s,baz=184,slow=19,SNR=16
BRVK  Borovoye           20.57  17  P     Pn     02 29 29.6 +0.5
BRVK                                pmax  pmax
      comp=Z,23nm,1.1s
BRVK  Borovoye           20.57  17  P     Pn     02 29 29.6 +0.5
BRVK                                IAmb  IAmb   02 29 34.6
      comp=Z,23nm,1.1s
MAKZ  Makanchi           20.78  44 ⇓P     P      02 29 31.0 +1.7
      comp=Z,14nm,1.0s
MAKZ  Makanchi           20.78  44  P     Pn     02 29 31.2 -0.5
MAKZ                                pmax  pmax
      comp=Z,15nm,1.1s
MAKZ  Makanchi           20.78  44  P     P      02 29 31.1 +1.9
MAKZ                                IAmb  IAmb   02 29 36.0
      comp=Z,15nm,1.1s
MK31  Makanchi Array     20.96  45  P     P      02 29 32.7 +1.5
      comp=Z,3.4nm,0.6s,baz=229,slow=8.7,SNR=63
MK31  Makanchi Array     20.96  45ceP     P      02 29 32.4 +1.2
MK31  Makanchi Array     20.96  45  P     P      02 29 31.9 +0.7
MKAR  Makanchi Array     20.96  45  P     P      02 29 32.9 +1.7
      comp=Z,3.7nm,0.7s,baz=237,slow=11,SNR=25
MKAR  Makanchi Array     20.96  45  P     P      02 29 31.9 +0.7
BELG  Belogornoye        20.99 337 i P    P      02 29 32.1 +0.7
BELG                                pmax  pmax
      comp=Z,4.0nm,0.8s
ANN   Anapa              21.15 309 eP     P      02 29 32.3 -0.8
ANN                                eS     Sn     02 33 34.0 -0.9
ANN                                 pmax  pmax
      comp=Z,40nm,0.6s
MMAI  Mount Meron Ar     21.18 275  P     P      02 29 36.6 +2.9
      comp=Z,4.0nm,0.8s,baz=74,slow=15,SNR=3.7
KURBB Kurchatov Arra     21.39  32  P     P      02 29 37.4 +1.7
      comp=Z,5.3nm,0.7s,baz=233,slow=9.5,SNR=37
KURK  Kurchatov          21.50  32 ⇑P     P      02 29 38.1 +1.3
      comp=Z,16nm,1.1s
KURK  Kurchatov          21.50  32 i P    P      02 29 39.0 +2.1
KURK                                pmax  pmax
      comp=Z,20nm,1.3s
KURK  Kurchatov          21.50  32  P     P      02 29 37.6 +0.8
KURK                                IAmb  IAmb   02 29 44.3
      comp=Z,22nm,1.4s
EIL   Elat               22.30 267  P     P      02 29 46.0 +0.4
      comp=Z,10nm,1.2s,baz=106,slow=7.4,SNR=3.2
EIL                                 LR    LR     02 39 35.1
      comp=Z,104nm,18.2s,baz=78,slow=40
VRH   Novokhopyorsk      22.36 327 eP     P      02 29 44.4 -1.7
VRH                                 pmax  pmax
      comp=Z,10.0nm,0.7s
BR131 Keskin Array S     22.53 293  P     P      02 29 48.5 +0.2
BR131                               pmax  pmax
      comp=Z,10.0nm,0.9s
BR131 Keskin Array S     22.53 293  P     P      02 29 48.5 +0.3
BR131                               IAmb  IAmb   02 29 51.8
      comp=Z,9.7nm,0.9s
BRTR  Keskin Array B     22.53 293  P     P      02 29 48.1 -0.1
      comp=Z,3.5nm,0.9s,baz=53,slow=19,SNR=17
BRTR  Keskin Array B     22.53 293  P     P      02 29 48.4 +0.2
BRTR  Keskin Array B     22.53 293  P     P      02 29 48.4 +0.2
ARU   Arti               22.83 357  P     P      02 29 52.8 +1.7
      comp=Z,0.8nm,0.4s,baz=178,slow=12,SNR=9.0
ARU   Arti               22.83 357c iP    P      02 29 51.9 +0.8
ARU                                 S     S      02 34 03.9 +3.6
ARU                                 pmax  pmax
      comp=Z,17nm,1.5s
ARU   Arti               22.83 357  P     P      02 29 52.4 +1.3
ARU                                 IAmb  IAmb   02 29 57.9
      comp=Z,26nm,1.4s
WMQ   Urumqi             23.25  56 eP     P      02 29 57.3 +1.7
WMQ                                 pmax  pmax
      comp=Z,13nm,0.7s
WMQ                                 pmax  pmax
      comp=Z,330nm,6.7s
VSR   Storozhevoye       23.56 325 eP     P      02 29 56.2 -2.4
VSR                                 pmax  pmax
      comp=Z,10.0nm,0.8s
MDUB  Mudurnu            24.48 295  P     P      02 30 06.5 -0.9
LPSR  Galich'ya Gora     24.58 327 eP     P      02 30 07.5 -0.6
LPSR                                pmax  pmax
      comp=Z,10.0nm,0.7s
DGZ   Jazzator, Alta     25.39  43 i P    P      02 30 17.4 +1.7
DGZ                                 pmax  pmax
      comp=Z,14nm,1.8s
ZAA0  Zalesovo Array     26.48  33  P     P      02 30 26.5 +1.2
ZAA0                                IAmb  IAmb   02 30 40.4
      comp=Z,6.1nm,0.9s
ZALV  Zalesovo Beam      26.48  33  P     P      02 30 26.4 +1.1
      comp=Z,4.8nm,0.7s,baz=239,slow=9.5,SNR=16
ZALV  Zalesovo Beam      26.48  33 i P    P      02 30 29.2 +3.9
ZALV                                pmax  pmax
      comp=Z,5.0nm,0.7s
ZALV  Zalesovo Beam      26.48  33  P     P      02 30 26.2 +0.9
OBN   Obninsk            27.30 329deP     P      02 30 34.0 +1.4
OBN                                 PPP   PPP    02 31 23.0
OBN                                 pmax  pmax
      comp=Z,36nm,2.5s
OBN                                 MLR   MLR
      comp=Z,319nm,17.0s
AKASG Malin Array Be     28.62 316  P     P      02 30 44.4 -0.1
      comp=Z,0.2nm,0.2s,baz=109,slow=8.1,SNR=3.9
MLR   Muntele Rosu       29.10 304  P     P      02 30 52.1 +3.1
      comp=Z,2.4nm,0.7s,baz=14,slow=6.4,SNR=6.0
BURAR Bucovina Array     30.07 308  P     P      02 30 57.8 +0.3
BUR08 Bucovina Ar. S     30.09 308  P     P      02 30 58.8 +1.1
BUR08                               IAmb  IAmb   02 31 14.5
      comp=Z,5.9nm,1.4s
VTS   Vitosha            30.63 298  P     P      02 31 02.8 +0.2
VTS                                 pmax  pmax
      comp=Z,2.0nm,0.8s
VTS   Vitosha            30.63 298  P     P      02 31 02.8 +0.2
VTS                                 IAmb  IAmb   02 31 04.5
      comp=Z,2.2nm,0.8s
GTA   Gaotai             31.73  68 eP     P      02 31 16.5 +4.2
GTA                                 pP    sP     02 31 22.8 +5.9
GTA                                 sP    pP     02 31 25.5  +10
GTA                                 pmax  pmax
      comp=Z,3.0nm,1.3s
GTA                                 pmax  pmax
      comp=Z,160nm,5.5s
GTA                                 LR    LR
      comp=N,250nm,17.5s
GTA                                 LR    LR
      comp=E,200nm,17.8s
GTA                                 LR    LR
      comp=Z,220nm,18.5s
KOLS  Kolonicke sedl     32.30 310 eP     P      02 31 20.0 +2.9
KOLS  Kolonicke sedl     32.30 310 eP     P      02 31 20.0 +2.9
FIA1  FINESS Array S     35.58 332  P     P      02 31 46.3 +1.0
FIA1                                IAmb  IAmb   02 31 57.9
      comp=Z,11nm,1.2s
FINES FINESS Array B     35.58 332  P     P      02 31 46.2 +0.9
      comp=Z,2.6nm,0.5s,baz=130,slow=8.8,SNR=26
SONM  Songino Array      36.83  53  P     P      02 31 58.1 +1.7
      comp=Z,0.4nm,0.6s,baz=271,slow=10,SNR=3.7
SONM  Songino Array      36.83  53  IAmb  IAmb   02 32 05.9
      comp=Z,1.1nm,1.2s
CHTO  Chiang Mai         37.08 104  P     P      02 31 57.9 -0.8
CHTO                                pmax  pmax
      comp=Z,11nm,1.3s
CHTO  Chiang Mai         37.08 104  P     P      02 31 57.9 -0.8
CHTO                                IAmb  IAmb   02 32 01.6
      comp=Z,11nm,1.2s
CMAR  Chiang Mai Arr     37.26 104  P     P      02 31 59.8 -0.5
      comp=Z,1.1nm,0.4s,baz=290,slow=8.7,SNR=7.6
KMI   Kunming            37.35  92 ⇑P     P      02 32 01.5 +0.3
KMI                                 pmax  pmax
      comp=Z,8.0nm,0.9s
GERES GERESS Array B     37.86 308  P     P      02 32 05.7 +0.6
      comp=Z,0.6nm,0.7s,baz=99,slow=8.5,SNR=4.1
CLL   Collm              38.61 312 eP     P      02 32 17.0 +5.8
NRIK  Noril'sk           38.75  15ceP     P      02 32 14.9 +2.7
HHC   Hu-ho-hao-te       40.61  65 eP     P      02 32 29.5 +1.3
HHC                                 pmax  pmax
      comp=Z,8.0nm,0.9s
HHC                                 pmax  pmax
      comp=Z,220nm,8.1s
ARCES ARCESS Array B     40.90 342  P     P      02 32 30.7 +0.6
      comp=Z,1.4nm,0.7s,baz=96,slow=1.2,SNR=5.7
ARCES ARCESS Array B     40.90 342  IAmb  IAmb   02 32 35.0
      comp=Z,17nm,1.5s
NB2   NORSAR Subarra     41.82 326  P     P      02 32 37.8  0.0
      comp=Z,2.4nm,0.7s,baz=108,slow=7.9
NB2   NORSAR Subarra     41.82 326  P     P      02 32 37.5 -0.3
NOA   NORSAR Array B     41.82 326  P     P      02 32 38.1 +0.4
      comp=Z,4.0nm,0.8s,baz=109,slow=7.9,SNR=9.7
TOA0  Torodi Ar. Sit     57.15 264  P     P      02 34 34.2 -1.1
TORD  Torodi Ar. Bea     57.15 264  P     P      02 34 34.1 -1.2
      comp=Z,4.8nm,0.8s,baz=61,slow=6.7,SNR=21
TORD  Torodi Ar. Bea     57.15 264  P     P      02 34 34.3 -1.0
KOWA  Kowa               61.21 269  P     P      02 35 02.8 -0.7
BOSA  Boshof             70.47 213  P     P      02 35 59.5 -3.4
      comp=Z,1.7nm,1.0s,baz=131,slow=2.1,SNR=4.0
BOSA                                LR    LR     03 11 52.6
      comp=Z,76nm,18.7s,baz=345,slow=40
BOSA  Boshof             70.47 213  P     P      02 36 01.5 -1.4
BOSA                                pmax  pmax
      comp=Z,8.0nm,1.3s
BOSA  Boshof             70.47 213  P     P      02 36 01.5 -1.4
TOLK  Toolik Lake Re     75.56  11  P     P      02 36 33.8 +1.3
IMAR  Indian Mountai     77.18  14  P     P      02 36 41.7  0.0
C36M  Paulatuk           77.25   2  P     P      02 36 41.7 -0.3
C36M                                IAmb  IAmb   02 36 42.3
      comp=Z,3.6nm,0.7s
BMAR  Burnt Mountain     77.43  10  P     P      02 36 43.4 +0.3
INK   Inuvik             77.80   5  P     P      02 36 45.6 +0.6
INK                                 pmax  pmax
      comp=Z,2.0nm,0.9s
INK   Inuvik             77.80   5  P     P      02 36 45.6 +0.6
INK                                 IAmb  IAmb   02 36 49.7
      comp=Z,1.8nm,0.8s
ILAR  Eielson Array      79.54  12  P     P      02 36 53.4 -1.4
      comp=Z,0.5nm,0.6s,baz=339,slow=4.8,SNR=4.2
BCAR  Beaver Creek A     81.94  10  P     P      02 37 08.3 +0.6
YKA   Yellowknife Ar     84.12 358  P     P      02 37 18.8 -0.1
      comp=Z,1.5nm,0.9s,baz=3.1,slow=5.3,SNR=21
KDAK  Kodiak Island      84.70  17  P     P      02 37 22.4 +0.5
KDAK                                pmax  pmax
      comp=Z,10.0nm,1.3s
KDAK  Kodiak Island      84.70  17  P     P      02 37 22.4 +0.5
WRA   Warramunga Arr     88.01 115  P     P      02 37 37.4 -1.4
      comp=Z,0.9nm,0.6s,baz=320,slow=4.3,SNR=8.8
ASAR  Alice Springs      89.91 119  P     P      02 37 46.2 -1.4
      comp=Z,0.5nm,0.6s,baz=304,slow=5.1,SNR=5.9
```

IDC 27 02:29:52.0±3.9**,5°.55S**×**138°.98E,h0**km**,mb3.4**/1**, mb1 3.4**/3**,mb1mx3.2**/30**,mbtmp3.2**/3**,ML2.5**/2**,Error ellipse: s-maj=139.9km s-min=34.8km az=88.0,Near south coast of Irian Jaya**

```
Code  Station Name        Δ°   AZ°   Phase ID          Time     Res
                                    Op    ISC       h  m  s    ISC
WRA   Warramunga Arr     15.00 197  Pn    Pn     02 33 27.3 +1.8
      0.0nm,0.3s,baz=18,slow=12,SNR=2.8
ASAR  Alice Springs      18.67 195  P     P      02 34 10.7 -1.0
      0.0nm,0.3s,baz=26,slow=11,SNR=5.9
MKAR  Makanchi Array     72.20 323  P     P      02 41 19.0 +0.1
      0.1nm,0.4s,baz=121,slow=6.3,SNR=4.4
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*BGR **27** 02:30:33.6±0.2, 50°.39N×7°.38E, h10km, ML2.0/3, Error ellipse: s-maj=2.2km s-min=1.1km az=125.0*
*LDG **27** 02:30:34.0±0.1, 50°.37N×7°.35E, h8km, Md2.4/2, Ml2.4/20, Error ellipse: s-maj=1.0km s-min=0.9km az=36.0*
*BNS **27** 02:30:34.0±0.4, 50°.38N×7°.37E, h12km±5km, ML1.8*
*UCC **27** 02:30:34.3±0.5, 50°.38N×7°.35E, h9km±1km, ML1.9*
*STR **27** 02:30:39.9±1.4, 50°N±9°×°±°, h5km, MLv1.6/3, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/haslach_taup-2.11 preliminary*

ISC 27 02:30:33.5±0.7**,50°.38N**±0°.01×**7°.34E**±0°.01**,h14**km**,n92, σ1ˢ65**/161**,5C-31D,Germany**

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Code  Station Name        Δ°   AZ°   Phase ID          Time     Res
                                    Op    ISC       h  m  s    ISC
BHE   Schloss Buerre      0.11 255⇓iPg    Pg     02 30 37.1 +0.4
BHE                                 Sg    Sg     02 30 38.9 +0.1
      2µm,0.1s
LAGB  Langenfeld Gru      0.15 263⇓iPg    Pg     02 30 37.8 +0.4
LAGB                                Sg    Sg     02 30 40.1 +0.2
BGG   Burgeitz            0.17 181⇑ePg    Pg     02 30 38.0 +0.4
AHRW  Bad Neuenahr-A      0.23 314⇓iPg    Pg     02 30 39.1 +0.6
AHRW                                Sg    Sg     02 30 42.2 +0.1
KOE   Koeppel             0.26  80⇓ePg    Pg     02 30 39.0  0.0
TDN   Todenfeld           0.32 308 ⇓Pg    Pg     02 30 40.7 +0.6
TDN                                 Sg    Sg     02 30 44.8 +0.3
      78nm,0.2s
STB   Steinbach           0.38 304⇓ePg    Pg     02 30 42.0 +0.7
FACH  Fachingen           0.42  93⇓iPg    Pg     02 30 41.9  0.0
FACH                                Sg    Sg     02 30 47.7 +0.2
WBS   Wahnbachtalspe      0.43 355 ⇑Pg    Pg     02 30 42.5 +0.4
WBS                                 Sg    Sg     02 30 47.8  0.0
      198nm,0.2s
HILG  Hillesheim          0.43 258⇓ePg    Pg     02 30 42.6 +0.5
GWBD  Espenschied/He      0.45 126 ⇓Pg    Pg     02 30 43.0 +0.6
GWBD                                P*    Pb     02 30 43.6 +0.4
GWBD                                Sg    Sg     02 30 48.3 -0.1
BIW   Bindweide           0.47  42 ⇑Pg    Pg     02 30 42.3 -0.6
BIW                                 Sg    Sg     02 30 48.0 -1.2
ABH   Alteburg            0.52 165  P     Pg     02 30 44.3 +0.6
ABH                                 Pg    Pb     02 30 45.3 +1.0
ABH                                 Sg    Sg     02 30 50.9 +0.3
ABH   Alteburg            0.52 165 ⇑Pg    Pg     02 30 44.2 +0.6
ABH                                 PmP          02 30 45.5
ABH                                eSg    Sg     02 30 50.4 -0.1
ABH                                 S*    Sb     02 30 52.8 +1.1
LOH   Wallersheim-Lo      0.55 249 ⇓Pg    Pg     02 30 44.8 +0.5
LOH                                 Sg    Sg     02 30 52.0 +0.3
      54nm,0.1s
BNS   Bensberg            0.59 350 ePg    Pg     02 30 45.7 +0.6
GWBC  Aumenau             0.59  88 ⇑Pg    Pg     02 30 45.2 +0.1
GWBC                                S*    Sg     02 30 54.1 +1.1
OLFT  Oleftalsperre       0.60 281 ePg    Pg     02 30 45.8 +0.6
OLFT                                PmP          02 30 47.2
OLFT                               eSg    Sg     02 30 54.1 +1.0
HOBG  Hohbusch            0.60 360 ePg    Pg     02 30 45.6 +0.3
BLI   Bleialf             0.69 258  Pg    Pg     02 30 47.1 +0.1
BLI                                 Sg    Sg     02 30 56.4 +0.4
PLH   Pulheim             0.71 332  Pg    Pg     02 30 47.8 +0.6
PLH                                eSg    Sg     02 30 56.6  0.0
PLH                                 SmS          02 30 58.6
GSH   Grosshau            0.71 301  Pg    Pg     02 30 47.9 +0.6
GSH                                 PmP          02 30 48.9
GSH                                eSg    Sg     02 30 57.3 +0.7
      38nm,0.2s
KLL   Kalltalsperre       0.71 293 ePg    Pg     02 30 47.5 +0.3
TNS   Taunus Mts          0.73 102 ⇓Pg    Pg     02 30 47.5 -0.2
TNS                                eSg    Sg     02 30 56.2 -1.0
DREG  Dreilaegerbach      0.76 292 ePg    Pg     02 30 48.7 +0.4
RIVT  Riveris             0.77 209  Pg    Pg     02 30 48.0 -0.3
RIVT                                PmP          02 30 48.8
RIVT                               eSg    Sg     02 30 58.3 -0.1
BODE  Bodenheim           0.77 127  Pg    Pg     02 30 49.0 +0.5
BODE                                SmS          02 31 01.5
BHOU  Houvegnez           0.85 269 dP     Pg     02 30 49.9 -0.1
ENTS  Ennepetalsperr      0.86   3  Pg    Pg     02 30 49.6 -0.6
ENTS                               ePg    Pb     02 30 50.1 -0.2
ENTS                                PmP          02 30 50.5
ENTS                               eSg    Sg     02 31 01.2 -0.3
IMS   Imsbach             0.87 155  Pg    Pg     02 30 50.6 +0.3
IMS                                 PmP          02 30 51.5
IMS                                 SmS          02 31 04.0
MEM   Membach             0.88 286 dP     Pb     02 30 50.9 +0.3
MEM                                dS     Sg     02 31 02.1  0.0
      comp=E,20nm,0.0s
MEM   Membach             0.88 286  Pg    Pb     02 30 50.7 +0.1
MEM                                 Sg    Sg     02 31 02.1  0.0
MEM                                 SmS          02 31 04.4
WBB   Darmstadt           1.01 122  Pg    Pb     02 30 53.0 +0.3
DUP   Duppenweiler        1.03 200  PmP          02 30 54.1
WLF   Walferdange         1.05 227 dP     Pb     02 30 52.6 -0.8
WLF                                dS     Sb     02 31 07.8 +0.8
WLF   Walferdange         1.05 227  Pg    Pb     02 30 52.6 -0.8
WLF                                 PmP          02 30 53.8
WLF                                eSg    Sb     02 31 08.1 +1.2
WLF                                 SmS          02 31 08.4
SORT  Sorpetalsperre      1.05  22 ePg    Pb     02 30 53.6 +0.1
SORT                                Pg    Pb     02 30 53.6 +0.1
SORT                               eSg    Sb     02 31 07.3 +0.2
      comp=E,66nm,0.3s
SORT                                SmS          02 31 07.5
      comp=E,66nm,0.3s
BUG   Bochum--Univer      1.06 358 ePg    Pb     02 30 53.9 +0.2
BUG                                eSg    Sb     02 31 06.8 -0.6
KASTN Kahler Asten        1.07  39 ePg    Pb     02 30 53.1 -0.8
KASTN                              eSg    Sb     02 31 06.8 -0.9
BEBN  Eben Emael          1.14 292 dP     Pb     02 30 55.7 +0.8
BEBN                               dSg    Sb     02 31 10.9 +1.4
BLCH  La Chartreuse       1.14 284 dP     Pb     02 30 55.9 +0.9
BLCH                               dS     Sb     02 31 10.6 +1.0
BSTI  Sart Tilman         1.15 281 dP     Pb     02 30 56.0 +0.8
KTD   Kalmit              1.17 155 eSg    Sb     02 31 10.5 +0.1
WBA   Furth               1.20 127  Pg    Pn     02 30 56.5 +0.7
SWS   Schriesheim-Wi      1.26 135  Pg    Pn     02 30 57.4 +0.8
SWS                                 Sg    Sb     02 31 13.2 +0.3
BCLA  Clavier             1.30 273 κP     Pn     02 30 58.5 +1.3
BCLA                               dS     Sb     02 31 15.8 +1.4
      comp=N,25nm,0.0s
WBG   Bieber              1.30  98  Pg    Pn     02 30 57.7 +0.4
WBG                                 PmP          02 30 58.8
PEB   Petersbachel        1.34 169  Pn    Pn     02 30 57.7 -0.1
PEB                                 Pg    Pb     02 30 58.8 +0.5
PEB                                 Sg    Sb     02 31 16.1 +0.8
RCHB  Rochefort           1.37 261 dP     Pn     02 30 59.6 +1.4
RCHB                               dS     Sn     02 31 17.0 +0.8
BGES  Gesves              1.44 271 dP     Pn     02 30 60.0 +0.8
GIVF  Givet               1.64 261 ePg    Pb     02 31 04.2 +0.7
GIVF                               eSg    Sb     02 31 25.1 +1.1
      comp=N,22nm,0.4s
BMRD  Maredsous           1.65 268 dP     Pn     02 31 03.9 +1.9
BMRD                               dS     Sn     02 31 24.4 +1.4
DOU   Dourbes             1.79 262 dP     Pn     02 31 06.1 +2.2
DOU                                dS     Sb     02 31 28.8 +0.6
SIND  Sindeldorf          1.79 124  Pn    Pn     02 31 04.4 +0.4
SIND                                Pg    Pb     02 31 07.6 +1.5
HROE  Hohe Rhon--Fla      1.81  84 ePg    Pb     02 31 06.9 +0.5
HROE                               eSg    Sb     02 31 30.8 +1.9
UCC   Uccle               1.94 284 eSg    Sg     02 31 35.9 -0.1
LBG   Lerchenberg         1.96 151  Sn    Sn     02 31 30.2 -0.6
OPP   Oppenau             1.96 163  Pn    Pb     02 31 10.1 +1.1
OPP   Oppenau             1.96 163  Pg    Pb     02 31 10.1 +1.1
WLS   Welschbruch         1.97 180  Pn    Pb     02 31 09.6 +0.4
WLS                                 Sn    Sn     02 31 33.1 +2.1
CDF   Champ du Feu        1.97 181 ePg    Pb     02 31 09.8 +0.6
CDF                                eSg    Sb     02 31 34.8 +1.2
      comp=N,10nm,0.4s
GTTG  Gottingen           2.03  54 eSg    Sb     02 31 37.3 +2.1
BAIF  Baives              2.04 262 ePg    Pb     02 31 11.5 +1.3
BAIF                               eSg    Sb     02 31 36.1 +0.7
      comp=N,8.6nm,0.3s
PAGF  Fort de Pagny       2.11 211 ePg    Pb     02 31 13.0 +1.5
PAGF                               eSg    Sb     02 31 39.7 +2.2
      comp=N,4.6nm,0.2s
BFO   Black Forest        2.15 162  Pg    Pb     02 31 14.4 +2.2
BFO                                eSg    Sb     02 31 40.9 +2.2
ECH   Echery              2.17 183  Pn    Pn     02 31 11.9 +2.7
ECH   Echery              2.17 183  Pg    Pb     02 31 12.9 +0.4
ECH                                eSg    Sg     02 31 42.7 -0.5
SAVF  Savonnieres en      2.28 220 ePg    Pb     02 31 16.1 +1.7
      baz=40
SAVF                               eSg    Sb     02 31 45.5 +3.0
      comp=N,4.7nm,0.2s,baz=41
MEZF  Maizieres J’vi      2.40 219 ePn    Pn     02 31 11.1 -1.2
MEZF  Maizieres J’vi      2.40 219 ePg    Pb     02 31 18.4 +2.0
      baz=39
MEZF                               eSn    Sn     02 31 38.9 -2.6
MEZF                               eSg    Sg     02 31 50.0 -0.6
      comp=N,6.1nm,0.4s
CLZ   Clausthal           2.41  51 ePg    Pb     02 31 18.3 +1.7
CLZ                                eSg    Sb     02 31 49.0 +2.9
KIZ   Kirchzarten         2.46 171  Pg    Pb     02 31 19.8 +2.4
HAU   Haudompre           2.46 196 ePn    Pn     02 31 11.4 -1.8
HAU   Haudompre           2.46 196 ePg    Pb     02 31 19.3 +1.8
HAU                                eSn    Sn     02 31 40.5 -2.6
HAU                                eSg    Sb     02 31 51.3 +3.6
      comp=N,4.9nm,0.2s
FELD  Feldberg im Sc      2.54 170  Pg    Pb     02 31 21.4 +2.5
HINF  Hinteralfeld        2.58 187 ePg    Pb     02 31 20.7 +1.1
HINF                               eSg    Sb     02 31 54.4 +3.1
      comp=N,4.7nm,0.3s
GUT   Gutenstein          2.59 153  Pn    Pn     02 31 16.1 +1.1
GUT                                 Sn    Sn     02 31 44.7 -1.5
SFTF  Sexfontaines        2.65 216 ePg    Pb     02 31 22.6 +1.9
SFTF                               eSg    Sb     02 31 56.8 +3.8
      comp=N,5.2nm,0.3s
CLL   Collm               3.71  73 eSg    Sg     02 32 31.0 -1.5
CABF  La Chapelle         3.86 193 ePn    Pn     02 31 32.0 -0.5
CABF  La Chapelle         3.86 193 ePg    Pg     02 31 46.3 -1.1
CABF                               eSg    Sg     02 32 34.8 -2.7
      comp=N,0.4nm,0.2s
LOR   Lormes              3.87 218 ePn    Pn     02 31 31.1 -1.5
LOR   Lormes              3.87 218 ePg    Pb     02 31 45.5 +4.0
      baz=37
LOR                                eSn    Sn     02 32 15.2 -2.6
      comp=N,1.4nm,0.2s
LOR                                eSg    Sg     02 32 35.3 -2.4
      comp=N,1.5nm,0.3s,baz=38
SSF   Saint Saulge        4.18 219 ePn    Pn     02 31 35.8 -1.0
SSF   Saint Saulge        4.18 219 ePg    Pb     02 31 51.2 +4.4
SSF                                eSn    Sn     02 32 21.6 -3.8
SSF                                eSg    Sg     02 32 45.7 -1.9
      comp=N,3.1nm,0.5s
SMF   Signal de Mont      4.40 213 ePn    Pn     02 31 38.7 -1.2
SMF   Signal de Mont      4.40 213 ePg    Pb     02 31 55.2 +4.7
SMF                                eSn    Sn     02 32 28.0 -2.9
SMF                                eSg    Sg     02 32 51.5 -3.2
      comp=N,0.7nm,0.3s
AVF   Avril sur Loir      4.46 218 ePn    Pn     02 31 41.4 +0.8
AVF                                eSn    Sn     02 32 29.3 -3.0
      comp=N,0.7nm,0.3s
BGF   Bois d'Agland       4.85 220 ePg    Pg     02 32 03.8 -2.6
BGF                                eSn    Sn     02 32 37.4 -4.6
BGF                                eSg    Sg     02 33 06.3 -2.9
      comp=N,3.4nm,0.4s
LDF   La Druitiere        5.18 253 eSg    Sg     02 33 16.2 -3.5
      comp=N,0.7nm,0.4s
TCF   Toulx Ste Croi      5.33 222 ePn    Pn     02 31 51.3 -1.4
TCF                                eSn    Sn     02 32 49.0 -4.9
      comp=N,1.1nm,0.2s
FLN   La Foliniere        5.34 255 ePn    Pn     02 31 51.4 -1.3
FLN                                eSn    Sn     02 32 49.2 -4.8
      comp=N,0.1nm,0.2s
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*NEIC **27** 02:39:52.8±1.9, 32°.82S±0°.10×179°.9E±0°.2, h201km±6km, mb4.4/19, Error ellipse: s-maj=22.4km s-min=12.1km az=110.0*
*IDC **27** 02:39:55.0±2.4, 32°.95S×179°.96E, h221km±22km, mb4.0/8, mb1 4.1/11, mb1mx3.9/31, mbtmp4.6/11, Error ellipse: s-maj=20.0km s-min=18.1km az=42.0*

*WEL **27** 02:39:56.0±0.5, 33°S±8°×18°0E±2°0, h140^{km}±31^{km}, M4.4/30, mB4.9/20, MLv5.1/30, Mw(mB)4.2/20, Error ellipse: s-maj=0.0km s-min=0.0km az=111.6*

*NOU **27** 02:40:41.9, 36°.48S×178°.02E, h241^{km}, MLv4.4, Off E. Coast of N. Island, N.Z.*

ISC 27 02:39:52.9±0.5, **32°.84S**±0°.05×**180°.00W**±0°.09, **h200**^{km}, **n128**, σ**1^{s}78**/144, **mb4.4**/17, **South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	3.99	27	P	Pn	02 40 55.7	+1.1
GLKZ				S	Sn	02 41 43.3	+0.4
RAO	Raoul Island	4.00	27	S	Sn	02 41 45.3	+2.1
	312nm,0.3s,baz=156,slow=21,SNR=6.9						
RAO	Raoul Island	4.00	27	Pn	Pn	02 40 54.7	0.0
RIZ	Raoul Island	4.00	27	S	Sn	02 41 42.7	-0.6
MXZ	Matakaoa Point	4.91	196	P	Pn	02 41 10.0	+4.0
MXZ				S	Sn	02 42 03.5	-0.3
WMGZ	Waiomatatini S	5.13	194	P	Pn	02 41 13.9	+5.0
WMGZ				S	Sn	02 42 11.2	+2.2
HAZ	Te Kaha	5.23	200	P	Pn	02 41 14.6	+4.5
HAZ				S	Sn	02 42 14.9	+3.7
PKGZ	Pakihiroa	5.28	197	P	Pn	02 41 15.7	+4.9
PUZ	Puketiti	5.41	195	P	Pn	02 41 18.5	+6.0
PUZ				S	Sn	02 42 15.7	+0.3
RUGZ	Raukumara Rang	5.45	200	P	Pn	02 41 18.7	+5.6
RUGZ				S	Sn	02 42 17.0	+0.4
TWGZ	Tauwhareparae	5.57	197	P	Pn	02 41 20.5	+5.9
TWGZ				S	Sn	02 42 20.5	+1.2
OPRZ	Ohinepanea	5.73	208	P	Pn	02 41 21.3	+4.8
CNGZ	Carnagh Statio	5.82	194	P	Pn	02 41 19.2	+1.5
CNGZ				S	Sn	02 42 27.5	+2.6
MWZ	Matawai	5.84	199	P	Pn	02 41 20.3	+2.2
MWZ				S	Sn	02 42 25.7	+0.3
TKGZ	Te Karaka	5.86	197	S	Sn	02 42 26.6	+0.9
URZ	Urewera	5.90	203	P	Pn	02 41 20.5	+1.8
	3.3nm,0.3s,baz=264,slow=3.0,SNR=17						
URZ				S	Sn	02 42 26.2	-0.5
	50nm,0.3s,baz=64,slow=22,SNR=16						
URZ	Urewera	5.90	203	P	Pn	02 41 21.5	+2.7
URZ				S	Sn	02 42 26.3	-0.5
MUGZ	Murupara	6.21	204	P	Pn	02 41 24.2	+1.5
MUGZ				S	Sn	02 42 35.8	+1.8
RTZ	Ruatahuna	6.26	202	P	Pn	02 41 24.4	+0.8
RTZ				S	Sn	02 42 34.2	-1.2
SNGZ	Shannon Statio	6.31	199	P	Pn	02 41 25.3	+1.2
SNGZ				S	Sn	02 42 37.0	+0.6
MTHZ	Maungataniwha	6.52	202	P	Pn	02 41 28.2	+1.3
MTHZ				S	Sn	02 42 41.5	+0.1
TLZ	Tolley Road	6.57	212	P	Pn	02 41 32.7	+5.2
WHHZ	Waihua	6.62	199	P	Pn	02 41 31.8	+3.8
WHHZ				S	Sn	02 42 44.3	+0.8
MRHZ	Matea Rd	6.65	205	P	Pn	02 41 30.8	+2.3
MRHZ				S	Sn	02 42 45.2	+0.8
NMHZ	Naumai	6.76	202	P	Pn	02 41 32.4	+2.4
NMHZ				S	Sn	02 42 47.4	+0.4
ARHZ	Aropaoanui	6.86	200	P	Pn	02 41 32.6	+1.5
ARHZ				S	Sn	02 42 48.8	-0.4
BKZ	Black Stump Fm	6.92	203		Pn	02 41 32.0	0.0
BKZ	Black Stump Fm	6.92	203	P	Pn	02 41 32.9	+0.9
BKZ				S	Sn	02 42 49.9	-0.9
RITZ	Rihia Road	6.98	208	P	Pn	02 41 37.0	+4.2
HIZ	Hauiti	7.04	215	P	Pn	02 41 39.1	+5.5
MCHZ	McNeill Hill	7.11	201	P	Pn	02 41 37.1	+2.6
MCHZ				S	Sn	02 42 55.6	+0.4
TMVZ	Te Maari	7.16	208	P	Pn	02 41 37.0	+1.7
ETVZ	East Tongariro	7.18	208	P	Pn	02 41 37.0	+1.5
KWHZ	Kaweka Forest	7.18	203	P	Pn	02 41 37.5	+2.1
KWHZ				S	Sn	02 42 56.4	-0.4
WTVZ	West Tongariro	7.21	208	P	Pn	02 41 39.6	+3.7
OTVZ	Oturere	7.22	208	P	Pn	02 41 36.9	+0.8
OTVZ				S	Sn	02 42 58.2	+0.2
TWVZ	Taurewa	7.23	209	P	Pn	02 41 38.9	+2.7
NGZ	Ngauruhoe	7.26	208	P	Pn	02 41 38.9	+2.4
TUVZ	Tukino	7.32	208	P	Pn	02 41 40.1	+2.8
FWVZ	Far West T-bar	7.34	208	P	Pn	02 41 39.8	+2.0
BHHZ	Black Hill Sta	7.36	205	P	Pn	02 41 38.1	+0.4
BHHZ				S	Sn	02 42 59.1	-2.1
KAHZ	Kahuranaki	7.38	199	P	Pn	02 41 37.8	-0.3
KAHZ				S	Sn	02 43 00.4	-1.2
WNVZ	Wahianoa	7.39	208	P	Pn	02 41 40.1	+1.8
KRHZ	Kereru	7.39	202	P	Pn	02 41 37.0	-1.2
KRHZ				S	Sn	02 42 59.4	-2.5
MOVZ	Moawhango	7.40	206	P	Pn	02 41 39.0	+0.7
MOVZ				S	Sn	02 43 00.5	-1.6
PKVZ	Pokaka	7.46	209	P	Pn	02 41 40.9	+1.9
MTVZ	Mangateitei	7.49	208	P	Pn	02 41 36.5	-3.0
VRZ	Vera Road	7.57	213	P	Pn	02 41 44.6	+4.1
PXZ	Pawanui	7.61	199	P	Pn	02 41 40.2	-0.8
PNHZ	Pukenui	7.69	202	P	Pn	02 41 40.5	-1.6
PRHZ	Porangahau	7.89	199	P	Pn	02 41 44.6	0.0
TSZ	Takapari Road	7.90	203	P	Pn	02 41 45.2	+0.3
WAZ	Wanganui	8.00	209	P	Pn	02 41 47.2	+1.2
NEZ	North Egmont	8.00	215	P	Pn	02 41 50.8	+4.7
DVHZ	Dannevirke	8.06	201	P	Pn	02 41 47.7	+0.9
KHEZ	Kahui Hut	8.06	215	P	Pn	02 41 51.1	+4.2
POWZ	Post Office Ro	8.27	203	P	Pn	02 41 49.7	+0.1
PRWZ	Pori Road	8.35	202	P	Pn	02 41 51.3	+0.7
BFZ	Birch Farm	8.38	200	Pn	Pn	02 41 51.1	0.0
BFZ	Birch Farm	8.38	200	P	Pn	02 41 49.5	-1.5
MRZ	Mangatainoka R	8.57	203	P	Pn	02 41 51.0	-2.5
TIWZ	Tintock	8.58	201	P	Pn	02 41 52.9	-0.7
HOWZ	Holdsworth Sta	8.81	203	P	Pn	02 41 54.4	-2.1
OGWZ	Otaki Gorge	8.85	205	P	Pn	02 41 54.7	-2.4
TMWZ	Te Maipa	8.88	201	P	Pn	02 41 54.4	-3.1
KIW	Kapiti Island	8.98	206	P	Pn	02 41 56.2	-2.6
MTW	Mount Morrison	9.05	202	P	Pn	02 41 57.9	-1.8
CAW	Cannon Point	9.14	204	P	Pn	02 41 59.1	-1.8
MSWZ	Moikau Station	9.36	203	Pn	Pn	02 42 02.9	-0.8
PLWZ	Palliser	9.50	202	Pn	Pn	02 42 04.7	-0.8
THZ	Tophouse	10.54	210	Pn	Pn	02 42 17.7	-1.4
LTZ	Lake Taylor	11.65	209	Pn	Pn	02 42 31.4	-1.8
OXZ	Oxford	12.20	209	Pn	Pn	02 42 38.1	-2.0
RPZ	Rata Peaks	12.92	210	P	Pn	02 42 47.0	-2.3
	2.9nm,0.3s,baz=269,slow=0.2,SNR=9.7						
RPZ				S	S	02 44 58.7	-15
	4.7nm,0.3s,baz=327,slow=23,SNR=18						
ODZ	Otahua Downs	14.18	208	Pn	Pn	02 43 03.3	-1.6
MSVF	Nonsavu	15.15	353	P	P	02 43 19.1	+1.5
	3.4nm,0.3s,baz=212,slow=6.6,SNR=32						
MSVF	Nonsavu	15.15	353		P	02 43 18.3	+0.7
MSVF				IAmb	IAmb	02 43 20.6	
	comp=Z,20nm,0.7s						
WHZ	Wether Hill Ro	16.00	212	P	P	02 43 25.4	-1.2
DZM	Mont Dzumac	16.10	308	P	Pn	02 43 29.6	+1.0
	comp=Z,0.3nm,0.3s,baz=112,slow=20,SNR=5.3						
ARMA	Armidale	24.25	268	P	P	02 44 52.7	+1.0
ARMA				IAmb	IAmb	02 45 10.9	
	comp=Z,8.9nm,1.1s						
EIDS	Eidsvold	26.29	279	P	P	02 45 10.2	+0.2
EIDS				IAmb	IAmb	02 45 11.2	
	comp=Z,5.1nm,0.8s						
STKA	Stephens Creek	32.34	261	P	P	02 46 04.4	+1.0
	comp=Z,3.6nm,0.8s,baz=94,slow=10,SNR=8.4						
STKA	Stephens Creek	32.34	261	IAmb	IAmb	02 46 05.1	
	comp=Z,1.4nm,1.0s						
CTA	Charters Tower	32.63	284	P	P	02 46 07.0	+1.0
	comp=Z,10nm,0.5s,baz=114,slow=10,SNR=42						
CTAO	Charters Tower	32.63	284	P	P	02 46 05.8	-0.2
BBOO	Buckleboo	36.72	258	P	P	02 46 40.4	-0.6
BBOO				IAmb	IAmb	02 46 41.2	
	comp=Z,7.9nm,1.1s						
COEN	Coen	38.41	291	P	P	02 46 55.0	-0.3
AS31	Alice Springs	41.35	271	P	P	02 47 19.0	-0.4
ASAR	Alice Springs	41.35	271	P	P	02 47 18.8	-0.6
	comp=Z,9.3nm,0.7s,baz=110,slow=7.6,SNR=92						
ASAR	Alice Springs	41.35	271	P	P	02 47 18.6	-0.9
WR0	Warramunga Arr	42.39	276	P	P	02 47 27.1	-0.8
WR0				IAmb	IAmb	02 47 27.4	
	comp=Z,7.5nm,0.7s						
WB2	Warramunga Arr	42.55	276	P	P	02 47 28.4	-0.8
WB2				IAmb	IAmb	02 47 29.1	
	comp=Z,14nm,0.7s						
WRA	Warramunga Arr	42.57	276	P	P	02 47 28.3	-1.0
	comp=Z,10nm,0.6s,baz=115,slow=7.6,SNR=117						
WB0	Warramunga Arr	42.60	276	P	P	02 47 28.7	-0.8
WB0				IAmb	IAmb	02 47 29.4	
	comp=Z,15nm,0.7s						
FORT	Forrest	43.82	258	P	P	02 47 38.2	-1.0
FITZ	Fitzroy Crossi	50.71	273	P	P	02 48 31.9	-0.6
QSPA	South Pole Qui	57.27	180	P	P	02 49 20.4	+1.0
BELA	Belgrano 2	67.60	173	P	P	02 50 27.8	+0.4
SNAA	Sanae	75.76	179	P	P	02 51 16.7	+0.5
SNAA	Sanae	75.76	179	P	P	02 51 16.1	-0.1
VNA3	Neumayer Olymp	75.98	177	P	P	02 51 18.1	+0.8
VNA2	Neumayer--Watz	76.39	178	P	P	02 51 20.7	+1.0
	baz=175,slow=4.5						
VNA1	Neumayer--Stat	76.63	177	P	P	02 51 22.0	+1.1
PLCA	Paso Flores	82.08	134	P	P	02 51 53.5	+2.4
	comp=Z,1.4nm,0.8s,baz=197,slow=11,SNR=3.6						
KSRS	Korea Array	85.13	321	P	P	02 52 06.9	+0.7
	comp=Z,1.7nm,0.6s,baz=142,slow=6.3,SNR=4.2						
PETK	Petropavlovsk-	87.77	347	P	P	02 52 18.6	-0.1
	comp=Z,4.8nm,0.8s,baz=125,slow=6.5,SNR=6.3						
PFO	Pinyon Flats O	89.10	48	P	P	02 52 26.4	+0.8
	comp=Z,3.1nm,0.9s,baz=184,slow=2.2,SNR=4.5						
PFO	Pinyon Flats O	89.10	48	IAmb	IAmb	02 52 28.4	
	comp=Z,3.5nm,1.0s						
GLA	Glamis	89.78	50	P	P	02 52 30.0	+1.4
GLA				IAmb	IAmb	02 52 32.1	
	comp=Z,6.3nm,0.8s						
NVAR	Mina Array Bea	91.18	44	P	P	02 52 36.0	+0.7
	comp=Z,0.8nm,0.8s,baz=230,slow=9.0,SNR=5.3						
NVAR	Mina Array Bea	91.18	44	P	P	02 52 35.4	+0.2
HHC	Hu-ho-hao-te	96.72	315	*e*P	P	02 52 59.8	-0.7
HHC				pmax	pmax		
	comp=Z,4.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,330nm,8.4s						
KSH	Kashi	119.99	300	PKP	PKPdf	02 58 14.5	-5.1
KURK	Kurchatov	121.48	313		PKPdf	02 58 19.7	-2.2
KURBB	Kurchatov Arra	121.51	313	PKhKP	PKPpre	02 58 18.6	
	comp=Z,0.2nm,0.4s,baz=112,slow=1.9,SNR=2.8						
ARCES	ARCESS Array B	140.58	346	PKhKP	PKPpre	02 58 50.5	
	comp=Z,3.9nm,1.0s,baz=59,slow=1.8,SNR=7.2						
KBZ	Khabaz	144.97	301	PKP	PKPbc	02 59 04.9	-0.8
	comp=Z,1.1nm,0.7s,baz=117,slow=9.0,SNR=4.0						
MARD	Mardin	146.51	289		PKPdf	02 59 08.5	-0.5
FINES	FINESS Array B	146.79	337	PKPbc	PKPdf	02 59 09.2	+0.8
	comp=Z,7.0nm,0.5s,baz=45,slow=4.3,SNR=69						
FINES	FINESS Array B	146.79	337	PKPbc	PKPdf	02 59 08.6	+0.2
NB2	NORSAR Subarra	150.85	349	PKP	PKPbc	02 59 19.6	-1.3
	comp=Z,1.3nm,0.5s,baz=16,slow=2.6						
NOA	NORSAR Array B	150.85	349	PKPbc	PKPbc	02 59 19.7	-1.2
	comp=Z,1.5nm,0.5s,baz=17,slow=4.1,SNR=9.6						
LIC	Lamto	153.11	169	*e*PKIKP	PKPbc	02 59 27.4	0.0
	comp=Z,16nm,0.7s						
KIC	Kosan Boka	153.29	169	*e*PKIKP	PKPbc	02 59 27.8	0.0
	comp=Z,19nm,1.1s						
TIC	Toumodi	153.52	169	*e*PKIKP	PKPbc	02 59 28.2	-0.1
DBIC	Dimbokro	153.57	169	PKPbc	PKPbc	02 59 28.1	-0.3
	comp=Z,2.9nm,0.8s,baz=146,slow=4.6,SNR=6.0						
TORD	Torodi Ar. Bea	160.34	185	PKPab	PKPab	03 00 10.0	-0.5
	comp=Z,3.8nm,0.9s,baz=163,slow=4.0,SNR=11						
TORD	Torodi Ar. Bea	160.34	185	PKPdf	PKPdf	02 59 27.6	-1.4
TORD					PKPab	03 00 10.1	-0.5

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*IDC **27** 03:08:31.0±0.7, 3°.03S×142°.63E, h0^{km}, mb4.2/9, mb1 4.4/10, mb1mx4.0/38, mbtmp4.2/10, ML3.8/1, MS3.5/6, Ms1 3.5/6, ms1mx3.1/35, Error ellipse: s-maj=25.7km s-min=17.8km az=87.0*

*NEIC **27** 03:08:32.0±1.2, 3°.0S±0°.1×142°.6E±0°.1, h10^{km}±1^{km}, mb4.6/22, Error ellipse: s-maj=25.0km s-min=19.3km az=42.0*

ISC 27 03:08:34.7±0.6, **3°.03S**±0°.09×**142°.6E**±0°.1, **h27**^{km}, **n53**, σ**0^{s}75**/44, **mb4.4**/17, **MS3.5**/5, **Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WB0	Warramunga Arr	18.47	205	P	P	03 12 48.5	-0.2
WR0	Warramunga Arr	18.58	204	P	P	03 12 47.6	-2.2
WR0				IAmb	IAmb	03 13 06.6	
	comp=Z,14nm,0.8s						
WB2	Warramunga Arr	18.64	205	P	P	03 12 50.3	-0.3
WRA	Warramunga Arr	18.65	205	P	P	03 12 49.2	-1.4
	comp=Z,0.3nm,0.3s,baz=25,slow=12,SNR=23						
WRA				LR	LR	03 20 24.7	
	comp=Z,163nm,18.4s,baz=10.0,slow=38						
AS31	Alice Springs	22.18	202	P	P	03 13 28.2	-0.7
ASAR	Alice Springs	22.18	202	P	P	03 13 27.8	-1.1
	comp=Z,4.3nm,0.8s,baz=32,slow=9.8,SNR=33						
ASAR				S	S	03 17 32.1	+0.1
	comp=Z,1.2nm,1.0s,baz=12,slow=28,SNR=3.8						
ASAR				LR	LR	03 22 56.9	
	comp=Z,121nm,20.6s,baz=18,slow=39						
TOLI2	Tolitoli	22.20	280	P	P	03 13 28.4	-0.9
TOLI2				IAmb	IAmb	03 13 39.0	
	comp=Z,46nm,1.8s						
FITZ	Fitzroy Crossi	22.38	227	P	P	03 13 31.6	+0.5
	comp=Z,7.6nm,0.8s,baz=70,slow=6.9,SNR=15						
FITZ	Fitzroy Crossi	22.38	227	P	P	03 13 31.2	+0.1
FITZ				IAmb	IAmb	03 13 34.2	
	comp=Z,9.6nm,0.9s						
EIDS	Eidsvold	23.66	161	P	P	03 13 45.7	+1.6
EIDS				IAmb	IAmb	03 13 48.3	
	comp=Z,15nm,1.0s						
STKA	Stephens Creek	28.71	182	P	P	03 14 30.2	+0.4
	comp=Z,2.9nm,0.8s,baz=348,slow=11,SNR=8.3						
STKA				LR	LR	03 27 22.5	
	comp=Z,155nm,19.4s,baz=21,slow=39						
STKA	Stephens Creek	28.71	182	P	P	03 14 29.6	-0.2
DZM	Mont Dzumac	29.90	131	P	P	03 14 40.2	-0.3
	comp=Z,5.6nm,1.0s,baz=34,slow=2.3,SNR=3.2						
DZM				LR	LR	03 24 37.2	
	comp=Z,137nm,20.0s,baz=64,slow=32						
DZM	Mont Dzumac	29.90	131	IAmb	IAmb	03 14 40.9	
	comp=Z,41nm,1.5s						
BBOO	Buckleboo	30.26	191	P	P	03 14 43.1	-0.4
FORT	Forrest	30.84	205	P	P	03 14 48.9	+0.2
H11S3	WAKE ISLAND Hy	31.93	47	T	T	03 48 35.4	
	baz=230,slow=75,SNR=22						
H11S2	WAKE ISLAND Hy	31.94	47	T	T	03 48 35.9	
	baz=230,slow=75,SNR=21						
H11S1	WAKE ISLAND Hy	31.95	47	T	T	03 48 36.1	
	baz=230,slow=75,SNR=20						
H11N1	WAKE ISLAND Hy	32.86	46	T	T	03 49 54.9	
	baz=230,slow=76,SNR=23						
H11N2	WAKE ISLAND Hy	32.88	46	T	T	03 49 56.2	
	baz=230,slow=76,SNR=31						
H11N3	WAKE ISLAND Hy	32.88	46	T	T	03 49 54.4	
	baz=230,slow=76,SNR=11						
KSRS	Korea Array	42.53	343	LR	LR	03 33 30.5	
	comp=Z,27nm,18.1s,baz=350,slow=35						
GSI	Gunungsitoli	45.22	275	P	P	03 16 50.1	-0.1
CMAR	Chiang Mai Arr	48.00	298	P	P	03 17 12.1	+0.2
	comp=Z,1.4nm,0.3s,baz=115,slow=7.0,SNR=5.4						
PETK	Petropavlovsk-	57.36	11	LR	LR	03 42 00.7	
	comp=Z,36nm,19.6s,baz=337,slow=35						
MK31	Makanchi Array	72.44	321	P	P	03 19 59.3	+0.5
MKAR	Makanchi Array	72.44	321	P	P	03 19 59.8	+1.0
	comp=Z,2.3nm,1.0s,baz=101,slow=7.0,SNR=15						
MKAR	Makanchi Array	72.44	321	P	P	03 19 59.5	+0.6
MAKZ	Makanchi	72.65	321	P	P	03 20 00.7	+0.6
MAKZ				IAmb	IAmb	03 20 01.7	
	comp=Z,2.8nm,0.9s						
ZAA0	Zalesovo Array	74.20	329	P	P	03 20 08.6	-0.4
ZAA0				IAmb	IAmb	03 20 52.0	
	comp=Z,11nm,1.9s						
ZALV	Zalesovo Beam	74.20	329	P	P	03 20 09.0	0.0
	comp=Z,1.4nm,0.7s,baz=64,slow=6.8,SNR=6.1						
ZALV	Zalesovo Beam	74.20	329	P	P	03 20 08.8	-0.2
NIL	Nilore	74.65	306	P	P	03 20 11.8	-0.3
KK31	Karatay Array	79.10	315	P	P	03 20 36.9	-0.1
KK31				IAmb	IAmb	03 20 42.3	
	comp=Z,9.9nm,2.0s						
KKAR	Karatay Array	79.10	315	P	P	03 20 37.4	+0.4
IMAR	Indian Mountai	82.32	22	P	P	03 20 54.8	+1.1
RND	Reindeer	83.25	25	P	P	03 20 58.3	-0.4
RND				IAmb	IAmb	03 21 01.3	
	comp=Z,8.5nm,1.2s						
CCB	Clear Creek Bu	84.11	24	P	P	03 21 02.8	-0.2
CCB				IAmb	IAmb	03 21 03.6	
	comp=Z,3.9nm,0.9s						
IL31		84.53	24	P	P	03 21 04.2	-0.8
IL31				IAmb	IAmb	03 21 13.4	
	comp=Z,5.2nm,1.2s						
ILAR	Eielson Array	84.53	24	P	P	03 21 04.7	-0.4
	comp=Z,2.5nm,0.9s,baz=259,slow=4.9,SNR=15						
ILAR	Eielson Array	84.53	24	P	P	03 21 04.5	-0.5
BCAR	Beaver Creek A	86.20	26	P	P	03 21 14.3	+0.8
BMAR	Burnt Mountain	86.24	22	P	P	03 21 14.6	+0.9
QSPA	South Pole Qui	86.92	180	P	P	03 21 17.0	-0.1
QSPA				IAmb	IAmb	03 21 24.0	
	comp=Z,5.8nm,0.8s						
H04A	Detroit Lake	95.82	46	P	P	03 21 57.6	-1.3
YKA	Yellowknife Ar	98.58	27	P	Pdif	03 22 11.2	+0.3
	comp=Z,0.5nm,0.9s,baz=279,slow=3.5,SNR=5.2						
PLCA	Paso Flores	126.95	149	PKP	PKiKP	03 27 38.5	+1.2
	comp=Z,1.9nm,0.8s,baz=246,slow=7.9,SNR=3.9						
LPAZ	La Paz	144.06	123	PKP	PKPdf	03 28 09.8	0.0
	comp=Z,2.4nm,0.8s,baz=220,slow=3.0,SNR=8.3						
CPUP	Villa Florida	145.02	148	PKPbc	PKPab	03 28 09.2	-0.6
	comp=Z,0.5nm,0.4s,baz=285,slow=1.4,SNR=3.6						
KOWA	Kowa	145.16	291	PKPbc	PKPdf	03 28 11.2	+0.3
	comp=Z,5.4nm,0.7s,baz=79,slow=9.5,SNR=6.5						
DBIC	Dimbokro	147.39	278	PKPbc	PKPbc	03 28 17.7	+0.5
	comp=Z,4.2nm,0.7s,baz=73,slow=3.0,SNR=6.3						
SIV	San Ignacio	149.91	130	PKPbc	PKiKP	03 28 25.0	+0.3
	comp=Z,4.2nm,0.8s,baz=292,slow=1.4,SNR=20						

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*IDC **27** 03:14:14.2±2.8, 3°.27S×101°.82E, h96^{km}±23^{km}, mb4.1/14, mb1 4.2/16, mb1mx3.9/43, mbtmp4.4/16, MS3.6/3, Ms1 3.6/3, ms1mx2.9/41, Error ellipse: s-maj=37.0km s-min=10.5km az=51.0*

*KLM **27** 03:14:14, 3°.41S×101°.55E, h105^{km}, mb4.4*

*DJA **27** 03:14:14.5±0.2, 3°S±2°×10°2E±°, h96^{km}±2^{km}, M4.7/21, mB5.3/6, mb4.6/21, MLv4.7/20, Mw(mB)4.8/6*

*NEIC **27** 03:14:14.2±1.2, 3°.35S±0°.07×101°.71E±0°.08, h102^{km}±4^{km}, mb4.5/31, Error ellipse: s-maj=13.8km s-min=6.8km az=48.0*

ISC 27 03:14:14.9±0.7, **3°.35S**±0°.05×**101°.73E**±0°.05, **h106**^{km}±6^{km}, **n114**, σ**1^{s}10**/125, **mb4.5**/33, **Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRJI	Kerinci	1.28	348	P	Pn	03 14 39.3	+0.4
KRJI				S	Sn	03 14 58.2	+1.1
MNAI	Manna	1.58	130	Pn	Pn	03 14 42.2	-0.3
MNAI				Sn	Sn	03 15 02.7	-0.7
MNAI	Manna	1.58	130	P	Pn	03 14 42.4	0.0
MNAI				S	Sn	03 15 03.2	-0.2
LHSI	Lahat	1.85	105	P	Pn	03 14 46.3	+0.6
LHSI				S	Sn	03 15 09.4	+0.1
SDSI	Sungai Dareh	2.42	353	P	Pn	03 14 52.6	-0.5
JMBI	JAMBI	2.56	48	P	Pn	03 14 55.2	+0.3
JMBI				S	Sn	03 15 23.3	-2.4
MDSI	Maura Dua	2.69	115	P	Pn	03 14 56.7	+0.1
MDSI				S	Sn	03 15 28.6	-0.1
LWLI	Liwa	2.85	126	P	Pn	03 14 59.3	+0.4
PMBI	Palembang	3.06	82	Pn	Pn	03 14 59.6	-2.0
KLSI		3.27	114	P	Pn	03 15 05.2	+0.8
KLSI				S	Sn	03 15 42.5	-0.2
SISI	Saibi	3.32	307	P	Pn	03 15 05.4	+0.4
SISI				S	Sn	03 15 41.0	-2.8
KASI	Kota Agung	3.50	128	P	Pn	03 15 07.3	-0.1
KASI				S	Sn	03 15 45.4	-2.7
BKNI	Bangkinang	3.72	349		Pn	03 15 10.1	-0.3
BKNI	Bangkinang	3.72	349	P	Pn	03 15 10.1	-0.3
PPBI	Pangkal Pinang	4.55	75	P	Pn	03 15 21.5	-0.1
MNSI	Mandailing Nat	4.65	332	P	Pn	03 15 22.4	-0.5
PBSI	Pulau Batu	4.76	313	P	Pn	03 15 24.4	0.0
MYKOM	Kota Tinggi	5.53	23	Pn	Pn	03 15 34.6	-0.2
MYKOM	Kota Tinggi	5.53	23	P	Pn	03 15 35.0	+0.2
GSI	Gunungsitoli	6.22	318	Pn	Pn	03 15 43.2	-1.0
GSI	Gunungsitoli	6.22	318	P	Pn	03 15 43.1	-1.0
	2.3nm9µm408nm,0.4s						
RPSI	Rantau Prapat	6.63	335		Pn	03 15 48.6	-1.1
RPSI	Rantau Prapat	6.63	335		Pn	03 15 48.8	-1.0
PSI	Prapat	6.72	335	P	Pn	03 15 48.8	-2.4
	4.8nm,0.3s,baz=180,slow=13,SNR=14						
PSI				LR	LR	03 18 41.1	
	comp=Z,76nm,21.5s,baz=92,slow=40						
CISI	Cisompet, Garu	7.36	125	Pn	Pn	03 15 57.5	-2.1
CISI	Cisompet, Garu	7.36	125	P	Pn	03 15 57.6	-2.1
	0.6nm920nm28nm,0.7s						
IPM	Ipoh	7.81	355	Pn	Pn	03 16 05.1	-0.7
IPM	Ipoh	7.81	355	P	Pn	03 16 07.0	+1.2
TPTI		7.99	325	P	Pn	03 16 06.4	-1.9
	0.2nm1µm35nm,0.5s						
KULM	Kulim	8.65	353	Pn	Pn	03 16 16.6	-0.6
KULM	Kulim	8.65	353	P	Pn	03 16 16.0	-1.2
MLSI	Meulaboh, Aceh	9.25	325	P	Pn	03 16 23.5	-1.9
	6µm334nm,0.5s						
LHMI	Lhok Sumawe	9.77	331	Pn	Pn	03 16 30.6	-1.9
UGM	Wanagama	9.85	118	Pn	Pn	03 16 33.1	-0.5
UGM	Wanagama	9.85	118	P	Pn	03 16 33.0	-0.5
	81nm,1.6s						
COCO	West Island	10.03	209		Pn	03 16 36.5	+0.5
SBUM	Sibu	11.96	61	Pn	Pn	03 17 02.9	+0.9
SBUM	Sibu	11.96	61	P	Pn	03 17 05.0	+3.0
BBKI	Banjar Baru	13.09	91	P	Pn	03 17 18.7	+1.9
ABJI	Asem Bagus	13.20	110	P	Pn	03 17 19.4	+1.1
	53nm,0.7s						
SPSI	Sidrap Palu	18.01	93	P	P	03 18 17.9	+0.3
	15nm,0.5s						
KAPI	Kappang	18.05	96	P	P	03 18 15.4	-2.6
	1.6nm,0.3s,baz=70,slow=12,SNR=2.5						
KAPI	Kappang	18.05	96	P	P	03 18 16.6	-1.4
KAPI				IAmb	IAmb	03 18 22.2	
	comp=Z,51nm,1.2s						
BNSI	Bone	18.36	94	P	Pn	03 18 23.3	+0.6
	comp=Z,32nm,1.1s						
MYLDM	Lahad Datu	18.77	63	P	P	03 18 26.4	+0.5
MYLDM				IAmb	IAmb	03 18 44.2	
	comp=Z,23nm,0.9s						
UBPT	Khong Chiam	18.88	11	P	P	03 18 26.7	-0.3
TOLI2	Tolitoli	19.55	77	P	P	03 18 34.7	+0.3
TOLI2				IAmb	IAmb	03 18 38.5	
	comp=Z,26nm,0.8s						
APSI	Ampana	20.05	84	P	Pn	03 18 41.2	-1.3
	comp=Z,37nm,0.9s						
MRSI	Marisa	20.55	80	P	P	03 18 45.8	+0.5
	comp=Z,36nm,0.8s						
CMAR	Chiang Mai Arr	21.84	353	P	P	03 18 57.4	-1.6
	comp=Z,3.0nm,0.5s,baz=187,slow=8.7,SNR=9.8						
CMAR	Chiang Mai Arr	21.84	353	P	P	03 18 58.2	-0.8
CHTO	Chiang Mai	22.19	353	P	P	03 19 01.4	-1.2
SLVN	Son La	24.62	5	P	P	03 19 26.9	+1.2
FITZ	Fitzroy Crossi	27.63	124	P	P	03 19 53.4	+0.7
	comp=Z,5.6nm,0.5s,baz=317,slow=7.8,SNR=16						
FITZ	Fitzroy Crossi	27.63	124	IAmb	IAmb	03 19 56.9	
	comp=Z,6.1nm,0.7s						
SHL	Shillong	30.29	342	P	P	03 20 15.2	-1.2
LSA	Lhasa	34.39	344	P	P	03 20 51.2	-1.4
LSA				IAmb	IAmb	03 20 53.6	
	comp=Z,4.7nm,1.1s						
WB0	Warramunga Arr	35.80	120	P	P	03 21 03.7	-0.6
WRA	Warramunga Arr	35.82	120	P	P	03 21 03.8	-0.7
	comp=Z,5.2nm,0.4s,baz=303,slow=9.0,SNR=72						
WRA				PcP	PcP	03 23 30.5	+0.5
	comp=Z,0.5nm,0.4s,baz=314,slow=2.1,SNR=3.2						
WB2	Warramunga Arr	35.83	120	P	P	03 21 04.1	-0.5
WR0	Warramunga Arr	36.00	120	P	P	03 21 05.5	-0.5
ASAR	Alice Springs	37.06	126	P	P	03 21 15.1	0.0
	comp=Z,2.6nm,0.3s,baz=297,slow=7.6,SNR=61						
ASAR				PcP	PcP	03 23 34.1	+0.4
	comp=Z,0.8nm,0.6s,baz=306,slow=2.3,SNR=4.9						
ASAR				S	S	03 26 49.9	-3.6
	comp=Z,0.7nm,0.7s,baz=297,slow=14,SNR=9.4						
ASAR				ScP	ScP	03 27 11.2	-0.1
	comp=Z,0.3nm,0.7s,baz=311,slow=3.8,SNR=4.5						
ASAR	Alice Springs	37.06	126	P	P	03 21 15.3	+0.3
AS31	Alice Springs	37.06	126	P	P	03 21 15.2	+0.2
AS31				IAmb	IAmb	03 21 16.6	
	comp=Z,2.1nm,0.6s						
XAN	Xi'an	37.80	10	P	P	03 21 21.5	+0.4
XAN				pmax	pmax		
	comp=Z,8.0nm,0.6s						
XAN	Xi'an	37.80	10	P	P	03 21 20.4	-0.6
XAN				IAmb	IAmb	03 21 22.3	
	comp=Z,5.3nm,0.5s						
NJ2	Nanjing	38.78	24	*e*P	P	03 21 31.5	+2.2
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.5s						
GTA	Gaotai	42.59	358	*e*P	P	03 22 00.8	+0.2
GTA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BBOO	Buckleboo	43.48	136	P	P	03 22 08.3	+0.5
BBOO				IAmb	IAmb	03 22 14.1	
	comp=Z,12nm,1.4s						
HHC	Hu-ho-hao-te	44.90	11	*e*P	P	03 22 20.8	+1.7
HHC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,300nm,8.2s						
NIL	Nilore	45.58	326	P	P	03 22 24.4	-0.1

NIL				IAmb	IAmb	03 22 25.5	
	comp=Z,7.6nm,0.7s						
CTA	**Charters Tower**	**46.46**	**115**	P	**P**	**03 22 31.2**	**-0.4**
	comp=Z,4.5nm,0.6s,baz=290,slow=9.7,SNR=11						
CTAO	**Charters Tower**	**46.46**	**115**	P	**P**	**03 22 31.5**	**-0.2**
CTAO				IAmb	IAmb	03 22 32.0	
	comp=Z,6.2nm,0.8s						
STKA	**Stephens Creek**	**46.97**	**132**	P	**P**	**03 22 36.2**	**+0.9**
	comp=Z,10nm,0.7s,baz=305,slow=8.0,SNR=40						
STKA	**Stephens Creek**	**46.97**	**132**	P	**P**	**03 22 36.5**	**+1.1**
WMQ	**Urumqi**	**48.62**	**346**	*e*P	**P**	**03 22 49.0**	**+1.0**
WMQ				pmax	pmax		
	comp=Z,18nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,150nm,5.9s						
WMQ	**Urumqi**	**48.62**	**346**	P	**P**	**03 22 48.2**	**+0.2**
KSH	**Kashi**	**48.80**	**333**	P	**P**	**03 22 49.0**	**-0.5**
KSH				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KSH				pmax	pmax		
	comp=Z,370nm,8.4s						
SHLS	**Shalkode**	**50.47**	**339**	*e*P	**P**	**03 23 01.1**	**-1.0**
	comp=Z,5.4nm,1.7s,baz=339						
UZB	**Uzynbulak**	**50.62**	**339**	*e*P	**P**	**03 23 03.0**	**-0.3**
	baz=338						
SATY	**Saty**	**50.77**	**338**	*e*P	**P**	**03 23 04.7**	**+0.3**
	comp=Z,4.5nm,1.5s,baz=338						
SONM	**Songino Array**	**51.13**	**4**	P	**P**	**03 23 07.7**	**+0.6**
	comp=Z,2.2nm,0.6s,baz=186,slow=9.1,SNR=18						
SONM	**Songino Array**	**51.13**	**4**	P	**P**	**03 23 07.6**	**+0.6**
MDOK	**Medeo**	**51.38**	**337**	*e*P	**P**	**03 23 09.1**	**+0.1**
	baz=337						
CN2	**Changchun**	**51.55**	**22**	*e*P	**P**	**03 23 11.0**	**+0.9**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.3s						
EIDS	**Eidsvold**	**52.19**	**120**	P	**P**	**03 23 15.2**	**+0.1**
EIDS				IAmb	IAmb	03 23 16.1	
	comp=Z,5.6nm,0.7s						
KUU	**Kurty**	**52.27**	**337**	*e*P	**P**	**03 23 15.3**	**-0.1**
	comp=Z,2.4nm,0.8s,baz=337						
ZSN	**Zaisan**	**52.72**	**346**	*e*P	**P**	**03 23 18.5**	**-0.1**
	baz=346						
MK31	**Makanchi Array**	**52.80**	**343**	P	**P**	**03 23 19.2**	**0.0**
MK31				IAmb	IAmb	03 23 19.6	
	comp=Z,2.6nm,0.5s						
MKAR	**Makanchi Array**	**52.80**	**343**	P	**P**	**03 23 19.2**	**-0.1**
	comp=Z,2.9nm,0.5s,baz=155,slow=9.0,SNR=94						
MKAR				LR	LR	03 49 30.1	
	comp=Z,92nm,18.5s,baz=310,slow=40						
MKAR	**Makanchi Array**	**52.80**	**343**	P	**P**	**03 23 18.9**	**-0.4**
MAKZ	**Makanchi**	**52.90**	**343**	P	**P**	**03 23 21.1**	**+1.0**
KK31	**Karatay Array**	**54.14**	**332**	P	**P**	**03 23 29.4**	**+0.2**
KKAR	**Karatay Array**	**54.14**	**332**	P	**P**	**03 23 29.2**	**+0.1**
USRK	**Ussuriysk Ar.**	**54.55**	**26**	P	**P**	**03 23 32.0**	**-0.1**
	comp=Z,0.9nm,0.6s,baz=218,slow=2.9,SNR=5.2						
SEM	**Semipalatinsk**	**56.65**	**344**	*e*P	**P**	**03 23 46.3**	**-0.9**
	baz=344						
KURK	**Kurchatov**	**57.39**	**343**	P	**P**	**03 23 52.2**	**+0.1**
KURK				IAmb	IAmb	03 23 53.5	
	comp=Z,2.9nm,0.8s						
ZAA0	**Zalesovo Array**	**58.82**	**348**	P	**P**	**03 24 01.5**	**-0.6**
ZAA0				IAmb	IAmb	03 24 05.7	
	comp=Z,5.9nm,0.8s						
ZALV	**Zalesovo Beam**	**58.82**	**348**	P	**P**	**03 24 01.4**	**-0.6**
	comp=Z,5.3nm,0.3s,baz=162,slow=6.1,SNR=23						
ZALV				LR	LR	03 52 15.7	
	comp=Z,184nm,20.4s,baz=302,slow=39						
BRVK	**Borovoye**	**62.11**	**339**	P	**P**	**03 24 23.7**	**-0.8**
ABKAR	**Akbulak array**	**63.65**	**331**	P	**P**	**03 24 34.1**	**-0.7**
DZM	**Mont Dzumac**	**65.34**	**113**	P	**P**	**03 24 46.6**	**+0.1**
	comp=Z,2.9nm,0.5s,baz=66,slow=20,SNR=6.0						
DZM	**Mont Dzumac**	**65.34**	**113**	P	**P**	**03 24 46.6**	**+0.1**
KBZ	**Khabaz**	**70.45**	**319**	P	**P**	**03 25 18.6**	**+0.7**
	comp=Z,1.8nm,0.8s,baz=135,slow=7.3,SNR=6.4						
BRTR	**Keskin Array B**	**75.50**	**312**	P	**P**	**03 25 47.6**	**-0.4**
	comp=Z,0.9nm,0.5s,baz=117,slow=7.5,SNR=3.6						
BKZ	**Black Stump Fm**	**76.08**	**129**	P	**P**	**03 25 51.5**	**+0.2**
BKZ				IAmb	IAmb	03 25 52.3	
	comp=Z,13nm,1.3s						
BFZ	**Birch Farm**	**76.09**	**131**	P	**P**	**03 25 49.0**	**-2.2**
BURAR	**Bucovina Array**	**83.41**	**319**	P	**P**	**03 26 30.9**	**+0.2**
KOLS	**Kolonicke sedl**	**85.60**	**319**	*e*P	**P**	**03 26 43.5**	**+1.9**
FINES	**FINESS Array B**	**86.10**	**332**	P	**P**	**03 26 45.8**	**+2.0**
	comp=Z,1.4nm,0.8s,baz=92,slow=4.4,SNR=4.1						
NVAR	**Mina Array Bea**	**129.51**	**41**	PKP	**PKPdf**	**03 33 11.7**	**-0.3**
	comp=Z,0.2nm,0.4s,baz=266,slow=5.4,SNR=2.7						
CPUP	**Villa Florida**	**144.21**	**213**	PKP	**PKPdf**	**03 33 38.6**	**-0.6**
	comp=Z,1.0nm,0.4s,baz=112,slow=3.3,SNR=6.1						
TXAR	**Lajitas Array**	**144.66**	**40**	PKP	**PKPdf**	**03 33 39.8**	**-0.3**
	comp=Z,2.4nm,0.6s,baz=278,slow=1.0,SNR=10						
JCT	**Junction City**	**146.20**	**35**	PKPbc	**PKPdf**	**03 33 42.7**	**+0.1**

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*NIC **27** 03:33:45.2±0.0, 35°.24N×31°.87E, h13^{km}, Ml3.1/4*
*ISK **27** 03:33:47.1, 35°.32N×32°.05E, h8^{km}, ML2.5/11*
*DDA **27** 03:33:49.5, 35°.45N×31°.99E, h14^{km}±1^{km}, ML2.1*
ISC 27 03:33:45.5±1.4, **35°.26N**±0°.03×**31°.93E**±0°.05, **h6**^{km}±10^{km}, **n30**, σ1^{s}.01/45, **1C-1D, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKMS	**Akamas**	**0.41**	**126**	⇓P	**Pg**	**03 33 53.7**	**+0.3**
AKMS				AML	AML	03 33 57.4	
	7.2nm,0.4s						
AKMS				AML	AML	03 33 57.7	
	12nm,0.3s						
ALFC	**Alefka**	**0.55**	**100**	P	**Pg**	**03 33 56.2**	**-0.1**
ALFC				AML	AML	03 34 06.1	
	1.7nm,0.3s						
ALFC				AML	AML	03 34 07.4	
	2.6nm,0.2s						
NATA	**Nata**	**0.71**	**132**	⇑P	**Pg**	**03 33 59.6**	**+0.5**
NATA				S	**Sb**	**03 34 11.8**	**+1.6**
NATA				AML	AML	03 34 12.9	
	4.4nm,0.7s						
NATA				AML	AML	03 34 12.9	
	4.4nm,0.7s						
NATA				AML	AML	03 34 15.6	
	6.7nm,0.4s						
NATA				AML	AML	03 34 15.6	
	6.7nm,0.4s						
LEF	**Lefka**	**0.80**	**100**	PG	**Pg**	**03 34 00.1**	**-0.7**
SZAC	**Souni**	**0.93**	**122**	P	**Pg**	**03 34 03.9**	**+0.6**
SZAC				S	**Sb**	**03 34 17.7**	**+1.1**
SZAC				AML	AML	03 34 18.6	
	1.7nm,0.3s						
SZAC				AML	AML	03 34 18.6	
	1.7nm,0.3s						
SZAC				AML	AML	03 34 18.6	
	2.6nm,0.4s						
SZAC				AML	AML	03 34 18.6	
	2.6nm,0.4s						
GAZI	**Gazipasa**	**1.02**	**18**	PG	**Pn**	**03 34 05.9**	**-0.6**
GAZI				SG	**Sb**	**03 34 18.8**	**-0.6**
GAZI	**Gazipasa**	**1.02**	**18**	*i* P	**Pn**	**03 34 06.2**	**-0.3**
GAZI				*i* S	**Sg**	**03 34 17.8**	**-0.7**
ASGA	**Asgata**	**1.18**	**113**	S	**Sn**	**03 34 25.0**	**+0.1**
CSS	**Mathiatis**	**1.18**	**104**	PN	**Pb**	**03 34 08.9**	**+0.5**
CSS				SN	**Sn**	**03 34 24.9**	**-0.2**
CSS	**Mathiatis**	**1.18**	**104**	P	**Pb**	**03 34 07.7**	**-0.6**
CSS				S	**Sn**	**03 34 25.9**	**+0.8**
MVOU	**Mavrovouni**	**1.41**	**99**	P	**Pn**	**03 34 11.3**	**-0.5**
BERE	**Bereket-Mersin**	**1.51**	**44**	PN	**Pb**	**03 34 13.4**	**-0.7**
BERE				SN	**Sg**	**03 34 32.8**	**-1.3**
ERMK	**Ermenek**	**1.59**	**30**	*i* P	**Pg**	**03 34 16.9**	**+0.8**
ERMK				*i* S	**Sg**	**03 34 38.1**	**+1.3**
ERMK				IAML		03 34 47.0	
	comp=E,25nm,0.6s						
ERMK				IAML		03 34 47.0	
	comp=N,42nm,0.5s						
GULN	**MERSIN_Gulnar**	**1.60**	**54**	*i* P	**Pg**	**03 34 16.1**	**-0.2**
GULN				*i* S	**Sn**	**03 34 32.7**	**-2.7**
KEPZ	**Antalya-Kepez**	**1.66**	**351**	*i* P	**Pb**	**03 34 16.9**	**+0.3**
KEPZ				*i* S	**Sb**	**03 34 37.6**	**-0.3**
TEVE	**Tevekalti-Mers**	**1.70**	**46**	PN	**Pb**	**03 34 16.3**	**-0.9**
KEBE	**Keben-Mersin**	**1.87**	**50**	PN	**Pn**	**03 34 18.6**	**+0.4**
KKBE	**Karaman, Kazim**	**2.12**	**22**	*i* P	**Pb**	**03 34 24.7**	**+0.3**
KKBE				*i* S	**Sb**	**03 34 50.1**	**-1.0**
KIZK	**Mersin**	**2.17**	**55**	PN	**Pn**	**03 34 22.9**	**+0.7**
KIZK	**Mersin**	**2.17**	**55**	*i* P	**Pb**	**03 34 25.8**	**+0.5**
KIZK				IAML		03 34 58.0	
	comp=E,18nm,0.8s						
OSC2	**CSNet OBS 4**	**2.19**	**173**	P	**Pn**	**03 34 21.1**	**-1.4**
OSC2				S	**Sn**	**03 34 49.2**	**-0.7**
SEDI	**Konya, Seydise**	**2.19**	**356**	*i* P	**Pb**	**03 34 26.5**	**+0.8**
SEDI				*i* S	**Sb**	**03 34 53.9**	**+0.7**
SEDI				IAML		03 34 59.0	
	comp=N,14nm,0.6s						
SEDI				IAML		03 35 02.0	
	comp=E,15nm,0.6s						
KMER	**Konya-Meram**	**2.53**	**8**	*i* P	**Pb**	**03 34 31.7**	**+0.2**
KMER				*i* S	**Sb**	**03 35 03.4**	**+0.5**
KMER				IAML		03 35 10.0	
	comp=N,13nm,1.1s						
KMER				IAML		03 35 15.0	
	comp=E,12nm,0.6s						
KONT	**Konya--Tatoy**	**2.71**	**7**	PN	**Pn**	**03 34 31.7**	**+2.1**
KONT	**Konya--Tatoy**	**2.71**	**7**	*i* P	**Pb**	**03 34 33.0**	**-1.3**
KONT				IAML		03 35 12.0	
	comp=E,11nm,1.4s						
KERG	**Konya-Eregli**	**2.79**	**39**	*i* P	**Pb**	**03 34 34.2**	**-1.6**
KERG				*i* S	**Sn**	**03 35 05.7**	**+0.9**
KERG				IAML		03 35 14.0	
	comp=E,10nm,0.6s						
KERG				IAML		03 35 16.0	
	comp=N,15nm,0.5s						
DOGA	**KONYA_Doganhis**	**2.85**	**356**	*i* P	**Pb**	**03 34 35.5**	**-1.4**
YESY	**Yesilyurt**	**2.91**	**30**	PN	**Pn**	**03 34 33.6**	**+1.1**
KARA	**Karaisali**	**3.22**	**51**	PN	**Pn**	**03 34 37.7**	**+1.1**
CMRD	**Camardi-Nigde**	**3.44**	**45**	PN	**Pn**	**03 34 41.0**	**+1.2**

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*IDC **27** 03:39:07.0±0.7, 34°.57N×73°.13E, h0^{km}, mb4.0/10, mb1 4.0/15, mb1mx3.7/42, mbtmp3.9/15, ML3.5/5, MS3.7/1, Ms1 3.7/1, ms1mx2.8/43, Error ellipse: s-maj=20.6km s-min=15.3km az=80.0*
*NEIC **27** 03:39:10.9±2.8, 34°.60N±0°.04×73°.3E±0°.1, h27^{km}±4^{km}, mb4.2/7, Error ellipse: s-maj=12.2km s-min=5.4km az=86.0*
*NNC **27** 03:39:17.6±4.7, 34°.92N×73°.20E, h87^{km}±51^{km}, mb3.5, mpv3.9, Error ellipse: s-maj=41.4km s-min=35.7km az=89.0*
ISC 27 03:39:11.9±0.6, **34°.63N**±0°.05×**73°.40E**±0°.07, **h35**^{km}, **n48**, σ1^{s}.78/54, **mb3.6**/11, **4C-1D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIL	**Nilore**	**0.98**	**187**		**Pn**	**03 39 29.1**	**-0.2**
KBL	**Kabul**	**3.59**	**270**	Pn	**Pn**	**03 40 05.5**	**+0.2**
NDI	**New Delhi**	**6.76**	**150**	*e*P	Pn	03 40 40.5	-8.2
NDI				*e*S	**Sn**	**03 42 07.5**	**+3.0**
AAK	**Ala-Archa**	**8.04**	**6**	Pn	**Pn**	**03 41 10.2**	**+3.9**
	0.4nm,0.3s,baz=178,slow=6.4,SNR=4.0						
AAK				Sn	**Sn**	**03 42 38.3**	**+2.1**
	0.4nm,0.3s,baz=198,slow=20,SNR=3.7						
AAK	**Ala-Archa**	**8.04**	**6**		**Pn**	**03 41 07.8**	**+1.5**
TKM2	**Tokmak 2**	**8.46**	**11**	⇑P	**Pn**	**03 41 14.9**	**+2.8**
	2.3nm,0.5s						
TKM2				⇑S	**Sn**	**03 42 45.6**	**-0.8**
	8.3nm,0.7s						
KK31	**Karatay Array**	**8.76**	**346**	P	**Pn**	**03 41 16.4**	**+0.4**
	3.2nm,0.3s,baz=162,slow=12,SNR=58						
KK31				⇓S	**Sn**	**03 42 51.3**	**-2.1**
	2.1nm,0.5s,baz=180,slow=25,SNR=4.3						
KK31	**Karatay Array**	**8.76**	**346**		**Pn**	**03 41 16.0**	**0.0**
KKAR	**Karatay Array**	**8.76**	**346**	Pn	**Pn**	**03 41 16.0**	**0.0**
KKAR	**Karatay Array**	**8.76**	**346**	Pn	**Pn**	**03 41 16.5**	**+0.5**
GKN	**Gorkha**	**11.66**	**121**	*e*P	**Pn**	**03 41 57.0**	**+1.1**
	17nm,0.3s						
GKN				*e*S	**Sn**	**03 44 02.0**	**-2.9**
DMN	**Daman**	**12.23**	**122**	*e*P	**Pn**	**03 42 04.8**	**+1.0**
	21nm,0.5s						
KKN	**Kakani**	**12.24**	**121**	*e*P	**Pn**	**03 42 05.0**	**+1.1**
	14nm,0.4s						
PKIN	**Phulchoki**	**12.45**	**121**	*e*P	**Pn**	**03 42 07.7**	**+0.8**
	27nm,0.5s						
PKIN				*e*S	**Sn**	**03 44 20.9**	**-3.6**
PKI	**Pulchoki**	**12.46**	**121**	*e*P	**Pn**	**03 42 07.7**	**+0.6**
	8.9nm,0.3s						
PKI				*e*S	**Sn**	**03 44 21.0**	**-3.8**
GUN	**Gumba**	**12.60**	**119**	*e*P	**Pn**	**03 42 09.2**	**+0.2**
	16nm,0.4s						
RAMN	**Ramite**	**13.68**	**120**	*e*P	**Pn**	**03 42 23.2**	**-0.4**
	31nm,0.6s						
MAKZ	**Makanchi**	**13.79**	**25**	Pn	**Pn**	**03 42 25.0**	**+0.2**
MKAR	**Makanchi Array**	**13.89**	**26**	Pn	**Pn**	**03 42 26.8**	**+0.6**
	0.1nm,0.3s,baz=206,slow=15,SNR=7.5						
MK31	**Makanchi Array**	**13.89**	**26**	P	**Pn**	**03 42 26.8**	**+0.7**
	0.3nm,0.5s,baz=202,slow=12,SNR=5.6						
MK31	**Makanchi Array**	**13.89**	**26**		**Pn**	**03 42 26.6**	**+0.4**
TAPN	**Taplejung**	**14.25**	**117**	*e*P	**Pn**	**03 42 30.8**	**-0.7**
	11nm,0.3s						
TAPN				*e*S	**Sn**	**03 45 03.5**	**-5.0**
ODAN	**Odare**	**14.30**	**119**	*e*P	**Pn**	**03 42 30.9**	**-1.2**
	19nm,0.6s						
KURBB	**Kurchatov Arra**	**16.42**	**12**	Pn	**Pn**	**03 42 57.8**	**-1.6**
	0.1nm,0.3s,baz=205,slow=11,SNR=3.3						
AB31	**Akbulak array**	**17.67**	**330**	⇑P	**Pn**	**03 43 12.2**	**-2.9**
	1.3nm,0.6s,baz=154,slow=9.9,SNR=17						
ABKAR	**Akbulak array**	**17.67**	**330**	Pn	**Pn**	**03 43 13.1**	**-2.0**
BVAR	**Borovoye Array**	**18.52**	**354**	P	**P**	**03 43 24.8**	**-0.3**
	0.5nm,0.3s,baz=179,slow=21,SNR=9.2						
BRVK	**Borovoye**	**18.56**	**354**		**P**	**03 43 24.8**	**-0.7**
AKTO	**Aktyubinsk**	**19.38**	**329**	P	**P**	**03 43 33.9**	**-0.7**
	0.3nm,0.3s,baz=138,slow=12,SNR=11						
AKTO	**Aktyubinsk**	**19.38**	**329**	⇑P	**P**	**03 43 33.4**	**-1.2**
	8.4nm,0.9s						
ZAA0	**Zalesovo Array**	**20.93**	**19**	P	**P**	**03 43 50.7**	**-0.6**
ZAA0				IAmb	IAmb	03 43 51.7	
	comp=Z,5.6nm,0.6s						
ZALV	**Zalesovo Beam**	**20.93**	**19**	P	**P**	**03 43 50.9**	**-0.4**
	comp=Z,5.5nm,0.5s,baz=212,slow=11,SNR=30						
ZALV	**Zalesovo Beam**	**20.93**	**19**		**P**	**03 43 50.6**	**-0.7**
GNI	**Garni**	**23.37**	**292**	LR	LR	03 55 56.2	
	comp=Z,165nm,18.1s,baz=344,slow=44						
ARU	**Arti**	**24.05**	**340**	P	**P**	**03 44 23.3**	**-0.3**
	comp=Z,0.9nm,0.5s,baz=121,slow=18,SNR=1.7						
CMAR	**Chiang Mai Arr**	**27.84**	**119**	P	**P**	**03 45 00.4**	**+2.2**
	comp=Z,1.7nm,0.3s,baz=305,slow=11,SNR=11						
SONM	**Songino Array**	**27.88**	**52**	P	**P**	**03 45 01.8**	**+3.4**
	comp=Z,0.4nm,0.8s,baz=232,slow=7.5,SNR=4.3						
SONM	**Songino Array**	**27.88**	**52**	P	**P**	**03 45 00.5**	**+2.1**
ARCES	**ARCESS Array B**	**43.61**	**338**	P	**P**	**03 47 13.9**	**+1.5**
	comp=Z,3.7nm,0.8s,baz=117,slow=8.9,SNR=11						
KSAR	**Wonju Array Be**	**43.64**	**70**	P	**P**	**03 47 13.3**	**+0.3**
TOA0	**Torodi Ar. Sit**	**67.66**	**271**	P	**P**	**03 50 03.9**	**-1.8**
TOA0				IAmb	IAmb	03 50 05.0	
	comp=Z,7.5nm,1.4s						
TORD	**Torodi Ar. Bea**	**67.66**	**271**	P	**P**	**03 50 04.3**	**-1.4**
	comp=Z,0.9nm,0.4s,baz=46,slow=5.8,SNR=19						
BOSA	**Boshof**	**77.62**	**222**	P	**P**	**03 51 04.7**	**0.0**
	comp=Z,5.0nm,1.1s,baz=95,slow=1.0,SNR=6.7						
WRA	**Warramunga Arr**	**79.34**	**123**	P	**P**	**03 51 15.6**	**+1.3**
	comp=Z,0.3nm,0.4s,baz=323,slow=5.0,SNR=12						
AS31	**Alice Springs**	**81.58**	**126**	P	**P**	**03 51 25.9**	**-0.4**
AS31				IAmb	IAmb	03 52 08.0	
	comp=Z,0.7nm,1.0s						
ASAR	**Alice Springs**	**81.58**	**126**	P	**P**	**03 51 26.6**	**+0.4**
	comp=Z,0.4nm,0.5s,baz=310,slow=5.1,SNR=5.6						
YKA	**Yellowknife Ar**	**83.00**	**4**	P	**P**	**03 51 33.6**	**+0.5**
	comp=Z,0.3nm,0.6s,baz=357,slow=4.9,SNR=8.1						
AC02	**Maricunga**	**147.01**	**273**	PKPbc	**PKPab**	**03 58 53.3**	**0.0**

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*IDC **27** 03:43:59.0±3.0, 37°.78S×93°.71W, h0^{km}, mb4.0/4, mb1 4.3/4, mb1mx4.0/23, mbtmp4.0/4, MS3.5/6, Ms1 3.5/6, ms1mx3.4/19, Error ellipse: s-maj=97.5km s-min=33.6km az=180.0*
*NEIC **27** 03:44:00.4±0.7, 37°.8S±0°.1×93°.7W±0°.3, h10^{km}±1^{km}, mb4.2/8, Error ellipse: s-maj=34.5km s-min=17.7km az=264.0*
ISC 27 03:44:00.7±1.2, **37°.8S**±0°.2×**93°.7W**±0°.2, **h10**^{km}, **n26**, σ0^{s}.84/15, **mb4.2**/7, **MS3.4**/5, **West Chile Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H03S2	**Juan Fernandez**	**12.59**	**76**	T	T	04 00 21.2	
	baz=244,slow=74,SNR=62						
H03S1	**Juan Fernandez**	**12.61**	**76**	T	T	04 00 20.5	
	baz=244,slow=74,SNR=79						
H03S3	**Juan Fernandez**	**12.61**	**76**	T	T	04 00 19.1	
	baz=244,slow=74,SNR=79						
H03N2	**Juan Fernandez**	**12.74**	**74**	T	T	04 00 24.1	
	baz=274,slow=77,SNR=111						
H03N3	**Juan Fernandez**	**12.74**	**75**	T	T	04 00 24.9	
	baz=274,slow=77,SNR=120						
H03N1	**Juan Fernandez**	**12.76**	**75**	T	T	04 00 25.0	
	baz=274,slow=77,SNR=193						
PLCA	**Paso Flores**	**18.13**	**107**	LR	LR	03 53 37.9	
	comp=Z,108nm,18.1s,baz=263,slow=32						
AC05	**El Transito**	**21.45**	**72**	P	**P**	**03 48 49.1**	**-0.1**
AC05				IAmb	IAmb	03 49 10.0	
	comp=Z,13nm,1.1s						
AC02	**Maricunga**	**23.37**	**69**	P	**P**	**03 49 10.1**	**+0.2**
AC02				IAmb	IAmb	03 49 11.6	
	comp=Z,4.7nm,0.7s						
LVC	**Limon Verde**	**26.09**	**62**	LR	LR	03 57 20.1	
	comp=Z,97nm,20.9s,baz=275,slow=31						
LVC	**Limon Verde**	**26.09**	**62**	P	**P**	**03 49 34.9**	**-0.2**
MNMC	**Minye Minye**	**28.03**	**55**	P	**P**	**03 49 52.3**	**-0.1**
NNA	**Nana**	**29.78**	**35**	LR	LR	03 59 08.0	
	comp=Z,79nm,19.7s,baz=190,slow=30						
LPAZ	**La Paz**	**31.06**	**53**	P	**P**	**03 50 20.7**	**+1.1**
	comp=Z,2.3nm,0.6s,baz=186,slow=9.9,SNR=6.8						
LPAZ				LR	LR	03 59 47.0	
	comp=Z,84nm,21.1s,baz=337,slow=30						
LPAZ	**La Paz**	**31.06**	**53**	P	**P**	**03 50 19.5**	**-0.2**
LPAZ				IAmb	IAmb	03 50 22.7	
	comp=Z,3.2nm,0.8s						
CPUP	**Villa Florida**	**32.65**	**80**	LR	LR	04 02 16.3	
	comp=Z,83nm,18.3s,baz=169,slow=34						
SIV	**San Ignacio**	**35.99**	**62**	P	**P**	**03 51 01.0**	**-1.0**
	comp=Z,0.8nm,0.5s,baz=251,slow=12,SNR=5.6						
BDFB	**Brasilia**	**45.81**	**74**	LR	LR	04 12 28.4	
	comp=Z,66nm,18.8s,baz=109,slow=37						
SNAA	**Sanae**	**54.88**	**157**	P	**P**	**03 53 30.7**	**-0.2**
NVAR	**Mina Array Bea**	**79.17**	**341**	P	**P**	**03 56 06.0**	**+0.3**
	comp=Z,1.2nm,0.9s,baz=160,slow=6.4,SNR=5.6						
PD31	**Pinedale Array**	**81.48**	**348**	P	**P**	**03 56 17.3**	**-0.7**
PDAR	**Pinedale Array**	**81.48**	**348**	P	**P**	**03 56 17.6**	**-0.4**
	comp=Z,0.9nm,0.7s,baz=157,slow=5.9,SNR=9.6						
PDAR	**Pinedale Array**	**81.48**	**348**	P	**P**	**03 56 16.8**	**-1.2**
HLID	**Hailey**	**83.14**	**345**	P	**P**	**03 56 26.8**	**+0.2**
HLID				IAmb	IAmb	03 56 35.1	
	comp=Z,1.9nm,1.0s						
KBZ	**Khabaz**	**146.86**	**66**	PKPbc	**PKPdf**	**04 03 42.8**	**+1.9**
	comp=Z,1.2nm,0.8s,baz=246,slow=6.8,SNR=4.6						
SONM	**Songino Array**	**162.24**	**311**	PKPab	**PKPab**	**04 04 48.7**	**-0.6**
	comp=Z,0.3nm,0.6s,baz=85,slow=3.3,SNR=3.1						

IDC 27 03:56:27.2±1.7, **9°.44S**×**125°.91E**, **h0**^{km}, **mb3.9**/1, **mb1 3.8**/5, **mb1mx3.6**/30, **mbtmp3.7**/5, **ML3.5**/4, **MS4.3**/3, **Ms1 4.3**/3, **ms1mx3.0**/38, **Error ellipse: s-maj=43.1km s-min=26.4km az=67.0, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	**Baumata**	**2.34**	**251**	Pn	Pn	03 57 07.0	0.0
	4.2nm,0.3s,baz=150,slow=20,SNR=1.7						
FITZ	**Fitzroy Crossi**	**8.61**	**182**	Pn	Pn	03 58 32.4	-0.8
	0.6nm,0.3s,baz=355,slow=11,SNR=14						
FITZ				Sn	Sn	04 00 02.5	-8.7
	0.6nm,0.3s,baz=86,slow=19,SNR=3.0						
FITZ				LR	LR	04 02 33.1	
	comp=Z,42nm,20.9s,baz=86,slow=42						
WRA	**Warramunga Arr**	**13.24**	**143**	Pn	Pn	03 59 36.5	-0.2
	0.2nm,0.3s,baz=319,slow=14,SNR=10						
WRA				Sn	Sn	04 01 57.2	-7.6
	0.2nm,0.3s,baz=326,slow=17,SNR=7.0						
WRA				LR	LR	04 05 08.5	
	comp=Z,26nm,20.4s,baz=205,slow=39						
ASAR	**Alice Springs**	**16.08**	**153**	Pn	Pn	04 00 16.1	+1.1
	0.5nm,0.3s,baz=325,slow=11,SNR=32						
ASAR				Sn	Sn	04 03 06.8	-7.3
	0.1nm,0.3s,baz=314,slow=19,SNR=3.4						
MKAR	**Makanchi Array**	**68.14**	**329**	P	P	04 07 29.2	0.0
	0.7nm,0.6s,baz=127,slow=7.8,SNR=11						
BELG	**Belogornoye**	**90.34**	**323**	LR	LR	04 55 50.5	
	comp=Z,125nm,21.1s,baz=305,slow=39						
KVAR	**Kislovodsk Arr**	**91.63**	**314**	LR	LR	05 01 36.2	
	comp=Z,215nm,18.0s,baz=226,slow=43						
OBN	**Obninsk**	**97.28**	**325**	LR	LR	04 59 00.8	
	comp=Z,72nm,18.4s,baz=224,slow=39						

NOU 27 04:43:37.3, 15°.37S×**166°.31E, h0**^{km}**, MLv4.6, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**0.86**	**95**	P	Pb	04 43 55.1	-0.1
DVP	**Devils Point**	**2.95**	**143**	P	Pn	04 44 25.1	-0.4
KOUNC	**Koumac, New Ca**	**5.50**	**200**	P	Pn	04 45 01.1	+0.6
DZM	**Mont Dzumac**	**6.67**	**179**	P	Pn	04 45 16.1	-0.6
YATNC	**Mamie plateau,**	**6.68**	**175**	P	Pn	04 45 15.8	-0.9
NOUC	**Port Laguerre**	**6.70**	**180**	P	Pn	04 45 17.6	+0.6
OUENC	**Ouen Island, N**	**7.03**	**176**	P	Pn	04 45 21.2	-0.3

PRU 27 04:56:06.6±0.0, **51°.44N**×**16°.10E, h0**^{km}**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.61**	**168**	*e*Pg	Pg	04 56 18.4	+0.1
KSP				*e*Sg	Sg	04 56 26.9	+0.7
CHVC	**Chvalec**	**0.85**	**182**	*e*PG	Pg	04 56 23.3	+0.4
CHVC				*e*SG	Sg	04 56 34.6	+0.6
	comp=Z,8.6nm,0.3s						
OSTC	**Ostas**	**0.89**	**175**	*e*PG	Pg	04 56 23.7	+0.1
OSTC				*e*SG	Sg	04 56 35.7	+0.6
	comp=Z,7.0nm,0.3s						
UPC	**Upice**	**0.94**	**183**	*e*PG	Pg	04 56 24.2	-0.3
UPC				*e*SG	Sg	04 56 37.1	+0.5
	comp=Z,14nm,0.2s						
DPC	**Dobruska-Polom**	**1.10**	**173**	*e*PG	Pg	04 56 27.3	-0.4
DPC				*e*SG	Sg	04 56 41.3	-0.6
PVCC	**Panska Ves**	**1.33**	**227**	*e*PG	Pg	04 56 32.0	-0.1
PVCC				*e*SG	Sg	04 56 49.5	+0.2
	comp=Z,22nm,0.2s						
KRLC	**Kraliky**	**1.43**	**162**	*e*PG	Pn	04 56 33.4	-0.5
KRLC				*e*SG	Sg	04 56 52.2	-0.4
BRG	**Berggiesshubel**	**1.47**	**248**	Pg	Pn	04 56 34.1	-0.2
BRG				Sg	Sb	04 56 54.2	+0.1
BRG				Amp		04 56 55.1	
	comp=Z,7.8nm,0.7s						
PRU	**Pruhonice**	**1.76**	**215**	*e*SG	Sg	04 57 03.0	-0.1
MORC	**Moravsky Berou**	**1.90**	**151**	*e*PN	Pn	04 56 39.4	-0.9
MORC				*e*SG	Sn	04 57 05.5	+0.5
CLL	**Collm**	**1.95**	**267**	*e*Pg	Pb	04 56 43.0	+0.1
CLL				*e*Sg	Sg	04 57 09.0	-0.1
VRAC	**Vranov**	**2.16**	**171**	*e*SG	Sg	04 57 15.3	-0.6
KRUC	**Moravsky**	**2.39**	**175**	*e*SG	Sg	04 57 22.4	-0.9
NKC	**Novy Kostel**	**2.61**	**244**	*e*SG	Sg	04 57 29.0	-1.4
KHC	**Kasperske Hory**	**2.82**	**216**	*e*PG	Pb	04 56 58.5	+0.7
KHC				*e*SN	Sn	04 57 24.9	-2.8
KHC				*e*SG	Sg	04 57 35.6	-1.6

WEL 27 05:26:18.0, 43°.5S±0°.8×**172°.7E**±0°.7, **h10**^{km}±1^{km}, **M2.8**/3, **ML3.1**/3, **MLv2.8**/3, **Error ellipse: s-maj=0.0km s-min=0.0km az=33.9, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MQZ	**McQueen's Vall**	**0.23**	**180**	P	Pg	05 26 24.2	+1.5
MQZ				S	Sg	05 26 27.8	+1.9
AMCZ	**Amberley**	**0.30**	**360**	P	Pb	05 26 26.0	+0.6
OKCZ	**Okains Bay**	**0.38**	**130**	P	Pg	05 26 26.3	+0.7
RACZ	**Rakaia**	**0.45**	**236**	P	Pn	05 26 29.7	-0.8
OXZ	**Oxford**	**0.47**	**288**	P	Pn	05 26 30.0	-0.9
GVZ	**Greta Valley S**	**0.58**	**29**	P	Pb	05 26 30.6	+0.3
LTZ	**Lake Taylor**	**0.75**	**338**	P	Pn	05 26 34.6	-0.1
WACZ	**Wakanui South**	**0.75**	**231**	P	Pn	05 26 35.4	+0.7
INZ	**Inchbonnie**	**1.16**	**310**	P	Pn	05 26 42.2	+1.9
ARCZ	**Arundel**	**1.17**	**246**	P	Pn	05 26 41.3	+0.8
RPZ	**Rata Peaks**	**1.19**	**258**	P	Pg	05 26 42.1	+1.3
KHZ	**Kahutara**	**1.24**	**32**	P	Pn	05 26 40.7	-0.7
WVZ	**Waitaha Valley**	**1.46**	**285**	P	Pg	05 26 46.6	+0.6
TMZ	**Timaru**	**1.50**	**232**	P	Pb	05 26 46.0	+0.1
GCSZ	**Gaunt Creek Bo**	**1.70**	**275**	P	Pg	05 26 50.5	-0.2
THZ	**Tophouse**	**1.72**	**6**	P	Pn	05 26 48.1	-0.1
DSZ	**Denniston Nort**	**1.84**	**340**	P	Pn	05 26 50.7	+1.0
BSWZ	**Blackbirch Sta**	**1.98**	**28**	P	Pn	05 26 51.3	-0.3
LBZ	**Lake Benmore**	**2.00**	**242**	P	Pb	05 26 53.5	-1.1
FOZ	**Fox Glacier**	**2.07**	**267**	P	Pb	05 26 55.5	-0.1
ODZ	**Otahua Downs**	**2.13**	**222**	P	Pn	05 26 54.5	+0.8
NNZ	**Nelson**	**2.32**	**14**	P	Pn	05 26 56.7	+0.4
QRZ	**Quartz Range**	**2.65**	**358**	P	Pn	05 27 01.6	+0.8
JCZ	**Jackson Bay**	**2.87**	**257**	P	Pn	05 27 06.1	+2.3
EAZ	**Earnscleugh**	**2.97**	**233**	P	Pn	05 27 06.2	+0.9
MRZ	**Mangatainoka R**	**3.56**	**39**	P	Pn	05 27 11.7	-1.6
WNVZ	**Wahianoa**	**4.70**	**29**	P	Pn	05 27 27.2	-1.9
WHTZ	**Whakaora**	**5.42**	**29**	P	Pn	05 27 44.2	+5.3

*IDC **27** 05:27:30.4±0.9, 57°.77S×25°.38W, h0km, mb4.0/4, mb1 3.9/5, mb1mx3.7/25, mbtmp3.9/5, ML3.7/1, Error ellipse: s-maj=42.2km s-min=24.8km az=83.0*
*NEIC **27** 05:27:38.3±1.3, 57°.99S±0°.07×25°.8W±0°.3, h55km±7km, mb4.3/11, Error ellipse: s-maj=20.9km s-min=7.2km az=70.0*
ISC 27 05:27:36.7±0.7**, 57°.9S**±0°.1×**25°.4W**±0°.1**, h49km, n28, σ1s.02**/27**, mb4.2**/9**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	7.18	296	Pn	Pn	05 29 18.8	-0.2
VNA1	Neumayer--Stat	14.70	157	P	Pn	05 31 01.3	0.0
VNA3	Neumayer Olymp	14.91	160	P	Pn	05 31 03.3	-0.8
VNA2	Neumayer--Watz	15.10	157	P	Pn	05 31 06.8	+0.3
	baz=319,slow=14						
SNAA	Sanae	16.64	155	P	P	05 31 27.2	-0.8
SNAA	Sanae	16.64	155	Pn	P	05 31 27.0	-1.1
	0.3nm,0.3s,baz=320,slow=14,SNR=18						
SNAA	Sanae	16.64	155		P	05 31 27.3	-0.8
BELA	Belgrano 2	20.31	186	P	P	05 32 08.0	-0.1
QSPA	South Pole Qui	32.34	180	P	P	05 34 01.9	+0.9
	0.6nm,0.5s,baz=229,slow=0.9,SNR=8.5						
QSPA	South Pole Qui	32.34	180	P	P	05 34 02.4	+1.4
PLCA	Paso Flores	33.31	281	P	P	05 34 10.3	+0.7
PLCA				IAmb	IAmb	05 34 14.8	
	comp=Z,5.4nm,1.4s						
BI02	San Fabin de	36.72	285	P	P	05 34 37.1	-1.8
BI02				IAmb	IAmb	05 34 41.0	
	comp=Z,12nm,1.5s						
BO02	Sierra Bellavi	37.91	288	P	P	05 34 48.4	-0.7
BO02				IAmb	IAmb	05 34 51.2	
	comp=Z,11nm,1.5s						
VA03	San Esteban	39.41	290	P	P	05 35 02.5	+0.8
SIV	San Ignacio	49.56	313	P	P	05 36 22.3	-0.4
	comp=Z,0.4nm,0.5s,baz=203,slow=13,SNR=3.9						
SAML	Samuel	56.80	314	P	P	05 37 15.9	0.0
SAML				IAmb	IAmb	05 37 16.7	
	comp=Z,2.3nm,1.0s						
DBIC	Dimbokro	66.48	22	P	P	05 38 19.0	-2.0
	comp=Z,7.5nm,1.1s,baz=173,slow=8.1,SNR=3.6						
DBIC	Dimbokro	66.48	22	P	P	05 38 24.4	+3.5
TOA0	Torodi Ar. Sit	74.22	27	P	P	05 39 09.9	+1.7
TOA0				IAmb	IAmb	05 39 10.7	
	comp=Z,1.8nm,1.0s						
TORD	Torodi Ar. Bea	74.22	27	P	P	05 39 09.3	+1.2
	comp=Z,0.6nm,0.4s,baz=198,slow=6.3,SNR=8.9						
TORD	Torodi Ar. Bea	74.22	27	P	P	05 39 10.2	+2.0
YKA	Yellowknife Ar	138.20	316	PKP	PKPdf	05 46 54.9	+0.3
	comp=Z,0.2nm,0.4s,baz=118,slow=3.2,SNR=8.5						
BCAR	Beaver Creek A	149.41	307	PKPbc	PKiKP	05 47 19.8	-0.1
SONM	Songino Array	149.83	88	PKPbc	PKiKP	05 47 20.9	-0.4
	comp=Z,0.7nm,0.4s,baz=217,slow=3.7,SNR=10						
SONM	Songino Array	149.83	88		PKiKP	05 47 21.1	-0.2
IL31		152.06	309	PKPbc	PKiKP	05 47 25.9	+0.8
ILAR	Eielson Array	152.06	309	PKPbc	PKiKP	05 47 26.0	+0.8
	comp=Z,1.2nm,0.8s,baz=146,slow=4.2,SNR=13						
ILAR	Eielson Array	152.06	309		PKiKP	05 47 25.9	+0.8

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*MEX **27** 05:57:43.7±0.5, 13°.78N×92°.76W, h30km, MD4.0*
*GCG **27** 05:57:48.3±0.7, 13°.83N×92°.58W, h35km±999km, MD3.8*
ISC 27 05:57:45.8±3.4**, 14°.1N**±0°.2×**92°.8W**±0°.1**, h35km, n5, σ0s.87**/8**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		1.00	34	*i* P	Pn	05 58 02.9	-0.5
THIG				*e*S	Sn	05 58 16.9	+0.7
PCIG		1.67	347	*e*P	Pn	05 58 12.5	0.0
FUG	Fuego 3	1.97	79	*e*P	Pn	05 58 15.8	-1.0
FUG				*e*S	Sn	05 58 40.0	-0.5
PCG	Pacaya	2.19	81	*e*P	Pn	05 58 20.2	+0.3
PCG				*e*S	Sn	05 58 45.7	-0.2
NBG	Las Nubes	2.47	78	*e*P	Pn	05 58 25.1	+1.3

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*IDC **27** 06:00:30.0±2.0, 9°.71N×104°.59W, h0km, mb4.0/8, mb1 4.3/9, mb1mx4.0/43, mbtmp4.0/9, ML3.7/1, MS3.9/13, Ms1 3.9/13, ms1mx3.7/28, Error ellipse: s-maj=86.2km s-min=19.0km az=61.0*
*NEIC **27** 06:00:33.2±1.5, 10°.0N±0°.1×104°.0W±0°.1, h10km±1km, mb4.4/31, Error ellipse: s-maj=25.4km s-min=16.1km az=249.0*
ISC 27 06:00:32.9±0.9**, 10°.01N**±0°.09×**104°.1W**±0°.1**, h10km, n60, σ0s.97**/48**, mb4.2**/15**, MS3.9**/8**, Northern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOIG	Morelia	10.01	16		Pn	06 02 57.3	+0.2
CMIG	Matias Romero	11.38	51	LR	LR	06 06 32.3	
	comp=Z,498nm,20.1s,baz=230,slow=30						
ZAIG	Zacatecas	12.77	6	Pn	Pn	06 03 34.6	-0.3
HUEH	Huehuetenango	13.37	65	Pn	Pn	06 03 43.2	+0.2
LPIG	La Paz	15.21	338	LR	LR	06 08 19.9	
	comp=Z,516nm,18.2s,baz=158,slow=31						
HPIG		16.90	355	P	P	06 04 32.3	+0.5
TGUH	Tegucigalpa,Un	16.93	75	P	Pn	06 04 29.9	-0.4
TGUH				IAmb	IAmb	06 04 49.9	
	comp=Z,22nm,1.1s						
BOAB	BOACO BROADBAN	18.24	81	P	P	06 04 47.2	+0.7
BOAB				IAmb	IAmb	06 04 50.9	
	comp=Z,37nm,1.2s						
TEIG	Tepich	18.32	55	LR	LR	06 10 51.2	
	comp=Z,115nm,21.6s,baz=236,slow=33						
JTS	Las Juntas de	18.85	87	LR	LR	06 10 12.6	
	comp=Z,306nm,18.4s,baz=334,slow=30						
JTS	Las Juntas de	18.85	87	P	P	06 04 51.5	-1.8
SRIG	Santa Rosalia	18.85	337	P	P	06 04 51.8	-1.4
SRIG				IAmb	IAmb	06 05 16.3	
	comp=Z,32nm,1.4s						
TX32	Lajitas Array	19.23	1	P	Pn	06 04 58.3	-0.1
TXAR	Lajitas Array	19.23	1	P	Pn	06 05 00.1	+1.8
	comp=Z,0.1nm,0.3s,baz=182,slow=12,SNR=10						
TXAR				LR	LR	06 11 15.3	
	comp=Z,281nm,20.9s,baz=0.0,slow=33						
TXAR	Lajitas Array	19.23	1		Pn	06 04 58.5	+0.2
TX31	Lajitas Ar. Si	19.23	1	P	Pn	06 04 58.1	-0.3
TX31				IAmb	IAmb	06 05 05.8	
	comp=Z,49nm,1.2s						
ESPN	Las Esperanzas	19.55	82	P	P	06 04 59.8	-1.1
ESPN				IAmb	IAmb	06 05 03.7	
	comp=Z,28nm,1.4s						
HDC	Heredia	19.68	88	P	P	06 05 01.3	-1.2
HDC				IAmb	IAmb	06 05 28.4	
	comp=Z,16nm,0.6s						
HSIG		19.97	342	P	P	06 05 06.5	+1.1
JCT	Junction City	20.75	11	P	P	06 05 14.2	+0.2
JCT				IAmb	IAmb	06 05 20.9	
	comp=Z,22nm,1.1s						
HKT	Hockley	21.28	20	P	P	06 05 20.1	+0.5
435B	Jarrell	21.54	15	P	P	06 05 22.4	+0.1
MNTX	Cornudas Mount	21.61	357	P	P	06 05 23.2	0.0
MNTX				IAmb	IAmb	06 05 30.0	
	comp=Z,14nm,1.1s						
319A	Douglas	21.80	348	P	P	06 05 25.2	0.0
319A				IAmb	IAmb	06 05 40.5	
	comp=Z,17nm,1.2s						
WHTX	Lake Whitney,	22.72	15	P	P	06 05 34.7	-0.3
WHTX				IAmb	IAmb	06 05 49.2	
	comp=Z,21nm,1.2s						
ABTX	Abilene, Hawle	22.87	10	P	P	06 05 37.0	+0.4
ABTX				IAmb	IAmb	06 05 42.4	
	comp=Z,11nm,0.8s						
TUC	Tucson	23.04	345	P	P	06 05 39.5	+1.1
NATX	Nacogdoches	23.34	21	P	P	06 05 41.6	+0.2
MSTX	Muleshoe	23.88	3	P	P	06 05 46.9	+0.2
AMTX	Amarillo	24.85	5	P	P	06 05 56.5	+0.8
ANMO	Albuquerque	24.91	355	P	P	06 05 59.1	+2.7
	comp=Z,4.5nm,0.9s,baz=176,slow=6.0,SNR=6.9						
ANMO	Albuquerque	24.91	355	P	P	06 05 59.0	+2.6
ANMO				IAmb	IAmb	06 06 04.2	
	comp=Z,7.8nm,1.1s						
PFO	Pinyon Flats O	26.09	336	LR	LR	06 14 21.0	
	comp=Z,268nm,19.6s,baz=132,slow=32						
WUAZ	Wupatki	26.24	346	P	P	06 06 09.7	+1.4
WUAZ				IAmb	IAmb	06 06 11.1	
	comp=Z,5.2nm,0.9s						
OTAV	Otavalo	27.30	109	P	P	06 06 18.8	+0.4
ROSC	El Rosal	29.96	98	LR	LR	06 15 47.1	
	comp=Z,253nm,21.2s,baz=298,slow=30						
NVAR	Mina Array Bea	31.03	338	P	P	06 06 52.1	+0.9
	comp=Z,1.1nm,0.8s,baz=168,slow=9.4,SNR=8.9						
NVAR				LR	LR	06 17 18.5	
	comp=Z,159nm,19.3s,baz=122,slow=32						
NVAR	Mina Array Bea	31.03	338	P	P	06 06 51.6	+0.5
PD31	Pinedale Array	32.98	353	P	P	06 07 09.1	+0.9
PDAR	Pinedale Array	32.98	353	P	P	06 07 07.9	-0.3
	comp=Z,0.5nm,0.6s,baz=165,slow=10,SNR=5.2						
PDAR	Pinedale Array	32.98	353	P	P	06 07 08.7	+0.5
N49A	Columbus Grove	35.46	26	P	P	06 07 29.2	-0.3
NEW	Newport	39.67	346	P	P	06 08 05.7	+0.6
NEW				IAmb	IAmb	06 08 07.2	
	comp=Z,5.1nm,0.8s						
ULM	Lac du Bonnet	40.69	8	P	P	06 08 13.7	+0.3
	comp=Z,1.1nm,0.6s,baz=189,slow=7.0,SNR=3.1						
LPAZ	La Paz	44.16	126	P	P	06 08 43.9	+1.1
	comp=Z,3.5nm,0.9s,baz=311,slow=8.5,SNR=6.6						
LPAZ				LR	LR	06 23 26.0	
	comp=Z,44nm,20.0s,baz=336,slow=31						
LPAZ	La Paz	44.16	126	P	P	06 08 42.8	0.0
LPAZ				IAmb	IAmb	06 08 51.2	
	comp=Z,4.6nm,1.0s						
H03N2	Juan Fernandez	49.41	152	T	T	07 02 32.4	
	baz=329,slow=77,SNR=16						
H03N1	Juan Fernandez	49.42	152	T	T	07 02 33.7	
	baz=329,slow=77,SNR=27						
H03N3	Juan Fernandez	49.42	152	T	T	07 02 32.8	
	baz=329,slow=77,SNR=21						
AC05	El Transito	50.58	141	P	P	06 09 33.7	+1.6
AC05				IAmb	IAmb	06 09 39.8	
	comp=Z,6.8nm,1.1s						
YKA	Yellowknife Ar	52.94	354	P	P	06 09 48.8	-0.4
	comp=Z,1.5nm,1.0s,baz=164,slow=7.6,SNR=5.6						
CPUP	Villa Florida	58.04	130	P	P	06 10 26.1	-0.4
	comp=Z,3.4nm,1.0s,baz=317,slow=7.9,SNR=5.5						
CPUP				LR	LR	06 34 55.8	
	comp=Z,90nm,19.8s,baz=6.5,slow=36						
CPUP	Villa Florida	58.04	130	P	P	06 10 26.7	+0.3
CPUP				IAmb	IAmb	06 10 31.3	
	comp=Z,9.1nm,1.2s						
PLCA	Paso Flores	59.23	151	LR	LR	06 30 46.9	
	comp=Z,122nm,18.1s,baz=328,slow=31						
BCAR	Beaver Creek A	59.42	341	P	P	06 10 34.6	-1.0
GO07	Milladeo Hill,	59.72	155	P	P	06 10 36.5	-1.2
BDFB	Brasilia	61.10	114	LR	LR	06 35 44.5	
	comp=Z,170nm,19.8s,baz=65,slow=34						
ILAR	Eielson Array	62.23	341	P	P	06 10 53.5	-1.1
	comp=Z,4.9nm,0.8s,baz=151,slow=5.0,SNR=36						
BMAR	Burnt Mountain	63.35	344	P	P	06 11 01.9	-0.2
FINES	FINESS Array B	98.85	22	LR	LR	06 59 26.8	
	comp=Z,276nm,18.1s,baz=275,slow=36						

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*NOU **27** 06:02:50.2, 17°.69S×178°.08W, h509km, mb4.9, Fiji Islands Region*
*IDC **27** 06:02:50.1±1.5, 17°.78S×178°.16W, h506km±16km, mb4.0/19, mb1 4.2/21, mb1mx4.0/34, mbtmp4.9/21, Error ellipse: s-maj=13.9km s-min=8.0km az=158.0*
*BJI **27** 06:02:50.0±0.0, 17°.80S×178°.10W, h518km, mB5.0/5, mb4.5/13*
*NEIC **27** 06:02:51.4±1.8, 17°.8S±0°.1×178°.1W±0°.1, h521km±8km, mb4.7/60, Error ellipse: s-maj=18.0km s-min=14.3km az=158.0*
ISC 27 06:02:49.7±0.3**, 17°.82S**±0°.06×**178°.09W**±0°.05**, h500km, n261, σ1s.13**/270**, mb4.7**/64**, 2D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.68	271	P	P	06 04 10.4	+4.7
	59nm,0.3s,baz=129,slow=13,SNR=1112						
MSVF	Nonsavu	3.68	271	P	P	06 04 10.8	+5.1
AFI	Afiamalu	7.21	58	P	P	06 04 37.5	-0.7
AFI	Afiamalu	7.21	58	P	P	06 04 37.3	-0.9
NIUE	Niue	7.84	100	P	P	06 04 46.2	+1.7
NIUE	Niue	7.84	100	P	P	06 04 46.7	+2.2
FUNA	Funafuti	9.61	344	P	P	06 05 04.8	+1.7
GLKZ	Green Lake	11.39	179	P	P	06 05 20.4	-1.2
GLKZ				S	S	06 07 27.8	+1.0
YATNC	Mamie plateau,	14.74	251	P	P	06 05 57.4	+0.2
DZM	Mont Dzumac	15.14	251	*e*P	P	06 06 02.4	+0.9
	75nm,1.1s						
DZM	Mont Dzumac	15.14	251	P	P	06 06 02.4	+0.9
	1.8nm,0.3s,baz=84,slow=18,SNR=26						
DZM	Mont Dzumac	15.14	251	P	P	06 06 02.0	+0.4
DZM				IAmb	IAmb	06 06 06.4	
	comp=Z,24nm,0.7s						
DZM	Mont Dzumac	15.14	251	P	P	06 06 02.8	+1.3
NOUC	Port Laguerre	15.28	251	P	P	06 06 03.1	+0.3
KOUNC	Koumac, New Ca	16.87	258	P	P	06 06 19.7	+0.3
RAR	Rarotonga	17.59	104	P	P	06 06 26.5	+0.2
	comp=Z,1.8nm,0.3s,baz=248,slow=5.1,SNR=10						
RAR	Rarotonga	17.59	104	P	P	06 06 26.5	+0.2
OUZ	Omahuta	18.84	202	P	P	06 06 39.8	+2.1
KUZ	Kuaotunu	19.63	195	P	P	06 06 46.9	+2.2
WIAZ	Waiheke Island	19.82	196	P	P	06 06 49.7	+3.1
MXZ	Matakaoa Point	19.92	188	P	P	06 06 46.9	-0.5
ETAZ	East Tamaki Re	20.03	197	P	P	06 06 50.8	+2.4
WTAZ	Waiatarua	20.11	197	P	P	06 06 51.4	+2.2
MKAZ	Moumakai	20.11	196	P	P	06 06 51.1	+1.9
HAZ	Te Kaha	20.19	190	P	P	06 06 50.3	+0.5
AWAZ	Awhitu Peninsu	20.21	197	P	P	06 06 52.2	+2.1
PKGZ	Pakihiroa	20.27	189	P	P	06 06 51.0	+0.3
RUGZ	Raukumara Rang	20.41	190	P	P	06 06 53.3	+1.3
PUZ	Puketiti	20.43	188	P	P	06 06 53.1	+1.0
TWGZ	Tauwhareparae	20.57	189	P	P	06 06 54.6	+1.2
TOZ	Tahuroa Road	20.62	195	P	P	06 06 55.7	+1.9
URZ	Urewera	20.79	191	P	P	06 06 53.9	-1.5
	comp=Z,12nm,0.4s,baz=274,slow=2.2,SNR=28						
URZ				S	S	06 10 06.1	-8.6
	comp=Z,3.0nm,0.7s,baz=40,slow=18,SNR=1.7						
URZ	Urewera	20.79	191	P	P	06 06 53.6	-1.7
MWZ	Matawai	20.79	190	P	P	06 06 54.3	-1.2
RAHZ	Arahi	21.43	190	P	P	06 06 59.2	-2.0
OXZ	Oxford	26.76	196	P	P	06 07 49.0	+0.4
OXZ				IAmb	IAmb	06 07 51.5	
	comp=Z,14nm,0.7s						
PAE	Paea	27.14	94	*e*P	P	06 07 52.5	+0.3
	comp=Z,22nm,1.2s						
PPT2	Papeete2	27.15	94	*e*P	P	06 07 52.9	+0.5
	comp=Z,100nm,1.2s						
PPT	Papeete	27.15	94	P	P	06 07 53.1	+0.7
	comp=Z,59nm,0.7s,baz=64,slow=6.2,SNR=9.7						
PPTF	Pamatai, Papee	27.16	94	P	P	06 07 53.4	+0.9
TBI	Tubuai	27.33	106	*e*P	P	06 07 54.7	+0.9
	comp=Z,190nm,1.0s						
TIAR	Tiarei	27.37	94	*e*P	P	06 07 54.7	+0.4
	comp=Z,26nm,0.9s						
RPZ	Rata Peaks	27.39	197	P	P	06 07 53.4	-0.7
	comp=Z,5.4nm,0.6s,baz=65,slow=14,SNR=3.7						
TVO	Taravao	27.44	94	*e*P	P	06 07 55.5	+0.5
	comp=Z,15nm,0.9s						
EIDS	Eidsvold	29.58	250	P	P	06 08 13.8	+0.2
ARMA	Armidale	30.25	240	P	P	06 08 20.0	+0.6
CTAO	Charters Tower	33.76	260	P	P	06 08 49.0	-0.5
CTAO				IAmb	IAmb	06 08 50.1	
	comp=Z,51nm,1.1s						
CAN	Canberra	34.00	233	P	P	06 08 52.2	+0.9
COEN	Coen	37.41	270	P	P	06 09 20.2	+0.4
COEN				IAmb	IAmb	06 09 20.9	
	comp=Z,22nm,0.8s						
TOO	Toolangi	37.46	231	P	P	06 09 21.1	+1.1
STKA	Stephens Creek	38.94	241	P	P	06 09 33.0	+0.9
	comp=Z,80nm,0.9s,baz=88,slow=9.2,SNR=146						
STKA	Stephens Creek	38.94	241	P	P	06 09 33.0	+0.9
STKA				IAmb	IAmb	06 09 33.9	
	comp=Z,18nm,0.9s						
GENI	Genyem	43.64	285	P	P	06 10 09.7	0.0
	comp=Z,282nm,0.9s						
BBOO	Buckleboo	43.72	241	P	P	06 10 10.3	+0.3
WB0	Warramunga Arr	44.91	260	P	P	06 10 18.5	-1.1
WB0				IAmb	IAmb	06 10 19.4	
	comp=Z,30nm,0.9s						
WB2	Warramunga Arr	44.94	259	P	P	06 10 19.1	-0.7
WB2				IAmb	IAmb	06 10 19.6	
	comp=Z,28nm,0.8s						
WRA	Warramunga Arr	44.95	259	P	P	06 10 18.3	-1.5
	comp=Z,17nm,0.8s,baz=94,slow=7.0,SNR=167						
WRA				PcP	PcP	06 11 50.6	-0.2
	comp=Z,5.5nm,0.8s,baz=89,slow=3.7,SNR=7.3						
WRA				ScP	ScP	06 14 54.3	-1.1
	comp=Z,2.5nm,1.2s,baz=81,slow=4.3,SNR=6.2						
WRA				S	S	06 16 20.2	-1.1
	comp=Z,0.9nm,0.8s,baz=93,slow=14,SNR=5.0						
AS31	Alice Springs	45.11	254	P	P	06 10 21.2	+0.2
ASAR	Alice Springs	45.11	254	P	P	06 10 20.9	-0.2
	comp=Z,196nm,0.7s,baz=85,slow=8.5,SNR=89						
ASAR				PcP	PcP	06 11 51.1	-0.2
	comp=Z,7.7nm,0.7s,baz=94,slow=4.0,SNR=7.0						
ASAR				ScP	ScP	06 14 55.8	-0.2
	comp=Z,1.1nm,0.8s,baz=87,slow=4.1,SNR=3.9						
ASAR				S	S	06 16 20.1	-3.5
	comp=Z,0.9nm,1.0s,baz=88,slow=14,SNR=4.3						
SMPI	Sarmi	45.21	285	P	P	06 10 22.2	+0.3
	comp=Z,81nm,0.8s						
BAKI	Biak	47.92	285	P	P	06 10 43.1	+0.7
FORT	Forrest	50.32	245	P	P	06 10 59.5	-0.5
FAKI	Fak Fak	50.86	281	P	P	06 11 04.0	-0.2
FAKI				IAmb	IAmb	06 11 04.6	
	comp=Z,87nm,1.3s						
FAKI	Fak Fak	50.86	281	P	P	06 11 03.7	-0.5
	comp=Z,658nmcomp=Z,55nm,1.2s						
SIJI	Sorong	52.52	283	P	P	06 11 16.3	+0.1
	comp=Z,230nm,0.7s,baz=87,slow=5.7,SNR=64						
SWI	Sorong	52.52	283	P	P	06 11 15.9	-0.3
	comp=Z,3µmcomp=Z,411nm,0.8s						
FITZ	Fitzroy Crossi	53.34	260	P	P	06 11 22.0	0.0
NLAI	Namlea	55.59	278	P	P	06 11 37.9	0.0
	comp=Z,76nm,0.8s						
SOEI	Soe	56.38	270	P	P	06 11 43.4	-0.1
	comp=Z,150nm,0.9s						
TNTI	Ternate	56.74	283	P	P	06 11 45.9	0.0
	comp=Z,128nm,0.9s						
SANI	Sanana	57.03	279	P	P	06 11 47.2	-0.7
	comp=Z,1µmcomp=Z,116nm,0.8s						
PSA00	Pilbara Seismi	58.23	255	P	P	06 11 55.5	-0.4
PSA00				IAmb	IAmb	06 11 56.0	
	comp=Z,33nm,0.8s						
NWAO	Narrogin (SRO)	59.52	242	P	P	06 12 03.9	-0.6
NWAO				IAmb	IAmb	06 12 04.4	
	comp=Z,21nm,0.9s						
VNDA	Vanda	60.55	185	P	P	06 12 12.2	+1.7
	comp=Z,2.3nm,1.0s,baz=346,slow=6.6,SNR=6.0						
VNDA	Vanda	60.55	185	P	P	06 12 12.5	+2.0
MORW	Morawa	60.80	246	P	P	06 12 12.7	-0.4
KAPI	Kappang	61.99	274	P	P	06 12 20.2	-0.9
	comp=Z,12nm,0.7s,baz=115,slow=6.6,SNR=7.7						
TOLI2	Tolitoli	63.00	281	P	P	06 12 27.9	+0.2
TOLI2				IAmb	IAmb	06 12 31.0	
	comp=Z,28nm,0.7s						
JAGI	Jajag, Banyuwa	66.35	268	P	P	06 12 47.1	-1.8
MJAR	Matsushiro Arr	68.02	323	P	P	06 12 57.8	-1.0
	comp=Z,5.1nm,0.8s,baz=147,slow=5.7,SNR=7.3						
KKM	Kota Kinabalu	69.02	284	P	P	06 13 04.8	-0.6
KKM				IAmb	IAmb	06 13 05.9	
	comp=Z,32nm,0.7s						
UGM	Wanagama	69.96	268	P	P	06 13 10.2	-0.8
JHS	Saijyo	70.03	319	P	P	06 13 11.3	+0.4
JHS				IAmb	IAmb	06 13 24.8	
	comp=Z,64nm,1.4s						
SBUM	Sibu	71.50	279	P	P	06 13 18.9	-1.0
SBUM				IAmb	IAmb	06 13 21.2	
	comp=Z,17nm,0.8s						
SBUM	Sibu	71.50	279	P	P	06 13 21.0	+1.0
QSPA	South Pole Qui	72.23	180	P	P	06 13 24.6	+1.1
QSPA				IAmb	IAmb	06 13 25.4	
	comp=Z,15nm,0.7s						
CISI	Cisompet, Garu	72.63	267	P	P	06 13 25.2	-1.5
KSM	Kuching	72.98	277	P	P	06 13 28.9	+0.4
KSM	Kuching	72.98	277	P	P	06 13 29.0	+0.4
LEM	Lembang	73.03	268	P	P	06 13 29.2	+0.2
	comp=Z,122nm,0.7s,baz=319,slow=19,SNR=8.9						
SAO	San Andreas Ge	76.15	44	P	P	06 13 47.0	+1.0
SAO				IAmb	IAmb	06 13 47.4	
	comp=Z,19nm,0.8s						
PMPB	Monarch Peak	76.27	44	P	P	06 13 47.7	+1.0
PMPB				IAmb	IAmb	06 14 01.0	
	comp=Z,43nm,1.2s						
109C	Camp Elliot, M	77.03	49	P	P	06 13 50.5	-0.4
	baz=239						
CBX	Cerro Bola	77.06	50	P	P	06 13 52.0	+0.8
MWC	Mount Wilson	77.06	47	P	P	06 13 51.7	+0.4
VES	Vestal, Richgr	77.22	46	P	P	06 13 51.7	-0.1
	baz=237,SNR=7.0						
O02D	Mt. Diablo Mer	77.29	40	P	P	06 13 52.9	+0.7
	baz=233,SNR=5.1						
BFSC	Mount Baldy Ra	77.34	48	P	P	06 13 52.5	-0.2
	baz=238,SNR=6.9						
ESJX	Sierra Juarez	77.42	50	P	P	06 13 54.3	+1.1
EDW2	Edwards Air Fo	77.45	47	P	P	06 13 53.4	+0.2
	baz=238,SNR=8.9						
MONP2	Monument Peak	77.53	49	P	P	06 13 54.4	+0.5
	baz=239,SNR=18						
ISA	Isabella, Lake	77.54	46	P	P	06 13 54.1	+0.4
	baz=237,SNR=10						
CMB	Columbia Colle	77.57	43	P	P	06 13 54.2	+0.5
IKP	In-Ko-Pah, Jac	77.63	50	P	P	06 13 54.8	+0.5
	baz=239,SNR=12						
N02D	Trinity Center	77.82	40	P	P	06 13 55.5	+0.5
	baz=233						
PFO	Pinyon Flats O	77.87	49	P	P	06 13 55.6	0.0
	comp=Z,6.3nm,1.0s,baz=272,slow=4.0,SNR=7.8						
PFO	Pinyon Flats O	77.87	49	P	P	06 13 55.7	0.0
	baz=239,SNR=5.6						
TPFO	Pinon Flats	77.87	49	P	P	06 13 55.4	-0.2
	baz=239						
O03E	Paynes Creek	77.97	41	P	P	06 13 56.2	+0.3
	baz=234						
M02C	Callahan	77.98	39	P	P	06 13 56.5	+0.6
	baz=233,SNR=6.1						
LRMC	Laurel Mtn Rad	77.98	47	P	P	06 13 56.1	0.0
	baz=238,SNR=6.0						
SWSC	Sam W. Stewart	78.00	50	P	P	06 13 56.2	+0.1
	baz=240,SNR=7.2						
NJ2	Nanjing	78.12	309	*e*P	P	06 13 57.3	+0.5
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
MDPB	Devils Postpil	78.20	44	P	P	06 13 57.9	+0.5
MDPB				IAmb	IAmb	06 13 58.7	
	comp=Z,20nm,0.8s						
CWC	Cottonwood Cre	78.22	46	P	P	06 13 57.4	-0.1
	baz=237						
OMMB	Old Mammoth Mi	78.24	44	P	P	06 13 58.2	+0.5
KDAK	Kodiak Island	78.25	14	P	P	06 13 55.3	-1.6
	comp=Z,4.6nm,0.6s,baz=218,slow=5.5,SNR=7.9						
YBH	Yreka Blue Hor	78.27	39	P	P	06 13 58.3	+0.8
MLAC	Mammoth, Mammo	78.36	44	P	P	06 13 58.6	+0.3
	baz=237						
BELC	Belle Mtn. Jos	78.40	49	P	P	06 13 58.6	+0.2
	baz=239,SNR=5.4						
MPMC	Manual Prospec	78.42	46	P	P	06 13 58.7	+0.1
	baz=238,SNR=12						
WAKR	Walker	78.45	43	P	P	06 13 59.3	+0.6
WAKR				IAmb	IAmb	06 14 00.2	
	comp=Z,18nm,0.8s						
GSC	Goldstone, Bar	78.50	47	P	P	06 13 58.8	-0.1
	baz=238						
HEC	Hector,Ludlow	78.58	48	P	P	06 13 59.4	+0.1
	baz=239,SNR=8.5						
BC3	Big Chuckawall	78.61	49	P	P	06 14 00.1	+0.5
	baz=240,SNR=5.7						
BEKR	Beckworth	78.62	42	P	P	06 13 60.0	+0.4
GLA	Glamis	78.77	50	P	P	06 14 01.0	+0.7
	baz=240						
GLA	Glamis	78.77	50	P	P	06 14 01.1	+0.7
GLA				IAmb	IAmb	06 14 02.3	
	comp=Z,19nm,0.9s						
L04D	Klamath Falls	78.80	39	P	P	06 14 00.4	0.0
	baz=233						
M04C	Macdoel	78.82	39	P	P	06 14 00.9	+0.3
	baz=234,SNR=5.1						
GRAC	Grapevine Rang	79.01	45	P	P	06 14 02.1	+0.6
	baz=238						
GMRC	Granite Mounta	79.04	48	P	P	06 14 02.0	+0.1
	baz=239,SNR=5.6						
FURC	Furnace Creek,	79.07	46	P	P	06 14 02.0	+0.3
	baz=238,SNR=5.0						
IRM	Iron Mountain	79.09	49	P	P	06 14 02.5	+0.5
	baz=240,SNR=7.6						
NVAR	Mina Array Bea	79.15	44	P	P	06 14 03.0	+0.5
	comp=Z,13nm,0.7s,baz=224,slow=9.1,SNR=99						
MYKOM	Kota Tinggi	79.19	275	P	P	06 14 03.0	0.0
J04D	Umpqua Nationa	79.52	38	P	P	06 14 04.7	+0.3
	baz=233,SNR=8.0						
I04A	Tendick Farm,	79.68	37	P	P	06 14 05.1	+0.2
	baz=233						
214A	Organ Pipe Nat	79.72	52	P	P	06 14 06.1	+0.7
	baz=242						
TPNV	Topopah Spring	79.74	46	P	P	06 14 05.8	+0.3
	baz=239,SNR=8.1						
NEE2	Needles Airpor	79.77	48	P	P	06 14 06.1	+0.6
	baz=240						
PDMCI	Parker Dam,Lak	79.88	49	P	P	06 14 06.8	+0.7

	baz=240						
G03D	McMinnville, O	80.05	36	P	P	06 14 07.0	+0.2
	baz=232						
J05D	Fort Rock, OR	80.06	38	P	P	06 14 07.7	+0.6
	baz=234,SNR=16						
SHPR	Sheep Range	80.26	47	P	P	06 14 08.0	-0.4
BRSE	Bradley Lake S	80.43	14	P	P	06 14 08.8	+0.3
	baz=206						
I05D	Terrebonne, OR	80.62	37	P	P	06 14 09.9	0.0
	baz=234						
R11A	Troy Canyon, C	80.92	45	P	P	06 14 11.7	0.0
	baz=239,SNR=8.4						
WVOR	Wild Horse Val	81.14	40	P	P	06 14 12.0	-0.7
WVOR				IAmb	IAmb	06 14 13.9	
	comp=Z,21nm,1.1s						
G05D	Wamic, OR	81.17	37	P	P	06 14 12.8	+0.2
	baz=234						
E04D	Cinebar	81.26	35	P	P	06 14 13.0	0.0
	baz=233						
TUC	Tucson	81.41	52	P	P	06 14 15.4	+1.2
	baz=243						
F05D	White Salmon	81.47	36	P	P	06 14 14.1	0.0
	baz=234						
D04E	Lakebay	81.53	35	P	P	06 14 15.0	+0.6
	baz=232						
D03D	Eldon	81.57	34	P	P	06 14 14.9	+0.3
	baz=232						
J08A	Circle Bar Ran	81.76	39	P	P	06 14 15.4	-0.4
J08A				IAmb	IAmb	06 14 16.9	
	comp=Z,27nm,1.2s						
RC01	Rabbit Creek A	81.87	13	P	P	06 14 14.5	-1.3
	baz=207						
SUA	Susitna One	81.98	13	P	P	06 14 15.4	-1.1
	baz=206						
319A	Douglas	82.13	54	P	P	06 14 18.3	+0.3
319A				IAmb	IAmb	06 14 20.2	
	comp=Z,31nm,0.9s						
GLI	Glacier Island	82.29	15	P	P	06 14 17.0	-1.0
	baz=210						
TTA	Tatalina	82.34	10	P	P	06 14 17.9	-0.4
	baz=201						
ELK	Elko	82.39	43	P	P	06 14 18.4	-0.9
WUAZ	Wupatki	82.46	49	P	P	06 14 20.3	+0.7
	baz=242						
A04D	Lummi Island	82.50	33	P	P	06 14 19.7	+0.5
	baz=232						
B05A	Bryant	82.55	34	P	P	06 14 19.4	-0.2
	baz=233						
IPM	Ipoh	82.72	277	P	P	06 14 20.7	-0.6
IPM				IAmb	IAmb	06 14 22.2	
	comp=Z,34nm,0.7s						
IPM	Ipoh	82.72	277	P	P	06 14 22.0	+0.8
CUT	Chulitna	82.93	13	P	P	06 14 20.3	-0.8
	baz=207						
BMRM	Bremner River	82.99	16	P	P	06 14 20.4	-1.2
	baz=212						
KLU	Klutina	83.11	15	P	P	06 14 21.7	-0.5
	baz=211						
KULM	Kulim	83.33	278	P	P	06 14 24.2	-0.1
KULM				IAmb	IAmb	06 14 24.9	
	comp=Z,16nm,0.9s						
KULM	Kulim	83.33	278	P	P	06 14 25.0	+0.7
W18A	Petrified Fore	83.46	50	P	P	06 14 25.2	+0.5
	baz=243						
N25K	Chitina, Valde	83.54	15	P	P	06 14 23.5	-0.8
	baz=212						
M24K	Tolsona, Glenn	83.58	14	P	P	06 14 23.9	-0.6
	baz=210						
BALM	Baldy	83.65	17	P	P	06 14 24.4	-0.5
DUG	Dugway, Tooele	83.70	44	P	P	06 14 26.0	+0.3
	baz=240						
MCARA	McCarthy VSAT	83.76	16	P	P	06 14 24.4	-0.9
	baz=213						
121A	Cookes Peak, D	83.78	53	P	P	06 14 26.7	+0.4
	baz=244						
TRF	Thorofare Moun	83.86	12	P	P	06 14 24.4	-1.6
	baz=207						
CHUM	Lake Minchumin	83.86	11	P	P	06 14 24.1	-1.7
	baz=205						
CTGM	Chitina Glacie	83.87	17	P	P	06 14 25.7	-0.4
ZAIG	Zacatecas	84.10	64	P	P	06 14 28.0	-0.3
PSI	Prapat	84.18	275	P	P	06 14 27.9	-0.8
	comp=Z,14nm,0.4s,baz=360,slow=16						
BPAW	Bear Paw Mtn.	84.31	12	P	P	06 14 26.5	-1.5
	baz=206						
HLID	Hailey	84.36	41	P	P	06 14 29.4	+0.4
	baz=239						
MCK	McKinley	84.39	13	P	P	06 14 27.6	-0.9
	baz=208						
PAX	Paxson	84.49	14	P	P	06 14 27.4	-1.6
	baz=211						
SKAG	Skagway	84.51	20	P	P	06 14 26.7	-2.4
	baz=220						
GSI	Gunungsitoli	85.00	273	P	P	06 14 32.7	+0.1
NEA2	Nenana	85.13	12	P	P	06 14 30.0	-2.0
	baz=208						
MLY	Manley	85.20	11	P	P	06 14 30.8	-1.6
	baz=206						
GYA	Guiyang	85.26	300	⇓P	P	06 14 34.5	+0.8
GYA				pmax	pmax		
	comp=Z,6.0nm,1.3s						
NEW	Newport	85.26	36	P	P	06 14 32.2	-0.9
	baz=237						
MNTX	Cornudas Mount	85.28	55	P	P	06 14 33.9	+0.4
	baz=246						
MVCO	Mesa Verde	85.29	49	P	P	06 14 33.3	-0.5
	baz=244						
HDA	Harding Lake	85.41	13	P	P	06 14 32.5	-0.9
	baz=210						
BCAR	Beaver Creek A	85.48	16	P	P	06 14 32.5	-1.3
I23K	Minto, Yukon-K	85.57	12	P	P	06 14 33.2	-0.8
	baz=207						
TX31	Lajitas Ar. Si	85.69	58	P	P	06 14 36.1	+0.5
TX32	Lajitas Array	85.69	58	P	P	06 14 35.9	+0.2
TX32				IAmb	IAmb	06 14 37.9	
	comp=Z,21nm,1.0s						
TXAR	Lajitas Array	85.69	58	P	P	06 14 36.8	+1.1
	comp=Z,12nm,0.8s,baz=224,slow=5.2,SNR=51						
SCRK	Sand Creek	85.70	14	P	P	06 14 34.3	-0.6
	baz=212						
ILAR	Eielson Array	85.74	13	P	P	06 14 33.6	-1.3
	comp=Z,1.1nm,0.4s,baz=222,slow=5.5,SNR=30						
ILAR	Eielson Array	85.74	13	P	P	06 14 32.8	-2.1
ANMO	Albuquerque	85.81	51	P	P	06 14 36.4	+0.2
	comp=Z,5.1nm,1.0s,baz=204,slow=4.0,SNR=18						
ANMO	Albuquerque	85.81	51	P	P	06 14 36.2	0.0
	baz=245						
XAN	Xi'an	86.45	307	P	P	06 14 39.3	+0.2
S22A	4UR Ranch, Cre	86.72	49	P	P	06 14 40.9	+0.3
	baz=245						
O20A	White River Ci	86.77	46	P	P	06 14 40.5	-0.2
	baz=244						
EGAK	Eagle	87.05	15	P	P	06 14 40.7	-0.5
	baz=215						
BW06	Boulder Array	87.08	43	P	P	06 14 42.1	0.0
	baz=243						
PDAR	Pinedale Array	87.08	43	P	P	06 14 41.5	-0.6
	comp=Z,5.1nm,0.9s,baz=221,slow=3.0,SNR=38						
PDAR				PP	PP	06 18 11.4	-3.5
	comp=Z,0.2nm,0.6s,baz=262,slow=6.7,SNR=4.0						
PDAR	Pinedale Array	87.08	43	P	P	06 14 41.2	-0.9
BOZ	Bozeman (W)	87.10	40	P	P	06 14 42.6	+0.5
	baz=241						
H17A	Grant Village	87.19	42	P	P	06 14 44.1	+1.5
	baz=242						
H17A	Grant Village	87.19	42	P	P	06 14 43.5	+0.9
H17A				IAmb	IAmb	06 14 44.9	
	comp=Z,9.3nm,0.8s						
COLD	Coldfoot	87.27	11	P	P	06 14 42.0	-0.1
	baz=206						
LKWY	Lake	87.38	41	P	P	06 14 44.1	+0.6
LKWY				IAmb	IAmb	06 14 46.0	
	comp=Z,9.4nm,0.9s						
HHC	Hu-ho-hao-te	87.43	314	*e*P	P	06 14 41.5	-2.2
HHC				pmax	pmax		
	comp=Z,6.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,200nm,5.8s						
SDCO	Great Sand Dun	87.68	49	P	P	06 14 44.9	-0.2
	baz=245						
KMI	Kunming	88.07	297	⇓P	P	06 14 49.0	+1.9
KMI				pmax	pmax		
	comp=Z,19nm,1.0s						
MSTX	Muleshoe	88.19	54	P	P	06 14 47.4	0.0
	baz=247						
T25A	Trinidad	88.22	50	P	P	06 14 47.5	-0.1
	baz=246						
RLMT	Red Lodge	88.35	41	P	P	06 14 48.6	+0.6
	baz=243						
BMAR	Burnt Mountain	88.51	12	P	P	06 14 47.0	-1.0
TOLK	Toolik Lake Re	88.65	10	P	P	06 14 47.6	-1.0
	baz=207						
N23A	Red Feather La	88.68	46	P	P	06 14 49.9	+0.1
	baz=245						
833A	Chaparral WMA,	88.79	60	P	P	06 14 49.7	-0.4
	baz=249						
K22A	Casper	89.03	44	P	P	06 14 51.0	-0.1
	baz=245						
CMAR	Chiang Mai Arr	89.14	290	P	P	06 14 50.9	-1.1
	comp=Z,2.3nm,0.4s,baz=90,slow=2.9,SNR=18						
CMAR	Chiang Mai Arr	89.14	290	P	P	06 14 51.9	-0.1
JCT	Junction City	89.23	58	P	P	06 14 51.9	-0.3
	baz=249						
CHTO	Chiang Mai	89.26	290	P	P	06 14 52.0	-0.5
CHTO				IAmb	IAmb	06 14 54.0	
	comp=Z,13nm,1.3s						
AMTX	Amarillo	89.38	53	P	P	06 14 52.3	-0.5
	baz=248						
ABTX	Abilene, Hawle	90.13	56	P	P	06 14 56.8	+0.5
	baz=249						
SNAA	Sanae	90.67	178	P	P	06 14 57.2	-1.0
VNA3	Neumayer Olymp	90.80	176	P	P	06 14 58.3	-0.4
LAO	LASA Array	90.95	41	P	P	06 15 01.0	+1.2
	baz=245						
PLCA	Paso Flores	91.17	134	P	P	06 15 01.9	+0.8
	comp=Z,2.7nm,0.9s,baz=232,slow=8.7,SNR=4.7						
VNA2	Neumayer--Watz	91.25	177	P	P	06 15 00.5	-0.3
	baz=181,slow=3.9						
RSSD	Black Hills	91.29	44	P	P	06 15 01.3	-0.3
	baz=246						
VNA1	Neumayer--Stat	91.47	177	P	P	06 15 01.6	-0.1
R32A	Long Quarter,	92.89	51	P	P	06 15 07.7	-1.2
DGMT	Dagmar	92.93	40	P	P	06 15 09.2	+0.3
	baz=246						
YKA	Yellowknife Ar	94.13	25	P	P	06 15 13.3	-0.6
	comp=Z,2.1nm,0.7s,baz=239,slow=4.0,SNR=21						
BGNE	Belgrade	94.31	48	P	P	06 15 15.8	+0.5
	baz=250						
KSU1	Kansas State U	94.66	51	P	P	06 15 17.4	+0.4
	baz=251						
GTA	Gaotai	95.22	310	*e*P	P	06 15 22.0	+2.4
GTA				pP	pP	06 17 16.8	+5.4
GTA				sP	sP	06 18 08.3	+6.4
ECSD	EROS Data Cent	96.15	46	P	P	06 15 23.1	-0.5
	baz=251						
ARCES	ARCESS Array B	126.29	350	PKP	PKPdf	06 20 52.8	-1.7
	comp=Z,5.2nm,1.0s,baz=327,slow=2.0,SNR=7.4						
AKASG	Malin Array Be	140.63	333	PKP	PKPdf	06 21 20.5	-1.3
	comp=Z,0.2nm,0.4s,baz=43,slow=3.6,SNR=3.5						
BRTR	Keskin Array B	144.94	315	PKP	PKPdf	06 21 29.6	-0.4
	comp=Z,2.5nm,1.0s,baz=116,slow=2.9,SNR=10						
GERES	GERESS Array B	147.61	345	PKPbc	PKPbc	06 21 37.0	-0.5
	comp=Z,1.5nm,0.6s,baz=46,slow=3.9,SNR=9.4						
GERES	GERESS Array B	147.61	345		PKPbc	06 21 37.0	-0.5
WTTA	Wattenberg	149.57	347	*e*P	PKPbc	06 21 41.9	-0.7
	comp=Z,5.9nm,0.7s						
MOTA	Moosalm	149.60	348	*i* P	PKPbc	06 21 41.6	-1.0
	comp=Z,6.0nm,0.9s						
SQTA	Sankt Quirin	149.70	347	*i* P	PKPbc	06 21 42.1	-0.7
	comp=Z,3.4nm,0.5s						
ABTA	Abfaltersbach	149.85	345	*e*P	PKPbc	06 21 42.7	-0.5
	comp=Z,7.7nm,0.9s						
DAVA	Damuels	149.89	349	*e*P	PKPbc	06 21 43.2	-0.1
	comp=Z,6.2nm,0.8s						
TORD	Torodi Ar. Bea	175.35	177	PKP	PKPdf	06 22 00.7	-2.0
	comp=Z,1.6nm,0.9s,baz=149,slow=0.9,SNR=4.1						
TORD				PKPab	PKPab	06 23 42.7	+0.2
	comp=Z,1.6nm,0.9s,baz=189,slow=3.3,SNR=3.9						

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*BEO **27** 06:11:34.1±0.8, 45.°75N×27.°68E, h121^{km}±4^{km}, ML3.3/9*
*SIGU **27** 06:11:38.5, 45.°78N×26.°65E, h140^{km}, mb3.4*
*BUC **27** 06:11:40.1±0.3, 45.°73N×26.°67E, h130^{km}±2^{km}, ml4.2/54,*
Error ellipse: s-maj=2.2km s-min=1.8km az=162.0
*SOF **27** 06:11:41.4, 45.°78N×26.°61E, h49^{km}, MD3.7*
ISC 27 06:11:38.8±1.2**, 45.°76N**±0.°02×**26.°66E**±0.°02**, h141**^{km}±5^{km},
n157, σ1.°**10**/255, **140C-71D, Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLOR	Plostina	0.10	355	⇑P	Pn	06 11 57.1	-0.8
PLOR				⇓S	Sn	06 12 10.8	-1.6
PLOR	Plostina	0.10	355	⇑P	Pn	06 11 57.1	-0.8
PLOR				⇓S	Sn	06 12 10.8	-1.6
VRI	Vrincioaia	0.12	23	⇑P	Pn	06 11 58.2	+0.3
VRI				⇑S	Sn	06 12 11.0	-1.4
VRI	Vrincioaia	0.12	23	⇑P	Pn	06 11 58.2	+0.3
VRI				⇑S	Sn	06 12 11.0	-1.4
BISRR	Bisoca	0.21	171	⇑P	Pn	06 11 58.6	+0.5
BISRR				⇑S	Sn	06 12 12.2	-0.5
BISRR	Bisoca	0.21	171	⇑P	Pn	06 11 58.6	+0.5
BISRR				⇑S	Sn	06 12 12.2	-0.5
ODBI	Odobesti	0.28	88	⇑P	Pn	06 11 59.3	+1.1
ODBI				⇑S	Sn	06 12 13.0	+0.2
ODBI	Odobesti	0.28	88	⇑P	Pn	06 11 59.3	+1.1
ODBI				⇑S	Sn	06 12 13.0	+0.2
PETR	Petresti	0.40	94	⇑P	Pn	06 11 59.3	+0.7
PETR				⇓S	Sn	06 12 13.2	-0.3
PETR	Petresti	0.40	94	⇑P	Pn	06 11 59.3	+0.7
PETR				⇓S	Sn	06 12 13.2	-0.3
NEHR	Nehoiu	0.42	218	⇑P	Pn	06 11 59.3	+0.5
NEHR				⇑S	Sn	06 12 13.3	-0.5
NEHR	Nehoiu	0.42	218	⇑P	Pn	06 11 59.3	+0.5
NEHR				⇑S	Sn	06 12 13.3	-0.5
GRER		0.43	150	⇑P	Pn	06 12 00.1	+1.3
GRER				⇑S	Sn	06 12 14.3	+0.4
GRER		0.43	150	⇑P	Pn	06 12 00.1	+1.3
GRER				⇑S	Sn	06 12 14.3	+0.4
MLR	Muntele Rosu	0.57	242	⇑P	Pn	06 12 00.2	+0.5
MLR				⇑S	Sn	06 12 14.1	-1.3
MLR	Muntele Rosu	0.57	242	*e*Pg	Pn	06 12 00.1	+0.5
MLR				*e*Sg	Sn	06 12 14.5	-0.9
MLR	Muntele Rosu	0.57	242	⇑P	Pn	06 12 00.2	+0.5
MLR				⇑S	Sn	06 12 14.1	-1.3
GHRR		0.60	59	⇓P	Pn	06 12 00.4	+0.7
GHRR				⇓S	Sn	06 12 15.2	-0.3
GHRR		0.60	59	⇓P	Pn	06 12 00.4	+0.7
GHRR				⇓S	Sn	06 12 15.2	-0.3
ISR	Istrita	0.64	187	⇓P	Pn	06 12 00.7	+0.7
ISR				⇑S	Sn	06 12 16.3	+0.3
ISR	Istrita	0.64	187	⇓P	Pn	06 12 00.7	+0.7
ISR				⇑S	Sn	06 12 16.3	+0.3
OZUR		0.70	299	⇑P	Pn	06 12 00.5	+0.1
OZUR		0.70	299	⇑P	Pn	06 12 00.5	+0.1
TUDR		0.72	103	⇑P	Pn	06 12 00.6	+0.2
TUDR				⇑S	Sn	06 12 15.9	-1.0
TUDR		0.72	103	⇑P	Pn	06 12 00.6	+0.2
TUDR				⇑S	Sn	06 12 15.9	-1.0
TESR	Tescani	0.76	359	⇑P	Pn	06 12 00.9	+0.2
TESR	Tescani	0.76	359	⇑P	Pn	06 12 00.9	+0.2
SECR		0.83	210	⇑P	Pn	06 12 02.2	+0.9
SECR				⇑S	Sn	06 12 18.8	+0.4
SECR		0.83	210	⇑P	Pn	06 12 02.2	+0.9
SECR				⇑S	Sn	06 12 18.8	+0.4
VARL	Varlezi	0.84	80	⇑P	Pn	06 12 02.1	+0.7
VARL				⇑S	Sn	06 12 17.6	-0.8
VARL	Varlezi	0.84	80	⇑P	Pn	06 12 02.1	+0.7
VARL				⇑S	Sn	06 12 17.6	-0.8
BIR	Birlad	0.84	52	⇓P	Pn	06 12 02.0	+0.7
BIR				⇑S	Sn	06 12 18.0	-0.6
BIR	Birlad	0.84	52	⇓P	Pn	06 12 02.0	+0.7
BIR				⇑S	Sn	06 12 18.0	-0.6
SCHL	Schela	0.86	107	⇑P	Pn	06 12 01.9	+0.4
SCHL				⇑S	Sn	06 12 17.9	-0.8
SCHL	Schela	0.86	107	⇑P	Pn	06 12 01.9	+0.4
SCHL				⇑S	Sn	06 12 17.9	-0.8
PGOR	Pogoanele	0.88	165	⇑P	Pn	06 12 02.3	+0.7
PGOR				⇓S	Sn	06 12 19.1	+0.1
PGOR	Pogoanele	0.88	165	⇑P	Pn	06 12 02.3	+0.7
PGOR				⇓S	Sn	06 12 19.1	+0.1
DOPR	Dopca	0.91	284	⇑P	Pn	06 12 02.6	+0.6
DOPR				⇓S	Sn	06 12 18.8	-0.8
DOPR	Dopca	0.91	284	⇑P	Pn	06 12 02.6	+0.6
DOPR				⇓S	Sn	06 12 18.8	-0.8
PLAR	PLOIESTI	0.95	208	⇑P	Pn	06 12 03.3	+1.0
PLAR				⇑S	Sn	06 12 21.0	+0.9
PLAR	PLOIESTI	0.95	208	⇑P	Pn	06 12 03.3	+1.0
PLAR				⇑S	Sn	06 12 21.0	+0.9
SULR		1.11	195	⇑P	Pn	06 12 04.7	+0.9
SULR				⇑S	Sn	06 12 23.1	+0.4
SULR		1.11	195	⇑P	Pn	06 12 04.7	+0.9
SULR				⇑S	Sn	06 12 23.1	+0.4
VOIR		1.18	255	⇑P	Pn	06 12 04.8	+0.3
VOIR				⇑S	Sn	06 12 22.6	-1.3
VOIR		1.18	255	⇑P	Pn	06 12 04.8	+0.3
VOIR				⇑S	Sn	06 12 22.6	-1.3
VASR	Vaslui	1.18	41	⇓P	Pn	06 12 05.3	+0.9
VASR				⇓S	Sn	06 12 23.3	-0.6
VASR	Vaslui	1.18	41	⇓P	Pn	06 12 05.3	+0.9
VASR				⇓S	Sn	06 12 23.3	-0.6
CFR	Carcaliu	1.19	119	⇑P	Pn	06 12 04.6	+0.1
CFR				⇑S	Sn	06 12 22.4	-1.5
CFR	Carcaliu	1.19	119	⇑P	Pn	06 12 04.6	+0.1
CFR				⇑S	Sn	06 12 22.4	-1.5
AMRR	Amara	1.24	157	⇑P	Pn	06 12 05.7	+0.8
AMRR				⇓S	Sn	06 12 24.5	-0.4
AMRR	Amara	1.24	157	⇑P	Pn	06 12 05.7	+0.8
AMRR				⇓S	Sn	06 12 24.5	-0.4
MTUR	Matau	1.24	245	⇑P	Pn	06 12 06.2	+1.1
MTUR	Matau	1.24	245	⇑P	Pn	06 12 06.2	+1.1
BIZ	Bicaz	1.25	342	⇑P	Pn	06 12 06.6	+1.6
BIZ				⇓S	Sn	06 12 25.2	+0.1
BIZ	Bicaz	1.25	342	⇑P	Pn	06 12 06.6	+1.6
BIZ				⇓S	Sn	06 12 25.2	+0.1
LEHL	Lehliu	1.29	175	⇓P	Pn	06 12 06.3	+0.8
LEHL				⇓S	Sn	06 12 25.5	-0.1
LEHL	Lehliu	1.29	175	⇓P	Pn	06 12 06.3	+0.8
LEHL				⇓S	Sn	06 12 25.5	-0.1
HARR	Harsova	1.39	139	⇑P	Pn	06 12 07.0	+0.5
HARR	Harsova	1.39	139	⇑P	Pn	06 12 07.0	+0.5
ARR	Arges	1.48	255	⇑P	Pn	06 12 08.8	+1.3
ARR				⇑S	Sn	06 12 28.3	-1.0
ARR	Arges	1.48	255	⇑P	Pn	06 12 08.8	+1.3
ARR				⇑S	Sn	06 12 28.3	-1.0
BUC1	Bucharest	1.48	198	⇓P	Pn	06 12 08.3	+0.8
BUC1				⇑S	Sn	06 12 27.4	-1.8
BUC1	Bucharest	1.48	198	⇓P	Pn	06 12 08.3	+0.8
BUC1				⇑S	Sn	06 12 27.4	-1.8
STFAR	Stefanesti-Arg	1.50	234	⇑P	Pn	06 12 08.8	+1.1
STFAR				⇑S	Sn	06 12 29.9	+0.3
STFAR	Stefanesti-Arg	1.50	234	⇑P	Pn	06 12 08.8	+1.1
STFAR				⇑S	Sn	06 12 29.9	+0.3
TPGR	Topolog	1.53	125	⇓P	Pn	06 12 08.3	+0.3
TPGR	Topolog	1.53	125	⇓P	Pn	06 12 08.3	+0.3
TLBR	Topalu	1.56	141	⇑P	Pn	06 12 08.9	+0.6
TLBR				⇑S	Sn	06 12 29.5	-1.3
TLBR	Topalu	1.56	141	⇑P	Pn	06 12 08.9	+0.6
TLBR				⇑S	Sn	06 12 29.5	-1.3
IAS	Iasi	1.57	23	⇓P	Pn	06 12 09.1	+0.8
IAS				⇑S	Sn	06 12 29.9	-1.1
IAS	Iasi	1.57	23	⇓P	Pn	06 12 09.1	+0.8
IAS				⇑S	Sn	06 12 29.9	-1.1
SGRR	Singureni	1.61	198	⇑P	Pn	06 12 09.3	+0.4
SGRR				⇑S	Sn	06 12 31.1	-0.7
SGRR	Singureni	1.61	198	⇑P	Pn	06 12 09.3	+0.4
SGRR				⇑S	Sn	06 12 31.1	-0.7
TLCR		1.62	110	⇑P	Pn	06 12 10.0	+1.0
TLCR				⇑S	Sn	06 12 31.2	-0.8
TLCR		1.62	110	⇑P	Pn	06 12 10.0	+1.0
TLCR				⇑S	Sn	06 12 31.2	-0.8
HUMR	Humele	1.71	225	⇓P	Pn	06 12 10.4	+0.4
HUMR				⇓S	Sn	06 12 32.9	-0.9
HUMR	Humele	1.71	225	⇓P	Pn	06 12 10.4	+0.4
HUMR				⇓S	Sn	06 12 32.9	-0.9
CVDA	Cernavoda	1.73	145	⇑P	Pn	06 12 10.9	+0.8
CVDA				⇑S	Sn	06 12 32.5	-1.6
CVDA	Cernavoda	1.73	145	⇑P	Pn	06 12 10.9	+0.8
CVDA				⇑S	Sn	06 12 32.5	-1.6
TIRR	Tirgusor	1.79	136	⇑P	Pn	06 12 11.6	+0.6
TIRR				⇓S	Sn	06 12 34.2	-1.3
TIRR	Tirgusor	1.79	136	⇑P	Pn	06 12 11.6	+0.6
TIRR				⇓S	Sn	06 12 34.2	-1.3
ICOR	Ion Corvin	1.83	153	⇑P	Pn	06 12 12.4	+1.0
ICOR	Ion Corvin	1.83	153	⇑P	Pn	06 12 12.4	+1.0
JURR	Jurilovca	1.85	122	⇑P	Pn	06 12 12.5	+0.9
JURR	Jurilovca	1.85	122	⇑P	Pn	06 12 12.5	+0.9
MILM	Milestii Mici	1.89	51	⇓P	Pn	06 12 13.0	+0.9
MILM	Milestii Mici	1.89	51	⇓P	Pn	06 12 13.0	+0.9
MILM	Milestii Mici	1.89	51	P	Pn	06 12 13.0	+0.9
COPA	Copaceanca	1.92	213	⇑P	Pn	06 12 12.9	+0.5
COPA				⇓S	Sn	06 12 36.7	-1.4
COPA	Copaceanca	1.92	213	⇑P	Pn	06 12 12.9	+0.5
COPA				⇓S	Sn	06 12 36.7	-1.4
KIS	Kishinev	1.94	49	⇓*i*P	Pn	06 12 13.7	+1.0
	200nm,0.2s						
KIS				*e*S	Sn	06 12 37.6	-1.0
	370nm,0.2s						
KIS	Kishinev	1.94	49	⇓P	Pn	06 12 13.7	+1.0
KIS				⇑S	Sn	06 12 37.8	-0.9
KIS	Kishinev	1.94	49	⇓P	Pn	06 12 13.7	+1.0
KIS				⇑S	Sn	06 12 37.8	-0.9
KIS	Kishinev	1.94	49	P	Pn	06 12 13.7	+1.0
KIS				Pm		06 12 13.8	
KIS				S	Sn	06 12 37.8	-0.9
KIS				Sm		06 12 37.9	
KIS				m		06 12 38.5	
MFTR	Murfatlar	2.01	141	⇑P	Pn	06 12 14.1	+0.6
MFTR				⇓S	Sn	06 12 38.4	-1.6
MFTR	Murfatlar	2.01	141	⇑P	Pn	06 12 14.1	+0.6
MFTR				⇓S	Sn	06 12 38.4	-1.6
LOT	Lotru	2.05	262	⇑P	Pn	06 12 15.4	+1.3
LOT				⇑S	Sn	06 12 42.4	+1.3
LOT	Lotru	2.05	262	⇑P	Pn	06 12 15.4	+1.3
LOT				⇑S	Sn	06 12 42.4	+1.3
BURAR	Bucovina Array	2.11	332	⇑P	Pn	06 12 16.5	+1.7
BURAR	Bucovina Array	2.11	332	⇑P	Pn	06 12 16.5	+1.7
TSCT	Constanta Port	2.13	138	⇓S	Sn	06 12 42.2	-0.5
TSCT	Constanta Port	2.13	138	⇓S	Sn	06 12 42.2	-0.5
RAZG	Razgrad	2.19	183	⇓P	Pn	06 12 16.4	+0.7
RAZG	Razgrad	2.19	183	⇓P	Pn	06 12 16.4	+0.7
TSSL	Sulina	2.24	104	⇓S	Sn	06 12 45.1	+0.2
TSSL	Sulina	2.24	104	⇓S	Sn	06 12 45.1	+0.2
ZIMR		2.29	204	⇓S	Sn	06 12 44.7	-1.4
ZIMR		2.29	204	⇓S	Sn	06 12 44.7	-1.4
VLAD	Vladila	2.38	223	⇓P	Pn	06 12 18.3	+0.3
VLAD	Vladila	2.38	223	⇓P	Pn	06 12 18.3	+0.3
TSMN	Mangalia Port-	2.39	144	⇑S	Sn	06 12 47.4	-0.9
TSMN	Mangalia Port-	2.39	144	⇑S	Sn	06 12 47.4	-0.9
SZH	Strazhica	2.54	192	*i* P	Pn	06 12 20.1	+0.1
PRD	Provadia	2.61	168	*i* P	Pn	06 12 22.2	+1.4
SORM	Soroca	2.65	25	⇑P	Pn	06 12 21.9	+0.7
SORM	Soroca	2.65	25	⇑P	Pn	06 12 21.9	+0.7
SORM	Soroca	2.65	25	P	Pn	06 12 21.9	+0.7
SRE	Strehaia	2.68	247	⇑P	Pn	06 12 22.5	+0.8
SRE				⇑S	Sn	06 12 53.7	-1.0
SRE	Strehaia	2.68	247	⇑P	Pn	06 12 22.5	+0.8
SRE				⇑S	Sn	06 12 53.7	-1.0
PVL	Pavlikeni	2.71	201	*i* P	Pn	06 12 24.6	+2.5
GZR	Gura Zlata	2.75	264	⇑P	Pn	06 12 24.2	+1.5
GZR				⇓S	Sn	06 12 57.2	+0.7
GZR	Gura Zlata	2.75	264	*e*Pn	Pn	06 12 23.9	+1.2
GZR	Gura Zlata	2.75	264	⇑P	Pn	06 12 24.2	+1.5
GZR				⇓S	Sn	06 12 57.2	+0.7
PLVB	Pleven	2.78	212	⇓P	Pn	06 12 23.7	+0.6
PLVB	Pleven	2.78	212	⇓P	Pn	06 12 23.7	+0.6
KSV	Kosov	2.78	338	*e*Pn	Pn	06 12 23.6	+0.6
KSV				Pm		06 12 33.5	
KSV				*e*Sn	Sn	06 12 57.6	+0.4
KSV				Sm		06 13 13.7	
KMPD	K-Podol'skiy	2.81	357	*e*Pn	Pn	06 12 23.2	-0.1
KMPD				*e*Sn	Sn	06 12 55.4	-2.4
NDNU	Novodnistrovsk	2.88	9	*e*Pn	Pn	06 12 24.1	-0.1
NDNU				Pm		06 12 25.2	
NDNU				*e*Sn	Sn	06 12 56.6	-2.7
NDNU				Sm		06 12 58.5	
HERR	Herculane	3.12	255	⇓P	Pn	06 12 27.7	+0.4
HERR				⇓S	Sn	06 13 04.1	-0.7
HERR	Herculane	3.12	255	⇓P	Pn	06 12 27.7	+0.4
HERR				⇓S	Sn	06 13 04.1	-0.7
MPEP	Malo Peshtene	3.18	222	*i* P	Pn	06 12 29.8	+1.7
HORU	Horodok	3.46	357	*e*Pn	Pn	06 12 32.0	+0.3
HORU				Pm		06 12 33.2	
HORU				*e*Sn	Sn	06 13 13.2	+0.4
HORU				Sm		06 13 27.1	
BZS	Buzias	3.54	270	⇓P	Pn	06 12 33.8	+1.1
BZS	Buzias	3.54	270	*e*Pn	Pn	06 12 33.9	+1.1
BZS				*e*Sn	Sn	06 13 11.9	-2.6
BZS	Buzias	3.54	270	⇓P	Pn	06 12 33.8	+1.1

MDVR	**Moldovita**	**3.63**	**256**	⇑P	**Pn**	**06 12 34.7**	**+0.7**
MDVR	**Moldovita**	**3.63**	**256**	*e*Pn	**Pn**	**06 12 34.4**	**+0.4**
MDVR	**Moldovita**	**3.63**	**256**	⇑P	**Pn**	**06 12 34.7**	**+0.7**
ZAGS	**Zajecar**	**3.70**	**240**	*e*Pn	**Pn**	**06 12 34.1**	**-0.8**
ZAGS				*e*Sn	**Sn**	**06 13 12.3**	**-6.1**
KUBS	**Kucevo**	**3.78**	**251**	*e*Pn	**Pn**	**06 12 35.4**	**-0.5**
ZAPS	**Zavoj**	**3.80**	**231**	*e*Pn	**Pn**	**06 12 36.8**	**+0.5**
ZAPS				*e*Sn	Sn	06 13 12.0	-8.8
VTS	**Vitosha**	**3.99**	**219**	⇓P	**Pn**	**06 12 39.8**	**+1.0**
VTS	**Vitosha**	**3.99**	**219**	*e*Pn	**Pn**	**06 12 39.6**	**+0.8**
VTS				*e*Sn	Sn	06 13 15.9	-9.4
VTS	**Vitosha**	**3.99**	**219**	⇓P	**Pn**	**06 12 39.8**	**+1.0**
VTS	**Vitosha**	**3.99**	**219**	*i* P	**Pn**	**06 12 39.9**	**+1.0**
BOVS	**Bovan**	**4.12**	**241**	⇑P	**Pn**	**06 12 40.4**	**0.0**
BOVS	**Bovan**	**4.12**	**241**	⇑P	**Pn**	**06 12 40.4**	**0.0**
BOSS	**Bosilegrad**	**4.44**	**224**	*e*Pn	**Pn**	**06 12 45.7**	**+1.1**
BOSS				*e*Sn	Sn	06 13 27.5	-8.2
GRUS	**Gruza**	**4.62**	**248**	*e*Pn	**Pn**	**06 12 47.8**	**+0.8**
GRUS				*e*Sn	**Sn**	**06 13 36.2**	**-3.9**
PRVS	**Prvonek**	**4.63**	**227**	*e*Pn	**Pn**	**06 12 48.2**	**+1.0**
PRVS				*e*Sn	Sn	06 13 31.8	-8.5
TRUS	**Trudelj**	**4.69**	**253**	*e*Pn	**Pn**	**06 12 48.5**	**+0.5**
TRUS				*e*Sn	**Sn**	**06 13 37.3**	**-4.5**
DIVS	**Divibare**	**5.02**	**253**	*e*Pn	**Pn**	**06 12 52.7**	**+0.3**
SEV	**Sevastopol'**	**5.10**	**101**	P	**Pn**	**06 12 54.1**	**+0.7**
SEV				Pm		06 12 55.1	
SEV				S	**Sn**	**06 13 50.2**	**-1.2**
SEV				Sm		06 13 52.8	
IVAS	**Ivanjica**	**5.13**	**247**	*e*Pn	**Pn**	**06 12 53.8**	**0.0**
IVAS				*e*Sn	**Sn**	**06 13 47.8**	**-4.4**
BBLS	**Lazići**	**5.50**	**252**	*e*Pn	**Pn**	**06 13 00.0**	**+1.3**
SUDU	**Sudak**	**5.94**	**95**	P	**Pn**	**06 13 05.5**	**+0.9**
SUDU				Pm		06 13 05.7	
SUDU				S	**Sn**	**06 14 11.2**	**-0.4**
SUDU				Sm		06 14 13.9	
FEO	**Feodosiya**	**6.19**	**94**	S	**Sn**	**06 14 17.9**	**+0.4**
FEO				Sm		06 14 20.4	

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*IDC **27** 06:14:23.3±0.9, 0°.48S×125°.50E, h0^{km}, mb3.9/8, mb1 4.0/8, mb1mx3.7/58, mbtmp3.9/8, MS3.5/1, Ms1 3.5/1, ms1mx2.5/49, Error ellipse: s-maj=52.8km s-min=18.7km az=71.0*

ISC 27 06:14:30.6±1.1, 0°.5S±0°.2×125°.6E±0°.4, h57^{km}, n10, σ0^{s}.74/9, mb3.9/9, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.12**	**157**	P	**P**	**06 19 09.8**	**-0.9**
	2.8nm,0.7s,baz=335,slow=11,SNR=20						
ASAR	**Alice Springs**	**24.38**	**161**	P	**P**	**06 19 44.5**	**+0.9**
	1.7nm,0.8s,baz=338,slow=8.4,SNR=15						
PSI	**Prapat**	**26.85**	**277**	LR	LR	06 33 02.9	
	comp=Z,86nm,18.5s,baz=270,slow=42						
USRK	**Ussuriysk Ar.**	**44.90**	**7**	P	**P**	**06 22 39.5**	**0.0**
	1.3nm,0.6s,baz=182,slow=9.5,SNR=2.4						
KLR	**Kul'dur**	**49.85**	**5**	P	**P**	**06 23 17.2**	**-0.7**
	0.6nm,0.6s,baz=98,slow=7.1,SNR=1.5						
SONM	**Songino Array**	**50.98**	**343**	P	**P**	**06 23 26.3**	**-0.4**
	0.5nm,0.5s,baz=153,slow=9.3,SNR=5.1						
PETK	**Petropavlovsk-**	**59.78**	**22**	P	**P**	**06 24 30.3**	**+0.6**
	1.1nm,0.5s,baz=190,slow=7.2,SNR=1.7						
MKAR	**Makanchi Array**	**60.43**	**327**	P	**P**	**06 24 33.8**	**-0.5**
	0.5nm,0.4s,baz=122,slow=8.0,SNR=12						
KURBB	**Kurchatov Arra**	**64.72**	**329**	P	**P**	**06 25 03.0**	**+0.2**
	0.4nm,0.2s,baz=128,slow=5.7,SNR=5.3						
AKTO	**Aktyubinsk**	**76.28**	**323**	P	**P**	**06 26 13.8**	**+0.5**
	1.7nm,0.6s,baz=108,slow=6.7,SNR=6.7						

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*IDC **27** 06:22:56.2±2.9, 27°.75S×139°.10E, h0^{km}, mb1 3.1/3, mb1mx3.0/41, mbtmp2.9/3, ML2.9/3, Error ellipse: s-maj=118.4km s-min=20.4km az=58.0*

*AUST **27** 06:22:57.1±0.3, 27°.84S×138°.93E, h10^{km}, Error ellipse: s-maj=6.1km s-min=3.4km az=5.0*

ISC 27 06:22:55.0±0.8, 27°.86S±0°.06×138°.95E±0°.04, h10^{km}, n14, σ2^{s}.64/26, South Australia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
INKA	**Innaminka**	**1.60**	**86**	P	**Pg**	**06 23 26.3**	**+0.6**
	baz=1.6						
INKA				S	**Sg**	**06 23 46.6**	**+0.1**
	baz=1.6						
OOD	**Oodnadatta**	**2.89**	**271**	P	**Pb**	**06 23 44.6**	**-2.0**
	baz=2.9						
OOD				S	**Sn**	**06 24 17.1**	**+1.3**
	baz=2.9						
STKA	**Stephens Creek**	**4.62**	**151**	Pn	**Pn**	**06 24 07.5**	**+2.7**
	0.4nm,0.3s,baz=329,slow=14,SNR=3.0						
STKA				Sn	**Sn**	**06 24 56.0**	**-2.6**
	0.8nm,0.3s,baz=222,slow=20,SNR=6.2						
STKA				Lg	Lg	06 25 24.2	
	0.9nm,0.3s,baz=66,slow=23,SNR=4.1						
STKA	**Stephens Creek**	**4.62**	**151**	P	**Pn**	**06 24 07.4**	**+2.5**
	baz=4.6						
STKA				P	**Pn**	**06 24 07.6**	**+2.7**
	baz=4.6						
STKA				S	**Sn**	**06 24 56.3**	**-2.2**
	baz=4.6						
QLP	**Quilpie**	**4.88**	**76**	P	**Pn**	**06 24 11.2**	**+2.7**
	baz=4.9						
QLP				S	**Sn**	**06 25 03.3**	**-1.7**
	baz=4.9						
MULG	**Mulgathing**	**4.91**	**239**	P	**Pn**	**06 24 11.5**	**+2.6**
	baz=4.9						
MULG				S	**Sn**	**06 25 04.8**	**-1.0**
	baz=4.9						
BBOO	**Buckleboo**	**5.53**	**206**	P	**Pn**	**06 24 20.1**	**+2.8**
	baz=5.6						
BBOO				S	**Sn**	**06 25 18.1**	**-2.9**
	baz=5.6						
ASAR	**Alice Springs**	**6.17**	**311**	Pn	**Pn**	**06 24 29.4**	**+3.1**
	0.3nm,0.3s,baz=136,slow=13,SNR=20						
ASAR				Sn	**Sn**	**06 25 33.7**	**-3.3**
	0.2nm,0.3s,baz=140,slow=23,SNR=5.1						
CMSA	**Cobar Meteorol**	**6.92**	**124**	P	**Pn**	**06 24 37.4**	**+1.0**
	baz=6.9						
CMSA				S	**Sn**	**06 25 50.3**	**-4.9**
	baz=6.9						
WC3	**Warramunga Arr**	**8.91**	**331**	P	**Pn**	**06 25 05.7**	**+1.9**
	baz=8.9						
WB2	**Warramunga Arr**	**8.93**	**331**	P	**Pn**	**06 25 06.0**	**+1.9**
	baz=8.9						
WB2				S	**Sn**	**06 26 41.4**	**-3.5**
	baz=8.9						
WRA	**Warramunga Arr**	**8.94**	**331**	Pn	**Pn**	**06 25 05.9**	**+1.7**
	0.1nm,0.3s,baz=149,slow=13,SNR=7.0						
WRA				Sn	**Sn**	**06 26 41.2**	**-3.8**
	0.4nm,0.3s,baz=144,slow=23,SNR=9.4						
FORT	**Forrest**	**9.94**	**250**	P	**Pn**	**06 25 19.2**	**+1.3**
	baz=9.9						
WRKA	**Warakurna**	**9.95**	**284**	P	**Pn**	**06 25 20.1**	**+2.0**
	baz=9.9						

IDC 27 06:23:21.1±3.0, 32°.59S×178°.27W, h0^{km}, mb3.5/2, mb1 3.8/3, mb1mx3.6/32, mbtmp3.6/3, ML3.6/1, Error ellipse: s-maj=72.0km s-min=45.3km az=125.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**6.79**	**212**	Pn	Pn	06 25 01.7	-0.4
	1.1nm,0.3s,baz=202,slow=0.3,SNR=7.0						
URZ				Sn	Sn	06 26 15.2	-4.9
	1.9nm,0.3s,baz=113,slow=21,SNR=9.7						
ASAR	**Alice Springs**	**42.81**	**269**	P	P	06 31 20.8	-0.2
	0.4nm,0.7s,baz=109,slow=7.6,SNR=6.8						
WRA	**Warramunga Arr**	**43.99**	**275**	P	P	06 31 30.5	0.0
	0.5nm,0.4s,baz=112,slow=8.1,SNR=14						
FINES	**FINESS Array B**	**147.11**	**339**	PKPbc	PKPbc	06 43 04.6	-0.7
	1.7nm,0.9s,baz=82,slow=2.9,SNR=3.1						

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*IDC **27** 06:25:47.0±2.0, 33°.27N×60°.80E, h0^{km}, mb3.5/8, mb1 3.7/10, mb1mx3.4/53, mbtmp3.6/10, ML3.5/2, MS3.9/1, Ms1 3.9/1, ms1mx2.8/38, Error ellipse: s-maj=40.2km s-min=21.2km az=159.0*

*THR **27** 06:25:51.2±0.4, 33°.58N×60°.66E, h14^{km}±5^{km}, ML3.6*

*TEH **27** 06:25:51.1, 33°.61N×60°.66E, h13^{km}, ML4.0*

ISC 27 06:25:50.5±0.8, 33°.62N±0°.04×60°.77E±0°.06, h10^{km}, n47, σ1^{s}.23/49, mb3.8/7, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHRT	**Shahrakht**	**0.40**	**274**	*e*Pg	**Pg**	**06 25 57.8**	**-0.7**
SHRT				IAML		06 26 04.9	
	comp=E,9μm,0.3s						
SHRT	**Shahrakht**	**0.40**	**274**	*e*Pg	**Pg**	**06 25 57.8**	**-0.7**
IMON	**Monand**	**1.02**	**246**	*e*Sg	**Sg**	**06 26 23.8**	**+0.4**
IMON				*e*Pg	**Pg**	**06 26 09.5**	**-0.6**
IMON				*e*		06 26 27.4	
	comp=Z,99nm,0.3s						
IDAH	**Dahanechah**	**1.16**	**221**	*e*Pg	**Pg**	**06 26 12.1**	**-0.7**
IDAH				*e*		06 26 34.4	
	comp=Z,99nm,0.2s						
AFRZ	**Afriz**	**1.48**	**263**	*e*Pg	**Pn**	**06 26 18.0**	**+0.6**
ITEG	**Tejag**	**1.84**	**248**	*e*Pn	**Pn**	**06 26 23.4**	**+1.0**
ITEG				*e*		06 26 55.4	
	comp=Z,99nm,0.4s						
IKOO	**Kooshah**	**1.90**	**232**	*e*Pn	**Pn**	**06 26 24.2**	**+0.9**
IKOO				*e*		06 26 27.3	
	comp=Z,99nm,0.4s						
BSRN	**Basiran**	**2.15**	**221**	*e*Pn	**Pn**	**06 26 27.6**	**+1.0**
BSRN				*e*Sg	**Sb**	**06 26 56.1**	**-0.5**
BSRN	**Basiran**	**2.15**	**221**	*e*Pn	**Pn**	**06 26 27.6**	**+1.0**
NHDN	**Nehbandan**	**2.30**	**196**	*e*Pn	**Pn**	**06 26 29.7**	**+1.0**
NHDN				*e*		06 27 06.7	
	comp=Z,99nm,0.4s						
JRKH	**Jarkhoshk**	**2.31**	**351**	*e*Pn	**Pn**	**06 26 29.8**	**+1.0**
IMYA	**Miami**	**2.77**	**349**	*e*Pn	**Pn**	**06 26 36.2**	**+1.0**
IMYA				*e*		06 27 35.0	
	comp=Z,99nm,0.6s						
TKDS	**Koohdasht(Taba**	**3.04**	**271**	*e*Pn	**Pn**	**06 26 40.3**	**+1.4**
IPAY	**Payeh**	**3.18**	**333**	*e*Pn	**Pn**	**06 26 42.7**	**+1.9**
IKRD	**Kardeh**	**3.31**	**342**	*e*Pn	**Pn**	**06 26 44.2**	**+1.5**
IAKL	**Akhelmad**	**3.40**	**332**	*e*Pn	**Pn**	**06 26 45.2**	**+1.2**
IAKL				*e*		06 28 09.8	
	comp=E,99nm,0.4s						
TPRV	**Parvadeh(Tabas**	**3.47**	**261**	*e*Pn	**Pn**	**06 26 45.8**	**+1.1**
TNSJ	**Nastanj**	**3.48**	**277**	*e*Pn	**Pn**	**06 26 45.8**	**+0.9**
TNSJ				*e*		06 27 57.6	
	comp=Z,99nm,0.7s						
SBZV	**Sabzevar**	**3.79**	**318**	*e*Pn	**Pn**	**06 26 50.8**	**+1.6**
ZHSF	**Zahedan**	**4.00**	**180**	*e*Pn	**Pn**	**06 26 53.5**	**+1.5**
ZHSF	**Zahedan**	**4.00**	**180**	*e*Pn	**Pn**	**06 26 53.5**	**+1.5**
ISFR	**Sfrayin**	**4.11**	**327**	*e*Pn	**Pn**	**06 26 54.7**	**+1.0**
CHMN	**Cheshme madani**	**4.65**	**217**	*e*Pn	**Pn**	**06 27 02.5**	**+1.3**
GEYT	**Alibeck**	**4.81**	**334**	Pn	**Pn**	**06 27 04.0**	**+0.9**
	comp=Z,1.3nm,0.3s,baz=153,slow=18,SNR=4.8						
GEYT				Pg	**Pg**	**06 27 21.4**	**-1.3**
	comp=Z,2.9nm,0.3s,baz=157,slow=17,SNR=13						
KBAM	**BAM**	**4.89**	**205**	*e*Pn	**Pn**	**06 27 05.4**	**+1.2**
TVBK	**TV Kerman**	**4.98**	**224**	*e*Pn	**Pn**	**06 27 07.5**	**+1.8**
TVBK				*e*		06 28 09.0	
	comp=Z,99nm,0.4s						
YZKH	**Yazd**	**5.33**	**258**	*e*Pn	**Pn**	**06 27 11.4**	**+1.1**
YZKH	**Yazd**	**5.33**	**258**	*e*Pn	**Pn**	**06 27 11.4**	**+1.1**
IMND	**Minoodasht**	**5.69**	**311**	*e*Pn	**Pn**	**06 27 15.8**	**+0.7**
ANAR	**Anarak**	**5.91**	**268**	*e*Pn	**Pn**	**06 27 20.1**	**+1.9**
IANJ	**Anjilo**	**5.95**	**290**	*e*Pn	**Pn**	**06 27 20.3**	**+1.3**
IGLO	**Ghaloghah**	**6.38**	**299**	*e*Pn	**Pn**	**06 27 26.9**	**+2.1**
NASN	**Na'in**	**6.72**	**265**	*e*Pn	**Pn**	**06 27 30.6**	**+0.9**
NASN	**Na'in**	**6.72**	**265**	*e*Pn	**Pn**	**06 27 30.6**	**+0.9**
IZEF	**Zefreh**	**7.11**	**266**	*e*Pn	**Pn**	**06 27 36.2**	**+1.3**
IPRN	**Peran**	**7.40**	**293**	*e*Pn	**Pn**	**06 27 40.5**	**+1.7**
AAK	**Ala-Archa**	**14.05**	**46**	Pn	**Pn**	**06 29 09.1**	**-0.6**
	comp=Z,0.4nm,0.3s,baz=234,slow=7.9,SNR=4.3						
BVAR	**Borovoye Array**	**20.59**	**17**	P	**P**	**06 30 30.1**	**+0.6**
	comp=Z,0.8nm,0.6s,baz=211,slow=25,SNR=3.4						
MKAR	**Makanchi Array**	**20.97**	**45**	P	**P**	**06 30 34.8**	**+1.0**
	comp=Z,0.6nm,0.5s,baz=240,slow=11,SNR=4.8						
KURBB	**Kurchatov Arra**	**21.41**	**32**	P	**P**	**06 30 40.0**	**+1.7**
	comp=Z,40nm,0.7s,baz=231,slow=10,SNR=13						
BRTR	**Keskin Array B**	**22.55**	**294**	P	**P**	**06 30 52.2**	**+1.2**
	comp=Z,0.7nm,0.7s,baz=111,slow=8.0,SNR=3.3						
ZALV	**Zalesovo Beam**	**26.50**	**33**	P	**P**	**06 31 28.4**	**+0.5**
	comp=Z,0.9nm,0.7s,baz=226,slow=9.8,SNR=4.1						
FINES	**FINESS Array B**	**35.61**	**332**	P	**P**	**06 32 48.6**	**+0.6**
	comp=Z,1.1nm,0.7s,baz=120,slow=7.5,SNR=4.2						
ARCES	**ARCESS Array B**	**40.93**	**342**	LR	LR	06 52 33.9	
	comp=Z,154nm,21.4s,baz=255,slow=39						
NOA	**NORSAR Array B**	**41.85**	**326**	P	**P**	**06 33 40.4**	**-0.1**
	comp=Z,0.9nm,0.8s,baz=108,slow=7.9,SNR=2.0						
TORD	**Torodi Ar. Bea**	**57.16**	**264**	P	**P**	**06 35 35.4**	**-2.4**
	comp=Z,0.9nm,0.9s,baz=54,slow=5.5,SNR=3.6						
YKA	**Yellowknife Ar**	**84.15**	**358**	P	**P**	**06 38 20.9**	**-0.6**
	comp=Z,0.6nm,1.0s,baz=2.9,slow=5.2,SNR=6.4						

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*IDC **27** 06:30:15.4±1.5, 8°.63S×127°.97E, h0^{km}, mb3.5/2, mb1 4.0/6, mb1mx3.6/36, mbtmp3.8/6, ML3.9/4, Error ellipse: s-maj=33.1km s-min=20.8km az=65.0*

ISC 27 06:30:19.6±1.4, 8°.5S±0°.1×128°.0E±0°.1, h35^{km}, n6, σ1^{s}.80/10, Timor region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**4.55**	**248**	Pn	**Pn**	**06 31 24.6**	**-1.4**
	3.6nm,0.3s,baz=90,slow=8.1,SNR=1.7						
BATI				Sn	**Sn**	**06 32 18.6**	**+0.8**
	5.9nm,0.3s,baz=336,slow=20,SNR=2.0						
FITZ	**Fitzroy Crossi**	**9.76**	**193**	Pn	**Pn**	**06 32 37.4**	**-0.2**
	0.6nm,0.3s,baz=20,slow=9.7,SNR=15						
FITZ				Sn	**Sn**	**06 34 27.3**	**+1.2**
	0.7nm,0.3s,baz=315,slow=17,SNR=4.1						
WRA	**Warramunga Arr**	**12.91**	**152**	Pn	**Pn**	**06 33 18.6**	**-2.1**
	1.4nm,0.3s,baz=322,slow=14,SNR=38						
WRA				Sn	**Sn**	**06 35 45.3**	**+2.2**
	0.5nm,0.3s,baz=335,slow=22,SNR=6.2						
ASAR	**Alice Springs**	**16.08**	**160**	Pn	**Pn**	**06 34 00.8**	**-2.3**
	0.4nm,0.3s,baz=338,slow=11,SNR=31						
ASAR				Sn	**Sn**	**06 37 01.1**	**+0.6**
	0.1nm,0.3s,baz=334,slow=14,SNR=3.1						
STKA	**Stephens Creek**	**26.45**	**153**	P	**P**	**06 35 53.5**	**0.0**
	1.5nm,0.5s,baz=331,slow=13,SNR=4.7						
MKAR	**Makanchi Array**	**68.43**	**328**	P	**P**	**06 41 19.8**	**+1.9**
	0.1nm,0.6s,baz=131,slow=7.9,SNR=2.0						

IDC 27 06:53:41.9±11.0, 6°.83S×125°.63E, h0^{km}, mb4.0/1, mb1 4.1/3, mb1mx3.5/44, mbtmp3.9/3, ML3.5/2, Error ellipse: s-maj=180.4km s-min=152.9km az=67.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**15.54**	**148**	Pn	Pn	06 57 21.1	-1.5
	0.1nm,0.3s,baz=320,slow=13,SNR=17						
ASAR	**Alice Springs**	**18.54**	**155**	P	P	06 58 00.2	0.0
	0.3nm,0.3s,baz=332,slow=11,SNR=25						
STKA	**Stephens Creek**	**29.04**	**151**	P	P	06 59 44.2	+0.3
	1.0nm,0.5s,baz=328,slow=11,SNR=3.5						

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*IDC **27** 07:05:58.2±6.1, 34°.70N×73°.16E, h36^{km}±51^{km}, mb3.9/8, mb1 4.0/11, mb1mx3.5/56, mbtmp4.0/11, ML3.9/3, Error ellipse: s-maj=31.9km s-min=18.1km az=39.0*

*NNC **27** 07:06:00.6±6.2, 34°.80N×73°.27E, h61^{km}±48^{km}, mb3.6, mpv3.9, Error ellipse: s-maj=56.9km s-min=32.7km az=17.0*

ISC 27 07:05:57.6±0.7, 34°.69N±0°.09×73°.4E±0°.1, h35^{km}, n28, σ1^{s}.86/29, mb4.0/8, 2C-4D, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	**Ala-Archa**	**7.99**	**6**	Pn	**Pn**	**07 07 55.6**	**+4.3**
	0.6nm,0.3s,baz=180,slow=5.4,SNR=6.9						
AAK				Sn	Sn	07 09 07.6	-13
	0.3nm,0.3s,baz=125,slow=4.3,SNR=3.7						
KK31	**Karatay Array**	**8.70**	**346**	⇑P	**Pn**	**07 08 02.4**	**+1.6**
	1.4nm,0.3s,baz=150,slow=11,SNR=76						
KK31				S	**Sn**	**07 09 37.7**	**0.0**
	2.6nm,0.4s,baz=167,slow=22,SNR=4.8						
GKN	**Gorkha**	**11.69**	**122**	*e*P	**Pn**	**07 08 43.1**	**+1.1**
	27nm,0.4s						
GKN				*e*S	**Sn**	**07 10 48.3**	**-3.1**
DMN	**Daman**	**12.26**	**122**	*e*P	**Pn**	**07 08 51.0**	**+1.1**
	13nm,0.3s						
PKIN	**Phulchoki**	**12.48**	**121**	*e*P	**Pn**	**07 08 53.9**	**+0.9**
	11nm,0.3s						
PKI	**Pulchoki**	**12.49**	**121**	*e*P	**Pn**	**07 08 54.2**	**+1.0**
	14nm,0.3s						
GUN	**Gumba**	**12.63**	**119**	*e*P	**Pn**	**07 08 55.1**	**+0.1**
	15nm,0.4s						
RAMN	**Ramite**	**13.71**	**121**	*e*P	**Pn**	**07 09 09.2**	**-0.5**
	25nm,0.5s						
MAKZ	**Makanchi**	**13.73**	**26**	⇓P	**Pn**	**07 09 11.1**	**+1.4**
	1.3nm,0.5s						
MK31	**Makanchi Array**	**13.84**	**26**	⇓P	**Pn**	**07 09 12.9**	**+1.8**
	0.7nm,0.6s,baz=205,slow=13,SNR=7.9						
MKAR	**Makanchi Array**	**13.84**	**26**	Pn	Pn	07 09 04.8	-6.3
	0.0nm,0.3s,baz=209,slow=14,SNR=2.1						
TAPN	**Taplejung**	**14.28**	**117**	*e*P	**Pn**	**07 09 16.7**	**-0.8**
	11nm,0.3s						
ODAN	**Odare**	**14.33**	**119**	*e*P	**Pn**	**07 09 17.7**	**-0.5**
	13nm,0.4s						
KURBB	**Kurchatov Arra**	**16.36**	**12**	Pn	**Pn**	**07 09 42.4**	**-2.0**
	baz=198,slow=12,SNR=1.7						
AB31	**Akbulak array**	**17.62**	**330**	⇓P	**Pn**	**07 09 57.8**	**-2.3**
	0.9nm,0.5s,baz=134,slow=13,SNR=40						
BVAR	**Borovoye Array**	**18.46**	**354**	P	**P**	**07 10 08.9**	**-1.2**
	0.5nm,0.3s,baz=210,slow=17,SNR=10						
BRVK	**Borovoye**	**18.50**	**354**	⇑P	**P**	**07 10 10.9**	**+0.4**
	2.2nm,0.6s						
AKTO	**Aktyubinsk**	**19.33**	**329**	P	**P**	**07 10 19.2**	**-0.4**
	0.7nm,0.3s,baz=128,slow=9.8,SNR=17						
AKTO	**Aktyubinsk**	**19.33**	**329**	⇓P	**P**	**07 10 19.6**	**0.0**
	6.0nm,0.7s						
ZALV	**Zalesovo Beam**	**20.87**	**19**	P	**P**	**07 10 31.3**	**-5.0**
	1.0nm,0.5s,baz=200,slow=12,SNR=4.8						
CMAR	**Chiang Mai Arr**	**27.87**	**119**	P	**P**	**07 11 46.8**	**+2.6**
	1.7nm,0.3s,baz=305,slow=9.8,SNR=9.7						
FINES	**FINESS Array B**	**40.07**	**327**	P	**P**	**07 13 28.5**	**-0.7**
	0.6nm,0.5s,baz=110,slow=10,SNR=1.7						
ARCES	**ARCESS Array B**	**43.56**	**338**	P	**P**	**07 13 58.0**	**+0.4**
	3.1nm,0.8s,baz=117,slow=7.2,SNR=8.0						
TORD	**Torodi Ar. Bea**	**67.66**	**271**	P	**P**	**07 16 50.6**	**-0.8**
	1.2nm,0.4s,baz=46,slow=5.9,SNR=15						
BOSA	**Boshof**	**77.67**	**222**	P	**P**	**07 17 50.7**	**+0.1**
	1.8nm,0.6s,baz=32,slow=3.8,SNR=6.0						
WRA	**Warramunga Arr**	**79.37**	**123**	P	**P**	**07 18 01.6**	**+1.4**
	0.5nm,0.4s,baz=324,slow=4.4,SNR=9.8						
ASAR	**Alice Springs**	**81.62**	**126**	P	**P**	**07 18 12.9**	**+0.8**
	0.9nm,0.8s,baz=309,slow=5.0,SNR=8.4						
YKA	**Yellowknife Ar**	**82.94**	**4**	P	**P**	**07 18 19.1**	**+0.6**
	0.4nm,0.5s,baz=355,slow=5.1,SNR=12						

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*NNC **27** 07:33:15.2±0.4, 49°.98N×78°.68E, h0^{km}, mb3.6, mpv3.3, Error ellipse: s-maj=4.1km s-min=2.1km az=69.0, Suspected Mining explosion.*

*IDC **27** 07:33:16.6±0.8, 50°.06N×78°.88E, h0^{km}, mb1 3.1/3, mb1mx2.9/54, mbtmp3.1/3, ML2.8/3, Error ellipse: s-maj=14.7km s-min=5.9km az=60.0*

ISC 27 07:33:12.6±0.8, 49°.93N±0°.03×78°.94E±0°.04, h0^{km}, n31, σ1^{s}.68/41, 21C-8D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR07	**Kurchatov Arra**	**0.71**	**338**	⇓P	**Pb**	**07 33 27.1**	**-0.8**
KUR07				⇑S	**Sg**	**07 33 36.1**	**+0.6**
KUR14	**Kurchatov Arra**	**0.72**	**342**	⇑P	**Pb**	**07 33 27.4**	**-0.7**
KUR14				⇑S	**Sg**	**07 33 36.2**	**+0.3**
KUR06	**Kurchatov Arra**	**0.73**	**339**	⇑P	**Pb**	**07 33 27.4**	**-0.8**
KUR06				⇑S	**Sg**	**07 33 36.4**	**+0.4**
KUR15	**Kurchatov Arra**	**0.73**	**341**	⇑P	**Pb**	**07 33 27.5**	**-0.7**
KUR15				⇑S	**Sg**	**07 33 36.7**	**+0.5**
KURBB	**Kurchatov Arra**	**0.74**	**340**	Pg	**Pb**	**07 33 27.9**	**-0.6**
	6.3nm,0.3s,baz=160,slow=18,SNR=34						
KURBB				Lg	Lg	07 33 37.3	
	7.2nm,0.3s,baz=144,slow=47,SNR=12						
KURBB	**Kurchatov Arra**	**0.74**	**340**	⇑P	**Pb**	**07 33 27.8**	**-0.6**
	29nm,0.3s						
KURBB				⇓S	**Sb**	**07 33 38.1**	**-1.1**
	184nm,0.5s						
KUR16	**Kurchatov Arra**	**0.76**	**338**	⇑P	**Pb**	**07 33 27.8**	**-0.9**
KUR16				⇑S	**Sg**	**07 33 37.2**	**+0.3**
KUR05	**Kurchatov Arra**	**0.76**	**340**	⇑P	**Pb**	**07 33 28.0**	**-0.8**
KUR05				⇑S	**Sg**	**07 33 37.1**	**0.0**
KUR17	**Kurchatov Arra**	**0.77**	**337**	⇑P	**Pb**	**07 33 27.9**	**-0.9**
KUR17				⇑S	**Sg**	**07 33 38.0**	**+0.8**
KUR04	**Kurchatov Arra**	**0.78**	**341**	⇑P	**Pb**	**07 33 28.2**	**-0.8**
KUR04				⇑S	**Sg**	**07 33 37.5**	**-0.1**
SEM	**Semipalatinsk**	**0.97**	**60**	P	**Pn**	**07 33 35.9**	**+2.1**
	7.7nm,0.2s						
SEM				S	**Sn**	**07 33 51.3**	**+2.9**
	89nm,0.3s						
MAKZ	**Makanchi**	**3.72**	**146**	⇑Pn	**Pb**	**07 34 17.8**	**-1.4**
	0.5nm,0.5s						
MAKZ				⇓Pg	**Pg**	**07 34 24.9**	**+1.0**
	3.2nm,0.6s						
MAKZ				⇓Lg	Lg	07 35 15.1	
	18nm,0.6s						
MK31	**Makanchi Array**	**3.85**	**143**	⇑Pn	**Pb**	**07 34 19.6**	**-1.8**
	0.2nm,0.2s,baz=326,slow=13,SNR=9.1						
MK31				⇓Pg	**Pg**	**07 34 27.7**	**+1.3**
	2.0nm,0.5s,baz=320,slow=13,SNR=24						
MK31				Lg	Lg	07 35 21.5	
	15nm,0.5s,baz=328,slow=26,SNR=15						
MKAR	**Makanchi Array**	**3.85**	**143**	Pn	**Pb**	**07 34 19.8**	**-1.6**
	0.6nm,0.3s,baz=328,slow=11,SNR=36						
MKAR				Pg	**Pg**	**07 34 25.7**	**-0.7**
	0.8nm,0.3s,baz=328,slow=14,SNR=17						
MKAR				Sn	**Sb**	**07 35 06.0**	**-2.5**
	0.5nm,0.3s,baz=328,slow=14,SNR=2.2						
MKAR				Lg	Lg	07 35 20.7	
	3.8nm,0.3s,baz=328,slow=27,SNR=18						
BRZS	**Berezniki**	**4.04**	**273**	Pg	**Pb**	**07 34 26.9**	**+2.2**
	4.8nm,0.2s						
BRZS				Lg	Lg	07 35 18.2	
	21nm,0.6s						
ZSN	**Zaisan**	**4.64**	**120**	Pg	**Pg**	**07 34 39.8**	**-1.8**
	4.3nm,0.3s						
ZSN				Lg	Lg	07 35 40.6	
	21nm,0.5s						
ZALV	**Zalesovo Beam**	**5.42**	**40**	Pn	Pn	07 34 39.7	+5.0
	1.9nm,0.3s,baz=231,slow=14,SNR=11						
ZALV				Lg	Lg	07 36 04.7	
	0.3nm,0.3s,baz=230,slow=30,SNR=2.7						
I46RU	**ZALESOVO INFRA**	**5.43**	**40**	*i*		08 07 30.0	
	baz=226,slow=328,SNR=0.8						
DJR	**Jarkent**	**5.63**	**174**	Pg	**Pg**	**07 34 58.8**	**-1.6**
	2.6nm,0.5s						
DJR				Lg	Lg	07 36 08.8	
	6.1nm,0.6s						
MNBS	**Baschi**	**5.86**	**184**	Pg	**Pg**	**07 35 06.2**	**+1.3**
	3.7nm,0.5s						
MNBS				Lg	Lg	07 36 22.0	
	34nm,0.7s						
BVAR	**Borovoye Array**	**6.18**	**303**	Pn	**Pn**	**07 34 47.7**	**+2.7**
	0.2nm,0.3s,baz=216,slow=40,SNR=2.7						
BVAR				Sn	**Sn**	**07 35 52.3**	**-4.0**
	1.0nm,0.3s,baz=137,slow=26,SNR=18						
BVAR				Lg	Lg	07 36 26.1	
	0.9nm,0.3s,baz=135,slow=27,SNR=5.2						
BRVK	**Borovoye**	**6.25**	**303**	⇑Pn	**Pn**	**07 34 46.8**	**+0.8**
	0.7nm,0.6s						
BRVK				⇓Sn	**Sn**	**07 35 56.7**	**-1.4**
	5.9nm,0.7s						
BRVK				⇑Lg	Lg	07 36 27.8	
	5.4nm,0.9s						
KUU	**Kurty**	**6.29**	**197**	Pg	**Pg**	**07 35 10.1**	**-3.0**
	2.2nm,0.5s						
KUU				Lg	Lg	07 36 32.3	
	20nm,0.5s						
KTBS	**Karatobe**	**6.41**	**195**	Pg	Pg	07 35 22.2	+6.8
	0.8nm,0.6s						
KTBS				Lg	Lg	07 36 49.4	
	18nm,0.6s						
PDGK	**Podgornoye**	**6.61**	**177**	⇓Lg	Lg	07 36 48.2	
	9.5nm,0.6s						
KOTS	**Kotyrbulak**	**6.81**	**191**	Pg	**Pb**	**07 35 13.5**	**+1.5**
	4.5nm,0.3s						
KOTS				Lg	Lg	07 36 35.0	
	51nm,0.8s						
MDOK	**Medeo**	**6.89**	**192**	Pg	**Pb**	**07 35 14.1**	**+0.8**
MDOK				Lg	Lg	07 36 36.1	
KST	**Kastek**	**7.18**	**198**	Pg	**Pg**	**07 35 27.4**	**-2.9**
	2.3nm,1.1s						
KST				Lg	Lg	07 36 58.3	
	7.1nm,0.9s						
TKM2	**Tokmak 2**	**7.38**	**199**	⇓Lg	Lg	07 37 08.0	
	4.3nm,0.6s						
AAK	**Ala-Archa**	**7.91**	**205**	Sn	**Sn**	**07 36 42.5**	**+3.2**
	0.1nm,0.3s,baz=354,slow=22,SNR=2.0						
AAK				Lg	Lg	07 37 27.3	
	0.2nm,0.3s,baz=257,slow=23,SNR=5.3						
AAK	**Ala-Archa**	**7.91**	**205**	⇑Lg	Lg	07 37 27.1	
	6.1nm,0.6s						

WEL 27 07:34:19.1, 38°S±5°×17°6E±°, h207^{km}±6^{km}, M2.4/27, MLv2.4/27, Error ellipse: s-maj=0.0km s-min=0.0km

az=130.4,North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPRZ	**Ohinepanea**	0.11	153	P	Pn	07 34 46.2	+0.1
OMRZ	**Omania**	0.37	195	P	Pn	07 34 47.1	+0.5
KMRZ	**Kaimai**	0.45	257	P	Pn	07 34 46.6	-0.2
URZ	**Urewera**	0.71	137	P	Pn	07 34 47.6	-0.2
URZ				S	S	07 35 08.6	-1.7
MUGZ	**Murupara**	0.76	163	P	Pn	07 34 48.2	+0.1
TOZ	**Tahuroa Road**	0.79	271	P	Pn	07 34 49.0	+0.7
RTZ	**Ruatahuna**	0.95	156	P	Pn	07 34 49.4	+0.1
RTZ				S	S	07 35 11.7	-1.1
RUGZ	**Raukumara Rang**	0.96	103	P	Pn	07 34 48.9	-0.5
RUGZ				S	S	07 35 10.1	-2.8
MWZ	**Matawai**	1.01	126	P	Pn	07 34 49.5	-0.1
MWZ				S	S	07 35 12.5	-0.8
HAZ	**Te Kaha**	1.02	91	P	Pn	07 34 49.4	-0.3
HAZ				S	S	07 35 11.7	-1.6
RAGZ	**Rawiri**	1.04	136	P	Pn	07 34 49.8	-0.1
RAGZ				S	S	07 35 13.7	-0.2
MRHZ	**Matea Rd**	1.09	183	P	Pn	07 34 50.2	0.0
MRHZ				S	S	07 35 13.2	-1.2
MTHZ	**Maungataniwha**	1.14	166	P	Pn	07 34 50.7	+0.2
SNGZ	**Shannon Statio**	1.23	147	P	Pn	07 34 51.9	+0.7
PKGZ	**Pakihiroa**	1.26	97	P	Pn	07 34 49.0	-2.5
NMHZ	**Naumai**	1.37	170	P	Pn	07 34 53.4	+1.1
RIGZ	**Rimuhau**	1.39	134	P	Pn	07 34 53.2	+0.8
BKZ	**Black Stump Fm**	1.42	180	P	Pn	07 34 52.6	-0.1
HIZ	**Hauiti**	1.50	239	P	Pn	07 34 54.0	+0.7
TMVZ	**Te Maari**	1.50	204	P	Pn	07 34 53.5	+0.1
ETVZ	**East Tongariro**	1.52	204	P	Pn	07 34 53.7	+0.1
WTVZ	**West Tongariro**	1.54	207	P	Pn	07 34 53.9	+0.1
CNGZ	**Carnagh Statio**	1.54	119	P	Pn	07 34 52.2	-1.5
OTVZ	**Oturere**	1.56	204	P	Pn	07 34 54.3	+0.2
ARHZ	**Aropaoanui**	1.56	166	P	Pn	07 34 54.6	+0.7
TUVZ	**Tukino**	1.66	203	P	Pn	07 34 54.9	0.0
KWHZ	**Kaweka Forest**	1.68	182	P	Pn	07 34 55.4	+0.4
MCHZ	**McNeill Hill**	1.70	175	P	Pn	07 34 55.9	+0.7
WNVZ	**Wahianoa**	1.73	204	P	Pn	07 34 55.5	-0.1
MOVZ	**Moawhango**	1.76	199	P	Pn	07 34 55.3	-0.4
BHHZ	**Black Hill Sta**	1.77	191	P	Pn	07 34 55.6	-0.3
MHGZ	**Mahia Peninsul**	1.79	142	P	Pn	07 34 56.5	+0.5
MTVZ	**Mangateitei**	1.82	206	P	Pn	07 34 56.3	-0.1
KRHZ	**Kereru**	1.90	183	P	Pn	07 34 57.0	-0.1
VRZ	**Vera Road**	1.94	224	P	Pn	07 34 57.9	+0.5
CKHZ	**Cape Kidnapper**	1.96	167	P	S	07 35 21.5	-6.0
KAHZ	**Kahuranaki**	2.07	172	P	Pn	07 34 59.0	+0.2
PNHZ	**Pukenui**	2.18	186	P	Pn	07 34 59.6	-0.3
PNHZ	**Pukenui**	2.18	186	P	S	07 35 24.6	-6.9
PXZ	**Pawanui**	2.30	173	P	Pn	07 35 00.9	-0.3
PXZ	**Pawanui**	2.30	173	P	S	07 35 28.1	-5.6
WPHZ	**Waipukurau**	2.31	181	P	S	07 35 29.0	-5.0
TSZ	**Takapari Road**	2.35	190	P	Pn	07 35 01.2	-0.5
WCZ	**Waipu Caves**	2.49	316	P	Pn	07 34 57.7	-5.7
DVHZ	**Dannevirke**	2.56	186	P	S	07 35 31.6	-7.3
POWZ	**Post Office Ro**	2.70	192	P	Pn	07 35 04.7	-0.8
ANWZ	**Angora Road**	2.71	180	P	S	07 35 36.6	-5.2
PRWZ	**Pori Road**	2.83	188	P	Pn	07 35 06.5	-0.6
PRWZ	**Pori Road**	2.83	188	P	S	07 35 37.8	-6.5
BFZ	**Birch Farm**	2.94	184	P	Pn	07 35 07.5	-0.8
BFZ	**Birch Farm**	2.94	184	P	S	07 35 40.2	-6.2
MRZ	**Mangatainoka R**	3.00	193	P	Pn	07 35 07.4	-1.5
TIWZ	**Tintock**	3.06	189	P	Pn	07 35 08.7	-1.0
TIWZ	**Tintock**	3.06	189	P	S	07 35 41.2	-7.9
HOWZ	**Holdsworth Sta**	3.24	193	P	Pn	07 35 10.0	-1.8
HOWZ	**Holdsworth Sta**	3.24	193	P	S	07 35 44.4	-8.4
KIW	**Kapiti Island**	3.34	201	P	Pn	07 35 11.1	-1.9
TMWZ	**Te Maipa**	3.39	188	P	S	07 35 48.6	-7.5
MTW	**Mount Morrison**	3.49	192	P	Pn	07 35 12.6	-2.2
CAW	**Cannon Point**	3.53	198	P	Pn	07 35 13.2	-2.1
DUWZ	**D'Urville Isla**	3.65	212	P	Pn	07 35 14.4	-2.3
MSWZ	**Moikau Station**	3.79	194	P	Pn	07 35 15.9	-2.5
PLWZ	**Palliser**	3.94	194	P	Pn	07 35 17.6	-2.6
TUWZ	**Tuamarina**	4.17	207	P	Pn	07 35 20.6	-2.6
THZ	**Tophouse**	4.87	213	P	Pn	07 35 30.4	-1.6
KHZ	**Kahutara**	5.18	205	P	Pn	07 35 33.4	-2.5
KHZ				S	S	07 36 30.7	-5.6
LTZ	**Lake Taylor**	5.97	211	P	Pn	07 35 42.6	-3.4

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*IDC **27** 07:35:14.8±2.2,3°.83N×94°.82E,h0^{km},mb3.6/5,mb1 3.7/6, mb1mx3.5/57,mbtmp3.6/6,ML3.0/1,MS2.9/1,Ms1 3.1/1, ms1mx2.6/55,Error ellipse: s-maj=72.2km s-min=20.0km az=50.0*

ISC 27 07:35:19.3±1.8,3°.7N±0°.3×94°.8E±0°.2,h35^{km},n14,σ1^s.53/8, mb3.6/6,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	4.27	103	Pn	**Pn**	**07 36 19.6**	**-2.3**
	0.9nm,0.3s,baz=359,slow=3.9,SNR=5.3						
PSI				Sn	**Sn**	**07 37 12.4**	**+1.8**
	1.0nm,0.3s,baz=190,slow=0.5,SNR=4.2						
CMAR	**Chiang Mai Arr**	15.19	15	LR	LR	07 45 02.1	
	comp=Z,43nm,19.6s,baz=205,slow=39						
H08S2	**Diego Garcia H**	24.93	243	T	T	08 05 51.4	
	baz=66,slow=76,SNR=9.2						
H08S3	**Diego Garcia H**	24.93	243	T	T	08 05 53.0	
	baz=66,slow=76,SNR=18						
H08S1	**Diego Carcia H**	24.94	243	T	T	08 05 54.7	
	baz=66,slow=76,SNR=8.3						
H01W3	**Cape Leeuwin H**	42.52	156	T	T	08 27 38.7	
	baz=332,slow=76,SNR=7.7						
H01W2	**Cape Leeuwin H**	42.54	156	T	T	08 27 28.5	
	baz=332,slow=76,SNR=8.6						
H01W1	**Cape Leeuwin H**	42.54	156	T	T	08 27 22.2	
	baz=332,slow=76,SNR=7.8						
MKAR	**Makanchi Array**	44.23	348	P	**P**	**07 43 25.6**	**+0.5**
	0.8nm,0.6s,baz=176,slow=8.7,SNR=5.5						
SONM	**Songino Array**	45.06	11	P	**P**	**07 43 32.5**	**+0.6**
	0.4nm,0.6s,baz=182,slow=9.3,SNR=2.3						
WRA	**Warramunga Arr**	45.45	123	P	**P**	**07 43 36.6**	**+1.3**
	0.5nm,0.8s,baz=298,slow=8.8,SNR=2.8						
ASAR	**Alice Springs**	46.87	128	P	**P**	**07 43 46.8**	**+0.3**
	0.5nm,0.9s,baz=300,slow=7.4,SNR=4.4						
KURBB	**Kurchatov Arra**	48.68	346	P	**P**	**07 43 59.6**	**-0.3**
	1.4nm,0.8s,baz=174,slow=7.3,SNR=5.6						
ZALV	**Zalesovo Beam**	50.71	352	P	**P**	**07 44 14.6**	**-0.7**
	0.6nm,0.4s,baz=188,slow=10.0,SNR=3.6						

IDC 27 07:36:51.6±1.3,23°.75N×101°.87E,h0^{km},mb3.2/4, mb1 3.5/5,mb1mx3.2/59,mbtmp3.3/5,ML4.1/1,Error ellipse: s-maj=36.6km s-min=19.5km az=99.0,Yunnan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	5.93	208	Pn	Pn	07 38 22.1	+1.4
	1.2nm,0.3s,baz=31,slow=15,SNR=4.0						
CMAR				Pg	Pb	07 38 39.8	+3.9
	2.1nm,0.3s,baz=19,slow=14,SNR=4.7						
CMAR				Lg	Lg	07 39 57.7	
	1.7nm,0.3s,baz=11,slow=29,SNR=4.6						
SONM	**Songino Array**	24.30	7	P	P	07 42 10.0	-0.9
	0.5nm,0.7s,baz=196,slow=8.0,SNR=3.7						
MKAR	**Makanchi Array**	27.85	330	P	P	07 42 43.4	+0.6
	0.2nm,0.7s,baz=127,slow=9.2,SNR=1.6						
WRA	**Warramunga Arr**	53.74	141	P	P	07 46 16.5	+0.7
	0.2nm,0.5s,baz=329,slow=7.5,SNR=2.0						
ASAR	**Alice Springs**	56.48	144	P	P	07 46 34.9	-0.7
	0.2nm,0.7s,baz=332,slow=7.7,SNR=2.2						

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*IDC **27** 07:46:47.5±2.4,39°.38N×143°.47E,h0^{km},mb3.5/6, mb1 3.6/8,mb1mx3.4/47,mbtmp3.5/8,ML3.0/2,Error ellipse: s-maj=52.6km s-min=24.6km az=150.0*

*JMA **27** 07:46:47.1±0.2,39°.37N×143°.65E,h30^{km},M3.8*

ISC 27 07:46:49.2±1.1,39°.43N±0°.06×143°.41E±0°.07,h11^{km},n20, σ1^s.07/24,mb3.5/6,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIYJ	**Miyakonagasawa**	1.24	277	P	**Pn**	**07 47 11.7**	**-0.8**
MIYJ				*e*S	**Sg**	**07 47 29.9**	**+0.7**
OFUJ	**Ofunato**	1.40	256	P	**Pn**	**07 47 13.7**	**-1.0**
OFUJ				*e*S	**Sb**	**07 47 32.1**	**-1.1**
JOM	**Ohasama**	1.64	272	P	**Pn**	**07 47 17.8**	**-0.2**
JOM				*e*S	**Sn**	**07 47 40.0**	**+0.9**
JMK	**Ichinoseki**	1.77	255	P	**Pn**	**07 47 19.4**	**-0.4**
JIO	**Ouri**	1.88	239	P	**Pn**	**07 47 20.1**	**-1.2**
JIO				*e*S	**Sn**	**07 47 43.0**	**-2.0**
JYK	**Kaneyama**	2.43	259	P	**Pn**	**07 47 29.2**	**+0.4**
JNBK	**Urakawa-nobuka**	2.89	350	*e*S	**Sn**	**07 48 10.1**	**+0.2**
JCH	**Churui**	3.18	359	P	**Pn**	**07 47 38.2**	**-0.9**
JCH				*e*S	**Sn**	**07 48 15.0**	**-2.0**
ASAJ	**Asahikawa**	4.72	353	Pn	**Pn**	**07 48 02.3**	**+2.0**
	0.6nm,0.3s,baz=187,slow=26,SNR=1.6						
ASAJ				Sn	**Sn**	**07 48 53.7**	**-1.3**
	0.2nm,0.3s,baz=334,slow=31,SNR=1.4						
MJAR	**Matsushiro Arr**	5.02	237	Pn	**Pn**	**07 48 05.1**	**+0.6**
	0.4nm,0.3s,baz=46,slow=11,SNR=11						
MAT	**Matsushiro**	5.02	237	P	**Pn**	**07 48 05.3**	**+0.8**
MAT				*e*S	**Sn**	**07 49 03.9**	**+1.4**
SEY	**Seymchan**	24.15	10	P	**P**	**07 52 05.4**	**+0.5**
	0.4nm,0.3s,baz=175,slow=9.0,SNR=8.4						
SONM	**Songino Array**	27.86	300	P	**P**	**07 52 39.3**	**+0.5**
	0.2nm,0.4s,baz=94,slow=9.3,SNR=2.6						
H11N2	**WAKE ISLAND Hy**	28.18	127	T	T	08 22 19.9	
	baz=320						
H11N1	**WAKE ISLAND Hy**	28.19	127	T	T	08 22 10.0	
	baz=320						
H11N3	**WAKE ISLAND Hy**	28.20	127	T	T	08 22 12.5	
	baz=320						
ZALV	**Zalesovo Beam**	41.51	310	P	**P**	**07 54 36.4**	**+0.2**
	0.5nm,0.5s,baz=106,slow=9.8,SNR=2.0						
MKAR	**Makanchi Array**	44.22	300	P	**P**	**07 54 58.0**	**-0.3**
	0.7nm,0.8s,baz=94,slow=7.3,SNR=5.9						
ILAR	**Eielson Array**	46.63	34	P	**P**	**07 55 17.1**	**0.0**
	0.5nm,0.9s,baz=270,slow=5.1,SNR=4.5						
YKA	**Yellowknife Ar**	60.95	31	P	**P**	**07 57 01.9**	**+0.1**
	0.2nm,0.7s,baz=297,slow=5.7,SNR=3.0						

IDC 27 07:49:50.2±1.6,1°.06S×130°.48E,h0^{km},mb3.3/2, mb1 3.5/3,mb1mx3.2/48,mbtmp3.3/3,ML3.4/1,Error ellipse: s-maj=28.5km s-min=12.0km az=159.0,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	0.81	76	Pg	Pg	07 50 05.2	-0.5
	132nm,0.3s,baz=106,slow=11,SNR=595						
SIJI				Lg	Lg	07 50 17.6	
	111nm,0.3s,baz=114,slow=20,SNR=31						
WRA	**Warramunga Arr**	19.14	169	P	P	07 54 15.1	0.0
	0.1nm,0.3s,baz=349,slow=11,SNR=4.9						
ASAR	**Alice Springs**	22.71	172	P	P	07 54 54.0	+0.1
	1.2nm,0.8s,baz=352,slow=10,SNR=18						
MKAR	**Makanchi Array**	63.60	325	P	P	08 00 23.2	+0.2
	0.1nm,0.5s,baz=111,slow=7.9,SNR=1.9						

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*DJA **27** 07:52:35.7±1.3, 1°S±6°×12°0E±°, h102^{km}±35^{km}, M3.7/8, MLv3.7/8*

*IDC **27** 07:52:36.3±6.8, 0°.64S×120°.08E, h42^{km}±72^{km}, mb3.4/6, mb1 3.5/8, mb1mx3.4/52, mbtmp3.6/8, ML3.5/2, Error ellipse: s-maj=67.5km s-min=18.6km az=54.0*

ISC 27 07:52:36.3±0.9,0°.65S±0°.07×119°.86E±0°.08,h45^{km},n18, σ1^s.19/19,mb3.6/7,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APSI	**Ampana**	1.81	98	P	**Pn**	**07 53 05.1**	**0.0**
APSI				S	**Sn**	**07 53 28.9**	**+2.0**
MRSI	**Marisa**	2.37	62	P	**Pn**	**07 53 11.5**	**-1.2**
TTSI	**Tana Toraja**	2.38	181	P	**Pn**	**07 53 12.1**	**-0.7**
LUWI	**Luwuk**	2.94	98	P	**Pn**	**07 53 19.8**	**-0.8**
SPSI	**Sidrap Palu**	3.29	181	P	**Pn**	**07 53 24.5**	**-0.9**
GTOI	**Gorontalo**	3.41	68	P	**Pn**	**07 53 25.5**	**-1.5**
BNSI	**Bone**	3.73	176	P	**Pn**	**07 53 30.3**	**-1.2**
KAPI	**Kappang**	4.33	181	P	**Pn**	**07 53 40.1**	**+0.3**
	4.4nm,0.3s,baz=353,slow=7.0,SNR=12						
KAPI				S	**Sn**	**07 54 30.4**	**+1.4**
	0.9nm,0.3s,baz=127,slow=15,SNR=1.4						
SOEI	**Soe**	10.05	154	P	Pn	07 54 45.5	-13
SRPI	**Serui, Papua**	16.43	94	P	**P**	**07 56 27.4**	**+1.4**
FITZ	**Fitzroy Crossi**	18.25	162	P	**Pn**	**07 56 45.9**	**-0.4**
	0.1nm,0.3s,baz=320,slow=12,SNR=1.8						
WRA	**Warramunga Arr**	23.84	144	P	**P**	**07 57 44.1**	**-1.5**
	2.0nm,1.0s,baz=325,slow=10,SNR=9.3						
ASAR	**Alice Springs**	26.63	150	P	**P**	**07 58 09.2**	**-1.7**
	0.2nm,0.6s,baz=322,slow=8.7,SNR=5.1						
CTA	**Charters Tower**	32.25	128	P	**P**	**07 59 00.8**	**-0.1**
	2.9nm,0.8s,baz=319,slow=12,SNR=4.1						
STKA	**Stephens Creek**	37.23	149	P	**P**	**07 59 43.0**	**-0.7**
	0.5nm,0.6s,baz=301,slow=18,SNR=2.9						
SONM	**Songino Array**	49.70	348	P	**P**	**08 01 24.8**	**+0.8**
	0.2nm,0.5s,baz=168,slow=7.6,SNR=1.6						
MKAR	**Makanchi Array**	57.56	330	P	**P**	**08 02 22.5**	**+1.0**
	0.3nm,0.5s,baz=121,slow=8.9,SNR=6.2						
KURBB	**Kurchatov Arra**	61.99	332	P	**P**	**08 02 52.1**	**+0.3**
	0.5nm,0.5s,baz=134,slow=6.6,SNR=7.8						

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*IDC **27** 07:54:48.5±2.1, 4°.07S×139°.18E, h0^{km}, mb3.7/2, mb1 4.0/4, mb1mx3.6/48, mbtmp3.9/4, ML3.9/2, MS3.5/2, Ms1 3.5/2, ms1mx2.8/34, Error ellipse: s-maj=63.8km s-min=25.1km az=110.0*

ISC 27 07:54:51.3±1.7,3°.9S±0°.2×138°.8E±0°.3,h24^{km},n7,σ1^s.36/9, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	16.55	195	Pn	**Pn**	**07 58 42.4**	**+0.3**
	0.5nm,0.3s,baz=18,slow=12,SNR=20						
WRA				Sn	**Sn**	**08 01 44.8**	**-0.5**
	0.2nm,0.3s,baz=18,slow=25,SNR=2.5						
WRA				LR	LR	08 05 17.7	
	comp=Z,41nm,20.9s,baz=335,slow=38						
FITZ	**Fitzroy Crossi**	19.14	221	P	**P**	**07 59 14.9**	**+2.0**
	0.2nm,0.3s,baz=48,slow=10.0,SNR=8.6						
FITZ				S	**S**	**08 02 46.4**	**-2.1**
	0.2nm,0.3s,baz=169,slow=15,SNR=6.0						
ASAR	**Alice Springs**	20.24	193	P	**P**	**07 59 25.6**	**+0.6**
	2.2nm,0.6s,baz=20,slow=9.9,SNR=18						
ASAR				S	**S**	**08 03 11.8**	**+0.7**
	0.6nm,0.8s,baz=14,slow=27,SNR=2.8						
STKA	**Stephens Creek**	27.98	175	P	**P**	**08 00 39.7**	**-0.5**
	0.3nm,0.3s,baz=356,slow=16,SNR=1.2						
ZALV	**Zalesovo Beam**	72.99	330	LR	LR	08 39 19.5	
	comp=Z,110nm,19.2s,baz=329,slow=36						
DBIC	**Dimbokro**	143.73	276	PKP	**PKPdf**	**08 14 25.2**	**-0.3**
	2.8nm,0.7s,baz=79,slow=5.2,SNR=4.9						
LPAZ	**La Paz**	146.66	128	PKPbc	**PKPbc**	**08 14 31.7**	**-1.1**
	0.7nm,0.8s,baz=258,slow=2.2,SNR=3.8						

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*BJI **27** 07:57:59.0±0.0, 28°.08N×128°.57E, h133^{km}, mB5.1/35, mb4.7/59*

*JMA **27** 07:58:03.7±0.1, 28°.34N×128°.22E, h118^{km}±3^{km}, M4.5*

JMA Felt I J1.

*NEIC **27** 07:58:03.6±2.0, 28°.26N±0°.05×128°.28E±0°.06, h139^{km}±7^{km}, mb4.9/48, Error ellipse: s-maj=8.9km s-min=5.6km az=134.0*

*NIED **27** 07:58:03.7, 28°.34N×128°.22E, h118^{km}, MW4.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.62; M$_{\theta\theta}$-0.79; M$_{\phi\phi}$0.17; M$_{r\theta}$-1.61; M$_{\theta\phi}$-0.07; M$_{\phi r}$0.17. Fault plane solution: M$_0$1.77000×10^{16} NP1: φ$_s$276.00000°, δ78.00000°, λ95.00000°. NP2:φ$_s$70.00000°, δ13.00000°, λ65.00000°.*

*MOS **27** 07:58:03.0±0.9, 28°.32N×128°.31E, h150^{km}, mb4.6/15 Error ellipse: s-maj=7.8km s-min=5.0km az=97.7*

*IDC **27** 07:58:03.2±0.3, 28°.32N×128°.23E, h132^{km}±2^{km}, mb4.3/37, mb1 4.4/42, mb1mx4.2/66, mbtmp4.7/42, MS3.2/5, Ms1 3.2/5, ms1mx3.0/42, Error ellipse: s-maj=9.7km s-min=4.8km az=86.0*

*GCMT **27** 07:58:04.6±0.3, 28°.30N±0°.02×128°.26E±0°.03, h130^{km}±5^{km}, MW4.8/95, Moment Tensor Solution. s12,c14; s95,c124; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.67±.10; M$_{\theta\theta}$-1.09±.14; M$_{\phi\phi}$0.41±.12; M$_{r\theta}$-1.96±.08; M$_{\theta\phi}$-0.47±.16; M$_{\phi r}$0.35±.06; Best double couple: M$_0$2.24500×10^{16} NP1:φ$_s$39.00000°, δ20.00000°, λ31.00000°. NP2:φ$_s$280.00000°, δ79.00000°, λ108.00000°. Principal axes: T 2.1170, Plg52.0000°, Azm210.0000°; N 0.2560, Plg17.0000°, Azm96.0000°; P -2.3730, Plg32.0000°, Azm355.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 27 07:58:03.4±0.3,28°.30N±0°.03×128°.31E±0°.03,h134^{km}±2^{km}, h134^{km}:pP-P,n377,σ1^s.20/447,mb4.8/107,4C-4D,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTK	**Tokunoshima**	0.77	132	P	**Pn**	**07 58 24.4**	**-0.3**
JTK				*e*S	**Sn**	**07 58 39.8**	**-1.0**
JAMN	**Amaminishikomi**	0.77	94	P	**Pn**	**07 58 24.2**	**-0.5**
JAMN				*e*S	**Sn**	**07 58 39.6**	**-1.2**
JOKE	**Okinoerabujima**	0.96	166	P	**Pn**	**07 58 26.1**	**-0.3**
JOKE				*e*S	**Sn**	**07 58 42.7**	**-1.1**
JAM	**Amami Oshima**	1.15	84	P	**Pn**	**07 58 27.7**	**-0.4**
JAM				*e*S	**Sn**	**07 58 46.1**	**-0.7**
JTAJ	**Takarajima**	1.16	43	P	**Pn**	**07 58 27.8**	**-0.4**
JTAJ				*e*S	**Sn**	**07 58 45.4**	**-1.6**
JYRO	**Yoronjima**	1.27	174	P	**Pn**	**07 58 29.0**	**-0.4**
JYRO				*e*S	**Sn**	**07 58 48.0**	**-1.1**
JIH	**Iheya**	1.29	193	P	**Pn**	**07 58 29.5**	**-0.1**
JIH				*e*S	**Sn**	**07 58 48.9**	**-0.5**
JOW	**Kunigami**	1.46	181	P	**Pn**	**07 58 31.2**	**-0.2**
	2µm,0.3s,baz=136,slow=26,SNR=2418						
JOW				S	**Sn**	**07 58 51.5**	**-1.1**
	1µm,0.3s,baz=182,slow=28,SNR=25						
JOW	**Kunigami**	1.46	181	P	**Pn**	**07 58 31.1**	**-0.2**
JOW				*e*S	**Sn**	**07 58 51.6**	**-1.1**
JOW	**Kunigami**	1.46	181		**Pn**	**07 58 31.0**	**-0.4**
JOW				Sn	**Sn**	**07 58 51.7**	**-1.0**
JZK	**Kikaishima**	1.47	89	P	**Pn**	**07 58 32.7**	**+1.3**
JZK				*e*S	**Sn**	**07 58 53.9**	**+1.1**
JNTH	**Nagotoyohara**	1.79	188	P	**Pn**	**07 58 34.6**	**-0.5**
JNTH				*e*S	**Sn**	**07 58 58.1**	**-1.2**
JAGN	**Aguni-jima**	1.95	209	P	**Pn**	**07 58 36.7**	**-0.3**
JAGN				*e*S	**Sn**	**07 59 01.8**	**-0.8**
JNN	**Nakanoshima**	2.06	41	P	**Pn**	**07 58 38.3**	**0.0**
JNN				*e*S	**Sn**	**07 59 05.5**	**+0.4**
JJT3	**Tamagusuku3**	2.20	192	P	**Pn**	**07 58 40.3**	**+0.3**
JJT3				*e*S	**Sn**	**07 59 08.0**	**-0.1**
JKE	**Kume jima 2**	2.38	215	P	**Pn**	**07 58 42.0**	**-0.3**
JKE				*e*S	**Sn**	**07 59 10.4**	**-1.8**
JKC	**Kuchinoerabu**	2.71	37	P	**Pn**	**07 58 46.9**	**+0.4**
JKC				*e*S	**Sn**	**07 59 18.9**	**-0.8**
JYAK	**Yakushimahirau**	2.73	44	P	**Pn**	**07 58 46.3**	**-0.3**
JYAK				*e*S	**Sn**	**07 59 18.5**	**-1.5**
JMTN	**Minamitane**	3.08	47	P	**Pn**	**07 58 50.7**	**-0.5**
JMTN				*e*S	**Sn**	**07 59 26.9**	**-1.3**
JTN	**Tanegashima 3**	3.31	44	P	**Pn**	**07 58 53.9**	**-0.3**
JTN				*e*S	**Sn**	**07 59 33.2**	**-0.2**
JKDJ	**Kitadaitoujima**	3.55	131	P	**Pn**	**07 58 57.4**	**+0.1**
JKDJ				*e*S	**Sn**	**07 59 36.9**	**-2.1**
JMZ	**Minamidaito 2**	3.58	133	P	**Pn**	**07 58 57.9**	**+0.1**
JMZ				*e*S	**Sn**	**07 59 36.9**	**-3.0**
JMZ	**Minamidaito 2**	3.58	133	Pn	**Pn**	**07 58 58.1**	**+0.3**
JMZ				Sn	**Sn**	**07 59 37.1**	**-2.8**
JSU	**Suzuyama**	3.70	30	Pn	**Pn**	**07 59 00.0**	**+0.7**
JSU				Sn	**Sn**	**07 59 44.2**	**+1.5**
JNU	**Nakatsue**	5.29	24	P	**Pn**	**07 59 22.0**	**+1.5**
	36nm,0.3s,baz=234,slow=4.8,SNR=116						
JNU				S	**Sn**	**08 00 22.2**	**+1.6**
	6.0nm,0.3s,baz=346,slow=12,SNR=6.4						
JNU	**Nakatsue**	5.29	24	Pn	**Pn**	**07 59 22.1**	**+1.6**
YOJ	**Yonaguni jima**	6.09	232	P	**Pn**	**07 59 30.5**	**-0.7**
YOJ	**Yonaguni jima**	6.09	232	Pn	**Pn**	**07 59 30.5**	**-0.7**
JTU	**Tsushima**	6.28	8	Pn	**Pn**	**07 59 35.1**	**+1.5**
SSE	**Sheshan**	6.79	296	Pn	**Pn**	**07 59 40.6**	**+0.1**
YHNB	**Yeheng**	7.18	241		**Pn**	**07 59 45.9**	**-0.1**
JMN	**Monobe**	7.22	40	Pn	**Pn**	**07 59 45.0**	**-1.4**
NACB	**Ninganchiao**	7.29	237	Pn	**Pn**	**07 59 45.2**	**-2.2**
JHS	**Saijyo**	7.84	30	Pn	**Pn**	**07 59 53.7**	**-0.9**
SSLB	**Suanglung**	7.99	237	Pn	**Pn**	**07 59 54.7**	**-2.1**
TJN	**Taejon**	8.10	355	*i* P	**Pn**	**07 59 58.2**	**+0.2**
TPUB	**Ta-pu**	8.52	236	Pn	**Pn**	**08 00 02.8**	**-1.1**
NJ2	**Nanjing**	8.99	297	⇑P	**Pn**	**08 00 10.5**	**+0.4**
NJ2				pmax	pmax		
	comp=Z,26nm,0.8s						
KSAR	**Wonju Array Be**	9.13	358	P	**Pn**	**08 00 13.4**	**+1.5**
KSAR	**Wonju Array Be**	9.13	358		**Pn**	**08 00 13.4**	**+1.5**
KSRS	**Korea Array**	9.14	358	P	**Pn**	**08 00 12.9**	**+1.0**
	2.1nm,0.3s,baz=176,slow=14,SNR=193						
KSRS	**Korea Array**	9.14	358	P	**Pn**	**08 00 13.0**	**+1.0**
KS19	**Wonju Array Si**	9.19	358		**Pn**	**08 00 13.5**	**+0.8**
JWT	**Wachi**	9.21	39		**Pn**	**08 00 12.2**	**-0.9**
INCN	**Inchon**	9.27	352	P	**Pn**	**08 00 14.8**	**+1.0**
INCN	**Inchon**	9.27	352	Pn	**Pn**	**08 00 14.8**	**+1.0**
QZH	**Quanzhou**	9.31	251	⇓*i*P	**Pn**	**08 00 15.5**	**+1.1**
QZH				S	**Sn**	**08 01 58.5**	**+1.0**
QZH				pmax	pmax		
	comp=Z,39nm,1.0s						
INU	**Inuyama**	10.21	44		**Pn**	**08 00 25.9**	**-0.5**
JGF	**Kuroka**	10.58	44	Pn	**Pn**	**08 00 31.3**	**-0.2**
MAJO	**Matsushiro**	11.72	43	*i* P	**Pn**	**08 00 44.3**	**-2.2**
MAT	**Matsushiro**	11.72	43	P	**Pn**	**08 00 45.0**	**-1.5**
MAT				*e*S	**Sn**	**08 02 57.1**	**+1.4**
MJAR	**Matsushiro Arr**	11.72	43	P	**Pn**	**08 00 45.5**	**-1.0**
	0.3nm,0.3s,baz=243,slow=14,SNR=11						
MJAR				LR	LR	08 04 38.0	
	comp=Z,97nm,21.7s,baz=305,slow=34						
DL2	**Dalian**	11.95	334	P	**P**	**08 00 58.3**	**+1.6**
DL2				pmax	pmax		
	comp=Z,120nm,0.8s						
TIA	**Tai'an**	12.31	313	P	**Pn**	**08 00 54.0**	**-0.2**
TIA				pmax	pmax		
	comp=Z,18nm,1.8s						
JCJ	**Chichijima**	12.36	92	LR	LR	08 05 09.5	
	comp=Z,87nm,20.1s,baz=115,slow=34						
WHN	**Wuhan**	12.37	284	⇑P	**P**	**08 01 03.3**	**+1.8**
WHN				S	**S**	**08 03 22.5**	**-6.9**
WHN				LR	LR		
	comp=N,1µm,3.5s						
WHN				LR	LR		
	comp=E,820nm,4.9s						
WHN				LR	LR		
	comp=Z,840nm,10.8s						
SNY	**Shenyang**	14.04	345	⇓P	**Pn**	**08 01 17.0**	**+0.7**
SNY				pmax	pmax		
	comp=Z,30nm,2.1s						
JMM	**Marumori**	14.15	44		**Pn**	**08 01 17.4**	**-0.4**
BJT	**Baijiatuau**	15.39	323	P	**P**	**08 01 34.4**	**-0.6**
BJT				pmax	pmax		
	comp=Z,83nm,0.8s						
BJT	**Baijiatuau**	15.39	323	P	**P**	**08 01 34.4**	**-0.6**
BJI	**Beijing**	15.41	323	P	**P**	**08 01 34.5**	**-0.6**
BJI				S	**Sn**	**08 04 26.0**	**+1.6**
BJI				pmax	pmax		
	comp=Z,12nm,1.4s						
BJI				pmax	pmax		
	comp=Z,400nm,3.5s						
CN2	**Changchun**	15.64	352	*e*P	**P**	**08 01 38.0**	**+0.3**
CN2				pmax	pmax		
	comp=Z,70nm,1.6s						
CN2				pmax	pmax		
	comp=Z,700nm,3.5s						
CN2				LR	LR		
	comp=Z,470nm,9.0s						
CN2				LR	LR		
	comp=Z,470nm,9.0s						
CN2				LR	LR		
	comp=Z,450nm,9.0s						
USRK	**Ussuriysk Ar.**	16.14	10	P	**Pn**	**08 01 41.6**	**-1.0**
	baz=188,slow=9.9,SNR=12						
USRK	**Ussuriysk Ar.**	16.14	10	P	**P**	**08 01 43.3**	**+0.1**
USRK	**Ussuriysk Ar.**	16.14	10		**P**	**08 01 43.3**	**+0.1**
TIY	**Taiyuan**	16.27	309	*e*P	**P**	**08 01 46.3**	**+1.5**
TIY				sP	**sP**	**08 02 25.0**	**-0.2**
TIY				S	**S**	**08 04 49.5**	**+2.8**
TIY				pmax	pmax		
	comp=Z,11nm,0.5s						
TIY				pmax	pmax		
	comp=Z,390nm,4.9s						
TIY				LR	LR		
	comp=Z,460nm,8.8s						
TIY				LR	LR		
	comp=Z,220nm,9.8s						
TIY				LR	LR		
	comp=Z,420nm,9.7s						
MDJ	**Mudanjiang**	16.32	3	P	**P**	**08 01 44.9**	**-0.3**
ENH	**Enshi**	16.54	281	P	**P**	**08 01 48.3**	**+0.5**
XAN	**Xi'an**	17.54	294	P	**Pn**	**08 01 59.8**	**+0.1**
XAN				sP	sP	08 02 36.5	-2.8
XAN				S	**S**	**08 05 12.3**	**-2.2**
XAN				pmax	pmax		
	comp=Z,110nm,0.8s						
XAN				LR	LR		
	comp=Z,360nm,13.0s						
XAN	**Xi'an**	17.54	294	P	**Pn**	**08 01 59.8**	**+0.1**
XAN				pmax	pmax		
	comp=Z,71nm,0.8s						

XAN	Xi'an	17.54	294		Pn	08 01 59.8	+0.1
XAN				IAmb	IAmb	08 02 01.4	
	comp=Z,71nm,0.8s						
ERM	Erimo	18.26	38	*i* P	P	08 02 06.6	+0.1
ERM				pmax	pmax		
	comp=Z,40nm,1.0s						
HHC	Hu-ho-hao-te	18.58	317	*e*P	Pn	08 02 11.0	-1.0
HHC				pmax	pmax		
	comp=Z,43nm,1.1s						
HHC				pmax	pmax		
	comp=Z,340nm,5.0s						
QIZ	Qiongzhong	19.24	245	P	P	08 02 14.8	-2.7
QIZ				sP	sP	08 02 56.5	-1.0
QIZ				S	S	08 05 49.3	+1.0
GYA	Guiyang	19.31	270	⇓P	P	08 02 19.0	+0.8
GYA				pmax	pmax		
	comp=Z,16nm,0.9s						
BTO	Baotou	19.40	314	*e*P	Pn	08 02 20.3	-1.3
ASAJ	Asahikawa	19.50	32	P	P	08 02 20.6	+0.5
	comp=Z,2.2nm,0.3s,baz=198,slow=12,SNR=7.7						
KLR	Kul'dur	21.07	6	P	P	08 02 36.3	-0.5
	comp=Z,0.8nm,0.3s,baz=211,slow=7.9,SNR=5.6						
KLR				ScP	ScP	08 10 03.0	+0.8
	comp=Z,1.2nm,0.7s,baz=182,slow=6.1,SNR=4.2						
CD2	Chengdu	21.49	283	P	P	08 02 40.0	-1.6
CD2				pmax	pmax		
	comp=Z,50nm,1.1s						
YSS	Yuzh-Sakhalins	21.79	27	*i* P	P	08 02 44.6	+0.1
YSS				pmax	pmax		
	comp=Z,19nm,1.0s						
LZH	Lanzhou	22.07	297	*e*P	P	08 02 47.5	-0.2
LZH				pP	pP	08 03 18.3	+6.0
LZH				sP	sP	08 03 35.3	+6.3
LZH				pmax	pmax		
	comp=Z,27nm,1.4s						
DLV	T Lat	24.66	233	P	P	08 03 11.9	-0.1
DLV				IAmb	IAmb	08 03 15.6	
	comp=Z,30nm,0.9s						
ULN	Ulaanbaatar	25.57	326	P	P	08 03 20.6	+0.6
ULN				pmax	pmax		
	comp=Z,35nm,1.2s						
ULN	Ulaanbaatar	25.57	326	P	P	08 03 20.6	+0.6
ULN				IAmb	IAmb	08 03 22.5	
	comp=Z,35nm,1.2s						
SONM	Songino Array	25.88	325	P	P	08 03 21.8	-1.0
	comp=Z,15nm,1.0s,baz=141,slow=9.3,SNR=62						
SONM				pP	pP	08 03 53.4	+2.5
	comp=Z,8.1nm,0.8s,baz=142,slow=9.9,SNR=6.5						
SONM				PcP	PcP	08 06 48.5	+0.2
	comp=Z,0.4nm,0.3s,baz=140,slow=2.6,SNR=2.6						
SONM				ScP	ScP	08 10 15.5	+0.1
	comp=Z,5.3nm,0.9s,baz=150,slow=4.6,SNR=21						
SONM	Songino Array	25.88	325	P	P	08 03 21.3	-1.5
GTA	Gaotai	26.02	303	⇑P	P	08 03 23.5	-0.7
GTA				pP	pP	08 03 54.5	+2.3
GTA				sP	sP	08 04 10.5	+2.8
GTA				PcP	PcP	08 06 49.8	+1.1
GTA				SS	SS	08 09 04.8	-35
GTA				ScP	ScP	08 10 16.0	0.0
GTA				pmax	pmax		
	comp=Z,14nm,0.9s						
GTA				pmax	pmax		
	comp=Z,210nm,4.7s						
GTA				LR	LR		
	comp=Z,240nm,16.4s						
GTA				LR	LR		
	comp=Z,430nm,17.1s						
GTA				LR	LR		
	comp=Z,330nm,17.8s						
KHON	Khomkaen	26.35	249	P	P	08 03 29.5	+2.4
	comp=Z,60nm,0.8s						
CHAI	Chaiyaphum	27.26	249	P	P	08 03 37.0	+1.7
	comp=Z,36nm,0.8s						
TOLI2	Tolitoli	27.98	196	P	P	08 03 41.9	+0.3
TOLI2				IAmb	IAmb	08 03 43.4	
	comp=Z,22nm,1.0s						
SRAK	Srakaew	28.23	245	P	P	08 03 41.0	-2.9
	comp=Z,2µmcomp=Z,238nm,1.1s						
MRSI	Marisa	28.33	194	P	P	08 03 46.4	+1.7
	comp=Z,32nm,1.4s						
CMMT	Chiang Mai	28.46	257	P	P	08 03 49.8	+3.9
	comp=Z,3.0nm,0.8s						
CHTO	Chiang Mai	28.46	257	P	P	08 03 46.3	+0.3
CHTO				pmax	pmax		
	comp=Z,4.0nm,0.9s						
CHTO	Chiang Mai	28.46	257	P	P	08 03 46.3	+0.3
CMAR	Chiang Mai Arr	28.61	256	P	P	08 03 48.0	+0.7
	comp=Z,1.2nm,0.3s,baz=56,slow=6.6,SNR=1.7						
CMAR				PcP	PcP	08 06 56.1	+1.0
	comp=Z,1.1nm,0.3s,baz=57,slow=0.7,SNR=6.2						
CMAR				ScP	ScP	08 10 24.3	+0.3
	comp=Z,1.7nm,0.3s,baz=44,slow=4.0,SNR=7.7						
CMAR				LR	LR	08 14 38.1	
	comp=Z,26nm,20.3s,baz=60,slow=35						
SIJI	Sorong	29.14	174	LR	LR	08 13 13.3	
	comp=Z,78nm,21.0s,baz=8.5,slow=31						
UTHA	Uthaitani	29.53	251	P	P	08 03 58.3	+2.8
	comp=Z,14nm,0.8s						
UMPA	Umpang Tak	29.70	252	P	P	08 04 01.3	+4.3
TLY	Talaya	29.77	328	P	P	08 03 56.7	-0.6
	comp=Z,1.3nm,0.5s,baz=180,slow=14,SNR=2.0						
TLY				ScP	ScP	08 10 27.3	+0.1
	comp=Z,1.3nm,0.5s,baz=198,slow=4.5,SNR=5.7						
TLY	Talaya	29.77	328	*i* P	P	08 03 58.0	+0.8
TLY				pmax	pmax		
	comp=Z,10.0nm,2.2s						
TLY	Talaya	29.77	328	P	P	08 03 57.6	+0.4
SBUM	Sibu	29.94	214	P	P	08 03 58.7	-0.3
SBUM	Sibu	29.94	214	P	P	08 04 00.0	+1.0
SANI	Sanana	30.26	185	P	P	08 04 01.6	-0.2
	comp=Z,61nm,1.0s						
SKR	Severo-Kuril's	30.68	36	*e*P	P	08 04 21.0	+16
SKR				*e**SP	PnPn	08 05 05.7	-5.1
SKR				pmax	pmax		
	comp=Z,600nm,4.5s						
SKR				MLR	MLR		
	comp=Z,800nm,13.0s						
PHET	Kaeng Krachan	30.79	246	P	P	08 04 09.5	+3.0
	comp=Z,19nm,1.2s						
FAKI	Fak Fak	31.27	172	P	P	08 04 10.8	+0.1
KSM	Kuching	31.74	216	P	P	08 04 17.0	+2.1
SHL	Shillong	32.51	274	P	P	08 04 21.6	-0.2
SHL				pmax	pmax		
	comp=Z,16nm,0.9s						
SHL	Shillong	32.51	274	P	P	08 04 21.6	-0.2
SHL				IAmb	IAmb	08 04 23.3	
	comp=Z,16nm,0.9s						
PETK	Petropavlovsk-	32.92	33	P	P	08 04 22.9	-1.9
	comp=Z,4.5nm,0.9s,baz=197,slow=7.8,SNR=20						
PETK	Petropavlovsk-	32.92	33	P	P	08 04 23.9	-0.9
PETK	Petropavlovsk-	32.92	33	P	P	08 04 23.9	-0.9
PET	Petropavlovsk	33.33	34	*i* P	P	08 04 27.2	-1.1
PET				pmax	pmax		
	comp=Z,80nm,1.1s						
PET	Petropavlovsk	33.33	34	P	P	08 04 27.1	-1.2
PET				IAmb	IAmb	08 04 28.1	
	comp=Z,56nm,1.5s						
TRTT	Trang	33.81	239	P	P	08 04 34.0	+1.1
BBKI	Banjar Baru	34.13	204	P	P	08 04 36.6	+0.9
	comp=Z,5µmcomp=Z,77nm,0.9s						
KULM	Kulim	34.82	234	P	P	08 04 42.5	+0.9
KULM				IAmb	IAmb	08 04 44.1	
	comp=Z,20nm,0.8s						
KULM	Kulim	34.82	234	P	P	08 04 43.0	+1.4
MA2	Magadan	34.85	20	*i* P	P	08 04 38.7	-2.6
MA2				pmax	pmax		
	comp=Z,5.0nm,1.2s						
IPM	Ipoh	35.12	233	P	P	08 04 44.4	+0.2
IPM	Ipoh	35.12	233	P	P	08 04 46.0	+1.8
MYKOM	Kota Tinggi	35.22	226	P	P	08 04 48.0	+3.0
TAPN	Taplejung	35.80	278	*e*P	P	08 04 51.4	+1.1
	comp=Z,6.4nm,0.5s						
WMQ	Urumqi	35.91	307	*e*P	P	08 04 51.5	+0.7
WMQ				pP	pP	08 05 21.5	+1.8
WMQ				sP	sP	08 05 34.5	-0.4
WMQ				pmax	pmax		
	comp=Z,22nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,260nm,6.5s						
H11N2	WAKE ISLAND Hy	36.15	95	T	T	08 43 01.6	
	baz=290,slow=74,SNR=5.5						
H11N1	WAKE ISLAND Hy	36.15	95	T	T	08 43 02.9	
	baz=290,slow=74,SNR=6.2						
H11N3	WAKE ISLAND Hy	36.16	95	T	T	08 43 03.2	
	baz=290,slow=74,SNR=7.2						
ODAN	Odare	36.17	278	*e*P	P	08 04 54.0	+0.6
	comp=Z,38nm,0.4s						
TPI	Tanjungpandan	36.71	216	P	P	08 04 59.8	+2.1
	comp=Z,31nm,1.1s						
RAMN	Ramite	36.85	278	*e*P	P	08 05 00.0	+0.9
	comp=Z,12nm,0.7s						
PPBI	Pangkal Pinang	37.02	219	P	P	08 05 01.9	+1.5
GUN	Gumba	37.28	280	*e*P	P	08 05 04.4	+1.5
	comp=Z,23nm,0.4s						
DGZ	Jazzator, Alta	37.66	316	*i* P	P	08 05 05.1	-0.5
DGZ				pmax	pmax		
	comp=Z,6.0nm,2.5s						
PKI	Pulchoki	37.76	279	*e*P	P	08 05 07.8	+0.9
	comp=Z,16nm,0.5s						
PKIN	Phulchoki	37.77	279	*e*P	P	08 05 07.6	+0.7
	comp=Z,16nm,0.4s						
PSI	Prapat	37.78	233	P	P	08 05 06.7	-0.2
	comp=Z,8.9nm,0.4s,baz=0.0,slow=5.9,SNR=7.1						
KKN	Kakani	37.83	280	*e*P	P	08 05 09.0	+1.6
	comp=Z,19nm,0.4s						
RPSI	Rantau Prapat	37.85	233	P	P	08 05 06.7	-0.7
RPSI	Rantau Prapat	37.85	233	P	P	08 05 07.7	+0.3
RPSI				IAmb	IAmb	08 05 10.5	
	comp=Z,25nm,1.1s						
DMN	Daman	38.02	279	*e*P	P	08 05 10.4	+1.4
	comp=Z,12nm,0.6s						
JMBI	JAMBI	38.03	223	P	P	08 05 12.1	+3.3
	comp=Z,101nm,0.4s						
SOEI	Soe	38.03	186	P	P	08 05 09.0	+0.1
SOEI	Soe	38.03	186	P	P	08 05 09.2	+0.3
	comp=Z,64nm,1.1s						
SEY	Seymchan	38.03	18	*i* P	P	08 05 07.6	-0.7
BKNI	Bangkinang	38.14	228	P	P	08 05 11.7	+1.9
	comp=Z,2µmcomp=Z,152nm,0.9s						
PLAI	Plampang	38.28	197	P	P	08 05 11.7	+0.8
	comp=Z,1µmcomp=Z,120nm,0.9s						
GKN	Gorkha	38.35	280	*e*P	P	08 05 12.7	+1.1
	comp=Z,10.0nm,0.3s						
TWSI	Taliwang, Sumb	38.44	198	P	P	08 05 13.1	+0.9
	comp=Z,772nmcomp=Z,24nm,1.0s						
BATI	Baumata	38.54	187	P	P	08 05 11.9	-1.2
	comp=Z,84nm,0.7s,baz=340,slow=2.0,SNR=7.1						
MLSI	Meulaboh, Aceh	38.61	238	P	P	08 05 14.2	+0.5
	comp=Z,119nm,0.9s						
MNSI	Mandailing Nat	38.77	230	P	P	08 05 16.1	+1.1
	comp=Z,54nm,1.0s						
GSI	Gunungsitoli	39.78	233	P	P	08 05 24.7	+1.2
	comp=Z,2µmcomp=Z,34nm,0.8s						
LHSI	Lahat	39.86	221	P	P	08 05 26.7	+2.6
	comp=Z,51nm,0.7s						
UGM	Wanagama	39.89	208	P	P	08 05 26.0	+1.7
	comp=Z,131nm,1.2s						
MDSI	Maura Dua	40.03	219	P	P	08 05 27.1	+1.6
	comp=Z,38nm,1.0s						
TNG	Tangerang	40.14	215	P	P	08 05 28.2	+1.9
	comp=Z,695nm,0.4s						
BLSI	Bandar Lampung	40.18	217	P	P	08 05 28.2	+1.5
LEM	Lembang	40.23	213	P	P	08 05 29.4	+2.2
	comp=Z,80nm,0.9s,baz=45,slow=8.6,SNR=16						
LEM	Lembang	40.23	213	P	P	08 05 29.5	+2.2
MK31	Makanchi Array	40.23	310	*i* P	P	08 05 26.6	-0.3
MK31	Makanchi Array	40.23	310	P	P	08 05 26.4	-0.5
MKAR	Makanchi Array	40.23	310	P	P	08 05 24.5	-2.4
	comp=Z,2.2nm,0.7s,baz=88,slow=8.8,SNR=29						
MKAR				pP	pP	08 05 56.3	0.0
	comp=Z,5.6nm,0.8s,baz=97,slow=9.9,SNR=11						
MKAR				PcP	PcP	08 07 28.3	+0.1
	comp=Z,2.5nm,0.7s,baz=86,slow=3.8,SNR=6.8						
MKAR				ScP	ScP	08 11 04.6	-0.4
	comp=Z,3.2nm,1.0s,baz=93,slow=4.9,SNR=12						
MKAR	Makanchi Array	40.23	310	P	P	08 05 26.1	-0.8
MAKZ	Makanchi	40.45	310	P	P	08 05 27.2	-1.5
MAKZ				pmax	pmax		
	comp=Z,4.0nm,1.4s						
MAKZ	Makanchi	40.45	310	P	P	08 05 27.2	-1.5
ZALV	Zalesovo Beam	40.66	321	P	P	08 05 28.8	-1.5
	comp=Z,1.5nm,0.3s,baz=115,slow=10.0,SNR=7.3						
ZALV				pP	pP	08 05 59.9	+0.2
	comp=Z,12nm,0.9s,baz=102,slow=6.8,SNR=9.4						
ZALV				PcP	PcP	08 07 28.6	-0.8
	comp=Z,1.1nm,0.4s,baz=99,slow=4.8,SNR=5.1						
ZALV				ScP	ScP	08 11 04.8	-1.6
	comp=Z,6.3nm,1.0s,baz=101,slow=3.0,SNR=5.9						
ZALV	Zalesovo Beam	40.66	321	P	P	08 05 29.1	-1.2
CISI	Cisompet, Garu	40.77	212	P	P	08 05 30.8	-0.8
SHLS	Shalkode	41.75	304	*e*P	P	08 05 35.5	-4.0
	baz=304						
SHLS	Shalkode	41.75	304	*e*P	P	08 05 35.4	-4.0
SEM	Semipalatinsk	42.31	315	*e*P	P	08 05 42.4	-1.6
	baz=315						
SEM	Semipalatinsk	42.31	315	*e*P	P	08 05 42.4	-1.6
KPKS	Kokpek	42.34	305	*e*P	P	08 05 43.5	-0.8
	baz=305						
KPKS	Kokpek	42.34	305	*e*P	P	08 05 43.4	-0.8
KURK	Kurchatov	43.39	315	P	P	08 05 51.1	-1.3
KURK				*PP	pP	08 06 21.8	-0.4
KURK	Kurchatov	43.39	315	P	P	08 05 51.6	-0.8
TIXI	Tiksi	43.40	0	*i* P	P	08 05 53.0	+0.8
KURBB	Kurchatov Arra	43.42	315	P	P	08 05 51.1	-1.6
	comp=Z,67nm,0.9s,baz=101,slow=9.2,SNR=27						
KURBB				pP	pP	08 06 21.8	-0.7
	comp=Z,8.7nm,0.9s,baz=102,slow=8.9,SNR=10						
MDOK	Medeo	43.51	304	*e*P	P	08 05 52.7	-1.1
	baz=304						
MDOK	Medeo	43.51	304	*e*P	P	08 05 52.6	-1.1
CHKK	Chushkaly	43.59	305	*e*P	P	08 05 53.0	-1.2
	baz=305						
CHKK	Chushkaly	43.59	305	*e*P	P	08 05 53.0	-1.2
KUU	Kurty	44.06	305	*e*P	P	08 05 57.6	-0.4
	baz=305						
KUU	Kurty	44.06	305	*e*P	P	08 05 57.5	-0.4
KSH	Kashi	44.30	299	P	P	08 06 05.5	+5.5
KSH				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KSH				pmax	pmax		
	comp=Z,500nm,9.5s						
AMKA	Amchitka	44.33	44	P	P	08 06 00.1	+0.2
AAK	Ala-Archa	45.37	303	P	P	08 06 08.6	0.0
	comp=Z,0.7nm,0.3s,baz=112,slow=3.7,SNR=3.8						
AAK				ScP	ScP	08 11 26.4	+0.4
	comp=Z,0.5nm,0.3s,baz=112,slow=4.7,SNR=5.7						
BTLS	Baital	45.75	307	*e*P	P	08 06 09.1	-2.2
	baz=307						
BTLS	Baital	45.75	307	*e*P	P	08 06 09.0	-2.2
FITZ	Fitzroy Crossi	46.20	184	P	P	08 06 16.1	+1.2
	comp=Z,14nm,0.4s,baz=10,slow=8.8,SNR=36						
FITZ	Fitzroy Crossi	46.20	184	P	P	08 06 15.2	+0.3
FITZ				IAmb	IAmb	08 06 17.1	
	comp=Z,38nm,1.1s						
BRZS	Berezniki	47.03	313	*e*P	P	08 06 21.2	0.0
	baz=313						
BRZS	Berezniki	47.03	313	*e*P	P	08 06 21.2	0.0
KKAR	Karatay Array	48.29	304	P	P	08 06 30.5	-0.6
KKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KKAR	Karatay Array	48.29	304	P	P	08 06 30.2	-0.8
KKAR	Karatay Array	48.29	304	P	P	08 06 30.5	-0.6
WRAB	Tennant Creek	48.30	172	P	P	08 06 30.8	-0.4
WRAB				pmax	pmax		
	comp=Z,24nm,0.8s						
WRAB	Tennant Creek	48.30	172	P	P	08 06 30.8	-0.4
WRAB				IAmb	IAmb	08 06 32.9	
	comp=Z,24nm,0.8s						
WRA	Warramunga Arr	48.31	172	P	P	08 06 31.9	+0.6
	comp=Z,9.0nm,0.3s,baz=353,slow=8.5,SNR=33						
WRA				pP	pP	08 07 01.9	+0.1
	comp=Z,8.1nm,0.9s,baz=351,slow=8.4,SNR=5.0						
WRA				PcP	PcP	08 07 56.4	+0.3
	comp=Z,2.4nm,0.7s,baz=348,slow=4.4,SNR=3.4						
WRA				ScP	ScP	08 11 39.0	+0.8
	comp=Z,0.1nm,0.4s,baz=352,slow=5.3,SNR=3.6						
WB2	Warramunga Arr	48.31	172	P	P	08 06 32.0	+0.6
WB2				IAmb	IAmb	08 06 33.0	
	comp=Z,30nm,0.9s						
IUG	Iuzhnay	48.69	303	*e*P	P	08 06 32.6	-1.6
	baz=303						
IUG	Iuzhnay	48.69	303	*e*P	P	08 06 32.6	-1.6
BVAR	Borovoye Array	48.80	317	P	P	08 06 34.8	+0.1
	comp=Z,1.9nm,0.6s,baz=51,slow=17,SNR=11						
BVAR				pP	pP	08 07 06.1	+1.0
	comp=Z,3.0nm,0.7s,baz=130,slow=14,SNR=5.3						
BVAR				PcP	PcP	08 07 56.7	-0.8
	comp=Z,1.4nm,0.4s,baz=74,slow=5.4,SNR=7.2						
BRVK	Borovoye	48.86	317	P	P	08 06 35.6	+0.4
BRVK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BRVK	Borovoye	48.86	317	P	P	08 06 35.5	+0.4
PSA00	Pilbara Seismi	50.25	190	P	P	08 06 46.6	+0.6
PSA00				IAmb	IAmb	08 06 47.9	
	comp=Z,32nm,1.0s						
CTA	Charters Tower	51.14	158	P	P	08 06 54.0	+1.3
	comp=Z,5.9nm,0.5s,baz=336,slow=11,SNR=8.1						
CTA				pP	pP	08 07 24.5	+0.9
	comp=Z,3.2nm,0.8s,baz=16,slow=14,SNR=2.9						
CTAO	Charters Tower	51.14	158	P	P	08 06 53.5	+0.8
CTAO				pmax	pmax		
	comp=Z,14nm,1.0s						
CTAO	Charters Tower	51.14	158	P	P	08 06 53.5	+0.8
CTAO				IAmb	IAmb	08 06 55.0	
	comp=Z,14nm,0.9s						
AS31	Alice Springs	51.94	173	P	P	08 06 59.4	+0.7
ASAR	Alice Springs	51.94	173	P	P	08 06 59.9	+1.2
	comp=Z,6.5nm,0.7s,baz=360,slow=15,SNR=24						
ASAR				pP	pP	08 07 30.1	+0.6
	comp=Z,5.1nm,0.9s,baz=351,slow=6.3,SNR=5.5						
ASAR				PcP	PcP	08 08 10.0	+0.6
	comp=Z,2.9nm,0.8s,baz=344,slow=4.0,SNR=5.0						
ASAR				ScP	ScP	08 11 55.2	+1.4
	comp=Z,0.2nm,0.4s,baz=347,slow=3.8,SNR=4.0						
ASAR	Alice Springs	51.94	173	P	P	08 06 59.0	+0.3
ANM	Nome	54.67	29	P	P	08 07 18.3	+0.2
	baz=262						
ANM	Nome	54.67	29	P	P	08 07 18.5	+0.4
ANM				pmax	pmax		
	comp=Z,11nm,1.0s						
ANM	Nome	54.67	29	P	P	08 07 18.5	+0.4
ANM				IAmb	IAmb	08 07 19.4	
	comp=Z,11nm,1.0s						
ARU	Arti	55.82	321	P	P	08 07 26.1	-0.4
	comp=Z,2.9nm,0.2s,baz=290,slow=15,SNR=1.5						
ARU				pP	pP	08 07 57.3	-0.3
	comp=Z,2.8nm,0.2s,baz=74,slow=3.6,SNR=1.4						
ARU	Arti	55.82	321	*d i*P	P	08 07 26.1	-0.4
ARU				*PP	pP	08 07 57.2	-0.4
ARU						08 09 30.9	
ARU				S	S	08 15 03.8	+0.7
ARU				pmax	pmax		
	comp=Z,23nm,2.5s						
CHNA	Chernabura Isl	57.22	41	P	P	08 07 35.3	-1.1
	baz=274						
CHGN	Chignik	57.80	39	P	P	08 07 39.1	-1.3
	baz=274						
CHGN	Chignik	57.80	39	P	P	08 07 39.5	-0.9
A21K	Barrow	58.69	21	P	P	08 07 45.6	-0.8
	baz=266						
TTA	Tatalina	58.73	31	P	P	08 07 47.1	+0.2
	baz=272,SNR=11						
TTA	Tatalina	58.73	31	P	P	08 07 46.6	-0.3
TTA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
TTA	Tatalina	58.73	31	P	P	08 07 46.6	-0.3
TTA				IAmb	IAmb	08 07 48.0	
	comp=Z,10nm,0.9s						
FORT	Forrest	58.75	180	P	P	08 07 46.7	-0.5
SVW2	Sparrevohn	59.00	33	P	P	08 07 48.8	+0.1
SVW2				IAmb	IAmb	08 07 50.4	
	comp=Z,16nm,0.8s						
IMAR	Indian Mountai	59.62	28	P	P	08 07 52.9	0.0
SII	Sitkinak Islan	60.11	39	P	P	08 07 56.2	-0.2
	baz=277						
CHUM	Lake Minchumin	60.34	30	P	P	08 07 58.5	+0.7
	baz=274,SNR=21						
RSO	Redoubt South	60.43	34	P	P	08 07 58.2	-0.5
PPLA	Purkeypile	60.48	31	P	P	08 07 59.6	+0.7
	baz=275,SNR=15						
PPLA	Purkeypile	60.48	31	P	P	08 07 59.0	+0.1
OHAK	Old Harbor	60.52	38	P	P	08 07 58.9	-0.2
	baz=277,SNR=5.6						
KIRV	Kirov	60.61	324	*i* P	P	08 07 59.6	-0.1
SPCR	Spurr Chakacha	60.62	33	P	P	08 08 00.3	+0.4
	baz=276,SNR=11						
KDAK	Kodiak Island	60.83	37	P	P	08 08 01.0	-0.2
	comp=Z,59nm,1.0s,baz=314,slow=4.0,SNR=89						
KDAK	Kodiak Island	60.83	37	P	P	08 08 01.1	-0.2
	baz=277						
KDAK	Kodiak Island	60.83	37	*i* P	P	08 08 00.4	-0.8
KDAK				pmax	pmax		
	comp=Z,77nm,0.9s						
SKT	Skwentna	60.87	32	P	P	08 08 01.1	-0.4
	baz=276,SNR=13						
SKT	Skwentna	60.87	32	P	P	08 08 00.7	-0.7
SKT				IAmb	IAmb	08 08 02.0	
	comp=Z,20nm,0.9s						
BPAW	Bear Paw Mtn.	60.91	30	P	P	08 08 02.0	+0.3
	baz=275						
BPAW	Bear Paw Mtn.	60.91	30	P	P	08 08 01.7	0.0
BPAW				IAmb	IAmb	08 08 03.0	
	comp=Z,18nm,0.9s						
MLY	Manley	60.93	29	P	P	08 08 02.3	+0.4
	baz=275,SNR=25						
COLD	Coldfoot	60.98	26	P	P	08 08 02.1	0.0
	baz=274,SNR=9.8						
HOM	Homer	61.08	35	P	P	08 08 03.4	+0.5
	baz=277						
TOLK	Toolik Lake Re	61.11	24	P	P	08 08 03.0	0.0
	baz=274,SNR=12						
STKA	Stephens Creek	61.16	167	P	P	08 08 04.5	+0.8
	comp=Z,5.4nm,0.6s,baz=332,slow=7.4,SNR=16						
STKA				pP	pP	08 08 35.0	-0.5
	comp=Z,2.8nm,0.8s,baz=49,slow=3.2,SNR=2.3						
STKA				LR	LR	08 36 21.6	
	comp=Z,44nm,19.4s,baz=24,slow=38						
CAPN	Captain Cook N	61.18	34	P	P	08 08 03.6	0.0
	baz=277						
TRF	Thorofare Moun	61.28	30	P	P	08 08 03.9	-0.5
	baz=276,SNR=8.7						
TRF	Thorofare Moun	61.28	30	P	P	08 08 04.0	-0.4
TRF				IAmb	IAmb	08 08 05.6	
	comp=Z,13nm,1.0s						
SUA	Susitna One	61.30	33	P	P	08 08 03.8	-0.7
	baz=277,SNR=38						
SUA	Susitna One	61.30	33	P	P	08 08 03.4	-1.1
CUT	Chulitna	61.41	32	P	P	08 08 04.5	-0.5
	baz=277						
I23K	Minto, Yukon-K	61.50	28	P	P	08 08 06.1	+0.4
	baz=276,SNR=11						
BRSE	Bradley Lake S	61.52	35	P	P	08 08 05.4	-0.5
	baz=278						
NEA2	Nenana	61.69	29	P	P	08 08 07.0	+0.1
	baz=277,SNR=49						
NWAO	Narrogin (SRO)	61.79	191	P	P	08 08 08.3	+0.4
	comp=Z,24nm,1.1s,baz=32,slow=6.0,SNR=4.8						
RC01	Rabbit Creek A	61.83	33	P	P	08 08 07.0	-0.9
	baz=278,SNR=8.7						
MCK	McKinley	61.85	30	P	P	08 08 07.4	-0.6
	baz=277,SNR=24						
O22K	Cooper Landing	61.92	34	P	P	08 08 07.7	-0.8
	baz=278						
SEW	Seward	62.11	34	P	P	08 08 09.2	-0.5
	baz=279,SNR=6.3						
DZM	Mont Dzumac	62.15	140	P	P	08 08 12.2	+1.6
	comp=Z,9.5nm,0.8s,baz=193,slow=22,SNR=7.1						
TCOL	CIGO, UAF Yank	62.17	29	P	P	08 08 10.3	+0.2
	baz=278,SNR=6.6						
COLA	College	62.17	29	P	P	08 08 10.2	+0.1
	baz=278						
COLA	College	62.17	29	*i* P	P	08 08 10.1	0.0
COLA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
POKR	Poker Plat Res	62.31	28	P	P	08 08 11.4	+0.3
	baz=278,SNR=32						
SML	Sawmill	62.39	32	P	P	08 08 11.3	-0.4
	baz=279,SNR=8.5						
ILAR	Eielson Array	62.59	29	P	P	08 08 11.6	-1.4
	comp=Z,6.6nm,0.7s,baz=271,slow=3.8,SNR=45						
ILAR				pP	pP	08 08 45.0	+0.2
	comp=Z,0.8nm,0.8s,baz=201,slow=13,SNR=2.3						
ILAR	Eielson Array	62.59	29	P	P	08 08 12.3	-0.7
BELG	Belogornoye	62.60	317	P	P	08 08 10.5	-2.7
	comp=Z,3.7nm,0.6s,baz=134,slow=2.4,SNR=3.8						
BELG				pP	pP	08 08 44.2	-0.7
	comp=Z,6.6nm,0.8s,baz=124,slow=5.5,SNR=3.8						
HDA	Harding Lake	62.62	29	P	P	08 08 12.2	-0.9
	baz=279						
HDA	Harding Lake	62.62	29	P	P	08 08 12.3	-0.9
PRP	Porcupine Dome	63.05	28	P	P	08 08 15.9	-0.2
	baz=279						
BMAR	Burnt Mountain	63.12	26	P	P	08 08 17.3	+0.9
GLI	Glacier Island	63.13	33	P	P	08 08 16.2	-0.3
	baz=280						
M24K	Tolsona, Glenn	63.35	32	P	P	08 08 18.6	+0.5
	baz=280						
PAX	Paxson	63.51	31	P	P	08 08 18.9	-0.2

	baz=281,SNR=9.5						
KLU	**Klutina**	**63.58**	**32**	P	**P**	**08 08 19.6**	**0.0**
	baz=281						
Q23K	**Middleton Isla**	**63.77**	**35**	P	**P**	**08 08 20.5**	**-0.2**
	baz=282						
EYAK	**Cordova Ski Ar**	**63.84**	**33**	P	**P**	**08 08 21.4**	**+0.2**
	baz=282						
SCRK	**Sand Creek**	**63.97**	**29**	P	**P**	**08 08 21.6**	**-0.6**
	baz=281,SNR=30						
N25K	**Chitina, Valde**	**64.18**	**32**	P	**P**	**08 08 23.7**	**+0.2**
	baz=282,SNR=7.2						
BMRM	**Bremner River**	**64.31**	**33**	P	**P**	**08 08 24.5**	**+0.2**
	baz=282,SNR=7.5						
KAIM	**Kayak Island**	**64.63**	**34**	P	**P**	**08 08 25.7**	**-0.7**
	baz=283						
MCARA	**McCarthy VSAT**	**64.96**	**32**	P	**P**	**08 08 28.7**	**+0.2**
	baz=283,SNR=13						
EGAK	**Eagle**	**65.00**	**28**	P	**P**	**08 08 28.3**	**-0.4**
	baz=283,SNR=18						
BCAR	**Beaver Creek A**	**65.14**	**30**	P	**P**	**08 08 30.1**	**+0.5**
BARN	**Barnard Glacie**	**65.68**	**32**	P	**P**	**08 08 33.8**	**+0.4**
BARN				IAmb	IAmb	08 08 34.6	
	comp=Z,12nm,0.7s						
MSVF	**Nonsavu**	**66.40**	**127**	P	**P**	**08 08 38.2**	**-0.3**
	comp=Z,7.8nm,1.0s,baz=207,slow=6.6,SNR=6.2						
SPITS	**Spitsbergen Ar**	**66.83**	**348**	P	**P**	**08 08 38.6**	**-1.6**
	comp=Z,3.6nm,0.8s,baz=128,slow=11,SNR=8.5						
INK	**Inuvik**	**66.97**	**24**	P	**P**	**08 08 40.9**	**-0.3**
	comp=Z,9.6nm,0.9s,baz=277,slow=7.2,SNR=27						
TOO	**Toolangi**	**67.48**	**165**	P	**P**	**08 08 45.0**	**+0.2**
TOO				pmax	pmax		
	comp=Z,24nm,1.5s						
TOO	**Toolangi**	**67.48**	**165**	P	**P**	**08 08 45.0**	**+0.2**
TOO				IAmb	IAmb	08 08 48.1	
	comp=Z,24nm,1.5s						
KBZ	**Khabaz**	**67.91**	**309**	P	**P**	**08 08 46.7**	**-0.9**
	comp=Z,2.8nm,1.1s,baz=304,slow=4.9,SNR=2.7						
KBZ				pP	**pP**	**08 09 20.0**	**+0.1**
	comp=Z,6.3nm,1.0s,baz=106,slow=4.3,SNR=5.4						
KBZ	**Khabaz**	**67.91**	**309**	i P	**P**	**08 08 46.1**	**-1.5**
KBZ				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KIV	**Kislovodsk**	**67.99**	**309**⇑	eP	**P**	**08 08 48.2**	**0.0**
KIV						08 09 11.0	
KIV				e*PP	**pP**	**08 09 23.2**	**+2.8**
KIV				S	**S**	**08 17 37.0**	**+0.4**
KIV				*SS	**SKiKP**	**08 18 32.0**	**+1.6**
KIV				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ARCES	**ARCESS Array B**	**68.11**	**338**	P	**P**	**08 08 47.5**	**-1.0**
	comp=Z,4.6nm,0.9s,baz=29,slow=2.8,SNR=3.7						
SKAG	**Skagway**	**69.17**	**33**	P	**P**	**08 08 55.6**	**+0.5**
	baz=290						
EUNU	**Eureka**	**70.22**	**6**	P	**P**	**08 09 00.6**	**-0.7**
SOCY	**Socotra**	**70.61**	**274**	P	**P**	**08 09 03.7**	**-1.1**
SOCY				IAmb	IAmb	08 09 05.0	
	comp=Z,15nm,0.7s						
FINES	**FINESS Array B**	**71.11**	**330**	P	**P**	**08 09 05.4**	**-1.5**
	comp=Z,0.9nm,0.4s,baz=354,slow=37,SNR=2.1						
FINES				pP	**pP**	**08 09 40.0**	**+0.7**
	comp=Z,2.2nm,0.7s,baz=90,slow=5.7,SNR=2.6						
DLBC	**Dease Lake**	**72.10**	**33**	P	**P**	**08 09 13.8**	**+0.8**
	comp=Z,7.2nm,0.8s,baz=310,slow=5.2,SNR=15						
RES	**Resolute Bay**	**73.51**	**11**	P	**P**	**08 09 20.3**	**-0.6**
	comp=Z,4.6nm,0.9s,baz=311,slow=6.2,SNR=21						
RES				pP	**pP**	**08 09 54.1**	**+0.4**
	comp=Z,2.8nm,0.8s,baz=316,slow=6.2,SNR=3.8						
YKA	**Yellowknife Ar**	**76.63**	**25**	P	**P**	**08 09 39.0**	**0.0**
	comp=Z,14nm,0.7s,baz=300,slow=4.9,SNR=136						
YKA				pP	**pP**	**08 10 12.3**	**+0.3**
	comp=Z,2.9nm,0.9s,baz=304,slow=4.9,SNR=2.8						
NC405	**NORSAR Array S**	**77.25**	**334**	P	**P**	**08 09 41.3**	**-1.3**
NB2	**NORSAR Subarra**	**77.50**	**334**	P	**P**	**08 09 42.7**	**-1.2**
	comp=Z,1.5nm,0.8s,baz=49,slow=5.3						
NOA	**NORSAR Array B**	**77.50**	**334**	P	**P**	**08 09 44.3**	**+0.4**
	comp=Z,1.4nm,0.8s,baz=50,slow=5.3,SNR=3.9						
NOA				pP	**pP**	**08 10 17.8**	**+0.8**
	comp=Z,1.7nm,0.8s,baz=49,slow=5.4,SNR=3.0						
B05A	**Bryant**	**81.19**	**40**	P	**P**	**08 10 04.8**	**+0.7**
	baz=303						
RPZ	**Rata Peaks**	**81.67**	**150**	P	**P**	**08 10 07.6**	**+1.0**
	comp=Z,10nm,1.0s,baz=42,slow=6.1,SNR=5.3						
I03D	**Drain, OR**	**82.92**	**44**	P	**P**	**08 10 14.9**	**+1.6**
	baz=303						
K02D	**Willamette Mer**	**83.26**	**45**	P	**P**	**08 10 16.0**	**+0.8**
	baz=302						
G05D	**Wamic, OR**	**83.29**	**42**	P	**P**	**08 10 16.4**	**+1.2**
	baz=304						
I04A	**Tendick Farm,**	**83.43**	**43**	P	**P**	**08 10 17.3**	**+1.2**
	baz=303						
GERES	**GERESS Array B**	**83.60**	**323**	P	**P**	**08 10 16.9**	**+0.1**
	comp=Z,0.7nm,0.6s,baz=56,slow=5.0,SNR=6.5						
I05D	**Terrebonne, OR**	**83.78**	**43**	P	**P**	**08 10 18.5**	**+0.7**
	baz=304						
J04D	**Umpqua Nationa**	**83.92**	**44**	P	**P**	**08 10 19.5**	**+0.8**
	baz=303						
NEW	**Newport**	**83.92**	**38**	P	**P**	**08 10 19.3**	**+0.9**
	comp=Z,5.8nm,0.6s,baz=299,slow=4.0,SNR=17						
NEW	**Newport**	**83.92**	**38**	P	**P**	**08 10 19.4**	**+1.0**
	baz=306						
L04D	**Klamath Falls**	**84.36**	**45**	P	**P**	**08 10 22.0**	**+1.1**
	baz=303						
J05D	**Fort Rock, OR**	**84.43**	**43**	P	**P**	**08 10 22.3**	**+1.1**
	baz=304						
K04D	**Chiloquin, OR**	**84.48**	**44**	P	**P**	**08 10 22.2**	**+0.8**
	baz=304						
N02D	**Trinity Center**	**84.79**	**46**	P	**P**	**08 10 24.4**	**+1.4**
	baz=303						
M04C	**Macdoel**	**84.89**	**45**	P	**P**	**08 10 24.9**	**+1.4**
	baz=304						
O02D	**Mt. Diablo Mer**	**85.17**	**47**	P	**P**	**08 10 26.6**	**+1.7**
	baz=303						
O03E	**Paynes Creek**	**85.74**	**46**	P	**P**	**08 10 28.6**	**+0.9**
	baz=304						
MSO	**Missoula**	**86.51**	**37**	P	**P**	**08 10 31.7**	**+0.4**
	baz=309						
FRB	**Frobisher Bay**	**87.30**	**7**	P	**P**	**08 10 32.9**	**-1.8**
	comp=Z,14nm,0.8s,baz=341,slow=5.5,SNR=26						
EGMT	**Eagleton**	**87.92**	**35**	P	**P**	**08 10 38.5**	**+0.4**
	baz=312,SNR=7.1						
DLMT	**Dillon**	**88.16**	**38**	P	**P**	**08 10 40.2**	**+0.8**
DLMT				IAmb	IAmb	08 10 41.5	
	comp=Z,14nm,0.8s						
HLID	**Hailey**	**88.28**	**40**	P	**P**	**08 10 41.0**	**+1.0**
	baz=308						
HLID	**Hailey**	**88.28**	**40**	P	**P**	**08 10 40.8**	**+0.7**
HLID				IAmb	IAmb	08 10 42.6	
	comp=Z,13nm,0.9s						
BOZ	**Bozeman (W)**	**88.53**	**37**	P	**P**	**08 10 41.8**	**+0.7**
	baz=310,SNR=7.9						
NVAR	**Mina Array Bea**	**89.03**	**46**	P	**P**	**08 10 44.7**	**+1.0**
	comp=Z,1.8nm,0.7s,baz=288,slow=5.3,SNR=13						
H17A	**Grant Village**	**89.88**	**38**	P	**P**	**08 10 50.5**	**+2.9**
	baz=311,SNR=11						
RLMT	**Red Lodge**	**90.10**	**37**	P	**P**	**08 10 49.6**	**+1.0**
	baz=312,SNR=7.7						
DGMT	**Dagmar**	**90.30**	**32**	P	**P**	**08 10 49.8**	**+0.7**
	baz=316						
CWC	**Cottonwood Cre**	**90.34**	**48**	P	**P**	**08 10 51.0**	**+1.2**
	baz=306						
LAO	**LASA Array**	**90.58**	**34**	P	**P**	**08 10 51.7**	**+1.1**
	baz=314						
R11A	**Troy Canyon, C**	**90.79**	**45**	P	**P**	**08 10 52.8**	**+0.9**
	baz=308						
MPMC	**Manual Prospec**	**90.95**	**48**	P	**P**	**08 10 53.6**	**+0.9**
	baz=307						
FURC	**Furnace Creek,**	**91.11**	**47**	P	**P**	**08 10 54.3**	**+1.2**
	baz=307						
LRMC	**Laurel Mtn Rad**	**91.17**	**48**	P	**P**	**08 10 54.3**	**+0.7**
	baz=306						
TPNV	**Topopah Spring**	**91.22**	**46**	P	**P**	**08 10 54.9**	**+1.0**
	baz=307,SNR=7.5						
DUG	**Dugway, Tooele**	**91.32**	**42**	P	**P**	**08 10 55.5**	**+1.3**
	baz=310,SNR=13						
BW06	**Boulder Array**	**91.51**	**39**	P	**P**	**08 10 55.6**	**+0.4**
	baz=312,SNR=6.3						
PDAR	**Pinedale Array**	**91.51**	**39**	P	**P**	**08 10 55.5**	**+0.3**
	comp=Z,3.1nm,0.7s,baz=32,slow=0.3,SNR=34						
GSC	**Goldstone, Bar**	**91.85**	**48**	P	**P**	**08 10 57.7**	**+1.0**
	baz=307,SNR=5.6						
HEC	**Hector,Ludlow**	**92.44**	**48**	P	**P**	**08 11 00.4**	**+1.0**
	baz=307,SNR=5.4						
ULM	**Lac du Bonnet**	**92.55**	**27**	P	**P**	**08 10 59.2**	**-0.3**
	comp=Z,6.0nm,0.6s,baz=325,slow=5.3,SNR=20						
MURC	**Murrieta**	**92.61**	**49**	P	**P**	**08 11 00.9**	**+0.7**
	baz=307						
MVU	**Marysvale**	**92.76**	**43**	P	**P**	**08 11 01.2**	**+0.2**
GMRC	**Granite Mounta**	**92.91**	**48**	P	**P**	**08 11 02.9**	**+1.2**
	baz=308						
109C	**Camp Elliot, M**	**93.09**	**50**	P	**P**	**08 11 03.4**	**+1.1**
	baz=307						
PFO	**Pinyon Flats O**	**93.09**	**49**	P	**P**	**08 11 03.5**	**+1.0**
	baz=307,SNR=7.4						
TPFO	**Pinon Flats**	**93.10**	**49**	P	**P**	**08 11 03.6**	**+1.0**
	baz=307,SNR=8.3						
BELC	**Belle Mtn. Jos**	**93.16**	**49**	P	**P**	**08 11 03.5**	**+0.7**
	baz=307,SNR=6.2						
K22A	**Casper**	**93.23**	**37**	P	**P**	**08 11 03.4**	**+0.4**
	baz=314						
RSSD	**Black Hills**	**93.49**	**35**	P	**P**	**08 11 04.5**	**+0.3**
	baz=316						
MONP2	**Monument Peak**	**93.55**	**50**	P	**P**	**08 11 05.6**	**+0.9**
	baz=307,SNR=5.3						
IRM	**Iron Mountain**	**93.63**	**48**	P	**P**	**08 11 06.0**	**+1.1**
	baz=308,SNR=6.7						
BC3	**Big Chuckawall**	**93.73**	**49**	P	**P**	**08 11 06.5**	**+1.1**
	baz=308,SNR=7.2						
IKP	**In-Ko-Pah, Jac**	**93.90**	**50**	P	**P**	**08 11 06.9**	**+0.7**
	baz=307						
SWSC	**Sam W. Stewart**	**93.93**	**49**	P	**P**	**08 11 07.6**	**+1.4**
	baz=307						
O20A	**White River Ci**	**94.01**	**40**	P	**P**	**08 11 07.8**	**+1.1**
	baz=313						
PDMCI	**Parker Dam,Lak**	**94.19**	**47**	P	**P**	**08 11 08.0**	**+0.6**
	baz=308						
GLA	**Glamis**	**94.51**	**49**	P	**P**	**08 11 10.5**	**+1.5**
	baz=308						
N23A	**Red Feather La**	**94.76**	**38**	P	**P**	**08 11 11.2**	**+1.0**
	baz=314						
WUAZ	**Wupatki**	**95.19**	**45**	P	**P**	**08 11 13.2**	**+1.1**
	baz=310						
SUSD	**Miller**	**95.72**	**32**	P	**P**	**08 11 14.6**	**+0.5**
	baz=320						
MVCO	**Mesa Verde**	**95.82**	**42**	P	**P**	**08 11 14.8**	**-0.3**
	baz=312						
EYMN	**Ely**	**96.11**	**26**	P	**P**	**08 11 15.8**	**0.0**
	baz=326						
TXAR	**Lajitas Array**	**104.15**	**45**	Pdiff	**Pdif**	**08 11 54.2**	**+1.9**
	comp=Z,0.7nm,0.7s,baz=292,slow=3.9,SNR=5.5						
TXAR				PKiKP	**PP**	**08 16 10.4**	**-0.6**
	comp=Z,0.3nm,0.6s,baz=247,slow=1.9,SNR=2.3						
TORD	**Torodi Ar. Bea**	**113.94**	**301**	PKiKP	**PKiKP**	**08 16 27.2**	**0.0**
	comp=Z,0.8nm,0.6s,baz=3.9,slow=1.9,SNR=4.0						
VNA2	**Neumayer--Watz**	**130.76**	**198**	PKPdf	**PKPdf**	**08 16 58.6**	**+0.9**
VNA3	**Neumayer Olymp**	**131.16**	**197**	PKPdf	**PKPdf**	**08 16 56.6**	**-2.0**

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*IDC **27** 07:59:54.8±0.9, 5°.34S×152°.86E, h0^{km}, mb4.1/15, mb1 4.2/16, mb1mx4.1/50, mbtmp4.1/16, ML1.9/1, Error ellipse: s-maj=32.3km s-min=17.0km az=122.0*

ISC 27 08:00:00.3±0.8**, 5°.4S**±0°.1×**152°.8E**±0°.2**, h37**^{km}**, n19,** σ**0ˢ.67**/20**, mb4.0**/16**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.89**	**235**	Pn	**Pn**	**08 01 40.0**	**+1.2**
	1.2nm,0.3s,baz=36,slow=4.3,SNR=2.4						
PMG				Sn	**Sn**	**08 02 55.1**	**-0.9**
	6.7nm,0.3s,baz=76,slow=16,SNR=6.5						
WRA	**Warramunga Arr**	**23.08**	**230**	P	**P**	**08 05 02.9**	**0.0**
	1.1nm,0.4s,baz=53,slow=10.0,SNR=2.8						
ASAR	**Alice Springs**	**25.73**	**223**	P	**P**	**08 05 28.3**	**+0.8**
	2.1nm,0.8s,baz=56,slow=9.4,SNR=9.5						
STKA	**Stephens Creek**	**28.36**	**200**	P	**P**	**08 05 50.4**	**-0.5**
	0.9nm,0.7s,baz=23,slow=12,SNR=1.6						
FITZ	**Fitzroy Crossi**	**29.41**	**242**	P	**P**	**08 05 59.4**	**-1.0**
	5.2nm,0.8s,baz=102,slow=12,SNR=3.1						
CMAR	**Chiang Mai Arr**	**58.18**	**295**	P	**P**	**08 09 51.1**	**+0.1**
	1.5nm,0.3s,baz=103,slow=5.7,SNR=5.5						
PETK	**Petropavlovsk-**	**58.45**	**3**	P	**P**	**08 09 52.2**	**-0.1**
	1.0nm,0.5s,baz=163,slow=5.7,SNR=7.6						
SONM	**Songino Array**	**66.86**	**328**	P	**P**	**08 10 49.1**	**+0.4**
	0.2nm,0.4s,baz=134,slow=5.5,SNR=3.5						
MKAR	**Makanchi Array**	**80.81**	**319**	P	**P**	**08 12 10.0**	**-0.3**
	0.7nm,0.7s,baz=95,slow=8.0,SNR=5.1						
ZALV	**Zalesovo Beam**	**81.68**	**326**	P	**P**	**08 12 14.3**	**-0.4**
	0.9nm,0.4s,baz=103,slow=6.1,SNR=2.4						
ILAR	**Eielson Array**	**82.71**	**22**	P	**P**	**08 12 18.9**	**-1.0**
	1.1nm,0.8s,baz=255,slow=5.0,SNR=9.1						
KURBB	**Kurchatov Arra**	**84.31**	**322**	P	**P**	**08 12 28.6**	**+0.3**
	0.4nm,0.5s,baz=102,slow=5.3,SNR=1.7						
AAK	**Ala-Archa**	**85.12**	**314**	P	**P**	**08 12 33.5**	**+0.6**
	2.4nm,0.7s,baz=100,slow=7.8,SNR=6.8						
INK	**Inuvik**	**89.01**	**21**	P	**P**	**08 12 50.9**	**0.0**
	1.0nm,0.6s,baz=225,slow=2.9,SNR=4.0						
BVAR	**Borovoye Array**	**89.75**	**323**	P	**P**	**08 12 53.7**	**-1.1**
	1.4nm,0.7s,baz=153,slow=12,SNR=5.7						
NVAR	**Mina Array Bea**	**92.43**	**52**	P	**P**	**08 13 07.9**	**+0.1**
	0.1nm,0.4s,baz=250,slow=2.7,SNR=1.6						
YKA	**Yellowknife Ar**	**95.95**	**28**	P	**P**	**08 13 23.4**	**+0.3**
	0.5nm,0.8s,baz=268,slow=4.1,SNR=5.4						
TORD	**Torodi Ar. Bea**	**150.53**	**287**	PKPbc	**PKPbc**	**08 19 49.2**	**-0.1**
	1.4nm,0.6s,baz=88,slow=2.4,SNR=7.5						
BDFB	**Brasilia**	**150.60**	**136**	PKPbc	**PKiKP**	**08 19 50.6**	**+0.4**
	1.4nm,0.5s,baz=199,slow=9.7,SNR=3.7						

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*IDC **27** 08:18:44.4±0.9, 38°.35S×93°.74W, h0^{km}, mb4.1/10, mb1 4.3/10, mb1mx4.1/33, mbtmp4.1/10, MS3.3/5, Ms1 3.3/5, ms1mx3.1/22, Error ellipse: s-maj=25.3km s-min=24.2km az=152.0*

*NEIC **27** 08:18:44.5±1.0, 38°.32S±0°.10×93°.8W±0°.2, h10^{km}±1^{km}, mb4.5/31, Error ellipse: s-maj=22.5km s-min=14.9km az=245.0*

ISC 27 08:18:45.8±0.7**, 38°.3S**±0°.1×**93°.72W**±0°.09**, h13**^{km}**, n57,** σ**0ˢ.99**/50**, mb4.4**/21**, MS3.3**/4**, West Chile Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H03S2	**Juan Fernandez**	**12.76**	**74**	T	T	08 35 00.8	
	baz=244,slow=74,SNR=91						
H03S1	**Juan Fernandez**	**12.77**	**74**	T	T	08 35 04.2	
	baz=244,slow=74,SNR=127						
H03S3	**Juan Fernandez**	**12.77**	**74**	T	T	08 35 04.0	
	baz=244,slow=74,SNR=140						
H03N2	**Juan Fernandez**	**12.92**	**73**	T	T	08 35 10.2	
	baz=274,slow=77,SNR=269						
H03N3	**Juan Fernandez**	**12.92**	**73**	T	T	08 35 11.6	
	baz=274,slow=77,SNR=346						
H03N1	**Juan Fernandez**	**12.93**	**73**	T	T	08 35 10.2	
	baz=274,slow=77,SNR=597						
LL01	**San Ignacio de**	**16.75**	**111**	P	**Pn**	**08 22 41.6**	**+1.6**
RPN	**Rapa Nui**	**17.18**	**306**	P	**Pn**	**08 22 46.0**	**+0.5**
BI02	**San Fabin de**	**17.89**	**92**	P	**Pn**	**08 22 53.3**	**-1.1**
PLCA	**Paso Flores**	**18.04**	**105**	LR	LR	08 28 11.2	
	comp=Z,102nm,19.5s,baz=227,slow=31						
MT05	**Renca**	**19.24**	**82**	P	**P**	**08 23 08.4**	**-1.4**
MT05				IAmb	IAmb	08 23 22.4	
	comp=Z,46nm,1.4s						
PEL	**Peldehue**	**19.37**	**82**	P	**P**	**08 23 11.2**	**-0.1**
GO04	**Tololo Observa**	**20.56**	**74**	P	**P**	**08 23 26.1**	**+1.6**
LCO	**Las Campanas**	**21.22**	**71**	P	**P**	**08 23 31.4**	**-0.3**
ZON	**Zonda**	**21.56**	**79**	P	**P**	**08 23 34.5**	**-0.6**
ZON				IAmb	IAmb	08 23 49.0	
	comp=Z,19nm,1.3s						
AC05	**El Transito**	**21.63**	**71**	P	**P**	**08 23 35.8**	**-0.1**
GO03	**Copiap**	**22.34**	**68**	P	**P**	**08 23 43.8**	**+0.3**
GO03				IAmb	IAmb	08 23 52.4	
	comp=Z,15nm,1.3s						
AC01	**Pan de Azucar**	**22.92**	**65**	P	**P**	**08 23 49.7**	**+0.1**
AC01				IAmb	IAmb	08 23 58.2	
	comp=Z,14nm,0.9s						
AC02	**Maricunga**	**23.58**	**68**	P	**P**	**08 23 57.1**	**+0.4**
AC02				IAmb	IAmb	08 24 06.3	
	comp=Z,8.1nm,0.8s						
PB14	**IPOC Station P**	**24.01**	**62**	P	**P**	**08 24 01.0**	**+0.4**
PB14				IAmb	IAmb	08 24 10.7	
	comp=Z,12nm,1.1s						
PB15	**IPOC Station P**	**25.57**	**61**	P	**P**	**08 24 15.8**	**+0.9**
PB15				IAmb	IAmb	08 24 25.3	
	comp=Z,15nm,0.9s						
LVC	**Limon Verde**	**26.36**	**61**	P	**P**	**08 24 24.2**	**+2.1**
	comp=Z,3.7nm,0.9s,baz=225,slow=4.3,SNR=3.2						
LVC				LR	LR	08 32 00.8	
	comp=Z,125nm,21.8s,baz=265,slow=30						
LVC	**Limon Verde**	**26.36**	**61**	P	**P**	**08 24 22.4**	**+0.2**
LVC				IAmb	IAmb	08 24 38.5	
	comp=Z,11nm,1.1s						
NNA	**Nana**	**30.19**	**34**	LR	LR	08 33 58.4	
	comp=Z,60nm,18.0s,baz=239,slow=30						
LPAZ	**La Paz**	**31.38**	**53**	P	**P**	**08 25 09.1**	**+2.0**
	comp=Z,4.0nm,0.9s,baz=204,slow=9.3,SNR=8.0						
LPAZ				LR	LR	08 35 29.8	
	comp=Z,18nm,20.5s,baz=327,slow=32						
LPAZ	**La Paz**	**31.38**	**53**	P	**P**	**08 25 07.9**	**+0.8**
LPAZ				IAmb	IAmb	08 25 09.8	
	comp=Z,6.3nm,1.0s						
CPUP	**Villa Florida**	**32.78**	**80**	P	**P**	**08 25 17.6**	**-1.0**
	comp=Z,2.2nm,0.9s,baz=238,slow=4.5,SNR=5.3						
CPUP	**Villa Florida**	**32.78**	**80**	P	**P**	**08 25 17.7**	**-1.0**
CPUP				IAmb	IAmb	08 25 45.0	
	comp=Z,6.8nm,1.4s						
ATAH	**Atahualpa**	**33.95**	**28**	P	**P**	**08 25 32.3**	**+2.9**
	comp=Z,11nm,1.0s,baz=243,slow=3.6,SNR=6.2						
SIV	**San Ignacio**	**36.26**	**61**	P	**P**	**08 25 49.4**	**+0.5**
	comp=Z,1.2nm,0.8s,baz=211,slow=11,SNR=4.9						
SIV				PcP	**PcP**	**08 28 13.7**	**-0.2**
	comp=Z,1.0nm,0.7s,baz=270,slow=4.0,SNR=4.3						
SIV				LR	LR	08 39 21.7	
	comp=Z,49nm,21.2s,baz=269,slow=34						
SAML	**Samuel**	**40.08**	**51**	P	**P**	**08 26 20.5**	**-0.5**
OTAV	**Otavalo**	**40.81**	**24**	P	**P**	**08 26 27.4**	**-0.2**
OTAV				IAmb	IAmb	08 26 30.7	
	comp=Z,13nm,1.4s						
ROSC	**El Rosal**	**46.51**	**27**	P	**P**	**08 27 12.0**	**-1.4**
ESPN	**Las Esperanzas**	**50.96**	**12**	P	**P**	**08 27 47.2**	**+0.1**
QSPA	**South Pole Qui**	**51.96**	**180**	P	**P**	**08 27 54.8**	**+0.5**
	comp=Z,1.6nm,1.0s,baz=151,slow=2.2,SNR=10						
QSPA	**South Pole Qui**	**51.96**	**180**	P	**P**	**08 27 55.0**	**+0.6**
QSPA				IAmb	IAmb	08 27 59.2	
	comp=Z,9.0nm,1.5s						
TGUH	**Tegucigalpa,Un**	**52.39**	**8**	P	**P**	**08 27 57.1**	**-0.8**
VNA3	**Neumayer Olymp**	**52.41**	**156**	P	**P**	**08 27 56.2**	**-1.3**
PPTF	**Pamatai, Papee**	**52.65**	**277**	P	**P**	**08 27 58.7**	**-1.2**
VNA1	**Neumayer--Stat**	**52.97**	**155**	P	**P**	**08 28 02.1**	**+0.6**
VNA2	**Neumayer--Watz**	**53.20**	**156**	P	**P**	**08 28 02.9**	**-0.3**
	baz=257,slow=7.9						
SNAA	**Sanae**	**54.47**	**157**	P	**P**	**08 28 12.2**	**-0.3**
TXAR	**Lajitas Array**	**67.89**	**351**	P	**P**	**08 29 44.5**	**+0.6**
	comp=Z,1.3nm,0.9s,baz=164,slow=4.9,SNR=7.0						
TXAR	**Lajitas Array**	**67.89**	**351**	P	**P**	**08 29 43.4**	**-0.5**
TX31	**Lajitas Ar. Si**	**67.89**	**351**	P	**P**	**08 29 43.9**	**-0.1**
TX31				IAmb	IAmb	08 30 02.4	
	comp=Z,4.0nm,1.2s						
TX32	**Lajitas Array**	**67.89**	**351**	P	**P**	**08 29 43.5**	**-0.4**
BRAL	**Brewton**	**69.35**	**6**	P	**P**	**08 29 52.6**	**-0.3**
SMCO	**Snowmass**	**78.02**	**350**	P	**P**	**08 30 43.7**	**-0.5**
SMCO				IAmb	IAmb	08 30 52.5	
	comp=Z,5.0nm,1.2s						
NVAR	**Mina Array Bea**	**79.60**	**341**	P	**P**	**08 30 53.9**	**+1.2**
	comp=Z,1.5nm,0.8s,baz=170,slow=5.5,SNR=11						
ELK	**Elko**	**81.06**	**344**	P	**P**	**08 31 01.4**	**+0.9**
	comp=Z,0.9nm,0.7s,baz=106,slow=4.2,SNR=4.9						
BW06	**Boulder Array**	**81.93**	**348**	P	**P**	**08 31 05.5**	**+0.5**
BW06				IAmb	IAmb	08 31 11.9	
	comp=Z,6.8nm,1.2s						
PD31	**Pinedale Array**	**81.93**	**348**	P	**P**	**08 31 04.3**	**-0.7**
PD31				IAmb	IAmb	08 31 11.9	
	comp=Z,5.2nm,1.1s						
PDAR	**Pinedale Array**	**81.93**	**348**	P	**P**	**08 31 05.5**	**+0.5**
	comp=Z,1.5nm,0.7s,baz=163,slow=6.0,SNR=16						
PDAR	**Pinedale Array**	**81.93**	**348**	P	**P**	**08 31 04.3**	**-0.7**
FLWY	**Flagg Ranch**	**83.39**	**348**	P	**P**	**08 31 11.9**	**-0.7**
HLID	**Hailey**	**83.58**	**345**	P	**P**	**08 31 12.7**	**-0.8**
HLID				IAmb	IAmb	08 31 16.4	
	comp=Z,6.1nm,1.4s						
SONM	**Songino Array**	**162.51**	**310**	PKPab	**PKPab**	**08 39 36.6**	**+1.5**
	comp=Z,0.2nm,0.3s,baz=102,slow=2.1,SNR=3.7						

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*MEX **27** 08:27:37.4±2.4, 17°.26N×100°.95W, h20^{km}±56^{km}, MD4.5*

*NEIC **27** 08:27:37.8±2.3, 17°.4N±0°.2×100°.86W±0°.06, h26^{km}±14^{km}, Error ellipse: s-maj=23.4km s-min=3.8km az=197.0*

*IDC **27** 08:27:45.4±4.7, 17°.82N×100°.39W, h75^{km}±37^{km}, mb3.8/7, mb1 4.0/10, mb1mx3.6/51, mbtmp4.1/10, ML3.4/3, MS3.8/9, Ms1 3.8/9, ms1mx3.4/41, Error ellipse: s-maj=60.1km s-min=23.2km az=27.0*

ISC 27 08:27:35.6±0.6**, 17°.28N**±0°.03×**100°.93W**±0°.03**, h21**^{km}±3^{km}**, n116,** σ**1ˢ.35**/163**, mb4.2**/12**, MS3.9**/6**, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.60**	**302**	eP	**Pb**	**08 27 46.9**	**-0.7**
ZIIG				eS	**Sb**	**08 27 55.6**	**-0.1**
ZIIG	**Zihuatanejo**	**0.60**	**302**		**Pb**	**08 27 46.9**	**-0.7**
ZIIG					**Sb**	**08 27 55.6**	**-0.1**
CAIG	**El Cayaco**	**0.67**	**110**	eP	**Pb**	**08 27 48.2**	**-0.4**
CAIG				eS	**Sb**	**08 27 57.7**	**+0.1**
CAIG	**El Cayaco**	**0.67**	**110**		**Pb**	**08 27 48.3**	**-0.4**
CAIG					**Sb**	**08 27 57.7**	**+0.1**
ACP2	**Acapulco**	**1.08**	**112**	eP	**Pn**	**08 27 54.6**	**-0.9**
ACP2				eS	**Sb**	**08 28 07.9**	**-1.2**
ACP2	**Acapulco**	**1.08**	**112**		**Pn**	**08 27 55.2**	**-0.2**
ACP2					**Sb**	**08 28 09.4**	**+0.2**
ARIG	**Puente Sto Nin**	**1.14**	**29**	eP	**Pn**	**08 27 55.8**	**-0.5**
ARIG				eS	**Sb**	**08 28 08.4**	**-2.5**
ARIG	**Puente Sto Nin**	**1.14**	**29**		**Pn**	**08 27 56.0**	**-0.3**
ARIG					**Sb**	**08 28 08.4**	**-2.5**
MEIG	**Mezcala**	**1.40**	**63**	eP	**Pn**	**08 27 59.6**	**-0.4**
MEIG				i S	**Sn**	**08 28 15.2**	**-2.7**
MEIG	**Mezcala**	**1.40**	**63**		**Pn**	**08 28 00.2**	**+0.2**
MEIG					**Sb**	**08 28 19.1**	**+0.5**
PLIG	**Platanillo**	**1.75**	**51**	i P	**Pn**	**08 28 05.6**	**+0.8**
PLIG				i S	**Sn**	**08 28 24.8**	**-1.8**
PLIG	**Platanillo**	**1.75**	**51**		**Pn**	**08 28 05.5**	**+0.8**
PLIG					**Sb**	**08 28 29.6**	**+1.0**
CRIG	**Cruz Grande**	**1.80**	**107**	eP	**Pn**	**08 28 05.1**	**-0.4**
CRIG				eS	**Sn**	**08 28 25.0**	**-2.7**
MAVM	**Malinalco, Edo**	**2.15**	**39**	eP	**Pn**	**08 28 10.8**	**+0.3**
MAVM				eS	**Sn**	**08 28 35.7**	**-0.9**
TOVM	**TOLUCA**	**2.32**	**31**	eP	**Pn**	**08 28 13.6**	**+0.8**
TOVM				i S	**Sn**	**08 28 40.5**	**-0.4**
HMTT	**Tlapaneco**	**2.32**	**77**	i P	**Pn**	**08 28 14.1**	**+1.5**
HMTT				eS	**Sn**	**08 28 39.4**	**-1.2**
HMTT	**Tlapaneco**	**2.32**	**77**		**Pn**	**08 28 14.1**	**+1.5**
HMTT					**Sb**	**08 28 48.4**	**+3.4**
YAIG	**Yautepec**	**2.37**	**48**	eP	**Pn**	**08 28 12.9**	**-0.5**
YAIG				eS	**Sn**	**08 28 40.4**	**-1.5**
YAIG	**Yautepec**	**2.37**	**48**		**Pn**	**08 28 13.7**	**+0.3**
YAIG					**Sb**	**08 28 47.1**	**+0.7**
URUA	**Uruapan**	**2.39**	**333**	eP	**Pb**	**08 28 16.1**	**-1.9**
MOIG	**Morelia**	**2.39**	**354**	eP	**Pn**	**08 28 13.2**	**-0.6**
MOIG				i S	**Sn**	**08 28 39.7**	**-3.0**
MOIG	**Morelia**	**2.39**	**354**		**Pn**	**08 28 15.0**	**+1.2**
MMIG	**Aquila**	**2.51**	**294**	eP	**Pn**	**08 28 14.5**	**-0.7**
MMIG				eS	**Sn**	**08 28 44.2**	**-0.9**
MMIG	**Aquila**	**2.51**	**294**		**Pn**	**08 28 14.5**	**-0.7**
MMIG					**Sn**	**08 28 44.2**	**-0.9**
UNM	**Universidad Na**	**2.63**	**39**	eP	**Pn**	**08 28 17.1**	**+0.1**
UNM				eS	**Sn**	**08 28 46.5**	**-2.0**
UNM	**Universidad Na**	**2.63**	**39**		**Pn**	**08 28 18.5**	**+1.4**
CVM	**Colonia del Va**	**2.67**	**38**	eP	**Pn**	**08 28 18.8**	**+1.5**
CVM				i S	**Sn**	**08 28 50.8**	**+1.7**
ATVM	**ATLACOMULCO**	**2.67**	**23**	eP	**Pn**	**08 28 19.8**	**+2.1**
ATVM				eS	**Sn**	**08 28 50.1**	**+0.5**
FTIG	**Fresnillo de T**	**2.74**	**76**	eP	**Pn**	**08 28 17.9**	**-0.5**
FTIG				eS	**Sn**	**08 28 49.3**	**-1.7**
AMVM	**AMECAMECA**	**2.74**	**48**	eP	**Pn**	**08 28 19.2**	**+0.5**
AMVM				eS	**Sn**	**08 28 50.7**	**-0.7**
PBVM	**Pinon**	**2.77**	**39**	eS	**Sn**	**08 28 51.0**	**-0.6**
PBVM				eP	**Pn**	**08 28 18.9**	**+0.2**
PPM	**Popocatepetl**	**2.82**	**51**	eP	**Pn**	**08 28 20.6**	**+0.7**
PPM				eS	**Sn**	**08 28 52.4**	**-1.0**
PNIG	**Pinotepa**	**2.83**	**108**	eP	**Pn**	**08 28 20.9**	**+1.3**
PNIG				i S	**Sn**	**08 28 53.5**	**+0.5**
PNIG	**Pinotepa**	**2.83**	**108**		**Pb**	**08 28 24.9**	**-0.5**
ACIG	**Acambay**	**2.86**	**20**	eP	**Pn**	**08 28 22.2**	**+2.0**
ACIG				i S	**Sn**	**08 28 55.4**	**+1.3**
TXIG	**Tlaxiaco**	**3.02**	**90**	eP	**Pn**	**08 28 21.8**	**-0.7**
TXIG				eS	**Sn**	**08 28 56.7**	**-1.4**
HLIG	**Huajuapan de L**	**3.03**	**79**	eP	**Pn**	**08 28 23.4**	**+0.9**
HLIG				i S	**Sn**	**08 28 56.8**	**-1.5**
ZUVM	**ZUMPANGO**	**3.08**	**34**	eP	**Pn**	**08 28 20.8**	**-2.4**
ZUVM				eS	**Sn**	**08 29 00.4**	**+0.8**
PHPU	**Puebla**	**3.15**	**56**	eP	**Pn**	**08 28 22.4**	**-1.9**
VTVM	**Tizayuca**	**3.21**	**39**	eP	**Pn**	**08 28 26.4**	**+1.4**
VTVM				eS	**Sn**	**08 29 01.7**	**-1.2**
COIG	**Colima**	**3.23**	**306**	eP	**Pn**	**08 28 24.9**	**-0.3**
COIG				i S	**Sn**	**08 29 02.4**	**-0.7**
YOIG	**Yosondua**	**3.26**	**97**	eP	**Pn**	**08 28 25.4**	**-0.4**
YOIG				i S	**Sn**	**08 29 03.3**	**-0.8**
EZ5V		**3.35**	**311**	eP	**Pn**	**08 28 27.1**	**+0.1**
EZ5V				eS	**Sn**	**08 29 04.9**	**-1.4**
JRQG	**Juriquilla Cam**	**3.43**	**8**	eP	**Pn**	**08 28 27.5**	**-0.6**
JRQG				eS	**Sn**	**08 29 08.3**	**0.0**

R15V		3.46	303	*e*P	Pn	08 28 27.7	-0.6
R15V				*i* S	Sn	08 29 07.0	-1.7
IGIG	**Irapuato, Guan**	3.47	354	*e*P	Pn	08 28 27.8	-0.8
IGIG				*e*S	Sn	08 29 08.1	-1.1
DEIG	**Demacu**	3.50	31	*e*P	Pn	08 28 28.6	-0.4
DEIG				*i* S	Sn	08 29 08.4	-1.4
TPIG	**Tehuac#an**	3.58	71	*i* S	Sn	08 29 11.0	-0.8
TOIG	**Toxpalan**	3.77	77	*i* P	Pn	08 28 33.7	+1.0
TOIG				*e*S	Sn	08 29 16.4	-0.1
PEIG	**Puerto Escondi**	3.84	109	*e*P	Pn	08 28 32.6	-0.9
PEIG				*e*S	Sn	08 29 17.0	-1.1
VHO	**Vista Hermosa**	4.02	92	*e*P	Pn	08 28 36.5	+0.4
VHO				*e*S	Sn	08 29 21.8	-0.9
HUIG	**Huatulco**	4.86	107	*i* P	Pn	08 28 47.1	-0.4
HUIG				*i* S	Sn	08 29 42.3	-0.9
ANIG	**Ahuacatlan**	5.06	318	*i* P	Pn	08 28 50.4	+0.1
ZAIG	**Zacatecas**	5.67	345		Pn	08 29 01.2	+2.3
CMIG	**Matias Romero**	5.78	91	P	Pn	08 29 01.9	+1.7
	1.3nm,0.3s,baz=255,slow=9.9,SNR=25						
CMIG				S	Sn	08 30 02.6	-3.3
	4.5nm,0.3s,baz=338,slow=12,SNR=4.0						
CMIG				LR	LR	08 31 33.2	
	comp=Z,278nm,19.6s,baz=227,slow=43						
CMIG	**Matias Romero**	5.78	91	*e*P	Pn	08 29 02.1	+2.0
CMIG				*i* S	Sn	08 30 06.0	+0.1
CCIG	**Comitan**	8.48	95	*e*P	Pn	08 29 34.6	-2.8
CCIG				*e*S	Sn	08 31 13.6	+1.0
CCIG	**Comitan**	8.48	95	Pn	Pn	08 29 41.4	+4.0
TX31	**Lajitas Ar. Si**	12.26	349	Pn	Pn	08 30 28.7	-0.4
TX32	**Lajitas Array**	12.26	349	Pn	Pn	08 30 28.0	-1.1
TXAR	**Lajitas Array**	12.26	349	P	P	08 30 37.2	-4.1
	0.1nm,0.3s,baz=159,slow=15,SNR=4.1						
TXAR	**Lajitas Array**	12.26	349		Pn	08 30 28.4	-0.7
TEIG	**Tepich**	12.34	74	P	Pn	08 30 29.2	-0.9
	0.3nm,0.3s,baz=257,slow=4.9,SNR=2.9						
TEIG				S	Sn	08 32 41.5	-5.5
	baz=36,slow=18,SNR=2.6						
TEIG				LR	LR	08 35 50.9	
	comp=Z,123nm,20.2s,baz=270,slow=42						
TEIG	**Tepich**	12.34	74	Pn	Pn	08 30 30.1	0.0
JCT	**Junction City**	13.18	4	Pn	Pn	08 30 42.6	+1.1
HSIG		14.87	324	Pn	Pn	08 31 04.5	-0.1
MNTX	**Cornudas Mount**	14.91	345	Pn	Pn	08 31 05.9	+0.7
WHTX	**Lake Whitney,**	14.98	11	Pn	Pn	08 31 07.3	+1.2
GDL2	**Guadalupe Moun**	15.17	349	P	P	08 31 15.0	+1.2
ABTX	**Abilene, Hawle**	15.32	4		P	08 31 15.1	-0.1
ABTX				IAmb	IAmb	08 31 25.2	
	comp=Z,19nm,1.0s						
237A	**Washetta, Mont**	15.37	17	P	P	08 31 15.8	0.0
NATX	**Nacogdoches**	15.49	20		P	08 31 16.9	-0.2
319A	**Douglas**	15.95	333	P	P	08 31 23.0	+0.6
MSTX	**Muleshoe**	16.70	355		Pn	08 31 29.5	+1.1
Z38A	**Mt. Pleasant**	16.79	17		P	08 31 32.0	+0.6
Z38A				IAmb	IAmb	08 31 42.5	
	comp=Z,40nm,1.1s						
AMTX	**Amarillo**	17.54	358		Pn	08 31 39.4	+0.4
AMTX				IAmb	IAmb	08 31 51.0	
	comp=Z,14nm,0.9s						
BNM	**Barren Site**	17.56	344	P	P	08 31 42.6	+2.3
WLAR	**White Oak Lake**	17.78	22		P	08 31 42.4	-0.1
WLAR				IAmb	IAmb	08 31 52.8	
	comp=Z,22nm,0.9s						
214A	**Organ Pipe Nat**	18.15	326	P	P	08 31 47.1	+0.5
ANMO	**Albuquerque**	18.27	345	P	P	08 31 50.6	+2.5
	comp=Z,0.1nm,0.3s,baz=150,slow=13,SNR=12						
ANMO				LR	LR	08 39 35.2	
	comp=Z,391nm,18.1s,baz=164,slow=40						
ANMO	**Albuquerque**	18.27	345		P	08 31 48.9	+0.8
MIAR	**Mount Ida**	18.41	20		P	08 31 48.6	-0.7
MIAR				IAmb	IAmb	08 31 59.6	
	comp=Z,26nm,1.5s						
W39A	**Magazine**	18.94	18	P	P	08 31 54.9	-0.4
W39A				IAmb	IAmb	08 32 05.8	
	comp=Z,33nm,1.2s						
OK031	**S. Brethren Rd**	18.95	10	P	Pn	08 31 56.1	+0.1
OK031				IAmb	IAmb	08 32 06.4	
	comp=Z,23nm,1.1s						
TUL1	**Leonard**	19.11	13	P	P	08 31 55.9	-1.1
KAN13	**South Haven SW**	19.89	8	P	P	08 32 03.9	-1.7
HHAR	**Hobbs**	19.91	17	P	P	08 32 05.4	-0.5
HHAR				IAmb	IAmb	08 32 15.1	
	comp=Z,18nm,1.2s						
U38A	**Gravette**	19.94	16	P	P	08 32 06.0	-0.2
U38A				IAmb	IAmb	08 32 16.3	
	comp=Z,12nm,1.0s						
LRAL	**Lakeview Retre**	20.09	36	P	P	08 32 06.9	-0.9
LRAL				IAmb	IAmb	08 32 24.1	
	comp=Z,10nm,1.0s						
FCAR	**Ozark Folk Cen**	20.11	21	P	P	08 32 07.9	-0.2
U40A	**Yellville**	20.30	19	P	P	08 32 09.8	-0.3
U40A				IAmb	IAmb	08 32 19.6	
	comp=Z,16nm,0.9s						
WUAZ	**Wupatki**	20.40	335	P	P	08 32 11.4	0.0
SDCO	**Great Sand Dun**	20.78	350	P	P	08 32 16.0	+0.4
TKX	**Tecate**	20.79	320	P	P	08 32 15.5	0.0
TKX				IAmb	IAmb	08 32 22.8	
	comp=Z,6.0nm,0.7s						
MGMO	**Mountain Grove**	21.22	19	P	P	08 32 21.4	+1.3
MGMO				IAmb	IAmb	08 32 30.1	
	comp=Z,9.9nm,0.9s						
S39A	**Bolivar**	21.40	17	P	P	08 32 21.9	-0.1
S39A				IAmb	IAmb	08 32 31.7	
	comp=Z,7.2nm,0.8s						
PBMO	**Poplar Bluff**	21.52	24	P	P	08 32 23.3	0.0
KSCO	**Kaye Shedlock'**	21.70	356	P	P	08 32 24.6	-0.7
KSU1	**Kansas State U**	22.06	9	P	P	08 32 28.7	-0.4
KSU1				IAmb	IAmb	08 32 38.3	
	comp=Z,17nm,0.9s						
S44A	**Carbondale**	22.78	24	P	P	08 32 36.4	-0.3
SIUC	**Southern Illin**	22.81	25	P	P	08 32 38.9	+1.8
SIUC				IAmb	IAmb	08 32 43.8	
	comp=Z,17nm,1.1s						
SHPR	**Sheep Range**	22.92	329	P	P	08 32 38.7	+0.3
TPNV	**Topopah Spring**	23.81	328	P	P	08 32 48.8	+1.6
TPNV				IAmb	IAmb	08 32 51.8	
	comp=Z,5.2nm,0.8s						
NVAR	**Mina Array Bea**	25.98	328	P	P	08 33 10.1	+3.0
	comp=Z,3.9nm,0.9s,baz=149,slow=11,SNR=18						
NVAR	**Mina Array Bea**	25.98	328	P	P	08 33 07.5	+0.3
ELK	**Elko**	26.44	335	LR	LR	08 44 33.0	
	comp=Z,152nm,21.4s,baz=172,slow=38						
PDAR	**Pinedale Array**	26.44	346	P	P	08 33 11.8	+0.6
	comp=Z,1.4nm,0.9s,baz=140,slow=12,SNR=6.2						
PDAR				LR	LR	08 42 54.5	
	comp=Z,106nm,21.0s,baz=82,slow=35						
PDAR	**Pinedale Array**	26.44	346	P	P	08 33 10.7	-0.7
ULM	**Lac du Bonnet**	33.14	6	P	P	08 34 08.1	-2.2
	comp=Z,1.4nm,0.7s,baz=200,slow=9.0,SNR=4.3						
NNA	**Nana**	37.58	139	LR	LR	08 46 27.6	
	comp=Z,34nm,21.5s,baz=350,slow=30						
YKA	**Yellowknife Ar**	46.17	351	P	P	08 35 58.2	-0.2
	comp=Z,2.8nm,0.8s,baz=157,slow=7.7,SNR=36						
YKA				PcP	PcP	08 37 34.6	+0.5
	comp=Z,0.2nm,0.8s,baz=148,slow=4.0,SNR=5.3						
YKA				LR	LR	08 56 38.8	
	comp=Z,249nm,18.4s,baz=0.0,slow=38						
INK	**Inuvik**	55.01	346	P	P	08 37 06.2	+1.1
	comp=Z,3.7nm,0.8s,baz=124,slow=8.4,SNR=13						
ILAR	**Eielson Array**	56.53	338	P	P	08 37 17.4	+1.2
	comp=Z,1.2nm,0.8s,baz=145,slow=5.5,SNR=15						
BORG	**Borgarnes**	70.08	27	LR	LR	09 10 27.2	
	comp=Z,322nm,18.1s,baz=124,slow=37						
EKA	**Eskdalemuir Ar**	80.30	35	P	P	08 39 45.0	+0.1
	comp=Z,3.0nm,0.8s,baz=295,slow=7.0,SNR=4.1						
NOA	**NORSAR Array B**	85.26	27	LR	LR	09 17 52.1	
	comp=Z,297nm,19.3s,baz=280,slow=36						

NNC 27 08:30:54.1±3.6, 54°.44N×85°.92E, h0^{km}, mb3.8, mpv3.0, 3C-1D, Error ellipse: s-maj=101.3km s-min=19.4km az=147.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAA0	**Zalesovo Array**	0.82	233	⇑P	Pg	08 31 09.7	0.0
	0.6nm,0.3s						
ZAA0				⇓S	Sg	08 31 21.4	+1.1
	2.8nm,0.5s						
KURBB	**Kurchatov Arra**	5.92	233	⇑Pn	Pn	08 32 25.2	+2.3
	2.4nm,0.5s						
MK31	**Makanchi Array**	8.00	198	Pn	Pn	08 32 51.1	-0.4
	1.3nm,0.5s,baz=27,slow=14,SNR=36						
MAKZ	**Makanchi**	8.04	200	⇑Pn	Pn	08 32 52.7	+0.6
	0.9nm,0.6s						

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*IDC **27** 08:33:59.4±2.8, 20°.93S×68°.78W, h82^{km}±23^{km}, mb3.8/3, mb1 3.8/5, mb1mx3.4/29, mbtmp4.1/5, Error ellipse: s-maj=54.4km s-min=17.3km az=114.0*

*VAO **27** 08:34:00.6±0.7, 21°.12S×68°.94W, h126^{km}±8^{km}, mb4.2*

*GUC **27** 08:34:00.7±0.7, 21°.14S×68°.94W, h113^{km}±3^{km}, ML3.8*

ISC 27 08:34:00.2±0.7, 21°.14S±0°.03×69°.01W±0°.07, h119^{km}±7^{km}, n41, σ1^{s}.44/57, 12C-4D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB01	**IPOC Station P**	0.46	282	⇑*i*P	Pn	08 34 17.4	-0.4
PB01				*i* S	Sn	08 34 30.2	-0.9
PB01				IAML		08 34 31.5	
	comp=E,9µm,0.1s						
PB09	**IPOC Station P**	0.69	198	⇓*i*P	Pn	08 34 19.9	+0.3
PB09				*i* S	Sn	08 34 34.5	+0.3
PB09				IAML		08 34 35.9	
	comp=E,2µm,0.2s						
PB08	**IPOC Station P**	1.00	352	⇓*i*P	Pn	08 34 22.6	0.0
PB08				*i* S	Sn	08 34 39.2	-0.3
PB08				IAML		08 34 40.9	
	comp=E,2µm,0.2s						
PB07	**IPOC Station P**	1.01	234	⇑*i*P	Pn	08 34 22.4	0.0
PB07				*i* S	Sn	08 34 39.1	0.0
PB07				IAML		08 34 40.6	
	comp=E,2µm,0.3s						
PATCX	**Punta Patache**	1.12	286	⇑*i*P	Pn	08 34 23.8	+0.4
PATCX				*i* S	Sn	08 34 41.1	+0.1
PATCX				IAML		08 34 42.9	
	comp=E,4µm,0.3s						
HMBC	**Humberstone**	1.19	316	⇑*i*P	Pn	08 34 24.0	-0.2
HMBC				*i* S	Sn	08 34 42.2	-0.2
HMBC				IAML		08 34 45.9	
	comp=N,2µm,0.5s						
TA01	**Diego Aracena**	1.24	297	⇑*i*P	Pn	08 34 24.6	+0.1
TA01				*i* S	Sn	08 34 43.0	-0.1
TA01				IAML		08 34 45.9	
	comp=E,3µm,0.2s						
TA02	**Huaiquique**	1.36	309	⇑*i*P	Pn	08 34 25.8	-0.1
TA02				*i* S	Sn	08 34 45.0	-0.5
TA02				IAML		08 34 50.0	
	comp=N,3µm,0.1s						
LVC	**Limon Verde**	1.47	176	P	Pn	08 34 28.1	+0.5
	comp=N,13nm,0.3s,baz=355,slow=9.4,SNR=195						
LVC				S	Sn	08 34 48.4	+0.1
	comp=N,131nm,0.3s,baz=115,slow=22,SNR=89						
LVC	**Limon Verde**	1.47	176	⇑*i*P	Pn	08 34 27.7	+0.2
LVC				*i* S	Sn	08 34 48.5	+0.1
LVC	**Limon Verde**	1.47	176	*e*P	Pn	08 34 27.9	+0.4
PB04	**IPOC Station P**	1.59	222	⇑*i*P	Pn	08 34 28.9	+0.1
PB04				*i* S	Sn	08 34 50.6	0.0
PB04				IAML		08 34 56.6	
	comp=N,930nm,0.4s						
PB06	**IPOC Station P**	1.65	198	⇑*i*P	Pn	08 34 29.5	+0.1
PB06				*i* S	Sn	08 34 51.7	0.0
PB06				IAML		08 34 56.5	
	comp=E,973nm,0.2s						
PSGC	**Pisagua**	1.86	325	⇑*i*P	Pn	08 34 31.4	-0.6
PSGC				*i* S	Sn	08 34 55.2	-0.9
PB05	**IPOC Station P**	2.03	213	⇑*i*P	Pn	08 34 34.0	-0.1
MNMC	**Minye Minye**	2.07	344	⇑*i*P	Pn	08 34 35.0	+0.2
MNMC				*i* S	Sn	08 35 01.9	+0.7
PB15	**IPOC Station P**	2.10	192	⇓*i*P	Pn	08 34 35.6	+0.5
PB15				*i* S	Sn	08 35 01.8	0.0
PB10	**IPOC Station P**	2.76	211	⇓*i*P	Pn	08 34 42.8	-0.6
PB10				*e*S	Sn	08 35 09.7	-6.9
GO02	**Mina Guanaco**	4.04	188	*e*P	Pn	08 34 59.8	-0.7
LPAZ	**La Paz**	4.90	10	P	Pn	08 35 14.4	+2.1
	comp=E,1.4nm,0.3s,baz=184,slow=7.8,SNR=24						
LPAZ	**La Paz**	4.90	10	*e*P	Pn	08 35 13.1	+0.7
SIV	**San Ignacio**	9.10	57	P	Pn	08 36 04.8	-3.8
	comp=E,4.7nm,0.3s,baz=251,slow=10,SNR=124						
VILB	**Vilhena**	11.71	47	*e*P	Pn	08 36 42.4	-1.3
TRCB	**Terra Rica**	15.28	99	*e*P	Pn	08 37 29.8	+0.2
BB19B	**Bebedouro**	19.11	93	*e*P	P	08 38 12.7	-1.3
NPGB	**Novo Progresso**	19.25	45	*e*P	P	08 38 13.1	-2.4
SNDB	**Serra Nova Dou**	19.25	65	*e*P	P	08 38 13.7	-1.8
PLCA	**Paso Flores**	19.58	184	P	Pn	08 38 24.4	+3.0
	comp=E,0.1nm,0.3s,baz=4.3,slow=11,SNR=4.1						
IPMB	**Ipameri, GO**	19.84	85	*e*P	P	08 38 21.1	-0.9
BDFB	**Brasilia**	20.65	78	P	P	08 38 29.6	-1.1
	comp=E,3.4nm,0.5s,baz=279,slow=8.9,SNR=6.7						
ITTB	**Itaituba**	21.08	40	*e*P	P	08 38 33.4	-1.7
PEXB	**Peixe**	21.76	69	*e*P	P	08 38 41.5	-0.9
PTGA	**Pitinga**	22.12	25	P	P	08 38 45.0	-1.2
	comp=E,2.4nm,0.4s,baz=246,slow=11,SNR=6.7						
MALB	**Monte Alegre**	23.96	39	*e*P	P	08 39 03.2	-0.4
SMTB	**Santa Maria do**	23.98	63	*e*P	P	08 39 03.5	-0.4
JANB	**Januaria**	24.23	80	*e*P	P	08 39 05.4	-0.7
SDBA	**SAO DESIDERIO**	24.63	73	*e*P	P	08 39 09.0	-0.8
NAN01	**Guarapari, ES**	27.41	88	*e*P	P	08 39 34.4	-0.4
GDU01	**Guandu, BA**	29.00	80	*e*P	P	08 39 48.2	-0.7
TORD	**Torodi Ar. Bea**	77.32	70	P	P	08 45 44.4	+2.2
	comp=E,1.7nm,0.5s,baz=252,slow=5.3,SNR=4.2						
MKAR	**Makanchi Array**	145.40	36	PKPbc	PKPab	08 53 25.7	+1.2
	comp=E,0.4nm,0.6s,baz=306,slow=1.9,SNR=4.9						

IDC 27 09:00:50.2±2.4, 52°.28N×35°.64E, h0^{km}, mb3.3/1, mb1 3.6/4, mb1mx3.2/37, mbtmp3.5/4, ML3.0/3, Error ellipse: s-maj=30.4km s-min=12.7km az=126.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OBN	**Obninsk**	2.89	11	Lg	Lg	09 02 19.2	
	3.1nm,0.3s,baz=36,slow=21,SNR=3.0						
AKASG	**Malin Array Be**	4.31	251	Pn	Pn	09 01 55.3	-1.7
	2.1nm,0.3s,baz=108,slow=15,SNR=2.1						
AKASG				Pg	Pb	09 02 06.4	-0.5
	2.0nm,0.3s,baz=58,slow=15,SNR=5.3						
AKASG				Sn	Sn	09 02 45.8	-2.2
	3.8nm,0.3s,baz=60,slow=18,SNR=2.6						
AKASG				Lg	Lg	09 03 03.6	
	4.4nm,0.3s,baz=47,slow=29,SNR=5.8						
I43RU	**DUBNA INFRASON**	4.54	11	*i*		09 30 40.0	
	baz=189,slow=326,SNR=2.1						
FINES	**FINESS Array B**	10.56	334	Pn	Pn	09 03 19.1	-3.5
	0.2nm,0.3s,baz=149,slow=13,SNR=7.3						
FINES				Sn	Sn	09 05 10.3	-11
	0.3nm,0.3s,baz=155,slow=24,SNR=2.2						
I31KZ	**AKTYUBINSK INF**	14.11	89	*i*		10 26 50.0	
	baz=289,slow=286,SNR=1.2						
ARCES	**ARCESS Array B**	17.95	348	P	Pn	09 04 59.9	-1.0
	baz=160,slow=11,SNR=6.9						
YKA	**Yellowknife Ar**	63.18	345	P	P	09 11 18.7	-0.8
	0.2nm,0.6s,baz=20,slow=6.7,SNR=6.4						

THE 27 09:00:59.1, 38°.22N×20°.42E, h14^{km}±2^{km}, ML1.6/5, Error ellipse: s-maj=3.5km s-min=1.5km az=358.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DMLN	**Damoulianata-K**	0.04	303	P	Pg	09 01 01.7	-0.1
DMLN				S	Sg	09 01 03.5	-0.1
	680nm,0.1s						
KEF4	**Livadi, Kephal**	0.04	5	P	Pg	09 01 01.8	+0.1
KEF4				S	Sg	09 01 03.8	+0.3
KEF3	**Kipouria, Keph**	0.06	259	P	Pg	09 01 01.6	-0.2
KEF3				S	Sg	09 01 03.4	-0.3
	2µm,0.1s						
KEF5	**Kardakata, Kep**	0.07	31	P	Pg	09 01 02.1	+0.1
KEF5				S	Sg	09 01 04.3	+0.3
	445nm,0.1s						
VLS	**Valsamata**	0.14	105	P	Pg	09 01 01.4	-1.4
VLS				S	Sg	09 01 04.5	-0.8
	148nm,0.1s						
PSDA	**Pessada-Kefalo**	0.16	128	P	Pb	09 01 03.7	-0.2
PSDA				S	Sb	09 01 07.0	-0.1
	122nm,0.1s						

ATH 27 09:01:03.1, 38°.55N×21°.60E, h16^{km}±3^{km}, ML2.1/6, Error ellipse: s-maj=3.3km s-min=1.1km az=130.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANX	**Ano Chora**	0.26	79	P	Pg	09 01 08.8	-0.1
ANX				S	Sb	09 01 13.4	-0.3
ANX				AML	AML	09 01 14.3	
	comp=N,1335µm,0.3s						
ANX				AML	AML	09 01 16.8	
	comp=E,1285µm,0.4s						
EFP	**Efpalio**	0.27	116	P	Pg	09 01 08.9	-0.1
EFP				S	Sg	09 01 12.6	-0.4
EFP				AML	AML	09 01 15.9	
	comp=E,1083µm,0.2s						
EFP				AML	AML	09 01 16.5	
	comp=N,797µm,0.2s						
PDO	**Prodromos**	0.33	279	P	Pg	09 01 09.8	-0.2
PDO				S	Sg	09 01 14.5	-0.2
PDO				AML	AML	09 01 16.8	
	comp=N,1864µm,0.2s						
PDO				AML	AML	09 01 17.8	
	comp=E,1078µm,0.2s						
EVR	**Evrytania**	0.41	24	P	Pg	09 01 10.6	-0.8
EVR				S	Sb	09 01 17.6	-0.4
EVR				AML	AML	09 01 18.5	
	comp=E,456µm,0.5s						
EVR				AML	AML	09 01 18.8	
	comp=N,302µm,0.2s						
TRIZ	**Trizonia**	0.41	116	P	Pg	09 01 11.2	-0.3
TRIZ				S	Sg	09 01 16.6	-0.6
KALE	**Kalithea**	0.45	110	P	Pg	09 01 11.8	-0.4
KALE				S	Sb	09 01 19.4	+0.2
KALE				AML	AML	09 01 20.7	
	comp=E,299µm,0.3s						
KALE				AML	AML	09 01 22.4	
	comp=N,518µm,0.3s						
RLS	**Riolos of Patr**	0.50	192	P	Pb	09 01 13.5	0.0
RLS				AML	AML	09 01 23.5	
	comp=N,843µm,0.2s						
RLS				AML	AML	09 01 23.6	
	comp=E,496µm,0.2s						
MAKR	**Makrakomi, Fth**	0.63	42	P	Pg	09 01 15.5	0.0
KLV	**Kalavryta, Ach**	0.66	139	P	Pg	09 01 15.7	-0.5
AGG	**Agios Georgios**	0.74	50	P	Pg	09 01 17.1	-0.6
LKD2	**Lefkada island**	0.78	289	P	Pb	09 01 17.9	-0.4

IDC 27 09:31:10.3±5.6, 23°.86S×179°.89E, h558^{km}±46^{km}, mb3.1/4, mb1 3.2/5, mb1mx2.9/29, mbtmp4.0/5, Error ellipse: s-maj=103.9km s-min=35.0km az=144.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	6.33	344	P	P	09 32 52.4	-0.2
	1.0nm,0.3s,baz=190,slow=7.1,SNR=11						
CTA	**Charters Tower**	31.37	270	P	P	09 36 47.0	+0.7
	3.5nm,0.5s,baz=92,slow=12,SNR=12						
STKA	**Stephens Creek**	34.64	248	P	P	09 37 12.8	-0.9
	1.1nm,0.5s,baz=79,slow=9.8,SNR=5.2						
ASAR	**Alice Springs**	41.94	261	P	P	09 38 12.8	-0.3
	0.8nm,0.7s,baz=94,slow=7.0,SNR=14						
WRA	**Warramunga Arr**	42.31	266	P	P	09 38 15.7	-0.3
	1.9nm,0.5s,baz=100,slow=8.3,SNR=26						
HFS	**Hagfors**	142.49	349	PKP	PKPdf	09 49 38.9	-0.6
	0.9nm,0.4s,baz=321,slow=4.1,SNR=5.1						

IDC 27 09:37:28.1±12.0, 68°.50N×58°.25E, h0^{km}, mb3.4/1, mb1 3.8/4, mb1mx3.2/54, mbtmp3.7/4, ML3.2/3, Error ellipse: s-maj=146.9km s-min=37.5km az=110.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARCES	**ARCESS Array B**	11.70	290	Pn	Pn	09 40 12.9	-3.1
	baz=86,slow=13,SNR=4.5						
SPITS	**Spitsbergen Ar**	14.94	328	Pn	Pn	09 40 55.0	-5.2
	baz=126,slow=22,SNR=1.3						
FINES	**FINESS Array B**	15.17	258	Pn	Pn	09 40 58.2	-5.0
	0.2nm,0.3s,baz=49,slow=15,SNR=5.7						
NOA	**NORSAR Array B**	20.88	272	P	P	09 42 10.9	-0.5
	1.4nm,0.8s,baz=49,slow=11,SNR=3.9						

IDC 27 09:49:22.7±3.1, 53°.51N×87°.65E, h0^{km}, mb1 2.6/1, mb1mx2.5/50, mbtmp2.6/1, ML2.4/2, Error ellipse: s-maj=30.7km s-min=17.6km az=60.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	1.74	286	*i*		10 02 20.0	
	baz=102,slow=329,SNR=8.9						
ZALV	**Zalesovo Beam**	1.74	286	Pn	Pn	09 49 53.4	-0.8
	0.7nm,0.3s,baz=108,slow=16,SNR=14						
ZALV				Lg	Lg	09 50 17.8	
	0.7nm,0.3s,baz=106,slow=28,SNR=4.8						
KURBB	**Kurchatov Arra**	6.33	246	Pn	Pn	09 50 57.8	+0.7
	0.1nm,0.3s,baz=63,slow=14,SNR=4.6						
MKAR	**Makanchi Array**	7.56	209	Pn	Pn	09 51 15.4	+1.4
	0.1nm,0.3s,baz=27,slow=12,SNR=5.2						

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*IDC **27** 10:10:24.2±3.9, 16°.31S×13°.09W, h0^{km}, mb4.0/4, mb1 4.0/4, mb1mx3.7/24, mbtmp4.0/4, MS3.8/8, Ms1 3.7/8, ms1mx3.5/40, Error ellipse: s-maj=227.8km s-min=26.9km az=141.0*

*NEIC **27** 10:10:26.3±2.4, 16°.2S±0°.1×13°.21W±0°.07, h10^{km}±1^{km}, mb4.5/10, Error ellipse: s-maj=20.7km s-min=5.5km az=213.0*

ISC 27 10:10:26.4±0.6, 16°.3S±0°.1×13°.19W±0°.09, h10^{km}, n31, σ1^{s}.66/19, mb4.4/12, MS3.7/8, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHEL	**Horse Pasture**	7.16	88	Pn	Pn	10 12 11.3	+0.1
H10S2	**ASCENSION HYDR**	7.42	349	T	T	10 19 32.5	
	baz=169,slow=74,SNR=99						
H10S3	**ASCENSION HYDR**	7.43	349	T	T	10 19 33.2	
	baz=51,slow=74,SNR=243						
ASCN	**Ascension**	8.38	352	Pn	Pn	10 12 28.5	+0.5
H10N1	**ASCENSION HYDR**	8.48	351	T	T	10 21 02.0	
	baz=174,slow=77,SNR=19						
H10N3	**ASCENSION HYDR**	8.49	351	T	T	10 21 00.9	
	baz=174,slow=77,SNR=36						
H10N2	**ASCENSION HYDR**	8.50	351	T	T	10 21 02.7	
	baz=174,slow=77,SNR=10						
LIC	**Lamto**	23.78	20	*e*P	P	10 15 42.2	+2.9
	54nm,1.5s						
KIC	**Kosan Boka**	24.00	21	*e*P	P	10 15 44.4	+2.9
	44nm,1.3s						
TIC	**Toumodi**	24.17	20	*e*P	P	10 15 45.1	+2.0
DBIC	**Dimbokro**	24.25	21	LR	LR	10 22 39.5	
	comp=Z,101nm,21.8s,baz=178,slow=30						
RCBR	**Riachuelo**	24.56	292	P	P	10 15 44.8	-1.9
TOA0	**Torodi Ar. Sit**	32.73	28	P	P	10 16 59.3	-0.2
TOA0				IAmb	IAmb	10 17 03.2	
	comp=Z,6.9nm,1.1s						
TORD	**Torodi Ar. Bea**	32.73	28	P	P	10 16 58.9	-0.7
	comp=Z,2.3nm,0.6s,baz=211,slow=8.9,SNR=11						
TORD				LR	LR	10 27 50.0	
	comp=Z,120nm,19.2s,baz=340,slow=32						
TORD	**Torodi Ar. Bea**	32.73	28	P	P	10 16 58.4	-1.1
BDFB	**Brasilia**	33.47	266	LR	LR	10 27 59.4	
	comp=Z,80nm,21.0s,baz=69,slow=31						
SUR	**Sutherland**	34.69	124	P	P	10 17 18.4	+1.6
SUR				IAmb	IAmb	10 17 32.0	
	comp=Z,13nm,1.1s						
BOSA	**Boshof**	37.43	116	LR	LR	10 31 06.3	
	comp=Z,113nm,18.0s,baz=346,slow=33						
LSZ	**Lusaka**	39.78	94	P	P	10 17 56.8	-3.2
CPUP	**Villa Florida**	42.15	249	P	P	10 18 19.3	0.0
	comp=Z,0.5nm,0.4s,baz=63,slow=9.0,SNR=1.9						
SAML	**Samuel**	49.23	272	P	P	10 19 15.7	+0.2
SAML				IAmb	IAmb	10 19 16.9	
	comp=Z,3.5nm,0.8s						
PB09	**IPOC Station P**	53.04	255	P	P	10 19 44.4	+0.2
PB09				IAmb	IAmb	10 20 00.5	
	comp=Z,5.2nm,1.1s						
PB07	**IPOC Station P**	53.64	255	P	P	10 19 48.5	-0.2
AC05	**El Transito**	53.73	246	P	P	10 19 48.4	-0.8
AC05				IAmb	IAmb	10 19 58.6	
	comp=Z,4.6nm,0.9s						
PLCA	**Paso Flores**	54.92	231	LR	LR	10 41 59.5	
	comp=Z,54nm,18.2s,baz=106,slow=34						
SNAA	**Sanae**	55.72	176	P	P	10 20 04.5	+1.6
SNAA				IAmb	IAmb	10 20 07.9	
	comp=Z,8.2nm,1.5s						
ESDC	**Sonseca Array**	56.33	9	LR	LR	10 43 10.8	
	comp=Z,290nm,18.1s,baz=345,slow=35						
ROSC	**El Rosal**	63.98	284	LR	LR	10 48 07.8	

	comp=Z,116nm,19.2s,baz=334,slow=35						
EIL	Elat	65.13	46	LR	LR	10 48 54.3	
	comp=Z,52nm,20.2s,baz=294,slow=36						
BRTR	Keskin Array B	70.77	37	P	P	10 21 42.6	-0.6
	comp=Z,1.4nm,0.9s,baz=212,slow=5.1,SNR=2.7						
AKASG	Malin Array Be	76.36	26	P	P	10 22 14.8	-0.8
	comp=Z,0.6nm,0.4s,baz=222,slow=5.1,SNR=3.2						

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*IDC **27** 10:16:16.7±0.7, 16°.96N×145°.98E, h0^{km}, mb4.0/12, mb1 4.2/12, mb1mx3.9/47, mbtmp4.0/12, MS3.7/2, Ms1 3.8/2, ms1mx3.1/47, Error ellipse: s-maj=26.1km s-min=15.2km az=110.0*

*NEIC **27** 10:16:18.2±2.2, 16°.96N±0°.06×146°.06E±0°.10, h10^{km}±1^{km}, mb4.6/21, ML4.0/6, Error ellipse: s-maj=18.7km s-min=4.1km az=302.0*

ISC 27 10:16:18.5±0.6**, 16°.95N**±0°.07×**146°.0E**±0°.1**, h10^{km}, n59, σ1^{s}.17**/53**, mb4.2**/23**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SARN	Sarigan	0.35	224	P	Pb	10 16 26.2	-0.7
ANA2	Anatahan	0.68	207	Pg	Pb	10 16 31.7	-0.8
ANA2	Anatahan	0.68	207	P	Pb	10 16 32.3	-0.2
GUMO	Guam	3.53	199	Pn	Pn	10 17 14.1	+0.6
GUMO				Sn	Sn	10 17 57.6	+2.4
GUMO				IAML		10 18 39.8	
	283nm,2.3s						
H11S3	WAKE ISLAND Hy	19.74	82	T	T	10 41 26.6	
	baz=269,slow=75,SNR=278						
H11S1	WAKE ISLAND Hy	19.75	82	T	T	10 41 28.0	
	baz=269,slow=75,SNR=232						
H11S2	WAKE ISLAND Hy	19.75	82	T	T	10 41 28.3	
	baz=269,slow=75,SNR=302						
H11N1	WAKE ISLAND Hy	19.99	79	T	T	10 41 45.2	
	baz=266,slow=74,SNR=306						
H11N2	WAKE ISLAND Hy	20.00	79	T	T	10 41 47.2	
	baz=266,slow=74,SNR=206						
H11N3	WAKE ISLAND Hy	20.01	79	T	T	10 41 47.8	
	baz=266,slow=74,SNR=292						
SIJI	Sorong	22.93	221	P	P	10 21 22.3	-0.7
	17nm,0.9s,baz=48,slow=18,SNR=4.6						
KSRS	Korea Array	25.92	326	P	P	10 21 51.3	+0.4
	1.7nm,0.8s,baz=152,slow=9.0,SNR=5.1						
USRK	Ussuriysk Ar.	29.64	339	P	P	10 22 23.3	-0.8
USA0B	Ussuriysk Arra	29.64	339	P	P	10 22 23.1	-1.0
WB0	Warramunga Arr	38.24	198	P	P	10 23 37.6	-1.4
WR0	Warramunga Arr	38.38	198	P	P	10 23 39.0	-1.2
WB2	Warramunga Arr	38.42	198		P	10 23 39.4	-1.1
WB2				IAmb	IAmb	10 23 40.6	
	comp=Z,14nm,1.2s						
WRA	Warramunga Arr	38.42	198	P	P	10 23 39.2	-1.3
	comp=Z,6.0nm,1.1s,baz=18,slow=9.2,SNR=14						
FITZ	Fitzroy Crossi	40.20	211	P	P	10 23 54.0	-1.4
	comp=Z,3.1nm,0.8s,baz=31,slow=5.9,SNR=4.7						
FITZ	Fitzroy Crossi	40.20	211	P	P	10 23 55.2	-0.2
AS31	Alice Springs	42.07	197	P	P	10 24 09.2	-1.6
ASAR	Alice Springs	42.07	197	P	P	10 24 09.5	-1.3
	comp=Z,1.1nm,0.9s,baz=26,slow=8.5,SNR=9.8						
ASAR	Alice Springs	42.07	197	P	P	10 24 08.9	-1.9
DZM	Mont Dzumac	43.63	152	LR	LR	10 39 41.3	
	comp=Z,127nm,21.2s,baz=16,slow=32						
SONM	Songino Array	44.70	322	P	P	10 24 36.1	+4.1
	comp=Z,0.3nm,0.4s,baz=142,slow=7.2,SNR=3.4						
CMAR	Chiang Mai Arr	44.79	279	P	P	10 24 32.8	-0.1
	comp=Z,1.1nm,0.4s,baz=72,slow=6.4,SNR=9.2						
CMAR				LR	LR	10 44 09.3	
	comp=Z,65nm,18.3s,baz=22,slow=37						
CMAR	Chiang Mai Arr	44.79	279	P	P	10 24 32.9	0.0
STKA	Stephens Creek	48.74	185	P	P	10 25 04.7	+1.3
	comp=Z,0.9nm,0.6s,baz=62,slow=5.5,SNR=3.1						
GSI	Gunungsitoli	50.12	257	P	P	10 25 13.1	-1.3
LSA	Lhasa	51.55	295	P	P	10 25 25.7	+0.2
LSA				IAmb	IAmb	10 25 46.6	
	comp=Z,4.7nm,0.7s						
MKAR	Makanchi Array	59.90	315	P	P	10 26 24.1	-0.7
	comp=Z,0.5nm,0.6s,baz=105,slow=7.6,SNR=6.8						
MKAR	Makanchi Array	59.90	315	P	P	10 26 24.4	-0.4
MAKZ	Makanchi	60.12	315	P	P	10 26 24.6	-1.7
MAKZ				IAmb	IAmb	10 26 43.3	
	comp=Z,3.8nm,1.2s						
IMAR	Indian Mountai	62.68	24	P	P	10 26 43.5	+0.3
SML	Sawmill	63.73	29	P	P	10 26 50.3	0.0
ILAR	Eielson Array	65.07	26	P	P	10 26 57.4	-1.6
	comp=Z,0.7nm,0.8s,baz=264,slow=5.0,SNR=6.3						
ILAR	Eielson Array	65.07	26	P	P	10 26 57.5	-1.5
TOLK	Toolik Lake Re	65.09	21	P	P	10 26 59.4	+0.3
TOLK				IAmb	IAmb	10 27 06.7	
	comp=Z,6.0nm,1.1s						
VRDI	Verde Repeater	65.92	30	P	P	10 27 04.3	-0.4
VRDI				IAmb	IAmb	10 27 26.4	
	comp=Z,4.9nm,1.0s						
CRQM	Cirque	66.00	31	P	P	10 27 06.0	+0.7
DOT	Dot Lake	66.04	27	P	P	10 27 04.8	-0.5
DOT				IAmb	IAmb	10 27 09.0	
	comp=Z,4.0nm,1.0s						
MCARA	McCarthy VSAT	66.14	30	P	P	10 27 06.2	+0.2
BMAR	Burnt Mountain	66.58	23	P	P	10 27 09.3	+0.5
CTGM	Chitina Glacie	66.90	30	P	P	10 27 11.8	+0.8
CTGM				IAmb	IAmb	10 27 34.2	
	comp=Z,5.5nm,1.1s						
TABL	Table Mountain	66.93	31	P	P	10 27 09.8	-1.5
TABL				IAmb	IAmb	10 27 33.8	
	comp=Z,5.9nm,0.9s						
BCAR	Beaver Creek A	66.96	28	P	P	10 27 11.4	+0.1
BRVK	Borovoye	68.08	321	P	P	10 27 17.8	-0.7
KK31	Karatay Array	68.12	310	P	P	10 27 18.6	-0.3
KK31				IAmb	IAmb	10 27 24.1	
	comp=Z,2.9nm,1.0s						
KKAR	Karatay Array	68.12	310	P	P	10 27 18.1	-0.9
KBL	Kabul	70.03	301	P	P	10 27 31.1	-0.1
KBL				IAmb	IAmb	10 27 31.8	
	comp=Z,4.7nm,0.9s						
INK	Inuvik	70.85	23	P	P	10 27 34.0	-1.2
	comp=Z,1.1nm,0.8s,baz=257,slow=8.4,SNR=4.2						
INK	Inuvik	70.85	23	P	P	10 27 34.4	-0.8
INK				IAmb	IAmb	10 28 00.1	
	comp=Z,3.7nm,1.1s						
ABKAR	Akbulak array	74.83	317	P	P	10 28 00.2	+1.0
YKA	Yellowknife Ar	79.38	28	P	P	10 28 23.7	-0.8
	comp=Z,1.2nm,0.9s,baz=288,slow=4.9,SNR=9.0						
NVAR	Mina Array Bea	83.96	52	P	P	10 28 51.2	+1.7
	comp=Z,0.8nm,0.7s,baz=262,slow=6.3,SNR=6.5						
NVAR	Mina Array Bea	83.96	52	P	P	10 28 50.7	+1.1
AC05	El Transito	144.66	116		PKPdf	10 35 56.2	-0.1
LPAZ	La Paz	147.28	94	PKPbc	PKPab	10 36 05.1	-0.7
	comp=Z,4.6nm,0.8s,baz=317,slow=2.3,SNR=14						
LPAZ	La Paz	147.28	94	PKPbc	PKPbc	10 36 03.5	-0.5

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*IDC **27** 10:18:27.5±0.9, 48°.39N×155°.91E, h0^{km}, mb3.5/6, mb1 3.9/10, mb1mx3.6/48, mbtmp3.7/10, ML3.3/4, Error ellipse: s-maj=37.4km s-min=18.2km az=144.0*

*MOS **27** 10:18:29.5±1.0, 48°.45N×155°.86E, h28^{km}, mb4.3/1, Error ellipse: s-maj=18.4km s-min=4.5km az=75.3*

*SKHL **27** 10:18:31.4±0.6, 48°.50N×155°.80E, h59^{km}±8^{km}, mb4.3/4*

*KRSC **27** 10:18:32.5±4.0, 48°.81N×156°.46E, h16^{km}±39^{km}, ML3.9*

*NEIC **27** 10:18:33.0±0.6, 48°.5N±0°.2×155°.8E±0°.2, h35^{km}±2^{km}, mb4.2/2, Error ellipse: s-maj=35.3km s-min=7.2km az=315.0*

ISC 27 10:18:33.0±0.7**, 48°.61N**±0°.08×**155°.63E**±0°.09**, h36^{km}, n81, σ1^{s}.22**/83**, mb3.5**/8**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	2.10	9	*e*PN	Pn	10 19 05.8	+0.2
SKR				pmax	pmax		
	comp=Z,22nm,0.3s						
SKR	Severo-Kuril's	2.10	9	*e*P	Pn	10 19 04.5	-1.1
SKR				AMB	AMB	10 19 06.0	
	comp=Z,40nm,0.4s						
SKR				*e*S	Sn	10 19 28.8	-1.6
SKR				A	A	10 19 32.6	
	comp=Z,200nm,0.4s						
SKR				A	A	10 19 32.6	
	comp=Z,210nm,0.4s						
ALID	Alaid	2.27	359	*e*P	Pn	10 19 06.5	-1.5
ALID				*e*S	Sn	10 19 32.4	-2.3
PAU	Pauzhetka	2.96	14	*e*P	Pn	10 19 17.0	-0.4
PAU				AMB	AMB	10 19 20.8	
	comp=Z,41nm,0.4s						
PAU				*e*S	Sn	10 19 50.5	-1.2
PAU				A	A	10 19 52.6	
	comp=Z,130nm,0.3s						
PAU				A	A	10 19 52.6	
	comp=Z,80nm,0.3s						
ASAK	Asacha	4.05	20	PN	Pn	10 19 32.8	+0.4
ASAK	Asacha	4.05	20	*e*P	Pn	10 19 32.8	+0.4
MTVR	Mutnovka	4.21	22	PN	Pn	10 19 34.9	+0.2
MTVR	Mutnovka	4.21	22	*e*P	Pn	10 19 34.9	+0.2
MTVR				*e*S	Sn	10 20 23.1	+0.5
GRL	Gorelyy	4.25	21	PN	Pn	10 19 35.8	+0.7
GRL	Gorelyy	4.25	21	*e*P	Pn	10 19 35.8	+0.7
RUS	Russkaya	4.25	25	PN	Pn	10 19 34.2	-0.9
RUS	Russkaya	4.25	25	*e*P	Pn	10 19 34.2	-0.9
RUS				*e*S	Sn	10 20 21.8	-1.5
RUS	Russkaya	4.25	25	*e*P	Pn	10 19 34.2	-0.9
APC	Apacha	4.43	12	PN	Pn	10 19 38.4	+0.8
APC	Apacha	4.43	12	*e*P	Pn	10 19 38.4	+0.8
KRMR	Karymshinskiy	4.52	20	PN	Pn	10 19 39.6	+0.9
KRMR	Karymshinskiy	4.52	20	*e*P	Pn	10 19 39.7	+1.0
PEA0B	Petropavlovsk-	4.69	15	PN	Pn	10 19 42.1	+0.9
PEA0B	Petropavlovsk-	4.69	15		Pn	10 19 42.1	+0.9
PETK	Petropavlovsk-	4.69	15	Pn	Pn	10 19 41.9	+0.7
	comp=Z,1.7nm,0.3s,baz=185,slow=12,SNR=72						
PETK				Sn	Sn	10 20 44.6	+10
	baz=156,slow=14,SNR=2.4						
PETK	Petropavlovsk-	4.69	15		Pn	10 19 41.7	+0.5
PET	Petropavlovsk	4.82	22	*e*PN	Pn	10 19 42.7	-0.2
PET				pmax	pmax		
	comp=Z,17nm,0.6s						
PET	Petropavlovsk	4.82	22	Pn	Pn	10 19 43.1	+0.2
PET				Sn	Sn	10 20 40.8	+3.4
PET	Petropavlovsk	4.82	22	*e*P	Pn	10 19 42.7	-0.2
PET				AMB	AMB	10 19 42.9	
	comp=Z,17nm,0.6s						
PET				*e*S	Sn	10 20 36.5	-0.9
PET				A	A	10 20 49.0	
	comp=Z,60nm,0.7s						
UGLR	Uglovaya	5.03	22	PN	Pn	10 19 46.5	+0.6
UGLR	Uglovaya	5.03	22	*e*P	Pn	10 19 46.5	+0.6
AVH	Avacha	5.06	22	PN	Pn	10 19 47.2	+0.9
AVH	Avacha	5.06	22	*e*P	Pn	10 19 47.2	+0.9
AVH	Avacha	5.06	22	*e*P	Pn	10 19 47.2	+0.9
KOK	Koryaka	5.06	21	PN	Pn	10 19 47.4	+1.1
KOK	Koryaka	5.06	21	*e*P	Pn	10 19 47.5	+1.1
KOK	Koryaka	5.06	21	*e*P	Pn	10 19 47.4	+1.1
SMAR	Somma	5.08	22	PN	Pn	10 19 47.8	+1.2
SMAR	Somma	5.08	22	*e*P	Pn	10 19 47.9	+1.3
KRER	Koryakskii	5.10	22	PN	Pn	10 19 47.6	+0.7
KRER	Koryakskii	5.10	22	*e*P	Pn	10 19 47.6	+0.7
SDLR	Sedlovina	5.11	23	PN	Pn	10 19 46.8	-0.2
SDLR	Sedlovina	5.11	23	*e*P	Pn	10 19 46.8	-0.2
KRX	Arik	5.13	21	PN	Pn	10 19 48.0	+0.8
KRX	Arik	5.13	21	*e*P	Pn	10 19 48.1	+0.8
GNL	Ganaly	5.30	15	PN	Pn	10 19 50.1	+0.5
GNL	Ganaly	5.30	15	*e*P	Pn	10 19 50.1	+0.5
KUR	Kuril'sk	6.30	240	*e*P	Pn	10 20 02.0	-1.2
KUR				AMB	AMB	10 20 07.5	
	comp=Z,50nm,0.6s						
KUR				*e*S	Sn	10 21 12.2	-1.6
KUR				A	A	10 21 20.4	
	comp=Z,50nm,0.4s						
KUR				A	A	10 21 20.4	
	comp=Z,40nm,0.4s						
MKZ	Mys Kozlova	7.07	30	PN	Pn	10 20 12.2	-1.4
MKZ	Mys Kozlova	7.07	30	*e*P	Pn	10 20 12.3	-1.4
MKZ	Mys Kozlova	7.07	30	*e*P	Pn	10 20 12.2	-1.4
KZV	Kizimen	7.13	22	PN	Pn	10 20 17.5	+2.8
KZV	Kizimen	7.13	22	*e*P	Pn	10 20 17.5	+2.8
TUMR	Tumrok	7.24	21	PN	Pn	10 20 18.9	+2.7
TUMR	Tumrok	7.24	21	*e*P	Pn	10 20 19.0	+2.7
KBTR	Krutoberegovo	8.79	27	PN	Pn	10 20 37.4	+0.2
KBTR	Krutoberegovo	8.79	27	*e*P	Pn	10 20 37.5	+0.2
JKA	Kamikawa-asahi	10.06	248		Pn	10 20 55.6	+0.8
JKA	Kamikawa-asahi	10.06	248	*e*P	Pn	10 20 55.6	+0.8
ASAJ	Asahikawa	10.06	248	Pn	Pn	10 20 55.1	+0.3
	comp=Z,1.1nm,0.3s,baz=72,slow=16,SNR=8.5						
ASAJ	Asahikawa	10.06	248	PN	Pn	10 20 55.6	+0.8
ERM	Erimo	10.97	238	PN	Pn	10 21 07.2	-0.1
ERM	Erimo	10.97	238	Pn	Pn	10 21 07.2	-0.1
ERM	Erimo	10.97	238	*e*P	Pn	10 21 07.2	-0.1
KLR	Kul'dur	15.70	281	Pn	Pn	10 22 12.7	+1.5
	comp=Z,0.1nm,0.3s,baz=71,slow=8.9,SNR=5.0						
KLR	Kul'dur	15.70	281	*e*P	Pn	10 22 07.5	-3.7
USRK	Ussuriysk Ar.	16.87	264	P	Pn	10 22 26.0	-0.1
	baz=70,slow=13,SNR=8.2						
USRK	Ussuriysk Ar.	16.87	264	P	Pn	10 22 26.0	-0.1
KSRS	Korea Array	22.99	251	P	P	10 23 36.0	+1.7
	comp=Z,1.1nm,0.7s,baz=48,slow=10,SNR=4.1						
KSRS	Korea Array	22.99	251	*e*P	P	10 23 36.0	+1.7
H11N2	WAKE ISLAND Hy	30.21	159	T	T	10 56 41.3	
	baz=342,slow=76,SNR=10						
H11N1	WAKE ISLAND Hy	30.22	159	T	T	10 56 42.0	
	baz=342,slow=76,SNR=12						
H11N3	WAKE ISLAND Hy	30.23	159	T	T	10 56 42.2	
	baz=342,slow=76,SNR=9.1						
H11S1	WAKE ISLAND Hy	31.34	159	T	T	10 58 06.5	
	baz=345,slow=76,SNR=102						
H11S3	WAKE ISLAND Hy	31.35	160	T	T	10 58 04.1	
	baz=345,slow=76,SNR=75						
H11S2	WAKE ISLAND Hy	31.36	159	T	T	10 58 04.6	
	baz=345,slow=76,SNR=51						
RND	Reindeer	33.17	43	P	P	10 25 05.7	0.0
RND				pmax	pmax		
	comp=Z,4.0nm,1.2s						
RND	Reindeer	33.17	43	P	P	10 25 05.7	0.0
RND				IAmb	IAmb	10 25 07.4	
	comp=Z,3.6nm,1.2s						
SML	Sawmill	33.45	46	P	P	10 25 08.4	+0.2
SML				IAmb	IAmb	10 25 08.9	
	comp=Z,3.6nm,0.8s						
ILAR	Eielson Array	34.03	40	P	P	10 25 11.8	-1.3
	comp=Z,0.3nm,0.7s,baz=257,slow=6.4,SNR=2.5						
PDAR	Pinedale Array	62.29	56	P	P	10 28 51.9	+0.4
	comp=Z,0.3nm,0.6s,baz=64,slow=3.4,SNR=3.8						
WRA	Warramunga Arr	70.84	201	P	P	10 29 44.3	-1.6
	comp=Z,0.3nm,0.6s,baz=17,slow=5.4,SNR=2.1						
ASAR	Alice Springs	74.53	201	P	P	10 30 07.1	-0.6
	comp=Z,0.3nm,0.6s,baz=10,slow=4.8,SNR=4.8						
ASAR	Alice Springs	74.53	201	P	P	10 30 07.6	-0.1
ASAR	Alice Springs	74.53	201	P	P	10 30 07.6	-0.1
TXAR	Lajitas Array	75.11	63	P	P	10 30 11.8	+0.4
	comp=Z,0.7nm,0.6s,baz=306,slow=4.7,SNR=6.5						

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*IDC **27** 10:21:16.2±2.2, 13°.02N×123°.34E, h0^{km}, mb3.2/3, mb1 3.5/4, mb1mx3.2/45, mbtmp3.4/4, ML4.2/1, Error ellipse: s-maj=100.5km s-min=23.3km az=54.0*

*MAN **27** 10:21:19.3, 12°.71N×123°.00E, h19^{km}, mb4.7, ML3.5, MS3.4*

ISC 27 10:21:17.6±1.9**, 12°.71N**±0°.04×**122°.97E**±0°.04**, h8^{km}**±13^{km}**, n19, σ1^{s}.74**/27**, mb3.5**/3**, 1C-1D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCSP	San Jose Seism	1.08	30	*e*P	Pb	10 21 38.5	-0.1
SCSP				*e*S	Sg	10 21 51.2	-1.3
GQP	Guinayangan	1.29	337⇓	*e*P	Pn	10 21 41.9	-0.1
GQP				*i* S	Sn	10 22 02.5	+3.1
BOAC	Boac	1.32	304	*e*P	Pn	10 21 41.8	-0.6
BOAC				*e*S	Sg	10 22 00.8	+0.5
JCNP	Jose Panganiba	1.59	351	*e*P	Pn	10 21 45.5	-0.6
JCNP				*e*S	Sg	10 22 08.0	-0.9
SJMP	San Jose	1.82	262	*e*P	Pn	10 21 50.9	+1.6
SJMP				*e*S	Sn	10 22 08.5	-4.0
LQP	Lukban	1.97	315⇑	*i*P	Pb	10 21 52.9	-0.9
LQP				*i* S	Sg	10 22 22.2	+1.2
POLP	Polilio Island	2.24	334	*e*P	Pb	10 21 59.1	+0.8
OCLP	Ormoc	2.30	136	*e*P	Pn	10 21 55.1	-0.8
TGY	Tagaytay City	2.41	305	Pn	Pn	10 21 59.3	+1.8
	49nm,0.3s,baz=130,slow=16,SNR=2.0						
TGY	Tagaytay City	2.41	305	*e*P	Pn	10 21 58.3	+0.8
MACP	Maragondon, Ca	2.68	305	*e*P	Pb	10 22 05.1	-0.7
MACP				*e*S	Sb	10 22 37.1	-1.8
BUSP	Coron	2.79	256	*e*P	Pn	10 22 04.4	+1.7
CNOP	Candoni, Negro	2.88	186	*e*P	Pn	10 22 02.4	-1.5
MSLP	Maasin	3.16	144	*e*P	Pn	10 22 10.3	+2.5
BALP	Baler	3.30	336	*e*P	Pn	10 22 11.5	+1.9
BALP				*e*S	Sn	10 22 47.0	-2.1
ENPP	El Nido	3.77	247	*e*P	Pn	10 22 17.6	+1.4
WRA	Warramunga Arr	34.32	161	P	P	10 28 07.0	+2.1
	0.6nm,1.0s,baz=340,slow=11,SNR=2.8						
ASAR	Alice Springs	37.70	163	P	P	10 28 34.4	+0.5
	0.2nm,0.7s,baz=354,slow=7.5,SNR=4.3						
MKAR	Makanchi Array	48.14	323	P	P	10 29 57.7	-0.6
	0.3nm,0.8s,baz=120,slow=8.5,SNR=3.8						

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*IDC **27** 10:23:35.5±0.8, 17°.00N×145°.93E, h0^{km}, mb3.9/9, mb1 4.1/9, mb1mx3.8/47, mbtmp3.9/9, MS3.5/1, Ms1 3.5/1, ms1mx2.8/46, Error ellipse: s-maj=27.0km s-min=20.1km az=112.0*

*NEIC **27** 10:23:37.4±2.6, 17°.02N±0°.05×145°.9E±0°.1, h10^{km}±1^{km}, mb4.5/16, Error ellipse: s-maj=22.7km s-min=7.5km az=279.0*

ISC 27 10:23:37.4±0.6**, 17°.00N**±0°.07×**145°.8E**±0°.1**, h10^{km}, n40, σ1^{s}.19**/33**, mb4.1**/16**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SARN	Sarigan	0.30	188	P	Pg	10 23 44.7	+1.3
ANA2	Anatahan	0.66	189	Pg	Pn	10 23 51.1	-1.8
GUMO	Guam	3.51	195	Pn	Pn	10 24 33.2	+1.1
H11S3	WAKE ISLAND Hy	19.93	83	T	T	10 48 45.9	
	baz=269,slow=75,SNR=70						
H11S1	WAKE ISLAND Hy	19.94	83	T	T	10 48 45.0	
	baz=269,slow=75,SNR=58						
H11S2	WAKE ISLAND Hy	19.95	83	T	T	10 48 47.1	
	baz=269,slow=75,SNR=77						
H11N1	WAKE ISLAND Hy	20.18	79	T	T	10 49 04.3	
	baz=266,slow=75,SNR=199						
H11N2	WAKE ISLAND Hy	20.18	79	T	T	10 49 04.6	
	baz=266,slow=75,SNR=150						
H11N3	WAKE ISLAND Hy	20.20	79	T	T	10 49 06.4	
	baz=266,slow=75,SNR=163						
MJAR	Matsushiro Arr	20.61	342	LR	LR	10 35 49.8	
	comp=Z,131nm,18.2s,baz=40,slow=36						
JMM	Marumori	21.26	349	P	P	10 28 24.5	+0.7
JMM				IAmb	IAmb	10 28 39.9	
	comp=Z,26nm,1.1s						
KSRS	Korea Array	25.77	326	P	P	10 29 08.8	+0.4
	comp=Z,3.3nm,0.9s,baz=149,slow=9.5,SNR=6.6						
WB0	Warramunga Arr	38.22	198	P	P	10 30 55.7	-2.0
WR0	Warramunga Arr	38.36	197	P	P	10 30 55.5	-3.4
WB2	Warramunga Arr	38.40	198	P	P	10 30 59.0	-0.2
WRA	Warramunga Arr	38.40	198	P	P	10 30 58.0	-1.2
	comp=Z,2.4nm,1.0s,baz=20,slow=9.2,SNR=5.0						
SANVU	Saraoutou	38.52	146	P	P	10 31 01.3	+1.0
SANVU				IAmb	IAmb	10 31 12.5	
	comp=Z,12nm,0.8s						
ASAR	Alice Springs	42.06	196	P	P	10 31 28.9	-0.6
	comp=Z,0.8nm,0.8s,baz=17,slow=8.6,SNR=7.3						
CM31	Chiang Mai Arr	44.58	279	P	P	10 31 48.6	-1.5
CM31				IAmb	IAmb	10 31 52.2	
	comp=Z,5.6nm,0.9s						
CMAR	Chiang Mai Arr	44.58	279	P	P	10 31 51.2	+1.1
	comp=Z,1.5nm,0.6s,baz=71,slow=6.5,SNR=13						
CMAR	Chiang Mai Arr	44.58	279	P	P	10 31 50.8	+0.7
GSI	Gunungsitoli	49.94	257	P	P	10 32 31.9	0.0
MKAR	Makanchi Array	59.73	315	P	P	10 33 42.5	+0.1
	comp=Z,0.5nm,0.8s,baz=94,slow=9.7,SNR=5.9						
SML	Sawmill	63.79	29	P	P	10 34 09.3	-0.2
I23K	Minto, Yukon-K	64.19	25	P	P	10 34 12.0	-0.1
SCM	Sheep Creek Mo	64.26	29	P	P	10 34 13.3	+0.6
EYAK	Cordova Ski Ar	64.76	31	P	P	10 34 15.5	-0.3
EYAK				IAmb	IAmb	10 34 30.8	
	comp=Z,3.8nm,1.1s						
ILAR	Eielson Array	65.11	26	P	P	10 34 16.2	-1.9
	comp=Z,0.7nm,0.8s,baz=251,slow=4.0,SNR=6.0						
ILAR	Eielson Array	65.11	26	P	P	10 34 16.7	-1.4
DOT	Dot Lake	66.09	27	P	P	10 34 24.6	+0.1
DOT				IAmb	IAmb	10 34 24.9	
	comp=Z,2.7nm,0.9s						
NIL	Nilore	66.47	300	P	P	10 34 28.4	+0.9
BMAR	Burnt Mountain	66.62	23	P	P	10 34 28.0	+0.2
KBL	Kabul	69.84	301	P	P	10 34 47.8	-1.0
KBL				IAmb	IAmb	10 34 50.0	
	comp=Z,5.5nm,1.1s						
INK	Inuvik	70.88	23	P	P	10 34 53.4	-0.8
	comp=Z,1.3nm,0.8s,baz=262,slow=4.8,SNR=5.5						
INK	Inuvik	70.88	23	P	P	10 34 54.0	-0.2
INK				IAmb	IAmb	10 35 13.2	
	comp=Z,2.6nm,1.1s						
YKA	Yellowknife Ar	79.43	28	P	P	10 35 42.8	-0.8
	comp=Z,0.6nm,0.8s,baz=288,slow=4.9,SNR=9.4						
PINE	Pine Mountain	80.72	47	P	P	10 35 52.5	+1.2
PINE				IAmb	IAmb	10 35 57.4	
	comp=Z,4.9nm,0.9s						
NVAR	Mina Array Bea	84.09	52	P	P	10 36 09.6	+0.5
	comp=Z,1.0nm,0.8s,baz=273,slow=6.1,SNR=6.1						
NVAR	Mina Array Bea	84.09	52	P	P	10 36 10.1	+1.0
LPAZ	La Paz	147.48	94	PKPbc	PKPab	10 43 24.6	-0.9
	comp=Z,1.8nm,0.5s,baz=319,slow=3.1,SNR=6.6						

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*INET **27** 10:25:11.5, 9°.99N×85°.56W, h6^{km}, MW3.1*

UCR 27 10:25:08.5±2.0**, 9°.91N**×**85°.80W, h13^{km}**±5^{km}**, MW3.8, 1C, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GRZA	Playa Garza	0.16	89	*e*P	Pb	10 25 13.4	0.0
GRZA				*e*S	Sb	10 25 16.2	-0.4
INDI	Punta indio, G	0.29	99	*e*P	Pg	10 25 14.8	+0.2
INDI				*e*S	Sg	10 25 18.7	0.0
PLVR	Palo Verde	0.62	45	*e*P	Pg	10 25 18.8	-1.8
PLVR				*e*S	Sg	10 25 26.5	-2.3
LAFE	Finca La Fe, P	0.88	97	*e*P	Pg	10 25 23.5	-2.1
JTS	Las Juntas de	0.91	66	*e*P	Pg	10 25 24.7	-1.5
GBS3	Finca Las Img	0.93	21	*i* P	Pg	10 25 25.8	-0.6
GBS3				*i* S	Sb	10 25 38.7	-0.1
GPS3	Bodega del ICE	0.94	27	*i* P	Pg	10 25 26.1	-0.6
GPS2	Hotel Rincn d	0.94	28	*e*P	Pg	10 25 26.0	-0.8
LIM1	Limonal	0.95	34	*i* P	Pg	10 25 26.0	-0.8
BUEV	Buena Vista	0.96	24	*i* P	Pg	10 25 26.4	-0.7
CUI	Cuipilapa	0.97	40	*e*P	Pb	10 25 25.1	-2.1
CUI				*e*S	Sg	10 25 37.8	-2.1
GUAB	Guayabo de Bag	0.97	35	*i* P	Pb	10 25 26.2	-1.1
GB1A	Borinquen Arri	0.98	24	*i* P	Pb	10 25 26.9	-0.6
HORNC	Hornillas	1.00	37	*i* P	Pb	10 25 26.8	-1.1
BUAI	Buenos Aires	1.06	26	*i* P	Pb	10 25 27.1	-1.7
PTEN	Parque Tenorio	1.13	45⇑	*i*P	Pb	10 25 29.0	-1.0
JACO	JACO, Garabito	1.15	102	*e*P	Pb	10 25 28.8	-1.5
CASO	Castillo	1.17	64	*i* P	Pb	10 25 29.2	-1.5
ARE1	Arenal 1	1.19	63	*e*P	Pn	10 25 30.0	-1.0
CEDE	Laguna Cedeo	1.22	62	*i* P	Pn	10 25 29.3	-2.1
FORC	Fortuna	1.24	64	*i* P	Pn	10 25 30.3	-1.3
SRA1	San Ramn	1.31	82	*e*P	Pn	10 25 31.1	-1.5
COVE	Coope Vega, Sa	1.59	60	*e*P	Pn	10 25 35.5	-0.9
HDC	Heredia	1.66	87	*e*P	Pn	10 25 37.6	+0.1
LCR2	La Lucha 2	1.78	95	*e*P	Pn	10 25 39.4	+0.2
RIMA	Rio Macho	1.91	94	*e*P	Pn	10 25 40.2	-0.8
CVTR	Volcan Turrial	2.01	87	*e*P	Pn	10 25 43.1	+0.5
CDM	Cerro de Muert	2.04	100	*e*P	Pn	10 25 42.4	-0.6
PEZE	Perez Zeledon,	2.16	104	*e*P	Pn	10 25 44.2	-0.1
DRK0	Durika	2.60	104	*e*P	Pn	10 25 49.8	-0.7
LPLA	Las Palmas La	2.89	107	*e*P	Pn	10 25 54.1	-0.4

IDC 27 10:26:10.5±11.0**, 36°.26N**×**139°.33E, h0^{km}, mb3.4**/3**, mb1 3.6**/3**, mb1mx3.3**/44**, mbtmp3.4**/3**, MS3.5**/1**, Ms1 3.5**/1**, ms1mx2.6**/40**, Error ellipse: s-maj=417.8km s-min=30.4km az=62.0, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YAK	Yakutsk	26.50	350	LR	LR	10 42 42.3	
	comp=Z,98nm,20.7s,baz=68,slow=37						
SONM	Songino Array	26.85	306	P	P	10 31 52.8	0.0
	0.4nm,0.4s,baz=98,slow=10,SNR=4.0						
WRA	Warramunga Arr	56.09	186	P	P	10 35 50.7	-0.8
	0.2nm,0.4s,baz=3.9,slow=7.4,SNR=5.3						
ASAR	Alice Springs	59.82	186	P	P	10 36 18.1	+0.5
	0.2nm,0.4s,baz=3.3,slow=5.5,SNR=9.1						

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*ATH **27** 10:45:43.3, 35°.80N×25°.49E, h33^{km}±5^{km}, ML3.3/10, Error ellipse: s-maj=5.2km s-min=0.8km az=130.0*

*THE **27** 10:45:43.7, 35°.79N×25°.50E, h14^{km}±1^{km}, ML3.4/8, Error ellipse: s-maj=1.8km s-min=0.5km az=271.0*

*IDC **27** 10:45:44.7±3.0, 35°.45N×25°.65E, h27^{km}±25^{km}, mb3.5/2, mb1 3.4/5, mb1mx3.2/41, mbtmp3.4/5, ML3.5/3, Error ellipse: s-maj=41.8km s-min=21.6km az=140.0*

ISC 27 10:45:43.9±0.8**, 35°.78N**±0°.02×**25°.49E**±0°.03**, h21^{km}**±4^{km}**, n49, σ0^{s}.92**/71**, Crete**

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

NPS	Neapolis	0.53	169	P	Pb	10 45 54.1	-0.6
NPS				S	Sb	10 46 02.3	+0.5
NPS				AML	AML	10 46 02.7	
	comp=E,12917µm,0.5s						
NPS				AML	AML	10 46 03.3	
	comp=N,11466µm,0.4s						
NPS	Neapolis	0.53	169	P	Pb	10 45 54.0	-0.6
NPS				S	Sb	10 46 02.2	+0.4
	comp=N,6µm,0.4s						
HRKL	Herakleio	0.57	214	P	Pb	10 45 54.9	-0.3
THR6	Thira Island,	0.58	353	P	Pb	10 45 54.5	-0.9
IACM	Heraklion	0.58	216	P	Pb	10 45 54.8	-0.8
IACM				S	Sb	10 46 03.9	+0.4
IACM	Heraklion	0.58	216	P	Pb	10 45 55.0	-0.6
THT1	Athinios (Pele	0.60	356	P	Pb	10 45 55.3	-0.6
LAST	Lasithi	0.62	181	P	Pb	10 45 55.3	-0.9
LAST				S	Sb	10 46 04.2	-0.4
LAST				AML	AML	10 46 05.3	
	comp=E,4261µm,0.5s						
LAST				AML	AML	10 46 09.2	
	comp=N,5267µm,0.5s						
LAST	Lasithi	0.62	181	P	Pb	10 45 55.5	-0.7
LAST				S	Sb	10 46 04.8	+0.2
	comp=N,2µm,0.5s						
THR8	Santorini-Mono	0.62	359	P	Pb	10 45 55.0	-1.2
SNT5	Nea Kammeni, S	0.62	353	P	Pb	10 45 55.2	-1.0
SNT5	Nea Kammeni, S	0.62	353	P	Pb	10 45 55.3	-0.9
SNT5				S	Sn	10 46 05.5	-1.3
	comp=N,8µm,0.2s						
THR3	Thira Island,	0.63	354	P	Pb	10 45 55.2	-1.1
SNT1	Gialos, Santor	0.63	356	P	Pb	10 45 55.5	-0.9
SNT1				S	Sb	10 46 05.3	+0.5
SNT1	Gialos, Santor	0.63	356	P	Pb	10 45 55.7	-0.7
SNT1				S	Sn	10 46 05.5	-1.6
	comp=N,3µm,0.3s						
THR7	Fira-Santorini	0.64	356	P	Pb	10 45 55.9	-0.6
THR5	Thira Island,	0.64	350	P	Pb	10 45 55.5	-1.0
THT2	Imerovigli	0.65	355	P	Pb	10 45 55.1	-1.6
THT2				S	Sb	10 46 05.6	+0.2
THT2	Imerovigli	0.65	355	P	Pb	10 45 55.9	-0.8
THT2				S	Sb	10 46 05.7	+0.3
	comp=N,3µm,0.3s						
SAP3	Santorini-Thir	0.66	350	P	Pb	10 45 55.6	-1.3
SAP3				S	Sb	10 46 06.0	+0.4
SAP3	Santorini-Thir	0.66	350	P	Pb	10 45 56.2	-0.6
SAP3				S	Sn	10 46 06.6	-1.2
	comp=N,9µm,0.3s						
THR2	Thira island,	0.66	356	P	Pb	10 45 55.8	-1.1
IDI	Anoyia	0.69	225	Pg	Pb	10 45 57.2	-0.3
	comp=N,76nm,0.3s,baz=46,slow=11,SNR=363						
IDI				Lg	Lg	10 46 06.8	
	comp=N,299nm,0.3s,baz=176,slow=19,SNR=54						
STIA	Sitia Lasithi	0.76	139	P	Pb	10 45 57.8	-0.7
STIA				S	Sb	10 46 08.6	+0.2
FRMA	Ierapetra Chan	0.79	165	P	Pn	10 46 00.1	+0.3
FRMA				S	Sn	10 46 10.6	-0.4
ZKR	Zakros	0.90	138	P	Pb	10 46 01.2	+0.4
ZKR				S	Sn	10 46 12.8	-0.8
ZKR				AML	AML	10 46 14.6	
	comp=E,4859µm,0.4s						
ZKR				AML	AML	10 46 15.3	
	comp=N,2375µm,0.7s						
ZKR	Zakros	0.90	138	P	Pb	10 46 01.1	+0.4
ZKR				S	Sn	10 46 12.8	-0.8
	comp=N,2µm,0.6s						
SIVA	Sivas	0.94	216	P	Pb	10 46 01.7	+0.1
SIVA				S	Sn	10 46 14.2	-0.5
SIVA				AML	AML	10 46 16.2	
	comp=E,7873µm,0.5s						
SIVA				AML	AML	10 46 19.1	
	comp=N,4013µm,0.4s						
SIVA	Sivas	0.94	216	P	Pb	10 46 01.6	0.0
SIVA				S	Sn	10 46 14.5	-0.2
	comp=N,4µm,0.5s						
VAM	Vamos	1.11	251	P	Pb	10 46 04.4	-0.1
VAM				S	Sn	10 46 18.2	-0.8
VAM				AML	AML	10 46 21.5	
	comp=E,1327µm,0.2s						
VAM				AML	AML	10 46 21.6	
	comp=N,2668µm,0.3s						
MHLO	Agia Marina, M	1.26	316	P	Pb	10 46 07.0	0.0
MHLO				AML	AML	10 46 28.1	
	comp=E,5169µm,0.4s						
MHLO				AML	AML	10 46 30.7	
	comp=N,7383µm,0.5s						
IMMV	Iera Moni Meta	1.27	256	P	Pn	10 46 06.1	-0.3
IMMV				AML	AML	10 46 31.6	
	comp=N,1926µm,0.8s						
IMMV				AML	AML	10 46 33.3	
	comp=E,2319µm,0.7s						
APE	Apeiranthos	1.28	2	P	Pb	10 46 06.7	-0.6
APE				S	Sn	10 46 22.1	-1.1
APE				AML	AML	10 46 27.9	
	comp=E,1138µm,0.4s						
APE				AML	AML	10 46 29.6	
	comp=N,1149µm,0.2s						
APE	Apeiranthos	1.28	2	P	Pb	10 46 06.8	-0.6
APE				S	Sn	10 46 22.4	-0.8
MHLA	Plaka, Milos I	1.29	318	P	Pb	10 46 07.6	+0.1
KARP	Karpathos	1.38	99	P	Pn	10 46 07.6	-0.4
KARP				S	Sb	10 46 25.9	-0.4
KARP				AML	AML	10 46 36.8	
	comp=E,908µm,0.5s						
KARP				AML	AML	10 46 42.7	
	comp=N,939µm,0.6s						
KARP	Karpathos	1.38	99	P	Pn	10 46 07.4	-0.6
GVD	Gavdhos	1.48	231	P	Pb	10 46 10.5	-0.3
GVD				AML	AML	10 46 32.6	
	comp=E,1470µm,0.7s						
GVD				AML	AML	10 46 38.7	
	comp=N,1657µm,0.4s						
NISR	Nisiros	1.56	58	P	Pb	10 46 12.0	-0.1
KTHA	Kythira Island	2.02	284	P	Pb	10 46 18.2	-1.8
ARG	Arkhangelos	2.18	78	P	Pn	10 46 20.1	+1.2
SMG	Samos	2.21	29	P	Pn	10 46 20.6	+1.3
VLI	Veliai	2.26	295	P	Pn	10 46 21.7	+1.6
VIL2	Platees	3.00	324	P	Pn	10 46 33.1	+2.8
BRTR	Keskin Array B	7.56	56	Pn	Pn	10 47 35.7	+2.8
	comp=N,0.2nm,0.3s,baz=236,slow=10,SNR=2.6						
AKASG	Malin Array Be	15.15	9	Pn	P	10 49 21.8	+0.3
	comp=N,0.6nm,0.3s,baz=199,slow=11,SNR=3.5						
GERES	GERESS Array B	15.67	330	Pn	P	10 49 27.1	-0.2
	comp=N,0.1nm,0.3s,baz=161,slow=9.3,SNR=3.1						
TORD	Torodi Ar. Bea	31.09	230	P	P	10 52 00.0	-0.8
	comp=N,0.2nm,0.3s,baz=38,slow=9.1,SNR=1.9						
MKAR	Makanchi Array	43.21	57	P	P	10 53 43.7	+0.3
	comp=N,0.8nm,0.5s,baz=266,slow=8.1,SNR=11						

IDC 27 11:05:09.9±478.0**, 62°.73N**×**42°.40E, h0^{km}, Error ellipse: s-maj=127.9km s-min=90.2km az=146.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I43RU	DUBNA INFRASON	6.57	206	*i*		11 43 40.0	
	baz=20,slow=337,SNR=1.7						
I37NO	I37NO	11.55	314	*i*		12 21 40.0	
	baz=112,slow=328,SNR=0.8						
I31KZ	AKTYUBINSK INF	15.00	138	*i*		12 40 20.0	
	baz=333,slow=330,SNR=1.3						
I18DK	QAANAAQ INFRAS	34.00	339	*i*		14 51 20.0	
	baz=40,slow=350,SNR=2.4						
I53US	FAIRBANKS INFR	52.48	6	*i*		16 39 40.0	
	baz=358,slow=328,SNR=1.7						
I44RU	PETROPAVLOVSK	53.89	42	*i*		16 21 40.0	
	baz=342,slow=341,SNR=2.0						

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*UCR **27** 11:08:50.3±1.5, 9°.93N×85°.71W, h21^{km}±3^{km}, MW3.9*
*INET **27** 11:08:51.5, 9°.98N×85°.59W, h3^{km}, MW3.1*
*IDC **27** 11:08:51.1±13.0, 11°.33N×84°.38W, h0^{km}, mb3.6/2, mb1 4.1/2, mb1mx3.5/33, mbtmp3.6/2, Error ellipse: s-maj=999.2km s-min=65.4km az=35.0*
ISC 27 11:08:51.7±0.9**, 9°.98N**±0°.04×**85°.61W**±0°.05**, h17^{km}**±6^{km}**, n32, σ1^{s}.06**/40**, 5C-3D, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GRZA	Playa Garza	0.07	205	⇑*i*P	Pg	11 08 54.4	-0.7
GRZA				*e*S	Sg	11 08 57.1	-0.1
INDI	Punta indio, G	0.15	138	⇑*i*P	Pg	11 08 55.8	-0.1
INDI				*e*S	Sg	11 08 59.5	+0.8
PLVR	Palo Verde	0.44	34	⇓*i*P	Pg	11 08 59.9	-1.0
LAFE	Finca La Fe, P	0.71	104	⇑*i*P	Pg	11 09 04.5	-1.2
JTS	Las Juntas de	0.71	64	⇓*e*P	Pb	11 09 05.5	-0.2
COLC	Colonia	0.79	30	*i* P	Pg	11 09 06.7	-0.5
LIM1	Limonal	0.80	26	*i* P	Pg	11 09 06.6	-0.7
LIM1				*i* S	Sb	11 09 19.9	+2.3
CUI	Cuipilapa	0.80	33	*e*P	Pg	11 09 06.0	-1.5
CUI				*i* S	Sb	11 09 18.7	+0.9
GPS3	Bodega del ICE	0.81	17	*i* P	Pg	11 09 06.7	-0.8
GPS2	Hotel Rincn d	0.81	18	*i* P	Pg	11 09 06.9	-0.7
GPS2				⇓*i*P	Pb	11 09 07.0	-0.4
GBS3	Finca Las Img	0.81	11	*i* P	Pg	11 09 06.7	-0.9
GUAB	Guayabo de Bag	0.81	27	*i* P	Pg	11 09 06.8	-0.8
BUEV	Buena Vista	0.84	14	*i* P	Pg	11 09 07.2	-0.9
HORNC	Hornillas	0.84	30	*i* P	Pg	11 09 07.4	-0.8
HORNC				*i* S	Sb	11 09 20.4	+1.4
GB1A	Borinquen Arri	0.86	14	*i* P	Pg	11 09 07.5	-1.0
BUAI	Buenos Aires	0.93	17	*i* P	Pg	11 09 07.9	-2.0
PTEN	Parque Tenorio	0.95	40	⇑*i*P	Pb	11 09 09.7	-0.2
CASO	Castillo	0.97	62	*i* P	Pb	11 09 09.9	-0.2
JACO	JACO, Garabito	0.98	109	*e*P	Pg	11 09 09.2	-1.6
ARE1	Arenal 1	1.00	61	⇑*i*P	Pb	11 09 10.8	+0.2
ARE1				*e*S	Sn	11 09 26.0	+1.4
CEDE	Laguna Cedeo	1.02	60	*i* P	Pg	11 09 10.1	-1.5
CEDE				*e*S	Sb	11 09 25.8	+1.7
FORC	Fortuna	1.04	62	*i* P	Pg	11 09 11.0	-1.0
SRA1	San Ramn	1.11	84	*e*P	Pg	11 09 11.8	-1.5
COVE	Coope Vega, Sa	1.40	58	*e*P	Pn	11 09 15.3	-1.0
HDC	Heredia	1.47	89	*e*P	Pn	11 09 18.4	+0.9
LCR2	La Lucha 2	1.60	98	*e*P	Pn	11 09 18.7	-0.6
CVTR	Volcan Turrial	1.82	89	*e*P	Pn	11 09 22.6	0.0
CDM	Cerro de Muert	1.86	103	*e*P	Pn	11 09 22.7	-0.5
LPLA	Las Palmas La	2.73	110	*e*P	Pn	11 09 34.6	-0.3
TXAR	Lajitas Array	25.62	321	P	P	11 14 20.1	-0.4
	0.6nm,0.6s,baz=139,slow=12,SNR=4.6						
NVAR	Mina Array Bea	40.74	319	P	P	11 16 32.7	+0.6
	0.8nm,0.7s,baz=133,slow=7.2,SNR=7.6						
CMAR	Chiang Mai Arr	151.39	351	PKPbc	PKPbc	11 28 44.8	-0.8
	0.8nm,0.3s,baz=347,slow=3.7,SNR=4.5						

IDC 27 11:13:38.1±2.2**, 6°.76S**×**128°.82E, h0^{km}, mb3.4**/1**, mb1 3.7**/3**, mb1mx3.3**/51**, mbtmp3.5**/3**, ML3.7**/2**, Error ellipse: s-maj=145.4km s-min=31.8km az=67.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.16	158	Pn	Pn	11 16 59.1	-1.1
	0.3nm,0.3s,baz=340,slow=13,SNR=15						
WRA				Sn	Sn	11 19 23.9	-14
	0.6nm,0.3s,baz=335,slow=23,SNR=11						
ASAR	Alice Springs	17.51	164	P	P	11 17 44.7	-0.5
	0.3nm,0.3s,baz=348,slow=10,SNR=16						
ASAR				S	Sn	11 20 49.6	-10
	0.2nm,0.3s,baz=355,slow=31,SNR=4.6						
MKAR	Makanchi Array	67.39	327	P	P	11 24 35.4	0.0
	0.2nm,0.4s,baz=125,slow=7.8,SNR=4.9						

DJA 27 11:14:50.2±0.5**, 0°S**±4°×**12°4E**±°**, h92^{km}**±11^{km}**, M3.8**/8**, mb3.8**/1**, MLv3.8**/8**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMSI	Cibinong	0.75	12	P	Pn	11 15 10.0	+2.6
GTOI	Gorontalo	1.13	314	P	Pn	11 15 14.3	+2.7
GTOI				S	Sn	11 15 32.7	+5.1
LUWI	Luwuk	1.37	230	P	Pn	11 15 14.6	+0.2
LUWI				S	Sn	11 15 32.9	+0.3
MRSI	Marisa	1.98	289	P	Pn	11 15 21.1	-1.2
APSI	Ampana	2.30	251	P	Pn	11 15 26.5	+0.1
SANI	Sanana	2.87	131	P	Pn	11 15 32.6	-1.4
NLAI	Namlea	4.48	133	P	Pn	11 15 56.4	+0.5
TTSI	Tana Toraja	4.92	234	P	Pn	11 16 01.5	-0.3
SPSI	Sidrap Palu	5.54	227	P	Pn	11 16 11.5	+1.3

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*NOU **27** 11:16:49.4, 34°.38S×179°.27W, h319^{km}, MLv4.6, South of Kermadec Islands*
WEL 27 11:17:19.5±1.0**, 36°S**±10°×**17°8E**±1°0**, h205^{km}**±14^{km}**, M3.7**/19**, MLv3.7**/19**, Error ellipse: s-maj=0.0km s-min=0.0km az=39.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.76	182	P	Pn	11 17 55.6	-0.5
MXZ				S	S	11 18 25.4	+1.2
HAZ	Te Kaha	2.02	194	P	Pn	11 17 58.3	-0.3
HAZ				S	S	11 18 30.0	+1.3
WMGZ	Waiomatatini S	2.02	180	P	Pn	11 17 58.8	+0.3
WMGZ				S	S	11 18 29.8	+1.1
PKGZ	Pakihiroa	2.10	187	P	Pn	11 17 59.5	0.0
PKGZ				S	S	11 18 30.5	+0.1
RUGZ	Raukumara Rang	2.24	195	P	Pn	11 18 00.5	-0.5
PUZ	Puketiti	2.27	183	P	Pn	11 18 01.0	-0.2
PUZ				S	S	11 18 33.4	-0.1
KUZ	Kuaotunu	2.36	246	P	Pn	11 18 01.2	-1.0
TWGZ	Tauwhareparae	2.40	188	P	Pn	11 18 03.2	+0.5
TWGZ				S	S	11 18 36.9	+0.9
OPRZ	Ohinepanea	2.52	215	P	Pn	11 18 05.1	+1.1
MARZ	Manawahe	2.58	212	P	Pn	11 18 06.2	+1.5
MWZ	Matawai	2.63	195	P	Pn	11 18 05.3	+0.1
MWZ				S	S	11 18 40.6	+0.2
URZ	Urewera	2.67	202	P	Pn	11 18 05.0	-0.5
URZ				S	S	11 18 41.7	+0.6
TKGZ	Te Karaka	2.67	189	P	Pn	11 18 05.9	+0.3
TKGZ				S	S	11 18 41.9	+0.6
CNGZ	Carnagh Statio	2.69	183	P	Pn	11 18 06.3	+0.5
RAGZ	Rawiri	2.81	196	P	Pn	11 18 07.5	+0.3
WIAZ	Waiheke Island	2.82	248	P	Pn	11 18 06.7	-0.6
MKAZ	Moumakai	2.92	242	P	Pn	11 18 08.4	0.0
RIGZ	Rimuhau	2.95	190	P	Pn	11 18 08.5	-0.3
RIGZ				S	S	11 18 48.1	+1.1
MUGZ	Murupara	2.98	205	P	Pn	11 18 09.5	+0.4
MUGZ				S	S	11 18 48.5	+1.0
TOZ	Tahuroa Road	3.02	229	P	Pn	11 18 10.4	+0.8
ETAZ	East Tamaki Re	3.03	247	P	Pn	11 18 09.5	-0.2
SNGZ	Shannon Statio	3.10	196	P	Pn	11 18 11.0	+0.5
SNGZ				S	S	11 18 52.0	+1.9
KNZ	Kokohu	3.27	190	P	Pn	11 18 11.0	-1.5
KNZ				S	S	11 18 53.4	-0.3
BKZ	Black Stump Fm	3.69	204	P	Pn	11 18 17.5	-0.2
BKZ				S	S	11 19 03.5	+0.5
HIZ	Hauiti	3.92	225	P	Pn	11 18 22.8	+2.3
OUZ	Omahuta	3.96	277	P	Pn	11 18 18.0	-2.9
CKHZ	Cape Kidnapper	4.00	195	P	Pn	11 18 18.9	-2.5
CKHZ				S	S	11 19 09.1	-0.5
PXZ	Pawanui	4.40	196	P	Pn	11 18 24.5	-1.9
PXZ				S	S	11 19 16.3	-2.3
VRZ	Vera Road	4.41	220	P	Pn	11 18 27.2	+0.7
TSZ	Takapari Road	4.67	204	P	Pn	11 18 28.9	-1.0
MRZ	Mangatainoka R	5.34	204	P	Pn	11 18 36.1	-2.2
MRZ				S	S	11 19 37.2	-3.1
HOWZ	Holdsworth Sta	5.57	203	P	Pn	11 18 39.1	-2.3
HOWZ				S	S	11 19 42.0	-3.8
OGWZ	Otaki Gorge	5.62	206	P	Pn	11 18 39.7	-2.1
OGWZ				S	S	11 19 44.7	-2.0
TMWZ	Te Maipa	5.66	200	P	Pn	11 18 40.4	-2.0
TMWZ				S	S	11 19 44.2	-3.4
KIW	Kapiti Island	5.75	207	P	Pn	11 18 41.6	-2.0
KIW				S	S	11 19 46.5	-3.4
MTW	Mount Morrison	5.81	202	P	Pn	11 18 41.7	-2.7
MTW				S	S	11 19 47.8	-3.6
CAW	Cannon Point	5.91	205	P	Pn	11 18 43.1	-2.5
CAW				S	S	11 19 51.1	-2.6
TRWZ	Traveller	5.98	200	P	Pn	11 18 44.3	-2.2
TRWZ				S	S	11 19 52.0	-3.3
PAWZ	Paruwai Farm	6.04	202	P	Pn	11 18 44.8	-2.5
DUWZ	D'Urville Isla	6.11	214	P	Pn	11 18 46.4	-1.9
MSWZ	Moikau Station	6.13	203	P	Pn	11 18 46.0	-2.4
WEL	Wellington	6.17	206	P	Pn	11 18 47.0	-2.0
BHW	Baring Head	6.25	205	P	Pn	11 18 47.5	-2.4
PLWZ	Palliser	6.27	202	P	Pn	11 18 47.4	-2.9
TCW	Tory Channel	6.30	210	P	Pn	11 18 47.8	-2.8
TUWZ	Tuamarina	6.62	210	P	Pn	11 18 52.8	-2.0
NNZ	Nelson	6.69	215	P	Pn	11 18 52.7	-2.9
QRZ	Quartz Range	6.82	221	P	Pn	11 18 54.7	-2.7
BSWZ	Blackbirch Sta	6.88	210	P	Pn	11 18 55.8	-2.4
THZ	Tophouse	7.34	214	P	Pn	11 19 02.0	-2.2
DSZ	Denniston Nort	7.86	219	P	Pn	11 19 08.6	-2.3

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*NEIC **27** 11:18:18.5±2.4, 23°.94S±0°.07×66°.79W±0°.09, h194^{km}±8^{km}, Error ellipse: s-maj=12.6km s-min=9.9km az=90.0*
*IDC **27** 11:18:19.4±1.4, 23°.78S×66°.68W, h190^{km}±9^{km}, mb3.4/7, mb1 3.6/12, mb1mx3.4/40, mbtmp3.9/12, Error ellipse: s-maj=24.4km s-min=13.7km az=12.0*
*GUC **27** 11:18:20.8±0.5, 23°.82S×67°.22W, h244^{km}±6^{km}, ML4.0*
ISC 27 11:18:18.6±0.8**, 23°.94S**±0°.05×**66°.84W**±0°.07**, h198^{km}**±8^{km}**, n61, σ1^{s}.31**/82**, mb3.5**/7**, 9C-4D, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	2.32	304	P	Pn	11 19 02.4	+1.6
	67nm,0.3s,baz=134,slow=5.5,SNR=55						
LVC				S	S	11 19 34.2	+0.6
	24nm,0.3s,baz=117,slow=16,SNR=9.0						
LVC	Limon Verde	2.32	304	⇓*i*P	Pn	11 19 02.4	+1.6
LVC				*i* S	S	11 19 34.5	+1.0
LVC	Limon Verde	2.32	304		Pn	11 19 02.4	+1.6
LVC				S	S	11 19 34.8	+1.2
PB15	IPOC Station P	2.52	286	⇑*i*P	Pn	11 19 04.3	+1.4
PB15				*i* S	S	11 19 37.2	-0.1
PB15	IPOC Station P	2.52	286	Pn	Pn	11 19 04.2	+1.4
PB15				S	S	11 19 37.1	-0.2
GO02	Mina Guanaco	2.79	243	⇓*i*P	Pn	11 19 07.4	+1.4
GO02	Mina Guanaco	2.79	243	Pn	Pn	11 19 07.3	+1.4
GO02				S	S	11 19 43.3	+0.4
PB06	IPOC Station P	2.80	295	⇑*i*P	Pn	11 19 07.2	+1.3
PB06				*i* S	S	11 19 42.1	-0.8
PB06				IAML		11 19 46.3	
	comp=N,388nm,0.1s						
PB06	IPOC Station P	2.80	295		Pn	11 19 07.0	+1.0
PB06				S	S	11 19 42.5	-0.4
PB09	IPOC Station P	3.08	313	⇑*i*P	Pn	11 19 10.8	+1.5
PB09				*i* S	S	11 19 48.7	-0.1
PB09				IAML		11 19 50.0	
	comp=E,168nm,0.5s						
PB09	IPOC Station P	3.08	313		Pn	11 19 10.8	+1.5
PB09				S	S	11 19 49.2	+0.4
PB05	IPOC Station P	3.27	289	⇓*i*P	Pn	11 19 12.3	+0.7
PB05				*i* S	S	11 19 50.9	-2.1
PB05				IAML		11 19 56.6	
	comp=E,154nm,0.3s						
PB14	IPOC Station P	3.33	257	Pn	Pn	11 19 12.8	+0.4
PB14				S	S	11 19 52.4	-2.0
PB10	IPOC Station P	3.43	276	⇑*i*P	Pn	11 19 14.2	+0.8
PB10				*i* S	S	11 19 54.3	-1.8
PB10	IPOC Station P	3.43	276	Pn	Pn	11 19 14.2	+0.8
PB10				S	S	11 19 55.2	-1.0
PB04	IPOC Station P	3.44	297	⇓*i*P	Pn	11 19 14.5	+0.9
PB04				*i* S	S	11 19 54.6	-2.1
PB04	IPOC Station P	3.44	297		Pn	11 19 14.2	+0.6
AC02	Maricunga	3.56	215	Pn	Pn	11 19 16.5	+1.2
PB07	IPOC Station P	3.57	307	⇑*i*P	Pn	11 19 15.8	+0.6
PB07				*i* S	S	11 19 57.6	-1.9
PB07	IPOC Station P	3.57	307	Pn	Pn	11 19 15.6	+0.3
PB01	IPOC Station P	3.78	319	⇑*i*P	Pn	11 19 18.4	+0.6
PB01				*i* S	S	11 20 02.6	-1.5
PB01	IPOC Station P	3.78	319		Pn	11 19 18.1	+0.3
AC01	Pan de Azucar	4.06	236	Pn	Pn	11 19 20.8	-0.3
PB08	IPOC Station P	4.34	330	⇑*i*P	Pn	11 19 26.2	+1.1
PB08				*i* S	S	11 20 16.5	-0.7
PB08	IPOC Station P	4.34	330		Pn	11 19 26.6	+1.4
PATCX	Punta Patache	4.36	315	⇑*i*P	Pn	11 19 24.5	-0.5
PATCX				*i* S	S	11 20 13.8	-3.3
PATCX	Punta Patache	4.36	315		Pn	11 19 24.5	-0.5
TA01	Diego Aracena	4.57	317	Pn	Pn	11 19 27.7	+0.2
HMBC	Humberstone	4.61	322	⇑*i*P	Pn	11 19 27.3	-0.9
HMBC				*i* S	S	11 20 19.5	-3.4
GO03	Copiap	4.76	219		Pn	11 19 29.1	-0.8
PSGCX	Pisagua	5.29	324		Pn	11 19 36.1	-0.7
MNMC	Minye Minye	5.43	331		Pn	11 19 38.9	+0.1
AC04	Llanos de Chal	5.71	221	Pn	Pn	11 19 41.4	-0.7
AC05	El Transito	5.77	212		Pn	11 19 42.0	-1.0
LCO	Las Campanas	6.13	214	Pn	Pn	11 19 46.3	-1.5
CO01	Juntas del Tor	6.68	205		Pn	11 19 54.8	-0.1
GO04	Tololo Observa	7.14	209	Pn	Pn	11 19 58.9	-2.1
CO03	El Pedregal	7.68	206		Pn	11 20 06.1	-1.7
LPAZ	La Paz	7.71	351	P	Pn	11 20 08.8	+0.1
	comp=E,0.5nm,0.3s,baz=174,slow=10,SNR=10						
LPAZ				S	S	11 21 33.4	-2.7
	comp=E,0.5nm,0.3s,baz=273,slow=19,SNR=7.4						
LPAZ	La Paz	7.71	351		Pn	11 20 09.0	+0.3
CPUP	Villa Florida	8.94	107	P	Pn	11 20 23.3	-0.8
	comp=E,0.2nm,0.3s,baz=286,slow=12,SNR=7.6						
CPUP	Villa Florida	8.94	107		Pn	11 20 23.1	-1.0
SIV	San Ignacio	9.58	35	P	Pn	11 20 31.6	-1.0
	comp=E,1.1nm,0.3s,baz=254,slow=12,SNR=18						
MT02	Curacav	10.03	201	Pn	Pn	11 20 35.5	-2.7
BO02	Sierra Bellavi	11.35	197	Pn	Pn	11 20 53.4	-1.9
BI02	San Fabin de	13.25	196	Pn	Pn	11 21 18.9	-0.4
SAML	Samuel	15.31	14	P	P	11 21 44.9	-0.3
BDFB	Brasilia	19.52	68	P	P	11 22 31.5	+0.2
	comp=E,0.7nm,0.3s,baz=223,slow=10,SNR=4.2						
BDFB	Brasilia	19.52	68	P	P	11 22 31.7	+0.4
BDFB				IAmb	IAmb	11 22 32.8	
	comp=Z,2.6nm,0.5s						
PTGA	Pitinga	24.01	17	P	P	11 23 14.6	-0.9
	comp=Z,1.9nm,0.4s,baz=184,slow=15,SNR=5.2						
PTGA	Pitinga	24.01	17	P	P	11 23 15.5	0.0
PTGA				IAmb	IAmb	11 23 41.1	
	comp=Z,5.1nm,1.0s						
SNAA	Sanae	59.36	161	P	P	11 28 01.4	+1.7
TXAR	Lajitas Array	63.71	324	P	P	11 28 30.8	+1.5
	comp=Z,0.3nm,0.6s,baz=156,slow=7.9,SNR=3.6						
TORD	Torodi Ar. Bea	76.41	69	P	P	11 29 46.4	-0.4
	comp=Z,0.8nm,0.8s,baz=252,slow=4.6,SNR=3.4						
PDAR	Pinedale Array	77.17	329	P	P	11 29 52.0	+1.3
	comp=Z,0.3nm,0.5s,baz=135,slow=7.6,SNR=6.1						
ULM	Lac du Bonnet	78.22	341	P	P	11 29 56.8	+0.8
	comp=Z,1.9nm,0.5s,baz=149,slow=5.7,SNR=6.4						
NVAR	Mina Array Bea	78.58	321	P	P	11 30 00.7	+2.1
	comp=Z,0.2nm,0.5s,baz=148,slow=5.3,SNR=3.0						
YKA	Yellowknife Ar	94.12	340	P	P	11 31 15.2	+1.1
	comp=Z,0.5nm,0.5s,baz=129,slow=4.9,SNR=14						
ZALV	Zalesovo Beam	143.27	28	PKP	PKPdf	11 37 27.8	-1.1
	comp=Z,0.8nm,0.4s,baz=241,slow=3.1,SNR=4.7						
ZALV	Zalesovo Beam	143.27	28		PKPdf	11 37 27.9	-0.9
MKAR	Makanchi Array	146.38	40	PKPbc	PKiKP	11 37 37.4	-1.5
	comp=Z,1.2nm,0.5s,baz=307,slow=3.1,SNR=17						

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*IDC **27** 11:18:22.3±1.4, 9°.86S×161°.28E, h0^{km}, mb3.7/4, mb1 3.9/6, mb1mx3.6/43, mbtmp3.8/6, ML3.5/2, Error ellipse: s-maj=30.7km s-min=26.6km az=20.0*
*NEIC **27** 11:18:25.2±1.2, 10°.1S±0°.2×161°.0E±0°.2, h10^{km}±2^{km}, mb4.5/4, Error ellipse: s-maj=42.1km s-min=6.7km az=40.0*
ISC 27 11:18:24.6±1.0**, 10°.0S**±0°.1×**161°.1E**±0°.1**, h10^{km}, n14, σ1^{s}.40**/16**, mb3.8**/5**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	1.25	296	Pn	Pg	11 18 48.5	-0.2
	190nm,0.3s,baz=149,slow=6.5,SNR=42						
HNR				Sn	Sg	11 19 04.7	-0.3
	375nm,0.3s,baz=166,slow=22,SNR=21						
HNR				LR	LR	11 19 35.9	
	comp=Z,199nm,21.7s,baz=186,slow=53						
HNR	Honiara	1.25	296		Pb	11 18 48.4	0.0
SANVU	Saraoutou	8.06	133		Pn	11 20 24.1	+2.2
DZM	Mont Dzumac	13.06	157	Pn	Pn	11 21 31.4	+0.9
	0.3nm,0.3s,baz=19,slow=8.8,SNR=25						
DZM				Sn	Sn	11 23 53.6	-2.5
	0.1nm,0.3s,baz=266,slow=14,SNR=3.0						
DZM	Mont Dzumac	13.06	157		Pn	11 21 30.3	-0.2
CTA	Charters Tower	17.48	233	P	Pn	11 22 29.2	+0.6
	0.1nm,0.3s,baz=57,slow=16,SNR=4.6						
WB0	Warramunga Arr	27.53	246	P	P	11 24 11.9	+0.1
WRA	Warramunga Arr	27.63	246	P	P	11 24 13.6	+0.9
	0.4nm,0.6s,baz=75,slow=8.9,SNR=5.0						
ASAR	Alice Springs	29.28	239	P	P	11 24 30.4	+3.0
	0.2nm,0.4s,baz=64,slow=10,SNR=3.6						
BKZ	Black Stump Fm	32.15	157		P	11 24 52.9	+0.3
BBOO	Buckleboo	32.37	222	P	P	11 24 53.9	-0.6
BBOO				IAmb	IAmb	11 25 10.7	
	comp=Z,14nm,1.4s						
QSPA	South Pole Qui	80.00	180	P	P	11 30 33.3	-0.9
	comp=Z,1.9nm,0.9s,baz=180,slow=3.0,SNR=5.9						
QSPA	South Pole Qui	80.00	180	P	P	11 30 33.3	-0.9
QSPA				IAmb	IAmb	11 30 33.9	
	comp=Z,5.0nm,1.2s						
ILAR	Eielson Array	84.03	20	P	P	11 30 53.8	-1.3

comp=Z,0.3nm,0.5s,baz=239,slow=5.0,SNR=5.3

IDC 27 11:19:14.5±423.0**, 64°.63N**×**40°.29E, h0**^{km}**, Error ellipse: s-maj=182.2km s-min=155.1km az=43.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I43RU	DUBNA INFRASON	8.07	192	*i*		12 08 20.0	
	baz=8.2,slow=332,SNR=1.1						
I18DK	QAANAAQ INFRAS	31.88	337	*i*		14 35 40.0	
	baz=41,slow=346,SNR=1.1						
I53US	FAIRBANKS INFR	50.66	4	*i*		16 28 20.3	
	baz=4.1,slow=328						

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*IDC **27** 11:32:44.3±1.4, 13°.56S×166°.86E, h0^{km}, mb3.9/5, mb1 4.0/6, mb1mx3.7/38, mbtmp3.8/6, ML3.2/1, Error ellipse: s-maj=51.5km s-min=25.7km az=125.0*

*NEIC **27** 11:32:54.6±1.6, 13°.6S±0°.1×166°.8E±0°.2, h85^{km}±15^{km}, mb4.3/5, Error ellipse: s-maj=23.8km s-min=15.6km az=124.0*

ISC 27 11:32:50.3±1.1**, 13°.5S**±0°.1×**166°.6E**±0°.2**, h35**^{km}**, n17, σ1ˢ42**/17**, mb3.9**/8**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	Saraoutou	2.03	164	Pn	Pn	11 33 27.0	+4.9
SANVU				Sn	Sn	11 33 46.5	+0.2
DZM	Mont Dzumac	8.55	181	Pn	Pn	11 34 50.7	-1.1
	0.3nm,0.3s,baz=65,slow=11,SNR=10.0						
DZM				Sn	Sn	11 36 18.3	-8.8
	0.2nm,0.3s,baz=139,slow=19,SNR=2.6						
DZM	Mont Dzumac	8.55	181		Pn	11 34 54.0	+2.2
PMG	Port Moresby	19.51	280	P	P	11 37 14.6	-0.2
STKA	Stephens Creek	29.36	227	P	P	11 38 49.2	-0.9
	2.3nm,0.4s,baz=61,slow=8.3,SNR=6.0						
STKA	Stephens Creek	29.36	227	P	P	11 38 48.1	-2.0
WRA	Warramunga Arr	31.56	254	P	P	11 39 10.6	+0.9
	0.2nm,0.5s,baz=84,slow=8.7,SNR=4.7						
AS31	Alice Springs	32.57	247	P	P	11 39 20.1	+1.6
AS31				IAmb	IAmb	11 39 27.5	
	comp=Z,1.5nm,1.4s						
ASAR	Alice Springs	32.57	247	P	P	11 39 19.0	+0.4
	comp=Z,0.8nm,0.4s,baz=78,slow=9.2,SNR=19						
ASAR	Alice Springs	32.57	247	P	P	11 39 19.2	+0.6
BBOO	Buckleboo	33.88	230	P	P	11 39 29.2	-0.7
BBOO				IAmb	IAmb	11 39 29.5	
	comp=Z,5.1nm,0.7s						
FORT	Forrest	39.42	238	P	P	11 40 16.6	-0.5
FORT				IAmb	IAmb	11 40 39.4	
	comp=Z,12nm,0.9s						
MORW	Morawa	49.27	243	P	P	11 41 35.5	-0.5
ILAR	Eielson Array	85.53	18	P	P	11 45 24.2	-0.2
	comp=Z,0.3nm,0.8s,baz=241,slow=5.8,SNR=3.8						
MKAR	Makanchi Array	95.88	317	P	P	11 46 15.7	+2.3
	comp=Z,0.2nm,0.6s,baz=90,slow=5.8,SNR=2.7						
ARCES	ARCESS Array B	118.89	345	PKP	PKPdf	11 51 32.5	-2.1
	comp=Z,2.7nm,0.8s,baz=54,slow=2.3,SNR=15						
ARCES	ARCESS Array B	118.89	345		PKPdf	11 51 32.8	-1.8

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*IDC **27** 11:35:10.4±1.9, 6°.97S×155°.26E, h28^{km}±12^{km}, mb5.0/28, mb1 5.1/30, mb1mx4.9/42, mbtmp5.1/30, ML4.0/2, MS4.7/26, Ms1 4.7/26, ms1mx4.6/30, Error ellipse: s-maj=12.4km s-min=10.1km az=86.0*

*MOS **27** 11:35:10.3±0.9, 6°.84S×155°.25E, h35^{km}, mb5.5/61, Error ellipse: s-maj=7.2km s-min=5.4km az=109.0*

*GCMT **27** 11:35:14.3±0.1, 7°.28S±0°.01×155°.28E±0°.01, h31^{km}, MW5.4/129, Moment Tensor Solution. s127,c220; s129,c230; Duration: 1ˢ2 Moment tensor: Scale 10^{17} Nm; M_{rr}1.21±.02; $M_{\theta\theta}$-1.21±.02; $M_{\phi\phi}$0.00±.02; $M_{r\theta}$0.65±.03; $M_{\theta\phi}$0.56±.01; $M_{\phi r}$-0.28±.03; Best double couple: $M_0$1.50000×10^{17} NP1:ϕ_s290.00000°, δ31.00000°, λ88.00000°. NP2:ϕ_s112.00000°, δ59.00000°, λ91.00000°. Principal axes: T 1.3890, Plg76.0000°, Azm26.0000°; N 0.2220, Plg1.0000°, Azm292.0000°; P -1.6100, Plg14.0000°, Azm202.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BJI **27** 11:35:14.1±0.0, 6°.63S×155°.50E, h71^{km}, mB5.4/53, mb5.2/71, Ms5.1/37, Ms7 4.8/38*

*NEIC **27** 11:35:14.3±1.5, 7°.05S±0°.07×155°.31E±0°.07, h64^{km}±4^{km}, mb5.3/198, Error ellipse: s-maj=11.3km s-min=9.0km az=213.0*

*DJA **27** 11:35:17.2±0.5, 7°S±3°×15°5E±°, h80^{km}±5^{km}, M5.2/71, mb5.4/71, mB5.6/44, MLv5.6/2, Mw(mB)5.2/44, MwMwp5.1/6, Mwp5.3/6*

ISC 27 11:35:15.8±0.4**, 7°.08S**±0°.04×**155°.32E**±0°.04**, h78**^{km}±3^{km}**, h78**^{km}**:pP-P, n988, σ1ˢ08**/1013**, mb5.4**/258**, 82C-53D, Fault plane solution: NP1:**ϕ_s81.21787°**,** δ61.66652°**,** λ93.75089°. **NP2:**ϕ_s253.35312°**,** δ28.56027°**,** λ83.08238°. **Principal axes:** T Plg73.0692°**,** Azm0.3576°**;** N Plg3.3010°**,** Azm259.4357°**;** P Plg16.5868°**,** Azm168.4513°**; Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	4.26	312	Pn	Pn	11 36 19.2	+0.9
RABL	Rabaul	4.26	312	P	Pn	11 36 20.2	+1.9
HNR	Honiara	5.14	117	Pn	Pn	11 36 30.8	+0.6
	42nm,0.3s,baz=171,slow=10,SNR=9.8						
HNR				Sn	Sn	11 37 28.1	-0.1
	52nm,0.3s,baz=246,slow=5.0,SNR=5.7						
HNR				LR	LR	11 38 32.1	
	comp=Z,21µm,19.1s,baz=298,slow=38						
HNR	Honiara	5.14	117	P	Pn	11 36 31.7	+1.5
HNR	Honiara	5.14	117	Pn	Pn	11 36 31.7	+1.5
HNR	Honiara	5.14	117	P	Pn	11 36 32.8	+2.6
PMG	Port Moresby	8.40	253	Pn	Pn	11 37 13.5	-1.4
	7.4nm,0.3s,baz=50,slow=10,SNR=19						
PMG				Sn	Sn	11 38 48.0	-0.2
	baz=39,slow=14,SNR=1.8						
PMG				LR	LR	11 40 29.7	
	comp=Z,5µm,19.4s,baz=62,slow=38						
PMG	Port Moresby	8.40	253	pmax	pmax		
	comp=Z,76nm,0.6s						
PMG	Port Moresby	8.40	253	Pn	Pn	11 37 14.0	-0.9
COEN	Coen	13.76	239	Pn	Pn	11 38 26.9	-0.6
PATS	Pohnpei	14.14	12	Pn	Pn	11 38 30.3	-2.2
SANVU	Saraoutou	14.31	127	Pn	Pn	11 38 34.1	-0.5
SANVU	Saraoutou	14.31	127	P	P	11 38 37.1	-2.4
MTSU	Mount Surprise	15.35	223	P	Pn	11 38 48.9	+0.8
	baz=15,SNR=7.5						
CTA	Charters Tower	15.64	213	Pn	Pn	11 38 51.6	-0.1
	comp=Z,0.2nm,0.3s,baz=37,slow=16,SNR=18						
CTA				Sn	S	11 41 49.9	-5.0
	comp=Z,0.1nm,0.3s,baz=144,slow=19,SNR=1.1						
CTA				LR	LR	11 44 28.8	
	comp=Z,4µm,18.5s,baz=46,slow=36						
CTAO	Charters Tower	15.64	213	P	Pn	11 38 51.1	-0.6
CTAO				pmax	pmax		
	comp=Z,102nm,1.1s						
CTAO	Charters Tower	15.64	213	Pn	Pn	11 38 51.1	-0.6
GENI	Genyem	15.74	286	P	Pn	11 38 53.4	+0.3
	comp=Z,96nm,0.8s						
KOUNC	Koumac, New Ca	15.96	148	P	P	11 38 58.7	+0.9
SMPI	Sarmi	17.31	286	P	Pn	11 39 12.0	-0.5
	comp=Z,108nm,1.0s						
NOUC	Port Laguerre	18.31	146	P	Pn	11 39 25.0	+0.4
DZM	Mont Dzumac	18.36	145	*e*P	Pn	11 39 25.9	+0.6
	comp=Z,262nm,1.2s						
DZM				*e*LR	LR	11 43 50.9	
	comp=Z,5µm,25.1s						
DZM	Mont Dzumac	18.36	145	P	Pn	11 39 25.9	+0.6
	comp=Z,1.7nm,0.3s,baz=319,slow=13,SNR=22						
DZM				S	S	11 42 45.9	-3.8
	comp=Z,0.1nm,0.3s,baz=132,slow=16,SNR=1.1						
DZM				LR	LR	11 45 40.0	
	comp=Z,3µm,21.6s,baz=316,slow=34						
DZM	Mont Dzumac	18.36	145	P	P	11 39 22.1	-2.4
DZM				IAmb	IAmb	11 39 36.7	
	comp=Z,190nm,1.4s						
DZM	Mont Dzumac	18.36	145	P	P	11 39 23.5	-1.0
ONTNC	Ouen Toro	18.56	146	P	Pn	11 39 29.3	+1.7
EIDS	Eidsvold	18.63	192	P	Pn	11 39 28.3	-0.2
	baz=19,SNR=6.1						
EIDS	Eidsvold	18.63	192	P	P	11 39 26.5	-0.8
BAKI	Biak	20.03	286	P	P	11 39 43.0	+0.3
	comp=Z,3µmcomp=Z,154nm,1.1s						
QIS	Mount Isa	20.28	227	P	P	11 39 46.6	+1.3
	baz=20,SNR=31						
RMQ	Roma	20.29	197	P	Pn	11 39 46.9	-1.0
	baz=20,SNR=52						
QLP	Quilpie	22.08	207	P	P	11 40 05.5	+1.0
	baz=22,SNR=10.0						
KDU	Kakadu	23.18	254	P	P	11 40 16.6	+0.6
	baz=23,SNR=5.8						
FAKI	Fak Fak	23.35	279	P	P	11 40 16.3	-1.4
FAKI				IAmb	IAmb	11 40 18.5	
	comp=Z,88nm,0.9s						
FAKI	Fak Fak	23.35	279	P	P	11 40 17.5	-0.2
	comp=Z,2µmcomp=Z,2µmcomp=Z,107nm,1.1s						
ARMA	Armidale	23.47	188	P	P	11 40 19.9	+1.2
	baz=24,SNR=8.6						
ARMA	Armidale	23.47	188	P	P	11 40 19.5	+0.8
ARMA				IAmb	IAmb	11 40 31.3	
	comp=Z,231nm,1.5s						
FUNA	Funafuti	23.70	95	P	P	11 40 21.3	+0.6
FUNA				IAmb	IAmb	11 40 24.9	
	comp=Z,99nm,0.8s						
SAUI	Saumlaki	23.83	266	P	P	11 40 22.8	+0.8
SAUI	Saumlaki	23.83	266	P	P	11 40 22.7	+0.7
	comp=Z,250nm,1.0s						
WR0	Warramunga Arr	23.88	236	P	P	11 40 22.8	+0.4
WR0				IAmb	IAmb	11 40 34.3	
	comp=Z,201nm,1.2s						
WB0	Warramunga Arr	23.91	236	P	P	11 40 23.3	+0.6
WB0				IAmb	IAmb	11 40 34.6	
	comp=Z,215nm,1.2s						
WRAB	Tennant Creek	24.02	236	*c i*P	P	11 40 24.2	+0.5
WRAB				pmax	pmax		
	comp=Z,323nm,1.7s						
WRAB	Tennant Creek	24.02	236	P	P	11 40 23.8	+0.2
WRAB				IAmb	IAmb	11 40 35.0	
	comp=Z,292nm,1.4s						
WB2	Warramunga Arr	24.03	236	P	P	11 40 23.8	+0.1
WB2				IAmb	IAmb	11 40 35.1	
	comp=Z,293nm,1.4s						
WRA	Warramunga Arr	24.04	236	P	P	11 40 24.2	+0.5
	comp=Z,51nm,0.9s,baz=60,slow=9.3,SNR=77						
WRA				PcP	PcP	11 44 05.4	+1.5
	comp=Z,7.0nm,0.8s,baz=59,slow=2.2,SNR=5.2						
WRA				S	S	11 44 36.5	+0.8
	comp=Z,1.6nm,0.8s,baz=33,slow=8.0,SNR=1.8						
WRA				ScP	ScP	11 47 42.0	+6.4
	comp=Z,3.2nm,0.9s,baz=62,slow=2.5,SNR=7.3						
WRA				LR	LR	11 49 52.8	
	comp=Z,2µm,18.4s,baz=60,slow=37						
MSVF	Nonsavu	24.56	118	LR	LR	11 49 17.5	
	comp=Z,2µm,20.3s,baz=302,slow=34						
MSVF	Nonsavu	24.56	118	*c i*P	P	11 40 28.9	+0.3
MSVF				pmax	pmax		
	comp=Z,247nm,1.0s						
MSVF	Nonsavu	24.56	118	P	P	11 40 27.8	-0.8
MSVF	Nonsavu	24.56	118	P	P	11 40 29.5	+0.9
SIJI	Sorong	24.77	283	P	P	11 40 29.3	-1.2
	comp=Z,108nm,0.9s,baz=88,slow=8.1,SNR=28						
SWI	Sorong	24.78	283	P	P	11 40 30.7	+0.2
	comp=Z,2µmcomp=Z,193nm,1.0s						
CMSA	Cobar Meteorol	25.94	199	P	P	11 40 41.7	+0.8
	baz=26,SNR=53						
MGCD	Mangrove Creek	26.29	188	P	P	11 40 46.2	+2.1
	baz=26,SNR=7.2						
AS31	Alice Springs	26.36	229	P	P	11 40 44.8	-0.1
ASAR	Alice Springs	26.36	229	P	P	11 40 44.8	-0.1
	comp=Z,21nm,1.0s,baz=56,slow=10,SNR=93						
ASAR				PcP	PcP	11 44 10.2	+1.2
	comp=Z,7.3nm,0.9s,baz=56,slow=3.3,SNR=6.4						
ASAR				ScP	ScP	11 47 48.6	+6.5
	comp=Z,2.9nm,0.9s,baz=56,slow=3.4,SNR=7.6						
ASAR	Alice Springs	26.36	229	P	P	11 40 44.2	-0.7
ASAR	Alice Springs	26.36	229	P	P	11 40 44.2	-0.7
ASAR					PcP	11 44 09.9	+0.8
H11S3	WAKE ISLAND Hy	27.78	24	T	T	12 09 21.2	
	baz=203,slow=74,SNR=98						
H11S2	WAKE ISLAND Hy	27.78	24	T	T	12 09 22.1	
	baz=203,slow=74,SNR=106						
H11S1	WAKE ISLAND Hy	27.79	24	T	T	12 09 21.0	
	baz=203,slow=74,SNR=79						
STKA	Stephens Creek	27.80	206	P	P	11 40 57.9	+0.3
	comp=Z,18nm,0.9s,baz=23,slow=13,SNR=11						
STKA				PcP	PcP	11 44 13.1	+0.8
	comp=Z,5.7nm,0.8s,baz=16,slow=7.4,SNR=2.9						
STKA				ScP	ScP	11 47 53.0	+6.7
	comp=Z,3.1nm,0.7s,baz=34,slow=20,SNR=4.4						
STKA				LR	LR	11 52 11.7	
	comp=Z,3µm,18.3s,baz=48,slow=37						
STKA	Stephens Creek	27.80	206	P	P	11 40 58.0	+0.5
	baz=28,SNR=16						
STKA	Stephens Creek	27.80	206	⇓*i*P	P	11 40 56.8	-0.8
STKA	Stephens Creek	27.80	206	P	P	11 40 56.2	-1.4
CNB	Canberra Magne	28.63	190	P	P	11 41 06.5	+1.5
	baz=29,SNR=5.3						
CAN	Canberra	28.70	191	P	P	11 41 06.4	+0.8
CAN				pmax	pmax		
	comp=Z,68nm,1.4s						
CAN	Canberra	28.70	191	P	P	11 41 06.4	+0.8
H11N1	WAKE ISLAND Hy	28.96	23	T	T	12 10 57.3	
	baz=193,slow=76,SNR=17						
H11N3	WAKE ISLAND Hy	28.97	23	T	T	12 10 49.2	
	baz=193,slow=76,SNR=41						
H11N2	WAKE ISLAND Hy	28.98	23	T	T	12 10 58.7	
	baz=193,slow=76,SNR=6.4						
SANI	Sanana	29.66	278	P	P	11 41 17.0	+2.7
	comp=Z,69nm,1.0s						
HTT	Hallett	30.31	208	P	P	11 41 20.7	+0.8
	baz=30,SNR=5.5						
FITZ	Fitzroy Crossi	30.92	246	LR	LR	11 53 51.1	
	comp=Z,2µm,19.6s,baz=77,slow=36						
FITZ	Fitzroy Crossi	30.92	246	P	P	11 41 25.3	-0.1
	baz=31,SNR=59						
FITZ	Fitzroy Crossi	30.92	246	P	P	11 41 25.0	-0.4
FITZ				IAmb	IAmb	11 41 26.8	
	comp=Z,49nm,0.8s						
BBOO	Buckleboo	31.24	212	P	P	11 41 28.3	+0.2
	baz=31,SNR=6.1						
BBOO	Buckleboo	31.24	212	P	P	11 41 28.0	0.0
WRKA	Warakurna	31.40	232	P	P	11 41 29.2	-0.5
	baz=32,SNR=36						
BATI	Baumata	31.45	262	LR	LR	11 56 32.2	
	comp=Z,3µm,18.3s,baz=112,slow=41						
BATI	Baumata	31.45	262	P	P	11 41 43.0	+13
TOO	Toolangi	31.64	195	P	P	11 41 31.5	-0.1
TOO				pmax	pmax		
	comp=Z,21nm,1.2s						
TOO	Toolangi	31.64	195	P	P	11 41 31.5	-0.1
ARPS	Mount Arapiles	32.01	201	P	P	11 41 35.6	+0.8
	baz=32,SNR=5.3						
KMSI	Cibinong	32.18	282	P	P	11 41 37.4	+0.8
	comp=Z,178nm,0.8s						
OUZ	Omahuta	32.66	152	P	P	11 41 42.3	+1.8
OUZ				IAmb	IAmb	11 41 50.1	
	comp=Z,45nm,1.4s						
MMRI	Maumere	32.80	265	P	P	11 41 41.8	-0.3
MMRI	Maumere	32.80	265	P	P	11 41 42.5	+0.5
	comp=Z,2µmcomp=Z,217nm,1.0s						
DAV	Davao City (W)	32.83	295	LR	LR	11 55 29.2	
	comp=Z,600nm,18.9s,baz=92,slow=37						
AFI	Afiamalu	33.02	105	P	P	11 41 42.6	-1.4
AFI				pmax	pmax		
	comp=Z,105nm,0.9s						
AFI	Afiamalu	33.02	105	P	P	11 41 42.6	-1.4
AFI	Afiamalu	33.02	105	P	P	11 41 44.2	+0.2
GTOI	Gorontalo	33.13	282	P	P	11 41 46.6	+1.7
	comp=Z,480nmcomp=Z,40nm,0.8s						
APSI	Ampana	34.13	279	P	P	11 41 54.8	+1.2
	comp=Z,575nmcomp=Z,48nm,1.1s						
MRSI	Marisa	34.14	281	P	P	11 41 54.7	+1.1
	comp=Z,701nmcomp=Z,39nm,0.9s						
BASI	Baing, Sumba	34.48	262	P	P	11 41 59.5	+2.9
	comp=Z,2µmcomp=Z,137nm,1.3s						
BSSI	Bau Bau, Buton	34.61	269	P	P	11 41 58.8	+1.1
	comp=Z,2µmcomp=Z,240nm,1.5s						
FORT	Forrest	34.75	224	P	P	11 41 58.8	+0.1
	baz=35,SNR=10						
FORT	Forrest	34.75	224	P	P	11 41 57.5	-1.2
BNSI	Bone	35.13	272	P	P	11 42 03.0	+0.8
	comp=Z,2µmcomp=Z,162nm,1.2s						
TOLI2	Tolitoli	35.41	282	P	P	11 42 03.2	-1.4
TOLI2				IAmb	IAmb	11 42 14.6	
	comp=Z,18nm,0.6s						
KAPI	Kappang	35.43	271	P	P	11 42 05.3	+0.5
KAPI				pmax	pmax		
	comp=Z,170nm,0.9s						
KAPI	Kappang	35.43	271	P	P	11 42 05.3	+0.5
SPSI	Sidrap Palu	35.52	273	P	P	11 42 05.7	+0.2
	comp=Z,908nmcomp=Z,69nm,1.2s						
TTSI	Tana Toraja	35.58	275	P	P	11 42 07.6	+1.5
	comp=Z,1µmcomp=Z,48nm,1.1s						
TAU	Tasmania Unive	36.38	190	P	P	11 42 14.1	+1.6
TAU				pmax	pmax		
	comp=Z,334nm,2.0s						
TAU	Tasmania Unive	36.38	190	P	P	11 42 14.1	+1.6
URZ	Urewera	36.77	151	P	P	11 42 15.5	-0.4
	comp=Z,16nm,1.1s,baz=114,slow=20,SNR=3.3						
URZ				PcP	PcP	11 44 36.2	-0.5
	comp=Z,12nm,0.8s,baz=39,slow=6.5,SNR=3.6						
URZ				LR	LR	11 55 37.7	
	comp=Z,576nm,18.0s,baz=198,slow=33						
OTVZ	Oturere	36.83	153	P	P	11 42 24.6	+8.0
PSA00	Pilbara Seismi	37.15	243	P	P	11 42 19.3	-0.1
PSA00	Pilbara Seismi	37.15	243	P	P	11 42 17.4	-2.0
PSA00				IAmb	IAmb	11 42 19.2	
	comp=Z,41nm,0.9s						
BKZ	Black Stump Fm	37.20	152	P	P	11 42 18.4	-1.2
BKZ				IAmb	IAmb	11 42 30.1	
	comp=Z,30nm,0.9s						
PLAI	Plampang	37.22	265	P	P	11 42 18.8	-1.2
	comp=Z,1µmcomp=Z,168nm,0.9s						
BHHZ	Black Hill Sta	37.27	153	P	P	11 42 27.1	+6.9
NMHZ	Naumai	37.29	152	P	P	11 42 26.6	+6.2
KRHZ	Kereru	37.53	153	P	P	11 42 25.4	+3.1
TSZ	Takapari Road	37.69	154	P	P	11 42 27.5	+3.8
KAHZ	Kahuranaki	37.88	153	P	P	11 42 30.3	+4.9
THZ	Tophouse	37.90	158	P	P	11 42 26.1	+0.6
THZ				IAmb	IAmb	11 42 44.1	
	comp=Z,43nm,0.8s						
OGWZ	Otaki Gorge	37.98	155	P	P	11 42 34.3	+8.3
TUWZ	Tuamarina	38.00	157	P	P	11 42 26.2	0.0
MRZ	Mangatainoka R	38.02	155	P	P	11 42 28.0	+1.6
PXZ	Pawanui	38.07	153	P	P	11 42 32.0	+5.2
TWSI	Taliwang, Sumb	38.10	265	P	P	11 42 26.3	-1.2
	comp=Z,48nm,0.8s						
CAW	Cannon Point	38.18	156	P	P	11 42 29.4	+1.7
HOWZ	Holdsworth Sta	38.19	155	P	P	11 42 29.3	+1.4
BSWZ	Blackbirch Sta	38.22	157	P	P	11 42 28.8	+0.7
MTW	Mount Morrison	38.40	155	P	P	11 42 30.7	+1.1
MSWZ	Moikau Station	38.51	156	P	P	11 42 29.4	-1.1
LTZ	Lake Taylor	38.57	160	P	P	11 42 30.6	-0.5
LTZ				IAmb	IAmb	11 42 43.1	
	comp=Z,63nm,1.1s						
PLWZ	Palliser	38.64	156	P	P	11 42 31.5	-0.2
KHZ	Kahutara	38.70	158	P	P	11 42 31.6	-0.5
KHZ				IAmb	IAmb	11 42 42.4	
	comp=Z,82nm,1.1s						
MYLDM	Lahad Datu	38.71	287	P	P	11 42 32.7	+0.1
MYLDM				IAmb	IAmb	11 42 42.8	
	comp=Z,110nm,1.3s						
OXZ	Oxford	38.98	161	P	P	11 42 34.1	-0.3
OXZ				IAmb	IAmb	11 42 44.8	
	comp=Z,100nm,1.3s						
RPZ	Rata Peaks	39.01	162	P	P	11 42 36.1	+1.4
	comp=Z,17nm,0.8s,baz=244,slow=2.5,SNR=12						
RPZ				LR	LR	11 56 31.7	
	comp=Z,2µm,21.6s,baz=324,slow=33						
RPZ	Rata Peaks	39.01	162	P	P	11 42 35.2	+0.5
RPZ				IAmb	IAmb	11 42 49.1	
	comp=Z,59nm,0.9s						
KMBL	Kambalda	39.48	228	P	P	11 42 39.3	+0.5
	baz=40,SNR=10						
MQZ	McQueen's Vall	39.52	160	P	P	11 42 38.9	0.0
MQZ				IAmb	IAmb	11 42 50.6	
	comp=Z,63nm,1.1s						
SRBI	Singaraja	39.76	266	P	P	11 42 54.2	+13
TGY	Tagaytay City	40.09	302	LR	LR	11 57 11.6	
	comp=Z,1µm,21.2s,baz=114,slow=33						
BBKI	Banjar Baru	40.46	273	P	P	11 42 48.2	+1.1
	comp=Z,4µmcomp=Z,131nm,1.1s						
JAGI	Jajag, Banyuwa	40.80	265	P	P	11 42 47.5	-2.5
JAGI				IAmb	IAmb	11 42 49.1	
	comp=Z,71nm,1.0s						
JAGI	Jajag, Banyuwa	40.80	265	P	P	11 42 48.3	-1.7
	comp=Z,88nm,1.1s						
KMMI	Kalianget	41.03	267	P	P	11 42 52.9	+1.1
	comp=Z,2µmcomp=Z,33nm,2.0s						
KKM	Kota Kinabalu	41.14	288	P	P	11 42 51.8	-1.0
KKM				IAmb	IAmb	11 42 54.0	
	comp=Z,73nm,1.0s						
KLBR	Kellerberrin	42.68	230	P	P	11 43 05.3	+0.2
	baz=43,SNR=6.3						
MORW	Morawa	42.97	234	P	P	11 43 07.8	+0.3
	baz=43,SNR=4.6						
MORW	Morawa	42.97	234	P	P	11 43 07.4	-0.1
MORW				IAmb	IAmb	11 43 15.8	
	comp=Z,50nm,1.1s						
BLDU	Ballidu	43.06	232	P	P	11 43 09.2	+1.1
	baz=43,SNR=4.4						
NWAO	Narrogin (SRO)	43.68	229	LR	LR	12 01 14.6	
	comp=Z,2µm,19.9s,baz=64,slow=36						
PBKI	Pangkalan Bun	43.69	273	P	P	11 43 15.4	+1.9
	comp=Z,3µmcomp=Z,304nm,1.1s						
MUN	Mundaring	44.03	230	P	P	11 43 16.5	+0.6
	baz=44,SNR=3.5						
SBUM	Sibu	44.05	281	P	P	11 43 15.3	-1.0
SBUM	Sibu	44.05	281	P	P	11 43 18.0	+1.7
UGM	Wanagama	44.41	266	P	P	11 43 17.8	-1.4
UGM	Wanagama	44.41	266	P	P	11 43 28.0	+8.8
YULB	Yu-li	44.98	313	P	P	11 43 23.1	-0.4
YULB				IAmb	IAmb	11 43 30.6	
	comp=Z,31nm,0.8s						
JYT	Yasato	45.36	343	P	P	11 43 25.5	-0.8
JYT				IAmb	IAmb	11 43 30.4	
	comp=Z,43nm,0.8s						
TPUB	Ta-pu	45.41	313	P	P	11 43 25.9	-1.1
TPUB				IAmb	IAmb	11 44 04.9	
	comp=Z,64nm,1.1s						
SSLB	Suanglung	45.47	313	P	P	11 43 26.9	-0.6
SSLB				IAmb	IAmb	11 43 41.9	
	comp=Z,42nm,0.9s						
RAR	Rarotonga	45.58	113	P	P	11 43 28.3	0.0
	comp=Z,29nm,0.8s,baz=192,slow=3.0,SNR=5.6						
KSM	Kuching	45.71	279	P	P	11 43 27.4	-2.1
KSM				IAmb	IAmb	11 43 30.4	
	comp=Z,21nm,0.6s						
KSM	Kuching	45.71	279	P	P	11 43 30.0	+0.4
YHNB	Yeheng	45.72	315	P	P	11 43 29.5	+0.1
JNU	Nakatsue	46.24	331	P	P	11 43 31.2	-2.2
	comp=Z,16nm,0.8s,baz=125,slow=1.5,SNR=7.5						
JNU	Nakatsue	46.24	331	P	P	11 43 32.5	-1.0
MJAR	Matsushiro Arr	46.27	341	P	P	11 43 31.6	-1.9
	comp=Z,7.6nm,0.7s,baz=166,slow=7.7,SNR=12						
MJAR				PcP	PcP	11 45 08.4	+0.6
	comp=Z,11nm,0.8s,baz=155,slow=4.0,SNR=7.9						
MJAR	Matsushiro Arr	46.27	341	P	P	11 43 32.9	-0.6
MJAR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MJAR	Matsushiro Arr	46.27	341	P	P	11 43 32.9	-0.6
MAJO	Matsushiro	46.27	341	P	P	11 43 33.0	-0.5
MAJO				pmax	pmax		
	comp=Z,18nm,0.9s						
MAJO	Matsushiro	46.27	341	P	P	11 43 33.0	-0.5
MAT	Matsushiro	46.27	341	P	P	11 43 32.5	-1.0
MAT				*e*S	S	11 50 10.4	-4.3
JHS	Saijyo	46.81	335	P	P	11 43 37.0	-0.8
CISI	Cisompet, Garu	47.10	266	P	P	11 43 39.2	-1.4
CISI	Cisompet, Garu	47.10	266	P	P	11 43 39.8	-0.7
	comp=Z,2µmcomp=Z,185nm,0.6s						
LEM	Lembang	47.34	267	P	P	11 43 42.1	-0.3
	comp=Z,34nm,0.6s,baz=68,slow=9.0,SNR=13						
TPI	Tanjungpandan	47.67	273	P	P	11 43 46.0	+1.2
	comp=Z,841nmcomp=Z,82nm,1.1s						
QZH	Quanzhou	47.88	313	⇓*i*P	P	11 43 46.8	+0.6
QZH				LR	LR		
	comp=Z,530nm,19.4s						
XMAS	Kiritimati	48.00	81	P	P	11 43 47.3	-0.1
CBJI	Citeko	48.12	268	P	P	11 43 49.3	+0.9
	comp=Z,120nm,0.7s						
PPBI	Pangkal Pinang	49.25	273	P	P	11 43 58.3	+1.3
	comp=Z,16µmcomp=Z,29nm,0.9s						
ERM	Erimo	50.11	348	⇑*i*P	P	11 44 02.9	-0.1
ERM				pmax	pmax		
	comp=Z,101nm,1.6s						
DLV	T Lat	50.26	292	P	P	11 44 05.8	+0.9
DLV				IAmb	IAmb	11 44 06.7	
	comp=Z,45nm,0.9s						
KASI	Kota Agung	50.52	269	P	P	11 44 05.3	-1.4
	comp=Z,98nm,0.9s						
TJN	Taejon	50.57	331	⇓*e*P	P	11 44 06.1	-0.5
MDSI	Maura Dua	50.93	270	P	P	11 44 08.7	-1.0
	comp=Z,39nm,1.1s						

LWLI	**Liwa**	**51.00**	**269**	P	**P**	**11 44 10.8**	**+0.4**
	comp=Z,54nm,0.7s						
KSRS	**Korea Array**	**51.17**	**332**	P	**P**	**11 44 09.9**	**-1.1**
	comp=Z,5.5nm,0.8s,baz=156,slow=8.3,SNR=15						
KSRS				PcP	**PcP**	**11 45 26.9**	**+1.3**
	comp=Z,3.6nm,0.6s,baz=150,slow=4.0,SNR=6.7						
KSAR	**Wonju Array Be**	**51.17**	**332**	P	**P**	**11 44 10.3**	**-0.8**
KSAR	**Wonju Array Be**	**51.17**	**332**	P	**P**	**11 44 10.3**	**-0.8**
YUK	**Yuzh-Kuril'sk**	**51.59**	**351**	*e*P	**P**	**11 44 14.1**	**0.0**
YUK				*e*		11 45 27.4	
YUK				*e*		11 46 11.9	
YUK				*e*PPP	PPP	11 47 15.0	
YUK				*e*S	**S**	**11 51 29.1**	**+0.1**
YUK				*e*		11 53 58.4	
YUK				*e*SS	**SS**	**11 55 08.7**	**+2.3**
YUK				pmax	pmax		
	comp=N,536nm,1.1s						
YUK				pmax	pmax		
	comp=E,837nm,1.1s						
YUK				pmax	pmax		
	comp=Z,810nm,1.1s						
YUK				pmax	pmax		
	comp=Z,1µm,1.8s						
QIZ	**Qiongzhong**	**51.78**	**301**	P	**P**	**11 44 17.0**	**+1.0**
QIZ				pP	**pP**	**11 44 34.3**	**-0.1**
QIZ				S	**S**	**11 51 34.0**	**+1.4**
QIZ				ScS	**ScS**	**11 53 58.5**	**-0.8**
QIZ				pmax	pmax		
	comp=Z,60nm,0.8s						
QIZ				pmax	pmax		
	comp=Z,300nm,6.6s						
QIZ				LR	LR		
	comp=Z,340nm,18.6s						
QIZ				LR	LR		
	comp=Z,630nm,21.6s						
QIZ				LR	LR		
	comp=Z,780nm,22.1s						
QIZ	**Qiongzhong**	**51.78**	**301**	P	**P**	**11 44 17.5**	**+1.5**
INCN	**Inchon**	**51.80**	**331**	P	**P**	**11 44 15.1**	**-0.7**
INCN				pmax	pmax		
	comp=Z,29nm,0.7s						
INCN	**Inchon**	**51.80**	**331**	P	**P**	**11 44 15.1**	**-0.7**
INCN				IAmb	IAmb	11 44 21.2	
	comp=Z,29nm,0.7s						
MYKOM	**Kota Tinggi**	**52.11**	**278**	P	**P**	**11 44 18.5**	**-0.1**
MYKOM				IAmb	IAmb	11 44 20.1	
	comp=Z,68nm,1.6s						
MYKOM	**Kota Tinggi**	**52.11**	**278**	P	**P**	**11 44 19.0**	**+0.5**
NJ2	**Nanjing**	**52.19**	**320**	*e*P	**P**	**11 44 19.0**	**+0.3**
NJ2				pmax	pmax		
	comp=Z,20nm,0.7s						
KUR	**Kuril'sk**	**52.50**	**353**	⇑*i*P	**P**	**11 44 19.1**	**-1.7**
KUR				pmax	pmax		
	comp=Z,147nm,1.0s						
OPA	**Opana**	**53.95**	**57**	P	**P**	**11 44 32.7**	**+0.8**
OPA				pmax	pmax		
	comp=Z,115nm,0.9s						
OPA	**Opana**	**53.95**	**57**	P	**P**	**11 44 32.7**	**+0.8**
SDSI	**Sungai Dareh**	**54.07**	**274**	P	**P**	**11 44 33.6**	**+0.6**
	comp=Z,8µmcomp=Z,56nm,1.5s						
UBPT	**Khong Chiam**	**54.16**	**294**	P	**P**	**11 44 35.2**	**+1.6**
	comp=Z,13nm,1.6s						
UBPT	**Khong Chiam**	**54.16**	**294**	P	**P**	**11 44 34.0**	**+0.5**
UBPT				IAmb	IAmb	11 44 35.8	
	comp=Z,22nm,1.0s						
WHN	**Wuhan**	**54.23**	**316**	⇑P	**P**	**11 44 34.0**	**+0.2**
WHN				pP	**pP**	**11 44 53.3**	**+0.2**
WHN				S	**S**	**11 52 06.8**	**+1.4**
WHN				pmax	pmax		
	comp=Z,56nm,1.0s						
WHN				LR	LR		
	comp=Z,2µm,23.5s						
PPT	**Papeete**	**54.66**	**106**	LR	LR	12 04 23.5	
	comp=Z,425nm,18.9s,baz=274,slow=32						
PPT2	**Papeete2**	**54.66**	**106**	*e*S	**S**	**11 52 13.6**	**+1.7**
	comp=Z,268nm,25.8s						
PPT2				*e*LQ	LQ	11 58 24.5	
	comp=Z,1µm,30.2s						
PPT2				*e*LR	LR	12 00 43.2	
	comp=Z,471nm,22.0s						
PAE	**Paea**	**54.66**	**107**	*e*P	**P**	**11 44 38.3**	**+1.1**
	comp=Z,9.7nm,0.9s						
KHLU	**Kahalu`u**	**54.85**	**60**	P	**P**	**11 44 38.7**	**+0.1**
TIAR	**Tiarei**	**54.88**	**106**	*e*P	**P**	**11 44 40.1**	**+1.3**
	comp=Z,20nm,0.8s						
YSS	**Yuzh-Sakhalins**	**54.94**	**350**	*e*P	**P**	**11 44 41.9**	**+3.3**
YSS				pmax	pmax		
	comp=Z,80nm,0.9s						
YSS				MLR	MLR		
	comp=Z,500nm,20.0s						
YSS	**Yuzh-Sakhalins**	**54.94**	**350**	P	**P**	**11 44 38.5**	**-0.1**
KHU	**Kahuku**	**54.95**	**61**	P	**P**	**11 44 39.2**	**-0.3**
KHU				pmax	pmax		
	comp=Z,188nm,0.8s						
KHU	**Kahuku**	**54.95**	**61**	P	**P**	**11 44 39.2**	**-0.3**
TVO	**Taravao**	**54.98**	**107**	*e*P	**P**	**11 44 40.9**	**+1.3**
	comp=Z,18nm,0.8s						
USA0B	**Ussuriysk Arra**	**55.22**	**340**	P	**P**	**11 44 41.2**	**+0.5**
USA0B				pmax	pmax		
	comp=Z,30nm,1.0s						
USA0B	**Ussuriysk Arra**	**55.22**	**340**	P	**P**	**11 44 41.2**	**+0.5**
USA0B				IAmb	IAmb	11 44 46.8	
	comp=Z,30nm,0.9s						
USRK	**Ussuriysk Ar.**	**55.22**	**340**	P	**P**	**11 44 40.6**	**-0.1**
	comp=Z,26nm,1.0s,baz=152,slow=8.6,SNR=14						
USRK				LR	LR	12 04 37.6	
	comp=Z,301nm,21.9s,baz=143,slow=32						
USRK	**Ussuriysk Ar.**	**55.22**	**340**	P	**P**	**11 44 41.1**	**+0.4**
USRK	**Ussuriysk Ar.**	**55.22**	**340**	P	**P**	**11 44 41.1**	**+0.4**
TBI	**Tubuai**	**55.34**	**113**	*e*S	**S**	**11 52 22.4**	**+1.7**
	comp=Z,165nm,27.0s						
TBI				*e*LQ	LQ	11 58 42.3	
	comp=Z,2µm,30.5s						
TBI				*e*LR	LR	12 01 03.6	
	comp=Z,1µm,29.8s,baz=278						
IPM	**Ipoh**	**55.39**	**280**	P	**P**	**11 44 41.9**	**-0.7**
IPM				IAmb	IAmb	11 44 43.4	
	comp=Z,34nm,0.9s						
IPM	**Ipoh**	**55.39**	**280**	P	**P**	**11 44 43.0**	**+0.5**
DL2	**Dalian**	**55.41**	**328**	P	**P**	**11 44 41.5**	**-0.6**
DL2				sP	**sP**	**11 45 12.5**	**+2.1**
DL2				*e*S	**S**	**11 52 21.5**	**+0.5**
DL2				sS	**sS**	**11 52 54.5**	**+1.3**
DL2				pmax	pmax		
	comp=Z,37nm,0.7s						
DL2				pmax	pmax		
	comp=Z,300nm,6.3s						
DL2				LR	LR		
	comp=Z,280nm,18.0s						
DL2				LR	LR		
	comp=Z,450nm,17.1s						
DL2				LR	LR		
	comp=Z,680nm,22.9s						
KULM	**Kulim**	**55.93**	**281**	P	**P**	**11 44 46.1**	**-0.2**
KULM				IAmb	IAmb	11 44 46.6	
	comp=Z,30nm,0.9s						
KULM	**Kulim**	**55.93**	**281**	P	**P**	**11 44 46.0**	**-0.3**
TIA	**Tai'an**	**56.03**	**323**	P	**P**	**11 44 45.3**	**-1.4**
TIA				pmax	pmax		
	comp=Z,16nm,0.9s						
MNSI	**Mandailing Nat**	**56.16**	**276**	P	**P**	**11 44 46.9**	**-1.1**
	comp=Z,44nm,1.1s						
SRAK	**Srakaew**	**56.87**	**292**	P	**P**	**11 44 50.3**	**-2.7**
	comp=Z,3µmcomp=Z,111nm,0.7s						
KHON	**Khomkaen**	**56.92**	**295**	P	**P**	**11 44 54.7**	**+1.5**
	comp=Z,3µmcomp=Z,159nm,0.8s						
PSI	**Prapat**	**57.14**	**278**	LR	LR	12 13 01.0	
	comp=Z,214nm,19.7s,baz=92,slow=40						
NONG	**Nongkai**	**57.23**	**297**	P	**P**	**11 44 56.2**	**+0.7**
	comp=Z,216nm,0.9s						
CN2	**Changchun**	**57.41**	**335**	*e*P	**P**	**11 44 54.8**	**-1.5**
CN2				S	**S**	**11 52 45.8**	**-1.4**
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
CN2				pmax	pmax		
	comp=Z,310nm,4.2s						
CN2				LR	LR		
	comp=Z,590nm,16.0s						
CN2				LR	LR		
	comp=Z,360nm,16.0s						
CN2				LR	LR		
	comp=Z,610nm,14.0s						
TRTT	**Trang**	**57.42**	**284**	P	**P**	**11 44 56.1**	**-0.8**
	comp=Z,21nm,1.8s						
CHAI	**Chaiyaphum**	**57.53**	**294**	P	**P**	**11 44 57.0**	**-0.6**
	comp=Z,728nmcomp=Z,87nm,0.7s						
SKR	**Severo-Kuril's**	**57.53**	**1**	*e*P	**P**	**11 44 57.3**	**+0.4**
SKR				*e*PPP	PPP	11 47 03.8	
SKR				pmax	pmax		
	comp=Z,23nm,0.8s						
SKR				pmax	pmax		
	comp=Z,400nm,4.9s						
SKR				MLR	MLR		
	comp=Z,500nm,20.0s						
ENH	**Enshi**	**57.53**	**313**	P	**P**	**11 44 57.5**	**+0.1**
ENH				IAmb	IAmb	11 45 20.8	
	comp=Z,19nm,0.9s						
PATY	**Pattaya**	**57.64**	**290**	P	**P**	**11 45 00.8**	**+2.4**
	comp=Z,76nm,0.8s						
GYA	**Guiyang**	**57.76**	**307**	⇓P	**P**	**11 45 00.5**	**+1.2**
GYA				pP	pwP	11 45 20.5	-1.0
GYA				PcP	**PcP**	**11 45 51.8**	**+0.5**
GYA				S	**S**	**11 52 53.5**	**+0.7**
GYA				pmax	pmax		
	comp=Z,36nm,0.9s						
GYA				pmax	pmax		
	comp=Z,280nm,11.5s						
GYA				LR	LR		
	comp=Z,340nm,23.1s						
GYA				LR	LR		
	comp=Z,540nm,23.6s						
GYA				LR	LR		
	comp=Z,510nm,22.0s						
SLVN	**Son La**	**57.81**	**301**	P	**P**	**11 45 00.6**	**+1.0**
SLVN				IAmb	IAmb	11 45 02.0	
	comp=Z,44nm,1.0s						
GSI	**Gunungsitoli**	**58.22**	**276**	P	**P**	**11 45 01.5**	**-1.0**
GSI	**Gunungsitoli**	**58.22**	**276**	P	**P**	**11 45 01.9**	**-0.6**
	comp=Z,62nm,1.1s						
PKDT	**Phuket**	**58.74**	**284**	P	**P**	**11 45 05.6**	**-0.5**
TYV	**Tymovskoe**	**58.74**	**351**	*e*P	**P**	**11 45 05.7**	**+0.3**
TYV				*e*		11 53 06.0	
TYV				pmax	pmax		
	comp=Z,400nm,5.5s						
TYV				pmax	pmax		
	comp=Z,44nm,0.9s						
PHET	**Kaeng Krachan**	**58.79**	**290**	P	**P**	**11 45 07.8**	**+1.4**
	comp=Z,707nmcomp=Z,83nm,0.8s						
BJT	**Baijiatuau**	**59.16**	**326**	P	**P**	**11 45 07.8**	**-0.8**
BJT				pmax	pmax		
	comp=Z,7.0nm,0.7s						
BJT	**Baijiatuau**	**59.16**	**326**	P	**P**	**11 45 07.8**	**-0.8**
BJI	**Beijing**	**59.17**	**326**	P	**P**	**11 45 07.3**	**-1.3**
BJI				pP	**pP**	**11 45 26.5**	**-1.9**
BJI				PP	**PP**	**11 47 23.3**	**+3.0**
BJI				pmax	pmax		
	comp=Z,150nm,3.7s						
PHIT	**Phitsanulok**	**59.37**	**295**	P	**P**	**11 45 12.2**	**+1.7**
	comp=Z,4µmcomp=Z,515nm,0.8s						
UTTA	**Uttaradit**	**59.43**	**295**	P	**P**	**11 45 12.0**	**+1.2**
	comp=Z,2µmcomp=Z,214nm,0.8s						
NANT	**Nan**	**59.66**	**296**	P	**P**	**11 45 13.7**	**+1.3**
	comp=Z,22µmcomp=Z,2µm,0.9s						
UTHA	**Uthaitani**	**59.74**	**293**	P	**P**	**11 45 13.9**	**+1.0**
	comp=Z,1µmcomp=Z,183nm,0.8s						
KLR	**Kul'dur**	**59.75**	**342**	*c i*P	**P**	**11 45 12.3**	**-0.1**
KLR				pmax	pmax		
	comp=Z,25nm,1.2s						
GRNR	**Gornyy**	**59.89**	**346**	⇓*i*P	**P**	**11 45 13.7**	**+0.3**
GRNR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
PET	**Petropavlovsk**	**59.94**	**2**	*e*P	**P**	**11 45 11.8**	**-1.8**
PET				*e*		11 45 59.0	
PET				*e*S	**S**	**11 53 18.4**	**-1.3**
PET				pmax	pmax		
	comp=Z,73nm,0.9s						
PET				pmax	pmax		
	comp=Z,300nm,12.9s						
PET	**Petropavlovsk**	**59.94**	**2**	P	**P**	**11 45 14.4**	**+0.8**
PET				IAmb	IAmb	11 45 15.0	
	comp=Z,45nm,0.9s						
PEA0B	**Petropavlovsk-**	**59.99**	**2**	P	**P**	**11 45 14.6**	**+0.6**
PEA0B				pmax	pmax		
	comp=Z,156nm,1.1s						
PEA0B	**Petropavlovsk-**	**59.99**	**2**	P	**P**	**11 45 14.6**	**+0.6**
PETK	**Petropavlovsk-**	**59.99**	**2**	P	**P**	**11 45 14.6**	**+0.5**
	comp=Z,101nm,0.8s,baz=166,slow=7.6,SNR=91						
PETK	**Petropavlovsk-**	**59.99**	**2**	P	**P**	**11 45 13.8**	**-0.2**
PETK	**Petropavlovsk-**	**59.99**	**2**	P	**P**	**11 45 13.8**	**-0.2**
XAN	**Xi'an**	**59.99**	**316**	P	**P**	**11 45 13.3**	**-1.2**
XAN				pmax	pmax		
	comp=Z,43nm,0.7s						
XAN				LR	LR		
	comp=Z,520nm,17.4s						
XAN				LR	LR		
	comp=Z,540nm,19.5s						
XAN				LR	LR		
	comp=Z,640nm,20.6s						
XAN	**Xi'an**	**59.99**	**316**	P	**P**	**11 45 14.7**	**+0.2**
XAN				pmax	pmax		
	comp=Z,27nm,0.6s						
XAN	**Xi'an**	**59.99**	**316**	P	**P**	**11 45 14.7**	**+0.2**
XAN				IAmb	IAmb	11 45 15.2	
	comp=Z,27nm,0.6s						
SUKH	**Sukhothai**	**60.18**	**295**	P	**P**	**11 45 17.3**	**+1.4**
	comp=Z,2µmcomp=Z,210nm,0.8s						
KMI	**Kunming**	**60.33**	**304**	⇑P	**P**	**11 45 18.8**	**+1.6**
KMI				pP	pwP	11 45 37.8	-1.2
KMI				sP	sP	11 45 44.0	-1.1
KMI				PcP	**PcP**	**11 46 02.5**	**+0.8**
KMI				S	**S**	**11 53 23.3**	**-3.0**
KMI				sS	sS	11 53 57.3	+0.5
KMI				SS	**SS**	**11 57 24.5**	**-0.8**
KMI				pmax	pmax		
	comp=Z,72nm,1.3s						
KMI				pmax	pmax		
	comp=Z,260nm,3.5s						
KMI				LR	LR		
	comp=Z,350nm,22.1s						
KMI				LR	LR		
	comp=Z,380nm,22.1s						
KMI				LR	LR		
	comp=Z,610nm,27.3s						
KMI	**Kunming**	**60.33**	**304**	P	**P**	**11 45 19.0**	**+1.8**
KMI				pmax	pmax		
	comp=Z,100nm,1.2s						
KMI	**Kunming**	**60.33**	**304**	P	**P**	**11 45 19.0**	**+1.8**
UMPA	**Umpang Tak**	**60.47**	**293**	P	**P**	**11 45 19.0**	**+1.0**
	comp=Z,2µmcomp=Z,95nm,0.7s						
LAMP	**Lampang**	**60.52**	**296**	P	**P**	**11 45 19.0**	**+0.7**
	comp=Z,2µmcomp=Z,294nm,0.8s						
CM36	**Chiang Mai Arr**	**61.00**	**296**	P	**P**	**11 45 22.0**	**+0.4**
CM35	**Chiang Mai Arr**	**61.00**	**296**	P	**P**	**11 45 22.0**	**+0.4**
CM34	**Chiang Mai Arr**	**61.06**	**296**	P	**P**	**11 45 22.0**	**0.0**
CM04	**Chiang Mai Arr**	**61.06**	**295**	P	**P**	**11 45 23.2**	**+1.2**
	comp=Z,948nmcomp=Z,119nm,0.9s						
CM09	**Chiang Mai Arr**	**61.07**	**295**	P	**P**	**11 45 23.4**	**+1.4**
	comp=Z,1µmcomp=Z,138nm,0.8s						
CM01	**Chiang Mai Arr**	**61.09**	**295**	P	**P**	**11 45 23.6**	**+1.5**
	comp=Z,880nmcomp=Z,122nm,0.9s						
CM05	**Chiang Mai Arr**	**61.09**	**295**	P	**P**	**11 45 23.4**	**+1.2**
	comp=Z,753nmcomp=Z,94nm,0.8s						
CM02	**Chiang Mai Arr**	**61.10**	**295**	P	**P**	**11 45 23.0**	**+0.7**
	comp=Z,863nmcomp=Z,122nm,0.9s						
CM31	**Chiang Mai Arr**	**61.12**	**295**	P	**P**	**11 45 24.0**	**+1.7**
	comp=Z,26µmcomp=Z,3µm,0.7s						
CM31	**Chiang Mai Arr**	**61.12**	**295**	P	**P**	**11 45 23.7**	**+1.3**
CMAR	**Chiang Mai Arr**	**61.12**	**295**	P	**P**	**11 45 23.6**	**+1.3**
	comp=Z,63nm,0.7s,baz=122,slow=5.4,SNR=291						
CMAR				PKPPKP	**P'P'df**	**12 14 38.1**	**-1.0**
	comp=Z,1.3nm,0.8s,baz=258,slow=4.8,SNR=5.6						
CM15	**Chiang Mai Arr**	**61.13**	**295**	P	**P**	**11 45 23.9**	**+1.5**
	comp=Z,961nmcomp=Z,140nm,0.8s						
CM13	**Chiang Mai Arr**	**61.13**	**295**	P	**P**	**11 45 23.6**	**+1.2**
	comp=Z,721nmcomp=Z,99nm,0.9s						
CMMT	**Chiang Mai**	**61.23**	**296**	P	**P**	**11 45 22.0**	**-1.1**
	comp=Z,437nmcomp=Z,52nm,1.2s						
CM33	**Chiang Mai Arr**	**61.23**	**296**	P	**P**	**11 45 23.0**	**-0.1**
CHTO	**Chiang Mai**	**61.23**	**296**	P	**P**	**11 45 23.5**	**+0.4**
CHTO				pmax	pmax		
	comp=Z,70nm,0.9s						
CHTO	**Chiang Mai**	**61.23**	**296**	P	**P**	**11 45 23.5**	**+0.4**
CM32	**Chiang Mai Arr**	**61.27**	**296**	P	**P**	**11 45 24.0**	**+0.6**
MHMT	**Maesarieng**	**61.93**	**295**	P	**P**	**11 45 28.0**	**+0.2**
CD2	**Chengdu**	**62.12**	**310**	P	**P**	**11 45 29.8**	**+0.9**
CD2				pmax	pmax		
	comp=Z,70nm,0.7s						
HHC	**Hu-ho-hao-te**	**62.35**	**324**	*e*P	**P**	**11 45 30.0**	**-0.4**
HHC				pmax	pmax		
	comp=Z,18nm,0.9s						
HHC				pmax	pmax		
	comp=Z,300nm,7.8s						
BTO	**Baotou**	**63.12**	**323**	*e*P	**P**	**11 45 33.5**	**-2.0**
ADK	**Adak**	**63.44**	**19**	P	**P**	**11 45 37.3**	**+0.1**
ADK				pmax	pmax		
	comp=Z,81nm,0.7s						
ADK	**Adak**	**63.44**	**19**	P	**P**	**11 45 37.3**	**+0.1**
LZH	**Lanzhou**	**64.61**	**315**	*e*P	**P**	**11 45 46.0**	**+0.6**
LZH				pP	pP	11 46 05.5	+0.5
LZH				sP	sP	11 46 13.0	-0.5
LZH				pmax	pmax		
	comp=Z,18nm,1.0s						
LZH				pmax	pmax		
	comp=Z,63nm,4.9s						
LZH				LR	LR		
	comp=Z,390nm,14.6s						
LZH				LR	LR		
	comp=Z,340nm,15.7s						
LZH				LR	LR		
	comp=Z,310nm,15.2s						
ZEA	**Zeya**	**65.06**	**342**	*e*P	**P**	**11 45 47.8**	**+0.1**
ZEA				pmax	pmax		
	comp=N,30nm,0.7s						
ZEA				pmax	pmax		
	comp=Z,60nm,0.9s						
MA2	**Magadan**	**66.54**	**357**	*c i*P	**P**	**11 45 56.9**	**-0.3**
MA2				pmax	pmax		
	comp=Z,56nm,0.7s						
MA2	**Magadan**	**66.54**	**357**	P	**P**	**11 45 57.1**	**-0.1**
NIKH	**Nikolski High**	**67.10**	**23**	P	**P**	**11 46 01.3**	**+0.4**
	baz=219						
MOKO	**MOKOCHONG**	**67.64**	**302**	*e*P	**P**	**11 46 03.8**	**-1.2**
SAIH	**SAIHA**	**67.69**	**298**	*e*P	**P**	**11 46 05.6**	**+0.2**
KOHI	**KOHIMA**	**67.78**	**301**	*e*P	**P**	**11 46 04.9**	**-1.0**
KOHI				IAmb	IAmb	11 46 07.7	
	comp=Z,40nm,0.5s						
RKT	**Rikitea**	**68.61**	**112**	*e*LR	LR	12 07 09.7	
	comp=Z,2µm,25.8s						
UNV	**Unalaska Valle**	**68.67**	**23**	P	**P**	**11 46 10.7**	**0.0**
	baz=221						
GTA	**Gaotai**	**69.03**	**317**	⇑P	**P**	**11 46 13.8**	**+0.4**
GTA				pP	PcP	11 46 36.5	-0.6
GTA				pmax	pmax		
	comp=Z,13nm,1.4s						
GTA				pmax	pmax		
	comp=Z,330nm,5.5s						
GTA				LR	LR		
	comp=Z,390nm,18.2s						
GTA				LR	LR		
	comp=Z,320nm,18.5s						
GTA				LR	LR		
	comp=Z,550nm,18.5s						
ULN	**Ulaanbaatar**	**69.25**	**327**	*c i*P	**P**	**11 46 15.1**	**+0.5**
ULN				pmax	pmax		
	comp=Z,25nm,0.9s						
ULN	**Ulaanbaatar**	**69.25**	**327**	P	**P**	**11 46 14.4**	**-0.2**
ULN				IAmb	IAmb	11 46 16.3	
	comp=Z,24nm,0.9s						
SONM	**Songino Array**	**69.58**	**327**	P	**P**	**11 46 17.0**	**+0.3**
	comp=Z,24nm,0.9s,baz=130,slow=6.6,SNR=88						
SONM				PKPPKP	**P'P'df**	**12 14 24.6**	**+1.7**
	comp=Z,4.3nm,0.9s,baz=289,slow=3.1,SNR=18						
SONM				LR	LR	12 15 47.7	
	comp=Z,156nm,21.5s,baz=128,slow=35						
SONM	**Songino Array**	**69.58**	**327**	P	**P**	**11 46 16.6**	**-0.1**
SONM				pmax	pmax		
	comp=Z,26nm,1.0s						
SONM	**Songino Array**	**69.58**	**327**	P	**P**	**11 46 16.6**	**-0.1**
SONM				IAmb	IAmb	11 46 18.2	
	comp=Z,26nm,1.0s						
SHL	**Shillong**	**69.62**	**300**	P	**P**	**11 46 16.9**	**-0.5**
SHL				pmax	pmax		
	comp=Z,129nm,0.8s						
SHL	**Shillong**	**69.62**	**300**	*e*P	**P**	**11 46 17.5**	**+0.1**
SHL				IAmb	IAmb	11 46 19.0	
	comp=Z,64nm,1.0s						
SHL				*e*x	x	11 50 07.7	
SHL	**Shillong**	**69.62**	**300**	P	**P**	**11 46 16.9**	**-0.5**
SEY	**Seymchan**	**69.85**	**359**	*i* P	**P**	**11 46 17.5**	**-0.3**
SPIA	**Saint Paul Isl**	**69.93**	**19**	P	**P**	**11 46 18.5**	**+0.2**
	baz=217						
GUWA	**GUWAHATI**	**69.98**	**301**	*e*P	**P**	**11 46 19.4**	**0.0**
VNDA	**Vanda**	**70.49**	**178**	P	**P**	**11 46 22.6**	**+1.0**
	comp=Z,9.6nm,0.8s,baz=333,slow=5.2,SNR=20						
VNDA				LR	LR	12 13 42.8	
	comp=Z,366nm,18.1s,baz=6.5,slow=33						
VNDA	**Vanda**	**70.49**	**178**	P	**P**	**11 46 22.5**	**+1.0**
VNDA				pmax	pmax		
	comp=Z,11nm,0.9s						
VNDA	**Vanda**	**70.49**	**178**	P	**P**	**11 46 22.5**	**+1.0**
LSA	**Lhasa**	**71.59**	**304**	P	**P**	**11 46 30.5**	**+0.8**
LSA				pmax	pmax		
	comp=Z,220nm,1.0s						
LSA	**Lhasa**	**71.59**	**304**	P	**P**	**11 46 30.8**	**+1.1**
LSA				pmax	pmax		
	comp=Z,48nm,0.9s						
LSA	**Lhasa**	**71.59**	**304**	P	**P**	**11 46 30.8**	**+1.1**
LSA				IAmb	IAmb	11 46 32.1	
	comp=Z,48nm,0.9s						
YAK	**Yakutsk**	**71.71**	**348**	*c i*P	**P**	**11 46 28.4**	**-0.7**
YAK				*e**PP	PcP	11 46 38.5	-9.2
YAK				*e*		11 46 44.2	
YAK				*e*S	**S**	**11 55 42.6**	**0.0**
YAK				*e**SS	**pS**	**11 56 09.4**	**+1.9**
YAK				*e*		11 56 34.1	
YAK				*e*SSS	SSS	12 03 22.7	
YAK				pmax	pmax		
	comp=Z,93nm,1.4s						
YAK				pmax	pmax		
	comp=N,20nm,1.5s						
YAK				pmax	pmax		
	comp=E,11nm,1.5s						
YAK				pmax	pmax		
	comp=Z,177nm,3.8s						
YAK				pmax	pmax		
	comp=N,116nm,4.1s						
YAK				pmax	pmax		
	comp=E,196nm,4.9s						
YAK				smax	smax		
	comp=N,426nm,6.8s						
YAK				smax	smax		
	comp=E,71nm,3.6s						
YAK	**Yakutsk**	**71.71**	**348**	P	**P**	**11 46 28.5**	**-0.6**
YAK				IAmb	IAmb	11 46 33.9	
	comp=Z,63nm,0.8s						
SDPT	**Sand Point**	**72.19**	**25**	P	**P**	**11 46 32.1**	**0.0**
	baz=227						
CHNA	**Chernabura Isl**	**72.21**	**25**	P	**P**	**11 46 31.4**	**-0.8**
	baz=228						
ZAK	**Zakamensk**	**72.74**	**328**	*e*P	**P**	**11 46 35.1**	**-0.5**
ZAK				pmax	pmax		
	comp=Z,27nm,1.0s						
BOD	**Bodaibo**	**72.81**	**338**	*e*P	**P**	**11 46 35.4**	**-0.4**
BOD				pmax	pmax		
	comp=Z,12nm,1.0s						
GTK	**Tadong**	**72.96**	**301**	*e*P	**P**	**11 46 38.2**	**+0.7**
GTK				IAmb	IAmb	11 46 39.9	
	comp=Z,28nm,0.7s						
TLY	**Talaya**	**73.30**	**329**	*i* P	**P**	**11 46 37.9**	**-0.9**
TLY				pmax	pmax		
	comp=Z,15nm,1.1s						
TLY	**Talaya**	**73.30**	**329**	P	**P**	**11 46 39.1**	**+0.3**
BWNR	**Bhubaneshwar**	**73.52**	**294**	*e*P	**P**	**11 46 38.9**	**-1.7**
CHGN	**Chignik**	**73.69**	**25**	P	**P**	**11 46 39.9**	**-1.0**
	baz=228						
CHGN	**Chignik**	**73.69**	**25**	P	**P**	**11 46 40.2**	**-0.7**
CHGN				IAmb	IAmb	11 46 45.6	
	comp=Z,25nm,1.0s						
TAPN	**Taplejung**	**73.72**	**301**	*e*P	**P**	**11 46 42.9**	**+0.7**
	comp=Z,222nm,0.9s						
ODAN	**Odare**	**73.86**	**300**	*e*P	**P**	**11 46 43.7**	**+0.8**
	comp=Z,366nm,0.8s						
BOK	**Bokaro**	**74.33**	**297**	*e*P	**P**	**11 46 45.6**	**+0.3**
BOK				IAmb	IAmb	11 46 48.0	
	comp=Z,116nm,1.1s						
RAMN	**Ramite**	**74.56**	**300**	*e*P	**P**	**11 46 47.3**	**+0.3**
	comp=Z,73nm,0.8s						
MOY	**Mondy**	**74.66**	**328**	*e*P	**P**	**11 46 46.9**	**+0.1**
MOY				pmax	pmax		
	comp=Z,32nm,1.3s						
GUN	**Gumba**	**75.44**	**301**	*e*P	**P**	**11 46 52.6**	**+0.4**
	comp=Z,225nm,0.8s						
SII	**Sitkinak Islan**	**75.67**	**26**	P	**P**	**11 46 52.0**	**-0.4**
	baz=232						
SII	**Sitkinak Islan**	**75.67**	**26**	P	**P**	**11 46 52.4**	**0.0**
SII				IAmb	IAmb	11 46 53.4	
	comp=Z,45nm,0.8s						
PKI	**Pulchoki**	**75.75**	**301**	*e*P	**P**	**11 46 54.1**	**+0.2**

	comp=Z,202nm,1.1s						
PKIN	**Phulchoki**	**75.76**	**301**	*e*P	**P**	**11 46 53.9**	**0.0**
	comp=Z,271nm,1.3s						
PALK	**Pallekele**	**75.78**	**279**	P	**P**	**11 46 54.5**	**+0.5**
	comp=Z,9.0nm,0.7s,baz=199,slow=5.2,SNR=8.2						
PALK	**Pallekele**	**75.78**	**279**	P	**P**	**11 46 54.0**	**0.0**
PALK				pmax	pmax		
	comp=Z,15nm,0.9s						
PALK	**Pallekele**	**75.78**	**279**	P	**P**	**11 46 54.0**	**0.0**
KKN	**Kakani**	**75.92**	**301**	*e*P	**P**	**11 46 55.2**	**+0.5**
	comp=Z,118nm,0.8s						
DMN	**Daman**	**76.02**	**301**	*e*P	**P**	**11 46 56.0**	**+0.6**
	comp=Z,315nm,1.0s						
OHAK	**Old Harbor**	**76.46**	**26**	P	**P**	**11 46 56.9**	**+0.1**
	baz=233,SNR=14						
OHAK	**Old Harbor**	**76.46**	**26**	P	**P**	**11 46 57.2**	**+0.4**
OHAK				IAmb	IAmb	11 47 01.7	
	comp=Z,42nm,0.8s						
GKN	**Gorkha**	**76.52**	**301**	*e*P	**P**	**11 46 58.5**	**+0.4**
	comp=Z,281nm,1.0s						
KDAK	**Kodiak Island**	**77.10**	**26**	P	**P**	**11 47 00.4**	**0.0**
	comp=Z,37nm,0.8s,baz=250,slow=5.5						
KDAK	**Kodiak Island**	**77.10**	**26**	P	**P**	**11 47 00.1**	**-0.3**
	baz=233						
KDAK	**Kodiak Island**	**77.10**	**26**	*i* P	**P**	**11 46 59.9**	**-0.5**
KDAK				pmax	pmax		
	comp=Z,44nm,0.9s						
KDAK	**Kodiak Island**	**77.10**	**26**	P	**P**	**11 47 00.4**	**0.0**
KDAK				IAmb	IAmb	11 47 04.6	
	comp=Z,28nm,0.8s						
ANM	**Nome**	**77.22**	**16**	P	**P**	**11 47 01.6**	**+0.6**
	baz=220						
ANM	**Nome**	**77.22**	**16**	P	**P**	**11 47 01.0**	**0.0**
ANM				pmax	pmax		
	comp=Z,37nm,0.8s						
ANM	**Nome**	**77.22**	**16**	P	**P**	**11 47 01.0**	**0.0**
ANM				IAmb	IAmb	11 47 02.7	
	comp=Z,36nm,0.8s						
SVW2	**Sparrevohn**	**77.95**	**22**	P	**P**	**11 47 05.6**	**+0.4**
SVW2				IAmb	IAmb	11 47 10.4	
	comp=Z,33nm,0.8s						
HOM	**Homer**	**78.61**	**24**	P	**P**	**11 47 09.0**	**+0.2**
	baz=234						
RSO	**Redoubt South**	**78.64**	**23**	P	**P**	**11 47 08.9**	**-0.3**
CNPM	**China Poot**	**78.70**	**25**	P	**P**	**11 47 09.5**	**+0.2**
BRLK	**Bradley Lake**	**78.98**	**25**	P	**P**	**11 47 10.6**	**-0.4**
BRLK				IAmb	IAmb	11 47 15.8	
	comp=Z,33nm,0.8s						
TTA	**Tatalina**	**78.99**	**20**	P	**P**	**11 47 11.7**	**+0.7**
	baz=229,SNR=23						
TTA	**Tatalina**	**78.99**	**20**	P	**P**	**11 47 10.9**	**0.0**
TTA				pmax	pmax		
	comp=Z,50nm,1.2s						
TTA	**Tatalina**	**78.99**	**20**	P	**P**	**11 47 10.9**	**0.0**
TTA				IAmb	IAmb	11 47 12.7	
	comp=Z,50nm,1.2s						
BRSE	**Bradley Lake S**	**79.03**	**25**	P	**P**	**11 47 11.3**	**+0.2**
	baz=235						
WMQ	**Urumqi**	**79.11**	**317**	*e*P	**P**	**11 47 12.0**	**0.0**
WMQ				pP	pP	11 47 32.0	-0.4
WMQ				pmax	pmax		
	comp=Z,18nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,560nm,5.9s						
WMQ				LR	LR		
	comp=Z,470nm,14.9s						
WMQ				LR	LR		
	comp=Z,380nm,18.5s						
SPCR	**Spurr Chakacha**	**79.30**	**23**	P	**P**	**11 47 12.0**	**-0.7**
	baz=233						
CAPN	**Captain Cook N**	**79.46**	**24**	P	**P**	**11 47 14.5**	**+1.1**
	baz=234,SNR=9.3						
HYB	**Hyderabad**	**79.61**	**289**	*i* P	**P**	**11 47 14.0**	**-1.2**
HYB	**Hyderabad**	**79.61**	**289**	*e*P	**P**	**11 47 13.3**	**-1.9**
HYB				IAmb	IAmb	11 47 15.4	
	comp=Z,18nm,0.4s						
SEW	**Seward**	**79.77**	**25**	P	**P**	**11 47 15.1**	**0.0**
	baz=236,SNR=5.8						
SEW	**Seward**	**79.77**	**25**	P	**P**	**11 47 15.7**	**+0.7**
SEW				IAmb	IAmb	11 47 16.4	
	comp=Z,35nm,0.9s						
O22K	**Cooper Landing**	**79.87**	**24**	P	**P**	**11 47 15.8**	**+0.2**
	baz=236,SNR=11						
O22K	**Cooper Landing**	**79.87**	**24**	P	**P**	**11 47 15.5**	**-0.1**
SUA	**Susitna One**	**80.03**	**23**	P	**P**	**11 47 16.1**	**-0.6**
	baz=234,SNR=43						
SUA	**Susitna One**	**80.03**	**23**	P	**P**	**11 47 16.0**	**-0.6**
SUA				IAmb	IAmb	11 47 20.9	
	comp=Z,42nm,0.6s						
SKT	**Skwentna**	**80.03**	**23**	P	**P**	**11 47 15.1**	**-1.4**
	baz=234,SNR=7.9						
SKT	**Skwentna**	**80.03**	**23**	P	**P**	**11 47 15.3**	**-1.2**
RC01	**Rabbit Creek A**	**80.21**	**24**	P	**P**	**11 47 17.5**	**0.0**
	baz=236,SNR=30						
PPLA	**Purkeypile**	**80.33**	**22**	P	**P**	**11 47 17.8**	**-0.5**
	baz=233,SNR=9.0						
PPLA	**Purkeypile**	**80.33**	**22**	P	**P**	**11 47 18.2**	**-0.1**
PPLA				IAmb	IAmb	11 47 19.1	
	comp=Z,75nm,1.6s						
TIXI	**Tiksi**	**80.49**	**352**	*ce*P	**P**	**11 47 17.5**	**-1.2**
TIXI				pmax	pmax		
	comp=Z,115nm,1.7s						
TIXI	**Tiksi**	**80.49**	**352**	P	**P**	**11 47 18.5**	**-0.2**
CUT	**Chulitna**	**80.76**	**23**	P	**P**	**11 47 19.6**	**-0.8**
	baz=235,SNR=9.6						
CHUM	**Lake Minchumin**	**80.88**	**21**	P	**P**	**11 47 21.5**	**+0.5**
	baz=233,SNR=38						
HIN	**Hinchinbrook I**	**81.17**	**25**	P	**P**	**11 47 22.9**	**+0.3**
HIN				IAmb	IAmb	11 47 24.0	
	comp=Z,40nm,0.8s						
GLI	**Glacier Island**	**81.17**	**25**	P	**P**	**11 47 22.7**	**0.0**
	baz=238						
GLI	**Glacier Island**	**81.17**	**25**	P	**P**	**11 47 22.6**	**0.0**
GLI				IAmb	IAmb	11 47 23.9	
	comp=Z,45nm,0.8s						
SML	**Sawmill**	**81.17**	**24**	P	**P**	**11 47 23.2**	**+0.5**
	baz=237,SNR=52						
SML	**Sawmill**	**81.17**	**24**	P	**P**	**11 47 22.7**	**0.0**
KTH	**Kantishna Hill**	**81.19**	**21**	P	**P**	**11 47 21.8**	**-0.9**
KTH				IAmb	IAmb	11 47 26.5	
	comp=Z,44nm,0.9s						
TRF	**Thorofare Moun**	**81.36**	**22**	P	**P**	**11 47 22.9**	**-0.9**
	baz=235,SNR=45						
TRF	**Thorofare Moun**	**81.36**	**22**	P	**P**	**11 47 22.9**	**-0.9**
TRF				IAmb	IAmb	11 47 25.8	
	comp=Z,54nm,0.8s						
DGZ	**Jazzator, Alta**	**81.41**	**323**	*c i*P	**P**	**11 47 23.5**	**-0.8**
DGZ				pmax	pmax		
	comp=Z,11nm,0.7s						
BPAW	**Bear Paw Mtn.**	**81.48**	**21**	P	**P**	**11 47 23.7**	**-0.5**
	baz=234						
BPAW	**Bear Paw Mtn.**	**81.48**	**21**	P	**P**	**11 47 23.4**	**-0.8**
EYAK	**Cordova Ski Ar**	**81.56**	**25**	P	**P**	**11 47 24.7**	**0.0**
	baz=239						
EYAK	**Cordova Ski Ar**	**81.56**	**25**	P	**P**	**11 47 24.4**	**-0.2**
EYAK				IAmb	IAmb	11 47 41.1	
	comp=Z,59nm,1.6s						
SCM	**Sheep Creek Mo**	**81.59**	**24**	P	**P**	**11 47 25.5**	**+0.6**
SCM				pmax	pmax		
	comp=Z,63nm,0.8s						
SCM	**Sheep Creek Mo**	**81.59**	**24**	P	**P**	**11 47 25.4**	**+0.6**
BHPL	**Bhopal**	**81.76**	**295**	*e*P	**P**	**11 47 25.3**	**-1.4**
BHPL				IAmb	IAmb	11 47 26.6	
	comp=Z,66nm,0.7s						
KAIM	**Kayak Island**	**81.83**	**26**	P	**P**	**11 47 26.4**	**+0.3**
	baz=240						
RND	**Reindeer**	**81.86**	**22**	P	**P**	**11 47 25.6**	**-0.7**
RND				pmax	pmax		
	comp=Z,58nm,0.8s						
RND	**Reindeer**	**81.86**	**22**	P	**P**	**11 47 25.6**	**-0.7**
RAGM	**Ragged Mountai**	**81.94**	**26**	P	**P**	**11 47 27.0**	**+0.3**
RAGM				IAmb	IAmb	11 47 28.6	
	comp=Z,65nm,1.4s						
KLU	**Klutina**	**81.98**	**24**	P	**P**	**11 47 27.6**	**+0.5**
	baz=239						
KLU	**Klutina**	**81.98**	**24**	P	**P**	**11 47 27.5**	**+0.5**
MCK	**McKinley**	**82.01**	**22**	P	**P**	**11 47 26.5**	**-0.5**
	baz=236,SNR=90						
BWN	**Browne**	**82.07**	**21**	P	**P**	**11 47 28.4**	**+1.1**
HMT	**Hamilton**	**82.10**	**26**	P	**P**	**11 47 28.3**	**+0.8**
HMT				IAmb	IAmb	11 47 29.9	
	comp=Z,24nm,0.7s						
MLY	**Manley**	**82.12**	**20**	P	**P**	**11 47 27.6**	**0.0**
	baz=234,SNR=38						
M24K	**Tolsona, Glenn**	**82.20**	**24**	P	**P**	**11 47 28.9**	**+0.8**
	baz=239,SNR=27						
M24K	**Tolsona, Glenn**	**82.20**	**24**	P	**P**	**11 47 29.3**	**+1.2**
BMRM	**Bremner River**	**82.26**	**25**	P	**P**	**11 47 28.7**	**+0.3**
	baz=240,SNR=12						
NEA2	**Nenana**	**82.45**	**21**	P	**P**	**11 47 28.6**	**-0.7**
	baz=236,SNR=54						
N25K	**Chitina, Valde**	**82.58**	**25**	P	**P**	**11 47 30.8**	**+0.7**
	baz=240,SNR=28						
N25K	**Chitina, Valde**	**82.58**	**25**	P	**P**	**11 47 30.8**	**+0.7**
N25K				IAmb	IAmb	11 47 32.0	
	comp=Z,94nm,1.6s						
I23K	**Minto, Yukon-K**	**82.66**	**21**	P	**P**	**11 47 30.0**	**-0.3**
	baz=235,SNR=21						
I23K	**Minto, Yukon-K**	**82.66**	**21**	P	**P**	**11 47 30.1**	**-0.3**
WRH	**Wood River Hil**	**82.73**	**21**	P	**P**	**11 47 30.2**	**-0.5**
WRH				IAmb	IAmb	11 47 32.9	
	comp=Z,30nm,0.9s						
GLB	**Gilahina Butte**	**82.83**	**25**	P	**P**	**11 47 31.0**	**-0.4**
GLB				IAmb	IAmb	11 47 33.0	
	comp=Z,58nm,0.9s						
VRDI	**Verde Repeater**	**82.88**	**25**	P	**P**	**11 47 31.4**	**-0.4**
VRDI				IAmb	IAmb	11 47 33.3	
	comp=Z,36nm,0.9s						
QSPA	**South Pole Qui**	**82.89**	**180**	P	**P**	**11 47 33.0**	**+1.3**
	comp=Z,48nm,0.8s,baz=350,slow=1.3,SNR=146						
QSPA	**South Pole Qui**	**82.89**	**180**	P	**P**	**11 47 33.1**	**+1.3**
QSPA				IAmb	IAmb	11 47 34.4	
	comp=Z,67nm,0.9s						
PAX	**Paxson**	**82.92**	**23**	P	**P**	**11 47 31.7**	**-0.2**
	baz=239,SNR=13						
PAX	**Paxson**	**82.92**	**23**	P	**P**	**11 47 31.5**	**-0.4**
PAX				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PAX	**Paxson**	**82.92**	**23**	P	**P**	**11 47 31.5**	**-0.4**
CCB	**Clear Creek Bu**	**82.93**	**21**	P	**P**	**11 47 31.0**	**-0.8**
CCB				IAmb	IAmb	11 47 33.6	
	comp=Z,26nm,0.8s						
MDM	**Murphy Dome**	**82.95**	**21**	P	**P**	**11 47 31.4**	**-0.6**
MDM				IAmb	IAmb	11 47 32.5	
	comp=Z,39nm,1.1s						
TCOL	**CIGO, UAF Yank**	**83.04**	**21**	P	**P**	**11 47 31.7**	**-0.6**
	baz=237,SNR=32						
TCOL	**CIGO, UAF Yank**	**83.04**	**21**	P	**P**	**11 47 31.3**	**-1.0**
COLA	**College**	**83.04**	**21**	P	**P**	**11 47 31.4**	**-0.9**
COLA				pmax	pmax		
	comp=Z,83nm,1.0s						
COLA	**College**	**83.04**	**21**	P	**P**	**11 47 31.4**	**-0.9**
HDA	**Harding Lake**	**83.12**	**22**	P	**P**	**11 47 32.2**	**-0.6**
	baz=238						
HDA	**Harding Lake**	**83.12**	**22**	P	**P**	**11 47 31.9**	**-0.8**
HDA				IAmb	IAmb	11 47 35.7	
	comp=Z,29nm,0.8s						
MCARA	**McCarthy VSAT**	**83.14**	**25**	P	**P**	**11 47 33.4**	**+0.5**
	baz=242,SNR=34						
MCARA	**McCarthy VSAT**	**83.14**	**25**	P	**P**	**11 47 33.1**	**+0.3**
MCARA				IAmb	IAmb	11 47 35.1	
	comp=Z,44nm,0.8s						
BALM	**Baldy**	**83.26**	**26**	P	**P**	**11 47 33.4**	**-0.3**
BALM				IAmb	IAmb	11 47 35.2	
	comp=Z,38nm,0.8s						
POKR	**Poker Plat Res**	**83.33**	**21**	P	**P**	**11 47 32.9**	**-0.9**
	baz=237,SNR=15						
POKR	**Poker Plat Res**	**83.33**	**21**	P	**P**	**11 47 32.3**	**-1.5**
POKR				IAmb	IAmb	11 47 34.0	
	comp=Z,26nm,1.1s						
IL31		**83.33**	**21**	P	**P**	**11 47 32.3**	**-1.5**
IL31				IAmb	IAmb	11 47 34.1	
	comp=Z,47nm,1.2s						
ILAR	**Eielson Array**	**83.33**	**21**	P	**P**	**11 47 32.9**	**-1.0**
	comp=Z,24nm,1.0s,baz=256,slow=4.8,SNR=172						
ILAR				PKKP	**PKKPdf**	**12 05 47.8**	**+0.3**
	comp=Z,0.3nm,1.0s,baz=90,slow=0.9,SNR=2.4						
ILAR				LR	LR	12 20 52.9	
	comp=Z,778nm,20.7s,baz=238,slow=33						
ILAR	**Eielson Array**	**83.33**	**21**	P	**P**	**11 47 32.5**	**-1.4**
ILAR	**Eielson Array**	**83.33**	**21**	P	**P**	**11 47 32.5**	**-1.4**
TABL	**Table Mountain**	**83.51**	**27**	P	**P**	**11 47 35.5**	**+0.3**
COLD	**Coldfoot**	**83.59**	**19**	P	**P**	**11 47 36.0**	**+0.9**
	baz=234,SNR=40						
COLD	**Coldfoot**	**83.59**	**19**	P	**P**	**11 47 35.8**	**+0.7**
COLD				IAmb	IAmb	11 47 37.4	
	comp=Z,86nm,1.7s						
SMLA	**Simla**	**83.59**	**302**	*e*P	**P**	**11 47 35.8**	**-0.1**
SMLA				IAmb	IAmb	11 47 40.3	
	comp=Z,35nm,0.6s						
MENT	**Mentasta**	**83.60**	**24**	P	**P**	**11 47 35.6**	**+0.3**
MENT				IAmb	IAmb	11 47 41.0	
	comp=Z,27nm,0.8s						
MK31	**Makanchi Array**	**83.68**	**319**	P	**P**	**11 47 35.6**	**-0.5**
MK31				pmax	pmax		
	comp=Z,14nm,0.7s						
MK31	**Makanchi Array**	**83.68**	**319**	P	**P**	**11 47 35.6**	**-0.5**
MKAR	**Makanchi Array**	**83.68**	**319**	P	**P**	**11 47 36.0**	**0.0**
	comp=Z,16nm,0.7s,baz=104,slow=5.3,SNR=155						
MKAR				PKKPbc	**PKKPbc**	**12 05 52.6**	**-2.4**
	comp=Z,1.7nm,0.8s,baz=292,slow=2.6,SNR=13						
MKAR				PKPPKP	**P'P'df**	**12 13 57.6**	**-0.6**
	comp=Z,0.8nm,0.8s,baz=198,slow=1.4,SNR=4.3						
MKAR				LR	LR	12 26 59.0	
	comp=Z,201nm,19.0s,baz=60,slow=37						
MKAR	**Makanchi Array**	**83.68**	**319**	P	**P**	**11 47 35.2**	**-0.9**
DOT	**Dot Lake**	**83.81**	**23**	P	**P**	**11 47 36.0**	**-0.4**
MAKZ	**Makanchi**	**83.89**	**319**	P	**P**	**11 47 36.6**	**-0.6**
MAKZ				pmax	pmax		
	comp=Z,23nm,0.8s						
MAKZ	**Makanchi**	**83.89**	**319**	P	**P**	**11 47 36.6**	**-0.6**
MAKZ				IAmb	IAmb	11 47 43.5	
	comp=Z,22nm,0.8s						
SCRK	**Sand Creek**	**84.01**	**23**	P	**P**	**11 47 37.9**	**+0.5**
	baz=240						
PRP	**Porcupine Dome**	**84.22**	**21**	P	**P**	**11 47 36.9**	**-1.6**
A21K	**Barrow**	**84.39**	**14**	P	**P**	**11 47 39.5**	**+0.4**
	baz=228,SNR=9.3						
A21K	**Barrow**	**84.39**	**14**	P	**P**	**11 47 39.2**	**+0.2**
ZAA0	**Zalesovo Array**	**84.43**	**326**	P	**P**	**11 47 38.1**	**-1.6**
ZALV	**Zalesovo Beam**	**84.43**	**326**	P	**P**	**11 47 38.5**	**-1.1**
	comp=Z,7.9nm,0.6s,baz=112,slow=5.8,SNR=36						
ZALV				PKKPbc	**PKKPbc**	**12 05 52.5**	**-1.0**
	comp=Z,0.3nm,0.3s,baz=270,slow=3.0,SNR=4.1						
ZALV				PKPPKP	**P'P'df**	**12 13 56.5**	**+0.2**
	comp=Z,1.7nm,0.9s,baz=320,slow=3.9,SNR=3.6						
ZALV	**Zalesovo Beam**	**84.43**	**326**	P	**P**	**11 47 37.8**	**-1.8**
MAW	**Mawson**	**84.44**	**203**	LR	LR	12 23 44.6	
	comp=Z,194nm,18.3s,baz=59,slow=34						
DHRM	**DHARAMSHALA**	**84.54**	**303**	*e*P	**P**	**11 47 39.1**	**-1.9**
DHRM				*e*S	**S**	**11 57 58.2**	**-4.0**
TOLK	**Toolik Lake Re**	**84.60**	**18**	P	**P**	**11 47 41.2**	**+0.9**
	baz=235,SNR=123						
TOLK	**Toolik Lake Re**	**84.60**	**18**	P	**P**	**11 47 40.5**	**+0.2**
SHLS	**Shalkode**	**84.61**	**315**	*e*P	**P**	**11 47 39.0**	**-2.1**
	baz=315						
SHLS	**Shalkode**	**84.61**	**315**	*e*P	**P**	**11 47 38.9**	**-2.1**
FYU	**Fort Yukon**	**84.86**	**20**	P	**P**	**11 47 41.5**	**0.0**
FYU				IAmb	IAmb	11 47 45.0	
	comp=Z,25nm,0.7s						
UZB	**Uzynbulak**	**84.92**	**314**	*e*P	**P**	**11 47 42.3**	**-0.3**
	baz=314						
UZB	**Uzynbulak**	**84.92**	**314**	*e*P	**P**	**11 47 42.3**	**-0.3**
DIB	**Dawson Inlet,**	**85.14**	**35**	P	**P**	**11 47 43.9**	**+0.7**
DIB				IAmb	IAmb	11 47 49.9	
	comp=Z,68nm,1.2s						
KPKS	**Kokpek**	**85.24**	**315**	*e*P	**P**	**11 47 43.5**	**-0.6**
	comp=Z,5.9nm,0.6s,baz=315						
KPKS	**Kokpek**	**85.24**	**315**	*e*P	**P**	**11 47 43.5**	**-0.6**
KPKS				pmax	pmax		
	comp=Z,6.0nm,0.6s						
HYT	**Haines Junctio**	**85.30**	**27**	P	**P**	**11 47 45.1**	**+1.0**
SATY	**Saty**	**85.33**	**314**	*e*P	**P**	**11 47 44.3**	**-0.3**
	comp=Z,6.3nm,0.9s,baz=314						
SATY	**Saty**	**85.33**	**314**	*e*P	**P**	**11 47 44.3**	**-0.3**
SATY				pmax	pmax		
	comp=Z,6.0nm,0.9s						
EGAK	**Eagle**	**85.47**	**23**	P	**P**	**11 47 45.5**	**+0.8**
	baz=243						
EGAK	**Eagle**	**85.47**	**23**	P	**P**	**11 47 44.8**	**+0.2**
EGAK				IAmb	IAmb	11 47 46.5	
	comp=Z,32nm,0.8s						
SKAG	**Skagway**	**85.79**	**29**	P	**P**	**11 47 47.2**	**+0.9**
	baz=249						
SKAG	**Skagway**	**85.79**	**29**	P	**P**	**11 47 47.2**	**+0.9**
TDK	**Taldyqorghan**	**85.81**	**316**	*e*P	**P**	**11 47 45.9**	**-0.9**
	baz=316						
TDK	**Taldyqorghan**	**85.81**	**316**	*e*P	**P**	**11 47 45.8**	**-1.0**
JIS	**Juneau Island**	**85.82**	**30**	P	**P**	**11 47 47.4**	**+0.9**
JIS				IAmb	IAmb	11 47 48.1	
	comp=Z,15nm,0.8s						
SEM	**Semipalatinsk**	**86.02**	**322**	*e*P	**P**	**11 47 46.1**	**-1.8**
	baz=322						
SEM	**Semipalatinsk**	**86.02**	**322**	*e*P	**P**	**11 47 46.1**	**-1.8**
WRAK	**Wrangell Islan**	**86.24**	**32**	P	**P**	**11 47 49.2**	**+0.7**
	baz=251						
WRAK	**Wrangell Islan**	**86.24**	**32**	P	**P**	**11 47 48.8**	**+0.2**
KSH	**Kashi**	**86.31**	**310**	P	**P**	**11 47 51.3**	**+1.7**
KSH				sP	sP	11 48 23.0	+5.3
KSH				PP	**PP**	**11 51 17.3**	**+5.6**
KSH				S	**S**	**11 58 20.8**	**+1.7**
KSH				pmax	pmax		
	comp=Z,20nm,0.9s						
KSH				pmax	pmax		
	comp=Z,540nm,8.6s						
KSH				LR	LR		
	comp=Z,420nm,7.5s						
KSH				LR	LR		
	comp=Z,450nm,7.5s						
KSH				LR	LR		
	comp=Z,1µm,7.8s						
MDOK	**Medeo**	**86.33**	**314**	*e*P	**P**	**11 47 48.3**	**-1.3**
	baz=314						
MDOK	**Medeo**	**86.33**	**314**	*e*P	**P**	**11 47 48.3**	**-1.3**
TNSS	**Tian-Shan**	**86.37**	**314**	*e*P	**P**	**11 47 49.7**	**-0.4**
	baz=314						
TNSS	**Tian-Shan**	**86.37**	**314**	*e*P	**P**	**11 47 49.7**	**-0.4**
AAA	**Alma-Ata**	**86.43**	**314**	*e*P	**P**	**11 47 49.5**	**-0.5**
	baz=314						
AAA	**Alma-Ata**	**86.43**	**314**	*e*P	**P**	**11 47 49.4**	**-0.5**
CHKK	**Chushkaly**	**86.52**	**315**	*e*P	**P**	**11 47 49.5**	**-0.9**
	baz=315						
CHKK	**Chushkaly**	**86.52**	**315**	*e*P	**P**	**11 47 49.4**	**-0.9**
KUU	**Kurty**	**86.99**	**315**	*e*P	**P**	**11 47 51.9**	**-0.7**
	comp=Z,21nm,0.8s,baz=315						
KUU	**Kurty**	**86.99**	**315**	*e*P	**P**	**11 47 51.9**	**-0.7**
KUU				pmax	pmax		
	comp=Z,21nm,0.8s						
KURK	**Kurchatov**	**87.10**	**322**	*ce*P	**P**	**11 47 51.2**	**-1.7**
KURK				pmax	pmax		
	comp=Z,15nm,2.5s						
KURK	**Kurchatov**	**87.10**	**322**	P	**P**	**11 47 52.1**	**-0.8**
TKM2	**Tokmak 2**	**87.31**	**314**	P	**P**	**11 47 54.8**	**+0.4**
	SNR=13						
NIL	**Nilore**	**87.33**	**304**	P	**P**	**11 47 54.1**	**-0.4**
NIL				pmax	pmax		
	comp=Z,41nm,1.2s						
NIL	**Nilore**	**87.33**	**304**	P	**P**	**11 47 54.1**	**-0.4**
NIL				IAmb	IAmb	11 47 55.6	
	comp=Z,41nm,1.2s						
KBK	**Karagaybulak**	**87.72**	**313**	P	**P**	**11 47 56.5**	**+0.2**
	SNR=5.4						
UCH	**Uchtor**	**87.95**	**313**	P	**P**	**11 48 00.5**	**+2.7**
	SNR=6.5						
AAK	**Ala-Archa**	**88.05**	**313**	P	**P**	**11 47 58.4**	**+0.5**
	comp=Z,5.6nm,0.7s,baz=142,slow=6.7,SNR=15						
AAK	**Ala-Archa**	**88.05**	**313**	*ce*P	**P**	**11 47 57.3**	**-0.6**
AAK				pmax	pmax		
	comp=Z,71nm,2.5s						
AAK	**Ala-Archa**	**88.05**	**313**	P	**P**	**11 47 58.1**	**+0.2**
SGDS	**Sogindy**	**88.11**	**314**	*e*P	**P**	**11 47 57.4**	**-0.7**
	comp=Z,3.6nm,1.0s,baz=314						
SGDS	**Sogindy**	**88.11**	**314**	*e*P	**P**	**11 47 57.4**	**-0.7**
SGDS				pmax	pmax		
	comp=Z,4.0nm,1.0s						
USP	**Ospenovka**	**88.17**	**314**	P	**P**	**11 47 58.4**	**+0.1**
	SNR=8.6						
O02D	**Mt. Diablo Mer**	**88.36**	**49**	P	**P**	**11 48 00.5**	**+1.2**
	baz=259,SNR=5.9						
AML	**Almayashu**	**88.53**	**313**	P	**P**	**11 48 01.1**	**+0.6**
	SNR=17						
M02C	**Callahan**	**88.54**	**48**	P	**P**	**11 48 00.8**	**+0.6**
	baz=259,SNR=6.5						
N02D	**Trinity Center**	**88.57**	**49**	P	**P**	**11 48 01.1**	**+0.8**
	baz=259,SNR=6.3						
EKS2	**Erkin-Say**	**88.57**	**313**	P	**P**	**11 48 01.0**	**+0.7**
	SNR=6.1						
WDC	**Whiskeytown Da**	**88.62**	**49**	P	**P**	**11 48 00.7**	**+0.3**
WDC				pmax	pmax		
	comp=Z,5.0nm,0.8s						
WDC	**Whiskeytown Da**	**88.62**	**49**	P	**P**	**11 48 00.7**	**+0.3**
HUMO	**Hull Mountain**	**88.69**	**47**	P	**P**	**11 48 01.2**	**+0.5**
BTLS	**Baital**	**88.83**	**315**	*e*P	**P**	**11 48 00.7**	**-0.7**
	comp=Z,4.2nm,0.9s,baz=316						
BTLS	**Baital**	**88.83**	**315**	*e*P	**P**	**11 48 00.6**	**-0.7**
BTLS				pmax	pmax		
	comp=Z,4.0nm,0.9s						
NRIK	**Noril'sk**	**88.92**	**341**	P	**P**	**11 48 00.2**	**-1.0**
	comp=Z,16nm,0.8s,baz=99,slow=4.4,SNR=16						
NRIK	**Noril'sk**	**88.92**	**341**	*ce*P	**P**	**11 47 59.8**	**-1.4**
NRIK				pmax	pmax		
	comp=Z,16nm,0.9s						
NRIK	**Noril'sk**	**88.92**	**341**	P	**P**	**11 48 00.4**	**-0.8**
NRIK				IAmb	IAmb	11 48 05.7	
	comp=Z,15nm,0.7s						
O03E	**Paynes Creek**	**89.12**	**49**	P	**P**	**11 48 03.1**	**+0.1**
	baz=260,SNR=7.2						
ORV	**Oroville**	**89.23**	**50**	P	**P**	**11 48 03.2**	**-0.1**
ORV				pmax	pmax		
	comp=Z,8.0nm,1.1s						
ORV	**Oroville**	**89.23**	**50**	P	**P**	**11 48 03.2**	**-0.1**
I04A	**Tendick Farm,**	**89.30**	**46**	P	**P**	**11 48 03.4**	**-0.2**
	baz=260						
M04C	**Macdoel**	**89.36**	**48**	P	**P**	**11 48 04.5**	**+0.5**
	baz=260						
AFDM	**Forest Hills D**	**89.53**	**51**	P	**P**	**11 48 05.6**	**+0.8**
INK	**Inuvik**	**89.68**	**21**	P	**P**	**11 48 04.8**	**+0.1**
INK				pmax	pmax		
	comp=Z,101nm,1.3s						
INK	**Inuvik**	**89.68**	**21**	P	**P**	**11 48 04.8**	**+0.1**
J05D	**Fort Rock, OR**	**90.05**	**47**	P	**P**	**11 48 07.9**	**+0.6**
	baz=260						
BEKR	**Beckworth**	**90.15**	**50**	P	**P**	**11 48 08.5**	**+0.6**
I05D	**Terrebonne, OR**	**90.15**	**45**	P	**P**	**11 48 07.3**	**-0.3**
	baz=260						
K05A	**Summer Lake**	**90.21**	**47**	P	**P**	**11 48 08.5**	**+0.5**
K05A				IAmb	IAmb	11 48 11.6	
	comp=Z,11nm,1.0s						
B05A	**Bryant**	**90.31**	**41**	P	**P**	**11 48 07.6**	**-0.5**
	baz=260						
PINE	**Pine Mountain**	**90.35**	**46**	P	**P**	**11 48 08.8**	**+0.1**
PINE				IAmb	IAmb	11 48 10.6	
	comp=Z,9.4nm,0.8s						
DZA	**Taraz**	**90.38**	**313**	*e*P	**P**	**11 48 09.0**	**+0.2**
	baz=313						
DZA	**Taraz**	**90.38**	**313**	*e*P	**P**	**11 48 08.9**	**+0.2**
MOD	**Modoc Plateau**	**90.51**	**48**	P	**P**	**11 48 09.2**	**-0.2**
VES	**Vestal, Richgr**	**90.54**	**54**	P	**P**	**11 48 09.9**	**+0.4**
	baz=262						
PNTR	**Pine Nut**	**90.61**	**51**	P	**P**	**11 48 10.3**	**+0.2**
PNTR				IAmb	IAmb	11 48 13.2	
	comp=Z,9.3nm,0.8s						
ARVC	**Arvin**	**90.64**	**55**	P	**P**	**11 48 10.3**	**+0.3**
	baz=262						
CIS	**Catalina Islan**	**90.74**	**57**	P	**P**	**11 48 10.5**	**-0.1**
	baz=262						
OMMB	**Old Mammoth Mi**	**90.86**	**52**	P	**P**	**11 48 10.9**	**-0.5**
PAHR	**Pah Rah Range**	**90.86**	**50**	P	**P**	**11 48 11.2**	**0.0**
YERR	**Yerington**	**90.87**	**51**	P	**P**	**11 48 10.0**	**-1.2**
YERR				IAmb	IAmb	11 49 06.1	
	comp=Z,18nm,1.6s						
KBL	**Kabul**	**90.91**	**305**	P	**P**	**11 48 10.6**	**-1.0**
KBL				pmax	pmax		
	comp=Z,13nm,1.0s						
KBL	**Kabul**	**90.91**	**305**	P	**P**	**11 48 10.6**	**-1.0**
KBL				IAmb	IAmb	11 48 11.7	
	comp=Z,12nm,0.9s						
KK31	**Karatay Array**	**91.01**	**313**	P	**P**	**11 48 12.0**	**+0.4**
KK31				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KK31	**Karatay Array**	**91.01**	**313**	P	**P**	**11 48 12.0**	**+0.4**
KKAR	**Karatay Array**	**91.01**	**313**	P	**P**	**11 48 12.1**	**+0.5**
KKAR				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KKAR	**Karatay Array**	**91.01**	**313**	P	**P**	**11 48 10.8**	**-0.8**
KKAR	**Karatay Array**	**91.01**	**313**	P	**P**	**11 48 12.1**	**+0.5**
KKAR				IAmb	IAmb	11 48 19.0	
	comp=Z,4.8nm,1.0s						
MWC	**Mount Wilson**	**91.15**	**56**	P	**P**	**11 48 13.4**	**+0.8**
MWC				pmax	pmax		
	comp=Z,34nm,1.0s						
MWC	**Mount Wilson**	**91.15**	**56**	P	**P**	**11 48 13.4**	**+0.8**
IUG	**Iuzhnay**	**91.22**	**312**	*e*P	**P**	**11 48 12.7**	**0.0**
	comp=Z,2.9nm,0.9s,baz=312						
IUG	**Iuzhnay**	**91.22**	**312**	*e*P	**P**	**11 48 12.7**	**0.0**
IUG				pmax	pmax		
	comp=Z,3.0nm,0.9s						
EDW2	**Edwards Air Fo**	**91.29**	**55**	P	**P**	**11 48 14.3**	**+1.2**

	baz=262,SNR=7.9						
LHV	Little Huntoon	91.34	52	P	P	11 48 14.3	+1.2
LHV				IAmb	IAmb	11 48 31.0	
	comp=Z,18nm,1.2s						
RYN	Ryan	91.38	51	P	P	11 48 14.5	+0.9
TIN	Tinemaha, Big	91.39	53	P	P	11 48 13.7	+0.1
	baz=262						
I07A	Izee	91.42	46	P	P	11 48 14.1	+0.6
CWC	Cottonwood Cre	91.43	54	P	P	11 48 14.5	+0.6
	baz=262						
BFSC	Mount Baldy Ra	91.48	56	P	P	11 48 14.5	+0.4
	baz=262						
NVAR	Mina Array Bea	91.52	52	P	P	11 48 15.1	+0.8
	comp=Z,3.2nm,0.7s,baz=253,slow=5.8,SNR=26						
NVAR				LR	LR	12 24 23.0	
	comp=Z,361nm,19.8s,baz=266,slow=32						
NVAR	Mina Array Bea	91.52	52	P	P	11 48 13.6	-0.7
LRMC	Laurel Mtn Rad	91.62	55	P	P	11 48 15.8	+1.1
	baz=262,SNR=9.5						
NV11	Mina Array Sit	91.63	52	P	P	11 48 14.5	-0.2
NV11				IAmb	IAmb	11 48 17.0	
	comp=Z,14nm,1.1s						
KVN	Kaiserville	91.76	51	P	P	11 48 15.5	+0.1
KVN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KVN	Kaiserville	91.76	51	P	P	11 48 15.5	+0.1
109C	Camp Elliot, M	91.77	57	P	P	11 48 16.1	+0.9
	baz=263						
MURC	Murrieta	91.78	57	P	P	11 48 15.9	+0.5
	baz=263						
WVOR	Wild Horse Val	91.81	48	P	P	11 48 15.5	+0.1
WVOR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
WVOR	Wild Horse Val	91.81	48	P	P	11 48 15.5	+0.1
WVOR				IAmb	IAmb	11 48 18.2	
	comp=Z,9.7nm,0.8s						
MPMC	Manual Prospec	91.85	54	P	P	11 48 16.8	+0.9
	baz=263,SNR=6.3						
J08A	Circle Bar Ran	92.05	47	P	P	11 48 16.6	+0.1
J08A				IAmb	IAmb	11 48 18.1	
	comp=Z,8.6nm,0.8s						
GRAC	Grapevine Rang	92.07	53	P	P	11 48 17.6	+1.0
	baz=263						
E08A	Dider Farm, El	92.07	44	P	P	11 48 16.0	-0.4
BBRC	Big Bear Solar	92.09	56	P	P	11 48 17.5	+0.5
	baz=263						
PNT	Penticton	92.10	41	P	P	11 48 10.3	-6.2
PNT				pmax	pmax		
	comp=Z,9.0nm,0.8s						
GSC	Goldstone, Bar	92.31	55	P	P	11 48 18.5	+0.7
	baz=263						
TPH	Tonopah	92.32	52	P	P	11 48 18.3	+0.3
TPH				pmax	pmax		
	comp=Z,50nm,1.1s						
TPH	Tonopah	92.32	52	P	P	11 48 18.3	+0.3
MONP2	Monument Peak	92.34	57	P	P	11 48 19.2	+1.0
	baz=263						
SYO	Syowa Base	92.35	199	⇑*e*P	P	11 48 16.6	-0.6
PFO	Pinyon Flats O	92.39	57	P	P	11 48 19.0	+0.7
	baz=263,SNR=5.4						
PFO	Pinyon Flats O	92.39	57	*i* P	P	11 48 17.0	-1.3
PFO				pmax	pmax		
	comp=Z,16nm,1.0s						
TPFO	Pinon Flats	92.39	57	P	P	11 48 19.0	+0.7
	baz=263						
FURC	Furnace Creek,	92.40	54	P	P	11 48 19.1	+1.0
	baz=263,SNR=10						
BRVK	Borovoye	92.63	323	*i* P	P	11 48 16.4	-2.4
BRVK				pmax	pmax		
	comp=Z,14nm,0.9s						
HEC	Hector,Ludlow	92.64	55	P	P	11 48 20.0	+0.6
	baz=263,SNR=6.0						
E09A	Wood Farm, Sta	92.70	44	P	P	11 48 19.0	-0.2
E09A				IAmb	IAmb	11 48 20.3	
	comp=Z,11nm,1.0s						
SHOC	Shoshone, Teco	92.81	54	P	P	11 48 21.0	+1.0
	baz=263						
BELC	Belle Mtn. Jos	92.82	56	P	P	11 48 21.3	+1.0
	baz=263,SNR=11						
SWSC	Sam W. Stewart	92.86	57	P	P	11 48 20.9	+0.6
	baz=264						
TPNV	Topopah Spring	92.95	53	P	P	11 48 21.5	+0.6
	baz=263,SNR=7.3						
TPNV	Topopah Spring	92.95	53	P	P	11 48 21.8	+0.9
TPNV				pmax	pmax		
	comp=Z,6.0nm,0.8s						
TPNV	Topopah Spring	92.95	53	P	P	11 48 21.8	+0.9
BMO	Blue Mountains	93.08	45	P	P	11 48 21.0	-0.2
BMO				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BMO	Blue Mountains	93.08	45	P	P	11 48 21.0	-0.2
GMRC	Granite Mounta	93.18	56	P	P	11 48 22.9	+0.9
	baz=264,SNR=10						
BC3	Big Chuckawall	93.23	57	P	P	11 48 23.3	+1.2
	baz=264,SNR=5.3						
F10A	Beach Ranch, E	93.27	44	P	P	11 48 21.4	-0.6
IRM	Iron Mountain	93.54	56	P	P	11 48 24.5	+1.0
	baz=264,SNR=13						
NEW	Newport	93.60	42	P	P	11 48 23.1	-0.4
	comp=Z,4.6nm,0.8s,baz=226,slow=6.3,SNR=9.5						
NEW	Newport	93.60	42	P	P	11 48 23.4	0.0
	baz=264						
NEW	Newport	93.60	42	P	P	11 48 23.5	0.0
NEW				pmax	pmax		
	comp=Z,5.0nm,0.8s						
NEW	Newport	93.60	42	P	P	11 48 23.5	0.0
R11A	Troy Canyon, C	93.63	52	P	P	11 48 25.0	+1.0
	baz=264						
R11A	Troy Canyon, C	93.63	52	P	P	11 48 24.1	+0.1
R11A				IAmb	IAmb	11 48 26.2	
	comp=Z,14nm,1.4s						
GLA	Glamis	93.69	57	P	P	11 48 24.9	+0.7
	baz=264						
SHPR	Sheep Range	93.77	54	P	P	11 48 25.7	+1.0
SHPR				IAmb	IAmb	11 48 27.0	
	comp=Z,6.5nm,0.8s						
PRN	Pahroc Range	93.95	53	P	P	11 48 26.2	+0.8
PRN				IAmb	IAmb	11 48 28.0	
	comp=Z,19nm,1.4s						
NEE2	Needles Airpor	94.03	56	P	P	11 48 26.9	+1.2
	baz=264						
ELK	Elko	94.14	50	P	P	11 48 26.8	+0.4
ELK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ELK	Elko	94.14	50	P	P	11 48 26.8	+0.4
PDMCI	Parker Dam,Lak	94.38	56	P	P	11 48 28.7	+1.4
	baz=264						
W13A	Hualapai Mount	94.67	55	P	P	11 48 29.6	+0.7
BELA	Belgrano 2	94.99	178	P	P	11 48 29.3	+0.1
BELA				IAmb	IAmb	11 48 31.1	
	comp=Z,13nm,1.0s						
HLID	Hailey	95.01	47	P	P	11 48 30.2	0.0
	baz=265						
WALA	Waterton Lakes	95.79	41	P	P	11 48 33.0	-0.5
WALA				IAmb	IAmb	11 48 36.4	
	comp=Z,8.4nm,1.1s						
BCYI	Bear Canyon	95.80	46	P	P	11 48 33.6	-0.3
DUG	Dugway, Tooele	95.94	50	P	P	11 48 34.1	-0.3
	baz=266						
MCMT	McKenzie Canyo	96.23	46	P	P	11 48 35.8	-0.1
YKA	Yellowknife Ar	96.26	28	P	P	11 48 35.4	+0.2
	comp=Z,15nm,0.8s,baz=261,slow=3.9,SNR=138						
YKA				PKiKP	PKiKP	11 53 13.3	+0.4
	comp=Z,0.5nm,0.6s,baz=236,slow=0.7,SNR=6.6						
YKA				PKKPbc	PKKPbc	12 05 20.5	-3.3
	comp=Z,1.0nm,0.9s,baz=91,slow=3.3,SNR=14						
YKA				LR	LR	12 26 27.9	
	comp=Z,293nm,21.4s,baz=0.0,slow=32						
HRA	Herat	96.48	304	P	P	11 48 36.6	-0.6
HRA				IAmb	IAmb	11 48 37.6	
	comp=Z,9.0nm,1.1s						
TUC	Tucson	97.02	58	P	P	11 48 39.1	-0.4
	baz=266						
BOZ	Bozeman (W)	97.14	45	P	Pdif	11 48 40.0	+0.1
	baz=267						
BOZ	Bozeman (W)	97.14	45	P	Pdif	11 48 40.2	+0.3
BOZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BOZ	Bozeman (W)	97.14	45	P	Pdif	11 48 40.2	+0.3
REDW	Red Top Meadow	97.59	47	P	P	11 48 41.9	-0.1
H17A	Grant Village	97.83	46	P	Pdif	11 48 43.7	+0.6
	baz=268						
EGMT	Eagleton	98.51	43	P	P	11 48 45.1	-0.7
	baz=269						
BW06	Boulder Array	98.51	48	P	P	11 48 45.7	-0.4
	baz=268						
BW06	Boulder Array	98.51	48	P	P	11 48 45.4	-0.8
PD31	Pinedale Array	98.52	48	P	P	11 48 45.3	-0.9
PDAR	Pinedale Array	98.52	48	P	P	11 48 45.9	-0.3
	comp=Z,4.4nm,0.8s,baz=242,slow=2.4,SNR=40						
PDAR				LR	LR	12 30 21.1	
	comp=Z,538nm,18.7s,baz=306,slow=34						
PDAR	Pinedale Array	98.52	48	P	P	11 48 45.6	-0.6
RLMT	Red Lodge	98.78	45	P	P	11 48 47.3	0.0
	baz=269						
PV23	Carpenter Ridg	98.79	52	P	Pdif	11 48 47.8	+0.2
PV12	Saucer Basin,	98.95	52	P	Pdif	11 48 48.9	+0.7
PV12				IAmb	IAmb	11 48 50.2	
	comp=Z,18nm,1.5s						
O20A	White River Ci	99.43	51	P	Pdif	11 48 50.6	+0.3
	baz=269						
ARU	Arti	99.60	326	P	Pdif	11 48 48.5	-1.8
ARU						11 52 51.8	
ARU				S	SKSac	11 59 20.3	-1.5
GEYT	Alibeck	99.99	307	LR	LR	12 35 47.8	
	comp=Z,152nm,19.9s,baz=55,slow=36						
SNAA	Sanae	100.10	187	PKKP	PKKPbc	12 05 06.1	-7.2
SNAA	Sanae	100.10	187	Pdiff	Pdif	11 48 51.9	-0.5
SNAA	Sanae	100.10	187	P	Pdif	11 48 52.9	+0.5
	comp=Z,1.4nm,0.8s,baz=284,slow=6.8,SNR=5.2						
K22A	Casper	100.75	48	P	Pdif	11 48 55.5	-0.5
	baz=270						
LAO	LASA Array	100.91	44	P	Pdif	11 48 56.7	+0.1
	baz=271						
LAO	LASA Array	100.91	44	Pdif	Pdif	11 48 56.8	+0.3
N23A	Red Feather La	101.19	50	P	Pdif	11 48 58.5	+0.3
	baz=270						
VNA3	Neumayer Olymp	101.20	185	PKKP	PKKPbc	12 05 06.9	-3.1
VNA3	Neumayer Olymp	101.20	185	Pdiff	Pdif	11 48 56.8	-0.4
VNA2	Neumayer--Watz	101.30	186	Pdiff	Pdif	11 48 58.1	+0.4
VNA2	Neumayer--Watz	101.30	186	PKKP	PKKPbc	12 05 06.7	-3.1
EUNU	Eureka	101.67	9	Pdif	Pdif	11 48 59.4	+0.2
DGMT	Dagmar	102.21	42	P	Pdif	11 49 02.1	-0.2
	baz=273						
RSSD	Black Hills	102.53	46	P	Pdif	11 49 03.7	-0.3
	baz=272						
TXAR	Lajitas Array	103.01	62	PKKPbc	PKKPbc	12 05 04.4	+0.8
	comp=Z,0.7nm,0.8s,baz=116,slow=5.7,SNR=5.4						
ECSD	EROS Data Cent	107.90	46	P	PKiKP	11 53 34.6	0.0
	baz=278						
ARCES	ARCESS Array B	109.76	343	PKiKP	PKiKP	11 53 37.1	-0.3
	comp=Z,4.6nm,0.7s,baz=104,slow=1.0,SNR=11						
EYMN	Ely	110.69	41	P	PKiKP	11 53 39.5	-0.2
	baz=283						
KBZ	Khabaz	111.03	314	PKKPbc	PKKPbc	12 04 39.6	+0.6
	comp=Z,3.0nm,0.8s,baz=314,slow=5.7,SNR=8.2						
S39A	Bolivar	111.18	52	PKiKP	PKiKP	11 53 40.9	-0.1
U40A	Yellville	111.72	54	P	PKiKP	11 53 41.8	-0.2
	baz=277						
JFWS	Jewell Farm	112.62	46	P	PKiKP	11 53 42.9	-0.6
	baz=282						
CCM	Cathedral Cave	112.75	52	P	PKiKP	11 53 44.0	+0.1
	baz=279						
FINES	FINESS Array B	114.15	336	PKP	PKiKP	11 53 46.5	+0.6
	comp=Z,4.5nm,0.9s,baz=122,slow=6.9,SNR=7.8						
FINES				PKKPbc	PKKPbc	12 04 26.8	-2.3
	comp=Z,2.3nm,0.7s,baz=117,slow=6.6,SNR=5.1						
SFIN	Lafayette	115.47	49	P	PKiKP	11 53 48.5	-0.5
	baz=283						
E46A	Sault Ste Mari	115.84	42		PKiKP	11 53 49.2	-0.3
PLCA	Paso Flores	116.46	142	PKP	PKiKP	11 53 52.3	+1.2
	comp=Z,5.1nm,0.9s,baz=219,slow=2.8,SNR=13						
PLCA				PKKPab	PKKPab	12 04 24.7	-0.5
	comp=Z,1.7nm,1.1s,baz=354,slow=4.4,SNR=3.3						
WCI	Wyandotte Cave	116.55	51	P	PKPdf	11 53 51.0	-0.2
	baz=283						
LRAL	Lakeview Retre	116.98	57	P	PKPdf	11 53 51.2	-1.0
	baz=280						
NACGM	Naroch	117.20	329	*i* PKP	PKiKP	11 53 52.4	+0.5
NACGM				*i* PKP	PKiKP	11 53 52.4	+0.5
NACGM				*i* PKP	PKiKP	11 53 52.4	+0.5
NACGM				*i* pP	pPKPdf	11 54 07.0	-6.2
NACGM				*i* sP	PP	11 54 43.0	-20
NACGM				*i* PP	PP	11 55 09.1	+6.1
NACGM				*i* PPP	PPP	11 58 08.0	
NACGM				*i* SKS	SKSdf	12 00 39.4	-18
NACGM				*i* SKKS	SKKSac	12 02 14.3	+18
NACGM				*i* PPS	PPS	12 06 45.8	
NACGM				*i* SS	SS	12 11 20.1	+14
NACGM				*i* SSS	SSS	12 16 15.7	
P49A	Miami Univ. Ec	117.45	49	P	PKPdf	11 53 52.6	-0.3
	baz=284						
N49A	Columbus Grove	117.49	47	PKPdf	PKPdf	11 53 52.3	-0.6
KMBO	Kilima Mbogo	117.68	265	PKP	PKiKP	11 53 55.5	+1.1
	comp=Z,1.4nm,0.3s,baz=60,slow=4.1,SNR=4.5						
AKASG	Malin Array Be	117.80	324	PKP	PKiKP	11 53 53.5	+0.3
	comp=Z,4.6nm,0.6s,baz=59,slow=2.2,SNR=12						
AKASG				PKKPbc	PKKPbc	12 04 15.1	-0.9
	comp=Z,2.0nm,0.7s,baz=264,slow=3.9,SNR=4.8						
AKASG	Malin Array Be	117.80	324	PKIKP	PKPdf	11 53 52.8	-0.4
AKASG	Malin Array Be	117.80	324		PKPdf	11 53 52.8	-0.4
AKBB	Malin Array Si	117.80	324	*i* PKIKP	PKPdf	11 53 52.6	-0.6
BI02	San Fabin de	118.39	138	PKPdf	PKiKP	11 53 55.7	+0.7
ACSO	Alum Creek Sta	118.55	48	P	PKPdf	11 53 54.5	-0.5
	baz=286						
BRTR	Keskin Array B	118.68	312	PKP	PKPdf	11 53 55.1	-0.3
	comp=Z,1.4nm,0.5s,baz=169,slow=1.3,SNR=6.9						
BRTR				PKKPbc	PKKPbc	12 04 13.3	+0.6
	comp=Z,2.0nm,0.7s,baz=205,slow=2.3,SNR=7.3						
BRTR	Keskin Array B	118.68	312	PKIKP	PKiKP	11 53 55.5	0.0
BRTR	Keskin Array B	118.68	312	PKPdf	PKiKP	11 53 55.5	0.0
MATQ	Matagami	118.75	36	P	PKPdf	11 53 54.3	-0.7
	baz=296						
I51A	Listowel	118.86	43	P	PKPdf	11 53 55.2	-0.3
	baz=290						
P52A	Corning	119.35	48	P	PKPdf	11 53 56.0	-0.5
	baz=286						
LSQQ	Lebel-sur-Quev	119.44	37	P	PKPdf	11 53 55.9	-0.5
	baz=296						
VLDQ	Val d'Or	119.55	38	PKPdf	PKPdf	11 53 55.6	-1.1
BO02	Sierra Bellavi	119.79	137	PKPdf	PKiKP	11 53 57.9	+0.1
SADO	Sadowa	119.79	42	PKPdf	PKPdf	11 53 57.1	-0.1
GOGA	Godfrey	119.82	56	P	PKPdf	11 53 57.0	-0.6
	baz=282						
O53A	New Philadelph	119.85	47	P	PKPdf	11 53 57.4	-0.1
	baz=288						
M53A	WI Miller and	119.87	46	P	PKPdf	11 53 57.0	-0.5
	baz=288						
NB2	NORSAR Subarra	119.89	341	PKPdf	PKiKP	11 53 57.7	+0.6
	comp=Z,3.1nm,0.7s,baz=41,slow=1.9						
NOA	NORSAR Array B	119.89	341	PKP	PKiKP	11 53 57.4	+0.3
	comp=Z,3.7nm,0.7s,baz=44,slow=1.9,SNR=15						
N53A	Lisbon	119.95	47	PKPdf	PKiKP	11 53 57.9	+0.1
L53A	Girard	120.00	45	P	PKPdf	11 53 57.0	-0.7
	baz=289						
Q53A	Leroy	120.02	49	P	PKPdf	11 53 57.3	-0.6
	baz=286						
ALGO	Algonquin Park	120.05	40	P	PKPdf	11 53 57.2	-0.5
	baz=293						
ERPA	Erie	120.14	45	P	PKPdf	11 53 57.3	-0.7
	baz=289						
ERPA	Erie	120.14	45	PKPdf	PKPdf	11 53 57.0	-1.0
BOSA	Boshof	120.22	231	PKP	PKiKP	11 53 59.5	+0.7
	comp=Z,4.0nm,0.8s,baz=250,slow=0.9,SNR=6.0						
BOSA	Boshof	120.22	231	PKIKP	PKiKP	11 53 59.8	+0.9
BOSA	Boshof	120.22	231		PKiKP	11 53 59.8	+0.9
H53A	Bobcaygeon	120.23	42	P	PKPdf	11 53 57.5	-0.5
	baz=292						
G54A	Lake Saint Pet	120.25	41	P	PKPdf	11 53 57.6	-0.6
	baz=293						
U54A	Nelsons Funny	120.42	52	P	PKiKP	11 53 59.0	+0.1
	baz=285						
S54A	Dingess, Beckl	120.47	50	P	PKPdf	11 53 58.0	-0.8
	baz=286						
N54A	Moraine State	120.51	46	P	PKPdf	11 53 58.5	-0.2
	baz=289						
M54A	Oil Creek Stat	120.57	46	P	PKPdf	11 53 58.6	-0.3
	baz=289,SNR=6.6						
R54A	Victor	120.61	50	P	PKPdf	11 53 58.6	-0.4
	baz=286						
PLVO	Plevna	121.05	41	PKPdf	PKPdf	11 53 59.0	-0.6
E55A	Montcerf-Lytto	121.11	39	P	PKPdf	11 53 59.3	-0.4
	baz=295,SNR=6.2						
KMSC	Kings Mountain	121.15	53	P	PKiKP	11 54 00.3	0.0
	baz=284						
BIZ	Bicaz	121.28	322	⇑P	PKiKP	11 54 00.9	+0.7
BLA	Blacksburg	121.32	51	P	PKPdf	11 54 00.1	-0.4
	baz=286						
BURAR	Bucovina Array	121.52	323	⇑P	PKiKP	11 54 02.0	+1.2
BURAR	Bucovina Array	121.52	323	⇑PKIKP	PKiKP	11 54 02.0	+1.2
BURAR	Bucovina Array	121.52	323	PKPdf	PKiKP	11 54 01.2	+0.5
M56A	Emporium	121.62	45	P	PKPdf	11 54 00.7	-0.1
	baz=291,SNR=5.4						
V56A	Mocksville	121.64	52	P	PKPdf	11 54 00.8	-0.2
	baz=286						
D56A	ZEC Mazanza, M	121.66	38	P	PKPdf	11 54 00.4	-0.4
	baz=297,SNR=10						
T56A	Rocky Mt	121.67	51	P	PKPdf	11 54 00.9	-0.2
	baz=286						
Q56A	Snyder Ridge,	121.70	48	P	PKPdf	11 54 00.6	-0.5
	baz=288						
E56A	St. Veronique	121.71	39	P	PKPdf	11 54 00.2	-0.6
	baz=296						
N56A	West Decatur	121.74	46	P	PKPdf	11 54 01.0	-0.1
	baz=290						
O56A	Blue Knob Stat	121.76	47	P	PKPdf	11 54 01.0	-0.2
	baz=290						
O56A	Blue Knob Stat	121.76	47	PKPdf	PKiKP	11 54 01.7	+0.4
K56A	Middlesex	121.78	44	P	PKPdf	11 54 01.1	-0.1
	baz=292						
P56A	Dayton Farm, R	121.81	48	P	PKPdf	11 54 01.0	-0.2
	baz=289						
L56A	Greenwood	121.82	44	P	PKPdf	11 54 01.0	-0.3
	baz=292						
J56A	Wolcott	121.88	43	P	PKPdf	11 54 00.7	-0.5
	baz=293,SNR=9.7						
MLR	Muntele Rosu	122.00	320	⇓P	PKiKP	11 54 02.3	+0.5
MLR	Muntele Rosu	122.00	320	⇓PKIKP	PKiKP	11 54 02.3	+0.5
V57A	Coltrane Farms	122.18	52	P	PKPdf	11 54 01.9	-0.2
	baz=286						
Q57A	Strasburg	122.28	48	P	PKiKP	11 54 02.4	0.0
	baz=289						
K57A	Scipio Center	122.32	43	P	PKPdf	11 54 02.1	-0.1
	baz=293						
N57A	Milroy	122.32	46	P	PKPdf	11 54 02.2	0.0
	baz=291						
L57A	Andrews Acres	122.37	44	P	PKPdf	11 54 02.2	-0.1
	baz=292						
G57A	Newington	122.37	40	P	PKPdf	11 54 01.6	-0.5
	baz=295						
U57A	Blanch	122.37	51	P	PKPdf	11 54 02.3	-0.1
	baz=287						
H57A	Richville	122.38	41	P	PKPdf	11 54 01.8	-0.3
	baz=295						
M57A	Sunshine Farm,	122.42	45	P	PKPdf	11 54 02.3	-0.1
	baz=291,SNR=6.5						
P57A	Homestead Farm	122.42	47	P	PKPdf	11 54 02.4	0.0
	baz=290						
R57A	Stanardsville	122.43	49	P	PKPdf	11 54 02.4	-0.1
	baz=288						
O57A	Amberson	122.45	46	P	PKPdf	11 54 02.4	-0.1
	baz=290						
VOIR		122.59	320	⇑P	PKiKP	11 54 04.2	+1.3
VOIR		122.59	320	⇑PKIKP	PKiKP	11 54 04.2	+1.3
KOLS	Kolonicke sedl	122.60	325	*e*PKIKP	PKiKP	11 54 03.6	+0.9
KOLS	Kolonicke sedl	122.60	325	*e*PKP	PKiKP	11 54 03.6	+0.9
LATQ	La Tuque	122.70	37	P	PKPdf	11 54 02.4	-0.3
	baz=299						
D58A	Chemin du LacG	122.78	37	P	PKPdf	11 54 02.4	-0.5
	baz=298,SNR=5.7						
LONY	Lake Ozonia	122.83	41	P	PKPdf	11 54 02.4	-0.7
	baz=296						
T58A	Grand View Acr	122.84	50	P	PKPdf	11 54 02.8	-0.5
	baz=288						
Q58A	Fox Den Farm,	122.85	48	P	PKiKP	11 54 03.5	0.0
	baz=290						
M58A	Price’s Panora	122.87	45	P	PKPdf	11 54 03.1	-0.2
	baz=292						
E58A	La Victoria	122.87	38	P	PKPdf	11 54 02.8	-0.3
	baz=298,SNR=5.4						
BINY	Binghamton	122.89	44	P	PKPdf	11 54 03.1	-0.2
	baz=293						
N58A	Sunbury	122.89	45	P	PKPdf	11 54 02.8	-0.5
	baz=291,SNR=6.4						
N58A	Sunbury	122.89	45	PKPdf	PKPdf	11 54 03.1	-0.2
K58A	Earlville	122.89	43	P	PKPdf	11 54 02.8	-0.5
	baz=294						
G58A	Ormstown	122.94	40	P	PKPdf	11 54 02.7	-0.5
	baz=296,SNR=5.2						
I58A	Old Forge	122.97	42	P	PKPdf	11 54 03.1	-0.3
	baz=295						
U58A	Oxford	122.99	51	P	PKPdf	11 54 03.0	-0.7
	baz=287						
LCO	Las Campanas	122.99	131	PKIKP	PKiKP	11 54 05.1	+0.7
LCO	Las Campanas	122.99	131	PKPdf	PKiKP	11 54 05.1	+0.7
O58A	Lewisberry	122.99	46	P	PKPdf	11 54 03.0	-0.5
	baz=291,SNR=5.1						
S58A	Poland Farm, P	123.00	49	P	PKPdf	11 54 03.6	+0.1
	baz=288						
R58B	Mineral	123.02	49	P	PKPdf	11 54 03.2	-0.4
	baz=289						
L58A	Harry Jones Me	123.04	44	P	PKPdf	11 54 03.7	+0.1
	baz=293						
LSZ	Lusaka	123.11	247	PKIKP	PKPdf	11 54 04.2	-0.4
LSZ	Lusaka	123.11	247	PKPdf	PKPdf	11 54 04.2	-0.4
AC04	Llanos de Chal	123.13	130	PKPdf	PKiKP	11 54 05.1	+0.7
H58A	Gabriels	123.18	41	P	PKPdf	11 54 03.4	-0.4
	baz=296,SNR=7.0						
NCB	Newcomb	123.34	41	PKPdf	PKPdf	11 54 04.0	-0.2
J59A	Piesco	123.37	42	P	PKPdf	11 54 03.9	-0.3
	baz=295,SNR=6.3						
J59A	Piesco	123.37	42	PKPdf	PKPdf	11 54 04.0	-0.2
FRNY	Flat Rock	123.38	40	PKPdf	PKPdf	11 54 03.6	-0.5
H59A	Cadyville	123.40	40	P	PKPdf	11 54 03.9	-0.3
	baz=296						
DRGR		123.41	323	⇑P	PKPdf	11 54 04.1	-0.1
DRGR		123.41	323	⇑PKIKP	PKPdf	11 54 04.1	-0.1
K59A	Cooperstown	123.43	43	P	PKPdf	11 54 03.6	-0.7
	baz=294						
D59A	Saint-Raymond	123.44	37	P	PKPdf	11 54 04.2	0.0
	baz=299						
O59A	Robesonia	123.45	46	P	PKPdf	11 54 04.4	0.0
	baz=292						
R59A	King George, V	123.51	49	P	PKiKP	11 54 04.8	0.0
	baz=290						
M59A	Waymart	123.52	44	P	PKPdf	11 54 04.5	-0.1
	baz=293,SNR=6.4						
S59A	Mechanicsville	123.52	49	P	PKPdf	11 54 04.3	-0.3
	baz=289						
N59A	State Game Lan	123.52	45	P	PKPdf	11 54 04.5	-0.1
	baz=292						
P59A	Jarrettsville	123.53	47	P	PKPdf	11 54 04.4	-0.1
	baz=291						
L59A	Walton	123.53	43	P	PKPdf	11 54 04.6	+0.1
	baz=294						
PLVB	Pleven	123.76	318	⇓P	PKiKP	11 54 06.0	+0.9
F60A	Warwick	123.88	38	P	PKPdf	11 54 04.8	-0.2
	baz=299,SNR=7.2						
E60A	Ste Agathe de	123.99	37	P	PKPdf	11 54 04.8	-0.4
	baz=299						
MOQ	Mont Orford	124.00	39	PKPdf	PKiKP	11 54 05.6	-0.1
I60A	Shoreham	124.01	41	P	PKPdf	11 54 05.4	+0.1
	baz=296,SNR=8.9						
O60A	Telford	124.01	46	P	PKPdf	11 54 05.5	0.0
	baz=292,SNR=5.8						
N60A	Cedar Hill Far	124.01	45	P	PKPdf	11 54 05.3	-0.2
	baz=293,SNR=5.5						
P60A	Greenville	124.03	46	P	PKPdf	11 54 05.4	-0.1
	baz=292						
D60A	Saint Jean D’O	124.03	37	P	PKPdf	11 54 05.0	-0.3
	baz=300,SNR=5.9						
U60A	Pendleton	124.03	50	P	PKPdf	11 54 05.2	-0.4
	baz=288						
GZR	Gura Zlata	124.04	321	⇓P	PKiKP	11 54 05.9	+0.1
GZR	Gura Zlata	124.04	321	⇓PKIKP	PKiKP	11 54 05.9	+0.1
LANS	Liptovska Anna	124.05	326	*e*PKIKP	PKiKP	11 54 07.6	+2.0
LANS	Liptovska Anna	124.05	326	*e*PKP	PKiKP	11 54 07.6	+2.0
H60A	Morristown	124.07	40	P	PKiKP	11 54 05.7	0.0
	baz=297						
M60A	Port Jervis	124.16	44	P	PKiKP	11 54 06.2	+0.1
	baz=294						
V60A	Jim Taylor Roa	124.17	51	P	PKiKP	11 54 06.2	+0.1
	baz=288						
L60A	Shokan	124.17	43	P	PKiKP	11 54 06.1	0.0
	baz=294						
J60A	Lant Hill Farm	124.18	42	P	PKPdf	11 54 05.7	0.0
	baz=296						
MBAR	Mbarara	124.20	264	PKP	PKiKP	11 54 08.3	+1.2
	comp=Z,1.5nm,0.2s,baz=119,slow=5.6,SNR=6.2						
D61A	St Aubert, Com	124.32	36	P	PKPdf	11 54 06.0	+0.1
	baz=301						
F61A	St Evariste	124.46	38	P	PKiKP	11 54 06.7	+0.2
	baz=300						
G61A	St-Isidore-de-	124.47	39	P	PKPdf	11 54 06.3	0.0
	baz=299						
HERR	Herculane	124.51	321	⇑P	PKiKP	11 54 06.6	0.0
K61A	Williamstown	124.53	42	P	PKiKP	11 54 06.6	-0.1
	baz=296,SNR=5.0						
E61A	Lac Etchemin	124.53	37	P	PKiKP	11 54 06.7	0.0

	baz=300,SNR=9.4						
H61A	Lyndonville	124.57	40	P	PKiKP	11 54 06.9	+0.2
	baz=298						
BZS	Buzias	124.65	322	⇓P	PKiKP	11 54 06.8	-0.1
BZS	Buzias	124.65	322	⇓PKIKP	PKiKP	11 54 06.8	-0.1
LBNH	Lisbon	124.71	40	P	PKiKP	11 54 07.1	0.0
	baz=298						
J61A	Chester	124.71	41	P	PKiKP	11 54 07.0	-0.1
	baz=297						
MORC	Moravsky Berou	124.73	328	⇑P	PKiKP	11 54 07.9	+0.9
MORC	Moravsky Berou	124.73	328	*e*PKP	PKiKP	11 54 07.8	+0.9
MORC	Moravsky Berou	124.73	328	⇑PKIKP	PKiKP	11 54 07.9	+0.9
M61A	Granite Spring	124.76	44	P	PKPdf	11 54 06.8	0.0
	baz=294,SNR=6.3						
PAL	Palisades	124.79	44	P	PKiKP	11 54 07.1	-0.1
	baz=294						
KRLC	Kraliky	124.95	329	*e*PKIKP	PKiKP	11 54 08.3	+0.9
KRLC	Kraliky	124.95	329	*e*PKPDF	PKiKP	11 54 08.3	+0.9
VTS	Vitosha	125.00	318	⇓P	PKiKP	11 54 08.5	+0.6
VTS	Vitosha	125.00	318	⇓PKIKP	PKiKP	11 54 08.5	+0.6
L61B	Northampton	125.02	42	P	PKiKP	11 54 07.7	0.0
	baz=296						
DPC	Dobruska-Polom	125.02	329	*e*PKIKP	PKiKP	11 54 08.2	+0.7
DPC	Dobruska-Polom	125.02	329	*e*PKPDF	PKiKP	11 54 08.2	+0.7
H62A	Milan	125.04	39	P	PKiKP	11 54 07.7	0.0
	baz=299						
G62A	West of Eustis	125.11	38	P	PKiKP	11 54 07.8	0.0
	baz=300						
N62A	Caumsett State	125.12	44	P	PKiKP	11 54 08.0	+0.1
	baz=294						
JAVC	Velka Javorina	125.20	327	*e*PKP	PKiKP	11 54 09.8	+1.9
K62A	Royalston	125.22	42	P	PKiKP	11 54 08.2	+0.1
	baz=296						
J62A	Henniker	125.24	41	P	PKPdf	11 54 07.9	+0.1
	baz=297						
I62A	Tamworth	125.25	40	P	PKPdf	11 54 07.9	+0.1
	baz=298						
BSEG	Bad Segeberg	125.42	335	*e*PKPdf	PKiKP	11 54 09.6	+1.5
	baz=48,slow=1.9						
VRAC	Vranov	125.51	328	*e*PKP	PKiKP	11 54 08.8	+0.3
D63A	Stockholm	125.61	35	P	PKPdf	11 54 07.8	-0.5
	baz=303						
I63A	Otisfield	125.65	40	P	PKiKP	11 54 08.8	0.0
	baz=299						
K63A	Dunstable	125.67	41	P	PKPdf	11 54 08.7	+0.1
	baz=297						
MODS	Modra-Piesok	125.69	327	*e*PKIKP	PKPdf	11 54 08.5	0.0
MODS	Modra-Piesok	125.69	327	*e*PKP	PKPdf	11 54 08.5	0.0
J63A	Strafford	125.70	41	P	PKiKP	11 54 08.9	0.0
	baz=298						
G63A	Kingsbury	125.72	38	P	PKPdf	11 54 08.6	0.0
	baz=300						
F63A	Nahmakanta, Br	125.74	37	P	PKiKP	11 54 08.9	-0.1
	baz=301						
HRV	Adam Dziewonsk	125.74	42	P	PKiKP	11 54 08.9	-0.2
	baz=297						
KRUC	Moravsky	125.76	328	*e*PKP	PKiKP	11 54 09.7	+0.7
E63A	Oxbow	125.76	36	P	PKPdf	11 54 08.0	-0.6
	baz=302						
PKME	Peaks-Kenny Pk	125.85	38	P	PKiKP	11 54 09.1	-0.1
	baz=301						
BRG	Berggiesshubel	125.88	331	*i* PKP	PKiKP	11 54 09.6	+0.5
BRG				Amp		11 54 11.0	
	comp=Z,18nm,1.0s						
BRG				*e*x	x	11 54 17.1	
BRG				Amp		11 54 18.8	
	comp=Z,31nm,1.6s						
BRG	Berggiesshubel	125.88	331	*e*PKPdf	PKiKP	11 54 10.2	+1.1
	baz=48,slow=1.9						
M63A	Gales Ferry	125.90	43	P	PKPdf	11 54 08.3	-0.7
	baz=296						
L63A	North Scituate	125.99	42	P	PKiKP	11 54 09.5	-0.1
	baz=296						
CLL	Collm	126.04	332	⇓*i*PKPdf	PKiKP	11 54 10.2	+0.8
	comp=Z,14nm,0.8s						
CLL	Collm	126.04	332	⇓*i*PKIKP	PKiKP	11 54 10.2	+0.8
CLL				pmax	pmax		
	comp=Z,14nm,0.8s						
CLL	Collm	126.04	332	*e*PKPdf	PKiKP	11 54 10.3	+0.9
	baz=48,slow=1.9						
F64A	Sherman	126.10	37	P	PKPdf	11 54 09.2	-0.1
	baz=302						
E64A	Bridgewater	126.11	36	P	PKPdf	11 54 09.2	0.0
	baz=303						
MORH	Mrgy, Hungar	126.12	324	⇓P	PKiKP	11 54 10.2	+0.5
FBE	Freiberg	126.13	331	*e*PKPdf	PKiKP	11 54 11.0	+1.4
	baz=48,slow=1.9						
FLTG	Flechtingen	126.15	334	*e*PKPdf	PKiKP	11 54 10.5	+0.9
	baz=48,slow=1.9						
G64A	Maxfield	126.18	38	P	PKPdf	11 54 09.6	+0.2
	baz=301						
H64A	Troy	126.21	38	P	PKPdf	11 54 09.7	+0.1
	baz=300						
I64A	Boothbay	126.31	39	P	PKiKP	11 54 10.6	+0.4
	baz=300						
M64A	Tiverton	126.40	43	P	PKiKP	11 54 10.4	0.0
	baz=297						
L64A	Middleborough	126.47	42	P	PKPdf	11 54 10.3	+0.2
	baz=297						
NRDL	Niedersach Rie	126.53	334	*e*PKPdf	PKiKP	11 54 11.7	+1.4
	baz=48,slow=1.9						
ASSE	Asse, Remlinge	126.54	334	*e*PKPdf	PKiKP	11 54 11.6	+1.3
	baz=48,slow=1.9						
BATG	Bathurst New B	126.64	34	PKPdf	PKiKP	11 54 10.8	0.0
NEUB	Neuenburg	126.68	332	*e*PKPdf	PKiKP	11 54 11.8	+1.1
	baz=48,slow=1.9						
CONA	Conrad Observa	126.72	327	*e*P	PKiKP	11 54 11.3	+0.3
	comp=Z,7.4nm,1.5s						
H65A	Eastbrook	126.78	38	P	PKiKP	11 54 11.2	+0.1
	baz=302						
CLZ	Clausthal	126.88	334	*e*PKPdf	PKiKP	11 54 12.5	+1.3
	baz=48,slow=1.9						
TANN	Tannenbergstha	126.89	331	*e*PKPdf	PKiKP	11 54 12.2	+1.0
	baz=48,slow=1.9						
G65A	Princeton	126.92	37	P	PKiKP	11 54 11.5	+0.1
	baz=302						
WERD	Werda	126.94	331	*e*PKPdf	PKiKP	11 54 12.2	+0.8
	baz=48,slow=1.9						
GUNZ	Gunzen	126.99	331	*e*PKPdf	PKiKP	11 54 12.5	+1.1
	baz=48,slow=1.9						
PLN	Plauen	126.99	331	*e*PKPdf	PKiKP	11 54 12.3	+0.9
	baz=48,slow=1.9						
CKRC	Cesky Krumlov	127.00	329	*e*PKPDF	PKiKP	11 54 12.5	+1.0
WERN	Wernitzgruen	127.02	331	*e*PKPdf	PKiKP	11 54 12.5	+1.0
	baz=48,slow=1.9						
NKC	Novy Kostel	127.02	331	*e*PKIKP	PKiKP	11 54 12.2	+0.7
NKC	Novy Kostel	127.02	331	*e*PKPDF	PKiKP	11 54 12.2	+0.7
MOX	Moxa	127.14	332	*e*PKPdf	PKiKP	11 54 12.7	+1.0
	baz=48,slow=1.9						
KHC	Kasperske Hory	127.17	329	*i* PKIKP	PKPdf	11 54 10.6	-0.7
KHC	Kasperske Hory	127.17	329	*e*PKPDF	PKiKP	11 54 12.5	+0.7
GCUF	Volcan Galeras	127.18	94	*e*P	PKiKP	11 54 14.4	+1.0
GTTG	Gottingen	127.27	334	*e*PKPdf	PKiKP	11 54 13.1	+1.2
	baz=48,slow=1.9						
GEC2	GERESS Array S	127.29	329	PKPdf	PKiKP	11 54 13.0	+0.8
GEC2	GERESS Array S	127.29	329	*e*PKPdf	PKiKP	11 54 13.0	+0.8
	baz=48,slow=1.9						
GERES	GERESS Array B	127.29	329	PKP	PKiKP	11 54 12.7	+0.5
	comp=Z,7.1nm,0.8s,baz=81,slow=1.8,SNR=36						
GERES	GERESS Array B	127.29	329	PKIKP	PKiKP	11 54 12.3	+0.1
GERES	GERESS Array B	127.29	329	PKPdf	PKiKP	11 54 12.3	+0.1
ROTZ	Rotzenmuhle	127.44	331	*e*PKPdf	PKiKP	11 54 13.1	+0.8
	baz=48,slow=1.9						
TA01	Diego Aracena	127.52	123	PKPdf	PKiKP	11 54 13.7	+0.4
WET	Wettzell	127.52	330	*e*PKPdf	PKiKP	11 54 13.5	+0.9
	baz=48,slow=1.9						
LVC	Limon Verde	127.61	126	PKIKP	PKiKP	11 54 15.1	+1.2
LVC	Limon Verde	127.61	126	PKPdf	PKiKP	11 54 15.1	+1.2
IBBN	Ibbenburen	127.66	335	*e*PKPdf	PKiKP	11 54 13.7	+1.1
	baz=48,slow=1.9						
SOKA	Soboth	127.92	326	*e*P	PKiKP	11 54 13.2	-0.2
	comp=Z,6.3nm,1.0s						
GRF	Grafenberg Arr	127.97	331	*e*PKPdf	PKiKP	11 54 14.1	+0.7
	baz=48,slow=1.9						
POPC	Popayan, Colom	128.01	92	*e*P	PKPdf	11 54 13.4	-0.8
KASTN	Kahler Asten	128.19	334	*e*PKPdf	PKiKP	11 54 14.8	+1.0
	baz=48,slow=1.9						
OBKA	Obir	128.28	326	*e*P	PKiKP	11 54 14.7	+0.5
	comp=Z,7.7nm,1.4s						
YOTC	Yotoco, Valle	128.50	91	*e*P	PKPdf	11 54 15.0	0.0
BUG	Bochum--Univer	128.51	335	*e*PKPdf	PKiKP	11 54 15.2	+0.8
	baz=48,slow=1.9						
PLMC	San Jos del P	128.65	89	*e*P	PKPdf	11 54 15.3	+0.1
MARP	Paez Belalcaza	128.76	92	*e*P	PKiKP	11 54 16.1	-0.2
ABTA	Abfaltersbach	129.24	328	*e*P	PKPdf	11 54 15.5	+0.1
	comp=Z,11nm,1.3s						
AHRW	Bad Neuenahr-A	129.25	334	*e*PKPdf	PKiKP	11 54 16.7	+0.8
	baz=48,slow=1.9						
WATA	Walderalm	129.35	329	*e*P	PKiKP	11 54 16.8	+0.3
	comp=Z,8.0nm,0.7s						
WTTA	Wattenberg	129.37	329	*e*P	PKiKP	11 54 17.3	+0.8
	comp=Z,25nm,1.3s						
PTLC	Puerto Leguiza	129.55	96	*e*P	PKiKP	11 54 17.6	0.0
STU	Stuttgart	129.57	331	*e*PKPdf	PKiKP	11 54 17.3	+0.7
	baz=48,slow=1.9						
TOLC	Tolima	129.58	90	*e*P	PKPdf	11 54 16.9	-0.4
RREF	El Recreo	129.58	89	*e*P	PKiKP	11 54 18.4	0.0
ORTC	Ortega, Tolima	129.58	91	*e*P	PKPdf	11 54 15.1	-1.8
GUY2C	Guyana, Caldas	129.59	89	*e*P	PKPdf	11 54 17.6	+0.1
MOTA	Moosalm	129.59	329	*e*P	PKiKP	11 54 17.6	+0.7
	comp=Z,11nm,1.0s						
SQTA	Sankt Quirin	129.62	329	*e*P	PKiKP	11 54 17.2	+0.3
	comp=Z,16nm,1.1s						
PRAC	Prado	129.92	91	*e*P	PKPdf	11 54 16.6	-1.0
FETA	Feichten	130.00	329	*e*P	PKiKP	11 54 17.7	-0.1
	comp=Z,10nm,1.0s						
NORC	Norcasia	130.11	89	*e*P	PKPdf	11 54 17.7	-0.2
BFO	Black Forest	130.29	332	*e*PKPdf	PKiKP	11 54 18.3	+0.2
	baz=48,slow=1.9						
ROSC	El Rosal	130.59	90	PKP	PKiKP	11 54 19.8	-0.4
	comp=Z,7.8nm,0.4s,baz=19,slow=4.3,SNR=5.0						
SPBC	San Pablo de B	130.91	89	*e*P	PKPdf	11 54 18.4	-1.1
LPAZ	La Paz	131.13	119	PKP	PKiKP	11 54 21.6	+0.2
	comp=Z,14nm,0.9s,baz=0.1,slow=1.1,SNR=24						
LPAZ				SKPbc	SKiKP	11 57 45.3	-5.4
	comp=Z,4.5nm,0.8s,baz=252,slow=6.4,SNR=7.9						
CPUP	Villa Florida	134.10	138	PKP	PKiKP	11 54 25.9	-0.4
	comp=Z,15nm,0.8s,baz=277,slow=1.5,SNR=33						
CPUP				SKPab	SKiKP	11 57 55.0	-0.8
	comp=Z,4.5nm,1.0s,baz=261,slow=5.4,SNR=5.2						
CPUP	Villa Florida	134.10	138	PKIKP	PKiKP	11 54 26.0	-0.4
SDV	Santo Domingo	134.47	85	PKPdf	PKPdf	11 54 26.6	+0.3
SDV	Santo Domingo	134.47	85	*e*P	PKPdf	11 54 26.0	-0.3
PGAV	Gavieira, Arco	142.34	340	*e*PKPdf	PKPdf	11 54 37.4	-2.5
ESDC	Sonseca Array	142.59	333	PKhKP	PKPpre	11 54 37.2	
	comp=Z,2.8nm,0.9s,baz=17,slow=2.2,SNR=10						
MVO	Moncorvo	142.59	338	*e*PKPdf	PKPdf	11 54 37.6	-2.7
POLO	Lamas de Olo	142.69	339	*e*PKPdf	PKPdf	11 54 38.2	-2.3
PVIS	Viseu	143.31	338	*e*PKPdf	PKPbc	11 54 39.7	+0.9
MTE	Manteigas	143.45	338	*e*PKPdf	PKPbc	11 54 40.1	+0.9
PCBR	Castelo Branco	143.91	337	*e*PKPdf	PKPdf	11 54 41.6	-1.0
PTGA	Pitinga	143.95	101	PKPdf	PKPbc	11 54 41.2	-0.2
PCAS	Casmilo, Conde	144.11	339	*e*PKPdf	PKPbc	11 54 41.8	+0.7
PMRV	Marv??o	144.24	337	*e*PKPdf	PKPdf	11 54 42.6	-0.6
PSBE	So Bento	144.69	339	*e*PKPdf	PKPdf	11 54 44.9	+0.9
PESTR	Estremoz	144.80	337	PKPdf	PKPdf	11 54 43.9	-0.2
PMTG	Montargil	144.87	337	*e*PKPdf	PKPdf	11 54 44.4	+0.2
PBAR	Barrancos	145.17	335	*e*PKPdf	PKPdf	11 54 45.2	+0.4
EVO	Evora	145.25	337	*e*PKPdf	PKPdf	11 54 45.9	+1.0
PMAFR	Mafra	145.36	339	*e*PKPdf	PKPab	11 54 46.4	+1.1
LIS	Lisbon	145.52	338	*e*PKPdf	PKPab	11 54 47.5	+1.7
PBEJ	Beja	145.63	336	*e*PKPdf	PKPab	11 54 47.5	+1.2
PNCL	Nicolau / Gran	145.82	337	*e*PKPdf	PKPab	11 54 48.0	+1.0
MESJ	Messejana	145.93	336	*e*PKP	PKPab	11 54 47.3	-0.1
MESJ	Messejana	145.93	336	*e*PKPdf	PKPab	11 54 48.4	+1.0
PCVE	Castro Verde	146.04	336	*e*PKPdf	PKPab	11 54 48.5	+0.7
PVAQ	Vaqueiros	146.10	335	PKPab	PKPab	11 54 48.9	+0.8
PVAQ	Vaqueiros	146.10	335	*e*PKPdf	PKPab	11 54 48.8	+0.8
PBDV	Barranco-do-Ve	146.33	335	*e*PKPdf	PKPab	11 54 49.3	+0.3
PTEO	Sao Teotonio	146.39	337	*e*PKPdf	PKPab	11 54 50.1	+1.0
MORF	Marmelete	146.56	336	*e*PKPdf	PKPab	11 54 50.1	+0.2
PFVI	Vila Bisbo	146.78	337	*e*PKPdf	PKPab	11 54 51.1	+0.4
TAM	Tamanrasset	147.01	302	PKP2	PKPab	11 54 52.2	-0.1
TAM	Tamanrasset	147.01	302		PKPab	11 54 52.2	-0.1
BDFB	Brasilia	147.69	134	PKP	PKPdf	11 54 50.6	+0.8
	comp=Z,98nm,0.7s,baz=248,slow=1.5,SNR=59						
BDFB				PKPbc	PKiKP	11 54 53.7	-0.9
	comp=Z,98nm,0.7s,baz=226,slow=2.8,SNR=56						
BDFB	Brasilia	147.69	134	PKIKP	PKPdf	11 54 50.0	+0.2
BDFB	Brasilia	147.69	134	PKPdf	PKPdf	11 54 50.0	+0.2
TOA0	Torodi Ar. Sit	153.36	285	PKPbc	PKiKP	11 55 06.3	0.0
TOA0				PKPab	PKPab	11 55 18.5	+0.1
TORD	Torodi Ar. Bea	153.36	285	PKP	PKPdf	11 54 58.4	-0.1
	comp=Z,1.8nm,0.7s,baz=16,slow=1.2,SNR=8.6						
TORD				PKPbc	PKiKP	11 55 06.4	+0.2
	comp=Z,16nm,0.8s,baz=58,slow=2.0,SNR=46						
TORD				PP	PP	11 58 54.1	+1.5
	comp=Z,2.0nm,0.9s,baz=52,slow=6.3,SNR=3.9						
TORD	Torodi Ar. Bea	153.36	285		PKPdf	11 54 57.5	-1.0
TORD				PKPbc	PKiKP	11 55 06.4	+0.2
TORD				PKPab	PKPab	11 55 18.6	+0.2
KOWA	Kowa	158.42	292	PKPab	PKPab	11 55 39.9	-0.2
KIC	Kosan Boka	160.19	269	*e*PKP2	PKPab	11 55 48.3	+0.4
	comp=Z,22nm,0.6s						
DBIC	Dimbokro	160.32	270	PKP	PKPdf	11 55 07.7	+0.2
	comp=Z,4.5nm,1.0s,baz=45,slow=1.4,SNR=3.1						
DBIC				PKPab	PKPab	11 55 48.8	+0.4
	comp=Z,6.5nm,0.7s,baz=71,slow=5.1,SNR=12						
DBIC	Dimbokro	160.32	270	PKP2	PKPab	11 55 48.6	+0.1
DBIC	Dimbokro	160.32	270	PKPab	PKPab	11 55 48.5	+0.1
LIC	Lamto	160.46	269	*e*PKP2	PKPab	11 55 49.4	+0.3
	comp=Z,35nm,0.8s						
TIC	Toumodi	160.48	270	*e*PKP2	PKPab	11 55 49.2	0.0

IDC 27 11:49:18.3±4.5**, 6°.81S**×**154°.94E, h0**^{km}**, mb3.3**/5**,**
mb1 3.5/5**, mb1mx3.4**/33**, mbtmp3.3**/5 **Error ellipse:**
s-maj=121.3km s-min=30.0km az=109.0,
Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.87	235	P	P	11 54 31.9	-1.8
	0.4nm,0.6s,baz=59,slow=9.0,SNR=2.5						
ASAR	Alice Springs	26.25	228	P	P	11 54 56.5	+1.0
	0.1nm,0.5s,baz=59,slow=10.0,SNR=6.0						
CMAR	Chiang Mai Arr	60.65	295	P	P	11 59 32.4	+0.7
	0.5nm,0.4s,baz=120,slow=5.5,SNR=2.9						
SONM	Songino Array	69.15	327	P	P	12 00 26.6	-0.2
	0.2nm,0.6s,baz=127,slow=3.8,SNR=2.3						
MKAR	Makanchi Array	83.23	319	P	P	12 01 46.7	-0.1
	0.1nm,0.5s,baz=116,slow=3.4,SNR=2.2						

DJA ***27*** *12:03:48.3±0.3, 8°S±3°×11°4E±°, h11*^{km}*±3*^{km}*, M4.0/9,*
MLv4.0/9
IDC ***27*** *12:03:53.4±5.1, 8°.88S×114°.38E, h0*^{km}*, mb3.3/3,*
mb1 3.6/4, mb1mx3.3/26, mbtmp3.4/4, ML2.9/1, Error
ellipse: s-maj=137.7km s-min=69.0km az=39.0
ISC 27 12:03:48.6±1.0**, 7°.91S**±0°.06×**114°.37E**±0°.06**, h10**^{km}±9^{km}**,**
n12, σ**1**^{s}**.14**/15**, mb3.4**/3**, Bali Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABJI	Asem Bagus	0.17	310	P	Pg	12 03 53.0	+0.6
ABJI				S	Sg	12 03 54.8	-0.2
JAGI	Jajag, Banyuwa	0.60	201	P	Pg	12 04 00.1	-0.1
SRBI	Singaraja	0.85	102	P	Pb	12 04 05.7	+0.2
SRBI				S	Sn	12 04 18.2	-1.0
KMMI	Kalianget	0.94	335	P	Pg	12 04 06.9	+0.1
DNP	Denpasar	1.13	133	P	Pg	12 04 10.7	+0.4
DNP				S	Sn	12 04 28.1	+2.1
TWSI	Taliwang, Sumb	2.62	108	P	Pn	12 04 29.9	-1.1
PLAI	Plampang	3.49	105	P	Pn	12 04 42.8	-0.2
UGM	Wanagama	3.81	270	P	Pn	12 04 46.7	-0.7
FITZ	Fitzroy Crossi	14.93	134	Pn	Pn	12 07 18.5	-1.3
	0.0nm,0.3s,baz=325,slow=10,SNR=1.6						
FITZ				Sn	Sn	12 09 55.5	-10
	0.1nm,0.3s,baz=190,slow=14,SNR=2.3						
WRA	Warramunga Arr	22.74	124	P	P	12 08 50.2	-0.9
	0.2nm,0.3s,baz=296,slow=12,SNR=2.4						
ASAR	Alice Springs	24.42	132	P	P	12 09 07.3	-0.3
	0.5nm,0.5s,baz=304,slow=9.2,SNR=17						
STKA	Stephens Creek	34.79	137	P	P	12 10 41.5	+2.0
	0.4nm,0.3s,baz=284,slow=8.3,SNR=1.4						

SOME ***27*** *12:05:03.1, 41°.90N×72°.90E, h5*^{km}
KRNET ***27*** *12:05:03.1±0.1, 41°.83N×72°.93E, h16*^{km}*, mb2.5*
NNC ***27*** *12:05:04.1±0.8, 41°.89N×72°.94E, h0*^{km}*, mb3.1, mpv3.0,*
Error ellipse: s-maj=7.9km s-min=3.5km az=171.0
ISC 27 12:05:03.2±1.0**, 41°.83N**±0°.03×**72°.93E**±0°.02**, h13**^{km}±10^{km}**,**
n48, σ**1**^{s}**.34**/76**, 24C-10D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARSB	Arslanbob	0.50	176	⇓*i*P	Pg	12 05 12.8	-0.3
	baz=76						
ARSB				⇓*i*S	Sg	12 05 20.0	+0.2
	baz=76						
AML	Almayashu	0.64	61	⇑*i*P	Pg	12 05 15.6	-0.2
	baz=62						
AML				⇑*i*S	Sg	12 05 24.8	+0.4
	baz=62						
AML	Almayashu	0.64	61	P	Pg	12 05 16.1	+0.3
	SNR=42						
MNAS	Manas	0.73	334	⇑*i*P	Pg	12 05 17.1	-0.4
	baz=35						
MNAS				⇑*i*S	Sg	12 05 27.3	+0.2
	baz=35						
MRKS	Merke	0.94	13	*e*P	Pb	12 05 21.3	-0.2
	20nm,0.1s						
MRKS				*e*S	Sn	12 05 34.5	-1.2
	24nm,0.1s						
MRKS	Merke	0.94	13	P	Pb	12 05 21.3	-0.2
	20nm,0.1s						
MRKS				S	Sn	12 05 34.5	-1.2
	24nm,0.1s						
ARLS	Aral	1.04	88	⇑*i*P	Pb	12 05 23.0	-0.1
	baz=88						
ARLS				⇑*i*S	Sg	12 05 37.1	+0.3
	baz=88						
EKS2	Erkin-Say	1.04	37	⇑*i*P	Pb	12 05 23.0	-0.2
	baz=37						
EKS2				⇑*i*S	Sg	12 05 37.1	+0.2
	baz=37						
EKS2	Erkin-Say	1.04	37	P	Pn	12 05 23.2	-0.5
	SNR=6.9						
UCH	Uchtor	1.24	71	⇓*i*P	Pb	12 05 26.8	0.0
	baz=71						
UCH				⇓*i*S	Sg	12 05 43.6	+0.2
	baz=71						
UCH	Uchtor	1.24	71	P	Pg	12 05 27.2	+0.1
	SNR=21						
AAK	Ala-Archa	1.41	55	⇓*i*P	Pb	12 05 29.7	+0.1
	baz=55						
AAK				⇓*i*S	Sg	12 05 48.6	-0.2
	baz=55						
AAK	Ala-Archa	1.41	55	⇑P	Pg	12 05 30.4	0.0
	2.3nm,0.6s						
AAK				⇓S	Sg	12 05 48.5	-0.3
	3.0nm,0.5s						
KBK	Karagaybulak	1.71	60	⇑*i*P	Pb	12 05 34.9	+0.3
	baz=60						
KBK				⇑*i*S	Sg	12 05 57.9	-0.3
	baz=60						
KBK	Karagaybulak	1.71	60	P	Pg	12 05 35.7	-0.3
	SNR=11						
CHMS	Chumysh	1.78	48	⇑*i*P	Pb	12 05 36.1	+0.3
	baz=48						
CHMS				⇑*i*S	Sg	12 06 00.1	-0.5
	baz=48						
CHMS	Chumysh	1.78	48	P	Pg	12 05 36.9	-0.5
	SNR=5.6						
USP	Ospenovka	1.85	38	⇑*i*P	Pb	12 05 37.2	+0.3
	baz=38						
USP				⇑*i*S	Sg	12 06 01.8	-0.8
	baz=38						
USP	Ospenovka	1.85	38	P	Pg	12 05 37.6	-1.0
	SNR=8.1						
SFK	Sufi-Kurgan	1.86	166	⇓*i*P	Pb	12 05 37.2	0.0
	baz=66						
SFK				⇓*i*S	Sg	12 06 01.9	-1.2
	baz=66						
IUG	Iuzhnay	2.19	279	*e*P	Pb	12 05 42.9	+0.2
	1.5nm,0.2s						
IUG				*e*S	Sb	12 06 11.2	+1.5
	20nm,0.5s						
IUG	Iuzhnay	2.19	279	Pg	Pb	12 05 42.9	+0.2
	1.5nm,0.2s						
IUG				Lg	Lg	12 06 11.2	
	20nm,0.5s						
KK31	Karatay Array	2.20	306	⇑Pn	Pb	12 05 42.9	0.0
	3.3nm,0.5s,baz=120,slow=16,SNR=13						
KK31				⇑Lg	Lg	12 06 12.4	
	2.7nm,0.3s,baz=130,slow=28,SNR=7.9						
TKM2	Tokmak 2	2.26	60	⇑*e*P	Pb	12 05 43.3	-0.6
	baz=60						
TKM2				⇑*i*S	Sb	12 06 12.6	+0.8
	baz=60						
TKM2	Tokmak 2	2.26	60	P	Sb	12 06 15.2	+3.3
	SNR=5.8						
TKM2	Tokmak 2	2.26	60	⇑Pn	Pb	12 05 43.8	-0.1
	4.8nm,0.8s						
TKM2				⇓Lg	Lg	12 06 15.0	
	12nm,0.6s						
BOOM	Boomskoye usch	2.33	72	⇑*e*P	Pb	12 05 44.4	-0.8
	baz=72						
BOOM				⇑*i*S	Sb	12 06 14.4	+0.4
	baz=72						
ULHL	Ulahol	2.50	79	⇑*e*P	Pb	12 05 46.5	-1.6
	baz=79						
ULHL				⇑*i*S	Sb	12 06 18.3	-0.6
	baz=79						
DGS	Degeres	2.53	55	*e*P	Pb	12 05 49.9	+1.3
	2.1nm,0.3s						
DGS				*e*S	Sg	12 06 23.4	-1.1
	9.8nm,0.7s						
DGS	Degeres	2.53	55	Pg	Pb	12 05 49.9	+1.3
	2.1nm,0.3s						
DGS				Lg	Lg	12 06 23.4	
	9.8nm,0.7s						
KST	Kastek	2.55	61	*e*P	Pb	12 05 49.6	+0.7
	2.4nm,0.4s						
KST				*e*S	Sg	12 06 22.9	-2.3
	8.3nm,0.4s						
KST	Kastek	2.55	61	Pg	Pb	12 05 49.6	+0.7
	2.4nm,0.4s						
KST				Lg	Lg	12 06 22.9	
	8.3nm,0.4s						
BRLS	Borolday	2.59	299	*e*P	Pb	12 05 50.0	+0.5
	4.2nm,0.2s						
BRLS				*e*S	Sb	12 06 23.4	+2.1
	7.8nm,0.4s						
BRLS	Borolday	2.59	299	Pg	Pb	12 05 50.0	+0.5
	4.2nm,0.2s						
BRLS				Lg	Lg	12 06 23.4	
	7.8nm,0.4s						
KRBS	Karabastau	2.75	46	*e*P	Pb	12 05 53.5	+1.2
	1.9nm,0.3s						
KRBS				*e*S	Sg	12 06 29.6	-2.0
	6.6nm,0.5s						
KRBS	Karabastau	2.75	46	Pg	Pb	12 05 53.5	+1.2
	1.9nm,0.3s						
KRBS				Lg	Lg	12 06 29.5	
	6.6nm,0.5s						
IZV	Izvestkoviy	2.98	65	*e*P	Pb	12 05 58.0	+1.8
	1.7nm,0.3s						
IZV				*e*S	Sg	12 06 37.1	-1.7
	5.0nm,0.3s						
IZV	Izvestkoviy	2.98	65	Pg	Pb	12 05 58.0	+1.8
	1.7nm,0.3s						
IZV				Lg	Lg	12 06 37.2	
	5.0nm,0.3s						
TNSS	Tian-Shan	3.21	67	*e*P	Pb	12 06 02.1	+1.9
	0.7nm,0.1s						
TNSS				*e*S	Sg	12 06 44.8	-1.5
	2.8nm,0.4s						
TNSS	Tian-Shan	3.21	67	Pg	Pb	12 06 02.1	+1.9
	0.7nm,0.1s						
TNSS				Lg	Lg	12 06 44.8	
	2.8nm,0.4s						
BTLS	Baital	3.31	14	*e*P	Pb	12 06 03.1	+1.3
	1.0nm,0.3s						
BTLS				*e*S	Sg	12 06 45.8	-3.8
	3.0nm,0.3s						
BTLS	Baital	3.31	14	Pg	Pb	12 06 03.1	+1.3
	1.0nm,0.3s						
BTLS				Lg	Lg	12 06 45.8	
	3.0nm,0.3s						
KTBS	Karatobe	3.34	54	*e*P	Pb	12 06 03.4	+1.1
	0.7nm,0.3s						
KTBS				*e*S	Sb	12 06 46.5	+3.6
	6.4nm,0.5s						
KTBS	Karatobe	3.34	54	Pg	Pb	12 06 03.4	+1.1
	0.7nm,0.3s						
KTBS				Lg	Lg	12 06 46.5	
	6.4nm,0.5s						
KOTS	Kotyrbulak	3.39	64	*e*P	Pb	12 06 03.8	+0.5
	3.4nm,0.3s						
KOTS				*e*S	Sb	12 06 47.7	+3.2
	4.7nm,0.6s						
KOTS	Kotyrbulak	3.39	64	Pg	Pb	12 06 03.8	+0.5
	3.4nm,0.3s						
KOTS				Lg	Lg	12 06 47.7	
	4.7nm,0.6s						
CHKK	Chushkaly	3.60	54	*e*P	Pb	12 06 08.9	+2.1
	0.8nm,0.1s						

CHKK				*e*S	Sg	12 06 55.8	-3.1
	3.5nm,0.3s						
CHKK	Chushkaly	3.60	54	Pg	Pb	12 06 08.9	+2.1
	0.8nm,0.1s						
CHKK				Lg	Lg	12 06 55.8	
	3.5nm,0.3s						

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*NEIC **27** 12:18:21.7±1.1, 32.°83N±0.°02×96.°91W±0.°05, h8^{km}±5^{km}, mb_Lg3.1/52, Error ellipse: s-maj=6.4km s-min=2.5km az=97.0*

*ANF **27** 12:18:21.8±0.5, 32.°82N×96.°90W, h5^{km}, ML3.7/8, Error ellipse: s-maj=6.1km s-min=5.0km az=160.0*

ISC 27 12:18:21.1±1.3, **32.°82N**±0.°03×**96.°89W**±0.°03, **h1**^{km}±11^{km}, **n53,** σ**0.^{s}77**/49, **Central Texas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
Z35A	Perchaven, San	0.59	329	Pg	Pg	12 18 31.9	-0.5
Z35A				Sg	Sg	12 18 39.9	-0.3
Z35A	Perchaven, San	0.59	329	P		12 18 32.1	
	baz=149						
Z35A				S		12 18 39.5	
	baz=149						
WHTX	Lake Whitney,	0.95	210	P	Pb	12 18 40.4	0.0
	baz=30						
WHTX				S	Sb	12 18 52.7	-0.8
	baz=30						
WHTX	Lake Whitney,	0.95	210	Pg	Pb	12 18 40.4	0.0
WHTX				Sg	Sg	12 18 52.6	+0.8
WHTX	Lake Whitney,	0.95	210	P		12 18 40.3	
	baz=30,SNR=298						
WHTX				S		12 18 53.3	
	baz=30						
237A	Washetta, Mont	1.23	131		Pg	12 18 45.4	+0.8
237A					Sn	12 19 03.5	+0.9
237A	Washetta, Mont	1.23	131	P		12 18 45.6	
	baz=312,SNR=40						
Z38A	Mt. Pleasant	1.66	74	Pn	Pn	12 18 51.1	-0.2
Z38A				Sn	Sb	12 19 13.3	-0.6
Z38A	Mt. Pleasant	1.66	74	P		12 18 51.1	
	baz=255						
Z38A				S		12 19 14.0	
	baz=255						
435B	Jarrell	2.12	196	P	Pn	12 18 58.2	+0.6
	baz=16						
435B				S	Sb	12 19 25.9	-1.0
	baz=16						
435B	Jarrell	2.12	196	S		12 19 26.5	
	baz=16						
NATX	Nacogdoches	2.17	119	P	Pn	12 18 58.8	+0.5
	baz=300						
NATX				S	Sn	12 19 26.4	+0.7
	baz=300						
NATX	Nacogdoches	2.17	119	Pn	Pn	12 18 58.6	+0.4
NATX				IAmb_Lg		12 19 36.4	
	comp=Z,113nm,1.1s						
NATX	Nacogdoches	2.17	119	P		12 18 58.8	
	baz=300,SNR=5.9						
X37A	Clayton	2.17	35	Pn	Pn	12 18 58.7	+0.4
X37A				IAmb_Lg		12 19 30.6	
	comp=Z,120nm,0.8s						
X37A	Clayton	2.17	35	P		12 18 58.8	
	baz=216						
X37A				S		12 19 26.9	
	baz=216						
ABTX	Abilene, Hawle	2.33	266	P	Pn	12 19 00.5	0.0
	baz=84						
ABTX				S	Sn	12 19 30.3	+0.6
	baz=84						
ABTX	Abilene, Hawle	2.33	266	Pn	Pn	12 19 00.5	0.0
ABTX	Abilene, Hawle	2.33	266	P		12 19 00.2	
	baz=84						
FNO	Franklin	2.47	350		Pn	12 19 04.0	+1.6
FNO				IAmb_Lg		12 19 41.5	
	comp=Z,124nm,0.9s						
WMOK	Wichita Mounta	2.48	321	P	Pn	12 19 03.8	+1.2
	baz=140						
WMOK				S	Sn	12 19 33.7	+0.2
	baz=140						
WMOK	Wichita Mounta	2.48	321	P		12 19 02.6	
	baz=140						
OKCFA	Oklahoma City	2.63	350	IAmb_Lg		12 19 50.5	
	comp=Z,59nm,0.8s						
OK025	Westminster Rd	2.78	352	IAmb_Lg		12 19 51.3	
	comp=Z,61nm,0.7s						
HKT	Hockley	3.00	162	Pn	Pn	12 19 08.3	-1.4
TUL1	Leonard	3.21	16	P	Pn	12 19 13.0	+0.3
	baz=197						
TUL1	Leonard	3.21	16		Pn	12 19 12.7	0.0
MIAR	Mount Ida	3.26	57	P	Pn	12 19 12.5	-0.8
	baz=239						
MIAR	Mount Ida	3.26	57	Pn	Pn	12 19 12.5	-0.8
MIAR	Mount Ida	3.26	57	P		12 19 12.2	
	baz=239						
WLAR	White Oak Lake	3.28	74	Pn	Pn	12 19 13.4	-0.2
QUOK	Quay	3.35	3	Pn	Pn	12 19 14.3	-0.2
JCT	Junction City	3.41	228	P	Pn	12 19 15.6	+0.2
	baz=46						
JCT				S	Sn	12 19 56.8	+0.4
	baz=46						
JCT	Junction City	3.41	228	Pn	Pn	12 19 15.7	+0.2
JCT				IAmb_Lg		12 20 13.3	
	comp=Z,61nm,0.8s						
JCT	Junction City	3.41	228	P		12 19 15.5	
	baz=46						
Z41A	Richland Creek	3.46	82	S		12 19 56.4	
	baz=264						
Z41A				S		12 19 56.4	
	baz=264						
W39A	Magazine	3.50	47		Pn	12 19 17.8	+1.1
W39A				IAmb_Lg		12 20 19.7	
	comp=Z,53nm,1.1s						
W39A	Magazine	3.50	47	P		12 19 17.2	
	baz=228,SNR=9.6						
W39A				S		12 19 59.5	
	baz=228						
441A	DeRidder	3.77	122	Pn	Pn	12 19 19.4	-0.9
X40A	Basin Creek Fa	3.77	63	P		12 19 19.5	
	baz=245,SNR=16						
X40A				P		12 19 19.5	
	baz=245,SNR=16						
CROK	Carrier	3.78	347	Pn	Pn	12 19 19.9	-0.7
CROK				IAmb_Lg		12 20 23.3	
	comp=Z,55nm,0.7s						
U32A	Winter Ranch,	3.95	334	IAmb_Lg		12 20 37.3	
	comp=Z,64nm,0.8s						
U32A	Winter Ranch,	3.95	334	P		12 19 22.9	
	baz=153						
735A	Kenedy	4.03	192	IAmb_Lg		12 20 36.8	
	comp=Z,32nm,0.8s						
T35A	Sooner Cattle	4.10	4		Pn	12 19 25.8	+0.9
T35A				IAmb_Lg		12 20 36.5	
	comp=Z,58nm,1.2s						
342A	Flagon Creek P	4.13	109	Pn	Pn	12 19 24.8	-0.6
342B	Flagon Creek P	4.13	109	P		12 19 25.2	
	baz=292						
U38A	Gravette	4.16	29	Pn	Pn	12 19 26.9	+1.2
U38A				IAmb_Lg		12 20 40.7	
	comp=Z,29nm,0.9s						
KAN13	South Haven SW	4.21	354	Pn	Pn	12 19 27.2	+0.8
KAN13				IAmb_Lg		12 20 39.4	
	comp=Z,49nm,1.0s						
HHAR	Hobbs	4.23	34	Pn	Pn	12 19 24.4	-2.2
KAN01	Argonia South	4.38	351	IAmb_Lg		12 20 41.7	
	comp=Z,33nm,0.9s						
CCAR	Cane Creek	4.42	74	P		12 19 29.3	
	baz=257						
AMTX	Amarillo	4.49	299		Pn	12 19 30.7	+0.5
AMTX	Amarillo	4.49	299	P		12 19 30.6	
	baz=116						
W41B	Gary Mavity, V	4.51	57	P		12 19 30.3	
	baz=240,SNR=12						
WHAR	Wooly Hollow	4.55	56	Pn	Pn	12 19 31.3	+0.3
U40A	Yellville	4.85	42	P		12 19 35.2	
	baz=224,SNR=16						
U40A				P		12 19 35.2	
	baz=224,SNR=16						
S39A	Bolivar	5.67	30	IAmb_Lg		12 21 29.7	
	comp=Z,18nm,0.8s						
LCAR	Lake Charles	5.74	54	Pn	Pn	12 19 47.1	-0.3
MGMO	Mountain Grove	5.75	40	Pn	Pn	12 19 47.0	-0.6
MGMO				IAmb_Lg		12 21 23.9	
	comp=Z,34nm,1.0s						
R32A	Long Quarter,	5.78	346	Pn	Pn	12 19 47.3	-0.7
R32A				IAmb_Lg		12 21 35.8	
	comp=Z,24nm,1.0s						
T42A	Van Buren	6.35	47		Pn	12 19 55.6	-0.2
T42A	Van Buren	6.35	47	P		12 19 55.2	
	baz=230,SNR=30						
CBKS	Cedar Bluff	6.41	340	IAmb_Lg		12 22 02.3	
	comp=Z,18nm,0.8s						
R40A	Maddies Statio	6.63	33	IAmb_Lg		12 21 56.3	
	comp=Z,18nm,0.9s						
TX31	Lajitas Ar. Si	6.77	241		Pn	12 20 01.0	-0.7
TX32	Lajitas Array	6.77	241		Pn	12 20 01.6	-0.1
TXAR	Lajitas Array	6.77	241	Pn	Pn	12 20 01.1	-0.6
MNTX	Cornudas Mount	7.28	263	IAmb_Lg		12 22 14.1	
	comp=Z,28nm,0.8s						
P38A	Dawn	7.31	21	IAmb_Lg		12 22 13.7	
	comp=Z,13nm,0.8s						
KSCO	Kaye Shedlock'	7.73	325	IAmb_Lg		12 22 47.6	
	comp=Z,17nm,0.8s						
N33A	J Bar K, Exete	7.92	357	IAmb_Lg		12 22 49.0	
	comp=Z,22nm,0.8s						
N35A	Tabor	8.09	7	P		12 20 19.8	
	baz=188,SNR=6.9						
ANMO	Albuquerque	8.23	288	IAmb_Lg		12 22 40.4	
	comp=Z,14nm,0.8s						
N38A	Joes South For	8.48	19	IAmb_Lg		12 22 50.5	
	comp=Z,26nm,0.8s						

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*IDC **27** 12:25:49.2±13.0, 7.°31S×155.°47E, h151^{km}±122^{km}, mb3.2/8, mb1 3.4/8, mb1mx3.3/27, mbtmp3.6/8, Error ellipse: s-maj=51.2km s-min=33.4km az=124.0*

ISC 27 12:25:49.3±1.6, **7.°3S**±0.°3×**155.°4E**±0.°3, **h150**^{km}**, n9,** σ**0.^{s}73**/9, **mb3.4**/8, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.01	236	P	P	12 30 50.3	-0.1
	0.5nm,0.6s,baz=59,slow=9.5,SNR=5.2						
ASAR	Alice Springs	26.31	229	P	P	12 31 11.3	0.0
	0.2nm,0.5s,baz=54,slow=9.4,SNR=4.3						
PETK	Petropavlovsk-	60.19	2	P	P	12 35 41.0	-0.1
	1.1nm,0.9s,baz=175,slow=6.9,SNR=1.4						
CMAR	Chiang Mai Arr	61.30	296	P	P	12 35 49.9	+0.6
	0.8nm,0.6s,baz=120,slow=5.2,SNR=6.9						
SONM	Songino Array	69.81	327	P	P	12 36 43.2	-0.4
	0.7nm,0.9s,baz=123,slow=5.5,SNR=4.2						
ILAR	Eielson Array	83.48	21	P	P	12 37 59.1	-0.8
	0.4nm,0.7s,baz=241,slow=5.9,SNR=4.9						
MKAR	Makanchi Array	83.90	319	P	P	12 38 02.5	0.0
	0.4nm,0.8s,baz=100,slow=5.6,SNR=4.1						
YKA	Yellowknife Ar	96.39	28	P	P	12 39 02.0	+1.2
	0.2nm,0.7s,baz=263,slow=4.0,SNR=4.3						
TORD	Torodi Ar. Bea	153.51	285	PKPbc	PKPbc	12 45 30.3	-0.8
	0.5nm,0.7s,baz=3.8,slow=2.2,SNR=2.1						

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*IDC **27** 12:43:48.7±1.1, 15.°40N×147.°40E, h0^{km}, mb3.6/7, mb1 3.8/7, mb1mx3.5/55, mbtmp3.6/7, Error ellipse: s-maj=35.4km s-min=23.5km az=110.0*

ISC 27 12:43:53.2±1.1, **15.°4N**±0.°2×**147.°4E**±0.°2, **h29**^{km}**, n8,** σ**0.^{s}62**/8, **mb3.7**/8, **Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	37.37	201	P	P	12 51 02.8	-0.7
	0.4nm,0.8s,baz=25,slow=9.9,SNR=2.2						
ASAR	Alice Springs	40.98	199	P	P	12 51 34.2	+0.4
	0.3nm,0.8s,baz=23,slow=8.1,SNR=2.0						
CMAR	Chiang Mai Arr	46.37	281	P	P	12 52 17.8	+0.5
	0.3nm,0.4s,baz=81,slow=6.2,SNR=2.0						
MKAR	Makanchi Array	61.95	315	P	P	12 54 10.2	-0.3
	0.5nm,0.5s,baz=90,slow=8.1,SNR=15						
KURBB	Kurchatov Arra	64.89	319	P	P	12 54 29.1	-0.6
	3.8nm,0.8s,baz=98,slow=6.7,SNR=8.9						
ILAR	Eielson Array	65.92	25	P	P	12 54 35.7	-0.5
	0.5nm,0.9s,baz=264,slow=5.3,SNR=3.5						
INK	Inuvik	71.79	23	P	P	12 55 12.8	+0.2
	0.8nm,0.8s,baz=286,slow=7.4,SNR=2.9						
YKA	Yellowknife Ar	80.16	28	P	P	12 56 00.9	+0.5
	0.8nm,0.8s,baz=288,slow=4.9,SNR=7.5						

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*ISK **27** 12:47:01.8, 37.°21N×29.°99E, h1^{km}, ML2.7/9*

*DDA **27** 12:47:05.4, 37.°09N×30.°02E, h7^{km}±6^{km}, ML2.4*

ISC 27 12:47:04.9±1.1, **37.°11N**±0.°03×**30.°03E**±0.°03, **h7**^{km}±11^{km}, **n16,** σ**1.^{s}67**/26, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KORT	Korkueli	0.28	112	PG	Pg	12 47 10.1	-0.3
KORT				SG	Sg	12 47 15.9	+1.8
KORT	Korkueli	0.28	112	*i* P	Pg	12 47 11.3	+0.9
KORT				*i* S	Sb	12 47 16.6	-0.5
KORT				IAML		12 47 18.0	
	comp=N,738nm,0.3s						
ELL	Elmali	0.37	195	PG	Pg	12 47 11.7	-0.4
ELL				SG	Sb	12 47 19.8	-0.1
GOLH	Golhisar	0.40	289	*i* P	Pg	12 47 13.0	+0.3
GOLH				*i* S	Sb	12 47 20.9	+0.2
GOLH				IAML		12 47 24.0	
	comp=N,235nm,0.3s						
BUCA	Burdur, Bucak-	0.48	62	*i* P	Pg	12 47 14.2	0.0
BUCA				*i* S	Sg	12 47 22.1	+1.7
ANTB	Antalya	0.54	112	PG	Pg	12 47 14.3	-1.0
ANTB				SG	Sg	12 47 23.6	+1.3
BCK	Bucak	0.57	51	PG	Pg	12 47 13.5	-2.4
BCK				SG	Sg	12 47 21.6	-1.7
CAEL	Denizli, Camel	0.57	272	*i* P	Pg	12 47 16.4	+0.5
CAEL				IAML		12 47 31.0	
	comp=N,173nm,0.5s						
BRDR	BURDUR-Merkez	0.59	2	*i* P	Pg	12 47 16.4	+0.1
BRDR				*i* S	Sb	12 47 26.9	+0.6
BASM	Basmaki-Afyon	0.81	1	PG	Pg	12 47 16.9	-3.6
FETY	Fethiye	0.89	239	PG	Pg	12 47 20.5	-1.5
AKAS	Kas	0.94	202	PG	Pg	12 47 22.6	-0.3
TAVA	DENIZLI_Tavas	0.96	292	*i* P	Pg	12 47 23.8	+0.4
TAVA				*i* S	Sb	12 47 37.7	+0.8
DALY	Dalyan (Mula)	1.14	256	PN	Pg	12 47 24.2	-2.6
KHAL	Karahalli	1.33	341	*i* P	Pg	12 47 31.4	+0.9
KHAL				*i* S	Sn	12 47 51.8	+3.7
YER	Yerkesik	1.40	272	PN	Pn	12 47 28.9	-2.0

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*IDC **27** 12:48:09.2±1.1, 21.°36S×68.°20W, h112^{km}±12^{km}, mb3.7/2, mb1 3.7/5, mb1mx3.4/29, mbtmp4.0/5, MS2.7/1, Ms1 2.9/1, ms1mx2.6/28, Error ellipse: s-maj=40.3km s-min=15.5km az=114.0*

*GUC **27** 12:48:09.4±0.6, 21.°32S×68.°49W, h119^{km}±3^{km}, ML3.6*

ISC 27 12:48:09.0±0.9, **21.°29S**±0.°03×**68.°51W**±0.°08, **h120**^{km}±8^{km}, **n25,** σ**1.^{s}33**/43, **13C, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	IPOC Station P	0.85	233	⇑*i*P	Pn	12 48 29.9	+0.1
PB09				*i* S	Sn	12 48 45.9	+0.4
PB09				IAML		12 48 49.9	
	comp=N,854nm,0.3s						
PB01	IPOC Station P	0.95	285	⇑*i*P	Pn	12 48 30.1	-0.5
PB01				*i* S	Sn	12 48 46.5	-0.4
PB01				IAML		12 48 48.4	
	comp=N,1μm,0.5s						
PB08	IPOC Station P	1.29	332	⇑*i*P	Pn	12 48 35.2	+0.6
PB08				*i* S	Sn	12 48 54.9	+1.0
PB08				IAML		12 48 56.9	
	comp=N,1μm,0.7s						
PB07	IPOC Station P	1.36	251	⇑*i*P	Pn	12 48 34.6	-0.3
PB07				*i* S	Sn	12 48 54.0	-0.6
PB07				IAML		12 48 54.5	
	comp=N,1μm,0.3s						
LVC	Limon Verde	1.37	196	P	Pn	12 48 35.4	+0.1
	comp=N,79nm,0.3s,baz=9.2,slow=8.8,SNR=556						
LVC				S	Sn	12 48 55.0	-0.2
	comp=N,80nm,0.3s,baz=163,slow=19,SNR=72						
LVC	Limon Verde	1.37	196	*e*P	Pn	12 48 35.5	+0.1
LVC				*i* S	Sn	12 48 55.0	-0.2
PATCX	Punta Patache	1.61	287	⇑*i*P	Pn	12 48 37.7	-0.1
PATCX				*i* S	Sn	12 48 59.4	-0.3
PATCX				IAML		12 49 04.7	
	comp=N,1μm,0.3s						
HMBC	Humberstone	1.64	308	⇑*i*P	Pn	12 48 37.8	-0.4
HMBC				*i* S	Sn	12 49 00.3	-0.1
HMBC				IAML		12 49 02.0	
	comp=E,933nm,0.3s						
PB06	IPOC Station P	1.72	215	⇑*i*P	Pn	12 48 39.0	-0.2
PB06				*i* S	Sn	12 49 01.8	-0.5
PB06				IAML		12 49 03.4	
	comp=E,986nm,0.2s						
TA01	Diego Aracena	1.72	294	⇑*i*P	Pn	12 48 38.8	-0.3
TA01				*i* S	Sn	12 49 01.6	-0.3
TA01				IAML		12 49 02.7	
	comp=E,1μm,0.2s						
TA02	Huaiquique	1.83	303	⇑*i*P	Pn	12 48 40.1	-0.3
TA02				*e*S	Sn	12 49 03.9	-0.4
PB04	IPOC Station P	1.85	235	*e*P	Pn	12 48 40.0	-0.7
PB04				*i* S	Sn	12 49 04.2	-0.7
PB04				IAML		12 49 10.5	
	comp=N,587nm,0.2s						
PB15	IPOC Station P	2.11	205	⇑*i*P	Pn	12 48 44.1	0.0
PB15				*i* S	Sn	12 49 11.1	+0.2
PB05	IPOC Station P	2.21	225	⇑*i*P	Pn	12 48 44.4	-0.9
PB05				*e*S	Sn	12 49 10.6	-2.4
PB05				IAML		12 49 20.6	
	comp=E,245nm,0.2s						
PSGC	Pisagua	2.27	318	⇑*i*P	Pn	12 48 45.1	-0.8
PSGC				*i* S	Sn	12 49 13.7	-0.5
PSGC				IAML		12 49 20.2	
	comp=E,596nm,0.4s						
MNMC	Minye Minye	2.38	334	⇑*i*P	Pn	12 48 47.9	+0.4
MNMC				*i* S	Sn	12 49 17.9	+0.8
PB10	IPOC Station P	2.91	220	*e*P	Pn	12 48 53.8	-0.3
PB10				*e*S	Sn	12 49 24.9	-4.1
LPAZ	La Paz	4.99	4	P	Pn	12 49 24.1	+1.7
	comp=E,4.2nm,0.3s,baz=172,slow=5.6,SNR=84						
LPAZ				S	Sn	12 50 14.8	-4.6
	baz=81,slow=6.0,SNR=2.0						
LPAZ				LR	LR	12 51 59.8	
	comp=E,90nm,21.1s,baz=70,slow=46						
SIV	San Ignacio	8.80	54	P	Pn	12 50 10.2	-3.2
	comp=E,1.5nm,0.3s,baz=249,slow=12,SNR=46						
PLCA	Paso Flores	19.46	185	P	P	12 52 27.0	+0.6
	comp=E,0.1nm,0.3s,baz=359,slow=10,SNR=4.5						
TORD	Torodi Ar. Bea	76.93	70	P	P	12 59 48.2	-0.6
	comp=E,0.4nm,0.3s,baz=252,slow=5.7,SNR=4.0						
YKA	Yellowknife Ar	91.11	340	P	P	13 01 00.5	+0.9
	comp=E,0.5nm,0.5s,baz=128,slow=5.2,SNR=12						
ASAR	Alice Springs	130.27	207	PKP	PKPdf	13 07 06.7	+0.8
	comp=E,0.3nm,0.6s,baz=135,slow=1.6,SNR=3.6						
WRA	Warramunga Arr	133.32	210	PKP	PKPdf	13 07 12.9	+1.1
	comp=E,0.2nm,0.8s,baz=153,slow=1.7,SNR=5.9						
MKAR	Makanchi Array	145.24	36	PKPbc	PKPbc	13 07 33.5	+1.1
	comp=E,1.1nm,0.7s,baz=324,slow=3.5,SNR=11						

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*IDC **27** 12:53:06.9±0.5, 31.°91N×31.°13E, h0^{km}, mb4.0/28, mb1 4.1/37, mb1mx4.0/64, mbtmp4.0/37, ML4.4/8, Error ellipse: s-maj=12.4km s-min=10.9km az=157.0*

*NEIC **27** 12:53:08.2±3.0, 31.°89N±0.°07×31.°10E±0.°06, h10^{km}±1^{km}, mb4.3/35, Error ellipse: s-maj=12.2km s-min=6.1km az=209.0*

*NIC **27** 12:53:12.8±0.0, 32.°01N×31.°36E, h32^{km}±32^{km}, Ml4.7/5*

*SGS **27** 12:53:13.3, 31.°58N×31.°11E, h8^{km}, Ml3.6*

ISC 27 12:53:07.9±0.4, **31.°89N**±0.°04×**31.°09E**±0.°04, **h10**^{km}**, n284,** σ**1.^{s}98**/309, **mb4.2**/49, **20C-9D, Egypt**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OSC2	CSNet OBS 4	1.54	40	P	Pn	12 53 33.9	-1.6
OSC2				S	Sn	12 53 51.6	-4.1
OSC1	CSNet OBS 1	1.61	6	P	Pn	12 53 37.0	+0.5
OSC1				S	Sn	12 53 56.1	-1.3
KZIT	Kziot	2.99	108	⇑P	Pn	12 53 55.7	+0.2
KZIT				S	Sn	12 54 28.9	-2.6
KZIT				AML	AML	12 54 29.7	
	5.8nm,0.2s						
KZIT				AML	AML	12 54 29.7	
	5.8nm,0.2s						
KZIT				AML	AML	12 54 32.9	
	6.2nm,0.4s						
KZIT				AML	AML	12 54 32.9	
	6.2nm,0.4s						
NATA	Nata	3.14	23	S	Sn	12 54 32.3	-2.6
SZAC	Souni	3.23	27	S	Sn	12 54 33.7	-3.6
AMAZ	Amatzia	3.28	95	⇑P	Pn	12 53 59.2	-0.2
AMAZ				S	Sn	12 54 36.0	-2.6
AMAZ				AML	AML	12 54 38.6	
	8.8nm,0.5s						
AMAZ				AML	AML	12 54 38.6	
	8.8nm,0.5s						
AKMS	Akamas	3.29	18	P	Pn	12 54 00.3	+0.7
AKMS				AML	AML	12 54 36.8	
	5.5nm,0.3s						
ASGA	Asgata	3.41	31	S	Sn	12 54 39.0	-2.6
ALFC	Alefka	3.49	21	⇑P	Pn	12 54 02.9	+0.5
ALFC				AML	AML	12 54 41.8	
	4.7nm,0.6s						
LEF	Lefka	3.56	25	P	Pn	12 54 04.4	+1.2
LEF	Lefka	3.56	25	S	Sn	12 54 46.6	+1.3
CSS	Mathiatis	3.59	31	P	Pn	12 54 05.9	+2.2
CSS	Mathiatis	3.59	31	S	Sn	12 54 47.5	+1.3
CSS	Mathiatis	3.59	31	Pn	Pn	12 54 05.8	+2.0
CSS	Mathiatis	3.59	31	S	Sn	12 54 42.6	-3.6
CSS	Mathiatis	3.59	31	⇑P	Pn	12 54 05.7	+2.0
AKIN	Akıncılar- Kıb	3.70	32	P	Pn	12 54 06.8	+1.7
MMLI	Mount Malkishu	3.71	80	P	Pn	12 54 05.2	-0.2
MMLI	Mount Malkishu	3.71	80	⇑P	Pn	12 54 05.0	-0.4
MMLI				S	Sn	12 54 45.8	-3.4
MMLI				AML	AML	12 54 46.3	
	2.6nm,0.6s						
MMLI				AML	AML	12 54 46.3	
	2.6nm,0.6s						
MMLI				AML	AML	12 54 48.2	
	2.0nm,0.4s						
MMLI				AML	AML	12 54 48.2	
	2.0nm,0.4s						
AKDN	Akdeniz- Kıbrı	3.74	24	P	Pn	12 54 07.6	+1.8
MMAI	Mount Meron Ar	3.81	72	Pn	Pn	12 54 06.2	-0.6
	135nm,0.3s,baz=251,slow=11,SNR=254						
MMAI				Sn	Sn	12 54 47.0	-4.8
	63nm,0.3s,baz=267,slow=9.1,SNR=4.7						
EIL	Elat	3.99	123	Pn	Pn	12 54 08.9	-0.3
	28nm,0.3s,baz=320,slow=17,SNR=193						
EIL				Pg	Pb	12 54 17.6	-0.7
	69nm,0.3s,baz=311,slow=13,SNR=45						
EIL				Sn	Sn	12 54 52.7	-3.4
	128nm,0.3s,baz=134,slow=6.4,SNR=16						
EIL				Lg	Lg	12 55 06.7	
	86nm,0.3s,baz=320,slow=21,SNR=7.9						
EIL	Elat	3.99	123	⇓P	Pn	12 54 08.8	-0.4
DQRL	Deir Qamar	4.18	63	*e*P	Pn	12 54 11.7	-0.2
SHBL	Chebaa	4.19	68	*e*P	Pn	12 54 11.8	-0.2
QRWL	Qaraoun	4.21	66	*e*P	Pn	12 54 12.6	+0.3
HQLS		4.29	126	S	Sn	12 55 00.7	-2.7
HQLS		4.29	126	P	Pn	12 54 14.5	+1.2
RCY	Rachaya	4.31	67	*e*P	Pn	12 54 13.8	+0.1
BHL	Bhannes	4.33	61	*e*P	Pn	12 54 14.5	+0.5
HAQS	Haql	4.35	130	S	Sn	12 55 01.4	-3.6
HAQS				P	Pn	12 54 15.1	+0.9
EREN	Erenkoy	4.45	34	P	Pn	12 54 18.0	+2.6
GAZI	Gazipasa	4.45	13	P	Pn	12 54 17.4	+1.9
AKAS	Kas	4.50	345	P	Pn	12 54 16.7	+0.3
AKAS	Kas	4.50	345		Pn	12 54 16.0	-0.3
AKAS				Sn	Sn	12 55 05.2	-3.7
TEKE	Tekeli-Mersin	4.56	21	P	Pn	12 54 19.3	+2.3
YORU	Yoruktepe-Mers	4.67	24	P	Pn	12 54 20.9	+2.4
AKK2	Akkuyu-Mersin	4.70	25	P	Pn	12 54 21.2	+2.3
AKK1	Akkuyu-Mersin	4.71	25	P	Pn	12 54 20.9	+1.9
ALAN	Alanya-ANTALYA	4.72	9	P	Pn	12 54 20.8	+1.6
HWQ	Hawqa	4.72	58	*e*P	Pn	12 54 18.9	-0.4
AKKU	Akkuyu-Mersin	4.72	25	P	Pn	12 54 21.8	+2.6
KEMT	Kemer-ANTALYA	4.72	355	P	Pn	12 54 20.1	+0.9
OREN	Orenkoy-Mersin	4.74	24	P	Pn	12 54 22.1	+2.7
TISA	Tisan-Mersin	4.77	26	P	Pn	12 54 22.4	+2.5
TEPK	Tepekoy-MERSIN	4.78	25	P	Pn	12 54 23.0	+2.9
BERE	Bereket-Mersin	4.79	21	P	Pn	12 54 22.9	+2.7
YESI	Yesilovacik-Me	4.79	26	P	Pn	12 54 21.9	+1.8
RSHS		4.81	137	P	Pn	12 54 20.8	+0.3
RSHS		4.81	137	S	Sn	12 55 12.3	-3.9
KARP	Karpathos	4.90	319	P	Pn	12 54 21.9	+0.1
KARP	Karpathos	4.90	319	Pn	Pn	12 54 21.8	0.0
KARP				Sn	Sn	12 55 15.9	-2.6
KARP	Karpathos	4.90	319	⇑P	Pn	12 54 21.9	+0.1
TEVE	Tevekalti-Mers	4.94	23	P	Pn	12 54 24.7	+2.4
ELL	Elmali	4.94	349	P	Pn	12 54 23.3	+0.9
ELL	Elmali	4.94	349	Pn	Pn	12 54 24.1	+1.7
ELL				Sn	Sn	12 55 16.7	-3.0
ARG	Arkhangelos	4.97	331	P	Pn	12 54 23.1	+0.5
ARG	Arkhangelos	4.97	331	P	Pn	12 54 22.6	0.0

ANTB	**Antalya**	**5.01**	**356**	P	**Pn**	**12 54 24.6**	**+1.4**
FETY	**Fethiye**	**5.02**	**341**	P	**Pn**	**12 54 22.5**	**-0.8**
FETY	**Fethiye**	**5.02**	**341**	P	**Pn**	**12 54 22.9**	**-0.4**
KEBE	**Keben-Mersin**	**5.04**	**25**	P	**Pn**	**12 54 26.5**	**+2.8**
SILI	**Silifke-Mersin**	**5.05**	**27**	P	**Pn**	**12 54 26.0**	**+2.3**
SLFK	**Silifke-Mersin**	**5.08**	**27**	P	**Pn**	**12 54 26.2**	**+2.1**
KORT	**Korkueli**	**5.13**	**353**	P	**Pn**	**12 54 26.5**	**+1.5**
ZKR	**Zakros**	**5.19**	**310**	P	**Pn**	**12 54 24.9**	**-0.7**
KRABS	**KRABS**	**5.22**	**135**	P	**Pn**	**12 54 26.3**	**+0.1**
KIZK	**Mersin**	**5.23**	**28**	P	**Pn**	**12 54 28.6**	**+2.4**
DALY	**Dalyan (Mula)**	**5.31**	**338**	P	**Pn**	**12 54 27.8**	**+0.5**
STIA	**Sitia Lasithi**	**5.32**	**310**	P	**Pn**	**12 54 26.8**	**-0.7**
MRSB	**Marmaris-Mugla**	**5.38**	**334**	P	**Pn**	**12 54 28.8**	**+0.6**
TURN	**Turunc**	**5.41**	**335**	P	**Pn**	**12 54 28.8**	**+0.1**
QREAT	**Al Qurrayyat**	**5.53**	**92**	P	**Pn**	**12 54 30.0**	**-0.4**
BCK	**Bucak**	**5.57**	**356**	P	**Pn**	**12 54 32.6**	**+1.6**
MWLHS	**Almuwaylih**	**5.64**	**136**	P	**Pn**	**12 54 32.1**	**+0.3**
WTBKS	**WTBKS**	**5.65**	**131**	P	**Pn**	**12 54 32.7**	**+0.7**
NPS	**Neapolis**	**5.67**	**308**	P	**Pn**	**12 54 32.3**	**0.0**
LAST	**Lasithi**	**5.71**	**306**	P	**Pn**	**12 54 32.6**	**-0.3**
YER	**Yerkesik**	**5.72**	**337**	P	**Pn**	**12 54 34.3**	**+1.3**
YER	**Yerkesik**	**5.72**	**337**	P	**Pn**	**12 54 33.0**	**0.0**
KRTS	**Karatas**	**5.87**	**36**	P	**Pn**	**12 54 30.6**	**-4.3**
ISP	**Isparta**	**5.94**	**356**	P	**Pn**	**12 54 37.8**	**+1.8**
ISP	**Isparta**	**5.94**	**356**	Pn	**Pn**	**12 54 38.6**	**+2.6**
ISP				Sn	**Sn**	**12 55 42.4**	**-1.8**
TBKS	**Tabuk**	**5.97**	**126**	P	**Pn**	**12 54 37.1**	**+0.6**
KSTL	**Kastelli Herak**	**6.07**	**306**	P	**Pn**	**12 54 35.6**	**-2.1**
BASM	**Basmaki-Afyon**	**6.08**	**352**	P	**Pn**	**12 54 39.1**	**+1.2**
SIVA	**Sivas**	**6.11**	**302**	P	**Pn**	**12 54 37.8**	**-0.4**
KONT	**Konya--Tatoy**	**6.13**	**9**	P	**Pn**	**12 54 41.2**	**+2.6**
IDI	**Anoyia**	**6.18**	**305**	Pn	**Pn**	**12 54 39.7**	**+0.3**
	17nm,0.3s,baz=120,slow=15,SNR=85						
IDI				Sn	**Sn**	**12 55 45.9**	**-4.3**
	88nm,0.3s,baz=360,slow=19,SNR=20						
YESY	**Yesilyurt**	**6.27**	**20**	P	**Pn**	**12 54 43.2**	**+2.6**
KARA	**Karaisali**	**6.28**	**30**	P	**Pn**	**12 54 42.8**	**+2.2**
LADK	**Ladik-KONYA**	**6.38**	**9**	P	**Pn**	**12 54 42.8**	**+0.7**
CEYT	**Ceyhan**	**6.39**	**36**	P	**Pn**	**12 54 44.6**	**+2.4**
SANT	**Santorini**	**6.46**	**315**	Pn	**Pn**	**12 54 41.5**	**-1.7**
SANT				Sn	**Sn**	**12 55 50.5**	**-6.5**
THR8	**Santorini-Mono**	**6.47**	**316**	P	**Pn**	**12 54 41.8**	**-1.5**
THR6	**Thira Island,**	**6.49**	**315**	P	**Pn**	**12 54 42.1**	**-1.4**
SNT5	**Nea Kammeni, S**	**6.52**	**315**	P	**Pn**	**12 54 42.8**	**-1.2**
THR3	**Thira Island,**	**6.52**	**315**	P	**Pn**	**12 54 42.6**	**-1.4**
KHL	**Karahalli**	**6.55**	**349**	P	**Pn**	**12 54 44.6**	**+0.2**
GVDS	**Gavdos**	**6.55**	**299**	P	**Pn**	**12 54 44.2**	**-0.2**
GVD	**Gavdhos**	**6.55**	**299**	P	**Pn**	**12 54 43.9**	**-0.5**
THR5	**Thira Island,**	**6.56**	**315**	P	**Pn**	**12 54 43.1**	**-1.4**
CMRD	**Camardi-Nigde**	**6.59**	**28**	P	**Pn**	**12 54 47.6**	**+2.6**
SHUT	**Suhut-Afyon**	**6.66**	**356**	P	**Pn**	**12 54 48.0**	**+2.0**
KOZT	**Kozan**	**6.81**	**34**	P	**Pn**	**12 54 49.8**	**+1.9**
CHBY	**Cihanbeyli**	**6.84**	**12**	P	**Pn**	**12 54 49.9**	**+1.5**
KULA	**Kula-Manisa**	**6.90**	**344**	P	**Pn**	**12 54 50.1**	**+0.8**
MANT	**Manisa**	**6.90**	**343**	Pn	**Pn**	**12 54 49.5**	**0.0**
APE	**Apeiranthos**	**6.91**	**320**	⇑P	**Pn**	**12 54 48.0**	**-1.3**
IMMV	**Iera Moni Meta**	**6.91**	**303**	P	**Pn**	**12 54 49.0**	**-0.3**
JOFS	**JOFS**	**6.93**	**109**	P	**Pn**	**12 54 49.8**	**+0.1**
BIDS	**Bi'r al Bayda'**	**7.16**	**133**	P	**Pn**	**12 54 53.7**	**+1.0**
QLABS	**Al Qalibar**	**7.17**	**122**	P	**Pn**	**12 54 54.0**	**+1.0**
BLCB	**Balcova**	**7.28**	**334**	P	**Pn**	**12 54 54.3**	**0.0**
GAZ	**Gaziantep**	**7.30**	**42**	P	**Pn**	**12 54 57.0**	**+2.3**
GAZ	**Gaziantep**	**7.30**	**42**	Pn	**Pn**	**12 54 55.0**	**+0.3**
GAZ				Sn	**Sn**	**12 56 12.9**	**-4.7**
KMRS	**Kahramanmaras**	**7.37**	**39**	P	**Pn**	**12 54 57.9**	**+2.3**
YAYX	**Yaylak**	**7.38**	**17**	P	**Pn**	**12 54 57.3**	**+1.5**
CIFT	**Cifteler, Eski**	**7.46**	**360**	P	**Pn**	**12 54 58.6**	**+1.8**
EWJHS	**Al Wajh**	**7.51**	**138**	P	**Pn**	**12 54 58.1**	**+0.6**
AUSIV	**SIVRIHISAR**	**7.54**	**3**	P	**Pn**	**12 54 59.1**	**+1.0**
SVRH	**Sivrihisar-ESK**	**7.55**	**3**	P	**Pn**	**12 54 59.3**	**+1.2**
AFSR	**Afar-Bala (An**	**7.71**	**12**	P	**Pn**	**12 55 02.5**	**+2.1**
KAMT	**Kaman**	**7.76**	**15**	P	**Pn**	**12 55 02.9**	**+1.8**
SARI	**SarD1z-Kayseri**	**7.83**	**32**	P	**Pn**	**12 55 03.2**	**+1.1**
BR131	**Keskin Array S**	**8.09**	**14**	Pn	**Pn**	**12 55 07.0**	**+1.4**
BRTR	**Keskin Array B**	**8.09**	**14**	Pn	**Pn**	**12 55 06.4**	**+0.8**
	1.7nm,0.3s,baz=192,slow=16,SNR=29						
BRTR				Pg	Pb	12 55 18.8	-9.5
	1.2nm,0.3s,baz=191,slow=16,SNR=17						
BRTR				Sn	**Sn**	**12 56 32.9**	**-4.2**
	0.5nm,0.3s,baz=202,slow=23,SNR=2.2						
BRTR	**Keskin Array B**	**8.09**	**14**	Pn	**Pn**	**12 55 07.3**	**+1.8**
MDUB	**Mudurnu**	**8.56**	**1**	Pn	**Pn**	**12 55 12.7**	**+0.6**
ITM	**Ithomi**	**9.22**	**307**	Pn	**Pn**	**12 55 19.6**	**-1.3**
ITM	**Ithomi**	**9.22**	**307**	⇑P	**Pn**	**12 55 19.1**	**-1.9**
ITM				⇑S	**Sn**	**12 56 57.3**	**-7.4**
AGG	**Agios Georgios**	**10.08**	**317**	Pn	**Pn**	**12 55 31.6**	**-1.1**
AGG	**Agios Georgios**	**10.08**	**317**	⇓P	**Pn**	**12 55 31.7**	**-1.1**
GEVA	**Gevas**	**11.71**	**54**	Pn	**Pn**	**12 55 55.7**	**+0.5**
FNA	**Florina**	**11.83**	**321**		**Pn**	**12 55 57.0**	**+0.3**
FNA	**Florina**	**11.83**	**321**	⇑P	**Pn**	**12 55 57.6**	**+0.8**
KEK	**Kerkira**	**12.03**	**314**	⇑P	**Pn**	**12 55 55.3**	**-4.2**
TIRR	**Tirgusor**	**12.72**	**351**	Pn	**Pn**	**12 56 09.4**	**+0.5**
TIR	**Tirane**	**13.04**	**319**	Pn	**Pn**	**12 56 12.9**	**-0.4**
TPGR	**Topolog**	**13.11**	**352**	⇓P	**Pn**	**12 56 16.0**	**+1.7**
CFR	**Carcaliu**	**13.47**	**351**	⇑P	**Pn**	**12 56 19.1**	**+0.1**
TIP	**Timpagrande**	**13.74**	**306**	⇓P	**Pn**	**12 56 18.6**	**-4.3**
TIP	**Timpagrande**	**13.74**	**306**	Pn	**Pn**	**12 56 18.8**	**-4.0**
TIP	**Timpagrande**	**13.74**	**306**	⇓P	**Pn**	**12 56 18.5**	**-4.3**
GNI	**Garni**	**13.77**	**49**	Pn	**Pn**	**12 56 24.5**	**+1.1**
	0.7nm,0.3s,baz=80,slow=18,SNR=1.3						
PDG	**Podgorica**	**14.12**	**322**	⇓P	**Pn**	**12 56 23.6**	**-4.3**
PDG	**Podgorica**	**14.12**	**322**	Pn	**Pn**	**12 56 24.8**	**-3.2**
MLR	**Muntele Rosu**	**14.16**	**345**	Pn	**Pn**	**12 56 29.8**	**+1.2**
	0.2nm,0.3s,baz=104,slow=20,SNR=5.0						
MLR	**Muntele Rosu**	**14.16**	**345**	⇑P	**Pn**	**12 56 31.4**	**+2.8**
MLR	**Muntele Rosu**	**14.16**	**345**	Pn	**Pn**	**12 56 30.2**	**+1.6**
VOIR		**14.32**	**343**	⇓P	**Pn**	**12 56 31.6**	**+0.9**
PLOR	**Plostina**	**14.36**	**347**	⇑P	**Pn**	**12 56 33.7**	**+2.4**
VRI	**Vrincioaia**	**14.36**	**348**	⇓P	**Pn**	**12 56 33.4**	**+2.1**
HERR	**Herculane**	**14.63**	**335**	⇓P	**Pn**	**12 56 35.7**	**+0.7**
RAFF	**Raffo Rosso**	**14.77**	**296**	Pn	**Pn**	**12 56 35.4**	**-1.5**
VAE	**Valguarnera**	**14.80**	**297**	Pn	**Pn**	**12 56 38.1**	**+0.7**
	12nm,0.3s,baz=57,slow=12,SNR=3.6						
VAE				Sn	Sn	12 59 06.5	-15
	28nm,0.3s,baz=17,slow=1.1,SNR=4.1						
GZR	**Gura Zlata**	**14.95**	**337**	⇑P	**P**	**12 56 46.1**	**+1.1**
DIVS	**Divibare**	**14.98**	**328**		**Pn**	**12 56 40.6**	**+0.8**
KBZ	**Khabaz**	**15.04**	**35**	Pn	**Pn**	**12 56 42.5**	**+2.0**
	0.1nm,0.3s,baz=232,slow=18,SNR=3.5						
MRVN	**Minervino Murg**	**15.06**	**312**	⇑P	**Pn**	**12 56 35.4**	**-5.4**
RAYN	**Ar Rayn**	**15.23**	**120**	P	**P**	**12 56 46.3**	**-1.9**
RAYN				IAmb	IAmb	12 56 47.5	
	comp=Z,6.0nm,0.8s						
PAOL	**Paolisi**	**16.10**	**309**		**Pn**	**12 56 52.2**	**-2.2**
PAOL				IAmb	IAmb	12 57 02.7	
	comp=Z,12nm,0.6s						
BURAR	**Bucovina Array**	**16.33**	**346**	⇑P	**P**	**12 57 00.8**	**+0.5**
BURAR	**Bucovina Array**	**16.33**	**346**	Pn	**Pn**	**12 56 57.6**	**+0.2**
BUR08	**Bucovina Ar. S**	**16.36**	**346**	Pn	**Pn**	**12 56 56.7**	**-1.1**
INTR	**Introdacqua**	**17.02**	**311**	Pn	**Pn**	**12 57 04.3**	**-1.8**
INTR				IAmb	IAmb	12 57 07.4	
	comp=Z,35nm,1.1s						
NRCA	**Norcia**	**17.95**	**313**	P	**Pn**	**12 57 16.5**	**-1.2**
NRCA				IAmb	IAmb	12 57 30.0	
	comp=Z,25nm,1.3s						
PSZ	**Piszkesteto**	**18.14**	**335**	⇑P	**P**	**12 57 21.7**	**+1.5**
PSZ	**Piszkesteto**	**18.14**	**335**	P	**Pn**	**12 57 18.2**	**-1.7**
PSZ				IAmb	IAmb	12 57 35.5	
	comp=Z,19nm,1.2s						
KOLS	**Kolonicke sedl**	**18.28**	**341**	*e*PN	**P**	**12 57 23.1**	**+1.4**
KOLS	**Kolonicke sedl**	**18.28**	**341**	*e*P	P	12 57 35.7	+14
KEST	**Kesra**	**18.46**	**288**	P	**Pn**	**12 57 25.3**	**+1.3**
	comp=Z,0.7nm,0.3s,baz=58,slow=11,SNR=7.1						
KEST	**Kesra**	**18.46**	**288**	P	**Pn**	**12 57 25.6**	**+1.5**
KEST				IAmb	IAmb	12 57 29.3	
	comp=Z,57nm,1.5s						
AKASG	**Malin Array Be**	**18.85**	**356**	P	**P**	**12 57 27.8**	**-0.1**
	comp=Z,1.9nm,0.3s,baz=176,slow=9.3,SNR=15						
AKASG	**Malin Array Be**	**18.85**	**356**	P	**Pn**	**12 57 28.9**	**+0.4**
AKBB	**Malin Array Si**	**18.85**	**356**	P	**P**	**12 57 26.9**	**-1.0**
AKBB				IAmb	IAmb	12 57 41.6	
	comp=Z,11nm,0.8s						
SOKA	**Soboth**	**19.25**	**325**	*e*P	**Pn**	**12 57 35.4**	**+1.9**
	comp=Z,2.7nm,0.6s						
OBKA	**Obir**	**19.37**	**324**	*e*P	**Pn**	**12 57 36.8**	**+1.8**
	comp=Z,2.8nm,0.6s						
MODS	**Modra-Piesok**	**19.51**	**332**	*e*PN	**P**	**12 57 35.5**	**+0.2**
MODS	**Modra-Piesok**	**19.51**	**332**	*e*P	Pn	12 57 47.8	+11
JAVC	**Velka Javorina**	**19.74**	**333**	*e*P	**Pn**	**12 57 39.6**	**+0.3**
MYKA	**Terra Mystica**	**19.91**	**323**	*e*P	**Pn**	**12 57 42.0**	**+0.6**
	comp=Z,5.8nm,0.9s						
PTCC	**Patocco-Chiusa**	**19.92**	**322**	⇑P	**Pn**	**12 57 41.5**	**+0.1**
KBA	**Koelnbreinsper**	**20.36**	**323**	*e*P	Pn	12 57 46.4	-0.4
	comp=Z,5.6nm,0.7s						
KRUC	**Moravsky**	**20.41**	**331**	*e*P	**P**	**12 57 45.4**	**+0.3**
VRAC	**Vranov**	**20.53**	**332**	P	**P**	**12 57 46.8**	**+0.5**
	comp=Z,2.5nm,0.5s,baz=156,slow=12,SNR=1.9						
MORC	**Moravsky Berou**	**20.54**	**334**	*e*P	**P**	**12 57 47.3**	**+0.8**
ABTA	**Abfaltersbach**	**20.58**	**321**	*e*P	Pn	12 57 51.2	+2.0
	comp=Z,7.4nm,0.6s						
CTI	**Castel Tesino**	**20.62**	**319**		**P**	**12 57 46.9**	**-0.6**
CTI				IAmb	IAmb	12 57 56.0	
	comp=Z,18nm,0.8s						
SALO	**Salr**	**21.02**	**317**	P	**P**	**12 57 50.0**	**-1.7**
KRLC	**Kraliky**	**21.07**	**334**	*e*P	**P**	**12 57 58.2**	**+6.0**
CKRC	**Cesky Krumlov**	**21.12**	**328**	*e*P	**P**	**12 57 59.5**	**+6.7**
WTTA	**Wattenberg**	**21.37**	**322**	*e*P	**P**	**12 57 58.8**	**+3.2**
	comp=Z,14nm,1.1s						
GEC2	**GERESS Array S**	**21.42**	**327**	P	**P**	**12 57 54.4**	**-1.7**
GEC2				IAmb	IAmb	12 58 03.1	
	comp=Z,13nm,1.5s						
GERES	**GERESS Array B**	**21.42**	**327**	P	**P**	**12 57 56.2**	**+0.2**
	comp=Z,0.7nm,0.3s,baz=135,slow=9.4,SNR=7.6						
GERES	**GERESS Array B**	**21.42**	**327**	P	**P**	**12 57 54.5**	**-1.5**
WATA	**Walderalm**	**21.45**	**322**	*e*P	**P**	**12 57 58.2**	**+1.7**
	comp=Z,14nm,1.2s						
DPC	**Dobruska-Polom**	**21.47**	**333**	*e*P	**P**	**12 57 57.5**	**+1.0**
SQTA	**Sankt Quirin**	**21.57**	**321**	*e*P	**P**	**12 57 59.2**	**+1.5**
	comp=Z,8.6nm,0.8s						
KHC	**Kasperske Hory**	**21.68**	**328**	*e*P	**P**	**12 58 02.6**	**+3.8**
KHC	**Kasperske Hory**	**21.68**	**328**	P	**P**	**12 57 58.1**	**-0.6**
MOTA	**Moosalm**	**21.71**	**321**	*e*P	**P**	**12 58 01.6**	**+2.4**
	comp=Z,10nm,0.8s						
FETA	**Feichten**	**21.71**	**320**	*e*P	**P**	**12 58 00.9**	**+1.6**
	comp=Z,26nm,1.4s						
CHVC	**Chvalec**	**21.76**	**334**	*e*P	P	12 58 12.0	+12
RETA	**Reutte**	**21.98**	**321**	*e*P	**P**	**12 58 02.4**	**+0.3**
	comp=Z,11nm,0.9s						
DAVOX	**Davos/Dischmat**	**22.04**	**319**	P	**P**	**12 58 04.2**	**+1.3**
	comp=Z,2.2nm,0.4s,baz=146,slow=15,SNR=3.0						
TUE	**Stuetta**	**22.17**	**317**	P	**P**	**12 58 06.2**	**+1.9**
TUE				IAmb	IAmb	12 58 29.1	
	comp=Z,7.5nm,0.7s						
DAVA	**Damuels**	**22.34**	**320**	*e*P	**P**	**12 58 06.6**	**+0.6**
	comp=Z,16nm,1.1s						
MNK	**Minsk**	**22.72**	**355**	*i* P	**P**	**12 58 09.0**	**-0.8**
	comp=E,3.0nm,0.9s						
MNK				*i* P	**P**	**12 58 09.0**	**-0.8**
	comp=N,33nm,1.1s						
MNK				*i* P	**P**	**12 58 09.0**	**-0.8**
	comp=Z,22nm,0.8s						
MNK				*i* PP	**PnPn**	**12 58 34.3**	**+0.7**
MNK				*i* PcP	**PcP**	**13 01 57.0**	**-4.6**
MNK				*i* S	**S**	**13 02 21.2**	**+3.1**
MNK				*i* SS	**SnSn**	**13 02 56.1**	**+7.9**
MNK				*i* LQ	LQ	13 05 18.1	
MNK				*i* LR	LR	13 07 03.9	
MNK				*i* LRM	MLR	13 07 43.0	
	comp=E,27nm,15.8s						
MNK				*i* LRM	MLR	13 07 43.0	
	comp=N,326nm,16.6s						
MNK				*i* LRM	MLR	13 07 43.7	
	comp=Z,246nm,16.4s						
GEYT	**Alibeck**	**22.93**	**67**	P	**P**	**12 58 13.8**	**+1.6**
	comp=Z,2.6nm,0.7s,baz=265,slow=10,SNR=3.8						
GEYT	**Alibeck**	**22.93**	**67**	P	**P**	**12 58 13.6**	**+1.4**
NACGM	**Naroch**	**23.21**	**354**	*i* P	**P**	**12 58 15.0**	**+0.1**
NACGM				*i* P	**P**	**12 58 15.0**	**+0.1**
NACGM				*i* P	**P**	**12 58 15.0**	**+0.1**
NACGM				*i* Pb	**pP**	**12 58 15.9**	**-1.8**
	comp=Z,26nm,1.1s						
NACGM				*i* Pb	**sP**	**12 58 16.7**	**-2.3**
	comp=E,17nm,1.1s						
NACGM				*i* PP	**PnPn**	**12 58 36.0**	**-4.4**
NACGM				*i* PPP	PPP	12 58 52.4	
NACGM				*i* S	**S**	**13 02 25.6**	**-1.0**
NACGM				*i* SS	**SnSn**	**13 02 56.8**	**-3.3**
NACGM				*i* SSS	SSS	13 03 30.5	
NACGM				*i* LQ	LQ	13 05 30.3	
NACGM				*i* LR	LR	13 06 21.8	
SENIN	**Lac Senin/Sane**	**23.32**	**315**	P	**P**	**12 58 16.9**	**+0.5**
SENIN				IAmb	IAmb	12 58 26.3	
	comp=Z,14nm,0.8s						
BELG	**Belogornoye**	**23.77**	**26**	P	**P**	**12 58 22.1**	**+1.7**
	comp=Z,7.8nm,0.5s,baz=305,slow=18,SNR=2.9						
BFO	**Black Forest**	**23.79**	**320**	P	**P**	**12 58 21.7**	**+0.9**
BFO				IAmb	IAmb	12 58 36.0	
	comp=Z,8.9nm,0.8s						
ECH	**Echery**	**24.38**	**319**	P	**P**	**12 58 27.3**	**+1.1**
TAM	**Tamanrasset**	**24.40**	**255**	P	**P**	**12 58 29.3**	**+2.4**
TAM				IAmb	IAmb	12 58 45.9	
	comp=Z,6.9nm,1.0s						
AKTO	**Aktyubinsk**	**27.23**	**39**	P	**P**	**12 58 53.3**	**+1.3**
	comp=Z,1.1nm,0.3s,baz=246,slow=13,SNR=6.3						
ABKAR	**Akbulak array**	**27.71**	**43**	P	**P**	**12 58 58.4**	**+2.1**
ESDC	**Sonseca Array**	**29.34**	**295**	P	**P**	**12 59 12.0**	**+1.0**
	comp=Z,0.9nm,0.6s,baz=82,slow=8.8,SNR=4.6						
KLMR	**Klimovskoe**	**29.50**	**8**	*e*P	**P**	**12 59 08.7**	**-3.3**
KLMR				AMP		12 59 13.0	
	comp=Z,27nm,1.3s						
FINES	**FINESS Array B**	**29.75**	**355**	P	**P**	**12 59 14.1**	**-0.1**
	comp=Z,1.5nm,0.7s,baz=163,slow=13,SNR=9.5						
MDT	**Midelt**	**30.09**	**281**	P	**P**	**12 59 19.0**	**+1.3**
	comp=Z,1.2nm,0.4s,baz=90,slow=8.1,SNR=2.0						
HOMB	**Homborsund**	**30.53**	**336**	*e*P	**P**	**12 59 21.9**	**+0.8**
SNART	**Snartemo**	**31.03**	**336**	*e*P	**P**	**12 59 25.3**	**-0.3**
KONO	**Kongsberg**	**31.26**	**339**	*e*P	**P**	**12 59 28.2**	**+0.6**
NOA	**NORSAR Array B**	**31.94**	**342**	P	**P**	**12 59 33.2**	**-0.5**
	comp=Z,0.8nm,0.6s,baz=144,slow=8.7,SNR=3.4						
NC303	**NORSAR Array S**	**32.05**	**342**	*e*P	**P**	**12 59 34.7**	**+0.1**
SKAR	**Skarslia**	**32.47**	**339**	*e*P	**P**	**12 59 39.0**	**+0.6**
TORD	**Torodi Ar. Bea**	**32.78**	**242**	P	**P**	**12 59 43.6**	**+2.2**
	comp=Z,0.9nm,0.7s,baz=67,slow=7.0,SNR=4.3						
TORD	**Torodi Ar. Bea**	**32.78**	**242**	P	**P**	**12 59 41.7**	**+0.3**
HYA	**Hoyanger**	**33.50**	**338**	*e*P	**P**	**12 59 48.8**	**+1.5**
SUE	**Sulen**	**33.88**	**337**	*e*P	**P**	**12 59 51.1**	**+0.6**
BVAR	**Borovoye Array**	**35.25**	**42**	P	**P**	**13 00 03.6**	**+1.1**
	comp=Z,0.3nm,0.4s,baz=164,slow=34,SNR=2.3						
KONS	**Konsvik**	**36.28**	**348**	*e*P	**P**	**13 00 11.6**	**+0.5**
KOWA	**Kowa**	**36.41**	**250**	P	**P**	**13 00 14.3**	**+1.5**
	comp=Z,1.5nm,0.5s,baz=55,slow=7.6,SNR=5.0						
FAUS	**Fauske**	**36.74**	**350**	*e*P	**P**	**13 00 16.1**	**+1.0**
KSH	**Kashi**	**36.93**	**65**	P	**P**	**13 00 16.5**	**-0.7**
KSH				pmax	pmax		
	comp=Z,23nm,1.2s						
KSH				pmax	pmax		
	comp=Z,540nm,7.7s						
STEI	**Steigen**	**37.25**	**350**	*e*P	**P**	**13 00 19.8**	**+0.4**
KTK1	**Kautokeino**	**37.44**	**355**	*e*P	**P**	**13 00 23.1**	**+2.1**
ARCES	**ARCESS Array B**	**37.82**	**357**	P	**P**	**13 00 24.2**	**0.0**
	comp=Z,3.3nm,0.5s,baz=172,slow=7.7,SNR=7.2						
KURBB	**Kurchatov Arra**	**39.49**	**48**	P	**P**	**13 00 39.4**	**+0.9**
	comp=Z,58nm,0.7s,baz=264,slow=8.5,SNR=6.9						
KURBB				PcP	**PcP**	**13 02 45.8**	**-0.3**
	comp=Z,0.6nm,0.5s,baz=259,slow=4.4,SNR=4.6						
KURK	**Kurchatov**	**39.56**	**47**	P	**P**	**13 00 39.1**	**0.0**
KURK				IAmb	IAmb	13 01 05.8	
	comp=Z,6.1nm,1.3s						
MAKZ	**Makanchi**	**41.35**	**54**	P	**P**	**13 00 54.0**	**0.0**
MK31	**Makanchi Array**	**41.56**	**54**	P	**P**	**13 00 56.6**	**+0.8**
MKAR	**Makanchi Array**	**41.56**	**54**	P	**P**	**13 00 57.0**	**+1.2**
	comp=Z,0.8nm,0.6s,baz=255,slow=6.3,SNR=9.8						
MKAR				PcP	**PcP**	**13 02 53.1**	**+0.2**
	comp=Z,0.8nm,0.9s,baz=270,slow=5.9,SNR=3.3						
MKAR	**Makanchi Array**	**41.56**	**54**	P	**P**	**13 00 56.9**	**+1.1**
DBIC	**Dimbokro**	**41.86**	**241**	P	**P**	**13 00 58.8**	**+0.3**
	comp=Z,2.2nm,0.7s,baz=25,slow=9.1,SNR=4.6						
DBIC	**Dimbokro**	**41.86**	**241**	P	**P**	**13 00 58.8**	**+0.3**
DBIC				IAmb	IAmb	13 01 05.4	
	comp=Z,11nm,1.3s						
ZALV	**Zalesovo Beam**	**43.82**	**43**	P	**P**	**13 01 14.6**	**+0.7**
	comp=Z,0.9nm,0.5s,baz=266,slow=9.0,SNR=4.2						
HOPEN	**Hopen**	**44.80**	**358**	*e*P	**P**	**13 01 22.1**	**+0.6**
WMQ	**Urumqi**	**45.44**	**58**	*e*P	**P**	**13 01 30.5**	**+3.4**
HSPB	**Hornsund (broa**	**45.77**	**355**	*e*P	**P**	**13 01 30.4**	**+1.3**
SPA0	**Spitsbergen Ar**	**46.84**	**356**	P	**P**	**13 01 38.0**	**+0.5**
SPA0	**Spitsbergen Ar**	**46.84**	**356**	*e*P	**P**	**13 01 38.0**	**+0.5**
LSZ	**Lusaka**	**46.98**	**184**	P	**P**	**13 01 40.3**	**+0.9**
	comp=Z,2.6nm,0.6s,baz=33,slow=5.8,SNR=4.7						
LSZ	**Lusaka**	**46.98**	**184**	P	**P**	**13 01 39.7**	**+0.3**
KBS	**Kingsbay**	**47.84**	**355**	P	**P**	**13 01 45.9**	**+0.6**
KBS	**Kingsbay**	**47.84**	**355**	*e*P	**P**	**13 01 45.7**	**+0.3**
NRIK	**Noril'sk**	**48.83**	**23**	P	**P**	**13 01 53.4**	**+0.3**
	comp=Z,1.4nm,0.6s,baz=313,slow=2.0,SNR=3.8						
NRIK	**Noril'sk**	**48.83**	**23**	P	**P**	**13 01 53.6**	**+0.5**
NRIK				IAmb	IAmb	13 01 54.5	
	comp=Z,1.6nm,0.6s						
SUMG	**Summit**	**53.78**	**340**	P	**P**	**13 02 31.3**	**+0.7**
SUMG				IAmb	IAmb	13 02 54.3	
	comp=Z,6.3nm,1.5s						
GTA	**Gaotai**	**55.14**	**62**	*e*P	P	13 02 54.0	+13
GTA				pmax	pmax		
	comp=Z,2.0nm,1.2s						
LBTB	**Lobatse**	**56.83**	**186**	P	**P**	**13 02 54.4**	**+1.7**
SONM	**Songino Array**	**57.73**	**50**	P	**P**	**13 02 60.0**	**+0.9**
	comp=Z,0.9nm,0.8s,baz=283,slow=7.0,SNR=4.8						
SONM	**Songino Array**	**57.73**	**50**	P	**P**	**13 02 58.0**	**-1.1**
SONM				IAmb	IAmb	13 03 15.0	
	comp=Z,1.4nm,0.8s						
BOSA	**Boshof**	**60.42**	**186**	P	**P**	**13 03 18.9**	**+1.1**
	comp=Z,1.6nm,0.4s,baz=10.0,slow=6.1,SNR=13						
BOSA	**Boshof**	**60.42**	**186**	P	**P**	**13 03 18.2**	**+0.4**
CMAR	**Chiang Mai Arr**	**61.98**	**85**	P	**P**	**13 03 28.4**	**-0.2**
	comp=Z,0.6nm,0.3s,baz=296,slow=8.7,SNR=1.9						
HHC	**Hu-ho-hao-te**	**63.30**	**57**	*e*P	**P**	**13 03 39.8**	**+2.6**
HHC				pmax	pmax		
	comp=Z,4.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,460nm,7.7s						
XAN	**Xi'an**	**63.78**	**65**	P	P	13 03 49.0	+8.6
XAN				pmax	pmax		
	comp=Z,4.0nm,1.5s						
SUR	**Sutherland**	**64.66**	**190**	P	**P**	**13 03 47.2**	**+1.1**
YAK	**Yakutsk**	**66.19**	**31**	P	**P**	**13 03 56.2**	**+0.7**
	comp=Z,23nm,0.4s,baz=217,slow=4.7,SNR=4.1						
WHN	**Wuhan**	**69.39**	**66**	⇑P	P	13 04 23.8	+7.6
KSRS	**Korea Array**	**76.24**	**54**	P	**P**	**13 04 55.8**	**-1.0**
	comp=Z,0.6nm,0.5s,baz=296,slow=5.9,SNR=2.0						
INK	**Inuvik**	**79.45**	**354**	P	**P**	**13 05 13.9**	**-0.2**
	comp=Z,0.4nm,0.6s,baz=2.8,slow=11,SNR=3.2						
INK	**Inuvik**	**79.45**	**354**	P	**P**	**13 05 14.4**	**+0.3**
INK				IAmb	IAmb	13 05 27.5	
	comp=Z,2.0nm,1.2s						
YKA	**Yellowknife Ar**	**81.99**	**345**	P	**P**	**13 05 27.9**	**+0.1**
	comp=Z,0.7nm,0.7s,baz=35,slow=5.7,SNR=19						
PETK	**Petropavlovsk-**	**83.48**	**29**	P	**P**	**13 05 35.0**	**-0.7**
	comp=Z,2.0nm,0.8s,baz=279,slow=12,SNR=7.1						
ILAR	**Eielson Array**	**83.65**	**359**	P	**P**	**13 05 36.8**	**+0.4**
	comp=Z,0.4nm,0.5s,baz=334,slow=3.6,SNR=3.4						
ULM	**Lac du Bonnet**	**85.72**	**329**	P	**P**	**13 05 46.1**	**-1.0**
	comp=Z,0.4nm,0.4s,baz=30,slow=3.5,SNR=3.1						
JCJ	**Chichijima**	**91.99**	**56**	P	**P**	**13 06 15.8**	**-1.5**
	comp=Z,42nm,0.7s,baz=266,slow=24,SNR=2.1						
WRA	**Warramunga Arr**	**111.20**	**101**	PKiKP	**PKiKP**	**13 11 41.0**	**-1.5**
	comp=Z,0.2nm,0.7s,baz=259,slow=3.6,SNR=0.9						
ASAR	**Alice Springs**	**112.51**	**105**	PKiKP	**PKiKP**	**13 11 44.1**	**-0.8**
	comp=Z,0.1nm,0.4s,baz=304,slow=1.3,SNR=10.0						

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*IDC **27** 12:56:47.8±5.0, 37°.38N×71°.55E, h94^{km}±29^{km}, mb3.4/4, mb1 3.5/9, mb1mx3.1/62, mbtmp3.8/9, Error ellipse: s-maj=61.5km s-min=21.8km az=147.0*

*NNC **27** 12:56:49.3±4.7, 37°.75N×71°.44E, h0^{km}, mb4.2, mpv3.9, Error ellipse: s-maj=38.0km s-min=35.0km az=176.0*

ISC 27 12:56:45.3±0.9**, 37°.14N**±0°.08×**71°.65E**±0°.07**, h100^{km}, n29, σ1^{s}.79**/33**, mb3.9**/4**, 4C, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**5.22**	**17**	P	**Pn**	**12 58 02.3**	**+0.9**
	SNR=28						
UCH	**Uchtor**	**5.54**	**23**	P	**Pn**	**12 58 07.0**	**+1.3**
	SNR=19						
EKS2	**Erkin-Say**	**5.75**	**16**	P	**Pn**	**12 58 09.6**	**+1.3**
	SNR=8.5						
AAK	**Ala-Archa**	**5.91**	**21**	P	**Pn**	**12 58 11.9**	**+1.5**
	3.4nm,0.3s,baz=163,slow=5.5,SNR=44						
AAK				S	**Sn**	**12 59 14.4**	**-2.4**
	2.2nm,0.3s,baz=319,slow=23,SNR=18						
AAK	**Ala-Archa**	**5.91**	**21**	P	**Pn**	**12 58 11.9**	**+1.5**
	SNR=9.0						
AAK	**Ala-Archa**	**5.91**	**21**	⇑P	**Pn**	**12 58 11.8**	**+1.5**
	3.0nm,0.3s						
AAK				⇑S	**Sn**	**12 59 14.6**	**-2.1**
	16nm,0.7s						
KK31	**Karatay Array**	**6.02**	**352**	P	**Pn**	**12 58 13.1**	**+1.3**
	17nm,0.3s,baz=183,slow=14,SNR=398						
KK31				⇑S	**Sn**	**12 59 15.5**	**-3.7**
	6.9nm,0.2s,baz=182,slow=24,SNR=7.2						
ULHL	**Ulahol**	**6.20**	**33**	P	**Pn**	**12 58 15.5**	**+1.0**
	SNR=7.7						
CHMS	**Chumysh**	**6.31**	**21**	P	**Pn**	**12 58 17.0**	**+1.2**
	SNR=7.2						
USP	**Ospenovka**	**6.49**	**19**	P	**Pn**	**12 58 19.1**	**+0.8**
	SNR=11						
TKM2	**Tokmak 2**	**6.52**	**26**	⇑P	**Pn**	**12 58 20.2**	**+1.4**
	3.5nm,0.6s						
GEYT	**Alibeck**	**10.78**	**278**	P	**Pn**	**12 59 16.8**	**+0.2**
	1.9nm,0.3s,baz=135,slow=8.8,SNR=11						
GEYT				S	**Sn**	**13 01 11.6**	**-3.6**
	1.4nm,0.3s,baz=119,slow=15,SNR=2.7						
MKAR	**Makanchi Array**	**12.46**	**36**	P	**Pn**	**12 59 39.1**	**+0.1**
	0.0nm,0.3s,baz=229,slow=14,SNR=3.0						
GKN	**Gorkha**	**14.23**	**126**	*e*P	**Pn**	**13 00 00.9**	**-1.5**
	24nm,0.4s						
KURBB	**Kurchatov Arra**	**14.35**	**18**	P	**Pn**	**13 00 05.7**	**+2.1**
	0.0nm,0.3s,baz=204,slow=11,SNR=3.1						
AB31	**Akbulak array**	**14.79**	**329**	P	**Pn**	**13 00 08.7**	**-0.5**
	0.9nm,0.3s,baz=134,slow=14,SNR=18						
DMN	**Daman**	**14.80**	**126**	*e*P	**Pn**	**13 00 08.5**	**-1.3**
	10.0nm,0.4s						
PKIN	**Phulchoki**	**15.01**	**125**	*e*P	**Pn**	**13 00 10.8**	**-1.7**
	12nm,0.4s						
PKI	**Pulchoki**	**15.03**	**125**	*e*P	**Pn**	**13 00 11.1**	**-1.6**
	12nm,0.4s						
GUN	**Gumba**	**15.11**	**123**	*e*P	**Pn**	**13 00 11.2**	**-2.5**
	12nm,0.4s						
RAMN	**Ramite**	**16.23**	**125**	*e*P	**Pn**	**13 00 25.8**	**-1.8**
	19nm,0.5s						
AKTO	**Aktyubinsk**	**16.50**	**328**	P	**Pn**	**13 00 31.9**	**+1.4**
	0.8nm,0.3s,baz=154,slow=9.1,SNR=10						
AKTO				S	Sn	13 03 22.7	-11
	0.2nm,0.3s,baz=163,slow=18,SNR=3.0						
TAPN	**Taplejung**	**16.71**	**121**	*e*P	**Pn**	**13 00 31.7**	**-1.9**
	9.0nm,0.3s						
ODAN	**Odare**	**16.81**	**123**	*e*P	**Pn**	**13 00 33.3**	**-1.5**
	12nm,0.5s						
ZALV	**Zalesovo Beam**	**19.11**	**24**	P	**P**	**13 00 59.6**	**-0.5**
	0.2nm,0.3s,baz=209,slow=9.7,SNR=3.0						
FINES	**FINESS Array B**	**37.25**	**325**	P	**P**	**13 03 48.0**	**+1.1**
	0.9nm,0.4s,baz=118,slow=8.9,SNR=5.6						
ARCES	**ARCESS Array B**	**40.75**	**337**	P	**P**	**13 04 16.8**	**+0.7**
	4.1nm,0.9s,baz=108,slow=4.0,SNR=4.3						
ESDC	**Sonseca Array**	**57.62**	**298**	P	**P**	**13 06 26.4**	**+1.4**
	0.4nm,0.5s,baz=60,slow=7.6,SNR=2.7						
YKA	**Yellowknife Ar**	**80.58**	**3**	P	**P**	**13 08 48.7**	**+2.5**
	0.1nm,0.6s,baz=5.3,slow=5.2,SNR=2.0						

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*TRN **27** 13:00:13.1, 10°.88N×61°.80W, h110^{km}, MD3.1*

*FUNV **27** 13:00:14.5, 10°.82N×62°.23W, h32^{km}, MW3.2*

ISC 27 13:00:11.4±1.6**, 10°.82N**±0°.05×**62°.22W**±0°.05**, h91**^{km}±16^{km}**, n14, σ1^{s}.52**/23**, 1C, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRN	**Trinidad (W)**	**0.82**	**102**	⇑*i*P	**Pn**	**13 00 30.4**	**+1.2**
TRN				*e*S	**Sn**	**13 00 42.1**	**-0.4**
TRN	**Trinidad (W)**	**0.82**	**102**	*e*P	**Pn**	**13 00 29.9**	**+0.8**
TRN				*e*S	**Sn**	**13 00 41.5**	**-1.0**
CRUV	**Carupano**	**1.01**	**262**	*e*P	**Pn**	**13 00 32.5**	**+1.2**
CRUV				*e*S	**Sn**	**13 00 44.4**	**-1.8**
TBH	**Brigand Hill**	**1.18**	**106**	*e*P	**Pn**	**13 00 32.3**	**-1.0**
GRGR	**Grenville**	**1.42**	**23**	*e*P	**Pn**	**13 00 37.2**	**+0.9**
GRGR				*e*S	**Sn**	**13 00 54.4**	**-0.6**
GRGR	**Grenville**	**1.42**	**23**	*e*P	**Pn**	**13 00 37.6**	**+1.4**
GRGR				*e*S	**Sn**	**13 00 54.9**	**-0.1**
GCMP	**Grenada, Carri**	**1.83**	**25**	*e*P	**Pn**	**13 00 41.8**	**+0.3**
GCMP				*e*S	**Sn**	**13 01 03.2**	**-1.2**
ORIV	**Oritupano**	**2.09**	**214**	*e*P	**Pn**	**13 00 46.8**	**+1.9**
ORIV				*e*S	**Sn**	**13 01 10.3**	**-0.2**
PCRV	**Puerto La Cruz**	**2.46**	**255**	*e*P	**Pn**	**13 00 50.8**	**+1.0**
PCRV				*e*S	**Sn**	**13 01 18.2**	**-1.1**
BIRV	**Birongo**	**4.00**	**266**	*e*P	**Pn**	**13 01 11.5**	**+1.0**
TACV	**Tcata**	**4.78**	**262**	*e*P	**Pn**	**13 01 22.6**	**+1.5**
LUEV	**Luepa**	**5.00**	**171**	*e*P	**Pn**	**13 01 25.2**	**+1.0**
BAUV	**El Baul**	**6.03**	**253**	*e*P	**Pn**	**13 01 38.8**	**+0.7**
BAUV				*e*S	**Sn**	**13 02 41.8**	**-4.1**
PAYV	**Puerto Ayacuch**	**7.60**	**226**	*e*P	**Pn**	**13 02 01.3**	**+1.8**

WEL 27 13:08:54.8±0.7**,34°S**±10°×**18°0E**±1°6**,h380^{km}**±11^{km}**,**
M3.9/40**,mB4.5**/25**,ML4.8**/6**,MLv4.5**/40**,Mw(mB)3.7**/25**,**
Error ellipse: s-maj=0.0km s-min=0.0km az=116.2,
South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**3.77**	**197**	P	Pn	13 10 02.8	-0.4
HAZ	**Te Kaha**	**4.09**	**202**	P	Pn	13 10 05.3	-1.1
PKGZ	**Pakihiroa**	**4.13**	**198**	P	Pn	13 10 06.0	-0.8
RUGZ	**Raukumara Rang**	**4.32**	**202**	P	Pn	13 10 08.1	-0.7
TWGZ	**Tauwhareparae**	**4.43**	**198**	P	Pn	13 10 10.0	+0.2
TWGZ				S	S	13 11 10.8	+0.1
OPRZ	**Ohinepanea**	**4.64**	**212**	P	Pn	13 10 12.2	+0.3
CNGZ	**Carnagh Statio**	**4.67**	**194**	P	Pn	13 10 10.2	-2.1
TKGZ	**Te Karaka**	**4.71**	**198**	P	Pn	13 10 12.9	+0.2
TKGZ				S	S	13 11 14.8	-1.1
URZ	**Urewera**	**4.77**	**205**	P	Pn	13 10 12.5	-0.7
URZ				S	S	13 11 15.7	-1.3
RAGZ	**Rawiri**	**4.88**	**201**	P	Pn	13 10 14.8	+0.2
RAGZ				S	S	13 11 19.8	+0.5
RIGZ	**Rimuhau**	**4.99**	**198**	P	Pn	13 10 15.8	+0.2
RIGZ				S	S	13 11 21.1	-0.1
MUGZ	**Murupara**	**5.09**	**207**	S	S	13 11 23.0	-0.1
RTZ	**Ruatahuna**	**5.13**	**204**	S	S	13 11 24.6	+0.4
HSRZ	**Hossack Road**	**5.16**	**212**	S	S	13 11 27.1	+2.6
PRGZ	**Paritu Road**	**5.16**	**196**	S	S	13 11 24.2	-0.4
SNGZ	**Shannon Statio**	**5.17**	**201**	P	Pn	13 10 17.6	+0.1
KNZ	**Kokohu**	**5.31**	**197**	P	Pn	13 10 21.1	+2.2
WPRZ	**Whakapapatarin**	**5.37**	**211**	P	Pn	13 10 16.0	-3.6
RAHZ	**Arahi**	**5.37**	**202**	S	S	13 11 29.9	+1.2
MHGZ	**Mahia Peninsul**	**5.38**	**195**	P	Pn	13 10 22.1	+2.4
MHGZ				S	S	13 11 30.6	+1.9
WHHZ	**Waihua**	**5.48**	**200**	P	Pn	13 10 21.6	+0.8
KUTZ	**Kaahu Road**	**5.49**	**214**	P	Pn	13 10 22.3	+1.3
TLZ	**Tolley Road**	**5.50**	**216**	P	Pn	13 10 23.0	+1.9
MRHZ	**Matea Rd**	**5.53**	**208**	P	Pn	13 10 21.4	-0.1
MRHZ				S	S	13 11 31.9	0.0
NMHZ	**Naumai**	**5.63**	**204**	P	Pn	13 10 23.3	+0.8
NMHZ				S	S	13 11 37.0	+3.1
HATZ	**Hinemaiaia**	**5.71**	**209**	P	Pn	13 10 22.9	-0.5
ARHZ	**Aropaoanui**	**5.72**	**201**	P	Pn	13 10 24.7	+1.2
ARHZ				S	S	13 11 36.0	+0.5
MCHZ	**McNeill Hill**	**5.98**	**203**	S	S	13 11 41.0	+0.2
CKHZ	**Cape Kidnapper**	**6.06**	**199**	S	S	13 11 43.2	+0.8
WTVZ	**West Tongariro**	**6.11**	**211**	P	Pn	13 10 29.0	+1.1
OTVZ	**Oturere**	**6.12**	**211**	P	Pn	13 10 28.4	+0.4
TWVZ	**Taurewa**	**6.14**	**213**	P	Pn	13 10 28.4	+0.2
NGZ	**Ngauruhoe**	**6.16**	**211**	P	Pn	13 10 29.4	+0.9
TUVZ	**Tukino**	**6.21**	**210**	P	Pn	13 10 29.1	+0.1
BHHZ	**Black Hill Sta**	**6.24**	**207**	P	Pn	13 10 29.1	-0.1
BHHZ				S	S	13 11 44.4	-1.8
FWVZ	**Far West T-bar**	**6.24**	**211**	P	Pn	13 10 29.5	+0.1
KAHZ	**Kahuranaki**	**6.24**	**200**	P	Pn	13 10 29.3	0.0
KAHZ				S	S	13 11 47.0	+0.7
KRHZ	**Kereru**	**6.26**	**204**	P	Pn	13 10 29.5	0.0
KRHZ				S	S	13 11 46.0	-0.7
WNVZ	**Wahianoa**	**6.29**	**210**	P	Pn	13 10 29.2	-0.7
MOVZ	**Moawhango**	**6.29**	**209**	P	Pn	13 10 29.0	-0.8
PKVZ	**Pokaka**	**6.36**	**212**	P	Pn	13 10 30.5	-0.1
MTVZ	**Mangateitei**	**6.39**	**211**	P	Pn	13 10 31.2	+0.3
PXZ	**Pawanui**	**6.47**	**200**	P	Pn	13 10 31.9	+0.2
VRZ	**Vera Road**	**6.50**	**216**	P	Pn	13 10 32.6	+0.4
PNHZ	**Pukenui**	**6.57**	**204**	P	Pn	13 10 32.5	-0.4
WPHZ	**Waipukurau**	**6.62**	**202**	P	P	13 10 34.8	+0.4
PRHZ	**Porangahau**	**6.75**	**200**	P	Pn	13 10 35.2	+0.2
TSZ	**Takapari Road**	**6.78**	**205**	P	Pn	13 10 34.5	-0.8
WAZ	**Wanganui**	**6.90**	**212**	P	Pn	13 10 36.6	-0.1
DVHZ	**Dannevirke**	**6.92**	**203**	P	Pn	13 10 37.1	+0.2
ANWZ	**Angora Road**	**6.98**	**201**	P	P	13 10 38.4	0.0
PRWZ	**Pori Road**	**7.22**	**203**	P	Pn	13 10 40.3	0.0
BFZ	**Birch Farm**	**7.25**	**201**	P	P	13 10 41.1	-0.4
MRZ	**Mangatainoka R**	**7.45**	**205**	P	Pn	13 10 41.5	-1.4
HOWZ	**Holdsworth Sta**	**7.68**	**204**	P	Pn	13 10 44.9	-0.7
OGWZ	**Otaki Gorge**	**7.73**	**206**	P	Pn	13 10 44.9	-1.2
TMWZ	**Te Maipa**	**7.75**	**202**	P	Pn	13 10 46.2	-0.1
KIW	**Kapiti Island**	**7.87**	**207**	P	Pn	13 10 46.5	-1.2
MTW	**Mount Morrison**	**7.92**	**204**	P	Pn	13 10 47.9	-0.4
CAW	**Cannon Point**	**8.02**	**206**	P	Pn	13 10 48.0	-1.5
PAWZ	**Paruwai Farm**	**8.14**	**203**	P	Pn	13 10 50.9	0.0
DUWZ	**D'Urville Isla**	**8.23**	**212**	P	Pn	13 10 51.3	-0.6
PLWZ	**Palliser**	**8.37**	**203**	P	Pn	13 10 53.6	0.0
THZ	**Tophouse**	**9.45**	**213**	P	Pn	13 11 05.6	-0.7
KHZ	**Kahutara**	**9.73**	**208**	P	P	13 11 09.7	0.0
LTZ	**Lake Taylor**	**10.55**	**211**	P	Pn	13 11 19.2	0.0

NNC 27 13:10:01.0±5.9**,37°.90N**×**71°.94E,h0^{km},mb3.6,mpv3.1,**
1C-2D,Error ellipse: s-maj=47.7km s-min=40.6km
az=159.0,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	**Ala-Archa**	**5.12**	**22**	P	Pn	13 11 19.3	+0.2
	1.8nm,0.4s						
AAK				S	Sn	13 12 19.7	+0.6
	8.4nm,0.7s						
KK31	**Karatay Array**	**5.31**	**349**	⇓P	Pn	13 11 22.8	+1.2
	0.6nm,0.3s,baz=163,slow=11,SNR=22						
KK31				⇓S	Sn	13 12 24.9	+1.4
	6.7nm,0.3s,baz=163,slow=16,SNR=32						
AB31	**Akbulak array**	**14.28**	**326**	⇑P	Pn	13 13 20.4	-3.9
	0.4nm,0.3s						

WEL 27 13:25:04.8,40°S±1°×**17°4E**±°**,h54^{km}**±4^{km}**,M3.3**/39**,**
ML3.7/39**,MLv3.3**/39**,Error ellipse: s-maj=0.0km**
s-min=0.0km az=77.8,Off west coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NMEZ	**Namu Road**	**0.25**	**346**	P	Pn	13 25 14.3	+0.4
NMEZ				S	Sn	13 25 21.6	+1.3
PREZ	**Palmer Road**	**0.35**	**27**	P	Pn	13 25 14.8	0.0
PREZ				S	Sn	13 25 22.3	+0.5
LREZ	**Lake Rotokare**	**0.39**	**61**	P	Pn	13 25 14.4	-0.7
LREZ				S	Sn	13 25 21.6	-1.0
NEZ	**North Egmont**	**0.40**	**16**	P	Pn	13 25 15.4	+0.1
PKE	**Pukeiti**	**0.46**	**3**	P	Pn	13 25 16.8	+0.9
PKE				S	Sn	13 25 25.7	+1.8
MHEZ	**Mangahewa**	**0.64**	**26**	P	Pn	13 25 19.0	+1.0
MHEZ				S	Sn	13 25 29.3	+1.8
WAZ	**Wanganui**	**0.80**	**98**	P	Pn	13 25 19.2	-0.8
VRZ	**Vera Road**	**0.81**	**50**	P	Pn	13 25 20.4	+0.2
VRZ				S	Sn	13 25 32.1	+0.6
PKVZ	**Pokaka**	**1.14**	**72**	P	Pn	13 25 24.5	0.0
PKVZ				S	Sn	13 25 39.1	0.0
DUWZ	**D'Urville Isla**	**1.15**	**181**	P	Pn	13 25 24.7	0.0
DUWZ				S	Sn	13 25 40.4	+1.0
OHWZ	**Ohakea**	**1.18**	**118**	P	Pn	13 25 25.5	+0.4
OHWZ				S	Sn	13 25 40.7	+0.6
MTVZ	**Mangateitei**	**1.20**	**78**	P	Pn	13 25 25.6	+0.2
MTVZ				S	Sn	13 25 40.9	+0.2
TRVZ	**Turoa**	**1.28**	**75**	P	Pn	13 25 27.1	+0.4
TRVZ				S	Sn	13 25 42.7	-0.2
TWVZ	**Taurewa**	**1.29**	**64**	P	Pn	13 25 26.8	+0.2
FWVZ	**Far West T-bar**	**1.30**	**73**	P	Pn	13 25 27.2	+0.4
FWVZ				S	Sn	13 25 43.3	0.0
DRZ	**Dome Shelter**	**1.30**	**74**	P	Pn	13 25 27.7	+0.7
DRZ				S	Sn	13 25 43.7	+0.3
WNVZ	**Wahianoa**	**1.31**	**76**	P	Pn	13 25 27.5	+0.5
WHVZ	**Whangaehu Hut**	**1.32**	**74**	P	Pn	13 25 27.6	+0.5
HIZ	**Hauiti**	**1.34**	**32**	P	Pn	13 25 27.6	+0.4
NGZ	**Ngauruhoe**	**1.36**	**70**	P	Pn	13 25 28.0	+0.4
TUVZ	**Tukino**	**1.37**	**74**	P	Pn	13 25 28.4	+0.7
WTVZ	**West Tongariro**	**1.37**	**68**	P	Pn	13 25 28.4	+0.6
KIW	**Kapiti Island**	**1.41**	**149**	P	Pn	13 25 28.5	+0.3
MOVZ	**Moawhango**	**1.41**	**81**	P	Pn	13 25 28.6	+0.4
OTVZ	**Oturere**	**1.41**	**70**	P	Pn	13 25 28.7	+0.4
KRVZ	**Karewarewa**	**1.42**	**67**	P	Pn	13 25 28.8	+0.4
ETVZ	**East Tongariro**	**1.45**	**70**	P	Pn	13 25 29.4	+0.6
TMVZ	**Te Maari**	**1.46**	**69**	P	Pn	13 25 29.5	+0.6
OGWZ	**Otaki Gorge**	**1.49**	**142**	P	Pn	13 25 29.8	+0.6
KATZ	**Kakaramea**	**1.51**	**64**	P	Pn	13 25 30.2	+0.5
POWZ	**Post Office Ro**	**1.57**	**119**	P	Pn	13 25 31.5	+1.1
TCW	**Tory Channel**	**1.57**	**171**	P	Pn	13 25 31.0	+0.6
TSZ	**Takapari Road**	**1.59**	**105**	P	Pn	13 25 31.3	+0.6
MRZ	**Mangatainoka R**	**1.60**	**130**	P	Pn	13 25 31.5	+0.7
QRZ	**Quartz Range**	**1.60**	**223**	P	Pn	13 25 31.2	+0.5
RATZ	**Rangitukua**	**1.61**	**61**	P	Pn	13 25 32.2	+1.3
RITZ	**Rihia Road**	**1.62**	**66**	P	Pn	13 25 31.2	+0.1
NNZ	**Nelson**	**1.62**	**196**	P	Pn	13 25 31.9	+0.8
BHHZ	**Black Hill Sta**	**1.64**	**85**	P	Pn	13 25 31.7	+0.4
WATZ	**Wairara**	**1.67**	**56**	P	Pn	13 25 32.8	+1.0
CAW	**Cannon Point**	**1.68**	**150**	P	Pn	13 25 32.4	+0.5
HOWZ	**Holdsworth Sta**	**1.72**	**137**	P	Pn	13 25 33.5	+1.1
WEL	**Wellington**	**1.74**	**159**	P	Pn	13 25 34.1	+1.5
PNHZ	**Pukenui**	**1.75**	**99**	P	Pn	13 25 33.9	+1.1
TUWZ	**Tuamarina**	**1.77**	**180**	P	Pn	13 25 33.7	+0.6
PRWZ	**Pori Road**	**1.79**	**121**	P	Pn	13 25 34.9	+1.6
TLZ	**Tolley Road**	**1.81**	**44**	P	Pn	13 25 34.3	+0.7
DVHZ	**Dannevirke**	**1.82**	**112**	P	Pn	13 25 35.5	+1.8
HATZ	**Hinemaiaia**	**1.82**	**66**	P	Pn	13 25 34.8	+1.0
TIWZ	**Tintock**	**1.85**	**128**	P	Pn	13 25 36.0	+1.7
KUTZ	**Kaahu Road**	**1.86**	**52**	P	Pn	13 25 36.4	+2.1
KRHZ	**Kereru**	**1.86**	**90**	P	Pn	13 25 35.8	+1.4
BHW	**Baring Head**	**1.89**	**159**	P	Pn	13 25 36.0	+1.4
MTW	**Mount Morrison**	**1.91**	**142**	P	Pn	13 25 36.4	+1.4
KWHZ	**Kaweka Forest**	**1.92**	**84**	P	Pn	13 25 36.5	+1.3
WPHZ	**Waipukurau**	**1.96**	**103**	P	Pn	13 25 38.0	+2.4
MSWZ	**Moikau Station**	**2.02**	**151**	P	Pn	13 25 37.9	+1.4
BKZ	**Black Stump Fm**	**2.02**	**77**	P	Pn	13 25 37.5	+0.9
BFZ	**Birch Farm**	**2.03**	**121**	P	Pn	13 25 38.1	+1.5
PAWZ	**Paruwai Farm**	**2.06**	**147**	P	Pn	13 25 39.1	+2.0
BSWZ	**Blackbirch Sta**	**2.06**	**182**	P	Pn	13 25 39.5	+2.5
TMWZ	**Te Maipa**	**2.07**	**135**	P	Pn	13 25 39.3	+2.1
ANWZ	**Angora Road**	**2.09**	**113**	P	Pn	13 25 39.6	+2.2
THZ	**Tophouse**	**2.25**	**200**	P	Pn	13 25 41.1	+1.4
NMHZ	**Naumai**	**2.28**	**77**	P	Pn	13 25 42.3	+2.3
NGRZ	**Ngongotaha**	**2.33**	**49**	P	Pn	13 25 42.2	+1.4
MTHZ	**Maungataniwha**	**2.38**	**71**	P	Pn	13 25 42.8	+1.4
MUGZ	**Murupara**	**2.48**	**63**	P	Pn	13 25 47.0	+4.2
RAHZ	**Arahi**	**2.54**	**74**	P	Pn	13 25 46.8	+3.2
RTZ	**Ruatahuna**	**2.57**	**67**	P	Pn	13 25 45.8	+1.8
AWAZ	**Awhitu Peninsu**	**2.64**	**12**	P	Pn	13 25 46.5	+1.5
MKAZ	**Moumakai**	**2.71**	**21**	P	Pn	13 25 47.2	+1.2
WTAZ	**Waiatarua**	**2.76**	**10**	P	Pn	13 25 48.2	+1.6
SNGZ	**Shannon Statio**	**2.77**	**73**	P	Pn	13 25 49.5	+2.8
KHZ	**Kahutara**	**2.78**	**186**	P	Pn	13 25 49.4	+2.6
ETAZ	**East Tamaki Re**	**2.80**	**16**	P	Pn	13 25 48.4	+1.2
URZ	**Urewera**	**2.83**	**62**	P	Pn	13 25 49.9	+2.5
RVAZ	**Riverhead Bore**	**2.92**	**10**	P	Pn	13 25 50.1	+1.4
RAGZ	**Rawiri**	**2.93**	**68**	P	Pn	13 25 52.1	+3.2
MBAZ	**Motutapu North**	**2.97**	**15**	P	Pn	13 25 50.8	+1.3
WIAZ	**Waiheke Island**	**3.00**	**18**	P	Pn	13 25 51.4	+1.5
MWZ	**Matawai**	**3.08**	**66**	P	Pn	13 25 53.5	+2.6
RIGZ	**Rimuhau**	**3.10**	**73**	P	Pn	13 25 53.5	+2.2
PRGZ	**Paritu Road**	**3.13**	**78**	P	Pn	13 25 53.2	+1.5
KUZ	**Kuaotunu**	**3.22**	**26**	P	Pn	13 25 53.2	+0.4
RUGZ	**Raukumara Rang**	**3.36**	**61**	P	Pn	13 25 57.5	+2.6
LTZ	**Lake Taylor**	**3.38**	**202**	P	Pn	13 25 57.1	+2.1
TWGZ	**Tauwhareparae**	**3.47**	**66**	P	Pn	13 25 59.4	+3.0
INZ	**Inchbonnie**	**3.61**	**211**	P	Pn	13 25 59.2	+1.0
OXZ	**Oxford**	**3.94**	**201**	P	Pn	13 26 03.3	+0.5
OKCZ	**Okains Bay**	**4.12**	**189**	P	Pn	13 26 05.9	+0.7
MQZ	**McQueen's Vall**	**4.17**	**193**	P	Pn	13 26 05.9	0.0
WVZ	**Waitaha Valley**	**4.19**	**214**	P	Pn	13 26 08.4	+2.2
RACZ	**Rakaia**	**4.29**	**198**	P	Pn	13 26 07.5	-0.1
OUZ	**Omahuta**	**4.43**	**356**	P	Pn	13 26 12.0	+2.5
GCSZ	**Gaunt Creek Bo**	**4.56**	**216**	P	Pn	13 26 12.5	+1.2
RPZ	**Rata Peaks**	**4.60**	**207**	P	Pn	13 26 15.0	+3.2
FOZ	**Fox Glacier**	**4.97**	**217**	P	Pn	13 26 17.6	+0.8
TMZ	**Timaru**	**5.21**	**204**	P	Pn	13 26 20.3	+0.1
ODZ	**Otahua Downs**	**5.92**	**203**	P	Pn	13 26 30.1	+0.2

BJI ***27*** *13:45:03.4±0.0,7°.25S×122°.50E,h550^{km},mB6.9/78,*
mb6.6/91

MOS ***27*** *13:45:04.8±1.0,7°.20S×122°.57E,h555^{km},mb6.6/90,*
MS5.9/5,Error ellipse: s-maj=7.2km s-min=3.9km
az=117.1

KLM ***27*** *13:45:04,7°.25S×122°.53E,h544^{km},mb7.1*

DJA ***27*** *13:45:04.9±0.1,7°S±1°×12°3E±°,h547^{km}±1^{km},M6.7/139,*
mB6.9/136,mb6.7/139,MLv7.2/24,Mw(mB)6.8/136,
MwMwp6.5/126,Mwp6.4/126

NEIC ***27*** *13:45:05.4±2.3,7°.30S±0°.08×122°.54E±0°.05,h552^{km}±3^{km},*
mb6.6/260,Mwb7.0/65,Mwc7.0/172,Mww7.0,
Mwc7.0(GCMT),Error ellipse: s-maj=11.2km s-min=7.8km
az=170.0

NEIC ***27*** *13:45:05.3,7°.30S×122°.54E,h555^{km},Moment Tensor*
Solution. Moment tensor: Scale 10^{19}Nm; M_{rr}-1.26;
$M_{\theta\theta}$-2.34; $M_{\phi\phi}$3.60; $M_{r\theta}$-2.31; $M_{\theta\phi}$-0.39; $M_{\phi r}$1.05; Fault
plane solution: $M_0$4.07000×10^{19} NP1:ϕ_s137.05000°,
δ74.92000°,λ-139.30000°. NP2:ϕ_s34.44000°,δ50.98000°,
λ-19.56000°. Principal axes: T 3.9493, Plg15.0000°,
Azm261.0000°; N 0.2336, Plg47.0000°, Azm154.0000°; P
-4.1829, Plg39.0000°, Azm3.0000°;

IDC ***27*** *13:45:06.0±0.3,7°.30S×122°.56E,h556^{km}±3^{km},mb5.9/35,*
mb1 6.0/40,mb1mx6.0/40,mbtmp6.8/40 Error ellipse:
s-maj=8.8km s-min=5.2km az=65.0

NEIC ***27*** *13:45:07,7°.58S×122°.51E,h550^{km},Moment Tensor*
Solution. Moment tensor: Scale 10^{19}Nm; M_{rr}-0.74;
$M_{\theta\theta}$-2.27; $M_{\phi\phi}$3.00; $M_{r\theta}$-1.90; $M_{\theta\phi}$-0.13; $M_{\phi r}$1.09; Fault
plane solution: $M_0$3.48000×10^{19} NP1:ϕ_s39.00000°,
δ51.00000°,λ-13.00000°. NP2:ϕ_s137.00000°,δ79.00000°,
λ-140.00000°. Principal axes: T 3.3754, Plg18.0000°,
Azm262.0000°; N 0.2090, Plg49.0000°, Azm150.0000°; P
-3.5843, Plg35.0000°, Azm5.0000°;

GCMT ***27*** *13:45:08.4±0.1,7°.35S×122°.50E,h552^{km},MW7.0/175,*
Moment Tensor Solution. s175,c483; s173,c400;
Duration: 7^{s}5 Moment tensor: Scale 10^{19}Nm;
M_{rr}-0.72±.01; $M_{\theta\theta}$-2.34±.01; $M_{\phi\phi}$3.06±.01; $M_{r\theta}$-2.05±.01;
$M_{\theta\phi}$-0.17±.01; $M_{\phi r}$1.07±.01; Best double couple:
$M_0$3.60200×10^{19} NP1:ϕ_s38.00000°,δ51.00000°,
λ-14.00000°. NP2:ϕ_s137.00000°,δ79.00000°,
λ-141.00000°. Principal axes: T 3.4380, Plg18.0000°,
Azm262.0000°; N 0.3280, Plg49.0000°, Azm149.0000°; P
-3.7660, Plg35.0000°, Azm5.0000°; nsta1 refers to body
waves, cutoff=50s. nsta2 refers to mantle waves,
cutoff=125s. Triangular moment-rate function

NEIC ***27*** *13:45:09,7°.31S×122°.59E,h555^{km},Moment Tensor*
Solution. Moment tensor: Scale 10^{19}Nm; M_{rr}-0.76;
$M_{\theta\theta}$-2.29; $M_{\phi\phi}$3.05; $M_{r\theta}$-2.06; $M_{\theta\phi}$-0.20; $M_{\phi r}$1.06; Fault
plane solution: $M_0$3.60000×10^{19} NP1:ϕ_s37.00000°,
δ51.00000°,λ-14.00000°. NP2:ϕ_s136.00000°,δ79.00000°,
λ-140.00000°. Principal axes: T 3.4296, Plg18.0000°,
Azm261.0000°; N 0.3221, Plg49.0000°, Azm149.0000°; P
-3.7517, Plg36.0000°, Azm5.0000°;

NEIC ***27*** *13:45:19,7°.18S×122°.63E,h552^{km},Moment Tensor*
Solution. Moment tensor: Scale 10^{19}Nm; M_{rr}-0.71;
$M_{\theta\theta}$-2.13; $M_{\phi\phi}$2.84; $M_{r\theta}$-2.00; $M_{\theta\phi}$-0.33; $M_{\phi r}$0.99; Fault
plane solution: $M_0$3.41000×10^{19} NP1:ϕ_s134.78000°,
δ79.30000°,λ-139.19000°. NP2:ϕ_s35.67000°,δ50.05000°,
λ-14.02000°. Principal axes: T 3.2512, Plg19.0000°,
Azm259.0000°; N 0.3119, Plg48.0000°, Azm147.0000°; P
-3.5632, Plg36.0000°, Azm3.0000°;

ISC 27 13:45:05.6±0.2**,7°.36S**±0°.02×**122°.49E**±0°.03**,h559^{km}**±1^{km}**,**
h561^{km}:pP-P,n2437,σ**1^{s}62**/2852**,mb6.6**/296**,168C-235D,**
Fault plane solution: NP1:ϕ_s26.40610°**,**δ53.65071°**,**
λ-27.55907°. **NP2:**ϕ_s133.59401°**,**δ68.12164°**,**
λ-140.30446°. **Principal axes:** T Plg8.9523°**,**
Azm257.0154°**;** N Plg45.5639°**,** Azm157.7700°**;** P
Plg43.0472°, Azm355.4768°**; Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MMRI	**Maumere**	**1.29**	**191**	P	**P**	**13 46 12.2**	**-1.5**
MMRI	**Maumere**	**1.29**	**191**	⇓P	**P**	**13 46 11.7**	**-1.9**
MMRI	**Maumere**	**1.29**	**191**	P	**P**	**13 46 12.5**	**-1.1**
MMRI				S	**S**	**13 47 04.3**	**-4.6**
BSSI	**Bau Bau, Buton**	**2.33**	**301**	P	**P**	**13 46 17.3**	**-0.4**
BSSI				S	**S**	**13 47 15.7**	**-0.6**
SOEI	**Soe**	**2.96**	**144**	P	**P**	**13 46 21.0**	**-0.4**
SOEI	**Soe**	**2.96**	**144**	⇓P	**P**	**13 46 19.9**	**-1.4**
SOEI	**Soe**	**2.96**	**144**	P	**P**	**13 46 20.0**	**-1.4**
SOEI				S	**S**	**13 47 19.7**	**-3.2**
BATI	**Baumata**	**3.06**	**158**	P	**P**	**13 46 22.2**	**+0.4**
	37μm,0.3s,baz=293,slow=0.4,SNR=917						
BATI				S	**S**	**13 47 21.9**	**-2.0**
	25μm,0.3s,baz=198,slow=2.7,SNR=8.5						
BATI	**Baumata**	**3.06**	**158**	P	**P**	**13 46 21.2**	**-0.6**
WSI	**Waingapu**	**3.16**	**223**	P	**P**	**13 46 20.4**	**-2.0**
KDI	**Kendari**	**3.38**	**2**	P	**P**	**13 46 23.9**	**0.0**
BASI	**Baing, Sumba**	**3.41**	**213**	P	**P**	**13 46 22.8**	**-1.3**
KAPI	**Kappang**	**3.58**	**310**	P	**P**	**13 46 26.3**	**+1.1**
	344nm,0.3s,baz=132,slow=4.9,SNR=731						
KAPI				S	**S**	**13 47 32.0**	**+2.0**
	baz=51,slow=24,SNR=10						
KAPI	**Kappang**	**3.58**	**310**	P	**P**	**13 46 27.1**	**+1.9**
KAPI				S	**S**	**13 47 33.6**	**+3.6**
KAPI	**Kappang**	**3.58**	**310**	⇑P	**P**	**13 46 25.8**	**+0.5**
BNSI	**Bone**	**3.78**	**321**	P	**P**	**13 46 27.1**	**+0.5**
SPSI	**Sidrap Palu**	**4.32**	**321**	P	**P**	**13 46 30.5**	**-0.2**
PLAI	**Plampang**	**4.89**	**252**	P	**P**	**13 46 33.0**	**-2.1**
TTSI	**Tana Toraja**	**5.04**	**328**	P	**P**	**13 46 36.5**	**0.0**
	101nm64μm102μm12μm,0.8s						
TWSI	**Taliwang, Sumb**	**5.72**	**256**	P	**P**	**13 46 40.5**	**-1.7**
	313nm164μm327μm22μm,0.7s						
NLAI	**Namlea**	**6.15**	**49**	P	**P**	**13 46 45.6**	**-0.5**
	340nm87μm,1.3s						
LUWI	**Luwuk**	**6.28**	**3**	P	**P**	**13 46 49.0**	**+1.6**
LUWI	**Luwuk**	**6.28**	**3**	⇑P	**P**	**13 46 47.4**	**0.0**
LUWI	**Luwuk**	**6.28**	**3**	P	**P**	**13 46 47.2**	**-0.1**
	150nm162μm342μm31μm,1.1s						
SANI	**Sanana**	**6.32**	**34**	⇑P	**P**	**13 46 46.7**	**-1.0**
SANI	**Sanana**	**6.32**	**34**	P	**P**	**13 46 46.9**	**-0.8**
	104nm557μm327μm35μm,1.1s						
APSI	**Ampana**	**6.46**	**352**	P	**P**	**13 46 49.6**	**+0.6**
	77nm116μm195μm19μm,1.4s						
SRBI	**Singaraja**	**7.25**	**264**	P	**P**	**13 46 55.6**	**-0.8**
	125nm634μm328μm28μm,0.9s						
DNP	**Denpasar**	**7.33**	**259**	P	**P**	**13 46 56.6**	**-0.5**
	670nm610μm923μm46μm,0.4s						
MSAI	**Masohi**	**7.55**	**58**	P	**P**	**13 46 56.5**	**-2.8**
	63nm63μm4μm,0.8s						
MRSI	**Marisa**	**7.80**	**356**	P	**P**	**13 47 01.8**	**0.0**
	321nm342μm97μm,1.2s						
BNDI	**Bandanaira**	**7.89**	**70**	⇑P	**P**	**13 47 00.3**	**-2.3**
BNDI	**Bandanaira**	**7.89**	**70**	P	**P**	**13 47 00.8**	**-1.9**
	592nm106μm,0.8s						
GTOI	**Gorontalo**	**7.96**	**4**	P	**P**	**13 47 03.7**	**+0.4**
	276μm193μm24μm,0.8s						
KMSI	**Cibinong**	**8.02**	**11**	P	**P**	**13 47 05.0**	**+1.1**
	31μm153μm,0.8s						
ABJI	**Asem Bagus**	**8.20**	**266**	P	**P**	**13 47 05.3**	**-0.3**
	827μm419μm37μm,1.1s						
BKB	**Balikpapan**	**8.23**	**317**	P	**P**	**13 47 10.1**	**+4.1**
BKB	**Balikpapan**	**8.23**	**317**	P	**P**	**13 47 09.9**	**+3.9**
	138μm212μm22μm,1.1s						
JAGI	**Jajag, Banyuwa**	**8.33**	**262**	P	**P**	**13 47 05.6**	**-1.4**
JAGI	**Jajag, Banyuwa**	**8.33**	**262**	⇑P	**P**	**13 47 04.5**	**-2.5**
JAGI				⇓S	**S**	**13 48 44.2**	**-2.3**
JAGI	**Jajag, Banyuwa**	**8.33**	**262**	P	**P**	**13 47 04.6**	**-2.4**
	541μm396μm29μm,0.9s						
KMMI	**Kalianget**	**8.46**	**272**	P	**P**	**13 47 10.0**	**+1.7**
	871μm780μm93μm,1.1s						
BBKI	**Banjar Baru**	**8.54**	**297**	P	**P**	**13 47 11.1**	**+2.0**
	345μm241μm16μm,0.9s						
TOLI2	**Tolitoli**	**8.58**	**348**	P	**P**	**13 47 09.3**	**-0.3**
SAUI	**Saumlaki**	**8.75**	**95**	P	**P**	**13 47 09.0**	**-2.2**
SAUI	**Saumlaki**	**8.75**	**95**	⇑P	**P**	**13 47 08.3**	**-2.9**
SAUI	**Saumlaki**	**8.75**	**95**	P	**P**	**13 47 08.7**	**-2.5**
	899μm327μm,0.7s						
TNTI	**Ternate**	**9.43**	**31**	P	**P**	**13 47 17.1**	**-0.9**
TNTI	**Ternate**	**9.43**	**31**	⇓P	**P**	**13 47 16.6**	**-1.3**
TNTI				⇑S	**S**	**13 49 03.0**	**-3.6**
TNTI	**Ternate**	**9.43**	**31**	P	**P**	**13 47 16.7**	**-1.3**
	69μm121μm9μm,1.1s						
MTKI	**Muara Teweh, K**	**9.90**	**310**	P	**P**	**13 47 23.9**	**+1.1**
	105μm194μm21μm,1.1s						
FAKI	**Fak Fak**	**10.67**	**66**	P	**P**	**13 47 27.6**	**-3.0**
FAKI	**Fak Fak**	**10.67**	**66**	⇑P	**P**	**13 47 26.7**	**-3.9**
FAKI	**Fak Fak**	**10.67**	**66**	P	**P**	**13 47 27.2**	**-3.5**
	552μm592μm62μm,0.9s						
SWI	**Sorong**	**10.87**	**54**	P	**P**	**13 47 31.7**	**-0.9**
	472μm714μm52μm,0.7s						
SIJI	**Sorong**	**10.87**	**54**	P	**P**	**13 47 31.7**	**-1.0**
	3μm,0.3s,baz=236,slow=7.7,SNR=1005						
SIJI				S	**S**	**13 49 29.5**	**-4.0**
	115nm,0.3s,baz=111,slow=18,SNR=13						
FITZ	**Fitzroy Crossi**	**11.11**	**164**	P	**P**	**13 47 34.5**	**-0.5**
	490nm,0.3s,baz=353,slow=7.7,SNR=1789						
FITZ				S	**S**	**13 49 35.5**	**-2.4**
	118nm,0.3s,baz=356,slow=19,SNR=16						
FITZ				P3KPbc		14 23 16.5	
	0.1nm,0.3s,baz=211,slow=5.9,SNR=5.1						
FITZ				PKP2ab		14 27 31.6	
	0.1nm,0.3s,baz=135,slow=6.7,SNR=3.9						
FITZ	**Fitzroy Crossi**	**11.11**	**164**	P	**P**	**13 47 34.6**	**-0.4**
KDU	**Kakadu**	**11.16**	**119**	⇑P	**P**	**13 47 33.5**	**-2.2**
SGSI	**Sangihe**	**11.38**	**16**	P	**P**	**13 47 36.2**	**-1.8**
	14μm305μm38μm,0.8s						
PBKI	**Pangkalan Bun**	**11.73**	**293**	P	**P**	**13 47 42.0**	**+0.5**
	449μm567μm91μm,1.0s						
KMPI	**Kaimana, Papua**	**11.75**	**72**	P	**P**	**13 47 39.3**	**-2.4**
	643μm564μm32μm,1.2s						
UGM	**Wanagama**	**11.88**	**267**	P	**P**	**13 47 40.8**	**-2.2**
UGM	**Wanagama**	**11.88**	**267**	P	**P**	**13 47 40.9**	**-2.2**
	450μm147μm11μm,1.2s						
SMRI	**Semarang**	**11.96**	**271**	P	**P**	**13 47 42.8**	**-1.1**
SMRI	**Semarang**	**11.96**	**271**	⇑P	**P**	**13 47 42.5**	**-1.4**
SMRI	**Semarang**	**11.96**	**271**	P	**P**	**13 47 42.8**	**-1.1**
	564μm205μm4μm,1.3s						
MYLDM	**Lahad Datu**	**13.08**	**342**	P	**P**	**13 47 56.8**	**+1.4**
MYLDM	**Lahad Datu**	**13.08**	**342**	⇓P	**P**	**13 47 55.6**	**+0.2**
STKI	**Sintang**	**13.23**	**303**	P	**P**	**13 47 58.8**	**+1.8**
	1μm29μm3μm,1.0s						
DDMP	**Don Marcelino,**	**13.75**	**14**	*e*P	**P**	**13 47 59.2**	**-3.2**
SKMP	**Bagumbayan, Su**	**13.94**	**8**	*e*P	**P**	**13 48 02.9**	**-1.4**
MBWA	**Marble Bar**	**13.98**	**191**	P	**P**	**13 48 03.8**	**-0.8**
MBWA				P	**P**	**13 48 03.8**	**-0.8**
MBWA				S	**S**	**13 50 29.6**	**-2.1**
MBWA				S	**S**	**13 50 29.6**	**-2.1**
MBWA	**Marble Bar**	**13.98**	**191**	⇓P	**P**	**13 48 03.1**	**-1.5**
SBUM	**Sibu**	**14.14**	**313**	P	**P**	**13 48 07.6**	**+1.2**
SBUM	**Sibu**	**14.14**	**313**	P	**P**	**13 48 08.0**	**+1.6**
SBUM	**Sibu**	**14.14**	**313**	⇑P	**P**	**13 48 06.7**	**+0.3**
JCJI	**Jatiwangi**	**14.14**	**273**	P	**P**	**13 48 05.0**	**-1.4**
	480μm302μm29μm,0.9s						
ZCP	**Zamboanga City**	**14.20**	**358**	⇑*e*P	**P**	**13 48 07.0**	**0.0**
PSA00	**Pilbara Seismi**	**14.36**	**190**	P	**P**	**13 48 08.1**	**-0.3**
PSA00	**Pilbara Seismi**	**14.36**	**190**	P	**P**	**13 48 07.6**	**-0.9**
KCP	**Kidapawan**	**14.51**	**10**	⇓*i*P	**P**	**13 48 08.9**	**-1.2**
CISI	**Cisompet, Garu**	**14.55**	**268**	P	**P**	**13 48 08.0**	**-2.7**
CISI	**Cisompet, Garu**	**14.55**	**268**	⇑P	**P**	**13 48 06.7**	**-3.9**
CISI	**Cisompet, Garu**	**14.55**	**268**	P	**P**	**13 48 07.9**	**-2.7**
	410μm500μm57μm,0.8s						
DAV	**Davao City (W)**	**14.66**	**12**	P	**P**	**13 48 10.0**	**-1.6**
DAV	**Davao City (W)**	**14.66**	**12**	⇓*i*P	**P**	**13 48 08.7**	**-2.9**
MATI	**Mati**	**14.70**	**15**	*e*P	**P**	**13 48 09.8**	**-2.2**
KKM	**Kota Kinabalu**	**14.71**	**335**	P	**P**	**13 48 10.8**	**-1.5**
KKM	**Kota Kinabalu**	**14.71**	**335**	⇑P	**P**	**13 48 10.7**	**-1.5**
SRPI	**Serui, Papua**	**14.74**	**69**	P	**P**	**13 48 11.3**	**-1.2**
	333μm307μm16μm,1.5s						
LEM	**Lembang**	**14.77**	**271**	P	**P**	**13 48 12.7**	**-0.2**
	237nm,0.3s,baz=71,slow=7.5,SNR=288						
LEM				S	**S**	**13 50 39.8**	**-7.2**
	61nm,0.3s,baz=149,slow=14,SNR=3.7						
LEM	**Lembang**	**14.77**	**271**	P	**P**	**13 48 11.8**	**-1.1**
	275μm159μm9μm,1.5s						
BAKI	**Biak**	**14.89**	**66**	P	**P**	**13 48 12.8**	**-1.2**
	282μm9μm,1.0s						
KSM	**Kuching**	**14.99**	**305**	P	**P**	**13 48 16.1**	**+1.1**
KSM	**Kuching**	**14.99**	**305**	P	**P**	**13 48 16.0**	**+1.1**
KSM	**Kuching**	**14.99**	**305**	⇑P	**P**	**13 48 14.6**	**-0.3**
PAGZ	**Pagadian**	**15.13**	**3**	*e*P	**P**	**13 48 16.9**	**+0.5**
TPI	**Tanjungpandan**	**15.47**	**286**	P	**P**	**13 48 19.7**	**-0.1**
	454μm240μm15μm,1.0s						
CBJI	**Citeko**	**15.56**	**272**	P	**P**	**13 48 17.9**	**-2.7**
	428μm436μm42μm,0.9s						
DBJI	**Dramaga**	**15.65**	**272**	P	**P**	**13 48 19.6**	**-2.0**
	248μm18μm,1.1s						
TNG	**Tangerang**	**15.78**	**273**	P	**P**	**13 48 22.4**	**-0.4**
	210μm147μm10μm,1.9s						
CGP	**Cagayan de Oro**	**15.86**	**8**	⇓*i*P	**P**	**13 48 23.8**	**+0.2**
BUTP	**Butuan**	**16.52**	**11**	*e*P	**P**	**13 48 28.8**	**-0.9**
BATP	**Bataraza**	**16.71**	**344**	*e*P	**P**	**13 48 31.6**	**+0.1**
XMI	**Christmas Isla**	**16.88**	**258**	⇑P	**P**	**13 48 31.4**	**-1.6**
XMI	**Christmas Isla**	**16.88**	**258**	P	**P**	**13 48 31.5**	**-1.5**
	41μm,1.1s						
WB0	**Warramunga Arr**	**16.90**	**138**	P	**P**	**13 48 31.8**	**-1.3**
XMIS	**Christmas Isla**	**16.92**	**258**	P	**P**	**13 48 32.6**	**-0.8**
XMIS	**Christmas Isla**	**16.92**	**258**	P	**P**	**13 48 31.6**	**-1.8**
	40μm,0.9s						
I07AU	**WARRAMUNGA INF**	**16.97**	**139**	P	**P**	**13 48 33.7**	**-0.1**
	baz=311,slow=18,SNR=4.4						
I07AU				S	**S**	**13 51 23.4**	**-0.1**
	baz=306,slow=19						
WRA	**Warramunga Arr**	**16.99**	**139**	P	**P**	**13 48 33.4**	**-0.5**

	474nm,0.3s,baz=307,slow=13,SNR=2482						
WRA				S	S	13 51 23.1	-0.5
	32nm,0.3s,baz=313,slow=18,SNR=5.7						
WRA				PKiKP	PKiKP	14 00 38.9	+0.2
	baz=298,slow=1.2,SNR=5.6						
WRA				P3KPbc		14 22 56.7	
	0.2nm,0.3s,baz=142,slow=2.9,SNR=6.2						
WRAB	Tennant Creek	16.99	139	d iP	P	13 48 33.2	-0.7
WRAB				pmax	pmax		
	comp=Z,21µm,1.3s						
WRAB	Tennant Creek	16.99	139	P	P	13 48 33.8	-0.1
WRAB	Tennant Creek	16.99	139	⇑P	P	13 48 33.0	-0.9
WB2	Warramunga Arr	16.99	139	P	P	13 48 33.0	-0.9
SMPI	Sarmi	17.02	73	P	P	13 48 33.6	-0.7
	comp=Z,217µmcomp=Z,262µmcomp=Z,11µm,1.4s						
CNOP	Candoni, Negro	17.07	0	eP	P	13 48 33.9	-0.8
PPBI	Pangkal Pinang	17.09	287	P	P	13 48 36.4	+1.5
	comp=Z,440µmcomp=Z,467µmcomp=Z,25µm,1.6s						
WR0	Warramunga Arr	17.13	138	P	P	13 48 34.3	-0.9
GIRL	Giralia	17.15	207	P	P	13 48 35.6	+0.3
	baz=17,SNR=978						
GIRL	Giralia	17.15	207	P	P	13 48 36.2	+0.9
GIRL	Giralia	17.15	207	⇑P	P	13 48 35.6	+0.3
BLSI	Bandar Lampung	17.25	276	P	P	13 48 34.0	-2.4
	comp=Z,246µmcomp=Z,74µmcomp=Z,4µm,1.0s						
GLSP	General Luna,	17.41	12	eP	P	13 48 36.7	-1.1
MSLP	Maasin	17.54	8	eP	P	13 48 39.1	+0.2
LLP	Lapu-Lapu	17.62	5	⇓eP	P	13 48 39.1	-0.6
LLP				eS	S	13 51 35.4	+1.4
MMPI	Merauke	17.76	95	P	P	13 48 40.1	-0.9
	comp=Z,321µmcomp=Z,399µmcomp=Z,29µm,0.8s						
KLSI		17.86	278	P	P	13 48 39.9	-2.1
	comp=Z,80µmcomp=Z,26µmcomp=Z,808nm,2.0s						
GUIM	Jordan	17.87	0	eP	P	13 48 40.4	-1.6
KASI	Kota Agung	17.97	275	P	P	13 48 40.7	-2.3
	comp=Z,243µmcomp=Z,136µmcomp=Z,13µm,1.0s						
CUYO	Cuyo Island	18.15	355	eP	P	13 48 44.9	+0.4
PMBI	Palembang	18.18	283	P	P	13 48 46.5	+1.6
PMBI	Palembang	18.18	283	⇑P	P	13 48 45.8	+0.9
PMBI	Palembang	18.18	283	P	P	13 48 46.8	+1.9
	comp=Z,401µmcomp=Z,722µmcomp=Z,49µm,1.1s						
GENI	Genyem	18.23	76	⇑P	P	13 48 44.0	-1.3
GENI	Genyem	18.23	76	P	P	13 48 44.7	-0.7
	comp=Z,237µmcomp=Z,192µmcomp=Z,16µm,0.8s						
OCLP	Ormoc	18.41	7	eP	P	13 48 46.9	-0.1
MDSI	Maura Dua	18.43	278	P	P	13 48 45.2	-2.0
	comp=Z,190µmcomp=Z,96µmcomp=Z,4µm,1.7s						
WRKA	Warakurna	18.44	163	P	P	13 48 46.6	-0.6
	baz=19,SNR=1000						
WRKA	Warakurna	18.44	163	⇑P	P	13 48 46.5	-0.6
LWLI	Liwa	18.47	276	P	P	13 48 45.6	-2.1
	comp=Z,94µmcomp=Z,8µm,2.0s						
ENPP	El Nido	18.69	351	eP	P	13 48 49.9	+0.4
BESP	Borongan	19.06	9	eP	P	13 48 51.2	-1.7
LHSI	Lahat	19.20	280	P	P	13 48 53.8	-0.4
	comp=Z,243µmcomp=Z,135µmcomp=Z,12µm,1.0s						
BUSP	Coron	19.37	353	eP	P	13 48 56.7	+1.1
AS31	Alice Springs	19.57	147	P	P	13 48 57.5	0.0
ASAR	Alice Springs	19.57	147	P	P	13 48 57.9	+0.4
	comp=Z,107nm,0.3s,baz=325,slow=7.6,SNR=2710						
ASAR				S	S	13 52 04.3	-1.2
	comp=Z,22nm,0.3s,baz=341,slow=22,SNR=7.8						
ASAR				ScP	ScP	13 55 34.0	-0.3
	comp=Z,26nm,0.3s,baz=342,slow=1.5,SNR=6.1						
ASAR				P3KPbc		14 22 50.4	
	comp=Z,0.1nm,0.3s,baz=317,slow=2.1,SNR=6.1						
ASAR	Alice Springs	19.57	147	P	P	13 48 56.9	-0.5
JMBI	JAMBI	19.62	286	P	P	13 49 00.5	+2.4
	comp=Z,186µmcomp=Z,181µmcomp=Z,15µm,1.0s						
MNAI	Manna	19.66	278	P	P	13 48 55.8	-2.5
MNAI	Manna	19.66	278	⇑P	P	13 48 56.2	-2.2
MNAI	Manna	19.66	278	P	P	13 48 56.0	-2.4
	comp=Z,225µmcomp=Z,186µmcomp=Z,15µm,1.1s						
SJMP	San Jose	19.74	356	eP	P	13 49 00.1	+1.2
MYKOM	Kota Tinggi	20.70	295	P	P	13 49 08.7	+1.0
MYKOM	Kota Tinggi	20.70	295	P	P	13 49 09.0	+1.2
PGP	Puerto Galera	20.78	356	⇓eP	P	13 49 08.9	+0.4
SCSP	San Jose Seism	20.90	3	eP	P	13 49 09.3	-0.2
LUBP	Lubang	21.07	354	eP	P	13 49 11.2	+0.1
GQP	Guinayangan	21.12	360	⇓eP	P	13 49 11.4	-0.1
QIS	Mount Isa	21.14	130	P	P	13 49 10.9	-0.7
	baz=21,SNR=1000						
COEN	Coen	21.35	110	P	P	13 49 12.9	-0.7
COEN				IAmb	IAmb	13 49 15.6	
	comp=Z,4µm,1.4s						
COEN	Coen	21.35	110	⇓P	P	13 49 12.3	-1.3
TGY	Tagaytay City	21.38	356	P	P	13 49 13.8	-0.1
	comp=Z,19µm,0.8s,baz=220,slow=1.4,SNR=95						
TGY	Tagaytay City	21.38	356	⇓eP	P	13 49 15.2	+1.3
JCNP	Jose Panganiba	21.51	1	eP	P	13 49 13.6	-1.4
MACP	Maragondon, Ca	21.55	355	eP	P	13 49 13.8	-1.6
QVP	Quezon City--P	21.89	356	eP	P	13 49 17.0	-1.4
SDSI	Sungai Dareh	21.95	286	P	P	13 49 18.6	-0.4
	comp=Z,74µmcomp=Z,5µm,1.6s						
MORW	Morawa	22.44	195	P	P	13 49 22.3	-0.8
	baz=23,SNR=595						
MORW	Morawa	22.44	195	P	P	13 49 22.4	-0.7
MORW	Morawa	22.44	195	⇑P	P	13 49 22.2	-1.0
BKNI	Bangkinang	22.72	289	P	P	13 49 26.5	+0.6
BKNI	Bangkinang	22.72	289	⇑P	P	13 49 25.6	-0.3
BKNI	Bangkinang	22.72	289	P	P	13 49 26.1	+0.2
	comp=Z,155µmcomp=Z,130µmcomp=Z,10µm,1.5s						
BALP	Baler	22.97	358	eP	P	13 49 27.2	-0.8
SMPP	San Manuel, Pa	23.43	356	eP	P	13 49 30.6	-1.5
BCP	Baguio City	23.70	356	⇓eP	P	13 49 30.0	-4.7
DLV	T Lat	23.70	324	P	P	13 49 35.6	+0.8
DLV				IAmb	IAmb	13 49 41.8	
	comp=Z,888nm,0.6s						
BOLP	Bolinao	23.72	354	eP	P	13 49 33.1	-1.6
BLDU	Ballidu	23.76	192	P	P	13 49 34.0	-0.9
	baz=24,SNR=1000						
MTSU	Mount Surprise	23.80	119	P	P	13 49 35.0	-0.5
	baz=24,SNR=1000						
FORT	Forrest	23.88	168	P	P	13 49 35.3	-0.7
	baz=24,SNR=1000						
FORT	Forrest	23.88	168	P	P	13 49 35.4	-0.5
KMBL	Kambalda	23.89	181	P	P	13 49 35.1	-1.0
	baz=24,SNR=543						
CAUP	Cauayan	24.16	358	eP	P	13 49 38.2	-0.4
MNSI	Mandailing Nat	24.25	289	P	P	13 49 38.1	-1.4
	comp=Z,95µmcomp=Z,84µmcomp=Z,9µm,0.7s						
IPM	Ipoh	24.44	298	P	P	13 49 41.3	+0.2
IPM	Ipoh	24.44	298	P	P	13 49 42.0	+0.8
PMG	Port Moresby	24.49	97	P	P	13 49 40.5	-1.1
	comp=Z,556nm,0.6s,baz=293,slow=3.3,SNR=100						
PMG	Port Moresby	24.49	97	ceP	P	13 49 40.4	-1.1
PMG				pmax	pmax		
	comp=Z,2µm,1.7s						
PMG	Port Moresby	24.49	97	P	P	13 49 40.6	-1.0
PMG				IAmb	IAmb	13 49 43.9	
	comp=Z,2µm,1.3s						
PMG	Port Moresby	24.49	97	⇑P	P	13 49 40.3	-1.3
PMG	Port Moresby	24.49	97	P	P	13 49 41.2	-0.4
KLBR	Kellerberrin	24.51	190	P	P	13 49 40.7	-0.9
	baz=25,SNR=1000						
SZP	Santa	24.83	355	P	P	13 49 42.2	-2.3
APYP	Conner	25.09	357	eP	P	13 49 44.3	-2.5
KULM	Kulim	25.16	299	P	P	13 49 47.2	-0.3
KULM	Kulim	25.16	299	P	P	13 49 48.0	+0.5
KULM	Kulim	25.16	299	⇑P	P	13 49 45.8	-1.7
MUN	Mundaring	25.19	193	P	P	13 49 46.5	-1.0
	baz=25,SNR=524						
MANU	Manus Island	25.34	79	P	P	13 49 48.8	-0.3
MANU				IAmb	IAmb	13 49 52.0	
	comp=Z,1µm,0.9s						
MANU	Manus Island	25.34	79	⇑P	P	13 49 49.6	+0.4
SGCP	Mt. Cagua	25.44	359	eP	P	13 49 47.5	-2.3
PSI	Prapat	25.59	292	P	P	13 49 50.5	-0.9
	comp=Z,5µm,0.9s,baz=180,slow=4.9,SNR=344						
PSI				S	S	13 53 40.0	-0.9
	comp=Z,446nm,1.0s,baz=180,slow=22,SNR=7.2						
PSI				P3KPbc		14 22 34.1	
	comp=Z,12nm,0.8s,baz=181,slow=2.8,SNR=10						
COCO	West Island	25.73	257	P	P	13 49 52.7	+0.2
COCO				pmax	pmax		
	comp=Z,10µm,1.7s						
COCO	West Island	25.73	257	P	P	13 49 52.7	+0.2
NWAO	Narrogin (SRO)	25.91	190	P	P	13 49 53.6	-0.2
	comp=Z,762nm,0.5s,baz=25,slow=8.3,SNR=548						
NWAO				S	S	13 53 44.7	-0.3
	comp=Z,1µm,1.1s,baz=319,slow=8.9,SNR=5.6						
NWAO	Narrogin (SRO)	25.91	190	P	P	13 49 53.2	-0.7
	baz=26,SNR=1000						
NWAO	Narrogin (SRO)	25.91	190	P	P	13 49 53.2	-0.7
NWAO				pmax	pmax		
	comp=Z,3µm,1.5s						
NWAO	Narrogin (SRO)	25.91	190	P	P	13 49 53.1	-0.7
NWAO				IAmb	IAmb	13 49 56.8	
	comp=Z,3µm,1.4s						
NWAO	Narrogin (SRO)	25.91	190	P	P	13 49 53.2	-0.7
NWAO				IAmb	IAmb	13 49 56.7	
	comp=Z,2µm,1.4s						
NWAO	Narrogin (SRO)	25.91	190	P	P	13 49 54.0	+0.1
TSI	Tuntungan	26.20	294	P	P	13 49 56.9	+0.2
	comp=Z,90µmcomp=Z,145µmcomp=Z,12µm,1.3s						
CTA	Charters Tower	26.28	121	P	P	13 49 57.4	+0.1
	comp=Z,681nm,0.9s,baz=302,slow=11,SNR=371						
CTA				P3KPbc		14 22 22.6	
	comp=Z,1.7nm,0.9s,baz=108,slow=6.1,SNR=1.9						
CTAO	Charters Tower	26.28	121	P	P	13 49 57.5	+0.1
CTAO				pmax	pmax		
	comp=Z,6µm,1.9s						
CTAO	Charters Tower	26.28	121	P	P	13 49 57.5	+0.1
CTAO	Charters Tower	26.28	121	⇑P	P	13 49 57.2	-0.2
GSI	Gunungsitoli	26.30	288	P	P	13 49 56.0	-1.7
GSI	Gunungsitoli	26.30	288	⇑P	P	13 49 55.8	-1.9
GSI	Gunungsitoli	26.30	288	P	P	13 49 56.7	-0.9
	comp=Z,103µmcomp=Z,98µmcomp=Z,7µm,1.0s						
TRTT	Trang	27.29	303	P	P	13 50 05.0	-1.2
	comp=Z,52µmcomp=Z,4µm,1.4s						
TPTI		27.37	292	P	P	13 50 05.9	-1.1
	comp=Z,39µmcomp=Z,49µmcomp=Z,2µm,0.8s						
BBP	Basco	27.63	359	eP	P	13 50 06.9	-2.2
UBPT	Khong Chiam	28.11	323	P	P	13 50 13.0	-0.4
	comp=Z,31µmcomp=Z,10µmcomp=Z,630nm,1.1s						
UBPT	Khong Chiam	28.11	323	P	P	13 50 14.3	+0.9
UBPT				IAmb	IAmb	13 50 17.1	
	comp=Z,920nm,0.9s						
UBPT	Khong Chiam	28.11	323	⇓P	P	13 50 13.2	-0.2
QLP	Quilpie	28.16	135	P	P	13 50 13.9	+0.2
	baz=28,SNR=1000						
QLP	Quilpie	28.16	135	⇑P	P	13 50 13.9	+0.2
BBOO	Buckleboo	28.29	155	P	P	13 50 13.9	-0.8
	baz=28,SNR=1000						
BBOO	Buckleboo	28.29	155	P	P	13 50 13.9	-0.8
BBOO				IAmb	IAmb	13 50 16.5	
	comp=Z,1µm,0.8s						
LHMI	Lhok Sumawe	28.39	295	P	P	13 50 15.1	-0.8
LHMI	Lhok Sumawe	28.39	295	⇓P	P	13 50 15.6	-0.2
LHMI	Lhok Sumawe	28.39	295	P	P	13 50 15.7	-0.2
	comp=Z,82µmcomp=Z,90µmcomp=Z,8µm,0.9s						
H01W3	Cape Leeuwin H	28.45	195	P	P	13 50 17.6	+1.7
	baz=24,slow=6.6,SNR=82						
PKDT	Phuket	28.45	302	P	P	13 50 15.4	-1.0
	comp=Z,41µmcomp=Z,4µm,1.2s						
H01W1	Cape Leeuwin H	28.46	194	P	P	13 50 17.6	+1.7
	baz=24,slow=6.6,SNR=146						
H01W2	Cape Leeuwin H	28.47	195	P	P	13 50 17.7	+1.8
	baz=24,slow=6.6,SNR=80						
QIZ	Qiongzhong	29.03	335	P	P	13 50 21.8	+0.4
QIZ				sP	sP	13 52 58.5	+0.2
QIZ				S	S	13 54 37.5	+3.4
QIZ				pmax	pmax		
	comp=Z,540nm,1.1s						
QIZ				pmax	pmax		
	comp=Z,20µm,9.4s						
QIZ	Qiongzhong	29.03	335	P	P	13 50 21.5	+0.2
QIZ				IAmb	IAmb	13 50 25.3	
	comp=Z,2µm,1.0s						
RNTT	Ranong	29.14	304	P	P	13 50 16.8	-5.6
	comp=Z,7µmcomp=Z,916nm,1.0s						
SRAK	Srakaew	29.37	316	P	P	13 50 21.3	-3.1
	comp=Z,12µmcomp=Z,164µmcomp=Z,17µm,0.9s						
RABL	Rabaul	29.68	86	P	P	13 50 25.6	-1.5
RABL	Rabaul	29.68	86	⇑P	P	13 50 25.5	-1.7
RABL	Rabaul	29.68	86	P	P	13 50 27.7	+0.5
TWG	Pinlang	30.02	357	P	P	13 50 27.5	-2.4
TWG				IAmb	IAmb	13 50 38.5	
	comp=Z,1µm,0.5s						
HTT	Hallett	30.08	152	P	P	13 50 30.3	0.0
	baz=30,SNR=1000						
HTT	Hallett	30.08	152	⇑P	P	13 50 30.2	0.0
STKA	Stephens Creek	30.20	146	P	P	13 50 31.6	+0.3
	comp=Z,2µm,0.8s,baz=317,slow=8.6,SNR=1185						
STKA				S	S	13 54 50.8	-1.1
	comp=Z,858nm,0.7s,baz=89,slow=18,SNR=10						
STKA				P3KPbc		14 22 11.8	
	comp=Z,2.9nm,0.9s,baz=124,slow=7.3,SNR=3.7						
STKA	Stephens Creek	30.20	146	P	P	13 50 31.3	-0.1
	baz=30,SNR=1000						
STKA	Stephens Creek	30.20	146	c iP	P	13 50 30.8	-0.5
STKA	Stephens Creek	30.20	146	P	P	13 50 31.2	-0.1
PHET	Kaeng Krachan	30.36	311	P	P	13 50 34.4	+1.5
	comp=Z,28µmcomp=Z,4µm,0.9s						
GUMO	Guam	30.44	47	P	P	13 50 32.1	-1.5
GUMO				pmax	pmax		
	comp=Z,12µm,1.0s						
GUMO	Guam	30.44	47	P	P	13 50 32.0	-1.5
GUMO	Guam	30.44	47	P	P	13 50 32.2	-1.4
TPUB	Ta-pu	30.52	357	P	P	13 50 33.1	-1.1
MCO	Taipa Grande	30.58	344	P	P	13 50 36.0	+1.4
HKC	Hong Kong Obse	30.58	345	⇑P	P	13 50 35.0	+0.3
YULB	Yu-li	30.58	358	P	P	13 50 32.1	-2.5
CHAI	Chaiyaphum	30.76	319	P	P	13 50 37.0	+0.7
	comp=Z,55µmcomp=Z,5µm,0.9s						
SSLB	Suanglung	30.99	357	P	P	13 50 36.6	-1.6
NACB	Ninganchiao	31.35	358	P	P	13 50 38.0	-3.2
NACB				IAmb	IAmb	13 50 43.8	
	comp=Z,2µm,0.9s						
RMQ	Roma	31.40	130	P	P	13 50 42.6	+1.0
	baz=32,SNR=467						
GZH	Guangzhou	31.55	344	P	P	13 50 47.3	+4.4
GZH				sP	sP	13 53 21.0	+0.4
GZH				S	S	13 55 18.8	+6.1
GZH				pmax	pmax		
	comp=Z,42µm,2.8s						
YOJ	Yonaguni jima	31.63	1	P	P	13 50 42.9	-0.7
YOJ	Yonaguni jima	31.63	1	P	P	13 50 42.9	-0.7
YOJ	Yonaguni jima	31.63	1	⇑P	P	13 50 42.9	-0.7
NONG	Nongkai	31.67	323	P	P	13 50 44.0	0.0
	comp=Z,30µmcomp=Z,2µm,0.8s						
YHNB	Yeheng	31.85	358	P	P	13 50 43.1	-2.4
YHNB				IAmb	IAmb	13 50 51.6	
	comp=Z,2µm,1.0s						
KNMB	Chin-men Tao	31.88	353	P	P	13 50 45.0	-0.7
TATO	Taipei	32.15	358	P	P	13 50 45.3	-2.7
TATO				IAmb	IAmb	13 50 50.1	
	comp=Z,2µm,0.8s						
TATO	Taipei	32.15	358	P	P	13 50 45.7	-2.3
TATO				P	P	13 50 45.7	-2.3
UTHA	Uthaitani	32.24	315	P	P	13 50 49.4	+0.5
	comp=Z,55µmcomp=Z,7µm,0.9s						
QZH	Quanzhou	32.33	353	⇓iP	P	13 50 49.3	-0.2
QZH				S	S	13 55 23.0	-1.4
QZH				SS	SS	13 58 13.0	-22
QZH				pmax	pmax		
	comp=Z,3µm,1.0s						
QZH				pmax	pmax		
	comp=Z,31µm,7.7s						
CMSA	Cobar Meteorol	32.37	141	P	P	13 50 50.0	+0.2
	baz=32,SNR=1000						
EIDS	Eidsvold	32.64	127	P	P	13 50 51.6	-0.5
	baz=33,SNR=209						
EIDS	Eidsvold	32.64	127	P	P	13 50 51.7	-0.5
EIDS	Eidsvold	32.64	127	⇑P	P	13 50 51.5	-0.7
PHIT	Phitsanulok	32.73	318	P	P	13 50 54.2	+1.2
	comp=Z,145µmcomp=Z,21µm,0.9s						
ANA2	Anatahan	32.90	44	P	P	13 50 53.2	-1.3
UTTA	Uttaradit	33.04	319	P	P	13 50 56.0	+0.4
	comp=Z,37µmcomp=Z,5µm,0.9s						
UMPA	Umpang Tak	33.09	315	P	P	13 50 56.0	-0.2
	comp=Z,44µmcomp=Z,6µm,0.9s						
SARN	Sarigan	33.20	44	P	P	13 50 56.9	-0.2
SUKH	Sukhothai	33.46	318	P	P	13 51 00.1	+1.0
	comp=Z,44µmcomp=Z,6µm,1.0s						
SLVN	Son La	33.85	328	P	P	13 51 03.1	+0.6
SLVN				IAmb	IAmb	13 51 07.2	
	comp=Z,2µm,0.9s						
JMZ	Minamidaito 2	34.05	14	P	P	13 51 02.5	-1.5
JMZ	Minamidaito 2	34.05	14	⇑P	P	13 51 02.2	-1.8
ARPS	Mount Arapiles	34.18	152	P	P	13 51 05.1	+0.1
	baz=34,SNR=956						
JOW	Kunigami	34.45	9	P	P	13 51 06.8	-0.6
JOW	Kunigami	34.45	9	⇓P	P	13 51 05.8	-1.5
CM04	Chiang Mai Arr	34.54	318	P	P	13 51 08.8	+0.5
	comp=Z,580nmcomp=Z,20µmcomp=Z,3µm,0.9s						
CM36	Chiang Mai Arr	34.55	318	P	P	13 51 08.0	-0.4
CM05	Chiang Mai Arr	34.57	318	P	P	13 51 09.0	+0.5
	comp=Z,13µmcomp=Z,2µm,0.9s						
CM09	Chiang Mai Arr	34.57	318	P	P	13 51 09.1	+0.5
	comp=Z,765nmcomp=Z,21µmcomp=Z,3µm,0.8s						
CM01	Chiang Mai Arr	34.57	318	P	P	13 51 09.0	+0.5
	comp=Z,680nmcomp=Z,20µmcomp=Z,3µm,0.9s						
CM02	Chiang Mai Arr	34.59	318	P	P	13 51 09.2	+0.5
	comp=Z,17µmcomp=Z,2µm,0.9s						
CM13	Chiang Mai Arr	34.61	318	P	P	13 51 09.2	+0.4
	comp=Z,541nmcomp=Z,14µmcomp=Z,2µm,0.8s						
CM31	Chiang Mai Arr	34.61	318	P	P	13 51 09.5	+0.7
	comp=Z,47µmcomp=Z,394µmcomp=Z,55µm,0.9s						
CM31	Chiang Mai Arr	34.61	318	P	P	13 51 10.0	+1.2
CM31				IAmb	IAmb	13 51 13.4	
	comp=Z,2µm,0.8s						
CMAR	Chiang Mai Arr	34.61	318	P	P	13 51 09.0	+0.2
	comp=Z,1µm,0.9s,baz=144,slow=6.6,SNR=771						
CMAR				PcP	PcP	13 53 29.8	+2.5
	comp=Z,200nm,0.8s,baz=163,slow=3.3,SNR=9.7						
CMAR				S	S	13 56 00.5	+1.3
	comp=Z,56nm,1.2s,baz=137,slow=13,SNR=2.1						
CMAR				ScP	ScP	13 56 22.8	+2.8
	comp=Z,292nm,0.8s,baz=165,slow=2.5,SNR=25						
CMAR				PKiKP	PKiKP	14 00 48.8	0.0
	comp=Z,9.5nm,0.9s,baz=214,slow=2.3,SNR=4.5						
CMAR				P3KPbc		14 21 54.8	
	comp=Z,4.2nm,0.8s,baz=312,slow=6.0,SNR=16						
CMAR	Chiang Mai Arr	34.61	318	P	P	13 51 09.3	+0.4
CMAR					PcP	13 53 30.2	+2.9
CM15	Chiang Mai Arr	34.62	318	P	P	13 51 09.3	+0.4
	comp=Z,550nmcomp=Z,17µmcomp=Z,2µm,0.9s						
CM35	Chiang Mai Arr	34.63	319	P	P	13 51 09.0	0.0
PAYA	Payao	34.66	320	P	P	13 51 12.8	+3.5
	comp=Z,7µm,0.8s						
CM34	Chiang Mai Arr	34.76	319	P	P	13 51 10.7	+0.6
CMMT	Chiang Mai	34.86	319	P	P	13 51 10.0	-1.0
	comp=Z,13µmcomp=Z,2µm,1.0s						
CHTO	Chiang Mai	34.86	319	P	P	13 51 11.0	0.0
CHTO				pmax	pmax		
	comp=Z,2µm,0.8s						
CHTO	Chiang Mai	34.86	319	P	P	13 51 11.0	0.0
CHTO				IAmb	IAmb	13 51 14.9	
	comp=Z,2µm,0.8s						
CHTO	Chiang Mai	34.86	319	P	P	13 51 11.9	+0.9
CHTO				P	P	13 51 11.9	+0.9
CHTO				S	S	13 56 01.1	-1.9
CHTO				S	S	13 56 01.1	-1.9
CHTO	Chiang Mai	34.86	319	⇓P	P	13 51 11.0	0.0
CM33	Chiang Mai Arr	34.86	319	P	P	13 51 11.0	0.0
MHMT	Maesarieng	35.09	317	P	P	13 51 12.3	-0.6
	comp=Z,22µmcomp=Z,2µm,1.2s						
PBA	Port Blair	35.10	302	eP	P	13 51 11.2	-1.8
PBA	Port Blair	35.10	302	P	P	13 51 10.7	-2.3
PBA				IAmb	IAmb	13 51 26.7	
	comp=Z,2µm,0.9s						
PBA				PcP	PcP	13 53 31.1	+2.3
PBA	Port Blair	35.10	302	P	P	13 51 11.5	-1.5
	SNR=46						
PBA				S	S	13 56 04.3	-2.4
PBA	Port Blair	35.10	302	⇑P	P	13 51 10.4	-2.6
ARMA	Armidale	35.66	134	P	P	13 51 19.3	+1.7
	baz=36,SNR=542						
ARMA	Armidale	35.66	134	P	P	13 51 19.5	+1.9
ARMA	Armidale	35.66	134	⇑P	P	13 51 19.5	+1.9
DGPR	DIGLIPUR	35.76	305	eP	P	13 51 17.2	-1.2
YNG	Young	35.90	142	P	P	13 51 20.1	+0.7
	baz=36,SNR=1000						
TOO	Toolangi	36.61	149	P	P	13 51 26.1	+0.9
	baz=37,SNR=417						
TOO	Toolangi	36.61	149	P	P	13 51 26.0	+0.8
TOO				pmax	pmax		
	comp=Z,1µm,1.1s						
TOO	Toolangi	36.61	149	P	P	13 51 26.0	+0.8
TOO				IAmb	IAmb	13 53 05.8	
	comp=Z,1µm,1.1s						
TOO	Toolangi	36.61	149	⇑P	P	13 51 26.0	+0.8
TOO				⇑p	pP	13 53 01.2	+0.7
MGCD	Mangrove Creek	36.94	138	P	P	13 51 29.7	+1.8
	baz=37,SNR=240						
GYA	Guiyang	36.96	336	⇓P	P	13 51 28.8	+0.5
GYA				PcP	PcP	13 53 37.3	+2.9
GYA				sP	sP	13 54 07.5	-0.7
GYA				ScP	S	13 56 31.5	-2.8
GYA				S	ScP	13 56 34.5	+5.9
GYA				ScS	ScS	14 00 39.8	+1.6
GYA				pmax	pmax		
	comp=Z,640nm,1.0s						
CAN	Canberra	36.96	143	P	P	13 51 29.4	+1.3
CAN				pmax	pmax		
	comp=Z,1µm,1.0s						
CAN	Canberra	36.96	143	P	P	13 51 29.4	+1.3
CAN				IAmb	IAmb	13 51 32.0	
	comp=Z,1µm,1.0s						
CAN	Canberra	36.96	143	⇑P	P	13 51 28.9	+0.7
HNR	Honiara	37.10	96	P	P	13 51 28.5	-1.0
HNR				pmax	pmax		
	comp=Z,12µm,1.0s						
HNR	Honiara	37.10	96	P	P	13 51 28.5	-1.0
HNR	Honiara	37.10	96	⇑P	P	13 51 28.7	-0.8
HNR	Honiara	37.10	96	P	P	13 51 30.2	+0.7
CNB	Canberra Magne	37.17	142	P	P	13 51 30.6	+0.7
	baz=37,SNR=370						
RIV	Riverview	37.35	139	P	P	13 51 33.4	+2.1
	baz=38,SNR=83						
RIV	Riverview	37.35	139	⇑P	P	13 51 33.3	+2.1
KMI	Kunming	37.58	330	⇓P	P	13 51 34.5	+1.0
KMI				pP	pP	13 53 13.0	+3.3
KMI				ScP	ScP	13 56 33.8	+2.7
KMI				S	S	13 56 46.0	+2.3
KMI				PcS	PcS	13 57 26.0	-0.5
KMI				pmax	pmax		
	comp=Z,3µm,1.0s						
KMI				pmax	pmax		
	comp=Z,22µm,8.6s						
KMI	Kunming	37.58	330	P	P	13 51 34.5	+1.0
KMI				pmax	pmax		
	comp=Z,3µm,0.9s						
KMI	Kunming	37.58	330	P	P	13 51 34.5	+1.0
KMI				IAmb	IAmb	13 51 38.6	
	comp=Z,3µm,0.9s						
SSE	Sheshan	38.26	358	P	P	13 51 38.8	+0.2
SSE				PP	PP	13 53 23.3	-1.3
SSE				S	S	13 56 53.5	+0.5
SSE				pmax	pmax		
	comp=Z,320nm,0.9s						
SSE				pmax	pmax		
	comp=Z,6µm,4.5s						
SSE	Sheshan	38.26	358	P	P	13 51 37.7	-0.9
PATS	Pohnpei	38.41	69	P	P	13 51 40.9	+0.7
	baz=38,SNR=28						
PATS	Pohnpei	38.41	69	P	P	13 51 39.9	-0.3
PATS				IAmb	IAmb	13 51 42.3	
	comp=Z,3µm,1.1s						
WHN	Wuhan	38.49	349	⇓iP	P	13 51 41.3	+0.8
WHN				ScP	ScP	13 56 35.8	+1.6
WHN				S	S	13 56 56.5	+0.1
WHN				pmax	pmax		
	comp=Z,8µm,1.0s						
WHN				pmax	pmax		
	comp=Z,56µm,6.3s						
JCJ	Chichijima	39.21	28	P	P	13 51 44.2	-2.2
NJ2	Nanjing	39.34	355	⇓iP	P	13 51 47.0	-0.3
NJ2				PP	PP	13 53 34.8	-0.5
NJ2				PcP	PcP	13 53 43.8	+2.1
NJ2				ScP	ScP	13 56 39.8	+2.3
NJ2				S	S	13 57 08.8	-0.1
NJ2				PcS	PcS	13 57 33.0	+0.4
NJ2				ScS	ScS	14 00 54.8	+3.1
NJ2				pmax	pmax		
	comp=Z,2µm,0.7s						
NJ2				pmax	pmax		
	comp=Z,40µm,3.5s						
JSU	Suzuyama	39.39	11	P	P	13 51 46.6	-1.2
JSU				IAmb	IAmb	13 51 51.7	
	comp=Z,2µm,0.9s						
JSU	Suzuyama	39.39	11	⇓P	P	13 51 45.8	-2.0
ENH	Enshi	39.44	342	P	P	13 51 48.0	-0.3
JNU	Nakatsue	41.04	11	P	P	13 52 00.1	-0.9
JNU				IAmb	IAmb	13 52 06.0	
	comp=Z,2µm,0.8s						
JNU	Nakatsue	41.04	11	⇓P	P	13 51 58.9	-2.1
SAIH	SAIHA	41.41	316	eP	P	13 52 04.4	+0.2
TAU	Tasmania Unive	41.61	152	P	P	13 52 06.5	+1.2
TAU				pmax	pmax		
	comp=Z,2µm,1.4s						
TAU	Tasmania Unive	41.61	152	P	P	13 52 06.5	+1.2
TAU				IAmb	IAmb	13 53 48.3	

	comp=Z,2µm,1.4s						
TAU	Tasmania Unive	41.61	152	⇑P	P	13 52 06.2	+0.9
TAU				⇑p	pP	13 53 43.8	-0.1
LHI	Lord Howe Isla	41.71	130	P	P	13 52 07.8	+1.5
	baz=42,SNR=33						
LHI	Lord Howe Isla	41.71	130	P	P	13 52 07.4	+1.1
LHI				IAmb	IAmb	13 52 10.1	
	comp=Z,2µm,1.1s						
LHI	Lord Howe Isla	41.71	130	⇑P	P	13 52 07.1	+0.8
LHI	Lord Howe Isla	41.71	130	P	P	13 52 07.1	+0.8
CD2	Chengdu	42.07	336	P	P	13 52 08.3	-0.9
CD2				PcP	PcP	13 53 50.8	0.0
CD2				PP	PP	13 54 02.5	+2.1
CD2				sP	sP	13 54 48.5	-2.5
CD2				S	S	13 57 46.0	-2.6
CD2				pmax	pmax		
	comp=Z,8µm,0.9s						
CD2				pmax	pmax		
	comp=Z,40µm,12.6s						
JTU	Tsushima	42.16	9	P	P	13 52 08.9	-0.8
JTU	Tsushima	42.16	9	⇓P	P	13 52 09.0	-0.7
JMN	Monobe	42.27	14	P	P	13 52 11.0	+0.4
JMN	Monobe	42.27	14	⇓P	P	13 52 10.0	-0.6
KOHI	KOHIMA	42.92	321	eP	P	13 52 15.4	-0.7
BELO	BELONIA	42.97	316	eP	P	13 52 17.8	+1.5
SILR	SILCHAR	43.10	319	eP	P	13 52 17.9	+0.7
MOKO	MOKOCHONG	43.11	322	eP	P	13 52 17.7	+0.3
XAN	Xi'an	43.13	343	P	P	13 52 16.0	-1.4
XAN				PcP	pP	13 53 56.0	-1.4
XAN				sP	sP	13 55 01.0	+1.1
XAN				ScP	ScP	13 56 54.5	+1.8
XAN				S	S	13 57 58.8	-4.9
XAN				sS	sS	14 00 57.5	-6.9
XAN				ScS	ScS	14 01 15.5	+0.3
XAN				pmax	pmax		
	comp=Z,8µm,0.8s						
XAN				pmax	pmax		
	comp=Z,32µm,9.2s						
XAN	Xi'an	43.13	343	P	P	13 52 16.0	-1.4
XAN				pmax	pmax		
	comp=Z,6µm,0.9s						
XAN	Xi'an	43.13	343	P	P	13 52 16.0	-1.4
JHS	Saijyo	43.31	13	P	P	13 52 18.3	-0.4
JHS	Saijyo	43.31	13	⇑P	P	13 52 18.4	-0.3
JHJ2	Mitsune	43.49	21	P	P	13 52 18.1	-1.9
JHJ2				IAmb	IAmb	13 52 22.2	
	comp=Z,4µm,0.9s						
JHJ2	Mitsune	43.49	21	⇑P	P	13 52 18.2	-1.9
AGT	Agartala	43.53	316	eP	P	13 52 21.9	+1.4
AGT				IAmb	IAmb	13 52 25.3	
	comp=Z,3µm,0.7s						
JORH	JORHAT	43.58	322	eP	P	13 52 20.6	-0.3
TIA	Tai'an	43.63	354	P	P	13 52 20.3	-0.9
TIA				sP	sP	13 55 03.8	+0.2
TIA				S	S	13 58 07.3	-3.3
TIA				pmax	pmax		
	comp=Z,1µm,0.7s						
TIA				pmax	pmax		
	comp=Z,26µm,7.5s						
DIBR	DIBRUGARH	43.71	323	eP	P	13 52 21.5	-0.5
TJN	Taejon	43.74	6	ceP	P	13 52 21.3	-0.7
HALK	Hakmana	43.80	287	⇑P	P	13 52 21.8	-1.1
JWT	Wachi	44.13	15	P	P	13 52 25.5	+0.5
JWT	Wachi	44.13	15	⇓P	P	13 52 24.4	-0.6
PALK	Pallekele	44.14	288	c iP	P	13 52 24.6	-0.9
PALK				pmax	pmax		
	comp=Z,2µm,1.4s						
PALK	Pallekele	44.14	288	P	P	13 52 24.9	-0.6
PALK				IAmb	IAmb	13 52 30.2	
	comp=Z,6µm,1.7s						
PALK	Pallekele	44.14	288	P	P	13 52 25.5	0.0
PALK				P	P	13 52 25.5	0.0
PALK				S	S	13 58 17.7	-0.8
PALK				S	S	13 58 17.7	-0.8
PALK	Pallekele	44.14	288	⇑P	P	13 52 24.7	-0.9
SHL	Shillong	44.24	319	P	P	13 52 25.8	-0.5
SHL				pmax	pmax		
	comp=Z,3µm,1.1s						
SHL	Shillong	44.24	319	eP	P	13 52 26.0	-0.2
SHL				IAmb	IAmb	13 52 29.5	
	comp=Z,3µm,0.2s						
SHL	Shillong	44.24	319	P	P	13 52 25.8	-0.5
SHL				IAmb	IAmb	13 52 29.2	
	comp=Z,3µm,1.1s						
SHL	Shillong	44.24	319	P	P	13 52 25.9	-0.4
	SNR=743						
JSG	Sagara	44.36	19	P	P	13 52 26.8	0.0
JSG	Sagara	44.36	19	⇓P	P	13 52 27.2	+0.4
ZIRO	ZIRO	44.39	323	eP	P	13 52 27.4	0.0
ZIRO				IAmb	IAmb	13 52 30.2	
	comp=Z,1µm,0.7s						
SANVU	Saraoutou	44.49	104	P	P	13 52 28.4	+0.3
SANVU	Saraoutou	44.49	104	⇓P	P	13 52 28.4	+0.2
SANVU	Saraoutou	44.49	104	P	P	13 52 28.7	+0.6
INU	Inuyama	44.63	17	P	P	13 52 28.8	-0.1
INU				IAmb	IAmb	13 52 32.9	
	comp=Z,2µm,0.9s						
INU	Inuyama	44.63	17	⇓P	P	13 52 27.9	-1.0
MALK	Mahakanadarawa	44.65	290	⇑P	P	13 52 28.6	-0.8
NOUC	Port Laguerre	44.65	114	P	P	13 52 29.6	+0.3
DZM	Mont Dzumac	44.77	114	eP	P	13 52 31.5	+1.1
	comp=Z,3µm,1.4s						
DZM	Mont Dzumac	44.77	114	P	P	13 52 30.3	-0.1
DZM	Mont Dzumac	44.77	114	⇑P	P	13 52 30.6	+0.3
DZM	Mont Dzumac	44.77	114	P	P	13 52 31.1	+0.7
INCN	Inchon	44.77	5	P	P	13 52 29.5	-0.5
INCN				pmax	pmax		
	comp=Z,2µm,1.4s						
INCN	Inchon	44.77	5	P	P	13 52 29.4	-0.5
INCN				IAmb	IAmb	13 52 33.8	
	comp=Z,2µm,1.4s						
INCN	Inchon	44.77	5	P	P	13 52 29.5	-0.5
INCN				P	P	13 52 29.5	-0.5
INCN				S	S	13 58 27.9	+1.2
INCN				S	S	13 58 27.9	+1.2
INCN	Inchon	44.77	5	⇓P	P	13 52 29.6	-0.4
GUWA	GUWAHATI	44.80	319	eP	P	13 52 29.5	-0.8
ONTNC	Ouen Toro	44.83	114	P	P	13 52 31.4	+0.7
KSAR	Wonju Array Be	44.85	6	P	P	13 52 30.5	0.0
KSAR						13 54 01.0	
KSAR	Wonju Array Be	44.85	6	P	P	13 52 30.5	0.0
KSAR				PcP	PcP	13 54 01.0	+0.9
KSRS	Korea Array	44.87	6	P	P	13 52 29.8	-0.9
	comp=Z,779nm,0.8s,baz=184,slow=8.8,SNR=301						
KSRS				PcP	PcP	13 54 02.4	+2.1
	comp=Z,136nm,0.6s,baz=184,slow=3.1,SNR=6.7						
KSRS				ScP	ScP	13 57 01.0	+1.3
	comp=Z,121nm,0.9s,baz=194,slow=3.7,SNR=7.1						
KSRS				S	S	13 58 32.3	+4.4
	comp=Z,95nm,1.2s,baz=192,slow=11,SNR=7.6						
KSRS				P4KPbc		14 30 11.6	
	comp=Z,1.0nm,0.8s,baz=164,slow=4.9,SNR=4.4						
KS19	Wonju Array Si	44.91	6	P	P	13 52 30.4	-0.6
KS19				IAmb	IAmb	13 52 36.9	
	comp=Z,1µm,1.0s						
JGF	Kuroka	44.97	17	P	P	13 52 31.0	-0.5
JGF				IAmb	IAmb	13 52 36.2	
	comp=Z,3µm,0.8s						
JGF	Kuroka	44.97	17	⇓P	P	13 52 30.2	-1.3
YATNC	Mamie plateau,	45.18	114	P	P	13 52 34.4	+1.0
OUENC	Ouen Island, N	45.21	114	P	P	13 52 34.4	+0.8
BWNR	Bhubaneshwar	45.35	308	eP	P	13 52 32.2	-2.5
BWNR				IAmb	IAmb	13 52 34.8	
	comp=Z,3µm,1.3s						
DVP	Devils Point	45.67	108	P	P	13 52 39.9	+2.8
PINNC	Pines Island,	45.80	114	P	P	13 52 40.2	+2.2
TIY	Taiyuan	45.81	349	eP	P	13 52 37.0	-1.0
TIY				pP	pP	13 54 20.8	+1.2
TIY				PP	PP	13 54 39.5	+5.1
TIY				sP	sP	13 55 17.8	-3.9
TIY				S	S	13 58 40.8	-0.5
TIY				pmax	pmax		
	comp=Z,23µm,13.0s						
VIS	Vishakhapatnam	46.01	303	eP	P	13 52 40.4	+0.7
DL2	Dalian	46.03	359	⇓iP	P	13 52 38.8	-0.7
DL2				PcP	PcP	13 54 06.5	+2.2
DL2				PP	PP	13 54 31.8	-4.5
DL2				ScP	ScP	13 57 07.0	+2.5
DL2				S	S	13 58 43.5	-0.7
DL2				ScS	ScS	14 01 33.0	-0.7
DL2				pmax	pmax		
	comp=Z,2µm,1.5s						
DL2				pmax	pmax		
	comp=Z,25µm,4.2s						
MAJO	Matsushiro	46.09	18	⇓iP	P	13 52 38.8	-1.3
MAJO				pmax	pmax		
	comp=Z,4µm,0.9s						
MAJO	Matsushiro	46.09	18	P	P	13 52 39.6	-0.4
MAJO	Matsushiro	46.09	18	⇑P	P	13 52 38.5	-1.5
MAT	Matsushiro	46.09	18	P	P	13 52 38.4	-1.7
MAT				S	S	13 58 41.8	-3.4
MJAR	Matsushiro Arr	46.09	18	P	P	13 52 38.5	-1.6
	comp=Z,4µm,0.8s,baz=186,slow=8.9,SNR=639						
MJAR				ScP	ScP	13 57 04.6	-0.3
	comp=Z,173nm,0.9s,baz=178,slow=4.7,SNR=5.7						
MJAR				S	S	13 58 42.3	-2.9
	comp=Z,22nm,0.9s,baz=178,slow=11,SNR=1.7						
MJAR				PKP2bc		14 24 14.5	
	comp=Z,11nm,1.1s,baz=5.6,slow=5.7,SNR=5.9						
MJAR				P4KPbc		14 30 18.1	
	comp=Z,5.6nm,0.8s,baz=184,slow=4.6,SNR=6.5						
MJAR	Matsushiro Arr	46.09	18	P	P	13 52 38.3	-1.8
MJAR				pmax	pmax		
	comp=Z,2µm,0.8s						
MJAR	Matsushiro Arr	46.09	18	P	P	13 52 38.3	-1.8
MJAR				IAmb	IAmb	13 52 43.2	
	comp=Z,2µm,0.8s						
MARNC	Mare, Loyalty	46.10	113	⇑P	P	13 52 41.4	+1.0
MARNC	Mare, Loyalty	46.10	113	P	P	13 52 41.1	+0.7
JYT	Yasato	46.44	20	P	P	13 52 40.9	-1.7
JYT	Yasato	46.44	20	⇓P	P	13 52 40.9	-1.7
MDRS	Chennai	46.61	296	eP	P	13 52 45.0	+0.6
LZH	Lanzhou	46.63	339	eP	P	13 52 44.5	+0.1
LZH				sP	sP	13 55 29.8	+1.5
LZH				ScP	ScP	13 57 10.0	+2.6
LZH				S	S	13 58 51.5	-1.6
LZH				SS	SS	14 02 25.8	-3.4
LZH				pmax	pmax		
	comp=Z,5µm,1.1s						
LZH				pmax	pmax		
	comp=Z,22µm,8.7s						
BOK	Bokaro	47.29	312	eP	P	13 52 49.5	+0.2
BOK				IAmb	IAmb	13 52 54.0	
	comp=Z,926nm,1.1s						
JSD	Sado	47.49	17	P	P	13 52 50.5	0.0
JSD	Sado	47.49	17	⇓P	P	13 52 49.5	-1.0
BJT	Baijiatuau	47.50	353	P	P	13 52 49.0	-1.5
BJT						13 54 12.0	
BJT				pmax	pmax		
	comp=Z,2µm,0.7s						
BJT	Baijiatuau	47.50	353	P	P	13 52 49.0	-1.5
BJT				IAmb	IAmb	13 52 53.0	
	comp=Z,2µm,0.7s						
BJT				PcP	PcP	13 54 12.0	+2.4
BJI	Beijing	47.52	353	P	P	13 52 50.5	-0.2
BJI				PcP	PcP	13 54 12.3	+2.7
BJI				pP	pP	13 54 35.5	+2.1
BJI				PP	PP	13 54 54.8	+5.1
BJI				ScP	ScP	13 57 13.3	+2.6
BJI				S	S	13 59 01.8	-3.0
BJI				ScS	ScS	14 01 46.5	+2.9
BJI				pmax	pmax		
	comp=Z,530nm,1.2s						
BJI				pmax	pmax		
	comp=Z,24µm,10.4s						
GTK	Tadong	47.59	318	eP	P	13 52 51.6	0.0
LSA	Lhasa	47.60	322	P	P	13 52 53.5	+1.5
LSA				S	S	13 59 08.0	+0.8
LSA				ScS	ScS	14 01 42.5	-3.1
LSA				pmax	pmax		
	comp=Z,7µm,1.9s						
LSA	Lhasa	47.60	322	P	P	13 52 53.5	+1.5
LSA	Lhasa	47.60	322	P	P	13 52 52.5	+0.5
LSA				pmax	pmax		
	comp=Z,3µm,0.7s						
LSA	Lhasa	47.60	322	P	P	13 52 52.5	+0.5
LSA	Lhasa	47.60	322	P	P	13 52 53.6	+1.6
LSA				P	P	13 52 53.6	+1.6
LSA				S	S	13 59 09.3	+2.1
LSA				S	S	13 59 09.3	+2.1
KWAJ	Kwajalein Atol	47.75	71	⇓P	P	13 52 53.2	+0.3
KWAJ				⇑p	pP	13 54 35.1	+0.3
KWAJ	Kwajalein Atol	47.75	71	P	P	13 52 53.4	+0.5
NFK	Norfolk Island	47.87	123	P	P	13 52 54.1	+0.5
	baz=48,SNR=10						
NFK	Norfolk Island	47.87	123	⇑P	P	13 52 55.6	+2.0
NFK	Norfolk Island	47.87	123	P	P	13 52 55.6	+2.0
TRD	Trivandrum	48.04	288	eP	P	13 52 54.9	-0.2
TRD				IAmb	IAmb	13 53 00.8	
	comp=Z,3µm,0.9s						
ODAN	Odare	48.11	316	eP	P	13 52 56.0	+0.4
JMM	Marumori	48.12	19	P	P	13 52 55.8	+0.6
JMM	Marumori	48.12	19	⇓P	P	13 52 54.8	-0.4
TAPN	Taplejung	48.20	317	eP	P	13 52 55.9	-0.5
RAMN	Ramite	48.71	316	eP	P	13 53 00.3	+0.2
SNY	Shenyang	48.96	1	⇓P	P	13 52 59.5	-1.8
SNY				pP	pwP	13 54 49.0	+2.0
SNY				S	S	13 59 20.8	-3.6
SNY				pmax	pmax		
	comp=Z,340nm,1.0s						
SNY				pmax	pmax		
	comp=Z,27µm,12.0s						
HHC	Hu-ho-hao-te	49.01	349	eP	P	13 53 02.0	+0.1
HHC				S	S	13 59 25.0	-0.5
HHC				SS	SS	14 03 07.3	+0.8
HHC				pmax	pmax		
	comp=Z,2µm,1.1s						
HHC				pmax	pmax		
	comp=Z,19µm,7.3s						
BTO	Baotou	49.09	347	eP	P	13 53 01.8	-0.7
H08S2	Diego Garcia H	49.55	266	P	P	13 53 07.5	+1.6
	baz=52,slow=8.7,SNR=1092						
H08S3	Diego Garcia H	49.56	266	P	P	13 53 07.4	+1.4
	baz=52,slow=8.7,SNR=4358						
H08S1	Diego Carcia H	49.57	266	P	P	13 53 07.9	+1.8
	baz=52,slow=8.7,SNR=235						
I52GB	DIEGO GARCIA I	49.57	267	P	P	13 53 08.2	+1.8
	baz=98,slow=9.7,SNR=13						
DGAR	Diego Garcia	49.60	267	ceP	P	13 53 07.8	+1.1
DGAR				pmax	pmax		
	comp=Z,9µm,1.0s						
DGAR	Diego Garcia	49.60	267	P	P	13 53 08.1	+1.5
DGAR	Diego Garcia	49.60	267	P	P	13 53 08.2	+1.5
DGAR				P	P	13 53 08.2	+1.5
DGAR				S	S	13 59 37.2	+3.1
DGAR				S	S	13 59 37.2	+3.1
DGAR	Diego Garcia	49.60	267	⇑P	P	13 53 07.7	+1.1
GUN	Gumba	49.81	316	eP	P	13 53 08.0	-0.3
HYB	Hyderabad	49.91	300	i P	P	13 53 07.0	-1.8
	comp=Z,1µm,1.5s						
HYB				ePcP	PcP	13 54 16.0	-3.0
HYB				epP	pP	13 54 54.0	+1.3
HYB				ePP	PP	13 55 12.0	+0.5
HYB				eS	S	13 59 36.0	-2.2
HYB				eScS	ScS	14 01 58.0	-2.9
HYB	Hyderabad	49.91	300	eP	P	13 53 06.7	-2.1
PKI	Pulchoki	49.92	316	eP	P	13 53 08.4	-0.7
PKIN	Phulchoki	49.93	316	eP	P	13 53 08.5	-0.7
	comp=Z,2µm,0.4s						
KKN	Kakani	50.15	316	eP	P	13 53 10.4	-0.2
	comp=Z,4µm,1.1s						
DMN	Daman	50.15	315	eP	P	13 53 10.3	-0.5
MSHR	Mys Shultsa	50.32	8	d iP	P	13 53 11.9	+0.6
MSHR				pmax	pmax		
	comp=Z,5µm,1.1s						
H11S3	WAKE ISLAND Hy	50.60	59	P	P	13 53 14.9	+1.2
	baz=230,slow=5.9,SNR=16						
H11S2	WAKE ISLAND Hy	50.61	59	P	P	13 53 14.9	+1.2
	baz=230,slow=5.9,SNR=13						
H11S1	WAKE ISLAND Hy	50.62	59	P	P	13 53 14.4	+0.6
	baz=230,slow=5.9,SNR=14						
AIS	Amsterdam Isla	50.65	226	P	P	13 53 16.5	+2.6
AIS				IAmb	IAmb	13 53 20.6	
	comp=Z,4µm,1.0s						
AIS	Amsterdam Isla	50.65	226	⇑P	P	13 53 16.4	+2.4
GKN	Gorkha	50.72	315	eP	P	13 53 14.4	-0.4
JTM	Tenmabayashi	50.87	18	P	P	13 53 14.9	-0.5
JTM	Tenmabayashi	50.87	18	⇑P	P	13 53 14.8	-0.5
WAKE	Wake Island	50.92	58	P	P	13 53 17.1	+1.0
WAKE				IAmb	IAmb	13 53 19.0	
	comp=Z,5µm,1.8s						
CN2	Changchun	50.99	3	eP	P	13 53 15.0	-1.2
CN2				pmax	pmax		
	comp=Z,1µm,1.1s						
CN2				pmax	pmax		
	comp=Z,25µm,12.5s						
TARA	Tarawa	51.05	82	P	P	13 53 17.4	+0.2
TARA	Tarawa	51.05	82	⇓P	P	13 53 17.2	0.0
GTA	Gaotai	51.06	337	⇓P	P	13 53 17.0	+0.1
GTA				PcP	PcP	13 54 25.0	+2.0
GTA				PP	PP	13 55 17.3	-4.3
GTA				sP	sP	13 56 01.0	-1.9
GTA				ScP	ScP	13 57 29.0	+2.8
GTA				S	S	13 59 53.0	-0.2
GTA				ScS	ScS	14 02 10.5	+2.2
GTA				SS	SS	14 03 38.5	-0.3
GTA				pmax	pmax		
	comp=Z,530nm,1.2s						
GTA				pmax	pmax		
	comp=Z,23µm,6.2s						
H11N1	WAKE ISLAND Hy	51.32	58	P	P	13 53 19.0	+0.2
	baz=239,slow=9.9,SNR=75						
H11N2	WAKE ISLAND Hy	51.33	58	P	P	13 53 19.1	+0.2
	baz=239,slow=9.9,SNR=30						
H11N3	WAKE ISLAND Hy	51.34	58	P	P	13 53 19.2	+0.3
	baz=239,slow=9.9,SNR=56						
DANN	Dangsing	51.55	315	eP	P	13 53 20.4	-0.5
MNCI	Minicoy	51.67	287	P	P	13 53 22.9	+1.3
MNCI	Minicoy	51.67	287	⇑P	P	13 53 22.1	+0.5
MNCY	Minicoy	51.69	287	eP	P	13 53 21.8	0.0
I45RU	USSURIYSK INFR	52.03	9	P	P	13 53 24.6	+0.9
	baz=184,slow=6.6,SNR=1.7						
USA0B	Ussuriysk Arra	52.03	9	P	P	13 53 24.3	+0.6
USA0B				pmax	pmax		
	comp=Z,4µm,1.0s						
USA0B	Ussuriysk Arra	52.03	9	P	P	13 53 24.3	+0.6
USA0B				IAmb	IAmb	13 53 27.9	
	comp=Z,4µm,1.0s						
USRK	Ussuriysk Ar.	52.03	9	P	P	13 53 22.9	-0.8
	comp=Z,2µm,0.5s,baz=192,slow=6.5,SNR=797						
USRK				ScP	ScP	13 57 32.4	+2.3
	comp=Z,136nm,0.8s,baz=207,slow=4.1,SNR=6.2						
USRK				S	S	14 00 03.8	-2.0
	comp=Z,121nm,1.1s,baz=198,slow=13,SNR=6.0						
USRK				PKPPKP		14 23 46.5	
	comp=Z,8.4nm,0.8s,baz=7.6,slow=4.4,SNR=12						
USRK				P4KPbc		14 30 44.0	
	comp=Z,3.1nm,0.7s,baz=211,slow=5.4,SNR=9.3						
USRK	Ussuriysk Ar.	52.03	9	P	P	13 53 23.5	-0.2
MDJ	Mudanjiang	52.13	6	P	P	13 53 24.8	+0.4
MDJ				pP	pP	13 55 08.8	0.0
MDJ				S	S	14 00 08.3	+1.2
MDJ				SS	SS	14 03 59.3	+4.1
MDJ				pmax	pmax		
	comp=Z,20µm,1.1s						
MDJ				pmax	pmax		
	comp=Z,44µm,12.0s						
MDJ	Mudanjiang	52.13	6	P	P	13 53 23.9	-0.5
ERM	Erimo	52.65	19	ceP	P	13 53 28.0	-0.1
ERM				pmax	pmax		
	comp=Z,3µm,1.0s						
ERM	Erimo	52.65	19	P	P	13 53 28.1	-0.1
ERM				IAmb	IAmb	13 53 32.7	
	comp=Z,2µm,0.8s						
ERM	Erimo	52.65	19	⇓P	P	13 53 28.5	+0.4
JEW	Eniwo	52.86	17	P	P	13 53 29.7	+0.1
GOA	Goa	53.29	295	eP	P	13 53 33.3	+0.2
BHPL	Bhopal	53.53	306	eP	P	13 53 32.7	-2.1
BHPL				IAmb	IAmb	13 53 36.5	
	comp=Z,1µm,1.1s						
TEY	Ternei	53.68	12	⇓eP	P	13 53 35.9	+0.5
TEY				eS	S	14 00 27.7	+0.2
TEY				pmax	pmax		
	comp=E,120nm,1.0s						
TEY				pmax	pmax		
	comp=N,580nm,1.2s						
TEY				pmax	pmax		
	comp=Z,1µm,0.9s						
TEY				pmax	pmax		
	comp=N,16µm,1.6s						
TEY				pmax	pmax		
	comp=Z,30µm,1.6s						
DCZ	Deep Cove	54.07	142	P	P	13 53 39.8	+1.6
DCZ				PcP	PcP	13 54 35.9	+1.6
PYZ	Puysegur Point	54.14	143	P	P	13 53 40.3	+1.6
OUZ	Omahuta	54.34	128	⇑P	P	13 53 42.1	+1.8
ASAJ	Asahikawa	54.37	18	PKPPKP		14 23 33.2	
	comp=Z,52nm,1.2s,baz=278,slow=17,SNR=3.8						
ASAJ	Asahikawa	54.37	18	P	P	13 53 39.4	-0.9
ASAJ				pmax	pmax		
	comp=Z,5µm,1.0s						
JKA	Kamikawa-asahi	54.37	18	P	P	13 53 39.4	-0.9
JKA				IAmb	IAmb	13 53 44.7	
	comp=Z,5µm,1.0s						
POO	Poona	54.43	299	eP	P	13 53 40.6	-0.7
POO				IAmb	IAmb	13 53 44.2	
	comp=Z,1µm,0.6s						
MSVF	Nonsavu	55.03	106	PKPPKP		14 23 31.7	
	comp=Z,7.4nm,1.1s,baz=100,slow=3.3,SNR=4.5						
MSVF	Nonsavu	55.03	106	i P	P	13 53 45.7	+0.2
MSVF				pmax	pmax		
	comp=Z,1µm,0.8s						
MSVF	Nonsavu	55.03	106	P	P	13 53 45.8	+0.2
MSVF				IAmb	IAmb	13 53 49.0	
	comp=Z,2µm,0.8s						
MSVF	Nonsavu	55.03	106	P	P	13 53 46.0	+0.5
MCQ	Macquarie Isla	55.34	155	P	P	13 53 48.6	+1.6
	baz=56,SNR=36						
MCQ	Macquarie Isla	55.34	155	P	P	13 53 48.2	+1.3
MCQ				pmax	pmax		
	comp=Z,731nm,1.1s						
MCQ	Macquarie Isla	55.34	155	P	P	13 53 48.2	+1.3
MCQ	Macquarie Isla	55.34	155	⇑P	P	13 53 48.5	+1.6
MCQ	Macquarie Isla	55.34	155	P	P	13 53 47.9	+1.0
	comp=Z,831nm,1.2s						
YUK	Yuzh-Kuril'sk	55.35	20	d iP	P	13 53 46.8	-0.3
YUK				e		13 54 38.2	
YUK				e		13 55 59.3	
YUK				e*SP	sP	13 56 32.0	-0.7
YUK				i S	S	14 00 49.3	-0.1
YUK				e		14 02 41.3	
YUK				pmax	pmax		
	comp=Z,11µm,1.1s						
YUK				pmax	pmax		
	comp=N,1µm,1.5s						
YUK				pmax	pmax		
	comp=E,3µm,1.0s						
YUK				pmax	pmax		
	comp=Z,14µm,1.4s						
LBZ	Lake Benmore	55.43	140	P	P	13 53 48.1	+0.3
QRZ	Quartz Range	55.51	135	P	P	13 53 50.6	+2.2
RPZ	Rata Peaks	55.70	139	P4KPbc		14 31 01.2	
	comp=Z,10nm,0.9s,baz=208,slow=6.9,SNR=4.2						
RPZ	Rata Peaks	55.70	139	P	P	13 53 50.6	+1.0
RPZ				IAmb	IAmb	13 53 53.7	
	comp=Z,2µm,0.8s						
NBEZ	Newall Road No	55.89	133	P	P	13 53 54.7	+3.7
NMEZ	Namu Road	55.95	133	P	P	13 53 54.4	+3.0
PKE	Pukeiti	55.95	133	P	P	13 53 54.8	+3.3
KHEZ	Kahui Hut	56.00	133	P	P	13 53 54.9	+2.9
ODZ	Otahua Downs	56.02	140	⇓P	P	13 53 51.0	-0.9
NEZ	North Egmont	56.05	133	P	P	13 53 55.3	+3.0
LTZ	Lake Taylor	56.11	137	P	P	13 53 53.1	+0.5
PREZ	Palmer Road	56.13	133	P	P	13 53 56.7	+3.9
FUNA	Funafuti	56.13	95	P	P	13 53 53.5	+0.4
THZ	Tophouse	56.13	136	P	P	13 53 54.0	+1.2
MHEZ	Mangahewa	56.15	133	P	P	13 53 56.1	+3.3
OXZ	Oxford	56.18	138	P	P	13 53 53.1	+0.1
NNZ	Nelson	56.25	135	P	P	13 53 54.1	+0.6
LREZ	Lake Rotokare	56.34	133	P	P	13 53 57.3	+3.1
HIZ	Hauiti	56.35	132	P	P	13 53 56.6	+2.3
NDI	New Delhi	56.46	311	eP	P	13 53 54.5	-0.6
NDI				eS	S	14 01 02.5	-1.9
VRZ	Vera Road	56.49	132	P	P	13 53 57.0	+1.8
TOZ	Tahuroa Road	56.59	131	P	P	13 53 58.2	+2.3
ULN	Ulaanbaatar	56.65	348	d iP	P	13 53 55.8	-0.5
ULN				pmax	pmax		
	comp=Z,2µm,1.5s						
ULN	Ulaanbaatar	56.65	348	P	P	13 53 57.0	+0.8
ULN				IAmb	IAmb	13 54 00.6	
	comp=Z,5µm,1.6s						
ULN	Ulaanbaatar	56.65	348	P	P	13 53 56.8	+0.6
ULN				P	P	13 53 56.8	+0.6
ULN				S	S	14 01 06.4	-0.1
ULN				S	S	14 01 06.4	-0.1
ULN	Ulaanbaatar	56.65	348	⇓P	P	13 53 55.6	-0.6
TUWZ	Tuamarina	56.73	135	P	P	13 53 56.8	+0.1
DDI	Dehra Dun	56.74	314	eP	P	13 53 56.9	-0.1
DDI				IAmb	IAmb	13 54 01.0	
	comp=Z,3µm,0.8s						
MQZ	McQueen's Vall	56.74	138	P	P	13 53 58.1	+1.3

SONM	Songino Array	56.77	347	P	P	13 53 57.1	+0.1
	comp=Z,867nm,0.6s,baz=165,slow=7.7,SNR=435						
SONM				PcP	PcP	13 54 45.9	+1.1
	comp=Z,210nm,1.0s,baz=150,slow=4.0,SNR=4.2						
SONM				ScP	ScP	13 57 52.5	+1.5
	comp=Z,175nm,1.0s,baz=172,slow=3.4,SNR=5.0						
SONM				PKiKP	PKiKP	14 01 09.8	0.0
	comp=Z,31nm,0.9s,baz=139,slow=4.8,SNR=5.2						
SONM				PKPPKP	P'P'df	14 23 25.5	-13
	comp=Z,10nm,0.9s,baz=341,slow=3.1,SNR=14						
SONM				PKP2bc		14 23 53.5	
	comp=Z,9.7nm,1.0s,baz=237,slow=2.0,SNR=5.1						
SONM				P4KPbc		14 31 03.0	
	comp=Z,2.0nm,0.6s,baz=166,slow=4.1,SNR=6.2						
SONM	Songino Array	56.77	347	P	P	13 53 56.5	-0.5
BSWZ	Blackbirch Sta	56.78	136	P	P	13 53 57.5	+0.3
TLZ	Tolley Road	56.80	131	P	P	13 53 59.6	+2.2
KHZ	Kahutara	56.82	137	⇑P	P	13 53 57.5	+0.2
KLR	Kul'dur	56.93	7	PKPPKP		14 23 24.6	
	comp=Z,38nm,1.1s,baz=65,slow=4.4,SNR=28						
KLR				P4KPbc		14 31 04.8	
	comp=Z,1.5nm,0.8s,baz=204,slow=4.2,SNR=5.6						
KLR	Kul'dur	56.93	7	ceP	P	13 53 57.1	-0.8
KLR				pmax	pmax		
	comp=Z,2µm,1.4s						
TWVZ	Taurewa	56.97	132	P	P	13 54 00.2	+1.6
YSS	Yuzh-Sakhalins	56.99	16	κ iP	P	13 53 58.6	+0.2
YSS				e		13 56 08.6	
YSS				e*SP	sP	13 56 42.7	-2.1
YSS				eS	S	14 01 10.6	+0.1
YSS				e		14 02 48.0	
YSS				pmax	pmax		
	comp=Z,4µm,0.9s						
YSS				pmax	pmax		
	comp=Z,22µm,2.0s						
YSS				smax	smax		
	comp=E,10µm,13.0s						
YSS	Yuzh-Sakhalins	56.99	16	P	P	13 53 58.9	+0.5
YSS				IAmb	IAmb	13 54 02.7	
	comp=Z,4µm,0.9s						
YSS	Yuzh-Sakhalins	56.99	16	⇓P	P	13 53 57.8	-0.6
CMWZ	Cape Campbell	57.03	136	P	P	13 54 00.1	+1.2
KUTZ	Kaahu Road	57.07	131	P	P	13 54 04.0	+4.8
WATZ	Wairara	57.07	132	P	P	13 54 01.7	+2.4
WTVZ	West Tongariro	57.09	132	P	P	13 54 01.5	+2.0
MTVZ	Mangateitei	57.10	133	P	P	13 54 01.4	+1.9
KUR	Kuril'sk	57.10	21	d iP	P	13 53 59.7	+0.6
KUR				e		13 54 43.6	
KUR				i S	S	14 01 12.7	+0.9
KUR				e		14 02 49.7	
KUR				eSS	SS	14 05 13.2	0.0
KUR				pmax	pmax		
	comp=Z,29µm,3.3s						
KUR				pmax	pmax		
	comp=Z,9µm,1.1s						
KUR				pmax	pmax		
	comp=E,2µm,1.0s						
KUR				pmax	pmax		
	comp=N,1µm,1.1s						
KUR				MLR	MLR		
	comp=Z,4µm,14.0s						
KUR				MLR	MLR		
	comp=E,6µm,15.0s						
KUR				MLR	MLR		
	comp=N,4µm,14.0s						
FWVZ	Far West T-bar	57.11	132	P	P	13 54 01.6	+1.9
NGZ	Ngauruhoe	57.12	132	P	P	13 54 01.4	+1.6
TRVZ	Turoa	57.12	132	P	P	13 54 01.6	+1.8
KRVZ	Karewarewa	57.13	132	P	P	13 54 01.6	+1.9
KATZ	Kakaramea	57.13	132	P	P	13 54 02.3	+2.6
RATZ	Rangitukua	57.15	132	P	P	13 54 02.0	+2.2
WHVZ	Whangaehu Hut	57.15	132	P	P	13 54 01.8	+1.8
OTVZ	Oturere	57.17	132	P	P	13 54 01.9	+1.9
WNVZ	Wahianoa	57.17	132	P	P	13 54 01.6	+1.6
TMVZ	Te Maari	57.18	132	P	P	13 54 01.7	+1.6
ETVZ	East Tongariro	57.19	132	P	P	13 54 02.0	+1.8
TUVZ	Tukino	57.19	132	P	P	13 54 02.0	+1.8
SNZO	South Karori	57.22	135	P	P	13 54 00.6	+0.5
SNZO	South Karori	57.22	135	⇑P	P	13 53 59.7	-0.4
SNZO				⇓p	pwP	13 55 51.2	+1.2
WHTZ	Whakaora	57.22	132	P	P	13 54 05.6	+5.3
KARZ	Kaharoa	57.23	131	P	P	13 54 02.5	+2.2
GRRZ	Galatos Road	57.23	131	P	P	13 54 02.9	+2.5
UTU	Utuhina	57.24	131	P	P	13 54 03.4	+3.0
RITZ	Rihia Road	57.25	132	P	P	13 54 02.7	+2.3
OHWZ	Ohakea	57.26	133	P	P	13 54 01.6	+1.2
MOVZ	Moawhango	57.31	132	P	P	13 54 01.5	+0.7
OMRZ	Omania	57.36	131	P	P	13 54 03.5	+2.3
BHW	Baring Head	57.37	135	P	P	13 54 01.0	-0.1
OGWZ	Otaki Gorge	57.37	134	P	P	13 54 01.2	0.0
HRRZ	Handcock Road	57.38	131	P	P	13 54 03.9	+2.6
HATZ	Hinemaiaia	57.39	132	P	P	13 54 02.7	+1.3
OPRZ	Ohinepanea	57.41	130	P	P	13 54 03.1	+1.6
MKRZ	Makatiti	57.44	131	P	P	13 54 05.9	+4.1
TARZ	Mount Tarawera	57.50	131	P	P	13 54 05.0	+2.8
MRZ	Mangatainoka R	57.60	134	P	P	13 54 02.5	-0.3
MRHZ	Matea Rd	57.62	132	P	P	13 54 03.3	+0.3
EDRZ	Edgecumbe	57.63	131	P	P	13 54 04.8	+1.7
MSWZ	Moikau Station	57.63	135	P	P	13 54 02.8	-0.2
MSWZ	Moikau Station	57.63	135	P	P	13 54 02.7	-0.3
HOWZ	Holdsworth Sta	57.64	134	P	P	13 54 03.0	-0.1
MTW	Mount Morrison	57.72	134	P	P	13 54 03.9	+0.3
WHRZ	Whale Island	57.73	130	P	P	13 54 07.1	+3.3
PNHZ	Pukenui	57.80	133	P	P	13 54 04.8	+0.6
KWHZ	Kaweka Forest	57.81	132	P	P	13 54 04.9	+0.6
SMLA	Simla	57.82	314	eP	P	13 54 04.3	0.0
KRHZ	Kereru	57.84	133	P	P	13 54 05.0	+0.6
PRWZ	Pori Road	57.85	134	P	P	13 54 04.7	+0.2
TRWZ	Traveller	57.94	135	P	P	13 54 05.7	+0.6
URZ	Urewera	57.96	131	S	S	14 01 23.7	+0.5
	comp=N,71nm,1.1s,baz=215,slow=20,SNR=8.2						
URZ				PKPPKP		14 23 23.6	
	comp=N,20nm,1.1s,baz=38,slow=19,SNR=3.3						
URZ				PKP2bc		14 23 49.3	
	comp=N,35nm,1.2s,baz=4.4,slow=6.5,SNR=6.1						
URZ	Urewera	57.96	131	⇑P	P	13 54 04.9	-0.3
WPHZ	Waipukurau	58.03	133	P	P	13 54 06.3	+0.6
BFZ	Birch Farm	58.09	134	P	P	13 53 57.4	-8.7
DHRM	DHARAMSHALA	59.05	315	eP	P	13 54 12.2	-0.8
DHRM				IAmb	IAmb	13 54 16.1	
	comp=Z,4µm,0.8s						
GRNR	Gornyy	59.13	10	⇓iP	P	13 54 14.1	+1.3
GRNR				eS	S	14 01 39.7	+2.1
GRNR				pmax	pmax		
	comp=E,260nm,1.0s						
GRNR				pmax	pmax		
	comp=N,2µm,1.2s						
GRNR				pmax	pmax		
	comp=Z,5µm,1.0s						
GRNR				smax	smax		
	comp=N,50nm,1.1s						
GRNR				MLR	MLR		
	comp=E,2µm,18.0s						
GRNR				MLR	MLR		
	comp=N,4µm,17.0s						
GRNR				MLR	MLR		
	comp=Z,7µm,14.0s						
CASY	Casey	59.41	186	P	P	13 54 14.4	+0.1
CASY	Casey	59.41	186	⇑P	P	13 54 14.1	-0.3
CIT	Chita	59.64	354	eP	P	13 54 16.6	+0.4
CIT				e		13 54 57.2	
CIT				e		14 01 45.6	
CIT				e		14 03 08.0	
CIT				pmax	pmax		
	comp=Z,6µm,1.7s						
ZAK	Zakamensk	59.87	346	eP	P	13 54 17.4	-0.5
ZAK				pmax	pmax		
	comp=Z,1µm,1.4s						
WMQ	Urumqi	59.88	331	P	P	13 54 19.0	+1.0
WMQ				pP	pP	13 56 07.8	+0.3
WMQ				sP	sP	13 57 05.5	-1.2
WMQ				S	S	14 01 48.0	+0.7
WMQ				ScS	ScS	14 03 11.3	-1.0
WMQ				pmax	pmax		
	comp=Z,2µm,0.9s						
WMQ				pmax	pmax		
	comp=Z,26µm,4.9s						
BHUJ	Bhuj	59.92	302	eP	P	13 54 19.6	+1.0
BHUJ				IAmb	IAmb	13 54 22.4	
	comp=Z,5µm,1.4s						
PAF	Port-aux-Franc	60.45	216	P	P	13 54 23.2	+1.6
PAF				pmax	pmax		
	comp=Z,4µm,1.5s						
PAF	Port-aux-Franc	60.45	216	P	P	13 54 23.2	+1.6
PAF				IAmb	IAmb	13 54 27.6	
	comp=Z,4µm,1.5s						
PAF	Port-aux-Franc	60.45	216	⇑P	P	13 54 23.2	+1.6
TYV	Tymovskoe	60.55	15	eP	P	13 54 23.7	+1.5
TYV				eS	S	14 01 56.7	+1.5
TYV				pmax	pmax		
	comp=Z,30µm,4.0s						
TYV				pmax	pmax		
	comp=Z,2µm,1.6s						
TYV				smax	smax		
	comp=N,136nm,3.1s						
TYV				smax	smax		
	comp=E,18µm,9.1s						
TLY	Talaya	60.99	347	d iP	P	13 54 25.7	+0.5
TLY				e		13 56 18.4	
TLY				e		13 56 49.7	
TLY				e		14 02 00.7	
TLY				eS	SKSac	14 03 18.3	-1.9
TLY				e		14 06 14.3	
TLY				pmax	pmax		
	comp=Z,5µm,1.5s						
TLY	Talaya	60.99	347	P	P	13 54 25.6	+0.5
TLY	Talaya	60.99	347	P	P	13 54 26.1	+0.9
TLY				P	P	13 54 26.1	+0.9
TLY				S	S	14 02 02.0	+1.3
TLY				S	S	14 02 02.0	+1.3
TLY	Talaya	60.99	347	⇓P	P	13 54 24.9	-0.3
ZEA	Zeya	61.00	3	d iP	P	13 54 25.7	+0.7
ZEA				e		13 55 04.0	
ZEA				e		13 56 48.1	
ZEA				e		13 57 15.4	
ZEA				eS	S	14 02 03.0	+2.4
ZEA				e		14 03 20.3	
ZEA				eSS	SS	14 06 16.2	+2.4
ZEA				pmax	pmax		
	comp=N,9µm,3.9s						
ZEA				pmax	pmax		
	comp=Z,16µm,3.7s						
ZEA				pmax	pmax		
	comp=N,3µm,0.8s						
ZEA				pmax	pmax		
	comp=Z,6µm,0.9s						
ZEA				pmax	pmax		
	comp=N,4µm,6.3s						
ZEA				pmax	pmax		
	comp=Z,6µm,8.5s						
ZEA				smax	smax		
	comp=N,11µm,11.8s						
IRK	Irkutsk	61.38	347	eP	P	13 54 27.2	-0.4
IRK				pmax	pmax		
	comp=Z,4µm,2.6s						
MOY	Mondy	61.63	345	eP	P	13 54 29.9	+0.5
MOY				pmax	pmax		
	comp=Z,5µm,1.7s						
NIL	Nilore	61.96	314	P	P	13 54 31.9	0.0
NIL				pmax	pmax		
	comp=Z,4µm,1.3s						
NIL	Nilore	61.96	314	P	P	13 54 31.9	0.0
NIL				IAmb	IAmb	13 54 34.9	
	comp=Z,4µm,1.2s						
NIL	Nilore	61.96	314	P	P	13 54 31.8	-0.1
NKL	Nikolayevsk	62.23	12	eP	P	13 54 34.4	+1.4
NKL				e		13 56 55.5	
NKL				eSS	SS	14 06 36.3	+3.5
NKL				pmax	pmax		
	comp=E,38nm,1.1s						
NKL				pmax	pmax		
	comp=N,14nm,1.4s						
NKL				pmax	pmax		
	comp=Z,4µm,1.2s						
NKL				MLR	MLR		
	comp=E,3µm,17.0s						
NKL				MLR	MLR		
	comp=Z,6µm,16.0s						
KSH	Kashi	63.43	321	P	P	13 54 41.0	-0.3
KSH				S	S	14 02 26.5	-4.7
KSH				SS	SS	14 06 52.3	0.0
KSH				pmax	pmax		
	comp=Z,700nm,0.8s						
KSH				pmax	pmax		
	comp=Z,21µm,8.4s						
SHLS	Shalkode	63.65	326	⇓iP	P	13 54 42.4	-0.3
	comp=Z,2µm,1.3s,baz=326						
SHLS				i S	S	14 02 32.9	-0.8
	comp=Z,4µm,5.8s,baz=326						
SHLS	Shalkode	63.65	326	d iP	P	13 54 42.3	-0.3
SHLS				i S	S	14 02 32.9	-0.8
SHLS				pmax	pmax		
	comp=Z,2µm,1.3s						
SHLS				smax	smax		
	comp=E,4µm,5.8s						
PDGK	Podgornoye	63.75	326	i P	P	13 54 43.9	+0.7
PDGK				pmax	pmax		
	comp=Z,2µm,0.7s						
UZB	Uzynbulak	63.89	326	⇓iP	P	13 54 45.1	+0.9
	comp=Z,855nm,1.0s,baz=326						
UZB				i S	S	14 02 38.3	+1.6
	comp=Z,6µm,5.8s,baz=326						
UZB	Uzynbulak	63.89	326	d iP	P	13 54 45.0	+0.9
UZB				i S	S	14 02 38.2	+1.6
UZB				pmax	pmax		
	comp=Z,855nm,1.0s						
UZB				smax	smax		
	comp=E,6µm,5.8s						
ZSN	Zaisan	63.91	333	⇓iP	P	13 54 44.7	+0.6
	comp=E,1µm,1.5s,baz=332						
ZSN	Zaisan	63.91	333	d iP	P	13 54 44.6	+0.6
ZSN				pmax	pmax		
	comp=Z,1µm,1.5s						
SATY	Saty	64.17	325	⇓iP	P	13 54 47.0	+1.0
	comp=Z,2µm,1.3s,baz=325						
SATY				i S	S	14 02 41.9	+1.8
	comp=Z,7µm,5.4s,baz=325						
SATY	Saty	64.17	325	d iP	P	13 54 47.0	+1.0
SATY				i S	S	14 02 41.8	+1.8
SATY				pmax	pmax		
	comp=Z,2µm,1.3s						
SATY				smax	smax		
	comp=N,7µm,5.4s						
KPKS	Kokpek	64.28	326	⇓iP	P	13 54 47.4	+0.8
	comp=N,2µm,0.8s,baz=326						
KPKS				i S	S	14 02 42.9	+1.6
	comp=N,6µm,5.0s,baz=326						
KPKS	Kokpek	64.28	326	d iP	P	13 54 47.4	+0.8
KPKS				i S	S	14 02 42.8	+1.6
KPKS				pmax	pmax		
	comp=Z,2µm,0.8s						
KPKS				smax	smax		
	comp=E,6µm,5.0s						
DGZ	Jazzator, Alta	64.51	336	i P	P	13 54 47.5	-0.4
DGZ				pmax	pmax		
	comp=Z,2µm,1.2s						
MK31	Makanchi Array	64.66	331	i P	P	13 54 49.3	+0.5
MK31				pmax	pmax		
	comp=Z,2µm,0.6s						
MK31	Makanchi Array	64.66	331	IAmb	IAmb	13 54 52.5	
	comp=Z,3µm,1.2s						
MKAR	Makanchi Array	64.66	331	P	P	13 54 48.9	+0.1
	comp=Z,2µm,0.5s,baz=135,slow=6.4,SNR=1211						
MKAR				S	S	14 02 47.9	+2.4
	comp=Z,42nm,0.9s,baz=148,slow=14,SNR=5.6						
MKAR				PKPPKP	P'P'df	14 23 23.7	-3.0
	comp=Z,7.4nm,1.0s,baz=271,slow=1.2,SNR=6.2						
MKAR				PKP2bc		14 23 30.8	
	comp=Z,15nm,0.9s,baz=304,slow=2.4,SNR=10						
MKAR				P4KPbc		14 31 40.9	
	comp=Z,8.6nm,0.8s,baz=130,slow=5.3,SNR=33						
MKAR	Makanchi Array	64.66	331	P	P	13 54 49.4	+0.6
SKR	Severo-Kuril's	64.71	23	eP	P	13 54 49.6	+0.7
SKR				e*PP	sP	13 57 41.0	+3.1
SKR				eS	S	14 02 47.4	+1.6
SKR				pmax	pmax		
	comp=Z,13µm,4.0s						
AFI	Afiamalu	64.77	102	P	P	13 54 50.9	+0.7
AFI				pmax	pmax		
	comp=Z,797nm,0.9s						
AFI	Afiamalu	64.77	102	P	P	13 54 50.9	+0.7
AFI	Afiamalu	64.77	102	⇓P	P	13 54 51.0	+0.7
AFI	Afiamalu	64.77	102	P	P	13 54 51.4	+1.2
MAKZ	Makanchi	64.82	330	P	P	13 54 50.3	+0.5
MAKZ				pmax	pmax		
	comp=Z,1µm,0.9s						
MAKZ	Makanchi	64.82	330	P	P	13 54 50.3	+0.5
MAKZ				IAmb	IAmb	13 54 52.9	
	comp=Z,1µm,0.8s						
MAKZ	Makanchi	64.82	330	⇓P	P	13 54 49.1	-0.7
MAKZ				⇓P	P	13 54 49.2	-0.7
ULHL	Ulahol	64.91	324	P	P	13 54 51.3	+0.6
	SNR=51						
TNSS	Tian-Shan	64.99	325	⇓iP	P	13 54 52.4	+0.9
	baz=325						
TNSS	Tian-Shan	64.99	325	⇓iP	P	13 54 52.3	+0.9
MDOK	Medeo	65.01	325	i P	P	13 54 52.2	+0.9
	baz=325						
MDOK				i S	S	14 02 51.7	+1.6
	baz=325						
MDOK	Medeo	65.01	325	i P	P	13 54 52.1	+0.9
MDOK				i S	S	14 02 51.7	+1.6
AAA	Alma-Ata	65.11	325	⇓iP	P	13 54 52.8	+1.0
	comp=Z,2µm,1.0s,baz=325						
AAA				i S	S	14 02 53.1	+1.8
	comp=Z,18µm,4.7s,baz=325						
AAA	Alma-Ata	65.11	325	d iP	P	13 54 52.8	+1.0
AAA				i S	S	14 02 53.0	+1.8
AAA				pmax	pmax		
	comp=Z,2µm,1.0s						
AAA				smax	smax		
	comp=N,18µm,4.7s						
BOD	Bodaibo	65.32	355	⇓iP	P	13 54 52.4	-0.3
BOD				pmax	pmax		
	comp=Z,4µm,1.6s						
KBL	Kabul	65.43	313	P	P	13 54 54.7	+0.5
KBL				pmax	pmax		
	comp=Z,2µm,0.8s						
KBL	Kabul	65.43	313	P	P	13 54 54.7	+0.5
KBL				IAmb	IAmb	13 54 57.1	
	comp=Z,2µm,0.8s						
KBL	Kabul	65.43	313	P	P	13 54 54.5	+0.4
	SNR=884						
KBL				P	P	13 54 54.5	+0.4
	SNR=884						
TDK	Taldyqorghan	65.43	327	i P	P	13 54 54.5	+0.8
	comp=Z,4µm,1.4s,baz=327						
TDK				i S	S	14 02 56.5	+1.7
	baz=327						
TDK	Taldyqorghan	65.43	327	i P	P	13 54 54.5	+0.8
TDK				i S	S	14 02 56.5	+1.7
TDK				pmax	pmax		
	comp=Z,4µm,1.4s						
CHKK	Chushkaly	65.48	325	⇓iP	P	13 54 54.4	+0.3
	baz=325						
CHKK	Chushkaly	65.48	325	⇓iP	P	13 54 54.3	+0.3
KNTN	Kanton	65.64	90	P	P	13 54 56.6	+0.9
KNTN				IAmb	IAmb	13 54 58.9	
	comp=Z,3µm,0.8s						
KNTN	Kanton	65.64	90	⇓P	P	13 54 56.8	+1.1
KNTN	Kanton	65.64	90	P	P	13 54 56.9	+1.3
TKM2	Tokmak 2	65.70	324	P	P	13 54 55.4	-0.3
	SNR=694						
TKM2	Tokmak 2	65.70	324	i P	P	13 54 55.3	-0.3
TKM2				pmax	pmax		
	comp=Z,898nm,0.7s						
RER	Riviere de l'E	65.72	250	P	P	13 54 57.2	+1.1
RER				IAmb	IAmb	13 55 01.5	
	comp=Z,2µm,0.9s						
RER	Riviere de l'E	65.72	250	P	P	13 54 57.8	+1.7
	SNR=27						
RER	Riviere de l'E	65.72	250	⇑P	P	13 54 57.8	+1.7
KUU	Kurty	65.87	325	⇓iP	P	13 54 57.2	+0.7
	comp=Z,5µm,1.1s,baz=325						
KUU				i S	S	14 03 00.6	+0.6
	baz=325						
KUU	Kurty	65.87	325	d iP	P	13 54 57.1	+0.7
KUU				i S	S	14 03 00.6	+0.6
KUU				pmax	pmax		
	comp=Z,5µm,1.1s						
KBK	Karagaybulak	65.92	323	P	P	13 54 57.1	+0.1
	SNR=1016						
UCH	Uchtor	65.92	323	P	P	13 54 57.4	0.0
	SNR=682						
AAK	Ala-Archa	66.18	323	S	S	14 03 07.4	+3.4
	comp=Z,41nm,1.0s,baz=228,slow=19,SNR=13						
AAK				SKiKP	SKiKP	14 04 02.4	-0.3
	comp=Z,52nm,1.0s,baz=261,slow=22,SNR=7.8						
AAK				PKPPKP		14 23 18.7	
	comp=Z,13nm,1.1s,baz=117,slow=2.1,SNR=4.9						
AAK				P4KPbc		14 31 47.2	
	comp=Z,8.1nm,0.7s,baz=158,slow=4.8,SNR=15						
AAK	Ala-Archa	66.18	323	P	P	13 54 58.7	+0.1
	SNR=1189						
AAK	Ala-Archa	66.18	323	i P	P	13 54 58.7	+0.1
	SNR=2027						
AAK	Ala-Archa	66.18	323	i P	P	13 54 59.3	+0.7
AAK				pmax	pmax		
	comp=Z,5µm,1.0s						
AAK	Ala-Archa	66.18	323	P	P	13 54 59.9	+1.3
AAK				IAmb	IAmb	13 55 02.2	
	comp=Z,1µm,0.7s						
AAK	Ala-Archa	66.18	323	P	P	13 54 59.7	+1.1
AAK				P	P	13 54 59.7	+1.1
CHMS	Chumysh	66.24	324	P	P	13 54 58.4	-0.4
	SNR=435						
AML	Almayashu	66.36	322	P	P	13 54 59.9	-0.1
	SNR=856						
NIUE	Niue	66.48	108	P	P	13 55 01.9	+1.2
NIUE				IAmb	IAmb	13 55 08.4	
	comp=Z,2µm,1.2s						
NIUE	Niue	66.48	108	P	P	13 55 02.5	+1.8
USP	Ospenovka	66.55	324	P	P	13 55 00.2	-0.5
	SNR=53						
SGDS	Sogindy	66.58	324	⇓iP	P	13 55 01.4	+0.5
	comp=Z,785nm,1.1s,baz=324						
SGDS				i S	S	14 03 08.7	+0.1
	baz=324						
SGDS				i S	S	14 03 10.0	+1.5
SGDS	Sogindy	66.58	324	d iP	P	13 55 01.4	+0.5
SGDS				i S	S	14 03 08.6	+0.1
SGDS				pmax	pmax		
	comp=Z,785nm,1.1s						
EKS2	Erkin-Say	66.62	323	P	P	13 55 01.5	+0.2
	SNR=788						
PEA0B	Petropavlovsk-	67.23	22	P	P	13 55 05.8	+1.2
PEA0B				pmax	pmax		
	comp=Z,2µm,0.9s						
PEA0B	Petropavlovsk-	67.23	22	P	P	13 55 05.8	+1.2
PEA0B				IAmb	IAmb	13 55 09.4	
	comp=Z,2µm,0.8s						
PETK	Petropavlovsk-	67.23	22	P	P	13 55 05.1	+0.5
	comp=Z,2µm,0.8s,baz=238,slow=0.9,SNR=948						
PETK				PKPPKP	P'P'df	14 23 19.0	-3.0
	comp=Z,11nm,1.0s,baz=168,slow=7.6,SNR=3.7						
PETK	Petropavlovsk-	67.23	22	P	P	13 55 05.3	+0.7
PET	Petropavlovsk	67.52	23	κ iP	P	13 55 07.0	+0.6
PET				e*SP	sP	13 57 56.6	+0.5
PET				i S	S	14 03 20.0	+1.1
PET				eSP	SPn	14 03 43.9	-1.6
PET				e		14 04 08.1	
PET				eSSS	SSS	14 11 02.5	
PET				pmax	pmax		
	comp=Z,3µm,1.0s						
PET				pmax	pmax		
	comp=Z,28µm,15.5s						
PET				smax	smax		
	comp=E,32µm,9.5s						
PET				smax	smax		
	comp=E,34µm,21.4s						
PET				MLR	MLR		
	comp=Z,11µm,20.0s						
PET	Petropavlovsk	67.52	23	P	P	13 55 07.2	+0.9
PET				IAmb	IAmb	13 55 12.7	
	comp=Z,3µm,1.2s						
PET	Petropavlovsk	67.52	23	⇑P	P	13 55 06.8	+0.5
BTLS	Baital	67.87	325	⇓iP	P	13 55 08.9	+0.2
	comp=Z,497nm,1.2s,baz=325						
BTLS	Baital	67.87	325	d iP	P	13 55 08.9	+0.2
BTLS				pmax	pmax		
	comp=Z,497nm,1.2s						
MIDW	Midway	67.92	56	P	P	13 55 09.2	-0.1
MIDW	Midway	67.92	56	⇓P	P	13 55 09.3	-0.1
SEM	Semipalatinsk	68.16	332	⇓iP	P	13 55 10.3	-0.4
	comp=Z,1µm,1.4s,baz=332						
SEM	Semipalatinsk	68.16	332	d iP	P	13 55 10.2	-0.4
SEM				pmax	pmax		
	comp=Z,1µm,1.4s						
DZA	Taraz	68.23	322	⇓iP	P	13 55 11.0	-0.1
	comp=Z,264nm,1.0s,baz=322						
DZA	Taraz	68.23	322	d iP	P	13 55 10.9	-0.1
DZA				pmax	pmax		
	comp=Z,264nm,1.0s						
JLN	Jalan Bani Buh	68.37	297	P	P	13 55 13.4	+1.2

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JLN                              P       P        13 55 13.4 +1.2
IUG   Iuzhnay         68.63 321⇓iP       P        13 55 14.2 +0.6
      comp=Z,769nm,0.8s,baz=321
IUG                             eS       S        14 03 34.1 +1.6
      baz=321
IUG   Iuzhnay         68.63 321d iP      P        13 55 14.1 +0.6
IUG                             eS       S        14 03 34.1 +1.6
IUG                              pmax    pmax
      comp=Z,769nm,0.8s
ZAA0  Zalesovo Array  68.81 337  P       P        13 55 13.9 -0.3
ZAA0                             IAmb    IAmb     13 55 16.3
      comp=Z,1µm,0.7s
ZALV  Zalesovo Beam   68.81 337  P       P        13 55 14.0 -0.2
      comp=Z,1µm,0.5s,baz=132,slow=4.4,SNR=563
ZALV                             S       S        14 03 32.0 -1.9
      comp=Z,207nm,1.0s,baz=139,slow=11,SNR=15
ZALV                             SKKP             14 17 49.1
      comp=Z,3.9nm,1.0s,baz=39,slow=5.7,SNR=3.7
ZALV                             PKPPKP           14 23 19.4
      comp=Z,54nm,1.0s,baz=304,slow=3.2,SNR=14
ZALV                             P4KPbc           14 31 56.6
      comp=Z,2.1nm,0.7s,baz=148,slow=3.9,SNR=6.2
ZALV  Zalesovo Beam   68.81 337  P       P        13 55 13.7 -0.5
KK31  Karatay Array   68.85 322  P       P        13 55 14.6 -0.1
KK31                             pmax    pmax
      comp=Z,793nm,1.3s
KK31  Karatay Array   68.85 322  P       P        13 55 14.6 -0.1
KKAR  Karatay Array   68.85 322  P       P        13 55 14.8 +0.1
KKAR  Karatay Array   68.85 322  P       P        13 55 14.8 +0.1
WBK   Wadi Bani Khal  68.90 298  P       P        13 55 16.8 +1.3
      SNR=87
WBK                              P       P        13 55 16.8 +1.3
      SNR=87
KURBB Kurchatov Arra  69.10 332  S       S        14 03 35.7 -1.7
      comp=Z,76nm,1.1s,baz=133,slow=13,SNR=6.2
KURK  Kurchatov       69.12 332ceP       P        13 55 15.6 -0.5
KURK                             pmax    pmax
      comp=Z,3µm,1.3s
KURK  Kurchatov       69.12 332  P       P        13 55 16.6 +0.4
KURK                             IAmb    IAmb     13 55 19.1
      comp=Z,2µm,0.8s
KURK  Kurchatov       69.12 332  P       P        13 55 16.5 +0.4
KURK                             P       P        13 55 16.5 +0.4
BRLS  Borolday        69.22 321⇓iP       P        13 55 16.9 -0.1
      comp=Z,660nm,1.3s,baz=321
BRLS  Borolday        69.22 321d iP      P        13 55 16.9 -0.1
BRLS                             pmax    pmax
      comp=Z,660nm,1.3s
MHTO  MHTO            69.31 296  P       P        13 55 18.5 +0.7
      SNR=170
MHTO                             P       P        13 55 18.5 +0.7
      SNR=170
WSAR  Wadi Sarin      69.39 298  PKPPKP  P'P'df   14 23 18.2 -2.7
      baz=323,slow=3.1
DQM   DQM             69.39 294  P       P        13 55 19.6 +1.3
      SNR=99
DQM                              P       P        13 55 19.6 +1.3
      SNR=99
YAK   Yakutsk         69.41   4  PKPPKP  P'P'df   14 23 15.6 -2.1
      comp=Z,54nm,1.1s,baz=228,slow=0.6,SNR=8.3
YAK   Yakutsk         69.41   4 eP       P        13 55 17.1 -0.5
YAK                             e                 13 55 33.3
YAK                             e*PP     pP       13 57 09.4 -2.7
YAK                             ePPP     PPP      13 59 43.0
YAK                             eS       S        14 03 40.6 +0.3
YAK                             e                 14 04 22.5
YAK                             eSSS     SSS      14 11 35.9
YAK                              pmax    pmax
      comp=N,4µm,1.1s
YAK                              pmax    pmax
      comp=E,2µm,1.3s
YAK                              smax    smax
      comp=E,5µm,2.1s
YAK                              smax    smax
      comp=N,12µm,4.8s
YAK   Yakutsk         69.41   4  P       P        13 55 18.1 +0.6
YAK   Yakutsk         69.41   4 ⇓P       P        13 55 16.8 -0.8
YAK                             ⇑P       P        13 55 19.7 +2.1
JMDO  Jabal Madar     69.59 297  P       P        13 55 20.5 +0.9
      SNR=101
SMDO  Samad           69.84 298  P       P        13 55 22.2 +1.1
      SNR=90
BIDO  Bidbid          69.92 298  P       P        13 55 22.9 +1.4
      SNR=167
MA2   Magadan         70.42  15  PKPPKP  P'P'df   14 23 15.5 -0.7
      comp=N,9.8nm,0.9s,baz=49,slow=4.7,SNR=8.8
MA2   Magadan         70.42  15ceP       P        13 55 23.6 -0.1
MA2                              pmax    pmax
      comp=Z,6µm,1.3s
MA2   Magadan         70.42  15  P       P        13 55 24.8 +1.1
MA2   Magadan         70.42  15 ⇓P       P        13 55 23.8 +0.1
MA2                             ⇓P       P        13 55 23.8 +0.1
BSY   Bisya           70.50 297  P       P        13 55 26.1 +1.2
      SNR=66
SHAO  Shalim          70.63 292 i P      P        13 55 26.0 +0.2
      SNR=226
SHAO  Shalim          70.63 292  P       P        13 55 27.1 +1.3
      SNR=140
HOQ   Hoqain          70.65 298  P       P        13 55 27.4 +1.6
      SNR=82
SOCY  Socotra         70.81 286  IAmb    IAmb     13 55 30.4
      comp=Z,3µm,0.9s
SOCY  Socotra         70.81 286  P       P        13 55 27.2 +0.2
      SNR=168
SOCY  Socotra         70.81 286 ⇑P       P        13 55 26.3 -0.7
DMTO  DMTO            71.18 291  P       P        13 55 30.1 +1.1
      SNR=107
ARQ   Araqi           71.27 298  P       P        13 55 30.8 +1.3
      SNR=68
JOHN  Johnston Islan  71.34  70  P       P        13 55 30.3 +0.4
JOHN                             IAmb    IAmb     13 55 34.3
      comp=Z,2µm,0.9s
JOHN  Johnston Islan  71.34  70 ⇑P       P        13 55 30.1 +0.2
JOHN                            ⇓P       P        13 55 30.5 +0.5
CRZF  Crozet Islands  71.37 224  IAmb    IAmb     13 55 34.7
      comp=Z,1µm,0.9s
CRZF  Crozet Islands  71.37 224 ⇑P       P        13 55 30.5 +0.9
CRZF                            ⇓P       P        13 55 30.9 +1.3
SBV   Sambava         71.43 258  P       P        13 55 31.6 +1.1
      SNR=51
SBV   Sambava         71.43 258 ⇑P       P        13 55 31.0 +0.5
SBV                             ⇑P       P        13 55 31.1 +0.6
SOHO  SOHO            71.49 298 i P      P        13 55 31.1 +0.4
      SNR=302
SOHO  SOHO            71.49 298  P       P        13 55 31.9 +1.2
BRZS  Berezniki       71.58 329⇓iP       P        13 55 31.2 +0.4
      comp=Z,1µm,1.7s,baz=329
BRZS  Berezniki       71.58 329d iP      P        13 55 31.1 +0.4
BRZS                             pmax    pmax
      comp=Z,1µm,1.7s
RBK   Rabkut          71.81 291  P       P        13 55 33.7 +0.9
      SNR=186
MAW   Mawson          71.96 200  P       P        13 55 33.6 +1.0
      comp=Z,541nm,0.9s,baz=64,slow=5.4,SNR=37
MAW                              pP      pP       13 57 29.1 +1.4
      comp=Z,78nm,0.8s,baz=41,slow=10,SNR=3.3
MAW                              S       S        14 04 09.5 +0.5
      comp=Z,41nm,1.0s,baz=258,slow=19,SNR=2.6
MAW                              PKPPKP  P'P'df   14 23 11.1 -3.5
      comp=Z,146nm,1.2s,baz=233,slow=7.0,SNR=7.4
MAW   Mawson          71.96 200  P       P        13 55 33.1 +0.6
      baz=72,SNR=53
UOSS  Minazif         72.02 299 i P      P        13 55 33.8  0.0
      SNR=15
UOSS  Minazif         72.02 299  P       P        13 55 34.0 +0.2
MDH   Madha           72.04 299 i P      P        13 55 33.8 -0.1
      SNR=12
MDH   Madha           72.04 299  P       P        13 55 34.9 +1.0
      SNR=13
HATD  Hatta, Dubai    72.04 299 i P      P        13 55 34.3 +0.3
      SNR=160
HATD  Hatta, Dubai    72.04 299  P       P        13 55 35.5 +1.5
      SNR=46
ASHO  Ashiyiah        72.07 299 i P      P        13 55 34.7 +0.5
      SNR=225
ASHO  Ashiyiah        72.07 299  P       P        13 55 35.6 +1.4
      SNR=70
ALNE  Al Ain          72.15 298 i P      P        13 55 35.2 +0.7
      SNR=306
ALNE  Al Ain          72.15 298  P       P        13 55 36.0 +1.4
      SNR=51
DOK   Doka            72.15 292  P       P        13 55 34.9 +0.3
      SNR=328
MSFE  Esma-Masafi     72.18 299 i P      P        13 55 35.6 +0.9
      SNR=103
MASF  Masafi          72.18 300  P       P        13 55 36.7 +1.9
      SNR=36
BANOM Banah           72.23 300 i P      P        13 55 36.1 +1.0
      SNR=61
BANOM Banah           72.23 300  P       P        13 55 36.8 +1.8
      SNR=32
UMZA  Um Al Zommool   72.29 297  P       P        13 55 36.2 +0.8
WHFO  Wadi Hawf       72.31 291  P       P        13 55 36.0 +0.3
      SNR=367
SHME  Shamm           72.40 300 i P      P        13 55 37.1 +1.1
      SNR=158
SHME  Shamm           72.40 300  P       P        13 55 37.4 +1.5
      SNR=49
FAQ   Al Faqa, Dubai  72.49 299 i P      P        13 55 37.4 +0.9
      SNR=25
FAQ   Al Faqa, Dubai  72.49 299  P       P        13 55 37.7 +1.2
      SNR=65
NAZ   Nazwa, Dubai    72.50 299 i P      P        13 55 38.0 +1.4
      SNR=79
NAZ   Nazwa, Dubai    72.50 299  P       P        13 55 38.5 +1.9
      SNR=29
ABTO  Aybut           72.62 291  P       P        13 55 38.3 +0.9
      SNR=241
ASUD  Al Ashush, Dub  72.68 299 i P      P        13 55 38.7 +1.1
      SNR=56
ASUD  Al Ashush, Dub  72.68 299  P       P        13 55 39.3 +1.6
      SNR=46
AJN   Ajban           72.96 298 i P      P        13 55 40.0 +0.8
      SNR=90
AJN   Ajban           72.96 298  P       P        13 55 40.3 +1.1
      SNR=32
VNDA  Vanda           73.08 172  P       P        13 55 39.4 +0.5
      comp=Z,139nm,0.8s,baz=319,slow=6.7,SNR=221
VNDA                             pP      pP       13 57 35.9 +1.4
      comp=Z,28nm,0.5s,baz=312,slow=7.8,SNR=1.9
VNDA                             S       S        14 04 22.4 +1.0
      comp=Z,22nm,1.1s,baz=61,slow=21,SNR=11
VNDA                             PKPPKP  P'P'df   14 23 09.1 -3.3
      comp=Z,20nm,1.2s,baz=201,slow=3.9,SNR=4.3
MZWR  Madinat Zayed   73.71 297  P       P        13 55 44.4 +0.9
SEY   Seymchan        73.72  14  PKPPKP  P'P'df   14 22 58.1  -12
      comp=Z,2.9nm,0.9s,baz=35,slow=5.2,SNR=3.7
SEY   Seymchan        73.72  14d iP      P        13 55 43.6 +0.9
ABPO  Ambohimpanom    73.75 252  P       P        13 55 44.9 +0.9
ABPO                             pmax    pmax
      comp=Z,2µm,1.5s
ABPO  Ambohimpanom    73.75 252  P       P        13 55 44.9 +0.9
ABPO                             IAmb    IAmb     13 55 49.3
      comp=Z,2µm,1.4s
SBA   Scott Base      74.05 171  P       P        13 55 45.4 +1.0
SBA                              pmax    pmax
      comp=Z,932nm,1.6s
SBA   Scott Base      74.05 171  P       P        13 55 45.4 +1.0
VOI   Vohitsoka       74.05 249  P       P        13 55 46.7 +1.0
      SNR=220
VOI   Vohitsoka       74.05 249 ⇑P       P        13 55 45.5 -0.1
VOI                             ⇑P       P        13 55 45.8 +0.1
BVAR  Borovoye Array  74.54 330  S       S        14 04 38.4 +0.4
      comp=Z,48nm,0.8s,baz=33,slow=17,SNR=7.0
BRVK  Borovoye        74.61 330 i P      P        13 55 47.9  0.0
BRVK                             pmax    pmax
      comp=Z,1µm,1.2s
BRVK  Borovoye        74.61 330  P       P        13 55 48.3 +0.4
BRVK  Borovoye        74.61 330  P       P        13 55 48.3 +0.4
ASHT  Ashkhabad       74.66 312  P       P        13 55 49.8 +1.3
ASHT                             pmax    pmax
      comp=Z,1µm,0.9s
ASHT  Ashkhabad       74.66 312  P       P        13 55 49.8 +1.3
GEYT  Alibeck         74.85 312  P       P        13 55 50.5 +0.8
      comp=Z,651nm,1.0s,baz=114,slow=3.7,SNR=237
GEYT                             PP      sP       13 58 43.1 -1.0
      comp=Z,118nm,1.0s,baz=133,slow=8.5,SNR=3.8
GEYT                             PKPPKP           14 23 04.3
      comp=Z,1.9nm,0.5s,baz=10,slow=9.3,SNR=4.7
GEYT  Alibeck         74.85 312  P       P        13 55 50.5 +0.8
JRN   Qarnain Island  74.94 298  P       P        13 55 51.4 +1.0
      SNR=16
SLWR  Sila            75.72 297  P       P        13 55 55.8 +1.1
RAR   Rarotonga       75.97 110  S       S        14 04 57.5 +2.9
      comp=Z,36nm,1.2s,baz=71,slow=16,SNR=6.5
RAR                              PKPPKP  P'P'df   14 23 02.3 -7.8
      comp=Z,6.0nm,0.6s,baz=129,slow=6.5,SNR=3.0
RAR   Rarotonga       75.97 110  P       P        13 55 57.5 +1.3
RAR                              pmax    pmax
      comp=Z,1µm,1.5s
RAR   Rarotonga       75.97 110  P       P        13 55 57.5 +1.3
RAR   Rarotonga       75.97 110  P       P        13 55 58.2 +2.0
ABKAR Akbulak array   78.26 324  P       P        13 56 08.1 +0.1
ABKAR Akbulak array   78.26 324  IAmb    IAmb     13 56 10.7
      comp=Z,1µm,1.1s
ADK   Adak            78.47  34  P       P        13 56 09.1  0.0
ADK                              pmax    pmax
      comp=Z,6µm,1.6s
ADK   Adak            78.47  34  P       P        13 56 09.1  0.0
ADK                              IAmb    IAmb     13 56 12.4
      comp=Z,6µm,1.6s
TIXI  Tiksi           78.96   2ceP       P        13 56 10.1 -1.1
TIXI  Tiksi           78.96   2  P       P        13 56 11.1 -0.2
TIXI                             IAmb    IAmb     13 56 15.6
      comp=Z,4µm,1.3s
AKTO  Aktyubinsk      79.89 324  P       P        13 56 16.9 +0.2
      comp=Z,1µm,0.8s,baz=112,slow=5.8,SNR=277
AKTO                             S       S        14 05 34.6 +0.1
      comp=Z,17nm,1.0s,baz=219,slow=21,SNR=8.9
ATKA  Atka Island     79.99  34  P       P        13 56 16.4 -0.6
ATKA                             IAmb    IAmb     13 56 21.4
      comp=Z,2µm,0.9s
NRIK  Noril'sk        80.23 348  P       P        13 56 18.3 +0.3
      comp=Z,368nm,0.5s,baz=133,slow=5.4,SNR=246
NRIK                             S       S        14 05 36.4 -0.8
      comp=Z,227nm,1.2s,baz=157,slow=13,SNR=13
NRIK                             PKPPKP           14 23 00.1
      comp=Z,3.9nm,0.8s,baz=304,slow=3.9,SNR=4.1
NRIK  Noril'sk        80.23 348  IAmb    IAmb     13 56 23.7
      comp=Z,2µm,1.0s
XMAS  Kiritimati      80.41  87  P       P        13 56 21.5 +1.3
RDF   Al-Radifah      80.52 301 eP                13 56 20.6
UMR   Umm Al-Rimmam   80.53 302 eP                13 56 20.4
SYO   Syowa Base      80.63 201⇓eP       P        13 56 20.1  0.0
SYO   Syowa Base      80.63 201⇑iPcP     PcP      13 56 23.8 -1.1
MIB   Mutribah        80.91 302 eP                13 56 22.3
RAYN  Ar Rayn         81.11 295 i P      P        13 56 24.1 +0.4
      SNR=1612
RAYN  Ar Rayn         81.11 295  P       P        13 56 25.2 +1.6
RAYN                             pmax    pmax
      comp=Z,2µm,0.9s
RAYN  Ar Rayn         81.11 295  P       P        13 56 25.2 +1.6
RAYN                             IAmb    IAmb     13 56 27.9
      comp=Z,2µm,0.9s
SVE   Sverdlovsk      81.32 331c iP      P        13 56 24.0 +0.1
SVE                             e                 13 59 41.2
SVE                             i S      S        14 05 45.1 -3.6
SVE                             eSS      SS       14 11 16.5 -4.8
SVE                             eSSS     SSS      14 14 52.9
SVE                              pmax    pmax
      comp=Z,4µm,1.5s
SVE                              pmax    pmax
      comp=Z,8µm,9.5s
ATD   Arta Tunnel     81.40 283 eP       P        13 56 26.8 +1.5
ATD                             eS       S        14 05 53.1 +1.8
ARU   Arti            82.16 330  P       P        13 56 27.9 -0.3
      comp=Z,383nm,0.7s,baz=122,slow=2.8,SNR=210
ARU                              S       S        14 05 54.4 -2.7
      comp=Z,13nm,0.9s,baz=310,slow=20,SNR=9.3
ARU   Arti            82.16 330c iP      P        13 56 27.6 -0.6
ARU                              *PP     pP       13 58 28.2 +1.0
ARU                              *SP     sP       13 59 20.6 -3.2
ARU                                               13 59 44.6
ARU                              PPP     PPP      14 01 44.3
ARU                              S       S        14 05 54.9 -2.2
ARU                              pmax    pmax
      comp=Z,2µm,1.0s
ARU   Arti            82.16 330  P       P        13 56 27.6 -0.6
ARU                              IAmb    IAmb     13 56 31.1
      comp=Z,2µm,1.0s
QSPA  South Pole Qui  82.62 180  pP      pP       13 58 30.4 +1.0
      comp=Z,54nm,0.7s,baz=305,slow=6.5,SNR=1.3
QSPA                             S       S        14 05 57.2 -4.5
      comp=Z,84nm,1.1s,baz=44,slow=19,SNR=19
QSPA                             PKKPbc  PKKPbc   14 14 51.7 -3.0
      comp=Z,35nm,0.8s,baz=200,slow=1.0,SNR=13
QSPA                             PKPPKP  P'P'df   14 22 53.9 -1.7
      comp=Z,22nm,1.0s,baz=222,slow=4.1,SNR=5.5
QSPA  South Pole Qui  82.62 180  P       P        13 56 30.4 -0.1
HON   Honolulu        82.97  67  IAmb    IAmb     13 56 37.2
      comp=Z,3µm,1.0s
KIP   Kipapa          82.98  67 i P      P        13 56 31.7 -1.3
KIP                              pmax    pmax
      comp=Z,551nm,0.9s
KIP   Kipapa          82.98  67  P       P        13 56 33.6 +0.6
TEND  Ethiopian Broa  83.23 283 eP       P        13 56 37.8 +3.3
TEND                            eS       S        14 06 12.4 +3.0
NIKH  Nikolski High   83.28  35  P       P        13 56 33.5 -0.4
      baz=248
NIKH  Nikolski High   83.28  35  IAmb    IAmb     13 56 39.8
      comp=Z,1µm,0.7s
ANKE  Ethiopia-Afar   84.13 280 eP       P        13 56 43.1 +3.6
ANKE                            eS       S        14 06 16.8 -2.2
MAK   Makhachkala     84.13 315 eP       P        13 56 38.4 +0.1
MAK                             e*PP     pP       13 58 41.0 +2.7
MAK                             e*SP     sP       13 59 38.0 +3.3
MAK                             e                 14 00 04.2
MAK                             ePPP     PPP      14 01 59.9
MAK                             e                 14 06 08.2
MAK                             eSS      SS       14 12 06.0 +3.0
MAK                             eSSS     SSS      14 15 37.7
MAK                              pmax    pmax
      comp=Z,1µm,0.8s
MAK                              pmax    pmax
      comp=Z,15µm,4.2s
MAK                              pmax    pmax
      comp=N,118µm,7.4s
MAK                              pmax    pmax
      comp=E,39µm,7.2s
SPIA  Saint Paul Isl  84.14  30  P       P        13 56 38.5 +0.5
      baz=247
SPIA  Saint Paul Isl  84.14  30  IAmb    IAmb     13 56 42.0
      comp=Z,6µm,1.6s
KIBK  Kibwezi         84.20 268  P       P        13 56 40.9 +1.5
      SNR=229
DESE  Dese            84.45 282 eP       P        13 56 43.4 +2.5
DESE                            eS       S        14 06 18.9 -3.0
HLK   Haleakala       84.48  68  IAmb    IAmb     13 56 45.1
      comp=Z,2µm,1.3s
KHLU  Kahalu`u        84.61  70  IAmb    IAmb     13 56 44.9
      comp=Z,2µm,1.0s
HUH   Hualalai        84.68  69  IAmb    IAmb     13 56 46.3
      comp=Z,3µm,1.6s
KHU   Kahuku          84.81  70  IAmb    IAmb     13 56 46.5
      comp=Z,1µm,1.0s
MWH   Moku‘aweowe     84.87  70  IAmb    IAmb     13 56 48.3
      comp=Z,2µm,1.4s
MLOA  Mauna Loa Obse  84.89  70  IAmb    IAmb     13 56 46.8
      comp=Z,2µm,1.1s
UNV   Unalaska Valle  84.90  34  P       P        13 56 41.3 -0.5
      baz=250
UNV   Unalaska Valle  84.90  34  IAmb    IAmb     13 56 45.2
      comp=Z,4µm,1.8s
POHA  Pohakuloa       84.97  69  P       P        13 56 44.3 +1.1
POHA                             IAmb    IAmb     13 56 46.8
      comp=Z,949nm,0.9s
AIN   Ainahou         84.98  70  IAmb    IAmb     13 56 47.0
      comp=Z,2µm,1.2s
AAE   Adis Abeba      85.00 280 eP       P        13 56 45.2 +1.7
AAE                             eS       S        14 06 20.4 -6.8
FURI  Furi            85.06 280 eP       P        13 56 46.9 +3.0
FURI                            eS       S        14 06 22.2 -5.7
HLP   Hilina Pali     85.11  70  IAmb    IAmb     13 56 47.4
      comp=Z,1µm,1.0s
WRMHI West Rim        85.13  70  IAmb    IAmb     13 56 47.9
      comp=Z,2µm,1.1s
SDHHI Sand Hill       85.13  70  IAmb    IAmb     13 56 48.0
      comp=Z,1µm,1.0s
KMBO  Kilima Mbogo    85.14 269  P       P        13 56 45.6 +1.4
      comp=Z,267nm,1.0s,baz=63,slow=6.5,SNR=139
KMBO                             pP      pP       13 58 45.9 +2.0
      comp=Z,35nm,1.0s,baz=62,slow=2.1,SNR=2.8
KMBO                             S       SKSac    14 06 16.6 -0.1
      comp=Z,1.5nm,0.3s,baz=99,slow=22,SNR=1.2
KMBO                             PKKPbc  PKKPbc   14 14 47.3 +1.0
      comp=Z,3.5nm,0.7s,baz=303,slow=5.5,SNR=5.9
KMBO                             PKPPKP  P'P'df   14 22 49.1 -5.0
      comp=Z,2.7nm,0.9s,baz=236,slow=3.6,SNR=6.6
UWE   Uwekahuna       85.14  70  IAmb    IAmb     13 56 48.1
      comp=Z,2µm,1.1s
OBL   Observatory Le  85.15  70  IAmb    IAmb     13 56 48.1
      comp=Z,2µm,1.2s
NPH   North Pit       85.15  70  IAmb    IAmb     13 56 49.5
      comp=Z,1µm,1.2s
RIM   Rim             85.15  70  IAmb    IAmb     13 56 48.1
      comp=Z,2µm,1.1s
UWB   Uwekahuna B     85.15  70  IAmb    IAmb     13 56 48.0
      comp=Z,1µm,1.2s
KKO   Keanakako`i     85.16  70  IAmb    IAmb     13 56 48.1
      comp=Z,2µm,1.1s
SBLHI Steaming Bluff  85.16  70  IAmb    IAmb     13 56 48.1
      comp=Z,2µm,1.3s
BYL   Byron's Ledge   85.17  70  IAmb    IAmb     13 56 50.3
      comp=Z,2µm,1.2s
HATHI Halema‘uma‘u T  85.17  70  IAmb    IAmb     13 56 48.2
      comp=Z,2µm,1.3s
PUH   Pauahi          85.20  70  IAmb    IAmb     13 56 48.3
      comp=Z,1µm,1.1s
TBI   Tubuai          85.34 113 eP       P        13 56 46.2 +1.5
      comp=Z,1µm,0.9s
TBI                             epP      pP       13 58 48.0 +2.2
      comp=Z,946nm,1.4s
GROC  Groznyy         85.40 314 eP       P        13 56 43.8 -0.7
GROC                            e*PP     pP       13 58 45.3 +0.4
GROC                            e*SP     sP       13 59 37.3 -4.1
GROC                            e                 14 00 11.7
GROC                            eS       SKSac    14 06 14.4 -2.1
GROC                             pmax    pmax
      comp=Z,2µm,1.0s
GNI   Garni           85.43 311  P       P        13 56 47.0 +2.1
      comp=Z,740nm,1.0s,baz=100,slow=2.4
GNI                              PKKPbc  PKKPbc   14 14 47.9 +1.2
      comp=Z,6.3nm,0.4s,baz=254,slow=5.8,SNR=4.6
GNI   Garni           85.43 311  P       P        13 56 45.6 +0.6
GNI   Garni           85.43 311 eP       P        13 56 46.5 +1.5
GNI   Garni           85.43 311ceP       P        13 56 46.1 +1.1
GNI                              pmax    pmax
      comp=Z,1µm,1.3s
GNI   Garni           85.43 311  P       P        13 56 46.4 +1.4
GNI                              IAmb    IAmb     13 56 51.8
      comp=Z,893nm,1.0s
GNI   Garni           85.43 311  P       P        13 56 46.2 +1.3
CUKT  Cukurca         85.64 308 eP       P        13 56 45.6 -0.4
TASB  TASBURUN-IGDIR  85.77 311 eP       P        13 56 44.2 -2.3
CLDR  Caldiran        85.82 310 eP       P        13 56 47.2 +0.3
PAE   Paea            85.84 107 eP       P        13 56 49.5 +2.4
      comp=Z,212nm,1.2s
PAE                             epP      pwP      13 58 50.2 -1.7
      comp=Z,142nm,1.3s
PPT2  Papeete2        85.85 107 eP       P        13 56 49.8 +2.5
      comp=Z,1µm,1.1s
PPT2                            epP      pwP      13 58 50.6 -1.4
      comp=Z,582nm,1.2s
PPT   Papeete         85.85 107  P       P        13 56 48.8 +1.6
      comp=Z,1µm,0.9s,baz=358,slow=1.0,SNR=36
PPT                              pP      pwP      13 58 49.6 -2.4
      comp=Z,76nm,0.9s,baz=229,slow=22,SNR=2.0
PPTF  Pamatai, Papee  85.86 107  IAmb    IAmb     13 56 54.5
      comp=Z,2µm,1.1s
TIAR  Tiarei          86.07 107 eP       P        13 56 50.7 +2.4
      comp=Z,287nm,0.9s
TIAR                            epP      pwP      13 58 51.7 -0.4
      comp=Z,74nm,0.9s
VANB  Van             86.11 310 eP       P        13 56 49.2 +1.1
TVO   Taravao         86.14 107 eP       P        13 56 51.2 +2.5
      comp=Z,272nm,1.0s
TVO                             epP      pwP      13 58 52.0 -0.8
      comp=Z,105nm,1.1s
AKDM  Akdamar-Van     86.36 309 eP       P        13 56 51.0 +1.6
AGRB  Hanur-Agry      86.62 310 eP       P        13 56 52.2 +1.6
AKH   Akhalkalaki     86.64 312 ⇓P       P        13 56 52.4 +1.7
AKH   Akhalkalaki     86.64 312 eP       P        13 56 52.5 +1.8
ZEI   Tsey            86.66 314 eP       P        13 56 48.2 -2.5
ZEI                              pmax    pmax
      comp=Z,1µm,1.3s
BELG  Belogornoye     86.67 324  P       P        13 56 50.2 -0.1
      comp=Z,1µm,0.9s,baz=4.1,slow=0.5,SNR=214
BELG                             S       SKSac    14 06 25.1 +1.4
      comp=Z,106nm,1.1s,baz=84,slow=23,SNR=8.8
BELG  Belogornoye     86.67 324d iP      P        13 56 50.0 -0.2
BELG                             pmax    pmax
      comp=Z,320nm,0.9s
KARS  Kars            86.78 311 eP       P        13 56 54.5 +3.2
MLAZ  Malazgirt-MUS   86.86 310 eP       P        13 56 53.4 +1.6
FALS  False Pass      86.94  34  P       P        13 56 50.5 -1.0
      baz=253
FALS  False Pass      86.94  34  IAmb    IAmb     13 56 53.6
      comp=Z,2µm,1.4s
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NCK   Nalchik            87.03 314  i P     P        13 56 52.9 +0.6
NCK                                   pmax  pmax
      comp=Z,810nm,1.0s
GURO  Guroymak-BITLI     87.14 309  eP      P        13 56 54.4 +1.4
MEH   Mehetia            87.25 108  eP      P        13 56 55.9 +2.1
      comp=Z,1µm,1.5s
MEH                                 epP     pwP      13 58 57.5 -1.2
      comp=Z,116nm,1.2s
SENK  Senkaya-Erzuru     87.31 311  eP      P        13 56 55.3 +1.4
KIRV  Kirov              87.54 330    P     P        13 56 54.2  0.0
      comp=Z,307nm,0.6s,baz=115,slow=2.6,SNR=101
KIRV                                  pP    pwP      13 58 58.1 -0.1
      comp=Z,94nm,0.9s,baz=78,slow=6.1,SNR=2.1
KIRV  Kirov              87.54 330ceP       P        13 56 53.7 -0.5
KOPR  Koprukoy-ERZUR     87.56 311  eP      P        13 56 56.5 +1.5
KBZ   Khabaz             87.58 314    P     P        13 56 55.1 +0.3
      comp=Z,372nm,0.8s,baz=108,slow=2.4,SNR=280
KBZ                                   S     SKSac    14 06 29.9 +0.3
      comp=Z,32nm,1.1s,baz=97,slow=22,SNR=2.4
KBZ                                   PKKPbc PKKPbc  14 14 41.7 +0.3
      comp=Z,47nm,0.9s,baz=201,slow=2.3,SNR=24
KBZ                                   SKKPbc SKKPbc  14 17 26.2 -1.3
      comp=Z,22nm,0.9s,baz=287,slow=1.0,SNR=7.7
KBZ                                   PKPPKP         14 22 46.0
      comp=Z,7.8nm,0.9s,baz=205,slow=5.4,SNR=6.6
KBZ   Khabaz             87.58 314ceP       P        13 56 55.0 +0.3
KBZ                                   pmax  pmax
      comp=Z,438nm,0.9s
LODK  Lodwar             87.59 274    P     P        13 56 58.1 +2.5
      SNR=181
NEY   Neytrino           87.60 314d iP      P        13 56 56.1 +1.0
NEY                                   pmax  pmax
      comp=Z,156nm,1.0s
VRTB  Varto-Mus          87.70 310  eP      P        13 56 57.6 +1.9
SVAN  Silvan-Diyarba     87.70 309  eP      P        13 56 56.9 +1.3
SHA1  Shidzhatmaz        87.75 314d iP      P        13 56 56.1 +0.2
GOF   Gofitskoye         87.77 316⇓iP       P        13 56 56.3 +0.7
GOF                                 i S     SKSac    14 06 31.5 +0.8
GOF                                 i                14 06 52.0
GOF                                   pmax  pmax
      comp=Z,2µm,1.2s
GOF                                   smax  smax
      comp=E,662nm,1.5s
KVAR  Kislovodsk Arr     87.77 315    P     P        13 56 56.7 +0.9
      comp=E,43nm,0.7s,baz=262,slow=24,SNR=9.6
KVAR                                  S     SKSac    14 06 32.0 +0.9
      comp=E,128nm,1.2s,baz=178,slow=12,SNR=7.1
KIV   Kislovodsk         87.78 315  ⇓P      P        13 56 56.2 +0.4
KIV   Kislovodsk         87.78 315  i P     P        13 56 55.8 -0.1
      SNR=45
KIV   Kislovodsk         87.78 315  eP      P        13 56 56.4 +0.6
KIV   Kislovodsk         87.78 315d iP      P        13 56 56.0 +0.1
KIV                                 i *PP   pP       13 58 59.2 +2.0
KIV                                 e*SP    sP       13 59 55.9 +2.6
KIV                                 e                14 00 28.5
KIV                                 i                14 06 29.7
KIV                                 i S     S        14 06 51.0 -0.9
KIV                                 i SS    SS       14 12 57.5 +1.6
KIV                                 i SSS   SSS      14 16 35.4
KIV                                   pmax  pmax
      comp=Z,233nm,1.0s
KIV                                   pmax  pmax
      comp=Z,4µm,3.5s
KIV   Kislovodsk         87.78 315    P     P        13 56 55.9 +0.1
CHVG  Ch'k'valeri        87.95 313  ⇓P      P        13 56 57.5 +1.0
VAH   Vaihoa             87.98 105  eP      P        13 56 59.7 +2.4
      comp=Z,2µm,1.3s
VAH                                 epP     pwP      13 59 00.9 -2.1
      comp=Z,240nm,1.1s
BATM  Batumi             88.00 312  ⇑P      P        13 56 57.6 +0.8
BATM  Batumi             88.00 312  eP      P        13 56 59.1 +2.3
KARO  Karliova-Bingo     88.04 310  eP      P        13 56 58.2 +0.9
BNGB  Bingl              88.26 309  eP      P        13 56 59.5 +1.3
YEDI  Yedisu-Bingol      88.45 310  eP      P        13 57 00.5 +1.3
DYBB  Diyarbakir         88.48 308  eP      P        13 57 00.4 +1.1
CHOM  Cayeli-Rize        88.59 312  eP      P        13 57 01.8 +2.2
SDPT  Sand Point         88.70  34    P     P        13 56 59.0 -0.7
      baz=255
SDPT  Sand Point         88.70  34    IAmb  IAmb     13 57 01.6
      comp=Z,2µm,1.3s
ANM   Nome               89.05  24    P     P        13 57 01.1 -0.1
      baz=251
CHNA  Chernabura Isl     89.06  34    P     P        13 57 00.7 -0.7
      baz=256
KTUT  Trabzon            89.31 311  ⇑P      P        13 57 03.7 +0.7
KTUT  Trabzon            89.31 311  eP      P        13 57 05.1 +2.2
URFA  Urfa               89.42 308  eP      P        13 57 03.6 -0.1
NVL   N'lazarevskaya     89.77 198⇑iP       P        13 57 04.9 +0.5
NVL                                 e*PP    pwP      13 59 12.3 +2.7
NVL                                 eSS     SS       14 13 27.1 +4.8
NVL                                   pmax  pmax
      comp=Z,226nm,1.1s
SOC   Sochi              89.81 314d iP      P        13 57 04.0 -1.2
SOC                                 e*PP    pP       13 59 06.4 -0.7
SOC                                 e                14 00 43.1
SOC                                 eS      SKSac    14 06 38.8 -3.9
SOC                                   pmax  pmax
      comp=Z,294nm,1.2s
MALT  Malatya            89.88 309  eP      P        13 57 06.6 +0.8
VRH   Novokhopyorsk      89.93 322  eP      P        13 57 05.3 -0.2
VRH                                 e                14 06 38.9
VRH                                 eS      S        14 07 06.1 -4.8
VRH                                   pmax  pmax
      comp=Z,1µm,0.6s
VRH                                   pmax  pmax
      comp=Z,1µm,0.6s
VRH                                   smax  smax
      comp=N,13µm,6.6s
ILIC  ilic-Erzincan      89.95 310  eP      P        13 57 08.6 +2.5
CHGN  Chignik            90.06  33    P     P        13 57 04.8 -1.2
      baz=257
DARE  Darende-Malaty     90.65 309  eP      P        13 57 10.7 +1.4
GAZ   Gaziantep          90.65 307  eP      P        13 57 10.2 +0.9
GAZ   Gaziantep          90.65 307    IAmb  IAmb     13 57 12.4
      comp=Z,409nm,0.8s
KMRS  Kahramanmaras      90.94 308  eP      P        13 57 11.3 +0.7
RSDY  Resadiye-TOKAT     91.05 310  eP      P        13 57 11.9 +0.9
RDOG  Red Dog Mine       91.08  21    IAmb  IAmb     13 57 15.9
      comp=Z,803nm,1.3s
HWQ   Hawqa              91.25 304  eP      P        13 57 11.8 -0.4
SHBL  Chebaa             91.29 303  eP      P        13 57 12.6 +0.1
QRWL  Qaraoun            91.37 303  eP      P        13 57 13.1 +0.3
VORD  Divnogorie         91.39 321  eP      P        13 57 11.7 -0.6
VORD                                e                14 06 49.4
VORD                                eS      S        14 07 20.3 -3.6
VORD                                  pmax  pmax
      comp=Z,490nm,0.6s
VORD                                  pmax  pmax
      comp=Z,520nm,0.6s
VORD                                  smax  smax
      comp=N,4µm,6.2s
MMLI  Mount Malkishu     91.43 302  eP      P        13 57 13.9 +0.9
BHL   Bhannes            91.44 304  eP      P        13 57 13.7 +0.7
HRFI  Mount Harif        91.44 300  eP      P        13 57 14.7 +1.6
SARI  SarD1z-Kayseri     91.45 308  eP      P        13 57 13.1  0.0
EIL   Elat               91.47 300    pP    pP       13 59 22.7 +7.6
      comp=N,321nm,1.3s,baz=115,slow=3.2,SNR=4.7
EIL                                   S     SKSac    14 06 54.8 +2.2
      comp=N,58nm,1.2s,baz=275,slow=22,SNR=9.2
EIL                                   PKKPbc PKKPbc  14 14 31.8 +0.4
      comp=N,27nm,0.6s,baz=296,slow=2.5,SNR=20
EIL   Elat               91.47 300  eP      P        13 57 12.6 -0.5
DQRL  Deir Qamar         91.48 304  eP      P        13 57 14.0 +0.8
VSR   Storozhevoye       91.51 321  eP      P        13 57 12.3 -0.5
VSR                                 e                14 06 48.0
VSR                                 eS      S        14 07 20.3 -4.6
VSR                                   pmax  pmax
      comp=Z,810nm,0.7s
VSR                                   pmax  pmax
      comp=Z,800nm,0.7s
VSR                                   smax  smax
      comp=N,10µm,6.5s
MMAI  Mount Meron Ar     91.53 303    pP    pP       13 59 23.6 +7.9
      comp=N,130nm,1.2s,baz=77,slow=5.6,SNR=4.7
MMAI                                  PKKPbc PKKPbc  14 14 32.6 +1.2
      comp=N,24nm,1.1s,baz=356,slow=2.5,SNR=7.6
VORR  Voronezh           91.56 322⇓iP       P        13 57 13.0  0.0
VORR                                  pmax  pmax
      comp=Z,1µm,1.6s
TOKT  Tokat              91.63 310  eP      P        13 57 14.4 +0.7
ANN   Anapa              91.63 315  eP      P        13 57 13.3 -0.2
ANN                                 e*PP    pP       13 59 16.6 +1.1
ANN                                 e                14 01 05.4
ANN                                 ePPP    PPP      14 03 07.4
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ANN                                 eS      SKSac    14 06 52.4 -0.4
ANN                                 e                14 07 20.1
ANN                                 eSS     SS       14 13 46.2 -4.5
ANN                                   pmax  pmax
      comp=N,238nm,0.7s
ANN                                   pmax  pmax
      comp=Z,768nm,0.7s
ANN                                   pmax  pmax
      comp=N,242nm,0.7s
ANN                                   pmax  pmax
      comp=E,64nm,0.6s
ANN                                   pmax  pmax
      comp=Z,972nm,0.8s
ANN                                   pmax  pmax
      comp=E,161nm,0.8s
ANN                                   smax  smax
      comp=E,1µm,1.5s
ANN                                   smax  smax
      comp=N,695nm,1.3s
MBAR  Mbarara            91.66 269    PKKPbc PKKPbc  14 14 33.7 +3.3
      comp=N,17nm,0.9s,baz=256,slow=2.2,SNR=13
MBAR  Mbarara            91.66 269c iP      P        13 57 15.1 +0.5
MBAR                                  pmax  pmax
      comp=Z,328nm,1.3s
MBAR  Mbarara            91.66 269    P     P        13 57 15.2 +0.6
MBAR                                  IAmb  IAmb     13 57 19.7
      comp=Z,1µm,1.6s
CEYT  Ceyhan             91.78 307  eP      P        13 57 15.3 +0.9
KOZT  Kozan              91.79 307  eP      P        13 57 15.1 +0.6
LPSR  Galich'ya Gora     91.89 323  eP      P        13 57 14.4 -0.1
LPSR                                e                14 06 50.4
LPSR                                eS      S        14 07 23.2 -5.0
LPSR                                  pmax  pmax
      comp=Z,620nm,0.9s
LPSR                                  pmax  pmax
      comp=Z,620nm,0.9s
LPSR                                  smax  smax
      comp=N,22µm,8.6s
BNN   Bunyan             91.96 309  eP      P        13 57 14.8 -0.6
KRTS  Karatas            92.02 306  eP      P        13 57 18.1 +2.6
KVT   Kavak              92.11 311  eP      P        13 57 16.7 +0.8
LSZ   Lusaka             92.21 254    PKKPbc PKKPbc  14 14 31.3 +2.2
      comp=N,36nm,0.9s,baz=264,slow=0.9,SNR=17
LSZ                                   SKKS           14 20 44.0
      comp=N,4.4nm,0.8s,baz=233,slow=5.9,SNR=3.5
LSZ   Lusaka             92.21 254    P     P        13 57 17.2 +0.2
LSZ                                   pmax  pmax
      comp=Z,830nm,1.0s
LSZ   Lusaka             92.21 254    P     P        13 57 17.2 +0.2
LSZ                                   IAmb  IAmb     13 57 21.8
      comp=Z,830nm,1.0s
KARA  Karaisali          92.37 307  eP      P        13 57 18.6 +1.5
SII   Sitkinak Islan     92.41  33    P     P        13 57 16.8 -0.1
      baz=260
SII   Sitkinak Islan     92.41  33    IAmb  IAmb     13 57 18.9
      comp=Z,671nm,1.0s
CMRD  Camardi-Nigde      92.47 307  eP      P        13 57 18.8 +1.1
TTA   Tatalina           92.64  27    P     P        13 57 17.8  0.0
      baz=259
TTA   Tatalina           92.64  27    IAmb  IAmb     13 57 20.5
      comp=Z,754nm,1.4s
KOZK  Kozakli-Nevseh     92.76 309  eP      P        13 57 20.2 +1.2
DIKM  Dikmen             92.77 311  ⇓P      P        13 57 19.0 +0.1
BOSA  Boshof             92.82 241    P     P        13 57 19.6  0.0
      comp=Z,474nm,0.9s,baz=106,slow=3.7,SNR=116
BOSA                                  pP    pP       13 59 22.9 +0.7
      comp=Z,57nm,0.9s,baz=60,slow=2.2,SNR=5.1
BOSA                                  PKKPbc PKKPbc  14 14 28.1  0.0
      comp=Z,6.7nm,0.5s,baz=286,slow=3.2,SNR=10
BOSA                                  PKPPKP         14 22 29.4
      comp=Z,6.1nm,1.1s,baz=63,slow=2.2,SNR=4.0
BOSA  Boshof             92.82 241    IAmb  IAmb     13 57 24.3
      comp=Z,915nm,1.1s
SNOP  Sinop              92.86 312  eP      P        13 57 19.6 +0.4
EREN  Erenkoy            92.86 305  eP      P        13 57 20.9 +1.5
KLMR  Klimovskoe         92.95 331d iP      P        13 57 17.9 -1.2
KLMR                                e                14 01 09.5
KLMR                                eS      SKSac    14 06 58.4 -0.9
KLMR                                  pmax  pmax
      comp=Z,1µm,1.3s
KLMR  Klimovskoe         92.95 331⇓iP       P        13 57 18.0 -1.2
KLMR                                i P     P        13 57 18.0 -1.2
KLMR                               ⇑iP      P        13 57 18.0 -1.2
KLMR                                  AMP            13 57 22.3
      comp=Z,1µm,1.3s
KLMR                                ePP     PP       14 01 09.6 -2.3
KLMR                                eS      SKSac    14 06 58.4 -0.9
KLMR                                eS      SKSac    14 06 58.4 -0.9
KLMR                                esS     sSKSac   14 10 47.7 -2.9
KLMR                                esS     sSKSac   14 10 47.7 -2.9
OHAK  Old Harbor         93.01  33    P     P        13 57 18.9 -0.6
      baz=261
CORM  Corum              93.06 310  eP      P        13 57 19.9 -0.5
LBTB  Lobatse            93.12 244    P     P        13 57 20.4 -0.6
LBTB                                  pmax  pmax
      comp=Z,516nm,1.1s
LBTB  Lobatse            93.12 244    P     P        13 57 20.4 -0.6
LBTB                                  IAmb  IAmb     13 57 25.8
      comp=Z,516nm,1.1s
MOS   Moscow             93.14 326  eP      P        13 57 18.6 -1.6
MOS                                 e                14 01 13.5
MOS                                 ePPP    PPP      14 03 19.0
MOS                                 e                14 06 53.9
MOS                                 eS      S        14 07 29.5 -9.4
MOS                                 ePS     PS       14 09 39.0  -33
MOS                                 eSS     SS       14 14 06.9 -4.5
MOS                                   pmax  pmax
      comp=Z,1µm,1.0s
SILI  Silifke-Mersin     93.16 306  eP      P        13 57 22.1 +1.4
KEBE  Keben-Mersin       93.34 306  eP      P        13 57 23.2 +1.5
AKKU  Akkuyu-Mersin      93.43 306  eP      P        13 57 21.8 -0.2
KDAK  Kodiak Island      93.47  32    P     P        13 57 21.1 -0.5
      baz=262
KDAK  Kodiak Island      93.47  32d iP      P        13 57 19.8 -1.8
KDAK                                  pmax  pmax
      comp=Z,343nm,1.1s
KDAK  Kodiak Island      93.47  32    P     P        13 57 20.6 -1.0
YESY  Yesilyurt          93.47 307  eP      P        13 57 23.8 +1.5
CSS   Mathiatis          93.48 305  eP      P        13 57 22.8 +0.5
CSS   Mathiatis          93.48 305    IAmb  IAmb     13 57 24.5
      comp=Z,360nm,1.1s
SNAA  Sanae              93.48 195    P     P        13 57 21.7  0.0
SNAA  Sanae              93.48 195    PKKP  PKKPdf   14 14 23.6 -0.8
SNAA  Sanae              93.48 195    pP    pP       13 59 25.8 +2.5
SNAA  Sanae              93.48 195ceP       P        13 57 22.0 +0.4
SNAA                                  pmax  pmax
      comp=Z,119nm,1.1s
SNAA  Sanae              93.48 195    IAmb  IAmb     13 59 39.3
      comp=Z,949nm,1.8s
YAYX  Yaylak             93.54 309  eP      P        13 57 22.5 -0.1
TEVE  Tevekalti-Mers     93.55 306  eP      P        13 57 23.9 +1.2
OBN   Obninsk            93.65 325    P     P        13 57 22.3 -0.2
      comp=Z,210nm,0.6s,baz=82,slow=2.1,SNR=124
OBN                                   S     SKSac    14 07 03.4 +0.1
      comp=Z,7.6nm,0.5s,baz=327,slow=23,SNR=18
OBN                                   PKPPKP         14 22 36.4
      comp=Z,2.8nm,0.3s,baz=150,slow=13,SNR=3.2
OBN   Obninsk            93.65 325  ⇓P      P        13 57 22.3 -0.2
OBN   Obninsk            93.65 325d iP      P        13 57 22.0 -0.5
OBN                                 e*PP    pwP      13 59 26.6 -1.1
OBN                                 e                14 01 16.5
OBN                                 ePPP    PPP      14 03 23.9
OBN                                 e                14 06 58.5
OBN                                 i S     S        14 07 38.7 -4.6
OBN                                   pmax  pmax
      comp=Z,3µm,1.7s
OBN                                   pmax  pmax
      comp=Z,1µm,1.0s
OBN   Obninsk            93.65 325    P     P        13 57 22.6 +0.1
KAMT  Kaman              93.67 309  eP      P        13 57 23.7 +0.5
BERE  Bereket-Mersin     93.72 306  eP      P        13 57 24.8 +1.3
SERE  Sereflikochisa     93.74 309  eP      P        13 57 24.4 +0.9
BR131 Keskin Array S     93.77 309d iP      P        13 57 22.5 -1.1
BRTR  Keskin Array B     93.77 309    P     P        13 57 22.9 -0.8
      comp=Z,119nm,0.8s,baz=132,slow=4.1,SNR=189
BRTR                                  pP    pwP      13 59 27.4 -1.2
      comp=Z,14nm,0.8s,baz=137,slow=3.5,SNR=3.0
BRTR                                  PP    PP       14 01 22.2 +3.3
      comp=Z,36nm,0.8s,baz=112,slow=6.7,SNR=4.0
BRTR                                  S     SKSac    14 07 06.5 +1.4
      comp=Z,13nm,1.1s,baz=76,slow=5.2,SNR=4.3
BRTR                                  PKKPbc PKKPdf  14 14 23.2 -1.0
      comp=Z,1.4nm,0.5s,baz=46,slow=10,SNR=7.7
BRTR                                  SKKP  SKKPdf   14 17 09.9 +3.6
      comp=Z,9.1nm,0.9s,baz=217,slow=2.4,SNR=6.8
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BRTR                                  SKKS  SKKSdf   14 20 36.0 -7.0
      comp=Z,3.7nm,0.9s,baz=262,slow=3.6,SNR=5.7
BRTR                                  PKPPKP         14 22 33.2
      comp=Z,3.3nm,1.1s,baz=207,slow=2.5,SNR=4.3
BRTR  Keskin Array B     93.77 309    P     P        13 57 23.3 -0.3
TEKE  Tekeli-Mersin      93.78 306  eP      P        13 57 24.5 +0.9
LEF   Lefka              93.85 305  ⇓P      P        13 57 24.6 +0.7
CANT  Cankiri            93.88 310  eP      P        13 57 24.4 +0.4
BELA  Belgrano 2         93.95 185    P     P        13 57 23.9 +0.4
A21K  Barrow             94.01  19    P     P        13 57 24.2 +0.4
      baz=259
IMAR  Indian Mountai     94.13  24    P     P        13 57 22.9 -1.6
SPCR  Spurr Chakacha     94.13  29    P     P        13 57 23.3 -1.4
      baz=262
TMCR  Tamitsa            94.15 334  eP      P        13 57 22.6 -2.0
TMCR                                eS      SKSac    14 07 04.7 -0.9
TMCR                                  pmax  pmax
      comp=Z,557nm,0.8s
AFSR  Afar-Bala (An      94.17 309  eP      P        13 57 24.5 -0.9
HOM   Homer              94.20  31    P     P        13 57 23.7 -1.2
      baz=263
ITZ   Itezhi-Tezhi       94.21 254⇑iP       P        13 57 26.2  0.0
ITZ                                 i                13 57 26.2
      baz=314,slow=28
ITZ                                   AMP            13 57 31.3
      comp=Z,14µm,2.1s
ITZ   Itezhi-Tezhi       94.21 254  eP      P        13 57 26.3 +0.2
ITZ   Itezhi-Tezhi       94.21 254⇑iP       P        13 57 26.2  0.0
ITZ                                 i                13 57 26.2
      baz=314,slow=28
ITZ                                   AMP            13 57 31.3
      comp=Z,14µm,2.1s
CHBY  Cihanbeyli         94.22 308  eP      P        13 57 25.9 +0.2
PPLA  Purkeypile         94.36  27    P     P        13 57 25.4 -0.4
      baz=262
PPLA  Purkeypile         94.36  27    IAmb  IAmb     13 57 28.0
      comp=Z,1µm,1.7s
CNPM  China Poot         94.39  31    IAmb  IAmb     13 57 27.7
      comp=Z,908nm,1.6s
CHUM  Lake Minchumin     94.43  26    P     P        13 57 25.9  0.0
      baz=262
LOD   Lodumlu            94.45 309  eP      P        13 57 26.9 +0.2
SKT   Skwentna           94.55  28    P     P        13 57 24.6 -1.9
      baz=263
SKT   Skwentna           94.55  28    IAmb  IAmb     13 57 27.6
      comp=Z,497nm,1.4s
KONT  Konya--Tatoy       94.57 308  eP      P        13 57 28.1 +0.9
CAPN  Captain Cook N     94.58  29    P     P        13 57 26.4 -0.3
      baz=263
LADK  Ladik-KONYA        94.59 308  eP      P        13 57 26.8 -0.6
BRLK  Bradley Lake       94.60  30    IAmb  IAmb     13 57 28.3
      comp=Z,482nm,1.2s
KURC  Kurucasile-Bar     94.66 311  eP      P        13 57 26.7 -0.8
BRSE  Bradley Lake S     94.67  30    P     P        13 57 25.8 -1.3
      baz=264
SUA   Susitna One        94.86  29    P     P        13 57 26.5 -1.6
      baz=264
SUA   Susitna One        94.86  29    IAmb  IAmb     13 57 31.7
      comp=Z,515nm,1.1s
KTH   Kantishna Hill     95.01  27    IAmb  IAmb     13 57 30.4
      comp=Z,681nm,1.3s
BPAW  Bear Paw Mtn.      95.04  26    P     P        13 57 27.8 -0.9
      baz=264
VNA2  Neumayer--Watz     95.10 195    P     P        13 57 29.0 +0.1
      baz=128,slow=4.2
VNA2  Neumayer--Watz     95.10 195    PKKP  PKKPdf   14 14 19.8 -1.7
VNA2  Neumayer--Watz     95.10 195    pP    pP       13 59 33.2 +2.5
CUT   Chulitna           95.18  28    P     P        13 57 27.9 -1.4
      baz=264
MLY   Manley             95.25  25    P     P        13 57 29.4 -0.2
      baz=264
O22K  Cooper Landing     95.25  30    P     P        13 57 28.6 -1.1
      baz=264
O22K  Cooper Landing     95.25  30    IAmb  IAmb     13 57 40.7
      comp=Z,502nm,0.7s
TRF   Thorofare Moun     95.28  27    P     P        13 57 28.8 -1.2
      baz=264
TRF   Thorofare Moun     95.28  27    IAmb  IAmb     13 57 31.0
      comp=Z,373nm,1.1s
RC01  Rabbit Creek A     95.31  29    P     P        13 57 28.9 -1.0
      baz=264
YUVA  Yuva-Kibriscik     95.32 310  eP      P        13 57 30.8 +0.2
AUSIV SIVRIHISAR         95.35 309  eP      P        13 57 31.9 +1.1
SEW   Seward             95.35  30    P     P        13 57 29.1 -1.0
      baz=265
SVRH  Sivrihisar-ESK     95.36 309  eP      P        13 57 30.8  0.0
VNA3  Neumayer Olymp     95.45 194    P     P        13 57 30.2 -0.3
VNA3  Neumayer Olymp     95.45 194    PKKP  PKKPdf   14 14 19.8 -1.1
VNA3  Neumayer Olymp     95.45 194    pP    pP       13 59 34.5 +2.2
VNA1  Neumayer--Stat     95.50 195    P     P        13 57 30.6 -0.1
VNA1  Neumayer--Stat     95.50 195    PKKP  PKKPdf   14 14 18.8 -1.9
VNA1  Neumayer--Stat     95.50 195    pP    pP       13 59 35.0 +2.5
COLD  Coldfoot           95.69  23    P     P        13 57 31.9 +0.4
      baz=265
COLD  Coldfoot           95.69  23    IAmb  IAmb     13 57 34.8
      comp=Z,898nm,1.5s
MDUB  Mudurnu            95.70 310  eP      P        13 57 31.0 -1.3
CIFT  Cifteler, Eski     95.71 309  eP      P        13 57 32.2 -0.2
I23K  Minto, Yukon-K     95.84  25    P     P        13 57 32.1 -0.1
      baz=265
SUR   Sutherland         95.86 236    PKKPbc PKKPbc  14 14 21.9 +1.5
      comp=Z,41nm,1.0s,baz=239,slow=1.9,SNR=12
SUR   Sutherland         95.86 236    P     P        13 57 35.1 +1.7
SUR                                   IAmb  IAmb     13 57 39.2
      comp=Z,413nm,1.0s
MCK   McKinley           95.91  27    P     P        13 57 31.7 -0.9
      baz=265
NEA2  Nenana             95.92  26    P     P        13 57 31.5 -1.1
      baz=265
RND   Reindeer           95.92  27    IAmb  IAmb     13 57 33.5
      comp=Z,542nm,0.9s
BCK   Bucak              95.93 307  eP      P        13 57 32.9 -0.5
LVZ   Lovozero           95.95 338ceP       P        13 57 31.0 -1.7
LVZ                                   pmax  pmax
      comp=Z,384nm,1.1s
LVZ   Lovozero           95.95 338    P     P        13 57 31.4 -1.3
LVZ                                   IAmb  IAmb     13 57 35.8
      comp=Z,461nm,1.2s
ISP   Isparta            96.01 307  eP      P        13 57 33.3 -0.5
SML   Sawmill            96.04  29    P     P        13 57 32.5 -0.8
      baz=266
SML   Sawmill            96.04  29    IAmb  IAmb     13 57 34.7
      comp=Z,448nm,1.0s
SHUT  Suhut-Afyon        96.04 308  eP      P        13 57 34.9 +0.9
TOLK  Toolik Lake Re     96.04  22    P     P        13 57 33.8 +0.6
      baz=265
TOLK  Toolik Lake Re     96.04  22    IAmb  IAmb     13 57 36.5
      comp=Z,1µm,1.8s
SRCK  Saricakaya, Es     96.10 309  eP      P        13 57 33.8 -0.2
GULT  Gulveren           96.22 310  eP      P        13 57 35.4 +0.8
BORA  Eskisehir          96.22 309  eP      P        13 57 34.9 +0.2
SAUV  Serdivan-Sakar     96.38 310  eP      P        13 57 35.2  0.0
SPNC  Sapanca-Adapaz     96.39 310  eP      P        13 57 36.1 +0.8
APA   Apatity            96.40 337⇓iP       P        13 57 32.5 -2.2
APA                                 i *PP   pP       13 59 40.0 +2.7
APA                                 i                14 01 37.0
APA                                 i                14 07 16.0
APA                                 i S     S        14 07 58.0 -8.4
APA                                 i PS    PS       14 10 40.0 -5.7
APA                                   pmax  pmax
      comp=Z,164nm,1.0s
TCOL  CIGO, UAF Yank     96.46  25    P     P        13 57 33.6 -1.4
      baz=266
COLA  College            96.46  25    P     P        13 57 33.6 -1.4
      baz=266
COLA  College            96.46  25    P     P        13 57 33.3 -1.7
COLA                                  pmax  pmax
      comp=Z,172nm,1.1s
COLA  College            96.46  25    P     P        13 57 33.3 -1.7
SCM   Sheep Creek Mo     96.52  29    IAmb  IAmb     13 57 37.8
      comp=Z,594nm,1.3s
AUBOZ BOZOYUK            96.55 309  eP      P        13 57 34.2 -1.9
GLI   Glacier Island     96.57  29    P     P        13 57 34.6 -1.0
      baz=267
POKR  Poker Plat Res     96.65  25    P     P        13 57 34.4 -1.5
      baz=267
CAVI  Cavuskoy           96.71 310  eP      P        13 57 37.9 +1.1
ADVT  Abdulvahap         96.81 310  eP      P        13 57 37.7 +0.5
HDA   Harding Lake       96.82  26    P     P        13 57 35.5 -1.2
      baz=267
HDA   Harding Lake       96.82  26    IAmb  IAmb     13 57 40.6
      comp=Z,291nm,1.0s
HIN   Hinchinbrook I     96.84  30    IAmb  IAmb     13 57 38.4
      comp=Z,250nm,1.1s
IL31                     96.87  26    P     P        13 57 35.1 -1.7
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ILAR	Eielson Array	96.87	26	P	P	13 57 35.2	-1.6
	comp=Z,51nm,0.6s,baz=261,slow=2.9,SNR=148						
ILAR				pP	pP	13 59 39.1	-0.6
	comp=Z,22nm,1.1s,baz=275,slow=4.4,SNR=3.2						
ILAR				PP	PP	14 01 42.2	+0.6
	comp=Z,51nm,0.8s,baz=256,slow=5.1,SNR=7.8						
ILAR				S	SKSac	14 07 23.1	+3.3
	comp=Z,3.8nm,0.9s,baz=254,slow=3.5,SNR=4.8						
ILAR				PKKPbc	PKKPbc	14 14 15.2	-3.5
	comp=Z,18nm,0.9s,baz=359,slow=2.2,SNR=23						
ILAR				SKKP	SKKPdf	14 17 01.8	+0.4
	comp=Z,16nm,0.9s,baz=55,slow=1.5,SNR=10.0						
ILAR				PKPPKP	P'P'df	14 22 25.9	-2.5
	comp=Z,4.3nm,1.1s,baz=68,slow=2.2,SNR=4.1						
FID	Port Fidalgo	96.87	30	IAmb	IAmb	13 57 39.2	
	comp=Z,933nm,2.0s						
Q23K	Middleton Isla	96.87	31	P	P	13 57 37.3	+0.4
	baz=267						
HRT	Hereke	96.89	310	eP	P	13 57 37.2	-0.4
SILT	Sile	96.93	311	eP	P	13 57 38.3	+0.6
TVSB	Tavsanli	96.95	309	eP	P	13 57 36.9	-1.1
GEDZ	Gediz	96.97	308	eP	P	13 57 38.6	+0.6
M24K	Tolsona, Glenn	97.07	28	P	P	13 57 38.2	+0.3
	baz=268						
M24K	Tolsona, Glenn	97.07	28	IAmb	IAmb	13 57 40.9	
	comp=Z,673nm,1.1s						
YLV	Yalova	97.09	310	eP	Pdif	13 57 39.2	+0.6
KLU	Klutina	97.17	29	P	Pdif	13 57 38.1	-0.3
	baz=268						
KLU	Klutina	97.17	29	IAmb	IAmb	13 57 42.5	
	comp=Z,486nm,2.0s						
EYAK	Cordova Ski Ar	97.22	30	P	Pdif	13 57 38.0	-0.5
	baz=268						
EYAK	Cordova Ski Ar	97.22	30	IAmb	IAmb	13 57 41.2	
	comp=Z,396nm,1.7s						
GEMT	Gemlik	97.23	310	eP	Pdif	13 57 38.8	-0.2
SIMA	Simav-Kutahya	97.30	308	eP	Pdif	13 57 38.1	-1.4
KAVV	Kandilli-Istan	97.36	310	eP	P	13 57 39.8	+0.2
ISK	Istanbul-Kandi	97.36	310	eP	Pdif	13 57 39.1	-0.5
KLYT	Kilyos	97.39	311	eP	P	13 57 39.8	+0.1
PUL	Pulkovo	97.40	329c	eP	Pdif	13 57 38.7	-0.6
PUL				pmax	pmax		
	comp=Z,356nm,0.8s						
PAX	Paxson	97.43	27	P	Pdif	13 57 39.2	-0.3
	baz=268						
MDNY	Mudanya-Bursa	97.45	310	eP	Pdif	13 57 39.3	-0.7
PRP	Porcupine Dome	97.47	25	P	Pdif	13 57 38.0	-1.7
	baz=269						
KULA	Kula-Manisa	97.52	308	eP	P	13 57 41.9	+1.4
BGKT	Bogazkoy	97.58	311	eP	Pdif	13 57 40.2	-0.4
FYU	Fort Yukon	97.61	24	IAmb	IAmb	13 57 43.6	
	comp=Z,579nm,1.1s						
JURR	Jurilovca	97.69	314	⇓P	P	13 57 42.1	+1.1
AKASG	Malin Array Be	97.71	320	P	Pdif	13 57 40.0	-1.0
	comp=Z,113nm,0.6s,baz=79,slow=4.5,SNR=228						
AKASG				PP	PP	14 01 44.3	-4.0
	comp=Z,103nm,1.1s,baz=78,slow=5.9,SNR=7.1						
AKASG				PKiKP	PKiKP	14 02 12.1	+0.7
	comp=Z,8.1nm,0.5s,baz=89,slow=1.8,SNR=5.7						
AKASG				S	SKSac	14 07 24.1	-0.5
	comp=Z,10nm,0.9s,baz=74,slow=4.8,SNR=3.1						
AKASG				ScS	ScS	14 08 13.9	-4.3
	comp=Z,9.2nm,0.8s,baz=89,slow=7.7,SNR=4.3						
AKASG				PKKPbc	PKKPbc	14 14 14.8	-1.0
	comp=Z,20nm,0.7s,baz=273,slow=3.4,SNR=23						
AKASG				SKKP	SKKPdf	14 17 00.6	+1.1
	comp=Z,8.5nm,0.8s,baz=268,slow=3.3,SNR=7.5						
AKASG				PKPPKP		14 22 25.6	
	comp=Z,1.0nm,0.6s,baz=265,slow=2.8,SNR=6.5						
AKASG	Malin Array Be	97.71	320	P	Pdif	13 57 39.9	-1.0
AKASG				pmax	pmax		
	comp=Z,125nm,0.9s						
AKASG	Malin Array Be	97.71	320		Pdif	13 57 39.9	-1.0
AKBB	Malin Array Si	97.71	320	i P	Pdif	13 57 39.3	-1.6
TLCR		97.75	315	⇓P	P	13 57 42.6	+1.3
TLCR		97.75	315	⇓P	P	13 57 42.6	+1.3
CTKS	Kestanelik-??a	97.79	311	eP	Pdif	13 57 41.1	-0.4
BMRM	Bremner River	97.79	29	P	Pdif	13 57 40.3	-0.9
	baz=269						
N25K	Chitina, Valde	97.81	29	P	Pdif	13 57 41.2	-0.1
	baz=269						
KIS	Kishinev	97.83	316	i P	Pdif	13 57 41.0	-0.6
	comp=Z,110nm,1.8s						
KIS				epP	pwP	13 59 46.0	-0.7
KIS				esP	sP	14 00 42.0	+2.3
KIS	Kishinev	97.83	316	ePP	PKiKP	14 01 58.0	-14
KIS	Kishinev	97.83	316	ePS	PS	14 11 14.0	+13
KIS				LRM	MLR	14 45 14.0	
	comp=Z,2µm,21.0s						
KIS	Kishinev	97.83	316	eP	Pdif	13 57 41.0	-0.6
KIS				e*PP	pwP	13 59 46.0	-0.7
KIS				e*SP	sP	14 00 42.0	+2.3
KIS				e		14 01 58.0	
KIS				i		14 07 23.0	
KIS				eS	S	14 08 14.0	-5.4
KIS				pmax	pmax		
	comp=Z,110nm,1.8s						
KIS				pmax	pmax		
	comp=E,2µm,6.3s						
MILM	Milestii Mici	97.83	316	⇑P	Pdif	13 57 41.6	0.0
MILM	Milestii Mici	97.83	316	⇑P	PKKPbc	14 14 14.9	-0.4
KCTX	Karacabey (Bur	97.85	310	eP	Pdif	13 57 41.1	-0.8
MANR	Mangalia	97.85	313	⇑P	P	13 57 42.7	+0.9
KAIM	Kayak Island	97.86	31	P	Pdif	13 57 41.4	0.0
	baz=269						
KALB	Balgarevo	97.96	313	⇓P	P	13 57 43.9	+1.7
CTYL	Yalikoy Yolu	97.96	311	eP	P	13 57 42.3	0.0
MFTR	Murfatlar	97.99	314	⇓P	P	13 57 43.9	+1.5
TIRR	Tirgusor	98.01	314	⇑P	PKKPbc	14 14 13.7	-1.1
TIRR	Tirgusor	98.01	314	⇑P	PKKPbc	14 14 13.7	-1.1
SLVT	Silivri	98.01	311	eP	P	13 57 43.6	+1.1
TPGR	Topolog	98.02	314	⇑P	Pdif	13 57 42.4	-0.1
TPGR	Topolog	98.02	314	⇓P	PKKPbc	14 14 14.8	0.0
AYDB	Zeytinkoy-Aydi	98.09	307	eP	P	13 57 44.9	+1.7
SCRK	Sand Creek	98.11	26	P	Pdif	13 57 42.2	-0.4
	baz=270						
SORM	Soroca	98.19	318	⇓P	Pdif	13 57 42.2	-0.9
SORM	Soroca	98.19	318	⇓P	Pdif	13 57 42.2	-0.9
CFR	Carcaliu	98.23	315	⇓P	Pdif	13 57 42.7	-0.7
CFR	Carcaliu	98.23	315	⇑P	PKKPbc	14 14 13.7	-0.4
EDC	Edincik	98.23	310	eP	P	13 57 43.7	+0.1
HARR	Harsova	98.36	314	⇑P	P	13 57 45.3	+1.3
HARR	Harsova	98.36	314	⇓P	PKKPbc	14 14 14.0	+0.2
HARR	Harsova	98.36	314	⇑P	P	13 57 45.3	+1.3
ICOR	Ion Corvin	98.43	313	⇑P	P	13 57 46.2	+1.8
BGLC	Bering Glacier	98.44	30	P	P	13 57 44.5	+0.5
	baz=270						
MRMT	Marmara Adasi	98.45	310	eP	P	13 57 45.5	+0.9
VARL	Varlezi	98.46	315	⇓P	P	13 57 46.0	+1.5
BODT	Bodrum	98.51	306	eP	Pdif	13 57 44.3	-0.6
VASR	Vaslui	98.52	316	⇓P	Pdif	13 57 44.4	-0.3
PHSR	Pinarhisar	98.54	311	eP	P	13 57 45.0	+0.1
KARP	Karpathos	98.56	305	eP	P	13 57 46.9	+1.7
MCARA	McCarthy VSAT	98.56	29	P	Pdif	13 57 44.5	0.0
	baz=270						
GCAM	G?zelcaml?	98.60	307	eP	P	13 57 46.2	+0.9
MNK	Minsk	98.62	324	⇓eP	P	13 57 45.0	+0.1
MNK				ePPP	PPP	14 04 10.0	
MNK				e		14 07 23.0	
MNK				eS	S	14 08 20.0	-5.8
MNK				eSS	SS	14 15 34.0	+6.2
MNK				eSSS	SSS	14 19 20.0	
MNK				pmax	pmax		
	comp=Z,950nm,1.0s						
MNK				pmax	pmax		
	comp=E,620nm,1.5s						
MNK				smax	smax		
	comp=N,24µm,12.0s						
MNK				smax	smax		
	comp=E,9µm,8.0s						
MNK				MLR	MLR		
	comp=Z,15µm,24.0s						
MNK	Minsk	98.62	324	i P	P	13 57 45.6	+0.7
	comp=E,43nm,1.0s						
MNK				i P	P	13 57 45.6	+0.7
	comp=N,55nm,0.9s						
MNK				i P	P	13 57 45.6	+0.7
	comp=Z,518nm,1.2s						
MNK				i pP	pP	13 59 46.9	-0.3
MNK				i PP	PP	14 01 56.2	+1.1
MNK				i PPP	PPP	14 04 08.1	
MNK				i S	S	14 08 22.8	-3.0
MNK				i SS	SS	14 15 34.3	+6.5
MNK				i SSS	SSS	14 19 29.4	
MNK				i LR	LR	14 41 24.1	
MNK				i LRM	MLR	14 43 34.7	
	comp=E,345nm,14.8s						
MNK				i LRM	MLR	14 43 35.0	
	comp=Z,2µm,15.0s						
MNK				i LRM	MLR	14 43 35.7	
	comp=N,4µm,14.7s						
GZKV	Gazikoy-Tekird	98.66	310	eP	P	13 57 45.9	+0.5
KRBG	Karabiga-Canak	98.67	310	eP	P	13 57 46.2	+0.7
MAR4	Marsite Statio	98.68	310	eP	P	13 57 46.2	+0.5
RKY	Sarkoy-Tekirda	98.77	310	eP	Pdif	13 57 45.9	-0.1
GHRR		98.77	315	⇓P	P	13 57 47.5	+1.7
BLCB	Balcova	98.78	308	eP	P	13 57 46.9	+0.8
HOPEN	Hopen	98.86	346	ePdif	P	13 57 46.1	+0.5
HOPEN				IVmB_BB		13 57 48.6	
	comp=Z,4µm,4.1s						
HOPEN				epP	pP	13 59 47.0	-1.9
HOPEN				ePS	PS	14 11 11.6	+1.0
HOPEN				eSS	SS	14 15 33.6	+3.5
PETR	Petresti	98.89	315	⇑P	P	13 57 47.7	+1.3
DKL	Dikili	98.92	308	eP	P	13 57 47.1	+0.4
ODBI	Odobesti	99.01	315	⇓P	Pdif	13 57 48.2	+1.4
GRER		99.06	315	⇓P	Pdif	13 57 49.1	+2.0
URLA	Izmir	99.13	308	eP	Pdif	13 57 47.6	0.0
EDRB	Edirne	99.14	311	eP	Pdif	13 57 47.1	-0.4
VSU	Vasula	99.24	328	eP	Pdif	13 57 47.5	0.0
VSU	Vasula	99.24	328d	iP	Pdif	13 57 47.1	-0.4
VSU				pmax	pmax		
	comp=Z,1µm,1.2s						
VRI	Vrincioaia	99.24	315	⇑P	Pdif	13 57 48.4	+0.5
VRI				⇓P	Pdif	13 57 49.1	+1.2
VRI	Vrincioaia	99.24	315	⇓P	PKKPbc	14 14 10.6	-0.8
VRI	Vrincioaia	99.24	315	eP	Pdif	13 57 48.4	+0.5
VRI	Vrincioaia	99.24	315	⇑P	Pdif	13 57 48.4	+0.5
BISRR	Bisoca	99.25	315	⇑P	Pdif	13 57 51.0	+3.0
NACGM	Naroch	99.25	324	i P	Pdif	13 57 48.0	+0.3
NACGM				i P	Pdif	13 57 48.0	+0.3
NACGM				i P	Pdif	13 57 48.0	+0.3
NACGM				i pP	pP	13 59 49.4	-0.8
NACGM				i sP	sP	14 00 44.6	-1.1
NACGM				i PP	PP	14 01 44.8	-15
NACGM				i PPP	PPP	14 04 12.6	
NACGM				i SKS	SKSac	14 07 32.1	+0.1
NACGM				i S	ScS	14 08 27.2	-3.6
NACGM				i SKKS		14 11 29.3	
NACGM				i SS	SS	14 15 35.6	-1.0
NACGM				i SSS	SSS	14 19 15.1	
ERIK	Erikli-Kesan	99.27	310	eP	Pdif	13 57 49.1	+1.0
IDID	Didziasalis	99.28	325	eP	Pdif	13 57 49.2	+1.5
ARA0	ARCESS Array S	99.30	339	ePdif	Pdif	13 57 48.0	+0.4
ARA0				epP	pP	13 59 48.7	-2.0
ARCES	ARCESS Array B	99.30	339	P	Pdif	13 57 46.8	-0.8
	comp=Z,210nm,0.8s,baz=90,slow=4.9,SNR=84						
ARCES				PP	PP	14 01 56.9	-2.8
	comp=Z,67nm,1.0s,baz=76,slow=6.5,SNR=4.6						
ARCES				PKiKP	PKiKP	14 02 14.6	+0.9
	comp=Z,24nm,0.8s,baz=110,slow=1.5,SNR=7.0						
ARCES				S	SKSac	14 07 32.2	+0.5
	comp=Z,89nm,1.1s,baz=84,slow=5.5,SNR=7.1						
ARCES				PKKPbc	PKKPbc	14 14 09.4	-2.7
	comp=Z,9.0nm,0.7s,baz=269,slow=3.8,SNR=20						
GELI	Tayfur-Gelibol	99.30	310	eP	Pdif	13 57 48.5	+0.3
PLOR	Plostina	99.30	315	⇑P	Pdif	13 57 48.6	+0.4
PLOR	Plostina	99.30	315	⇑P	Pdif	13 57 48.6	+0.4
TESR	Tescani	99.31	316	⇓P	Pdif	13 57 48.5	+0.4
EGAK	Eagle	99.32	26	P	Pdif	13 57 47.6	-0.2
	baz=273						
RAZG	Razgrad	99.35	313	⇑P	Pdif	13 57 47.5	-1.0
ISR	Istrita	99.36	314	⇑P	Pdif	13 57 49.9	+1.4
ISR	Istrita	99.36	314	⇑P	Pdif	13 57 49.9	+1.4
EZN	Ezine	99.39	309	eP	Pdif	13 57 48.5	-0.2
PRK	Paraskevi	99.42	309	P	Pdif	13 57 49.7	+0.9
FINES	FINESS Array B	99.49	331	P	Pdif	13 57 47.9	-0.7
	comp=Z,39nm,0.6s,baz=88,slow=4.2,SNR=86						
FINES				PP	PP	14 02 02.1	+0.8
	comp=Z,42nm,0.8s,baz=64,slow=4.9,SNR=3.7						
FINES				PKiKP	PKiKP	14 02 15.3	+1.1
	comp=Z,30nm,0.8s,baz=102,slow=3.8,SNR=9.7						
FINES				S	SKSac	14 07 33.0	+0.2
	comp=Z,32nm,0.9s,baz=104,slow=8.0,SNR=5.3						
FINES				PKKPbc	PKKPbc	14 14 08.7	-2.6
	comp=Z,3.0nm,0.5s,baz=280,slow=4.0,SNR=8.1						
NEHR	Nehoiu	99.54	315	⇑P	Pdif	13 57 50.7	+1.4
SULR		99.56	314	⇓P	Pdif	13 57 50.8	+1.6
CHOS	Chios island	99.56	308	eP	Pdif	13 57 50.8	+1.2
IIGN	Ignalina	99.57	325	eP	Pdif	13 57 50.0	+0.9
BOZC	Bozcaada	99.60	309	eP	Pdif	13 57 49.8	+0.2
PRAR	RASCA	99.61	317	⇑P	Pdif	13 57 51.3	+1.9
ISAL	Salakas	99.62	325	eP	Pdif	13 57 50.3	+1.0
ALN	Alexandroupoli	99.64	310	P	Pdif	13 57 48.9	-0.8
ALN	Alexandroupoli	99.64	310	eP	Pdif	13 57 50.4	+0.7
BIZ	Bicaz	99.69	316	⇑P	Pdif	13 57 51.3	+1.4
BIZ	Bicaz	99.69	316	⇑P	PKKPbc	14 14 10.1	-0.1
SECR		99.69	314	⇑P	Pdif	13 57 48.7	-1.3
GADA	Gvkgeada	99.73	309	eP	Pdif	13 57 50.5	+0.3
SIGR	SIGRI	99.74	308	eP	Pdif	13 57 48.9	-1.3
SGRR	Singureni	99.75	314	⇓P	Pdif	13 57 51.7	+1.6
MLR	Muntele Rosu	99.79	315	P	Pdif	13 57 50.9	+0.4
	comp=Z,76nm,0.8s,baz=42,slow=2.0,SNR=66						
MLR				PP	PP	14 02 04.4	+0.2
	comp=Z,188nm,0.9s,baz=105,slow=3.3,SNR=9.0						
MLR				S	SKSac	14 07 37.5	+2.1
	comp=Z,54nm,1.0s,baz=127,slow=23,SNR=10						
MLR				PKKPbc	PKKPbc	14 14 08.2	-1.9
	comp=Z,10nm,0.7s,baz=184,slow=6.8,SNR=5.9						
MLR	Muntele Rosu	99.79	315	⇑P	Pdif	13 57 50.6	+0.2
MLR				⇓P	Pdif	13 57 51.3	+0.8
MLR	Muntele Rosu	99.79	315	⇓P	PKKPbc	14 14 08.5	-1.6
MLR	Muntele Rosu	99.79	315	⇓P	Pdif	13 57 51.3	+0.8
HAMF	Hammerfest	99.82	340	eSKSac	SKSac	14 07 33.5	-0.7
HAMF				i		14 08 32.1	
HAMF				ePS	PS	14 11 20.9	+0.3
OZUR		99.90	315	⇑P	Pdif	13 57 42.4	-8.5
LAST	Lasithi	99.91	304	P	SKSac	14 07 37.8	+1.5
RDO	Rodhopi	100.03	310	P	Pdif	13 57 51.0	-0.4
RDO	Rodhopi	100.03	310	eP	Pdif	13 57 51.9	+0.5
KTK1	Kautokeino	100.14	339	ePdif	Pdif	13 57 51.2	-0.1
KTK1				epP	pPdif	13 59 52.9	-1.3
KTK1				eSKSac	SKSac	14 07 34.6	-1.3
DOPR	Dopca	100.18	315	⇓P	Pdif	13 57 53.1	+1.0
DOPR	Dopca	100.18	315	⇓P	PKKPbc	14 14 08.8	0.0
BURAR	Bucovina Array	100.29	317	⇓P	Pdif	13 57 53.0	+0.3
BURAR	Bucovina Array	100.29	317	⇑P	PKKPbc	14 14 08.8	+0.1
BURAR	Bucovina Array	100.29	317	⇓P	Pdif	13 57 53.0	+0.3
COPA	Copaceanca	100.29	313	⇑P	Pdif	13 57 52.2	-0.4
IDI	Anoyia	100.40	304	PP	PKiKP	14 02 10.0	-6.7
	comp=Z,127nm,1.0s,baz=111,slow=11,SNR=4.9						
IDI				PKiKP	PP	14 02 17.9	+8.9
	comp=Z,38nm,0.5s,baz=171,slow=3.7,SNR=7.9						
IDI				S	SKSac	14 07 36.4	-2.3
	comp=Z,164nm,1.1s,baz=300,slow=1.4,SNR=5.4						
IDI				PKKPbc	PKKPbc	14 14 08.2	+0.4
	comp=Z,74nm,0.9s,baz=313,slow=3.9,SNR=12						
IDI				SKKPbc	SKKPbc	14 16 56.8	+0.8
	comp=Z,62nm,1.0s,baz=313,slow=1.9,SNR=7.8						
MTUR	Matau	100.41	315	⇓P	Pdif	13 57 54.9	+1.7
MTUR	Matau	100.41	315	⇓P	Pdif	13 57 54.9	+1.7
VOIR		100.42	315	⇓P	Pdif	13 57 53.5	+0.3
VOIR		100.42	315	⇓P	PKKPbc	14 14 06.6	-1.7
VOIR		100.42	315	⇓P	Pdif	13 57 53.5	+0.3
SPA0	Spitsbergen Ar	100.44	348	ePdif	Pdif	13 57 52.1	-0.5
SPA0				eSKSac	SKSac	14 07 38.3	+1.3
SPA0				IVmBBB		14 07 45.1	
	comp=Z,4µm,4.5s						
SPA0				i		14 08 38.9	
SPITS	Spitsbergen Ar	100.44	348	P	Pdif	13 57 52.0	-0.5
	comp=Z,318nm,0.8s,baz=128,slow=11,SNR=15						
SPITS				PKKPbc	PKKPbc	14 14 08.0	-1.0
	comp=Z,18nm,1.0s,baz=172,slow=12,SNR=8.0						
HUMR	Humele	100.47	314	⇓P	Pdif	13 57 54.6	+1.2
HUMR	Humele	100.47	314	⇑P	PKKPbc	14 14 07.9	0.0
STFAR	Stefanesti-Arg	100.48	314	⇑P	Pdif	13 57 54.9	+1.5
BJO1	Bjornoya	100.65	345	ePdif	Pdif	13 57 54.4	+0.9
PLD	Plovdiv	100.66	311	eP	Pdif	13 57 54.2	-0.1
ARR	Arges	100.71	315	⇑P	Pdif	13 57 55.3	+0.8
ARR	Arges	100.71	315	⇑P	PKKPbc	14 14 07.2	-0.1
PLVB	Pleven	100.72	313	⇓P	Pdif	13 57 55.5	+1.0
MTSE	Matsula	100.75	328	eP	Pdif	13 57 54.9	+0.6
PABE	Paberze	100.85	325	eP	Pdif	13 57 55.6	+0.9
VLAD	Vladila	100.88	313	⇓P	Pdif	13 57 56.9	+1.7
ARCR	ARCALIA	100.88	316	⇓P	Pdif	13 57 57.0	+1.8
ARCR	ARCALIA	100.88	316	⇑P	PKKPbc	14 14 07.6	+0.8
HSPB	Hornsund (broa	100.92	347	ePdif	Pdif	13 57 55.0	+0.3
HSPB				ePP	PP	14 02 13.7	+2.1
HSPB				eSKSac	SKSac	14 07 41.4	+2.1
HSPB				eL	L	14 44 41.4	
	comp=Z,16µm,23.7s						
HSPB	Hornsund (broa	100.92	347	ePdif	Pdif	13 57 55.1	+0.5
HSPB				IVmB_BB		13 57 57.6	
	comp=Z,2µm,4.0s						
HSPB				eSKSac	SKSac	14 07 40.3	+1.0
HSPB				eSP	SP	14 10 21.9	+2.7
HSPB				eSS	SS	14 16 00.5	+2.2
LVV	L'vov	101.04	319	eP	Pdif	13 57 56.0	+0.2
LVV				eS	Sdif	14 08 42.0	-4.0
LVV				pmax	pmax		
	comp=Z,180nm,1.6s						
JETT	Jettan, Norway	101.07	340	e	Pdif	13 57 55.2	-0.3
KBS	Kingsbay	101.08	349	i P	Pdif	13 57 54.0	-1.3
KBS				pmax	pmax		
	comp=Z,176nm,1.1s						
KBS	Kingsbay	101.08	349	ePdif	Pdif	13 57 55.9	+0.5
KBS				IVmB_BB		13 57 58.2	
	comp=Z,2µm,1.2s						
KBS				eSKSac	SKSac	14 07 41.1	+1.1
KBS				ePS	PS	14 11 35.3	+2.2
KBS				eSS	SS	14 16 03.0	+2.5
KBS	Kingsbay	101.08	349	i P	Pdif	13 57 54.5	-0.9
KBS				IAmb	IAmb	13 57 58.5	
	comp=Z,473nm,1.2s						
OUR	Ouranopolis	101.20	310	eP	Pdif	13 57 57.4	+0.7
SUW	Suwalki	101.39	324	ePdif	Pdif	13 57 56.9	-0.3
SUW				eSKSac	SKSac	14 07 43.4	+1.1
SUW				eSdif	Sdif	14 08 49.4	+0.7
SUW				eL	L	14 43 23.6	
	comp=Z,9µm,25.9s						
SUW	Suwalki	101.39	324	eP	Pdif	13 57 57.7	+0.5
CJR	Cluj-Napoca	101.41	316	⇑P	Pdif	13 57 59.4	+1.8
CJR	Cluj-Napoca	101.41	316	⇑P	Pdif	13 57 59.4	+1.8
BMR	Baia Mare	101.45	317	⇑P	Pdif	13 57 58.3	+0.6
BMR	Baia Mare	101.45	317	⇑P	Pdif	13 57 58.3	+0.6
TSUM	Tsumeb	101.51	249	PKKPbc	PKKPbc	14 14 04.1	-0.3
	comp=Z,15nm,0.8s,baz=275,slow=2.2,SNR=9.4						
TRO	Tromso	101.57	340	ePdif	Pdif	13 57 56.6	-1.0
TRO				IVmB_BB		13 58 00.3	
	comp=Z,3µm,1.0s						
TRO				eSKSac	SKSac	14 07 42.5	0.0
TRO				i		14 08 45.1	
TRO				ePS	PS	14 11 37.0	-1.2
TRO				eSS	SS	14 16 10.2	+2.6
SRE	Strehaia	101.73	314	⇓P	Pdif	13 58 01.4	+2.4
SRE	Strehaia	101.73	314	⇓P	Pdif	13 58 01.4	+2.4
VTS	Vitosha	101.75	312	⇓P	Pdif	13 57 60.0	+0.7
VTS	Vitosha	101.75	312	⇑P	PKKPbc	14 14 04.3	-0.1
VTS	Vitosha	101.75	312	⇓P	Pdif	13 58 00.0	+0.7
KTHA	Kythira Island	101.90	305	P	SKSac	14 07 39.3	-6.3
KWP	Kalwaria Pacla	101.90	319	ePdif	Pdif	13 58 00.0	+0.4
KWP				ePP	PP	14 02 22.4	+2.7
KWP				eSKSac	SKSac	14 07 46.0	+1.0
KWP				eSdif	Sdif	14 08 51.7	-1.6
KWP				eL	L	14 46 07.1	
	comp=Z,6µm,24.5s						
DEV	Deva	101.91	315	⇓P	Pdif	13 58 01.3	+1.6
DEV	Deva	101.91	315	⇓P	Pdif	13 58 01.3	+1.6
KTHR	Kythira	101.95	305	P	SKSac	14 07 44.2	-1.6
LKR	Lokris	101.96	308	P	SKSac	14 07 44.2	-1.5
PBUR	Paburge	101.97	326	eP	Pdif	13 58 00.5	+0.8
LOUT	Loutraki	101.98	307	P	SKSac	14 07 38.5	-7.4
LTK	Loutraki	101.98	307	P	Pdif	13 57 56.9	-3.4
LTK	Loutraki	101.98	307	P	SKSac	14 07 40.9	-5.0
DRGR		102.02	316	⇓P	Pdif	13 58 00.2	-0.1
DRGR		102.02	316	⇑P	PKKPbc	14 14 03.2	-0.5
DRGR		102.02	316	⇓P	Pdif	13 58 00.2	-0.1
GZR	Gura Zlata	102.02	315	⇓P	Pdif	13 58 01.1	+0.8
GZR	Gura Zlata	102.02	315	⇑P	PKKPbc	14 14 04.2	+0.6
GZR	Gura Zlata	102.02	315	⇓P	Pdif	13 58 01.1	+0.8
KOLS	Kolonicke sedl	102.22	318	eP	Pdif	13 58 03.3	+2.2
KOLS				e		14 02 24.8	
KOLS				e		14 07 48.1	
KOLS				eS	Sdif	14 08 54.5	-1.5
KOLS	Kolonicke sedl	102.22	318	ePDIFF	Pdif	13 58 03.3	+2.2
KOLS				ePP	PP	14 02 24.8	+2.8
UZH	Uzhgorod	102.22	318	⇓iP	Pdif	13 57 58.3	-2.7
UZH				i S	Sdif	14 08 50.3	-5.6
AXAR	Agios Charalam	102.22	308	P	SKSac	14 07 46.6	-0.4
VAY	Valandovo	102.26	311	i P	Pdif	13 58 00.1	-1.3
HERR	Herculane	102.29	314	⇓P	Pdif	13 58 02.5	+1.0
HERR	Herculane	102.29	314	⇓P	PKKPbc	14 14 03.1	+0.4
GRG	Griva	102.40	310	eP	Pdif	13 58 00.4	-1.7
VLX	Vlachokerasia	102.45	307	P	SKSac	14 07 48.6	+0.3
AGG	Agios Georgios	102.48	308	P	SKSac	14 07 49.2	+1.0
SKAG	Skagway	102.49	31	P	Pdif	13 58 01.6	-0.4
	baz=277						
STIP	Stip	102.54	311	i P	Pdif	13 58 01.4	-1.2
LTVH	Ltavrtes, Hu	102.55	317	⇓P	Pdif	13 58 04.3	+1.8
AAL	Aland	102.56	330	eP	Pdif	13 58 02.3	+0.1
KLV	Kalavryta, Ach	102.63	307	P	Pdif	13 58 00.9	-2.3
KLV	Kalavryta, Ach	102.63	307	P	SKSac	14 07 45.2	-3.8
MAKR	Makrakomi, Fth	102.63	308	P	SKSac	14 07 47.2	-1.7
KALE	Kalithea	102.63	308	P	Pdif	13 58 01.5	-1.7
TRIZ	Trizonia	102.69	308	P	Pdif	13 58 02.0	-1.4
TRIZ	Trizonia	102.69	308	P	SKSac	14 07 47.2	-1.9
CRVS	Cervenica-Dubn	102.76	318	eP	Pdif	13 58 05.6	+2.1
CRVS				e		14 02 28.7	
CRVS				eS	Sdif	14 08 57.1	-3.4
CRVS	Cervenica-Dubn	102.76	318	ePDIFF	Pdif	13 58 05.6	+2.1
CRVS				e		14 01 09.0	
CRVS				ePP	PP	14 02 28.7	+2.7
CRVS				eSDIFF	Sdif	14 08 57.1	-3.4
CRVS				eSS	SS	14 16 13.7	-11
LAKA	Lakka	102.76	307	P	Pdif	13 58 01.4	-2.4
LAKA	Lakka	102.76	307	P	SKSac	14 07 48.9	-0.7
SIRR	Siria	102.76	316	⇓P	Pdif	13 58 04.6	+1.0
SIRR	Siria	102.76	316	⇑P	PKKPbc	14 14 01.6	+0.2
MDVR	Moldovita	102.79	314	⇓P	Pdif	13 58 04.5	+0.8
ANX	Ano Chora	102.80	308	P	Pdif	13 58 03.9	-0.1
ANX	Ano Chora	102.80	308	P	SKSac	14 07 44.9	-5.0
ITM	Ithomi	102.81	306	P	SKSac	14 07 39.6	-10
EFP	Efpalio	102.82	308	P	Pdif	13 58 04.1	+0.2
EFP	Efpalio	102.82	308	P	SKSac	14 07 46.9	-2.8
BZS	Buzias	102.82	315	⇑P	Pdif	13 58 02.5	-1.3
BZS	Buzias	102.82	315	⇑P	PKKPbc	14 14 00.5	-0.7
BZS	Buzias	102.82	315	⇑P	Pdif	13 58 02.5	-1.3
BOVS	Bovan	102.84	313	⇓P	Pdif	13 58 04.2	+0.2
BOVS	Bovan	102.84	313	⇓P	PKKPbc	14 14 01.3	+0.3
EVR	Evrytania	102.89	308	P	SKSac	14 07 49.2	-1.1
N2IH	Innhavet	102.97	338	ePdif	Pdif	13 58 04.4	+0.5
N2IH				IVmB_BB		13 58 05.3	
	comp=Z,3µm,1.2s						
N2IH				ePS	PS	14 11 50.5	-1.6
N2IH				eSS	SS	14 16 28.2	+1.6
DRO	Drossia	102.98	307	P	Pdif	13 58 04.5	-0.2
BEL	Belsk	102.98	321	ePdif	Pdif	13 58 05.7	+1.3
BEL				eSKSac	SKSac	14 07 50.9	+1.1
BEL				eSdif	Sdif	14 09 02.1	0.0
BEL				eL	L	14 44 39.7	
	comp=Z,9µm,25.4s						
RLS	Riolos of Patr	103.17	307	P	Pdif	13 58 05.7	+0.2
N2ST	Straumen	103.23	338	ePdif	Pdif	13 58 05.2	+0.1
N2ST				IVmB_BB		13 58 57.8	
	comp=Z,3µm,5.6s						
N2ST				eSKSac	SKSac	14 07 51.1	+0.8
STEI	Steigen	103.23	338	ePdif	Pdif	13 58 05.2	+0.1
STEI				IVmB_BB		13 58 07.1	
	comp=Z,5µm,2.3s						
STEI				eSKSac	SKSac	14 07 50.9	+0.6
STEI				ePS	PS	14 11 47.5	-7.0
STEI				eSS	SS	14 16 33.2	+3.0
FAUS	Fauske	103.34	338	ePdif	Pdif	13 58 05.7	+0.1
N2TV	T¥rnvik	103.36	338	ePdif	Pdif	13 58 05.6	-0.1
N2TV				IVmB_BB		13 58 08.3	
	comp=Z,5µm,1.9s						
N2TV				eSKSac	SKSac	14 07 52.3	+1.5
PDO	Prodromos	103.38	308	P	Pdif	13 58 06.4	-0.1
KECS	Kecovo	103.43	318	eP	Pdif	13 58 07.5	+1.1
KECS	Kecovo	103.43	318	ePDIFF	Pdif	13 58 07.5	+1.1
NIE	Niedzica	103.48	319	ePdif	Pdif	13 58 07.4	+0.7
NIE				ePP	PP	14 02 30.7	-0.6
NIE				eSKSac	SKSac	14 07 53.5	+1.1
NIE				eSdif	Sdif	14 09 05.8	-0.8
NIE				eSS	SS	14 16 36.9	+2.1
NIE				eL	L	14 47 19.3	
	comp=Z,6µm,22.5s						

NBB08	Skaug oppvekst	103.59	338	ePdif	Pdif	13 58 06.5	-0.2
NBB08	Skaug oppvekst	103.59	338	IVmB_BB		13 59 00.0	
	comp=Z,4µm,4.2s						
NBB08				eSKSac	SKSac	14 07 53.6	+1.7
NBB28	Valnes	103.70	338	ePdif	Pdif	13 58 08.9	+1.7
NBB28				eSKSac	SKSac	14 07 54.1	+1.6
OJC	Ojcow	103.74	320	ePdif	Pdif	13 58 07.6	-0.2
OJC				eSKSac	SKSac	14 07 54.7	+1.2
OJC				eSdif	Sdif	14 09 07.3	-1.3
OJC				eSS	SS	14 16 36.0	-2.1
OJC				eL	L	14 44 51.6	
	comp=Z,8µm,27.5s						
UPP	Uppsala	103.78	330	eP	Pdif	13 58 07.9	+0.3
LOF	Lofoten	103.81	339	ePdif	Pdif	13 58 07.2	-0.4
LOF				IVmB_BB		13 59 11.7	
	comp=Z,3µm,4.8s						
VLS	Valsamata	103.86	307	P	SKSac	14 07 48.6	-5.9
PSZ	Piszkesteto	103.86	317	⇑P	Pdif	13 58 09.8	+1.3
PSZ	Piszkesteto	103.86	317	⇑P	Pdif	13 58 09.8	+1.3
NBB05	Inndyr	103.90	337	ePdif	Pdif	13 58 08.7	+0.6
NBB05				IVmB_BB		13 58 35.5	
	comp=Z,5µm,5.9s						
NBB05	Inndyr	103.90	337	eSKSac	SKSac	14 07 55.2	+1.9
NBB17	Glomfjord B¥r	103.98	337	ePdif	Pdif	13 58 08.9	+0.5
NBB17				IVmB_BB		13 58 38.8	
	comp=Z,4µm,4.7s						
NBB17	Glomfjord B¥r	103.98	337	eSKSac	SKSac	14 07 55.8	+2.0
IGT	Igoumenitsa	104.02	309	P	SKSac	14 07 47.4	-7.8
NBB30	Finnes	104.03	337	ePdif	Pdif	13 58 08.8	+0.2
NBB30				IVmB_BB		13 58 15.1	
	comp=Z,4µm,3.6s						
NBB30				eSKSac	SKSac	14 07 56.0	+2.0
LANS	Liptovska Anna	104.05	319	eP	Pdif	13 58 10.7	+1.5
LANS				e		14 02 37.5	
DIVS	Divibare	104.06	314	eP	Pdif	13 58 10.1	+0.6
N2SV	S¸rv¥gen	104.06	338	ePdif	Pdif	13 58 08.6	-0.2
N2SV				IVmB_BB		13 58 11.3	
	comp=Z,4µm,1.3s						
N2SV				eSKSac	SKSac	14 07 56.4	+2.4
FRGS	Fruska Gora	104.12	315	⇑P	Pdif	13 58 10.3	+0.7
FRGS	Fruska Gora	104.12	315	eP	Pdif	13 58 10.0	+0.4
NBB15	Halsa Church	104.15	337	ePP	PP	14 02 36.0	+0.5
NBB15	Halsa Church	104.15	337	eSKSac	SKSac	14 07 57.1	+2.6
CRAG	Craig	104.18	35	P	Pdif	13 58 10.7	+1.1
	baz=278						
N2VA	Vr¸y	104.24	338	ePdif	Pdif	13 58 09.3	-0.3
N2VA				IVmB_BB		13 59 19.3	
	comp=Z,4µm,4.5s						
N2VA				eSKSac	SKSac	14 07 56.4	+1.6
TIR	Tirane	104.30	311	⇑P	PKKPbc	14 13 58.5	+1.8
KONS	Konsvik	104.39	337	ePdif	Pdif	13 58 10.5	+0.3
KONS				eSKSac	SKSac	14 07 56.7	+1.1
KONS				i		14 13 52.7	
STOK	Stokkvaagen	104.47	337	ePdif	Pdif	13 58 11.3	+0.7
WRAK	Wrangell Islan	104.47	34	P	Pdif	13 58 12.0	+1.1
	baz=279						
N2RO	R¸st	104.49	338	ePdif	Pdif	13 58 10.8	+0.1
N2RO				IVmB_BB		13 58 37.5	
	comp=Z,4µm,5.0s						
BBLS	Lazići	104.49	313	eP	Pdif	13 58 11.1	-0.3
PDG	Podgorica	104.69	312	⇑P	Pdif	13 58 12.5	+0.3
PDG	Podgorica	104.69	312	⇓P	PKKPbc	14 13 56.3	+0.8
PDG	Podgorica	104.69	312	eP	Pdif	13 58 12.3	+0.1
DRME	Dracevica, Mon	104.76	312	eP	Pdif	13 58 12.9	+0.4
HAPS	Han Pijesak,BI	104.81	314	eP	Pdif	13 58 12.9	+0.1
OKC	Ostrava-Krasne	104.84	320	eSDIF	Sdif	14 09 18.1	+0.4
MORH	Mrgy, Hungar	104.86	316	⇑P	Pdif	13 58 12.8	0.0
MORH	Mrgy, Hungar	104.86	316	⇑P	PKKPbc	14 13 54.5	-0.7
MORH	Mrgy, Hungar	104.86	316	eP	Pdif	13 58 12.4	-0.4
SRO2	Moca	104.89	317	eP	Pdif	13 58 14.0	+1.1
SRO2	Moca	104.89	317	ePDIFF	Pdif	13 58 14.0	+1.1
SRO	Srobarova	104.94	317	eP	Pdif	13 58 15.0	+1.9
SRO				e		14 02 41.7	
SRO	Srobarova	104.94	317	ePDIFF	Pdif	13 58 15.0	+1.9
SRO				e		14 02 26.4	
SRO				ePP	PP	14 02 41.7	-0.2
GKP	Gorka Klasztor	104.98	323	ePdif	Pdif	13 58 14.8	+1.6
GKP				eSKSac	SKSac	14 08 00.3	+1.5
GKP				eSdif	Sdif	14 09 18.3	-0.4
GKP				eL	L	14 45 22.2	
	comp=Z,11µm,23.4s						
BRY	Bratogost	105.19	312	eP	Pdif	13 58 14.7	+0.1
MORC	Moravsky Berou	105.23	320	⇓P	Pdif	13 58 14.8	+0.3
MORC	Moravsky Berou	105.23	320	⇑P	PKKPbc	14 13 54.4	+0.1
MORC	Moravsky Berou	105.23	320	ePDIFF	Pdif	13 58 15.3	+0.8
MORC				ePP	PP	14 02 45.5	+1.4
MORC				eSKS	SKSac	14 08 02.3	+2.1
MORC				eSDIFF	Sdif	14 09 19.9	-1.3
MORC				ePKKP	PKKPbc	14 13 54.2	-0.1
MORC	Moravsky Berou	105.23	320	⇓P	Pdif	13 58 14.8	+0.3
JAVC	Velka Javorina	105.25	319	ePDIFF	Pdif	13 58 16.3	+1.7
JAVC				eSKS	SKSac	14 08 04.3	+3.9
JAVC				eSDIFF	SKKSac	14 09 22.5	+33
HCY	Herceg Novi	105.25	312	eP	Pdif	13 58 13.6	-1.1
TREB	Trebinje	105.34	312	eP	Pdif	13 58 14.9	-0.2
NSS	Namsos	105.37	335	ePdif	Pdif	13 58 14.3	-0.3
NSS				IVmB_BB		13 58 34.2	
	comp=Z,5µm,7.2s						
NSS				eSKSac	SKSac	14 08 00.0	0.0
NSS				eSS	SS	14 17 00.7	+1.5
SMOL	Smolenice	105.45	318	e	PKiKP	14 02 27.6	+2.1
SMOL				e		14 13 53.7	
MODS	Modra-Piesok	105.57	318	eP	Pdif	13 58 16.7	+0.7
MODS				eS	Sdif	14 09 20.0	-4.0
MODS	Modra-Piesok	105.57	318	ePDIFF	Pdif	13 58 16.7	+0.7
MODS				e		14 01 41.3	
MODS				e		14 02 27.5	
MODS				eSDIFF	Sdif	14 09 20.0	-4.0
MODS				eSS	SKKPbc	14 16 51.7	+8.7
HFS	Hagfors	105.67	331	Pdiff	Pdif	13 58 16.6	+0.5
	comp=Z,27nm,0.5s,baz=114,slow=3.7,SNR=48						
HFS				PP	PP	14 02 43.4	-3.4
	comp=Z,21nm,0.6s,baz=77,slow=7.8,SNR=3.7						
HFS				PKKPbc	PKKPbc	14 13 50.8	-2.5
	comp=Z,4.4nm,0.5s,baz=210,slow=3.2,SNR=17						
KRLC	Kraliky	105.68	320	eP	Pdif	13 58 18.3	+1.8
KRLC				e		14 08 07.2	
KRLC				eS	Sdif	14 09 24.7	-0.2
KRLC	Kraliky	105.68	320	ePDIFF	Pdif	13 58 18.3	+1.8
KRLC				eSKS	SKSac	14 08 07.2	+5.0
KRLC				eSDIF	Sdif	14 09 24.7	-0.2
KRLC				ePKKP	PKKPbc	14 13 53.1	+0.1
ZST	Bratislava	105.70	318	eP	Pdif	13 58 18.1	+1.6
ZST				eS	Sdif	14 09 20.7	-4.3
ZST	Bratislava	105.70	318	ePDIFF	Pdif	13 58 18.1	+1.6
ZST				e		14 01 43.6	
ZST				e		14 02 28.7	
ZST				eSDIFF	Sdif	14 09 20.7	-4.3
ZST				e		14 13 52.9	
STON	Ston	105.81	312	i P	PKiKP	14 02 24.9	-1.3
KSP	Ksiaz	105.89	321	ePdif	Pdif	13 58 18.2	+0.9
KSP				eSKSac	SKSac	14 08 05.1	+2.1
KSP				eSdif	Sdif	14 09 26.0	-0.5
KSP				eL	L	14 46 20.3	
	comp=Z,7µm,28.4s						
VRAC	Vranov	105.90	319	Pdiff	Pdif	13 58 18.0	+0.5
	comp=Z,5.8nm,0.6s,baz=110,slow=5.4,SNR=8.0						
VRAC				PKKPbc	PKKPbc	14 13 53.2	+1.0
	comp=Z,3.9nm,0.4s,baz=223,slow=2.9,SNR=5.3						
VRAC	Vranov	105.90	319	⇑P	Pdif	13 58 18.8	+1.4
VRAC	Vranov	105.90	319	⇑P	PKKPbc	14 13 52.7	+0.5
VRAC	Vranov	105.90	319	⇑P	Pdif	13 58 18.8	+1.4
DPC	Dobruska-Polom	105.94	320	eP	Pdif	13 58 19.3	+1.7
DPC	Dobruska-Polom	105.94	320	ePDIFF	Pdif	13 58 19.3	+1.7
DPC				ePKKP	PKKPbc	14 13 52.3	+0.1
OSTC	Ostas	105.98	320	ePDIFF	Pdif	13 58 21.4	+3.6
OSTC				eSDIF		14 09 26.5	
BLY	Banja Luka	106.01	314	eP	Pdif	13 58 18.7	+0.7
BSD	Bornholm Skovb	106.03	325	i P	PKiKP	14 02 29.0	+2.7
BSD	Bornholm Skovb	106.03	325	eP	Pdif	13 58 19.2	+1.4
BSD	Bornholm Skovb	106.03	325	i P	PKiKP	14 02 29.0	+2.7
KRUC	Moravsky	106.06	319	ePDIFF	Pdif	13 58 19.0	+0.9
KRUC				ePP	PP	14 02 48.6	-1.4
KRUC				eSKS	SKSac	14 08 06.3	+2.5
KRUC				eSDIFF	Sdif	14 09 26.3	-1.7
KRUC				ePKKP	PKKPbc	14 13 50.7	-1.0
CHVC	Chvalec	106.08	320	ePDIFF	Pdif	13 58 20.3	+2.1
MGRS	Mrkonjic Grad	106.11	314	eP	Pdif	13 58 21.1	+2.6
UPC	Upice	106.11	320	eP	Pdif	13 58 21.6	+3.3
UPC	Upice	106.11	320	ePDIFF	Pdif	13 58 21.6	+3.3
UPC				eSDIF	Sdif	14 09 25.6	-2.8
BEHE	Becsehely	106.12	316	eP	Pdif	13 58 19.7	+1.3
RICI	Ricice	106.17	313	P	PKiKP	14 02 27.6	+0.6
KALN	Kalnik	106.38	316	i P	PKiKP	14 02 27.7	+0.4
LSTV	Lastovo	106.41	312	i P	PKiKP	14 02 26.9	-0.5
KOGS	Kog	106.48	316	i Pdiff	Pdif	13 58 21.0	+0.9
KOGS				ePKiKP	PKiKP	14 02 30.1	+2.7
KOGS				e		14 04 54.4	
KOGS				eSKSac	SKSac	14 08 06.7	+1.0
KOGS				e		14 11 49.7	
KOGS				i PKKPbc	PKKPbc	14 13 50.2	-0.2
KOGS				eSS	SS	14 17 15.0	-0.2
KOGS				e		14 23 53.0	
KOGS				e		14 28 16.5	
CONA	Conrad Observa	106.56	318	i P	Pdif	13 58 20.9	+0.4
	comp=Z,14nm,1.2s						
CONA				eP	PKKPbc	14 13 50.5	+0.3
	comp=Z,26nm,1.2s,SNR=5.7						
CONA				eS	SKKPbc	14 16 37.3	-3.0
	comp=Z,17nm,0.9s						
NC602	NORSAR Array S	106.56	331	ePdif	Pdif	13 58 20.4	+0.4
NC602				IVmB_BB		14 01 14.8	
	comp=Z,4µm,4.4s						
NC602				eSKSac	SKSac	14 08 06.9	+1.4
NC602				eSS	SS	14 17 18.8	+3.4
TREC	Trest	106.62	319	ePKKP	PKKPbc	14 13 49.3	-0.7
NB2	NORSAR Subarra	106.64	332	P	Pdif	13 58 19.8	-0.7
	comp=Z,108nm,1.4s,baz=74,slow=4.4						
NB2	NORSAR Subarra	106.64	332	PKPdf	PKiKP	14 02 28.9	+1.5
	comp=Z,85nm,1.2s,baz=68,slow=1.9						
NOA	NORSAR Array B	106.64	332	Pdiff	Pdif	13 58 19.4	-1.1
	comp=Z,15nm,0.7s,baz=74,slow=4.5,SNR=34						
NOA				PKiKP	PKiKP	14 02 29.1	+1.8
	comp=Z,40nm,1.0s,baz=262,slow=3.2,SNR=5.6						
NOA				PP	PP	14 02 45.3	-8.5
	comp=Z,19nm,0.8s,baz=71,slow=7.0,SNR=5.5						
NOA				SKiKP	SKiKP	14 05 10.0	0.0
	comp=Z,21nm,0.9s,baz=259,slow=3.2,SNR=4.6						
NOA				PKKPbc	PKKPbc	14 13 47.8	-2.6
	comp=Z,2.7nm,0.9s,baz=61,slow=2.6,SNR=3.7						
KIJV	Kijevo	106.64	314	i P	PKiKP	14 02 28.4	+0.5
HVAR	Hvar	106.69	313	i P	PKiKP	14 02 28.2	+0.3
MATE	Matera	106.73	310	⇑P	PKKPbc	14 13 49.1	-0.2
PTJ	Puntijarka	106.74	316	P	PKiKP	14 02 28.2	+0.1
TIP	Timpagrande	106.80	309	⇑P	PKKPbc	14 13 47.2	-2.0
ARSA	Arzberg	106.88	317	eP	Pdif	13 58 22.2	+0.4
	comp=Z,27nm,1.2s,SNR=9.6						
ARSA				P	PKiKP	14 02 29.7	+1.5
	comp=Z,141nm,1.2s						
ARSA				eP	PKKPbc	14 13 49.2	0.0
	comp=Z,24nm,1.1s,SNR=6.2						
ARSA				i S	SKKPbc	14 16 37.9	-1.4
	comp=Z,30nm,1.2s						
PVCC	Panska Ves	107.02	321	eP	Pdif	13 58 25.7	+3.3
PVCC	Panska Ves	107.02	321	ePDIFF	Pdif	13 58 25.7	+3.3
UDBI	Udbina	107.04	314	i P	PKiKP	14 02 28.7	+0.1
CRES	Cresnjev	107.11	316	eP	Pdif	13 58 24.0	+1.1
PRU	Pruhonice	107.13	320	eP	Pdif	13 58 24.3	+1.5
PRU				e		14 02 53.9	
PRU				e		14 08 08.2	
PRU	Pruhonice	107.13	320	ePDIFF	Pdif	13 58 24.3	+1.5
PRU				ePP	PP	14 02 53.9	-3.8
PRU				eSKS	SKSac	14 08 08.2	-0.2
PRU				eSDIF	Sdif	14 09 37.9	+1.1
PRU				ePKKP	PKKPbc	14 13 48.5	0.0
MORI	Morici	107.16	314	i P	PKiKP	14 02 28.9	+0.1
OSL	Oslo	107.17	331	ePdif	Pdif	13 58 23.2	+0.4
OSL				IVmB_BB		13 59 16.0	
	comp=Z,5µm,5.1s						
OSL				ePP	PP	14 02 56.6	-0.9
OSL				eSKSac	SKSac	14 08 07.6	-0.4
OSL				i		14 09 33.1	
OSL				eSS	SS	14 17 25.6	+2.2
PRA	Prague	107.18	320	eSDIF	Sdif	14 09 38.1	+0.8
ZIRJ	Zirje	107.23	313	i P	PKiKP	14 02 28.7	-0.2
SOKA	Soboth	107.29	317	eP	Pdif	13 58 23.8	0.0
	comp=Z,25nm,1.3s,SNR=10						
SOKA				eP	PKiKP	14 02 29.5	+0.4
	comp=Z,253nm,1.3s						
SOKA				eP	PP	14 02 58.4	-0.6
	comp=Z,253nm,1.3s						
SOKA				i S	SKKPbc	14 16 36.6	-1.6
	comp=Z,28nm,1.3s						
DOMB	Dombas	107.34	333	ePdif	Pdif	13 58 22.8	-0.8
DOMB				IVmB_BB		14 01 21.2	
	comp=Z,5µm,6.1s						
DOMB				eSKSac	SKSac	14 08 09.3	+0.4
DOMB				i		14 09 39.5	
DOMB				eSS	SS	14 17 25.8	0.0
BRG	Berggiesshubel	107.36	321	⇓iPiff	Pdif	13 58 25.5	+1.7
BRG				Amp		13 58 28.0	
	comp=Z,57nm,1.2s						
BRG				ex	x	14 00 39.4	
BRG				Amp		14 00 44.5	
	comp=Z,24nm,1.4s						
BRG				ex	x	14 01 32.7	
BRG				Amp		14 01 40.9	
	comp=Z,43nm,1.4s						
BRG				ex	x	14 01 46.0	
BRG				Amp		14 01 49.7	
	comp=Z,75nm,1.5s						
BRG				PKiKP	PKiKP	14 02 30.8	+1.8
BRG				Amp		14 02 32.7	
	comp=Z,178nm,1.8s						
BRG				ex	x	14 02 47.6	
BRG				Amp		14 02 49.3	
	comp=Z,156nm,1.4s						
BRG				PP	PP	14 03 01.9	+2.7
BRG				Amp		14 03 07.2	
	comp=Z,192nm,1.1s						
BRG	Berggiesshubel	107.36	321	SP	SP	14 11 21.0	-5.5
BRG				⇑PKKPb		14 13 47.8	
BRG				Amp		14 13 48.8	
	comp=Z,25nm,1.0s						
BRG				PKKPab	PKKPab	14 14 04.9	+1.7
BRG				Amp		14 14 07.7	
	comp=Z,44nm,1.4s						
BRG				SS	SS	14 17 26.0	-0.6
BRG				i PKPPKP		14 22 10.1	
BRG				Amp		14 22 12.0	
	comp=Z,43nm,1.7s						
BRG				ex	x	14 28 29.0	
CKRC	Cesky Krumlov	107.46	319	ePDIFF	Pdif	13 58 25.7	+1.3
CKRC				eSKS	SKSac	14 08 12.0	+2.1
CKRC				eSDIF	Sdif	14 09 40.3	+0.6
CKRC				ePKKP	PKKPbc	14 13 47.7	+0.2
LLD	Lille Linde	107.51	326	i P	Pdif	13 58 26.6	+2.3
LLD	Lille Linde	107.51	326	eP	Pdif	13 58 26.6	+2.3
LLD	Lille Linde	107.51	326	eP	Pdif	13 58 26.7	+2.3
PBCC	Pribram	107.52	320	ePDIFF	Pdif	13 58 26.4	+1.8
PBCC				eSDIF	Sdif	14 09 41.1	+0.9
PBCC				ePKKP	PKKPbc	14 13 47.0	-0.3
DAG	Danmarks Havn	107.56	351	i P	Pdif	13 58 23.0	-1.2
	comp=Z,71nm,1.1s						
DAG	Danmarks Havn	107.56	351	i P	Pdif	13 58 23.0	-1.2
DAG				pmax	pmax		
	comp=Z,71nm,1.1s						
DAG	Danmarks Havn	107.56	351	i P	Pdif	13 58 23.0	-1.2
DAG				IAmb	IAmb	13 58 29.0	
	comp=Z,71nm,1.1s						
DUGI	Dugi Otok	107.61	314	i P	PKiKP	14 02 29.5	-0.1
MOA	Molln	107.64	318	eP	Pdif	13 58 23.1	-2.1
	comp=Z,20nm,1.2s,SNR=7.9						
MOA				eP	PKiKP	14 02 30.9	+1.3
	comp=Z,62nm,1.1s						
MOA				eS	SKKPbc	14 16 35.3	-1.9
	comp=Z,24nm,1.1s						
OBKA	Obir	107.64	316	i P	Pdif	13 58 25.8	+0.5
	comp=Z,26nm,1.1s						
OBKA				eP	PKiKP	14 02 31.3	+1.6
	comp=Z,230nm,1.4s						
OBKA				i P	PKKPbc	14 13 47.2	+0.3
	comp=Z,27nm,0.8s,SNR=11						
OBKA				i S	SKKPbc	14 16 35.5	-1.7
	comp=Z,26nm,1.1s						
LJU	Ljubljana	107.72	316	i Pdiff	Pdif	13 58 26.8	+1.2
LJU				ePKiKP	PKiKP	14 02 30.9	+1.1
LJU				ePP	PP	14 03 00.8	-1.3
LJU				e		14 05 27.4	
LJU				eSKSac	SKSac	14 08 11.5	+0.4
LJU				eSKKSac	SKKSac	14 09 07.1	0.0
LJU				eSdiff	Sdif	14 09 40.6	-1.4
LJU				eSP	SP	14 11 28.4	-2.0
LJU				e		14 11 54.7	
LJU				e		14 12 38.1	
LJU				esSdiff		14 13 21.6	
LJU				eSS	SS	14 17 30.1	-1.7
LJU				e		14 20 14.7	
LJU				e		14 21 28.2	
LJU				e		14 25 06.6	
LJU				e		14 28 40.4	
LJU	Ljubljana	107.72	316	eP	Pdif	13 58 26.8	+1.2
KONO	Kongsberg	107.79	331	ePdif	Pdif	13 58 25.9	+0.3
KONO				IVmB_BB		13 59 31.9	
	comp=Z,4µm,6.5s						
KONO				eSKSdf	SKSdf	14 08 50.1	+1.7
KONO				eSS	SS	14 17 34.8	+3.0
CEY	Cerknica	107.83	316	eP	Pdif	13 58 25.8	-0.3
MOL	Molde	107.85	334	ePdif	Pdif	13 58 26.0	+0.3
MOL				IVmB_BB		14 00 58.3	
	comp=Z,6µm,5.4s						
MOL				eSKSdf	SKSdf	14 08 48.9	+0.5
MOL				eSS	SS	14 17 33.9	+1.6
GERES	GERESS Array B	107.85	319	Pdiff	Pdif	13 58 27.4	+1.2
	comp=Z,7.6nm,0.8s,baz=90,slow=5.3,SNR=38						
GERES				PKiKP	PKiKP	14 02 31.4	+1.3
	comp=Z,16nm,0.6s,baz=116,slow=1.7,SNR=18						
GERES				SKiKP	SKiKP	14 05 13.4	+0.7
	comp=Z,26nm,0.8s,baz=64,slow=3.1,SNR=7.1						
GERES				PKKPbc	PKKPbc	14 13 46.1	-0.2
	comp=Z,7.8nm,0.6s,baz=269,slow=1.6,SNR=24						
GERES				PKKPab	PKKPab	14 14 00.1	-1.0
	comp=Z,14nm,0.9s,baz=243,slow=1.5,SNR=7.9						
GERES				SKKPbc	SKKPbc	14 16 34.5	-2.3
	comp=Z,12nm,0.9s,baz=259,slow=1.4,SNR=7.5						
CLL	Collm	107.86	322	ePdif	Pdif	13 58 27.0	+0.9
CLL				e		14 01 34.0	
CLL				e		14 02 21.0	
CLL				e(PKiKP)		14 02 33.0	
CLL				ePP	PP	14 02 59.0	-3.9
CLL				i PPmax		14 03 09.9	
	comp=Z,261nm,1.5s						
CLL				i		14 05 13.3	
	comp=Z,74nm,1.1s						
CLL				ePPP	PPP	14 05 19.0	
CLL				esPP		14 05 43.0	
CLL				eSKSac	SKSac	14 08 13.0	+1.6
CLL				eSdif	Sdif	14 09 45.0	+2.1
CLL				eSP	SP	14 11 27.0	-4.4
CLL				esSKSac	sSKSac	14 12 12.0	+6.7
CLL				ePS	PS	14 12 36.0	-1.7
CLL				esSKKSac		14 13 01.0	
CLL				esSdiff		14 13 30.0	
CLL				ePKKPbc	PKKPbc	14 13 46.0	-0.2
	comp=Z,19nm,0.9s						
CLL				ePKKPab	PKKPab	14 14 02.0	+1.1
	comp=Z,22nm,0.9s						
CLL				e(sSP)		14 15 14.0	
CLL				e		14 15 37.0	
CLL				esPPS		14 15 59.0	
CLL				eSKKPbc	SKKPbc	14 16 27.0	-10
CLL				i SKKPdf	SKKPdf	14 16 34.8	-6.2
	comp=Z,31nm,1.0s						
CLL				eSS	SS	14 17 18.0	-15
CLL				eSPS	SPS	14 17 42.0	
CLL				ePcPPKPre		14 17 52.0	
CLL				e		14 18 36.0	
CLL				esSS		14 20 48.0	
CLL				eSSS	SSS	14 21 48.0	
CLL				ePKPPKPdf	P'P'df	14 22 08.0	-0.3
CLL				e		14 23 00.0	
CLL				e		14 23 45.0	
CLL				esSSS		14 24 30.0	
CLL				eSKPPKPdf		14 24 43.0	
CLL				eSSSS		14 24 48.0	
CLL				ePPPPrev		14 26 30.0	
CLL				e		14 28 36.0	
CLL	Collm	107.86	322	eP	Pdif	13 58 27.0	+0.9
KHC	Kasperske Hory	107.89	319	eP	Pdif	13 58 27.4	+1.1
KHC				e		14 02 59.5	
KHC				MLR	MLR		
	comp=Z,8µm,23.7s						
KHC	Kasperske Hory	107.89	319	ePDIFF	Pdif	13 58 27.4	+1.1
KHC				ePP	PP	14 02 59.5	-3.7
KHC				eSDIF	Sdif	14 09 38.4	-4.9
KHC				ePKKP	PKKPbc	14 13 44.7	-1.5
KHC				ex	x	14 14 03.3	
KHC				eSKKP		14 16 34.0	
KHC				AMS	AMS	14 49 30.0	
	comp=Z,8µm,23.7s						
SKAR	Skarslia	108.11	332	ePdif	Pdif	13 58 26.5	-0.5
SKAR				IVmB_BB		14 00 24.1	
	comp=Z,6µm,5.5s						
SKAR				eSS	SS	14 17 38.4	+2.3
AKN	Aaknes	108.22	334	ePdif	Pdif	13 58 27.9	+0.5
AKN				IVmBBB		13 58 31.4	
	comp=Z,4µm,4.6s						
AKN				i		14 09 46.5	
AKN				eSP	SP	14 11 31.4	-2.7
AKN				eSS	SS	14 17 38.5	+1.1
CADS	Cadrg	108.24	316	i Pdiff	Pdif	13 58 28.1	+0.2
CADS				e		14 04 54.9	
CADS				eSKSac	SKSac	14 08 13.6	+0.2
CADS				eSKKSac	SKKSac	14 09 09.9	-0.8
CADS				i Sdiff	Sdif	14 09 43.9	-2.5
CADS				ePKKPbc	PKKPbc	14 13 45.6	+0.7
CADS				eSKKPbc	SKKPbc	14 16 34.4	-1.0
MYKA	Terra Mystica	108.24	317	i P	Pdif	13 58 29.2	+1.2
	comp=Z,15nm,1.6s						
MYKA				eP	PKKPbc	14 13 44.5	-0.5
	comp=Z,32nm,1.1s,SNR=9.2						
MYKA				eS	SKKPbc	14 16 34.2	-1.3
	comp=Z,44nm,1.5s						
WET	Wettzell	108.33	319	eSKKPbc	SKKPbc	14 16 34.4	-0.9
	baz=257,slow=2.9						
TANN	Tannenbergstha	108.37	321	eSKKPbc	SKKPbc	14 16 34.5	-0.8
	baz=257,slow=2.9						
KBA	Koelnbreinsper	108.37	317	eP	Pdif	13 58 28.4	-0.3
	comp=Z,23nm,1.2s,SNR=5.1						
KBA				eP	PKKPbc	14 13 43.8	-0.9
	comp=Z,11nm,0.3s,SNR=19						
KBA				i S	SKKPbc	14 16 33.8	-1.5
	comp=Z,31nm,1.2s						
NKC	Novy Kostel	108.41	321	eP	Pdif	13 58 31.0	+2.4
NKC	Novy Kostel	108.41	321	ePDIFF	Pdif	13 58 31.0	+2.4
NKC				ePKKP	PKKPbc	14 13 44.9	+0.3
WERN	Wernitzgruen	108.45	321	eSKKPbc	SKKPbc	14 16 34.5	-0.5
	baz=257,slow=2.9						
GUNZ	Gunzen	108.46	321	eSKKPbc	SKKPbc	14 16 34.4	-0.6
	baz=257,slow=2.9						
PLN	Plauen	108.55	321	eSKKPbc	SKKPbc	14 16 34.0	-0.8
	baz=257,slow=2.9						
RJOB	Jochberg	108.63	318	eSKKPbc	SKKPbc	14 16 33.4	-1.0
	baz=257,slow=2.9						
NEUB	Neuenburg	108.64	322	eSKKPbc	SKKPbc	14 16 33.6	-0.9
	baz=257,slow=2.9						
ROTZ	Rotzenmuhle	108.65	320	eSKKPbc	SKKPbc	14 16 33.6	-0.8
	baz=257,slow=2.9						
HOMB	Homborsund	108.73	329	eSS	SS	14 17 48.1	+3.8
HOMB	Homborsund	108.73	329	i P	PKiKP	14 02 33.0	+1.7
MOX	Moxa	108.85	321	eSKKPbc	SKKPbc	14 16 33.0	-0.9
	baz=257,slow=2.9						
MUD	Monsted U'grnd	108.89	327	i P	Pdif	13 58 32.1	+1.6
	comp=Z,90nm,1.2s						
MUD	Monsted U'grnd	108.89	327	i P	Pdif	13 58 32.1	+1.6
MUD				pmax	pmax		
	comp=Z,90nm,1.2s						
MUD	Monsted U'grnd	108.89	327	i P	Pdif	13 58 32.2	+1.6
MUD				IAmb	IAmb	13 58 33.9	
	comp=Z,90nm,1.2s						
BSEG	Bad Segeberg	108.90	325	eSKKPbc	SKKPbc	14 16 32.9	-1.0
	baz=257,slow=2.9						
HYA	Hoyanger	108.93	333	ePdif	Pdif	13 58 32.0	+1.4
HYA				IVmB_BB		13 59 15.4	
	comp=Z,7µm,4.2s						
HYA				eSKPdf	SKiKP	14 05 15.1	+0.9
ABTA	Abfaltersbach	108.99	317	eP	Pdif	13 58 30.9	-0.4
	comp=Z,18nm,1.1s,SNR=7.7						
ABTA				i P	PKiKP	14 02 32.2	-0.1
	comp=Z,41nm,0.6s						
ABTA				eS	SKiKP	14 05 15.5	+0.6
	comp=Z,96nm,0.9s,SNR=6.6						
ABTA				eS	SKSac	14 08 17.7	+1.1
	comp=Z,74nm,1.4s						
ABTA				eP	PKKPbc	14 13 43.2	+0.5
	comp=Z,36nm,0.9s,SNR=8.3						
ABTA				i S	SKKPbc	14 16 31.4	-2.0
	comp=Z,66nm,1.3s						
ODD1	Odda	109.14	331	ePdif	Pdif	13 58 32.1	+0.5

ODD1				IVmB_BB		13 58 59.4	
	comp=Z,7µm,5.0s						
ODD1				eSKSac	SKSac	14 08 19.7	+3.2
SKMB	Sankelmark Bun	109.21	326	eSKKPbc	SKKPbc	14 16 32.3	-0.7
	baz=257,slow=2.9						
FOO	Floro	109.29	333	ePdif	Pdif	13 58 31.9	-0.3
FOO				IVmB_BB		14 00 20.7	
	comp=Z,8µm,6.4s						
FOO				eSKSac	SKSac	14 08 18.6	+1.7
GRF	Grafenberg Arr	109.29	320	ePdiff	Pdif	13 58 33.9	+1.4
	baz=89,slow=3.6						
GRF				ePKiKP	PKiKP	14 02 33.7	+1.0
	baz=119,slow=0.9						
GRF				ePP	PP	14 03 14.0	+0.8
	baz=95,slow=6.8						
GRF				epPKiKP	SKiKP	14 05 16.8	+1.4
	baz=105,slow=1.0						
GRF				eSP	SP	14 12 06.8	+22
	baz=71,slow=8.7						
GRF				ePKKPbc	PKKPbc	14 13 41.9	+0.2
	baz=244,slow=3.5						
GRF				ePKKPab	PKKPdf	14 13 56.1	+0.3
	baz=251,slow=5.4						
GRF				eSKKPbc	SKKPbc	14 16 32.1	-0.5
	baz=257,slow=2.9						
BLS5	Blasjo	109.39	331	ePdif	Pdif	13 58 34.0	+1.3
BLS5				IVmB_BB		13 58 39.9	
	comp=Z,6µm,4.8s						
BLS5				eSS	SS	14 17 57.6	+4.6
JMIC	Jan Mayen	109.48	345	ePdif	Pdif	13 58 33.6	+0.7
WTTA	Wattenberg	109.49	318	eP	Pdif	13 58 33.8	+0.1
	comp=Z,43nm,1.2s,SNR=11						
WTTA				eP	PKiKP	14 02 33.8	+0.5
	comp=Z,115nm,0.6s,SNR=14						
WTTA				eS	SKiKP	14 05 17.0	+1.0
	comp=Z,166nm,0.9s,SNR=5.7						
WTTA				eS	SKSac	14 08 21.2	+2.3
	comp=Z,71nm,0.9s						
WTTA				eP	PKKPbc	14 13 42.0	+0.7
	comp=Z,50nm,0.9s,SNR=7.7						
WTTA				eS	SKKPbc	14 16 30.4	-1.7
	comp=Z,77nm,1.4s						
WATA	Walderalm	109.52	318	eP	Pdif	13 58 33.7	0.0
	comp=Z,39nm,1.2s,SNR=9.5						
WATA				eP	PKiKP	14 02 34.3	+1.0
	comp=Z,122nm,1.2s,SNR=9.2						
WATA				eS	SKiKP	14 05 16.8	+0.7
	comp=Z,182nm,1.0s,SNR=8.9						
WATA				eP	PKKPbc	14 13 41.5	+0.4
	comp=Z,30nm,0.8s,SNR=4.7						
WATA				eS	SKKPbc	14 16 30.9	-1.1
	comp=Z,54nm,1.3s						
FUR	Furstenfeldbru	109.56	319	eSKKPbc	SKKPbc	14 16 30.9	-0.9
	baz=257,slow=2.9						
BER	Bergen	109.59	332	ePdif	Pdif	13 58 35.7	+2.2
BER				IVmB_BB		14 00 48.8	
	comp=Z,8µm,5.1s						
DBG	Daneborg	109.71	350	i P	Pdif	13 58 34.5	+0.7
DBG				IAmb	IAmb	13 58 38.0	
	comp=Z,66nm,1.2s						
SQTA	Sankt Quirin	109.78	318	eP	Pdif	13 58 35.2	+0.3
	comp=Z,28nm,0.9s,SNR=11						
SQTA				eP	PKiKP	14 02 34.9	+1.1
	comp=Z,75nm,1.1s						
SQTA				eP	PP	14 03 15.4	-1.5
	comp=Z,116nm,1.3s						
SQTA				eS	SKiKP	14 05 16.7	+0.2
	comp=Z,104nm,1.2s						
SQTA				eS	SKSac	14 08 20.9	+0.9
	comp=Z,75nm,1.2s						
SQTA				eP	PKKPbc	14 13 41.0	+0.8
	comp=Z,44nm,0.7s,SNR=9.5						
SQTA				eS	SKKPbc	14 16 29.5	-1.7
	comp=Z,52nm,1.0s						
MOTA	Moosalm	109.83	318	eP	Pdif	13 58 35.3	+0.2
	comp=Z,49nm,1.1s,SNR=14						
MOTA				eP	PKiKP	14 02 34.9	+1.0
	comp=Z,77nm,1.0s,SNR=5.9						
MOTA				eP	PP	14 03 16.7	-0.6
	comp=Z,211nm,1.1s						
MOTA				eS	SKiKP	14 05 17.2	+0.6
	comp=Z,95nm,1.0s						
MOTA				i P	PKKPbc	14 13 40.7	+0.5
	comp=Z,42nm,0.8s,SNR=7.0						
MOTA				eS	SKKPbc	14 16 29.1	-2.0
	comp=Z,56nm,1.4s						
RETA	Reutte	110.03	318	eP	Pdif	13 58 36.2	+0.3
	comp=Z,23nm,1.4s						
RETA				eP	PKiKP	14 02 35.5	+1.3
	comp=Z,19nm,0.8s						
RETA				eS	SKiKP	14 05 17.1	+0.1
	comp=Z,96nm,1.1s						
RETA				eS	SKSac	14 08 22.4	+1.6
	comp=Z,66nm,1.6s						
RETA				i P	PKKPbc	14 13 40.1	+0.7
	comp=Z,34nm,1.1s						
FETA	Feichten	110.14	317	eP	Pdif	13 58 36.7	+0.1
	comp=Z,28nm,1.1s,SNR=9.5						
FETA				eP	PKiKP	14 02 35.4	+0.9
	comp=Z,44nm,0.9s						
FETA				eP	PP	14 03 19.2	-0.3
	comp=Z,108nm,1.2s						
FETA				i S	SKSac	14 08 22.7	+1.1
	comp=Z,47nm,1.2s						
FETA				eP	PKKPbc	14 13 40.0	+0.8
	comp=Z,40nm,0.9s,SNR=7.6						
FETA				i S	SKKPbc	14 16 28.6	-1.6
	comp=Z,64nm,1.1s						
TULEG	Thule	110.58	3	i P	Pdif	13 58 37.7	+0.1
TULEG				IAmb	IAmb	13 58 42.6	
	comp=Z,81nm,1.3s						
DAVA	Damuels	110.66	318	i P	Pdif	13 58 39.0	+0.2
	comp=Z,34nm,1.4s						
DAVA				eP	PKiKP	14 02 36.1	+0.6
	comp=Z,117nm,0.9s						
DAVA				eP	PP	14 03 21.8	-1.4
	comp=Z,233nm,1.3s						
DAVA				i S	SKiKP	14 05 18.8	+0.5
	comp=Z,170nm,0.9s						
DAVA				S	SKSac	14 08 25.6	+2.0
	comp=Z,107nm,1.2s						
DAVA				i P	PKKPbc	14 13 38.2	+0.7
	comp=Z,30nm,0.9s						
DAVA				eS	SKKPbc	14 16 27.1	-1.6
	comp=Z,43nm,1.1s						
DAVOX	Davos/Dischmat	110.76	317	Pdiff	Pdif	13 58 40.5	+1.2
	comp=Z,29nm,0.6s,baz=253,slow=7.4,SNR=19						
DAVOX				PKiKP	PKiKP	14 02 36.7	+1.0
	comp=Z,48nm,0.6s,baz=276,slow=0.8,SNR=18						
DAVOX				SKP		14 05 19.6	
	comp=Z,61nm,0.9s,baz=140,slow=0.9,SNR=4.7						
DAVOX				S	SKSac	14 08 25.0	+0.9
	comp=Z,25nm,1.0s,baz=100,slow=19,SNR=3.0						
DAVOX				PKKPbc	PKKPbc	14 13 37.7	+0.5
	comp=Z,38nm,0.9s,baz=324,slow=1.0,SNR=16						
DAVOX				PKKPab	PKKPab	14 13 48.8	+0.4
	comp=Z,32nm,0.8s,baz=322,slow=6.5,SNR=9.4						
DAVOX				SKKPbc	SKKPbc	14 16 26.4	-2.0
	comp=Z,22nm,1.0s,baz=190,slow=0.9,SNR=5.1						
STU	Stuttgart	110.79	319	eSKKPbc	SKKPbc	14 16 27.5	-0.7
	baz=257,slow=2.9						
TNS	Taunus Mts	110.92	321	eSKKPbc	SKKPbc	14 16 27.2	-0.8
	baz=257,slow=2.9						
YKA	Yellowknife Ar	111.28	25	Pdiff	Pdif	13 58 40.9	-0.1
	comp=Z,4.5nm,0.8s,baz=297,slow=4.1,SNR=46						
YKA				PKiKP	PKiKP	14 02 35.6	-0.3
	comp=Z,35nm,0.5s,baz=297,slow=1.7,SNR=55						
YKA				PP	PP	14 03 24.3	-2.4
	comp=Z,30nm,0.8s,baz=296,slow=5.6,SNR=5.7						
YKA				SKP		14 05 19.0	
	comp=Z,32nm,0.7s,baz=327,slow=1.1,SNR=8.6						
YKA				S	SKSac	14 08 25.4	+0.4
	comp=Z,7.3nm,0.9s,baz=302,slow=3.5,SNR=4.5						
YKA				PKKPbc	PKKPbc	14 13 31.5	-4.3
	comp=Z,1.8nm,0.5s,baz=109,slow=4.3,SNR=4.9						
YKA				PKKPab	PKKPab	14 13 46.0	+0.3
	comp=Z,7.4nm,0.8s,baz=102,slow=5.3,SNR=6.2						
YKA				SKKPbc	SKKPbc	14 16 23.7	-3.7
	comp=Z,18nm,0.9s,baz=112,slow=3.3,SNR=8.8						
BUG	Bochum--Univer	111.33	323	eSKKPbc	SKKPbc	14 16 25.8	-0.9
	baz=257,slow=2.9						
BFO	Black Forest	111.45	319	eSKKPbc	SKKPbc	14 16 25.1	-1.2
	baz=257,slow=2.9						
A04D	Lummi Island	111.77	40	P	PKiKP	14 02 38.1	+0.8
	baz=284						
D03D	Eldon	111.80	42	P	PKiKP	14 02 37.3	-0.1
	baz=284						
D04E	Lakebay	112.10	42	P	PKiKP	14 02 39.2	+1.3
	baz=284						
J01E	Myrtle Point	112.15	46	P	PKiKP	14 02 38.8	+0.6
	baz=281						
F04D	Rainier, OR	112.19	43	P	PKiKP	14 02 40.2	+2.0
	baz=283						
G03D	McMinnville, O	112.20	44	P	PKiKP	14 02 39.2	+0.9
	baz=282						
BTNL	Ternell	112.26	322	dPKiKP	PKiKP	14 02 37.9	-0.3
BTNL				dPP	PP	14 03 35.9	+1.9
MEM	Membach	112.33	322	dPKiKP	PKiKP	14 02 39.9	+1.5
MEM				dPP	PP	14 03 36.3	+1.8
E04D	Cinebar	112.38	43	P	PKiKP	14 02 39.5	+0.9
	baz=284						
BHOU	Houvegnez	112.40	322	dPKiKP	PKiKP	14 02 38.9	+0.4
BHOU				dPP	PP	14 03 37.2	+2.1
K02D	Willamette Mer	112.43	47	P	PKiKP	14 02 40.4	+1.5
	baz=281						
I03D	Drain, OR	112.46	46	P	PKiKP	14 02 40.5	+1.7
	baz=282						
BEBN	Eben Emael	112.47	322	dPKiKP	PKiKP	14 02 39.8	+1.2
BEBN				dPP	PP	14 03 34.8	-0.7
WLF	Walferdange	112.50	321	dPKiKP	PKiKP	14 02 41.3	+2.6
WLF				dPP	PP	14 03 37.0	+1.2
WLF	Walferdange	112.50	321	eSKKPbc	SKKPbc	14 16 22.6	-0.6
	baz=257,slow=2.9						
BSTI	Sart Tilman	112.60	322	dPKiKP	PKiKP	14 02 40.5	+1.6
BSTI				dPP	PP	14 03 40.6	+4.1
H04D	Lebanon	112.72	45	P	PKiKP	14 02 40.7	+1.4
	baz=283						
BCLA	Clavier	112.81	322	dPKiKP	PKiKP	14 02 40.1	+0.8
BCLA				dPP	PP	14 03 38.7	+0.8
RCHB	Rochefort	112.93	322	dPKiKP	PKiKP	14 02 39.9	+0.4
RCHB				dPP	PP	14 03 40.3	+1.6
BGES	Gesves	112.95	322	dPKiKP	PKiKP	14 02 40.2	+0.7
BGES				dPP	PP	14 03 40.1	+1.2
SCO	Scoresbysund	113.02	348	i P	Pdif	13 58 50.0	+1.4
	comp=Z,44nm,1.2s						
SCO	Scoresbysund	113.02	348	i P	PKiKP	14 02 40.0	+1.0
SCO	Scoresbysund	113.02	348	i P	Pdif	13 58 50.0	+1.4
SCO				i		14 02 40.0	
SCO				pmax	pmax		
	comp=Z,44nm,1.2s						
SCO	Scoresbysund	113.02	348	i P	PKiKP	14 02 40.1	+1.0
SCO	Scoresbysund	113.02	348	i P	Pdif	13 58 50.0	+1.4
SCO				IAmb	IAmb	13 58 53.7	
	comp=Z,44nm,1.2s						
KEST	Kesra	113.03	306	Pdiff	Pdif	13 58 51.8	+2.3
	comp=Z,11nm,0.9s,baz=309,slow=6.6,SNR=5.9						
KEST				PKiKP	PKiKP	14 02 42.2	+2.0
	comp=Z,26nm,0.6s,baz=142,slow=0.8,SNR=24						
KEST				PP	PP	14 03 38.1	-2.0
	comp=Z,231nm,1.0s,baz=339,slow=3.6,SNR=12						
KEST				PKKPbc	PKKPbc	14 13 30.4	+1.1
	comp=Z,48nm,1.0s,baz=184,slow=1.3,SNR=12						
I04A	Tendick Farm,	113.10	45	P	PKiKP	14 02 39.5	-0.6
	baz=282						
C06D	Leavenworth	113.14	41	P	PKiKP	14 02 40.7	+0.6
	baz=285						
BMRD	Maredsous	113.17	322	dPKiKP	PKiKP	14 02 41.4	+1.5
BMRD				dPP	PP	14 03 41.7	+1.3
UCC	Uccle	113.27	322	dPKiKP	PKiKP	14 02 41.2	+1.1
M02C	Callahan	113.27	48	P	PKiKP	14 02 41.2	+0.7
	baz=281						
F05D	White Salmon	113.28	43	P	PKiKP	14 02 40.4	+0.1
	baz=284						
DOU	Dourbes	113.34	322	dPKiKP	PKiKP	14 02 41.2	+0.9
DOU				dPP	PP	14 03 44.2	+2.6
SNF	Seneffe	113.41	322	dPKiKP	PKiKP	14 02 41.4	+1.1
SNF				dPP	PP	14 03 46.2	+4.2
J04D	Umpqua Nationa	113.44	46	P	PKiKP	14 02 41.3	+0.3
	baz=282						
N02D	Trinity Center	113.46	49	P	PKiKP	14 02 41.3	+0.4
	baz=281						
L04D	Klamath Falls	113.51	47	P	PKiKP	14 02 40.9	-0.2
	baz=282						
O02D	Mt. Diablo Mer	113.55	49	P	PKiKP	14 02 41.8	+0.6
	baz=281						
I05D	Terrebonne, OR	113.73	45	P	PKiKP	14 02 41.5	+0.2
	baz=284						
SUMG	Summit	113.81	354	i P	Pdif	13 58 56.2	+3.6
	comp=Z,16nm,0.9s						
SUMG	Summit	113.81	354	i P	PKiKP	14 02 42.6	+1.5
SUMG	Summit	113.81	354	i P	Pdif	13 58 56.2	+3.6
SUMG				pmax	pmax		
	comp=Z,16nm,0.9s						
SUMG	Summit	113.81	354	i P	PKiKP	14 02 42.6	+1.5
SUMG	Summit	113.81	354	i P	Pdif	13 58 56.2	+3.6
SUMG				IAmb	IAmb	13 59 00.8	
	comp=Z,16nm,0.9s						
K04D	Chiloquin, OR	113.83	47	P	PKiKP	14 02 41.7	+0.1
	baz=282						
M04C	Macdoel	113.94	48	P	PKiKP	14 02 42.2	+0.3
	baz=282						
J05D	Fort Rock, OR	114.05	46	P	PKiKP	14 02 42.7	+0.6
	baz=283						
O03E	Paynes Creek	114.27	49	P	PKiKP	14 02 42.9	+0.3
	baz=281						
CMAH	Djebel Manchou	114.44	307	P	PKiKP	14 02 43.9	+1.0
ABSA	Djebel Ababsia	114.45	306	P	PKiKP	14 02 44.8	+1.8
UPNV	Upernavik	114.63	360	i P	PKiKP	14 02 43.0	+0.9
UPNV	Upernavik	114.63	360	i P	Pdif	13 58 59.2	+3.5
UPNV				IAmb	IAmb	13 59 00.1	
	comp=Z,7.1nm,0.8s						
WACR	West Acre	114.80	325	eP	PKiKP	14 02 44.1	+1.2
CAEH	'Ain El Ouahch	114.86	307	P	PKiKP	14 02 45.0	+1.3
GDLE	Glaisdale, N Y	114.93	327	eP	PKPdf	14 02 43.0	-0.2
CKFL	Kef-Lekhel	115.03	307	P	PKiKP	14 02 45.8	+1.7
ESY	Stoneypath	115.23	329	eP	PKiKP	14 02 44.1	+0.4
CASM	Ain Smara	115.24	307	P	PKiKP	14 02 45.7	+1.2
CTEI	Djebel Teioual	115.34	306	P	PKiKP	14 02 46.0	+1.2
EDMD	Edmundbyers	115.37	328	eP	PKiKP	14 02 44.2	+0.2
NEW	Newport	115.46	40	P	PKiKP	14 02 45.4	+0.8
	baz=289						
NEW	Newport	115.46	40	PKIKP	PKiKP	14 02 44.8	+0.3
NEW	Newport	115.46	40		PKiKP	14 02 44.8	+0.3
HPK	Haverah Park	115.56	327	eP	PKiKP	14 02 45.1	+0.7
HMNX	Herstmonceux	115.65	323	eP	PKiKP	14 02 44.8	+0.1
DFRA	Djebel Bou Aff	115.67	307	P	PKiKP	14 02 47.0	+1.6
INVG	Invergeldie, C	115.71	330	eP	PKiKP	14 02 45.5	+0.8
EKA	Eskdalemuir Ar	115.77	329	Pdiff	Pdif	13 59 02.1	+1.0
	comp=Z,2.3nm,0.8s,baz=68,slow=4.7,SNR=1.3						
EKA				PKP	PKiKP	14 02 45.6	+0.8
	comp=Z,27nm,0.5s,baz=0.7,slow=2.3,SNR=32						
EKA				PP	PP	14 03 58.0	-0.2
	comp=Z,153nm,1.1s,baz=64,slow=7.9,SNR=3.7						
EKA				SKP	SKPdf	14 05 29.1	+1.5
	comp=Z,52nm,1.0s,baz=59,slow=4.0,SNR=5.1						
EKA				PKKPbc	PKKPbc	14 13 16.4	-4.2
	comp=Z,2.4nm,0.5s,baz=235,slow=2.9,SNR=5.8						
EKA				SKKPbc	SKKPbc	14 16 10.0	-3.7
	comp=Z,15nm,0.8s,baz=255,slow=1.7,SNR=8.8						
ESK	Eskdalemuir	115.80	329	eP	PKiKP	14 02 45.0	+0.2
ESK	Eskdalemuir	115.80	329	PKIKP	PKiKP	14 02 46.7	+1.8
ESK	Eskdalemuir	115.80	329		PKiKP	14 02 46.7	+1.8
NUUG	Nuugaatsiaq	115.83	358	i P	PKiKP	14 02 44.8	+0.3
LBWR	Ladybower, Pea	115.84	327	eP	PKiKP	14 02 45.7	+0.7
CWF	Charnwood Fore	115.88	326	eP	PKPdf	14 02 45.1	0.0
EAB	Aberfoyle	115.97	330	eP	PKiKP	14 02 46.0	+0.9
CKHR	Kef el Ahmar	116.06	306	P	PKiKP	14 02 48.1	+1.9
KESW	Keswick, Cumbr	116.07	328	eP	PKiKP	14 02 45.6	+0.2
SET	Setif	116.11	307	P	PKiKP	14 02 48.0	+1.8
WOL	Wolverton	116.40	324	eP	PKiKP	14 02 46.5	+0.4
NEWG	New Galloway	116.41	329	eP	PKiKP	14 02 46.2	+0.2
SWN1	Swindon	116.65	325	eP	PKiKP	14 02 46.8	+0.2
STRD	Stroud	116.75	325	eP	PKiKP	14 02 47.0	+0.2
GAL1	Galloway	116.78	329	eP	PKiKP	14 02 47.1	+0.3
PKM	Mcpherson Peak	116.83	55	P	PKiKP	14 02 48.3	+0.5
	baz=280						
HLM1	Long Mynd	116.84	326	eP	PKiKP	14 02 47.3	+0.3
VOG	Valley Oaks Go	116.92	53	P	PKiKP	14 02 47.6	0.0
	baz=281						
IOMK	Kirk Michael	116.98	328	eP	PKiKP	14 02 47.2	+0.1
SBC	Santa Barbara	116.99	55	P	PKiKP	14 02 48.9	+1.1
	baz=280						
MLAC	Mammoth, Mammo	117.08	51	P	PKiKP	14 02 48.8	+0.5
	baz=282						
MONM	Monmouth	117.09	325	eP	PKiKP	14 02 47.8	+0.4
WIM	Isle of Man	117.09	328	eP	PKiKP	14 02 47.9	+0.5
MCH1	Michaelchurch	117.13	326	eP	PKiKP	14 02 47.7	+0.1
LLW	Llanuwychllyn	117.13	327	eP	PKiKP	14 02 47.8	+0.3
SCZ2	Santa Cruz Isl	117.14	56	P	PKiKP	14 02 48.3	+0.2
	baz=280						
WME	Myndd Eilian	117.24	327	eP	PKiKP	14 02 48.6	+1.0
ICESG	Greenland Ices	117.24	353	i P	PKiKP	14 02 47.9	+0.2
ICESG	Greenland Ices	117.24	353	i P	Pdif	13 59 12.7	+4.9
ICESG				IAmb	IAmb	13 59 17.3	
	comp=Z,9.9nm,0.8s						
VES	Vestal, Richgr	117.24	53	P	PKiKP	14 02 48.3	0.0
	baz=281						
YLL	Llanberis	117.28	327	eP	PKiKP	14 02 48.1	+0.4
NVAR	Mina Array Bea	117.31	50	Pdiff	Pdif	13 59 11.1	+2.4
	comp=Z,0.9nm,0.8s,baz=290,slow=3.3,SNR=7.1						
NVAR				PKP	PKiKP	14 02 49.6	+1.0
	comp=Z,75nm,0.9s,baz=254,slow=2.2,SNR=42						
NVAR				PP	PP	14 04 07.4	-2.4
	comp=Z,80nm,1.1s,baz=258,slow=5.0,SNR=7.9						
NVAR				SKP	SKPdf	14 05 32.1	+0.7
	comp=Z,151nm,1.2s,baz=257,slow=1.3,SNR=4.5						
NVAR				PKKPbc	PKKPbc	14 13 12.8	-2.3
	comp=Z,1.1nm,0.6s,baz=209,slow=21,SNR=5.5						
NVAR				SKKPbc	SKKPbc	14 16 08.3	0.0
	comp=Z,22nm,0.8s,baz=139,slow=3.8,SNR=12						
WLF1	Llynfaes	117.33	327	eP	PKiKP	14 02 48.3	+0.4
AKET	Djebel Ketaf	117.35	307	P	PKiKP	14 02 50.9	+2.2
SNCC	San Nicolas Is	117.35	56	P	PKiKP	14 02 49.0	+0.5
	baz=280						
USHA	Ushuaia	117.37	173	PKP	PKiKP	14 02 49.4	+1.4
	comp=Z,129nm,0.8s,baz=187,slow=1.9,SNR=8.8						
USHA				SKP	SKPdf	14 05 31.7	+1.0
	comp=Z,104nm,0.8s,baz=162,slow=2.0,SNR=7.4						
USHA				PKKPbc	PKKPbc	14 13 15.5	0.0
	comp=Z,31nm,0.4s,baz=12,slow=2.4,SNR=6.0						
CLGH	Cloghs, Cushen	117.38	330	eP	PKiKP	14 02 48.1	+0.2
ARVC	Arvin	117.58	54	P	PKiKP	14 02 49.5	+0.5
	baz=281						
TIN	Tinemaha, Big	117.67	52	P	PKiKP	14 02 50.4	+1.2
	baz=282						
ADJB	Djebel Djouab	117.68	307	P	PKiKP	14 02 51.4	+2.1
ISA	Isabella, Lake	117.77	54	P	PKiKP	14 02 50.1	+0.7
	baz=282						
OSI	Osito Audit: C	117.77	55	P	PKiKP	14 02 50.4	+0.9
	baz=281						
JSA	Saint Aubin	117.78	322	eP	PKPdf	14 02 48.8	-0.1
CWC	Cottonwood Cre	117.92	53	P	PKiKP	14 02 50.4	+0.6
	baz=282						
MSO	Missoula	117.97	40	P	PKPdf	14 02 49.1	-0.4
	baz=291						
ILULI	Ilulissat	118.08	357	i P	PKiKP	14 02 49.7	+0.8
ILULI	Ilulissat	118.08	357	i PKIKP	PKiKP	14 02 49.7	+0.8
ILULI	Ilulissat	118.08	357	i P	PKiKP	14 02 49.7	+0.8
DECC	Green Verdugo	118.15	55	P	PKPdf	14 02 50.0	-0.1
	baz=281						
CIS	Catalina Islan	118.24	56	P	PKiKP	14 02 51.0	+0.7
	baz=280						
FMP	Fort Macarthur	118.28	56	P	PKiKP	14 02 51.1	+0.7
	baz=281						
EDW2	Edwards Air Fo	118.31	54	P	PKiKP	14 02 51.1	+0.6
	baz=282						
DYA	Yadsworthy	118.32	324	eP	PKPdf	14 02 49.9	0.0
GRAC	Grapevine Rang	118.36	52	P	PKiKP	14 02 51.2	+0.7
	baz=283						
HTL	Hartland	118.40	325	eP	PKiKP	14 02 50.5	+0.5
LRMC	Laurel Mtn Rad	118.44	54	P	PKiKP	14 02 51.6	+0.8
	baz=282						
MPMC	Manual Prospec	118.47	53	P	PKiKP	14 02 51.7	+0.8
	baz=282						
BFSC	Mount Baldy Ra	118.70	55	P	PKiKP	14 02 52.2	+0.8
	baz=281						
HLID	Hailey	118.75	44	P	PKiKP	14 02 52.5	+1.2
	baz=289						
FURC	Furnace Creek,	118.87	52	P	PKiKP	14 02 52.5	+1.1
	baz=283						
RRX	Edison Barstow	119.11	54	P	PKiKP	14 02 52.7	+0.7
	baz=282						
EBNR	Beni Rached	119.16	308	P	PKiKP	14 02 53.2	+1.1
GSC	Goldstone, Bar	119.17	54	P	PKiKP	14 02 53.3	+1.1
	baz=282						
CCA1	Carnmenellis	119.18	324	eP	PKiKP	14 02 52.1	+0.5
CCA1				IAmb	IAmb	14 02 55.2	
	comp=Z,132nm,0.6s						
MURC	Murrieta	119.20	56	P	PKiKP	14 02 53.4	+1.1
	baz=281						
TPNV	Topopah Spring	119.24	52	P	PKiKP	14 02 53.4	+1.1
	baz=284						
BBRC	Big Bear Solar	119.30	55	P	PKiKP	14 02 53.8	+1.2
	baz=282						
ECHA	Ech Chlef	119.32	307	P	PKiKP	14 02 53.8	+1.5
R11A	Troy Canyon, C	119.41	50	P	PKiKP	14 02 53.7	+1.1
	baz=285						
109C	Camp Elliot, M	119.41	56	P	PKiKP	14 02 53.5	+0.9
	baz=281						
SHOC	Shoshone, Teco	119.46	53	P	PKiKP	14 02 53.9	+1.2
	baz=283						
EANR	'Ain N'Sour	119.58	307	P	PKiKP	14 02 54.3	+1.4
HEC	Hector,Ludlow	119.65	54	P	PKiKP	14 02 54.2	+1.1
	baz=282						
PFO	Pinyon Flats O	119.80	55	P	PKiKP	14 02 54.0	+0.5
	baz=282						
PFO	Pinyon Flats O	119.80	55	PKIKP	PKiKP	14 02 54.7	+1.2
PFO	Pinyon Flats O	119.80	55		PKiKP	14 02 54.7	+1.2
TPFO	Pinon Flats	119.81	55	P	PKiKP	14 02 54.3	+0.7
	baz=282						
BOZ	Bozeman (W)	119.92	41	P	PKiKP	14 02 54.1	+0.7
	baz=292						
MONP2	Monument Peak	119.98	56	P	PKiKP	14 02 55.1	+1.1
	baz=281						
BELC	Belle Mtn. Jos	120.10	55	P	PKiKP	14 02 54.8	+0.7
	baz=282						
EGMT	Eagleton	120.13	38	P	PKiKP	14 02 54.0	+0.3
	baz=295						
ANGG	Ammassalik, Gr	120.20	351	i P	PKPdf	14 02 53.0	0.0
GMRC	Granite Mounta	120.20	54	P	PKiKP	14 02 56.1	+1.8
	baz=283						
SFJD	Kangerlussuaq	120.27	357	i P	PKPdf	14 02 52.6	-0.5
SFJD	Kangerlussuaq	120.27	357	i PKIKP	PKPdf	14 02 52.6	-0.5
SFJD	Kangerlussuaq	120.27	357		PKPdf	14 02 53.0	-0.1
SFJD	Kangerlussuaq	120.27	357	i P	PKPdf	14 02 52.6	-0.5
IKP	In-Ko-Pah, Jac	120.28	56	P	PKiKP	14 02 55.4	+1.0
	baz=282						
ISOG	Isortoq, Green	120.47	351	i P	PKiKP	14 02 54.1	+0.4
SWSC	Sam W. Stewart	120.48	56	P	PKiKP	14 02 55.5	+0.9
	baz=282						
BC3	Big Chuckawall	120.62	55	P	PKiKP	14 02 56.6	+1.5
	baz=282						
IRM	Iron Mountain	120.76	55	P	PKiKP	14 02 56.6	+1.3
	baz=283						
FFC	Flin Flon	120.95	28	PKIKP	PKiKP	14 02 55.2	+0.3
FFC	Flin Flon	120.95	28		PKiKP	14 02 55.2	+0.3
DUG	Dugway, Tooele	120.95	47	P	PKiKP	14 02 56.1	+0.5
	baz=288						
NEE2	Needles Airpor	121.04	54	P	PKiKP	14 02 56.6	+0.9
	baz=284						
H17A	Grant Village	121.06	42	P	PKiKP	14 02 57.1	+1.3
	baz=292						
EFI	East Falkland	121.20	180	PKIKP	PKiKP	14 02 55.8	+0.2
EFI	East Falkland	121.20	180		PKiKP	14 02 55.8	+0.2
GLA	Glamis	121.26	56	P	PKiKP	14 02 56.8	+0.5
	baz=282						
PDMCI	Parker Dam,Lak	121.53	54	P	PKiKP	14 02 57.3	+0.6
	baz=284						
TORD	Torodi Ar. Bea	121.56	281	Pdiff	Pdif	13 59 29.8	+2.0
	comp=Z,0.2nm,0.4s,baz=96,slow=1.4,SNR=1.6						
TORD				PKP	PKiKP	14 02 58.0	+0.8
	comp=Z,354nm,0.8s,baz=56,slow=1.9,SNR=110						
TORD				PP	PP	14 04 38.3	-0.8
	comp=Z,44nm,0.8s,baz=70,slow=6.7,SNR=4.9						
TORD				SKP	SKPdf	14 05 40.2	+0.4
	comp=Z,101nm,1.1s,baz=63,slow=1.7,SNR=5.3						
TORD				PKKPbc	PKKPab	14 13 00.5	-0.3
	comp=Z,22nm,0.8s,baz=297,slow=3.4,SNR=13						
RLMT	Red Lodge	121.64	41	P	PKiKP	14 02 57.4	+0.5
	baz=294						
BW06	Boulder Array	122.36	43	P	PKiKP	14 02 59.1	+0.6
	baz=292						
PDAR	Pinedale Array	122.36	43	Pdiff	Pdif	13 59 36.0	+4.9
	comp=Z,0.4nm,0.7s,baz=316,slow=2.5,SNR=4.0						
PDAR				PKhKP	PKPpre	14 02 48.7	
	comp=Z,2.5nm,0.8s,baz=112,slow=1.2,SNR=2.6						
PDAR				PKP	PKPdf	14 02 58.2	0.0
	comp=Z,74nm,0.9s,baz=5.2,slow=0.4,SNR=26						
PDAR				PP	PP	14 04 33.2	-10
	comp=Z,23nm,1.0s,baz=296,slow=4.9,SNR=3.5						
PDAR				SKP	SKPdf	14 05 40.1	-0.8
	comp=Z,81nm,1.1s,baz=236,slow=1.6,SNR=5.1						
PDAR				PKKPbc	PKKPbc	14 12 55.9	-1.1
	comp=Z,13nm,0.6s,baz=108,slow=5.6,SNR=34						
PDAR				SKKPbc	SKKPbc	14 15 50.6	-2.0
	comp=Z,16nm,0.8s,baz=114,slow=5.5,SNR=11						
ESDC	Sonseca Array	122.39	313	Pdiff	Pdif	13 59 33.4	+2.3
	comp=Z,1.0nm,0.9s,baz=57,slow=4.7,SNR=3.4						
ESDC				PKhKP	PKPpre	14 02 51.5	

	comp=Z,2.2nm,0.6s,baz=56,slow=1.9,SNR=6.8						
ESDC				PKP	PKiKP	14 02 58.8	+0.4
	comp=Z,170nm,1.1s,baz=26,slow=2.4,SNR=58						
ESDC				PP	PP	14 04 40.6	-3.2
	comp=Z,58nm,1.0s,baz=61,slow=5.5,SNR=8.8						
ESDC				SKP	SKPdf	14 05 42.4	+1.5
	comp=Z,50nm,1.1s,baz=28,slow=2.6,SNR=4.9						
ESDC				PKKPbc	PKKPbc	14 12 56.1	-0.4
	comp=Z,4.2nm,0.8s,baz=273,slow=3.6,SNR=5.5						
ESDC				SKKPbc	SKKPbc	14 15 51.1	-0.9
	comp=Z,6.6nm,1.1s,baz=271,slow=3.9,SNR=4.7						
PAB	San Pablo	122.72	313	PKIKP	PKiKP	14 03 00.6	+1.6
PAB	San Pablo	122.72	313		PKiKP	14 03 00.6	+1.6
LAO	LASA Array	122.88	38	P	PKiKP	14 03 00.6	+1.5
	baz=298						
NUUK	Nuuk	123.13	357	iP	PKiKP	14 02 59.4	+0.4
214A	Organ Pipe Nat	123.16	57	P	PKiKP	14 03 00.9	+0.9
	baz=283						
DGMT	Dagmar	123.22	35	P	PKiKP	14 02 59.8	+0.2
	baz=300						
DGMT	Dagmar	123.22	35		PKiKP	14 03 01.5	+1.8
WUAZ	Wupatki	123.42	52	P	PKiKP	14 03 01.4	+0.7
	baz=286						
PBRG	Braganca	123.61	316	ePKPdf	PKPdf	14 03 00.0	-0.4
PBRG	Braganca	123.61	316	ePP	PP	14 04 59.6	+7.9
MVO	Moncorvo	124.05	315	ePKPdf	PKiKP	14 03 02.7	+1.1
MVO	Moncorvo	124.05	315	ePP	PP	14 04 56.3	+1.7
MVO				A	A	14 21 51.4	
	comp=Z,3µm,18.0s						
MVO	Moncorvo	124.05	315	eLQ	LQ	14 36 02.1	
O20A	White River Ci	124.26	46	P	PKiKP	14 03 02.7	+0.5
	baz=292						
K22A	Casper	124.46	42	P	PKiKP	14 03 02.5	0.0
	baz=295						
PVRL	Vila Real	124.49	316	ePKPdf	PKiKP	14 03 04.3	+1.9
POLO	Lamas de Olo	124.50	316	ePKPdf	PKPdf	14 03 00.6	-1.6
POLO	Lamas de Olo	124.50	316	ePP	PP	14 04 58.0	+0.4
PCAB	Cabril	124.53	316	ePKPdf	PKiKP	14 03 03.5	+1.0
PCAB	Cabril	124.53	316	ePP	PP	14 05 00.5	+2.8
PGAV	Gavieira, Arco	124.59	317	ePKPdf	PKiKP	14 03 03.5	+0.8
PGAV	Gavieira, Arco	124.59	317	ePP	PP	14 04 57.8	-0.4
PGAV				A	A	14 21 50.9	
	comp=Z,3µm,18.0s						
PGAV	Gavieira, Arco	124.59	317	eLQ	LQ	14 36 13.0	
MTE	Manteigas	124.71	315	ePKPdf	PKiKP	14 03 03.9	+1.0
MTE	Manteigas	124.71	315	ePP	PP	14 04 57.4	-1.6
MTE				A	A	14 29 19.3	
	comp=Z,3µm,20.0s						
MTE				eLQ	LQ	14 36 24.4	
MTE	Manteigas	124.71	315	eLR	LR	14 45 27.9	
TUC	Tucson	124.74	56	P	PKiKP	14 03 03.9	+0.7
	baz=285						
TUC	Tucson	124.74	56	PKIKP	PKiKP	14 03 04.7	+1.4
TUC	Tucson	124.74	56		PKiKP	14 03 04.7	+1.4
W18A	Petrified Fore	124.81	52	P	PKiKP	14 03 04.6	+1.1
	baz=287						
PVIS	Viseu	124.83	315	ePKPdf	PKiKP	14 03 04.3	+1.1
PVIS	Viseu	124.83	315	ePP	PP	14 04 56.3	-3.5
PCBR	Castelo Branco	124.87	314	ePKPdf	PKiKP	14 03 04.3	+1.1
PCBR	Castelo Branco	124.87	314	ePP	PP	14 05 01.1	+1.1
MDT	Midelt	124.92	305	PKKPbc	PKKPbc	14 12 48.2	+1.5
	comp=Z,23nm,1.0s,baz=330,slow=1.7,SNR=8.2						
MDT				SKKPbc	SKKPbc	14 15 43.8	+0.4
	comp=Z,28nm,1.3s,baz=287,slow=5.8,SNR=4.7						
PMRV	Marv??o	124.96	314	ePKPdf	PKPdf	14 03 03.0	0.0
PMRV	Marv??o	124.96	314	ePP	PP	14 04 56.8	-3.9
PMRV				A	A	14 30 16.4	
	comp=Z,2µm,18.0s						
PMRV				eLQ	LQ	14 36 18.7	
MVCO	Mesa Verde	125.11	49	P	PKiKP	14 03 05.1	+1.1
	baz=290						
PTO	Porto	125.16	316	ePKPdf	PKiKP	14 03 05.7	+2.0
PBAR	Barrancos	125.16	312	ePKPdf	PKiKP	14 03 04.5	+0.7
PBAR	Barrancos	125.16	312	ePP	PP	14 04 59.4	-2.6
PESTR	Estremoz	125.31	313	ePKPdf	PKiKP	14 03 04.4	+0.3
PESTR	Estremoz	125.31	313	ePP	PP	14 05 04.2	+1.2
COI	Coimbra	125.39	315	ePKPdf	PKiKP	14 03 04.8	+0.6
COI	Coimbra	125.39	315	ePP	PP	14 05 05.9	+2.5
RSSD	Black Hills	125.43	40	P	PKPdf	14 03 04.1	0.0
	baz=298						
PCAS	Casmilo, Conde	125.52	315	ePKPdf	PKiKP	14 03 05.6	+1.1
NRS	Narsarsuaq	125.56	353	iP	PKiKP	14 03 04.1	+0.3
NRS	Narsarsuaq	125.56	353	iPKIKP	PKiKP	14 03 04.1	+0.3
NRS	Narsarsuaq	125.56	353	iP	PKiKP	14 03 04.1	+0.3
N23A	Red Feather La	125.58	44	P	PKiKP	14 03 04.9	0.0
	baz=294						
PMTG	Montargil	125.70	313	ePKPdf	PKPdf	14 03 04.0	-0.4
PMTG	Montargil	125.70	313	ePP	PP	14 05 07.4	+2.0
EVO	Evora	125.75	313	ePKPdf	PKiKP	14 03 06.2	+1.2
EVO	Evora	125.75	313	ePP	PP	14 05 08.9	+3.1
PBEJ	Beja	125.82	312	ePKPdf	PKiKP	14 03 05.8	+0.7
PBEJ	Beja	125.82	312	ePP	PP	14 05 02.7	-3.6
PVAQ	Vaqueiros	125.94	311	ePKPdf	PKiKP	14 03 06.2	+0.8
PVAQ	Vaqueiros	125.94	311	ePP	PP	14 05 05.5	-1.6
PVAQ	Vaqueiros	125.94	311	eLQ	LQ	14 36 37.5	
PSBE	So Bento	125.94	314	ePKPdf	PKPdf	14 03 01.1	-3.8
PSBE	So Bento	125.94	314	ePP	PP	14 05 01.1	-5.9
PCVE	Castro Verde	126.09	312	ePKPdf	PKPdf	14 03 03.1	-2.1
PCVE	Castro Verde	126.09	312	ePP	PP	14 05 03.4	-4.7
MDND	Maddock	126.14	34	P	PKPdf	14 03 05.1	+0.1
	baz=305						
MESJ	Messejana	126.15	312	ePKPdf	PKiKP	14 03 05.9	+0.1
MESJ				ePP	PP	14 05 09.0	+0.6
MESJ	Messejana	126.15	312	ePKPdf	PKiKP	14 03 07.2	+1.4
MESJ	Messejana	126.15	312	ePP	PP	14 05 11.4	+3.0
PBDV	Barranco-do-Ve	126.15	311	ePKPdf	PKiKP	14 03 06.2	+0.3
PBDV	Barranco-do-Ve	126.15	311	ePP	PP	14 05 10.0	+1.5
S22A	4UR Ranch, Cre	126.16	48	P	PKiKP	14 03 07.1	+0.9
	baz=291						
PNCL	Nicolau / Gran	126.28	312	ePKPdf	PKPdf	14 03 03.8	-1.7
PNCL	Nicolau / Gran	126.28	312	ePP	PP	14 05 11.1	+1.9
LIS	Lisbon	126.50	313	ePKPdf	PKiKP	14 03 06.5	+0.1
LIS				ePP	PP	14 05 11.5	+0.9
LIS	Lisbon	126.50	313	ePKPdf	PKiKP	14 03 07.0	+0.6
LIS	Lisbon	126.50	313	ePP	PP	14 05 11.4	+0.8
PMAFR	Mafra	126.50	314	ePKPdf	PKiKP	14 03 06.4	-0.1
PMAFR	Mafra	126.50	314	ePP	PP	14 05 15.8	+5.1
PTEO	Sao Teotonio	126.63	312	ePKPdf	PKiKP	14 03 08.0	+1.3
PTEO	Sao Teotonio	126.63	312	ePP	PP	14 05 07.7	-3.9
ULM	Lac du Bonnet	126.64	30	PKP	PKPdf	14 03 05.6	-0.2
	comp=Z,188nm,1.0s,baz=315,slow=2.9,SNR=71						
ULM				pPKP	pPKPdf	14 05 14.0	-1.8
	comp=Z,56nm,1.1s,baz=22,slow=5.4,SNR=3.2						
ULM				SKPbc	SKPbc	14 05 31.5	
	comp=Z,68nm,0.6s,baz=313,slow=3.6,SNR=10						
MORF	Marmelete	126.66	312	ePKPdf	PKiKP	14 03 06.9	0.0
MORF				ePP	PP	14 05 12.5	+0.6
MORF	Marmelete	126.66	312	ePKPdf	PKiKP	14 03 07.3	+0.4
MORF	Marmelete	126.66	312	ePP	PP	14 05 13.6	+1.7
PFVI	Vila Bisbo	126.86	311	ePKPdf	PKiKP	14 03 08.1	+0.9
PFVI	Vila Bisbo	126.86	311	ePP	PP	14 05 15.1	+2.0
Q24A	Divide	126.92	46	P	PKiKP	14 03 08.0	+0.3
	baz=294						
KOWA	Kowa	127.10	283	pPKP	pPKPdf	14 05 16.0	-2.3
	baz=39,slow=2.2						
KOWA				SKPbc	SKPbc	14 05 34.6	
	comp=Z,155nm,0.9s,baz=119,slow=3.3,SNR=4.3						
121A	Cookes Peak, D	127.12	55	P	PKiKP	14 03 09.0	+0.8
	baz=287						
SDCO	Great Sand Dun	127.14	48	P	PKiKP	14 03 08.7	+0.5
	baz=292						
SLBS	Sierra La Lagu	127.24	66		PKiKP	14 03 09.7	+1.2
ANMO	Albuquerque	127.42	51	P	PKiKP	14 03 09.5	+0.8
	baz=290						
KIC	Kosan Boka	127.62	272	ePKIKP	PKiKP	14 03 10.5	+1.1
	comp=Z,581nm,1.1s						
GO07	Milladeo Hill,	127.66	165	⇓iP	PKiKP	14 03 09.9	+1.2
DBIC	Dimbokro	127.76	273	PKP	PKiKP	14 03 09.9	+0.2
	comp=Z,229nm,0.8s,baz=86,slow=2.3,SNR=19						
DBIC				pPKP	PP	14 05 20.1	+0.2
	comp=Z,75nm,1.1s,baz=90,slow=6.1,SNR=4.4						
DBIC				SKPbc	SKPbc	14 05 37.2	
	comp=Z,169nm,0.9s,baz=86,slow=4.5,SNR=12						
DBIC				PKKP	PKKPdf	14 13 22.7	+2.6
	comp=Z,13nm,0.8s,baz=237,slow=4.7,SNR=4.4						
DBIC				SKKPbc	SKKPbc	14 15 33.1	+0.5
	comp=Z,12nm,1.1s,baz=261,slow=5.3,SNR=3.5						
AGMN	Agassiz Nation	127.89	32	P	PKPdf	14 03 07.6	-0.7
	baz=309						
LIC	Lamto	127.90	272	ePKIKP	PKiKP	14 03 10.1	+0.1
	comp=Z,1µm,1.1s						
TIC	Toumodi	127.92	273	ePKIKP	PKiKP	14 03 10.3	+0.3
LL02	Futaleuf	128.03	167	⇓iP	PKiKP	14 03 10.4	+1.0
T25A	Trinidad	128.17	48	P	PKiKP	14 03 10.4	+0.2
	baz=293						
OGNE	Ogallala	128.22	43	P	PKiKP	14 03 10.7	+0.7
	baz=298						
SUSD	Miller	128.41	37	P	PKPdf	14 03 09.1	-0.3
	baz=303						
LL01	San Ignacio de	128.67	166	eP	PKiKP	14 03 11.7	+1.0
KSCO	Kaye Shedlock'	128.69	45	P	PKiKP	14 03 11.1	0.0
	baz=296						
MNTX	Cornudas Mount	129.32	55	P	PKiKP	14 03 12.3	-0.1
	baz=288						
ECSD	EROS Data Cent	130.21	37	P	PKPdf	14 03 12.8	-0.1
	baz=305						
EYMN	Ely	130.32	30	P	PKPdf	14 03 13.2	+0.3
	baz=313						
BGNE	Belgrade	130.54	40	P	PKPdf	14 03 14.0	+0.4
	baz=302						
MSTX	Muleshoe	130.61	51	P	PKiKP	14 03 14.7	-0.3
	baz=292						
PLCA	Paso Flores	130.66	167	PKhKP	PKPpre	14 02 59.9	
	comp=Z,6.2nm,0.8s,baz=197,slow=4.9,SNR=9.6						
PLCA				PKP	PKiKP	14 03 15.0	0.0
	comp=Z,75nm,0.8s,baz=200,slow=1.5,SNR=25						
PLCA				pPKP	pPKPdf	14 05 22.4	-1.9
	comp=Z,12nm,0.8s,baz=245,slow=3.0,SNR=2.1						
PLCA				SKPbc	SKPab	14 05 46.7	0.0
	comp=Z,661nm,1.1s,baz=219,slow=3.1,SNR=37						
PLCA				SKKPbc	SKKPbc	14 15 23.4	+0.2
	comp=Z,8.1nm,0.7s,baz=36,slow=3.2,SNR=7.4						
PLCA	Paso Flores	130.66	167	PKPdf	PKiKP	14 03 16.2	+1.3
PLCA	Paso Flores	130.66	167	eP	PKPdf	14 03 12.4	-1.5
PLCA	Paso Flores	130.66	167	eP	PKPdf	14 03 13.6	-0.3
CBKS	Cedar Bluff	130.78	44	P	PKPdf	14 03 14.4	+0.3
	baz=298						
AMTX	Amarillo	131.09	49	P	PKiKP	14 03 15.6	-0.3
	baz=294						
TXAR	Lajitas Array	131.45	57	Pdiff	Pdif	14 00 13.2	+1.6
	comp=Z,0.1nm,0.3s,baz=289,slow=2.8,SNR=1.4						
TXAR				PKhKP	PKPpre	14 02 57.9	
	comp=Z,2.4nm,0.5s,baz=231,slow=2.1,SNR=15						
TXAR				PKP	PKiKP	14 03 17.0	+0.2
	comp=Z,108nm,1.1s,baz=251,slow=1.7,SNR=22						
TXAR				pPKP	pPKPdf	14 05 27.5	+2.4
	comp=Z,18nm,0.9s,baz=234,slow=2.9,SNR=3.3						
TXAR				SKPbc	SKPab	14 05 50.5	0.0
	comp=Z,700nm,1.1s,baz=263,slow=2.1,SNR=27						
TXAR				SKKPbc	SKKPbc	14 15 20.3	-0.4
	comp=Z,12nm,0.8s,baz=117,slow=5.1,SNR=16						
TXAR	Lajitas Array	131.45	57	PKPdf	PKiKP	14 03 17.6	+0.7
SPMN	Marine on St.	131.46	33	P	PKPdf	14 03 15.1	-0.1
	baz=310						
KSU1	Kansas State U	132.75	42	P	PKPdf	14 03 18.1	+0.3
	baz=302						
SCIA	State Center	133.30	37	P	PKPdf	14 03 19.4	+0.6
	baz=307						
WMOK	Wichita Mounta	133.32	48	P	PKPdf	14 03 19.5	+0.4
	baz=296						
ABTX	Abilene, Hawle	133.55	51	P	PKPdf	14 03 19.9	+0.4
	baz=294						
PMPST	Porto Santo, M	134.10	310	ePKPdf	PKiKP	14 03 23.8	+1.8
PMPST	Porto Santo, M	134.10	310	ePP	PP	14 05 53.2	-6.1
PMPS	Porto Santo	134.11	310	ePKPdf	PKiKP	14 03 22.8	+0.9
PMPS	Porto Santo	134.11	310	ePP	PP	14 05 55.3	-4.1
JCT	Junction City	134.24	54	P	PKPdf	14 03 20.2	-0.7
	baz=292						
JFWS	Jewell Farm	134.37	34	P	PKPdf	14 03 20.0	-0.7
	baz=312						
MATQ	Matagami	134.49	18	P	PKPdf	14 03 19.9	-0.8
	baz=332						
PMAR	Madeira	134.69	310	ePKPdf	PKiKP	14 03 24.1	+0.7
PMAR	Madeira	134.69	310	ePP	PP	14 06 00.3	-3.0
FUL	Funchal	134.71	309	ePKPdf	PKiKP	14 03 23.5	+0.3
FUL	Funchal	134.71	309	ePP	PP	14 05 59.8	-3.3
PMOZ	Porto Moniz, M	134.87	310	ePKPdf	PKiKP	14 03 25.7	+2.0
PMOZ	Porto Moniz, M	134.87	310	ePP	PP	14 05 58.7	-5.5
PMOZ				A	A	14 29 00.7	
	comp=Z,2µm,18.0s						
PMOZ				eLQ	LQ	14 36 10.7	
TUL1	Leonard	134.94	45	P	PKPdf	14 03 21.9	-0.1
	baz=300						
LSQQ	Lebel-sur-Quev	135.31	18	P	PKPdf	14 03 21.7	-0.6
	baz=332						
833A	Chaparral WMA,	135.32	57	P	PKPdf	14 03 23.3	+0.4
	baz=290						
WHTX	Lake Whitney,	135.50	51	P	PKPdf	14 03 23.0	-0.2
	baz=295						
GLMI	Grayling	135.86	28	P	PKPdf	14 03 23.3	-0.2
	baz=320						
435B	Jarrell	135.89	53	P	PKPdf	14 03 24.0	+0.1
	baz=294						
L44A	Lake County Fo	136.14	33	P	PKPdf	14 03 23.2	-0.8
	baz=314						
BO03	Pichilemu	136.19	163	⇓iP	PKPdf	14 03 24.6	+0.3
BO02	Sierra Bellavi	136.24	164	eP	PKPdf	14 03 19.1	-5.5
HDIL	Hopedale	136.45	36	P	PKPdf	14 03 24.1	-0.6
	baz=311						
W39A	Magazine	136.71	45	P	PKPdf	14 03 24.9	-0.4
	baz=301						
U40A	Yellville	136.74	43	P	PKPdf	14 03 24.7	-0.7
	baz=303						
CCM	Cathedral Cave	136.82	40	P	PKPdf	14 03 25.1	-0.3
	baz=306						
MIAR	Mount Ida	137.19	46	P	PKPdf	14 03 25.5	-0.7
	baz=301						
MT02	Curacav	137.58	163	eP	PKPdf	14 03 16.9	-10
D55A	Sainte-Anne-du	137.59	18	P	PKPdf	14 03 26.3	-0.3
	baz=333						
ALGO	Algonquin Park	137.66	21	P	PKPdf	14 03 26.5	-0.2
	baz=329						
NATX	Nacogdoches	137.74	50	P	PKPdf	14 03 27.3	+0.1
	baz=297						
X40A	Basin Creek Fa	137.75	45	P	PKPdf	14 03 27.6	+0.4
	baz=302						
D56A	ZEC Mazanza, M	137.78	18	P	PKPdf	14 03 27.0	+0.1
	baz=334						
W41B	Gary Mavity, V	137.79	44	P	PKPdf	14 03 27.1	-0.1
	baz=303						
SFIN	Lafayette	137.82	34	P	PKPdf	14 03 27.4	+0.2
	baz=313						
BART	Pico Bartolome	137.87	321	ePKP	PKPdf	14 03 25.3	-2.2
BART	Pico Bartolome	137.87	321	ePP	PP	14 06 11.2	-11
E55A	Montcerf-Lytto	137.91	19	P	PKPdf	14 03 26.7	-0.4
	baz=332						
LPA	La Plata	137.96	179	ePKIKP	PKPdf	14 03 22.7	-4.9
LPA				SKP		14 06 02.1	
LPA				PP	PP	14 06 20.2	-1.4
LPA				PKS	PKSdf	14 07 14.9	+11
LPA				pPP		14 08 10.7	
LPA				PPP	PPP	14 09 32.3	
LPA				SKIKS		14 09 59.6	
LPA				SDIFF		14 14 00.4	
LPA				PSP	PSP	14 18 51.0	
LPA				SS	SS	14 23 55.1	+7.8
LPA				SSS	SSS	14 29 03.5	
LATQ	La Tuque	138.03	16	P	PKPdf	14 03 27.7	+0.4
	baz=337						
CMLA	Cha da Macela	138.10	321	ePKP	PKPdf	14 03 20.0	-7.8
CMLA	Cha da Macela	138.10	321	ePP	SKPbc	14 06 11.2	+1.4
GRON	Grota Negra	138.10	321	ePKP	PKPdf	14 03 23.0	-4.8
GRON	Grota Negra	138.10	321	ePP	SKPbc	14 06 10.3	+0.5
G54A	Lake Saint Pet	138.12	22	P	PKPdf	14 03 27.6	0.0
	baz=329						
E56A	St. Veronique	138.15	18	P	PKPdf	14 03 27.7	+0.1
	baz=333						
PSET	Sete Cidades	138.19	321	ePP	SKPbc	14 06 11.2	+1.1
PDA	Ponta Delgada	138.20	321	ePP	SKPbc	14 06 12.2	+2.2
AAM	Ann Arbor	138.23	29	P	PKPdf	14 03 27.8	0.0
	baz=319						
I51A	Listowel	138.27	26	P	PKPdf	14 03 28.2	+0.3
	baz=324						
D58A	Chemin du LacG	138.27	16	P	PKPdf	14 03 27.6	-0.2
	baz=337						
PSMN	Pico do Norte,	138.28	320	ePKP	PKPdf	14 03 23.6	-4.5
PSMN	Pico do Norte,	138.28	320	ePP	SKPbc	14 06 11.8	+1.5
SIUC	Southern Illin	138.31	39	PKPdf	PKPdf	14 03 23.9	-4.3
PSMA	Santa Maria	138.32	320	ePKP	PKPdf	14 03 23.2	-5.0
PSMA	Santa Maria	138.32	320	ePP	SKPbc	14 06 12.3	+1.9
Z41A	Richland Creek	138.40	47	P	PKPdf	14 03 28.5	+0.1
	baz=300						
PAGU	Agualva, Azore	138.47	323	ePP	SKPbc	14 06 11.0	+0.2
PSCM	Serra do Cume	138.48	323	ePP	SKPbc	14 06 12.2	+1.4
D59A	Saint-Raymond	138.63	15	P	PKPdf	14 03 28.5	+0.1
	baz=338						
H53A	Bobcaygeon	138.63	23	P	PKPdf	14 03 28.5	0.0
	baz=327						
PGRA	Graciosa	138.76	324	ePKP	PKPdf	14 03 27.7	-1.2
PGRA	Graciosa	138.76	324	ePP	SKPbc	14 06 11.1	-0.5
SRBC	Serra Branca	138.79	324	ePP	SKPbc	14 06 12.7	+1.0
E58A	La Victoria	138.83	17	P	PKPdf	14 03 29.4	+0.6
	baz=336						
D61A	St Aubert, Com	138.84	13	P	PKPdf	14 03 28.6	-0.2
	baz=341						
F57A	Harrington	138.91	18	P	PKPdf	14 03 28.8	-0.2
	baz=334						
E59A	St. Maurice	138.94	16	P	PKPdf	14 03 29.4	+0.4
	baz=337						
D60A	Saint Jean D'O	138.94	14	P	PKPdf	14 03 28.5	-0.4
	baz=340						
X43A	Marvell	139.09	44	P	PKPdf	14 03 29.4	-0.3
	baz=304						
PMAN	Manadas	139.09	324	ePKP	PKPdf	14 03 27.5	-2.0
PMAN	Manadas	139.09	324	ePP	SKPbc	14 06 09.3	-3.2
ROSA	Rosais	139.12	324	ePKP	PKPdf	14 03 23.7	-5.9
ROSA	Rosais	139.12	324	ePP	SKPbc	14 06 13.9	+1.3
F58A	St-Lin Laurent	139.13	17	P	PKPdf	14 03 28.9	-0.5
	baz=335						
PID	Ribeirinha	139.24	324	ePKP	PKPdf	14 03 28.8	-1.1
PID	Ribeirinha	139.24	324	ePP	SKPbc	14 06 13.8	+0.9
E60A	Ste Agathe de	139.32	15	P	PKPdf	14 03 29.2	-0.5
	baz=338						
PICO	Pico	139.38	324	ePKP	PKPdf	14 03 28.1	-2.1
PICO	Pico	139.38	324	ePP	SKPbc	14 06 12.3	-1.0
D63A	Stockholm	139.43	11	P	PKPdf	14 03 29.3	-0.6
	baz=344						
PCAN	Candelaria	139.44	324	ePP	SKPbc	14 06 11.8	-1.6
F59A	Saint Guilaume	139.44	16	P	PKPdf	14 03 29.4	-0.5
	baz=336						
PCED	Cedros	139.45	325	ePKP	PKPdf	14 03 29.9	-0.3
G57A	Newington	139.45	19	P	PKPdf	14 03 29.4	-0.5
	baz=333						
CALA	Caldeira	139.48	324	ePP	SKPbc	14 06 13.6	0.0
E61A	Lac Etchemin	139.50	14	P	PKPdf	14 03 30.1	0.0
	baz=340						
F60A	Warwick	139.56	16	P	PKPdf	14 03 30.0	-0.2
	baz=338						
G58A	Ormstown	139.71	18	P	PKPdf	14 03 30.2	-0.2
	baz=334						
P49A	Miami Univ. Ec	139.72	33	P	PKPdf	14 03 30.4	-0.2
	baz=316						
WCI	Wyandotte Cave	139.73	36	P	PKPdf	14 03 30.6	-0.1
	baz=312						
F61A	St Evariste	139.80	15	P	PKPdf	14 03 30.6	0.0
	baz=339						
H57A	Richville	139.88	20	P	PKPdf	14 03 30.7	-0.1
	baz=332						
E63A	Oxbow	139.96	12	P	PKPdf	14 03 30.7	-0.2
	baz=343						
LONY	Lake Ozonia	140.01	19	P	PKPdf	14 03 30.8	-0.3
	baz=333						
G59A	Clarenceville	140.03	17	P	PKPdf	14 03 30.5	-0.6
	baz=335						
ERPA	Erie	140.08	26	P	PKPdf	14 03 31.0	-0.2
	baz=324						
ERPA	Erie	140.08	26	PKPdf	PKPdf	14 03 27.0	-4.2
E64A	Bridgewater	140.08	11	P	PKPdf	14 03 30.5	-0.6
	baz=344						
L53A	Girard	140.09	27	P	PKPdf	14 03 31.2	-0.1
	baz=323						
OXF	Oxford	140.10	43	P	PKPdf	14 03 31.4	-0.1
	baz=305						
ACSO	Alum Creek Sta	140.12	31	P	PKPdf	14 03 31.1	-0.2
	baz=318						
WVT	Waverly	140.16	40	P	PKPdf	14 03 31.9	+0.4
	baz=309						
G60A	Masonville	140.26	16	P	PKPdf	14 03 31.4	0.0
	baz=337						
H59A	Cadyville	140.27	18	P	PKPdf	14 03 31.6	+0.1
	baz=334						
G61A	St-Isidore-de-	140.31	16	P	PKPdf	14 03 31.3	-0.3
	baz=338						
M53A	WI Miller and	140.31	28	P	PKPdf	14 03 31.7	0.0
	baz=322						
H07S1	FLORES T-PHASE	140.31	327	ePKP	PKPdf	14 03 28.8	-3.0
H07S1	FLORES T-PHASE	140.31	327	ePP	SKPbc	14 06 13.0	-2.7
H58A	Gabriels	140.32	19	P	PKPdf	14 03 31.8	+0.1
	baz=334						
J56A	Wolcott	140.39	22	P	PKPdf	14 03 31.2	-0.5
	baz=329						
J56A	Wolcott	140.39	22	PKPdf	PKPdf	14 03 27.8	-3.9
F63A	Nahmakanta, Br	140.50	13	P	PKPdf	14 03 31.9	0.0
	baz=342						
F64A	Sherman	140.51	12	P	PKPdf	14 03 32.2	+0.3
	baz=343						
GO04	Tololo Observa	140.56	162	⇑iP	PKPdf	14 03 27.6	-5.2
VBMS	Vicksburg	140.58	47	P	PKPdf	14 03 31.9	-0.5
	baz=302						
G62A	West of Eustis	140.62	15	P	PKPdf	14 03 32.0	-0.2
	baz=339						
P51A	Williamsport	140.64	32	PKPdf	PKPdf	14 03 28.5	-3.8
H60A	Morristown	140.65	17	P	PKPdf	14 03 32.1	-0.1
	baz=336						
K56A	Middlesex	140.70	23	P	PKPdf	14 03 31.8	-0.6
	baz=328						
I58A	Old Forge	140.71	20	P	PKPdf	14 03 32.2	-0.1
	baz=332						
M54A	Oil Creek Stat	140.71	27	P	PKPdf	14 03 32.0	-0.4
	baz=324						
PKME	Peaks-Kenny Pk	140.88	13	P	PKPdf	14 03 32.3	-0.2
	baz=341						
H61A	Lyndonville	140.89	16	P	PKPdf	14 03 32.4	-0.2
	baz=337						
PLTB	Pedras Altas	140.92	185	eP	PKPdf	14 03 29.9	-3.2
G63A	Kingsbury	140.94	14	P	PKPdf	14 03 32.6	-0.1
	baz=341						
K57A	Scipio Center	140.99	22	P	PKPdf	14 03 32.9	0.0
	baz=329						
O53A	New Philadelph	140.99	29	P	PKPdf	14 03 31.6	-1.3
	baz=321						
P52A	Corning	141.00	31	P	PKPdf	14 03 31.7	-1.3
	baz=319						
N54A	Moraine State	141.00	27	P	PKPdf	14 03 31.7	-1.3
	baz=323						
G64A	Maxfield	141.01	13	P	PKPdf	14 03 32.5	-0.3
	baz=342						
H62A	Milan	141.06	16	P	PKPdf	14 03 31.8	-1.1
	baz=338						
J59A	Piesco	141.06	20	P	PKPdf	14 03 32.5	-0.5
	baz=333						
L56A	Greenwood	141.08	24	P	PKPdf	14 03 32.1	-1.0
	baz=327						
I60A	Shoreham	141.12	18	P	PKPdf	14 03 32.5	-0.5
	baz=335						
LBNH	Lisbon	141.16	17	P	PKPdf	14 03 32.7	-0.4
	baz=337						
H63A	New Sharon	141.27	14	P	PKPdf	14 03 33.1	-0.2
	baz=340						
K58A	Earlville	141.28	22	P	PKPdf	14 03 33.0	-0.4
	baz=330						
G65A	Princeton	141.30	11	P	PKPdf	14 03 33.3	0.0
	baz=344						
G65A	Princeton	141.30	11	PKPdf	PKPdf	14 03 31.4	-1.9
M56A	Emporium	141.37	25	P	PKPdf	14 03 33.3	-0.3
	baz=326						
L57A	Andrews Acres	141.48	23	P	PKPdf	14 03 33.3	-0.5
	baz=328						
H64A	Troy	141.48	13	P	PKPdf	14 03 33.7	+0.1
	baz=341						
K59A	Cooperstown	141.55	21	P	PKPdf	14 03 33.7	-0.2
	baz=332						
J60A	Lant Hill Farm	141.62	19	P	PKPdf	14 03 34.0	0.0
	baz=334						
H65A	Eastbrook	141.65	12	P	PKPdf	14 03 34.2	+0.3
	baz=343						
AC05	El Transito	141.97	162	eP	PKPdf	14 03 32.1	-3.1
MCWV	Mont Chateau	142.10	29	P	PKPdf	14 03 33.3	-1.7
	baz=322						
M58A	Price's Panora	142.17	23	P	PKPdf	14 03 33.7	-1.3
	baz=328						
K61A	Williamstown	142.18	19	P	PKPdf	14 03 33.9	-1.1
	baz=334						
O56A	Blue Knob Stat	142.20	27	P	PKPdf	14 03 33.8	-1.4
	baz=324						
N57A	Milroy	142.24	25	P	PKPdf	14 03 33.9	-1.2
	baz=326						
CPSB	Cacapava Do Su	142.25	186	eP	PKPdf	14 03 34.4	-1.1
CPSB	Cacapava Do Su	142.25	186	eP	PKPdf	14 03 34.6	-0.9
J63A	Strafford	142.29	16	P	PKPdf	14 03 34.3	-0.8
	baz=338						
AC04	Llanos de Chal	142.29	160	⇓iP	PKPdf	14 03 32.9	-2.8
W50A	Signal Mountai	142.33	39	PKPdf	PKPdf	14 03 34.6	-0.9
M59A	Waymart	142.42	22	P	PKPdf	14 03 34.5	-1.0
	baz=330						
L60A	Shokan	142.47	21	P	PKPdf	14 03 34.4	-1.1
	baz=332						

K62A	Royalston	142.51	18	P		PKPdf	14 03 34.6	-0.9
	baz=336							
L61A	Hillsdale 1, H	142.51	20	P		PKPdf	14 03 34.1	-1.5
	baz=333							
N58A	Sunbury	142.52	24	P		PKPdf	14 03 34.1	-1.5
	baz=328							
L61B	Northampton	142.57	19	P		PKPdf	14 03 34.4	-1.3
	baz=335							
LRAL	Lakeview Retre	142.59	43	P		PKPdf	14 03 34.9	-1.1
	baz=307							
O57A	Amberson	142.66	26	P		PKPdf	14 03 34.7	-1.2
	baz=326							
VCA	Vinchina	142.66	164	eP		PKPdf	14 03 34.2	-2.3
R54A	Victor	142.68	31	P		PKPdf	14 03 34.6	-1.4
	baz=319							
P56A	Dayton Farm, R	142.70	28	P		PKPdf	14 03 34.9	-1.1
	baz=324							
K63A	Dunstable	142.70	17	P		PKPdf	14 03 35.1	-0.8
	baz=337							
S54A	Dingess, Beckl	142.80	32	P		PKPdf	14 03 35.3	-1.0
	baz=319							
N59A	State Game Lan	142.83	23	P		PKPdf	14 03 35.4	-0.8
	baz=329							
HRV	Adam Dziewonsk	142.86	17	P		PKPdf	14 03 35.6	-0.6
	baz=336							
HRV	Adam Dziewonsk	142.86	17		PKIKP	PKPdf	14 03 36.1	-0.1
HRV	Adam Dziewonsk	142.86	17			PKPdf	14 03 36.1	-0.1
Q56A	Snyder Ridge,	142.90	28	P		PKPdf	14 03 35.3	-1.1
	baz=323							
M60A	Port Jervis	142.91	22	P		PKPdf	14 03 35.5	-0.8
	baz=331							
L62A	Suffield	142.95	19	P		PKPdf	14 03 35.7	-0.6
	baz=335							
CNLB	Canela	142.98	190	eP		PKPdf	14 03 33.8	-3.1
CNLB	Canela	142.98	190	eP		PKPdf	14 03 36.6	-0.3
O58A	Lewisberry	143.03	25	P		PKPdf	14 03 35.8	-0.8
	baz=327							
P57A	Homestead Farm	143.09	27	P		PKPdf	14 03 35.9	-0.8
	baz=325							
N60A	Cedar Hill Far	143.13	22	P		PKPdf	14 03 36.2	-0.5
	baz=330							
GO03	Copiap	143.14	161	⇑iP		PKPbc	14 03 35.2	-0.2
GO03	Copiap	143.14	161		PKPdf	PKPdf	14 03 38.3	+1.0
ITQB	Itaqui	143.18	181	eP		PKPbc	14 03 35.5	+0.1
ITQB	Itaqui	143.18	181	eP		PKPbc	14 03 36.1	+0.7
O59A	Robesonia	143.18	24	P		PKPdf	14 03 36.2	-0.6
	baz=328							
M61A	Granite Spring	143.23	21	P		PKPdf	14 03 36.5	-0.3
	baz=332							
Q57A	Strasburg	143.27	28	P		PKPab	14 03 35.1	0.0
	baz=324							
M62A	Hamden	143.41	20	P		PKPab	14 03 34.8	-0.6
	baz=334							
TER01	Tubaro-SC	143.41	192	eP		PKPab	14 03 35.2	-0.7
TER01	Tubaro-SC	143.41	192	eP		PKPdf	14 03 37.4	-0.2
L63A	North Scituate	143.43	18	P		PKPbc	14 03 35.7	-0.1
	baz=336							
PAL	Palisades	143.45	21	P		PKPbc	14 03 35.9	+0.1
	baz=332							
U54A	Nelsons Funny	143.47	34	P		PKPab	14 03 35.5	-0.5
	baz=317							
O60A	Telford	143.49	23	P		PKPab	14 03 35.8	0.0
	baz=329							
YLE	Yale	143.51	20			PKPab	14 03 34.7	-1.1
N61A	South Mountain	143.53	22	P		PKPbc	14 03 36.3	+0.2
	baz=331							
L64A	Middleborough	143.59	17	P		PKPbc	14 03 36.5	+0.3
	baz=337							
BRAL	Brewton	143.63	45	P		PKPdf	14 03 37.7	-0.1
	baz=305							
N62A	Caumsett State	143.67	21	P		PKPbc	14 03 36.8	+0.3
	baz=333							
P59A	Jarrettsville	143.67	25	P		PKPab	14 03 36.4	-0.2
	baz=327							
Q58A	Fox Den Farm,	143.68	27	P		PKPab	14 03 36.6	0.0
	baz=325							
BLA	Blacksburg	143.71	32	P		PKPab	14 03 36.6	-0.3
	baz=319							
M63A	Gales Ferry	143.72	19	P		PKPab	14 03 36.6	0.0
	baz=335							
L65A	Cape Cod Natio	143.73	16	P		PKPab	14 03 36.7	0.0
	baz=339							
S56A	Natural Bridge	143.79	30	P		PKPbc	14 03 36.8	-0.3
	baz=321							
R57A	Stanardsville	143.81	29	P		PKPdf	14 03 37.6	-0.3
	baz=323							
P60A	Greenville	143.83	24	P		PKPbc	14 03 37.0	0.0
	baz=329							
M64A	Tiverton	143.84	18	P		PKPab	14 03 37.3	+0.3
	baz=337							
BG3	Lake Jocassee	143.91	37			PKPdf	14 03 38.0	-0.2
N63A	Mattituck	143.94	19	P		PKPbc	14 03 37.2	-0.1
	baz=334							
M65A	Busby, Falmout	143.99	17	P		PKPbc	14 03 37.4	-0.1
	baz=338							
O61A	Allentown	144.01	22	P		PKPab	14 03 37.8	0.0
	baz=330							
S57A	Dark Hollow, R	144.03	30	P		PKPbc	14 03 37.7	-0.1
	baz=322							
T56A	Rocky Mt	144.05	31	P		PKPbc	14 03 37.8	-0.1
	baz=320							
R58A	Rapidan	144.05	28	P		PKPab	14 03 38.0	-0.1
	baz=324							
AC02	Maricunga	144.19	162	⇑iP		PKPdf	14 03 40.0	+0.3
Q59A	Harwood	144.20	26	P		PKPab	14 03 38.6	0.0
	baz=326							
U56A	King	144.38	33	P		PKPdf	14 03 39.2	+0.2
	baz=319							
R58B	Mineral	144.38	28	P		PKPbc	14 03 38.9	0.0
	baz=324							
CBN	Corbin Frederi	144.42	27	P		PKPbc	14 03 38.8	-0.1
	baz=325							
CBN	Corbin Frederi	144.42	27			PKPdf	14 03 39.1	+0.1
M66A	Nantucket	144.42	16	P		PKPbc	14 03 38.7	-0.1
	baz=338							
T57A	Hurt	144.47	31	P		PKPdf	14 03 39.0	-0.1
	baz=321							
R59A	King George, V	144.54	27	P		PKPbc	14 03 39.3	0.0
	baz=325							
S58A	Poland Farm, P	144.58	29	P		PKPbc	14 03 39.5	0.0
	baz=323							
GOGA	Godfrey	144.65	39	P		PKPab	14 03 40.3	-0.2
	baz=312							
V56A	Mocksville	144.72	33	P		PKPdf	14 03 39.6	0.0
	baz=318							
R60A	Leonardtown, M	144.72	26	P		PKPbc	14 03 39.9	0.0
	baz=326							
KMSC	Kings Mountain	144.74	35	P		PKPbc	14 03 40.0	0.0
	baz=316							
Q61A	Milford	144.74	24	P		PKPbc	14 03 40.1	+0.2
	baz=328							
S59A	Mechanicsville	144.81	28	P		PKPbc	14 03 40.2	0.0
	baz=324							
U57A	Blanch	144.86	31	P		PKPbc	14 03 40.4	0.0
	baz=320							
T58A	Grand View Acr	144.87	30	P		PKPbc	14 03 40.6	+0.2
	baz=322							
V57A	Coltrane Farms	145.05	32	P		PKPbc	14 03 40.7	-0.2
	baz=319							
S60A	Water View	145.15	27	P		PKPbc	14 03 41.5	+0.3
	baz=325							
W56A	Indian Trail	145.17	34	P		PKPbc	14 03 41.3	-0.1
	baz=317							
ITAB	Concordia	145.22	188	eP		PKPbc	14 03 41.7	0.0
AHML	Horco Molle	145.22	168	⇓iP		PKPbc	14 03 42.1	+0.2
U58A	Oxford	145.29	31	P		PKPbc	14 03 41.3	-0.4
	baz=321							
JSC	Jenkinsville	145.39	36		PKP2	PKPbc	14 03 42.0	0.0
JSC	Jenkinsville	145.39	36			PKPbc	14 03 42.0	0.0
V58A	Windy Hill, Pi	145.47	32			PKPbc	14 03 42.0	-0.2
W57A	Gilead	145.48	34			PKPbc	14 03 42.3	0.0
T60A	Surry	145.58	28	P		PKPbc	14 03 42.5	+0.1
	baz=325							
GO02	Mina Guanaco	145.60	160	⇓iP		PKPbc	14 03 42.9	-0.4
GO02	Mina Guanaco	145.60	160			PKPbc	14 03 43.8	+0.5
RTAL	Retalhuleu	145.72	75	eP		PKPbc	14 03 43.5	0.0
HUEH	Huehuetenango	145.78	74	i P		PKPdf	14 03 42.4	+0.1
PB14	IPOC Station P	145.81	159	⇓iP		PKPbc	14 03 44.4	+0.4
TIGA	Tifton	145.84	42	P		PKPbc	14 03 43.5	+0.1
	baz=309							
U60A	Pendleton	145.92	29	P		PKPbc	14 03 43.1	-0.3
	baz=324							
SACV	Santiago Islan	145.93	286			PKiKP	14 03 46.5	-0.1
V59A	Middlesex	145.94	31	P		PKPbc	14 03 43.2	-0.3
	baz=321							
PAYG	Puerto Ayora	146.35	102			PKPbc	14 03 45.7	+0.3
PAYG	Puerto Ayora	146.35	102	eP		PKiKP	14 03 47.6	0.0
U61A	Possum Corner	146.37	28	P		PKPbc	14 03 44.5	-0.2
	baz=325							
V60A	Jim Taylor Roa	146.43	30	P		PKPbc	14 03 44.6	-0.3
	baz=323							
TIJ01	Guaruva-PR	146.48	194	eP		PKPdf	14 03 43.4	+0.4
TIJ01	Guaruva-PR	146.48	194	eP		PKPdf	14 03 44.2	+1.2
CPUP	Villa Florida	146.51	180		PKPbc	PKPbc	14 03 44.4	-1.0
	comp=Z,629nm,1.0s,baz=155,slow=0.9,SNR=96							
CPUP					pPKPbc	pPKPdf	14 05 53.0	+0.2
	comp=Z,197nm,0.9s,baz=202,slow=4.0,SNR=7.4							
CPUP					SKKPbc	SKKPbc	14 14 22.3	+0.4
	comp=Z,42nm,1.1s,baz=352,slow=6.1,SNR=4.8							
CPUP	Villa Florida	146.51	180			PKPbc	14 03 44.7	-0.7
CPUP	Villa Florida	146.51	180	eP		PKPdf	14 03 43.9	+0.9
CPUP	Villa Florida	146.51	180	eP		PKPdf	14 03 43.6	+0.6
CNNC	Cliffs of the	146.53	31	P		PKPbc	14 03 45.0	-0.2
	baz=321							
X59A	McDuffie Farm,	146.67	33	P		PKPbc	14 03 45.2	-0.4
	baz=320							
PB10	IPOC Station P	146.77	158	⇓iP		PKPdf	14 03 44.8	+1.3
PB10	IPOC Station P	146.77	158			PKPbc	14 03 45.5	-0.7
NHSC	New Hope	146.86	36	P		PKPbc	14 03 45.4	-0.7
	baz=316							
PET01	Itanhaem-SP	147.00	197	eP		PKPdf	14 03 44.7	+0.9
PET01	Itanhaem-SP	147.00	197	eP		PKPbc	14 03 45.7	-1.0
X60A	Albert Glenn T	147.00	32	P		PKPbc	14 03 45.1	-1.4
	baz=321							
PETF	Flores	147.02	70	eP		PKPdf	14 03 43.9	-0.1
W61A	Ground Anchor	147.03	30	P		PKPbc	14 03 45.2	-1.3
	baz=323							
CAM01	Campos-RJ	147.09	208	eP		PKPbc	14 03 46.0	-1.0
CAM01	Campos-RJ	147.09	208	eP		PKPdf	14 03 45.5	+1.5
MAN01	Angra dos Reis	147.17	203	eP		PKPbc	14 03 46.5	-0.8
MAN01	Angra dos Reis	147.17	203	eP		PKPbc	14 03 46.2	-1.1
SLA	San Lorenzo	147.18	167	eP		PKPdf	14 03 45.5	+1.1
DUB01	Friburgo-RJ	147.20	207	eP		PKPdf	14 03 45.6	+1.3
DUB01	Friburgo-RJ	147.20	207	eP		PKPbc	14 03 46.0	-1.4
V62A	Hyde County Ai	147.23	28	P		PKPbc	14 03 46.1	-0.9
	baz=325							
Z59A	Georgetown, SC	147.29	35	P		PKPbc	14 03 46.1	-1.1
	baz=317							
PARB	Paraibuna	147.35	201	eP		PKPdf	14 03 45.0	+0.5
PARB	Paraibuna	147.35	201	eP		PKPdf	14 03 46.0	+1.5
PB15	IPOC Station P	147.45	159	⇓iP		PKPdf	14 03 46.3	+1.5
VAS01	Vassouras-RJ	147.48	205	eP		PKPdf	14 03 44.6	-0.1
VAS01	Vassouras-RJ	147.48	205	eP		PKPbc	14 03 47.2	-0.9
TEIG	Tepich	147.57	64			PKPbc	14 03 48.9	+0.6
TEIG	Tepich	147.57	64	eP		PKPbc	14 03 46.6	-1.8
ALF01	Guarapari-ES	147.67	210	eP		PKPdf	14 03 46.2	+1.2
ALF01	Guarapari-ES	147.67	210	eP		PKPdf	14 03 45.7	+0.8
PTGB	Pitanga	147.68	189	eP		PKPdf	14 03 43.3	-1.7
PTGB	Pitanga	147.68	189	eP		PKPdf	14 03 45.2	+0.2
SPB	Sao Paulo	147.70	197	eP		PKPdf	14 03 46.2	+1.2
SPB	Sao Paulo	147.70	197	eP		PKPbc	14 03 47.0	-1.6
RTR	El Retiro	147.78	76	eP		PKPbc	14 03 47.4	-1.8
RTR	El Retiro	147.78	76	eP		PKPbc	14 03 47.4	-1.8
CEVE	Cerro Verde	147.81	76	eP		PKPdf	14 03 47.3	+1.7
CEVE				eP		PKiKP	14 03 50.9	0.0
CEVE					IAML		14 04 13.1	
CEVE	Cerro Verde	147.81	76	eP		PKPdf	14 03 47.3	+1.7
CEVE				eP		PKiKP	14 03 50.9	0.0
CEVE					IAML		14 04 13.1	
SNJE	San Jose	147.82	76	eP		PKPdf	14 03 46.5	+0.9
SNJE	San Jose	147.82	76	eP		PKPdf	14 03 46.5	+0.9
PB06	IPOC Station P	147.87	159	⇓iP		PKPdf	14 03 46.7	+1.2
ESQI	Esquipulas	147.97	74	i P		PKPdf	14 03 46.1	+0.4
ESQI				e			14 03 46.1	
MTO3	Montecristo	147.98	75	eP		PKPdf	14 03 44.7	-1.2
MTO3	Montecristo	147.98	75	eP		PKPdf	14 03 44.7	-1.2
PB04	IPOC Station P	148.00	158	⇓iP		PKPdf	14 03 47.0	+1.3
JAYA	Jayaque - finc	148.00	76	eP		PKPbc	14 03 48.3	-1.5
JAYA	Jayaque - finc	148.00	76	eP		PKPbc	14 03 48.3	-1.5
CEDA	San Andres	148.03	76	eP		PKPdf	14 03 46.6	+0.9
CEDA	San Andres	148.03	76	eP		PKPdf	14 03 46.6	+0.9
TACO	Tacachico	148.05	75	eP		PKPdf	14 03 44.9	-0.9
TACO	Tacachico	148.05	75	eP		PKPdf	14 03 44.9	-0.9
LALI	Alcalda de L	148.15	76	eP		PKPbc	14 03 48.1	-1.9
LALI	Alcalda de L	148.15	76	eP		PKPbc	14 03 48.1	-1.9
BOQS	Boqueron	148.15	76	eP		PKPdf	14 03 47.9	+1.7
BOQS	Boqueron	148.15	76	eP		PKPdf	14 03 47.9	+1.7
LVC	Limon Verde	148.19	160		PKPbc	PKPbc	14 03 48.9	-1.5
	comp=Z,149nm,0.9s,baz=226,slow=1.8,SNR=61							
LVC					pPKPbc	pPKPdf	14 05 56.9	+0.4
	comp=Z,52nm,0.8s,baz=270,slow=8.1,SNR=2.3							
LVC	Limon Verde	148.19	160	eP		PKPdf	14 03 48.0	+1.8
LVC	Limon Verde	148.19	160	eP		PKPdf	14 03 46.0	-0.3
UEES	Universidad Ev	148.19	76	eP		PKPdf	14 03 47.1	+1.1
UEES	Universidad Ev	148.19	76	eP		PKPdf	14 03 47.1	+1.1
SNET	Serv Nac Est T	148.21	76	eP		PKPdf	14 03 47.7	+1.6
SNET	Serv Nac Est T	148.21	76	eP		PKPdf	14 03 47.7	+1.6
OPAM	Oficina de Pla	148.24	76	eP		PKPdf	14 03 47.2	+1.1
OPAM	Oficina de Pla	148.24	76	eP		PKPdf	14 03 47.2	+1.1
LFRS	El Faro	148.38	76	eP		PKPdf	14 03 45.9	-0.4
LFRS	El Faro	148.38	76	eP		PKPdf	14 03 45.9	-0.4
LBRS	Las Brisas	148.38	76	eP		PKPdf	14 03 42.2	-4.2
LBRS	Las Brisas	148.38	76	eP		PKPdf	14 03 42.2	-4.2
PB03	IPOC Station P	148.41	158	⇓iP		PKPdf	14 03 47.4	+1.0
FRTB	Fartura	148.51	194	eP		PKPdf	14 03 47.2	+0.8
FRTB	Fartura	148.51	194	eP		PKPdf	14 03 47.9	+1.6
COEG	Centro de Oper	148.55	76	eP		PKPdf	14 03 47.7	+1.1
COEG					IAML		14 03 54.2	
	comp=Z,536nm,0.6s							
COEG	Centro de Oper	148.55	76	eP		PKPdf	14 03 47.7	+1.1
COEG					IAML		14 03 54.2	
	comp=Z,536nm,0.6s							
RIB01	Linhares ES	148.59	212	eP		PKPdf	14 03 48.3	+1.8
RIB01	Linhares ES	148.59	212	eP		PKPdf	14 03 47.8	+1.2
PB07	IPOC Station P	148.65	157	⇓iP		PKPdf	14 03 47.9	+1.2
PB09	IPOC Station P	148.82	159	⇓iP		PKPdf	14 03 48.9	+1.8
COEB	Comit de Eme	148.91	76	eP		PKPdf	14 03 49.3	+2.0
COEB	Comit de Eme	148.91	76	eP		PKPdf	14 03 49.3	+2.0
TECA	Tecapa	148.94	76	eP		PKPdf	14 03 48.9	+1.5
TECA	Tecapa	148.94	76	eP		PKPdf	14 03 48.9	+1.5
PB02	IPOC Station P	149.01	157	⇓iP		PKPdf	14 03 48.5	+1.2
PACA	Pacayal	149.11	76	eP		PKPbc	14 03 50.0	-2.4
PACA	Pacayal	149.11	76	eP		PKPbc	14 03 50.0	-2.4
BSCB	Bom Sucesso	149.17	204	eP		PKPdf	14 03 48.6	+1.1
JUCU	Jucuar¡n	149.21	77	eP		PKPdf	14 03 47.5	-0.1
JUCU	Jucuar¡n	149.21	77	eP		PKPdf	14 03 47.5	-0.1
BSFB	Barra de Sao F	149.22	212	eP		PKPdf	14 03 48.0	+0.5
BSFB	Barra de Sao F	149.22	212	eP		PKPdf	14 03 48.5	+1.0
PATCX	Punta Patache	149.37	156	⇓iP		PKPdf	14 03 48.8	+1.0
DWPF	Disney Wildern	149.38	45	P		PKPdf	14 03 47.7	+0.2
	baz=308							
PB01	IPOC Station P	149.42	158	i P		PKPdf	14 03 49.0	+1.1
SJMB	Sao Joao De Ma	149.51	212	eP		PKPdf	14 03 48.8	+0.8
SJMB	Sao Joao De Ma	149.51	212	eP		PKPdf	14 03 49.7	+1.7
LCND	La Caada	149.55	76	eP		PKPdf	14 03 49.3	+1.2
LCND	La Caada	149.55	76	eP		PKPdf	14 03 49.3	+1.2
TA01	Diego Aracena	149.58	156	⇓iP		PKPdf	14 03 48.9	+0.8
CNCH	Conchagua	149.61	76	eP		PKiKP	14 03 54.2	-0.1
CNCH	Conchagua	149.61	76	eP		PKiKP	14 03 54.2	-0.1
TRCB	Terra Rica	149.66	189	eP		PKPdf	14 03 49.1	+0.9
TRCB	Terra Rica	149.66	189	eP		PKPdf	14 03 48.6	+0.5
TA02	Huaiquique	149.87	156	eP		PKPdf	14 03 49.4	+0.9
HMBC	Humberstone	149.96	156	⇓iP		PKPdf	14 03 49.5	+0.6
TGUH	Tegucigalpa,Un	150.03	75	eP		PKPdf	14 03 49.3	+0.3
TGUH	Tegucigalpa,Un	150.03	75	eP		PKPdf	14 03 49.3	+0.3
TGUH	Tegucigalpa,Un	150.03	75	eP		PKPdf	14 03 48.5	-0.5
PB08	IPOC Station P	150.37	157	⇓iP		PKPdf	14 03 51.1	+1.3
BB19B	Bebedouro	150.41	197	eP		PKPdf	14 03 50.5	+1.1
BB19B	Bebedouro	150.41	197	eP		PKPdf	14 03 51.0	+1.6
CRIN	San Cristobal	150.45	77	eP		PKPdf	14 03 50.6	+1.0
PSGC	Pisagua	150.47	155	⇓iP		PKPdf	14 03 50.4	+0.8
PCMB	Pacaembu	150.57	192	eP		PKPdf	14 03 50.8	+1.2
PCMB	Pacaembu	150.57	192	eP		PKPdf	14 03 50.3	+0.7
061Z	Ochoppi	151.09	48			PKiKP	14 03 57.2	+0.2
MNMC	Minye Minye	151.11	156	⇓iP		PKPdf	14 03 52.0	+1.2
MASN	Masaya	151.40	78	eP		PKPbc	14 03 57.7	0.0
PB16	IPOC Station P	151.86	155	⇓iP		PKPdf	14 03 53.5	+1.2
SAJU	San Juanillo,	152.00	82	eP		PKPdf	14 03 52.2	+0.3
GRZA	Playa Garza	152.08	83	eP		PKPdf	14 03 52.4	+0.5
ITRB	Iturama	152.20	195	eP		PKPdf	14 03 53.0	+0.9
ITRB	Iturama	152.20	195	eP		PKPdf	14 03 53.8	+1.7
INDI	Punta indio, G	152.22	83	eP		PKPdf	14 03 53.4	+1.2
ORTG	Ortega, Santa	152.23	82	eP		PKPdf	14 03 52.7	+0.4
AQDB	Aquidauana	152.28	184	eP		PKPdf	14 03 53.1	+1.0
AQDB	Aquidauana	152.28	184	eP		PKPdf	14 03 52.8	+0.7
GPS2	Hotel Rincn d	152.31	81	eP		PKPdf	14 03 54.0	+1.6
PLVR	Palo Verde	152.34	82	eP		PKPdf	14 03 51.6	-1.0
ACON	Acoyapa	152.36	78	eP		PKPdf	14 03 51.9	-0.5
CUI	Cuipilapa	152.50	81	eP		PKPdf	14 03 50.6	-2.1
GDU01	Guandu, BA	152.51	220	eP		PKPdf	14 03 53.8	+1.2
GDU01	Guandu, BA	152.51	220	eP		PKPdf	14 03 54.1	+1.5
NBRF	Rio Formoso -	152.59	235	eP		PKPdf	14 03 52.1	-0.7
NBRF	Rio Formoso -	152.59	235	eP		PKPdf	14 03 54.4	+1.6
JTS	Las Juntas de	152.73	82		PKP	PKPdf	14 03 54.4	+1.4
	comp=Z,150nm,1.0s,baz=56,slow=2.1,SNR=44							
JTS					PKPbc	PKiKP	14 04 01.3	+0.5
	comp=Z,480nm,1.0s,baz=318,slow=6.2,SNR=25							
JTS					pPKP	pPKPdf	14 06 04.8	+1.8
	comp=Z,35nm,0.9s,baz=8.0,slow=9.5,SNR=1.9							
JTS					pPKPab	pPKPab	14 06 15.6	-1.7
	comp=Z,176nm,0.9s,baz=52,slow=3.6,SNR=8.4							
JTS	Las Juntas de	152.73	82	eP		PKPdf	14 03 52.4	-0.5
JTS	Las Juntas de	152.73	82	eP		PKPdf	14 03 52.3	-0.6
LAFE	Finca La Fe, P	152.80	83	eP		PKPdf	14 03 53.2	+0.2
NNA	Nana	152.82	135		PKP	PKPdf	14 03 54.6	+1.5
	comp=Z,218nm,0.9s,baz=276,slow=3.3,SNR=52							
NNA					PKPbc	PKiKP	14 04 01.0	0.0
	comp=Z,654nm,0.9s,baz=262,slow=6.1,SNR=36							
NNA					pPKP	pPKPdf	14 06 04.6	+1.4
	comp=Z,38nm,0.7s,baz=264,slow=7.7,SNR=2.2							
NNA					pPKPab	pPKPab	14 06 16.5	-1.3
	comp=Z,156nm,0.9s,baz=263,slow=2.3,SNR=5.2							
ARE1	Arenal 1	152.95	81	eP		PKPdf	14 03 52.3	-1.0
CEDE	Laguna Cedeo	152.96	81	i P		PKPdf	14 03 52.8	-0.5
JACO	JACO, Garabito	153.06	83	eP		PKPdf	14 03 54.0	+0.6
ESPN	Las Esperanzas	153.18	78	eP		PKPdf	14 03 53.1	-0.4
IPMB	Ipameri, GO	153.20	200	eP		PKPdf	14 03 54.8	+1.2
IPMB	Ipameri, GO	153.20	200	eP		PKPdf	14 03 55.4	+1.8
COVE	Coope Vega, Sa	153.24	81	eP		PKPdf	14 03 52.3	-1.4
HDC	Heredia	153.57	82	eP		PKPdf	14 03 54.8	+0.5
HDC3	Heredia 3	153.58	82	eP		PKPdf	14 03 55.1	+0.8
LCR2	La Lucha 2	153.70	83	eP		PKPdf	14 03 54.8	+0.2
RIMA	Rio Macho	153.83	83	eP		PKPdf	14 03 54.8	0.0
VTUC	Crater, Volcan	153.92	82	eP		PKPdf	14 03 54.0	-1.1
CVTR	Volcan Turrial	153.92	82	eP		PKPdf	14 03 50.6	-4.6
CDM	Cerro de Muert	153.94	83	⇓iP		PKPdf	14 03 55.7	+0.5
NBPV	Pedro Velho	153.95	239	eP		PKPdf	14 03 56.6	+1.9
PEZE	Perez Zeledon,	154.03	84	eP		PKPdf	14 03 55.6	+0.7
JANB	Januaria	154.17	210	eP		PKPdf	14 03 57.2	+2.2
JANB	Januaria	154.17	210	eP		PKPdf	14 03 56.7	+1.7
RIOS	Rincon, Osa	154.22	85	i P		PKPdf	14 03 56.0	+1.0
LPAZ	La Paz	154.26	156		PKP	PKPdf	14 03 56.8	+1.0
	comp=Z,85nm,1.0s,baz=45,slow=0.5,SNR=113							
LPAZ					PKPab	PKPab	14 04 22.0	+0.7
	comp=Z,202nm,0.8s,baz=188,slow=4.8,SNR=16							
LPAZ					pPKP	pPKPdf	14 06 07.9	+1.6
	comp=Z,19nm,0.7s,baz=235,slow=13,SNR=1.4							
LPAZ					pPKPab	pPKPab	14 06 21.2	-3.1
	comp=Z,160nm,1.0s,baz=84,slow=3.8,SNR=7.1							
LPAZ	La Paz	154.26	156	eP		PKPdf	14 03 56.1	+0.3
LPAZ	La Paz	154.26	156	eP		PKPdf	14 03 57.5	+1.7
LPAZ	La Paz	154.26	156	eP		PKPdf	14 03 55.4	-0.4
EDPN	Palmar Norte	154.27	85	eP		PKPdf	14 03 57.7	+2.6
PIRO	Carate, Puerto	154.40	86	eP		PKPdf	14 03 55.9	+0.6
DRK0	Durika	154.47	84	eP		PKPdf	14 03 55.6	0.0
ATAH	Atahualpa	154.68	124		PKP	PKPdf	14 03 58.1	+1.9
	comp=Z,318nm,1.0s,baz=235,slow=1.3,SNR=125							
ATAH					PKPab	PKPab	14 04 23.9	+0.8
	comp=Z,169nm,0.8s,baz=222,slow=4.3,SNR=7.5							
ATAH					pPKP	pPKPdf	14 06 08.6	+2.1
	comp=Z,27nm,0.8s,baz=129,slow=14,SNR=1.2							
ATAH					pPKPab	pPKPab	14 06 26.7	-0.5
	comp=Z,176nm,0.9s,baz=222,slow=4.4,SNR=7.8							
CCOL	Caracol de Cor	154.76	86	eP		PKPdf	14 03 57.5	+1.7
RCBR	Riachuelo	154.77	239	eP		PKPdf	14 03 55.7	-0.2
RCBR	Riachuelo	154.77	239	eP		PKPdf	14 03 58.9	+3.0
NBLI	Livramento-PB	154.81	235	eP		PKPdf	14 03 57.7	+1.7
NBLI	Livramento-PB	154.81	235	eP		PKPdf	14 03 56.5	+0.6
BRU2	Volcan	155.03	85	⇓iP		PKPdf	14 03 56.9	+0.6
PP1B	Ponte de Pedra	155.06	186	eP		PKPdf	14 03 57.6	+1.4
PP1B	Ponte de Pedra	155.06	186	eP		PKPdf	14 03 58.2	+2.0
BDFB	Brasilia	155.29	202		PKP	PKPdf	14 03 57.8	+1.2
	comp=Z,74nm,0.9s,baz=64,slow=1.6,SNR=52							
BDFB					PKPab	PKPab	14 04 25.8	+0.8
	comp=Z,125nm,0.9s,baz=94,slow=3.9,SNR=5.2							
BDFB					pPKP	pPKPdf	14 06 07.3	-0.1
	comp=Z,14nm,0.6s,baz=110,slow=1.0,SNR=1.3							
BDFB					pPKPab	pPKPab	14 06 27.6	-0.6
	comp=Z,40nm,0.6s,baz=36,slow=8.5,SNR=3.1							
PRVC	Isla de Provid	155.80	74	eP		PKPdf	14 03 57.1	0.0
NBPA	Parau_RN	155.84	238	eP		PKPdf	14 03 59.1	+1.8
ARAG	Araguaiana, MT	156.40	194	eP		PKPdf	14 03 59.2	+1.3
ARAG	Araguaiana, MT	156.40	194	eP		PKPdf	14 03 58.4	+0.5
GMAL	Guarumal, Vera	156.48	87	eP		PKPdf	14 03 58.1	+0.1
SIV	San Ignacio	156.53	171		PKP	PKPdf	14 03 58.7	+0.6
	comp=Z,98nm,1.0s,baz=210,slow=1.2,SNR=115							
SIV					PKPab	PKPab	14 04 31.8	+1.6
	comp=Z,79nm,0.8s,baz=234,slow=6.8,SNR=13							
SIV					pPKP	pPKPdf	14 06 10.7	+2.3
	comp=Z,19nm,0.8s,baz=213,slow=5.4,SNR=2.0							
SIV					pPKPab	pPKPab	14 06 30.7	-2.4
	comp=Z,58nm,0.9s,baz=120,slow=3.5,SNR=4.7							
SDBA	SAO DESIDERIO	156.71	213	eP		PKPdf	14 03 59.7	+1.3
SDBA	SAO DESIDERIO	156.71	213	eP		PKPdf	14 03 59.0	+0.6
PNME	Penonome	157.37	86	eP		PKPdf	14 04 00.9	+1.7
AZU	Azuero	157.43	87	eP		PKPdf	14 03 58.8	-0.5
AZU	Azuero	157.43	87	eP		PKPdf	14 03 59.3	+0.1
MTDJ	Mount Denham	157.71	59	eP		PKPdf	14 03 59.0	-0.6
BCIP	Isla Barro Col	157.83	84	eP		PKPdf	14 03 58.8	-0.9
BCIP	Isla Barro Col	157.83	84	eP		PKPdf	14 04 00.2	+0.5
OTAV	Otavalo	157.95	108	eP		PKPdf	14 03 59.0	-1.5
OTAV	Otavalo	157.95	108	eP		PKPdf	14 04 01.0	+0.5
OTAV	Otavalo	157.95	108	eP		PKPdf	14 03 57.6	-2.9
UPA	Univ. de Panam	158.14	84	eP		PKPdf	14 03 58.0	-2.0
CTUM2	Tumaco	158.16	104	eP		PKPdf	14 04 02.0	+1.9
TUMC	Tumaco	158.16	104	eP		PKPdf	14 03 58.0	-2.1
PEXB	Peixe	158.60	205	eP		PKPdf	14 04 02.0	+1.3
PEXB	Peixe	158.60	205	eP		PKPdf	14 04 01.1	+0.4
CZSB	Cruzeiro do Su	158.69	134	eP		PKPdf	14 04 02.2	+1.5
CZSB	Cruzeiro do Su	158.69	134	eP		PKPdf	14 03 58.5	-2.3
GTBY	Guantanamo Bay	158.85	52	eP		PKPdf	14 03 59.0	-1.8
GCUF	Volcan Galeras	159.31	106	eP		PKPdf	14 04 03.8	+1.6
CPAS1	Pasto	159.32	106	⇑eP		PKPdf	14 04 04.8	+2.7
NBMO	Morrinhos-CE	159.60	239	eP		PKPdf	14 04 02.6	+0.8
NBMO	Morrinhos-CE	159.60	239	eP		PKPdf	14 04 04.3	+2.5
BBAC	Balboa, Cauca	159.63	104	eP		PKPdf	14 04 02.6	+0.5
VILB	Vilhena	159.65	172	eP		PKPdf	14 04 03.5	+1.6
VILB	Vilhena	159.65	172	eP		PKPdf	14 04 02.9	+1.0
UPD2	Meteti	159.66	85	eP		PKPdf	14 04 00.9	-0.9
SNDB	Serra Nova Dou	159.82	198	eP		PKPdf	14 04 03.4	+1.4
SNDB	Serra Nova Dou	159.82	198	eP		PKPdf	14 04 03.6	+1.6
PTAC	Punta Ardita,	159.86	89	eP		PKPdf	14 04 02.8	+0.7
MALC	Bahia Malaga	160.00	98	eP		PKPdf	14 04 03.9	+1.6
PIZC	Pizarro, Choco	160.12	96	eP		PKPdf	14 03 59.0	-3.4
NBPS	Pedro II - PI	160.17	234	eP		PKPdf	14 04 03.7	+1.1
CAPC	Capurgana	160.31	85	eP		PKPdf	14 04 03.0	+0.4
POPC	Popayan, Colom	160.32	103	eP		PKPdf	14 03 59.0	-3.9
ETMB	Extrema	160.86	153	eP		PKPdf	14 04 03.5	+0.3
ETMB	Extrema	160.86	153	eP		PKPdf	14 04 03.1	-0.1
YOTC	Yotoco, Valle	160.96	99	eP		PKPdf	14 04 01.9	-1.6
CFLOR	Florencia	161.03	107	eP		PKPdf	14 04 04.5	+1.1
FLOC	Florencia	161.03	107	eP		PKPdf	14 04 03.8	+0.3
SMTB	Santa Maria do	161.10	212	eP		PKPdf	14 04 04.5	+1.0
SMTB	Santa Maria do	161.10	212	eP		PKPdf	14 04 04.7	+1.2
PLMC	San Jos del P	161.18	96	eP		PKPdf	14 04 00.9	-2.7
GARC	Garzon, Huila	161.36	105	eP		PKPdf	14 04 04.7	+0.7
DBBC	Dabeiba	161.44	90	eP		PKPdf	14 04 05.7	+1.8
BETC	Betania	161.55	104	eP		PKPdf	14 04 04.5	+0.5
CLDB	Colider	161.81	185	eP		PKPdf	14 04 04.3	+0.1
CLDB	Colider	161.81	185	eP		PKPdf	14 04 04.3	+0.1
MOTC	Monteria, Cord	161.97	84	⇑eP		PKPdf	14 04 03.8	-0.5
ANIL	Santa Ana	161.98	98	eP		PKPdf	14 04 04.8	+0.1
ORTC	Ortega, Tolima	162.02	100	eP		PKPdf	14 04 01.9	-2.6
RREF	El Recreo	162.10	97	eP		PKPdf	14 04 03.8	-1.5
GUY2C	Guyana, Caldas	162.13	96	⇑eP		PKPdf	14 04 01.9	-3.2
UREC	San Jos de Ur	162.13	88	eP		PKPdf	14 04 02.8	-1.7
NORC	Norcasia	162.66	95	eP		PKPdf	14 04 03.8	-1.3
SAML	Samuel	162.84	161		PKIKP	PKPdf	14 04 06.4	+1.3
SAML	Samuel	162.84	161			PKPdf	14 04 06.4	+1.3
SAML	Samuel	162.84	161	eP		PKPdf	14 04 04.7	-0.4
SAML	Samuel	162.84	161	eP		PKPdf	14 04 05.9	+0.7
SAML	Samuel	162.84	161	eP		PKPdf	14 04 05.1	-0.1
MACC	Macarena, Meta	162.92	107	eP		PKPdf	14 04 05.7	+0.4
MACC	Macarena, Meta	162.92	107	eP		PKPdf	14 04 03.8	-1.5
SMRC	Santa Marta, M	163.08	76	eP		PKPdf	14 04 03.8	-1.6
ROSC	El Rosal	163.10	98		PKP	PKPdf	14 04 06.2	+0.2
	comp=Z,284nm,0.9s,baz=106,slow=1.4,SNR=48							
ROSC					PKPab	PKPab	14 05 01.3	+1.4
	comp=Z,279nm,0.9s,baz=322,slow=2.1,SNR=9.6							
ROSC	El Rosal	163.10	98	eP		PKPdf	14 04 07.6	+1.6

PTBC	PUERTO BERRIO,	163.16	92	eP	PKPdf	14 04 03.8	-1.7
ROSB	Rosrio	163.20	233	eP	PKPdf	14 04 05.5	0.0
ARGC	Ariguani, Magd	163.27	80	eP	PKPdf	14 04 07.2	+1.7
SPBC	San Pablo de B	163.46	95	eP	PKPdf	14 04 04.7	-1.2
SMLC	San Martn de	163.54	84	eP	PKPdf	14 04 05.7	-0.1
CHIC	Chingaza	163.64	99	eP	PKPdf	14 04 03.6	-2.9
CVALL	Valledupar, Ce	164.13	77	eP	PKPdf	14 04 06.3	0.0
CRJC	Cerrejon, Guaj	164.40	75	eP	PKPdf	14 04 04.7	-2.0
BARC	Barichara	164.42	92	eP	PKPdf	14 04 06.9	0.0
RUSC	La Rusia	164.46	94	⇑eP	PKPdf	14 04 04.7	-2.6
PRPB	Parauapebas	164.52	210	eP	PKPdf	14 04 06.8	0.0
URIC	Uribia, Colomb	165.08	72	eP	PKPdf	14 04 05.7	-1.4
PTGC	Puerto Gaitan,	165.12	101	eP	PKPdf	14 04 05.7	-1.6
NPGB	Novo Progresso	165.53	189	eP	PKPdf	14 04 07.7	0.0
NPGB	Novo Progresso	165.53	189	eP	PKPdf	14 04 07.6	0.0
TAMC	Tame, Arauca	165.79	93	eP	PKPdf	14 04 07.6	-0.2
ICMP	Isla Caja de M	166.34	39		PKPdf	14 04 08.4	+0.4
SJG	San Juan	166.40	37	eP	PKPdf	14 04 08.5	+0.5
TMAB	Tom-Au,PA,Br	166.52	225	eP	PKPdf	14 04 08.8	+0.5
HUMP	Col San Antoni	166.55	36		PKPdf	14 04 08.8	+0.6
DABV	Dabajuro	166.57	74	eP	PKPdf	14 04 07.5	-0.8
SDV	Santo Domingo	166.92	82	PKP	PKPdf	14 04 08.0	-0.9
	comp=Z,174nm,1.1s,baz=258,slow=0.5,SNR=67						
SDV				PKPab	PKPab	14 05 17.3	+0.8
	comp=Z,273nm,0.8s,baz=272,slow=2.2,SNR=25						
SDV				pPKPab	pPKPab	14 07 22.0	+3.4
	comp=Z,48nm,0.8s,baz=302,slow=9.5,SNR=0.9						
SDV	Santo Domingo	166.92	82		PKPdf	14 04 09.8	+1.0
SDV	Santo Domingo	166.92	82	eP	PKPdf	14 04 05.7	-3.2
SDV	Santo Domingo	166.92	82	eP	PKPdf	14 04 07.9	-0.9
ITTB	Itaituba	168.22	189	eP	PKPdf	14 04 09.4	-0.2
SEUS	St. Eustatius	168.60	27	eP	PKPdf	14 04 02.5	-7.1
SKI	Saint Kitts	168.85	27	eP	PKPdf	14 04 04.2	-5.6
ANWB	Willy Bob	168.94	22	eP	PKPdf	14 04 06.9	-2.9
MACA	Manacapuru-AM	169.08	163	eP	PKPdf	14 04 10.1	0.0
BAUV	El Baul	169.46	81	eP	PKPdf	14 04 06.8	-3.5
BAUV	El Baul	169.46	81	e	PKPab	14 05 27.2	-0.3
ANBD	Bethesda, Anti	169.51	23	eP	PKPdf	14 04 01.5	-8.7
MLYT	Lee's Yard	169.63	26	eP	PKPdf	14 04 08.1	-2.2
ABD	La Joyeuse, An	170.14	23	eP	PKPdf	14 04 08.6	-2.0
ABD	La Joyeuse, An	170.14	23	e	PKPab	14 05 28.4	-1.6
MALB	Monte Alegre	170.29	200	eP	PKPdf	14 04 11.0	+0.2
CBE	Ff, Capester	170.46	24	eP	PKPdf	14 04 10.2	-0.6
CBE	Ff, Capester	170.46	24	e	PKPab	14 05 29.3	-2.2
CBE	Ff, Capester	170.46	24	e	PKPab	14 05 31.2	-0.3
MCPB	Macapa, AP	170.60	216	eP	PKPdf	14 04 11.0	0.0
TDBA	Terre de Bas,	170.64	25	eP	PKPdf	14 04 08.9	-2.0
DSLB	Salisbury	171.10	25	eP	PKPdf	14 04 10.6	-0.5
DLPL	La Plaine	171.27	24	eP	PKPdf	14 04 02.9	-8.3
PTGA	Pitinga	171.60	163	PKP	PKPdf	14 04 11.4	-0.1
	comp=Z,63nm,1.0s,baz=245,slow=0.5,SNR=41						
PTGA				PKPab	PKPab	14 05 37.3	+0.8
	comp=Z,44nm,0.8s,baz=230,slow=8.8,SNR=14						
PTGA				pPKPab	pPKPab	14 07 40.8	+2.0
	comp=Z,32nm,0.9s,baz=219,slow=6.3,SNR=3.1						
PTGA	Pitinga	171.60	163		PKPdf	14 04 11.9	+0.4
PTGA	Pitinga	171.60	163	eP	PKPdf	14 04 11.0	-0.5
FDF	Fort de France	171.85	26	eP	PKPdf	14 04 10.1	-1.5
FDF	Fort de France	171.85	26	e	PKPab	14 05 34.3	-3.4
ILAM	Ilet Lapin Mar	171.92	24	eP	PKPdf	14 04 08.4	-3.1
ILAM	Ilet Lapin Mar	171.92	24	e	PKPab	14 05 33.1	-4.8
BIM	Bigot	172.07	26	eP	PKPdf	14 04 08.9	-2.7
BIM	Bigot	172.07	26	e	PKPab	14 05 45.0	+6.3
MPOM	Morne Pois Mar	172.23	25	eP	PKPdf	14 04 09.5	-2.1
MPOM	Morne Pois Mar	172.23	25	e	PKPab	14 05 33.7	-5.6
SLBI	Saint Lucia, B	172.55	27	eP	PKPdf	14 04 09.1	-2.7
MCLT	Moule a Chique	172.84	28	eP	PKPdf	14 04 10.3	-1.6
SVV	Soufriere Volc	173.04	31	e	PKPdf	14 04 12.3	+0.3
SVB	Belmont	173.06	32	eP	PKPdf	14 04 09.8	-2.2
GCMP	Grenada, Carri	173.61	37	eP	PKPdf	14 04 09.7	-2.5
GRGR	Grenville	173.74	40	eP	PKPdf	14 04 07.5	-4.8
BBGH	Gun Hill	173.91	19	eP	PKPdf	14 04 12.7	+0.4
BOAV	Boa Vista	174.23	149	eP	PKPdf	14 04 12.4	-0.1
BOAV	Boa Vista	174.23	149	eP	PKPdf	14 04 12.7	+0.2
MDP	Montagnes des	174.67	245	PKP	PKPdf	14 04 13.2	+0.5
	comp=Z,120nm,0.9s,baz=19,slow=1.2,SNR=12						
MDP				PKPab	PKPab	14 05 51.3	+0.7
	comp=Z,139nm,1.0s,baz=96,slow=2.7,SNR=14						
TRN	Trinidad (W)	174.95	49	eP	PKPdf	14 04 09.2	-3.4
TRN	Trinidad (W)	174.95	49	e	PKPab	14 05 47.8	-3.9
TPP	Pointe-a-Pierr	175.12	53	e	PKPab	14 05 52.0	-0.4

JMA 27 13:52:55.7±0.1, 41°.80N×140°.50E, h18km±1km, M0.8, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSR	Shiriuchi	0.28	193	eS	Sg	13 53 05.7	-0.3
JYM2	Yakumo 2	0.33	343	P	Pg	13 53 02.7	-0.1
JYM2				eS	Sg	13 53 07.5	-0.1
JOT	Ohata	0.59	135	eS	Sg	13 53 14.8	-0.4

IDC 27 14:12:46.4±0.9, 67°.16S×144°.68E, h0km, mb4.3/5, mb1 4.7/6, mb1mx4.2/41, mbtmp4.5/6, ML5.1/1, Error ellipse: s-maj=60.4km s-min=14.0km az=86.0

ISC 27 14:12:46.9±0.9, 67°.1S±0°.1×146°.2E±0°.3, h10km, n13, σ1s16/12, mb4.2/5, Antarctica

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	Vanda	11.42	163	Pn	Pn	14 15 30.6	+0.8
	13nm,0.3s,baz=321,slow=13,SNR=253						
VNDA				Sn	Sn	14 17 34.8	-2.4
	8.5nm,0.3s,baz=205,slow=16,SNR=5.3						
QSPA	South Pole Qui	22.96	180	P	P	14 17 52.7	+1.5
	14nm,0.7s,baz=317,slow=7.6,SNR=28						
QSPA				S	S	14 22 02.5	+1.3
	1.1nm,0.5s,baz=17,slow=20,SNR=1.0						
H01W1	Cape Leeuwin H	37.18	314	T	T	14 58 01.4	
	baz=158						
H01W2	Cape Leeuwin H	37.18	314	T	T	14 58 01.4	
	baz=158						
H01W3	Cape Leeuwin H	37.20	314	T	T	14 58 37.9	
	baz=158						
SNAA	Sanae	39.92	195	P	P	14 20 20.2	-0.3
	1.6nm,0.6s,baz=171,slow=10,SNR=7.9						
ASAR	Alice Springs	44.12	344	P	P	14 20 55.2	0.0
	2.1nm,0.6s,baz=164,slow=9.0,SNR=30						
WRA	Warramunga Arr	47.76	345	P	P	14 21 23.6	-0.3
	2.3nm,0.5s,baz=174,slow=6.8,SNR=24						
FITZ	Fitzroy Crossi	50.76	334	P	P	14 21 46.2	-0.6
	2.7nm,0.9s,baz=186,slow=6.9,SNR=2.5						
AKASG	Malin Array Be	145.39	274	PKP	PKPbc	14 32 23.1	-0.4
	0.8nm,0.4s,baz=127,slow=2.1,SNR=2.1						
INK	Inuvik	146.08	41	PKPbc	PKPab	14 32 26.1	+0.3
	0.3nm,0.4s,baz=159,slow=2.0,SNR=1.1						
YKA	Yellowknife Ar	147.58	59	PKPbc	PKPab	14 32 32.4	+0.6
	0.4nm,0.5s,baz=223,slow=2.2,SNR=10.0						
GERES	GERESS Array B	149.94	257	PKPbc	PKPbc	14 32 35.4	-0.8
	0.2nm,0.3s,baz=129,slow=2.7,SNR=2.7						

NNC 27 14:18:09.8±2.3, 40°.83N×69°.68E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=17.8km s-min=12.7km az=49.0

KRNET 27 14:18:10.3±0.1, 41°.08N×69°.77E, mb3.0

ISC 27 14:18:13.4±2.0, 40°.99N±0°.05×69°.8E±0°.1, h10km, n11, σ1s48/20, 19C-1D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRKS	Terek-Say	1.14	62	⇑iP	Pb	14 18 31.7	-3.7
	baz=70						
TRKS				⇑iS	Sb	14 18 47.5	-2.9
	baz=70						
BTK	Batken	1.22	140	⇑eP	Pn	14 18 35.0	-1.6
	baz=42						
BTK				⇑iS	Sn	14 18 52.9	-0.2
	baz=42						
DRK	Karamyk	2.15	134	⇑iP	Pn	14 18 50.6	+1.0
	baz=35						
DRK				⇑iS	Sb	14 19 20.3	+0.8
	baz=35						
KK31	Karatay Array	2.17	14	Pn	Pn	14 18 50.1	+0.4
	2.4nm,0.4s,baz=202,slow=14,SNR=75						
KK31				Sn	Sb	14 19 20.3	+0.4
	5.7nm,0.4s,baz=200,slow=26,SNR=17						
OHH	Osh	2.32	101	⇑iP	Pn	14 18 52.1	+0.4
	baz=3.0						
OHH				⇑iS	Sn	14 19 22.2	+1.9
	baz=3.0						
ARSB	Arslanbob	2.42	81	⇑iP	Pn	14 18 53.4	+0.1
	baz=83						
ARSB				⇑iS	Sn	14 19 24.6	+1.5
	baz=83						
MNAS	Manas	2.51	53	⇑eP	Pn	14 18 54.4	-0.1
	baz=54						
MNAS				⇑iS	Sn	14 19 26.0	+0.7
	baz=54						
AML	Almayashu	3.13	67	⇑eP	Pn	14 19 03.3	+0.1
	baz=69						
AML				⇑iS	Sn	14 19 41.8	+0.9
	baz=69						
ARLS	Aral	3.51	74	⇑iP	Pn	14 19 08.4	+0.2
	baz=76						
ARLS				⇑iS	Sn	14 19 50.7	+0.9
	baz=76						
AAK	Ala-Archa	3.87	63	⇑Pg	Pb	14 19 22.8	+0.9
	3.4nm,0.6s						
AAK				⇑Lg	Lg	14 20 19.8	
	12nm,1.2s						
TKM2	Tokmak 2	4.73	64	⇓Pg	Pb	14 19 38.0	+1.5
	5.3nm,1.2s						
TKM2				⇑Lg	Lg	14 20 45.3	
	6.9nm,0.8s						

WEL 27 14:45:31.6, 43°S±1°×17°3E±°, h10km±1km, M3.3/12, ML3.5/12, MLv3.3/12, Error ellipse: s-maj=0.0km s-min=0.0km az=43.9, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MQZ	McQueen's Vall	0.23	189	P	Pg	14 45 37.4	+1.1
MQZ				S	Sg	14 45 41.0	+1.5
AMCZ	Amberley	0.31	353	P	Pb	14 45 39.2	-0.1
OKCZ	Okains Bay	0.35	133	P	Pb	14 45 39.4	-0.7
RACZ	Rakaia	0.48	239	P	Pb	14 45 42.8	+0.7
OXZ	Oxford	0.51	288	P	Pb	14 45 43.1	+0.5
GVZ	Greta Valley S	0.57	25	P	Pb	14 45 43.7	0.0
LTZ	Lake Taylor	0.77	336	P	Pb	14 45 47.8	+0.6
WACZ	Wakanui South	0.78	233	P	Pn	14 45 48.6	-0.1
MHCZ	Mount Hutt	0.83	266	P	Pn	14 45 49.4	0.0
INZ	Inchbonnie	1.19	309	P	Pb	14 45 54.2	-0.2
ARCZ	Arundel	1.20	247	P	Pb	14 45 54.4	0.0
RPZ	Rata Peaks	1.22	259	P	Pn	14 45 54.7	0.0
KHZ	Kahutara	1.23	30	P	Pn	14 45 53.5	-1.4
WVZ	Waitaha Valley	1.49	285	P	Pb	14 45 59.4	0.0
TMZ	Timaru	1.52	233	P	Pn	14 45 58.9	0.0
THZ	Tophouse	1.73	5	P	Pn	14 46 01.2	-0.6
GCSZ	Gaunt Creek Bo	1.74	275	P	Pb	14 46 03.4	-0.3
DSZ	Denniston Nort	1.86	339	P	Pn	14 46 03.6	0.0
BSWZ	Blackbirch Sta	1.97	27	P	Pn	14 46 04.5	-0.6
LBZ	Lake Benmore	2.03	243	P	Pn	14 46 06.6	+0.7
FOZ	Fox Glacier	2.10	268	P	Pb	14 46 08.5	-1.2
ODZ	Otahua Downs	2.15	223	P	Pn	14 46 07.4	-0.1
TUWZ	Tuamarina	2.25	25	P	Pn	14 46 07.8	-1.0
QRZ	Quartz Range	2.66	357	P	Pn	14 46 14.2	-0.3
MSWZ	Moikau Station	2.80	43	P	Pn	14 46 14.6	-1.9
DUWZ	D'Urville Isla	2.83	19	P	Pn	14 46 17.0	+0.1
HHSZ	Highcliff Hill	2.83	211	P	Pn	14 46 16.8	-0.1
JCZ	Jackson Bay	2.90	257	P	Pn	14 46 19.5	+1.6
CAW	Cannon Point	2.95	37	P	Pn	14 46 16.8	-1.8
WKZ	Wanaka	2.97	242	P	Pn	14 46 19.1	+0.2
EAZ	Earnscleugh	3.00	233	P	Pn	14 46 19.2	+0.1
MTW	Mount Morrison	3.12	43	P	Pn	14 46 18.7	-2.2
OGWZ	Otaki Gorge	3.24	35	P	Pn	14 46 20.8	-1.6
TUZ	Tuapeka	3.30	220	P	Pn	14 46 23.7	+0.4
MRZ	Mangatainoka R	3.54	38	P	Pn	14 46 24.5	-2.2
MLZ	Mavora Lakes	3.79	239	P	Pn	14 46 29.7	-0.3
BFZ	Birch Farm	3.85	44	P	Pn	14 46 28.8	-2.1
SYZ	Scrubby Hill	3.96	218	P	Pn	14 46 32.8	+0.4
TSZ	Takapari Road	4.20	37	P	Pn	14 46 36.6	+0.8
KHEZ	Kahui Hut	4.30	14	P	Pn	14 46 38.6	+1.4
NBEZ	Newall Road No	4.30	12	P	Pn	14 46 38.1	+1.0
NEZ	North Egmont	4.34	14	P	Pn	14 46 39.2	+1.5
PKE	Pukeiti	4.39	13	P	Pn	14 46 40.0	+1.6
MTVZ	Mangateitei	4.59	28	P	Pn	14 46 41.4	+0.2
VRZ	Vera Road	4.62	20	P	Pn	14 46 42.3	+0.8
PKVZ	Pokaka	4.64	26	P	Pn	14 46 42.3	+0.5
WNVZ	Wahianoa	4.69	29	P	Pn	14 46 42.7	+0.1
APZ	The Paps	4.72	223	P	Pn	14 46 43.1	+0.2
TUVZ	Tukino	4.76	29	P	Pn	14 46 43.8	+0.3
NGZ	Ngauruhoe	4.83	28	P	Pn	14 46 43.7	-0.8
OTVZ	Oturere	4.86	28	P	Pn	14 46 45.1	+0.2
WTVZ	West Tongariro	4.88	27	P	Pn	14 46 44.8	-0.3
ETVZ	East Tongariro	4.90	29	P	Pn	14 46 45.5	+0.1
TMVZ	Te Maari	4.91	28	P	Pn	14 46 44.9	-0.8
HIZ	Hauiti	5.23	19	P	Pn	14 46 49.5	-0.3
TLZ	Tolley Road	5.58	24	P	Pn	14 46 55.1	+0.4
TOZ	Tahuroa Road	6.13	21	P	Pn	14 47 01.4	-0.8
MWZ	Matawai	6.31	37	P	Pn	14 47 01.6	-3.1
AWAZ	Awhitu Peninsu	6.58	14	P	Pn	14 47 08.5	+0.1
WIAZ	Waiheke Island	6.94	16	P	Pn	14 47 13.5	+0.2
WMGZ	Waiomatatini S	7.13	39	P	Pn	14 47 14.2	-1.7

IDC 27 14:54:00.1±0.3, 9°.93N×126°.40E, h0km, mb4.7/46, mb1 4.8/47, mb1mx4.6/63, mbtmp4.7/47, ML4.1/1, MS4.6/1, Ms1 4.6/1, ms1mx3.4/41, Error ellipse: s-maj=14.5km s-min=7.6km az=80.0

BJI 27 14:54:06.0±0.0, 10°.00N×126°.50E, h68km, mB5.4/16, mb4.7/60, Ms4.9/13, Ms7 4.7/13

NEIC 27 14:54:07.9±1.7, 9°.88N±0°.06×126°.44E±0°.09, h65km±7km, mb4.9/38, Error ellipse: s-maj=13.8km s-min=8.0km az=116.0

DJA 27 14:54:09.2±0.5, 10°N±3°×12°7E±°, h74km±5km, M5.3/53, mB5.6/7, mb4.9/53, MLv5.7/1, Mw(mB)5.1/7

ISC 27 14:54:07.5±0.8, 9°.93N±0°.04×126°.54E±0°.06, h57km±7km, n251, σ1s50/252, mb4.8/108, 4C-6D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLSP	General Luna,	0.43	250	eP	Pn	14 54 12.3	-6.2
MSLP	Maasin	1.66	277	eP	Pn	14 54 32.4	-2.0
BESP	Borongan	1.98	327	eP	Pn	14 54 34.4	-4.3
OCLP	Ormoc	2.20	301	eP	Pn	14 54 41.7	0.0
CGP	Cagayan de Oro	2.34	231	⇑iP	Pn	14 54 40.5	-3.0
CGP				i S	Sn	14 55 13.8	+2.7
LLP	Lapu-Lapu	2.56	279	⇓eP	Pn	14 54 46.6	0.0
LLP				eS	Sn	14 55 19.7	+3.1
MATI	Mati	2.98	185	eP	Pn	14 54 51.8	-0.6
DAV	Davao City (W)	3.00	199	Pn	Pn	14 54 52.8	+0.2
	70nm,0.3s,baz=339,slow=6.3,SNR=6.1						
DAV				Sn	Sn	14 55 29.8	+2.5
	102nm,0.3s,baz=158,slow=8.4,SNR=6.3						
KCP	Kidapawan	3.24	206	⇓eP	Pn	14 54 55.5	-0.5
PAGZ	Pagadian	3.74	237	eP	Pn	14 55 01.5	-1.3
CNOP	Candoni, Negro	3.84	269	eP	Pn	14 55 02.9	-1.3
DDMP	Don Marcelino,	3.89	192	eP	Pn	14 55 04.9	+0.1
SKMP	Bagumbayan, Su	3.92	210	eP	Pn	14 55 02.0	-3.3
GUIM	Jordan	3.95	280	eP	Pn	14 55 04.6	-1.0
SCSP	San Jose Seism	4.74	322	eP	Pn	14 55 25.8	+9.4
CUYO	Cuyo Island	5.50	280	eP	Pn	14 55 27.8	+0.8
JCNP	Jose Panganiba	5.73	319	eP	Pn	14 55 26.7	-3.4
SJMP	San Jose	5.88	296	eP	Pn	14 55 33.4	+1.3
LQP	Lukban	6.42	311	⇑iP	Pn	14 55 39.8	+0.1
TGY	Tagaytay City	6.87	308	Pn	Pn	14 55 45.0	-0.8
	16nm,0.3s,baz=56,slow=11,SNR=3.5						
ENPP	El Nido	7.11	281	eP	Pn	14 55 48.1	-0.8
MACP	Maragondon, Ca	7.13	308	eP	Pn	14 55 55.2	+5.9
LUBP	Lubang	7.22	302	eP	Pn	14 55 53.1	+2.5
BALP	Baler	7.53	321	eP	Pn	14 55 55.6	+0.8
CAUP	Cauayan	8.34	327	eP	Pn	14 56 02.7	-3.2
SMPP	San Manuel, Pa	8.41	318	eP	Pn	14 56 03.6	-3.2
TNTI	Ternate	9.13	175	Pn	Pn	14 56 17.1	+0.4
MYLDM	Lahad Datu	9.26	240	Pn	Pn	14 56 21.1	+2.6
SGCP	Mt. Cagua	9.34	333	eP	Pn	14 56 26.0	+6.5
APYP	Conner	9.41	327	eP	Pn	14 56 19.9	-0.5
GTOI	Gorontalo	9.88	201	P	Pn	14 56 25.2	-1.7
	36nm,0.8s						
MRSI	Marisa	10.45	206	P	Pn	14 56 32.1	-2.6
	25nm,0.7s						
SIJI	Sorong	11.72	156	Pn	Pn	14 56 51.7	-0.4
	2.1nm,0.3s,baz=336,slow=23,SNR=5.8						
APSI	Ampana	11.82	205	P	Pn	14 56 55.3	+1.9
	24nm,1.1s						
SANI	Sanana	11.91	183	P	Pn	14 56 57.7	+3.0
	43nm,0.9s						
FAKI	Fak Fak	13.97	156	Pn	Pn	14 57 22.1	-0.7
YULB	Yu-li	14.29	340	P	P	14 57 32.0	-0.6
TPUB	Ta-pu	14.45	338	P	P	14 57 33.4	-0.9
TTSI	Tana Toraja	14.52	208	P	Pn	14 57 29.8	-0.2
	37nm,1.3s						
SSLB	Suanglung	14.78	340	P	P	14 57 37.4	-0.6
SPSI	Sidrap Palu	15.36	206	P	Pn	14 57 41.0	+0.1
	29nm,1.0s						
YHNB	Yeheng	15.46	342	P	P	14 57 46.1	+0.4
BNSI	Bone	15.61	205	P	P	14 57 47.1	-0.2
	48nm,1.9s						
SBUM	Sibu	16.05	243	P	P	14 57 54.0	+1.8
KAPI	Kappang	16.31	205	Pn	Pn	14 57 50.8	-2.2
	0.8nm,0.3s,baz=33,slow=8.9,SNR=4.7						
KBKI	Kotabaru	16.72	219	P	P	14 58 02.9	+3.4
	55nm,0.9s						
JOW	Kunigami	16.89	5	LR	LR	15 04 06.2	
	comp=Z,2μm,19.6s,baz=183,slow=36						
SMPI	Sarmi	16.95	134	P	Pn	14 58 01.2	+0.3
	49nm,1.2s						
BBKI	Banjar Baru	17.68	222	P	P	14 58 13.7	+3.4
	34nm,1.2s						
GENI	Genyem	18.41	132	P	Pn	14 58 20.6	+1.7
	106nm,2.1s						
MMRI	Maumere	18.93	193	P	Pn	14 58 26.0	+0.9
	77nm,0.9s						
PBKI	Pangkalan Bun	19.41	230	P	P	14 58 28.1	-1.1
	84nm,1.6s						
SOEI	Soe	19.69	187	P	Pn	14 58 33.9	-0.3
SOEI	Soe	19.69	187	P	P	14 58 33.0	+0.7
	3μm134nm,1.4s						
BATI	Baumata	20.21	188	P	P	14 58 36.8	-1.1
	187nm,0.8s,baz=188,slow=0.9,SNR=24						
BATI				S	Sn	15 02 26.2	-1.1
	19nm,0.8s,baz=97,slow=16,SNR=3.1						
BATI	Baumata	20.21	188	P	P	14 58 37.9	0.0
	1μm125nm,0.9s						
PLAI	Plampang	20.57	205	P	Pn	14 58 43.9	-0.6
	59nm,1.3s						
TWSI	Taliwang, Sumb	20.89	208	P	Pn	14 58 47.4	-0.9
	36nm,1.4s						
UBPT	Khong Chiam	21.23	287	P	P	14 58 48.1	-0.9
	16nm,1.1s						
UBPT	Khong Chiam	21.23	287	P	P	14 58 48.0	-0.9
TPI	Tanjungpandan	22.64	237	P	P	14 59 07.1	+3.1
	21nm,0.8s						
NJ2	Nanjing	23.14	343	⇓iP	P	14 59 09.3	+0.4
NJ2				pmax	pmax		
	comp=Z,35nm,1.0s						
KDU	Kakadu	23.23	165	P	P	14 59 08.0	-2.0
	baz=23,SNR=16						
SMRI	Semarang	23.27	224	P	P	14 59 13.2	+2.8
	67nm,1.7s						
JNU	Nakatsue	23.43	9	P	P	14 59 11.7	-0.1
	25nm,1.0s,baz=153,slow=4.2,SNR=6.1						
JNU	Nakatsue	23.43	9	P	P	14 59 13.0	+1.2
JNU				IAmb	IAmb	14 59 16.7	
	comp=Z,78nm,1.4s						
WHN	Wuhan	23.44	333	⇓iP	P	14 59 12.8	+0.9
WHN				pP	pP	14 59 24.3	+0.2
WHN				pmax	pmax		
	comp=Z,130nm,1.3s						
PPBI	Pangkal Pinang	23.60	240	P	P	14 59 14.4	+0.9
	comp=Z,5μmcomp=Z,74nm,1.3s						
KHON	Khomkaen	23.94	288	P	P	14 59 16.3	-0.3
	comp=Z,3μmcomp=Z,96nm,1.1s						
MYKOM	Kota Tinggi	23.95	252	P	P	14 59 17.1	+0.4
NONG	Nongkai	24.07	292	P	P	14 59 16.0	-1.8
	comp=Z,50nm,1.1s						
SRAK	Srakaew	24.30	282	P	P	14 59 14.0	-5.9
	comp=Z,83nm,1.1s						
JMN	Monobe	24.63	15	P	P	14 59 21.3	-1.5
JMN				IAmb	IAmb	14 59 38.2	
	comp=Z,65nm,1.3s						
CHAI	Chaiyaphum	24.64	286	P	P	14 59 22.5	-0.5
	comp=Z,541nmcomp=Z,71nm,0.8s						
GYA	Guiyang	24.97	314	⇓P	P	14 59 25.0	-1.1
GYA				LR	LR		
	comp=Z,2μm,19.6s						
LEM	Lembang	25.14	229	P	P	14 59 27.9	+0.2
	comp=Z,15nm,0.5s,baz=87,slow=8.4,SNR=12						
CBJI	Citeko	25.46	231	P	P	14 59 33.7	+3.2
	comp=Z,12μmcomp=Z,92nm,0.5s						
IPM	Ipoh	25.87	260	P	P	14 59 33.8	-0.4
IPM				IAmb	IAmb	14 59 36.5	
	comp=Z,50nm,0.9s						
UTTA	Uttaradit	26.37	290	P	P	14 59 38.5	-0.2
	comp=Z,22nm,1.0s						
PHIT	Phitsanulok	26.38	289	P	P	14 59 40.1	+1.4
	comp=Z,92nm,0.8s						
MDSI	Maura Dua	26.48	238	P	P	14 59 40.3	+0.6
	comp=Z,25nm,1.3s						
PHET	Kaeng Krachan	26.53	279	P	P	14 59 42.0	+1.8
	comp=Z,416nmcomp=Z,42nm,1.2s						
KASI	Kota Agung	26.79	236	P	P	14 59 41.2	-1.3
	comp=Z,1μmcomp=Z,44nm,1.0s						
LWLI	Liwa	26.87	237	P	P	14 59 43.2	-0.1
	comp=Z,73nm,0.9s						
UTHA	Uthaitani	26.99	285	P	P	14 59 45.7	+1.4
	comp=Z,32nm,1.1s						
SUKH	Sukhothai	27.17	289	P	P	14 59 46.0	+0.1
	comp=Z,20nm,0.8s						
KMI	Kunming	27.19	307	⇑P	P	14 59 48.8	+2.5
KMI				pP	pwP	15 00 02.5	+0.2
KMI				pmax	pmax		
	comp=Z,9.0nm,1.2s						
SURT	Suratani	27.38	270	P	P	14 59 51.9	+4.1
	comp=Z,0.4nm,1.1s						
LAMP	Lampang	27.41	291	P	P	14 59 47.7	-0.4
	comp=Z,250nmcomp=Z,26nm,1.0s						
KSAR	Wonju Array Be	27.42	2	P	P	14 59 46.4	-1.4
KSRS	Korea Array	27.43	2	P	P	14 59 47.7	-0.3
	comp=Z,5.2nm,0.9s,baz=174,slow=11,SNR=13						
UMPA	Umpang Tak	27.65	286	P	P	14 59 52.3	+2.1
	comp=Z,749nmcomp=Z,24nm,1.0s						
FITZ	Fitzroy Crossi	27.86	182	P	P	14 59 51.5	-0.4
	comp=Z,29nm,0.9s,baz=14,slow=11,SNR=24						
FITZ	Fitzroy Crossi	27.86	182	P	P	14 59 50.7	-1.3
	baz=28,SNR=26						
FITZ	Fitzroy Crossi	27.86	182	P	P	14 59 51.0	-1.0
FITZ				IAmb	IAmb	14 59 55.4	
	comp=Z,32nm,0.9s						
CM35	Chiang Mai Arr	27.89	291	P	P	14 59 51.0	-1.3
CM36	Chiang Mai Arr	27.90	291	P	P	14 59 51.0	-1.5
PKDT	Phuket	27.93	268	P	P	14 59 54.0	+1.2
	comp=Z,23nm,1.3s						
CM34	Chiang Mai Arr	27.94	292	P	P	14 59 52.0	-0.7
CM09	Chiang Mai Arr	27.98	291	P	P	14 59 53.0	-0.2
	comp=Z,148nmcomp=Z,19nm,1.1s						
CM04	Chiang Mai Arr	27.98	291	P	P	14 59 53.0	-0.2
	comp=Z,128nmcomp=Z,17nm,1.1s						
CM01	Chiang Mai Arr	28.01	291	P	P	14 59 53.2	-0.1
	comp=Z,129nmcomp=Z,16nm,1.1s						
CM05	Chiang Mai Arr	28.01	291	P	P	14 59 53.2	-0.2
	comp=Z,82nmcomp=Z,11nm,1.1s						
CM02	Chiang Mai Arr	28.02	291	P	P	14 59 53.0	-0.5
	comp=Z,128nmcomp=Z,17nm,1.1s						
CM31	Chiang Mai Arr	28.03	291	P	P	14 59 53.4	-0.2
	comp=Z,4μmcomp=Z,423nm,1.0s						
CMAR	Chiang Mai Arr	28.03	291	P	P	14 59 52.6	-0.9
	comp=Z,12nm,1.0s,baz=105,slow=7.1,SNR=80						
CMAR				PcP	PcP	15 03 08.4	+1.0
	comp=Z,1.4nm,1.0s,baz=93,slow=0.6,SNR=4.9						
CM15	Chiang Mai Arr	28.05	291	P	P	14 59 53.5	-0.2
	comp=Z,19nm,1.0s						
CM13	Chiang Mai Arr	28.05	291	P	P	14 59 53.5	-0.2
	comp=Z,93nmcomp=Z,13nm,1.1s						
CMMT	Chiang Mai	28.11	291	P	P	14 59 52.3	-2.0
	comp=Z,6.2nm,1.1s						
CM33	Chiang Mai Arr	28.11	291	P	P	14 59 53.0	-1.3
CM32	Chiang Mai Arr	28.16	291	P	P	14 59 54.0	-0.8
MNSI	Mandailing Nat	28.30	253	P	P	14 59 55.4	-0.6
	comp=Z,46nm,0.8s						
PSI	Prapat	28.32	257	P	P	14 59 56.1	-0.3
	comp=Z,5.8nm,0.6s,baz=180,slow=7.9,SNR=5.8						
MHMT	Maesarieng	28.90	290	P	P	15 00 00.6	-0.7
COEN	Coen	28.91	145	P	P	15 00 00.5	-0.8
XAN	Xi'an	28.93	329	P	P	15 00 00.5	-1.0
XAN				pP	pwP	15 00 20.0	-1.4
XAN				S	S	15 04 47.5	-0.7
XAN				pmax	pmax		
	comp=Z,52nm,0.9s						
XAN	Xi'an	28.93	329	P	P	15 00 00.1	-1.3
XAN				IAmb	IAmb	15 00 01.5	
	comp=Z,40nm,0.9s						
CD2	Chengdu	29.74	318	P	P	15 00 08.3	-0.4
CD2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GSI	Gunungsitoli	30.04	255	P	P	15 00 09.9	-1.6
GSI				IAmb	IAmb	15 00 11.1	
	comp=Z,28nm,1.0s						
JMM	Marumori	30.63	22	P	P	15 00 16.7	+0.3

JMM				IAmb	IAmb	15 00 21.0	
	comp=Z,33nm,1.0s						
WRAB	Tennant Creek	30.66	165	P	P	15 00 16.2	-0.6
WRA	Warramunga Arr	30.66	165	P	P	15 00 16.4	-0.4
	comp=Z,2.0nm,0.6s,baz=348,slow=9.3,SNR=24						
WRA				PcP	PcP	15 03 14.7	+0.6
	comp=Z,1.0nm,0.8s,baz=346,slow=3.2,SNR=3.2						
BJI	Beijing	31.37	345	P	P	15 00 23.0	+0.1
BJI				pmax	pmax		
	comp=Z,7.0nm,1.1s						
SNY	Shenyang	31.88	356	⇑P	P	15 00 39.0	+12
SNY				pmax	pmax		
	comp=Z,16nm,1.2s						
PSA00	Pilbara Seismi	31.99	192	P	P	15 00 27.4	-1.1
QIS	Mount Isa	32.91	157	P	P	15 00 35.5	-1.1
	baz=33,SNR=17						
MTSU	Mount Surprise	32.95	148	P	P	15 00 37.0	+0.1
	baz=33,SNR=11						
LZH	Lanzhou	33.20	325	*e*P	P	15 00 39.3	+0.1
LZH				pP	sP	15 01 00.0	+2.2
LZH				sP	pwP	15 01 08.5	+8.9
LZH				pmax	pmax		
	comp=Z,25nm,1.2s						
HHC	Hu-ho-hao-te	33.53	339	*e*P	P	15 00 43.0	+1.1
HHC				pmax	pmax		
	comp=Z,36nm,1.0s						
BTO	Baotou	33.88	337	*e*P	P	15 00 44.5	-0.4
AS31	Alice Springs	34.16	168	P	P	15 00 46.4	-1.0
ASAR	Alice Springs	34.16	168	P	P	15 00 45.8	-1.7
	comp=Z,1.4nm,0.4s,baz=349,slow=6.9,SNR=50						
ASAR				PcP	PcP	15 03 24.1	+0.5
	comp=Z,1.7nm,0.8s,baz=17,slow=0.9,SNR=5.2						
ASAR	Alice Springs	34.16	168	P	P	15 00 47.6	+0.1
USRK	Ussuriysk Ar.	34.47	7	P	P	15 00 50.4	+0.5
	comp=Z,6.0nm,0.8s,baz=197,slow=9.0,SNR=5.9						
WRKA	Warakurna	34.80	177	P	P	15 00 51.9	-1.1
	baz=35,SNR=37						
CTA	Charters Tower	35.59	147	P	P	15 01 00.1	+0.3
	comp=Z,7.2nm,0.7s,baz=332,slow=12,SNR=11						
CTAO	Charters Tower	35.59	147	P	P	15 01 00.1	+0.3
CTAO				IAmb	IAmb	15 01 01.9	
	comp=Z,9.4nm,0.8s						
GTA	Gaotai	37.81	325	⇓P	P	15 01 18.5	-0.2
GTA				PcP	PcP	15 03 35.8	+1.4
GTA				S	S	15 07 09.3	+3.6
GTA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,380nm,6.2s						
GTA				LR	LR		
	comp=Z,1μm,18.2s						
GTA				LR	LR		
	comp=Z,920nm,18.2s						
GTA				LR	LR		
	comp=Z,1μm,18.2s						
KLR	Kul'dur	39.42	5	P	P	15 01 32.6	+0.8
	comp=Z,3.3nm,0.6s,baz=195,slow=3.8,SNR=9.1						
KLR				PcP	PcP	15 03 40.3	+1.3
	comp=Z,3.5nm,0.8s,baz=224,slow=2.5,SNR=4.7						
MORW	Morawa	40.07	194	P	P	15 01 36.3	-1.2
	baz=40,SNR=11						
MORW	Morawa	40.07	194	P	P	15 01 36.7	-0.8
H11N1	WAKE ISLAND Hy	40.11	71	T	T	15 45 10.5	
	baz=265,slow=74,SNR=35						
H11N2	WAKE ISLAND Hy	40.12	71	T	T	15 45 09.4	
	baz=265,slow=74,SNR=28						
H11N3	WAKE ISLAND Hy	40.13	71	T	T	15 45 07.9	
	baz=265,slow=74,SNR=31						
QLP	Quilpie	40.16	155	P	P	15 01 37.8	-0.4
	baz=40,SNR=6.2						
FORT	Forrest	40.50	178	P	P	15 01 40.6	-0.4
	baz=40,SNR=16						
FORT	Forrest	40.50	178	P	P	15 01 40.1	-0.9
ULN	Ulaanbaatar	41.23	340	P	P	15 01 47.3	+0.3
KMBL	Kambalda	41.30	186	P	P	15 01 47.8	+0.2
	baz=41,SNR=7.6						
BLDU	Ballidu	41.40	193	P	P	15 01 48.1	-0.4
	baz=41,SNR=7.8						
SONM	Songino Array	41.43	339	P	P	15 01 49.0	+0.4
	comp=Z,18nm,0.9s,baz=158,slow=9.3,SNR=67						
SONM				ScP	ScP	15 07 35.8	+4.8
	comp=Z,1.0nm,1.1s,baz=138,slow=2.2,SNR=3.8						
SONM	Songino Array	41.43	339	P	P	15 01 48.7	0.0
SONM				IAmb	IAmb	15 01 50.4	
	comp=Z,17nm,1.0s						
EIDS	Eidsvold	42.46	146	P	P	15 01 56.9	-0.2
	baz=42,SNR=4.5						
MUN	Mundaring	42.83	193	P	P	15 01 59.7	-0.3
	baz=43,SNR=8.4						
BBOO	Buckleboo	43.46	168	P	P	15 02 03.9	-1.2
	baz=43,SNR=48						
BBOO	Buckleboo	43.46	168	P	P	15 02 04.4	-0.8
NWAO	Narrogin (SRO)	43.53	191	P	P	15 02 05.6	-0.1
	comp=Z,12nm,0.6s,baz=33,slow=11,SNR=12						
NWAO	Narrogin (SRO)	43.53	191	P	P	15 02 05.6	-0.1
	baz=44,SNR=10.0						
NWAO	Narrogin (SRO)	43.53	191	P	P	15 02 04.6	-1.1
NWAO	Narrogin (SRO)	43.53	191	P	P	15 02 05.1	-0.6
NWAO				IAmb	IAmb	15 02 16.9	
	comp=Z,20nm,0.8s						
STKA	Stephens Creek	44.00	161	P	P	15 02 08.9	-0.6
	comp=Z,3.9nm,0.6s,baz=339,slow=9.5,SNR=11						
STKA	Stephens Creek	44.00	161	P	P	15 02 08.8	-0.6
	baz=44,SNR=10						
STKA	Stephens Creek	44.00	161	P	P	15 02 07.8	-1.6
HTT	Hallett	44.70	165	P	P	15 02 15.0	-0.1
	baz=45,SNR=8.0						
CMSA	Cobar Meteorol	45.13	157	P	P	15 02 18.5	0.0
	baz=45,SNR=12						
PALK	Pallekele	45.37	270	P	P	15 02 20.1	-0.7
	comp=Z,4.8nm,0.9s,baz=229,slow=9.4,SNR=3.6						
TLY	Talaya	45.64	340	P	P	15 02 23.1	+0.8
	comp=Z,34nm,0.9s,baz=172,slow=6.3,SNR=43						
HYB	Hyderabad	47.11	285	*i* P	P	15 02 34.0	-0.4
WMQ	Urumqi	47.65	322	*e*P	P	15 02 38.8	+0.5
WMQ				pP	sP	15 02 57.8	+0.1
WMQ				pmax	pmax		
	comp=Z,18nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,260nm,6.3s						
ARPS	Mount Arapiles	48.63	164	P	P	15 02 45.9	+0.2
	baz=49,SNR=6.2						
PEA0B	Petropavlovsk-	49.84	24	P	P	15 02 55.4	+0.6
PEA0B				IAmb	IAmb	15 03 01.5	
	comp=Z,18nm,1.1s						
PETK	Petropavlovsk-	49.84	24	P	P	15 02 56.1	+1.3
	comp=Z,5.7nm,0.8s,baz=196,slow=3.2,SNR=15						
DZM	Mont Dzumac	50.43	129	P	P	15 03 01.1	+1.2
	comp=Z,4.0nm,0.8s,baz=253,slow=11,SNR=1.9						
TOO	Toolangi	50.48	160	P	P	15 03 00.8	+0.9
	baz=50,SNR=5.4						
ZSN	Zaisan	51.30	325	*e*P	P	15 03 04.3	-1.6
	baz=325						
YAK	Yakutsk	52.06	2	P	P	15 03 12.3	+1.0
	comp=Z,10nm,0.8s,baz=81,slow=0.8,SNR=8.7						
MK31	Makanchi Array	52.45	323	P	P	15 03 13.9	-0.7
MK31				IAmb	IAmb	15 03 15.4	
	comp=Z,10nm,0.9s						
MKAR	Makanchi Array	52.45	323	P	P	15 03 13.9	-0.7
	comp=Z,11nm,0.8s,baz=116,slow=8.2,SNR=65						
MKAR	Makanchi Array	52.45	323	P	P	15 03 14.0	-0.5
SHLS	Shalkode	52.57	318	*e*P	P	15 03 10.8	-4.8
	comp=Z,6.1nm,0.8s,baz=318						
MAKZ	Makanchi	52.65	323	P	P	15 03 15.1	-0.8
MAKZ				IAmb	IAmb	15 03 16.9	
	comp=Z,10nm,0.9s						
UZB	Uzynbulak	52.86	317	*e*P	P	15 03 16.0	-1.8
	baz=317						
KPKS	Kokpek	53.22	318	*e*P	P	15 03 18.2	-2.1
	baz=318						
SATY	Saty	53.24	317	*e*P	P	15 03 19.4	-1.1
	comp=Z,5.9nm,1.1s,baz=317						
KSH	Kashi	53.65	312	P	P	15 03 24.5	+0.9
KSH				PP	PP	15 05 26.0	+1.1
KSH				S	S	15 10 52.8	-0.7
KSH				ScS	ScS	15 13 04.5	-3.9
KSH				SS	SS	15 14 36.5	+1.8
KSH				pmax	pmax		
	comp=Z,17nm,1.1s						
KSH				LR	LR		
	comp=Z,1μm,10.5s						
KSH				LR	LR		
	comp=Z,1μm,12.8s						
TDK	Taldyqorghan	54.04	319	*e*P	P	15 03 25.3	-0.9
	comp=Z,8.3nm,0.6s,baz=319						
MDOK	Medeo	54.19	317	*e*P	P	15 03 26.2	-1.3
	baz=317						
AAA	Alma-Ata	54.30	317	*e*P	P	15 03 25.9	-2.3
	baz=317						
CHKK	Chushkaly	54.50	317	*e*P	P	15 03 27.7	-1.9
	baz=318						
KUU	Kurty	54.95	317	*e*P	P	15 03 30.5	-2.3
	comp=Z,21nm,1.3s,baz=317						
ZALV	Zalesovo Beam	55.05	331	P	P	15 03 32.2	-1.1
	comp=Z,9.7nm,1.1s,baz=121,slow=5.7,SNR=16						
KURK	Kurchatov	56.49	326	P	P	15 03 42.4	-1.3
KURBB	Kurchatov Arra	56.50	325	P	P	15 03 42.7	-1.1
	comp=Z,24nm,0.3s,baz=124,slow=6.5,SNR=30						
BTLS	Baital	56.90	318	*e*P	P	15 03 44.6	-2.1
	baz=318						
DZA	Taraz	58.04	315	*e*P	P	15 03 53.0	-1.8
	baz=315						
IUG	Iuzhnay	58.74	313	*e*P	P	15 03 58.1	-1.7
	comp=Z,4.6nm,1.1s,baz=314						
BRZS	Berezniki	59.60	323	*e*P	P	15 04 04.0	-1.5
	comp=Z,5.2nm,1.1s,baz=323						
TIXI	Tiksi	61.69	1	P	P	15 04 20.5	+1.2
TIXI				IAmb	IAmb	15 04 30.3	
	comp=Z,15nm,1.1s						
BVAR	Borovoye Array	62.09	325	P	P	15 04 21.8	-0.5
	comp=Z,4.3nm,1.0s,baz=219,slow=30,SNR=10						
BRVK	Borovoye	62.16	325	P	P	15 04 21.8	-1.1
BRVK				IAmb	IAmb	15 04 23.7	
	comp=Z,12nm,1.0s						
NRIK	Noril'sk	64.41	346	P	P	15 04 37.9	+0.5
	comp=Z,29nm,1.0s,baz=130,slow=6.1,SNR=27						
NRIK	Noril'sk	64.41	346	P	P	15 04 37.5	+0.1
THZ	Tophouse	66.74	144	P	P	15 04 51.4	-1.5
THZ				IAmb	IAmb	15 04 57.2	
	comp=Z,18nm,1.1s						
GEYT	Alibeck	66.96	307	P	P	15 04 54.5	+0.1
	comp=Z,12nm,0.9s,baz=147,slow=3.5,SNR=16						
RPZ	Rata Peaks	66.96	146	P	P	15 04 54.8	+0.6
	comp=Z,16nm,0.8s,baz=201,slow=2.5,SNR=11						
URZ	Urewera	67.24	139	P	P	15 04 56.9	+0.8
	comp=Z,16nm,1.1s,baz=149,slow=1.6,SNR=3.1						
ABKAR	Akbulak array	67.30	319	P	P	15 04 54.4	-2.0
AKTO	Aktyubinsk	68.75	320	P	P	15 05 04.9	-0.6
	comp=Z,3.0nm,0.8s,baz=110,slow=7.6,SNR=6.5						
ARU	Arti	69.65	327	P	P	15 05 10.5	-0.4
	comp=Z,1.5nm,0.4s,baz=102,slow=3.7,SNR=7.8						
SOCY	Socotra	71.05	280	P	P	15 05 18.1	-2.1
SOCY				IAmb	IAmb	15 05 19.4	
	comp=Z,20nm,0.9s						
BELG	Belogornoye	75.43	322	P	P	15 05 44.6	-0.7
	comp=Z,21nm,0.9s,baz=37,slow=4.6,SNR=5.4						
IMAR	Indian Mountai	76.80	24	P	P	15 05 53.4	+0.6
GNI	Garni	77.42	309	P	P	15 05 57.6	+0.6
	comp=Z,3.9nm,0.5s,baz=154,slow=8.8,SNR=5.0						
RAYN	Ar Rayn	77.94	292	P	P	15 05 57.7	-2.5
KBZ	Khabaz	78.63	313	P	P	15 06 03.1	-0.4
	comp=Z,9.0nm,1.1s,baz=83,slow=1.9,SNR=8.2						
ILAR	Eielson Array	79.63	26	P	P	15 06 09.4	+0.8
	comp=Z,1.6nm,0.9s,baz=243,slow=5.6,SNR=8.5						
KLMR	Klimovskoe	79.95	330	*e*P	P	15 06 07.4	-2.9
KLMR				AMP		15 06 10.9	
	comp=Z,33nm,1.3s						
BCAR	Beaver Creek A	81.99	27	P	P	15 06 23.0	+1.8
INK	Inuvik	84.50	22	P	P	15 06 35.1	+1.2
	comp=Z,8.0nm,1.2s,baz=286,slow=7.9,SNR=6.0						
ARCES	ARCESS Array B	84.60	340	P	P	15 06 34.6	+0.1
	comp=Z,14nm,0.8s,baz=75,slow=5.7,SNR=32						
ARCES	ARCESS Array B	84.60	340	P	P	15 06 34.5	0.0
MMAI	Mount Meron Ar	85.61	303	P	P	15 06 40.3	-0.1
	comp=Z,3.7nm,0.8s,baz=22,slow=5.4,SNR=4.8						
BRTR	Keskin Array B	85.95	309	P	P	15 06 41.0	-1.0
	comp=Z,1.8nm,0.8s,baz=119,slow=4.5,SNR=7.9						
FIA1	FINESS Array S	86.31	332	P	P	15 06 42.8	-0.3
FINES	FINESS Array B	86.31	332	P	P	15 06 42.6	-0.5
	comp=Z,18nm,0.9s,baz=90,slow=7.6,SNR=26						
EIL	Elat	86.52	299	P	P	15 06 43.9	-1.0
	comp=Z,3.8nm,0.8s,baz=120,slow=5.1,SNR=3.8						
VSU	Vasula	86.70	329	*e*P	P	15 06 43.5	-1.6
AKASG	Malin Array Be	86.99	321	P	P	15 06 45.8	-0.9
	comp=Z,2.0nm,0.5s,baz=61,slow=4.6,SNR=9.9						
C36M	Paulatuk	87.47	20	P	P	15 06 49.0	+0.4
C36M				IAmb	IAmb	15 06 55.9	
	comp=Z,6.3nm,0.9s						
MTSE	Matsula	88.11	329	*e*P	P	15 06 48.6	-3.3
PABE	Paberze	88.92	326	*e*P	P	15 06 52.5	-3.2
KMBO	Kilima Mbogo	89.49	269	P	P	15 06 59.5	-0.1
	comp=Z,3.7nm,0.9s,baz=57,slow=8.3,SNR=6.6						
VNDA	Vanda	89.56	173	P	P	15 06 59.1	+0.9
	comp=Z,2.5nm,0.9s,baz=55,slow=16,SNR=4.3						
SUW	Suwalki	89.77	325	*e*P	P	15 06 58.6	-1.2
PBUR	Paburge	89.87	327	*e*P	P	15 06 55.7	-4.5
BURAR	Bucovina Array	90.27	318	P	P	15 07 01.0	-1.4
UPP	Uppsala	90.76	331	*e*P	P	15 06 56.4	-7.8
DAG	Danmarks Havn	91.12	352	*i* P	P	15 07 05.0	-0.6
	comp=Z,8.2nm,0.8s						
DAG	Danmarks Havn	91.12	352	*i* P	P	15 07 05.0	-0.6
DAG				IAmb	IAmb	15 07 06.4	
	comp=Z,8.2nm,0.8s						
CRVS	Cervenica-Dubn	92.31	320	*e*P	P	15 07 12.6	+0.9
CRVS				*e*		15 07 23.6	
NB2	NORSAR Subarra	93.18	334	P	P	15 07 14.2	-1.3
	comp=Z,33nm,1.2s,baz=63,slow=4.6						
NOA	NORSAR Array B	93.18	334	P	P	15 07 15.1	-0.4
	comp=Z,5.1nm,0.9s,baz=63,slow=4.6,SNR=8.6						
DBG	Daneborg	93.41	351	*i* P	P	15 07 16.4	+0.2
DBG				IAmb	IAmb	15 07 21.0	
	comp=Z,6.7nm,1.0s						
YKA	Yellowknife Ar	93.96	24	P	P	15 07 20.0	+1.0
	comp=Z,2.1nm,0.8s,baz=302,slow=4.0,SNR=28						
CLL	Collm	96.52	325	*e*P	P	15 07 31.0	+0.1
SUMG	Summit	97.08	355	*i* P	Pdif	15 07 35.7	+2.1
SUMG	Summit	97.08	355	*i* P	Pdif	15 07 35.7	+2.1
GERES	GERESS Array B	97.12	322	P	P	15 07 33.9	0.0
	comp=Z,2.0nm,0.9s,baz=57,slow=4.9,SNR=9.4						
TXAR	Lajitas Array	117.85	49	PKP	PKiKP	15 12 49.6	+1.1
	comp=Z,0.4nm,0.6s,baz=5.4,slow=0.4,SNR=3.4						
TORD	Torodi Ar. Bea	120.64	292	PKP	PKPdf	15 12 53.9	-0.1
	comp=Z,1.0nm,0.7s,baz=86,slow=4.5,SNR=3.2						
PLCA	Paso Flores	145.79	157	PKPbc	PKPab	15 13 41.8	+0.7
	comp=Z,4.5nm,0.7s,baz=220,slow=4.6,SNR=7.3						

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*IDC **27** 14:54:23.6±2.2, 36°.39N×70°.30E, h184km±19km, mb3.5/16, mb1 3.6/21, mb1mx3.4/65, mbtmp4.1/21, Error ellipse: s-maj=17.0km s-min=12.1km az=15.0*

*NNC **27** 14:54:30.8±2.3, 36°.95N×70°.38E, h210km±19km, mb3.2, mpv4.2, Error ellipse: s-maj=21.9km s-min=15.3km az=175.0*

ISC 27 14:54:25.1±0.5**, 36°.48N**±0°.05×**70°.37E**±0°.06**, h204**km**, n52, σ1ˢ.74**/60**, mb3.7**/15**, 10C-5D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	Cherat	2.94	154	⇑P	Pn	14 55 15.9	+1.5
CEP				S	S	14 55 53.0	+0.7
THW	Thamme Wali	3.85	162	⇑P	Pn	14 55 26.3	+1.1
JMU	Jammu	5.30	134	*e*S	S	14 56 28.0	-17
AML	Almayashu	6.20	24	P	Pn	14 55 55.7	+0.3
	SNR=248						
DHRM	DHARAMSHALA	6.47	129	*e*P	Pn	14 55 58.4	-0.4
DHRM				*e*S	S	14 57 09.8	-2.9
DHRM				IAML		14 57 10.9	
	comp=N,423nm,0.5s						
UCH	Uchtor	6.58	28	P	Pn	14 56 00.7	+0.5
	SNR=95						
KK31	Karatay Array	6.62	1	⇑P	Pn	14 55 60.0	-0.3
	comp=N,9.7nm,0.3s,baz=175,slow=11,SNR=369						
KK31				⇑S	S	14 57 08.7	-7.0
	comp=N,14nm,0.5s,baz=188,slow=22,SNR=6.2						
EKS2	Erkin-Say	6.71	22	P	Pn	14 56 02.3	+0.7
	SNR=17						
AAK	Ala-Archa	6.92	26	P	Pn	14 56 05.0	+0.6
	comp=N,5.7nm,0.3s,baz=193,slow=14,SNR=54						
AAK				S	S	14 57 21.5	-1.7
	comp=N,7.2nm,0.3s,baz=0.2,slow=22,SNR=25						
AAK	Ala-Archa	6.92	26	P	Pn	14 56 05.2	+0.7
	SNR=18						
AAK	Ala-Archa	6.92	26	⇓P	Pn	14 56 05.0	+0.6
	comp=N,6.0nm,0.4s						
AAK				S	S	14 57 21.1	-2.1
	comp=N,88nm,0.5s						
KBK	Karagaybulak	7.11	28	P	Pn	14 56 07.7	+0.8
	SNR=9.6						
CHMS	Chumysh	7.33	26	P	Pn	14 56 10.2	+0.6
	SNR=12						
ULHL	Ulahol	7.34	37	P	Pn	14 56 08.2	-1.7
	SNR=11						
USP	Ospenovka	7.49	24	P	Pn	14 56 12.1	+0.5
	SNR=14						
TKM2	Tokmak 2	7.59	30	P	Pn	14 56 13.9	+0.8
	SNR=11						
TKM2	Tokmak 2	7.59	30	⇑P	Pn	14 56 13.7	+0.6
	comp=N,14nm,0.5s						
TKM2				⇓S	S	14 57 35.8	-3.2
	comp=N,27nm,0.7s						
SMLA	Simla	7.78	131	*e*P	Pn	14 56 15.5	0.0
SMLA				*e*S	S	14 57 39.3	-4.0
SMLA				IAML		14 57 41.3	
	comp=N,208nm,0.9s						
SMLA				IAML		14 57 41.8	
	comp=E,189nm,0.5s						
MDOK	Medeo	8.42	36	P	Pn	14 56 24.6	+0.7
	comp=E,3.7nm,0.7s						
DDI	Dehra Dun	8.89	132	*e*P	Pn	14 56 30.8	+0.8
DDI				*e*S	S	14 58 05.2	-4.7
NDI	New Delhi	9.68	141	*e*S	S	14 58 20.0	-8.8
PDGK	Podgornoye	9.79	43	⇑P	Pn	14 56 42.5	+0.9
	comp=E,2.4nm,1.0s						
GEYT	Alibeck	9.88	282	P	Pn	14 56 41.0	-1.7
	comp=E,0.6nm,0.3s,baz=103,slow=14,SNR=5.2						
GEYT				S	S	14 58 29.2	-4.2
	comp=E,0.4nm,0.3s,baz=125,slow=12,SNR=2.2						
MAKZ	Makanchi	13.47	36	⇓P	Pn	14 57 28.4	+0.3
	comp=E,20nm,1.1s						
MK31	Makanchi Array	13.61	37	⇑P	Pn	14 57 29.6	-0.3
	comp=E,6.6nm,0.8s,baz=218,slow=13,SNR=77						
MKAR	Makanchi Array	13.61	37	P	Pn	14 57 30.2	+0.3
	comp=E,0.5nm,0.3s,baz=220,slow=15,SNR=30						
BHPL	Bhopal	14.54	153	*e*P	Pn	14 57 39.5	-2.1
BHPL				*i* x	x	14 57 44.0	
BHPL				*e*S	S	15 00 14.1	-8.9
AB31	Akbulak array	14.86	332	⇓P	P	14 57 47.1	+1.2
	comp=E,3.3nm,0.3s,baz=154,slow=12,SNR=271						
KURBB	Kurchatov Arra	15.31	20	P	Pn	14 57 50.4	-0.3
	comp=E,0.2nm,0.3s,baz=211,slow=9.9,SNR=24						
KURK	Kurchatov	15.42	20	⇑P	P	14 57 52.6	+0.5
	comp=E,3.4nm,0.8s						
BVAR	Borovoye Array	16.54	0	P	Pn	14 58 05.5	0.0
	comp=E,1.3nm,0.3s,baz=207,slow=9.2,SNR=26						
AKTO	Aktyubinsk	16.55	331	P	Pn	14 58 06.0	+0.4
	comp=E,1.0nm,0.3s,baz=142,slow=10.0,SNR=31						
AKTO				S	S	15 01 06.5	-0.6
	comp=E,0.1nm,0.3s,baz=209,slow=19,SNR=1.9						
AKTO	Aktyubinsk	16.55	331	⇑P	Pn	14 58 05.7	+0.1
	comp=E,13nm,0.9s						
BRVK	Borovoye	16.58	360	⇓P	Pn	14 58 05.8	-0.1
	comp=E,6.3nm,0.7s						
ZAA0	Zalesovo Array	20.15	25	⇑P	P	14 58 44.1	+0.6
	comp=E,0.9nm,0.5s						
ZALV	Zalesovo Beam	20.15	25	P	P	14 58 44.3	+0.8
	comp=E,9.5nm,0.3s,baz=214,slow=10,SNR=66						
ARU	Arti	21.49	342	P	P	14 58 59.9	+2.3
	comp=E,1.8nm,0.4s,baz=136,slow=9.0,SNR=8.0						
BELG	Belogornoye	22.59	322	P	P	14 59 09.1	+1.0
	comp=E,12nm,0.5s,baz=180,slow=4.0,SNR=6.0						
SONM	Songino Array	28.77	55	P	P	15 00 05.7	+1.9
	comp=E,0.9nm,0.5s,baz=270,slow=9.5,SNR=6.1						
CMAR	Chiang Mai Arr	30.89	118	P	P	15 00 23.6	+0.9
	comp=E,4.4nm,1.0s,baz=306,slow=7.7,SNR=6.1						
AKASG	Malin Array Be	32.56	309	P	P	15 00 37.5	+0.7
	comp=E,0.8nm,0.4s,baz=83,slow=7.0,SNR=5.1						
NRIK	Noril'sk	34.24	11	P	P	15 00 52.9	+1.7
	comp=E,5.5nm,0.5s,baz=196,slow=7.8,SNR=9.2						
FINES	FINESS Array B	37.22	326	P	P	15 01 17.2	+0.7
	comp=E,2.2nm,0.6s,baz=116,slow=8.4,SNR=15						
ARCES	ARCESS Array B	40.97	338	P	P	15 01 48.5	+1.0
	comp=E,3.4nm,0.5s,baz=107,slow=7.0,SNR=35						
NB2	NORSAR Subarra	44.09	323	P	P	15 02 12.8	+0.1
	comp=Z,0.5nm,0.5s,baz=98,slow=7.9						
NOA	NORSAR Array B	44.09	323	P	P	15 02 13.2	+0.5
	comp=Z,2.0nm,0.8s,baz=97,slow=7.8,SNR=4.3						
TORD	Torodi Ar. Bea	65.21	268	P	P	15 04 44.7	-0.2
	comp=Z,0.6nm,0.5s,baz=56,slow=6.4,SNR=3.1						
INK	Inuvik	74.00	9	P	P	15 05 39.0	+1.2
	comp=Z,1.0nm,0.6s,baz=13,slow=5.8,SNR=3.6						
ILAR	Eielson Array	74.94	16	P	P	15 05 43.8	+0.5
	comp=Z,0.1nm,0.5s,baz=323,slow=7.4,SNR=4.5						
YKA	Yellowknife Ar	81.29	2	P	P	15 06 18.8	+0.7
	comp=Z,0.7nm,0.7s,baz=358,slow=5.0,SNR=15						
WRA	Warramunga Arr	82.42	121	P	P	15 06 25.5	+0.9
	comp=Z,0.9nm,0.9s,baz=326,slow=4.7,SNR=4.8						
ASAR	Alice Springs	84.66	124	P	P	15 06 35.1	-0.9
	comp=Z,0.5nm,0.8s,baz=316,slow=4.4,SNR=2.5						

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*IDC **27** 15:02:58.8±2.9, 24°.82S×179°.46W, h378km±55km, mb3.0/4, mb1 3.2/6, mb1mx3.0/29, mbtmp3.8/6, Error ellipse: s-maj=72.8km s-min=22.9km az=48.0*

ISC 27 15:02:58.9±2.1**, 24°.8S**±0°.1×**179°.3W**±0°.4**, h400**km**, n6, σ1ˢ.06**/6**, mb3.3**/4**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	7.42	340	P	Pn	15 04 47.0	-0.4
	0.8nm,0.3s,baz=146,slow=18,SNR=7.1						
URZ	Urewera	13.81	192	P	P	15 05 57.0	-1.3
	1.0nm,0.3s,baz=29,slow=19,SNR=6.8						
ASAR	Alice Springs	42.55	261	P	P	15 10 17.9	+0.3
	0.2nm,0.6s,baz=90,slow=6.9,SNR=7.3						
WRA	Warramunga Arr	43.01	267	P	P	15 10 21.3	+0.1
	0.4nm,0.3s,baz=102,slow=8.1,SNR=14						
FITZ	Fitzroy Crossi	51.42	266	P	P	15 11 25.4	+0.2
	2.0nm,1.0s,baz=83,slow=8.1,SNR=1.6						
VNDA	Vanda	53.59	185	P	P	15 11 41.2	+1.2
	2.1nm,0.5s,baz=8.9,slow=8.4,SNR=14						

JMA 27 15:08:33.2, 35°.15N×135°.91E, h11km, M2.6, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JWT	Wachi	0.44	288	P	Pg	15 08 41.7	-0.1
JWT				S	Sg	15 08 47.4	-0.2
JHE	Heguri	0.53	201	P	Pg	15 08 43.6	+0.1
JHE				S	Sg	15 08 50.4	-0.1
TSUJ	Tsu 2	0.61	136	P	Pg	15 08 44.6	-0.4
TSUJ				S	Sg	15 08 52.7	-0.3
JYTA	Yamagatataniai	0.81	56	P	Pg	15 08 48.5	-0.3
JYTA				S	Sg	15 08 58.8	-0.5
JKY	Yasaka	0.81	306	P	Pg	15 08 48.7	-0.2
JKY				S	Sg	15 08 59.5	-0.1
JKS	Kasai	0.89	259	P	Pg	15 08 50.0	-0.4
JKS				S	Sg	15 09 01.9	-0.1
JKN2	Miekihoku	0.96	162	P	Pg	15 08 50.8	-0.8
JKN2				S	Sg	15 09 02.9	-1.2
JWY	Kouya	0.96	196	P	Pg	15 08 51.3	-0.5
JWY				S	Sg	15 09 03.9	-0.5
JIE	Ise	1.00	139	P	Pg	15 08 51.6	-0.9
JIE				S	Sg	15 09 04.7	-0.8
MAT	Matsushiro	2.33	53	P	Pn	15 09 12.2	+0.8
MAT				*e*S	Sn	15 09 41.2	+1.1

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*BJI **27** 15:27:51.6±0.0, 7°.96S×122°.85E, h572km, mB5.1/37, mb4.9/73*

*KLM **27** 15:27:55, 7°.75S×122°.68E, h586km, mb5.0*

*DJA **27** 15:27:56.7±0.1, 8°S±2°×12°2E±°, h565km±2km, M4.8/68, mb4.9/68, mB5.3/30, MLv5.1/23, Mw(mB)4.7/30, MwMwp6.3/2, Mwp6.3/2*

*NEIC **27** 15:27:56.7±1.6, 7°.48S±0°.09×122°.54E±0°.09, h565km±6km, mb4.9/73, Error ellipse: s-maj=14.4km s-min=12.1km az=220.0*

*IDC **27** 15:27:57.0±0.5, 7°.50S×122°.53E, h565km±6km, mb4.2/29, mb1 4.3/34, mb1mx4.1/41, mbtmp5.1/34, Error ellipse: s-maj=11.7km s-min=7.8km az=74.0*

ISC 27 15:27:56.5±0.5**, 7°.50S**±0°.05×**122°.54E**±0°.05**, h564**km±5km**, n407, σ1ˢ.02**/387**, mb4.8**/111**, 3C-5D, Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMRI	Maumere	1.17	195	P	P	15 29 04.6	-0.1
MMRI	Maumere	1.17	195	P	P	15 29 05.0	+0.3
BSSI	Bau Bau, Buton	2.44	303	P	P	15 29 10.7	+1.1
SOEI	Soe	2.82	143	P	P	15 29 12.7	+0.9
SOEI	Soe	2.82	143	P	P	15 29 12.8	+0.9
BATI	Baumata	2.91	158	P	P	15 29 13.8	+1.5
	1μm,0.3s,baz=317,slow=1.5,SNR=957						
BATI				S	S	15 30 14.6	+0.7
	614nm,0.3s,baz=32,slow=2.5,SNR=16						
BATI	Baumata	2.91	158	P	P	15 29 13.6	+1.3

WSI	Waingapu	3.09	226	P	P	15 29 12.7	-0.6
BASI	Baing, Sumba	3.32	215	P	P	15 29 15.2	+0.4
BASI				S	S	15 30 17.0	-1.4
KDI	Kendari	3.52	1	P	P	15 29 17.9	+1.8
KAPI	Kappang	3.71	312	P	P	15 29 19.5	+2.1
	5.0nm,0.3s,baz=142,slow=4.5,SNR=15						
KAPI	Kappang	3.71	312	P	P	15 29 19.4	+2.0
BNSI	Bone	3.91	322	P	P	15 29 20.8	+2.0
SPSI	Sidrap Palu	4.46	322	P	P	15 29 24.4	+1.5
PLAI	Plampang	4.89	254	P	P	15 29 25.3	-1.1
TTSI	Tana Toraja	5.18	328	P	P	15 29 30.3	+1.5
	0.2nm57nm,0.7s						
TWSI	Taliwang, Sumb	5.73	257	P	P	15 29 32.8	-0.7
	2.3nm2µm155nm,0.6s						
NLAI	Namlea	6.21	47	P	P	15 29 39.3	+1.5
	6.5nm20µm2µm,0.7s						
SANI	Sanana	6.41	33	P	P	15 29 40.9	+1.2
	2.3nm5µm666nm,1.0s						
LUWI	Luwuk	6.42	2	P	P	15 29 41.6	+1.9
	0.5nm95nm,0.9s						
APSI	Ampana	6.60	352	P	P	15 29 43.3	+1.9
	0.4nm26nm,0.9s						
SRBI	Singaraja	7.28	265	P	P	15 29 47.2	-0.6
	1.1nm4µm311nm,1.0s						
DNP	Denpasar	7.35	260	P	P	15 29 49.7	+1.3
	6.8nm17µm644nm,0.4s						
KBKI	Kotabaru	7.59	303	P	P	15 29 52.4	+1.6
	0.7nm2µm179nm,0.6s						
BNDI	Bandanaira	7.90	68	P	P	15 29 54.8	+1.0
	3.8nm9µm1µm,0.8s						
MRSI	Marisa	7.94	356	P	P	15 29 55.7	+1.5
	4µm259nm,0.9s						
GTOI	Gorontalo	8.09	3	P	P	15 29 58.1	+2.4
	984nm67nm,0.7s						
KMSI	Cibinong	8.15	10	P	P	15 29 58.2	+2.0
	256nm,0.7s						
ABJI	Asem Bagus	8.23	267	P	P	15 29 57.5	+0.5
	106nm,0.6s						
JAGI	Jajag, Banyuwa	8.36	263	P	P	15 29 56.6	-1.6
JAGI	Jajag, Banyuwa	8.36	263	P	P	15 29 56.8	-1.5
	5µm296nm,0.4s						
KMMI	Kalianget	8.51	272	P	P	15 29 59.9	+0.1
	226nm,1.0s						
BBKI	Banjar Baru	8.64	297	P	P	15 30 02.8	+1.7
	1µm60nm,1.6s						
SAUI	Saumlaki	8.70	94	P	P	15 30 00.8	-0.9
SAUI	Saumlaki	8.70	94	P	P	15 30 01.2	-0.5
	18µm2µm,1.0s						
TOLI2	Tolitoli	8.73	348	P	P	15 30 02.2	+0.2
MTKI	Muara Teweh, K	10.02	310	P	P	15 30 15.7	+0.7
	4µm128nm,0.8s						
FAKI	Fak Fak	10.69	65	P	P	15 30 21.1	-0.7
FAKI	Fak Fak	10.69	65	P	P	15 30 21.5	-0.3
	7µm849nm,0.8s						
SWI	Sorong	10.91	53	P	P	15 30 24.3	+0.2
	6µm620nm,1.0s						
SIJI	Sorong	10.91	53	P	P	15 30 24.4	+0.3
	51nm,0.3s,baz=253,slow=7.2,SNR=163						
SIJI				S	S	15 32 22.8	-2.6
	3.2nm,0.3s,baz=64,slow=23,SNR=20						
FITZ	Fitzroy Crossi	10.96	164	P	P	15 30 24.8	+0.3
	2.7nm,0.3s,baz=348,slow=9.9,SNR=159						
FITZ				S	S	15 32 24.3	-1.8
	2.2nm,0.3s,baz=9.0,slow=18,SNR=10						
FITZ	Fitzroy Crossi	10.96	164	P	P	15 30 24.6	+0.1
KMPI	Kaimana, Papua	11.75	72	P	P	15 30 33.7	+1.0
	161µm4µm188nm,0.7s						
PBKI	Pangkalan Bun	11.82	293	P	P	15 30 34.8	+1.4
	7µm730nm,0.8s						
UGM	Wanagama	11.91	267	P	P	15 30 33.2	-1.2
UGM	Wanagama	11.91	267	P	P	15 30 33.8	-0.6
	311nm,0.9s						
SMRI	Semarang	12.01	271	P	P	15 30 35.6	+0.3
	100nm,1.3s						
MYLDM	Lahad Datu	13.22	342	P	P	15 30 49.1	+1.3
JCJI	Jatiwangi	14.20	273	P	P	15 30 56.2	-1.6
	7µm346nm,0.4s						
PSA00	Pilbara Seismi	14.23	190	P	P	15 30 58.5	+0.4
SBUM	Sibu	14.27	313	P	P	15 30 59.3	+0.8
SBUM	Sibu	14.27	313	P	P	15 31 00.0	+1.5
CISI	Cisompet, Garu	14.59	269	P	P	15 30 59.7	-2.2
CISI	Cisompet, Garu	14.59	269	P	P	15 30 59.2	-2.7
	9µm885nm,0.6s						
SRPI	Serui, Papua	14.75	68	P	P	15 31 04.1	+0.7
	122nm,0.8s						
LEM	Lembang	14.82	272	P	P	15 31 03.2	-0.9
	30nm,0.3s,baz=69,slow=6.2,SNR=56						
LEM				S	S	15 33 37.2	-1.2
	1.6nm,0.3s,baz=307,slow=17,SNR=4.9						
LEM	Lembang	14.82	272	P	P	15 31 03.3	-0.9
	142nm,0.7s						
KKM	Kota Kinabalu	14.86	335	P	P	15 31 04.0	-0.5
BAKI	Biak	14.91	66	P	P	15 31 14.7	+10
TPI	Tanjungpandan	15.55	287	P	P	15 31 10.9	-0.4
	1µm158nm,0.8s						
CBJI	Citeko	15.61	273	P	P	15 31 09.0	-2.9
	13µm505nm,0.8s						
DBJI	Dramaga	15.70	272	P	P	15 31 10.5	-2.3
	163nm,0.9s						
WRA	Warramunga Arr	16.85	138	P	P	15 31 23.8	+0.4
	1.0nm,0.3s,baz=318,slow=10,SNR=94						
WRA				S	S	15 34 12.4	+0.5
	baz=314,slow=19,SNR=7.9						
WRAB	Tennant Creek	16.85	138	P	P	15 31 23.9	+0.5
WRAB				IAmb	IAmb	15 31 24.8	
	comp=Z,15nm,0.8s						
XMI	Christmas Isla	16.89	259	P	P	15 31 22.7	-1.1
	comp=Z,402nm,0.9s						
XMIS	Christmas Isla	16.94	259	P	P	15 31 23.2	-1.0
XMIS	Christmas Isla	16.94	259	P	P	15 31 22.9	-1.3
	comp=Z,338nm,1.4s						
SMPI	Sarmi	17.02	72	P	P	15 31 25.8	+0.9
	comp=Z,85nm,1.1s						
GIRL	Giralia	17.05	207	P	P	15 31 26.6	+1.5
PPBI	Pangkal Pinang	17.17	287	P	P	15 31 27.6	+1.2
	comp=Z,4µmcomp=Z,231nm,1.3s						
KLSI		17.92	278	P	P	15 31 32.2	-1.0
	comp=Z,5.3nm,0.5s						
KASI	Kota Agung	18.03	275	P	P	15 31 32.2	-2.0
	comp=Z,108nm,0.7s						
GENI	Genyem	18.22	75	P	P	15 31 38.2	+2.2
	comp=Z,150nm,0.8s						
PMBI	Palembang	18.26	283	P	P	15 31 37.6	+1.3
	comp=Z,182nm,1.0s						
MDSI	Maura Dua	18.50	278	P	P	15 31 37.9	-0.6
	comp=Z,47nm,0.8s						
LWLI	Liwa	18.53	277	P	P	15 31 36.9	-2.0
LHSI	Lahat	19.26	280	P	P	15 31 44.1	-1.3
	comp=Z,1µmcomp=Z,107nm,1.1s						
AS31	Alice Springs	19.43	147	P	P	15 31 47.3	+0.4
ASAR	Alice Springs	19.43	147	P	P	15 31 47.4	+0.5
	comp=Z,0.4nm,0.3s,baz=324,slow=8.9,SNR=81						
ASAR	Alice Springs	19.43	147	P	P	15 31 47.9	+1.0
JMBI	JAMBI	19.71	286	P	P	15 31 50.8	+1.3
	comp=Z,235nm,0.8s						
MNAI	Manna	19.72	278	P	P	15 31 47.9	-1.7
COEN	Coen	21.26	109	P	P	15 32 02.4	-1.1
TGY	Tagaytay City	21.52	356	P	P	15 32 06.6	+0.8
	comp=Z,158nm,0.5s,baz=100,slow=6.1,SNR=6.5						
BKNI	Bangkinang	22.80	289	P	P	15 32 17.4	+0.1
	comp=Z,140nm,0.9s						
MNSI	Mandailing Nat	24.33	289	P	P	15 32 30.2	-0.7
	comp=Z,112nm,0.8s						
IPM	Ipoh	24.54	298	P	P	15 32 32.8	+0.1
IPM				IAmb	IAmb	15 32 33.8	
	comp=Z,23nm,1.1s						
IPM	Ipoh	24.54	298	P	P	15 32 32.0	-0.7
KULM	Kulim	25.26	300	P	P	15 32 39.0	-0.1
KULM				IAmb	IAmb	15 32 39.8	
	comp=Z,24nm,0.8s						
KULM	Kulim	25.26	300	P	P	15 32 38.0	-1.1
RPSI	Rantau Prapat	25.64	292	P	P	15 32 42.8	+0.3
PSI	Prapat	25.68	293	P	P	15 32 42.9	-0.1
	comp=Z,26nm,0.4s,baz=180,slow=4.2,SNR=47						
NWAO	Narrogin (SRO)	25.78	190	P	P	15 32 43.5	+0.2
	comp=Z,7.7nm,0.4s,baz=3.9,slow=7.4,SNR=20						
GSI	Gunungsitoli	26.39	288	P	P	15 32 48.1	-0.9
GSI	Gunungsitoli	26.39	288	P	P	15 32 48.1	-0.9
	comp=Z,44µmcomp=Z,95nm,0.6s						
TRTT	Trang	27.40	303	P	P	15 32 58.0	+0.1
	comp=Z,16nm,1.4s						
TPTI		27.46	292	P	P	15 32 58.6	+0.2
	comp=Z,29nm,1.1s						
UBPT	Khong Chiam	28.25	323	P	P	15 33 06.7	+1.4
	comp=Z,8.9nm,1.2s						
UBPT	Khong Chiam	28.25	323	P	P	15 33 06.1	+0.8

QIZ	Qiongzhong	29.18	335	P	P	15 33 13.5	+0.3
QIZ				S	S	15 37 31.5	+4.8
QIZ				pmax	pmax		
	comp=Z,40nm,0.9s						
QIZ	Qiongzhong	29.18	335	P	P	15 33 13.6	+0.3
QIZ				IAmb	IAmb	15 33 14.3	
	comp=Z,47nm,1.1s						
SRAK	Srakaew	29.50	316	P	P	15 33 13.5	-2.6
	comp=Z,1µmcomp=Z,136nm,0.8s						
STKA	Stephens Creek	30.06	146	P	P	15 33 21.5	+0.8
	comp=Z,3.2nm,0.4s,baz=323,slow=8.8,SNR=38						
STKA	Stephens Creek	30.06	146	P	P	15 33 21.6	+0.9
TWG	Pinlang	30.16	357	P	P	15 33 20.0	-1.7
TPUB	Ta-pu	30.67	357	P	P	15 33 25.2	-0.8
TPUB				IAmb	IAmb	15 33 25.6	
	comp=Z,29nm,0.7s						
KHON	Khomkaen	30.68	321	P	P	15 33 27.0	+0.8
YULB	Yu-li	30.72	358	P	P	15 33 24.2	-2.3
YULB				IAmb	IAmb	15 33 28.3	
	comp=Z,30nm,0.8s						
CHAI	Chaiyaphum	30.90	319	P	P	15 33 29.8	+1.7
	comp=Z,541nmcomp=Z,61nm,0.8s						
SSLB	Suanglung	31.13	357	P	P	15 33 28.9	-1.1
SSLB				IAmb	IAmb	15 33 32.4	
	comp=Z,26nm,0.9s						
YHNB	Yeheng	31.99	358	P	P	15 33 36.4	-1.0
KNMB	Chin-men Tao	32.02	353	P	P	15 33 36.6	-1.0
KNMB				IAmb	IAmb	15 33 48.2	
	comp=Z,47nm,1.1s						
TATO	Taipei	32.29	358	P	P	15 33 38.3	-1.6
UTHA	Uthaitani	32.37	315	P	P	15 33 41.7	+1.0
	comp=Z,520nmcomp=Z,46nm,0.7s						
QZH	Quanzhou	32.47	353	⇑*i*P	P	15 33 41.5	+0.2
QZH				pmax	pmax		
	comp=Z,28nm,0.6s						
LOEI	Loei	32.54	320	P	P	15 33 40.0	-2.1
	comp=Z,14µmcomp=Z,18nm,0.8s						
PHIT	Phitsanulok	32.86	318	P	P	15 33 46.3	+1.5
	comp=Z,148nm,0.8s						
UTTA	Uttaradit	33.17	319	P	P	15 33 48.3	+0.9
	comp=Z,354nmcomp=Z,38nm,0.8s						
UMPA	Umpang Tak	33.22	315	P	P	15 33 48.0	+0.2
	comp=Z,437nmcomp=Z,48nm,0.7s						
SUKH	Sukhothai	33.59	318	P	P	15 33 52.2	+1.3
	comp=Z,25nm,0.8s						
JMZ	Minamidaito 2	34.18	14	P	P	15 33 54.5	-1.2
LAMP	Lampang	34.34	319	P	P	15 33 58.0	+0.8
	comp=Z,395nmcomp=Z,39nm,1.0s						
JOW	Kunigami	34.58	9	P	P	15 33 58.9	-0.2
JOW				IAmb	IAmb	15 33 59.7	
	comp=Z,51nm,0.8s						
CM04	Chiang Mai Arr	34.68	318	P	P	15 34 01.1	+1.0
	comp=Z,112nmcomp=Z,15nm,0.8s						
CM36	Chiang Mai Arr	34.69	318	P	P	15 34 00.0	-0.1
CM05	Chiang Mai Arr	34.70	318	P	P	15 34 01.1	+0.9
	comp=Z,68nmcomp=Z,9.1nm,0.8s						
CM09	Chiang Mai Arr	34.70	318	P	P	15 34 01.0	+0.8
	comp=Z,121nmcomp=Z,17nm,0.8s						
CM01	Chiang Mai Arr	34.70	318	P	P	15 34 01.4	+1.1
	comp=Z,115nmcomp=Z,14nm,0.8s						
CM02	Chiang Mai Arr	34.72	318	P	P	15 34 01.0	+0.6
	comp=Z,92nmcomp=Z,13nm,0.9s						
CM13	Chiang Mai Arr	34.74	318	P	P	15 34 01.5	+1.0
	comp=Z,10nm,1.0s						
CM31	Chiang Mai Arr	34.74	318	P	P	15 34 02.0	+1.4
CMAR	Chiang Mai Arr	34.74	318	P	P	15 34 01.4	+0.8
	comp=Z,7.6nm,0.7s,baz=144,slow=6.3,SNR=48						
CMAR				PcP	PcP	15 36 19.0	+0.9
	comp=Z,2.7nm,0.6s,baz=171,slow=3.1,SNR=8.4						
CMAR				ScP	ScP	15 39 11.3	+0.9
	comp=Z,2.6nm,0.7s,baz=167,slow=2.8,SNR=11						
CM15	Chiang Mai Arr	34.75	318	P	P	15 34 01.8	+1.2
CM35	Chiang Mai Arr	34.76	319	P	P	15 34 01.0	+0.3
CM34	Chiang Mai Arr	34.89	319	P	P	15 34 02.0	+0.2
CM32	Chiang Mai Arr	34.95	318	P	P	15 34 03.0	+0.8
CMMT	Chiang Mai	34.99	319	P	P	15 34 02.2	-0.4
	comp=Z,10nm,0.8s						
CHTO	Chiang Mai	35.00	319	P	P	15 34 03.4	+0.7
CHTO				IAmb	IAmb	15 34 04.3	
	comp=Z,12nm,0.7s						
CM33	Chiang Mai Arr	35.00	319	P	P	15 34 03.0	+0.3
GYA	Guiyang	37.10	336	⇓P	P	15 34 20.8	+0.7
GYA				pmax	pmax		
	comp=Z,43nm,1.0s						
KMI	Kunming	37.72	330	⇑P	P	15 34 27.0	+1.7
KMI				pmax	pmax		
	comp=Z,29nm,1.0s						
SSE	Sheshan	38.40	358	P	P	15 34 30.7	+0.4
SSE				IAmb	IAmb	15 34 31.4	
	comp=Z,50nm,0.7s						
WHN	Wuhan	38.63	349	⇓*i*P	P	15 34 33.0	+0.8
WHN				pmax	pmax		
	comp=Z,94nm,1.0s						
JCJ	Chichijima	39.31	28	P	P	15 34 36.7	-1.1
NJ2	Nanjing	39.48	355	⇓P	P	15 34 39.5	+0.4
NJ2				pmax	pmax		
	comp=Z,43nm,0.6s						
JNU	Nakatsue	41.17	11	P	P	15 34 52.4	-0.2
	comp=Z,28nm,0.8s,baz=130,slow=1.6,SNR=5.3						
JNU	Nakatsue	41.17	11	P	P	15 34 52.0	-0.5
JNU				IAmb	IAmb	15 34 53.6	
	comp=Z,32nm,0.9s						
CD2	Chengdu	42.22	336	P	P	15 35 00.5	-0.4
CD2				pmax	pmax		
	comp=Z,70nm,0.8s						
JTU	Tsushima	42.30	8	P	P	15 35 01.4	0.0
JMN	Monobe	42.39	14	P	P	15 35 02.6	+0.5
XAN	Xi'an	43.28	343	P	P	15 35 08.5	-0.6
XAN				PcP	PcP	15 36 46.3	+1.0
XAN				pmax	pmax		
	comp=Z,100nm,0.8s						
XAN	Xi'an	43.28	343	P	P	15 35 08.6	-0.6
JHS	Saijyo	43.43	13	P	P	15 35 11.1	+0.8
JWT	Wachi	44.25	15	P	P	15 35 17.1	+0.6
INU	Inuyama	44.75	17	P	P	15 35 20.4	0.0
INU				IAmb	IAmb	15 35 21.0	
	comp=Z,20nm,0.5s						
KSAR	Wonju Array Be	44.98	6	P	P	15 35 22.8	+0.7
KSAR					PcP	15 36 52.2	+1.1
KSRS	Korea Array	45.00	6	P	P	15 35 22.5	+0.3
	comp=Z,18nm,0.9s,baz=185,slow=8.7,SNR=51						
KSRS				PcP	PcP	15 36 51.6	+0.5
	comp=Z,3.8nm,0.7s,baz=184,slow=3.0,SNR=7.5						
KS19	Wonju Array Si	45.04	6	P	P	15 35 22.8	+0.2
KS19				IAmb	IAmb	15 35 23.6	
	comp=Z,25nm,1.1s						
JGF	Kuroka	45.09	17	P	P	15 35 23.3	+0.3
JGF				IAmb	IAmb	15 35 24.7	
	comp=Z,39nm,0.7s						
DL2	Dalian	46.17	359	P	P	15 35 30.5	-0.6
DL2				pmax	pmax		
	comp=Z,34nm,1.0s						
MAJO	Matsushiro	46.21	18	P	P	15 35 31.1	-0.4
MAJO				IAmb	IAmb	15 35 32.0	
	comp=Z,38nm,0.8s						
MAT	Matsushiro	46.21	18	P	P	15 35 30.8	-0.7
MJAR	Matsushiro Arr	46.21	18	P	P	15 35 31.3	-0.2
	comp=Z,62nm,0.8s,baz=192,slow=8.4,SNR=63						
JYT	Yasato	46.55	20	P	P	15 35 33.1	-1.0
JYT				IAmb	IAmb	15 35 35.9	
	comp=Z,51nm,0.9s						
LZH	Lanzhou	46.78	339	*e*P	P	15 35 37.0	+1.0
LZH				pP	pP	15 37 15.8	-2.9
LZH				pmax	pmax		
	comp=Z,71nm,1.4s						
LZH				pmax	pmax		
	comp=Z,160nm,4.8s						
JSD	Sado	47.62	17	P	P	15 35 41.5	-0.5
BJT	Baijiatuau	47.64	353	P	P	15 35 41.7	-0.5
BJT				IAmb	IAmb	15 35 42.6	
	comp=Z,38nm,0.7s						
BJI	Beijing	47.66	353	P	P	15 35 42.3	0.0
BJI				PcP	PcP	15 37 01.8	+1.2
BJI				pmax	pmax		
	comp=Z,51nm,0.7s						
BJI				pmax	pmax		
	comp=Z,560nm,4.9s						
LSA	Lhasa	47.73	322	P	P	15 35 44.9	+1.3
LSA				IAmb	IAmb	15 35 45.6	
	comp=Z,30nm,0.6s						
ODAN	Odare	48.24	316	*e*P	P	15 35 47.4	+0.2
	comp=Z,17nm,0.5s						
JMM	Marumori	48.24	19	P	P	15 35 47.5	+0.9
TAPN	Taplejung	48.34	317	*e*P	P	15 35 48.1	+0.1
	comp=Z,26nm,0.7s						

RAMN	Ramite	48.84	316	*e*P	P	15 35 52.1	+0.5
	comp=Z,48nm,0.6s						
SNY	Shenyang	49.09	1	⇑P	P	15 35 52.5	-0.4
SNY				pmax	pmax		
	comp=Z,25nm,0.7s						
HHC	Hu-ho-hao-te	49.16	349	*e*P	P	15 35 53.8	+0.2
HHC				pmax	pmax		
	comp=Z,19nm,1.1s						
HHC				pmax	pmax		
	comp=Z,630nm,5.9s						
DGAR	Diego Garcia	49.64	267	P	P	15 35 58.1	+0.7
DGAR				IAmb	IAmb	15 35 59.5	
	comp=Z,44nm,0.7s						
GUN	Gumba	49.94	316	*e*P	P	15 35 59.8	0.0
	comp=Z,42nm,0.7s						
PKI	Pulchoki	50.05	316	*e*P	P	15 36 00.3	-0.3
	comp=Z,19nm,0.5s						
PKIN	Phulchoki	50.06	316	*e*P	P	15 36 00.3	-0.4
	comp=Z,20nm,0.5s						
KKN	Kakani	50.27	316	*e*P	P	15 36 02.0	-0.1
	comp=Z,26nm,0.9s						
DMN	Daman	50.28	315	*e*P	P	15 36 02.2	-0.1
	comp=Z,15nm,0.7s						
GKN	Gorkha	50.85	316	*e*P	P	15 36 06.2	-0.1
	comp=Z,15nm,0.3s						
JTM	Tenmabayashi	50.99	18	P	P	15 36 06.7	-0.1
JTM				IAmb	IAmb	15 36 23.5	
	comp=Z,64nm,1.0s						
GTA	Gaotai	51.20	337	⇓P	P	15 36 09.0	+0.5
GTA				PcP	PcP	15 37 15.5	+1.5
GTA				ScP	ScP	15 40 18.0	+1.2
GTA				pmax	pmax		
	comp=Z,24nm,0.8s						
DANN	Dangsing	51.68	315	*e*P	P	15 36 12.3	-0.1
MNCI	Minicoy	51.75	287	P	P	15 36 12.4	-0.4
MNCI				IAmb	IAmb	15 36 21.4	
	comp=Z,44nm,1.0s						
USA0B	Ussuriysk Arra	52.16	9	P	P	15 36 15.3	+0.1
USA0B				IAmb	IAmb	15 36 16.3	
	comp=Z,60nm,0.6s						
USRK	Ussuriysk Ar.	52.16	9	P	P	15 36 15.4	+0.2
	comp=Z,55nm,0.4s,baz=193,slow=6.9,SNR=263						
USRK	Ussuriysk Ar.	52.16	9	P	P	15 36 15.1	-0.1
MDJ	Mudanjiang	52.26	6	P	P	15 36 15.8	0.0
ASAJ	Asahikawa	54.48	18	P	P	15 36 32.1	+0.5
	comp=Z,28nm,0.8s,baz=252,slow=7.5,SNR=18						
JKA	Kamikawa-asahi	54.48	18	P	P	15 36 31.5	-0.1
ULN	Ulaanbaatar	56.80	348	P	P	15 36 48.1	+0.3
SONM	Songino Array	56.91	347	P	P	15 36 48.8	+0.3
	comp=Z,20nm,0.5s,baz=164,slow=8.3,SNR=224						
SONM				PcP	PcP	15 37 36.2	+0.3
	comp=Z,3.0nm,0.8s,baz=159,slow=4.7,SNR=3.7						
SONM				ScP	ScP	15 40 41.4	-0.3
	comp=Z,1.4nm,0.7s,baz=164,slow=5.1,SNR=4.3						
SONM	Songino Array	56.91	347	P	P	15 36 48.6	+0.1
KLR	Kul'dur	57.06	7	P	P	15 36 49.5	+0.1
	comp=Z,11nm,0.5s,baz=192,slow=6.1,SNR=61						
YSS	Yuzh-Sakhalins	57.12	16	P	P	15 36 49.9	+0.1
YSS				IAmb	IAmb	15 36 51.0	
	comp=Z,28nm,0.6s						
BKZ	Black Stump Fm	57.65	132	P	P	15 36 54.5	+0.8
WMQ	Urumqi	60.02	331	*e*P	P	15 37 10.5	+1.0
WMQ				pmax	pmax		
	comp=Z,35nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,1µm,5.9s						
TLY	Talaya	61.14	347	P	P	15 37 17.0	+0.4
	comp=Z,10.0nm,0.5s,baz=198,slow=9.3,SNR=11						
TLY	Talaya	61.14	347	P	P	15 37 17.3	+0.7
TLY				IAmb	IAmb	15 37 18.1	
	comp=Z,27nm,1.0s						
NIL	Nilore	62.09	314	P	P	15 37 23.1	-0.1
KSH	Kashi	63.56	321	P	P	15 37 32.8	+0.1
KSH				pP	pP	15 39 29.3	+4.1
KSH				pmax	pmax		
	comp=Z,26nm,0.6s						
KSH				pmax	pmax		
	comp=Z,670nm,9.8s						
SHLS	Shalkode	63.79	326	*e*P	P	15 37 33.0	-1.1
	comp=Z,14nm,0.5s,baz=326						
SHLS				*e*S	S	15 45 24.8	-0.9
	baz=326						
UZB	Uzynbulak	64.03	326	*e*P	P	15 37 35.3	-0.2
	baz=326						
ZSN	Zaisan	64.06	333	*e*P	P	15 37 35.4	-0.1
	comp=Z,17nm,1.2s,baz=332						
SATY	Saty	64.31	326	*e*P	P	15 37 37.5	+0.1
	comp=Z,17nm,1.1s,baz=325						
KPKS	Kokpek	64.42	326	*e*P	P	15 37 38.1	+0.1
	comp=Z,9.3nm,0.4s,baz=326						
MK31	Makanchi Array	64.80	331	P	P	15 37 40.4	+0.2
MK31				IAmb	IAmb	15 37 41.4	
	comp=Z,23nm,0.8s						
MKAR	Makanchi Array	64.80	331	P	P	15 37 40.5	+0.3
	comp=Z,30nm,0.7s,baz=136,slow=7.7,SNR=325						
MKAR				S	S	15 45 37.0	-0.4
	comp=Z,0.5nm,0.8s,baz=144,slow=12,SNR=3.3						
MKAR	Makanchi Array	64.80	331	P	P	15 37 40.4	+0.2
MAKZ	Makanchi	64.96	330	P	P	15 37 41.0	-0.3
MDOK	Medeo	65.15	325	*e*P	P	15 37 42.4	-0.2
	baz=325						
TDK	Taldyqorghan	65.57	327	*e*P	P	15 37 44.8	-0.3
	comp=Z,12nm,0.9s,baz=327						
CHKK	Chushkaly	65.61	325	*e*P	P	15 37 45.0	-0.4
	baz=325						
TKM2	Tokmak 2	65.83	324	P	P	15 37 47.5	+0.5
	SNR=6.1						
KUU	Kurty	66.00	325	*e*P	P	15 37 47.7	-0.2
	comp=Z,24nm,0.6s,baz=325						
UCH	Uchtor	66.06	323	P	P	15 37 49.4	+0.6
	SNR=8.1						
AAK	Ala-Archa	66.31	323	P	P	15 37 50.5	+0.6
	SNR=14						
AAK	Ala-Archa	66.31	323	P	P	15 37 50.6	+0.6
AAK				IAmb	IAmb	15 37 51.4	
	comp=Z,15nm,0.7s						
CHMS	Chumysh	66.38	324	P	P	15 37 50.4	+0.3
	SNR=6.1						
AML	Almayashu	66.50	322	P	P	15 37 51.9	+0.5
	SNR=23						
USP	Ospenovka	66.69	324	P	P	15 37 52.3	+0.2
	SNR=17						
SGDS	Sogindy	66.72	324	*e*P	P	15 37 51.9	-0.4
	baz=324						
EKS2	Erkin-Say	66.75	323	P	P	15 37 53.2	+0.6
	SNR=12						
PEA0B	Petropavlovsk-	67.34	22	P	P	15 37 56.6	+0.8
PEA0B				IAmb	IAmb	15 37 57.6	
	comp=Z,30nm,0.8s						
PETK	Petropavlovsk-	67.34	22	P	P	15 37 56.6	+0.8
	comp=Z,24nm,0.7s,baz=228,slow=1.3,SNR=44						
BTLS	Baital	68.01	325	*e*P	P	15 37 59.6	-0.5
	baz=325						
SEM	Semipalatinsk	68.30	332	*e*P	P	15 38 00.9	-1.1
	baz=332						
IUG	Iuzhnay	68.77	321	*e*P	P	15 38 04.4	-0.4
	baz=320						
ZAA0	Zalesovo Array	68.96	337	IAmb	IAmb	15 38 05.6	
	comp=Z,23nm,0.8s						
ZALV	Zalesovo Beam	68.96	337	P	P	15 38 05.0	-0.6
	comp=Z,16nm,0.4s,baz=136,slow=4.7,SNR=91						
ZALV				S	S	15 46 20.9	-4.8
	comp=Z,0.4nm,0.3s,baz=140,slow=11,SNR=5.3						
ZALV	Zalesovo Beam	68.96	337	P	P	15 38 04.6	-0.9
KK31	Karatay Array	68.98	322	P	P	15 38 05.7	-0.3
KKAR	Karatay Array	68.98	322	P	P	15 38 05.8	-0.3
KKAR	Karatay Array	68.98	322	P	P	15 38 05.8	-0.3
KURBB	Kurchatov Arra	69.25	332	P	P	15 38 07.4	0.0
	comp=Z,12nm,0.8s,baz=146,slow=5.4,SNR=124						
KURK	Kurchatov	69.27	332	P	P	15 38 07.5	0.0
KURK				IAmb	IAmb	15 38 08.4	
	comp=Z,23nm,0.8s						
YAK	Yakutsk	69.54	4	P	P	15 38 09.1	+0.3
	comp=Z,71nm,0.5s,baz=188,slow=0.4,SNR=73						
MA2	Magadan	70.55	15	P	P	15 38 15.8	+0.8
	comp=Z,42nm,0.8s,baz=195,slow=5.7,SNR=109						
MA2	Magadan	70.55	15	P	P	15 38 15.7	+0.8
MA2				IAmb	IAmb	15 38 16.8	
	comp=Z,43nm,0.7s						
SOCY	Socotra	70.89	286	P	P	15 38 17.9	-0.1
BRZS	Berezniki	71.72	329	*e*P	P	15 38 21.7	-0.3
	baz=328						
SEY	Seymchan	73.85	14	P	P	15 38 34.7	+0.8
	comp=Z,42nm,0.8s,baz=214,slow=4.7,SNR=248						
BRVK	Borovoye	74.75	330	P	P	15 38 39.3	+0.1
GEYT	Alibeck	74.98	312	P	P	15 38 41.3	+0.4

	comp=Z,2.0nm,0.6s,baz=270,slow=7.4,SNR=4.1						
ABKAR	**Akbulak array**	**78.40**	**324**	P	**P**	**15 38 59.2**	**-0.1**
ABKAR	**Akbulak array**	**78.40**	**324**	P	**P**	**15 38 59.0**	**-0.3**
TIXI	**Tiksi**	**79.09**	**2**	P	**P**	**15 39 01.9**	**-0.5**
NRIK	**Noril'sk**	**80.38**	**348**	P	**P**	**15 39 09.8**	**+0.5**
	comp=Z,5.5nm,0.4s,baz=137,slow=5.5,SNR=12						
NRIK	**Noril'sk**	**80.38**	**348**	P	**P**	**15 39 09.7**	**+0.5**
SYO	**Syowa Base**	**80.51**	**201**	⇓*e*X	P	15 39 20.4	+10
ARU	**Arti**	**82.30**	**330**	P	**P**	**15 39 18.8**	**-0.6**
ARU				IAmb	IAmb	15 39 20.3	
	comp=Z,19nm,0.8s						
QSPA	**South Pole Qui**	**82.48**	**180**	P	**P**	**15 39 20.3**	**0.0**
UNV	**Unalaska Valle**	**85.00**	**34**	P	**P**	**15 39 33.0**	**+0.3**
UNV				IAmb	IAmb	15 39 35.5	
	comp=Z,41nm,1.2s						
KMBO	**Kilima Mbogo**	**85.18**	**269**	P	**P**	**15 39 35.9**	**+1.0**
	comp=Z,0.8nm,0.3s,baz=87,slow=7.6,SNR=5.0						
KBZ	**Khabaz**	**87.71**	**314**	P	**P**	**15 39 45.9**	**+0.1**
	comp=Z,2.8nm,0.8s,baz=94,slow=8.1,SNR=6.5						
SII	**Sitkinak Islan**	**92.51**	**33**	P	**P**	**15 40 07.0**	**-0.8**
	baz=260						
TTA	**Tatalina**	**92.74**	**27**	P	**P**	**15 40 08.6**	**-0.2**
	baz=259						
KLMR	**Klimovskoe**	**93.10**	**331**	*e*P	**P**	**15 40 07.6**	**-2.7**
KLMR				AMP		15 40 09.3	
	comp=Z,12nm,1.2s						
OHAK	**Old Harbor**	**93.10**	**33**	P	**P**	**15 40 10.4**	**0.0**
	baz=261						
SNAA	**Sanae**	**93.36**	**195**	P	**P**	**15 40 11.7**	**+0.2**
BRTR	**Keskin Array B**	**93.89**	**309**	P	**P**	**15 40 14.0**	**-0.7**
	comp=Z,0.8nm,0.8s,baz=126,slow=6.3,SNR=4.1						
A21K	**Barrow**	**94.12**	**19**	P	**P**	**15 40 15.7**	**+1.0**
	baz=259						
IMAR	**Indian Mountai**	**94.23**	**24**	P	**P**	**15 40 14.7**	**-0.8**
CHUM	**Lake Minchumin**	**94.54**	**26**	P	**P**	**15 40 17.1**	**+0.3**
	baz=262						
SUA	**Susitna One**	**94.96**	**29**	P	**P**	**15 40 18.0**	**-1.0**
	baz=264						
VNA2	**Neumayer--Watz**	**94.98**	**195**	P	**P**	**15 40 19.4**	**+0.6**
BPAW	**Bear Paw Mtn.**	**95.15**	**26**	P	**P**	**15 40 19.4**	**-0.2**
	baz=264						
VNA3	**Neumayer Olymp**	**95.33**	**194**	P	**P**	**15 40 20.5**	**+0.1**
MLY	**Manley**	**95.36**	**25**	P	**P**	**15 40 20.3**	**-0.3**
	baz=264						
VNA1	**Neumayer--Stat**	**95.38**	**195**	P	**P**	**15 40 20.5**	**-0.1**
TRF	**Thorofare Moun**	**95.39**	**27**	P	**P**	**15 40 20.2**	**-0.7**
	baz=264						
RC01	**Rabbit Creek A**	**95.41**	**29**	P	**P**	**15 40 20.0**	**-0.9**
	baz=264						
COLD	**Coldfoot**	**95.80**	**23**	P	**P**	**15 40 22.9**	**+0.4**
	baz=265						
I23K	**Minto, Yukon-K**	**95.95**	**25**	P	**P**	**15 40 23.3**	**+0.1**
	baz=265						
MCK	**McKinley**	**96.01**	**27**	P	**P**	**15 40 23.1**	**-0.4**
	baz=265						
RND	**Reindeer**	**96.02**	**27**	P	**P**	**15 40 21.9**	**-1.7**
RND				IAmb	IAmb	15 40 23.1	
	comp=Z,9.6nm,0.8s						
NEA2	**Nenana**	**96.03**	**26**	P	**P**	**15 40 23.1**	**-0.5**
	baz=265						
SML	**Sawmill**	**96.14**	**29**	P	**P**	**15 40 23.9**	**-0.3**
	baz=266						
TOLK	**Toolik Lake Re**	**96.16**	**22**	P	**P**	**15 40 24.3**	**+0.2**
	baz=265						
TOLK	**Toolik Lake Re**	**96.16**	**22**	P	**P**	**15 40 24.2**	**+0.1**
TOLK				IAmb	IAmb	15 40 25.3	
	comp=Z,3.8nm,0.8s						
WRH	**Wood River Hil**	**96.44**	**26**	P	**P**	**15 40 23.7**	**-1.7**
WRH				IAmb	IAmb	15 40 25.1	
	comp=Z,5.7nm,0.9s						
CCB	**Clear Creek Bu**	**96.57**	**26**	P	**P**	**15 40 24.6**	**-1.4**
CCB				IAmb	IAmb	15 40 25.9	
	comp=Z,7.5nm,0.9s						
HDA	**Harding Lake**	**96.93**	**26**	P	**P**	**15 40 26.5**	**-1.1**
	baz=267						
ILAR	**Eielson Array**	**96.97**	**26**	P	**P**	**15 40 26.2**	**-1.6**
	comp=Z,1.9nm,0.9s,baz=234,slow=5.2,SNR=15						
ILAR				PP	**PP**	**15 44 27.1**	**-5.9**
	comp=Z,1.4nm,1.1s,baz=263,slow=7.2,SNR=5.4						
ILAR	**Eielson Array**	**96.97**	**26**	P	**P**	**15 40 24.9**	**-2.9**
AKASG	**Malin Array Be**	**97.84**	**320**	P	Pdif	15 40 31.2	-0.7
	comp=Z,1.0nm,0.5s,baz=79,slow=4.2,SNR=4.8						
ARCES	**ARCESS Array B**	**99.44**	**339**	P	**Pdif**	**15 40 37.9**	**-0.8**
	comp=Z,4.0nm,0.9s,baz=82,slow=6.6,SNR=4.2						
FINES	**FINESS Array B**	**99.63**	**331**	P	**Pdif**	**15 40 39.4**	**-0.3**
	comp=Z,1.9nm,0.9s,baz=66,slow=4.6,SNR=3.6						
KOLS	**Kolonicke sedl**	**102.35**	**318**	*e*PDIFF	**Pdif**	**15 40 53.1**	**+1.0**
YKA	**Yellowknife Ar**	**111.38**	**25**	PKiKP	**PKiKP**	**15 45 26.2**	**-0.3**
	comp=Z,1.3nm,0.6s,baz=318,slow=1.2,SNR=28						
O02D	**Mt. Diablo Mer**	**113.61**	**49**	P	**PKiKP**	**15 45 32.7**	**+1.0**
	baz=281						
J05D	**Fort Rock, OR**	**114.12**	**46**	P	**PKiKP**	**15 45 33.7**	**+1.0**
	baz=283						
NVAR	**Mina Array Bea**	**117.37**	**51**	PKP	**PKiKP**	**15 45 39.9**	**+0.8**
	comp=Z,1.4nm,0.8s,baz=228,slow=2.1,SNR=9.0						
MSO	**Missoula**	**118.05**	**40**	P	**PKiKP**	**15 45 40.1**	**0.0**
	baz=291						
EDW2	**Edwards Air Fo**	**118.35**	**54**	P	**PKiKP**	**15 45 41.7**	**+0.7**
	baz=281						
LRMC	**Laurel Mtn Rad**	**118.48**	**54**	P	**PKiKP**	**15 45 41.2**	**-0.1**
	baz=282						
MPMC	**Manual Prospec**	**118.52**	**53**	P	**PKiKP**	**15 45 42.3**	**+0.9**
	baz=282						
HLID	**Hailey**	**118.83**	**44**	P	**PKiKP**	**15 45 42.9**	**+1.1**
	baz=288						
GSC	**Goldstone, Bar**	**119.22**	**54**	P	**PKiKP**	**15 45 43.1**	**+0.4**
	baz=282						
R11A	**Troy Canyon, C**	**119.46**	**50**	P	**PKiKP**	**15 45 44.2**	**+1.0**
	baz=285						
SHOC	**Shoshone, Teco**	**119.51**	**53**	P	**PKiKP**	**15 45 43.9**	**+0.7**
	baz=283						
BOZ	**Bozeman (W)**	**119.99**	**41**	P	**PKiKP**	**15 45 44.6**	**+0.6**
	baz=292						
MONP2	**Monument Peak**	**120.02**	**56**	P	**PKiKP**	**15 45 44.6**	**+0.1**
	baz=281						
BELC	**Belle Mtn. Jos**	**120.14**	**55**	P	**PKiKP**	**15 45 44.9**	**+0.2**
	baz=282						
EGMT	**Eagleton**	**120.21**	**38**	P	**PKiKP**	**15 45 44.5**	**+0.2**
	baz=295						
GMRC	**Granite Mounta**	**120.25**	**54**	P	**PKiKP**	**15 45 45.2**	**+0.4**
	baz=283						
IKP	**In-Ko-Pah, Jac**	**120.32**	**57**	P	**PKiKP**	**15 45 45.5**	**+0.6**
	baz=281						
BC3	**Big Chuckawall**	**120.66**	**55**	P	**PKiKP**	**15 45 46.2**	**+0.6**
	baz=282						
IRM	**Iron Mountain**	**120.80**	**55**	P	**PKiKP**	**15 45 46.4**	**+0.7**
	baz=283						
DUG	**Dugway, Tooele**	**121.01**	**47**	P	**PKiKP**	**15 45 46.8**	**+0.7**
	baz=288						
TORD	**Torodi Ar. Bea**	**121.63**	**281**	PKP	**PKPdf**	**15 45 47.5**	**-0.2**
	comp=Z,2.2nm,0.8s,baz=58,slow=1.9,SNR=8.0						
RLMT	**Red Lodge**	**121.71**	**41**	P	**PKiKP**	**15 45 48.3**	**+0.9**
	baz=294						
BW06	**Boulder Array**	**122.43**	**44**	P	**PKiKP**	**15 45 49.4**	**+0.4**
	baz=292						
PDAR	**Pinedale Array**	**122.43**	**44**	PKP	**PKPdf**	**15 45 48.4**	**-0.3**
	comp=Z,0.4nm,0.5s,baz=140,slow=0.8,SNR=8.3						
PDAR				PP	**PP**	**15 47 35.9**	**+1.3**
	comp=Z,0.2nm,0.6s,baz=278,slow=6.3,SNR=2.1						
PDAR	**Pinedale Array**	**122.43**	**44**		**PKPdf**	**15 45 48.8**	**0.0**
LAO	**LASA Array**	**122.96**	**38**	P	**PKiKP**	**15 45 50.5**	**+0.8**
	baz=297						
WUAZ	**Wupatki**	**123.47**	**52**	P	**PKiKP**	**15 45 52.1**	**+0.9**
	baz=286						
O20A	**White River Ci**	**124.33**	**46**	P	**PKiKP**	**15 45 53.5**	**+0.7**
	baz=292						
K22A	**Casper**	**124.53**	**43**	P	**PKiKP**	**15 45 53.0**	**-0.1**
	baz=295						
MVCO	**Mesa Verde**	**125.16**	**49**	P	**PKiKP**	**15 45 55.4**	**+0.8**
	baz=290						
RSSD	**Black Hills**	**125.51**	**40**	P	**PKiKP**	**15 45 54.8**	**-0.3**
	baz=298						
N23A	**Red Feather La**	**125.65**	**44**	P	**PKiKP**	**15 45 55.7**	**+0.2**
	baz=294						
S22A	**4UR Ranch, Cre**	**126.22**	**48**	P	**PKiKP**	**15 45 57.4**	**+0.6**
	baz=291						
MDND	**Maddock**	**126.23**	**34**	P	**PKiKP**	**15 45 56.2**	**+0.1**
	baz=305						
ULM	**Lac du Bonnet**	**126.74**	**30**	PKP	**PKPdf**	**15 45 55.9**	**-0.6**
	comp=Z,0.8nm,0.4s,baz=315,slow=3.3,SNR=7.0						
SDCO	**Great Sand Dun**	**127.20**	**48**	P	**PKiKP**	**15 45 58.8**	**+0.1**
	baz=292						
ANMO	**Albuquerque**	**127.47**	**51**	P	**PKPdf**	**15 45 58.5**	**-0.1**
	baz=290						
T25A	**Trinidad**	**128.23**	**48**	P	**PKiKP**	**15 46 00.5**	**-0.2**
	baz=293						
OGNE	**Ogallala**	**128.30**	**43**	P	**PKPdf**	**15 45 59.9**	**+0.1**
	baz=298						
MNTX	**Cornudas Mount**	**129.36**	**55**	P	**PKiKP**	**15 46 02.6**	**-0.3**
	baz=288						
ECSD	**EROS Data Cent**	**130.29**	**37**	P	**PKPdf**	**15 46 03.5**	**+0.1**
	baz=305						
EYMN	**Ely**	**130.42**	**30**	P	**PKPdf**	**15 46 03.6**	**+0.1**
	baz=313						
TXAR	**Lajitas Array**	**131.49**	**57**	PKP	**PKiKP**	**15 46 07.4**	**+0.1**
	comp=Z,0.6nm,0.5s,baz=208,slow=2.4,SNR=4.8						
TXAR				SKPbc	**SKPbc**	**15 48 39.1**	**-0.3**
	comp=Z,1.2nm,0.7s,baz=220,slow=3.3,SNR=7.2						
WMOK	**Wichita Mounta**	**133.38**	**48**	P	**PKiKP**	**15 46 10.2**	**-0.8**
	baz=296						
JCT	**Junction City**	**134.28**	**54**	P	**PKiKP**	**15 46 12.4**	**-0.5**
	baz=291						
W39A	**Magazine**	**136.78**	**45**	P	**PKiKP**	**15 46 17.2**	**-0.6**
	baz=301						
U40A	**Yellville**	**136.81**	**43**	P	**PKiKP**	**15 46 17.2**	**-0.6**
	baz=303						
CCM	**Cathedral Cave**	**136.90**	**40**	P	**PKiKP**	**15 46 17.3**	**-0.7**
	baz=306						
MIAR	**Mount Ida**	**137.26**	**46**	P	**PKiKP**	**15 46 17.9**	**-0.8**
	baz=301						
W41B	**Gary Mavity, V**	**137.86**	**44**	P	**PKiKP**	**15 46 19.9**	**0.0**
	baz=303						
D56A	**ZEC Mazanza, M**	**137.90**	**18**	P	**PKiKP**	**15 46 19.2**	**-0.5**
	baz=334						
E61A	**Lac Etchemin**	**139.62**	**14**	P	**PKiKP**	**15 46 23.5**	**+0.3**
	baz=340						
F60A	**Warwick**	**139.68**	**16**	P	**PKiKP**	**15 46 23.1**	**-0.3**
	baz=338						
F61A	**St Evariste**	**139.93**	**15**	P	**PKiKP**	**15 46 23.5**	**-0.4**
	baz=339						
LONY	**Lake Ozonia**	**140.13**	**19**	P	**PKiKP**	**15 46 23.7**	**-0.7**
	baz=333						
I62A	**Tamworth**	**141.78**	**16**	P	**PKiKP**	**15 46 27.1**	**-0.6**
	baz=338						
LRAL	**Lakeview Retre**	**142.66**	**43**	PKPdf	**PKPdf**	**15 46 24.7**	**-1.8**
N59A	**State Game Lan**	**142.94**	**23**		**PKPdf**	**15 46 24.9**	**-1.9**
Q56A	**Snyder Ridge,**	**143.00**	**29**		PKPbc	15 46 24.8	-0.3
O58A	**Lewisberry**	**143.14**	**25**	P	PKPab	15 46 24.8	-0.2
	baz=327						
P57A	**Homestead Farm**	**143.19**	**27**	P	PKPbc	15 46 25.3	-0.2
	baz=325,SNR=13						
N60A	**Cedar Hill Far**	**143.24**	**23**	P	PKPbc	15 46 25.6	-0.1
	baz=330						
O59A	**Robesonia**	**143.29**	**24**	P	PKPbc	15 46 25.8	-0.1
	baz=328,SNR=5.7						
M61A	**Granite Spring**	**143.34**	**21**	P	PKPbc	15 46 25.9	-0.1
	baz=332						
Q57A	**Strasburg**	**143.37**	**28**	P	PKPab	15 46 25.7	-0.2
	baz=324,SNR=10						
M62A	**Hamden**	**143.52**	**20**	P	PKPbc	15 46 26.7	+0.2
	baz=334						
L63A	**North Scituate**	**143.55**	**18**	P	PKPbc	15 46 26.9	+0.4
	baz=336						
PAL	**Palisades**	**143.56**	**21**	P	PKPbc	15 46 26.8	+0.1
	baz=332,SNR=6.8						
PAL	**Palisades**	**143.56**	**21**		PKPbc	15 46 26.5	-0.1
U54A	**Nelsons Funny**	**143.56**	**34**	P	PKPab	15 46 26.5	-0.3
	baz=317,SNR=7.3						
U54A	**Nelsons Funny**	**143.56**	**34**		PKPab	15 46 26.5	-0.3
O60A	**Telford**	**143.59**	**23**	P	PKPab	15 46 26.6	-0.1
	baz=329,SNR=5.3						
BRNJ	**Basking Ridge**	**143.60**	**22**		**PKPdf**	**15 46 27.3**	**-0.6**
N61A	**South Mountain**	**143.64**	**22**	P	PKPbc	15 46 27.0	+0.1
	baz=331						
BRAL	**Brewton**	**143.70**	**46**	P	**PKPdf**	**15 46 28.0**	**-0.4**
	baz=304						
L64A	**Middleborough**	**143.71**	**17**	P	PKPbc	15 46 27.4	+0.3
	baz=337						
P59A	**Jarrettsville**	**143.78**	**25**	P	PKPab	15 46 27.5	+0.1
	baz=327,SNR=11						
250A	**Grady**	**143.78**	**44**		PKPab	15 46 27.6	0.0
N62A	**Caumsett State**	**143.78**	**21**	P	PKPab	15 46 27.6	+0.3
	baz=333						
Q58A	**Fox Den Farm,**	**143.78**	**27**	P	PKPbc	15 46 27.2	-0.2
	baz=325,SNR=16						
BLA	**Blacksburg**	**143.80**	**32**	P	PKPbc	15 46 27.3	-0.3
	baz=319,SNR=7.4						
M63A	**Gales Ferry**	**143.83**	**19**	P	PKPbc	15 46 27.2	-0.3
	baz=335						
S56A	**Natural Bridge**	**143.88**	**30**	P	PKPbc	15 46 27.0	-0.8
	baz=321						
R57A	**Stanardsville**	**143.91**	**29**	P	PKPab	15 46 28.0	0.0
	baz=323,SNR=12						
P60A	**Greenville**	**143.94**	**24**	P	PKPab	15 46 27.9	-0.1
	baz=328,SNR=12						
M64A	**Tiverton**	**143.96**	**18**	P	**PKPdf**	**15 46 28.1**	**-0.3**
	baz=336						
S57A	**Dark Hollow, R**	**144.12**	**30**	P	PKPbc	15 46 28.0	-0.5
	baz=322						
T56A	**Rocky Mt**	**144.14**	**32**	P	PKPbc	15 46 28.3	-0.3
	baz=320,SNR=9.3						
R58A	**Rapidan**	**144.15**	**28**	P	PKPbc	15 46 28.6	0.0
	baz=324,SNR=11						
Q59A	**Harwood**	**144.30**	**26**	P	PKPbc	15 46 28.7	-0.3
	baz=326						
152A	**Waverly Hall**	**144.40**	**42**		**PKPdf**	**15 46 29.6**	**0.0**
U56A	**King**	**144.47**	**33**	P	**PKPdf**	**15 46 29.2**	**-0.4**
	baz=318						
R58B	**Mineral**	**144.48**	**28**	P	**PKPdf**	**15 46 29.1**	**-0.4**
	baz=324,SNR=6.7						
CBN	**Corbin Frederi**	**144.52**	**28**	P	PKPbc	15 46 29.8	+0.1
	baz=325						
T57A	**Hurt**	**144.57**	**31**	P	**PKPdf**	**15 46 29.6**	**-0.1**
	baz=321,SNR=6.6						
R59A	**King George, V**	**144.64**	**27**	P	PKPbc	15 46 30.0	0.0
	baz=325						
S58A	**Poland Farm, P**	**144.68**	**29**	P	PKPbc	15 46 30.4	+0.2
	baz=323						
GOGA	**Godfrey**	**144.73**	**39**	P	PKPbc	15 46 30.8	+0.2
	baz=311,SNR=9.7						
V56A	**Mocksville**	**144.81**	**33**	P	PKPbc	15 46 30.7	0.0
	baz=318						
KMSC	**Kings Mountain**	**144.83**	**35**	P	PKPbc	15 46 30.5	-0.2
	baz=316,SNR=5.7						
S59A	**Mechanicsville**	**144.92**	**28**	P	PKPbc	15 46 31.0	+0.1
	baz=324						
HODGE	**Hodges**	**144.92**	**37**		PKPbc	15 46 31.1	+0.1
U57A	**Blanch**	**144.96**	**32**	P	PKPbc	15 46 30.9	-0.3
	baz=320						
T58A	**Grand View Acr**	**144.97**	**30**	P	PKPbc	15 46 31.3	+0.2
	baz=322						
V57A	**Coltrane Farms**	**145.14**	**33**	P	**PKPbc**	**15 46 31.9**	**+0.2**
	baz=319						
S60A	**Water View**	**145.26**	**27**	P	**PKPbc**	**15 46 32.3**	**+0.3**
	baz=325						
W56A	**Indian Trail**	**145.26**	**34**	P	**PKPbc**	**15 46 31.8**	**-0.2**
	baz=317,SNR=5.7						
U58A	**Oxford**	**145.39**	**31**	P	**PKPbc**	**15 46 32.0**	**-0.3**
	baz=321,SNR=11						
W57A	**Gilead**	**145.57**	**34**		**PKPbc**	**15 46 32.3**	**-0.6**
T60A	**Surry**	**145.68**	**28**	P	**PKPbc**	**15 46 33.5**	**+0.4**
	baz=325						
TIGA	**Tifton**	**145.92**	**42**	P	**PKPbc**	**15 46 34.1**	**+0.1**
	baz=309						
V59A	**Middlesex**	**146.04**	**31**	P	**PKPbc**	**15 46 33.9**	**-0.3**
	baz=321						
V60A	**Jim Taylor Roa**	**146.53**	**30**	P	**PKPbc**	**15 46 36.1**	**+0.5**
	baz=323						
X60A	**Albert Glenn T**	**147.09**	**32**	P	**PKPbc**	**15 46 37.6**	**+0.5**
	baz=320						

IDC ***27*** *15:33:08.6±8.0, 25°.60N×122°.66E, h238^{km}±79^{km},*
mb3.3/12, mb1 3.4/12, mb1mx3.3/34, mbtmp3.8/12, Error
ellipse: s-maj=33.8km s-min=15.0km az=64.0
JMA ***27*** *15:33:11.6±0.2, 25°.39N×122°.56E, h236^{km}±3^{km}, M3.9*
ISC 27 15:33:09.3±0.8**, 25°.5N**±0°.1×**122°.54E**±0°.09**, h245**^{km}±10^{km},
n25, σ0^{s}.98/37**, mb3.5**/13**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**1.13**	**161**	P	**Pn**	**15 33 45.3**	**+0.7**
JYNG				S	**S**	**15 34 12.2**	**-0.1**
YOJ	**Yonaguni jima**	**1.15**	**158**	P	**Pn**	**15 33 45.5**	**+0.8**
YOJ				S	**S**	**15 34 12.3**	**-0.1**
IRIF	**Iriomote-Funau**	**1.60**	**138**	P	**Pn**	**15 33 48.6**	**+0.7**
IRIF				S	**S**	**15 34 17.2**	**-1.1**
JKRS	**Kuro-shima**	**1.85**	**134**	P	**Pn**	**15 33 51.1**	**+1.1**
JKRS				S	**S**	**15 34 20.9**	**-1.1**
JISG	**Ishigakijimahi**	**1.86**	**120**	P	**Pn**	**15 33 50.8**	**+0.8**
JISG				S	**S**	**15 34 20.9**	**-1.1**
JIJ	**Ishigaki jima**	**1.86**	**128**	P	**Pn**	**15 33 50.7**	**+0.6**
JIJ				S	**S**	**15 34 20.2**	**-1.9**
HATJ	**Hateruma jima**	**1.86**	**142**	P	**Pn**	**15 33 51.4**	**+1.3**
HATJ				S	**S**	**15 34 21.7**	**-0.5**
JTJ	**Tarama**	**2.15**	**114**	P	**Pn**	**15 33 54.0**	**+1.3**
JTJ				S	**S**	**15 34 25.9**	**-0.9**
JIRB	**Irabujima**	**2.48**	**106**	P	**Pn**	**15 33 57.3**	**+1.3**
JIRB				S	**S**	**15 34 31.4**	**-1.3**
JIKM	**Ikemajima**	**2.52**	**103**	P	**Pn**	**15 33 58.1**	**+1.7**
JIKM				S	**S**	**15 34 32.9**	**-0.5**
JMJ2	**Miyako jima3**	**2.64**	**107**	P	**Pn**	**15 33 59.4**	**+1.8**
JMJ2				S	**S**	**15 34 35.1**	**-0.6**
JOGS	**Gusukube**	**2.71**	**106**	P	**Pn**	**15 34 00.1**	**+1.8**
JOGS				S	**S**	**15 34 36.2**	**-0.7**
SONM	**Songino Array**	**25.65**	**334**	P	**P**	**15 38 17.2**	**+0.4**
	1.7nm,0.8s,baz=152,slow=9.7,SNR=2.3						
MKAR	**Makanchi Array**	**38.26**	**314**	P	**P**	**15 40 06.1**	**0.0**
	1.4nm,0.4s,baz=108,slow=9.3,SNR=12						
ZALV	**Zalesovo Beam**	**39.81**	**326**	P	**P**	**15 40 18.3**	**-0.4**
	1.9nm,0.5s,baz=121,slow=8.6,SNR=5.2						
KURBB	**Kurchatov Arra**	**41.90**	**318**	P	**P**	**15 40 35.6**	**-0.2**
	2.1nm,0.7s,baz=117,slow=8.8,SNR=9.7						
WRA	**Warramunga Arr**	**46.63**	**165**	P	**P**	**15 41 13.3**	**-0.2**
	0.5nm,0.5s,baz=348,slow=8.7,SNR=5.8						
ASAR	**Alice Springs**	**50.13**	**166**	P	**P**	**15 41 40.6**	**+0.6**
	0.3nm,0.6s,baz=352,slow=7.3,SNR=2.2						
ILAR	**Eielson Array**	**67.45**	**28**	P	**P**	**15 43 37.2**	**-1.2**
	0.2nm,0.5s,baz=287,slow=6.3,SNR=5.9						
ARCES	**ARCESS Array B**	**68.76**	**338**	P	**P**	**15 43 46.6**	**+0.1**
	6.1nm,1.0s,baz=71,slow=6.8,SNR=2.4						
FINES	**FINESS Array B**	**70.91**	**330**	P	**P**	**15 43 59.8**	**+0.1**
	0.8nm,0.5s,baz=48,slow=4.1,SNR=8.5						
BRTR	**Keskin Array B**	**73.37**	**306**	P	**P**	**15 44 15.0**	**+0.2**
	0.6nm,0.7s,baz=95,slow=5.0,SNR=3.4						
NOA	**NORSAR Array B**	**77.61**	**332**	P	**P**	**15 44 38.1**	**-0.3**
	0.3nm,0.5s,baz=53,slow=5.8,SNR=1.8						
YKA	**Yellowknife Ar**	**81.25**	**23**	P	**P**	**15 44 57.8**	**-0.1**
	0.6nm,0.6s,baz=318,slow=4.5,SNR=14						
GERES	**GERESS Array B**	**82.59**	**321**	P	**P**	**15 45 05.4**	**+0.2**
	0.4nm,0.5s,baz=64,slow=6.1,SNR=3.9						

NNC 27 15:49:14.6±3.0**, 37°.50N×80°.71E, h0^{km}, mb3.8, mpv3.5,**
3C-7D, Error ellipse: s-maj=29.1km s-min=19.6km
az=57.0, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SATY	**Saty**	**5.83**	**343**	Pg	Pb	15 50 59.2	+2.0
	3.4nm,0.6s						
SATY				Lg	Lg	15 52 22.7	
	21nm,0.9s						
PDGK	**Podgornoye**	**5.90**	**351**	Pg	Pb	15 50 54.0	-4.3
	0.8nm,0.6s						
PDGK				Lg	Lg	15 52 13.6	
	6.3nm,0.7s						
PDGK	**Podgornoye**	**5.90**	**351**	⇓Pn	Pn	15 50 43.7	+0.4
	1.4nm,0.6s						
PDGK				⇓Sn	Sn	15 51 53.2	+1.5
	5.6nm,0.5s						
MDOK	**Medeo**	**6.31**	**335**	⇓Pg	Pb	15 51 09.0	+3.5
	2.2nm,0.6s						
MDOK				⇓Lg	Lg	15 52 35.0	
	12nm,0.6s						
MDOK	**Medeo**	**6.31**	**335**	Pg	Pg	15 51 12.4	-3.2
	3.2nm,0.7s						
MDOK				Lg	Lg	15 52 45.2	
	12nm,0.9s						
KST	**Kastek**	**6.62**	**328**	Pg	Pg	15 51 21.8	+0.3
	7.8nm,1.1s						
KST				Lg	Lg	15 53 01.4	
	9.2nm,0.9s						
TKM2	**Tokmak 2**	**6.68**	**326**	⇓Lg	Lg	15 52 46.6	
	8.7nm,0.9s						
MNBS	**Baschi**	**6.80**	**346**	Pg	Pb	15 51 16.5	+2.8
	1.0nm,0.3s						
MNBS				Lg	Lg	15 52 52.0	
	6.0nm,0.3s						
DJR	**Jarkent**	**6.86**	**354**	Pg	Pb	15 51 09.4	-5.3
	2.3nm,0.5s						
DJR				Lg	Lg	15 52 39.8	
	3.1nm,0.5s						
AAK	**Ala-Archa**	**7.01**	**319**	⇓Lg	Lg	15 52 56.8	
	17nm,1.1s						
MAKZ	**Makanchi**	**9.35**	**5**	⇓Pn	Pn	15 51 30.8	+0.2
	1.4nm,0.5s						
MAKZ				⇑Sn	Sn	15 53 17.0	+0.6
	4.2nm,1.4s						
MK31	**Makanchi Array**	**9.36**	**7**	⇑Pn	Pn	15 51 31.9	+1.2
	0.2nm,0.5s,baz=184,slow=14,SNR=11						
MK31				⇑Sn	Sn	15 53 17.2	+0.5
	1.9nm,0.8s,baz=186,slow=21,SNR=7.3						

TAP ***27*** *16:19:02.2, 24°.82N×121°.96E, h94^{km}, ML3.9, B*
JMA ***27*** *16:19:02.2±0.2, 24°.78N×121°.93E, h92^{km}±3^{km}, M3.1*
IDC ***27*** *16:19:11.5±9.6, 24°.87N×121°.56E, h208^{km}±104^{km},*
mb2.8/4, mb1 2.9/5, mb1mx2.7/34, mbtmp3.4/5, Error
ellipse: s-maj=55.6km s-min=22.8km az=70.0
ISC 27 16:19:01.6±0.8**, 24°.86N**±0°.03×**121°.95E**±0°.02**, h97**^{km}±4^{km},
n154, σ1^{s}.03/268**, mb3.1**/4**, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NTC	**Toucheng**	**0.10**	**268**	*i* P	**Pn**	**16 19 15.4**	**+0.2**
	baz=293						
NTC				S	**Sn**	**16 19 25.4**	**0.0**
	baz=293						
TWB1	**Santiao Chiao**	**0.16**	**15**	*i* P	**Pn**	**16 19 15.7**	**+0.3**
	baz=10.0						
TWB1				*i* S	**Sn**	**16 19 25.1**	**-0.5**
	baz=10.0						
TIPB	**Shuangxi**	**0.16**	**317**	*i* P	**Pn**	**16 19 15.8**	**+0.4**
	baz=321						
TIPB				S	**Sn**	**16 19 24.6**	**-1.1**
	baz=321						
ILA	**Ilan**	**0.20**	**243**	*i* P	**Pn**	**16 19 16.3**	**+0.8**
	baz=251						
ILA				*i* S	**Sn**	**16 19 26.3**	**+0.5**
	baz=251						
NWF	**Wu-fen Shan**	**0.26**	**325**	*i* P	**Pn**	**16 19 16.1**	**+0.3**
	baz=322						
NWF				*i* S	**Sn**	**16 19 26.2**	**-0.2**
	baz=322						
WFSB	**Wu-fen Shan**	**0.26**	**325**	P	**Pn**	**16 19 16.2**	**+0.5**
	baz=322						
WFSB				S	**Sn**	**16 19 26.7**	**+0.5**
	baz=322						
TWC	**Suao**	**0.26**	**199**	*i* P	**Pn**	**16 19 16.0**	**+0.3**
	baz=204						
TWC				*i* S	**Sn**	**16 19 25.9**	**-0.3**
	baz=204						
TWE	**Neicheng**	**0.29**	**242**	*i* P	**Pn**	**16 19 16.8**	**+1.0**
	baz=246						
TWE				*i* S	**Sn**	**16 19 26.4**	**0.0**
	baz=246						
NDS	**Dongshan**	**0.30**	**223**	P	**Pn**	**16 19 17.0**	**+1.1**
	baz=229						
NDS				S	**Sn**	**16 19 27.9**	**+1.3**
	baz=229						
TNOU	**National Taiwa**	**0.33**	**332**	P	**Pn**	**16 19 16.4**	**+0.3**
	baz=329						
TNOU				S	**Sn**	**16 19 26.2**	**-0.6**
	baz=329						
TWA	**Mucha**	**0.35**	**291**	*i* P	**Pn**	**16 19 16.5**	**+0.3**
	baz=298						
TWA				*i* S	**Sn**	**16 19 26.9**	**-0.1**
	baz=298						
NHDH	**Xindian Distri**	**0.40**	**286**	P	**Pn**	**16 19 17.0**	**+0.6**
	baz=292						
NHDH				S	**Sn**	**16 19 27.5**	**+0.1**
	baz=292						
ENTT	**Nioudou**	**0.41**	**238**	*i* P	**Pn**	**16 19 17.5**	**+1.0**
	baz=241						
ENTT				*i* S	**Sn**	**16 19 28.6**	**+1.0**
	baz=241						
NWLT	**Wulai**	**0.41**	**259**	*i* P	**Pn**	**16 19 17.0**	**+0.4**
	baz=269						
NWLT				*i* S	**Sn**	**16 19 27.4**	**-0.3**
	baz=269						
TATO	**Taipei**	**0.43**	**286**	*i* P	**Pn**	**16 19 17.2**	**+0.6**
	baz=292						
TATO				S	**Sn**	**16 19 27.3**	**-0.6**
	baz=292						
EWUT	**Wuta**	**0.44**	**200**	P	**Pn**	**16 19 16.9**	**+0.2**
	baz=204						
EWUT				S	**Sn**	**16 19 28.1**	**+0.2**
	baz=204						
TAP	**Taipei**	**0.44**	**295**	*i* P	**Pn**	**16 19 17.5**	**+0.8**
	baz=300						

TAP	baz=300			*i*S	Sn	16 19 27.9	-0.1
YM01	YM01 baz=312	0.45	310	S	Sn	16 19 26.6	-1.5
YM11	YM11 baz=314	0.46	312	P	Pn	16 19 17.6	+0.7
YM11	baz=314			S	Sn	16 19 28.0	-0.3
YM10	YM10 baz=312	0.46	311	P	Pn	16 19 17.3	+0.4
YM10	baz=312			S	Sn	16 19 28.3	0.0
YM05	YM05 baz=313	0.46	312	P	Pn	16 19 17.5	+0.5
YM05	baz=313			S	Sn	16 19 29.8	+1.4
YM08	YM08 baz=317	0.46	316	P	Pn	16 19 17.2	+0.3
YM08	baz=317			S	Sn	16 19 27.4	-0.9
ENA	Nanau baz=203	0.47	204	*i*P	Pn	16 19 17.4	+0.6
ENA	baz=203			*i*S	Sn	16 19 29.0	+0.7
NDT	Datong Townshi baz=250	0.47	237	*i*P	Pn	16 19 17.9	+1.0
NDT	baz=250			*i*S	Sn	16 19 29.0	+0.7
YM04	YM04 baz=313	0.47	309	P	Pn	16 19 17.3	+0.3
YM04	baz=313			S	Sn	16 19 27.3	-1.1
BACT	New Taipei Cit baz=289	0.48	287	P	Pn	16 19 18.0	+1.1
BACT	baz=289			S	Sn	16 19 29.4	+1.0
YM03	YM03 baz=313	0.49	311	P	Pn	16 19 17.5	+0.3
ANP	Anpu baz=312	0.51	310	*i*P	Pn	16 19 17.4	+0.2
ANP	baz=312			*i*S	Sn	16 19 29.7	+0.8
TWY	Chenhua baz=325	0.52	323	*i*P	Pn	16 19 18.0	+0.8
TWS1	Kuangyinshan baz=302	0.54	297	*i*P	Pn	16 19 18.3	+0.9
TWS1	baz=302			*i*S	Sn	16 19 31.0	+1.8
NTST	Danshui baz=306	0.54	304	*i*P	Pn	16 19 18.2	+0.8
NTST	baz=306			*i*S	Sn	16 19 30.9	+1.6
YHNB	Yeheng baz=254	0.55	250	P	Pn	16 19 18.0	+0.4
YHNB	baz=254			S	Sn	16 19 29.3	-0.3
NSK	Sanguang baz=254	0.56	251	*i*P	Pn	16 19 18.1	+0.4
NSK	baz=254			*i*S	Sn	16 19 29.4	-0.3
NTY	Taoyuan baz=285	0.60	284	P	Pn	16 19 18.9	+1.0
NTY	baz=285			S	Sn	16 19 31.9	+1.7
NNS	Nan Shan baz=238	0.67	232	*i*P	Pn	16 19 19.2	+0.6
NNS	baz=238			S	Sn	16 19 32.0	+0.7
NNSB	Datong baz=237	0.67	230	P	Pn	16 19 19.2	+0.6
NNSB	baz=237			S	Sn	16 19 31.8	+0.4
NNSH	Datong baz=237	0.67	230	*i*P	Pn	16 19 19.3	+0.7
NNSH	baz=237			*i*S	Sn	16 19 31.9	+0.6
NCU	National Centr baz=281	0.70	279	*i*P	Pn	16 19 19.6	+0.9
NCU	baz=281			*i*S	Sn	16 19 32.7	+1.1
NCUH	Zhongli baz=281	0.70	279	*i*P	Pn	16 19 19.4	+0.7
NCUH	baz=281			*i*S	Sn	16 19 32.4	+0.8
NACB	Ninganchiao baz=207	0.75	205	P	Pn	16 19 19.1	-0.2
NACB	baz=207			S	Sn	16 19 32.3	-0.2
ETLH	Xiulin Townshi baz=223	0.77	213	P	Pn	16 19 20.0	+0.4
ETLH	baz=223			S	Sn	16 19 32.4	-0.7
NJD	Zhudong baz=255	0.79	261	P	Pn	16 19 20.5	+0.9
NJD	baz=255			S	Sn	16 19 34.0	+0.8
TWD	Chiawan baz=211	0.84	202	*i*P	Pn	16 19 19.8	-0.3
TWD	baz=211			*i*S	Sn	16 19 33.2	-0.7
HSN1	Hsinchu baz=257	0.85	265	P	Pn	16 19 21.0	+0.8
HSN1	baz=257			S	Sn	16 19 35.0	+0.8
LIOB	Emei baz=250	0.87	256	P	Pn	16 19 21.2	+0.7
LIOB	baz=250			S	Sn	16 19 34.6	0.0
SBCB	Hsinchu baz=267	0.87	266	*i*P	Pn	16 19 21.3	+0.8
SBCB	baz=267			S	Sn	16 19 35.7	+1.0
FUSS	Fushou baz=221	0.88	227	P	Pn	16 19 21.7	+0.9
FUSS	baz=221			S	Sn	16 19 36.1	+0.9
NSTT	Nanjuang baz=249	0.89	255	*i*P	Pn	16 19 21.2	+0.6
NSTT	baz=249			*i*S	Sn	16 19 34.8	-0.1
HSN	Hsinchu baz=261	0.89	267	*i*P	Pn	16 19 20.9	+0.3
HSN	baz=261			*i*S	Sn	16 19 34.9	-0.1
TWT	Tachien baz=225	0.92	230	*i*P	Pn	16 19 22.4	+1.2
TWT	baz=225			*i*S	Sn	16 19 36.6	+0.7
HWA	Hwalien baz=191	0.93	200	*i*P	Pn	16 19 21.2	+0.2
HWA	baz=191			S	Sn	16 19 35.9	+0.2
TDCB	Techi baz=231	0.94	230	P	Pn	16 19 22.3	+1.0
TDCB	baz=231			S	Sn	16 19 37.0	+0.9
WHF	Hehuan Shan baz=216	0.94	221	*i*P	Pn	16 19 22.4	+0.8
WHF	baz=216			*i*S	Sn	16 19 37.0	+0.3
NJN	Zhunan baz=256	0.99	260	P	Pn	16 19 22.6	+0.9
NJN	baz=256			S	Sn	16 19 37.5	+0.6
JYNG	Yonagunijimaku	1.00	114	P	Pn	16 19 22.1	+0.3
JYNG				S	Sn	16 19 36.6	-0.3
YOJ	Yonaguni jima baz=111	1.05	112	P	Pn	16 19 22.9	+0.6
YOJ	Yonaguni jima	1.05	112	P	Pn	16 19 22.7	+0.4
YOJ				S	Sn	16 19 37.5	-0.4
CHGB	Renai baz=216	1.06	222	P	Pn	16 19 23.6	+0.8
CHGB	baz=216			S	Sn	16 19 38.5	-0.2
WHP	Taichung City baz=238	1.08	238	*i*P	Pn	16 19 23.8	+1.0
WHP	baz=238			*i*S	Sn	16 19 39.0	+0.3
NMLH	Miaoli baz=254	1.10	253	*i*P	Pn	16 19 23.8	+0.9
NMLH	baz=254			*i*S	Sn	16 19 39.1	+0.1
ESL	Shilin baz=204	1.14	204	P	Pn	16 19 22.5	-0.9
NSY	Sanyi baz=248	1.16	248	*i*P	Pn	16 19 24.8	+1.1
NSY	baz=248			*i*S	Sn	16 19 41.0	+0.7
TWQ1	Liyutan baz=245	1.18	245	*i*P	Pn	16 19 24.6	+0.7
TWQ1	baz=245			*i*S	Sn	16 19 40.8	+0.1
WPL	Puli Township baz=235	1.23	227	P	Pn	16 19 25.9	+1.4
WPL	baz=235			S	Sn	16 19 41.9	+0.2
WCS	Beigang Elemen baz=238	1.23	230	P	Pn	16 19 25.6	+1.1
WCS	baz=238			S	Sn	16 19 42.3	+0.6
DPDB	Guoxing baz=237	1.24	229	P	Pn	16 19 25.6	+1.0
DPDB	baz=237			S	Sn	16 19 42.6	+0.6
EGFH	Guangfu baz=207	1.27	202	*i*P	Pn	16 19 26.2	+1.2
WDJ	Dajia District baz=240	1.29	247	*i*P	Pn	16 19 25.9	+0.8
WDJ	baz=240			*i*S	Sn	16 19 43.3	+0.3
VWDT	VWDT baz=209	1.32	214	P	Pn	16 19 26.5	+1.0
VWDT	baz=209			S	Sn	16 19 44.3	+0.7
TCU	Taichung baz=239	1.35	239	*i*P	Pn	16 19 27.0	+1.0
TCU	baz=239			*i*S	Sn	16 19 43.0	-1.4
SMLT	Sun Moon Lake baz=232	1.36	225	*i*P	Pn	16 19 27.3	+1.2
SMLT	baz=232			S	Sn	16 19 46.1	+1.4
TYC	Yuchr baz=233	1.37	226	*i*P	Pn	16 19 27.6	+1.4
TYC	baz=233			*i*S	Sn	16 19 45.6	+0.9
WWF	Wufeng baz=242	1.40	235	P	Pn	16 19 27.4	+1.0
WWF	baz=242			S	Sn	16 19 46.6	+1.3
SSLB	Suanglung baz=231	1.40	221	P	Pn	16 19 27.6	+1.1
SSLB	baz=231			S	Sn	16 19 46.6	+1.2
HGSD	Ruisui baz=202	1.44	199	P	Pn	16 19 27.5	+0.5
HGSD	baz=202			S	Sn	16 19 46.6	+0.4
EHY	Hungye baz=203	1.46	203	*i*P	Pn	16 19 26.4	-0.9
WCHH	Zhanghua baz=239	1.48	239	*i*P	Pn	16 19 28.2	+0.7
WCHH	baz=239			*i*S	Sn	16 19 47.6	+0.5
WNT1	Nantou City baz=239	1.49	231	P	Pn	16 19 29.0	+1.4
WNT1	baz=239			S	Sn	16 19 48.0	+0.6
WNT	Mingjian baz=238	1.51	230	*i*P	Pn	16 19 28.8	+1.0
WNT	baz=238			*i*S	Sn	16 19 48.5	+0.8
WJS	Zhushan baz=237	1.52	227	*i*P	Pn	16 19 28.5	+0.6
WJS	baz=237			*i*S	Sn	16 19 48.6	+0.8
WHYT	Xinyi Township baz=229	1.53	221	P	Pn	16 19 29.5	+1.4
WHYT	baz=229			*i*S	Sn	16 19 49.8	+1.7
YULB	Yu-li baz=195	1.57	202	P	Pn	16 19 27.9	-0.8
EYUL	Yuli baz=205	1.61	201	*e*P	Pn	16 19 29.9	+0.8
TWF1	Yuli baz=206	1.61	202	*e*P	Pn	16 19 28.5	-0.6
YUS	Yu-Shan baz=207	1.64	214	*i*P	Pn	16 19 31.2	+1.3
YUS	baz=207			*i*S	Sn	16 19 54.2	+2.9
ALS	Alishan baz=226	1.70	218	*i*P	Pn	16 19 32.5	+1.9
ALS	baz=226			*i*S	Sn	16 19 54.8	+2.4
CHN5	Tsauling baz=223	1.71	223	*i*P	Pn	16 19 31.6	+1.2
CHN5	baz=223			*i*S	Sn	16 19 53.7	+1.4
IRIF	Iriomote-Funau	1.71	107	P	Pn	16 19 30.4	+0.1
IRIF				S	Sn	16 19 51.7	-0.4
WRL	Guolierlin Hig baz=236	1.72	237	P	Pn	16 19 30.2	-0.3
WRL	baz=236			S	Sn	16 19 52.2	-0.2
WGK	Gukeng baz=237	1.72	228	*i*P	Pn	16 19 31.5	+1.0
WGK	baz=237			*i*S	Sn	16 19 54.1	+1.7
WDLH	Douliu baz=237	1.73	228	*i*P	Pn	16 19 31.5	+0.9
WDLH	baz=237			*i*S	Sn	16 19 54.0	+1.3
RLNB	Erlin baz=236	1.74	237	P	Pn	16 19 31.3	+0.6
RLNB	baz=236			S	Sn	16 19 53.8	+1.0
FULB	Fuli baz=192	1.75	200	*e*P	Pn	16 19 32.0	+1.0
WTCT	Ta-ch'eng baz=237	1.81	237	*e*S	Sn	16 19 54.3	-0.2
CHKT	Chengkung baz=199	1.83	197	*i*P	Pn	16 19 31.6	-0.2
CHKT	baz=199			*i*S	Sn	16 19 53.3	-1.6
WTK	Tuku baz=231	1.84	231	P	Pn	16 19 32.6	+0.6
WTK	baz=231			S	Sn	16 19 55.4	+0.3
ELDTW	Lidau baz=202	1.86	207	*i*P	Pn	16 19 33.2	+0.7
ELDTW	baz=202			*i*S	Sn	16 19 57.0	+1.1
HATJ	Hateruma jima	1.87	115	P	Pn	16 19 33.4	+1.0
HATJ				S	Sn	16 19 56.3	+0.4
CHN2	Minshiung baz=234	1.88	226	S	Sn	16 19 57.4	+1.3
CHY	Chiayi baz=234	1.94	226	P	Pn	16 19 34.6	+1.3
CHY	baz=234			S	Sn	16 19 58.5	+1.0
CHN4	Tsaushan baz=219	1.94	220	*i*P	Pn	16 19 34.5	+1.2
CHN4	baz=219			*i*S	Sn	16 19 59.5	+1.9
TPUB	Ta-pu baz=218	1.96	218	P	Pn	16 19 34.5	+0.8
TPUB	baz=218			S	Sn	16 19 58.7	+0.7
EDH	Donghe baz=199	1.97	197	P	Pn	16 19 33.7	0.0
EDH	baz=199			S	Sn	16 19 57.1	-1.0
JKRS	Kuro-shima	1.98	108	P	Pn	16 19 34.6	+0.8
JKRS				S	Sn	16 19 58.2	-0.1
WSF	Szhu baz=232	1.99	233	S	Sn	16 19 59.8	+1.3
STYH	Taoyuan baz=223	1.99	213	P	Pn	16 19 35.3	+1.3
STYH	baz=223			S	Sn	16 20 00.5	+1.9
STYT	Tauyuan baz=223	2.01	213	P	Pn	16 19 35.7	+1.5
STYT	baz=223			S	Sn	16 20 01.9	+2.8
WTP	Ta-pu baz=217	2.01	217	P	Pn	16 19 35.6	+1.3
WTP	baz=217			S	Sn	16 20 01.2	+1.9
JIJ	Ishigaki jima	2.06	103	P	Pn	16 19 35.3	+0.5
JIJ				S	Sn	16 19 59.2	-1.1
TWK	Hsinying baz=220	2.07	220	P	Pn	16 19 36.1	+1.0
TWK	baz=220			S	Sn	16 20 01.2	+0.6
PTTC	Pingtan baz=289	2.07	288	*e*P	Pn	16 19 35.4	+0.4
LONT	Longtian baz=196	2.08	201	*e*P	Pn	16 19 34.2	-1.0
LONT	baz=196			*e*S	Sn	16 19 58.3	-2.5
CHN1	Nanshi baz=218	2.11	218	S	Sn	16 20 02.1	+0.6
ICHU	Yijhu baz=236	2.13	226	P	Pn	16 19 38.0	+2.2
ICHU	baz=236			S	Sn	16 20 03.4	+1.6
SGST	Jiashian baz=223	2.16	215	P	Pn	16 19 36.5	+0.2
SGST	baz=223			S	Sn	16 20 03.2	+0.5
JISG	Ishigakijimahi	2.17	97	P	Pn	16 19 37.1	+0.9
JISG				S	Sn	16 20 02.5	-0.3
TWG	Pinlang baz=197	2.18	202	P	Pn	16 19 36.1	-0.4
TWG	baz=197			S	Sn	16 20 01.4	-1.7
TWGBT	Beinan baz=197	2.18	201	P	Pn	16 19 36.1	-0.4
TWGBT	baz=197			S	Sn	16 20 00.5	-2.6
CHN8	Yiju baz=236	2.19	227	S	Sn	16 20 04.5	+1.3
SLGT	Liugui baz=223	2.20	213	P	Pn	16 19 38.9	+2.1
SLGT	baz=223			S	Sn	16 20 05.2	+1.6
LDUT	Ludao baz=188	2.22	191	P	Pn	16 19 36.4	-0.5
LDUT	baz=188			S	Sn	16 20 01.4	-2.6
MATB	Ma-tsu baz=306	2.22	306	*e*P	Pn	16 19 37.1	+0.2
MSUT	Lienchiang baz=306	2.25	306	P	Pn	16 19 37.6	+0.4
VWUC	VWUC baz=274	2.27	274	P	Pn	16 19 37.6	+0.1
SCLT	Jiali baz=224	2.32	224	S	Sn	16 20 07.9	+1.7
SCST	Cishan baz=223	2.37	214	P	Pn	16 19 40.5	+1.6
SCST	baz=223			S	Sn	16 20 09.3	+1.8
SSD	Sandimen baz=210	2.42	210	P	Pn	16 19 41.1	+1.5
SSD	baz=210			S	Sn	16 20 09.1	+0.4
ECL	Taimali baz=199	2.43	202	P	Pn	16 19 40.7	+1.1
ECL	baz=199			S	Sn	16 20 08.6	-0.2
TSMG	Majia baz=209	2.45	209	P	Pn	16 19 41.2	+1.2
TSMG	baz=209			S	Sn	16 20 10.7	+1.2
JTJ	Tarama	2.52	94	P	Pn	16 19 42.1	+1.3
JTJ				S	Sn	16 20 11.6	+0.7
PNG	Penghu baz=239	2.53	240	S	Sn	16 20 09.1	-2.2
MASBT	Mashibuluo baz=208	2.54	209	P	Pn	16 19 42.6	+1.4
MASBT	baz=208			S	Sn	16 20 12.6	+1.1
PHUB	P'eng-hu baz=238	2.55	239	P	Pn	16 19 40.5	-0.7
PHUB	baz=238			S	Sn	16 20 10.0	-1.7
PTMZ	Houxiangcun baz=274	2.57	275	*e*P	Pn	16 19 41.2	-0.3
LYJJ	Jianjiangzhen baz=311	2.59	311	P	Pn	16 19 42.1	+0.3
XPSS	Dashiqiu baz=324	2.60	323	P	Pn	16 19 41.9	0.0
EAST	Anshuo baz=196	2.66	202	*i*P	Pn	16 19 44.2	+1.3
SSPT	Xinbi baz=207	2.68	208	*i*P	Pn	16 19 45.2	+2.2
SCZT	Fangliau baz=206	2.76	206	*i*P	Pn	16 19 45.0	+1.0
SCZT	baz=206			S	Sn	16 20 16.7	0.0
VCHM	Qimei baz=234	2.83	235	S	Sn	16 20 16.7	-1.6
LAY	Lan-yu baz=188	2.83	187	*i*P	Pn	16 19 44.5	-0.6
MHZQ	Yeshan baz=296	2.91	296	*e*P	Pn	16 19 46.4	+0.3
JIRB	Irabujima	2.93	90	S	Sn	16 20 21.1	+0.2
JIKM	Ikemajima	3.00	88	*e*S	Sn	16 20 24.4	+1.9
JMJ	Miyako jima 2 baz=97	3.04	90	*e*S	Sn	16 20 25.1	+1.6
JMJ2	Miyako jima3	3.08	91	P	Pn	16 19 49.8	+1.5
JMJ2				*e*S	Sn	16 20 25.5	+1.2
JOGS	Gusukube	3.15	91	P	Pn	16 19 51.0	+1.8
JOGS				*e*S	Sn	16 20 28.0	+2.0
KNMB	Chin-men Tao baz=263	3.26	264	*e*P	Pn	16 19 50.5	-0.2
AXDP	Jialang baz=270	3.61	272	*e*P	Pn	16 19 55.5	+0.1
KSRS	Korea Array 0.2nm,0.3s,baz=199,slow=12,SNR=8.1	13.55	21	P	P	16 22 16.8	+1.4
KLR	Kul'dur 0.2nm,0.4s,baz=226,slow=5.6,SNR=4.2	25.51	15	P	P	16 24 21.6	+0.7
MKAR	Makanchi Array 0.1nm,0.6s,baz=107,slow=7.7,SNR=1.3	38.35	315	P	P	16 26 10.1	-2.9
WRA	Warramunga Arr 0.5nm,0.9s,baz=344,slow=8.6,SNR=3.2	46.13	164	P	P	16 27 15.7	-0.7
ASAR	Alice Springs 0.2nm,0.7s,baz=356,slow=6.5,SNR=4.2	49.61	166	P	P	16 27 43.0	-0.2

IDC ***27*** *16:19:28.8±2.1, 13°.54N×91°.75W, h0km, mb3.6/6,*
mb1 4.0/9, mb1mx3.8/34, mbtmp3.7/9, ML4.2/3, Error
ellipse: s-maj=58.5km s-min=26.7km az=31.0
GCG ***27*** *16:19:33.0±0.8, 13°.30N×91°.78W, h30km±999km, MD4.2*
SNET ***27*** *16:19:33.9±1.2, 13°.81N×91°.96W, h62km±32km, ML3.6*
UCR ***27*** *16:19:34.1±1.4, 13°.82N×91°.95W, h63km±33km, ML3.5*
ISC 27 16:19:36.7±0.9, **13°.79N**±0°.08×**91°.93W**±0°.06, **h54**km, **n33,**
σ**1**^{s}**94**/40, **mb3.7**/6, **3C, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RTAL	Retalhuleu	0.77	17	⇑*i*P	Pn	16 19 49.1	-2.4
RTAL	comp=Z,2μm,0.2s			IAML		16 19 49.6	
RTAL				*e*S	Sn	16 20 00.8	-1.5
FUG	Fuego 3	1.24	58	*e*P	Pn	16 19 56.1	-1.9
PCG	Pacaya	1.41	65	*e*P	Pn	16 19 59.4	-1.0
IXG	Ixpaco	1.49	75	*e*P	Pn	16 19 59.3	-2.1
IXG				*e*S	Sn	16 20 19.8	-0.1
HUEH	Huehuetenango	1.57	15	*e*P	Pn	16 20 00.5	-2.1
NBG	Las Nubes	1.73	62	*e*P	Pn	16 20 05.0	+0.3
NBG				*e*S	Sn	16 20 28.6	+2.8
RTR	El Retiro	2.22	87	*e*P	Pn	16 20 10.3	-0.9
RTR	El Retiro	2.22	87	*e*P	Pn	16 20 10.3	-0.9
SBLS	San Blas	2.24	88	*e*P	Pn	16 20 09.4	-2.2
SBLS	San Blas	2.24	88	*e*P	Pn	16 20 09.4	-2.2
JAYA	Jayaque - finc	2.41	93	*e*P	Pn	16 20 11.7	-2.2
JAYA	Jayaque - finc	2.41	93	*e*P	Pn	16 20 11.7	-2.2
TACO	Tacachico	2.51	86	⇑*i*P	Pn	16 20 13.4	-1.7
TACO				*e*S	Sn	16 20 43.7	-0.8
TACO	Tacachico	2.51	86	⇑*i*P	Pn	16 20 13.4	-1.7
TACO				*e*S	Sn	16 20 43.7	-0.8
MRL	Marmol	2.52	59	*e*P	Pn	16 20 16.1	+0.6
PMON	Piamonte	2.54	91	*e*P	Pn	16 20 13.6	-2.0
PMON	Piamonte	2.54	91	*e*P	Pn	16 20 13.6	-2.0
MTO3	Montecristo	2.56	76	*e*P	Pn	16 20 14.2	-1.8
MTO3	Montecristo	2.56	76	*e*P	Pn	16 20 14.2	-1.8
COEG	Centro de Oper	2.97	93	*i*P	Pn	16 20 20.6	-0.8
COEG	comp=Z,216nm,0.4s			IAML		16 20 22.1	
COEG	Centro de Oper	2.97	93	*i*P	Pn	16 20 20.6	-0.8
COEG	comp=Z,216nm,0.4s			IAML		16 20 22.1	
CMIG	Matias Romero comp=Z,4.1nm,0.3s,baz=137,slow=7.8,SNR=13	4.35	319	Pn	Pn	16 20 38.3	-2.0
CMIG	comp=Z,6.4nm,0.3s,baz=130,slow=8.6,SNR=5.7			Sn	Sn	16 21 26.9	-2.9
TEIG	Tepich comp=Z,6.3nm,0.3s,baz=36,slow=17,SNR=21	7.29	28	Pn	Pn	16 21 20.5	-0.2
TEIG	baz=140,slow=16,SNR=2.0			Sn	Sn	16 22 38.7	-3.4

JTS	**Las Juntas de**	**7.66**	**116**	Pn	**Pn**	**16 21 24.4**	**-1.3**
	comp=Z,0.9nm,0.3s,baz=233,slow=22,SNR=1.6						
JTS				Lg	Lg	16 23 18.7	
	comp=Z,3.7nm,0.3s,baz=34,slow=11,SNR=3.6						
H06E1	**SOCORRO T-PHAS**	**18.90**	**288**	T	T	16 43 09.9	
	SNR=12						
TXAR	**Lajitas Array**	**18.91**	**327**	P	**Pn**	**16 23 54.9**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=152,slow=11,SNR=6.5						
SDV	**Santo Domingo**	**21.43**	**101**	P	**P**	**16 24 15.7**	**-5.0**
	comp=Z,2.4nm,0.4s,baz=339,slow=17,SNR=2.4						
ANMO	**Albuquerque**	**24.82**	**331**	P	**P**	**16 24 55.1**	**+1.0**
	comp=Z,0.8nm,0.6s,baz=144,slow=18,SNR=2.7						
PDAR	**Pinedale Array**	**32.64**	**336**	P	**P**	**16 26 05.4**	**+1.6**
	comp=Z,0.4nm,0.9s,baz=134,slow=7.7,SNR=2.5						
NVAR	**Mina Array Bea**	**33.88**	**321**	P	**P**	**16 26 17.8**	**+3.1**
	comp=Z,1.4nm,0.8s,baz=136,slow=8.0,SNR=8.7						
YKA	**Yellowknife Ar**	**51.25**	**347**	P	**P**	**16 28 34.9**	**+0.2**
	comp=Z,0.4nm,0.7s,baz=147,slow=7.9,SNR=6.3						
YKA				PcP	**PcP**	**16 29 50.0**	**+0.8**
	comp=Z,0.2nm,0.7s,baz=134,slow=3.7,SNR=3.4						
ILAR	**Eielson Array**	**63.06**	**337**	P	**P**	**16 29 59.3**	**+1.1**
	comp=Z,0.8nm,0.8s,baz=127,slow=5.1,SNR=8.0						
CMAR	**Chiang Mai Arr**	**146.21**	**341**	PKPbc	**PKPab**	**16 39 13.4**	**+0.7**
	comp=Z,0.6nm,0.6s,baz=350,slow=3.7,SNR=2.3						

*IDC **27** 16:24:47.0±0.4, 17°.06N×145°.84E, h0^{km}, mb4.9/40, mb1 4.9/41, mb1mx4.8/48, mbtmp4.8/41, ML4.6/1, MS5.0/47, Ms1 5.0/47, ms1mx4.9/51, Error ellipse: s-maj=11.8km s-min=9.4km az=107.0*

*BJI **27** 16:24:47.3±0.0, 17°.25N×145°.92E, h7^{km}, mB5.8/77, mb5.3/82, Ms5.6/96, Ms7 5.3/88*

*MOS **27** 16:24:50.3±1.3, 17°.06N×145°.70E, h35^{km}, mb5.4/40, MS5.1/22, Error ellipse: s-maj=8.0km s-min=4.6km az=109.8*

*NEIC **27** 16:24:50.6±1.7, 16°.90N±0°.03×145°.8E±0°.1, h20^{km}±4^{km}, mb5.7/152, ML5.1/6, Ms_20 5.3/160, Mww5.7, Error ellipse: s-maj=14.2km s-min=4.3km az=89.0*

*NEIC **27** 16:24:51, 16°.22N×146°.67E, h30^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$-3.42; M$_{\theta\theta}$0.91; M$_{\phi\phi}$2.52; M$_{r\theta}$-2.98; M$_{\theta\phi}$1.11; M$_{\phi r}$-1.67; Fault plane solution: M$_0$4.73000×10^{17} NP1:ϕ$_s$195.00000°, δ25.00000°, λ-121.00000°. NP2:ϕ$_s$49.00000°, δ69.00000°, λ-75.00000°. Principal axes: T 4.2748, Plg22.0000°, Azm128.0000°; N 0.8048, Plg13.0000°, Azm224.0000°; P -5.0795, Plg64.0000°, Azm342.0000°;*

*GCMT **27** 16:24:54.6±0.2, 16°.99N±0°.02×145°.67E±0°.01, h17^{km}, MW5.7/129, Moment Tensor Solution. s46,c52; s129,c234; Duration: 1^{s}8 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-4.81±.23; M$_{\theta\theta}$0.00±.13; M$_{\phi\phi}$4.81±.15; M$_{r\theta}$0.29±.49; M$_{\theta\phi}$0.92±.08; M$_{\phi r}$1.63±.32; Best double couple: M$_0$5.16800×10^{17} NP1:ϕ$_s$11.00000°, δ36.00000°, λ-90.00000°. NP2:ϕ$_s$190.00000°, δ54.00000°, λ-90.00000°. Principal axes: T 5.2530, Plg9.0000°, Azm280.0000°; N -0.1710, Plg0.0000°, Azm190.0000°; P -5.0820, Plg81.0000°, Azm100.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 27 16:24:50.1±0.4, **17°.03N**±0°.03×**145°.89E**±0°.04, **h19**^{km}±1^{km}, **h20**^{km}**:pP-P, n793, σ1^{s}80**/819, **mb5.6**/267, **MS5.3**/149, **45C-75D, Fault plane solution: NP1:**ϕ$_s$199.66934°, δ57.45845°, λ-105.75031°. **NP2:**ϕ$_s$47.33806°, δ35.77195°, λ-66.95493°. **Principal axes:** T Plg11.1484°, Azm300.9510°; N Plg13.2282°, Azm208.2959°; P Plg72.5677°, Azm69.8250°; **Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANA2	**Anatahan**	**0.70**	**194**		**Pb**	**16 25 02.1**	**-1.6**
ANA2	**Anatahan**	**0.70**	**194**	P	**Pb**	**16 25 02.9**	**-0.8**
GUMO	**Guam**	**3.56**	**196**	P	**Pn**	**16 25 44.3**	**0.0**
GUMO	**Guam**	**3.56**	**196**		**Pn**	**16 25 44.2**	**0.0**
GUMO				IAML		16 27 13.5	
	4μm,2.4s						
GUMO				IAML		16 27 24.5	
	3μm,2.2s						
GUMO	**Guam**	**3.56**	**196**	P	**Pn**	**16 25 44.4**	**+0.1**
JCJ	**Chichijima**	**10.59**	**342**	Pn	Pn	16 27 25.8	+4.9
	4.0nm,0.3s,baz=151,slow=18,SNR=2.1						
JCJ				LR	LR	16 30 13.0	
	comp=Z,4μm,19.8s,baz=168,slow=31						
PATS	**Pohnpei**	**15.81**	**128**	P	**Pn**	**16 28 30.7**	**-1.0**
JOW	**Kunigami**	**19.02**	**304**	P	**Pn**	**16 29 11.8**	**+0.1**
	3.1nm,0.3s,baz=135,slow=14,SNR=7.4						
JOW				LR	LR	16 34 57.0	
	comp=Z,20μm,21.8s,baz=122,slow=32						
JMN	**Monobe**	**19.83**	**329**		**P**	**16 29 19.3**	**-0.5**
H11S3	**WAKE ISLAND Hy**	**19.86**	**83**	T	T	16 49 54.4	
	baz=269,slow=75,SNR=70						
H11S1	**WAKE ISLAND Hy**	**19.87**	**83**	T	T	16 49 55.0	
	baz=269,slow=75,SNR=139						
H11S2	**WAKE ISLAND Hy**	**19.88**	**83**	T	T	16 49 52.8	
	baz=269,slow=75,SNR=61						
JGF	**Kuroka**	**20.00**	**339**		**Pn**	**16 29 23.2**	**-0.2**
H11N1	**WAKE ISLAND Hy**	**20.11**	**79**	T	T	16 50 13.5	
	baz=266,slow=74,SNR=17						
JSU	**Suzuyama**	**20.11**	**319**		Pn	16 29 24.5	-0.2
JSU				IAmb	IAmb	16 29 27.4	
	comp=Z,492nm,1.5s						
H11N2	**WAKE ISLAND Hy**	**20.11**	**79**	T	T	16 50 13.9	
	baz=266,slow=74,SNR=172						
H11N3	**WAKE ISLAND Hy**	**20.12**	**79**	T	T	16 50 16.7	
	baz=266,slow=74,SNR=3361						
SMPI	**Sarmi**	**20.18**	**201**	P	Pn	16 29 25.9	+0.2
	comp=Z,5μmcomp=Z,249nm,1.3s						
GENI	**Genyem**	**20.30**	**197**	P	Pn	16 29 27.0	0.0
	comp=Z,15μmcomp=Z,906nm,1.4s						
BAKI	**Biak**	**20.52**	**209**	P	**P**	**16 29 28.3**	**+1.0**
	comp=Z,7μmcomp=Z,208nm,1.2s						
GLSP	**General Luna,**	**20.52**	**252**	*e*P	**P**	**16 29 27.3**	**-0.1**
MJAR	**Matsushiro Arr**	**20.60**	**342**	P	**P**	**16 29 26.7**	**-1.4**
	comp=Z,22nm,1.1s,baz=166,slow=11,SNR=16						
MJAR				LR	LR	16 36 17.3	
	comp=Z,7μm,20.5s,baz=175,slow=34						
MAJO	**Matsushiro**	**20.60**	**342**	*i* P	**P**	**16 29 26.7**	**-1.4**
MAJO				pmax	pmax		
	comp=Z,104nm,1.4s						
MAT	**Matsushiro**	**20.60**	**342**	P	**P**	**16 29 27.0**	**-1.1**
MAT				S	**S**	**16 33 16.6**	**-1.1**
MJB9	**Matsu-Tunnel**	**20.60**	**342**		Pn	16 29 32.4	+1.9
MJB9				IAmb	IAmb	16 29 36.6	
	comp=Z,329nm,1.1s						
JNU	**Nakatsue**	**20.98**	**323**	P	Pn	16 29 33.9	-1.0
	comp=Z,66nm,1.1s,baz=136,slow=6.1,SNR=7.7						
JNU				LR	LR	16 36 51.0	
	comp=Z,1μm,18.9s,baz=128,slow=35						
SRPI	**Serui, Papua**	**21.05**	**208**	P	**P**	**16 29 34.3**	**+1.1**
	comp=Z,5μmcomp=Z,254nm,1.1s						
JHS	**Saijyo**	**21.23**	**330**	IAMs_20	IAMs_20	16 36 01.4	
	comp=Z,10μm,19.0s						
BUTP	**Butuan**	**21.30**	**250**	*e*P	P	16 29 43.9	+8.0
OCLP	**Ormoc**	**21.48**	**257**	*e*P	**P**	**16 29 38.6**	**+0.8**
MSLP	**Maasin**	**21.55**	**254**	*e*P	**P**	**16 29 40.0**	**+1.5**
MATI	**Mati**	**21.64**	**245**	*e*P	**P**	**16 29 40.0**	**+0.5**
SCSP	**San Jose Seism**	**21.83**	**264**	*e*P	**P**	**16 29 43.8**	**+2.3**
WAMI	**Wamena**	**21.96**	**199**	P	**P**	**16 29 45.8**	**+3.0**
RABL	**Rabaul**	**21.97**	**163**	P	**P**	**16 29 46.1**	**+3.0**
	comp=Z,494nm,0.9s						
DAV	**Davao City (W)**	**22.17**	**246**	P	**P**	**16 29 46.2**	**+0.9**
	comp=Z,172nm,0.4s,baz=35,slow=8.9,SNR=2.4						
DAV				LR	LR	16 37 10.2	
	comp=Z,4μm,21.8s,baz=222,slow=34						
DAV	**Davao City (W)**	**22.17**	**246**	⇑*i*P	**P**	**16 29 46.6**	**+1.3**
LLP	**Lapu-Lapu**	**22.31**	**255**	⇑*e*P	**P**	**16 29 47.3**	**+0.6**
LLP				*e*S	**S**	**16 33 55.2**	**+3.7**
CGP	**Cagayan de Oro**	**22.34**	**250**	⇓*e*P	**P**	**16 29 46.9**	**-0.2**
JCNP	**Jose Panganiba**	**22.50**	**266**	*e*P	**P**	**16 29 48.4**	**-0.3**
DDMP	**Don Marcelino,**	**22.53**	**244**	*e*P	**P**	**16 29 48.6**	**-0.5**
YOJ	**Yonaguni jima**	**22.62**	**293**	IAMs_20	IAMs_20	16 36 22.4	
	comp=Z,8μm,21.0s						
KWAJ	**Kwajalein Atol**	**22.68**	**108**	IAMs_20	IAMs_20	16 36 54.5	
	comp=Z,11μm,22.0s						
SGCP	**Mt. Cagua**	**22.76**	**277**	*e*P	**P**	**16 29 51.7**	**+0.3**
SWI	**Sorong**	**22.89**	**220**	P	**P**	**16 29 54.0**	**+1.1**
	comp=Z,13μmcomp=Z,691nm,1.4s						
SIJI	**Sorong**	**22.90**	**220**	P	**P**	**16 29 53.7**	**+0.8**
	comp=Z,418nm,0.9s,baz=28,slow=9.6,SNR=82						
SIJI				LR	LR	16 36 50.3	
	comp=Z,3μm,20.8s,baz=36,slow=32						
BBP	**Basco**	**22.91**	**282**	*e*P	**P**	**16 29 52.7**	**-0.3**
CAUP	**Cauayan**	**23.02**	**273**	*e*P	**P**	**16 29 54.9**	**+0.8**
SKMP	**Bagumbayan, Su**	**23.34**	**246**	*e*P	**P**	**16 29 57.4**	**0.0**
BALP	**Baler**	**23.36**	**270**	*e*P	**P**	**16 29 56.2**	**-1.5**
BOAC	**Boac**	**23.47**	**265**	*e*P	**P**	**16 29 58.8**	**+0.1**
GUIM	**Jordan**	**23.49**	**257**	*e*P	**P**	**16 29 57.7**	**-1.3**
APYP	**Conner**	**23.53**	**276**	*e*P	**P**	**16 29 58.0**	**-1.2**
CNOP	**Candoni, Negro**	**23.71**	**255**	*e*P	**P**	**16 29 59.8**	**-1.3**
PAGZ	**Pagadian**	**23.78**	**250**	*e*P	**P**	**16 30 01.8**	**+0.1**
NACB	**Ninganchiao**	**23.81**	**291**	P	**P**	**16 30 03.0**	**+1.0**
NACB				IAmb	IAmb	16 30 19.4	
	comp=Z,444nm,1.5s						
NACB				IAMs_20	IAMs_20	16 37 11.5	
	comp=Z,13μm,22.0s						
KMPI	**Kaimana, Papua**	**23.82**	**211**	P	**P**	**16 30 01.9**	**-0.2**
	comp=Z,5μmcomp=Z,397nm,1.1s						
YULB	**Yu-li**	**23.92**	**289**	P	**P**	**16 30 04.5**	**+1.4**
YULB				IAmb	IAmb	16 30 16.9	
	comp=Z,259nm,1.5s						
YULB				IAMs_20	IAMs_20	16 36 55.3	
	comp=Z,11μm,20.0s						
FAKI	**Fak Fak**	**23.96**	**215**	P	**P**	**16 30 03.1**	**-0.4**
FAKI				IAmb	IAmb	16 30 07.0	
	comp=Z,286nm,0.9s						
FAKI	**Fak Fak**	**23.96**	**215**	P	**P**	**16 30 03.1**	**-0.4**
	comp=Z,6μmcomp=Z,323nm,0.8s						
TWG	**Pinlang**	**24.02**	**288**	P	**P**	**16 30 03.3**	**-0.7**
TWG				IAmb	IAmb	16 30 21.5	
	comp=Z,268nm,1.4s						
TWG				IAMs_20	IAMs_20	16 36 46.8	
	comp=Z,10μm,22.0s						
JTM	**Tenmabayashi**	**24.04**	**351**	P	**P**	**16 30 05.9**	**+1.9**
JTM				IAmb	IAmb	16 30 29.8	
	comp=Z,322nm,1.2s						
TATO	**Taipei**	**24.09**	**293**	IAMs_20	IAMs_20	16 37 20.1	
	comp=Z,9μm,22.0s						
YHNB	**Yeheng**	**24.12**	**292**	P	**P**	**16 30 05.3**	**+0.4**
YHNB				IAmb	IAmb	16 30 24.3	
	comp=Z,210nm,1.1s						
YHNB				IAMs_20	IAMs_20	16 37 54.7	
	comp=Z,13μm,20.0s						
SMPP	**San Manuel, Pa**	**24.18**	**272**	*e*P	**P**	**16 30 03.3**	**-2.2**
TGY	**Tagaytay City**	**24.21**	**267**	P	**P**	**16 30 05.8**	**-0.1**
	comp=Z,138nm,0.4s,baz=110,slow=3.9,SNR=7.4						
TGY				LR	LR	16 37 51.3	
	comp=Z,10μm,20.0s,baz=92,slow=32						
SZP	**Santa**	**24.29**	**275**	IAMs_20	IAMs_20	16 37 44.0	
	comp=Z,12μm,19.0s						
SSLB	**Suanglung**	**24.30**	**290**	IAMs_20	IAMs_20	16 38 37.6	
	comp=Z,10μm,20.0s						
PGP	**Puerto Galera**	**24.31**	**265**	⇓*e*P	**P**	**16 30 04.8**	**-1.9**
TNTI	**Ternate**	**24.36**	**230**	P	**P**	**16 30 06.2**	**-1.0**
	comp=Z,4μmcomp=Z,200nm,0.9s						
SJMP	**San Jose**	**24.38**	**263**	*e*P	**P**	**16 30 08.1**	**+0.8**
MACP	**Maragondon, Ca**	**24.39**	**267**	*e*P	**P**	**16 30 06.9**	**-0.6**
TPUB	**Ta-pu**	**24.50**	**289**	P	**P**	**16 30 08.8**	**+0.4**
TPUB				IAmb	IAmb	16 30 28.5	
	comp=Z,248nm,1.2s						
CUYO	**Cuyo Island**	**24.90**	**259**	*e*P	**P**	**16 30 10.9**	**-1.2**
LUBP	**Lubang**	**24.94**	**266**	*e*P	**P**	**16 30 11.2**	**-1.2**
TJN	**Taejon**	**25.32**	**323**	*i* P	**P**	**16 30 12.8**	**-2.8**
BUSP	**Coron**	**25.36**	**262**	*e*P	**P**	**16 30 14.3**	**-1.9**
KSRS	**Korea Array**	**25.78**	**326**	P	**P**	**16 30 19.8**	**0.0**
	comp=Z,18nm,0.8s,baz=146,slow=8.8,SNR=55						
KSRS				LR	LR	16 39 50.1	
	comp=Z,2μm,18.6s,baz=138,slow=35						
KSAR	**Wonju Array Be**	**25.80**	**326**	P	**P**	**16 30 21.7**	**+1.7**
KSAR	**Wonju Array Be**	**25.80**	**326**	P	**P**	**16 30 21.7**	**+1.7**
KS19	**Wonju Array Si**	**25.85**	**326**	P	**P**	**16 30 22.7**	**+2.3**
KS19				IAmb	IAmb	16 30 37.0	
	comp=Z,188nm,1.2s						
PMG	**Port Moresby**	**26.29**	**177**	P	**P**	**16 30 24.6**	**-0.1**
	comp=Z,127nm,0.9s,baz=13,slow=5.1,SNR=26						
PMG				LR	LR	16 40 46.9	
	comp=Z,640nm,19.3s,baz=358,slow=36						
PMG	**Port Moresby**	**26.29**	**177**	*ce*P	**P**	**16 30 24.2**	**-0.4**
PMG				pmax	pmax		
	comp=Z,310nm,1.7s						
PMG	**Port Moresby**	**26.29**	**177**	P	**P**	**16 30 24.9**	**+0.3**
PMG				IAmb	IAmb	16 30 37.1	
	comp=Z,251nm,1.1s						
PMG	**Port Moresby**	**26.29**	**177**	P	**P**	**16 30 24.5**	**-0.1**
ENPP	**El Nido**	**26.30**	**261**	*e*P	**P**	**16 30 23.6**	**-1.1**
SSE	**Sheshan**	**26.47**	**306**	P	**P**	**16 30 25.5**	**-0.7**
SSE				S	**S**	**16 35 02.0**	**+2.7**
SSE				pmax	pmax		
	comp=Z,35nm,1.8s						
SSE				pmax	pmax		
	comp=Z,1μm,6.3s						
SSE				LR	LR		
	comp=Z,2μm,24.7s						
SSE				LR	LR		
	comp=Z,3μm,16.4s						
SSE	**Sheshan**	**26.47**	**306**	P	**P**	**16 30 25.9**	**-0.3**
SSE				IAmb	IAmb	16 30 31.8	
	comp=Z,265nm,1.2s						
SSE	**Sheshan**	**26.47**	**306**	IAMs_20	IAMs_20	16 39 49.3	
	comp=Z,7μm,20.0s						
INCN	**Inchon**	**26.52**	**324**	P	**P**	**16 30 26.6**	**+0.1**
INCN				P	**P**	**16 30 26.6**	**+0.1**
INCN				S	**S**	**16 35 07.7**	**+7.8**
INCN				S	**S**	**16 35 07.7**	**+7.8**
QZH	**Quanzhou**	**26.64**	**292**	⇑*i*P	**P**	**16 30 28.5**	**+0.7**
QZH				S	**S**	**16 35 01.0**	**-1.1**
QZH				pmax	pmax		
	comp=Z,46nm,1.5s						
QZH				pmax	pmax		
	comp=Z,2μm,7.7s						
QZH				LR	LR		
	comp=Z,2μm,20.8s						
QZH				LR	LR		
	comp=Z,4μm,20.8s						
QZH				LR	LR		
	comp=Z,5μm,20.8s						
YUK	**Yuzh-Kuril'sk**	**26.92**	**360**	*e*P	**P**	**16 30 24.5**	**-5.5**
YUK				PPP	PPP	16 31 21.9	
YUK				*e*S	**S**	**16 35 00.1**	**-5.9**
YUK				*e*SSS	SSS	16 36 27.6	
YUK				MLR	MLR		
	comp=Z,2μm,13.0s						
KMSI	**Cibinong**	**27.07**	**235**	P	**P**	**16 30 31.1**	**-0.6**
	comp=Z,363nm,1.0s						
ASAJ	**Asahikawa**	**27.15**	**355**	P	**P**	**16 30 32.6**	**+0.5**
	comp=Z,12nm,0.8s,baz=249,slow=16,SNR=6.1						
ASAJ				LR	LR	16 40 28.6	
	comp=Z,2μm,21.2s,baz=168,slow=35						
SANI	**Sanana**	**27.30**	**228**	P	**P**	**16 30 31.4**	**-2.3**
	comp=Z,3μmcomp=Z,137nm,0.9s						
GTOI	**Gorontalo**	**27.80**	**236**	P	**P**	**16 30 34.5**	**-3.7**
	comp=Z,1μmcomp=Z,45nm,1.6s						
BATP	**Bataraza**	**28.55**	**257**	*e*P	**P**	**16 30 42.2**	**-2.7**
NJ2	**Nanjing**	**28.68**	**306**	⇓*i*P	**P**	**16 30 45.0**	**-0.9**
NJ2				pP	**pP**	**16 30 50.5**	**-0.8**
NJ2				sP	**sP**	**16 30 53.3**	**-0.2**
NJ2				PP	**PnPn**	**16 31 36.0**	**-0.5**
NJ2				S	**S**	**16 35 34.3**	**+0.2**
NJ2				sS	**sS**	**16 35 41.8**	**-0.7**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,2μm,9.5s						
NJ2				LR	LR		
	comp=Z,6μm,14.4s						
NJ2				LR	LR		
	comp=Z,5μm,16.3s						
NJ2				LR	LR		
	comp=Z,6μm,19.4s						
SAUI	**Saumlaki**	**28.74**	**211**	P	**P**	**16 30 46.1**	**-0.5**
	comp=Z,5μmcomp=Z,298nm,0.9s						
MRSI	**Marisa**	**28.75**	**238**	P	**P**	**16 30 46.6**	**-0.1**
	comp=Z,3μmcomp=Z,136nm,1.3s						
LUWI	**Luwuk**	**29.02**	**234**	P	**P**	**16 30 48.2**	**-0.9**
LUWI	**Luwuk**	**29.02**	**234**	P	**P**	**16 30 48.0**	**-1.1**
	comp=Z,5μmcomp=Z,492nm,0.8s						
TOLI2	**Tolitoli**	**29.34**	**240**	P	**P**	**16 30 52.2**	**+0.3**
USA0B	**Ussuriysk Arra**	**29.52**	**339**	*i* P	**P**	**16 30 52.9**	**-0.4**
USRK	**Ussuriysk Ar.**	**29.52**	**339**	P	**P**	**16 30 54.1**	**+0.8**
	comp=Z,2.1nm,0.8s,baz=146,slow=13,SNR=2.7						
USRK				LR	LR	16 41 54.9	
	comp=Z,3μm,18.1s,baz=143,slow=35						
HNR	**Honiara**	**29.74**	**151**	LR	LR	16 43 12.3	
	comp=Z,3μm,18.9s,baz=338,slow=37						
APSI	**Ampana**	**29.82**	**236**	P	**P**	**16 30 55.7**	**-0.5**
	comp=Z,1μmcomp=Z,90nm,1.1s						
YSS	**Yuzh-Sakhalins**	**29.95**	**356**	*e*P	**P**	**16 30 55.1**	**-1.9**
YSS				*e*		16 35 42.1	
YSS				MLR	MLR		
	comp=Z,2μm,17.0s						
YSS				MLR	MLR		
	comp=E,3μm,15.0s						
DL2	**Dalian**	**30.40**	**321**	P	**P**	**16 31 01.8**	**+0.7**
DL2				S	**S**	**16 36 02.8**	**+1.9**
DL2				pmax	pmax		
	comp=E,51nm,1.3s						
DL2				pmax	pmax		
	comp=E,2μm,9.6s						
DL2				LR	LR		
	comp=E,3μm,19.6s						
DL2				LR	LR		
	comp=E,3μm,19.6s						
DL2				LR	LR		
	comp=E,3μm,15.7s						
TARA	**Tarawa**	**30.82**	**118**	IAMs_20	IAMs_20	16 40 56.4	
	comp=Z,6μm,20.0s						
COEN	**Coen**	**30.90**	**185**	P	**P**	**16 31 05.4**	**-0.3**
KKM	**Kota Kinabalu**	**31.01**	**253**	P	**P**	**16 31 05.9**	**-0.9**
KKM				IAMs_20	IAMs_20	16 42 14.7	
	comp=Z,5μm,20.0s						
SNY	**Shenyang**	**31.26**	**327**	⇑P	**P**	**16 31 08.0**	**-0.6**
SNY				S	**S**	**16 36 13.8**	**-0.5**
SNY				pmax	pmax		
	comp=Z,460nm,7.5s						
SNY				LR	LR		
	comp=Z,5μm,15.8s						
SNY				LR	LR		
	comp=Z,7μm,17.8s						
SNY				LR	LR		
	comp=Z,3μm,14.2s						
WHN	**Wuhan**	**31.72**	**301**	⇓P	**P**	**16 31 13.5**	**+0.6**
WHN				sP	**sP**	**16 31 23.0**	**+2.5**
WHN				PP	**PnPn**	**16 32 17.8**	**+0.7**
WHN				pmax	pmax		
	comp=Z,270nm,1.7s						
WHN				pmax	pmax		
	comp=Z,3μm,4.4s						
WHN				LR	LR		
	comp=Z,6μm,12.1s						
WHN				LR	LR		
	comp=Z,4μm,10.0s						
WHN				LR	LR		
	comp=Z,15μm,20.7s						
CN2	**Changchun**	**31.81**	**331**	*e*P	**P**	**16 31 11.5**	**-2.0**
CN2				*e*S	**S**	**16 36 26.0**	**+3.1**
CN2				pmax	pmax		
	comp=Z,910nm,5.7s						
CN2				LR	LR		
	comp=Z,4μm,23.0s						
CN2				LR	LR		
	comp=Z,5μm,23.0s						
CN2				LR	LR		
	comp=Z,5μm,21.0s						
TIA	**Tai'an**	**31.85**	**312**	P	**P**	**16 31 14.0**	**0.0**
TIA				S	**S**	**16 36 25.0**	**+1.2**
TIA				pmax	pmax		
	comp=Z,32nm,2.3s						
TIA				pmax	pmax		
	comp=Z,2μm,11.3s						
TIA				LR	LR		
	comp=Z,7μm,22.1s						
TIA				LR	LR		
	comp=Z,4μm,18.1s						
TIA				LR	LR		
	comp=Z,3μm,16.3s						
TTSI	**Tana Toraja**	**32.56**	**235**	P	**P**	**16 31 21.4**	**+1.0**
	comp=Z,4μmcomp=Z,225nm,0.8s						
SPSI	**Sidrap Palu**	**33.18**	**233**	P	**P**	**16 31 25.9**	**+0.1**
	comp=Z,2μmcomp=Z,76nm,0.8s						
BNSI	**Bone**	**33.20**	**232**	P	**P**	**16 31 27.3**	**+1.3**
	comp=Z,4μmcomp=Z,165nm,1.9s						
TYV	**Tymovskoe**	**33.85**	**356**	*e*P	**P**	**16 31 30.1**	**-1.1**
TYV				*e*S	**S**	**16 36 54.9**	**+0.4**
TYV				pmax	pmax		
	comp=Z,19nm,1.4s						
TYV				pmax	pmax		
	comp=Z,200nm,3.9s						
TYV				smax	smax		
	comp=E,2μm,7.9s						
TYV				MLR	MLR		
	comp=Z,2μm,20.0s						
KAPI	**Kappang**	**33.87**	**232**	P	**P**	**16 31 31.8**	**0.0**
	comp=Z,70nm,0.9s,baz=58,slow=6.2,SNR=35						
KAPI				LR	LR	16 43 29.7	
	comp=Z,1μm,20.6s,baz=32,slow=33						
KAPI	**Kappang**	**33.87**	**232**	P	**P**	**16 31 31.9**	**+0.2**
KAPI				S	**S**	**16 36 58.3**	**+2.9**
BSSI	**Bau Bau, Buton**	**34.07**	**230**	P	**P**	**16 31 34.2**	**+0.7**
	comp=Z,2μmcomp=Z,90nm,1.5s						
KLR	**Kul'dur**	**34.11**	**343**	P	**P**	**16 31 31.1**	**-2.4**
	comp=Z,1.5nm,0.6s,baz=160,slow=13,SNR=7.2						
KLR	**Kul'dur**	**34.11**	**343**	*i* P	**P**	**16 31 32.0**	**-1.5**
KLR				pmax	pmax		
	comp=Z,22nm,1.4s						
SOEI	**Soe**	**34.14**	**220**	P	**P**	**16 31 32.7**	**-1.6**
SOEI	**Soe**	**34.14**	**220**	P	**P**	**16 31 32.8**	**-1.5**
	comp=Z,3μmcomp=Z,174nm,0.9s						
QIZ	**Qiongzhong**	**34.30**	**279**	P	**P**	**16 31 36.8**	**+1.2**
QIZ				PP	**PnPn**	**16 32 50.3**	**+0.2**
QIZ				S	**S**	**16 37 02.3**	**+0.1**
QIZ				pmax	pmax		
	comp=Z,1μm,7.7s						
QIZ				LR	LR		
	comp=Z,3μm,19.6s						
QIZ				LR	LR		
	comp=Z,3μm,20.1s						
QIZ				LR	LR		
	comp=Z,5μm,30.4s						
QIZ	**Qiongzhong**	**34.30**	**279**	IAMs_20	IAMs_20	16 42 10.9	
	comp=Z,6μm,22.0s						
BJT	**Baijiatuau**	**34.47**	**318**	P	**P**	**16 31 37.4**	**+0.6**
BJT				pmax	pmax		
	comp=Z,305nm,1.5s						
BJT				MLR	MLR		
	comp=Z,4μm,20.0s						
BJT	**Baijiatuau**	**34.47**	**318**	P	**P**	**16 31 37.4**	**+0.6**
BJT	**Baijiatuau**	**34.47**	**318**	IAMs_20	IAMs_20	16 44 13.9	
	comp=Z,4μm,20.0s						
BJI	**Beijing**	**34.48**	**318**	P	**P**	**16 31 37.0**	**+0.2**
BJI				S	**S**	**16 37 05.5**	**+1.1**
BJI				pmax	pmax		
	comp=Z,170nm,1.4s						
BJI				pmax	pmax		
	comp=Z,2μm,4.0s						
BJI				LR	LR		
	comp=Z,4μm,17.6s						
BJI				LR	LR		
	comp=Z,2μm,14.8s						
BJI				LR	LR		
	comp=Z,3μm,26.5s						
GRNR	**Gornyy**	**34.51**	**349**	⇓*i*P	**P**	**16 31 38.5**	**+1.5**
GRNR				*e*S	**S**	**16 37 10.6**	**+6.0**
GRNR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
GRNR				smax	smax		
	comp=N,1.0nm,1.1s						
GRNR				MLR	MLR		
	comp=E,1μm,14.0s						
GRNR				MLR	MLR		
	comp=N,1μm,13.0s						
GRNR				MLR	MLR		
	comp=Z,1μm,20.0s						
MMRI	**Maumere**	**34.60**	**224**	P	**P**	**16 31 36.8**	**-1.4**
MMRI	**Maumere**	**34.60**	**224**	P	**P**	**16 31 37.4**	**-0.8**
	comp=Z,5μmcomp=Z,316nm,0.9s						
BATI	**Baumata**	**34.86**	**221**	LR	LR	16 45 15.7	
	comp=Z,2μm,21.8s,baz=84,slow=35						
BATI	**Baumata**	**34.86**	**221**	P	**P**	**16 31 38.9**	**-1.5**
	comp=Z,1μmcomp=Z,94nm,1.3s						
MTKI	**Muara Teweh, K**	**35.39**	**243**	P	**P**	**16 31 45.2**	**+0.2**
	comp=Z,2μmcomp=Z,82nm,1.5s						
KBKI	**Kotabaru**	**35.63**	**238**	P	**P**	**16 31 47.4**	**+0.4**
	comp=Z,727nmcomp=Z,49nm,0.9s						
ENH	**Enshi**	**35.70**	**298**	IAMs_20	IAMs_20	16 46 24.0	
	comp=Z,4μm,18.0s						
TIY	**Taiyuan**	**35.88**	**312**	*e*P	**P**	**16 31 50.5**	**+1.5**
TIY				S	**S**	**16 37 28.0**	**+1.8**
TIY				sS	**sS**	**16 37 34.3**	**-0.2**
TIY				SS	SS	16 39 46.5	-16
TIY				pmax	pmax		
	comp=Z,110nm,1.7s						
TIY				LR	LR		
	comp=Z,2μm,9.3s						
TIY				LR	LR		
	comp=Z,2μm,10.9s						

TIY				LR	LR		
	comp=Z,2µm,12.9s						
SBUM	**Sibu**	**36.12**	**250**	IAMs_20	IAMs_20	16 45 06.3	
	comp=Z,4µm,22.0s						
SBUM	**Sibu**	**36.12**	**250**	P	**P**	**16 31 52.0**	**+0.8**
DLV	**T Lat**	**36.53**	**267**	IAMs_20	IAMs_20	16 44 41.0	
	comp=Z,6µm,19.0s						
WSI	**Waingapu**	**36.66**	**226**	P	**P**	**16 31 53.6**	**-2.2**
	comp=Z,11µmcomp=Z,447nm,1.0s						
BBKI	**Banjar Baru**	**36.80**	**239**	P	**P**	**16 31 57.4**	**+0.3**
	comp=Z,2µmcomp=Z,39nm,1.0s						
BASI	**Baing, Sumba**	**36.87**	**225**	P	**P**	**16 31 55.1**	**-2.5**
	comp=Z,3µmcomp=Z,304nm,1.0s						
CTAO	**Charters Tower**	**36.89**	**179**	P	**P**	**16 31 57.9**	**+0.3**
CTAO				pmax	pmax		
	comp=Z,94nm,1.3s						
CTAO				MLR	MLR		
	comp=Z,2µm,19.0s						
CTAO	**Charters Tower**	**36.89**	**179**	P	**P**	**16 31 57.9**	**+0.3**
XAN	**Xi'an**	**37.17**	**304**	⇓P	**P**	**16 31 59.8**	**-0.3**
XAN				S	**S**	**16 37 48.0**	**+2.0**
XAN				PcS	**PcS**	**16 38 10.8**	**+2.4**
XAN				ScS	**ScS**	**16 42 11.5**	**-2.6**
XAN				pmax	pmax		
	comp=Z,87nm,1.7s						
XAN				pmax	pmax		
	comp=Z,3µm,7.5s						
XAN				LR	LR		
	comp=Z,6µm,17.3s						
XAN				LR	LR		
	comp=Z,4µm,22.8s						
XAN				LR	LR		
	comp=Z,7µm,20.6s						
XAN	**Xi'an**	**37.17**	**304**	IAMs_20	IAMs_20	16 46 00.3	
	comp=Z,5µm,21.0s						
PEA0B	**Petropavlovsk-**	**37.18**	**12**	P	**P**	**16 32 01.2**	**+1.4**
PEA0B				pmax	pmax		
	comp=Z,64nm,1.0s						
PEA0B				MLR	MLR		
	comp=Z,2µm,19.0s						
PEA0B	**Petropavlovsk-**	**37.18**	**12**	P	**P**	**16 32 01.2**	**+1.4**
PETK	**Petropavlovsk-**	**37.18**	**12**	P	**P**	**16 31 59.3**	**-0.5**
	comp=Z,6.3nm,0.7s,baz=182,slow=6.6,SNR=18						
PETK				LR	LR	16 45 14.8	
	comp=Z,1µm,19.8s,baz=192,slow=33						
PET	**Petropavlovsk**	**37.29**	**13**	i P	**P**	**16 31 59.7**	**-1.0**
PET				pmax	pmax		
	comp=Z,242nm,1.2s						
GYA	**Guiyang**	**37.50**	**291**	⇓P	**P**	**16 32 04.0**	**+0.9**
GYA				PP	**PnPn**	**16 33 31.8**	**+2.2**
GYA				S	**S**	**16 37 51.5**	**+0.1**
GYA				pmax	pmax		
	comp=Z,80nm,2.0s						
GYA				LR	LR		
	comp=Z,3µm,15.1s						
GYA				LR	LR		
	comp=Z,3µm,19.0s						
GYA				LR	LR		
	comp=Z,4µm,17.5s						
PLAI	**Plampang**	**37.85**	**229**	P	**P**	**16 32 05.2**	**-0.8**
	comp=Z,4µmcomp=Z,278nm,1.0s						
HHC	**Hu-ho-hao-te**	**37.91**	**316**	eP	**P**	**16 32 06.8**	**+0.5**
HHC				sP	pwP	16 32 15.3	+0.3
HHC				PP	**PP**	**16 33 39.5**	**+6.5**
HHC				S	**S**	**16 37 55.5**	**-1.7**
HHC				sS	sS	16 38 04.8	-1.3
HHC				pmax	pmax		
	comp=Z,73nm,1.7s						
HHC				pmax	pmax		
	comp=Z,2µm,8.2s						
HHC				LR	LR		
	comp=Z,2µm,16.7s						
HHC				LR	LR		
	comp=Z,5µm,16.1s						
HHC				LR	LR		
	comp=Z,4µm,17.6s						
WB0	**Warramunga Arr**	**38.27**	**198**	P	**P**	**16 32 07.9**	**-1.5**
WB0				IAmb	IAmb	16 32 09.3	
	comp=Z,181nm,1.1s						
WR0	**Warramunga Arr**	**38.41**	**197**	P	**P**	**16 32 09.9**	**-0.7**
WR0				IAmb	IAmb	16 32 10.5	
	comp=Z,132nm,1.1s						
WRAB	**Tennant Creek**	**38.44**	**198**	d iP	**P**	**16 32 09.1**	**-1.7**
WRAB				pmax	pmax		
	comp=Z,193nm,1.2s						
WRAB	**Tennant Creek**	**38.44**	**198**	P	**P**	**16 32 09.7**	**-1.1**
WRAB				IAmb	IAmb	16 32 11.4	
	comp=Z,191nm,1.1s						
TWSI	**Taliwang, Sumb**	**38.45**	**230**	P	**P**	**16 32 09.8**	**-1.2**
	comp=Z,4µmcomp=Z,337nm,1.0s						
WB2	**Warramunga Arr**	**38.45**	**198**	P	**P**	**16 32 10.0**	**-0.9**
WB2				IAmb	IAmb	16 32 11.5	
	comp=Z,207nm,1.1s						
WRA	**Warramunga Arr**	**38.45**	**198**	P	**P**	**16 32 09.4**	**-1.5**
	comp=Z,113nm,1.0s,baz=18,slow=9.2,SNR=198						
WRA				PcP	**PcP**	**16 34 22.8**	**-1.3**
	comp=Z,3.2nm,0.8s,baz=8.6,slow=3.1,SNR=1.4						
WRA				S	**S**	**16 38 02.4**	**-3.0**
	comp=Z,1.8nm,0.9s,baz=19,slow=15,SNR=2.6						
WRA				LR	LR	16 47 38.5	
	comp=Z,2µm,21.8s,baz=15,slow=36						
WC3	**Warramunga Arr**	**38.46**	**198**	P	**P**	**16 32 10.1**	**-0.8**
WC3				IAmb	IAmb	16 32 11.6	
	comp=Z,192nm,1.1s						
SANVU	**Saraoutou**	**38.51**	**146**	P	**P**	**16 32 12.8**	**+1.3**
SANVU				IAmb	IAmb	16 32 14.4	
	comp=Z,187nm,1.1s						
SANVU				PcP	**PcP**	**16 34 23.0**	**-1.3**
SANVU				IAMs_20	IAMs_20	16 46 10.2	
	comp=Z,5µm,20.0s						
SANVU	**Saraoutou**	**38.51**	**146**	P	**P**	**16 32 14.4**	**+3.0**
UBPT	**Khong Chiam**	**38.82**	**273**	P	**P**	**16 32 16.0**	**+1.8**
	comp=Z,901nmcomp=Z,19nm,2.2s						
UBPT	**Khong Chiam**	**38.82**	**273**	IAMs_20	IAMs_20	16 45 26.0	
	comp=Z,6µm,20.0s						
BTO	**Baotou**	**38.84**	**315**	eP	**P**	**16 32 14.5**	**+0.4**
PBKI	**Pangkalan Bun**	**39.05**	**243**	P	**P**	**16 32 16.5**	**+0.4**
	comp=Z,3µmcomp=Z,308nm,1.1s						
SRBI	**Singaraja**	**39.28**	**233**	P	**P**	**16 32 18.4**	**+0.4**
	comp=Z,5µmcomp=Z,193nm,2.2s						
ZEA	**Zeya**	**39.41**	**343**	eP	**P**	**16 32 18.8**	**+0.2**
ZEA				eS	**S**	**16 38 15.5**	**-3.7**
ZEA				eSS	**SS**	**16 41 04.1**	**-9.3**
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ZEA				smax	smax		
	comp=E,300nm,6.4s						
ZEA				MLR	MLR		
	comp=N,2µm,14.0s						
ZEA				MLR	MLR		
	comp=E,800nm,14.0s						
ZEA				MLR	MLR		
	comp=Z,1µm,15.0s						
KMMI	**Kalianget**	**39.61**	**235**	P	**P**	**16 32 22.5**	**+1.8**
	comp=Z,3µmcomp=Z,112nm,1.4s						
DNP	**Denpasar**	**39.66**	**232**	P	**P**	**16 32 21.5**	**+0.4**
	comp=Z,29µmcomp=Z,373nm,1.2s						
SLVN	**Son La**	**39.80**	**283**	IAMs_20	IAMs_20	16 48 53.6	
	comp=Z,5µm,19.0s						
ABJI	**Asem Bagus**	**39.85**	**234**	P	**P**	**16 32 23.0**	**+0.3**
	comp=Z,7µmcomp=Z,217nm,2.5s						
FITZ	**Fitzroy Crossi**	**40.20**	**211**	LR	LR	16 50 27.2	
	comp=Z,720nm,18.6s,baz=48,slow=38						
FITZ	**Fitzroy Crossi**	**40.20**	**211**	P	**P**	**16 32 24.8**	**-0.6**
FITZ				IAmb	IAmb	16 32 26.1	
	comp=Z,159nm,1.1s						
JAGI	**Jajag, Banyuwa**	**40.34**	**234**	P	**P**	**16 32 26.5**	**-0.3**
	comp=Z,2µmcomp=Z,104nm,1.4s						
CD2	**Chengdu**	**40.66**	**298**	P	**P**	**16 32 29.0**	**-0.4**
CD2				PP	**PP**	**16 34 08.8**	**+5.6**
CD2				S	**S**	**16 38 39.5**	**+0.8**
CD2				sS	sS	16 38 46.0	-1.3
CD2				pmax	pmax		
	comp=Z,160nm,1.6s						
CD2				pmax	pmax		
	comp=Z,3µm,7.8s						
CD2				LR	LR		
	comp=Z,6µm,15.8s						
CD2				LR	LR		
	comp=Z,5µm,17.7s						
CD2				LR	LR		
	comp=Z,7µm,26.6s						
NONG	**Nongkai**	**40.71**	**278**	P	**P**	**16 32 31.1**	**+1.2**
	comp=Z,5µmcomp=Z,85nm,1.5s						
KMI	**Kunming**	**40.93**	**289**	⇓P	**P**	**16 32 33.0**	**+1.1**
KMI				pP	pwP	16 32 40.5	+1.0
KMI				sP	sP	16 32 46.0	+6.4
KMI				PP	**PP**	**16 34 08.0**	**+1.7**
KMI				S	**S**	**16 38 46.3**	**+3.2**
KMI				sS	sS	16 38 54.3	+2.6
KMI				SS	**SS**	**16 41 41.3**	**-3.7**
KMI				pmax	pmax		
	comp=Z,70nm,1.8s						
KMI				pmax	pmax		
	comp=Z,2µm,6.5s						
KMI				LR	LR		
	comp=Z,2µm,15.4s						
KMI				LR	LR		
	comp=Z,4µm,20.7s						
KMI				LR	LR		
	comp=Z,4µm,19.0s						
KMI	**Kunming**	**40.93**	**289**	IAMs_20	IAMs_20	16 48 58.0	
	comp=Z,5µm,20.0s						
LZH	**Lanzhou**	**41.74**	**305**	⇓P	**P**	**16 32 39.0**	**+0.6**
LZH				pP	sP	16 32 47.0	+1.0
LZH				PP	**PnPn**	**16 34 19.8**	**-0.2**
LZH				S	**S**	**16 38 56.8**	**+1.9**
LZH				sS	sS	16 39 05.5	+2.2
LZH				SS	**SS**	**16 41 56.8**	**-4.0**
LZH				pmax	pmax		
	comp=Z,92nm,1.6s						
LZH				pmax	pmax		
	comp=Z,3µm,5.4s						
LZH				LR	LR		
	comp=Z,3µm,17.3s						
LZH				LR	LR		
	comp=Z,4µm,16.3s						
LZH				LR	LR		
	comp=Z,4µm,17.2s						
CHAI	**Chaiyaphum**	**42.06**	**275**	P	**P**	**16 32 42.3**	**+1.3**
	comp=Z,686nmcomp=Z,71nm,0.8s						
AS31	**Alice Springs**	**42.11**	**197**	P	**P**	**16 32 40.2**	**-1.0**
ASAR	**Alice Springs**	**42.11**	**197**	P	**P**	**16 32 39.8**	**-1.5**
	comp=Z,22nm,0.8s,baz=18,slow=6.6,SNR=158						
ASAR				PP	**PP**	**16 34 16.4**	**-2.6**
	comp=Z,5.9nm,0.9s,baz=15,slow=12,SNR=2.5						
ASAR				S	**S**	**16 38 55.8**	**-4.3**
	comp=Z,4.0nm,1.1s,baz=19,slow=22,SNR=6.8						
ASAR				LR	LR	16 48 40.1	
	comp=Z,1µm,21.7s,baz=34,slow=34						
ASAR	**Alice Springs**	**42.11**	**197**	P	**P**	**16 32 40.2**	**-1.0**
ASAR	**Alice Springs**	**42.11**	**197**	P	**P**	**16 32 40.1**	**-1.0**
SRAK	**Srakaew**	**42.30**	**272**	P	**P**	**16 32 39.0**	**-3.9**
SMRI	**Semarang**	**42.44**	**239**	P	**P**	**16 32 45.4**	**+1.4**
	comp=Z,5µmcomp=Z,182nm,2.2s						
EIDS	**Eidsvold**	**42.44**	**173**	P	**P**	**16 32 43.5**	**-0.3**
EIDS				IAMs_20	IAMs_20	16 47 58.4	
	comp=Z,3µm,21.0s						
TPI	**Tanjungpandan**	**42.55**	**246**	P	**P**	**16 32 44.9**	**-0.1**
	comp=Z,3µmcomp=Z,176nm,1.2s						
MA2	**Magadan**	**42.64**	**4**	P	**P**	**16 32 44.5**	**-0.6**
	comp=Z,5.1nm,0.8s,baz=183,slow=8.7,SNR=13						
MA2	**Magadan**	**42.64**	**4**	ceP	**P**	**16 32 42.8**	**-2.3**
MA2				pmax	pmax		
	comp=Z,49nm,2.5s						
UGM	**Wanagama**	**42.86**	**237**	P	**P**	**16 32 47.1**	**-0.4**
UGM	**Wanagama**	**42.86**	**237**	P	**P**	**16 32 48.3**	**+0.8**
	comp=Z,5µmcomp=Z,202nm,1.1s						
LIFNC	**LIFOU**	**43.01**	**150**	P	**P**	**16 32 50.2**	**+1.7**
UTTA	**Uttaradit**	**43.19**	**278**	P	**P**	**16 32 50.9**	**+0.8**
	comp=Z,562nmcomp=Z,60nm,0.9s						
CIT	**Chita**	**43.26**	**331**	eP	**P**	**16 32 51.5**	**+1.2**
CIT				e		16 33 02.4	
CIT				e		16 33 09.1	
CIT				e		16 34 40.2	
PHIT	**Phitsanulok**	**43.39**	**277**	P	**P**	**16 32 53.2**	**+1.5**
	comp=Z,180nm,0.8s						
NOUC	**Port Laguerre**	**43.72**	**152**	P	**P**	**16 32 56.7**	**+2.4**
DZM	**Mont Dzumac**	**43.76**	**152**	eP	**P**	**16 32 56.3**	**+1.6**
	comp=Z,292nm,1.3s						
DZM				eS	**S**	**16 39 25.0**	**+0.5**
	comp=Z,935nm,29.1s						
DZM				eLR	LR	16 45 12.2	
	comp=Z,8µm,25.9s						
DZM	**Mont Dzumac**	**43.76**	**152**	LR	LR	16 49 53.7	
	comp=Z,5µm,20.2s,baz=342,slow=34						
DZM	**Mont Dzumac**	**43.76**	**152**	P	**P**	**16 32 56.0**	**+1.3**
DZM				IAmb	IAmb	16 32 58.5	
	comp=Z,138nm,1.2s						
DZM				IAMs_20	IAMs_20	16 49 43.7	
	comp=Z,5µm,20.0s						
DZM	**Mont Dzumac**	**43.76**	**152**	P	**P**	**16 32 57.4**	**+2.7**
JCJI	**Jatiwangi**	**43.92**	**241**	P	**P**	**16 32 58.6**	**+2.6**
	comp=Z,14µmcomp=Z,704nm,1.0s						
YATNC	**Mamie plateau,**	**43.95**	**151**	P	**P**	**16 32 59.9**	**+3.8**
ONTNC	**Ouen Toro**	**43.97**	**152**	P	**P**	**16 32 59.2**	**+2.9**
LAMP	**Lampang**	**43.99**	**279**	P	**P**	**16 32 57.6**	**+1.1**
	comp=Z,541nmcomp=Z,47nm,0.8s						
MYKOM	**Kota Tinggi**	**44.01**	**254**	IAMs_20	IAMs_20	16 50 37.1	
	comp=Z,3µm,20.0s						
MYKOM	**Kota Tinggi**	**44.01**	**254**	P	**P**	**16 32 57.0**	**+0.2**
SUKH	**Sukhothai**	**44.10**	**278**	P	**P**	**16 32 58.6**	**+1.2**
	comp=Z,54nm,1.6s						
ULN	**Ulaanbaatar**	**44.20**	**323**	ceP	**P**	**16 32 56.2**	**-1.9**
ULN				pmax	pmax		
	comp=Z,66nm,2.5s						
ULN	**Ulaanbaatar**	**44.20**	**323**	P	**P**	**16 32 58.6**	**+0.5**
ULN				S	**S**	**16 39 39.1**	**+8.5**
CM34	**Chiang Mai Arr**	**44.41**	**280**	P	**P**	**16 33 00.0**	**0.0**
CM35	**Chiang Mai Arr**	**44.42**	**279**	P	**P**	**16 33 00.0**	**-0.1**
CM36	**Chiang Mai Arr**	**44.49**	**279**	P	**P**	**16 33 01.0**	**+0.3**
UTHA	**Uthaitani**	**44.53**	**275**	P	**P**	**16 33 02.3**	**+1.4**
	comp=Z,728nmcomp=Z,58nm,1.5s						
SONM	**Songino Array**	**44.57**	**322**	P	**P**	**16 33 00.7**	**-0.3**
	comp=Z,3.3nm,1.0s,baz=135,slow=9.9,SNR=12						
SONM				LR	LR	16 51 26.0	
	comp=Z,2µm,19.4s,baz=116,slow=36						
SONM	**Songino Array**	**44.57**	**322**	P	**P**	**16 33 03.3**	**+2.3**
CM09	**Chiang Mai Arr**	**44.60**	**279**	P	**P**	**16 33 02.0**	**+0.5**
	comp=Z,542nmcomp=Z,61nm,1.0s						
CMMT	**Chiang Mai**	**44.60**	**280**	P	**P**	**16 33 00.9**	**-0.7**
	comp=Z,886nmcomp=Z,23nm,1.2s						
CM33	**Chiang Mai Arr**	**44.61**	**280**	P	**P**	**16 33 01.0**	**-0.6**
CHTO	**Chiang Mai**	**44.61**	**280**	P	**P**	**16 33 02.2**	**+0.6**
CHTO				pmax	pmax		
	comp=Z,49nm,1.1s						
CHTO				MLR	MLR		
	comp=Z,3µm,18.0s						
CHTO	**Chiang Mai**	**44.61**	**280**	P	**P**	**16 33 02.2**	**+0.6**
CHTO	**Chiang Mai**	**44.61**	**280**	IAMs_20	IAMs_20	16 52 56.0	
	comp=Z,3µm,18.0s						
CHTO	**Chiang Mai**	**44.61**	**280**	P	**P**	**16 33 02.1**	**+0.6**
CHTO				P	**P**	**16 33 02.1**	**+0.6**
CHTO				S	**S**	**16 39 35.6**	**-1.4**
CHTO				S	**S**	**16 39 35.6**	**-1.4**
CM04	**Chiang Mai Arr**	**44.62**	**279**	P	**P**	**16 33 02.5**	**+0.9**
	comp=Z,865nmcomp=Z,92nm,1.2s						
CM01	**Chiang Mai Arr**	**44.63**	**279**	P	**P**	**16 33 02.7**	**+0.9**
	comp=Z,849nmcomp=Z,68nm,1.1s						
CM02	**Chiang Mai Arr**	**44.64**	**279**	P	**P**	**16 33 02.8**	**+0.9**
	comp=Z,884nmcomp=Z,98nm,1.2s						
CM31	**Chiang Mai Arr**	**44.64**	**279**	P	**P**	**16 33 02.0**	**+0.1**
	comp=Z,18µmcomp=Z,1µm,0.8s						
CMAR	**Chiang Mai Arr**	**44.64**	**279**	P	**P**	**16 33 02.6**	**+0.8**
	comp=Z,26nm,0.8s,baz=71,slow=6.8,SNR=136						
CMAR				LR	LR	16 52 31.8	
	comp=Z,3µm,18.1s,baz=132,slow=37						
CMAR	**Chiang Mai Arr**	**44.64**	**279**	P	**P**	**16 33 02.0**	**+0.1**
CMAR	**Chiang Mai Arr**	**44.64**	**279**	P	**P**	**16 33 02.0**	**+0.1**
CM05	**Chiang Mai Arr**	**44.65**	**279**	P	**P**	**16 33 02.7**	**+0.8**
	comp=Z,601nmcomp=Z,58nm,1.1s						
CM15	**Chiang Mai Arr**	**44.66**	**279**	P	**P**	**16 33 02.0**	**0.0**
	comp=Z,633nmcomp=Z,66nm,1.0s						
CM13	**Chiang Mai Arr**	**44.68**	**279**	P	**P**	**16 33 03.0**	**+0.8**
	comp=Z,714nmcomp=Z,79nm,1.2s						
PINNC	**Pines Island,**	**44.69**	**151**	P	**P**	**16 33 04.8**	**+2.8**
CM32	**Chiang Mai Arr**	**44.72**	**280**	P	**P**	**16 33 03.0**	**+0.6**
PHET	**Kaeng Krachan**	**44.80**	**271**	P	**P**	**16 33 05.8**	**+2.6**
	comp=Z,520nmcomp=Z,49nm,1.0s						
CISI	**Cisompet, Garu**	**44.88**	**240**	P	**P**	**16 33 01.6**	**-2.2**
CISI	**Cisompet, Garu**	**44.88**	**240**	P	**P**	**16 33 01.7**	**-2.1**
	comp=Z,2µmcomp=Z,205nm,0.9s						
UMPA	**Umpang Tak**	**44.99**	**276**	P	**P**	**16 33 06.4**	**+1.8**
	comp=Z,1µmcomp=Z,101nm,1.4s						
SRDT	**SRDT**	**45.03**	**273**	P	**P**	**16 33 05.5**	**+0.5**
	comp=Z,30nm,1.8s						
CBJI	**Citeko**	**45.08**	**242**	P	**P**	**16 33 05.9**	**+0.6**
	comp=Z,76nm,0.9s						
DBJI	**Dramaga**	**45.23**	**242**	P	**P**	**16 33 06.5**	**-0.1**
	comp=Z,477µmcomp=Z,13µmcomp=Z,33nm,0.6s						
JMBI	**JAMBI**	**45.60**	**250**	P	**P**	**16 33 09.9**	**+0.4**
ADK	**Adak**	**45.63**	**32**	P	**P**	**16 33 11.1**	**+1.9**
ADK				pmax	pmax		
	comp=Z,173nm,1.3s						
ADK	**Adak**	**45.63**	**32**	P	**P**	**16 33 11.1**	**+1.9**
MHMT	**Maesarieng**	**45.63**	**279**	P	**P**	**16 33 09.0**	**-0.7**
	comp=Z,2µmcomp=Z,130nm,1.5s						
IPM	**Ipoh**	**45.69**	**259**	IAMs_20	IAMs_20	16 50 44.6	
	comp=Z,4µm,20.0s						
IPM	**Ipoh**	**45.69**	**259**	P	**P**	**16 33 11.0**	**+0.8**
GTA	**Gaotai**	**45.72**	**309**	⇓P	**P**	**16 33 11.0**	**+0.7**
GTA				PP	**PP**	**16 35 00.3**	**+2.9**
GTA				S	**S**	**16 39 55.3**	**+2.4**
GTA				sS	sS	16 40 08.0	+6.1
GTA				pmax	pmax		
	comp=Z,59nm,1.6s						
GTA				pmax	pmax		
	comp=Z,1µm,4.7s						
GTA				LR	LR		
	comp=Z,2µm,18.2s						
GTA				LR	LR		
	comp=Z,4µm,18.2s						
GTA				LR	LR		
	comp=Z,5µm,18.9s						
KULM	**Kulim**	**45.78**	**261**	IAMs_20	IAMs_20	16 49 10.1	
	comp=Z,3µm,22.0s						
KULM	**Kulim**	**45.78**	**261**	P	**P**	**16 33 11.0**	**+0.1**
MBWA	**Marble Bar**	**45.81**	**215**	P	**P**	**16 33 09.7**	**-1.2**
MBWA				P	**P**	**16 33 09.7**	**-1.2**
MBWA				S	**S**	**16 40 00.7**	**+6.7**
MBWA				S	**S**	**16 40 00.7**	**+6.7**
BLSI	**Bandar Lampung**	**45.92**	**245**	P	**P**	**16 33 11.7**	**-0.3**
	comp=Z,6µmcomp=Z,342nm,1.0s						
TRTT	**Trang**	**45.94**	**264**	P	**P**	**16 33 12.7**	**+0.6**
	comp=Z,2µmcomp=Z,64nm,1.6s						
PSAD1	**Pilbara Seismi**	**45.99**	**215**	P	**P**	**16 33 11.9**	**-0.5**
PSAD1				IAmb	IAmb	16 33 13.0	
	comp=Z,96nm,0.9s						
PSA00	**Pilbara Seismi**	**46.08**	**215**	P	**P**	**16 33 12.1**	**-0.9**
PSA00				IAmb	IAmb	16 33 13.7	
	comp=Z,118nm,1.1s						
SEY	**Seymchan**	**46.08**	**4**	P	**P**	**16 33 12.0**	**-0.6**
	comp=Z,3.6nm,0.9s,baz=200,slow=5.0,SNR=8.4						
SEY	**Seymchan**	**46.08**	**4**	P	**P**	**16 33 12.0**	**-0.6**
YAK	**Yakutsk**	**46.39**	**350**	LR	LR	16 51 47.0	
	comp=Z,1µm,21.7s,baz=158,slow=35						
YAK	**Yakutsk**	**46.39**	**350**	eP	**P**	**16 33 11.2**	**-3.8**
YAK				e*PP	**pwP**	**16 33 24.4**	**+1.0**
YAK				e		16 34 58.8	
YAK				eS	**S**	**16 39 57.7**	**-3.7**
YAK				e*SS	**sS**	**16 40 16.3**	**+6.0**
YAK				eSS	**ScS**	**16 43 14.7**	**+5.7**
YAK				eSSS	SSS	16 44 18.2	
YAK				pmax	pmax		
	comp=Z,16nm,0.8s						
YAK				pmax	pmax		
	comp=N,8.0nm,1.5s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.4s						
YAK				pmax	pmax		
	comp=Z,365nm,5.4s						
YAK				pmax	pmax		
	comp=N,237nm,4.6s						
YAK				pmax	pmax		
	comp=E,238nm,5.2s						
YAK				smax	smax		
	comp=N,219nm,3.0s						
YAK				smax	smax		
	comp=E,142nm,2.7s						
YAK				MLR	MLR		
	comp=E,1µm,19.0s						
YAK	**Yakutsk**	**46.39**	**350**	IAMs_20	IAMs_20	16 51 23.8	
	comp=Z,3µm,20.0s						
MDSI	**Maura Dua**	**46.42**	**246**	P	**P**	**16 33 14.6**	**-1.3**
	comp=Z,2µmcomp=Z,84nm,1.1s						
SURT	**Suratani**	**46.49**	**266**	P	**P**	**16 33 20.2**	**+3.6**
	comp=Z,2.3nm,1.2s						
KASI	**Kota Agung**	**46.64**	**245**	P	**P**	**16 33 16.2**	**-1.5**
	comp=Z,3µmcomp=Z,136nm,1.2s						
RNTT	**Ranong**	**46.69**	**267**	P	**P**	**16 33 13.8**	**-4.2**
LHSI	**Lahat**	**46.69**	**248**	P	**P**	**16 33 18.2**	**+0.2**
	comp=Z,3µmcomp=Z,80nm,0.9s						
LWLI	**Liwa**	**46.78**	**246**	P	**P**	**16 33 17.8**	**-1.1**
	comp=Z,4µmcomp=Z,318nm,0.9s						
MSVF	**Nonsavu**	**46.86**	**136**	P	**P**	**16 33 21.5**	**+2.2**
	comp=Z,48nm,1.1s,baz=323,slow=1.4,SNR=4.1						
MSVF				LR	LR	16 51 05.1	
	comp=Z,2µm,19.3s,baz=317,slow=34						
MSVF	**Nonsavu**	**46.86**	**136**	P	**P**	**16 33 20.8**	**+1.4**
MSVF	**Nonsavu**	**46.86**	**136**	P	**P**	**16 33 22.1**	**+2.8**
ATKA	**Atka Island**	**47.08**	**33**	P	**P**	**16 33 22.3**	**+1.8**
ATKA				IAmb	IAmb	16 33 39.5	
	comp=Z,107nm,1.2s						
BOD	**Bodaibo**	**47.11**	**337**	eP	**P**	**16 33 21.4**	**+0.7**
BOD				pmax	pmax		
	comp=Z,20nm,1.6s						
LKP	**Lekhapani**	**47.20**	**292**	eP	**P**	**16 33 23.0**	**+1.1**
PKDT	**Phuket**	**47.21**	**265**	P	**P**	**16 33 23.3**	**+1.1**
SDSI	**Sungai Dareh**	**47.31**	**252**	P	**P**	**16 33 23.3**	**+0.4**
	comp=Z,2µmcomp=Z,43nm,1.6s						
ARMA	**Armidale**	**47.49**	**173**	P	**P**	**16 33 24.7**	**+0.6**
ARMA				IAmb	IAmb	16 33 26.0	
	comp=Z,102nm,1.4s						
ARMA				IAMs_20	IAMs_20	16 50 44.2	
	comp=Z,3µm,22.0s						
ZAK	**Zakamensk**	**47.60**	**324**	eP	**P**	**16 33 22.3**	**-2.5**
ZAK				pmax	pmax		
	comp=Z,25nm,1.6s						
IRK	**Irkutsk**	**47.99**	**327**	eP	**P**	**16 33 29.6**	**+1.9**
IRK				pmax	pmax		
	comp=Z,76nm,2.6s						
DIBR	**DIBRUGARH**	**48.03**	**292**	eP	**P**	**16 33 29.2**	**+0.9**
TLY	**Talaya**	**48.04**	**326**	P	**P**	**16 33 28.5**	**+0.4**
	comp=Z,1.7nm,0.6s,baz=333,slow=18,SNR=0.8						
TLY				LR	LR	16 54 54.7	
	comp=Z,1µm,18.1s,baz=121,slow=38						
TLY	**Talaya**	**48.04**	**326**	eP	P	16 33 34.9	+6.8
TLY				e		16 35 00.2	
TLY				eS	**S**	**16 40 29.2**	**+3.8**
TLY				pmax	pmax		
	comp=Z,73nm,1.5s						
TLY				MLR	MLR		
	comp=Z,4µm,19.0s						
TLY	**Talaya**	**48.04**	**326**	P	**P**	**16 33 28.3**	**+0.2**
TLY				P	**P**	**16 33 28.3**	**+0.2**
TLY				S	**S**	**16 40 31.1**	**+5.8**
TLY				S	**S**	**16 40 31.1**	**+5.8**
XMI	**Christmas Isla**	**48.22**	**238**	P	**P**	**16 33 29.0**	**-0.9**
	comp=Z,243nm,1.4s						
PSI	**Prapat**	**48.23**	**258**	P	**P**	**16 33 30.8**	**+0.7**
	comp=Z,59nm,1.0s,baz=0.6,slow=1.7,SNR=38						
XMIS	**Christmas Isla**	**48.27**	**238**	P	**P**	**16 33 28.9**	**-1.3**
XMIS	**Christmas Isla**	**48.27**	**238**	P	**P**	**16 33 29.0**	**-1.3**
	comp=Z,180nm,1.3s						
MNSI	**Mandailing Nat**	**48.34**	**255**	P	**P**	**16 33 31.4**	**+0.5**
	comp=Z,2µmcomp=Z,70nm,1.0s						
MOKO	**MOKOCHONG**	**48.37**	**290**	eP	**P**	**16 33 31.8**	**+0.6**
MOKO				IAmb	IAmb	16 33 33.8	
	comp=Z,34nm,0.7s						
JORH	**JORHAT**	**48.61**	**291**	eP	**P**	**16 33 33.5**	**+0.7**
KOHI	**KOHIMA**	**48.74**	**289**	eP	**P**	**16 33 31.4**	**-2.7**
KOHI				IAmb	IAmb	16 33 36.7	
	comp=Z,219nm,2.0s						
STKA	**Stephens Creek**	**48.80**	**185**	P	**P**	**16 33 32.8**	**-1.3**
	comp=Z,8.5nm,0.8s,baz=1.1,slow=7.7,SNR=12						
ZIRO	**ZIRO**	**48.98**	**292**	eP	**P**	**16 33 36.5**	**+0.6**
MOY	**Mondy**	**49.48**	**325**	eP	**P**	**16 33 38.5**	**-0.8**
MOY				pmax	pmax		
	comp=Z,62nm,2.9s						
SAIH	**SAIHA**	**49.88**	**285**	eP	**P**	**16 33 43.2**	**+0.4**
SILR	**SILCHAR**	**49.94**	**288**	eP	**P**	**16 33 44.1**	**+1.1**
GSI	**Gunungsitoli**	**50.01**	**257**	P	**P**	**16 33 43.8**	**+0.1**
	comp=Z,5µmcomp=Z,474nm,1.0s						
NIKH	**Nikolski High**	**50.27**	**34**	P	**P**	**16 33 46.1**	**+1.0**
	baz=242						
BBOO	**Buckleboo**	**50.44**	**191**	IAmb	IAmb	16 33 47.0	
	comp=Z,102nm,1.1s						
SHL	**Shillong**	**50.75**	**289**	eP	**P**	**16 33 50.1**	**+0.7**
SHL				IAmb	IAmb	16 33 51.0	
	comp=Z,42nm,0.7s						
SHL	**Shillong**	**50.75**	**289**	P	**P**	**16 33 49.6**	**+0.2**
SHL				S	**S**	**16 41 03.3**	**-1.1**
GUWA	**GUWAHATI**	**50.91**	**290**	eP	**P**	**16 33 50.6**	**+0.3**
DGPR	**DIGLIPUR**	**51.16**	**273**	eP	**P**	**16 33 53.2**	**+0.9**
BELO	**BELONIA**	**51.25**	**286**	eP	**P**	**16 33 53.3**	**+0.3**
LSA	**Lhasa**	**51.40**	**295**	P	**P**	**16 33 56.3**	**+1.8**
LSA				S	**S**	**16 41 17.0**	**+3.1**

LSA				pmax	pmax		
	comp=Z,170nm,1.0s						
LSA				LR	LR		
	comp=Z,3µm,17.8s						
LSA				LR	LR		
	comp=Z,5µm,22.1s						
LSA				LR	LR		
	comp=Z,8µm,20.6s						
LSA	**Lhasa**	**51.40**	**295**	P	**P**	**16 33 56.1**	**+1.5**
LSA				pmax	pmax		
	comp=Z,85nm,1.0s						
LSA				MLR	MLR		
	comp=Z,2µm,20.0s						
LSA	**Lhasa**	**51.40**	**295**	P	**P**	**16 33 56.1**	**+1.5**
LSA				IAmb	IAmb	16 34 18.0	
	comp=Z,85nm,1.0s						
LSA				IAMs_20	IAMs_20	16 54 56.1	
	comp=Z,2µm,20.0s						
LSA	**Lhasa**	**51.40**	**295**	P	**P**	**16 33 55.9**	**+1.4**
LSA				P	**P**	**16 33 55.9**	**+1.4**
LSA				S	**S**	**16 41 19.0**	**+5.1**
LSA				S	**S**	**16 41 19.0**	**+5.1**
AGT	**Agartala**	**51.40**	**287**	*e*P	**P**	**16 33 54.4**	**+0.4**
AGT				IAmb	IAmb	16 33 59.0	
	comp=Z,211nm,1.3s						
SPIA	**Saint Paul Isl**	**51.70**	**29**	P	**P**	**16 33 57.0**	**+1.2**
	baz=238						
UNV	**Unalaska Valle**	**51.92**	**34**	P	**P**	**16 33 57.7**	**+0.2**
	baz=244						
UNV				S	**S**	**16 41 21.1**	**+1.6**
	baz=244						
UNV	**Unalaska Valle**	**51.92**	**34**	P	**P**	**16 33 59.3**	**+1.8**
AKUT	**Akutan**	**52.44**	**34**	P	**P**	**16 34 02.5**	**+1.2**
GTK	**Tadong**	**53.64**	**292**	*e*P	**P**	**16 34 11.4**	**+0.6**
FALS	**False Pass**	**53.99**	**34**	P	**P**	**16 34 13.1**	**+0.3**
	baz=246						
MORW	**Morawa**	**54.15**	**213**	P	**P**	**16 34 12.8**	**-1.4**
MORW				IAmb	IAmb	16 34 14.2	
	comp=Z,108nm,1.1s						
TOO	**Toolangi**	**54.31**	**180**	P	**P**	**16 34 14.8**	**-0.4**
TOO				pmax	pmax		
	comp=Z,70nm,1.2s						
TOO	**Toolangi**	**54.31**	**180**	P	**P**	**16 34 14.8**	**-0.4**
TOO				IAmb	IAmb	16 34 28.8	
	comp=Z,70nm,1.2s						
TIXI	**Tiksi**	**55.54**	**354**	*ce*P	**P**	**16 34 19.8**	**-3.9**
TIXI				pmax	pmax		
	comp=Z,25nm,1.7s						
TIXI	**Tiksi**	**55.54**	**354**	IAMs_20	IAMs_20	16 59 22.8	
	comp=Z,2µm,18.0s						
WMQ	**Urumqi**	**55.55**	**312**	P	**P**	**16 34 26.3**	**+2.0**
WMQ				pP	sP	16 34 31.5	-0.5
WMQ				sP	pwP	16 34 36.5	+4.2
WMQ				PP	**PP**	**16 36 33.5**	**+5.1**
WMQ				S	**S**	**16 42 11.0**	**+1.9**
WMQ				pmax	pmax		
	comp=Z,160nm,1.9s						
WMQ				pmax	pmax		
	comp=Z,2µm,7.9s						
WMQ				LR	LR		
	comp=Z,6µm,18.9s						
WMQ				LR	LR		
	comp=Z,4µm,22.7s						
WMQ				LR	LR		
	comp=Z,3µm,23.3s						
SDPT	**Sand Point**	**55.74**	**34**	P	**P**	**16 34 26.0**	**+0.6**
	baz=249						
SDPT				S	**S**	**16 42 11.9**	**+0.8**
	baz=249						
SDPT	**Sand Point**	**55.74**	**34**	P	**P**	**16 34 26.7**	**+1.3**
CHNA	**Chernabura Isl**	**56.03**	**35**	P	**P**	**16 34 27.1**	**-0.4**
	baz=250						
BOK	**Bokaro**	**56.30**	**288**	*e*P	**P**	**16 34 30.0**	**0.0**
NWAO	**Narrogin (SRO)**	**56.73**	**209**	LR	LR	16 58 52.2	
	comp=Z,998nm,21.6s,baz=31,slow=36						
NWAO	**Narrogin (SRO)**	**56.73**	**209**	P	**P**	**16 34 31.5**	**-1.2**
NWAO				pmax	pmax		
	comp=Z,45nm,1.0s						
NWAO	**Narrogin (SRO)**	**56.73**	**209**	P	**P**	**16 34 31.5**	**-1.2**
BWNR	**Bhubaneshwar**	**56.76**	**283**	*e*x	x	16 34 15.1	
DGZ	**Jazzator, Alta**	**56.89**	**319**	*i* P	**P**	**16 34 30.9**	**-3.0**
DGZ				pmax	pmax		
	comp=Z,37nm,1.1s						
CHGN	**Chignik**	**57.17**	**33**	P	**P**	**16 34 34.9**	**-0.6**
	baz=250						
ANM	**Nome**	**57.66**	**23**	P	**P**	**16 34 39.3**	**+0.4**
	baz=238						
ANM				S	**S**	**16 42 38.4**	**+2.2**
	baz=238						
ANM	**Nome**	**57.66**	**23**	P	**P**	**16 34 40.2**	**+1.3**
ANM				pmax	pmax		
	comp=Z,92nm,1.3s						
ANM	**Nome**	**57.66**	**23**	P	**P**	**16 34 40.2**	**+1.3**
ANM				IAmb	IAmb	16 35 00.2	
	comp=Z,92nm,1.3s						
RAO	**Raoul Island**	**57.77**	**142**	LR	LR	16 56 36.5	
	comp=Z,1µm,19.7s,baz=351,slow=33						
ZSN	**Zaisan**	**58.11**	**316**	*e*P	**P**	**16 34 40.3**	**-2.2**
	comp=Z,86nm,2.3s,baz=316						
ZSN	**Zaisan**	**58.11**	**316**	*e*P	**P**	**16 34 40.2**	**-2.2**
ZSN				pmax	pmax		
	comp=Z,86nm,2.3s						
ZALV	**Zalesovo Beam**	**59.45**	**323**	P	**P**	**16 34 49.7**	**-1.8**
	comp=Z,5.8nm,0.8s,baz=103,slow=6.7,SNR=24						
ZALV				LR	LR	17 00 03.3	
	comp=Z,1µm,19.7s,baz=104,slow=36						
ZALV				PKP2bc		17 04 30.9	
	comp=Z,1.4nm,0.9s,baz=270,slow=4.4,SNR=4.4						
ZALV	**Zalesovo Beam**	**59.45**	**323**	P	**P**	**16 34 51.2**	**-0.4**
ZALV	**Zalesovo Beam**	**59.45**	**323**	P	**P**	**16 34 51.2**	**-0.4**
SII	**Sitkinak Islan**	**59.48**	**34**	P	**P**	**16 34 52.1**	**+0.4**
	baz=254						
SII				S	**S**	**16 43 02.8**	**+2.6**
	baz=254						
TAU	**Tasmania Unive**	**59.65**	**179**	P	**P**	**16 34 53.1**	**+0.1**
TAU				pmax	pmax		
	comp=Z,75nm,1.4s						
TAU				MLR	MLR		
	comp=Z,3µm,22.0s						
TAU	**Tasmania Unive**	**59.65**	**179**	P	**P**	**16 34 53.1**	**+0.1**
TAU				IAmb	IAmb	16 35 09.2	
	comp=Z,75nm,1.4s						
TAU				IAMs_20	IAMs_20	16 57 03.8	
	comp=Z,3µm,22.0s						
MK31	**Makanchi Array**	**59.76**	**315**	P	**P**	**16 34 54.1**	**+0.2**
MK31				pmax	pmax		
	comp=Z,34nm,1.3s						
MK31	**Makanchi Array**	**59.76**	**315**	P	**P**	**16 34 54.0**	**+0.2**
MKAR	**Makanchi Array**	**59.76**	**315**	P	**P**	**16 34 53.0**	**-0.9**
	comp=Z,6.7nm,0.8s,baz=94,slow=8.8,SNR=60						
MKAR				LR	LR	17 02 32.9	
	comp=Z,1µm,18.3s,baz=92,slow=38						
MKAR				PKP2bc		17 04 32.5	
	comp=Z,1.2nm,1.0s,baz=299,slow=2.5,SNR=4.4						
MKAR	**Makanchi Array**	**59.76**	**315**	P	**P**	**16 34 54.3**	**+0.4**
MKAR	**Makanchi Array**	**59.76**	**315**	P	**P**	**16 34 54.3**	**+0.4**
MAKZ	**Makanchi**	**59.97**	**315**	P	**P**	**16 34 55.8**	**+0.5**
MAKZ				pmax	pmax		
	comp=Z,105nm,1.4s						
MAKZ				MLR	MLR		
	comp=Z,2µm,21.0s						
MAKZ	**Makanchi**	**59.97**	**315**	P	**P**	**16 34 55.8**	**+0.5**
MAKZ				IAmb	IAmb	16 35 14.1	
	comp=Z,105nm,1.4s						
MAKZ				IAMs_20	IAMs_20	17 00 42.5	
	comp=Z,2µm,21.0s						
OHAK	**Old Harbor**	**60.14**	**33**	P	**P**	**16 34 57.2**	**+1.0**
	baz=254,SNR=18						
OHAK				S	**S**	**16 43 11.9**	**+3.4**
	baz=254						
OHAK	**Old Harbor**	**60.14**	**33**	P	**P**	**16 34 57.5**	**+1.3**
RDOG	**Red Dog Mine**	**60.33**	**20**	IAmb	IAmb	16 35 24.1	
	comp=Z,84nm,1.2s						
TTA	**Tatalina**	**60.65**	**26**	P	**P**	**16 35 00.2**	**+0.4**
	baz=249						
TTA	**Tatalina**	**60.65**	**26**	P	**P**	**16 34 59.3**	**-0.5**
TTA				pmax	pmax		
	comp=Z,41nm,1.0s						
TTA	**Tatalina**	**60.65**	**26**	P	**P**	**16 34 59.3**	**-0.5**
KDAK	**Kodiak Island**	**60.65**	**33**	P	**P**	**16 35 00.6**	**+0.9**
	comp=Z,24nm,1.1s						
KDAK				LR	LR	16 59 31.3	
	comp=Z,803nm,19.8s,baz=257,slow=34						
KDAK	**Kodiak Island**	**60.65**	**33**	P	**P**	**16 35 00.3**	**+0.6**
	baz=255						
KDAK				S	**S**	**16 43 16.4**	**+1.3**
	baz=255						
KDAK	**Kodiak Island**	**60.65**	**33**	P	**P**	**16 35 00.7**	**+0.9**
KDAK				pmax	pmax		
	comp=Z,70nm,1.1s						
KDAK				MLR	MLR		
	comp=Z,2µm,22.0s						
KDAK	**Kodiak Island**	**60.65**	**33**	P	**P**	**16 35 00.7**	**+1.0**
KDAK				IAmb	IAmb	16 35 27.9	
	comp=Z,70nm,1.1s						
KDAK	**Kodiak Island**	**60.65**	**33**	IAMs_20	IAMs_20	16 56 04.6	
	comp=Z,2µm,22.0s						
PDGK	**Podgornoye**	**61.42**	**310**	*i* P	**P**	**16 35 05.4**	**0.0**
PDGK				pmax	pmax		
	comp=Z,62nm,0.9s						
SHLS	**Shalkode**	**61.43**	**310**	*e*P	**P**	**16 35 01.4**	**-4.1**
	comp=Z,117nm,1.8s,baz=310						
SHLS				*e*S	**S**	**16 43 19.4**	**-6.5**
	baz=310						
SHLS	**Shalkode**	**61.43**	**310**	*e*P	**P**	**16 35 01.3**	**-4.1**
SHLS				*e*S	**S**	**16 43 19.3**	**-6.5**
SHLS				pmax	pmax		
	comp=Z,117nm,1.8s						
HIZ	**Hauiti**	**61.56**	**154**	IAMs_20	IAMs_20	16 59 03.0	
	comp=Z,3µm,21.0s						
SEM	**Semipalatinsk**	**61.57**	**318**	*e*P	**P**	**16 35 03.3**	**-3.1**
	comp=Z,46nm,1.6s,baz=318						
SEM				*e*S	**S**	**16 43 23.9**	**-3.6**
	baz=318						
SEM	**Semipalatinsk**	**61.57**	**318**	*e*P	**P**	**16 35 03.3**	**-3.1**
SEM				*e*S	**S**	**16 43 23.9**	**-3.6**
SEM				pmax	pmax		
	comp=Z,46nm,1.6s						
HOM	**Homer**	**61.62**	**31**	P	**P**	**16 35 05.9**	**-0.4**
	baz=255						
UZB	**Uzynbulak**	**61.75**	**310**	*e*P	**P**	**16 35 05.5**	**-2.2**
	comp=Z,87nm,1.6s,baz=310						
UZB				*e*S	**S**	**16 43 27.1**	**-2.9**
	baz=310						
UZB	**Uzynbulak**	**61.75**	**310**	*e*P	**P**	**16 35 05.4**	**-2.2**
UZB				*e*S	**S**	**16 43 27.0**	**-2.9**
UZB				pmax	pmax		
	comp=Z,87nm,1.6s						
SPCR	**Spurr Chakacha**	**61.78**	**29**	P	**P**	**16 35 07.4**	**0.0**
	baz=253						
SPCR				S	**S**	**16 43 29.6**	**+0.1**
	baz=253						
KPKS	**Kokpek**	**62.01**	**311**	*e*P	**P**	**16 35 07.6**	**-1.7**
	comp=Z,162nm,2.2s,baz=310						
KPKS	**Kokpek**	**62.01**	**311**	*e*P	**P**	**16 35 07.6**	**-1.7**
KPKS				pmax	pmax		
	comp=Z,162nm,2.2s						
BRLK	**Bradley Lake**	**62.02**	**31**	IAmb	IAmb	16 35 31.3	
	comp=Z,73nm,1.0s						
BRSE	**Bradley Lake S**	**62.09**	**31**	P	**P**	**16 35 09.4**	**0.0**
	baz=255						
CAPN	**Captain Cook N**	**62.15**	**30**	P	**P**	**16 35 10.5**	**+0.7**
	baz=254						
CAPN				S	**S**	**16 43 34.9**	**+0.9**
	baz=254						
SATY	**Saty**	**62.20**	**310**	*e*P	**P**	**16 35 08.6**	**-2.0**
	comp=Z,117nm,1.8s,baz=310						
SATY				*e*S	**S**	**16 43 33.0**	**-2.5**
	baz=310						
SATY	**Saty**	**62.20**	**310**	*e*P	**P**	**16 35 08.6**	**-2.0**
SATY				*e*S	**S**	**16 43 33.0**	**-2.5**
SATY				pmax	pmax		
	comp=Z,117nm,1.8s						
PPLA	**Purkeypile**	**62.29**	**27**	P	**P**	**16 35 11.5**	**+0.5**
	baz=252,SNR=15						
PPLA				S	**S**	**16 43 36.6**	**+0.4**
	baz=252						
TDK	**Taldyqorghan**	**62.29**	**312**	*e*P	**P**	**16 35 09.9**	**-1.2**
	comp=Z,414nm,2.3s,baz=312						
TDK				*e*S	**S**	**16 43 34.8**	**-1.7**
	baz=312						
TDK	**Taldyqorghan**	**62.29**	**312**	*e*P	**P**	**16 35 09.9**	**-1.2**
TDK				*e*S	**S**	**16 43 34.7**	**-1.7**
TDK				pmax	pmax		
	comp=Z,414nm,2.3s						
URZ	**Urewera**	**62.31**	**153**	LR	LR	16 57 54.3	
	comp=Z,1µm,21.2s,baz=24,slow=32						
URZ	**Urewera**	**62.31**	**153**	IAMs_20	IAMs_20	16 57 43.6	
	comp=Z,2µm,20.0s						
SKT	**Skwentna**	**62.31**	**28**	P	**P**	**16 35 10.6**	**-0.3**
	baz=254,SNR=19						
SKT	**Skwentna**	**62.31**	**28**	P	**P**	**16 35 10.2**	**-0.7**
SKT				IAmb	IAmb	16 35 33.6	
	comp=Z,57nm,1.0s						
CAST	**Castle Rocks**	**62.49**	**27**	P	**P**	**16 35 10.3**	**-1.9**
	baz=252						
SUA	**Susitna One**	**62.53**	**29**	P	**P**	**16 35 12.0**	**-0.5**
	baz=254,SNR=8.9						
SUA	**Susitna One**	**62.53**	**29**	P	**P**	**16 35 12.9**	**+0.4**
CHUM	**Lake Minchumin**	**62.54**	**26**	P	**P**	**16 35 13.2**	**+0.9**
	baz=252,SNR=11						
CHUM				S	**S**	**16 43 40.3**	**+1.4**
	baz=252						
KURK	**Kurchatov**	**62.64**	**319**	*ce*P	**P**	**16 35 11.1**	**-2.1**
KURK				pmax	pmax		
	comp=Z,74nm,1.3s						
KURK	**Kurchatov**	**62.64**	**319**	P	**P**	**16 35 13.2**	**0.0**
KURK				IAmb	IAmb	16 35 35.1	
	comp=Z,84nm,1.2s						
KURK	**Kurchatov**	**62.64**	**319**	P	**P**	**16 35 13.8**	**+0.6**
KURK				P	**P**	**16 35 13.8**	**+0.6**
QRZ	**Quartz Range**	**62.65**	**157**	P	**P**	**16 35 14.2**	**+0.9**
QRZ				IAMs_20	IAMs_20	16 59 42.5	
	comp=Z,2µm,21.0s						
IMAR	**Indian Mountai**	**62.66**	**24**	P	**P**	**16 35 13.8**	**+0.6**
DDI	**Dehra Dun**	**62.73**	**296**	*e*P	**P**	**16 35 14.4**	**+0.1**
DDI				IAmb	IAmb	16 35 16.2	
O22K	**Cooper Landing**	**62.76**	**30**	P	**P**	**16 35 13.9**	**0.0**
	baz=256,SNR=8.0						
O22K				S	**S**	**16 43 40.7**	**-1.0**
	baz=256						
BKZ	**Black Stump Fm**	**62.80**	**154**	P	**P**	**16 35 14.4**	**0.0**
BKZ				IAMs_20	IAMs_20	16 58 31.8	
	comp=Z,3µm,22.0s						
SEW	**Seward**	**62.80**	**31**	P	**P**	**16 35 14.3**	**+0.1**
	baz=256,SNR=20						
SEW				S	**S**	**16 43 42.0**	**-0.2**
	baz=256						
SEW	**Seward**	**62.80**	**31**	P	**P**	**16 35 15.0**	**+0.8**
RC01	**Rabbit Creek A**	**62.91**	**29**	P	**P**	**16 35 14.8**	**-0.1**
	baz=256,SNR=23						
CUT	**Chulitna**	**63.00**	**28**	P	**P**	**16 35 15.1**	**-0.3**
	baz=254						
CUT				S	**S**	**16 43 43.7**	**-1.0**
	baz=254						
BPAW	**Bear Paw Mtn.**	**63.16**	**26**	P	**P**	**16 35 16.9**	**+0.3**
	baz=253						
BPAW				S	**S**	**16 43 48.6**	**+1.8**
	baz=253						
MDOK	**Medeo**	**63.19**	**310**	*e*P	**P**	**16 35 15.4**	**-1.9**
	baz=310						
MDOK	**Medeo**	**63.19**	**310**	*e*P	**P**	**16 35 15.4**	**-1.9**
NRIK	**Noril'sk**	**63.24**	**340**	P	**P**	**16 35 15.2**	**-1.7**
	comp=Z,5.2nm,0.9s,baz=111,slow=5.8,SNR=9.0						
NRIK				LR	LR	17 03 11.7	
	comp=Z,2µm,18.4s,baz=120,slow=36						
NRIK	**Noril'sk**	**63.24**	**340**	*ce*P	**P**	**16 35 13.0**	**-3.9**
NRIK				pmax	pmax		
	comp=Z,17nm,1.1s						
NRIK	**Noril'sk**	**63.24**	**340**	IAMs_20	IAMs_20	17 03 18.9	
	comp=Z,2µm,18.0s						
CHKK	**Chushkaly**	**63.26**	**311**	*e*P	**P**	**16 35 16.5**	**-1.1**
	baz=311						
CHKK	**Chushkaly**	**63.26**	**311**	*e*P	**P**	**16 35 16.4**	**-1.1**
MDRS	**Chennai**	**63.27**	**276**	*e*P	**P**	**16 35 18.2**	**+0.2**
MDRS				IAmb	IAmb	16 35 20.2	
	comp=Z,122nm,1.3s						
TRF	**Thorofare Moun**	**63.28**	**27**	P	**P**	**16 35 17.1**	**-0.4**
	baz=254,SNR=20						
TRF				S	**S**	**16 43 46.9**	**-1.6**
	baz=254						
AAA	**Alma-Ata**	**63.29**	**310**	*e*P	**P**	**16 35 16.8**	**-1.1**
	comp=Z,409nm,1.7s,baz=310						
AAA				*e*S	**S**	**16 43 47.4**	**-1.8**
	baz=310						
AAA	**Alma-Ata**	**63.29**	**310**	*e*P	**P**	**16 35 16.8**	**-1.1**
AAA				*e*S	**S**	**16 43 47.4**	**-1.8**
AAA				pmax	pmax		
	comp=Z,409nm,1.7s						
NNZ	**Nelson**	**63.30**	**157**	P	**P**	**16 35 17.8**	**+0.1**
NNZ				IAMs_20	IAMs_20	17 00 29.9	
	comp=Z,2µm,21.0s						
SMLA	**Simla**	**63.42**	**297**	*e*P	**P**	**16 35 18.6**	**-0.2**
SMLA				IAmb	IAmb	16 35 20.8	
MLY	**Manley**	**63.54**	**25**	P	**P**	**16 35 19.4**	**+0.3**
	baz=253,SNR=39						
MLY				S	**S**	**16 43 52.2**	**+0.6**
	baz=253						
THZ	**Tophouse**	**63.60**	**158**	P	**P**	**16 35 20.1**	**+0.4**
THZ				IAMs_20	IAMs_20	17 00 42.8	
	comp=Z,2µm,20.0s						
KUU	**Kurty**	**63.73**	**311**	*e*P	**P**	**16 35 18.4**	**-2.2**
	comp=Z,290nm,1.8s,baz=311						
KUU				*e*S	**S**	**16 43 51.6**	**-2.9**
	baz=311						
KUU	**Kurty**	**63.73**	**311**	*e*P	**P**	**16 35 18.4**	**-2.2**
KUU				*e*S	**S**	**16 43 51.6**	**-2.9**
KUU				pmax	pmax		
	comp=Z,290nm,1.8s						
SML	**Sawmill**	**63.73**	**29**	P	**P**	**16 35 20.5**	**0.0**
	baz=257,SNR=41						
SML				S	**S**	**16 43 55.5**	**+1.5**
	baz=257						
A21K	**Barrow**	**63.82**	**18**	P	**P**	**16 35 20.9**	**+0.2**
	baz=244						
A21K				S	**S**	**16 43 55.1**	**+0.4**
	baz=244						
SNZO	**South Karori**	**63.89**	**156**	IAMs_20	IAMs_20	17 00 08.4	
	comp=Z,2µm,22.0s						
MCK	**McKinley**	**63.94**	**27**	P	**P**	**16 35 21.3**	**-0.4**
	baz=255,SNR=16						
MCK				S	**S**	**16 43 54.0**	**-2.4**
	baz=255						
BFZ	**Birch Farm**	**63.97**	**155**	IAmb	IAmb	16 35 23.9	
	comp=Z,52nm,1.0s						
BFZ				IAMs_20	IAMs_20	17 00 11.6	
	comp=Z,3µm,22.0s						
KSH	**Kashi**	**63.99**	**306**	P	**P**	**16 35 25.5**	**+2.9**
KSH				sP	pwP	16 35 34.8	+4.1
KSH				PP	**PP**	**16 37 48.8**	**+5.5**
KSH				S	**S**	**16 43 57.8**	**-0.3**
KSH				ScS	**SKSac**	**16 45 15.0**	**-0.9**
KSH				SS	**SS**	**16 48 13.3**	**+6.5**
KSH				pmax	pmax		
	comp=Z,130nm,1.4s						
KSH				pmax	pmax		
	comp=Z,1µm,8.8s						
KSH				LR	LR		
	comp=Z,1µm,9.8s						
KSH				LR	LR		
	comp=Z,710nm,9.0s						
KSH				LR	LR		
	comp=Z,1µm,12.3s						
HYB	**Hyderabad**	**63.99**	**281**	*i* P	**P**	**16 35 21.0**	**-1.9**
HYB	**Hyderabad**	**63.99**	**281**	*e*P	**P**	**16 35 22.8**	**-0.1**
HYB				IAmb	IAmb	16 35 23.2	
	comp=Z,42nm,0.7s						
DHRM	**DHARAMSHALA**	**64.07**	**298**	IAmb	IAmb	16 35 22.8	
	comp=Z,176nm,1.3s						
DHRM				*e*P	**P**	**16 35 23.3**	**-0.1**
BHPL	**Bhopal**	**64.08**	**288**	*e*P	**P**	**16 35 22.9**	**-0.5**
BHPL				IAmb	IAmb	16 35 23.5	
	comp=Z,451nm,2.7s						
NEA2	**Nenana**	**64.10**	**26**	P	**P**	**16 35 22.3**	**-0.5**
	baz=255,SNR=24						
NEA2				S	**S**	**16 43 59.7**	**+1.3**
	baz=255						
GLI	**Glacier Island**	**64.11**	**30**	P	**P**	**16 35 23.1**	**+0.2**
	baz=258						
GLI				S	**S**	**16 43 59.7**	**+1.1**
	baz=258						
I23K	**Minto, Yukon-K**	**64.13**	**25**	P	**P**	**16 35 23.3**	**+0.4**
	baz=254,SNR=30						
I23K				S	**S**	**16 43 59.5**	**+0.8**
	baz=254						
I23K	**Minto, Yukon-K**	**64.13**	**25**	IAmb	IAmb	16 35 32.2	
	comp=Z,104nm,1.4s						
Q23K	**Middleton Isla**	**64.20**	**32**	P	**P**	**16 35 24.5**	**+1.2**
	baz=260						
Q23K				S	**S**	**16 44 02.4**	**+2.7**
	baz=260						
PALK	**Pallekele**	**64.22**	**270**	P	**P**	**16 35 21.6**	**-2.8**
PALK				pmax	pmax		
	comp=Z,48nm,1.4s						
PALK				MLR	MLR		
	comp=Z,2µm,22.0s						
PALK	**Pallekele**	**64.22**	**270**	P	**P**	**16 35 21.6**	**-2.8**
PALK	**Pallekele**	**64.22**	**270**	IAMs_20	IAMs_20	16 59 53.4	
	comp=Z,2µm,22.0s						
PALK	**Pallekele**	**64.22**	**270**	P	**P**	**16 35 24.3**	**-0.2**
PALK				P	**pP**	**16 35 24.6**	**-5.3**
TKM2	**Tokmak 2**	**64.25**	**310**	P	**P**	**16 35 25.0**	**+0.6**
	SNR=13						
TKM2	**Tokmak 2**	**64.25**	**310**	*i* P	**P**	**16 35 24.4**	**0.0**
TKM2				pmax	pmax		
	comp=Z,69nm,1.4s						
HIN	**Hinchinbrook I**	**64.30**	**31**	IAmb	IAmb	16 35 48.7	
	comp=Z,84nm,1.1s						
KHZ	**Kahutara**	**64.41**	**158**	IAmb	IAmb	16 35 24.3	
	comp=Z,77nm,1.4s						
COLD	**Coldfoot**	**64.41**	**23**	P	**P**	**16 35 24.8**	**+0.1**
	baz=252,SNR=30						
COLD				S	**S**	**16 44 03.8**	**+1.6**
	baz=252						
WRH	**Wood River Hil**	**64.48**	**26**	IAmb	IAmb	16 35 48.3	
	comp=Z,71nm,1.2s						
CCB	**Clear Creek Bu**	**64.64**	**26**	IAmb	IAmb	16 35 54.7	
	comp=Z,65nm,1.4s						
OXZ	**Oxford**	**64.67**	**159**	IAmb	IAmb	16 35 26.8	
	comp=Z,42nm,0.9s						
OXZ				IAMs_20	IAMs_20	17 02 01.0	
	comp=Z,3µm,20.0s						
TCOL	**CIGO, UAF Yank**	**64.68**	**26**	P	**P**	**16 35 25.6**	**-0.8**
	baz=256						
TCOL				S	**S**	**16 44 08.0**	**+2.5**
	baz=256						
COLA	**College**	**64.68**	**26**	P	**P**	**16 35 25.6**	**-0.8**
	baz=256						
COLA				S	**S**	**16 44 08.0**	**+2.5**
	baz=256						
COLA	**College**	**64.68**	**26**	*i* P	**P**	**16 35 24.5**	**-2.0**
COLA				pmax	pmax		
	comp=Z,31nm,1.2s						
RPZ	**Rata Peaks**	**64.69**	**160**	LR	LR	16 59 12.1	
	comp=Z,1µm,20.7s,baz=322,slow=32						
RPZ	**Rata Peaks**	**64.69**	**160**	P	**P**	**16 35 26.0**	**-0.8**
RPZ				IAmb	IAmb	16 35 29.1	
	comp=Z,76nm,1.0s						
RPZ				IAMs_20	IAMs_20	17 00 07.4	
	comp=Z,2µm,21.0s						
EYAK	**Cordova Ski Ar**	**64.70**	**31**	P	**P**	**16 35 27.1**	**+0.5**
	baz=260,SNR=7.8						
EYAK	**Cordova Ski Ar**	**64.70**	**31**	IAmb	IAmb	16 35 50.4	
	comp=Z,76nm,1.1s						
KLU	**Klutina**	**64.79**	**29**	P	**P**	**16 35 27.8**	**+0.5**
	baz=259						
KLU				S	**S**	**16 44 07.3**	**+0.1**
	baz=259						
M24K	**Tolsona, Glenn**	**64.79**	**29**	P	**P**	**16 35 28.2**	**+0.8**
	baz=258,SNR=8.7						
M24K				S	**S**	**16 44 10.5**	**+3.3**
	baz=258						
M24K	**Tolsona, Glenn**	**64.79**	**29**	P	**P**	**16 35 27.9**	**+0.5**
M24K				IAmb	IAmb	16 35 51.2	
	comp=Z,70nm,1.1s						
CHMS	**Chumysh**	**64.87**	**310**	P	**P**	**16 35 28.5**	**+0.3**
	SNR=26						
POKR	**Poker Plat Res**	**64.91**	**25**	P	**P**	**16 35 27.3**	**-0.8**
	baz=256						
HDA	**Harding Lake**	**64.95**	**26**	P	**P**	**16 35 26.8**	**-1.4**
	baz=257						
HDA	**Harding Lake**	**64.95**	**26**	P	**P**	**16 35 28.0**	**-0.3**
SGDS	**Sogindy**	**64.96**	**310**	*e*P	**P**	**16 35 26.7**	**-2.1**
	comp=Z,39nm,2.0s,baz=310						
SGDS	**Sogindy**	**64.96**	**310**	*e*P	**P**	**16 35 26.7**	**-2.1**
SGDS				pmax	pmax		
	comp=Z,39nm,2.0s						
LBZ	**Lake Benmore**	**65.02**	**161**	P	**P**	**16 35 28.4**	**-0.5**
UCH	**Uchtor**	**65.06**	**309**	P	**P**	**16 35 31.1**	**+1.1**
	SNR=60						
USP	**Ospenovka**	**65.06**	**310**	P	**P**	**16 35 29.5**	**+0.1**
	SNR=26						
IL31		**65.06**	**26**	P	**P**	**16 35 28.1**	**-0.8**
IL31				IAmb	IAmb	16 35 48.5	
	comp=Z,103nm,1.5s						
ILAR	**Eielson Array**	**65.06**	**26**	P	**P**	**16 35 27.5**	**-1.5**
	comp=Z,8.8nm,0.7s,baz=257,slow=4.9,SNR=79						
ILAR				LR	LR	17 05 51.9	
	comp=Z,333nm,18.2s,baz=262,slow=38						
ILAR	**Eielson Array**	**65.06**	**26**	P	**P**	**16 35 28.0**	**-1.0**

ILAR	Eielson Array	65.06	26	P	P	16 35 28.0	-1.0
AAK	Ala-Archa	65.06	310	P	P	16 35 29.8	+0.2
	SNR=16						
AAK	Ala-Archa	65.06	310	*i* P	P	16 35 29.4	-0.2
AAK				pmax	pmax		
	comp=Z,141nm,1.5s						
AAK	Ala-Archa	65.06	310	IAMs_20	IAMs_20	17 07 23.1	
	comp=Z,2µm,18.0s						
AAK	Ala-Archa	65.06	310	P	P	16 35 29.9	+0.2
TOLK	Toolik Lake Re	65.07	21	P	P	16 35 29.6	+0.5
	baz=252,SNR=33						
TOLK				S	S	16 44 12.6	+2.3
	baz=252						
TOLK	Toolik Lake Re	65.07	21	P	P	16 35 29.9	+0.8
TOLK				IAmb	IAmb	16 35 56.0	
	comp=Z,67nm,1.1s						
RAGM	Ragged Mountai	65.19	31	IAmb	IAmb	16 35 52.4	
	comp=Z,79nm,1.2s						
KAIM	Kayak Island	65.25	31	P	P	16 35 29.7	-0.6
	baz=261						
PAX	Paxson	65.28	28	P	P	16 35 30.6	+0.1
	baz=259,SNR=33						
PAX				S	S	16 44 13.3	+0.1
	baz=259						
PAX	Paxson	65.28	28	IAmb	IAmb	16 35 57.3	
	comp=Z,72nm,1.3s						
BMRM	Bremner River	65.32	30	P	P	16 35 31.3	+0.5
	baz=260,SNR=20						
BMRM				S	S	16 44 16.0	+2.3
	baz=260						
BTLS	Baital	65.38	312	*e*P	P	16 35 29.3	-2.2
	comp=Z,115nm,2.7s,baz=312						
BTLS	Baital	65.38	312	*e*P	P	16 35 29.2	-2.2
BTLS				pmax	pmax		
	comp=Z,115nm,2.7s						
HMT	Hamilton	65.39	31	IAmb	IAmb	16 35 55.0	
	comp=Z,72nm,1.2s						
N25K	Chitina, Valde	65.44	29	P	P	16 35 32.3	+0.7
	baz=260,SNR=22						
N25K				S	S	16 44 16.7	+1.6
	baz=260						
N25K	Chitina, Valde	65.44	29	IAmb	IAmb	16 35 56.4	
	comp=Z,73nm,1.2s						
SUCK	Suckling Hills	65.59	31	P	P	16 35 34.1	+1.6
SUCK				IAmb	IAmb	16 36 02.9	
	comp=Z,69nm,1.2s						
EKS2	Erkin-Say	65.59	310	P	P	16 35 33.8	+0.8
	SNR=27						
AML	Almayashu	65.67	309	P	P	16 35 34.7	+0.9
	SNR=40						
BGLC	Bering Glacier	65.84	31	S	S	16 44 21.4	+1.6
	baz=262						
VRDI	Verde Repeater	65.92	30	IAmb	IAmb	16 36 01.6	
	comp=Z,73nm,1.1s						
CRQM	Cirque	66.00	31	IAmb	IAmb	16 35 58.5	
	comp=Z,68nm,0.9s						
DOT	Dot Lake	66.04	27	IAmb	IAmb	16 35 55.2	
	comp=Z,46nm,0.9s						
DOT				IAMs_20	IAMs_20	16 59 27.0	
	comp=Z,2µm,21.0s						
MENT	Mentasta	66.07	28	IAMs_20	IAMs_20	16 59 41.9	
	comp=Z,2µm,20.0s						
SCRK	Sand Creek	66.13	27	P	P	16 35 35.9	-0.1
	baz=260,SNR=36						
SCRK				S	S	16 44 22.2	-1.4
	baz=260						
MCARA	McCarthy VSAT	66.15	30	P	P	16 35 36.6	+0.6
	baz=262,SNR=20						
TGL	Tana Glacier	66.15	31	IAmb	IAmb	16 36 05.8	
	comp=Z,101nm,1.3s						
BRZS	Berezniki	66.38	318	*e*P	P	16 35 34.6	-3.2
	comp=Z,30nm,1.9s,baz=318						
BRZS				*e*S	S	16 44 23.2	-3.7
	baz=318						
BRZS	Berezniki	66.38	318	*e*P	P	16 35 34.6	-3.2
BRZS				*e*S	S	16 44 23.1	-3.8
BRZS				pmax	pmax		
	comp=Z,30nm,1.9s						
NIL	Nilore	66.51	300	P	P	16 35 39.9	+1.0
NIL				pmax	pmax		
	comp=Z,388nm,1.2s						
NIL				MLR	MLR		
	comp=Z,2µm,20.0s						
NIL	Nilore	66.51	300	P	P	16 35 39.9	+1.0
NIL	Nilore	66.51	300	IAMs_20	IAMs_20	17 07 38.7	
	comp=Z,2µm,20.0s						
NIL	Nilore	66.51	300	P	P	16 35 39.4	+0.4
NIL				P	P	16 35 39.4	+0.4
BMAR	Burnt Mountain	66.57	23	P	P	16 35 39.9	+1.1
YAH	Yahtse	66.63	31	IAmb	IAmb	16 36 06.9	
	comp=Z,102nm,1.2s						
CTGM	Chitina Glacie	66.90	30	IAmb	IAmb	16 36 08.3	
	comp=Z,86nm,1.2s						
TABL	Table Mountain	66.94	31	IAmb	IAmb	16 36 05.1	
	comp=Z,70nm,0.9s						
BCAR	Beaver Creek A	66.96	28	P	P	16 35 41.4	+0.2
PCA	Pinnacle	67.34	31	IAMs_20	IAMs_20	17 00 37.7	
	comp=Z,1µm,18.0s						
DZA	Taraz	67.39	310	*e*P	P	16 35 42.6	-1.8
	baz=310						
DZA				*e*S	S	16 44 36.9	-2.5
	baz=310						
DZA	Taraz	67.39	310	*e*P	P	16 35 42.6	-1.8
DZA				*e*S	S	16 44 36.8	-2.5
EGAK	Eagle	67.47	26	P	P	16 35 44.6	+0.2
	baz=262						
EGAK				S	S	16 44 39.8	+0.3
	baz=262						
EGAK	Eagle	67.47	26	P	P	16 35 45.1	+0.7
EGAK				IAmb	IAmb	16 36 08.6	
	comp=Z,49nm,1.1s						
TRD	Trivandrum	67.49	272	*e*P	P	16 35 46.5	+1.1
TRD				IAmb	IAmb	16 35 46.8	
	comp=Z,5µm,3.3s						
BRVK	Borovoye	67.94	321	P	P	16 35 47.3	-0.3
BRVK				pmax	pmax		
	comp=Z,52nm,1.2s						
BRVK				MLR	MLR		
	comp=Z,2µm,20.0s						
BRVK	Borovoye	67.94	321	P	P	16 35 47.3	-0.3
BRVK				IAmb	IAmb	16 36 09.0	
	comp=Z,52nm,1.2s						
BRVK				IAMs_20	IAMs_20	17 05 02.6	
	comp=Z,2µm,20.0s						
KK31	Karatay Array	67.98	310	P	P	16 35 48.0	-0.1
KK31				pmax	pmax		
	comp=Z,94nm,1.4s						
KK31	Karatay Array	67.98	310	P	P	16 35 48.0	-0.1
KK31				IAmb	IAmb	16 35 49.9	
	comp=Z,94nm,1.4s						
KKAR	Karatay Array	67.98	310	P	P	16 35 47.7	-0.4
KKAR	Karatay Array	67.98	310	P	P	16 35 47.7	-0.4
KKAR	Karatay Array	67.98	310	IAmb	IAmb	16 35 49.9	
	comp=Z,94nm,1.4s						
POO	Poona	68.18	284	*e*P	P	16 35 48.9	-0.9
POO				IAmb	IAmb	16 35 50.1	
	comp=Z,430nm,2.0s						
IUG	Iuzhnay	68.39	309	*e*P	P	16 35 48.7	-2.1
	comp=Z,30nm,1.9s,baz=309						
IUG	Iuzhnay	68.39	309	*e*P	P	16 35 48.7	-2.1
IUG				pmax	pmax		
	comp=Z,30nm,1.9s						
GOA	Goa	68.82	280	*e*P	P	16 35 53.5	-0.2
SKAG	Skagway	69.80	32	P	P	16 35 59.9	+0.9
	baz=269						
KBL	Kabul	69.88	301	IAMs_20	IAMs_20	17 09 10.4	
	comp=Z,2µm,19.0s						
KBL	Kabul	69.88	301	P	P	16 36 00.4	+0.1
	SNR=72						
KBL				S	S	16 45 05.4	-4.2
INK	Inuvik	70.83	23	P	P	16 36 04.5	-0.7
	comp=Z,19nm,0.7s						
INK	Inuvik	70.83	23	IAmb	IAmb	16 36 25.4	
	comp=Z,94nm,1.4s						
CRAG	Craig	71.06	36	P	P	16 36 07.1	+0.3
	baz=273						
BHUJ	Bhuj	71.12	289	*e*P	P	16 36 07.3	-0.5
MNCY	Minicoy	71.30	273	*e*P	P	16 36 09.8	+0.8
WRAK	Wrangell Islan	71.45	35	P	P	16 36 08.5	-0.6
	baz=273						
H02S1	DAWSON INLET T	71.56	39	T	T	17 54 59.1	
	SNR=93						
PPT	Papeete	72.23	115	LR	LR	17 01 21.4	
	comp=Z,3µm,21.3s,baz=266,slow=30						
PPT2	Papeete2	72.24	115	*e*P	P	16 36 17.7	+3.1
	comp=Z,103nm,1.1s						
PPT2				*e*S	S	16 45 38.0	+1.0
	comp=Z,2µm,25.2s						
PPT2	Papeete2	72.24	115	*e*LR	LR	16 58 26.4	
	comp=Z,10µm,29.5s,baz=298						
PAE	Paea	72.27	115	*e*P	P	16 36 17.6	+2.9
	comp=Z,19nm,1.3s						
TIAR	Tiarei	72.43	115	*e*P	P	16 36 18.8	+3.1
	comp=Z,24nm,1.0s						
DLBC	Dease Lake	72.58	33	P	P	16 36 17.2	+1.2
	comp=Z,10nm,0.6s,baz=274,slow=5.0,SNR=22						
TVO	Taravao	72.60	115	*e*P	P	16 36 19.9	+3.1
	comp=Z,50nm,1.4s						
VAH	Vaihoa	72.99	112	*e*P	P	16 36 21.6	+2.6
	comp=Z,100nm,1.1s						
SVE	Sverdlovsk	73.34	325	*e*P	P	16 36 21.1	+0.6
SVE				pmax	pmax		
	comp=Z,30nm,1.4s						
ARU	Arti	74.53	325*c*	*i*P	P	16 36 25.3	-2.1
ARU				S	S	16 45 59.7	-2.0
ARU				pmax	pmax		
	comp=Z,40nm,1.8s						
ABKAR	Akbulak array	74.69	317	P	P	16 36 27.1	-1.4
TBI	Tubuai	74.82	121	*e*S	S	16 46 06.4	+0.5
	comp=Z,2µm,29.5s						
TBI	Tubuai	74.82	121	*e*LR	LR	16 59 27.0	
	comp=Z,4µm,26.8s,baz=305						
HRA	Herat	75.46	302	IAMs_20	IAMs_20	17 10 05.0	
	comp=Z,2µm,22.0s						
DGAR	Diego Garcia	76.52	258*c*	*e*P	P	16 36 38.4	-1.2
DGAR				pmax	pmax		
	comp=Z,421nm,2.5s						
TAOE	Nuku Hiva Isla	77.48	103	*e*LR	LR	17 00 42.0	
	comp=Z,7µm,25.4s						
GEYT	Alibeck	78.02	306	P	P	16 36 48.0	+0.3
	comp=Z,26nm,1.2s,baz=79,slow=7.7,SNR=22						
GEYT				LR	LR	17 15 53.3	
	comp=Z,1µm,18.1s,baz=65,slow=39						
A04D	Lummi Island	78.31	43	P	P	16 36 49.8	+0.8
	baz=282						
D03D	Eldon	78.31	44	P	P	16 36 49.6	+0.5
	baz=282,SNR=10						
I02D	Swisshome	78.54	47	P	P	16 36 50.6	+0.2
	baz=282						
D04E	Lakebay	78.60	44	P	P	16 36 50.9	+0.3
	baz=283						
F04D	Rainier, OR	78.68	45	P	P	16 36 51.4	+0.2
	baz=283						
J01E	Myrtle Point	78.68	48	P	P	16 36 50.8	-0.4
	baz=283						
G03D	McMinnville, O	78.70	46	P	P	16 36 51.0	-0.2
	baz=283						
B05A	Bryant	78.81	43	P	P	16 36 52.0	+0.3
	baz=283,SNR=6.9						
E04D	Cinebar	78.88	45	P	P	16 36 52.1	-0.1
	baz=283						
KIRV	Kirov	78.97	328	P	P	16 36 50.1	-2.3
K02D	Willamette Mer	78.98	49	P	P	16 36 52.8	-0.2
	baz=283						
I03D	Drain, OR	78.98	48	P	P	16 36 52.9	+0.1
	baz=283						
JCC	Jacoby Creek,	79.13	51	IAMs_20	IAMs_20	17 04 41.6	
	comp=Z,2µm,19.0s						
L02E	Cave Junction	79.14	49	P	P	16 36 53.3	-0.5
	baz=283						
H04D	Lebanon	79.22	47	P	P	16 36 54.8	+0.6
	baz=283						
YKA	Yellowknife Ar	79.37	28	P	P	16 36 53.8	-0.7
	comp=Z,10nm,0.8s,baz=290,slow=4.8,SNR=115						
YKA				LR	LR	17 10 46.4	
	comp=Z,616nm,20.5s,baz=0.0,slow=35						
I04A	Tendick Farm,	79.62	47	P	P	16 36 57.1	+0.8
	baz=284						
C06D	Leavenworth	79.67	43	P	P	16 36 57.1	+0.5
	baz=284						
F05D	White Salmon	79.78	45	P	P	16 36 57.6	+0.4
	baz=284						
M02C	Callahan	79.86	50	P	P	16 36 58.0	+0.2
	baz=284						
YBH	Yreka Blue Hor	79.89	49	P	P	16 36 59.3	+1.4
	comp=Z,12nm,0.8s,baz=64,slow=2.1,SNR=15						
YBH	Yreka Blue Hor	79.89	49	IAMs_20	IAMs_20	17 05 51.5	
	comp=Z,2µm,20.0s						
J04D	Umpqua Nationa	79.96	48	P	P	16 36 58.1	-0.4
	baz=284						
G05D	Wamic, OR	80.03	46	P	P	16 36 59.2	+0.6
	baz=284						
L04D	Klamath Falls	80.07	49	P	P	16 36 59.2	+0.3
	baz=284						
N02D	Trinity Center	80.07	50	P	P	16 36 60.0	+1.0
	baz=284						
O02D	Mt. Diablo Mer	80.20	51	P	P	16 37 00.5	+0.9
	baz=284,SNR=16						
I05D	Terrebonne, OR	80.24	47	P	P	16 37 00.1	+0.4
	baz=284						
WDC	Whiskeytown Da	80.29	51	IAMs_20	IAMs_20	17 05 41.2	
	comp=Z,2µm,20.0s						
K04D	Chiloquin, OR	80.36	48	P	P	16 37 02.0	+1.4
	baz=284,SNR=6.9						
M04C	Macdoel	80.51	49	P	P	16 37 02.3	+0.9
	baz=284						
J05D	Fort Rock, OR	80.57	48	P	P	16 37 02.5	+0.8
	baz=284,SNR=24						
JLN	Jalan Bani Buh	80.59	290	P	P	16 37 01.8	-0.2
JLN				P	P	16 37 01.8	-0.2
MCCM	Marconi Confer	80.63	53	IAMs_20	IAMs_20	17 08 04.2	
	comp=Z,1µm,20.0s						
WBK	Wadi Bani Khal	80.87	291	P	P	16 37 03.5	0.0
O03E	Paynes Creek	80.91	51	P	P	16 37 04.1	+0.6
	baz=284						
ORV	Oroville	81.32	51	IAMs_20	IAMs_20	17 02 27.4	
	comp=Z,1µm,18.0s						
MOD	Modoc Plateau	81.59	49	IAMs_20	IAMs_20	17 09 24.5	
	comp=Z,1µm,19.0s						
BELG	Belogornoye	81.62	322	*i* P	P	16 37 03.9	-2.9
BELG				pmax	pmax		
	comp=Z,11nm,1.3s						
NEW	Newport	82.02	42	P	P	16 37 09.6	+0.5
	comp=Z,23nm,1.0s,baz=290,slow=4.8,SNR=17						
NEW	Newport	82.02	42	P	P	16 37 09.8	+0.6
	baz=286						
SAO	San Andreas Ge	82.08	54	IAMs_20	IAMs_20	17 10 58.7	
	comp=Z,2µm,18.0s						
BEKR	Beckworth	82.08	51	IAmb	IAmb	16 37 33.8	
	comp=Z,71nm,0.9s						
HOQ	Hoqain	82.10	292	P	P	16 37 09.6	-0.4
HOQ				P	P	16 37 09.6	-0.4
MHTO	MHTO	82.19	290	P	P	16 37 10.1	-0.3
	SNR=9.1						
MHTO				P	P	16 37 10.1	-0.3
	SNR=9.1						
TMCR	Tamitsa	82.35	335	*e*P	P	16 37 09.3	-1.1
TMCR				pmax	pmax		
	comp=Z,26nm,1.1s						
BSY	Bisya	82.41	291	P	P	16 37 11.4	-0.3
BSY				P	P	16 37 11.4	-0.3
CMB	Columbia Colle	82.56	53	IAMs_20	IAMs_20	17 04 46.2	
	comp=Z,1µm,19.0s						
APA	Apatity	82.63	339⇑	*i*P	P	16 37 26.4	+15
APA				*i*		16 47 27.0	
APA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
APA				MLR	MLR		
	comp=Z,3µm,17.0s						
SOHO	SOHO	82.64	293	P	P	16 37 12.6	-0.2
SOHO				P	P	16 37 12.6	-0.2
UOSS	Minazif	82.72	294	IAMs_20	IAMs_20	17 16 25.1	
	comp=Z,1µm,21.0s						
UOSS	Minazif	82.72	294	P	P	16 37 12.5	-0.7
HATD	Hatta, Dubai	82.81	294	P	P	16 37 13.9	+0.3
DQM	DQM	82.85	289	P	P	16 37 13.6	-0.3
DQM				P	P	16 37 13.6	-0.3
ARQ	Araqi	82.86	292	P	P	16 37 14.4	+0.5
	SNR=5.2						
ARQ				P	P	16 37 14.4	+0.5
	SNR=5.2						
BMO	Blue Mountains	82.88	45	IAmb	IAmb	16 37 23.4	
	comp=Z,82nm,1.4s						
KLMR	Klimovskoe	83.01	332	*e*P	P	16 37 11.9	-2.0
KLMR				pmax	pmax		
	comp=Z,26nm,1.5s						
KLMR	Klimovskoe	83.01	332	*e*P	P	16 37 11.9	-2.0
KLMR				AMP		16 37 27.7	
	comp=Z,26nm,1.5s						
KLMR				LQ	LQ	17 05 36.7	
KLMR				LQ	LQ	17 05 36.7	
KLMR				LR	LR	17 09 03.9	
SMMC	Simmler	83.60	55	P	P	16 37 17.3	-0.3
	baz=286						
WALA	Waterton Lakes	83.81	41	IAmb	IAmb	16 37 46.2	
	comp=Z,67nm,1.2s						
MLAC	Mammoth, Mammo	83.85	53	P	P	16 37 17.8	-1.3
	baz=287						
PKM	Mcpherson Peak	83.87	56	P	P	16 37 18.1	-1.0
	baz=286						
KVN	Kaiserville	83.99	51	IAmb	IAmb	16 37 43.4	
	comp=Z,53nm,0.9s						
NVAR	Mina Array Bea	84.02	52	P	P	16 37 21.1	+1.2
	comp=Z,11nm,0.6s,baz=266,slow=5.9,SNR=92						
NVAR				LR	LR	17 14 26.7	
	comp=Z,766nm,18.1s,baz=274,slow=35						
NVAR	Mina Array Bea	84.02	52	P	P	16 37 20.2	+0.3
SBC	Santa Barbara	84.07	56	P	P	16 37 19.3	-0.6
	baz=286						
ARCES	ARCESS Array B	84.13	342	P	P	16 37 19.1	-0.4
	comp=Z,2.7nm,0.8s,baz=0.0,slow=2.4,SNR=6.5						
ARCES				LR	LR	17 18 47.3	
	comp=Z,2µm,19.4s,baz=75,slow=38						
VES	Vestal, Richgr	84.17	54	P	P	16 37 20.7	+0.3
	baz=287						
SCZ2	Santa Cruz Isl	84.26	56	P	P	16 37 20.6	-0.4
	baz=287						
TULEG	Thule	84.34	8	*e*P	P	16 37 18.2	-2.2
TIN	Tinemaha, Big	84.48	53	P	P	16 37 22.4	+0.2
	baz=287						
MSO	Missoula	84.51	43	P	P	16 37 21.6	-0.5
	baz=289						
MAK	Makhachkala	84.54	313	*e*P	P	16 37 16.9	-5.2
MAK				*e*		16 40 30.9	
MAK				*e*		16 47 37.1	
MAK				*e*SSS	SSS	16 56 42.1	
MAK				pmax	pmax		
	comp=Z,420nm,1.5s						
MAK				MLR	MLR		
	comp=Z,2µm,16.0s						
SNCC	San Nicolas Is	84.56	57	P	P	16 37 22.4	-0.1
	baz=287						
ARVC	Arvin	84.57	55	P	P	16 37 22.3	-0.2
	baz=287						
ISA	Isabella, Lake	84.69	54	P	P	16 37 22.3	-0.9
	baz=287						
CWC	Cottonwood Cre	84.77	54	P	P	16 37 24.3	+0.6
	baz=287						
OSI	Osito Audit: C	84.81	56	P	P	16 37 24.6	+0.8
	baz=287						
SHAO	Shalim	85.11	287	P	P	16 37 25.3	-0.2
SHAO				P	P	16 37 25.3	-0.2
GRAC	Grapevine Rang	85.15	53	P	P	16 37 25.4	0.0
	baz=288,SNR=9.7						
DECC	Green Verdugo	85.22	56	P	P	16 37 25.9	+0.1
	baz=287						
HLID	Hailey	85.25	46	P	P	16 37 26.5	+0.6
	baz=289						
HLID	Hailey	85.25	46	IAMs_20	IAMs_20	17 09 18.3	
	comp=Z,1µm,22.0s						
EDW2	Edwards Air Fo	85.30	55	P	P	16 37 27.0	+0.7
	baz=287,SNR=10						
MPMC	Manual Prospec	85.34	54	P	P	16 37 26.8	+0.2
	baz=288,SNR=17						
PASC	Pasadena Art C	85.36	56	IAMs_20	IAMs_20	17 14 46.6	
	comp=Z,1µm,19.0s						
LRMC	Laurel Mtn Rad	85.36	54	P	P	16 37 27.4	+0.7
	baz=288						
CIS	Catalina Islan	85.41	57	P	P	16 37 26.5	-0.3
	baz=287						
FMP	Fort Macarthur	85.41	56	P	P	16 37 26.7	0.0
	baz=287						
SCI2	San Clemente I	85.42	57	P	P	16 37 27.0	+0.2
	baz=287						
ELK	Elko	85.57	49	P	P	16 37 28.7	+1.0
	comp=Z,20nm,0.9s,baz=281,slow=4.2,SNR=39						
GROC	Groznyy	85.65	314	*e*P	P	16 37 27.7	0.0
GROC				*e*S	S	16 47 52.9	-6.3
GROC				pmax	pmax		
	comp=Z,58nm,1.4s						
FURC	Furnace Creek,	85.70	53	P	P	16 37 28.7	+0.6
	baz=288,SNR=9.7						
BFSC	Mount Baldy Ra	85.76	56	P	P	16 37 28.8	+0.1
	baz=288						
DMTO	DMTO	85.82	287	P	P	16 37 28.7	-0.3
DMTO				P	P	16 37 28.7	-0.3
LRM	Limekiln Ridge	85.82	43	P	P	16 37 30.0	+1.1
DLMT	Dillon	85.88	44	IAmb	IAmb	16 37 38.3	
	comp=Z,94nm,1.4s						
HRY	Holter Researc	85.92	42	P	P	16 37 30.2	+1.0
DAG	Danmarks Havn	85.94	356	*i* P	P	16 37 27.9	-0.6
DAG	Danmarks Havn	85.94	356	*i* P	P	16 37 27.9	-0.6
DAG	Danmarks Havn	85.94	356	*i* P	P	16 37 27.9	-0.6
TPNV	Topopah Spring	86.02	53	P	P	16 37 30.0	+0.1
	baz=288,SNR=24						
TPNV	Topopah Spring	86.02	53	IAmb	IAmb	16 37 55.2	
	comp=Z,70nm,1.3s						
R11A	Troy Canyon, C	86.08	51	P	P	16 37 31.0	+0.8
	baz=288						
R11A	Troy Canyon, C	86.08	51	IAmb	IAmb	16 37 40.2	
	comp=Z,85nm,1.4s						
RRX	Edison Barstow	86.08	55	P	P	16 37 30.5	+0.4
	baz=288						
GSC	Goldstone, Bar	86.10	54	P	P	16 37 31.4	+1.1
	baz=288						
DOK	Doka	86.31	288	P	P	16 37 30.4	-1.0
	SNR=13						
DOK				P	P	16 37 30.4	-1.0
	SNR=13						
MURC	Murrieta	86.32	56	P	P	16 37 31.5	+0.3
	baz=288						
SHOC	Shoshone, Teco	86.33	54	P	P	16 37 32.0	+0.8
	baz=288						
BBRC	Big Bear Solar	86.33	55	P	P	16 37 31.3	-0.3
	baz=288						
BOZ	Bozeman (W)	86.44	43	P	P	16 37 31.5	-0.3
	baz=291						
RBK	Rabkut	86.56	287	P	P	16 37 31.9	-0.8
	SNR=9.9						
109C	Camp Elliot, M	86.61	57	P	P	16 37 32.5	-0.1
	baz=288						
HEC	Hector,Ludlow	86.61	55	P	P	16 37 33.3	+0.5
	baz=288						
EGMT	Eagleton	86.76	41	P	P	16 37 33.2	0.0
	baz=292						
OBN	Obninsk	86.77	327⇑	*e*P	P	16 37 30.9	-2.0
OBN				*SP	pwP	16 37 40.0	-1.1
OBN				*e*		16 49 08.6	
OBN				pmax	pmax		
	comp=Z,41nm,2.8s						
OBN				MLR	MLR		
	comp=Z,2µm,22.0s						
WHFO	Wadi Hawf	86.83	288	P	P	16 37 32.6	-1.5
	SNR=7.0						
WHFO				P	P	16 37 32.6	-1.5
	SNR=7.0						
PFO	Pinyon Flats O	86.90	56	P	P	16 37 35.4	+1.2
	comp=Z,14nm,1.0s,baz=270,slow=7.4,SNR=7.6						
PFO	Pinyon Flats O	86.90	56	P	P	16 37 34.4	+0.1
	baz=288						
TPFO	Pinon Flats	86.90	56	P	P	16 37 34.4	+0.1
	baz=288						
VSR	Storozhevoye	86.96	323	*e*P	P	16 37 28.4	-5.6
VSR				pmax	pmax		
	comp=Z,10.0nm,1.5s						
RKT	Rikitea	87.00	115	*e*LR	LR	17 05 12.2	
	comp=Z,6µm,31.0s						
ZEI	Tsey	87.10	314	*e*P	P	16 37 31.5	-3.6
ZEI				pmax	pmax		
	comp=Z,10.0nm,1.3s						
BELC	Belle Mtn. Jos	87.14	55	P	P	16 37 35.8	+0.3
	baz=288						
MONP2	Monument Peak	87.15	57	P	P	16 37 36.2	+0.6
	baz=288						
GMRC	Granite Mounta	87.16	55	P	P	16 37 35.5	0.0
	baz=289						
GNI	Garni	87.42	311	*i* P	P	16 37 35.1	-1.6
GNI				pmax	pmax		
	comp=Z,19nm,1.3s						
ABTO	Aybut	87.43	287	P	P	16 37 36.1	-0.9
	SNR=14						
KBZ	Khabaz	87.45	315	P	P	16 37 34.5	-2.0
	comp=Z,4.5nm,0.9s,baz=107,slow=5.2,SNR=5.6						
KBZ				LR	LR	17 18 55.4	
	comp=Z,2µm,20.7s,baz=60,slow=37						
KBZ	Khabaz	87.45	315*c*	*e*P	P	16 37 34.3	-2.2
KBZ				pmax	pmax		
	comp=Z,8.0nm,1.0s						
IKP	In-Ko-Pah, Jac	87.48	57	P	P	16 37 36.5	-0.5
	baz=288						
DUG	Dugway, Tooele	87.50	49	P	P	16 37 36.2	-0.8

	baz=290						
DUG	Dugway, Tooele	87.50	49	P	P	16 37 38.2	+1.1
DUG				pmax	pmax		
	comp=Z,66nm,1.1s						
DUG				MLR	MLR		
	comp=Z,2µm,21.0s						
DUG	Dugway, Tooele	87.50	49	P	P	16 37 38.2	+1.1
DUG				IAMs_20	IAMs_20	17 08 52.0	
	comp=Z,2µm,21.0s						
KIV	Kislovodsk	87.51	315⇓	eP	P	16 37 35.0	-2.0
KIV				*SP	pwP	16 37 44.0	-1.2
KIV				S	S	16 48 21.0	+3.5
KIV				e		16 49 48.8	
KIV				SS	SS	16 53 56.0	-6.3
KIV				pmax	pmax		
	comp=Z,10.0nm,1.7s						
KIV				MLR	MLR		
	comp=Z,900nm,20.0s						
H17A	Grant Village	87.57	44	P	P	16 37 38.1	+0.6
	baz=291,SNR=23						
SHA1	Shidzhatmaz	87.61	315	i P	P	16 37 35.6	-2.0
SWSC	Sam W. Stewart	87.63	56	P	P	16 37 37.1	-0.5
	baz=289						
BC3	Big Chuckawall	87.68	56	P	P	16 37 38.5	+0.5
	baz=289,SNR=13						
NEY	Neytrino	87.74	315	i P	P	16 37 35.5	-2.7
NEY				pmax	pmax		
	comp=Z,3.0nm,1.4s						
IRM	Iron Mountain	87.76	55	P	P	16 37 39.1	+0.8
	baz=289						
NEE2	Needles Airpor	87.97	54	P	P	16 37 39.8	+0.6
	baz=289						
RLMT	Red Lodge	88.16	43	P	P	16 37 40.4	+0.2
	baz=292,SNR=17						
SOCY	Socotra	88.28	282	IAMs_20	IAMs_20	17 14 37.9	
	comp=Z,1µm,21.0s						
SOCY	Socotra	88.28	282	P	P	16 37 39.2	-2.0
	SNR=6.2						
GLA	Glamis	88.37	56	P	P	16 37 41.9	+0.6
	baz=289,SNR=6.4						
FINES	FINESS Array B	88.47	335	P	P	16 37 37.1	-3.9
	comp=Z,1.7nm,0.7s,baz=31,slow=4.9,SNR=7.4						
FINES				LR	LR	17 19 32.4	
	comp=Z,1µm,19.5s,baz=64,slow=37						
FINES	FINESS Array B	88.47	335	i P	P	16 37 41.0	0.0
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
PDMCI	Parker Dam,Lak	88.50	55	P	P	16 37 41.9	+0.2
	baz=290						
BW06	Boulder Array	88.86	45	P	P	16 37 43.3	-0.3
	baz=292,SNR=11						
PDAR	Pinedale Array	88.86	45	P	P	16 37 43.3	-0.3
	comp=Z,1.3nm,0.6s,baz=240,slow=2.1,SNR=14						
PDAR				LR	LR	17 18 35.7	
	comp=Z,372nm,18.3s,baz=298,slow=36						
PDAR	Pinedale Array	88.86	45	P	P	16 37 44.0	+0.4
LAO	LASA Array	89.49	41	P	P	16 37 46.1	-0.2
	baz=294,SNR=6.7						
DGMT	Dagmar	89.98	39	P	P	16 37 47.8	-0.6
	baz=296						
WUAZ	Wupatki	90.21	53	P	P	16 37 50.7	+0.7
	baz=291,SNR=17						
214A	Organ Pipe Nat	90.34	56	P	P	16 37 51.6	+1.2
	baz=290,SNR=10						
214A	Organ Pipe Nat	90.34	56	P	P	16 37 50.7	+0.2
214A				IAmb	IAmb	16 38 14.6	
	comp=Z,52nm,0.9s						
O20A	White River Ci	90.78	48	P	P	16 37 52.6	0.0
	baz=293,SNR=17						
O20A	White River Ci	90.78	48	P	P	16 37 53.4	+0.8
O20A				IAmb	IAmb	16 37 57.9	
	comp=Z,47nm,1.1s						
PV23	Carpenter Ridg	90.88	49	P	P	16 37 53.8	+0.6
K22A	Casper	90.96	45	P	P	16 37 53.9	+0.6
	baz=294,SNR=10.0						
PV01	Paradox Valley	91.32	49	P	P	16 37 54.3	-0.9
PV01				IAmb	IAmb	16 38 04.3	
	comp=Z,46nm,1.1s						
W18A	Petrified Fore	91.60	53	P	P	16 37 57.2	+0.7
	baz=292						
MVCO	Mesa Verde	91.73	50	P	P	16 37 57.5	+0.4
	baz=293,SNR=13						
NACGM	Naroch	91.79	330	i P	P	16 37 55.0	-1.6
NACGM				i P	P	16 37 55.0	-1.6
NACGM				i P	P	16 37 55.0	-1.6
NACGM				i PP	PP	16 41 49.5	+14
NACGM				i PPP	PPP	16 43 50.3	
NACGM				i SKS	SKSac	16 48 22.6	-5.9
NACGM				i SS	SS	16 55 15.0	+12
NACGM				i SSS	SSS	16 59 15.2	
NACGM				i LQ	LQ	17 10 19.9	
NACGM				i LR	LR	17 14 26.2	
TUC	Tucson	91.83	56	P	P	16 37 58.2	+0.7
	baz=291						
RSSD	Black Hills	91.98	43	P	P	16 37 57.7	-0.4
	baz=296						
N23A	Red Feather La	92.08	46	P	P	16 37 59.5	+0.8
	baz=295,SNR=39						
S22A	4UR Ranch, Cre	92.74	49	P	P	16 38 01.7	-0.1
	baz=294,SNR=29						
ISCO	Idaho Springs	92.76	47	P	P	16 38 01.1	-0.8
ISCO				pmax	pmax		
	comp=Z,36nm,1.2s						
ISCO	Idaho Springs	92.76	47	P	P	16 38 01.1	-0.8
ISCO				IAmb	IAmb	16 38 24.2	
	comp=Z,36nm,1.2s						
AKASG	Malin Array Be	92.78	325	LR	LR	17 22 10.1	
	comp=Z,1µm,19.8s,baz=45,slow=37						
Q24A	Divide	93.44	48	P	P	16 38 05.3	+0.2
	baz=295						
SDCO	Great Sand Dun	93.70	49	P	P	16 38 06.6	+0.3
	baz=295						
ULM	Lac du Bonnet	93.86	35	P	P	16 38 05.8	-0.5
	comp=Z,5.0nm,0.9s,baz=315,slow=5.1,SNR=8.4						
ULM				LR	LR	17 17 25.0	
	comp=Z,918nm,20.7s,baz=292,slow=34						
121A	Cookes Peak, D	94.09	54	P	P	16 38 08.2	+0.2
	baz=293,SNR=8.2						
ANMO	Albuquerque	94.15	52	P	P	16 38 07.9	-0.3
	comp=Z,4.7nm,1.1s,baz=270,slow=6.2,SNR=11						
ANMO	Albuquerque	94.15	52	P	P	16 38 08.8	+0.5
	baz=294						
ANMO	Albuquerque	94.15	52	ceP	P	16 38 08.5	+0.3
ANMO				pmax	pmax		
	comp=Z,20nm,1.3s						
NOA	NORSAR Array B	94.19	340	LR	LR	17 22 35.9	
	comp=Z,445nm,20.7s,baz=45,slow=37						
T25A	Trinidad	94.74	49	P	P	16 38 10.8	-0.2
	baz=295,SNR=9.2						
VNDA	Vanda	94.82	177	P	P	16 38 10.9	+0.9
	comp=Z,1.5nm,1.0s,baz=333,slow=4.5,SNR=3.7						
VNDA				LR	LR	17 18 58.8	
	comp=Z,448nm,20.6s,baz=354,slow=34						
AGMN	Agassiz Nation	94.92	36	P	P	16 38 11.3	+0.1
	baz=302						
KSCO	Kaye Shedlock'	95.19	47	P	P	16 38 12.4	-0.4
	baz=297						
BRTR	Keskin Array B	95.40	314	P	P	16 38 11.6	-2.3
	comp=Z,3.3nm,1.1s,baz=85,slow=2.7,SNR=9.1						
BRTR				LR	LR	17 24 36.3	
	comp=Z,550nm,20.0s,baz=59,slow=38						
H06N1	SOCORRO T-PHAS	96.44	68	T	T	18 25 51.1	
H06S1	SOCORRO T	96.51	68	T	T	18 25 52.6	
	SNR=7.4						
ECSD	EROS Data Cent	96.87	40	P	P	16 38 21.0	+0.7
	baz=301						
CBKS	Cedar Bluff	97.28	46	P	P	16 38 22.1	-0.2
	baz=299						
AMTX	Amarillo	97.72	50	P	P	16 38 24.4	+0.1
	baz=297						
CSS	Mathiatis	97.79	310	IAMs_20	IAMs_20	17 27 51.0	
	comp=Z,923nm,20.0s						
TXAR	Lajitas Array	98.62	56	P	Pdif	16 38 29.3	+0.8
	comp=Z,0.2nm,0.3s,baz=305,slow=4.4,SNR=3.8						
TXAR				PP	PP	16 42 41.6	+13
	comp=Z,2.2nm,1.1s,baz=289,slow=3.8,SNR=5.2						
TXAR				LR	LR	17 21 12.9	
	comp=Z,477nm,18.7s,baz=0.0,slow=34						
WMOK	Wichita Mounta	99.90	49	P	Pdif	16 38 34.0	-0.1
	baz=299						
BRG	Berggiesshubel	100.37	331	ex	x	16 42 51.1	
BRG				Amp		16 42 59.7	
	comp=Z,27nm,2.0s						
CLL	Collm	100.50	332	ePP	PP	16 42 44.0	+1.7
CLL				esPP		16 42 53.0	
CLL				LmV		17 26 00.0	
	comp=Z,2µm,21.2s						
FURI	Furi	103.60	284	IAMs_20	IAMs_20	17 23 12.9	
	comp=Z,952nm,21.0s						
SGRT	San Giovanni R	105.57	324	IAMs_20	IAMs_20	17 33 17.9	
	comp=Z,1µm,20.0s						
MURB	Monte Urbino	106.33	326	IAMs_20	IAMs_20	17 14 46.8	
	comp=Z,629nm,21.0s						
SYO	Syowa Base	111.61	202⇓	ePKiKP	PKiKP	16 43 21.3	-1.4
SYO	Syowa Base	111.61	202⇓	eX	PKiKP	16 43 26.2	+3.5
MBAR	Mbarara	114.19	277	IAMs_20	IAMs_20	17 30 10.5	
	comp=Z,893nm,19.0s						
TGUH	Tegucigalpa,Un	119.10	63	IAMs_20	IAMs_20	17 26 23.5	
	comp=Z,822nm,21.0s						
NVL	N'lazarevskaya	119.67	196	ePKIKP	PKPdf	16 43 26.6	-12
NVL				MLR	MLR		
	comp=Z,524nm,18.0s						
LSZ	Lusaka	120.36	262	IAMs_20	IAMs_20	17 33 40.5	
	comp=Z,865nm,20.0s						
SNAA	Sanae	122.33	191	PKPdf	PKPdf	16 43 41.3	-2.0
VNA2	Neumayer--Watz	123.77	190	PKPdf	PKPdf	16 43 44.4	-1.6
VNA3	Neumayer Olymp	123.86	189	PKPdf	PKPdf	16 43 44.2	-2.0
BCIP	Isla Barro Col	127.83	64	IAMs_20	IAMs_20	17 27 44.9	
	comp=Z,917nm,22.0s						
TORD	Torodi Ar. Bea	133.64	308	PKP	PKPdf	16 44 05.2	-1.2
	comp=Z,0.6nm,0.6s,baz=33,slow=3.1,SNR=2.6						
TORD				PP	PP	16 46 34.0	-0.5
	comp=Z,3.5nm,1.1s,baz=26,slow=3.5,SNR=5.4						
TORD				SKKPbc	SKKPbc	16 56 26.2	-22
	comp=Z,1.4nm,1.1s,baz=256,slow=3.0,SNR=4.0						
SDV	Santo Domingo	135.65	57	IAMs_20	IAMs_20	17 39 24.6	
	comp=Z,574nm,19.0s						
ATAH	Atahualpa	135.69	83	SKPbc	SKPbc	16 47 42.0	+0.5
	comp=Z,5.1nm,0.8s,baz=288,slow=5.0,SNR=4.0						
H03S2	Juan Fernandez	136.56	121	T	T	19 15 58.0	
	baz=261						
H03S1	Juan Fernandez	136.58	121	T	T	19 16 00.3	
	baz=261						
H03S3	Juan Fernandez	136.58	121	T	T	19 16 00.4	
	baz=261						
PLCA	Paso Flores	140.72	135	PKhKP	PKPpre	16 44 12.2	
	comp=Z,1.0nm,0.4s,baz=217,slow=5.7,SNR=4.0						
DBIC	Dimbokro	142.71	307	PKhKP	PKPpre	16 44 18.0	
	comp=Z,1.8nm,0.6s,baz=359,slow=3.9,SNR=2.1						
LCO	Las Campanas	144.41	116	PKIKP	PKPdf	16 44 26.1	+0.1
LCO	Las Campanas	144.41	116		PKPdf	16 44 26.1	+0.1
CO01	Juntas del Tor	144.72	118		PKPdf	16 44 27.1	+0.6
AC05	El Transito	144.81	116		PKPdf	16 44 27.3	+0.7
AC01	Pan de Azucar	144.97	111		PKPdf	16 44 27.5	+0.7
PB10	IPOC Station P	145.27	107		PKPdf	16 44 28.9	+1.6
TA01	Diego Aracena	145.71	102		PKPab	16 44 30.5	+1.6
PSGCX	Pisagua	145.75	100		PKPab	16 44 30.3	+1.1
GO02	Mina Guanaco	146.00	110		PKPab	16 44 31.5	+1.3
LVC	Limon Verde	146.84	105	PKP2	PKiKP	16 44 34.9	-0.1
LVC	Limon Verde	146.84	105		PKiKP	16 44 34.9	-0.1
LPAZ	La Paz	147.42	94	PKPbc	PKPbc	16 44 35.0	+0.6
	comp=Z,62nm,0.9s,baz=305,slow=2.4,SNR=99						
LPAZ	La Paz	147.42	94	PKP2	PKPbc	16 44 35.0	+0.6
PTGA	Pitinga	149.83	60		PKPbc	16 44 40.3	+0.3
SIV	San Ignacio	154.13	92	PKPbc	PKPbc	16 44 49.3	-0.4
	baz=251,slow=2.8						
CPUP	Villa Florida	156.55	117	PKP	PKPdf	16 44 41.3	-3.2
	comp=Z,1.2nm,0.4s,baz=64,slow=1.5,SNR=5.0						
CPUP				PKPab	PKPab	16 45 13.0	-0.4
	comp=Z,7.2nm,0.8s,baz=248,slow=6.1,SNR=9.9						
CPUP				PP	PP	16 48 53.0	+1.5
	comp=Z,1.9nm,0.6s,baz=282,slow=5.0,SNR=2.9						
CPUP	Villa Florida	156.55	117	PKP2	PKPab	16 45 13.0	-0.4
BDFB	Brasilia	166.58	86	PKPab	PKPab	16 45 57.8	+0.1
	comp=Z,10nm,0.7s,baz=254,slow=4.3,SNR=12						

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*NEIC **27** 16:30:10.5±2.4, 17°.0N±0°.1×145°.2E±0°.1, h10^{km}±2^{km}, mb4.4/10 Error ellipse: s-maj=23.0km s-min=16.1km az=62.0*

*IDC **27** 16:30:13.8±0.8, 17°.01N×145°.98E, h0^{km}, mb4.1/12, mb1 4.3/12, mb1mx4.0/50, mbtmp4.1/12, Error ellipse: s-maj=26.9km s-min=17.2km az=112.0*

ISC 27 16:30:11.7±0.8**, 16°.91N**±0°.09×**145°.0E**±0°.1**, h10^{km}, n31, σ1^{s}.19**/18**, mb4.2**/15**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANA2	Anatahan	0.87	131		Pg	16 30 27.3	-1.1
GUMO	Guam	3.31	183	Pn	Pn	16 31 04.0	+0.5
JMN	Monobe	19.52	331	P	P	16 34 38.1	-1.2
JWT	Wachi	20.21	337	P	P	16 34 45.2	-1.6
JWT				IAmb	IAmb	16 35 02.0	
	comp=Z,12nm,1.1s						
MJAR	Matsushiro Arr	20.47	344	P	Pn	16 34 55.3	+3.5
	comp=Z,2.0nm,0.7s,baz=140,slow=9.6,SNR=2.4						
MAJO	Matsushiro	20.47	344	P	P	16 34 49.9	+0.2
H11S3	WAKE ISLAND Hy	20.70	82	T	T	16 55 24.9	
	baz=272						
H11S1	WAKE ISLAND Hy	20.71	82	T	T	16 55 26.0	
	baz=272						
H11S2	WAKE ISLAND Hy	20.71	82	T	T	16 55 25.9	
	baz=272						
JHS	Saijyo	20.92	332		P	16 34 52.4	-2.2
JHS				IAmb	IAmb	16 34 58.2	
	comp=Z,34nm,1.3s						
H11N1	WAKE ISLAND Hy	20.94	79	T	T	16 55 41.8	
	baz=266,slow=74,SNR=23						
H11N2	WAKE ISLAND Hy	20.95	79	T	T	16 55 42.5	
	baz=266,slow=74,SNR=16						
H11N3	WAKE ISLAND Hy	20.96	79	T	T	16 55 44.5	
	baz=266,slow=74,SNR=23						
SIJI	Sorong	22.27	219	P	P	16 35 20.3	+11
	comp=Z,14nm,0.6s,baz=48,slow=13,SNR=7.9						
KSRS	Korea Array	25.42	327	P	P	16 35 46.8	+7.3
	comp=Z,4.1nm,0.9s,baz=150,slow=10,SNR=6.4						
WB0	Warramunga Arr	37.91	196	P	P	16 37 27.9	-1.5
WB0				IAmb	IAmb	16 37 36.5	
	comp=Z,13nm,1.4s						
WR0	Warramunga Arr	38.06	196	P	P	16 37 31.0	+0.4
WR0				IAmb	IAmb	16 37 42.8	
	comp=Z,6.9nm,1.1s						
WRAB	Tennant Creek	38.09	196	P	P	16 37 31.7	+0.8
WRAB				IAmb	IAmb	16 37 40.6	
	comp=Z,13nm,1.2s						
WB2	Warramunga Arr	38.09	196	P	P	16 37 29.9	-1.0
WRA	Warramunga Arr	38.10	196	P	P	16 37 36.9	+5.9
	comp=Z,4.2nm,1.0s,baz=20,slow=9.4,SNR=5.2						
FITZ	Fitzroy Crossi	39.68	210	P	P	16 37 45.3	+1.1
FITZ				IAmb	IAmb	16 37 55.4	
	comp=Z,17nm,1.4s						
AS31	Alice Springs	41.77	195	P	P	16 38 02.8	+1.3
ASAR	Alice Springs	41.77	195	P	P	16 38 07.3	+5.9
	comp=Z,1.5nm,0.8s,baz=15,slow=12,SNR=5.6						
CMAR	Chiang Mai Arr	43.84	279	P	P	16 38 29.5	+11
	comp=Z,2.2nm,0.9s,baz=72,slow=6.7,SNR=4.8						
MKAR	Makanchi Array	59.25	315	P	P	16 40 21.2	+7.8
	comp=Z,0.7nm,0.6s,baz=90,slow=8.1,SNR=4.7						
ILAR	Eielson Array	65.53	26	P	P	16 40 54.4	-0.7
	comp=Z,1.6nm,0.9s,baz=262,slow=4.0,SNR=4.9						
INK	Inuvik	71.26	23	P	P	16 41 31.7	+0.9
	comp=Z,3.2nm,1.0s,baz=288,slow=8.4,SNR=4.6						
DLBC	Dease Lake	73.13	33	P	P	16 41 43.7	+1.3
	comp=Z,2.5nm,0.9s,baz=30,slow=1.8,SNR=2.6						
YKA	Yellowknife Ar	79.86	28	P	P	16 42 20.8	+0.4
	comp=Z,0.9nm,0.6s,baz=292,slow=4.7,SNR=6.0						
NVAR	Mina Array Bea	84.75	52	P	P	16 42 47.5	+0.7
	comp=Z,0.6nm,0.5s,baz=263,slow=6.2,SNR=4.4						
LPAZ	La Paz	148.24	94	PKPbc	PKiKP	16 50 01.5	0.0
	comp=Z,2.5nm,0.7s,baz=353,slow=3.5,SNR=5.0						

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*IDC **27** 16:35:21.4±0.7, 17°.05N×145°.88E, h0^{km}, mb3.9/11, mb1 4.2/13, mb1mx3.9/53, mbtmp4.1/13, ML4.4/2, Error ellipse: s-maj=22.0km s-min=16.4km az=108.0*

*NEIC **27** 16:35:23.1±1.7, 17°.15N±0°.04×145°.8E±0°.2, h24^{km}±6^{km}, mb4.3/5, Error ellipse: s-maj=29.7km s-min=6.2km az=89.0*

ISC 27 16:35:21.9±0.7**, 17°.07N**±0°.08×**145°.8E**±0°.1**, h10^{km}, n33, σ1^{s}.57**/26**, mb4.1**/12**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANA2	Anatahan	0.74	190	Pn	Pn	16 35 38.6	+0.1
JCJ	Chichijima	10.53	342	Pn	Pn	16 37 54.0	+0.9
	14nm,0.3s,baz=267,slow=21,SNR=6.2						
JOW	Kunigami	18.95	304	P	Pn	16 39 43.4	-0.5
	0.8nm,0.3s,baz=142,slow=21,SNR=1.7						
H11S3	WAKE ISLAND Hy	19.90	83	T	T	17 00 32.2	
	baz=269,slow=75,SNR=74						
H11S1	WAKE ISLAND Hy	19.92	83	T	T	17 00 32.7	
	baz=269,slow=75,SNR=70						
H11S2	WAKE ISLAND Hy	19.92	83	T	T	17 00 34.3	
	baz=269,slow=75,SNR=72						
H11N1	WAKE ISLAND Hy	20.15	79	T	T	17 00 50.7	
	baz=266,slow=74,SNR=65						
H11N2	WAKE ISLAND Hy	20.15	79	T	T	17 00 51.3	
	baz=266,slow=74,SNR=54						
H11N3	WAKE ISLAND Hy	20.16	79	T	T	17 00 51.7	
	baz=266,slow=74,SNR=45						
JNU	Nakatsue	20.91	323	P	P	16 40 05.2	+0.5
	5.4nm,0.7s,baz=163,slow=8.4,SNR=1.6						
JHS	Saijyo	21.16	330	P	P	16 40 06.3	-1.1
SIJI	Sorong	22.90	220	P	P	16 40 25.7	-0.4
	5.7nm,0.7s,baz=111,slow=15,SNR=2.0						
KSRS	Korea Array	25.71	326	P	P	16 40 54.8	+2.3
	2.1nm,0.9s,baz=145,slow=8.9,SNR=4.7						
USRK	Ussuriysk Ar.	29.46	340	P	P	16 41 22.4	-3.6
COEN	Coen	30.95	185	P	P	16 41 37.2	-2.2
COEN				IAmb	IAmb	16 41 38.5	
	comp=Z,4.5nm,1.1s						
WRA	Warramunga Arr	38.48	198	P	P	16 42 45.0	+0.5
	comp=Z,3.9nm,1.0s,baz=22,slow=9.7,SNR=9.6						
AS31	Alice Springs	42.14	196	P	P	16 43 15.8	+1.1
ASAR	Alice Springs	42.14	196	P	P	16 43 15.4	+0.7
	comp=Z,1.2nm,0.7s,baz=20,slow=8.7,SNR=14						
ASAR	Alice Springs	42.14	196	P	P	16 43 14.0	-0.7
CMAR	Chiang Mai Arr	44.59	279	P	P	16 43 37.3	+2.6
	comp=Z,1.4nm,0.9s,baz=70,slow=6.8,SNR=10						
LSA	Lhasa	51.33	295	P	P	16 44 25.8	-1.6
LSA				IAmb	IAmb	16 44 33.2	
	comp=Z,3.7nm,0.9s						
MKAR	Makanchi Array	59.69	315	P	P	16 45 28.4	+1.7
	comp=Z,0.6nm,0.9s,baz=96,slow=5.8,SNR=3.6						
ILAR	Eielson Array	65.04	26	P	P	16 46 02.6	+0.4
	comp=Z,1.1nm,0.8s,baz=255,slow=4.3,SNR=7.5						
ILAR	Eielson Array	65.04	26	P	P	16 46 01.3	-0.8
KKAR	Karatay Array	67.91	310	P	P	16 46 20.7	-0.3
INK	Inuvik	70.81	23	P	P	16 46 39.2	+0.8
	comp=Z,1.3nm,0.6s,baz=272,slow=5.5,SNR=5.8						
INK	Inuvik	70.81	23	P	P	16 46 38.3	0.0
INK				IAmb	IAmb	16 46 40.5	
	comp=Z,3.2nm,0.9s						
H02S1	DAWSON INLET T	71.56	39	T	T	18 05 27.6	
YKA	Yellowknife Ar	79.35	28	P	P	16 47 27.7	-0.1
	comp=Z,0.8nm,0.8s,baz=287,slow=4.9,SNR=8.8						
NVAR	Mina Array Bea	84.03	52	P	P	16 47 55.0	+1.7
	comp=Z,0.9nm,0.7s,baz=263,slow=6.0,SNR=6.6						
NVAR	Mina Array Bea	84.03	52	P	P	16 47 51.5	-1.8
ELK	Elko	85.58	49	P	P	16 48 03.8	+2.6
LPAZ	La Paz	147.47	94	PKPbc	PKPbc	16 55 09.2	+1.3
	comp=Z,3.5nm,0.9s,baz=281,slow=3.7,SNR=6.4						

TAP 27 16:37:13.7, 24°.42N×120°.98E, h13^{km}±1^{km}, ML1.4, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WHP	Taichung City	0.14	192	i P	Pg	16 37 17.6	+0.4
	baz=184						
WHP				i S	Sg	16 37 20.2	+0.4
	baz=184						
NSY	Sanyi	0.20	269	i P	Pb	16 37 18.8	-0.4
	baz=269						
NSY				i S	Sb	16 37 22.9	-0.1
	baz=269						
TWQ1	Liyutan	0.20	250	i P	Pg	16 37 18.6	+0.6
	baz=249						
TWQ1				i S	Sb	16 37 22.5	-0.4
	baz=249						
NMLH	Miaoli	0.21	305	i P	Pb	16 37 19.0	-0.4
	baz=304						
NMLH				i S	Sg	16 37 21.6	+0.2
	baz=304						
NSTT	Nanjuang	0.21	6	i P	Pg	16 37 18.8	+0.5
	baz=7.0						
NSTT				i S	Sg	16 37 22.0	+0.5
	baz=7.0						
LIOB	Emei	0.23	9	i P	Pg	16 37 19.0	+0.4
	baz=8.0						
LIOB				i S	Sg	16 37 22.7	+0.8
	baz=8.0						
TDCB	Techi	0.23	135	P	Pg	16 37 19.2	+0.4
	baz=136						
TDCB				S	Sg	16 37 21.7	-0.4
	baz=136						
TWT	Tachien	0.24	132	i P	Pg	16 37 19.5	+0.6
	baz=135						
FUSS	Fushou	0.30	125	P	Pb	16 37 20.7	-0.3
	baz=125						
FUSS				S	Sg	16 37 23.2	-0.8
	baz=125						
NNS	Nan Shan	0.36	86	i P	Pb	16 37 23.1	+1.1
	baz=95						
NNS				S	Sg	16 37 26.5	+0.6
	baz=95						
WCS	Beigang Elemen	0.36	190	P	Pb	16 37 21.9	-0.1
	baz=183						
WCS				S	Sb	16 37 27.4	-0.2
	baz=183						
NNSB	Datong	0.37	88	P	Pb	16 37 22.9	+0.7
	baz=96						
NNSB				S	Sg	16 37 25.9	-0.3
	baz=96						
NNSH	Datong	0.37	88	i P	Pb	16 37 22.9	+0.7
	baz=96						
NNSH				i S	Sg	16 37 26.4	+0.2
	baz=96						
CHGB	Renai	0.40	153	P	Pb	16 37 22.8	0.0
	baz=154						
CHGB				S	Sg	16 37 27.5	+0.4
	baz=154						
NSK	Sanguang	0.43	53	i P	Pg	16 37 22.7	+0.5
	baz=61						
YHNB	Yeheng	0.44	55	P	Pg	16 37 22.6	+0.2
	baz=55						
YHNB				S	Sg	16 37 27.9	-0.4
	baz=55						
ETLH	Xiulin Townshi	0.51	114	P	Pb	16 37 24.6	+0.1
	baz=121						
ETLH				S	Sb	16 37 31.7	-0.1
	baz=121						
NDT	Datong Townshi	0.52	69	i P	Pb	16 37 24.6	-0.2
	baz=69						
NDT				i S	Sg	16 37 31.0	+0.2
	baz=69						
ENTT	Nioudou	0.58	67	i P	Pb	16 37 25.8	+0.1
	baz=68						
ENTT				i S	Sg	16 37 33.2	+0.5
	baz=68						
SSLB	Suanglung	0.63	182	P	Pn	16 37 27.7	-0.7
	baz=176						
SSLB				S	Sg	16 37 34.6	+0.4
	baz=176						
CHN5	Tsauling	0.86	199	P	Pn	16 37 31.6	0.0
	baz=214						
ALS	Alishan	0.92	190	i P	Pn	16 37 32.5	-0.1
	baz=190						
TPUB	Ta-pu	1.16	196	P	Pb	16 37 35.2	-0.3
	baz=197						
TPUB				S	Sn	16 37 53.4	+2.0
	baz=197						

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*ISK **27** 16:39:01.1, 37°.54N×37°.50E, h9^{km}, ML2.3/9*

*DDA **27** 16:39:02.0, 37°.53N×37°.47E, h7^{km}±1^{km}, ML2.5*

ISC 27 16:39:01.8±1.0**, 37°.55N**±0°.04×**37°.49E**±0°.03**, h11^{km}**±10^{km}**, n19, σ0^{s}.35**/25**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GZT	Gaziantep	0.20	164	i P	Pg	16 39 06.3	+0.1
GZT				IAML		16 39 09.0	
	comp=E,2µm,0.2s						
GZT				IAML		16 39 09.0	
	comp=N,2µm,0.3s						
GZT				i S	Sg	16 39 09.4	+0.2
KHMN	Narli-Kahraman	0.31	239	PG	Pg	16 39 07.9	-0.2
GAZ	Gaziantep	0.44	211	PG	Pg	16 39 10.5	0.0
GAZ				SG	Sg	16 39 16.5	+0.2
KMRS	Kahramanmaras	0.47	265	PG	Pg	16 39 10.9	-0.2
HCB	Kahramanmara	0.51	246	i P	Pg	16 39 11.8	+0.1
HCB				i S	Sg	16 39 17.8	-0.7
HCB				IAML		16 39 18.0	
	comp=N,225nm,0.2s						
HCB				IAML		16 39 18.0	
	comp=E,206nm,0.3s						
ATAB	Bozova	0.64	97	i P	Pb	16 39 15.0	-0.1

ATAB				*i* S	Sb	16 39 24.3	+0.2
ATAB				IAML		16 39 27.0	
	comp=E,215nm,0.3s						
KAMA	Osmaniye	0.75	241	*i* P	Pg	16 39 16.2	-0.2
KAMA				IAML		16 39 30.0	
	comp=E,173nm,0.1s						
KAMA				IAML		16 39 30.0	
	comp=N,116nm,0.2s						
KUZU	Kuzuini	0.84	203	*i* P	Pb	16 39 18.5	-0.1
KUZU				*i* S	Sb	16 39 29.9	-0.1
KUZU				IAML		16 39 34.0	
	comp=E,273nm,0.4s						
KUZU				IAML		16 39 34.0	
	comp=N,307nm,0.6s						
ANDN	Andirin	0.91	272	*i* P	Pg	16 39 19.3	-0.1
DARE	Darende-Malaty	1.02	360	PG	Pg	16 39 21.4	0.0
MALT	Malatya	1.06	44	PG	Pb	16 39 22.5	+0.2
URFA	Urfa	1.06	96	PG	Pg	16 39 21.4	-0.8
URFA				SG	Sb	16 39 36.8	+0.6
SAIM	ADANA	1.20	291	*i* P	Pn	16 39 24.7	+0.1
SAIM				IAML		16 39 43.0	
	comp=E,142nm,0.3s						
SAIM				IAML		16 39 45.0	
	comp=N,160nm,0.3s						
SARI	SarD1z-Kayseri	1.20	315	PN	Pg	16 39 24.4	-0.6
SANL	SANLIURFA_Merk	1.25	107	*i* P	Pn	16 39 25.1	-0.2
SANL				IAML		16 39 44.0	
	comp=N,124nm,0.3s						
SANL				IAML		16 39 44.0	
	comp=E,92nm,0.2s						
KOZT	Kozan	1.33	267	PN	Pb	16 39 26.7	0.0
CEYT	Ceyhan	1.49	249	PN	Pn	16 39 28.6	0.0
ELZG	Elazig	1.51	51	*i* P	Pb	16 39 30.5	+0.5
ELZG				IAML		16 39 54.0	
	comp=E,68nm,0.5s						
ELZG				IAML		16 39 54.0	
	comp=N,51nm,0.4s						
CMRD	Camardi-Nigde	1.99	274	PN	Pn	16 39 35.9	+0.3

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*IDC **27** 16:39:54.6±1.6, 44°.31N×105°.52W, h0^{km}, mb1 3.7/3, mb1mx3.3/57, mbtmp3.4/3, ML2.9/2, Error ellipse: s-maj=46.5km s-min=9.6km az=144.0*

*NEIC **27** 16:39:57±1.9, 44°.37N±0°.05×105°.39W±0°.06, h0^{km}±2^{km}, ML3.3/20, Error ellipse: s-maj=10.1km s-min=4.5km az=35.0*

ISC 27 16:39:56.2±1.1, **44°.43N**±0°.07×**105°.30W**±0°.08, **h0^{km}, n20,** σ**0^{s}.87**/19, **Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	Black Hills	0.96	108		Pb	16 40 16.2	+0.4
K22A	Casper	1.99	207		Pn	16 40 30.4	-0.8
LAO	LASA Array	2.35	344		Pn	16 40 37.0	+0.9
LAO				IAML		16 41 14.8	
	283nm,0.7s						
RLMT	Red Lodge	2.91	285		Pn	16 40 43.8	-0.2
RLMT				IAML		16 41 42.6	
	66nm,0.8s						
RLMT				IAML		16 41 50.6	
	75nm,1.0s						
RWWY	Rawlins	3.08	208		Pn	16 40 46.8	+0.5
RWWY				IAML		16 41 48.8	
	143nm,1.0s						
RWWY				IAML		16 42 05.1	
	85nm,1.9s						
PHWY	Pilot Hill	3.13	182		Pn	16 40 47.0	0.0
GCMT	Greycliff	3.38	295		Pn	16 40 50.4	+0.1
PD31	Pinedale Array	3.51	243		Pn	16 40 51.0	-1.3
PDAR	Pinedale Array	3.51	243	Pn	Pn	16 40 51.1	-1.1
	5.5nm,0.3s,baz=66,slow=16,SNR=100						
PDAR				Lg	Lg	16 41 38.0	
	21nm,0.3s,baz=65,slow=32,SNR=2.9						
PDAR	Pinedale Array	3.51	243		Pn	16 40 51.8	-0.5
BW06	Boulder Array	3.51	243		Pn	16 40 51.3	-0.9
BW06				IAML		16 41 49.4	
	63nm,0.8s						
BW06				IAML		16 41 50.7	
	53nm,1.0s						
H17A	Grant Village	3.78	271		Pn	16 40 57.2	+1.2
H17A				IAML		16 42 01.5	
	comp=E,38nm,1.1s						
FLWY	Flagg Ranch	3.90	267		Pn	16 40 58.5	+1.0
LOHW	Long Hollow	3.91	260		Pn	16 40 59.1	+1.3
SNOW	Snow King Moun	4.06	258		Pn	16 41 00.3	+0.5
SNOW				IAML		16 42 12.2	
	comp=E,63nm,2.4s						
SNOW				IAML		16 42 16.1	
	comp=E,52nm,1.0s						
LRM	Limekiln Ridge	5.25	288		Pn	16 41 15.5	-0.7
PV22	Blue Mesa, Par	6.44	205		Pn	16 41 33.0	+0.4
I10CA	LAC DU BONNET	8.54	44	*i*		17 33 50.0	
	baz=227,slow=330,SNR=3.9						
ULM	Lac du Bonnet	8.65	44	Pn	Pn	16 42 01.8	-0.8
	comp=E,0.7nm,0.3s,baz=230,slow=9.5,SNR=6.6						
ULM				Lg	Lg	16 44 27.4	
	comp=E,0.2nm,0.3s,baz=301,slow=18,SNR=6.9						
YKA	Yellowknife Ar	18.89	347	P	P	16 44 17.2	-0.7
	comp=E,0.1nm,0.3s,baz=158,slow=12,SNR=3.7						

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*IDC **27** 16:40:36.3±0.8, 16°.98N×146°.07E, h0^{km}, mb3.9/10, mb1 4.2/10, mb1mx3.8/54, mbtmp3.9/10, Error ellipse: s-maj=26.5km s-min=17.5km az=115.0*

*NEIC **27** 16:40:40.6±1.4, 17°.02N±0°.06×146°.0E±0°.3, h41^{km}±7^{km}, mb4.3/8, ML3.9/6, Error ellipse: s-maj=37.5km s-min=8.8km az=92.0*

ISC 27 16:40:41.1±0.7, **16°.94N**±0°.08×**146°.1E**±0°.1, **h35^{km}, n33,** σ**1^{s}.40**/26, **mb4.0**/14, **Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANA2	Anatahan	0.68	209	Pn	Pn	16 40 54.0	-0.3
GUMO	Guam	3.52	199	Pn	Pn	16 41 33.5	+0.1
GUMO				IAML		16 42 54.4	
	317nm,3.6s						
JCJ	Chichijima	10.72	341	Pn	Pn	16 43 10.5	-1.7
JOW	Kunigami	19.19	304	P	Pn	16 45 07.0	+4.0
	baz=210,slow=18,SNR=4.2						
H11S3	WAKE ISLAND Hy	19.72	82	T	T	17 05 47.3	
	baz=276						
H11S1	WAKE ISLAND Hy	19.73	82	T	T	17 05 48.8	
	baz=276						
H11S2	WAKE ISLAND Hy	19.74	82	T	T	17 05 48.6	
	baz=276						
H11N1	WAKE ISLAND Hy	19.98	79	T	T	17 06 05.1	
	baz=266						
H11N2	WAKE ISLAND Hy	19.98	79	T	T	17 06 05.6	
	baz=266						
H11N3	WAKE ISLAND Hy	19.99	79	T	T	17 06 06.2	
	baz=266						
MJAR	Matsushiro Arr	20.73	342	Pn	P	16 45 18.1	-0.4
JHS	Saijyo	21.38	330	P	P	16 45 24.1	-1.6
SIJI	Sorong	22.93	221	P	P	16 45 43.9	+1.6
	10nm,0.8s,baz=14,slow=13,SNR=4.4						
YULB	Yu-li	24.09	290	P	P	16 45 52.2	-1.3
KSRS	Korea Array	25.94	326	P	P	16 46 10.8	+0.7
	5.6nm,1.1s,baz=147,slow=10.0,SNR=9.0						
COEN	Coen	30.83	185	P	P	16 46 53.2	-0.8
COEN				IAmb	IAmb	16 47 07.4	
	comp=Z,3.6nm,1.1s						
WB0	Warramunga Arr	38.23	198	P	P	16 47 57.8	-0.2
WB0				IAmb	IAmb	16 48 01.7	
	comp=Z,8.4nm,1.4s						
WRAB	Tennant Creek	38.40	198	P	P	16 47 57.9	-1.5
WRAB				IAmb	IAmb	16 48 15.8	
	comp=Z,4.8nm,1.2s						
WB2	Warramunga Arr	38.41	198	P	P	16 47 57.9	-1.5
WB2				IAmb	IAmb	16 48 12.4	
	comp=Z,7.1nm,1.2s						
WRA	Warramunga Arr	38.41	198	P	P	16 47 59.3	-0.2
	comp=Z,1.8nm,0.9s,baz=22,slow=9.3,SNR=6.0						
FITZ	Fitzroy Crossi	40.20	211	P	P	16 48 12.7	-1.7
AS31	Alice Springs	42.06	197	P	P	16 48 30.8	+1.1
ASAR	Alice Springs	42.07	197	P	P	16 48 29.6	-0.1
	comp=Z,0.6nm,0.8s,baz=23,slow=14,SNR=8.3						
ASAR	Alice Springs	42.07	197	P	P	16 48 29.3	-0.4
CMAR	Chiang Mai Arr	44.80	279	P	P	16 48 52.3	+0.3
	comp=Z,1.7nm,1.0s,baz=72,slow=6.8,SNR=14						
CMAR	Chiang Mai Arr	44.80	279	P	P	16 48 50.3	-1.7
MKAR	Makanchi Array	59.92	315	P	P	16 50 44.3	+0.5
	comp=Z,0.9nm,1.0s,baz=96,slow=7.4,SNR=5.6						
ILAR	Eielson Array	65.07	26	P	P	16 51 17.4	-0.4
	comp=Z,0.9nm,0.9s,baz=266,slow=5.6,SNR=9.8						
INK	Inuvik	70.85	23	P	P	16 51 53.7	-0.3
	comp=Z,2.0nm,0.9s,baz=224,slow=3.8,SNR=5.0						
H02S1	DAWSON INLET T	71.54	39	T	T	18 10 40.7	
YKA	Yellowknife Ar	79.38	28	P	P	16 52 43.2	-0.1
	comp=Z,0.8nm,0.8s,baz=293,slow=5.0,SNR=10						
NVAR	Mina Array Bea	83.96	52	P	P	16 53 10.7	+2.4
	comp=Z,0.8nm,0.8s,baz=268,slow=6.3,SNR=6.2						
LPAZ	La Paz	147.26	94	PKPbc	PKPab	17 00 23.8	-0.6
	comp=Z,2.3nm,0.5s,baz=267,slow=3.0,SNR=7.5						

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*IDC **27** 16:41:12.8±1.0, 16°.84N×145°.82E, h0^{km}, mb4.1/7, mb1 4.4/7, mb1mx3.8/55, mbtmp4.2/7, Error ellipse: s-maj=42.0km s-min=21.4km az=121.0*

ISC 27 16:41:14.3±1.0, **16°.8N**±0°.2×**145°.9E**±0°.2, **h10^{km}, n8,** σ**0^{s}.54**/8, **mb4.1**/7, **Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	22.71	221	P	P	16 46 17.4	+1.0
	17nm,0.9s,baz=24,slow=11,SNR=5.5						
WRA	Warramunga Arr	38.23	198	P	P	16 48 34.6	-0.1
	3.6nm,1.1s,baz=18,slow=9.2,SNR=6.0						
FITZ	Fitzroy Crossi	39.99	211	P	P	16 48 48.9	-0.4
	4.2nm,1.0s,baz=34,slow=11,SNR=4.1						
ASAR	Alice Springs	41.89	197	P	P	16 49 04.7	-0.3
	1.0nm,0.8s,baz=18,slow=12,SNR=6.3						
CMAR	Chiang Mai Arr	44.65	279	P	P	16 49 27.3	-0.2
	0.5nm,0.4s,baz=75,slow=5.7,SNR=4.6						
INK	Inuvik	71.04	23	P	P	16 52 32.1	0.0
	2.6nm,0.9s,baz=300,slow=7.0,SNR=4.5						
NVAR	Mina Array Bea	84.18	52	P	P	16 53 46.6	+0.2
	1.1nm,0.8s,baz=263,slow=6.3,SNR=3.7						
LPAZ	La Paz	147.44	94	PKPbc	PKPbc	17 01 00.1	-0.1
	3.8nm,1.1s,baz=301,slow=5.9,SNR=2.2						

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*BJI **27** 16:41:50.2±0.0, 16°.92N×146°.82E, h10^{km}, mB4.9/1, mb4.6/26, Ms4.9/1, Ms7 4.6/1*

*IDC **27** 16:41:55.2±0.5, 17°.04N×146°.00E, h0^{km}, mb4.5/25, mb1 4.6/26, mb1mx4.4/55, mbtmp4.5/26, ML4.7/1, MS4.3/1, Ms1 4.3/1, ms1mx3.6/47, Error ellipse: s-maj=16.2km s-min=10.7km az=92.0*

*NEIC **27** 16:42:01.9±1.9, 16°.98N±0°.02×145°.9E±0°.1, h47^{km}±8^{km}, mb4.9/41, Error ellipse: s-maj=19.4km s-min=2.9km az=88.0*

ISC 27 16:42:00.5±0.4, **17°.01N**±0°.06×**145°.99E**±0°.09, **h35^{km}, n118,** σ**1^{s}.13**/110, **mb4.8**/62, **2C, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANA2	Anatahan	0.72	202	Pn	Pn	16 42 14.3	+0.1
GUMO	Guam	3.57	198	Pn	Pn	16 42 51.2	-2.2
JCJ	Chichijima	10.64	341	Pn	Pn	16 44 29.2	-1.2
JOW	Kunigami	19.10	304	P	P	16 46 21.1	+0.7
	3.4nm,0.3s,baz=138,slow=11,SNR=10.0						
H11S3	WAKE ISLAND Hy	19.77	83	T	T	17 07 07.9	
	baz=269,slow=75,SNR=80						
H11S1	WAKE ISLAND Hy	19.78	83	T	T	17 07 06.7	
	baz=269,slow=75,SNR=151						
H11S2	WAKE ISLAND Hy	19.78	83	T	T	17 07 07.0	
	baz=269,slow=75,SNR=164						
JMN	Monobe	19.89	329	P	P	16 46 29.5	+0.5
H11N1	WAKE ISLAND Hy	20.01	79	T	T	17 07 24.6	
	baz=266,slow=75,SNR=287						
H11N2	WAKE ISLAND Hy	20.02	79	T	T	17 07 26.3	
	baz=266,slow=75,SNR=86						
H11N3	WAKE ISLAND Hy	20.03	79	T	T	17 07 28.0	
	baz=266,slow=75,SNR=100						
JAY	Jayapura	20.09	196	LR	LR	16 53 45.8	
	comp=Z,854nm,18.6s,baz=64,slow=35						
MJAR	Matsushiro Arr	20.64	342	P	P	16 46 37.0	-0.1
	6.7nm,1.1s,baz=160,slow=10.0,SNR=4.6						
SIJI	Sorong	22.95	221	P	P	16 47 01.5	-0.4
	29nm,0.8s,baz=31,slow=8.3,SNR=8.2						
SSLB	Suanglung	24.40	290	P	P	16 47 18.6	+2.8
SSLB				IAmb	IAmb	16 47 20.8	
	comp=Z,29nm,0.8s						
TPUB	Ta-pu	24.60	289	P	P	16 47 19.8	+2.2
TPUB				IAmb	IAmb	16 47 33.0	
	comp=Z,61nm,1.3s						
KSRS	Korea Array	25.85	326	P	P	16 47 29.6	+0.9
	comp=Z,8.9nm,0.9s,baz=150,slow=10,SNR=12						
PMG	Port Moresby	26.27	177	P	P	16 47 32.5	-0.2
	comp=Z,24nm,0.9s,baz=320,slow=11,SNR=4.0						
SSE	Sheshan	26.56	306	P	P	16 47 36.0	+0.7
SSE				IAmb	IAmb	16 47 39.8	
	comp=Z,24nm,0.9s						
WHN	Wuhan	31.81	301	⇑P	P	16 48 24.8	+2.8
BJI	Beijing	34.55	318	P	P	16 48 45.0	-0.7
CTA	Charters Tower	36.87	180	P	P	16 49 07.3	+1.5
	comp=Z,5.2nm,1.1s,baz=35,slow=5.9,SNR=3.7						
PEA0B	Petropavlovsk-	37.17	12	P	P	16 49 08.2	+0.2
PEA0B				IAmb	IAmb	16 49 10.5	
	comp=Z,20nm,1.1s						
PETK	Petropavlovsk-	37.17	12	P	P	16 49 07.0	-1.0
	comp=Z,2.8nm,0.7s,baz=161,slow=6.7,SNR=6.2						
PETK	Petropavlovsk-	37.17	12	P	P	16 49 09.9	+1.8
XAN	Xi'an	37.26	304	P	P	16 49 10.5	+1.4
XAN				pmax	pmax		
	comp=Z,10.0nm,1.0s						
WB0	Warramunga Arr	38.28	198	P	P	16 49 15.9	-1.8
WR0	Warramunga Arr	38.42	197	P	P	16 49 16.7	-2.2
SANVU	Saraoutou	38.45	146	P	P	16 49 18.3	-0.9
WRAB	Tennant Creek	38.45	198	P	P	16 49 17.4	-1.8
WB2	Warramunga Arr	38.46	198	P	P	16 49 18.2	-1.1
WB2				IAmb	IAmb	16 49 20.0	
	comp=Z,15nm,1.1s						
WRA	Warramunga Arr	38.47	198	P	P	16 49 17.4	-1.9
	comp=Z,8.1nm,1.1s,baz=18,slow=9.4,SNR=9.5						
FITZ	Fitzroy Crossi	40.23	211	P	P	16 49 32.5	-1.5
	comp=Z,5.1nm,0.9s,baz=27,slow=7.7,SNR=5.5						
CD2	Chengdu	40.76	298	P	P	16 49 40.3	+1.9
CD2				pmax	pmax		
	comp=Z,40nm,1.2s						
KMI	Kunming	41.02	289	⇑P	P	16 49 43.0	+2.1
KMI				pP	pP	16 49 50.3	-0.4
KMI				sP	pwP	16 49 53.3	+0.5
KMI				pmax	pmax		
	comp=Z,13nm,1.1s						
AS31	Alice Springs	42.12	197	P	P	16 49 49.0	-0.5
ASAR	Alice Springs	42.12	197	P	P	16 49 49.0	-0.5
	comp=Z,2.6nm,0.8s,baz=18,slow=9.2,SNR=13						
ASAR	Alice Springs	42.12	197	P	P	16 49 48.6	-1.0
DZM	Mont Dzumac	43.70	152	P	P	16 50 02.7	+0.3
	comp=Z,16nm,1.0s,baz=43,slow=16,SNR=5.1						
DZM	Mont Dzumac	43.70	152	P	P	16 50 03.8	+1.3
DZM				IAmb	IAmb	16 50 06.1	
	comp=Z,38nm,1.3s						
SONM	Songino Array	44.64	322	P	P	16 50 08.4	-1.4
	comp=Z,1.8nm,1.1s,baz=116,slow=6.8,SNR=4.7						
CMAR	Chiang Mai Arr	44.74	279	P	P	16 50 11.7	+0.8
	comp=Z,7.7nm,1.0s,baz=71,slow=6.6,SNR=11						
CMAR	Chiang Mai Arr	44.74	279	P	P	16 50 11.1	+0.2
MSVF	Nonsavu	46.78	136	P	P	16 50 28.8	+1.9
	comp=Z,9.6nm,1.1s,baz=328,slow=9.1,SNR=4.4						
STKA	Stephens Creek	48.79	185	P	P	16 50 43.2	+1.0
	comp=Z,2.4nm,1.0s,baz=330,slow=14,SNR=3.7						
LSA	Lhasa	51.49	295	P	P	16 51 05.6	+2.1
TAPN	Taplejung	54.53	292	*e*P	P	16 51 26.3	+0.6
	comp=Z,34nm,1.2s						
ODAN	Odare	54.83	291	*e*P	P	16 51 28.3	+0.5
	comp=Z,38nm,1.0s						
RAMN	Ramite	55.53	291	*e*P	P	16 51 33.2	+0.3
	comp=Z,26nm,1.2s						
GUN	Gumba	56.13	292	*e*P	P	16 51 37.0	-0.3
	comp=Z,39nm,1.1s						
PKI	Pulchoki	56.56	292	*e*P	P	16 51 40.4	+0.1
	comp=Z,15nm,0.9s						
PKIN	Phulchoki	56.57	292	*e*P	P	16 51 40.4	0.0
	comp=Z,10nm,0.7s						
KKN	Kakani	56.67	292	*e*P	P	16 51 41.5	+0.6
	comp=Z,13nm,0.8s						
DMN	Daman	56.83	292	*e*P	P	16 51 42.6	+0.4
	comp=Z,33nm,1.1s						
GKN	Gorkha	57.22	293	*e*P	P	16 51 45.1	+0.3
	comp=Z,44nm,1.0s						
ZSN	Zaisan	58.19	316	*e*P	P	16 51 51.6	+0.4
	baz=316						
ZALV	Zalesovo Beam	59.52	323	P	P	16 52 00.2	0.0
	comp=Z,1.4nm,0.7s,baz=92,slow=4.9,SNR=5.0						
ZALV	Zalesovo Beam	59.52	323	P	P	16 52 01.4	+1.2
MKAR	Makanchi Array	59.83	315	P	P	16 52 02.4	-0.2
	comp=Z,2.3nm,0.6s,baz=94,slow=8.2,SNR=10						
MKAR	Makanchi Array	59.83	315	P	P	16 52 02.1	-0.4
MAKZ	Makanchi	60.05	315	P	P	16 52 03.5	-0.5
OHAK	Old Harbor	60.10	33	P	P	16 52 05.4	+1.3
SVW2	Sparrevohn	60.16	28	P	P	16 52 05.7	+1.2
SVW2				IAmb	IAmb	16 52 07.6	
	comp=Z,8.5nm,0.8s						
KDAK	Kodiak Island	60.61	33	P	P	16 52 07.3	-0.3
	comp=Z,8.0nm,0.7s,baz=253,slow=5.5,SNR=7.5						
KDAK	Kodiak Island	60.61	33	P	P	16 52 08.4	+0.8
TTA	Tatalina	60.62	26	P	P	16 52 08.4	+0.7
TTA				IAmb	IAmb	16 52 10.3	
	comp=Z,8.4nm,0.9s						
SHLS	Shalkode	61.51	310	*e*P	P	16 52 11.2	-3.0
	comp=Z,4.4nm,1.1s,baz=310						
SEM	Semipalatinsk	61.64	318	*e*P	P	16 52 13.7	-1.3
	baz=318						
BRLK	Bradley Lake	61.98	31	P	P	16 52 16.7	-0.2
KPKS	Kokpek	62.09	311	*e*P	P	16 52 17.1	-0.9
	comp=Z,2.8nm,0.8s,baz=311						
PPLA	Purkeypile	62.26	27	P	P	16 52 19.8	+1.0
PPLA				IAmb	IAmb	16 52 25.2	
	comp=Z,8.3nm,0.8s						
SATY	Saty	62.28	310	*e*P	P	16 52 19.0	-0.4
	comp=Z,2.7nm,1.1s,baz=310						
SKT	Skwentna	62.28	28	P	P	16 52 18.4	-0.5
SKT				IAmb	IAmb	16 52 20.9	
	comp=Z,9.7nm,0.8s						
TDK	Taldyqorghan	62.37	312	*e*P	P	16 52 19.6	-0.2
	comp=Z,8.4nm,0.9s,baz=312						
SUA	Susitna One	62.50	29	P	P	16 52 20.8	+0.4
SUA				IAmb	IAmb	16 52 23.3	
	comp=Z,7.5nm,0.8s						
IMAR	Indian Mountai	62.64	24	P	P	16 52 22.1	+1.0
BKZ	Black Stump Fm	62.74	154	P	P	16 52 22.2	0.0
BKZ				IAmb	IAmb	16 52 27.7	
	comp=Z,11nm,1.0s						
BPAW	Bear Paw Mtn.	63.14	26	P	P	16 52 25.7	+1.1
TRF	Thorofare Moun	63.25	27	P	P	16 52 25.1	-0.4
TRF				IAmb	IAmb	16 52 28.8	
	comp=Z,12nm,1.0s						
MDOK	Medeo	63.27	310	*e*P	P	16 52 25.2	-0.8
	baz=310						
CHKK	Chushkaly	63.34	311	*e*P	P	16 52 25.7	-0.6
	baz=311						
AAA	Alma-Ata	63.37	310	*e*P	P	16 52 26.6	+0.1
	baz=310						
SML	Sawmill	63.70	29	P	P	16 52 29.1	+0.7
KUU	Kurty	63.81	311	*e*P	P	16 52 28.1	-1.2
	comp=Z,12nm,1.0s,baz=311						
COLD	Coldfoot	64.39	23	P	P	16 52 34.5	+1.8
RPZ	Rata Peaks	64.64	160	P	P	16 52 33.7	-0.9
	comp=Z,12nm,1.0s,baz=39,slow=4.5,SNR=3.8						
EYAK	Cordova Ski Ar	64.66	31	P	P	16 52 35.4	+0.8
EYAK				IAmb	IAmb	16 52 37.3	
	comp=Z,9.5nm,0.8s						
ILAR	Eielson Array	65.03	26	P	P	16 52 35.5	-1.4
	comp=Z,5.7nm,0.8s,baz=252,slow=4.5,SNR=20						
ILAR	Eielson Array	65.03	26	P	P	16 52 36.7	-0.2
TOLK	Toolik Lake Re	65.05	21	P	P	16 52 37.4	+0.4
TOLK				IAmb	IAmb	16 52 39.5	
	comp=Z,10nm,0.8s						
BTLS	Baital	65.46	312	*e*P	P	16 52 38.6	-1.5
	baz=312						
SUCK	Suckling Hills	65.55	31	P	P	16 52 41.3	+0.9
SUCK				IAmb	IAmb	16 52 58.5	
	comp=Z,15nm,1.1s						
VRDI	Verde Repeater	65.88	30	P	P	16 52 43.1	+0.4
VRDI				IAmb	IAmb	16 52 45.1	
	comp=Z,8.9nm,0.8s						
CRQM	Cirque	65.97	31	P	P	16 52 44.1	+0.9
DOT	Dot Lake	66.01	27	P	P	16 52 43.3	+0.1
DOT				IAmb	IAmb	16 52 45.1	
	comp=Z,11nm,0.7s						
MCARA	McCarthy VSAT	66.11	30	P	P	16 52 44.3	+0.4
MCARA				IAmb	IAmb	16 52 47.0	
	comp=Z,13nm,0.8s						
TGL	Tana Glacier	66.12	31	P	P	16 52 43.9	-0.2
TGL				IAmb	IAmb	16 52 46.3	
	comp=Z,9.1nm,0.9s						
BALM	Baldy	66.39	30	P	P	16 52 46.0	+0.1
BMAR	Burnt Mountain	66.55	23	P	P	16 52 47.5	+0.8
BARN	Barnard Glacie	66.72	30	P	P	16 52 47.3	-0.8
CTGM	Chitina Glacie	66.87	30	P	P	16 52 49.9	+0.9
CTGM				IAmb	IAmb	16 52 51.9	
	comp=Z,12nm,0.8s						
TABL	Table Mountain	66.90	31	P	P	16 52 50.0	+0.7
BCAR	Beaver Creek A	66.93	28	P	P	16 52 49.4	+0.2
DZA	Taraz	67.47	310	*e*P	P	16 52 51.7	-1.3
	baz=310						
KKAR	Karatay Array	68.06	310	P	P	16 52 56.0	-0.7
KKAR	Karatay Array	68.06	310	P	P	16 52 57.3	+0.6
KKAR				IAmb	IAmb	16 52 58.4	
	comp=Z,8.6nm,1.1s						
IUG	Iuzhnay	68.47	309	*e*P	P	16 52 57.9	-1.5
	baz=309						
HYT	Haines Junctio	68.72	31	P	P	16 53 02.2	+1.6
INK	Inuvik	70.81	23	P	P	16 53 12.7	-0.4
	comp=Z,11nm,0.8s,baz=263,slow=6.5,SNR=17						
H02S1	DAWSON INLET T	71.52	39	T	T	18 12 01.7	
	SNR=6.8						
DLBC	Dease Lake	72.54	33	P	P	16 53 23.5	-0.4
	comp=Z,5.9nm,0.8s,baz=237,slow=2.1,SNR=8.0						
ABKAR	Akbulak array	74.76	317	P	P	16 53 35.5	-1.4
GEYT	Alibeck	78.11	306	P	P	16 53 56.1	-0.1
	comp=Z,2.9nm,0.8s,baz=85,slow=5.4,SNR=4.6						
YKA	Yellowknife Ar	79.34	28	P	P	16 54 01.9	-0.5
	comp=Z,4.3nm,0.7s,baz=290,slow=4.7,SNR=18						
NVAR	Mina Array Bea	83.95	52	P	P	16 54 29.0	+1.4
	comp=Z,4.1nm,0.6s,baz=260,slow=6.0,SNR=13						
FINES	FINESS Array B	88.53	335	P	P	16 54 47.0	-2.2
	comp=Z,3.5nm,1.0s,baz=121,slow=10,SNR=2.8						
PDAR	Pinedale Array	88.80	46	P	P	16 54 51.1	-0.2
	comp=Z,0.5nm,0.6s,baz=193,slow=2.3,SNR=6.2						
LPAZ	La Paz	147.32	94	PKPbc	PKPab	17 01 43.5	-0.5
	comp=Z,20nm,1.0s,baz=279,slow=2.5,SNR=14						

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*IDC **27** 16:45:15.9±0.4, 17°.06N×145°.96E, h0^{km}, mb4.4/32, mb1 4.5/32, mb1mx4.4/54, mbtmp4.4/32, MS4.5/9, Ms1 4.5/9, ms1mx4.1/43, Error ellipse: s-maj=14.8km s-min=9.3km az=101.0*

*BJI **27** 16:45:16.7±0.0, 17°.04N×146°.13E, h18^{km}, mB5.4/11, mb4.7/37, Ms5.0/7, Ms7 4.8/8*

*NEIC **27** 16:45:20.2±1.2, 16°.98N±0°.08×145°.9E±0°.1, h28^{km}±4^{km}, mb5.0/54, ML4.4/6, Error ellipse: s-maj=16.8km s-min=11.0km az=96.0*

ISC 27 16:45:17.8±0.3, **17°.03N**±0°.05×**146°.05E**±0°.07, **h10^{km}, n273,** σ**1^{s}.30**/249, **mb4.9**/93, **MS4.5**/9, **2C-2D, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANA2	Anatahan	0.76	205		Pb	16 45 33.1	0.0
GUMO	Guam	3.61	199		Pn	16 46 14.0	+0.2
GUMO				IAML		16 47 22.7	
	862nm,1.1s						
JCJ	Chichijima	10.63	341	LR	LR	16 51 08.6	
	comp=Z,1µm,20.0s,baz=158,slow=33						
JOW	Kunigami	19.14	304	P	Pn	16 49 46.2	+4.2
	3.3nm,0.3s,baz=129,slow=15,SNR=4.8						
JOW				LR	LR	16 55 45.3	
	comp=Z,2µm,18.2s,baz=154,slow=33						
H11S3	WAKE ISLAND Hy	19.71	83	T	T	17 10 25.4	
	baz=269,slow=75,SNR=48						
H11S1	WAKE ISLAND Hy	19.72	83	T	T	17 10 27.3	
	baz=269,slow=75,SNR=53						
H11S2	WAKE ISLAND Hy	19.73	83	T	T	17 10 27.2	
	baz=269,slow=75,SNR=53						
H11N1	WAKE ISLAND Hy	19.96	79	T	T	17 10 46.1	
	baz=266,slow=74,SNR=81						
H11N2	WAKE ISLAND Hy	19.97	79	T	T	17 10 43.1	
	baz=266,slow=74,SNR=109						
H11N3	WAKE ISLAND Hy	19.98	79	T	T	17 10 50.0	
	baz=266,slow=74,SNR=107						
JAY	Jayapura	20.13	196	P	Pn	16 49 53.0	-1.0
	41nm,0.8s,baz=331,slow=12,SNR=4.2						
SMPI	Sarmi	20.24	202	P	Pn	16 49 55.6	+0.4
	53nm,1.6s						
GENI	Genyem	20.34	197	P	P	16 49 54.6	+0.2
	4µm296nm,1.6s						
MJAR	Matsushiro Arr	20.64	342	P	P	16 49 57.1	-0.4
	1.8nm,0.6s,baz=162,slow=9.0,SNR=3.0						
MJAR				LR	LR	16 56 44.8	
	comp=Z,971nm,21.1s,baz=155,slow=34						
MJAR	Matsushiro Arr	20.64	342	P	P	16 49 56.1	-1.4
MAT	Matsushiro	20.64	342	P	P	16 49 57.1	-0.4
SIJI	Sorong	23.00	221	P	P	16 50 22.4	-0.6

	22nm,0.6s,baz=24,slow=9.4,SNR=14						
SWI	Sorong	23.00	221	P	P	16 50 23.2	+0.3
	110nm,1.5s						
FAKI	Fak Fak	24.05	216	P	P	16 50 33.2	-0.2
FAKI				IAmb	IAmb	16 50 38.9	
	comp=Z,62nm,1.2s						
FAKI	Fak Fak	24.05	216	P	P	16 50 34.0	+0.6
	comp=Z,38nm,1.1s						
YHNB	Yeheng	24.25	292	P	P	16 50 33.8	-1.5
YHNB				IAmb	IAmb	16 50 44.2	
	comp=Z,56nm,1.0s						
TGY	Tagaytay City	24.36	267	LR	LR	16 58 21.3	
	comp=Z,1µm,22.0s,baz=107,slow=32						
SSLB	Suanglung	24.44	290	P	P	16 50 35.9	-1.0
SSLB				IAmb	IAmb	16 50 49.0	
	comp=Z,48nm,1.1s						
KSRS	Korea Array	25.86	325	P	P	16 50 49.9	+0.3
	comp=Z,3.1nm,0.8s,baz=145,slow=9.2,SNR=9.7						
PMG	Port Moresby	26.29	178	P	P	16 50 53.7	0.0
	comp=Z,38nm,1.1s,baz=356,slow=9.5,SNR=7.0						
PMG	Port Moresby	26.29	178	P	P	16 50 52.0	-1.6
PMG				IAmb	IAmb	16 50 55.4	
	comp=Z,60nm,1.1s						
PMG	Port Moresby	26.29	178	P	P	16 50 54.3	+0.6
NJ2	Nanjing	28.80	306	*e*P	P	16 51 16.3	+0.3
MRSI	Marisa	28.88	238	P	P	16 51 18.8	+1.9
	comp=Z,20nm,1.3s						
DL2	Dalian	30.49	321	P	P	16 51 42.0	+11
DL2				pmax	pmax		
	comp=Z,19nm,1.4s						
COEN	Coen	30.92	185	P	P	16 51 33.0	-1.9
WHN	Wuhan	31.85	301	⇓P	P	16 51 45.0	+2.0
KAPI	Kappang	33.99	232	P	P	16 52 01.7	-0.2
	comp=Z,3.7nm,0.2s,baz=64,slow=9.0,SNR=6.5						
BJT	Baijiatuau	34.56	318	P	P	16 52 05.9	-0.8
BJI	Beijing	34.57	318	P	P	16 52 06.3	-0.4
BJI				S	S	16 57 34.5	-1.3
BJI				pmax	pmax		
	comp=Z,14nm,1.3s						
CTA	Charters Tower	36.89	180	P	P	16 52 26.6	-0.2
	comp=Z,7.7nm,1.1s,baz=353,slow=8.4,SNR=6.1						
PETK	Petropavlovsk-	37.14	12	P	P	16 52 28.7	+0.1
	comp=Z,2.4nm,0.6s,baz=181,slow=7.0,SNR=8.0						
PETK	Petropavlovsk-	37.14	12	P	P	16 52 28.8	+0.2
XAN	Xi'an	37.29	304	P	P	16 52 30.3	+0.1
XAN				pmax	pmax		
	comp=Z,17nm,1.6s						
GYA	Guiyang	37.64	291	⇓P	P	16 52 35.3	+2.0
GYA				pmax	pmax		
	comp=Z,23nm,1.2s						
STKI	Sintang	37.99	247	P	P	16 52 38.0	+1.7
	comp=Z,156nm,0.4s						
HHC	Hu-ho-hao-te	38.01	316	*e*P	P	16 52 36.0	-0.3
HHC				pmax	pmax		
	comp=Z,8.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,550nm,7.6s						
WB0	Warramunga Arr	38.32	198	P	P	16 52 37.8	-1.1
WB0				IAmb	IAmb	16 52 38.7	
	comp=Z,31nm,1.2s						
SANVU	Saraoutou	38.43	146	P	P	16 52 40.9	+1.1
WR0	Warramunga Arr	38.46	198	P	P	16 52 38.8	-1.3
WR0				IAmb	IAmb	16 52 39.4	
	comp=Z,32nm,1.4s						
WR0				PcP	PcP	16 54 51.6	-1.7
WRAB	Tennant Creek	38.49	198	P	P	16 52 38.8	-1.5
WRAB				IAmb	IAmb	16 52 40.2	
	comp=Z,50nm,1.4s						
WB2	Warramunga Arr	38.50	198	P	P	16 52 39.3	-1.1
WB2				IAmb	IAmb	16 52 40.4	
	comp=Z,49nm,1.4s						
WRA	Warramunga Arr	38.50	198	P	P	16 52 38.8	-1.6
	comp=Z,17nm,1.1s,baz=17,slow=9.2,SNR=20						
WRA				PcP	PcP	16 54 51.7	-1.7
	comp=Z,0.8nm,0.9s,baz=17,slow=3.5,SNR=1.3						
TWSI	Taliwang, Sumb	38.57	231	P	P	16 52 40.9	-0.2
	comp=Z,23nm,1.0s						
BTO	Baotou	38.94	315	*e*P	P	16 52 46.8	+2.7
FITZ	Fitzroy Crossi	40.27	211	P	P	16 52 54.0	-1.2
	comp=Z,11nm,1.0s,baz=33,slow=10,SNR=7.1						
FITZ	Fitzroy Crossi	40.27	211	P	P	16 52 54.3	-0.9
CD2	Chengdu	40.79	298	P	P	16 53 00.3	+0.7
CD2				pmax	pmax		
	comp=Z,50nm,1.4s						
KMI	Kunming	41.06	289	⇑P	P	16 53 04.0	+1.9
KMI				pP	pwP	16 53 09.5	+2.3
KMI				sP	sP	16 53 12.3	+6.7
KMI				pmax	pmax		
	comp=Z,13nm,1.6s						
LZH	Lanzhou	41.86	305	*e*P	P	16 53 09.3	+0.9
LZH				pP	pwP	16 53 19.5	+5.9
LZH				pmax	pmax		
	comp=Z,27nm,1.1s						
AS31	Alice Springs	42.15	197	P	P	16 53 09.8	-0.8
ASAR	Alice Springs	42.15	197	P	P	16 53 09.2	-1.5
	comp=Z,3.0nm,0.9s,baz=22,slow=7.9,SNR=11						
ASAR	Alice Springs	42.15	197	P	P	16 53 09.4	-1.3
CHAI	Chaiyaphum	42.20	275	P	P	16 53 14.3	+3.0
	comp=Z,21nm,1.0s						
SRAK	Srakaew	42.44	272	P	P	16 53 12.3	-0.9
	comp=Z,146nm,1.0s						
MA2	Magadan	42.62	4	P	P	16 53 13.1	-0.9
	comp=Z,2.7nm,0.8s,baz=110,slow=18,SNR=1.9						
UTTA	Uttaradit	43.34	278	P	P	16 53 23.3	+2.8
	comp=Z,13nm,0.8s						
DZM	Mont Dzumac	43.70	152	P	P	16 53 23.6	+0.4
	comp=Z,14nm,0.9s,baz=139,slow=7.6,SNR=7.6						
DZM	Mont Dzumac	43.70	152	P	P	16 53 22.6	-0.6
DZM				IAmb	IAmb	16 53 26.1	
	comp=Z,30nm,1.1s						
SUKH	Sukhothai	44.24	278	P	P	16 53 31.2	+3.5
	comp=Z,11nm,0.7s						
CM35	Chiang Mai Arr	44.57	280	P	P	16 53 33.0	+2.7
SONM	Songino Array	44.65	322	P	P	16 53 30.9	+0.1
	comp=Z,0.9nm,0.7s,baz=124,slow=7.9,SNR=3.7						
SONM				LR	LR	17 11 02.1	
	comp=Z,625nm,19.6s,baz=144,slow=35						
SONM	Songino Array	44.65	322	P	P	16 53 28.9	-1.9
UTHA	Uthaitani	44.67	275	P	P	16 53 34.8	+3.6
	comp=Z,187nmcomp=Z,12nm,1.1s						
CM09	Chiang Mai Arr	44.75	279	P	P	16 53 34.5	+2.8
	comp=Z,107nmcomp=Z,12nm,1.1s						
CMMT	Chiang Mai	44.75	280	P	P	16 53 33.7	+1.9
CM01	Chiang Mai Arr	44.78	279	P	P	16 53 34.8	+2.7
	comp=Z,136nmcomp=Z,15nm,1.1s						
LEM	Lembang	44.78	241	P	P	16 53 31.0	-1.2
	comp=Z,5.7nm,0.4s,baz=137,slow=4.5,SNR=4.3						
CM02	Chiang Mai Arr	44.79	279	P	P	16 53 34.4	+2.3
	comp=Z,123nmcomp=Z,13nm,1.0s						
CM31	Chiang Mai Arr	44.79	279	P	P	16 53 34.4	+2.3
	comp=Z,283nm,1.0s						
CMAR	Chiang Mai Arr	44.79	279	P	P	16 53 31.5	-0.6
	comp=Z,4.5nm,0.8s,baz=72,slow=6.8,SNR=18						
CMAR				LR	LR	17 13 37.7	
	comp=Z,246nm,18.0s,baz=260,slow=38						
CM15	Chiang Mai Arr	44.81	279	P	P	16 53 34.4	+2.1
	comp=Z,88nmcomp=Z,12nm,1.0s						
UMPA	Umpang Tak	45.14	276	P	P	16 53 39.4	+4.5
	comp=Z,18nm,1.1s						
MHMT	Maesarieng	45.77	279	P	P	16 53 42.1	+2.2
GTA	Gaotai	45.83	309	⇑P	P	16 53 40.8	+0.5
GTA				pP	pwP	16 53 47.0	+1.6
GTA				sP	sP	16 53 50.3	+6.5
GTA				LR	LR		
	comp=Z,540nm,16.4s						
GTA				LR	LR		
	comp=Z,480nm,16.7s						
GTA				LR	LR		
	comp=Z,1µm,18.5s						
SEY	Seymchan	46.06	4	P	P	16 53 40.2	-1.3
	comp=Z,1.0nm,0.7s,baz=87,slow=22,SNR=4.6						
MDSI	Maura Dua	46.56	246	P	P	16 53 45.3	-0.8
	comp=Z,7.5nm,1.2s						
MSVF	Nonsavu	46.76	136	P	P	16 53 49.3	+1.7
	comp=Z,6.4nm,0.9s,baz=350,slow=6.6,SNR=3.9						
PSI	Prapat	48.37	258	P	P	16 54 01.1	+0.7
	comp=Z,2.7nm,0.3s,baz=359,slow=0.6,SNR=5.5						
STKA	Stephens Creek	48.82	185	P	P	16 54 02.5	-0.8
	comp=Z,1.5nm,0.6s,baz=344,slow=9.2,SNR=5.0						
GSI	Gunungsitoli	50.16	257	P	P	16 54 12.1	-1.8
GSI	Gunungsitoli	50.16	257	P	P	16 54 14.2	+0.3
	comp=Z,43nm,0.9s						
BBOO	Buckleboo	50.47	191	P	P	16 54 15.1	-0.8
BBOO				IAmb	IAmb	16 54 16.4	
	comp=Z,16nm,1.1s						
TAPN	Taplejung	54.57	292	*e*P	P	16 54 46.8	-0.1
ODAN	Odare	54.88	291	*e*P	P	16 54 48.4	-0.7
	comp=Z,61nm,1.3s						
RAMN	Ramite	55.58	291	*e*P	P	16 54 53.7	-0.5
	comp=Z,30nm,1.2s						
WMQ	Urumqi	55.65	312	P	P	16 54 54.8	+0.6
WMQ				pP	pwP	16 55 01.5	+2.0
WMQ				sP	sP	16 55 04.8	+7.0
WMQ				pmax	pmax		
	comp=Z,27nm,1.1s						
SDPT	Sand Point	55.66	34	P	P	16 54 54.6	+0.7
	baz=249						
GUN	Gumba	56.17	292	*e*P	P	16 54 58.0	-0.5
	comp=Z,19nm,0.6s						
PKI	Pulchoki	56.60	292	*e*P	P	16 55 00.7	-0.9
	comp=Z,9.6nm,0.6s						
PKIN	Phulchoki	56.61	292	*e*P	P	16 55 01.4	-0.2
	comp=Z,12nm,0.7s						
KKN	Kakani	56.71	292	*e*P	P	16 55 01.8	-0.4
	comp=Z,18nm,0.9s						
DMN	Daman	56.87	292	*e*P	P	16 55 02.5	-0.9
	comp=Z,11nm,0.5s						
CHGN	Chignik	57.08	33	P	P	16 55 04.6	+0.6
	baz=250						
GKN	Gorkha	57.27	293	*e*P	P	16 55 05.1	-1.0
	comp=Z,20nm,0.6s						
ANM	Nome	57.59	23	P	P	16 55 07.7	+0.2
	baz=238						
RAO	Raoul Island	57.69	143	LR	LR	17 15 37.6	
	comp=Z,513nm,19.0s,baz=120,slow=32						
ZSN	Zaisan	58.21	316	*e*P	P	16 55 10.5	-1.7
	baz=316						
SII	Sitkinak Islan	59.40	34	P	P	16 55 21.4	+1.1
	baz=254						
ZALV	Zalesovo Beam	59.54	323	P	P	16 55 18.8	-2.5
	comp=Z,0.5nm,0.4s,baz=100,slow=8.1,SNR=3.7						
MKAR	Makanchi Array	59.86	315	P	P	16 55 23.1	-0.6
	comp=Z,1.1nm,0.7s,baz=101,slow=5.4,SNR=9.0						
MKAR	Makanchi Array	59.86	315	P	P	16 55 22.6	-1.1
OHAK	Old Harbor	60.05	33	P	P	16 55 25.7	+0.9
	baz=254						
OHAK	Old Harbor	60.05	33	P	P	16 55 25.9	+1.1
MAKZ	Makanchi	60.07	315	P	P	16 55 24.5	-0.6
MAKZ				IAmb	IAmb	16 55 41.4	
	comp=Z,10nm,1.2s						
KDAK	Kodiak Island	60.57	33	P	P	16 55 28.2	-0.1
	comp=Z,7.2nm,0.9s,baz=236,slow=2.1,SNR=11						
KDAK	Kodiak Island	60.57	33	P	P	16 55 28.6	+0.3
	baz=255						
KDAK	Kodiak Island	60.57	33	P	P	16 55 29.2	+1.0
KDAK				IAmb	IAmb	16 55 38.0	
	comp=Z,15nm,1.1s						
TTA	Tatalina	60.58	26	P	P	16 55 28.7	+0.3
	baz=249,SNR=5.1						
TTA	Tatalina	60.58	26	P	P	16 55 29.0	+0.6
SHLS	Shalkode	61.54	310	*e*P	P	16 55 31.5	-3.9
	comp=Z,24nm,2.2s,baz=310						
SEM	Semipalatinsk	61.66	318	*e*P	P	16 55 33.7	-2.4
	baz=318						
UZB	Uzynbulak	61.86	310	*e*P	P	16 55 35.7	-1.8
	comp=Z,9.1nm,1.5s,baz=310						
BRSE	Bradley Lake S	62.01	31	P	P	16 55 37.9	-0.1
	baz=255						
CAPN	Captain Cook N	62.08	30	P	P	16 55 39.2	+0.8
	baz=254						
KPKS	Kokpek	62.12	311	*e*P	P	16 55 37.8	-1.4
	baz=310						
PPLA	Purkeypile	62.22	27	P	P	16 55 40.2	+0.6
	baz=252						
PPLA	Purkeypile	62.22	27	IAmb	IAmb	16 55 59.1	
	comp=Z,21nm,1.3s						
SKT	Skwentna	62.24	28	P	P	16 55 39.7	+0.1
	baz=254,SNR=7.5						
SKT	Skwentna	62.24	28	IAmb	IAmb	16 55 40.2	
	comp=Z,9.6nm,0.9s						
SATY	Saty	62.30	310	*e*P	P	16 55 39.0	-1.6
	baz=310						
TDK	Taldyqorghan	62.40	312	*e*P	P	16 55 39.6	-1.3
	baz=312						
SUA	Susitna One	62.45	29	P	P	16 55 40.6	-0.6
	baz=255						
SUA	Susitna One	62.45	29	IAmb	IAmb	16 55 42.6	
	comp=Z,6.6nm,0.7s						
CHUM	Lake Minchumin	62.47	26	P	P	16 55 41.5	+0.5
	baz=252,SNR=6.4						
IMAR	Indian Mountai	62.60	24	P	P	16 55 42.4	+0.5
O22K	Cooper Landing	62.68	30	P	P	16 55 42.7	+0.1
	baz=256						
SEW	Seward	62.72	31	P	P	16 55 42.8	0.0
	baz=256						
RC01	Rabbit Creek A	62.83	29	P	P	16 55 43.3	-0.2
	baz=256,SNR=6.9						
BPAW	Bear Paw Mtn.	63.09	26	P	P	16 55 45.6	+0.3
	baz=253						
BPAW	Bear Paw Mtn.	63.09	26	IAmb	IAmb	16 55 54.4	
	comp=Z,12nm,0.8s						
TRF	Thorofare Moun	63.20	27	P	P	16 55 45.4	-0.8
	baz=254,SNR=5.8						
TRF	Thorofare Moun	63.20	27	IAmb	IAmb	16 55 46.3	
	comp=Z,9.9nm,0.9s						
NRIK	Noril'sk	63.28	340	P	P	16 55 44.4	-2.0
	comp=Z,1.2nm,0.5s,baz=16,slow=22,SNR=2.1						
NRIK	Noril'sk	63.28	340	P	P	16 55 45.9	-0.5
MDOK	Medeo	63.30	310	*e*P	P	16 55 46.0	-1.2
	baz=310						
CHKK	Chushkaly	63.36	311	*e*P	P	16 55 45.2	-2.2
	baz=311						
AAA	Alma-Ata	63.40	310	*e*P	P	16 55 46.8	-0.9
	baz=310						
MLY	Manley	63.48	25	P	P	16 55 48.0	+0.2
	baz=253,SNR=16						
SML	Sawmill	63.66	29	P	P	16 55 49.2	+0.1
	baz=257,SNR=14						
A21K	Barrow	63.77	18	P	P	16 55 48.5	-1.0
	baz=244						
RND	Reindeer	63.82	27	IAmb	IAmb	16 55 50.7	
	comp=Z,7.4nm,0.8s						
KUU	Kurty	63.83	311	*e*P	P	16 55 48.6	-1.9
	comp=Z,11nm,1.2s,baz=311						
MCK	McKinley	63.87	27	P	P	16 55 50.0	-0.3
	baz=255						
GLI	Glacier Island	64.03	30	P	P	16 55 51.8	+0.3
	baz=258						
NEA2	Nenana	64.03	26	P	P	16 55 51.2	-0.3
	baz=255,SNR=5.9						
I23K	Minto, Yukon-K	64.07	25	P	P	16 55 51.7	+0.1
	baz=254,SNR=7.8						
I23K	Minto, Yukon-K	64.07	25	IAmb	IAmb	16 55 52.5	
	comp=Z,22nm,1.4s						
KSH	Kashi	64.11	306	P	P	16 55 55.0	+2.5
KSH				sP	pwP	16 56 08.5	+11
KSH				PP	PP	16 58 19.0	+5.6
KSH				S	S	17 04 26.5	-3.2
KSH				ScS	SKSac	17 05 44.0	-3.0
KSH				pmax	pmax		
	comp=Z,13nm,0.9s						
KSH				pmax	pmax		
	comp=Z,250nm,7.4s						
KSH				LR	LR		
	comp=Z,450nm,8.5s						
KSH				LR	LR		
	comp=Z,390nm,8.5s						
KSH				LR	LR		
	comp=Z,1µm,10.7s						
Q23K	Middleton Isla	64.12	32	P	P	16 55 51.9	-0.1
	baz=260						
HYB	Hyderabad	64.14	281	*i* P	P	16 55 53.0	0.0
FID	Port Fidalgo	64.30	30	P	P	16 55 53.9	+0.6
COLD	Coldfoot	64.35	23	P	P	16 55 53.4	-0.1
	baz=252,SNR=12						
MDM	Murphy Dome	64.48	25	IAmb	IAmb	16 55 55.6	
	comp=Z,9.0nm,0.8s						
EYAK	Cordova Ski Ar	64.62	31	P	P	16 55 56.1	+0.8
	baz=260						
RPZ	Rata Peaks	64.65	160	P	P	16 55 55.4	-0.2
	comp=Z,8.4nm,0.9s,baz=200,slow=4.1,SNR=3.6						
KLU	Klutina	64.71	29	P	P	16 55 56.4	+0.4
	baz=259						
M24K	Tolsona, Glenn	64.72	29	P	P	16 55 56.2	+0.2
	baz=258						
POKR	Poker Plat Res	64.85	25	P	P	16 55 57.2	+0.5
	baz=256						
HDA	Harding Lake	64.88	26	P	P	16 55 56.1	-0.9
	baz=257						
IL31		64.99	26	IAmb	IAmb	16 55 56.8	
	comp=Z,9.4nm,0.9s						
ILAR	Eielson Array	64.99	26	P	P	16 55 56.2	-1.5
	comp=Z,5.3nm,0.8s,baz=257,slow=4.8,SNR=25						
ILAR	Eielson Array	64.99	26	P	P	16 55 55.9	-1.8
TOLK	Toolik Lake Re	65.01	21	P	P	16 55 57.8	0.0
	baz=252,SNR=9.1						
TOLK	Toolik Lake Re	65.01	21	IAmb	IAmb	16 56 07.0	
	comp=Z,13nm,1.0s						
KAIM	Kayak Island	65.17	31	P	P	16 55 58.9	0.0
	baz=261						
PAX	Paxson	65.21	28	P	P	16 55 59.2	-0.1
	baz=259,SNR=8.1						
PAX	Paxson	65.21	28	IAmb	IAmb	16 55 59.9	
	comp=Z,7.9nm,0.8s						
BMRM	Bremner River	65.25	30	P	P	16 55 59.8	+0.3
	baz=260,SNR=6.7						
RAR	Rarotonga	65.31	124	LR	LR	17 19 24.5	
	comp=Z,150nm,20.4s,baz=293,slow=31						
N25K	Chitina, Valde	65.36	29	P	P	16 56 00.9	+0.7
	baz=260,SNR=5.2						
N25K	Chitina, Valde	65.36	29	P	P	16 56 01.1	+0.8
BTLS	Baital	65.49	312	*e*P	P	16 55 59.2	-2.0
	baz=312						
GLB	Gilahina Butte	65.70	30	IAmb	IAmb	16 56 04.1	
	comp=Z,17nm,1.1s						
VRDI	Verde Repeater	65.84	30	P	P	16 56 03.8	+0.3
VRDI				IAmb	IAmb	16 56 04.4	
	comp=Z,8.9nm,0.8s						
CRQM	Cirque	65.92	31	IAmb	IAmb	16 56 14.5	
	comp=Z,15nm,0.9s						
DOT	Dot Lake	65.96	27	IAmb	IAmb	16 56 04.8	
	comp=Z,11nm,0.8s						
SCRK	Sand Creek	66.06	27	P	P	16 56 04.3	-0.4
	baz=260,SNR=8.9						
MCARA	McCarthy VSAT	66.07	30	P	P	16 56 05.2	+0.4
	baz=262,SNR=6.5						
BRZS	Berezniki	66.48	318	*e*P	P	16 56 05.3	-2.3
	baz=318						
BMAR	Burnt Mountain	66.51	23	P	P	16 56 08.2	+0.7
NIL	Nilore	66.64	300	P	P	16 56 08.0	-0.9
CTGM	Chitina Glacie	66.83	30	IAmb	IAmb	16 56 11.6	
	comp=Z,11nm,0.8s						
BCAR	Beaver Creek A	66.88	28	P	P	16 56 09.7	-0.3
EGAK	Eagle	67.40	26	P	P	16 56 13.2	+0.1
	baz=262						
KKAR	Karatay Array	68.09	310	P	P	16 56 16.1	-1.8
IUG	Iuzhnay	68.50	309	*e*P	P	16 56 18.7	-1.9
	baz=309						
SKAG	Skagway	69.72	32	P	P	16 56 28.4	+0.7
	baz=269						
INK	Inuvik	70.77	23	P	P	16 56 33.1	-0.8
	comp=Z,8.1nm,0.8s,baz=271,slow=6.3,SNR=19						
WRAK	Wrangell Islan	71.36	35	P	P	16 56 38.6	+0.9
	baz=273						
H02S1	DAWSON INLET T	71.47	39	T	T	18 15 24.0	
	SNR=14						
PPT	Papeete	72.10	115	LR	LR	17 22 11.2	
	comp=Z,598nm,19.3s,baz=284,slow=31						
DLBC	Dease Lake	72.49	33	P	P	16 56 44.8	+0.1
	baz=279,slow=3.0						
B05A	Bryant	78.70	43	P	P	16 57 21.2	+0.8
	baz=283						
K02D	Willamette Mer	78.86	49	P	P	16 57 22.2	+0.7
	baz=283						
H04D	Lebanon	79.11	47	P	P	16 57 23.4	+0.7
	baz=283						
YKA	Yellowknife Ar	79.30	28	P	P	16 57 22.9	-0.5
	comp=Z,4.2nm,0.7s,baz=290,slow=4.7,SNR=30						
C06D	Leavenworth	79.57	43	P	P	16 57 25.8	+0.6
	baz=284						
L04D	Klamath Falls	79.95	49	P	P	16 57 28.9	+1.4
	baz=284						
N02D	Trinity Center	79.96	50	P	P	16 57 29.0	+1.6
	baz=284						
O02D	Mt. Diablo Mer	80.08	51	P	P	16 57 29.7	+1.5
	baz=284						
I05D	Terrebonne, OR	80.13	47	P	P	16 57 29.2	+0.9
	baz=284						
K04D	Chiloquin, OR	80.25	48	P	P	16 57 30.4	+1.3
	baz=284						
M04C	Macdoel	80.39	49	P	P	16 57 31.3	+1.3
	baz=284						
J05D	Fort Rock, OR	80.46	48	P	P	16 57 31.3	+1.1
	baz=284						
O03E	Paynes Creek	80.79	51	P	P	16 57 32.8	+0.8
	baz=285,SNR=6.3						
NEW	Newport	81.92	42	P	P	16 57 37.9	+0.1
	baz=287						
BEKR	Beckworth	81.97	51	P	P	16 57 38.7	+0.3
PKM	Mcpherson Peak	83.74	56	P	P	16 57 48.2	+0.5
	baz=286						
NVAR	Mina Array Bea	83.90	52	P	P	16 57 49.6	+1.1
	comp=Z,3.7nm,0.6s,baz=268,slow=6.2,SNR=19						
ARCES	ARCESS Array B	84.17	342	P	P	16 57 49.9	+1.0
	comp=Z,3.7nm,0.8s,baz=64,slow=8.1,SNR=2.1						
MSO	Missoula	84.41	43	P	P	16 57 51.3	+0.5
	baz=289						
GRAC	Grapevine Rang	85.03	53	P	P	16 57 54.2	+0.1
	baz=288						
HLID	Hailey	85.14	46	P	P	16 57 55.4	+0.8
	baz=289						
EDW2	Edwards Air Fo	85.18	55	P	P	16 57 55.8	+1.0
	baz=287						
MPMC	Manual Prospec	85.22	54	P	P	16 57 55.9	+0.7
	baz=288						
LRMC	Laurel Mtn Rad	85.24	54	P	P	16 57 55.9	+0.7
	baz=288						
CIS	Catalina Islan	85.28	57	P	P	16 57 55.7	+0.4
	baz=287						
TPNV	Topopah Spring	85.90	53	P	P	16 57 58.9	+0.4
	baz=288						
R11A	Troy Canyon, C	85.96	51	P	P	16 57 59.4	+0.6
	baz=289						
BOZ	Bozeman (W)	86.33	43	P	P	16 58 00.9	+0.4
	baz=291						
HEC	Hector,Ludlow	86.49	55	P	P	16 58 02.4	+1.1
	baz=288						
EGMT	Eagleton	86.66	41	P	P	16 58 03.0	+1.0
	baz=292						
PFO	Pinyon Flats O	86.77	56	P	P	16 58 03.6	+0.8
	baz=288						
TPFO	Pinon Flats	86.78	56	P	P	16 58 03.2	+0.3
	baz=288						
BELC	Belle Mtn. Jos	87.02	55	P	P	16 58 04.7	+0.6
	baz=289						
MONP2	Monument Peak	87.03	57	P	P	16 58 04.9	+0.7
	baz=288						
GMRC	Granite Mounta	87.03	55	P	P	16 58 04.8	+0.8
	baz=289						
DUG	Dugway, Tooele	87.39	49	P	P	16 58 06.3	+0.6
	baz=290,SNR=13						
H17A	Grant Village	87.46	44	P	P	16 58 07.7	+1.6
	baz=292						
SWSC	Sam W. Stewart	87.51	56	P	P	16 58 07.3	+1.1
	baz=289						
BC3	Big Chuckawall	87.56	56	P	P	16 58 07.7	+1.1
	baz=289						
IRM	Iron Mountain	87.64	55	P	P	16 58 07.6	+0.7
	baz=289						
RLMT	Red Lodge	88.06	43	P	P	16 58 09.5	+0.6
	baz=292						
GLA	Glamis	88.25	56	P	P	16 58 10.5	+0.7
	baz=289						
W13A	Hualapai Mount	88.31	54	P	P	16 58 10.0	-0.3
PDMCI	Parker Dam,Lak	88.37	55	P	P	16 58 11.1	+0.8
	baz=290						
FINES	FINESS Array B	88.53	335	P	P	16 58 08.5	-1.9
	comp=Z,1.1nm,0.7s,baz=28,slow=6.3,SNR=1.3						
BW06	Boulder Array	88.75	46	P	P	16 58 12.6	+0.3
	baz=292						
PDAR	Pinedale Array	88.75	46	P	P	16 58 11.7	-0.6
	comp=Z,0.5nm,0.7s,baz=198,slow=1.2,SNR=8.7						
PDAR	Pinedale Array	88.75	46	P	P	16 58 11.9	-0.4
WUAZ	Wupatki	90.09	53	P	P	16 58 19.5	+0.9
	baz=291						
214A	Organ Pipe Nat	90.22	57	P	P	16 58 20.0	+0.9
	baz=290						
O20A	White River Ci	90.67	48	P	P	16 58 21.5	+0.3
	baz=293,SNR=6.0						
K22A	Casper	90.85	45	P	P	16 58 21.2	-0.8
	baz=294						
W18A	Petrified Fore	91.48	53	P	P	16 58 25.9	+0.8
	baz=292						
MVCO	Mesa Verde	91.62	50	P	P	16 58 26.6	+0.8
	baz=293						
TUC	Tucson	91.70	56	P	P	16 58 26.6	+0.6
	baz=291						
RSSD	Black Hills	91.88	43	P	P	16 58 26.8	0.0
	baz=296						
N23A	Red Feather La	91.97	46	P	P	16 58 28.2	+0.8
	baz=295,SNR=13						

S22A	**4UR Ranch, Cre**	**92.63**	**49**	P	**P**	**16 58 31.1**	**+0.6**
	baz=294						
ISCO	**Idaho Springs**	**92.65**	**47**	P	**P**	**16 58 30.9**	**+0.3**
	baz=295,SNR=7.7						
MDND	**Maddock**	**92.90**	**38**	P	**P**	**16 58 31.2**	**+0.1**
	baz=299						
Q24A	**Divide**	**93.33**	**48**	P	**P**	**16 58 34.1**	**+0.4**
	baz=295						
SDCO	**Great Sand Dun**	**93.59**	**49**	P	**P**	**16 58 35.7**	**+0.8**
	baz=295						
121A	**Cookes Peak, D**	**93.97**	**54**	P	**P**	**16 58 38.1**	**+1.5**
	baz=293						
ANMO	**Albuquerque**	**94.03**	**52**	P	**P**	**16 58 37.3**	**+0.4**
	baz=294						
T25A	**Trinidad**	**94.63**	**49**	P	**P**	**16 58 40.1**	**+0.5**
	baz=295						
ECSD	**EROS Data Cent**	**96.77**	**40**	P	**P**	**16 58 48.3**	**-0.7**
	baz=301						
WMOK	**Wichita Mounta**	**99.79**	**49**	P	**Pdif**	**16 59 03.0**	**+0.2**
	baz=299						
PLCA	**Paso Flores**	**140.61**	**134**	PKP	**PKPdf**	**17 04 47.6**	**-0.3**
	comp=Z,0.9nm,0.7s,baz=295,slow=23,SNR=1.7						
LCO	**Las Campanas**	**144.28**	**116**		**PKPdf**	**17 04 54.8**	**-0.3**
TA01	**Diego Aracena**	**145.57**	**102**		**PKPab**	**17 04 58.8**	**+1.3**
MNMC	**Minye Minye**	**146.09**	**99**		**PKPab**	**17 05 00.5**	**+0.6**
LPAZ	**La Paz**	**147.27**	**94**	PKPbc	**PKPbc**	**17 05 04.0**	**+0.7**
	comp=Z,10nm,0.7s,baz=305,slow=2.3,SNR=18						
LPAZ	**La Paz**	**147.27**	**94**	PKPab	**PKPab**	**17 05 04.7**	**-0.3**
CPUP	**Villa Florida**	**156.42**	**117**	PKPab	**PKPab**	**17 05 42.7**	**+0.6**
	comp=Z,1.4nm,0.8s,baz=235,slow=6.6,SNR=3.9						
BDFB	**Brasilia**	**166.43**	**86**	PKPab	**PKPab**	**17 06 26.8**	**+0.5**
	comp=Z,2.1nm,0.4s,baz=263,slow=8.1,SNR=4.0						

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*IDC **27** 16:51:58.1±0.5, 17°.01N×146°.06E, h0^{km}, mb4.2/21, mb1 4.4/21, mb1mx4.2/44, mbtmp4.2/21, Error ellipse: s-maj=20.7km s-min=11.9km az=96.0*

*BJI **27** 16:51:59.0±0.0, 17°.15N×145°.97E, h15^{km}, mB5.4/16, mb4.5/43, Ms4.8/5, Ms7 4.7/5*

*NEIC **27** 16:52:01.3±1.8, 16°.99N±0°.07×145°.9E±0°.1, h18^{km}±4^{km}, mb4.8/26, Error ellipse: s-maj=20.7km s-min=9.5km az=103.0*

ISC 27 16:52:00.1±0.4, **17°.00N**±0°.05×**146°.07E**±0°.08, **h10**^{km}, **n95**, σ**1^{s}41**/93, **mb4.5**/45, **1C, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANA2	**Anatahan**	**0.74**	**208**		**Pb**	**16 52 15.2**	**+0.2**
ANA2				Sg	**Sg**	**16 52 23.6**	**-0.3**
GUMO	**Guam**	**3.58**	**199**	Pn	**Pn**	**16 52 54.5**	**-1.2**
PATS	**Pohnpei**	**15.65**	**129**	P	**P**	**16 55 45.3**	**+0.3**
JOW	**Kunigami**	**19.17**	**304**	P	**Pn**	**16 56 27.8**	**+2.9**
	1.6nm,0.3s,baz=166,slow=7.1,SNR=7.3						
JOW	**Kunigami**	**19.17**	**304**	P	**P**	**16 56 21.0**	**-2.9**
JOW				IAmb	IAmb	16 56 30.9	
	comp=Z,95nm,1.0s						
H11S3	**WAKE ISLAND Hy**	**19.69**	**83**	T	T	17 17 09.4	
	baz=269,slow=75,SNR=96						
H11S1	**WAKE ISLAND Hy**	**19.71**	**83**	T	T	17 17 10.4	
	baz=269,slow=75,SNR=118						
H11S2	**WAKE ISLAND Hy**	**19.71**	**83**	T	T	17 17 10.0	
	baz=269,slow=75,SNR=123						
H11N1	**WAKE ISLAND Hy**	**19.95**	**79**	T	T	17 17 27.4	
	baz=266,slow=74,SNR=104						
H11N2	**WAKE ISLAND Hy**	**19.95**	**79**	T	T	17 17 27.9	
	baz=266,slow=74,SNR=113						
H11N3	**WAKE ISLAND Hy**	**19.96**	**79**	T	T	17 17 28.6	
	baz=266,slow=74,SNR=110						
JAY	**Jayapura**	**20.10**	**196**	P	**P**	**16 56 35.0**	**+0.8**
	comp=Z,29nm,0.8s,baz=26,slow=9.3,SNR=5.3						
MJAR	**Matsushiro Arr**	**20.68**	**342**	P	**P**	**16 56 40.1**	**-0.1**
	comp=Z,4.7nm,1.2s,baz=157,slow=11,SNR=2.2						
SIJI	**Sorong**	**22.98**	**221**	P	**P**	**16 57 05.4**	**+0.3**
	comp=Z,12nm,0.8s,baz=7.5,slow=18,SNR=3.1						
FAKI	**Fak Fak**	**24.04**	**216**	P	**P**	**16 57 13.9**	**-1.7**
FAKI				IAmb	IAmb	16 57 31.1	
	comp=Z,27nm,1.1s						
KSRS	**Korea Array**	**25.90**	**325**	P	**P**	**16 57 32.5**	**+0.2**
	comp=Z,2.6nm,0.9s,baz=144,slow=11,SNR=6.6						
PMG	**Port Moresby**	**26.25**	**178**	P	**P**	**16 57 36.4**	**+0.8**
	comp=Z,12nm,0.8s,baz=268,slow=4.3,SNR=3.0						
NJ2	**Nanjing**	**28.84**	**306**	*e*P	**P**	**16 57 58.5**	**-0.2**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
BJI	**Beijing**	**34.61**	**318**	P	**P**	**16 58 49.3**	**-0.1**
BJI				S	**S**	**17 04 17.5**	**-1.3**
BJI				pmax	pmax		
	comp=Z,11nm,1.3s						
BJI				pmax	pmax		
	comp=Z,520nm,8.3s						
CTA	**Charters Tower**	**36.85**	**180**	P	**P**	**16 59 10.2**	**+1.4**
	comp=Z,2.4nm,0.8s,baz=4.7,slow=11,SNR=2.7						
XAN	**Xi'an**	**37.33**	**304**	P	**P**	**16 59 14.0**	**+1.2**
XAN				pmax	pmax		
	comp=Z,5.0nm,1.3s						
GYA	**Guiyang**	**37.67**	**291**	*e*P	**P**	**16 59 17.0**	**+1.1**
GYA				pmax	pmax		
	comp=Z,12nm,1.3s						
HHC	**Hu-ho-hao-te**	**38.05**	**316**	*e*P	**P**	**16 59 18.0**	**-0.9**
HHC				pmax	pmax		
	comp=Z,7.0nm,1.4s						
HHC				pmax	pmax		
	comp=Z,640nm,8.7s						
WB0	**Warramunga Arr**	**38.29**	**198**	P	**P**	**16 59 19.7**	**-1.3**
WR0	**Warramunga Arr**	**38.43**	**198**	P	**P**	**16 59 21.0**	**-1.1**
WRAB	**Tennant Creek**	**38.46**	**198**	P	**P**	**16 59 19.9**	**-2.6**
WB2	**Warramunga Arr**	**38.47**	**198**	P	**P**	**16 59 22.0**	**-0.5**
WRA	**Warramunga Arr**	**38.47**	**198**	P	**P**	**16 59 20.8**	**-1.7**
	comp=Z,3.7nm,1.1s,baz=22,slow=9.2,SNR=13						
WRA				PcP	**PcP**	**17 01 33.9**	**-1.8**
	comp=Z,0.5nm,0.7s,baz=12,slow=3.2,SNR=2.1						
FITZ	**Fitzroy Crossi**	**40.26**	**211**	P	**P**	**16 59 36.6**	**-0.7**
	comp=Z,3.1nm,0.9s,baz=42,slow=13,SNR=4.4						
CD2	**Chengdu**	**40.83**	**298**	P	**P**	**16 59 44.0**	**+1.8**
CD2				pmax	pmax		
	comp=Z,50nm,1.4s						
KMI	**Kunming**	**41.10**	**289**	⇑P	**P**	**16 59 47.5**	**+2.8**
KMI				pP	pwP	16 59 53.0	+3.1
KMI				pmax	pmax		
	comp=Z,8.0nm,1.3s						
LZH	**Lanzhou**	**41.90**	**305**	*e*P	**P**	**16 59 50.3**	**-0.8**
LZH				pP	pwP	16 59 58.0	+1.7
LZH				sP	sP	17 00 02.0	+7.5
LZH				pmax	pmax		
	comp=Z,17nm,1.1s						
AS31	**Alice Springs**	**42.12**	**197**	P	**P**	**16 59 52.4**	**-0.4**
ASAR	**Alice Springs**	**42.12**	**197**	P	**P**	**16 59 50.7**	**-2.0**
	comp=Z,0.8nm,0.8s,baz=20,slow=8.4,SNR=6.4						
MA2	**Magadan**	**42.66**	**4**	P	**P**	**16 59 55.7**	**-1.0**
	comp=Z,1.5nm,0.2s,baz=129,slow=23,SNR=1.9						
DZM	**Mont Dzumac**	**43.65**	**152**	P	**P**	**17 00 06.2**	**+1.0**
	comp=Z,5.0nm,0.9s,baz=270,slow=20,SNR=1.9						
CM34	**Chiang Mai Arr**	**44.58**	**280**	P	**P**	**17 00 15.0**	**+2.2**
CM35	**Chiang Mai Arr**	**44.59**	**280**	P	**P**	**17 00 15.0**	**+2.1**
CM36	**Chiang Mai Arr**	**44.67**	**279**	P	**P**	**17 00 16.0**	**+2.5**
CM09	**Chiang Mai Arr**	**44.77**	**279**	P	**P**	**17 00 17.5**	**+3.2**
CM33	**Chiang Mai Arr**	**44.78**	**280**	P	**P**	**17 00 17.0**	**+2.6**
CM04	**Chiang Mai Arr**	**44.79**	**279**	P	**P**	**17 00 16.5**	**+2.1**
CM02	**Chiang Mai Arr**	**44.81**	**279**	P	**P**	**17 00 16.9**	**+2.3**
CM31	**Chiang Mai Arr**	**44.82**	**279**	P	**P**	**17 00 17.1**	**+2.4**
CMAR	**Chiang Mai Arr**	**44.82**	**279**	P	**P**	**17 00 15.1**	**+0.4**
	comp=Z,3.2nm,0.8s,baz=72,slow=6.6,SNR=24						
CM05	**Chiang Mai Arr**	**44.82**	**279**	P	**P**	**17 00 16.8**	**+2.1**
CM15	**Chiang Mai Arr**	**44.83**	**279**	P	**P**	**17 00 16.9**	**+2.1**
CM13	**Chiang Mai Arr**	**44.85**	**279**	P	**P**	**17 00 16.0**	**+1.0**
MHMT	**Maesarieng**	**45.80**	**279**	P	**P**	**17 00 25.0**	**+2.5**
GTA	**Gaotai**	**45.87**	**309**	P	**P**	**17 00 23.5**	**+0.6**
GTA				pP	pwP	17 00 28.8	+0.6
GTA				sP	sP	17 00 32.0	+5.6
GTA				pmax	pmax		
	comp=Z,5.0nm,1.6s						
GTA				LR	LR		
	comp=Z,380nm,13.1s						
GTA				LR	LR		
	comp=Z,460nm,14.2s						
GTA				LR	LR		
	comp=Z,720nm,15.6s						
SEY	**Seymchan**	**46.10**	**4**	P	**P**	**17 00 22.4**	**-1.8**
	comp=Z,0.7nm,0.7s,baz=92,slow=23,SNR=1.7						
STKA	**Stephens Creek**	**48.78**	**185**	P	**P**	**17 00 43.3**	**-2.0**
	comp=Z,0.9nm,0.6s,baz=0.0,slow=6.1,SNR=2.1						
BBOO	**Buckleboo**	**50.44**	**191**	P	**P**	**17 00 58.4**	**+0.3**
BBOO				IAmb	IAmb	17 01 04.8	
	comp=Z,7.2nm,1.1s						
WMQ	**Urumqi**	**55.69**	**312**	P	**P**	**17 01 38.3**	**+1.5**
WMQ				pP	pwP	17 01 45.0	+2.8
WMQ				pmax	pmax		
	comp=Z,19nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,280nm,6.3s						
ZALV	**Zalesovo Beam**	**59.58**	**323**	P	**P**	**17 02 03.5**	**-0.4**
	comp=Z,0.3nm,0.4s,baz=85,slow=8.8,SNR=2.2						
MKAR	**Makanchi Array**	**59.90**	**315**	P	**P**	**17 02 05.4**	**-0.9**
	comp=Z,1.4nm,0.8s,baz=93,slow=9.7,SNR=12						
MKAR	**Makanchi Array**	**59.90**	**315**	P	**P**	**17 02 06.4**	**+0.1**
OHAK	**Old Harbor**	**60.07**	**33**	P	**P**	**17 02 08.1**	**+0.9**
MAKZ	**Makanchi**	**60.11**	**315**	P	**P**	**17 02 08.6**	**+0.8**
MAKZ				IAmb	IAmb	17 02 09.3	
	comp=Z,4.1nm,1.1s						
SHLS	**Shalkode**	**61.58**	**310**	*e*P	**P**	**17 02 16.0**	**-2.0**
	comp=Z,4.1nm,1.4s,baz=310						
SATY	**Saty**	**62.34**	**310**	*e*P	**P**	**17 02 23.3**	**+0.2**
	baz=310						
TDK	**Taldyqorghan**	**62.44**	**312**	*e*P	**P**	**17 02 24.4**	**+0.8**
	comp=Z,4.9nm,0.7s,baz=312						
IMAR	**Indian Mountai**	**62.62**	**24**	P	**P**	**17 02 25.3**	**+0.9**
BPAW	**Bear Paw Mtn.**	**63.12**	**26**	P	**P**	**17 02 27.7**	**-0.1**
BPAW				IAmb	IAmb	17 02 30.1	
	comp=Z,9.9nm,0.9s						
MDOK	**Medeo**	**63.34**	**310**	*e*P	**P**	**17 02 30.0**	**+0.2**
	baz=310						
CHKK	**Chushkaly**	**63.40**	**311**	*e*P	**P**	**17 02 30.1**	**+0.1**
	baz=311						
SML	**Sawmill**	**63.68**	**29**	P	**P**	**17 02 31.1**	**-0.5**
KUU	**Kurty**	**63.87**	**311**	*e*P	**P**	**17 02 33.1**	**0.0**
	comp=Z,7.3nm,1.0s,baz=311						
I23K	**Minto, Yukon-K**	**64.09**	**25**	P	**P**	**17 02 34.8**	**+0.7**
I23K				IAmb	IAmb	17 02 42.0	
	comp=Z,16nm,1.5s						
KSH	**Kashi**	**64.15**	**306**	P	**P**	**17 02 36.0**	**+0.9**
KSH				pP	pwP	17 02 45.5	+5.0
KSH				PcP	**PcP**	**17 03 11.5**	**+1.3**
KSH				S	**S**	**17 11 09.0**	**-3.5**
KSH				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KSH				pmax	pmax		
	comp=Z,430nm,10.9s						
KSH				LR	LR		
	comp=Z,680nm,9.2s						
KSH				LR	LR		
	comp=Z,680nm,8.9s						
KSH				LR	LR		
	comp=Z,1µm,12.0s						
WRH	**Wood River Hil**	**64.44**	**26**	P	**P**	**17 02 35.5**	**-0.9**
WRH				IAmb	IAmb	17 02 43.1	
	comp=Z,8.9nm,1.2s						
MDM	**Murphy Dome**	**64.50**	**25**	P	**P**	**17 02 36.8**	**-0.1**
MDM				IAmb	IAmb	17 02 39.6	
	comp=Z,5.6nm,0.8s						
ILAR	**Eielson Array**	**65.01**	**26**	P	**P**	**17 02 38.7**	**-1.4**
	comp=Z,3.4nm,0.9s,baz=254,slow=4.9,SNR=21						
ILAR	**Eielson Array**	**65.01**	**26**	P	**P**	**17 02 38.9**	**-1.2**
TOLK	**Toolik Lake Re**	**65.04**	**21**	P	**P**	**17 02 40.7**	**+0.4**
TOLK				IAmb	IAmb	17 02 42.7	
	comp=Z,7.6nm,0.8s						
PAX	**Paxson**	**65.23**	**28**	P	**P**	**17 02 42.5**	**+0.7**
PAX				IAmb	IAmb	17 02 43.8	
	comp=Z,5.5nm,0.8s						
DOT	**Dot Lake**	**65.99**	**27**	P	**P**	**17 02 46.6**	**+0.1**
DOT				IAmb	IAmb	17 02 48.3	
	comp=Z,8.1nm,0.9s						
MCARA	**McCarthy VSAT**	**66.09**	**30**	P	**P**	**17 02 48.1**	**+1.0**
TABL	**Table Mountain**	**66.88**	**31**	P	**P**	**17 02 53.2**	**+0.7**
BCAR	**Beaver Creek A**	**66.91**	**28**	P	**P**	**17 02 51.9**	**-0.5**
KKAR	**Karatay Array**	**68.13**	**310**	P	**P**	**17 03 00.7**	**+0.2**
HYT	**Haines Junctio**	**68.70**	**31**	P	**P**	**17 03 04.0**	**+0.1**
HYT				IAmb	IAmb	17 03 07.2	
	comp=Z,11nm,0.8s						
H02S1	**DAWSON INLET T**	**71.48**	**39**	T	T	18 21 56.8	
C36M	**Paulatuk**	**74.19**	**22**	P	**P**	**17 03 36.4**	**-0.3**
C36M				IAmb	IAmb	17 03 38.4	
	comp=Z,13nm,1.2s						
YKA	**Yellowknife Ar**	**79.32**	**28**	P	**P**	**17 04 04.5**	**-1.3**
	comp=Z,3.9nm,0.8s,baz=289,slow=4.8,SNR=28						
PINE	**Pine Mountain**	**80.55**	**47**	P	**P**	**17 04 13.8**	**+0.6**
NVAR	**Mina Array Bea**	**83.91**	**52**	P	**P**	**17 04 31.8**	**+1.0**
	comp=Z,3.5nm,0.8s,baz=268,slow=5.5,SNR=19						
KBZ	**Khabaz**	**87.59**	**315**	P	**P**	**17 04 49.0**	**+0.4**
	comp=Z,1.7nm,0.8s,baz=201,slow=5.8,SNR=3.7						
PDAR	**Pinedale Array**	**88.76**	**46**	P	**P**	**17 04 55.9**	**+1.3**
	comp=Z,0.8nm,0.9s,baz=166,slow=0.9,SNR=5.3						
SRU	**San Rafael Swe**	**89.43**	**49**	P	**P**	**17 04 58.3**	**+0.5**
PV14	**Lion Creek, Pa**	**90.80**	**49**	P	**P**	**17 05 04.6**	**+0.4**
LCO	**Las Campanas**	**144.25**	**116**	PKPdf	**PKPdf**	**17 11 36.9**	**-0.4**
AC01	**Pan de Azucar**	**144.80**	**111**	PKPdf	**PKPdf**	**17 11 39.5**	**+1.4**
LPAZ	**La Paz**	**147.25**	**94**	PKPbc	**PKPbc**	**17 11 44.5**	**-1.0**
	comp=Z,13nm,0.9s,baz=304,slow=2.1,SNR=20						
LPAZ	**La Paz**	**147.25**	**94**		**PKPab**	**17 11 46.6**	**-0.6**

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*IDC **27** 17:22:50.9±0.8, 16°.90N×146°.06E, h0^{km}, mb3.7/13, mb1 4.0/13, mb1mx3.8/43, mbtmp3.7/13, Error ellipse: s-maj=25.3km s-min=17.9km az=106.0*

*NEIC **27** 17:22:52.4±1.8, 17°.01N±0°.08×146°.0E±0°.1, h6^{km}±5^{km}, mb4.7/34, Error ellipse: s-maj=15.9km s-min=11.5km az=79.0*

ISC 27 17:22:52.9±0.6, **16°.92N**±0°.08×**146°.1E**±0°.1, **h10**^{km}, **n64**, σ**1^{s}51**/56, **mb4.6**/28, **Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANA2	**Anatahan**	**0.69**	**214**	Pn	**Pn**	**17 23 07.8**	**-0.9**
ANA2	**Anatahan**	**0.69**	**214**	P	**Pn**	**17 23 09.4**	**+0.7**
GUMO	**Guam**	**3.52**	**200**	Pn	**Pn**	**17 23 49.1**	**+1.4**
JOW	**Kunigami**	**19.25**	**304**	P	**Pn**	**17 27 23.8**	**+5.3**
	0.5nm,0.3s,baz=193,slow=22,SNR=1.4						
JOW	**Kunigami**	**19.25**	**304**	P	**Pn**	**17 27 22.2**	**+3.7**
JOW				IAmb	IAmb	17 27 29.5	
	comp=Z,38nm,0.8s						
H11S3	**WAKE ISLAND Hy**	**19.67**	**82**	T	T	17 48 03.4	
	baz=269,slow=75,SNR=37						
H11S1	**WAKE ISLAND Hy**	**19.68**	**82**	T	T	17 48 01.3	
	baz=269,slow=75,SNR=33						
H11S2	**WAKE ISLAND Hy**	**19.68**	**82**	T	T	17 48 01.3	
	baz=269,slow=75,SNR=38						
H11N1	**WAKE ISLAND Hy**	**19.92**	**79**	T	T	17 48 14.9	
	baz=266,slow=74,SNR=74						
H11N2	**WAKE ISLAND Hy**	**19.93**	**79**	T	T	17 48 17.8	
	baz=266,slow=74,SNR=61						
H11N3	**WAKE ISLAND Hy**	**19.94**	**79**	T	T	17 48 17.2	
	baz=266,slow=74,SNR=70						
MJAR	**Matsushiro Arr**	**20.76**	**342**	P	**P**	**17 27 32.1**	**-1.9**
	comp=Z,1.7nm,0.7s,baz=170,slow=9.2,SNR=2.8						
MJAR	**Matsushiro Arr**	**20.76**	**342**	IAmb	IAmb	17 27 41.3	
	comp=Z,12nm,1.6s						
MJB9	**Matsu-Tunnel**	**20.77**	**342**	P	**P**	**17 27 31.4**	**-2.7**
MJB9				IAmb	IAmb	17 28 09.0	
	comp=Z,53nm,0.6s						
KSRS	**Korea Array**	**25.99**	**325**	P	**P**	**17 28 26.3**	**+0.4**
	comp=Z,3.2nm,1.0s,baz=140,slow=9.1,SNR=6.9						
KSAR	**Wonju Array Be**	**26.00**	**325**	P	**P**	**17 28 27.5**	**+1.5**
BJT	**Baijiatuau**	**34.69**	**318**	P	**P**	**17 29 41.4**	**-1.5**
BJT				IAmb	IAmb	17 29 51.5	
	comp=Z,12nm,1.2s						
ENH	**Enshi**	**35.93**	**298**	P	**P**	**17 29 52.2**	**-1.5**
ENH				IAmb	IAmb	17 30 02.4	
	comp=Z,9.7nm,0.9s						
XAN	**Xi'an**	**37.40**	**304**	P	**P**	**17 30 08.7**	**+2.4**
WRA	**Warramunga Arr**	**38.41**	**198**	P	**P**	**17 30 13.6**	**-1.2**
	comp=Z,1.6nm,1.0s,baz=20,slow=9.0,SNR=5.2						
FITZ	**Fitzroy Crossi**	**40.21**	**211**	P	**P**	**17 30 28.5**	**-1.3**
	comp=Z,2.6nm,0.9s,baz=29,slow=14,SNR=2.6						
FITZ	**Fitzroy Crossi**	**40.21**	**211**	P	**P**	**17 30 29.6**	**-0.2**
ASAR	**Alice Springs**	**42.06**	**197**	P	**P**	**17 30 44.3**	**-0.7**
	comp=Z,0.6nm,0.8s,baz=15,slow=12,SNR=4.3						
SONM	**Songino Array**	**44.78**	**322**	P	**P**	**17 31 06.5**	**-0.4**
	comp=Z,0.3nm,0.5s,baz=123,slow=10,SNR=2.1						
CHTO	**Chiang Mai**	**44.83**	**280**	P	**P**	**17 31 05.8**	**-1.7**
CM31	**Chiang Mai Arr**	**44.87**	**279**	P	**P**	**17 31 07.1**	**-0.8**
CM31				IAmb	IAmb	17 31 17.7	
	comp=Z,16nm,1.6s						
CMAR	**Chiang Mai Arr**	**44.87**	**279**	P	**P**	**17 31 07.3**	**-0.5**
	comp=Z,0.9nm,0.5s,baz=71,slow=7.0,SNR=12						
CMAR	**Chiang Mai Arr**	**44.87**	**279**	P	**P**	**17 31 06.1**	**-1.7**
XMIS	**Christmas Isla**	**48.39**	**239**	P	**P**	**17 31 36.1**	**+0.6**
GSI	**Gunungsitoli**	**50.19**	**257**	P	**P**	**17 31 48.5**	**-0.8**
LSA	**Lhasa**	**51.63**	**295**	P	**P**	**17 31 60.0**	**-0.6**
LSA				IAmb	IAmb	17 32 10.1	
	comp=Z,13nm,1.5s						
WMQ	**Urumqi**	**55.77**	**312**	P	**P**	**17 32 31.2**	**+1.0**
WMQ				IAmb	IAmb	17 32 37.8	
	comp=Z,7.1nm,0.9s						
MK31	**Makanchi Array**	**59.98**	**315**	P	**P**	**17 32 58.2**	**-1.4**
MKAR	**Makanchi Array**	**59.98**	**315**	P	**P**	**17 32 58.7**	**-0.9**
	comp=Z,0.2nm,0.6s,baz=97,slow=7.7,SNR=2.4						
MAKZ	**Makanchi**	**60.19**	**315**	P	**P**	**17 33 02.0**	**+0.9**
IMAR	**Indian Mountai**	**62.68**	**24**	P	**P**	**17 33 17.2**	**-0.4**
SML	**Sawmill**	**63.73**	**29**	P	**P**	**17 33 24.2**	**-0.5**
SCM	**Sheep Creek Mo**	**64.20**	**29**	P	**P**	**17 33 27.3**	**-0.5**
FID	**Port Fidalgo**	**64.37**	**30**	P	**P**	**17 33 28.6**	**-0.2**
OXZ	**Oxford**	**64.50**	**159**	P	**P**	**17 33 29.3**	**-0.5**
MDM	**Murphy Dome**	**64.56**	**25**	P	**P**	**17 33 29.6**	**-0.5**
MDM				IAmb	IAmb	17 33 38.2	
	comp=Z,3.2nm,0.8s						
KLU	**Klutina**	**64.78**	**29**	P	**P**	**17 33 31.6**	**0.0**
KLU				IAmb	IAmb	17 33 39.8	
	comp=Z,3.6nm,0.9s						
DCZ	**Deep Cove**	**64.96**	**164**	P	**P**	**17 33 31.9**	**-0.8**
ILAR	**Eielson Array**	**65.07**	**26**	P	**P**	**17 33 32.1**	**-1.2**
	comp=Z,0.7nm,0.8s,baz=256,slow=4.9,SNR=4.7						
ILAR	**Eielson Array**	**65.07**	**26**		**P**	**17 33 31.0**	**-2.3**
ODZ	**Otahua Downs**	**65.58**	**161**		**P**	**17 33 40.2**	**+3.4**
GLB	**Gilahina Butte**	**65.77**	**30**	P	**P**	**17 33 38.6**	**+0.6**
GLB				IAmb	IAmb	17 33 46.9	
	comp=Z,7.8nm,1.2s						
VRDI	**Verde Repeater**	**65.91**	**30**	P	**P**	**17 33 39.5**	**+0.4**
VRDI				IAmb	IAmb	17 33 47.0	
	comp=Z,4.9nm,0.9s						
CRQM	**Cirque**	**65.99**	**30**	P	**P**	**17 33 40.8**	**+1.2**
CRQM				IAmb	IAmb	17 33 49.8	
	comp=Z,7.0nm,0.8s						
DOT	**Dot Lake**	**66.04**	**27**	P	**P**	**17 33 40.2**	**+0.6**
DOT				IAmb	IAmb	17 33 47.4	
	comp=Z,4.5nm,0.8s						
BMAR	**Burnt Mountain**	**66.59**	**23**	P	**P**	**17 33 43.0**	**-0.1**
TABL	**Table Mountain**	**66.93**	**31**	P	**P**	**17 33 47.0**	**+1.4**
TABL				IAmb	IAmb	17 33 54.0	
	comp=Z,7.6nm,0.8s						
BCAR	**Beaver Creek A**	**66.96**	**28**	P	**P**	**17 33 46.9**	**+1.3**
KK31	**Karatay Array**	**68.20**	**310**	P	**P**	**17 33 52.3**	**-1.5**
KK31				IAmb	IAmb	17 33 59.1	
	comp=Z,6.2nm,1.5s						
KKAR	**Karatay Array**	**68.20**	**310**	P	**P**	**17 33 52.3**	**-1.5**
KKAR				IAmb	IAmb	17 33 59.1	
	comp=Z,6.2nm,1.5s						
HYT	**Haines Junctio**	**68.75**	**31**		**P**	**17 33 58.1**	**+1.1**
HYT				IAmb	IAmb	17 34 05.9	
	comp=Z,6.5nm,0.8s						
KBL	**Kabul**	**70.12**	**301**	P	**P**	**17 34 05.0**	**-1.1**
KBL				IAmb	IAmb	17 34 13.4	
	comp=Z,6.2nm,1.0s						
INK	**Inuvik**	**70.85**	**23**	P	**P**	**17 34 08.9**	**-0.6**
	comp=Z,1.5nm,0.7s,baz=263,slow=5.7,SNR=5.2						
INK	**Inuvik**	**70.85**	**23**	P	**P**	**17 34 09.2**	**-0.4**
H02S1	**DAWSON INLET T**	**71.52**	**39**	T	T	18 52 49.6	
YKA	**Yellowknife Ar**	**79.37**	**28**	P	**P**	**17 34 59.3**	**+0.4**
	comp=Z,0.5nm,0.7s,baz=289,slow=5.0,SNR=6.3						
NVAR	**Mina Array Bea**	**83.93**	**52**	P	**P**	**17 35 24.7**	**+1.0**
	comp=Z,0.5nm,0.6s,baz=271,slow=6.1,SNR=3.9						
PDAR	**Pinedale Array**	**88.79**	**46**	P	**P**	**17 35 48.2**	**+0.6**
	comp=Z,0.1nm,0.4s,baz=250,slow=2.7,SNR=1.4						
LPAZ	**La Paz**	**147.21**	**94**	PKPbc	**PKPbc**	**17 42 37.5**	**-0.7**
	comp=Z,0.9nm,0.5s,baz=194,slow=1.7,SNR=1.8						

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*IDC **27** 17:36:47.5±0.4, 16°.96N×145°.95E, h0^{km}, mb4.2/30, mb1 4.3/31, mb1mx4.2/62, mbtmp4.2/31, ML4.5/1, MS4.1/9, Ms1 4.1/9, ms1mx3.7/38, Error ellipse: s-maj=14.8km s-min=10.7km az=95.0*

*BJI **27** 17:36:48.3±0.0, 16°.88N×145°.90E, h9^{km}, mB5.3/25, mb4.5/39, Ms4.7/9, Ms7 4.5/9*

*NEIC **27** 17:36:51.5±1.3, 16°.95N±0°.06×145°.90E±0°.09, h21^{km}±5^{km}, mb4.9/141, Error ellipse: s-maj=12.6km s-min=8.7km az=90.0*

ISC 27 17:36:50.0±0.3, **16°.97N**±0°.05×**145°.93E**±0°.06, **h10**^{km}, **n262**, σ**1^{s}11**/252, **mb4.9**/114, **MS4.1**/12, **1D, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANA2	**Anatahan**	**0.66**	**199**		**Pb**	**17 37 03.7**	**-0.1**
GUMO	**Guam**	**3.52**	**197**	Pn	**Pn**	**17 37 44.9**	**+0.1**
PATS	**Pohnpei**	**15.74**	**128**	Pn	**Pn**	**17 40 33.3**	**+1.3**
JMZ	**Minamidaito 2**	**16.27**	**305**	Pn	**Pn**	**17 40 36.6**	**-2.2**
JMZ				IAmb	IAmb	17 41 01.1	
	comp=Z,200nm,1.4s						
JOW	**Kunigami**	**19.08**	**304**	P	**P**	**17 41 12.6**	**-0.2**
	comp=Z,2.2nm,0.3s,baz=202,slow=26,SNR=3.5						
JOW				LR	LR	17 47 18.5	
	comp=Z,955nm,20.1s,baz=168,slow=33						
JOW	**Kunigami**	**19.08**	**304**		**Pn**	**17 41 15.2**	**+1.6**
H11S3	**WAKE ISLAND Hy**	**19.83**	**82**	T	T	18 01 59.0	
	baz=269,slow=75,SNR=1040						
H11S1	**WAKE ISLAND Hy**	**19.84**	**82**	T	T	18 01 59.3	
	baz=269,slow=75,SNR=720						
H11S2	**WAKE ISLAND Hy**	**19.84**	**83**	T	T	18 01 59.6	
	baz=269,slow=75,SNR=756						
JGF	**Kuroka**	**20.06**	**339**		**P**	**17 41 22.8**	**-0.8**
JGF				IAmb	IAmb	17 42 00.8	
	comp=Z,141nm,2.0s						
H11N1	**WAKE ISLAND Hy**	**20.08**	**79**	T	T	18 02 16.9	
	baz=266,slow=74,SNR=816						
H11N2	**WAKE ISLAND Hy**	**20.08**	**79**	T	T	18 02 17.4	
	baz=266,slow=74,SNR=625						
H11N3	**WAKE ISLAND Hy**	**20.10**	**79**	T	T	18 02 18.3	
	baz=266,slow=74,SNR=770						
JWT	**Wachi**	**20.51**	**335**	P	**P**	**17 41 27.9**	**-0.5**
JWT				IAmb	IAmb	17 42 00.2	
	comp=Z,83nm,1.4s						
MJAR	**Matsushiro Arr**	**20.66**	**342**	P	**P**	**17 41 30.0**	**0.0**
	comp=Z,6.2nm,1.2s,baz=153,slow=16,SNR=4.3						
MJAR				LR	LR	17 48 55.8	
	comp=Z,395nm,18.1s,baz=210,slow=35						
MJAR	**Matsushiro Arr**	**20.66**	**342**	P	**P**	**17 41 30.4**	**+0.3**
MAJO	**Matsushiro**	**20.66**	**342**	P	**P**	**17 41 31.1**	**+1.1**
MAT	**Matsushiro**	**20.66**	**342**	P	**P**	**17 41 29.9**	**-0.1**
JNU	**Nakatsue**	**21.04**	**323**	LR	LR	17 48 31.1	
	comp=Z,169nm,19.8s,baz=102,slow=33						
JHS	**Saijyo**	**21.29**	**330**	P	**P**	**17 41 37.0**	**+0.1**
JHS				IAmb	IAmb	17 42 18.2	
	comp=Z,112nm,1.5s						
JMM	**Marumori**	**21.30**	**349**	P	**P**	**17 41 37.1**	**+0.3**
JMM				IAmb	IAmb	17 41 40.8	
	comp=Z,150nm,1.8s						
SIJI	**Sorong**	**22.88**	**221**	P	**P**	**17 41 53.7**	**-0.3**
	comp=Z,21nm,0.8s,baz=21,slow=18,SNR=7.7						
SIJI				LR	LR	17 48 51.4	
	comp=Z,300nm,19.2s,baz=211,slow=32						
FAKI	**Fak Fak**	**23.94**	**216**	P	**P**	**17 42 05.8**	**+1.3**
FAKI				IAmb	IAmb	17 42 09.5	
	comp=Z,22nm,0.8s						
YHNB	**Yeheng**	**24.17**	**293**	P	**P**	**17 42 07.4**	**+0.6**
YHNB				IAmb	IAmb	17 42 38.6	
	comp=Z,57nm,1.1s						
TGY	**Tagaytay City**	**24.25**	**267**	LR	LR	17 50 02.5	
	comp=Z,603nm,20.2s,baz=123,slow=33						
SSLB	**Suanglung**	**24.36**	**290**	P	**P**	**17 42 09.9**	**+1.5**
SSLB				IAmb	IAmb	17 42 32.3	
	comp=Z,48nm,1.3s						
KSRS	**Korea Array**	**25.85**	**326**	P	**P**	**17 42 21.2**	**-0.6**
	comp=Z,2.6nm,0.8s,baz=152,slow=9.9,SNR=13						
KSAR	**Wonju Array Be**	**25.86**	**326**	P	**P**	**17 42 21.1**	**-0.7**
KS19	**Wonju Array Si**	**25.91**	**326**	P	**P**	**17 42 21.4**	**-0.9**
KS19				IAmb	IAmb	17 42 27.2	
	comp=Z,56nm,1.4s						
PMG	**Port Moresby**	**26.24**	**177**	P	**P**	**17 42 23.6**	**-1.9**
	comp=Z,12nm,0.7s,baz=358,slow=11,SNR=2.8						
PMG	**Port Moresby**	**26.24**	**177**	P	**P**	**17 42 24.9**	**-0.5**
PMG				IAmb	IAmb	17 42 33.1	
	comp=Z,25nm,1.1s						
SSE	**Sheshan**	**26.54**	**307**	P	**P**	**17 42 28.4**	**+0.3**
SSE				IAmb	IAmb	17 42 32.1	
	comp=Z,29nm,0.9s						
NJ2	**Nanjing**	**28.74**	**306**	*e*P	**P**	**17 42 48.0**	**+0.2**
NJ2				pmax	pmax		
	comp=Z,3.0nm,0.5s						
LUWI	**Luwuk**	**29.02**	**234**	P	**P**	**17 42 49.8**	**-0.7**
LUWI				IAmb	IAmb	17 42 54.4	
	comp=Z,23nm,0.8s						
USRK	**Ussuriysk Ar.**	**29.59**	**339**	LR	LR	17 53 47.2	
	comp=Z,246nm,18.4s,baz=236,slow=34						
COEN	**Coen**	**30.85**	**185**	P	**P**	**17 43 07.1**	**+0.5**
KKM	**Kota Kinabalu**	**31.03**	**253**	P	**P**	**17 43 07.4**	**-1.0**
KKM				IAmb	IAmb	17 43 47.9	
	comp=Z,20nm,1.1s						

SOEI	Soe	34.12	220	P	P	17 43 35.3	-0.1
SOEI				IAmb	IAmb	17 43 57.9	
	comp=Z,18nm,1.0s						
KLR	Kul'dur	34.18	343	P	P	17 43 33.8	-1.6
	comp=Z,0.9nm,0.6s,baz=138,slow=12,SNR=1.8						
QIZ	Qiongzhong	34.35	279	P	P	17 43 35.8	-1.5
QIZ				S	S	17 49 05.3	+0.2
QIZ				LR	LR		
	comp=Z,240nm,19.6s						
QIZ				LR	LR		
	comp=Z,230nm,17.2s						
QIZ				LR	LR		
	comp=Z,360nm,21.6s						
BJT	Baijiatuau	34.53	318	P	P	17 43 38.4	-0.2
BJT				IAmb	IAmb	17 43 44.2	
	comp=Z,13nm,1.2s						
BJI	Beijing	34.54	318	P	P	17 43 38.8	+0.1
BJI				S	S	17 49 12.3	+4.7
BJI				pmax	pmax		
	comp=Z,5.0nm,1.5s						
BJI				LR	LR		
	comp=Z,350nm,15.8s						
BJI				LR	LR		
	comp=Z,290nm,19.5s						
MMRI	Maumere	34.59	224	P	P	17 43 39.6	+0.2
MMRI				IAmb	IAmb	17 44 22.8	
	comp=Z,26nm,1.0s						
BATI	Baumata	34.85	221	P	P	17 43 39.7	-1.9
	comp=Z,15nm,0.8s,baz=325,slow=22,SNR=3.1						
MIDW	Midway	35.55	65	P	P	17 43 47.9	+0.3
ENH	Enshi	35.76	298	P	P	17 43 50.0	+0.6
ENH				IAmb	IAmb	17 43 56.7	
	comp=Z,33nm,1.6s						
SBUM	Sibu	36.13	250		P	17 43 52.6	-0.1
CTAO	Charters Tower	36.83	179	P	P	17 44 00.5	+2.0
CTAO				IAmb	IAmb	17 44 07.6	
	comp=Z,25nm,1.5s						
PEA0B	Petropavlovsk-	37.22	12	P	P	17 44 01.6	+0.1
PETK	Petropavlovsk-	37.22	12	P	P	17 44 01.2	-0.3
	comp=Z,1.4nm,0.7s,baz=201,slow=7.7,SNR=2.0						
PETK	Petropavlovsk-	37.22	12	P	P	17 44 02.0	+0.5
XAN	Xi'an	37.23	304	P	P	17 44 02.8	+0.9
XAN				pmax	pmax		
	comp=Z,7.0nm,1.5s						
XAN	Xi'an	37.23	304	P	P	17 44 02.8	+0.9
GYA	Guiyang	37.56	291	⇓P	P	17 44 07.5	+2.6
GYA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
GYA				LR	LR		
	comp=Z,360nm,11.8s						
HHC	Hu-ho-hao-te	37.98	316	*e*P	P	17 44 09.5	+1.3
HHC				pmax	pmax		
	comp=Z,7.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,300nm,6.3s						
WB0	Warramunga Arr	38.23	198	P	P	17 44 08.9	-1.5
WB0				IAmb	IAmb	17 44 30.8	
	comp=Z,30nm,2.0s						
WR0	Warramunga Arr	38.37	197	P	P	17 44 10.3	-1.2
WRAB	Tennant Creek	38.40	198	P	P	17 44 10.6	-1.3
WB2	Warramunga Arr	38.41	198	P	P	17 44 11.2	-0.7
WRA	Warramunga Arr	38.41	198	P	P	17 44 09.4	-2.6
	comp=Z,3.2nm,0.8s,baz=18,slow=9.6,SNR=21						
WRA				PcP	PcP	17 46 23.8	-1.6
	comp=Z,0.6nm,0.8s,baz=15,slow=3.5,SNR=2.7						
SANVU	Saraoutou	38.45	146	P	P	17 44 14.3	+2.1
SANVU				IAmb	IAmb	17 44 19.4	
	comp=Z,49nm,1.4s						
FITZ	Fitzroy Crossi	40.17	211	P	P	17 44 26.2	-0.4
	comp=Z,3.5nm,0.9s,baz=16,slow=15,SNR=4.3						
FITZ	Fitzroy Crossi	40.17	211	P	P	17 44 26.7	+0.1
JAGI	Jajag, Banyuwa	40.33	234	P	P	17 44 27.8	-0.3
CD2	Chengdu	40.72	298	P	P	17 44 32.0	+0.7
CD2				pmax	pmax		
	comp=Z,20nm,1.1s						
LZH	Lanzhou	41.81	305	*e*P	P	17 44 41.5	+1.3
LZH				pP	pwP	17 44 48.0	+4.8
LZH				sP	sP	17 44 52.0	+7.6
LZH				pmax	pmax		
	comp=Z,14nm,1.2s						
AS31	Alice Springs	42.06	197	P	P	17 44 40.4	-1.8
ASAR	Alice Springs	42.07	197	P	P	17 44 41.4	-0.9
	comp=Z,2.5nm,0.8s,baz=20,slow=9.4,SNR=35						
ASAR				PcP	PcP	17 46 36.5	-0.6
	comp=Z,0.4nm,0.8s,baz=20,slow=3.0,SNR=2.2						
ASAR	Alice Springs	42.07	197	P	P	17 44 39.9	-2.4
CHAI	Chaiyaphum	42.10	275	P	P	17 44 49.5	+6.9
	comp=Z,12nm,0.9s						
UGM	Wanagama	42.87	238	P	P	17 44 48.4	-0.5
AMKA	Amchitka	43.37	30	P	P	17 44 52.0	-0.5
DZM	Mont Dzumac	43.70	152	P	P	17 44 55.8	+0.3
	comp=Z,10nm,1.1s,baz=298,slow=15						
DZM	Mont Dzumac	43.70	152	P	P	17 44 56.9	+1.4
DZM				IAmb	IAmb	17 44 58.7	
	comp=Z,25nm,1.3s						
ULN	Ulaanbaatar	44.26	323	P	P	17 45 01.1	+1.2
CM34	Chiang Mai Arr	44.46	280	P	P	17 45 06.0	+4.3
CM35	Chiang Mai Arr	44.47	280	P	P	17 45 05.0	+3.2
CM36	Chiang Mai Arr	44.54	279	P	P	17 45 07.0	+4.6
SONM	Songino Array	44.63	322	P	P	17 45 03.1	+0.3
	comp=Z,0.7nm,0.7s,baz=140,slow=9.2,SNR=3.5						
SONM				LR	LR	18 03 06.0	
	comp=Z,249nm,18.6s,baz=72,slow=35						
SONM	Songino Array	44.63	322	P	P	17 45 03.9	+1.1
CM33	Chiang Mai Arr	44.65	280	P	P	17 45 09.0	+5.7
CHTO	Chiang Mai	44.66	280	P	P	17 45 02.8	-0.5
CM04	Chiang Mai Arr	44.66	279	P	P	17 45 06.0	+2.6
	comp=Z,49nmcomp=Z,5.3nm,0.9s						
CM01	Chiang Mai Arr	44.68	279	P	P	17 45 06.0	+2.5
	comp=Z,42nmcomp=Z,4.2nm,0.9s						
CM02	Chiang Mai Arr	44.69	279	P	P	17 45 05.5	+1.9
	comp=Z,4.2nm,0.8s						
CM31	Chiang Mai Arr	44.69	279	P	P	17 45 03.6	+0.1
CMAR	Chiang Mai Arr	44.69	279	P	P	17 45 04.0	+0.4
	comp=Z,2.0nm,0.7s,baz=74,slow=6.6,SNR=15						
CMAR				LR	LR	18 04 51.0	
	comp=Z,138nm,18.1s,baz=154,slow=38						
CMAR	Chiang Mai Arr	44.69	279	P	P	17 45 03.5	-0.1
CM05	Chiang Mai Arr	44.69	279	P	P	17 45 06.5	+2.9
	comp=Z,3.9nm,1.0s						
CM15	Chiang Mai Arr	44.71	279	P	P	17 45 06.7	+2.9
	comp=Z,5.8nm,1.0s						
CM13	Chiang Mai Arr	44.73	279	P	P	17 45 06.8	+2.9
	comp=Z,45nmcomp=Z,5.7nm,0.9s						
MHMT	Maesarieng	45.68	279	P	P	17 45 19.0	+7.6
GTA	Gaotai	45.78	309	*e*P	P	17 45 12.0	-0.2
GTA				pP	pwP	17 45 18.5	+3.4
GTA				sP	sP	17 45 22.0	+5.7
GTA				pmax	pmax		
	comp=Z,340nm,6.2s						
GTA				LR	LR		
	comp=Z,300nm,16.4s						
GTA				LR	LR		
	comp=Z,440nm,17.8s						
GTA				LR	LR		
	comp=Z,550nm,16.7s						
KULM	Kulim	45.81	261	P	P	17 45 14.3	+1.8
KULM				IAmb	IAmb	17 45 42.1	
	comp=Z,32nm,1.7s						
PSA00	Pilbara Seismi	46.06	215	P	P	17 45 14.7	+0.4
PSA00				IAmb	IAmb	17 46 52.1	
	comp=Z,20nm,1.2s						
SEY	Seymchan	46.13	4	P	P	17 45 14.1	-0.2
	comp=Z,0.6nm,0.6s,baz=94,slow=4.3,SNR=5.2						
MSVF	Nonsavu	46.79	136	P	P	17 45 17.3	-2.9
	comp=Z,0.5nm,0.4s,baz=287,slow=20						
MSVF	Nonsavu	46.79	136	P	P	17 45 22.5	+2.3
GSI	Gunungsitoli	50.04	257	P	P	17 45 45.1	-0.2
NIKH	Nikolski High	50.30	34	P	P	17 45 47.9	+1.2
BBOO	Buckleboo	50.40	191	P	P	17 45 46.9	-0.7
BBOO				IAmb	IAmb	17 45 56.5	
	comp=Z,16nm,1.5s						
FORT	Forrest	50.50	200	P	P	17 45 48.8	+0.4
FORT				IAmb	IAmb	17 45 50.7	
	comp=Z,12nm,0.8s						
SHL	Shillong	50.80	289	P	P	17 45 51.0	-0.2
LSA	Lhasa	51.45	295	P	P	17 45 55.7	-0.6
LSA				IAmb	IAmb	17 46 03.5	
	comp=Z,15nm,1.3s						
UNV	Unalaska Valle	51.95	34	P	P	17 45 59.4	+0.4
CAN	Canberra	52.09	177	P	P	17 46 02.3	+2.0
CAN				IAmb	IAmb	17 46 09.9	
	comp=Z,46nm,1.8s						
AKUT	Akutan	52.47	34	P	P	17 46 04.9	+2.1
TAPN	Taplejung	54.49	292	*e*P	P	17 46 19.0	+0.4
	comp=Z,49nm,1.5s						
ODAN	Odare	54.79	291	*e*P	P	17 46 21.0	+0.2
	comp=Z,30nm,1.1s						
RAMN	Ramite	55.49	291	*e*P	P	17 46 25.5	-0.3
WMQ	Urumqi	55.61	312	*e*P	P	17 46 27.5	+1.3
WMQ				pP	pwP	17 46 32.5	+3.3
WMQ				sP	sP	17 46 35.0	+4.6
WMQ				pmax	pmax		
	comp=Z,19nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,150nm,4.7s						
PUH	Pauahi	55.73	78	P	P	17 46 27.9	+0.4
GUN	Gumba	56.09	292	*e*P	P	17 46 30.9	+0.7
	comp=Z,24nm,0.9s						
PKI	Pulchoki	56.52	292	*e*P	P	17 46 33.3	0.0
	comp=Z,13nm,1.2s						
PKIN	Phulchoki	56.53	292	*e*P	P	17 46 33.4	+0.1
DMN	Daman	56.79	292	*e*P	P	17 46 34.7	-0.4
GKN	Gorkha	57.19	293	*e*P	P	17 46 37.3	-0.5
	comp=Z,29nm,1.0s						
ANM	Nome	57.69	23	P	P	17 46 40.8	+0.3
	baz=238						
SII	Sitkinak Islan	59.50	34	P	P	17 46 53.3	0.0
	baz=254						
SII	Sitkinak Islan	59.50	34	P	P	17 46 54.3	+1.0
ZALV	Zalesovo Beam	59.52	323	P	P	17 46 52.5	-0.9
	comp=Z,0.6nm,0.6s,baz=107,slow=7.7,SNR=1.9						
MK31	Makanchi Array	59.82	315	P	P	17 46 55.6	-0.1
MKAR	Makanchi Array	59.82	315	P	P	17 46 55.5	-0.2
	comp=Z,0.9nm,0.5s,baz=92,slow=7.2,SNR=18						
MKAR	Makanchi Array	59.82	315	P	P	17 46 55.3	-0.4
MAKZ	Makanchi	60.03	315	P	P	17 46 57.0	-0.2
OHAK	Old Harbor	60.16	33	P	P	17 46 58.2	+0.5
	baz=254						
OHAK	Old Harbor	60.16	33	P	P	17 46 58.1	+0.3
OHAK				IAmb	IAmb	17 47 23.1	
	comp=Z,14nm,1.0s						
SVW2	Sparrevohn	60.22	28	P	P	17 46 59.0	+0.8
RDOG	Red Dog Mine	60.37	20	P	P	17 46 59.5	+0.5
	baz=239						
KDAK	Kodiak Island	60.68	33	P	P	17 46 59.9	-1.3
	comp=Z,2.2nm,0.3s,baz=281,slow=4.5,SNR=11						
KDAK	Kodiak Island	60.68	33	P	P	17 47 02.4	+1.1
TTA	Tatalina	60.68	26	P	P	17 47 01.2	-0.2
	baz=249						
TTA	Tatalina	60.68	26	P	P	17 47 00.3	-1.1
TTA				IAmb	IAmb	17 47 34.9	
	comp=Z,22nm,2.0s						
CNPM	China Poot	61.81	31	P	P	17 47 08.5	-0.5
BRLK	Bradley Lake	62.05	31	P	P	17 47 10.5	-0.1
BRLK				IAmb	IAmb	17 47 44.8	
	comp=Z,9.7nm,1.0s						
BRSE	Bradley Lake S	62.11	31	P	P	17 47 10.8	-0.2
	baz=255						
PPLA	Purkeypile	62.32	27	P	P	17 47 12.4	-0.1
	baz=252						
PPLA	Purkeypile	62.32	27	P	P	17 47 12.3	-0.2
PPLA				IAmb	IAmb	17 48 05.9	
	comp=Z,18nm,1.4s						
SKT	Skwentna	62.34	28	P	P	17 47 12.2	-0.4
	baz=253						
SUA	Susitna One	62.56	29	P	P	17 47 13.6	-0.5
	baz=254						
SUA	Susitna One	62.56	29	P	P	17 47 13.8	-0.3
SUA				IAmb	IAmb	17 47 43.8	
	comp=Z,8.3nm,1.2s						
CHUM	Lake Minchumin	62.57	26	P	P	17 47 14.5	+0.5
	baz=252						
KURK	Kurchatov	62.70	319	P	P	17 47 13.6	-1.5
KURK				IAmb	IAmb	17 47 20.2	
	comp=Z,13nm,1.5s						
KURBB	Kurchatov Arra	62.75	319	P	P	17 47 13.5	-1.9
	comp=Z,46nm,0.6s,baz=97,slow=7.3,SNR=21						
SEW	Seward	62.83	31	P	P	17 47 16.0	+0.3
	baz=256						
RC01	Rabbit Creek A	62.93	29	P	P	17 47 16.3	-0.2
	baz=256						
KTH	Kantishna Hill	63.06	27	P	P	17 47 17.1	-0.2
KTH				IAmb	IAmb	17 47 43.4	
	comp=Z,11nm,1.0s						
BPAW	Bear Paw Mtn.	63.20	26	P	P	17 47 18.1	-0.1
	baz=253						
BPAW	Bear Paw Mtn.	63.20	26	P	P	17 47 17.7	-0.5
TRF	Thorofare Moun	63.31	27	P	P	17 47 19.3	+0.1
	baz=254						
TRF	Thorofare Moun	63.31	27	P	P	17 47 18.7	-0.4
MLY	Manley	63.57	25	P	P	17 47 21.5	+0.8
	baz=253						
SML	Sawmill	63.76	29	P	P	17 47 22.0	0.0
	baz=257						
SML	Sawmill	63.76	29	P	P	17 47 21.5	-0.5
SML				IAmb	IAmb	17 47 44.3	
	comp=Z,15nm,1.0s						
NEA2	Nenana	64.14	26	P	P	17 47 24.2	-0.1
	baz=254						
GLI	Glacier Island	64.14	30	P	P	17 47 23.6	-0.8
	baz=258						
I23K	Minto, Yukon-K	64.17	25	P	P	17 47 24.4	-0.1
	baz=254						
I23K	Minto, Yukon-K	64.17	25	P	P	17 47 24.9	+0.4
I23K				IAmb	IAmb	17 47 51.3	
	comp=Z,27nm,1.9s						
SCM	Sheep Creek Mo	64.23	29	P	P	17 47 25.5	+0.3
HIN	Hinchinbrook I	64.33	31	P	P	17 47 25.4	-0.3
HIN				IAmb	IAmb	17 47 48.0	
	comp=Z,11nm,0.9s						
KHZ	Kahutara	64.34	158	P	P	17 47 25.6	-0.3
COLD	Coldfoot	64.45	23	P	P	17 47 27.1	+0.7
	baz=252						
COLD	Coldfoot	64.45	23	P	P	17 47 26.2	-0.1
MDM	Murphy Dome	64.58	25	P	P	17 47 27.4	+0.1
EYAK	Cordova Ski Ar	64.72	31	P	P	17 47 27.7	-0.6
	baz=260						
KLU	Klutina	64.82	29	P	P	17 47 29.7	+0.7
	baz=259						
HDA	Harding Lake	64.98	26	P	P	17 47 28.5	-1.4
	baz=257						
HDA	Harding Lake	64.98	26	P	P	17 47 29.9	0.0
IL31		65.09	26	P	P	17 47 29.0	-1.6
ILAR	Eielson Array	65.09	26	P	P	17 47 29.2	-1.4
	comp=Z,1.8nm,0.7s,baz=254,slow=5.0,SNR=9.0						
ILAR	Eielson Array	65.09	26	P	P	17 47 28.8	-1.7
TOLK	Toolik Lake Re	65.11	21	P	P	17 47 30.6	-0.1
	baz=252						
TOLK	Toolik Lake Re	65.11	21	P	P	17 47 30.4	-0.3
TOLK				IAmb	IAmb	17 47 59.9	
	comp=Z,16nm,1.5s						
KAIM	Kayak Island	65.27	31	P	P	17 47 31.2	-0.6
	baz=261						
KAIM	Kayak Island	65.27	31	P	P	17 47 30.6	-1.3
PAX	Paxson	65.31	28	P	P	17 47 31.9	-0.3
	baz=259						
PAX	Paxson	65.31	28	P	P	17 47 31.6	-0.6
BMRM	Bremner River	65.35	30	P	P	17 47 32.9	+0.5
	baz=260						
N25K	Chitina, Valde	65.46	29	P	P	17 47 33.4	+0.3
	baz=260						
N25K	Chitina, Valde	65.46	29	P	P	17 47 34.2	+1.1
N25K				IAmb	IAmb	17 47 48.8	
	comp=Z,23nm,1.9s						
ODZ	Otahua Downs	65.69	161	P	P	17 47 33.3	-1.3
GLB	Gilahina Butte	65.81	30	P	P	17 47 34.8	-0.5
GLB				IAmb	IAmb	17 48 01.9	
	comp=Z,12nm,1.2s						
VRDI	Verde Repeater	65.94	30	P	P	17 47 35.5	-0.9
DOT	Dot Lake	66.07	27	P	P	17 47 36.8	-0.2
DOT				IAmb	IAmb	17 47 38.6	
	comp=Z,7.6nm,0.8s						
SCRK	Sand Creek	66.16	27	P	P	17 47 36.3	-1.4
	baz=260						
FYU	Fort Yukon	66.16	24	P	P	17 47 38.2	+0.7
MCARA	McCarthy VSAT	66.17	30	P	P	17 47 37.6	0.0
	baz=262						
MCARA	McCarthy VSAT	66.17	30	P	P	17 47 37.6	0.0
MCARA				IAmb	IAmb	17 48 18.1	
	comp=Z,10.0nm,0.8s						
BALM	Baldy	66.45	30	P	P	17 47 39.8	+0.2
BALM				IAmb	IAmb	17 48 05.2	
	comp=Z,13nm,1.5s						
NIL	Nilore	66.57	300	P	P	17 47 40.5	-0.2
CTG	Chitna Glacier	66.93	30	P	P	17 47 41.8	-0.9
	baz=263						
TABL	Table Mountain	66.97	31	P	P	17 47 43.3	+0.3
TABL				IAmb	IAmb	17 47 45.8	
	comp=Z,10nm,0.7s						
PINM	Pinnacle	67.37	31	P	P	17 47 44.4	-1.0
	baz=265						
EGAK	Eagle	67.50	26	P	P	17 47 45.1	-0.9
EGAK				IAmb	IAmb	17 47 51.7	
	comp=Z,16nm,1.6s						
YKU2	Yakutat	67.61	32	P	P	17 47 45.3	-1.5
BVAR	Borovoye Array	67.94	321	P	P	17 47 46.8	-2.2
	comp=Z,1.6nm,0.8s,baz=111,slow=8.1,SNR=9.7						
BRVK	Borovoye	68.01	321	P	P	17 47 48.3	-1.1
HYT	Haines Junctio	68.78	31	P	P	17 47 54.8	+0.5
KBL	Kabul	69.94	301	P	P	17 48 01.1	-1.0
KBL				IAmb	IAmb	17 48 07.5	
	comp=Z,16nm,1.1s						
INK	Inuvik	70.86	23	P	P	17 48 04.4	-2.4
	comp=Z,2.8nm,0.7s,baz=270,slow=6.1,SNR=11						
INK	Inuvik	70.86	23	P	P	17 48 05.9	-0.9
H02S1	DAWSON INLET T	71.58	39	T	T	19 06 51.6	
	SNR=41						
PPT	Papeete	72.17	115	LR	LR	18 11 09.5	
	comp=Z,234nm,21.4s,baz=314,slow=29						
DLBC	Dease Lake	72.60	33	P	P	17 48 18.3	+0.8
	comp=Z,1.4nm,0.4s,baz=282,slow=7.6,SNR=2.7						
C36M	Paulatuk	74.26	22	P	P	17 48 25.9	-1.1
	baz=276						
YKA	Yellowknife Ar	79.40	28	P	P	17 48 55.3	-0.8
	comp=Z,2.0nm,0.7s,baz=290,slow=4.9,SNR=24						
YBH	Yreka Blue Hor	79.89	49	P	P	17 48 58.0	-1.4
	comp=Z,1.7nm,0.8s,baz=260,slow=6.1,SNR=2.5						
PINE	Pine Mountain	80.66	47	P	P	17 49 03.8	+0.2
PINE				IAmb	IAmb	17 49 06.0	
	comp=Z,10.0nm,0.8s						
K05A	Summer Lake	80.96	48	P	P	17 49 05.0	-0.3
K05A				IAmb	IAmb	17 49 09.0	
	comp=Z,16nm,1.1s						
ORV	Oroville	81.32	51	P	P	17 49 06.6	-0.3
NEW	Newport	82.03	42	P	P	17 49 10.1	-0.6
	comp=Z,2.6nm,0.8s,baz=260,slow=6.1,SNR=4.1						
BEKR	Beckworth	82.09	51	P	P	17 49 11.2	0.0
CMB	Columbia Colle	82.56	53	P	P	17 49 13.7	+0.1
PNTR	Pine Nut	82.86	51	P	P	17 49 14.8	-0.7
PNTR				IAmb	IAmb	17 49 18.9	
	comp=Z,7.3nm,0.6s						
BMO	Blue Mountains	82.89	45	P	P	17 49 14.8	-0.4
BMO				IAmb	IAmb	17 49 20.1	
	comp=Z,15nm,1.7s						
RYN	Ryan	83.80	52	P	P	17 49 19.6	-0.6
KVN	Kaiserville	84.00	51	P	P	17 49 21.1	-0.1
KVN				IAmb	IAmb	17 49 23.6	
	comp=Z,19nm,1.8s						
NVAR	Mina Array Bea	84.02	52	P	P	17 49 21.7	+0.4
	comp=Z,1.8nm,0.6s,baz=267,slow=5.8,SNR=18						
NVAR	Mina Array Bea	84.02	52	P	P	17 49 21.2	-0.1
NV11	Mina Array Sit	84.13	52	P	P	17 49 22.4	+0.5
ARCES	ARCESS Array B	84.19	342	P	P	17 49 20.7	-0.7
	comp=Z,3.3nm,0.9s,baz=46,slow=10,SNR=1.9						
MFID	Camas Ranch	84.33	46	P	P	17 49 23.1	+0.4
MFID				IAmb	IAmb	17 49 29.4	
	comp=Z,7.6nm,1.0s						
HLID	Hailey	85.26	46	P	P	17 49 27.4	-0.1
ELK	Elko	85.58	49	P	P	17 49 28.7	-0.5
	comp=Z,1.7nm,0.6s,baz=272,slow=6.4,SNR=6.9						
ELK	Elko	85.58	49	P	P	17 49 28.8	-0.4
ELK				IAmb	IAmb	17 49 34.9	
	comp=Z,27nm,2.0s						
BCYI	Bear Canyon	85.71	45	P	P	17 49 29.8	+0.1
LRM	Limekiln Ridge	85.83	43	P	P	17 49 30.0	-0.4
MCMT	McKenzie Canyo	85.91	44	P	P	17 49 30.2	-0.6
HRY	Holter Researc	85.93	42	P	P	17 49 30.9	+0.2
R11A	Troy Canyon, C	86.08	51	P	P	17 49 32.4	+0.8
R11A				IAmb	IAmb	17 49 38.7	
	comp=Z,17nm,1.8s						
BOZ	Bozeman (W)	86.45	43	P	P	17 49 33.6	+0.3
QLMT	Earthquake Lak	86.85	44	P	P	17 49 35.1	-0.3
HVU	Hansel Valley	86.99	47	P	P	17 49 36.5	+0.4
HVU				IAmb	IAmb	17 49 43.9	
	comp=Z,10nm,1.3s						
YHL	Hebgen Lake	87.01	44	P	P	17 49 36.4	+0.2
YHL				IAmb	IAmb	17 49 38.4	
	comp=Z,12nm,1.3s						
YMR	Madison River	87.22	44	P	P	17 49 38.1	+0.9
YMR				IAmb	IAmb	17 49 40.9	
	comp=Z,7.9nm,1.0s						
YHH	Holmes Hill	87.25	44	P	P	17 49 38.2	+0.7
YHH				IAmb	IAmb	17 50 00.4	
	comp=Z,13nm,1.9s						
PSUT	Pine Spring	87.31	51	P	P	17 49 37.6	-0.1
PSUT				IAmb	IAmb	17 49 42.1	
	comp=Z,4.5nm,0.8s						
DUG	Dugway, Tooele	87.51	49	P	P	17 49 38.2	-0.4
DUG				IAmb	IAmb	17 49 44.3	
	comp=Z,11nm,1.4s						
KBZ	Khabaz	87.52	315	P	P	17 49 37.1	-1.2
	comp=Z,1.5nm,1.0s,baz=36,slow=19,SNR=4.1						
H17A	Grant Village	87.58	44	P	P	17 49 38.8	-0.2
FLWY	Flagg Ranch	87.61	45	P	P	17 49 38.6	-0.4
YMP	Mirror Lake Pl	87.73	44	P	P	17 49 39.0	-0.8
CCUT	Cedar City	88.00	51	P	P	17 49 41.2	+0.1
NLU	North Lily Min	88.12	49	P	P	17 49 41.4	-0.2
NLU				IAmb	IAmb	17 49 43.2	
	comp=Z,4.5nm,0.9s						
TCUT	Toone Canyon	88.19	48	P	P	17 49 42.0	+0.1
TCUT				IAmb	IAmb	17 49 49.9	
	comp=Z,5.6nm,0.9s						
JLU	Jordanelle	88.34	48	P	P	17 49 42.4	-0.3
JLU				IAmb	IAmb	17 49 51.0	
	comp=Z,6.3nm,1.0s						
MVU	Marysvale	88.53	50	P	P	17 49 43.5	0.0
KNB	Kanab	88.59	52	P	P	17 49 44.9	+1.1
PDAR	Pinedale Array	88.87	45	P	P	17 49 43.8	-1.3
	comp=Z,0.4nm,0.6s,baz=241,slow=0.9,SNR=2.1						
Q16A	Castle Valley	89.14	50	P	P	17 49 46.5	+0.1
Q16A				IAmb	IAmb	17 49 52.5	
	comp=Z,13nm,1.4s						
SRU	San Rafael Swe	89.55	49	P	P	17 49 48.1	-0.1
SRU				IAmb	IAmb	17 49 56.6	
	comp=Z,4.3nm,0.8s						
PV23	Carpenter Ridg	90.89	49	P	P	17 49 53.0	-1.7
PV23				IAmb	IAmb	17 49 56.1	
	comp=Z,8.9nm,0.9s						
PV14	Lion Creek, Pa	90.91	49	P	P	17 49 54.2	-0.5
PV20	West Nyswonger	90.96	49	P	P	17 49 55.2	+0.3
PV17	East Wray Mesa	90.99	49	P	P	17 49 54.9	-0.2
PV16	Nyswonger Mesa	91.01	49	P	P	17 49 54.1	-1.1
PV16				IAmb	IAmb	17 50 01.1	
	comp=Z,11nm,1.2s						
PV11	David Mesa, Pa	91.05	49	P	P	17 49 54.9	-0.4
PV03	Paradox Valley	91.08	49	P	P	17 49 54.7	-0.8
PV03				IAmb	IAmb	17 50 31.3	
	comp=Z,7.2nm,0.8s						
PV12	Saucer Basin,	91.09	49	P	P	17 49 55.1	-0.5
SMCO	Snowmass	92.07	48	P	P	17 50 00.1	-0.1
SMCO				IAmb	IAmb	17 50 08.9	
	comp=Z,5.9nm,1.1s						
ISCO	Idaho Springs	92.77	47	P	P	17 50 03.7	+0.3
ISCO				IAmb	IAmb	17 50 46.6	
	comp=Z,13nm,1.9s						
LPAZ	La Paz	147.38	94	PKPbc	PKPab	17 56 36.6	-1.0
	comp=Z,4.9nm,0.7s,baz=299,slow=1.8,SNR=15						

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*IDC **27** 17:39:06.1±1.1, 16°.94N×145°.98E, h0^{km}, mb3.8/7, mb1 4.0/7, mb1mx3.6/62, mbtmp3.8/7, Error ellipse: s-maj=32.6km s-min=30.3km az=134.0*

*NEIC **27** 17:39:08.4±1.2, 16°.9N±0°.2×145°.9E±0°.2, h10^{km}±2^{km}, mb4.6/17, Error ellipse: s-maj=38.8km s-min=34.3km az=273.0*

ISC 27 17:39:08.2±0.9**, 17°.0N**±0°.2×**145°.9E**±0°.2**, h10^{km}, n28,** σ**0^{s}.97**/27**, mb4.4**/15**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAJO	Matsushiro	20.60	342	P	P	17 43 44.6	-2.9
KSRS	Korea Array	25.78	326	P	P	17 44 39.2	-0.1
	1.6nm,1.0s,baz=152,slow=9.7,SNR=2.6						
ASAR	Alice Springs	42.09	196	P	P	17 46 59.5	-1.1
	0.4nm,0.8s,baz=12,slow=9.5,SNR=2.1						
CMAR	Chiang Mai Arr	44.63	279	P	P	17 47 22.4	+1.1
	1.2nm,0.9s,baz=77,slow=5.6,SNR=3.6						
MK31	Makanchi Array	59.75	315	P	P	17 49 14.1	+0.7
MKAR	Makanchi Array	59.75	315	P	P	17 49 13.4	+0.1
	0.3nm,0.6s,baz=90,slow=8.7,SNR=2.2						
MAKZ	Makanchi	59.97	315	P	P	17 49 15.7	+0.8
MAKZ				IAmb	IAmb	17 49 28.5	
	comp=Z,4.7nm,1.4s						
OHAK	Old Harbor	60.15	33	P	P	17 49 17.0	+1.1

SVW2	Sparrevohn	60.21	29	P	P	17 49 16.8	+0.6
SVW2				IAmb	IAmb	17 49 27.2	
	comp=Z,14nm,1.6s						
TTA	Tatalina	60.66	26	P	P	17 49 19.0	-0.5
KDAK	Kodiak Island	60.67	33	P	P	17 49 20.0	+0.6
IMAR	Indian Mountai	62.68	24	P	P	17 49 33.6	+0.7
MDM	Murphy Dome	64.56	25	P	P	17 49 46.0	+0.7
MDM				IAmb	IAmb	17 50 00.9	
	comp=Z,7.8nm,1.6s						
IL31		65.07	26	P	P	17 49 47.6	-1.0
ILAR	Eielson Array	65.07	26	P	P	17 49 47.3	-1.3
DOT	Dot Lake	66.05	27	P	P	17 49 55.6	+0.5
DOT				IAmb	IAmb	17 49 56.0	
	comp=Z,2.7nm,0.8s						
BARN	Barnard Glacie	66.77	30	P	P	17 50 00.5	+0.6
CTGM	Chitina Glacie	66.92	30	P	P	17 50 01.8	+1.0
CTGM				IAmb	IAmb	17 50 16.2	
	comp=Z,3.7nm,1.2s						
TABL	Table Mountain	66.95	31	P	P	17 50 02.1	+1.0
TABL				IAmb	IAmb	17 50 18.3	
	comp=Z,11nm,1.4s						
HYT	Haines Junctio	68.77	31	P	P	17 50 13.3	+0.9
HYT				IAmb	IAmb	17 50 17.4	
	comp=Z,2.4nm,0.7s						
INK	Inuvik	70.84	23	P	P	17 50 24.6	-0.2
	comp=Z,2.1nm,0.9s,baz=251,slow=10,SNR=3.3						
INK	Inuvik	70.84	23	IAmb	IAmb	17 50 25.4	
	comp=Z,4.6nm,1.1s						
YKA	Yellowknife Ar	79.39	28	P	P	17 51 14.0	-0.3
	comp=Z,0.8nm,0.7s,baz=290,slow=5.0,SNR=3.7						
KVN	Kaiserville	84.01	51	P	P	17 51 39.1	-0.3
KVN				IAmb	IAmb	17 51 41.5	
	comp=Z,6.9nm,1.7s						
JTMT	Jette	84.01	42	P	P	17 51 39.7	+0.5
NVAR	Mina Array Bea	84.04	52	P	P	17 51 40.1	+0.5
	comp=Z,0.8nm,0.7s,baz=264,slow=4.4,SNR=4.7						
NVAR	Mina Array Bea	84.04	52	P	P	17 51 39.4	-0.2
LPAZ	La Paz	147.43	94	PKPbc	PKPdf	17 58 51.4	-0.3
	comp=Z,2.5nm,0.8s,baz=270,slow=1.0,SNR=2.2						

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*IDC **27** 17:42:19.9±0.8, 17°.04N×146°.02E, h0^{km}, mb3.8/9, mb1 4.2/9, mb1mx3.7/57, mbtmp3.8/9, Error ellipse: s-maj=32.3km s-min=19.6km az=120.0*

*NEIC **27** 17:42:22.2±1.8, 17°.00N±0°.05×145°.90E±0°.10, h15^{km}±4^{km}, mb4.6/45, ML4.0/6, Error ellipse: s-maj=13.4km s-min=7.9km az=88.0*

ISC 27 17:42:21.6±0.5, **17°.00N**±0°.06×**145°.90E**±0°.09, **h10**^{km}, **n76**, σ**1^s.02**/69, **mb4.5**/31, **Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANA2	Anatahan	0.68	196		Pn	17 42 37.2	-0.2
GUMO	Guam	3.54	197		Pn	17 43 16.5	-0.2
GUMO				IAML		17 44 15.2	
	270nm,0.6s						
GUMO				IAML		17 44 19.6	
	341nm,0.6s						
JCJ	Chichijima	10.62	342	Pn	Pn	17 44 53.6	-0.3
PATS	Pohnpei	15.79	128	P	Pn	17 46 04.2	0.0
JHJ2	Mitsune	16.95	342	Pn	Pn	17 46 19.3	+0.3
H11S3	WAKE ISLAND Hy	19.85	83	T	T	18 07 27.1	
	baz=273						
JMN	Monobe	19.86	329	P	P	17 46 51.0	-2.0
JMN				IAmb	IAmb	17 47 19.6	
	comp=Z,72nm,1.4s						
H11S1	WAKE ISLAND Hy	19.87	83	T	T	18 07 27.5	
	baz=273						
H11S2	WAKE ISLAND Hy	19.87	83	T	T	18 07 30.1	
	baz=273						
H11N1	WAKE ISLAND Hy	20.10	79	T	T	18 07 47.3	
	baz=266,slow=74,SNR=37						
H11N2	WAKE ISLAND Hy	20.11	79	T	T	18 07 47.3	
	baz=266,slow=74,SNR=18						
H11N3	WAKE ISLAND Hy	20.12	79	T	T	18 07 49.5	
	baz=266,slow=74,SNR=38						
FAKI	Fak Fak	23.95	216	P	P	17 47 35.5	-0.8
FAKI				IAmb	IAmb	17 47 47.2	
	comp=Z,59nm,1.6s						
SSLB	Suanglung	24.32	290	P	P	17 47 40.4	+0.7
SSLB				IAmb	IAmb	17 47 54.5	
	comp=Z,25nm,1.2s						
KSAR	Wonju Array Be	25.82	326	P	P	17 47 49.7	-3.4
COEN	Coen	30.88	185	P	P	17 48 40.3	+1.9
COEN				IAmb	IAmb	17 48 41.7	
	comp=Z,7.8nm,1.4s						
SOEI	Soe	34.12	220	P	P	17 49 06.4	-0.7
BJT	Baijiatuau	34.49	318	P	P	17 49 10.3	+0.4
BJT				IAmb	IAmb	17 49 19.2	
	comp=Z,9.5nm,1.3s						
ENH	Enshi	35.72	298	P	P	17 49 22.5	+1.8
ENH				IAmb	IAmb	17 49 24.5	
	comp=Z,14nm,1.3s						
SBUM	Sibu	36.12	250	P	P	17 49 24.0	-0.2
SBUM				IAmb	IAmb	17 49 40.2	
	comp=Z,10nm,1.5s						
XAN	Xi'an	37.19	304	P	P	17 49 35.0	+1.8
PETK	Petropavlovsk-	37.20	12	P	P	17 49 34.0	+1.0
WB0	Warramunga Arr	38.25	198	P	P	17 49 41.6	-0.6
WR0	Warramunga Arr	38.39	197	P	P	17 49 42.8	-0.5
WR0				IAmb	IAmb	17 49 44.4	
	comp=Z,14nm,1.6s						
WRAB	Tennant Creek	38.42	198	P	P	17 49 42.8	-0.8
WB2	Warramunga Arr	38.43	198	P	P	17 49 43.3	-0.3
WRA	Warramunga Arr	38.43	198	P	P	17 49 43.2	-0.5
	comp=Z,1.8nm,0.9s,baz=16,slow=9.2,SNR=7.0						
SANVU	Saraoutou	38.49	146	P	P	17 49 43.7	-0.5
FITZ	Fitzroy Crossi	40.18	211	P	P	17 49 58.2	-0.1
JAGI	Jajag, Banyuwa	40.33	234	P	P	17 50 00.2	+0.5
JAGI				IAmb	IAmb	17 50 05.5	
	comp=Z,21nm,0.8s						
AS31	Alice Springs	42.08	197	P	P	17 50 13.8	-0.2
ASAR	Alice Springs	42.09	197	P	P	17 50 13.8	-0.2
	comp=Z,0.7nm,0.8s,baz=20,slow=8.5,SNR=8.3						
ASAR	Alice Springs	42.09	197	P	P	17 50 13.5	-0.5
DZM	Mont Dzumac	43.73	152	P	P	17 50 25.7	-1.8
DZM				IAmb	IAmb	17 50 37.2	
	comp=Z,16nm,1.3s						
CHTO	Chiang Mai	44.62	280	P	P	17 50 33.8	-0.9
CM31	Chiang Mai Arr	44.66	279	P	P	17 50 34.2	-0.7
CMAR	Chiang Mai Arr	44.66	279	P	P	17 50 36.2	+1.3
	comp=Z,1.9nm,1.1s,baz=72,slow=6.8,SNR=11						
CMAR	Chiang Mai Arr	44.66	279	P	P	17 50 34.2	-0.7
LHI	Lord Howe Isla	49.87	165	P	P	17 51 15.7	+0.5
LSA	Lhasa	51.41	295	P	P	17 51 28.4	+0.7
CHGN	Chignik	57.18	33	P	P	17 52 08.5	-0.1
MK31	Makanchi Array	59.78	315	P	P	17 52 27.3	+0.3
MKAR	Makanchi Array	59.78	315	P	P	17 52 27.0	0.0
	comp=Z,0.2nm,0.6s,baz=100,slow=7.5,SNR=2.0						
MKAR	Makanchi Array	59.78	315	P	P	17 52 27.0	0.0
TTA	Tatalina	60.67	26	P	P	17 52 33.6	+0.7
TTA				IAmb	IAmb	17 52 36.2	
	comp=Z,13nm,1.7s						
MXZ	Matakaoa Point	62.26	151	P	P	17 52 44.5	+0.8
IMAR	Indian Mountai	62.68	24	P	P	17 52 47.7	+1.4
BPAW	Bear Paw Mtn.	63.18	26	P	P	17 52 50.1	+0.4
BPAW				IAmb	IAmb	17 53 08.0	
	comp=Z,5.7nm,1.2s						
MDM	Murphy Dome	64.56	25	P	P	17 52 59.9	+1.1
MDM				IAmb	IAmb	17 53 24.0	
	comp=Z,2.9nm,1.1s						
IL31		65.08	26	P	P	17 53 00.3	-1.7
IL31				IAmb	IAmb	17 53 25.3	
	comp=Z,7.1nm,1.6s						
ILAR	Eielson Array	65.08	26	P	P	17 53 00.4	-1.7
	comp=Z,0.8nm,0.7s,baz=257,slow=4.6,SNR=6.6						
TOLK	Toolik Lake Re	65.09	21	P	P	17 53 02.8	+0.6
CRQM	Cirque	66.02	31	P	P	17 53 08.0	-0.5
DOT	Dot Lake	66.05	27	P	P	17 53 08.2	-0.3
DOT				IAmb	IAmb	17 53 09.3	
	comp=Z,3.1nm,0.9s						
MCARA	McCarthy VSAT	66.16	30	P	P	17 53 09.0	-0.2
MCARA				IAmb	IAmb	17 53 11.2	
	comp=Z,4.7nm,1.0s						
BALM	Baldy	66.44	30	P	P	17 53 10.8	-0.3
BALM				IAmb	IAmb	17 53 30.9	
	comp=Z,4.1nm,1.1s						
NIL	Nilore	66.53	300	P	P	17 53 11.7	-0.4
BMAR	Burnt Mountain	66.59	23	P	P	17 53 11.8	-0.1
YAH	Yahtse	66.65	31	P	P	17 53 13.8	+1.2
CTGM	Chitina Glacie	66.92	30	P	P	17 53 15.8	+1.5
CTGM				IAmb	IAmb	17 53 22.6	
	comp=Z,2.9nm,0.9s						
TABL	Table Mountain	66.96	31	P	P	17 53 16.0	+1.5
TABL				IAmb	IAmb	17 53 35.4	
	comp=Z,6.8nm,1.0s						
BCAR	Beaver Creek A	66.98	28	P	P	17 53 14.7	+0.2
KK31	Karatay Array	68.00	310	P	P	17 53 21.1	-0.1
KK31				IAmb	IAmb	17 53 29.2	
	comp=Z,4.3nm,1.2s						
KKAR	Karatay Array	68.00	310	P	P	17 53 20.8	-0.4
KKAR	Karatay Array	68.00	310	P	P	17 53 21.2	0.0
KKAR				IAmb	IAmb	17 53 29.2	
	comp=Z,4.3nm,1.2s						
HYT	Haines Junctio	68.77	31	P	P	17 53 25.0	-0.9
HYT				IAmb	IAmb	17 53 34.5	
	comp=Z,4.8nm,1.1s						
INK	Inuvik	70.85	23	P	P	17 53 37.0	-1.3
	comp=Z,1.4nm,0.7s,baz=252,slow=6.7,SNR=5.5						
INK	Inuvik	70.85	23	P	P	17 53 37.7	-0.6
YKA	Yellowknife Ar	79.39	28	P	P	17 54 27.5	-0.2
	comp=Z,0.7nm,0.6s,baz=290,slow=4.8,SNR=8.5						
PINE	Pine Mountain	80.66	47	P	P	17 54 36.9	+1.6
PINE				IAmb	IAmb	17 54 45.3	
	comp=Z,5.9nm,0.9s						
NVAR	Mina Array Bea	84.03	52	P	P	17 54 53.7	+0.7
	comp=Z,0.7nm,0.6s,baz=273,slow=6.4,SNR=6.4						
NVAR	Mina Array Bea	84.03	52	P	P	17 54 54.0	+1.0
PDAR	Pinedale Array	88.87	45	P	P	17 55 14.8	-1.9
	comp=Z,0.2nm,0.3s,baz=296,slow=2.9,SNR=2.1						
GO04	Tololo Observa	144.06	118		PKPbc	18 01 56.9	+0.4
LPAZ	La Paz	147.41	94	PKPbc	PKPab	18 02 08.6	-0.8
	comp=Z,1.4nm,0.8s,baz=241,slow=4.4,SNR=3.2						
LPAZ	La Paz	147.41	94	PKPbc	PKPab	18 02 08.4	-1.0

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*NNC **27** 17:45:03.5±1.9, 38°.76N×70°.20E, h0^{km}, mb3.8, mpv3.5, Error ellipse: s-maj=16.2km s-min=13.0km az=48.0*

ISC 27 17:45:02.3±3.3, **38°.6N**±0°.2×**70°.1E**±0°.1, **h10**^{km}, **n12**, σ**0^s.82**/14, **5C-2D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	4.47	37	P	Pn	17 46 10.4	0.0
	SNR=13						
KK31	Karatay Array	4.51	4	⇑Pn	Pn	17 46 10.7	+0.1
	0.8nm,0.3s,baz=175,slow=11,SNR=47						
KK31				⇑Sn	Sn	17 47 04.0	+0.8
	0.8nm,0.3s,baz=171,slow=12,SNR=6.3						
KK31				⇑Lg	Lg	17 47 20.9	
	1.8nm,0.3s,baz=166,slow=26,SNR=5.1						
EKS2	Erkin-Say	4.92	33	P	Pn	17 46 16.1	-0.4
	SNR=7.4						
UCH	Uchtor	4.94	41	P	Pn	17 46 15.1	-1.9
	SNR=12						
AAK	Ala-Archa	5.24	38	P	Pn	17 46 21.5	+0.7
	SNR=7.0						
AAK	Ala-Archa	5.24	38	⇑Pn	Pn	17 46 21.3	+0.5
	3.2nm,0.6s						
AAK				⇓Sn	Sn	17 47 20.6	-0.7
	4.1nm,0.8s						
CHMS	Chumysh	5.63	37	P	Pn	17 46 26.3	+0.2
	SNR=6.2						
USP	Ospenovka	5.73	34	P	Pn	17 46 27.1	-0.3
	SNR=12						
TKM2	Tokmak 2	6.00	42	P	Pn	17 46 31.9	+0.7
	SNR=7.1						
TKM2	Tokmak 2	6.00	42	⇓Pn	Pn	17 46 31.7	+0.4
	5.2nm,0.5s						
PDGK	Podgornoye	8.52	53	⇑Pn	Pn	17 47 06.7	+0.9
	4.3nm,0.8s						
AB31	Akbulak array	12.92	329	P	Pn	17 48 05.5	-0.3
	0.2nm,0.3s,baz=275,slow=40,SNR=9.7						

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*IDC **27** 18:03:45.7±0.9, 16°.96N×145°.97E, h0^{km}, mb3.5/7, mb1 3.9/7, mb1mx3.6/41, mbtmp3.5/7, MS3.4/1, Ms1 3.4/1, ms1mx2.8/31, Error ellipse: s-maj=34.8km s-min=23.5km az=119.0*

*NEIC **27** 18:03:48.0±2.9, 16°.98N±0°.05×145°.9E±0°.1, h10^{km}±1^{km}, mb4.6/15, Error ellipse: s-maj=19.2km s-min=8.0km az=100.0*

ISC 27 18:03:47.6±0.6, **16°.93N**±0°.08×**145°.9E**±0°.1, **h10**^{km}, **n37**, σ**1^s.21**/30, **mb4.4**/15, **Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANA2	Anatahan	0.62	200		Pb	18 04 01.5	+0.9
GUMO	Guam	3.48	197	Pn	Pn	18 04 40.2	-1.6
JOW	Kunigami	19.11	304	P	Pn	18 08 10.4	-1.1
JOW				IAmb	IAmb	18 08 17.0	
	comp=Z,123nm,1.6s						
H11S3	WAKE ISLAND Hy	19.83	82	T	T	18 28 55.2	
	baz=269,slow=75,SNR=62						
H11S1	WAKE ISLAND Hy	19.84	82	T	T	18 28 56.9	
	baz=269,slow=75,SNR=53						
H11S2	WAKE ISLAND Hy	19.85	82	T	T	18 28 57.7	
	baz=269,slow=75,SNR=64						
H11N1	WAKE ISLAND Hy	20.08	79	T	T	18 29 14.3	
	baz=266,slow=75,SNR=79						
H11N2	WAKE ISLAND Hy	20.09	79	T	T	18 29 14.9	
	baz=266,slow=75,SNR=77						
H11N3	WAKE ISLAND Hy	20.10	79	T	T	18 29 15.7	
	baz=266,slow=75,SNR=71						
YOJ	Yonaguni jima	22.70	293	P	P	18 08 49.9	+0.4
ASAJ	Asahikawa	27.25	355	LR	LR	18 18 37.9	
	comp=Z,90nm,21.3s,baz=336,slow=33						
QIZ	Qiongzhong	34.36	279	P	P	18 10 37.3	+2.4
WB0	Warramunga Arr	38.19	198	P	P	18 11 08.2	+0.6
WB0				IAmb	IAmb	18 11 28.1	
	comp=Z,10nm,1.4s						
WB2	Warramunga Arr	38.37	198	P	P	18 11 10.7	+1.6
WRA	Warramunga Arr	38.37	198	P	P	18 11 09.2	0.0
	comp=Z,0.8nm,1.0s,baz=20,slow=8.6,SNR=4.3						
SANVU	Saraoutou	38.41	146	P	P	18 11 08.1	-1.3
ASAR	Alice Springs	42.02	197	P	P	18 11 38.6	-0.8
	comp=Z,0.2nm,0.7s,baz=10,slow=11,SNR=1.8						
CMAR	Chiang Mai Arr	44.70	279	P	P	18 12 01.6	+0.4
	comp=Z,0.8nm,0.8s,baz=73,slow=7.2,SNR=6.1						
LSA	Lhasa	51.47	295	P	P	18 12 52.2	-1.9
LSA				IAmb	IAmb	18 12 58.5	
	comp=Z,8.0nm,1.5s						
OUZ	Omahuta	58.13	153	P	P	18 13 42.2	+0.8
OUZ				IAmb	IAmb	18 13 45.1	
	comp=Z,23nm,1.3s						
MK31	Makanchi Array	59.85	315	P	P	18 13 52.7	-0.8
MKAR	Makanchi Array	59.85	315	P	P	18 13 52.6	-0.9
	comp=Z,0.5nm,0.9s,baz=111,slow=7.9,SNR=2.9						
MKAR	Makanchi Array	59.85	315	P	P	18 13 53.0	-0.5
MAKZ	Makanchi	60.07	315	P	P	18 13 53.8	-1.2
TTA	Tatalina	60.72	26	P	P	18 13 59.4	+0.2
TTA				IAmb	IAmb	18 14 11.3	
	comp=Z,6.7nm,1.5s						
IMAR	Indian Mountai	62.74	24	P	P	18 14 13.1	+0.4
ILAR	Eielson Array	65.13	26	P	P	18 14 27.1	-1.3
	comp=Z,0.5nm,0.7s,baz=247,slow=6.2,SNR=4.7						
TOLK	Toolik Lake Re	65.15	21	P	P	18 14 30.1	+1.6
TOLK				IAmb	IAmb	18 15 06.7	
	comp=Z,5.5nm,1.6s						
BALM	Baldy	66.49	30	P	P	18 14 38.7	+1.3
BALM				IAmb	IAmb	18 15 10.0	
	comp=Z,7.6nm,1.6s						
BMAR	Burnt Mountain	66.64	23	P	P	18 14 39.5	+1.4
BARN	Barnard Glacie	66.82	30	P	P	18 14 41.2	+1.6
BARN				IAmb	IAmb	18 15 07.7	
	comp=Z,4.5nm,1.4s						
TABL	Table Mountain	67.00	31	P	P	18 14 42.2	+1.4
TABL				IAmb	IAmb	18 15 06.0	
	comp=Z,14nm,1.4s						
BCAR	Beaver Creek A	67.03	28	P	P	18 14 41.6	+0.9
YKA	Yellowknife Ar	79.44	28	P	P	18 15 53.2	-0.7
	comp=Z,0.2nm,0.4s,baz=291,slow=4.9,SNR=5.5						
NVAR	Mina Array Bea	84.05	52	P	P	18 16 20.0	+0.9
	comp=Z,0.4nm,0.5s,baz=270,slow=5.4,SNR=4.5						
NVAR	Mina Array Bea	84.05	52	P	P	18 16 18.3	-0.8
LPAZ	La Paz	147.37	94	PKPbc	PKPdf	18 23 32.1	+1.2
	comp=Z,0.5nm,0.3s,baz=271,slow=3.1,SNR=1.4						

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*IDC **27** 18:10:18.3±1.5, 4°.11S×128°.22E, h0^{km}, mb3.4/3, mb1 3.8/5, mb1mx3.5/35, mbtmp3.6/5, ML3.8/2, Error ellipse: s-maj=42.2km s-min=26.6km az=79.0*

ISC 27 18:10:22.4±0.9, **4°.22S**±0°.10×**128°.5E**±0°.1, **h35**^{km}, **n7**, σ**1^s.54**/8, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	4.33	40	Pn	Pn	18 11 27.0	+1.1
	9.5nm,0.3s,baz=70,slow=7.5,SNR=126						
SIJI				Sn	Sn	18 12 15.1	0.0
	12nm,0.3s,baz=227,slow=22,SNR=20						
BATI	Baumata	7.64	219	Pn	Pn	18 12 13.1	+1.8
	2.6nm,0.3s,baz=87,slow=2.2,SNR=5.7						
FITZ	Fitzroy Crossi	14.07	191	Pn	Pn	18 13 38.2	-1.2
	0.2nm,0.3s,baz=13,slow=11,SNR=7.5						
WRA	Warramunga Arr	16.64	160	Pn	Pn	18 14 11.3	-1.8
	0.2nm,0.3s,baz=344,slow=13,SNR=6.2						
ASAR	Alice Springs	20.03	165	P	Pn	18 14 55.4	+0.9
	3.1nm,0.7s,baz=346,slow=11,SNR=79						
CMAR	Chiang Mai Arr	36.82	309	P	P	18 17 26.6	-0.8
	0.1nm,0.3s,baz=132,slow=7.0,SNR=2.1						
MKAR	Makanchi Array	65.09	327	P	P	18 20 58.6	-1.0
	0.2nm,0.7s,baz=118,slow=7.2,SNR=2.6						

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*IDC **27** 18:12:13.5±1.6, 27°.81S×70°.93W, h0^{km}, mb3.9/1, mb1 3.9/2, mb1mx3.6/17, mbtmp3.8/2, ML3.8/1, Error ellipse: s-maj=103.4km s-min=53.1km az=110.0*

*NEIC **27** 18:12:13.3±2.0, 27°.27S±0°.04×71°.41W±0°.09, h10^{km}±1^{km}, mb4.4/3, ML3.6(GUC), Error ellipse: s-maj=14.2km s-min=4.9km az=248.0*

*GUC **27** 18:12:13.8±0.8, 27°.34S×71°.31W, h25^{km}±6^{km}, ML3.6*

ISC 27 18:12:12.4±1.5, **27°.32S**±0°.03×**71°.35W**±0°.06, **h1**^{km}±10^{km}, **n58**, σ**1^s.07**/65, **mb4.5**/3, **1C-1D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AC04	Llanos de Chal	0.91	164	⇓*i*P	Pn	18 12 32.1	-0.4
AC04				*i* S	Sb	18 12 43.5	-0.3
AC04				IAML		18 12 45.5	
	comp=E,3µm,0.4s						
AC04	Llanos de Chal	0.91	164	Pg	Pn	18 12 31.9	-0.6
AC04				Sg	Sb	18 12 43.4	-0.4
GO03	Copiap	1.03	106	*e*P	Pn	18 12 34.5	+0.5
GO03				*e*S	Sn	18 12 46.8	-2.5
GO03				IAML		18 12 49.5	
	comp=E,3µm,0.4s						
GO03	Copiap	1.03	106		Pn	18 12 34.6	+0.5
GO03				Sg	Sn	18 12 48.7	-0.6
AC01	Pan de Azucar	1.35	30	*e*P	Pb	18 12 38.8	+0.2
AC01				*i* S	Sg	18 12 56.6	+0.8
AC01	Pan de Azucar	1.35	30	Pn	Pg	18 12 40.0	+1.6
LCO	Las Campanas	1.78	161	Pn	Pg	18 12 46.5	0.0
AC05	El Transito	1.78	148	⇑*i*P	Pg	18 12 47.1	+0.4
AC05				*i* S	Sg	18 13 08.8	-1.0
AC05				IAML		18 13 15.7	
	comp=N,961nm,0.6s						
AC05	El Transito	1.78	148	Pn	Pg	18 12 47.0	+0.3
AC05				Sn	Sb	18 13 08.7	-0.3
AC02	Maricunga	2.04	77	*e*P	Pg	18 12 52.0	+0.4
AC02				*i* S	Sg	18 13 18.0	0.0
AC02				IAML		18 13 24.0	
	comp=E,1µm,0.4s						
AC02	Maricunga	2.04	77	Pn	Pg	18 12 51.7	+0.1
GO02	Mina Guanaco	2.67	37	*i* S	Sb	18 13 33.1	-1.6
GO02	Mina Guanaco	2.67	37	Pn	Pb	18 12 59.7	-1.5
PB14	IPOC Station P	2.82	18	Pn	Pn	18 12 58.0	-0.9
CO01	Juntas del Tor	2.87	158	Pn	Pn	18 12 59.4	-0.2
GO04	Tololo Observa	2.88	170	Pn	Pn	18 12 60.0	+0.2
CO03	El Pedregal	3.55	171	Pn	Pn	18 13 07.4	-1.4
PB10	IPOC Station P	3.86	11	Pn	Pn	18 13 12.1	-1.0
CO02	Combarbal	3.88	176	Pn	Pn	18 13 13.9	+0.5
PB15	IPOC Station P	4.44	23	Pn	Pn	18 13 20.2	-0.9
ZON	Zonda	4.81	152		Pn	18 13 26.8	+0.6
PB06	IPOC Station P	4.87	20	Pn	Pn	18 13 27.0	-0.1
PB04	IPOC Station P	5.08	13	Pn	Pn	18 13 29.2	-0.8
LVC	Limon Verde	5.19	26	Pn	Pn	18 13 32.2	+0.6
VA03	San Esteban	5.47	173	Pn	Pn	18 13 38.0	+2.8
PB07	IPOC Station P	5.73	14	Pn	Pn	18 13 37.4	-1.5
PB09	IPOC Station P	5.83	20	Pn	Pn	18 13 40.5	+0.3
PEL	Peldehue	5.83	174	Pn	Pn	18 13 41.1	+1.0
MT02	Curacav	5.92	178	Pn	Pn	18 13 41.3	0.0
MT05	Renca	6.07	175	Pn	Pn	18 13 42.0	-1.5
PB01	IPOC Station P	6.48	16	Pn	Pn	18 13 47.9	-1.2
PATCX	Punta Patache	6.56	10	Pn	Pn	18 13 49.7	-0.5
TA01	Diego Aracena	6.81	9	Pn	Pn	18 13 51.9	-1.7
PB08	IPOC Station P	7.43	16	Pn	Pn	18 14 00.6	-1.8
BO02	Sierra Bellavi	7.46	176	Pn	Pn	18 14 03.6	+1.0
PSGCX	Pisagua	7.77	9		Pn	18 14 05.2	-1.7
MNMC	Minye Minye	8.31	12		Pn	18 14 13.1	-1.3
H03N1	Juan Fernandez	8.93	225	Pn	Pn	18 14 22.1	-0.4
	baz=166,slow=74						
H03N1				T	T	18 23 54.4	
	baz=52,slow=71,SNR=256						
H03N2	Juan Fernandez	8.94	225	Pn	Pn	18 14 20.9	-1.6
	baz=166						
H03N2				T	T	18 23 54.5	
	baz=52,slow=71,SNR=143						
H03N3	Juan Fernandez	8.95	225	Pn	Pn	18 14 20.6	-2.1
	baz=166,slow=74						
H03N3				T	T	18 23 52.7	
	baz=52,slow=71,SNR=141						
AP01	Chacalluta	8.96	6	Pn	Pn	18 14 23.2	+0.1
PB16	IPOC Station P	9.11	11	Pn	Pn	18 14 24.2	-1.4
H03S3	Juan Fernandez	9.19	223	Pn	Pn	18 14 25.8	-0.1
	baz=3.8						
H03S1	Juan Fernandez	9.20	223	Pn	Pn	18 14 25.7	-0.4
	baz=3.8						
H03S2	Juan Fernandez	9.21	223	Pn	Pn	18 14 26.1	-0.1
	baz=3.8						
BI02	San Fabin de	9.31	180	Pn	Pn	18 14 28.6	+0.6
LPAZ	La Paz	11.38	16	Pn	Pn	18 15 02.5	+5.7
	comp=E,0.2nm,0.3s,baz=134,slow=5.4,SNR=2.3						
LPAZ	La Paz	11.38	16		Pn	18 14 55.9	-0.9
SAML	Samuel	19.84	24	P	P	18 16 44.8	-0.1
SAML				IAmb	IAmb	18 16 50.8	
	comp=Z,6.5nm,1.4s						
SNAA	Sanae	57.57	160	P	P	18 22 04.9	+1.3
SNAA				IAmb	IAmb	18 22 18.7	
	comp=Z,7.5nm,1.4s						
QSPA	South Pole Qui	62.89	180	P	P	18 22 42.3	+2.2
QSPA				IAmb	IAmb	18 22 59.9	
	comp=Z,4.6nm,1.4s						
TORD	Torodi Ar. Bea	81.40	70	P	P	18 24 31.5	0.0
	comp=Z,0.5nm,0.5s,baz=240,slow=4.8,SNR=2.1						
ASAR	Alice Springs	123.75	208	PKP	PKiKP	18 31 12.8	-0.3
	comp=Z,0.2nm,1.0s,baz=132,slow=1.6,SNR=1.0						
ZAA0	Zalesovo Array	148.14	27		PKiKP	18 32 00.9	-0.6
ZALV	Zalesovo Beam	148.14	27	PKPbc	PKiKP	18 32 01.2	-0.2
	comp=Z,3.4nm,0.8s,baz=304,slow=3.2,SNR=12						
MK31	Makanchi Array	151.58	40		PKiKP	18 32 09.3	+0.5
MKAR	Makanchi Array	151.58	40	PKPbc	PKiKP	18 32 09.7	+0.9
	comp=Z,1.4nm,0.8s,baz=310,slow=2.3,SNR=12						
MKAR	Makanchi Array	151.58	40		PKiKP	18 32 09.6	+0.8

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*IDC **27** 18:18:00.1±1.0, 17°.00N×146°.10E, h0^{km}, mb3.5/8, mb1 3.8/8, mb1mx3.6/36, mbtmp3.5/8, Error ellipse: s-maj=33.2km s-min=22.3km az=106.0*

ISC 27 18:18:01.7±1.0, **17°.0N**±0°.2×**146°.1E**±0°.2, **h10**^{km}, **n14**, σ**0^s.58**/8, **mb3.5**/8, **Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H11S3	WAKE ISLAND Hy	19.68	83	T	T	18 43 12.3	
	baz=269,slow=75,SNR=16						
H11S1	WAKE ISLAND Hy	19.69	82	T	T	18 43 13.5	
	baz=269,slow=75,SNR=14						
H11S2	WAKE ISLAND Hy	19.70	83	T	T	18 43 14.2	
	baz=269,slow=75,SNR=15						
H11N1	WAKE ISLAND Hy	19.93	79	T	T	18 43 32.7	
	baz=266,slow=74,SNR=16						
H11N2	WAKE ISLAND Hy	19.94	79	T	T	18 43 29.5	
	baz=266,slow=74,SNR=34						
H11N3	WAKE ISLAND Hy	19.95	79	T	T	18 43 29.2	
	baz=266,slow=74,SNR=12						
KSRS	Korea Array	25.92	325	P	P	18 23 34.8	+0.8
	1.7nm,1.0s,baz=138,slow=11,SNR=3.5						
WRA	Warramunga Arr	38.47	198	P	P	18 25 24.2	+0.1
	1.0nm,0.9s,baz=16,slow=9.6,SNR=4.7						
ASAR	Alice Springs	42.12	197	P	P	18 25 54.4	+0.1
	0.3nm,0.8s,baz=21,slow=10,SNR=5.6						
CMAR	Chiang Mai Arr	44.83	279	P	P	18 26 16.4	+0.1
	0.4nm,0.8s,baz=71,slow=7.6,SNR=4.5						
MKAR	Makanchi Array	59.91	315	P	P	18 28 07.2	-0.8
	0.2nm,0.6s,baz=104,slow=6.1,SNR=2.6						
ILAR	Eielson Array	65.01	26	P	P	18 28 41.8	+0.1
	0.6nm,0.8s,baz=254,slow=5.2,SNR=4.0						
YKA	Yellowknife Ar	79.32	28	P	P	18 30 07.8	+0.4
	0.1nm,0.3s,baz=289,slow=4.7,SNR=5.1						
NVAR	Mina Array Bea	83.90	52	P	P	18 30 31.9	-0.5
	0.3nm,0.5s,baz=268,slow=6.8,SNR=2.4						

MAN 27 18:40:11.1, 14°.11N×119°.92E, h33km, mb4.0, ML2.8, MS2.4, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUBP	**Lubang**	**0.49**	**140**	*e*P	Pn	18 40 23.0	+1.3
LUBP				*e*S	Sn	18 40 31.0	+1.9
MACP	**Maragondon, Ca**	**0.79**	**79**	*e*P	Pn	18 40 25.7	-0.2
MACP				*e*S	Sn	18 40 36.4	-0.1
PGP	**Puerto Galera**	**1.17**	**121**	⇓*e*P	Pb	18 40 33.3	+0.5
PGP				*e*S	Sb	18 40 48.6	+0.9
SMPP	**San Manuel, Pa**	**2.16**	**20**	*e*P	Pn	18 40 45.6	+0.9
SMPP				*e*S	Sn	18 41 11.3	+0.9
ENPP	**El Nido**	**2.93**	**190**	*e*P	Pn	18 40 56.0	+0.7

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*IDC **27** 18:42:13.6±0.8, 16°.91N×146°.09E, h0km, mb3.8/10, mb1 4.1/10, mb1mx3.7/62, mbtmp3.8/10, Error ellipse: s-maj=27.4km s-min=20.2km az=121.0*

*NEIC **27** 18:42:16.1±1.0, 16°.88N±0°.07×146°.00E±0°.10, h14km±5km, mb4.5/11, Error ellipse: s-maj=15.4km s-min=6.1km az=122.0*

ISC 27 18:42:15.4±0.7, **16°.91N**±0°.09×**146°.0E**±0°.1, **h10km, n33, σ0s.77**/25, **mb4.1**/15, **Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANA2	**Anatahan**	**0.64**	**208**	Pg	**Pb**	**18 42 27.8**	**-0.9**
GUMO	**Guam**	**3.49**	**199**	Pn	**Pn**	**18 43 10.1**	**+0.5**
H11S3	**WAKE ISLAND Hy**	**19.75**	**82**	T	T	19 07 23.5	
	baz=269,slow=75,SNR=164						
H11S1	**WAKE ISLAND Hy**	**19.76**	**82**	T	T	19 07 25.5	
	baz=269,slow=75,SNR=136						
H11S2	**WAKE ISLAND Hy**	**19.77**	**82**	T	T	19 07 26.0	
	baz=269,slow=75,SNR=223						
H11N1	**WAKE ISLAND Hy**	**20.00**	**79**	T	T	19 07 41.8	
	baz=266,slow=74,SNR=217						
H11N2	**WAKE ISLAND Hy**	**20.01**	**79**	T	T	19 07 42.3	
	baz=266,slow=74,SNR=152						
H11N3	**WAKE ISLAND Hy**	**20.02**	**79**	T	T	19 07 43.2	
	baz=266,slow=74,SNR=203						
FAKI	**Fak Fak**	**23.94**	**216**	P	**P**	**18 47 31.8**	**+1.8**
FAKI				IAmb	IAmb	18 47 35.0	
	comp=Z,18nm,0.9s						
KSRS	**Korea Array**	**25.95**	**326**	P	**P**	**18 47 47.9**	**-0.1**
	comp=Z,0.9nm,1.0s,baz=142,slow=10,SNR=2.1						
KSAR	**Wonju Array Be**	**25.96**	**326**	P	**P**	**18 47 47.1**	**-1.0**
BJT	**Baijiatuau**	**34.64**	**318**	P	**P**	**18 49 05.3**	**+0.4**
BJT				IAmb	IAmb	18 49 25.8	
	comp=Z,12nm,1.6s						
WR0	**Warramunga Arr**	**38.34**	**198**	P	**P**	**18 49 36.7**	**0.0**
WRA	**Warramunga Arr**	**38.38**	**198**	P	**P**	**18 49 37.0**	**0.0**
	comp=Z,1.7nm,1.1s,baz=10,slow=8.2,SNR=4.5						
ASAR	**Alice Springs**	**42.03**	**197**	P	**P**	**18 50 06.7**	**-0.6**
	comp=Z,0.4nm,0.8s,baz=24,slow=9.6,SNR=4.2						
CMAR	**Chiang Mai Arr**	**44.79**	**279**	P	**P**	**18 50 29.8**	**0.0**
	comp=Z,1.5nm,0.9s,baz=71,slow=6.3,SNR=12						
CMAR	**Chiang Mai Arr**	**44.79**	**279**	P	**P**	**18 50 29.6**	**-0.1**
MKAR	**Makanchi Array**	**59.93**	**315**	P	**P**	**18 52 22.4**	**+0.6**
	comp=Z,0.5nm,0.8s,baz=99,slow=8.2,SNR=4.7						
MAKZ	**Makanchi**	**60.14**	**315**	P	**P**	**18 52 23.0**	**-0.2**
OHAK	**Old Harbor**	**60.16**	**33**	P	**P**	**18 52 23.1**	**0.0**
TTA	**Tatalina**	**60.70**	**26**	P	**P**	**18 52 28.2**	**+1.4**
TTA				IAmb	IAmb	18 52 40.9	
	comp=Z,4.4nm,1.3s						
ILAR	**Eielson Array**	**65.11**	**26**	P	**P**	**18 52 55.1**	**-0.9**
	comp=Z,1.2nm,0.8s,baz=257,slow=5.1,SNR=11						
NIL	**Nilore**	**66.68**	**300**	P	**P**	**18 53 06.8**	**0.0**
KKAR	**Karatay Array**	**68.15**	**310**	P	**P**	**18 53 15.1**	**-0.8**
INK	**Inuvik**	**70.89**	**23**	P	**P**	**18 53 32.4**	**+0.1**
	comp=Z,2.2nm,0.8s,baz=253,slow=5.8,SNR=7.3						
INK	**Inuvik**	**70.89**	**23**	IAmb	IAmb	18 53 33.3	
	comp=Z,3.2nm,0.9s						
YKA	**Yellowknife Ar**	**79.42**	**28**	P	**P**	**18 54 22.0**	**+0.4**
	comp=Z,0.8nm,0.7s,baz=289,slow=4.8,SNR=13						
PINE	**Pine Mountain**	**80.64**	**47**	P	**P**	**18 54 29.0**	**+0.2**
PINE				IAmb	IAmb	18 54 32.6	
	comp=Z,5.9nm,0.8s						
NVAR	**Mina Array Bea**	**83.99**	**52**	P	**P**	**18 54 46.6**	**+0.1**
	comp=Z,0.9nm,0.7s,baz=262,slow=5.9,SNR=8.0						
HLID	**Hailey**	**85.24**	**46**	P	**P**	**18 54 53.7**	**+1.0**
HLID				IAmb	IAmb	18 54 56.1	
	comp=Z,3.5nm,1.1s						
ELK	**Elko**	**85.56**	**49**	P	**P**	**18 54 53.1**	**-1.3**
	comp=Z,0.7nm,0.4s,baz=279,slow=7.0,SNR=4.3						
ELK	**Elko**	**85.56**	**49**	IAmb	IAmb	18 54 57.5	
	comp=Z,2.1nm,0.9s						
LPAZ	**La Paz**	**147.28**	**94**	PKPbc	**PKPbc**	**19 02 00.2**	**-0.7**
	comp=Z,2.5nm,0.8s,baz=299,slow=4.5,SNR=5.2						

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*RSNC **27** 19:00:10.9±1.1, 1°.17N×77°.81W, h138km±6km, ML3.2, Mw3.9, Fault plane solution: NP1:ϕ_s10.00000°, δ78.00000°, λ-162.00000°.*

*NEIC **27** 19:00:10.7±2.7, 1°.07N±0°.09×77°.5W±0°.1, h113km±18km, mb4.0/9, Error ellipse: s-maj=18.1km s-min=11.8km az=107.0*

ISC 27 19:00:10.4±0.9, **1°.19N**±0°.04×**77°.78W**±0°.05, **h142km**±7km, **n37, σ1s.61**/52, **mb4.0**/3, **1C-6D, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CCUFI	**Cufio, Nario**	**0.44**	**85**	*e*P	**Pn**	**19 00 31.1**	**0.0**
GCUF	**Volcan Galeras**	**0.44**	**85**	⇓*i*P	**Pn**	**19 00 30.9**	**-0.2**
GCUF				*e*S	**Sn**	**19 00 46.5**	**-0.4**
GCUF				*i*		19 01 04.5	
	comp=Z,202nm,0.6s						
CPAS1	**Pasto**	**0.46**	**90**	*e*P	**Pn**	**19 00 31.0**	**-0.2**
BBAC	**Balboa, Cauca**	**0.99**	**33**	*e*P	**Pn**	**19 00 34.1**	**-0.4**
BBAC				*e*S	**Sn**	**19 00 52.1**	**-0.8**
BBAC				*i*		19 00 58.1	
	comp=Z,1µm,0.3s						
TUMC	**Tumaco**	**1.14**	**304**	⇑*e*P	**Pn**	**19 00 35.8**	**+0.1**
TUMC				*e*S	**Sn**	**19 00 54.3**	**-0.6**
TUMC				*i*		19 01 24.3	
	comp=Z,292nm,0.5s						
OTAV	**Otavalo**	**1.16**	**215**	Pn	**Pn**	**19 00 35.4**	**-1.0**
OTAV				Sn	**Sn**	**19 00 55.0**	**-1.2**
OTAV	**Otavalo**	**1.16**	**215**	⇓*e*P	**Pn**	**19 00 35.5**	**-0.8**
OTAV				*e*S	**Sn**	**19 00 54.9**	**-1.2**
OTAV				*i*		19 01 01.3	
	comp=Z,71nm,0.7s						
SOTA	**Rioblanco**	**1.51**	**51**	*e*P	**Pn**	**19 00 40.8**	**+0.8**
SOTA				*e*S	**Sn**	**19 01 03.8**	**+1.3**
POPC	**Popayan, Colom**	**1.74**	**39**	⇓*e*P	**Pn**	**19 00 41.8**	**-0.5**
POPC				*e*S	**Sn**	**19 01 06.2**	**-0.5**
POPC				*i*		19 01 16.3	
	comp=Z,116nm,0.4s						
PCON	**Cinco Dias**	**1.79**	**51**	⇓*e*P	**Pn**	**19 00 43.9**	**+0.7**
GR1C	**Gorgona, Isla**	**1.84**	**348**	*e*P	**Pn**	**19 00 42.7**	**-0.6**
GR1C				*e*S	**Sn**	**19 01 06.0**	**-2.4**
GR1C				*i*		19 01 08.5	
	comp=Z,3µm,0.4s						
FLOC	**Florencia**	**2.17**	**79**	⇓*i*P	**Pn**	**19 00 47.1**	**+0.1**
FLOC				*e*S	**Sn**	**19 01 14.6**	**-0.6**
FLOC				*i*		19 01 19.4	
	comp=Z,56nm,0.5s						
MARP	**Paez Belalcaza**	**2.46**	**48**	*e*P	**Pn**	**19 00 51.7**	**+0.7**
MARP				*i*		19 01 30.4	
	comp=Z,18nm,0.4s						
GARC	**Garzon, Huila**	**2.50**	**66**	⇓*e*P	**Pn**	**19 00 51.8**	**+0.5**
GARC				*i*		19 01 13.1	
	comp=Z,60nm,0.2s						
BETC	**Betania**	**2.77**	**58**	*e*P	**Pn**	**19 00 56.0**	**+1.4**
MALC	**Bahia Malaga**	**2.84**	**9**	*e*P	**Pn**	**19 00 55.8**	**+0.3**
MALC				*e*S	**Sn**	**19 01 29.9**	**-0.4**
MALC				*i*		19 01 37.9	
	comp=Z,210nm,0.4s						
YOTC	**Yotoco, Valle**	**3.13**	**27**	*e*P	**Pn**	**19 00 58.3**	**-0.9**
YOTC				*e*S	**Sn**	**19 01 35.5**	**-1.5**
PTLC	**Puerto Leguiza**	**3.15**	**109**	*e*P	**Pn**	**19 00 59.3**	**-0.1**
PRAC	**Prado**	**3.83**	**49**	*e*P	**Pn**	**19 01 08.6**	**+0.3**
PRAC				*e*S	**Sn**	**19 01 52.0**	**-1.2**
PRAC				*i*		19 02 12.0	
	comp=Z,18nm,0.5s						
PLMC	**San Jos del P**	**3.99**	**22**	*e*P	**Pn**	**19 01 08.5**	**-1.9**
PLMC				*e*S	**Sn**	**19 01 52.1**	**-4.9**
PLMC				*i*		19 01 57.9	
	comp=Z,83nm,0.4s						
MACC	**Macarena, Meta**	**4.05**	**76**	*e*P	**Pn**	**19 01 10.9**	**-0.2**
MACC				*i*		19 02 09.2	
	comp=Z,20nm,0.1s						
ANIL	**Santa Ana**	**4.05**	**36**	*e*P	**Pn**	**19 01 11.0**	**-0.4**
TOLC	**Tolima**	**4.18**	**36**	*e*P	**Pn**	**19 01 12.4**	**-0.7**
TOLC				*e*S	**Sn**	**19 01 57.6**	**-4.2**
GUY2C	**Guyana, Caldas**	**4.68**	**31**	*e*P	**Pn**	**19 01 18.4**	**-1.5**
GUY2C				*e*S	**Sn**	**19 02 14.2**	**+0.3**
GUY2C				*i*		19 02 16.0	
	comp=Z,21nm,0.5s						
ROSC	**El Rosal**	**5.01**	**44**	Pn	**Pn**	**19 01 22.9**	**-1.3**
BCIP	**Isla Barro Col**	**8.19**	**346**	Pn	**Pn**	**19 02 09.9**	**+3.5**
BCIP				Sn	**Sn**	**19 03 37.9**	**+0.4**
SDV	**Santo Domingo**	**10.45**	**43**	Pn	**Pn**	**19 02 35.2**	**-1.6**
SAML	**Samuel**	**17.69**	**125**		**P**	**19 04 05.5**	**-1.5**
SAML				IAmb	IAmb	19 04 07.8	
	comp=Z,6.3nm,1.0s						
DR12	**Loma Pena Alta**	**19.34**	**25**	P	**P**	**19 04 27.6**	**+2.7**
LPAZ	**La Paz**	**19.81**	**152**	P	**P**	**19 04 29.7**	**-0.9**
AOPR	**Arecibo Observ**	**20.20**	**32**	P	**P**	**19 04 37.3**	**+3.1**
MTP	**Monte Pirata**	**20.66**	**35**	P	Pn	19 04 42.5	-0.5
MTP				IAmb	IAmb	19 04 51.7	
	comp=Z,43nm,1.2s						
CUPR	**Culebra, Puert**	**20.98**	**35**	P	**P**	**19 04 45.6**	**+3.1**
PB16	**IPOC Station P**	**21.04**	**158**	P	**P**	**19 04 43.1**	**-0.7**
PB16				IAmb	IAmb	19 04 50.3	
	comp=Z,3.1nm,0.8s						
MNMC	**Minye Minye**	**21.73**	**159**	P	**P**	**19 04 51.0**	**+0.1**
MNMC				IAmb	IAmb	19 04 54.5	
	comp=Z,8.1nm,1.0s						
PSGCX	**Pisagua**	**21.98**	**160**	P	**P**	**19 04 54.9**	**+1.6**
PSGCX				IAmb	IAmb	19 04 58.8	
	comp=Z,8.7nm,1.2s						
PB08	**IPOC Station P**	**22.82**	**159**	P	**P**	**19 04 59.9**	**-1.9**

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*IDC **27** 19:02:38.7±0.5, 37°.04S×52°.43E, h0km, mb4.2/21, mb1 4.3/22, mb1mx4.2/42, mbtmp4.2/22, ML3.7/1, MS4.2/21, Ms1 4.2/21, ms1mx4.0/39, Error ellipse: s-maj=19.6km s-min=12.7km az=29.0*

*BJI **27** 19:02:41.8±0.0, 37°.10S×52°.51E, h12km, mB5.2/13, mb4.6/23, Ms5.2/2, Ms7 5.1/2*

*NEIC **27** 19:02:41.4±2.2, 37°.00S±0°.08×52°.5E±0°.1, h14km±3km, mb4.9/57, Error ellipse: s-maj=14.0km s-min=11.5km az=73.0*

*GCMT **27** 19:02:44.4±0.4, 37°.06S±0°.02×52°.39E±0°.03, h23km±2km, MW5.2/76, Moment Tensor Solution. s12,c13; s76,c95; Duration: 1s.0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.59±.85; $M_{\theta\theta}$0.69±.49; $M_{\phi\phi}$2.89±.57; $M_{r\theta}$1.12±.65; $M_{\theta\phi}$6.78±.30; $M_{\phi r}$-1.66±.75; Best double couple: $M_0$7.54500×10^{16} NP1:ϕ_s260.00000°, δ64.00000°, λ-24.00000°. NP2:ϕ_s1.00000°, δ68.00000°, λ-152.00000°. Principal axes: T 8.6840, Plg3.0000°, Azm130.0000°; N -2.2840, Plg55.0000°, Azm36.0000°; P -6.4060, Plg35.0000°, Azm222.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 27 19:02:40.5±0.3, **37°.10S**±0°.06×**52°.36E**±0°.06, **h10km, n144, σ1s.27**/122, **mb4.8**/60, **MS4.3**/24, **1C, South Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRZF	**Crozet Islands**	**9.33**	**182**		**Pn**	**19 04 53.9**	**-1.1**
ABPO	**Ambohimpanom**	**18.57**	**345**		**Pn**	**19 06 58.5**	**+0.4**
OPO	**Ambohidratompo**	**19.01**	**345**	P	**P**	**19 07 01.6**	**-1.1**
	0.2nm,0.3s,baz=152,slow=15,SNR=5.8						
OPO				S	**Sn**	**19 10 29.0**	**-7.3**
	0.9nm,0.3s,baz=265,slow=22,SNR=1.9						
OPO				LR	LR	19 11 28.8	
	comp=Z,374nm,20.7s,baz=352,slow=28						
BOSA	**Boshof**	**24.23**	**283**	P	**P**	**19 07 57.4**	**-0.4**
	10nm,1.0s,baz=126,slow=9.4,SNR=15						
BOSA				LR	LR	19 16 07.4	
	comp=Z,737nm,18.4s,baz=123,slow=33						
BOSA	**Boshof**	**24.23**	**283**	P	**P**	**19 07 57.8**	**0.0**
LBTB	**Lobatse**	**25.81**	**290**	P	**P**	**19 08 12.8**	**+0.8**
	5.5nm,0.8s,baz=126,slow=8.9,SNR=7.1						
LBTB				LR	LR	19 16 51.2	
	comp=Z,468nm,20.0s,baz=126,slow=33						
LBTB	**Lobatse**	**25.81**	**290**	P	**P**	**19 08 13.2**	**+1.1**
LBTB				IAmb	IAmb	19 08 27.0	
	comp=Z,22nm,1.2s						
SUR	**Sutherland**	**26.28**	**271**	LR	LR	19 16 17.4	
	comp=Z,542nm,22.0s,baz=116,slow=31						
SUR	**Sutherland**	**26.28**	**271**	P	**P**	**19 08 15.7**	**-0.7**
SUR				IAmb	IAmb	19 08 40.4	
	comp=Z,77nm,1.8s						
MATP	**Matopo**	**26.60**	**302**	P	**P**	**19 08 17.9**	**-1.4**
	comp=Z,9.6nm,0.9s,baz=125,slow=9.2,SNR=16						
MATP				LR	LR	19 16 59.6	
	comp=Z,1µm,21.8s,baz=134,slow=32						
LSZ	**Lusaka**	**30.54**	**309**	P	**P**	**19 08 54.7**	**+0.2**
LSZ				IAmb	IAmb	19 08 56.3	
	comp=Z,15nm,1.0s						
MAW	**Mawson**	**31.13**	**172**	LR	LR	19 18 20.2	
	comp=Z,322nm,21.3s,baz=342,slow=30						
SYO	**Syowa Base**	**32.73**	**188**	⇑*e*sP	sP	19 09 21.0	+5.7
H08S1	**Diego Carcia H**	**34.55**	**37**	T	T	19 45 40.1	
	baz=210,slow=75,SNR=8.6						
H08S2	**Diego Garcia H**	**34.56**	**37**	T	T	19 45 43.7	
	baz=210,slow=75,SNR=7.7						
H08S3	**Diego Garcia H**	**34.57**	**37**	T	T	19 45 40.7	
	baz=210,slow=75,SNR=19						
TSUM	**Tsumeb**	**35.22**	**291**	P	**P**	**19 09 35.3**	**0.0**
	comp=Z,3.5nm,0.8s,baz=126,slow=7.9,SNR=4.4						
TSUM	**Tsumeb**	**35.22**	**291**	P	**P**	**19 09 35.0**	**-0.3**
TSUM				IAmb	IAmb	19 09 49.0	
	comp=Z,18nm,1.4s						
KMBO	**Kilima Mbogo**	**38.42**	**335**	P	**P**	**19 10 02.8**	**+0.1**
	comp=Z,0.5nm,0.3s,baz=129,slow=8.9,SNR=4.4						
KMBO				LR	LR	19 23 47.6	
	comp=Z,384nm,21.1s,baz=100,slow=33						
MBAR	**Mbarara**	**41.45**	**326**	P	**P**	**19 10 26.5**	**-1.3**
CASY	**Casey**	**43.96**	**150**	P	P	19 10 58.1	+11
SNAA	**Sanae**	**44.43**	**202**	P	**P**	**19 10 51.9**	**+0.8**
SNAA	**Sanae**	**44.43**	**202**	P	**P**	**19 10 52.0**	**+0.8**
	comp=Z,6.4nm,1.1s,baz=101,slow=1.3,SNR=14						
SNAA	**Sanae**	**44.43**	**202**	P	**P**	**19 10 51.8**	**+0.6**
SNAA				IAmb	IAmb	19 11 05.8	
	comp=Z,16nm,1.2s						
VNA2	**Neumayer--Watz**	**45.60**	**203**	P	**P**	**19 11 01.3**	**+0.8**
	baz=64,slow=6.6						
VNA1	**Neumayer--Stat**	**45.82**	**204**	P	**P**	**19 11 01.6**	**-0.5**
VNA3	**Neumayer Olymp**	**46.40**	**203**	P	**P**	**19 11 07.2**	**+0.5**
COCO	**West Island**	**46.85**	**70**	P	**P**	**19 11 09.9**	**-1.0**
FURI	**Furi**	**47.52**	**342**	P	**P**	**19 11 17.6**	**+1.1**
SOCY	**Socotra**	**49.04**	**2**	P	**P**	**19 11 29.7**	**+1.9**
SOCY				IAmb	IAmb	19 12 16.3	
	comp=Z,26nm,1.5s						
ATD	**Arta Tunnel**	**49.19**	**348**	P	**P**	**19 11 29.2**	**+0.2**
ATD				IAmb	IAmb	19 11 31.0	
	comp=Z,15nm,1.2s						
H01W2	**Cape Leeuwin H**	**49.24**	**107**	T	T	20 03 58.3	
	baz=248,slow=75,SNR=63						
H01W3	**Cape Leeuwin H**	**49.24**	**107**	T	T	20 03 57.9	
	baz=248,slow=75,SNR=65						
H01W1	**Cape Leeuwin H**	**49.26**	**107**	T	T	20 03 55.7	
	baz=248,slow=75,SNR=64						
NWAO	**Narrogin (SRO)**	**52.38**	**106**	P	**P**	**19 11 51.1**	**-1.9**
NWAO	**Narrogin (SRO)**	**52.38**	**106**	P	**P**	**19 11 51.0**	**-1.9**
NWAO				IAmb	IAmb	19 12 12.1	
	comp=Z,114nm,1.9s						
MNAI	**Manna**	**56.53**	**67**	P	**P**	**19 12 23.0**	**-0.3**
GSI	**Gunungsitoli**	**56.66**	**58**	P	**P**	**19 12 23.6**	**-0.7**
GSI				IAmb	IAmb	19 12 36.8	
	comp=Z,14nm,1.0s						
VNDA	**Vanda**	**58.12**	**166**	P	**P**	**19 12 32.9**	**-0.8**
	comp=Z,1.5nm,0.8s,baz=247,slow=4.4,SNR=4.7						
VNDA				LR	LR	19 34 35.8	
	comp=Z,260nm,21.5s,baz=241,slow=33						
VNDA	**Vanda**	**58.12**	**166**	P	**P**	**19 12 33.9**	**+0.2**
VNDA				IAmb	IAmb	19 12 52.1	
	comp=Z,32nm,1.8s						
BKNI	**Bangkinang**	**58.36**	**62**	P	**P**	**19 12 35.5**	**-0.7**
RAYN	**Ar Rayn**	**60.64**	**353**	P	**P**	**19 12 51.9**	**+0.1**
RAYN				IAmb	IAmb	19 12 53.7	
	comp=Z,7.0nm,0.9s						
FORT	**Forrest**	**61.59**	**109**	P	**P**	**19 12 58.1**	**-0.1**
UOSS	**Minazif**	**61.82**	**4**	P	**P**	**19 12 59.8**	**+0.2**
FITZ	**Fitzroy Crossi**	**66.15**	**95**	P	**P**	**19 13 26.8**	**-1.7**
	comp=Z,3.9nm,0.9s,baz=227,slow=9.4,SNR=4.7						
FITZ	**Fitzroy Crossi**	**66.15**	**95**	P	**P**	**19 13 26.8**	**-1.7**
BBOO	**Buckleboo**	**66.56**	**114**	P	**P**	**19 13 30.5**	**-0.4**
BBOO				IAmb	IAmb	19 13 51.3	
	comp=Z,17nm,1.6s						
PMSA	**Palmer Station**	**67.03**	**205**	P	**P**	**19 13 33.3**	**-0.1**
SBUM	**Sibu**	**67.94**	**69**	P	**P**	**19 13 39.0**	**-0.9**
SBUM				IAmb	IAmb	19 13 46.2	
	comp=Z,12nm,1.3s						
MMRI	**Maumere**	**68.80**	**85**	P	**P**	**19 13 43.8**	**-1.5**
DBIC	**Dimbokro**	**68.86**	**296**	P	**P**	**19 13 46.4**	**+0.8**
	comp=Z,1.5nm,0.4s,baz=196,slow=11,SNR=2.6						
DBIC				LR	LR	19 40 34.1	
	comp=Z,284nm,20.7s,baz=118,slow=33						
DBIC	**Dimbokro**	**68.86**	**296**	P	**P**	**19 13 45.7**	**+0.1**
DBIC				IAmb	IAmb	19 14 08.9	
	comp=Z,35nm,1.9s						
KAPI	**Kappang**	**69.00**	**80**	LR	LR	19 37 04.0	
	comp=Z,76nm,21.3s,baz=222,slow=30						
TOA0	**Torodi Ar. Sit**	**69.03**	**306**	P	**P**	**19 13 47.2**	**+0.7**
TOA0				IAmb	IAmb	19 14 00.9	
	comp=Z,8.2nm,1.1s						
TORD	**Torodi Ar. Bea**	**69.03**	**306**	P	**P**	**19 13 46.7**	**+0.2**
	comp=Z,3.3nm,1.0s,baz=125,slow=3.8,SNR=8.3						
TORD				LR	LR	19 43 43.2	
	comp=Z,218nm,19.6s,baz=130,slow=36						
TORD	**Torodi Ar. Bea**	**69.03**	**306**	P	**P**	**19 13 46.8**	**+0.2**
TORD				IAmb	IAmb	19 14 01.4	
	comp=Z,7.8nm,1.1s						
BKB	**Balikpapan**	**69.09**	**75**	P	**P**	**19 13 47.6**	**+0.5**
ASAR	**Alice Springs**	**69.66**	**105**	P	**P**	**19 13 50.5**	**-0.1**
	comp=Z,3.3nm,0.8s,baz=231,slow=5.9,SNR=35						
ASAR				LR	LR	19 40 22.9	
	comp=Z,150nm,19.3s,baz=230,slow=32						
AS31	**Alice Springs**	**69.66**	**105**	P	**P**	**19 13 49.7**	**-0.9**
CM13	**Chiang Mai Arr**	**70.52**	**47**	P	**P**	**19 13 57.1**	**+1.4**
	comp=Z,37nmcomp=Z,5.5nm,0.9s						
CM05	**Chiang Mai Arr**	**70.53**	**47**	P	P	19 14 00.5	+4.7
	comp=Z,33nmcomp=Z,4.4nm,0.9s						
CM04	**Chiang Mai Arr**	**70.55**	**47**	P	P	19 14 00.7	+4.8
	comp=Z,4.3nm,1.0s						
CM01	**Chiang Mai Arr**	**70.55**	**47**	P	**P**	**19 13 57.8**	**+1.9**
	comp=Z,56nmcomp=Z,4.7nm,1.1s						
CM02	**Chiang Mai Arr**	**70.55**	**47**	P	**P**	**19 14 00.1**	**+4.3**
	comp=Z,40nmcomp=Z,5.0nm,1.0s						
CM15	**Chiang Mai Arr**	**70.56**	**47**	P	**P**	**19 13 57.2**	**+1.4**
	comp=Z,35nmcomp=Z,5.0nm,1.0s						
CM31	**Chiang Mai Arr**	**70.57**	**47**	P	**P**	**19 13 57.9**	**+1.9**
	comp=Z,115nm,0.9s						
CM31	**Chiang Mai Arr**	**70.57**	**47**	P	**P**	**19 13 55.0**	**-1.0**
CM31				IAmb	IAmb	19 14 10.0	
	comp=Z,8.4nm,1.2s						
CMAR	**Chiang Mai Arr**	**70.57**	**47**	P	**P**	**19 13 55.8**	**-0.2**
	comp=Z,1.5nm,0.8s,baz=232,slow=6.6,SNR=20						
CMAR				LR	LR	19 40 55.7	
	comp=Z,43nm,20.6s,baz=308,slow=33						
CMAR	**Chiang Mai Arr**	**70.57**	**47**	P	**P**	**19 13 55.2**	**-0.8**
CM09	**Chiang Mai Arr**	**70.59**	**47**	P	P	19 14 01.6	+5.5
	comp=Z,4.1nm,1.0s						
CMMT	**Chiang Mai**	**70.85**	**47**	P	P	19 14 11.6	+14
STKA	**Stephens Creek**	**71.05**	**116**	P	**P**	**19 13 58.5**	**-0.5**
	comp=Z,5.0nm,0.8s,baz=249,slow=5.0,SNR=11						
STKA				LR	LR	19 38 20.6	
	comp=Z,108nm,21.4s,baz=214,slow=30						
STKA	**Stephens Creek**	**71.05**	**116**	P	**P**	**19 13 58.0**	**-0.9**
DMN	**Daman**	**71.34**	**30**	*e*P	**P**	**19 14 01.0**	**+0.2**
	comp=Z,22nm,0.8s						
RAMN	**Ramite**	**71.38**	**32**	*e*P	**P**	**19 14 01.2**	**+0.2**
	comp=Z,22nm,0.8s						
PKI	**Pulchoki**	**71.43**	**31**	*e*P	**P**	**19 14 01.2**	**-0.2**
	comp=Z,22nm,1.4s						
PKIN	**Phulchoki**	**71.43**	**31**	*e*P	**P**	**19 14 01.1**	**-0.2**
	comp=Z,42nm,1.7s						
GKN	**Gorkha**	**71.50**	**30**	*e*P	**P**	**19 14 01.9**	**+0.3**
	comp=Z,23nm,1.0s						
KKN	**Kakani**	**71.57**	**30**	*e*P	**P**	**19 14 02.3**	**+0.2**
	comp=Z,24nm,1.0s						
ODAN	**Odare**	**71.64**	**33**	*e*P	**P**	**19 14 03.0**	**+0.4**
	comp=Z,17nm,0.6s						
HRA	**Herat**	**71.71**	**9**	P	**P**	**19 14 02.8**	**0.0**
GUN	**Gumba**	**71.92**	**31**	*e*P	**P**	**19 14 04.5**	**+0.1**
	comp=Z,47nm,0.8s						
WRA	**Warramunga Arr**	**72.02**	**102**	P	**P**	**19 14 04.9**	**-0.1**
	comp=Z,3.2nm,0.8s,baz=224,slow=6.3,SNR=19						
WB2	**Warramunga Arr**	**72.03**	**102**	P	**P**	**19 14 05.2**	**+0.2**
WB2				IAmb	IAmb	19 14 18.4	
	comp=Z,8.2nm,0.9s						
WRAB	**Tennant Creek**	**72.04**	**102**	P	**P**	**19 14 04.8**	**-0.2**
WRAB				IAmb	IAmb	19 14 18.5	
	comp=Z,10nm,0.8s						
WR0	**Warramunga Arr**	**72.17**	**102**	P	**P**	**19 14 05.0**	**-0.8**
WR0				IAmb	IAmb	19 14 36.5	
	comp=Z,8.3nm,1.1s						
TAPN	**Taplejung**	**72.20**	**33**	*e*P	**P**	**19 14 06.2**	**+0.2**
	comp=Z,32nm,1.3s						
KBL	**Kabul**	**72.94**	**14**	P	**P**	**19 14 11.2**	**+1.0**
KBL				IAmb	IAmb	19 14 24.8	
	comp=Z,4.6nm,0.6s						
KOWA	**Kowa**	**73.78**	**303**	P	**P**	**19 14 17.2**	**+1.9**
KOWA				IAmb	IAmb	19 14 30.0	
	comp=Z,15nm,1.2s						
GEYT	**Alibeck**	**74.84**	**5**	P	**P**	**19 14 20.9**	**-0.1**
GEVA	**Gevas**	**75.53**	**352**	P	**P**	**19 14 26.2**	**+1.1**
GEVA				IAmb	IAmb	19 14 48.9	
	comp=Z,25nm,1.6s						
SLVN	**Son La**	**75.73**	**49**	P	**P**	**19 14 26.4**	**-0.1**
LSA	**Lhasa**	**75.75**	**34**	P	**P**	**19 14 26.9**	**0.0**
LSA				IAmb	IAmb	19 14 41.2	
	comp=Z,8.7nm,0.9s						
AKAS	**Kas**	**75.95**	**341**	P	**P**	**19 14 28.1**	**+0.5**
GNI	**Garni**	**77.19**	**354**	P	**P**	**19 14 36.2**	**+1.7**
GNI				IAmb	IAmb	19 14 59.9	
	comp=Z,11nm,1.0s						
KOPT	**Kop Dagi**	**77.51**	**351**	P	**P**	**19 14 35.4**	**-1.0**
KOPT				IAmb	IAmb	19 15 00.1	
	comp=Z,32nm,1.7s						
BR131	**Keskin Array S**	**78.36**	**345**	P	**P**	**19 14 40.4**	**-0.6**
BRTR	**Keskin Array B**	**78.36**	**345**	P	**P**	**19 14 39.0**	**-2.0**
	comp=Z,0.8nm,0.9s,baz=156,slow=7.4,SNR=4.6						
BRTR	**Keskin Array B**	**78.36**	**345**	P	**P**	**19 14 40.1**	**-1.0**
CTA	**Charters Tower**	**81.14**	**108**	P	**P**	**19 14 56.5**	**0.0**
	comp=Z,3.1nm,0.9s,baz=273,slow=7.1,SNR=4.3						
KIV	**Kislovodsk**	**81.15**	**353**	P	**P**	**19 14 55.4**	**-0.6**
KIV				IAmb	IAmb	19 15 13.4	
	comp=Z,17nm,1.3s						
ALN	**Alexandroupoli**	**81.28**	**340**	P	**P**	**19 14 57.0**	**+0.4**
ALN				IAmb	IAmb	19 14 59.7	
	comp=Z,26nm,1.4s						
LBZ	**Lake Benmore**	**81.31**	**140**	P	**P**	**19 14 55.7**	**-1.4**
KK31	**Karatay Array**	**81.51**	**13**	P	**P**	**19 14 58.2**	**+0.4**
KKAR	**Karatay Array**	**81.51**	**13**	P	**P**	**19 14 58.8**	**+1.0**
KKAR	**Karatay Array**	**81.51**	**13**	P	**P**	**19 14 58.5**	**+0.7**
EIDS	**Eidsvold**	**81.59**	**115**	P	**P**	**19 14 58.7**	**-0.2**
AAK	**Ala-Archa**	**81.88**	**16**	P	**P**	**19 15 00.7**	**+0.7**
KEST	**Kesra**	**82.73**	**326**	LR	LR	19 50 15.4	
	comp=Z,241nm,21.2s,baz=350,slow=34						
ABKAR	**Akbulak array**	**86.24**	**5**	P	**P**	**19 15 21.6**	**-0.1**
PLCA	**Paso Flores**	**86.55**	**220**	P	**P**	**19 15 24.0**	**0.0**
	comp=Z,1.5nm,0.7s,baz=197,slow=4.8,SNR=3.8						
PLCA				LR	LR	19 47 32.4	
	comp=Z,108nm,21.3s,baz=136,slow=31						
PLCA	**Paso Flores**	**86.55**	**220**	IAmb	IAmb	19 16 00.7	
	comp=Z,34nm,1.9s						
WMQ	**Urumqi**	**86.69**	**25**	*e*P	**P**	**19 15 25.5**	**+1.2**
WMQ				pmax	pmax		
	comp=Z,9.0nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,170nm,3.9s						
MKAR	**Makanchi Array**	**87.72**	**20**	P	**P**	**19 15 28.9**	**-0.3**
	comp=Z,0.4nm,0.8s,baz=202,slow=1.3,SNR=4.0						
MKAR				LR	LR	19 50 25.8	
	comp=Z,116nm,19.2s,baz=312,slow=33						
GTA	**Gaotai**	**87.76**	**35**	*e*P	**P**	**19 15 31.0**	**+1.4**
GTA				pP	pwP	19 15 38.0	-0.2
GTA				sP	sP	19 15 41.3	+10
GTA				pmax	pmax		
	comp=Z,200nm,5.5s						
GTA				LR	LR		
	comp=Z,200nm,16.7s						
GTA				LR	LR		
	comp=Z,380nm,16.7s						
GTA				LR	LR		
	comp=Z,460nm,16.4s						
PMG	**Port Moresby**	**88.19**	**100**	LR	LR	19 52 03.9	
	comp=Z,152nm,18.8s,baz=272,slow=34						
CPUP	**Villa Florida**	**88.67**	**238**	LR	LR	19 47 00.5	
	comp=Z,76nm,20.4s,baz=112,slow=30						
AKASG	**Malin Array Be**	**89.77**	**346**	P	**P**	**19 15 39.1**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=180,slow=4.4,SNR=2.1						
GERES	**GERESS Array B**	**92.20**	**336**	P	**P**	**19 15 49.4**	**-0.7**
	comp=Z,0.3nm,0.7s,baz=150,slow=8.0,SNR=1.8						
GERES				LR	LR	20 01 49.5	

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=Z,159nm,18.5s,baz=360,slow=38						
ESDC	Sonseca Array	92.28	320	LR	LR	19 59 40.4	
	comp=Z,165nm,18.7s,baz=50,slow=37						
NJ2	Nanjing	92.66	51	*e*P	P	19 15 54.0	+1.5
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.5s						
DZM	Mont Dzumac	94.49	122	*e*LR	LR	19 46 32.5	
	comp=Z,308nm,30.7s						
HHC	Hu-ho-hao-te	94.63	41	*e*P	P	19 16 02.8	+1.2
HHC				pmax	pmax		
	comp=Z,180nm,8.4s						
ZALV	Zalesovo Beam	94.91	19	P	P	19 16 01.6	-0.7
	comp=Z,1.2nm,0.8s,baz=202,slow=7.5,SNR=4.1						
TBI	Tubuai	116.46	158	*e*LR	LR	19 56 42.4	
	comp=Z,129nm,24.5s						
PPT2	Papeete2	121.80	155	*e*SS	SS	19 39 51.1	+7.5
	comp=Z,105nm,25.0s						
PPT2	Papeete2	121.80	155	*e*LR	LR	19 59 14.0	
	comp=Z,102nm,23.8s						
TOLK	Toolik Lake Re	146.15	14	PKPab	PKPab	19 22 21.3	+0.6
WVT	Waverly	148.19	280		PKPdf	19 22 25.6	+2.3
INK	Inuvik	148.56	4	PKPbc	PKPbc	19 22 26.4	-0.2
	comp=Z,1.0nm,0.5s,baz=1.9,slow=5.8,SNR=5.0						
FCC	Fort Churchill	149.30	326		PKPdf	19 22 25.8	+1.5
BPAW	Bear Paw Mtn.	149.54	20		PKPdf	19 22 25.6	+1.0
MDM	Murphy Dome	149.54	17		PKiKP	19 22 30.9	+0.6
PRP	Porcupine Dome	149.66	15		PKPbc	19 22 30.5	+0.9
WRH	Wood River Hil	149.99	18	PKPdf	PKPdf	19 22 26.4	+1.1
ILAR	Eielson Array	150.01	16	PKPbc	PKPbc	19 22 29.8	-0.5
	comp=Z,1.1nm,0.7s,baz=312,slow=3.6,SNR=10						
PPLA	Purkeypile	150.11	22		PKPdf	19 22 24.4	-1.4
JFWS	Jewell Farm	150.95	293		PKPdf	19 22 31.3	+3.8
EGAK	Eagle	151.13	12		PKPbc	19 22 32.8	-0.2
WHAR	Wooly Hollow	151.51	277		PKPdf	19 22 29.8	+1.1
DOT	Dot Lake	151.61	15		PKPdf	19 22 30.1	+2.2
SUA	Susitna One	151.63	23		PKPdf	19 22 29.3	+1.2
E38A	The Farm, Brul	151.71	301		PKPdf	19 22 30.0	+1.5
YKA	Yellowknife Ar	153.33	347	PKPbc	PKPbc	19 22 38.1	+0.2
	comp=Z,0.5nm,0.7s,baz=45,slow=2.0,SNR=4.6						
YKA				PKPab	PKPab	19 22 48.6	-1.4
	comp=Z,3.2nm,0.9s,baz=32,slow=2.3,SNR=19						

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*IDC **27** 19:15:55.1±1.5, 27°.27S×67°.00E, h0^{km}, mb3.7/9, mb1 3.9/9, mb1mx3.6/55, mbtmp3.7/9, MS3.6/1, Ms1 3.6/1, ms1mx2.8/43, Error ellipse: s-maj=52.0km s-min=25.9km az=29.0*

*NEIC **27** 19:15:57.6±0.9, 27°.3S±0°.1×67°.0E±0°.1, h15^{km}±4^{km}, mb4.4/16, Error ellipse: s-maj=19.6km s-min=16.4km az=179.0*

ISC 27 19:15:56.6±0.7, **27°.3S**±0°.1×**67°.0E**±0°.2, **h10**^{km}, **n33**, σ**0^{s}.45**/28, **mb4.0**/16, **Indian Ocean Triple Junction**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	20.25	16	T	T	19 41 06.9	
	baz=194,slow=76,SNR=5.6						
H08S2	Diego Garcia H	20.25	16	T	T	19 41 09.3	
	baz=194,slow=76,SNR=11						
H08S3	Diego Garcia H	20.27	16	T	T	19 41 07.0	
	baz=194,slow=76,SNR=16						
SUR	Sutherland	40.14	251	LR	LR	19 38 40.4	
	comp=Z,80nm,18.0s,baz=336,slow=34						
CM31	Chiang Mai Arr	55.04	38	P	P	19 25 28.4	-0.4
CM31				IAmb	IAmb	19 25 38.2	
	comp=Z,4.3nm,1.2s						
CMAR	Chiang Mai Arr	55.04	38	P	P	19 25 29.0	+0.3
	comp=Z,0.5nm,0.4s,baz=225,slow=7.0,SNR=9.7						
CMAR	Chiang Mai Arr	55.04	38	P	P	19 25 28.5	-0.2
MMRI	Maumere	55.27	81	P	P	19 25 30.6	+0.1
SNAA	Sanae	57.98	201	P	P	19 25 49.1	0.0
SNAA				IAmb	IAmb	19 26 16.0	
	comp=Z,6.7nm,1.5s						
ASAR	Alice Springs	59.85	103	P	P	19 26 03.0	+0.3
	comp=Z,0.5nm,0.6s,baz=250,slow=6.2,SNR=11						
ASAR	Alice Springs	59.85	103	P	P	19 26 02.9	+0.1
AS31	Alice Springs	59.85	103	P	P	19 26 02.5	-0.3
WRA	Warramunga Arr	61.49	99	P	P	19 26 14.1	+0.1
	comp=Z,0.8nm,0.9s,baz=245,slow=6.5,SNR=4.7						
WB2	Warramunga Arr	61.50	99	P	P	19 26 14.4	+0.4
WR0	Warramunga Arr	61.66	99	P	P	19 26 15.2	+0.1
WR0				IAmb	IAmb	19 26 50.8	
	comp=Z,10nm,1.5s						
QSPA	South Pole Qui	62.82	180	P	P	19 26 22.1	-0.3
STKA	Stephens Creek	63.83	114	P	P	19 26 29.8	+0.3
CSS	Mathiatis	69.66	331	P	P	19 27 07.0	+0.7
KK31	Karatay Array	70.15	3	P	P	19 27 09.2	0.0
KK31				IAmb	IAmb	19 27 14.5	
	comp=Z,1.9nm,1.1s						
KKAR	Karatay Array	70.15	3	P	P	19 27 09.8	+0.6
KKAR	Karatay Array	70.15	3	P	P	19 27 09.4	+0.2
KKAR				IAmb	IAmb	19 27 14.5	
	comp=Z,1.9nm,1.1s						
BRTR	Keskin Array B	73.60	334	P	P	19 27 30.9	+0.8
	comp=Z,0.4nm,0.7s,baz=134,slow=4.7,SNR=3.9						
TORD	Torodi Ar. Bea	75.00	294	P	P	19 27 38.6	-0.1
	comp=Z,0.7nm,0.8s,baz=117,slow=5.0,SNR=1.7						
TORD	Torodi Ar. Bea	75.00	294	IAmb	IAmb	19 27 41.7	
	comp=Z,1.0nm,1.0s						
MKAR	Makanchi Array	75.06	11	P	P	19 27 37.5	-0.9
	comp=Z,0.2nm,0.6s,baz=179,slow=5.4,SNR=2.6						
ABKAR	Akbulak array	76.49	355	P	P	19 27 46.6	+0.1
ABKAR	Akbulak array	76.49	355	P	P	19 27 46.9	+0.5
ABKAR				IAmb	IAmb	19 27 47.8	
	comp=Z,5.6nm,1.5s						
ZAA0	Zalesovo Array	82.39	11	P	P	19 28 18.0	-0.5
ZAA0				IAmb	IAmb	19 28 21.8	
	comp=Z,1.5nm,0.5s						
ZALV	Zalesovo Beam	82.39	11	P	P	19 28 18.2	-0.2
	comp=Z,0.9nm,0.5s,baz=225,slow=5.5,SNR=5.9						
ZALV	Zalesovo Beam	82.39	11	P	P	19 28 18.7	+0.2
SONM	Songino Array	82.77	26	P	P	19 28 19.7	-1.1
	comp=Z,0.4nm,0.7s,baz=234,slow=4.8,SNR=2.7						
SONM	Songino Array	82.77	26	P	P	19 28 20.9	+0.1
AKASG	Malin Array Be	84.56	337	P	P	19 28 29.2	-0.6
	comp=Z,0.4nm,0.5s,baz=142,slow=4.6,SNR=2.2						

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*IDC **27** 19:23:27.7±0.9, 17°.10N×145°.84E, h0^{km}, mb3.6/9, mb1 3.9/9, mb1mx3.6/51, mbtmp3.6/9, Error ellipse: s-maj=27.3km s-min=21.8km az=95.0*

*NEIC **27** 19:23:27.1±2.6, 16°.46N±0°.04×145°.8E±0°.1, h9^{km}±4^{km}, mb4.7/9, Error ellipse: s-maj=21.2km s-min=3.0km az=101.0*

ISC 27 19:23:27.1±0.9, **16°.5N**±0°.1×**145°.8E**±0°.2, **h10**^{km}, **n31**, σ**1^{s}.41**/23, **mb3.8**/15, **Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANA2	Anatahan	0.17	217	Pg	Pg	19 23 29.9	-0.9
H11S3	WAKE ISLAND Hy	20.01	81	T	T	19 48 37.1	
	baz=269,slow=75,SNR=220						
H11S1	WAKE ISLAND Hy	20.02	81	T	T	19 48 39.2	
	baz=269,slow=75,SNR=106						
H11S2	WAKE ISLAND Hy	20.03	81	T	T	19 48 38.6	
	baz=269,slow=75,SNR=131						
H11N1	WAKE ISLAND Hy	20.29	78	T	T	19 48 56.5	
	baz=266,slow=75,SNR=324						
H11N2	WAKE ISLAND Hy	20.30	78	T	T	19 48 56.1	
	baz=266,slow=75,SNR=386						
H11N3	WAKE ISLAND Hy	20.31	78	T	T	19 48 57.4	
	baz=266,slow=75,SNR=379						
KSRS	Korea Array	26.20	326	P	P	19 28 59.9	-2.1
	1.5nm,0.9s,baz=145,slow=8.7,SNR=2.9						
WRA	Warramunga Arr	37.91	198	P	P	19 30 51.5	+6.7
	1.0nm,0.8s,baz=20,slow=9.7,SNR=5.4						
ASAR	Alice Springs	41.56	197	P	P	19 31 21.7	+6.5
	0.4nm,0.9s,baz=9.7,slow=8.9,SNR=4.1						
CMAR	Chiang Mai Arr	44.66	280	P	P	19 31 43.1	+2.6
	1.0nm,0.9s,baz=77,slow=6.3,SNR=8.6						
LSA	Lhasa	51.56	295	P	P	19 32 33.6	-0.7
LSA				IAmb	IAmb	19 32 40.4	
	comp=Z,3.4nm,0.9s						
MKAR	Makanchi Array	60.09	315	P	P	19 33 34.3	-0.4
	comp=Z,0.4nm,0.7s,baz=94,slow=9.0,SNR=5.1						
MAKZ	Makanchi	60.30	315	P	P	19 33 37.8	+1.7
MAKZ				IAmb	IAmb	19 33 39.1	
	comp=Z,9.1nm,1.8s						
TTA	Tatalina	61.18	26	P	P	19 33 42.9	+1.1
TTA				IAmb	IAmb	19 35 01.5	
	comp=Z,24nm,2.0s						
KURK	Kurchatov	63.00	319	P	P	19 33 53.6	-0.5
KURK				IAmb	IAmb	19 35 34.9	
	comp=Z,8.3nm,1.6s						
KURBB	Kurchatov Arra	63.05	319	P	P	19 33 52.5	-2.0
	comp=Z,30nm,0.6s,baz=97,slow=7.0,SNR=8.3						
IMAR	Indian Mountai	63.20	24	P	P	19 33 55.7	+0.5
BPAW	Bear Paw Mtn.	63.69	26	P	P	19 33 56.8	-1.7
BPAW				IAmb	IAmb	19 34 11.5	
	comp=Z,16nm,1.8s						
FID	Port Fidalgo	64.89	30	P	P	19 34 07.3	+0.8
ILAR	Eielson Array	65.58	26	P	P	19 34 09.3	-1.5
	comp=Z,0.5nm,0.8s,baz=246,slow=4.7,SNR=4.4						
BMAR	Burnt Mountain	67.10	23	P	P	19 34 21.4	+0.8
TABL	Table Mountain	67.45	31	P	P	19 34 24.2	+1.1
BCAR	Beaver Creek A	67.48	28	P	P	19 34 22.0	-1.1
BVAR	Borovoye Array	68.26	321	P	P	19 34 26.8	-1.3
	comp=Z,0.2nm,0.5s,baz=132,slow=8.7,SNR=2.5						
KK31	Karatay Array	68.27	310	P	P	19 34 29.8	+1.3
KKAR	Karatay Array	68.27	310	P	P	19 34 29.4	+0.9
KKAR	Karatay Array	68.27	310	P	P	19 34 30.1	+1.6
KKAR				IAmb	IAmb	19 34 31.4	
	comp=Z,2.1nm,1.1s						
YKA	Yellowknife Ar	79.89	28	P	P	19 35 34.6	-1.3
	comp=Z,0.4nm,0.6s,baz=284,slow=5.0,SNR=3.7						
NVAR	Mina Array Bea	84.42	52	P	P	19 36 01.5	+1.0
	comp=Z,0.4nm,0.6s,baz=274,slow=5.1,SNR=4.3						
LPAZ	La Paz	147.45	95	PKPbc	PKPab	19 43 15.3	+0.2
	comp=Z,0.7nm,0.4s,baz=228,slow=2.9,SNR=2.8						

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*IDC **27** 19:32:03.5±0.7, 5°.44N×126°.83E, h0^{km}, mb3.9/11, mb1 4.0/13, mb1mx3.8/44, mbtmp3.9/13, ML3.9/2, Error ellipse: s-maj=45.2km s-min=13.5km az=70.0*

*MAN **27** 19:32:05.9, 5°.34N×127°.16E, h8^{km}, mb4.6, ML3.5, MS3.3*

*NEIC **27** 19:32:09.3±1.9, 5°.46N±0°.07×127°.31E±0°.09, h38^{km}±8^{km}, mb4.1/14, Error ellipse: s-maj=14.8km s-min=7.7km az=56.0*

ISC 27 19:32:05.2±0.5, **5°.47N**±0°.05×**127°.23E**±0°.07, **h10**^{km}, **n46**, σ**1^{s}.86**/54, **mb4.1**/18, **1D**, **Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	1.64	293	*e*P	Pn	19 32 34.1	0.0
DDMP				*e*S	Sg	19 32 56.6	-1.4
MATI	Mati	1.76	327	*e*P	Pb	19 32 37.0	-0.7
MATI				*e*S	Sg	19 33 00.9	-1.0
DAV	Davao City (W)	2.29	314	Pn	Pn	19 32 38.5	-4.6
	66nm,0.3s,baz=319,slow=5.9,SNR=2.5						
DAV				Sn	Sb	19 33 14.1	-0.9
	52nm,0.3s,baz=269,slow=23,SNR=7.3						
DAV	Davao City (W)	2.29	314	Pn	Pb	19 32 45.9	-0.7
SKMP	Bagumbayan, Su	2.87	292	*e*P	Pn	19 32 51.4	+0.3
SKMP				*e*S	Sb	19 33 29.7	-2.1
BUTP	Butuan	3.83	335	*e*P	Pn	19 33 07.8	+3.5
CGP	Cagayan de Oro	3.89	320⇓	*e*P	Pb	19 33 10.1	-3.9
CGP				*e*S	Sn	19 33 54.4	+3.5
GLSP	General Luna,	4.43	346	*e*P	Pn	19 33 16.6	+4.1
PAGZ	Pagadian	4.50	302	*e*P	Pn	19 33 15.8	+2.3
PAGZ				*e*S	Sn	19 34 10.1	+4.2
TNTI	Ternate	4.66	178	Pn	Pn	19 33 17.9	+2.2
SIJI	Sorong	7.47	147	Pn	Pn	19 33 54.9	+0.5
	0.9nm,0.3s,baz=178,slow=22,SNR=6.8						
SIJI				Sn	Sn	19 35 15.1	-4.2
	0.4nm,0.3s,baz=348,slow=22,SNR=2.1						
TOLI2	Tolitoli	7.75	236		Pn	19 33 58.7	+0.4
LUWI	Luwuk	7.85	215		Pn	19 34 04.3	+4.8
MYLDM	Lahad Datu	8.70	269		Pn	19 34 14.9	+3.7
FAKI	Fak Fak	9.72	149	Pn	Pn	19 34 27.6	+2.3
SAUI	Saumlaki	13.96	163	Pn	Pn	19 35 23.3	0.0
SBUM	Sibu	15.27	259		P	19 35 46.2	+0.2
FITZ	Fitzroy Crossi	23.47	184	P	P	19 37 14.7	-0.4
	2.3nm,0.8s,baz=12,slow=9.9,SNR=3.2						
FITZ	Fitzroy Crossi	23.47	184	P	P	19 37 15.7	+0.6
FITZ				IAmb	IAmb	19 37 52.6	
	comp=Z,11nm,1.6s						
COEN	Coen	24.95	141	P	P	19 37 29.1	0.0
COEN				IAmb	IAmb	19 37 29.2	
	comp=Z,11nm,1.5s						
WB0	Warramunga Arr	26.05	164	P	P	19 37 38.4	-0.5
WB0				IAmb	IAmb	19 37 42.1	
	comp=Z,5.5nm,0.9s						
WRAB	Tennant Creek	26.19	165	P	P	19 37 40.2	0.0
WRA	Warramunga Arr	26.20	165	P	P	19 37 41.0	+0.7
	comp=Z,1.9nm,0.6s,baz=344,slow=10,SNR=16						
WRA	Warramunga Arr	26.20	165	P	P	19 37 41.0	+0.7
WB2	Warramunga Arr	26.20	165	P	P	19 37 40.2	-0.2
WB2				IAmb	IAmb	19 37 59.9	
	comp=Z,6.9nm,1.2s						
WR0	Warramunga Arr	26.27	164	P	P	19 37 40.8	-0.1
WR0				IAmb	IAmb	19 37 43.6	
	comp=Z,4.5nm,0.9s						
ASAR	Alice Springs	29.68	168	P	P	19 38 10.8	-0.7
	comp=Z,0.2nm,0.8s,baz=345,slow=6.9,SNR=2.4						
ASAR				PcP	PcP	19 41 16.4	+0.5
	comp=Z,0.3nm,0.5s,baz=346,slow=2.4,SNR=4.6						
ASAR	Alice Springs	29.68	168	P	P	19 38 11.3	-0.1
BBOO	Buckleboo	38.98	168	P	P	19 39 32.4	+0.6
NWAO	Narrogin (SRO)	39.34	193	P	P	19 39 34.7	-0.1
STKA	Stephens Creek	39.58	161	P	P	19 39 38.1	+1.3
	comp=Z,1.9nm,0.5s,baz=333,slow=8.6,SNR=9.5						
STKA	Stephens Creek	39.58	161	P	P	19 39 36.6	-0.2
SONM	Songino Array	45.83	340	P	P	19 40 26.4	-1.2
	comp=Z,0.1nm,0.3s,baz=155,slow=6.8,SNR=1.8						
SONM				PcP	PcP	19 42 05.0	+0.1
	comp=Z,0.2nm,0.6s,baz=160,slow=4.6,SNR=1.9						
SONM	Songino Array	45.83	340	P	P	19 40 27.0	-0.6
PETK	Petropavlovsk-	53.65	22	P	P	19 41 27.3	+0.5
	comp=Z,3.4nm,1.0s,baz=233,slow=7.3,SNR=2.2						
MK31	Makanchi Array	56.43	324	P	P	19 41 47.7	+0.5
MK31				IAmb	IAmb	19 42 15.0	
	comp=Z,2.6nm,1.4s						
MKAR	Makanchi Array	56.43	324	P	P	19 41 45.2	-2.0
	comp=Z,0.5nm,0.5s,baz=112,slow=8.5,SNR=14						
MKAR	Makanchi Array	56.43	324	P	P	19 41 47.6	+0.4
ZALV	Zalesovo Beam	59.28	332	P	P	19 42 06.5	-0.5
	comp=Z,0.4nm,0.4s,baz=134,slow=8.3,SNR=3.9						
KURK	Kurchatov	60.56	327	P	P	19 42 15.2	-0.7
KURBB	Kurchatov Arra	60.56	327	P	P	19 42 13.7	-2.2
	comp=Z,60nm,0.5s,baz=127,slow=6.7,SNR=8.4						
BRVK	Borovoye	66.22	326	P	P	19 42 54.5	+1.1
BRVK				IAmb	IAmb	19 43 04.3	
	comp=Z,1.5nm,0.7s						
ABKAR	Akbulak array	71.14	320	P	P	19 43 22.8	-1.3
ILAR	Eielson Array	83.33	25	P	P	19 44 33.8	+1.6
	comp=Z,0.1nm,0.6s,baz=282,slow=4.3,SNR=1.1						
ARCES	ARCESS Array B	89.00	340	P	P	19 44 59.0	-1.0
	comp=Z,5.9nm,1.1s,baz=79,slow=4.7,SNR=1.8						
FINES	FINESS Array B	90.55	332	P	P	19 45 07.5	+0.1
	comp=Z,1.0nm,0.8s,baz=77,slow=8.4,SNR=4.5						

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*IDC **27** 19:42:08.6±0.9, 17°.07N×145°.96E, h0^{km}, mb3.6/10, mb1 3.9/10, mb1mx3.7/42, mbtmp3.6/10, Error ellipse: s-maj=27.8km s-min=21.2km az=109.0*

*NEIC **27** 19:42:11.2±0.5, 16°.96N±0°.08×146°.1E±0°.1, h13^{km}±5^{km}, mb4.5/14, Error ellipse: s-maj=23.4km s-min=3.0km az=118.0*

ISC 27 19:42:10.7±0.7, **17°.02N**±0°.09×**146°.0E**±0°.1, **h10**^{km}, **n36**, σ**0^{s}.91**/29, **mb3.8**/14, **Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANA2	Anatahan	0.73	203	Pg	Pg	19 42 25.0	+0.1
H11S3	WAKE ISLAND Hy	19.75	83	T	T	20 07 21.9	
	baz=269,slow=75,SNR=47						
H11S1	WAKE ISLAND Hy	19.77	83	T	T	20 07 22.7	
	baz=269,slow=75,SNR=46						
H11S2	WAKE ISLAND Hy	19.77	83	T	T	20 07 23.3	
	baz=269,slow=75,SNR=55						
H11N1	WAKE ISLAND Hy	20.00	79	T	T	20 07 40.0	
	baz=266						
H11N2	WAKE ISLAND Hy	20.01	79	T	T	20 07 40.5	
	baz=266						
H11N3	WAKE ISLAND Hy	20.02	79	T	T	20 07 41.3	
	baz=266						
KSRS	Korea Array	25.85	325	P	P	19 47 40.9	-1.5
	2.7nm,1.1s,baz=149,slow=9.6,SNR=3.4						
SAUI	Saumlaki	28.79	211	P	P	19 48 09.1	+0.1
LUWI	Luwuk	29.10	234	P	P	19 48 11.9	+0.1
BJT	Baijiatuau	34.55	318	P	P	19 49 00.1	+0.7
BJT				IAmb	IAmb	19 49 06.0	
	comp=Z,6.7nm,1.1s						
WRA	Warramunga Arr	38.48	198	P	P	19 49 33.0	-0.2
	comp=Z,1.7nm,1.1s,baz=20,slow=9.4,SNR=5.5						
ASAR	Alice Springs	42.13	197	P	P	19 50 01.5	-1.9
	comp=Z,0.3nm,0.8s,baz=14,slow=8.6,SNR=3.0						
SONM	Songino Array	44.64	322	P	P	19 50 22.6	-0.9
	comp=Z,0.1nm,0.3s,baz=111,slow=6.8,SNR=1.5						
CMAR	Chiang Mai Arr	44.75	279	P	P	19 50 24.3	-0.4
	comp=Z,0.5nm,0.6s,baz=71,slow=6.3,SNR=7.4						
CMAR	Chiang Mai Arr	44.75	279	P	P	19 50 25.7	+1.0
MKAR	Makanchi Array	59.84	315	P	P	19 52 15.9	-0.6
	comp=Z,0.2nm,0.7s,baz=94,slow=8.9,SNR=2.4						
IMAR	Indian Mountai	62.63	24	P	P	19 52 34.9	-0.1
SML	Sawmill	63.69	29	P	P	19 52 41.6	-0.6
IL31		65.02	26	P	P	19 52 51.0	+0.2
IL31				IAmb	IAmb	19 53 04.3	
	comp=Z,2.5nm,1.1s						
ILAR	Eielson Array	65.02	26	P	P	19 52 49.3	-1.5
	comp=Z,1.0nm,1.0s,baz=258,slow=5.7,SNR=6.3						
ILAR	Eielson Array	65.02	26	P	P	19 52 49.6	-1.2
BMAR	Burnt Mountain	66.53	23	P	P	19 53 00.8	+0.2
NIL	Nilore	66.61	300	P	P	19 53 02.9	+1.2
BCAR	Beaver Creek A	66.92	28	P	P	19 53 04.0	+0.9
KK31	Karatay Array	68.06	310	P	P	19 53 11.2	+0.5
KKAR	Karatay Array	68.06	310	P	P	19 53 11.2	+0.5
HYT	Haines Junctio	68.71	31	P	P	19 53 15.7	+1.1
SKAG	Skagway	69.75	32	P	P	19 53 20.8	0.0
SKAG				IAmb	IAmb	19 53 42.4	
	comp=Z,3.7nm,1.0s						
KBL	Kabul	69.98	301	P	P	19 53 23.5	+0.5
KBL				IAmb	IAmb	19 53 25.2	
	comp=Z,2.7nm,0.7s						
INK	Inuvik	70.80	23	P	P	19 53 26.6	-0.5
	comp=Z,1.2nm,0.7s,baz=300,slow=6.8,SNR=4.5						
INK	Inuvik	70.80	23	IAmb	IAmb	19 53 40.1	
	comp=Z,9.7nm,1.6s						
ABKAR	Akbulak array	74.76	317	P	P	19 53 51.9	+0.9
YKA	Yellowknife Ar	79.33	28	P	P	19 54 15.2	-1.2
	comp=Z,0.4nm,0.7s,baz=293,slow=4.9,SNR=6.8						
NVAR	Mina Array Bea	83.94	52	P	P	19 54 42.8	+1.2
	comp=Z,0.4nm,0.7s,baz=270,slow=4.5,SNR=3.2						
LPAZ	La Paz	147.31	94	PKPbc	PKPbc	20 01 56.8	+0.5
	comp=Z,1.1nm,0.6s,baz=0.0,slow=3.0,SNR=1.8						

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*IDC **27** 19:44:12.2±0.7, 17°.02N×146°.06E, h0^{km}, mb4.0/15, mb1 4.2/16, mb1mx4.0/41, mbtmp4.1/16, ML4.0/1, MS3.5/4, Ms1 3.6/4, ms1mx3.0/36, Error ellipse: s-maj=20.9km s-min=15.3km az=109.0*

*BJI **27** 19:44:14.2±0.0, 16°.79N×145°.90E, h25^{km}, mB5.2/18, mb4.4/34, Ms4.6/2, Ms7 4.3/1*

*NEIC **27** 19:44:16.1±1.2, 16°.97N±0°.08×145°.9E±0°.1, h23^{km}±5^{km}, mb4.7/54, Error ellipse: s-maj=15.7km s-min=10.4km az=122.0*

ISC 27 19:44:14.2±0.5, **17°.01N**±0°.07×**145°.97E**±0°.09, **h10**^{km}, **n101**, σ**0^{s}.81**/92, **mb4.6**/54, **MS3.4**/4, **Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANA2	Anatahan	0.71	200		Pb	19 44 28.3	-0.5
GUMO	Guam	3.57	197	Pn	Pn	19 45 09.2	-0.4
PATS	Pohnpei	15.74	129	Pn	Pn	19 47 58.1	+1.9
JOW	Kunigami	19.08	304	P	Pn	19 48 38.3	+0.4
	0.7nm,0.3s,baz=138,slow=9.6,SNR=1.2						
H11S3	WAKE ISLAND Hy	19.79	83	T	T	20 09 22.3	
	baz=269,slow=75,SNR=120						
H11S1	WAKE ISLAND Hy	19.80	83	T	T	20 09 23.7	
	baz=269,slow=75,SNR=76						
H11S2	WAKE ISLAND Hy	19.80	83	T	T	20 09 23.6	
	baz=269,slow=75,SNR=85						
INU	Inuyama	19.93	338	P	P	19 48 44.6	-1.7
INU				IAmb	IAmb	19 49 12.8	
	comp=Z,89nm,1.7s						
H11N1	WAKE ISLAND Hy	20.04	79	T	T	20 09 40.8	
	baz=266,slow=74,SNR=57						
H11N2	WAKE ISLAND Hy	20.04	79	T	T	20 09 48.2	
	baz=266,slow=74,SNR=174						
H11N3	WAKE ISLAND Hy	20.05	79	T	T	20 09 42.8	
	baz=266,slow=74,SNR=220						
MJAR	Matsushiro Arr	20.63	342	P	P	19 48 53.8	-0.1
	comp=Z,1.0nm,0.7s,baz=122,slow=11,SNR=1.3						
JNU	Nakatsue	21.03	322	P	P	19 48 58.8	+0.5
	comp=Z,15nm,1.0s,baz=304,slow=3.8,SNR=3.3						
DAV	Davao City (W)	22.23	246	LR	LR	19 55 41.0	
	comp=Z,106nm,21.3s,baz=82,slow=31						
SIJI	Sorong	22.93	221	P	P	19 49 20.1	+1.3
	comp=Z,20nm,0.9s,baz=28,slow=16,SNR=6.5						
YHNB	Yeheng	24.19	292	P	P	19 49 32.7	+1.6
SSLB	Suanglung	24.38	290	P	P	19 49 34.4	+1.6
SSLB				IAmb	IAmb	19 49 37.8	
	comp=Z,15nm,0.8s						
KSRS	Korea Array	25.84	326	P	P	19 49 45.8	0.0
	comp=Z,3.4nm,0.9s,baz=151,slow=9.9,SNR=7.7						
KSAR	Wonju Array Be	25.85	325	P	P	19 49 46.0	0.0
SSE	Sheshan	26.54	306	P	P	19 49 52.1	-0.2
SSE				IAmb	IAmb	19 50 15.2	
	comp=Z,30nm,1.3s						
ASAJ	Asahikawa	27.17	355	LR	LR	20 02 30.7	
	comp=Z,75nm,18.5s,baz=124,slow=40						
NJ2	Nanjing	28.75	306	*e*P	P	19 50 12.0	-0.1
NJ2				pmax	pmax		
	comp=Z,3.0nm,0.5s						
SOEI	Soe	34.17	220	P	P	19 51 00.2	+0.1
SOEI				IAmb	IAmb	19 51 23.9	
	comp=Z,13nm,0.9s						
BJT	Baijiatuau	34.53	318	P	P	19 51 02.6	-0.2
BJT				IAmb	IAmb	19 51 15.1	
	comp=Z,9.0nm,1.2s						
BJI	Beijing	34.53	318	P	P	19 51 03.0	+0.2
BJI				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BJI				pmax	pmax		
	comp=Z,350nm,8.2s						
BJI				LR	LR		
	comp=Z,330nm,8.7s						
BJI				LR	LR		
	comp=Z,220nm,5.9s						
ENH	Enshi	35.77	298	P	P	19 51 13.3	-0.4
ENH				IAmb	IAmb	19 51 17.3	
	comp=Z,6.0nm,0.8s						
PETK	Petropavlovsk-	37.17	12	P	P	19 51 24.3	-1.1
	comp=Z,2.0nm,0.8s,baz=213,slow=6.9,SNR=1.9						
XAN	Xi'an	37.24	304	P	P	19 51 26.0	-0.2
XAN				pmax	pmax		
	comp=Z,4.0nm,1.4s						
GYA	Guiyang	37.58	291	*e*P	P	19 51 29.8	+0.5
GYA				pmax	pmax		
	comp=Z,7.0nm,1.7s						
HHC	Hu-ho-hao-te	37.97	316	*e*P	P	19 51 34.0	+1.6
HHC				pmax	pmax		
	comp=Z,4.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,200nm,8.0s						
WRA	Warramunga Arr	38.46	198	P	P	19 51 35.7	-0.8
	comp=Z,3.0nm,0.9s,baz=20,slow=9.3,SNR=8.4						
FITZ	Fitzroy Crossi	40.22	211	P	P	19 51 50.6	-0.7
CD2	Chengdu	40.74	298	P	P	19 51 57.5	+1.9
CD2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
LZH	Lanzhou	41.81	305	*e*P	P	19 52 05.8	+1.3
LZH				pP	pwP	19 52 16.0	+6.1
LZH				sP	sP	19 52 20.5	+13
LZH				pmax	pmax		
	comp=Z,14nm,1.3s						
ASAR	Alice Springs	42.11	197	P	P	19 52 06.2	-0.6
	comp=Z,1.2nm,0.8s,baz=20,slow=10.0,SNR=12						
ASAR	Alice Springs	42.11	197	P	P	19 52 05.1	-1.7
SONM	Songino Array	44.62	322	P	P	19 52 26.4	-0.5
	comp=Z,0.5nm,0.6s,baz=128,slow=9.4,SNR=5.0						
SONM	Songino Array	44.62	322	P	P	19 52 27.9	+0.9
CMAR	Chiang Mai Arr	44.72	279	P	P	19 52 28.2	+0.2
	comp=Z,1.8nm,0.8s,baz=70,slow=6.6,SNR=14						
CMAR				LR	LR	20 08 49.5	
	comp=Z,62nm,21.6s,baz=357,slow=33						
CMAR	Chiang Mai Arr	44.72	279	P	P	19 52 27.8	-0.2
GSI	Gunungsitoli	50.08	257	P	P	19 53 09.7	-0.1
LSA	Lhasa	51.47	295	P	P	19 53 20.9	+0.3
LSA				IAmb	IAmb	19 53 24.8	
	comp=Z,6.3nm,0.8s						
TAPN	Taplejung	54.51	292	*e*P	P	19 53 42.2	-0.8
	comp=Z,9.7nm,1.0s						
WMQ	Urumqi	55.61	312	*e*P	P	19 53 51.0	+0.6
WMQ				pP	pwP	19 53 59.5	+3.7
WMQ				sP	sP	19 54 03.8	+10
WMQ				pmax	pmax		
	comp=Z,11nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,170nm,7.1s						
GUN	Gumba	56.11	292	*e*P	P	19 53 55.1	+0.5
	comp=Z,17nm,1.1s						
PKI	Pulchoki	56.54	292	*e*P	P	19 53 58.0	+0.4

	comp=Z,5.6nm,0.8s						
PKIN	Phulchoki	56.55	292	*e*P	P	19 53 58.0	+0.4
KKN	Kakani	56.65	292	*e*P	P	19 53 58.1	-0.1
	comp=Z,8.3nm,0.4s						
GKN	Gorkha	57.20	293	*e*P	P	19 54 02.4	+0.3
	comp=Z,19nm,1.1s						
MK31	Makanchi Array	59.82	315	P	P	19 54 19.0	-0.9
MKAR	Makanchi Array	59.82	315	P	P	19 54 18.7	-1.2
	comp=Z,0.4nm,0.6s,baz=95,slow=7.6,SNR=5.2						
MKAR	Makanchi Array	59.82	315	P	P	19 54 18.4	-1.5
MAKZ	Makanchi	60.03	315	P	P	19 54 20.6	-0.8
OHAK	Old Harbor	60.11	33	P	P	19 54 21.7	+0.1
SVW2	Sparrevohn	60.17	29	P	P	19 54 22.6	+0.6
KDAK	Kodiak Island	60.62	33	P	P	19 54 25.1	0.0
	comp=Z,2.2nm,0.7s,baz=337,slow=20,SNR=1.8						
KDAK	Kodiak Island	60.62	33	P	P	19 54 25.6	+0.5
TTA	Tatalina	60.63	26	P	P	19 54 24.6	-0.7
TTA				IAmb	IAmb	19 54 47.4	
	comp=Z,16nm,1.6s						
CNPM	China Poot	61.76	31	P	P	19 54 33.5	+0.6
BRLK	Bradley Lake	61.99	31	P	P	19 54 33.8	-0.6
BRLK				IAmb	IAmb	19 55 05.7	
	comp=Z,6.6nm,0.9s						
SUA	Susitna One	62.51	29	P	P	19 54 38.1	+0.2
KURK	Kurchatov	62.70	319	P	P	19 54 38.1	-1.1
SEW	Seward	62.78	31	P	P	19 54 40.7	+1.1
KTH	Kantishna Hill	63.01	27	P	P	19 54 41.5	+0.2
KTH				IAmb	IAmb	19 54 43.6	
	comp=Z,5.2nm,1.0s						
BPAW	Bear Paw Mtn.	63.15	26	P	P	19 54 42.2	+0.1
BPAW				IAmb	IAmb	19 54 43.7	
	comp=Z,3.5nm,0.8s						
TRF	Thorofare Moun	63.26	27	P	P	19 54 43.2	+0.2
TRF				IAmb	IAmb	19 54 44.3	
	comp=Z,4.1nm,0.9s						
SML	Sawmill	63.71	29	P	P	19 54 46.3	+0.4
RND	Reindeer	63.87	27	P	P	19 54 47.5	+0.6
RND				IAmb	IAmb	19 54 49.1	
	comp=Z,6.3nm,1.1s						
I23K	Minto, Yukon-K	64.12	25	P	P	19 54 48.5	+0.1
I23K				IAmb	IAmb	19 54 50.7	
	comp=Z,3.3nm,0.8s						
SCM	Sheep Creek Mo	64.18	29	P	P	19 54 49.9	+0.9
COLD	Coldfoot	64.40	23	P	P	19 54 50.4	+0.2
WRH	Wood River Hil	64.46	26	P	P	19 54 50.6	-0.1
MDM	Murphy Dome	64.53	25	P	P	19 54 51.9	+0.7
ILAR	Eielson Array	65.04	26	P	P	19 54 53.5	-1.0
	comp=Z,1.8nm,0.8s,baz=257,slow=4.9,SNR=11						
TOLK	Toolik Lake Re	65.06	21	P	P	19 54 55.5	+0.9
TOLK				IAmb	IAmb	19 55 07.1	
	comp=Z,5.6nm,1.1s						
GLB	Gilahina Butte	65.76	30	P	P	19 55 00.5	+1.2
GLB				IAmb	IAmb	19 55 08.3	
	comp=Z,6.1nm,1.2s						
DOT	Dot Lake	66.02	27	P	P	19 55 01.2	+0.4
DOT				IAmb	IAmb	19 55 06.7	
	comp=Z,4.5nm,0.8s						
MCARA	McCarthy VSAT	66.12	30	P	P	19 55 02.0	+0.5
MCARA				IAmb	IAmb	19 55 04.3	
	comp=Z,7.4nm,0.9s						
NIL	Nilore	66.58	300	P	P	19 55 04.8	-0.2
TABL	Table Mountain	66.91	31	P	P	19 55 06.5	-0.3
TABL				IAmb	IAmb	19 55 20.6	
	comp=Z,9.7nm,1.0s						
KK31	Karatay Array	68.04	310	P	P	19 55 13.9	-0.2
KKAR	Karatay Array	68.04	310	P	P	19 55 14.2	+0.1
HYT	Haines Junctio	68.73	31	P	P	19 55 19.5	+1.3
HYT				IAmb	IAmb	19 55 21.4	
	comp=Z,6.2nm,0.9s						
KBL	Kabul	69.95	301	P	P	19 55 24.7	-1.7
KBL				IAmb	IAmb	19 55 28.1	
	comp=Z,7.4nm,1.1s						
INK	Inuvik	70.81	23	P	P	19 55 30.6	-0.1
	comp=Z,3.3nm,0.7s,baz=257,slow=6.0,SNR=11						
PPT	Papeete	72.16	115	LR	LR	20 23 17.8	
	comp=Z,51nm,19.1s,baz=336,slow=32						
YKA	Yellowknife Ar	79.35	28	P	P	19 56 19.2	-0.9
	comp=Z,1.6nm,0.8s,baz=290,slow=4.7,SNR=4.7						
PINE	Pine Mountain	80.61	47	P	P	19 56 28.9	+1.3
PINE				IAmb	IAmb	19 56 30.6	
	comp=Z,9.5nm,0.8s						
BEKR	Beckworth	82.04	51	P	P	19 56 35.0	-0.2
NVAR	Mina Array Bea	83.97	52	P	P	19 56 44.0	-1.3
	comp=Z,1.8nm,0.8s,baz=259,slow=6.1,SNR=9.5						
NVAR	Mina Array Bea	83.97	52	P	P	19 56 45.6	+0.3
ARCES	ARCESS Array B	84.17	342	P	P	19 56 45.3	-0.1
ELK	Elko	85.53	49	P	P	19 56 54.0	+0.9
HVU	Hansel Valley	86.94	47	P	P	19 57 00.9	+0.9
HVU				IAmb	IAmb	19 57 07.3	
	comp=Z,3.9nm,0.9s						
PSUT	Pine Spring	87.26	51	P	P	19 57 01.6	-0.1
PSUT				IAmb	IAmb	19 57 04.5	
	comp=Z,4.0nm,1.1s						
DUG	Dugway, Tooele	87.46	49	P	P	19 57 02.4	-0.1
SRU	San Rafael Swe	89.49	49	P	P	19 57 12.5	+0.2
SRU				IAmb	IAmb	19 57 14.2	
	comp=Z,2.8nm,0.8s						
PV02	Paradox Valley	91.13	49	P	P	19 57 19.7	-0.2
PV02				IAmb	IAmb	19 57 26.1	
	comp=Z,4.4nm,0.9s						
SMCO	Snowmass	92.02	48	P	P	19 57 24.7	+0.5
SMCO				IAmb	IAmb	19 57 27.0	
	comp=Z,3.4nm,0.9s						
ISCO	Idaho Springs	92.72	47	P	P	19 57 28.7	+1.3
ISCO				IAmb	IAmb	19 57 58.4	
	comp=Z,3.0nm,1.2s						
LPAZ	La Paz	147.34	94	PKPbc	PKPbc	20 03 59.9	0.0
	comp=Z,2.9nm,0.6s,baz=314,slow=1.8,SNR=6.5						

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*IDC **27** 19:45:39.2±0.8, 16.°95N×146.°01E, h0^{km}, mb3.7/11, mb1 4.0/11, mb1mx3.8/43, mbtmp3.7/11, MS3.4/1, Ms1 3.4/1, ms1mx2.8/35, Error ellipse: s-maj=28.2km s-min=21.3km az=105.0*

*NEIC **27** 19:45:43.0±0.6, 16.°9N±0.°1×146.°0E±0.°2, h22^{km}±6^{km}, mb4.4/4, Error ellipse: s-maj=22.4km s-min=16.1km az=112.0*

ISC 27 19:45:40.8±0.8**, 16.°9N**±0.°1×**146.°0E**±0.°1**, h10^{km}, n22, σ0.s58**/18**, mb3.8**/13**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANA2	Anatahan	0.66	209	Pn	Pn	19 45 56.2	-0.1
H11N1	WAKE ISLAND Hy	19.98	79	T	T	20 11 09.5	
	baz=266,slow=74,SNR=19						
H11N2	WAKE ISLAND Hy	19.99	79	T	T	20 11 10.3	
	baz=266,slow=74,SNR=20						
H11N3	WAKE ISLAND Hy	20.00	79	T	T	20 11 26.7	
	baz=266,slow=74,SNR=18						
SSLB	Suanglung	24.47	290	P	P	19 51 00.6	+0.3
SSLB				IAmb	IAmb	19 51 23.6	
	comp=Z,22nm,1.2s						
KSRS	Korea Array	25.95	326	P	P	19 51 13.1	-0.3
	comp=Z,1.6nm,0.8s,baz=154,slow=9.7,SNR=3.2						
HNR	Honiara	29.58	151	LR	LR	20 01 05.6	
	comp=Z,78nm,20.9s,baz=339,slow=31						
WR0	Warramunga Arr	38.36	198	P	P	19 53 02.5	+0.2
WR0				IAmb	IAmb	19 53 23.2	
	comp=Z,7.5nm,1.4s						
WB2	Warramunga Arr	38.40	198	P	P	19 53 02.4	-0.2
WRA	Warramunga Arr	38.40	198	P	P	19 53 02.2	-0.4
	comp=Z,1.3nm,0.8s,baz=18,slow=8.7,SNR=4.0						
ASAR	Alice Springs	42.05	197	P	P	19 53 32.8	-0.1
	comp=Z,0.5nm,0.6s,baz=21,slow=9.6,SNR=5.9						
SONM	Songino Array	44.73	322	P	P	19 53 54.2	-0.3
	comp=Z,0.4nm,0.6s,baz=121,slow=10,SNR=1.8						
CMAR	Chiang Mai Arr	44.80	279	P	P	19 53 55.3	0.0
	comp=Z,1.1nm,0.9s,baz=70,slow=6.1,SNR=3.2						
MKAR	Makanchi Array	59.93	315	P	P	19 55 46.7	-0.5
	comp=Z,0.3nm,0.6s,baz=90,slow=6.1,SNR=1.7						
ILAR	Eielson Array	65.09	26	P	P	19 56 20.8	-0.5
	comp=Z,0.6nm,0.8s,baz=258,slow=4.9,SNR=2.5						
NIL	Nilore	66.68	300	P	P	19 56 33.2	+1.0
INK	Inuvik	70.87	23	P	P	19 56 56.7	-0.9
	comp=Z,1.1nm,0.7s,baz=240,slow=5.7,SNR=3.6						
YKA	Yellowknife Ar	79.39	28	P	P	19 57 47.0	+0.1
	comp=Z,0.5nm,0.7s,baz=289,slow=5.1,SNR=2.6						
NVAR	Mina Array Bea	83.97	52	P	P	19 58 12.7	+0.8
	comp=Z,0.5nm,0.6s,baz=273,slow=5.3,SNR=2.3						
NVAR	Mina Array Bea	83.97	52	P	P	19 58 12.6	+0.7
ELK	Elko	85.53	49	P	P	19 58 20.7	+0.9
	comp=Z,0.9nm,0.8s,baz=243,slow=4.5,SNR=2.5						
LPAZ	La Paz	147.27	94	PKPbc	PKPbc	20 05 25.7	-0.6
	comp=Z,0.9nm,0.5s,baz=248,slow=5.4,SNR=2.7						

IDC 27 20:18:27.0±9.6**, 9.°67S**×**160.°55E, h0^{km}, mb3.5**/4**, mb1 3.6**/4**, mb1mx3.5**/21**, mbtmp3.5**/4**, Error ellipse: s-maj=280.5km s-min=38.3km az=118.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	27.28	245	P	P	20 24 13.8	+0.4
	0.4nm,0.6s,baz=71,slow=8.9,SNR=4.9						
ASAR	Alice Springs	29.00	238	P	P	20 24 28.4	-0.4
	0.4nm,0.9s,baz=67,slow=10,SNR=2.8						
SONM	Songino Array	74.59	325	P	P	20 30 09.1	+1.0
	0.5nm,0.6s,baz=144,slow=6.3,SNR=6.2						
MKAR	Makanchi Array	89.05	318	P	P	20 31 22.4	-1.7
	0.1nm,0.6s,baz=93,slow=4.5,SNR=2.0						

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*NEIC **27** 20:23:10.3±1.1, 36.°27N±0.°01×97.°39W±0.°03, h7^{km}±7^{km}, Error ellipse: s-maj=3.2km s-min=1.7km az=71.0*

*TUL **27** 20:23:10.3±1.3, 36.°27N±0.°01×97.°38W±0.°03, h7^{km}±7^{km}, ML3.3, mb_Lg3.2/79(NEIC), Error ellipse: s-maj=3.1km s-min=1.7km az=71.0*

*ANF **27** 20:23:10.2±0.8, 36.°27N×97.°33W, h5^{km}, ML3.7/8, Error ellipse: s-maj=11.8km s-min=4.6km az=170.0*

ISC 27 20:23:10.3±1.1**, 36.°27N**±0.°02×**97.°38W**±0.°02**, h6^{km}**±9^{km}**, n96, σ0.s65**/99**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK029	Liberty Lake	0.48	187		Pg	20 23 19.6	+0.1
OK029				Sg	Sg	20 23 25.8	+0.2
CROK	Carrier	0.54	296	Pg	Pg	20 23 20.8	+0.1
CROK				Sg	Sg	20 23 28.3	+0.6
OK031	S. Brethren Rd	0.54	126		Pg	20 23 20.3	-0.4
OK031				Sg	Sg	20 23 28.2	+0.5
QUOK	Quay	0.55	100		Pg	20 23 21.1	+0.1
QUOK				Sg	Sg	20 23 28.5	+0.3
OK030	Cody Creek RV	0.59	125		Pg	20 23 21.8	+0.1
OK030				Sg	Sg	20 23 29.9	+0.6
ADOK	Arcadia Dam	0.62	179	Pg	Pg	20 23 21.5	-0.7
BCOK	Bluff Creek, N	0.64	197		Pg	20 23 22.6	0.0
BCOK				Sg	Sg	20 23 31.2	+0.4
OK025	Westminster Rd	0.69	177		Pg	20 23 23.5	0.0
KAN13	South Haven SW	0.75	354		Pg	20 23 24.6	-0.1
KAN13				Sg	Sg	20 23 34.6	+0.3
KAN14	Manchester OK	0.83	326		Pg	20 23 26.1	-0.1
KAN14				Sg	Sg	20 23 37.1	+0.1
OKCFA	Oklahoma City	0.85	184		Pg	20 23 26.4	-0.3
OKCFA				Sg	Sg	20 23 38.0	+0.3
OKCSW	OKLAHOMA CITY	0.86	183		Pg	20 23 26.6	-0.3
OKCSW				Sg	Sg	20 23 38.5	+0.5
KAN05	Bluff City Nor	0.93	335		Pg	20 23 27.6	-0.4
KAN05				Sg	Sg	20 23 40.0	-0.1
KAN01	Argonia South	0.93	341		Pg	20 23 27.6	-0.6
KAN01				Sg	Sg	20 23 40.5	+0.2
T35A	Sooner Cattle	0.95	47		Pg	20 23 28.4	-0.2
T35B	Sooner Cattle	0.95	47	P		20 23 28.4	
	baz=227						
T35B				S		20 23 41.3	
	baz=227						
FNO	Franklin	1.01	181	Pg	Pg	20 23 29.5	-0.2
FNO				Sg	Sb	20 23 43.2	-0.5
KAN10	Anthony SW Sta	1.03	326		Pg	20 23 29.6	-0.3
KAN08	Anthony NE Sta	1.07	334		Pg	20 23 30.2	-0.5
KAN12	Harper NE Stat	1.14	334		Pg	20 23 31.4	-0.7
U32A	Winter Ranch,	1.31	275		Pn	20 23 34.3	-0.9
U32A	Winter Ranch,	1.31	275	P		20 23 34.3	
	baz=94						
TUL1	Leonard	1.34	105	P	Pn	20 23 34.5	-1.0
	baz=286						
TUL1				S	Sb	20 23 52.5	-0.6
	baz=286						
TUL1	Leonard	1.34	105	Pn	Pn	20 23 34.4	-1.1
TUL1	Leonard	1.34	105	P		20 23 34.5	
	baz=286						
TUL1				S		20 23 52.4	
	baz=286						
WMOK	Wichita Mounta	1.91	217	P	Pn	20 23 43.8	+0.4
	baz=36						
WMOK				S	Sn	20 24 08.2	+0.5
	baz=36						
WMOK	Wichita Mounta	1.91	217		Pn	20 23 43.8	+0.4
WMOK	Wichita Mounta	1.91	217	P		20 23 43.8	
	baz=36						
WMOK				S		20 24 09.5	
	baz=36						
X37A	Clayton	2.35	135		Pn	20 23 50.2	+0.8
X37A				IAmb_Lg		20 24 26.7	
	comp=Z,96nm,0.8s						
X37A	Clayton	2.35	135	P		20 23 50.2	
	baz=316						
R32A	Long Quarter,	2.40	334	Pn	Pn	20 23 51.7	+1.6
R32A	Long Quarter,	2.40	334	S		20 24 20.7	
	baz=154						
U38A	Gravette	2.42	85		Pn	20 23 51.0	+0.5
U38A	Gravette	2.42	85	P		20 23 51.7	
	baz=267						
HHAR	Hobbs	2.78	89		Pn	20 23 55.8	+0.4
KSU1	Kansas State U	2.89	12	P	Pn	20 23 56.4	-0.5
	baz=192						
KSU1				S	Sn	20 24 32.8	+0.7
	baz=192						
KSU1	Kansas State U	2.89	12		Pn	20 23 56.4	-0.5
Z35A	Perchaven, San	2.93	178		Pn	20 23 57.7	+0.2
Z35A	Perchaven, San	2.93	178	P		20 23 57.8	
	baz=358						
W39A	Magazine	3.12	109	P	Pn	20 24 00.4	+0.4
	baz=291						
W39A				S	Sn	20 24 38.1	+0.5
	baz=291						
W39A	Magazine	3.12	109		Pn	20 24 00.4	+0.4
W39A				IAmb_Lg		20 24 58.1	
	comp=Z,62nm,0.7s						
W39A	Magazine	3.12	109	S		20 24 38.1	
	baz=291						
CBKS	Cedar Bluff	3.15	324	P	Pn	20 24 01.4	+0.8
	baz=143						
CBKS	Cedar Bluff	3.15	324		Pn	20 24 01.1	+0.6
CBKS				IAmb_Lg		20 24 54.2	
	comp=Z,73nm,0.7s						
S39A	Bolivar	3.55	65		Pn	20 24 07.0	+1.0
S39A	Bolivar	3.55	65	P		20 24 06.9	
	baz=248						
MIAR	Mount Ida	3.55	118	P	Pn	20 24 06.5	+0.6
	baz=300						
MIAR				S	Sn	20 24 48.5	+0.2
	baz=300						
MIAR	Mount Ida	3.55	118		Pn	20 24 06.2	+0.3
MIAR	Mount Ida	3.55	118	P		20 24 06.9	
	baz=300						
MIAR				S		20 24 48.7	
	baz=300						
Z38A	Mt. Pleasant	3.59	146	Pn	Pn	20 24 06.8	+0.3
U40A	Yellville	3.66	87	P	Pn	20 24 07.6	+0.1
	baz=270						
U40A				S	Sn	20 24 51.6	+0.7
	baz=270						
U40A	Yellville	3.66	87		Pn	20 24 08.1	+0.6
U40A				IAmb_Lg		20 25 08.4	
	comp=Z,58nm,0.9s						
AMTX	Amarillo	3.77	250	P	Pn	20 24 09.1	+0.1
	baz=67						
AMTX				S	Sn	20 24 54.6	+0.9
	baz=67						
AMTX	Amarillo	3.77	250		Pn	20 24 08.7	-0.3
AMTX				IAmb_Lg		20 25 10.9	
	comp=Z,40nm,0.8s						
ABTX	Abilene, Hawle	4.09	208		Pn	20 24 13.4	0.0
X40A	Basin Creek Fa	4.12	114		Pn	20 24 14.8	+1.1
X40A				IAmb_Lg		20 25 20.5	
	comp=Z,40nm,0.9s						
MGMO	Mountain Grove	4.20	76		Pn	20 24 14.9	-0.1
MGMO				IAmb_Lg		20 25 25.6	
	comp=Z,38nm,0.8s						
WHAR	Wooly Hollow	4.25	102		Pn	20 24 15.7	+0.1
WHAR				IAmb_Lg		20 25 34.2	
	comp=Z,33nm,0.8s						
WHTX	Lake Whitney,	4.27	181		Pn	20 24 14.7	-1.1
FCAR	Ozark Folk Cen	4.28	94		Pn	20 24 15.1	-0.8
FCAR				IAmb_Lg		20 25 25.7	
	comp=Z,34nm,0.9s						
W41B	Gary Mavity, V	4.32	103	S		20 25 06.5	
	baz=286						
WLAR	White Oak Lake	4.35	125	Pn	Pn	20 24 16.4	-0.6
237A	Washetta, Mont	4.45	163	Pn	Pn	20 24 17.8	-0.6
N33A	J Bar K, Exete	4.46	359	Pn	Pn	20 24 18.4	-0.1
P38A	Dawn	4.53	41		Pn	20 24 20.5	+1.1
P38A				IAmb_Lg		20 25 38.6	
	comp=Z,38nm,0.7s						
N35A	Tabor	4.78	16		Pn	20 24 23.5	+0.6
N35A				IAmb_Lg		20 25 45.7	
	comp=Z,53nm,0.7s						
MSTX	Muleshoe	4.98	244		Pn	20 24 24.6	-1.1
MSTX				IAmb_Lg		20 25 56.8	
	comp=Z,30nm,1.2s						
KSCO	Kaye Shedlock'	4.98	305		Pn	20 24 24.9	-0.9
KSCO				IAmb_Lg		20 25 58.1	
	comp=Z,30nm,0.7s						
LCAR	Lake Charles	5.04	90	Pn	Pn	20 24 26.1	-0.3
LCAR				IAmb_Lg		20 25 56.1	
	comp=Z,30nm,1.1s						
T42A	Van Buren	5.11	80	Pn	Pn	20 24 27.4	0.0
T42A				IAmb_Lg		20 25 52.8	
	comp=Z,30nm,0.8s						
BGNE	Belgrade	5.17	354		Pn	20 24 28.4	+0.2
CCM	Cathedral Cave	5.22	68		Pn	20 24 27.9	-1.0
CCM				IAmb_Lg		20 25 56.2	
	comp=Z,30nm,0.8s						
P40A	Paris	5.33	51		Pn	20 24 29.4	-1.0
P40A				IAmb_Lg		20 26 01.5	
	comp=Z,34nm,0.7s						
HBAR	Harrisburg	5.50	95	Pn	Pn	20 24 31.3	-1.5
N38A	Joes South For	5.56	34	IAmb_Lg		20 26 08.1	
	comp=Z,40nm,0.7s						
PBMO	Poplar Bluff	5.62	83	Pn	Pn	20 24 34.9	+0.5
PBMO				IAmb_Lg		20 26 11.0	
	comp=Z,46nm,1.1s						
L34A	Svendsen Farm,	5.74	8	Pn	Pn	20 24 35.2	-0.9
L34A				IAmb_Lg		20 26 17.3	
	comp=Z,26nm,0.8s						
FVM	French Village	5.82	71	Pn	Pn	20 24 37.2	+0.1
OGNE	Ogallala	5.92	323	Pn	Pn	20 24 40.5	+1.9
OGNE				IAmb_Lg		20 26 20.7	
	comp=Z,29nm,0.7s						
143A	Socs Landing,	6.08	124	IAmb_Lg		20 26 37.0	
	comp=Z,27nm,0.8s						
JCT	Junction City	6.12	200		Pn	20 24 40.3	-1.0
JCT				IAmb_Lg		20 26 28.5	
	comp=Z,25nm,1.0s						
PARMO	Parma	6.16	84	IAmb_Lg		20 26 29.8	
	comp=Z,36nm,0.9s						
K31A	O'Neill	6.43	351	Pn	Pn	20 24 45.7	+0.1
K31A				IAmb_Lg		20 26 36.2	
	comp=Z,36nm,0.8s						
SCIA	State Center	6.50	29	IAmb_Lg		20 26 54.3	
	comp=Z,34nm,0.8s						
S44A	Carbondale	6.66	75	Pn	Pn	20 24 48.3	-0.3
S44A				IAmb_Lg		20 26 51.1	
	comp=Z,34nm,0.7s						
SDCO	Great Sand Dun	6.66	285	Pn	Pn	20 24 48.9	-0.1
SIUC	Southern Illin	6.69	75	Pn	Pn	20 24 48.5	-0.6
OXF	Oxford	6.74	103	Pn	Pn	20 24 49.2	-0.6
W45A	Hickory Valley	6.76	97	IAmb_Lg		20 26 54.4	
	comp=Z,22nm,0.8s						
Y45A	Yeager Farm, C	6.86	108	Pn	Pn	20 24 50.7	-0.7
GDL2	Guadalupe Moun	7.06	237	Pn	Pn	20 24 53.5	-0.9
P43A	Skaggs, Pawnee	7.06	59	Pn	Pn	20 24 54.4	+0.2
T45A	Paducah	7.07	81	IAmb_Lg		20 27 12.5	
	comp=Z,34nm,0.7s						
Q44A	Meyer Farm, Va	7.14	66	Pn	Pn	20 24 56.3	+1.0
K38A	Parkersburg	7.30	28	IAmb_Lg		20 27 11.3	
	comp=Z,39nm,1.0s						
ECSD	EROS Data Cent	7.48	4	Pn	Pn	20 25 00.2	+0.3
L40A	Anamosa	7.51	38	Pn	Pn	20 24 59.4	-0.9
L40A				IAmb_Lg		20 27 14.0	
	comp=Z,22nm,0.8s						
PLAL	Pickwick Lake	7.69	97	Pn	Pn	20 25 01.9	-0.9
USIN	University of	7.95	75	IAmb_Lg		20 27 25.8	
	comp=Z,32nm,1.0s						
PHWY	Pilot Hill	8.06	311	IAmb_Lg		20 27 35.9	
	comp=Z,15nm,0.9s						
I37A	Lemond, Waseca	8.31	20	IAmb_Lg		20 27 44.8	
	comp=Z,19nm,1.0s						
JFWS	Jewell Farm	8.62	37	IAmb_Lg		20 27 44.2	
	comp=Z,20nm,0.7s						
CLTN	Cedars of Leba	8.94	88	IAmb_Lg		20 28 17.8	
	comp=Z,16nm,1.0s						
U49A	Red Boiling Sp	9.36	85	IAmb_Lg		20 28 19.9	
	comp=Z,26nm,1.0s						
L44A	Lake County Fo	9.42	48	IAmb_Lg		20 28 10.9	
	comp=Z,27nm,0.8s						
K43A	Burlington	9.49	45	IAmb_Lg		20 28 23.7	
	comp=Z,20nm,0.8s						
K22A	Casper	9.51	315	IAmb_Lg		20 28 25.8	
	comp=Z,14nm,0.8s						
I42A	Draeger Farm,	10.00	38	IAmb_Lg		20 28 31.5	
	comp=Z,15nm,0.9s						

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*IDC **27** 20:32:10.3±6.7, 50.°50N×173.°36W, h0^{km}, mb3.2/2, mb1 3.6/5, mb1mx3.3/62, mbtmp3.5/5, ML3.4/3, Error ellipse: s-maj=139.0km s-min=26.9km az=167.0*

*NEIC **27** 20:32:15.2±1.6, 50.°50N±0.°10×173.°90W±0.°02, h19^{km}±8^{km}, mb3.9/27, ML2.9/19(AEIC), Error ellipse: s-maj=13.9km s-min=1.4km az=177.0*

*AEIC **27** 20:32:15±3.1, 50.°49N±0.°04×174.°08W±0.°09, h13^{km}±4^{km}, Error ellipse: s-maj=8.4km s-min=6.3km az=107.0*

ISC 27 20:32:13.6±1.0**, 50.°55N**±0.°08×**173.°85W**±0.°06**, h10^{km}, n55, σ1.s59**/57**, mb3.8**/5**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATKA	Atka Island	1.67	353		Pb	20 32 43.9	-0.5
KOFP	Korovin Flat P	1.73	355		Pb	20 32 45.3	-0.2
KOKL	Mount Kliuchef	1.79	353		Pb	20 32 46.0	-0.4
KOKL					Sg	20 33 10.7	-0.3
GSMY	Great Sitkin M	2.04	318		Pn	20 32 48.4	+0.5
GSMY					Sn	20 33 14.1	+0.7
GSTR	Great Sitkin T	2.07	319		Pn	20 32 49.3	+0.8
GSTD	Great Sitkin T	2.08	317		Pn	20 32 49.1	+0.5
GSTD					Sn	20 33 15.4	+0.8
ADK	Adak	2.23	308		Sn	20 33 17.1	-0.9
ADK	Adak	2.23	308	Pn	Pn	20 32 50.2	-0.3
KIRH	Kanaga Island	2.44	305		Pn	20 32 53.9	+0.3
KIRH					Sn	20 33 24.0	+0.5
KIMD	Kanaga Island	2.45	301		Pn	20 32 53.4	-0.2
KIKV	Kanaga Island	2.47	304		Pn	20 32 54.1	+0.2
TAFP	Tanaga Falls P	2.93	299		Pn	20 33 00.6	+0.4
TAFP					Sn	20 33 36.2	+0.8
TASE	Tanaga Southea	2.93	298		Pn	20 33 00.8	+0.6
NIKH	Nikolski High	3.94	50	Pn	Pn	20 33 13.4	-0.6
AMKA	Amchitka	4.41	283	Pn	Pn	20 33 19.1	-1.4
UNV	Unalaska Valle	5.59	51	Pn	Pn	20 33 37.2	+0.5
AKUT	Akutan	6.11	51		Pn	20 33 45.6	+1.8
SDPT	Sand Point	9.39	54	Pn	Pn	20 34 30.1	+1.4
OHAK	Old Harbor	13.81	53	Pn	Pn	20 35 26.1	-3.0
KDAK	Kodiak Island	14.36	52	Pn	Pn	20 35 33.8	-2.9
	0.4nm,0.3s,baz=243,slow=6.9,SNR=8.6						
KDAK	Kodiak Island	14.36	52		Pn	20 35 34.1	-2.6
CNPM	China Poot	15.70	46	Pn	Pn	20 35 51.7	-2.9
CNPM				IAmb	IAmb	20 36 01.6	
	comp=Z,15nm,1.3s						
BRLK	Bradley Lake	15.96	46		Pn	20 35 54.9	-3.1
BRLK				IAmb	IAmb	20 36 19.6	
	comp=Z,29nm,1.6s						
SEW	Seward	16.76	46	Pn	Pn	20 36 04.5	-3.6
SEW				IAmb	IAmb	20 36 25.1	
	comp=Z,13nm,1.2s						
SUA	Susitna One	16.81	41	Pn	Pn	20 36 05.3	-3.6
PEA0B	Petropavlovsk-	17.72	289	P	P	20 36 22.1	+1.0
PETK	Petropavlovsk-	17.72	289	P	P	20 36 21.6	+0.5
	comp=Z,0.1nm,0.3s,baz=85,slow=15,SNR=4.9						
BPAW	Bear Paw Mtn.	18.19	33		P	20 36 26.6	+0.4
HIN	Hinchinbrook I	18.23	47	P	Pn	20 36 24.6	-1.9
FID	Port Fidalgo	18.37	46	P	Pn	20 36 24.7	-3.4
FID				IAmb	IAmb	20 36 38.9	
	comp=Z,16nm,1.4s						
SCM	Sheep Creek Mo	18.43	42	P	Pn	20 36 25.8	-3.1
SCM				IAmb	IAmb	20 36 47.4	
	comp=Z,12nm,1.4s						
IMAR	Indian Mountai	18.59	26	P	Pn	20 36 32.5	+1.7
KLU	Klutina	18.90	44	P	P	20 36 33.0	-1.1
M24K	Tolsona, Glenn	19.04	42	P	Pn	20 36 36.6	+0.3
RAGM	Ragged Mountai	19.08	48	P	P	20 36 36.2	+0.1
I23K	Minto, Yukon-K	19.39	32	P	P	20 36 38.7	-0.6
N25K	Chitina, Valde	19.53	44	P	Pn	20 36 42.0	-0.3

VRDI	Verde Repeater	19.92	46	P	P	20 36 46.2	+0.8
VRDI				IAmb	IAmb	20 36 59.2	
	comp=Z,6.9nm,1.4s						
IL31		20.04	35	P	Pn	20 36 47.6	-0.5
ILAR	Eielson Array	20.04	35	P	P	20 36 44.8	-1.6
	comp=Z,0.3nm,0.3s,baz=230,slow=8.6,SNR=17						
TGL	Tana Glacier	20.06	48	P	P	20 36 46.7	-0.1
TGL				IAmb	IAmb	20 37 06.2	
	comp=Z,11nm,1.5s						
BALM	Baldy	20.37	47	P	P	20 36 51.1	+0.9
BALM				IAmb	IAmb	20 36 60.0	
	comp=Z,6.3nm,1.2s						
DOT	Dot Lake	20.57	39	P	P	20 36 53.2	+1.0
DOT				IAmb	IAmb	20 37 12.4	
	comp=Z,6.2nm,1.6s						
BARN	Barnard Glacie	20.70	47	P	Pn	20 36 56.5	+0.3
BARN				IAmb	IAmb	20 37 01.6	
	comp=Z,5.4nm,1.3s						
CTGM	Chitina Glacie	20.82	48	P	Pn	20 36 57.8	+0.2
CTGM				IAmb	IAmb	20 37 07.2	
	comp=Z,11nm,1.5s						
PCA	Pinnacle	21.14	50	P	P	20 36 59.2	+0.7
PCA				IAmb	IAmb	20 37 03.7	
	comp=Z,9.3nm,1.1s						
BCAR	Beaver Creek A	21.28	42	P	P	20 37 01.7	+1.8
BCPM	Bancas Point	21.41	51	P	P	20 37 03.0	+1.6
SEY	Seymchan	21.97	317	P	P	20 37 07.6	+0.4
	comp=Z,0.5nm,0.6s,baz=196,slow=18,SNR=2.0						
EGAK	Eagle	22.20	38	P	P	20 37 11.5	+1.8
EGAK				IAmb	IAmb	20 37 29.9	
	comp=Z,5.2nm,1.4s						
BMAR	Burnt Mountain	22.30	30	P	P	20 37 13.6	+2.8
MIDW	Midway	22.47	188	P	P	20 37 13.3	+0.5
HYT	Haines Junctio	22.62	49	P	P	20 37 15.4	+1.0
HYT				IAmb	IAmb	20 37 43.1	
	comp=Z,5.5nm,1.3s						
SONM	Songino Array	49.80	300	P	P	20 41 06.8	+0.5
	comp=Z,0.2nm,0.5s,baz=59,slow=5.6,SNR=2.4						
SONM	Songino Array	49.80	300	IAmb	IAmb	20 41 14.6	
	comp=Z,1.2nm,1.4s						

IDC 27 20:36:53.7±6.4**, 12.°66S**×**167.°71E, h0**^{km}**, mb3.5**/2**, mb1 3.8**/2**, mb1mx3.3**/29**, mbtmp3.5**/2**, Error ellipse: s-maj=383.3km s-min=38.2km az=140.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	33.85	246	P	P	20 43 38.4	+0.2
	0.4nm,0.6s,baz=70,slow=9.9,SNR=7.7						
ILAR	Eielson Array	84.44	18	P	P	20 49 28.4	+0.6
	0.3nm,0.6s,baz=236,slow=5.2,SNR=5.6						
ARCES	ARCESS Array B	118.36	346	PKP	PKPdf	20 55 41.2	-1.4
	2.4nm,0.9s,baz=70,slow=3.0,SNR=1.6						

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*RSPR **27** 20:56:45.0, 19.°10N×68.°88W, h40^{km}±19^{km}, MD3.4/5*
*OSPL **27** 20:56:46.9±2.4, 18.°44N×68.°60W, h0^{km}±24^{km}, ML2.8*
NEIC 27 20:56:44.9±2.7**, 19.°1N**±0.°1×**68.°81W**±0.°06**, h38**^{km}±55^{km}**, 6C, Error ellipse: s-maj=17.3km s-min=7.4km az=196.0, North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DR12	Loma Pena Alta	0.64	238		Pn	20 56 55.7	-1.8
DR12				Sn	Sn	20 57 06.7	+0.2
SDD	Santo Domingo	1.24	238	Pn	Pn	20 57 07.8	+2.1
SDD				IAML		20 57 13.1	
	comp=N,274nm,2.9s						
SDD	Santo Domingo	1.24	238	eS	Sn	20 57 26.2	+5.1
BANI	BANI	1.64	244	Pn	Pn	20 57 12.6	+1.3
BANI	BANI	1.64	244	i P	Pn	20 57 14.7	+3.4
BANI				eS	Sn	20 57 36.8	+5.6
BANI				IAML		20 57 42.4	
	comp=Z,47nm,2.0s						
AGPR	Aguadilla, PR	1.74	112	⇑eP	Pn	20 57 12.1	-0.4
AGPR	Aguadilla, PR	1.74	112	eS	Sn	20 57 33.7	+0.3
AGPR	Aguadilla, PR	1.74	112		Sn	20 57 33.7	+0.3
AGPR	Aguadilla, PR	1.74	112		Pn	20 57 11.2	-1.3
AGPR				IAML		20 57 37.8	
	comp=N,221nm,0.8s						
AGPR				IAML		20 57 39.5	
	comp=E,202nm,0.7s						
AGPR	Aguadilla, PR	1.74	112	i P	Pn	20 57 11.6	-0.9
AGPR				eS	Sn	20 57 31.2	-2.2
AGPR				IAML		20 57 39.5	
	comp=Z,103nm,0.2s						
MPR	Mayaguez	1.83	120	Pn	Pn	20 57 12.8	-0.9
SC01	Santiago de lo	1.83	280	Pn	Pn	20 57 15.4	+1.5
SC01				IAML		20 58 04.9	
	comp=E,142nm,0.6s						
SC01	Santiago de lo	1.83	280	eS	Sn	20 57 49.8	+14
SC01				IAML		20 58 06.5	
	comp=Z,69nm,0.3s						
LSP	Las Mesas	1.89	120	⇑eP	Pn	20 57 14.8	+0.2
LSP	Las Mesas	1.89	120	eS	Sn	20 57 37.3	0.0
LSP	Las Mesas	1.89	120		Pn	20 57 14.8	+0.2
LSP					Sn	20 57 37.3	0.0
MLPR	Magueyes Islan	2.04	124	⇑eP	Pn	20 57 16.5	-0.1
MLPR	Magueyes Islan	2.04	124	eS	Sn	20 57 40.8	+0.1
MLPR	Magueyes Islan	2.04	124		Sn	20 57 40.8	+0.1
MLPR	Magueyes Islan	2.04	124		Pn	20 57 16.1	-0.5
AOPR	Arecibo Observ	2.10	111	⇑eP	Pn	20 57 17.3	-0.2
AOPR	Arecibo Observ	2.10	111	eS	Sn	20 57 42.9	+0.5
AOPR	Arecibo Observ	2.10	111		Sn	20 57 42.9	+0.5
AOPR	Arecibo Observ	2.10	111		Pn	20 57 16.9	-0.6
EMPR	Esperanza - Ma	2.26	106	⇑eP	Pn	20 57 20.1	+0.4
EMPR	Esperanza - Ma	2.26	106	eS	Sn	20 57 46.8	+0.6
EMPR	Esperanza - Ma	2.26	106		Pn	20 57 18.0	-1.6
EMPR				IAML		20 57 57.4	
	comp=E,169nm,0.5s						
EMPR				IAML		20 58 20.0	
	comp=N,146nm,2.5s						
EMPR	Esperanza - Ma	2.26	106		Sn	20 57 46.8	+0.6
SDDR	Presa de Saban	2.35	267		Pn	20 57 26.6	+5.6
SDDR				IAML		20 58 08.2	
	comp=N,100nm,0.4s						
SDDR	Presa de Saban	2.35	267	i P	Pn	20 57 26.7	+5.7
SDDR				eS	Sn	20 58 00.6	+12
SDDR				IAML		20 58 07.1	
	comp=Z,58nm,0.4s						
OBIP	Obispado Ponce	2.35	117	Pn	Pn	20 57 19.1	-1.8
OBIP				IAML		20 57 52.4	
	comp=E,68nm,0.5s						
OBIP				IAML		20 57 56.5	
	comp=N,79nm,0.6s						
CELP	Cerrillos	2.36	116	⇑eP	Pn	20 57 21.0	-0.1
CELP	Cerrillos	2.36	116	eS	Sn	20 57 49.8	+1.0
CELP	Cerrillos	2.36	116		Pn	20 57 21.0	-0.1
CELP					Sn	20 57 49.8	+1.0
ICMP	Isla Caja de M	2.50	119	Pn	Pn	20 57 23.4	+0.5
ICMP				IAML		20 58 52.9	
	comp=E,75nm,0.5s						
GCPR	Guaynabo City	2.71	107	Pn	Pn	20 57 24.4	-1.5
SJG	San Juan	2.72	111	Pn	Pn	20 57 24.5	-1.5
SJG				IAML		20 58 03.7	
	comp=E,69nm,0.5s						
SJG				IAML		20 58 04.7	
	comp=E,54nm,0.5s						
PDPR	Patillas Dam,	2.87	112	Pn	Pn	20 57 23.9	-4.1
PDPR				IAML		20 57 58.9	
	comp=E,56nm,2.9s						
CBYP	Canovanas	2.93	106	Pn	Pn	20 57 26.8	-2.1
HUMP	Col San Antoni	2.97	109	Pn	Pn	20 57 27.9	-1.6
HUMP				IAML		20 58 52.2	
	comp=N,86nm,1.4s						
GRTK	Grand Turk	3.22	318	Pn	Pn	20 57 33.8	+0.9
MTP	Monte Pirata	3.26	108	Pn	Pn	20 57 33.5	+0.1
MTP				IAML		20 59 36.5	
	comp=N,31nm,2.6s						
CUPR	Culebra, Puert	3.44	103	Pn	Pn	20 57 36.4	+0.5
CUPR				IAML		20 58 44.5	
	comp=N,26nm,3.5s						
CUPR				IAML		20 59 38.1	
	comp=E,26nm,2.4s						

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*IDC **27** 21:23:01.7±31.0, 23.°00S×177.°13W, h0^{km}, mb4.2/4, mb1 4.3/4, mb1mx3.8/36, mbtmp4.2/4, Error ellipse: s-maj=594.9km s-min=157.4km az=91.0*
*NEIC **27** 21:23:34.2±1.6, 22.°9S±0.°1×177.°9W±0.°1, h259^{km}±13^{km}, mb4.3/14, Error ellipse: s-maj=17.1km s-min=15.7km az=216.0*
ISC 27 21:23:33.6±0.8**, 22.°93S**±0.°10×**177.°88W**±0.°10**, h250**^{km}**, n24, σ1**^{s}**15**/23**, mb4.1**/11**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	6.29	180	Pn	Pn	21 25 07.0	+1.7
MSVF	Nonsavu	6.43	323	Pn	Pn	21 25 07.2	-0.1
NIUE	Niue	8.36	64	Pn	Pn	21 25 31.1	-0.5
MSWZ	Moikau Station	19.31	196	P	Pn	21 27 42.1	-2.5
BSWZ	Blackbirch Sta	19.96	198	P	P	21 27 47.3	+0.2
ARMA	Armidale	28.19	248	P	P	21 29 04.4	+0.9
EIDS	Eidsvold	28.40	259	P	P	21 29 06.6	+1.4
EIDS				IAmb	IAmb	21 29 08.9	
	comp=Z,17nm,1.6s						
CTAO	Charters Tower	33.44	268	P	P	21 29 51.5	+2.1
CTAO				IAmb	IAmb	21 29 52.0	
	comp=Z,5.9nm,0.7s						
TOO	Toolangi	34.61	237	P	P	21 29 58.8	-0.5
TOO				IAmb	IAmb	21 31 07.3	
	comp=Z,18nm,1.5s						
STKA	Stephens Creek	36.89	247	P	P	21 30 17.2	-1.4
	comp=Z,0.8nm,0.5s,baz=114,slow=10.0,SNR=3.3						
PATS	Pohnpei	37.66	319	P	P	21 30 25.6	+0.4
BBOO	Buckleboo	41.62	246	P	P	21 30 55.9	-1.7
BBOO				IAmb	IAmb	21 31 02.5	
	comp=Z,17nm,1.3s						
PTCN	Pitcairn Islan	43.53	103	P	P	21 31 13.4	+0.3
AS31	Alice Springs	44.12	259	P	P	21 31 16.7	-1.1
ASAR	Alice Springs	44.12	259	P	P	21 31 17.5	-0.4
	comp=Z,2.5nm,0.8s,baz=97,slow=7.4,SNR=25						
ASAR	Alice Springs	44.12	259	P	P	21 31 17.1	-0.7
WR0	Warramunga Arr	44.24	264	P	P	21 31 18.4	-0.4
WR0				IAmb	IAmb	21 32 22.3	
	comp=Z,16nm,1.7s						
WB2	Warramunga Arr	44.42	264	P	P	21 31 19.8	-0.4
WB2				IAmb	IAmb	21 32 10.6	
	comp=Z,20nm,1.9s						
WB0	Warramunga Arr	44.42	265	P	P	21 31 19.9	-0.3
WRAB	Tennant Creek	44.42	264	P	P	21 31 19.7	-0.5
WRA	Warramunga Arr	44.43	264	P	P	21 31 19.9	-0.4
	comp=Z,2.4nm,0.3s,baz=102,slow=8.3,SNR=85						
FORT	Forrest	48.48	249	P	P	21 31 50.1	-1.4
FORT				IAmb	IAmb	21 32 43.9	
	comp=Z,16nm,1.0s						
FITZ	Fitzroy Crossi	52.86	264	P	P	21 32 24.6	+0.4
	comp=Z,1.6nm,0.5s,baz=94,slow=6.8,SNR=2.9						
FITZ	Fitzroy Crossi	52.86	264	IAmb	IAmb	21 33 13.5	
	comp=Z,9.0nm,1.4s						

IDC 27 21:30:13.3±1.0**, 16.°89N**×**146.°03E, h0**^{km}**, mb3.5**/8**, mb1 3.8**/8**, mb1mx3.6**/48**, mbtmp3.5**/8**, Error ellipse: s-maj=32.3km s-min=23.6km az=112.0, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H11N1	WAKE ISLAND Hy	20.01	79	T	T	21 55 43.0	
	baz=266,slow=74,SNR=216						
H11N2	WAKE ISLAND Hy	20.02	79	T	T	21 55 43.5	
	baz=266,slow=74,SNR=231						
H11N3	WAKE ISLAND Hy	20.03	79	T	T	21 55 44.4	
	baz=266,slow=74,SNR=256						
WRA	Warramunga Arr	38.36	198	P	P	21 37 35.4	-0.9
	1.0nm,0.8s,baz=20,slow=9.2,SNR=4.6						
ASAR	Alice Springs	42.01	197	P	P	21 38 07.1	+0.5
	0.4nm,0.7s,baz=15,slow=7.7,SNR=2.3						
SONM	Songino Array	44.75	322	P	P	21 38 29.0	+0.3
	0.2nm,0.6s,baz=112,slow=9.5,SNR=2.2						
CMAR	Chiang Mai Arr	44.79	279	P	P	21 38 28.9	-0.3
	1.4nm,0.8s,baz=77,slow=6.4,SNR=11						
MKAR	Makanchi Array	59.94	315	P	P	21 40 21.9	+0.5
	0.3nm,0.8s,baz=99,slow=8.0,SNR=2.3						
ILAR	Eielson Array	65.13	26	P	P	21 40 54.1	-1.6
	0.3nm,0.6s,baz=261,slow=6.0,SNR=2.2						
YKA	Yellowknife Ar	79.44	28	P	P	21 42 20.8	-0.5
	0.4nm,0.7s,baz=292,slow=5.0,SNR=4.6						
NVAR	Mina Array Bea	84.01	52	P	P	21 42 48.1	+1.9
	0.5nm,0.7s,baz=240,slow=3.0,SNR=4.2						

IDC 27 21:30:33.2±2.7**, 11.°20S**×**119.°72E, h0**^{km}**, mb3.2**/1**, mb1 3.5**/4**, mb1mx3.2**/43**, mbtmp3.3**/4**, ML3.3**/3**, Error ellipse: s-maj=204.4km s-min=25.8km az=51.0, South of Sumba**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	8.94	141	Pn	Pn	21 32 43.3	-0.3
	0.3nm,0.3s,baz=316,slow=8.2,SNR=8.8						
FITZ				Sn	Sn	21 34 24.2	-0.9
	0.1nm,0.3s,baz=340,slow=2.4,SNR=2.8						
WRA	Warramunga Arr	16.54	123	Pn	Pn	21 34 26.5	-0.2
	0.1nm,0.3s,baz=295,slow=13,SNR=2.3						
ASAR	Alice Springs	18.34	134	P	P	21 34 50.3	+1.0
	0.1nm,0.3s,baz=320,slow=14,SNR=6.2						
MKAR	Makanchi Array	66.72	333	P	P	21 41 25.9	-0.2
	0.1nm,0.4s,baz=157,slow=6.0,SNR=1.4						

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*IDC **27** 21:33:47.0±1.2, 54.°07N×160.°41E, h0^{km}, mb3.7/9, mb1 4.0/9, mb1mx3.5/60, mbtmp3.7/9, MS3.8/1, Ms1 3.8/1, ms1mx2.7/54, Error ellipse: s-maj=38.7km s-min=12.0km az=149.0*
*KRSC **27** 21:33:49.0±0.9, 53.°55N×160.°88E, h49^{km}±18^{km}, ML4.1*
*MOS **27** 21:33:50.6±0.7, 53.°53N×160.°87E, h44^{km}, mb3.9/1, Error ellipse: s-maj=8.8km s-min=4.9km az=72.2*
*NEIC **27** 21:33:53.4±1.8, 53.°8N±0.°2×160.°5E±0.°2, h54^{km}±13^{km}, mb4.2/8, Error ellipse: s-maj=30.9km s-min=13.2km az=153.0*
ISC 27 21:33:50.5±1.3**, 53.°74N**±0.°04×**160.°77E**±0.°04**, h32**^{km}±10^{km}**, n102, σ1**^{s}**45**/139**, mb4.0**/14**, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	Mys Shipunski	0.78	215	PN	Pn	21 34 04.0	-1.3
SPN				S	Sn	21 34 13.2	-2.7
SPN	Mys Shipunski	0.78	215	eP	Pn	21 34 04.0	-1.3
SPN				eS	Sn	21 34 13.2	-2.7
NLC	Nalytchevo	1.03	237	PN	Pn	21 34 07.9	-0.7
NLC				S	Sn	21 34 20.8	-1.0
NLC	Nalytchevo	1.03	237	eP	Pn	21 34 07.9	-0.7
NLC				eS	Sn	21 34 20.8	-1.0
SDLR	Sedlovina	1.22	248	PN	Pn	21 34 11.5	+0.1
SDLR				S	Sn	21 34 26.1	-0.7
SDLR	Sedlovina	1.22	248	eP	Pn	21 34 11.5	+0.1
SDLR				eS	Sn	21 34 26.1	-0.7
SMAR	Somma	1.27	249	PN	Pn	21 34 12.1	-0.1
SMAR	Somma	1.27	249	eP	Pn	21 34 12.1	-0.1
UGLR	Uglovaya	1.28	246	PN	Pn	21 34 12.4	+0.2
UGLR				S	Sn	21 34 28.8	+0.5
UGLR	Uglovaya	1.28	246	eP	Pn	21 34 12.4	+0.2
UGLR				eS	Sn	21 34 28.8	+0.5
KRER	Koryakskii	1.28	251	PN	Pn	21 34 12.8	+0.4
KRER				S	Sn	21 34 28.9	+0.3
KRER	Koryakskii	1.28	251	eP	Pn	21 34 12.8	+0.4
KRER				eS	Sn	21 34 28.9	+0.3
AVH	Avacha	1.31	249	PN	Pn	21 34 13.1	+0.6
AVH				S	Sn	21 34 29.5	+0.6
AVH	Avacha	1.31	249	eP	Pn	21 34 13.1	+0.6
AVH				eS	Sn	21 34 29.5	+0.6
KRX	Arik	1.32	254	PN	Pn	21 34 13.1	+0.3
KRX				S	Sn	21 34 28.8	-0.6
KRX	Arik	1.32	254	eP	Pn	21 34 13.1	+0.3
KRX				eS	Sn	21 34 28.8	-0.6
KOK	Koryaka	1.35	252	PN	Pn	21 34 13.5	+0.3
KOK				S	Sn	21 34 30.2	+0.1
KOK	Koryaka	1.35	252	eP	Pn	21 34 13.5	+0.3
KOK				eS	Sn	21 34 30.2	+0.1
DALK	Dalny	1.40	240	PN	Pn	21 34 13.4	-0.4
DALK				S	Sn	21 34 29.9	-1.2
DALK	Dalny	1.40	240	eP	Pn	21 34 13.4	-0.4
DALK				eS	Sn	21 34 29.9	-1.2
KZV	Kizimen	1.41	349	PN	Pb	21 34 17.2	+1.0
KZV				S	Sb	21 34 36.3	+2.5
KZV	Kizimen	1.41	349	eP	Pb	21 34 17.2	+1.0
KZV				eS	Sb	21 34 36.3	+2.5
PET	Petropavlovsk	1.46	241	ePN	Pn	21 34 14.3	-0.2
PET				eS	Sn	21 34 30.1	-2.4
PET				smax	smax		
	comp=E,852nm,0.4s						
PET	Petropavlovsk	1.46	241	eP	Pn	21 34 14.4	-0.1
PET				eS	Sn	21 34 31.3	-1.2
PET	Petropavlovsk	1.46	241	Pn	Pn	21 34 14.6	0.0
TUMD	Tumrok D	1.48	352	eP	Pb	21 34 17.9	+0.4
TUMD				eS	Sb	21 34 37.1	+1.2
TUMR	Tumrok	1.59	347	PN	Pb	21 34 17.9	-1.4
TUMR				S	Sb	21 34 37.1	-2.0
TUMR	Tumrok	1.59	347	eP	Pb	21 34 20.2	+0.9
TUMR				eS	Sb	21 34 41.8	+2.7
GNL	Ganaly	1.68	270	PN	Pb	21 34 19.4	-1.5
GNL				S	Sb	21 34 40.6	-1.1
GNL	Ganaly	1.68	270	eP	Pb	21 34 19.4	-1.5
GNL				eS	Sb	21 34 40.6	-1.1
KRMR	Karymshinskiy	1.83	241	PN	Pn	21 34 20.2	+0.6
KRMR				S	Sn	21 34 42.0	+0.3
KRMR	Karymshinskiy	1.83	241	eP	Pn	21 34 20.2	+0.6
KRMR				eS	Sn	21 34 42.0	+0.3
RUS	Russkaya	1.89	227	PN	Pn	21 34 19.6	-0.9
RUS				S	Sn	21 34 40.4	-2.7
RUS	Russkaya	1.89	227	eP	Pn	21 34 19.6	-0.9
RUS				eS	Sn	21 34 40.4	-2.7
PEA0B	Petropavlovsk-	1.95	252	Pn	Pn	21 34 22.2	+1.0
PEA0B				Sn	Sn	21 34 45.4	+0.8
PETK	Petropavlovsk-	1.95	252	Pg	Pn	21 34 22.1	+0.9
	comp=E,17nm,0.3s,baz=97,slow=21,SNR=141						
PETK				Lg	Lg	21 34 46.8	
	comp=E,25nm,0.3s,baz=148,slow=41,SNR=14						
PETK				LR	LR	21 34 55.8	
	comp=E,73nm,20.7s,baz=47,slow=37						
PETK	Petropavlovsk-	1.95	252	Pn	Pn	21 34 22.4	+1.1
PETK				Sn	Sn	21 34 45.3	+0.8
MTVR	Mutnovka	2.01	232	PN	Pn	21 34 22.0	-0.2
MTVR	Mutnovka	2.01	232	eP	Pn	21 34 22.0	-0.2
GRL	Gorelyy	2.02	235	PN	Pn	21 34 22.5	+0.2
GRL	Gorelyy	2.02	235	eP	Pn	21 34 22.5	+0.2
KMNR	Kamenistaya	2.04	351	PN	Pb	21 34 27.3	+0.3
KMNR	Kamenistaya	2.04	351	eP	Pb	21 34 27.3	+0.3
ASAK	Asacha	2.20	233	PN	Pn	21 34 25.4	+0.5
ASAK	Asacha	2.20	233	eP	Pn	21 34 25.4	+0.5
KIRR	Kirishev	2.23	354	PN	Pb	21 34 30.3	+0.1
KIRR	Kirishev	2.23	354	eP	Pb	21 34 30.3	+0.1
BZWR	Bezymyannyi-We	2.23	356	PN	Pb	21 34 30.0	-0.3
BZWR	Bezymyannyi-We	2.23	356	eP	Pb	21 34 30.0	-0.3
APC	Apacha	2.32	251	PN	Pn	21 34 27.2	+0.9
APC				S	Sn	21 34 54.1	+0.4
APC	Apacha	2.32	251	eP	Pn	21 34 27.2	+0.9
APC				eS	Sn	21 34 54.1	+0.4
KOZ	Kozyrevsk	2.38	348	PN	Pb	21 34 31.4	-1.3
KOZ	Kozyrevsk	2.38	348	eP	Pb	21 34 31.4	-1.3
ESO	Esso	2.50	332	PN	Pb	21 34 32.6	-2.1
ESO	Esso	2.50	332	eP	Pb	21 34 32.6	-2.1
KDTR	Khodutka, Kamc	2.53	221	PN	Pn	21 34 29.6	+0.3
KDTR				S	Sn	21 34 58.1	-0.9
KDTR	Khodutka, Kamc	2.53	221	eP	Pn	21 34 29.6	+0.3
KDTR				eS	Sn	21 34 58.1	-0.9
KLY	Klyuchi	2.58	358	PN	Pb	21 34 34.5	-1.5
KLY	Klyuchi	2.58	358	eP	Pb	21 34 34.5	-1.5
SRDR	Sredinnyy	2.65	347	PN	Pb	21 34 34.6	-2.7
SRDR	Sredinnyy	2.65	347	eP	Pb	21 34 34.6	-2.7
KBTR	Krutoberegovo	2.74	25	PN	Pb	21 34 36.1	-2.7
KBTR	Krutoberegovo	2.74	25	eP	Pb	21 34 36.1	-2.7
KBG	Krutoberegovo	2.76	23	PN	Pb	21 34 36.4	-2.6
KBG	Krutoberegovo	2.76	23	eP	Pb	21 34 36.4	-2.6
BDR	Baidarnaya	2.85	5	PN	Pb	21 34 38.2	-2.4
BDR				S	Sb	21 35 12.5	-2.5
BDR	Baidarnaya	2.85	5	eP	Pb	21 34 38.2	-2.4
BDR				eS	Sb	21 35 12.5	-2.5
SMKR	Semkarok	2.88	8	PN	Pb	21 34 38.6	-2.5
SMKR	Semkarok	2.88	8	eP	Pb	21 34 38.6	-2.5
SRKR	Sorokina	2.93	4	PN	Pb	21 34 39.4	-2.6
SRKR	Sorokina	2.93	4	eP	Pb	21 34 39.4	-2.6
PAU	Pauzhetka	3.32	228	PN	Pn	21 34 41.9	+1.8
PAU	Pauzhetka	3.32	228	eP	Pn	21 34 41.9	+1.8
BKI	Bering	3.37	62	PN	Pn	21 34 42.8	+2.0
BKI	Bering	3.37	62	eP	Pn	21 34 42.8	+2.0
BKI				eS	Sn	21 35 18.8	-0.8
SKR	Severo-Kuril’s	4.19	225	ePN	Pb	21 35 07.4	+4.0
SKR				eS	Sn	21 35 40.1	+0.2
SKR				smax	smax		
	comp=E,86nm,0.8s						
SKR				smax	smax		
	comp=N,88nm,0.9s						
SKR				MLR	MLR		
	comp=Z,800nm,17.0s						
TTA	Tatalina	24.02	50	P	P	21 39 04.0	+1.8
TTA				pmax	pmax		
	comp=Z,4.0nm,1.4s						
TTA	Tatalina	24.02	50	P	P	21 39 04.0	+1.8
IMAR	Indian Mountai	25.25	43	P	P	21 39 14.5	+1.3
ILAR	Eielson Array	28.07	46	P	P	21 39 39.3	+0.7
	comp=Z,0.7nm,0.7s,baz=268,slow=7.9,SNR=8.4						
BMAR	Burnt Mountain	28.98	41	P	P	21 39 48.0	+1.3
BCAR	Beaver Creek A	30.48	49	P	P	21 40 01.7	+1.7
EGAK	Eagle	30.52	46	P	P	21 40 00.8	+0.6
EGAK				IAmb	IAmb	21 40 01.3	
	comp=Z,2.1nm,0.9s						
BARN	Barnard Glacie	30.93	53	P	P	21 40 05.3	+1.2
BARN				IAmb	IAmb	21 40 14.8	
	comp=Z,3.9nm,1.2s						
PCA	Pinnacle	31.83	54	P	P	21 40 13.3	+1.4
PCA				IAmb	IAmb	21 40 24.7	
	comp=Z,10nm,1.3s						
BCPM	Bancas Point	32.17	55	P	P	21 40 15.3	+0.5
BCPM				IAmb	IAmb	21 40 25.5	
	comp=Z,6.3nm,1.1s						
INK	Inuvik	33.11	38	P	P	21 40 24.2	+1.3
	comp=Z,1.6nm,1.0s,baz=270,slow=11,SNR=3.1						
INK	Inuvik	33.11	38	P	P	21 40 24.7	+1.8
INK				IAmb	IAmb	21 40 39.1	
	comp=Z,4.7nm,1.4s						
H11N2	WAKE ISLAND Hy	34.27	170	T	T	22 16 58.8	
	baz=354,slow=76,SNR=22						
H11N3	WAKE ISLAND Hy	34.29	170	T	T	22 16 59.9	
	baz=354,slow=76,SNR=20						
H11N1	WAKE ISLAND Hy	34.29	170	T	T	22 17 09.1	
	baz=354,slow=76,SNR=22						
JOW	Kunigami	36.02	235	LR	LR	21 56 59.2	
	comp=Z,136nm,18.1s,baz=351,slow=39						
YOJ	Yonaguni jima	40.61	239	P	P	21 41 27.5	+0.4
YOJ	Yonaguni jima	40.61	239	P	P	21 41 27.5	+0.4
EUNU	Eureka	41.22	14	P	P	21 41 32.9	+1.2
YKA	Yellowknife Ar	42.41	43	P	P	21 41 41.5	0.0
	comp=Z,0.3nm,0.5s,baz=302,slow=7.8,SNR=4.3						
MKAR	Makanchi Array	48.24	296	P	P	21 42 24.8	-3.2
	comp=Z,0.3nm,0.9s,baz=39,slow=6.1,SNR=1.8						
ARCES	ARCESS Array B	52.80	342	P	P	21 43 01.5	-0.4
	comp=Z,2.1nm,0.9s,baz=34,slow=8.7,SNR=1.1						
PDAR	Pinedale Array	56.85	62	P	P	21 43 33.5	+1.5
	comp=Z,0.4nm,0.7s,baz=338,slow=1.6,SNR=3.8						
FINES	FINESS Array B	59.69	337	P	P	21 43 49.8	-1.4
	comp=Z,1.4nm,0.7s,baz=25,slow=5.0,SNR=5.5						
NOA	NORSAR Array B	63.03	344	P	P	21 44 12.6	-1.2
	comp=Z,3.1nm,1.1s,baz=21,slow=6.7,SNR=3.6						
TXAR	Lajitas Array	70.01	68	P	P	21 45 00.3	+1.3
	comp=Z,0.2nm,0.5s,baz=328,slow=8.5,SNR=1.8						

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*IDC **27** 21:43:29.7±1.9, 24.°37N×141.°40E, h150^{km}±14^{km}, mb3.4/12, mb1 3.6/13, mb1mx3.2/52, mbtmp3.8/13, MS3.5/1, Ms1 3.5/1, ms1mx2.5/44, Error ellipse: s-maj=24.2km s-min=17.2km az=110.0*
*NEIC **27** 21:43:29.7±2.4, 24.°24N±0.°07×141.°4E±0.°2, h149^{km}±8^{km}, mb4.1/9, Error ellipse: s-maj=24.8km s-min=10.3km az=86.0*
*JMA **27** 21:43:35.2±0.1, 24.°97N×140.°54E, h106^{km}, M4.4*
ISC 27 21:43:29.3±0.6**, 24.°34N**±0.°06×**141.°5E**±0.°1**, h148**^{km}**, n33, σ1**^{s}**58**/36**, mb3.7**/16**, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHH2	Haha-jima-NKT2	2.37	16	P	Pn	21 44 11.2	+2.5
JHH2				eS	Sn	21 44 38.6	-0.6
CBIJ	Chichi jima	2.82	13	P	Pn	21 44 16.2	+1.9
CBIJ				eS	Sn	21 44 47.3	-1.8
JCJ	Chichijima	2.82	13	P	Pn	21 44 16.3	+2.0
	46nm,0.3s,baz=93,slow=5.0,SNR=100						
JCJ				S	Sn	21 44 49.2	+0.1
	44nm,0.3s,baz=264,slow=22,SNR=13						
ANA2	Anatahan	8.90	153	Pn	Pn	21 45 35.6	+0.8
ANA2				Sn	Sn	21 47 10.5	-3.2
BSO3	Boso 3	10.46	356	P	Pn	21 45 52.6	-2.4
BSO4	Boso 4	10.66	355	P	Pn	21 45 57.6	-0.2
JAG	Ashikaga	12.17	352	P	Pn	21 46 14.1	-3.6

JHO	**Hitachi**	**12.25**	**357**	P	**Pn**	**21 46 15.7**	**-3.1**
JHO				*e*S	Sn	21 48 20.7	-13
KLR	**Kul'dur**	**25.98**	**345**	LR	LR	21 59 46.0	
	comp=Z,104nm,18.5s,baz=329,slow=38						
MA2	**Magadan**	**35.81**	**8**	P	**P**	**21 50 14.3**	**+0.1**
	0.9nm,0.3s,baz=182,slow=11,SNR=3.6						
SEY	**Seymchan**	**39.27**	**8**	P	**P**	**21 50 44.1**	**+1.0**
	0.9nm,0.5s,baz=186,slow=9.5,SNR=7.2						
CMAR	**Chiang Mai Arr**	**39.89**	**270**	P	**P**	**21 50 50.4**	**+1.4**
	0.4nm,0.6s,baz=52,slow=7.5,SNR=4.2						
WR0	**Warramunga Arr**	**44.54**	**189**	P	**P**	**21 51 26.4**	**-0.1**
WR0				IAmb	IAmb	21 51 27.0	
	comp=Z,1.8nm,0.8s						
WB2	**Warramunga Arr**	**44.56**	**190**	P	**P**	**21 51 27.7**	**+1.1**
WB2				IAmb	IAmb	21 51 27.9	
	comp=Z,6.8nm,1.2s						
WRA	**Warramunga Arr**	**44.56**	**190**	P	**P**	**21 51 26.3**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=7.2,slow=8.6,SNR=9.5						
PSA00	**Pilbara Seismi**	**50.24**	**206**	P	**P**	**21 52 10.8**	**+0.4**
MKAR	**Makanchi Array**	**51.75**	**311**	P	**P**	**21 52 22.0**	**+0.5**
	comp=Z,0.6nm,0.4s,baz=87,slow=9.4,SNR=29						
MKAR	**Makanchi Array**	**51.75**	**311**	P	**P**	**21 52 22.3**	**+0.8**
MAKZ	**Makanchi**	**51.97**	**311**	P	**P**	**21 52 23.3**	**+0.1**
KURK	**Kurchatov**	**54.47**	**316**	P	**P**	**21 52 40.6**	**-0.7**
KURBB	**Kurchatov Arra**	**54.52**	**316**	P	**P**	**21 52 40.8**	**-0.8**
	comp=Z,0.4nm,0.4s,baz=93,slow=7.7,SNR=10						
RSO	**Redoubt South**	**57.23**	**33**	P	**P**	**21 53 00.0**	**-1.0**
AAK	**Ala-Archa**	**57.31**	**306**	P	**P**	**21 53 01.2**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=342,slow=16,SNR=1.3						
IMAR	**Indian Mountai**	**57.80**	**26**	P	**P**	**21 53 06.6**	**+1.9**
LHI	**Lord Howe Isla**	**58.05**	**162**	P	**P**	**21 53 06.5**	**-0.3**
BRLK	**Bradley Lake**	**58.07**	**33**	P	**P**	**21 53 08.9**	**+2.2**
BVAR	**Borovoye Array**	**59.64**	**319**	P	**P**	**21 53 16.8**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=74,slow=12,SNR=5.8						
ILAR	**Eielson Array**	**60.44**	**28**	P	**P**	**21 53 23.8**	**+0.9**
	comp=Z,0.7nm,0.9s,baz=227,slow=6.0,SNR=4.6						
BALM	**Baldy**	**62.36**	**32**	P	**P**	**21 53 37.7**	**+1.7**
BALM				IAmb	IAmb	21 53 38.2	
	comp=Z,4.5nm,1.5s						
YKA	**Yellowknife Ar**	**74.87**	**28**	P	**P**	**21 54 53.5**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=296,slow=5.2,SNR=4.5						
ARCES	**ARCESS Array B**	**75.92**	**341**	P	**P**	**21 54 59.8**	**+0.6**
	comp=Z,2.2nm,0.8s,baz=71,slow=6.8,SNR=1.1						
KBZ	**Khabaz**	**79.40**	**313**	P	**P**	**21 55 18.6**	**-0.3**
	comp=Z,1.7nm,0.9s,baz=311,slow=20,SNR=2.1						
FINES	**FINESS Array B**	**80.12**	**334**	P	**P**	**21 55 20.7**	**-1.8**
	comp=Z,2.7nm,1.1s,baz=54,slow=7.1,SNR=1.6						

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*JMA **27** 21:44:33.0±0.1, 23°.36N×122°.71E, h56^{km}, M2.1*
*TAP **27** 21:44:34.4, 23°.42N×122°.68E, h62^{km}±1^{km}, ML2.5, D*
ISC 27 21:44:33.7±1.2**, 23°.36N**±0°.04×**122°.73E**±0°.03**, h50**^{km}**, n60, σ1^{s}24**/111**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**1.12**	**13**	*e*P	**Pn**	**21 44 53.8**	**+0.6**
	baz=10.0						
YOJ				*e*S	**Sn**	**21 45 08.0**	**+0.5**
	baz=10.0						
YOJ	**Yonaguni jima**	**1.12**	**13**	P	**Pn**	**21 44 53.3**	**+0.1**
YOJ				*e*S	**Sn**	**21 45 07.7**	**+0.1**
HATJ	**Hateruma jima**	**1.20**	**55**	P	**Pn**	**21 44 54.2**	**0.0**
HATJ				S	**Sn**	**21 45 09.0**	**-0.5**
HGSD	**Ruisui**	**1.21**	**276**	*i* P	**Pn**	**21 44 53.3**	**-1.0**
	baz=274						
HGSD				S	**Sn**	**21 45 07.6**	**-1.9**
	baz=274						
ESL	**Shilin**	**1.27**	**291**	P	**Pn**	**21 44 54.1**	**-1.1**
	baz=282						
ESL				S	**Sn**	**21 45 09.2**	**-2.0**
	baz=282						
CHKT	**Chengkung**	**1.28**	**258**	*e*S	**Sn**	**21 45 09.4**	**-2.0**
	baz=250						
EYUL	**Yuli**	**1.30**	**270**	P	**Pn**	**21 44 55.1**	**-0.3**
	baz=262						
EYUL				S	**Sn**	**21 45 11.0**	**-0.7**
	baz=262						
EHY	**Hungye**	**1.30**	**277**	P	**Pn**	**21 44 55.2**	**-0.3**
	baz=274						
EHY				S	**Sn**	**21 45 10.7**	**-1.1**
	baz=274						
TWF1	**Yuli**	**1.32**	**270**	*i* P	**Pn**	**21 44 55.4**	**-0.4**
	baz=263						
TWF1				S	**Sn**	**21 45 11.7**	**-0.5**
	baz=263						
YULB	**Yu-li**	**1.32**	**272**	P	**Pn**	**21 44 55.2**	**-0.6**
	baz=269						
YULB				*e*S	**Sn**	**21 45 11.3**	**-0.9**
	baz=269						
NACB	**Ninganchiao**	**1.32**	**308**	P	**Pn**	**21 44 54.8**	**-0.9**
	baz=302						
NACB				S	**Sn**	**21 45 09.6**	**-2.6**
	baz=302						
FULB	**Fuli**	**1.33**	**263**	P	**Pn**	**21 44 55.2**	**-0.7**
	baz=255						
FULB				*e*S	**Sn**	**21 45 11.2**	**-1.4**
	baz=255						
IRIF	**Iriomote-Funau**	**1.33**	**43**	P	**Pn**	**21 44 55.9**	**-0.1**
IRIF				*e*S	**Sn**	**21 45 12.4**	**-0.2**
LDUT	**Ludao**	**1.35**	**240**	*e*P	**Pn**	**21 44 55.8**	**-0.4**
	baz=237						
LDUT				*e*S	**Sn**	**21 45 10.7**	**-2.3**
	baz=237						
EDH	**Donghe**	**1.37**	**254**	P	**Pn**	**21 44 56.0**	**-0.5**
	baz=251						
EDH				S	**Sn**	**21 45 11.5**	**-2.0**
	baz=251						
ENA	**Nanau**	**1.39**	**320**	P	**Pn**	**21 44 57.0**	**+0.2**
	baz=327						
ENA				*e*S	**Sn**	**21 45 13.8**	**-0.3**
	baz=327						
ETLH	**Xiulin Townshi**	**1.42**	**307**	P	**Pn**	**21 44 57.3**	**0.0**
	baz=298						
ETLH				S	**Sn**	**21 45 14.0**	**-0.8**
	baz=298						
JKRS	**Kuro-shima**	**1.46**	**53**	P	**Pn**	**21 44 57.9**	**+0.2**
JKRS				S	**Sn**	**21 45 15.1**	**-0.6**
VWDT	**VWDT**	**1.51**	**285**	P	**Pn**	**21 44 58.5**	**+0.2**
	baz=277						
VWDT				*e*S	**Sn**	**21 45 14.9**	**-1.9**
	baz=277						
WHF	**Hehuan Shan**	**1.55**	**300**	P	**Pn**	**21 44 58.9**	**-0.5**
	baz=291						
WHF				*e*S	**Sn**	**21 45 17.1**	**-1.5**
	baz=291						
NDS	**Dongshan**	**1.57**	**324**	P	**Pn**	**21 44 59.5**	**+0.3**
	baz=331						
NDS				S	**Sn**	**21 45 17.8**	**-0.6**
	baz=331						
ELDTW	**Lidau**	**1.58**	**264**	P	**Pn**	**21 44 59.2**	**-0.3**
	baz=256						
ELDTW				*e*S	**Sn**	**21 45 17.0**	**-1.9**
	baz=256						
CHGB	**Renai**	**1.59**	**296**	P	**Pn**	**21 44 59.8**	**+0.2**
	baz=295						
CHGB				S	**Sn**	**21 45 18.1**	**-1.1**
	baz=295						
TWGBT	**Beinan**	**1.61**	**251**	P	**Pn**	**21 45 00.2**	**+0.4**
	baz=252						
TWGBT				S	**Sn**	**21 45 18.5**	**-1.0**
	baz=252						
TWG	**Pinlang**	**1.62**	**251**	P	**Pn**	**21 45 00.3**	**+0.4**
	baz=252						
TWG				*e*S	**Sn**	**21 45 19.2**	**-0.4**
	baz=252						
FUSS	**Fushou**	**1.62**	**303**	P	**Pn**	**21 45 00.1**	**0.0**
	baz=302						
FUSS				*e*S	**Sn**	**21 45 19.1**	**-0.9**
	baz=302						
NNSB	**Datong**	**1.63**	**311**	P	**Pn**	**21 44 59.9**	**-0.2**
	baz=303						
NNSB				S	**Sn**	**21 45 18.0**	**-2.0**
	baz=303						
NNSH	**Datong**	**1.63**	**311**	P	**Pn**	**21 45 00.4**	**+0.3**
	baz=304						
NNSH				S	**Sn**	**21 45 18.8**	**-1.2**
	baz=304						
JIJ	**Ishigaki jima**	**1.63**	**52**	P	**Pn**	**21 44 59.9**	**-0.2**
JIJ				S	**Sn**	**21 45 19.5**	**-0.5**
NNS	**Nan Shan**	**1.64**	**311**	*e*S	**Sn**	**21 45 19.1**	**-1.3**
	baz=303						
ENTT	**Nioudou**	**1.66**	**320**	P	**Pn**	**21 45 01.1**	**+0.6**
	baz=320						
ENTT				*e*S	**Sn**	**21 45 18.3**	**-2.3**
	baz=320						
TWT	**Tachien**	**1.68**	**302**	*e*S	**Sn**	**21 45 21.0**	**-0.3**
	baz=301						
SSLB	**Suanglung**	**1.68**	**285**	*e*P	**Pn**	**21 45 00.6**	**-0.2**
	baz=291						
SSLB				*e*S	**Sn**	**21 45 20.6**	**-0.6**
	baz=291						
LAY	**Lan-yu**	**1.71**	**220**	*e*P	**Pn**	**21 45 02.5**	**+1.4**
	baz=217						
LAY				*e*S	**Sn**	**21 45 20.7**	**-1.1**
	baz=217						
SMLT	**Sun Moon Lake**	**1.76**	**288**	*e*S	**Sn**	**21 45 22.2**	**-0.9**
	baz=292						
YHNB	**Yeheng**	**1.80**	**317**	*e*P	**Pn**	**21 45 03.1**	**+0.7**
	baz=307						
YHNB				*e*S	**Sn**	**21 45 22.4**	**-1.6**
	baz=307						
TYC	**Yuchr**	**1.80**	**288**	*e*P	**Pn**	**21 45 03.2**	**+0.8**
	baz=293						
TYC				*e*S	**Sn**	**21 45 22.9**	**-1.1**
	baz=293						
NWLT	**Wulai**	**1.80**	**322**	*e*P	**Pn**	**21 45 03.3**	**+0.9**
	baz=330						
NWLT				*e*S	**Sn**	**21 45 23.4**	**-0.7**
	baz=330						
TIPB	**Shuangxi**	**1.80**	**333**	*e*P	**Pn**	**21 45 02.0**	**-0.5**
	baz=345						
TIPB				*e*S	**Sn**	**21 45 24.2**	**0.0**
	baz=345						
ECL	**Taimali**	**1.80**	**245**	*e*S	**Sn**	**21 45 22.9**	**-1.3**
	baz=252						
WCS	**Beigang Elemen**	**1.80**	**293**	P	**Pn**	**21 45 03.0**	**+0.6**
	baz=292						
WCS				*e*S	**Sn**	**21 45 23.7**	**-0.5**
	baz=292						
STYH	**Taoyuan**	**1.81**	**264**	P	**Pn**	**21 45 03.3**	**+0.9**
	baz=260						
STYH				*e*S	**Sn**	**21 45 24.0**	**-0.2**
	baz=260						
NSK	**Sanguang**	**1.81**	**316**	*e*P	**Pn**	**21 45 03.9**	**+1.3**
	baz=306						
NSK				*e*S	**Sn**	**21 45 22.7**	**-1.8**
	baz=306						
STYT	**Tauyuan**	**1.82**	**264**	*e*P	**Pn**	**21 45 03.8**	**+1.0**
	baz=259						
WHP	**Taichung City**	**1.87**	**300**	*e*P	**Pn**	**21 45 05.3**	**+1.9**
	baz=299						
WHP				*e*S	**Sn**	**21 45 26.2**	**+0.3**
	baz=299						
JISG	**Ishigakijimahi**	**1.89**	**50**	P	**Pn**	**21 45 03.3**	**-0.3**
JISG				S	**Sn**	**21 45 25.8**	**-0.5**
CHN5	**Tsauling**	**1.90**	**277**	*e*P	**Pn**	**21 45 05.5**	**+1.7**
	baz=276						
CHN5				*e*S	**Sn**	**21 45 27.1**	**+0.5**
	baz=276						
TPUB	**Ta-pu**	**1.93**	**269**	*e*P	**Pn**	**21 45 06.2**	**+2.0**
	baz=270						
TPUB				*e*S	**Sn**	**21 45 30.1**	**+2.8**
	baz=270						
WTP	**Ta-pu**	**1.95**	**267**	*e*P	**Pn**	**21 45 06.4**	**+1.9**
	baz=272						
WTP				*e*S	**Sn**	**21 45 29.3**	**+1.5**
	baz=272						
SLGT	**Liugui**	**1.95**	**260**	*e*P	**Pn**	**21 45 05.9**	**+1.5**
	baz=259						
SLGT				*e*S	**Sn**	**21 45 30.9**	**+3.1**
	baz=259						
CHN4	**Tsaushan**	**1.96**	**270**	*e*P	**Pn**	**21 45 07.0**	**+2.4**
	baz=274						
CHN4				*e*S	**Sn**	**21 45 29.3**	**+1.2**
	baz=274						
EAST	**Anshuo**	**1.99**	**241**	*e*P	**Pn**	**21 45 05.5**	**+0.4**
	baz=239						
EAST				*e*S	**Sn**	**21 45 27.4**	**-1.3**
	baz=239						
LIOB	**Emei**	**2.02**	**310**	*e*P	**Pn**	**21 45 07.8**	**+2.3**
	baz=309						
LIOB				*e*S	**Sn**	**21 45 31.0**	**+1.4**
	baz=309						
NSTT	**Nanjuang**	**2.02**	**309**	*e*P	**Pn**	**21 45 08.5**	**+3.1**
	baz=308						
NSTT				*e*S	**Sn**	**21 45 30.0**	**+0.5**
	baz=308						
SSD	**Sandimen**	**2.03**	**253**	*e*P	**Pn**	**21 45 07.5**	**+2.1**
	baz=251						
TSMG	**Majia**	**2.03**	**252**	*e*P	**Pn**	**21 45 06.0**	**+0.5**
	baz=252						
TSMG				*e*S	**Sn**	**21 45 28.7**	**-0.9**
	baz=252						
TWK	**Hsinying**	**2.06**	**268**	*e*P	**Pn**	**21 45 08.2**	**+2.1**
	baz=272						
TWK				*e*S	**Sn**	**21 45 33.1**	**+2.5**
	baz=272						
MASBT	**Mashibuluo**	**2.07**	**249**	*e*P	**Pn**	**21 45 06.8**	**+0.8**
	baz=248						
SLIU	**Shizi**	**2.12**	**238**	*e*P	**Pn**	**21 45 07.0**	**+0.3**
	baz=236						
JTJ	**Tarama**	**2.21**	**54**	P	**Pn**	**21 45 08.2**	**+0.3**
JTJ				S	**Sn**	**21 45 33.9**	**-0.1**

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*IDC **27** 21:46:27.8±2.0, 17°.65S×167°.23E, h0^{km}, mb3.8/3, mb1 3.9/4, mb1mx3.5/37, mbtmp3.8/4, ML3.1/1, MS3.2/1, Ms1 3.2/1, ms1mx2.5/32, Error ellipse: s-maj=63.4km s-min=33.5km az=121.0*
*NEIC **27** 21:46:27.8±2.4, 17°.74S±0°.03×167°.9E±0°.2, h35^{km}±2^{km}, mb4.5/10, Error ellipse: s-maj=24.6km s-min=4.0km az=83.0*
ISC 27 21:46:28.1±1.0**, 17°.77S**±0°.07×**167°.9E**±0°.1**, h35**^{km}**, n20, σ1^{s}72**/18**, mb4.3**/9**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**2.39**	**345**	Pn	**Pn**	**21 47 06.7**	**+1.9**
DZM	**Mont Dzumac**	**4.48**	**197**	Pn	**Pn**	**21 47 36.0**	**+2.4**
	0.9nm,0.3s,baz=138,slow=23,SNR=17						
DZM				Sn	**Sn**	**21 48 22.6**	**-2.0**
	1.4nm,0.3s,baz=116,slow=22,SNR=2.0						
DZM	**Mont Dzumac**	**4.48**	**197**	Pn	**Pn**	**21 47 36.4**	**+2.7**
FOZ	**Fox Glacier**	**25.74**	**177**	P	**P**	**21 51 54.3**	**-1.0**
FOZ				IAmb	IAmb	21 52 04.1	
	comp=Z,22nm,1.2s						
LBZ	**Lake Benmore**	**26.61**	**176**	P	**P**	**21 52 04.2**	**+1.0**
LBZ				IAmb	IAmb	21 52 14.3	
	comp=Z,9.2nm,1.1s						
WKZ	**Wanaka**	**27.00**	**178**	P	**P**	**21 52 06.1**	**-0.6**
WKZ				IAmb	IAmb	21 52 18.0	
	comp=Z,17nm,1.2s						
STKA	**Stephens Creek**	**27.57**	**234**	P	**P**	**21 52 14.0**	**+2.0**
	comp=Z,1.8nm,0.7s,baz=68,slow=10,SNR=4.4						
STKA	**Stephens Creek**	**27.57**	**234**	P	**P**	**21 52 12.9**	**+0.9**
RAR	**Rarotonga**	**30.69**	**102**	P	**P**	**21 52 39.1**	**-0.6**
WR0	**Warramunga Arr**	**31.57**	**261**	P	**P**	**21 52 47.7**	**+0.1**
WB0	**Warramunga Arr**	**31.71**	**261**	P	**P**	**21 52 48.1**	**-0.8**
WB0				IAmb	IAmb	21 52 58.2	
	comp=Z,4.2nm,1.1s						
ASAR	**Alice Springs**	**32.23**	**254**	P	**P**	**21 52 52.9**	**-0.6**
	comp=Z,0.6nm,0.7s,baz=71,slow=9.9,SNR=5.0						
BBOO	**Buckleboo**	**32.26**	**236**	IAmb	IAmb	21 52 56.2	
	comp=Z,5.7nm,1.1s						
BBOO	**Buckleboo**	**32.26**	**236**	P	**P**	**21 52 53.2**	**-0.3**
BBOO				IAmb	IAmb	21 52 56.2	
	comp=Z,5.7nm,1.1s						
BBOO	**Buckleboo**	**32.26**	**236**	P	**P**	**21 52 55.7**	**+2.2**
FITZ	**Fitzroy Crossi**	**40.09**	**263**	LR	LR	22 09 37.1	
	comp=Z,32nm,19.1s,baz=328,slow=35						
NWAO	**Narrogin (SRO)**	**47.73**	**241**	P	**P**	**21 55 01.6**	**-0.2**
MORW	**Morawa**	**48.52**	**247**	P	**P**	**21 55 04.7**	**-3.2**
MORW				IAmb	IAmb	21 55 24.5	
	comp=Z,5.1nm,0.8s						
MYLDM	**Lahad Datu**	**53.77**	**290**	P	**P**	**21 55 47.4**	**-0.1**
ILAR	**Eielson Array**	**89.23**	**18**	P	P	21 59 25.6	+5.6
	comp=Z,0.4nm,0.7s,baz=236,slow=4.2,SNR=4.2						

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*IDC **27** 22:25:05.9±0.8, 38°.70N×26°.46E, h0^{km}, mb3.8/12, mb1 3.9/18, mb1mx3.7/47, mbtmp3.8/18, ML3.7/6, Error ellipse: s-maj=14.9km s-min=13.8km az=80.0*
*DDA **27** 22:25:06.7, 38°.68N×26°.36E, h25^{km}, MW4.1*
*ATH **27** 22:25:06.2, 38°.68N×26°.34E, h51^{km}±3^{km}, ML3.9/10, Error ellipse: s-maj=3.7km s-min=1.3km az=59.0*
*ISK **27** 22:25:06.6, 38°.69N×26°.41E, h17^{km}, ML4.1/33*
*THE **27** 22:25:08.2, 38°.69N×26°.34E, h15^{km}, ML3.9/9, Error ellipse: s-maj=1.2km s-min=0.5km az=272.0*
*NEIC **27** 22:25:10.6±2.2, 38°.66N±0°.05×26°.38E±0°.07, h48^{km}±8^{km}, Error ellipse: s-maj=7.7km s-min=7.5km az=137.0*
ISC 27 22:25:07.4±0.9**, 38°.67N**±0°.02×**26°.39E**±0°.02**, h17**^{km}±6^{km}**, n226, σ1^{s}14**/251**, mb3.9**/19**, 13C-17D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FOCM	**Foa**	**0.27**	**81**	PG	**Pg**	**22 25 12.7**	**-0.6**
FOCM				SG	**Sg**	**22 25 16.9**	**-0.4**
URLA	**Izmir**	**0.35**	**153**	*i* P	**Pg**	**22 25 13.7**	**-1.0**
URLA				*i* S	**Sb**	**22 25 19.8**	**-0.7**
CHOS	**Chios island**	**0.39**	**223**	P	**Pb**	**22 25 16.1**	**+0.2**
CHOS				AML	AML	22 25 21.6	
	comp=E,63173µm,0.2s						
CHOS				AML	AML	22 25 22.9	
	comp=N,35925µm,0.3s						
CHOS	**Chios island**	**0.39**	**223**	P	**Pb**	**22 25 16.0**	**+0.2**
CHOS				S	**Sb**	**22 25 21.4**	**-0.1**
	comp=N,25µm,0.2s						
CHOS	**Chios island**	**0.39**	**223**	PG	**Pb**	**22 25 16.1**	**+0.2**
CHOS				SG	**Sb**	**22 25 21.6**	**+0.1**
ZEYE	**Izmir, Urla-Ze**	**0.44**	**168**	*i* P	**Pb**	**22 25 16.5**	**-0.2**
ZEYE				IAML		22 25 28.0	
	comp=N,11µm,0.9s						
ZEYE				IAML		22 25 28.0	
	comp=E,12µm,0.3s						
DKL	**Dikili**	**0.57**	**45**	PG	**Pg**	**22 25 17.8**	**-0.8**
PRK	**Paraskevi**	**0.58**	**351**	P	**Pb**	**22 25 19.2**	**+0.1**
PRK				S	**Sb**	**22 25 28.1**	**+1.0**
PRK				AML	AML	22 25 28.3	
	comp=N,72625µm,0.5s						
PRK				AML	AML	22 25 30.9	
	comp=E,80562µm,0.3s						
PRK	**Paraskevi**	**0.58**	**351**	P	**Pb**	**22 25 19.4**	**+0.3**
PRK				S	**Sb**	**22 25 27.3**	**+0.2**
	comp=E,39µm,0.4s						
ZEDA	**zmir-Bergama**	**0.61**	**61**	*i* P	**Pg**	**22 25 18.9**	**-0.6**
ZEDA				IAML		22 25 30.0	
	comp=N,3µm,0.6s						
ZEDA				IAML		22 25 35.0	
	comp=E,2µm,0.8s						
PSRA	**Psara**	**0.66**	**259**	P	**Pn**	**22 25 20.8**	**-1.2**
PSRA				S	**Sb**	**22 25 30.0**	**+0.7**
PSRA				AML	AML	22 25 32.6	
	comp=N,52735µm,0.2s						
PSRA				AML	AML	22 25 32.8	
	comp=E,45354µm,0.2s						
AYVA	**Ayvalik**	**0.68**	**20**	*i* P	**Pg**	**22 25 19.8**	**-0.9**
AYVA				*i* S	**Sb**	**22 25 30.1**	**+0.3**
AYVA				IAML		22 25 32.0	
	comp=N,7µm,0.4s						
AYVA				IAML		22 25 33.0	
	comp=E,4µm,0.7s						
SIGR	**SIGRI**	**0.68**	**322**	P	**Pg**	**22 25 20.1**	**-0.7**
SIGR				S	**Sb**	**22 25 29.8**	**-0.2**
SIGR				AML	AML	22 25 33.5	
	comp=N,44493µm,0.6s						
SIGR				AML	AML	22 25 33.7	
	comp=E,51291µm,0.6s						
SIGR	**SIGRI**	**0.68**	**322**	P	**Pb**	**22 25 20.5**	**-0.3**
SIGR				S	**Sb**	**22 25 29.5**	**-0.5**
	comp=E,24µm,0.5s						
SIGR	**SIGRI**	**0.68**	**322**	PG	**Pb**	**22 25 20.5**	**-0.3**
DGB	**zmir**	**0.73**	**148**	*i* P	**Pg**	**22 25 21.2**	**-0.4**
DGB				IAML		22 25 32.0	
	comp=E,3µm,0.2s						
DGB				*i* S	**Sb**	**22 25 32.1**	**+0.8**
DGB				IAML		22 25 34.0	
	comp=N,3µm,0.5s						
KOCA	**Canakkale, Ayv**	**0.85**	**347**	*i* P	**Pg**	**22 25 23.4**	**-0.6**
KOCA				*i* S	**Sb**	**22 25 35.6**	**+0.8**
KOCA				IAML		22 25 37.0	
	comp=N,16µm,0.5s						
KOCA				IAML		22 25 37.0	
	comp=E,9µm,0.5s						
BUHA	**Balikesir, Bur**	**0.99**	**33**	*i* P	**Pg**	**22 25 25.4**	**-1.1**
BUHA				IAML		22 25 41.0	
	comp=N,6µm,0.6s						
BUHA				IAML		22 25 42.0	
	comp=E,9µm,0.5s						
SMG	**Samos**	**1.02**	**160**	P	**Pb**	**22 25 26.5**	**-0.1**
SMG				AML	AML	22 25 44.3	
	comp=E,15706µm,0.3s						
SMG				AML	AML	22 25 46.9	
	comp=N,16377µm,0.4s						
SMG	**Samos**	**1.02**	**160**	P	**Pn**	**22 25 27.0**	**0.0**
SMG				S	**Sn**	**22 25 42.1**	**+1.2**
	comp=N,8µm,0.3s						
BAYC	**CANAKKALE_Bayr**	**1.07**	**6**	*i* P	**Pb**	**22 25 26.9**	**-0.6**
BAYC				IAML		22 25 43.0	
	comp=E,5µm,0.4s						
BAYC				IAML		22 25 45.0	
	comp=N,4µm,0.4s						
AKHS	**Akhisar**	**1.13**	**79**	*i* P	**Pb**	**22 25 28.5**	**+0.1**
AKHS				*i* S	**Sb**	**22 25 43.8**	**+0.8**
AKHS				IAML		22 25 46.0	
	comp=E,2µm,0.4s						
EZN	**Ezine**	**1.15**	**358**	P	**Pb**	**22 25 28.5**	**-0.4**
EZN				S	**Sg**	**22 25 44.2**	**-0.6**
	comp=E,9µm,0.6s						
EZN	**Ezine**	**1.15**	**358**	PN	**Pn**	**22 25 29.0**	**+0.3**
GCAM	**G?zelcaml?**	**1.18**	**145**	*i* P	**Pg**	**22 25 29.4**	**-0.7**
GCAM				*i* S	**Sn**	**22 25 46.2**	**+1.6**
GCAM				IAML		22 25 49.0	
	comp=N,2µm,0.3s						
GCAM				IAML		22 25 51.0	
	comp=E,2µm,1.7s						
GOMA	**Golmarmara-Man**	**1.20**	**88**	PN	**Pn**	**22 25 28.9**	**-0.4**
BOZC	**Bozcaada**	**1.20**	**347**	*i* P	**Pn**	**22 25 28.9**	**-0.4**
BOZC				*i* P	**Pn**	**22 25 28.9**	**-0.4**
BOZC				IAML		22 25 47.0	
	comp=N,6µm,0.6s						
BOZC				IAML		22 25 47.0	
	comp=N,6µm,0.6s						
BOZC				IAML		22 25 48.0	
	comp=E,6µm,0.5s						
BOZC				IAML		22 25 48.0	
	comp=E,6µm,0.5s						
STEP	**BALIKESIR_Sava**	**1.25**	**55**	*i* P	**Pn**	**22 25 30.5**	**+0.4**
STEP				IAML		22 25 50.0	
	comp=N,5µm,0.8s						
STEP				IAML		22 25 50.0	
	comp=E,6µm,0.5s						
ECEA	**Canakkale, Ece**	**1.38**	**353**	*i* P	**Pn**	**22 25 32.1**	**+0.3**
ECEA				IAML		22 25 54.0	
	comp=N,15µm,0.8s						
ECEA				IAML		22 25 54.0	
	comp=E,21µm,0.5s						
AYDB	**Zeytinkoy-Aydi**	**1.38**	**121**	PN	**Pn**	**22 25 32.6**	**+0.6**
EFSA	**Agios Efstrati**	**1.39**	**309**	P	**Pn**	**22 25 31.9**	**-0.1**
EFSA				S	**Sb**	**22 25 49.5**	**-0.9**
BALY	**Balya**	**1.43**	**41**	*i* P	**Pn**	**22 25 31.7**	**-1.0**
SKY	**Skiros Island**	**1.45**	**279**	P	**Pn**	**22 25 32.5**	**-0.4**
SKY	**Skiros Island**	**1.45**	**279**	P	**Pb**	**22 25 33.2**	**-0.8**
TNSA	**Tinos**	**1.49**	**221**	P	**Pn**	**22 25 33.3**	**0.0**
LIA	**Limnos Island**	**1.54**	**323**	P	**Pn**	**22 25 33.9**	**-0.2**
LIA				S	**Sn**	**22 25 53.1**	**-0.6**
LIA				AML	AML	22 25 59.9	
	comp=N,3609µm,0.4s						
LIA				AML	AML	22 26 00.2	
	comp=E,5942µm,0.5s						
LIA	**Limnos Island**	**1.54**	**323**	P	**Pn**	**22 25 34.4**	**+0.3**
LIA				S	**Sn**	**22 25 52.9**	**-0.8**
	comp=E,2µm,0.4s						
GOKA	**anakkale-Gk**	**1.56**	**346**	*i* P	**Pn**	**22 25 34.6**	**+0.2**
GADA	**Gvkgeada**	**1.56**	**346**	P	**Pn**	**22 25 34.3**	**-0.1**
GADA				S	**Sn**	**22 25 53.8**	**-0.5**
	comp=E,2µm,0.5s						
GADA	**Gvkgeada**	**1.56**	**346**	PN	**Pn**	**22 25 34.0**	**-0.4**
KARY	**Karystos**	**1.66**	**248**	P	**Pn**	**22 25 35.9**	**+0.1**
KARY	**Karystos**	**1.66**	**248**	P	**Pn**	**22 25 36.0**	**+0.3**
KARY				S	**Sn**	**22 25 55.5**	**-1.2**
MANT	**Manisa**	**1.71**	**95**	*i* P	**Pn**	**22 25 37.2**	**+0.6**
MANT	**Manisa**	**1.71**	**95**	Pn	**Pn**	**22 25 37.1**	**+0.5**
LPK	**Lapseki**	**1.72**	**9**	PN	**Pn**	**22 25 35.6**	**-1.0**
GELI	**Tayfur-Gelibol**	**1.73**	**2**	PN	**Pn**	**22 25 36.6**	**0.0**
APE	**Apeiranthos**	**1.74**	**203**	P	**Pn**	**22 25 36.7**	**-0.1**
APE				AML	AML	22 26 05.7	
	comp=N,1680µm,0.7s						
APE				AML	AML	22 26 09.2	
	comp=E,2214µm,0.6s						
APE	**Apeiranthos**	**1.74**	**203**	P	**Pn**	**22 25 36.8**	**-0.1**
APE				S	**Sn**	**22 25 58.6**	**0.0**
	comp=E,938nm,0.5s						
APE	**Apeiranthos**	**1.74**	**203**	PN	**Pn**	**22 25 36.9**	**+0.1**
MLSB	**Milas**	**1.76**	**141**	PN	**Pn**	**22 25 37.5**	**+0.4**
BODT	**Bodrum**	**1.76**	**155**	P	**Pn**	**22 25 36.6**	**-0.5**

BODT	Bodrum	1.76	155	PN	Pn	22 25 36.7	-0.4
KULA	Kula-Manisa	1.79	94	P	Pn	22 25 38.2	+0.7
KULA	Kula-Manisa	1.79	94	PN	Pn	22 25 37.7	+0.2
KYMI	Kymi, Euboea I	1.79	269	P	Pn	22 25 37.4	-0.2
KYMI				AML	AML	22 26 13.0	
	comp=E,1003µm,0.8s						
KYMI				AML	AML	22 26 14.6	
	comp=N,954µm,1.1s						
KYMI	Kymi, Euboea I	1.79	269	P	Pn	22 25 37.8	+0.3
BDRM	Kayabasi	1.81	152	*i* P	Pn	22 25 38.3	+0.5
BDRM				IAML		22 26 15.0	
	comp=N,657nm,0.7s						
BDRM				IAML		22 26 16.0	
	comp=E,345nm,0.6s						
DEMI	Demirci	1.85	78	*i* P	Pn	22 25 39.0	+0.6
KRBG	Karabiga-Canak	1.86	22	PN	Pn	22 25 38.2	-0.2
DURS	Dursunbey	1.87	60	*i* P	Pn	22 25 38.9	+0.3
SMTH	Samothraki Isl	1.92	340	P	Pn	22 25 39.2	0.0
SMTH				AML	AML	22 26 11.4	
	comp=N,2006µm,0.5s						
SMTH				AML	AML	22 26 17.6	
	comp=E,1831µm,0.5s						
SMTH	Samothraki Isl	1.92	340	P	Pn	22 25 39.3	0.0
SMTH				S	Sn	22 26 03.4	+0.4
	comp=E,965nm,0.5s						
EREA	Eretria	1.94	263	P	Pn	22 25 40.0	+0.4
EREA	Eretria	1.94	263	P	Pn	22 25 40.1	+0.5
DST	Dursunbey	1.97	61	PN	Pn	22 25 39.8	-0.2
KOSK	Kos Island	1.97	166	PN	Pn	22 25 40.5	+0.5
ERIK	Erikli-Kesan	2.00	3	PN	Pn	22 25 40.5	+0.2
DION	Dionisos Attik	2.02	254	P	Pn	22 25 40.9	+0.2
DION	Dionisos Attik	2.02	254	P	Pn	22 25 41.1	+0.4
EDC	Edincik	2.02	34	PN	Pn	22 25 40.6	-0.1
USAK	Uak-Merkez	2.06	88	*i* P	Pn	22 25 42.1	+0.9
SIMA	Simav-Kutahya	2.06	78	PN	Pn	22 25 40.7	-0.7
SMAA	Simav-Kutahya	2.07	77	PN	Pn	22 25 40.9	-0.5
ENEZ	Enez	2.07	355	P	Pn	22 25 41.7	+0.4
ENEZ	Enez	2.07	355	PN	Pn	22 25 41.2	-0.1
MULA	Mugla, Merkez-	2.08	132	*i* P	Pn	22 25 42.4	+0.8
PTL	Penteli	2.08	253	P	Pn	22 25 41.9	+0.4
PTL				AML	AML	22 26 18.6	
	comp=E,860µm,0.5s						
PTL				AML	AML	22 26 19.5	
	comp=N,1451µm,0.8s						
PTL	Penteli	2.08	253	P	Pn	22 25 41.7	+0.2
RKY	Sarkoy-Tekirda	2.10	17	PN	Pn	22 25 41.7	-0.2
MRMT	Marmara Adasi	2.14	25	PN	Pn	22 25 42.4	0.0
YER	Yerkesik	2.14	135	P	Pn	22 25 43.4	+1.0
YER	Yerkesik	2.14	135	PN	Pn	22 25 42.9	+0.5
ATHU	Athens Univers	2.17	252	P	Pn	22 25 43.1	+0.4
GZKV	Gazikoy-Tekird	2.20	19	PN	Pn	22 25 43.4	+0.3
VLY	Voula,Athens	2.20	249	P	Pn	22 25 43.7	+0.6
KCTX	Karacabey (Bur	2.20	43	PN	Pn	22 25 43.1	-0.1
ALN	Alexandroupoli	2.24	353	P	Pn	22 25 43.6	0.0
ALN	Alexandroupoli	2.24	353	PN	Pn	22 25 43.6	0.0
ALN	Alexandroupoli	2.24	353	Pn	Pn	22 25 43.9	+0.2
THAS	Thassos island	2.32	327	P	Pn	22 25 44.8	0.0
TAVA	DENIZLI_Tavas	2.33	120	*i* P	Pn	22 25 46.0	+1.0
THT2	Imerovigli	2.36	199	PN	Pn	22 25 45.6	+0.2
ORLT	Orhaneli	2.38	54	PN	Pn	22 25 45.5	-0.1
GEDZ	Gediz	2.39	80	PN	Pn	22 25 46.2	+0.4
TURN	Turunc	2.40	142	*i* P	Pn	22 25 46.6	+0.8
SANT	Santorini	2.41	198	Pn	Pn	22 25 47.0	+0.9
MRSB	Marmaris-Mugla	2.42	143	PN	Pn	22 25 46.4	+0.2
PAIG	Paliouri	2.45	302	P	Pn	22 25 47.2	+0.7
KHAL	Karahalli	2.45	96	*i* P	Pn	22 25 47.8	+1.1
TKR	Tekirdag	2.48	20	PN	Pn	22 25 46.9	0.0
OUR	Ouranopolis	2.50	312	P	Pn	22 25 47.6	+0.4
OUR	Ouranopolis	2.50	312	PN	Pn	22 25 47.2	0.0
TVSB	Tavsanli	2.51	71	PN	Pn	22 25 47.1	-0.4
RDO	Rodhopi	2.56	345	P	Pn	22 25 48.6	+0.6
RDO	Rodhopi	2.56	345	PN	Pn	22 25 48.1	+0.1
MDNY	Mudanya-Bursa	2.57	48	PN	Pn	22 25 48.3	+0.1
DALY	Dalyan (Mula)	2.58	135	PN	Pn	22 25 48.9	+0.6
DALY	Dalyan (Mula)	2.58	135	*i* P	Pn	22 25 49.6	+1.3
ATAL	Atalanti	2.64	272	P	Pn	22 25 49.9	+0.8
KAVA	Kavala	2.73	329	P	Pn	22 25 50.8	+0.3
GEMT	Gemlik	2.79	50	PN	Pn	22 25 51.8	+0.6
ARG	Arkhangelos	2.81	150	P	Pn	22 25 52.6	+1.0
ARG	Arkhangelos	2.81	150	PN	Pn	22 25 52.3	+0.7
TRML	Termal-Yalova	2.89	47	PN	Pn	22 25 52.0	-0.6
SLVT	Silivri	2.91	28	PN	Pn	22 25 52.8	-0.1
BASM	Basmaki-Afyon	2.98	103	PN	Pn	22 25 54.1	+0.2
YLV	Yalova	2.98	50	PN	Pn	22 25 54.4	+0.5
CFTB	Yalova	3.00	48	PN	Pn	22 25 54.6	+0.5
KARP	Karpathos	3.18	169	Pn	Pn	22 25 58.2	+1.6
AGG	Agios Georgios	3.19	278	Pn	Pn	22 25 57.8	+1.0
SRS	Serrai	3.26	319	P	Pn	22 25 58.2	+0.5
ISP	Isparta	3.36	103	Pn	Pn	22 26 00.5	+1.3
ELL	Elmali	3.39	123		Pn	22 26 01.6	+2.0
AKAS	Kas	3.53	133		Pn	22 26 03.4	+1.8
IDI	Anoyia	3.58	200	Pn	Pn	22 26 02.5	+0.3
	comp=N,2.2nm,0.3s,baz=0.5,slow=11,SNR=19						
IDI				Sn	Sn	22 26 44.4	+0.2
	comp=N,3.5nm,0.3s,baz=336,slow=18,SNR=2.0						
ITM	Ithomi	3.83	249	Pn	Pn	22 26 06.9	+1.3
VAY	Valandovo	3.95	313	*i* Pn	Pn	22 26 09.2	+2.0
MDUB	Mudurnu	4.13	63	Pn	Pn	22 26 10.9	+1.2
FNA	Florina	4.40	300		Pn	22 26 14.7	+1.2
STIP	Stip	4.41	314	*i* Pn	Pn	22 26 13.8	+0.3
VTS	Vitosha	4.62	330	⇑P	Pn	22 26 17.3	+0.9
VTS	Vitosha	4.62	330	Pn	Pn	22 26 17.5	+1.1
RAZG	Razgrad	4.89	1	⇑P	Pn	22 26 20.7	+0.6
PLVB	Pleven	4.90	345	⇓P	Pn	22 26 21.1	+0.9
COPA	Copaceanca	5.53	351	⇓P	Pn	22 26 29.6	+0.7
ICOR	Ion Corvin	5.54	11	⇑P	Pn	22 26 29.9	+0.9
BR131	Keskin Array S	5.73	77	Pn	Pn	22 26 33.0	+1.2
BRTR	Keskin Array B	5.73	77	Pn	Pn	22 26 33.5	+1.8
	comp=N,0.6nm,0.3s,baz=255,slow=14,SNR=19						
BRTR	Keskin Array B	5.73	77	Pn	Pn	22 26 33.2	+1.4
HUMR	Humele	5.95	350	⇓P	Pn	22 26 35.3	+0.7
TIRR	Tirgusor	5.98	14	Pn	Pn	22 26 35.4	+0.4
TLBR	Topalu	6.00	11	⇑P	Pn	22 26 35.9	+0.6
BOVS	Bovan	6.09	326	⇑P	Pn	22 26 37.3	+0.7
HARR	Harsova	6.12	10	⇓P	Pn	22 26 37.5	+0.5
SCTE	Santa Cesarea	6.30	285	Pn	Pn	22 26 41.5	+2.1
PDG	Podgorica	6.60	307	Pn	Pn	22 26 46.8	+3.1
CSS	Mathiatis	6.68	122	Pn	Pn	22 26 47.3	+2.5
MLR	Muntele Rosu	6.82	357	Pn	Pn	22 26 48.8	+2.0
	comp=N,1.4nm,0.3s,baz=217,slow=4.1,SNR=21						
MLR				Lg	Lg	22 28 44.8	
	comp=N,0.7nm,0.3s,baz=273,slow=21,SNR=1.6						
MLR	Muntele Rosu	6.82	357	⇑P	Pn	22 26 47.8	+1.0
MLR	Muntele Rosu	6.82	357	Pn	Pn	22 26 48.3	+1.5
BISRR	Bisoca	6.88	2	⇓P	Pn	22 26 47.8	+0.3
HERR	Herculane	6.88	336	⇓P	Pn	22 26 47.6	+0.2
MDVR	Moldovita	7.04	332	⇓P	Pn	22 26 50.4	+0.8
LOT	Lotru	7.05	345	⇑P	Pn	22 26 50.7	+0.8
PLOR	Plostina	7.18	1	⇓P	Pn	22 26 53.3	+1.8
VRI	Vrincioaia	7.20	2	⇑P	Pn	22 26 52.1	+0.4
GZR	Gura Zlata	7.23	339	⇓P	Pn	22 26 52.3	0.0
DIVS	Divibare	7.25	320	Pn	Pn	22 26 53.7	+1.2
DOPR	Dopca	7.33	355	⇓P	Pn	22 26 54.6	+1.0
OZUR		7.43	357	⇓P	Pn	22 26 56.7	+1.7
TIP	Timpagrande	7.53	277	Pn	Pn	22 26 58.3	+1.9
MDB	Medias	7.61	349	⇓P	Pn	22 26 58.7	+1.2
BZS	Buzias	7.79	334	⇓P	Pn	22 27 00.2	+0.2
TESR	Tescani	7.84	1	⇓P	Pn	22 27 01.4	+0.8
BIZ	Bicaz	8.27	359	⇓P	Pn	22 27 08.3	+1.9
SIRR	Siria	8.36	337	⇑P	Pn	22 27 07.7	0.0
MILM	Milestii Mici	8.43	11	⇑P	Pn	22 27 08.7	+0.1
DRGR		8.55	343	⇓P	Pn	22 27 10.8	+0.4
PRAR	RASCA	8.69	359	⇑P	Pn	22 27 14.1	+1.9
SGRT	San Giovanni R	8.71	294	Pn	Pn	22 27 13.2	+0.7
BURAR	Bucovina Array	8.98	355	⇑P	Pn	22 27 17.6	+1.3
BURAR	Bucovina Array	8.98	355		Pn	22 27 18.3	+1.9
BUR08	Bucovina Ar. S	9.01	355	Pn	Pn	22 27 18.8	+2.1
MMAI	Mount Meron Ar	9.24	125	Pn	Pn	22 27 19.8	-0.1
	comp=N,2.2nm,0.3s,baz=311,slow=12,SNR=34						
MMAI				Sn	Sn	22 28 59.5	-3.9
	comp=N,1.2nm,0.3s,baz=313,slow=26,SNR=6.8						
MORH	Mrgy, Hungar	9.46	325	⇓P	Pn	22 27 23.6	+0.8
SORM	Soroca	9.57	8	⇑P	Pn	22 27 24.7	+0.5
RAFF	Raffo Rosso	9.61	265	Pn	Pn	22 27 26.4	+1.4
KOLS	Kolonicke sedl	10.68	345	*e*	Pn	22 27 45.5	+6.0
NRCA	Norcia	10.89	297	Pn	Pn	22 27 42.3	-0.3
KWP	Kalwaria Pacla	11.27	348	Pn	Pn	22 27 48.8	+1.3
EIL	Elat	11.43	139	Pn	Pn	22 27 49.9	0.0
	comp=N,0.2nm,0.3s,baz=355,slow=6.5,SNR=6.9						
EIL				Sn	Sn	22 29 49.7	-7.5
	comp=N,0.1nm,0.3s,baz=323,slow=6.3,SNR=2.0						
MURB	Monte Urbino	11.44	298	Pn	Pn	22 27 51.1	+1.2
AKASG	Malin Array Be	12.20	9	Pn	Pn	22 27 59.2	-1.0
	comp=N,0.6nm,0.3s,baz=202,slow=12,SNR=2.4						
AKASG	Malin Array Be	12.20	9		Pn	22 28 00.6	+0.5
ZOU	Zoufplan	12.63	313	Pn	Pn	22 28 09.4	+3.1
ZCCA	Zocca	12.86	301	Pn	Pn	22 28 12.1	+2.7
CTI	Castel Tesino	13.15	309	Pn	Pn	22 28 15.4	+2.1
GERES	GERESS Array B	13.67	322	Pn	P	22 28 30.9	+1.7
	comp=N,0.1nm,0.3s,baz=131,slow=12,SNR=11						
KHC	Kasperske Hory	13.93	323	Pn	Pn	22 28 26.5	+2.5
BNI	Bardonecchia	15.99	300		P	22 28 54.6	-0.5
SENIN	Lac Senin/Sane	16.01	305		Pn	22 28 53.4	+1.4
SENIN				IAmb	IAmb	22 29 12.8	
	comp=Z,7.6nm,1.1s						
BFO	Black Forest	16.24	312	Pn	Pn	22 28 52.8	-1.9
ECH	Echery	16.87	311	Pn	Pn	22 29 00.7	-1.9
FIA1	FINESS Array S	22.80	360	P	P	22 30 09.8	+0.9
FIA1				IAmb	IAmb	22 30 23.1	
	comp=Z,6.0nm,1.1s						
FINES	FINESS Array B	22.80	360	P	P	22 30 10.1	+1.1
	comp=Z,1.3nm,0.7s,baz=180,slow=7.6,SNR=5.3						
HFS	Hagfors	22.93	344	P	P	22 30 09.4	-1.0
	comp=Z,0.6nm,0.5s,baz=145,slow=11,SNR=4.2						
ESBB	Sonseca Array	23.50	282	P	P	22 30 18.6	+2.3
ESBB				IAmb	IAmb	22 30 20.2	
	comp=Z,9.2nm,1.0s						
ESDC	Sonseca Array	23.50	282	P	P	22 30 19.1	+2.6
	comp=Z,3.7nm,0.8s,baz=72,slow=10,SNR=18						
ESDC	Sonseca Array	23.50	282	P	P	22 30 17.4	+1.0
KLMR	Klimovskoe	23.68	16	*e*P	P	22 30 16.4	-1.4
KLMR				AMP		22 30 19.4	
	comp=Z,10.0nm,0.9s						
PAB	San Pablo	23.82	282	P	P	22 30 20.8	+1.3
PAB				IAmb	IAmb	22 30 37.0	
	comp=Z,2.7nm,1.1s						
NC602	NORSAR Array S	23.97	342	P	P	22 30 20.3	-0.3
NAO01	NORSAR Array S	24.22	341	P	P	22 30 23.1	+0.1
NB2	NORSAR Subarra	24.31	342	P	P	22 30 24.5	+0.7
	comp=Z,0.8nm,0.6s,baz=156,slow=10						
NOA	NORSAR Array B	24.31	342	P	P	22 30 23.9	+0.1
	comp=Z,0.8nm,0.7s,baz=144,slow=9.4,SNR=4.3						
NBO00	NORSAR Array S	24.41	342	P	P	22 30 24.5	-0.2
NBO00				IAmb	IAmb	22 30 37.0	
	comp=Z,2.6nm,0.8s						
NC303	NORSAR Array S	24.44	342	P	P	22 30 26.1	+1.2
GEYT	Alibeck	24.85	82	P	P	22 30 30.7	+1.8
	comp=Z,0.9nm,0.5s,baz=225,slow=55,SNR=1.4						
GEYT	Alibeck	24.85	82	P	P	22 30 28.8	-0.2
MDT	Midelt	25.75	266	P	P	22 30 39.5	+2.3
	comp=Z,2.3nm,0.8s,baz=334,slow=3.7,SNR=4.1						
SFS	San Fernando	25.86	275	P	P	22 30 34.3	-3.7
BRVK	Borovoye	33.21	50	P	P	22 31 42.3	-0.8
BRVK				IAmb	IAmb	22 31 47.6	
	comp=Z,2.8nm,0.8s						
KKAR	Karatay Array	33.36	68	P	P	22 31 45.3	+0.7
TOA0	Torodi Ar. Sit	33.55	227	P	P	22 31 47.1	+0.7
TOA0				IAmb	IAmb	22 31 59.0	
	comp=Z,2.5nm,1.1s						
TORD	Torodi Ar. Bea	33.55	227	P	P	22 31 48.5	+2.1
	comp=Z,1.3nm,0.8s,baz=31,slow=9.0,SNR=5.9						
TORD	Torodi Ar. Bea	33.55	227	P	P	22 31 46.5	+0.2
KBS	Kingsbay	40.79	356	P	P	22 32 46.2	-0.9
MK31	Makanchi Array	41.09	60	P	P	22 32 49.6	-0.5
MKAR	Makanchi Array	41.09	60	P	P	22 32 51.0	+0.9
	comp=Z,0.6nm,0.7s,baz=285,slow=6.8,SNR=7.3						
ZALV	Zalesovo Beam	41.91	49	P	P	22 32 57.1	+0.4
	comp=Z,0.7nm,0.5s,baz=269,slow=8.6,SNR=4.2						
FRB	Frobisher Bay	58.17	329	P	P	22 35 00.4	+0.6
	comp=Z,1.5nm,0.8s,baz=60,slow=5.7,SNR=3.9						
SHEL	Horse Pasture	62.12	215	P	P	22 35 27.2	-0.3
GBN	Guysborough	62.49	307	P	P	22 35 27.4	-2.3
LBTB	Lobatse	63.36	181	P	P	22 35 30.8	-4.9
LBTB				IAmb	IAmb	22 35 46.7	
	comp=Z,2.4nm,1.1s						
CMAR	Chiang Mai Arr	65.25	86	P	P	22 35 49.1	+0.8
	comp=Z,0.4nm,0.3s,baz=308,slow=8.1,SNR=5.9						
YKA	Yellowknife Ar	74.41	342	P	P	22 36 44.9	+0.9
	comp=Z,0.7nm,0.8s,baz=40,slow=5.7,SNR=11						

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*IDC **27** 22:25:17.5±5.3, 14°.96S×167°.65E, h0^{km}, mb3.7/4, mb1 4.0/4, mb1mx3.6/31, mbtmp3.7/4, Error ellipse: s-maj=287.5km s-min=31.6km az=145.0*

*NOU **27** 22:25:19.4, 15°.75S×167°.97E, h0^{km}, MLv4.9, Vanuatu Islands*

ISC 27 22:25:20.9±1.1, **15°.6S**±0°.1×**168°.0E**±0°.1, **h35**^{km}**, n11,** σ**0**^{s}.**85**/11, **mb3.6**/4, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.77	279	P	Pn	22 25 34.6	-0.7
DVP	Devils Point	2.15	175	P	Pn	22 25 54.2	-0.1
KOUNC	Koumac, New Ca	6.08	215	P	Pn	22 26 48.7	+0.4
YATNC	Mamie plateau,	6.54	189	P	Pn	22 26 52.9	-1.7
DZM	Mont Dzumac	6.63	193	P	Pn	22 26 55.2	-0.8
NOUC	Port Laguerre	6.69	194	P	Pn	22 26 56.6	-0.1
OUENC	Ouen Island, N	6.90	189	P	Pn	22 26 59.6	+0.1
WRA	Warramunga Arr	32.31	257	P	P	22 31 48.1	+1.2
	0.4nm,0.9s,baz=83,slow=8.3,SNR=1.7						
ASAR	Alice Springs	33.04	250	P	P	22 31 52.8	-0.5
	0.4nm,0.8s,baz=78,slow=8.6,SNR=4.3						
ILAR	Eielson Array	87.11	18	P	P	22 38 02.7	0.0
	0.6nm,1.0s,baz=233,slow=6.2,SNR=5.6						
YKA	Yellowknife Ar	97.97	27	P	P	22 38 53.1	+0.1
	0.7nm,0.9s,baz=248,slow=4.1,SNR=6.2						

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*ISK **27** 22:37:51.6, 34°.62N×33°.97E, h26^{km}, ML3.3/22*

*DDA **27** 22:37:52.4, 34°.78N×33°.96E, h5^{km}±1^{km}, ML2.4*

*NIC **27** 22:37:52.9±0.0, 34°.57N×33°.90E, h25^{km}, Ml3.1/6*

*GII **27** 22:37:56.2±0.0, 34°.30N×34°.19E, h10^{km}, MD2.2/5, Mm2.5/2*

ISC 27 22:37:52.4±1.0, **34°.60N**±0°.02×**34°.00E**±0°.03, **h31**^{km}±11^{km}, **n69,** σ**1**^{s}.**00**/100, **3C-1D, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MVOU	Mavrovouni	0.51	324	P	Pb	22 38 03.3	+0.2
MVOU				S	Sb	22 38 10.4	0.0
MVOU				AML	AML	22 38 11.2	
	3.3nm,0.4s						
MVOU				AML	AML	22 38 11.2	
	3.3nm,0.4s						
MVOU				AML	AML	22 38 12.3	
	2.3nm,0.6s						
MVOU				AML	AML	22 38 12.3	
	2.3nm,0.6s						
ASGA	Asgata	0.65	287	P	Pb	22 38 04.9	-0.4
ASGA				S	Sb	22 38 13.6	-0.4
ASGA				AML	AML	22 38 14.8	
	3.3nm,0.2s						
ASGA				AML	AML	22 38 14.8	
	3.3nm,0.2s						
ASGA				AML	AML	22 38 14.9	
	3.2nm,0.4s						
ASGA				AML	AML	22 38 14.9	
	3.2nm,0.4s						
CSS	Mathiatis	0.66	303	PG	Pb	22 38 04.9	-0.6
CSS				SG	Sb	22 38 14.1	-0.3
CSS	Mathiatis	0.66	303	⇓P	Pb	22 38 05.4	-0.1
CSS				S	Sn	22 38 14.9	-0.1
ATHAL	Athalassa	0.73	318	P	Pb	22 38 06.8	+0.1
ATHAL				S	Sn	22 38 17.3	+0.6
SZAC	Souni	0.93	280	⇑P	Pb	22 38 09.4	-0.7
SZAC				AML	AML	22 38 21.5	
	3.8nm,0.4s						
SZAC				AML	AML	22 38 21.5	
	3.8nm,0.4s						
SZAC				AML	AML	22 38 21.6	
	3.5nm,0.3s						
SZAC				AML	AML	22 38 21.6	
	3.5nm,0.3s						
SZAC				S	Sb	22 38 22.0	-0.2
EREN	Erenkoy	0.94	9	PG	Pn	22 38 10.3	+0.9
EREN				SG	Sb	22 38 22.3	0.0
EREN	Erenkoy	0.94	9	*i* P	Pb	22 38 10.6	+0.5
LEF	Lefka	1.05	300	PG	Pn	22 38 11.2	+0.3
LEF				SG	Sn	22 38 25.1	+0.6
LEF	Lefka	1.05	300	*i* P	Pn	22 38 11.2	+0.3
LEF				IAML		22 38 25.0	
	comp=E,105nm,0.3s						
LEF				IAML		22 38 25.0	
	comp=N,162nm,0.6s						
AKDN	Akdeniz- Kıbrı	1.10	310	PG	Pn	22 38 11.5	-0.1
NATA	Nata	1.19	279	P	Pn	22 38 13.5	+0.6
NATA				AML	AML	22 38 31.6	
	comp=N,7.2nm,0.4s						
NATA				AML	AML	22 38 31.6	
	comp=N,4.6nm,0.3s						
ALFC	Alefka	1.28	296	P	Pn	22 38 14.0	-0.1
ALFC				S	Sn	22 38 30.3	+0.1
ALFC				AML	AML	22 38 30.7	
	comp=N,1.2nm,0.2s						
ALFC				AML	AML	22 38 30.7	
	comp=N,1.2nm,0.2s						
ALFC				AML	AML	22 38 31.0	
	comp=N,1.4nm,0.3s						
ALFC				AML	AML	22 38 31.0	
	comp=N,1.4nm,0.3s						
AKMS	Akamas	1.43	287	P	Pn	22 38 16.4	+0.2
AKMS				S	Sn	22 38 34.6	+0.5
AKMS				AML	AML	22 38 36.2	
	comp=N,1.0nm,0.3s						
AKMS				AML	AML	22 38 36.2	
	comp=N,1.0nm,0.3s						
AKMS				AML	AML	22 38 36.3	
	comp=N,1.5nm,0.4s						
AKMS				AML	AML	22 38 36.3	
	comp=N,1.5nm,0.4s						
BHL	Bhannes	1.54	116	*e*P	Pn	22 38 17.7	-0.1
AKK2	Akkuyu-Mersin	1.58	347	PN	Pn	22 38 17.9	-0.3
AKK2				SN	Sn	22 38 38.0	+0.5
TISA	Tisan-Mersin	1.58	351	PN	Pn	22 38 18.4	+0.1
AKK1	Akkuyu-Mersin	1.58	346	PN	Pn	22 38 18.1	-0.2
AKK1				SN	Sn	22 38 37.4	-0.3
AKKU	Akkuyu-Mersin	1.60	347	PN	Pn	22 38 18.8	+0.3
KARG	Kargicak-Mersi	1.62	352	PN	Pn	22 38 18.5	-0.3
YESI	Yesilovacik-Me	1.62	350	PN	Pn	22 38 18.9	+0.1
GULN	MERSIN_Gulnar	1.62	347	*i* P	Pn	22 38 19.2	+0.4
GULN				*i* S	Sn	22 38 39.5	+0.8
GULN				IAML		22 38 40.0	
	comp=N,76nm,0.5s						
GULN				IAML		22 38 40.0	
	comp=E,66nm,0.4s						
YORU	Yoruktepe-Mers	1.62	343	PN	Pn	22 38 18.8	-0.1
HWQ	Hawqa	1.64	101	*e*P	Pn	22 38 20.5	+1.2
OREN	Orenkoy-Mersin	1.66	345	PN	Pn	22 38 19.4	0.0
TEKE	Tekeli-Mersin	1.70	335	PN	Pn	22 38 19.9	0.0
QRWL	Qaraoun	1.75	126	*e*P	Pn	22 38 21.4	+0.7
SILI	Silifke-Mersin	1.76	358	PN	Pn	22 38 20.7	-0.1
SLFK	Silifke-Mersin	1.79	359	PN	Pn	22 38 21.1	0.0
BERE	Bereket-Mersin	1.85	340	PN	Pn	22 38 22.6	+0.4
KEBE	Keben-Mersin	1.86	353	PN	Pn	22 38 22.9	+0.7
RCY	Rachaya	1.88	125	*e*P	Pn	22 38 23.5	+0.9
TEVE	Tevekalti-Mers	1.89	346	PN	Pn	22 38 23.2	+0.6
GEM	Giv'at Ha'Em	1.96	135	Pn	Pn	22 38 24.6	+1.1
GEM				Sn	Sn	22 38 45.5	-1.5
MMA0B	Mount Meron ar	1.97	143	Pn	Pn	22 38 24.7	+1.0
MMA0B				Sn	Sn	22 38 46.4	-0.9
NATI	Neve Ativ	1.97	132	Pn	Pn	22 38 24.8	+1.2
NATI				Sn	Sn	22 38 46.1	-1.1
OSC2	CSNet OBS 4	2.10	224	P	Pn	22 38 25.0	-0.4
OSC2				S	Sn	22 38 50.9	+0.5
BLGI	Bet Lehem HaGe	2.11	152	Pn	Pn	22 38 27.4	+1.8
OFRI	`Ofer	2.14	157	Pn	Pn	22 38 26.7	+0.7
OFRI				Sn	Sn	22 38 50.2	-1.3
KRTS	Karatas	2.27	29	PN	Pn	22 38 28.4	+0.7
DED	Mersin	2.44	15	*i* P	Pn	22 38 31.0	+0.8
DED				*i* S	Sn	22 38 59.4	+0.3
DED				IAML		22 39 00.0	
	comp=E,41nm,0.6s						
DED				IAML		22 39 00.0	
	comp=N,20nm,0.2s						
MMLI	Mount Malkishu	2.46	151	PN	Pn	22 38 31.4	+0.9
MMLI	Mount Malkishu	2.46	151	Pn	Pn	22 38 32.0	+1.5
MMLI	Mount Malkishu	2.46	151	⇑P	Pn	22 38 31.9	+1.5
SLTI	Sal'it	2.51	159	Pn	Pn	22 38 32.7	+1.6
SLTI				Sn	Sn	22 38 59.6	-1.0
OSC1	CSNet OBS 1	2.51	245	P	Pn	22 38 30.8	-0.3
OSC1				S	Sn	22 39 00.1	-0.5
HMDT	Nahal Hemdat	2.67	151	Pn	Pn	22 38 34.6	+1.4
HMDT				Sn	Sn	22 39 03.4	-1.1
KARA	Karaisali	2.79	18	PN	Pn	22 38 35.5	+0.6
CEYT	Ceyhan	2.79	30	PN	Pn	22 38 35.5	+0.6
AMAZ	Amatzia	3.15	166	Pn	Pn	22 38 41.4	+1.4
AMAZ				Sn	Sn	22 39 15.9	-0.7
AMAZ	Amatzia	3.15	166	P	Pn	22 38 41.3	+1.4
CMRD	Camardi-Nigde	3.16	14	PN	Pn	22 38 40.9	+0.8
KOZT	Kozan	3.23	27	PN	Pn	22 38 41.7	+0.7
DSI	Dead Sea	3.24	159	Pn	Pn	22 38 42.5	+1.4
DSI				Sn	Sn	22 39 17.6	-1.0
KUZU	Kuzuini	3.31	48	*i* P	Pn	22 38 42.9	+0.7
YTIR	Yattir	3.36	163	Pn	Pn	22 38 44.4	+1.5
YTIR				Sn	Sn	22 39 21.0	-0.8
KAMA	Osmaniye	3.37	39	*i* P	Pn	22 38 43.4	+0.5
KAMA				*i* S	Sn	22 39 19.3	-2.6
KAMA				IAML		22 39 21.0	
	comp=E,15nm,0.6s						
KAMA				IAML		22 39 21.0	
	comp=N,8.0nm,0.2s						
GHAJ	Ghor Haditha	3.54	158	Pn	Pn	22 38 47.1	+1.8
KONT	Konya--Tatoy	3.59	339	PN	Pn	22 38 47.1	+1.1
HCB	Kahramanmara	3.61	40	*i* P	Pn	22 38 46.7	+0.4
HCB				*i* S	Sn	22 39 25.1	-2.8
HCB				IAML		22 39 28.0	
	comp=E,9.1nm,0.4s						
HCB				IAML		22 39 28.0	
	comp=N,7.1nm,0.6s						
KZIT	Kziot	3.70	175	Pn	Pn	22 38 48.6	+1.1
KZIT	Kziot	3.70	175	⇑P	Pn	22 38 48.5	+1.0
KMRS	Kahramanmaras	3.73	38	PN	Pn	22 38 49.2	+1.3
ZFRI	Zfri	4.16	166	Pn	Pn	22 38 55.0	+1.3
PRNI	Paran	4.32	168	Pn	Pn	22 38 57.9	+1.9
PRNI				Sn	Sn	22 39 44.7	-0.7
KRMI	Paran Flat	4.51	172	Pn	Pn	22 39 00.0	+1.3
KRMI				Sn	Sn	22 39 49.0	-1.1
HRFI	Mount Harif	4.64	169	Pn	Pn	22 39 01.7	+1.4
HRFI				Sn	Sn	22 39 51.6	-1.5
MBRI	Mt Berech	4.86	171	Pn	Pn	22 39 05.8	+2.4
MBRI				Sn	Sn	22 39 57.2	-1.4
EIL	Elat	4.98	170	Pn	Pn	22 39 06.8	+1.7

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*NEIC **27** 22:40:49.8±1.7, 32°.95N±0°.03×88°.06W±0°.02, h6^{km}±6^{km}, Error ellipse: s-maj=4.7km s-min=2.9km az=171.0*

*SLM **27** 22:40:50.0±2.2, 33°.01N±0°.04×88°.04W±0°.03, h20^{km}±4^{km}, Md3.2/6, mb_Lg3.1/109(NEIC), Error ellipse: s-maj=5.8km s-min=4.0km az=166.0*

*ANF **27** 22:40:50.1±0.7, 33°.02N×88°.03W, h20^{km}, ML3.6/6, Error ellipse: s-maj=12.8km s-min=5.9km az=21.0*

ISC 27 22:40:49.5±1.2, **32°.97N**±0°.04×**88°.04W**±0°.03, **h12**^{km}±9^{km}**, n86,** σ**1**^{s}.**26**/49, **Mississippi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
Z47A	Carrollton	0.23	354		Pg	22 40 54.0	-0.3
Z47A				Sg	Sg	22 40 58.4	+0.8
Z47A	Carrollton	0.23	354	P		22 40 54.1	
	baz=173,SNR=207						
Z47A				S		22 40 58.5	
	baz=173						
LRAL	Lakeview Retre	0.88	86	P	Pb	22 41 06.4	-0.2
	baz=269						
LRAL	Lakeview Retre	0.88	86		Pb	22 41 05.8	-0.8
LRAL	Lakeview Retre	0.88	86	P		22 41 05.4	
	baz=268,SNR=23						
146A	Union	0.92	249		Pb	22 41 06.8	-0.6
146A	Union	0.92	249	P		22 41 06.6	
	baz=66,SNR=61						
Y45A	Yeager Farm, C	1.54	306		Pn	22 41 18.0	+1.2
Y45A	Yeager Farm, C	1.54	306	P		22 41 17.9	
	baz=124,SNR=8.4						
Y45A				S		22 41 39.7	
	baz=124						
Y49A	Blount Mountai	1.62	57		Pn	22 41 18.2	+0.2
Y49A	Blount Mountai	1.62	57	P		22 41 18.2	
	baz=238						
Y49A				S		22 41 40.4	
	baz=238						
X48A	Hartselle	1.69	29		Pn	22 41 18.9	0.0
X48A	Hartselle	1.69	29	P		22 41 18.8	
	baz=210						
250A	Grady	1.79	123		Pn	22 41 21.8	+1.5
250A				IAmb_Lg		22 41 50.3	
	comp=Z,156nm,0.8s						
250A	Grady	1.79	123	P		22 41 21.5	

	baz=305,SNR=40						
250A				S		22 41 45.9	
	baz=305						
OXF	Oxford	1.91	324	P	Pn	22 41 21.1	-0.8
	baz=142						
OXF				S	Sn	22 41 45.2	-0.8
	baz=142						
OXF	Oxford	1.91	324	Pn	Pb	22 41 24.3	0.0
OXF	Oxford	1.91	324	S		22 41 49.2	
	baz=142						
BRAL	Brewton	1.98	155	P	Pn	22 41 23.3	+0.5
	baz=336						
BRAL	Brewton	1.98	155		Pn	22 41 23.7	+0.9
BRAL				IAmb_Lg		22 41 54.2	
	comp=Z,67nm,0.8s						
346A	Big Creek Wild	1.99	218		Pn	22 41 23.7	+0.8
346A				IAmb_Lg		22 41 56.8	
	comp=Z,104nm,1.0s						
346A	Big Creek Wild	1.99	218	P		22 41 23.6	
	baz=36						
346A				Sb		22 41 52.8	
	baz=36						
PWLA	Pickwick Lake	2.00	359		Pn	22 41 24.6	+1.4
PWLA					Sb	22 41 51.5	+0.7
PLAL	Pickwick Lake	2.01	359		Pn	22 41 24.7	+1.5
PLAL				Sg	Sb	22 41 51.0	+0.1
VBMS	Vicksburg	2.22	251	P	Pn	22 41 26.0	-0.1
	baz=69						
VBMS				S	Sn	22 41 53.6	0.0
	baz=69						
W45A	Hickory Valley	2.38	337		Pn	22 41 30.1	+1.8
W45A	Hickory Valley	2.38	337	P		22 41 30.1	
	baz=156,SNR=8.7						
W45A				S		22 42 03.2	
	baz=156						
Z51A	Franklin	2.43	81		Pn	22 41 30.2	+1.2
Z51A	Franklin	2.43	81	S		22 42 03.2	
	baz=264						
FPAL	Fort Paine	2.56	52		Pn	22 41 31.7	+0.8
344A	Westbrook Farm	2.74	237	Pn	Pn	22 41 33.8	+0.5
152A	Waverly Hall	2.81	95	Pn	Pn	22 41 35.6	+1.3
SWET	Sewanee	2.84	37		Pn	22 41 35.4	+0.6
SWET	Sewanee	2.84	37		Pn	22 41 35.3	+0.5
SWET	Sewanee	2.84	37	IAmb_Lg		22 42 19.5	
	comp=Z,48nm,0.7s						
143A	Socs Landing,	2.84	266		Pn	22 41 35.6	+0.9
V48A	Smith Brothers	2.94	20	Pn	Pn	22 41 38.8	+2.8
CMGA	Chestnut Mount	3.00	56		Pn	22 41 37.7	+0.8
352A	Blakely	3.03	119	Pn	Pn	22 41 37.0	-0.2
451A	Vernon	3.05	140	S		22 42 15.5	
	baz=321						
X51A	Calhoun	3.09	58	IAmb_Lg		22 42 33.2	
	comp=Z,73nm,0.7s						
HALT	Halls	3.12	340	IAmb_Lg		22 42 32.7	
	comp=Z,86nm,0.7s						
WVT	Waverly	3.16	3	P	Pn	22 41 39.0	0.0
	baz=183						
WVT	Waverly	3.16	3		Pn	22 41 39.6	+0.6
WVT	Waverly	3.16	3	P		22 41 40.6	
	baz=183,SNR=8.1						
W50A	Signal Mountai	3.17	45	Pn	Pn	22 41 40.1	+0.8
GNAR	Gosnell	3.41	332	IAmb_Lg		22 42 43.9	
	comp=Z,48nm,0.8s						
CLTN	Cedars of Leba	3.42	24	Pn	Pn	22 41 46.5	+3.9
CLTN				IAmb_Lg		22 42 38.3	
	comp=Z,37nm,0.9s						
Y52A	Lilburn	3.44	74	Pn	Pn	22 41 44.6	+1.7
Y52A				IAmb_Lg		22 42 38.6	
	comp=Z,46nm,0.8s						
GLAT	Glass	3.45	343	Pn	Pn	22 41 43.9	+0.9
PEBM	Pemiscott Bayo	3.48	335	IAmb_Lg		22 42 43.0	
	comp=Z,79nm,0.8s						
CPCT	Cooper Cave	3.82	49		Pn	22 41 48.8	+0.7
CPCT				IAmb_Lg		22 42 57.7	
	comp=Z,50nm,0.9s						
GOGA	Godfrey	3.86	82	P	Pn	22 41 49.0	+0.3
	baz=265						
GOGA	Godfrey	3.86	82	IAmb_Lg		22 42 57.5	
	comp=Z,44nm,1.1s						
PARMO	Parma	3.94	340	Pn	Pn	22 41 51.0	+1.2
PARMO				IAmb_Lg		22 42 55.0	
	comp=Z,66nm,0.7s						
U49A	Red Boiling Sp	3.99	27	Pn	Pb	22 41 56.6	-3.2
U49A				IAmb_Lg		22 43 00.3	
	comp=Z,31nm,0.9s						
W52A	Murphy	4.02	57	IAmb_Lg		22 43 00.3	
	comp=Z,42nm,0.8s						
LCAR	Lake Charles	4.02	321		Pn	22 41 52.4	+1.5
TIGA	Tifton	4.07	111	IAmb_Lg		22 43 01.9	
	comp=Z,50nm,0.7s						
T45A	Paducah	4.07	353	IAmb_Lg		22 42 57.9	
	comp=Z,41nm,0.7s						
T47A	Sharon Grove	4.08	11	Pn	Pn	22 41 52.1	+0.4
154A	Montrose	4.17	94	IAmb_Lg		22 43 14.6	
	comp=Z,64nm,1.2s						
X40A	Basin Creek Fa	4.27	292		Pn	22 41 55.5	+1.2
X40A	Basin Creek Fa	4.27	292	P		22 41 55.9	
	baz=109,SNR=8.7						
X40A				P		22 41 55.9	
	baz=109,SNR=8.7						
PBMO	Poplar Bluff	4.28	333	IAmb_Lg		22 43 07.5	
	comp=Z,34nm,0.7s						
WLAR	White Oak Lake	4.31	281	Pn	Pn	22 41 54.8	0.0
V52A	Sevierville	4.66	51	IAmb_Lg		22 43 20.0	
	comp=Z,38nm,0.7s						
BG3	Lake Jocassee	4.70	63	Pn	Pn	22 42 02.6	+2.3
T42A	Van Buren	4.76	329	IAmb_Lg		22 43 28.4	
	comp=Z,30nm,1.0s						
S44A	Carbondale	4.82	348		Pn	22 42 02.2	+0.4
S44A				IAmb_Lg		22 43 34.1	
	comp=Z,30nm,0.7s						
T50A	Nancy	4.82	32		Pn	22 42 01.9	0.0
T50A				IAmb_Lg		22 43 30.2	
	comp=Z,27nm,0.8s						
SIUC	Southern Illin	4.83	349	IAmb_Lg		22 43 27.8	
	comp=Z,33nm,0.7s						
USIN	University of	4.99	3	IAmb_Lg		22 43 33.0	
	comp=Z,42nm,0.9s						
V53A	Saluda	5.09	57	IAmb_Lg		22 43 33.0	
	comp=Z,45nm,0.8s						
W39A	Magazine	5.26	297	IAmb_Lg		22 43 49.0	
	comp=Z,26nm,1.2s						
FVM	French Village	5.37	339	IAmb_Lg		22 43 44.7	
	comp=Z,29nm,1.0s						
PAULI	Pauline	5.50	69	IAmb_Lg		22 43 59.5	
	comp=Z,40nm,1.3s						
R49A	Shelbyville	5.80	23	IAmb_Lg		22 43 50.8	
	comp=Z,43nm,1.1s						
KMSC	Kings Mountain	5.97	67	IAmb_Lg		22 43 58.8	
	comp=Z,23nm,0.9s						
Q44A	Meyer Farm, Va	5.97	353	IAmb_Lg		22 44 02.1	
	comp=Z,35nm,1.2s						
R50A	Paris	6.10	29	IAmb_Lg		22 44 03.7	
	comp=Z,33nm,0.9s						
U38A	Gravette	6.27	305	IAmb_Lg		22 44 08.9	
	comp=Z,26nm,1.3s						
BLO	Bloomington	6.31	11	IAmb_Lg		22 44 17.7	
	comp=Z,23nm,0.8s						
V55A	Taylorsville	6.33	61	IAmb_Lg		22 44 17.0	
	comp=Z,21nm,0.8s						
P49A	Miami Univ. Ec	7.08	21	IAmb_Lg		22 44 44.2	
	comp=Z,21nm,0.8s						
U56A	King	7.15	60	IAmb_Lg		22 44 43.6	
	comp=Z,22nm,0.9s						
O44A	Mansfield	7.18	357	IAmb_Lg		22 44 41.5	
	comp=Z,17nm,0.9s						
P40A	Paris	7.30	335	IAmb_Lg		22 44 45.3	
	comp=Z,17nm,0.7s						
SFIN	Lafayette	7.43	6	IAmb_Lg		22 44 42.1	
	comp=Z,19nm,0.8s						
P51A	Williamsport	7.64	30	IAmb_Lg		22 44 50.0	
	comp=Z,30nm,0.7s						
O49A	Covington	7.79	21	IAmb_Lg		22 45 11.9	
	comp=Z,26nm,0.9s						
T35A	Sooner Cattle	7.99	302	IAmb_Lg		22 45 05.2	
	comp=Z,28nm,1.2s						
N47A	Urbana	8.11	13	IAmb_Lg		22 45 05.6	
	comp=Z,24nm,1.1s						
ACSO	Alum Creek Sta	8.31	28	IAmb_Lg		22 45 15.3	
	comp=Z,16nm,0.8s						
Q54A	Coxs Mills	8.37	42	IAmb_Lg		22 45 13.7	
	comp=Z,21nm,0.9s						
O52A	Adamsville	8.70	33	IAmb_Lg		22 45 38.9	
	comp=Z,24nm,1.0s						
S57A	Dark Hollow, R	8.82	55	IAmb_Lg		22 45 32.6	
	comp=Z,22nm,1.0s						
N38A	Joes South For	8.85	333	IAmb_Lg		22 45 38.7	
	comp=Z,26nm,0.9s						
R58B	Mineral	9.67	56	IAmb_Lg		22 46 08.6	
	comp=Z,17nm,0.8s						
SCIA	State Center	9.82	337	IAmb_Lg		22 46 01.1	
	comp=Z,21nm,1.1s						

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*IDC **27** 22:40:54.3±1.0, 7°.02S×155°.47E, h0^{km}, mb4.1/9, mb1 4.3/10, mb1mx4.1/27, mbtmp4.1/10, ML3.7/1, MS3.3/5, Ms1 3.3/5, ms1mx3.1/30, Error ellipse: s-maj=37.8km s-min=18.9km az=117.0*

*NEIC **27** 22:40:58.9±1.2, 7°.34S±0°.09×155°.69E±0°.08, h44^{km}±6^{km}, mb4.4/14, Error ellipse: s-maj=13.5km s-min=10.1km az=213.0*

ISC 27 22:40:58.1±0.5**, 7°.32S**±0°.08×**155°.70E**±0°.08**, h35^{km}, n37,** σ**1^{s}15**/31**, mb4.2**/16**, MS3.3**/3**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	4.69	117	LR	LR	22 44 15.2	
	comp=Z,239nm,21.6s,baz=261,slow=40						
HNR	Honiara	4.69	117	Pn	Pn	22 42 07.4	+0.9
RABL	Rabaul	4.70	311	Pn	Pn	22 42 07.7	+1.1
PMG	Port Moresby	8.70	256	LR	LR	22 46 13.2	
	comp=Z,209nm,20.4s,baz=68,slow=37						
PMG	Port Moresby	8.70	256	Pn	Pn	22 43 00.8	-0.8
PATS	Pohnpei	14.31	11	Pn	Pn	22 44 18.2	-0.1
CTA	Charters Tower	15.65	215	Pn	Pn	22 44 37.9	+1.8
	0.2nm,0.3s,baz=162,slow=1.4,SNR=2.5						
CTAO	Charters Tower	15.65	215		Pn	22 44 36.3	+0.2
ARMA	Armidale	23.29	189	P	P	22 46 03.4	+0.4
FAKI	Fak Fak	23.76	279	P	P	22 46 05.6	-1.9
FAKI				IAmb	IAmb	22 46 16.2	
	comp=Z,27nm,1.1s						
WR0	Warramunga Arr	24.06	236	P	P	22 46 10.5	+0.2
WR0				IAmb	IAmb	22 46 11.6	
	comp=Z,8.9nm,0.9s						
WB0	Warramunga Arr	24.09	237	P	P	22 46 11.2	+0.6
WB0				IAmb	IAmb	22 46 12.5	
	comp=Z,10.0nm,1.1s						
WB2	Warramunga Arr	24.20	237	P	P	22 46 12.0	+0.3
WB2				IAmb	IAmb	22 46 13.1	
	comp=Z,14nm,1.2s						
WRA	Warramunga Arr	24.21	237	P	P	22 46 12.3	+0.5
	comp=Z,7.7nm,1.0s,baz=61,slow=9.4,SNR=21						
WRA				LR	LR	22 55 13.9	
	comp=Z,56nm,18.8s,baz=275,slow=36						
AS31	Alice Springs	26.49	230	P	P	22 46 32.5	+0.1
ASAR	Alice Springs	26.49	230	P	P	22 46 32.7	+0.3
	comp=Z,1.7nm,0.7s,baz=60,slow=9.0,SNR=19						
ASAR				LR	LR	22 57 30.7	
	comp=Z,77nm,18.1s,baz=34,slow=38						
ASAR	Alice Springs	26.49	230	P	P	22 46 32.2	-0.2
STKA	Stephens Creek	27.75	206	P	P	22 46 47.5	+3.9
	comp=Z,2.1nm,0.7s,baz=8.9,slow=10,SNR=5.1						
STKA				LR	LR	22 57 55.3	
	comp=Z,113nm,18.5s,baz=26,slow=37						
H11S3	WAKE ISLAND Hy	27.85	23	T	T	23 15 10.2	
	baz=203,slow=75,SNR=37						
H11S2	WAKE ISLAND Hy	27.85	23	T	T	23 15 08.8	
	baz=203,slow=75,SNR=36						
H11S1	WAKE ISLAND Hy	27.87	23	T	T	23 15 09.5	
	baz=203,slow=75,SNR=14						
FITZ	Fitzroy Crossi	31.16	247	P	P	22 47 13.0	-1.0
FITZ				IAmb	IAmb	22 47 14.0	
	comp=Z,4.0nm,0.8s						
AFI	Afiamalu	32.60	104	P	P	22 47 25.3	-1.5
PSA00	Pilbara Seismi	37.38	244	P	P	22 48 07.4	-0.5
FOZ	Fox Glacier	38.13	163	P	P	22 48 12.4	-1.5
PETK	Petropavlovsk-	60.22	1	P	P	22 51 03.0	+0.4
	comp=Z,5.9nm,0.8s,baz=145,slow=3.6,SNR=4.6						
CMAR	Chiang Mai Arr	61.56	295	P	P	22 51 12.4	+0.1
	comp=Z,1.2nm,0.4s,baz=126,slow=5.3,SNR=8.6						
CHTO	Chiang Mai	61.67	296	P	P	22 51 12.9	-0.2
CHTO				IAmb	IAmb	22 51 13.8	
	comp=Z,1.5nm,0.7s						
SONM	Songino Array	69.99	327	P	P	22 52 05.9	-0.4
	comp=Z,0.8nm,0.8s,baz=140,slow=6.1,SNR=5.5						
SONM	Songino Array	69.99	327	IAmb	IAmb	22 52 12.7	
	comp=Z,1.1nm,1.0s						
ILAR	Eielson Array	83.42	21	P	P	22 53 21.2	-0.4
	comp=Z,1.1nm,0.8s,baz=254,slow=5.2,SNR=8.2						
MKAR	Makanchi Array	84.11	319	P	P	22 53 24.7	-0.9
	comp=Z,1.1nm,0.8s,baz=101,slow=6.3,SNR=9.2						
MKAR	Makanchi Array	84.11	319	P	P	22 53 25.0	-0.6
TOLK	Toolik Lake Re	84.72	17	P	P	22 53 28.0	-0.2
TOLK				IAmb	IAmb	22 53 30.8	
	comp=Z,3.7nm,0.8s						
YKA	Yellowknife Ar	96.30	28	P	P	22 54 23.1	+0.3
	comp=Z,0.7nm,0.9s,baz=264,slow=4.2,SNR=6.7						
BDFB	Brasilia	147.25	134	PKPbc	PKiKP	23 00 42.0	+0.6
	comp=Z,1.7nm,0.5s,baz=223,slow=4.8,SNR=4.5						
TORD	Torodi Ar. Bea	153.79	285	PKPbc	PKiKP	23 00 56.6	+1.8
	comp=Z,0.9nm,0.8s,baz=84,slow=1.7,SNR=2.8						

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*VIE **27** 23:05:43.7±0.3, 50°.15N×18°.42E, h0^{km}, mb2.3/3, ml2.7/5, Error ellipse: s-maj=4.0km s-min=1.8km az=164.0 38 km NNE of Ostrava Suspected Mining induced.*

*IPEC **27** 23:05:44.2±0.2, 50°.07N×18°.51E, h0^{km}±2^{km}, ML2.4/3, Error ellipse: s-maj=2.0km s-min=1.1km az=164.0*

*IDC **27** 23:05:44.2±2.0, 49°.89N×18°.61E, h0^{km}, mb1 3.5/4, mb1mx3.0/39, mbtmp3.3/4, ML2.6/4, Error ellipse: s-maj=37.8km s-min=10.7km az=139.0*

*PRU **27** 23:05:45.4±0.0, 50°.07N×18°.39E, h0^{km}*

ISC 27 23:05:43.2±0.7**, 50°.09N**±0°.03×**18°.51E**±0°.02**, h0^{km}, n42,** σ**0^{s}96**/74**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKC	Ostrava-Krasne	0.34	223	*e*PG	Pb	23 05 51.0	-1.2
OKC				*e*SG	Sg	23 05 55.2	+1.0
	comp=Z,265nm,0.7s						
MORC	Moravsky Berou	0.70	244	*e*PG	Pg	23 05 57.2	+0.6
MORC				*e*SG	Sg	23 06 05.6	0.0
MORC	Moravsky Berou	0.70	244	*e*Pg	Pg	23 05 57.1	+0.5
	baz=64						
MORC				*e*Sg	Sg	23 06 05.5	0.0
	120nm,0.3s,baz=64						
OJC	Ojcow	0.84	81	*e*Pg	Pb	23 06 00.3	-0.4
OJC				*e*Sg	Sb	23 06 13.7	+1.1
KRLC	Kraliky	1.11	270	*e*PG	Pg	23 06 04.1	-0.4
KRLC				*e*SG	Sg	23 06 18.0	-0.9
	comp=Z,89nm,0.2s						
LANS	Liptovska Anna	1.13	146	*e*PG	Pn	23 06 06.2	-0.1
LANS				*e*SG	Sn	23 06 22.4	-0.1
LANS				*e*LG	Lg	23 06 25.3	
NIE	Niedzica	1.34	119	*e*Pg	Pn	23 06 09.8	+0.5
NIE				*e*Sg	Sn	23 06 29.7	+1.9
JAVC	Velka Javorina	1.35	204	*e*PG	Pn	23 06 09.6	+0.2
JAVC	Velka Javorina	1.35	204	*e*Pg	Pn	23 06 09.5	+0.2
	baz=24						
DPC	Dobruska-Polom	1.43	281	*e*PG	Pg	23 06 10.7	+0.1
DPC				*e*SG	Sg	23 06 29.2	+0.1
	comp=Z,77nm,0.3s						
VRAC	Vranov	1.47	239	Pg	Pn	23 06 11.0	+0.1
	5.6nm,0.3s,baz=62,slow=13,SNR=18						
VRAC				Lg	Lg	23 06 31.2	
	13nm,0.3s,baz=11,slow=22,SNR=17						
VRAC	Vranov	1.47	239	*e*PG	Pn	23 06 11.0	+0.1
VRAC				*e*SG	Sg	23 06 29.9	-0.4
VRAC	Vranov	1.47	239	*e*Pg	Pn	23 06 11.0	+0.1
	baz=58						
VRAC				*e*Sg	Sg	23 06 29.8	-0.5
	32nm,0.2s,baz=58						
OSTC	Ostas	1.54	289	*e*SG	Sg	23 06 33.0	+0.3
	comp=Z,43nm,0.4s						
KSP	Ksiaz	1.60	299	*e*Pn	Pn	23 06 13.0	+0.2
KSP				*e*Pg	Pg	23 06 14.9	+0.9
KSP				*e*Sg	Sg	23 06 34.9	+0.2
CHVC	Chvalec	1.65	289	*e*PG	Pb	23 06 14.3	-0.2
CHVC				*e*SG	Sb	23 06 36.0	+0.2
	comp=Z,30nm,0.4s						
UPC	Upice	1.65	286	*e*PG	Pb	23 06 14.6	0.0
UPC				*e*SG	Sn	23 06 35.3	-0.2
	comp=Z,39nm,0.6s						
KRUC	Moravsky	1.72	234	*e*PN	Pb	23 06 15.1	-0.5
KRUC				*e*SG	Sb	23 06 37.7	0.0
KRUC	Moravsky	1.72	234	*e*Pn	Pb	23 06 15.1	-0.5
	baz=53						
KRUC				*e*Sg	Sb	23 06 37.7	0.0
	22nm,0.3s,baz=53						
SMOL	Smolenice	1.73	205	*e*PN	Pn	23 06 14.4	-0.1
SMOL				*e*SN	Sn	23 06 37.0	-0.2
SMOL				*e*LG	Lg	23 06 42.1	
MODS	Modra-Piesok	1.90	206	*e*PN	Pn	23 06 16.2	-0.6
MODS				*e*SN	Sn	23 06 40.0	-1.4
MODS				*e*LG	Lg	23 06 50.0	
KECS	Kecovo	2.06	140	*e*SN	Sb	23 06 47.2	-0.5
KECS				*e*LG	Lg	23 06 53.5	
TREC	Trest	2.12	249	*e*SG	Sb	23 06 49.7	+0.4
CRVS	Cervenica-Dubn	2.26	121	*e*PN	Pg	23 06 26.5	-0.1
CRVS				*e*SN	Sg	23 06 55.0	-0.9
SRO	Srobarova	2.28	183	*e*PG	Pg	23 06 28.5	+1.6
PRU	Pruhonice	2.56	269	*e*PG	Pb	23 06 30.1	+0.1
PRU				*e*SG	Sb	23 07 02.4	+0.4
	comp=Z,17nm,0.4s						
PVCC	Panska Ves	2.56	281	*e*PG	Pg	23 06 31.8	-0.5
PVCC				*e*SG	Sg	23 07 05.2	-0.3
	comp=Z,38nm,0.3s						
PRA	Prague	2.62	271	*e*PG	Pb	23 06 32.2	+1.1
KOLS	Kolonicke sedl	2.71	114	*e*PN	Pb	23 06 32.3	-0.3
KOLS				*e*SN	Sn	23 07 02.4	+0.8
CONA	Conrad Observa	2.78	220	*e*Pn	Pn	23 06 28.8	-0.2
	0.9nm,0.2s						
CONA				*e*Sn	Sn	23 07 02.6	-0.7
	5.4nm,0.3s						
PBCC	Pribram	2.95	264	*e*PG	Pb	23 06 37.7	+1.1
CKRC	Cesky Krumlov	3.02	247	*e*PN	Pn	23 06 33.2	+0.9
CKRC				*e*PG	Pb	23 06 38.8	+1.0
BRG	Berggiesshubel	3.02	287	Pg	Pg	23 06 39.7	-1.3
BRG				Sg	Sg	23 07 18.8	-1.4
BRG				Amp		23 07 21.5	
	comp=Z,13nm,0.5s						
KHC	Kasperske Hory	3.35	255	*e*PN	Pn	23 06 36.7	-0.1
KHC				*e*PG	Pb	23 06 45.1	+1.7
KHC				*e*SG	Sg	23 07 28.5	-2.2
	comp=Z,19nm,0.4s						
GERES	GERESS Array B	3.37	250	Pn	Pn	23 06 37.4	+0.2
	comp=Z,0.2nm,0.3s,baz=66,slow=13,SNR=3.4						
GERES				Pg	Pg	23 06 46.4	-1.5
	comp=Z,1.3nm,0.3s,baz=67,slow=17,SNR=10						
GERES				Lg	Lg	23 07 29.1	
	comp=Z,3.3nm,0.3s,baz=70,slow=29,SNR=9.4						
ARSA	Arzberg	3.46	216	*e*Pn	Pn	23 06 38.7	+0.4
	comp=Z,1.1nm,0.3s						
ARSA				Sn	Sn	23 07 22.8	+2.7
	comp=Z,1.3nm,0.2s						
MOA	Molln	3.58	233	*i* Pn	Pn	23 06 39.7	-0.3
	comp=Z,0.3nm,0.1s						
MOA				*e*Sn	Sn	23 07 23.1	+0.1
	comp=Z,2.0nm,0.2s						
CLL	Collm	3.71	291	*e*Pg	Pg	23 06 55.0	+0.8
CLL				*e*Sg	Sg	23 07 41.0	-1.2
	comp=Z,12nm,0.6s						
NKC	Novy Kostel	3.90	274	*e*PG	Pb	23 06 55.0	+2.2
NKC				*e*SG	Sg	23 07 47.2	-1.2
	comp=Z,14nm,0.4s						
DAVOX	Davos/Dischmat	6.62	243	Pn	Pn	23 07 24.0	+2.0
	comp=Z,0.5nm,0.3s,baz=24,slow=18,SNR=5.7						
DAVOX				Lg	Lg	23 09 13.2	
	comp=Z,0.3nm,0.3s,baz=162,slow=23,SNR=2.6						
FINES	FINESS Array B	12.14	18	Pn	Pn	23 08 34.8	-2.5
	comp=Z,0.1nm,0.3s,baz=202,slow=12,SNR=6.6						
ARCES	ARCESS Array B	19.80	7	P	Pn	23 10 17.8	+1.5
	baz=211,slow=14,SNR=6.7						

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*GCG **27** 23:46:36.6±0.5, 13°.55N×91°.29W, h90^{km}±72^{km}, MD5.0*

*GCMT **27** 23:46:42.0±0.4, 14°.06N±0°.02×91°.08W±0°.02, h44^{km}±5^{km}, MW5.0/91, Moment Tensor Solution. s20,c26; s91,c118; Duration: 1^{s}2 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.14±.24; $M_{\theta\theta}$1.14±.17; $M_{\phi\phi}$-1.00±.19; $M_{r\theta}$3.96±.38; $M_{\theta\phi}$-0.36±.15; $M_{\phi r}$-2.52±.27; Best double couple: $M_0$4.79200×10^{16} NP1:ϕ_s49.00000°, δ11.00000°, λ-165.00000°. NP2:ϕ_s304.00000°, δ87.00000°, λ-80.00000°. Principal axes: T 5.1400, Plg41.0000°, Azm25.0000°; N -0.6940, Plg10.0000°, Azm124.0000°; P -4.4430, Plg47.0000°, Azm225.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*UCR **27** 23:46:42.4±1.6, 13°.90N×91°.03W, h25^{km}±7^{km}, ML5.3, MW5.3, mb4.9(NEIC)*

*SNET **27** 23:46:42.6±1.0, 13°.92N×91°.02W, h25^{km}±4^{km}, ML5.5, MW5.3*

*IDC **27** 23:46:42.7±0.6, 14°.23N×90°.53W, h80^{km}±4^{km}, mb4.1/21, mb1 4.3/23, mb1mx4.2/34, mbtmp4.4/23, MS4.0/16, Ms1 4.0/16, ms1mx3.8/29, Error ellipse: s-maj=18.8km s-min=10.2km az=52.0*

*BJI **27** 23:46:43.5±0.0, 14°.00N×90°.90W, h90^{km}, mB5.3/3, Ms5.1/3, Ms7 4.9/3*

*NEIC **27** 23:46:45.0±1.9, 14°.07N±0°.07×90°.85W±0°.06, h99^{km}±4^{km}, mb4.9/462, Md5.4(SNET), Error ellipse: s-maj=11.2km s-min=6.9km az=212.0*

*INET **27** 23:46:44.0, 13°.96N×90°.90W, h15^{km}, MW5.1*

*BGR **27** 23:47:01.9±0.0, 14°.67N×90°.73W, h33^{km}, mb5.1*

ISC 27 23:46:42.5±0.4**, 14°.05N**±0°.04×**90°.93W**±0°.04**, h83^{km}**±3^{km}**, h83^{km}:pP-P, n956,** σ**1^{s}43**/872**, mb4.9**/259**, 5D, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FUG	Fuego 3	0.41	12	*i* P	Pn	23 46 57.1	+0.9
PCG	Pacaya	0.47	42	*i* P	Pn	23 46 57.9	+1.3
IXG	Ixpaco	0.49	75	*i* P	Pn	23 46 57.5	+0.8
NBG	Las Nubes	0.78	46	*i* P	Pn	23 47 02.3	+2.6
RTAL	Retalhuleu	0.88	303		Pn	23 47 00.1	-0.4
RTR	El Retiro	1.26	97	*i* P	Pn	23 47 06.1	+1.0
RTR	El Retiro	1.26	97	*i* P	Pn	23 47 06.1	+1.0
SBLS	San Blas	1.29	99	*i* P	Pn	23 47 06.5	+1.0
SBLS	San Blas	1.29	99	*i* P	Pn	23 47 06.5	+1.0
CEVE	Cerro Verde	1.29	100	*i* P	Pn	23 47 06.7	+1.2
CEVE				*e*S	Sn	23 47 25.8	+2.9
CEVE	Cerro Verde	1.29	100	*i* P	Pn	23 47 06.7	+1.2
CEVE				*e*S	Sn	23 47 25.8	+2.9
HUEH	Huehuetenango	1.38	336	*e*P	Pn	23 47 08.4	+1.7
HUEH				*e*S	Sn	23 47 28.3	+3.4
HUEH	Huehuetenango	1.38	336		Pn	23 47 08.4	+1.7
CEDA	San Andres	1.51	99	*e*P	Pn	23 47 09.5	+1.3
CEDA				*e*S	Sn	23 47 29.7	+2.1
CEDA				IAML		23 47 38.9	
	comp=Z,62µm,0.3s						
CEDA	San Andres	1.51	99	*e*P	Pn	23 47 09.5	+1.3
CEDA				*e*S	Sn	23 47 29.7	+2.1
CEDA				IAML		23 47 38.9	
	comp=Z,62µm,0.3s						
MTO3	Montecristo	1.56	77⇓	*e*P	Pn	23 47 10.0	+1.0
MTO3	Montecristo	1.56	77⇓	*e*P	Pn	23 47 10.0	+1.0
MTO3	Montecristo	1.56	77		Pn	23 47 10.1	+1.0
MRL	Marmol	1.59	49	*i* P	Pn	23 47 12.2	+2.9
ESQI	Esquipulas	1.62	71⇓	*i*P	Pn	23 47 11.3	+1.5
ESQI	Esquipulas	1.62	71		Pn	23 47 11.2	+1.5
BOQS	Boqueron	1.63	101	*e*P	Pn	23 47 11.1	+1.1
BOQS	Boqueron	1.63	101	*e*P	Pn	23 47 11.1	+1.1
ITCA	Escuela Especi	1.65	103	*e*P	Pn	23 47 10.9	+0.9
ITCA				*e*S	Sn	23 47 33.3	+2.5
ITCA	Escuela Especi	1.65	103	*e*P	Pn	23 47 10.9	+0.9
ITCA				*e*S	Sn	23 47 33.3	+2.5
LALI	Alcalda de L	1.66	109	*e*P	Pn	23 47 10.9	+0.9
LALI				*e*S	Sn	23 47 33.1	+2.2
LALI	Alcalda de L	1.66	109	*e*P	Pn	23 47 10.9	+0.9
LALI				*e*S	Sn	23 47 33.1	+2.2
SNET	Serv Nac Est T	1.69	102	*e*P	Pn	23 47 11.3	+0.7
SNET				*e*P	Pn	23 47 11.4	+0.9
SNET				*e*S	Sn	23 47 34.3	+2.5
SNET				*e*S	Sn	23 47 34.5	+2.7
SNET				IAML		23 47 38.5	
	comp=Z,53µm,0.3s						
SNET	Serv Nac Est T	1.69	102	*e*P	Pn	23 47 11.3	+0.7
SNET				*e*P	Pn	23 47 11.4	+0.9
SNET				*e*S	Sn	23 47 34.3	+2.5
SNET				*e*S	Sn	23 47 34.5	+2.7
SNET				IAML		23 47 38.5	
	comp=Z,53µm,0.3s						
SNET	Serv Nac Est T	1.69	102		Pn	23 47 11.4	+0.9
IGN	Direccin Gen	1.74	101	*e*P	Pn	23 47 12.0	+0.8
IGN				*e*P	Pn	23 47 12.2	+1.0
IGN				*e*S	Sn	23 47 35.4	+2.5
IGN	Direccin Gen	1.74	101	*e*P	Pn	23 47 12.0	+0.8
IGN				*e*P	Pn	23 47 12.2	+1.0
IGN				*e*S	Sn	23 47 35.4	+2.5
UDBS	Universidad Do	1.76	101	*e*P	Pn	23 47 12.3	+0.9

UDBS				eS	Sn	23 47 36.3	+3.0
UDBS				IAML		23 47 41.1	
	comp=Z,51µm,0.4s						
UDBS	Universidad Do	1.76	101	eP	Pn	23 47 12.3	+0.9
UDBS				eS	Sn	23 47 36.3	+3.0
UDBS				IAML		23 47 41.1	
	comp=Z,51µm,0.4s						
LFU	La Fuente	1.79	99	eP	Pn	23 47 13.0	+1.2
LFU	La Fuente	1.79	99	eP	Pn	23 47 13.0	+1.2
AEIL	Aeropuerto Ilo	1.80	101	eP	Pn	23 47 13.4	+1.5
AEIL				eS	Sn	23 47 37.2	+3.0
AEIL				IAML		23 47 42.7	
	comp=Z,63µm,0.2s						
AEIL	Aeropuerto Ilo	1.80	101	eP	Pn	23 47 13.4	+1.5
AEIL				eS	Sn	23 47 37.2	+3.0
AEIL				IAML		23 47 42.7	
	comp=Z,63µm,0.2s						
LBRS	Las Brisas	1.86	99	⇓iP	Pn	23 47 13.8	+1.0
LBRS	Las Brisas	1.86	99	⇓iP	Pn	23 47 13.8	+1.0
LFRS	El Faro	1.86	103	eP	Pn	23 47 13.7	+0.8
LFRS	El Faro	1.86	103	eP	Pn	23 47 13.7	+0.8
COEG	Centro de Oper	2.04	102	eP	Pn	23 47 16.7	+1.6
COEG				eS	Sn	23 47 42.1	+2.2
COEG				IAML		23 47 47.0	
	comp=Z,25µm,0.2s						
COEG	Centro de Oper	2.04	102	eP	Pn	23 47 16.7	+1.6
COEG				eS	Sn	23 47 42.1	+2.2
COEG				IAML		23 47 47.0	
	comp=Z,25µm,0.2s						
COEB	Comit de Eme	2.40	103	eP	Pn	23 47 21.3	+1.4
COEB				eS	Sn	23 47 51.1	+2.6
COEB				IAML		23 48 01.4	
	comp=Z,17µm,0.4s						
COEB	Comit de Eme	2.40	103	eP	Pn	23 47 21.3	+1.4
COEB				eS	Sn	23 47 51.1	+2.6
COEB				IAML		23 48 01.4	
	comp=Z,17µm,0.4s						
CCIG	Comitan	2.51	332		Pn	23 47 24.2	+2.7
PETF	Flores	3.03	20		Pn	23 47 31.2	+2.8
CSGN	Cosiguina Volc	3.45	108		Pn	23 47 38.7	+4.6
TGUH	Tegucigalpa,Un	3.55	89	Pn	Pn	23 47 36.8	+1.2
CRIN	San Cristobal	4.01	109		Pn	23 47 43.4	+1.7
CMIG	Matias Romero	4.87	309	P	Pn	23 47 54.3	+0.9
	comp=Z,27nm,0.3s,baz=104,slow=9.1,SNR=134						
CMIG				S	Sn	23 48 47.4	-1.0
	comp=Z,23nm,0.3s,baz=88,slow=18,SNR=1.4						
CMIG				LR	LR	23 50 01.6	
	comp=Z,828nm,20.5s,baz=124,slow=39						
CMIG	Matias Romero	4.87	309		Pn	23 47 53.9	+0.5
CMIG					Sn	23 48 47.7	-0.7
MATN	Matagalpa	4.99	102		Pn	23 47 56.0	+0.8
BOAB	BOACO BROADBAN	5.37	107		Pn	23 48 00.5	+0.3
ACON	Acoyapa	5.98	110		Pn	23 48 08.7	+0.2
GBS3	Finca Las Img	6.26	121	eP	Pn	23 48 14.4	+2.1
LAPC	Finca la Perla	6.28	121	eP	Pn	23 48 13.4	+0.8
GB1A	Borinquen Arri	6.28	120	eP	Pn	23 48 14.8	+2.0
BUEV	Buena Vista	6.29	120	eP	Pn	23 48 14.9	+2.1
BUAI	Buenos Aires	6.31	119	eP	Pn	23 48 13.1	0.0
GPS2	Hotel Rincn d	6.36	120	eP	Pn	23 48 14.2	+0.5
SAJU	San Juanillo,	6.46	127	eP	Pn	23 48 16.4	+1.4
LIM1	Limonal	6.47	120	eP	Pn	23 48 16.4	+1.1
GUAB	Guayabo de Bag	6.48	120	eP	Pn	23 48 18.3	+2.8
GUAI	GUAI	6.49	125	eP	Pn	23 48 17.2	+1.7
HORNC	Hornillas	6.52	120	eP	Pn	23 48 16.9	+0.8
COLC	Colonia	6.53	120	eP	Pn	23 48 17.9	+1.9
CUI	Cuipilapa	6.56	120	eP	Pn	23 48 17.4	+0.8
PLVR	Palo Verde	6.58	123	eP	Pn	23 48 17.7	+0.9
GRZA	Playa Garza	6.61	128	eP	Pn	23 48 18.6	+1.4
TEIG	Tepich	6.65	22	P	Pn	23 48 20.1	+2.5
	comp=Z,116nm,0.3s,baz=207,slow=5.1,SNR=287						
TEIG				S	Sn	23 49 33.3	+1.3
	baz=302,slow=23,SNR=2.6						
TEIG				LR	LR	23 51 29.9	
	comp=Z,2µm,18.5s,baz=202,slow=45						
TEIG	Tepich	6.65	22	Pn	Pn	23 48 20.4	+2.8
PTEN	Parque Tenorio	6.68	119	eP	Pn	23 48 19.4	+1.1
ESPN	Las Esperanzas	6.72	105		Pn	23 48 19.4	+0.8
INDI	Punta indio, G	6.74	127	eP	Pn	23 48 20.4	+1.5
JTS	Las Juntas de	6.93	122	P	Pn	23 48 23.0	+1.4
	comp=Z,20nm,0.3s,baz=9.0,slow=14,SNR=36						
JTS				S	Sn	23 49 39.1	+0.1
	comp=Z,22nm,0.3s,baz=355,slow=22,SNR=1.3						
JTS	Las Juntas de	6.93	122	eP	Pn	23 48 23.0	+1.4
JTS	Las Juntas de	6.93	122	Pn	Pn	23 48 23.1	+1.5
ARE1	Arenal 1	7.04	120	eP	Pn	23 48 25.1	+2.0
CEDE	Laguna Cedeo	7.04	119	eP	Pn	23 48 24.1	+1.0
CASO	Castillo	7.04	120	eP	Pn	23 48 26.5	+3.5
FORC	Fortuna	7.08	119	eP	Pn	23 48 28.0	+4.4
LAFE	Finca La Fe, P	7.24	125	eP	Pn	23 48 27.1	+1.3
JACO	JACO, Garabito	7.53	125	eP	Pn	23 48 31.1	+1.4
HDC	Heredia	7.79	120		Pn	23 48 36.0	+2.7
LCR2	La Lucha 2	8.02	121	eP	Pn	23 48 38.8	+2.3
RIMA	Rio Macho	8.12	121	eP	Pn	23 48 39.5	+1.6
TLIG	Tlapa	8.14	296	Pn	Pn	23 48 39.6	+1.5
CDM	Cerro de Muert	8.32	122	eP	Pn	23 48 43.3	+2.5
EDDO	Dominical	8.40	124	eP	Pn	23 48 44.7	+3.1
EDPN	Palmar Norte	8.90	124	eP	Pn	23 48 51.1	+2.8
DRK0	Durika	8.90	121	eP	Pn	23 48 51.0	+2.3
EDBA	Buenos Aires	8.93	122	eP	Pn	23 48 51.3	+2.4
RIOS	Rincon, Osa	9.00	125	eP	Pn	23 48 51.3	+1.4
LPLA	Las Palmas La	9.22	122	eP	Pn	23 48 55.3	+2.3
PIRO	Carate, Puerto	9.32	126	eP	Pn	23 48 57.2	+3.1
BRU2	Volcan	9.62	122	eP	Pn	23 48 59.2	+0.9
WBCY	West Bay, Gran	10.56	59	Pn	Pn	23 49 13.7	+2.7
FSCY	Frank Sound, G	10.71	59		Pn	23 49 14.1	+1.1
MOIG	Morelia	11.30	301		Pn	23 49 25.0	+3.6
LCCY	Blossom Villag	11.79	60	Pn	Pn	23 49 24.7	-3.1
CBCY	The Bluff, Cay	12.10	61	Pn	Pn	23 49 31.4	-0.5
MTDJ	Mount Denham	13.52	70	Pn	Pn	23 49 53.4	+2.3
ZAIG	Zacatecas	14.04	310	Pn	Pn	23 50 00.4	+2.5
PAYG	Puerto Ayora	14.64	177		Pn	23 50 07.1	+1.6
061Z	Ochoppi	15.06	37	P	P	23 50 13.6	-0.5
MOTC	Monteria, Cord	15.85	108	eP	Pn	23 50 15.1	-5.9
DBBC	Dabeiba	16.06	114	eP	Pn	23 50 22.8	-0.9
GTBY	Guantanamo Bay	16.22	67		Pn	23 50 24.5	-1.0
833A	Chaparral WMA,	16.24	332	P	Pn	23 50 28.0	+2.3
	baz=149,SNR=7.0						
060A	Indiantown	16.26	36	Pn	Pn	23 50 23.1	-2.8
HKT	Hockley	16.46	345		P	23 50 30.8	+1.2
HKT				IAmb	IAmb	23 50 32.1	
	comp=Z,156nm,1.6s						
DWPF	Disney Wildern	16.55	31	P	P	23 50 31.6	+0.9
	baz=214						
DWPF	Disney Wildern	16.55	31	P	P	23 50 31.5	+0.8
GR1C	Gorgona, Isla	16.71	130	eP	P	23 50 33.5	+0.9
441A	DeRidder	16.75	353	P	P	23 50 35.6	+2.7
CBOC	Ciudad Bolivar	16.78	118	eP	P	23 50 36.0	+2.5
PLMC	San Jos del P	17.05	121	eP	Pn	23 50 34.7	-1.3
656A	Willston	17.11	26	P	P	23 50 38.8	+1.8
656A					PcP	23 55 17.3	+0.6
553A	Crawfordville	17.15	19	P	P	23 50 39.3	+2.0
451A	Vernon	17.17	15	P	P	23 50 39.3	+1.8
342A	Flagon Creek P	17.30	356	P	Pn	23 50 40.4	+1.7
346A	Big Creek Wild	17.31	4	P	Pn	23 50 41.2	+2.4
SMLC	San Martn de	17.32	106	eP	Pn	23 50 38.5	-0.7
BRAL	Brewton	17.41	11	P	Pn	23 50 43.1	+3.0
	baz=192,SNR=6.6						
BRAL	Brewton	17.41	11	P	Pn	23 50 41.6	+1.5
YOTC	Yotoco, Valle	17.52	123	eP	P	23 50 41.7	0.0
GUY2C	Guyana, Caldas	17.66	118	eP	P	23 50 40.7	-2.9
435B	Jarrell	17.75	341	P	P	23 50 45.3	+1.4
	baz=158						
435B	Jarrell	17.75	341	P	P	23 50 45.5	+1.6
PTBC	PUERTO BERRIO,	17.83	113	eP	P	23 50 42.8	-2.2
RREF	El Recreo	17.84	119	eP	P	23 50 43.9	-1.8
NORC	Norcasia	17.92	116	eP	P	23 50 46.2	+0.2
NATX	Nacogdoches	17.96	350	P	Pn	23 50 47.9	+1.2
	baz=168						
NATX	Nacogdoches	17.96	350	P	P	23 50 47.5	+1.3
NATX				IAmb	IAmb	23 51 31.2	
	comp=Z,148nm,1.6s						
ANIL	Santa Ana	18.01	120	eP	Pn	23 50 49.3	+1.5
TOLC	Tolima	18.03	120	eP	Pn	23 50 50.0	+1.8
BBAC	Balboa, Cauca	18.05	130	eP	Pn	23 50 49.8	+1.6
VBMS	Vicksburg	18.09	1	P	Pn	23 50 51.0	+2.6
	baz=181						
VBMS	Vicksburg	18.09	1		Pn	23 50 51.0	+2.6
POPC	Popayan, Colom	18.14	128	eP	P	23 50 49.6	+1.0
352A	Blakely	18.20	17	P	Pn	23 50 51.0	+1.3
OCAC	Ocana	18.21	107	eP	P	23 50 49.0	-0.3
BRRC	Barranca, Sant	18.27	110	eP	P	23 50 50.6	+0.9
JCT	Junction City	18.29	335	P	Pn	23 50 52.1	+1.3
	baz=151						
JCT	Junction City	18.29	335		Pn	23 50 52.7	+2.0
250A	Grady	18.35	13	P	Pn	23 50 52.9	+1.4
250A				IAmb	IAmb	23 51 28.7	
	comp=Z,76nm,1.0s						
237A	Washetta, Mont	18.42	347	P	P	23 50 52.9	+1.6
237A				IAmb	IAmb	23 51 36.9	
	comp=Z,97nm,1.4s						
SOTA	Rioblanco	18.45	129	eP	Pn	23 50 55.4	+2.1
ORTC	Ortega, Tolima	18.46	122	eP	P	23 50 53.1	+1.1
OTAV	Otavalo	18.46	137	P	Pn	23 50 55.3	+1.9
OTAV	Otavalo	18.46	137	eP	Pn	23 50 54.0	+0.6
OTAV	Otavalo	18.46	137	eP	Pn	23 50 56.6	+3.2
PCON	Cinco Dias	18.49	128	eP	P	23 50 53.4	+0.6
MARP	Paez Belalcaza	18.51	126	eP	Pn	23 50 54.6	+0.7
SPBC	San Pablo de B	18.57	115	eP	Pn	23 50 55.1	+0.7
TIGA	Tifton	18.58	20	P	Pn	23 50 55.6	+1.4
	baz=203						
TIGA	Tifton	18.58	20	P	P	23 50 53.7	+0.7
TIGA					PcP	23 55 19.8	+0.6
146A	Union	18.59	5	P	Pn	23 50 55.8	+1.6
ROSC	El Rosal	18.75	118	P	Pn	23 50 57.5	+0.7
	comp=Z,3.1nm,0.3s,baz=85,slow=3.3,SNR=13						
ROSC	El Rosal	18.75	118	P	Pn	23 50 57.5	+0.7
ROSC				IAmb	IAmb	23 51 01.9	
	comp=Z,94nm,1.3s						
HPIG		18.82	315	P	P	23 50 57.2	+1.3
HPIG				IAmb	IAmb	23 51 01.8	
	comp=Z,108nm,1.5s						
WHTX	Lake Whitney,	18.84	343	P	Pn	23 50 59.1	+1.9
	baz=160						
WHTX	Lake Whitney,	18.84	343	P	P	23 50 57.6	+1.8
WHTX				IAmb	IAmb	23 51 18.5	
	comp=Z,79nm,1.1s						
PRAC	Prado	18.87	121	eP	P	23 50 55.2	-1.2
BARC	Barichara	18.96	111	eP	P	23 50 57.4	-0.2
BETC	Betania	19.02	125	eP	Pn	23 50 59.8	+0.2
PAMC	Pamplona, Colo	19.11	109	eP	P	23 50 56.2	-3.3
Z41A	Richland Creek	19.20	355	P	P	23 51 01.5	+1.7
	baz=174						
LRAL	Lakeview Retre	19.24	10	P	P	23 51 02.0	+1.8
	baz=191,SNR=29						
LRAL	Lakeview Retre	19.24	10	P	P	23 51 01.5	+1.2
Z47A	Carrollton	19.24	7	P	P	23 51 01.5	+1.3
TX31	Lajitas Ar. Si	19.25	324	IAmb	IAmb	23 51 08.4	
	comp=Z,49nm,1.0s						
TX31					PcP	23 55 22.1	+1.6
TX32	Lajitas Array	19.25	324	P	Pn	23 51 03.1	+0.9
TX32					PcP	23 55 22.2	+1.7
TXAR	Lajitas Array	19.25	324	P	Pn	23 51 03.5	+1.2
	comp=Z,1.2nm,0.3s,baz=148,slow=12,SNR=37						
TXAR				PcP	PcP	23 55 22.1	+1.6
	comp=Z,0.2nm,0.3s,baz=158,slow=1.3,SNR=10						
TXAR				ScP	ScP	23 58 52.4	+3.3
	comp=Z,0.0nm,0.3s,baz=141,slow=4.4,SNR=5.5						
TXAR	Lajitas Array	19.25	324	P	P	23 51 03.0	+2.5
TXAR					PcP	23 55 21.7	+1.2
GARC	Garzon, Huila	19.28	126	eP	P	23 50 59.2	-1.9
RUSC	La Rusia	19.34	113	eP	P	23 51 00.2	-1.8
CHIC	Chingaza	19.36	117	eP	P	23 51 03.0	+0.8
152A	Waverly Hall	19.39	16	P	Pn	23 51 03.9	+0.2
152A				IAmb	IAmb	23 51 05.1	
	comp=Z,53nm,0.8s						
255A	Hazlehurst	19.41	22	P	Pn	23 51 04.2	+0.2
SDDR	Presa de Saban	19.46	73	P	Pn	23 51 04.4	-0.4
Z38A	Mt. Pleasant	19.48	350	P	P	23 51 04.0	+1.2
Z38A				IAmb	IAmb	23 51 10.9	
	comp=Z,70nm,1.1s						
FLOC	Florencia	19.53	128	eP	P	23 51 04.2	+0.6
Y45A	Yeager Farm, C	19.77	3	P	Pn	23 51 09.2	+0.9
CCAR	Cane Creek	19.80	358	P	Pn	23 51 08.8	+0.2
Z51A	Franklin	19.89	14	P	Pn	23 51 09.4	-0.2
257A	Skidaway Islan	20.02	25	P	Pn	23 51 11.2	+0.1
Z35A	Perchaven, San	20.04	344	P	P	23 51 09.6	+0.6
Z35A				IAmb	IAmb	23 51 29.0	
	comp=Z,68nm,1.1s						
SC01	Santiago de lo	20.07	72	P	P	23 51 10.9	+1.6
ABTX	Abilene, Hawle	20.13	338	P	P	23 51 11.5	+1.6
	baz=155,SNR=16						
ABTX	Abilene, Hawle	20.13	338	IAmb	IAmb	23 51 30.6	
	comp=Z,90nm,1.2s						
Y49A	Blount Mountai	20.15	11	P	Pn	23 51 12.6	-0.1
Y49A				IAmb	IAmb	23 51 15.1	
	comp=Z,73nm,1.1s						
BANI	BANI	20.22	75	P	P	23 51 11.4	+0.3
TAMC	Tame, Arauca	20.28	110	eP	P	23 51 08.7	-3.1
SLBS	Sierra La Lagu	20.37	301	P	P	23 51 15.5	+2.9
SLBS				IAmb	IAmb	23 51 47.6	
	comp=Z,84nm,1.9s						
X43A	Marvell	20.38	0	P	P	23 51 14.6	+2.0
	baz=180,SNR=8.7						
OXF	Oxford	20.42	4	P	P	23 51 14.1	+1.0
	baz=184,SNR=5.2						
OXF	Oxford	20.42	4	P	P	23 51 14.7	+1.7
X40A	Basin Creek Fa	20.43	355	P	P	23 51 13.5	+0.4
	baz=174,SNR=15						
X40A	Basin Creek Fa	20.43	355	P	P	23 51 14.2	+1.1
X40A				IAmb	IAmb	23 51 15.7	
	comp=Z,115nm,1.7s						
GOGA	Godfrey	20.44	18	P	P	23 51 14.6	+1.4
	baz=201,SNR=17						
GOGA	Godfrey	20.44	18	P	P	23 51 15.2	+2.0
GOGA				IAmb	IAmb	23 51 18.2	
	comp=Z,77nm,1.1s						
SDV	Santo Domingo	20.54	102	P	P	23 51 12.4	-2.3
	comp=Z,42nm,0.8s,baz=276,slow=4.5,SNR=34						
SDV				PcP	PcP	23 55 24.1	+0.9
	comp=Z,5.8nm,0.7s,baz=255,slow=4.6,SNR=3.8						
SDV	Santo Domingo	20.54	102	P	P	23 51 12.9	-1.7
SDV				IAmb	IAmb	23 51 36.3	
	comp=Z,41nm,0.8s						
SDV	Santo Domingo	20.54	102	eP	P	23 51 09.6	-5.1
SDV	Santo Domingo	20.54	102	eP	P	23 51 13.2	-1.5
MIAR	Mount Ida	20.55	354	P	P	23 51 15.0	+0.5
	baz=172,SNR=13						
MIAR	Mount Ida	20.55	354	P	P	23 51 15.5	+1.0
MACC	Macarena, Meta	20.61	123	eP	P	23 51 16.4	+1.1
X48A	Hartselle	20.62	9	P	P	23 51 16.9	+1.7
X48A				IAmb	IAmb	23 51 19.4	
	comp=Z,51nm,0.8s						
Y52A	Lilburn	20.69	16	P	P	23 51 17.8	+1.8
X37A	Clayton	20.84	350	IAmb	IAmb	23 51 27.1	
	comp=Z,106nm,1.4s						
PTGC	Puerto Gaitan,	20.96	116	eP	P	23 51 18.3	-0.7
FPAL	Fort Paine	20.96	12	P	P	23 51 20.3	+1.4
FPAL				IAmb	IAmb	23 51 22.0	
	comp=Z,60nm,1.0s						
PLAL	Pickwick Lake	21.00	7	IAmb	IAmb	23 51 48.6	
	comp=Z,46nm,1.0s						
W41B	Gary Mavity, V	21.07	357	P	P	23 51 20.6	+0.6
	baz=176,SNR=14						
Z56A	Williston	21.07	23	P	P	23 51 21.4	+1.3
Z56A				IAmb	IAmb	23 51 24.3	
	comp=Z,63nm,0.8s						
W45A	Hickory Valley	21.08	4	P	P	23 51 23.5	+3.4
PTLC	Puerto Leguiza	21.10	129	eP	P	23 51 23.0	+2.5
X51A	Calhoun	21.16	14	P	P	23 51 22.8	+1.8
X51A				IAmb	IAmb	23 51 25.3	
	comp=Z,76nm,1.1s						
WHAR	Wooly Hollow	21.19	357	P	P	23 51 21.9	+0.6
WHAR				IAmb	IAmb	23 51 32.7	
	comp=Z,86nm,1.2s						
DR12	Loma Pena Alta	21.20	74	P	P	23 51 22.4	+0.8
W39A	Magazine	21.22	354	P	P	23 51 22.0	+0.4
	baz=172,SNR=12						
W39A	Magazine	21.22	354	P	P	23 51 22.9	+1.4
CSU	Charleston Sou	21.29	26	P	P	23 51 25.6	+3.2
NHSC	New Hope	21.35	25	P	P	23 51 23.2	+0.2
	baz=210,SNR=6.5						
NHSC	New Hope	21.35	25	P	P	23 51 25.6	+2.5
HBAR	Harrisburg	21.42	1	P	P	23 51 26.9	+3.2
LPAR	Lepanto	21.47	1	P	P	23 51 25.6	+1.3
SWET	Sewanee	21.56	11	P	P	23 51 26.1	+0.9
SWET				IAmb	IAmb	23 51 28.6	
	comp=Z,44nm,0.8s						
HODGE	Hodges	21.58	20	P	P	23 51 26.7	+1.3
HODGE				IAmb	IAmb	23 51 28.7	
	comp=Z,46nm,0.9s						
W50A	Signal Mountai	21.66	13	P	P	23 51 27.7	+1.3
FCAR	Ozark Folk Cen	21.78	357	P	P	23 51 28.1	+0.6
WMOK	Wichita Mounta	21.79	342	P	P	23 51 28.8	+1.1
	baz=159						
HALT	Halls	21.82	3	P	P	23 51 30.4	+2.4
GNAR	Gosnell	21.84	2	P	P	23 51 31.1	+2.9
Z59A	Georgetown, SC	21.85	27	P	P	23 51 29.7	+1.3
	baz=212						
W52A	Murphy	21.89	16	P	P	23 51 30.3	+1.5
W52A				IAmb	IAmb	23 52 01.0	
	comp=Z,59nm,0.8s						
FNO	Franklin	21.91	346	IAmb	IAmb	23 51 56.7	
	comp=Z,70nm,0.8s						
V48A	Smith Brothers	21.91	9	IAmb	IAmb	23 51 49.7	
	comp=Z,62nm,1.0s						
LCAR	Lake Charles	21.93	360		P	23 51 31.3	+2.1
LCAR				IAmb	IAmb	23 51 50.6	
	comp=Z,46nm,0.8s						
PEBM	Pemiscott Bayo	22.00	2	P	P	23 51 32.0	+2.1
LNXT	Lenox	22.00	3	P	P	23 51 32.0	+2.1
MNTX	Cornudas Mount	22.00	325	P	P	23 51 31.4	+1.3
	baz=140,SNR=36						
MNTX	Cornudas Mount	22.00	325	P	P	23 51 31.5	+1.5
MNTX				IAmb	IAmb	23 51 33.6	
	comp=Z,53nm,0.8s						
Y57A	Sumter	22.06	24	P	P	23 51 30.9	+0.4
BG3	Lake Jocassee	22.07	18	IAmb	IAmb	23 51 34.0	
	comp=Z,51nm,1.0s						
OKCFA	Oklahoma City	22.07	346	P	P	23 51 30.7	-0.1
WVT	Waverly	22.17	7	P	P	23 51 32.6	+0.9
	baz=188						
WVT	Waverly	22.17	7	P	P	23 51 31.9	+0.2
WVT				IAmb	IAmb	23 51 42.3	
	comp=Z,63nm,1.1s						
GLAT	Glass	22.18	4	P	P	23 51 32.7	+0.9
OK025	Westminster Rd	22.20	346	IAmb	IAmb	23 51 52.3	
	comp=Z,77nm,1.1s						
TUL1	Leonard	22.20	350	P	P	23 51 32.7	+0.5
	baz=167						
TUL1	Leonard	22.20	350	IAmb	IAmb	23 51 56.1	
	comp=Z,60nm,1.1s						
Y58A	Scranton	22.26	25	P	P	23 51 33.4	+0.7
PAULI	Pauline	22.26	20	IAmb	IAmb	23 51 35.7	
	comp=Z,164nm,1.8s						
U40A	Yellville	22.28	356	P	P	23 51 33.0	+0.1
	baz=175,SNR=27						
U40A	Yellville	22.28	356	P	P	23 51 33.1	+0.1
HHAR	Hobbs	22.31	354	P	P	23 51 33.0	-0.2
CLTN	Cedars of Leba	22.34	10	P	P	23 51 34.5	+1.0
CLTN				IAmb	IAmb	23 51 54.8	
	comp=Z,58nm,1.1s						
OK029	Liberty Lake	22.44	346	IAmb	IAmb	23 51 54.5	
	comp=Z,58nm,1.1s						
OK031	S. Brethren Rd	22.45	347	P	P	23 51 34.4	-0.4
HICK	Hickman	22.45	4	P	P	23 51 35.2	+0.4
V51A	Loudon	22.46	14	P	P	23 51 35.9	+1.1
V51A				IAmb	IAmb	23 51 59.1	
	comp=Z,55nm,1.0s						
TKL	Tuckaleechee C	22.46	15	P	P	23 51 35.8	+0.9
	comp=Z,68nm,0.9s,baz=189,slow=11,SNR=44						
U38A	Gravette	22.51	353		P	23 51 35.4	-0.1
PARMO	Parma	22.55	2	P	P	23 51 35.9	+0.2
MSTX	Muleshoe	22.56	334	P	P	23 51 37.2	+1.2
	baz=149,SNR=5.1						
MSTX	Muleshoe	22.56	334	P	P	23 51 37.3	+1.2
MSTX					PcP	23 55 27.9	+1.2
HENM	Henderson Moun	22.61	3	P	P	23 51 39.0	+2.6
QUOK	Quay	22.63	348	P	P	23 51 36.9	+0.2
QUOK				IAmb	IAmb	23 51 56.0	
	comp=Z,62nm,1.1s						
PBMO	Poplar Bluff	22.64	1	IAmb	IAmb	23 52 00.5	
	comp=Z,52nm,1.1s						
Y59A	Loris	22.67	27	P	P	23 51 37.1	0.0
V52A	Sevierville	22.68	16	P	P	23 51 38.3	+1.1
KMSC	Kings Mountain	22.72	21	P	P	23 51 38.1	+0.6
	baz=204,SNR=19						
KMSC	Kings Mountain	22.72	21	P	P	23 51 38.4	+0.8
KMSC				IAmb	IAmb	23 51 39.7	
	comp=Z,52nm,0.8s						
V53A	Saluda	22.74	17	P	P	23 51 38.5	+0.7
U49A	Red Boiling Sp	22.84	11	P	P	23 51 39.3	+0.5
U49A				IAmb	IAmb	23 52 03.7	
	comp=Z,70nm,1.1s						
T42A	Van Buren	22.89	360	P	P	23 51 39.5	+0.2
T42A				IAmb	IAmb	23 52 03.3	
	comp=Z,63nm,1.1s						
AMTX	Amarillo	22.91	337	P	P	23 51 39.1	-0.5
	baz=152						
AMTX	Amarillo	22.91	337	IAmb	IAmb	23 51 59.3	
	comp=Z,57nm,1.1s						
X58A	Rowland	22.95	25	P	P	23 51 39.9	0.0
T45A	Paducah	22.97	5	P	P	23 51 41.2	+1.1
Y60A	Bolivia	22.97	28	P	P	23 51 40.4	+0.2
Y60A				IAmb	IAmb	23 51 42.8	
	comp=Z,73nm,0.8s						
W56A	Indian Trail	22.98	22	P	P	23 51 40.3	+0.2
	baz=206,SNR=12						
MGMO	Mountain Grove	23.04	357	IAmb	IAmb	23 52 01.6	
	comp=Z,98nm,1.2s						
W57A	Gilead	23.21	23	IAmb	IAmb	23 52 17.2	
	comp=Z,69nm,1.2s						
CROK	Carrier	23.24	345	P	P	23 51 43.7	+1.0
CROK				IAmb	IAmb	23 52 18.8	
	comp=Z,60nm,1.0s						
U32A	Winter Ranch,	23.39	343	P	P	23 51 45.4	+1.4
V55A	Taylorsville	23.40	20	IAmb	IAmb	23 52 08.1	
	comp=Z,49nm,1.0s						
T50A	Nancy	23.52	12	IAmb	IAmb	23 52 13.3	
	comp=Z,66nm,1.2s						
X60A	Albert Glenn T	23.56	28	P	P	23 51 45.4	-0.2
	baz=213						
S44A	Carbondale	23.60	3	IAmb	IAmb	23 51 57.1	
	comp=Z,78nm,1.1s						
V56A	Mocksville	23.61	22	P	P	23 51 46.2	+0.1
	baz=206,SNR=13						
SIUC	Southern Illin	23.62	3	IAmb	IAmb	23 51 57.2	
	comp=Z,71nm,1.0s						
ICMP	Isla Caja de M	23.76	78	P	P	23 51 47.3	-0.3
ICMP				IAmb	IAmb	23 51 54.5	
	comp=Z,76nm,1.1s						
KAN05	Bluff City Nor	23.79	346	P	P	23 51 47.6	0.0
KAN05				IAmb	IAmb	23 52 07.1	
	comp=Z,44nm,1.1s						
HSIG		23.79	312	P	P	23 51 49.6	+1.9
KAN01	Argonia South	23.81	346	P	P	23 51 47.9	+0.1
U54A	Nelsons Funny	23.82	18	P	P	23 51 48.4	+0.3
	baz=202,SNR=26						
FVM	French Village	23.85	1	P	P	23 51 49.6	+1.4
KAN10	Anthony SW Sta	23.86	346	P	P	23 51 49.3	+1.1
SRIG	Santa Rosalia	23.86	307	P	P	23 51 47.9	-0.5
SRIG				IAmb	IAmb	23 51 50.6	
	comp=Z,37nm,0.8s						
CCM	Cathedral Cave	23.91	359	P	P	23 51 49.0	+0.2
	baz=179						
CCM	Cathedral Cave	23.91	359	P	P	23 51 48.3	-0.5
CCM				IAmb	IAmb	23 52 10.3	
	comp=Z,43nm,1.1s						
KAN08	Anthony NE Sta	23.93	346	P	P	23 51 48.9	0.0
KAN08				IAmb	IAmb	23 51 50.9	
	comp=Z,35nm,1.0s						
V57A	Coltrane Farms	23.95	23	P	P	23 51 49.5	+0.5
	baz=207,SNR=17						
121A	Cookes Peak, D	23.98	323	P	P	23 51 52.1	+2.4
	baz=136,SNR=35						
121A	Cookes Peak, D	23.98	323	P	P	23 51 52.4	+2.7
KAN12	Harper NE Stat	24.00	346	P	P	23 51 49.9	+0.4
KAN12				IAmb	IAmb	23 52 17.0	
	comp=Z,33nm,0.9s						
USIN	University of	24.00	6	P	P	23 51 50.0	+0.6
319A	Douglas	24.10	319	P	P	23 51 52.7	+2.1
V58A	Windy Hill, Pi	24.12	24	IAmb	IAmb	23 51 52.1	
	comp=Z,54nm,0.8s						
U56A	King	24.14	21	P	P	23 51 51.3	+0.5
	baz=206,SNR=9.4						
U56A	King	24.14	21	P	P	23 51 51.0	+0.3
U56A				IAmb	IAmb	23 51 53.9	
	comp=Z,36nm,0.8s						
SJG	San Juan	24.14	77	P	P	23 51 47.6	-3.4
	comp=Z,11nm,0.6s,baz=195,slow=17,SNR=2.2						
SJG	San Juan	24.14	77	P	P	23 51 48.5	-2.5
CNNC	Cliffs of the	24.15	27	P	P	23 51 51.3	+0.4
	baz=212						
CNNC	Cliffs of the	24.15	27	P	P	23 51 51.3	+0.4
CNNC				IAmb	IAmb	23 51 52.3	
	comp=Z,50nm,0.8s						
GCPR	Guaynabo City	24.23	77	P	P	23 51 50.9	-0.9
S51A	Beattyville	24.39	14	IAmb	IAmb	23 51 58.9	
	comp=Z,37nm,0.8s						
WCI	Wyandotte Cave	24.43	9	P	P	23 51 53.7	+0.3
	baz=191						
WCI	Wyandotte Cave	24.43	9	P	P	23 51 53.8	+0.4

ATAH	Atahualpa	24.45	149	P	P	23 51 55.2	+1.0
	comp=Z,13nm,0.9s,baz=327,slow=6.3,SNR=8.2						
V59A	Middlesex	24.45	26	P	P	23 51 53.6	0.0
	baz=211,SNR=6.4						
SLM	Saint Louis	24.50	1	P	P	23 51 56.0	+2.0
SLM				IAmb	IAmb	23 52 16.4	
	comp=Z,48nm,1.1s						
W61A	Ground Anchor	24.51	28	P	P	23 51 54.4	+0.3
	baz=214						
BNM	Barren Site	24.55	327	P	P	23 51 57.1	+2.3
U57A	Blanch	24.59	23	P	P	23 51 55.4	+0.5
	baz=208,SNR=11						
R49A	Shelbyville	24.68	11	IAmb	IAmb	23 52 23.6	
	comp=Z,41nm,1.1s						
OLIL	Olney	24.72	5	IAmb	IAmb	23 52 39.0	
	comp=Z,58nm,1.1s						
LENM	Lemitar	24.75	327	P	P	23 51 58.9	+2.3
Q44A	Meyer Farm, Va	24.82	4	IAmb	IAmb	23 52 34.5	
	comp=Z,36nm,1.1s						
R50A	Paris	24.84	12	IAmb	IAmb	23 52 27.2	
	comp=Z,34nm,0.9s						
U58A	Oxford	24.87	24	P	P	23 51 58.0	+0.6
	baz=209						
T56A	Rocky Mt	24.87	21	P	P	23 51 58.1	+0.6
	baz=206						
V60A	Jim Taylor Roa	24.87	27	P	P	23 51 58.1	+0.6
	baz=213						
V60A	Jim Taylor Roa	24.87	27	IAmb	IAmb	23 52 02.2	
	comp=Z,43nm,0.7s						
BLA	Blacksburg	24.90	20	P	P	23 51 58.6	+0.8
	baz=205,SNR=7.3						
BLA	Blacksburg	24.90	20	IAmb	IAmb	23 52 01.1	
	comp=Z,33nm,0.9s						
ANMO	Albuquerque	25.09	329	P	P	23 51 59.5	-0.1
	comp=Z,5.0nm,1.0s,baz=149,slow=12,SNR=12						
ANMO				PcP	PcP	23 55 32.8	+0.6
	comp=Z,5.5nm,0.9s,baz=159,slow=5.0,SNR=8.0						
ANMO	Albuquerque	25.09	329	P	P	23 52 00.6	+0.9
	baz=142						
ANMO	Albuquerque	25.09	329	P	P	23 52 01.3	+1.6
ANMO				PcP	PcP	23 55 33.6	+1.3
T57A	Hurt	25.12	22	P	P	23 52 00.1	+0.4
	baz=207,SNR=8.6						
U59A	Littleton	25.14	26	P	P	23 52 00.1	+0.2
S54A	Dingess, Beckl	25.16	18	P	P	23 52 00.3	+0.2
	baz=202						
S54A	Dingess, Beckl	25.16	18	IAmb	IAmb	23 52 31.7	
	comp=Z,77nm,1.4s						
V61A	Roper	25.20	28	P	P	23 52 01.4	+0.9
R32A	Long Quarter,	25.24	346	P	P	23 52 01.7	+0.9
R32A				IAmb	IAmb	23 52 20.8	
	comp=Z,35nm,1.1s						
V62A	Hyde County Ai	25.31	30	P	P	23 52 00.8	-0.6
	baz=216						
BLO	Bloomington	25.33	8	IAmb	IAmb	23 52 35.3	
	comp=Z,63nm,0.9s						
T58A	Grand View Acr	25.35	24	P	P	23 52 01.8	0.0
	baz=209						
P40A	Paris	25.40	358	IAmb	IAmb	23 52 47.2	
	comp=Z,33nm,1.1s						
KSU1	Kansas State U	25.45	350	P	P	23 52 03.6	+0.9
	baz=167						
KSU1	Kansas State U	25.45	350	P	P	23 52 02.7	-0.1
R53A	Hurricane	25.46	17	IAmb	IAmb	23 52 24.6	
	comp=Z,29nm,0.8s						
U60A	Pendleton	25.51	26	P	P	23 52 03.2	0.0
	baz=212						
P43A	Skaggs, Pawnee	25.53	3	P	P	23 52 05.1	+1.7
P43A				IAmb	IAmb	23 52 51.0	
	comp=Z,36nm,0.9s						
R54A	Victor	25.61	18	P	P	23 52 04.8	+0.6
	baz=203						
S56A	Natural Bridge	25.61	21	P	P	23 52 04.7	+0.5
	baz=206						
TUC	Tucson	25.68	318	P	P	23 52 06.2	+1.2
	baz=130						
TUC	Tucson	25.68	318	P	P	23 52 05.9	+0.9
TUC					PcP	23 55 35.3	+1.8
T59A	Double "B" Far	25.77	25	IAmb	IAmb	23 52 07.0	
	comp=Z,36nm,0.8s						
P48A	Milroy	25.78	10	IAmb	IAmb	23 52 42.8	
	comp=Z,50nm,0.9s						
CBKS	Cedar Bluff	25.87	344	P	P	23 52 07.5	+0.9
	baz=160						
CBKS	Cedar Bluff	25.87	344	P	P	23 52 07.1	+0.6
S57A	Dark Hollow, R	25.91	22	P	P	23 52 07.5	+0.6
	baz=207						
S57A	Dark Hollow, R	25.91	22	P	P	23 52 07.2	+0.4
P49A	Miami Univ. Ec	25.97	11	P	P	23 52 08.3	+0.9
	baz=194						
P49A	Miami Univ. Ec	25.97	11	IAmb	IAmb	23 52 44.0	
	comp=Z,38nm,1.1s						
Q52A	Bidwell	25.97	16	IAmb	IAmb	23 52 08.6	
	comp=Z,33nm,0.8s						
Q53A	Leroy	26.08	17	P	P	23 52 09.0	+0.6
	baz=201						
O44A	Mansfield	26.10	4	P	P	23 52 07.8	-0.7
O44A				IAmb	IAmb	23 53 03.9	
	comp=Z,41nm,1.1s						
S58A	Poland Farm, P	26.12	24	P	P	23 52 09.3	+0.6
	baz=209						
S58A	Poland Farm, P	26.12	24	IAmb	IAmb	23 52 52.9	
	comp=Z,37nm,1.4s						
JSRW	J. Sargeant Re	26.26	24	P	P	23 52 09.6	-0.4
P51A	Williamsport	26.27	14	IAmb	IAmb	23 52 56.2	
	comp=Z,63nm,1.2s						
Q54A	Coxs Mills	26.39	18	IAmb	IAmb	23 52 12.5	
	comp=Z,34nm,0.8s						
SFIN	Lafayette	26.45	7	P	P	23 52 11.6	-0.1
	baz=188						
HDIL	Hopedale	26.45	3	P	P	23 52 12.0	+0.3
	baz=183						
HDIL	Hopedale	26.45	3	P	P	23 52 11.6	-0.1
HDIL				IAmb	IAmb	23 53 02.2	
	comp=Z,44nm,0.9s						
R58B	Mineral	26.49	24	P	P	23 52 12.5	+0.4
	baz=209						
R57A	Stanardsville	26.54	22	P	P	23 52 12.9	+0.4
	baz=208						
S59A	Mechanicsville	26.55	25	P	P	23 52 13.6	+1.0
	baz=210						
P52A	Corning	26.64	15	P	P	23 52 13.7	+0.3
	baz=199						
P52A	Corning	26.64	15	IAmb	IAmb	23 52 52.9	
	comp=Z,37nm,1.1s						
O49A	Covington	26.68	11	P	P	23 52 13.2	-0.5
P53A	Whipple	26.70	17	IAmb	IAmb	23 52 16.0	
	comp=Z,63nm,1.4s						
N38A	Joes South For	26.72	356	IAmb	IAmb	23 52 34.4	
	comp=Z,46nm,0.9s						
R58A	Rapidan	26.74	23	P	P	23 52 14.8	+0.5
	baz=209						
214A	Organ Pipe Nat	26.80	315	P	P	23 52 17.1	+2.0
	baz=127,SNR=6.8						
214A	Organ Pipe Nat	26.80	315	P	P	23 52 16.0	+1.0
CBN	Corbin Frederi	26.90	24	P	P	23 52 16.5	+0.7
	baz=210						
CBN	Corbin Frederi	26.90	24	P	P	23 52 16.0	+0.3
CBN				IAmb	IAmb	23 52 17.7	
	comp=Z,63nm,1.2s						
KSCO	Kaye Shedlock’	26.93	340	P	P	23 52 17.8	+1.6
	baz=154						
Q56A	Snyder Ridge,	26.97	20	P	P	23 52 17.2	+0.8
	baz=206						
W18A	Petrified Fore	26.97	324	P	P	23 52 18.5	+1.9
	baz=136,SNR=6.5						
W18A	Petrified Fore	26.97	324	P	P	23 52 18.2	+1.5
W18A				IAmb	IAmb	23 52 21.4	
	comp=Z,53nm,1.2s						
R59A	King George, V	27.00	24	P	P	23 52 17.3	+0.7
	baz=210						
ACSO	Alum Creek Sta	27.00	13	P	P	23 52 16.8	+0.1
	baz=197,SNR=8.4						
ACSO	Alum Creek Sta	27.00	13	IAmb	IAmb	23 52 45.6	
	comp=Z,65nm,1.2s						
N35A	Tabor	27.03	352	P	P	23 52 17.3	+0.3
N35A				IAmb	IAmb	23 52 44.7	
	comp=Z,25nm,0.8s						
N47A	Urbana	27.12	9	IAmb	IAmb	23 52 56.8	
	comp=Z,64nm,1.2s						
O52A	Adamsville	27.17	15	P	P	23 52 18.1	-0.1
O52A				IAmb	IAmb	23 52 19.7	
	comp=Z,48nm,1.1s						
Q57A	Strasburg	27.23	22	P	P	23 52 19.7	+1.0
	baz=207						
R60A	Leonardtown, M	27.27	25	P	P	23 52 19.7	+0.6
	baz=211						
MCWV	Mont Chateau	27.31	19	P	P	23 52 20.2	+0.7
	baz=204						
MCWV	Mont Chateau	27.31	19	P	P	23 52 19.2	-0.3
M44A	Midewin, Midew	27.36	5	P	P	23 52 18.8	-1.0
M44A				IAmb	IAmb	23 53 14.0	
	comp=Z,30nm,1.0s						
N49A	Columbus Grove	27.42	11	P	P	23 52 21.9	+1.5
N49A				IAmb	IAmb	23 53 03.9	
	comp=Z,23nm,0.9s						
Q58A	Fox Den Farm,	27.42	23	P	P	23 52 21.0	+0.6
	baz=209						
O53A	New Philadelph	27.46	16	P	P	23 52 21.4	+0.6
	baz=201						
O53A	New Philadelph	27.46	16	IAmb	IAmb	23 53 06.8	
	comp=Z,32nm,1.1s						
P56A	Dayton Farm, R	27.50	21	P	P	23 52 22.2	+1.0
	baz=206						
S22A	4UR Ranch, Cre	27.51	332	P	P	23 52 22.3	+0.7
	baz=145,SNR=6.5						
O54A	Avella	27.63	18	IAmb	IAmb	23 52 23.1	
	comp=Z,24nm,0.7s						
Q59A	Harwood	27.75	24	P	P	23 52 24.0	+0.6
	baz=211						
P57A	Homestead Farm	27.77	22	P	P	23 52 24.6	+1.0
	baz=208						
P57A	Homestead Farm	27.77	22	P	P	23 52 24.1	+0.5
HQIL	Hanson Quary C	27.78	5	P	P	23 52 23.4	-0.2
HQIL				IAmb	IAmb	23 53 04.2	
	comp=Z,24nm,1.0s						
N51A	Ashland	27.80	14	IAmb	IAmb	23 53 16.0	
	comp=Z,29nm,1.0s						
SCIA	State Center	27.83	356	P	P	23 52 24.0	0.0
MVCO	Mesa Verde	27.88	329	P	P	23 52 26.7	+1.8
	baz=141,SNR=7.9						
MVCO	Mesa Verde	27.88	329	P	P	23 52 25.4	+0.5
L40A	Anamosa	27.92	360	IAmb	IAmb	23 52 45.5	
	comp=Z,32nm,1.1s						
N53A	Lisbon	28.08	16	IAmb	IAmb	23 52 27.6	
	comp=Z,44nm,1.1s						
M50A	Fremont	28.11	13	IAmb	IAmb	23 52 46.5	
	comp=Z,20nm,0.8s						
L46A	Eue Claire	28.15	7	P	P	23 52 25.7	-1.2
L46A				IAmb	IAmb	23 53 13.3	
	comp=Z,42nm,0.9s						
WUAZ	Wupatki	28.20	323	P	P	23 52 29.6	+2.0
	baz=134,SNR=12						
WUAZ	Wupatki	28.20	323	P	P	23 52 29.6	+2.0
WUAZ				IAmb	IAmb	23 52 31.3	
	comp=Z,30nm,1.1s						
WUAZ				PcP	PcP	23 55 41.3	+1.7
L34A	Svendsen Farm,	28.22	351	P	P	23 52 27.9	+0.4
L34A				IAmb	IAmb	23 52 59.6	
	comp=Z,69nm,1.7s						
O56A	Blue Knob Stat	28.28	20	P	P	23 52 28.6	+0.5
	baz=206,SNR=6.2						
O56A	Blue Knob Stat	28.28	20	IAmb	IAmb	23 52 29.8	
	comp=Z,21nm,0.9s						
L48A	N Adams	28.36	10	IAmb	IAmb	23 53 22.7	
	comp=Z,35nm,0.9s						
N54A	Moraine State	28.46	18	P	P	23 52 29.5	-0.2
	baz=202,SNR=9.5						
N54A	Moraine State	28.46	18	IAmb	IAmb	23 52 30.6	
	comp=Z,28nm,0.8s						
P59A	Jarrettsville	28.48	24	P	P	23 52 30.2	+0.4
	baz=210						
O57A	Amberson	28.55	22	P	P	23 52 30.8	+0.3
	baz=208						
GRGR	Grenville	28.57	90	P	P	23 52 32.0	+1.0
M52A	Chesterland	28.63	15	IAmb	IAmb	23 52 32.3	
	comp=Z,22nm,1.0s						
PV01	Paradox Valley	28.64	330	P	P	23 52 33.0	+1.3
M53A	WI Miller and	28.71	16	P	P	23 52 31.9	0.0
	baz=201,SNR=6.1						
M53A	WI Miller and	28.71	16	IAmb	IAmb	23 52 32.7	
	comp=Z,24nm,0.8s						
O58A	Lewisberry	28.74	23	P	P	23 52 32.6	+0.5
	baz=209						
SMCO	Snowmass	28.75	333	P	P	23 52 33.4	+0.6
PV15	Paradox Valley	28.76	330	P	P	23 52 35.6	+2.9
PV02	Paradox Valley	28.78	330	P	P	23 52 35.0	+2.1
PV13	Radium Mtn., P	28.78	330	P	P	23 52 33.9	+1.1
PV13				IAmb	IAmb	23 52 37.1	
	comp=Z,39nm,1.3s						
GLA	Glamis	28.82	315	P	P	23 52 35.2	+2.1
GLA				IAmb	IAmb	23 52 36.9	
	comp=Z,31nm,1.3s						
MVL	Millersville	28.85	24	P	P	23 52 33.6	+0.5
PV05	Paradox Valley	28.86	329	P	P	23 52 34.8	+1.2
PV05				IAmb	IAmb	23 52 37.4	
	comp=Z,33nm,1.3s						
PV03	Paradox Valley	28.87	330	P	P	23 52 35.0	+1.4
PV18	Skein Mesa, Pa	28.90	330	P	P	23 52 35.2	+1.4
PV18				IAmb	IAmb	23 52 38.0	
	comp=Z,28nm,1.2s						
PV12	Saucer Basin,	28.90	330	P	P	23 52 35.9	+2.0
PV12				IAmb	IAmb	23 52 38.3	
	comp=Z,28nm,1.3s						
PV11	David Mesa, Pa	28.92	330	P	P	23 52 35.1	+1.1
PV11				IAmb	IAmb	23 52 38.3	
	comp=Z,36nm,1.4s						
PV07	Paradox Valley	28.92	330	P	P	23 52 35.4	+1.4
PV17	East Wray Mesa	28.95	330	IAmb	IAmb	23 52 38.4	
	comp=Z,30nm,1.3s						
PV16	Nyswonger Mesa	28.95	330	P	P	23 52 36.2	+1.9
N56A	West Decatur	28.95	20	P	P	23 52 34.5	+0.4
	baz=206,SNR=11						
P60A	Greenville	28.97	25	P	P	23 52 34.4	+0.2
	baz=212						
P60A	Greenville	28.97	25	P	P	23 52 33.5	-0.8
PV19	Morning Glory	28.98	330	P	P	23 52 35.8	+1.2
PV19				IAmb	IAmb	23 53 17.7	
	comp=Z,46nm,1.7s						
PV20	West Nyswonger	29.00	330	P	P	23 52 36.8	+2.1
PV04	Paradox Valley	29.01	330	P	P	23 52 36.3	+1.5
ESJX	Sierra Juarez	29.03	312	P	P	23 52 35.9	+0.8
PV14	Lion Creek, Pa	29.05	330	P	P	23 52 36.6	+1.3
ALLY	Alegheny Colle	29.06	17	P	P	23 52 34.4	-0.6
ALLY				IAmb	IAmb	23 53 33.8	
	comp=Z,47nm,1.1s						
PV10	Paradox Valley	29.06	330	P	P	23 52 36.6	+1.2
M54A	Oil Creek Stat	29.06	18	P	P	23 52 35.1	0.0
	baz=203						
M54A	Oil Creek Stat	29.06	18	IAmb	IAmb	23 53 37.0	
	comp=Z,21nm,0.9s						
PV22	Blue Mesa, Par	29.06	330	P	P	23 52 36.7	+1.4
N57A	Milroy	29.07	21	P	P	23 52 35.0	0.0
	baz=207						
PV23	Carpenter Ridg	29.11	330	P	P	23 52 37.1	+1.3
PDMCI	Parker Dam,Lak	29.11	318	P	P	23 52 36.1	+0.5
	baz=128,SNR=11						
PSUB	Penn St. - Bra	29.15	25	P	P	23 52 35.8	+0.1
O59A	Robesonia	29.18	24	P	P	23 52 36.5	+0.5
	baz=210						
M55A	Ridgway	29.30	19	IAmb	IAmb	23 53 36.0	
	comp=Z,52nm,1.4s						
L53A	Girard	29.31	16	P	P	23 52 37.4	+0.2
	baz=201						
N58A	Sunbury	29.44	22	P	P	23 52 38.5	+0.2
	baz=209						
W13A	Hualapai Mount	29.45	319	P	P	23 52 39.6	+0.8
W13A				IAmb	IAmb	23 52 42.8	
	comp=Z,29nm,1.4s						
O60A	Telford	29.50	25	P	P	23 52 39.1	+0.3
	baz=212						
M56A	Emporium	29.50	20	P	P	23 52 38.9	0.0
	baz=206,SNR=7.5						
M56A	Emporium	29.50	20	IAmb	IAmb	23 52 40.2	
	comp=Z,31nm,0.9s						
ERPA	Erie	29.53	17	P	P	23 52 39.5	+0.3
	baz=202						
ERPA	Erie	29.53	17	IAmb	IAmb	23 52 39.8	
	comp=Z,20nm,0.7s						
BC3	Big Chuckawall	29.60	316	P	P	23 52 42.0	+2.0
	baz=125,SNR=10						
IRM	Iron Mountain	29.69	317	P	P	23 52 42.8	+2.1
	baz=126,SNR=8.7						
M57A	Sunshine Farm,	29.73	21	P	P	23 52 41.1	+0.2
	baz=208,SNR=5.7						
M57A	Sunshine Farm,	29.73	21	P	P	23 52 40.9	0.0
M57A				IAmb	IAmb	23 52 42.0	
	comp=Z,18nm,0.8s						
LUPA	Lehigh Univers	29.75	24	IAmb	IAmb	23 52 42.7	
	comp=Z,29nm,0.7s						
N59A	State Game Lan	29.86	23	P	P	23 52 42.7	+0.6
	baz=210						
I37A	Lemond, Waseca	29.94	356	IAmb	IAmb	23 53 40.3	
	comp=Z,28nm,1.1s						
ECSD	EROS Data Cent	29.98	352	P	P	23 52 43.7	+0.5
	baz=169						
M58A	Price’s Panora	30.00	22	P	P	23 52 43.7	+0.4
	baz=209						
KNB	Kanab	30.08	323	P	P	23 52 46.2	+1.9
KNB				IAmb	IAmb	23 52 48.2	
	comp=Z,26nm,0.9s						
PKCU	Pink Cliffs	30.09	325	P	P	23 52 46.7	+2.2
N60A	Cedar Hill Far	30.09	24	P	P	23 52 44.6	+0.6
	baz=212						
O20A	White River Ci	30.10	333	P	P	23 52 47.4	+2.9
	baz=145						
O20A	White River Ci	30.10	333	P	P	23 52 44.9	+0.4
BRNJ	Basking Ridge	30.15	25	P	P	23 52 44.9	+0.3
BRNJ				IAmb	IAmb	23 52 45.6	
	comp=Z,20nm,0.8s						
BELC	Belle Mtn. Jos	30.17	316	P	P	23 52 46.9	+1.9
	baz=125						
WVNY	West Valley, N	30.20	18	IAmb	IAmb	23 52 46.0	
	comp=Z,20nm,0.8s						
TPFO	Pinon Flats	30.26	314	P	P	23 52 48.9	+3.0
	baz=124						
XPFO	Pion Flat	30.26	314	P	P	23 52 47.3	+1.4
PFO	Pinyon Flats O	30.27	314	P	P	23 52 48.2	+2.3
	baz=124						
PFO	Pinyon Flats O	30.27	314		P	23 52 47.3	+1.4
L56A	Greenwood	30.29	20	P	P	23 52 45.9	-0.1
	baz=206,SNR=7.9						
L56A	Greenwood	30.29	20	IAmb	IAmb	23 52 47.1	
	comp=Z,25nm,0.8s						
LCMT	Little Creek M	30.32	323	P	P	23 52 48.4	+2.0
LCMT				IAmb	IAmb	23 52 50.1	
	comp=Z,21nm,1.1s						
SRU	San Rafael Swe	30.36	329	P	P	23 52 48.6	+1.8
GMRC	Granite Mounta	30.40	317	P	P	23 52 49.0	+1.9
	baz=127,SNR=10						
L57A	Andrews Acres	30.41	21	P	P	23 52 47.0	0.0
	baz=208						
KSPA	Keystone Colle	30.41	23	IAmb	IAmb	23 52 51.2	
	comp=Z,20nm,1.2s						
MTPU	Mount Pierson	30.44	326	P	P	23 52 49.4	+1.7
MTPU				IAmb	IAmb	23 52 52.2	
	comp=Z,23nm,0.9s						
M59A	Waymart	30.53	23	P	P	23 52 47.5	-0.5
	baz=210,SNR=9.8						
Q16A	Castle Valley	30.55	328	P	P	23 52 50.6	+2.2
SZCU	Shurtz Canyon	30.63	324	P	P	23 52 51.4	+2.2
SZCU				IAmb	IAmb	23 52 53.1	
	comp=Z,25nm,1.0s						
M60A	Port Jervis	30.66	24	P	P	23 52 49.3	+0.1
	baz=212						
TRNY	Table Rock, Ra	30.67	25	P	P	23 52 49.4	+0.2
PAL	Palisades	30.69	26	P	P	23 52 49.4	0.0
	baz=214						
PAL	Palisades	30.69	26	P	P	23 52 49.0	-0.3
PAL				IAmb	IAmb	23 52 50.4	
	comp=Z,17nm,0.8s						
MMNY	Mt. Morris Dam	30.71	19	IAmb	IAmb	23 52 50.8	
	comp=Z,26nm,1.0s						
P17A	Butcher Ranch,	30.75	329	P	P	23 52 52.0	+1.8
CCUT	Cedar City	30.76	324	P	P	23 52 52.4	+2.0
CCUT				IAmb	IAmb	23 52 54.6	
	comp=Z,25nm,1.1s						
MSU	Marysvale	30.78	326	P	P	23 52 52.1	+1.6
MVU	Marysvale	30.79	326	P	P	23 52 51.3	+0.6
L58A	Harry Jones Me	30.81	22	P	P	23 52 50.5	0.0
	baz=209,SNR=6.9						
I51A	Listowel	30.85	14	P	P	23 52 50.4	-0.3
	baz=199,SNR=7.8						
TMUT	Trail Mountain	30.85	328	P	P	23 52 52.6	+1.4
K56A	Middlesex	30.87	20	P	P	23 52 51.0	0.0
	baz=206,SNR=12						
BINY	Binghamton	30.89	22	P	P	23 52 51.3	+0.1
	baz=209,SNR=5.9						
BINY	Binghamton	30.89	22	IAmb	IAmb	23 52 52.0	
	comp=Z,20nm,0.8s						
MEDO	Medina	30.94	18	IAmb	IAmb	23 52 52.2	
	comp=Z,26nm,0.9s						
J54A	Appleton	30.98	18	P	P	23 52 51.5	-0.4
J54A				IAmb	IAmb	23 52 53.0	
	comp=Z,24nm,0.8s						
TCRU	Three Creeks R	30.99	326	P	P	23 52 53.9	+1.4
TCRU				IAmb	IAmb	23 52 56.0	
	comp=Z,24nm,0.9s						
M61A	Granite Spring	31.00	26	P	P	23 52 52.1	0.0
	baz=214						
RDMU	Red Mountain	31.05	332	P	P	23 52 53.7	+0.9
WSPT	Westport, CT	31.07	26	IAmb	IAmb	23 52 53.4	
	comp=Z,20nm,0.8s						
SPMN	Marine on St.	31.12	357	P	P	23 52 52.5	-0.6
	baz=176,SNR=6.7						
SPMN	Marine on St.	31.12	357	IAmb	IAmb	23 52 53.5	
	comp=Z,18nm,0.8s						
G40A	Rib Lake	31.13	1	P	P	23 52 52.2	-1.0
SHPR	Sheep Range	31.14	320	P	P	23 52 54.9	+1.3
SHPR				PcP	PcP	23 55 49.2	+2.1
GLMI	Grayling	31.14	9	P	P	23 52 53.1	-0.2
	baz=192						
K57A	Scipio Center	31.17	21	P	P	23 52 53.3	-0.4
	baz=208,SNR=8.5						
J55A	Hilton	31.23	19	IAmb	IAmb	23 52 55.1	
	comp=Z,30nm,0.9s						
L59A	Walton	31.23	23	P	P	23 52 54.4	+0.2
	baz=211,SNR=9.8						
L59A	Walton	31.23	23	P	P	23 52 54.1	-0.1
L59A				IAmb	IAmb	23 52 56.5	
	comp=Z,24nm,0.8s						
L60A	Shokan	31.38	24	P	P	23 52 55.7	+0.2
	baz=212,SNR=7.1						
BFSC	Mount Baldy Ra	31.44	314	P	P	23 52 58.3	+2.0
	baz=123						
GSC	Goldstone, Bar	31.46	317	P	P	23 52 58.9	+2.5
	baz=126						
GSC	Goldstone, Bar	31.46	317	P	P	23 52 57.1	+0.7
GSC				PcP	PcP	23 55 49.8	+1.9
KSCT	Kent School, K	31.47	25	P	P	23 52 56.0	-0.2
KSCT				IAmb	IAmb	23 52 57.4	
	comp=Z,24nm,0.8s						
SHOC	Shoshone, Teco	31.47	318	P	P	23 52 59.0	+2.6
	baz=127						
K58A	Earlville	31.51	22	P	P	23 52 56.6	0.0
	baz=209,SNR=12						
K58A	Earlville	31.51	22	IAmb	IAmb	23 52 57.2	
	comp=Z,26nm,0.7s						
K22A	Casper	31.52	338	P	P	23 52 58.2	+1.3
	baz=150						
J56A	Wolcott	31.54	20	P	P	23 52 56.9	0.0
	baz=207,SNR=16						
MPU	Maple Canyon	31.61	329	P	P	23 52 58.8	+1.1
PRN	Pahroc Range	31.66	322	P	P	23 52 58.8	+0.6
PRN				IAmb	IAmb	23 53 02.4	
	comp=Z,48nm,1.9s						
PRN				PcP	PcP	23 55 50.8	+2.4
MWC	Mount Wilson	31.71	314	P	P	23 52 59.4	+0.7
MWC				IAmb	IAmb	23 53 02.6	
	comp=Z,35nm,1.4s						
PSUT	Pine Spring	31.72	324	P	P	23 53 00.4	+1.6
PSUT				IAmb	IAmb	23 53 02.6	
	comp=Z,17nm,1.0s						
NLU	North Lily Min	31.79	328	P	P	23 53 00.2	+0.9
F36A	Milaca	31.79	357	P	P	23 52 58.6	-0.4
K59A	Cooperstown	31.81	23	P	P	23 52 59.9	+0.7
	baz=210						
L61A	Hillsdale 1, H	31.82	25	P	P	23 52 59.8	+0.4
	baz=213						
M63A	Gales Ferry	31.82	27	P	P	23 52 59.9	+0.6
	baz=216						
M63A	Gales Ferry	31.82	27	P	P	23 52 58.5	-0.9
M63A				IAmb	IAmb	23 53 00.4	
	comp=Z,24nm,0.8s						
JLU	Jordanelle	31.96	330	P	P	23 53 01.8	+0.9
COWI	Conover	31.99	2	IAmb	IAmb	23 54 06.4	
	comp=Z,39nm,1.2s						
F33A	5 Mile Ranch,	32.01	353	P	P	23 53 00.8	-0.2
EDW2	Edwards Air Fo	32.03	315	P	P	23 53 03.3	+2.0
	baz=124						
UCCT	U. Connecticut	32.06	27	P	P	23 53 01.6	+0.2
TPNV	Topopah Spring	32.10	320	P	P	23 53 04.7	+2.6
	baz=129,SNR=9.0						
TPNV	Topopah Spring	32.10	320	P	P	23 53 03.5	+1.4
TPNV				IAmb	IAmb	23 53 06.5	
	comp=Z,32nm,1.5s						
TPNV				PcP	PcP	23 55 51.8	+2.1
CTU	Camp Tracy	32.18	330	P	P	23 53 04.1	+1.4
BOAV	Boa Vista	32.19	108	*e*P	P	23 53 00.8	-2.1

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FURC  Furnace Creek,    32.19 319  P     P      23 53 05.9 +3.2
      baz=127
H53A  Bobcaygeon        32.19  17  P     P      23 53 02.4 -0.2
      baz=203,SNR=12
SADO  Sadowa            32.22  16  P     P      23 53 01.8 -1.0
      comp=Z,19nm,0.9s,baz=221,slow=8.7,SNR=15
TRY   Troy              32.23  24  P     P      23 53 03.3 +0.4
TRY                                IAmb  IAmb   23 53 04.3
      comp=Z,25nm,0.8s
M64A  Tiverton          32.32  28  P     P      23 53 04.4 +0.7
      baz=218
TCUT  Toone Canyon      32.34 330  P     P      23 53 04.9 +0.7
K61A  Williamstown      32.34  25  P     P      23 53 04.7 +0.8
      baz=213
DUG   Dugway, Tooele    32.34 328  P     P      23 53 06.5 +2.3
      baz=137
DUG   Dugway, Tooele    32.34 328  P     P      23 53 04.4 +0.2
DUG                                PcP   PcP    23 55 51.5 +1.3
MPMC  Manual Prospec    32.36 317  P     P      23 53 06.0 +1.6
      baz=126,SNR=9.0
OSI   Osito Audit: C    32.38 314  P     P      23 53 05.6 +1.1
OSI                                IAmb  IAmb   23 53 08.2
      comp=Z,16nm,0.8s
L63A  North Scituate    32.39  27  P     P      23 53 03.6 -0.7
E43A  Lone Tree Farm    32.40   5  IAmb  IAmb   23 53 04.4
      comp=Z,17nm,0.9s
QUA2  Belchertown       32.40  26  P     P      23 53 04.0 -0.4
QUA2                               IAmb  IAmb   23 53 05.1
      comp=Z,24nm,1.1s
L61B  Northampton       32.40  26  P     P      23 53 04.0 -0.4
      baz=214
E38A  The Farm, Brul    32.46 359  IAmb  IAmb   23 54 12.8
      comp=Z,24nm,1.0s
J59A  Piesco            32.53  23  P     P      23 53 05.4 -0.1
      baz=210
J59A  Piesco            32.53  23  IAmb  IAmb   23 53 08.0
      comp=Z,16nm,0.9s
I58A  Old Forge         32.56  22  P     P      23 53 05.6 -0.2
      baz=210,SNR=13
R11A  Troy Canyon, C    32.59 322  P     P      23 53 08.8 +2.4
      baz=131,SNR=28
R11A  Troy Canyon, C    32.59 322  P     P      23 53 07.6 +1.2
R11A                               IAmb  IAmb   23 53 10.5
      comp=Z,37nm,1.4s
R11A                                     PcP    23 55 52.7 +1.7
E46A  Sault Ste Mari    32.70   9  IAmb  IAmb   23 54 11.5
      comp=Z,32nm,1.1s
J60A  Lant Hill Farm    32.76  24  P     P      23 53 07.5  0.0
      baz=212
ISA   Isabella, Lake    32.79 316  P     P      23 53 10.3 +2.3
      baz=124,SNR=5.5
ISA   Isabella, Lake    32.79 316  P     P      23 53 09.2 +1.2
ISA                                IAmb  IAmb   23 53 12.1
      comp=Z,24nm,1.4s
ISA                                PcP   PcP    23 55 53.2 +1.8
L64A  Middleborough     32.80  28  P     P      23 53 08.4 +0.6
      baz=218
L64A  Middleborough     32.80  28  P     P      23 53 07.9 +0.1
PDAR  Pinedale Array    32.82 334  P     P      23 53 09.6 +1.2
      comp=Z,0.5nm,0.4s,baz=125,slow=10,SNR=1.4
PDAR                               PcP   PcP    23 55 51.4 -0.2
      comp=Z,1.2nm,0.5s,baz=115,slow=5.6,SNR=9.9
PDAR                               ScP   ScP    23 59 29.4 +1.0
      comp=Z,0.8nm,0.8s,baz=134,slow=4.3,SNR=5.4
PDAR                               LR    LR     00 08 31.3
      comp=Z,171nm,19.4s,baz=136,slow=40
HRV   Adam Dziewonsk    32.93  27  P     P      23 53 09.2 +0.2
      baz=216
HRV   Adam Dziewonsk    32.93  27  P     P      23 53 08.8 -0.2
HRV                                IAmb  IAmb   23 53 09.9
      comp=Z,22nm,1.1s
D41A  Chassel           32.97   3  IAmb  IAmb   23 54 25.3
      comp=Z,15nm,1.1s
SPUT  South Promonto    32.99 330  P     P      23 53 11.3 +1.5
SPUT                               IAmb  IAmb   23 53 13.1
      comp=Z,19nm,1.3s
BGU   Big Grassy Mou    32.99 328  P     P      23 53 11.3 +1.5
BGU                                IAmb  IAmb   23 53 13.1
      comp=Z,15nm,1.1s
PLVO  Plevna            33.06  18  IAmb  IAmb   23 53 10.6
      comp=Z,20nm,1.0s
H57A  Richville         33.08  21  P     P      23 53 10.2 -0.2
      baz=208,SNR=5.5
K63A  Dunstable         33.09  27  P     P      23 53 10.6 +0.2
      baz=216
G54A  Lake Saint Pet    33.09  17  P     P      23 53 10.2 -0.2
      baz=203,SNR=13
PKM   Mcpherson Peak    33.29 314  P     P      23 53 14.9 +2.4
      baz=121
VES   Vestal, Richgr    33.30 316  P     P      23 53 15.3 +3.0
      baz=124
I60A  Shoreham          33.32  24  P     P      23 53 11.9 -0.5
      baz=212,SNR=6.5
J62A  Henniker          33.40  26  P     P      23 53 13.4 +0.2
      baz=215
TPH   Tonopah           33.41 321  P     P      23 53 15.1 +1.6
H58A  Gabriels          33.47  22  P     P      23 53 13.3 -0.5
      baz=210,SNR=11
AHID  Auburn Hatcher    33.49 333  P     P      23 53 13.5 -0.7
LONY  Lake Ozonia       33.50  21  P     P      23 53 14.1 +0.1
      baz=209
HVU   Hansel Valley     33.51 330  P     P      23 53 15.8 +1.5
ALGO  Algonquin Park    33.61  16  P     P      23 53 13.9 -1.0
      baz=203,SNR=9.3
J63A  Strafford         33.76  27  P     P      23 53 16.4 +0.2
      baz=216
G57A  Newington         33.78  20  P     P      23 53 15.8 -0.6
      baz=208,SNR=6.1
EYMN  Ely               33.80 359  P     P      23 53 15.4 -1.2
      baz=179,SNR=7.2
H59A  Cadyville         33.85  22  P     P      23 53 16.7 -0.3
      baz=211
REDW  Red Top Meadow    33.85 334  P     P      23 53 18.9 +1.5
REDW                               IAmb  IAmb   23 53 21.0
      comp=Z,23nm,1.3s
SNOW  Snow King Moun    33.89 334  P     P      23 53 19.0 +1.3
VT1   Waterbury         33.94  24  P     P      23 53 17.4 -0.4
PTGA  Pitinga           34.00 113  P     P      23 53 17.1 -1.6
PTGA                               PcP   PcP    23 55 55.9 +0.7
PTGA  Pitinga           34.00 113  eP    P      23 53 17.3 -1.4
ELK   Elko              34.02 326  P     P      23 53 20.2 +1.3
ELK                                PcP   PcP    23 55 56.3 +1.3
PAGB  Antelope Grade    34.04 315  P     P      23 53 19.8 +1.0
ETMB  Extrema           34.11 133  eP    P      23 53 19.8 +0.2
I62A  Tamworth          34.13  26  P     P      23 53 19.8 +0.3
      baz=215
I62A  Tamworth          34.13  26  P     P      23 53 19.8 +0.3
I62A                               IAmb  IAmb   23 53 20.6
      comp=Z,13nm,0.8s
G58A  Ormstown          34.15  21  P     P      23 53 20.2 +0.6
      baz=210
H60A  Morristown        34.15  23  P     P      23 53 19.5 -0.1
      baz=212
NV11  Mina Array Sit    34.20 320  P     P      23 53 22.3 +2.0
OMMB  Old Mammoth Mi    34.25 318  P     P      23 53 22.7 +1.8
OMMB                               IAmb  IAmb   23 53 25.0
      comp=Z,30nm,1.5s
B35A  Bob, Littlefor    34.29 357  IAmb  IAmb   23 53 39.9
      comp=Z,26nm,1.3s
NVAR  Mina Array Bea    34.29 320  P     P      23 53 23.9 +2.7
      comp=Z,20nm,0.8s,baz=130,slow=8.4,SNR=83
NVAR                               PcP   PcP    23 55 57.7 +1.9
      comp=Z,11nm,0.8s,baz=138,slow=3.8,SNR=18
NVAR                               ScP   ScP    23 59 35.5 +1.9
      comp=Z,1.1nm,0.8s,baz=141,slow=5.8,SNR=4.4
NVAR                               LR    LR     00 09 37.8
      comp=Z,167nm,18.8s,baz=142,slow=40
NVAR  Mina Array Bea    34.29 320  P     P      23 53 23.6 +2.4
NVAR                               PcP   PcP    23 55 57.1 +1.2
MDPB  Devils Postpil    34.31 318  P     P      23 53 21.4  0.0
MDPB                               IAmb  IAmb   23 53 24.8
      comp=Z,23nm,1.0s
LHV   Little Huntoon    34.31 320  P     P      23 53 23.3 +2.2
LHV                                IAmb  IAmb   23 53 25.7
      comp=Z,25nm,0.9s
AGMN  Agassiz Nation    34.40 354  P     P      23 53 21.6 -0.1
      baz=171
AGMN  Agassiz Nation    34.40 354  IAmb  IAmb   23 53 41.7
      comp=Z,26nm,1.4s
H61A  Lyndonville       34.43  24  P     P      23 53 21.9 -0.1
      baz=214
F57A  Harrington        34.51  20  P     P      23 53 21.9 -0.8
      baz=208,SNR=5.6
MACA  Manacapuru-AM     34.52 117  eP    P      23 53 23.1 -0.2
RYN   Ryan              34.55 320  P     P      23 53 25.1 +1.7
KVN   Kaiserville       34.55 321  P     P      23 53 25.2 +1.8
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I63A  Otisfield         34.59  26  P     P      23 53 24.1 +0.7
      baz=216
E55A  Montcerf-Lytto    34.64  18  P     P      23 53 23.2 -0.6
      baz=206,SNR=5.4
G60A  Masonville        34.74  23  P     P      23 53 24.8  0.0
      baz=213
TRQ   Mont Tremblant    34.91  20  P     P      23 53 26.1 -0.1
MOQ   Mont Orford       34.95  23  P     P      23 53 26.6  0.0
E56A  St. Veronique     35.04  19  P     P      23 53 27.2 -0.1
      baz=207,SNR=16
WAKR  Walker            35.05 319  P     P      23 53 29.6 +1.9
F59A  Saint Guilaume    35.21  22  P     P      23 53 29.1 +0.5
      baz=211
G61A  St-Isidore-de-    35.21  24  P     P      23 53 29.4 +0.7
      baz=214
YERR  Yerington         35.21 320  P     P      23 53 31.0 +1.9
H63A  New Sharon        35.32  26  P     P      23 53 29.7 +0.1
      baz=217
D55A  Sainte-Anne-du    35.33  18  P     P      23 53 29.5 -0.2
      baz=206,SNR=17
CMB   Columbia Colle    35.39 318  P     P      23 53 32.1 +1.7
CMB                                IAmb  IAmb   23 53 33.7
      comp=Z,12nm,1.1s
E58A  La Victoria       35.48  21  P     P      23 53 30.8 -0.2
      baz=210,SNR=8.2
PNTR  Pine Nut          35.50 320  P     P      23 53 32.8 +1.2
G62A  West of Eustis    35.56  25  P     P      23 53 31.6 -0.2
      baz=215,SNR=8.1
D56A  ZEC Mazanza, M    35.58  19  P     P      23 53 31.8 -0.1
      baz=208,SNR=10
F60A  Warwick           35.62  23  P     P      23 53 31.8 -0.4
      baz=213,SNR=8.7
HLID  Hailey            35.64 330  P     P      23 53 33.5 +0.8
      baz=138,SNR=7.9
H64A  Troy              35.65  27  P     P      23 53 32.7 +0.2
      baz=218
VCNR  Virginia City     35.65 320  P     P      23 53 34.8 +1.9
PAHR  Pah Rah Range     35.74 321  P     P      23 53 35.3 +1.7
PAHR                               IAmb  IAmb   23 53 37.4
      comp=Z,20nm,1.3s
VLDQ  Val d'Or          35.76  16  IAmb  IAmb   23 53 36.7
      comp=Z,31nm,1.5s
SAML  Samuel            35.78 128  P     P      23 53 32.8 -1.2
SAML                               IAmb  IAmb   23 53 53.4
      comp=Z,20nm,0.9s
G63A  Kingsbury         35.86  26  P     P      23 53 34.3  0.0
      baz=217
BOZ   Bozeman (W)       35.99 335  P     P      23 53 37.5 +1.9
      baz=144
PKME  Peaks-Kenny Pk    36.12  26  P     P      23 53 36.5 +0.1
      baz=217
H65A  Eastbrook         36.13  28  P     P      23 53 36.4 -0.2
      baz=219
E60A  Ste Agathe de     36.15  23  P     P      23 53 36.2 -0.5
      baz=213,SNR=5.8
MFID  Camas Ranch       36.23 329  P     P      23 53 38.8 +1.1
D58A  Chemin du LacG    36.24  21  P     P      23 53 37.3 -0.3
      baz=210,SNR=15
ULM   Lac du Bonnet     36.33 355  P     P      23 53 36.8 -1.4
      comp=Z,9.7nm,1.0s,baz=176,slow=8.3,SNR=12
ULM                                PcP   PcP    23 55 60.0 -1.3
      comp=Z,4.7nm,1.0s,baz=206,slow=1.3,SNR=3.2
ULM                                ScP   ScP    23 59 41.9 +1.5
      comp=Z,3.0nm,1.0s,baz=222,slow=2.1,SNR=3.8
ULM                                LR    LR     00 11 36.5
      comp=Z,124nm,18.1s,baz=142,slow=41
ULM   Lac du Bonnet     36.33 355  IAmb  IAmb   23 53 38.1
      comp=Z,26nm,1.2s
G64A  Maxfield          36.34  27  P     P      23 53 38.1 -0.3
      baz=218
BEKR  Beckworth         36.44 320  P     P      23 53 41.3 +1.8
BEKR                               IAmb  IAmb   23 53 43.4
      comp=Z,25nm,1.1s
LATQ  La Tuque          36.52  21  P     P      23 53 40.0 +0.1
      baz=210,SNR=6.6
LATQ  La Tuque          36.52  21  IAmb  IAmb   23 53 41.0
      comp=Z,13nm,0.7s
F63A  Nahmakanta, Br    36.55  26  P     P      23 53 40.0 -0.2
      baz=217
F63A  Nahmakanta, Br    36.55  26  P     P      23 53 40.5 +0.3
F63A                               IAmb  IAmb   23 54 01.2
      comp=Z,21nm,1.1s
E61A  Lac Etchemin      36.57  24  P     P      23 53 40.9 +0.5
      baz=214
H66A  Whiting           36.63  29  P     P      23 53 40.6 -0.2
      baz=220
LSQQ  Lebel-sur-Quev    36.76  15  P     P      23 53 41.3 -0.6
      baz=203
D60A  Saint Jean D'O    36.80  23  P     P      23 53 41.6 -0.6
      baz=214,SNR=7.9
G65A  Princeton         36.83  28  P     P      23 53 42.8 +0.2
      baz=220
G65A  Princeton         36.83  28  IAmb  IAmb   23 53 43.5
      comp=Z,18nm,0.8s
F64A  Sherman           36.99  26  P     P      23 53 43.6 -0.3
      baz=218
MATQ  Matagami          37.24  14  P     P      23 53 45.3 -0.7
      baz=202,SNR=13
D61A  St Aubert, Com    37.32  23  P     P      23 53 46.5 -0.2
      baz=214,SNR=6.7
E63A  Oxbow             37.41  26  P     P      23 53 47.1 -0.3
      baz=218
E63A  Oxbow             37.41  26  P     P      23 53 47.2 -0.2
E63A                               IAmb  IAmb   23 53 47.7
      comp=Z,14nm,0.9s
O03E  Paynes Creek      37.58 320  P     P      23 53 50.1 +1.0
      baz=125,SNR=6.4
LPAZ  La Paz            37.63 142  P     P      23 53 50.4  0.0
      comp=Z,1.5nm,0.6s,baz=329,slow=9.1,SNR=7.2
LPAZ                               LR    LR     00 08 16.6
      comp=Z,104nm,21.8s,baz=313,slow=34
LPAZ  La Paz            37.63 142  P     P      23 53 51.4 +1.1
MOD   Modoc Plateau     37.65 323  IAmb  IAmb   23 53 52.3
      comp=Z,28nm,1.4s
E64A  Bridgewater       37.66  26  P     P      23 53 49.3 -0.2
      baz=218
BMO   Blue Mountains    38.01 329  IAmb  IAmb   23 53 54.4
      comp=Z,15nm,1.4s
D63A  Stockholm         38.02  26  P     P      23 53 52.3 -0.3
      baz=218,SNR=5.4
O02D  Mt. Diablo Mer    38.14 319  P     P      23 53 54.6 +0.8
      baz=124
M04C  Macdoel           38.48 322  P     P      23 53 58.0 +1.3
      baz=127,SNR=7.7
PB16  IPOC Station P    38.49 146  IAmb  IAmb   23 54 21.8
      comp=Z,22nm,0.9s
I07A  Izee              38.61 326  IAmb  IAmb   23 54 00.0
      comp=Z,21nm,1.1s
KMRM  Mail Ridge        38.75 319  P     P      23 54 00.5 +1.6
F10A  Beach Ranch, E    38.77 330  IAmb  IAmb   23 54 01.1
      comp=Z,24nm,1.1s
M02C  Callahan          38.87 321  P     P      23 54 00.3 +0.4
      baz=125
K04D  Chiloquin, OR     38.94 323  P     P      23 54 02.8 +2.3
      baz=128
L04D  Klamath Falls     39.02 322  P     P      23 54 02.5 +1.3
      baz=127,SNR=9.3
J05D  Fort Rock, OR     39.05 324  P     P      23 54 02.5 +1.1
      baz=129
BATG  Bathurst New B    39.09  27  IAmb  IAmb   23 54 02.1
      comp=Z,14nm,1.0s
PINE  Pine Mountain     39.20 325  IAmb  IAmb   23 54 05.2
      comp=Z,24nm,1.0s
JCC   Jacoby Creek,     39.28 319  P     P      23 54 05.3 +2.1
ITTB  Itaituba          39.42 115  eP    P      23 54 03.5 -1.3
J04D  Umpqua Nationa    39.52 324  P     P      23 54 06.9 +1.4
      baz=128,SNR=7.2
KRMB  Red Mountain      39.59 320  P     P      23 54 07.4 +1.4
MALB  Monte Alegre      39.62 111  eP    P      23 54 05.2 -1.1
L02E  Cave Junction     39.76 321  P     P      23 54 08.3 +1.0
      baz=125
I05D  Terrebonne, OR    39.77 325  P     P      23 54 08.9 +1.5
      baz=130
I04A  Tendick Farm,     40.03 324  P     P      23 54 10.7 +1.2
      baz=128
KBO   Bosley Butte      40.18 321  P     P      23 54 11.6 +0.8
G05D  Wamic, OR         40.35 326  P     P      23 54 14.5 +2.5
      baz=131,SNR=6.5
D08A  Wollman Farm,     40.37 330  P     P      23 54 13.4 +1.2
NEW   Newport           40.42 333  P     P      23 54 14.5 +1.9
      baz=139
E07A  Sunnyside         40.47 329  P     P      23 54 13.9 +0.8
I03D  Drain, OR         40.52 323  P     P      23 54 14.8 +1.3
      baz=127,SNR=6.8
J01E  Myrtle Point      40.54 322  P     P      23 54 15.0 +1.3
      baz=126
VILB  Vilhena           40.58 130  eP    P      23 54 14.1 -0.2
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C09A  Chrisman Ranch    40.60 332  P     P      23 54 15.4 +1.3
C09A                               IAmb  IAmb   23 54 17.1
      comp=Z,7.9nm,0.6s
KEBM  Edson Butte       40.62 322  P     P      23 54 15.3 +1.0
H04D  Lebanon           40.67 325  P     P      23 54 15.7 +1.0
      baz=128
F05D  White Salmon      40.84 327  P     P      23 54 18.4 +2.3
      baz=131
I02D  Swisshome         41.05 323  P     P      23 54 19.6 +1.8
      baz=126
NPGB  Novo Progresso    41.05 118  eP    P      23 54 16.2 -2.1
MCPB  Macapa, AP        41.06 107  eP    P      23 54 17.3 -1.0
LTY   Liberty           41.36 329  IAmb  IAmb   23 55 04.0
      comp=Z,56nm,1.9s
G03D  McMinnville, O    41.39 325  P     P      23 54 22.3 +1.7
      baz=128
B08A  Colville Reser    41.49 331  P     P      23 54 21.9 +0.4
FFC   Flin Flon         41.50 350  P     P      23 54 21.1 -0.2
FFC                                IAmb  IAmb   23 54 23.5
      comp=Z,24nm,1.4s
LON   Longmire          41.60 328  IAmb  IAmb   23 54 24.9
      comp=Z,20nm,0.9s
F04D  Rainier, OR       41.80 326  P     P      23 54 26.0 +2.1
      baz=129
E04D  Cinebar           41.86 327  P     P      23 54 26.3 +1.8
      baz=130
C06D  Leavenworth       41.93 330  P     P      23 54 26.9 +1.9
      baz=134
D05A  Enumclaw          41.98 328  P     P      23 54 26.3 +0.9
D05A                               IAmb  IAmb   23 54 27.8
      comp=Z,24nm,1.0s
E03A  Lebam             42.39 326  P     P      23 54 29.9 +1.2
B06A  Marblemount       42.62 330  P     P      23 54 31.2 +0.6
B06A                               IAmb  IAmb   23 54 32.4
      comp=Z,16nm,0.9s
CLDB  Colider           42.74 124  eP    P      23 54 30.4 -1.6
D03D  Eldon             42.77 328  P     P      23 54 33.0 +1.2
      baz=130
A05A  Maple Falls       43.24 330  P     P      23 54 36.6 +1.1
A05A                               IAmb  IAmb   23 54 38.1
      comp=Z,39nm,1.3s
PB14  IPOC Station P    43.35 152  P     P      23 54 36.5 -0.6
FCC   Fort Churchill    44.70 358  IAmb  IAmb   23 55 08.0
      comp=Z,20nm,1.1s
PRPB  Parauapebas       45.48 114  eP    P      23 54 52.3 -1.6
TMAB  Tom-Au,PA,Br      45.48 108  eP    P      23 54 51.8 -2.2
AC02  Maricunga         45.83 152  P     P      23 54 57.6 +0.6
SNDB  Serra Nova Dou    47.03 121  eP    P      23 55 05.3 -0.8
LCO   Las Campanas      47.06 156  P     P      23 55 06.6 +0.3
LCO                                IAmb  IAmb   23 55 31.6
      comp=Z,22nm,1.1s
AC05  El Transito       47.08 155  P     P      23 55 07.0 +0.7
AC05                               IAmb  IAmb   23 55 32.4
      comp=Z,17nm,1.0s
GO04  Tololo Observa    48.05 156  P     P      23 55 14.6 +0.6
GO04                               IAmb  IAmb   23 55 38.8
      comp=Z,32nm,1.3s
BBB   Bella Bella       48.23 330  P     P      23 55 16.0 +1.2
H03N2 Juan Fernandez    48.59 167  T     T      00 46 49.4
      baz=346,slow=76,SNR=6.7
H03N1 Juan Fernandez    48.59 167  T     T      00 46 58.1
      baz=346,slow=76,SNR=7.8
H03N3 Juan Fernandez    48.60 167  T     T      00 46 48.6
      baz=346,slow=76,SNR=7.1
SMTB  Santa Maria do    48.66 115  eP    P      23 55 16.8 -1.9
ARAG  Araguaiana, MT    48.68 126  eP    P      23 55 17.6 -1.1
CO03  El Pedregal       48.69 157  IAmb  IAmb   23 55 44.0
      comp=Z,21nm,1.1s
AQDB  Aquidauana        48.75 134  eP    P      23 55 19.0 -0.2
CO02  Combarbal         48.90 157  IAmb  IAmb   23 55 47.2
      comp=Z,16nm,0.8s
ROSB  Rosrio            49.36 106  eP    P      23 55 20.9 -3.1
PEXB  Peixe             49.60 120  eP    P      23 55 24.8 -1.1
YKA   Yellowknife Ar    51.22 346  P     P      23 55 36.8 -0.5
      comp=Z,2.6nm,0.5s,baz=146,slow=8.1,SNR=9.4
YKA                                pP    pP     23 55 57.3 -0.8
      comp=Z,5.2nm,0.8s,baz=142,slow=7.4,SNR=12
YKA                                PcP   PcP    23 56 50.9 -0.6
      comp=Z,3.0nm,0.8s,baz=139,slow=4.5,SNR=11
YKA                                ScP   ScP    00 00 42.8 +2.1
      comp=Z,1.1nm,0.9s,baz=141,slow=4.4,SNR=6.9
YKA                                LR    LR     00 20 07.2
      comp=Z,121nm,19.5s,baz=0.0,slow=39
BDFB  Brasilia          51.67 123  P     P      23 55 40.4 -1.1
      comp=Z,11nm,0.8s,baz=298,slow=5.7,SNR=18
CPUP  Villa Florida     51.76 141  LR    LR     00 16 21.7
      comp=Z,62nm,19.1s,baz=331,slow=34
ITRB  Iturama           52.14 129  eP    P      23 55 44.5 -0.4
PCMB  Pacaembu          52.64 132  eP    P      23 55 49.0 +0.6
SDBA  SAO DESIDERIO     52.64 118  eP    P      23 55 47.4 -1.3
IPMB  Ipameri, GO       52.80 126  eP    P      23 55 48.8 -0.9
BI02  San Fabin de      53.74 160  IAmb  IAmb   23 56 19.3
      comp=Z,18nm,1.3s
TAOE  Nuku Hiva Isla    53.87 248  eLR   LR     00 11 19.5
      comp=Z,382nm,29.8s
BB19B Bebedouro         54.33 129  eP    P      23 56 00.4 -0.5
JANB  Januaria          54.43 120  eP    P      23 56 00.8 -1.0
FRTB  Fartura           54.94 132  eP    P      23 56 04.8 -0.4
RKT   Rikitea           56.77 230  eLR   LR     00 12 58.7
      comp=Z,395nm,34.5s
BSCB  Bom Sucesso       57.16 127  eP    P      23 56 21.1 -0.1
NBLI  Livramento-PB     57.63 108  eP    P      23 56 22.8 -1.8
PLCA  Paso Flores       57.69 162  P     P      23 56 24.5 -0.1
      comp=Z,6.0nm,1.0s,baz=336,slow=9.4,SNR=6.6
PLCA                               LR    LR     00 15 30.5
      comp=Z,88nm,20.9s,baz=336,slow=30
PLCA  Paso Flores       57.69 162  P     P      23 56 25.2 +0.6
PLCA                               IAmb  IAmb   23 56 26.5
      comp=Z,18nm,1.4s
PLCA  Paso Flores       57.69 162  eP    P      23 56 25.3 +0.8
PARB  Paraibuna         57.84 129  eP    P      23 56 26.2 +0.3
GDU01 Guandu, BA        57.85 116  eP    P      23 56 25.4 -0.6
RCBR  Riachuelo         58.06 106  P     P      23 56 26.1 -1.5
RCBR                               IAmb  IAmb   23 56 28.5
      comp=Z,14nm,0.8s
SJMB  Sao Joao De Ma    58.83 122  eP    P      23 56 32.5 -0.4
VAS01 Vassouras-RJ      58.90 127  eP    P      23 56 33.1 -0.2
BSFB  Barra de Sao F    59.17 122  eP    P      23 56 35.2  0.0
NAN01 Guarapari, ES     59.29 121  eP    P      23 56 35.8 -0.3
DUB01 Friburgo-RJ       59.62 126  eP    P      23 56 38.7 +0.4
BALM  Baldy             59.65 334  P     P      23 56 38.6 +0.6
BALM                               IAmb  IAmb   23 56 41.8
      comp=Z,7.4nm,1.0s
RIB01 Linhares ES       59.78 122  eP    P      23 56 38.9 -0.5
NBRF  Rio Formoso -     59.79 109  eP    P      23 56 36.8 -2.7
CAM01 Campos-RJ         60.05 126  eP    P      23 56 41.0 -0.2
MCARA McCarthy VSAT     60.10 334  P     P      23 56 43.0 +2.0
MCARA                              IAmb  IAmb   23 56 45.5
      comp=Z,14nm,1.0s
ALF01 Guarapari-ES      60.17 124  eP    P      23 56 42.0  0.0
BCAR  Beaver Creek A    60.41 336  P     P      23 56 42.4 -0.7
EGAK  Eagle             61.06 338  P     P      23 56 48.0 +0.6
      baz=122
HIN   Hinchinbrook I    61.20 332  P     P      23 56 49.0 +0.5
DOT   Dot Lake          61.60 336  P     P      23 56 52.3 +1.3
DOT                                IAmb  IAmb   23 57 34.5
      comp=Z,32nm,2.0s
SCRK  Sand Creek        61.72 336  P     P      23 56 52.9 +0.9
      baz=118
SEW   Seward            62.45 331  P     P      23 56 57.3 +0.6
SEW                                IAmb  IAmb   23 57 35.8
      comp=Z,27nm,1.5s
BRSE  Bradley Lake S    62.93 331  P     P      23 57 01.2 +1.2
      baz=110
RC01  Rabbit Creek A    62.93 332  P     P      23 57 00.6 +0.6
      baz=111
BRLK  Bradley Lake      63.01 331  P     P      23 57 00.9 +0.4
BRLK                               IAmb  IAmb   23 57 27.4
      comp=Z,14nm,1.0s
PRP   Porcupine Dome    63.03 338  P     P      23 57 00.8  0.0
      baz=117
HDA   Harding Lake      63.08 336  P     P      23 57 01.3 +0.4
      baz=115
ILAR  Eielson Array     63.21 337  P     P      23 57 01.4 -0.4
      comp=Z,2.5nm,0.9s,baz=167,slow=4.9,SNR=21
ILAR                               LR    LR     00 28 30.6
      comp=Z,66nm,18.6s,baz=82,slow=40
ILAR  Eielson Array     63.21 337  P     P      23 57 01.0 -0.8
KDAK  Kodiak Island     63.22 328  P     P      23 57 03.1 +1.1
      baz=107
KDAK  Kodiak Island     63.22 328  P     P      23 57 02.2 +0.3
KDAK                               IAmb  IAmb   23 57 03.7
      comp=Z,11nm,0.9s
RND   Reindeer          63.43 335  IAmb  IAmb   23 57 41.2
      comp=Z,11nm,1.0s
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OHAK	Old Harbor	63.43	327	P	P	23 57 04.5	+1.2
	baz=106						
SUA	Susitna One	63.52	332	P	P	23 57 04.5	+0.4
	baz=110						
SUA	Susitna One	63.52	332	IAmb	IAmb	23 57 41.7	
	comp=Z,12nm,1.1s						
MCK	McKinley	63.59	335	P	P	23 57 06.2	+1.8
	baz=113						
BMAR	Burnt Mountain	63.61	340	P	P	23 57 04.7	+0.2
CUT	Chulitna	63.65	333	P	P	23 57 05.8	+1.2
	baz=111						
ICESG	Greenland Ices	63.70	18	*i* P	P	23 57 04.3	-1.1
SII	Sitkinak Islan	63.73	327	P	P	23 57 06.6	+1.3
	baz=105						
NEA2	Nenana	63.99	336	P	P	23 57 07.6	+0.7
	baz=113						
TRF	Thorofare Moun	64.04	335	P	P	23 57 08.3	+0.8
	baz=112						
TRF	Thorofare Moun	64.04	335	IAmb	IAmb	23 57 09.7	
	comp=Z,13nm,1.0s						
SKT	Skwentna	64.05	333	P	P	23 57 07.8	+0.4
	baz=110						
SKT	Skwentna	64.05	333	IAmb	IAmb	23 57 09.6	
	comp=Z,12nm,1.0s						
SPCR	Spurr Chakacha	64.10	332	P	P	23 57 08.8	+1.0
	baz=109						
I23K	Minto, Yukon-K	64.32	336	P	P	23 57 09.9	+0.9
	baz=113,SNR=7.3						
I23K	Minto, Yukon-K	64.32	336	IAmb	IAmb	23 57 52.6	
	comp=Z,29nm,1.8s						
BPAW	Bear Paw Mtn.	64.57	335	P	P	23 57 11.3	+0.6
	baz=111						
PPLA	Purkeypile	64.65	334	P	P	23 57 11.7	+0.3
	baz=110						
MLY	Manley	64.82	336	P	P	23 57 12.3	0.0
	baz=112,SNR=11						
COLD	Coldfoot	65.47	338	P	P	23 57 17.3	+0.8
	baz=113						
TOLK	Toolik Lake Re	65.83	340	P	P	23 57 18.9	+0.1
	baz=115						
PPT	Papeete	65.83	243	LR	LR	00 17 49.0	
	comp=Z,290nm,18.2s,baz=60,slow=28						
PPT2	Papeete2	65.84	243	*e*LR	LR	00 16 57.0	
	comp=Z,462nm,28.5s,baz=62						
SUMG	Summit	65.92	15	*i* P	P	23 57 18.4	-1.3
SUMG	Summit	65.92	15	P	P	23 57 19.0	-0.8
SUMG				IAmb	IAmb	23 57 45.6	
	comp=Z,21nm,1.0s						
SUMG	Summit	65.92	15	*i* P	P	23 57 18.5	-1.3
CHGN	Chignik	65.96	326	P	P	23 57 20.2	+0.5
	baz=101						
EUNU	Eureka	66.06	1	IAmb	IAmb	23 57 21.3	
	comp=Z,14nm,1.1s						
TTA	Tatalina	66.33	333	P	P	23 57 22.2	+0.1
	baz=106						
TBI	Tubuai	68.25	238	*e*LR	LR	00 18 17.7	
	comp=Z,316nm,30.2s,baz=62						
FALS	False Pass	68.55	324	P	P	23 57 37.0	+0.8
	baz=96						
UNV	Unalaska Valle	70.27	322	P	P	23 57 47.6	+0.8
	baz=93,SNR=6.2						
RDOG	Red Dog Mine	70.34	338	P	P	23 57 48.1	+1.0
	baz=101						
NIKH	Nikolski High	71.65	321	P	P	23 57 55.3	+0.1
	baz=91						
ESDC	Sonseca Array	78.87	52	P	P	23 58 34.4	-2.6
	comp=Z,1.6nm,0.8s,baz=297,slow=5.9,SNR=7.9						
ESDC				pP	pP	23 58 56.9	-2.2
	comp=Z,3.2nm,1.0s,baz=291,slow=6.2,SNR=8.3						
ESDC	Sonseca Array	78.87	52	P	P	23 58 36.5	-0.5
NB2	NORSAR Subarra	83.61	29	P	pP	23 59 23.8	-0.2
	comp=Z,2.3nm,0.8s,baz=289,slow=5.1						
NOA	NORSAR Array B	83.61	29	P	P	23 59 00.2	-1.4
	comp=Z,0.6nm,0.6s,baz=291,slow=5.1,SNR=3.5						
NOA				pP	pP	23 59 23.0	-0.9
	comp=Z,4.8nm,0.9s,baz=289,slow=5.1,SNR=10						
NOA				LR	LR	00 36 52.2	
	comp=Z,127nm,19.1s,baz=0.0,slow=36						
KOWA	Kowa	83.65	77	P	P	23 59 00.9	-1.8
WLF	Walferdange	83.94	40	*e*P	pP	23 59 25.9	0.0
	comp=Z,21nm,1.3s,baz=288,slow=4.9						
BUG	Bochum--Univer	84.18	39	*e*P	pP	23 59 26.8	-0.3
	comp=Z,24nm,1.3s,baz=288,slow=4.9						
AHRW	Bad Neuenahr-A	84.29	39	*e*P	pP	23 59 26.7	-1.0
	comp=Z,19nm,1.2s,baz=288,slow=4.9						
TIC	Toumodi	84.46	85	*e*P	P	23 59 04.8	-2.1
LIC	Lamto	84.55	85	*e*P	P	23 59 05.3	-2.0
	comp=Z,25nm,0.8s						
DBIC	Dimbokro	84.62	84	P	P	23 59 05.1	-2.5
	comp=Z,6.2nm,0.8s,baz=279,slow=5.3,SNR=8.8						
DBIC				LR	LR	00 31 55.3	
	comp=Z,66nm,20.8s,baz=342,slow=32						
DBIC	Dimbokro	84.62	84	IAmb	IAmb	23 59 07.8	
	comp=Z,9.3nm,0.9s						
KIC	Kosan Boka	84.80	85	*e*P	P	23 59 06.5	-2.1
	comp=Z,15nm,0.7s						
TNS	Taunus Mts	85.22	39	*e*P	pP	23 59 31.5	-1.0
	comp=Z,19nm,1.4s,baz=288,slow=4.9						
BSEG	Bad Segeberg	85.26	36	*e*P	pP	23 59 31.9	-0.6
	comp=Z,25nm,1.2s,baz=288,slow=4.9						
NRDL	Niedersach Rie	85.57	37	*e*P	pP	23 59 33.5	-0.4
	comp=Z,23nm,1.4s,baz=288,slow=4.9						
GTTG	Gottingen	85.77	38	*e*P	pP	23 59 34.5	-0.6
	comp=Z,20nm,1.2s,baz=288,slow=4.9						
ARCES	ARCESS Array B	85.77	18	P	P	23 59 10.3	-2.0
	comp=Z,4.2nm,0.8s,baz=286,slow=4.6,SNR=8.7						
ARCES				LR	LR	00 38 51.2	
	comp=Z,317nm,18.2s,baz=250,slow=37						
ARCES	ARCESS Array B	85.77	18	IAmb	IAmb	00 00 00.2	
	comp=Z,28nm,1.4s						
CLZ	Clausthal	85.92	38	*e*P	pP	23 59 35.4	-0.5
	comp=Z,15nm,1.1s,baz=288,slow=4.9						
ASSE	Asse, Remlinge	86.01	37	*e*P	pP	23 59 35.7	-0.4
	comp=Z,21nm,1.3s,baz=288,slow=4.9						
FLTG	Flechtingen	86.28	37	*e*P	pP	23 59 36.4	-1.2
	comp=Z,18nm,1.4s,baz=288,slow=4.9						
TUE	Stuetta	86.87	43	P	P	23 59 17.5	-0.9
NEUB	Neuenburg	86.95	38	*e*P	pP	23 59 40.2	-0.5
	comp=Z,29nm,1.5s,baz=288,slow=4.9						
DAVA	Damuels	86.98	42	*e*P	pP	23 59 40.8	-0.4
	comp=Z,16nm,1.2s						
MOX	Moxa	87.03	38	*e*P	pP	23 59 40.6	-0.7
	comp=Z,14nm,1.2s,baz=288,slow=4.9						
GRFO	Grafenberg	87.09	39	P	P	23 59 19.2	0.0
GRF	Grafenberg Arr	87.09	39	*e*P	pP	23 59 41.1	-0.5
	comp=Z,25nm,1.5s,baz=288,slow=4.9						
PLN	Plauen	87.41	39	*e*P	pP	23 59 42.4	-0.7
	comp=Z,39nm,1.7s,baz=288,slow=4.9						
RETA	Reutte	87.49	42	*e*P	pP	23 59 43.1	-0.6
	comp=Z,18nm,1.4s						
WERD	Werda	87.51	39	*e*P	pP	23 59 42.9	-0.7
	comp=Z,14nm,1.3s,baz=288,slow=4.9						
GUNZ	Gunzen	87.56	39	*e*P	pP	23 59 43.3	-0.6
	comp=Z,20nm,1.3s,baz=288,slow=4.9						
WERN	Wernitzgruen	87.61	39	*e*P	pP	23 59 43.7	-0.4
	comp=Z,21nm,1.1s,baz=288,slow=4.9						
FETA	Feichten	87.61	42	*i* P	pP	23 59 43.9	-0.4
	comp=Z,6.5nm,0.9s						
TANN	Tannenbergstha	87.62	39	*e*P	pP	23 59 43.5	-0.6
	comp=Z,14nm,1.1s,baz=288,slow=4.9						
CLL	Collm	87.65	38	*e*P	P	23 59 22.0	+0.2
CLL				*i* pP	pP	23 59 43.3	-0.9
	comp=Z,14nm,1.1s						
CLL	Collm	87.65	38	P	P	23 59 21.4	-0.4
CLL				IAmb	IAmb	23 59 44.6	
	comp=Z,11nm,1.0s						
CLL	Collm	87.65	38	*e*P	pP	23 59 43.5	-0.7
	comp=Z,14nm,1.1s,baz=288,slow=4.9						
NKC	Novy Kostel	87.67	39	*e*pP	pP	23 59 43.8	-0.6
ROTZ	Rotzenmuhle	87.67	39	*e*P	pP	23 59 43.8	-0.6
	comp=Z,14nm,1.3s,baz=288,slow=4.9						
MOTA	Moosalm	87.75	42	*i* P	pP	23 59 43.8	-1.2
	comp=Z,15nm,1.2s						
SQTA	Sankt Quirin	87.86	42	*i* P	pP	23 59 44.7	-0.7
	comp=Z,13nm,1.5s						
FBE	Freiberg	87.98	38	*e*P	pP	23 59 45.4	-0.4
	comp=Z,18nm,1.2s,baz=288,slow=4.9						
WET	Wettzell	88.29	40	*e*P	pP	23 59 46.9	-0.5
	comp=Z,19nm,1.2s,baz=288,slow=4.9						
BRG	Berggiesshubel	88.35	38	Amp		23 59 49.7	
	comp=Z,12nm,1.5s						
BRG	Berggiesshubel	88.35	38	*e*P	pP	23 59 47.0	-0.5
	comp=Z,7.8nm,1.2s,baz=288,slow=4.9						
BRG	Berggiesshubel	88.35	38	*e*P	pP	23 59 47.2	-0.4
CTI	Castel Tesino	88.52	43	P	P	23 59 26.8	+0.6
CTI				IAmb	IAmb	23 59 47.8	
	comp=Z,11nm,1.3s						
KHC	Kasperske Hory	88.73	39	*e*pP	pP	23 59 49.0	-0.5
KHC	Kasperske Hory	88.73	39	P	P	23 59 26.4	-0.6
KHC				IAmb	IAmb	00 00 11.1	
	comp=Z,27nm,2.0s						
ABTA	Abfaltersbach	88.86	42	*e*P	pP	23 59 49.6	-0.6
	comp=Z,13nm,1.1s						
GEC2	GERESS Array S	88.91	40	P	P	23 59 28.2	+0.3
GEC2				IAmb	IAmb	23 59 51.4	
	comp=Z,19nm,1.7s						
GEC2	GERESS Array S	88.91	40	*e*P	pP	23 59 49.6	-0.8
	comp=Z,9.3nm,1.2s,baz=288,slow=4.9						
GERES	GERESS Array B	88.91	40	P	P	23 59 26.2	-1.8
	comp=Z,0.4nm,0.7s,baz=296,slow=3.2,SNR=3.9						
GERES				pP	pP	23 59 49.4	-1.0
	comp=Z,2.1nm,0.9s,baz=288,slow=1.3,SNR=8.5						
GERES				LR	LR	00 38 25.4	
	comp=Z,181nm,18.9s,baz=359,slow=35						
PRU	Pruhonice	89.02	38	*e*pP	pP	23 59 50.5	-0.3
KBA	Koelnbreinsper	89.28	41	*e*P	pP	23 59 51.7	-0.6
	comp=Z,10.0nm,1.5s						
TORD	Torodi Ar. Bea	89.36	77	P	P	23 59 28.4	-2.1
	comp=Z,0.7nm,0.6s,baz=288,slow=4.7,SNR=4.2						
TORD				LR	LR	00 36 39.2	
	comp=Z,73nm,20.3s,baz=0.0,slow=34						
MYKA	Terra Mystica	89.63	42	*e*P	pP	23 59 53.0	-0.8
	comp=Z,8.9nm,1.3s						
OSTC	Ostas	89.81	38	*e*pP	pP	23 59 54.4	-0.1
DPC	Dobruska-Polom	89.95	38	*e*pP	pP	23 59 54.9	-0.3
FINES	FINESS Array B	90.01	25	P	P	23 59 31.3	-1.4
	comp=Z,3.1nm,1.0s,baz=352,slow=4.2,SNR=1.6						
KEST	Kesra	90.04	53	P	P	23 59 32.3	-1.2
	comp=Z,2.5nm,0.9s,baz=318,slow=16,SNR=1.8						
TIXI	Tiksi	90.42	348	P	P	23 59 33.4	-1.0
SOKA	Soboth	90.51	41	*e*P	pP	23 59 56.4	-1.6
	comp=Z,9.9nm,1.4s						
CONA	Conrad Observa	90.58	40	*e*P	pP	23 59 57.9	-0.3
	comp=Z,7.4nm,2.0s						
MA2	Magadan	91.52	333	P	P	23 59 40.2	+0.4
MA2				IAmb	IAmb	23 59 41.9	
	comp=Z,7.6nm,1.0s						
MLR	Muntele Rosu	97.88	39	P	Pdif	00 00 09.9	+0.5
DZM	Mont Dzumac	106.67	251	*e*LR	LR	00 36 06.0	
	comp=Z,142nm,29.2s						
ZALV	Zalesovo Beam	112.18	3	PKiKP	PKiKP	00 05 07.6	-0.8
	comp=Z,0.9nm,0.5s,baz=284,slow=2.0,SNR=5.4						
KURBB	Kurchatov Arra	114.95	7	PKP	PKiKP	00 05 13.2	-0.6
	comp=Z,48nm,0.6s,baz=352,slow=1.9,SNR=9.0						
SONM	Songino Array	116.48	347	PKP	PKPdf	00 05 16.3	-0.8
	comp=Z,0.2nm,0.3s,baz=317,slow=0.9,SNR=8.0						
KSRS	Korea Array	117.09	326	PKP	PKPdf	00 05 18.4	0.0
	comp=Z,4.2nm,0.8s,baz=2.0,slow=1.6,SNR=13						
MKAR	Makanchi Array	119.14	5	PKP	PKPdf	00 05 20.9	-1.2
	comp=Z,2.2nm,0.8s,baz=354,slow=2.4,SNR=8.6						
MKAR				pPKP	pPKPdf	00 05 44.3	-1.2
	comp=Z,0.8nm,0.9s,baz=299,slow=0.4,SNR=2.1						
MKAR	Makanchi Array	119.14	5	PKPdf	PKPdf	00 05 21.1	-1.0
BOSA	Boshof	119.44	115	PKP	PKPdf	00 05 22.6	-0.7
	comp=Z,8.2nm,0.8s,baz=300,slow=1.9,SNR=12						
BOSA				pPKP	pPKPdf	00 05 45.4	-1.2
	comp=Z,2.4nm,0.9s,baz=210,slow=6.8,SNR=1.6						
BOSA	Boshof	119.44	115	PKPdf	PKPdf	00 05 23.6	+0.4
GEYT	Alibeck	120.70	28	PKP	PKPdf	00 05 24.8	-0.6
	comp=Z,3.1nm,0.8s,baz=299,slow=3.1,SNR=4.5						
HHC	Hu-ho-hao-te	121.54	340	*e*PKP	PKPdf	00 05 25.5	-1.5
WMQ	Urumqi	122.40	1	*e*PKP	PKPdf	00 05 29.0	+0.5
WMQ				LR	LR		
	comp=Z,220nm,18.1s						
WMQ				LR	LR		
	comp=Z,230nm,22.3s						
GTA	Gaotai	125.88	350	PKP	PKPdf	00 05 36.0	+0.6
GTA				sPKP		00 06 13.0	
GTA				LR	LR		
	comp=Z,180nm,15.3s						
GTA				LR	LR		
	comp=Z,230nm,16.4s						
NJ2	Nanjing	126.01	329	*e*PKP	PKiKP	00 05 36.5	+0.4
XAN	Xi'an	128.58	339	PKP	PKPdf	00 05 40.8	+0.2
STKA	Stephens Creek	128.98	240	PKP	PKiKP	00 05 42.4	+0.4
	comp=Z,0.7nm,0.3s,baz=266,slow=4.2,SNR=4.4						
STKA				pPKP	pPKPdf	00 06 04.3	-0.3
	comp=Z,1.3nm,0.5s,baz=62,slow=3.6,SNR=5.9						
WRA	Warramunga Arr	136.41	256	PKP	PKPdf	00 05 56.8	+1.2
	comp=Z,5.2nm,0.9s,baz=89,slow=1.5,SNR=24						
WRA				pPKP	pPKPdf	00 06 18.4	-0.6
	comp=Z,4.4nm,0.8s,baz=88,slow=2.1,SNR=8.5						
ASAR	Alice Springs	136.66	250	PKP	PKiKP	00 05 58.0	+0.2
	comp=Z,2.2nm,0.9s,baz=109,slow=2.5,SNR=13						
ASAR				pPKP	pPKPdf	00 06 18.6	-0.7
	comp=Z,2.2nm,0.8s,baz=114,slow=1.3,SNR=6.6						
ASAR	Alice Springs	136.66	250	PKPdf	PKPdf	00 05 57.2	+1.2
KMI	Kunming	138.85	341	PKHKP	PKPpre	00 05 50.3	
KMI				PKP	PKPdf	00 05 59.0	-1.3
KMI				pPKP	pPKPdf	00 06 23.0	-0.7
KMI				sPKP		00 06 34.5	
KMI				PP	PP	00 08 49.5	-1.6
KMI				PKS	PKSdf	00 09 31.5	-5.3
KMI				pmax	pmax		
	comp=Z,180nm,6.9s						
KMI				LR	LR		
	comp=N,150nm,5.9s						
KMI				LR	LR		
	comp=E,150nm,9.5s						
KMI				LR	LR		
	comp=Z,120nm,10.6s						
KMI	Kunming	138.85	341	PKPab	PKPpre	00 05 50.3	
KMI				PKP	PKPdf	00 05 59.0	-1.3
KMI				pPKP	pPKPdf	00 06 23.0	-0.7
KMI				sPKP		00 06 34.5	
KMI				PKS	PKSdf	00 09 31.5	-5.3
KMI				AMB	AMB		
	comp=Z,180nm,6.9s						
KMI				LR	LR		
	comp=Z,150nm,5.9s						
KMI				LR	LR		
	comp=Z,150nm,9.5s						
KMI				LR	LR		
	comp=Z,120nm,10.6s						
MYLDM	Lahad Datu	145.10	301		PKPdf	00 06 13.0	+1.6
CMAR	Chiang Mai Arr	146.27	343	PKPbc	PKPdf	00 06 14.4	+1.1
	comp=Z,17nm,0.8s,baz=336,slow=3.6,SNR=81						
UBPT	Khong Chiam	146.65	330		PKPbc	00 06 16.0	+0.4
HYB	Hyderabad	147.06	19	*i* PKP	PKPdf	00 06 13.0	-1.7
PSA00	Pilbara Seismi	149.80	251	PKPbc	PKPbc	00 06 24.2	+0.4

RSPR 27 23:48:54.8, 17°.93N×66°.87W, h15^{km}±1^{km}, MD2.3/7, 6C-6D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GBPR	Guanica, Bosqu	0.05	348	⇑*e*P	Pg	23 48 57.9	+0.2
GBPR	Guanica, Bosqu	0.05	348	*e*S	Sg	23 49 00.0	+0.4
MLPR	Magueyes Islan	0.17	285	⇓*e*P	Pg	23 48 59.0	-0.1
MLPR	Magueyes Islan	0.17	285	*e*S	Sg	23 49 02.1	+0.2
OBIP	Obispado Ponce	0.28	65	⇑*e*P	Pg	23 48 59.8	-0.9
OBIP	Obispado Ponce	0.28	65	*e*S	Sg	23 49 04.4	-0.3
CELP	Cerrillos	0.31	62	⇓*e*P	Pg	23 49 01.4	+0.1
CELP	Cerrillos	0.31	62	*e*S	Sg	23 49 06.4	+0.5
LSP	Las Mesas	0.32	320	⇓*e*P	Pg	23 49 01.5	-0.1
LSP	Las Mesas	0.32	320	*e*S	Sg	23 49 06.0	-0.2
ICMP	Isla Caja de M	0.33	97	⇓*e*P	Pg	23 49 00.7	-0.9
ICMP	Isla Caja de M	0.33	97	*e*S	Sb	23 49 07.0	-0.4
AOPR	Arecibo Observ	0.43	15	⇑*e*P	Pg	23 49 03.2	-0.3
AGPR	Aguadilla, PR	0.59	337	⇑*e*P	Pg	23 49 05.8	-0.6
EMPR	Esperanza - Ma	0.64	30	⇑*e*P	Pb	23 49 07.8	+0.2
EMPR	Esperanza - Ma	0.64	30	*e*S	Sb	23 49 16.4	+0.1
IGPR	InterUniversit	0.73	87	⇓*e*P	Pg	23 49 09.0	0.0
IGPR	InterUniversit	0.73	87	*e*S	Sb	23 49 19.3	+0.5
HUMP	Col San Antoni	0.99	77	⇓*e*P	Pb	23 49 12.7	-1.0
HUMP	Col San Antoni	0.99	77	*e*S	Sb	23 49 26.2	-0.4
CBYP	Canovanas	1.02	70	⇑*e*P	Pb	23 49 13.0	-1.2

IDC ***27*** *23:51:21.4±3.5, 31°.01S×178°.81W, h0^{km}, mb3.8/3, mb1 4.0/3, mb1mx3.8/17, mbtmp3.8/3, Error ellipse: s-maj=176.1km s-min=37.5km az=158.0*

NEIC ***27*** *23:52:13.2±2.0, 32°.1S±0°.1×179°.2E±0°.1, h393^{km}±12^{km}, mb4.2/10, Error ellipse: s-maj=21.1km s-min=8.6km az=208.0*

ISC 27 23:52:12.3±1.1, 32°.08S±0°.09×179°.4E±0°.2, h400^{km}, n35, σ1^{s}.31/37, mb4.1/9, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	5.54	189	Pn	Pn	23 53 39.8	0.0
OUZ	Omahuta	5.75	235	Pn	Pn	23 53 40.9	-1.2
URZ	Urewera	6.44	196		Pn	23 53 49.3	-0.2
URZ				S	S	23 55 08.7	-0.3
HIZ	Hauiti	7.41	209	Pn	Pn	23 53 59.9	-0.5
BKZ	Black Stump Fm	7.45	198		Pn	23 54 00.2	-0.7
BKZ				S	S	23 55 29.1	-0.8
BFZ	Birch Farm	8.95	195	P	Pn	23 54 17.4	-0.6
BFZ				S	S	23 56 00.9	-0.3
BHW	Baring Head	9.99	200	P	P	23 54 28.9	-0.6
TUWZ	Tuamarina	10.30	203	P	P	23 54 32.1	-0.8
NNZ	Nelson	10.31	206	P	P	23 54 31.7	-1.4
QRZ	Quartz Range	10.32	210	P	Pn	23 54 33.3	-0.5
BSWZ	Blackbirch Sta	10.57	203	P	Pn	23 54 36.8	0.0
THZ	Tophouse	10.96	206	P	P	23 54 40.5	+0.1
KHZ	Kahutara	11.31	203	P	P	23 54 44.1	-0.1
OXZ	Oxford	12.63	205	P	P	23 54 58.6	-0.2
CTAO	Charters Tower	31.93	284	P	P	23 58 03.6	+0.7
CTAO				IAmb	IAmb	23 59 15.7	
	comp=Z,24nm,1.9s						
STKA	Stephens Creek	31.94	260	P	P	23 58 05.3	+2.4
	comp=Z,0.9nm,0.4s,baz=80,slow=6.1,SNR=1.8						
STKA	Stephens Creek	31.94	260	P	P	23 58 05.5	+2.7
BBOO	Buckleboo	36.37	257	P	P	23 58 41.9	+1.4
BBOO				IAmb	IAmb	00 00 06.9	
	comp=Z,26nm,1.6s						
COEN	Coen	37.65	290	P	P	23 58 53.6	+2.3
COEN				IAmb	IAmb	23 59 42.5	
	comp=Z,15nm,1.4s						
ASAR	Alice Springs	40.81	270	P	P	23 59 16.7	-0.4
	comp=Z,0.3nm,0.5s,baz=104,slow=7.6,SNR=6.2						
WR0	Warramunga Arr	41.78	276	P	P	23 59 24.5	-0.3
WB2	Warramunga Arr	41.95	275	P	P	23 59 26.3	+0.1
WB2				IAmb	IAmb	23 59 49.7	
	comp=Z,18nm,1.7s						
WRA	Warramunga Arr	41.96	275	P	P	23 59 26.2	0.0
	comp=Z,0.6nm,0.3s,baz=111,slow=8.1,SNR=19						
WB0	Warramunga Arr	41.99	276	P	P	23 59 26.1	-0.4
WB0				IAmb	IAmb	00 00 17.6	
	comp=Z,33nm,1.9s						
FITZ	Fitzroy Crossi	50.15	273	P	P	00 00 28.9	-0.3
FITZ				IAmb	IAmb	00 00 50.2	
	comp=Z,19nm,1.8s						
MMRI	Maumere	57.70	281	P	P	00 01 20.9	-2.2
QSPA	South Pole Qui	58.04	180	P	P	00 01 26.7	+1.9
SNAA	Sanae	76.53	179	P	P	00 03 19.4	+0.2
VNA3	Neumayer Olymp	76.77	177	P	P	00 03 20.7	+0.2
VNA2	Neumayer--Watz	77.18	178	P	P	00 03 23.2	+0.5
	baz=180,slow=4.6						
VNA1	Neumayer--Stat	77.42	177	P	P	00 03 24.5	+0.6
KURBB	Kurchatov Arra	120.61	313	PKP	PKPdf	00 10 13.4	-3.4
	comp=Z,0.4nm,0.7s,baz=119,slow=2.2,SNR=4.2						
ARCES	ARCESS Array B	139.71	346	PKhKP	PKPpre	00 10 41.3	
	comp=Z,1.8nm,0.8s,baz=82,slow=1.9,SNR=1.3						
FINES	FINESS Array B	145.88	337	PKPbc	PKPdf	00 11 00.7	-2.6
	comp=Z,2.8nm,0.4s,baz=48,slow=4.1,SNR=39						
NOA	NORSAR Array B	150.00	348	PKPbc	PKPdf	00 11 11.7	+1.5
	comp=Z,0.6nm,0.5s,baz=18,slow=4.1,SNR=3.7						

ROM 27 23:57:38.6±0.1, 43°.061N±0°.003×13°.013E±0°.005, h15^{km}, ML1.6/5, 3C-3D, Error ellipse: s-maj=0.4km s-min=0.2km az=269.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FDMO	Fiordimonte	0.06	114	P	Pg	23 57 41.5	+0.1
FDMO				S	Sg	23 57 43.5	+0.1
FDMO				AML	AML		
	comp=E,718µm,0.1s						
FDMO				AML	AML		
	comp=N,944µm,0.2s						
FDMO				AML	AML		
	comp=N,944µm,0.2s						
CESI	CESI - Serrava	0.10	235	⇑*i*P	Pg	23 57 42.2	+0.3
CESI				S	Sg	23 57 44.7	+0.7
SEF1	Sefro	0.10	331	P	Pg	23 57 42.0	+0.1
SEF1				S	Sg	23 57 44.5	+0.5
FEMA	Monte Fema	0.10	165	P	Pb	23 57 42.2	-0.2
FEMA				S	Sb	23 57 44.8	-0.2
FIU1	Fiuminata	0.14	335	⇑*i*P	Pg	23 57 42.6	+0.2
FIU1				S	Sg	23 57 45.3	+0.4
CRM1	Catelraimondo	0.15	13	P	Pg	23 57 42.8	+0.3
CRM1				S	Sb	23 57 45.9	-0.4
MDAR	Monte D'Aria	0.16	36	P	Pg	23 57 42.9	+0.1
MDAR				S	Sg	23 57 45.7	+0.3
GAG1	Gagliole	0.18	13	P	Pb	23 57 43.4	-0.4
GAG1				S	Sb	23 57 46.8	-0.3
SNTG	Esanatoglia	0.20	345	⇓*i*P	Pg	23 57 43.4	+0.1
SNTG				S	Sg	23 57 46.9	+0.5
SNTG				AML	AML		
	comp=E,300µm,0.2s						
SNTG				AML	AML		
	comp=E,300µm,0.2s						
SNTG				AML	AML		
	comp=N,296µm,0.1s						
NRCA	Norcia	0.24	162	AML	AML		
	comp=E,392µm,0.1s						
NRCA				AML	AML		
	comp=N,401µm,0.1s						
ASSB	Assisi San Ben	0.26	266	P	Pg	23 57 43.4	-0.8
ASSB				S	Sg	23 57 48.3	+0.3
ASSB				AML	AML		
	comp=E,332µm,0.1s						
ASSB				AML	AML		
	comp=N,184µm,1.2s						
EL6	Elcito	0.28	14	⇑P	Pg	23 57 44.7	+0.2
EL6				S	Sb	23 57 49.3	-0.6
FOSV	Fossato di Vic	0.30	322	⇓*i*P	Pg	23 57 45.1	+0.3
FOSV				S	Sb	23 57 50.1	-0.3
FOSV				AML	AML		
	comp=N,226µm,0.3s						
FOSV				AML	AML		
	comp=E,144µm,0.5s						
ATCC	AVT- Casa Cast	0.30	295	⇓*i*P	Pg	23 57 45.3	+0.4
ATCC				S	Sb	23 57 50.3	-0.2
ATCC				AML	AML		
	comp=E,147µm,1.1s						
ATCC				AML	AML		
	comp=N,121µm,1.4s						
ATCC				AML	AML		
	comp=E,147µm,1.1s						
CING	Cingoli	0.34	23	AML	AML		
	comp=N,105µm,0.4s						
CING				AML	AML		
	comp=E,101µm,0.1s						
MURB	Monte Urbino	0.41	300	AML	AML		
	comp=E,144µm,0.3s						
MURB				AML	AML		
	comp=N,132µm,0.3s						
SSFR	Montelago di S	0.41	336	AML	AML		
	comp=N,190µm,0.6s						
SSFR				AML	AML		
	comp=E,210µm,0.2s						
ARVD	Arcevia	0.44	353	P	Pg	23 57 47.5	+0.1
ARVD				S	Sb	23 57 54.3	-0.2
ARVD				AML	AML		
	comp=E,65µm,0.6s						
ARVD				AML	AML		
	comp=N,54µm,0.2s						
LNSS	Leonessa	0.46	177	AML	AML		
	comp=N,87µm,0.9s						
LNSS				AML	AML		
	comp=E,68µm,0.7s						

KRNET ***27*** *23:59:24.9±0.1, 41°.65N×74°.89E, h19^{km}, mb3.5*

SOME ***27*** *23:59:25.0, 41°.67N×74°.85E, h10^{km}*

NNC ***27*** *23:59:25.9±1.0, 41°.69N×74°.82E, h0^{km}, mb4.0, mpv3.8, Error ellipse: s-maj=6.8km s-min=4.2km az=21.0*

ISC 27 23:59:24.5±1.0, 41°.65N±0°.03×74°.89E±0°.02, h17^{km}±9^{km}, n61, σ1^{s}.16/99, 28C-26D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARLS	Aral	0.47	297	⇑*i*P	Pg	23 59 33.8	-0.3
	baz=96						
ARLS				⇑*i*S	Sg	23 59 40.3	-0.3
	baz=96						
UCH	Uchtor	0.65	335	⇓*i*P	Pb	23 59 37.7	+0.1
	baz=34						
UCH				⇓*i*S	Sg	23 59 46.9	+0.9
	baz=34						
UCH	Uchtor	0.65	335	P	Pb	23 59 37.5	-0.1
	SNR=1488						
AML	Almayashu	1.01	299	⇓*i*P	Pb	23 59 43.9	+0.1
	baz=98						

AML				⇓iS	**Sb**	**23 59 57.6**	**+0.6**
	baz=98						
AML	**Almayashu**	**1.01**	**299**	P	**Pb**	**23 59 44.0**	**+0.1**
	SNR=206						
AAK	**Ala-Archa**	**1.03**	**344**	⇑iP	**Pb**	**23 59 44.2**	**+0.2**
	baz=43						
AAK				⇑iS	**Sb**	**23 59 57.6**	**+0.2**
	baz=43						
AAK	**Ala-Archa**	**1.03**	**344**	P	**Pn**	**23 59 44.6**	**+0.2**
	SNR=73						
AAK	**Ala-Archa**	**1.03**	**344**	⇓P	**Pn**	**23 59 44.6**	**+0.2**
	25nm,0.4s						
AAK				⇓S	**Sn**	**23 59 58.4**	**-0.2**
BOOM	**Boomskoye usch**	**1.15**	**43**	⇑iP	**Pg**	**23 59 46.8**	**0.0**
	baz=43						
BOOM				⇑iS	**Sg**	**00 00 02.5**	**+0.6**
	baz=43						
ULHL	**Ulahol**	**1.18**	**59**	⇓iP	**Pn**	**23 59 45.9**	**-0.5**
	baz=59						
ULHL				⇓iS	**Sn**	**00 00 02.1**	**0.0**
	baz=59						
ULHL	**Ulahol**	**1.18**	**59**	P	**Pb**	**23 59 46.6**	**+0.1**
	SNR=170						
FRU1	**Bishkek**	**1.18**	**351**	⇑iP	**Pb**	**23 59 47.0**	**+0.5**
	baz=50						
FRU1				⇑iS	**Sg**	**00 00 03.0**	**+0.3**
	baz=50						
EKS2	**Erkin-Say**	**1.31**	**321**	⇓iP	**Pb**	**23 59 49.5**	**+0.8**
	baz=21						
EKS2				⇓iS	**Sg**	**00 00 06.6**	**-0.2**
	baz=21						
EKS2	**Erkin-Say**	**1.31**	**321**	P	**Pb**	**23 59 49.4**	**+0.8**
	SNR=65						
CHMS	**Chumysh**	**1.36**	**356**	⇑iP	**Pg**	**23 59 50.4**	**-0.2**
	baz=56						
CHMS				⇑iS	**Sg**	**00 00 08.9**	**+0.6**
	baz=56						
CHMS	**Chumysh**	**1.36**	**356**	P	**Pg**	**23 59 50.5**	**-0.2**
	SNR=31						
TKM2	**Tokmak 2**	**1.38**	**22**	⇑iP	**Pb**	**23 59 50.2**	**+0.2**
	baz=22						
TKM2				⇑iS	**Sb**	**00 00 08.3**	**+0.9**
	baz=22						
TKM2	**Tokmak 2**	**1.38**	**22**	P	**Pg**	**23 59 50.8**	**-0.3**
	SNR=52						
TKM2	**Tokmak 2**	**1.38**	**22**	⇑P	**Pb**	**23 59 50.7**	**+0.7**
	3.6nm,0.2s						
ARSB	**Arslanbob**	**1.47**	**258**	⇑eP	**Pb**	**23 59 51.9**	**+0.5**
	baz=58						
ARSB				⇑eS	**Sg**	**00 00 11.9**	**+0.1**
	baz=58						
KST	**Kastek**	**1.61**	**29**	eS	**Sg**	**00 00 17.0**	**+0.6**
	74nm,0.3s						
KST				eP	**Pg**	**23 59 55.2**	**-0.2**
	7.7nm,0.2s						
USP	**Ospenovka**	**1.65**	**350**	⇑iP	**Pg**	**23 59 55.7**	**-0.4**
	baz=50						
USP				⇑iS	**Sg**	**00 00 16.9**	**-0.7**
	baz=50						
USP	**Ospenovka**	**1.65**	**350**	P	**Pg**	**23 59 55.7**	**-0.4**
	SNR=282						
MRKS	**Merke**	**1.65**	**312**	eS	**Sg**	**00 00 17.3**	**-0.5**
	165nm,0.3s						
MRKS				eP	**Pb**	**23 59 55.4**	**+0.8**
	20nm,0.1s						
MRKS	**Merke**	**1.65**	**312**	P	**Pb**	**23 59 55.4**	**+0.8**
	20nm,0.1s						
MRKS				S	**Sg**	**00 00 17.3**	**-0.5**
	165nm,0.3s						
DGS	**Degeres**	**1.73**	**22**	eS	**Sg**	**00 00 20.8**	**+0.7**
	112nm,0.4s						
DGS				eP	**Pg**	**23 59 57.5**	**-0.2**
	8.9nm,0.2s						
DGS	**Degeres**	**1.73**	**22**	P	**Pg**	**23 59 57.5**	**-0.2**
	8.9nm,0.2s						
DGS				S	**Sg**	**00 00 20.8**	**+0.7**
	112nm,0.4s						
KDJ	**Kajisay**	**1.78**	**73**	⇓iP	**Pb**	**23 59 57.4**	**+0.6**
	baz=74						
KDJ				⇓iS	**Sg**	**00 00 21.5**	**-0.4**
	baz=74						
IZV	**Izvestkoviy**	**1.89**	**42**	eP	**Pb**	**23 59 59.3**	**+0.6**
	13nm,0.2s						
IZV				eS	**Sg**	**00 00 25.9**	**+0.6**
	174nm,0.4s						
IZV	**Izvestkoviy**	**1.89**	**42**	P	**Pg**	**00 00 00.3**	**-0.5**
	13nm,0.2s						
IZV				S	**Sg**	**00 00 25.9**	**+0.6**
	174nm,0.4s						
SFK	**Sufi-Kurgan**	**1.94**	**213**	⇑eP	**Pb**	**00 00 00.4**	**+0.9**
	baz=13						
SFK				⇑eS	**Sb**	**00 00 25.7**	**+2.2**
	baz=13						
OHH	**Osh**	**1.94**	**235**	⇑iP	**Pb**	**00 00 00.5**	**+1.0**
	baz=35						
OHH				⇑iS	**Sg**	**00 00 26.2**	**-0.9**
	baz=35						
MNAS	**Manas**	**1.96**	**296**	⇓iP	**Pb**	**00 00 00.6**	**+0.7**
	baz=96						
MNAS				⇓iS	**Sg**	**00 00 26.4**	**-1.3**
	baz=96						
TNSS	**Tian-Shan**	**2.07**	**47**	⇑eP	**Pg**	**00 00 03.4**	**-0.8**
	39nm,0.4s						
TNSS				eS	**Sg**	**00 00 31.5**	**+0.4**
	65nm,0.5s						
KRBS	**Karabastau**	**2.13**	**16**	eP	**Pg**	**00 00 04.8**	**-0.6**
	60nm,0.2s						
KRBS				eS	**Sg**	**00 00 33.6**	**+0.6**
	185nm,0.4s						
KRBS	**Karabastau**	**2.13**	**16**	Pg	**Pg**	**00 00 04.8**	**-0.6**
	60nm,0.2s						
KRBS				Lg	Lg	00 00 33.6	
	185nm,0.4s						
KNDC	**Almaty**	**2.20**	**44**	⇑Pg	**Pg**	**00 00 06.1**	**-0.6**
	18nm,0.3s						
KNDC				⇑Lg	Lg	00 00 36.6	
	139nm,0.5s						
MDOK	**Medeo**	**2.21**	**46**	⇓eP	**Pg**	**00 00 05.9**	**-0.9**
	44nm,0.4s						
MDOK				eS	**Sg**	**00 00 35.5**	**0.0**
	36nm,0.3s						
MDOK	**Medeo**	**2.21**	**46**	⇑Pg	**Pg**	**00 00 05.8**	**-1.0**
	20nm,0.4s						
MDOK				⇓Lg	Lg	00 00 35.5	
	29nm,0.4s						
KOTS	**Kotyrbulak**	**2.29**	**45**	eP	**Pg**	**00 00 07.6**	**-0.8**
	153nm,0.3s						
KOTS				eS	**Sg**	**00 00 38.1**	**0.0**
	506nm,0.5s						
KOTS	**Kotyrbulak**	**2.29**	**45**	Pg	**Pg**	**00 00 07.6**	**-0.8**
	153nm,0.3s						
KOTS				Lg	Lg	00 00 38.1	
	506nm,0.5s						
ANVS	**Anan'yevo**	**2.36**	**60**	⇓iP	**Pb**	**00 00 05.5**	**-1.1**
	baz=60						
ANVS				⇓iS	**Sb**	**00 00 35.5**	**0.0**
	baz=60						
KTBS	**Karatobe**	**2.45**	**32**	eP	**Pg**	**00 00 10.4**	**-1.2**
	27nm,0.2s						
KTBS				eS	**Sg**	**00 00 43.0**	**-0.3**
	253nm,0.2s						
KTBS	**Karatobe**	**2.45**	**32**	Pg	**Pg**	**00 00 10.4**	**-1.2**
	27nm,0.2s						
KTBS				Lg	Lg	00 00 43.0	
	253nm,0.2s						
CHKK	**Chushkaly**	**2.70**	**34**	⇓eP	**Pg**	**00 00 14.8**	**-1.4**
	9.8nm,0.5s						
CHKK				eS	**Sg**	**00 00 50.6**	**-0.5**
	159nm,0.3s						
TRKS	**Terek-Say**	**2.81**	**269**	⇓iP	**Pn**	**00 00 11.4**	**+2.6**
	baz=67						
TRKS				⇓iS	**Sb**	**00 00 46.4**	**-2.1**
	baz=67						
SATY	**Saty**	**2.97**	**60**	eP	**Pb**	**00 00 19.1**	**+2.1**
	9.8nm,0.5s						
SATY				eS	**Sg**	**00 00 58.3**	**-1.5**
	98nm,0.5s						
KURS	**Kuram**	**3.04**	**52**	eP	**Pg**	**00 00 20.9**	**-1.9**
	16nm,0.6s						
KURS				eS	**Sg**	**00 01 01.2**	**-1.1**
	34nm,0.3s						
KPKS	**Kokpek**	**3.34**	**56**	eP	**Pb**	**00 00 26.1**	**+2.7**
	19nm,0.4s						
KPKS				eS	**Sg**	**00 01 10.1**	**-1.8**
	74nm,0.6s						
ARXS	**Arharly**	**3.35**	**39**	eP	**Pb**	**00 00 26.0**	**+2.4**
	12nm,0.3s						
ARXS				eS	**Sg**	**00 01 09.8**	**-2.4**
	111nm,0.4s						
UZB	**Uzynbulak**	**3.41**	**63**	eP	**Pb**	**00 00 26.5**	**+1.9**
	6.4nm,0.3s						
UZB				eS	**Sg**	**00 01 10.7**	**-3.4**
	34nm,0.2s						
BTLS	**Baital**	**3.45**	**350**	eP	**Pb**	**00 00 27.2**	**+2.1**
	4.0nm,0.3s						
BTLS				eS	**Sg**	**00 01 12.0**	**-3.3**
	28nm,0.3s						
MNBS	**Baschi**	**3.55**	**46**	eP	**Pg**	**00 00 30.2**	**-2.2**
	8.2nm,0.3s						
MNBS				eS	**Sg**	**00 01 17.1**	**-1.3**
	130nm,0.4s						
KK31	**Karatay Array**	**3.55**	**296**	⇓Pg	**Pg**	**00 00 31.4**	**-1.1**
	0.9nm,0.2s,baz=117,slow=16,SNR=20						
KK31				⇓Lg	Lg	00 01 15.3	
	6.6nm,0.3s,baz=111,slow=28,SNR=6.7						
IUG	**Iuzhnay**	**3.66**	**279**	eP	**Pg**	**00 00 32.8**	**-1.8**
	5.3nm,0.2s						
IUG				eS	**Sg**	**00 01 21.3**	**-0.7**
	57nm,0.5s						
PDGK	**Podgornoye**	**3.80**	**62**	⇑Pg	**Pg**	**00 00 36.9**	**-0.3**
	4.9nm,0.5s						
PDGK				⇑Lg	Lg	00 01 23.1	
	15nm,0.5s						
BRLS	**Borolday**	**3.99**	**292**	eP	**Pg**	**00 00 39.1**	**-1.8**
	10nm,0.4s						
BRLS				eS	**Sg**	**00 01 32.1**	**-0.5**
	36nm,0.3s						
MAKZ	**Makanchi**	**7.25**	**42**	⇓Lg	Lg	00 03 15.1	
	0.8nm,0.5s						
MK31	**Makanchi Array**	**7.40**	**43**	Pn	**Pn**	**00 01 09.9**	**-1.7**
	0.3nm,0.4s,baz=221,slow=14,SNR=9.1						
MK31				⇑Lg	Lg	00 03 19.2	
	0.9nm,0.5s,baz=218,slow=29,SNR=4.3						
KURBB	**Kurchatov Arra**	**9.33**	**14**	⇓Lg	Lg	00 04 23.4	
	10nm,0.7s						
KURK	**Kurchatov**	**9.43**	**15**	⇓Lg	Lg	00 04 21.7	
	4.9nm,0.9s						

NNC 28 00:03:13.4±5.9**, 36°.08N×69°.42E, h0^{km}, mb3.7, mpv3.5, 1C-4D, Error ellipse: s-maj=63.5km s-min=39.2km az=144.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**7.06**	**7**	⇓P	Pn	00 04 59.6	+1.6
	0.5nm,0.3s,baz=197,slow=16,SNR=5.2						
KK31				⇓S	Sn	00 06 21.2	+2.2
	1.0nm,0.4s,baz=187,slow=22,SNR=6.2						
AAK	**Ala-Archa**	**7.63**	**29**	⇓P	Pn	00 05 06.2	+0.2
	3.0nm,0.5s						
AAK				⇓S	Sn	00 06 33.8	+0.5
	6.4nm,0.7s						
AB31	**Akbulak array**	**14.88**	**335**	⇑P	Pn	00 06 43.5	-1.5
	0.3nm,0.3s,baz=158,slow=13,SNR=18						
NB2	**NORSAR Subarra**	**43.95**	**323**	PKP	P	00 11 11.6	-10
	comp=Z,0.6nm,0.5s,baz=16,slow=2.6						

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*NEIC **28** 00:12:31.9±2.1, 7°.39S±0°.10×155°.68E±0°.10, h105^{km}±8^{km}, mb4.1/11, Error ellipse: s-maj=14.3km s-min=13.8km az=211.0*

*IDC **28** 00:12:36.5±9.8, 7°.49S×155°.94E, h159^{km}±97^{km}, mb3.5/9, mb1 3.7/10, mb1mx3.5/37, mbtmp4.0/10, MS3.5/2, Ms1 3.5/2, ms1mx3.0/33, Error ellipse: s-maj=61.6km s-min=30.2km az=133.0*

ISC 28 00:12:31.4±0.7**, 7°.40S**±0°.08×**155°.68E**±0°.09**, h100^{km}, n32,** σ1^{s}**71**/30**, mb3.9**/14**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.68**	**116**	LR	LR	00 15 43.2	
	comp=Z,572nm,18.7s,baz=322,slow=42						
RABL	**Rabaul**	**4.73**	**312**	Pn	**Pn**	**00 13 40.1**	**-0.5**
RABL				Sn	**Sn**	**00 14 38.2**	**+3.9**
PMG	**Port Moresby**	**8.66**	**256**	Pn	**Pn**	**00 14 32.5**	**-1.5**
PMG				Sn	**Sn**	**00 16 06.6**	**-3.4**
COEN	**Coen**	**13.90**	**241**	Pn	**Pn**	**00 15 43.3**	**-1.0**
CTA	**Charters Tower**	**15.58**	**215**	P	**P**	**00 16 10.5**	**+2.8**
	baz=37,slow=12,SNR=9.5						
CTAO	**Charters Tower**	**15.58**	**215**		**Pn**	**00 16 05.8**	**+0.2**
CTAO				IAmb	IAmb	00 16 12.3	
	comp=Z,7.1nm,0.9s						
DZM	**Mont Dzumac**	**17.91**	**146**		**P**	**00 16 33.5**	**-0.1**
WR0	**Warramunga Arr**	**24.00**	**237**	P	**P**	**00 17 37.8**	**+0.8**
WR0				IAmb	IAmb	00 17 39.4	
	comp=Z,7.8nm,1.1s						
WB0	**Warramunga Arr**	**24.03**	**237**	P	**P**	**00 17 38.4**	**+1.0**
WB0				IAmb	IAmb	00 17 53.7	
	comp=Z,4.5nm,1.0s						
MSVF	**Nonsavu**	**24.10**	**117**	P	**P**	**00 17 37.4**	**-0.7**
MSVF				IAmb	IAmb	00 17 46.2	
	comp=Z,12nm,1.1s						
WB2	**Warramunga Arr**	**24.15**	**237**	P	**P**	**00 17 38.8**	**+0.4**
WB2				IAmb	IAmb	00 17 50.8	
	comp=Z,7.2nm,1.1s						
WRA	**Warramunga Arr**	**24.16**	**237**	P	**P**	**00 17 39.8**	**+1.3**
	comp=Z,3.1nm,1.0s,baz=60,slow=9.2,SNR=9.6						
AS31	**Alice Springs**	**26.42**	**230**	P	**P**	**00 17 59.1**	**+0.1**
ASAR	**Alice Springs**	**26.43**	**230**	P	**P**	**00 17 59.9**	**+0.8**
	comp=Z,1.6nm,0.9s,baz=61,slow=9.1,SNR=12						
ASAR	**Alice Springs**	**26.43**	**230**	P	**P**	**00 17 58.6**	**-0.5**
STKA	**Stephens Creek**	**27.67**	**206**	P	**P**	**00 18 15.2**	**+5.2**
	comp=Z,2.1nm,0.7s,baz=38,slow=15,SNR=4.9						
STKA				LR	LR	00 29 24.0	
	comp=Z,96nm,18.7s,baz=25,slow=36						
H11S3	**WAKE ISLAND Hy**	**27.93**	**23**	T	T	00 46 42.2	
	baz=202,slow=75,SNR=9.9						
H11S2	**WAKE ISLAND Hy**	**27.93**	**23**	T	T	00 46 45.2	
	baz=202,slow=75,SNR=11						
H11S1	**WAKE ISLAND Hy**	**27.94**	**23**	T	T	00 46 44.6	
	baz=202,slow=75,SNR=5.2						
FITZ	**Fitzroy Crossi**	**31.12**	**247**	P	**P**	**00 18 41.1**	**+0.4**
	comp=Z,2.3nm,0.6s,baz=83,slow=9.8,SNR=12						
FITZ	**Fitzroy Crossi**	**31.12**	**247**	P	**P**	**00 18 40.9**	**+0.2**
FITZ				IAmb	IAmb	00 18 55.7	
	comp=Z,6.2nm,1.1s						
KULM	**Kulim**	**56.33**	**281**	P	**P**	**00 22 01.8**	**-0.7**
PETK	**Petropavlovsk-**	**60.29**	**1**	P	**P**	**00 22 28.2**	**-1.2**
	comp=Z,4.0nm,0.9s,baz=164,slow=9.3,SNR=2.1						
CMAR	**Chiang Mai Arr**	**61.57**	**296**	P	**P**	**00 22 39.9**	**+1.3**
	comp=Z,1.7nm,0.4s,baz=128,slow=5.8,SNR=10						
CMAR	**Chiang Mai Arr**	**61.57**	**296**	P	**P**	**00 22 39.2**	**+0.5**
CHTO	**Chiang Mai**	**61.68**	**296**	P	**P**	**00 22 39.2**	**-0.3**
SONM	**Songino Array**	**70.04**	**327**	P	**P**	**00 23 32.6**	**0.0**
	comp=Z,0.8nm,0.9s,baz=141,slow=5.0,SNR=4.1						
ILAR	**Eielson Array**	**83.50**	**21**	P	**P**	**00 24 46.5**	**-1.4**
	comp=Z,0.1nm,0.5s,baz=232,slow=6.8,SNR=3.2						
ILAR	**Eielson Array**	**83.50**	**21**	P	**P**	**00 24 47.2**	**-0.6**
MKAR	**Makanchi Array**	**84.15**	**319**	P	**P**	**00 24 51.6**	**0.0**
	comp=Z,0.4nm,0.7s,baz=102,slow=4.8,SNR=6.5						
ZALV	**Zalesovo Beam**	**84.89**	**326**	P	**P**	**00 24 53.6**	**-1.5**
	comp=Z,0.4nm,0.4s,baz=72,slow=4.7,SNR=3.5						
TORD	**Torodi Ar. Bea**	**153.78**	**285**	PKPab	**PKPab**	**00 32 32.5**	**-0.7**
	comp=Z,1.1nm,0.8s,baz=100,slow=4.4,SNR=3.2						

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*IDC **28** 00:30:57.0±1.0, 12°.87N×123°.62E, h0^{km}, mb3.7/8, mb1 3.9/9, mb1mx3.7/42, mbtmp3.7/9, ML4.1/1, MS3.2/3, Ms1 3.2/3, ms1mx2.8/55, Error ellipse: s-maj=32.9km s-min=16.3km az=46.0*

*MAN **28** 00:30:59.2, 12°.90N×123°.53E, h26^{km}, MS3.7*

*NEIC **28** 00:31:00.6±1.8, 12°.93N±0°.05×123°.7E±0°.1, h29^{km}±8^{km}, mb4.2/9, Error ellipse: s-maj=19.3km s-min=6.6km az=102.0*

ISC 28 00:30:56.8±1.5**, 12°.89N**±0°.04×**123°.57E**±0°.05**, h2^{km}**±10^{km}**, n40,** σ1^{s}**30**/48**, mb3.9**/12**, MS3.0**/3**, 3C-1D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCSP	**San Jose Seism**	**0.76**	**357**	eP	**Pb**	**00 31 13.0**	**+0.2**
SCSP				eS	**Sn**	**00 31 25.7**	**-1.0**
GQP	**Guinayangan**	**1.49**	**313**	⇑eP	**Pn**	**00 31 24.7**	**+0.2**
GQP				eS	**Sg**	**00 31 46.6**	**+2.0**
GQP	**Guinayangan**	**1.49**	**313**	⇑eP	**Pn**	**00 31 24.7**	**+0.2**
GQP				eS	**Sg**	**00 31 46.6**	**+2.0**
BOAC	**Boac**	**1.77**	**289**	eP	**Pn**	**00 31 28.3**	**-0.1**
BOAC				eS	**Sn**	**00 31 48.5**	**-3.0**
OCLP	**Ormoc**	**2.09**	**151**	eP	**Pn**	**00 31 33.2**	**+0.4**
OCLP				eS	**Sn**	**00 32 00.2**	**+0.7**
LQP	**Lukban**	**2.32**	**302**	⇓eP	**Pn**	**00 31 36.2**	**+0.1**
LQP				i S	**Sg**	**00 32 12.6**	**+1.3**
GUIM	**Jordan**	**2.44**	**203**	eP	**Pn**	**00 31 37.3**	**-0.4**
GUIM				eS	**Sn**	**00 32 08.0**	**-0.1**
LLP	**Lapu-Lapu**	**2.58**	**171**	eP	**Pn**	**00 31 40.0**	**+0.4**
LLP				i S	**Sb**	**00 32 17.8**	**+1.7**
JAP	**San Jose, Anti**	**2.65**	**217**	⇑eP	**Pn**	**00 31 42.5**	**+1.9**
TGY	**Tagaytay City**	**2.83**	**296**	Pn	**Pn**	**00 31 44.3**	**+1.3**
	28nm,0.3s,baz=135,slow=11,SNR=4.1						
TGY				Lg	Lg	00 32 28.4	
	24nm,0.3s,baz=163,slow=19,SNR=1.3						
MSLP	**Maasin**	**3.02**	**155**	eP	**Pg**	**00 31 52.9**	**-1.8**
MSLP				eS	**Sb**	**00 32 27.4**	**-1.1**
MACP	**Maragondon, Ca**	**3.09**	**297**	eP	**Pb**	**00 31 50.6**	**-1.9**
CNOP	**Candoni, Negro**	**3.17**	**197**	eP	**Pn**	**00 31 47.6**	**-0.2**
CNOP				eS	**Sn**	**00 32 25.2**	**-1.0**
BALP	**Baler**	**3.43**	**326**	eP	**Pn**	**00 31 51.4**	**+0.1**
BALP				eS	Sn	00 32 15.8	-17
SZP	**Santa**	**5.52**	**327**		**Pn**	**00 32 21.1**	**+1.0**
MYLDM	**Lahad Datu**	**9.14**	**214**	Pn	**Pn**	**00 33 11.5**	**+1.7**
JCJ	**Chichijima**	**22.45**	**48**	LR	LR	00 44 57.8	
	comp=Z,41nm,18.9s,baz=308,slow=38						
BATI	**Baumata**	**22.94**	**180**	LR	LR	00 46 41.6	
	comp=Z,56nm,19.3s,baz=264,slow=41						
CMAR	**Chiang Mai Arr**	**24.33**	**286**	P	**P**	**00 36 17.2**	**+1.0**
	1.9nm,0.3s,baz=102,slow=8.4,SNR=1.5						
WRA	**Warramunga Arr**	**34.30**	**162**	P	**P**	**00 37 44.6**	**-0.2**
	0.3nm,0.6s,baz=342,slow=9.1,SNR=1.8						
SONM	**Songino Array**	**37.68**	**341**	P	**P**	**00 38 14.3**	**+0.7**
	0.2nm,0.3s,baz=147,slow=8.1,SNR=2.2						
ASAR	**Alice Springs**	**37.71**	**164**	P	**P**	**00 38 14.4**	**+0.4**
	0.7nm,0.5s,baz=345,slow=7.3,SNR=6.8						
ASAR				LR	LR	00 54 29.2	
	comp=Z,46nm,19.3s,baz=94,slow=38						
MK31	**Makanchi Array**	**48.35**	**323**	P	**P**	**00 39 41.2**	**+1.3**
MK31				IAmb	IAmb	00 39 42.0	
	comp=Z,1.9nm,0.7s						
MKAR	**Makanchi Array**	**48.35**	**323**	P	**P**	**00 39 41.3**	**+1.4**
	comp=Z,2.2nm,0.7s,baz=122,slow=8.7,SNR=31						
MKAR	**Makanchi Array**	**48.35**	**323**		**P**	**00 39 41.1**	**+1.1**
PEA0B	**Petropavlovsk-**	**48.44**	**27**	P	**P**	**00 39 39.6**	**-0.9**
PETK	**Petropavlovsk-**	**48.44**	**27**	P	**P**	**00 39 38.1**	**-2.4**
MAKZ	**Makanchi**	**48.55**	**323**	P	**P**	**00 39 42.6**	**+1.1**
MAKZ				IAmb	IAmb	00 39 43.3	
	comp=Z,1.6nm,0.7s						
ZALV	**Zalesovo Beam**	**51.08**	**332**	P	**P**	**00 40 01.0**	**+0.5**
	comp=Z,0.7nm,0.5s,baz=120,slow=8.8,SNR=4.5						
ZALV	**Zalesovo Beam**	**51.08**	**332**	P	**P**	**00 40 00.3**	**-0.2**
AAK	**Ala-Archa**	**51.61**	**315**	P	**P**	**00 40 02.9**	**-2.1**
KURK	**Kurchatov**	**52.42**	**325**		**P**	**00 40 11.7**	**+1.0**
KKAR	**Karatay Array**	**54.54**	**314**	P	**P**	**00 40 25.2**	**-1.2**
KKAR	**Karatay Array**	**54.54**	**314**	P	**P**	**00 40 23.2**	**-3.2**
KKAR				IAmb	IAmb	00 40 24.6	
	comp=Z,1.8nm,1.1s						
GEYT	**Alibeck**	**62.87**	**306**	P	**P**	**00 41 24.7**	**+0.1**
GYA0B	**ALIBECK ARRAY**	**62.87**	**306**	P	**P**	**00 41 25.4**	**+0.8**
GYA0B				IAmb	IAmb	00 41 26.7	
	comp=Z,4.1nm,1.1s						
ABKAR	**Akbulak array**	**63.17**	**319**	P	**P**	**00 41 26.5**	**+0.2**
ABKAR	**Akbulak array**	**63.17**	**319**	P	**P**	**00 41 26.4**	**+0.2**
ABKAR				IAmb	IAmb	00 41 27.9	
	comp=Z,0.8nm,0.8s						
ILAR	**Eielson Array**	**78.26**	**26**	P	**P**	**00 42 58.3**	**+0.4**
	comp=Z,0.1nm,0.5s,baz=269,slow=5.4,SNR=2.2						
BRTR	**Keskin Array B**	**81.83**	**309**	P	**P**	**00 43 18.8**	**+0.9**
	comp=Z,0.4nm,0.6s,baz=55,slow=5.5,SNR=2.5						

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*BJI **28** 00:40:41.5±0.0, 42°.80N×144°.40E, h96^{km}, mB5.0/26, mb4.5/39*

*MOS **28** 00:40:42.6±0.9, 42°.72N×144°.34E, h101^{km}, mb4.6/48, Error ellipse: s-maj=7.5km s-min=4.9km az=90.9*

*SKHL **28** 00:40:43.9±0.7, 42°.70N×144°.40E, h105^{km}±5^{km}, mb5.1/10, msha6.0/7*

*NEIC **28** 00:40:43.2±2.0, 42°.68N±0°.06×144°.3E±0°.1, h92^{km}±6^{km}, mb4.6/132, Error ellipse: s-maj=13.1km s-min=9.1km az=103.0*

*NIED **28** 00:40:43.4, 42°.74N×144°.33E, h98^{km}, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-2.96; $M_{\theta\theta}$3.28; $M_{\phi\phi}$-0.33; $M_{r\theta}$2.32; $M_{\theta\phi}$0.20; $M_{\phi r}$0.23; Fault plane solution: $M_0$3.90000×10^{15} NP1: ϕ_s265.00000°, δ63.00000°, λ-92.00000°. NP2: ϕ_s89.00000°, δ27.00000°, λ-87.00000°.*

*JMA **28** 00:40:43.4±0.1, 42°.74N×144°.33E, h98^{km}±1^{km}, M4.3 Broadband fault plane solution: P waves. NP1: ϕ_s99.00000°, δ15.00000°, λ-80.00000°. NP2: ϕ_s269.00000°, δ75.00000°, λ-93.00000°. Principal axes: T Plg30.0000°, Azm1.0000°; N Plg3.0000°, Azm270.0000°; P Plg60.0000°, Azm175.0000°;*

JMA Felt II J1.

*IDC **28** 00:40:44.2±0.7, 42°.79N×144°.33E, h105^{km}±5^{km}, mb4.1/30, mb1 4.2/34, mb1mx4.1/45, mbtmp4.5/34, MS3.1/3, Ms1 3.1/3, ms1mx2.8/61 Error ellipse: s-maj=9.6km s-min=7.4km az=62.0*

ISC 28 00:40:43.7±0.5**, 42°.76N**±0°.04×**144°.36E**±0°.03**, h100^{km}**±4^{km}**, n416,** σ1^{s}**49**/435**, mb4.5**/127**, 23C-15D, Fault plane solution: NP1:**ϕ_s68.10737°**,**δ87.46514°**,**λ102.64526°. **NP2:**ϕ_s169.25906°**,**δ12.89277°**,**λ11.43261°. **Principal axes:** T Plg46.1002°**,** Azm351.0069°**;** N Plg12.6327°**,** Azm247.5389°**;** P Plg41.1480°**,** Azm146.2446°**; Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAK	**Akkeshi**	**0.34**	**46**	⇓P	**Pn**	**00 40 58.2**	**-0.3**
JAK				eS	**Sn**	**00 41 08.9**	**-0.6**
JOB	**Onbets**	**0.41**	**291**	⇓P	**Pn**	**00 40 58.8**	**-0.1**
JOB				eS	**Sn**	**00 41 09.8**	**-0.5**
JKHN	**Kushirohamanak**	**0.67**	**61**	⇓P	**Pn**	**00 41 00.8**	**0.0**
JKHN				eS	**Sn**	**00 41 13.2**	**-0.5**
JAR	**Ashorobuto**	**0.69**	**321**	⇓P	**Pn**	**00 41 00.8**	**-0.2**
JAR				eS	**Sn**	**00 41 13.1**	**-0.9**
JCH	**Churui**	**0.75**	**259**	⇓P	**Pn**	**00 41 01.0**	**-0.6**
JCH				eS	**Sn**	**00 41 13.4**	**-1.6**
JNK	**Nakash**	**0.87**	**17**	⇓P	**Pn**	**00 41 02.1**	**-0.6**
JNK				eS	**Sn**	**00 41 16.1**	**-0.9**
HRK	**Horoka**	**1.15**	**308**	eP	**Pn**	**00 41 05.6**	**-0.2**
HRK				eS	**Sn**	**00 41 21.8**	**-0.7**
JEM	**Erimo**	**1.16**	**231**	P	**Pn**	**00 41 04.8**	**-1.1**
ERM	**Erimo**	**1.16**	**231**	cePN	**Pn**	**00 41 05.6**	**-0.3**
ERM				pmax	pmax		
	comp=Z,2μm,1.0s						
ERM	**Erimo**	**1.16**	**231**		**Pn**	**00 41 05.3**	**-0.5**
ERM	**Erimo**	**1.16**	**231**	eP	**Pn**	**00 41 05.6**	**-0.3**
NMR	**Nemuro--Hokkai**	**1.17**	**58**	⇓iPN	**Pn**	**00 41 05.5**	**-0.5**
NMR				eS	**Sn**	**00 41 20.5**	**-2.4**
NMR	**Nemuro--Hokkai**	**1.17**	**58**	i P	**Pn**	**00 41 05.0**	**-1.0**
NMR				eS	**Sn**	**00 41 20.0**	**-2.9**
NEM2	**Nemuro 2**	**1.18**	**59**	⇓P	**Pn**	**00 41 05.4**	**-0.7**
NEM2				eS	**Sn**	**00 41 21.3**	**-1.7**
JTKR	**Abashiri--Toko**	**1.25**	**345**	⇓P	**Pn**	**00 41 07.3**	**+0.3**
JNBK	**Urakawa-nobuka**	**1.28**	**249**	⇑P	**Pn**	**00 41 06.2**	**-1.1**
JNBK				eS	**Sn**	**00 41 22.9**	**-2.2**
JRA	**Rausu**	**1.30**	**25**	⇓P	**Pn**	**00 41 07.7**	**+0.2**
JRA				eS	**Sn**	**00 41 26.3**	**+0.8**
JFR	**Furan**	**1.36**	**288**	⇓P	**Pn**	**00 41 07.6**	**-0.6**
JFR				eS	**Sn**	**00 41 25.9**	**-0.9**
JMP	**Maruseppu**	**1.45**	**330**	⇓P	**Pn**	**00 41 09.3**	**0.0**
JMP				eS	**Sn**	**00 41 28.3**	**-0.4**
JBT2	**Biratori 2**	**1.47**	**271**	⇓P	**Pn**	**00 41 08.7**	**-0.9**
RUSJ	**Misakicho**	**1.49**	**25**	⇑iPN	**Pn**	**00 41 10.8**	**+1.0**
RUSJ				eS	**Sn**	**00 41 30.5**	**+0.9**
GRPR	**Tuman**	**1.61**	**39**	⇑iPN	**Pn**	**00 41 11.7**	**+0.5**
GRPR				i S	**Sn**	**00 41 31.5**	**-0.6**
GRPR				pmax	pmax		
	comp=N,168nm,0.2s						
GRPR				pmax	pmax		
	comp=E,248nm,0.2s						
GRPR				pmax	pmax		
	comp=Z,2μm,0.2s						
GRPR				smax	smax		
	comp=N,18μm,0.4s						
GRPR				smax	smax		
	comp=E,8μm,0.4s						
GRPR	**Tuman**	**1.61**	**39**	i P	**Pn**	**00 41 11.0**	**-0.2**
GRPR				AMB	AMB	00 41 12.0	
	comp=E,2μm,0.3s						
GRPR				i S	**Sn**	**00 41 31.7**	**-0.4**
GRPR				A	A	00 41 34.0	
	comp=E,18μm,0.5s						

GRPR				A	A	00 41 34.0	
	comp=E,8µm,0.5s						
JKK2	Kamakawa 2	1.62	314	⇓P	Pn	00 41 11.6	+0.2
JKK2				*e*S	Sn	00 41 32.1	-0.4
YUK	Yuzh-Kuril'sk	1.68	40	*d i*PN	Pn	00 41 12.5	+0.4
YUK				*i* S	Sn	00 41 33.0	-0.7
YUK				pmax	pmax		
	comp=N,418nm,0.3s						
YUK				pmax	pmax		
	comp=E,465nm,0.3s						
YUK				pmax	pmax		
	comp=Z,2µm,0.3s						
YUK				smax	smax		
	comp=N,25µm,0.4s						
YUK				smax	smax		
	comp=E,10µm,0.3s						
YUK	Yuzh-Kuril'sk	1.68	40	*i* P	Pn	00 41 12.0	-0.1
YUK				AMB	AMB	00 41 17.0	
	comp=E,1µm,0.3s						
YUK				*i* S	Sn	00 41 33.1	-0.7
YUK				A	A	00 41 34.0	
	comp=E,31µm,0.3s						
YUK				A	A	00 41 34.0	
	comp=E,13µm,0.3s						
JKA	Kamikawa-asahi	1.87	317	Pn	Pn	00 41 15.1	+0.6
JKA	Kamikawa-asahi	1.87	317	*e*P	Pn	00 41 15.0	+0.5
ASAJ	Asahikawa	1.87	317	P	Pn	00 41 15.0	+0.5
	comp=E,70nm,0.3s,baz=204,slow=11,SNR=237						
ASAJ				S	Sn	00 41 38.6	+0.5
	comp=E,116nm,0.3s,baz=60,slow=20,SNR=24						
ASAJ				LR	LR	00 41 56.7	
	comp=E,505nm,19.8s,baz=165,slow=40						
JEW	Eniwo	2.15	273	Pn	Pn	00 41 18.5	+0.4
JTM	Tenmabayashi	3.15	232	Pn	Pn	00 41 30.2	-1.2
KUR	Kuril'sk	3.54	44	*e*PN	Pn	00 41 37.7	+1.2
KUR				*i* S	Sn	00 42 18.7	+1.3
KUR				pmax	pmax		
	comp=E,53nm,0.3s						
KUR				pmax	pmax		
	comp=Z,223nm,0.3s						
KUR				pmax	pmax		
	comp=N,47nm,0.1s						
KUR				smax	smax		
	comp=N,903nm,0.3s						
KUR				smax	smax		
	comp=E,1µm,0.3s						
KUR	Kuril'sk	3.54	44	*e*P	Pn	00 41 37.8	+1.2
KUR				AMB	AMB	00 41 38.0	
	comp=E,260nm,0.5s						
KUR				*i* S	Sn	00 42 16.9	-0.5
KUR				A	A	00 42 21.0	
	comp=E,1µm,0.4s						
KUR				A	A	00 42 21.0	
	comp=E,1µm,0.4s						
YSS	Yuzh-Sakhalins	4.35	345	⇑*e*PN	Pn	00 41 48.0	+0.5
YSS				*e*S	Sn	00 42 36.5	-0.5
YSS				pmax	pmax		
	comp=Z,70nm,0.8s						
YSS				smax	smax		
	comp=E,280nm,0.9s						
YSS	Yuzh-Sakhalins	4.35	345	Pn	Pn	00 41 47.1	-0.4
YSS	Yuzh-Sakhalins	4.35	345	*e*P	Pn	00 41 48.8	+1.3
YSS				AMB	AMB	00 41 50.9	
	comp=E,80nm,0.4s						
YSS				*e*S	Sn	00 42 36.8	-0.2
YSS				A	A	00 42 39.0	
	comp=E,170nm,0.8s						
YSS				A	A	00 42 39.0	
	comp=E,290nm,0.8s						
JMM	Marumori	5.60	210	Pn	Pn	00 42 02.1	-2.4
TEY	Ternei	6.05	295	*e*P	Pn	00 42 09.5	-1.0
TEY				AMB	AMB	00 42 11.5	
	comp=E,10.0nm,0.7s						
UGL	Uglegorsk	6.52	347	*e*P	Pn	00 42 18.3	+1.4
UGL				AMB	AMB	00 42 23.1	
	comp=E,50nm,0.4s						
UGL				*e*S	Sn	00 43 30.6	+0.9
UGL				A	A	00 43 34.0	
	comp=E,60nm,0.6s						
UGL				A	A	00 43 34.0	
	comp=E,120nm,0.6s						
JSD	Sado	6.63	227	Pn	Pn	00 42 16.0	-2.4
JYT	Yasato	7.27	208	Pn	Pn	00 42 23.3	-4.0
MAJO	Matsushiro	7.81	219	*i* PN	Pn	00 42 33.4	-1.2
MAJO	Matsushiro	7.81	219	Pn	Pn	00 42 33.5	-1.1
MAJO	Matsushiro	7.81	219	*e*P	Pn	00 42 33.4	-1.2
MAT	Matsushiro	7.81	219	P	Pn	00 42 33.0	-1.6
MAT				*e*S	Sn	00 43 59.2	-2.2
MJAR	Matsushiro Arr	7.81	219	P	Pn	00 42 33.6	-1.0
	comp=E,0.8nm,0.3s,baz=26,slow=13,SNR=35						
MJAR				S	Sn	00 44 01.0	-0.4
	baz=61,slow=25,SNR=4.3						
TYV	Tymovskoe	8.19	352	*e*PN	Pn	00 42 40.2	+0.6
TYV				pmax	pmax		
	comp=Z,22nm,0.8s						
TYV				pmax	pmax		
	comp=Z,200nm,3.9s						
TYV	Tymovskoe	8.19	352	*e*P	Pn	00 42 39.6	0.0
TYV				AMB	AMB	00 42 41.8	
	comp=Z,22nm,0.7s						
TYV				*e*S	Sn	00 44 08.9	-1.4
TYV				A	A	00 44 10.5	
	comp=Z,5.0nm,0.6s						
TYV				A	A	00 44 10.5	
	comp=Z,5.0nm,0.6s						
JGF	Kuroka	8.98	220	Pn	Pn	00 42 49.4	-1.0
USRK	Ussuriysk Ar.	9.11	283	P	Pn	00 42 53.0	+0.8
	baz=84,slow=13,SNR=1.7						
USRK	Ussuriysk Ar.	9.11	283	PN	Pn	00 42 53.0	+0.8
INU	Inuyama	9.34	220	Pn	Pn	00 42 54.9	-0.5
GRNR	Gornyy	9.68	329	⇑*i*PN	Pn	00 43 00.6	+0.7
GRNR				pmax	pmax		
	comp=E,10.0nm,0.8s						
GRNR				pmax	pmax		
	comp=Z,20nm,0.7s						
GRNR	Gornyy	9.68	329	*e*P	Pn	00 43 00.6	+0.7
GRNR				AMB	AMB	00 43 01.4	
	comp=Z,10.0nm,0.7s						
GRNR				AMB	AMB	00 43 01.4	
	comp=Z,20nm,0.7s						
JWT	Wachi	10.21	226	Pn	Pn	00 43 06.3	-0.9
JHJ2	Mitsune	10.28	202	Pn	Pn	00 43 07.2	-0.9
NKL	Nikolayevsk	10.68	348	*e*P	Pn	00 43 14.4	+0.9
NKL				AMB	AMB	00 43 15.6	
	comp=Z,100nm,0.6s						
MDJ	Mudanjiang	10.86	285	P	Pn	00 43 16.8	+0.9
MDJ				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,56nm,5.2s						
KLR	Kul'dur	10.89	311	P	Pn	00 43 15.9	-0.5
	comp=Z,0.3nm,0.3s,baz=115,slow=15,SNR=4.9						
KLR				LR	LR	00 48 08.3	
	comp=Z,99nm,18.1s,baz=54,slow=41						
KLR	Kul'dur	10.89	311	*ce*PN	Pn	00 43 15.8	-0.6
KLR	Kul'dur	10.89	311	*e*P	Pn	00 43 15.8	-0.6
SKR	Severo-Kuril’s	11.30	41	*e*P	Pn	00 43 22.1	+0.3
SKR				AMB	AMB	00 43 29.7	
	comp=Z,50nm,0.6s						
JHS	Saijyo	11.69	232	Pn	Pn	00 43 26.9	-0.3
PAU	Pauzhetka	12.14	40	*e*P	Pn	00 43 31.5	-1.5
PAU				AMB	AMB	00 43 33.5	
	comp=Z,50nm,0.6s						
JMN	Monobe	12.21	226	Pn	Pn	00 43 32.3	-1.8
EKMR	Ekimchan	12.83	327	*e*P	Pn	00 43 41.0	-1.1
EKMR				AMB	AMB	00 43 54.9	
	comp=Z,7.0nm,0.5s						
KSRS	Korea Array	13.65	253	P	Pn	00 43 54.4	+1.5
	comp=Z,0.2nm,0.3s,baz=57,slow=13,SNR=1.6						
KSRS	Korea Array	13.65	253	*e*P	Pn	00 43 54.4	+1.5
PEA0B	Petropavlovsk-	13.65	36	P	Pn	00 43 52.0	-0.9
PEA0B	Petropavlovsk-	13.65	36	Pn	Pn	00 43 52.0	-0.9
PETK	Petropavlovsk-	13.65	36	P	Pn	00 43 50.2	-2.7
	comp=Z,1.1nm,0.3s,baz=216,slow=8.4,SNR=24						
PETK				LR	LR	00 50 20.8	
	comp=Z,81nm,19.0s,baz=300,slow=42						
PETK	Petropavlovsk-	13.65	36	P	Pn	00 43 51.1	-1.8
PETK	Petropavlovsk-	13.65	36	Pn	Pn	00 43 51.1	-1.8
PET	Petropavlovsk	14.02	38	*ce*P	Pn	00 43 58.8	+1.2
PET				pmax	pmax		
	comp=Z,310nm,1.7s						
PET	Petropavlovsk	14.02	38	*e*P	Pn	00 43 56.8	-0.8
BMKR	Bomnak	15.70	325	*e*P	Pn	00 44 16.8	-2.1
BMKR				AMB	AMB	00 44 21.0	
	comp=Z,8.0nm,0.4s						
JCJ	Chichijima	15.73	187	Pn	Pn	00 44 18.7	-0.8
ZEA	Zeya	15.78	320	*e*P	Pn	00 44 20.6	+0.6
ZEA				pmax	pmax		
	comp=N,30nm,0.6s						
ZEA				pmax	pmax		
	comp=E,20nm,0.5s						
ZEA				pmax	pmax		
	comp=Z,40nm,0.5s						
ZEA	Zeya	15.78	320	*e*P	Pn	00 44 19.9	-0.1
ZEA				AMB	AMB	00 44 21.9	
	comp=Z,160nm,0.5s						
KROS	Kirovskiy	16.34	322	*e*P	Pn	00 44 26.0	-0.9
KROS				AMB	AMB	00 44 28.1	
	comp=Z,7.0nm,0.4s						
MA2	Magadan	17.30	11	P	P	00 44 37.4	-1.1
	comp=Z,1.9nm,0.3s,baz=199,slow=9.6,SNR=45						
MA2				LR	LR	00 51 11.5	
	comp=Z,65nm,18.5s,baz=256,slow=36						
MA2	Magadan	17.30	11	*ce*P	P	00 44 37.1	-1.4
MA2				pmax	pmax		
	comp=Z,28nm,0.7s						
MA2	Magadan	17.30	11	P	P	00 44 37.9	-0.6
MA2				IAmb	IAmb	00 44 38.5	
	comp=Z,29nm,0.7s						
MA2	Magadan	17.30	11	*e*P	P	00 44 37.1	-1.4
SEY	Seymchan	20.75	10	P	P	00 45 14.4	-1.6
	comp=Z,5.9nm,0.3s,baz=189,slow=7.8,SNR=40						
SEY	Seymchan	20.75	10	*i* P	P	00 45 14.1	-1.9
YAK	Yakutsk	21.18	341	P	P	00 45 20.1	-0.5
	comp=Z,30nm,0.3s,baz=132,slow=5.1,SNR=22						
YAK				S	S	00 49 05.1	-5.1
	comp=Z,12nm,0.4s,baz=56,slow=3.6,SNR=6.0						
YAK	Yakutsk	21.18	341	*e*P	P	00 45 17.1	-3.5
YAK				*e*S	S	00 49 04.5	-5.7
YAK				*e*		00 49 28.6	
YAK				*e*		00 56 32.7	
YAK				pmax	pmax		
	comp=Z,87nm,0.8s						
YAK				pmax	pmax		
	comp=N,14nm,1.0s						
YAK				pmax	pmax		
	comp=E,5.0nm,0.8s						
YAK				smax	smax		
	comp=E,43nm,1.3s						
YAK				smax	smax		
	comp=N,27nm,0.9s						
YAK	Yakutsk	21.18	341	P	P	00 45 19.9	-0.7
NJ2	Nanjing	22.82	251	*e*P	P	00 45 36.8	-1.3
NJ2				pmax	pmax		
	comp=N,7.0nm,0.5s						
HHC	Hu-ho-hao-te	24.44	277	*e*P	P	00 45 53.5	+0.5
HHC				pmax	pmax		
	comp=N,7.0nm,1.1s						
HHC				pmax	pmax		
	comp=N,250nm,5.7s						
ULN	Ulaanbaatar	26.55	294	*ce*P	P	00 46 12.0	-0.1
ULN				pmax	pmax		
	comp=Z,29nm,1.3s						
ULN	Ulaanbaatar	26.55	294	P	P	00 46 13.4	+1.3
ULN				IAmb	IAmb	00 46 15.3	
	comp=Z,19nm,0.9s						
ULN	Ulaanbaatar	26.55	294	*e*P	P	00 46 12.0	-0.1
SONM	Songino Array	26.99	294	P	P	00 46 16.4	+0.4
	comp=Z,36nm,0.8s,baz=84,slow=8.3,SNR=146						
SONM	Songino Array	26.99	294	P	P	00 46 17.2	+1.1
SONM				pmax	pmax		
	comp=Z,28nm,0.9s						
SONM	Songino Array	26.99	294	P	P	00 46 17.1	+1.1
TLY	Talaya	28.73	302	P	P	00 46 31.2	-0.1
	comp=Z,10nm,0.8s,baz=103,slow=2.4,SNR=13						
TLY	Talaya	28.73	302	*i* P	P	00 46 32.2	+0.8
TLY				pmax	pmax		
	comp=Z,8.0nm,0.8s						
TLY	Talaya	28.73	302	P	P	00 46 31.3	-0.1
TLY				IAmb	IAmb	00 46 35.0	
	comp=Z,8.9nm,0.7s						
TLY	Talaya	28.73	302	*e*P	P	00 46 32.2	+0.8
ZAK	Zakamensk	28.95	300	*e*P	P	00 46 34.2	+0.8
ZAK				pmax	pmax		
	comp=Z,25nm,1.0s						
ZAK	Zakamensk	28.95	300	*e*P	P	00 46 34.2	+0.8
H11N2	WAKE ISLAND Hy	29.79	133	T	T	01 18 03.5	
	baz=327,slow=75,SNR=352						
H11N1	WAKE ISLAND Hy	29.81	133	T	T	01 18 02.0	
	baz=327,slow=75,SNR=78						
H11N3	WAKE ISLAND Hy	29.81	133	T	T	01 18 05.1	
	baz=327,slow=75,SNR=453						
TIXI	Tiksi	29.95	350	*ce*P	P	00 46 38.8	-3.1
TIXI				pmax	pmax		
	comp=Z,62nm,2.5s						
TIXI	Tiksi	29.95	350	P	P	00 46 38.8	-3.1
MOY	Mondy	30.38	302	*e*P	P	00 46 47.3	+1.2
MOY				pmax	pmax		
	comp=Z,24nm,2.2s						
H11S1	WAKE ISLAND Hy	30.70	135	T	T	01 19 14.8	
	baz=328,slow=76,SNR=604						
H11S3	WAKE ISLAND Hy	30.70	135	T	T	01 19 15.6	
	baz=328,slow=76,SNR=93						
H11S2	WAKE ISLAND Hy	30.72	135	T	T	01 19 20.9	
	baz=328,slow=76,SNR=110						
ANM	Nome	35.57	35	P	P	00 47 32.1	+1.3
ANM				pmax	pmax		
	comp=Z,6.0nm,1.2s						
ANM	Nome	35.57	35	P	P	00 47 32.1	+1.3
ANM				IAmb	IAmb	00 47 50.1	
	comp=Z,6.1nm,1.2s						
NRIK	Noril'sk	39.15	332	P	P	00 47 59.8	-1.2
	comp=Z,8.3nm,0.5s,baz=112,slow=9.6,SNR=22						
NRIK	Noril'sk	39.15	332	*ce*P	P	00 47 58.9	-2.1
NRIK				pmax	pmax		
	comp=Z,5.0nm,0.5s						
NRIK	Noril'sk	39.15	332	P	P	00 48 00.0	-1.0
DGZ	Jazzator, Alta	39.16	300	*i* P	P	00 48 01.7	+0.1
DGZ				pmax	pmax		
	comp=Z,5.0nm,0.7s						
TTA	Tatalina	39.48	38	P	P	00 48 06.6	+2.7
TTA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
TTA	Tatalina	39.48	38	P	P	00 48 06.5	+2.7
SVW2	Sparrevohn	39.66	41	P	P	00 48 07.2	+1.8
ZALV	Zalesovo Beam	39.98	308	P	P	00 48 08.1	0.0
	comp=Z,6.2nm,0.5s,baz=81,slow=9.2,SNR=41						
ZALV				PcP	PcP	00 50 11.3	+0.1
	comp=Z,0.6nm,0.3s,baz=63,slow=3.9,SNR=1.8						
ZALV	Zalesovo Beam	39.98	308	P	P	00 48 07.8	-0.3
A21K	Barrow	40.31	25	P	P	00 48 10.5	-0.1
WMQ	Urumqi	40.56	292	*e*P	P	00 48 14.5	+1.3
WMQ				pmax	pmax		
	comp=Z,430nm,7.1s						
WMQ				LR	LR		
	comp=Z,210nm,28.9s						
WMQ				LR	LR		
	comp=Z,950nm,29.2s						
WMQ				LR	LR		
	comp=Z,130nm,15.5s						
WMQ	Urumqi	40.56	292	P	P	00 48 13.7	+0.5
WMQ				pmax	pmax		
	comp=Z,11nm,0.7s						
WMQ	Urumqi	40.56	292	P	P	00 48 13.7	+0.5
IMAR	Indian Mountai	40.60	34	P	P	00 48 14.0	+0.9
OHAK	Old Harbor	41.10	47	P	P	00 48 17.8	+0.6
OHAK				IAmb	IAmb	00 48 35.2	
	comp=Z,14nm,1.1s						
PPLA	Purkeypile	41.23	38	P	P	00 48 19.9	+1.5
KDAK	Kodiak Island	41.41	46	P	P	00 48 19.5	-0.3
	comp=Z,7.9nm,0.8s,baz=282,slow=9.3,SNR=6.3						
KDAK	Kodiak Island	41.41	46	P	P	00 48 19.9	+0.1
KDAK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KDAK	Kodiak Island	41.41	46	P	P	00 48 19.9	+0.1
KDAK				IAmb	IAmb	00 48 29.6	
	comp=Z,5.6nm,0.9s						
BPAW	Bear Paw Mtn.	41.74	37	IAmb	IAmb	00 48 27.3	
	comp=Z,5.6nm,0.8s						
KTH	Kantishna Hill	41.78	37	IAmb	IAmb	00 48 28.6	
	comp=Z,8.4nm,0.8s						
CNPM	China Poot	41.91	43	P	P	00 48 25.1	+1.2
CNPM				IAmb	IAmb	00 48 38.2	
	comp=Z,11nm,1.2s						
SUA	Susitna One	41.98	41	P	P	00 48 26.1	+1.6
SUA				IAmb	IAmb	00 48 31.1	
	comp=Z,4.0nm,0.5s						
BRLK	Bradley Lake	42.06	43	P	P	00 48 26.6	+1.4
TRF	Thorofare Moun	42.07	38	IAmb	IAmb	00 48 31.5	
	comp=Z,8.2nm,1.0s						
TOLK	Toolik Lake Re	42.36	30	P	P	00 48 28.2	+0.7
TOLK				IAmb	IAmb	00 48 30.5	
	comp=Z,2.8nm,0.4s						
BWN	Browne	42.40	36	P	P	00 48 30.2	+2.4
I23K	Minto, Yukon-K	42.41	35	P	P	00 48 28.9	+1.1
I23K				IAmb	IAmb	00 48 32.9	
	comp=Z,3.7nm,0.5s						
O22K	Cooper Landing	42.56	42	P	P	00 48 29.4	+0.3
RND	Reindeer	42.72	38	IAmb	IAmb	00 48 35.1	
	comp=Z,5.3nm,0.8s						
SEW	Seward	42.74	42	P	P	00 48 33.0	+2.4
SEW				IAmb	IAmb	00 48 36.7	
	comp=Z,5.1nm,0.7s						
MDM	Murphy Dome	42.90	35	IAmb	IAmb	00 48 42.6	
	comp=Z,6.3nm,0.8s						
COLA	College	43.06	35	*i* P	P	00 48 34.1	+1.0
COLA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
SML	Sawmill	43.09	40	IAmb	IAmb	00 48 45.0	
	comp=Z,6.4nm,0.8s						
POKR	Poker Plat Res	43.23	35	P	P	00 48 36.0	+1.6
MK31	Makanchi Array	43.24	298	P	P	00 48 34.9	+0.1
MK31				pmax	pmax		
	comp=Z,7.0nm,0.7s						
MK31	Makanchi Array	43.24	298	P	P	00 48 34.9	+0.1
MK31				IAmb	IAmb	00 48 39.0	
	comp=Z,6.7nm,0.7s						
MKAR	Makanchi Array	43.24	298	P	P	00 48 34.9	+0.1
	comp=Z,5.3nm,0.6s,baz=82,slow=10,SNR=39						
MKAR	Makanchi Array	43.24	298	*i* P	P	00 48 34.7	-0.1
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MKAR	Makanchi Array	43.24	298	P	P	00 48 35.0	+0.2
MKAR	Makanchi Array	43.24	298	*e*P	P	00 48 34.7	-0.1
MAKZ	Makanchi	43.44	298	P	P	00 48 36.5	+0.1
MAKZ				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MAKZ	Makanchi	43.44	298	P	P	00 48 36.5	+0.1
MAKZ				IAmb	IAmb	00 48 40.7	
	comp=Z,6.4nm,0.8s						
IL31		43.48	35	IAmb	IAmb	00 48 41.2	
	comp=Z,6.8nm,0.7s						
ILAR	Eielson Array	43.48	35	P	P	00 48 37.1	+0.6
	comp=Z,5.9nm,0.6s,baz=270,slow=5.7,SNR=28						
ILAR				pP	pP	00 48 58.7	-1.2
	comp=Z,4.7nm,0.9s,baz=269,slow=8.3,SNR=6.5						
HDA	Harding Lake	43.48	36	IAmb	IAmb	00 48 47.1	
	comp=Z,4.7nm,0.6s						
SCM	Sheep Creek Mo	43.56	40	P	P	00 48 39.0	+1.7
SCM				pmax	pmax		
	comp=Z,4.0nm,0.7s						
SCM	Sheep Creek Mo	43.56	40	P	P	00 48 39.0	+1.7
PRP	Porcupine Dome	44.00	34	IAmb	IAmb	00 48 51.7	
	comp=Z,7.9nm,0.7s						
FYU	Fort Yukon	44.05	33	P	P	00 48 43.2	+2.2
FYU				IAmb	IAmb	00 48 43.4	
	comp=Z,18nm,1.2s						
M24K	Tolsona, Glenn	44.07	39	P	P	00 48 42.6	+1.3
M24K				IAmb	IAmb	00 48 52.6	
	comp=Z,7.9nm,0.6s						
HIN	Hinchinbrook I	44.16	42	P	P	00 48 42.9	+0.9
HIN				IAmb	IAmb	00 48 55.2	
	comp=Z,16nm,1.2s						
KLU	Klutina	44.27	40	IAmb	IAmb	00 48 50.2	
	comp=Z,10nm,1.2s						
PAX	Paxson	44.28	38	P	P	00 48 44.1	+1.0
PAX				pmax	pmax		
	comp=Z,2.0nm,0.6s						
PAX	Paxson	44.28	38	P	P	00 48 44.1	+1.0
KURK	Kurchatov	44.40	304	*ce*P	P	00 48 43.5	-0.5
KURK				pmax	pmax		
	comp=Z,18nm,0.8s						
KURK	Kurchatov	44.40	304	P	P	00 48 44.3	+0.3
KURK	Kurchatov	44.40	304	*e*P	P	00 48 43.5	-0.5
N25K	Chitina, Valde	44.88	40	P	P	00 48 50.7	+2.9
RAGM	Ragged Mountai	45.05	42	P	P	00 48 52.9	+3.7
RAGM				IAmb	IAmb	00 49 08.4	
	comp=Z,5.2nm,0.8s						
MENT	Mentasta	45.08	38	P	P	00 48 52.3	+3.0
MENT				IAmb	IAmb	00 49 01.1	
	comp=Z,4.1nm,0.6s						
HMT	Hamilton	45.27	42		P	00 48 53.4	+2.7
HMT				IAmb	IAmb	00 49 03.6	
	comp=Z,7.3nm,1.0s						
GLB	Gilahina Butte	45.28	40	P	P	00 48 54.1	+3.2
MCARA	McCarthy VSAT	45.66	40	P	P	00 48 58.4	+4.5
MCARA				IAmb	IAmb	00 49 02.1	
	comp=Z,7.0nm,0.7s						
CRQM	Cirque	45.73	41	P	P	00 48 58.9	+4.2
CRQM				IAmb	IAmb	00 49 04.6	
	comp=Z,6.6nm,0.8s						
TGL	Tana Glacier	45.88	41	P	P	00 48 59.3	+3.6
TGL				IAmb	IAmb	00 49 05.0	
	comp=Z,5.6nm,0.9s						
EGAK	Eagle	45.92	35	IAmb	IAmb	00 49 00.6	
	comp=Z,3.9nm,0.6s						
BCAR	Beaver Creek A	45.93	38	P	P	00 48 57.1	+1.1
BALM	Baldy	46.05	40	IAmb	IAmb	00 49 03.7	
	comp=Z,5.2nm,0.8s						
BARN	Barnard Glacie	46.38	40	P	P	00 49 01.7	+2.0
BARN				IAmb	IAmb	00 49 06.5	
	comp=Z,7.0nm,0.7s						
YAH	Yahtse	46.48	41	P	P	00 49 03.1	+2.5
YAH				IAmb	IAmb	00 49 08.1	
	comp=Z,6.2nm,0.8s						
CTGM	Chitina Glacie	46.55	40	P	P	00 49 02.9	+1.9
CTGM				IAmb	IAmb	00 49 07.8	
	comp=Z,8.3nm,0.8s						
FAKI	Fak Fak	46.77	197	P	P	00 49 02.4	-0.6
INK	Inuvik	48.28	30	P	P	00 49 14.3	+0.3
	comp=Z,2.9nm,0.3s,baz=277,slow=5.9,SNR=19						
INK	Inuvik	48.28	30	IAmb	IAmb	00 49 24.4	
	comp=Z,3.5nm,0.5s						
BRVK	Borovoye	48.60	309	*ce*P	P	00 49 17.8	+1.0
BRVK				pmax	pmax		
	comp=Z,15nm,1.0s						
BRVK	Borovoye	48.60	309	P	P	00 49 18.1	+1.3
BRVK	Borovoye	48.60	309	*e*P	P	00 49 17.8	+1.0
AAK	Ala-Archa	49.94	295	P	P	00 49 27.2	-0.2
AAK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
AAK	Ala-Archa	49.94	295	P	P	00 49 27.2	-0.2
AAK	Ala-Archa	49.94	295	*e*P	P	00 49 27.2	-0.2
KSH	Kashi	50.32	291	P	P	00 49 34.3	+4.1
KSH				PP	PP	00 51 37.5	+11
KSH				S	S	00 56 40.3	+4.9
KSH				pmax	pmax		
	comp=Z,5.0nm,1.5s						
KSH				pmax	pmax		
	comp=Z,150nm,5.1s						
KSH				LR	LR		
	comp=Z,280nm,9.3s						
KSH				LR	LR		
	comp=Z,420nm,8.7s						
KSH				LR	LR		
	comp=Z,400nm,11.5s						
C36M	Paulatuk	51.30	27	IAmb	IAmb	00 49 40.2	
	comp=Z,4.9nm,0.5s						
KK05	Karatay Array	52.35	297	P	P	00 49 45.5	+0.3
KK02	Karatay Array	52.37	297	P	P	00 49 47.3	+2.0
KK31	Karatay Array	52.37	297	P	P	00 49 46.7	+1.4
KK31				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KK31	Karatay Array	52.37	297	P	P	00 49 46.7	+1.4
KK31				IAmb	IAmb	00 49 51.5	
	comp=Z,4.5nm,0.8s						
KKAR	Karatay Array	52.37	297	P	P	00 49 46.8	+1.5
KKAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KKAR	Karatay Array	52.37	297	P	P	00 49 45.3	0.0
KKAR	Karatay Array	52.37	297	P	P	00 49 46.8	+1.5
KKAR				IAmb	IAmb	00 49 51.5	
	comp=Z,4.5nm,0.8s						
KK04	Karatay Array	52.37	297	P	P	00 49 45.2	-0.1
KK07	Karatay Array	52.38	297	P	P	00 49 45.4	0.0
SVE	Sverdlovsk	52.46	316	⇑*e*P	P	00 49 46.4	+0.7
SVE				pmax	pmax		
	comp=Z,22nm,1.0s						
SVE	Sverdlovsk	52.46	316	*e*P	P	00 49 46.4	+0.7
DLBC	Dease Lake	52.77	41	P	P	00 49 49.2	+1.1
	comp=Z,1.3nm,0.7s,baz=264,slow=9.0,SNR=4.7						
ARU	Arti	53.67	317	*c i*P	P	00 49 54.5	-0.1
ARU				*PP	pP	00 50 16.9	-2.0
ARU						00 50 59.6	
ARU				S	S	00 57 22.0	+1.5
ARU				pmax	pmax		

	comp=Z,12nm,0.8s						
ARU	**Arti**	**53.67**	**317**	P	**P**	**00 49 54.5**	**-0.1**
ARU	**Arti**	**53.67**	**317**	*e*P	**P**	**00 49 54.5**	**-0.1**
EUNU	**Eureka**	**54.18**	**10**	P	**P**	**00 49 58.2**	**+0.1**
HOPEN	**Hopen**	**55.05**	**346**	*e*P	**P**	**00 50 04.2**	**-0.2**
SPB1	**Spitsbergen Ar**	**55.35**	**349**	P	**P**	**00 50 06.8**	**+0.2**
SPB5	**Spitsbergen Ar**	**55.35**	**349**	P	**P**	**00 50 06.2**	**-0.3**
SPA1	**Spitsbergen Ar**	**55.36**	**349**	P	**P**	**00 50 06.6**	**0.0**
SPA0	**Spitsbergen Ar**	**55.36**	**349**	P	**P**	**00 50 06.7**	**+0.2**
SPA0	**Spitsbergen Ar**	**55.36**	**349**	*e*P	**P**	**00 50 06.8**	**+0.2**
SPITS	**Spitsbergen Ar**	**55.36**	**349**	P	**P**	**00 50 05.9**	**-0.6**
	comp=Z,3.2nm,0.6s,baz=112,slow=11,SNR=28						
SPA2	**Spitsbergen Ar**	**55.36**	**349**	P	**P**	**00 50 06.7**	**+0.1**
SPA3	**Spitsbergen Ar**	**55.36**	**349**	P	**P**	**00 50 06.7**	**+0.1**
SPB4	**Spitsbergen Ar**	**55.36**	**349**	P	**P**	**00 50 06.3**	**-0.3**
KBS	**Kingsbay**	**55.41**	**350**	*e*P	**P**	**00 50 07.3**	**+0.4**
AB06	**Akbulak array**	**56.07**	**308**	P	**P**	**00 50 12.3**	**+0.3**
AB05	**Akbulak array**	**56.08**	**308**	P	**P**	**00 50 12.3**	**+0.2**
AB02	**Akbulak array**	**56.08**	**308**	P	**P**	**00 50 12.7**	**+0.6**
AB07	**Akbulak array**	**56.08**	**308**	P	**P**	**00 50 12.6**	**+0.5**
AB01	**Akbulak array**	**56.09**	**308**	P	**P**	**00 50 12.1**	**-0.1**
AB31	**Akbulak array**	**56.09**	**308**	P	**P**	**00 50 12.7**	**+0.6**
ABKAR	**Akbulak array**	**56.09**	**308**	P	**P**	**00 50 12.1**	**0.0**
ABKAR	**Akbulak array**	**56.09**	**308**	IAmb	IAmb	00 50 15.9	
	comp=Z,10nm,0.7s						
AB03	**Akbulak array**	**56.09**	**308**	P	**P**	**00 50 12.3**	**+0.2**
AB04	**Akbulak array**	**56.09**	**308**	P	**P**	**00 50 12.6**	**+0.5**
AB09	**Akbulak array**	**56.10**	**308**	P	**P**	**00 50 12.7**	**+0.5**
AB08	**Akbulak array**	**56.10**	**308**	P	**P**	**00 50 13.0**	**+0.7**
HSPB	**Hornsund (broa**	**56.33**	**348**	*e*P	**P**	**00 50 14.3**	**+0.8**
COEN	**Coen**	**56.45**	**181**	P	**P**	**00 50 15.0**	**0.0**
BBB	**Bella Bella**	**56.45**	**48**	P	**P**	**00 50 16.5**	**+1.9**
RES	**Resolute Bay**	**56.49**	**16**	P	**P**	**00 50 14.2**	**-0.4**
	comp=Z,13nm,0.6s,baz=303,slow=7.0,SNR=69						
KIRV	**Kirov**	**57.11**	**322**	*ce*P	**P**	**00 50 18.5**	**-0.7**
KBL	**Kabul**	**57.60**	**289**	P	**P**	**00 50 22.5**	**-0.8**
KBL				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KBL	**Kabul**	**57.60**	**289**	P	**P**	**00 50 22.5**	**-0.8**
YKA	**Yellowknife Ar**	**57.74**	**33**	P	**P**	**00 50 23.5**	**-0.1**
	comp=Z,1.5nm,0.8s,baz=307,slow=6.1,SNR=24						
YKA	**Yellowknife Ar**	**57.74**	**33**	*ce*P	**P**	**00 50 24.2**	**+0.6**
YKA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
LVZ	**Lovozero**	**57.85**	**335**	P	**P**	**00 50 25.2**	**+0.9**
LVZ				pmax	pmax		
	comp=Z,10.0nm,0.7s						
LVZ	**Lovozero**	**57.85**	**335**	P	**P**	**00 50 25.2**	**+0.9**
KEV	**Kevo**	**58.91**	**339**	P	**P**	**00 50 32.2**	**+0.6**
KEV				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KEV	**Kevo**	**58.91**	**339**	P	**P**	**00 50 32.2**	**+0.6**
HAMF	**Hammerfest**	**59.17**	**340**	*e*P	**P**	**00 50 33.3**	**-0.1**
ARA0	**ARCESS Array S**	**59.45**	**339**	*e*P	**P**	**00 50 35.5**	**+0.1**
ARCES	**ARCESS Array B**	**59.45**	**339**	P	**P**	**00 50 35.0**	**-0.4**
	comp=Z,1.9nm,0.4s,baz=32,slow=6.2,SNR=20						
ARCES	**ARCESS Array B**	**59.45**	**339**	P	**P**	**00 50 35.8**	**+0.4**
ARCES				pmax	pmax		
	comp=Z,8.0nm,1.2s						
ARCES	**ARCESS Array B**	**59.45**	**339**	P	**P**	**00 50 35.8**	**+0.4**
ARCES				IAmb	IAmb	00 50 38.1	
	comp=Z,8.4nm,1.1s						
DAG	**Danmarks Havn**	**60.26**	**356**	*i* P	**P**	**00 50 40.5**	**-0.3**
	comp=Z,7.9nm,1.0s						
DAG	**Danmarks Havn**	**60.26**	**356**	*i* P	**P**	**00 50 40.5**	**-0.3**
DAG				pmax	pmax		
	comp=Z,8.0nm,1.0s						
DAG	**Danmarks Havn**	**60.26**	**356**	*i* P	**P**	**00 50 40.6**	**-0.3**
DAG				IAmb	IAmb	00 50 43.8	
	comp=Z,7.9nm,1.0s						
KTK1	**Kautokeino**	**60.40**	**339**	*e*P	**P**	**00 50 42.5**	**+0.6**
JETT	**Jettan, Norway**	**60.74**	**340**	*e*P	**P**	**00 50 44.8**	**+0.6**
TRO	**Tromso**	**61.04**	**341**	*e*P	**P**	**00 50 46.3**	**+0.1**
WB0	**Warramunga Arr**	**62.89**	**191**	P	**P**	**00 50 58.7**	**-0.4**
WB0				IAmb	IAmb	00 51 02.1	
	comp=Z,3.8nm,0.6s						
FITZ	**Fitzroy Crossi**	**62.96**	**200**	P	**P**	**00 50 59.1**	**-0.5**
WR0	**Warramunga Arr**	**63.06**	**190**	P	**P**	**00 50 59.6**	**-0.6**
WR0				IAmb	IAmb	00 51 00.8	
	comp=Z,6.1nm,1.1s						
WB2	**Warramunga Arr**	**63.07**	**191**	P	**P**	**00 50 60.0**	**-0.3**
WRA	**Warramunga Arr**	**63.07**	**191**	P	**P**	**00 50 59.8**	**-0.5**
	comp=Z,2.4nm,0.7s,baz=9.2,slow=6.8,SNR=24						
WRA				pP	**pP**	**00 51 27.3**	**+2.5**
	comp=Z,2.2nm,0.8s,baz=9.1,slow=7.1,SNR=5.0						
WRA	**Warramunga Arr**	**63.07**	**191**	*i* P	**P**	**00 50 59.9**	**-0.4**
WRA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
WC3	**Warramunga Arr**	**63.08**	**191**	P	**P**	**00 51 00.5**	**+0.1**
GEYT	**Alibeck**	**63.11**	**298**	P	**P**	**00 51 00.3**	**-0.3**
	comp=Z,1.5nm,0.5s,baz=63,slow=8.2,SNR=2.4						
GEYT	**Alibeck**	**63.11**	**298**	P	**P**	**00 51 00.1**	**-0.5**
LTY	**Liberty**	**63.14**	**50**	P	**P**	**00 51 01.2**	**+0.6**
STEI	**Steigen**	**63.21**	**341**	*e*P	**P**	**00 51 01.4**	**+0.7**
FAUS	**Fauske**	**63.62**	**340**	*e*P	**P**	**00 51 03.5**	**+0.1**
FINES	**FINESS Array B**	**64.81**	**332**	P	**P**	**00 51 10.9**	**-0.3**
	comp=Z,16nm,0.5s,baz=46,slow=7.2,SNR=70						
FINES	**FINESS Array B**	**64.81**	**332**	*i* P	**P**	**00 51 11.0**	**-0.3**
FINES				pmax	pmax		
	comp=Z,16nm,0.5s						
OBN	**Obninsk**	**64.89**	**323**	*e*P	**P**	**00 51 10.0**	**-1.8**
OBN				*e*		00 51 44.5	
OBN				*e*		00 53 37.1	
OBN				*e*PPP	PPP	00 55 09.4	
OBN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SUMG	**Summit**	**64.95**	**1**	*i* P	**P**	**00 51 12.9**	**+0.4**
	comp=Z,20nm,0.7s						
SUMG	**Summit**	**64.95**	**1**	*i* P	**P**	**00 51 12.9**	**+0.4**
SUMG				pmax	pmax		
	comp=Z,20nm,0.7s						
SUMG	**Summit**	**64.95**	**1**	IAmb	IAmb	00 51 13.5	
	comp=Z,3.9nm,0.6s						
SUMG	**Summit**	**64.95**	**1**	*i* P	**P**	**00 51 12.9**	**+0.4**
SUMG				IAmb	IAmb	00 51 17.3	
	comp=Z,20nm,0.7s						
KCRM	**Chalk Rock**	**65.22**	**57**	P	**P**	**00 51 16.7**	**+2.3**
SCO	**Scoresbysund**	**66.63**	**355**	P	**P**	**00 51 23.6**	**+0.8**
SCO				pmax	pmax		
	comp=Z,3.0nm,0.8s						
SCO	**Scoresbysund**	**66.63**	**355**	P	**P**	**00 51 23.6**	**+0.8**
VSU	**Vasula**	**66.67**	**330**	*e*P	**P**	**00 51 22.7**	**-0.5**
NSS	**Namsos**	**66.72**	**340**	*e*P	**P**	**00 51 24.4**	**+1.0**
ASAR	**Alice Springs**	**66.79**	**190**	P	**P**	**00 51 24.6**	**+0.2**
	comp=Z,1.6nm,0.7s,baz=7.6,slow=5.7,SNR=17						
ASAR				pP	**PcP**	**00 51 51.5**	**-1.0**
	comp=Z,1.2nm,0.8s,baz=9.4,slow=5.5,SNR=3.7						
MTSE	**Matsula**	**67.56**	**331**	*e*P	**P**	**00 51 27.7**	**-1.1**
FFC	**Flin Flon**	**67.69**	**35**	P	**P**	**00 51 30.8**	**+1.0**
FFC				pmax	pmax		
	comp=Z,4.0nm,0.8s						
FFC	**Flin Flon**	**67.69**	**35**	P	**P**	**00 51 30.8**	**+1.0**
FFC				IAmb	IAmb	00 51 31.3	
	comp=Z,4.0nm,0.8s						
FCC	**Fort Churchill**	**67.88**	**29**	IAmb	IAmb	00 51 36.3	
	comp=Z,3.4nm,0.5s						
ICESG	**Greenland Ices**	**68.43**	**2**	*i* P	**P**	**00 51 35.0**	**+0.4**
ICESG				IAmb	IAmb	00 51 39.7	
	comp=Z,13nm,0.7s						
LRM	**Limekiln Ridge**	**68.53**	**47**	P	**P**	**00 51 36.6**	**+1.1**
UPP	**Uppsala**	**68.80**	**334**	*e*P	**P**	**00 51 36.2**	**-0.4**
KIV	**Kislovodsk**	**68.88**	**311**	*ce*P	**P**	**00 51 37.9**	**+0.4**
KIV				*e*		00 52 00.7	
KIV				pmax	pmax		
	comp=Z,17nm,1.0s						
KIV	**Kislovodsk**	**68.88**	**311**	P	**P**	**00 51 38.5**	**+1.0**
KIV	**Kislovodsk**	**68.88**	**311**	*e*P	**P**	**00 51 37.9**	**+0.4**
IDID	**Didziasalis**	**68.91**	**327**	*e*P	**P**	**00 51 37.5**	**+0.2**
KBZ	**Khabaz**	**68.91**	**310**	P	**P**	**00 51 38.0**	**+0.4**
	comp=Z,2.3nm,0.6s,baz=48,slow=4.0,SNR=9.7						
KBZ	**Khabaz**	**68.91**	**310**	*i* P	**P**	**00 51 37.8**	**+0.3**
KBZ				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KBZ	**Khabaz**	**68.91**	**310**	*e*P	**P**	**00 51 37.8**	**+0.3**
ISAL	**Salakas**	**68.97**	**328**	*e*P	**P**	**00 51 38.7**	**+1.0**
MNK	**Minsk**	**69.03**	**326**	*i* P	**P**	**00 51 42.2**	**+4.2**
	comp=E,5.0nm,1.5s						
MNK				*i* P	**P**	**00 51 42.2**	**+4.2**
	comp=N,24nm,1.6s						
MNK				*i* P	**P**	**00 51 42.2**	**+4.2**
	comp=Z,11nm,0.9s						
MNK				*i* pP	**pP**	**00 52 07.6**	**+4.2**
MNK				*i* PP	PP	00 54 19.6	+8.5
MNK				*i* PPP	PPP	00 56 03.1	
MNK				*i* S	S	01 00 47.0	+12
MNK				*i* SS	SS	01 05 23.0	+22
MNK				*i* SSS	SSS	01 08 42.1	
MNK				*i* LQ	LQ	01 18 01.3	
MNK				*i* LR	LR	01 23 23.9	
MNK				*i* LRM	MLR	01 25 27.6	
	comp=E,12nm,9.2s						
MNK				*i* LRM	MLR	01 25 27.6	
	comp=N,193nm,9.7s						
MNK				*i* LRM	MLR	01 25 27.6	
	comp=Z,130nm,8.4s						
IIGN	**Ignalina**	**69.09**	**327**	*e*P	**P**	**00 51 39.2**	**+0.7**
NACGM	**Naroch**	**69.19**	**327**	*i* P	**P**	**00 51 37.5**	**-1.5**
NACGM				*i* P	**P**	**00 51 37.5**	**-1.5**
NACGM				*i* P	**P**	**00 51 37.5**	**-1.5**
NACGM				*i* pP	**PcP**	**00 52 01.0**	**-1.2**
NACGM				*i* PP	**PP**	**00 54 10.4**	**-2.1**
NACGM				*i* PPP	PPP	00 55 52.5	
NACGM				*i* S	**S**	**01 00 33.8**	**-2.8**
NACGM				*i* sS	**SKiKP**	**01 01 15.6**	**-3.2**
NACGM				*i* SS	SS	01 04 36.6	-27
NACGM				*i* SSS	SSS	01 07 25.1	
DOMB	**Dombas**	**69.52**	**339**	*e*	**P**	**00 51 44.2**	**+3.2**
KVN	**Kaiserville**	**69.56**	**55**	P	**P**	**00 51 43.1**	**+1.2**
KVN				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KVN	**Kaiserville**	**69.56**	**55**	P	**P**	**00 51 43.1**	**+1.2**
NC303	**NORSAR Array S**	**69.57**	**338**	P	**P**	**00 51 41.8**	**+0.4**
NB2	**NORSAR Subarra**	**69.77**	**338**	P	**P**	**00 51 42.5**	**-0.1**
	comp=Z,10nm,0.5s,baz=32,slow=6.9						
NOA	**NORSAR Array B**	**69.77**	**338**	P	**P**	**00 51 42.3**	**-0.4**
	comp=Z,12nm,0.6s,baz=35,slow=4.7,SNR=48						
NVAR	**Mina Array Bea**	**69.83**	**56**	P	**P**	**00 51 44.0**	**+0.4**
	comp=Z,0.6nm,0.6s,baz=302,slow=5.6,SNR=5.5						
NVAR	**Mina Array Bea**	**69.83**	**56**	P	**P**	**00 51 45.9**	**+2.3**
PABE	**Paberze**	**69.86**	**328**	*e*P	**P**	**00 51 44.5**	**+1.3**
NC602	**NORSAR Array S**	**69.93**	**337**	P	**P**	**00 51 45.6**	**+2.1**
NC602	**NORSAR Array S**	**69.93**	**337**	*e*	**P**	**00 51 46.4**	**+2.8**
SFJD	**Kangerlussuaq**	**69.98**	**6**	P	**P**	**00 51 45.6**	**+1.9**
SFJD				pmax	pmax		
	comp=Z,4.0nm,0.8s						
SFJD	**Kangerlussuaq**	**69.98**	**6**	P	**P**	**00 51 45.6**	**+1.9**
PBUR	**Paburge**	**70.24**	**330**	*e*P	**P**	**00 51 47.2**	**+1.7**
SKAR	**Skarslia**	**70.86**	**339**	*e*	**P**	**00 51 52.9**	**+3.6**
HYA	**Hoyanger**	**71.00**	**340**	*e*	**P**	**00 51 53.0**	**+3.1**
AKASG	**Malin Array Be**	**71.15**	**323**	P	**P**	**00 51 50.6**	**-0.4**
	comp=Z,4.3nm,0.4s,baz=43,slow=6.4,SNR=14						
AKASG	**Malin Array Be**	**71.15**	**323**	P	**P**	**00 51 52.5**	**+1.4**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AKASG	**Malin Array Be**	**71.15**	**323**	P	**P**	**00 51 52.5**	**+1.4**
AKBB	**Malin Array Si**	**71.15**	**323**	P	**P**	**00 51 52.6**	**+1.5**
AKBB				pmax	pmax		
	comp=Z,7.0nm,0.6s						
AKBB	**Malin Array Si**	**71.15**	**323**	P	**P**	**00 51 52.6**	**+1.5**
AKBB				IAmb	IAmb	00 51 55.3	
	comp=Z,6.8nm,0.6s						
KONO	**Kongsberg**	**71.38**	**338**	P	**P**	**00 51 54.8**	**+2.5**
KONO				pmax	pmax		
	comp=Z,17nm,1.2s						
KONO	**Kongsberg**	**71.38**	**338**	P	**P**	**00 51 54.8**	**+2.5**
KONO				IAmb	IAmb	00 52 09.0	
	comp=Z,16nm,1.1s						
KONO	**Kongsberg**	**71.38**	**338**	*e*	**P**	**00 51 55.8**	**+3.5**
ASK	**Askoy**	**71.83**	**340**	*e*	**P**	**00 51 58.9**	**+3.9**
BER	**Bergen**	**71.89**	**340**	*e*	**P**	**00 51 58.5**	**+3.2**
ANGG	**Ammassalik, Gr**	**71.95**	**1**	P	**P**	**00 51 58.4**	**+2.7**
ANGG				IAmb	IAmb	00 52 02.6	
	comp=Z,7.3nm,0.9s						
ODD1	**Odda**	**71.96**	**339**	*e*	**P**	**00 51 58.5**	**+2.6**
TPNV	**Topopah Spring**	**72.02**	**56**	P	**P**	**00 51 58.1**	**+1.3**
TPNV				pmax	pmax		
	comp=Z,5.0nm,1.2s						
TPNV	**Topopah Spring**	**72.02**	**56**	P	**P**	**00 51 58.1**	**+1.3**
BW06	**Boulder Array**	**72.09**	**48**	P	**P**	**00 51 58.1**	**+0.9**
PDAR	**Pinedale Array**	**72.09**	**48**	P	**P**	**00 51 58.0**	**+0.8**
	comp=Z,0.8nm,0.5s,baz=6.6,slow=1.3,SNR=16						
PDAR	**Pinedale Array**	**72.09**	**48**	P	**P**	**00 51 57.9**	**+0.6**
BLS5	**Blasjo**	**72.42**	**339**	*e*	**P**	**00 52 02.5**	**+3.9**
SNART	**Snartemo**	**73.15**	**338**	*e*	**P**	**00 52 06.5**	**+3.6**
BSD	**Bornholm Skovb**	**73.45**	**332**	*e*P	**P**	**00 52 04.5**	**-0.2**
ULM	**Lac du Bonnet**	**73.50**	**36**	P	**P**	**00 52 05.0**	**-0.2**
	comp=Z,2.1nm,0.5s,baz=318,slow=5.4,SNR=7.3						
ULM	**Lac du Bonnet**	**73.50**	**36**	P	**P**	**00 52 05.0**	**-0.2**
GKP	**Gorka Klasztor**	**74.11**	**330**	*e*P	**P**	**00 52 08.2**	**-0.4**
STKA	**Stephens Creek**	**74.31**	**182**	P	**P**	**00 52 10.6**	**+0.7**
	comp=Z,3.2nm,0.8s,baz=330,slow=6.9,SNR=6.5						
KWP	**Kalwaria Pacla**	**74.77**	**325**	P	**P**	**00 52 14.0**	**+1.4**
KWP				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KWP	**Kalwaria Pacla**	**74.77**	**325**	P	**P**	**00 52 13.9**	**+1.4**
KWP				IAmb	IAmb	00 52 16.8	
	comp=Z,9.0nm,1.1s						
BUR08	**Bucovina Ar. S**	**75.19**	**322**	P	**P**	**00 52 15.8**	**+0.7**
BURAR	**Bucovina Array**	**75.20**	**322**	P	**P**	**00 52 15.4**	**+0.3**
PV17	**East Wray Mesa**	**75.47**	**51**	P	**P**	**00 52 18.2**	**+1.3**
PV17				IAmb	IAmb	00 52 27.2	
	comp=Z,5.2nm,0.9s						
KOLS	**Kolonicke sedl**	**75.49**	**325**	*e*P	**P**	**00 52 21.1**	**+4.4**
KOLS	**Kolonicke sedl**	**75.49**	**325**	*e*P	**P**	**00 52 21.1**	**+4.4**
OJC	**Ojcow**	**75.52**	**327**	P	**P**	**00 52 17.8**	**+1.0**
OJC				pmax	pmax		
	comp=Z,7.0nm,0.8s						
OJC	**Ojcow**	**75.52**	**327**	P	**P**	**00 52 17.8**	**+1.0**
OJC				IAmb	IAmb	00 52 22.9	
	comp=Z,7.0nm,0.8s						
BBOO	**Buckleboo**	**75.59**	**187**	P	**P**	**00 52 18.0**	**+0.9**
BBOO				IAmb	IAmb	00 52 19.0	
	comp=Z,5.8nm,0.8s						
B35A	**Bob, Littlefor**	**75.85**	**36**	P	**P**	**00 52 18.8**	**+0.1**
B35A				IAmb	IAmb	00 52 19.5	
	comp=Z,5.1nm,0.7s						
MORW	**Morawa**	**76.08**	**205**	P	**P**	**00 52 21.4**	**+1.3**
MORW				IAmb	IAmb	00 52 21.6	
	comp=Z,11nm,1.0s						
LANS	**Liptovska Anna**	**76.49**	**326**	*e*P	**P**	**00 52 24.1**	**+1.7**
LANS				*e*		00 52 28.7	
LANS	**Liptovska Anna**	**76.49**	**326**	*e*P	**P**	**00 52 24.1**	**+1.7**
LANS				*e*		00 52 28.7	
OSTC	**Ostas**	**76.66**	**329**	*e*P	**P**	**00 52 24.8**	**+1.5**
CHVC	**Chvalec**	**76.69**	**329**	*e*P	**P**	**00 52 23.6**	**+0.1**
CHVC				*e*x	x	00 52 28.3	
BR131	**Keskin Array S**	**76.72**	**312**	P	**P**	**00 52 24.5**	**+0.5**
BR131				pmax	pmax		
	comp=Z,2.0nm,1.0s						
BR131	**Keskin Array S**	**76.72**	**312**	P	**P**	**00 52 24.5**	**+0.5**
BRTR	**Keskin Array B**	**76.72**	**312**	P	**P**	**00 52 23.1**	**-0.9**
	comp=Z,0.7nm,0.7s,baz=60,slow=4.7,SNR=4.6						
BRTR	**Keskin Array B**	**76.72**	**312**	*i* P	**P**	**00 52 24.3**	**+0.3**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BRTR	**Keskin Array B**	**76.72**	**312**	P	**P**	**00 52 24.1**	**+0.1**
MORC	**Moravsky Berou**	**76.77**	**328**	*e*P	**P**	**00 52 24.2**	**+0.3**
MORC	**Moravsky Berou**	**76.77**	**328**	P	**P**	**00 52 24.4**	**+0.5**
MORC				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MORC	**Moravsky Berou**	**76.77**	**328**	P	**P**	**00 52 24.4**	**+0.5**
MORC				IAmb	IAmb	00 52 30.1	
	comp=Z,5.4nm,0.7s						
DPC	**Dobruska-Polom**	**76.78**	**329**	*e*P	**P**	**00 52 25.0**	**+1.0**
DPC	**Dobruska-Polom**	**76.78**	**329**	*e*P	**P**	**00 52 25.0**	**+1.0**
KRLC	**Kraliky**	**76.83**	**328**	*e*P	**P**	**00 52 25.0**	**+0.7**
KRLC				*e*		00 52 28.6	
KRLC	**Kraliky**	**76.83**	**328**	*e*P	**P**	**00 52 25.0**	**+0.7**
KRLC				*e*x	x	00 52 28.6	
EYMN	**Ely**	**77.12**	**35**	P	**P**	**00 52 26.3**	**+0.4**
EYMN				IAmb	IAmb	00 52 26.8	
	comp=Z,4.3nm,0.7s						
CLL	**Collm**	**77.22**	**331**	*e*P	**P**	**00 52 30.0**	**+3.6**
	comp=Z,10.0nm,0.5s						
CLL	**Collm**	**77.22**	**331**	P	**P**	**00 52 28.6**	**+2.2**
CLL				pmax	pmax		
	comp=Z,16nm,1.1s						
CLL	**Collm**	**77.22**	**331**	P	**P**	**00 52 28.6**	**+2.2**
CLL				IAmb	IAmb	00 52 31.8	
	comp=Z,16nm,1.1s						
JAVC	**Velka Javorina**	**77.45**	**327**	*e*P	**P**	**00 52 29.6**	**+1.8**
VRAC	**Vranov**	**77.51**	**328**	*e*P	**P**	**00 52 29.1**	**+1.0**
PRU	**Pruhonice**	**77.75**	**330**	*e*P	**P**	**00 52 30.6**	**+1.3**
PRU				*e*		00 52 34.5	
PRU	**Pruhonice**	**77.75**	**330**	*e*P	**P**	**00 52 30.6**	**+1.3**
PRU				*e*x	x	00 52 34.5	
KRUC	**Moravsky**	**77.79**	**328**	*e*P	**P**	**00 52 30.3**	**+0.7**
SMOL	**Smolenice**	**77.82**	**327**	*e*P	P	00 52 36.0	+6.2
SMOL	**Smolenice**	**77.82**	**327**	*e*	P	00 52 36.0	+6.2
CKRC	**Cesky Krumlov**	**78.79**	**329**	*e*P	**P**	**00 52 35.7**	**+0.6**
KHC	**Kasperske Hory**	**78.81**	**330**	*ce*P	**P**	**00 52 35.5**	**+0.2**
KHC				pmax	pmax		
	comp=Z,41nm,2.5s						
KHC	**Kasperske Hory**	**78.81**	**330**	*e*P	**P**	**00 52 35.7**	**+0.4**
KHC				*e*x	x	00 52 39.3	
KHC	**Kasperske Hory**	**78.81**	**330**	P	**P**	**00 52 36.0**	**+0.8**
KHC				IAmb	IAmb	00 52 41.5	
	comp=Z,5.4nm,0.7s						
CONA	**Conrad Observa**	**78.91**	**328**	*e*P	**P**	**00 52 37.6**	**+1.7**
	comp=Z,3.1nm,0.6s						
GERES	**GERESS Array B**	**79.00**	**329**	P	**P**	**00 52 36.1**	**-0.3**
	comp=Z,0.4nm,0.3s,baz=40,slow=5.7,SNR=8.0						
ARSA	**Arzberg**	**79.60**	**327**	*e*P	**P**	**00 52 42.1**	**+2.6**
	comp=Z,3.7nm,1.0s						
MOA	**Molln**	**79.60**	**328**	*e*P	**P**	**00 52 41.6**	**+2.0**
	comp=Z,4.5nm,1.3s						
SOKA	**Soboth**	**80.26**	**327**	*e*P	**P**	**00 52 44.4**	**+1.2**
	comp=Z,2.2nm,0.6s						
KBA	**Koelnbreinsper**	**80.59**	**328**	*e*P	**P**	**00 52 46.8**	**+1.7**
	comp=Z,4.1nm,0.5s						
WTTA	**Wattenberg**	**81.08**	**330**	*e*P	**P**	**00 52 50.7**	**+2.9**
	comp=Z,4.5nm,0.6s						
DAVA	**Damuels**	**81.71**	**331**	*e*P	**P**	**00 52 51.0**	**0.0**
	comp=Z,2.8nm,0.5s						
CTI	**Castel Tesino**	**82.10**	**329**	P	**P**	**00 52 52.8**	**-0.2**
CTI				pmax	pmax		
	comp=Z,4.0nm,1.1s						
CTI	**Castel Tesino**	**82.10**	**329**	P	**P**	**00 52 52.8**	**-0.2**
FNA	**Florina**	**82.20**	**320**	P	**P**	**00 52 54.2**	**+0.6**
FNA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
FNA	**Florina**	**82.20**	**320**	P	**P**	**00 52 54.2**	**+0.6**
FNA				IAmb	IAmb	00 53 10.3	
	comp=Z,5.5nm,1.0s						
MSSA	**Maissana**	**84.37**	**329**	P	**P**	**00 53 04.7**	**0.0**
MSSA				IAmb	IAmb	00 53 11.4	
	comp=Z,9.9nm,1.1s						
OSSC	**Osservatorio P**	**84.37**	**328**	P	**P**	**00 53 04.5**	**-0.1**
OSSC				IAmb	IAmb	00 53 05.5	
	comp=Z,7.4nm,1.2s						
ITM	**Ithomi**	**84.75**	**317**	P	**P**	**00 53 06.4**	**-0.2**
BNI	**Bardonecchia**	**84.77**	**331**	P	**P**	**00 53 08.2**	**+1.4**
BNI				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BNI	**Bardonecchia**	**84.77**	**331**	P	**P**	**00 53 08.2**	**+1.4**
BNI				IAmb	IAmb	00 53 16.3	
	comp=Z,5.3nm,1.0s						
TXAR	**Lajitas Array**	**84.89**	**54**	P	**P**	**00 53 06.6**	**-1.0**
	comp=Z,0.4nm,0.4s,baz=256,slow=5.0,SNR=2.0						
PLVO	**Plevna**	**85.09**	**28**	P	**P**	**00 53 08.3**	**+0.2**
PLVO				IAmb	IAmb	00 53 08.8	
	comp=Z,4.1nm,0.7s						
BATG	**Bathurst New B**	**86.39**	**20**	P	**P**	**00 53 14.4**	**-0.1**
BATG				IAmb	IAmb	00 53 25.6	
	comp=Z,9.6nm,1.2s						
MOQ	**Mont Orford**	**86.43**	**25**	P	**P**	**00 53 15.8**	**+1.0**
ESDC	**Sonseca Array**	**93.07**	**336**	P	**P**	**00 53 45.4**	**-0.7**
	comp=Z,1.0nm,1.1s,baz=8.2,slow=2.8,SNR=4.2						
H03N2	**Juan Fernandez**	**145.01**	**89**	T	T	03 41 48.8	
	baz=301,slow=76,SNR=7.8						
H03N3	**Juan Fernandez**	**145.02**	**89**	T	T	03 41 51.5	
	baz=301,slow=76,SNR=6.3						
H03N1	**Juan Fernandez**	**145.03**	**89**	T	T	03 41 51.5	
	baz=301,slow=76,SNR=6.7						
SNAA	**Sanae**	**146.88**	**198**	PKPbc	**PKPab**	**01 00 14.5**	**-0.2**
VNA2	**Neumayer--Watz**	**148.45**	**197**	PKPbc	**PKPbc**	**01 00 17.5**	**+0.3**
VNA3	**Neumayer Olymp**	**148.68**	**196**	PKPbc	**PKPbc**	**01 00 17.5**	**-0.3**
VNA1	**Neumayer--Stat**	**148.84**	**197**	PKPbc	**PKiKP**	**01 00 19.8**	**+0.3**
BDFB	**Brasilia**	**150.96**	**25**	PKPbc	**PKPbc**	**01 00 24.5**	**-0.7**
	comp=Z,1.4nm,0.6s,baz=249,slow=2.9,SNR=2.0						

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*IDC **28** 00:42:27.3±2.7, 51°.81N×177°.94E, h0^{km}, mb3.7/12, mb1 3.8/12, mb1mx3.6/54, mbtmp3.7/12 Error ellipse: s-maj=69.8km s-min=22.1km az=171.0*

*NEIC **28** 00:42:36.5±1.2, 51°.63N±0°.08×177°.93E±0°.07, h75^{km}±6^{km}, Error ellipse: s-maj=11.6km s-min=6.3km az=182.0*

*AEIC **28** 00:42:37±0.6, 51°.66N±0°.07×177°.92E±0°.09, h62^{km}±5^{km}, ML3.4, Error ellipse: s-maj=10.9km s-min=8.1km az=194.0*

ISC 28 00:42:36.3±1.1**, 51°.7N**±0°.1×**177°.93E**±0°.08**, h77**^{km}±9^{km}**,**
n37, σ0^{s}.72/42**, mb3.9**/12**, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSSA	**Little Sitkin**	**0.45**	**53**		**Pn**	**00 42 49.1**	**-0.3**
LSNW	**Little Sitkin**	**0.47**	**51**		**Pn**	**00 42 49.2**	**-0.3**
LSPA	**Little Sitkin**	**0.49**	**55**		**Pn**	**00 42 49.5**	**-0.2**
LSPA					**Sn**	**00 42 59.6**	**+0.1**
AMKA	**Amchitka**	**0.91**	**109**		**Pn**	**00 42 53.9**	**-0.1**
AMKA					**Sn**	**00 43 06.7**	**-0.6**
CETU	**Semis' Tuman**	**1.01**	**73**		**Pn**	**00 42 55.4**	**+0.1**
CESW	**Semis' Southwe**	**1.04**	**77**		**Pn**	**00 42 55.5**	**-0.1**
CEAP	**Semis' Anvil P**	**1.07**	**72**		**Pn**	**00 42 56.1**	**+0.1**
CEAP					**Sn**	**00 43 10.6**	**-0.2**
CERB	**Semis' Cerberu**	**1.08**	**76**		**Pn**	**00 42 56.4**	**+0.2**
CERB					**Sn**	**00 43 11.5**	**+0.4**
CERAA	**Semis' Rag'd T**	**1.11**	**78**		**Pn**	**00 42 56.4**	**-0.1**
GALAA	**Gareloi Lava P**	**2.05**	**86**		**Pn**	**00 43 09.3**	**+0.5**
GAEA	**Gareloi East**	**2.07**	**86**		**Pn**	**00 43 09.6**	**+0.6**
TANO	**Tanaga North**	**2.46**	**83**		**Pn**	**00 43 14.9**	**+0.7**
TASE	**Tanaga Southea**	**2.51**	**85**		**Pn**	**00 43 15.6**	**+0.6**
TAFP	**Tanaga Falls P**	**2.55**	**83**		**Pn**	**00 43 15.8**	**+0.4**
TAFP					**Sn**	**00 43 45.4**	**-0.1**
SMY	**Shemya**	**2.58**	**296**		**Pn**	**00 43 16.3**	**+0.5**
KIMD	**Kanaga Island**	**3.01**	**87**		**Pn**	**00 43 22.1**	**+0.5**
KIKV	**Kanaga Island**	**3.05**	**84**		**Pn**	**00 43 22.6**	**+0.3**
ADK	**Adak**	**3.35**	**84**	Pn	**Pn**	**00 43 27.3**	**+1.0**
GSTR	**Great Sitkin T**	**3.75**	**81**	Pn	**Pn**	**00 43 31.2**	**-0.5**
ATKA	**Atka Island**	**4.90**	**81**		**Pn**	**00 43 48.2**	**+0.9**
KOKL	**Mount Kliuchef**	**4.91**	**79**		**Pn**	**00 43 48.7**	**+1.2**
NIKH	**Nikolski High**	**8.20**	**76**	Pn	**Pn**	**00 44 33.9**	**+1.5**
SPIA	**Saint Paul Isl**	**8.81**	**47**	Pn	**Pn**	**00 44 42.0**	**+1.3**
UNV	**Unalaska Valle**	**9.68**	**71**	Pn	**Pn**	**00 44 53.5**	**+0.9**
AKUT	**Akutan**	**10.15**	**70**	Pn	**Pn**	**00 45 00.1**	**+1.2**
ILAR	**Eielson Array**	**22.32**	**41**	P	**P**	**00 47 26.2**	**-1.0**
	0.2nm,0.5s,baz=252,slow=6.2,SNR=4.7						
KLR	**Kul'dur**	**29.13**	**284**	P	**P**	**00 48 30.3**	**+0.7**
	1.1nm,0.8s,baz=104,slow=13,SNR=2.3						
YKA	**Yellowknife Ar**	**36.50**	**46**	P	**P**	**00 49 33.6**	**0.0**
	0.2nm,0.6s,baz=285,slow=7.1,SNR=2.9						
SONM	**Songino Array**	**44.67**	**295**	P	**P**	**00 50 42.0**	**+0.7**
	0.8nm,0.5s,baz=69,slow=7.6,SNR=4.1						
PDAR	**Pinedale Array**	**48.15**	**71**	P	**P**	**00 51 07.7**	**-0.9**
	0.2nm,0.6s,baz=349,slow=2.8,SNR=2.6						
SPITS	**Spitsbergen Ar**	**49.91**	**355**	P	**P**	**00 51 20.8**	**-0.7**
	1.1nm,0.4s,baz=2.9,slow=8.7,SNR=1.3						
ARCES	**ARCESS Array B**	**57.42**	**349**	P	**P**	**00 52 15.4**	**-0.9**
	3.2nm,1.0s,baz=19,slow=9.6,SNR=1.1						
MKAR	**Makanchi Array**	**58.23**	**306**	P	**P**	**00 52 21.6**	**-0.7**
	0.5nm,0.4s,baz=53,slow=6.9,SNR=6.4						
BVAR	**Borovoye Array**	**59.32**	**318**	P	**P**	**00 52 29.8**	**+0.1**
	0.7nm,0.6s,baz=44,slow=4.4,SNR=3.7						
FINES	**FINESS Array B**	**65.01**	**346**	P	**P**	**00 53 07.0**	**-0.6**
	2.1nm,0.9s,baz=18,slow=5.8,SNR=1.4						
AKTO	**Aktyubinsk**	**66.23**	**323**	P	**P**	**00 53 15.9**	**+0.2**
	1.1nm,0.5s,baz=69,slow=8.6,SNR=2.6						
BRTR	**Keskin Array B**	**83.79**	**333**	P	**P**	**00 54 58.5**	**+1.4**
	0.7nm,0.8s,baz=61,slow=5.8,SNR=3.7						

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*IDC **28** 00:46:57.9±3.0, 20°.70S×175°.83W, h0^{km}, mb4.0/3, mb1 4.2/3, mb1mx3.7/42, mbtmp4.0/3, Error ellipse: s-maj=160.3km s-min=52.0km az=149.0*

*NEIC **28** 00:47:11.9±2.9, 21°.26S±0°.10×175°.5W±0°.1, h132^{km}±14^{km}, mb4.2/16, Error ellipse: s-maj=15.6km s-min=11.9km az=133.0*

ISC 28 00:47:13.3±0.6**, 21°.27S**±0°.08×**175°.44W**±0°.07**, h150**^{km}**,**
n27, σ1^{s}.52/31**, mb4.1**/10**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	**Niue**	**5.62**	**68**	Pn	**Pn**	**00 48 36.8**	**+1.9**
NIUE				Sn	**Sn**	**00 49 36.5**	**-2.2**
MSVF	**Nonsavu**	**7.08**	**299**	Pn	**Pn**	**00 48 55.2**	**+0.7**
AFI	**Afiamalu**	**8.11**	**26**	Pn	**Pn**	**00 49 05.8**	**-2.5**
RAO	**Raoul Island**	**8.26**	**195**	Pn	**Pn**	**00 49 08.8**	**-1.2**
RAO				Sn	**Sn**	**00 50 39.6**	**-2.4**
RAR	**Rarotonga**	**14.61**	**93**	Pn	**Pn**	**00 50 32.8**	**0.0**
DZM	**Mont Dzumac**	**16.86**	**264**		**P**	**00 50 59.4**	**-0.8**
DZM				IAmb	IAmb	00 51 04.8	

	comp=Z,11nm,0.9s						
OUZ	**Omahuta**	**16.91**	**212**	P	**Pn**	**00 51 00.3**	**-0.6**
SANVU	**Saraoutou**	**17.46**	**286**	P	**P**	**00 51 05.1**	**-1.6**
URZ	**Urewera**	**18.11**	**199**	Pn	**Pn**	**00 51 16.7**	**+1.4**
MSWZ	**Moikau Station**	**21.57**	**199**	P	**P**	**00 51 49.7**	**-1.3**
QRZ	**Quartz Range**	**22.01**	**205**	P	**P**	**00 51 56.0**	**+0.5**
QRZ				IAmb	IAmb	00 52 02.5	
	comp=Z,7.5nm,0.9s						
TUWZ	**Tuamarina**	**22.02**	**202**	P	**P**	**00 51 54.8**	**-0.7**
NNZ	**Nelson**	**22.03**	**203**	P	**P**	**00 51 54.2**	**-1.4**
THZ	**Tophouse**	**22.68**	**203**	P	**P**	**00 52 04.3**	**+2.3**
THZ				IAmb	IAmb	00 52 12.4	
	comp=Z,9.5nm,1.0s						
KHZ	**Kahutara**	**23.03**	**201**	P	**P**	**00 52 03.9**	**-1.3**
KHZ				IAmb	IAmb	00 52 13.7	
	comp=Z,7.8nm,0.9s						
LTZ	**Lake Taylor**	**23.80**	**203**	P	**P**	**00 52 14.8**	**+2.6**
LTZ				IAmb	IAmb	00 52 19.8	
	comp=Z,7.4nm,0.8s						
RPZ	**Rata Peaks**	**25.05**	**204**	P	**P**	**00 52 24.8**	**+1.2**
RPZ				IAmb	IAmb	00 52 31.4	
	comp=Z,6.9nm,0.8s						
FOZ	**Fox Glacier**	**25.38**	**206**	P	**P**	**00 52 26.1**	**-0.3**
STKA	**Stephens Creek**	**39.63**	**245**	P	**P**	**00 54 30.9**	**+0.5**
	comp=Z,1.4nm,0.6s,baz=90,slow=10,SNR=1.7						
COEN	**Coen**	**40.02**	**273**	P	**P**	**00 54 34.0**	**+0.2**
COEN				IAmb	IAmb	00 54 50.0	
	comp=Z,4.9nm,1.1s						
BBOO	**Buckleboo**	**44.36**	**244**	P	**P**	**00 55 08.7**	**-0.1**
ASAR	**Alice Springs**	**46.68**	**257**	P	**P**	**00 55 26.8**	**-0.4**
	comp=Z,2.1nm,0.8s,baz=90,slow=8.1,SNR=16						
ASAR				PcP	**PcP**	**00 57 01.1**	**+2.6**
	comp=Z,0.9nm,0.6s,baz=104,slow=3.8,SNR=10						
ASAR	**Alice Springs**	**46.68**	**257**	P	**P**	**00 55 28.5**	**+1.3**
WR0	**Warramunga Arr**	**46.68**	**262**	P	**P**	**00 55 27.6**	**+0.4**
WB0	**Warramunga Arr**	**46.85**	**262**	P	**P**	**00 55 28.2**	**-0.3**
WB0				IAmb	IAmb	00 55 42.5	
	comp=Z,4.6nm,1.1s						
WRA	**Warramunga Arr**	**46.87**	**262**	P	**P**	**00 55 28.0**	**-0.7**
	comp=Z,2.0nm,1.0s,baz=97,slow=8.1,SNR=11						
WRA				PcP	**PcP**	**00 57 01.5**	**+2.3**
	comp=Z,0.3nm,0.7s,baz=93,slow=3.2,SNR=2.4						
BRTR	**Keskin Array B**	**149.12**	**313**	PKPbc	**PKiKP**	**01 06 47.0**	**+1.6**
	comp=Z,1.1nm,0.7s,baz=120,slow=4.1,SNR=6.5						

IDC 28 00:51:15.1±84.0**, 34°.74N×103°.12E, h0^{km}, mb3.1**/1**, mb1 3.2**/3**, mb1mx3.0**/58**, mbtmp3.2**/3**, ML3.0**/2**, Error ellipse: s-maj=1185.0km s-min=81.2km az=150.0, Gansu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	**Songino Array**	**13.31**	**10**	Pn	Pn	00 54 24.6	-0.9
	0.1nm,0.3s,baz=193,slow=12,SNR=1.5						
MKAR	**Makanchi Array**	**19.78**	**314**	P	P	00 55 46.0	-0.9
	0.1nm,0.3s,baz=126,slow=11,SNR=5.1						
ZALV	**Zalesovo Beam**	**23.12**	**332**	P	P	00 56 23.6	+1.0
	0.4nm,0.6s,baz=120,slow=8.5,SNR=1.2						

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*IDC **28** 00:51:26.5±1.0, 35°.70N×140°.52E, h0^{km}, mb3.4/7, mb1 3.6/10, mb1mx3.5/51, mbtmp3.5/10, ML2.9/2, Error ellipse: s-maj=27.9km s-min=17.8km az=78.0*

*JMA **28** 00:51:30.5±0.1, 35°.87N×140°.47E, h36^{km}±1^{km}, M3.3 JMA Felt I J1.*

ISC 28 00:51:31.0±0.9**, 35°.82N**±0°.03×**140°.47E**±0°.05**, h33^{km}**±4^{km}**, n19, σ1^{s}65**/26**, mb3.4**/7**, 4D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIHU	**Itakohorinouch**	**0.15**	**16**	P	**Pn**	**00 51 37.2**	**+0.8**
JIHU				*e*S	Sn	00 51 42.2	+3.7
JSMT	**Sammumatsuo**	**0.18**	**187**	⇓P	**Pn**	**00 51 38.1**	**+1.1**
JSMT				*e*S	**Sb**	**00 51 43.8**	**+2.1**
CHOJ	**Chosi**	**0.34**	**111**	⇓P	**Pb**	**00 51 38.9**	**-0.2**
CHOJ				S	**Sb**	**00 51 44.6**	**-0.1**
JYT	**Yasato**	**0.46**	**331**	⇓P	**Pb**	**00 51 40.1**	**-0.9**
JYT				S	**Sb**	**00 51 46.7**	**-1.1**
JHO	**Hitachi**	**0.79**	**6**	⇓P	**Pn**	**00 51 44.3**	**-1.5**
JHO				*e*S	**Sn**	**00 51 53.8**	**-2.7**
BSO4	**Boso 4**	**0.84**	**188**	P	**Pn**	**00 51 47.4**	**+1.0**
BSO3	**Boso 3**	**1.02**	**178**	P	**Pn**	**00 51 49.1**	**+0.4**
JAG	**Ashikaga**	**1.02**	**306**	P	**Pn**	**00 51 47.9**	**-1.1**
JAG				*e*S	**Sn**	**00 52 00.5**	**-1.7**
MJAR	**Matsushiro Arr**	**1.97**	**292**	Pn	**Pn**	**00 52 02.0**	**0.0**
	1.2nm,0.3s,baz=92,slow=12,SNR=43						
MAT	**Matsushiro**	**1.97**	**292**	P	**Pn**	**00 52 02.5**	**+0.4**
MAT				*e*S	**Sn**	**00 52 24.8**	**-0.8**
JHJ	**Hachijo jima 2**	**2.76**	**192**	Pn	**Pn**	**00 52 10.7**	**-2.2**
	22nm,0.3s,baz=19,slow=18,SNR=1.2						
JHJ				Sn	**Sn**	**00 52 42.6**	**-2.5**
	34nm,0.3s,baz=18,slow=20,SNR=6.1						
JCJ	**Chichijima**	**8.82**	**170**	Pn	**Pn**	**00 53 33.1**	**-3.1**
	6.3nm,0.3s,baz=285,slow=19,SNR=1.9						
SONM	**Songino Array**	**27.86**	**306**	P	**P**	**00 57 18.4**	**+0.8**
	0.2nm,0.4s,baz=96,slow=7.5,SNR=1.8						
ZALV	**Zalesovo Beam**	**42.18**	**313**	P	**P**	**00 59 23.4**	**+3.1**
	0.4nm,0.3s,baz=79,slow=7.5,SNR=1.6						
MKAR	**Makanchi Array**	**44.13**	**303**	P	**P**	**00 59 35.5**	**-0.8**
	0.4nm,0.8s,baz=82,slow=8.5,SNR=3.6						
ILAR	**Eielson Array**	**50.92**	**32**	P	**P**	**01 00 29.5**	**+0.9**
	0.5nm,1.0s,baz=276,slow=8.9,SNR=2.4						
WRA	**Warramunga Arr**	**55.77**	**187**	P	**P**	**01 01 03.6**	**-1.0**
	0.3nm,0.5s,baz=3.2,slow=7.5,SNR=5.1						
ASAR	**Alice Springs**	**59.49**	**187**	P	**P**	**01 01 31.9**	**+1.0**
	0.2nm,0.3s,baz=354,slow=7.1,SNR=1.4						
PDAR	**Pinedale Array**	**79.06**	**45**	P	**P**	**01 03 33.0**	**+0.8**
	0.2nm,0.6s,baz=297,slow=4.0,SNR=2.6						

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*HEL **28** 01:01:03.0, 67°.75N×20°.25E, h0^{km}, ML1.4, Explosion*

UPP 28 01:01:02.6±0.1**, 67°.83N×20°.20E, h0^{km}, ML2.6, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.13**	**24**	P	Pg	01 01 05.4	+0.3
KUA				S	Sg	01 01 07.1	+0.3
KUA	**Kurravaara**	**0.13**	**24**	*i* P	Pg	01 01 05.4	+0.3
KUA				*i* S	Sg	01 01 07.1	+0.3
KOVU	**Salmi**	**0.39**	**358**	P	Pg	01 01 10.2	+0.1
KOVU				S	Sg	01 01 15.3	+0.2
KOVU	**Salmi**	**0.39**	**358**	*i* P	Pg	01 01 10.2	+0.1
KOVU				*i* S	Sg	01 01 15.3	+0.2
NIKU	**Nikkaluokta**	**0.44**	**275**	P	Pg	01 01 11.2	+0.1
NIKU				S	Sg	01 01 17.3	+0.6
NIKU	**Nikkaluokta**	**0.44**	**275**	*i* P	Pg	01 01 11.2	+0.1
NIKU				*i* S	Sg	01 01 17.3	+0.6
LANU	**Lannavaara**	**0.71**	**71**	P	Pg	01 01 16.1	-0.1
LANU	**Lannavaara**	**0.71**	**71**	*e*P	Pg	01 01 16.1	-0.1
DUNU	**Dundret**	**0.73**	**168**	P	Pg	01 01 16.2	-0.3
DUNU	**Dundret**	**0.73**	**168**	*i* P	Pg	01 01 16.2	-0.3
MASU	**Masugnsbyn**	**0.79**	**118**	P	Pg	01 01 17.6	-0.1
MASU	**Masugnsbyn**	**0.79**	**118**	*i* P	Pg	01 01 17.6	-0.1
KIF	**Kilpisjarvi**	**1.20**	**11**	*e*PN	Pn	01 01 26.8	+0.2
	baz=193						
KIF				*e*S	Sg	01 01 41.4	+0.4
KIF				MSG		01 01 42.9	
	comp=Z,3.8nm,0.2s						
PAJU	**Pajala**	**1.39**	**124**	P	Pg	01 01 28.1	-1.1
PAJU	**Pajala**	**1.39**	**124**	*e*P	Pg	01 01 28.1	-1.1
	baz=306						
PAJU				*e*SB	Sg	01 01 46.8	-0.3
TOF	**Tornio**	**2.40**	**135**	*e*PB	Pn	01 01 44.6	+1.6
TOF				MSG		01 02 11.7	
	comp=Z,1.0nm,0.2s						
TOF				*e*SG	Sb	01 02 17.1	+0.5
SGF	**Sodankyl**	**2.45**	**96**	*e*PG	Pb	01 01 46.7	-0.8
	baz=277						
RNF	**Rovaniemi**	**2.58**	**116**	*e*PB	Pb	01 01 47.9	-1.7
RNF				*e*SG	Sb	01 02 21.7	-0.1
ARA0	**ARCESS Array S**	**2.58**	**46**	*e*P	Pn	01 01 46.9	+1.3
	baz=222						
ARA0				*e*SG	Sb	01 02 23.3	+1.3

UPP 28 01:01:10.5±0.1**, 67°.84N×20°.29E, h0^{km}, ML2.4, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.12**	**8**	P	Pg	01 01 12.9	+0.2
KUA				S	Sg	01 01 14.9	+0.7
KOVU	**Salmi**	**0.39**	**353**	S	Sg	01 01 23.4	+0.5
DUNU	**Dundret**	**0.73**	**172**	P	Pg	01 01 24.2	-0.3
PAJU	**Pajala**	**1.36**	**126**	P	Pg	01 01 35.7	-0.9

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*IDC **28** 01:02:48.5±0.4, 17°.06N×145°.66E, h0^{km}, mb4.4/31, mb1 4.6/31, mb1mx4.4/53, mbtmp4.4/31, MS4.3/35, Ms1 4.3/35, ms1mx4.3/36, Error ellipse: s-maj=15.7km s-min=9.1km az=94.0*

*BJI **28** 01:02:48.2±0.0, 16°.92N×145°.90E, h5^{km}, mB5.3/45, mb4.7/61, Ms4.8/48, Ms7 4.6/46*

*NEIC **28** 01:02:51.6±1.4, 16°.98N±0°.05×145°.92E±0°.10, h17^{km}±3^{km}, mb5.0/191, Error ellipse: s-maj=14.2km s-min=6.5km az=104.0*

*GCMT **28** 01:02:55.6±0.2, 16°.98N±0°.02×145°.69E±0°.01, h12^{km}, MW5.1/129, Moment Tensor Solution. s52,c62; s129,c200; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.93±.11; $M_{\theta\theta}$-0.21±.10; $M_{\phi\phi}$4.14±.09; $M_{r\theta}$0.74±.39; $M_{\theta\phi}$1.84±.08; $M_{\phi r}$3.70±.28; Best double couple: $M_0$5.78200×10^{16} NP1:ϕ_s29.00000°, δ25.00000°, λ-76.00000°. NP2:ϕ_s194.00000°, δ66.00000°, λ-96.00000°. Principal axes: T 6.1940, Plg20.0000°, Azm288.0000°; N -0.8240, Plg6.0000°, Azm196.0000°; P -5.3700, Plg69.0000°, Azm91.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 28 01:02:50.7±0.3**, 16°.97N**±0°.04×**145°.95E**±0°.05**, h10^{km}, n358, σ1^{s}41**/288**, mb5.0**/156**, MS4.4**/54**, 13C-14D, Fault plane solution: NP1:**ϕ_s11.04214°**,** δ82.22446°**,** λ82.56173°. **NP2:**ϕ_s235.02153°**,** δ10.74460°**,** λ133.47319°. **Principal axes:** T Plg52.2207°**,** Azm272.4486°**;** N Plg7.3695°**,** Azm12.0541°**;** P Plg36.8014°**,** Azm107.6067°**; Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SARN	**Sarigan**	**0.31**	**211**	P	**Pb**	**01 02 58.7**	**+0.2**
ANA2	**Anatahan**	**0.67**	**200**		**Pb**	**01 03 04.7**	**+0.2**
ANA2	**Anatahan**	**0.67**	**200**	P	**Pn**	**01 03 06.5**	**+0.2**
GUMO	**Guam**	**3.52**	**197**		**Pn**	**01 03 45.0**	**-0.5**
JCJ	**Chichijima**	**10.66**	**342**	LR	LR	01 08 13.4	
	comp=Z,494nm,20.4s,baz=167,slow=31						
PATS	**Pohnpei**	**15.73**	**128**	Pn	**Pn**	**01 06 32.1**	**-0.4**
JHJ	**Hachijo jima 2**	**17.01**	**342**	LR	LR	01 13 01.8	
	comp=Z,589nm,19.1s,baz=180,slow=36						
JOW	**Kunigami**	**19.09**	**304**	P	**P**	**01 07 12.9**	**-0.7**
	1.2nm,0.3s,baz=148,slow=19,SNR=1.6						
JOW				LR	LR	01 12 59.4	
	comp=Z,3μm,21.8s,baz=149,slow=32						
JOW	**Kunigami**	**19.09**	**304**		**P**	**01 07 13.5**	**-0.1**
JOW				IAmb	IAmb	01 07 21.7	
	comp=Z,113nm,1.1s						
H11S3	**WAKE ISLAND Hy**	**19.82**	**82**	T	T	01 27 58.3	
	baz=269,slow=75,SNR=286						
H11S1	**WAKE ISLAND Hy**	**19.83**	**82**	T	T	01 27 59.9	
	baz=269,slow=75,SNR=362						
H11S2	**WAKE ISLAND Hy**	**19.83**	**83**	T	T	01 28 00.2	
	baz=269,slow=75,SNR=312						
JMN	**Monobe**	**19.90**	**329**	P	**P**	**01 07 21.8**	**-0.8**
JMN				IAmb	IAmb	01 07 35.3	
	comp=Z,119nm,1.3s						
H11N1	**WAKE ISLAND Hy**	**20.07**	**79**	T	T	01 28 18.9	
	baz=266,slow=75,SNR=546						
H11N2	**WAKE ISLAND Hy**	**20.07**	**79**	T	T	01 28 18.1	
	baz=266,slow=75,SNR=608						
H11N3	**WAKE ISLAND Hy**	**20.09**	**79**	T	T	01 28 19.0	
	baz=266,slow=75,SNR=530						
SMPI	**Sarmi**	**20.15**	**201**	P	Pn	01 07 27.4	+0.3
	comp=Z,33nm,1.2s						
JSU	**Suzuyama**	**20.18**	**319**	P	**P**	**01 07 25.9**	**+0.3**
GENI	**Genyem**	**20.26**	**197**	P	Pn	01 07 28.3	-0.1
	comp=Z,3μmcomp=Z,139nm,1.1s						
MJAR	**Matsushiro Arr**	**20.66**	**342**	P	**P**	**01 07 29.5**	**-1.3**
	comp=Z,4.5nm,0.9s,baz=167,slow=12,SNR=5.5						
MJAR				LR	LR	01 14 28.4	
	comp=Z,1μm,19.5s,baz=190,slow=34						
MJAR	**Matsushiro Arr**	**20.66**	**342**	P	**P**	**01 07 30.3**	**-0.4**
MAT	**Matsushiro**	**20.67**	**342**	P	**P**	**01 07 30.1**	**-0.7**
MAT				S	**S**	**01 11 19.2**	**-2.5**
SWI	**Sorong**	**22.89**	**221**	P	**P**	**01 07 54.9**	**+0.2**
	comp=Z,88nm,1.2s						
SIJI	**Sorong**	**22.89**	**221**	P	**P**	**01 07 55.9**	**+1.1**
	comp=Z,35nm,0.6s,baz=20,slow=10,SNR=16						
SIJI				LR	LR	01 14 44.4	
	comp=Z,608nm,21.8s,baz=269,slow=31						
NACB	**Ninganchiao**	**23.88**	**291**	P	**P**	**01 08 05.0**	**+0.4**
NACB				IAmb	IAmb	01 08 30.6	
	comp=Z,84nm,1.3s						
FAKI	**Fak Fak**	**23.95**	**216**	P	**P**	**01 08 06.4**	**+1.1**
FAKI				IAmb	IAmb	01 08 07.5	
	comp=Z,49nm,1.1s						
YHNB	**Yeheng**	**24.18**	**293**	P	**P**	**01 08 08.0**	**+0.4**
YHNB				IAmb	IAmb	01 08 11.5	
	comp=Z,51nm,1.0s						
TGY	**Tagaytay City**	**24.26**	**267**	LR	LR	01 15 53.1	
	comp=Z,1μm,20.0s,baz=124,slow=33						
SSLB	**Suanglung**	**24.37**	**290**	P	**P**	**01 08 09.2**	**0.0**
SSLB				IAmb	IAmb	01 08 13.9	
	comp=Z,32nm,0.7s						
TNTI	**Ternate**	**24.37**	**231**	P	**P**	**01 08 08.8**	**-0.4**
KSRS	**Korea Array**	**25.86**	**326**	P	**P**	**01 08 21.8**	**-0.7**
	comp=Z,7.3nm,0.9s,baz=149,slow=10,SNR=22						
KSRS				LR	LR	01 17 52.7	
	comp=Z,384nm,18.3s,baz=136,slow=35						
KSAR	**Wonju Array Be**	**25.87**	**326**	P	**P**	**01 08 21.8**	**-0.9**
PMG	**Port Moresby**	**26.24**	**177**	P	**P**	**01 08 26.7**	**+0.6**
	comp=Z,50nm,0.9s,baz=8.1,slow=7.1,SNR=8.1						
PMG				LR	LR	01 16 43.3	
	comp=Z,356nm,21.5s,baz=346,slow=32						
PMG	**Port Moresby**	**26.24**	**177**	P	**P**	**01 08 25.7**	**-0.4**
SSE	**Sheshan**	**26.55**	**306**	P	**P**	**01 08 28.5**	**-0.4**
SSE				S	**S**	**01 13 02.3**	**-1.0**
SSE				pmax	pmax		
	comp=Z,9.0nm,1.1s						
SSE				pmax	pmax		
	comp=Z,340nm,6.8s						
SSE				LR	LR		
	comp=Z,200nm,14.7s						
SSE				LR	LR		
	comp=Z,540nm,19.7s						
SSE	**Sheshan**	**26.55**	**306**	P	**P**	**01 08 28.5**	**-0.4**
SSE				IAmb	IAmb	01 08 35.2	
	comp=Z,25nm,0.9s						
ASAJ	**Asahikawa**	**27.21**	**355**	LR	LR	01 18 29.5	
	comp=Z,326nm,21.8s,baz=160,slow=35						
NJ2	**Nanjing**	**28.75**	**306**	*e*P	**P**	**01 08 48.5**	**-0.1**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NJ2				LR	LR		
	comp=Z,1μm,15.6s						
NJ2				LR	LR		
	comp=Z,780nm,16.1s						
NJ2				LR	LR		
	comp=Z,1μm,17.1s						
TOLI2	**Tolitoli**	**29.36**	**240**	P	**P**	**01 08 54.1**	**-0.1**
USRK	**Ussuriysk Ar.**	**29.59**	**339**	LR	LR	01 19 04.1	
	comp=Z,624nm,21.5s,baz=149,slow=33						
HNR	**Honiara**	**29.66**	**151**	LR	LR	01 21 23.6	
	comp=Z,468nm,18.0s,baz=332,slow=37						
DL2	**Dalian**	**30.47**	**321**	P	**P**	**01 09 05.3**	**+1.5**
DL2				S	**S**	**01 14 08.5**	**+3.6**
DL2				pmax	pmax		
	comp=Z,16nm,0.7s						
DL2				LR	LR		
	comp=Z,550nm,13.7s						
DL2				LR	LR		
	comp=Z,520nm,15.5s						
DL2				LR	LR		
	comp=Z,550nm,11.2s						
MDJ	**Mudanjiang**	**30.81**	**337**	P	**P**	**01 09 07.3**	**+0.6**
MDJ				pP	sP	01 09 10.8	+0.8
MDJ				PP	**PnPn**	**01 10 10.5**	**+3.7**
MDJ				S	**S**	**01 14 17.3**	**+7.2**
MDJ				pmax	pmax		
	comp=Z,6.0nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,170nm,4.2s						
MDJ				LR	LR		
	comp=Z,670nm,14.5s						
MDJ				LR	LR		
	comp=Z,490nm,6.9s						
MDJ				LR	LR		
	comp=Z,1μm,19.6s						
COEN	**Coen**	**30.85**	**185**	P	**P**	**01 09 07.2**	**-0.1**
WHN	**Wuhan**	**31.80**	**301**	⇓P	**P**	**01 09 16.5**	**+1.0**
TIA	**Tai'an**	**31.93**	**313**	P	**P**	**01 09 16.8**	**+0.1**
TIA				S	**S**	**01 14 26.3**	**-1.6**
TIA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
TIA				pmax	pmax		
	comp=Z,190nm,3.7s						
TIA				LR	LR		
	comp=Z,380nm,16.4s						
TIA				LR	LR		
	comp=Z,650nm,16.4s						
TIA				LR	LR		
	comp=Z,640nm,17.8s						
TTSI	**Tana Toraja**	**32.57**	**235**	P	**P**	**01 09 23.5**	**+1.0**
	comp=Z,501nmcomp=Z,22nm,0.8s						
KAPI	**Kappang**	**33.87**	**232**	P	**P**	**01 09 35.2**	**+1.3**
KAPI				IAmb	IAmb	01 09 36.6	
	comp=Z,19nm,1.1s						
SOEI	**Soe**	**34.13**	**220**	P	**P**	**01 09 35.4**	**-0.8**
SOEI				IAmb	IAmb	01 09 58.0	
	comp=Z,22nm,0.8s						
KLR	**Kul'dur**	**34.18**	**343**	P	**P**	**01 09 34.9**	**-1.2**
	comp=Z,0.6nm,0.4s,baz=155,slow=12,SNR=4.4						
KLR				LR	LR	01 22 08.0	
	comp=Z,612nm,21.5s,baz=156,slow=34						
QIZ	**Qiongzhong**	**34.36**	**279**	P	**P**	**01 09 37.0**	**-1.1**
QIZ				S	**S**	**01 15 06.3**	**+0.3**
QIZ				PcS	**PcS**	**01 16 00.3**	**-0.4**
QIZ				pmax	pmax		
	comp=Z,300nm,11.8s						
QIZ				LR	LR		
	comp=Z,400nm,19.6s						
QIZ				LR	LR		
	comp=Z,460nm,21.1s						
QIZ				LR	LR		
	comp=Z,620nm,20.6s						
BJT	**Baijiatuau**	**34.54**	**318**	P	**P**	**01 09 39.3**	**-0.1**
BJI	**Beijing**	**34.55**	**318**	P	**P**	**01 09 40.0**	**+0.5**
BJI				S	**S**	**01 15 09.8**	**+1.4**
BJI				pmax	pmax		
	comp=Z,27nm,1.4s						
BJI				pmax	pmax		
	comp=Z,330nm,7.0s						
BJI				LR	LR		
	comp=Z,530nm,21.3s						
BJI				LR	LR		
	comp=Z,670nm,18.4s						
BJI				LR	LR		
	comp=Z,520nm,21.1s						
MMRI	**Maumere**	**34.60**	**224**	P	**P**	**01 09 39.5**	**-0.7**
BATI	**Baumata**	**34.85**	**221**	P	**P**	**01 09 40.9**	**-1.4**
	comp=Z,18nm,0.3s,baz=163,slow=11,SNR=4.0						
ENH	**Enshi**	**35.77**	**298**	P	**P**	**01 09 50.2**	**0.0**
TIY	**Taiyuan**	**35.95**	**312**	*e*P	P	01 09 41.0	-11
TIY				S	**S**	**01 15 32.3**	**+2.0**
TIY				SS	**SnSn**	**01 17 55.8**	**+1.8**
TIY				pmax	pmax		
	comp=Z,280nm,5.9s						
TIY				LR	LR		
	comp=N,300nm,11.2s						
TIY				LR	LR		
	comp=E,380nm,7.7s						
TIY				LR	LR		
	comp=Z,380nm,17.0s						
SBUM	**Sibu**	**36.14**	**250**	P	**P**	**01 09 53.4**	**-0.1**
CTA	**Charters Tower**	**36.83**	**180**	P	**P**	**01 10 00.5**	**+1.3**
	comp=Z,1.3nm,0.5s,baz=9.1,slow=10,SNR=4.2						
CTAO	**Charters Tower**	**36.83**	**180**	P	**P**	**01 09 59.6**	**+0.4**
PETK	**Petropavlovsk-**	**37.22**	**12**	P	**P**	**01 10 01.8**	**-0.4**
	comp=Z,2.0nm,0.6s,baz=241,slow=6.1,SNR=4.2						
PETK				LR	LR	01 23 03.1	
	comp=Z,281nm,21.6s,baz=190,slow=33						
PETK	**Petropavlovsk-**	**37.22**	**12**	P	**P**	**01 10 01.9**	**-0.3**
XAN	**Xi'an**	**37.24**	**304**	P	**P**	**01 10 02.8**	**+0.1**
XAN				S	**S**	**01 15 44.3**	**-5.7**
XAN				pmax	pmax		
	comp=Z,15nm,1.5s						
XAN				pmax	pmax		
	comp=Z,500nm,6.3s						
XAN				LR	LR		
	comp=Z,970nm,16.3s						
XAN				LR	LR		
	comp=Z,840nm,19.5s						
XAN				LR	LR		
	comp=Z,1μm,20.6s						
XAN	**Xi'an**	**37.24**	**304**	P	**P**	**01 10 02.6**	**-0.2**
GYA	**Guiyang**	**37.57**	**291**	⇓P	**P**	**01 10 06.5**	**+0.8**
GYA				S	**S**	**01 15 57.0**	**+1.7**
GYA				pmax	pmax		
	comp=Z,17nm,1.2s						
GYA				pmax	pmax		
	comp=Z,200nm,8.5s						
GYA				LR	LR		
	comp=Z,330nm,19.4s						
GYA				LR	LR		
	comp=Z,410nm,18.6s						
GYA				LR	LR		
	comp=Z,640nm,18.7s						
PLAI	**Plampang**	**37.86**	**229**	P	**P**	**01 10 08.8**	**+0.8**
	comp=Z,31nm,1.0s						
HHC	**Hu-ho-hao-te**	**37.99**	**316**	*e*P	**P**	**01 10 09.3**	**+0.3**
HHC				S	**S**	**01 16 00.5**	**-0.8**
HHC				sS	sS	01 16 08.0	+2.6
HHC				pmax	pmax		
	comp=Z,310nm,5.9s						
HHC				LR	LR		
	comp=Z,470nm,18.4s						
HHC				LR	LR		
	comp=Z,650nm,19.4s						
HHC				LR	LR		
	comp=Z,850nm,19.0s						
KSM	**Kuching**	**38.29**	**250**	P	**P**	**01 10 10.1**	**-1.6**
WR0	**Warramunga Arr**	**38.37**	**197**	P	**P**	**01 10 11.3**	**-1.0**
WR0				IAmb	IAmb	01 10 14.2	
	comp=Z,26nm,1.1s						
WB2	**Warramunga Arr**	**38.41**	**198**	P	**P**	**01 10 11.6**	**-1.0**
WB2				IAmb	IAmb	01 10 14.6	
	comp=Z,29nm,1.0s						
WRA	**Warramunga Arr**	**38.41**	**198**	P	**P**	**01 10 11.5**	**-1.2**
	comp=Z,23nm,1.1s,baz=18,slow=9.2,SNR=33						
WRA				PcP	**PcP**	**01 12 24.2**	**-1.9**
	comp=Z,1.0nm,0.8s,baz=16,slow=3.3,SNR=2.5						
WRA				S	**S**	**01 16 08.9**	**+1.1**
	comp=Z,0.7nm,1.0s,baz=4.3,slow=17,SNR=2.5						
SANVU	**Saraoutou**	**38.44**	**146**	P	**P**	**01 10 12.9**	**0.0**
SANVU				IAmb	IAmb	01 10 19.4	
	comp=Z,24nm,0.7s						
TWSI	**Taliwang, Sumb**	**38.45**	**231**	P	**P**	**01 10 13.3**	**+0.2**
	comp=Z,482nmcomp=Z,46nm,1.0s						
BTO	**Baotou**	**38.91**	**315**	*e*P	**P**	**01 10 16.5**	**-0.3**
SRBI	**Singaraja**	**39.29**	**233**	P	**P**	**01 10 19.9**	**-0.2**
	comp=Z,773nmcomp=Z,29nm,1.3s						
KMMI	**Kalianget**	**39.62**	**236**	P	P	01 10 30.0	+7.2
SLVN	**Son La**	**39.87**	**283**	P	**P**	**01 10 24.5**	**-0.5**
FITZ	**Fitzroy Crossi**	**40.17**	**211**	P	**P**	**01 10 26.1**	**-1.3**
	comp=Z,19nm,1.0s,baz=35,slow=9.4,SNR=14						
FITZ	**Fitzroy Crossi**	**40.17**	**211**	P	**P**	**01 10 26.9**	**-0.5**
JAGI	**Jajag, Banyuwa**	**40.34**	**234**	P	**P**	**01 10 28.4**	**-0.5**
CD2	**Chengdu**	**40.73**	**298**	P	**P**	**01 10 31.3**	**-0.8**
CD2				PP	**PP**	**01 12 04.3**	**-1.6**
CD2				S	**S**	**01 16 40.3**	**-2.4**
CD2				pmax	pmax		
	comp=Z,30nm,1.0s						
CD2				LR	LR		
	comp=Z,810nm,12.9s						
CD2				LR	LR		
	comp=Z,840nm,16.5s						
CD2				LR	LR		
	comp=Z,930nm,11.5s						
KMI	**Kunming**	**40.99**	**289**	⇓P	**P**	**01 10 35.3**	**+0.9**
KMI				pP	sP	01 10 38.0	-0.5
KMI				sP	pP	01 10 40.8	+3.5
KMI				PP	**PnPn**	**01 12 16.0**	**+2.8**
KMI				PcP	**PcP**	**01 12 33.5**	**-1.2**
KMI				ScP	**ScP**	**01 16 24.8**	**+0.1**
KMI				S	**S**	**01 16 48.3**	**+1.3**
KMI				pmax	pmax		
	comp=Z,9.0nm,1.6s						
KMI				pmax	pmax		
	comp=Z,200nm,5.5s						
KMI				LR	LR		
	comp=Z,320nm,13.1s						
KMI				LR	LR		

	comp=Z,520nm,16.4s						
KMI				LR	LR		
	comp=Z,650nm,17.8s						
KMI	**Kunming**	**40.99**	**289**	P	**P**	**01 10 34.3**	**-0.2**
LZH	**Lanzhou**	**41.82**	**305**	*e*P	**P**	**01 10 41.8**	**+0.8**
LZH				pP	pP	01 10 44.5	+0.5
LZH				sP	sP	01 10 49.3	+4.1
LZH				S	**S**	**01 17 00.8**	**+1.9**
LZH				sS	sS	01 17 08.5	+5.5
LZH				SS	**SS**	**01 19 57.3**	**-7.7**
LZH				pmax	pmax		
	comp=Z,22nm,1.1s						
LZH				pmax	pmax		
	comp=Z,410nm,4.1s						
LZH				LR	LR		
	comp=Z,660nm,16.3s						
LZH				LR	LR		
	comp=Z,690nm,16.8s						
LZH				LR	LR		
	comp=Z,680nm,17.3s						
AS31	**Alice Springs**	**42.07**	**197**	P	**P**	**01 10 42.3**	**-0.6**
ASAR	**Alice Springs**	**42.07**	**197**	P	**P**	**01 10 41.6**	**-1.3**
	comp=Z,5.6nm,0.9s,baz=21,slow=9.1,SNR=32						
ASAR				PP	**PP**	**01 12 19.9**	**-0.6**
	comp=Z,0.4nm,0.5s,baz=18,slow=10,SNR=2.4						
ASAR				PcP	**PcP**	**01 12 37.1**	**-0.7**
	comp=Z,1.3nm,0.9s,baz=28,slow=3.4,SNR=4.2						
ASAR	**Alice Springs**	**42.07**	**197**	P	**P**	**01 10 41.4**	**-1.6**
SRAK	**Srakaew**	**42.35**	**272**	P	**P**	**01 10 42.0**	**-3.4**
	comp=Z,1μmcomp=Z,148nm,0.8s						
EIDS	**Eidsvold**	**42.38**	**173**	P	**P**	**01 10 45.2**	**-0.2**
MA2	**Magadan**	**42.69**	**4**	P	**P**	**01 10 47.2**	**-0.3**
UTTA	**Uttaradit**	**43.25**	**278**	P	**P**	**01 10 55.0**	**+2.3**
	comp=Z,18nm,0.6s						
DZM	**Mont Dzumac**	**43.69**	**152**	*e*P	**P**	**01 10 58.6**	**+2.4**
	comp=Z,44nm,1.1s						
DZM	**Mont Dzumac**	**43.69**	**152**	*e*LR	LR	01 23 01.0	
	comp=Z,1μm,24.6s						
DZM	**Mont Dzumac**	**43.69**	**152**	P	**P**	**01 10 57.0**	**+0.9**
	comp=Z,13nm,0.8s,baz=295,slow=5.1,SNR=9.4						
DZM	**Mont Dzumac**	**43.69**	**152**	P	**P**	**01 10 56.3**	**+0.1**
DZM				IAmb	IAmb	01 10 58.5	
	comp=Z,17nm,0.9s						
LAMP	**Lampang**	**44.05**	**279**	P	**P**	**01 11 01.7**	**+2.5**
	comp=Z,16nm,0.8s						
SUKH	**Sukhothai**	**44.16**	**278**	P	**P**	**01 11 01.8**	**+1.8**
	comp=Z,16nm,1.2s						
ULN	**Ulaanbaatar**	**44.27**	**323**	P	**P**	**01 11 01.2**	**+0.5**
CM36	**Chiang Mai Arr**	**44.55**	**279**	P	**P**	**01 11 04.0**	**+0.8**
UTHA	**Uthaitani**	**44.58**	**275**	P	**P**	**01 11 05.0**	**+1.6**
	comp=Z,14nm,0.8s						
SONM	**Songino Array**	**44.64**	**322**	P	**P**	**01 11 03.8**	**+0.2**
	comp=Z,1.4nm,0.6s,baz=133,slow=6.3,SNR=7.6						
SONM				LR	LR	01 29 18.1	
	comp=Z,294nm,19.6s,baz=114,slow=36						
SONM	**Songino Array**	**44.64**	**322**	P	**P**	**01 11 03.8**	**+0.2**
CMMT	**Chiang Mai**	**44.66**	**280**	P	**P**	**01 11 05.0**	**+0.9**
	comp=Z,3.4nm,0.7s						
CHTO	**Chiang Mai**	**44.67**	**280**	P	**P**	**01 11 03.9**	**-0.3**
CM31	**Chiang Mai Arr**	**44.70**	**279**	P	**P**	**01 11 04.8**	**+0.5**
CM31				IAmb	IAmb	01 11 07.2	
	comp=Z,19nm,1.0s						
CMAR	**Chiang Mai Arr**	**44.70**	**279**	P	**P**	**01 11 04.7**	**+0.3**
	comp=Z,8.9nm,0.7s,baz=72,slow=6.7,SNR=44						
CMAR				LR	LR	01 29 49.4	
	comp=Z,200nm,18.0s,baz=145,slow=36						
UMPA	**Umpang Tak**	**45.05**	**276**	P	**P**	**01 11 09.9**	**+2.7**
	comp=Z,17nm,0.8s						
MHMT	**Maesarieng**	**45.69**	**279**	P	**P**	**01 11 13.3**	**+1.1**
GTA	**Gaotai**	**45.80**	**309**	⇑P	**P**	**01 11 14.0**	**+1.1**
GTA				pP	sP	01 11 19.5	+2.4
GTA				sP	pP	01 11 22.0	+6.1
GTA				pmax	pmax		
	comp=Z,13nm,1.5s						
GTA				pmax	pmax		
	comp=Z,180nm,4.4s						
GTA				LR	LR		
	comp=Z,420nm,18.2s						
GTA				LR	LR		
	comp=Z,760nm,17.8s						
GTA				LR	LR		
	comp=Z,860nm,18.5s						
KLSI		**46.06**	**246**	P	**P**	**01 11 15.1**	**0.0**
	comp=Z,16nm,1.1s						
PSA00	**Pilbara Seismi**	**46.06**	**215**	P	**P**	**01 11 13.3**	**-1.7**
SEY	**Seymchan**	**46.13**	**4**	P	**P**	**01 11 14.2**	**-0.8**
	comp=Z,0.5nm,0.5s,baz=216,slow=14,SNR=2.0						
MDSI	**Maura Dua**	**46.44**	**246**	P	**P**	**01 11 18.3**	**+0.1**
	comp=Z,7.4nm,0.9s						
MSVF	**Nonsavu**	**46.78**	**136**	P	**P**	**01 11 23.1**	**+2.3**
	comp=Z,4.6nm,0.7s,baz=301,slow=12,SNR=4.9						
ARMA	**Armidale**	**47.43**	**173**	P	**P**	**01 11 25.9**	**+0.2**
ARMA				IAmb	IAmb	01 11 28.3	
	comp=Z,10nm,1.0s						
RPSI	**Rantau Prapat**	**48.30**	**258**	IAmb	IAmb	01 11 35.3	
	comp=Z,23nm,1.2s						
MNSI	**Mandailing Nat**	**48.37**	**256**	P	**P**	**01 11 34.1**	**+0.9**
	comp=Z,954nmcomp=Z,12nm,0.5s						
STKA	**Stephens Creek**	**48.75**	**185**	P	**P**	**01 11 35.8**	**0.0**
	comp=Z,3.0nm,0.7s,baz=5.4,slow=12,SNR=6.7						
STKA				LR	LR	01 32 57.4	
	comp=Z,147nm,19.1s,baz=13,slow=37						
STKA	**Stephens Creek**	**48.75**	**185**	P	**P**	**01 11 34.9**	**-0.9**
GSI	**Gunungsitoli**	**50.05**	**257**	P	**P**	**01 11 46.0**	**-0.1**
GSI	**Gunungsitoli**	**50.05**	**257**	P	**P**	**01 11 46.8**	**+0.7**
	comp=Z,92nm,1.0s						
FORT	**Forrest**	**50.50**	**200**	P	**P**	**01 11 49.3**	**+0.2**
FORT				IAmb	IAmb	01 11 51.5	
	comp=Z,28nm,1.1s						
LSA	**Lhasa**	**51.46**	**295**	P	**P**	**01 11 59.0**	**+1.9**
LSA				pmax	pmax		
	comp=Z,100nm,1.1s						
LSA	**Lhasa**	**51.46**	**295**	P	**P**	**01 11 57.3**	**+0.2**
LSA				IAmb	IAmb	01 12 00.9	
	comp=Z,18nm,0.7s						
CAN	**Canberra**	**52.08**	**177**	P	**P**	**01 12 01.4**	**+0.3**
CAN				IAmb	IAmb	01 12 04.6	
	comp=Z,33nm,1.2s						
WMQ	**Urumqi**	**55.62**	**312**	*e*P	**P**	**01 12 28.3**	**+1.3**
WMQ				sP	sP	01 12 39.0	+8.4
WMQ				PP	**PP**	**01 14 34.5**	**+3.4**
WMQ				pmax	pmax		
	comp=Z,23nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,270nm,3.6s						
WMQ				LR	LR		
	comp=Z,580nm,28.9s						
WMQ				LR	LR		
	comp=Z,1μm,29.0s						
WMQ				LR	LR		
	comp=Z,470nm,25.7s						
WMQ	**Urumqi**	**55.62**	**312**	IAmb	IAmb	01 12 29.3	
	comp=Z,21nm,1.1s						
ANM	**Nome**	**57.69**	**23**	P	**P**	**01 12 41.5**	**+0.4**
	baz=238						
ANM	**Nome**	**57.69**	**23**	P	**P**	**01 12 41.6**	**+0.4**
ANM				IAmb	IAmb	01 12 49.8	
	comp=Z,13nm,1.1s						
ZAA0	**Zalesovo Array**	**59.53**	**323**	P	**P**	**01 12 52.8**	**-1.4**
ZALV	**Zalesovo Beam**	**59.53**	**323**	P	**P**	**01 12 52.0**	**-2.2**
	comp=Z,0.6nm,0.4s,baz=115,slow=6.7,SNR=4.9						
ZALV				LR	LR	01 37 44.6	
	comp=Z,323nm,19.3s,baz=106,slow=35						
ZALV	**Zalesovo Beam**	**59.53**	**323**	P	**P**	**01 12 52.9**	**-1.2**
MK31	**Makanchi Array**	**59.83**	**315**	P	**P**	**01 12 55.5**	**-1.0**
MKAR	**Makanchi Array**	**59.83**	**315**	P	**P**	**01 12 54.1**	**-2.4**
	comp=Z,1.1nm,0.6s,baz=92,slow=8.7,SNR=16						
MKAR				LR	LR	01 40 26.1	
	comp=Z,335nm,18.0s,baz=92,slow=38						
MKAR	**Makanchi Array**	**59.83**	**315**	P	**P**	**01 12 55.3**	**-1.1**
MAKZ	**Makanchi**	**60.05**	**315**	P	**P**	**01 12 57.3**	**-0.6**
MAKZ				IAmb	IAmb	01 13 10.2	
	comp=Z,16nm,1.5s						
OHAK	**Old Harbor**	**60.16**	**33**	P	**P**	**01 12 58.8**	**+0.4**
	baz=254						
OHAK	**Old Harbor**	**60.16**	**33**	P	**P**	**01 12 58.5**	**+0.1**
SVW2	**Sparrevohn**	**60.22**	**28**	IAmb	IAmb	01 13 24.0	
	comp=Z,14nm,1.1s						
RDOG	**Red Dog Mine**	**60.36**	**20**	P	**P**	**01 12 59.7**	**0.0**
	baz=239						
RDOG	**Red Dog Mine**	**60.36**	**20**	IAmb	IAmb	01 13 07.1	
	comp=Z,14nm,1.0s						
KDAK	**Kodiak Island**	**60.67**	**33**	P	**P**	**01 13 02.2**	**+0.2**
	comp=Z,4.4nm,0.7s,baz=281,slow=5.7,SNR=6.5						
KDAK	**Kodiak Island**	**60.67**	**33**	P	**P**	**01 13 02.0**	**0.0**
	baz=255						
KDAK	**Kodiak Island**	**60.67**	**33**	IAmb	IAmb	01 13 25.9	
	comp=Z,12nm,1.0s						
TTA	**Tatalina**	**60.68**	**26**	P	**P**	**01 13 01.9**	**-0.1**
	baz=249						
TTA	**Tatalina**	**60.68**	**26**	P	**P**	**01 13 02.1**	**0.0**
TTA				IAmb	IAmb	01 13 09.2	
	comp=Z,9.0nm,1.0s						
SHLS	**Shalkode**	**61.50**	**310**	*e*P	**P**	**01 13 06.3**	**-1.8**
	comp=Z,7.4nm,1.6s,baz=310						
UZB	**Uzynbulak**	**61.82**	**310**	*i* P	**P**	**01 13 10.4**	**+0.1**
	comp=Z,3.8nm,1.2s,baz=310						
BRLK	**Bradley Lake**	**62.04**	**31**	IAmb	IAmb	01 13 36.8	
	comp=Z,14nm,0.9s						
KPKS	**Kokpek**	**62.08**	**311**	*e*P	**P**	**01 13 12.1**	**+0.1**
	comp=Z,5.0nm,1.6s,baz=311						
BRSE	**Bradley Lake S**	**62.11**	**31**	P	**P**	**01 13 11.3**	**-0.4**
	baz=255						
URZ	**Urewera**	**62.24**	**153**	P	**P**	**01 13 13.1**	**+0.3**
URZ				IAmb	IAmb	01 13 14.0	
	comp=Z,13nm,1.1s						
SATY	**Saty**	**62.27**	**310**	*e*P	**P**	**01 13 13.4**	**+0.2**
	comp=Z,9.4nm,1.2s,baz=310						
PPLA	**Purkeypile**	**62.32**	**27**	P	**P**	**01 13 13.3**	**+0.1**
	baz=252						
PPLA	**Purkeypile**	**62.32**	**27**	P	**P**	**01 13 13.1**	**-0.1**
PPLA				IAmb	IAmb	01 13 42.2	
	comp=Z,17nm,1.1s						
SKT	**Skwentna**	**62.34**	**28**	P	**P**	**01 13 12.3**	**-0.9**
	baz=254						
TDK	**Taldyqorghan**	**62.37**	**312**	*e*P	**P**	**01 13 14.5**	**+0.8**
	baz=312						
SUA	**Susitna One**	**62.55**	**29**	P	**P**	**01 13 14.2**	**-0.6**
	baz=254						
SUA	**Susitna One**	**62.55**	**29**	IAmb	IAmb	01 13 21.1	
	comp=Z,6.2nm,0.8s						
CHUM	**Lake Minchumin**	**62.57**	**26**	P	**P**	**01 13 15.1**	**+0.5**
	baz=252						
IMAR	**Indian Mountai**	**62.70**	**24**	P	**P**	**01 13 14.9**	**-0.6**
KURK	**Kurchatov**	**62.71**	**319**	P	**P**	**01 13 13.8**	**-2.1**
KURK				IAmb	IAmb	01 13 39.7	
	comp=Z,11nm,1.1s						
BKZ	**Black Stump Fm**	**62.73**	**154**	P	**P**	**01 13 16.0**	**-0.1**
BKZ				IAmb	IAmb	01 13 17.4	
	comp=Z,11nm,0.8s						
KURBB	**Kurchatov Arra**	**62.76**	**319**	P	**P**	**01 13 13.7**	**-2.5**
	comp=Z,29nm,0.5s,baz=93,slow=7.3,SNR=38						
O22K	**Cooper Landing**	**62.78**	**30**	P	**P**	**01 13 15.9**	**-0.3**
	baz=256						
SEW	**Seward**	**62.83**	**31**	P	**P**	**01 13 16.2**	**-0.3**
	baz=256,SNR=6.4						
RC01	**Rabbit Creek A**	**62.93**	**29**	P	**P**	**01 13 16.6**	**-0.5**
	baz=256,SNR=7.2						
BPAW	**Bear Paw Mtn.**	**63.19**	**26**	P	**P**	**01 13 18.7**	**-0.2**
	baz=253						
MDOK	**Medeo**	**63.27**	**310**	*e*P	**P**	**01 13 20.1**	**+0.2**
	baz=310						
TRF	**Thorofare Moun**	**63.30**	**27**	P	**P**	**01 13 18.9**	**-0.9**
	baz=254						
TRF	**Thorofare Moun**	**63.30**	**27**	IAmb	IAmb	01 13 42.0	
	comp=Z,14nm,1.0s						
NRIK	**Noril'sk**	**63.31**	**340**	P	**P**	**01 13 18.3**	**-1.2**
	comp=Z,1.6nm,0.6s,baz=129,slow=6.5,SNR=2.9						
NRIK				LR	LR	01 42 36.4	
	comp=Z,317nm,18.1s,baz=131,slow=38						
TNSS	**Tian-Shan**	**63.34**	**310**	*e*P	**P**	**01 13 21.5**	**+0.8**
	baz=310						
AAA	**Alma-Ata**	**63.37**	**310**	*e*P	**P**	**01 13 20.8**	**+0.4**
	baz=310						
MLY	**Manley**	**63.57**	**25**	P	**P**	**01 13 21.2**	**-0.2**
	baz=253,SNR=13						
SML	**Sawmill**	**63.76**	**29**	P	**P**	**01 13 22.6**	**-0.1**
	baz=257,SNR=9.2						
KUU	**Kurty**	**63.80**	**311**	*e*P	**P**	**01 13 23.4**	**+0.2**
	comp=Z,13nm,1.3s,baz=311						
A21K	**Barrow**	**63.86**	**18**	P	**P**	**01 13 23.1**	**+0.1**
	baz=244						
RND	**Reindeer**	**63.91**	**27**	IAmb	IAmb	01 13 42.0	
	comp=Z,13nm,1.2s						
MCK	**McKinley**	**63.96**	**27**	P	**P**	**01 13 21.7**	**-2.3**
	baz=255						
HYB	**Hyderabad**	**64.05**	**281**	*i* P	**P**	**01 13 25.0**	**-0.4**
KSH	**Kashi**	**64.06**	**306**	P	**P**	**01 13 28.5**	**+3.3**
KSH				pP	pwP	01 13 34.3	+3.9
KSH				S	**S**	**01 22 09.5**	**+7.4**
KSH				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KSH				pmax	pmax		
	comp=Z,520nm,7.9s						
KSH				LR	LR		
	comp=Z,390nm,7.0s						
KSH				LR	LR		
	comp=Z,400nm,10.4s						
KSH				LR	LR		
	comp=Z,1μm,18.3s						
NEA2	**Nenana**	**64.13**	**26**	P	**P**	**01 13 24.8**	**-0.2**
	baz=254						
GLI	**Glacier Island**	**64.14**	**30**	P	**P**	**01 13 24.6**	**-0.5**
	baz=258						
GLI	**Glacier Island**	**64.14**	**30**	IAmb	IAmb	01 13 49.4	
	comp=Z,16nm,1.1s						
I23K	**Minto, Yukon-K**	**64.16**	**25**	P	**P**	**01 13 25.3**	**+0.1**
	baz=254,SNR=7.8						
I23K	**Minto, Yukon-K**	**64.16**	**25**	IAmb	IAmb	01 13 32.2	
	comp=Z,21nm,1.3s						
FID	**Port Fidalgo**	**64.41**	**30**	IAmb	IAmb	01 13 51.8	
	comp=Z,17nm,1.0s						
COLD	**Coldfoot**	**64.44**	**23**	P	**P**	**01 13 26.2**	**-0.8**
	baz=252						
COLD	**Coldfoot**	**64.44**	**23**	IAmb	IAmb	01 13 34.6	
	comp=Z,6.1nm,0.8s						
MDM	**Murphy Dome**	**64.58**	**25**	IAmb	IAmb	01 13 35.4	
	comp=Z,8.2nm,1.0s						
CCB	**Clear Creek Bu**	**64.67**	**26**	IAmb	IAmb	01 13 51.9	
	comp=Z,14nm,1.4s						
EYAK	**Cordova Ski Ar**	**64.72**	**31**	P	**P**	**01 13 29.1**	**+0.2**
	baz=260						
EYAK	**Cordova Ski Ar**	**64.72**	**31**	IAmb	IAmb	01 13 54.7	
	comp=Z,12nm,0.9s						
KLU	**Klutina**	**64.81**	**29**	P	**P**	**01 13 29.9**	**+0.2**
	baz=259						
M24K	**Tolsona, Glenn**	**64.82**	**29**	P	**P**	**01 13 30.3**	**+0.7**
	baz=258						
HDA	**Harding Lake**	**64.97**	**26**	P	**P**	**01 13 28.7**	**-1.8**
	baz=257						
HDA	**Harding Lake**	**64.97**	**26**	IAmb	IAmb	01 13 35.9	
	comp=Z,7.6nm,0.9s						
IL31		**65.08**	**26**	IAmb	IAmb	01 13 54.8	
	comp=Z,15nm,1.4s						
ILAR	**Eielson Array**	**65.08**	**26**	P	**P**	**01 13 29.1**	**-2.1**
	comp=Z,2.4nm,0.7s,baz=252,slow=4.8,SNR=30						
ILAR				LR	LR	01 41 36.2	
	comp=Z,106nm,19.4s,baz=290,slow=36						
TOLK	**Toolik Lake Re**	**65.10**	**21**	P	**P**	**01 13 31.3**	**-0.1**
	baz=252,SNR=9.1						
TOLK	**Toolik Lake Re**	**65.10**	**21**	IAmb	IAmb	01 13 38.4	
	comp=Z,17nm,1.1s						
PAX	**Paxson**	**65.31**	**28**	P	**P**	**01 13 32.6**	**-0.3**
	baz=259,SNR=12						
PAX	**Paxson**	**65.31**	**28**	IAmb	IAmb	01 13 57.2	
	comp=Z,16nm,1.3s						
BMRM	**Bremner River**	**65.35**	**30**	P	**P**	**01 13 33.4**	**+0.3**
	baz=260,SNR=7.1						
BTLS	**Baital**	**65.46**	**312**	*e*P	**P**	**01 13 34.0**	**0.0**
	baz=312						
N25K	**Chitina, Valde**	**65.46**	**29**	P	**P**	**01 13 34.1**	**+0.2**
	baz=260,SNR=6.8						
N25K	**Chitina, Valde**	**65.46**	**29**	IAmb	IAmb	01 14 00.8	
	comp=Z,9.0nm,1.0s						
PRP	**Porcupine Dome**	**65.81**	**25**	P	**P**	**01 13 33.7**	**-2.5**
	baz=258						
VRDI	**Verde Repeater**	**65.94**	**30**	IAmb	IAmb	01 14 03.7	
	comp=Z,11nm,0.9s						
CRQE	**Cirque**	**66.05**	**31**	P	**P**	**01 13 37.8**	**+0.1**
	baz=262						
DOT	**Dot Lake**	**66.06**	**27**	IAmb	IAmb	01 13 38.5	
	comp=Z,9.7nm,0.7s						
SCRK	**Sand Creek**	**66.16**	**27**	P	**P**	**01 13 37.5**	**-0.8**
	baz=260,SNR=10						
MCARA	**McCarthy VSAT**	**66.17**	**30**	P	**P**	**01 13 38.4**	**+0.1**
	baz=262						
MCARA	**McCarthy VSAT**	**66.17**	**30**	IAmb	IAmb	01 13 57.7	
	comp=Z,13nm,0.9s						
TGL	**Tana Glacier**	**66.17**	**31**	IAmb	IAmb	01 14 05.9	
	comp=Z,22nm,1.3s						
BALM	**Baldy**	**66.45**	**30**	IAmb	IAmb	01 14 04.7	
	comp=Z,11nm,1.1s						
NIL	**Nilore**	**66.58**	**300**	P	**P**	**01 13 41.8**	**+0.3**
BMAR	**Burnt Mountain**	**66.60**	**23**	P	**P**	**01 13 40.9**	**-0.1**
YAH	**Yahtse**	**66.65**	**31**	IAmb	IAmb	01 14 04.3	
	comp=Z,11nm,0.8s						
BARN	**Barnard Glacie**	**66.78**	**30**	IAmb	IAmb	01 13 44.1	
	comp=Z,14nm,1.3s						
CTG	**Chitna Glacier**	**66.92**	**30**	P	**P**	**01 13 43.5**	**+0.2**
	baz=263						
CTGM	**Chitina Glacie**	**66.93**	**30**	IAmb	IAmb	01 13 45.2	
	comp=Z,11nm,0.8s						
BCAR	**Beaver Creek A**	**66.98**	**28**	P	**P**	**01 13 43.1**	**-0.5**
PINM	**Pinnacle**	**67.37**	**31**	P	**P**	**01 13 46.2**	**+0.1**
	baz=265						
EGAK	**Eagle**	**67.50**	**26**	P	**P**	**01 13 46.8**	**+0.1**
	baz=262,SNR=7.0						
BVAR	**Borovoye Array**	**67.95**	**321**	P	**P**	**01 13 46.9**	**-2.9**
	comp=Z,1.6nm,0.6s,baz=142,slow=13,SNR=10.0						
BRVK	**Borovoye**	**68.02**	**321**	P	**P**	**01 13 50.2**	**0.0**
KK31	**Karatay Array**	**68.05**	**310**	IAmb	IAmb	01 13 58.3	
	comp=Z,8.7nm,1.0s						
KKAR	**Karatay Array**	**68.05**	**310**	P	**P**	**01 13 50.1**	**-0.6**
IUG	**Iuzhnay**	**68.46**	**309**	*e*P	**P**	**01 13 53.2**	**-0.2**
	baz=309						
SKAG	**Skagway**	**69.82**	**32**	P	**P**	**01 14 02.3**	**+1.1**
	baz=269						
KBL	**Kabul**	**69.96**	**301**	P	**P**	**01 14 02.9**	**0.0**
KBL				IAmb	IAmb	01 14 04.8	
	comp=Z,19nm,1.1s						
INK	**Inuvik**	**70.86**	**23**	P	**P**	**01 14 06.2**	**-1.3**
	comp=Z,5.8nm,0.6s,baz=291,slow=4.5,SNR=24						
INK	**Inuvik**	**70.86**	**23**	IAmb	IAmb	01 14 13.4	
	comp=Z,13nm,1.0s						
H02S1	**DAWSON INLET T**	**71.58**	**39**	T	T	02 32 50.6	
	SNR=49						
PPT	**Papeete**	**72.16**	**115**	LR	LR	01 39 34.2	
	comp=Z,649nm,19.2s,baz=290,slow=30						
PPT2	**Papeete2**	**72.17**	**115**	*e*LR	LR	01 36 09.7	
	comp=Z,1μm,24.8s,baz=292						
DLBC	**Dease Lake**	**72.60**	**33**	P	**P**	**01 14 18.8**	**+0.6**
	comp=Z,4.7nm,0.5s,baz=274,slow=4.6,SNR=38						
C36M	**Paulatuk**	**74.26**	**22**	P	**P**	**01 14 26.5**	**-1.2**
	baz=276						
C36M	**Paulatuk**	**74.26**	**22**	IAmb	IAmb	01 14 28.5	
	comp=Z,21nm,1.2s						
TBI	**Tubuai**	**74.75**	**121**	*e*LR	LR	01 37 14.0	
	comp=Z,505nm,26.2s,baz=305						
ABKAR	**Akbulak array**	**74.76**	**317**	P	**P**	**01 14 28.8**	**-2.2**
TAOE	**Nuku Hiva Isla**	**77.42**	**103**	*e*LR	LR	01 38 25.5	
	comp=Z,1μm,26.2s						
GEYT	**Alibeck**	**78.10**	**306**	P	**P**	**01 14 48.7**	**-1.6**
	comp=Z,1.3nm,0.7s,baz=39,slow=7.4,SNR=5.0						
GEYT				LR	LR	01 51 32.4	
	comp=Z,242nm,20.3s,baz=325,slow=38						
GYA0B	**ALIBECK ARRAY**	**78.10**	**306**	P	**P**	**01 14 49.4**	**-0.9**
B05A	**Bryant**	**78.81**	**43**	P	**P**	**01 14 54.8**	**+0.9**
	baz=283						
YKA	**Yellowknife Ar**	**79.40**	**28**	P	**P**	**01 14 55.9**	**-0.9**
	comp=Z,3.9nm,0.6s,baz=290,slow=4.7,SNR=59						
YKA				LR	LR	01 50 56.3	
	comp=Z,112nm,19.3s,baz=0.0,slow=36						
I04A	**Tendick Farm,**	**79.62**	**47**	P	**P**	**01 14 59.2**	**+0.6**
	baz=284						
M02C	**Callahan**	**79.86**	**50**	P	**P**	**01 15 01.3**	**+1.3**
	baz=284						
YBH	**Yreka Blue Hor**	**79.89**	**49**	P	**P**	**01 15 00.9**	**+0.9**
	comp=Z,4.0nm,0.8s,baz=315,slow=4.3,SNR=5.8						
J04D	**Umpqua Nationa**	**79.96**	**48**	P	**P**	**01 15 01.4**	**+0.8**
	baz=284						
L04D	**Klamath Falls**	**80.07**	**49**	P	**P**	**01 15 02.3**	**+1.2**
	baz=284						
N02D	**Trinity Center**	**80.07**	**50**	P	**P**	**01 15 02.7**	**+1.6**
	baz=284						
O02D	**Mt. Diablo Mer**	**80.20**	**51**	P	**P**	**01 15 03.3**	**+1.6**
	baz=284						
M04C	**Macdoel**	**80.51**	**49**	P	**P**	**01 15 05.4**	**+2.0**
	baz=284						
J05D	**Fort Rock, OR**	**80.57**	**48**	P	**P**	**01 15 04.8**	**+1.0**
	baz=284						
B08A	**Colville Reser**	**80.58**	**42**	IAmb	IAmb	01 15 06.1	
	comp=Z,9.8nm,0.8s						
PINE	**Pine Mountain**	**80.65**	**47**	P	**P**	**01 15 05.3**	**+1.0**
O03E	**Paynes Creek**	**80.90**	**51**	P	**P**	**01 15 06.1**	**+0.6**
	baz=284						
K05A	**Summer Lake**	**80.95**	**48**	IAmb	IAmb	01 15 09.3	
	comp=Z,18nm,0.8s						
D08A	**Wollman Farm,**	**81.19**	**44**	P	**P**	**01 15 06.9**	**+0.1**
D08A				IAmb	IAmb	01 15 08.9	
	comp=Z,18nm,1.5s						
ORV	**Oroville**	**81.31**	**51**	P	**P**	**01 15 07.7**	**+0.1**
MOD	**Modoc Plateau**	**81.59**	**49**	IAmb	IAmb	01 15 11.5	
	comp=Z,19nm,1.4s						
NEW	**Newport**	**82.03**	**42**	P	**P**	**01 15 11.1**	**-0.2**
	comp=Z,4.1nm,0.8s,baz=306,slow=2.4,SNR=6.6						
NEW	**Newport**	**82.03**	**42**	P	**P**	**01 15 11.2**	**-0.2**
	baz=286						
BEKR	**Beckworth**	**82.08**	**51**	IAmb	IAmb	01 15 14.1	
	comp=Z,13nm,1.0s						
CMB	**Columbia Colle**	**82.55**	**53**	P	**P**	**01 15 14.0**	**-0.3**
CMB				IAmb	IAmb	01 15 16.6	
	comp=Z,9.4nm,0.9s						
WVOR	**Wild Horse Val**	**82.64**	**48**	IAmb	IAmb	01 15 16.9	
	comp=Z,20nm,1.4s						
BMO	**Blue Mountains**	**82.88**	**45**	IAmb	IAmb	01 15 18.5	
	comp=Z,10.0nm,1.1s						
RYN	**Ryan**	**83.79**	**52**	IAmb	IAmb	01 15 23.3	
	comp=Z,13nm,1.2s						
WALA	**Waterton Lakes**	**83.82**	**41**	IAmb	IAmb	01 15 40.0	
	comp=Z,7.5nm,1.1s						
PKM	**Mcpherson Peak**	**83.86**	**56**	P	**P**	**01 15 22.5**	**+1.3**
	baz=286						
KVN	**Kaiserville**	**83.99**	**51**	IAmb	IAmb	01 15 24.1	
	comp=Z,17nm,1.2s						
NVAR	**Mina Array Bea**	**84.02**	**52**	P	**P**	**01 15 22.8**	**+0.8**
	comp=Z,4.5nm,0.5s,baz=266,slow=6.2,SNR=47						
NVAR				LR	LR	01 44 52.3	
	comp=Z,56nm,20.7s,baz=280,slow=30						
NVAR	**Mina Array Bea**	**84.02**	**52**	P	**P**	**01 15 21.8**	**-0.2**
NV11	**Mina Array Sit**	**84.13**	**52**	IAmb	IAmb	01 15 37.5	
	comp=Z,11nm,1.2s						
ARCES	**ARCESS Array B**	**84.20**	**342**	P	**P**	**01 15 20.2**	**-1.9**
	comp=Z,4.9nm,1.1s,baz=40,slow=9.6,SNR=4.1						
ARCES				LR	LR	01 57 41.2	
	comp=Z,385nm,18.1s,baz=215,slow=39						
MSO	**Missoula**	**84.52**	**43**	P	**P**	**01 15 24.5**	**+0.3**
	baz=289						
HLID	**Hailey**	**85.25**	**46**	P	**P**	**01 15 28.6**	**+0.5**
	baz=289						
HLID	**Hailey**	**85.25**	**46**	IAmb	IAmb	01 15 36.6	
	comp=Z,7.1nm,0.9s						
MPMC	**Manual Prospec**	**85.33**	**54**	P	**P**	**01 15 29.3**	**+0.6**
	baz=288						
ELK	**Elko**	**85.57**	**49**	IAmb	IAmb	01 15 44.1	
	comp=Z,9.1nm,1.0s						
MCMT	**McKenzie Canyo**	**85.90**	**44**	P	**P**	**01 15 30.7**	**-0.7**
TPNV	**Topopah Spring**	**86.01**	**53**	P	**P**	**01 15 32.5**	**+0.4**
	baz=288						
TPNV	**Topopah Spring**	**86.01**	**53**	IAmb	IAmb	01 15 51.9	
	comp=Z,7.9nm,1.1s						
GSC	**Goldstone, Bar**	**86.09**	**54**	P	**P**	**01 15 32.6**	**+0.3**
	baz=288						
BOZ	**Bozeman (W)**	**86.44**	**43**	P	**P**	**01 15 33.7**	**-0.2**
	baz=291						
BOZ	**Bozeman (W)**	**86.44**	**43**	IAmb	IAmb	01 15 35.5	
	comp=Z,19nm,1.4s						
EGMT	**Eagleton**	**86.77**	**41**	IAmb	IAmb	01 15 37.4	
	comp=Z,19nm,1.5s						
PRN	**Pahroc Range**	**86.78**	**52**	IAmb	IAmb	01 15 58.4	
	comp=Z,8.9nm,1.2s						
RKT	**Rikitea**	**86.93**	**115**	*e*LR	LR	01 42 56.6	
	comp=Z,765nm,23.2s						
HVU	**Hansel Valley**	**86.99**	**47**	IAmb	IAmb	01 15 44.3	
	comp=Z,13nm,1.1s						
GMRC	**Granite Mounta**	**87.15**	**55**	P	**P**	**01 15 38.1**	**+0.5**
	baz=289						
PSUT	**Pine Spring**	**87.30**	**51**	P	**P**	**01 15 37.8**	**-0.6**
YPP	**Pitchstone Pla**	**87.46**	**44**	IAmb	IAmb	01 15 46.2	
	comp=Z,9.9nm,1.3s						
DUG	**Dugway, Tooele**	**87.50**	**49**	P	**P**	**01 15 39.6**	**+0.4**
	baz=290						
DUG	**Dugway, Tooele**	**87.50**	**49**	IAmb	IAmb	01 15 41.1	
	comp=Z,11nm,0.8s						
KBZ	**Khabaz**	**87.53**	**315**	LR	LR	01 57 29.3	
	comp=Z,226nm,19.3s,baz=59,slow=38						
H17A	**Grant Village**	**87.57**	**44**	P	**P**	**01 15 42.0**	**+2.3**
	baz=291						
FLWY	**Flagg Ranch**	**87.60**	**45**	IAmb	IAmb	01 15 42.9	
	comp=Z,7.9nm,0.8s						
YMP	**Mirror Lake Pl**	**87.72**	**44**	P	**P**	**01 15 41.1**	**+0.7**
YMP				IAmb	IAmb	01 16 02.8	
	comp=Z,13nm,1.1s						

AHID	Auburn Hatcher	87.81	46	IAmb	IAmb	01 15 43.2	
	comp=Z,12nm,1.1s						
CCUT	Cedar City	88.00	51	IAmb	IAmb	01 15 45.0	
	comp=Z,9.9nm,1.0s						
RLMT	Red Lodge	88.17	43	P	P	01 15 42.4	0.0
	baz=292						
RLMT	Red Lodge	88.17	43	IAmb	IAmb	01 16 12.2	
	comp=Z,13nm,1.4s						
SZCU	Shurtz Canyon	88.19	51	IAmb	IAmb	01 15 49.5	
	comp=Z,9.0nm,1.3s						
LCMT	Little Creek M	88.27	52	IAmb	IAmb	01 16 04.7	
	comp=Z,6.7nm,1.2s						
FFC	Flin Flon	88.42	33	P	P	01 15 42.3	-0.7
FFC				IAmb	IAmb	01 15 44.4	
	comp=Z,17nm,1.4s						
PDMCI	Parker Dam,Lak	88.49	55	P	P	01 15 44.2	+0.4
	baz=290						
FINES	FINESS Array B	88.54	335	P	P	01 15 40.8	-2.7
	comp=Z,3.0nm,0.9s,baz=80,slow=4.6,SNR=5.2						
FINES				LR	LR	01 58 15.3	
	comp=Z,375nm,18.7s,baz=319,slow=38						
BW06	Boulder Array	88.86	45	P	P	01 15 45.3	-0.5
	baz=292						
PDAR	Pinedale Array	88.86	45	P	P	01 15 45.1	-0.6
	comp=Z,0.5nm,0.4s,baz=172,slow=1.4,SNR=17						
PDAR				LR	LR	01 50 49.2	
	comp=Z,63nm,19.2s,baz=344,slow=32						
PDAR	Pinedale Array	88.86	45	P	P	01 15 45.0	-0.7
P17A	Butcher Ranch,	89.25	49	IAmb	IAmb	01 15 50.3	
	comp=Z,12nm,1.1s						
WUAZ	Wupatki	90.20	53	P	P	01 15 52.4	+0.3
	baz=291						
WUAZ	Wupatki	90.20	53	IAmb	IAmb	01 15 55.4	
	comp=Z,9.2nm,1.1s						
O20A	White River Ci	90.78	48	P	P	01 15 54.6	-0.2
	baz=293						
O20A	White River Ci	90.78	48	IAmb	IAmb	01 15 56.9	
	comp=Z,10nm,1.0s						
K22A	Casper	90.96	45	P	P	01 15 56.5	+1.0
	baz=294						
PV22	Blue Mesa, Par	91.01	49	IAmb	IAmb	01 16 20.6	
	comp=Z,15nm,1.5s						
W18A	Petrified Fore	91.60	53	P	P	01 15 59.2	+0.6
	baz=292						
MVCO	Mesa Verde	91.73	50	P	P	01 16 00.3	+1.0
	baz=293						
MVCO	Mesa Verde	91.73	50	IAmb	IAmb	01 16 15.0	
	comp=Z,15nm,1.5s						
TUC	Tucson	91.82	56	P	P	01 16 01.7	+2.1
	baz=291						
TUC	Tucson	91.82	56	P	P	01 16 00.5	+1.0
TUC				IAmb	IAmb	01 16 02.9	
	comp=Z,7.3nm,1.2s						
RSSD	Black Hills	91.99	43	P	P	01 16 01.1	+0.8
	baz=296						
N23A	Red Feather La	92.08	46	P	P	01 16 01.2	+0.4
	baz=295						
PHWY	Pilot Hill	92.25	46	IAmb	IAmb	01 16 04.0	
	comp=Z,13nm,1.4s						
S22A	4UR Ranch, Cre	92.74	49	P	P	01 16 04.4	+0.4
	baz=294						
ISCO	Idaho Springs	92.77	47	P	P	01 16 04.2	+0.2
	baz=295						
ISCO	Idaho Springs	92.77	47	IAmb	IAmb	01 16 12.9	
	comp=Z,7.0nm,1.1s						
AKASG	Malin Array Be	92.85	325	LR	LR	02 00 11.5	
	comp=Z,339nm,19.0s,baz=10.0,slow=37						
ULM	Lac du Bonnet	93.88	35	LR	LR	01 56 18.0	
	comp=Z,79nm,20.1s,baz=316,slow=34						
ANMO	Albuquerque	94.14	52	P	P	01 16 10.7	+0.4
	baz=294						
NOA	NORSAR Array B	94.27	340	LR	LR	02 00 37.0	
	comp=Z,134nm,19.2s,baz=30,slow=37						
VNDA	Vanda	94.76	177	LR	LR	01 58 01.8	
	comp=Z,79nm,19.4s,baz=354,slow=35						
BRTR	Keskin Array B	95.48	314	LR	LR	02 03 56.7	
	comp=Z,92nm,18.8s,baz=36,slow=38						
MMAI	Mount Meron Ar	97.17	308	LR	LR	02 03 19.9	
	comp=Z,90nm,20.5s,baz=345,slow=38						
TXAR	Lajitas Array	98.61	56	P	Pdif	01 16 30.9	+0.2
	comp=Z,0.2nm,0.4s,baz=266,slow=2.5,SNR=2.0						
TXAR				LR	LR	01 58 37.6	
	comp=Z,90nm,18.9s,baz=0.0,slow=34						
SYO	Syowa Base	111.58	202	⇑ePdiff	Pdif	01 17 29.2	+2.1
SYO	Syowa Base	111.58	202	⇑epPdiff	Pdif	01 17 31.2	+4.1
TORD	Torodi Ar. Bea	133.71	308	PKP	PKPdf	01 22 06.4	-2.4
	comp=Z,0.3nm,0.3s,baz=45,slow=2.2,SNR=1.8						
PLCA	Paso Flores	140.64	135	PKP	PKPdf	01 22 20.4	-0.5
	comp=Z,1.4nm,0.8s,baz=223,slow=4.2,SNR=4.2						
MT05	Renca	143.22	123		PKPbc	01 22 23.9	+1.2
VA03	San Esteban	143.56	122	PKPdf	PKPbc	01 22 23.7	0.0
LCO	Las Campanas	144.34	116	PKPdf	PKPbc	01 22 27.1	+0.6
AC05	El Transito	144.74	116		PKPdf	01 22 28.2	-0.4
PB14	IPOC Station P	145.25	109		PKPdf	01 22 30.2	+0.4
TA01	Diego Aracena	145.65	102		PKPbc	01 22 30.5	0.0
AC02	Maricunga	146.11	113	PKPbc	PKPab	01 22 33.4	+0.3
PB09	IPOC Station P	146.51	104		PKPbc	01 22 33.6	+0.3
LVC	Limon Verde	146.78	105	PKPbc	PKPab	01 22 35.0	-0.6
LPAZ	La Paz	147.36	94	PKPbc	PKPbc	01 22 37.2	+0.8
	comp=Z,18nm,0.5s,baz=291,slow=2.6,SNR=63						
PTGA	Pitinga	149.81	60		PKPbc	01 22 41.2	-1.0
SAML	Samuel	150.54	78		PKPbc	01 22 43.6	-0.3
CPUP	Villa Florida	156.48	117	PKPab	PKPab	01 23 15.7	+0.4
	comp=Z,2.7nm,0.8s,baz=286,slow=5.9,SNR=4.2						
BDFB	Brasilia	166.53	86	PKPab	PKPab	01 24 00.1	+0.4
	comp=Z,3.9nm,0.6s,baz=306,slow=3.4,SNR=8.9						

HEL ***28*** *01:05:11.7, 67°.84N×19°.95E, h0^{km}, ML1.6, Explosion*

UPP 28 01:05:12.9±0.1**, 67°.85N×20°.20E, h0^{km}, ML2.5, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUA	Kurravaara	0.12	26	P	Pg	01 05 15.4	+0.3
KUA				S	Sg	01 05 17.1	+0.4
KUA	Kurravaara	0.12	26	iP	Pg	01 05 15.4	+0.3
KUA				iS	Sg	01 05 17.1	+0.4
KOVU	Salmi	0.38	358	P	Pg	01 05 20.2	+0.1
KOVU				S	Sg	01 05 25.3	+0.4
KOVU	Salmi	0.38	358	iP	Pg	01 05 20.2	+0.1
KOVU				iS	Sg	01 05 25.3	+0.4
NIKU	Nikkaluokta	0.44	273	P	Pg	01 05 21.4	+0.1
NIKU	Nikkaluokta	0.44	273	iP	Pg	01 05 21.4	+0.1
LANU	Lannavaara	0.70	73	P	Pg	01 05 26.2	-0.1
LANU				S	Sg	01 05 35.8	+0.4
LANU	Lannavaara	0.70	73	eP	Pg	01 05 26.1	-0.2
	baz=260						
LANU				eS	Sg	01 05 35.6	+0.2
DUNU	Dundret	0.74	169	P	Pg	01 05 26.9	-0.2
DUNU	Dundret	0.74	169	iP	Pg	01 05 26.9	-0.2
MASU	Masugnsbyn	0.79	119	P	Pg	01 05 27.9	-0.2
MASU	Masugnsbyn	0.79	119	iP	Pg	01 05 27.9	-0.2
SALU	Saltoluokta	0.80	235	eP	Pg	01 05 27.9	-0.4
KIF	Kilpisjarvi	1.18	11	eP	Pb	01 05 36.1	0.0
KIF	Kilpisjarvi	1.18	11	ePB	Pg	01 05 35.7	+0.2
KIF				MSG		01 05 49.5	
	comp=Z,6.2nm,0.2s						
KIF				eSB	Sg	01 05 51.3	+0.5
PAJU	Pajala	1.40	125	P	Pg	01 05 38.4	-1.2
PAJU	Pajala	1.40	125	eP	Pg	01 05 38.4	-1.2
PAJU				eSB	Sg	01 05 57.6	0.0
KALU	Kalix	2.36	147	ePB	Pn	01 05 54.0	+1.3
KALU				eSB	Sb	01 06 24.8	-0.9
TOF	Tornio	2.41	136	ePB	Pn	01 05 55.1	+1.7
	baz=320						
TOF				MSG		01 06 24.8	
	comp=Z,1.8nm,0.2s						
TOF				eSG	Sb	01 06 27.3	+0.2
SGF	Sodankyl	2.45	97	ePB	Pb	01 05 56.3	-1.5
ARA0	ARCESS Array S	2.57	46	ePB	Pn	01 05 57.6	+1.9
ARA0				eSG	Sg	01 06 34.4	-1.0
RNF	Rovaniemi	2.58	116	ePB	Pn	01 05 57.8	+2.0
RNF				eSG	Sb	01 06 31.9	-0.3

UPP 28 01:05:33.9±0.4**, 67°.86N×20°.17E, h0^{km}, ML3.2, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUA	Kurravaara	0.11	34	P	Pg	01 05 36.4	+0.3
KUA				S	Sg	01 05 37.9	+0.4
KOVU	Salmi	0.36	359	P	Pg	01 05 40.9	+0.1
KOVU				S	Sg	01 05 46.4	+0.8
PAJU	Pajala	1.41	125	S	Sg	01 06 18.3	-0.9

IDC ***28*** *01:40:09.3±0.8, 17°.00N×146°.04E, h0^{km}, mb3.8/11, mb1 4.1/11, mb1mx3.9/45, mbtmp3.8/11, MS3.4/5, Ms1 3.4/5, ms1mx3.1/34, Error ellipse: s-maj=25.8km s-min=18.5km az=113.0*

NEIC ***28*** *01:40:12.2±1.3, 17°.02N±0°.03×145°.8E±0°.1, h10^{km}±1^{km}, mb4.4/11, Error ellipse: s-maj=23.9km s-min=5.6km az=93.0*

ISC 28 01:40:11.3±0.7**, 16°.92N**±0°.10×**146°.0E**±0°.1**, h10^{km}, n39, σ1^{s}.09**/29**, mb4.2**/18**, MS3.2**/4**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANA2	Anatahan	0.62	203	Pg	Pn	01 40 25.4	-0.8
JOW	Kunigami	19.13	304	LR	LR	01 50 29.3	
	comp=Z,352nm,18.6s,baz=53,slow=32						
H11S3	WAKE ISLAND Hy	19.81	82	T	T	02 05 19.8	
	baz=269,slow=75,SNR=142						
H11S1	WAKE ISLAND Hy	19.82	82	T	T	02 05 20.8	
	baz=269,slow=75,SNR=173						
H11S2	WAKE ISLAND Hy	19.82	82	T	T	02 05 21.2	
	baz=269,slow=75,SNR=225						
H11N1	WAKE ISLAND Hy	20.06	79	T	T	02 05 38.0	
	baz=266,slow=74,SNR=152						
H11N2	WAKE ISLAND Hy	20.07	79	T	T	02 05 38.5	
	baz=266,slow=74,SNR=148						
H11N3	WAKE ISLAND Hy	20.08	79	T	T	02 05 39.4	
	baz=266,slow=74,SNR=162						
SIJI	Sorong	22.86	221	P	P	01 45 17.4	+2.4
	4.4nm,0.3s,baz=54,slow=18,SNR=4.0						
KSRS	Korea Array	25.91	326	P	P	01 45 44.5	+1.0
	1.8nm,0.9s,baz=151,slow=11,SNR=5.9						
KSRS				LR	LR	01 54 47.0	
	comp=Z,20nm,18.2s,baz=345,slow=34						
HNR	Honiara	29.61	151	LR	LR	01 57 01.5	
	comp=Z,64nm,20.6s,baz=17,slow=34						
WB0	Warramunga Arr	38.19	198	P	P	01 47 31.1	-0.1
WB0				IAmb	IAmb	01 47 38.9	
	comp=Z,9.9nm,1.3s						
WB2	Warramunga Arr	38.37	198	P	P	01 47 34.0	+1.2
WB2				IAmb	IAmb	01 47 37.7	
	comp=Z,11nm,1.4s						
WRA	Warramunga Arr	38.37	198	P	P	01 47 32.5	-0.3
	comp=Z,1.9nm,1.0s,baz=18,slow=9.3,SNR=6.5						
ASAR	Alice Springs	42.02	197	P	P	01 48 02.6	-0.5
	comp=Z,0.2nm,0.3s,baz=19,slow=6.9,SNR=2.5						
SONM	Songino Array	44.69	322	P	P	01 48 25.1	+0.5
	comp=Z,0.2nm,0.3s,baz=90,slow=5.8,SNR=2.7						
CMAR	Chiang Mai Arr	44.73	279	P	P	01 48 23.8	-1.4
	comp=Z,1.6nm,0.5s,baz=72,slow=6.7,SNR=12						
CMAR				LR	LR	02 04 57.3	
	comp=Z,27nm,20.6s,baz=75,slow=33						
GSI	Gunungsitoli	50.05	257	P	P	01 49 06.6	0.0
LSA	Lhasa	51.50	295	P	P	01 49 18.2	+0.3
LSA				IAmb	IAmb	01 49 21.4	
	comp=Z,6.8nm,1.2s						
WMQ	Urumqi	55.67	312	P	P	01 49 47.4	-0.4
WMQ				IAmb	IAmb	01 49 51.1	
	comp=Z,4.6nm,0.8s						
NWAO	Narrogin (SRO)	56.67	209	LR	LR	02 13 38.6	
	comp=Z,42nm,18.6s,baz=124,slow=35						
MK31	Makanchi Array	59.88	315	P	P	01 50 17.5	+0.2
MKAR	Makanchi Array	59.88	315	P	P	01 50 16.3	-1.1
	comp=Z,0.3nm,0.6s,baz=96,slow=6.6,SNR=5.2						
IL31		65.12	26	P	P	01 50 54.1	+2.1
ILAR	Eielson Array	65.12	26	P	P	01 50 50.4	-1.7
	comp=Z,0.9nm,0.9s,baz=261,slow=5.1,SNR=5.9						
ILAR	Eielson Array	65.12	26	P	P	01 50 52.8	+0.8
NIL	Nilore	66.62	300	P	P	01 51 02.4	+0.1
BMAR	Burnt Mountain	66.64	23	P	P	01 51 03.4	+1.5
KK31	Karatay Array	68.10	310	P	P	01 51 12.1	+0.6
KK31				IAmb	IAmb	01 51 13.7	
	comp=Z,3.6nm,1.2s						
KKAR	Karatay Array	68.10	310	P	P	01 51 11.1	-0.3
KBL	Kabul	70.00	301	P	P	01 51 23.5	-0.2
KBL				IAmb	IAmb	01 51 27.9	
	comp=Z,2.7nm,0.7s						
INK	Inuvik	70.90	23	P	P	01 51 26.9	-1.3
	comp=Z,1.1nm,0.7s,baz=270,slow=6.1,SNR=4.5						
H02S1	DAWSON INLET T	71.61	39	T	T	03 10 15.4	
	SNR=7.5						
ABKAR	Akbulak array	74.81	317	P	P	01 51 51.7	-0.1
YKA	Yellowknife Ar	79.44	28	P	P	01 52 16.3	-1.3
	comp=Z,0.5nm,0.7s,baz=290,slow=5.4,SNR=4.3						
NVAR	Mina Array Bea	84.03	52	P	P	01 52 42.0	-0.7
	comp=Z,1.1nm,0.8s,baz=282,slow=7.3,SNR=5.4						
ELK	Elko	85.59	49	P	P	01 52 52.3	+1.8
ELK				IAmb	IAmb	01 52 55.3	
	comp=Z,2.2nm,0.9s						
LPAZ	La Paz	147.34	94	PKPbc	PKPbc	01 59 57.3	+0.4
	comp=Z,2.7nm,0.9s,baz=339,slow=3.1,SNR=7.7						
LPAZ	La Paz	147.34	94		PKPab	01 59 58.6	-0.1

GUC ***28*** *01:41:36.3±0.4, 20°.53S×70°.59W, h32^{km}±2^{km}, ML2.8*

IDC ***28*** *01:41:59.5±1.1, 22°.04S×67°.93W, h86^{km}±16^{km}, mb4.0/2, mb1 3.6/5, mb1mx3.4/28, mbtmp3.8/5, MS3.0/1, Ms1 3.0/1, ms1mx2.5/24, Error ellipse: s-maj=34.4km s-min=20.4km az=140.0*

ISC 28 01:41:34.6±2.3**, 20°.51S**±0°.05×**70°.7W**±0°.2**, h22^{km}**±11^{km}**, n23, σ0^{s}.84**/20**, 1C-3D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TA01	Diego Aracena	0.44	97	⇓iP	Pb	01 41 43.7	+0.1
TA01				iS	Sb	01 41 49.7	-0.1
TA01				IAML		01 41 50.1	
	comp=N,878nm,0.2s						
TA01	Diego Aracena	0.44	97	iS	Sb	01 41 49.8	+0.1
TA01	Diego Aracena	0.44	97	iP	Pb	01 41 43.6	+0.1
TA02	Huaiquique	0.54	64	eP	Pb	01 41 45.4	0.0
TA02				iS	Sb	01 41 52.8	0.0
TA02				IAML		01 41 53.6	
	comp=N,2µm,0.1s						
TA02	Huaiquique	0.54	64	iS	Sb	01 41 52.5	-0.2
TA02	Huaiquique	0.54	64	iP	Pb	01 41 45.4	0.0
PATCX	Punta Patache	0.56	124	⇓iP	Pb	01 41 45.7	-0.1
PATCX				iS	Sb	01 41 53.2	-0.1
PATCX				IAML		01 41 55.2	
	comp=N,589nm,0.3s						
HMBC	Humberstone	0.75	72	⇓iP	Pn	01 41 48.7	-1.2
HMBC				iS	Sb	01 41 58.6	-0.2
HMBC				IAML		01 41 59.6	
	comp=N,818nm,0.6s						
PSGC	Pisagua	1.03	29	eP	Pn	01 41 53.3	-0.6
PSGC				iS	Sn	01 42 06.8	-0.9
PSGC				IAML		01 42 09.3	
	comp=N,287nm,0.2s						
MNMC	Minye Minye	1.69	36	iP	Pn	01 42 04.1	+1.0
MNMC				iS	Sn	01 42 25.7	+1.5
MNMC				IAML		01 42 35.1	
	comp=E,302nm,0.2s						
PB09	IPOC Station P	1.83	135	eP	Pb	01 42 18.3	+11
PB09				iS	Sb	01 42 31.4	+1.3
PB06	IPOC Station P	2.40	156	⇑iP	Pb	01 42 24.5	+7.3
PB06				iS	Sn	01 42 43.0	+1.3
LVC	Limon Verde	2.64	143	S	Sn	01 42 35.8	-12
	comp=E,26nm,0.3s,baz=107,slow=19,SNR=17						
LVC	Limon Verde	2.64	143	iS	Sn	01 42 32.8	-15
LVC	Limon Verde	2.64	143	P	Pb	01 42 20.2	-1.2
	comp=E,14nm,0.3s,baz=62,slow=13,SNR=220						
LVC	Limon Verde	2.64	143	iP	Pb	01 42 20.8	-0.6
LPAZ	La Paz	4.83	30	P	Pb	01 43 21.7	+23
	comp=E,0.5nm,0.3s,baz=180,slow=9.9,SNR=7.0						
SIV	San Ignacio	10.14	65	P	Pn	01 44 05.8	+6.7
	comp=E,0.3nm,0.3s,baz=241,slow=14,SNR=5.5						
CPUP	Villa Florida	13.52	118	P	Pn	01 44 28.6	-17
	comp=E,0.2nm,0.3s,baz=249,slow=8.6,SNR=3.0						
CPUP				LR	LR	01 49 18.1	
	comp=E,71nm,19.1s,baz=82,slow=42						
KOWA	Kowa	74.13	68	P	P	01 53 17.9	+8.1
	comp=E,1.7nm,0.6s,baz=225,slow=4.1,SNR=5.5						
TORD	Torodi Ar. Bea	78.56	71	P	P	01 53 40.0	+5.0
	comp=E,2.3nm,0.6s,baz=261,slow=5.4,SNR=10.0						
ZALV	Zalesovo Beam	141.72	23	PKP	PKiKP	02 01 20.6	+14
	comp=E,1.7nm,0.4s,baz=307,slow=3.9,SNR=7.8						
MKAR	Makanchi Array	145.75	34	PKPbc	PKiKP	02 01 28.4	+13
	comp=E,0.6nm,0.6s,baz=305,slow=2.6,SNR=13						

IDC ***28*** *02:04:54.5±1.5, 47°.40S×165°.74E, h0^{km}, mb3.9/4, mb1 4.0/6, mb1mx3.9/31, mbtmp4.0/6, ML3.7/2, MS3.5/3, Ms1 3.5/3, ms1mx3.1/26, Error ellipse: s-maj=43.2km s-min=24.3km az=159.0*

ISC 28 02:04:56.3±1.5**, 47°.4S**±0°.2×**165°.9E**±0°.2**, h16^{km}, n19, σ1^{s}.26**/14**, mb3.8**/4**, MS3.4**/3**, Off west coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPZ	Rata Peaks	5.20	46	Pn	Pn	02 06 12.9	-0.5
	3.5nm,0.3s,baz=222,slow=5.7,SNR=17						
RPZ				Sn	Sn	02 07 14.3	+1.3
	10nm,0.3s,baz=234,slow=17,SNR=4.1						
URZ	Urewera	12.31	46	Pn	Pn	02 07 50.5	-0.4
	0.3nm,0.3s,baz=256,slow=4.2,SNR=2.7						
URZ				Sn	Sn	02 10 06.1	-1.7
	0.4nm,0.3s,baz=210,slow=20,SNR=1.6						
STKA	Stephens Creek	24.17	301	P	P	02 10 11.8	0.0
	0.5nm,0.2s,baz=145,slow=23,SNR=1.6						
STKA				LR	LR	02 17 55.6	
	comp=Z,107nm,19.8s,baz=197,slow=32						
DZM	Mont Dzumac	25.31	1	P	P	02 10 24.1	+1.9
	6.2nm,1.0s,baz=176,slow=15,SNR=3.7						
VNDA	Vanda	30.24	182	LR	LR	02 20 25.8	
	comp=Z,86nm,18.4s,baz=176,slow=31						
ASAR	Alice Springs	34.80	302	P	P	02 11 45.3	-1.0
	0.9nm,0.6s,baz=133,slow=8.1,SNR=12						
WRA	Warramunga Arr	37.51	306	P	P	02 12 08.0	-1.5
	0.5nm,0.7s,baz=139,slow=7.6,SNR=6.1						
H01W1	Cape Leeuwin H	40.20	269	T	T	02 54 40.7	
	baz=124,slow=75,SNR=110						
H01W2	Cape Leeuwin H	40.21	269	T	T	02 54 41.3	
	baz=124,slow=75,SNR=89						
H01W3	Cape Leeuwin H	40.22	269	T	T	02 54 41.9	
	baz=124,slow=75,SNR=102						
PPT	Papeete	47.01	66	LR	LR	02 29 33.4	
	comp=Z,44nm,20.1s,baz=172,slow=31						
H08S2	Diego Garcia H	86.72	262	T	T	03 52 59.0	
	baz=141,slow=75,SNR=5.4						
H08S1	Diego Carcia H	86.73	262	T	T	03 53 03.7	
	baz=141						
H08S3	Diego Garcia H	86.73	262	T	T	03 53 01.1	
	baz=141,slow=75,SNR=7.4						
TORD	Torodi Ar. Bea	143.35	206	PKP	PKPdf	02 24 29.4	-0.7
	0.8nm,1.0s,baz=152,slow=2.3,SNR=2.4						
BRTR	Keskin Array B	145.02	275	PKP	PKPbc	02 24 31.6	-0.3
	0.7nm,0.8s,baz=162,slow=2.4,SNR=5.0						
ARCES	ARCESS Array B	150.60	333	PKPbc	PKiKP	02 24 46.4	-0.4
	3.8nm,0.9s,baz=46,slow=3.5,SNR=6.7						
AKASG	Malin Array Be	151.72	293	PKPbc	PKiKP	02 24 50.2	+0.7
	0.3nm,0.4s,baz=74,slow=2.4,SNR=1.7						
AKASG				PKPab	PKPab	02 24 57.6	-0.5
	1.4nm,0.6s,baz=69,slow=2.5,SNR=5.4						
FINES	FINESS Array B	153.26	316	PKPbc	PKiKP	02 24 53.5	+1.1
	1.2nm,0.9s,baz=106,slow=4.2,SNR=6.5						
FINES				PKPab	PKPab	02 25 06.1	+1.8
	1.1nm,0.7s,baz=98,slow=2.7,SNR=3.4						

IDC ***28*** *02:14:52.5±0.7, 11°.81N×142°.26E, h0^{km}, mb4.3/17, mb1 4.4/17, mb1mx4.2/38, mbtmp4.3/17, MS3.4/7, Ms1 3.4/7, ms1mx3.1/46, Error ellipse: s-maj=24.0km s-min=15.4km az=78.0*

NEIC ***28*** *02:14:59.5±1.2, 11°.8N±0°.1×142°.2E±0°.1, h47^{km}±7^{km}, mb4.6/42, Error ellipse: s-maj=18.5km s-min=14.0km az=114.0*

ISC 28 02:14:59.9±0.5**, 11°.80N**±0°.08×**142°.25E**±0°.09**, h50^{km}, n82, σ1^{s}.00**/70**, mb4.5**/44**, MS3.3**/8**, 1C, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	3.11	55		Pn	02 15 46.5	0.0
SSLB	Suanglung	23.48	303	P	P	02 20 04.5	-0.8
SSLB				IAmb	IAmb	02 20 16.7	
	comp=Z,26nm,1.1s						
JNU	Nakatsue	23.64	336	P	P	02 20 06.5	-0.3
	comp=Z,18nm,0.7s,baz=146,slow=2.4,SNR=8.7						
JWT	Wachi	24.19	346	P	P	02 20 10.8	-0.8
JYT	Yasato	24.39	356	P	P	02 20 12.5	-1.0
H11S3	WAKE ISLAND Hy	24.49	71	T	T	02 42 30.2	
	baz=269,slow=75,SNR=24						
H11S1	WAKE ISLAND Hy	24.51	71	T	T	02 42 34.7	
	baz=269,slow=75,SNR=36						
H11S2	WAKE ISLAND Hy	24.51	71	T	T	02 42 33.6	
	baz=269,slow=75,SNR=31						
JHS	Saijyo	24.54	342	P	P	02 20 14.8	-0.2
JHS				IAmb	IAmb	02 20 21.3	
	comp=Z,49nm,1.3s						
MJAR	Matsushiro Arr	24.90	352	P	P	02 20 16.1	-2.1
	comp=Z,2.4nm,0.5s,baz=173,slow=11,SNR=7.0						
MJAR				LR	LR	02 28 08.2	
	comp=Z,97nm,19.5s,baz=180,slow=32						
MAT	Matsushiro	24.90	352	P	P	02 20 17.5	-0.7
H11N1	WAKE ISLAND Hy	24.96	69	T	T	02 42 49.6	
	baz=266,slow=74,SNR=26						
H11N2	WAKE ISLAND Hy	24.97	69	T	T	02 42 50.4	
	baz=266,slow=74,SNR=28						
H11N3	WAKE ISLAND Hy	24.98	69	T	T	02 42 51.3	
	baz=266,slow=74,SNR=33						
KSRS	Korea Array	28.59	336	P	P	02 20 50.5	-0.8
	comp=Z,0.8nm,0.4s,baz=146,slow=8.8,SNR=2.8						
KSRS				LR	LR	02 30 52.7	
	comp=Z,31nm,18.4s,baz=10.0,slow=34						
BATI	Baumata	28.62	221	LR	LR	02 32 23.6	
	comp=Z,59nm,18.8s,baz=66,slow=37						
NJ2	Nanjing	29.49	317	eP	P	02 21 00.0	+0.6
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
CTAO	Charters Tower	31.93	173	P	P	02 21 21.1	+0.1
CTAO				IAmb	IAmb	02 21 26.6	
	comp=Z,7.9nm,1.3s						
WB2	Warramunga Arr	32.49	194	P	P	02 21 25.1	-0.9
WRA	Warramunga Arr	32.49	194	P	P	02 21 24.5	-1.5
	comp=Z,1.0nm,0.7s,baz=15,slow=9.7,SNR=3.7						
WRA				LR	LR	02 35 41.5	
	comp=Z,46nm,18.3s,baz=75,slow=38						
USA0B	Ussuriysk Arra	33.47	347	P	P	02 21 34.3	0.0
USA0B				IAmb	IAmb	02 21 34.9	
	comp=Z,23nm,1.5s						
USRK	Ussuriysk Ar.	33.47	347	P	P	02 21 34.0	-0.2
	comp=Z,4.4nm,0.6s,baz=179,slow=8.8,SNR=21						
USRK				LR	LR	02 33 34.6	
	comp=Z,122nm,20.6s,baz=326,slow=34						
FITZ	Fitzroy Crossi	33.93	209	P	P	02 21 37.0	-1.5
	comp=Z,1.1nm,0.7s,baz=29,slow=13,SNR=1.1						
ENH	Enshi	35.49	306	P	P	02 21 51.5	-0.5
AS31	Alice Springs	36.18	193	P	P	02 21 56.6	-1.3
ASAR	Alice Springs	36.18	193	P	P	02 21 57.3	-0.6
	comp=Z,0.4nm,0.5s,baz=25,slow=11,SNR=1.7						
BJT	Baijiatuau	36.34	325	P	P	02 21 58.7	-0.4
BJI	Beijing	36.35	325	P	P	02 21 59.5	+0.4
BJI				pmax	pmax		
	comp=Z,12nm,0.5s						
BJI				pmax	pmax		
	comp=Z,240nm,6.4s						
HHC	Hu-ho-hao-te	39.54	323	eP	P	02 22 27.0	+0.8
HHC				pmax	pmax		
	comp=Z,6.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,210nm,5.6s						
KMI	Kunming	39.59	295	⇑P	P	02 22 30.0	+3.0
KMI				pP	pP	02 22 37.5	-1.3
KMI				sP	sP	02 22 41.8	-2.4
KMI				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KMI				LR	LR		
	comp=N,100nm,5.1s						
KMI				LR	LR		
	comp=E,170nm,5.6s						
KMI				LR	LR		
	comp=Z,180nm,8.0s						
CMAR	Chiang Mai Arr	42.25	284	P	P	02 22 48.4	-0.2
	comp=Z,2.9nm,0.4s,baz=85,slow=6.6,SNR=2.7						
CMAR				LR	LR	02 39 40.4	
	comp=Z,38nm,19.8s,baz=25,slow=35						
CMAR	Chiang Mai Arr	42.25	284	P	P	02 22 50.8	+2.1
STKA	Stephens Creek	43.44	181	P	P	02 22 59.6	+1.7
RPSI	Rantau Prapat	43.86	262	P	P	02 23 00.8	-0.9
RPSI				IAmb	IAmb	02 23 01.9	
	comp=Z,6.9nm,0.7s						
BBOO	Buckleboo	44.75	187	P	P	02 23 08.2	-0.3
BBOO				IAmb	IAmb	02 23 10.0	
	comp=Z,14nm,1.4s						
MSVF	Nonsavu	45.95	129	P	P	02 23 19.0	+0.7
	comp=Z,4.2nm,0.8s,baz=0.0,slow=13,SNR=3.6						
ULN	Ulaanbaatar	46.45	328	P	P	02 23 22.1	+0.1
ULN				IAmb	IAmb	02 23 23.5	
	comp=Z,7.6nm,1.2s						

GTA	**Gaotai**	**46.50**	**314**	*e*P	**P**	**02 23 23.3**	**+0.8**
GTA				pP	pP	02 23 27.0	-7.5
GTA				sP	sP	02 23 29.5	-10
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,83nm,6.2s						
GTA				LR	LR		
	comp=N,230nm,16.7s						
GTA				LR	LR		
	comp=E,190nm,17.1s						
GTA				LR	LR		
	comp=Z,170nm,18.9s						
SONM	**Songino Array**	**46.78**	**327**	P	**P**	**02 23 25.0**	**+0.5**
	comp=Z,2.6nm,0.4s,baz=139,slow=6.6,SNR=28						
SONM	**Songino Array**	**46.78**	**327**	P	**P**	**02 23 24.6**	**0.0**
TLY	**Talaya**	**50.55**	**330**	P	**P**	**02 23 53.6**	**+0.3**
TLY				IAmb	IAmb	02 23 54.8	
	comp=Z,3.6nm,0.9s						
YAK	**Yakutsk**	**50.97**	**352**	P	**P**	**02 23 55.5**	**-0.8**
WMQ	**Urumqi**	**56.55**	**315**	*e*P	**P**	**02 24 40.0**	**+2.5**
MK31	**Makanchi Array**	**61.02**	**317**	P	**P**	**02 25 08.5**	**0.0**
MK31				IAmb	IAmb	02 25 13.8	
	comp=Z,5.9nm,1.4s						
MKAR	**Makanchi Array**	**61.02**	**317**	P	**P**	**02 25 08.5**	**0.0**
	comp=Z,1.3nm,0.5s,baz=94,slow=8.9,SNR=25						
MKAR	**Makanchi Array**	**61.02**	**317**	P	**P**	**02 25 08.2**	**-0.2**
MAKZ	**Makanchi**	**61.24**	**317**	P	**P**	**02 25 09.4**	**-0.5**
MAKZ				IAmb	IAmb	02 25 14.7	
	comp=Z,4.1nm,0.9s						
ZAA0	**Zalesovo Array**	**61.61**	**326**	P	**P**	**02 25 11.9**	**-0.3**
ZAA0				IAmb	IAmb	02 25 12.4	
	comp=Z,2.4nm,0.8s						
ZALV	**Zalesovo Beam**	**61.61**	**326**	P	**P**	**02 25 11.4**	**-0.8**
	comp=Z,1.7nm,0.4s,baz=107,slow=7.4,SNR=8.4						
KSH	**Kashi**	**64.31**	**308**	P	**P**	**02 25 33.3**	**+2.7**
KSH				pmax	pmax		
	comp=Z,5.0nm,1.4s						
KSH				pmax	pmax		
	comp=Z,300nm,6.4s						
KURK	**Kurchatov**	**64.32**	**321**	P	**P**	**02 25 30.1**	**-0.2**
KURK				IAmb	IAmb	02 25 30.8	
	comp=Z,8.3nm,0.9s						
AAK	**Ala-Archa**	**65.75**	**311**	LR	LR	02 55 48.6	
	comp=Z,68nm,19.0s,baz=326,slow=37						
KK31	**Karatay Array**	**68.71**	**312**	P	**P**	**02 25 57.9**	**-0.7**
KKAR	**Karatay Array**	**68.71**	**312**	P	**P**	**02 25 58.2**	**-0.4**
BRVK	**Borovoye**	**69.82**	**322**	P	**P**	**02 26 05.0**	**-0.2**
BRVK				IAmb	IAmb	02 26 05.9	
	comp=Z,7.1nm,0.6s						
COLD	**Coldfoot**	**70.56**	**22**	P	**P**	**02 26 09.9**	**+0.5**
COLD				IAmb	IAmb	02 26 11.0	
	comp=Z,5.9nm,1.1s						
HIN	**Hinchinbrook I**	**70.57**	**30**	P	**P**	**02 26 09.9**	**+0.3**
FID	**Port Fidalgo**	**70.64**	**30**	P	**P**	**02 26 09.8**	**-0.3**
FID				IAmb	IAmb	02 26 20.8	
	comp=Z,13nm,1.4s						
WRH	**Wood River Hil**	**70.69**	**26**	P	**P**	**02 26 09.7**	**-0.6**
IL31		**71.27**	**25**	P	**P**	**02 26 12.7**	**-1.0**
ILAR	**Eielson Array**	**71.27**	**25**	P	**P**	**02 26 12.1**	**-1.7**
	comp=Z,1.3nm,0.5s,baz=250,slow=6.0,SNR=20						
DOT	**Dot Lake**	**72.27**	**27**	P	**P**	**02 26 19.8**	**0.0**
DOT				IAmb	IAmb	02 26 20.7	
	comp=Z,5.6nm,1.0s						
FYU	**Fort Yukon**	**72.31**	**24**	IAmb	IAmb	02 26 22.1	
	comp=Z,6.4nm,0.9s						
BMAR	**Burnt Mountain**	**72.73**	**23**	P	**P**	**02 26 22.9**	**+0.3**
BCAR	**Beaver Creek A**	**73.20**	**27**	P	**P**	**02 26 25.2**	**-0.2**
ABKAR	**Akbulak array**	**76.15**	**318**	P	**P**	**02 26 42.1**	**-0.6**
ABKAR				IAmb	IAmb	02 26 43.2	
	comp=Z,8.5nm,1.4s						
ARU	**Arti**	**76.78**	**325**	P	**P**	**02 26 45.2**	**-0.8**
EUNU	**Eureka**	**84.97**	**8**	P	**P**	**02 27 30.1**	**+0.6**
YKA	**Yellowknife Ar**	**85.61**	**27**	P	**P**	**02 27 32.8**	**0.0**
	comp=Z,1.2nm,0.5s,baz=292,slow=4.3,SNR=20						
PINE	**Pine Mountain**	**86.78**	**46**	P	**P**	**02 27 40.1**	**+0.8**
B08A	**Colville Reser**	**86.80**	**41**	P	**P**	**02 27 39.5**	**+0.4**
B08A				IAmb	IAmb	02 27 40.4	
	comp=Z,4.6nm,0.8s						
K05A	**Summer Lake**	**87.06**	**47**	P	**P**	**02 27 41.3**	**+0.7**
ARCES	**ARCESS Array B**	**87.98**	**342**	P	**P**	**02 27 43.0**	**-1.2**
	comp=Z,0.9nm,0.4s,baz=66,slow=7.0,SNR=12						
ARCES	**ARCESS Array B**	**87.98**	**342**	IAmb	IAmb	02 27 51.4	
	comp=Z,14nm,1.4s						
WVOR	**Wild Horse Val**	**88.75**	**47**	IAmb	IAmb	02 28 02.1	
	comp=Z,2.8nm,0.9s						
BMO	**Blue Mountains**	**89.05**	**44**	IAmb	IAmb	02 27 51.3	
	comp=Z,5.5nm,1.4s						
NVAR	**Mina Array Bea**	**90.02**	**51**	P	**P**	**02 27 55.6**	**+0.8**
	comp=Z,1.7nm,0.5s,baz=273,slow=5.4,SNR=18						
NVAR	**Mina Array Bea**	**90.02**	**51**	P	**P**	**02 27 55.9**	**+1.1**
FINES	**FINESS Array B**	**91.68**	**334**	P	**P**	**02 27 59.9**	**-1.8**
	comp=Z,2.9nm,0.4s,baz=60,slow=4.6,SNR=54						
TORD	**Torodi Ar. Bea**	**133.68**	**301**	PKP	**PKPdf**	**02 34 10.9**	**-1.2**
	comp=Z,0.2nm,0.5s,baz=37,slow=3.0,SNR=1.5						
LPAZ	**La Paz**	**150.21**	**102**	PKPbc	**PKPbc**	**02 34 47.4**	**+0.2**
	comp=Z,1.6nm,0.5s,baz=284,slow=3.0,SNR=7.5						
LPAZ	**La Paz**	**150.21**	**102**		**PKiKP**	**02 34 48.8**	**+0.8**

IDC ***28*** *02:15:11.9±3.9, 3.°77S×143.°80E, h125^{km}±38^{km}, mb3.5/7, mb1 3.5/10, mb1mx3.4/32, mbtmp3.8/10, MS3.3/3, Ms1 3.3/3, ms1mx2.9/26, Error ellipse: s-maj=35.5km s-min=21.0km az=102.0*

ISC 28 02:15:09.5±0.9**, 3.°7S**±0.°1×**143.°7E**±0.°2**, h100**^{km}**, n12, σ1^{s}22**/12**, mb3.7**/7**, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.67**	**149**	P	**Pn**	**02 16 46.6**	**+1.7**
	1.3nm,0.3s,baz=272,slow=10,SNR=1.8						
PMG				LR	LR	02 19 45.6	
	comp=Z,102nm,20.6s,baz=66,slow=42						
CTA	**Charters Tower**	**16.51**	**171**	P	**P**	**02 18 55.2**	**-0.9**
	0.1nm,0.3s,baz=6.8,slow=13,SNR=1.6						
WRA	**Warramunga Arr**	**18.56**	**209**	P	**P**	**02 19 18.5**	**-0.1**
	0.3nm,0.3s,baz=30,slow=12,SNR=14						
WRA				PcP	**PcP**	**02 23 43.7**	**-0.5**
	0.1nm,0.3s,baz=7.3,slow=27,SNR=3.8						
BATI	**Baumata**	**20.88**	**251**	P	Pn	02 19 49.7	+2.4
	33nm,0.5s,baz=60,slow=2.0,SNR=6.7						
ASAR	**Alice Springs**	**22.00**	**205**	P	**P**	**02 19 55.0**	**-0.8**
	1.3nm,0.5s,baz=34,slow=9.1,SNR=20						
ASAR				PcP	**PcP**	**02 23 50.2**	**-0.4**
	0.9nm,0.8s,baz=32,slow=3.7,SNR=4.5						
FITZ	**Fitzroy Crossi**	**22.74**	**230**	P	**P**	**02 20 04.0**	**+0.6**
	4.6nm,0.8s,baz=49,slow=8.8,SNR=16						
STKA	**Stephens Creek**	**28.12**	**184**	P	**P**	**02 20 51.4**	**-0.8**
	1.6nm,0.6s,baz=343,slow=8.4,SNR=4.8						
STKA				LR	LR	02 34 03.4	
	comp=Z,85nm,18.1s,baz=24,slow=40						
JOW	**Kunigami**	**33.78**	**335**	LR	LR	02 33 18.1	
	comp=Z,104nm,20.6s,baz=142,slow=32						
KSRS	**Korea Array**	**43.46**	**342**	P	**P**	**02 23 03.2**	**+0.5**
	0.5nm,0.4s,baz=160,slow=8.4,SNR=1.2						
MKAR	**Makanchi Array**	**73.61**	**321**	P	**P**	**02 26 33.3**	**+1.3**
	0.4nm,0.8s,baz=98,slow=6.4,SNR=1.6						
ZALV	**Zalesovo Beam**	**75.30**	**328**	P	**P**	**02 26 42.8**	**+1.3**
	0.4nm,0.3s,baz=102,slow=6.5,SNR=1.6						
ILAR	**Eielson Array**	**84.68**	**24**	P	**P**	**02 27 29.9**	**-2.0**
	0.7nm,0.8s,baz=248,slow=4.3,SNR=2.1						

IDC 28 02:22:10.9±3.3**, 5.°80S**×**149.°57E, h0**^{km}**, mb3.7**/3**, mb1 4.0**/4**, mb1mx3.6**/30**, mbtmp3.9**/4**, ML2.4**/1**, MS2.8**/1**, Ms1 2.8**/1**, ms1mx2.5**/31**, Error ellipse: s-maj=101.8km s-min=35.7km az=114.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.31**	**214**	Pn	Pn	02 23 18.9	+1.3
	14nm,0.3s,baz=34,slow=6.7,SNR=15						
PMG				Sn	Sn	02 24 08.1	-0.6
	16nm,0.3s,baz=84,slow=19,SNR=3.7						
SIJI	**Sorong**	**18.91**	**284**	LR	LR	02 34 23.7	
	comp=Z,30nm,19.2s,baz=175,slow=39						
WRA	**Warramunga Arr**	**20.42**	**225**	P	P	02 26 50.5	+0.7
	1.9nm,0.5s,baz=52,slow=11,SNR=16						
ASAR	**Alice Springs**	**23.30**	**219**	P	P	02 27 19.9	-0.7
	0.5nm,0.4s,baz=48,slow=9.6,SNR=8.3						
FITZ	**Fitzroy Crossi**	**26.36**	**240**	P	P	02 27 49.1	+0.1
	3.0nm,1.0s,baz=68,slow=11,SNR=7.6						
TORD	**Torodi Ar. Bea**	**147.51**	**285**	PKPbc	PKPbc	02 41 57.1	-1.0
	0.3nm,0.3s,baz=82,slow=2.4,SNR=7.9						

ISU ***28*** *02:25:49, 41.°33N×72.°33E, h5^{km}, Hypocentre not reviewed by the ISC*

KRNET ***28*** *02:25:50.5±0.1, 41.°31N×72.°22E, h18^{km}, mb2.8*

SOME ***28*** *02:25:51.2, 41.°33N×72.°20E, h10^{km}*

NNC ***28*** *02:25:52.6±1.2, 41.°38N×72.°28E, h0^{km}, mb3.5, mpv3.3, Error ellipse: s-maj=11.3km s-min=3.7km az=175.0*

ISC 28 02:25:49.6±1.2**, 41.°32N**±0.°02×**72.°25E**±0.°02**, h3**^{km}±11^{km}**, n45, σ1^{s}39**/77**, 21C-18D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARSB	**Arslanbob**	**0.55**	**89**	⇓*i*P	**Pg**	**02 26 00.8**	**+0.6**
	baz=89						
ARSB				⇓*i*S	**Sg**	**02 26 09.4**	**+2.1**
	baz=89						
ARSB	**Arslanbob**	**0.55**	**89**	*e*P		02 26 00.0	
ARSB				*e*S		02 26 09.0	
ANR	**Andizhan**	**0.57**	**172**	*e*P		02 26 02.0	
ANR				*e*S		02 26 11.0	
TRKS	**Terek-Say**	**0.86**	**285**	⇑*i*P	**Pb**	**02 26 05.7**	**-1.7**
	baz=81						
TRKS				⇑*i*S	**Sb**	**02 26 16.6**	**-2.9**
	baz=81						
OHH	**Osh**	**0.89**	**153**	⇓*i*P	**Pb**	**02 26 07.4**	**-0.4**
	baz=51						
OHH				⇓*i*S	**Sb**	**02 26 19.3**	**-0.8**
	baz=51						
OHH	**Osh**	**0.89**	**153**	*e*P		02 26 06.0	
OHH				*e*S		02 26 19.0	
MNAS	**Manas**	**1.18**	**9**	⇓*i*P	**Pb**	**02 26 12.6**	**-0.3**
	baz=10.0						
MNAS				⇓*i*S	**Sn**	**02 26 28.6**	**-1.5**
	baz=10.0						
AML	**Almayashu**	**1.35**	**53**	⇓*i*P	**Pb**	**02 26 16.2**	**+0.3**
	baz=53						
AML				⇓*i*S	**Sg**	**02 26 34.4**	**+1.3**
	baz=53						
SHAK	**Shakhimardan**	**1.42**	**196**	*e*P		02 26 19.0	
SHAK				*e*S		02 26 38.0	
MRKS	**Merke**	**1.60**	**27**	*e*P	**Pg**	**02 26 20.8**	**+0.5**
	3.3nm,0.2s						
MRKS				*e*S	**Sg**	**02 26 42.2**	**+1.1**
	31nm,0.3s						
MRKS	**Merke**	**1.60**	**27**	P	**Pg**	**02 26 20.8**	**+0.5**
	3.9nm,0.1s						
MRKS				S	**Sg**	**02 26 42.2**	**+1.1**
	18nm,0.6s						
SFK	**Sufi-Kurgan**	**1.61**	**143**	⇓*i*P	**Pb**	**02 26 20.1**	**-0.1**
	baz=43						
SFK				⇓*i*S	**Sg**	**02 26 41.8**	**+0.4**
	baz=43						
SFK	**Sufi-Kurgan**	**1.61**	**143**	*e*P		02 26 00.0	
SFK				*e*S		02 26 41.0	
ARLS	**Aral**	**1.65**	**70**	⇑*e*P	**Pb**	**02 26 21.4**	**+0.6**
	baz=70						
ARLS				⇑*i*S	**Sg**	**02 26 43.4**	**+0.9**
	baz=70						
BTK	**Batken**	**1.67**	**221**	⇑*i*P	**Pb**	**02 26 20.8**	**-0.2**
	baz=21						
BTK				⇑*i*S	**Sg**	**02 26 42.3**	**-0.8**
	baz=21						
BTK	**Batken**	**1.67**	**221**	*e*P		02 26 21.0	
BTK				*e*S		02 26 43.0	
CHMG	**Chimgan**	**1.70**	**279**	*e*P		02 26 22.0	
CHMG				*e*S		02 26 45.0	
DZA	**Taraz**	**1.72**	**337**	*e*P	**Pg**	**02 26 23.3**	**+0.8**
	40nm,0.1s						
DZA				*e*S	**Sg**	**02 26 46.4**	**+1.6**
	119nm,0.3s						
DZA	**Taraz**	**1.72**	**337**	P	**Pg**	**02 26 24.1**	**+1.6**
	86nm,0.1s						
DZA				S	**Sg**	**02 26 47.9**	**+3.1**
	119nm,0.3s						
CHRV	**Charvak**	**1.76**	**281**	*e*P		02 26 24.0	
CHRV				*e*S		02 26 48.0	
EKS2	**Erkin-Say**	**1.76**	**40**	⇓*i*P	**Pb**	**02 26 22.9**	**+0.2**
	baz=40						
EKS2				⇓*e*S	**Sg**	**02 26 46.3**	**+0.1**
	baz=40						
IUG	**Iuzhnay**	**1.86**	**297**	*e*P	**Pg**	**02 26 25.1**	**-0.2**
	33nm,0.3s						
IUG				*e*S	**Sg**	**02 26 49.7**	**+0.3**
	142nm,0.3s						
IUG	**Iuzhnay**	**1.86**	**297**	P	**Pg**	**02 26 25.1**	**-0.2**
	33nm,0.3s						
IUG				S	**Sg**	**02 26 49.7**	**+0.3**
	142nm,0.3s						
UCH	**Uchtor**	**1.92**	**61**	⇑*i*P	**Pb**	**02 26 25.3**	**-0.3**
	baz=61						
UCH				⇑*i*S	**Sb**	**02 26 50.5**	**+0.3**
	baz=61						
AAK	**Ala-Archa**	**2.13**	**51**	⇑*e*P	**Pb**	**02 26 28.2**	**-0.8**
	baz=51						
AAK				⇑*i*S	**Sb**	**02 26 55.1**	**-0.8**
	baz=51						
AAK	**Ala-Archa**	**2.13**	**51**	⇑Pg	**Pb**	**02 26 30.0**	**+1.0**
	4.0nm,0.6s						
AAK				⇓Lg	Lg	02 26 59.9	
	7.1nm,0.5s						
KK31	**Karatay Array**	**2.21**	**325**	Pg	**Pb**	**02 26 30.8**	**+0.6**
	4.5nm,0.3s,baz=132,slow=14,SNR=154						
KK31				⇑Lg	Lg	02 26 59.9	
	20nm,0.5s,baz=135,slow=26,SNR=14						
FRU1	**Bishkek**	**2.31**	**49**	⇑*i*P	**Pb**	**02 26 30.6**	**-1.5**
	baz=49						
FRU1				⇑*i*S	**Sb**	**02 26 59.5**	**-1.7**
	baz=49						
KBK	**Karagaybulak**	**2.41**	**55**	⇑*i*P	**Pb**	**02 26 32.0**	**-1.9**
	baz=56						
KBK				⇑*i*S	**Sb**	**02 27 02.0**	**-2.1**
	baz=56						
BRLS	**Borolday**	**2.48**	**314**	*e*P	**Pb**	**02 26 34.8**	**-0.1**
	38nm,0.3s						
BRLS				*e*S	**Sb**	**02 27 06.1**	**+0.2**
	46nm,0.5s						
BRLS	**Borolday**	**2.48**	**314**	Pg	**Pb**	**02 26 34.8**	**-0.1**
	38nm,0.3s						
BRLS				Lg	Lg	02 27 06.1	
	46nm,0.5s						
CHMS	**Chumysh**	**2.50**	**47**	⇑*e*P	**Pb**	**02 26 33.1**	**-2.2**
	baz=47						
CHMS				⇑*e*S	**Sb**	**02 27 04.0**	**-2.6**
	baz=47						
USP	**Ospenovka**	**2.56**	**40**	⇓*i*P	**Pn**	**02 26 33.8**	**+1.6**
	baz=40						
USP				⇓*i*S	**Sb**	**02 27 05.4**	**-2.9**
	baz=40						
SGDS	**Sogindy**	**2.77**	**39**	Pg	**Pb**	**02 26 41.8**	**+2.0**
	5.7nm,0.6s						
SGDS				Lg	Lg	02 27 17.8	
	20nm,0.5s						
TKM2	**Tokmak 2**	**2.96**	**56**	⇑*i*P	**Pn**	**02 26 39.6**	**+1.8**
	baz=56						
TKM2				⇑*i*S	**Sn**	**02 27 15.5**	**+1.6**
	baz=56						
TKM2	**Tokmak 2**	**2.96**	**56**	⇓Pg	**Pg**	**02 26 46.1**	**-0.2**
	2.4nm,0.5s						
TKM2				⇑Lg	Lg	02 27 24.6	
	6.5nm,0.6s						
BOOM	**Boomskoye usch**	**2.99**	**66**	⇓*e*P	**Pn**	**02 26 40.1**	**+1.9**
	baz=66						
BOOM				⇓*i*S	**Sn**	**02 27 16.5**	**+1.8**
	baz=66						
DGS	**Degeres**	**3.24**	**52**	*e*P	**Pg**	**02 26 51.0**	**-0.8**
	2.9nm,0.5s						
DGS				*e*S	**Sg**	**02 27 34.0**	**+0.1**
	12nm,0.5s						
DGS	**Degeres**	**3.24**	**52**	Pg	**Pg**	**02 26 51.0**	**-0.8**
	2.9nm,0.5s						
DGS				Lg	Lg	02 27 34.0	
	12nm,0.5s						
KST	**Kastek**	**3.25**	**57**	*e*P	**Pg**	**02 26 51.3**	**-0.6**
	4.5nm,0.3s						
KST				*e*S	**Sg**	**02 27 34.2**	**+0.1**
	8.5nm,0.4s						
KST	**Kastek**	**3.25**	**57**	Pg	**Pg**	**02 26 51.3**	**-0.6**
	4.5nm,0.3s						
KST				Lg	Lg	02 27 34.2	
	8.5nm,0.4s						
KRBS	**Karabastau**	**3.47**	**46**	*e*P	**Pg**	**02 26 54.7**	**-1.4**
	1.3nm,0.3s						
KRBS				*e*S	**Sg**	**02 27 40.0**	**-1.1**
	4.8nm,0.4s						
KRBS	**Karabastau**	**3.47**	**46**	Pg	**Pg**	**02 26 54.7**	**-1.4**
	1.3nm,0.3s						
KRBS				Lg	Lg	02 27 40.0	
	4.8nm,0.4s						
MTBS	**Maitube**	**3.59**	**58**	*e*P	**Pg**	**02 26 56.9**	**-1.5**
	1.7nm,0.2s						
MTBS				*e*S	**Sg**	**02 27 43.7**	**-1.3**
	4.4nm,0.3s						
MTBS	**Maitube**	**3.59**	**58**	Pg	**Pg**	**02 26 56.9**	**-1.5**
	1.7nm,0.2s						
MTBS				Lg	Lg	02 27 43.7	
	4.4nm,0.3s						
TNSS	**Tian-Shan**	**3.89**	**62**	*e*P	**Pg**	**02 27 04.2**	**0.0**
	2.6nm,0.4s						
TNSS				*e*S	**Sg**	**02 27 56.1**	**+1.6**
	2.1nm,0.6s						
TNSS	**Tian-Shan**	**3.89**	**62**	Pg	**Pg**	**02 27 04.2**	**0.0**
	2.6nm,0.4s						
BTLS	**Baital**	**3.95**	**19**	*e*P	**Pg**	**02 27 03.1**	**-2.1**
	1.2nm,0.4s						
BTLS				*e*S	**Sg**	**02 27 54.8**	**-1.6**
	2.4nm,0.5s						
BTLS	**Baital**	**3.95**	**19**	Pg	**Pg**	**02 27 03.2**	**-2.1**
	1.2nm,0.4s						
BTLS				Lg	Lg	02 27 54.8	
	2.4nm,0.5s						
KUU	**Kurty**	**3.97**	**48**	*e*P	**Pg**	**02 27 04.4**	**-1.2**
	1.0nm,0.3s						
KUU				*e*S	**Sg**	**02 27 56.6**	**-0.4**
	5.2nm,0.5s						
KUU	**Kurty**	**3.97**	**48**	Pg	**Pg**	**02 27 04.4**	**-1.2**
	1.0nm,0.3s						
KUU				Lg	Lg	02 27 56.6	
	5.2nm,0.5s						
ARXS	**Arharly**	**5.02**	**53**	*e*P	**Pg**	**02 27 23.5**	**-2.4**
	2.7nm,0.5s						
ARXS				*e*S	**Sg**	**02 28 29.6**	**-1.3**
	5.3nm,0.8s						
ARXS	**Arharly**	**5.02**	**53**	Pg	**Pg**	**02 27 23.5**	**-2.4**
	2.7nm,0.5s						

IDC 28 02:59:33.7±0.8**, 30.°96N**×**142.°03E, h0**^{km}**, mb3.6**/8**, mb1 3.8**/12**, mb1mx3.7**/38**, mbtmp3.6**/12**, ML3.3**/4**, Error ellipse: s-maj=28.3km s-min=17.4km az=86.0, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**2.88**	**319**	Pn	Pn	03 00 22.4	+1.6
	9.5nm,0.3s,baz=71,slow=19,SNR=1.0						
JHJ				Sn	Sn	03 00 51.7	-4.4
	14nm,0.3s,baz=68,slow=21,SNR=2.0						
JCJ	**Chichijima**	**3.85**	**178**	Pn	Pn	03 00 34.8	+0.5
	5.6nm,0.3s,baz=313,slow=19,SNR=1.4						
JCJ				Sn	Sn	03 01 18.4	-1.9
	baz=303,slow=23,SNR=1.3						
MJAR	**Matsushiro Arr**	**6.41**	**331**	Pn	Pn	03 01 10.6	+1.2
	0.3nm,0.3s,baz=160,slow=12,SNR=13						
KLR	**Kul'dur**	**19.84**	**340**	P	P	03 04 05.8	-0.1
	0.1nm,0.3s,baz=172,slow=17,SNR=1.8						
MKAR	**Makanchi Array**	**47.98**	**307**	P	P	03 08 13.1	-1.1
	1.0nm,0.3s,baz=121,slow=8.6,SNR=26						
WRA	**Warramunga Arr**	**51.15**	**189**	P	P	03 08 39.5	+0.9
	0.4nm,0.4s,baz=6.5,slow=7.7,SNR=12						
ILAR	**Eielson Array**	**54.42**	**30**	P	P	03 09 02.4	+0.2
	0.5nm,1.0s,baz=257,slow=8.2,SNR=2.3						
ASAR	**Alice Springs**	**54.87**	**189**	P	P	03 09 05.0	-1.1
	0.4nm,0.6s,baz=1.2,slow=4.8,SNR=9.4						
YKA	**Yellowknife Ar**	**68.82**	**29**	P	P	03 10 37.8	-1.7
	0.3nm,0.9s,baz=297,slow=5.7,SNR=2.2						
NVAR	**Mina Array Bea**	**78.25**	**52**	P	P	03 11 34.9	-0.8
	0.1nm,0.4s,baz=287,slow=6.1,SNR=1.6						
PDAR	**Pinedale Array**	**81.57**	**45**	P	P	03 11 55.6	+1.9
	0.1nm,0.3s,baz=266,slow=5.4,SNR=2.2						
TXAR	**Lajitas Array**	**93.39**	**53**	P	P	03 12 52.1	+0.8
	0.3nm,0.7s,baz=320,slow=4.0,SNR=3.0						

JMA 28 03:01:37.6±0.3**, 39.°65N**×**143.°34E, h17**^{km}±4^{km}**, M3.4, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	**Tanohata**	**1.17**	**285**	P	Pn	03 01 59.2	0.0
MIYJ	**Miyakonagasawa**	**1.18**	**267**	P	Pn	03 01 59.2	-0.1
MIYJ				*e*S	Sn	03 02 15.2	+0.3
JKEN	**Kujiedanarisaw**	**1.37**	**294**	P	Pn	03 02 01.7	-0.2
JANG	**Nango**	**1.58**	**298**	P	Pn	03 02 04.8	0.0
JOM	**Ohasama**	**1.59**	**264**	P	Pn	03 02 05.7	+0.7
JOM				*e*S	Sb	03 02 26.2	-0.2
JMK	**Ichinoseki**	**1.79**	**248**	P	Pn	03 02 08.4	+0.8
JIO	**Ouri**	**1.96**	**233**	P	Pn	03 02 10.3	+0.3
JTM	**Tenmabayashi**	**2.08**	**304**	P	Pn	03 02 12.9	+1.2
JTM				*e*S	Sb	03 02 39.2	-1.1
JRG	**Rokugo**	**2.11**	**264**	P	Pn	03 02 13.5	+1.4
JAH	**Hinai**	**2.15**	**285**	P	Pn	03 02 14.1	+1.5
JAH				*e*S	Sb	03 02 40.9	-1.5
JYK	**Kaneyama**	**2.43**	**253**	P	Pn	03 02 17.9	+1.4

ECX ***28*** *03:04:13.8±0.8, 31.°72N×115.°85W, h5^{km}±3^{km}, MD2.9, ML3.2*

SCEDC ***28*** *03:04:13.7, 31.°71N×115.°87W, h5^{km}*

ANF ***28*** *03:04:13.9±1.0, 31.°78N×115.°95W, h5^{km}, ML2.6/9, Error ellipse: s-maj=7.8km s-min=7.0km az=76.0*

PAS ***28*** *03:04:13.7±1.4, 31.°71N±0.°02×115.°872W±0.°009, h5^{km}±6^{km}, ML3.2/70, ML3.0/28(NEIC), Error ellipse: s-maj=2.3km s-min=1.0km az=179.0*

NEIC ***28*** *03:04:13.3±1.9, 31.°70N±0.°02×115.°87W±0.°03, h19^{km}±2^{km}, Error ellipse: s-maj=4.1km s-min=2.7km az=224.0*

ISC 28 03:04:12.9±0.9**, 31.°70N**±0.°02×**115.°85W**±0.°02**, h14**^{km}±8^{km}**, n60, σ0^{s}92**/86**, 4C-3D, Baja California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SJX	**San Joaquin**	**0.11**	**304**	⇓*i*P	**Pb**	**03 04 19.4**	**+2.5**
SJX				*e*S	**Sb**	**03 04 23.7**	**+4.3**
SJX				⇑*e*		03 04 24.0	
SJX				IAML		03 04 24.0	
	comp=E,5µm,0.1s						
VTX	**Valle De La Tr**	**0.31**	**170**	⇓*e*P	**Pg**	**03 04 19.8**	**+0.4**
VTX				*e*S	**Sg**	**03 04 24.2**	**+0.3**
ESJX	**Sierra Juarez**	**0.32**	**345**		**Pg**	**03 04 19.4**	**-0.2**
ESJX					**Sg**	**03 04 23.6**	**-0.5**
ESJX	**Sierra Juarez**	**0.32**	**345**	IAML		03 04 24.1	
	comp=N,5µm,0.1s						
ESJX				IAML		03 04 24.2	
	comp=E,4µm,0.1s						
SVX	**San Vicente**	**0.51**	**223**	⇑*e*P	**Pg**	**03 04 23.2**	**+0.3**
SVX				*e*S	**Sg**	**03 04 30.1**	**+0.4**
CCX	**Cicese**	**0.71**	**284**		**Pg**	**03 04 26.8**	**-0.1**
CCX					**Sg**	**03 04 36.4**	**+0.1**
CCX	**Cicese**	**0.71**	**284**	IAML		03 04 36.6	
	comp=E,468nm,0.5s						
CCX				IAML		03 04 36.8	
	comp=N,854nm,0.4s						
CCX	**Cicese**	**0.71**	**284**	⇑*e*P	**Pg**	**03 04 26.7**	**-0.1**
CCX				*e*S	**Sg**	**03 04 35.8**	**-0.4**
ECBX	**El Chinero**	**0.72**	**108**	⇑*e*P	**Pg**	**03 04 26.1**	**-0.8**
ECBX				*e*S	**Sg**	**03 04 35.8**	**-0.6**
SPIG	**San Pedro Mart**	**0.73**	**153**	*e*P	**Pg**	**03 04 27.1**	**-0.1**
SPX	**San Pedro Mart**	**0.74**	**153**		**Pg**	**03 04 27.3**	**-0.1**
SPX					**Sg**	**03 04 37.0**	**-0.1**
SPX	**San Pedro Mart**	**0.74**	**153**	*e*P	**Pg**	**03 04 27.3**	**-0.1**
CPBX	**Cerro Prieto**	**0.85**	**33**		**Pg**	**03 04 30.3**	**+0.9**
GUVIX	**Guadalupe Vict**	**0.89**	**47**		**Pn**	**03 04 31.2**	**+0.2**
GUVIX					**Sg**	**03 04 43.2**	**+1.4**
RMX	**La Rumorosa**	**0.92**	**348**	Pg	**Pb**	**03 04 29.5**	**-1.2**
RMX				IAML		03 04 44.5	
	comp=N,333nm,0.4s						
CBX	**Cerro Bola**	**0.92**	**312**		**Pb**	**03 04 30.1**	**-0.6**
CBX					**Sb**	**03 04 41.7**	**-1.2**
CBX	**Cerro Bola**	**0.92**	**312**	IAML		03 04 43.3	
	comp=E,408nm,0.3s						
CBX				IAML		03 04 44.0	
	comp=N,345nm,0.4s						
CBX	**Cerro Bola**	**0.92**	**312**	*e*P	**Pb**	**03 04 30.1**	**-0.6**
CBX				*e*S	**Sb**	**03 04 41.7**	**-1.2**
CBX				IAML		03 04 43.1	
	comp=E,791nm,0.2s						
CBX				⇓*e*		03 04 43.1	
YUH	**Yuha Desert**	**0.95**	**356**		**Pb**	**03 04 30.2**	**-0.8**
YUH					**Sb**	**03 04 42.2**	**-1.2**
SGL	**Mount Signal**	**0.95**	**6**		**Pb**	**03 04 30.8**	**-0.4**
IKP	**In-Ko-Pah, Jac**	**0.97**	**347**	P	**Pb**	**03 04 31.0**	**-0.6**
	baz=168						
IKP				S	**Sb**	**03 04 42.9**	**-1.4**

```
       baz=168
IKP    In-Ko-Pah, Jac     0.97 347       Pb     03 04 30.9 -0.6
IKP                                      Sb     03 04 43.0 -1.4
IKP    In-Ko-Pah, Jac     0.97 347  eP   Pb     03 04 31.0 -0.6
IKP                                 eS   Sb     03 04 42.8 -1.4
UABX   UABC, Campus M     0.99  20       Sn     03 04 46.3 +0.2
TJIG   Tijuana            1.01 316  eP   Pb     03 04 31.5 -0.7
TJIG                                eS   Sb     03 04 44.2 -1.1
TKX    Tecate             1.08 324       Pb     03 04 32.5 -0.9
TKX                                      Sb     03 04 46.2 -1.1
TKX    Tecate             1.08 324  eP   Pb     03 04 32.4 -0.9
SFX    San Felipe         1.08 127       Pb     03 04 33.8 +0.5
SFX                                      Sn     03 04 48.4 +0.1
SFX    San Felipe         1.08 127  IAML        03 04 49.6
       comp=E,268nm,0.5s
SFX                                 IAML        03 04 49.7
       comp=N,291nm,0.3s
SQX    San Quintin        1.12 181  eP   Pb     03 04 33.3 -0.8
SQX                                 eS   Sb     03 04 48.0 -0.4
COK2   Cook Ranch 2       1.15   5       Pn     03 04 34.8 +0.3
CRR    Carrizo Plain      1.19 355       Pn     03 04 35.0 -0.1
CRR                                      Sb     03 04 49.9 -0.5
BAR    Barrett            1.20 325       Pn     03 04 34.4 -0.8
BAR                                 IAML        03 04 50.5
       comp=N,471nm,0.1s
BAR                                 IAML        03 04 51.7
       comp=E,443nm,0.2s
BAR    Barrett            1.20 325       Sb     03 04 49.4 -1.4
BAR    Barrett            1.20 325       Pn     03 04 34.7 -0.6
BAR    Barrett            1.20 325  eP   Pn     03 04 34.4 -0.8
SWSC   Sam W. Stewart     1.24   2  P    Pn     03 04 36.2 +0.4
       baz=183
SWSC                                S    Sn     03 04 52.9 +0.6
       baz=183
CBKC   Canebrake          1.24 344       Pn     03 04 36.2 +0.3
MONP2  Monument Peak      1.28 338  P    Pn     03 04 36.6  0.0
       baz=158
MONP2                               S    Sb     03 04 52.6 -0.8
       baz=158
MONP2  Monument Peak      1.28 338       Pn     03 04 36.5 -0.1
MONP2                                    Sb     03 04 52.6 -0.8
OLP    Otay Lakes Par     1.29 315       Sb     03 04 52.2 -1.0
OLP    Otay Lakes Par     1.29 315  eP   Pn     03 04 36.0 -0.4
TJX    Tijuana            1.30 309  Pn   Pn     03 04 37.0 +0.3
TJX                                 IAML        03 05 00.4
       comp=N,420nm,0.9s
TJX                                 IAML        03 05 04.3
       comp=E,482nm,0.7s
SDRC   San Diego Road     1.39 318       Pn     03 04 37.7 -0.1
SDRC                                     Sn     03 04 55.2 -0.7
SDRC   San Diego Road     1.39 318  eP   Pn     03 04 37.7 -0.1
DPP    Dos Picos Cty      1.59 325       Pn     03 04 41.2 +0.6
DPP                                      Sn     03 05 01.6 +0.6
109C   Camp Elliot, M     1.59 318  P    Pn     03 04 41.1 +0.5
       baz=138
109C                                S    Sn     03 05 01.0 +0.1
       baz=138
109C   Camp Elliot, M     1.59 318       Pn     03 04 41.1 +0.5
CPE    Camp Elliot        1.59 318       Pn     03 04 41.0 +0.4
CPE                                      Sn     03 05 01.0  0.0
GLA    Glamis             1.60  32  P    Pb     03 04 42.6 +0.3
       baz=214
GLA                                 S    Sb     03 05 03.9 +1.5
       baz=214
MATG   Mataguay Scout     1.64 336       Sn     03 05 02.9 +0.6
PFO    Pinyon Flats O     1.97 345  P    Pn     03 04 46.0  0.0
       baz=165
PFO                                 S    Sb     03 05 13.8 +0.6
       baz=165
PFO    Pinyon Flats O     1.97 345       Pn     03 04 46.0  0.0
BC3    Big Chuckawall     1.98  10  P    Pn     03 04 45.9 -0.1
       baz=190
CRY    Cary Ranch         2.00 338       Pn     03 04 46.8 +0.4
MURC   Murrieta           2.21 329  P    Pn     03 04 50.4 +1.2
       baz=149
MURC                                S    Sb     03 05 19.2 -0.6
       baz=149
BELC   Belle Mtn. Jos     2.30 357  P    Pn     03 04 51.4 +0.9
       baz=177
IRM    Iron Mountain      2.52  13  P    Pn     03 04 55.3 +1.9
       baz=194
214A   Organ Pipe Nat     2.60  84  Pn   Pn     03 04 53.9 -0.6
MWC    Mount Wilson       3.13 324  Pn   Pn     03 05 02.4 +0.5
MWC                                 IAML        03 05 51.3
       comp=E,40nm,0.3s
MWC                                 IAML        03 05 54.2
       comp=N,33nm,1.1s
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*STR **28** 03:16:12.5±0.9, 42°N±10°×1°4E±°, h0^{km}, mb4.3/6, MLv4.1/6, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/alpes_taup-2.11 preliminary*

*MOS **28** 03:16:17.8±1.6, 42°.07N×13°.44E, h11^{km}, mb4.2/9, Error ellipse: s-maj=6.9km s-min=3.6km az=73.3*

*BEO **28** 03:16:17.2±0.8, 41°.89N×13°.28E, h6^{km}±7^{km}, ML4.1/6, Mining explosion.*

*LDG **28** 03:16:17.5±0.1, 42°.00N×13°.55E, h17^{km}, Ml3.4/27, Error ellipse: s-maj=3.0km s-min=1.8km az=41.0*

*MED_RC **28** 03:16:17.0±0.5, 41°.85N×13°.53E, h17^{km}±1^{km}, MW4.4/17, Moment Tensor Solution.Mantle waves: s17,c26; Duration: 1^{s}0 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-4.35±.58; M$_{\theta\theta}$2.17±.35; M$_{\phi\phi}$2.19±.34; M$_{r\theta}$-1.32±.53; M$_{\theta\phi}$-2.49±.16; M$_{\phi r}$0.17±.46; Best double couple: M$_0$4.71000×10^{15} NP1:φ$_s$326.00000°,δ39.00000°, λ-73.00000°. NP2:φ$_s$125.00000°,δ53.00000°, λ-103.00000°. Principal axes: T 4.7900, Plg7.0000°, Azm224.0000°; N -0.1600, Plg10.0000°, Azm133.0000°; P -4.6200, Plg78.0000°, Azm346.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

*NEIC **28** 03:16:17.6±1.8, 41°.96N±0°.04×13°.54E±0°.07, h12^{km}±3^{km} Error ellipse: s-maj=8.0km s-min=5.3km az=77.0*

*IDC **28** 03:16:18.3±0.8, 42°.08N×13°.38E, h0^{km}, mb4.0/10, mb1 4.1/21, mb1mx3.8/59, mbtmp3.9/21, ML3.7/9, MS3.4/11, Ms1 3.5/11, ms1mx3.2/55, Error ellipse: s-maj=14.5km s-min=12.2km az=108.0*

*ROM **28** 03:16:18.2±0.1, 41°.950N±0°.004×13°.534E±0°.005, h11^{km}, ML3.9/1, Mw4.1, Error ellipse: s-maj=0.5km s-min=0.1km az=213.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$-1.30; M$_{\theta\theta}$0.67; M$_{\phi\phi}$0.64; M$_{r\theta}$0.28; M$_{\theta\phi}$-1.79; M$_{\phi r}$-0.57; Fault plane solution: M$_0$2.02103×10^{15} NP1:φ$_s$106.00000°,δ44.00000°, λ-134.00000°. NP2:φ$_s$339.00000°,δ60.00000°, λ-56.00000°.*

*PDG **28** 03:16:18.5±0.6, 41°.98N×13°.54E, h10^{km}, ML3.9/14 Error ellipse: s-maj=0.5km s-min=0.6km az=0.0*

*PRU **28** 03:16:20.9±0.0, 42°.09N×13°.61E, h0^{km}, M4.2*

ISC 28 03:16:18.9±0.7, **41°.96N**±0°.02×**13°.54E**±0°.02, **h13**^{km}±4^{km}, **n468**, σ**1^{s}80**/488, **mb4.0**/18, **MS3.6**/6, **49C-30D, Southern Italy**

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Code   Station Name         Δ°  AZ°     Phase ID            Time     Res
                                      Op     ISC         h  m  s    ISC
VVLD   Villa Vallelon     0.10 144  ⇓P     Pg         03 16 21.5 -0.4
VVLD                                 S     Sg         03 16 23.6 -0.6
PTQR   Pietraquaria       0.12 302  ⇓P     Pg         03 16 21.7 -0.5
PTQR                                 S     Sg         03 16 24.1 -0.5
PTQR                                 AML   AML
PTQR                                 AML   AML
       comp=N,71000µm,0.2s
PTQR                                 AML   AML
       comp=N,71000µm,0.2s
GUAR   Guarcino           0.23 226  ⇑P     Pg         03 16 23.7 -0.2
GUAR                                 S     Sg         03 16 27.7 +0.4
GUAR                                 AML   AML
       comp=E,92700µm,1.6s
GUAR                                 AML   AML
       comp=N,97650µm,0.3s
GUAR                                 AML   AML
       comp=N,97650µm,0.3s
GUAR                                 AML   AML
       comp=E,92700µm,1.6s
POFI   Posta Fibreno      0.27 152  ⇑P     Pb         03 16 24.0 -1.6
POFI                                 S     Sb         03 16 28.5 -1.7
POFI                                 AML   AML
       comp=N,67000µm,0.6s
POFI                                 AML   AML
       comp=N,68450µm,0.6s
POFI                                 AML   AML
       comp=E,72250µm,0.4s
POFI                                 AML   AML
       comp=E,74850µm,0.4s
POFI                                 AML   AML
       comp=E,72250µm,0.4s
POFI                                 AML   AML
       comp=N,67050µm,0.6s
POFI                                 AML   AML
       comp=N,67050µm,0.6s
POFI                                 AML   AML
       comp=E,74850µm,0.4s
POFI                                 AML   AML
       comp=N,68450µm,0.6s
INTR   Introdacqua        0.28  78   Pg    Pb         03 16 23.9 -1.9
INTR   Introdacqua        0.28  78  ⇑P     Pb         03 16 24.2 -1.6
INTR                                 S     Sb         03 16 28.6 -1.8
INTR                                 AML   AML
INTR                                 AML   AML
       comp=N,22000µm,0.5s
FAGN   Fagnano            0.31   6   P     Pb         03 16 24.6 -1.8
FAGN                                 AML   AML
       comp=E,92100µm,0.6s
FAGN                                 AML   AML
       comp=N,66250µm,0.4s
FAGN                                 AML   AML
       comp=N,66250µm,0.4s
FAGN                                 AML   AML
       comp=E,92100µm,0.6s
T0110  Collepietro        0.32  33   P     Pb         03 16 25.0 -1.6
T0110                                S     Sb         03 16 29.6 -2.2
T0110                                AML   AML
       comp=E,52250µm,1.3s
T0110                                AML   AML
AQU    L'Aquila           0.41 346   P     Pg         03 16 26.0 -1.1
AQU    L'Aquila           0.41 346   Pg    Pg         03 16 26.0 -1.1
AQU    L'Aquila           0.41 346  ⇓P     Pg         03 16 26.0 -1.1
AQU                                  AML   AML
       comp=E,24100µm,0.5s
AQU                                  AML   AML
       comp=N,29850µm,0.7s
AQU                                  AML   AML
       comp=N,29550µm,0.7s
AQU                                  AML   AML
       comp=N,29900µm,0.7s
AQU                                  AML   AML
       comp=N,29550µm,0.7s
AQU                                  AML   AML
       comp=E,24100µm,0.5s
AQU                                  AML   AML
       comp=E,22450µm,0.5s
AQU                                  AML   AML
       comp=N,29900µm,0.7s
CERT   Cerreto            0.42 269  ⇑P     Pb         03 16 26.4 -1.7
CERT                                 S     Sb         03 16 32.8 -1.6
CERT                                 AML   AML
       comp=N,17850µm,1.2s
CERT                                 AML   AML
       comp=E,29950µm,0.4s
CERT                                 AML   AML
       comp=E,29950µm,0.4s
FIAM   Fiamignano         0.44 315   P     Pb         03 16 26.9 -1.8
FIAM                                 S     Sb         03 16 34.0 -1.2
FIAM                                 AML   AML
       comp=E,21600µm,0.5s
FIAM                                 AML   AML
       comp=N,18150µm,0.9s
FIAM                                 AML   AML
       comp=E,21600µm,0.5s
FIAM                                 AML   AML
       comp=N,18150µm,0.9s
GIUL   Giuliano Di Ro     0.45 208  ⇑P     Pb         03 16 27.2 -1.5
GIUL                                 S     Sb         03 16 34.2 -1.1
GIUL                                 AML   AML
       comp=N,28250µm,0.3s
GIUL                                 AML   AML
       comp=E,24050µm,0.9s
GIUL                                 AML   AML
       comp=N,28250µm,0.3s
RCAV   Rocca di Cave      0.46 256   P     Pg         03 16 27.0 -0.9
RCAV                                 S     Sb         03 16 34.0 -1.6
CERA   Filignano          0.51 135  ⇓P     Pg         03 16 28.0 -0.8
CERA                                 S     Sg         03 16 35.1 -0.5
CERA                                 AML   AML
       comp=E,47400µm,0.3s
CERA                                 AML   AML
       comp=N,48300µm,0.5s
CERA                                 AML   AML
       comp=E,48950µm,0.3s
CERA                                 AML   AML
       comp=E,47400µm,0.3s
CERA                                 AML   AML
       comp=N,48250µm,0.5s
CERA                                 AML   AML
       comp=E,47400µm,0.3s
CERA                                 AML   AML
       comp=E,48950µm,0.3s
CERA                                 AML   AML
       comp=N,49500µm,0.5s
RNI2   Rionero Sannit     0.52 119  ⇑P     Pb         03 16 28.6 -1.3
RNI2                                 AML   AML
       comp=E,51650µm,0.2s
RNI2                                 AML   AML
       comp=N,38350µm,0.4s
RNI2                                 AML   AML
       comp=N,38900µm,0.4s
RNI2                                 AML   AML
       comp=E,54200µm,0.2s
RNI2                                 AML   AML
       comp=N,38900µm,0.4s
RNI2                                 AML   AML
       comp=E,51650µm,0.2s
RNI2                                 AML   AML
       comp=N,38350µm,0.4s
RNI2                                 AML   AML
       comp=E,54200µm,0.2s
CAMP   Campotosto         0.59 351   P     Pb         03 16 29.4 -1.6
CAMP                                 AML   AML
       comp=E,7720µm,0.5s
CAMP                                 AML   AML
       comp=N,12200µm,0.7s
MTCE   Montecelio         0.60 277  ⇑P     Pg         03 16 29.3 -1.2
MTCE                                 AML   AML
       comp=E,18600µm,0.9s
MTCE                                 AML   AML
       comp=E,18600µm,0.9s
MTCE                                 AML   AML
       comp=N,10335µm,0.9s
RM33   Pellescritta (     0.60 337   P     Pg         03 16 29.2 -1.4
RM33                                 AML   AML
       comp=N,17250µm,0.5s
RM33                                 AML   AML
       comp=E,25350µm,0.7s
RM33                                 AML   AML
       comp=N,17300µm,0.5s
RM33                                 AML   AML
       comp=E,25350µm,0.7s
VIVA   Pratoni del Vi     0.61 251   P     Pg         03 16 29.8 -0.9
VIVA                                 AML   AML
       comp=E,64650µm,0.4s
VIVA                                 AML   AML
       comp=N,65100µm,0.4s
VIVA                                 AML   AML
       comp=E,64650µm,0.4s
VIVA                                 AML   AML
       comp=N,65100µm,0.4s
MIDA   Miranda            0.62 120  ⇑P     Pg         03 16 29.9 -1.0
MIDA                                 S     Sb         03 16 39.3 -1.0
MIDA                                 AML   AML
       comp=E,38050µm,0.3s
MIDA                                 AML   AML
       comp=E,37200µm,0.3s
MIDA                                 AML   AML
       comp=N,42050µm,0.3s
MIDA                                 AML   AML
       comp=N,42050µm,0.3s
MIDA                                 AML   AML
       comp=E,38000µm,0.3s
MIDA                                 AML   AML
       comp=N,39250µm,0.3s
MIDA                                 AML   AML
       comp=E,37200µm,0.3s
LATB   Latina             0.63 223  ⇑P     Pg         03 16 29.8 -1.4
LATB                                 S     Sb         03 16 39.5 -1.0
LATB                                 AML   AML
       comp=E,9885µm,0.8s
LATB                                 AML   AML
       comp=N,11400µm,0.8s
LATB                                 AML   AML
       comp=N,11350µm,0.8s
LATB                                 AML   AML
       comp=E,9910µm,0.8s
RMP    Rome, Mte Porz     0.64 257  ⇑P     Pg         03 16 30.2 -1.2
RMP                                  AML   AML
       comp=N,27700µm,1.2s
RMP                                  AML   AML
       comp=E,24000µm,1.0s
RDP    Rocca di Papa      0.65 252  ⇑P     Pg         03 16 30.5 -0.9
RDP                                  AML   AML
       comp=E,34550µm,1.2s
RDP                                  AML   AML
       comp=N,56600µm,1.2s
RDP                                  AML   AML
       comp=E,34550µm,1.2s
RDP                                  AML   AML
       comp=N,56600µm,1.2s
CAFR   Castel Frentan     0.66  65   P     Pb         03 16 30.9 -1.3
CAFR                                 AML   AML
       comp=N,14600µm,0.5s
CAFR                                 AML   AML
       comp=E,12750µm,0.4s
TERO   Teramo             0.67   4  ⇑P     Pg         03 16 30.5 -1.4
TERO                                 AML   AML
       comp=E,11900µm,0.6s
TERO                                 AML   AML
       comp=E,4850µm,0.6s
TERO                                 AML   AML
       comp=N,15700µm,0.6s
TERO                                 AML   AML
       comp=N,6385µm,0.6s
MA9    Marino             0.68 254  ⇑P     Pg         03 16 30.8 -1.3
MA9                                  AML   AML
       comp=E,22950µm,0.6s
MA9                                  AML   AML
       comp=N,19250µm,0.6s
SMA1   SAN MARTINO        0.69 347   P     Pb         03 16 31.4 -1.5
SAMA   S.Maria delle      0.73 256  ⇑P     Pg         03 16 31.5 -1.5
SAMA                                 AML   AML
       comp=E,13850µm,0.8s
SAMA                                 AML   AML
       comp=N,11065µm,1.1s
LNSS   Leonessa           0.74 330   P     Pg         03 16 32.3 -1.1
LNSS                                 AML   AML
       comp=E,17950µm,0.6s
LNSS                                 AML   AML
       comp=N,13950µm,0.6s
VAGA   Valle Agricola     0.75 136   P     Pg         03 16 32.3 -1.1
VAGA                                 AML   AML
       comp=E,9915µm,1.0s
VAGA                                 AML   AML
       comp=N,20100µm,0.3s
VAGA                                 AML   AML
       comp=E,10180µm,1.0s
VAGA                                 AML   AML
       comp=N,20700µm,0.3s
VAGA                                 AML   AML
       comp=E,9920µm,1.0s
VAGA                                 AML   AML
       comp=N,20100µm,0.3s
VAGA                                 AML   AML
       comp=N,20100µm,0.3s
VAGA                                 AML   AML
       comp=N,20700µm,0.3s
ROM9   Roma               0.78 261   P     Pg         03 16 32.4 -1.5
ROM9                                 AML   AML
       comp=E,36650µm,1.6s
ROM9                                 AML   AML
       comp=N,62200µm,1.0s
ROM9                                 AML   AML
       comp=N,62200µm,1.0s
ROM9                                 AML   AML
       comp=E,36650µm,1.6s
TRIV   Trivento           0.78 104   P     Pg         03 16 32.6 -1.3
TRIV                                 AML   AML
       comp=E,9175µm,0.4s
TRIV                                 AML   AML
       comp=N,9600µm,0.8s
TRIV                                 AML   AML
       comp=E,8970µm,1.2s
TRIV                                 AML   AML
       comp=E,9170µm,0.4s
TRIV                                 AML   AML
       comp=N,9570µm,0.8s
TRIV                                 AML   AML
       comp=N,9425µm,1.3s
TRIV                                 AML   AML
       comp=E,8965µm,1.2s
SRES   S.Oreste - Sor     0.82 290   P     Pb         03 16 33.8 -1.1
SRES                                 AML   AML
       comp=N,6050µm,1.2s
SRES                                 AML   AML
       comp=E,5765µm,1.1s
FRES   Fresagrandinar     0.84  88   P     Pg         03 16 33.4 -1.8
ARRO   Arrone             0.85 318   AML   AML
       comp=N,11790µm,0.6s
ARRO                                 AML   AML
       comp=E,9600µm,1.0s
ARRO                                 AML   AML
       comp=N,11755µm,0.6s
ARRO                                 AML   AML
       comp=E,9610µm,1.0s
SGG    Gregorio Mates     0.85 132   P     Pb         03 16 34.2 -1.3
SGG                                  AML   AML
       comp=E,32nm,0.5s
SGG                                  AML   AML
       comp=N,9735µm,1.1s
SGG                                  AML   AML
       comp=E,10475µm,0.5s
SGG                                  AML   AML
       comp=N,30nm,1.3s
MODR   Mondragone         0.85 162   P     Pg         03 16 33.6 -1.7
MODR                                 AML   AML
       comp=N,6850µm,0.4s
MODR                                 AML   AML
       comp=E,6430µm,1.4s
BSSO   Busso              0.89 117   P     Pg         03 16 34.7 -1.3
BSSO                                 AML   AML
       comp=N,2850µm,0.7s
BSSO                                 AML   AML
       comp=N,6775µm,0.7s
BSSO                                 AML   AML
       comp=E,10785µm,1.0s
BSSO                                 AML   AML
       comp=E,4440µm,1.0s
PIGN   Pignataro Magg     0.90 147   P     Pb         03 16 35.6 -0.7
PIGN                                 AML   AML
       comp=E,4480µm,0.8s
PIGN                                 AML   AML
       comp=N,4980µm,0.5s
PIGN                                 AML   AML
       comp=E,4520µm,0.8s
PIGN                                 AML   AML
       comp=N,4985µm,0.5s
PIGN                                 AML   AML
       comp=N,4685µm,0.5s
PIGN                                 AML   AML
       comp=E,4480µm,0.9s
NRCA   Norcia             0.93 340         Pg         03 16 35.2 -1.6
NRCA   Norcia             0.93 340   P     Pg         03 16 35.1 -1.8
NRCA                                 AML   AML
       comp=N,4285µm,0.7s
NRCA                                 AML   AML
       comp=E,5645µm,0.7s
NRCA                                 AML   AML
       comp=E,5470µm,0.7s
NRCA                                 AML   AML
       comp=N,4385µm,0.7s
PTRJ   Pietraroja         0.95 128   P     Pg         03 16 35.5 -1.7
PTRJ                                 AML   AML
       comp=N,9965µm,0.6s
PTRJ                                 AML   AML
       comp=E,16350µm,1.2s
PTRJ                                 AML   AML
       comp=N,9280µm,0.6s
PTRJ                                 AML   AML
       comp=E,14600µm,1.2s
CESX   Cesi               0.97 313   P     Pb         03 16 36.9 -0.6
CESX                                 AML   AML
       comp=E,8900µm,1.0s
CESX                                 AML   AML
       comp=N,12050µm,1.0s
OFFI   Offida             0.98   6   P     Pb         03 16 37.2 -0.6
OFFI                                 AML   AML
       comp=E,27900µm,0.6s
OFFI                                 AML   AML
       comp=N,50900µm,0.8s
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OFFI                           AML    AML
      comp=E,27900µm,0.6s
OFFI                           AML    AML
      comp=N,50900µm,0.8s
SACR  S. Croce Del S  1.04 122  P      Pb      03 16 37.9  -0.8
SACR                           AML    AML
      comp=N,4635µm,0.7s
SACR                           AML    AML
      comp=N,4750µm,0.7s
SACR                           AML    AML
      comp=E,3635µm,0.9s
SACR                           AML    AML
      comp=E,3675µm,0.9s
GATE  Gambatesa       1.12 113  AML    AML
      comp=E,4955µm,0.5s
GATE                           AML    AML
      comp=E,2195µm,1.6s
GATE                           AML    AML
      comp=N,2955µm,1.2s
GATE                           AML    AML
      comp=N,2950µm,1.2s
VITU  Vitulano (BN)   1.12 133  AML    AML
      comp=E,2300µm,1.4s
VITU                           AML    AML
      comp=N,8520µm,0.4s
VITU                           AML    AML
      comp=E,8455µm,0.4s
VITU                           AML    AML
      comp=N,8260µm,0.4s
FDMO  Fiordimonte     1.13 343 ⇑P      Pg      03 16 39.0  -1.6
FDMO                           AML    AML
      comp=N,4465µm,1.3s
FDMO                           AML    AML
      comp=E,5280µm,0.6s
GUMA  Gualdo di Mace  1.14  15  AML    AML
      comp=N,24550µm,0.6s
GUMA                           AML    AML
      comp=E,22850µm,1.6s
GUMA                           AML    AML
      comp=E,22850µm,1.6s
GUMA                           AML    AML
      comp=N,25250µm,0.5s
GUMA                           AML    AML
      comp=E,31000µm,0.5s
CESI  CESI - Serrava  1.15 336  P      Pb      03 16 40.0  -0.7
CESI                           AML    AML
      comp=E,7465µm,0.5s
CESI                           AML    AML
      comp=N,3690µm,0.6s
TOLF  Tolfa           1.15 276  P      Pg      03 16 38.7  -2.3
TOLF                           AML    AML
      comp=E,3195µm,0.9s
TOLF                           AML    AML
      comp=N,3100µm,1.2s
PAOL  Paolisi         1.20 140         Pb      03 16 40.8  -0.8
PAOL  Paolisi         1.20 140  P      Pn      03 16 41.5  +0.1
PAOL                           AML    AML
      comp=E,2315µm,1.6s
PAOL                           AML    AML
      comp=N,3420µm,1.3s
PAOL                           AML    AML
      comp=N,3455µm,1.3s
PAOL                           AML    AML
      comp=E,2370µm,1.6s
MELA  Melanico ??? S  1.21 101  AML    AML
      comp=E,6200µm,1.1s
MELA                           AML    AML
      comp=E,5880µm,1.2s
MELA                           AML    AML
      comp=N,8375µm,0.4s
MELA                           AML    AML
      comp=N,8260µm,0.4s
ASSB  Assisi San Ben  1.27 329  AML    AML
      comp=E,6045µm,0.7s
ASSB                           AML    AML
      comp=N,6985µm,0.9s
MRB1  Monte Rocchett  1.36 127  P      Pg      03 16 43.2  -1.8
MRB1                           AML    AML
      comp=N,7515µm,0.7s
MRB1                           AML    AML
      comp=E,7040µm,0.5s
MRB1                           AML    AML
      comp=E,6970µm,0.5s
MRB1                           AML    AML
      comp=N,7310µm,0.7s
SNTG  Esanatoglia     1.37 341  P      Pb      03 16 44.0  -0.4
SNTG                           AML    AML
      comp=N,482µm,0.7s
SNTG                           AML    AML
      comp=E,3930µm,0.7s
SNTG                           AML    AML
      comp=N,3645µm,0.6s
SNTG                           AML    AML
      comp=E,514µm,0.7s
ATCC  AVT- Casa Cast  1.40 332  AML    AML
      comp=N,9195µm,0.7s
ATCC                           AML    AML
      comp=E,10085µm,0.9s
EL6   Elcito          1.41 347  P      Pb      03 16 44.5  -0.6
EL6                            AML    AML
      comp=E,6990µm,0.7s
EL6                            AML    AML
      comp=N,9120µm,1.5s
PP3   Marolino        1.42   2  P      Pb      03 16 44.9  -0.3
PP3                            AML    AML
      comp=E,9995µm,1.6s
PP3                            AML    AML
      comp=N,10335µm,1.0s
PP3                            AML    AML
      comp=N,10150µm,1.0s
PP3                            AML    AML
      comp=E,9480µm,1.0s
MGAB  Montegabbione   1.43 313  P      Pb      03 16 44.7  -0.6
MGAB                           AML    AML
      comp=E,4450µm,0.6s
MGAB                           AML    AML
      comp=N,4620µm,1.1s
MGAB                           AML    AML
      comp=N,5255µm,0.7s
MGAB                           AML    AML
      comp=E,4535µm,0.6s
CING  Cingoli         1.44 350  P      Pn      03 16 44.6  -0.2
CING                           AML    AML
      comp=E,4880µm,1.6s
CING                           AML    AML
      comp=N,3285µm,0.7s
LATE  Laterza         1.45 298         Pn      03 16 44.0  -0.8
LATE  Laterza         1.45 298  P      Pn      03 16 44.8   0.0
LATE                           AML    AML
      comp=N,1595µm,0.6s
LATE                           AML    AML
      comp=E,1015µm,1.0s
FOSV  Fossato di Vic  1.46 337  AML    AML
      comp=N,4935µm,0.6s
FOSV                           AML    AML
      comp=E,4400µm,1.4s
TREM  Isole Tremiti   1.48  83  P      Pg      03 16 45.4  -1.9
TREM                           AML    AML
      comp=N,10425µm,0.5s
TREM                           AML    AML
      comp=E,7005µm,0.5s
SACS  San Casciano d  1.50 307  P      Pb      03 16 46.0  -0.6
SACS                           AML    AML
      comp=E,2310µm,1.0s
SACS                           AML    AML
      comp=N,3665µm,0.9s
SACS                           AML    AML
      comp=E,2440µm,0.9s
SACS                           AML    AML
      comp=N,3735µm,0.9s
MURB  Monte Urbino    1.51 331         Pb      03 16 46.6  -0.1
ATTE  AVT- Monte Tez  1.52 325  AML    AML
      comp=N,3785µm,1.6s
ATTE                           AML    AML
      comp=E,3245µm,1.3s
CAFE  Carife          1.58 125  P      Pb      03 16 47.1  -0.8
CAFE                           AML    AML
      comp=N,2655µm,1.2s
CAFE                           AML    AML
      comp=E,3190µm,1.3s
CAFE                           AML    AML
      comp=N,2710µm,1.2s
CAFE                           AML    AML
      comp=E,3225µm,1.3s
ATFO  Monte Foce - G  1.58 333  P      Pg      03 16 47.5  -1.7
ATFO                           AML    AML
      comp=N,3115µm,0.6s
ATFO                           AML    AML
      comp=E,4320µm,1.6s
SSFR  Montelago di S  1.58 340  P      Pg      03 16 47.7  -1.5
SSFR                           AML    AML
      comp=N,2375µm,0.6s
SSFR                           AML    AML
      comp=E,3625µm,1.3s
SSFR                           AML    AML
      comp=E,3420µm,1.3s
SSFR                           AML    AML
      comp=N,2740µm,1.6s
SGTA  Sant Agata di   1.60 120  AML    AML
      comp=N,2135µm,1.2s
SGTA                           AML    AML
      comp=E,2290µm,1.3s
SGTA                           AML    AML
      comp=E,2310µm,0.7s
SGTA                           AML    AML
      comp=N,1970µm,1.2s
ARVD  Arcevia         1.60 344  P      Pb      03 16 47.7  -0.7
ARVD                           AML    AML
      comp=E,2255µm,0.7s
ARVD                           AML    AML
      comp=N,1795µm,0.7s
MCIV  Monte Civitell  1.61 301  P      Pn      03 16 46.9  -0.1
MCIV                           AML    AML
      comp=E,1405µm,1.5s
MCIV                           AML    AML
      comp=N,950µm,1.4s
SNAL  S. Angelo Dei   1.62 129  AML    AML
      comp=E,4280µm,1.6s
SNAL                           AML    AML
      comp=N,2795µm,1.3s
SNAL                           AML    AML
      comp=E,4355µm,1.6s
SNAL                           AML    AML
      comp=N,2845µm,1.3s
ATVO  AVT- Monte Val  1.65 330  AML    AML
      comp=E,3070µm,0.7s
ATVO                           AML    AML
      comp=N,2985µm,1.6s
SGRT  San Giovanni R  1.66  96         Pn      03 16 47.6  -0.1
SGRT  San Giovanni R  1.66  96  P      Pn      03 16 47.4  -0.3
SGRT                           AML    AML
      comp=N,3245µm,0.5s
SGRT                           AML    AML
      comp=E,2715µm,0.6s
MCRV  Calabrutti - M  1.70 133  P      Pn      03 16 48.5  +0.2
MCRV                           AML    AML
      comp=E,1442µm,0.5s
MCRV                           AML    AML
      comp=N,1700µm,1.2s
ATPI  Pietralunga -   1.71 331  AML    AML
      comp=E,2840µm,1.6s
ATPI                           AML    AML
      comp=N,2590µm,0.7s
PIEI  Pieia           1.74 335  P      Pb      03 16 49.7  -1.1
PIEI                           AML    AML
      comp=N,2275µm,0.8s
PIEI                           AML    AML
      comp=E,1370µm,0.5s
SENI  Senigallia      1.76 353  AML    AML
      comp=E,9060µm,0.7s
SENI                           AML    AML
      comp=N,4770µm,0.9s
SENI                           AML    AML
      comp=N,8640µm,0.5s
SENI                           AML    AML
      comp=E,3330µm,0.8s
MPAG  Monte Paganucc  1.77 341  AML    AML
      comp=E,2540µm,0.9s
MPAG                           AML    AML
      comp=N,2675µm,0.8s
ARCI  Arcidosso       1.77 301  P      Pn      03 16 49.9  +0.6
ARCI                           AML    AML
      comp=E,576µm,1.6s
ARCI                           AML    AML
      comp=N,490µm,1.3s
MSAG  Monte S. Angel  1.79  97  P      Pb      03 16 50.3  -1.2
MSAG                           AML    AML
      comp=N,6520µm,1.5s
MSAG                           AML    AML
      comp=N,6510µm,1.5s
MSAG                           AML    AML
      comp=E,2945µm,1.2s
MSAG                           AML    AML
      comp=E,2795µm,1.2s
CAFI  Castiglion Fio  1.80 320  AML    AML
      comp=N,2410µm,0.8s
CAFI                           AML    AML
      comp=E,1835µm,0.9s
NARO  Abbazia di Nar  1.80 337  AML    AML
      comp=E,1295µm,0.7s
NARO                           AML    AML
      comp=N,1875µm,0.7s
APEC  Apecchio        1.80 333  P      Pb      03 16 50.9  -0.8
APEC                           AML    AML
      comp=E,2730µm,1.1s
APEC                           AML    AML
      comp=N,1125µm,0.7s
APEC                           AML    AML
      comp=E,542µm,0.6s
APEC                           AML    AML
      comp=N,4455µm,0.7s
BADI  Badiali         1.82 329  P      Pb      03 16 50.9  -1.2
BADI                           AML    AML
      comp=E,3300µm,0.9s
BADI                           AML    AML
      comp=N,2695µm,0.8s
FSSB  Fossombrone     1.82 342  AML    AML
      comp=E,3770µm,0.5s
FSSB                           AML    AML
      comp=N,4335µm,0.6s
VULT  Monte Vulture   1.85 122  P      Pn      03 16 51.0  +0.6
VULT                           AML    AML
      comp=E,2510µm,0.9s
VULT                           AML    AML
      comp=E,2565µm,0.9s
VULT                           AML    AML
      comp=N,2410µm,1.0s
VULT                           AML    AML
      comp=N,2365µm,1.6s
PE3   Peglio          1.90 337  AML    AML
      comp=E,5350µm,0.7s
PE3                            AML    AML
      comp=N,6630µm,0.6s
SSP9  Sansepolcro     1.92 328  P      Pn      03 16 52.0  +0.8
SSP9                           AML    AML
      comp=E,3775µm,1.4s
SSP9                           AML    AML
      comp=N,3190µm,1.6s
PARC  Parchiule       1.94 331  P      Pn      03 16 52.5  +0.8
PARC                           AML    AML
      comp=E,2250µm,1.6s
PARC                           AML    AML
      comp=N,2030µm,0.7s
CRE   Caprese Michel  2.03 325  P      Pn      03 16 53.1  +0.2
CRE                            AML    AML
      comp=E,1230µm,1.6s
CRE                            AML    AML
      comp=N,1285µm,1.4s
PALZ  Palazzo San Ge  2.08 118  P      Pb      03 16 54.7  -1.8
PALZ                           AML    AML
      comp=E,2515µm,1.4s
PALZ                           AML    AML
      comp=N,2495µm,1.3s
CASP  Castiglione de  2.15 294  Pn     Pn      03 16 53.4  -1.1
CASP  Castiglione de  2.15 294  P      Pn      03 16 54.4   0.0
CASP                           AML    AML
      comp=E,322µm,1.4s
CASP                           AML    AML
      comp=N,336µm,1.6s
ACER  Acerenza        2.15 122  P      Pn      03 16 55.3  +0.8
ACER                           AML    AML
      comp=N,1061µm,0.8s
ACER                           AML    AML
      comp=E,1255µm,0.6s
ACER                           AML    AML
      comp=E,1290µm,0.6s
ACER                           AML    AML
      comp=N,1018µm,1.4s
FROS  Frosini         2.16 306  P      Pn      03 16 54.8  +0.2
FROS                           AML    AML
      comp=N,755µm,1.2s
FROS                           AML    AML
      comp=E,750µm,1.1s
MRVN  Minervino Murg  2.19 113  P      Pn      03 16 55.8  +0.8
MRVN                           AML    AML
      comp=N,829µm,0.9s
MRVN                           AML    AML
      comp=E,665µm,1.6s
SLCN  Sala Consilina  2.22 134  AML    AML
      comp=E,1355µm,1.6s
SLCN                           AML    AML
      comp=N,848µm,1.6s
ASQU  Asqua           2.25 326  AML    AML
      comp=N,1114µm,1.4s
ASQU                           AML    AML
      comp=E,913µm,0.9s
CSNT  Castellina Chi  2.25 313  P      Pn      03 16 56.6  +0.8
CSNT                           AML    AML
      comp=E,534µm,1.4s
CSNT                           AML    AML
      comp=N,408µm,1.6s
TRIF  Trifonti        2.27 302  P      Pn      03 16 56.2  +0.2
TRIF                           AML    AML
      comp=N,393µm,1.6s
TRIF                           AML    AML
      comp=E,438µm,0.8s
ZIRJ  Zirje           2.30  42 ePn     Pn      03 16 56.6  +0.2
OSSC  Osservatorio P  2.30 314  Pn     Pn      03 16 57.1  +0.6
OSSC  Osservatorio P  2.30 314  P      Pn      03 16 57.5  +0.9
OSSC                           AML    AML
      comp=N,522µm,0.8s
OSSC                           AML    AML
      comp=E,559µm,1.2s
SFI   Santa Sofia     2.31 328  AML    AML
      comp=E,1114µm,1.4s
SFI                            AML    AML
      comp=N,1044µm,1.6s
SFI                            AML    AML
      comp=N,857µm,1.5s
SFI                            AML    AML
      comp=E,1224µm,1.6s
DUGI  Dugi Otok       2.32  28 ePn     Pn      03 16 56.5  -0.2
MCEL  Monticello      2.36 133  P      Pn      03 16 58.9  +1.5
MCEL                           AML    AML
      comp=E,550µm,1.4s
MCEL                           AML    AML
      comp=E,542µm,1.4s
MCEL                           AML    AML
      comp=N,792µm,1.6s
MCEL                           AML    AML
      comp=N,788µm,1.6s
MTSN  Montesano sull  2.38 135  P      Pn      03 16 59.0  +1.4
MTSN                           AML    AML
      comp=N,453µm,1.0s
MTSN                           AML    AML
      comp=E,540µm,0.8s
RUFI  Rufina          2.40 322  P      Pn      03 16 58.7  +0.8
RUFI                           AML    AML
      comp=E,882µm,0.6s
RUFI                           AML    AML
      comp=N,749µm,0.7s
HVAR  Hvar            2.47  59 ePn     Pn      03 16 59.8  +0.9
MORI  Morici          2.49  39 i Pn    Pn      03 16 59.2  +0.2
SIRI  Monte Sirino -  2.50 134  P      Pb      03 17 01.2  -2.4
SIRI                           AML    AML
      comp=E,454µm,1.5s
SIRI                           AML    AML
      comp=E,468µm,1.5s
SIRI                           AML    AML
      comp=N,537µm,1.4s
SIRI                           AML    AML
      comp=N,544µm,1.4s
LMD   Lutirano        2.51 328  P      Pn      03 17 00.5  +1.1
LMD                            AML    AML
      comp=E,702µm,0.7s
LMD                            AML    AML
      comp=N,604µm,0.8s
AMUR  Altamura        2.53 113  P      Pn      03 17 00.6  +0.9
AMUR                           AML    AML
      comp=N,809µm,0.4s
AMUR                           AML    AML
      comp=E,864µm,0.5s
LSTV  Lastovo         2.61  71 ePn     Pn      03 17 01.5  +0.7
CRMI  Carmignano      2.63 315  P      Pn      03 17 01.8  +0.8
CRMI                           AML    AML
      comp=E,136µm,1.3s
CRMI                           AML    AML
      comp=N,180µm,1.6s
BRIS  BRISIGHELLA     2.65 327  AML    AML
      comp=N,1250µm,1.6s
BRIS                           AML    AML
      comp=E,612µm,0.5s
CRAC  Craco           2.70 125  P      Pn      03 17 02.5  +0.5
CRAC                           AML    AML
      comp=E,1024µm,1.2s
CRAC                           AML    AML
      comp=N,1320µm,1.6s
MATE  Matera          2.72 118 ⇑P      Pn      03 17 04.2  +2.0
NVLJ  Novalja         2.78  20 i Pn    Pn      03 17 03.5  +0.4
MAKA  Makarska        2.89  61 ePn     Pn      03 17 05.6  +1.0
NOCI  Noci            2.90 113  P      Pn      03 17 05.3  +0.6
NOCI                           AML    AML
      comp=E,486µm,0.4s
NOCI                           AML    AML
      comp=N,785µm,0.4s
POPM  Popiglio        2.92 317  P      Pn      03 17 05.8  +0.8
POPM                           AML    AML
      comp=N,446µm,1.6s
POPM                           AML    AML
      comp=E,288µm,1.6s
KIJV  Kijevo          2.94  45 i Pn    Pn      03 17 06.5  +1.3
KIJV                            Sn     Sn      03 17 41.8  +1.5
ZCCA  Zocca           3.04 323  Pn     Pn      03 17 06.4  -0.3
UDBI  Udbina          3.04  32 ePn     Pn      03 17 07.8  +1.1
CARD  Cardoso         3.05 314  P      Pn      03 17 07.5  +0.7
CARD                           AML    AML
      comp=N,288µm,1.5s
CARD                           AML    AML
      comp=E,212µm,0.8s
RICI  Ricice          3.06  59 i Pn    Pn      03 17 08.4  +1.4
SMPL  Sampolo         3.17 274  P      Pn      03 17 08.1  -0.3
SMPL                            S      Sn      03 17 48.9  +2.7
SMPL  Sampolo         3.17 274  AML    AML
      comp=E,82µm,1.6s
SMPL                           AML    AML
      comp=N,82µm,1.4s
VLC   Villacollemand  3.19 315         Pn      03 17 06.5  -2.3
SARO  Sassorosso      3.20 315  P      Pn      03 17 09.6  +0.6
SARO                           AML    AML
      comp=E,163µm,0.5s
SARO                           AML    AML
      comp=N,148µm,0.5s
STON  Ston            3.21  72 ePn     Pn      03 17 09.1  +0.1
STON                            Sn     Sn      03 17 46.6  -0.5
PGF   Pioggiola       3.42 281 eP      Pn      03 17 12.3  +0.3
PGF                            eSn     Sn      03 17 45.9  -6.6
      comp=N,55nm,0.5s
PGF   Pioggiola       3.42 281  P      Pn      03 17 12.5  +0.5
PGF                             S      Sn      03 17 55.2  +2.8
PGF   Pioggiola       3.42 281  AML    AML
      comp=N,180µm,0.5s
PGF                            AML    AML
      comp=E,273µm,1.5s
RIY   Rijeka          3.44  11 ePn     Pn      03 17 13.6  +1.5
DBRK  Dubrovnik       3.49  77 ePn     Pn      03 17 13.1  +0.3
DBRK                            Sn     Sn      03 17 53.7  -0.4
AJAC  Base Areonaval  3.56 271  P      Pn      03 17 14.5  +0.7
AJAC                            S      Sn      03 17 57.0  +1.3
AJAC  Base Areonaval  3.56 271  AML    AML
      comp=N,200µm,0.5s
AJAC                           AML    AML
      comp=E,474µm,1.3s
MGRS  Mrkonjic Grad   3.57  45 ePn     Pn      03 17 15.9  +1.9
SKDS  Skadanscina     3.60   5 ePn     Pn      03 17 14.3  -0.2
SKDS                           eSn     Sn      03 17 57.7  +0.8
SKDS  Skadanscina     3.60   5 ePn     Pn      03 17 14.4   0.0
TREB  Trebinje        3.65  76 ePn     Pn      03 17 15.9  +0.9
PRMA  PARMA           3.66 321  Pn     Pn      03 17 13.7  -1.5
TEOL  Teolo           3.66 339         Pn      03 17 13.4  -1.8
GBRS  Gornja Briga    3.69  14 ePn     Pn      03 17 16.0  +0.4
TIP   Timpagrande     3.70 137 ⇓P      Pb      03 17 20.4  -3.8
TIP   Timpagrande     3.70 137         Pn      03 17 15.9  +0.1
HCY   Herceg Novi     3.71  81 ePn     Pn      03 17 16.6  +0.7
HCY   Herceg Novi     3.71  81⇓i Pn    Pn      03 17 17.1  +1.2
HCY                            i Sn    Sn      03 18 00.5  +1.0
TRI   Trieste         3.75   2  P      Pn      03 17 14.8  -1.7
TRI   Trieste         3.75   2  Pn     Pn      03 17 14.8  -1.7
TRI   Trieste         3.75   2  AML    AML
      comp=N,185µm,1.5s
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TRI				AML	AML		
	comp=E,311µm,0.9s						
BOJS	Bojanci	3.76	19	ePn	Pn	03 17 17.1	+0.6
BOJS				eSn	Sn	03 18 02.8	+2.2
MSSA	Maissana	3.77	310		Pn	03 17 15.4	-1.4
MSSA	Maissana	3.77	310	AML	AML		
	comp=E,118µm,1.3s						
MSSA				AML	AML		
	comp=N,155µm,1.6s						
PRIJ	Prijedor	3.80	36	ePn	Pn	03 17 20.5	+3.4
BRY	Bratogost	3.82	74	ePn	Pn	03 17 18.5	+1.0
BRY	Bratogost	3.82	74	ePn	Pn	03 17 18.3	+0.8
BRY				i Sn	Sn	03 18 04.1	+1.8
CEY	Cerknica	3.83	9	ePn	Pn	03 17 17.9	+0.3
CEY				eSn	Sn	03 18 02.4	-0.2
CEY	Cerknica	3.83	9	ePn	Pn	03 17 18.2	+0.6
BLY	Banja Luka	3.85	42	ePn	Pn	03 17 18.5	+0.7
BLY	Banja Luka	3.85	42	AML	AML		
	comp=N,482µm,1.4s						
BLY				AML	AML		
	comp=E,450µm,0.6s						
BLY				AML	AML		
	comp=E,460µm,0.6s						
BLY				AML	AML		
	comp=N,466µm,1.4s						
OZLJ	Ozalj	3.92	20	ePn	Pn	03 17 20.1	+1.4
BUM	Brajici-Budva	4.00	83	ePn	Pn	03 17 21.0	+1.1
BUM				i Sn	Sn	03 18 07.4	+0.8
VSL	Villasalto	4.00	234	Pn	Pn	03 17 18.8	-1.1
VSL	Villasalto	4.00	234	AML	AML		
	comp=N,110µm,1.2s						
VSL				AML	AML		
	comp=E,104µm,1.3s						
SABO	M.te Sabotino	4.02	1	AML	AML		
	comp=N,510µm,0.9s						
SABO				AML	AML		
	comp=E,489µm,0.7s						
CEME	Cevo	4.04	80	ePn	Pn	03 17 21.7	+1.3
CEME				i Sn	Sn	03 18 09.1	+1.5
VOJS	Vojsko	4.08	3	i Pn	Pn	03 17 21.0	-0.1
NKME	Niksic	4.09	77	ePn	Pn	03 17 22.6	+1.4
NKME				i Sn	Sn	03 18 11.0	+2.1
CRES	Cresnjev	4.11	19	ePn	Pn	03 17 21.3	-0.1
CEL	Celeste	4.11	153	Pn	Pn	03 17 19.8	-1.6
NKY	Niksic	4.13	76	⇓iPn	Pn	03 17 23.0	+1.3
NKY				i Sn	Sn	03 18 09.5	-0.4
POLC	Polcenigo	4.14	350	AML	AML		
	comp=E,656µm,0.6s						
POLC				AML	AML		
	comp=N,594µm,0.5s						
LJU	Ljubljana	4.15	10	ePn	Pn	03 17 22.7	+0.8
LJU				eSn	Sn	03 18 12.0	+1.8
LJU	Ljubljana	4.15	10	ePn	Pn	03 17 20.9	-1.0
LJU	Ljubljana	4.15	10	AML	AML		
	comp=E,736µm,1.5s						
LJU				AML	AML		
	comp=N,550µm,1.5s						
UPM	Unac-Piva	4.15	71	ePn	Pn	03 17 24.0	+1.8
UPM	Unac-Piva	4.15	71	ePn	Pn	03 17 23.9	+1.8
UPM				i Sn	Sn	03 18 12.4	+1.8
DRME	Dracevica, Mon	4.21	85	ePn	Pn	03 17 23.5	+0.8
DRME	Dracevica, Mon	4.21	85	ePn	Pn	03 17 24.2	+1.5
DRME				i Sn	Sn	03 18 14.0	+2.3
ULC	Ulcinj	4.25	88	ePn	Pn	03 17 24.5	+1.1
ULC				i Sn	Sn	03 18 15.1	+2.2
SALO	Salr	4.26	330	Pn	Pn	03 17 22.1	-1.4
PDG	Podgorica	4.27	82	ePn	Pn	03 17 24.8	+1.2
PDG	Podgorica	4.27	82	⇑P	Pn	03 17 25.2	+1.6
PDG	Podgorica	4.27	82	ePn	Pn	03 17 23.9	+0.3
PDG	Podgorica	4.27	82	Pn	Pn	03 17 22.9	-0.7
PDG	Podgorica	4.27	82	AML	AML		
	comp=E,532µm,0.5s						
PDG				AML	AML		
	comp=E,406µm,0.4s						
PDG				AML	AML		
	comp=N,664µm,0.5s						
PDG				AML	AML		
	comp=N,864µm,0.5s						
TTG	Podgorica	4.27	82	ePn	Pn	03 17 24.9	+1.3
TTG				i Sn	Sn	03 18 15.4	+2.1
CTI	Castel Tesino	4.31	342	P	Pn	03 17 24.0	-0.2
CTI	Castel Tesino	4.31	342	Pn	Pn	03 17 24.0	-0.2
CTI	Castel Tesino	4.31	342	AML	AML		
	comp=N,280µm,0.5s						
CTI				AML	AML		
	comp=E,322µm,0.5s						
PTJ	Puntijarka	4.32	23	i Pn	Pn	03 17 24.3	-0.1
STAL	STALIGIAL	4.34	352		Pn	03 17 22.7	-1.9
MAGA	Magasa	4.36	332	AML	AML		
	comp=N,457µm,0.6s						
MAGA				AML	AML		
	comp=E,790µm,0.5s						
PTCC	Patocco-Chiusa	4.45	358	AML	AML		
	comp=E,198µm,0.9s						
PTCC				AML	AML		
	comp=N,140µm,0.7s						
HAPS	Han Pijesak,BI	4.50	60	ePn	Pn	03 17 27.3	+0.4
KOME	Kolasin	4.51	77	ePn	Pn	03 17 28.8	+1.8
KOME				i Sn	Sn	03 18 21.1	+1.7
VAE	Valguarnera	4.52	171	Pn	Pb	03 17 34.9	-3.2
	comp=N,0.6nm,0.3s,baz=304,slow=7.3,SNR=2.6						
VAE				Sn	Sn	03 18 20.8	+1.2
	comp=N,0.4nm,0.3s,baz=251,slow=22,SNR=1.1						
PLE	Pljevlja	4.53	70	⇓iPn	Pn	03 17 28.5	+1.3
PLE				i Sn	Sn	03 18 21.4	+1.6
ACOM	Acomizza, Ital	4.59	360	⇑P	Pn	03 17 29.3	+1.1
ACOM				AML	AML		
	comp=E,311µm,1.3s						
ACOM				AML	AML		
	comp=N,354µm,0.7s						
RUDO	Rudo	4.60	67	ePn	Pn	03 17 29.0	+0.9
OBKA	Obir	4.61	9	ePn	Pn	03 17 29.4	+1.1
	comp=N,31nm,0.6s,SNR=7.8						
ZOU	Zoufplan	4.62	355	Pn	Pn	03 17 27.4	-1.1
MABI	Malga Bissina	4.64	333	⇑P	Pn	03 17 30.3	+1.5
MABI				AML	AML		
	comp=N,93µm,0.6s						
MABI				AML	AML		
	comp=E,110µm,0.6s						
KALN	Kalnik	4.67	26	ePn	Pn	03 17 29.3	+0.2
MYKA	Terra Mystica	4.67	1	ePn	Pn	03 17 29.9	+0.7
	comp=E,16nm,0.4s,SNR=14						
BBLS	Lazići	4.71	64	ePn	Pn	03 17 31.9	+2.2
BBLS				eSn	Sn	03 18 26.2	+2.0
BBLS	Lazići	4.71	64	ePn	Pn	03 17 31.5	+1.8
PUK	Puka	4.74	87	⇓P	Pn	03 17 32.1	+2.1
PUK				AML	AML		
	comp=E,899µm,0.6s						
PUK				AML	AML		
	comp=N,928µm,0.6s						
TIR	Tirane	4.78	95	ePn	Pn	03 17 31.8	+1.2
TIR	Tirane	4.78	95	⇑P	Pn	03 17 31.7	+1.2
TIR	Tirane	4.78	95	⇑P	Pn	03 17 31.7	+1.2
TIR	Tirane	4.78	95		Pn	03 17 30.8	+0.3
IVA	Berane	4.79	77	ePn	Pn	03 17 32.5	+1.7
IVA				i Sn	Sn	03 18 27.8	+1.6
PVY	Plav	4.81	80	ePn	Pn	03 17 32.5	+1.5
PVY				i Sn	Sn	03 18 27.9	+1.3
HAGA	Augusta	4.83	165	P	Pn	03 17 31.8	+0.6
SAOF	Saorge	4.84	297	P	Pn	03 17 32.1	+0.7
SAOF				S	Sn	03 18 28.7	+1.4
SAOF	Saorge	4.84	297	⇓P	Pn	03 17 32.4	+1.0
SOKA	Soboth	4.84	12	ePn	Pn	03 17 32.5	+1.0
	comp=N,6.5nm,0.3s,SNR=8.5						
ABTA	Abfaltersbach	4.85	352	i Pn	Pn	03 17 32.6	+1.0
	comp=N,111nm,0.6s,SNR=63						
SBF	Sospel	4.87	295	eP	Pn	03 17 32.3	+0.4
SBF				eSn	Sn	03 18 19.9	-8.3
	comp=N,43nm,0.6s						
KOGS	Kog	4.89	23	⇑P	Pn	03 17 33.0	+0.8
BRES	Bressanone	4.92	345	P	Pn	03 17 32.5	-0.2
TURF	col de Turini	4.94	296	P	Pn	03 17 33.6	+0.7
TURF				S	Sn	03 18 31.7	+1.7
ABSI	Aberstueckl	5.03	342	⇓P	Pn	03 17 35.2	+1.0
BEHE	Becsehely	5.08	26	ePn	Pn	03 17 37.0	+2.4
TEKS	Tekeris	5.08	57	ePn	Pn	03 17 36.5	+1.7
TEKS	Tekeris	5.08	57	ePn	Pn	03 17 34.9	+0.1
RISI	Rein	5.10	349	⇑P	Pn	03 17 36.8	+1.7
KBA	Koelnbreinsper	5.12	359	ePn	Pn	03 17 36.6	+1.2
	comp=N,18nm,0.5s,SNR=12						
IVAS	Ivanjica	5.13	69	ePn	Pn	03 17 36.3	+0.9
CALF	Calern	5.18	292	P	Pn	03 17 36.7	+0.4
CALF				S	Sn	03 18 35.9	-0.1
DIVS	Divibare	5.19	63	ePn	Pn	03 17 37.6	+1.3
DIVS				eSn	Sn	03 18 38.7	+2.6
DIVS	Divibare	5.19	63	ePn	Pn	03 17 37.7	+1.4
DIVS	Divibare	5.19	63	Pn	Pn	03 17 34.1	-2.2
DIVS	Divibare	5.19	63	P	Pn	03 17 37.7	+1.4
ISO	Isola	5.25	297	P	Pn	03 17 38.4	+1.4
FRF	La Foret Royal	5.32	290	eP	Pn	03 17 37.8	-0.2
FRF				eSn	Sn	03 18 31.2	-8.0
	comp=N,14nm,0.6s						
LMR	La Mourre	5.37	287	eP	Pn	03 17 38.1	-0.5
LMR				eSn	Sn	03 18 31.8	-8.4
	comp=N,8.6nm,0.4s						
TUE	Stuetta	5.43	328	Pn	Pn	03 17 37.6	-2.0
TUE	Stuetta	5.43	328	⇑P	Pn	03 17 42.3	+2.7
FETA	Feichten	5.45	339	ePn	Pn	03 17 42.3	+2.4
	comp=N,19nm,0.5s						
WTTA	Wattenberg	5.48	346	ePn	Pn	03 17 42.7	+2.4
	comp=N,4.0nm,0.2s						
ARSA	Arzberg	5.48	14	ePn	Pn	03 17 40.7	+0.5
ARSA	Arzberg	5.48	14	i Pn	Pn	03 17 40.5	+0.3
	comp=N,9.6nm,0.6s						
DAVOX	Davos/Dischmat	5.49	333	Pn	Pn	03 17 43.2	+2.7
	comp=N,4.0nm,0.3s,baz=151,slow=14,SNR=59						
DAVOX				Sn	Sn	03 18 38.7	-4.9
	baz=119,slow=19,SNR=1.0						
OHR	Ohrid	5.51	96	i Pn	Pn	03 17 42.4	+1.7
TRUS	Trudelj	5.51	63	ePn	Pn	03 17 41.7	+1.0
SQTA	Sankt Quirin	5.52	343	i Pn	Pn	03 17 42.9	+2.1
	comp=N,21nm,0.4s,SNR=11						
SURF	Saint Ours	5.53	299	P	Pn	03 17 42.1	+1.1
WATA	Walderalm	5.56	346	i Pn	Pn	03 17 44.1	+2.7
	comp=N,11nm,0.3s,SNR=6.1						
FRGS	Fruska Gora	5.57	53	ePn	Pn	03 17 42.5	+1.1
FRGS	Fruska Gora	5.57	53	⇓P	Pn	03 17 41.9	+0.5
FRGS	Fruska Gora	5.57	53	ePn	Pn	03 17 41.3	-0.1
GRUS	Gruza	5.61	67	ePn	Pn	03 17 43.1	+1.1
MORH	Mrgy, Hungar	5.62	39	⇑P	Pn	03 17 41.6	-0.5
MORH	Mrgy, Hungar	5.62	39	ePn	Pn	03 17 40.7	-1.4
MBDF	Montbardon	5.66	302	eP	Pn	03 17 44.4	+1.6
MBDF				eSn	Sn	03 18 40.7	-7.0
	comp=N,23nm,0.8s						
MOTA	Moosalm	5.66	343	i Pn	Pn	03 17 45.4	+2.6
	comp=N,19nm,0.5s,SNR=8.9						
OGAG	Argentiere	5.69	298	Pg	Pn	03 17 50.2	+7.0
OGDI	Digne	5.72	295	P	Pn	03 17 45.8	+2.2
BNI	Bardonecchia	5.87	304	P	Pn	03 17 44.5	-1.2
BNI	Bardonecchia	5.87	304	Pn	Pn	03 17 44.5	-1.2
RETA	Reutte	5.87	341	i Pn	Pn	03 17 48.3	+2.6
	comp=N,11nm,0.4s						
MOA	Molln	5.92	5	ePn	Pn	03 17 47.5	+1.4
	comp=N,33nm,0.6s,SNR=18						
ARTF	Artigues	5.92	289	P	Pn	03 17 47.0	+0.7
DAVA	Damuels	5.93	335	i Pn	Pn	03 17 49.2	+2.6
	comp=N,12nm,0.4s,SNR=11						
FNA	Florina	6.01	99	P	Pn	03 17 47.4	-0.1
FNA	Florina	6.01	99	Pn	Pn	03 17 47.4	-0.1
LPG	La Plagne	6.06	308	eP	Pn	03 17 49.4	+1.0
LPG				eSn	Sn	03 18 49.5	-8.2
	comp=N,15nm,0.6s						
LPL	La Plagne	6.08	308	eP	Pn	03 17 50.0	+1.4
LPL				eSn	Sn	03 18 49.4	-8.8
	comp=N,12nm,0.7s						
BSTF	la Bastide-des	6.11	291	P	Pn	03 17 49.5	+0.7
SMRF	Simiane la Rot	6.18	292	eP	Pn	03 17 50.8	+0.9
BARS	Barje	6.19	79	ePn	Pn	03 17 55.1	+5.2
CONA	Conrad Observa	6.20	15	ePn	Pn	03 17 50.8	+0.8
	comp=N,11nm,0.3s,SNR=13						
RUSF	Rustrel	6.24	291	P	Pn	03 17 52.2	+1.6
SENIN	Lac Senin/Sane	6.29	317	Pn	Pn	03 17 49.5	-2.0
ORIF	Oris-en-Rattie	6.31	301	eP	Pn	03 17 52.8	+1.1
ORIF				eSn	Sn	03 18 54.8	-8.9
	comp=N,17nm,0.7s						
ORIF	Oris-en-Rattie	6.31	301	Pg	Pn	03 17 56.1	+4.4
PRVS	Prvonek	6.36	82	ePn	Pn	03 17 54.0	+1.7
STIP	Stip	6.46	89	i Pn	Pn	03 17 56.9	+3.2
MDVR	Moldovita	6.59	62	⇑P	Pn	03 17 56.5	+1.1
ZAGS	Zajecar	6.65	71	ePn	Pn	03 17 57.5	+1.3
BOSS	Bosilegrad	6.66	82	ePn	Pn	03 17 57.7	+1.3
ZST	Bratislava	6.73	21	eP	Pn	03 17 57.4	+0.1
ZST				e		03 19 13.7	
ZST	Bratislava	6.73	21	ePN	Pn	03 17 57.4	+0.1
ZST				eSN	Sn	03 19 13.7	-0.1
SRO	Srobarova	6.77	28	eP	Pn	03 17 58.6	+0.8
SRO				e		03 19 11.7	
SRO	Srobarova	6.77	28	ePN	Pn	03 17 58.6	+0.8
SRO				eSN	Sn	03 19 11.7	-3.0
VAY	Valandovo	6.80	92	i Pn	Pn	03 18 00.5	+2.2
ZAPS	Zavoj	6.84	76	ePn	Pn	03 18 00.2	+1.3
CKRC	Cesky Krumlov	6.88	4	ePN	Pn	03 17 59.7	+0.2
CKRC				eSN	Sn	03 19 14.6	-3.1
GEC2	GERESS Array S	6.89	1	Pn	Pn	03 17 57.2	-2.4
GERES	GERESS Array B	6.89	1	Pn	Pn	03 17 59.8	+0.2
	comp=N,1.3nm,0.3s,baz=169,slow=13,SNR=34						
GERES				Sn	Sn	03 19 09.4	-8.5
	baz=189,slow=24,SNR=2.2						
GERES	GERESS Array B	6.89	1		Pn	03 17 56.8	-2.9
BZS	Buzias	6.89	55	⇓P	Pn	03 17 59.6	0.0
BZS	Buzias	6.89	55	⇓P	Pn	03 17 59.6	0.0
BLKB	Belogradchik	6.92	73	⇓S	Sn	03 19 17.2	-1.5
MODS	Modra-Piesok	6.94	21	eP	Pn	03 18 03.4	+3.2
MODS	Modra-Piesok	6.94	21	ePN	Pn	03 18 03.4	+3.2
KEST	Kesra	7.02	209	Pn	Pn	03 18 04.2	+2.8
	comp=N,2.2nm,0.3s,baz=328,slow=5.8,SNR=54						
KEST				Sn	Sn	03 19 19.2	-2.0
	baz=325,slow=16,SNR=0.9						
KEST				LR	LR	03 20 35.5	
	comp=N,285nm,19.8s,baz=350,slow=36						
KEST	Kesra	7.02	209	Pn	Pn	03 17 59.1	-2.3
VIVF	Saint-Julien-l	7.08	297	eP	Pn	03 18 02.6	+0.5
VIVF				eSn	Sn	03 19 13.0	-9.4
	comp=N,2.8nm,0.4s						
CABF	La Chapelle	7.09	314	eP	Pn	03 18 03.0	+0.7
CABF				eSn	Sn	03 19 13.1	-10
	comp=N,14nm,0.8s						
HERR	Herculane	7.09	63	⇓P	Pn	03 18 03.4	+1.1
SMOL	Smolenice	7.11	21	eP	Pn	03 18 03.7	+1.2
SMOL	Smolenice	7.11	21	ePN	Pn	03 18 03.7	+1.2
KHC	Kasperske Hory	7.17	0	eP	Pn	03 18 03.3	-0.2
KHC				e		03 19 22.5	
KHC	Kasperske Hory	7.17	0	ePN	Pn	03 18 03.3	-0.2
KHC				eSN	Sn	03 19 22.5	-2.3
KHC	Kasperske Hory	7.17	0		Pn	03 18 01.6	-1.8
VTS	Vitosha	7.22	82	⇓P	Pn	03 18 05.2	+1.0
VTS				⇑P	Pb	03 18 05.5	-19
VTS	Vitosha	7.22	82	⇑P	Pn	03 18 05.5	+1.3
VTS	Vitosha	7.22	82	Pn	Pn	03 18 02.2	-2.0
SIRR	Siria	7.26	51	⇑P	Pn	03 18 05.3	+0.6
BFO	Black Forest	7.36	332	P	Pn	03 18 04.8	-1.2
BFO	Black Forest	7.36	332	Pn	Pn	03 18 04.8	-1.2
KRUC	Moravsky	7.38	15	ePN	Pn	03 18 06.9	+0.6
LASF	Ste Croix	7.41	290	eP	Pn	03 18 07.1	+0.5
LASF				eSn	Sn	03 19 21.1	-9.4
	comp=N,5.4nm,0.8s						
TREC	Trest	7.46	10	eP	Pn	03 18 07.2	-0.2
TREC	Trest	7.46	10	ePN	Pn	03 18 07.2	-0.2
STU	Stuttgart	7.47	337	P	Pn	03 18 06.2	-1.3
STU	Stuttgart	7.47	337	Pn	Pn	03 18 06.2	-1.3
PSZ	Piszkesteto	7.47	35	⇓P	Pn	03 18 09.8	+2.2
PSZ	Piszkesteto	7.47	35	⇓P	Pn	03 18 09.8	+2.2
PSZ	Piszkesteto	7.47	35	Pn	Pn	03 18 05.0	-2.6
JAVC	Velka Javorina	7.49	21	ePN	Pn	03 18 08.2	+0.4
GZR	Gura Zlata	7.53	60	⇑P	Pn	03 18 09.3	+1.0
HINF	Hinteralfeld	7.54	323	eP	Pn	03 18 09.3	+0.8
HINF				eSn	Sn	03 19 24.5	-9.3
	comp=N,9.1nm,0.5s						
VRAC	Vranov	7.66	15	Pn	Pn	03 18 10.8	+0.8
	comp=N,0.9nm,0.3s,baz=209,slow=12,SNR=9.8						
VRAC				Sn	Sn	03 19 27.9	-8.8
	comp=N,0.3nm,0.3s,baz=177,slow=18,SNR=1.6						
VRAC				LR	LR	03 22 02.6	
	comp=N,360nm,20.2s,baz=10.0,slow=46						
VRAC	Vranov	7.66	15	⇓P	Pn	03 18 11.2	+1.1
VRAC	Vranov	7.66	15	ePN	Pn	03 18 11.0	+0.9
VRAC	Vranov	7.66	15	⇓P	Pn	03 18 11.2	+1.1
ECH	Echery	7.71	326	P	Pn	03 18 08.3	-2.6
ECH	Echery	7.71	326		Pn	03 18 08.3	-2.6
PBCC	Pribram	7.74	2	ePN	Pn	03 18 11.2	0.0
DEV	Deva	7.82	57	⇓P	Pn	03 18 15.0	+2.8
DEV	Deva	7.82	57	⇓P	Pn	03 18 15.0	+2.8
CDF	Champ du Feu	7.82	328	eP	Pn	03 18 12.5	+0.1
CDF				eSn	Sn	03 19 31.2	-10
	comp=N,8.4nm,0.6s						
GRFO	Grafenberg	7.90	349	P	Pn	03 18 12.4	-1.0
GRFO	Grafenberg	7.90	349		Pn	03 18 12.4	-1.0
GRA1	Grafenberg Arr	7.90	349		Pn	03 18 11.8	-1.7
GRF	Grafenberg Arr	7.90	349	P	Pn	03 18 11.8	-1.7
HAU	Haudompre	7.91	322	eP	Pn	03 18 14.5	+1.0
HAU				eSn	Sn	03 19 32.9	-10
	comp=N,25nm,0.6s						
PRU	Pruhonice	8.06	5	eP	Pn	03 18 15.9	+0.3
PRU	Pruhonice	8.06	5	ePN	Pn	03 18 15.9	+0.3
DRGR		8.15	51	⇑P	Pn	03 18 18.6	+1.6
DRGR		8.15	51	⇑P	Pn	03 18 18.6	+1.6
LOT	Lotru	8.19	61	⇓P	Pn	03 18 20.4	+2.9
PLVB	Pleven	8.29	76	⇑P	Pn	03 18 19.7	+1.0
MORC	Moravsky Berou	8.30	18	⇑P	Pn	03 18 21.5	+2.5
MORC	Moravsky Berou	8.30	18	ePN	Pn	03 18 20.7	+1.7
MORC	Moravsky Berou	8.30	18	⇑P	Pn	03 18 21.5	+2.5
MORC	Moravsky Berou	8.30	18	Pn	Pn	03 18 16.2	-2.8
LANS	Liptovska Anna	8.31	28	eP	Pn	03 18 23.3	+4.3
LANS	Liptovska Anna	8.31	28	ePN	Pn	03 18 23.3	+4.3
SMF	Signal de Mont	8.38	307	eP	Pn	03 18 21.0	+0.9
SMF				eSn	Sn	03 19 44.4	-10
	comp=N,3.5nm,0.5s						
KRLC	Kraliky	8.43	14	eP	Pn	03 18 21.9	+1.3
KRLC	Kraliky	8.43	14	ePN	Pn	03 18 21.9	+1.3
MTLF	Montolieu	8.46	283	eP	Pn	03 18 21.3	+0.2
PAGF	Fort de Pagny	8.59	323	eP	Pn	03 18 24.2	+1.3
	baz=146						
PAGF				eSn	Sn	03 19 48.8	-11
	comp=N,9.4nm,0.5s						
PVCC	Panska Ves	8.60	4	eP	Pn	03 18 24.1	+1.1
PVCC	Panska Ves	8.60	4	ePN	Pn	03 18 24.1	+1.1
DPC	Dobruska-Polom	8.61	12	eP	Pn	03 18 24.2	+1.0
DPC	Dobruska-Polom	8.61	12	ePN	Pn	03 18 24.2	+1.0
CJR	Cluj-Napoca	8.63	53	⇓P	Pn	03 18 26.3	+2.8
CJR	Cluj-Napoca	8.63	53	⇓P	Pn	03 18 26.3	+2.8
SFTF	Sexfontaines	8.67	319	eP	Pn	03 18 25.1	+1.2
	baz=139						
SFTF				eSn	Sn	03 19 52.9	-8.6
	comp=N,2.6nm,0.5s						
LOR	Lormes	8.71	311	eP	Pn	03 18 26.8	+2.3
	baz=129						
LOR				eSn	Sn	03 19 51.9	-11
	comp=N,5.0nm,0.5s						
HUMR	Humele	8.74	69	⇓P	Pn	03 18 26.7	+1.8
AVF	Avril sur Loir	8.75	307	eP	Pn	03 18 26.1	+1.1
AVF				eSn	Sn	03 19 52.1	-11
	comp=N,1.2nm,0.5s						
SSF	Saint Saulge	8.80	309	eP	Pn	03 18 27.2	+1.5
SSF				eSn	Sn	03 19 54.8	-10
	comp=N,3.6nm,0.5s						
OSTC	Ostas	8.80	11	ePN	Pn	03 18 25.6	-0.1
COPA	Copaceanca	8.82	72	⇓P	Pn	03 18 27.5	+1.5
CAF	Calviac	8.86	293	eP	Pn	03 18 27.5	+0.9
MEZF	Maizieres J'vi	8.87	320	eP	Pn	03 18 27.6	+1.0
MEZF				eSn	Sn	03 19 56.2	-10
	comp=N,2.8nm,0.5s						
CRVS	Cervenica-Dubn	8.90	36	eP	Pn	03 18 30.8	+3.7
CRVS	Cervenica-Dubn	8.90	36	ePN	Pn	03 18 30.8	+3.7
SAVF	Savonnieres en	8.91	321	ePn	Pn	03 18 22.7	-4.6
SAVF				eSn	Sn	03 19 56.0	-11
	comp=N,6.6nm,0.6s						
BRG	Berggiesshubel	8.92	2	Pn	Pn	03 18 28.2	+0.8
BRG				Amp		03 18 29.2	
	comp=Z,5.9nm,0.6s						
BRG				ex	x	03 20 04.6	
BRG				ex	x	03 21 17.1	
BRG				Amp		03 21 39.1	
	comp=Z,53nm,1.8s						
BGF	Bois d'Agland	8.94	305	eP	Pn	03 18 28.3	+0.6
BGF				eSn	Sn	03 19 57.4	-11
	comp=Z,3.6nm,0.5s						
VOIR		9.03	63	⇑P	Pn	03 18 32.5	+3.5
VOIR		9.03	63	⇑P	Pn	03 18 32.5	+3.5
TCF	Toulx Ste Croi	9.22	302	eP	Pn	03 18 32.9	+1.3
KOLS	Kolonicke sedl	9.29	38	eP	Pn	03 18 33.9	+1.5
KOLS	Kolonicke sedl	9.29	38	ePN	Pn	03 18 33.9	+1.5
RJF	Les Rejaudoux	9.34	295	eP	Pn	03 18 33.5	+0.4
RJF				eSn	Sn	03 20 06.4	-12
	comp=Z,1.0nm,0.3s						
CLL	Collm	9.36	358	ePn	Pn	03 18 33.0	-0.4
CLL				e		03 18 43.0	
CLL				eSn	Sn	03 20 14.0	-4.5
CLL				eSb		03 21 06.0	
CLL				eSg		03 21 33.0	
CLL	Collm	9.36	358	eP	Pn	03 18 33.0	-0.4
CLL				e		03 20 14.0	
CLL	Collm	9.36	358	Pn	Pn	03 18 31.8	-1.6
HYF	Humbligny	9.41	308	eP	Pn	03 18 35.5	+1.4
DOPR	Dopca	9.44	61	⇑P	Pn	03 18 37.3	+2.8
MLR	Muntele Rosu	9.65	64	Pn	Pn	03 18 40.2	+2.7
	comp=Z,1.7nm,0.3s,baz=273,slow=4.0,SNR=31						
MLR				LR	LR	03 22 32.0	
	comp=Z,388nm,20.1s,baz=274,slow=38						
MLR	Muntele Rosu	9.65	64	⇓P	Pn	03 18 40.2	+2.7
MLR	Muntele Rosu	9.65	64	Pn	Pn	03 18 36.3	-1.2
LFF	La Frestale	9.78	292	eP	Pn	03 18 40.5	+1.4
EPF	Esparros	9.81	281	eP	Pn	03 18 39.5	-0.1
NEHR	Nehoiu	9.87	65	⇑P	Pn	03 18 42.9	+2.5
KWP	Kalwaria Pacla	9.99	37	eP	Pn	03 18 46.1	+4.1
BURAR	Bucovina Array	10.04	52	⇑P	Pn	03 18 42.7	-0.1
BURAR	Bucovina Array	10.04	52	⇑P	Pn	03 18 42.7	-0.1
BURAR	Bucovina Array	10.04	52	Pn	Pn	03 18 41.1	-1.7
BUR08	Bucovina Ar. S	10.05	52	Pn	Pn	03 18 41.5	-1.4
GIVF	Givet	10.15	326	eP	Pn	03 18 45.6	+1.4
BISRR	Bisoca	10.18	65	⇑P	Pn	03 18 49.8	+5.0
PLOR	Plostina	10.23	63	⇑P	Pn	03 18 47.8	+2.4
PLOR	Plostina	10.23	63	⇑P	Pn	03 18 47.8	+2.4
BIZ	Bicaz	10.27	57	⇓P	Pn	03 18 50.1	+4.2
VRI	Vrincioaia	10.29	63	⇑P	Pn	03 18 47.6	+1.5
VRI	Vrincioaia	10.29	63	⇑P	Pn	03 18 47.6	+1.5
BAIF	Baives	10.38	325	eP	Pn	03 18 48.4	+1.1
ETSF	Etsaut	10.47	280	eP	Pn	03 18 49.9	+1.2
LVV	L'vov	10.73	39	eP	Pn	03 18 55.3	+3.2
IDI	Anoyia	11.09	123	Pn	Pn	03 19 01.1	+3.9
	comp=Z,0.6nm,0.3s,baz=339,slow=14,SNR=1.5						
IDI				Sn	Sn	03 20 56.7	-4.5
	comp=Z,0.3nm,0.3s,baz=318,slow=14,SNR=1.0						
IDI				LR	LR	03 24 32.0	
	comp=Z,94nm,18.6s,baz=304,slow=44						
ESDC	Sonseca Array	13.45	266	Pn	Pn	03 19 28.7	-0.8
	comp=Z,0.1nm,0.3s,baz=78,slow=13,SNR=5.0						
ESDC				LR	LR	03 24 31.3	
	comp=Z,137nm,18.6s,baz=10.0,slow=37						
AKASG	Malin Array Be	13.90	46	Pn	Pn	03 19 34.6	-0.9
	comp=Z,0.3nm,0.3s,baz=241,slow=13,SNR=1.6						
BRTR	Keskin Array B	15.38	92	Pn	P	03 19 59.8	-0.5
	comp=Z,0.0nm,0.3s,baz=306,slow=12,SNR=2.1						
BRTR				LR	LR	03 27 17.0	
	comp=Z,64nm,19.5s,baz=297,slow=42						
MNK	Minsk	15.73	32	i P	Pn	03 19 56.9	-3.2
	comp=E,2.0nm,0.7s						
MNK				i P	Pn	03 19 56.9	-3.2
	comp=N,11nm,0.7s						
MNK				i P	Pn	03 19 56.9	-3.2
	comp=Z,6.0nm,0.8s						
MNK				i PP	P	03 20 05.1	+1.1
MNK				i PPP	PPP	03 20 12.8	
MNK				i S	Sn	03 22 49.1	-5.1
MNK				i SS	SnSn	03 23 03.1	-3.7
MNK				i SSS	SSS	03 23 15.8	
MNK				i LQ	LQ	03 24 29.6	
MNK				i LR	LR	03 25 40.2	
MNK				i LRM	MLR	03 26 32.9	
	comp=E,10.0nm,10.1s						
MNK				i LRM	MLR	03 26 32.9	
	comp=Z,64nm,9.4s						
MNK				i LRM	MLR	03 26 35.8	
	comp=N,131nm,12.7s						
EKA	Eskdalemuir Ar	17.28	326	P	P	03 20 22.2	+1.1
	baz=128,slow=13,SNR=1.6						
ANN	Anapa	17.59	73	eP	Pn	03 20 20.9	-2.6
ANN				eS	Sn	03 23 33.9	-5.2
ANN				pmax	pmax		
	comp=Z,44nm,1.2s						
HFS	Hagfors	18.20	0	P	P	03 20 31.8	+0.6
	comp=Z,0.3nm,0.3s,baz=171,slow=10,SNR=8.0						
NB2	NORSAR Subarra	19.16	357	P	Pn	03 20 43.0	+0.3
	comp=Z,0.6nm,0.5s,baz=176,slow=11						
NOA	NORSAR Array B	19.16	357	P	Pn	03 20 42.9	+0.1
	comp=Z,0.0nm,0.3s,baz=174,slow=11,SNR=8.8						
NOA				LR	LR	03 27 31.6	
	comp=Z,42nm,21.4s,baz=355,slow=35						
MMAI	Mount Meron Ar	19.47	110	P	Pn	03 20 48.3	+1.7
	comp=Z,0.3nm,0.3s,baz=310,slow=8.9,SNR=3.3						

OBN	Obninsk	20.02	41	eP	P	03 20 51.0	-0.2
OBN				pmax	pmax		
	comp=Z,23nm,1.4s						
OBN				MLR	MLR		
	comp=Z,171nm,10.0s						
OBN	Obninsk	20.02	41	P	P	03 20 49.6	-1.6
MOS	Moscow	20.86	40	eP	P	03 20 59.7	-0.6
FINES	FINESS Array B	20.93	17	P	P	03 21 01.7	+0.7
	comp=Z,5.4nm,0.5s,baz=200,slow=8.7,SNR=32						
FINES	FINESS Array B	20.93	17	P	P	03 21 00.7	-0.3
FIA1	FINESS Array S	20.93	17	P	P	03 21 00.5	-0.5
FIA1				IAmb	IAmb	03 21 03.8	
	comp=Z,13nm,1.1s						
SHA1	Shidzhatmaz	21.38	75	i P	P	03 21 10.7	+4.5
KIV	Kislovodsk	21.38	75	eP	P	03 21 09.1	+3.0
KIV				ePPP	PPP	03 21 35.1	
KIV				pmax	pmax		
	comp=Z,12nm,1.3s						
KIV				MLR	MLR		
	comp=Z,122nm,22.0s						
KIV	Kislovodsk	21.38	75	P	P	03 21 06.0	-0.1
KIV				IAmb	IAmb	03 21 10.6	
	comp=Z,13nm,1.2s						
NEY	Neytrino	21.48	77	i P	P	03 21 12.1	+4.9
NEY				pmax	pmax		
	comp=Z,3.0nm,1.2s						
KBZ	Khabaz	21.55	75	P	P	03 21 10.8	+2.9
	comp=Z,4.1nm,1.1s,baz=278,slow=8.3,SNR=3.9						
BELG	Belogornoye	25.19	54	P	P	03 21 46.4	+2.6
	comp=Z,6.3nm,0.5s,baz=179,slow=1.4,SNR=6.5						
TMCR	Tamitsa	26.34	24	eP	P	03 21 52.3	-1.9
TMCR				pmax	pmax		
	comp=Z,9.0nm,1.0s						
ARCES	ARCESS Array B	28.34	9	P	P	03 22 12.0	-0.1
	comp=Z,4.0nm,1.0s,baz=186,slow=7.3,SNR=6.8						
ARCES				LR	LR	03 32 39.2	
	comp=Z,279nm,18.5s,baz=245,slow=35						
ARCES	ARCESS Array B	28.34	9	P	P	03 22 12.0	-0.1
BORG	Borgarnes	30.21	331	LR	LR	03 34 04.2	
	comp=Z,367nm,20.1s,baz=48,slow=36						
TOA0	Torodi Ar. Sit	30.50	203	P	P	03 22 31.2	-0.5
TOA0				IAmb	IAmb	03 22 38.7	
	comp=Z,2.8nm,1.1s						
TORD	Torodi Ar. Bea	30.50	203	P	P	03 22 32.2	+0.5
	comp=Z,0.9nm,0.7s,baz=14,slow=8.4,SNR=5.9						
TORD				LR	LR	03 35 11.6	
	comp=Z,93nm,18.7s,baz=0.0,slow=37						
TORD	Torodi Ar. Bea	30.50	203	P	P	03 22 30.5	-1.1
ARU	Arti	32.14	48	P	P	03 22 47.3	+1.5
ARU						03 23 48.9	
ARU				S	S	03 28 01.3	+3.5
DBIC	Dimbokro	38.75	210	P	P	03 23 45.0	+2.1
	comp=Z,1.0nm,0.5s,baz=354,slow=10,SNR=1.5						
DBIC				LR	LR	03 39 38.4	
	comp=Z,41nm,21.4s,baz=352,slow=36						
BRVK	Borovoye	38.93	53	i P	P	03 23 44.3	+0.2
BRVK				pmax	pmax		
	comp=Z,11nm,2.9s						
KKAR	Karatay Array	41.30	68	P	P	03 24 02.3	-1.7
KKAR	Karatay Array	41.30	68	P	P	03 24 02.3	-1.7
MBAR	Mbarara	45.13	155	ceP	P	03 24 38.5	+3.2
MBAR				pmax	pmax		
	comp=Z,3.0nm,1.3s						
ZALV	Zalesovo Beam	47.25	50	P	P	03 24 52.9	+1.4
	comp=Z,0.4nm,0.3s,baz=309,slow=9.1,SNR=1.7						
MK31	Makanchi Array	47.96	60	P	P	03 24 56.5	-0.6
MK31				pmax	pmax		
	comp=Z,1.0nm,0.9s						
MK31	Makanchi Array	47.96	60	P	P	03 24 56.5	-0.6
MKAR	Makanchi Array	47.96	60	P	P	03 24 58.5	+1.4
	comp=Z,0.7nm,0.7s,baz=285,slow=7.0,SNR=14						
MKAR	Makanchi Array	47.96	60	P	P	03 24 56.0	-1.0
DGZ	Jazzator, Alta	50.14	54	i P	P	03 25 15.3	+1.4
DGZ				pmax	pmax		
	comp=Z,3.0nm,1.6s						
WMQ	Urumqi	52.63	61	eP	P	03 25 45.8	+13
SONM	Songino Array	62.15	50	P	P	03 26 41.7	+2.0
	comp=Z,0.4nm,0.4s,baz=289,slow=4.4,SNR=5.0						
ULN	Ulaanbaatar	62.51	49	ceP	P	03 26 45.1	+3.0
ULN				pmax	pmax		
	comp=Z,7.0nm,1.3s						
YKA	Yellowknife Ar	67.91	337	P	P	03 27 17.4	+0.7
	comp=Z,0.6nm,0.5s,baz=45,slow=6.1,SNR=18						
YKA	Yellowknife Ar	67.91	337	ceP	P	03 27 18.1	+1.4
YKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						

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*IDC **28** 03:17:59.0±1.8, 2.°32N×123.°22E, h411km±20km, mb3.4/9, mb1 3.5/10, mb1mx3.1/44, mbtmp4.2/10, Error ellipse: s-maj=39.3km s-min=10.2km az=73.0*

ISC 28 03:17:57.7±0.8**, 2.°24N**±0.°09×**123.°1E**±0.°3**, h400km, n10, σ1.s79**/13**, mb3.6**/8**, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	Baumata	12.38	177	P	Pn	03 20 45.4	+2.1
	8.9nm,0.3s,baz=1.5,slow=1.7,SNR=4.5						
BATI				S	S	03 22 52.8	-4.3
	2.9nm,0.3s,baz=43,slow=17,SNR=2.1						
FITZ	Fitzroy Crossi	20.36	173	P	P	03 22 06.2	+0.7
	3.1nm,0.3s,baz=6.1,slow=11,SNR=34						
WRA	Warramunga Arr	24.65	154	P	P	03 22 44.4	0.0
	1.5nm,0.4s,baz=337,slow=9.7,SNR=19						
WRA				ScP	ScP	03 29 08.5	-1.3
	0.5nm,0.7s,baz=340,slow=3.0,SNR=8.3						
ASAR	Alice Springs	27.82	158	P	P	03 23 13.1	+0.6
	1.0nm,0.4s,baz=336,slow=6.7,SNR=27						
ASAR				ScP	ScP	03 29 18.2	-0.9
	1.0nm,0.6s,baz=350,slow=2.6,SNR=12						
STKA	Stephens Creek	38.20	154	P	P	03 24 42.5	+1.4
	2.8nm,0.3s,baz=336,slow=8.2,SNR=13						
USRK	Ussuriysk Ar.	42.52	9	P	P	03 25 16.0	+0.2
	0.8nm,0.5s,baz=179,slow=6.7,SNR=5.2						
SONM	Songino Array	47.66	345	P	P	03 25 56.2	+0.5
	1.5nm,0.5s,baz=158,slow=9.6,SNR=7.6						
MKAR	Makanchi Array	56.78	328	P	P	03 27 02.3	+0.4
	1.8nm,0.3s,baz=126,slow=8.0,SNR=55						
PETK	Petropavlovsk-	58.21	24	P	P	03 27 10.1	-1.4
	2.5nm,0.9s,baz=230,slow=8.7,SNR=1.2						
ZALV	Zalesovo Beam	60.33	335	P	P	03 27 24.8	-1.1
	0.6nm,0.4s,baz=146,slow=7.4,SNR=2.1						

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*NEIC **28** 03:30:46.7, 21.°77S×70.°66W, h23km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}2.05; $M_{\theta\theta}$0.03; $M_{\phi\phi}$-2.08; $M_{r\theta}$0.56; $M_{\theta\phi}$0.46; $M_{\phi r}$-1.77; Fault plane solution: $M_0$2.82000×10^{15} NP1:ϕ_s164.21000°, δ65.72000°, λ86.46000°. NP2:ϕ_s352.78000°, δ24.52000°, λ97.80000°. Principal axes: T 2.7547, Plg69.0000°, Azm67.0000°; N 0.1192, Plg3.0000°, Azm166.0000°; P -2.8739, Plg21.0000°, Azm257.0000°;*

*NEIC **28** 03:30:47.3±2.1, 21.°76S±0.°03×70.°63W±0.°05, h21km±4km Error ellipse: s-maj=6.8km s-min=3.7km az=98.0*

*GUC **28** 03:30:48.1±0.7, 21.°75S×70.°61W, h30km±8km, ML4.3*

*VAO **28** 03:30:50.3±1.7, 21.°88S×70.°83W, h73km±7km, mb4.5*

*IDC **28** 03:30:52.4±2.7, 21.°57S×70.°32W, h47km±25km, mb3.6/9, mb1 3.9/12, mb1mx3.7/33, mbtmp3.9/12, ML3.9/3, MS3.4/6, Ms1 3.4/6, ms1mx3.2/26, Error ellipse: s-maj=24.9km s-min=22.7km az=92.0*

ISC 28 03:30:46.7±0.8**, 21.°71S**±0.°02×**70.°62W**±0.°04**, h16km**±5km**, n120, σ1.s49**/133**, mb4.1**/12**, MS3.4**/3**, 5C-8D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB07	IPOC Station P	0.69	91	⇓iP	Pn	03 31 01.0	-0.8
PB07				i S	Sg	03 31 10.1	+0.7
PB07				IAML		03 31 10.7	
	comp=N,26µm,0.3s						
PB07	IPOC Station P	0.69	91		Pg	03 31 00.6	+0.4
PB07				Sn	Sg	03 31 09.9	+0.6
PB04	IPOC Station P	0.76	145	⇓iP	Pg	03 31 01.7	+0.1
PB04				i S	Sg	03 31 11.9	+0.2
PB04				IAML		03 31 14.1	
	comp=E,21µm,0.4s						
PB04	IPOC Station P	0.76	145		Pg	03 31 01.7	+0.1
PB04				Sn	Sg	03 31 11.7	0.0
PATCX	Punta Patache	0.99	26	⇑iP	Pg	03 31 06.3	+0.4
PATCX				i S	Sn	03 31 19.9	+0.3
PATCX				IAML		03 31 23.2	
	comp=E,19µm,0.3s						
PATCX	Punta Patache	0.99	26		Pg	03 31 06.3	+0.4
PATCX				Sn	Sn	03 31 20.3	+0.6
PB05	IPOC Station P	1.20	161	⇓iP	Pb	03 31 08.6	-0.6
PB05				i S	Sb	03 31 23.7	-0.7
TA01	Diego Aracena	1.21	20	⇑iP	Pg	03 31 09.8	-0.4
TA01				i S	Sg	03 31 26.1	+0.1
TA01	Diego Aracena	1.21	20		Pg	03 31 09.7	-0.4
PB01	IPOC Station P	1.25	58	⇓iP	Pg	03 31 10.3	-0.6
PB01				i S	Sg	03 31 26.7	-0.5
PB01				IAML		03 31 29.6	
	comp=N,12µm,0.3s						
PB01	IPOC Station P	1.25	58		Pg	03 31 10.2	-0.6
PB09	IPOC Station P	1.29	94	⇓iP	Pg	03 31 10.9	-0.7
PB09				i S	Sg	03 31 27.6	-0.8
PB09				IAML		03 31 33.2	
	comp=E,8µm,0.5s						
PB09	IPOC Station P	1.29	94		Pg	03 31 10.8	-0.7
PB06	IPOC Station P	1.39	136	⇓iP	Pb	03 31 11.6	-0.8
PB06				i S	Sn	03 31 29.3	-0.4
PB06				IAML		03 31 29.8	
	comp=N,10µm,0.2s						
PB06	IPOC Station P	1.39	136		Pb	03 31 11.5	-0.8
TA02	Huaiquique	1.51	18	eP	Pb	03 31 14.3	+0.1
TA02				eS	Sb	03 31 33.7	+0.6
TA02				IAML		03 31 38.1	
	comp=N,8µm,0.4s						
HMBC	Humberstone	1.58	26	⇑iP	Pb	03 31 15.1	-0.6
HMBC				i S	Sg	03 31 37.0	-0.8
HMBC				IAML		03 31 40.4	
	comp=N,11µm,0.6s						
PB10	IPOC Station P	1.79	178	⇓iP	Pn	03 31 16.1	-0.9
PB10				i S	Sg	03 31 45.1	+0.6
PB10				IAML		03 31 49.7	
	comp=N,2µm,0.5s						
PB10	IPOC Station P	1.79	178	Pn	Pn	03 31 16.1	-0.9
LVC	Limon Verde	1.82	120	P	Pb	03 31 19.7	-0.2
	comp=N,138nm,0.3s,baz=42,slow=6.1,SNR=1517						
LVC				S	Sb	03 31 42.6	0.0
	comp=N,303nm,0.3s,baz=248,slow=23,SNR=16						
LVC				LR	LR	03 32 01.6	
	comp=N,1µm,21.5s,baz=306,slow=41						
LVC	Limon Verde	1.82	120	⇓iP	Pb	03 31 19.2	-0.7
LVC				i S	Sb	03 31 42.5	0.0
LVC	Limon Verde	1.82	120	Pn	Pb	03 31 19.1	-0.8
LVC	Limon Verde	1.82	120	eP	Pb	03 31 19.6	-0.2
PB15	IPOC Station P	1.83	145		Pn	03 31 18.1	+0.5
PB08	IPOC Station P	2.08	42	⇑iP	Pb	03 31 23.4	-0.9
PB08				i S	Sg	03 31 51.8	-2.1
PB08				IAML		03 31 57.0	
	comp=N,5µm,0.4s						
PB08	IPOC Station P	2.08	42		Pb	03 31 23.3	-0.9
PSGC	Pisagua	2.16	13	⇑iP	Pn	03 31 22.8	+0.8
PSGCX	Pisagua	2.16	13		Pn	03 31 22.8	+0.8
MNMC	Minye Minye	2.74	21	eP	Pb	03 31 32.7	-2.8
MNMC				i S	Sb	03 32 08.6	-0.4
MNMC	Minye Minye	2.74	21	Pn	Pn	03 31 31.7	+1.4
PB14	IPOC Station P	2.91	176	Pn	Pn	03 31 31.2	-1.4
AP01	Chacalluta	3.33	5	eP	Pn	03 31 41.1	+3.0
AP01	Chacalluta	3.33	5	Pn	Pn	03 31 39.3	+1.1
GO02	Mina Guanaco	3.56	165	eP	Pn	03 31 42.3	+0.7
GO02	Mina Guanaco	3.56	165	Pn	Pn	03 31 42.1	+0.5
AC01	Pan de Azucar	4.42	180	Pn	Pn	03 31 51.1	-1.9
AC02	Maricunga	5.28	165	Pn	Pn	03 32 06.2	+0.8
GO03	Copiap	5.87	177		Pn	03 32 13.2	+0.1
LPAZ	La Paz	5.89	24	P	Pn	03 32 19.3	+5.4
	comp=N,3.6nm,0.3s,baz=227,slow=7.3,SNR=67						
LPAZ				S	Sn	03 33 28.5	+7.1
	baz=278,slow=19,SNR=1.3						
LPAZ				LR	LR	03 34 46.0	
	comp=N,472nm,18.5s,baz=207,slow=41						
LPAZ	La Paz	5.89	24	Pn	Pn	03 32 15.6	+1.7
LPAZ	La Paz	5.89	24	eP	Pn	03 32 19.0	+5.1
AC04	Llanos de Chal	6.48	184	Pn	Pn	03 32 17.7	-3.7
AC05	El Transito	7.10	178		Pn	03 32 28.6	-1.5
LCO	Las Campanas	7.27	181	Pn	Pn	03 32 32.4	-0.1
GO04	Tololo Observa	8.43	181		Pn	03 32 46.8	-1.5
SIV	San Ignacio	10.68	59	P	Pn	03 33 19.6	+0.5
	comp=N,4.7nm,0.3s,baz=248,slow=11,SNR=28						
SIV				S	Sn	03 35 16.3	-2.2
	baz=238,slow=17,SNR=1.5						
NNA	Nana	11.35	327	S	Sn	03 35 30.5	-4.4
	comp=N,0.9nm,0.3s,baz=357,slow=21,SNR=1.5						
NNA				LR	LR	03 37 28.0	
	comp=N,62nm,20.8s,baz=168,slow=35						
CPUP	Villa Florida	12.99	113	P	Pn	03 33 51.5	+0.9
	comp=N,0.1nm,0.3s,baz=309,slow=13,SNR=2.3						
CPUP				LR	LR	03 39 53.1	
	comp=N,194nm,21.4s,baz=294,slow=42						
VILB	Vilhena	13.22	50	eP	P	03 33 58.5	-5.2
H03N1	Juan Fernandez	13.79	210	P	Pn	03 33 59.3	-2.1
H03N1				T	T	03 48 17.9	
	baz=36,slow=72,SNR=918						
H03N2	Juan Fernandez	13.80	210	P	Pn	03 33 59.2	-2.2
H03N2				T	T	03 48 20.5	
	baz=36,slow=72,SNR=318						
H03N3	Juan Fernandez	13.81	210	P	Pn	03 33 59.0	-2.6
H03N3				T	T	03 48 19.5	
	baz=36,slow=72,SNR=252						
AQDB	Aquidauana	13.98	88	eP	P	03 34 09.5	-2.7
H03S3	Juan Fernandez	14.11	209	P	Pn	03 34 01.7	-4.0
H03S1	Juan Fernandez	14.12	209	P	Pn	03 34 01.6	-4.3
H03S2	Juan Fernandez	14.13	209	P	Pn	03 34 01.8	-4.1
SAML	Samuel	14.57	31		Pn	03 34 10.8	-1.6
PTGB	Pitanga	17.32	104	eP	P	03 34 50.6	+1.3
CPSB	Cacapava Do Su	17.68	123	eP	P	03 34 52.3	-0.9
CLDB	Colider	17.84	55	eP	P	03 34 57.0	+2.0
PCMB	Pacaembu	18.00	93	eP	P	03 34 56.5	-0.3
ARAG	Araguaiana, MT	18.79	75	eP	Pn	03 35 06.0	0.0
PLCA	Paso Flores	18.96	180	P	Pn	03 35 10.7	+2.7
	comp=N,0.1nm,0.3s,baz=345,slow=11,SNR=3.3						
PLCA	Paso Flores	18.96	180		Pn	03 35 07.5	-0.5
ITRB	Iturama	19.06	88	eP	Pn	03 35 09.3	0.0
FRTB	Fartura	19.52	99	eP	Pn	03 35 13.9	-0.9
BB19B	Bebedouro	20.59	92	eP	Pn	03 35 26.0	-1.4
NPGB	Novo Progresso	20.74	48	eP	P	03 35 27.0	+0.3
MACA	Manacapuru-AM	20.82	29	eP	P	03 35 28.0	+0.4
SNDB	Serra Nova Dou	20.86	65	eP	P	03 35 26.3	-1.8
IPMB	Ipameri, GO	21.40	84	eP	P	03 35 32.6	-1.4
BDFB	Brasilia	22.24	78	P	P	03 35 40.9	-2.1
	comp=N,3.1nm,0.5s,baz=243,slow=11,SNR=5.9						
BDFB				LR	LR	03 44 51.4	
	comp=N,123nm,18.3s,baz=299,slow=38						
BDFB	Brasilia	22.24	78	P	P	03 35 42.3	-0.7
BDFB				IAmb	IAmb	03 35 52.4	
	comp=Z,3.9nm,0.8s						
ITTB	Itaituba	22.49	42	eP	P	03 35 45.2	-0.4
PTGA	Pitinga	23.30	28	P	P	03 35 53.1	-0.9
	comp=Z,5.2nm,0.6s,baz=192,slow=13,SNR=11						
PTGA				LR	LR	03 45 37.7	
	comp=Z,140nm,19.2s,baz=204,slow=38						
PTGA	Pitinga	23.30	28	P	P	03 35 53.9	-0.1
PTGA				IAmb	IAmb	03 36 05.0	
	comp=Z,6.2nm,0.8s						
PTGA	Pitinga	23.30	28	eP	P	03 35 53.5	-0.5
PEXB	Peixe	23.37	69	eP	P	03 35 55.4	+0.7
BSCB	Bom Sucesso	24.08	93	eP	P	03 36 01.3	-0.4
MALB	Monte Alegre	25.36	41	eP	P	03 36 13.3	+0.1
SMTB	Santa Maria do	25.58	64	eP	P	03 36 15.6	+0.3
JANB	Januaria	25.81	80	eP	P	03 36 16.8	-0.5
BOAV	Boa Vista	25.92	24	eP	P	03 36 18.3	+0.1
SDBA	SAO DESIDERIO	26.24	74	eP	P	03 36 20.9	-0.4
ROSC	El Rosal	26.64	352	LR	LR	03 48 18.9	
	comp=Z,105nm,20.1s,baz=204,slow=39						
MCPB	Macapa, AP	27.90	43	eP	P	03 36 36.6	+0.5
GDU01	Guandu, BA	30.58	80	eP	P	03 36 59.0	-1.0
RCBR	Riachuelo	37.11	70	P	P	03 37 57.2	+0.4
RCBR				IAmb	IAmb	03 37 58.9	
	comp=Z,13nm,1.1s						
H06E1	SOCORRO T-PHAS	56.34	313	T	T	04 41 28.1	
	SNR=5.3						
TXAR	Lajitas Array	59.91	327	P	P	03 40 53.8	+1.7
	comp=Z,0.3nm,0.7s,baz=134,slow=7.7,SNR=1.7						
SNAA	Sanae	62.60	161	P	P	03 41 10.2	+0.4
SNAA				IAmb	IAmb	03 41 27.6	
	comp=Z,3.2nm,1.0s						
DBIC	Dimbokro	70.33	74	P	P	03 41 59.4	-0.6
	comp=Z,2.9nm,0.9s,baz=212,slow=4.5,SNR=3.6						
DBIC	Dimbokro	70.33	74	P	P	03 41 58.2	-1.8
PDAR	Pinedale Array	73.51	331	P	P	03 42 20.2	+1.4
	comp=Z,0.1nm,0.5s,baz=146,slow=9.8,SNR=1.9						
NVAR	Mina Array Bea	74.69	323	P	P	03 42 28.2	+2.4
	comp=Z,0.3nm,0.7s,baz=163,slow=6.6,SNR=2.2						
TOA0	Torodi Ar. Sit	78.93	71	P	P	03 42 49.4	-0.5
TOA0				IAmb	IAmb	03 42 50.2	
	comp=Z,3.8nm,0.7s						
TORD	Torodi Ar. Bea	78.93	71	P	P	03 42 49.8	-0.2
	comp=Z,2.7nm,0.6s,baz=253,slow=4.9,SNR=27						
TORD	Torodi Ar. Bea	78.93	71	P	P	03 42 49.2	-0.7
ESDC	Sonseca Array	87.11	45	P	P	03 43 33.6	+1.7
	comp=Z,0.4nm,0.6s,baz=264,slow=2.6,SNR=2.3						
YKA	Yellowknife Ar	90.86	341	P	P	03 43 49.8	+0.9
	comp=Z,0.6nm,0.7s,baz=135,slow=4.8,SNR=4.2						
H11S2	WAKE ISLAND Hy	126.32	277	T	T	06 09 18.9	
	baz=103,slow=74,SNR=134						
H11S1	WAKE ISLAND Hy	126.33	277	T	T	06 09 02.2	
	baz=103,slow=74,SNR=116						
H11S3	WAKE ISLAND Hy	126.34	277	T	T	06 09 08.4	
	baz=103,slow=74,SNR=90						
H11N3	WAKE ISLAND Hy	126.41	279	T	T	06 09 10.8	
	baz=103,slow=74,SNR=201						
H11N2	WAKE ISLAND Hy	126.43	279	T	T	06 09 11.9	
	baz=103,slow=74,SNR=150						
H11N1	WAKE ISLAND Hy	126.43	279	T	T	06 09 07.1	
	baz=103,slow=74,SNR=122						
ASAR	Alice Springs	128.97	209	PKP	PKiKP	03 49 56.2	+1.0
	comp=Z,0.4nm,0.8s,baz=140,slow=2.0,SNR=2.2						
WRA	Warramunga Arr	131.94	212	PKP	PKiKP	03 50 01.3	+0.1
	comp=Z,0.3nm,0.5s,baz=158,slow=1.5,SNR=2.4						
ZALV	Zalesovo Beam	142.81	24	PKP	PKPdf	03 50 19.7	+0.7
	comp=Z,1.1nm,0.4s,baz=325,slow=3.7,SNR=5.6						
AAK	Ala-Archa	144.21	46	PKPdf	PKPdf	03 50 22.0	-0.1
NIL	Nilore	146.04	62	PKPbc	PKPab	03 50 26.3	-0.5
KSH	Kashi	146.47	50	PKPbc	PKPab	03 50 27.8	-0.6
KSH				PP	PP	03 53 49.0	-1.5
KSH				SKS	SKSdf	03 57 32.5	-2.0
KSH				AMB	AMB		
	comp=Z,250nm,7.1s						
KSH				LR	LR		
	comp=N,470nm,9.3s						
KSH				LR	LR		
	comp=E,340nm,7.3s						
MAKZ	Makanchi	146.55	35	PKPbc	PKPbc	03 50 27.0	-0.3
MK31	Makanchi Array	146.73	35	PKPbc	PKPbc	03 50 27.0	-0.8
MKAR	Makanchi Array	146.73	35	PKPbc	PKPbc	03 50 27.3	-0.5
	comp=E,1.5nm,0.7s,baz=330,slow=2.7,SNR=16						
MKAR	Makanchi Array	146.73	35		PKPbc	03 50 27.1	-0.8
KLR	Kul'dur	147.29	332	PKPbc	PKPab	03 50 30.1	-0.9
	comp=E,0.5nm,0.5s,baz=326,slow=3.6,SNR=1.8						
USRK	Ussuriysk Ar.	150.80	325	PKPbc	PKiKP	03 50 40.2	+1.2
	comp=E,1.3nm,0.8s,baz=115,slow=6.8,SNR=1.6						
MJAR	Matsushiro Arr	150.94	307	PKPbc	PKiKP	03 50 40.0	+0.5
	comp=E,0.9nm,0.7s,baz=4.5,slow=1.3,SNR=3.2						
MJAR				PKPab	sPKPbc	03 50 46.9	+1.2
	comp=E,1.2nm,0.8s,baz=105,slow=1.5,SNR=4.6						
SONM	Songino Array	153.83	5	PKP	PKPdf	03 50 39.0	+1.6
	comp=E,0.6nm,0.9s,baz=354,slow=2.9,SNR=2.9						
SONM				PKPbc	PKiKP	03 50 46.1	+0.8
	comp=E,0.6nm,0.8s,baz=17,slow=1.5,SNR=3.1						
SONM				PKPab	PKPab	03 50 59.4	+1.3
	comp=E,0.5nm,0.7s,baz=327,slow=5.5,SNR=2.9						

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*SJA **28** 03:45:24.0±0.7, 36.°80S×73.°64W, h10km, ML4.5, MW4.3*

*GUC **28** 03:45:32.9±0.5, 36.°88S×72.°99W, h36km±2km, ML5.1*

*IDC **28** 03:45:33.1±0.5, 36.°84S×72.°86W, h31km±3km, mb4.2/15, mb1 4.3/18, mb1mx4.2/30, mbtmp4.3/18, ML4.2/3, MS3.7/6, Ms1 3.7/6, ms1mx3.6/16, Error ellipse: s-maj=19.7km s-min=12.9km az=76.0*

*NEIC **28** 03:45:33±1.0, 36.°85S±0.°06×73.°04W±0.°08, h36km±2km, Error ellipse: s-maj=9.4km s-min=8.3km az=95.0*

*VAO **28** 03:46:02.2±1.4, 35.°87S×71.°87W, h232km±13km, mb4.4*

ISC 28 03:45:32.1±0.5**, 36.°84S**±0.°04×**73.°15W**±0.°03**, h30km**±2km**, h30km:pP-P, n189, σ1.s40**/199**, mb4.7**/41**, MS4.0**/7**, 6C-4D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BI03	Tigo	0.10	92	⇑iP	Pb	03 45 38.6	+1.2
BI03				i S	Sb	03 45 42.4	+1.4
BI03	Tigo	0.10	92		Pb	03 45 38.6	+1.2
LAJA	Laja	0.56	141	⇓iP	Pb	03 45 42.4	-1.2
LAJA				i S	Sb	03 45 49.1	-2.3
BI02	San Fabin de	1.52	84	⇓iP	Pn	03 45 56.4	-0.9
BI02				i S	Sn	03 46 14.3	-1.8
BI02				IAML		03 46 17.2	
	comp=N,25µm,0.6s						
BI02	San Fabin de	1.52	84	Pn	Pn	03 45 56.4	-0.9
BI02				Sn	Sn	03 46 14.3	-1.8
CANA	Caviahue	1.96	123	i P	Pn	03 46 04.4	+0.8
CANA				⇓iS	Sb	03 46 35.3	+3.8
CANA				IAML		03 46 40.1	
	comp=Z,3µm,0.6s						
BO03	Pichilemu	2.53	23	⇑eP	Pn	03 46 10.8	-0.3
BO03				i S	Sn	03 46 42.3	+1.3
BO03				IAML		03 46 58.6	
	comp=N,8µm,0.7s						
BO02	Sierra Bellavi	2.81	44	⇑eP	Pn	03 46 15.1	0.0
BO02				i S	Sn	03 46 47.9	-0.1
BO02				IAML		03 47 02.9	
	comp=N,10µm,0.7s						
BO02	Sierra Bellavi	2.81	44	Pn	Pn	03 46 15.8	+0.7
VA05	Santo Domingo	3.42	22	eP	Pn	03 46 22.9	-0.5
VA05				IAML		03 47 20.5	
	comp=E,3µm,0.5s						
MT09	Talagante	3.53	31	eP	Pn	03 46 25.4	+0.4
MT09				i S	Sn	03 47 06.4	+0.5
MT09				IAML		03 47 22.5	
	comp=N,5µm,0.4s						
LAMA	Las Malvinas	3.72	60	i P	Pn	03 46 30.5	+3.0
LMEL	Las Melosas	3.84	40	⇓iP	Pn	03 46 30.3	+1.0
LMEL				i S	Sn	03 47 13.4	-0.1
LMEL				IAML		03 47 30.2	
	comp=N,2µm,0.5s						
MT02	Curacav	3.94	25	⇑eP	Pn	03 46 30.1	-0.4
MT02	Curacav	3.94	25		Pn	03 46 29.9	-0.6
MT05	Renca	3.97	31	eP	Pn	03 46 31.8	+0.8
MT05				i S	Sn	03 47 17.0	+0.4
MT05	Renca	3.97	31	Pn	Pn	03 46 31.2	+0.2
MT03	Universidad Ad	3.98	34	eP	Pn	03 46 32.2	+1.0
PEL	Peldehue	4.21	29	eP	Pn	03 46 34.8	+0.5
PEL	Peldehue	4.21	29		Pn	03 46 34.5	+0.2
ROCH	El Roble	4.24	25	⇑iP	Pn	03 46 35.3	+0.4
RFA	San Rafael	4.33	63	i P	Pn	03 46 38.1	+2.1
RFA				i S	Sb	03 47 32.6	-6.8
RFA				IAML		03 47 46.5	
	comp=Z,689nm,0.8s						
PLCA	Paso Flores	4.38	153	Pn	Pn	03 46 37.9	+1.2
	comp=Z,5.4nm,0.3s,baz=332,slow=14,SNR=79						
PLCA				Lg	Lg	03 47 45.5	
	comp=Z,16nm,0.3s,baz=88,slow=18,SNR=4.1						
PLCA				LR	LR	03 48 31.0	
	comp=Z,702nm,19.2s,baz=330,slow=42						
PLCA	Paso Flores	4.38	153	⇑eP	Pn	03 46 38.4	+1.7
PLCA	Paso Flores	4.38	153	Pn	Pn	03 46 36.7	0.0
VA03	San Esteban	4.59	28		Pn	03 46 39.4	-0.3
AUSP	Uspallata	5.55	35	i P	Pn	03 46 54.1	+1.1
LL01	San Ignacio de	5.56	174	Pn	Pn	03 46 52.3	-0.5
H03S1	Juan Fernandez	5.57	301	Pn	Pn	03 46 55.1	+2.3
H03S1				Sn	Sn	03 47 52.5	-3.1
H03S1				T	T	03 52 34.3	
	baz=122,slow=76,SNR=421						
H03S3	Juan Fernandez	5.59	301	Pn	Pn	03 46 55.3	+2.4
H03S3				Sn	Sn	03 47 52.7	-3.2
H03S3				T	T	03 52 31.7	
	baz=122,slow=76,SNR=582						
H03S2	Juan Fernandez	5.59	301	Pn	Pn	03 46 55.0	+2.1
H03S2				Sn	Sn	03 47 52.5	-3.6
H03S2				T	T	03 52 21.7	
	baz=122,slow=76,SNR=456						
VA04	Juan Fernndez	5.64	303	eP	Pn	03 46 55.9	+2.1
VA04	Juan Fernndez	5.64	303	Pn	Pn	03 46 55.4	+1.6
H03N1	Juan Fernandez	5.81	304	Pn	Pn	03 46 59.1	+3.1
H03N1				Sn	Sn	03 48 00.3	-1.2
H03N3	Juan Fernandez	5.81	304	Pn	Pn	03 46 59.1	+3.1
H03N3				Sn	Sn	03 48 00.4	-1.2
H03N2	Juan Fernandez	5.83	304	Pn	Pn	03 46 59.3	+3.1
H03N2				Sn	Sn	03 48 00.5	-1.3
CO02	Combarbal	5.90	18		Pn	03 46 56.9	-0.7
RTCV	Cerro Valdivia	6.26	39	i P	Pn	03 47 02.5	0.0
RTCV				IAML		03 49 15.0	
	comp=Z,118nm,1.4s						
GO07	Milladeo Hill,	6.28	183		Pn	03 47 02.4	-0.2
CO03	El Pedregal	6.33	20		Pn	03 47 03.0	-0.5
RTLL	Cerro Villicun	6.73	37	i P	Pn	03 47 08.9	0.0
RTLL				IAML		03 49 21.9	
	comp=Z,116nm,0.9s						
GO04	Tololo Observa	6.93	17	Pn	Pn	03 47 10.5	-1.4

CO01	Juntas del Tor	7.31	21		Pn	03 47 17.8	+0.7
AROD	Rodeo	7.33	26	iP	Pn	03 47 17.8	+0.4
MRA	San Martin	7.55	56	iP	Pn	03 47 21.6	+1.4
MRA				IAML		03 49 42.3	
	comp=Z,20nm,0.9s						
LCO	Las Campanas	8.07	15	Pn	Pn	03 47 26.7	-0.9
APLL	PUNTA DE LOS L	8.47	43	iP	Pn	03 47 31.6	-1.2
ACLC	CERRO LA CRUZ	9.04	37	iP	Pn	03 47 38.1	-2.6
VCA	Vinchina	9.09	29	iP	Pn	03 47 41.2	-0.2
VCA				eS	Sn	03 49 38.8	+16
AC02	Maricunga	10.54	20	Pn	Pn	03 48 01.8	+0.1
GO02	Mina Guanaco	12.03	16	Pn	Pn	03 48 22.1	+0.3
PB15	IPOC Station P	13.95	14		Pn	03 48 48.5	+0.5
LVC	Limon Verde	14.65	16	Pn	Pn	03 48 56.5	-1.1
	comp=Z,0.2nm,0.3s,baz=203,slow=7.3,SNR=2.4						
LVC				Sn	Sn	03 51 41.3	+2.1
	baz=15,slow=14,SNR=1.7						
LVC	Limon Verde	14.65	16	Pn	Pn	03 48 55.0	-2.6
LVC	Limon Verde	14.65	16	eP	P	03 49 05.8	+2.1
PB04	IPOC Station P	14.69	11	Pn	Pn	03 48 57.7	-0.3
ITQB	Itaqui	15.55	67	eP	P	03 49 13.6	+0.3
PB01	IPOC Station P	16.06	12		Pn	03 49 14.7	-1.2
TA01	Diego Aracena	16.42	10	Pn	Pn	03 49 18.4	-2.0
PB08	IPOC Station P	17.00	13		Pn	03 49 27.7	-0.4
CPUP	Villa Florida	17.05	57	Pn	Pn	03 49 28.8	+0.5
	comp=Z,0.2nm,0.3s,baz=234,slow=13,SNR=5.7						
CPUP				LR	LR	03 56 38.7	
	comp=Z,404nm,19.2s,baz=235,slow=40						
CPUP	Villa Florida	17.05	57	eP	P	03 49 29.8	0.0
CPSB	Cacapava Do Su	17.61	74	eP	P	03 49 39.1	+3.0
MNMC	Minye Minye	17.92	11	P	Pn	03 49 39.6	+0.2
CNLB	Canela	20.11	75	eP	P	03 50 03.1	-0.5
ITAB	Concordia	20.19	68	eP	P	03 50 03.4	-1.0
LPAZ	La Paz	20.95	14	P	Pn	03 50 15.3	-0.7
	comp=Z,5.6nm,0.7s,baz=203,slow=5.7,SNR=29						
LPAZ				LR	LR	03 58 45.9	
	comp=Z,83nm,19.9s,baz=150,slow=38						
LPAZ	La Paz	20.95	14	P	P	03 50 14.1	+0.8
LPAZ	La Paz	20.95	14	eP	Pn	03 50 14.8	-1.1
AQDB	Aquidauana	22.31	48	eP	P	03 50 27.0	-0.2
TRCB	Terra Rica	22.58	57	eP	P	03 50 29.9	-0.3
SIV	San Ignacio	23.37	30	P	P	03 50 37.5	-0.8
	comp=Z,9.0nm,0.8s,baz=215,slow=7.9,SNR=30						
PCMB	Pacaembu	24.32	57	eP	P	03 50 45.6	-1.6
FRTB	Fartura	24.36	63	eP	P	03 50 47.5	-0.1
NNA	Nana	24.97	351	P	P	03 50 54.3	+1.2
	comp=Z,3.9nm,0.4s,baz=199,slow=11,SNR=4.3						
NNA	Nana	24.97	351	IAmb	IAmb	03 51 01.1	
	comp=Z,23nm,1.4s						
PP1B	Ponte de Pedra	25.04	45	eP	P	03 50 52.7	-1.1
SPB	Sao Paulo	25.76	66	P	P	03 51 00.9	+0.7
SPB				IAmb	IAmb	03 51 03.9	
	comp=Z,22nm,1.0s						
ITRB	Iturama	26.25	56	eP	P	03 51 03.7	-1.0
VILB	Vilhena	26.47	29	eP	P	03 51 06.1	-0.6
BB19B	Bebedouro	26.56	60	eP	P	03 51 07.0	-0.5
PARB	Paraibuna	27.25	68	eP	P	03 51 13.2	-0.5
ETMB	Extrema	27.63	15	eP	P	03 51 17.8	+0.7
CZSB	Cruzeiro do Su	28.98	1	eP	P	03 51 30.4	+1.2
SAML	Samuel	29.20	21	P	P	03 51 30.0	-1.1
SAML	Samuel	29.20	21	eP	P	03 51 30.8	-0.3
BSCB	Bom Sucesso	29.28	65	eP	P	03 51 31.8	-0.2
VAS01	Vassouras-RJ	29.49	69	eP	P	03 51 33.7	0.0
CLDB	Colider	30.23	36	eP	P	03 51 39.5	-0.7
BDFB	Brasilia	30.72	53	P	P	03 51 43.8	-0.9
	comp=Z,2.3nm,0.5s,baz=192,slow=5.3,SNR=3.1						
BDFB				LR	LR	04 05 03.0	
	comp=Z,182nm,20.4s,baz=268,slow=38						
BDFB	Brasilia	30.72	53	P	P	03 51 45.0	+0.3
PEXB	Peixe	33.24	49	eP	P	03 52 05.4	-1.4
RIB01	Linhares ES	33.55	68	eP	P	03 52 10.1	+0.7
JANB	Januaria	33.59	57	eP	P	03 52 07.4	-2.4
SDBA	SAO DESIDERIO	35.13	53	eP	P	03 52 22.0	-1.1
SMTB	Santa Maria do	36.24	46	eP	P	03 52 31.6	-1.1
OTAV	Otavalo	37.22	351	P	P	03 52 42.8	+1.3
OTAV	Otavalo	37.22	351	eP	P	03 52 44.9	+3.5
PTGA	Pitinga	37.95	22	P	P	03 52 46.6	-0.5
	comp=Z,1.2nm,0.3s,baz=316,slow=22,SNR=4.9						
BBAC	Balboa, Cauca	38.85	353	eP	P	03 52 56.5	+1.5
POPC	Popayan, Colom	39.32	354	eP	P	03 53 00.1	+1.3
PRAC	Prado	40.38	357	eP	P	03 53 09.1	+1.7
ORTC	Ortega, Tolima	40.59	357	eP	P	03 53 12.7	+3.5
CHIC	Chingaza	41.26	359	eP	P	03 53 16.1	+1.0
PLMC	San Jos del P	41.63	355	eP	P	03 53 16.3	-1.5
NORC	Norcasia	42.21	357	eP	P	03 53 23.8	+1.3
CBOC	Ciudad Bolivar	42.56	356	eP	P	03 53 26.9	+1.4
PTBC	PUERTO BERRIO,	43.17	358	eP	P	03 53 22.4	-7.9
BELA	Belgrano 2	44.26	169	P	P	03 53 39.6	+1.2
BELA				IAmb	IAmb	03 53 40.8	
	comp=Z,28nm,1.5s						
SDV	Santo Domingo	45.55	3	P	P	03 53 49.5	+0.1
	comp=Z,4.5nm,0.8s,baz=282,slow=9.0,SNR=3.2						
VNA3	Neumayer Olymp	47.10	157	P	P	03 54 01.3	+0.5
VNA1	Neumayer--Stat	47.44	156	P	P	03 54 03.9	+0.4
VNA2	Neumayer--Watz	47.77	156	P	P	03 54 06.6	+0.5
	baz=291,slow=8.6						
SNAA	Sanae	49.32	157	P	P	03 54 18.6	+0.6
SNAA	Sanae	49.32	157	P	P	03 54 18.3	+0.2
	comp=Z,4.9nm,1.0s,baz=281,slow=7.1,SNR=6.9						
SNAA	Sanae	49.32	157	P	P	03 54 17.5	-0.5
SNAA				IAmb	IAmb	03 54 27.9	
	comp=Z,5.7nm,0.7s						
QSPA	South Pole Qui	53.40	180	P	P	03 54 50.2	+1.4
	comp=Z,11nm,0.8s,baz=154,slow=5.4,SNR=21						
QSPA	South Pole Qui	53.40	180	P	P	03 54 49.3	+0.5
QSPA				IAmb	IAmb	03 54 51.4	
	comp=Z,15nm,0.9s						
TBI	Tubuai	65.81	258	eLR	LR	04 16 06.8	
	comp=Z,132nm,25.5s						
PPT2	Papeete2	68.97	263	eLR	LR	04 17 32.9	
	comp=Z,123nm,22.2s						
PPT	Papeete	68.98	263	LR	LR	04 19 26.6	
	comp=Z,83nm,20.6s,baz=112,slow=29						
HPIG		70.43	329	P	P	03 56 44.2	+0.5
HPIG				IAmb	IAmb	03 56 56.3	
	comp=Z,5.0nm,0.8s						
143A	Socs Landing,	71.26	344	P	P	03 56 48.8	+0.4
JCT	Junction City	71.48	336		P	03 56 50.3	+0.5
JCT				IAmb	IAmb	03 57 02.3	
	comp=Z,12nm,0.9s						
TXAR	Lajitas Array	71.79	332	P	P	03 56 53.8	+2.0
	comp=Z,2.9nm,0.7s,baz=153,slow=8.2,SNR=18						
TXAR				pP	sP	03 57 03.3	-1.3
	comp=Z,4.3nm,0.8s,baz=158,slow=9.7,SNR=17						
TXAR	Lajitas Array	71.79	332	P	P	03 56 53.0	+1.3
TX31	Lajitas Ar. Si	71.79	332	P	P	03 56 52.4	+0.6
TX31				IAmb	IAmb	03 57 04.1	
	comp=Z,14nm,0.8s						
X48A	Hartselle	72.10	348	IAmb	IAmb	03 57 04.7	
	comp=Z,10nm,0.8s						
V48A	Smith Brothers	73.32	348	P	P	03 57 01.0	+0.4
ABTX	Abilene, Hawle	73.41	337	P	P	03 57 01.0	-0.2
ABTX				IAmb	IAmb	03 57 12.9	
	comp=Z,8.5nm,0.8s						
WVT	Waverly	73.87	348	P	P	03 57 03.6	-0.2
MNTX	Cornudas Mount	74.56	332	IAmb	IAmb	03 57 19.5	
	comp=Z,5.4nm,0.9s						
USIN	University of	75.64	348	P	P	03 57 14.3	+0.3
AMTX	Amarillo	76.14	336		P	03 57 17.9	+0.8
AMTX				IAmb	IAmb	03 57 29.0	
	comp=Z,15nm,1.1s						
CCM	Cathedral Cave	76.38	345	P	P	03 57 18.2	0.0
S39A	Bolivar	76.47	344	IAmb	IAmb	03 57 29.8	
	comp=Z,6.4nm,0.9s						
LIC	Lamto	76.53	72	eP	P	03 57 19.1	-0.6
	comp=Z,23nm,0.7s						
TIC	Toumodi	76.81	71	eP	P	03 57 20.7	-0.6
KIC	Kosan Boka	76.84	72	eP	P	03 57 21.1	-0.4
	comp=Z,20nm,0.7s						
DBIC	Dimbokro	76.95	71	P	P	03 57 22.1	0.0
	comp=Z,3.6nm,0.6s,baz=212,slow=6.0,SNR=8.9						
DBIC				pP	pP	03 57 30.8	-0.7
	comp=Z,6.9nm,0.6s,baz=116,slow=5.6,SNR=8.7						
DBIC	Dimbokro	76.95	71	P	P	03 57 21.5	-0.5
DBIC				IAmb	IAmb	03 57 32.1	
	comp=Z,9.2nm,0.7s						
ANMO	Albuquerque	77.86	333	P	P	03 57 27.8	+0.9
ANMO				IAmb	IAmb	03 57 30.1	
	comp=Z,7.9nm,1.1s						
N47A	Urbana	78.20	350	IAmb	IAmb	03 57 38.3	
	comp=Z,12nm,0.8s						
P38A	Dawn	78.37	344	IAmb	IAmb	03 57 40.6	
	comp=Z,13nm,0.8s						
BOSA	Boshof	79.55	118	P	P	03 57 36.8	+0.2
	comp=Z,0.8nm,0.4s,baz=293,slow=2.0,SNR=1.7						
BOSA				pP	pP	03 57 45.3	-0.8
	comp=Z,3.9nm,0.5s,baz=236,slow=4.4,SNR=7.6						
BOSA				LR	LR	04 29 44.0	
	comp=Z,43nm,18.0s,baz=188,slow=33						
MVCO	Mesa Verde	80.62	332	P	P	03 57 42.5	+0.5
SMCO	Snowmass	81.81	334	IAmb	IAmb	03 58 02.1	
	comp=Z,8.5nm,1.1s						
LBTB	Lobatse	81.93	115	P	P	03 57 48.9	-0.4
LBTB				IAmb	IAmb	03 57 59.6	
	comp=Z,11nm,1.1s						
K31A	O'Neill	82.46	341	P	P	03 57 51.7	+0.4
KOWA	Kowa	82.63	66		P	03 57 52.1	-0.7
KOWA				IAmb	IAmb	03 58 03.2	
	comp=Z,8.1nm,0.8s						
SHPR	Sheep Range	82.72	327	IAmb	IAmb	03 58 06.6	
	comp=Z,6.7nm,1.0s						
MTPU	Mount Pierson	82.78	330	IAmb	IAmb	03 58 06.3	
	comp=Z,6.7nm,0.9s						
CCUT	Cedar City	82.84	329	IAmb	IAmb	03 58 07.3	
	comp=Z,8.2nm,1.0s						
PRN	Pahroc Range	83.43	328	P	P	03 57 57.6	+1.0
TPNV	Topopah Spring	83.57	327	IAmb	IAmb	03 58 11.9	
	comp=Z,5.0nm,1.0s						
MPU	Maple Canyon	84.27	331	IAmb	IAmb	03 58 13.5	
	comp=Z,8.8nm,0.9s						
R11A	Troy Canyon, C	84.45	328	IAmb	IAmb	03 58 15.2	
	comp=Z,4.7nm,0.8s						
DUG	Dugway, Tooele	84.88	331	P	P	03 58 04.3	+0.4
DUG				IAmb	IAmb	03 58 18.0	
	comp=Z,8.8nm,1.2s						
NVAR	Mina Array Bea	85.71	326	P	P	03 58 08.7	+0.5
	comp=Z,1.4nm,0.5s,baz=140,slow=7.1,SNR=12						
NVAR				pP	sP	03 58 20.7	-0.5
	comp=Z,3.7nm,0.8s,baz=156,slow=5.6,SNR=12						
PDAR	Pinedale Array	85.90	334	P	P	03 58 10.2	+1.1
	comp=Z,0.8nm,0.5s,baz=148,slow=5.2,SNR=12						
PDAR				pP	sP	03 58 20.6	-1.4
	comp=Z,1.8nm,0.8s,baz=155,slow=6.1,SNR=9.5						
PDAR	Pinedale Array	85.90	334	P	P	03 58 09.3	+0.3
TOA0	Torodi Ar. Sit	86.02	70	P	P	03 58 09.1	-0.9
TOA0				IAmb	IAmb	03 58 20.0	
	comp=Z,3.1nm,0.9s						
TORD	Torodi Ar. Bea	86.02	70	P	P	03 58 09.2	-0.8
	comp=Z,0.6nm,0.6s,baz=221,slow=4.7,SNR=7.8						
TORD	Torodi Ar. Bea	86.02	70	P	P	03 58 09.1	-0.9
ELK	Elko	86.32	329	P	P	03 58 11.1	-0.1
ELK				IAmb	IAmb	03 58 23.7	
	comp=Z,4.3nm,0.9s						
ULM	Lac du Bonnet	89.01	346	P	P	03 58 24.0	+0.5
	comp=Z,1.6nm,0.8s,baz=175,slow=4.1,SNR=6.3						
ULM				pP	pP	03 58 34.0	+1.0
	comp=Z,4.2nm,0.8s,baz=160,slow=4.6,SNR=7.3						
DZM	Mont Dzumac	98.83	234	eLR	LR	04 31 29.8	
	comp=Z,83nm,29.6s						
ASAR	Alice Springs	114.63	207	PKP	PKiKP	04 04 08.8	-1.1
	comp=Z,0.2nm,0.4s,baz=116,slow=2.2,SNR=2.6						
ASAR				PKKPbc	PKKPab	04 14 56.9	+0.2
	comp=Z,0.3nm,0.5s,baz=351,slow=3.2,SNR=4.4						
GERES	GERESS Array B	114.78	47	PKP	PKPdf	04 04 09.1	-0.2
	comp=Z,0.4nm,0.6s,baz=264,slow=3.9,SNR=3.5						
ILAR	Eielson Array	116.30	333	PKP	PKiKP	04 04 12.5	+0.9
	comp=Z,0.2nm,0.8s,baz=116,slow=2.1,SNR=1.5						
WRA	Warramunga Arr	117.84	209	PKP	PKPdf	04 04 15.8	-0.3
	comp=Z,0.5nm,0.6s,baz=172,slow=1.7,SNR=5.6						
BRTR	Keskin Array B	123.97	63	PKP	PKiKP	04 04 27.6	0.0
	comp=Z,0.5nm,0.7s,baz=175,slow=4.7,SNR=2.8						
AKASG	Malin Array Be	124.76	49	PKP	PKPdf	04 04 27.0	-1.2
	comp=Z,0.8nm,0.5s,baz=258,slow=3.2,SNR=4.8						
ABKAR	Akbulak array	144.11	55	PKPdf	PKPbc	04 05 02.2	-0.3
RPSI	Rantau Prapat	145.24	166		PKPdf	04 05 07.3	-0.1
RPSI	Rantau Prapat	145.24	166		PKPab	04 05 07.2	0.0
PSI	Prapat	145.35	166	PKPbc	PKPbc	04 05 07.2	-0.4
	comp=Z,11nm,0.7s,baz=180,slow=6.1,SNR=14						
NRIK	Noril'sk	145.78	12	PKPbc	PKPdf	04 05 06.6	0.0
	comp=Z,1.3nm,0.3s,baz=169,slow=5.2,SNR=2.1						
BRVK	Borovoye	149.87	46		PKPbc	04 05 18.2	-0.5
BVAR	Borovoye Array	149.94	46	PKPbc	PKPbc	04 05 19.1	+0.3
	comp=Z,1.4nm,0.6s,baz=207,slow=6.3,SNR=8.1						
YAK	Yakutsk	151.05	338	PKPbc	PKiKP	04 05 21.5	-0.2
	comp=Z,11nm,0.5s,baz=137,slow=1.2,SNR=1.3						
KURBB	Kurchatov Arra	155.51	47	PKP	PKPdf	04 05 22.1	-0.1
	comp=Z,46nm,0.6s,baz=316,slow=2.3,SNR=4.5						
KURBB				pPKP	pPKPdf	04 05 31.8	-0.2
	comp=Z,0.9nm,0.7s,baz=294,slow=2.4,SNR=6.1						
KURK	Kurchatov	155.53	47		PKPdf	04 05 22.1	-0.1
KSH	Kashi	155.64	74	PKP	PKPdf	04 05 23.8	+0.9
KSH				PP	PP	04 09 20.5	-6.2
KSH				AMB	AMB		
	comp=Z,770nm,9.7s						
ZALV	Zalesovo Beam	157.09	35	PKP	PKPdf	04 05 24.3	+0.2
	comp=Z,1.7nm,0.6s,baz=325,slow=1.8,SNR=10						
ZALV				pPKP	pPKPdf	04 05 34.5	+0.5
	comp=Z,3.4nm,0.8s,baz=321,slow=2.1,SNR=6.8						
ZALV				PKPab	PKPab	04 05 54.8	0.0
	comp=Z,1.0nm,0.5s,baz=300,slow=5.7,SNR=2.0						
ZALV	Zalesovo Beam	157.09	35	PKPdf	PKPdf	04 05 23.2	-0.9
ZALV					pPKPdf	04 05 34.0	0.0
MKAR	Makanchi Array	159.25	54	PKP	PKPdf	04 05 27.4	+0.3
	comp=Z,1.2nm,0.8s,baz=246,slow=0.7,SNR=11						
MKAR				pPKP	pPKPdf	04 05 37.5	+0.5
	comp=Z,1.0nm,0.8s,baz=270,slow=1.1,SNR=6.3						
MKAR				PKPab	PKPab	04 06 04.1	-0.4
	comp=Z,0.5nm,0.5s,baz=287,slow=7.1,SNR=2.1						
MKAR	Makanchi Array	159.25	54	PKPdf	PKPdf	04 05 26.7	-0.3
SONM	Songino Array	169.01	2	PKPab	PKPab	04 06 48.4	+1.2
	comp=Z,1.5nm,0.9s,baz=347,slow=3.8,SNR=8.2						

IDC 28 04:09:18.2±10.0**,32°.13S**×**179°.85E,h150^{km}**±108^{km}**,mb3.2**/2**,mb1 3.5**/3**,mb1mx3.2**/28**,mbtmp3.6**/3**,Error ellipse: s-maj=94.9km s-min=44.6km az=177.0,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
URZ	Urewera	6.51	199	P	Pn	04 10 53.1	+1.4
	0.4nm,0.3s,baz=9.5,slow=12,SNR=1.6						
URZ				S	Sn	04 12 04.3	-0.6
	0.4nm,0.3s,baz=35,slow=18,SNR=1.1						
WRA	Warramunga Arr	42.37	275	P	P	04 16 57.2	-0.5
	0.7nm,1.0s,baz=112,slow=8.0,SNR=3.0						
NVAR	Mina Array Bea	90.75	44	P	P	04 22 03.6	-0.7
	0.2nm,0.5s,baz=209,slow=7.2,SNR=3.9						
FINES	FINESS Array B	146.09	338	PKPbc	PKPbc	04 28 39.5	-0.2
	2.8nm,1.0s,baz=46,slow=4.0,SNR=6.5						

*IDC **28** 04:20:55.1±0.8, 29°.40N×43°.11W, h0^{km}, mb3.7/15, mb1 3.9/15, mb1mx3.8/34, mbtmp3.7/15, MS3.8/8, Ms1 3.8/8, ms1mx3.4/44, Error ellipse: s-maj=23.6km s-min=18.1km az=174.0*

ISC 28 04:20:57.2±0.7**,29°.4N**±0°.1×**43°.1W**±0°.1**,h14^{km},n24,** σ**0^{s}.42**/16**,mb3.9**/15**,MS3.9**/8**,Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
ESDC	Sonseca Array	33.61	62	P	P	04 27 37.5	+0.2
	0.6nm,0.9s,baz=277,slow=10,SNR=2.0						
DBIC	Dimbokro	42.53	114	LR	LR	04 44 17.5	
	comp=Z,116nm,19.7s,baz=344,slow=33						
ULM	Lac du Bonnet	44.48	313	P	P	04 29 07.5	-0.5
	1.5nm,0.8s,baz=122,slow=7.5,SNR=4.3						
TORD	Torodi Ar. Bea	44.49	102	P	P	04 29 08.0	-0.5
	1.6nm,1.0s,baz=296,slow=6.7,SNR=5.0						
BDFB	Brasilia	45.02	187	LR	LR	04 45 31.0	
	comp=Z,72nm,21.9s,baz=134,slow=33						
H10N2	ASCENSION HYDR	46.15	139	T	T	05 18 26.3	
	baz=325,slow=75,SNR=110						
H10N3	ASCENSION HYDR	46.15	139	T	T	05 18 26.5	
	baz=325,slow=75,SNR=82						
H10N1	ASCENSION HYDR	46.16	139	T	T	05 18 27.7	
	baz=325,slow=75,SNR=149						
H10S3	ASCENSION HYDR	46.96	140	T	T	05 19 30.8	
	baz=256,slow=74,SNR=23						
H10S2	ASCENSION HYDR	46.98	140	T	T	05 19 27.0	
	baz=324,slow=74,SNR=16						
GERES	GERESS Array B	46.99	49	P	P	04 29 28.7	+0.8
	0.3nm,0.5s,baz=302,slow=9.2,SNR=2.3						
LPAZ	La Paz	51.44	211	P	P	04 30 03.0	+0.1
	1.1nm,0.6s,baz=22,slow=4.2,SNR=5.0						
TXAR	Lajitas Array	52.22	286	P	P	04 30 08.2	+0.1
	0.7nm,0.9s,baz=69,slow=6.9,SNR=3.8						
PDAR	Pinedale Array	54.04	303	P	P	04 30 21.4	-0.1
	0.6nm,0.6s,baz=73,slow=8.1,SNR=7.3						
PDAR				LR	LR	04 52 09.6	
	comp=Z,96nm,18.5s,baz=96,slow=35						
FINES	FINESS Array B	54.75	33	P	P	04 30 26.1	+0.1
	1.4nm,0.8s,baz=290,slow=8.8,SNR=1.7						
YKA	Yellowknife Ar	55.86	328	P	P	04 30 33.6	-0.5
	0.4nm,0.9s,baz=90,slow=8.0,SNR=3.6						
YKA				PcP	PcP	04 31 33.1	+0.4
	0.5nm,1.0s,baz=88,slow=5.7,SNR=4.7						
YKA				LR	LR	04 52 52.9	
	comp=Z,125nm,20.1s,baz=0.0,slow=34						
CPUP	Villa Florida	57.06	195	P	P	04 30 43.0	+0.1
	1.6nm,0.9s,baz=76,slow=8.3,SNR=1.4						
NVAR	Mina Array Bea	61.48	300	P	P	04 31 14.2	+0.4
	0.4nm,0.6s,baz=69,slow=10,SNR=2.3						
NVAR				LR	LR	04 56 34.4	
	comp=Z,85nm,18.9s,baz=54,slow=35						
BRTR	Keskin Array B	62.29	58	P	P	04 31 18.6	-0.6
	0.9nm,0.8s,baz=296,slow=4.0,SNR=5.0						
INK	Inuvik	63.19	335	LR	LR	04 56 26.8	
	comp=Z,94nm,19.8s,baz=61,slow=34						
ILAR	Eielson Array	69.38	334	P	P	04 32 04.5	+0.3
	0.3nm,0.8s,baz=41,slow=2.1,SNR=4.2						
ILAR				LR	LR	05 03 15.4	
	comp=Z,63nm,18.1s,baz=30,slow=37						
ZALV	Zalesovo Beam	85.60	28	P	P	04 33 35.2	+0.2
	0.4nm,0.3s,baz=306,slow=5.0,SNR=3.5						
MKAR	Makanchi Array	89.57	34	P	P	04 33 54.0	-0.4
	0.8nm,0.9s,baz=291,slow=5.1,SNR=6.0						
PETK	Petropavlovsk-	95.86	348	LR	LR	05 19 45.1	
	comp=Z,49nm,19.1s,baz=4.1,slow=37						

*ARE **28** 04:42:53±7.0, 12°.51S±0°.08×77°.4W±0°.1, h34^{km}±7^{km}, Error ellipse: s-maj=0.0km s-min=0.0km az=158.0*

*IDC **28** 04:42:54.3±4.7, 12°.51S×77°.27W, h34^{km}±27^{km}, mb3.7/8, mb1 3.9/8, mb1mx3.6/28, mbtmp3.9/8, MS2.6/1, Ms1 2.7/1, ms1mx2.3/31, Error ellipse: s-maj=50.2km s-min=24.7km az=45.0*

*NEIC **28** 04:43:01.3±2.1, 12°.1S±0°.1×76°.8W±0°.2, h52^{km}±4^{km}, mb3.9/5, ML4.4(ARE), Error ellipse: s-maj=27.0km s-min=11.5km az=65.0*

ISC 28 04:42:59.4±1.1**,12°.26S**±0°.08×**76°.9W**±0°.2**,h35^{km},n39,** σ**2^{s}.30**/31**,mb3.9**/7**,Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
NNA	Nana	0.27	4	Pg	Pn	04 43 07.5	+0.5
	493nm,0.3s,baz=240,slow=22,SNR=2077						
NNA				Lg	Lg	04 43 15.8	
	2µm,0.3s,baz=327,slow=21,SNR=27						
NNA	Nana	0.27	4		Pn	04 43 07.8	+0.7
NNA					Sn	04 43 15.6	+3.3
ATAH	Atahualpa	5.31	343	Pn	Pn	04 44 17.8	+1.1
	3.7nm,0.3s,baz=69,slow=2.2,SNR=26						
ATAH				Sn	Sn	04 45 15.8	-1.0
	2.0nm,0.3s,baz=224,slow=18,SNR=1.8						
LPAZ	La Paz	9.36	116	Pn	Pn	04 45 15.7	+3.1
	0.4nm,0.3s,baz=294,slow=7.4,SNR=9.6						
LPAZ				LR	LR	04 49 06.7	
	comp=Z,30nm,18.9s,baz=307,slow=39						
LPAZ	La Paz	9.36	116	Pn	Pn	04 45 14.4	+1.9
PSGCX	Pisagua	9.76	139	Pn	Pn	04 45 19.6	+2.2
MNMC	Minye Minye	9.78	135		Pn	04 45 19.1	+1.2
TA01	Diego Aracena	10.45	143	Pn	Pn	04 45 29.3	+2.4
PATCX	Punta Patache	10.67	144	Pn	Pn	04 45 33.8	+3.8
PB08	IPOC Station P	10.78	138	Pn	Pn	04 45 34.6	+2.9
PB01	IPOC Station P	11.23	142	Pn	Pn	04 45 41.0	+3.4
PB07	IPOC Station P	11.54	146	Pn	Pn	04 45 44.2	+2.4
PB09	IPOC Station P	11.96	144	Pn	Pn	04 45 49.7	+2.1
OTAV	Otavalo	12.51	353		Pn	04 45 57.5	+2.0
LVC	Limon Verde	12.78	145	Pn	Pn	04 45 59.2	+0.1
	0.1nm,0.3s,baz=108,slow=19,SNR=1.1						
LVC				Sn	Sn	04 48 20.5	+0.1
	0.1nm,0.3s,baz=276,slow=20,SNR=1.3						
PB15	IPOC Station P	12.96	148	Pn	Pn	04 46 04.5	+3.0
SAML	Samuel	13.84	78		Pn	04 46 13.0	-0.2
SIV	San Ignacio	15.76	105	Pn	P	04 46 42.1	-0.4
	0.1nm,0.3s,baz=282,slow=12,SNR=4.0						
CO03	El Pedregal	19.35	164	P	Pn	04 47 26.1	+2.7
PTGA	Pitinga	20.30	57	P	P	04 47 33.2	+0.8
	0.9nm,0.3s,baz=206,slow=9.8,SNR=6.8						
H03N1	Juan Fernandez	21.17	185	T	T	05 09 48.6	
	baz=3.7,slow=75,SNR=38						
H03N2	Juan Fernandez	21.17	185	T	T	05 09 47.8	
	baz=3.7,slow=75,SNR=36						
H03N3	Juan Fernandez	21.19	185	T	T	05 09 39.2	
	baz=3.7,slow=75,SNR=33						
SDV	Santo Domingo	21.90	17	P	P	04 47 49.8	-0.1
	3.7nm,0.7s,baz=174,slow=16,SNR=4.6						
SDV	Santo Domingo	21.90	17	P	P	04 47 50.4	+0.5
SDV				IAmb	IAmb	04 47 53.9	
	comp=Z,4.4nm,0.8s						
CPUP	Villa Florida	23.10	130	P	P	04 47 59.5	-2.9
	comp=Z,4.1nm,1.1s,baz=16,slow=11,SNR=2.9						
CPUP	Villa Florida	23.10	130	IAmb	IAmb	04 48 00.1	
	comp=Z,5.3nm,1.2s						
BANI	BANI	31.12	12	P	P	04 49 16.8	+1.8
GTBY	Guantanamo Bay	32.03	3	P	P	04 49 22.6	-0.2
NVAR	Mina Array Bea	63.58	325	P	P	04 53 23.4	-3.6
	comp=Z,0.4nm,0.8s,baz=163,slow=3.8,SNR=2.5						
ULM	Lac du Bonnet	64.43	347	P	P	04 53 27.1	-4.9
	comp=Z,2.1nm,0.7s,baz=165,slow=6.6,SNR=6.6						
DBIC	Dimbokro	74.00	79	P	P	04 54 29.1	-3.1
	comp=Z,2.2nm,0.7s,baz=277,slow=22,SNR=3.2						
DBIC	Dimbokro	74.00	79	IAmb	IAmb	04 54 33.2	
	comp=Z,9.3nm,1.4s						
YKA	Yellowknife Ar	80.09	343	P	P	04 55 00.5	-4.8
	comp=Z,0.1nm,0.7s,baz=144,slow=6.2,SNR=4.0						
TORD	Torodi Ar. Bea	81.88	75	P	P	04 55 13.3	-2.6
	comp=Z,1.7nm,0.8s,baz=270,slow=5.5,SNR=6.9						
H11S2	WAKE ISLAND Hy	118.65	284	T	T	07 10 35.0	
	baz=94,slow=74,SNR=18						
H11S1	WAKE ISLAND Hy	118.65	284	T	T	07 10 38.9	
	baz=94,slow=74,SNR=26						
H11S3	WAKE ISLAND Hy	118.67	284	T	T	07 10 36.4	
	baz=94,slow=74,SNR=20						
SONM	Songino Array	144.43	356	PKP	PKPab	05 02 26.7	-3.8
	comp=Z,0.5nm,0.6s,baz=94,slow=1.1,SNR=4.3						

*ARE **28** 04:53:07±2.1, 4°.95S±0°.06×78°.5W±0°.1, h40^{km}±5^{km}, Error ellipse: s-maj=17.2km s-min=8.1km az=83.0*

*IDC **28** 04:53:10.3±2.4, 4°.92S×78°.28W, h56^{km}±23^{km}, mb3.9/12, mb1 4.1/16, mb1mx4.0/28, mbtmp4.1/16, ML3.7/4, MS3.4/10, Ms1 3.4/10, ms1mx3.2/31, Error ellipse: s-maj=22.9km s-min=15.7km az=58.0*

*VAO **28** 04:53:11.2±0.9, 4°.84S×77°.82W, h10^{km}, mb4.6*

*NEIC **28** 04:53:11.2±0.9, 4°.93S±0°.05×78°.2W±0°.1, h67^{km}±6^{km}, mb4.6/95, ML4.6(ARE), Error ellipse: s-maj=16.2km s-min=5.7km az=75.0*

ISC 28 04:53:10.1±0.4**,4°.91S**±0°.05×**78°.16W**±0°.06**,h53^{km},n166,** σ**1^{s}.54**/141**,mb4.5**/58**,Peru-Ecuador border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
ATAH	Atahualpa	2.22	186	P	Pn	04 53 45.9	+1.0
	39nm,0.3s,baz=6.4,slow=10,SNR=144						
ATAH				S	Sn	04 54 14.1	+2.7
	80nm,0.3s,baz=47,slow=22,SNR=4.4						
ATAH				LR	LR	04 54 41.4	
	comp=Z,475nm,19.7s,baz=4.1,slow=41						
OTAV	Otavalo	5.12	357	Pn	Pn	04 54 26.2	+1.5
OTAV	Otavalo	5.12	357	eP	Pn	04 54 26.9	+2.2
OTAV	Otavalo	5.12	357	eP	Pn	04 54 27.5	+2.9
PTLC	Puerto Leguiza	6.06	34	eP	Pn	04 54 33.9	-3.3
CZSB	Cruzeiro do Su	6.11	118	eP	Pn	04 54 38.3	+0.5
GCUF	Volcan Galeras	6.15	8	eP	Pn	04 54 40.7	+1.9
FLOC	Florencia	6.92	21	eP	Pn	04 54 49.5	+0.5
BBAC	Balboa, Cauca	6.95	8	eP	Pn	04 54 51.9	+2.4
NNA	Nana	7.15	170	P	Pn	04 54 51.2	-1.0
	2.3nm,0.3s,baz=336,slow=11,SNR=8.2						
NNA				S	Sn	04 56 13.8	+1.6
	7.6nm,0.3s,baz=272,slow=21,SNR=2.0						
NNA				LR	LR	04 57 44.2	
	comp=Z,230nm,20.4s,baz=318,slow=38						
NNA	Nana	7.15	170		Pn	04 54 52.4	+0.2
PCON	Cinco Dias	7.40	14	eP	Pn	04 54 59.6	+3.5
GARC	Garzon, Huila	7.54	21	eP	Pn	04 54 58.2	+0.6
POPC	Popayan, Colom	7.55	11	eP	Pn	04 54 59.2	+1.5
GR1C	Gorgona, Isla	7.86	360	eP	Pn	04 55 01.3	-0.5
MARP	Paez Belalcaza	8.01	16	eP	Pn	04 55 01.3	-2.8
BETC	Betania	8.02	20	eP	Pn	04 55 07.1	+3.0
MACC	Macarena, Meta	8.23	32	eP	Pn	04 55 07.0	+0.1

PRAC	Prado	9.17	21	eP	Pn	04 55 23.4	+3.6
ORTC	Ortega, Tolima	9.23	18	eP	Pn	04 55 22.2	+1.6
GUVC	San Jose del G	9.24	37	eP	Pn	04 55 20.9	+0.1
ANIL	Santa Ana	9.74	16	eP	Pn	04 55 39.6	+12
TOLC	Tolima	9.85	17	eP	Pn	04 55 32.7	+3.3
PLMC	San Jos del P	9.93	11	eP	Pn	04 55 27.3	-2.9
RREF	El Recreo	10.14	16	eP	Pn	04 55 43.6	+10
ROSC	El Rosal	10.42	22	LR	LR	05 00 35.1	
	comp=Z,261nm,19.8s,baz=102,slow=42						
ROSC	El Rosal	10.42	22	Pn	Pn	04 55 38.4	+1.1
GUY2C	Guyana, Caldas	10.45	16	eP	Pn	04 55 37.8	+0.1
CHIC	Chingaza	10.46	25	eP	Pn	04 55 40.6	+2.8
CBOC	Ciudad Bolivar	10.91	11	eP	Pn	04 55 49.0	+5.2
SPBC	San Pablo de B	11.26	21	eP	Pn	04 55 47.9	-0.6
RUSC	La Rusia	11.87	25	eP	Pn	04 55 58.2	+1.1
PTBC	PUERTO BERRIO,	11.96	18	eP	Pn	04 55 58.5	+0.5
TAMC	Tame, Arauca	12.94	30	eP	Pn	04 56 11.3	-0.1
LPAZ	La Paz	14.99	140	P	Pn	04 56 41.2	+1.8
	0.2nm,0.3s,baz=306,slow=4.6,SNR=8.5						
LPAZ				LR	LR	05 03 39.1	
	comp=Z,177nm,20.1s,baz=14,slow=42						
LPAZ	La Paz	14.99	140	Pn	Pn	04 56 37.6	-1.9
LPAZ	La Paz	14.99	140	eP	Pn	04 56 41.1	+1.7
SAML	Samuel	15.40	106	Pn	Pn	04 56 40.5	-3.6
SAML	Samuel	15.40	106	eP	Pn	04 56 44.7	+0.6
SDV	Santo Domingo	15.63	29	P	Pn	04 56 46.6	-0.6
	0.9nm,0.3s,baz=264,slow=8.3,SNR=3.3						
SDV				S	Sn	04 59 43.1	+3.6
	0.3nm,0.3s,baz=301,slow=23,SNR=1.3						
SDV				LR	LR	05 04 07.1	
	comp=Z,134nm,19.4s,baz=177,slow=42						
SDV	Santo Domingo	15.63	29		Pn	04 56 45.7	-1.5
SDV	Santo Domingo	15.63	29	eP	Pn	04 56 48.8	+1.6
SDV	Santo Domingo	15.63	29	eP	Pn	04 56 48.8	+1.6
MNMC	Minye Minye	16.42	150		Pn	04 56 57.7	+0.3
MACA	Manacapuru-AM	17.52	85	eP	Pn	04 57 11.1	+0.3
ACON	Acoyapa	18.16	337	P	P	04 57 18.2	-0.1
PTGA	Pitinga	18.64	78	P	P	04 57 20.7	-2.9
	1.1nm,0.3s,baz=315,slow=19,SNR=3.5						
PTGA				S	Sn	05 00 46.7	-5.6
	1.4nm,0.3s,baz=337,slow=22,SNR=2.2						
PTGA				LR	LR	05 05 41.3	
	comp=Z,208nm,18.6s,baz=272,slow=40						
PTGA	Pitinga	18.64	78	P	P	04 57 23.8	+0.1
PTGA	Pitinga	18.64	78	eP	Pn	04 57 24.7	+0.2
PB09	IPOC Station P	18.88	154	P	P	04 57 25.4	-1.0
BOAV	Boa Vista	19.06	68	eP	Pn	04 57 29.9	+0.4
VILB	Vilhena	19.45	115	eP	Pn	04 57 34.2	+0.1
LVC	Limon Verde	19.74	154	LR	LR	05 06 05.1	
	comp=Z,109nm,20.0s,baz=316,slow=39						
LVC	Limon Verde	19.74	154	P	P	04 57 34.6	-1.4
TGUH	Tegucigalpa,Un	20.90	334	P	P	04 57 48.3	0.0
ITTB	Itaituba	22.36	90	eP	P	04 58 04.4	+0.4
CLDB	Colider	22.93	106	eP	P	04 58 12.3	+2.4
MALB	Monte Alegre	24.05	84	eP	P	04 58 24.3	+3.7
GTBY	Guantanamo Bay	24.86	7	P	P	04 58 27.7	-0.1
SJG	San Juan	25.76	27	P	P	04 58 37.2	+1.1
	14nm,0.8s,baz=139,slow=4.3,SNR=5.0						
SJG				LR	LR	05 10 50.1	
	comp=Z,60nm,18.1s,baz=107,slow=41						
SJG	San Juan	25.76	27	P	P	04 58 36.9	+0.8
GCPR	Guaynabo City	25.96	27	P	P	04 58 39.4	+1.6
GCPR				IAmb	IAmb	04 58 57.8	
	comp=Z,16nm,0.8s						
CBYP	Canovanas	26.04	27	P	P	04 58 39.4	+0.8
CBYP				IAmb	IAmb	04 58 53.3	
	comp=Z,20nm,0.9s						
MCPB	Macapa, AP	26.46	81	eP	P	04 58 46.5	+4.0
SNDB	Serra Nova Dou	27.47	107	eP	P	04 58 55.7	+4.2
CPUP	Villa Florida	29.17	139	LR	LR	05 13 31.8	
	comp=Z,55nm,19.1s,baz=350,slow=42						
BDFB	Brasilia	31.48	112	P	P	04 59 27.1	-0.1
	comp=Z,1.1nm,0.7s,baz=222,slow=15,SNR=1.7						
BDFB				LR	LR	05 13 43.0	
	comp=Z,64nm,18.5s,baz=97,slow=39						
PLCA	Paso Flores	36.32	170	P	P	05 00 08.4	-0.4
	comp=Z,0.6nm,0.7s,baz=354,slow=9.7,SNR=1.7						
PLCA	Paso Flores	36.32	170	P	P	05 00 07.1	-1.8
ZAIG	Zacatecas	36.41	320	P	P	05 00 09.7	-0.4
WHTX	Lake Whitney,	41.04	335	P	P	05 00 48.2	-0.1
WHTX				IAmb	IAmb	05 00 50.2	
	comp=Z,8.9nm,1.0s						
TXAR	Lajitas Array	41.94	326	P	P	05 00 55.9	-0.1
	comp=Z,0.5nm,0.4s,baz=151,slow=8.4,SNR=9.5						
TXAR				PcP	PcP	05 02 50.3	-0.4
	comp=Z,0.9nm,0.7s,baz=151,slow=8.6,SNR=5.8						
TX32	Lajitas Array	41.94	326	P	P	05 00 55.0	-1.0
Z35A	Perchaven, San	42.11	336	P	P	05 00 57.2	0.0
Z35A				IAmb	IAmb	05 00 58.5	
	comp=Z,18nm,1.2s						
X37A	Clayton	42.51	339	P	P	05 01 00.2	-0.1
U40A	Yellville	43.29	343	P	P	05 01 05.6	-1.1
U40A				IAmb	IAmb	05 01 06.8	
	comp=Z,6.9nm,0.8s						
HHAR	Hobbs	43.56	341	P	P	05 01 07.8	-1.1
HHAR				IAmb	IAmb	05 01 09.0	
	comp=Z,7.0nm,0.9s						
TUL1	Leonard	43.84	339	P	P	05 01 11.0	-0.1
U38A	Gravette	43.84	341	P	P	05 01 10.7	-0.5
FNO	Franklin	43.86	337	P	P	05 01 11.3	0.0
MGMO	Mountain Grove	43.87	344	P	P	05 01 10.6	-0.8
MGMO				IAmb	IAmb	05 01 11.1	
	comp=Z,7.9nm,0.9s						
WMOK	Wichita Mounta	43.96	335	P	P	05 01 11.6	-0.6
OK029	Liberty Lake	44.35	337	P	P	05 01 14.5	-0.8
QUOK	Quay	44.41	338	P	P	05 01 15.7	0.0
QUOK				IAmb	IAmb	05 01 16.3	
	comp=Z,10nm,0.6s						
T35A	Sooner Cattle	45.00	339	P	P	05 01 19.8	-0.6
T35A				IAmb	IAmb	05 01 21.4	
	comp=Z,12nm,1.1s						
MSTX	Muleshoe	45.12	331	P	P	05 01 21.3	-0.3
MSTX				IAmb	IAmb	05 01 22.8	
	comp=Z,6.4nm,0.9s						
CROK	Carrier	45.18	337	P	P	05 01 21.0	-0.8
121A	Cookes Peak, D	46.67	325	IAmb	IAmb	05 01 35.4	
	comp=Z,7.0nm,1.1s						
KSU1	Kansas State U	46.99	340	P	P	05 01 35.4	-0.6
ANMO	Albuquerque	47.76	328	P	P	05 01 41.8	-0.4
TUC	Tucson	48.28	322	P	P	05 01 45.4	-0.8
TUC				IAmb	IAmb	05 01 46.9	
	comp=Z,5.4nm,0.9s						
SDCO	Great Sand Dun	49.47	331	P	P	05 01 55.0	-0.5
SDCO				IAmb	IAmb	05 01 56.1	
	comp=Z,2.6nm,0.6s						
PV13	Radium Mtn., P	51.44	329	IAmb	IAmb	05 02 10.9	
	comp=Z,6.7nm,0.9s						
W13A	Hualapai Mount	52.07	323	IAmb	IAmb	05 02 16.3	
	comp=Z,6.6nm,0.8s						
LCMT	Little Creek M	53.01	325	IAmb	IAmb	05 02 23.2	
	comp=Z,4.7nm,1.1s						
BATG	Bathurst New B	53.05	10	P	P	05 02 21.5	-0.3
CCUT	Cedar City	53.45	325	IAmb	IAmb	05 02 26.7	
	comp=Z,3.8nm,0.9s						
SHPR	Sheep Range	53.78	323	IAmb	IAmb	05 02 28.8	
	comp=Z,4.2nm,1.0s						
EYMN	Ely	53.92	349	IAmb	IAmb	05 02 27.7	
	comp=Z,6.0nm,0.8s						
RSSD	Black Hills	54.08	337	P	P	05 02 29.4	-0.2
RSSD				IAmb	IAmb	05 02 30.7	
	comp=Z,4.5nm,0.9s						
TPNV	Topopah Spring	54.73	323	IAmb	IAmb	05 02 35.9	
	comp=Z,5.5nm,1.0s						
TCUT	Toone Canyon	54.98	330	IAmb	IAmb	05 02 37.1	
	comp=Z,6.0nm,0.6s						
DUG	Dugway, Tooele	55.02	328	IAmb	IAmb	05 02 37.5	
	comp=Z,3.5nm,0.8s						
PDAR	Pinedale Array	55.33	332	P	P	05 02 37.9	-0.9
	comp=Z,0.9nm,0.7s,baz=125,slow=8.4,SNR=8.7						
PDAR				PcP	PcP	05 03 38.0	-0.9
	comp=Z,0.7nm,0.6s,baz=128,slow=5.8,SNR=5.9						
PDAR	Pinedale Array	55.33	332	P	P	05 02 37.5	-1.3
ELK	Elko	56.72	327	IAmb	IAmb	05 02 49.8	
	comp=Z,5.3nm,1.2s						
OMMB	Old Mammoth Mi	56.84	322	IAmb	IAmb	05 02 50.7	
	comp=Z,6.8nm,0.9s						
NV11	Mina Array Sit	56.84	323	IAmb	IAmb	05 02 50.7	
	comp=Z,4.6nm,1.2s						
NVAR	Mina Array Bea	56.93	323	P	P	05 02 50.5	+0.2
	comp=Z,1.8nm,0.6s,baz=131,slow=7.2,SNR=21						
NVAR				PcP	PcP	05 03 44.6	-0.5
	comp=Z,0.9nm,0.7s,baz=128,slow=5.8,SNR=4.0						
NVAR	Mina Array Bea	56.93	323	P	P	05 02 49.7	-0.6
LHV	Little Huntoon	56.94	323	IAmb	IAmb	05 02 51.4	
	comp=Z,5.4nm,1.0s						
ULM	Lac du Bonnet	57.03	347	P	P	05 02 49.3	-1.2
	comp=Z,5.7nm,0.6s,baz=158,slow=6.7,SNR=18						
ULM	Lac du Bonnet	57.03	347	IAmb	IAmb	05 02 50.1	
	comp=Z,6.3nm,0.8s						
YHL	Hebgen Lake	57.69	333	IAmb	IAmb	05 02 57.0	
	comp=Z,7.2nm,1.0s						
BOZ	Bozeman (W)	58.46	333	IAmb	IAmb	05 03 01.4	
	comp=Z,3.4nm,0.8s						
MFID	Camas Ranch	58.90	329	IAmb	IAmb	05 03 04.7	
	comp=Z,7.5nm,0.9s						
BEKR	Beckworth	59.08	323	IAmb	IAmb	05 03 06.1	
	comp=Z,4.1nm,0.8s						
MSO	Missoula	60.45	333	P	P	05 03 14.3	-0.2
MSO				IAmb	IAmb	05 03 15.2	
	comp=Z,3.7nm,0.8s						
F10A	Beach Ranch, E	61.41	330	IAmb	IAmb	05 03 27.6	
	comp=Z,6.4nm,1.3s						
WALA	Waterton Lakes	62.10	334	IAmb	IAmb	05 03 25.8	
	comp=Z,4.6nm,0.7s						
FFC	Flin Flon	62.64	345	P	P	05 03 28.1	-0.8
NEW	Newport	62.97	332	IAmb	IAmb	05 03 31.6	
	comp=Z,4.3nm,0.8s						
FCC	Fort Churchill	64.74	351	IAmb	IAmb	05 03 42.7	
	comp=Z,7.4nm,1.2s						
YKA	Yellowknife Ar	72.73	343	P	P	05 04 31.6	-0.7
	comp=Z,3.1nm,0.6s,baz=136,slow=6.3,SNR=44						
DBIC	Dimbokro	74.07	82	P	P	05 04 42.3	+1.1
	comp=Z,3.5nm,0.8s,baz=255,slow=7.5,SNR=5.1						
DBIC	Dimbokro	74.07	82	P	P	05 04 41.5	+0.3
DBIC				IAmb	IAmb	05 04 54.0	
	comp=Z,5.8nm,1.1s						
KOWA	Kowa	75.97	74	P	P	05 04 51.8	-0.3
BELA	Belgrano 2	76.36	171	P	P	05 04 52.3	-0.9
VNA3	Neumayer Olymp	78.55	162	P	P	05 05 05.1	-0.4
VNA2	Neumayer--Watz	79.16	162	P	P	05 05 08.3	-0.6
	baz=279,slow=5.2						
SNAA	Sanae	80.77	162	P	P	05 05 16.9	-0.7
SNAA	Sanae	80.77	162	P	P	05 05 17.1	-0.5
SNAA				IAmb	IAmb	05 05 18.1	
	comp=Z,4.8nm,0.5s						
ESDC	Sonseca Array	81.06	49	P	P	05 05 21.2	+1.4
	comp=Z,1.0nm,0.8s,baz=259,slow=7.0,SNR=5.7						
TOA0	Torodi Ar. Sit	81.28	76	P	P	05 05 21.1	-0.3
TORD	Torodi Ar. Bea	81.28	76	P	P	05 05 21.7	+0.4
	comp=Z,0.6nm,0.5s,baz=285,slow=6.0,SNR=8.2						
TORD	Torodi Ar. Bea	81.28	76	P	P	05 05 21.5	+0.2
SUMG	Summit	81.38	11	P	P	05 05 21.1	-0.1
SUMG				IAmb	IAmb	05 05 24.2	
	comp=Z,5.7nm,1.0s						
BALM	Baldy	82.13	334	P	P	05 05 25.0	0.0
INK	Inuvik	82.44	342	P	P	05 05 26.3	0.0
INK				IAmb	IAmb	05 05 27.8	
	comp=Z,8.8nm,1.1s						
VRDI	Verde Repeater	82.70	334	P	P	05 05 27.8	-0.3
VRDI				IAmb	IAmb	05 05 28.9	
	comp=Z,7.3nm,1.0s						
BCAR	Beaver Creek A	82.77	336	P	P	05 05 28.1	-0.1
DOT	Dot Lake	83.94	336	IAmb	IAmb	05 05 34.9	
	comp=Z,6.8nm,0.8s						
SML	Sawmill	85.08	333	P	P	05 05 39.5	-0.6
SML				IAmb	IAmb	05 05 39.9	
	comp=Z,5.5nm,0.8s						
QSPA	South Pole Qui	85.18	180	P	P	05 05 40.4	-0.2
QSPA				IAmb	IAmb	05 05 52.2	
	comp=Z,9.3nm,1.3s						
PRP	Porcupine Dome	85.26	337	P	P	05 05 41.3	+0.3
ILAR	Eielson Array	85.52	336	P	P	05 05 41.4	-0.7
	comp=Z,1.7nm,0.7s,baz=135,slow=3.5,SNR=13						
ILAR	Eielson Array	85.52	336	P	P	05 05 41.3	-0.8
BMAR	Burnt Mountain	85.67	339	P	P	05 05 41.8	-1.1
MDM	Murphy Dome	86.12	336	P	P	05 05 44.8	-0.3
MDM				IAmb	IAmb	05 05 45.7	
	comp=Z,9.3nm,1.1s						
BWN	Browne	86.36	335	P	P	05 05 45.8	-0.4
SKT	Skwentna	86.57	333	IAmb	IAmb	05 05 47.8	
	comp=Z,8.0nm,1.0s						
I23K	Minto, Yukon-K	86.64	336	P	P	05 05 47.5	-0.1
KTH	Kantishna Hill	86.78	335	IAmb	IAmb	05 05 48.6	
	comp=Z,4.8nm,0.8s						
BPAW	Bear Paw Mtn.	86.97	335	P	P	05 05 48.5	-0.8
IMAR	Indian Mountai	88.63	337	P	P	05 05 56.6	-0.5
ARCES	ARCESS Array B	99.34	20	P	Pdif	05 06 45.3	-0.9
	comp=Z,4.1nm,0.9s,baz=331,slow=20,SNR=1.9						
ZALV	Zalesovo Beam	129.18	13	PKP	PKPdf	05 12 11.8	-0.5
	comp=Z,1.4nm,0.7s,baz=276,slow=2.8,SNR=6.8						
MKAR	Makanchi Array	134.98	19	PKP	PKPdf	05 12 23.3	-0.3
	comp=Z,0.3nm,0.5s,baz=276,slow=3.8,SNR=6.3						
SONM	Songino Array	137.05	355	PKP	PKPdf	05 12 26.6	-1.0
	comp=Z,0.6nm,0.6s,baz=355,slow=2.4,SNR=4.1						
ASAR	Alice Springs	137.75	226	PKhKP	PKPpre	05 12 27.2	
	comp=Z,0.9nm,0.6s,baz=116,slow=2.5,SNR=7.2						
KSH	Kashi	138.37	31	PKP	PKiKP	05 12 32.5	+0.2
KSH				PP	PP	05 15 24.0	+4.7
KSH				AMB	AMB		
	comp=Z,160nm,6.1s						
WRA	Warramunga Arr	139.62	231	PKhKP	PKPpre	05 12 24.8	
	comp=Z,0.5nm,0.7s,baz=119,slow=2.7,SNR=5.1						
WRA				PKP	PKPdf	05 12 31.9	-1.0
	comp=Z,1.0nm,0.7s,baz=112,slow=2.1,SNR=7.8						
KSRS	Korea Array	139.78	327	PKP	PKPdf	05 12 32.4	-0.3
	comp=Z,1.0nm,0.5s,baz=12,slow=2.3,SNR=2.7						
GTA	Gaotai	145.60	3	PKPbc	PKPbc	05 12 43.3	0.0
GTA				sPKP		05 13 00.0	
GTA				LR	LR		
	comp=N,140nm,17.8s						
GTA				LR	LR		
	comp=E,390nm,17.4s						
GTA				LR	LR		
	comp=Z,160nm,17.8s						
FITZ	Fitzroy Crossi	147.23	225	PKPbc	PKPdf	05 12 47.2	+1.0
	comp=Z,5.1nm,0.9s,baz=139,slow=1.6,SNR=12						
FITZ	Fitzroy Crossi	147.23	225		PKPbc	05 12 48.0	-0.6

IDC 28 05:14:43.6±1.6, 1°.89N×127°.06E, h0km, mb3.6/4, mb1 3.7/5, mb1mx3.5/35, mbtmp3.5/5, ML3.3/1, MS3.5/1, Ms1 3.5/1, ms1mx2.4/35, Error ellipse: s-maj=80.3km s-min=24.2km az=65.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	19.91	184	P	P	05 19 17.3	+0.3
	0.1nm,0.3s,baz=8.1,slow=7.1,SNR=1.0						
WRA	Warramunga Arr	22.84	162	P	P	05 19 48.2	-0.4
	1.1nm,0.5s,baz=341,slow=11,SNR=16						
ASAR	Alice Springs	26.26	166	P	P	05 20 20.8	0.0
	0.1nm,0.3s,baz=348,slow=13,SNR=2.0						
CTA	Charters Tower	28.84	140	P	P	05 20 44.1	+0.1
	0.9nm,0.4s,baz=353,slow=8.1,SNR=1.6						
MSVF	Nonsavu	53.87	114	LR	LR	05 45 40.2	
	comp=Z,43nm,20.6s,baz=341,slow=34						
MKAR	Makanchi Array	59.25	326	P	P	05 24 47.0	0.0
	0.1nm,0.4s,baz=126,slow=7.5,SNR=5.5						

NOU 28 05:16:32.9, 36°.89S×177°.19E, h285km, MLv4.5, Off E. Coast of N. Island, N.Z.

IDC 28 05:16:35.3±1.4, 37°.27S×177°.48E, h266km±15km, mb3.5/3, mb1 3.9/4, mb1mx3.5/30, mbtmp4.4/4, Error ellipse: s-maj=54.9km s-min=31.4km az=171.0

ISC 28 05:16:37.6±1.2, 37°.2S±0°.1×176°.8E±0°.2, h250km, n8, σ1s.24/10, mb3.7/3, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
URZ	Urewera	1.05	166	P	Pn	05 17 13.4	+0.6
	54nm,0.3s,baz=271,slow=3.1,SNR=274						
URZ				S	S	05 17 41.1	+0.4
	51nm,0.3s,baz=199,slow=7.4,SNR=5.7						
RPZ	Rata Peaks	7.81	212	P	Pn	05 18 29.1	+0.7
	19nm,0.3s,baz=20,slow=1.7,SNR=67						
RPZ				S	S	05 19 56.5	-1.2
	19nm,0.3s,baz=119,slow=23,SNR=16						
ASAR	Alice Springs	39.05	278	P	P	05 23 41.3	+0.6
	3.6nm,0.7s,baz=121,slow=8.2,SNR=40						
WRA	Warramunga Arr	40.69	283	P	P	05 23 54.3	+0.1
	1.0nm,0.4s,baz=123,slow=7.4,SNR=21						
FITZ	Fitzroy Crossi	48.54	279	P	P	05 24 56.4	+0.5
	2.1nm,0.6s,baz=117,slow=7.9,SNR=8.4						
ARCES	ARCESS Array B	144.12	343	PKP	PKPab	05 35 38.1	-2.6
	8.3nm,1.2s,baz=46,slow=5.5,SNR=3.9						
FINES	FINESS Array B	149.64	332	PKPbc	PKPdf	05 35 52.5	+0.8
	3.5nm,1.1s,baz=39,slow=3.7,SNR=8.9						
TORD	Torodi Ar. Bea	155.62	192	PKPab	PKPab	05 36 28.5	-0.7
	0.3nm,0.4s,baz=158,slow=5.1,SNR=5.4						

NEIC 28 05:48:10.7±1.5, 17°.4S±0°.1×178°.6W±0°.1, h545km±10km, mb4.7/26, Error ellipse: s-maj=20.9km s-min=13.3km az=147.0

IDC 28 05:48:13.3±0.8, 17°.55S×178°.83W, h564km±7km, mb3.6/15, mb1 3.8/16, mb1mx3.5/40, mbtmp4.5/16, Error ellipse: s-maj=20.1km s-min=11.3km az=156.0

ISC 28 05:48:11.0±0.4, 17°.42S±0°.09×178°.62W±0°.07, h547km, n80, σ1s.22/85, mb4.5/33, 1C-1D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.19	264	P	P	05 49 28.6	+1.4
	3.9nm,0.3s,baz=116,slow=4.4,SNR=50						
MSVF				S	S	05 50 31.8	+2.7
	baz=176,slow=18,SNR=14						
AFI	Afiamalu	7.46	63	P	P	05 50 00.8	-2.6
NIUE	Niue	8.42	103	P	P	05 50 12.3	-0.6
SANVU	Saraoutou	13.74	276	P	P	05 51 08.7	+1.0
DZM	Mont Dzumac	14.80	249	eP	P	05 51 21.7	+3.0
	1.5nm,0.3s						
OUZ	Omahuta	19.04	200	P	P	05 52 00.1	+1.8
OUZ				IAmb	IAmb	05 52 01.3	
	comp=Z,34nm,1.2s						
URZ	Urewera	21.10	189	P	P	05 52 13.7	-3.3
	comp=Z,12nm,0.8s,baz=0.9,slow=9.3,SNR=5.4						
OXZ	Oxford	27.02	195	P	P	05 53 07.4	-2.1
OXZ				IAmb	IAmb	05 53 07.7	
	comp=Z,24nm,0.8s						
RPZ	Rata Peaks	27.63	196	P	P	05 53 13.6	-1.4
	comp=Z,8.8nm,0.7s,baz=5.7,slow=3.6,SNR=7.7						
RPZ	Rata Peaks	27.63	196	P	P	05 53 13.6	-1.4
RPZ				IAmb	IAmb	05 53 15.2	
	comp=Z,11nm,0.7s						
FOZ	Fox Glacier	27.82	198	P	P	05 53 15.6	-0.8
EIDS	Eidsvold	29.25	249	P	P	05 53 28.9	-0.4
EIDS				IAmb	IAmb	05 53 29.3	
	comp=Z,8.5nm,0.8s						
MLZ	Mavora Lakes	29.99	199	P	P	05 53 35.1	-0.3
ARMA	Armidale	30.02	239	P	P	05 53 36.2	+0.3
ARMA				IAmb	IAmb	05 53 37.0	
	comp=Z,17nm,0.7s						
WHZ	Wether Hill Ro	30.52	199	P	P	05 53 39.2	-0.6
WHZ				IAmb	IAmb	05 53 41.1	
	comp=Z,43nm,1.2s						
CTA	Charters Tower	33.33	260	P	P	05 54 03.4	-0.9
	comp=Z,3.8nm,0.8s,baz=104,slow=11,SNR=7.8						
CTAO	Charters Tower	33.33	260	P	P	05 54 03.7	-0.6
COEN	Coen	36.91	270	P	P	05 54 34.5	+0.5
TOO	Toolangi	37.33	230	P	P	05 54 37.5	+0.3
STKA	Stephens Creek	38.69	241	P	P	05 54 48.6	+0.2
	comp=Z,10.0nm,0.5s,baz=93,slow=10,SNR=31						
STKA	Stephens Creek	38.69	241	P	P	05 54 48.9	+0.5
BBOO	Buckleboo	43.47	241	P	P	05 55 26.1	-0.1
BBOO				IAmb	IAmb	05 55 26.8	
	comp=Z,31nm,0.8s						
WB0	Warramunga Arr	44.49	259	P	P	05 55 33.4	-1.0
WRA	Warramunga Arr	44.53	259	P	P	05 55 33.3	-1.3
	comp=Z,3.3nm,0.5s,baz=97,slow=7.0,SNR=74						
WRA				PcP	PcP	05 57 06.5	+0.5
	comp=Z,1.8nm,0.7s,baz=84,slow=3.7,SNR=7.6						
WRA				S	S	06 01 24.9	-5.8
	comp=Z,0.7nm,0.8s,baz=92,slow=14,SNR=6.3						
AS31	Alice Springs	44.73	254	P	P	05 55 35.9	-0.3
AS31				IAmb	IAmb	05 55 36.3	
	comp=Z,13nm,0.6s						
ASAR	Alice Springs	44.73	254	P	P	05 55 35.7	-0.5
	comp=Z,39nm,0.6s,baz=88,slow=8.1,SNR=557						
ASAR				PcP	PcP	05 57 06.0	-0.7
	comp=Z,3.8nm,0.8s,baz=96,slow=4.4,SNR=8.0						
ASAR				S	S	06 01 31.0	-2.6
	comp=Z,2.3nm,0.8s,baz=90,slow=16,SNR=18						
ASAR	Alice Springs	44.73	254	P	P	05 55 35.4	-0.8
FORT	Forrest	50.04	244	P	P	05 56 15.2	-0.6
FITZ	Fitzroy Crossi	52.91	260	P	P	05 56 36.7	-0.1
	comp=Z,4.4nm,0.6s,baz=71,slow=5.6,SNR=21						
FITZ	Fitzroy Crossi	52.91	260	P	P	05 56 37.1	+0.4
SOEI	Soe	55.87	270	P	P	05 56 57.6	-0.2
	comp=Z,27nm,0.7s						
PSA00	Pilbara Seismi	57.84	255	P	P	05 57 10.5	-0.5
PSA00				IAmb	IAmb	05 57 11.2	
	comp=Z,15nm,0.7s						
NWAO	Narrogin (SRO)	59.27	242	P	P	05 57 19.8	-0.6
	comp=Z,5.9nm,0.7s,baz=127,slow=10,SNR=1.7						
MORW	Morawa	60.50	246	P	P	05 57 27.8	-0.9
MORW				IAmb	IAmb	05 57 28.5	
	comp=Z,8.1nm,0.6s						
VNDA	Vanda	60.91	185	P	P	05 57 29.7	-0.8
	comp=Z,2.1nm,0.9s,baz=320,slow=9.2,SNR=4.5						
VNDA	Vanda	60.91	185	P	P	05 57 31.1	+0.6
GIRL	Giralia	62.84	253	P	P	05 57 45.0	+1.0
TWSI	Taliwang, Sumb	63.18	269	P	P	05 57 46.0	-0.3
	comp=Z,18nm,0.9s						
SMKI	Samarinda	65.28	278	P	P	05 57 59.5	-0.2
UGM	Wanagama	69.47	268	P	P	05 58 25.3	-0.1
UGM				IAmb	IAmb	05 58 31.1	
	comp=Z,34nm,1.0s						
LEM	Lembang	72.53	268	P	P	05 58 44.5	+0.9
	comp=Z,11nm,0.3s,baz=63,slow=10.0,SNR=3.7						
QSPA	South Pole Qui	72.63	180	P	P	05 58 43.8	+0.7
QSPA				IAmb	IAmb	05 58 44.5	
	comp=Z,17nm,0.9s						
NJ2	Nanjing	77.47	309	eP	P	05 59 11.5	+1.0
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
NVAR	Mina Array Bea	79.21	44	P	P	05 59 21.6	+1.7
	comp=Z,0.2nm,0.3s,baz=228,slow=9.5,SNR=2.1						
BELA	Belgrano 2	82.67	173	P	P	05 59 36.9	0.0
RPSI	Rantau Prapat	83.61	275	P	P	05 59 42.2	-0.6
PSI	Prapat	83.64	275	P	P	05 59 42.2	-0.9
	comp=Z,1.3nm,0.3s,baz=356,slow=1.1,SNR=3.7						
ILAR	Eielson Array	85.46	13	P	P	05 59 49.2	-1.4
	comp=Z,0.5nm,0.5s,baz=223,slow=4.8,SNR=5.5						
TXAR	Lajitas Array	85.90	58	P	P	05 59 55.9	+2.2
	comp=Z,0.7nm,0.7s,baz=232,slow=4.1,SNR=5.5						
HHC	Hu-ho-hao-te	86.79	315	eP	P	05 59 56.8	-0.9
HHC				pmax	pmax		
	comp=Z,8.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,150nm,5.6s						
PDAR	Pinedale Array	87.14	44	P	P	06 00 00.2	+0.8
	comp=Z,0.4nm,0.6s,baz=189,slow=2.3,SNR=4.7						
KMI	Kunming	87.43	297	⇑P	P	06 00 10.3	+9.1
KMI				pmax	pmax		
	comp=Z,7.0nm,1.0s						
CMAR	Chiang Mai Arr	88.53	290	P	P	06 00 06.8	+0.7
	comp=Z,3.0nm,0.4s,baz=71,slow=2.1,SNR=5.5						
SNAA	Sanae	91.09	179	P	P	06 00 16.5	-0.6
SNAA	Sanae	91.09	179	P	P	06 00 16.7	-0.4
SNAA				IAmb	IAmb	06 00 17.8	
	comp=Z,8.7nm,1.2s						
VNA3	Neumayer Olymp	91.24	176	P	P	06 00 17.5	-0.2
VNA2	Neumayer--Watz	91.68	177	P	P	06 00 19.5	-0.3
	baz=181,slow=2.9						
VNA1	Neumayer--Stat	91.91	177	P	P	06 00 21.0	+0.3
YKA	Yellowknife Ar	93.97	25	P	P	06 00 30.5	+0.3
	comp=Z,0.2nm,0.6s,baz=240,slow=4.0,SNR=3.4						
MKAR	Makanchi Array	108.65	314	PKiKP	PKiKP	06 05 37.0	-1.0
	comp=Z,0.4nm,0.6s,baz=54,slow=0.7,SNR=5.2						
ARCES	ARCESS Array B	125.80	350	PKP	PKPdf	06 06 10.6	+0.4
	comp=Z,4.0nm,0.8s,baz=46,slow=3.5,SNR=4.3						
FINES	FINESS Array B	132.66	344	PKP	PKPdf	06 06 22.6	-0.7
	comp=Z,2.0nm,0.9s,baz=90,slow=3.8,SNR=4.3						
AKASG	Malin Array Be	140.03	332	PKP	PKiKP	06 06 39.4	-0.6
	comp=Z,0.9nm,0.6s,baz=46,slow=2.8,SNR=2.3						
KOLS	Kolonicke sedl	144.28	336	ePKP	PKPab	06 06 45.5	+0.5
BRTR	Keskin Array B	144.30	315	PKP	PKPdf	06 06 45.6	+0.2
	comp=Z,1.9nm,0.8s,baz=123,slow=3.4,SNR=10						
CLL	Collm	144.94	347	⇓iPKPbc	PKPbc	06 06 47.0	+0.4
	comp=Z,10.0nm,1.3s						
LANS	Liptovska Anna	145.11	339	ePKP	PKPab	06 06 48.9	+0.6
GERES	GERESS Array B	147.09	345	PKPbc	PKPbc	06 06 53.1	+0.3
	comp=Z,1.9nm,0.6s,baz=33,slow=3.1,SNR=15						
CONA	Conrad Observa	147.34	342	iP	PKiKP	06 06 54.7	-0.5
	comp=Z,4.7nm,0.6s						
SOKA	Soboth	148.71	342	iP	PKPbc	06 06 57.2	+0.2
	comp=Z,1.5nm,0.5s						
KBA	Koelnbreinsper	148.82	344	iP	PKPbc	06 06 57.2	-0.2
	comp=Z,2.5nm,0.5s						
WATA	Walderalm	149.00	346	iP	PKPbc	06 06 58.1	+0.4
	comp=Z,2.9nm,0.5s						
RETA	Reutte	149.03	348	iP	PKPbc	06 06 58.2	+0.4
	comp=Z,1.7nm,0.5s						
WTTA	Wattenberg	149.06	346	eP	PKPbc	06 06 58.2	+0.2
	comp=Z,6.2nm,0.6s						

MOTA	Moosalm	149.10	347	*i* P	PKPbc	06 06 58.4	+0.4
	comp=Z,5.5nm,1.0s						
MYKA	Terra Mystica	149.15	343	*i* P	PKPbc	06 06 57.9	-0.2
	comp=Z,2.6nm,0.4s						
SQTA	Sankt Quirin	149.19	347	*i* P	PKPbc	06 06 58.8	+0.5
	comp=Z,5.6nm,0.6s						
ABTA	Abfaltersbach	149.34	345	*i* P	PKPbc	06 06 58.6	0.0
	comp=Z,5.6nm,0.6s						
FNA	Florina	151.03	328	PKPbc	PKPbc	06 07 02.4	-0.3
TORD	Torodi Ar. Bea	175.74	184	PKP	PKPdf	06 07 18.6	-0.8
	comp=Z,0.8nm,0.7s,baz=294,slow=1.5,SNR=4.5						
TORD				PKPab	PKPab	06 09 02.1	+0.8
	comp=Z,1.1nm,0.8s,baz=179,slow=4.2,SNR=4.2						

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*IDC **28** 05:50:16.5±3.9, 15°.04N×94°.34W, h0^{km}, mb3.6/2, mb1 4.1/5, mb1mx3.7/36, mbtmp3.8/5, ML3.8/3, MS3.3/2, Ms1 3.3/2, ms1mx2.7/29, Error ellipse: s-maj=54.0km s-min=38.5km az=0.0*

*MEX **28** 05:50:18.9±1.4, 14°.89N×94°.53W, h15^{km}±26^{km}, MD4.1*

ISC 28 05:50:15.6±1.3**, 14°.95N**±0°.09×**94°.51W**±0°.05**, h10**^{km}**, n12, σ1^s.74**/19**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		1.45	59	*e*P	Pn	05 50 41.7	-0.2
PCIG				*e*S	Sn	05 50 59.4	-1.6
HUIG	Huatulco	1.75	298	*e*P	Pn	05 50 45.5	-0.6
HUIG				*i* S	Sn	05 51 05.0	-3.4
CMIG	Matias Romero	2.16	350	Pn	Pb	05 50 53.5	-1.4
	14nm,0.3s,baz=165,slow=12,SNR=64						
CMIG				Sn	Sb	05 51 20.2	-1.6
	52nm,0.3s,baz=251,slow=23,SNR=8.7						
CMIG	Matias Romero	2.16	350	*e*P	Pn	05 50 52.6	+0.8
CMIG				*i* S	Sn	05 51 17.8	-0.9
THIG		2.17	91	*e*P	Pn	05 50 51.6	-0.2
THIG				*i* S	Sn	05 51 17.0	-1.6
TGIG		2.25	36	*i* P	Pb	05 50 55.0	-1.5
TGIG				*i* S	Sn	05 51 20.4	-0.5
CCIG	Comitan	2.64	59	*e*P	Pb	05 51 00.5	-2.7
CCIG				*i* S	Sn	05 51 32.2	+1.5
TEIG	Tepich	7.93	48	Pn	Pn	05 52 11.6	+0.7
	5.8nm,0.3s,baz=247,slow=0.4,SNR=19						
TEIG				Sn	Sn	05 53 39.4	-1.4
	0.3nm,0.3s,baz=256,slow=22,SNR=0.9						
TEIG				LR	LR	05 55 44.0	
	comp=Z,266nm,19.3s,baz=302,slow=42						
TXAR	Lajitas Array	16.63	331	Pn	P	05 54 13.0	+1.5
	0.1nm,0.3s,baz=158,slow=14,SNR=5.8						
TKL	Tuckaleechee C	22.76	23	LR	LR	06 04 35.2	
	comp=Z,54nm,18.5s,baz=330,slow=38						
PDAR	Pinedale Array	30.60	338	P	P	05 56 32.7	+2.7
	0.3nm,0.6s,baz=143,slow=11,SNR=3.0						
YKA	Yellowknife Ar	49.58	348	P	P	05 59 07.9	+1.3
	0.8nm,0.6s,baz=150,slow=7.6,SNR=12						

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*JMA **28** 05:57:46.1±0.1, 25°.57N×125°.81E, h72^{km}±3^{km}, M3.2*

*IDC **28** 05:57:52.4±5.0, 25°.76N×126°.16E, h140^{km}±58^{km}, mb3.1/4, mb1 3.3/5, mb1mx3.1/33, mbtmp3.5/5, MS4.1/1, Ms1 4.1/1, ms1mx2.7/14, Error ellipse: s-maj=73.3km s-min=20.5km az=68.0*

ISC 28 05:57:46.5±0.9**, 25°.59N**±0°.10×**125°.75E**±0°.08**, h70**^{km}±11^{km}**, n18, σ1^s.04**/29**, mb3.5**/4**, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKM	Ikemajima	0.80	215	P	Pn	05 58 02.8	+0.2
JIKM				S	Sn	05 58 15.0	+0.5
JOGS	Gusukube	0.88	201	P	Pn	05 58 03.5	0.0
JOGS				S	Sn	05 58 16.0	-0.1
JIRB	Irabujima	0.92	215	P	Pn	05 58 04.0	0.0
JIRB				S	Sn	05 58 16.7	-0.3
JMJ2	Miyako jima3	0.93	205	P	Pn	05 58 04.2	+0.1
JMJ2				S	Sn	05 58 17.2	+0.1
JKE	Kume jima 2	1.19	51	P	Pn	05 58 07.0	-0.3
JKE				*e*S	Sn	05 58 21.8	-1.1
JTJ	Tarama	1.34	225	P	Pn	05 58 09.9	+0.6
JTJ				S	Sn	05 58 26.8	+0.3
JISG	Ishigakijimahi	1.64	233	P	Pn	05 58 13.7	+0.4
JISG				S	Sn	05 58 35.0	+1.3
JAGN	Aguni-jima	1.67	53	P	Pn	05 58 13.8	+0.1
JAGN				*e*S	Sn	05 58 34.0	-0.3
JIJ	Ishigaki jima	1.90	230	P	Pn	05 58 17.1	+0.3
JIJ				S	Sn	05 58 39.5	-0.4
JKRS	Kuro-shima	2.08	230	P	Pn	05 58 19.5	+0.4
JKRS				S	Sn	05 58 45.3	+1.2
IRIF	Iriomote-Funau	2.22	236	P	Pn	05 58 22.0	+0.9
IRIF				*e*S	Sn	05 58 48.4	+0.9
HATJ	Hateruma jima	2.34	230	*e*S	Sn	05 58 51.5	+1.2
JOW	Kunigami	2.58	61	P	Pn	05 58 29.0	+3.0
	4.8nm,0.3s,baz=127,slow=18,SNR=8.7						
JOW				S	Sn	05 58 57.8	+1.4
	13nm,0.3s,baz=118,slow=23,SNR=2.8						
MKAR	Makanchi Array	40.32	313	P	P	06 05 17.7	+0.7
	0.1nm,0.4s,baz=100,slow=9.0,SNR=4.2						
WRA	Warramunga Arr	46.02	169	P	P	06 06 02.0	-1.2
	0.3nm,0.5s,baz=350,slow=9.2,SNR=8.2						
ASAR	Alice Springs	49.60	170	P	P	06 06 31.4	+0.7
	0.3nm,0.6s,baz=358,slow=14,SNR=4.6						
GEYT	Alibeck	57.68	300	LR	LR	06 35 29.5	
	comp=Z,137nm,18.3s,baz=260,slow=39						
FINES	FINESS Array B	72.31	330	P	P	06 09 02.1	-2.1
	1.4nm,0.7s,baz=46,slow=8.7,SNR=4.8						

ISC 28 06:11:26.9±1.2**, 45°.21N**±0°.04×**14°.66E**±0°.04**, h9**^{km}±10^{km}**, n10, σ0^s.58**/16**, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RIY	Rijeka	0.17	313	*e*Pg	Pg	06 11 30.4	-0.2
RIY				Sg	Sg	06 11 33.3	+0.3
GBRS	Gornja Briga	0.34	18	*i* Pg	Pg	06 11 33.6	-0.1
GBRS				*i* Sg	Sg	06 11 38.3	+0.1
KNDS	Knezji Dol	0.38	329	*i* Sg	Sb	06 11 40.8	-1.0
KNDS				IAML		06 11 43.2	
	comp=Z,2.3nm,0.1s						
BOJS	Bojanci	0.51	54	*i* Pg	Pg	06 11 36.7	-0.2
BOJS				*i* Sg	Sg	06 11 43.8	+0.2
BOJS				IAML		06 11 44.4	
	comp=Z,2.0nm,0.1s						
CEY	Cerknica	0.56	343	*e*Sg	Sb	06 11 46.5	-0.4
CEY				IAML		06 11 48.4	
	comp=Z,2.2nm,0.1s						
SKDS	Skadanscina	0.57	307	*i* Pg	Pg	06 11 37.5	-0.5
SKDS				*i* Sg	Sg	06 11 46.3	+1.0
SKDS				IAML		06 11 47.2	
	comp=Z,0.7nm,0.1s						
VISS	Visnje	0.61	12	*i* Pg	Pg	06 11 38.7	0.0
VISS				*e*Sg	Sg	06 11 47.3	+0.6
VISS				IAML		06 11 51.8	
	comp=Z,0.8nm,0.1s						
NVLJ	Novalja	0.66	167	*e*Pg	Pg	06 11 39.2	-0.5
NVLJ				Sg	Sb	06 11 49.7	-0.2
OZLJ	Ozalj	0.70	54	Sg	Sg	06 11 49.4	-0.1
DUGI	Dugi Otok	1.25	167	Sg	Sn	06 12 08.3	+0.9

IDC 28 06:50:01.9±2.7**, 12°.10S×123°.83E, h0**^{km}**, mb3.4**/1**, mb1 3.4**/3**, mb1mx3.3**/32**, mbtmp3.3**/3**, ML2.9**/2**, Error ellipse: s-maj=220.2km s-min=31.1km az=51.0, South of Timor**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	12.76	129	Pn	Pn	06 53 03.6	-1.1
	0.1nm,0.3s,baz=304,slow=14,SNR=2.2						
WRA				Sn	Sn	06 55 22.4	-5.3
	0.4nm,0.3s,baz=312,slow=26,SNR=10						
ASAR	Alice Springs	14.97	142	Pn	Pn	06 53 36.5	+1.5
	0.1nm,0.3s,baz=316,slow=12,SNR=4.7						
ASAR				Sn	Sn	06 56 22.7	+1.1
	0.1nm,0.3s,baz=299,slow=40,SNR=1.1						
MKAR	Makanchi Array	69.41	331	P	P	07 01 11.8	0.0
	0.3nm,0.9s,baz=134,slow=4.2,SNR=3.7						

IDC 28 06:54:07.1±34.0**, 21°.19N×143°.16E, h0**^{km}**, mb3.6**/3**, mb1 3.8**/3**, mb1mx3.3**/43**, mbtmp3.6**/3**, MS3.4**/2**, Ms1 3.4**/2**, ms1mx2.7**/32**, Error ellipse: s-maj=642.7km s-min=216.7km az=176.0, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNU	Nakatsue	16.13	320	LR	LR	07 02 21.5	
	comp=Z,102nm,18.6s,baz=35,slow=31						
H11N1	WAKE ISLAND Hy	22.28	90	T	T	07 23 14.7	
	baz=270						
H11N2	WAKE ISLAND Hy	22.29	89	T	T	07 23 24.5	
	baz=270						
H11N3	WAKE ISLAND Hy	22.30	90	T	T	07 23 08.4	
	baz=270						
SIJI	Sorong	24.81	209	LR	LR	07 08 37.8	
	comp=Z,100nm,18.2s,baz=6.5,slow=35						
WRA	Warramunga Arr	41.78	193	P	P	07 01 57.2	-1.3
	0.8nm,0.8s,baz=16,slow=8.7,SNR=5.9						
ASAR	Alice Springs	45.48	192	P	P	07 02 29.4	+1.0
	0.2nm,0.4s,baz=15,slow=13,SNR=6.3						
STKA	Stephens Creek	52.78	182	P	P	07 03 24.0	-0.1
	1.3nm,0.8s,baz=20,slow=12,SNR=2.0						

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*IDC **28** 07:21:48.4±3.6, 30°.70N×141°.39E, h0^{km}, mb3.5/3, mb1 3.6/6, mb1mx3.4/31, mbtmp3.6/6, ML3.1/3, Error ellipse: s-maj=154.5km s-min=19.1km az=72.0*

ISC 28 07:21:51.8±2.4**, 30°.9N**±0°.2×**141°.7E**±0°.6**, h37**^{km}**, n6, σ1^s.11**/8**, mb3.6**/3**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ	Hachijo jima 2	2.80	324	Pn	Pn	07 22 33.6	-0.3
	6.8nm,0.3s,baz=44,slow=14,SNR=1.7						
JHJ				Sn	Sn	07 23 05.0	-1.4
	13nm,0.3s,baz=74,slow=20,SNR=1.1						
JCJ	Chichijima	3.77	174	Pn	Pn	07 22 46.6	-0.7
	3.3nm,0.3s,baz=310,slow=18,SNR=1.8						
JCJ				Sn	Sn	07 23 29.8	-0.7
	5.9nm,0.3s,baz=0.0,slow=20,SNR=1.5						
MJAR	Matsushiro Arr	6.38	334	Pn	Pn	07 23 22.8	-0.5
	0.2nm,0.3s,baz=151,slow=11,SNR=7.0						
MKAR	Makanchi Array	47.84	307	P	P	07 30 27.2	+1.4
	0.2nm,0.5s,baz=94,slow=8.7,SNR=3.9						
WRA	Warramunga Arr	51.01	189	P	P	07 30 50.4	+0.3
	0.5nm,0.5s,baz=5.2,slow=7.5,SNR=7.3						
ASAR	Alice Springs	54.73	189	P	P	07 31 18.3	+0.7
	0.3nm,0.4s,baz=5.3,slow=6.5,SNR=6.0						

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*SNET **28** 07:28:37.1±1.9, 13°.66N×90°.82W, h22^{km}±5^{km}, ML3.9*

*UCR **28** 07:28:37.6±1.7, 13°.65N×90°.82W, h29^{km}±6^{km}, ML3.8*

*INET **28** 07:28:38.1, 13°.68N×90°.81W, h26^{km}, MW3.4*

*GCG **28** 07:28:39.1±0.6, 13°.74N×90°.78W, h47^{km}±17^{km}, MD4.1*

ISC 28 07:28:37.6±2.2**, 13°.66N**±0°.08×**90°.83W**±0°.06**, h25**^{km}±16^{km}**, n45, σ0^s.61**/70**, 1D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IXG	Ixpaco	0.63	36	*e*P	Pn	07 28 51.2	0.0
PCG	Pacaya	0.76	16	*e*P	Pn	07 28 53.4	+0.3
FUG	Fuego 3	0.78	359	*e*P	Pn	07 28 53.2	-0.1
NBG	Las Nubes	1.03	27	*e*P	Pb	07 28 57.4	+0.4
NBG				*e*S	Sb	07 29 10.8	+0.5
RTR	El Retiro	1.17	78	*e*P	Pn	07 28 58.7	0.0
RTR	El Retiro	1.17	78	*e*P	Pn	07 28 58.7	0.0
CEVE	Cerro Verde	1.18	82	*e*P	Pn	07 28 58.7	-0.1
CEVE				*e*S	Sb	07 29 14.7	+0.2
CEVE	Cerro Verde	1.18	82	*e*P	Pn	07 28 58.7	-0.1
CEVE				*e*S	Sb	07 29 14.7	+0.2
SBLS	San Blas	1.18	81	*e*P	Pn	07 28 58.6	-0.2
SBLS	San Blas	1.18	81	*e*P	Pn	07 28 58.6	-0.2
SNJE	San Jose	1.20	80	*e*P	Pn	07 28 58.9	-0.2
SNJE	San Jose	1.20	80	*e*P	Pn	07 28 58.9	-0.2
RTAL	Retalhuleu	1.21	316	*e*P	Pn	07 28 58.5	-0.5
RTAL				*e*S	Sn	07 29 13.9	-0.6
JAYA	Jayaque - finc	1.34	90	*e*P	Pn	07 29 00.2	-0.7
JAYA				*e*S	Sn	07 29 16.9	-1.2
JAYA				IAML		07 29 18.2	
	comp=Z,4μm,0.2s						
JAYA	Jayaque - finc	1.34	90	*e*P	Pn	07 29 00.2	-0.7
JAYA				*e*S	Sn	07 29 16.9	-1.2
JAYA				IAML		07 29 18.2	
	comp=Z,4μm,0.2s						
CEDA	San Andres	1.40	84	*e*P	Pn	07 29 01.2	-0.4
CEDA				*e*S	Sn	07 29 19.5	+0.2
CEDA				IAML		07 29 22.2	
	comp=Z,3μm,0.4s						
CEDA	San Andres	1.40	84	*e*P	Pn	07 29 01.2	-0.4
CEDA				*e*S	Sn	07 29 19.5	+0.2
CEDA				IAML		07 29 22.2	
	comp=Z,3μm,0.4s						
LALI	Alcalda de L	1.47	96	*e*P	Pn	07 29 02.6	0.0
LALI				*e*S	Sn	07 29 21.7	+0.6
LALI	Alcalda de L	1.47	96	*e*P	Pn	07 29 02.6	0.0
LALI				*e*S	Sn	07 29 21.7	+0.6
BOQS	Boqueron	1.50	87	*e*P	Pn	07 29 03.5	+0.2
BOQS	Boqueron	1.50	87	*e*P	Pn	07 29 03.5	+0.2
UEES	Universidad Ev	1.54	88	*e*P	Pn	07 29 03.1	-0.6
UEES				*e*S	Sn	07 29 23.0	0.0
UEES				IAML		07 29 26.5	
	comp=Z,2μm,0.2s						
UEES	Universidad Ev	1.54	88	*e*P	Pn	07 29 03.1	-0.6
UEES				*e*S	Sn	07 29 23.0	0.0
UEES				IAML		07 29 26.5	
	comp=Z,2μm,0.2s						
SNET	Serv Nac Est T	1.55	89	*e*P	Pn	07 29 03.5	-0.2
SNET				*e*S	Sn	07 29 23.1	-0.1
SNET				IAML		07 29 28.4	
	comp=Z,1μm,0.3s						
SNET	Serv Nac Est T	1.55	89	*e*P	Pn	07 29 03.5	-0.2
SNET				*e*S	Sn	07 29 23.1	-0.1
SNET				IAML		07 29 28.4	
	comp=Z,1μm,0.3s						
OPAM	Oficina de Pla	1.58	88	*e*P	Pn	07 29 04.3	+0.1
OPAM				*e*S	Sn	07 29 24.2	+0.3
OPAM	Oficina de Pla	1.58	88	*e*P	Pn	07 29 04.3	+0.1
OPAM				*e*S	Sn	07 29 24.2	+0.3
MTO3	Montecristo	1.60	62	*i* P	Pn	07 29 03.3	-1.3
MTO3	Montecristo	1.60	62	*i* P	Pn	07 29 03.3	-1.3
ESQI	Esquipulas	1.69	58	⇓*i*P	Pn	07 29 04.8	-1.0
ESQI				*e*S	Sb	07 29 28.8	-0.4
ESQI				IAML		07 29 32.8	
	comp=Z,450nm,0.4s						
LFRS	El Faro	1.71	91	*e*P	Pn	07 29 06.2	+0.1
LFRS	El Faro	1.71	91	*e*P	Pn	07 29 06.2	+0.1
LBRS	Las Brisas	1.73	87	*e*P	Pn	07 29 06.1	-0.2
LBRS	Las Brisas	1.73	87	*e*P	Pn	07 29 06.1	-0.2
HUEH	Huehuetenango	1.77	338	*e*P	Pn	07 29 07.0	0.0
HUEH				*e*S	Sb	07 29 31.8	+0.2
MRL	Marmol	1.79	38	*e*P	Pn	07 29 07.1	-0.2
COEG	Centro de Oper	1.89	91	*e*P	Pn	07 29 08.1	-0.4
COEG				*e*S	Sn	07 29 32.0	+0.4
COEG				IAML		07 29 40.4	
	comp=Z,1μm,0.4s						
COEG	Centro de Oper	1.89	91	*e*P	Pn	07 29 08.1	-0.4
COEG				*e*S	Sn	07 29 32.0	+0.4
COEG				IAML		07 29 40.4	
	comp=Z,1μm,0.4s						
PQSS	Presa 15 de Se	2.20	91	*e*P	Pn	07 29 12.4	-0.3
PQSS				*e*S	Sb	07 29 41.4	-2.2
COEB	Comit de Eme	2.24	94	*e*P	Pn	07 29 13.0	-0.3
COEB				*e*S	Sn	07 29 40.4	+0.3
COEB				IAML		07 29 46.5	
	comp=Z,552nm,0.3s						
COEB	Comit de Eme	2.24	94	*e*P	Pn	07 29 13.0	-0.3
COEB				*e*S	Sn	07 29 40.4	+0.3
COEB				IAML		07 29 46.5	
	comp=Z,552nm,0.3s						
TECA	Tecapa	2.27	94	*e*P	Pn	07 29 14.4	+0.7
TECA	Tecapa	2.27	94	*e*P	Pn	07 29 14.4	+0.7
LCND	La Caada	2.88	97	*e*P	Pn	07 29 21.7	-0.2
LCND				*e*S	Sn	07 29 57.5	+1.7
LCND	La Caada	2.88	97	*e*P	Pn	07 29 21.7	-0.2
LCND				*e*S	Sn	07 29 57.5	+1.7

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*NEIC **28** 07:41:54.8±1.3, 18°.7S±0°.1×178°.0W±0°.1, h468^{km}±6^{km}, mb4.1/20, Error ellipse: s-maj=20.0km s-min=16.4km az=167.0*

*IDC **28** 07:41:56.4±3.0, 18°.73S×178°.05W, h482^{km}±23^{km}, mb3.4/6, mb1 3.6/7, mb1mx3.2/31, mbtmp4.1/7, Error ellipse: s-maj=61.5km s-min=19.3km az=139.0*

ISC 28 07:41:57.6±0.6**, 18°.67S**±0°.10×**178°.2W**±0°.1**, h500**^{km}**, n38, σ0^s.92**/39**, mb4.1**/16**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	3.69	284	P	P	07 43 12.8	-1.0
	1.2nm,0.3s,baz=74,slow=22,SNR=10						
MSVF	Nonsavu	3.69	284	P	P	07 43 13.4	-0.4
MSVF				S	S	07 44 11.9	-3.8
AFI	Afiamalu	7.76	53	P	P	07 43 42.8	-9.0
NIUE	Niue	7.83	94	P	P	07 43 44.7	-7.7
FUNA	Funafuti	10.39	346	P	P	07 44 19.1	-0.2
OUZ	Omahuta	18.03	202	P	P	07 45 37.5	-0.6
ARMA	Armidale	29.75	241	P	P	07 47 23.5	+0.5
ARMA				IAmb	IAmb	07 47 24.8	
	comp=Z,6.2nm,0.7s						
CTAO	Charters Tower	33.53	262	P	P	07 47 56.5	+1.0
CTAO				IAmb	IAmb	07 47 56.8	
	comp=Z,5.7nm,0.7s						
TOO	Toolangi	36.86	232	P	P	07 48 23.6	+0.6
TOO				IAmb	IAmb	07 48 43.3	
	comp=Z,18nm,1.4s						
COEN	Coen	37.32	271	P	P	07 48 28.3	+1.2
COEN				IAmb	IAmb	07 48 36.7	
	comp=Z,6.5nm,1.4s						
STKA	Stephens Creek	38.45	242	P	P	07 48 37.0	+0.9
	comp=Z,5.7nm,0.5s,baz=88,slow=9.4,SNR=29						
STKA	Stephens Creek	38.45	242	P	P	07 48 37.1	+1.0
BBOO	Buckleboo	43.23	242	P	P	07 49 14.7	+0.5
WR0	Warramunga Arr	44.51	260	P	P	07 49 24.9	+0.5
WR0				IAmb	IAmb	07 49 27.8	
	comp=Z,8.4nm,1.4s						
WB2	Warramunga Arr	44.69	260	P	P	07 49 26.1	+0.3
WB2				IAmb	IAmb	07 49 53.9	
	comp=Z,9.1nm,1.4s						
WRA	Warramunga Arr	44.70	260	P	P	07 49 25.9	0.0
	comp=Z,1.8nm,0.5s,baz=98,slow=6.2,SNR=44						
WRA				PcP	pP	07 50 58.7	+0.9
	comp=Z,0.2nm,0.4s,baz=102,slow=3.4,SNR=2.7						
AS31	Alice Springs	44.79	255	P	P	07 49 27.1	+0.6
AS31				IAmb	IAmb	07 49 27.8	
	comp=Z,4.7nm,0.7s						
ASAR	Alice Springs	44.79	255	P	P	07 49 27.0	+0.5
	comp=Z,17nm,0.7s,baz=90,slow=8.5,SNR=278						
ASAR				PcP	pP	07 50 58.9	+0.1
	comp=Z,0.8nm,0.7s,baz=93,slow=5.0,SNR=4.7						
ASAR	Alice Springs	44.79	255	P	P	07 49 26.7	+0.2
FORT	Forrest	49.88	245	P	P	07 50 03.6	-1.1
FITZ	Fitzroy Crossi	53.11	261	P	P	07 50 29.2	+0.9
PSA00	Pilbara Seismi	57.92	256	P	P	07 51 02.0	+0.2
PSA00				IAmb	IAmb	07 51 25.5	
	comp=Z,12nm,1.3s						
SBA	Scott Base	59.68	184	P	P	07 51 13.1	+0.4
MJAR	Matsushiro Arr	68.64	323	P	P	07 52 11.7	+1.3
	comp=Z,1.1nm,0.4s,baz=152,slow=6.2,SNR=2.1						
QSPA	South Pole Qui	71.39	180	P	P	07 52 25.6	-0.9
NVAR	Mina Array Bea	79.83	44	P	P	07 53 13.7	-0.3
	comp=Z,0.3nm,0.7s,baz=225,slow=8.9,SNR=2.1						
BELA	Belgrano 2	81.39	173	P	P	07 53 20.2	-1.1
BELA				IAmb	IAmb	07 53 27.4	
	comp=Z,7.3nm,1.4s						
HMT	Hamilton	83.38	16	P	P	07 53 31.8	+0.4
N25K	Chitina, Valde	84.37	15	P	P	07 53 36.7	+0.3
BALM	Baldy	84.48	17	P	P	07 53 37.2	+0.2
IMAR	Indian Mountai	86.39	10	P	P	07 53 46.6	+0.6
ILAR	Eielson Array	86.58	13	P	P	07 53 46.3	-0.5
	comp=Z,0.2nm,0.4s,baz=221,slow=5.4,SNR=5.1						
SNAA	Sanae	89.84	179	P	P	07 54 02.7	+0.4
SNAA				IAmb	IAmb	07 54 30.5	
	comp=Z,6.0nm,1.3s						
MKAR	Makanchi Array	109.81	314	PKiKP	PKiKP	07 59 31.3	-0.2
	comp=Z,0.1nm,0.5s,baz=128,slow=1.4,SNR=1.9						
ARCES	ARCESS Array B	127.09	350	PKP	PKPdf	08 00 03.9	-0.1
	comp=Z,3.5nm,1.1s,baz=41,slow=2.9,SNR=6.5						
BRTR	Keskin Array B	145.46	314	PKPbc	PKPab	08 00 41.5	+0.3
	comp=Z,0.3nm,0.5s,baz=18,slow=0.5,SNR=1.9						
CLL	Collm	146.24	347	*e*PKPbc	PKPab	08 00 43.0	-0.6
GERES	GERESS Array B	148.39	345	PKPbc	PKiKP	08 00 48.6	0.0
	comp=Z,0.5nm,0.5s,baz=19,slow=4.2,SNR=5.2						

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*JMA **28** 08:19:07.6±0.2, 35°.64N×140°.68E, h48^{km}±2^{km}, M2.9*

JMA Felt I J1.

*IDC **28** 08:19:09.1±1.2, 34°.58N×138°.24E, h0^{km}, mb3.5/3, mb1 3.8/4, mb1mx3.4/51, mbtmp3.8/4, ML4.6/1, Error ellipse: s-maj=41.8km s-min=17.5km az=73.0*

ISC 28 08:19:06.7±1.1**, 35°.60N**±0°.06×**140°.82E**±0°.08**, h54**^{km}±8^{km}**, n21, σ1^s.34**/21**, mb3.5**/3**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHOJ	Chosi	0.11	17	P	Pn	08 19 15.3	+0.3
CHOJ				S	Sn	08 19 21.2	+0.3
JSMT	Sammumatsuo	0.30	279	P	Pn	08 19 15.9	-0.3
JIHU	Itakohorinouch	0.44	327	P	Pn	08 19 17.6	+0.1
JCN	Nagara	0.53	251	P	Pn	08 19 18.7	+0.2
JCN				S	Sn	08 19 27.1	0.0
BSO4	Boso 4	0.72	213	P	Pn	08 19 21.9	+1.2
JYT	Yasato	0.81	321	P	Pn	08 19 21.2	-0.8
BSO3	Boso 3	0.83	198	P	Pn	08 19 23.4	+1.4
BSO1	Boso 1	0.95	172	P	Pn	08 19 25.3	+2.0
MJAR	Matsushiro Arr	2.32	295	Pn	Pn	08 19 43.4	+1.0
	1.1nm,0.3s,baz=170,slow=14,SNR=48						
MJAR				Sn	Sn	08 20 08.7	-1.0
	0.9nm,0.3s,baz=295,slow=30,SNR=3.2						
MAT	Matsushiro	2.32	295	P	Pn	08 19 43.4	+1.0
MAT				*e*S	Sn	08 20 11.3	+1.5
JHJ	Hachijo jima 2	2.61	199	Pn	Pn	08 19 45.6	-0.8
	21nm,0.3s,baz=90,slow=23,SNR=14						
JHJ				Sn	Sn	08 20 16.3	-0.7
	48nm,0.3s,baz=74,slow=22,SNR=8.8						
JCJ	Chichijima	8.55	172	Pn	Pn	08 21 07.2	-0.7
	7.8nm,0.3s,baz=282,slow=23,SNR=6.2						
JCJ				Sn	Sn	08 22 39.2	-3.8
	4.4nm,0.3s,baz=266,slow=22,SNR=1.7						
H11N2	WAKE ISLAND Hy	27.87	118	T	T	08 54 09.0	
	baz=309,slow=75,SNR=7.9						
H11N1	WAKE ISLAND Hy	27.87	118	T	T	08 54 20.9	
	baz=309,slow=75,SNR=7.4						
H11N3	WAKE ISLAND Hy	27.88	118	T	T	08 54 20.9	
	baz=309,slow=75,SNR=5.5						
H11S1	WAKE ISLAND Hy	28.52	120	T	T	08 54 53.0	
	baz=312,slow=75,SNR=15						
H11S3	WAKE ISLAND Hy	28.52	120	T	T	08 54 53.7	
	baz=312,slow=75,SNR=11						
H11S2	WAKE ISLAND Hy	28.54	120	T	T	08 54 56.8	
	baz=312,slow=75,SNR=9.9						
MKAR	Makanchi Array	44.49	303	P	P	08 27 12.6	-0.1
	0.5nm,0.7s,baz=85,slow=7.1,SNR=6.7						
WRA	Warramunga Arr	55.57	187	P	P	08 28 37.1	+0.4
	0.3nm,0.4s,baz=8.1,slow=7.3,SNR=8.6						
ASAR	Alice Springs	59.30	187	P	P	08 29 03.9	+1.0
	0.4nm,0.9s,baz=20,slow=5.3,SNR=2.6						

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*IDC **28** 08:24:23.6±0.9, 43°.65N×18°.33E, h0^{km}, mb3.7/6, mb1 3.9/12, mb1mx3.6/50, mbtmp3.8/12, ML3.5/6, Error ellipse: s-maj=13.1km s-min=10.5km az=38.0*

*MOS **28** 08:24:23.7±0.7, 43°.65N×18°.35E, h8^{km}, mb4.3/6, Error ellipse: s-maj=6.6km s-min=4.1km az=96.3*

*KRSZO **28** 08:24:23.6±0.5, 43°.62N×18°.37E, h2^{km}±3^{km}, ML4.1/27, Error ellipse: s-maj=2.6km s-min=2.2km az=122.0*

*PDG **28** 08:24:23.9±0.5, 43°.62N×18°.37E, h8^{km}, MD3.8/12, ML3.7/13, Error ellipse: s-maj=0.3km s-min=0.6km az=0.0*

*LDG **28** 08:24:24.4±0.1, 43°.66N×18°.50E, h2^{km}, Ml3.7/20, Error ellipse: s-maj=3.3km s-min=2.3km az=35.0*

*RHSSO **28** 08:24:24.8±0.2, 43°.62N×18°.40E, h5^{km}±2^{km}, ML3.8/14*

*MED_RC **28** 08:24:24.0±0.7, 43°.64N×18°.42E, h22^{km}±2^{km}, MW4.1/7, Moment Tensor Solution.Mantle waves: s7,c8;   Duration: 1^s.0   Moment tensor: Scale 10^{15}Nm; M_{rr}-1.15±.41; $M_{\theta\theta}$0.34±.23; $M_{\phi\phi}$0.81±.27; $M_{r\theta}$0.67±.28; $M_{\theta\phi}$1.21±.23; $M_{\phi r}$-0.19±.16;   Best double couple: $M_0$1.72000×10^{15} NP1:ϕ_s10.00000°,δ49.00000°,λ-137.00000°.   NP2: ϕ_s248.00000°,δ59.00000°,λ-50.00000°.   Principal axes: T 1.8400, Plg6.0000°, Azm311.0000°; N -0.2300, Plg34.0000°, Azm45.0000°; P -1.6000, Plg56.0000°, Azm212.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=30s.*

*NEIC **28** 08:24:24.9±2.1, 43°.63N±0°.03×18°.45E±0°.03, h4^{km}±6^{km} Error ellipse: s-maj=5.2km s-min=2.3km az=144.0*

*BEO **28** 08:24:25.0±0.3, 43°.63N×18°.37E, h12^{km}±2^{km}, ML3.8/13*

*PRU **28** 08:24:25.2±0.0, 43°.64N×18°.48E, h0^{km}, M4.1*

28d 8h

ISC 28 08:24:24.9±0.9, 43.62N±0.01×18.37E±0.01, h9km±6km, n551, σ2.03/809, mb4.0/16, 32C-24D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UPM	Unac-Piva	0.57	137	⇑iPg	Pg	08 24 35.2	-0.7
UPM				eSg	Sg	08 24 43.6	+0.2
UPM	Unac-Piva	0.57	137	⇑iPg	Pg	08 24 35.2	-0.7
UPM				i Sg	Sg	08 24 43.4	0.0
UPM	Unac-Piva	0.57	137	Pg	Pg	08 24 35.2	-0.7
UPM				Lg	Lg	08 24 43.6	
HAPS	Han Pijesak,BI	0.63	42	ePg	Pg	08 24 35.7	-1.3
HAPS				eSg	Sg	08 24 44.9	-0.3
HAPS	Han Pijesak,BI	0.63	42	⇑iPg	Pg	08 24 35.5	-1.5
HAPS				eSg	Sg	08 24 44.7	-0.5
HAPS	Han Pijesak,BI	0.63	42	Pg	Pg	08 24 35.5	-1.5
HAPS				Pb	Pg	08 24 35.7	-1.3
HAPS				Lg	Lg	08 24 44.7	
HAPS				Sg	Sg	08 24 44.9	-0.3
RUDO	Rudo	0.72	90	⇓iPg	Pg	08 24 37.0	-1.8
RUDO				eSg	Sg	08 24 47.0	-1.3
RUDO	Rudo	0.72	90	Pg	Pg	08 24 37.0	-1.8
RUDO				Lg	Lg	08 24 47.0	
BRY	Bratogost	0.73	170	⇑iPg	Pg	08 24 37.3	-1.6
BRY				eSg	Sg	08 24 48.5	+0.1
BRY	Bratogost	0.73	170	⇑iPg	Pg	08 24 37.4	-1.5
BRY				i Sg	Sg	08 24 48.5	+0.1
BRY	Bratogost	0.73	170	Pg	Pg	08 24 37.3	-1.6
BRY				Lg	Lg	08 24 48.5	
BBLS	Lazići	0.79	71	ePg	Pg	08 24 39.3	-0.7
BBLS				eSg	Sg	08 24 49.5	-0.9
BBLS	Lazići	0.79	71	ePg	Pg	08 24 39.0	-1.0
BBLS				eSg	Sg	08 24 49.4	-0.9
BBLS	Lazići	0.79	71	Pg	Pg	08 24 39.0	-1.0
BBLS				x	x	08 24 39.2	
	comp=Z,45nm,SNR=231						
BBLS				Pb	Pg	08 24 39.3	-0.7
BBLS				Lg	Lg	08 24 49.4	
BBLS				Lg	Lg	08 24 49.5	
PLE	Pljevlja	0.80	111	⇑iPg	Pg	08 24 39.0	-1.2
PLE				i Sg	Sb	08 24 51.0	-0.8
STON	Ston	0.90	214	i Pg	Pg	08 24 39.7	-2.4
STON				Sg	Sg	08 24 52.1	-1.6
STON	Ston	0.90	214	Pg	Pg	08 24 39.7	-2.4
STON				Lg	Lg	08 24 52.1	
TREB	Trebinje	0.90	181	ePg	Pg	08 24 40.9	-1.3
TREB				eSg	Sb	08 24 55.3	+0.5
TREB	Trebinje	0.90	181	ePg	Pg	08 24 40.3	-1.9
TREB				eSg	Sb	08 24 54.4	-0.4
TREB	Trebinje	0.90	181	Pg	Pg	08 24 40.3	-1.9
TREB				Pb	Pg	08 24 40.9	-1.3
TREB				Lg	Lg	08 24 54.4	
TREB				Sg	Sb	08 24 55.3	+0.5
RICI	Ricice	0.91	263	i Pg	Pg	08 24 40.9	-1.5
RICI				Sg	Sg	08 24 54.2	0.0
RICI	Ricice	0.91	263	Pg	Pg	08 24 40.9	-1.5
RICI				Lg	Lg	08 24 54.2	
NKY	Niksic	0.93	150	⇑iPg	Pg	08 24 41.0	-1.7
NKY				i Sg	Sb	08 24 55.2	-0.3
NKME	Niksic	0.95	153	⇑iPg	Pg	08 24 41.3	-1.9
NKME				i Sg	Sb	08 24 56.1	-0.2
DBRK	Dubrovnik	0.96	190	i Pg	Pg	08 24 40.8	-2.6
DBRK				Sg	Sg	08 24 55.3	-0.6
DBRK	Dubrovnik	0.96	190	Pg	Pg	08 24 40.8	-2.6
DBRK				Lg	Lg	08 24 55.3	
MAKA	Makarska	1.04	252	i Pg	Pg	08 24 43.2	-1.6
MAKA				Sg	Sg	08 24 58.3	0.0
MAKA	Makarska	1.04	252	Pg	Pg	08 24 43.2	-1.6
MAKA				Lg	Lg	08 24 58.3	
KOME	Kolasin	1.14	132	⇓iPg	Pb	08 24 45.2	-1.5
KOME				i Sg	Sn	08 25 02.6	-0.1
CEME	Cevo	1.15	159	⇓iPg	Pb	08 24 44.7	-2.1
CEME				i Sg	Sn	08 25 03.0	+0.1
HCY	Herceg Novi	1.18	176	ePg	Pb	08 24 45.8	-1.5
HCY				eSg	Sg	08 25 02.6	-0.1
HCY	Herceg Novi	1.18	176	⇑iPg	Pb	08 24 45.8	-1.5
HCY				i Sg	Sn	08 25 04.2	+0.6
HCY	Herceg Novi	1.18	176	Pg	Pb	08 24 45.8	-1.5
HCY				Lg	Lg	08 25 02.6	
MGRS	Mrkonjic Grad	1.22	311	⇑iPg	Pn	08 24 46.6	-1.6
MGRS				eSg	Sb	08 25 03.4	-0.7
MGRS	Mrkonjic Grad	1.22	311	Pn	Pn	08 24 46.6	-1.6
MGRS				Sn	Sb	08 25 03.4	-0.7
TEKS	Tekeris	1.25	41	ePg	Pg	08 24 48.7	-0.1
TEKS				eSg	Sg	08 25 04.9	-0.1
TEKS	Tekeris	1.25	41	ePg	Pn	08 24 47.5	-1.0
TEKS				eSg	Sb	08 25 04.4	-0.4
TEKS	Tekeris	1.25	41	Pn	Pn	08 24 47.5	-1.0
TEKS				Pg	Pg	08 24 48.7	-0.1
TEKS				Lg	Lg	08 25 04.4	
TEKS				Sg	Sg	08 25 04.9	-0.1
DIVS	Divibare	1.27	67	ePg	Pn	08 24 48.5	-0.3
DIVS				eSg	Sn	08 25 06.0	+0.1
DIVS	Divibare	1.27	67	ePg	Pn	08 24 47.0	-1.8
DIVS				eSg	Sb	08 25 04.9	-0.4
DIVS	Divibare	1.27	67		Pn	08 24 48.3	-0.5
DIVS				Sg	Sb	08 25 01.6	-3.7
DIVS	Divibare	1.27	67	Pg	Pn	08 24 47.0	-1.8
DIVS				Pn	Pb	08 24 48.0	-0.9
	comp=Z,7.7nm,SNR=105						
DIVS				Pb	Pn	08 24 48.5	-0.3
DIVS				Sg	Sb	08 25 01.6	-3.7
DIVS				Lg	Lg	08 25 04.7	
DIVS				Sb	Sb	08 25 04.9	-0.4
DIVS				Sn	Sn	08 25 06.0	+0.1
IVAS	Ivanjica	1.29	91	ePg	Pn	08 24 47.3	-1.9
IVAS				eSg	Sg	08 25 07.5	+1.0
IVAS	Ivanjica	1.29	91	Pn	Pn	08 24 47.3	-1.9
IVAS				Sn	Sg	08 25 07.5	+1.0
IVA	Berane	1.34	123	⇓iPg	Pn	08 24 48.8	-1.0
IVA				i Sg	Sg	08 25 09.6	+1.7
PDG	Podgorica	1.35	151	⇓P	Pn	08 24 48.2	-1.6
PDG	Podgorica	1.35	151	⇑iPg	Pn	08 24 47.8	-2.1
PDG				eSg	Sn	08 25 07.6	-0.3
PDG	Podgorica	1.35	151		Pn	08 24 48.1	-1.9
PDG				Sg	Sg	08 25 08.5	+0.1
PDG	Podgorica	1.35	151	Pg	Pn	08 24 47.8	-2.1
PDG				Pb	Pn	08 24 48.2	-1.6
PDG				Lg	Lg	08 25 07.6	
PDG				Sg	Sg	08 25 08.5	+0.1
TTG	Podgorica	1.35	151	⇓iPg	Pn	08 24 48.0	-1.9
TTG				i Sg	Sg	08 25 10.2	+1.8
BUM	Brajici-Budva	1.37	164	⇓iPg	Pn	08 24 49.1	-1.1
BUM				i Sg	Sg	08 25 10.9	+1.9
LSTV	Lastovo	1.38	232	i Pn	Pn	08 24 49.4	-0.8
LSTV				Sn	Sg	08 25 09.9	+0.8
LSTV	Lastovo	1.38	232	Pn	Pn	08 24 49.4	-0.8
LSTV				Sn	Sg	08 25 09.9	+0.8
BLY	Banja Luka	1.42	323	ePg	Pn	08 24 50.4	-0.4
BLY				eSg	Sg	08 25 11.2	+0.8
BLY	Banja Luka	1.42	323	⇑iPg	Pn	08 24 50.7	-0.1
BLY				eSg	Sg	08 25 10.9	+0.5
BLY	Banja Luka	1.42	323	Pb	Pn	08 24 50.3	-0.5
	comp=Z,7.1nm,SNR=170						
BLY				Pn	Pn	08 24 50.4	-0.4
BLY				Pg	Pn	08 24 50.7	-0.1
BLY				Sn	Sg	08 25 10.9	+0.5
BLY				Lg	Lg	08 25 11.1	
HVAR	Hvar	1.47	253	ePn	Pn	08 24 51.2	-0.3
HVAR				Sn	Sg	08 25 12.6	+0.5
HVAR	Hvar	1.47	253	Pn	Pn	08 24 51.2	-0.3
HVAR				Sn	Sg	08 25 12.6	+0.5
KIJV	Kijevo	1.48	286	ePn	Pn	08 24 51.4	-0.2
KIJV	Kijevo	1.48	286	Pn	Pn	08 24 51.4	-0.2
PVY	Plav	1.55	131	⇑iPg	Pn	08 24 52.6	-0.1
PVY				i Sg	Sg	08 25 15.9	+1.2
DRME	Dracevica, Mon	1.55	157	ePn	Pn	08 24 52.2	-0.4
DRME				eSn	Sg	08 25 14.2	-0.5
DRME	Dracevica, Mon	1.55	157	⇓iPg	Pn	08 24 52.5	-0.1
DRME				i Sg	Sg	08 25 16.1	+1.4
DRME	Dracevica, Mon	1.55	157	Pn	Pn	08 24 52.2	-0.4
DRME				Sn	Sg	08 25 14.2	-0.5
TRUS	Trudelj	1.59	67	ePn	Pn	08 24 52.9	-0.3
TRUS				eSn	Sn	08 25 13.4	-0.4
TRUS	Trudelj	1.59	67	Pn	Pn	08 24 52.9	-0.3
TRUS				Sn	Sn	08 25 13.4	-0.4
GRUS	Gruza	1.72	80	ePn	Pn	08 24 54.9	0.0
GRUS	Gruza	1.72	80	Pn	Pn	08 24 54.9	0.0
ULC	Ulcinj	1.77	159	⇓iPn	Pn	08 24 56.0	+0.3
ULC				i Sn	Sg	08 25 21.4	-0.5
PRIJ	Prijedor	1.80	319	ePn	Pn	08 24 56.6	+0.5
PRIJ				eSn	Sb	08 25 20.1	-0.6
PRIJ	Prijedor	1.80	319	Pn	Pn	08 24 56.6	+0.5
PRIJ				Sn	Sb	08 25 20.1	-0.6
FRGS	Fruska Gora	1.85	33	ePn	Pn	08 24 56.1	-0.7
FRGS				eSn	Sb	08 25 20.9	-1.2
FRGS	Fruska Gora	1.85	33	⇑P	Pn	08 24 56.1	-0.7
FRGS	Fruska Gora	1.85	33	⇑iPn	Pn	08 24 55.9	-0.9
FRGS				eSn	Sb	08 25 20.9	-1.2
FRGS	Fruska Gora	1.85	33		Pn	08 24 56.1	-0.7
FRGS	Fruska Gora	1.85	33	Pn	Pn	08 24 55.9	-0.9
FRGS				Pg	Pn	08 24 56.1	-0.7
FRGS				Pg	Pn	08 24 56.1	-0.7
FRGS				Sn	Sb	08 25 20.9	-1.2
BEO	Beograd	1.92	51	Pn	Pn	08 24 58.2	+0.5
	comp=Z,2.7nm,SNR=23						
BEO				Sn	Sn	08 25 22.4	+0.4
MORI	Morici	1.95	278	i Pn	Pb	08 25 00.1	-0.3
MORI	Morici	1.95	278	Pn	Pb	08 25 00.1	-0.3
ZIRJ	Zirje	1.98	272	i Pn	Pb	08 25 00.4	-0.7
ZIRJ				Sn	Sg	08 25 27.8	-0.8
ZIRJ	Zirje	1.98	272	Pn	Pb	08 25 00.4	-0.7
ZIRJ				Sn	Sg	08 25 27.8	-0.8
UDBI	Udbina	2.09	297	i Pn	Pb	08 25 01.4	-1.5
UDBI	Udbina	2.09	297	Pn	Pb	08 25 01.4	-1.5
SVIS	Svilajnac	2.15	72	ePn	Pn	08 25 00.8	-0.1
SVIS				eSn	Sn	08 25 27.6	-0.1
SVIS	Svilajnac	2.15	72	Pn	Pn	08 25 00.8	-0.1
SVIS				Sn	Sn	08 25 27.6	-0.1
BOVS	Bovan	2.42	88	ePn	Pn	08 25 04.2	-0.3
BOVS	Bovan	2.42	88	⇓P	Pn	08 25 04.3	-0.3
BOVS	Bovan	2.42	88		Pn	08 25 04.3	-0.3
BOVS	Bovan	2.42	88	Pn	Pn	08 25 04.2	-0.3
BOVS				Pg	Pn	08 25 04.3	-0.3
DUGI	Dugi Otok	2.43	280	i Pn	Pb	08 25 06.6	-2.1
DUGI				Sn	Sb	08 25 38.7	0.0
DUGI	Dugi Otok	2.43	280	Pn	Pb	08 25 06.6	-2.1
DUGI				Sn	Sb	08 25 38.7	0.0
PHP	Peshkopia	2.46	141	P	Pb	08 25 07.5	-1.8
PHP	Peshkopia	2.46	141	Pn	Pb	08 25 07.5	-1.8
KOVH	Kovagotottos	2.48	356	Pn	Pn	08 25 04.7	-0.6
	comp=Z,0.8nm,SNR=14						
KOVH				Sn	Sn	08 25 35.8	+0.1
KUBS	Kucevo	2.51	70	ePn	Pn	08 25 04.4	-1.4
KUBS	Kucevo	2.51	70	Pn	Pn	08 25 04.4	-1.4
TIR	Tirane	2.52	154	P	Pn	08 25 07.2	+1.2
TIR	Tirane	2.52	154	⇑P	Pn	08 25 07.2	+1.2
TIR	Tirane	2.52	154	P	Pn	08 25 07.2	+1.2
TIR	Tirane	2.52	154		Pn	08 25 07.2	+1.2
TIR	Tirane	2.52	154	Pn	Pn	08 25 07.2	+1.2
TIR				Pb	Pn	08 25 07.2	+1.2
TIR				Pb	Pn	08 25 07.2	+1.2
TIR				Pg	Pg	08 25 10.0	-3.2
	comp=Z,2.6nm,SNR=18						
TIR				Sn	Sb	08 25 43.0	+1.5
MORH	Mrgy, Hungar	2.60	4	⇑P	Pn	08 25 06.8	-0.3
MORH	Mrgy, Hungar	2.60	4		Pn	08 25 06.8	-0.3
MORH	Mrgy, Hungar	2.60	4	Pg	Pn	08 25 06.3	-0.7
	comp=Z,0.9nm,SNR=26						
MORH				Pn	Pn	08 25 06.8	-0.3
BARS	Barje	2.64	107	ePn	Pn	08 25 06.7	-0.9
BARS				eSn	Sn	08 25 39.5	-0.3
BARS	Barje	2.64	107	Pn	Pn	08 25 06.7	-0.9
BARS				Sn	Sn	08 25 39.5	-0.3
BANR	Banloc	2.65	47	⇓P	Pn	08 25 08.6	+0.9
BANR	Banloc	2.65	47		Pn	08 25 08.6	+0.9
BANR	Banloc	2.65	47	Pn	Pn	08 25 08.6	+0.9
BANR				Pg	Pb	08 25 09.6	-2.8
	comp=Z,0.8nm,SNR=6.2						
MDVR	Moldovita	2.67	63	⇑P	Pn	08 25 07.9	-0.2
MDVR	Moldovita	2.67	63		Pn	08 25 07.9	-0.2
MDVR	Moldovita	2.67	63	Pn	Pn	08 25 07.9	-0.2
SGRT	San Giovanni R	2.69	227		Pn	08 25 08.5	+0.2
NVLJ	Novalja	2.69	292	ePn	Pn	08 25 10.3	+2.0
NVLJ	Novalja	2.69	292	Pn	Pn	08 25 10.3	+2.0
ZAG	Zagreb	2.79	323	ePn	Pn	08 25 10.4	+0.9
ZAG	Zagreb	2.79	323	Pn	Pn	08 25 10.4	+0.9
SKO	Skopje	2.79	125	i Pn	Pn	08 25 10.5	+0.8
ZAGS	Zajecar	2.81	85	ePn	Pn	08 25 09.4	-0.5
ZAGS				eSn	Sn	08 25 42.9	-0.9
ZAGS	Zajecar	2.81	85	Pn	Pn	08 25 09.4	-0.5
ZAGS				Sn	Sn	08 25 42.9	-0.9
KALN	Kalnik	2.86	332	i Pn	Pn	08 25 10.6	-0.1
KALN	Kalnik	2.86	332	Pn	Pn	08 25 10.6	-0.1
PTJ	Puntijarka	2.86	324	ePn	Pn	08 25 10.9	+0.2
PTJ	Puntijarka	2.86	324	Pn	Pn	08 25 10.9	+0.2
OZLJ	Ozalj	2.88	315	ePn	Pn	08 25 11.6	+0.7
OZLJ	Ozalj	2.88	315	Pn	Pn	08 25 11.6	+0.7
BOJS	Bojanci	2.92	311	i Pn	Pn	08 25 12.3	+0.9
BOJS	Bojanci	2.92	311	Pn	Pn	08 25 12.3	+0.9
PRVS	Prvonek	2.93	111	ePn	Pn	08 25 11.7	0.0
PRVS				eSn	Sn	08 25 46.9	-0.1
PRVS	Prvonek	2.93	111	Pn	Pn	08 25 11.7	0.0
PRVS				Sn	Sn	08 25 46.9	-0.1
CRES	Cresnjev	3.03	318	⇑iPn	Pn	08 25 13.2	+0.2
CRES				eSn	Sn	08 25 49.9	+0.5
CRES	Cresnjev	3.03	318	Pg	Pn	08 25 13.2	+0.2
CRES				Sn	Sn	08 25 49.9	+0.5
BZS	Buzias	3.06	48	⇓P	Pn	08 25 14.2	+0.9
BZS	Buzias	3.06	48	P	Pn	08 25 14.2	+0.9
BZS	Buzias	3.06	48		Pn	08 25 14.2	+0.9
BZS	Buzias	3.06	48	Pn	Pn	08 25 14.2	+0.9
	comp=Z,0.4nm,SNR=8.7						
BZS				Sn	Sn	08 25 51.7	+1.6
BEHE	Becsehely	3.07	339	ePn	Pn	08 25 14.5	+1.0
BEHE				eSn	Sn	08 25 50.4	+0.1
BEHE	Becsehely	3.07	339	Pn	Pn	08 25 14.5	+1.0
BEHE				Pg	Pb	08 25 16.4	-3.1
	comp=Z,1.8nm,SNR=23						
BEHE				Sn	Sn	08 25 50.4	+0.1
OHR	Ohrid	3.08	144	i Pn	Pb	08 25 17.9	-2.1
GOLS	Golise	3.09	322	i Pn	Pn	08 25 14.3	+0.5
GOLS	Golise	3.09	322	Pn	Pn	08 25 14.3	+0.5
ZAPS	Zavoj	3.12	95	ePn	Pn	08 25 15.1	+0.8
ZAPS				eSn	Sn	08 25 50.8	-0.9
ZAPS	Zavoj	3.12	95	Pn	Pn	08 25 15.1	+0.8
ZAPS				Sn	Sn	08 25 50.8	-0.9
HERR	Herculane	3.17	65	⇑P	Pn	08 25 15.0	+0.1
HERR	Herculane	3.17	65		Pn	08 25 15.0	+0.1
HERR	Herculane	3.17	65	Pn	Pn	08 25 15.0	+0.1
KOGS	Kog	3.20	333	i Pn	Pn	08 25 15.8	+0.4
KOGS	Kog	3.20	333	Pn	Pn	08 25 15.8	+0.4
BOSS	Bosilegrad	3.21	109	ePn	Pn	08 25 15.6	+0.1
BOSS				eSn	Sn	08 25 52.8	-1.1
BOSS	Bosilegrad	3.21	109	Pn	Pn	08 25 15.6	+0.1
BOSS				Sn	Sn	08 25 52.8	-1.1
MATE	Matera	3.22	203	⇓P	Pn	08 25 15.7	+0.2
MATE	Matera	3.22	203		Pn	08 25 15.7	+0.2
MATE	Matera	3.22	203	Pn	Pn	08 25 15.7	+0.2
MATE				Pg	Pb	08 25 16.3	-5.8
	comp=Z,0.6nm,SNR=6.0						
MATE				Sn	Sn	08 25 54.4	+0.5
RIY	Rijeka	3.27	303	ePn	Pn	08 25 17.9	+1.8
RIY	Rijeka	3.27	303	Pn	Pn	08 25 17.9	+1.8
TIH	Tihany	3.30	354	Pn	Pn	08 25 16.8	+0.2
	comp=Z,2.7nm,SNR=22						
TIH				Sn	Sn	08 25 55.5	-0.5
VISS	Visnje	3.33	312	ePn	Pn	08 25 18.0	+0.9
VISS	Visnje	3.33	312	Pn	Pn	08 25 18.0	+0.9
STIP	Stip	3.41	123	i Pn	Pn	08 25 19.9	+1.7
PDKS	Podkum	3.42	317	ePn	Pn	08 25 19.1	+0.7
PDKS	Podkum	3.42	317	Pn	Pn	08 25 19.1	+0.7
KBN	Korca	3.49	148	P	Pn	08 25 21.0	+1.6
KBN	Korca	3.49	148	Pn	Pn	08 25 21.0	+1.6
CEY	Cerknica	3.52	308	⇑iPn	Pn	08 25 20.5	+0.7
CEY				eSn	Sn	08 26 02.0	+0.5
CEY	Cerknica	3.52	308	Pn	Pn	08 25 20.5	+0.7
CEY				Sn	Sn	08 26 02.0	+0.5
SIRR	Siria	3.53	40	⇑P	Pn	08 25 19.1	-0.8
SIRR	Siria	3.53	40		Pn	08 25 19.1	-0.8
SIRR	Siria	3.53	40	Pn	Pn	08 25 19.1	-0.8
SCTE	Santa Cesarea	3.54	179	Pn	Pn	08 25 20.4	+0.3
SCTE	Santa Cesarea	3.54	179	Pn	Pn	08 25 20.4	+0.3
MPLH	Magyarpolny	3.60	351	Pn	Pn	08 25 20.9	+0.2
	comp=Z,0.5nm,SNR=8.4						
MPLH				Sn	Sn	08 26 04.8	+1.4
VNDS	Vrh nad Dolski	3.60	315	i Pn	Pn	08 25 21.8	+1.0
VNDS	Vrh nad Dolski	3.60	315	Pn	Pn	08 25 21.8	+1.0
FNA	Florina	3.61	141	P	Pn	08 25 23.4	+2.5
FNA	Florina	3.61	141	P	Pn	08 25 22.2	+1.2
FNA	Florina	3.61	141		Pn	08 25 22.2	+1.2
FNA	Florina	3.61	141	Pn	Pn	08 25 22.2	+1.2
FNA				Pg	Pb	08 25 23.4	-5.4
GZR	Gura Zlata	3.62	59	⇑P	Pn	08 25 21.1	0.0
GZR	Gura Zlata	3.62	59		Pn	08 25 21.1	0.0
GZR	Gura Zlata	3.62	59	Pn	Pn	08 25 21.1	0.0
GZR				Pg	Pb	08 25 22.3	-6.6
	comp=Z,0.4nm,SNR=7.3						
GBAS	Gorenja Brezov	3.63	311	ePn	Pn	08 25 21.8	+0.6
GBAS	Gorenja Brezov	3.63	311	Pn	Pn	08 25 21.8	+0.6
SRE	Strehaia	3.63	72	⇓P	Pn	08 25 22.4	+1.1
SRE	Strehaia	3.63	72	P	Pn	08 25 22.4	+1.1
SRE	Strehaia	3.63	72		Pn	08 25 22.4	+1.1
SRE	Strehaia	3.63	72	Pn	Pn	08 25 22.4	+1.1
SRE				Pg	Pb	08 25 22.4	-6.8
LJU	Ljubljana	3.65	313	i Pn	Pn	08 25 22.6	+1.1
LJU				i		08 25 31.8	
LJU	Ljubljana	3.65	313	⇑iPn	Pn	08 25 22.6	+1.1
LJU	Ljubljana	3.65	313	Pn	Pn	08 25 22.6	+1.1
LJU				Pg	Pb	08 25 22.6	-6.9
INTR	Introdacqua	3.66	245	Pn	Pn	08 25 21.8	+0.1
INTR	Introdacqua	3.66	245	Pn	Pn	08 25 21.8	+0.1
VTS	Vitosha	3.70	104	⇓P	Pn	08 25 22.8	+0.5
VTS	Vitosha	3.70	104	P	Pn	08 25 22.7	+0.4
VTS	Vitosha	3.70	104		Pn	08 25 22.7	+0.4
VTS	Vitosha	3.70	104	Pn	Pn	08 25 22.6	+0.4
	comp=Z,0.2nm,SNR=8.4						
VTS				Pg	Pb	08 25 22.8	-7.6
CSKK	Cskako	3.74	359	Pn	Pn	08 25 23.0	+0.2
	comp=Z,0.5nm,SNR=45						
CSKK				Sn	Sn	08 26 07.3	+0.3
NEST	Nestorio	3.77	147	P	Pn	08 25 25.7	+2.4
NEST	Nestorio	3.77	147	Pn	Pn	08 25 25.7	+2.4
PAOL	Paolisi	3.83	229		Pn	08 25 23.5	-0.5
LSK	Leskovik	3.84	154	P	Pn	08 25 26.2	+2.0
LSK	Leskovik	3.84	154	Pn	Pn	08 25 26.2	+2.0
AQU	L'Aquila	3.86	253	P	Pn	08 25 25.9	+1.5
AQU	L'Aquila	3.86	253	ePn	Pn	08 25 25.5	+1.1
AQU				eSn	Sn	08 26 09.8	-0.1
AQU	L'Aquila	3.86	253		Pn	08 25 25.9	+1.5
AQU	L'Aquila	3.86	253	Pn	Pn	08 25 25.5	+1.1
AQU				Pg	Pn	08 25 25.9	+1.5
AQU				Pb	Pn	08 25 27.2	+2.8
	comp=Z,0.9nm,SNR=12						
AQU				Sn	Sn	08 26 09.8	-0.1
SOKA	Soboth	3.86	323	i Pn	Pn	08 25 24.9	+0.4
	comp=Z,31nm,0.5s,SNR=16						
SOKA				i Sn	Sn	08 26 08.2	-1.8
	comp=Z,43nm,0.6s						
SOKA	Soboth	3.86	323		Pn	08 25 24.9	+0.4
SOKA					Sn	08 26 08.2	-1.8
SOKA	Soboth	3.86	323	Pn	Pn	08 25 24.9	+0.4
	comp=Z,31nm,0.5s,SNR=16						
SOKA				Sn	Sn	08 26 08.2	-1.8
	comp=Z,43nm,0.6s						
EGYH	Egyhazaskeszo	3.87	349	Pn	Pn	08 25 21.4	-3.0
EGYH				Sn	Sn	08 26 09.7	-0.3
BUD	Budapest	3.89	7	Pn	Pn	08 25 24.4	-0.4
TRI	Trieste	3.90	304	P	Pn	08 25 26.4	+1.6
TRI	Trieste	3.90	304		Pn	08 25 26.4	+1.6
TRI	Trieste	3.90	304	Pg	Pn	08 25 26.4	+1.6
TRI				Pn	Pn	08 25 26.8	+2.0
	comp=Z,0.5nm,SNR=6.4						
BSZH	Besenyszg	3.91	19	⇓P	Pn	08 25 25.4	+0.4
BSZH	Besenyszg	3.91	19		Pn	08 25 25.4	+0.4
BSZH	Besenyszg	3.91	19	Pn	Pn	08 25 25.4	+0.4
NRCA	Norcia	3.92	260		Pn	08 25 26.8	+1.5
SRN	Sarande	3.93	161	P	Pn	08 25 25.9	+0.6
SRN	Sarande	3.93	161	Pn	Pn	08 25 25.9	+0.6
DEV	Deva	3.94	53	⇓P	Pn	08 25 25.3	-0.2
DEV	Deva	3.94	53	P	Pn	08 25 25.3	-0.2
DEV	Deva	3.94	53		Pn	08 25 25.3	-0.2
DEV	Deva	3.94	53	Pg	Pn	08 25 25.3	-0.2
DEV				Pb	Pn	08 25 25.3	-0.2
DEV				Pn	Pn	08 25 28.1	+2.6
	comp=Z,0.4nm,SNR=7.4						
OBKA	Obir	3.96	318	i Pn	Pn	08 25 26.9	+1.0
	comp=Z,9.1nm,0.3s						
OBKA				ePg	Pg	08 25 39.0	-1.7
	comp=Z,80nm,0.4s						
OBKA	Obir	3.96	318		Pn	08 25 26.9	+1.0
OBKA					Pg	08 25 39.0	-1.7
OBKA	Obir	3.96	318	Pn	Pn	08 25 26.9	+1.0
	comp=Z,9.1nm,0.3s						
OBKA				Pb	Pb	08 25 27.2	-7.6
	comp=Z,0.5nm,SNR=8.1						
OBKA				Pg	Pg	08 25 39.0	-1.7
	comp=Z,80nm,0.4s						
GRG	Griva	4.00	130	P	Pn	08 25 27.4	+1.1
GRG	Griva	4.00	130	Pn	Pn	08 25 27.4	+1.1
KEK	Kerkira	4.05	164	P	Pn	08 25 27.4	+0.5
KEK	Kerkira	4.05	164	Pn	Pn	08 25 27.4	+0.5
ARSA	Arzberg	4.15	332	i Pn	Pn	08 25 28.7	+0.3
	comp=Z,78nm,0.3s,SNR=58						
ARSA				eSn	Sn	08 26 14.7	-2.2
	comp=Z,56nm,0.5s						
ARSA	Arzberg	4.15	332		Pn	08 25 28.7	+0.3
ARSA					Sn	08 26 14.7	-2.2
ARSA	Arzberg	4.15	332	Pg	Pn	08 25 28.7	+0.3
	comp=Z,78nm,0.3s,SNR=58						
ARSA				Pn	Pn	08 25 29.6	+1.2
	comp=Z,0.6nm,SNR=13						
ARSA				Sn	Sn	08 26 14.3	-2.6
ARSA				Lg	Lg	08 26 14.7	
	comp=Z,56nm,0.5s						
SRO	Srobarova	4.19	359	eP	Pn	08 25 30.3	+1.4
SRO				e		08 26 18.2	
SRO				pmax	pmax		
	comp=N,90nm,0.8s						
SRO	Srobarova	4.19	359	ePN	Pn	08 25 30.3	+1.4
SRO				eSN	Sn	08 26 18.2	+0.2
SRO				eLG	Lg	08 26 52.0	
SRO	Srobarova	4.19	359	Pn	Pn	08 25 29.3	+0.3
	comp=Z,1.5nm,SNR=13						
SRO				Pg	Pn	08 25 30.3	+1.4
SRO				Pg	Pn	08 25 30.3	+1.4
SRO				Sn	Sn	08 26 18.2	+0.2
SRO				Lg	Lg	08 26 52.0	
SRO				pmax	pmax		
	comp=Z,90nm,0.8s						
SOP	Sopron	4.26	343	Pn	Pn	08 25 30.5	+0.7
	comp=Z,0.3nm,SNR=4.4						
SOP				Sn	Sn	08 26 20.7	+1.1
LOT	Lotru	4.27	63	⇓P	Pn	08 25 31.3	+1.2
LOT	Lotru	4.27	63		Pn	08 25 31.3	+1.2
LOT	Lotru	4.27	63	Pg	Pn	08 25 31.3	+1.2
LOT				Pn	Pn	08 25 33.2	+3.1
MURB	Monte Urbino	4.27	267		Pn	08 25 31.7	+1.6
KPRO	Kipourio	4.29	148	P	Pn	08 25 33.3	+2.9
KPRO	Kipourio	4.29	148	Pn	Pn	08 25 33.3	+2.9
IGT	Igoumenitsa	4.34	160	P	Pn	08 25 31.6	+0.6
IGT	Igoumenitsa	4.34	160	Pn	Pn	08 25 31.6	+0.6
DRGR		4.41	43	⇓P	Pn	08 25 30.2	-1.8
DRGR		4.41	43	P	Pn	08 25 30.2	-1.8
DRGR		4.41	43		Pn	08 25 30.2	-1.8
DRGR		4.41	43	Pn	Pn	08 25 30.2	-1.8
DRGR				Pg	Pn	08 25 30.2	-1.8
DRGR				Pb	Pn	08 25 32.8	+0.8
	comp=Z,0.2nm,SNR=5.8						
PSZ	Piszkesteto	4.43	13	⇑P	Pn	08 25 32.3	+0.1
PSZ	Piszkesteto	4.43	13	P	Pn	08 25 31.6	-0.7
PSZ	Piszkesteto	4.43	13		Pn	08 25 32.3	+0.1
PSZ	Piszkesteto	4.43	13		Pn	08 25 31.6	-0.7
PSZ	Piszkesteto	4.43	13	Pn	Pn	08 25 31.6	-0.7
PSZ				Pg	Pn	08 25 32.3	+0.1
	comp=Z,0.2nm,SNR=4.5						
MYKA	Terra Mystica	4.50	314	i Pn	Pn	08 25 34.6	+1.4
	comp=Z,4.2nm,0.3s						
MYKA	Terra Mystica	4.50	314		Pn	08 25 34.6	+1.4
MYKA	Terra Mystica	4.50	314	Pn	Pn	08 25 34.6	+1.4
	comp=Z,4.2nm,0.3s						
TIP	Timpagrande	4.60	196	⇑P	Pn	08 25 35.2	+0.6
TIP	Timpagrande	4.60	196	Pn	Pn	08 25 35.3	+0.6
TIP	Timpagrande	4.60	196	Pn	Pn	08 25 35.2	+0.6
TIP				Pg	Pn	08 25 35.3	+0.6
CONA	Conrad Observa	4.65	339	i Pn	Pn	08 25 35.7	+0.3
	comp=Z,16nm,0.4s,SNR=11						
CONA				eSn	Sn	08 26 30.6	+1.1
	comp=Z,59nm,0.8s						
CONA	Conrad Observa	4.65	339		Pn	08 25 35.7	+0.3
CONA					Sn	08 26 30.6	+1.1

CONA	**Conrad Observa**	**4.65**	**339**	Pn	**Pn**	**08 25 35.7**	**+0.3**
	comp=Z,16nm,0.4s,SNR=11						
CONA				Sn	**Sn**	**08 26 30.6**	**+1.1**
	comp=Z,59nm,0.8s						
ZST	**Bratislava**	**4.66**	**349**	*e*P	**Pn**	**08 25 36.2**	**+0.8**
ZST				*e*		08 26 27.5	
ZST	**Bratislava**	**4.66**	**349**	*e*PN	**Pn**	**08 25 36.2**	**+0.8**
ZST				*e*SN	**Sn**	**08 26 27.5**	**-2.1**
ZST	**Bratislava**	**4.66**	**349**	Pn	**Pn**	**08 25 36.2**	**+0.8**
ZST				Pn	**Pn**	**08 25 36.2**	**+0.8**
ZST				Pg	**Pn**	**08 25 36.3**	**+1.0**
	comp=Z,2.7nm,SNR=1.7						
ZST				Sn	**Sn**	**08 26 27.5**	**-2.1**
ZST				Lg	Lg	08 26 27.9	
LIT	**Litokhoron**	**4.67**	**137**	P	**Pn**	**08 25 37.3**	**+1.8**
LIT	**Litokhoron**	**4.67**	**137**	Pn	**Pn**	**08 25 37.3**	**+1.8**
LIT	**Litokhoron**	**4.67**	**137**	Pn	**Pn**	**08 25 37.3**	**+1.8**
LIT				Pg	**Pn**	**08 25 37.3**	**+1.8**
ARR	**Arges**	**4.81**	**67**	⇓P	**Pn**	**08 25 38.9**	**+1.4**
ARR	**Arges**	**4.81**	**67**		**Pn**	**08 25 38.9**	**+1.4**
ARR	**Arges**	**4.81**	**67**	Pn	**Pn**	**08 25 38.9**	**+1.4**
STAL	**STALIGIAL**	**4.81**	**305**		**Pn**	**08 25 38.1**	**+0.7**
MODS	**Modra-Piesok**	**4.81**	**351**	*e*P	**Pn**	**08 25 36.2**	**-1.3**
MODS				*e*		08 26 30.0	
MODS	**Modra-Piesok**	**4.81**	**351**	*e*PN	**Pn**	**08 25 36.2**	**-1.3**
MODS				*e*SN	**Sn**	**08 26 30.0**	**-3.4**
MODS	**Modra-Piesok**	**4.81**	**351**	Pn	**Pn**	**08 25 36.2**	**-1.3**
MODS				Pn	**Pn**	**08 25 36.2**	**-1.3**
MODS				Sn	**Sn**	**08 26 30.0**	**-3.4**
CJR	**Cluj-Napoca**	**4.82**	**48**	⇓P	**Pn**	**08 25 38.2**	**+0.6**
CJR	**Cluj-Napoca**	**4.82**	**48**	P	**Pn**	**08 25 38.2**	**+0.6**
CJR	**Cluj-Napoca**	**4.82**	**48**		**Pn**	**08 25 38.2**	**+0.6**
CJR	**Cluj-Napoca**	**4.82**	**48**	Pn	**Pn**	**08 25 38.2**	**+0.6**
CJR				Pg	**Pn**	**08 25 38.2**	**+0.6**
ZOU	**Zoufplan**	**4.82**	**309**		**Pn**	**08 25 39.4**	**+1.6**
LATE	**Laterza**	**4.91**	**260**		**Pn**	**08 25 40.1**	**+1.2**
SMOL	**Smolenice**	**4.94**	**353**	*e*P	**Pn**	**08 25 38.9**	**-0.3**
SMOL				*e*		08 26 33.6	
SMOL	**Smolenice**	**4.94**	**353**	*e*PN	**Pn**	**08 25 38.9**	**-0.3**
SMOL				*e*SN	**Sn**	**08 26 33.6**	**-2.8**
SMOL	**Smolenice**	**4.94**	**353**	Pn	**Pn**	**08 25 38.9**	**-0.3**
SMOL				Pn	**Pn**	**08 25 38.9**	**-0.3**
SMOL				Sn	**Sn**	**08 26 33.6**	**-2.8**
KBA	**Koelnbreinsper**	**4.95**	**316**	*i* Pn	**Pn**	**08 25 40.9**	**+1.4**
	comp=Z,7.7nm,0.3s,SNR=5.7						
KBA	**Koelnbreinsper**	**4.95**	**316**	P	**Pn**	**08 25 40.9**	**+1.4**
KBA	**Koelnbreinsper**	**4.95**	**316**		**Pn**	**08 25 40.9**	**+1.4**
KBA	**Koelnbreinsper**	**4.95**	**316**	Pn	**Pn**	**08 25 40.9**	**+1.4**
KBA				Pn	**Pn**	**08 25 40.9**	**+1.4**
	comp=Z,7.7nm,0.3s,SNR=5.7						
KECS	**Kecovo**	**5.08**	**16**	*e*P	**Pn**	**08 25 43.2**	**+2.1**
KECS				*e*		08 26 37.3	
KECS	**Kecovo**	**5.08**	**16**	*e*PN	**Pn**	**08 25 43.1**	**+2.0**
KECS				*e*SN	**Sn**	**08 26 37.3**	**-2.6**
KECS	**Kecovo**	**5.08**	**16**	Pn	**Pn**	**08 25 43.1**	**+2.0**
KECS				Pg	**Pn**	**08 25 43.2**	**+2.1**
KECS				Sn	**Sn**	**08 26 37.3**	**-2.6**
TEOL	**Teolo**	**5.10**	**292**		**Pn**	**08 25 41.7**	**+0.3**
VOIR		**5.11**	**67**	⇑P	**Pn**	**08 25 43.4**	**+1.8**
VOIR		**5.11**	**67**	P	**Pn**	**08 25 43.4**	**+1.8**
VOIR		**5.11**	**67**		**Pn**	**08 25 43.4**	**+1.8**
VOIR		**5.11**	**67**	x	x	08 25 43.3	
	comp=Z,18nm,0.7s						
VOIR				Pn	**Pn**	**08 25 43.4**	**+1.8**
VOIR				Pg	**Pn**	**08 25 43.4**	**+1.8**
VOIR				x	x	08 25 45.4	
	comp=Z,18nm,0.7s						
MOA	**Molln**	**5.11**	**327**	*i* Pn	**Pn**	**08 25 43.1**	**+1.4**
	comp=Z,11nm,0.3s,SNR=9.8						
MOA				*e*Sn	**Sn**	**08 26 39.8**	**-1.0**
	comp=Z,47nm,0.6s						
MOA	**Molln**	**5.11**	**327**		**Pn**	**08 25 43.1**	**+1.4**
MOA					**Sn**	**08 26 39.8**	**-1.0**
MOA	**Molln**	**5.11**	**327**	Pn	**Pn**	**08 25 43.1**	**+1.4**
	comp=Z,11nm,0.3s,SNR=9.8						
MOA				x	x	08 25 43.2	
	comp=Z,37nm,0.9s						
MOA				Sn	**Sn**	**08 26 39.8**	**-1.0**
	comp=Z,47nm,0.6s						
OSSC	**Osservatorio P**	**5.18**	**271**		**Pn**	**08 25 43.6**	**+1.1**
ABTA	**Abfaltersbach**	**5.19**	**309**	*i* Pn	**Pn**	**08 25 43.9**	**+1.1**
	comp=Z,9.5nm,0.3s,SNR=5.4						
ABTA				Sg	**Sg**	**08 27 16.4**	**+5.0**
	comp=Z,76nm,1.1s						
ABTA	**Abfaltersbach**	**5.19**	**309**		**Pn**	**08 25 43.9**	**+1.1**
ABTA					Lg	08 27 16.4	
ABTA	**Abfaltersbach**	**5.19**	**309**	Pn	**Pn**	**08 25 43.9**	**+1.1**
	comp=Z,9.5nm,0.3s,SNR=5.4						
ABTA				Lg	Lg	08 27 16.4	
	comp=Z,76nm,1.1s						
NYDR	**Nydri-Lefkada**	**5.21**	**160**	P	**Pn**	**08 25 42.9**	**+0.1**
NYDR	**Nydri-Lefkada**	**5.21**	**160**	Pn	**Pn**	**08 25 42.9**	**+0.1**
JAVC	**Velka Javorina**	**5.26**	**355**	*e*PN	**Pn**	**08 25 43.9**	**+0.2**
JAVC				*e*SN	**Sn**	**08 26 43.1**	**-1.4**
JAVC	**Velka Javorina**	**5.26**	**355**	Pn	**Pn**	**08 25 43.9**	**+0.2**
JAVC				x	x	08 25 44.9	
	comp=Z,27nm,2.1s						
JAVC				x	x	08 25 45.6	
	comp=Z,27nm,2.1s						
JAVC				Sn	**Sn**	**08 26 43.1**	**-1.4**
EVGI	**Lefkada island**	**5.28**	**160**	P	**Pn**	**08 25 43.7**	**-0.2**
EVGI	**Lefkada island**	**5.28**	**160**	Pn	**Pn**	**08 25 43.7**	**-0.2**
CTI	**Castel Tesino**	**5.36**	**299**	P	**Pn**	**08 25 45.5**	**+0.4**
CTI	**Castel Tesino**	**5.36**	**299**	Pn	**Pn**	**08 25 45.5**	**+0.4**
CTI	**Castel Tesino**	**5.36**	**299**	Pn	**Pn**	**08 25 45.5**	**+0.4**
CTI				Pg	**Pn**	**08 25 45.5**	**+0.4**
EVR	**Evrytania**	**5.36**	**150**	P	**Pn**	**08 25 47.3**	**+2.2**
EVR	**Evrytania**	**5.36**	**150**	Pn	**Pn**	**08 25 47.3**	**+2.2**
ZCCA	**Zocca**	**5.39**	**280**	Pn	**Pn**	**08 25 48.6**	**+3.2**
ZCCA	**Zocca**	**5.39**	**280**	Pn	**Pn**	**08 25 48.6**	**+3.2**
FSK	**Fiskardo**	**5.42**	**161**	P	**Pn**	**08 25 45.6**	**-0.1**
FSK	**Fiskardo**	**5.42**	**161**	Pn	**Pn**	**08 25 45.6**	**-0.1**
AGG	**Agios Georgios**	**5.47**	**146**	P	**Pn**	**08 25 48.3**	**+1.7**
AGG	**Agios Georgios**	**5.47**	**146**		**Pn**	**08 25 48.3**	**+1.7**
AGG	**Agios Georgios**	**5.47**	**146**	x	x	08 25 48.0	
	comp=Z,50nm,1.5s						
AGG				Pn	**Pn**	**08 25 48.3**	**+1.7**
AGG				x	x	08 25 50.3	
	comp=Z,50nm,1.5s						
CASP	**Castiglione de**	**5.55**	**264**	Pn	**Pn**	**08 25 47.8**	**+0.2**
CASP	**Castiglione de**	**5.55**	**264**	Pn	**Pn**	**08 25 47.8**	**+0.2**
LANS	**Liptovska Anna**	**5.58**	**7**	*e*P	**Pn**	**08 25 49.3**	**+1.2**
LANS	**Liptovska Anna**	**5.58**	**7**	*e*PN	**Pn**	**08 25 49.3**	**+1.2**
LANS	**Liptovska Anna**	**5.58**	**7**	Pn	**Pn**	**08 25 49.3**	**+1.2**
LANS				Pn	**Pn**	**08 25 49.3**	**+1.2**
KRUC	**Moravsky**	**5.61**	**347**	*e*PN	**Pn**	**08 25 48.6**	**+0.2**
KRUC				*e*SN	**Sn**	**08 26 52.4**	**-0.6**
KRUC	**Moravsky**	**5.61**	**347**	Pn	**Pn**	**08 25 48.6**	**+0.2**
KRUC				x	x	08 25 49.7	
	comp=Z,16nm,0.6s						
KRUC				Sn	**Sn**	**08 26 52.4**	**-0.6**
UZH	**Uzhgorod**	**5.70**	**27**	*e*P	**Pn**	**08 25 51.7**	**+2.0**
UZH				*e*S	**Sn**	**08 26 58.8**	**+3.6**
UZH	**Uzhgorod**	**5.70**	**27**	Pn	**Pn**	**08 25 51.7**	**+2.0**
UZH				Sn	**Sn**	**08 26 58.8**	**+3.6**
MLR	**Muntele Rosu**	**5.72**	**68**	Pn	**Pn**	**08 25 52.2**	**+2.1**
	comp=Z,0.4nm,0.3s,baz=308,slow=19,SNR=2.4						
MLR				Sn	**Sn**	**08 26 56.1**	**+0.1**
	comp=Z,0.4nm,0.3s,baz=114,slow=20,SNR=1.3						
MLR				Lg	Lg	08 27 25.5	
	comp=Z,0.6nm,0.3s,baz=105,slow=16,SNR=2.1						
MLR	**Muntele Rosu**	**5.72**	**68**	⇓P	**Pn**	**08 25 50.7**	**+0.6**
MLR	**Muntele Rosu**	**5.72**	**68**		**Pn**	**08 25 50.7**	**+0.6**
MLR	**Muntele Rosu**	**5.72**	**68**	Pn	**Pn**	**08 25 50.7**	**+0.6**
MLR				Pg	Pg	08 25 52.2	-22
MLR				Pb	**Pn**	**08 25 52.2**	**+2.1**
	comp=Z,0.4nm,0.3s,SNR=2.4						
MLR				Sn	**Sn**	**08 26 56.1**	**+0.1**
	comp=Z,0.4nm,0.3s,SNR=1.3						
MLR				Lg	Lg	08 27 25.5	
	comp=Z,0.6nm,0.3s,SNR=2.1						
VLC	**Villacollemand**	**5.80**	**278**	Pn	**Pn**	**08 25 52.2**	**+1.2**
VLC	**Villacollemand**	**5.80**	**278**	Pn	**Pn**	**08 25 52.2**	**+1.2**
VLC				x	x	08 25 52.9	
	comp=Z,31nm,0.9s						
VRAC	**Vranov**	**5.82**	**348**	Pn	**Pn**	**08 25 50.7**	**-0.6**
	comp=Z,0.6nm,0.3s,baz=174,slow=9.1,SNR=4.4						
VRAC				Sn	**Sn**	**08 26 56.8**	**-1.4**
	comp=Z,2.8nm,0.3s,baz=175,slow=11,SNR=6.9						
VRAC	**Vranov**	**5.82**	**348**	*e*PN	**Pn**	**08 25 50.9**	**-0.4**
VRAC				*e*SN	**Sn**	**08 26 58.6**	**+0.5**
VRAC	**Vranov**	**5.82**	**348**	Pn	**Pn**	**08 25 50.7**	**-0.6**
	comp=Z,0.6nm,0.3s,SNR=4.4						
VRAC				Pg	**Pn**	**08 25 50.7**	**-0.6**
VRAC				Pb	**Pn**	**08 25 50.9**	**-0.4**
VRAC				Sn	**Sn**	**08 26 56.8**	**-1.4**
	comp=Z,2.8nm,0.3s,SNR=6.9						
VRAC				Lg	Lg	08 26 58.6	
PRMA	**PARMA**	**5.91**	**284**	Pn	**Pn**	**08 25 53.5**	**+1.1**
PRMA	**PARMA**	**5.91**	**284**	Pn	**Pn**	**08 25 53.5**	**+1.1**
CKRC	**Cesky Krumlov**	**5.92**	**333**	*e*PN	**Pn**	**08 25 54.4**	**+1.8**
CKRC	**Cesky Krumlov**	**5.92**	**333**	Pn	**Pn**	**08 25 54.4**	**+1.8**
SALO	**Salr**	**5.95**	**292**		**Pn**	**08 25 53.5**	**+0.5**
NIE	**Niedzica**	**5.95**	**12**	Pn	**Pn**	**08 25 54.9**	**+1.8**
KOLS	**Kolonicke sedl**	**5.96**	**26**	*e*P	**Pn**	**08 25 55.4**	**+2.2**
KOLS	**Kolonicke sedl**	**5.96**	**26**	*e*PN	**Pn**	**08 25 55.4**	**+2.2**
KOLS				*e*PG	Pg	08 26 24.0	+5.0
KOLS	**Kolonicke sedl**	**5.96**	**26**	Pn	**Pn**	**08 25 55.4**	**+2.2**
KOLS				Pn	**Pn**	**08 25 55.4**	**+2.2**
KOLS				Pg	Pg	08 26 24.0	+5.0
WTTA	**Wattenberg**	**5.98**	**310**	*i* Pn	**Pn**	**08 25 55.7**	**+2.1**
	comp=Z,13nm,0.2s,SNR=15						
WTTA				*e*Sn	**Sn**	**08 27 05.2**	**+3.0**
	comp=Z,39nm,0.8s						
WTTA	**Wattenberg**	**5.98**	**310**		**Pn**	**08 25 55.7**	**+2.1**
WTTA					**Sn**	**08 27 05.2**	**+3.0**
WTTA	**Wattenberg**	**5.98**	**310**	Pn	**Pn**	**08 25 55.7**	**+2.1**
	comp=Z,13nm,0.2s,SNR=15						
WTTA				x	x	08 25 55.9	
	comp=Z,44nm,0.9s						
WTTA				Sn	**Sn**	**08 27 05.2**	**+3.0**
	comp=Z,39nm,0.8s						
TREC	**Trest**	**6.02**	**342**	x	**Pn**	**08 25 53.6**	**-0.4**
	comp=Z,5.3nm,0.6s						
TREC				Sn	**Sn**	**08 27 02.6**	**-0.4**
WATA	**Walderalm**	**6.05**	**310**	*i* Pn	**Pn**	**08 25 57.0**	**+2.4**
	comp=Z,13nm,0.4s,SNR=18						
WATA	**Walderalm**	**6.05**	**310**	P	**Pn**	**08 25 57.0**	**+2.4**
WATA	**Walderalm**	**6.05**	**310**		**Pn**	**08 25 57.0**	**+2.4**
WATA	**Walderalm**	**6.05**	**310**	Pn	**Pn**	**08 25 57.0**	**+2.4**
	comp=Z,13nm,0.4s,SNR=18						
WATA				Pg	**Pn**	**08 25 57.0**	**+2.4**
GEC2	**GERESS Array S**	**6.15**	**330**		**Pn**	**08 25 55.8**	**-0.1**
GEC2B	**GERESS ARRAY S**	**6.15**	**330**	Pn	**Pn**	**08 25 56.6**	**+0.7**
GEC2B	**GERESS ARRAY S**	**6.15**	**330**	Pn	**Pn**	**08 25 56.6**	**+0.7**
GERES	**GERESS Array B**	**6.15**	**330**	Pn	**Pn**	**08 25 56.6**	**+0.7**
	comp=Z,1.5nm,0.3s,baz=160,slow=14,SNR=44						
GERES				Sn	**Sn**	**08 27 05.0**	**-1.3**
	comp=Z,4.3nm,0.3s,baz=145,slow=24,SNR=6.6						
GERES	**GERESS Array B**	**6.15**	**330**		**Pn**	**08 25 56.2**	**+0.3**
GERES	**GERESS Array B**	**6.15**	**330**	Pn	**Pn**	**08 25 56.6**	**+0.7**
	comp=Z,1.5nm,0.3s,SNR=44						
GERES				Sn	**Sn**	**08 27 05.0**	**-1.3**
	comp=Z,4.3nm,0.3s,SNR=6.6						
MORC	**Moravsky Berou**	**6.19**	**355**	*e*PN	**Pn**	**08 25 57.6**	**+1.3**
MORC				*e*SN	**Sn**	**08 27 04.6**	**-2.6**
MORC	**Moravsky Berou**	**6.19**	**355**	P	**Pn**	**08 25 56.4**	**0.0**
MORC	**Moravsky Berou**	**6.19**	**355**		**Pn**	**08 25 56.4**	**0.0**
MORC	**Moravsky Berou**	**6.19**	**355**	Pn	**Pn**	**08 25 56.4**	**0.0**
MORC				x	x	08 25 57.4	
	comp=Z,12nm,0.7s						
MORC				Pg	**Pn**	**08 25 57.6**	**+1.3**
MORC				Sn	**Sn**	**08 27 04.6**	**-2.6**
SQTA	**Sankt Quirin**	**6.20**	**308**	*i* Pn	**Pn**	**08 25 59.2**	**+2.6**
	comp=Z,7.1nm,0.3s						
SQTA				*i* Sn	**Sn**	**08 27 11.7**	**+4.2**
	comp=Z,28nm,0.6s						
SQTA	**Sankt Quirin**	**6.20**	**308**		**Pn**	**08 25 59.2**	**+2.6**
SQTA					**Sn**	**08 27 11.7**	**+4.2**
SQTA	**Sankt Quirin**	**6.20**	**308**	Pn	**Pn**	**08 25 59.2**	**+2.6**
	comp=Z,7.1nm,0.3s						
SQTA				Sn	**Sn**	**08 27 11.7**	**+4.2**
	comp=Z,28nm,0.6s						
PLOR	**Plostina**	**6.30**	**66**	⇓P	**Pn**	**08 25 59.5**	**+1.5**
PLOR	**Plostina**	**6.30**	**66**	P	**Pn**	**08 25 59.5**	**+1.5**
PLOR	**Plostina**	**6.30**	**66**		**Pn**	**08 25 59.5**	**+1.5**
PLOR	**Plostina**	**6.30**	**66**	Pn	**Pn**	**08 25 59.5**	**+1.5**
PLOR				Pg	**Pn**	**08 25 59.5**	**+1.5**
ALN	**Alexandroupoli**	**6.31**	**113**	P	**Pn**	**08 25 59.5**	**+1.5**
ALN	**Alexandroupoli**	**6.31**	**113**	Pn	**Pn**	**08 25 59.5**	**+1.5**
ALN	**Alexandroupoli**	**6.31**	**113**	x	**Pn**	**08 25 58.8**	**+0.8**
	comp=Z,15nm,1.1s						
ALN				Pn	Pb	08 25 59.5	-15
ALN				Pg	**Pn**	**08 25 59.5**	**+1.5**
MOTA	**Moosalm**	**6.32**	**309**	*i* Pn	**Pn**	**08 26 01.0**	**+2.6**
	comp=Z,42nm,0.7s,SNR=14						
MOTA				*e*Sn	**Sn**	**08 27 14.2**	**+3.5**
	comp=Z,17nm,0.6s						
MOTA	**Moosalm**	**6.32**	**309**		**Pn**	**08 26 01.0**	**+2.6**
MOTA					**Sn**	**08 27 14.2**	**+3.5**
MOTA	**Moosalm**	**6.32**	**309**	Pn	**Pn**	**08 26 01.0**	**+2.6**
	comp=Z,42nm,0.7s,SNR=14						
MOTA				Sn	**Sn**	**08 27 14.2**	**+3.5**
	comp=Z,17nm,0.6s						
VRI	**Vrincioaia**	**6.36**	**66**	⇑P	**Pn**	**08 25 59.3**	**+0.6**
VRI	**Vrincioaia**	**6.36**	**66**	P	**Pn**	**08 25 59.3**	**+0.6**
VRI	**Vrincioaia**	**6.36**	**66**		**Pn**	**08 25 59.3**	**+0.6**
VRI	**Vrincioaia**	**6.36**	**66**	Pn	**Pn**	**08 25 59.3**	**+0.6**
VRI				Pg	**Pn**	**08 25 59.3**	**+0.6**
FETA	**Feichten**	**6.37**	**305**	*i* Pn	**Pn**	**08 26 00.8**	**+1.8**
	comp=Z,9.0nm,0.3s,SNR=6.9						
FETA				*e*Sn	**Sn**	**08 27 15.3**	**+3.3**
	comp=Z,6.8nm,0.5s						
FETA	**Feichten**	**6.37**	**305**		**Pn**	**08 26 00.8**	**+1.8**
FETA					**Sn**	**08 27 15.3**	**+3.3**
FETA	**Feichten**	**6.37**	**305**	Pn	**Pn**	**08 26 00.8**	**+1.8**
	comp=Z,9.0nm,0.3s,SNR=6.9						
FETA				Sn	**Sn**	**08 27 15.3**	**+3.3**
	comp=Z,6.8nm,0.5s						
MSSA	**Maissana**	**6.43**	**279**		**Pn**	**08 26 01.2**	**+1.5**
KHC	**Kasperske Hory**	**6.43**	**331**	*de*P	**Pn**	**08 26 00.5**	**+0.7**
KHC	**Kasperske Hory**	**6.43**	**331**	*e*PN	**Pn**	**08 26 00.4**	**+0.7**
KHC				*e*SN	**Sn**	**08 27 11.3**	**-1.9**
KHC	**Kasperske Hory**	**6.43**	**331**		**Pn**	**08 26 00.4**	**+0.7**
KHC	**Kasperske Hory**	**6.43**	**331**	Pn	**Pn**	**08 26 00.4**	**+0.7**
KHC				Pg	**Pn**	**08 26 00.5**	**+0.7**
KHC				x	x	08 26 00.9	
	comp=Z,7.1nm,0.9s						
KHC				Sn	**Sn**	**08 27 11.3**	**-1.9**
KRLC	**Kraliky**	**6.55**	**351**	*e*P	**Pn**	**08 26 01.4**	**+0.1**
KRLC	**Kraliky**	**6.55**	**351**	*e*PN	**Pn**	**08 26 01.4**	**+0.1**
KRLC	**Kraliky**	**6.55**	**351**	Pn	**Pn**	**08 26 01.4**	**+0.1**
RETA	**Reutte**	**6.59**	**309**	*i* Pn	**Pn**	**08 26 04.6**	**+2.7**
	comp=Z,6.3nm,0.5s						
RETA	**Reutte**	**6.59**	**309**		**Pn**	**08 26 04.6**	**+2.7**
RETA	**Reutte**	**6.59**	**309**	Pn	**Pn**	**08 26 04.6**	**+2.7**
	comp=Z,6.3nm,0.5s						
WET	**Wettzell**	**6.70**	**327**	x	**Pn**	**08 26 05.7**	**+2.3**
	comp=Z,13nm,0.8s						
FUR	**Furstenfeldbru**	**6.72**	**315**	x	**Pn**	**08 26 05.1**	**+1.4**
	comp=Z,47nm,0.8s						
PBCC	**Pribram**	**6.77**	**335**	*e*PN	**Pn**	**08 26 06.3**	**+1.9**
PBCC	**Pribram**	**6.77**	**335**	Pn	**Pn**	**08 26 06.3**	**+1.9**
DAVOX	**Davos/Dischmat**	**6.78**	**301**	Pn	**Pn**	**08 26 05.7**	**+1.1**
	comp=Z,3.2nm,0.3s,baz=149,slow=18,SNR=25						
DAVOX				Sn	**Sn**	**08 27 21.9**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=310,slow=23,SNR=3.8						
DAVOX				Lg	Lg	08 28 01.5	
	comp=Z,0.8nm,0.3s,baz=11,slow=22,SNR=1.1						
DAVOX	**Davos/Dischmat**	**6.78**	**301**	Pn	**Pn**	**08 26 05.7**	**+1.1**
DAVOX				Pg	**Pn**	**08 26 05.7**	**+1.1**
	comp=Z,3.2nm,0.3s,SNR=25						
DAVOX				Sn	**Sn**	**08 27 21.9**	**-0.1**
	comp=Z,0.4nm,0.3s,SNR=3.8						
DAVOX				Lg	Lg	08 28 01.5	
	comp=Z,0.8nm,0.3s,SNR=1.1						
DPC	**Dobruska-Polom**	**6.88**	**349**	*e*P	**Pn**	**08 26 06.9**	**+1.1**
DPC				*e*		08 27 22.4	
DPC	**Dobruska-Polom**	**6.88**	**349**	*e*PN	**Pn**	**08 26 06.9**	**+1.1**
DPC				*e*SN	**Sn**	**08 27 22.4**	**-1.8**
DPC	**Dobruska-Polom**	**6.88**	**349**	Pn	**Pn**	**08 26 06.9**	**+1.1**
DPC				x	x	08 26 07.6	
	comp=Z,53nm,2.2s						
DPC				Sn	**Sn**	**08 27 22.4**	**-1.8**
PRU	**Pruhonice**	**6.89**	**339**	*e*P	**Pn**	**08 26 07.4**	**+1.4**
PRU	**Pruhonice**	**6.89**	**339**	*e*PN	**Pn**	**08 26 07.4**	**+1.4**
PRU	**Pruhonice**	**6.89**	**339**	Pn	**Pn**	**08 26 07.4**	**+1.4**
PRU				x	x	08 26 08.2	
	comp=Z,4.9nm,1.1s						
PGF	**Pioggiola**	**6.95**	**264**	*e*Pn	**Pn**	**08 26 08.1**	**+1.2**
PGF				*e*Sn	**Sn**	**08 27 21.5**	**-4.5**
	comp=Z,1.0nm,0.3s						
PGF	**Pioggiola**	**6.95**	**264**	Pn	**Pn**	**08 26 08.1**	**+1.2**
PGF				Sn	**Sn**	**08 27 21.5**	**-4.5**
	comp=Z,0.5nm,0.3s						
ITM	**Ithomi**	**6.98**	**156**	Pn	**Pn**	**08 26 08.1**	**+0.9**
ITM	**Ithomi**	**6.98**	**156**	Pn	**Pn**	**08 26 08.1**	**+0.9**
TUE	**Stuetta**	**7.00**	**297**		**Pn**	**08 26 09.2**	**+1.6**
TUE	**Stuetta**	**7.00**	**297**	x	**Pn**	**08 26 09.8**	**+2.1**
	comp=Z,50nm,0.7s						
DAVA	**Damuels**	**7.01**	**304**	*i* Pn	**Pn**	**08 26 09.4**	**+1.7**
	comp=Z,6.0nm,0.3s						
DAVA	**Damuels**	**7.01**	**304**		**Pn**	**08 26 09.4**	**+1.7**
DAVA	**Damuels**	**7.01**	**304**	x	**Pn**	**08 26 09.3**	**+1.6**
	comp=Z,16nm,0.6s						
DAVA				Pn	Pb	08 26 09.4	-17
	comp=Z,6.0nm,0.3s						
DAVA				x	x	08 26 11.4	
	comp=Z,32nm,0.8s						
UBR	**Ueberruh**	**7.07**	**308**	x	**Pn**	**08 26 10.0**	**+1.5**
	comp=Z,14nm,0.8s						
RAFF	**Raffo Rosso**	**7.08**	**207**	Pn	**Pn**	**08 26 09.5**	**+0.9**
RAFF	**Raffo Rosso**	**7.08**	**207**	Pn	**Pn**	**08 26 09.5**	**+0.9**
CHVC	**Chvalec**	**7.15**	**348**	*e*PN	**Pn**	**08 26 09.4**	**-0.1**
CHVC	**Chvalec**	**7.15**	**348**	Pn	**Pn**	**08 26 09.4**	**-0.1**
ROTZ	**Rotzenmuhle**	**7.47**	**328**	x	**Pn**	**08 26 14.9**	**+1.0**
	comp=Z,14nm,1.8s						
ROTZ				x	x	08 26 19.4	
	comp=Z,15nm,1.8s						
BNALP	**Bannalp**	**7.74**	**298**	x	x	08 26 19.9	
	comp=Z,22nm,1.1s						
SAOF	**Saorge**	**7.83**	**276**	x	**Pn**	**08 26 19.3**	**+0.3**
	comp=Z,22nm,0.9s						
BRG	**Berggiesshubel**	**7.86**	**339**	Pn	Pn	08 26 24.2	+5.0
BRG				*e*x	x	08 27 38.3	
BRG				*e*x	x	08 28 07.2	
BRG				Amp		08 28 18.8	
	comp=Z,9.1nm,0.7s						
BRG	**Berggiesshubel**	**7.86**	**339**	Pn	Pn	08 26 24.2	+5.0
BRG				x	x	08 27 38.3	
BRG				x	x	08 28 07.2	
BRG				x	x	08 28 18.8	
	comp=Z,9.1nm,0.7s						
VSL	**Villasalto**	**7.90**	**242**	Pn	**Pn**	**08 26 21.1**	**+1.2**
VSL	**Villasalto**	**7.90**	**242**	x	**Pn**	**08 26 20.9**	**+1.0**
	comp=Z,18nm,1.3s						
VSL				Pn	Pb	08 26 21.1	-21
SBF	**Sospel**	**7.92**	**276**	*e*Pn	**Pn**	**08 26 20.2**	**0.0**
SBF				*e*Sn	**Sn**	**08 27 45.0**	**-5.0**
	comp=Z,22nm,0.5s						
SBF	**Sospel**	**7.92**	**276**	Pn	**Pn**	**08 26 20.2**	**0.0**
SBF				Sn	**Sn**	**08 27 45.0**	**-5.0**
	comp=Z,11nm,0.5s						
SLE	**Schleitheim**	**8.06**	**304**	x	**Pn**	**08 26 22.4**	**+0.3**
	comp=Z,23nm,0.7s						
ISO	**Isola**	**8.20**	**278**	x	**Pn**	**08 26 26.5**	**+2.5**
	comp=Z,13nm,0.9s						
SENIN	**Lac Senin/Sane**	**8.31**	**293**		**Pn**	**08 26 27.3**	**+1.6**
MOX	**Moxa**	**8.40**	**329**	x	**Pn**	**08 26 28.2**	**+1.5**
	comp=Z,13nm,2.2s						
MBDF	**Montbardon**	**8.41**	**282**	*e*Pn	**Pn**	**08 26 25.3**	**-1.7**
MBDF				*e*Sn	**Sn**	**08 27 56.7**	**-5.5**
	comp=Z,12nm,0.5s						
MBDF	**Montbardon**	**8.41**	**282**	Pn	**Pn**	**08 26 25.3**	**-1.7**
MBDF				Sn	**Sn**	**08 27 56.7**	**-5.5**
	comp=Z,6.0nm,0.5s						
BFO	**Black Forest**	**8.43**	**307**	P	**Pn**	**08 26 27.6**	**+0.4**
BFO	**Black Forest**	**8.43**	**307**		**Pn**	**08 26 27.6**	**+0.4**
BFO	**Black Forest**	**8.43**	**307**	x	**Pn**	**08 26 27.5**	**+0.4**
	comp=Z,13nm,1.9s						
BFO				Pn	Pb	08 26 27.6	-23
BFO				x	x	08 26 28.0	
	comp=Z,13nm,1.9s						
BNI	**Bardonecchia**	**8.51**	**284**	P	**Pn**	**08 26 29.0**	**+0.7**
BNI	**Bardonecchia**	**8.51**	**284**		**Pn**	**08 26 29.0**	**+0.7**
BNI	**Bardonecchia**	**8.51**	**284**	Pn	**Pn**	**08 26 29.0**	**+0.7**
BNI				x	x	08 26 29.4	
	comp=Z,17nm,2.2s						
CLL	**Collm**	**8.51**	**337**	*e*Pn	**Pn**	**08 26 31.0**	**+2.9**
CLL				*e*		08 27 23.0	
CLL				*e*		08 27 50.0	
CLL				*e*Sn	**Sn**	**08 27 58.0**	**-6.1**
CLL				*e*Sb	Sg	08 28 30.0	-28
CLL				*e*(Sg)	Sg	08 28 54.0	-3.6
CLL	**Collm**	**8.51**	**337**	*e*P	**Pn**	**08 26 31.0**	**+2.9**
CLL				*e*		08 27 58.0	
CLL	**Collm**	**8.51**	**337**	Pn	**Pn**	**08 26 31.0**	**+2.9**
CLL				Pn	**Pn**	**08 26 31.0**	**+2.9**
CLL				Sn	**Sn**	**08 27 58.0**	**-6.1**
CLL				Lg	Lg	08 28 30.0	
LPG	**La Plagne**	**8.51**	**287**	*e*Pn	**Pn**	**08 26 29.1**	**+0.6**
LPG	**La Plagne**	**8.51**	**287**	*e*P	Pn	08 26 34.4	+5.9
LPG				*e*Sn	**Sn**	**08 27 57.6**	**-7.1**
	comp=Z,27nm,0.7s						
LPG	**La Plagne**	**8.51**	**287**	Pn	**Pn**	**08 26 29.1**	**+0.6**
LPG				Pg	Pn	08 26 34.4	+5.9
LPG				Sn	**Sn**	**08 27 57.6**	**-7.1**
	comp=Z,13nm,0.7s						
FRF	**La Foret Royal**	**8.51**	**274**	*e*Pn	**Pn**	**08 26 29.1**	**+0.9**
FRF	**La Foret Royal**	**8.51**	**274**	Pn	**Pn**	**08 26 29.1**	**+0.9**
APE	**Apeiranthos**	**8.52**	**138**	⇑*e*P	**Pn**	**08 26 31.0**	**+2.6**
APE	**Apeiranthos**	**8.52**	**138**	Pn	**Pn**	**08 26 31.0**	**+2.6**
LPL	**La Plagne**	**8.53**	**287**	*e*Pn	**Pn**	**08 26 29.0**	**+0.4**
LPL	**La Plagne**	**8.53**	**287**	*e*P	Pn	08 26 34.0	+5.4
LPL				*e*Sn	**Sn**	**08 27 59.1**	**-5.9**
	comp=Z,13nm,0.4s						
LPL	**La Plagne**	**8.53**	**287**	Pn	**Pn**	**08 26 29.0**	**+0.4**
LPL				Pg	Pn	08 26 34.0	+5.4
LPL				Sn	**Sn**	**08 27 59.1**	**-5.9**
	comp=Z,6.7nm,0.4s						
OGAG	**Argentiere**	**8.57**	**280**	x	**Pn**	**08 26 30.9**	**+1.8**
	comp=Z,19nm,0.7s						
LMR	**La Mourre**	**8.63**	**272**	*e*Pn	**Pn**	**08 26 29.0**	**-0.9**
LMR				*e*Sn	**Sn**	**08 28 02.2**	**-5.1**
	comp=Z,2.5nm,0.5s						
LMR	**La Mourre**	**8.63**	**272**	Pn	**Pn**	**08 26 29.0**	**-0.9**
LMR				Sn	**Sn**	**08 28 02.2**	**-5.1**
	comp=Z,1.2nm,0.5s						
BOURR	**Bourrignon**	**8.69**	**300**	x	**Pn**	**08 26 31.2**	**+0.5**
	comp=Z,23nm,1.6s						
ORIF	**Oris-en-Rattie**	**9.06**	**283**	*e*Pn	**Pn**	**08 26 35.7**	**-0.1**
ORIF				*e*Sn	**Sn**	**08 28 11.1**	**-6.8**
	comp=Z,16nm,0.6s						
ORIF	**Oris-en-Rattie**	**9.06**	**283**	Pn	**Pn**	**08 26 35.7**	**-0.1**
ORIF				x	x	08 26 37.8	
	comp=Z,17nm,0.8s						
ORIF				Sn	**Sn**	**08 28 11.1**	**-6.8**
	comp=Z,8.0nm,0.6s						
ECH	**Echery**	**9.06**	**304**	P	**Pn**	**08 26 35.9**	**+0.1**
ECH	**Echery**	**9.06**	**304**		**Pn**	**08 26 35.9**	**+0.1**
ECH	**Echery**	**9.06**	**304**	x	**Pn**	**08 26 35.5**	**-0.3**
	comp=Z,15nm,1.2s						
ECH				Pn	Pn	08 26 35.9	+0.1
ECH				x	x	08 26 38.6	
	comp=Z,15nm,1.0s						
HINF	**Hinteralfeld**	**9.08**	**302**	*e*Pn	**Pn**	**08 26 36.6**	**+0.5**
HINF	**Hinteralfeld**	**9.08**	**302**	Pn	**Pn**	**08 26 36.6**	**+0.5**
CDF	**Champ du Feu**	**9.09**	**306**	*e*Pn	**Pn**	**08 26 36.3**	**+0.2**
CDF	**Champ du Feu**	**9.09**	**306**	*e*P	Pn	08 26 42.0	+5.9
CDF	**Champ du Feu**	**9.09**	**306**	Pn	**Pn**	**08 26 36.3**	**+0.2**
CDF				Pg		08 26 42.0	
CABF	**La Chapelle**	**9.19**	**293**	*e*Pn	**Pn**	**08 26 38.1**	**+0.5**
CABF				*e*Sn	**Sn**	**08 28 15.0**	**-6.1**
	comp=Z,6.8nm,0.5s						
CABF	**La Chapelle**	**9.19**	**293**	Pn	**Pn**	**08 26 38.1**	**+0.5**
CABF				Sn	**Sn**	**08 28 15.0**	**-6.1**
	comp=Z,3.4nm,0.5s						
SMRF	**Simiane la Rot**	**9.26**	**277**	*e*Pn	**Pn**	**08 26 39.3**	**+0.7**
SMRF				*e*Sn	**Sn**	**08 28 17.1**	**-5.8**
	comp=Z,3.6nm,0.4s						
SMRF	**Simiane la Rot**	**9.26**	**277**	Pn	**Pn**	**08 26 39.3**	**+0.7**
SMRF				Sn	**Sn**	**08 28 17.1**	**-5.8**
	comp=Z,1.8nm,0.4s						
TNS	**Taunus Mts**	**9.47**	**318**	x	x	08 26 42.5	
	comp=Z,20nm,0.7s						
HAU	**Haudompre**	**9.47**	**302**	*e*Pn	**Pn**	**08 26 41.2**	**-0.2**
HAU				*e*Sn	**Sn**	**08 28 20.8**	**-7.1**
	comp=Z,12nm,0.7s						
HAU	**Haudompre**	**9.47**	**302**	Pn	**Pn**	**08 26 41.2**	**-0.2**
HAU				Sn	**Sn**	**08 28 20.8**	**-7.1**
	comp=Z,5.9nm,0.7s						
IDI	**Anoyia**	**9.72**	**147**	Pn	**Pn**	**08 26 44.2**	**-0.7**
	comp=Z,0.7nm,0.3s,baz=306,slow=14,SNR=1.5						
IDI				Sn	**Sn**	**08 28 28.1**	**-6.2**
	comp=Z,0.7nm,0.3s,baz=108,slow=20,SNR=0.8						
IDI	**Anoyia**	**9.72**	**147**	Pn	**Pn**	**08 26 44.2**	**-0.7**
	comp=Z,0.7nm,0.3s,SNR=1.5						
IDI				Sn	**Sn**	**08 28 28.1**	**-6.2**
	comp=Z,0.7nm,0.3s,SNR=0.8						
VIVF	**Saint-Julien-l**	**9.91**	**282**	*e*Pn	**Pn**	**08 26 46.7**	**-0.8**
VIVF				*e*Sn	**Sn**	**08 28 31.5**	**-7.3**

	comp=Z,1.9nm,0.4s						
VIVF	Saint-Julien-l	9.91	282	Pn	Pn	08 26 46.7	-0.8
VIVF				Sn	Sn	08 28 31.5	-7.3
	comp=Z,0.9nm,0.4s						
PAGF	Fort de Pagny	10.07	304	ePn	Pn	08 26 49.4	-0.2
	baz=123						
PAGF	Fort de Pagny	10.07	304	eP	Pn	08 26 55.6	+6.0
	baz=124						
PAGF				eSn	Sn	08 28 35.8	-6.9
	comp=Z,3.8nm,0.6s						
PAGF	Fort de Pagny	10.07	304	Pn	Pn	08 26 49.4	-0.2
PAGF				Pg		08 26 55.6	
PAGF				Sn	Sn	08 28 35.8	-6.9
	comp=Z,1.9nm,0.6s						
MEZF	Maizieres J'vi	10.46	302	eSn	Sn	08 28 45.1	-7.1
	comp=Z,2.3nm,0.3s						
MEZF	Maizieres J'vi	10.46	302	Sn	Sn	08 28 45.1	-7.1
	comp=Z,1.1nm,0.3s						
SAVF	Savonnieres en	10.46	303	ePn	Pn	08 26 55.1	+0.2
	baz=115						
SAVF	Savonnieres en	10.46	303	Pn	Pn	08 26 55.1	+0.2
LASF	Ste Croix	10.50	277	ePn	Pn	08 26 54.8	-0.7
LASF				eSn	Sn	08 28 46.3	-6.9
	comp=Z,1.3nm,0.4s						
LASF	Ste Croix	10.50	277	Pn	Pn	08 26 54.8	-0.7
LASF				Sn	Sn	08 28 46.3	-6.9
	comp=Z,0.7nm,0.4s						
SMF	Signal de Mont	10.70	291	ePn	Pn	08 26 58.3	0.0
SMF				eSn	Sn	08 28 50.5	-7.7
	comp=Z,26nm,0.9s						
SMF	Signal de Mont	10.70	291	Pn	Pn	08 26 58.3	0.0
SMF				Sn	Sn	08 28 50.5	-7.7
	comp=Z,13nm,0.9s						
LOR	Lormes	10.83	295	ePn	Pn	08 27 00.0	0.0
	baz=107						
LOR				eSn	Sn	08 28 53.5	-7.7
	comp=Z,9.1nm,0.6s						
LOR	Lormes	10.83	295	Pn	Pn	08 27 00.0	0.0
LOR				x	x	08 27 00.1	
	comp=Z,11nm,1.3s						
LOR				Sn	Sn	08 28 53.5	-7.7
	comp=Z,4.5nm,0.6s						
SSF	Saint Saulge	11.02	293	ePn	Pn	08 27 02.8	+0.3
SSF				eSn	Sn	08 28 58.1	-7.7
	comp=Z,5.1nm,0.6s						
SSF	Saint Saulge	11.02	293	Pn	Pn	08 27 02.8	+0.3
SSF				Sn	Sn	08 28 58.1	-7.7
	comp=Z,2.5nm,0.6s						
AVF	Avril sur Loir	11.06	292	ePn	Pn	08 27 02.9	-0.2
AVF	Avril sur Loir	11.06	292	Pn	Pn	08 27 02.9	-0.2
BGF	Bois d'Agland	11.36	290	ePn	Pn	08 27 07.1	-0.2
BGF				eSn	Sn	08 29 06.7	-7.6
	comp=Z,4.2nm,0.4s						
BGF	Bois d'Agland	11.36	290	Pn	Pn	08 27 07.1	-0.2
BGF				Sn	Sn	08 29 06.7	-7.6
	comp=Z,2.1nm,0.4s						
TCF	Toulx Ste Croi	11.76	289	ePn	Pn	08 27 12.1	-0.6
TCF	Toulx Ste Croi	11.76	289	eP	Pn	08 27 19.1	+6.4
TCF				eSn	Sn	08 29 16.3	-7.7
TCF	Toulx Ste Croi	11.76	289	Pn	Pn	08 27 12.1	-0.6
TCF				Pg		08 27 19.1	
TCF				Sn	Sn	08 29 16.3	-7.7
MOS	Moscow	17.31	39	eP	Pn	08 28 22.9	-3.6
MOS	Moscow	17.31	39	Pn	Pn	08 28 22.9	-3.6
FINES	FINESS Array B	18.43	12	P	Pn	08 28 41.8	+1.5
	comp=Z,0.1nm,0.3s,baz=181,slow=13,SNR=1.8						
FINES	FINESS Array B	18.43	12	P	Pn	08 28 41.8	+1.5
	comp=Z,0.1nm,0.3s,SNR=1.8						
FINES				P	Pn	08 28 41.8	+1.5
BELG	Belogornoye	21.32	55	⇑eP	P	08 29 13.9	+2.1
BELG				pmax	pmax		
	comp=Z,2.0nm,1.2s						
BELG	Belogornoye	21.32	55	P	P	08 29 13.9	+2.1
BELG				pmax	pmax		
	comp=Z,2.0nm,1.2s						
TAM	Tamanrasset	23.33	211	x	P	08 29 35.8	+2.3
	comp=Z,5.1nm,2.2s						
KIRV	Kirov	24.29	41	⇑eP	P	08 29 40.7	-1.4
KIRV	Kirov	24.29	41	P	P	08 29 40.7	-1.4
TOA0	Torodi Ar. Sit	33.59	210	P	P	08 31 05.8	+0.5
TOA0				IAmb	IAmb	08 31 13.4	
	comp=Z,6.1nm,1.4s						
TOA0	Torodi Ar. Sit	33.59	210	P	P	08 31 05.8	+0.5
TOA0				i Amb		08 31 13.4	
	comp=Z,6.1nm,1.4s						
TORD	Torodi Ar. Bea	33.59	210	P	P	08 31 05.5	+0.1
	comp=Z,0.7nm,0.6s,baz=14,slow=7.5,SNR=5.0						
TORD	Torodi Ar. Bea	33.59	210	P	P	08 31 05.7	+0.4
TORD	Torodi Ar. Bea	33.59	210	P	P	08 31 05.5	+0.1
	comp=Z,0.7nm,0.6s,SNR=5.0						
TORD				pP	P	08 31 05.7	+0.4
BRVK	Borovoye	35.06	56	eP	P	08 31 18.5	+0.7
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BRVK	Borovoye	35.06	56	P	P	08 31 19.3	+1.4
BRVK				IAmb	IAmb	08 31 20.3	
	comp=Z,3.3nm,1.0s						
BRVK	Borovoye	35.06	56	P	P	08 31 18.5	+0.7
BRVK				x	x	08 31 19.2	
	comp=Z,5.1nm,1.4s						
BRVK				pP	P	08 31 19.3	+1.4
BRVK				i Amb		08 31 20.3	
	comp=Z,3.3nm,1.0s						
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KBL	Kabul	39.83	86	x	P	08 32 01.1	+2.4
	comp=Z,4.4nm,0.5s						
AAK	Ala-Archa	40.30	71	⇑eP	P	08 32 03.2	+0.8
AAK				pmax	pmax		
	comp=Z,28nm,2.9s						
AAK	Ala-Archa	40.30	71	P	P	08 32 03.2	+0.8
AAK				x	x	08 32 03.9	
	comp=Z,10.0nm,1.6s						
AAK				pmax	pmax		
	comp=Z,28nm,2.9s						
DBIC	Dimbokro	42.08	216	P	P	08 32 16.8	-0.3
	comp=Z,1.9nm,0.5s,baz=22,slow=9.8,SNR=5.0						
DBIC	Dimbokro	42.08	216	P	P	08 32 17.2	+0.1
DBIC				IAmb	IAmb	08 32 17.6	
	comp=Z,3.3nm,0.7s						
DBIC	Dimbokro	42.08	216	P	P	08 32 16.8	-0.3
	comp=Z,1.9nm,0.5s,SNR=5.0						
DBIC				P	P	08 32 16.8	-0.3
DBIC				sP	P	08 32 17.2	+0.1
DBIC				x	x	08 32 17.3	
	comp=Z,4.6nm,1.1s						
DBIC				i Amb		08 32 17.6	
	comp=Z,3.3nm,0.7s						
KSH	Kashi	42.55	75	P	P	08 32 20.8	-0.1
KSH				PP	PP	08 34 03.0	+3.6
KSH				S	S	08 38 40.5	-3.0
KSH				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KSH				pmax	pmax		
	comp=Z,160nm,6.0s						
KSH				LR	LR		
	comp=N,280nm,7.6s						
KSH				LR	LR		
	comp=E,380nm,8.3s						
KSH				LR	LR		
	comp=Z,380nm,9.2s						
KSH	Kashi	42.55	75	P	P	08 32 20.8	-0.1
KSH				PP	PP	08 34 03.0	+3.6
KSH				S	S	08 38 40.5	-3.0
ILULI	Ilulissat	42.86	331	P	P	08 32 23.6	+0.8
ILULI				pmax	pmax		
	comp=Z,13nm,1.0s						
ILULI	Ilulissat	42.86	331	P	P	08 32 23.6	+0.8
ILULI	Ilulissat	42.86	331	P	P	08 32 23.6	+0.8
ILULI				P	P	08 32 23.6	+0.8
ILULI				pmax	pmax		
	comp=Z,13nm,1.0s						
MK31	Makanchi Array	44.04	63	P	P	08 32 32.9	+0.2
MK31				pmax	pmax		
	comp=Z,2.0nm,1.5s						
MK31	Makanchi Array	44.04	63	P	P	08 32 32.9	+0.2
MK31				IAmb	IAmb	08 32 33.1	
	comp=Z,2.1nm,1.4s						
MK31	Makanchi Array	44.04	63	P	P	08 32 32.9	+0.2
MK31				P	P	08 32 32.9	+0.2
MK31				i Amb		08 32 33.1	
	comp=Z,2.1nm,1.4s						
MK31				pmax	pmax		
	comp=Z,2.0nm,1.5s						
MKAR	Makanchi Array	44.04	63	P	P	08 32 32.6	-0.2
	comp=Z,0.5nm,0.6s,baz=284,slow=7.7,SNR=7.2						
MKAR	Makanchi Array	44.04	63	P	P	08 32 33.3	+0.6
MKAR	Makanchi Array	44.04	63	P	P	08 32 33.3	+0.6
MKAR	Makanchi Array	44.04	63	P	P	08 32 32.6	-0.2
	comp=Z,0.5nm,0.6s,SNR=7.2						
MKAR				x	x	08 32 33.0	
	comp=Z,5.0nm,0.8s						
MKAR				pP	P	08 32 33.3	+0.6
MKAR				pP	P	08 32 33.3	+0.6
WMQ	Urumqi	48.70	64	eP	P	08 33 12.3	+2.8
WMQ	Urumqi	48.70	64	P	P	08 33 12.3	+2.8
SONM	Songino Array	58.34	52	P	P	08 34 20.6	+0.4
	comp=Z,0.9nm,0.8s,baz=285,slow=7.3,SNR=4.8						
SONM	Songino Array	58.34	52	P	P	08 34 20.6	+0.4
	comp=Z,0.9nm,0.8s,SNR=4.8						
SONM				P	P	08 34 20.6	+0.4
HHC	Hu-ho-hao-te	65.34	56	eP	P	08 35 10.0	+2.6
HHC				pmax	pmax		
	comp=Z,12nm,1.1s						
HHC				pmax	pmax		
	comp=Z,130nm,5.8s						
HHC				LR	LR		
	comp=N,360nm,19.2s						
HHC				LR	LR		
	comp=E,400nm,19.0s						
HHC				LR	LR		
	comp=Z,470nm,21.0s						
HHC	Hu-ho-hao-te	65.34	56	P	P	08 35 10.0	+2.6
YKA	Yellowknife Ar	67.73	338	P	P	08 35 21.8	-0.3
	comp=Z,0.6nm,0.8s,baz=41,slow=5.9,SNR=11						
YKA	Yellowknife Ar	67.73	338	i P	P	08 35 22.1	0.0
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
YKA	Yellowknife Ar	67.73	338	P	P	08 35 21.8	-0.3
	comp=Z,0.6nm,0.8s,SNR=11						
YKA				P	P	08 35 21.8	-0.3
YKA				pP	P	08 35 22.1	0.0
ILAR	Eielson Array	71.33	353	P	P	08 35 44.7	+0.3
	comp=Z,0.3nm,0.6s,baz=7.0,slow=7.1,SNR=2.9						
ILAR	Eielson Array	71.33	353	P	P	08 35 44.7	+0.3
	comp=Z,0.3nm,0.6s,SNR=2.9						
ILAR				P	P	08 35 44.7	+0.3

IDC ***28*** *08:35:08.4±1.0, 33°.82N×87°.91E, h0^{km}, mb3.6/7, mb1 3.7/11, mb1mx3.5/67, mbtmp3.5/11, ML2.7/3, MS3.5/3, Ms1 3.5/3, ms1mx2.9/46, Error ellipse: s-maj=39.9km s-min=17.5km az=61.0*

ISC 28 08:35:13.5±0.9**, 34°.0N**±0°.1×**88°.0E**±0°.2**, h35**^{km}**, n14, σ1§17**/11**, mb3.7**/6**, MS3.4**/3**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	Makanchi Array	13.54	343	Pn	Pn	08 38 21.1	-2.0
	0.0nm,0.3s,baz=145,slow=15,SNR=2.4						
KURBB	Kurchatov Arra	18.05	340	P	Pn	08 39 20.1	-1.3
	0.0nm,0.3s,baz=155,slow=12,SNR=5.6						
CMAR	Chiang Mai Arr	18.26	145	P	P	08 39 22.9	-1.3
	0.3nm,0.3s,baz=331,slow=9.2,SNR=1.6						
SONM	Songino Array	19.56	39	P	Pn	08 39 40.7	+0.8
	0.0nm,0.3s,baz=235,slow=12,SNR=4.2						
ZALV	Zalesovo Beam	20.12	354	P	P	08 39 44.5	+0.3
	0.4nm,0.4s,baz=154,slow=10,SNR=4.2						
BVAR	Borovoye Array	22.84	332	P	P	08 40 14.8	+1.3
	0.9nm,0.7s,baz=143,slow=14,SNR=4.1						
GEYT	Alibeck	24.48	288	LR	LR	08 51 47.9	
	comp=Z,104nm,20.3s,baz=355,slow=41						
AKTO	Aktyubinsk	27.41	316	LR	LR	08 53 59.6	
	comp=Z,93nm,18.9s,baz=315,slow=41						
TGY	Tagaytay City	35.75	116	LR	LR	08 56 35.6	
	comp=Z,63nm,19.3s,baz=103,slow=36						
NOA	NORSAR Array B	54.69	325	P	P	08 44 39.5	+0.7
	1.0nm,0.8s,baz=84,slow=7.4,SNR=3.2						
WRA	Warramunga Arr	69.42	133	P	P	08 46 18.1	0.0
	1.1nm,0.8s,baz=326,slow=6.3,SNR=9.7						
ASAR	Alice Springs	72.02	136	P	P	08 46 34.2	+0.2
	0.7nm,0.7s,baz=317,slow=5.7,SNR=7.6						
TORD	Torodi Ar. Bea	79.77	279	P	P	08 47 18.7	+0.2
	0.6nm,0.8s,baz=50,slow=5.2,SNR=3.2						
YKA	Yellowknife Ar	82.18	10	P	P	08 47 31.1	+0.6
	0.2nm,0.7s,baz=336,slow=4.9,SNR=4.9						

NEIC ***28*** *08:40:40.0±2.0, 35°.65N±0°.05×140°.73E±0°.07, h48^{km}±5^{km}, mb4.6/55, Mwr4.9/22, Error ellipse: s-maj=8.6km s-min=6.9km az=85.0*

JMA ***28*** *08:40:39.0±0.2, 35°.64N×140°.69E, h50^{km}±2^{km}, M4.5 Broadband fault plane solution: P waves. NP1: φ$_s$187.00000°, δ22.00000°, λ81.00000°. NP2: φ$_s$17.00000°, δ68.00000°, λ94.00000°. Principal axes: T Plg67.0000°, Azm294.0000°; N Plg4.0000°, Azm196.0000°; P Plg23.0000°, Azm104.0000°;*

JMA Felt III J1.

NIED ***28*** *08:40:39.0, 35°.64N×140°.69E, h50^{km}, MW5.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.68; M$_{\theta\theta}$-0.27; M$_{\phi\phi}$-2.41; M$_{r\theta}$0.71; M$_{\theta\phi}$-0.85; M$_{\phi r}$2.47; Fault plane solution: M$_0$3.72000×10^{16} NP1: φ$_s$17.00000°, δ67.00000°, λ88.00000°. NP2: φ$_s$201.00000°, δ23.00000°, λ94.00000°.*

NEIC ***28*** *08:40:40, 35°.65N×140°.74E, h51^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.90; M$_{\theta\theta}$-0.27; M$_{\phi\phi}$-0.63; M$_{r\theta}$-0.06; M$_{\theta\phi}$-1.02; M$_{\phi r}$3.05; Fault plane solution: M$_0$3.32000×10^{16} NP1: φ$_s$250.49000°, δ19.34000°, λ156.24000°. NP2: φ$_s$3.05000°, δ82.33000°, λ72.20000°. Principal axes: T 3.4075, Plg50.0000°, Azm254.0000°; N -0.1928, Plg18.0000°, Azm6.0000°; P -3.2147, Plg35.0000°, Azm108.0000°;*

IDC ***28*** *08:40:40.6±1.4, 35°.56N×140°.60E, h56^{km}±14^{km}, mb4.0/28, mb1 4.2/34, mb1mx4.0/59, mbtmp4.3/34, MS4.1/35, Ms1 4.1/35, ms1mx4.0/42 Error ellipse: s-maj=13.3km s-min=8.3km az=88.0*

GCMT ***28*** *08:40:42.0±0.2, 35°.56N±0°.02×140°.80E±0°.02, h46^{km}, MW5.0/100, Moment Tensor Solution. s59, c82; s100, c155; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$3.57±.15; M$_{\theta\theta}$-0.49±.11; M$_{\phi\phi}$-3.08±.10; M$_{r\theta}$0.54±.08; M$_{\theta\phi}$-1.55±.07; M$_{\phi r}$1.71±.07; Best double couple: M$_0$4.10000×10^{16} NP1: φ$_s$209.00000°, δ32.00000°, λ96.00000°. NP2: φ$_s$22.00000°, δ58.00000°, λ86.00000°. Principal axes: T 3.9900, Plg77.0000°, Azm279.0000°; N 0.2200, Plg3.0000°, Azm24.0000°; P -4.2110, Plg13.0000°, Azm114.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 28 08:40:40.2±0.5**, 35°.64N**±0°.04×**140°.72E**±0°.04**, h53**^{km}±4^{km}**, n190, σ1§48**/199**, mb4.5**/64**, MS4.3**/40**, 6C-12D, Fault plane solution: NP1:** φ$_s$4.07587°**,** δ68.98400°**,** λ55.05445°. **NP2:** φ$_s$246.90843°**,** δ40.07781°**,** λ146.14963°. **Principal axes:** T Plg52.6218°**,** Azm232.2258°**;** N Plg32.3233°**,** Azm18.1448°**;** P Plg16.7065°**,** Azm119.0923°**; Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHOJ	Chosi	0.13	60	⇑P	Pn	08 40 47.0	-1.5
CHOJ				S	Sn	08 40 52.8	-1.7
JSMT	Sammumatsuo	0.22	272	⇓P	Pn	08 40 47.6	-1.4
JSMT				S	Sn	08 40 54.3	-1.0
JIHU	Itakohorinouch	0.36	334	⇓P	Pn	08 40 49.3	-0.9
JIHU				S	Sn	08 40 57.2	-0.2
JCN	Nagara	0.48	243	⇓P	Pn	08 40 50.3	-1.1
JCN				S	Sn	08 40 59.0	-0.4
KTR	Katsuura	0.59	214	P	Pn	08 40 51.4	-1.3
KTR				eS	Sn	08 41 00.2	-1.6
BSO4	Boso 4	0.72	206	P	Pn	08 40 53.4	-0.8
JYT	Yasato	0.73	324	⇓P	Pn	08 40 52.7	-1.8
JYT				S	Sn	08 41 03.5	-1.4
JYT	Yasato	0.73	324		Pn	08 40 52.9	-1.6
JYT				Sn	Sn	08 41 03.4	-1.4
BSO3	Boso 3	0.85	192	P	Pn	08 40 54.6	-1.2
BSO1	Boso 1	1.00	168	P	Pn	08 40 56.5	-1.1
JMM	Marumori	2.23	1		Pn	08 41 15.1	+0.5
JMM				Sn	Sn	08 41 37.5	-3.5
MJAR	Matsushiro Arr	2.23	295	P	Pn	08 41 14.4	-0.3
	7.1nm,0.3s,baz=96,slow=14,SNR=163						
MJAR				LR	LR	08 42 15.6	
	comp=Z,7μm,19.7s,baz=115,slow=44						
MJAR	Matsushiro Arr	2.23	295	Pn	Pn	08 41 13.9	-0.8
MAJO	Matsushiro	2.23	295		Pn	08 41 15.1	+0.3
MAT	Matsushiro	2.23	295	P	Pn	08 41 14.8	+0.1
MAT				eS	Sn	08 41 42.4	+1.3
MJB9	Matsu-Tunnel	2.23	295		Pn	08 41 14.9	+0.1
JSG	Sagara	2.29	246		Pn	08 41 15.9	+0.4
JHJ	Hachijo jima 2	2.63	197	P	Pn	08 41 19.1	-1.1
	135nm,0.3s,baz=318,slow=23,SNR=49						
JHJ				S	Sn	08 41 49.2	-1.6
	288nm,0.3s,baz=78,slow=22,SNR=10						
JHJ				LR	LR	08 42 34.6	
	comp=Z,2μm,19.9s,baz=34,slow=45						
JHJ2	Mitsune	2.63	197		Pn	08 41 19.9	-0.3
JGF	Kuroka	2.74	270		Pn	08 41 22.6	+0.8
INU	Inuyama	3.04	266		Pn	08 41 26.1	+0.3
JSD	Sado	3.10	321	Pn	Pn	08 41 27.2	+0.5
JWT	Wachi	4.36	267	Pn	Pn	08 41 45.1	+1.2
JTM	Tenmabayashi	5.15	3	Pn	Pn	08 41 55.2	+0.5
JMN	Monobe	5.95	253	Pn	Pn	08 42 06.9	+1.2
JHS	Saijyo	6.25	266	Pn	Pn	08 42 11.0	+1.1
ERM	Erimo	6.65	16	Pn	Pn	08 42 13.6	-1.6
JEW	Eniwo	7.22	4	Pn	Pn	08 42 21.7	-1.3
JNU	Nakatsue	8.51	256	P	Pn	08 42 40.1	-0.8
	0.5nm,0.3s,baz=65,slow=9.0,SNR=4.1						
JNU				LR	LR	08 46 28.2	
	comp=Z,3μm,18.2s,baz=67,slow=41						
ASAJ	Asahikawa	8.59	9	P	Pn	08 42 39.9	-2.0
	5.0nm,0.3s,baz=208,slow=12,SNR=14						
ASAJ				S	Sn	08 44 12.3	-5.0
	1.4nm,0.3s,baz=9.5,slow=18,SNR=1.5						
ASAJ				LR	LR	08 47 01.2	
	comp=Z,425nm,21.1s,baz=192,slow=44						
JCJ	Chichijima	8.61	171	P	Pn	08 42 38.5	-3.7
	72nm,0.3s,baz=353,slow=7.8,SNR=27						
JCJ				S	Sn	08 44 07.2	-11
	39nm,0.3s,baz=307,slow=20,SNR=3.3						
KSRS	Korea Array	10.46	284	P	Pn	08 43 07.9	+0.5
	0.2nm,0.3s,baz=101,slow=14,SNR=17						
KSRS				LR	LR	08 47 12.7	
	comp=Z,2μm,19.4s,baz=122,slow=38						
USRK	Ussuriysk Ar.	10.86	325	P	Pn	08 43 14.3	+1.4
	baz=124,slow=12,SNR=14						
USRK				LR	LR	08 47 07.2	
	comp=Z,1μm,19.8s,baz=136,slow=36						
USRK	Ussuriysk Ar.	10.86	325	Pn	Pn	08 43 13.1	+0.2
MDJ	Mudanjiang	12.36	320	P	Pn	08 43 35.8	+2.5
MDJ				pP	P	08 43 38.0	-5.9
MDJ				sP		08 43 39.5	
MDJ				PP	PnPn	08 43 44.5	+3.2
MDJ				S	Sn	08 45 51.0	+1.6
MDJ				SS	SnSn	08 46 04.0	+2.0
MDJ				pmax	pmax		
	comp=Z,2.0nm,0.5s						
MDJ				pmax	pmax		
	comp=Z,410nm,5.3s						
MDJ				LR	LR		
	comp=N,800nm,14.1s						
MDJ				LR	LR		
	comp=E,850nm,12.7s						
MDJ				LR	LR		
	comp=Z,2μm,21.6s						
JOW	Kunigami	13.79	234	LR	LR	08 48 57.6	
	comp=Z,783nm,21.7s,baz=77,slow=36						
KLR	Kul'dur	15.10	337	P	Pn	08 44 10.1	0.0
	comp=Z,0.3nm,0.3s,baz=132,slow=11,SNR=8.6						
DL2	Dalian	15.55	288	P	P	08 44 18.5	-0.8
DL2				sP	pP	08 44 32.5	+1.4
DL2				S	S	08 47 15.8	-4.3
DL2				pmax	pmax		
	comp=Z,34nm,0.7s						
DL2				pmax	pmax		
	comp=Z,320nm,5.1s						
DL2				LR	LR		
	comp=N,390nm,19.2s						
DL2				LR	LR		
	comp=E,1μm,22.5s						
DL2				LR	LR		
	comp=Z,2μm,22.3s						
NJ2	Nanjing	18.51	265	eP	Pn	08 44 53.8	+1.1
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
NJ2				LR	LR		
	comp=N,710nm,16.1s						
NJ2				LR	LR		
	comp=E,880nm,17.7s						
NJ2				LR	LR		
	comp=Z,940nm,15.2s						
BJI	Beijing	19.86	290	P	P	08 45 05.3	-1.5
BJI				S	S	08 48 49.0	+1.6
BJI				pmax	pmax		
	comp=Z,8.0nm,1.2s						
BJI				pmax	pmax		
	comp=Z,110nm,5.2s						
BJI				LR	LR		
	comp=N,300nm,20.2s						
BJI				LR	LR		
	comp=E,470nm,21.1s						
BJI				LR	LR		
	comp=Z,850nm,42.6s						
BJT	Baijiatuau	19.86	290		P	08 45 05.6	-1.3
NACB	Ninganchiao	20.10	241	P	P	08 45 08.2	-1.3
NACB				IAmb	IAmb	08 45 36.8	
	comp=Z,45nm,1.5s						
PETK	Petropavlovsk-	21.18	29	P	P	08 45 22.0	+1.0
	comp=Z,7.3nm,1.0s,baz=232,slow=6.4,SNR=6.0						
PETK				LR	LR	08 54 33.1	
	comp=Z,77nm,18.7s,baz=217,slow=39						
WHN	Wuhan	22.64	265	⇑P	P	08 45 35.8	-1.0
WHN				pmax	pmax		
	comp=Z,28nm,0.6s						
HHC	Hu-ho-hao-te	23.43	292	eP	P	08 45 45.5	+0.8
HHC				pmax	pmax		
	comp=Z,12nm,1.0s						
HHC				pmax	pmax		
	comp=Z,180nm,6.1s						
HHC				LR	LR		
	comp=N,210nm,10.4s						
HHC				LR	LR		
	comp=E,360nm,12.0s						
HHC				LR	LR		
	comp=Z,390nm,13.3s						
MA2	Magadan	24.83	12	P	P	08 45 58.3	+1.0
	comp=Z,10nm,0.9s,baz=189,slow=7.9,SNR=14						
MA2	Magadan	24.83	12	P	P	08 45 58.5	+1.2
MA2				IAmb	IAmb	08 46 13.3	
	comp=Z,17nm,0.8s						
XAN	Xi'an	26.09	276	P	P	08 46 07.0	-2.0
XAN				pP	pP	08 46 25.5	+3.1
XAN				sP	sP	08 46 33.3	+4.6
XAN				pmax	pmax		
	comp=Z,14nm,0.8s						
XAN				LR	LR		
	comp=N,650nm,18.4s						
XAN				LR	LR		
	comp=E,690nm,20.6s						
XAN				LR	LR		
	comp=Z,1μm,22.8s						
XAN	Xi'an	26.09	276	P	P	08 46 07.3	-1.8
XAN				IAmb	IAmb	08 46 09.1	
	comp=Z,9.1nm,0.6s						
ENH	Enshi	26.68	267	P	P	08 46 12.4	-2.0
ULN	Ulaanbaatar	27.71	307	P	P	08 46 23.8	+0.3
H11N2	WAKE ISLAND Hy	27.96	118	T	T	09 15 38.6	
	baz=310,slow=75						
H11N1	WAKE ISLAND Hy	27.96	118	T	T	09 15 31.0	
	baz=310,slow=75						
H11N3	WAKE ISLAND Hy	27.97	118	T	T	09 15 33.6	
	baz=310,slow=75						
SONM	Songino Array	28.13	306	P	P	08 46 26.2	-1.1
	comp=Z,3.3nm,0.7s,baz=108,slow=8.5,SNR=16						
SONM				LR	LR	08 57 58.4	
	comp=Z,542nm,19.0s,baz=106,slow=37						
SONM	Songino Array	28.13	306	P	P	08 46 26.6	-0.6
SEY	Seymchan	28.27	11	P	P	08 46 28.9	+0.7
	comp=Z,2.7nm,0.8s,baz=219,slow=7.6,SNR=7.2						
H11S1	WAKE ISLAND Hy	28.61	120	T	T	09 16 22.0	
	baz=312,slow=75						
H11S3	WAKE ISLAND Hy	28.61	120	T	T	09 16 22.0	
	baz=312,slow=75						
H11S2	WAKE ISLAND Hy	28.63	120	T	T	09 16 23.1	
	baz=312,slow=75						
LZH	Lanzhou	29.78	282	eP	P	08 46 40.0	-2.1
LZH				pP	pP	08 46 49.0	-6.6
LZH				sP	sP	08 46 53.0	-8.8
LZH				pmax	pmax		
	comp=Z,17nm,1.3s						
GYA	Guiyang	30.45	262	⇓P	P	08 46 46.0	-2.1
GYA				pP	pP	08 46 59.8	-1.8

GYA				S	S	08 51 37.8	-7.8
GYA				ScP	ScP	08 53 27.0	+2.6
GYA				pmax	pmax		
	comp=Z,14nm,0.9s						
GYA				pmax	pmax		
	comp=Z,130nm,4.5s						
GYA				LR	LR		
	comp=N,250nm,7.7s						
GYA				LR	LR		
	comp=E,280nm,12.5s						
GYA				LR	LR		
	comp=Z,260nm,22.3s						
TLY	Talaya	30.85	313	P	P	08 46 51.2	+0.1
	comp=Z,2.5nm,0.7s,baz=53,slow=16,SNR=6.5						
TLY	Talaya	30.85	313	P	P	08 46 51.6	+0.4
QIZ	Qiongzhong	31.86	247	P	P	08 47 02.0	+1.7
QIZ				S	S	08 52 10.5	+3.1
QIZ				SS	SS	08 54 30.0	+4.5
QIZ				LR	LR		
	comp=N,300nm,30.9s						
QIZ				LR	LR		
	comp=E,360nm,21.1s						
QIZ				LR	LR		
	comp=Z,320nm,20.6s						
GTA	Gaotai	32.46	289	eP	P	08 47 05.3	-0.4
GTA				pP	pP	08 47 19.0	-0.2
GTA				sP	sP	08 47 23.5	-2.0
GTA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
GTA				pmax	pmax		
	comp=Z,190nm,6.2s						
GTA				LR	LR		
	comp=N,280nm,18.5s						
GTA				LR	LR		
	comp=E,450nm,18.9s						
GTA				LR	LR		
	comp=Z,560nm,20.4s						
KMI	Kunming	34.21	263⇓	eP	P	08 47 22.0	+0.9
KMI				pmax	pmax		
	comp=Z,6.0nm,0.9s						
TIXI	Tiksi	36.61	354	P	P	08 47 40.5	-0.4
FAKI	Fak Fak	39.17	193	P	P	08 48 02.6	-0.4
FAKI				IAmb	IAmb	08 48 18.8	
	comp=Z,14nm,0.8s						
CMAR	Chiang Mai Arr	40.61	256	P	P	08 48 14.6	-0.5
	comp=Z,1.1nm,0.4s,baz=48,slow=7.7,SNR=5.9						
CMAR				LR	LR	09 06 51.5	
	comp=Z,301nm,18.1s,baz=98,slow=39						
CMAR	Chiang Mai Arr	40.61	256	P	P	08 48 14.8	-0.3
WMQ	Urumqi	40.99	298	eP	P	08 48 19.0	+1.0
WMQ				pP	pP	08 48 34.8	+3.0
WMQ				pmax	pmax		
	comp=Z,17nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,170nm,4.1s						
WMQ				LR	LR		
	comp=N,460nm,29.1s						
WMQ				LR	LR		
	comp=E,1µm,29.0s						
WMQ				LR	LR		
	comp=Z,240nm,28.8s						
LSA	Lhasa	41.79	276	P	P	08 48 25.6	+0.3
LSA				IAmb	IAmb	08 48 31.6	
	comp=Z,7.0nm,0.7s						
ZAA0	Zalesovo Array	42.45	314	P	P	08 48 30.1	+0.4
ZAA0				IAmb	IAmb	08 48 49.5	
	comp=Z,8.5nm,0.9s						
ZALV	Zalesovo Beam	42.45	314	P	P	08 48 29.7	0.0
	comp=Z,6.4nm,0.7s,baz=87,slow=6.5,SNR=26						
ZALV				LR	LR	09 05 57.9	
	comp=Z,180nm,19.9s,baz=63,slow=36						
ZALV	Zalesovo Beam	42.45	314	P	P	08 48 30.7	+0.9
ZSN	Zaisan	42.58	304	eP	P	08 48 29.8	-1.1
	comp=Z,6.1nm,0.8s,baz=304						
NRIK	Noril'sk	44.31	336	P	P	08 48 44.6	+0.2
	comp=Z,7.9nm,0.9s,baz=103,slow=10,SNR=12						
NRIK				LR	LR	09 08 07.6	
	comp=Z,352nm,19.4s,baz=108,slow=37						
NRIK	Noril'sk	44.31	336	P	P	08 48 44.7	+0.3
MK31	Makanchi Array	44.40	303	P	P	08 48 45.8	+0.2
MKAR	Makanchi Array	44.40	303	P	P	08 48 45.4	-0.2
	comp=Z,5.5nm,0.8s,baz=92,slow=9.4,SNR=61						
MKAR				LR	LR	09 07 52.8	
	comp=Z,399nm,19.4s,baz=79,slow=37						
MKAR	Makanchi Array	44.40	303	P	P	08 48 45.6	+0.1
MAKZ	Makanchi	44.61	303	P	P	08 48 47.3	+0.1
SEM	Semipalatinsk	45.36	309	eP	P	08 48 52.2	-1.2
	baz=308						
KURK	Kurchatov	46.36	309	P	P	08 49 00.9	-0.1
KURBB	Kurchatov Arra	46.43	309	P	P	08 49 01.1	-0.3
	comp=Z,13nm,0.9s,baz=83,slow=8.3,SNR=49						
SHLS	Shalkode	47.00	299	eP	P	08 49 03.3	-3.0
	baz=298						
UZB	Uzynbulak	47.32	299	eP	P	08 49 08.0	-0.8
	baz=298						
TDK	Taldyqorghan	47.37	301	eP	P	08 49 08.2	-0.7
	baz=301						
KPKS	Kokpek	47.49	299	eP	P	08 49 09.2	-0.8
	baz=299						
SATY	Saty	47.78	299	eP	P	08 49 11.9	-0.4
	baz=298						
A21K	Barrow	47.96	23	P	P	08 49 15.0	+2.0
OHAK	Old Harbor	48.16	42	P	P	08 49 15.2	+0.4
BATI	Baumata	48.36	203	P	P	08 49 16.1	-0.7
	comp=Z,32nm,0.5s,baz=117,slow=1.8,SNR=6.4						
KDAK	Kodiak Island	48.51	41	P	P	08 49 17.6	0.0
	comp=Z,7.6nm,1.0s,baz=277,slow=8.1,SNR=2.4						
CHKK	Chushkaly	48.60	300	eP	P	08 49 17.9	-0.6
	baz=300						
MDOK	Medeo	48.72	299	eP	P	08 49 18.7	-0.9
	baz=299						
KUU	Kurty	49.05	300	eP	P	08 49 21.1	-0.9
	baz=300						
BRZS	Berezniki	50.24	309	eP	P	08 49 29.8	-1.1
	comp=Z,4.7nm,0.8s,baz=309						
BTLS	Baital	50.38	302	eP	P	08 49 31.0	-0.9
	comp=Z,2.8nm,0.7s,baz=302						
MDM	Murphy Dome	50.40	31	P	P	08 49 33.1	+1.3
MDM				IAmb	IAmb	08 49 35.1	
	comp=Z,14nm,1.2s						
KSH	Kashi	50.47	295	P	P	08 49 37.8	+4.9
KSH				S	S	08 56 36.8	-6.2
KSH				pmax	pmax		
	comp=Z,5.0nm,1.3s						
AAK	Ala-Archa	50.67	299	P	P	08 49 34.0	-0.5
AAK				IAmb	IAmb	08 49 37.8	
	comp=Z,5.5nm,0.9s						
SCM	Sheep Creek Mo	50.92	36	P	P	08 49 37.7	+1.7
SCM				IAmb	IAmb	08 50 05.9	
	comp=Z,14nm,1.4s						
HDA	Harding Lake	50.96	32	P	P	08 49 37.2	+1.2
IL31		50.97	32	P	P	08 49 37.2	+1.2
IL31				IAmb	IAmb	08 49 58.6	
	comp=Z,11nm,1.4s						
ILAR	Eielson Array	50.97	32	P	P	08 49 37.1	+1.0
	comp=Z,2.2nm,0.8s,baz=270,slow=6.0,SNR=22						
ILAR				LR	LR	09 12 05.7	
	comp=Z,49nm,21.6s,baz=278,slow=37						
ILAR	Eielson Array	50.97	32	P	P	08 49 37.4	+1.2
BRVK	Borovoye	51.16	313	P	P	08 49 38.6	+0.8
BRVK				IAmb	IAmb	08 49 40.2	
	comp=Z,4.7nm,0.8s						
BMAR	Burnt Mountain	51.82	28	P	P	08 49 43.9	+1.3
MCARA	McCarthy VSAT	53.02	36	P	P	08 49 52.5	+1.1
MCARA				IAmb	IAmb	08 50 09.3	
	comp=Z,9.2nm,1.0s						
CRQM	Cirque	53.05	37	P	P	08 49 52.2	+0.3
CRQM				IAmb	IAmb	08 49 55.6	
	comp=Z,6.6nm,1.0s						
KK31	Karatay Array	53.35	301	P	P	08 49 53.9	-0.3
KK31				IAmb	IAmb	08 50 07.3	
	comp=Z,6.6nm,1.0s						
KKAR	Karatay Array	53.35	301	P	P	08 49 54.1	-0.1
KKAR				IAmb	IAmb	08 50 07.3	
	comp=Z,6.6nm,1.0s						
BCAR	Beaver Creek A	53.36	34	P	P	08 49 53.7	-0.3
IUG	Iuzhnay	53.98	300	eP	P	08 49 58.0	-0.8
	baz=300						
NIL	Nilore	54.53	289	P	P	08 50 02.3	-0.6
FITZ	Fitzroy Crossi	55.32	198	P	P	08 50 08.0	-0.6
	comp=Z,5.7nm,0.9s,baz=9.6,slow=9.5,SNR=13						
FITZ	Fitzroy Crossi	55.32	198	P	P	08 50 09.2	+0.7
FITZ				IAmb	IAmb	08 50 13.4	
	comp=Z,9.9nm,1.1s						
WB0	Warramunga Arr	55.43	187	P	P	08 50 08.7	-0.6
WRAB	Tennant Creek	55.59	187	P	P	08 50 10.1	-0.4
WRAB				IAmb	IAmb	08 50 28.3	
	comp=Z,7.2nm,0.7s						
WR0	Warramunga Arr	55.60	187	P	P	08 50 10.2	-0.4
WR0				IAmb	IAmb	08 50 28.4	
	comp=Z,9.3nm,0.8s						
WB2	Warramunga Arr	55.60	187	P	P	08 50 10.1	-0.5
WRA	Warramunga Arr	55.60	187	P	P	08 50 09.3	-1.3
	comp=Z,2.0nm,0.3s,baz=3.3,slow=7.7,SNR=38						
WRA				LR	LR	09 11 25.7	
	comp=Z,75nm,21.3s,baz=10.0,slow=33						
HYT	Haines Junctio	55.75	36	P	P	08 50 13.8	+2.4
HYT				IAmb	IAmb	08 50 30.1	
	comp=Z,6.5nm,1.2s						
INK	Inuvik	55.88	27	P	P	08 50 12.7	+0.6
	comp=Z,0.9nm,0.4s,baz=279,slow=3.5,SNR=6.3						
INK	Inuvik	55.88	27	P	P	08 50 13.7	+1.6
INK				IAmb	IAmb	08 50 14.1	
	comp=Z,6.7nm,1.4s						
ARU	Arti	57.04	319	P	P	08 50 20.5	+0.1
ABKAR	Akbulak array	58.42	311	P	P	08 50 30.2	-0.1
ABKAR	Akbulak array	58.42	311	P	P	08 50 30.1	-0.2
AKTO	Aktyubinsk	59.20	312	P	P	08 50 36.1	+0.4
	comp=Z,3.6nm,0.9s,baz=77,slow=12,SNR=10						
AS31	Alice Springs	59.33	187	P	P	08 50 37.5	+0.7
ASAR	Alice Springs	59.33	187	P	P	08 50 36.0	-0.8
	comp=Z,0.8nm,0.5s,baz=20,slow=10,SNR=18						
ASAR				LR	LR	09 13 41.1	
	comp=Z,62nm,21.0s,baz=12,slow=33						
ASAR	Alice Springs	59.33	187	P	P	08 50 36.2	-0.6
DZM	Mont Dzumac	62.35	153	eLR	LR	09 09 39.5	
	comp=Z,314nm,25.8s						
GEYT	Alibeck	64.02	299	LR	LR	09 20 10.2	
	comp=Z,222nm,18.4s,baz=0.0,slow=37						
ARCES	ARCESS Array B	65.11	339	P	P	08 51 14.9	0.0
	comp=Z,5.6nm,0.9s,baz=75,slow=6.6,SNR=7.2						
ARCES				LR	LR	09 22 53.0	
	comp=Z,322nm,20.0s,baz=255,slow=39						
YKA	Yellowknife Ar	65.30	30	P	P	08 51 16.7	+0.5
	comp=Z,0.9nm,0.8s,baz=297,slow=6.0,SNR=12						
YKA				LR	LR	09 23 59.9	
	comp=Z,44nm,18.5s,baz=0.0,slow=40						
FORT	Forrest	67.13	192	P	P	08 51 28.6	+0.3
STKA	Stephens Creek	67.16	179	LR	LR	09 20 45.8	
	comp=Z,62nm,21.6s,baz=26,slow=36						
FIA1	FINESS Array S	69.79	332	P	P	08 51 44.8	+0.3
FIA1				IAmb	IAmb	08 51 46.8	
	comp=Z,11nm,0.9s						
FINES	FINESS Array B	69.79	332	P	P	08 51 44.5	-0.1
	comp=Z,5.9nm,0.8s,baz=55,slow=6.0,SNR=14						
FINES	FINESS Array B	69.79	332	P	P	08 51 44.6	0.0
KBZ	Khabaz	71.39	311	P	P	08 51 54.9	+0.2
	comp=Z,6.1nm,0.8s,baz=338,slow=1.5,SNR=8.3						
KBZ				LR	LR	09 27 01.1	
	comp=Z,143nm,19.6s,baz=55,slow=39						
GNI	Garni	72.09	307	LR	LR	09 26 16.4	
	comp=Z,234nm,19.3s,baz=52,slow=38						
MNK	Minsk	73.33	326	i P	P	08 52 06.4	+0.4
	comp=E,2.0nm,0.7s						
MNK				i P	P	08 52 06.4	+0.4
	comp=N,7.0nm,0.7s						
MNK				i P	P	08 52 06.4	+0.4
	comp=Z,11nm,0.8s						
MNK				i pP	PcP	08 52 22.9	+0.8
MNK				i PP	PP	08 54 49.3	-0.1
MNK				i PPP	PPP	08 56 34.0	
MNK				i S	S	09 01 29.5	-1.1
MNK				i sS	sS	09 01 57.8	+2.1
MNK				i ScS	ScS	09 02 08.9	-1.2
MNK				i SS	SS	09 06 11.9	-0.5
MNK				i SSS	SSS	09 09 32.9	
MNK				i LQ	LQ	09 19 22.7	
MNK				i LR	LR	09 24 56.3	
MNK				i LRM	MLR	09 26 45.4	
	comp=E,22nm,14.5s						
MNK				i LRM	MLR	09 27 27.6	
	comp=N,149nm,12.7s						
MNK				i LRM	MLR	09 27 27.6	
	comp=Z,142nm,15.4s						
NACGM	Naroch	73.58	327	i P	P	08 52 07.0	-0.4
NACGM				i P	P	08 52 07.0	-0.4
NACGM				i P	P	08 52 07.9	+0.4
NACGM				i PcP	pP	08 52 20.2	-2.2
NACGM				i PP	PP	08 54 51.8	+0.4
NACGM				i PPP	PPP	08 56 38.1	
NACGM				i S	S	09 01 37.3	+3.9
NACGM				i SS	SS	09 05 54.9	-21
NACGM				i SSS	SSS	09 09 04.8	
NACGM				i LQ	LQ	09 19 50.3	
NACGM				i LR	LR	09 25 30.2	
AKASG	Malin Array Be	75.06	322	P	P	08 52 15.8	-0.3
	comp=Z,4.5nm,0.7s,baz=48,slow=5.9,SNR=21						
AKASG	Malin Array Be	75.06	322	P	P	08 52 15.8	-0.3
HFS	Hagfors	75.13	336	LR	LR	09 26 51.9	
	comp=Z,305nm,19.8s,baz=37,slow=37						
FFC	Flin Flon	75.18	32	P	P	08 52 17.7	+0.9
NB2	NORSAR Subarra	75.25	337	P	P	08 52 17.3	+0.1
	comp=Z,3.6nm,0.9s,baz=41,slow=5.9						
NOA	NORSAR Array B	75.25	337	P	P	08 52 17.4	+0.3
	comp=Z,4.9nm,0.9s,baz=39,slow=5.8,SNR=11						
NOA				LR	LR	09 28 04.9	
	comp=Z,220nm,20.5s,baz=45,slow=38						
FCC	Fort Churchill	75.50	26	P	P	08 52 18.9	+0.4
FCC				IAmb	IAmb	08 52 34.2	
	comp=Z,6.4nm,1.1s						
NVAR	Mina Array Bea	76.28	53	P	P	08 52 25.1	+1.4
	comp=Z,0.9nm,0.6s,baz=301,slow=5.5,SNR=12						
NVAR				LR	LR	09 22 09.3	
	comp=Z,61nm,19.7s,baz=272,slow=32						
NVAR	Mina Array Bea	76.28	53	P	P	08 52 24.8	+1.2
KWP	Kalwaria Pacla	78.94	324	P	P	08 52 39.2	+1.3
PDAR	Pinedale Array	79.05	45	P	P	08 52 40.4	+1.4
	comp=Z,0.8nm,0.6s,baz=265,slow=1.6,SNR=9.4						
PDAR				LR	LR	09 22 54.4	
	comp=Z,44nm,21.7s,baz=332,slow=32						
PDAR	Pinedale Array	79.05	45	P	P	08 52 40.1	+1.1
BURAR	Bucovina Array	79.06	322	P	P	08 52 39.0	+0.2
BR131	Keskin Array S	79.36	311	P	P	08 52 40.3	-0.4
BR131				IAmb	IAmb	08 52 42.8	
	comp=Z,9.2nm,1.0s						
BRTR	Keskin Array B	79.36	311	P	P	08 52 41.3	+0.6
	comp=Z,2.9nm,0.8s,baz=100,slow=1.8,SNR=10						
BRTR				LR	LR	09 33 26.0	
	comp=Z,124nm,18.1s,baz=52,slow=40						
BRTR	Keskin Array B	79.36	311	P	P	08 52 40.4	-0.3
KOLS	Kolonicke sedl	79.62	324	eP	P	08 52 42.8	+1.1
OJC	Ojcow	79.88	326	P	P	08 52 42.7	-0.4
OJC				IAmb	IAmb	08 52 46.1	
	comp=Z,15nm,1.2s						
PFO	Pinyon Flats O	80.28	56	LR	LR	09 20 54.6	
	comp=Z,164nm,20.6s,baz=287,slow=30						
RAYN	Ar Rayn	80.67	292	P	P	08 52 46.8	-1.1
RAYN				IAmb	IAmb	08 52 48.5	
	comp=Z,4.9nm,0.8s						
ULM	Lac du Bonnet	80.98	33	LR	LR	09 28 43.2	
	comp=Z,55nm,21.5s,baz=327,slow=36						
CLL	Collm	82.02	330	eP	P	08 52 54.0	-0.5
CLL	Collm	82.02	330	P	P	08 52 54.3	-0.2
CLL				IAmb	IAmb	08 52 57.6	
	comp=Z,5.7nm,0.9s						
PV14	Lion Creek, Pa	82.13	48	P	P	08 52 56.5	+0.9
PV14				IAmb	IAmb	08 53 22.2	
	comp=Z,6.3nm,0.8s						
KHC	Kasperske Hory	83.44	328	eP	P	08 53 02.5	+0.6
GERES	GERESS Array B	83.60	328	P	P	08 53 02.6	-0.2
	comp=Z,0.8nm,0.7s,baz=38,slow=5.0,SNR=4.5						
GERES				LR	LR	09 31 53.4	
	comp=Z,171nm,20.1s,baz=40,slow=37						
PPT	Papeete	84.52	116	LR	LR	09 24 15.9	
	comp=Z,120nm,21.9s,baz=326,slow=31						
PPT2	Papeete2	84.53	116	eLR	LR	09 19 36.4	
	comp=Z,272nm,22.2s,baz=318						
SDCO	Great Sand Dun	84.65	47	P	P	08 53 08.7	0.0
EIL	Elat	84.66	303	LR	LR	09 33 55.4	
	comp=Z,67nm,20.8s,baz=33,slow=38						
BFO	Black Forest	86.24	330	P	P	08 53 13.6	-2.4
BFO				IAmb	IAmb	08 53 17.1	
	comp=Z,5.6nm,1.0s						
TAOE	Nuku Hiva Isla	86.38	103	eLR	LR	09 20 31.4	
	comp=Z,398nm,25.2s						
TBI	Tubuai	88.30	120	eLR	LR	09 21 26.3	
	comp=Z,247nm,27.2s,baz=305						
TX31	Lajitas Ar. Si	91.42	52	P	P	08 53 41.1	+0.1
TXAR	Lajitas Array	91.42	52	P	P	08 53 42.4	+1.4
	comp=Z,0.4nm,0.7s,baz=324,slow=4.6,SNR=4.8						
TXAR				LR	LR	09 30 40.7	
	comp=Z,64nm,20.4s,baz=0.0,slow=33						
TXAR	Lajitas Array	91.42	52	P	P	08 53 41.9	+0.9
KEST	Kesra	95.79	322	LR	LR	09 40 41.2	
	comp=Z,139nm,19.2s,baz=264,slow=38						
ESDC	Sonseca Array	98.29	333	LR	LR	09 45 13.6	
	comp=Z,148nm,18.3s,baz=30,slow=39						
RKT	Rikitea	98.75	112	eLR	LR	09 26 19.9	
	comp=Z,299nm,23.0s						
H03N2	Juan Fernandez	147.41	98	T	T	11 44 57.5	
	baz=290,slow=76						
H03N3	Juan Fernandez	147.42	98	T	T	11 45 02.9	
	baz=290,slow=76						
H03N1	Juan Fernandez	147.43	98	T	T	11 44 51.7	
	baz=290,slow=76						
LPAZ	La Paz	147.87	61	PKPbc	PKPbc	09 00 21.1	+0.4
	comp=Z,0.7nm,0.5s,baz=29,slow=1.6,SNR=3.6						

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*TRN **28** 08:42:26.7, 17°.87N×63°.71W, h168^{km}, MD3.9*
*IDC **28** 08:42:27.5±1.4, 17°.49N×63°.79W, h156^{km}±30^{km}, mb3.6/6, mb1 3.8/7, mb1mx3.3/37, mbtmp4.0/7, MS3.6/1, Ms1 3.6/1, ms1mx2.6/45, Error ellipse: s-maj=129.7km s-min=7.5km az=20.0*
*NEIC **28** 08:42:28.8±1.6, 17°.8N±0°.1×63°.78W±0°.06, h158^{km}±6^{km}, Error ellipse: s-maj=15.9km s-min=6.6km az=204.0*
*RSPR **28** 08:42:30.7, 17°.73N×63°.96W, h156^{km}±3^{km}, MD4.0/12*
ISC 28 08:42:28.9±0.7**, 17°.78N**±0°.08×**63°.77W**±0°.04**, h158**^{km}±5^{km}**, n121, σ0^{s}.95**/144**, mb4.0**/14**, 24C-2D, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SEUS	St. Eustatius	0.80	111	eP	Pn	08 42 53.4	+0.4
SEUS				eS	Sn	08 43 11.7	+0.4
SEUS	St. Eustatius	0.80	111	Pn	Pn	08 42 53.4	+0.4
SEUS				Sn	Sn	08 43 11.9	+0.6
SEUS				IAML		08 43 11.9	
	comp=E,619nm,0.5s						
SEUS				IAML		08 43 12.3	
	comp=N,711nm,0.8s						
CDVI	St. Croix	0.95	269⇑	eP	Pn	08 42 54.3	+0.3
CDVI	St. Croix	0.95	269⇑	eP	Pn	08 42 54.3	+0.3
CDVI	St. Croix	0.95	269	Pn	Pn	08 42 53.4	-0.6
CDVI				Sn	Sn	08 43 12.6	-0.7
TBVI	Tortola	1.03	308⇓	eP	Pn	08 42 55.2	+0.6
TBVI				eS	Sn	08 43 14.1	-0.3
TBVI	Tortola	1.03	308⇓	eP	Pn	08 42 55.2	+0.6
SKI	Saint Kitts	1.08	114	eP	Pn	08 42 55.5	+0.4
SKI				eS	Sn	08 43 15.6	+0.5
SKI	Saint Kitts	1.08	114	Pn	Pn	08 42 55.5	+0.4
SKI	Saint Kitts	1.08	114		Sn	08 43 15.6	+0.5
SKOC	St. Kitts, UWI	1.10	116	eP	Pn	08 42 55.8	+0.5
SKOC				eS	Sn	08 43 15.5	0.0
SKOC	St. Kitts, UWI	1.10	116		Pn	08 42 55.8	+0.5
SKOC					Sn	08 43 15.5	0.0
CUPR	Culebra, Puert	1.53	290⇑	eP	Pn	08 42 59.8	+0.4
CUPR	Culebra, Puert	1.53	290	Pn	Pn	08 42 59.8	+0.4
CUPR				Sn	Sn	08 43 21.9	-0.9
CUPR				IAML		08 43 24.6	
	comp=N,258nm,0.7s						
MTP	Monte Pirata	1.73	281⇑	eP	Pn	08 43 01.9	+0.4
MTP	Monte Pirata	1.73	281⇑	eP	Pn	08 43 01.9	+0.4
MTP	Monte Pirata	1.73	281	Pn	Pn	08 43 01.8	+0.4
MTP				Sn	Sn	08 43 24.1	-2.5
MTP				IAML		08 43 30.6	
	comp=E,287nm,0.3s						
MLYT	Lee's Yard	1.84	125	eP	Pn	08 43 03.1	+0.4
MLYT				eS	Sn	08 43 28.1	-0.7
ANWB	Willy Bob	1.89	93	eP	Pn	08 43 02.8	-0.5
ANWB				eS	Sn	08 43 28.3	-1.4
ANWB	Willy Bob	1.89	93		Pn	08 43 02.8	-0.5
ANWB					Sn	08 43 28.3	-1.4
ANWB	Willy Bob	1.89	93	IAML		08 43 29.2	
	comp=E,451nm,0.4s						
ANWB				IAML		08 43 29.4	
	comp=E,278nm,0.5s						
BPA	Boggy Peak	1.96	111	eP	Pn	08 43 03.2	-1.0
BPA				eS	Sn	08 43 29.2	-2.1
BPA	Boggy Peak	1.96	111		Pn	08 43 03.2	-1.0
BPA					Sn	08 43 29.2	-2.1
HUMP	Col San Antoni	2.01	281⇑	eP	Pn	08 43 04.9	+0.3
HUMP	Col San Antoni	2.01	281⇑	eP	Pn	08 43 04.9	+0.3
HUMP	Col San Antoni	2.01	281	Pn	Pn	08 43 04.8	+0.1
HUMP				IAML		08 43 35.3	
	comp=E,151nm,0.2s						
HUMP				IAML		08 43 37.2	
	comp=N,175nm,0.3s						
ANBD	Bethesda, Anti	2.05	111	eP	Pn	08 43 04.0	-1.0
ANBD				eS	Sn	08 43 30.8	-2.0
ANBD	Bethesda, Anti	2.05	111		Pn	08 43 04.0	-1.0
ANBD					Sn	08 43 30.8	-2.0
CBYP	Canovanas	2.05	284⇑	eP	Pn	08 43 05.5	+0.4
CBYP	Canovanas	2.05	284⇑	eP	Pn	08 43 05.5	+0.4
CBYP	Canovanas	2.05	284	Pn	Pn	08 43 05.2	+0.1
CBYP				Sn	Sn	08 43 31.8	-1.2
PDPR	Patillas Dam,	2.16	277	Pn	Pn	08 43 06.3	0.0
PDPR				Sn	Sn	08 43 35.5	+0.3
IGPR	InterUniversit	2.23	275⇑	eP	Pn	08 43 07.3	+0.1
GCPR	Guaynabo City	2.27	284⇑	eP	Pn	08 43 07.4	-0.1
GCPR	Guaynabo City	2.27	284	Pn	Pn	08 43 07.1	-0.5
SJG	San Juan	2.29	279	P	Pn	08 43 08.3	+0.4
	comp=N,57nm,0.3s,baz=293,slow=18,SNR=129						
SJG				S	Sn	08 43 37.7	-0.3
	comp=N,28nm,0.3s,baz=283,slow=17,SNR=22						
SJG	San Juan	2.29	279	Pn	Pn	08 43 08.3	+0.4
SJG				IAML		08 43 39.2	
	comp=N,336nm,0.7s						
SJG				IAML		08 43 39.6	
	comp=N,134nm,0.6s						
ABD	La Joyeuse, An	2.54	120	eP	Pn	08 43 10.3	-0.5
ABD				eS	Sn	08 43 41.8	-1.5
ABD	La Joyeuse, An	2.54	120		Pn	08 43 10.3	-0.5
ABD					Sn	08 43 41.8	-1.5
ICMP	Isla Caja de M	2.63	273	Pn	Pn	08 43 11.9	-0.1
ICMP				IAML		08 43 45.6	
	comp=E,127nm,0.8s						
ICMP				IAML		08 43 46.0	
	comp=N,100nm,1.4s						
CBE	Ff, Capester	2.68	129	eP	Pn	08 43 13.0	+0.3
CBE				eS	Sn	08 43 46.4	-0.1
CBE	Ff, Capester	2.68	129		Pn	08 43 13.0	+0.3
CBE					Sn	08 43 46.4	-0.1
CELP	Cerrillos	2.69	277⇑	eP	Pn	08 43 12.9	+0.1
CELP	Cerrillos	2.69	277⇑	eP	Pn	08 43 12.9	+0.1
OBIP	Obispado Ponce	2.71	276⇑	eP	Pn	08 43 12.0	-1.0
OBIP	Obispado Ponce	2.71	276⇑	eP	Pn	08 43 12.0	-1.0
OBIP	Obispado Ponce	2.71	276	Pn	Pn	08 43 12.1	-0.9
OBIP				IAML		08 43 48.3	
	comp=N,92nm,0.6s						
EMPR	Esperanza - Ma	2.72	285⇑	eP	Pn	08 43 13.1	+0.1
EMPR	Esperanza - Ma	2.72	285	Pn	Pn	08 43 12.6	-0.4
EMPR				IAML		08 43 49.7	
	comp=E,178nm,0.9s						
EMPR				IAML		08 43 50.9	
	comp=N,162nm,0.4s						
TBG	Guadaloupe-3	2.79	133	eP	Pn	08 43 13.3	-0.7
TBG	Guadaloupe-3	2.79	133		Pn	08 43 13.3	-0.7
TDBA	Terre de Bas,	2.80	133	eP	Pn	08 43 14.2	0.0
TDBA	Terre de Bas,	2.80	133		Pn	08 43 14.2	0.0
AOPR	Arecibo Observ	2.90	282	eP	Pn	08 43 15.1	-0.2
AOPR				eS	Sn	08 43 50.3	-0.9
AOPR	Arecibo Observ	2.90	282⇑	eP	Pn	08 43 15.1	-0.2
AOPR	Arecibo Observ	2.90	282	Pn	Pn	08 43 15.1	-0.2
AOPR	Arecibo Observ	2.90	282		Sn	08 43 50.3	-0.9
GBPR	Guanica, Bosqu	2.97	274⇑	eP	Pn	08 43 15.9	-0.2
GBPR				eS	Sn	08 43 51.1	-1.7
GBPR	Guanica, Bosqu	2.97	274⇑	eP	Pn	08 43 15.9	-0.2
H05N1	Guadeloupe/Mar	2.97	119	P	Pn	08 43 14.4	-1.9
H05N1				S	Sn	08 43 48.9	-4.1
MAGL	Barre de l'ile	3.00	127	eP	Pn	08 43 15.8	-0.7
MAGL	Barre de l'ile	3.00	127		Pn	08 43 15.8	-0.7
MLPR	Magueyes Islan	3.12	274⇑	eP	Pn	08 43 17.4	-0.7
MLPR	Magueyes Islan	3.12	274	Pn	Pn	08 43 17.6	-0.5
LSP	Las Mesas	3.18	278⇑	eP	Pn	08 43 18.8	-0.1
LSP	Las Mesas	3.18	278⇑	eP	Pn	08 43 18.8	-0.1
MPR	Mayaguez	3.24	278	Pn	Pn	08 43 19.2	-0.3
DSLB	Salisbury	3.24	136	eP	Pn	08 43 19.4	-0.2
DSLB				eS	Sn	08 43 57.6	-1.3
DSLB	Salisbury	3.24	136		Pn	08 43 19.4	-0.2
DSLB					Sn	08 43 57.6	-1.3
AGPR	Aguadilla, PR	3.25	283⇑	eP	Pn	08 43 19.1	-0.6
AGPR				eS	Sn	08 43 58.5	-0.6
AGPR	Aguadilla, PR	3.25	283⇑	eP	Pn	08 43 19.1	-0.6

AGPR	Aguadilla, PR	3.25	283	Pn	Pn	08 43 19.3	-0.4
AGPR				IAML		08 43 58.4	
	comp=N,140nm,0.4s						
AGPR				IAML		08 43 59.2	
	comp=E,157nm,0.4s						
FDF	Fort de France	3.94	140	eP	Pn	08 43 27.6	-1.0
FDF	Fort de France	3.94	140	Pn	Pn	08 43 27.7	-0.9
FDF				IAML		08 44 18.7	
	comp=E,96nm,1.6s						
BIM	Bigot	4.15	141	eP	Pn	08 43 30.7	-0.7
BIM	Bigot	4.15	141		Pn	08 43 30.7	-0.7
MPOM	Morne Pois Mar	4.34	139	eP	Pn	08 43 33.2	-0.6
MPOM	Morne Pois Mar	4.34	139		Pn	08 43 33.2	-0.6
SLBI	Saint Lucia, B	4.60	144	eP	Pn	08 43 36.7	-0.5
SLBI	Saint Lucia, B	4.60	144		Pn	08 43 36.7	-0.5
SVB	Belmont	5.09	151	Pn	Pn	08 43 45.1	+1.3
DR12	Loma Pena Alta	5.43	282	Pn	Pn	08 43 48.6	+0.5
BBGH	Gun Hill	6.14	138	Pn	Pn	08 43 56.9	-0.7
BANI	BANI	6.30	277	Pn	Pn	08 43 57.7	-2.0
SC01	Santiago de lo	6.80	285	Pn	Pn	08 44 05.3	-1.0
SDDR	Presa de Saban	7.24	281	Pn	Pn	08 44 11.6	-0.6
PCRV	Puerto La Cruz	7.61	186	LR	LR	08 47 10.3	
	comp=E,459nm,21.9s,slow=39						
GRTK	Grand Turk	7.87	299	Pn	Pn	08 44 18.4	-2.1
V58A	Windy Hill, Pi	22.52	326	pP	pP	08 47 43.7	+0.6
JSC	Jenkinsville	22.68	320	pP	pP	08 47 44.7	-0.1
HODGE	Hodges	23.27	318	pP	pP	08 47 52.8	+1.3
KMSC	Kings Mountain	23.31	321	pP	pP	08 47 54.2	+2.5
PAULI	Pauline	23.38	320	pP	pP	08 47 54.6	+2.3
GOGA	Godfrey	23.55	315	P	P	08 47 23.7	-1.2
GOGA				pP	pP	08 47 54.1	-0.6
TKL	Tuckaleechee C	25.14	319	P	P	08 47 38.9	-0.5
TKL					pP	08 48 19.8	+7.7
LCAR	Lake Charles	30.30	312	P	P	08 48 25.3	0.0
LCAR				IAmb	IAmb	08 48 27.6	
	comp=Z,4.6nm,1.3s						
RCBR	Riachuelo	36.15	128	P	P	08 49 18.3	+2.0
ECSD	EROS Data Cent	37.88	320	P	P	08 49 30.1	-0.4
ECSD				IAmb	IAmb	08 49 50.1	
	comp=Z,4.7nm,1.4s						
AGMN	Agassiz Nation	40.10	327	P	P	08 49 48.8	0.0
AGMN				IAmb	IAmb	08 50 01.6	
	comp=Z,4.9nm,1.1s						
ULM	Lac du Bonnet	41.34	329	P	P	08 49 59.0	0.0
	comp=Z,1.5nm,0.4s,baz=143,slow=8.0,SNR=3.8						
ULM	Lac du Bonnet	41.34	329	IAmb	IAmb	08 49 59.5	
	comp=Z,2.4nm,0.7s						
PDAR	Pinedale Array	46.01	313	P	P	08 50 37.5	+0.8
	comp=Z,0.4nm,0.5s,baz=114,slow=10.0,SNR=2.3						
PDAR	Pinedale Array	46.01	313	P	P	08 50 37.0	+0.3
FCC	Fort Churchill	46.55	339	P	P	08 50 40.9	+0.5
NVAR	Mina Array Bea	51.53	305	P	P	08 51 16.3	-2.5
YKA	Yellowknife Ar	56.76	335	P	P	08 51 55.9	0.0
	comp=Z,0.5nm,0.6s,baz=108,slow=8.0,SNR=7.9						
BCAR	Beaver Creek A	68.88	331	P	P	08 53 17.4	+1.2
MCARA	McCarthy VSAT	69.42	330	P	P	08 53 19.9	+0.4
MCARA				IAmb	IAmb	08 53 21.6	
	comp=Z,2.5nm,1.0s						
GLB	Gilahina Butte	69.80	330	P	P	08 53 23.0	+1.1
GLB				IAmb	IAmb	08 53 30.2	
	comp=Z,4.1nm,1.5s						
BMAR	Burnt Mountain	70.20	336	P	P	08 53 24.8	+0.6
IL31		71.15	333	P	P	08 53 30.0	+0.2
IL31				IAmb	IAmb	08 53 41.7	
	comp=Z,4.3nm,1.5s						
ILAR	Eielson Array	71.15	333	P	P	08 53 30.0	+0.1
	comp=Z,0.5nm,0.4s,baz=98,slow=4.1,SNR=16						
WRH	Wood River Hil	71.68	333	P	P	08 53 33.6	+0.5
WRH				IAmb	IAmb	08 53 48.3	
	comp=Z,2.8nm,1.3s						
I23K	Minto, Yukon-K	72.18	334	P	P	08 53 36.5	+0.5
COLD	Coldfoot	72.38	336	P	P	08 53 37.9	+0.6
TRF	Thorofare Moun	72.72	332	P	P	08 53 40.0	+0.5
KTH	Kantishna Hill	72.99	332	P	P	08 53 41.9	+0.9
KTH				IAmb	IAmb	08 53 42.4	
	comp=Z,4.9nm,1.1s						
ARCES	ARCESS Array B	73.24	22	P	P	08 53 43.7	+1.4
	comp=Z,1.8nm,0.7s,baz=280,slow=6.3,SNR=3.6						
ARCES	ARCESS Array B	73.24	22	P	P	08 53 43.6	+1.3
ARCES				PcP	PcP	08 53 56.2	-1.7
IMAR	Indian Mountai	73.92	335		P	08 53 46.5	+0.2
FINES	FINESS Array B	74.49	30	P	P	08 53 51.1	+1.4
	comp=Z,2.4nm,1.0s,baz=236,slow=4.5,SNR=1.7						

SKHL ***28*** *08:50:16.9±0.4, 43°.00N×146°.20E, h35^{km}±5^{km}, mb4.4/4*
JMA ***28*** *08:50:19.5±0.1, 43°.11N×145°.82E, h52^{km}±1^{km}, M3.3*
JMA Felt I J1.
ISC 28 08:50:16.2±2.1**, 43°.04N**±0°.09×**146°.08E**±0°.08**, h58**^{km}±12^{km}**, n14, σ1^s.09**/27**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	Nemuro 2	0.41	323	P	Pn	08 50 28.4	+1.4
NEM2				eS	Sn	08 50 34.7	-0.1
NMR	Nemuro--Hokkai	0.42	322	i P	Pn	08 50 28.0	+0.9
NMR				i S	Sn	08 50 33.0	-2.0
JKHN	Kushirohamanak	0.68	274	P	Pn	08 50 31.0	+1.0
JKHN				eS	Sn	08 50 39.1	-1.0
GLVR	Golovnino	0.81	330	eP	Pn	08 50 32.0	+0.4
GLVR				AMB	AMB	08 50 33.0	
	440nm,0.3s						
GLVR				eS	Sn	08 50 43.0	0.0
GLVR				A	A	08 50 43.0	
	955nm,0.3s						
GLVR				A	A	08 50 43.0	
	2µm,0.3s						
GRPR	Tuman	0.97	347	eP	Pn	08 50 34.1	+0.3
GRPR				AMB	AMB	08 50 35.0	
	310nm,0.4s						
GRPR				eS	Sn	08 50 47.0	+0.2
GRPR				A	A	08 50 47.0	
	1µm,0.4s						
GRPR				A	A	08 50 47.0	
	2µm,0.4s						
YUK	Yuzh-Kuril'sk	1.00	351	i P	Pn	08 50 34.0	-0.2
YUK				AMB	AMB	08 50 34.0	
	180nm,0.3s						
YUK				i S	Sn	08 50 47.2	-0.3
YUK				A	A	08 50 50.0	
	1µm,0.5s						
YUK				A	A	08 50 50.0	
	2µm,0.5s						
JAK	Akkeshi	1.02	268	P	Pn	08 50 34.8	+0.5
JAK				eS	Sn	08 50 46.4	-1.4
JNSB	Nemuroshibetsu	1.07	313	P	Pn	08 50 35.9	+0.8
JNSB				eS	Sn	08 50 47.9	-1.2
JNK	Nakash	1.13	299	P	Pn	08 50 36.2	+0.3
JNK				eS	Sn	08 50 48.2	-2.3
JRA	Rausu	1.14	322	P	Pn	08 50 37.2	+1.3
JRA				eS	Sn	08 50 50.0	-0.6
JOB	Onbets	1.66	266	P	Pn	08 50 43.8	+0.9
JAR	Ashorobuto	1.71	279	P	Pn	08 50 44.5	+0.8
JAR				eS	Sn	08 51 03.2	-1.2
JTKR	Abashiri--Toko	1.83	301	P	Pn	08 50 46.9	+1.6
JTKR				eS	Sn	08 51 07.4	0.0
KUR	Kuril'sk	2.54	30	eP	Pn	08 50 55.2	+0.3
KUR				AMB	AMB	08 50 57.6	
	70nm,0.8s						
KUR				eS	Sn	08 51 23.8	-0.8
KUR				A	A	08 51 32.0	
	170nm,0.6s						
KUR				A	A	08 51 32.0	
	120nm,0.6s						

NEIC ***28*** *09:07:53.4±1.9, 19°.1S±0°.2×177°.1W±0°.1, h405^{km}±10^{km}, mb4.0/12, Error ellipse: s-maj=25.4km s-min=14.9km az=192.0*
IDC ***28*** *09:07:57.2±3.0, 19°.15S×177°.47W, h424^{km}±22^{km}, mb3.4/9, mb1 3.6/10, mb1mx3.3/47, mbtmp4.2/10, Error ellipse: s-maj=47.2km s-min=19.9km az=142.0*
ISC 28 09:07:53.7±0.8**, 19°.2S**±0°.2×**177°.12W**±0°.09**, h400**^{km}**, n28, σ1^s.21**/27**, mb4.0**/15**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.83	287	P	Pn	09 09 15.0	+0.9
	9.9nm,0.3s,baz=112,slow=21,SNR=64						
MSVF				S	S	09 10 19.6	+0.2
	baz=114,slow=20,SNR=2.2						
MSVF	Nonsavu	4.83	287		Pn	09 09 15.2	+1.0
NIUE	Niue	6.80	90	Pn	P	09 09 35.2	-0.5
AFI	Afiamalu	7.37	45		Pn	09 09 41.2	-0.5
AFI	Afiamalu	7.37	45	P	P	09 09 41.8	-0.5
DZM	Mont Dzumac	15.64	257	P	P	09 11 15.6	+2.2
CTAO	Charters Tower	34.46	262	P	P	09 14 04.7	-1.3
CTAO				IAmb	IAmb	09 14 06.2	
	comp=Z,6.3nm,0.8s						
COEN	Coen	38.35	272	P	P	09 14 37.2	-1.4
COEN				IAmb	IAmb	09 15 01.8	
	comp=Z,12nm,1.5s						
STKA	Stephens Creek	39.09	243	P	P	09 14 43.6	-0.8
	comp=Z,3.2nm,1.0s,baz=80,slow=11,SNR=2.4						
WR0	Warramunga Arr	45.42	261	P	P	09 15 33.7	-1.3
WB0	Warramunga Arr	45.58	261	P	P	09 15 34.8	-1.4
WB0				IAmb	IAmb	09 15 38.7	
	comp=Z,9.8nm,1.4s						
WB2	Warramunga Arr	45.60	261	P	P	09 15 35.0	-1.4
WB2				IAmb	IAmb	09 15 50.2	
	comp=Z,6.1nm,1.1s						
WRAB	Tennant Creek	45.60	261	P	P	09 15 34.9	-1.5
WRAB				IAmb	IAmb	09 15 46.1	
	comp=Z,10nm,1.4s						
WRA	Warramunga Arr	45.61	261	P	P	09 15 34.7	-1.8
	comp=Z,0.8nm,0.5s,baz=97,slow=6.6,SNR=20						
AS31	Alice Springs	45.62	255	P	P	09 15 36.5	0.0
ASAR	Alice Springs	45.63	255	P	P	09 15 36.3	-0.3
	comp=Z,5.2nm,0.5s,baz=90,slow=8.5,SNR=121						
FORT	Forrest	50.56	246	P	P	09 16 14.6	+0.9
SIJI	Sorong	53.73	284	P	P	09 16 35.4	-1.6
	comp=Z,10nm,0.5s,baz=351,slow=19,SNR=3.5						
FITZ	Fitzroy Crossi	54.03	261	P	P	09 16 39.2	+0.3
FITZ				IAmb	IAmb	09 16 56.7	
	comp=Z,13nm,1.5s						
PSA00	Pilbara Seismi	58.77	256	P	P	09 17 12.0	0.0
MJAR	Matsushiro Arr	69.70	323	P	P	09 18 20.8	-1.0
	comp=Z,1.2nm,0.4s,baz=163,slow=5.8,SNR=4.1						
MJAR	Matsushiro Arr	69.70	323	P	P	09 18 20.9	-0.8
KSRS	Korea Array	76.51	318	P	P	09 19 01.4	+0.4
	comp=Z,0.5nm,0.5s,baz=129,slow=5.9,SNR=2.7						
NVAR	Mina Array Bea	79.54	43	P	P	09 19 20.2	+2.4
	comp=Z,0.6nm,0.7s,baz=240,slow=5.7,SNR=6.8						
WRH	Wood River Hil	86.40	12		pP	09 21 21.9	-0.6
CCB	Clear Creek Bu	86.62	12		pP	09 21 23.1	-0.5
ILAR	Eielson Array	86.91	12	P	P	09 19 54.0	-0.1
	comp=Z,0.1nm,0.3s,baz=218,slow=5.2,SNR=4.4						
CMAR	Chiang Mai Arr	90.48	289	P	P	09 20 12.9	+1.1
	comp=Z,1.2nm,0.3s,baz=117,slow=3.1,SNR=5.2						

NIED ***28*** *09:15:35.6, 39°.65N×143°.31E, h21^{km}, MW3.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}0.93; $M_{\theta\theta}$0.03; $M_{\phi\phi}$-0.96; $M_{r\theta}$0.51; $M_{\theta\phi}$-0.85; $M_{\phi r}$1.46; Fault plane solution: $M_0$1.96000×10^{14} NP1:ϕ_s19.00000°, δ72.00000°, λ80.00000°. NP2:ϕ_s229.00000°, δ21.00000°, λ118.00000°.*
JMA 28 09:15:35.6±0.2**, 39°.65N×143°.31E, h21**^{km}±3^{km}**, M3.5, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	1.15	285	P	Pn	09 15 56.4	-0.1
MIYJ	Miyakonagasawa	1.15	267	P	Pn	09 15 56.2	-0.3
JKEN	Kujiedanarisaw	1.35	295	P	Pn	09 15 59.2	0.0
JANG	Nango	1.56	298	P	Pn	09 16 02.1	+0.1
JOM	Ohasama	1.57	264	P	Pb	09 16 03.2	-0.7
JOM				S	Sb	09 16 23.3	0.0
JMK	Ichinoseki	1.77	247	P	Pn	09 16 05.7	+0.8
JMK				eS	Sb	09 16 27.9	-1.0
JIO	Ouri	1.94	233	P	Pn	09 16 07.7	+0.4
JTM	Tenmabayashi	2.06	304	P	Pn	09 16 10.0	+1.1
JTM				eS	Sb	09 16 35.7	-1.7
JRG	Rokugo	2.08	264	P	Pn	09 16 11.0	+1.7
JAH	Hinai	2.13	286	P	Pn	09 16 11.6	+1.7
JYK	Kaneyama	2.40	253	P	Pn	09 16 15.4	+1.7
JOU	Okura	2.43	239	P	Pn	09 16 15.4	+1.4
JOU				eS	Sn	09 16 45.1	+2.0
JNBK	Urakawa-nobuka	2.66	351	P	Pn	09 16 18.8	+1.6
JNBK				S	Sn	09 16 51.4	+2.6

IDC 28 09:17:37.5±1.7**, 1°.98S×137°.33E, h0**^{km}**, mb3.3**/2**, mb1 3.7**/4**, mb1mx3.5**/44**, mbtmp3.5**/4**, ML3.3**/2**, MS2.7**/1**, Ms1 2.7**/1**, ms1mx2.3**/13**, Error ellipse: s-maj=32.1km s-min=29.2km az=41.0, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	3.42	99	Pn	Pn	09 18 30.7	-1.4
	1.5nm,0.3s,baz=112,slow=22,SNR=6.2						
JAY				Sn	Sn	09 19 13.3	0.0
	2.3nm,0.3s,baz=121,slow=20,SNR=4.2						
JAY				LR	LR	09 20 14.5	
	comp=Z,116nm,18.6s,baz=193,slow=46						
WRA	Warramunga Arr	18.09	189	P	Pn	09 21 50.0	-0.5
	0.2nm,0.3s,baz=6.3,slow=12,SNR=7.8						
WRA				S	Sn	09 25 01.8	-11
	0.1nm,0.3s,baz=8.2,slow=24,SNR=1.9						
ASAR	Alice Springs	21.82	188	P	P	09 22 31.9	+0.4
	1.8nm,0.8s,baz=15,slow=11,SNR=13						
MKAR	Makanchi Array	68.37	323	P	P	09 28 41.5	+0.5
	0.1nm,0.5s,baz=116,slow=6.6,SNR=1.5						

BEO ***28*** *09:17:56.4±0.3, 43°.59N×18°.33E, h4^{km}±1^{km}, ML3.2/14*
LDG ***28*** *09:17:56.9±0.1, 43°.58N×18°.45E, h2^{km}, Ml3.4/13, Error ellipse: s-maj=2.9km s-min=2.0km az=35.0*
KRSZO ***28*** *09:17:56.4±0.8, 43°.62N×18°.37E, h4^{km}±7^{km}, ML3.6/24, Error ellipse: s-maj=2.6km s-min=2.2km az=116.0*
PDG ***28*** *09:17:57.1±0.2, 43°.60N×18°.39E, h10^{km}, MD3.2/8, ML3.3/14, Error ellipse: s-maj=0.3km s-min=0.5km az=0.0*
RHSSO ***28*** *09:17:57.7±0.2, 43°.61N×18°.42E, h6^{km}±2^{km}, ML3.2/13*
PRU ***28*** *09:17:58.6±0.0, 43°.74N×18°.49E, h0^{km}*
ISC 28 09:17:56.8±1.0**, 43°.61N**±0°.01×**18°.36E**±0°.01**, h12**^{km}±8^{km}**, n245, σ2^s.00**/394**, 24C-8D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UPM	Unac-Piva	0.57	136	⇑iPg	Pb	09 18 08.1	-0.8
UPM				eSg	Sb	09 18 16.0	-1.0
UPM	Unac-Piva	0.57	136	⇑iPg	Pg	09 18 07.3	-0.7
UPM				i Sg	Sb	09 18 16.0	-1.0
UPM	Unac-Piva	0.57	136	Pg	Pb	09 18 08.1	-0.8
UPM				Lg	Lg	09 18 16.0	
HAPS	Han Pijesak,BI	0.64	42	ePg	Pg	09 18 08.4	-0.8
HAPS				eSg	Sg	09 18 17.3	-0.3
HAPS	Han Pijesak,BI	0.64	42	⇑iPg	Pg	09 18 08.4	-0.8
HAPS				eSg	Sg	09 18 17.4	-0.2
HAPS	Han Pijesak,BI	0.64	42	Pg	Pg	09 18 08.4	-0.8
HAPS				Lg	Lg	09 18 17.3	
HAPS				Sg	Sg	09 18 17.4	-0.2
BRY	Bratogost	0.72	170	⇑iPg	Pg	09 18 10.2	-0.7
BRY				eSg	Sb	09 18 21.1	-0.3
BRY	Bratogost	0.72	170	ePg	Pg	09 18 10.2	-0.7
BRY				i Sg	Sb	09 18 21.4	0.0
BRY	Bratogost	0.72	170	Pg	Pg	09 18 10.2	-0.7
BRY				Lg	Lg	09 18 21.1	
RUDO	Rudo	0.73	89	⇓iPg	Pg	09 18 09.9	-1.1
RUDO				eSg	Sg	09 18 19.6	-1.0
RUDO	Rudo	0.73	89	Pg	Pg	09 18 09.9	-1.1
RUDO				Lg	Lg	09 18 19.6	
BBLS	Lazići	0.80	71	ePg	Pb	09 18 12.3	-0.4
BBLS				eSg	Sg	09 18 21.9	-0.8
BBLS	Lazići	0.80	71	ePg	Pg	09 18 11.9	-0.3
BBLS				eSg	Sg	09 18 22.2	-0.5
BBLS	Lazići	0.80	71	Pg	Pg	09 18 11.9	-0.3
BBLS				Pb	Pb	09 18 12.3	-0.4
BBLS				x	x	09 18 12.9	
	comp=Z,12nm,SNR=63						
BBLS				Lg	Lg	09 18 21.9	
BBLS				Sb	Sg	09 18 22.1	-0.6
BBLS				Sg	Sg	09 18 22.2	-0.5
PLE	Pljevlja	0.80	110	⇓iPg	Pg	09 18 11.5	-0.8
PLE				i Sg	Sb	09 18 23.8	+0.2
STON	Ston	0.89	213	ePg	Pg	09 18 12.5	-1.4
STON	Ston	0.89	213	Pg	Pg	09 18 12.5	-1.4
TREB	Trebinje	0.90	181	ePn	Pg	09 18 13.6	-0.5
TREB				eSn	Sb	09 18 26.1	-0.2
TREB	Trebinje	0.90	181	ePg	Pg	09 18 13.1	-1.0
TREB				eSg	Sb	09 18 26.9	+0.6
TREB	Trebinje	0.90	181	Pg	Pg	09 18 13.1	-1.0
TREB				Pb	Pg	09 18 13.6	-0.5
TREB				Lg	Lg	09 18 26.1	
TREB				Sg	Sb	09 18 26.9	+0.6
RICI	Ricice	0.90	263	i Pg	Pb	09 18 14.1	-0.4
RICI				Sg	Sb	09 18 27.3	+0.8
RICI	Ricice	0.90	263	Pg	Pb	09 18 14.1	-0.4
RICI				Lg	Lg	09 18 27.3	
NKY	Niksic	0.92	150	ePg	Pg	09 18 13.8	-0.9
NKY				i Sg	Sb	09 18 28.0	+0.8
NKME	Niksic	0.95	153	⇑iPg	Pg	09 18 14.2	-0.9
NKME				i Sg	Sn	09 18 28.9	-0.7
DBRK	Dubrovnik	0.96	190	i Pg	Pg	09 18 14.3	-1.0
DBRK				Sg	Sb	09 18 27.6	-0.4
DBRK	Dubrovnik	0.96	190	Pg	Pg	09 18 14.3	-1.0
DBRK				Lg	Lg	09 18 27.6	
MAKA	Makarska	1.03	252	i Pg	Pb	09 18 16.3	-0.4
MAKA				Sg	Sn	09 18 31.9	+0.4
MAKA	Makarska	1.03	252	Pg	Pb	09 18 16.3	-0.4
MAKA				Lg	Lg	09 18 31.9	
KOME	Kolasin	1.14	132	⇑iPg	Pg	09 18 17.9	-0.8
KOME				i Sg	Sn	09 18 35.1	+0.8
CEME	Cevo	1.14	159	ePg	Pg	09 18 17.7	-1.1
CEME				i Sg	Sn	09 18 35.3	+0.9
HCY	Herceg Novi	1.17	175	ePg	Pn	09 18 19.0	-0.1
HCY				eSg	Sn	09 18 34.6	-0.4
HCY	Herceg Novi	1.17	175	⇓iPg	Pg	09 18 18.4	-0.9
HCY				i Sg	Sn	09 18 36.6	+1.6
HCY	Herceg Novi	1.17	175	Pg	Pn	09 18 19.0	-0.1
HCY				Lg	Lg	09 18 34.6	
MGRS	Mrkonjic Grad	1.22	311	⇑iPg	Pn	09 18 19.8	-0.1
MGRS				eSg	Sn	09 18 37.7	+1.3
MGRS	Mrkonjic Grad	1.22	311	Pn	Pn	09 18 19.8	-0.1
MGRS				Lg	Lg	09 18 37.7	
TEKS	Tekeris	1.26	42	ePn	Pg	09 18 21.9	+0.9
TEKS				eSn	Sn	09 18 39.7	+2.5
TEKS	Tekeris	1.26	42	ePg	Pn	09 18 20.3	0.0
TEKS				eSg	Sn	09 18 37.5	+0.3
TEKS	Tekeris	1.26	42	Pn	Pn	09 18 20.3	0.0
TEKS				Pg	Pg	09 18 21.9	+0.9
TEKS				Lg	Lg	09 18 37.5	
TEKS				Sn	Sn	09 18 39.7	+2.5
DIVS	Divibare	1.27	67	ePg	Pg	09 18 21.2	-0.1
DIVS				eSg	Sn	09 18 38.1	+0.4
DIVS	Divibare	1.27	67	ePg	Pn	09 18 20.4	-0.2
DIVS				eSg	Sb	09 18 36.7	-0.5
DIVS	Divibare	1.27	67	Pn	Pn	09 18 20.4	-0.2
DIVS				Pb	Pg	09 18 21.2	-0.1
DIVS				Pg	Pb	09 18 21.7	+0.8
	comp=Z,1.3nm,SNR=23						
DIVS				Lg	Lg	09 18 36.7	
DIVS				Sg	Sn	09 18 38.1	+0.4
DIVS				Sn	Sg	09 18 39.5	+1.6
IVAS	Ivanjica	1.30	91	ePn	Pn	09 18 20.1	-0.8
IVAS				eSn	Sn	09 18 39.9	+1.6
IVAS	Ivanjica	1.30	91	Pn	Pn	09 18 20.1	-0.8
IVAS				Sn	Sn	09 18 39.9	+1.6
IVA	Berane	1.34	123	ePg	Pn	09 18 21.6	+0.1
IVA				i Sg	Sn	09 18 42.1	+2.8
PDG	Podgorica	1.35	151	ePn	Pn	09 18 20.8	-0.8
PDG				eSn	Sg	09 18 40.9	+0.6
PDG	Podgorica	1.35	151	⇓S	Sg	09 18 41.8	+1.4
PDG	Podgorica	1.35	151	⇑iPg	Pn	09 18 20.7	-0.8
PDG				eSg	Sb	09 18 39.3	-0.1
PDG	Podgorica	1.35	151	Pg	Pn	09 18 20.7	-0.8
PDG				Pg	Pn	09 18 20.8	-0.8
PDG				Lg	Lg	09 18 39.3	
PDG				Sg	Sg	09 18 40.9	+0.6
PDG				Sn	Sg	09 18 41.8	+1.4
TTG	Podgorica	1.35	151	⇓iPg	Pn	09 18 20.9	-0.7
TTG				i Sg	Sg	09 18 42.6	+2.3
LSTV	Lastovo	1.37	232	i Pn	Pg	09 18 22.2	-0.9
LSTV				Sn	Sg	09 18 42.9	+2.1
LSTV	Lastovo	1.37	232	Pn	Pg	09 18 22.2	-0.9
LSTV				Sn	Sg	09 18 42.9	+2.1
BUM	Brajici-Budva	1.37	163	⇓iPg	Pb	09 18 22.1	-0.4
BUM				i Sg	Sg	09 18 43.3	+2.4
BLY	Banja Luka	1.42	324	ePn	Pg	09 18 23.7	-0.4
BLY				eSn	Sg	09 18 43.0	+0.5
BLY	Banja Luka	1.42	324	⇑iPg	Pg	09 18 23.6	-0.5
BLY				eSg	Sg	09 18 43.5	+1.0
BLY	Banja Luka	1.42	324	Pn	Pg	09 18 23.6	-0.5
BLY				Pg	Pg	09 18 23.7	-0.4
BLY				Pb	Pn	09 18 23.8	+1.3
	comp=Z,1.7nm,SNR=33						
BLY				Sn	Sg	09 18 43.0	+0.5
BLY				Lg	Lg	09 18 43.5	
BLY				Sg	Sn	09 18 43.9	+2.8
HVAR	Hvar	1.46	253	ePn	Pb	09 18 23.5	-0.5
HVAR				Sn	Sg	09 18 45.4	+1.5
HVAR	Hvar	1.46	253	Pn	Pb	09 18 23.5	-0.5
HVAR				Sn	Sg	09 18 45.4	+1.5
KIJV	Kijevo	1.47	286	ePn	Pg	09 18 24.2	-0.9
KIJV	Kijevo	1.47	286	Pn	Pg	09 18 24.2	-0.9
DRME	Dracevica, Mon	1.55	157	ePn	Pb	09 18 25.1	-0.4
DRME				eSn	Sg	09 18 46.5	-0.1
DRME	Dracevica, Mon	1.55	157	ePg	Pb	09 18 25.2	-0.3
DRME				i Sg	Sg	09 18 48.1	+1.5
DRME	Dracevica, Mon	1.55	157	Pn	Pb	09 18 25.1	-0.4
DRME				Sn	Sg	09 18 46.5	-0.1
PVY	Plav	1.55	131	ePg	Pb	09 18 25.5	-0.1
PVY				i Sg	Sg	09 18 47.7	+1.0
TRUS	Trudelj	1.60	67	ePn	Pn	09 18 25.2	+0.2
TRUS				eSn	Sg	09 18 47.9	-0.3
TRUS	Trudelj	1.60	67	Pn	Pn	09 18 25.2	+0.2
TRUS				Sn	Sg	09 18 47.9	-0.3
GRUS	Gruza	1.73	80	ePn	Pb	09 18 28.0	-0.5
GRUS	Gruza	1.73	80	Pn	Pb	09 18 28.0	-0.5
ULC	Ulcinj	1.77	158	ePn	Pb	09 18 29.1	-0.2
ULC				i Sn	Sg	09 18 53.3	-0.5
PRIJ	Prijedor	1.81	320	ePn	Pb	09 18 29.6	-0.2
PRIJ	Prijedor	1.81	320	Pn	Pb	09 18 29.6	-0.2
FRGS	Fruska Gora	1.86	33	ePn	Pn	09 18 28.9	+0.3
FRGS	Fruska Gora	1.86	33	⇑P	Pn	09 18 29.5	+0.9
FRGS				⇑S	Sn	09 18 52.2	+0.2
FRGS	Fruska Gora	1.86	33	ePn	Pn	09 18 29.1	+0.5
FRGS				eSn	Sb	09 18 53.5	-0.5
FRGS	Fruska Gora	1.86	33	Pg	Pn	09 18 28.9	+0.3
FRGS				Pb	Pn	09 18 29.1	+0.5
FRGS				Pn	Pn	09 18 29.5	+0.9
FRGS				Pn	Pn	09 18 31.2	+2.6
	comp=Z,0.4nm,SNR=11						
FRGS				Sn	Sn	09 18 52.2	+0.2
FRGS				Sg	Sb	09 18 53.5	-0.5
FRGS				Lg	Lg	09 18 56.7	
BEO	Beograd	1.93	51	Pg	Pg	09 18 33.9	0.0
	comp=Z,0.5nm,SNR=4.3						
MORI	Morici	1.94	278	i Pn	Pg	09 18 33.1	-0.9
MORI				Sn	Sg	09 19 00.6	+1.3
MORI	Morici	1.94	278	Pn	Pg	09 18 33.1	-0.9
MORI				Sn	Sg	09 19 00.6	+1.3
ZIRJ	Zirje	1.98	272	i Pn	Pg	09 18 33.3	-1.4
ZIRJ				Sn	Sg	09 19 00.7	+0.4
ZIRJ	Zirje	1.98	272	Pn	Pg	09 18 33.3	-1.4
ZIRJ				Sn	Sg	09 19 00.7	+0.4
UDBI	Udbina	2.08	297	i Pn	Pb	09 18 34.4	-0.2
UDBI				Sn	Sg	09 19 01.9	-1.9
UDBI	Udbina	2.08	297	Pn	Pb	09 18 34.4	-0.2
UDBI				Sn	Sg	09 19 01.9	-1.9
SVIS	Svilajnac	2.16	71	ePn	Pn	09 18 33.7	+1.0
SVIS	Svilajnac	2.16	71	Pn	Pn	09 18 33.7	+1.0
DUGI	Dugi Otok	2.42	280	i Pn	Pb	09 18 39.6	-0.8
DUGI				Sn	Sb	09 19 11.8	+1.5
DUGI	Dugi Otok	2.42	280	Pn	Pb	09 18 39.6	-0.8
DUGI				Sn	Sb	09 19 11.8	+1.5
BOVS	Bovan	2.43	88	ePn	Pn	09 18 36.9	+0.5
BOVS	Bovan	2.43	88	Pn	Pn	09 18 36.9	+0.5
KOVH	Kovagotottos	2.48	356	Pn	Pn	09 18 38.4	+1.3
	comp=Z,0.2nm,SNR=4.9						
KOVH				Sn	Sn	09 19 08.1	+0.7
KUBS	Kucevo	2.52	70	ePn	Pn	09 18 37.5	-0.1
KUBS	Kucevo	2.52	70	Pn	Pn	09 18 37.5	-0.1
TIR	Tirane	2.52	153	Pg	Pb	09 18 43.0	+0.9
	comp=Z,0.8nm,SNR=5.5						
TIR				Sn	Sb	09 19 14.7	+1.6
MORH	Mrgy, Hungar	2.61	4	⇑P	Pn	09 18 39.7	+0.8
MORH	Mrgy, Hungar	2.61	4	ePn	Pn	09 18 39.6	+0.8
MORH				eSn	Sn	09 19 12.0	+1.5
MORH	Mrgy, Hungar	2.61	4	Pn	Pn	09 18 39.6	+0.8
MORH				Pg	Pn	09 18 39.7	+0.8
MORH				Pb	Pg	09 18 39.8	-7.0
	comp=Z,0.2nm,SNR=4.1						

MORH				Sn	Sn	09 19 12.0	+1.5
MORH				Lg	Lg	09 19 12.4	
BARS	Barje	2.65	106	*e*Pn	Pn	09 18 39.3	-0.1
BARS				*e*Sn	Sn	09 19 12.6	+1.2
BARS	Barje	2.65	106	Pn	Pn	09 18 39.3	-0.1
BARS				Sn	Sn	09 19 12.6	+1.2
MDVR	Moldovita	2.68	63	⇑P	Pn	09 18 40.6	+0.7
MDVR				⇑S	Sn	09 19 12.5	+0.2
MDVR	Moldovita	2.68	63	Pn	Pn	09 18 40.6	+0.7
MDVR				Sn	Sn	09 19 12.5	+0.2
NVLJ	Novalja	2.69	292	*e*Pn	Pb	09 18 42.7	-2.2
NVLJ				Sn	Sb	09 19 18.6	+0.7
NVLJ	Novalja	2.69	292	Pn	Pb	09 18 42.7	-2.2
NVLJ				Sn	Sb	09 19 18.6	+0.7
ZAGS	Zajecar	2.81	85	*e*Pn	Pn	09 18 42.3	+0.6
ZAGS				*e*Sn	Sb	09 19 18.9	-2.5
ZAGS	Zajecar	2.81	85	Pn	Pn	09 18 42.3	+0.6
ZAGS				Sn	Sb	09 19 18.9	-2.5
PTJ	Puntijarka	2.86	324	*e*Pn	Pn	09 18 44.1	+1.7
PTJ	Puntijarka	2.86	324	Pn	Pn	09 18 44.1	+1.7
KALN	Kalnik	2.86	332	*i* Pn	Pn	09 18 43.8	+1.4
KALN	Kalnik	2.86	332	Pn	Pn	09 18 43.8	+1.4
OZLJ	Ozalj	2.88	315	*e*Pn	Pn	09 18 44.7	+2.2
OZLJ	Ozalj	2.88	315	Pn	Pn	09 18 44.7	+2.2
BOJS	Bojanci	2.92	311	*e*Pn	Pn	09 18 45.5	+2.4
BOJS	Bojanci	2.92	311	Pn	Pn	09 18 45.5	+2.4
PRVS	Prvonek	2.94	111	*e*Pn	Pn	09 18 44.8	+1.4
PRVS	Prvonek	2.94	111	Pn	Pn	09 18 44.8	+1.4
CRES	Cresnjev	3.03	318	*e*Pn	Pn	09 18 46.5	+1.8
CRES				*e*Sn	Sn	09 19 23.5	+2.6
CRES	Cresnjev	3.03	318	Pg	Pn	09 18 46.5	+1.8
CRES				Sn	Sn	09 19 23.5	+2.6
BZS	Buzias	3.07	48	⇑P	Pn	09 18 46.6	+1.5
BZS	Buzias	3.07	48	Pn	Pn	09 18 46.6	+1.5
BZS				Pg	Pn	09 18 47.8	+2.6
	comp=Z,0.1nm,SNR=1.7						
BEHE	Becsehely	3.07	339	*e*Pn	Pn	09 18 47.6	+2.4
BEHE				*e*Sn	Sn	09 19 24.4	+2.5
BEHE	Becsehely	3.07	339	Pn	Pn	09 18 47.6	+2.4
BEHE				Pg	Pb	09 18 49.7	-1.7
	comp=Z,0.6nm,SNR=6.0						
BEHE				Sn	Sn	09 19 24.4	+2.5
ZAPS	Zavoj	3.13	95	*e*Pn	Pn	09 18 48.1	+2.1
ZAPS				*e*Sn	Sn	09 19 24.7	+1.3
ZAPS	Zavoj	3.13	95	Pn	Pn	09 18 48.1	+2.1
ZAPS				Sn	Sn	09 19 24.7	+1.3
BLKB	Belogradchik	3.13	88	⇑S	Sn	09 19 23.8	+0.4
BLKB	Belogradchik	3.13	88	Sn	Sn	09 19 23.8	+0.4
HERR	Herculane	3.17	65	⇑P	Pn	09 18 47.5	+0.8
HERR				⇑S	Sn	09 19 24.2	-0.2
HERR	Herculane	3.17	65	Pn	Pn	09 18 47.5	+0.8
HERR				Sn	Sn	09 19 24.2	-0.2
KOGS	Kog	3.21	333	*i* Pn	Pn	09 18 48.7	+1.7
KOGS	Kog	3.21	333	Pn	Pn	09 18 48.7	+1.7
AMBH	Ambrzfalva	3.21	31	Pg	Pg	09 19 01.3	+3.0
MATE	Matera	3.21	203	⇑P	Pn	09 18 48.9	+1.8
MATE				⇓S	Sn	09 19 26.8	+1.6
MATE	Matera	3.21	203	Pn	Pn	09 18 48.9	+1.8
	comp=Z,0.2nm,SNR=2.0						
MATE				Sn	Sn	09 19 26.8	+1.6
MATE				Lg	Lg	09 19 27.0	
BOSS	Bosilegrad	3.22	109	*e*Pn	Pn	09 18 48.4	+1.2
BOSS				*e*Sn	Sn	09 19 25.6	+0.1
BOSS	Bosilegrad	3.22	109	Pn	Pn	09 18 48.4	+1.2
BOSS				Sn	Sn	09 19 25.6	+0.1
TIH	Tihany	3.30	354	Pn	Pn	09 18 50.0	+1.6
	comp=Z,0.9nm,SNR=6.2						
TIH				Sn	Sn	09 19 30.4	+2.8
VISS	Visnje	3.33	312	*i* Pn	Pn	09 18 51.4	+2.6
VISS	Visnje	3.33	312	Pn	Pn	09 18 51.4	+2.6
PDKS	Podkum	3.42	317	*i* Pn	Pn	09 18 52.4	+2.3
PDKS	Podkum	3.42	317	Pn	Pn	09 18 52.4	+2.3
CEY	Cerknica	3.52	308	*e*Pn	Pn	09 18 53.2	+1.8
CEY	Cerknica	3.52	308	Pn	Pn	09 18 53.2	+1.8
SIRR	Siria	3.54	40	⇑P	Pn	09 18 52.7	+1.0
SIRR	Siria	3.54	40	Pg	Pn	09 18 52.7	+1.0
SIRR				Pn	Pn	09 18 53.5	+1.8
	comp=Z,0.1nm,SNR=1.2						
MPLH	Magyarpolny	3.60	351	Pn	Pn	09 18 54.5	+2.0
	comp=Z,0.1nm,SNR=1.9						
GZR	Gura Zlata	3.62	59	⇑P	Pn	09 18 54.5	+1.6
GZR	Gura Zlata	3.62	59	Pn	Pn	09 18 54.5	+1.6
GZR				Pg	Pn	09 18 55.1	+2.2
	comp=Z,0.1nm,SNR=1.7						
GBAS	Gorenja Brezov	3.63	311	*i* Pn	Pn	09 18 55.4	+2.5
GBAS	Gorenja Brezov	3.63	311	Pn	Pn	09 18 55.4	+2.5
LJU	Ljubljana	3.65	313	*e*Pn	Pn	09 18 55.6	+2.4
LJU	Ljubljana	3.65	313	Pn	Pn	09 18 55.6	+2.4
VTS	Vitosha	3.70	104	⇑P	Pn	09 18 55.1	+1.1
VTS	Vitosha	3.70	104	Pg	Pn	09 18 55.1	+1.1
VTS				Pn	Pn	09 18 56.2	+2.1
	comp=Z,0.1nm,SNR=1.8						
CSKK	Cskako	3.75	359	Pn	Pn	09 18 56.8	+2.3
	comp=Z,0.2nm,SNR=10.0						
AQU	L'Aquila	3.85	253	Pn	Pn	09 19 00.1	+4.0
	comp=Z,0.2nm,SNR=2.5						
SOKA	Soboth	3.87	324	*i* Pn	Pn	09 18 57.9	+1.7
	comp=Z,4.3nm,0.2s,SNR=19						
SOKA				*i* Sn	Sn	09 19 41.2	-0.4
	comp=Z,8.9nm,0.4s						
SOKA	Soboth	3.87	324	Pn	Pn	09 18 57.9	+1.7
	comp=Z,4.3nm,0.2s,SNR=19						
SOKA				Sn	Sn	09 19 41.2	-0.4
	comp=Z,8.9nm,0.4s						
TRI	Trieste	3.89	304	Pn	Pb	09 19 04.9	-0.6
OBKA	Obir	3.96	318	*e*Pn	Pn	09 18 59.9	+2.4
	comp=Z,1.9nm,0.1s,SNR=6.3						
OBKA				*e*Pg	Pg	09 19 11.1	-1.6
	comp=Z,15nm,0.3s						
OBKA	Obir	3.96	318	Pn	Pn	09 18 59.9	+2.4
	comp=Z,1.9nm,0.1s,SNR=6.3						
OBKA				Pb	Pn	09 19 00.2	+2.7
	comp=Z,0.2nm,SNR=2.4						
OBKA				Pg	Pg	09 19 11.1	-1.6
	comp=Z,15nm,0.3s						
ARSA	Arzberg	4.15	332	*i* Pn	Pn	09 19 01.9	+1.9
	comp=Z,18nm,0.3s,SNR=23						
ARSA				*i* Sn	Sn	09 19 47.8	-0.8
	comp=Z,11nm,0.4s						
ARSA	Arzberg	4.15	332	Pg	Pn	09 19 01.9	+1.9
	comp=Z,18nm,0.3s,SNR=23						
ARSA				Pn	Pn	09 19 02.1	+2.0
	comp=Z,0.2nm,SNR=3.4						
ARSA				Sn	Sn	09 19 47.8	-0.8
	comp=Z,11nm,0.4s						
SRO	Srobarova	4.20	360	*e*SN	Sn	09 19 53.2	+3.5
SRO				*e*LG	Lg	09 20 02.3	
SRO	Srobarova	4.20	360	Sn	Sn	09 19 53.2	+3.5
SRO				Lg	Lg	09 20 02.3	
LOT	Lotru	4.28	63	Pn	Pn	09 19 04.9	+3.0
	comp=Z,0.1nm,SNR=1.9						
DRGR		4.42	43	⇓P	Pn	09 19 05.8	+2.0
DRGR				⇑S	Sn	09 19 55.7	+0.5
DRGR		4.42	43	Pn	Pn	09 19 05.8	+2.0
DRGR				Pg	Pn	09 19 06.3	+2.4
	comp=Z,0.1nm,SNR=2.8						
DRGR				Sn	Sn	09 19 55.7	+0.5
PSZ	Piszkesteto	4.44	13	Pn	Pn	09 19 04.3	+0.3
	comp=Z,0.1nm,SNR=2.1						
TIP	Timpagrande	4.59	196	⇑P	Pn	09 19 08.1	+1.9
TIP	Timpagrande	4.59	196	Pn	Pn	09 19 08.1	+1.9
CONA	Conrad Observa	4.66	339	*i* Pn	Pn	09 19 08.9	+1.8
	comp=Z,3.3nm,0.3s						
CONA				*e*Sn	Sn	09 20 01.7	+0.6
	comp=Z,6.2nm,0.5s						
CONA	Conrad Observa	4.66	339	Pn	Pn	09 19 08.9	+1.8
	comp=Z,3.3nm,0.3s						
CONA				Sn	Sn	09 20 01.7	+0.6
	comp=Z,6.2nm,0.5s						
ZST	Bratislava	4.67	350	*e*PN	Pn	09 19 10.0	+2.9
ZST				*e*SN	Sn	09 20 01.1	-0.1
ZST	Bratislava	4.67	350	Pn	Pn	09 19 10.0	+2.9
ZST				Sn	Sn	09 20 00.9	-0.3
ZST				Lg	Lg	09 20 01.1	
MODS	Modra-Piesok	4.82	351	*e*PN	Pn	09 19 11.1	+1.8
MODS				*e*SN	Sn	09 20 04.9	-0.2
MODS				*e*LG	Lg	09 20 07.4	
MODS	Modra-Piesok	4.82	351	Pn	Pn	09 19 11.1	+1.8
MODS				Sn	Sn	09 20 04.9	-0.2
MODS				Lg	Lg	09 20 07.4	
SMOL	Smolenice	4.94	353	*e*SN	Sn	09 20 10.0	+1.9
SMOL				*e*LG	Lg	09 20 12.8	
SMOL	Smolenice	4.94	353	Sn	Sn	09 20 10.0	+1.9
SMOL				Lg	Lg	09 20 12.8	
MOA	Molln	5.12	327	*i* Pn	Pn	09 19 16.1	+2.8
	comp=Z,1.9nm,0.1s,SNR=13						
MOA				*e*Sn	Sn	09 20 12.8	+0.5
	comp=Z,8.9nm,0.3s						
MOA	Molln	5.12	327	Pn	Pn	09 19 16.1	+2.8
	comp=Z,1.9nm,0.1s,SNR=13						
MOA				Sn	Sn	09 20 12.8	+0.5
	comp=Z,8.9nm,0.3s						
ABTA	Abfaltersbach	5.19	309	*i* Pn	Pn	09 19 17.0	+2.6
	comp=Z,1.3nm,0.2s,SNR=5.5						
ABTA	Abfaltersbach	5.19	309	Pn	Pn	09 19 17.0	+2.6
	comp=Z,1.3nm,0.2s,SNR=5.5						
JAVC	Velka Javorina	5.27	355	*e*PN	Pn	09 19 17.9	+2.4
JAVC	Velka Javorina	5.27	355	Pn	Pn	09 19 17.8	+2.3
JAVC				Pg	Pn	09 19 17.9	+2.4
LANS	Liptovska Anna	5.59	7	*e*PN	Pn	09 19 21.9	+2.0
LANS	Liptovska Anna	5.59	7	Pn	Pn	09 19 21.9	+2.0
KRUC	Moravsky	5.62	347	*e*PN	Pn	09 19 21.2	+1.0
KRUC				*e*SN	Sn	09 20 26.5	+1.9
KRUC	Moravsky	5.62	347	Pg	Pn	09 19 21.1	+0.9
KRUC				Pn	Pn	09 19 21.2	+1.0
KRUC				Sn	Sn	09 20 26.5	+1.9
KRUC				Lg	Lg	09 20 27.5	
CKRC	Cesky Krumlov	5.92	333	*e*SN	Sn	09 20 30.6	-1.5
CKRC	Cesky Krumlov	5.92	333	Sn	Sn	09 20 30.6	-1.5
WTTA	Wattenberg	5.98	310	*i* Pn	Pn	09 19 28.6	+3.3
	comp=Z,2.7nm,0.2s						
WTTA				*i* Sn	Sn	09 20 36.8	+3.0
	comp=Z,6.0nm,0.5s						
WTTA	Wattenberg	5.98	310	Pn	Pn	09 19 28.6	+3.3
	comp=Z,2.7nm,0.2s						
WTTA				Sn	Sn	09 20 36.8	+3.0
	comp=Z,6.0nm,0.5s						
WATA	Walderalm	6.05	310	*i* Pn	Pn	09 19 30.1	+3.8
	comp=Z,2.8nm,0.3s						
WATA	Walderalm	6.05	310	Pn	Pn	09 19 30.1	+3.8
	comp=Z,2.8nm,0.3s						
MORC	Moravsky Berou	6.19	355	*e*SN	Sn	09 20 37.9	-0.9
MORC	Moravsky Berou	6.19	355	Sn	Sn	09 20 37.9	-0.9
SQTA	Sankt Quirin	6.19	308	*i* Pn	Pn	09 19 33.3	+5.1
	comp=Z,1.6nm,0.2s						
SQTA				*e*Sn	Sn	09 20 44.6	+5.5
	comp=Z,9.6nm,0.8s						
SQTA	Sankt Quirin	6.19	308	Pn	Pn	09 19 33.3	+5.1
	comp=Z,1.6nm,0.2s						
SQTA				Sn	Sn	09 20 44.6	+5.5
	comp=Z,9.6nm,0.8s						
MOTA	Moosalm	6.32	309	*i* Pn	Pn	09 19 34.0	+4.0
	comp=Z,2.7nm,0.4s						
MOTA				*i* Sn	Sn	09 20 46.2	+4.0
	comp=Z,5.6nm,0.6s						
MOTA	Moosalm	6.32	309	Pn	Pn	09 19 34.0	+4.0
	comp=Z,2.7nm,0.4s						
MOTA				Sn	Sn	09 20 46.2	+4.0
	comp=Z,5.6nm,0.6s						
FETA	Feichten	6.37	305	*i* Pn	Pn	09 19 34.7	+4.0
	comp=Z,2.0nm,0.4s						
FETA	Feichten	6.37	305	Pn	Pn	09 19 34.7	+4.0
	comp=Z,2.0nm,0.4s						
KHC	Kasperske Hory	6.43	331	*e*PN	Pn	09 19 33.4	+2.0
KHC				*e*SN	Sn	09 20 43.9	-0.9
KHC	Kasperske Hory	6.43	331	Pn	Pn	09 19 33.4	+2.0
KHC				Sn	Sn	09 20 43.9	-0.9
PGF	Pioggiola	6.94	264	*e*Pn	Pn	09 19 39.5	+1.0
PGF	Pioggiola	6.94	264	*e*P	Pn	09 19 43.4	+4.9
PGF				*e*Sn	Sn	09 20 54.0	-3.4
	comp=Z,3.1nm,0.5s						
PGF	Pioggiola	6.94	264	Pn	Pn	09 19 39.5	+1.0
PGF				Pg	Pn	09 19 43.4	+4.9
PGF				Sn	Sn	09 20 54.0	-3.4
	comp=Z,1.6nm,0.5s						
SBF	Sospel	7.92	276	*e*Pn	Pn	09 19 51.9	0.0
SBF	Sospel	7.92	276	*e*P	Pn	09 19 56.8	+4.9
SBF				*e*Sn	Sn	09 21 17.0	-4.4
	comp=Z,5.9nm,0.3s						
SBF	Sospel	7.92	276	Pn	Pn	09 19 51.9	0.0
SBF				Pg	Pn	09 19 56.8	+4.9
SBF				Sn	Sn	09 21 17.0	-4.4
	comp=Z,3.0nm,0.3s						
MBDF	Montbardon	8.41	282	*e*Pn	Pn	09 19 58.5	-0.2
MBDF	Montbardon	8.41	282	*e*P	Pn	09 20 04.3	+5.6
MBDF				*e*Sn	Sn	09 21 29.6	-4.0
	comp=Z,2.4nm,0.4s						
MBDF	Montbardon	8.41	282	Pn	Pn	09 19 58.5	-0.2
MBDF				Pg	Pn	09 20 04.3	+5.6
MBDF				Sn	Sn	09 21 29.6	-4.0
	comp=Z,1.2nm,0.4s						
FRF	La Foret Royal	8.51	274	*e*Pn	Pn	09 19 59.4	-0.5
FRF	La Foret Royal	8.51	274	*e*P	Pn	09 20 05.2	+5.3
FRF				*e*Sn	Sn	09 21 30.8	-5.0
	comp=Z,1.1nm,0.3s						
FRF	La Foret Royal	8.51	274	Pn	Pn	09 19 59.4	-0.5
FRF				Pg	Pn	09 20 05.2	+5.3
FRF				Sn	Sn	09 21 30.8	-5.0
	comp=Z,0.6nm,0.3s						
CLL	Collm	8.51	337	Sn	Sg	09 22 03.0	-27
LPL	La Plagne	8.52	287	*e*P	Pn	09 20 05.1	+4.8
LPL				*e*Sn	Sn	09 21 32.1	-4.3
	comp=Z,4.7nm,0.3s						
LPL	La Plagne	8.52	287	Pn	Pn	09 20 05.1	+4.8
LPL				Sn	Sn	09 21 32.1	-4.3
	comp=Z,2.4nm,0.3s						
LMR	La Mourre	8.63	272	*e*Pn	Pn	09 20 01.4	-0.1
LMR	La Mourre	8.63	272	*e*P	Pn	09 20 06.1	+4.6
LMR				*e*Sn	Sn	09 21 34.7	-4.0
	comp=Z,34nm,1.1s						
LMR	La Mourre	8.63	272	Pn	Pn	09 20 01.4	-0.1
LMR				Pg	Pn	09 20 06.1	+4.6
LMR				Sn	Sn	09 21 34.7	-4.0
	comp=Z,17nm,1.1s						
ORIF	Oris-en-Rattie	9.05	283	*e*Pn	Pn	09 20 07.5	+0.1
ORIF	Oris-en-Rattie	9.05	283	*e*P	Pn	09 20 12.9	+5.5
ORIF				*e*Sn	Sn	09 21 44.4	-4.9
	comp=Z,4.1nm,0.6s						
ORIF	Oris-en-Rattie	9.05	283	Pn	Pn	09 20 07.5	+0.1
ORIF				Pg		09 20 12.9	
ORIF				Sn	Sn	09 21 44.4	-4.9
	comp=Z,2.0nm,0.6s						
HINF	Hinteralfeld	9.08	302	*e*P	Pn	09 20 12.4	+4.6
HINF	Hinteralfeld	9.08	302	Pn	Pn	09 20 12.4	+4.6
CDF	Champ du Feu	9.08	306	*e*Pn	Pn	09 20 08.3	+0.5
CDF	Champ du Feu	9.08	306	Pn	Pn	09 20 08.3	+0.5
CABF	La Chapelle	9.18	293	*e*Pn	Pn	09 20 09.9	+0.7
CABF	La Chapelle	9.18	293	Pn	Pn	09 20 09.9	+0.7
SMRF	Simiane la Rot	9.26	277	*e*Pn	Pn	09 20 10.5	+0.3
SMRF	Simiane la Rot	9.26	277	*e*P	Pn	09 20 15.5	+5.3
SMRF				*e*Sn	Sn	09 21 49.0	-5.3
	comp=Z,1.9nm,0.5s						
SMRF	Simiane la Rot	9.26	277	Pn	Pn	09 20 10.5	+0.3
SMRF				Pg		09 20 15.5	
SMRF				Sn	Sn	09 21 49.0	-5.3
	comp=Z,0.9nm,0.5s						
VIVF	Saint-Julien-l	9.91	282	*e*Pn	Pn	09 20 18.7	-0.4
VIVF	Saint-Julien-l	9.91	282	*e*P	Pn	09 20 23.1	+4.0
VIVF	Saint-Julien-l	9.91	282	Pn	Pn	09 20 18.7	-0.4
VIVF				Pg		09 20 23.1	
MEZF	Maizieres J'vi	10.46	302	*e*Pn	Pn	09 20 26.2	-0.4
	baz=122						
MEZF	Maizieres J'vi	10.46	302	Pn	Pn	09 20 26.2	-0.4
LASF	Ste Croix	10.49	278	*e*P	Pn	09 20 33.2	+6.1
LASF				*e*Sn	Sn	09 22 17.1	-7.5
	comp=Z,0.7nm,0.2s						
LASF	Ste Croix	10.49	278	Pn	Pn	09 20 33.2	+6.1
LASF				Sn	Sn	09 22 17.1	-7.5
	comp=Z,0.3nm,0.2s						
SMF	Signal de Mont	10.70	291	*e*Pn	Pn	09 20 29.2	-0.7
SMF	Signal de Mont	10.70	291	*e*P	Pn	09 20 36.0	+6.1
SMF				*e*Sn	Sn	09 22 23.8	-5.8
	comp=Z,4.5nm,0.5s						
SMF	Signal de Mont	10.70	291	Pn	Pn	09 20 29.2	-0.7
SMF				Pg		09 20 36.0	
SMF				Sn	Sn	09 22 23.8	-5.8
	comp=Z,2.2nm,0.5s						
LOR	Lormes	10.83	295	*e*Pn	Pn	09 20 31.3	-0.3
	baz=101						
LOR	Lormes	10.83	295	Pn	Pn	09 20 31.3	-0.3
AVF	Avril sur Loir	11.06	292	*e*Pn	Pn	09 20 34.6	-0.2
AVF	Avril sur Loir	11.06	292	*e*P	Pn	09 20 40.3	+5.5
AVF				*e*Sn	Sn	09 22 32.3	-6.0
	comp=Z,1.1nm,0.3s						
AVF	Avril sur Loir	11.06	292	Pn	Pn	09 20 34.6	-0.2
AVF				Pg		09 20 40.3	
AVF				Sn	Sn	09 22 32.3	-6.0
	comp=Z,0.6nm,0.3s						

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*IDC **28** 09:19:14.8±1.0, 21°.70S×68°.09W, h116^{km}±14^{km}, mb3.4/2, mb1 3.5/5, mb1mx3.3/31, mbtmp3.7/5, Error ellipse: s-maj=40.7km s-min=18.1km az=115.0*

*VAO **28** 09:19:15.4±0.5, 21°.73S×68°.60W, h147^{km}±5^{km}, mb3.9*

*GUC **28** 09:19:15.0±0.7, 21°.63S×68°.57W, h136^{km}±5^{km}, ML3.9*

ISC 28 09:19:15.3±0.7**, 21°.66S**±0°.03×**68°.55W**±0°.07**, h138**^{km}±7^{km}**, n42, σ0^s.80**/58**, 8C-4D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	IPOC Station P	0.66	258	⇑*i*P	Pn	09 19 36.6	+0.1
PB09				*i* S	Sn	09 19 52.5	0.0
LVC	Limon Verde	1.01	199	P	Pn	09 19 39.1	-0.3
	52nm,0.3s,baz=33,slow=8.9,SNR=428						
LVC				S	Sn	09 19 56.8	-1.1
	72nm,0.3s,baz=152,slow=20,SNR=7.6						
LVC	Limon Verde	1.01	199	*e*P	Pn	09 19 39.2	-0.2
PB01	IPOC Station P	1.07	305	⇑*i*P	Pn	09 19 39.5	-0.2
PB01				*i* S	Sn	09 19 57.5	-0.7
PB01				IAML		09 19 59.0	
	comp=N,3µm,0.4s						
PB07	IPOC Station P	1.25	267	⇑*i*P	Pn	09 19 41.7	+0.2
PB07				*i* S	Sn	09 20 02.1	+0.6
PB07				IAML		09 20 02.8	
	comp=N,2µm,0.4s						
PB06	IPOC Station P	1.41	222	⇑*i*P	Pn	09 19 43.6	+0.4
PB06				*i* S	Sn	09 20 04.8	+0.3
PB06				IAML		09 20 06.0	
	comp=N,1µm,0.2s						
PB08	IPOC Station P	1.61	339	⇓*i*P	Pn	09 19 46.0	+0.3
PB08				*i* S	Sn	09 20 08.8	0.0
PB08				IAML		09 20 10.9	
	comp=N,699nm,0.3s						
PB04	IPOC Station P	1.63	245	⇑*i*P	Pn	09 19 46.0	+0.4
PB04				*i* S	Sn	09 20 09.7	+0.9
PB04				IAML		09 20 14.8	
	comp=E,576nm,0.4s						
PATCX	Punta Patache	1.71	299	⇑*i*P	Pn	09 19 46.7	+0.2
PATCX				*i* S	Sn	09 20 10.3	0.0
PATCX				IAML		09 20 12.5	
	comp=E,3µm,0.3s						
PB15	IPOC Station P	1.76	209	⇑*i*P	Pn	09 19 47.8	+0.6
PB15				*i* S	Sn	09 20 12.7	+1.0
HMBC	Humberstone	1.86	317	⇓*i*P	Pn	09 19 47.8	-0.4
HMBC				*i* S	Sn	09 20 12.5	-0.8
HMBC				IAML		09 20 15.0	
	comp=N,2µm,0.2s						
TA01	Diego Aracena	1.87	305	*e*P	Pn	09 19 48.1	-0.1
TA01				*i* S	Sn	09 20 13.0	-0.4
TA01				IAML		09 20 14.1	
	comp=E,2µm,0.4s						
PB05	IPOC Station P	1.94	232	⇑*i*P	Pn	09 19 49.4	+0.2
PB05				*i* S	Sn	09 20 15.3	+0.3
PB05				IAML		09 20 22.8	
	comp=E,383nm,0.5s						
TA02	Huaiquique	2.02	313	*e*P	Pn	09 19 49.6	-0.4
TA02				*i* S	Sn	09 20 15.6	-1.0
TA02				IAML		09 20 16.8	
	comp=N,1µm,0.3s						
PSGC	Pisagua	2.52	324	⇓*i*P	Pn	09 19 55.2	-1.1
PSGC				*i* S	Sn	09 20 26.2	-1.7
PSGC				IAML		09 20 32.2	
	comp=E,229nm,0.3s						
PB10	IPOC Station P	2.62	225	*e*P	Pn	09 19 57.4	+0.1
PB10				*i* S	Sn	09 20 27.0	-2.8
MNMC	Minye Minye	2.70	338	⇓*i*P	Pn	09 19 58.3	-0.4
MNMC				*i* S	Sn	09 20 32.1	0.0
MNMC				IAML		09 20 35.0	
	comp=N,549nm,0.1s						
GO02	Mina Guanaco	3.62	195	*e*P	Pn	09 20 10.2	-0.3
GO02				*i* S	Sn	09 20 53.1	-0.2
LPAZ	La Paz	5.36	4	P	Pn	09 20 34.3	+0.4
	comp=N,2.2nm,0.3s,baz=163,slow=5.3,SNR=61						
LPAZ	La Paz	5.36	4	*e*P	Pn	09 20 34.4	+0.5
SIV	San Ignacio	9.05	53	P	Pn	09 21 17.6	-5.3
	comp=N,1.6nm,0.3s,baz=254,slow=11,SNR=33						
SIV				S	Sn	09 22 51.6	-12
	comp=N,0.1nm,0.3s,baz=139,slow=19,SNR=1.2						
ETMB	Extrema	11.98	11	*e*P	Pn	09 22 03.2	+1.4
TRCB	Terra Rica	14.78	97	*e*P	Pn	09 22 38.1	+0.5
PTGB	Pitanga	15.46	105	*e*P	P	09 22 47.1	-0.4
ITAB	Concordia	15.94	114	*e*P	Pn	09 22 52.1	+0.1
PCMB	Pacaembu	16.08	93	*e*P	Pn	09 22 54.0	+0.3
CPSB	Cacapava Do Su	16.12	126	*e*P	Pn	09 22 53.8	-0.3
CLDB	Colider	16.26	51	*e*P	P	09 22 56.6	+0.2
ARAG	Araguaiana, MT	16.92	72	*e*P	P	09 23 03.9	+0.3
ITRB	Iturama	17.13	87	*e*P	P	09 23 05.2	-0.9
FRTB	Fartura	17.62	99	*e*P	P	09 23 11.2	-0.2
PLCA	Paso Flores	19.09	185	P	Pn	09 23 28.8	-0.9
	comp=N,0.1nm,0.3s,baz=2.4,slow=16,SNR=4.0						
SMTB	Santa Maria do	23.85	61	*e*P	P	09 24 15.1	-1.0
MALB	Monte Alegre	24.10	37	*e*P	P	09 24 17.5	-0.8
SDBA	SAO DESIDERIO	24.38	72	*e*P	P	09 24 20.8	-0.1
MCPB	Macapa, AP	26.59	39	*e*P	P	09 24 41.8	+1.0
NBLI	Livramento-PB	33.63	70	*e*P	P	09 25 42.4	-0.6
NBPA	Parau_RN	34.28	67	*e*P	P	09 25 48.8	+0.3
PMSA	Palmer Station	43.20	177	*e*P	P	09 27 00.8	-1.4
TORD	Torodi Ar. Bea	77.09	70	P	P	09 30 53.6	-0.3
	comp=N,0.9nm,0.5s,baz=255,slow=5.4,SNR=7.1						
YKA	Yellowknife Ar	91.45	340	P	P	09 32 07.2	+1.9
	comp=N,0.1nm,0.6s,baz=131,slow=5.1,SNR=2.8						
MKAR	Makanchi Array	145.56	36	PKPbc	PKPab	09 38 39.2	+1.3
	comp=N,0.2nm,0.5s,baz=319,slow=3.5,SNR=3.9						

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*IDC **28** 10:11:49.1±3.2, 57°.72N×154°.30W, h42^{km}±33^{km}, mb3.8/4, mb1 3.7/5, mb1mx3.3/46, mbtmp3.8/5, ML3.0/1, Error ellipse: s-maj=55.2km s-min=27.1km az=3.0*

*NEIC **28** 10:11:51.5±1.3, 57°.70N±0°.03×154°.04W±0°.06, h51^{km}±12^{km}, Error ellipse: s-maj=5.9km s-min=1.5km az=49.0*

*AEIC **28** 10:11:52±1.2, 57°.70N±0°.03×154°.03W±0°.05, h52^{km}±7^{km}, ML3.0, ML3.1/29(NEIC), Error ellipse: s-maj=3.9km s-min=3.7km az=157.0*

ISC 28 10:11:51.1±0.9**, 57°.71N**±0°.04×**154°.02W**±0°.04**, h62**^{km}±9^{km}**, n93, σ1^s.01**/101**, mb3.9**/4**, Kodiak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHAK	Old Harbor	0.63	141		Pn	10 12 04.5	-0.1
OHAK					Sn	10 12 14.1	-0.3
OHAK				IAML		10 12 15.1	
	comp=N,911nm,0.3s						
OHAK				IAML		10 12 17.2	
	comp=E,1µm,0.4s						
KABR	Katmai Barrier	0.66	310		Pn	10 12 04.2	-0.8
CAHL	Cahill	0.77	297		Pn	10 12 05.8	-0.5
KDAK	Kodiak Island	0.77	84	P	Pn	10 12 05.6	-0.7
	comp=E,49nm,0.3s,baz=252,slow=3.0,SNR=1200						
KDAK				LR	LR	10 12 18.2	
	comp=E,38nm,21.3s,baz=17,slow=32						
KDAK				S	Sn	10 12 18.3	+0.8
	comp=E,114nm,0.3s,baz=81,slow=23,SNR=13						
KDAK	Kodiak Island	0.77	84		Pn	10 12 06.2	-0.1
KDAK	Kodiak Island	0.77	84	IAML		10 12 21.2	
	comp=E,561nm,0.4s						
KDAK				IAML		10 12 21.9	
	comp=E,575nm,0.5s						
KCE	Katmai Mt Cerb	0.82	311		Pn	10 12 07.2	+0.3
KCG	Knife Ck. Glac	0.83	316		Pn	10 12 07.1	0.0
KCG					Sn	10 12 19.2	+0.3
ACHA	Angle Creek He	0.86	306		Pn	10 12 07.4	0.0
ACHA					Sn	10 12 18.2	-1.3
KJL	Kejulik	0.90	293		Pn	10 12 07.8	-0.1
KAHC	Katmai Hardscr	1.08	331		Pn	10 12 10.3	0.0
SII	Sitkinak Islan	1.16	184		Pn	10 12 11.1	-0.2
SII					Sn	10 12 26.2	-0.1
PLK3	Peulik 3	1.21	270		Pn	10 12 12.4	+0.6
PLK3					Sn	10 12 28.3	+0.9
PLK2	Peulik 2	1.24	273		Pn	10 12 12.7	+0.5
PLK1	Peulik 1	1.39	275		Pn	10 12 14.6	+0.4
PLBL	Peulik Blue Cr	1.50	271		Pn	10 12 16.6	+0.8
AUCH	Augustine Cone	1.68	10		Pn	10 12 19.6	+1.3
AUW	Augustine West	1.69	10		Pn	10 12 19.4	+1.1
OPT	Oil Point	1.99	12		Pn	10 12 23.7	+1.3
ILS	Iliamna Low So	2.31	12		Pn	10 12 27.6	+0.8
CNPM	China Poot	2.33	37		Pn	10 12 28.5	+1.5
CNPM				IAML		10 13 03.9	
	comp=N,90nm,0.7s						

CNPM				IAML		10 13 06.6	
	comp=E,95nm,0.7s						
IVE	Iliamna Volcan	2.37	12		Pn	10 12 28.4	+0.7
BRLK	Bradley Lake	2.63	37		Pn	10 12 31.3	+0.2
BRLK					Sn	10 13 01.5	-0.3
BRLK				IAML		10 13 13.6	
	comp=E,60nm,0.7s						
BRSE	Bradley Lake S	2.66	39		Pn	10 12 31.7	+0.2
CHGN	Chignik	2.79	241	Pn	Pn	10 12 33.6	+0.4
RED	Redoubt Volcan	2.79	13		Pn	10 12 34.3	+0.9
RSO	Redoubt South	2.84	13		Pn	10 12 35.6	+1.5
NCT	North Crescent	2.92	11		Pn	10 12 36.0	+1.0
DFR	Drift River	2.97	13		Pn	10 12 36.8	+1.0
DFR					Sn	10 13 12.2	+1.9
SEW	Seward	3.37	43	Pn	Pn	10 12 42.0	+0.8
SLKM	Skilak Lake	3.42	33		Pn	10 12 41.9	0.0
SVW2	Sparrevohn	3.49	347		Pn	10 12 43.5	+0.7
CKL	Chakachamna La	3.60	13		Pn	10 12 45.0	+0.6
SPBG	Spurr Blockage	3.66	13		Pn	10 12 45.8	+0.6
STLK	Strandline Lak	3.96	15		Pn	10 12 50.1	+0.8
SUA	Susitna One	4.12	22		Pn	10 12 52.6	+1.1
CNBA	Chernabura Isl	4.25	229		Pn	10 12 52.7	-0.5
PWL	Port Wells	4.30	40		Pn	10 12 53.5	-0.3
SKT	Skwentna	4.46	15		Pn	10 12 56.8	+0.7
HIN	Hinchinbrook I	4.72	52		Pn	10 13 00.1	+0.4
HIN				IAML		10 13 50.1	
	comp=E,17nm,2.0s						
HIN				IAML		10 14 40.2	
	comp=N,20nm,1.7s						
GLI	Glacier Island	4.76	45	Pn	Pn	10 13 01.3	+1.1
GLI				IAML		10 14 30.4	
	comp=N,13nm,4.3s						
FID	Port Fidalgo	4.93	49		Pn	10 13 02.2	-0.3
FID				IAML		10 14 49.8	
	comp=E,12nm,4.0s						
SML	Sawmill	5.01	33	Pn	Pn	10 13 07.1	+3.4
SML				IAML		10 14 20.4	
	comp=E,16nm,0.9s						
SML				IAML		10 14 28.8	
	comp=N,19nm,1.0s						
JPK	Jack Peak	5.06	45		Pn	10 13 04.3	-0.1
EYAK	Cordova Ski Ar	5.12	53	Pn	Pn	10 13 03.1	-1.9
PPLA	Purkeypile	5.28	9	Pn	Pn	10 13 09.1	+1.7
TT01	Tatalina	5.31	350		Pn	10 13 08.6	+0.9
TTA	Tatalina	5.33	350		Pn	10 13 08.9	+0.9
TTA				IAML		10 14 55.9	
	comp=E,9.8nm,2.7s						
SCM	Sheep Creek Mo	5.34	36	Pn	Pn	10 13 09.1	+0.9
SCM				IAML		10 14 25.9	
	comp=N,15nm,3.2s						
KAIM	Kayak Island	5.46	62	Pn	Pn	10 13 10.2	+0.5
RAGM	Ragged Mountai	5.52	57	Pn	Pn	10 13 11.1	+0.5
KLU	Klutina	5.59	44		Pn	10 13 12.3	+0.7
HMT	Hamilton	5.69	58	Pn	Pn	10 13 13.0	+0.2
SUCK	Suckling Hills	5.81	62	Pn	Pn	10 13 15.6	+1.0
M24K	Tolsona, Glenn	5.92	39		Pn	10 13 18.1	+2.1
BERG	Berg Lake	5.96	59		Pn	10 13 16.6	-0.1
TRF	Thorofare Moun	6.04	16		Pn	10 13 18.2	+0.4
KTH	Kantishna Hill	6.06	13	Pn	Pn	10 13 19.1	+1.1
N25K	Chitina, Valde	6.17	47	Pn	Pn	10 13 21.1	+1.6
RND	Reindeer	6.25	22	Pn	Pn	10 13 21.9	+1.2
CRQM	Cirque	6.36	57	Pn	Pn	10 13 22.6	+0.3
KULT	Kultieth River	6.37	62		Pn	10 13 22.2	-0.1
GLB	Gilahina Butte	6.39	50	Pn	Pn	10 13 23.8	+1.2
VRDI	Verde Repeater	6.43	52	Pn	Pn	10 13 24.4	+1.1
TGL	Tana Glacier	6.50	57	Pn	Pn	10 13 24.3	+0.3
MCK	McKinley	6.53	20		Pn	10 13 24.4	0.0
MCARA	McCarthy VSAT	6.69	52	Pn	Pn	10 13 28.2	+1.6
KIAG	Kiagna River	6.78	57		Pn	10 13 28.2	+0.2
BALM	Baldy	6.83	56		Pn	10 13 29.3	+0.7
YAH	Yahtse	6.87	62		Pn	10 13 29.6	+0.4
GRNC	Granite Creek	6.98	59		Pn	10 13 30.9	+0.1
CHX	Chaix Hills	7.09	65		Pn	10 13 32.1	0.0
BARN	Barnard Glacie	7.15	57	Pn	Pn	10 13 34.0	+1.0
TABL	Table Mountain	7.18	62		Pn	10 13 33.5	0.0
CTGM	Chitina Glacie	7.26	58		Pn	10 13 34.8	+0.3
LOGN	Logan Glacier	7.36	59		Pn	10 13 36.0	+0.1
WRH	Wood River Hil	7.36	20		Pn	10 13 35.1	-0.6
PCA	Pinnacle	7.52	66		Pn	10 13 38.1	+0.2
HDA	Harding Lake	7.54	24	Pn	Pn	10 13 38.7	+0.6
CCB	Clear Creek Bu	7.58	21		Pn	10 13 37.9	-0.8
DOT	Dot Lake	7.70	35	Pn	Pn	10 13 41.3	+0.9
IL31		7.87	23		Pn	10 13 42.7	+0.1
ILAR	Eielson Array	7.87	23	P	Pn	10 13 41.5	-1.2
	comp=N,0.2nm,0.3s,baz=222,slow=14,SNR=13						
ILAR				S	Sn	10 15 05.9	-4.2
	baz=198,slow=31,SNR=0.8						
ILAR	Eielson Array	7.87	23		Pn	10 13 43.8	+1.1
IM03		8.30	1		Pn	10 13 48.6	+0.1
IMAR	Indian Mountai	8.30	1	Pn	Pn	10 13 49.9	+1.3
ANM	Nome	8.79	326	Pn	Pn	10 13 56.8	+1.6
COLD	Coldfoot	9.71	9	Pn	Pn	10 14 08.6	+0.8
YKA	Yellowknife Ar	19.98	60	P	P	10 16 19.1	+1.1
	comp=N,0.1nm,0.7s,baz=272,slow=9.0,SNR=5.2						
MA2	Magadan	28.10	297	P	P	10 17 35.7	-0.8
	comp=N,0.9nm,0.3s,baz=49,slow=9.3,SNR=1.5						
FINES	FINESS Array B	61.18	360	P	P	10 21 58.6	0.0
	comp=N,5.3nm,1.2s,baz=8.8,slow=12,SNR=1.9						
MKAR	Makanchi Array	65.89	321	P	P	10 22 29.7	-0.2
	comp=N,0.2nm,0.4s,baz=40,slow=4.6,SNR=3.0						
AKASG	Malin Array Be	71.92	358	P	P	10 23 06.9	-0.3
	comp=N,0.7nm,0.5s,baz=5.0,slow=5.2,SNR=4.5						

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*IDC **28** 10:16:36.2±1.5, 6°.52S×153°.75E, h0^{km}, mb3.9/8, mb1 4.0/9, mb1mx3.8/32, mbtmp3.9/9, ML2.1/1, MS2.6/1, Ms1 2.6/1, ms1mx2.2/34, Error ellipse: s-maj=49.4km s-min=20.0km az=122.0*

ISC 28 10:16:41.2±1.2, **6°.6S**±0°.2×**153°.8E**±0°.2, **h35**^{km}, **n10**, σ**1^{s}11**/11, **mb3.8**/8, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	7.18	247	Pn	Pn	10 18 23.7	-0.1
	1.7nm,0.3s,baz=53,slow=9.4,SNR=7.7						
PMG				Sn	Sn	10 19 45.5	+1.3
	0.5nm,0.3s,baz=48,slow=20,SNR=1.6						
PMG				LR	LR	10 20 39.7	
	comp=Z,48nm,20.6s,baz=48,slow=34						
WRA	Warramunga Arr	23.12	233	P	P	10 21 43.0	-1.4
	1.9nm,0.9s,baz=57,slow=10,SNR=9.3						
ASAR	Alice Springs	25.60	226	P	P	10 22 07.0	-0.5
	2.1nm,0.9s,baz=60,slow=9.1,SNR=17						
STKA	Stephens Creek	27.64	203	P	P	10 22 27.2	+1.6
	2.5nm,0.9s,baz=9.0,slow=9.8,SNR=2.9						
FITZ	Fitzroy Crossi	29.77	245	P	P	10 22 43.2	-1.6
	2.8nm,1.0s,baz=83,slow=8.1,SNR=2.7						
SONM	Songino Array	68.37	328	P	P	10 27 39.5	+0.2
	0.4nm,0.3s,baz=146,slow=10,SNR=5.0						
MKAR	Makanchi Array	82.34	319	P	P	10 29 00.2	+0.7
	0.3nm,0.5s,baz=99,slow=7.5,SNR=4.6						
ZALV	Zalesovo Beam	83.20	326	P	P	10 29 03.6	-0.1
	0.6nm,0.4s,baz=115,slow=6.8,SNR=2.1						
ILAR	Eielson Array	83.42	22	P	P	10 29 04.8	+0.1
	0.5nm,0.8s,baz=253,slow=4.6,SNR=5.8						
TORD	Torodi Ar. Bea	151.81	286	PKPbc	PKPbc	10 36 33.7	+0.4
	0.9nm,0.7s,baz=53,slow=2.0,SNR=5.2						

TEH 28 10:26:22.7, 36°.90N×55°.82E, h8^{km}, ML3.5, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IMND	Minoodasht	0.48	317	*e*Pg	Pg	10 26 32.7	+0.6
SBZV	Sabzevar	1.53	109	*e*Pg	Pg	10 26 51.8	-0.2
IGLO	Ghaloghah	1.65	257	*e*Pg	Pg	10 26 54.2	-0.1
IGLO				*e*		10 27 28.7	
	comp=Z,99nm,0.5s						
ISFR	Sfrayin	1.75	84	*e*Pg	Pg	10 26 56.2	-0.1
ISFR				*e*		10 27 22.8	
	comp=Z,99nm,0.2s						
IANJ	Anjilo	2.10	228	*e*Pn	Pb	10 27 01.0	-0.3
IANJ				*e*		10 27 35.9	
	comp=Z,99nm,0.3s						
IAKL	Akhelmad	2.38	96	*e*Pn	Pb	10 27 04.5	-1.4
IAKL				*e*		10 27 44.0	
	comp=E,99nm,0.2s						
IPAY	Payeh	2.59	99	*e*Pn	Pb	10 27 08.1	-1.5
ILAS	Lasjerd	2.77	238	*e*Pn	Pb	10 27 11.2	-1.4
ILAS				*e*		10 28 03.7	
	comp=Z,99nm,0.3s						
IFIR	Firoozkooh	2.78	244	*e*Pn	Pb	10 27 10.4	-2.4
IPRN	Peran	2.88	258	*e*Pn	Pb	10 27 11.9	-2.5
IKRD	Kardeh	2.97	91	*e*Pn	Pg	10 27 13.4	+9.2
IKRD				*e*		10 28 06.4	
	comp=Z,99nm,0.7s						
TNSJ	Nastanj	3.00	167	*e*Pn	Pn	10 27 13.1	+2.4
TKDS	Koohdasht(Taba	3.45	162	*e*Pn	Pn	10 27 18.8	+1.9
TKDS				*e*		10 28 31.1	
	comp=Z,99nm,0.6s						
IMYA	Miami	3.49	98	*e*Pn	Pn	10 27 20.8	+3.4
IMYA				*e*		10 28 32.2	
	comp=Z,99nm,0.4s						
IVRN	Varamin	3.83	241	*e*Pn	Pn	10 27 25.5	+3.5
TPRV	Parvadeh(Tabas	3.93	169	*e*Pn	Pn	10 27 26.3	+2.9
TPRV				*e*		10 28 43.4	
	comp=Z,99nm,0.8s						
ANAR	Anarak	4.08	205	*e*Pn	Pn	10 27 27.0	+1.4
QALM	Alamut, Qazvin	4.19	265	*e*Pn	Pn	10 27 28.5	+1.4
KRSH	Karshahi	4.20	227	*e*Pn	Pn	10 27 29.3	+2.1
IMHD	Mahdasht	4.34	255	*e*Pn	Pn	10 27 30.9	+1.9
AFRZ	Afriz	4.35	142	*e*Pn	Pn	10 27 31.7	+2.5
ITEG	Tejag	4.67	148	*e*Pn	Pn	10 27 36.4	+2.8
IZEF	Zefreh	4.92	217	*e*Pn	Pn	10 27 40.8	+3.6
IRAZ	Razeghan	5.00	254	*e*Pn	Pn	10 27 41.8	+3.6
QABG	Abgarm-Qazvin	5.18	259	*e*Pn	Pn	10 27 42.3	+1.6
IRAM	Ramesheh	5.82	210	*e*Pn	Pn	10 27 52.4	+2.8
ISRB	Sarab	6.56	281	*e*Pn	Pn	10 28 01.8	+2.1

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*NEIC **28** 10:29:37.8±1.2, 20°.4S±0°.1×178°.3W±0°.1, h534^{km}±7^{km}, mb4.2/21, Error ellipse: s-maj=20.2km s-min=16.0km az=143.0*

*IDC **28** 10:29:39.6±2.1, 20°.52S×178°.30W, h552^{km}±20^{km}, mb3.4/13, mb1 3.7/14, mb1mx3.4/29, mbtmp4.3/14, Error ellipse: s-maj=31.1km s-min=14.0km az=147.0*

ISC 28 10:29:42.5±0.5, **20°.5S**±0°.1×**178°.5W**±0°.1, **h587**^{km}, **n75**, σ**0^{s}88**/76, **mb4.0**/23, **8C-1D**, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.25	309	P	P	10 31 04.7	-4.3
	4.7nm,0.3s,baz=139,slow=2.7,SNR=31						
NIUE	Niue	8.17	82	P	P	10 31 33.8	-9.2
AFI	Afiamalu	9.12	46	P	P	10 31 42.9	-10
DZM	Mont Dzumac	14.15	261	P	P	10 32 40.5	-2.7
OUZ	Omahuta	16.29	204	P	P	10 33 00.9	-2.0
EIDS	Eidsvold	28.43	254	P	P	10 34 52.5	+1.1
COEN	Coen	37.13	274	P	P	10 36 06.7	+1.8
COEN				IAmb	IAmb	10 36 21.4	
	comp=Z,5.3nm,1.1s						
STKA	Stephens Creek	37.41	244	P	P	10 36 07.1	+0.2
	comp=Z,1.1nm,0.5s,baz=64,slow=14,SNR=2.8						
STKA	Stephens Creek	37.41	244	P	P	10 36 06.9	0.0
BBOO	Buckleboo	42.17	243	P	P	10 36 44.8	-0.2
JAY	Jayapura	43.60	289	P	P	10 36 57.2	+0.9
	comp=Z,19nm,1.0s,baz=152,slow=17,SNR=1.9						
WR0	Warramunga Arr	43.97	262	P	P	10 36 59.3	+0.1
AS31	Alice Springs	44.09	257		P	10 37 00.5	+0.4
ASAR	Alice Springs	44.09	257	P	P	10 37 00.5	+0.4
	comp=Z,4.3nm,0.6s,baz=97,slow=7.8,SNR=88						
ASAR				PcP	PcP	10 38 33.1	+1.0
	comp=Z,1.2nm,0.5s,baz=99,slow=4.1,SNR=11						
ASAR	Alice Springs	44.09	257	P	P	10 37 00.3	+0.3
ASAR				PcP	PcP	10 38 32.7	+0.5
WB0	Warramunga Arr	44.14	262	P	P	10 37 00.6	+0.1
WB0				IAmb	IAmb	10 37 01.1	
	comp=Z,6.0nm,0.5s						
WB2	Warramunga Arr	44.15	262	P	P	10 37 00.7	+0.1
WB2				IAmb	IAmb	10 37 03.7	
	comp=Z,6.8nm,1.1s						
WRAB	Tennant Creek	44.15	262	P	P	10 37 00.9	+0.3
WRAB				IAmb	IAmb	10 37 01.3	
	comp=Z,6.5nm,1.0s						
WRA	Warramunga Arr	44.16	262	P	P	10 37 00.7	+0.1
	comp=Z,1.7nm,0.3s,baz=97,slow=7.4,SNR=57						
WRA				PcP	PcP	10 38 33.0	+0.6
	comp=Z,0.3nm,0.6s,baz=88,slow=3.2,SNR=4.7						
FITZ	Fitzroy Crossi	52.59	262	P	P	10 38 04.2	+1.2
PSA00	Pilbara Seismi	57.24	257	P	P	10 38 35.6	+0.2
PSA00				IAmb	IAmb	10 38 36.7	
	comp=Z,8.7nm,0.9s						
VNDA	Vanda	57.92	185	P	P	10 38 39.6	+0.6
VNDA				IAmb	IAmb	10 38 54.2	
	comp=Z,15nm,1.4s						
QSPA	South Pole Qui	69.62	180	P	P	10 39 53.3	-0.3
ADK	Adak	72.03	1	P	P	10 40 07.5	-0.2
UNV	Unalaska Valle	74.70	7	P	P	10 40 21.7	-1.0
PETK	Petropavlovsk-	76.11	345	P	P	10 40 31.1	+0.5
	comp=Z,4.6nm,0.8s,baz=118,slow=7.1,SNR=6.2						
PETK	Petropavlovsk-	76.11	345	P	P	10 40 30.3	-0.3
USRK	Ussuriysk Ar.	78.67	326	P	P	10 40 46.0	+1.4
	comp=Z,1.5nm,0.7s,baz=115,slow=4.1,SNR=6.5						
YBH	Yreka Blue Hor	80.53	39	P	P	10 40 55.0	+0.5
	comp=Z,3.8nm,0.8s,baz=192,slow=2.5,SNR=8.3						
YBH	Yreka Blue Hor	80.53	39	IAmb	IAmb	10 40 56.1	
	comp=Z,4.8nm,0.8s						
NVAR	Mina Array Bea	81.30	44	P	P	10 40 59.1	+0.4
	comp=Z,1.7nm,0.8s,baz=224,slow=9.9,SNR=11						
NVAR	Mina Array Bea	81.30	44	P	P	10 40 58.7	-0.1
RND	Reindeer	86.75	13	P	P	10 41 24.8	+0.1
RND				IAmb	IAmb	10 41 25.8	
	comp=Z,8.8nm,1.2s						
TXAR	Lajitas Array	87.41	58	P	P	10 41 28.9	+0.3
	comp=Z,0.8nm,0.9s,baz=222,slow=6.9,SNR=6.3						
WRH	Wood River Hil	87.85	13	P	P	10 41 29.6	-0.1
WRH				IAmb	IAmb	10 41 29.7	
	comp=Z,4.2nm,0.7s						
HDA	Harding Lake	88.03	13	P	P	10 41 30.6	-0.1
HDA				IAmb	IAmb	10 41 31.3	
	comp=Z,3.8nm,0.7s						
CCB	Clear Creek Bu	88.06	13	P	P	10 41 30.3	-0.4
MDM	Murphy Dome	88.25	12	P	P	10 41 31.2	-0.4
MDM				IAmb	IAmb	10 41 31.8	
	comp=Z,2.8nm,0.7s						
ILAR	Eielson Array	88.36	13	P	P	10 41 31.5	-0.6
	comp=Z,1.0nm,0.4s,baz=216,slow=5.3,SNR=30						
ILAR	Eielson Array	88.36	13	P	P	10 41 31.3	-0.8
PDAR	Pinedale Array	89.23	43	P	P	10 41 36.9	-0.2
	comp=Z,0.8nm,0.6s,baz=208,slow=3.7,SNR=10						
CMAR	Chiang Mai Arr	89.67	290	P	P	10 41 41.9	+2.5
	comp=Z,0.9nm,0.5s,baz=132,slow=2.9,SNR=8.6						
YKA	Yellowknife Ar	96.65	25	P	P	10 42 09.6	-0.5
	comp=Z,0.2nm,0.8s,baz=229,slow=3.9,SNR=5.5						
ZALV	Zalesovo Beam	110.17	321	PKiKP	PKiKP	10 47 07.1	-0.9
	comp=Z,0.5nm,0.4s,baz=130,slow=2.3,SNR=2.6						
MKAR	Makanchi Array	110.84	313	PKiKP	PKiKP	10 47 09.2	-0.4
	comp=Z,0.4nm,0.5s,baz=215,slow=1.7,SNR=8.7						
ABKAR	Akbulak array	125.74	317		PKPdf	10 47 38.2	+0.2
ARCES	ARCESS Array B	128.79	349	PKP	PKPdf	10 47 42.5	-0.8
	comp=Z,1.2nm,0.6s,baz=63,slow=2.6,SNR=7.8						
AKASG	Malin Array Be	142.75	331	PKhKP	PKPpre	10 48 07.0	
	comp=Z,6.7nm,0.5s,baz=43,slow=4.4,SNR=31						
SORM	Soroca	144.93	328	⇑P	PKPab	10 48 15.4	+0.2
BR131	Keskin Array S	146.47	312		PKPbc	10 48 19.5	+0.5
BRTR	Keskin Array B	146.47	312	PKPbc	PKPbc	10 48 19.6	+0.6
	comp=Z,1.6nm,0.6s,baz=137,slow=4.4,SNR=9.1						
BRTR	Keskin Array B	146.47	312	PKPdf	PKPdf	10 48 16.5	0.0
BUR08	Bucovina Ar. S	146.78	330		PKiKP	10 48 21.1	-0.4
BURAR	Bucovina Array	146.79	330	⇑P	PKPbc	10 48 20.1	+0.5
BURAR	Bucovina Array	146.79	330		PKPbc	10 48 19.7	+0.1
BIZ	Bicaz	146.85	329	⇑P	PKiKP	10 48 21.4	-0.1
OSTC	Ostas	147.79	342	*e*PKP	PKiKP	10 48 23.5	+0.1
DOPR	Dopca	147.89	328	⇑P	PKiKP	10 48 23.4	-0.4
CLL	Collm	147.91	346	⇓*i*PKPbc	PKPbc	10 48 22.9	+0.7
	comp=Z,11nm,1.0s						
CLL				*i* PKPab	PKPab	10 48 27.5	+0.5
	comp=Z,5.0nm,0.7s						
CLL	Collm	147.91	346		PKiKP	10 48 23.0	-0.5
MLR	Muntele Rosu	147.94	327	⇑P	PKPbc	10 48 22.8	+0.1
DPC	Dobruska-Polom	147.94	342	*e*PKP	PKiKP	10 48 23.7	0.0
DPC				*e*x	x	10 48 28.8	
ARR	Arges	148.69	328	⇑P	PKiKP	10 48 26.0	+0.5
PBCC	Pribram	149.18	344	*e*PKP	PKiKP	10 48 26.3	0.0
PBCC				*e*x	x	10 48 33.6	
GZR	Gura Zlata	149.57	330	⇑P	PKPbc	10 48 26.4	-0.2
KHC	Kasperske Hory	149.80	344	*e*PKP	PKiKP	10 48 27.9	+0.3
KHC				*e*x	x	10 48 36.4	
GERES	GERESS Array B	150.03	344	PKPbc	PKiKP	10 48 28.2	+0.1
	comp=Z,1.2nm,0.5s,baz=3.4,slow=2.3,SNR=10						
GERES				PKPab	PKPab	10 48 35.7	-0.3
	comp=Z,0.8nm,0.5s,baz=44,slow=4.4,SNR=5.4						
HERR	Herculane	150.12	329	⇑P	PKiKP	10 48 28.1	-0.2
CONA	Conrad Observa	150.23	340	*i* P	PKiKP	10 48 29.2	+0.6
	comp=Z,4.3nm,0.6s						
MOA	Molln	150.78	342	*e*P	PKiKP	10 48 29.9	+0.2
	comp=Z,1.2nm,0.5s						
WATA	Walderalm	151.96	345	*i* P	PKiKP	10 48 32.4	+0.2
	comp=Z,1.6nm,0.4s						
WTTA	Wattenberg	152.01	345	*e*P	PKiKP	10 48 32.8	+0.4
	comp=Z,4.9nm,0.7s						
SQTA	Sankt Quirin	152.15	346	*i* P	PKiKP	10 48 32.9	+0.3
	comp=Z,8.2nm,1.3s						
ABTA	Abfaltersbach	152.27	344	*i* P	PKPbc	10 48 32.6	-0.1
	comp=Z,4.5nm,0.6s						
TORD	Torodi Ar. Bea	172.74	181	PKPab	PKPab	10 50 14.9	-0.8
	comp=Z,0.5nm,0.7s,baz=251,slow=4.4,SNR=2.1						

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*ANF **28** 10:41:36.7±0.4, 38°.84N×115°.31W, h0^{km}, ML4.1/25, Error ellipse: s-maj=4.9km s-min=2.4km az=127.0*

*NEIC **28** 10:41:36.8, 38°.91N×115°.38W, h5^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-4.72; $M_{\theta\theta}$1.18; $M_{\phi\phi}$3.55; $M_{r\theta}$-2.46; $M_{\theta\phi}$3.68; $M_{\phi r}$-0.03; Fault plane solution: $M_0$6.14000×10^{14} NP1:ϕ_s58.21000°, δ57.14000°, λ-61.12000°. NP2:ϕ_s192.74000°, δ42.65000°, λ-126.78000°. Principal axes: T 6.4285, Plg8.0000°, Azm128.0000°; N -0.6239, Plg24.0000°, Azm222.0000°; P -5.8046, Plg65.0000°, Azm21.0000°;*

*REN **28** 10:41:36.7±1.6, 38°.91N±0°.03×115°.38W±0°.05, h0^{km}±6^{km}, ML3.9/11, mb3.8/5(NEIC), ML3.9/104(NEIC), Mwr3.8/65(NEIC) Error ellipse: s-maj=5.7km s-min=4.5km az=107.0*

*NEIC **28** 10:41:36.4±1.7, 38°.91N±0°.04×115°.36W±0°.05, h2^{km}±5^{km}, Error ellipse: s-maj=5.7km s-min=5.0km az=125.0*

*IDC **28** 10:41:37.4±0.7, 38°.95N×115°.40W, h0^{km}, mb3.5/4, mb1 3.8/11, mb1mx3.6/51, mbtmp3.5/11, ML3.4/6, MS3.1/6, Ms1 3.1/6, ms1mx2.9/26, Error ellipse: s-maj=7.7km s-min=5.7km az=128.0*

ISC 28 10:41:36.5±0.4, **38°.91N**±0°.02×**115°.43W**±0°.02, **h10**^{km}, **n153**, σ**1^{s}69**/170, **mb3.5**/4, **Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
R11A	Troy Canyon, C	0.57	193	P	Pg	10 41 47.6	0.0
	baz=16						
R11A				S	Sg	10 41 54.9	-0.2
	baz=16						
R11A	Troy Canyon, C	0.57	193	Pg	Pg	10 41 47.7	+0.2
R11A				Sg	Sg	10 41 55.3	+0.2
PSUT	Pine Spring	1.28	106		Pn	10 42 00.5	-0.2
PSUT					Sg	10 42 17.7	-0.1
PRN	Pahroc Range	1.52	169		Pn	10 42 04.6	+0.7
PRN				Sn	Sg	10 42 25.1	-0.4
TPH	Tonopah	1.64	240		Sg	10 42 30.3	+1.2
TPH	Tonopah	1.64	240		Pn	10 42 06.7	+1.2
TPH				IAML		10 42 32.5	
	comp=E,1μm,0.6s						
TPH				IAML		10 42 36.0	
	comp=N,1μm,0.6s						
ELK	Elko	1.84	4	Pn	Pn	10 42 08.7	+0.4
	comp=N,40nm,0.3s,baz=191,slow=10,SNR=232						
ELK				Lg	Lg	10 42 34.3	
	comp=N,120nm,0.3s,baz=269,slow=11,SNR=15						
ELK	Elko	1.84	4		Pn	10 42 08.8	+0.4
TPNV	Topopah Spring	2.06	199	P	Pn	10 42 12.2	+1.0
	baz=19						
TPNV				Sb	Sg	10 42 41.9	-0.8
	baz=19						
TPNV	Topopah Spring	2.06	199		Pn	10 42 12.3	+1.1
TPNV				IAML		10 42 44.1	
	comp=N,706nm,0.5s						
TPNV				IAML		10 42 49.3	
	comp=N,778nm,0.6s						
KVN	Kaiserville	2.09	275		Pn	10 42 13.3	+1.6
KVN				IAML		10 42 44.9	
	comp=N,1μm,0.5s						
KVN				IAML		10 42 46.6	
	comp=E,1μm,0.9s						
CCUT	Cedar City	2.11	129		Pn	10 42 12.7	+0.6
NV11	Mina Array Sit	2.19	258		Pn	10 42 13.8	+0.8
NVAR	Mina Array Bea	2.30	259	Pn	Pn	10 42 15.8	+1.1
	comp=E,14nm,0.3s,baz=76,slow=14,SNR=102						
NVAR				Lg	Lg	10 42 51.1	
	comp=E,128nm,0.3s,baz=55,slow=36,SNR=9.9						
NVAR	Mina Array Bea	2.30	259	Pn	Pn	10 42 14.5	-0.2
DUG	Dugway, Tooele	2.40	57	P	Pn	10 42 16.8	+0.9
	baz=238,SNR=114						
DUG				Sb	Sb	10 42 51.6	+2.2
	baz=238						
DUG	Dugway, Tooele	2.40	57		Pn	10 42 16.6	+0.8
DUG				IAML		10 43 00.8	
	comp=E,619nm,0.9s						
DUG				IAML		10 43 03.6	
	comp=E,448nm,1.2s						
SHPR	Sheep Range	2.41	175		Pn	10 42 16.7	+0.7
SHPR				IAML		10 43 03.3	
	comp=E,490nm,1.1s						
RYN	Ryan	2.44	264		Pn	10 42 17.6	+1.1
RYN				IAML		10 42 56.9	
	comp=E,774nm,0.6s						
RYN				IAML		10 42 57.0	
	comp=N,816nm,0.7s						
GRAC	Grapevine Rang	2.45	219	Pb	Pb	10 42 22.0	+1.5
	baz=39,SNR=30						
GRAC				Sb	Sg	10 42 55.3	+0.3
	baz=39						
LHV	Little Huntoon	2.50	256		Pn	10 42 18.6	+1.5
MVU	Marysvale	2.55	98		Pn	10 42 19.2	+1.1
FURC	Furnace Creek,	2.69	206	Pb	Pb	10 42 25.4	+0.8
	baz=25						
FURC				Sb	Sg	10 43 01.6	-1.2
	baz=25						
TIN	Tinemaha, Big	2.88	231	Pb	Pb	10 42 30.1	+2.1
	baz=50,SNR=23						
TIN				Sb	Sg	10 43 09.0	-0.1
	baz=50						
MLAC	Mammoth, Mammo	2.97	246	Pg	Pg	10 42 34.6	+1.2
	baz=64,SNR=24						
MLAC				Sb	Sg	10 43 13.5	+1.7
	baz=64						
YERR	Yerington	2.98	273		Pn	10 42 26.3	+2.4
YERR				IAML		10 43 15.9	
	comp=N,512nm,0.8s						
YERR				IAML		10 43 18.1	
	comp=E,531nm,0.8s						
SHOC	Shoshone, Teco	3.08	193	Pg	Pg	10 42 35.1	-0.3
	baz=13,SNR=45						
SHOC				Sg	Sg	10 43 16.8	+1.5
	baz=13						
OMMB	Old Mammoth Mi	3.10	246		Pn	10 42 26.7	+1.0
MDPB	Devils Postpil	3.14	247		Pn	10 42 27.7	+1.4
WAKR	Walker	3.16	264		Pn	10 42 28.4	+1.9
WAKR				IAML		10 43 23.6	
	comp=E,225nm,0.8s						
WAKR				IAML		10 43 24.3	
	comp=N,315nm,0.8s						
PAHR	Pah Rah Range	3.17	286	Pn	Pn	10 42 28.8	+2.2
PAHR				IAML		10 43 20.3	
	comp=N,262nm,0.8s						
CWC	Cottonwood Cre	3.24	221	Pg	Pg	10 42 39.2	+0.7
	baz=40						
PNTR	Pine Nut	3.26	275		Pn	10 42 29.2	+1.4
PNTR				IAML		10 43 25.7	
	comp=N,446nm,0.7s						
PNTR				IAML		10 43 34.2	
	comp=E,473nm,1.7s						
MPMC	Manual Prospec	3.28	211	Pn	Pn	10 42 30.1	+2.0
	baz=30,SNR=39						
MPMC				Pg	Pg	10 42 38.5	-0.9
	baz=30						
MPMC				Sb	Sg	10 43 20.1	-1.7
	baz=30						
VCNR	Virginia City	3.31	278		Pn	10 42 31.1	+2.6
VCNR				IAML		10 43 31.2	
	comp=E,442nm,0.8s						
RUBR	Rubicon Trail	3.69	274		Pn	10 42 36.1	+2.3
RUBR				IAML		10 43 38.7	
	comp=E,147nm,0.7s						
RUBR				IAML		10 43 44.9	
	comp=N,159nm,0.9s						
GSC	Goldstone, Bar	3.76	197	Pg	Pg	10 42 46.4	-2.2
	baz=17,SNR=36						
GSC	Goldstone, Bar	3.76	197		Pn	10 42 36.2	+1.6
GSC				IAML		10 43 58.4	
	comp=E,152nm,1.4s						
BEKR	Beckworth	3.94	286		Pn	10 42 38.7	+1.5
BEKR				IAML		10 43 44.5	
	comp=N,102nm,0.7s						
BEKR				IAML		10 43 47.3	

	comp=E,91nm,0.7s						
CMB	Columbia Colle	3.99	259	Pn	Pn	10 42 37.8	+0.1
W13A	Hualapai Mount	3.99	162	Pn	Pn	10 42 38.8	+0.9
ISA	Isabella, Lake	4.05	218	Pg	Pg	10 42 53.2	-0.8
	baz=36						
ISA	Isabella, Lake	4.05	218		Pn	10 42 38.7	+0.1
VOG	Valley Oaks Go	4.06	232	Sb	Sg	10 43 46.2	-0.7
	baz=50						
GMRC	Granite Mounta	4.12	183	Pn	Pn	10 42 41.0	+1.5
	baz=3.0						
GMRC				Pg	Pg	10 42 54.4	-0.9
	baz=3.0,SNR=26						
GMRC				Sg	Sg	10 43 47.9	-0.8
	baz=3.0						
HEC	Hector,Ludlow	4.13	190	Pg	Pg	10 42 54.7	-0.9
	baz=10,SNR=20						
HEC				Sb	Sg	10 43 46.2	-3.0
	baz=10						
NEE2	Needles Airpor	4.18	171	Pn	Pn	10 42 41.1	+0.8
	baz=352						
NEE2				Pg	Pg	10 42 54.6	-1.9
	baz=352,SNR=10						
NEE2				Sg	Sg	10 43 50.5	-0.2
	baz=352						
VES	Vestal, Richgr	4.22	225	Pg	Pg	10 42 56.4	-0.9
	baz=43						
VES				Sb	Sg	10 43 52.7	+0.6
	baz=43						
WVOR	Wild Horse Val	4.29	326		Pn	10 42 44.0	+2.1
WVOR				IAML		10 44 04.5	
	comp=E,144nm,0.8s						
WVOR				IAML		10 44 05.0	
	comp=E,174nm,0.9s						
AFDM	Forest Hills D	4.33	272		Pn	10 42 44.5	+2.1
EDW2	Edwards Air Fo	4.51	208	Pg	Pg	10 43 02.1	-0.8
	baz=27,SNR=6.5						
MFID	Camas Ranch	4.52	356	Pn	Pn	10 42 46.0	+1.0
MFID				IAML		10 44 04.0	
	comp=E,174nm,0.6s						
MFID				IAML		10 44 06.7	
	comp=E,131nm,1.3s						
WUAZ	Wupatki	4.68	135	Pb	Pb	10 42 59.3	+0.6
	baz=318,SNR=23						
WUAZ	Wupatki	4.68	135		Pn	10 42 48.2	+0.9
WUAZ				IAML		10 44 09.5	
	comp=E,163nm,0.5s						
HLID	Hailey	4.71	9	P	Pn	10 42 49.5	+1.7
	baz=189,SNR=44						
HLID				Sb	Sg	10 44 06.1	-1.8
	baz=189						
HLID	Hailey	4.71	9	Pn	Pn	10 42 49.0	+1.2
HLID				IAML		10 44 10.7	
	comp=E,68nm,0.8s						
HLID				IAML		10 44 12.3	
	comp=E,82nm,0.9s						
IRM	Iron Mountain	4.74	177	Pn	Pn	10 42 49.1	+1.0
	baz=358						
IRM				Pg	Pg	10 43 06.6	-0.7
	baz=358,SNR=34						
IRM				Sg	Sg	10 44 06.2	-2.6
	baz=358						
ORV	Oroville	4.76	280	Pn	Pn	10 42 49.8	+1.5
MOD	Modoc Plateau	4.78	310	Pn	Pn	10 42 50.8	+2.1
MOD				IAML		10 44 22.3	
	comp=N,102nm,0.8s						
MOD				IAML		10 44 22.5	
	comp=E,118nm,1.2s						
BFSC	Mount Baldy Ra	4.99	202	Pg	Pg	10 43 10.9	-1.1
	baz=21						
J08A	Circle Bar Ran	5.01	334	Pn	Pn	10 42 51.6	-0.2
PV10	Paradox Valley	5.03	94		Pn	10 42 52.1	-0.1
PV10				IAML		10 44 24.5	
	comp=N,132nm,1.1s						
PV10				IAML		10 44 39.7	
	comp=E,115nm,1.0s						
OSI	Osito Audit: C	5.03	213	Pn	Pn	10 42 53.3	+1.2
PV14	Lion Creek, Pa	5.04	94		Pn	10 42 51.6	-0.8
AHID	Auburn Hatcher	5.06	39		Pn	10 42 53.6	+1.0
AHID				IAML		10 44 27.0	
	comp=N,100nm,1.3s						
AHID				IAML		10 44 40.4	
	comp=E,78nm,1.1s						
PV19	Morning Glory	5.08	95		Pn	10 42 53.2	+0.3
PV19				IAML		10 44 26.0	
	comp=N,88nm,1.3s						
PV19				IAML		10 44 34.9	
	comp=E,67nm,0.8s						
PV20	West Nyswonger	5.09	94		Pn	10 42 53.8	+0.8
PV17	East Wray Mesa	5.11	95		Pn	10 42 54.3	+1.1
PV17				IAML		10 44 28.6	
	comp=E,103nm,1.4s						
PV17				IAML		10 44 31.2	
	comp=N,98nm,0.9s						
O03E	Paynes Creek	5.12	288	Pn	Pn	10 42 56.0	+2.8
	baz=104,SNR=17						
O03E				Sb	Sg	10 44 16.2	-4.5
	baz=104						
PV04	Paradox Valley	5.13	94		Pn	10 42 54.5	+1.0
PV16	Nyswonger Mesa	5.13	95		Pn	10 42 54.8	+1.2
PV18	Skein Mesa, Pa	5.15	95	Pn	Pn	10 42 54.8	+1.0
PV18				IAML		10 44 21.7	
	comp=N,96nm,1.2s						
PV18				IAML		10 44 29.4	
	comp=E,66nm,1.0s						
ECR	Eagle Creek	5.16	35	Pn	Pn	10 42 54.4	+0.5
PV11	David Mesa, Pa	5.17	95		Pn	10 42 53.9	-0.2
PV03	Paradox Valley	5.20	95		Pn	10 42 54.8	+0.4
PV03				IAML		10 44 20.8	
	comp=E,86nm,1.1s						
PV03				IAML		10 44 28.7	
	comp=N,102nm,1.6s						
PV22	Blue Mesa, Par	5.21	92	Pn	Pn	10 42 55.6	+1.0
PV12	Saucer Basin,	5.22	94		Pn	10 42 55.7	+0.9
PV13	Radium Mtn., P	5.23	96		Pn	10 42 55.1	+0.2
BC3	Big Chuckawall	5.24	180	Pg	Pg	10 43 16.4	-0.4
	baz=0.6						
PV02	Paradox Valley	5.29	95		Pn	10 42 56.5	+0.8
PV07	Paradox Valley	5.33	93		Pn	10 42 57.1	+0.9
PV07				IAML		10 44 25.1	
	comp=N,76nm,1.5s						
PV07				IAML		10 44 26.0	
	comp=E,89nm,0.9s						
PFO	Pinyon Flats O	5.35	189	Pn	Pn	10 43 00.4	+4.0
	comp=E,0.4nm,0.3s,baz=4.2,slow=7.0,SNR=4.2						
PFO				Lg	Lg	10 44 28.4	
	comp=E,0.8nm,0.3s,baz=92,slow=12,SNR=1.8						
PFO				LR	LR	10 45 22.8	
	comp=E,94nm,18.6s,baz=235,slow=42						
PFO	Pinyon Flats O	5.35	189	Pg	Pg	10 43 18.6	-0.3
	baz=9.0						
PFO	Pinyon Flats O	5.35	189		Pn	10 42 58.0	+1.5
PV01	Paradox Valley	5.43	96		Pn	10 42 58.2	+0.5
PV01				IAML		10 44 30.1	
	comp=E,56nm,1.5s						
PV01				IAML		10 44 35.1	
	comp=N,62nm,1.3s						
PV15	Paradox Valley	5.47	94		Pn	10 42 58.1	-0.1
BCYI	Bear Canyon	5.61	15		Pn	10 42 59.7	-0.5
REDW	Red Top Meadow	5.63	36	Pn	Pn	10 42 59.8	-0.7
K05A	Summer Lake	5.64	314	Pn	Pn	10 43 00.7	+0.3
M04C	Macdoel	5.68	302	P	Pn	10 43 07.1	+6.1
	baz=118						
M04C				Sb	Sg	10 44 37.2	-1.6
	baz=118						
O20A	White River Ci	5.69	75	Pn	Pn	10 43 03.7	+2.5
MVCO	Mesa Verde	5.72	105	P	Pn	10 43 04.3	+2.6
	baz=290,SNR=11						
MVCO	Mesa Verde	5.72	105	Pn	Pn	10 43 01.2	-0.5
WDC	Whiskeytown Da	5.73	289		Pn	10 43 03.8	+2.2
SNOW	Snow King Moun	5.76	36		Pn	10 43 01.8	-0.4
O02D	Mt. Diablo Mer	5.83	285	P	Pn	10 43 07.8	+4.7
	baz=100						
BW06	Boulder Array	5.89	47	P	Pn	10 43 09.3	+5.3
	baz=231,SNR=11						
BW06				Sb	Sg	10 44 40.6	-4.8
	baz=231						
BW06	Boulder Array	5.89	47		Pn	10 43 04.1	+0.1
PD31	Pinedale Array	5.89	47		Pn	10 43 04.0	+0.1
PDAR	Pinedale Array	5.89	47	Pn	Pn	10 43 07.2	+3.2
	comp=N,0.3nm,0.3s,baz=221,slow=9.4,SNR=23						
PDAR				Lg	Lg	10 44 43.8	
	comp=N,1.2nm,0.3s,baz=226,slow=30,SNR=1.6						
PDAR	Pinedale Array	5.89	47	Pn	Pn	10 43 04.7	+0.7
W18A	Petrified Fore	5.92	128	Pg	Pg	10 43 26.3	-3.5
	baz=312						
W18A	Petrified Fore	5.92	128		Pn	10 43 04.4	+0.1
LOHW	Long Hollow	5.94	36		Pn	10 43 05.0	+0.3
SWSC	Sam W. Stewart	5.96	183	Pg	Pg	10 43 31.3	+0.8
	baz=3.1						
I07A	Izee	6.01	331	Pn	Pn	10 43 06.1	+0.5
K04D	Chiloquin, OR	6.07	310	Sb	Sg	10 44 49.3	-2.1
	baz=126						
BMO	Blue Mountains	6.11	347		Pn	10 43 07.4	+0.6
J05D	Fort Rock, OR	6.20	317	P	Pn	10 43 13.0	+4.9
	baz=133,SNR=9.0						
J05D				Sb	Sg	10 44 55.8	+0.5
	baz=133						
L04D	Klamath Falls	6.20	304	P	Pn	10 43 14.2	+6.1
	baz=120						
L04D				Sb	Sg	10 44 52.7	-2.5
	baz=120						
M02C	Callahan	6.21	296	P	Pn	10 43 13.4	+5.2
	baz=111						
M02C				Sb	Sg	10 44 51.9	-3.8
	baz=111						
MCMT	McKenzie Canyo	6.22	17	Pn	Pn	10 43 08.5	-0.1
YBH	Yreka Blue Hor	6.24	299	Pn	Pn	10 43 12.9	+4.2
	comp=N,0.3nm,0.3s,baz=103,slow=9.8,SNR=20						
YBH				Lg	Lg	10 44 55.9	
	comp=N,0.3nm,0.3s,baz=33,slow=7.7,SNR=5.8						
YBH				LR	LR	10 46 02.4	
	comp=N,145nm,19.1s,baz=100,slow=42						
YBH	Yreka Blue Hor	6.24	299	Pn	Pn	10 43 08.4	-0.3
FLWY	Flagg Ranch	6.27	33	Pn	Pn	10 43 07.7	-1.6
SMCO	Snowmass	6.59	85	Pn	Pn	10 43 13.0	-0.7
DLMT	Dillon	6.79	17		Pn	10 43 16.5	+0.3
RWWY	Rawlins	6.87	64	Pn	Pn	10 43 17.4	-0.1
LRM	Limekiln Ridge	7.25	17		Pn	10 43 21.6	-1.1
BOZ	Bozeman (W)	7.25	22	Pb	Pb	10 43 45.0	+2.4
	baz=204						
BOZ	Bozeman (W)	7.25	22		Pn	10 43 22.2	-0.4
K02D	Willamette Mer	7.31	304	P	Pn	10 43 29.9	+6.7
	baz=118,SNR=9.2						
TUC	Tucson	7.59	149		Pn	10 43 26.7	-0.5
ISCO	Idaho Springs	7.66	80	P	Pn	10 43 32.7	+4.4
	baz=266						
ISCO	Idaho Springs	7.66	80		Pn	10 43 32.5	+4.1
RLMT	Red Lodge	7.72	34	P	Pn	10 43 35.2	+6.1
	baz=218						
K22A	Casper	7.72	58	P	Pn	10 43 34.4	+5.3
	baz=244,SNR=14						
K22A	Casper	7.72	58	Pn	Pn	10 43 30.9	+1.8
SDCO	Great Sand Dun	7.89	95	Pn	Pn	10 43 31.1	-0.3
MSO	Missoula	8.00	7		Pn	10 43 33.4	+0.6
GCMT	Greycliff	8.09	30		Pn	10 43 34.8	+0.6
ANMO	Albuquerque	8.20	116	Pn	Pn	10 43 38.7	+3.1
	comp=N,0.2nm,0.3s,baz=306,slow=11,SNR=7.8						
ANMO				Pg	Pg	10 44 10.0	-3.3
	comp=N,0.3nm,0.3s,baz=310,slow=13,SNR=7.1						
ANMO				Lg	Lg	10 45 55.4	
	comp=N,0.3nm,0.3s,baz=137,slow=20,SNR=1.7						
ANMO				LR	LR	10 47 23.6	
	comp=N,75nm,18.5s,baz=316,slow=42						
ANMO	Albuquerque	8.20	116		Pn	10 43 34.3	-1.3
BNM	Barren Site	8.52	121		Pn	10 43 41.0	+0.9
T25A	Trinidad	8.87	98	Pg	Pg	10 44 22.0	-4.3
	baz=285						
121A	Cookes Peak, D	8.89	133	Pg	Pg	10 44 22.2	-4.3
	baz=318						
121A				Sg	Sg	10 46 16.3	-5.3
	baz=318						
121A	Cookes Peak, D	8.89	133		Pn	10 43 43.0	-2.1
NEW	Newport	9.44	353	Pn	Pn	10 43 58.4	+5.9
	comp=N,0.1nm,0.3s,baz=170,slow=12,SNR=5.2						
NEW				Lg	Lg	10 46 30.9	
	comp=N,0.1nm,0.3s,baz=70,slow=18,SNR=2.0						
NEW				LR	LR	10 48 00.2	
	comp=N,83nm,20.1s,baz=112,slow=41						
EGMT	Eagleton	10.00	22	Pn	Pn	10 43 59.9	-0.3
RSSD	Black Hills	10.00	55	Pn	Pn	10 44 01.6	+1.2
TXAR	Lajitas Array	13.63	131	Pn	P	10 44 55.6	-3.2
	comp=N,0.0nm,0.3s,baz=311,slow=11,SNR=10.0						
TXAR				Pg		10 45 51.3	
	comp=N,0.0nm,0.3s,baz=316,slow=17,SNR=2.1						
TXAR				Lg	Lg	10 48 47.8	
	comp=N,0.0nm,0.3s,baz=299,slow=21,SNR=2.2						
TXAR				LR	LR	10 50 41.5	
	comp=N,134nm,18.5s,baz=0.0,slow=40						
TXAR	Lajitas Array	13.63	131		Pn	10 44 52.1	+2.2
ULM	Lac du Bonnet	17.90	44	Pn	Pn	10 45 44.7	-0.7
	comp=N,0.1nm,0.3s,baz=245,slow=7.5,SNR=3.7						
ULM	Lac du Bonnet	17.90	44		Pn	10 45 46.6	+1.2
ULM				IAmb	IAmb	10 45 52.5	
	comp=Z,5.6nm,1.1s						
R40A	Maddies Statio	18.11	85	P	Pn	10 45 48.0	0.0
T42A	Van Buren	19.27	88	P	P	10 46 00.0	-1.1
T42A				IAmb	IAmb	10 46 06.8	
	comp=Z,9.5nm,1.1s						
FVM	French Village	19.59	85	P	P	10 46 05.3	+0.6
COWI	Conover	20.61	61	P	Pn	10 46 18.1	0.0
COWI				IAmb	IAmb	10 46 22.9	
	comp=Z,6.6nm,1.0s						
DLBC	Dease Lake	21.70	339	P	P	10 46 30.4	+3.0
	comp=Z,2.8nm,1.2s,baz=117,slow=11,SNR=2.6						
YKA	Yellowknife Ar	23.62	1	P	P	10 46 48.4	+1.0
	comp=Z,1.0nm,0.9s,baz=177,slow=9.7,SNR=21						
KDAK	Kodiak Island	30.54	320	LR	LR	10 58 57.7	
	comp=Z,54nm,18.7s,baz=81,slow=34						
INK	Inuvik	31.09	347	P	P	10 47 56.7	+2.2
	comp=Z,0.7nm,0.7s,baz=140,slow=5.7,SNR=3.2						
ILAR	Eielson Array	31.75	335	P	P	10 48 01.8	+1.4
	comp=Z,0.7nm,1.0s,baz=128,slow=5.3,SNR=6.0						

SOME ***28*** *10:47:28.3, 44.°77N×81.°95E, h5^{km}*
NNC ***28*** *10:47:30.2±1.7, 44.°73N×81.°92E, h0^{km}, mb3.6, mpv3.2, Error ellipse: s-maj=21.7km s-min=6.7km az=123.0*
ISC 28 10:47:29.5±2.2**, 44.°66N**±0.°05×**81.°98E**±0.°08**, h1**^{km}±14^{km}**, n19, σ1.ˢ27**/32**, 3C-3D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DJR	Jarkent	1.60	259	*e*P	Pg	10 47 60.0	-0.1
	11nm,0.2s						
DJR				*e*S	Sg	10 48 22.8	+2.0
	9.7nm,0.5s						
DJR	Jarkent	1.60	259	P	Pb	10 47 59.7	-0.2
	11nm,0.2s						
DJR				S	Sg	10 48 23.1	+2.3
	9.7nm,0.5s						
KTMS	Ketmen	1.69	225	*e*P	Pb	10 48 01.2	-0.2
	9.9nm,0.3s						
KTMS				*e*S	Sg	10 48 24.8	+1.2
	25nm,0.2s						
KTMS	Ketmen	1.69	225	P	Pb	10 48 01.2	-0.2
	9.9nm,0.3s						
KTMS				S	Sg	10 48 24.8	+1.2
	25nm,0.2s						
MK31	Makanchi Array	2.15	6	⇓Pn	Pn	10 48 06.3	-0.3
	5.2nm,0.4s,baz=185,slow=15,SNR=317						
MK31				⇑Sn	Sn	10 48 34.0	+0.2
	1.4nm,0.2s,baz=185,slow=28,SNR=17						
MAKZ	Makanchi	2.15	0	⇑Pn	Pn	10 48 06.4	-0.2
	2.9nm,0.3s						
MAKZ				⇓Sn	Sn	10 48 34.2	+0.3
	8.9nm,0.6s						
PDGK	Podgornoye	2.23	234	Pg	Pb	10 48 09.2	-1.5
	3.5nm,0.3s						
PDGK				Lg	Lg	10 48 38.8	
	7.1nm,0.5s						
PDGK	Podgornoye	2.23	234	⇑Pn	Pb	10 48 09.6	-1.1
	2.3nm,0.3s						
PDGK				⇓Sn	Sb	10 48 39.3	+0.4
	12nm,0.6s						
SHLS	Shalkode	2.36	231	*e*P	Pn	10 48 08.8	-0.7
	18nm,0.2s						
SHLS				*e*S	Sn	10 48 38.4	-0.7
	29nm,0.3s						
UZB	Uzynbulak	2.62	236	*e*P	Pb	10 48 16.5	-0.8
	6.3nm,0.3s						
UZB				*e*S	Sb	10 48 51.1	+1.1
	4.3nm,0.3s						
MNBS	Baschi	2.63	259	*e*P	Pb	10 48 16.5	-1.0
	5.8nm,0.2s						
MNBS				*e*S	Sb	10 48 50.8	+0.5
	7.5nm,0.4s						
MNBS	Baschi	2.63	259	Pg	Pb	10 48 16.0	-1.5
	4.4nm,0.2s						
MNBS				Lg	Lg	10 48 50.3	
	7.5nm,0.4s						
KPKS	Kokpek	2.66	244	*e*P	Pb	10 48 17.7	-0.2
	6.5nm,0.2s						
KPKS				*e*S	Sb	10 48 52.9	+1.8
	15nm,0.4s						
ARXS	Arharly	3.00	263	*e*P	Pb	10 48 22.4	-1.5
	6.6nm,0.3s						
ARXS				*e*S	Sb	10 49 01.6	+0.6
	7.8nm,0.5s						
ARXS	Arharly	3.00	263	Lg	Lg	10 49 01.6	
	7.8nm,0.5s						
CHKK	Chushkaly	3.67	259	*e*P	Pb	10 48 34.2	-1.0
	1.7nm,0.1s						
CHKK				*e*S	Sb	10 49 21.2	+1.0
	4.6nm,0.3s						
KTBS	Karatobe	3.92	258	*e*P	Pb	10 48 40.9	+1.4
	1.5nm,0.2s						
KTBS				*e*S	Sg	10 49 33.2	-2.3
	5.6nm,0.6s						
KTBS	Karatobe	3.92	258	Lg	Lg	10 49 28.7	
	7.2nm,0.6s						
TNSS	Tian-Shan	3.98	248	*e*P	Pb	10 48 42.0	+1.3
	2.1nm,0.2s						
TNSS				*e*S	Sg	10 49 34.8	-2.6
	1.6nm,0.5s						

DJA ***28*** *10:51:42.7±0.7, 6°S±4°×15°2E±°, h10^{km}, M4.7/7, mB5.1/3, mb4.5/7, MLv4.8/3, Mw(mB)4.4/3*
IDC ***28*** *10:51:47.8±4.8, 5.°40S×151.°62E, h70^{km}±42^{km}, mb3.9/8, mb1 4.1/9, mb1mx3.7/44, mbtmp4.2/9, ML2.3/1, Error ellipse: s-maj=37.2km s-min=21.2km az=104.0*
ISC 28 10:51:45.0±0.7**, 5.°5S**±0.°1×**151.°9E**±0.°1**, h45**^{km}**, n17, σ2.ˢ09**/18**, mb4.2**/8**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	6.08	230	P	Pn	10 53 12.5	+0.2
	4.9nm,0.3s,baz=30,slow=10,SNR=20						
PMG				S	Sn	10 54 21.1	+0.4
	4.4nm,0.3s,baz=154,slow=21,SNR=8.1						
CTA	Charters Tower	15.52	200	P	P	10 55 26.1	+1.5
	0.1nm,0.3s,baz=17,slow=14,SNR=5.4						
FAKI	Fak Fak	19.71	277	P	Pn	10 56 17.6	+4.9
	1µm119nm,0.7s						
KDU	Kakadu	20.43	248	P	P	10 56 13.4	-5.3
	baz=14,SNR=82						
WRA	Warramunga Arr	22.30	228	P	P	10 56 38.2	-0.6
	4.3nm,0.5s,baz=52,slow=9.8,SNR=60						
ASAR	Alice Springs	25.02	222	P	P	10 57 05.0	-0.1
	6.6nm,0.7s,baz=57,slow=8.5,SNR=72						
STKA	Stephens Creek	27.97	199	P	P	10 57 32.5	+1.0
	1.4nm,0.6s,baz=354,slow=7.0,SNR=3.1						
SONM	Songino Array	66.39	328	P	P	11 02 28.8	-0.7
	1.5nm,0.6s,baz=145,slow=4.4,SNR=11						
ILAR	Eielson Array	83.13	22	P	P	11 04 05.0	-0.8
	0.8nm,0.6s,baz=248,slow=5.1,SNR=13						
QSPA	South Pole Qui	84.49	180	P	P	11 04 13.0	0.0
	2.6nm,0.7s,baz=8.9,slow=1.2,SNR=15						
NVAR	Mina Array Bea	93.24	52	P	P	11 04 56.6	+1.2
	2.6nm,0.8s,baz=256,slow=6.5,SNR=21						
YKA	Yellowknife Ar	96.45	28	P	P	11 05 10.4	+1.2
	0.1nm,0.7s,baz=280,slow=4.4,SNR=1.7						
PDAR	Pinedale Array	99.99	48	P	Pdif	11 05 25.7	-0.2
	0.6nm,0.6s,baz=194,slow=3.2,SNR=6.5						
PLCA	Paso Flores	119.81	144	PKP	PKPdf	11 10 30.5	-0.3
	1.9nm,1.1s,baz=214,slow=3.6,SNR=3.4						
GERES	GERESS Array B	124.12	328	PKP	PKPdf	11 10 37.6	-1.3
	0.6nm,0.5s,baz=90,slow=2.7,SNR=5.3						
TORD	Torodi Ar. Bea	149.61	287	PKPbc	PKPbc	11 11 28.8	-2.0
	3.1nm,0.7s,baz=64,slow=2.8,SNR=15						
BDFB	Brasilia	151.24	137	PKPbc	PKPbc	11 11 34.7	-0.1
	3.7nm,0.7s,baz=143,slow=3.3,SNR=5.5						

MOS ***28*** *10:53:02.4±1.0, 8.°72S×118.°91E, h117^{km}, mb5.2/61, Error ellipse: s-maj=9.1km s-min=4.6km az=121.5*
IDC ***28*** *10:53:03.9±0.4, 8.°75S×118.°89E, h114^{km}±3^{km}, mb4.6/35, mb1 4.7/39, mb1mx4.6/48, mbtmp5.0/39, MS3.4/5, Ms1 3.4/5, ms1mx3.0/34, Error ellipse: s-maj=10.7km s-min=7.3km az=57.0*
BJI ***28*** *10:53:03.0±0.0, 8.°90S×118.°80E, h126^{km}, mB5.0/43, mb5.1/69*
NEIC ***28*** *10:53:03.6±1.8, 8.°91S±0.°06×118.°82E±0.°06, h118^{km}±4^{km}, mb5.1/85, Error ellipse: s-maj=9.7km s-min=8.2km az=202.0*
DJA ***28*** *10:53:04.4±0.1, 9°S±2°×11°9E±°, h114^{km}±2^{km}, M4.8/68, mB5.3/36, mb5.2/68, MLv5.4/23, Mw(mB)4.8/36, MwMwp5.1/3, Mwp5.4/3*
GCMT ***28*** *10:53:05.6±0.3, 8.°98S±0.°03×118.°97E±0.°03, h135^{km}±4^{km}, MW4.8/86, Moment Tensor Solution. s25,c28; s86,c107; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.01±.10; $M_{\theta\theta}$0.80±.17; $M_{\phi\phi}$0.20±.20; $M_{r\theta}$1.15±.07; $M_{\theta\phi}$0.49±.12; $M_{\phi r}$1.31±.08; Best double couple: $M_0$2.03100×10^{16} NP1:ϕ_s76.00000°, δ17.00000°, λ-59.00000°. NP2: ϕ_s224.00000°, δ75.00000°, λ-99.00000°. Principal axes: T 2.0170, Plg30.0000°, Azm322.0000°; N 0.0280, Plg9.0000°, Azm227.0000°; P -2.0460, Plg59.0000°, Azm122.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
KLM ***28*** *10:53:07, 8.°89S×118.°94E, h232^{km}, mb5.1*
ISC 28 10:53:03.9±0.4**, 8.°88S**±0.°03×**118.°89E**±0.°03**, h119**^{km}±3^{km}**, h119**^{km}**:pP-P, n483, σ1.ˢ68**/522**, mb5.1**/148**, 26C-17D, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	Plampang	1.10	273	P	Pn	10 53 27.3	+0.4
PLAI				S	Sn	10 53 44.8	+0.6
WSI	Waingapu	1.59	119	P	Pn	10 53 31.7	-0.7
TWSI	Taliwang, Sumb	1.99	274	P	Pn	10 53 37.1	-0.1
BASI	Baing, Sumba	2.13	129	P	Pn	10 53 39.1	+0.1
BSSI	Bau Bau, Buton	3.15	30	P	Pn	10 53 54.3	+2.1
MMRI	Maumere	3.32	86		Pn	10 53 55.3	+0.9
MMRI				Sn	Sn	10 54 34.0	+0.6
MMRI	Maumere	3.32	86	P	Pn	10 53 56.2	+1.8
DNP	Denpasar	3.64	273	P	Pn	10 53 59.4	+0.7
SRBI	Singaraja	3.72	282	P	Pn	10 53 59.7	0.0
KAPI	Kappang	3.94	13	P	Pn	10 54 04.9	+2.2
	129nm,0.3s,baz=188,slow=8.2,SNR=204						
KAPI				S	Sn	10 54 49.6	+1.4
	160nm,0.3s,baz=11,slow=23,SNR=18						
KAPI	Kappang	3.94	13	P	Pn	10 54 04.7	+2.0
KAPI	Kappang	3.94	13	Pn	Pn	10 54 04.7	+2.0
BNSI	Bone	4.62	15	P	Pn	10 54 13.7	+2.0
JAGI	Jajag, Banyuwa	4.70	275	Pn	Pn	10 54 12.3	-0.6
JAGI	Jajag, Banyuwa	4.70	275	P	Pn	10 54 12.7	-0.2
ABJI	Asem Bagus	4.73	283	P	Pn	10 54 13.7	+0.4
BATI	Baumata	4.89	106	P	Pn	10 54 16.2	+0.8
	200nm,0.3s,baz=68,slow=1.4,SNR=87						
BATI				S	Sn	10 55 04.7	-6.4
	326nm,0.3s,baz=64,slow=2.0,SNR=5.6						
BATI	Baumata	4.89	106	P	Pn	10 54 15.9	+0.4
SPSI	Sidrap Palu	4.96	10	P	Pn	10 54 18.4	+2.0
	1.6nm4µm471nm,0.7s						
KMMI	Kalianget	5.20	290	P	Pn	10 54 21.3	+1.7
	1.6nm2µm3µm192nm,0.9s						
SOEI	Soe	5.38	100	Pn	Pn	10 54 22.9	+0.8
SOEI	Soe	5.38	100	P	Pn	10 54 23.2	+1.1
	11nm2µm11µm697nm,0.9s						
TTSI	Tana Toraja	5.87	9	P	Pn	10 54 30.8	+2.1
	1.8nm5µm579nm,0.8s						
KBKI	Kotabaru	6.17	334	P	Pn	10 54 34.3	+1.6
	1.7nm3µm223nm,0.7s						
BBKI	Banjar Baru	6.72	323	P	Pn	10 54 42.6	+2.4
	1.0nm3µm338nm,1.0s						
UGM	Wanagama	8.33	276	Pn	Pn	10 54 59.3	-2.7
UGM	Wanagama	8.33	276	P	Pn	10 55 02.6	+0.6
	146nm,0.8s						
APSI	Ampana	8.38	19	P	Pn	10 55 04.5	+1.8
	1µm121nm,1.0s						
SMRI	Semarang	8.56	282	Pn	Pn	10 55 05.6	+0.5
SMRI	Semarang	8.56	282	P	Pn	10 55 05.1	0.0
	111nm,0.6s						
MRSI	Marisa	9.78	18	P	Pn	10 55 24.4	+2.8
	1µm84nm,1.1s						
SANI	Sanana	9.80	47	P	Pn	10 55 24.5	+2.7
	1µm93nm,1.2s						
NLAI	Namlea	9.90	56	P	Pn	10 55 30.1	+6.9
TOLI2	Tolitoli	10.11	11	Pn	Pn	10 55 26.8	+0.8
GTOI	Gorontalo	10.31	24	P	Pn	10 55 36.1	+7.4
CISI	Cisompet, Garu	11.04	276	Pn	Pn	10 55 36.1	-2.5
CISI	Cisompet, Garu	11.04	276	P	Pn	10 55 37.6	-1.0
	4µm160nm,0.6s						

FITZ	Fitzroy Crossi	11.27	145	P	Pn	10 55 39.2	-2.3
	25nm,0.3s,baz=336,slow=9.1,SNR=348						
FITZ				S	Sn	10 57 35.2	-10
	34nm,0.3s,baz=28,slow=23,SNR=12						
FITZ				LR	LR	11 00 41.9	
	comp=Z,217nm,18.4s,baz=323,slow=40						
FITZ	Fitzroy Crossi	11.27	145	P	Pn	10 55 39.4	-2.1
	baz=11,SNR=162						
FITZ	Fitzroy Crossi	11.27	145	Pn	Pn	10 55 39.5	-2.1
LEM	Lembang	11.35	280	P	Pn	10 55 42.1	-0.7
	5.0nm,0.3s,baz=140,slow=4.8,SNR=9.8						
LEM				LR	LR	11 01 16.8	
	comp=Z,58nm,18.2s,baz=78,slow=44						
BNDI	Bandanaira	11.77	69	P	P	10 55 58.6	+2.2
KNRA	Kununurra	11.77	126		Pn	10 55 46.5	-1.7
CBJI	Citeko	12.18	281	P	Pn	10 55 52.0	-1.6
	440nm,0.7s						
DBJI	Dramaga	12.25	280	P	Pn	10 55 54.7	+0.2
	25µm224nm,1.1s						
SAUI	Saumlaki	12.31	87	Pn	Pn	10 55 53.6	-1.8
SAUI	Saumlaki	12.31	87	P	Pn	10 55 54.1	-1.2
	10µm873nm,0.9s						
PSA00	Pilbara Seismi	12.65	176	Pn	Pn	10 55 57.9	-1.8
PSA00	Pilbara Seismi	12.65	176		Pn	10 55 57.7	-2.1
MTN	Manton Dam	12.65	109		Pn	10 55 57.1	-2.7
TPI	Tanjungpandan	12.72	298	P	P	10 56 10.3	+3.2
SBUM	Sibu	13.07	329	Pn	Pn	10 56 05.0	-0.3
SBUM	Sibu	13.07	329	P	P	10 56 10.0	-1.0
XMI	Christmas Isla	13.11	262	P	Pn	10 56 03.1	-2.6
XMIS	Christmas Isla	13.14	262	Pn	Pn	10 56 00.9	-5.3
KSM	Kuching	13.38	320	Pn	Pn	10 56 07.8	-1.4
KSM	Kuching	13.38	320	P	P	10 56 13.0	-1.4
MYLDM	Lahad Datu	13.97	358	Pn	Pn	10 56 14.9	-2.0
BLSI	Bandar Lampung	13.98	284	P	Pn	10 56 15.3	-1.7
	170nm,0.7s						
PPBI	Pangkal Pinang	14.34	297	P	Pn	10 56 23.1	+1.6
	18µm94nm,0.8s						
GIRL	Giralia	14.39	198	P	Pn	10 56 22.3	+0.2
	baz=14,SNR=58						
GIRL	Giralia	14.39	198		Pn	10 56 22.2	0.0
FAKI	Fak Fak	14.55	67	Pn	Pn	10 56 22.0	-2.2
FAKI	Fak Fak	14.55	67	P	Pn	10 56 22.6	-1.6
	1µm119nm,0.7s						
KASI	Kota Agung	14.66	282	P	Pn	10 56 27.1	+1.4
	4µm352nm,0.5s						
KLSI		14.66	286	P	Pn	10 56 23.5	-2.2
	596nm54nm,0.9s						
SWI	Sorong	14.67	58	P	Pn	10 56 24.7	-1.1
	1µm146nm,0.8s						
SIJI	Sorong	14.67	58	P	Pn	10 56 24.5	-1.3
	2.5nm,0.3s,baz=218,slow=8.5,SNR=5.4						
SIJI				S	Sn	10 59 10.5	+2.4
	0.6nm,0.3s,baz=254,slow=23,SNR=3.0						
KKM	Kota Kinabalu	15.07	350		Pn	10 56 29.8	-1.0
LWLI	Liwa	15.21	284	P	P	10 56 34.1	-0.8
	242nm,0.8s						
MDSI	Maura Dua	15.25	286	P	Pn	10 56 33.2	+0.2
	528nm65nm,0.8s						
LHSI	Lahat	16.07	287	P	P	10 56 45.9	+1.6
	241nm,0.9s						
MNAI	Manna	16.45	285	Pn	Pn	10 56 45.7	-2.3
WRKA	Warakurna	18.40	152	P	Pn	10 57 10.9	-0.5
	baz=19,SNR=28						
WB0	Warramunga Arr	18.50	127	P	P	10 57 11.0	0.0
WB0				IAmb	IAmb	10 57 18.6	
	comp=Z,62nm,0.7s						
WRA	Warramunga Arr	18.55	128	P	P	10 57 11.4	-0.2
	comp=Z,5.4nm,0.3s,baz=301,slow=12,SNR=53						
WRA				S	S	11 00 27.4	-10
	comp=Z,4.8nm,0.3s,baz=304,slow=23,SNR=11						
WRA				LR	LR	11 05 15.6	
	comp=Z,138nm,20.0s,baz=275,slow=39						
WRAB	Tennant Creek	18.55	128	*de*P	P	10 57 11.6	-0.1
WRAB				pmax	pmax		
	comp=Z,112nm,1.3s						
WRAB	Tennant Creek	18.55	128	P	P	10 57 11.5	-0.1
WRAB				IAmb	IAmb	10 57 18.8	
	comp=Z,91nm,0.9s						
WB2	Warramunga Arr	18.56	128	P	P	10 57 11.3	-0.4
WB2				IAmb	IAmb	10 57 14.7	
	comp=Z,72nm,0.8s						
WC3	Warramunga Arr	18.59	128	P	P	10 57 11.9	-0.1
	baz=19						
KRJI	Kerinci	18.60	290	P	Pn	10 57 13.2	-0.8
	comp=Z,15µmcomp=Z,1µm,0.9s						
SRPI	Serui, Papua	18.62	69	P	P	10 57 12.9	+0.5
	comp=Z,284nm,0.6s						
WR0	Warramunga Arr	18.72	128	P	P	10 57 13.4	0.0
WR0				IAmb	IAmb	10 57 16.6	
	comp=Z,86nm,0.8s						
BKNI	Bangkinang	20.00	296	P	P	10 57 28.4	+1.1
	comp=Z,86nm,0.7s						
MORW	Morawa	20.26	187	P	Pn	10 57 31.7	-1.4
	baz=20,SNR=21						
MORW	Morawa	20.26	187	P	P	10 57 30.1	0.0
MORW				IAmb	IAmb	10 57 44.5	
	comp=Z,88nm,1.1s						
ASPA	Alice Springs	20.55	137	P	P	10 57 34.3	+0.9
	baz=21						
AS31	Alice Springs	20.56	137	P	P	10 57 33.7	+0.4
AS31				IAmb	IAmb	10 57 37.7	
	comp=Z,34nm,0.6s						
ASAR	Alice Springs	20.56	137	P	P	10 57 34.1	+0.8
	comp=Z,98nm,0.7s,baz=312,slow=9.5,SNR=249						
ASAR				S	S	11 01 18.8	+1.9
	comp=Z,40nm,0.8s,baz=314,slow=23,SNR=8.8						
ASAR				ScP	ScP	11 05 05.8	+0.1
	comp=Z,8.5nm,0.9s,baz=329,slow=3.2,SNR=5.5						
ASAR	Alice Springs	20.56	137	P	P	10 57 34.6	+1.3
SMPI	Sarmi	20.88	72	P	P	10 57 38.4	+1.6
	comp=Z,54nm,0.8s						
SMPI	Sarmi	20.88	72	P	P	10 57 30.1	-6.7
MNSI	Mandailing Nat	21.51	296	P	P	10 57 44.4	+0.8
	comp=Z,28nm,0.8s						
BLDU	Ballidu	21.72	185	P	P	10 57 46.3	+0.7
	baz=22,SNR=39						
IPM	Ipoh	22.21	306	P	P	10 57 50.7	-0.3
KMBL	Kambalda	22.55	173	P	P	10 57 54.3	+0.2
	baz=23,SNR=13						
JAY	Jayapura	22.60	75	P	P	10 57 53.0	-2.0
	comp=Z,24nm,0.7s,baz=221,slow=6.9,SNR=3.8						
JAY	Jayapura	22.60	75	P	P	10 57 53.0	-2.0
KLBR	Kellerberrin	22.62	183	P	P	10 57 55.4	+0.6
	baz=23,SNR=44						
TGY	Tagaytay City	22.93	5	P	P	10 57 59.2	+1.2
	comp=Z,428nm,0.7s,baz=193,slow=4.3,SNR=8.2						
RPSI	Rantau Prapat	22.99	299	P	P	10 57 58.0	-0.6
RPSI				IAmb	IAmb	10 57 58.8	
	comp=Z,44nm,0.6s						
RPSI	Rantau Prapat	22.99	299	P	P	10 57 58.3	-0.3
KULM	Kulim	23.00	307	P	P	10 57 57.6	-1.1
KULM	Kulim	23.00	307	P	P	10 57 58.0	-0.7
PSI	Prapat	23.04	299	P	P	10 57 58.3	-0.9
	comp=Z,30nm,0.5s,baz=180,slow=6.8,SNR=19						
PSI	Prapat	23.04	299	P	P	10 57 58.0	-1.2
PSI				pmax	pmax		
	comp=Z,44nm,0.6s						
MUN	Mundaring	23.12	186	P	P	10 58 00.5	+0.9
	baz=23,SNR=6.3						
QIS	Mount Isa	23.12	122	P	P	10 58 00.2	+0.4
	baz=23,SNR=43						
FORT	Forrest	23.41	160	P	P	10 58 03.3	+1.0
	baz=24,SNR=22						
FORT	Forrest	23.41	160	P	P	10 58 02.2	-0.1
FORT				IAmb	IAmb	10 58 05.0	
	comp=Z,62nm,0.7s						
GSI	Gunungsitoli	23.53	294	P	P	10 58 01.9	-1.8
TSI	Tuntungan	23.70	300	P	P	10 58 04.5	-0.7
	comp=Z,4µmcomp=Z,146nm,0.7s						
NWAO	Narrogin (SRO)	23.98	183	P	P	10 58 08.9	+1.4
	comp=Z,44nm,0.6s,baz=4.7,slow=6.7,SNR=34						
NWAO				pP	pP	10 58 31.6	+0.2
	comp=Z,41nm,0.5s,baz=16,slow=12,SNR=8.0						
NWAO				S	S	11 02 31.0	+15
	comp=Z,47nm,0.7s,baz=297,slow=14,SNR=3.0						
NWAO	Narrogin (SRO)	23.98	183	P	P	10 58 08.6	+1.1
	baz=24,SNR=31						
NWAO	Narrogin (SRO)	23.98	183	P	P	10 58 09.3	+1.8
NWAO				pmax	pmax		
	comp=Z,144nm,1.4s						
NWAO	Narrogin (SRO)	23.98	183	P	P	10 58 09.3	+1.8
NWAO				IAmb	IAmb	10 58 10.7	
	comp=Z,144nm,1.4s						
NWAO	Narrogin (SRO)	23.98	183	P	P	10 58 08.8	+1.4
NWAO				IAmb	IAmb	10 58 10.7	
	comp=Z,181nm,1.4s						
COEN	Coen	24.32	104	P	P	10 58 10.7	-0.1
	baz=24						
COEN	Coen	24.32	104	P	P	10 58 10.8	0.0
COEN				IAmb	IAmb	10 58 13.6	
	comp=Z,58nm,0.9s						
TPTI		24.78	298	P	P	10 58 15.2	+0.3
	comp=Z,838nmcomp=Z,107nm,0.9s						
MTSU	Mount Surprise	26.35	113	P	P	10 58 29.6	+0.4
	baz=26,SNR=27						
UBPT	Khong Chiam	27.44	331	P	P	10 58 40.8	+1.9
	comp=Z,6.5nm,0.7s						
UBPT	Khong Chiam	27.44	331	P	P	10 58 38.2	-0.6
PMG	Port Moresby	27.91	93	P	P	10 58 43.9	+0.8
	comp=Z,15nm,0.7s,baz=222,slow=1.3,SNR=5.1						
PMG	Port Moresby	27.91	93	⇓*i*P	P	10 58 44.0	+0.8
PMG				pmax	pmax		
	comp=Z,32nm,1.7s						
PMG	Port Moresby	27.91	93	P	P	10 58 42.6	-0.6
PMG				IAmb	IAmb	10 59 05.3	
	comp=Z,25nm,0.9s						
PATY	Pattaya	28.10	320	P	P	10 58 47.2	+2.4
	comp=Z,26µmcomp=Z,54nm,0.6s						
SRAK	Srakaew	28.23	324	P	P	10 58 43.4	-2.5
	comp=Z,4µmcomp=Z,537nm,0.6s						
BBOO	Buckleboo	28.62	149	P	P	10 58 50.0	+0.8
	baz=29,SNR=38						
BBOO	Buckleboo	28.62	149	P	P	10 58 50.1	+0.8
CTA	Charters Tower	28.69	116	P	P	10 58 51.0	+0.9
	comp=Z,16nm,0.8s,baz=288,slow=12,SNR=17						
CTA				pP	pP	10 59 16.1	+0.1
	comp=Z,10nm,0.7s,baz=280,slow=13,SNR=5.5						
CTAO	Charters Tower	28.69	116	P	P	10 58 51.3	+1.3
CTAO				pmax	pmax		
	comp=Z,32nm,1.1s						
CTAO	Charters Tower	28.69	116	P	P	10 58 51.3	+1.3
CTAO				IAmb	IAmb	10 58 52.1	
	comp=Z,32nm,1.1s						
KHON	Khomkaen	29.68	328	P	P	10 59 01.2	+2.5
CHAI	Chaiyaphum	29.77	326	P	P	10 59 01.7	+2.2
	comp=Z,832nmcomp=Z,88nm,0.8s						
QLP	Quilpie	29.77	129	P	P	10 59 01.1	+1.6
	baz=30,SNR=4.2						
SRDT	SRDT	30.29	319	P	P	10 59 06.6	+2.5
	comp=Z,9.0nm,0.9s						
HTT	Hallett	30.63	146	P	P	10 59 08.6	+1.5
	baz=31,SNR=25						
NONG	Nongkai	30.96	330	P	P	10 59 10.7	+0.7
	comp=Z,52nm,1.0s						
UTHA	Uthaitani	31.00	321	P	P	10 59 11.0	+0.6
	comp=Z,458nmcomp=Z,47nm,0.6s						
STKA	Stephens Creek	31.11	141	P	P	10 59 12.4	+1.2
	comp=Z,33nm,0.7s,baz=316,slow=9.6,SNR=56						
STKA				PcP	PcP	11 02 05.0	+1.0
	comp=Z,11nm,0.6s,baz=316,slow=6.2,SNR=3.7						
STKA				LR	LR	11 11 51.3	
	comp=Z,91nm,20.1s,baz=5.7,slow=36						
STKA	Stephens Creek	31.11	141	P	P	10 59 12.5	+1.2
	baz=31,SNR=35						
STKA	Stephens Creek	31.11	141	P	P	10 59 12.5	+1.2
PHIT	Phitsanulok	31.70	325	P	P	10 59 18.5	+2.1
	comp=Z,159nm,0.8s						
UTTA	Uttaradit	32.06	326	P	P	10 59 20.9	+1.2
	comp=Z,520nmcomp=Z,66nm,0.8s						
YULB	Yu-li	32.16	4	P	P	10 59 19.7	-0.9
SUKH	Sukhothai	32.38	324	P	P	10 59 24.2	+1.8
	comp=Z,30nm,0.7s						
LAMP	Lampang	33.21	325	P	P	10 59 31.4	+1.7
	comp=Z,499nmcomp=Z,70nm,0.8s						
RMQ	Roma	33.28	126	P	P	10 59 32.2	+1.9
	baz=33,SNR=34						
YOJ	Yonaguni jima	33.38	7	P	P	10 59 30.9	-0.2
YOJ				pmax	pmax		
	comp=Z,107nm,1.2s						
YOJ	Yonaguni jima	33.38	7	P	P	10 59 30.9	-0.2
SLVN	Son La	33.44	334	P	P	10 59 31.7	0.0
CM04	Chiang Mai Arr	33.48	324	P	P	10 59 33.3	+1.2
	comp=Z,156nmcomp=Z,16nm,0.8s						
CM05	Chiang Mai Arr	33.50	324	P	P	10 59 33.0	+0.7
	comp=Z,122nmcomp=Z,12nm,0.8s						
CM36	Chiang Mai Arr	33.51	324	P	P	10 59 33.0	+0.7
CM01	Chiang Mai Arr	33.51	324	P	P	10 59 33.8	+1.4
	comp=Z,200nmcomp=Z,21nm,0.8s						
CM09	Chiang Mai Arr	33.51	324	P	P	10 59 34.0	+1.6
	comp=Z,156nmcomp=Z,19nm,0.7s						
CM13	Chiang Mai Arr	33.54	324	P	P	10 59 34.0	+1.4
	comp=Z,229nmcomp=Z,14nm,0.8s						
CM31	Chiang Mai Arr	33.55	324	P	P	10 59 34.9	+2.2
	comp=Z,5µmcomp=Z,520nm,0.6s						
CM31	Chiang Mai Arr	33.55	324	P	P	10 59 32.2	-0.4
CMAR	Chiang Mai Arr	33.55	324	P	P	10 59 33.0	+0.3
	comp=Z,8.9nm,0.5s,baz=149,slow=6.7,SNR=40						
CMAR				PcP	PcP	11 02 12.8	+2.0
	comp=Z,1.6nm,0.4s,baz=179,slow=2.3,SNR=4.3						
CMAR				pPcP		11 02 42.0	
	comp=Z,2.5nm,0.8s,baz=179,slow=3.4,SNR=5.6						
CMAR				ScP	ScP	11 05 45.2	+0.6
	comp=Z,3.8nm,0.7s,baz=173,slow=3.0,SNR=15						
CMAR				LR	LR	11 13 59.5	
	comp=Z,62nm,20.2s,baz=186,slow=38						
CMAR	Chiang Mai Arr	33.55	324	*ce*P	P	10 59 33.4	+0.7
CMAR				pmax	pmax		
	comp=Z,9.0nm,0.5s						
CMAR	Chiang Mai Arr	33.55	324	P	P	10 59 32.9	+0.3
CM15	Chiang Mai Arr	33.55	324	P	P	10 59 34.6	+1.9
	comp=Z,233nmcomp=Z,23nm,0.6s						
CMSA	Cobar Meteorol	33.60	136	P	P	10 59 34.7	+1.7
	baz=34,SNR=20						
CM35	Chiang Mai Arr	33.60	325	P	P	10 59 34.0	+0.9
CM34	Chiang Mai Arr	33.74	325	P	P	10 59 35.0	+0.7
CM32	Chiang Mai Arr	33.76	324	P	P	10 59 37.0	+2.5
CHTO	Chiang Mai	33.83	325	P	P	10 59 35.0	-0.1
CHTO				pmax	pmax		
	comp=Z,16nm,0.9s						
CHTO	Chiang Mai	33.83	325	P	P	10 59 35.0	-0.1
CHTO				IAmb	IAmb	10 59 37.4	
	comp=Z,16nm,0.8s						
CM33	Chiang Mai Arr	33.83	325	P	P	10 59 35.0	-0.1
ARPS	Mount Arapiles	34.70	147	P	P	10 59 44.1	+1.7
	baz=35,SNR=29						
YNG	Young	37.06	137	P	P	11 00 04.7	+2.0
	baz=37,SNR=29						
GYA	Guiyang	37.08	342	⇓P	P	11 00 04.0	+1.0
GYA				pP	pwP	11 00 32.8	+3.7
GYA				S	S	11 05 39.5	-1.0
GYA				pmax	pmax		
	comp=Z,14nm,1.0s						
GYA				pmax	pmax		
	comp=Z,160nm,6.8s						
KMI	Kunming	37.28	335	⇓P	P	11 00 07.3	+2.5
KMI				pP	pP	11 00 35.3	+3.9
KMI				sP	sP	11 00 50.0	+5.1
KMI				pmax	pmax		
	comp=Z,24nm,1.0s						
KMI				pmax	pmax		
	comp=Z,89nm,3.5s						
KMI				LR	LR		
	comp=Z,120nm,8.9s						
KMI				LR	LR		
	comp=Z,130nm,9.0s						
KMI				LR	LR		
	comp=Z,140nm,5.8s						
ARMA	Armidale	37.32	130	P	P	11 00 07.6	+2.6
	baz=38,SNR=16						
ARMA	Armidale	37.32	130	P	P	11 00 05.9	+0.9
ARMA				IAmb	IAmb	11 00 08.7	
	comp=Z,32nm,0.8s						
TOO	Toolangi	37.33	144	P	P	11 00 07.5	+2.6
	baz=38,SNR=17						
TOO	Toolangi	37.33	144	P	P	11 00 06.1	+1.2
TOO				pmax	pmax		
	comp=Z,24nm,0.8s						
TOO	Toolangi	37.33	144	P	P	11 00 06.1	+1.2
TOO				IAmb	IAmb	11 00 08.0	
	comp=Z,24nm,0.8s						
CAN	Canberra	38.06	138	P	P	11 00 11.1	-0.1
CAN				pmax	pmax		
	comp=Z,59nm,1.5s						
CAN	Canberra	38.06	138	P	P	11 00 11.1	-0.1
CAN				IAmb	IAmb	11 00 14.2	
	comp=Z,59nm,1.5s						
CNB	Canberra Magne	38.30	138	P	P	11 00 15.2	+2.1
	baz=38,SNR=7.8						
MGCD	Mangrove Creek	38.33	134	P	P	11 00 16.2	+2.8
	baz=38,SNR=12						
ENH	Enshi	39.97	347	P	P	11 00 26.1	-0.8
ENH				IAmb	IAmb	11 00 28.1	
	comp=Z,34nm,0.7s						
HNR	Honiara	40.52	94	P	P	11 00 31.8	+0.1
	comp=Z,143nm,0.7s,baz=177,slow=6.6,SNR=4.2						
HNR	Honiara	40.52	94	P	P	11 00 31.6	-0.2
HNR				pmax	pmax		
	comp=Z,237nm,1.0s						
HNR	Honiara	40.52	94	P	P	11 00 31.6	-0.2
NJ2	Nanjing	40.70	360	⇓P	P	11 00 34.5	+1.6
NJ2				pmax	pmax		
	comp=Z,28nm,0.8s						
PALK	Pallekele	41.30	292	P	P	11 00 36.4	-1.8
	comp=Z,3.8nm,0.5s,baz=194,slow=12,SNR=5.1						
PALK				ScP	ScP	11 06 13.6	-0.3
	comp=Z,1.7nm,0.5s,baz=233,slow=3.3,SNR=2.2						
PALK	Pallekele	41.30	292	⇓*i*P	P	11 00 36.5	-1.8
PALK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
PALK	Pallekele	41.30	292	P	P	11 00 36.8	-1.4
CD2	Chengdu	42.14	340	P	P	11 00 45.0	+0.2
CD2				pP	pP	11 01 13.0	+1.3
CD2				pmax	pmax		
	comp=Z,80nm,0.9s						
JNU	Nakatsue	43.30	15	P	P	11 00 53.8	-0.3
	comp=Z,14nm,0.9s,baz=38,slow=4.1,SNR=4.6						
XAN	Xi'an	43.72	348	P	P	11 00 57.0	-0.5
XAN				pP	pP	11 01 28.8	+4.2
XAN				sP	sP	11 01 45.0	+7.1
XAN				PcP	PcP	11 02 42.3	-0.1
XAN				S	S	11 07 15.3	-3.6
XAN				pmax	pmax		
	comp=Z,26nm,0.7s						
XAN	Xi'an	43.72	348	P	P	11 00 57.5	0.0
XAN				pmax	pmax		
	comp=Z,17nm,0.6s						
XAN	Xi'an	43.72	348	P	P	11 00 57.5	0.0
XAN				IAmb	IAmb	11 00 59.2	
	comp=Z,17nm,0.6s						
JTU	Tsushima	44.30	12	P	P	11 01 02.2	+0.2
TIA	Tai'an	44.88	358	P	P	11 01 06.3	-0.3
TIA				pmax	pmax		
	comp=Z,7.0nm,0.7s						
H08S2	Diego Garcia H	45.91	268	T	T	11 51 08.7	
	baz=95,slow=76,SNR=33						
H08S3	Diego Garcia H	45.92	268	T	T	11 51 02.6	
	baz=95,slow=76,SNR=34						
H08S1	Diego Carcia H	45.93	268	T	T	11 51 02.6	
	baz=95,slow=76,SNR=16						
LSA	Lhasa	46.74	326	P	P	11 01 22.5	+0.6
LSA	Lhasa	46.74	326	P	P	11 01 22.4	+0.6
LSA				pmax	pmax		
	comp=Z,86nm,0.7s						
LSA	Lhasa	46.74	326	P	P	11 01 22.4	+0.5
KSAR	Wonju Array Be	46.85	10	P	P	11 01 22.7	+0.7
KSAR	Wonju Array Be	46.85	10	P	P	11 01 22.7	+0.7
KSRS	Korea Array	46.86	10	P	P	11 01 22.2	+0.1
	comp=Z,11nm,0.7s,baz=186,slow=8.8,SNR=49						
KSRS				pP	pP	11 01 49.5	-0.2
	comp=Z,19nm,1.0s,baz=192,slow=8.5,SNR=11						
KSRS				ScP	ScP	11 06 35.8	-0.3
	comp=Z,1.5nm,0.7s,baz=186,slow=6.2,SNR=5.2						
KS19	Wonju Array Si	46.90	10	P	P	11 01 22.7	+0.3
KS19				IAmb	IAmb	11 01 52.0	
	comp=Z,41nm,1.1s						
LZH	Lanzhou	46.92	343	*e*P	P	11 01 24.0	+1.2
LZH				pP	pP	11 01 52.5	+2.5
LZH				sP	sP	11 02 07.0	+3.8
LZH				pmax	pmax		
	comp=Z,49nm,1.3s						
LZH				pmax	pmax		
	comp=Z,160nm,4.9s						
DZM	Mont Dzumac	47.48	112	P	P	11 01 27.6	+0.3
DZM				IAmb	IAmb	11 01 29.8	
	comp=Z,20nm,1.0s						
SANVU	Saraoutou	47.60	103	P	P	11 01 29.8	+1.6
SANVU	Saraoutou	47.60	103	P	P	11 01 32.2	+4.0
DL2	Dalian	47.61	3	P	P	11 01 27.5	-0.4
DL2				pmax	pmax		
	comp=Z,29nm,0.8s						
YATNC	Mamie plateau,	47.88	112	P	P	11 01 32.3	+1.9
	comp=Z,68nm,0.8s						
MAJO	Matsushiro	48.70	21	P	P	11 01 36.2	-0.1
MAJO				pmax	pmax		
	comp=Z,10.0nm,1.1s						
MAJO	Matsushiro	48.70	21	P	P	11 01 36.2	-0.1
MAT	Matsushiro	48.70	21	P	P	11 01 34.4	-1.9
MJAR	Matsushiro Arr	48.70	21	P	P	11 01 34.6	-1.7
	comp=Z,5.5nm,1.0s,baz=197,slow=8.8,SNR=10						
MJAR				pP	pP	11 02 02.8	-1.2
	comp=Z,3.7nm,1.0s,baz=169,slow=7.5,SNR=3.0						
MJAR				ScP	ScP	11 06 43.9	0.0
	comp=Z,1.5nm,0.8s,baz=183,slow=4.3,SNR=4.3						
MJAR	Matsushiro Arr	48.70	21	P	P	11 01 35.1	-1.2
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MJAR	Matsushiro Arr	48.70	21	P	P	11 01 35.1	-1.2
BJT	Baijiatuau	48.72	357	P	P	11 01 36.9	+0.5
BJT				pmax	pmax		
	comp=Z,31nm,1.2s						
BJT	Baijiatuau	48.72	357	P	P	11 01 36.9	+0.5
BJT				IAmb	IAmb	11 01 37.2	
	comp=Z,31nm,1.2s						
BJI	Beijing	48.74	357	P	P	11 01 36.3	-0.2
BJI				pmax	pmax		
	comp=Z,22nm,0.9s						
HHC	Hu-ho-hao-te	49.94	353	*e*P	P	11 01 46.8	+1.0
HHC				pmax	pmax		
	comp=Z,11nm,1.1s						
HHC				pmax	pmax		
	comp=Z,150nm,5.9s						
JSD	Sado	50.06	20	P	P	11 01 46.3	-0.3
JMM	Marumori	50.81	22	P	P	11 01 50.9	-1.4
JMM				IAmb	IAmb	11 02 10.0	
	comp=Z,36nm,1.3s						
GTA	Gaotai	51.21	341	⇑P	P	11 01 56.3	+0.9
GTA				pP	pP	11 02 24.8	+1.5
GTA				sP	sP	11 02 39.3	+2.8
GTA				ScP	ScP	11 06 56.0	+1.3
GTA				pmax	pmax		
	comp=Z,66nm,0.8s						
GTA				pmax	pmax		
	comp=Z,100nm,4.4s						
GTA				LR	LR		
	comp=Z,120nm,14.9s						
GTA				LR	LR		
	comp=Z,130nm,16.0s						
GTA				LR	LR		
	comp=Z,180nm,16.4s						
CN2	Changchun	52.77	6	*e*P	P	11 02 05.3	-1.4
CN2				*e*pP	pP	11 02 34.8	+0.1
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
JTM	Tenmabayashi	53.49	21	P	P	11 02 10.8	-1.3
MDJ	Mudanjiang	54.12	9	P	P	11 02 17.0	+0.4
MDJ				pP	pP	11 02 45.5	+0.7
MDJ				sP	sP	11 02 59.5	+1.5
MDJ				S	S	11 09 45.3	+1.2
MDJ				ScS	ScS	11 11 51.5	-2.6
MDJ				SS	SS	11 13 27.5	-0.2
MDJ				pmax	pmax		
	comp=Z,44nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,44nm,3.7s						
MDJ	Mudanjiang	54.12	9	P	P	11 02 17.2	+0.7
USA0B	Ussuriysk Arra	54.15	12	⇓*e*P	P	11 02 16.5	-0.3
USA0B	Ussuriysk Arra	54.15	12	P	P	11 02 17.1	+0.3
USA0B				IAmb	IAmb	11 02 17.7	
	comp=Z,14nm,0.9s						
USRK	Ussuriysk Ar.	54.15	12	P	P	11 02 15.9	-0.9
	comp=Z,8.5nm,0.7s,baz=190,slow=6.4,SNR=19						
USRK				pP	pP	11 02 44.1	-0.8
	comp=Z,9.2nm,0.8s,baz=191,slow=8.2,SNR=6.9						
USRK				ScP	ScP	11 07 06.7	-0.5
	comp=Z,1.5nm,0.8s,baz=144,slow=3.2,SNR=3.0						
USRK	Ussuriysk Ar.	54.15	12	P	P	11 02 16.7	-0.1
MLZ	Mavora Lakes	55.69	140	P	P	11 02 29.8	+1.8
MLZ				IAmb	IAmb	11 02 31.0	
	comp=Z,32nm,1.2s						
WHZ	Wether Hill Ro	55.80	140	P	P	11 02 30.1	+1.3
ASAJ	Asahikawa	56.96	20	P	P	11 02 35.9	-1.0
	comp=Z,4.9nm,0.8s,baz=258,slow=6.0,SNR=3.7						
RPZ	Rata Peaks	56.97	137	P	P	11 02 38.5	+1.4
	comp=Z,42nm,0.9s,baz=236,slow=2.6,SNR=18						
ULN	Ulaanbaatar	57.47	351	*c i*P	P	11 02 40.8	+0.2
ULN				pmax	pmax		
	comp=Z,43nm,1.3s						

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ULN   Ulaanbaatar       57.47 351    P       P       11 02 41.2 +0.6
ULN                                  IAmb    IAmb    11 02 41.9
      comp=Z,36nm,1.1s
OXZ   Oxford            57.50 136    P       P       11 02 41.8 +1.0
OXZ                                  IAmb    IAmb    11 02 42.3
      comp=Z,26nm,0.8s
SONM  Songino Array     57.55 350    P       P       11 02 41.3 +0.2
      comp=Z,35nm,0.8s,baz=167,slow=8.9,SNR=137
SONM                                 pP      pP      11 03 10.0 +0.4
      comp=Z,4.8nm,0.7s,baz=168,slow=9.5,SNR=2.2
SONM                                 ScP     ScP     11 07 21.7  -0.6
      comp=Z,1.2nm,0.7s,baz=163,slow=5.1,SNR=4.5
SONM  Songino Array     57.55 350    P       P       11 02 41.7 +0.6
SONM                                 pmax    pmax
      comp=Z,33nm,0.8s
SONM  Songino Array     57.55 350    P       P       11 02 41.6 +0.6
THZ   Tophouse          57.58 134    P       P       11 02 43.3 +1.8
CASY  Casey             57.60 184    P       P       11 02 42.6 +1.6
CASY                                 IAmb    IAmb    11 02 43.7
      comp=Z,24nm,1.0s
MSVF  Nonsavu           58.05 105⇓eP         P       11 02 46.3 +1.1
MSVF                                 pmax    pmax
      comp=Z,39nm,1.5s
MSVF  Nonsavu           58.05 105    P       P       11 02 48.3 +3.1
      comp=Z,32nm,1.9s
KLR   Kul'dur           58.96  10    P       P       11 02 50.1  -0.6
      comp=Z,1.7nm,0.5s,baz=228,slow=5.5,SNR=9.3
KLR                                  pP      pP      11 03 17.5  -1.8
      comp=Z,2.7nm,0.9s,baz=328,slow=3.4,SNR=3.4
KLR   Kul'dur           58.96  10⇓eP         P       11 02 50.2  -0.6
KLR                                  pmax    pmax
      comp=Z,9.0nm,1.5s
BKZ   Black Stump Fm    59.47 130    P       P       11 02 55.8 +1.1
WMQ   Urumqi            59.60 334   eP       P       11 02 56.0 +0.7
WMQ                                  sP      sP      11 03 36.8  -0.5
WMQ                                  pmax    pmax
      comp=Z,81nm,1.1s
WMQ                                  pmax    pmax
      comp=Z,68nm,3.7s
WMQ                                  LR      LR
      comp=Z,380nm,29.3s
WMQ                                  LR      LR
      comp=Z,1µm,29.0s
WMQ                                  LR      LR
      comp=Z,7.0nm,26.3s
WMQ   Urumqi            59.60 334    P       P       11 02 56.1 +0.7
WMQ                                  pmax    pmax
      comp=Z,56nm,0.7s
WMQ   Urumqi            59.60 334    P       P       11 02 56.1 +0.7
URZ   Urewera           59.72 129    P       P       11 02 56.6 +0.4
      comp=Z,10nm,0.6s,baz=136,slow=4.7,SNR=13
NIL   Nilore            60.55 317    P       P       11 02 59.8  -2.2
NIL                                  pmax    pmax
      comp=Z,11nm,0.9s
NIL   Nilore            60.55 317    P       P       11 02 59.8  -2.2
NIL                                  IAmb    IAmb    11 03 03.0
      comp=Z,11nm,0.8s
ZAK   Zakamensk         60.56 349   eP       P       11 03 01.1  -0.8
ZAK                                  pmax    pmax
      comp=Z,17nm,1.1s
ZAK                                  pmax    pmax
      comp=Z,5.0nm,1.0s
TLY   Talaya            61.74 349ceP         P       11 03 10.1 +0.5
TLY                                  pmax    pmax
      comp=Z,29nm,0.8s
TLY   Talaya            61.74 349    P       P       11 03 10.0 +0.4
TLY                                  IAmb    IAmb    11 03 11.1
      comp=Z,29nm,0.9s
MOY   Mondy             62.25 348   eP       P       11 03 13.2   0.0
MOY                                  pmax    pmax
      comp=Z,30nm,1.5s
KSH   Kashi             62.45 324    P       P       11 03 13.5  -1.3
KSH                                  PP      PP      11 05 33.8 +0.1
KSH                                  S       S       11 11 27.0  -5.7
KSH                                  sS      sS      11 12 19.0  -3.2
KSH                                  pmax    pmax
      comp=Z,23nm,0.8s
KSH                                  pmax    pmax
      comp=Z,310nm,5.3s
KSH                                  LR      LR
      comp=Z,610nm,9.5s
KSH                                  LR      LR
      comp=Z,500nm,6.4s
KSH                                  LR      LR
      comp=Z,960nm,7.4s
ZEA   Zeya              62.78   6   eP       P       11 03 16.8 +0.3
ZEA                                  pmax    pmax
      comp=Z,10.0nm,1.2s
SHLS  Shalkode          63.00 329⇑eP         P       11 03 16.9  -1.5
      comp=Z,17nm,0.6s,baz=329
SHLS  Shalkode          63.00 329ceP         P       11 03 16.9  -1.5
SHLS                                 pmax    pmax
      comp=Z,17nm,0.6s
PDGK  Podgornoye        63.11 329   i P      P       11 03 18.1  -1.0
PDGK                                 pmax    pmax
      comp=Z,26nm,0.7s
UZB   Uzynbulak         63.22 328   eP       P       11 03 19.6  -0.3
      comp=Z,15nm,1.0s,baz=328
UZB   Uzynbulak         63.22 328   eP       P       11 03 19.6  -0.3
UZB                                  pmax    pmax
      comp=Z,15nm,1.0s
SATY  Saty              63.48 328   eP       P       11 03 21.5  -0.1
      comp=Z,18nm,0.9s,baz=328
SATY  Saty              63.48 328   eP       P       11 03 21.4  -0.1
SATY                                 pmax    pmax
      comp=Z,18nm,0.9s
KPKS  Kokpek            63.62 328⇑eP         P       11 03 22.0  -0.5
      comp=Z,31nm,0.9s,baz=328
KPKS  Kokpek            63.62 328ceP         P       11 03 21.9  -0.5
KPKS                                 pmax    pmax
      comp=Z,31nm,0.9s
ZSN   Zaisan            63.69 335   eP       P       11 03 22.7   0.0
      comp=Z,13nm,0.8s,baz=335
ZSN   Zaisan            63.69 335   eP       P       11 03 22.7   0.0
ZSN                                  pmax    pmax
      comp=Z,13nm,0.8s
KBL   Kabul             63.93 315    P       P       11 03 23.0  -1.8
KBL                                  pmax    pmax
      comp=Z,37nm,0.7s
KBL   Kabul             63.93 315    P       P       11 03 23.0  -1.8
TNSS  Tian-Shan         64.24 327   eP       P       11 03 26.3  -0.6
      baz=327
TNSS  Tian-Shan         64.24 327   eP       P       11 03 26.3  -0.6
MDOK  Medeo             64.27 327   eP       P       11 03 26.4  -0.4
      baz=327
MDOK  Medeo             64.27 327   eP       P       11 03 26.3  -0.4
MK31  Makanchi Array    64.30 333    P       P       11 03 26.3  -0.4
MK31                                 pmax    pmax
      comp=Z,37nm,0.8s
MK31  Makanchi Array    64.30 333    P       P       11 03 26.3  -0.4
MKAR  Makanchi Array    64.30 333    P       P       11 03 26.4  -0.4
      comp=Z,45nm,0.6s,baz=145,slow=7.5,SNR=440
MKAR                                 pP      pP      11 03 54.2  -1.7
      comp=Z,5.8nm,0.8s,baz=140,slow=7.7,SNR=2.3
MKAR                                 PKPPKP  P'P'df  11 32 20.3 +5.6
      comp=Z,1.3nm,0.9s,baz=340,slow=2.8,SNR=9.3
AAA   Alma-Ata          64.37 327   eP       P       11 03 26.8  -0.6
      comp=Z,14nm,0.8s,baz=327
AAA   Alma-Ata          64.37 327   eP       P       11 03 26.7  -0.6
AAA                                  pmax    pmax
      comp=Z,14nm,0.8s
MAKZ  Makanchi          64.45 333    P       P       11 03 27.2  -0.5
MAKZ                                 pmax    pmax
      comp=Z,20nm,0.7s
MAKZ  Makanchi          64.45 333    P       P       11 03 27.2  -0.5
MAKZ                                 IAmb    IAmb    11 03 28.1
      comp=Z,20nm,0.7s
DGZ   Jazzator, Alta    64.49 338c iP        P       11 03 28.0  -0.1
DGZ                                  pmax    pmax
      comp=Z,79nm,0.7s
CHKK  Chushkaly         64.78 328⇑iP         P       11 03 28.6  -1.2
      baz=328
CHKK  Chushkaly         64.78 328⇑iP         P       11 03 28.6  -1.2
TDK   Taldyqorghan      64.84 329   eP       P       11 03 29.8  -0.5
      comp=Z,51nm,0.7s,baz=329
TDK   Taldyqorghan      64.84 329   eP       P       11 03 29.7  -0.5
TDK                                  pmax    pmax
      comp=Z,51nm,0.7s
TKM2  Tokmak 2          64.90 326    P       P       11 03 30.3  -0.6
      SNR=18
TKM2  Tokmak 2          64.90 326   i P      P       11 03 30.1  -0.8
TKM2                                 pmax    pmax
      comp=Z,14nm,0.7s
UCH   Uchtor            65.05 325    P       P       11 03 31.9  -0.3
      SNR=14
KBK   Karagaybulak      65.08 326    P       P       11 03 31.9  -0.2
      SNR=18
KUU   Kurty             65.15 327⇑eP         P       11 03 31.5  -0.8
      comp=Z,40nm,0.9s,baz=327
KUU   Kurty             65.15 327ceP         P       11 03 31.4  -0.8
KUU                                  pmax    pmax
      comp=Z,40nm,0.9s
AAK   Ala-Archa         65.32 325    P       P       11 03 33.5  -0.1
      SNR=25
AAK   Ala-Archa         65.32 325c iP        P       11 03 32.9  -0.7
AAK                                  pmax    pmax
      comp=Z,92nm,0.8s
AAK   Ala-Archa         65.32 325    P       P       11 03 33.5  -0.1
AAK                                  IAmb    IAmb    11 03 34.4
      comp=Z,26nm,0.7s
CHMS  Chumysh           65.42 326    P       P       11 03 33.4  -0.7
      SNR=5.0
AML   Almayashu         65.45 325    P       P       11 03 35.1 +0.3
      SNR=7.0
USP   Ospenovka         65.73 326    P       P       11 03 35.3  -0.8
      SNR=26
EKS2  Erkin-Say         65.74 325    P       P       11 03 36.5 +0.3
      SNR=23
SGDS  Sogindy           65.78 326   eP       P       11 03 35.4  -1.0
      comp=Z,16nm,1.1s,baz=326
SGDS  Sogindy           65.78 326   eP       P       11 03 35.4  -1.0
SGDS                                 pmax    pmax
      comp=Z,16nm,1.1s
BOD   Bodaibo           66.59 357   eP       P       11 03 40.8  -0.4
BOD                                  pmax    pmax
      comp=Z,45nm,1.0s
WSAR  Wadi Sarin        67.00 300    P       P       11 03 42.9  -1.6
      comp=Z,14nm,0.7s,baz=145,slow=4.9,SNR=7.9
BTLS  Baital            67.14 327   eP       P       11 03 43.8  -1.2
      baz=327
BTLS  Baital            67.14 327   eP       P       11 03 43.7  -1.2
DZA   Taraz             67.29 324   eP       P       11 03 43.9  -2.2
      baz=324
DZA   Taraz             67.29 324   eP       P       11 03 43.8  -2.2
TAS   Tashkent          67.57 322    P       P       11 03 47.5  -0.3
TAS                                  pmax    pmax
      comp=Z,69nm,0.9s
TAS   Tashkent          67.57 322    P       P       11 03 47.5  -0.3
IUG   Iuzhnay           67.61 323   eP       P       11 03 47.5  -0.7
      comp=Z,23nm,0.7s,baz=323
IUG   Iuzhnay           67.61 323   eP       P       11 03 47.4  -0.7
IUG                                  pmax    pmax
      comp=Z,23nm,0.7s
SOCY  Socotra           67.81 287    P       P       11 03 49.4  -0.5
KK31  Karatay Array     67.90 324    P       P       11 03 48.6  -1.2
KK31                                 pmax    pmax
      comp=Z,14nm,1.0s
KK31  Karatay Array     67.90 324    P       P       11 03 48.6  -1.2
KKAR  Karatay Array     67.90 324    P       P       11 03 48.6  -1.2
KKAR                                 pmax    pmax
      comp=Z,14nm,1.0s
KKAR  Karatay Array     67.90 324    P       P       11 03 48.5  -1.3
KKAR  Karatay Array     67.90 324    P       P       11 03 48.6  -1.2
KKAR                                 IAmb    IAmb    11 03 50.5
      comp=Z,14nm,1.0s
SEM   Semipalatinsk     67.92 334   eP       P       11 03 49.0  -1.0
      comp=Z,22nm,0.7s,baz=334
SEM   Semipalatinsk     67.92 334   eP       P       11 03 49.0  -1.0
SEM                                  pmax    pmax
      comp=Z,22nm,0.7s
KURK  Kurchatov         68.84 334c iP        P       11 03 54.6  -0.9
KURK                                 pmax    pmax
      comp=Z,40nm,0.8s
KURK  Kurchatov         68.84 334    P       P       11 03 54.9  -0.5
KURK                                 IAmb    IAmb    11 03 55.9
      comp=Z,36nm,0.8s
ZAA0  Zalesovo Array    68.89 339    P       P       11 03 54.7  -1.0
ZALV  Zalesovo Beam     68.89 339    P       P       11 03 54.5  -1.1
      comp=Z,46nm,0.6s,baz=141,slow=4.3,SNR=191
ZALV  Zalesovo Beam     68.89 339    P       P       11 03 54.7  -1.0
PEA0B Petropavlovsk-    70.01  24    P       P       11 04 03.2 +0.6
PEA0B                                pmax    pmax
      comp=Z,50nm,1.2s
PEA0B Petropavlovsk-    70.01  24    P       P       11 04 03.2 +0.6
PEA0B                                IAmb    IAmb    11 04 04.7
      comp=Z,50nm,1.2s
PETK  Petropavlovsk-    70.01  24    P       P       11 04 03.3 +0.7
      comp=Z,7.0nm,0.7s,baz=219,slow=4.1,SNR=6.2
PETK  Petropavlovsk-    70.01  24    P       P       11 04 03.5 +0.9
PETK  Petropavlovsk-    70.01  24    P       P       11 04 03.5 +0.9
BRZS  Berezniki         71.08 330⇑eP         P       11 04 08.7  -0.5
      comp=Z,19nm,0.9s,baz=330
BRZS  Berezniki         71.08 330ceP         P       11 04 08.7  -0.5
BRZS                                 pmax    pmax
      comp=Z,19nm,0.9s
YAK   Yakutsk           71.20   5   eP       P       11 04 08.4  -1.2
YAK                                 e                11 04 27.3
YAK                                 e*PP     pP      11 04 40.7 +1.5
YAK                                 eS       S       11 13 16.0  -0.8
YAK                                 e                11 13 50.2
YAK                                 eSS      SS      11 17 57.3 +4.0
YAK                                  pmax    pmax
      comp=Z,11nm,0.8s
YAK                                  pmax    pmax
      comp=N,2.0nm,1.0s
YAK                                  pmax    pmax
      comp=E,2.0nm,1.0s
YAK                                  pmax    pmax
      comp=Z,220nm,4.8s
YAK                                  pmax    pmax
      comp=N,108nm,4.0s
YAK                                  pmax    pmax
      comp=E,68nm,4.3s
YAK                                  smax    smax
      comp=E,201nm,5.4s
YAK                                  smax    smax
      comp=N,197nm,4.8s
VNDA  Vanda             72.12 171    P       P       11 04 16.6 +1.6
      comp=N,5.1nm,0.6s,baz=314,slow=7.8,SNR=24
VNDA  Vanda             72.12 171    P       P       11 04 16.9 +1.9
VNDA                                 pmax    pmax
      comp=Z,18nm,1.2s
VNDA  Vanda             72.12 171    P       P       11 04 16.9 +1.9
MA2   Magadan           72.84  16⇓eP         P       11 04 20.9 +1.4
MA2                                  pmax    pmax
      comp=Z,18nm,2.7s
GEYT  Alibeck           73.28 314    P       P       11 04 22.4  -0.3
      comp=Z,10.0nm,0.7s,baz=167,slow=7.2,SNR=15
GEYT  Alibeck           73.28 314    P       P       11 04 22.3  -0.3
GYA0B ALIBECK ARRAY     73.28 314    P       P       11 04 21.9  -0.7
BRVK  Borovoye          74.21 332ceP         P       11 04 26.6  -1.0
BRVK                                 pmax    pmax
      comp=Z,22nm,1.3s
BRVK  Borovoye          74.21 332    P       P       11 04 27.1  -0.5
SEY   Seymchan          76.08  15⇓eP         P       11 04 38.5 +0.4
ABKAR Akbulak array     77.40 325    P       P       11 04 45.0  -0.8
ABKAR                                IAmb    IAmb    11 04 46.7
      comp=Z,29nm,0.9s
ABKAR Akbulak array     77.40 325    P       P       11 04 45.1  -0.7
RDF   Al-Radifah        78.27 302   eP               11 04 49.9
ATD   Arta Tunnel       78.28 284    P       P       11 04 53.4 +1.9
      comp=Z,19nm,0.9s,baz=149,slow=3.8,SNR=5.5
UMR   Umm Al-Rimmam     78.31 303   eP               11 04 49.7
RAYN  Ar Rayn           78.55 296    P       P       11 04 52.1  -0.8
RAYN                                 pmax    pmax
      comp=Z,24nm,0.9s
RAYN  Ar Rayn           78.55 296    P       P       11 04 52.1  -0.8
RAYN                                 IAmb    IAmb    11 04 53.3
      comp=Z,24nm,0.9s
MIB   Mutribah          78.70 303   eP               11 04 51.9
TIXI  Tiksi             80.63   3⇑iP         P       11 05 02.8  -0.2
TIXI                                 pmax    pmax
      comp=Z,48nm,0.8s
TIXI  Tiksi             80.63   3    P       P       11 05 02.0  -1.0
SVE   Sverdlovsk        80.93 332⇑eP         P       11 05 04.1  -0.8
SVE                                  pmax    pmax
      comp=Z,22nm,1.1s
NRIK  Noril'sk          81.02 349    P       P       11 05 05.3 +0.2
      comp=Z,3.8nm,0.5s,baz=124,slow=5.8,SNR=5.9
NRIK  Noril'sk          81.02 349⇓iP         P       11 05 05.2 +0.2
NRIK                                 pmax    pmax
      comp=Z,15nm,1.3s
NRIK  Noril'sk          81.02 349    P       P       11 05 04.2  -0.9
QSPA  South Pole Qui    81.11 180    P       P       11 05 07.1 +1.1
      comp=Z,10.0nm,0.8s,baz=306,slow=0.8,SNR=55
QSPA  South Pole Qui    81.11 180    P       P       11 05 07.4 +1.5
QSPA                                 IAmb    IAmb    11 05 08.6
      comp=Z,36nm,1.4s
KMBO  Kilima Mbogo      81.56 270    P       P       11 05 10.2 +0.7
      comp=Z,3.2nm,0.5s,baz=63,slow=8.5,SNR=8.2
KMBO  Kilima Mbogo      81.56 270   i P      P       11 05 10.1 +0.6
KMBO                                 pmax    pmax
      comp=Z,3.0nm,0.5s
ARU   Arti              81.71 331c iP        P       11 05 07.4  -1.6
ARU                                  S       S       11 15 09.6  -2.2
ARU                                  pmax    pmax
      comp=Z,13nm,1.2s
ARU   Arti              81.71 331    P       P       11 05 07.1  -1.9
GNI   Garni             83.78 312deP         P       11 05 21.3 +1.0
GNI                                  pmax    pmax
      comp=Z,20nm,1.3s
GEVA  Gevas             84.52 310    P       P       11 05 24.3 +0.2
GEVA                                 IAmb    IAmb    11 05 25.8
      comp=Z,25nm,0.9s
ZEI   Tsey              85.15 314   eP       P       11 05 27.2   0.0
ZEI                                  pmax    pmax
      comp=Z,34nm,1.3s
NCK   Nalchik           85.56 315⇑eP         P       11 05 30.1 +1.1
NCK                                  pmax    pmax
      comp=Z,21nm,0.6s
BELG  Belogornoye       85.80 324ceP         P       11 05 29.1  -0.8
BELG                                 pmax    pmax
      comp=Z,21nm,0.9s
MARD  Mardin            86.00 309    P       P       11 05 31.3  -0.2
NEY   Neytrino          86.11 315⇑eP         P       11 05 32.9 +1.0
NEY                                  pmax    pmax
      comp=Z,4.0nm,1.0s
KBZ   Khabaz            86.11 315deP         P       11 05 31.8 +0.1
KBZ                                  pmax    pmax
      comp=Z,18nm,0.9s
KIV   Kislovodsk        86.33 315   eP       P       11 05 32.1  -0.8
KIV                                 e*PP     pP      11 06 03.0  -0.6
KIV                                 e                11 08 50.6
KIV                                  pmax    pmax
      comp=Z,4.0nm,0.9s
GOF   Gofitskoye        86.39 316⇑eP         P       11 05 33.3 +0.3
KOPT  Kop Dagi          86.88 311    P       P       11 05 35.3  -0.6
KOPT                                 IAmb    IAmb    11 05 39.5
      comp=Z,26nm,1.4s
KIRV  Kirov             87.09 331⇓eP         P       11 05 34.2  -1.8
MBAR  Mbarara           88.08 270    P       P       11 05 43.9 +1.8
      comp=Z,16nm,0.7s,baz=63,slow=10,SNR=14
MBAR  Mbarara           88.08 270    P       P       11 05 40.6  -1.5
MBAR                                 pmax    pmax
      comp=Z,15nm,0.8s
MBAR  Mbarara           88.08 270    P       P       11 05 40.6  -1.5
MBAR                                 IAmb    IAmb    11 05 46.0
      comp=Z,16nm,0.8s
VRH   Novokhopyorsk     88.92 322   eP       P       11 05 44.1  -0.8
VRH                                  pmax    pmax
      comp=Z,70nm,1.7s
VORD  Divnogorie        90.34 322   eP       P       11 05 50.6  -1.0
VORD                                 pmax    pmax
      comp=Z,10.0nm,0.6s
VSR   Storozhevoye      90.48 322   eP       P       11 05 50.7  -1.5
VSR                                  pmax    pmax
      comp=Z,10.0nm,0.6s
LPSR  Galich'ya Gora    90.94 323   eP       P       11 05 53.3  -1.0
LPSR                                 pmax    pmax
      comp=Z,20nm,1.0s
SNAA  Sanae             91.08 196    P       P       11 05 56.8 +2.0
SNAA  Sanae             91.08 196⇑iP         P       11 05 57.1 +2.3
SNAA                                 pmax    pmax
      comp=Z,7.0nm,0.9s
SNAA  Sanae             91.08 196    P       P       11 05 53.3  -1.5
SNAA                                 IAmb    IAmb    11 05 57.5
      comp=Z,7.8nm,0.9s
BRTR  Keskin Array B    91.98 310    P       P       11 05 58.3  -1.4
      comp=Z,1.3nm,0.7s,baz=137,slow=6.1,SNR=6.7
BRTR  Keskin Array B    91.98 310   i P      P       11 06 00.1 +0.4
BRTR                                 pmax    pmax
      comp=Z,1.0nm,0.6s
BELA  Belgrano 2        92.12 185    P       P       11 05 59.9 +0.4
BELA                                 IAmb    IAmb    11 06 01.9
      comp=Z,11nm,0.7s
KLMR  Klimovskoe        92.55 331   eP       P       11 05 56.5  -5.1
KLMR                                 pmax    pmax
      comp=Z,15nm,0.8s
KLMR  Klimovskoe        92.55 331   eP       P       11 05 56.6  -5.0
KLMR                                 AMP             11 06 00.9
      comp=Z,15nm,0.8s
VNA2  Neumayer--Watz    92.72 195    P       P       11 06 03.6 +1.3
      baz=104,slow=3.9
OBN   Obninsk           92.85 325   eP       P       11 06 02.6  -0.5
OBN                                 e                11 09 46.7
OBN                                  pmax    pmax
      comp=Z,11nm,0.9s
VNA3  Neumayer Olymp    93.10 195    P       P       11 06 03.5  -0.6
VNA1  Neumayer--Stat    93.11 195    P       P       11 06 03.6  -0.5
TMCR  Tamitsa           93.96 334   eP       P       11 06 06.1  -1.9
TMCR                                 pmax    pmax
      comp=Z,23nm,1.1s
APA   Apatity           96.42 337⇓iP         P       11 06 08.8   -10
APA                                 i *PP    pP      11 06 48.0  -2.2
APA                                  pmax    pmax
      comp=Z,6.0nm,1.0s
AKASG Malin Array Be    96.59 320    P       P       11 06 18.6  -1.7
      comp=Z,1.2nm,0.6s,baz=83,slow=4.3,SNR=6.8
AKBB  Malin Array Si    96.59 320⇓eP         P       11 06 19.2  -1.1
AKBB                                 pmax    pmax
      comp=Z,5.0nm,1.0s
IMAR  Indian Mountai    96.97  24    P       P       11 06 21.8 +0.1
MNK   Minsk             97.74 324   i P      Pdif    11 06 25.8 +0.3
      comp=E,1.0nm,0.7s
MNK                                 i P      Pdif    11 06 25.8 +0.3
      comp=N,11nm,0.7s
MNK                                 i P      Pdif    11 06 25.8 +0.3
      comp=Z,15nm,0.9s
MNK                                 i pP     pP      11 06 57.0 +0.6
MNK                                 i PP     PP      11 10 25.6 +0.6
MNK                                 i PPP    PPP     11 12 32.6
MNK                                 i SKS            11 16 40.5
MNK                                 i S      SKSac   11 16 51.8   0.0
MNK                                 i sS     ScS     11 17 48.5 +7.5
MNK                                 i SS     SS      11 24 26.1 +2.0
MNK                                 i SSS    SSS     11 28 13.6
MNK                                 i LRM    MLR     11 51 33.4
      comp=E,7.0nm,11.6s
MNK                                 i LRM    MLR     11 51 39.2
      comp=N,84nm,13.1s
MNK                                 i LRM    MLR     11 51 44.2
      comp=Z,118nm,12.3s
NACGM Naroch            98.41 324   i P      Pdif    11 06 28.7 +0.3
NACGM                               i P      Pdif    11 06 28.7 +0.3
NACGM                               i P      Pdif    11 06 28.7 +0.3
NACGM                               i pP     pP      11 06 54.2  -5.2
NACGM                               i sP     sP      11 07 24.6   +13
NACGM                               i PP     PP      11 10 28.1  -1.9
NACGM                               i PPP    PPP     11 12 31.7
NACGM                               i SKS            11 16 32.3
NACGM                               i S      SKKSac  11 17 18.2  -7.1
NACGM                               i sS     ScS     11 18 05.6   +19
NACGM                               i SP     SP      11 19 04.2  -7.2
NACGM                               i PS     PS      11 19 39.3   +13
NACGM                               i PS     PS      11 19 39.3   +13
NACGM                               i SSS    SSS     11 27 44.6
COLD  Coldfoot          98.48  23    P       Pdif    11 06 29.2 +0.8
COLD                                 IAmb    IAmb    11 06 30.8
      comp=Z,6.8nm,1.5s
FINES FINESS Array B    99.08 331    P       Pdif    11 06 30.7  -0.5
      comp=Z,4.0nm,0.9s,baz=96,slow=7.9,SNR=6.9
ARCES ARCESS Array B    99.45 339    P       Pdif    11 06 32.3  -0.5
      comp=Z,2.1nm,0.9s,baz=19,slow=7.7,SNR=5.0
ILAR  Eielson Array     99.78  26    P       Pdif    11 06 32.6  -1.7
      comp=Z,0.4nm,0.8s,baz=280,slow=4.7,SNR=1.9
GERES GERESS Array B   106.63 318    PKiKP   PKiKP   11 11 17.3 +2.0
      comp=Z,0.2nm,0.3s,baz=66,slow=2.5,SNR=1.8
GERES                                pPKiKP  pPKiKP  11 11 45.5  -1.9
      comp=Z,0.3nm,0.4s,baz=93,slow=5.3,SNR=4.0
YKA   Yellowknife Ar   114.13  24    PKP     PKPdf   11 11 28.6  -0.3
      comp=Z,0.7nm,0.5s,baz=335,slow=1.3,SNR=30
YKA                                  pPKP    PP      11 11 59.5   -26
      comp=Z,0.8nm,0.6s,baz=326,slow=1.2,SNR=6.0
TORD  Torodi Ar. Bea   118.33 280    PKP     PKiKP   11 11 38.6 +0.2
      comp=Z,2.3nm,0.5s,baz=59,slow=1.6,SNR=11
TORD                                 pPKP    pPKPdf  11 12 09.2  -0.9
      comp=Z,2.3nm,0.5s,baz=56,slow=2.2,SNR=4.2
ESDC  Sonseca Array    120.75 311    PKP     PKiKP   11 11 43.2 +0.6
      comp=Z,0.6nm,0.4s,baz=27,slow=3.2,SNR=4.8
NVAR  Mina Array Bea   121.03  50    PKP     PKiKP   11 11 44.2 +0.9
      comp=Z,0.7nm,0.6s,baz=245,slow=1.9,SNR=4.3
DBIC  Dimbokro         124.26 272    PKP     PKiKP   11 11 50.3 +0.2
      comp=Z,2.9nm,0.6s,baz=87,slow=2.8,SNR=4.0
DBIC                                 pPKP    pPKPdf  11 12 20.4  -1.3
      comp=Z,3.3nm,0.6s,baz=75,slow=1.5,SNR=4.2
PDAR  Pinedale Array   125.91  43    PKP     PKiKP   11 11 52.9   0.0
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	comp=Z,0.3nm,0.6s,baz=212,slow=5.3,SNR=3.9						
ULM	Lac du Bonnet	129.70	28	PKP	PKPdf	11 11 58.0	-1.1
	comp=Z,1.2nm,0.7s,baz=314,slow=1.6,SNR=3.3						
PLCA	Paso Flores	129.87	171	PKP	PKiKP	11 12 01.2	+0.5
	comp=Z,3.7nm,1.1s,baz=205,slow=2.6,SNR=3.7						
PLCA				SKPbc	SKPbc	11 15 13.4	+1.6
	comp=Z,4.8nm,1.1s,baz=163,slow=6.5,SNR=4.3						
TXAR	Lajitas Array	135.26	57	PKhKP	PKPpre	11 11 59.7	
	comp=Z,0.3nm,0.9s,baz=306,slow=2.5,SNR=4.3						
TXAR				PKP	PKiKP	11 12 11.8	-0.2
	comp=Z,0.8nm,0.8s,baz=191,slow=0.6,SNR=7.4						
TXAR				SKPbc	SKPbc	11 15 29.2	-1.4
	comp=Z,1.3nm,0.8s,baz=270,slow=2.5,SNR=7.1						
S39A	Bolivar	139.17	40		PKPdf	11 12 16.8	-0.5
CO03	El Pedregal	139.45	167		PKPdf	11 12 16.6	-1.6
AC02	Maricunga	143.65	168		PKPdf	11 12 25.3	-1.0
VBMS	Vicksburg	144.20	45		PKPbc	11 12 24.7	-0.1
O54A	Avella	144.41	26		PKPbc	11 12 25.3	0.0
344A	Westbrook Farm	144.47	47		PKPbc	11 12 26.1	+0.4
CLTN	Cedars of Leba	144.49	36		PKPbc	11 12 25.8	+0.1
U49A	Red Boiling Sp	144.52	35	PKPdf	PKPab	11 12 25.4	-0.1
P53A	Whipple	144.53	28	PKPdf	PKPab	11 12 25.5	+0.1
T50A	Nancy	144.69	34		PKPab	11 12 26.2	+0.1
M57A	Sunshine Farm,	144.70	21		PKPbc	11 12 26.5	+0.4
CPUP	Villa Florida	144.81	186	PKP	PKPdf	11 12 28.4	+0.7
	comp=Z,17nm,0.8s,baz=187,slow=3.7,SNR=32						
CPUP				pPKP	pPKPdf	11 13 00.3	+1.0
	comp=Z,10nm,0.7s,baz=167,slow=2.8,SNR=6.8						
CPUP	Villa Florida	144.81	186		PKPdf	11 12 28.0	+0.4
S51A	Beattyville	144.90	32		PKPab	11 12 26.5	-0.4
146A	Union	144.97	44		PKPdf	11 12 28.3	+0.5
O56A	Blue Knob Stat	145.09	24		PKPab	11 12 27.6	+0.1
X48A	Hartselle	145.16	39		PKPbc	11 12 27.2	-0.6
GO02	Mina Guanaco	145.17	166		PKPdf	11 12 30.3	+1.6
Q54A	Coxs Mills	145.19	27		PKPdf	11 12 28.1	+0.1
Z47A	Carrollton	145.30	42		PKPab	11 12 28.4	0.0
SWET	Sewanee	145.33	37		PKPdf	11 12 27.8	-0.6
346A	Big Creek Wild	145.41	46		PKPdf	11 12 26.4	-2.1
KSCT	Kent School, K	145.51	16		PKPdf	11 12 27.7	-0.6
N59A	State Game Lan	145.55	20		PKPdf	11 12 28.2	-0.3
W50A	Signal Mountai	145.71	37	PKPdf	PKPdf	11 12 27.6	-1.4
ODNJ	Ogdensburg	145.77	18		PKPbc	11 12 29.3	-0.2
TRNY	Table Rock, Ra	145.83	18		PKPbc	11 12 29.6	0.0
V51A	Loudon	145.84	35		PKPbc	11 12 29.9	+0.1
Q56A	Snyder Ridge,	145.87	26		PKPdf	11 12 28.5	-0.6
S54A	Dingess, Beckl	145.92	29		PKPdf	11 12 29.4	+0.1
Y49A	Blount Mountai	145.94	39	PKPdf	PKPdf	11 12 29.3	-0.1
P57A	Homestead Farm	145.98	24	PKPdf	PKPdf	11 12 28.7	-0.6
FPAL	Fort Paine	145.98	38		PKPdf	11 12 29.0	-0.5
CPCT	Cooper Cave	145.99	35		PKPdf	11 12 29.8	+0.4
PAL	Palisades	146.05	17	PKP2	PKPdf	11 12 29.2	-0.1
PAL	Palisades	146.05	17		PKPdf	11 12 29.2	-0.1
LRAL	Lakeview Retre	146.10	41	PKPdf	PKPdf	11 12 29.8	+0.2
MVL	Millersville	146.16	21		PKPdf	11 12 29.9	+0.4
V52A	Sevierville	146.23	34		PKPdf	11 12 29.9	+0.1
TKL	Tuckaleechee C	146.27	34	PKP2	PKPbc	11 12 31.5	+0.3
TKL	Tuckaleechee C	146.27	34		PKPbc	11 12 31.5	+0.3
V53A	Saluda	146.79	33	PKPdf	PKPdf	11 12 29.9	-0.9
V53A					PKPbc	11 12 33.2	+0.5
PB15	IPOC Station P	147.07	166		PKPbc	11 12 34.1	0.0
BG3	Lake Jocassee	147.22	34		PKPab	11 12 35.1	-0.8
Y52A	Lilburn	147.38	37		PKPbc	11 12 35.0	+0.7
V55A	Taylorsville	147.49	31		PKPbc	11 12 34.4	-0.2
PB06	IPOC Station P	147.53	165		PKPbc	11 12 35.6	+0.3
PB04	IPOC Station P	147.74	164		PKPbc	11 12 35.4	-0.5
LVC	Limon Verde	147.78	166	PKP2	PKPbc	11 12 35.9	-0.3
LVC	Limon Verde	147.78	166		PKPbc	11 12 35.9	-0.3
152A	Waverly Hall	147.79	39		PKPbc	11 12 35.8	+0.3
PAULI	Pauline	147.96	33		PKPbc	11 12 35.0	-0.9
KMSC	Kings Mountain	147.98	32		PKPbc	11 12 35.8	-0.1
T59A	Double "B" Far	148.31	26		PKPbc	11 12 37.0	+0.3
PB07	IPOC Station P	148.38	164	PKPdf	PKPdf	11 12 30.6	-3.4
PB07					PKPbc	11 12 36.2	-1.4
PB07				PKPab	PKPab	11 12 40.4	-0.6
PB01	IPOC Station P	149.14	165		PKiKP	11 12 41.5	+0.8
TA01	Diego Aracena	149.41	163		PKiKP	11 12 42.0	+0.9
PB08	IPOC Station P	150.09	165		PKiKP	11 12 44.2	+1.2
MNMC	Minye Minye	150.93	163		PKiKP	11 12 46.2	+1.6
LPAZ	La Paz	154.04	164	PKP	PKPdf	11 12 44.6	+1.3
	comp=Z,0.4nm,0.3s,baz=72,slow=5.6,SNR=3.9						
LPAZ				PKPbc	PKiKP	11 12 53.2	+1.7
	comp=Z,3.5nm,0.8s,baz=102,slow=1.5,SNR=11						
OTAV	Otavalo	160.71	116	PKIKP	PKPdf	11 12 51.4	-0.2
OTAV	Otavalo	160.71	116	PKPdf	PKPdf	11 12 51.4	-0.2
SAML	Samuel	162.17	173	PKP2	PKPab	11 13 39.2	-0.2
SAML						12 12 52.2	
SAML	Samuel	162.17	173	PKPdf	PKPdf	11 12 52.2	-0.2
SAML					PKPab	11 13 39.2	-0.2

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*UPA **28** 10:55:21.5±0.9, 9°.02N×82°.69W, h5^{km}±1^{km}, MW3.3*
*UCR **28** 10:55:22.2±1.8, 9°.01N×82°.72W, h20^{km}, MW3.5*
*INET **28** 10:55:22.4, 9°.03N×82°.85W, h2^{km}, MW2.8*
ISC 28 10:55:19.9±1.1**, 9°.07N**±0°.03×**82°.70W**±0°.02**, h13**^{km}±10^{km}**,**
n44, σ1^{s}.00/69**, 9C-6D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BRU2	Volcan	0.27	179	⇓*i*P	Pb	10 55 27.2	+0.4
BRU2				*e*S	Sb	10 55 31.4	0.0
BRU2	Volcan	0.27	179	*e*P	Pb	10 55 27.2	+0.4
BRU2				*e*S	Sb	10 55 31.4	0.0
MLIR3	Monte Lirio, C	0.30	205	⇓*i*P	Pb	10 55 27.9	+0.7
MLIR3				*e*S	Sb	10 55 32.1	-0.1
EDSV	San Vito	0.37	228	⇓*e*P	Pb	10 55 28.9	+0.5
EDSV				*e*S	Sb	10 55 34.8	+0.7
LNBQ3	Los Naranjos,	0.37	138	⇑*i*P	Pb	10 55 29.0	+0.5
LNBQ3				*e*S	Sb	10 55 34.4	+0.1
PTAR3	Potrerillos Ar	0.42	152	⇑*i*P	Pb	10 55 29.9	+0.6
PTAR3				*e*S	Sb	10 55 36.1	+0.5
CDITO	Canoas	0.52	200	⇓*i*P	Pn	10 55 31.7	-1.4
CDITO				*e*S	Sb	10 55 39.2	+0.8
PSOM3	Paja de Sombre	0.53	136	⇑*i*P	Pb	10 55 31.6	+0.5
PSOM3				*e*S	Sb	10 55 38.7	0.0
CHGR2	Aguacate	0.56	103	⇑*i*P	Pb	10 55 32.3	+0.7
CHGR2				*e*S	Sb	10 55 39.8	+0.2
DRK0	Durika	0.58	290	⇑*i*P	Pb	10 55 31.8	-0.1
DRK0				*e*S	Sb	10 55 39.5	-0.7
DRK0	Durika	0.58	290	*e*P	Pb	10 55 31.9	-0.1
DRK0				*e*S	Sb	10 55 39.9	-0.2
EDBA	Buenos Aires	0.58	279	⇑*e*P	Pn	10 55 33.0	-0.9
EDBA				*e*S	Sb	10 55 41.2	+1.0
BAGA3	Bagala, Chiriq	0.62	164	*e*P	Pn	10 55 34.0	-0.5
BAGA3				*e*S	Sb	10 55 42.0	+0.7
LESP3	La Esperanza,	0.67	188	⇑*i*P	Pn	10 55 34.1	-0.9
LESP3				*e*S	Sn	10 55 43.8	-1.6
DVD	David	0.67	159	⇓*i*P	Pn	10 55 34.6	-0.6
DVD				*e*S	Sn	10 55 44.2	-1.4
LOMA3	Las Lomas, Chi	0.70	155	*e*P	Pn	10 55 35.3	-0.3
LOCO3	Loma Colorada,	0.71	157	*e*P	Pb	10 55 34.7	+0.6
PEDE3	Pedregal, Chir	0.73	158	⇑*e*P	Pb	10 55 35.0	+0.5
PEDE3				*e*S	Sn	10 55 45.5	-1.5
EDPN	Palmar Norte	0.76	262	*e*P	Pn	10 55 36.0	-0.3
EDPN				*e*S	Sn	10 55 46.9	-0.9
CHIR3	Chiriqui UPA,	0.76	152	⇑*i*P	Pb	10 55 35.5	+0.4
CHIR3				*e*S	Sn	10 55 46.7	-1.0
SBAR3	San Bartolo, C	0.77	194	*e*S	Sn	10 55 53.5	+5.6
RIOS	Rincon, Osa	0.89	246	*e*P	Pb	10 55 36.8	-0.3
EDLM	Las Mercedes	0.91	283	*e*P	Pb	10 55 37.8	+0.2
PIRO	Carate, Puerto	0.92	224	⇓*i*P	Pb	10 55 37.5	-0.1
PIRO				*e*S	Sg	10 55 48.3	-1.2
PIRO	Carate, Puerto	0.92	224	*e*P	Pb	10 55 37.5	-0.1
MRVA	Moravia de Chi	1.05	316	*e*P	Pn	10 55 40.7	+0.2
CDM	Cerro de Muert	1.16	295	*e*P	Pn	10 55 42.1	-0.1
EDDO	Dominical	1.17	279	*e*P	Pg	10 55 42.8	+0.4
NANC3	Nancito, Chiri	1.26	131	*e*P	Pb	10 55 43.8	+0.2
NANC3				*e*S	Sg	10 56 01.4	+0.9
RIMA	Rio Macho	1.34	301	*e*P	Pb	10 55 45.4	+0.3
CVTR	Volcan Turrial	1.41	312	*e*P	Pg	10 55 47.4	+0.3
LCR2	La Lucha 2	1.45	298	*e*P	Pg	10 55 47.8	-0.1
PVID3	Puerto Vidal,	1.48	133	*e*P	Pg	10 55 48.1	-0.1
PVID3				*e*S	Sg	10 56 07.6	+0.1
HDC	Heredia	1.68	304	*e*P	Pb	10 55 51.1	+0.4
HDC				*e*S	Sg	10 56 14.7	+0.7
HDC	Heredia	1.68	304	*e*P	Pg	10 55 51.6	-0.5
GMAL	Guarumal, Vera	1.94	132	*e*P	Pb	10 55 54.2	-1.0
GMAL				*e*S	Sn	10 56 17.1	+0.2
JACO	JACO, Garabito	2.03	287	*e*P	Pb	10 55 56.2	-0.4
LAFE	Finca La Fe, P	2.31	289	*e*P	Pb	10 56 00.2	-1.1
COVE	Coope Vega, Sa	2.35	314	*e*P	Pb	10 56 01.8	-0.3
ARE1	Arenal 1	2.43	305	*e*P	Pb	10 56 03.3	-0.2
CACAO	El Cacao, Vera	2.50	133	*e*P	Pb	10 56 03.9	-0.7
CACAO				*e*S	Sb	10 56 36.5	+1.2
JTS	Las Juntas de	2.54	299	*e*P	Pb	10 56 04.5	-0.8
AZU	Azuero	2.71	118	*e*P	Pb	10 56 07.9	-0.4
AZU				*e*S	Sb	10 56 40.8	-0.7
GRZA	Playa Garza	3.02	286	*e*P	Pn	10 56 09.6	+2.1

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*IDC **28** 11:13:00.9±0.6, 3°.61S×144°.24E, h0^{km}, mb4.2/15, mb1 4.3/18, mb1mx4.3/27, mbtmp4.2/18, ML4.1/2, MS3.9/20, Ms1 3.9/20, ms1mx3.8/26, Error ellipse: s-maj=20.5km s-min=13.2km az=91.0*
*BJI **28** 11:13:01.5±0.0, 3°.50S×144°.20E, h5^{km}, mB5.2/19, mb4.5/27, Ms4.8/5, Ms7 4.4/2*
*NEIC **28** 11:13:02.6±1.4, 3°.59S±0°.04×144°.14E±0°.07, h10^{km}±1^{km}, mb4.7/44, Error ellipse: s-maj=11.2km s-min=6.6km az=270.0*
*GCMT **28** 11:13:07.6±0.3, 3°.46S±0°.01×144°.06E±0°.03, h17^{km}±1^{km}, MW4.9/74, Moment Tensor Solution. s20,c25; s74,c105; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.19±.18; $M_{\theta\theta}$-2.38±.11; $M_{\phi\phi}$0.18±.10; $M_{r\theta}$-1.18±.23; $M_{\theta\phi}$0.48±.06; $M_{\phi r}$0.07±.32; Best double couple: $M_0$2.61200×10^{16} NP1:ϕ_s104.00000°, δ32.00000°, λ96.00000°. NP2: ϕ_s277.00000°, δ58.00000°, λ86.00000°. Principal axes: T 2.4780, Plg76.0000°, Azm175.0000°; N 0.2660, Plg3.0000°, Azm279.0000°; P -2.7460, Plg13.0000°, Azm10.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*DJA **28** 11:13:11.6±0.4, 4°S±3°×14°4E±°, h64^{km}±5^{km}, M4.6/21, mB5.1/9, mb4.7/21, MLv4.8/5, Mw(mB)4.4/9*
ISC 28 11:13:06.4±0.4**, 3°.64S**±0°.05×**144°.29E**±0°.07**, h35**^{km}**, n131,**
σ1^{s}.62/116**, mb4.6**/45**, MS4.0**/21**, 1C, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MANU	Manus Island	3.46	63		Pn	11 13 59.2	+1.4
JAY	Jayapura	3.75	287	Pn	Pn	11 13 60.0	-1.8
	5.8nm,0.3s,baz=152,slow=5.6,SNR=13						
JAY				LR	LR	11 15 18.8	
	comp=Z,821nm,20.7s,baz=228,slow=37						
GENI	Genyem	4.24	284	P	Pn	11 14 12.3	+3.8
SMPI	Sarmi	5.80	286	P	Pn	11 14 32.6	+2.6
	0.4nm42nm,1.9s						
MMPI	Merauke	6.17	219	P	Pn	11 14 39.2	+4.1
	3.3nm18μm954nm,0.7s						
PMG	Port Moresby	6.40	154	Pn	Pn	11 14 38.0	-0.3
	1.4nm,0.3s,baz=228,slow=5.8,SNR=3.3						
PMG				Sn	Sn	11 15 53.9	+3.7
	2.8nm,0.3s,baz=79,slow=22,SNR=0.9						
PMG	Port Moresby	6.40	154	Pn	Pn	11 14 38.7	+0.4
COEN	Coen	10.31	186	Pn	Pn	11 15 33.3	+1.3
FAKI	Fak Fak	12.04	273	Pn	Pn	11 15 53.7	-1.9
SIJI	Sorong	13.29	282	Pn	Pn	11 16 15.2	+2.4
	0.6nm,0.3s,baz=53,slow=3.2,SNR=3.6						
SIJI				LR	LR	11 21 52.1	
	comp=Z,272nm,19.5s,baz=102,slow=40						
CTA	Charters Tower	16.46	173	Pn	P	11 16 57.1	-0.1
	0.1nm,0.3s,baz=351,slow=9.1,SNR=2.5						
CTA				LR	LR	11 22 47.2	
	comp=Z,329nm,21.7s,baz=356,slow=36						
CTAO	Charters Tower	16.46	173		P	11 16 57.1	-0.1
WB0	Warramunga Arr	18.71	210		P	11 17 20.6	-1.4
WR0	Warramunga Arr	18.80	210	P	P	11 17 22.2	-0.9
WRAB	Tennant Creek	18.87	210	P	P	11 17 23.3	-0.5
WB2	Warramunga Arr	18.88	210		P	11 17 23.0	-0.9
WRA	Warramunga Arr	18.89	210	P	P	11 17 23.5	-0.5
	0.8nm,0.3s,baz=31,slow=12,SNR=26						
WRA				S	Sn	11 20 50.1	-5.3
	0.1nm,0.3s,baz=26,slow=24,SNR=4.0						
WRA				LR	LR	11 25 33.0	
	comp=Z,723nm,19.0s,baz=40,slow=40						
SOEI	Soe	20.78	252	P	P	11 17 43.0	-1.8
BATI	Baumata	21.48	251	P	P	11 17 51.3	-0.9
	89nm,0.5s,baz=180,slow=1.0,SNR=14						
BATI				LR	LR	11 26 24.0	
	comp=Z,208nm,19.9s,baz=94,slow=38						
BATI	Baumata	21.48	251	P	P	11 17 54.9	+2.7
	54nm,0.5s						
GTOI	Gorontalo	21.68	281	P	P	11 17 56.3	+1.9
	734nm62nm,1.2s						
AS31	Alice Springs	22.29	206	P	P	11 17 59.9	-1.0
ASAR	Alice Springs	22.30	206	P	P	11 17 59.9	-1.1
	3.2nm,0.5s,baz=29,slow=12,SNR=42						
ASAR				PcP	PcP	11 21 57.1	+1.0
	1.9nm,0.7s,baz=19,slow=2.9,SNR=6.4						
ASAR				LR	LR	11 27 49.6	
	comp=Z,943nm,19.4s,baz=30,slow=40						
EIDS	Eidsvold	22.57	164	P	P	11 18 04.4	+0.6
MRSI	Marisa	22.70	280	P	P	11 18 07.6	+2.3
	33nm,0.7s						
APSI	Ampana	22.78	276	P	P	11 18 08.3	+2.2
	929nm65nm,1.2s						
FITZ	Fitzroy Crossi	23.24	230	P	P	11 18 08.7	-2.0
	9.3nm,0.7s,baz=37,slow=1.6,SNR=41						
FITZ				LR	LR	11 27 31.4	
	comp=Z,214nm,18.9s,baz=52,slow=38						
FITZ	Fitzroy Crossi	23.24	230	P	P	11 18 09.5	-1.2
FITZ				IAmb	IAmb	11 18 15.9	
	comp=Z,21nm,1.1s						
TOLI2	Tolitoli	23.96	281	P	P	11 18 15.3	-2.4
BNSI	Bone	24.13	267	P	P	11 18 28.2	+8.9
TTSI	Tana Toraja	24.43	271	P	P	11 18 24.4	+2.3
	comp=Z,601nmcomp=Z,29nm,1.1s						
KAPI	Kappang	24.50	266	P	P	11 18 20.5	-2.1
	comp=Z,4.2nm,0.4s,baz=78,slow=11,SNR=1.4						
KAPI	Kappang	24.50	266	P	P	11 18 20.7	-2.0
KAPI				IAmb	IAmb	11 18 44.3	
	comp=Z,38nm,1.4s						
STKA	Stephens Creek	28.20	185	P	P	11 18 56.7	+0.8
	comp=Z,3.8nm,0.6s,baz=346,slow=8.2,SNR=6.3						
STKA				LR	LR	11 30 30.1	
	comp=Z,521nm,18.4s,baz=3.2,slow=37						
STKA	Stephens Creek	28.20	185	P	P	11 18 56.2	+0.3
DZM	Mont Dzumac	28.25	132	*e*LR	LR	11 26 10.7	
	comp=Z,540nm,24.9s						
H11S3	WAKE ISLAND Hy	31.16	44	T	T	11 52 34.3	
	baz=226,slow=76,SNR=9.3						
H11S2	WAKE ISLAND Hy	31.17	44	T	T	11 52 05.1	
	baz=226,SNR=8.4						
H11S1	WAKE ISLAND Hy	31.18	44	T	T	11 52 41.5	
	baz=226,slow=76,SNR=6.8						
H11N1	WAKE ISLAND Hy	32.13	43	T	T	11 53 13.1	
	baz=226,slow=76,SNR=14						
H11N2	WAKE ISLAND Hy	32.14	43	T	T	11 53 16.7	
	baz=226,slow=76,SNR=18						
H11N3	WAKE ISLAND Hy	32.14	43	T	T	11 53 19.0	
	baz=226,slow=76,SNR=9.2						
MJAR	Matsushiro Arr	40.37	352	LR	LR	11 36 45.4	
	comp=Z,83nm,20.5s,baz=190,slow=35						
NJ2	Nanjing	42.94	328	*e*P	P	11 21 02.5	+0.5
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
KSRS	Korea Array	43.62	341	P	P	11 21 07.0	-0.4
	comp=Z,2.0nm,0.7s,baz=159,slow=8.8,SNR=10						
KSRS				LR	LR	11 36 04.7	
	comp=Z,166nm,20.4s,baz=142,slow=32						
RPSI	Rantau Prapat	45.77	277	P	P	11 21 21.5	-3.5
RPZ	Rata Peaks	46.41	153	P	P	11 21 31.3	+1.7
WHZ	Wether Hill Ro	46.88	157	P	P	11 21 34.7	+1.4
TIA	Tai'an	47.07	330	P	P	11 21 39.8	+4.9
TIA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
USRK	Ussuriysk Ar.	48.88	348	P	P	11 21 48.4	-0.3
	comp=Z,1.8nm,0.9s,baz=183,slow=14,SNR=2.3						
USRK				LR	LR	11 38 04.9	
	comp=Z,98nm,19.7s,baz=151,slow=31						
KMI	Kunming	49.42	308	⇑P	P	11 21 52.8	-0.7
KMI				pmax	pmax		
	comp=Z,7.0nm,1.0s						
CM36	Chiang Mai Arr	49.65	298	P	P	11 21 56.0	+1.0
CM35	Chiang Mai Arr	49.65	298	P	P	11 21 56.0	+0.9
CM04	Chiang Mai Arr	49.71	298	P	P	11 21 56.0	+0.5
CM34	Chiang Mai Arr	49.72	298	P	P	11 21 58.0	+2.4
CM01	Chiang Mai Arr	49.73	298	P	P	11 21 58.5	+2.9
CM05	Chiang Mai Arr	49.74	298	P	P	11 21 58.4	+2.6
CM02	Chiang Mai Arr	49.75	298	P	P	11 21 58.3	+2.5
CMAR	Chiang Mai Arr	49.76	298	P	P	11 21 56.0	+0.1
	comp=Z,1.7nm,0.6s,baz=120,slow=5.4,SNR=16						
CMAR				LR	LR	11 42 02.3	
	comp=Z,10nm,21.7s,baz=0.0,slow=35						
CM15	Chiang Mai Arr	49.77	298	P	P	11 22 07.2	+11
CM13	Chiang Mai Arr	49.78	298	P	P	11 21 57.9	+1.9
CMMT	Chiang Mai	49.88	298	P	P	11 21 58.0	+1.2
CM33	Chiang Mai Arr	49.89	298	P	P	11 21 58.0	+1.1
CHTO	Chiang Mai	49.89	298	P	P	11 21 55.0	-1.9
CHTO				IAmb	IAmb	11 21 58.4	
	comp=Z,11nm,1.3s						
CM32	Chiang Mai Arr	49.91	298	P	P	11 22 03.0	+5.9
XAN	Xi'an	50.16	321	P	P	11 21 58.8	+0.1
XAN				pmax	pmax		
	comp=Z,9.0nm,1.7s						
XAN	Xi'an	50.16	321	P	P	11 21 57.3	-1.4
XAN				IAmb	IAmb	11 22 08.4	
	comp=Z,10.0nm,1.3s						
YSS	Yuzh-Sakhalins	50.39	359	P	P	11 21 59.6	-0.6
BJT	Baijiatuau	50.53	332	P	P	11 21 59.5	-1.8
BJT				IAmb	IAmb	11 22 09.1	
	comp=Z,15nm,1.4s						
HHC	Hu-ho-hao-te	53.42	329	*e*P	P	11 22 22.8	-0.2
HHC				pmax	pmax		
	comp=Z,7.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,140nm,5.8s						
PETK	Petropavlovsk-	57.66	10	P	P	11 22 53.2	+0.1
	comp=Z,7.6nm,1.0s,baz=168,slow=6.3,SNR=7.2						
PETK				LR	LR	11 46 58.0	
	comp=Z,55nm,19.5s,baz=198,slow=35						
PETK	Petropavlovsk-	57.66	10	P	P	11 22 52.3	-0.7
PET	Petropavlovsk	57.74	10	P	P	11 22 53.5	-0.1
GTA	Gaotai	59.21	321	*e*P	P	11 23 05.3	+0.9
GTA				pP	pP	11 23 09.8	-5.1
GTA				sP	sP	11 23 12.5	-6.4
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,110nm,5.1s						
GTA				LR	LR		
	comp=Z,170nm,14.9s						
GTA				LR	LR		
	comp=Z,140nm,16.7s						
ULN	Ulaanbaatar	60.76	332	P	P	11 23 14.5	-0.3
ULN				IAmb	IAmb	11 23 21.9	
	comp=Z,7.9nm,1.4s						
SONM	Songino Array	61.05	332	P	P	11 23 16.6	-0.2
	comp=Z,1.0nm,0.7s,baz=153,slow=7.8,SNR=7.4						
SONM				LR	LR	11 48 01.8	
	comp=Z,112nm,20.9s,baz=147,slow=34						
SONM	Songino Array	61.05	332	P	P	11 23 16.1	-0.7
SMY	Shemya	61.54	20	P	P	11 23 19.5	-0.2
TLY	Talaya	65.03	333	P	P	11 23 42.8	-0.2
TLY				IAmb	IAmb	11 23 50.1	
	comp=Z,7.6nm,1.3s						
PPT	Papeete	66.17	108	LR	LR	11 50 08.2	
	comp=Z,63nm,19.3s,baz=322,slow=34						
PPT2	Papeete2	66.17	108	*e*LR	LR	11 43 52.0	
	comp=Z,96nm,22.2s						
TBI	Tubuai	66.78	114	*e*LR	LR	11 44 13.7	
	comp=Z,48nm,31.0s						
WMQ	Urumqi	69.25	320	*e*P	P	11 24 11.3	+1.2
MK31	Makanchi Array	73.97	321	P	P	11 24 38.0	-0.4
MK31				IAmb	IAmb	11 24 59.3	
	comp=Z,8.0nm,1.4s						
MKAR	Makanchi Array	73.97	321	P	P	11 24 38.2	-0.1
	comp=Z,0.8nm,0.5s,baz=105,slow=7.6,SNR=8.8						
MKAR	Makanchi Array	73.97	321	P	P	11 24 37.9	-0.5
MAKZ	Makanchi	74.17	321	P	P	11 24 39.5	-0.1
MAKZ				IAmb	IAmb	11 24 47.6	
	comp=Z,9.8nm,1.4s						
VNDA	Vanda	74.42	176	P	P	11 24 39.8	-0.6
	comp=Z,4.6nm,0.8s,baz=329,slow=5.5,SNR=7.9						
VNDA				LR	LR	11 57 46.4	
	comp=Z,93nm,18.2s,baz=342,slow=36						
VNDA	Vanda	74.42	176	P	P	11 24 39.8	-0.6
ZAA0	Zalesovo Array	75.59	328	P	P	11 24 46.3	-1.2
ZALV	Zalesovo Beam	75.59	328	P	P	11 24 46.8	-0.7
	comp=Z,2.0nm,0.7s,baz=105,slow=3.9,SNR=9.1						
ZALV				LR	LR	11 57 28.1	
	comp=Z,80nm,20.6s,baz=121,slow=35						
ZALV	Zalesovo Beam	75.59	328	P	P	11 24 46.7	-0.8
KSH	Kashi	75.80	312	P	P	11 24 51.5	+2.3
KSH				sP	pP	11 24 57.5	-2.4
KSH				S	S	11 34 35.8	+6.7
KSH				pmax	pmax		
	comp=Z,14nm,1.3s						
KSH				pmax	pmax		
	comp=Z,300nm,5.8s						
NIL	Nilore	76.36	306	P	P	11 24 52.6	+0.1
KURK	Kurchatov	77.71	324	P	P	11 24 59.8	+0.2
KURK				IAmb	IAmb	11 25 01.7	
	comp=Z,6.2nm,1.2s						
AAK	Ala-Archa	77.77	315	P	P	11 24 60.0	-0.4
AAK				IAmb	IAmb	11 25 13.4	
	comp=Z,4.7nm,0.9s						
RDOG	Red Dog Mine	80.31	18	P	P	11 25 13.4	0.0
RDOG				IAmb	IAmb	11 25 23.0	
	comp=Z,6.3nm,0.9s						
KK31	Karatay Array	80.72	315	P	P	11 25 15.9	-0.3
KK31				IAmb	IAmb	11 25 29.6	
	comp=Z,9.8nm,1.4s						
KKAR	Karatay Array	80.72	315	P	P	11 25 15.7	-0.5
KKAR	Karatay Array	80.72	315	P	P	11 25 15.9	-0.3
KKAR				IAmb	IAmb	11 25 29.6	
	comp=Z,9.8nm,1.4s						
NRIK	Noril'sk	82.22	343	P	P	11 25 23.1	-0.4
	comp=Z,1.4nm,0.4s,baz=131,slow=9.3,SNR=2.2						
NRIK				LR	LR	12 00 29.1	
	comp=Z,110nm,21.8s,baz=114,slow=35						
NRIK	Noril'sk	82.22	343	P	P	11 25 23.1	-0.4
NRIK				IAmb	IAmb	11 25 40.8	
	comp=Z,10nm,1.4s						
IMAR	Indian Mountai	82.27	21	P	P	11 25 24.6	+0.7
RND	Reindeer	83.09	25	P	P	11 25 27.6	-0.8
RND				IAmb	IAmb	11 25 34.0	
	comp=Z,5.5nm,0.9s						
BRVK	Borovoye	83.35	324	P	P	11 25 30.1	+0.3
MAW	Mawson	83.38	202	LR	LR	11 58 56.5	
	comp=Z,70nm,20.0s,baz=65,slow=33						
WRH	Wood River Hil	83.81	24	P	P	11 25 31.5	-0.4
WRH				IAmb	IAmb	11 25 34.0	
	comp=Z,8.0nm,1.2s						
CCB	Clear Creek Bu	83.99	24	P	P	11 25 32.3	-0.5
CCB				IAmb	IAmb	11 25 38.3	
	comp=Z,5.3nm,1.1s						
COLD	Coldfoot	84.09	21	P	P	11 25 33.8	+0.6
COLD				IAmb	IAmb	11 25 51.8	
	comp=Z,5.5nm,1.3s						
IL31		84.40	24	P	P	11 25 33.9	-0.9
IL31				IAmb	IAmb	11 25 41.2	
	comp=Z,3.9nm,0.9s						
ILAR	Eielson Array	84.40	24	P	P	11 25 33.9	-1.0
	comp=Z,1.7nm,0.7s,baz=253,slow=5.0,SNR=18						
ILAR				LR	LR	12 01 22.0	
	comp=Z,56nm,18.8s,baz=278,slow=34						
ILAR	Eielson Array	84.40	24	P	P	11 25 33.8	-1.1
CTGM	Chitina Glacie	85.64	28	P	P	11 25 41.3	-0.1
CTGM				IAmb	IAmb	11 25 43.1	
	comp=Z,4.1nm,0.9s						
BCAR	Beaver Creek A	86.00	26	P	P	11 25 43.5	+0.5
BMAR	Burnt Mountain	86.19	21	P	P	11 25 44.7	+0.8
QSPA	South Pole Qui	86.31	180	P	P	11 25 44.2	-0.4
HYT	Haines Junctio	87.42	29	P	P	11 25 51.2	+1.1
HYT				IAmb	IAmb	11 25 58.6	
	comp=Z,3.8nm,1.0s						
ABKAR	Akbulak array	89.03	319	P	P	11 25 56.8	-1.1
ABKAR	Akbulak array	89.03	319	P	P	11 25 56.9	-0.9
YKA	Yellowknife Ar	98.34	27	P	P	11 26 39.9	-0.4
	comp=Z,0.2nm,0.8s,baz=278,slow=4.1,SNR=4.4						
YKA				LR	LR	12 09 21.4	
	comp=Z,68nm,20.1s,baz=0.0,slow=34						
GERES	GERESS Array B	118.44	325	PKP	PKiKP	11 31 51.4	+0.8
	comp=Z,0.5nm,0.7s,baz=48,slow=2.0,SNR=3.6						
GERES	GERESS Array B	118.44	325		PKPdf	11 31 48.7	-1.9
PLCA	Paso Flores	125.56	148	PKP	PKiKP	11 32 05.1	+0.2
	comp=Z,2.2nm,0.7s,baz=295,slow=1.2,SNR=12						
TORD	Torodi Ar. Bea	141.86	287	PKhKP	PKPpre	11 32 28.4	
	comp=Z,0.8nm,1.0s,baz=302,slow=1.3,SNR=2.4						
LPAZ	La Paz	142.33	123	PKhKP	PKPpre	11 32 34.0	
	comp=Z,1.0nm,0.5s,baz=270,slow=2.3,SNR=4.2						
LPAZ	La Paz	142.33	123		PKPdf	11 32 34.7	-2.4
CPUP	Villa Florida	143.60	146	PKP	PKPbc	11 32 35.7	0.0
	comp=Z,2.1nm,0.8s,baz=232,slow=7.4,SNR=4.0						
KIC	Kosan Boka	149.03	276	*e*PKIKP	PKPbc	11 32 51.8	-0.2
	comp=Z,9.7nm,0.8s						
DBIC	Dimbokro	149.12	277	PKPbc	PKPbc	11 32 51.8	-0.4
	comp=Z,1.9nm,0.5s,baz=67,slow=2.0,SNR=5.6						

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TIC   Toumodi          149.29 277 ePKIKP  PKPbc  11 32 52.2 -0.5
LIC   Lamto            149.32 276 ePKIKP  PKPbc  11 32 52.3 -0.4
      comp=Z,14nm,0.5s
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*NEIC **28** 11:32:17.2±2.0, 31.°73S±0.°05×68.°6W±0.°1, h85km±9km, mb4.2/5, Md4.3(SJA), Error ellipse: s-maj=18.4km s-min=3.6km az=69.0*

*SJA **28** 11:32:18.3±0.6, 31.°74S×68.°93W, h116km±3km, ML4.3, MW4.2*

*IDC **28** 11:32:19.7±0.8, 31.°73S×69.°00W, h111km±6km, mb3.8/9, mb1 3.9/11, mb1mx3.8/26, mbtmp4.1/11, Error ellipse: s-maj=25.6km s-min=16.3km az=76.0*

ISC 28 11:32:19.4±0.5**, 31.°67S**±0.°05×**68.°89W**±0.°05**, h110**km**, n68, σ1.s48**/73**, mb4.3**/9**, San Juan Province**

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Code  Station Name       Δ°   AZ°   Phase ID            Time     Res
                                  Op      ISC        h  m  s    ISC
RTCV  Cerro Valdivia     0.35 122 eP      Pn      11 32 36.1 +0.7
RTLL  Cerro Villicun     0.49  46 eP      Pn      11 32 36.9 +0.6
RTLL                              eS      Sn      11 32 50.6 +1.7
RTLL                               IAML           11 32 51.9
      comp=Z,9µm,0.3s
AUSP  Uspallata          0.69 218 eP      Pn      11 32 37.8 -0.2
ACCO  Cerro Coronel      1.09 352 eP      Pn      11 32 43.2 +1.3
ACCO                              eS      Sn      11 33 01.8 +2.9
ACCO                               IAML           11 33 03.3
      comp=Z,4µm,2.4s
ACDV  Cuesta del Vie     1.51 352 eP      Pn      11 32 47.5 +1.0
ACDV                               IAML           11 33 10.0
      comp=Z,1µm,0.4s
ACDV                              eS      Sn      11 33 10.1 +3.0
AROD  Rodeo              1.58 341 eP      Pn      11 32 49.0 +1.5
AROD                              eS      Sn      11 33 11.5 +2.6
CO03  El Pedregal        1.75 298         Pn      11 32 50.2 +0.9
VA03  San Esteban        1.78 232         Pn      11 32 50.1 +0.4
CO02  Combarbal          1.86 284         Pn      11 32 51.1 +0.3
CO01  Juntas del Tor     1.98 328         Pn      11 32 54.5 +2.1
PEL   Peldehue           2.11 226         Pn      11 32 53.6 -0.2
GO04  Tololo Observa     2.22 312         Pn      11 32 55.7 +0.2
MT05  Renca              2.32 222         Pn      11 32 56.3 -0.2
APLL  PUNTA DE LOS L     2.39  58 eP      Pn      11 32 58.7 +1.2
MT02  Curacav            2.47 230         Pn      11 32 57.2 -1.2
MRA   San Martin         2.79 106 eP      Pn      11 33 03.3 +0.6
MRA                                IAML           11 33 57.0
      comp=Z,733nm,0.6s
ACLC  CERRO LA CRUZ      2.79  37 eP      Pn      11 33 03.9 +1.0
ACLC                               IAML           11 34 07.3
      comp=Z,1µm,0.4s
AC05  El Transito        3.07 337         Pn      11 33 08.0 +1.5
LCO   Las Campanas       3.08 329  Pn     Pn      11 33 06.8 +0.1
RFA   San Rafael         3.11 174 eP      Pn      11 33 06.5 -0.4
BO02  Sierra Bellavi     3.49 207         Pn      11 33 11.9  0.0
AC04  Llanos de Chal     3.94 331  Pn     Pn      11 33 17.1 -0.8
GO03  Copiap             4.23 344         Pn      11 33 22.1 +0.2
AC02  Maricunga          4.83 357  Pn     Pn      11 33 31.8 +1.5
BI02  San Fabin de       5.36 201  Pn     Pn      11 33 35.5 -1.5
AC01  Pan de Azucar      5.71 344  Pn     Pn      11 33 40.5 -1.2
GO02  Mina Guanaco       6.52 354  Pn     Pn      11 33 51.7 -1.4
PB15  IPOC Station P     8.45 356         Pn      11 34 16.9 -2.2
H03N1 Juan Fernandez     8.64 256  T      T       11 41 33.2
      baz=84,slow=73,SNR=96
H03N3 Juan Fernandez     8.65 255  T      T       11 41 13.9
      baz=84,slow=73,SNR=67
H03N2 Juan Fernandez     8.66 256  T      T       11 41 34.4
      baz=84,slow=73,SNR=78
PB06  IPOC Station P     8.95 356  Pn     Pn      11 34 24.0 -2.0
LVC   Limon Verde        9.03 360  P      Pn      11 34 24.4 -2.7
      comp=Z,3.2nm,0.3s,baz=186,slow=8.3,SNR=18
LVC                                S      Sn      11 36 02.8 -4.5
      comp=Z,0.9nm,0.3s,baz=193,slow=19,SNR=1.3
LVC   Limon Verde        9.03 360  Pn     Pn      11 34 24.8 -2.4
PLCA  Paso Flores        9.14 188  P      Pn      11 34 27.0 -1.3
      comp=Z,0.2nm,0.3s,baz=349,slow=8.2,SNR=6.2
PLCA  Paso Flores        9.14 188         Pn      11 34 27.0 -1.3
PB09  IPOC Station P     9.84 358         Pn      11 34 36.1 -1.9
PB01  IPOC Station P    10.60 357         Pn      11 34 44.5 -3.8
CPUP  Villa Florida     11.43  65  P      Pn      11 34 56.1 -3.1
      comp=Z,0.2nm,0.3s,baz=248,slow=8.5,SNR=3.4
MNMC  Minye Minye       12.51 357  Pn     Pn      11 35 11.2 -2.6
LPAZ  La Paz            15.33   3  P      P       11 35 52.5 -0.2
      comp=Z,0.7nm,0.3s,baz=188,slow=7.3,SNR=13
LPAZ  La Paz            15.33   3  Pn     Pn      11 35 49.6 -0.9
LPAZ                               IAmb   IAmb    11 35 53.4
      comp=Z,5.4nm,0.7s
SAML  Samuel            23.23  14  P      P       11 37 18.0 +1.1
PTGA  Pitinga           31.91  17  P      P       11 38 34.5  0.0
      comp=Z,3.3nm,0.5s,baz=323,slow=22,SNR=6.9
PTGA  Pitinga           31.91  17  IAmb   IAmb    11 38 35.4
      comp=Z,4.4nm,0.8s
DR12  Loma Pena Alta    50.17 359  P      P       11 41 04.7 +0.8
VNA3  Neumayer Olymp    50.54 159  P      P       11 41 07.0 +0.9
VNA1  Neumayer--Stat    50.80 158  P      P       11 41 08.0 +0.1
VNA2  Neumayer--Watz    51.15 158  P      P       11 41 11.6 +0.9
      baz=285,slow=8.4
SNAA  Sanae             52.76 159  P      P       11 41 23.4 +0.8
SNAA  Sanae             52.76 159  P      P       11 41 23.2 +0.6
      comp=Z,3.5nm,0.8s,baz=278,slow=6.1,SNR=11
TXAR  Lajitas Array     69.10 328  P      P       11 43 14.9 +1.2
      comp=Z,0.7nm,0.7s,baz=151,slow=8.6,SNR=9.0
DBIC  Dimbokro          71.91  70  P      P       11 43 31.5 +0.5
      comp=Z,2.1nm,0.5s,baz=176,slow=7.2,SNR=5.1
DBIC  Dimbokro          71.91  70  IAmb   IAmb    11 43 32.1
      comp=Z,5.6nm,0.9s
BOSA  Boshof            78.77 117  P      P       11 44 11.4 +1.1
      comp=Z,3.9nm,0.8s,baz=264,slow=2.3,SNR=7.2
BOSA  Boshof            78.77 117  IAmb   IAmb    11 44 11.7
      comp=Z,10nm,1.1s
TORD  Torodi Ar. Bea    80.91  68  P      P       11 44 22.7 +0.9
      comp=Z,3.6nm,0.7s,baz=274,slow=5.4,SNR=15
TORD                               pP     pP      11 44 51.9 +1.7
      comp=Z,1.3nm,0.7s,baz=282,slow=5.0,SNR=3.4
PDAR  Pinedale Array    82.95 331  P      P       11 44 32.4 +0.2
      comp=Z,0.4nm,0.7s,baz=111,slow=8.1,SNR=3.6
NVAR  Mina Array Bea    83.56 323  P      P       11 44 36.2 +0.8
      comp=Z,0.5nm,0.8s,baz=145,slow=4.9,SNR=3.3
ULM   Lac du Bonnet     85.00 343  P      P       11 44 40.9 -1.1
      comp=Z,1.1nm,0.7s,baz=210,slow=1.3,SNR=3.5
ASAR  Alice Springs    120.81 204  PKP    PKiKP   11 50 58.0 -1.2
      comp=Z,0.3nm,0.6s,baz=143,slow=2.2,SNR=5.6
WRA   Warramunga Arr   124.05 207  PKP    PKiKP   11 51 04.9 -0.8
      comp=Z,0.9nm,0.5s,baz=160,slow=1.7,SNR=21
ZALV  Zalesovo Beam    150.85  33  PKPbc  PKiKP   11 51 59.1 +0.1
      comp=Z,4.6nm,0.6s,baz=306,slow=3.5,SNR=22
ZALV                               pPKPbc pPKPbc  11 52 28.0 -0.6
      comp=Z,1.0nm,0.5s,baz=304,slow=3.4,SNR=2.6
ZALV  Zalesovo Beam    150.85  33         PKiKP   11 51 59.2 +0.3
MKAR  Makanchi Array   153.24  47  PKPbc  PKiKP   11 52 04.2  0.0
      comp=Z,0.3nm,0.6s,baz=308,slow=1.0,SNR=4.4
MKAR                               PKPab  PKPab   11 52 17.0 +0.6
      comp=Z,1.7nm,0.7s,baz=300,slow=3.8,SNR=15
MKAR                               pPKPbc pPKPbc  11 52 34.7 +0.3
      comp=Z,0.7nm,0.9s,baz=336,slow=1.5,SNR=2.8
MKAR                               pPKPab sPKPbc  11 52 47.1 +1.3
      comp=Z,0.5nm,0.7s,baz=300,slow=2.7,SNR=4.3
MKAR  Makanchi Array   153.24  47  PKPab  PKPab   11 52 17.2 +0.8
CMAR  Chiang Mai Arr   162.85 137  PKPab  PKPab   11 52 58.0 -0.6
      comp=Z,0.4nm,0.3s,baz=240,slow=8.1,SNR=4.0
CMAR  Chiang Mai Arr   162.85 137  PKPdf  PKPdf   11 52 09.5 +0.5
CMAR                                      PKPab   11 52 57.7 -0.9
```

IDC 28 11:56:36.3±44.0**, 15.°85S**×**174.°96W, h0**km**, mb4.2**/3**, mb1 4.4**/3**, mb1mx3.7**/38**, mbtmp4.2**/3**, Error ellipse: s-maj=836.5km s-min=175.0km az=78.0, Tonga Islands**

```
Code  Station Name       Δ°   AZ°   Phase ID            Time     Res
                                  Op      ISC        h  m  s    ISC
STKA  Stephens Creek    42.51 240  P      P       12 04 32.2 -1.4
      1.0nm,0.5s,baz=90,slow=12,SNR=1.5
WRA   Warramunga Arr    48.27 257  P      P       12 05 19.8 +0.2
      1.2nm,0.5s,baz=90,slow=7.2,SNR=37
ASAR  Alice Springs     48.54 252  P      P       12 05 21.9 +0.3
      8.5nm,0.7s,baz=86,slow=8.3,SNR=119
```

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*IDC **28** 12:01:40.1±1.9, 27.°29S×70.°89W, h0km, mb4.2/1, mb1 4.0/3, mb1mx3.6/23, mbtmp3.9/3, ML3.7/2, MS3.5/5, Ms1 3.5/5, ms1mx3.2/25, Error ellipse: s-maj=95.3km s-min=25.4km az=106.0*

*GUC **28** 12:01:43.0±0.6, 27.°41S×71.°23W, h40km±2km, ML3.8*

ISC 28 12:01:39.2±1.7**, 27.°24S**±0.°04×**71.°28W**±0.°08**, h2**km±11km**, n29, σ1.s10**/28**, 4C-2D, Near coast of northern Chile**

```
Code  Station Name       Δ°   AZ°   Phase ID            Time     Res
                                  Op      ISC        h  m  s    ISC
AC04  Llanos de Chal     0.97 169⇓iP      Pg      12 01 58.0 +0.1
AC04                             i S      Sg      12 02 09.6 -0.9
AC04                               IAML           12 02 12.8
      comp=E,8µm,0.2s
GO03  Copiap             0.99 111⇓iP      Pn      12 01 59.7 -0.5
GO03                             i S      Sn      12 02 12.4 -2.4
GO03                               IAML           12 02 14.4
      comp=E,10µm,0.2s
AC01  Pan de Azucar      1.25  29⇑iP      Pb      12 02 03.7 +0.3
AC01                             i S      Sn      12 02 20.7 -0.3
AC01                               IAML           12 02 28.3
      comp=N,1µm,0.4s
AC05  El Transito        1.82 151⇑iP      Pn      12 02 12.5 +0.9
AC05                             i S      Sn      12 02 34.4 -0.9
AC05                               IAML           12 02 38.5
      comp=E,1µm,0.4s
AC02  Maricunga          1.96  79⇑iP      Pg      12 02 16.5 -0.3
AC02                             i S      Sg      12 02 43.0 +0.8
AC02                               IAML           12 02 49.0
      comp=E,2µm,0.3s
GO02  Mina Guanaco       2.57  37 eP      Pn      12 02 23.0 +1.0
GO02                               IAML           12 03 08.9
      comp=E,617nm,0.5s
CO01  Juntas del Tor     2.92 159 eP      Pn      12 02 28.1 +1.3
CO01                             i S      Sn      12 03 02.7 +0.2
CO01                               IAML           12 03 15.3
      comp=N,342nm,0.4s
GO04  Tololo Observa     2.95 172 eP      Pn      12 02 27.4 +0.1
GO04                             i S      Sn      12 03 05.4 +2.0
CO03  El Pedregal        3.62 172 eP      Pn      12 02 36.5 +0.2
CO03                             i S      Sn      12 03 18.3 -1.4
CO02  Combarbal          3.95 177 eP      Pn      12 02 40.2 -0.8
PB15  IPOC Station P     4.34  23 eP      Pn      12 02 47.6 +1.3
PB05  IPOC Station P     4.48  13⇑iP      Pn      12 02 46.9 -1.3
PB06  IPOC Station P     4.78  19 eP      Pn      12 02 51.8 -0.5
PB04  IPOC Station P     4.99  12 eP      Pn      12 02 53.4 -1.9
LVC   Limon Verde        5.09  26  Pn     Pn      12 02 57.8 +1.0
      comp=N,3.0nm,0.3s,baz=200,slow=9.0,SNR=19
LVC                                Sn     Sn      12 03 57.3 +1.0
      comp=N,7.7nm,0.3s,baz=212,slow=15,SNR=3.3
LVC                                Lg     Lg      12 04 17.8
      comp=N,9.0nm,0.3s,baz=357,slow=9.6,SNR=8.2
H03N1 Juan Fernandez     9.03 225  Pn     Pn      12 03 47.5 -2.8
      baz=109,slow=16,SNR=18
H03N1                              T      T       12 13 21.2
      baz=53,slow=71,SNR=162
H03N2 Juan Fernandez     9.05 225  Pn     Pn      12 03 47.4 -3.1
      baz=109,slow=16,SNR=8.8
H03N2                              T      T       12 13 16.6
      baz=53,slow=71,SNR=177
H03N3 Juan Fernandez     9.05 225  Pn     Pn      12 03 47.3 -3.3
      baz=109,slow=16,SNR=29
H03N3                              T      T       12 13 17.0
      baz=53,slow=71,SNR=172
H03S3 Juan Fernandez     9.29 223  Pn     Pn      12 03 50.1 -3.7
      baz=181,slow=74,SNR=7.2
H03S1 Juan Fernandez     9.30 223  Pn     Pn      12 03 50.3 -3.6
      baz=181,slow=74,SNR=7.4
H03S2 Juan Fernandez     9.31 223  Pn     Pn      12 03 50.6 -3.5
      baz=181,slow=74,SNR=10
LPAZ  La Paz            11.29  16  Pn     Pn      12 04 21.4 -0.7
      comp=N,0.3nm,0.3s,baz=215,slow=4.0,SNR=2.7
LPAZ                               LR     LR      12 09 25.2
      comp=N,104nm,18.1s,baz=198,slow=41
CPUP  Villa Florida     12.50  89  LR     LR      12 09 57.6
      comp=N,184nm,19.1s,baz=238,slow=41
PLCA  Paso Flores       13.47 178  LR     LR      12 09 55.2
      comp=N,145nm,20.1s,baz=2.0,slow=37
BDFB  Brasilia          24.49  67  LR     LR      12 17 49.4
      comp=N,212nm,18.6s,baz=269,slow=40
RPN   Rapa Nui          33.77 261  LR     LR      12 18 19.2
      comp=N,111nm,19.1s,baz=103,slow=29
TORD  Torodi Ar. Bea    81.31  70  P      P       12 13 57.2 -0.4
      comp=N,2.2nm,0.8s,baz=261,slow=3.7,SNR=7.7
ZALV  Zalesovo Beam    148.04  27  PKPbc  PKPbc   12 21 26.6 +0.7
      comp=N,4.5nm,0.8s,baz=316,slow=4.0,SNR=18
MKAR  Makanchi Array   151.48  40  PKPbc  PKPbc   12 21 34.9 +0.3
      comp=N,2.2nm,0.8s,baz=330,slow=1.9,SNR=18
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*IDC **28** 12:07:34.0±1.7, 34.°09N×142.°38E, h0km, mb3.6/4, mb1 3.8/7, mb1mx3.5/34, mbtmp3.7/7, ML3.9/2, MS2.8/3, Ms1 2.8/3, ms1mx2.4/50, Error ellipse: s-maj=42.3km s-min=21.4km az=72.0*

*JMA **28** 12:07:36.7±0.5, 34.°06N×142.°27E, h56km, M3.5*

ISC 28 12:07:39.2±1.3**, 34.°09N**±0.°06×**142.°2E**±0.°1**, h35**km**, n24, σ1.s23**/28**, mb3.6**/4**, Off east coast of Honshu**

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Code  Station Name       Δ°   AZ°   Phase ID            Time     Res
                                  Op      ISC        h  m  s    ISC
BSO1  Boso 1             1.17 299  P      Pn      12 07 57.9 -0.6
BSO1                              eS      Sn      12 08 13.7 +0.7
BSO3  Boso 3             1.58 297  P      Pn      12 08 04.2 -0.2
BSO4  Boso 4             1.79 300  P      Pn      12 08 07.6 +0.1
CHOJ  Chosi              1.96 326  P      Pn      12 08 09.0 -0.8
JKUC  kamogawauchiur     1.98 303  P      Pn      12 08 09.8 -0.3
JMKN  Mikurajimanish     2.19 265  P      Pn      12 08 12.0 -1.1
JMKN                               S      Sn      12 08 37.2 -1.8
JHJ2  Mitsune            2.23 245  P      Pn      12 08 12.9 -0.7
JHJ2                              eS      Sn      12 08 39.6 -0.3
JHJ   Hachijo jima 2     2.25 245  Pn     Pn      12 08 13.0 -0.9
      69nm,0.3s,baz=146,slow=22,SNR=39
JHJ                                Sn     Sn      12 08 38.8 -1.7
      62nm,0.3s,baz=77,slow=23,SNR=16
JIM2  Oshima 3           2.39 286  P      Pn      12 08 14.3 -1.5
JOD2  Odawara 2          2.83 295  P      Pn      12 08 20.7 -1.2
JAG   Ashikaga           3.24 317  P      Pn      12 08 26.9 -0.7
JRY   Ryogami san        3.33 306  P      Pn      12 08 28.3 -0.5
JYN   Shimob             3.33 296  P      Pn      12 08 28.0 -0.8
JFT   Otama              3.74 336  P      Pn      12 08 34.0 -0.5
JFT                                S      Sn      12 09 14.6 -2.7
MJAR  Matsushiro Arr     4.09 308  Pn     Pn      12 08 38.8 -0.4
      0.3nm,0.3s,baz=157,slow=15,SNR=38
MAT   Matsushiro         4.09 308  P      Pn      12 08 39.7 +0.5
MAT                               eS      Sn      12 09 26.3 +0.5
JNS   Sasagawa           4.40 329  P      Pn      12 08 43.5 +0.1
ASAJ  Asahikawa         10.01   2  Pn     Pn      12 09 57.3 -3.1
      1.3nm,0.3s,baz=242,slow=12,SNR=16
ASAJ                               LR     LR      12 15 03.6
      comp=Z,32nm,18.7s,baz=184,slow=45
KLR   Kul'dur           17.00 336  LR     LR      12 16 51.9
      comp=Z,23nm,20.8s,baz=205,slow=33
SONM  Songino Array     30.04 308  P      P       12 13 46.6 +1.7
      0.5nm,0.8s,baz=126,slow=7.4,SNR=2.9
MKAR  Makanchi Array    46.28 305  P      P       12 16 02.3 +1.0
      0.3nm,0.7s,baz=87,slow=11,SNR=2.9
WRA   Warramunga Arr    54.26 189  P      P       12 17 01.7  0.0
      0.7nm,0.5s,baz=6.4,slow=7.6,SNR=18
ASAR  Alice Springs     57.98 189  P      P       12 17 28.7 +0.4
      0.5nm,0.5s,baz=3.7,slow=6.3,SNR=12
ULM   Lac du Bonnet     81.59  33  LR     LR      13 01 22.5
      comp=Z,14nm,18.5s,baz=65,slow=40
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*IDC **28** 12:22:24.2±1.9, 5.°87S×148.°52E, h62km±12km, mb3.6/6, mb1 3.8/8, mb1mx3.5/33, mbtmp3.9/8, MS2.1/1, Ms1 2.1/1, ms1mx2.0/26, Error ellipse: s-maj=51.4km s-min=14.5km az=107.0*

ISC 28 12:22:24.7±0.8**, 5.°9S**±0.°1×**148.°4E**±0.°2**, h65**km**, n11, σ0.s79**/15**, mb3.6**/6**, New Britain region**

```
Code  Station Name       Δ°   AZ°   Phase ID            Time     Res
                                  Op      ISC        h  m  s    ISC
PMG   Port Moresby       3.75 200  P      Pn      12 23 20.0 -0.2
      18nm,0.3s,baz=1.8,slow=4.8,SNR=33
PMG                                S      Sn      12 24 03.2 +0.1
      14nm,0.3s,baz=32,slow=15,SNR=12
PMG                                LR     LR      12 24 33.7
      comp=Z,21nm,18.2s,baz=268,slow=34
PMG   Port Moresby       3.75 200  P      Pn      12 23 19.6 -0.6
RABL  Rabaul             4.06  66  P      Pn      12 23 24.4  0.0
WRA   Warramunga Arr    19.60 223  P      P       12 26 48.2 +0.4
      0.4nm,0.3s,baz=51,slow=11,SNR=22
WRA                                pP     pP      12 27 02.1 +1.2
      0.6nm,0.3s,baz=51,slow=10,SNR=7.0
ASAR  Alice Springs     22.57 217  P      P       12 27 19.7 -0.2
      1.0nm,0.6s,baz=53,slow=8.9,SNR=22
ASAR                               pP     pP      12 27 33.5 +0.4
      0.9nm,0.3s,baz=51,slow=9.3,SNR=5.9
FITZ  Fitzroy Crossi    25.37 239  P      P       12 27 46.9 +0.9
      2.5nm,0.3s,baz=54,slow=9.6,SNR=24
FITZ                               pP     pP      12 28 00.6 -0.9
      4.6nm,0.5s,baz=51,slow=8.5,SNR=5.4
PETK  Petropavlovsk-    59.26   6  P      P       12 32 20.6 +1.2
      15nm,1.3s,baz=142,slow=5.6,SNR=4.7
MKAR  Makanchi Array    78.31 320  P      P       12 34 17.6 -0.3
      0.1nm,0.4s,baz=101,slow=6.7,SNR=2.2
ZALV  Zalesovo Beam     79.66 327  P      P       12 34 24.0 -1.0
      0.5nm,0.5s,baz=126,slow=7.3,SNR=2.4
ILAR  Eielson Array     84.79  23  P      P       12 34 50.8 -0.9
      0.3nm,0.6s,baz=254,slow=5.1,SNR=5.0
TORD  Torodi Ar. Bea   146.44 285  PKPbc  PKPbc   12 41 59.2 -0.3
      0.3nm,0.5s,baz=18,slow=1.8,SNR=2.0
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*BGR **28** 12:27:47.2±0.0, 13.°98N×61.°02W, h33km, mb5.1*

*TRN **28** 12:28:02.5, 15.°39N×61.°20W, h140km, MD4.3*

*IDC **28** 12:28:03.1±0.3, 15.°38N×61.°40W, h132km±2km, mb4.1/28, mb1 4.3/31, mb1mx4.2/40, mbtmp4.5/31, MS3.0/2, Ms1 3.1/2, ms1mx2.8/27, Error ellipse: s-maj=9.5km s-min=4.8km az=83.0*

*NEIC **28** 12:28:03.7±1.2, 15.°36N±0.°05×61.°34W±0.°08, h139km±5km, mb4.6/174, Md4.8(TRN), Error ellipse: s-maj=11.2km s-min=7.2km az=66.0*

ISC 28 12:28:04.0±0.4**, 15.°36N**±0.°02×**61.°31W**±0.°04**, h141**km±3km**, n562, σ0.s85**/607**, mb4.6**/157**, 18C-24D, Leeward Islands**

```
Code  Station Name       Δ°   AZ°   Phase ID            Time     Res
                                  Op      ISC        h  m  s    ISC
DLPL  La Plaine          0.07 114 eP      Pn      12 28 22.8 -0.2
DLPL                              eS      Sn      12 28 37.2 -0.1
DLPL  La Plaine          0.07 114         Pn      12 28 22.7 -0.2
DSLB  Salisbury          0.13 306 eP      Pn      12 28 23.2 +0.1
DSLB                              eS      Sn      12 28 38.0 +0.5
SVN   Savane Anatole     0.53 165 eP      Pn      12 28 24.5  0.0
CXM   Morne La Croix     0.56 166 eP      Pn      12 28 24.8  0.0
TDBA  Terre de Bas,      0.58 327 eP      Pn      12 28 24.9 +0.1
TDBA                              eS      Sn      12 28 40.2 -0.4
PML   Morne Lenard       0.59 168 eP      Pn      12 28 24.6 -0.3
MAGL  Barre de l'ile     0.59   3 eP      Pn      12 28 24.4 -0.4
MAGL                              eS      Sn      12 28 39.7 -0.9
TBG   Guadaloupe-3       0.59 327 eP      Pn      12 28 24.8  0.0
FDF   Fort de France     0.64 166⇓iP      Pn      12 28 25.2  0.0
FDF                               eS      Sn      12 28 41.5 +0.2
FDF   Fort de France     0.64 166  Pn     Pn      12 28 25.3  0.0
FDF                                Sn     Sn      12 28 41.0 -0.3
ILAM  Ilet Lapin Mar     0.72 144⇓iP      Pn      12 28 25.2 -0.4
ILAM                              eS      Sn      12 28 40.9 -1.2
CBE   Ff, Capester       0.76 338 eP      Pn      12 28 25.8 -0.2
CBE                               eS      Sn      12 28 42.5 -0.3
ZAM   Aeronautique       0.83 161 eP      Pn      12 28 25.9 -0.6
LPMF  Morne Lapointe     0.85 157 eP      Pn      12 28 25.8 -0.8
BIM   Bigot              0.87 165⇓iP      Pn      12 28 26.9  0.0
BIM                               eS      Sn      12 28 44.4 +0.1
MVM   Montagne Vaucl     0.89 153 eP      Pn      12 28 26.6 -0.5
H05N1 Guadeloupe/Mar     0.98  14  P      Pn      12 28 26.9 -0.8
H05N1                              S      Sn      12 28 43.9 -2.0
MPOM  Morne Pois Mar     1.01 154⇓iP      Pn      12 28 27.6 -0.4
MPOM                              eS      Sn      12 28 45.1 -1.1
H05S1 Guadeloupe/Mar     1.03 154  P      Pn      12 28 27.6 -0.6
H05S1                              S      Sn      12 28 45.4 -1.2
ABD   La Joyeuse, An     1.12 351⇑iP      Pn      12 28 28.6 -0.4
ABD                               eS      Sn      12 28 46.9 -1.2
SLBI  Saint Lucia, B     1.37 166⇓iP      Pn      12 28 31.0 -0.4
SLBI                              eS      Sn      12 28 51.3 -1.2
SLCP  Castries, St.      1.38 167 eP      Pn      12 28 31.4 -0.2
SLCP                              eS      Sn      12 28 52.0 -0.6
SLW   Petit Monier       1.38 165⇓iP      Pn      12 28 31.3 -0.4
SLW                               eS      Sn      12 28 52.0 -0.8
SLPA  Patience           1.54 166 eP      Pn      12 28 33.4  0.0
SLPA                              eS      Sn      12 28 55.8  0.0
SLB   Belfond            1.54 170⇑iP      Pn      12 28 34.2 +0.8
SLDE  Delcer             1.57 171 eP      Pn      12 28 33.6 -0.1
SLDE                              eS      Sn      12 28 56.1 -0.2
MLYT  Lee's Yard         1.60 328⇑iP      Pn      12 28 34.0  0.0
MLYT                              eS      Sn      12 28 57.6 +0.6
MCLT  Moule a Chique     1.68 168 eP      Pn      12 28 35.0 +0.1
MCLT                              eS      Sn      12 28 57.5 -1.0
MCLT  Moule a Chique     1.68 168  Pn     Pn      12 28 34.9 +0.1
MCLT                               Sn     Sn      12 28 58.4 -0.1
ANBD  Bethesda, Anti     1.74 345 eP      Pn      12 28 34.6 -0.9
ANBD                              eS      Sn      12 28 58.2 -1.4
BPA   Boggy Peak         1.76 343⇑iP      Pn      12 28 34.9 -0.9
BPA                               eS      Sn      12 28 57.8 -2.4
SVB   Belmont            2.08 178⇓iP      Pn      12 28 39.7 +0.2
SVB                               eS      Sn      12 29 06.7 -0.2
SVB   Belmont            2.08 178         Pn      12 28 39.7 +0.2
SVOC  Richmond Hill,     2.19 178 eP      Pn      12 28 40.9 -0.1
SVOC                              eS      Sn      12 29 08.4 -0.9
ANWB  Willy Bob          2.34 349 eP      Pn      12 28 41.1 -1.6
ANWB                              eS      Sn      12 29 09.4 -3.1
ANWB  Willy Bob          2.34 349  Pn     Pn      12 28 41.1 -1.6
ANWB                               Sn     Sn      12 29 09.4 -3.1
SKOC  St. Kitts, UWI     2.36 325 eP      Pn      12 28 43.1 +0.2
SKOC                              eS      Sn      12 29 13.2 +0.3
SKI   Saint Kitts        2.40 325⇑iP      Pn      12 28 43.3 -0.1
SKI                               eS      Sn      12 29 14.4 +0.7
SKI   Saint Kitts        2.40 325         Pn      12 28 43.2 -0.1
SEUS  St. Eustatius      2.66 323 eP      Pn      12 28 46.5 -0.2
SEUS                              eS      Sn      12 29 20.4 +0.8
SEUS  St. Eustatius      2.66 323         Pn      12 28 46.5 -0.2
BBGH  Gun Hill           2.78 142 eP      Pn      12 28 49.0 +0.7
BBGH                              eS      Sn      12 29 20.6 -1.8
BBGH  Gun Hill           2.78 142         Pn      12 28 49.0 +0.7
GCMP  Grenada, Carri     2.86 182⇓iP      Pn      12 28 49.1 -0.1
GCMP                              eS      Sn      12 29 22.9 -1.3
BBSP  Saint Philip       2.87 141 eP      Pn      12 28 50.3 +0.9
BBSP                              eS      Sn      12 29 22.4 -2.0
GRGR  Grenville          3.23 186⇓iP      Pn      12 28 54.1 +0.2
GRGR                              eS      Sn      12 29 31.7 -0.9
GRGR  Grenville          3.23 186  Pn     Pn      12 28 54.0 +0.1
CDVI  St. Croix          4.08 306 eP      Pn      12 29 04.7 -0.4
CDVI  St. Croix          4.08 306  Pn     Pn      12 29 04.5 -0.5
TOSP  Speyside           4.11 169 eP      Pn      12 29 05.8 +0.3
TOSP                              eS      Sn      12 29 50.2 -3.0
TOSP  Speyside           4.11 169         Pn      12 29 05.4 -0.1
TRN   Trinidad (W)       4.68 181 eP      Pn      12 29 13.8 +0.7
TRN   Trinidad (W)       4.68 181 eS      Sn      12 30 04.4 -2.5
CUPR  Culebra, Puert     4.80 308  Pn     Pn      12 29 14.1 -0.6
MTP   Monte Pirata       4.89 304  Pn     Pn      12 29 15.5 -0.4
HUMP  Col San Antoni     5.16 303         Pn      12 29 18.9 -0.4
CBYP  Canovanas          5.23 304         Pn      12 29 20.1 -0.3
PDPR  Patillas Dam,      5.23 301         Pn      12 29 19.4 -1.0
SJG   San Juan           5.38 301  P      Pn      12 29 22.0 -0.4
      20nm,0.3s,baz=96,slow=11,SNR=40
SJG                                S      Sn      12 30 27.3 +3.7
      20nm,0.3s,baz=312,slow=21,SNR=2.1
SJG   San Juan           5.38 301 eP      Pn      12 29 22.2 -0.2
SJG   San Juan           5.38 301         Pn      12 29 21.7 -0.7
GCPR  Guaynabo City      5.43 303         Pn      12 29 22.8 -0.2
ICMP  Isla Caja de M     5.60 297  Pn     Pn      12 29 24.1 -1.2
OBIP  Obispado Ponce     5.74 298         Pn      12 29 25.2 -1.9
EMPR  Esperanza - Ma     5.88 303         Pn      12 29 29.5 +0.5
AOPR  Arecibo Observ     6.00 300 eP      Pn      12 29 30.6  0.0
AOPR  Arecibo Observ     6.00 300 eS      Sn      12 30 37.0 -1.3
AOPR  Arecibo Observ     6.00 300  Pn     Pn      12 29 30.7  0.0
PLCV  Puerto La Cruz     6.08 212         Pn      12 29 31.9 +0.2
MLPR  Magueyes Islan     6.08 296  Pn     Pn      12 29 31.1 -0.6
PCRV  Puerto La Cruz     6.09 213  P      Pn      12 29 31.9  0.0
      8.7nm,0.3s,baz=357,slow=5.6,SNR=27
MPR   Mayaguez           6.26 298         Pn      12 29 34.0 -0.1
AGPR  Aguadilla, PR      6.36 300         Pn      12 29 35.5 +0.1
DR12  Loma Pena Alta     8.44 295         Pn      12 30 02.7 -0.7
SC01  Santiago de lo     9.86 296         Pn      12 30 20.7 -1.6
SDDR  Presa de Saban    10.20 292 eP      Pn      12 30 26.7 -0.2
SDDR  Presa de Saban    10.20 292         Pn      12 30 26.4 -0.5
JAKH  Jacmel            11.11 286  Pn     Pn      12 30 38.0 -0.9
SDV   Santo Domingo     11.15 236  P      Pn      12 30 40.8 +1.1
      1.2nm,0.3s,baz=72,slow=9.8,SNR=8.2
SDV                                LR     LR      12 35 20.3
      comp=Z,84nm,19.1s,baz=62,slow=39
SDV   Santo Domingo     11.15 236         Pn      12 30 41.1 +1.4
SDV   Santo Domingo     11.15 236 eP      Pn      12 30 36.0 -3.8
LGNH  Logne             11.26 288         Pn      12 30 40.1 -0.8
BOAV  Boa Vista         12.90 176 eP      Pn      12 31 00.5 -2.0
PTGA  Pitinga           16.04 175  P      Pn      12 31 41.6 -0.2
      3.8nm,0.3s,baz=354,slow=16,SNR=38
PTGA  Pitinga           16.04 175         Pn      12 31 41.3 -0.5
PTGA                               IAmb   IAmb    12 31 43.7
      comp=Z,34nm,0.7s
PTGA  Pitinga           16.04 175 eP      Pn      12 31 41.5 -0.4
ROSC  El Rosal          16.52 232  P      P       12 31 50.0 +1.7
      comp=Z,4.4nm,0.3s,baz=85,slow=1.9,SNR=6.3
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ROSC	El Rosal	16.52	232		Pn	12 31 47.0	-1.1
BBSR	BB Station	17.21	350	P	Pn	12 31 55.6	-0.3
MCPB	Macapa, AP	18.10	149	*e*P	P	12 32 05.1	0.0
MACA	Manacapuru-AM	18.41	178	*e*P	Pn	12 32 10.0	-0.3
MALB	Monte Alegre	18.47	157	*e*P	P	12 32 09.8	+0.7
ITTB	Itaituba	20.36	164	*e*P	P	12 32 30.6	+0.9
061Z	Ochoppi	21.09	303	P	P	12 32 36.3	-1.0
060A	Indiantown	21.19	306	P	P	12 32 37.5	-1.0
TMAB	Tom-Au,PA,Br	21.94	142	*e*P	P	12 32 48.3	+1.9
OTAV	Otavalo	22.64	230	P	P	12 32 52.3	-1.6
OTAV	Otavalo	22.64	230	*e*P	P	12 32 53.7	-0.2
NPGB	Novo Progresso	23.03	165	*e*P	P	12 32 57.8	+0.7
ACON	Acoyapa	23.43	265	P	P	12 32 58.1	-2.6
ACON				IAmb	IAmb	12 33 02.4	
	comp=Z,22nm,1.0s						
JTS	Las Juntas de	23.59	260	P	P	12 33 01.9	-0.4
	comp=Z,8.4nm,0.7s,baz=110,slow=16,SNR=4.0						
BOAB	BOACO BROADBAN	23.82	266	P	P	12 33 03.6	-0.7
MATN	Matagalpa	23.99	267	P	P	12 33 06.3	+0.4
SAML	Samuel	24.22	185	P	P	12 33 07.9	0.0
SAML				IAmb	IAmb	12 33 08.8	
	comp=Z,15nm,0.8s						
SAML	Samuel	24.22	185	*e*P	P	12 33 07.9	0.0
PRPB	Parauapebas	24.23	151	*e*P	P	12 33 09.9	+1.9
ROSB	Rosrio	24.87	135	*e*P	P	12 33 15.5	+1.7
TGUH	Tegucigalpa,Un	25.14	270	P	P	12 33 17.2	+0.8
TGUH				IAmb	IAmb	12 33 25.0	
	comp=Z,30nm,1.1s						
ETMB	Extrema	25.48	191	*e*P	P	12 33 19.9	+0.6
CZSB	Cruzeiro do Su	25.57	207	*e*P	P	12 33 20.6	+0.5
BIRD	Birdtown, Kers	25.80	322	P	P	12 33 21.7	-0.3
BIRD				IAmb	IAmb	12 33 24.6	
	comp=Z,12nm,1.0s						
CLDB	Colider	26.63	168	*e*P	P	12 33 30.8	+1.1
PETF	Flores	27.47	277	P	P	12 33 37.3	+0.2
SMTB	Santa Maria do	27.64	150	*e*P	P	12 33 39.9	+1.2
NBPS	Pedro II - PI	27.79	133	*e*P	P	12 33 42.4	+2.2
ATAH	Atahualpa	28.04	218	P	P	12 33 42.9	+0.2
	comp=Z,8.1nm,0.9s,baz=15,slow=7.3,SNR=6.4						
L61A	Hillsdale 1, H	28.75	341	P	P	12 33 48.6	+0.4
	baz=155						
M59A	Waymart	28.81	338	P	P	12 33 49.1	+0.3
	baz=151						
SNDB	Serra Nova Dou	28.91	159	*e*P	P	12 33 51.0	+1.0
K61A	Williamstown	29.09	342	P	P	12 33 51.9	+0.6
	baz=156						
M57A	Sunshine Farm,	29.29	335	P	P	12 33 54.4	+1.3
	baz=148						
BINY	Binghamton	29.59	338	P	P	12 33 56.2	+0.5
	baz=150						
L57A	Andrews Acres	29.74	336	P	P	12 33 57.4	+0.3
	baz=149						
X48A	Hartselle	29.96	314	P	P	12 33 57.4	-1.6
X48A				IAmb	IAmb	12 34 02.0	
	comp=Z,8.1nm,0.9s						
L56A	Greenwood	30.14	336	P	P	12 34 01.0	+0.4
	baz=148						
LBNH	Lisbon	30.17	345	P	P	12 34 01.5	+0.7
	baz=160						
I60A	Shoreham	30.17	343	P	P	12 34 01.5	+0.7
	baz=157						
H61A	Lyndonville	30.44	345	P	P	12 34 04.4	+1.1
	baz=160						
G64A	Maxfield	30.45	350	P	P	12 34 04.4	+1.1
	baz=166						
G63A	Kingsbury	30.48	348	P	P	12 34 04.5	+0.9
	baz=164						
I58A	Old Forge	30.55	340	P	P	12 34 05.2	+1.0
	baz=154						
PKME	Peaks-Kenny Pk	30.56	349	P	P	12 34 05.4	+1.2
	baz=165						
G62A	West of Eustis	30.77	347	P	P	12 34 07.3	+1.2
	baz=163						
WVNY	West Valley, N	30.79	335	P	P	12 34 06.8	+0.5
WVNY				IAmb	IAmb	12 34 07.8	
	comp=Z,23nm,1.2s						
F63A	Nahmakanta, Br	30.95	349	P	P	12 34 08.5	+0.9
	baz=165						
PLAL	Pickwick Lake	30.96	314	P	P	12 34 08.5	+0.6
PLAL				IAmb	IAmb	12 34 10.9	
	comp=Z,12nm,0.7s						
F64A	Sherman	30.98	350	P	P	12 34 08.9	+1.1
	baz=167						
F64A	Sherman	30.98	350	P	P	12 34 08.8	+1.0
F64A				IAmb	IAmb	12 34 09.5	
	comp=Z,24nm,1.4s						
G61A	St-Isidore-de-	31.05	346	P	P	12 34 09.4	+0.9
	baz=161						
G60A	Masonville	31.07	345	P	P	12 34 09.7	+0.9
	baz=159						
MOQ	Mont Orford	31.25	345	P	P	12 34 12.3	+1.9
H57A	Richville	31.37	340	P	P	12 34 11.9	+0.6
	baz=153						
WVT	Waverly	31.42	316	P	P	12 34 11.9	-0.1
	baz=124						
WVT	Waverly	31.42	316	P	P	12 34 11.8	-0.1
E64A	Bridgewater	31.44	351	P	P	12 34 12.7	+0.8
	baz=168						
P49A	Miami Univ. Ec	31.62	324	P	P	12 34 14.2	+0.6
	baz=133						
OXF	Oxford	31.66	312	P	P	12 34 15.8	+1.8
	baz=120,SNR=5.2						
OXF	Oxford	31.66	312	P	P	12 34 15.1	+1.1
E61A	Lac Etchemin	31.92	348	P	P	12 34 17.3	+1.2
	baz=163,SNR=5.7						
P48A	Milroy	31.98	323	P	P	12 34 16.6	-0.2
P48A				IAmb	IAmb	12 34 26.2	
	comp=Z,5.3nm,0.7s						
E60A	Ste Agathe de	32.06	347	P	P	12 34 18.7	+1.4
	baz=162						
BATG	Bathurst New B	32.07	354	P	P	12 34 17.8	+0.4
BATG				IAmb	IAmb	12 34 18.8	
	comp=Z,9.0nm,0.8s						
D63A	Stockholm	32.09	351	P	P	12 34 18.7	+1.1
	baz=168,SNR=5.2						
LPAZ	La Paz	32.16	192	P	P	12 34 18.7	-0.5
	comp=Z,0.8nm,0.7s,baz=326,slow=1.2,SNR=3.9						
LPAZ				pP	pP	12 34 47.9	-0.7
	comp=Z,3.7nm,0.9s,baz=1.3,slow=11,SNR=8.5						
LPAZ				LR	LR	12 49 18.1	
	comp=Z,27nm,18.7s,baz=306,slow=40						
143A	Socs Landing,	32.30	308	P	P	12 34 18.6	-1.0
D60A	Saint Jean D'O	32.47	348	P	P	12 34 21.8	+0.9
	baz=163,SNR=6.5						
E58A	La Victoria	32.50	345	P	P	12 34 21.8	+0.6
	baz=158						
H53A	Bobcaygeon	32.59	337	P	P	12 34 22.3	+0.2
	baz=148,SNR=5.8						
TRQ	Mont Tremblant	32.71	343	P	P	12 34 23.4	+0.3
NBLI	Livramento-PB	33.05	131	*e*P	P	12 34 28.0	+1.5
N47A	Urbana	33.09	325	P	P	12 34 26.9	+0.5
N47A				IAmb	IAmb	12 34 27.4	
	comp=Z,13nm,0.8s						
G54A	Lake Saint Pet	33.12	338	P	P	12 34 26.8	+0.2
	baz=150						
E56A	St. Veronique	33.14	343	P	P	12 34 27.2	+0.4
	baz=155						
LATQ	La Tuque	33.32	346	P	P	12 34 29.1	+0.8
	baz=160						
BDFB	Brasilia	33.48	156	P	P	12 34 29.9	-0.3
	comp=Z,4.5nm,0.9s,baz=312,slow=11,SNR=3.7						
D56A	ZEC Mazanza, M	33.52	343	P	P	12 34 30.4	+0.3
	baz=156						
ALGO	Algonquin Park	33.58	339	P	P	12 34 30.6	-0.1
	baz=150						
D55A	Sainte-Anne-du	33.70	342	P	P	12 34 32.2	+0.6
	baz=155						
DRLN	Deer Lake	33.95	4	P	P	12 34 33.7	0.0
W41B	Gary Mavity, V	34.02	311	P	P	12 34 36.5	+1.9
	baz=118,SNR=6.4						
WHAR	Wooly Hollow	34.10	311	P	P	12 34 35.7	+0.4
WHAR				IAmb	IAmb	12 34 37.5	
	comp=Z,7.4nm,0.8s						
T42A	Van Buren	34.12	315	P	P	12 34 35.0	-0.4
X40A	Basin Creek Fa	34.14	310	P	P	12 34 37.6	+2.0
	baz=116,SNR=8.7						
X40A	Basin Creek Fa	34.14	310	P	P	12 34 36.1	+0.5
X40A				IAmb	IAmb	12 34 38.4	
	comp=Z,10nm,0.7s						
O44A	Mansfield	34.21	322	P	P	12 34 36.5	+0.4
FCAR	Ozark Folk Cen	34.27	312	P	P	12 34 36.8	+0.1
FCAR				IAmb	IAmb	12 34 39.1	
	comp=Z,8.7nm,0.6s						
P43A	Skaggs, Pawnee	34.54	320	P	P	12 34 38.8	-0.2
MIAR	Mount Ida	34.72	309	P	P	12 34 42.2	+1.6
	baz=115						
MIAR	Mount Ida	34.72	309	P	P	12 34 40.0	-0.6
MIAR				IAmb	IAmb	12 34 42.6	
	comp=Z,6.9nm,0.9s						
CCM	Cathedral Cave	34.76	316	P	P	12 34 41.0	0.0
	baz=123						
CCM	Cathedral Cave	34.76	316	P	P	12 34 40.9	0.0
CCM				IAmb	IAmb	12 34 43.3	
	comp=Z,5.7nm,0.8s						
HDIL	Hopedale	34.96	321	P	P	12 34 43.5	+0.9
HDIL				IAmb	IAmb	12 34 52.1	
	comp=Z,7.8nm,0.6s						
MGMO	Mountain Grove	34.99	314	P	P	12 34 43.0	+0.1
MGMO				IAmb	IAmb	12 34 46.0	
	comp=Z,8.9nm,0.7s						
U40A	Yellville	35.01	313	P	P	12 34 43.6	+0.5
	baz=119						
U40A	Yellville	35.01	313	P	P	12 34 43.5	+0.4
U40A				IAmb	IAmb	12 34 45.5	
	comp=Z,9.0nm,1.1s						
W39A	Magazine	35.16	310	P	P	12 34 46.5	+2.1
	baz=116						
VLDQ	Val d'Or	35.27	341	P	P	12 34 46.6	+1.5
VLDQ				IAmb	IAmb	12 34 46.7	
	comp=Z,5.8nm,0.7s						
GLMI	Grayling	35.37	331	P	P	12 34 46.2	+0.1
	baz=139						
GLMI	Grayling	35.37	331	P	P	12 34 46.6	+0.6
IPMB	Ipameri, GO	35.56	158	*e*P	P	12 34 49.0	+1.0
HHAR	Hobbs	35.75	312	P	P	12 34 49.5	0.0
HHAR				IAmb	IAmb	12 34 51.5	
	comp=Z,6.0nm,0.7s						
TLIG	Tlapa	35.76	279	P	P	12 34 50.8	+0.9
TLIG				IAmb	IAmb	12 34 54.2	
	comp=Z,8.2nm,0.8s						
LSQQ	Lebel-sur-Quev	35.98	342	P	P	12 34 51.4	+0.3
	baz=154						
S39A	Bolivar	35.98	314	P	P	12 34 51.0	-0.4
S39A				IAmb	IAmb	12 34 53.2	
	comp=Z,6.8nm,0.8s						
N41A	Harden Midland	36.00	320	P	P	12 34 51.5	0.0
N41A				IAmb	IAmb	12 34 52.0	
	comp=Z,12nm,0.9s						
L42A	Oliver, Polo	36.08	323	P	P	12 34 51.8	-0.3
L42A				IAmb	IAmb	12 34 53.5	
	comp=Z,9.7nm,0.8s						
X37A	Clayton	36.09	308	P	P	12 34 52.0	-0.3
X37A				IAmb	IAmb	12 35 08.3	
	comp=Z,10nm,1.2s						
PB08	IPOC Station P	36.11	193	P	P	12 34 50.9	-2.1
U38A	Gravette	36.14	312	P	P	12 34 51.7	-1.1
E46A	Sault Ste Mari	36.40	333	P	P	12 34 54.9	+0.1
E46A				IAmb	IAmb	12 34 56.1	
	comp=Z,10nm,1.1s						
435B	Jarrell	36.55	301	P	P	12 34 57.0	+0.8
	baz=107						
435B	Jarrell	36.55	301	P	P	12 34 55.6	-0.6
435B				IAmb	IAmb	12 34 58.0	
	comp=Z,15nm,1.3s						
H43A	Windswept, Lux	36.67	328	P	P	12 34 57.1	0.0
H43A				IAmb	IAmb	12 34 58.2	
	comp=Z,12nm,0.8s						
MATQ	Matagami	36.80	342	P	P	12 34 58.2	+0.1
	baz=153,SNR=11						
WHTX	Lake Whitney,	36.80	303	P	P	12 34 59.7	+1.3
	baz=108						
TUL1	Leonard	36.94	310	P	P	12 35 00.4	+0.9
	baz=115,SNR=8.9						
TUL1	Leonard	36.94	310	P	P	12 34 59.2	-0.3
JFWS	Jewell Farm	36.98	324	P	P	12 35 00.1	+0.3
	baz=129						
JFWS	Jewell Farm	36.98	324	P	P	12 34 59.9	+0.1
L40A	Anamosa	37.02	322	P	P	12 34 59.3	-0.8
L40A				IAmb	IAmb	12 35 00.9	
	comp=Z,6.3nm,0.8s						
Z35A	Perchaven, San	37.08	305	P	P	12 35 01.0	+0.3
Z35A				IAmb	IAmb	12 35 02.9	
	comp=Z,17nm,1.1s						
P38A	Dawn	37.10	317	P	P	12 35 00.4	-0.5
P38A				IAmb	IAmb	12 35 02.9	
	comp=Z,6.3nm,0.6s						
E43A	Lone Tree Farm	37.64	331	P	P	12 35 04.7	-0.6
QUOK	Quay	37.72	310	P	P	12 35 04.2	-1.9
QUOK				IAmb	IAmb	12 35 08.4	
	comp=Z,14nm,1.1s						
OK031	S. Brethren Rd	37.73	310	P	P	12 35 06.1	-0.1
I40A	Norwalk	37.81	325	P	P	12 35 06.9	+0.1
I40A				IAmb	IAmb	12 35 07.5	
	comp=Z,7.6nm,0.9s						
T35A	Sooner Cattle	37.89	311	P	P	12 35 07.3	-0.2
T35A				IAmb	IAmb	12 35 09.7	
	comp=Z,13nm,1.1s						
OK025	Westminster Rd	37.96	309	P	P	12 35 08.0	-0.1
OK025				IAmb	IAmb	12 35 09.5	
	comp=Z,11nm,0.6s						
BCOK	Bluff Creek, N	38.19	309	P	P	12 35 09.6	-0.5
JCT	Junction City	38.31	300	P	P	12 35 10.5	-0.7
	baz=104,SNR=8.0						
JCT	Junction City	38.31	300	P	P	12 35 10.2	-0.9
LVC	Limon Verde	38.46	191	P	P	12 35 10.3	-2.5
	comp=Z,2.5nm,0.6s,baz=16,slow=14,SNR=3.1						
G40A	Rib Lake	38.48	327	P	P	12 35 12.1	-0.2
COWI	Conover	38.49	329	P	P	12 35 12.1	-0.4
WMOK	Wichita Mounta	38.75	307	P	P	12 35 14.2	-0.6
	baz=110,SNR=7.2						
WMOK	Wichita Mounta	38.75	307	P	P	12 35 14.0	-0.8
ABTX	Abilene, Hawle	38.76	303	P	P	12 35 14.3	-0.6
	baz=107,SNR=11						
ABTX	Abilene, Hawle	38.76	303	P	P	12 35 13.4	-1.4
ABTX				IAmb	IAmb	12 35 16.2	
	comp=Z,14nm,0.8s						
CROK	Carrier	38.80	310	P	P	12 35 15.3	+0.2
D41A	Chassel	38.88	330	P	P	12 35 15.5	-0.2
D41A				IAmb	IAmb	12 35 17.1	
	comp=Z,9.8nm,0.8s						
KAN01	Argonia South	38.90	311	P	P	12 35 16.7	+0.8
KAN01				IAmb	IAmb	12 35 27.0	
	comp=Z,8.7nm,0.6s						
KSU1	Kansas State U	38.92	314	P	P	12 35 16.8	+0.7
	baz=118						
KSU1	Kansas State U	38.92	314	P	P	12 35 14.9	-1.2
KSU1				IAmb	IAmb	12 35 17.8	
	comp=Z,8.4nm,0.6s						
N35A	Tabor	39.12	317	P	P	12 35 17.8	0.0
N35A				IAmb	IAmb	12 35 19.6	
	comp=Z,8.0nm,0.8s						
U32A	Winter Ranch,	39.51	309	P	P	12 35 22.1	+1.0
U32A				IAmb	IAmb	12 35 23.0	
	comp=Z,12nm,0.8s						
SPMN	Marine on St.	39.86	325	P	P	12 35 21.1	-2.8
	baz=128,SNR=5.8						
L34A	Svendsen Farm,	40.16	318	P	P	12 35 25.9	-0.5
L34A				IAmb	IAmb	12 35 31.0	
	comp=Z,14nm,0.8s						
F36A	Milaca	40.65	325	P	P	12 35 30.2	-0.2
EYMN	Ely	40.93	329	P	P	12 35 32.4	-0.1
	baz=132						
CBKS	Cedar Bluff	41.00	312	P	P	12 35 33.2	-0.1
CBKS				IAmb	IAmb	12 35 44.4	
	comp=Z,15nm,1.1s						
BGNE	Belgrade	41.04	317	P	P	12 35 33.7	+0.1
AMTX	Amarillo	41.05	306	P	P	12 35 34.0	+0.2
	baz=108						
AMTX	Amarillo	41.05	306	P	P	12 35 34.1	+0.2
ECSD	EROS Data Cent	41.23	321	P	P	12 35 35.0	-0.1
	baz=122						
ECSD	EROS Data Cent	41.23	321	P	P	12 35 35.0	-0.1
TX31	Lajitas Ar. Si	41.34	297	P	P	12 35 36.1	-0.2
TX31				IAmb	IAmb	12 35 48.8	
	comp=Z,21nm,1.4s						
TX32	Lajitas Array	41.34	297	P	P	12 35 36.1	-0.2
TXAR	Lajitas Array	41.34	297	P	P	12 35 33.9	-2.4
	comp=Z,0.8nm,0.6s,baz=119,slow=7.8,SNR=25						
TXAR				PcP	PcP	12 37 33.0	+0.8
	comp=Z,1.1nm,0.7s,baz=123,slow=6.8,SNR=6.0						
TXAR				ScP	ScP	12 41 08.0	-1.2
	comp=Z,0.4nm,0.9s,baz=142,slow=6.3,SNR=4.3						
TXAR	Lajitas Array	41.34	297	P	P	12 35 35.8	-0.6
CPUP	Villa Florida	41.62	175	P	P	12 35 37.2	-1.1
	comp=Z,3.6nm,0.7s,baz=358,slow=8.6,SNR=7.6						
CPUP	Villa Florida	41.62	175	IAmb	IAmb	12 35 39.1	
	comp=Z,4.1nm,0.8s						
MSTX	Muleshoe	41.65	304	P	P	12 35 38.3	-0.4
	baz=106,SNR=16						
MSTX	Muleshoe	41.65	304	P	P	12 35 38.4	-0.4
K31A	O'Neill	42.02	318	P	P	12 35 41.3	-0.3
B35A	Bob, Littlefor	42.33	328	P	P	12 35 43.3	-0.7
B35A				IAmb	IAmb	12 35 44.2	
	comp=Z,6.7nm,0.8s						
GDL2	Guadalupe Moun	42.50	301	P	P	12 35 45.6	-0.2
HPIG		42.74	293	P	P	12 35 47.8	0.0
HPIG				IAmb	IAmb	12 35 49.4	
	comp=Z,7.4nm,0.8s						
SUSD	Miller	43.04	320	P	P	12 35 49.5	-0.3
MNTX	Cornudas Mount	43.24	300	P	P	12 35 51.5	-0.1
	baz=102,SNR=11						
MNTX	Cornudas Mount	43.24	300	P	P	12 35 51.4	-0.2
AGMN	Agassiz Nation	43.41	327	P	P	12 35 51.9	-0.7
	baz=127						
AGMN	Agassiz Nation	43.41	327	P	P	12 35 51.9	-0.7
AGMN				IAmb	IAmb	12 35 52.6	
	comp=Z,9.6nm,0.8s						
T25A	Trinidad	43.85	308	P	P	12 35 55.4	-1.2
	baz=108						
ULM	Lac du Bonnet	44.62	329	P	P	12 36 01.1	-1.1
	comp=Z,3.5nm,0.4s,baz=126,slow=8.4,SNR=16						
ULM				pP	pP	12 36 32.1	-1.6
	comp=Z,2.7nm,0.5s,baz=129,slow=8.4,SNR=4.9						
ULM	Lac du Bonnet	44.62	329	P	P	12 36 01.2	-1.1
ULM				IAmb	IAmb	12 36 01.9	
	comp=Z,5.8nm,0.7s						
AC05	El Transito	44.78	191	P	P	12 36 02.6	-1.3
BNM	Barren Site	44.79	303	P	P	12 36 03.4	-0.8
ANMO	Albuquerque	44.84	304	ScP	ScP	12 41 22.9	-0.4
	comp=Z,0.3nm,0.2s,baz=133,slow=4.3,SNR=4.4						
ANMO	Albuquerque	44.84	304	P	P	12 36 05.0	+0.5
	baz=104						
ANMO	Albuquerque	44.84	304	P	P	12 36 05.8	+1.3
SDCO	Great Sand Dun	44.86	308	P	P	12 36 04.4	-0.3
	baz=108,SNR=5.4						
SDCO	Great Sand Dun	44.86	308	P	P	12 36 04.5	-0.3
121A	Cookes Peak, D	45.41	301	P	P	12 36 09.5	+0.5
	baz=101						
CO01	Juntas del Tor	45.86	191		P	12 36 11.9	-0.6
S22A	4UR Ranch, Cre	45.87	308	P	P	12 36 12.9	+0.2
	baz=107						
N23A	Red Feather La	46.20	312	P	P	12 36 16.2	+0.9
	baz=110						
CO03	El Pedregal	46.81	191	P	P	12 36 18.2	-1.5
K22A	Casper	47.23	314	P	P	12 36 24.1	+1.1
	baz=111						
PV01	Paradox Valley	47.30	308	P	P	12 36 24.4	+0.6
W18A	Petrified Fore	47.50	304	P	P	12 36 26.3	+1.0
	baz=102						
TUC	Tucson	47.87	300	P	P	12 36 28.1	+0.1
	baz=99						
DGMT	Dagmar	48.17	323	P	P	12 36 30.3	+0.3
	baz=118						
LAO	LASA Array	48.61	320	P	P	12 36 34.2	+0.8
	baz=115						
WUAZ	Wupatki	48.90	304	P	P	12 36 36.5	+0.5
	baz=101						
WUAZ	Wupatki	48.90	304	P	P	12 36 36.1	+0.1
WUAZ				IAmb	IAmb	12 36 38.6	
	comp=Z,4.7nm,0.6s						
BW06	Boulder Array	49.37	314	P	P	12 36 39.5	0.0
	baz=109,SNR=9.4						
BW06	Boulder Array	49.37	314	P	P	12 36 39.2	-0.4
BW06				IAmb	IAmb	12 36 41.8	
	comp=Z,5.0nm,0.6s						
PD31	Pinedale Array	49.37	314	P	P	12 36 39.4	-0.2
PD31				IAmb	IAmb	12 36 41.8	
	comp=Z,4.5nm,0.6s						
PDAR	Pinedale Array	49.37	314	P	P	12 36 39.1	-0.5
	comp=Z,3.2nm,0.5s,baz=116,slow=11,SNR=37						
PDAR				ScP	ScP	12 41 41.2	-1.1
	comp=Z,0.8nm,0.7s,baz=115,slow=6.7,SNR=7.3						
PDAR	Pinedale Array	49.37	314	P	P	12 36 38.6	-0.9
FCC	Fort Churchill	49.66	338	P	P	12 36 40.2	-0.9
FCC				IAmb	IAmb	12 36 41.1	
	comp=Z,6.2nm,0.8s						
RLMT	Red Lodge	49.96	317	P	P	12 36 44.4	+0.4
	baz=111,SNR=7.9						
RLMT	Red Lodge	49.96	317	P	P	12 36 43.5	-0.4
RLMT				IAmb	IAmb	12 36 45.2	
	comp=Z,9.6nm,1.2s						
MVU	Marysvale	50.17	308	P	P	12 36 46.4	+0.7
FFC	Flin Flon	50.29	331	P	P	12 36 45.1	-0.9
LOHW	Long Hollow	50.36	314	P	P	12 36 47.0	-0.1
AHID	Auburn Hatcher	50.45	313	P	P	12 36 47.0	-0.7
AHID				IAmb	IAmb	12 36 58.5	
	comp=Z,8.1nm,1.1s						
REDW	Red Top Meadow	50.46	314	P	P	12 36 47.3	-0.5
DUG	Dugway, Tooele	51.01	310	P	P	12 36 52.5	+0.6
	baz=104						
DUG	Dugway, Tooele	51.01	310	P	P	12 36 50.6	-1.3
MORF	Marmelete	51.28	54	*e*P	P	12 36 54.5	+0.7
MORF				AMb	AMB	12 37 05.7	
	comp=Z,51nm,1.6s						
MORF	Marmelete	51.28	54	*e*P	P	12 36 55.0	+1.2
QLMT	Earthquake Lak	51.31	316	P	P	12 36 55.5	+1.4
EGMT	Eagleton	51.34	320	P	P	12 36 54.6	+0.5
	baz=112,SNR=7.1						
EGMT	Eagleton	51.34	320	P	P	12 36 54.8	+0.7
EGMT				IAmb	IAmb	12 36 55.9	
	comp=Z,14nm,1.1s						
PNCL	Nicolau / Gran	51.53	53	*e*P	P	12 36 56.8	+1.3
BOZ	Bozeman (W)	51.69	316	P	P	12 36 56.9	0.0
	baz=109						
BOZ	Bozeman (W)	51.69	316	P	P	12 36 56.3	-0.5
IRM	Iron Mountain	51.74	302	P	P	12 36 58.0	+0.7
	baz=97						
H10N3	ASCENSION HYDR	51.79	113	T	T	13 32 32.0	
	baz=296,slow=75,SNR=47						
H10N2	ASCENSION HYDR	51.80	113	T	T	13 32 32.5	
	baz=296,slow=75,SNR=42						
H10N1	ASCENSION HYDR	51.81	113	T	T	13 32 33.6	
	baz=296,slow=75,SNR=56						
PCAS	Casmilo, Conde	51.95	51	*e*P	P	12 36 59.5	+0.8
PMTG	Montargil	51.95	52	*e*P	P	12 36 59.5	+0.8
PBEJ	Beja	52.03	54	*e*P	P	12 37 00.6	+1.3
SFJD	Kangerlussuaq	52.08	5	P	P	12 36 58.6	-0.5
	comp=Z,12nm,1.0s,baz=195,slow=5.1,SNR=4.2						
SFJD	Kangerlussuaq	52.08	5	IAmb	IAmb	12 37 00.4	
	comp=Z,16nm,1.1s						
H10S3	ASCENSION HYDR	52.15	115	T	T	13 32 59.8	
	baz=295,slow=74,SNR=44						
H10S2	ASCENSION HYDR	52.16	115	T	T	13 33 02.9	
	baz=285,slow=74,SNR=25						
HRY	Holter Researc	52.19	318	P	P	12 37 00.0	-0.4
DLMT	Dillon	52.26	316	P	P	12 37 00.3	-0.8
MCMT	McKenzie Canyo	52.27	315	P	P	12 37 01.0	-0.2
PVIS	Viseu	52.55	50	*e*P	P	12 37 03.6	+0.5
PBAR	Barrancos	52.70	54	*e*P	P	12 37 04.8	+0.6
MTE	Manteigas	52.74	51	*e*P	P	12 37 05.3	+0.8
ELK	Elko	52.94	310	P	P	12 37 05.7	-0.5
	comp=Z,0.7nm,0.5s,baz=134,slow=5.4,SNR=3.0						
HLID	Hailey	53.00	313	P	P	12 37 07.1	+0.6
	baz=105						
HLID	Hailey	53.00	313	P	P	12 37 06.0	-0.6
NV11	Mina Array Sit	54.74	306	P	P	12 37 18.2	-1.1
NVAR	Mina Array Bea	54.85	306	P	P	12 37 20.7	+0.6
	comp=Z,1.4nm,0.7s,baz=97,slow=6.7,SNR=17						
NVAR				ScP	ScP	12 42 06.2	+0.1
	comp=Z,0.8nm,0.9s,baz=107,slow=4.0,SNR=4.4						
NVAR	Mina Array Bea	54.85	306	P	P	12 37 20.4	+0.3
KOWA	Kowa	55.22	83	P	P	12 37 23.7	+0.9
ESDC	Sonseca Array	55.31	52	P	P	12 37 23.8	+0.5
	comp=Z,5.2nm,0.9s,baz=259,slow=7.5,SNR=25						
ESDC				PcP	PcP	12 38 22.0	-0.2
	comp=Z,2.0nm,0.8s,baz=279,slow=4.5,SNR=7.3						
ICESG	Greenland Ices	55.42	9	*i* P	P	12 37 23.4	-0.4
ICESG				IAmb	IAmb	12 37 24.0	
	comp=Z,11nm,0.8s						
TIC	Toumodi	55.80	92	*e*P	P	12 37 27.0	0.0
LIC	Lamto	55.89	93	*e*P	P	12 37 27.9	+0.3
	comp=Z,24nm,0.7s						
DBIC	Dimbokro	55.95	92	P	P	12 37 28.7	+0.7
	comp=Z,7.2nm,0.6s,baz=276,slow=7.5,SNR=18						
DBIC	Dimbokro	55.95	92	P	P	12 37 28.1	0.0
NEW	Newport	56.08	318	P	P	12 37 28.3	-0.2
	baz=106,SNR=7.4						
NEW	Newport	56.08	318	P	P	12 37 28.3	-0.2
NEW				IAmb	IAmb	12 37 28.8	
	comp=Z,8.2nm,0.8s						
KIC	Kosan Boka	56.13	93	*e*P	P	12 37 29.8	+0.4
	comp=Z,14nm,0.6s						
PLCA	Paso Flores	56.46	188	P	P	12 37 30.6	-0.6
	comp=Z,1.1nm,0.5s,baz=357,slow=8.2,SNR=8.7						
J05D	Fort Rock, OR	57.80	312	P	P	12 37 41.4	+0.5
	baz=100						
YBH	Yreka Blue Hor	58.66	310	P	P	12 37 45.0	-1.7

	comp=Z,1.5nm,0.5s,baz=124,slow=3.3,SNR=6.2						
YBH	Yreka Blue Hor	58.66	310	P	P	12 37 45.9	-0.9
SUMG	Summit	58.75	8	*i* P	P	12 37 48.0	+0.8
SUMG	Summit	58.75	8	P	P	12 37 47.4	+0.2
SUMG	Summit	58.75	8	*i* P	P	12 37 48.0	+0.8
SUMG				IAML		12 37 48.9	
	comp=Z,47nm,0.9s						
YKA	Yellowknife Ar	59.94	335	P	P	12 37 54.1	-1.0
	comp=Z,7.5nm,0.7s,baz=107,slow=8.0,SNR=117						
TOA0	Torodi Ar. Sit	60.92	83	P	P	12 38 02.6	+0.1
TORD	Torodi Ar. Bea	60.92	83	P	P	12 38 02.7	+0.1
	comp=Z,15nm,0.8s,baz=288,slow=6.4,SNR=60						
TORD	Torodi Ar. Bea	60.92	83	P	P	12 38 02.6	+0.1
CLF	Chambon-Foret	61.09	43	P	P	12 38 04.3	+1.2
TULEG	Thule	61.32	358	P	P	12 38 04.2	+0.1
TULEG				IAmb	IAmb	12 38 05.2	
	comp=Z,9.9nm,1.0s						
SNF	Seneffe	62.80	41	*d*P	P	12 38 14.8	+0.3
DOU	Dourbes	62.93	41	*d*P	P	12 38 15.5	+0.1
DOU				*d*PcP	PcP	12 38 52.3	+0.1
BMRD	Maredsous	63.07	41	*d*P	P	12 38 16.1	-0.2
TAM	Tamanrasset	63.15	72	P	P	12 38 19.2	+1.6
DBG	Daneborg	63.18	12	*i* P	P	12 38 17.2	+0.6
DBG				IAmb	IAmb	12 38 18.5	
	comp=Z,12nm,0.8s						
BGES	Gesves	63.29	41	*d*P	P	12 38 17.5	-0.2
WLF	Walferdange	63.87	42	*d*P	P	12 38 22.2	+0.6
WLF	Walferdange	63.87	42	*e*P	P	12 38 22.3	+0.7
	comp=Z,26nm,0.9s,baz=266,slow=6.3						
MEM	Membach	63.90	41	*d*P	P	12 38 22.4	+0.7
MEM				*d*PcP	PcP	12 38 57.5	+1.3
ECH	Echery	64.37	44	P	P	12 38 25.2	+0.2
AHRW	Bad Neuenahr-A	64.57	41	*e*P	P	12 38 27.2	+1.1
	comp=Z,35nm,1.1s,baz=266,slow=6.3						
BFO	Black Forest	65.16	44	*e*P	P	12 38 30.0	-0.1
	comp=Z,15nm,1.2s,baz=266,slow=6.3						
DAG	Danmarks Havn	65.19	10	*i* P	P	12 38 29.3	-0.4
	comp=Z,8.1nm,0.8s						
DAG	Danmarks Havn	65.19	10	*i* P	P	12 38 29.4	-0.4
DAG				IAmb	IAmb	12 38 30.7	
	comp=Z,8.1nm,0.8s						
IBBN	Ibbenburen	65.20	39	*e*P	P	12 38 30.9	+0.7
	comp=Z,26nm,1.1s,baz=266,slow=6.3						
TNS	Taunus Mts	65.41	42	*e*P	P	12 38 32.3	+0.6
	comp=Z,23nm,1.0s,baz=266,slow=6.3						
KASTN	Kahler Asten	65.49	40	*e*P	P	12 38 32.3	+0.3
	comp=Z,12nm,1.1s,baz=266,slow=6.3						
KEST	Kesra	65.60	57	P	P	12 38 34.8	+1.5
	comp=Z,32nm,0.7s,baz=191,slow=1.9,SNR=34						
KEST	Kesra	65.60	57	P	P	12 38 33.9	+0.7
EUNU	Eureka	65.73	355	P	P	12 38 33.7	+0.5
TUE	Stuetta	65.73	46	P	P	12 38 33.8	-0.1
STU	Stuttgart	65.77	43	*e*P	P	12 38 34.4	+0.5
	comp=Z,28nm,1.0s,baz=266,slow=6.3						
DLBC	Dease Lake	65.92	328	P	P	12 38 35.2	+0.4
	comp=Z,3.2nm,0.6s,baz=122,slow=5.5,SNR=4.5						
DAVA	Damuels	66.14	45	*e*P	P	12 38 37.2	+0.7
	comp=Z,20nm,0.8s,SNR=8.4						
C36M	Paulatuk	66.25	340	P	P	12 38 34.8	-1.8
	baz=110						
GTTG	Gottingen	66.48	40	*e*P	P	12 38 39.4	+1.0
	comp=Z,20nm,1.0s,baz=266,slow=6.3						
NRDL	Niedersach Rie	66.66	39	*e*P	P	12 38 40.3	+0.9
	comp=Z,23nm,1.2s,baz=266,slow=6.3						
FETA	Feichten	66.70	45	*e*P	P	12 38 40.7	+0.6
	comp=Z,20nm,0.7s,SNR=9.6						
RETA	Reutte	66.74	45	*e*P	P	12 38 40.7	+0.5
	comp=Z,8.4nm,0.9s						
CLZ	Clausthal	66.76	40	*e*P	P	12 38 40.8	+0.5
	comp=Z,9.7nm,0.8s,baz=266,slow=6.3						
BSEG	Bad Segeberg	66.92	38	*e*P	P	12 38 41.6	+0.6
	comp=Z,16nm,1.0s,baz=266,slow=6.3						
ASSE	Asse, Remlinge	66.97	40	*e*P	P	12 38 42.4	+1.0
	comp=Z,19nm,1.0s,baz=266,slow=6.3						
MOTA	Moosalm	66.97	45	*i* P	P	12 38 42.0	+0.2
	comp=Z,11nm,1.1s						
OSSC	Osservatorio P	66.98	49	P	P	12 38 41.0	-0.8
OSSC				IAmb	IAmb	12 38 42.3	
	comp=Z,8.5nm,0.9s						
SQTA	Sankt Quirin	67.04	45	*e*P	P	12 38 42.6	+0.4
	comp=Z,15nm,0.8s,SNR=6.6						
GRF	Grafenberg Arr	67.16	42	*e*P	P	12 38 43.1	+0.4
	comp=Z,22nm,1.6s,baz=266,slow=6.3						
WATA	Walderalm	67.29	45	*i* P	P	12 38 44.0	+0.2
	comp=Z,2.7nm,0.6s						
CTI	Castel Tesino	67.31	46	P	P	12 38 43.5	-0.4
CTI				IAmb	IAmb	12 38 44.6	
	comp=Z,8.6nm,0.7s						
TEOL	Teolo	67.31	47	P	P	12 38 43.3	-0.4
WTTA	Wattenberg	67.33	45	*e*P	P	12 38 44.3	+0.2
	comp=Z,7.6nm,0.8s						
FLTG	Flechtingen	67.33	39	*e*P	P	12 38 44.0	+0.2
	comp=Z,9.4nm,0.8s,baz=266,slow=6.3						
NEUB	Neuenburg	67.59	41	*e*P	P	12 38 45.9	+0.5
	comp=Z,12nm,0.7s,baz=266,slow=6.3						
PLN	Plauen	67.80	41	*e*P	P	12 38 46.9	+0.2
	comp=Z,7.5nm,0.9s,baz=266,slow=6.3						
ROTZ	Rotzenmuhle	67.80	42	*e*P	P	12 38 47.0	+0.3
	comp=Z,5.0nm,1.1s,baz=266,slow=6.3						
WERD	Werda	67.89	41	*e*P	P	12 38 47.7	+0.3
	comp=Z,3.9nm,0.7s,baz=266,slow=6.3						
GUNZ	Gunzen	67.90	42	*e*P	P	12 38 48.0	+0.6
	comp=Z,8.4nm,0.8s,baz=266,slow=6.3						
MURB	Monte Urbino	67.92	49	P	P	12 38 47.0	-0.7
ABTA	Abfaltersbach	67.92	45	*e*P	P	12 38 47.8	+0.1
	comp=Z,12nm,0.9s,SNR=5.5						
WERN	Wernitzgruen	67.93	42	*e*P	P	12 38 48.1	+0.5
	comp=Z,8.2nm,1.0s,baz=266,slow=6.3						
NKC	Novy Kostel	67.97	42	*e*P	P	12 38 48.5	+0.6
TANN	Tannenbergstha	67.99	41	*e*P	P	12 38 48.4	+0.4
	comp=Z,9.2nm,0.8s,baz=266,slow=6.3						
WET	Wettzell	68.21	43	*e*P	P	12 38 49.7	+0.3
	comp=Z,18nm,1.6s,baz=266,slow=6.3						
NB2	NORSAR Subarra	68.23	30	P	P	12 38 49.7	+0.4
	comp=Z,7.7nm,0.9s,baz=262,slow=6.5						
NOA	NORSAR Array B	68.23	30	P	P	12 38 50.0	+0.8
	comp=Z,5.4nm,0.8s,baz=262,slow=6.3,SNR=15						
ZOU	Zoufplan	68.23	46	P	P	12 38 49.9	+0.2
ZOU				IAmb	IAmb	12 38 50.5	
	comp=Z,8.4nm,0.8s						
CLL	Collm	68.37	41	⇓*i*P	P	12 38 50.5	+0.3
	comp=Z,20nm,1.2s						
CLL	Collm	68.37	41	P	P	12 38 50.6	+0.4
CLL	Collm	68.37	41	*e*P	P	12 38 50.7	+0.4
	comp=Z,20nm,1.2s,baz=266,slow=6.3						
KBA	Koelnbreinsper	68.49	45	*e*P	P	12 38 51.5	+0.1
	comp=Z,19nm,1.0s,SNR=8.4						
FBE	Freiberg	68.58	41	*e*P	P	12 38 52.2	+0.7
	comp=Z,9.5nm,0.7s,baz=266,slow=6.3						
KHC	Kasperske Hory	68.67	43	*e*P	P	12 38 52.7	+0.4
KHC	Kasperske Hory	68.67	43	P	P	12 38 52.1	-0.2
MYKA	Terra Mystica	68.69	46	*i* P	P	12 38 52.7	+0.2
	comp=Z,9.6nm,0.7s						
GEC2	GERESS Array S	68.75	43	P	P	12 38 52.9	0.0
GEC2	GERESS Array S	68.75	43	*e*P	P	12 38 52.9	0.0
	comp=Z,9.6nm,1.0s,baz=266,slow=6.3						
GERES	GERESS Array B	68.75	43	P	P	12 38 52.8	0.0
	comp=Z,3.6nm,0.7s,baz=272,slow=5.1,SNR=30						
BRG	Berggiesshubel	68.95	41	*i* P	P	12 38 54.2	+0.4
BRG				Amp		12 38 55.3	
	comp=Z,12nm,0.9s						
BRG	Berggiesshubel	68.95	41	*e*P	P	12 38 54.3	+0.5
	comp=Z,12nm,0.9s,baz=266,slow=6.3						
PBCC	Pribram	68.95	42	*e*P	P	12 38 54.5	+0.5
MOA	Molln	69.12	44	*e*P	P	12 38 55.0	-0.1
	comp=Z,5.4nm,0.7s						
CKRC	Cesky Krumlov	69.15	43	*e*P	P	12 38 55.3	+0.1
INK	Inuvik	69.27	338	P	P	12 38 54.6	-0.9
INK				IAmb	IAmb	12 38 55.5	
	comp=Z,12nm,0.9s						
PRU	Pruhonice	69.31	42	*e*P	P	12 38 56.7	+0.6
OBKA	Obir	69.32	46	*e*P	P	12 38 56.5	+0.1
	comp=Z,14nm,0.8s						
PVCC	Panska Ves	69.34	41	*e*P	P	12 38 56.9	+0.6
RAFF	Raffo Rosso	69.57	56	P	P	12 38 57.5	-0.4
SOKA	Soboth	69.65	46	*i* P	P	12 38 58.0	-0.4
	comp=Z,6.2nm,0.8s						
TREC	Trest	69.93	43	*e*P	P	12 39 00.5	+0.5
ARSA	Arzberg	69.98	45	*i* P	P	12 39 00.3	0.0
	comp=Z,9.8nm,0.9s						
HYT	Haines Junctio	69.99	330	P	P	12 38 59.6	-0.7
CONA	Conrad Observa	70.19	44	*i* P	P	12 39 01.7	+0.1
	comp=Z,7.9nm,1.3s						
UPC	Upice	70.26	41	*e*P	P	12 39 02.6	+0.7
CHVC	Chvalec	70.28	41	*e*P	P	12 39 02.5	+0.4
OSTC	Ostas	70.39	41	*e*P	P	12 39 03.2	+0.5
DPC	Dobruska-Polom	70.46	42	*e*P	P	12 39 03.8	+0.6
KRUC	Moravsky	70.53	43	*e*P	P	12 39 03.8	+0.2
VRAC	Vranov	70.65	43	⇑P	P	12 39 05.1	+0.7
VRAC	Vranov	70.65	43	*e*P	P	12 39 04.7	+0.4
ZST	Bratislava	71.02	44	*e*P	P	12 39 05.9	-0.6
MODS	Modra-Piesok	71.13	44	*e*P	P	12 39 07.0	-0.3
SMOL	Smolenice	71.22	44	*e*P	P	12 39 08.6	+0.8
MORC	Moravsky Berou	71.26	42	⇓P	P	12 39 08.9	+0.9
MORC	Moravsky Berou	71.26	42	*e*P	P	12 39 08.5	+0.5
MORC	Moravsky Berou	71.26	42	P	P	12 39 08.0	0.0
MORC				IAmb	IAmb	12 39 09.6	
	comp=Z,8.9nm,1.0s						
TIP	Timpagrande	71.30	53	⇑P	P	12 39 06.8	-1.7
PCA	Pinnacle	71.31	329	P	P	12 39 08.0	-0.2
PCA				IAmb	IAmb	12 39 36.8	
	comp=Z,4.1nm,0.6s						
JAVC	Velka Javorina	71.37	43	*e*P	P	12 39 10.0	+1.2
SRO	Srobarova	71.85	44	*e*P	P	12 39 11.9	+0.4
CTGM	Chitina Glacie	71.86	330	P	P	12 39 11.2	-0.4
CTGM				IAmb	IAmb	12 39 13.8	
	comp=Z,6.5nm,0.8s						
CTG	Chitna Glacier	71.87	330	P	P	12 39 12.5	+0.9
	baz=91						
EGAK	Eagle	71.90	334	P	P	12 39 11.6	0.0
	baz=92,SNR=9.6						
EGAK	Eagle	71.90	334	P	P	12 39 11.4	-0.1
EGAK				IAmb	IAmb	12 39 12.3	
	comp=Z,7.6nm,0.8s						
SRO2	Moca	71.90	44	*e*P	P	12 39 11.2	-0.6
BARN	Barnard Glacie	72.02	330	P	P	12 39 12.7	+0.1
BCAR	Beaver Creek A	72.12	332	P	P	12 39 12.8	-0.1
MORH	Mrgy, Hungar	72.16	46	⇓P	P	12 39 14.3	+0.9
LANS	Liptovska Anna	72.54	43	*e*P	P	12 39 17.2	+1.5
MCARA	McCarthy VSAT	72.69	330	P	P	12 39 17.5	+1.2
	baz=90,SNR=12						
MCARA	McCarthy VSAT	72.69	330	P	P	12 39 16.6	+0.3
MCARA				IAmb	IAmb	12 39 18.2	
	comp=Z,16nm,0.9s						
OJC	Ojcow	72.69	42	P	P	12 39 16.1	-0.5
OJC				IAmb	IAmb	12 39 18.4	
	comp=Z,14nm,1.2s						
PDG	Podgorica	72.90	50	⇓P	P	12 39 18.9	+1.1
PDG	Podgorica	72.90	50	P	P	12 39 17.7	-0.1
MENT	Mentasta	73.00	332	P	P	12 39 18.3	+0.2
MENT				IAmb	IAmb	12 39 19.4	
	comp=Z,9.9nm,0.6s						
SCRK	Sand Creek	73.11	333	P	P	12 39 19.0	+0.1
	baz=90,SNR=6.4						
DIVS	Divibare	73.28	48	P	P	12 39 21.1	+0.9
DIVS				IAmb	IAmb	12 39 22.2	
	comp=Z,10nm,0.9s						
BMAR	Burnt Mountain	73.36	336	P	P	12 39 19.0	-1.2
N25K	Chitina, Valde	73.44	330	P	P	12 39 21.0	+0.2
	baz=88						
BMRM	Bremner River	73.46	330	P	P	12 39 21.2	+0.3
	baz=88						
PRP	Porcupine Dome	73.75	334	P	P	12 39 22.3	-0.4
	baz=89						
PRP	Porcupine Dome	73.75	334	P	P	12 39 21.4	-1.2
PRP				IAmb	IAmb	12 39 23.2	
	comp=Z,9.3nm,0.8s						
PAX	Paxson	73.80	332	P	P	12 39 23.0	+0.1
	baz=88						
PAX	Paxson	73.80	332	P	P	12 39 22.8	-0.1
CRVS	Cervenica-Dubn	73.87	43	*e*P	P	12 39 24.9	+1.4
KLU	Klutina	74.07	330	P	P	12 39 24.4	-0.1
	baz=87						
KLU	Klutina	74.07	330	P	P	12 39 24.1	-0.4
BZS	Buzias	74.28	46	⇓P	P	12 39 26.7	+0.8
IL31		74.35	334	P	P	12 39 25.4	-0.5
IL31				IAmb	IAmb	12 39 26.4	
	comp=Z,11nm,1.4s						
ILAR	Eielson Array	74.35	334	P	P	12 39 25.1	-0.8
	comp=Z,2.6nm,0.6s,baz=78,slow=4.6,SNR=46						
ILAR	Eielson Array	74.35	334	P	P	12 39 25.3	-0.7
KOLS	Kolonicke sedl	74.40	43	*e*P	P	12 39 27.8	+1.3
HDA	Harding Lake	74.40	333	P	P	12 39 25.1	-1.1
	baz=87						
MDVR	Moldovita	74.44	47	⇑P	P	12 39 27.6	+0.7
MTSE	Matsula	74.49	33	*e*P	P	12 39 27.7	+0.9
SUW	Suwalki	74.50	38	*e*P	P	12 39 27.3	+0.3
POKR	Poker Plat Res	74.57	334	P	P	12 39 26.3	-0.9
	baz=87						
POKR	Poker Plat Res	74.57	334	P	P	12 39 26.6	-0.6
POKR				IAmb	IAmb	12 39 27.8	
	comp=Z,8.2nm,0.8s						
ARCES	ARCESS Array B	74.62	21	P	P	12 39 27.6	+0.1
	comp=Z,11nm,0.8s,baz=292,slow=3.8,SNR=11						
ARCES	ARCESS Array B	74.62	21	P	P	12 39 27.4	0.0
ARCES				IAmb	IAmb	12 39 29.1	
	comp=Z,12nm,0.9s						
FNA	Florina	74.66	51	P	P	12 39 29.6	+1.3
GLI	Glacier Island	74.68	330	P	P	12 39 27.7	-0.2
	baz=86						
SCM	Sheep Creek Mo	74.72	331		P	12 39 28.9	+0.6
SCM				IAmb	IAmb	12 39 51.6	
	comp=Z,7.6nm,0.9s						
CCB	Clear Creek Bu	74.75	334	P	P	12 39 27.6	-0.6
COLA	College	74.76	334	P	P	12 39 27.9	-0.3
	baz=86						
COLA	College	74.76	334	P	P	12 39 28.0	-0.3
TCOL	CIGO, UAF Yank	74.77	334	P	P	12 39 27.9	-0.3
	baz=86						
TCOL	CIGO, UAF Yank	74.77	334	P	P	12 39 28.0	-0.3
PABE	Paberze	74.83	36	*e*P	P	12 39 28.9	+0.1
WRH	Wood River Hil	74.89	333	P	P	12 39 28.9	-0.1
DRGR		74.91	45	⇑P	P	12 39 30.4	+0.8
MDM	Murphy Dome	74.92	334	P	P	12 39 28.6	-0.6
MDM				IAmb	IAmb	12 39 29.6	
	comp=Z,13nm,0.9s						
HERR	Herculane	74.92	47	⇑P	P	12 39 30.3	+0.7
GZR	Gura Zlata	75.12	46	⇑P	P	12 39 29.6	-1.2
TOLK	Toolik Lake Re	75.19	338	P	P	12 39 30.4	-0.3
	baz=86						
TOLK	Toolik Lake Re	75.19	338	P	P	12 39 30.6	-0.1
TOLK				IAmb	IAmb	12 39 33.6	
	comp=Z,12nm,1.5s						
NEA2	Nenana	75.30	334	P	P	12 39 31.0	-0.5
	baz=85,SNR=6.4						
RND	Reindeer	75.31	332	P	P	12 39 32.3	+0.8
RND				IAmb	IAmb	12 39 32.5	
	comp=Z,7.7nm,0.8s						
MCK	McKinley	75.31	333	P	P	12 39 30.9	-0.6
	baz=85						
I23K	Minto, Yukon-K	75.38	334	P	P	12 39 31.5	-0.3
	baz=85						
FINES	FINESS Array B	75.41	30	P	P	12 39 32.2	+0.2
	comp=Z,8.1nm,0.9s,baz=262,slow=3.5,SNR=20						
FIA1	FINESS Array S	75.41	30	P	P	12 39 32.3	+0.3
FIA1				IAmb	IAmb	12 39 32.7	
	comp=Z,8.0nm,0.8s						
CJR	Cluj-Napoca	75.53	45	⇑P	P	12 39 32.4	-0.7
COLD	Coldfoot	75.54	336	P	P	12 39 32.7	-0.1
	baz=85						
COLD	Coldfoot	75.54	336	P	P	12 39 32.6	-0.1
LOT	Lotru	75.81	46	⇑P	P	12 39 35.2	+0.4
TRF	Thorofare Moun	75.94	332	P	P	12 39 35.3	0.0
	baz=84,SNR=14						
TRF	Thorofare Moun	75.94	332	P	P	12 39 35.1	-0.2
MLY	Manley	75.97	334	P	P	12 39 34.6	-0.7
	baz=84,SNR=9.2						
ARCR	ARCALIA	75.99	45	⇑P	P	12 39 35.7	0.0
VSU	Vasula	76.04	33	*e*P	P	12 39 35.8	+0.1
ISAL	Salakas	76.04	36	*e*P	P	12 39 35.7	-0.1
IIGN	Ignalina	76.13	36	*e*P	P	12 39 36.4	+0.2
BPAW	Bear Paw Mtn.	76.18	333	P	P	12 39 35.8	-0.7
	baz=84						
BPAW	Bear Paw Mtn.	76.18	333	P	P	12 39 35.7	-0.7
BPAW				IAmb	IAmb	12 39 36.7	
	comp=Z,11nm,0.8s						
KTH	Kantishna Hill	76.22	333	P	P	12 39 36.7	0.0
KTH				IAmb	IAmb	12 39 37.4	
	comp=Z,13nm,1.0s						
ARR	Arges	76.42	46	⇑P	P	12 39 38.2	-0.1
IDID	Didziasalis	76.42	36	*e*P	P	12 39 38.5	+0.6
BUR08	Bucovina Ar. S	76.49	44	P	P	12 39 40.0	+1.4
BURAR	Bucovina Array	76.50	44	⇓P	P	12 39 40.2	+1.5
BURAR	Bucovina Array	76.50	44	P	P	12 39 39.9	+1.2
SKT	Skwentna	76.69	331	P	P	12 39 38.6	-0.8
	baz=82						
VOIR		76.70	46	⇑P	P	12 39 38.7	-1.1
CHUM	Lake Minchumin	76.79	333	P	P	12 39 39.1	-0.7
	baz=82						
DOPR	Dopca	76.86	46	⇑P	P	12 39 41.5	+0.9
PPLA	Purkeypile	76.87	332	P	P	12 39 40.3	-0.2
	baz=82						
IMAR	Indian Mountai	77.09	335	P	P	12 39 40.9	-0.6
MNK	Minsk	77.19	37	*i* P	P	12 39 42.6	+0.4
	comp=E,2.0nm,0.8s						
MNK				*i* P	P	12 39 42.6	+0.4
	comp=N,17nm,0.8s						
MNK				*i* P	P	12 39 42.6	+0.4
	comp=Z,20nm,0.9s						
MNK				*i* pP	pP	12 40 17.3	+0.6
MNK				*i* PP	PP	12 42 37.3	-0.4
MNK				*i* PPP	PPP	12 44 22.2	
MNK				*i* S	S	12 49 19.7	-0.3
MNK				*i* sS	sS	12 50 20.2	+2.7
MNK				*i* SS	SS	12 54 20.2	-0.1
MNK				*i* SSS	SSS	12 57 44.6	
MNK				*i* LRM	MLR	13 15 47.9	
	comp=E,17nm,15.4s						
MNK				*i* LRM	MLR	13 15 49.7	
	comp=N,222nm,19.9s						
MNK				*i* LRM	MLR	13 15 54.2	
	comp=Z,87nm,13.6s						
MLR	Muntele Rosu	77.31	46	⇑P	P	12 39 43.9	+0.5
MLR	Muntele Rosu	77.31	46	P	P	12 39 44.7	+1.4
MLR				IAmb	IAmb	12 39 45.4	
	comp=Z,11nm,1.0s						
SORM	Soroca	78.51	43	⇓P	P	12 39 49.2	-0.4
AKASG	Malin Array Be	78.61	40	P	P	12 39 50.1	-0.1
	comp=Z,1.9nm,0.5s,baz=265,slow=4.7,SNR=8.4						
AKASG	Malin Array Be	78.61	40	P	P	12 39 50.0	-0.1
SVW2	Sparrevohn	78.75	330	P	P	12 39 50.4	-0.4
RDOG	Red Dog Mine	80.15	338	P	P	12 39 58.1	-0.1
	baz=74						
RDOG	Red Dog Mine	80.15	338	P	P	12 39 58.5	+0.3
RDOG				IAmb	IAmb	12 39 59.1	
	comp=Z,8.9nm,0.9s						
KLMR	Klimovskoe	81.91	29	*e*P	P	12 40 06.9	-0.7
KLMR				AMP		12 40 08.6	
	comp=Z,14nm,1.0s						
BR131	Keskin Array S	84.07	51	P	P	12 40 19.8	+0.5
BR131				IAmb	IAmb	12 40 20.0	
	comp=Z,7.5nm,0.8s						
BRTR	Keskin Array B	84.07	51	P	P	12 40 19.6	+0.2
	comp=Z,4.8nm,0.7s,baz=261,slow=4.9,SNR=18						
BRTR	Keskin Array B	84.07	51	P	P	12 40 19.4	0.0
KBZ	Khabaz	89.45	45	P	P	12 40 47.0	+1.9
	comp=Z,4.9nm,0.9s,baz=155,slow=3.2,SNR=6.0						
NRIK	Noril'sk	92.69	11	P	P	12 40 59.8	+0.1
	comp=Z,1.5nm,0.6s,baz=0.0,slow=13,SNR=5.0						
TIXI	Tiksi	92.93	357	P	P	12 41 00.5	-0.3
TIXI				IAmb	IAmb	12 41 01.2	
	comp=Z,4.4nm,1.0s						
SONM	Songino Array	116.14	9	PKP	PKPdf	12 46 29.8	-1.1
	comp=Z,0.7nm,0.6s,baz=114,slow=3.6,SNR=4.8						
MJAR	Matsushiro Arr	125.19	341	PKP	PKPdf	12 46 47.6	-0.8
	comp=Z,1.9nm,0.7s,baz=96,slow=1.7,SNR=5.5						
KSRS	Korea Array	126.76	351	PKP	PKPdf	12 46 50.5	-0.8
	comp=Z,1.2nm,0.9s,baz=26,slow=3.9,SNR=4.3						
CMAR	Chiang Mai Arr	141.17	31	PKhKP	PKPpre	12 47 12.6	
	comp=Z,0.2nm,0.4s,baz=177,slow=33,SNR=2.7						
ASAR	Alice Springs	163.46	238	PKP	PKPdf	12 47 49.9	-1.0
	comp=Z,1.0nm,0.9s,baz=69,slow=1.5,SNR=7.1						
WRA	Warramunga Arr	164.41	251	PKP	PKPdf	12 47 50.7	-1.0
	comp=Z,1.8nm,1.0s,baz=140,slow=0.2,SNR=9.0						
WRA				PKPab	PKPab	12 48 47.0	0.0
	comp=Z,0.8nm,0.8s,baz=98,slow=4.3,SNR=8.6						

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*RHSSO **28** 12:34:44.9±0.7, 43°.26N×20°.90E, h6^{km}±2^{km}, ML2.4/8*
*BEO **28** 12:34:45.3±0.3, 43°.20N×20°.86E, h0^{km}±3^{km}, ML2.5/9*
*PDG **28** 12:34:47.7±0.1, 43°.17N×20°.65E, h10^{km}, ML2.3/12, Error ellipse: s-maj=0.2km s-min=0.3km az=0.0*

ISC 28 12:34:43.9±1.1, **43°.23N**±0°.02×**20°.87E**±0°.02, **h9**^{km}±9^{km}, **n60, σ0^{s}.90**/105, **16C-10D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IVAS	Ivanjica	0.63	304	*e*Pg	Pg	12 34 56.0	0.0
IVAS				*e*Sg	Sg	12 35 04.7	+0.5
GRUS	Gruza	0.67	351	*e*Pg	Pb	12 34 57.6	-0.1
GRUS				*e*Sg	Sb	12 35 07.0	-0.1
BOVS	Bovan	0.73	56	*e*Pg	Pb	12 34 58.0	-0.8
BOVS				*e*Sg	Sb	12 35 09.8	+0.8
IVA	Berane	0.80	244	*e*Pg	Pb	12 34 59.6	-0.3
IVA				*i* Sg	Sg	12 35 09.5	-0.1
BARS	Barje	0.81	120	*e*Pg	Pn	12 35 06.2	+4.8
BARS				*e*Sg	Sn	12 35 22.5	+9.0
PVY	Plav	0.92	227	*e*Pg	Pb	12 35 02.0	0.0
PVY				*i* Sg	Sb	12 35 14.3	0.0
TRUS	Trudelj	1.05	342	*e*Pg	Pn	12 35 04.7	0.0
TRUS				*e*Sg	Sn	12 35 21.0	+1.5
KOME	Kolasin	1.06	250	*e*Pg	Pn	12 35 04.4	-0.5
KOME				*i* Sg	Sb	12 35 18.3	-0.1
SVIS	Svilajnac	1.07	14	*e*Pg	Pn	12 35 05.8	+0.8
SVIS				*e*Sg	Sn	12 35 20.3	+0.4
DIVS	Divibare	1.08	324	*e*Pg	Pb	12 35 04.6	-0.1
DIVS				*e*Sg	Sn	12 35 20.6	+0.3
DIVS	Divibare	1.08	324	⇓*i*Pg	Pg	12 35 04.3	-0.3
DIVS				*e*Sg	Sb	12 35 19.0	+0.1
PLE	Pljevlja	1.08	276	*e*Pg	Pn	12 35 05.0	-0.3
PLE				*i* Sg	Sb	12 35 19.7	+0.6
PRVS	Prvonek	1.14	129	*e*Pg	Pn	12 35 06.5	+0.5
PRVS				*e*Sg	Sn	12 35 22.3	+0.5
ZAGS	Zajecar	1.15	59	*e*Pg	Pn	12 35 06.2	+0.1
ZAGS				*e*Sg	Sn	12 35 22.0	0.0
RUDO	Rudo	1.16	290	⇑*i*Pg	Pg	12 35 05.4	-0.7
RUDO				*e*Sg	Sn	12 35 22.1	0.0
BBLS	Lazići	1.24	302	*e*Pg	Pg	12 35 07.7	0.0
BBLS				*e*Sg	Sn	12 35 25.4	+1.2
BBLS	Lazići	1.24	302	*e*Pg	Pg	12 35 07.3	-0.4
BBLS				*e*Sg	Sn	12 35 24.5	+0.3
ZAPS	Zavoj	1.29	87	*e*Pg	Pg	12 35 10.0	+1.3
ZAPS				*e*Sg	Sn	12 35 26.6	+1.1
KUBS	Kucevo	1.32	26	*e*Pg	Pb	12 35 08.3	-0.5
SKO	Skopje	1.32	161	*i* Pn	Pg	12 35 11.0	+1.8
BLKB	Belogradchik	1.38	73	⇑S	Sn	12 35 28.8	+1.2
BOSS	Bosilegrad	1.39	121	*e*Pg	Pg	12 35 10.4	-0.2
BOSS				*e*Sg	Sg	12 35 28.3	-0.4
PDG	Podgorica	1.43	237	*e*Pn	Pg	12 35 10.4	-0.8
PDG	Podgorica	1.43	237	⇑P	Pg	12 35 11.3	+0.1
PDG	Podgorica	1.43	237	*e*Pg	Pg	12 35 11.3	+0.1
PDG				*e*Sg	Sg	12 35 31.4	+1.6
TTG	Podgorica	1.43	237	*e*Pg	Pg	12 35 11.0	-0.2
TTG				*i* Sg	Sg	12 35 31.0	+1.2
UPM	Unac-Piva	1.43	270	*e*Pg	Pg	12 35 11.8	+0.4
NKY	Niksic	1.43	254	⇑*i*Pg	Pg	12 35 11.1	-0.3
NKY				*i* Sg	Sg	12 35 31.1	+1.1
NKME	Niksic	1.48	252	*e*Pg	Pg	12 35 11.8	-0.4
NKME				*i* Sg	Sg	12 35 32.4	+1.1
CEME	Cevo	1.58	245	⇑*i*Pg	Pg	12 35 13.9	-0.4
CEME				*i* Sg	Sg	12 35 35.8	+1.0
DRME	Dracevica, Mon	1.62	231	*e*Pn	Pg	12 35 14.1	-0.8
DRME				*e*Sn	Sg	12 35 36.5	+0.6
DRME	Dracevica, Mon	1.62	231	*e*Pg	Pg	12 35 14.8	-0.1
DRME				*i* Sg	Sg	12 35 36.9	+1.0
HAPS	Han Pijesak,Bl	1.63	302	*e*Pn	Pg	12 35 14.7	-0.5
HAPS	Han Pijesak,Bl	1.63	302	⇑*i*Pn	Pb	12 35 13.4	-0.8
HAPS				*e*Sn	Sg	12 35 35.8	-0.6
TEKS	Tekeris	1.64	324	*e*Pn	Pg	12 35 15.9	+0.6
TEKS				*e*Sn	Sg	12 35 38.3	+1.8
TEKS	Tekeris	1.64	324	*e*Pn	Pb	12 35 13.7	-0.5
TEKS				*e*Sn	Sg	12 35 36.1	-0.4
MDVR	Moldovita	1.67	21	⇑P	Pb	12 35 14.0	-0.8
MDVR				⇑S	Sn	12 35 35.0	+0.2
BUM	Brajici-Budva	1.72	238	⇑*i*Pg	Pg	12 35 16.4	-0.5
BUM				*i* Sg	Sg	12 35 39.2	0.0
BRY	Bratogost	1.74	260	⇑*i*Pn	Pb	12 35 16.1	+0.1
BRY				*e*Sn	Sg	12 35 38.6	-1.1
BRY	Bratogost	1.74	260	⇑*i*Pg	Pg	12 35 16.3	-0.8
BRY				*i* Sg	Sg	12 35 39.5	-0.2
ULC	Ulcinj	1.74	224	*e*Pn	Pg	12 35 17.0	-0.2
ULC				*i* Sn	Sg	12 35 40.0	+0.2
STIP	Stip	1.82	147	*i* Pn	Pb	12 35 16.2	-1.0
VTS	Vitosha	1.84	108	⇑P	Pg	12 35 19.2	-0.1
VTS				⇑S	Sg	12 35 43.7	+0.6
HCY	Herceg Novi	1.91	247	*e*Pn	Pb	12 35 18.8	0.0
HCY				*e*Sn	Sb	12 35 43.0	+0.2
HCY	Herceg Novi	1.91	247	⇓*i*Pn	Pb	12 35 19.0	+0.2
HCY				*i* Sn	Sb	12 35 43.6	+0.8
TREB	Trebinje	1.92	255	*e*Pn	Pb	12 35 18.3	-0.6
TREB				*e*Sn	Sb	12 35 43.4	+0.5

HERR	**Herculane**	**2.00**	**34**	⇑P	**Pb**	**12 35 18.7**	**-1.6**
HERR				⇓S	**Sn**	**12 35 42.9**	**+0.1**
DBRK	**Dubrovnik**	**2.07**	**255**	*e*Pn	**Pb**	**12 35 19.9**	**-1.7**
DBRK				Sn	**Sb**	**12 35 48.1**	**+0.7**
FRGS	**Fruska Gora**	**2.07**	**339**	*e*Pn	**Pb**	**12 35 21.2**	**-0.4**
FRGS	**Fruska Gora**	**2.07**	**339**	⇑P	**Pn**	**12 35 18.7**	**-0.1**
FRGS				⇓S	**Sn**	**12 35 43.9**	**-0.9**
FRGS	**Fruska Gora**	**2.07**	**339**	*e*Pn	**Pn**	**12 35 19.7**	**+0.9**
FRGS				*e*Sn	**Sn**	**12 35 46.2**	**+1.4**
BANR	**Banloc**	**2.16**	**5**	⇑S	**Sn**	**12 35 47.5**	**+0.6**
VAY	**Valandovo**	**2.29**	**146**	*i* Pn	**Pb**	**12 35 23.1**	**-2.1**
STON	**Ston**	**2.35**	**262**	*e*Pn	**Pn**	**12 35 24.1**	**+1.6**
STON				Sn	**Sb**	**12 35 53.8**	**-1.5**
BZS	**Buzias**	**2.45**	**12**	⇓P	**Pn**	**12 35 24.4**	**+0.4**
BZS				⇓S	**Sn**	**12 35 53.3**	**-0.7**
GZR	**Gura Zlata**	**2.56**	**32**	⇓P	**Pn**	**12 35 26.3**	**+0.7**
GZR				⇓S	**Sn**	**12 35 56.5**	**-0.4**
RICI	**Ricice**	**2.73**	**277**	*i* Pn	**Pb**	**12 35 31.0**	**-1.9**
RICI				Sn	**Sb**	**12 36 06.8**	**+0.2**
PLVB	**Pleven**	**2.75**	**85**	⇓S	**Sb**	**12 36 03.7**	**-3.1**
MAKA	**Makarska**	**2.81**	**273**	*e*Pn	**Pb**	**12 35 31.7**	**-2.5**
MAKA				Sn	**Sb**	**12 36 06.8**	**-1.9**
MORH	**Mrgy, Hungar**	**3.38**	**333**	⇓P	**Pn**	**12 35 37.5**	**+0.8**

*IDC **28** 12:35:55.1±22.0, 51°.67N×168°.81W, h0^{km}, mb3.2/4, mb1 3.6/4, mb1mx3.2/39, mbtmp3.2/4, Error ellipse: s-maj=427.4km s-min=60.6km az=73.0*

*AEIC **28** 12:36:09±1.0, 51°.9N±0°.1×166°.4W±0°.1, h25^{km}±9^{km}, ML2.9, ML3.6/6(NEIC), Error ellipse: s-maj=17.4km s-min=9.3km az=164.0*

*NEIC **28** 12:36:10.6±1.1, 51°.9N±0°.1×166°.4W±0°.1, h35^{km}±20^{km}, Error ellipse: s-maj=20.8km s-min=9.4km az=164.0*

ISC 28 12:36:08.8±1.2, **51°.9N**±0°.2×**166°.44W**±0°.09, **h17**^{km}**, n31,** σ**0^{s}.73**/31, **mb3.2**/4, **South of Aleutian Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKFG	**Magazine Ridge**	**1.74**	**330**		**Pn**	**12 36 38.3**	**+0.1**
OKSP	**Okmok Steeple**	**1.75**	**320**		**Pn**	**12 36 39.0**	**+0.7**
OKSO	**Okmok South**	**1.78**	**325**		**Pn**	**12 36 38.6**	**-0.2**
NIKH	**Nikolski High**	**1.82**	**306**		**Pn**	**12 36 39.1**	**-0.1**
MGOD	**Makushin Gods**	**1.90**	**352**		**Pn**	**12 36 41.1**	**+0.8**
MREP	**Makushin Rep't**	**1.90**	**354**		**Pn**	**12 36 41.1**	**+0.6**
MAPS	**Pakushin South**	**1.92**	**351**		**Pn**	**12 36 41.5**	**+0.9**
MNAT	**Makushin Natee**	**1.97**	**356**		**Pn**	**12 36 42.1**	**+0.7**
MSW	**Makushin Switc**	**2.01**	**354**		**Pn**	**12 36 42.8**	**+0.9**
ZRO	**Akutan Zero**	**2.19**	**7**		**Pn**	**12 36 45.0**	**+0.6**
AKUT	**Akutan**	**2.25**	**10**	Pn	**Pn**	**12 36 45.4**	**+0.2**
AKUT				IAML		12 37 24.8	
	comp=N,79nm,3.6s						
AKLV	**Akutan Long Va**	**2.26**	**7**		**Pn**	**12 36 45.8**	**+0.4**
WEBT	**Westdahl Beart**	**2.86**	**20**		**Pn**	**12 36 53.7**	**+0.1**
SSLW	**Shishaldin Wes**	**3.17**	**25**		**Pn**	**12 36 58.9**	**+0.9**
FALS	**False Pass**	**3.45**	**30**		**Pn**	**12 37 01.7**	**+0.1**
ATKA	**Atka Island**	**4.80**	**276**		**Pn**	**12 37 20.0**	**-0.2**
SDPT	**Sand Point**	**4.94**	**44**		**Pn**	**12 37 22.3**	**+0.2**
SDPT				IAML		12 40 02.3	
	comp=E,54nm,3.4s						
CNBA	**Chernabura Isl**	**5.02**	**52**		**Pn**	**12 37 22.7**	**-0.6**
CNBA				IAML		12 38 45.1	
	comp=N,47nm,3.8s						
CNBA				IAML		12 39 12.8	
	comp=E,46nm,3.9s						
GSMY	**Great Sitkin M**	**5.95**	**275**		**Pn**	**12 37 36.1**	**+0.1**
GSTD	**Great Sitkin T**	**6.00**	**275**		**Pn**	**12 37 37.5**	**+0.7**
CHGN	**Chignik**	**6.44**	**44**	Pn	**Pn**	**12 37 43.0**	**+0.3**
OHAK	**Old Harbor**	**9.29**	**50**	Pn	**Pn**	**12 38 21.5**	**-0.3**
KDAK	**Kodiak Island**	**9.90**	**48**	Pn	**Pn**	**12 38 29.2**	**-1.0**
SVW2	**Sparrevohn**	**10.96**	**29**	Pn	**Pn**	**12 38 44.9**	**+0.2**
SEW	**Seward**	**12.52**	**42**	Pn	**Pn**	**12 39 04.9**	**-1.0**
SUA	**Susitna One**	**12.84**	**36**	Pn	**Pn**	**12 39 10.2**	**-0.1**
HIN	**Hinchinbrook I**	**13.93**	**45**	Pn	**Pn**	**12 39 23.8**	**-1.4**
INK	**Inuvik**	**22.75**	**31**	P	**P**	**12 41 07.9**	**-1.8**
	comp=E,0.5nm,0.5s,baz=256,slow=6.0,SNR=1.4						
YKA	**Yellowknife Ar**	**29.18**	**48**	P	**P**	**12 42 09.9**	**+1.0**
	comp=E,0.1nm,0.6s,baz=270,slow=7.4,SNR=2.8						
PDAR	**Pinedale Array**	**38.70**	**81**	P	**P**	**12 43 32.7**	**+0.8**
	comp=E,0.2nm,0.6s,baz=287,slow=3.7,SNR=2.4						
TXAR	**Lajitas Array**	**50.94**	**91**	P	**P**	**12 45 09.3**	**0.0**
	comp=E,0.2nm,0.5s,baz=314,slow=5.7,SNR=4.3						

*IDC **28** 13:02:55.9±1.4, 12°.65N×144°.12E, h0^{km}, mb3.5/5, mb1 3.8/5, mb1mx3.5/41, mbtmp3.5/5, MS2.9/2, Ms1 2.9/2, ms1mx2.5/27, Error ellipse: s-maj=54.8km s-min=24.6km az=89.0*

*NEIC **28** 13:02:59.4±1.8, 12°.56N±0°.10×144°.3E±0°.2, h27^{km}±8^{km}, mb4.3/8, Error ellipse: s-maj=25.5km s-min=13.1km az=105.0*

ISC 28 13:02:59.7±0.7, **12°.6N**±0°.1×**144°.3E**±0°.1, **h30**^{km}**, n25,** σ**0^{s}.81**/16, **mb3.7**/8, **South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.15**	**28**	Pn	**Pn**	**13 03 19.5**	**-0.3**
PATS	**Pohnpei**	**14.92**	**111**	Pn	**Pn**	**13 06 27.9**	**-0.8**
DAV	**Davao City (W)**	**19.25**	**255**	LR	LR	13 14 20.0	
	comp=Z,40nm,21.9s,baz=333,slow=36						
TNTI	**Ternate**	**20.48**	**236**	P	**P**	**13 07 35.0**	**-0.3**
TNTI				IAmb	IAmb	13 07 44.3	
	comp=Z,18nm,0.9s						
H11S3	**WAKE ISLAND Hy**	**22.34**	**72**	T	T	13 30 58.7	
	baz=260						
H11S1	**WAKE ISLAND Hy**	**22.35**	**72**	T	T	13 30 58.0	
	baz=260						
H11S2	**WAKE ISLAND Hy**	**22.35**	**72**	T	T	13 31 00.7	
	baz=260						
H11N1	**WAKE ISLAND Hy**	**22.80**	**69**	T	T	13 31 32.4	
	baz=255,slow=75,SNR=35						
H11N2	**WAKE ISLAND Hy**	**22.82**	**69**	T	T	13 31 36.3	
	baz=255,slow=75,SNR=33						
H11N3	**WAKE ISLAND Hy**	**22.82**	**69**	T	T	13 31 35.9	
	baz=255,slow=75,SNR=28						
BATI	**Baumata**	**30.54**	**223**	LR	LR	13 21 09.0	
	comp=Z,19nm,19.6s,baz=57,slow=36						
WB0	**Warramunga Arr**	**33.58**	**197**	P	**P**	**13 09 38.0**	**+0.6**
WB0				IAmb	IAmb	13 09 55.5	
	comp=Z,3.0nm,1.1s						
WR0	**Warramunga Arr**	**33.72**	**197**	P	**P**	**13 09 39.4**	**+0.8**
WR0				IAmb	IAmb	13 09 48.0	
	comp=Z,4.3nm,1.2s						
WRAB	**Tennant Creek**	**33.75**	**197**	P	**P**	**13 09 38.3**	**-0.6**
WB2	**Warramunga Arr**	**33.76**	**197**	P	**P**	**13 09 40.0**	**+1.0**
WB2				IAmb	IAmb	13 09 48.3	
	comp=Z,4.4nm,1.1s						
WRA	**Warramunga Arr**	**33.76**	**197**	P	**P**	**13 09 39.3**	**+0.3**
	comp=Z,0.5nm,0.6s,baz=16,slow=9.5,SNR=9.3						
AS31	**Alice Springs**	**37.42**	**196**	P	**P**	**13 10 10.2**	**-0.2**
ASAR	**Alice Springs**	**37.42**	**196**	P	**P**	**13 10 11.5**	**+1.1**
	comp=Z,0.6nm,0.7s,baz=19,slow=11,SNR=12						
ASAR	**Alice Springs**	**37.42**	**196**	P	**P**	**13 10 09.1**	**-1.3**
SONM	**Songino Array**	**47.27**	**326**	P	**P**	**13 11 29.6**	**-0.8**
	comp=Z,0.3nm,0.6s,baz=117,slow=6.0,SNR=3.0						
SONM	**Songino Array**	**47.27**	**326**	IAmb	IAmb	13 11 30.8	
	comp=Z,0.4nm,0.9s						
AMKA	**Amchitka**	**47.95**	**29**	P	**P**	**13 11 36.4**	**+0.9**
TOO	**Toolangi**	**49.88**	**179**	P	**P**	**13 11 50.5**	**+0.1**
MKAR	**Makanchi Array**	**61.86**	**317**	P	**P**	**13 13 16.2**	**0.0**
	comp=Z,0.2nm,0.5s,baz=99,slow=7.9,SNR=2.0						
NVAR	**Mina Array Bea**	**87.98**	**51**	P	**P**	**13 15 48.5**	**+0.9**
	comp=Z,0.5nm,0.8s,baz=260,slow=5.3,SNR=3.7						

*SOME **28** 13:05:45.5, 41°.38N×79°.30E, h10^{km}*

*KRNET **28** 13:05:45.2±0.1, 41°.67N×79°.53E, h12^{km}, mb2.5*

*NNC **28** 13:05:55.6±2.3, 41°.64N×79°.10E, h0^{km}, mb3.5, mpv3.2, Error ellipse: s-maj=15.7km s-min=10.1km az=159.0*

ISC 28 13:05:44.1±2.6, **41°.4N**±0°.1×**79°.38E**±0°.06, **h18**^{km}±9^{km}**, n41,** σ**1^{s}.69**/55, **11C-5D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRZ	**Przheval'sk**	**1.31**	**326**	⇓*i*P	**Pn**	**13 06 07.6**	**-0.1**
	baz=15						
PRZ				⇓*i*S	**Sn**	**13 06 24.0**	**-0.9**
	baz=15						
SHLS	**Shalkode**	**1.76**	**2**	*e*P	Pg	13 06 19.4	+1.4
	4.6nm,0.2s						
SHLS				*e*S	Sg	13 06 43.7	+2.8
	131nm,0.4s						
SHLS	**Shalkode**	**1.76**	**2**	P	Pg	13 06 26.1	+8.1
	16nm,0.3s						
SHLS				S	Sg	13 06 47.7	+6.8
	131nm,0.4s						
UZB	**Uzynbulak**	**1.77**	**352**	*e*P	**Pg**	**13 06 19.0**	**+0.9**
	2.6nm,0.4s						
UZB				*e*S	Sg	13 06 43.3	+2.1
	15nm,0.3s						
UZB	**Uzynbulak**	**1.77**	**352**	P	Pg	13 06 25.3	+7.2
	5.1nm,0.2s						
UZB				S	Sg	13 06 45.9	+4.7
	15nm,0.3s						
KDJ	**Kajisay**	**1.80**	**295**	⇓*i*P	**Pb**	**13 06 18.8**	**+2.1**
	baz=85						
KDJ				⇓*i*S	**Sg**	**13 06 43.5**	**+1.3**
	baz=85						
SATY	**Saty**	**1.81**	**337**	*e*P	**Pg**	**13 06 20.0**	**+1.1**
	6.2nm,0.6s						
SATY				*e*S	**Sg**	**13 06 44.8**	**+2.2**
	10nm,0.1s						
SATY	**Saty**	**1.81**	**337**	P	Pg	13 06 24.6	+5.7
	6.2nm,0.6s						
SATY				S	**Sg**	**13 06 44.8**	**+2.2**
	10nm,0.1s						
ANVS	**Anan'yevo**	**1.88**	**318**	⇑*i*P	**Pg**	**13 06 18.6**	**-1.7**
	baz=10.0						
ANVS				⇑*i*S	**Sg**	**13 06 43.1**	**-1.7**
	baz=10.0						
PDGK	**Podgornoye**	**1.93**	**2**	P	Pg	13 06 27.2	+6.0
	5.7nm,0.4s						
PDGK				S	Sg	13 06 49.5	+3.2
	14nm,0.5s						
PDGK	**Podgornoye**	**1.93**	**2**	⇑P	**Pg**	**13 06 21.4**	**+0.1**
	8.9nm,0.6s						
PDGK				⇑S	Sg	13 06 49.7	+3.4
	22nm,0.6s						
KPKS	**Kokpek**	**2.13**	**346**	*e*P	**Pg**	**13 06 25.3**	**+0.2**
	6.7nm,0.2s						
KPKS				*e*S	**Sg**	**13 06 53.9**	**+1.1**
	53nm,0.3s						
KTMS	**Ketmen**	**2.17**	**19**	*e*P	**Pg**	**13 06 25.5**	**-0.4**
	1.2nm,0.1s						
KTMS				*e*S	**Sg**	**13 06 53.9**	**-0.1**
	6.6nm,0.1s						
KTMS	**Ketmen**	**2.17**	**19**	P	Pg	13 06 29.6	+3.8
	1.1nm,0.0s						
TNSS	**Tian-Shan**	**2.44**	**313**	*e*P	**Pg**	**13 06 30.6**	**-0.4**
	3.9nm,0.3s						
TNSS				*e*S	**Sg**	**13 07 02.7**	**+0.1**
	14nm,0.4s						
TNSS	**Tian-Shan**	**2.44**	**313**	Pg	**Pg**	**13 06 34.2**	**+3.2**
	9.9nm,0.6s						
TNSS				Lg	Lg	13 07 01.1	
	6.9nm,0.3s						
MDOK	**Medeo**	**2.47**	**316**	*e*P	**Pg**	**13 06 30.6**	**-0.9**
	2.4nm,0.3s						
MDOK				*e*S	**Sg**	**13 07 02.9**	**-0.7**
	12nm,0.5s						
MDOK	**Medeo**	**2.47**	**316**	Pg	**Pg**	**13 06 35.1**	**+3.6**
	6.4nm,0.4s						
MDOK				Lg	Lg	13 07 02.7	
	12nm,0.5s						
KOTS	**Kotyrbulak**	**2.49**	**318**	*e*P	**Pg**	**13 06 31.1**	**-0.8**
	14nm,0.3s						
KOTS				*e*S	**Sg**	**13 07 03.5**	**-0.7**
	42nm,0.4s						
KOTS	**Kotyrbulak**	**2.49**	**318**	Pg	Pg	13 06 35.6	+3.7
	17nm,0.3s						
KOTS				Lg	Lg	13 07 03.6	
	42nm,0.4s						
ULHL	**Ulahol**	**2.49**	**291**	⇑*i*P	**Pb**	**13 06 29.6**	**+1.1**
	baz=84						
ULHL				⇑*i*S	**Sb**	**13 07 01.8**	**+2.8**
	baz=84						
IZV	**Izvestkoviy**	**2.63**	**309**	*e*P	**Pg**	**13 06 33.6**	**-0.9**
	2.9nm,0.2s						
IZV				*e*S	**Sg**	**13 07 08.3**	**-0.3**
	27nm,0.5s						
IZV	**Izvestkoviy**	**2.63**	**309**	Pg	**Pg**	**13 06 37.8**	**+3.3**
	7.9nm,0.7s						
IZV				Lg	Lg	13 07 07.5	
	27nm,0.5s						
MNBS	**Baschi**	**2.77**	**345**	*e*P	**Pg**	**13 06 37.3**	**0.0**
	4.7nm,0.4s						
MNBS				*e*S	**Sg**	**13 07 14.5**	**+1.2**
	7.3nm,0.2s						
MNBS	**Baschi**	**2.77**	**345**	Pg	Pg	13 06 40.0	+2.7
	16nm,0.4s						
MNBS				Lg	Lg	13 07 11.0	
	7.3nm,0.2s						
BOOM	**Boomskoye usch**	**2.79**	**294**	⇑*i*P	**Pb**	**13 06 33.5**	**0.0**
	baz=88						
BOOM				⇑*i*S	**Sb**	**13 07 08.6**	**+1.2**
	baz=88						
DJR	**Jarkent**	**2.95**	**6**	*e*P	**Pg**	**13 06 39.2**	**-1.5**
	0.9nm,0.2s						
DJR				*e*S	**Sg**	**13 07 17.8**	**-1.0**
	12nm,0.4s						
CHKK	**Chushkaly**	**3.02**	**325**	*e*P	**Pg**	**13 06 40.7**	**-1.4**
	2.3nm,0.2s						
CHKK				*e*S	**Sg**	**13 07 20.0**	**-1.2**
	19nm,0.4s						
CHKK	**Chushkaly**	**3.02**	**325**	Pg	**Pg**	**13 06 44.5**	**+2.5**
	4.3nm,0.3s						
CHKK				Lg	Lg	13 07 19.1	
	19nm,0.4s						
KST	**Kastek**	**3.02**	**304**	*e*P	**Pg**	**13 06 40.7**	**-1.4**
	2.1nm,0.3s						
KST				*e*S	**Sg**	**13 07 20.2**	**-1.1**
	11nm,0.6s						
KST	**Kastek**	**3.02**	**304**	Pg	**Pg**	**13 06 43.8**	**+1.7**
	4.4nm,0.5s						
KST				Lg	Lg	13 07 17.6	
	11nm,0.6s						
ARXS	**Arharly**	**3.04**	**338**	*e*P	**Pg**	**13 06 41.6**	**-0.7**
	1.8nm,0.5s						
ARXS				*e*S	**Sg**	**13 07 22.1**	**+0.4**
	4.5nm,0.5s						
ARXS	**Arharly**	**3.04**	**338**	Pg	Pg	13 06 45.8	+3.5
	6.4nm,0.5s						
ARXS				Lg	Lg	13 07 21.1	
	4.0nm,0.3s						
KTBS	**Karatobe**	**3.05**	**320**	*e*P	**Pg**	**13 06 40.8**	**-1.9**
	1.0nm,0.2s						
KTBS				*e*S	**Sg**	**13 07 20.4**	**-1.8**
	20nm,0.4s						
KTBS	**Karatobe**	**3.05**	**320**	Pg	**Pg**	**13 06 44.6**	**+1.9**
	1.9nm,0.5s						
KTBS				Lg	Lg	13 07 20.4	
	13nm,0.6s						
TKM2	**Tokmak 2**	**3.20**	**300**	⇑*i*P	**Pb**	**13 06 38.7**	**-1.8**
	baz=95						
TKM2				⇑*i*S	**Sb**	**13 07 17.6**	**-1.6**
	baz=95						
TKM2	**Tokmak 2**	**3.20**	**300**	⇓P	**Pg**	**13 06 43.9**	**-1.5**
	1.2nm,0.5s						
TKM2				⇑S	**Sg**	**13 07 25.3**	**-1.6**
	2.7nm,0.4s						
KUU	**Kurty**	**3.35**	**319**	*e*P	**Pg**	**13 06 45.9**	**-2.5**
	0.9nm,0.1s						
KUU				*e*S	**Sg**	**13 07 29.2**	**-2.6**
	6.6nm,0.1s						
KUU	**Kurty**	**3.35**	**319**	Pg	**Pg**	**13 06 50.2**	**+1.8**
	1.6nm,0.1s						
KUU				Lg	Lg	13 07 28.7	
	6.6nm,0.1s						
KRBS	**Karabastau**	**3.57**	**311**	*e*P	**Pg**	**13 06 50.2**	**-2.4**
	1.0nm,0.3s						
KRBS				*e*S	**Sg**	**13 07 36.8**	**-2.1**
	3.6nm,0.3s						
KRBS	**Karabastau**	**3.57**	**311**	Pg	**Pg**	**13 06 54.6**	**+2.0**
	1.3nm,0.2s						
KRBS				Lg	Lg	13 07 36.2	
	2.2nm,0.3s						

*IDC **28** 13:10:44.2±1.1, 6°.45S×150°.27E, h0^{km}, mb3.9/8, mb1 4.1/9, mb1mx3.8/33, mbtmp3.9/9, ML2.3/1, MS3.0/2, Ms1 2.9/2, ms1mx2.5/23, Error ellipse: s-maj=50.2km s-min=18.8km az=125.0*

*NEIC **28** 13:10:51.3±2.2, 6°.61S±0°.06×150°.3E±0°.1, h63^{km}±14^{km}, mb4.1/7, Error ellipse: s-maj=21.0km s-min=6.3km az=109.0*

ISC 28 13:10:47.0±0.8, **6°.3S**±0°.1×**150°.3E**±0°.2, **h33**^{km}**, n27,** σ**1^{s}.45**/19, **mb3.7**/7, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	**Rabaul**	**2.84**	**41**	Pn	**Pb**	**13 11 36.5**	**-0.7**
PMG	**Port Moresby**	**4.34**	**225**	Pn	**Pn**	**13 11 52.6**	**+1.9**
	13nm,0.3s,baz=52,slow=7.3,SNR=38						
PMG				Sn	**Sn**	**13 12 38.3**	**-1.8**
	47nm,0.3s,baz=102,slow=21,SNR=13						
PMG	**Port Moresby**	**4.34**	**225**		**Pn**	**13 11 52.7**	**+2.0**
COEN	**Coen**	**10.30**	**222**	Pn	**Pn**	**13 13 13.0**	**+0.4**
CTAO	**Charters Tower**	**14.21**	**196**	Pn	**Pn**	**13 14 05.2**	**-0.9**
EIDS	**Eidsvold**	**18.93**	**178**	P	**Pn**	**13 15 04.0**	**-2.1**
EIDS				IAmb	IAmb	13 15 07.0	
	comp=Z,10nm,1.2s						
WB0	**Warramunga Arr**	**20.41**	**228**	P	Pn	13 15 22.7	-0.9
WB0				IAmb	IAmb	13 15 35.2	
	comp=Z,12nm,0.7s						
WR0	**Warramunga Arr**	**20.42**	**227**	P	Pn	13 15 22.8	-1.0
WR0				IAmb	IAmb	13 15 35.3	
	comp=Z,12nm,0.8s						
WRAB	**Tennant Creek**	**20.54**	**227**	P	Pn	13 15 23.9	-1.3
WRAB				IAmb	IAmb	13 15 36.6	
	comp=Z,12nm,0.7s						
WB2	**Warramunga Arr**	**20.55**	**227**	P	Pn	13 15 24.1	-1.2
WRA	**Warramunga Arr**	**20.56**	**227**	P	Pn	13 15 23.9	-1.6
	comp=Z,3.7nm,0.7s,baz=52,slow=11,SNR=29						
AS31	**Alice Springs**	**23.34**	**221**	P	**P**	**13 15 54.4**	**+1.8**
ASAR	**Alice Springs**	**23.34**	**221**	P	**P**	**13 15 52.5**	**-0.2**
	comp=Z,1.5nm,0.7s,baz=54,slow=8.8,SNR=22						
ASAR	**Alice Springs**	**23.34**	**221**	P	**P**	**13 15 52.9**	**+0.2**
BATI	**Baumata**	**26.61**	**260**	P	**P**	**13 16 21.4**	**-1.3**
	comp=Z,7.4nm,0.5s,baz=62,slow=18,SNR=1.8						
STKA	**Stephens Creek**	**26.67**	**197**	P	**P**	**13 16 24.2**	**+1.2**
	comp=Z,3.0nm,0.7s,baz=351,slow=9.5,SNR=5.2						
STKA				LR	LR	13 26 52.5	
	comp=Z,38nm,18.2s,baz=220,slow=36						
STKA	**Stephens Creek**	**26.67**	**197**	P	**P**	**13 16 23.6**	**+0.6**
STKA				IAmb	IAmb	13 16 41.2	
	comp=Z,1.5nm,1.4s						
FITZ	**Fitzroy Crossi**	**26.72**	**242**	P	**P**	**13 16 24.6**	**+0.9**
	comp=Z,3.1nm,0.4s,baz=57,slow=8.8,SNR=16						
FITZ	**Fitzroy Crossi**	**26.72**	**242**	P	**P**	**13 16 25.2**	**+1.5**
MBWA	**Marble Bar**	**33.03**	**240**	P	**P**	**13 17 18.4**	**-1.2**
KSRS	**Korea Array**	**48.31**	**336**	LR	LR	13 38 16.1	
	comp=Z,11nm,18.9s,baz=330,slow=34						
SONM	**Songino Array**	**66.33**	**329**	P	P	13 21 36.4	+3.9
	comp=Z,0.4nm,0.7s,baz=142,slow=7.3,SNR=2.9						
ILAR	**Eielson Array**	**84.53**	**23**	P	**P**	**13 23 17.6**	**+1.1**
	comp=Z,0.6nm,0.6s,baz=251,slow=5.3,SNR=8.8						
ILAR	**Eielson Array**	**84.53**	**23**	P	**P**	**13 23 18.0**	**+1.5**
NVAR	**Mina Array Bea**	**95.00**	**52**	P	P	13 24 11.6	+4.7
	comp=Z,0.1nm,0.4s,baz=271,slow=5.3,SNR=1.7						
YKA	**Yellowknife Ar**	**97.95**	**28**	P	Pdif	13 24 22.7	+3.2
	comp=Z,0.1nm,0.4s,baz=285,slow=4.2,SNR=2.5						
TORD	**Torodi Ar. Bea**	**148.34**	**285**	PKPbc	**PKPab**	**13 30 33.0**	**-1.2**
	comp=Z,0.6nm,0.7s,baz=62,slow=2.7,SNR=6.7						

IDC 28 13:18:54.3±4.0, **30°.94N×141°.72E, h0**^{km}**, mb3.3**/2, **mb1 3.4**/4, **mb1mx3.2**/34, **mbtmp3.3**/4, **ML2.5**/2, **Error ellipse: s-maj=151.6km s-min=22.1km az=70.0, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**2.73**	**323**	Pn	Pn	13 19 38.9	-0.5
	5.7nm,0.3s,baz=73,slow=18,SNR=1.7						
JHJ				Sn	Sn	13 20 12.3	-0.7
	4.6nm,0.3s,baz=128,slow=20,SNR=1.5						
MJAR	**Matsushiro Arr**	**6.31**	**333**	Pn	Pn	13 20 29.3	+0.7
	0.1nm,0.3s,baz=147,slow=16,SNR=1.4						
WRA	**Warramunga Arr**	**51.08**	**189**	P	P	13 27 59.2	+0.5
	0.1nm,0.2s,baz=6.7,slow=7.8,SNR=13						
ASAR	**Alice Springs**	**54.81**	**189**	P	P	13 28 25.3	-0.9
	0.3nm,0.9s,baz=15,slow=6.2,SNR=5.7						

*ATH **28** 13:23:30.9, 35°.26N×23°.32E, h16^{km}±3^{km}, ML2.5/2, Error ellipse: s-maj=3.9km s-min=1.6km az=41.0*

*THE **28** 13:23:31.5, 35°.23N×23°.38E, h26^{km}±3^{km}, ML2.4/4, Error ellipse: s-maj=6.2km s-min=1.5km az=168.0*

ISC 28 13:23:31.2±1.7, **35°.27N**±0°.07×**23°.35E**±0°.08, **h21**^{km}±3^{km}, **n11,** σ**0^{s}.51**/19, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KNDR	**Palaiochora Ch**	**0.27**	**97**	P	**Pb**	**13 23 37.1**	**-0.5**
KNDR				S	**Sb**	**13 23 42.0**	**+0.1**
	648nm,0.7s						
IMMV	**Iera Moni Meta**	**0.55**	**69**	P	**Pb**	**13 23 41.8**	**-0.3**
IMMV				S	**Sb**	**13 23 50.3**	**+0.6**
IMMV				AML	AML	13 23 53.0	
	comp=E,1037µm,0.5s						
IMMV				AML	AML	13 23 53.4	
	comp=N,912µm,0.4s						
IMMV	**Iera Moni Meta**	**0.55**	**69**	P	**Pb**	**13 23 41.9**	**-0.3**
IMMV				S	**Sb**	**13 23 50.2**	**+0.6**
	comp=N,475nm,0.5s						
VAM	**Vamos**	**0.71**	**78**	P	**Pb**	**13 23 44.4**	**-0.5**
VAM				S	**Sb**	**13 23 54.8**	**+0.7**
VAM				AML	AML	13 23 56.0	
	comp=E,914µm,0.5s						
VAM				AML	AML	13 23 57.0	
	comp=N,1606µm,0.6s						
VAM	**Vamos**	**0.71**	**78**	P	**Pb**	**13 23 44.5**	**-0.3**
VAM				S	**Sn**	**13 23 55.3**	**-1.0**
	comp=N,632nm,0.5s						
GVD	**Gavdhos**	**0.74**	**125**	P	**Pb**	**13 23 45.2**	**-0.2**
GVD				S	**Sn**	**13 23 57.0**	**0.0**
KTHA	**Kythira Island**	**1.02**	**347**	P	**Pn**	**13 23 50.2**	**-0.1**
KTHA				S	**Sn**	**13 24 04.0**	**0.0**
KTHA	**Kythira Island**	**1.02**	**347**	P	**Pn**	**13 23 50.1**	**-0.2**
KTHR	**Kythira**	**1.03**	**344**	P	**Pn**	**13 23 50.3**	**-0.2**
VLI	**Veliai**	**1.49**	**347**	P	**Pn**	**13 23 57.6**	**+0.8**
VLI	**Veliai**	**1.49**	**347**	P	**Pn**	**13 23 57.1**	**+0.3**
VLI				S	**Sn**	**13 24 15.2**	**-0.4**
	comp=N,90nm,0.6s						

IDC 28 13:34:09.1±2.8, **7°.29S×128°.25E, h0**^{km}**, mb3.1**/1, **mb1 3.1**/3, **mb1mx3.0**/24, **mbtmp2.9**/3, **ML2.9**/2, **Error ellipse: s-maj=306.0km s-min=34.2km az=65.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.89**	**155**	Pn	Pn	13 37 25.8	-1.6
	0.1nm,0.3s,baz=332,slow=13,SNR=4.6						
WRA				Sn	Sn	13 39 44.4	-18
	0.1nm,0.3s,baz=333,slow=23,SNR=1.6						
ASAR	**Alice Springs**	**17.16**	**162**	P	P	13 38 11.9	-0.3
	0.1nm,0.3s,baz=339,slow=9.2,SNR=1.6						
ASAR				S	Sn	13 41 03.4	-19
	0.0nm,0.3s,baz=95,slow=22,SNR=1.2						
MKAR	**Makanchi Array**	**67.53**	**328**	P	P	13 45 07.2	0.0
	0.1nm,0.4s,baz=119,slow=7.5,SNR=1.2						

IDC 28 13:37:53.2±2.1, **0°.43N×126°.48E, h0**^{km}**, mb3.3**/3, **mb1 3.5**/3, **mb1mx3.2**/23, **mbtmp3.3**/3, **MS2.8**/1, **Ms1 2.8**/1, **ms1mx2.5**/11, **Error ellipse: s-maj=206.9km s-min=24.9km az=65.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.66**	**160**	P	P	13 42 45.2	-0.3
	0.5nm,0.5s,baz=338,slow=10.0,SNR=1.8						
WRA				LR	LR	13 50 56.8	
	comp=Z,24nm,20.2s,baz=220,slow=36						
ASAR	**Alice Springs**	**25.01**	**164**	P	P	13 43 19.3	+0.2
	0.2nm,0.5s,baz=345,slow=7.6,SNR=6.3						
MKAR	**Makanchi Array**	**60.13**	**326**	P	P	13 48 02.5	-0.1
	0.4nm,0.3s,baz=126,slow=7.7,SNR=15						

IDC 28 13:59:43.0±2.0, **5°.49S×127°.53E, h0**^{km}**, mb3.4**/1, **mb1 3.2**/3, **mb1mx3.1**/23, **mbtmp3.1**/3, **ML2.8**/2, **Error ellipse: s-maj=139.8km s-min=28.1km az=65.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.82**	**156**	Pn	Pn	14 03 28.2	+0.9
	0.0nm,0.3s,baz=334,slow=12,SNR=1.8						
WRA				Sn	Sn	14 06 25.6	+2.2
	0.0nm,0.3s,baz=79,slow=40,SNR=1.6						
ASAR	**Alice Springs**	**19.08**	**162**	P	P	14 04 06.8	-0.6
	0.0nm,0.3s,baz=342,slow=12,SNR=2.1						

MKAR	**Makanchi Array**	**65.64**	**328**	P	P	14 10 29.1	0.0
	0.2nm,0.4s,baz=118,slow=8.5,SNR=5.7						

NOU ***28*** *14:17:47.9, 34°.01S×179°.11E, h134^{km}, mb4.7, South of Kermadec Islands*

WEL ***28*** *14:18:00, 36°.51S×177°.29E, h4^{km}, ML4.4, Mw4.9, Moment Tensor Solution. s10 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.90; $M_{\theta\theta}$0.94; $M_{\phi\phi}$0.96; $M_{r\theta}$1.37; $M_{\theta\phi}$0.99; $M_{\phi r}$1.38; Fault plane solution: $M_0$2.73000×10^{16} NP1: ϕ_s45.00000°, δ22.00000°, λ-90.00000°. NP2: ϕ_s225.00000°, δ68.00000°, λ-90.00000°. Principal axes: T 2751.1600, Plg23.0000°, Azm315.0000°; N -33.8500, Plg0.0000°, Azm45.0000°; P -2717.3100, Plg67.0000°, Azm135.0000°;*

IDC ***28*** *14:18:22.0±0.9, 36°.56S×177°.44E, h0^{km}, mb4.3/6, mb1 4.4/8, mb1mx4.2/21, mbtmp4.2/8, ML4.4/2, MS4.0/19, Ms1 4.0/19, ms1mx4.0/21 Error ellipse: s-maj=29.6km s-min=17.4km az=78.0*

NEIC ***28*** *14:18:23.7±2.5, 36°.47S±0°.09×177°.48E±0°.06, h15^{km}±7^{km}, mb4.3/7, Error ellipse: s-maj=14.8km s-min=4.9km az=204.0*

GCMT ***28*** *14:18:26.7±0.3, 36°.45S±0°.02×177°.40E±0°.02, h14^{km}, MW5.0/98, Moment Tensor Solution. s49,c61; s98,c140; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.34±.14; $M_{\theta\theta}$1.47±.10; $M_{\phi\phi}$1.86±.10; $M_{r\theta}$0.74±.20; $M_{\theta\phi}$1.75±.06; $M_{\phi r}$1.30±.22; Best double couple: $M_0$3.70000×10^{16} NP1: ϕ_s47.00000°, δ34.00000°, λ-82.00000°. NP2: ϕ_s217.00000°, δ57.00000°, λ-96.00000°. Principal axes: T 3.7300, Plg12.0000°, Azm311.0000°; N -0.0700, Plg5.0000°, Azm220.0000°; P -3.6690, Plg77.0000°, Azm109.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 28 14:18:27.2±0.6, **36°.55S**±0°.06×**177°.37E**±0°.08, **h35^{km}, n59,** σ**1^{s}36**/40, **mb4.2**/10, **MS4.0**/20, **Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.26**	**144**	Pn	**Pn**	**14 18 45.9**	**-2.4**
URZ	**Urewera**	**1.72**	**187**	Pn	**Pn**	**14 18 53.2**	**-1.5**
	64nm,0.3s,baz=275,slow=3.8,SNR=259						
URZ				Sn	**Sn**	**14 19 14.9**	**-0.5**
	177nm,0.3s,baz=216,slow=21,SNR=8.3						
URZ				LR	LR	14 19 41.0	
	comp=Z,6µm,18.6s,baz=333,slow=46						
BKZ	**Black Stump Fm**	**2.71**	**195**	Pn	**Pn**	**14 19 08.9**	**+0.7**
HIZ	**Hauiti**	**2.80**	**225**		**Pn**	**14 19 08.8**	**-0.7**
OUZ	**Omahuta**	**3.34**	**292**	Pn	**Pn**	**14 19 15.3**	**-1.5**
BFZ	**Birch Farm**	**4.22**	**192**	Pn	**Pn**	**14 19 29.1**	**0.0**
TUWZ	**Tuamarina**	**5.56**	**208**		**Pn**	**14 19 47.4**	**0.0**
THZ	**Tophouse**	**6.26**	**212**		**Pn**	**14 19 57.6**	**+0.6**
RAO	**Raoul Island**	**8.28**	**30**	LR	LR	14 23 22.8	
	comp=Z,688nm,19.5s,baz=127,slow=36						
RPZ	**Rata Peaks**	**8.64**	**212**	Pn	**Pn**	**14 20 28.5**	**-1.2**
	1.8nm,0.3s,baz=300,slow=1.2,SNR=9.9						
RPZ				Sn	**Sn**	**14 22 01.5**	**-4.3**
	0.7nm,0.3s,baz=184,slow=21,SNR=3.8						
RPZ				LR	LR	14 24 20.6	
	comp=Z,1µm,19.4s,baz=40,slow=41						
DZM	**Mont Dzumac**	**17.27**	**324**	*e*LR	LR	14 26 02.5	
	comp=Z,2µm,25.3s						
MSVF	**Nonsavu**	**18.75**	**2**	P	**P**	**14 22 43.0**	**-0.2**
	0.1nm,0.3s,baz=16,slow=23,SNR=2.4						
MSVF				LR	LR	14 28 12.4	
	comp=Z,548nm,20.0s,baz=181,slow=32						
MSVF	**Nonsavu**	**18.75**	**2**	P	**P**	**14 22 41.1**	**-2.1**
MSVF				IAmb	IAmb	14 22 49.7	
	comp=Z,22nm,1.1s						
STKA	**Stephens Creek**	**29.84**	**268**	LR	LR	14 35 41.5	
	comp=Z,255nm,18.4s,baz=85,slow=35						
TBI	**Tubuai**	**31.44**	**75**	*e*LR	LR	14 32 10.5	
	comp=Z,382nm,30.8s						
PPT2	**Papeete2**	**34.73**	**66**	*e*LR	LR	14 33 44.2	
	comp=Z,341nm,27.2s						
PPT	**Papeete**	**34.74**	**66**	LR	LR	14 35 32.4	
	comp=Z,163nm,20.1s,baz=203,slow=30						
AS31	**Alice Springs**	**39.42**	**277**	P	**P**	**14 25 53.9**	**0.0**
ASAR	**Alice Springs**	**39.42**	**277**	P	**P**	**14 25 54.5**	**+0.5**
	comp=Z,3.2nm,0.8s,baz=118,slow=7.5,SNR=28						
ASAR				PcP	**PcP**	**14 28 02.2**	**+0.5**
	comp=Z,0.2nm,0.6s,baz=123,slow=3.8,SNR=0.9						
ASAR				LR	LR	14 42 15.0	
	comp=Z,318nm,18.0s,baz=122,slow=36						
ASAR	**Alice Springs**	**39.42**	**277**	P	**P**	**14 25 52.8**	**-1.1**
WR0	**Warramunga Arr**	**40.82**	**282**	P	**P**	**14 26 04.4**	**-1.1**
WR0				IAmb	IAmb	14 26 10.3	
	comp=Z,6.7nm,1.2s						
WB2	**Warramunga Arr**	**40.98**	**282**	P	**P**	**14 26 07.7**	**+0.9**
WB2				IAmb	IAmb	14 26 17.3	
	comp=Z,3.2nm,0.7s						
WRAB	**Tennant Creek**	**40.99**	**282**	P	**P**	**14 26 07.1**	**+0.2**
WRAB				IAmb	IAmb	14 26 09.5	
	comp=Z,15nm,1.5s						
WRA	**Warramunga Arr**	**40.99**	**282**	P	**P**	**14 26 06.9**	**-0.1**
	comp=Z,1.6nm,0.7s,baz=122,slow=7.5,SNR=18						
WRA				PcP	**PcP**	**14 28 06.4**	**-0.3**
	comp=Z,0.4nm,0.7s,baz=119,slow=3.0,SNR=2.2						
WRA				LR	LR	14 43 26.1	
	comp=Z,385nm,18.3s,baz=135,slow=37						
WB0	**Warramunga Arr**	**41.05**	**282**	P	**P**	**14 26 07.0**	**-0.4**
WB0				IAmb	IAmb	14 26 18.2	
	comp=Z,4.4nm,0.8s						
VNDA	**Vanda**	**41.63**	**185**	LR	LR	14 41 40.2	
	comp=Z,107nm,18.7s,baz=32,slow=34						
RKT	**Rikitea**	**43.04**	**86**	*e*LR	LR	14 37 37.3	
	comp=Z,367nm,30.2s						
TAOE	**Nuku Hiva Isla**	**47.34**	**65**	*e*LR	LR	14 39 30.6	
	comp=Z,220nm,27.1s						
FITZ	**Fitzroy Crossi**	**48.89**	**278**	P	**P**	**14 27 10.6**	**+0.8**
QSPA	**South Pole Qui**	**53.58**	**180**	P	**P**	**14 27 46.0**	**+1.6**
	comp=Z,5.3nm,0.7s,baz=29,slow=1.4,SNR=32						
QSPA	**South Pole Qui**	**53.58**	**180**	P	**P**	**14 27 46.8**	**+2.4**
RPN	**Rapa Nui**	**61.63**	**104**	LR	LR	14 48 32.7	
	comp=Z,149nm,22.0s,baz=216,slow=29						
MAW	**Mawson**	**65.19**	**203**	LR	LR	15 00 03.2	
	comp=Z,139nm,18.1s,baz=86,slow=38						
VNA3	**Neumayer Olymp**	**72.39**	**178**	P	**P**	**14 29 50.0**	**+0.8**
VNA2	**Neumayer--Watz**	**72.78**	**178**	P	**P**	**14 29 51.6**	**+0.1**
	baz=174,slow=3.7						
VNA1	**Neumayer--Stat**	**73.03**	**178**	P	**P**	**14 29 54.1**	**+1.2**
H03S2	**Juan Fernandez**	**80.22**	**125**	T	T	15 59 04.1	
	baz=231,slow=74,SNR=9.3						
H03S1	**Juan Fernandez**	**80.23**	**125**	T	T	15 59 05.3	
	baz=231,slow=74,SNR=10						
H03S3	**Juan Fernandez**	**80.24**	**125**	T	T	15 59 04.3	
	baz=231,slow=74,SNR=11						
H03N3	**Juan Fernandez**	**80.45**	**125**	T	T	15 59 25.3	
	baz=235,slow=72,SNR=114						
H03N2	**Juan Fernandez**	**80.46**	**125**	T	T	15 59 21.9	
	baz=235,slow=72,SNR=61						
H03N1	**Juan Fernandez**	**80.47**	**125**	T	T	15 59 24.4	
	baz=235,slow=72,SNR=71						
PLCA	**Paso Flores**	**81.06**	**135**	P	**P**	**14 30 39.8**	**+1.1**
	comp=Z,0.8nm,0.7s,baz=283,slow=4.9,SNR=3.5						
PLCA				LR	LR	14 58 17.8	
	comp=Z,100nm,21.3s,baz=215,slow=30						
MJAR	**Matsushiro Arr**	**81.30**	**329**	LR	LR	15 03 05.9	
	comp=Z,35nm,21.9s,baz=305,slow=33						
KSRS	**Korea Array**	**86.70**	**323**	P	**P**	**14 31 09.2**	**+2.1**
	comp=Z,1.6nm,0.9s,baz=142,slow=5.1,SNR=5.2						
KSRS				LR	LR	15 03 00.3	
	comp=Z,58nm,20.8s,baz=134,slow=31						
PETK	**Petropavlovsk-**	**90.91**	**348**	LR	LR	15 05 18.7	
	comp=Z,93nm,20.2s,baz=158,slow=31						
CMAR	**Chiang Mai Arr**	**91.91**	**292**	P	**P**	**14 31 34.1**	**+2.0**
	comp=Z,2.2nm,0.8s,baz=142,slow=3.5,SNR=14						
CMAR				LR	LR	15 15 08.7	
	comp=Z,73nm,20.2s,baz=185,slow=37						
NVAR	**Mina Array Bea**	**95.33**	**45**	LR	LR	15 07 37.9	
	comp=Z,50nm,19.7s,baz=316,slow=31						
TXAR	**Lajitas Array**	**98.88**	**60**	LR	LR	15 09 22.7	
	comp=Z,18nm,20.8s,baz=0.0,slow=31						
LPAZ	**La Paz**	**98.94**	**118**	LR	LR	15 07 39.4	
	comp=Z,49nm,21.5s,baz=208,slow=30						
CPUP	**Villa Florida**	**98.98**	**132**	LR	LR	15 10 09.2	
	comp=Z,223nm,19.5s,baz=224,slow=31						
KBZ	**Khabaz**	**144.82**	**296**	PKP	**PKPab**	**14 37 58.4**	**-0.7**
	comp=Z,2.1nm,0.8s,baz=198,slow=3.2,SNR=2.4						
FINES	**FINESS Array B**	**149.24**	**333**	PKPbc	**PKPbc**	**14 38 09.9**	**-1.3**
	comp=Z,2.7nm,0.8s,baz=32,slow=4.4,SNR=8.5						
LIC	**Lamto**	**149.74**	**175**	*e*PKIKP	**PKiKP**	**14 38 14.7**	**-0.2**
	comp=Z,26nm,1.3s						
KIC	**Kosan Boka**	**149.89**	**176**	*e*PKIKP	**PKiKP**	**14 38 15.1**	**-0.1**
	comp=Z,15nm,1.0s						
TIC	**Toumodi**	**150.16**	**175**	*e*PKIKP	**PKPbc**	**14 38 14.6**	**-0.3**
DBIC	**Dimbokro**	**150.19**	**176**	PKPbc	**PKPbc**	**14 38 13.5**	**-1.5**
	comp=Z,1.8nm,0.6s,baz=180,slow=5.1,SNR=2.6						
BRTR	**Keskin Array B**	**151.42**	**288**	PKPbc	**PKPbc**	**14 38 16.1**	**-1.2**
	comp=Z,1.0nm,0.8s,baz=84,slow=3.7,SNR=3.9						
TORD	**Torodi Ar. Bea**	**156.38**	**191**	PKPab	**PKPab**	**14 38 45.5**	**-1.5**
	comp=Z,0.8nm,0.5s,baz=161,slow=5.5,SNR=4.6						

NEIC ***28*** *14:38:30.1±3.0, 37°.2N±0°.1×144°.6E±0°.2, h39^{km}±10^{km}, mb4.4/8, Error ellipse: s-maj=22.9km s-min=13.8km az=119.0*

JMA ***28*** *14:38:31.5±0.2, 37°.41N×144°.36E, h45^{km}, M3.4*

IDC ***28*** *14:38:34.4±9.3, 36°.16N×143°.99E, h0^{km}, mb3.5/2, mb1 3.8/3, mb1mx3.3/35, mbtmp3.5/3, ML2.6/1, Error ellipse: s-maj=205.6km s-min=44.4km az=35.0*

ISC 28 14:38:29.3±0.9, **37°.38N**±0°.06×**144°.61E**±0°.07, **h35^{km}, n34,** σ**2^{s}00**/46, **mb4.3**/6, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**2.66**	**291**	P	**Pn**	**14 39 10.4**	**+0.8**
JIKH				*e*S	**Sn**	**14 39 39.4**	**-1.2**
JIO	**Ouri**	**2.79**	**294**	P	**Pn**	**14 39 12.4**	**+0.9**
JIO				*e*S	**Sn**	**14 39 42.5**	**-1.4**
JKMT	**Kesennumamotoy**	**2.86**	**301**	P	**Pn**	**14 39 13.3**	**+0.9**
JKMT				S	**Sn**	**14 39 44.5**	**-1.0**
OFUJ	**Ofunato**	**2.87**	**307**	P	**Pn**	**14 39 13.5**	**+0.9**
OFUJ				*e*S	**Sn**	**14 39 45.0**	**-0.9**
JMM	**Marumori**	**3.07**	**280**	Pn	**Pn**	**14 39 16.2**	**+0.9**
JMK	**Ichinoseki**	**3.10**	**301**	P	**Pn**	**14 39 17.1**	**+1.4**
JMK				S	**Sn**	**14 39 51.1**	**-0.4**
JOM	**Ohasama**	**3.34**	**310**	P	**Pn**	**14 39 21.4**	**+2.4**
JOM				S	**Sn**	**14 39 57.3**	**-0.2**
JFT	**Otama**	**3.40**	**274**	P	**Pn**	**14 39 21.7**	**+1.8**
JFT				*e*S	**Sn**	**14 39 58.7**	**-0.3**
JYK	**Kaneyama**	**3.69**	**296**	P	**Pn**	**14 39 25.6**	**+1.8**
JTM	**Tenmabayashi**	**4.38**	**322**	Pn	**Pn**	**14 39 36.9**	**+3.6**
ERM	**Erimo**	**4.76**	**347**	Pn	**Pn**	**14 39 40.8**	**+2.2**
JRY	**Ryogami san**	**4.78**	**255**	P	**Pn**	**14 39 39.5**	**+0.6**
JRY				*e*S	**Sn**	**14 40 29.7**	**-3.4**
JOT	**Ohata**	**4.86**	**327**	*e*S	**Sn**	**14 40 33.7**	**-1.1**
JOD2	**Odawara 2**	**4.93**	**246**	*e*S	**Sn**	**14 40 34.2**	**-2.6**
MJAR	**Matsushiro Arr**	**5.19**	**263**	Pn	**Pn**	**14 39 46.4**	**+1.8**
	0.3nm,0.3s,baz=88,slow=15,SNR=27						
MJAR	**Matsushiro Arr**	**5.19**	**263**		**Pn**	**14 39 44.5**	**0.0**
MAJO	**Matsushiro**	**5.19**	**263**		**Pn**	**14 39 46.8**	**+2.2**
MJB9	**Matsu-Tunnel**	**5.20**	**263**	Pn	**Pn**	**14 39 44.2**	**-0.4**
JKB	**Kayabe**	**5.28**	**330**	P	**Pn**	**14 39 48.0**	**+2.3**
JKB				*e*S	**Sn**	**14 40 42.7**	**-2.6**
JCH	**Churui**	**5.32**	**350**	P	**Pn**	**14 39 47.1**	**+0.9**
JCH				*e*S	**Sn**	**14 40 43.4**	**-2.7**
NEM2	**Nemuro 2**	**6.04**	**8**	P	**Pn**	**14 39 55.6**	**-0.5**
NEM2				*e*S	**Sn**	**14 40 59.5**	**-4.5**
JTKR	**Abashiri--Toko**	**6.61**	**356**	P	**Pn**	**14 40 05.0**	**+1.1**
JTKR				*e*S	**Sn**	**14 41 13.5**	**-4.4**
BPAW	**Bear Paw Mtn.**	**46.03**	**33**	P	**P**	**14 46 51.2**	**+2.1**
N25K	**Chitina, Valde**	**48.99**	**37**	P	**P**	**14 47 13.6**	**+1.4**
N25K				IAmb	IAmb	14 47 17.3	
	comp=Z,2.6nm,1.1s						
BCAR	**Beaver Creek A**	**50.17**	**35**	P	**P**	**14 47 24.0**	**+2.9**
COEN	**Coen**	**51.08**	**182**	P	**P**	**14 47 26.5**	**-1.9**
CTAO	**Charters Tower**	**57.18**	**178**	P	**P**	**14 48 11.9**	**-0.8**
WB0	**Warramunga Arr**	**57.65**	**191**	P	**P**	**14 48 14.8**	**-1.3**
WB0				IAmb	IAmb	14 48 31.7	
	comp=Z,4.6nm,1.1s						
WR0	**Warramunga Arr**	**57.81**	**191**	P	**P**	**14 48 18.6**	**+1.3**
WR0				IAmb	IAmb	14 48 22.6	
	comp=Z,5.4nm,1.1s						
WB2	**Warramunga Arr**	**57.83**	**191**	P	**P**	**14 48 17.6**	**+0.3**
WB2				IAmb	IAmb	14 48 22.0	
	comp=Z,5.9nm,1.2s						
WRA	**Warramunga Arr**	**57.83**	**191**	P	**P**	**14 48 18.3**	**+1.0**
	comp=Z,0.6nm,0.6s,baz=11,slow=7.4,SNR=6.1						
AS31	**Alice Springs**	**61.55**	**191**	P	**P**	**14 48 39.5**	**-3.4**
ASAR	**Alice Springs**	**61.55**	**191**	P	**P**	**14 48 44.6**	**+1.6**
	comp=Z,0.3nm,0.8s,baz=5.3,slow=8.0,SNR=2.5						
ASAR	**Alice Springs**	**61.55**	**191**	P	**P**	**14 48 41.1**	**-1.8**

MOS ***28*** *14:39:55.3±0.0, 42°.74N×44°.20E, h23^{km}, MPVA4.2*

TIF ***28*** *14:39:55.3, 42°.82N×44°.27E, h13^{km}±1^{km}*

IASPEI ***28*** *14:39:56.4±0.8, 42°.79N±0°.02×44°.25E±0°.02, h12^{km}±5^{km}, Error ellipse: s-maj=2.6km s-min=2.5km az=45.5, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

NORS ***28*** *14:39:56.0±0.0, 42°.75N×44°.22E, h16^{km}, MPVA4.4*

ISK ***28*** *14:39:56.8, 42°.78N×43°.91E, h5^{km}, ML2.8/3*

ISC 28 14:39:56.2±0.8, **42°.77N**±0°.01×**44°.27E**±0°.01, **h15^{km}**±5^{km}, **n87,** σ**1^{s}30**/158, **14C-5D, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LACR	**Lac**	**0.06**	**21**	*c i*PG	**Pg**	**14 39 58.7**	**-0.6**
LACR				pmax	pmax		
	comp=Z,7µm,0.2s						
LACR	**Lac**	**0.06**	**21**	*i* Pg	**Pg**	**14 39 59.1**	**-0.2**
LACR				*e*Sg	**Sg**	**14 40 01.5**	**+0.2**
ZEI	**Tsey**	**0.27**	**273**	⇑*i*PG	**Pg**	**14 40 01.9**	**-0.3**
ZEI				*e*S	**Sg**	**14 40 05.9**	**-0.3**
ZEI	**Tsey**	**0.27**	**273**	*i* Pg	**Pg**	**14 40 01.5**	**-0.6**
	comp=Z,4µm,0.1s						
ZEI				*e*Sg	**Sg**	**14 40 05.7**	**-0.5**
PNSH	**Pansheti**	**0.29**	**118**	P	**Pg**	**14 40 02.6**	**+0.1**
PNSH				S	**Sg**	**14 40 06.8**	**+0.1**
PNSH	**Pansheti**	**0.29**	**118**	PG	**Pg**	**14 40 02.5**	**+0.1**
PNSH				S	**Sg**	**14 40 06.8**	**+0.1**
GUDG	**Gudauri**	**0.34**	**153**	P	**Pn**	**14 40 04.8**	**-2.1**
GUDG				S	**Sb**	**14 40 10.8**	**+1.3**
GUDG	**Gudauri**	**0.34**	**153**	PG	**Pn**	**14 40 04.8**	**-2.1**
GUDG				S	**Sb**	**14 40 10.8**	**+1.3**
KORR	**Kora**	**0.35**	**335**	*c i*PG	**Pb**	**14 40 03.7**	**-0.4**
KORR				pmax	pmax		
	comp=Z,197nm,0.4s						
KORR	**Kora**	**0.35**	**335**	*i* Pg	**Pb**	**14 40 03.5**	**-0.6**
	comp=Z,197nm,0.4s						
KORR				*e*Sg	**Sb**	**14 40 09.4**	**0.0**
	comp=Z,5µm,0.3s						
VLKR	**Vladikavkaz**	**0.41**	**47**	*de*PG	**Pb**	**14 40 05.1**	**-0.1**
VLKR				pmax	pmax		
	comp=Z,104nm,0.2s						
VLKR	**Vladikavkaz**	**0.41**	**47**	*i* Pg	**Pb**	**14 40 05.2**	**+0.1**
VLKR				*e*Sg	**Sb**	**14 40 12.3**	**+1.1**
ARNR	**Ardon**	**0.41**	**2**	*ce*PG	**Pb**	**14 40 05.0**	**-0.1**
ARNR				pmax	pmax		
	comp=Z,329nm,0.3s						
ARNR	**Ardon**	**0.41**	**2**	*i* Pg	**Pb**	**14 40 05.0**	**-0.1**
	comp=Z,329nm,0.2s						
ARNR				*e*Sg	**Sb**	**14 40 11.8**	**+0.6**
	comp=Z,2µm,0.7s						
DIGR	**Digorskoe uzhe**	**0.52**	**284**	*i* PG	**Pg**	**14 40 06.0**	**-0.6**
DIGR				pmax	pmax		
	comp=Z,357nm,0.1s						
DIGR	**Digorskoe uzhe**	**0.52**	**284**	*e*Pg	**Pg**	**14 40 05.8**	**-0.8**
	comp=Z,357nm,0.1s						
DIGR				*e*Sg	**Sg**	**14 40 12.8**	**-0.9**
KMGR	**Komgaron**	**0.52**	**57**	*e*PG	**Pb**	**14 40 07.3**	**+0.2**
KMGR				*e*S	**Sn**	**14 40 17.2**	**-0.7**
KMGR	**Komgaron**	**0.52**	**57**	*e*Pg	**Pb**	**14 40 07.3**	**+0.2**
	comp=Z,204nm,0.2s						
KMGR				*e*Sg	**Sn**	**14 40 17.2**	**-0.7**
	comp=Z,2µm,0.4s						
LSNR	**Lesken**	**0.60**	**327**	*i* PG	**Pb**	**14 40 08.2**	**-0.3**
LSNR				pmax	pmax		
	comp=Z,266nm,0.2s						
LSNR	**Lesken**	**0.60**	**327**	*i* Pg	**Pb**	**14 40 08.2**	**-0.3**
	comp=Z,266nm,0.1s						
LSNR				*e*Sg	**Sb**	**14 40 17.0**	**+0.2**
	comp=Z,1µm,0.2s						
STDR	**Stavd-Durt**	**0.61**	**346**	*e*PG	**Pb**	**14 40 09.2**	**+0.5**
STDR				*e*S	**Sb**	**14 40 19.5**	**+2.3**
STDR	**Stavd-Durt**	**0.61**	**346**	*e*Pg	**Pb**	**14 40 09.2**	**+0.5**
	comp=Z,294nm,0.4s						
STDR				*e*Sg	**Sb**	**14 40 19.5**	**+2.3**
	comp=Z,1µm,0.5s						
ONI	**Oni**	**0.63**	**253**	P	**Pb**	**14 40 08.6**	**-0.3**
ONI				S	**Sb**	**14 40 17.4**	**-0.2**
ONI	**Oni**	**0.63**	**253**	⇓*i*PG	**Pb**	**14 40 08.7**	**-0.3**
ONI				*e*S	**Sb**	**14 40 17.4**	**-0.2**
ONI	**Oni**	**0.63**	**253**	*i* Pg	**Pb**	**14 40 08.7**	**-0.3**
ONI				*e*Sg	**Sb**	**14 40 17.4**	**-0.2**
BTKR	**Batakoyurt**	**0.63**	**18**	*e*PG	**Pn**	**14 40 10.0**	**-0.7**
BTKR				*e*S	**Sb**	**14 40 19.4**	**+1.7**
BTKR	**Batakoyurt**	**0.63**	**18**	*e*Pg	**Pn**	**14 40 10.0**	**-0.7**
	comp=Z,477nm,0.4s						
BTKR				*e*Sg	**Sb**	**14 40 18.3**	**+0.6**
NCK	**Nalchik**	**0.88**	**326**	⇑*e*PG	**Pb**	**14 40 13.0**	**-0.1**
NCK				*e*S	**Sg**	**14 40 24.7**	**0.0**
NCK				pmax	pmax		
	comp=Z,198nm,0.2s						
NCK				smax	smax		
	comp=Z,292nm,0.2s						
NCK	**Nalchik**	**0.88**	**326**	*e*Pg	**Pb**	**14 40 13.1**	**-0.1**
	comp=Z,207nm,0.2s						
NCK				*e*Sg	**Sb**	**14 40 25.6**	**+0.9**
PRTR	**Priterechnaya**	**0.98**	**1**	⇑*i*PG	**Pn**	**14 40 15.5**	**+0.1**
PRTR				*e*S	**Sn**	**14 40 30.2**	**+1.2**
PRTR	**Priterechnaya**	**0.98**	**1**	*i* Pg	**Pn**	**14 40 15.5**	**+0.1**
	comp=Z,563nm,0.5s						
PRTR				*e*Sg	**Sn**	**14 40 30.2**	**+1.2**
TRKR	**Terskaya**	**1.01**	**19**	*e*PG	**Pn**	**14 40 15.7**	**-0.1**
TRKR				pmax	pmax		
	comp=Z,860nm,0.5s						
TRKR	**Terskaya**	**1.01**	**19**	*e*Pg	**Pn**	**14 40 15.8**	**-0.1**
	comp=Z,860nm,0.5s						
TRKR				*e*Sg	**Sn**	**14 40 31.4**	**+1.7**
BKRG	**Bakuriani**	**1.15**	**209**	P	**Pn**	**14 40 18.5**	**+0.5**
BKRG				S	**Sn**	**14 40 35.3**	**+1.7**
BKRG	**Bakuriani**	**1.15**	**209**	PG	**Pn**	**14 40 18.5**	**+0.5**
BKRG				S	**Sn**	**14 40 35.3**	**+1.7**
BTNK	**Botanikuri**	**1.16**	**160**	P	**Pn**	**14 40 19.6**	**+1.7**
BTNK				S	**Sn**	**14 40 36.0**	**+2.5**
BTNK	**Botanikuri**	**1.16**	**160**	PG	**Pn**	**14 40 19.6**	**+1.7**
BTNK				S	**Sn**	**14 40 36.0**	**+2.5**
BRNG	**Burnasheti**	**1.20**	**196**	P	**Pn**	**14 40 19.8**	**+1.2**
BRNG				S	**Sn**	**14 40 38.1**	**+3.5**
GROC	**Groznyy**	**1.20**	**68**	*de*PG	**Pn**	**14 40 19.0**	**+0.5**
GROC				*e*S	**Sn**	**14 40 37.1**	**+2.6**
GROC				pmax	pmax		
	comp=Z,111nm,0.5s						
GROC				smax	smax		
	comp=Z,223nm,0.7s						
GROC	**Groznyy**	**1.20**	**68**	*e*Pg	**Pn**	**14 40 19.1**	**+0.7**
	comp=Z,125nm,0.3s						
GROC				*e*Sg	**Sn**	**14 40 37.0**	**+2.6**
	comp=Z,1µm,0.5s						
NEY	**Neytrino**	**1.23**	**293**	*de*PG	**Pn**	**14 40 18.7**	**-0.4**
NEY				*i* S	**Sg**	**14 40 33.7**	**-2.3**
NEY				pmax	pmax		
	comp=Z,6.0nm,0.6s						
NEY				smax	smax		
	comp=Z,54nm,0.7s						
NEY	**Neytrino**	**1.23**	**293**	*e*Pg	**Pn**	**14 40 18.7**	**-0.4**
	comp=Z,29nm,0.2s						
NEY				*e*Sg	**Sg**	**14 40 34.0**	**-2.1**
DVE	**Vedeno**	**1.38**	**82**	*ce*PG	**Pg**	**14 40 21.1**	**-1.6**
DVE				*e*S	**Sn**	**14 40 40.0**	**+1.0**
DVE				pmax	pmax		
	comp=Z,89nm,0.3s						
DVE				smax	smax		
	comp=Z,219nm,0.6s						
DVE	**Vedeno**	**1.38**	**82**	*e*Pg	**Pg**	**14 40 21.1**	**-1.6**
	comp=Z,90nm,0.3s						
DVE				*e*Sg	**Sn**	**14 40 40.6**	**+1.6**
	comp=Z,544nm,0.3s						
KBZ	**Khabaz**	**1.39**	**314**	⇑*i*PG	**Pn**	**14 40 20.8**	**-0.2**
KBZ				*e*S	**Sb**	**14 40 37.7**	**-1.6**
KBZ	**Khabaz**	**1.39**	**314**	*i* Pg	**Pn**	**14 40 20.8**	**-0.2**
KBZ				*e*Sg	**Sb**	**14 40 37.7**	**-1.6**
KZRT	**Kazreti**	**1.39**	**176**	P	**Pn**	**14 40 18.2**	**-3.0**
KZRT				S	**Sb**	**14 40 37.2**	**-2.3**
KZRT	**Kazreti**	**1.39**	**176**	PG	**Pn**	**14 40 18.1**	**-3.0**
BTLR	**Botlikh**	**1.44**	**94**	⇑*e*PG	**Pg**	**14 40 22.8**	**-1.2**
BTLR				*i* S	**Sg**	**14 40 43.2**	**+0.4**
BTLR				pmax	pmax		
	comp=Z,59nm,0.8s						
BTLR				smax	smax		
	comp=Z,202nm,0.7s						
BTLR	**Botlikh**	**1.44**	**94**	*e*Pg	**Pg**	**14 40 23.1**	**-0.9**
	comp=Z,47nm,0.4s						
BTLR				*e*Sg	**Sg**	**14 40 42.5**	**-0.2**
	comp=Z,332nm,0.3s						
DMNI	**Dmanisi**	**1.44**	**182**	P	**Pg**	**14 40 22.9**	**-1.1**
DMNI				S	**Sg**	**14 40 43.6**	**+0.8**
DMNI	**Dmanisi**	**1.44**	**182**	PG	**Pg**	**14 40 22.9**	**-1.1**
DMNI				S	**Sg**	**14 40 43.6**	**+0.8**
AKH	**Akhalkalaki**	**1.48**	**203**	P	**Pg**	**14 40 24.1**	**-0.6**
AKH				S	**Sg**	**14 40 44.8**	**+0.9**
AKH	**Akhalkalaki**	**1.48**	**203**	PN	**Pg**	**14 40 24.4**	**-0.3**
AKH				SN	**Sg**	**14 40 44.6**	**+0.7**
AKH	**Akhalkalaki**	**1.48**	**203**	PG	**Pg**	**14 40 24.1**	**-0.6**
AKH				S	**Sg**	**14 40 44.8**	**+0.9**
ABS	**Abastumani**	**1.48**	**227**	P	**Pg**	**14 40 23.9**	**-0.8**
ABS				S	**Sg**	**14 40 44.7**	**+0.6**
ABS	**Abastumani**	**1.48**	**227**	PG	**Pg**	**14 40 23.9**	**-0.8**
ABS				S	**Sg**	**14 40 44.6**	**+0.6**
SHA1	**Shidzhatmaz**	**1.52**	**310**	⇑*e*PG	**Pn**	**14 40 22.9**	**-0.3**
SHA1				*e*S	**Sn**	**14 40 42.7**	**-0.1**
SHA1	**Shidzhatmaz**	**1.52**	**310**	*e*Pg	**Pn**	**14 40 22.9**	**-0.3**
	comp=Z,76nm,0.4s						
SHA1				*e*Sg	**Sn**	**14 40 42.7**	**-0.1**
	comp=Z,446nm,0.5s						
PYA1	**Pyatigorsk**	**1.55**	**327**	*e*PG	**Pn**	**14 40 22.8**	**-0.5**
PYA1				*e*S	**Sn**	**14 40 42.7**	**-0.4**
PYA1	**Pyatigorsk**	**1.55**	**327**	*e*Pg	**Pn**	**14 40 22.8**	**-0.5**
PYA1				*e*Sg	**Sn**	**14 40 42.7**	**-0.4**
BGD	**Bogdanovka**	**1.59**	**199**	P	**Pg**	**14 40 26.2**	**-0.5**
BGD				S	**Sg**	**14 40 48.7**	**+1.2**
BGD	**Bogdanovka**	**1.59**	**199**	PG	**Pg**	**14 40 26.2**	**-0.5**
BGD				S	**Sg**	**14 40 48.6**	**+1.2**
CHVG	**Ch'k'valeri**	**1.61**	**269**	P	**Pg**	**14 40 26.9**	**-0.3**
CHVG	**Ch'k'valeri**	**1.61**	**269**	PG	**Pg**	**14 40 26.9**	**-0.3**
BEYR	**Belyy Ugol+**	**1.63**	**320**	⇑*e*PG	**Pn**	**14 40 25.1**	**+0.7**
BEYR				*e*S	**Sn**	**14 40 46.4**	**+1.2**
BEYR	**Belyy Ugol+**	**1.63**	**320**	*e*Pg	**Pn**	**14 40 25.1**	**+0.7**
BEYR				*e*Sg	**Sn**	**14 40 46.4**	**+1.2**
KIV0	**Kislovodsk Arr**	**1.65**	**316**	*e*Pg	**Pn**	**14 40 25.6**	**+0.9**
KIV0				*e*Sg	**Sn**	**14 40 47.2**	**+1.5**
KIV	**Kislovodsk**	**1.65**	**316**	PN	**Pn**	**14 40 25.3**	**+0.5**
KIV				SN	**Sn**	**14 40 46.7**	**+0.9**
KIV	**Kislovodsk**	**1.65**	**316**	*de*PN	**Pn**	**14 40 25.4**	**+0.6**
KIV				*e*S	**Sb**	**14 40 47.8**	**+0.7**
KIV				pmax	pmax		
	comp=Z,34nm,1.5s						
KIV				smax	smax		
	comp=Z,81nm,0.8s						
KIV	**Kislovodsk**	**1.65**	**316**	*e*Pg	**Pn**	**14 40 25.7**	**+0.9**
KIV				*e*Sg	**Sn**	**14 40 47.1**	**+1.3**
LGD	**Lagodekhi**	**1.74**	**122**	P	**Pg**	**14 40 28.4**	**-1.2**
LGD				S	**Sg**	**14 40 53.3**	**+1.2**
LGD	**Lagodekhi**	**1.74**	**122**	PN	**Pg**	**14 40 28.4**	**-1.2**
LGD				S	**Sg**	**14 40 53.3**	**+1.2**
DDFL	**Dedoflistskaro**	**1.91**	**133**	P	**Pg**	**14 40 32.3**	**-0.7**
DDFL	**Dedoflistskaro**	**1.91**	**133**	PN	**Pg**	**14 40 32.2**	**-0.7**
BUJR	**Buynaksk**	**2.09**	**88**	*e*Pg	**Pg**	**14 40 35.1**	**-1.3**
BUJR				*e*Sg	**Sb**	**14 40 58.8**	**-0.8**
BATM	**Batumi**	**2.24**	**239**	P	**Pb**	**14 40 36.6**	**+0.2**
BATM				S	**Sg**	**14 41 06.5**	**-1.8**
BATM	**Batumi**	**2.24**	**239**	PN	**Pn**	**14 40 33.4**	**+0.6**
BATM				SN	**Sn**	**14 41 00.2**	**0.0**
BATM	**Batumi**	**2.24**	**239**	PN	**Pb**	**14 40 36.6**	**+0.2**
BATM				S	**Sg**	**14 41 06.5**	**-1.8**
GOF	**Gofitskoye**	**2.45**	**339**	⇑*e*PN	**Pg**	**14 40 41.4**	**-1.8**
GOF				*e*S	**Sg**	**14 41 15.0**	**0.0**
GOF				pmax	pmax		
	comp=Z,37nm,0.8s						
GOF				smax	smax		
	comp=N,131nm,0.6s						
GOF				smax	smax		
	comp=E,59nm,0.5s						
SENK	**Senkaya-Erzuru**	**2.64**	**214**	PN	**Pn**	**14 40 40.3**	**+1.9**
GNI	**Garni**	**2.65**	**172**	PN	**Pb**	**14 40 43.2**	**-0.2**
GNI				SN	**Sg**	**14 41 17.1**	**-4.1**
GNI	**Garni**	**2.65**	**172**	⇑*e*PN	**Pb**	**14 40 42.8**	**-0.6**
GNI	**Garni**	**2.65**	**172**	*e*Pn	**Pb**	**14 40 41.8**	**-1.6**
GNI				*e*Sn	**Sb**	**14 41 12.8**	**-2.9**
AKT	**Akhty**	**2.88**	**115**	⇑*e*PN	**Pb**	**14 40 44.0**	**-3.4**
GUZR	**Guzeripl'**	**3.26**	**293**	*e*Pn	**Pg**	**14 40 57.3**	**-1.4**

GUZR				*e*Sn	Sb	14 41 37.8	+4.3
AGRB	Hanur-Agry	3.34	197	PN	Pn	14 40 50.9	+2.9

IDC 28 14:42:06.7±58.0**, 16°.38S×175°.31W, h0^{km}, mb3.9**/3**, mb1 4.1**/3**, mb1mx3.6**/24**, mbtmp3.9**/3**, Error ellipse: s-maj=1086.0km s-min=192.4km az=79.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	41.96	240	P	P	14 50 00.4	+0.8
	2.0nm,0.9s,baz=72,slow=6.4,SNR=3.2						
WRA	Warramunga Arr	47.84	258	P	P	14 50 45.8	-0.8
	0.3nm,0.6s,baz=97,slow=7.3,SNR=1.9						
ASAR	Alice Springs	48.06	253	P	P	14 50 48.1	-0.3
	2.1nm,0.5s,baz=90,slow=7.9,SNR=97						

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*MDD **28** 14:50:51.3±1.2, 36°.47N×10°.00W, h40^{km}, mbLg3.4/34, Error ellipse: s-maj=11.2km s-min=7.2km az=47.0, PRXIMO*

*INMG **28** 14:50:52.4±1.2, 36°.46N×9°.96W, h31^{km}±8^{km}, ML3.2, Error ellipse: s-maj=4.1km s-min=2.6km az=56.0*

*LDG **28** 14:50:52.6±0.2, 36°.55N×9°.87W, h16^{km}, Ml3.6/6, Error ellipse: s-maj=3.6km s-min=2.7km az=46.0*

*IGIL **28** 14:50:52.0, 36°.43N×9°.94W, h32^{km}, ML3.3*

ISC 28 14:50:48.9±1.1**, 36°.46N**±0°.05×**9°.93W**±0°.05**, h35^{km}, n107, σ2ˢ.56**/187**, 8C, West of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	1.11	53	⇑P	Pn	14 51 10.7	+2.8
	157nm,0.1s,SNR=18						
PFVI				S	Sn	14 51 23.8	+1.9
	620nm,0.2s,SNR=7.9						
PFVI	Vila Bisbo	1.11	53	⇑*i*P	Pn	14 51 10.7	+2.8
PFVI				*e*S	Sn	14 51 23.8	+1.9
PFVI				A	A	14 51 24.5	
	235nm,0.3s						
MORF	Marmelete	1.33	50	*e*P	Pn	14 51 13.7	+2.8
MORF				*e*S	Sn	14 51 29.1	+1.6
MORF				AML	AML	14 51 29.8	
	comp=N,318nm,0.2s						
MORF	Marmelete	1.33	50	P	Pn	14 51 13.7	+2.8
MORF				S	Sn	14 51 29.1	+1.6
	comp=N,318nm,0.2s						
MORF	Marmelete	1.33	50	*e*Pn	Pn	14 51 13.7	+2.8
MORF				*e*Sn	Sn	14 51 29.8	+2.4
MORF				A	A	14 51 30.5	
	comp=N,268nm,0.2s						
PTEO	Sao Teotonio	1.45	41	*e*Pn	Pn	14 51 15.4	+2.8
PTEO				*e*Sn	Sn	14 51 32.6	+2.3
PTEO				A	A	14 51 48.6	
	comp=N,146nm,0.4s						
PBDV	Barranco-do-Ve	1.78	63	⇑*e*Pn	Pn	14 51 20.1	+2.9
PBDV				*e*Sn	Sn	14 51 40.7	+2.1
PCVE	Castro Verde	1.91	52	⇑*e*Pn	Pn	14 51 22.0	+3.1
PCVE				*e*Sn	Sn	14 51 43.9	+2.2
PCVE				A	A	14 51 45.5	
	comp=N,120nm,0.5s						
MESJ	Messejana	1.94	44	*e*P	Pn	14 51 22.0	+2.7
MESJ				*e*S	Sn	14 51 43.6	+1.2
MESJ				AML	AML	14 51 46.5	
	comp=N,177nm,0.2s						
MESJ	Messejana	1.94	44	P	Pn	14 51 22.0	+2.7
MESJ				S	Sn	14 51 43.6	+1.2
	comp=N,177nm,0.2s						
MESJ	Messejana	1.94	44	*e*Pn	Pn	14 51 22.1	+2.8
MESJ				*e*Sn	Sn	14 51 44.1	+1.7
MESJ				A	A	14 51 45.3	
	comp=N,71nm,0.3s						
PNCL	Nicolau / Gran	1.99	34	*e*Pn	Pn	14 51 22.6	+2.6
PNCL				*e*Sn	Sn	14 51 45.3	+1.6
PNCL				A	A	14 51 48.7	
	comp=N,104nm,0.3s						
PVAQ	Vaqueiros	2.01	61	⇑*e*Pn	Pn	14 51 23.1	+2.9
PVAQ				*e*Sn	Sn	14 51 45.7	+1.6
EGRO	El Granado	2.23	61	⇑P	Pn	14 51 26.0	+2.7
	comp=N,22nm,0.1s,SNR=18						
EGRO				S	Sn	14 51 50.7	+1.1
	comp=N,44nm,0.1s						
PBEJ	Beja	2.27	46	*e*Pn	Pn	14 51 26.3	+2.5
PBEJ				*e*Sn	Sn	14 51 52.0	+1.4
PBEJ				A	A	14 51 54.0	
	comp=N,61nm,0.3s						
LIS	Lisbon	2.33	15	*e*S	Sn	14 51 53.3	+1.2
LIS				AML	AML	14 51 56.4	
	comp=E,216nm,0.3s						
LIS	Lisbon	2.33	15	S	Sn	14 51 53.3	+1.2
	comp=E,216nm,0.3s						
LIS	Lisbon	2.33	15	*e*Sn	Sn	14 51 54.0	+1.8
PMAFR	Mafra	2.54	11	P	Pn	14 51 30.0	+2.3
	comp=E,11nm,0.1s,SNR=13						
PMAFR				S	Sn	14 51 58.0	+0.7
	comp=E,128nm,0.1s,SNR=26						
PMAFR	Mafra	2.54	11	*e*Pn	Pn	14 51 29.9	+2.3
PMAFR				*e*Sn	Sn	14 51 58.7	+1.4
PMAFR				A	A	14 52 01.7	
	comp=E,248nm,0.2s						
EVO	Evora	2.57	36	P	Pn	14 51 28.3	+0.4
EVO				S	Sn	14 51 58.6	+0.7
EVO	Evora	2.57	36	*e*P	Pn	14 51 28.3	+0.4
EVO				*e*S	Sn	14 51 58.6	+0.7
EVO	Evora	2.57	36	*e*Pn	Pn	14 51 30.4	+2.5
EVO				*e*Sn	Sn	14 51 58.7	+0.7
EVO				A	A	14 51 59.5	
	comp=E,217nm,0.1s						
PBAR	Barrancos	2.87	53	*e*Pn	Pn	14 51 34.6	+2.5
PBAR				*e*Sn	Sn	14 52 06.4	+1.0
PBAR				A	A	14 52 09.1	
	comp=E,32nm,0.3s						
EMIN	Mina Concepcio	2.91	62	⇑P	Pn	14 51 34.9	+2.3
	comp=E,7.0nm,0.1s,SNR=18						
EMIN				S	Sn	14 52 06.9	+0.5
	comp=E,25nm,0.1s,SNR=11						
PMTG	Montargil	2.93	27	*e*Pn	Pn	14 51 35.5	+2.5
PMTG				*e*Sn	Sn	14 52 07.7	+0.8
PMTG				A	A	14 52 09.3	
	comp=E,64nm,0.7s						
PESTR	Estremoz	3.03	37	*e*Pn	Pn	14 51 36.5	+2.1
PESTR				*e*Sn	Sn	14 52 10.3	+0.8
PESTR				A	A	14 52 12.1	
	comp=E,18nm,0.3s						
PSBE	So Bento	3.18	16	*e*Pn	Pn	14 51 39.1	+2.8
PSBE				*e*Sn	Sn	14 52 13.9	+0.9
PSBE				A	A	14 52 24.2	
	comp=E,34nm,0.3s						
ESPR	Espera	3.30	82	⇑P	Pn	14 51 40.7	+2.7
	comp=E,9.0nm,0.1s,SNR=18						
ESPR				S	Sn	14 52 16.3	+0.3
	comp=E,186nm,0.3s,SNR=7.8						
PMRV	Marv??o	3.58	33	*e*Pn	Pn	14 51 44.3	+2.5
PMRV				*e*Sn	Sn	14 52 22.7	-0.2
PMRV				A	A	14 52 25.6	
	comp=E,44nm,0.2s						
EJIF	Jimena Fronter	3.59	89	P	Pn	14 51 45.3	+3.2
	SNR=7.9						
EJIF				S	Sn	14 52 23.9	+0.6
	SNR=7.9						
ECEU	Ceuta	3.73	97	S	Sn	14 52 26.1	-0.4
	comp=E,8.3nm,0.1s,SNR=7.9						
CEU	Ceuta	3.73	97	P	Pn	14 51 46.3	+2.4
CEU				S	Sn	14 52 25.5	-1.1
CEU	Ceuta	3.73	97	*e*P	Pn	14 51 46.3	+2.4
CEU				*e*S	Sn	14 52 25.5	-1.1
PCAS	Casmilo, Conde	3.76	17	*e*Pn	Pn	14 51 47.0	+2.7
PCAS				*e*Sn	Sn	14 52 27.4	+0.1
PCAS				A	A	14 52 30.5	
	comp=E,31nm,0.3s						
AVE	Averroes	3.77	146	*e*P	Pn	14 51 46.3	+1.7
PCBR	Castelo Branco	3.89	29	*e*Pn	Pn	14 51 48.7	+2.6
PCBR				*e*Sn	Sn	14 52 30.6	+0.1
PCBR				A	A	14 52 32.1	
	comp=E,12nm,0.4s						
COI	Coimbra	3.93	17	*e*Sn	Sn	14 52 31.5	+0.1
MTE	Manteigas	4.36	25	*e*Pn	Pn	14 51 55.2	+2.6
MTE				*e*Sn	Sn	14 52 41.8	-0.3
MTE				A	A	14 52 45.1	
	comp=E,30nm,0.3s						
EMAL	Malaga-Limoner	4.43	84	S	Sn	14 52 44.5	+0.6
EMAL	Malaga-Limoner	4.43	84	*e*S	Sn	14 52 44.5	+0.6
PVIS	Viseu	4.54	20	*e*Pn	Pn	14 51 57.4	+2.3
PVIS				*e*Sn	Sn	14 52 46.1	-0.5
PVIS				A	A	14 52 49.3	
	comp=E,34nm,0.3s						
EADA	Adamuz	4.59	67	P	Pn	14 51 58.3	+2.5
	comp=E,17nm,0.1s,SNR=177						
EADA				S	Sn	14 52 47.4	-0.6
	comp=E,13nm,0.1s						
EPLA	Plasencia	4.70	39	P	Pn	14 51 59.3	+2.0
	comp=E,2.0nm,0.1s,SNR=31						
EPLA				S	Sn	14 52 49.9	-0.8
	comp=E,36nm,0.1s						
PTO	Porto	4.78	12	*e*-		14 51 04.9	
PTO				*e*Sn	Sn	14 52 51.8	-0.8
IFR	Ifrane	4.92	125	*e*P	Pn	14 52 01.4	+1.0
IFR				*e*S	Sn	14 52 51.9	-4.3
ELGU	Los Guajares,	5.08	84	P	Pn	14 52 06.2	+3.6
	comp=E,1.0nm,0.1s,SNR=7.9						
ELGU				S	Sn	14 53 00.4	+0.3
	comp=E,7.6nm,0.1s,SNR=7.9						
PVRL	Vila Real	5.11	19	*e*Pn	Pn	14 52 05.1	+2.2
PVRL				*e*Sn	Sn	14 52 58.4	-2.2
PVRL				A	A	14 53 02.2	
	comp=E,49nm,0.1s						
POLO	Lamas de Olo	5.18	18	*e*Pn	Pn	14 52 06.2	+2.3
POLO				*e*Sn	Sn	14 53 00.7	-1.8
POLO				A	A	14 53 03.9	
	comp=E,7.2nm,0.4s						
MVO	Moncorvo	5.21	25	P	Pn	14 52 06.4	+2.1
	comp=E,6.0nm,0.2s,SNR=16						
MVO				S	Sn	14 53 00.7	-2.6
	comp=E,12nm,0.1s,SNR=8.4						
MVO	Moncorvo	5.21	25	*e*Pn	Pn	14 52 06.5	+2.1
MVO				*e*Sn	Sn	14 53 02.2	-1.1
EQUE	Quentar	5.26	80	P	Pn	14 52 07.7	+2.7
	comp=E,0.6nm,0.1s,SNR=6.8						
EQUE				S	Sn	14 53 04.2	-0.2
	comp=E,1.3nm,0.1s						
PAB	San Pablo	5.38	53	P	Pn	14 52 08.6	+2.0
	comp=E,9.6nm,0.1s,SNR=7.9						
PAB				S	Sn	14 53 05.2	-2.1
	comp=E,12nm,0.3s,SNR=7.9						
PCAB	Cabril	5.45	15	*e*Pn	Pn	14 52 09.3	+1.8
PCAB				*e*Sn	Sn	14 53 07.3	-1.7
PCAB				A	A	14 53 09.8	
	comp=E,17nm,0.4s						
ELOB	Lobios	5.59	14	P	Pn	14 52 11.4	+1.9
	comp=E,1.3nm,0.1s,SNR=16						
ELOB				S	Sn	14 53 09.2	-3.3
	comp=E,6.6nm,0.1s,SNR=5.0						
EQES	Quesada	5.64	74	P	Pn	14 52 12.3	+2.0
	comp=E,0.2nm,0.2s,SNR=14						
EQES				S	Sn	14 53 13.3	-0.6
	comp=E,17nm,0.2s,SNR=9.4						
PGAV	Gavieira, Arco	5.64	13	*e*Pn	Pn	14 52 12.3	+2.0
PGAV				*e*Sn	Sn	14 53 12.0	-2.0
PGAV				A	A	14 53 14.7	
	comp=E,14nm,0.3s						
EBER	Berja	5.67	84	P	Pn	14 52 13.9	+3.1
	comp=E,0.6nm,0.2s,SNR=6.8						
EBER				S	Sn	14 53 14.7	-0.2
	comp=E,4.1nm,0.2s,SNR=7.9						
ESDC	Sonseca Array	5.70	54	P	Pn	14 52 13.4	+2.4
	comp=E,13nm,0.2s,baz=238,slow=13,SNR=81						
ESDC				S	Sn	14 53 13.8	-1.4
	comp=E,16nm,0.2s,baz=241,slow=23,SNR=45						
EZAM	Zamans	5.76	9	P	Pn	14 52 13.8	+1.9
	comp=E,2.8nm,0.1s,SNR=7.9						
EZAM				S	Sn	14 53 13.8	-2.8
	comp=E,2.6nm,0.1s,SNR=7.9						
PBRG	Braganca	5.88	24	*e*Pn	Pn	14 52 15.8	+2.3
PBRG				*e*Sn	Sn	14 53 18.0	-1.7
PBRG				A	A	14 53 20.7	
	comp=E,14nm,0.1s						
ECAL	Calabor	6.01	23	P	Pn	14 52 18.3	+3.0
	comp=E,2.6nm,0.2s,SNR=10						
ECAL				S	Sn	14 53 21.4	-1.5
	comp=E,4.9nm,0.1s,SNR=7.0						
SESP	Santiago Espad	6.12	72	P	Pn	14 52 19.1	+2.2
	comp=E,2.3nm,0.1s,SNR=7.9						
SESP				S	Sn	14 53 23.6	-2.0
	comp=E,8.0nm,0.1s,SNR=7.9						
GUD	Guadarrama	6.16	46	P	Pn	14 52 19.8	+2.4
	comp=E,2.7nm,0.1s,SNR=19						
GUD				S	Sn	14 53 24.7	-1.9
	comp=E,11nm,0.3s,SNR=10						
ENIJ	Nijar	6.22	83	S	Sn	14 53 27.0	-1.1
	comp=E,4.5nm,0.3s,SNR=7.9						
PMPST	Porto Santo, M	6.26	239	*e*Pn	Pn	14 52 19.6	+0.9
PMPS	Porto Santo	6.27	239	*e*Pn	Pn	14 52 19.7	+0.9
EAGO	Agolada(Pontev	6.49	12	P	Pn	14 52 23.5	+1.7
	comp=E,3.0nm,0.1s,SNR=7.9						
EAGO				S	Sn	14 53 30.9	-3.8
	comp=E,4.6nm,0.1s,SNR=7.9						
UCM	Universidad Co	6.50	52	P	Pn	14 52 24.8	+2.7
UCM				S	Sn	14 53 33.1	-1.9
UCM	Universidad Co	6.50	52	*e*P	Pn	14 52 24.8	+2.7
UCM				*e*S	Sn	14 53 33.1	-1.9
EMAZ	Mazaricos	6.52	6	P	Pn	14 52 23.6	+1.3
	comp=E,6.3nm,0.1s,SNR=7.9						
EMAZ				S	Sn	14 53 30.2	-5.2
	comp=E,18nm,0.2s,SNR=7.9						
PMAR	Madeira	6.86	239	*e*Pn	Pn	14 52 24.8	-2.3
ETOB	Tobarra	7.00	69	P	Pn	14 52 31.0	+2.0
	comp=E,4.0nm,0.2s,SNR=17						
ETOB				S	Sn	14 53 44.2	-3.2
	comp=E,0.4nm,0.1s,SNR=7.9						
EMUR	La Murta	7.07	76	P	Pn	14 52 31.6	+1.7
	comp=E,1.0nm,0.2s,SNR=7.9						
EMUR				S	Sn	14 53 47.6	-1.5
	comp=E,1.8nm,0.2s,SNR=7.9						
EPON	Pontenova	7.18	16	P	Pn	14 52 34.0	+2.7
	comp=E,0.9nm,0.1s,SNR=7.9						
EPON				S	Sn	14 53 47.3	-4.4
	comp=E,0.9nm,0.3s,SNR=7.9						
ETOR	Torete	7.54	52	P	Pn	14 52 38.9	+2.5
	comp=E,28nm,0.2s,SNR=61						
ETOR				S	Sn	14 53 58.0	-2.6
	comp=E,18nm,0.3s,SNR=7.9						
EARI	Arriondas	7.73	27	P	Pn	14 52 42.4	+3.5
	comp=E,0.6nm,0.2s,SNR=7.9						
EARI				S	Sn	14 54 03.8	-1.5
	comp=E,0.6nm,0.3s,SNR=7.9						
EMOS	Mosqueruela	8.38	59	P	Pn	14 52 51.2	+3.2
	comp=E,1.4nm,0.1s,SNR=15						
EMOS				S	Sn	14 54 18.0	-3.4
	comp=E,1.0nm,0.3s,SNR=7.9						
ELAN	Lanestosa	8.40	34	P	Pn	14 52 51.4	+3.3
	comp=E,0.5nm,0.2s,SNR=7.9						
ELAN				S	Sn	14 54 19.8	-1.9
	comp=E,2.4nm,0.4s,SNR=7.9						
CFUE	Fuerteventura	8.49	205	S	Sn	14 54 16.4	-7.6
	comp=E,2.7nm,0.1s,SNR=7.9						
EORO	Oroz-Betelu	9.24	43	P	Pn	14 53 01.1	+1.5
	comp=E,0.7nm,0.1s,SNR=6.1						
EORO				S	Sn	14 54 38.6	-3.7
	comp=E,1.7nm,0.2s,SNR=7.9						
SJPF	Ste Jean	9.43	43	P	Pn	14 53 04.8	+2.6
SJPF				S	Sn	14 54 41.7	-5.2
	comp=E,0.9nm,0.3s						
SJPF	Ste Jean	9.43	43	*e*Pn	Pn	14 53 04.8	+2.6
SJPF				*e*Sn	Sn	14 54 41.7	-5.2
	comp=E,1.9nm,0.3s						
ETSF	Etsaut	9.66	45	P	Pn	14 53 07.9	+2.5
ETSF				S	Sn	14 54 47.9	-4.8
	comp=E,1.1nm,0.3s						
ETSF	Etsaut	9.66	45	*e*Pn	Pn	14 53 07.9	+2.5
ETSF				*e*Sn	Sn	14 54 47.9	-4.8
	comp=E,2.2nm,0.3s						
EPOB	Poblet	9.87	57	P	Pn	14 53 10.9	+2.6
	comp=E,0.2nm,0.2s,SNR=7.9						
EPOB				S	Sn	14 54 53.5	-4.3
	comp=E,1.0nm,0.4s,SNR=7.9						
ECHI	Chisagues Biel	9.97	48	P	Pn	14 53 12.4	+2.8
	comp=E,0.4nm,0.1s,SNR=7.9						
ECHI				S	Sn	14 54 55.4	-4.9
	comp=E,3.1nm,0.2s,SNR=7.9						
EPF	Esparros	10.27	47	P	Pn	14 53 15.8	+2.1
EPF				S	Sn	14 55 02.5	-5.0
	comp=E,1.4nm,0.2s						
EPF	Esparros	10.27	47	*e*Pn	Pn	14 53 15.8	+2.1
EPF				*e*Sn	Sn	14 55 02.5	-5.0
	comp=E,2.9nm,0.2s						
CSOR	Sort	10.39	52	P	Pn	14 53 17.5	+2.0
	comp=E,0.3nm,0.1s,SNR=7.9						
CSOR				S	Sn	14 55 06.9	-3.8
	comp=E,1.2nm,0.2s,SNR=7.9						
CLLI	Llivia	10.98	53	P	Pn	14 53 26.3	+2.7
	comp=E,0.6nm,0.2s,SNR=7.9						
CLLI				S	Sn	14 55 21.5	-3.7
	comp=E,0.1nm,0.1s,SNR=7.9						
LFF	La Frestale	11.71	40	S	Sn	14 55 37.1	-5.5
	comp=E,1.7nm,0.3s						
LFF	La Frestale	11.71	40	*e*Sn	Sn	14 55 37.1	-5.5
	comp=E,3.3nm,0.3s						
RJF	Les Rejaudoux	12.36	41	P	Pn	14 53 43.4	+1.2
RJF				S	Sn	14 55 52.7	-5.9
	comp=E,1.0nm,0.3s						
RJF	Les Rejaudoux	12.36	41	*e*Pn	Pn	14 53 43.4	+1.2
RJF				*e*Sn	Sn	14 55 52.7	-5.9
	comp=E,2.0nm,0.3s						
CAF	Calviac	12.41	43	P	Pn	14 53 44.0	+1.0
CAF	Calviac	12.41	43	*e*Pn	Pn	14 53 44.0	+1.0
QUIF	Quistinic	12.49	21	P	Pn	14 53 46.3	+2.3
QUIF				S	Sn	14 55 55.9	-5.8
	comp=E,0.6nm,0.3s						
QUIF	Quistinic	12.49	21	*e*Pn	Pn	14 53 46.3	+2.3
QUIF				*e*Sn	Sn	14 55 55.9	-5.8
	comp=E,1.3nm,0.3s						
MFF	Saint Martin d	12.49	33	P	Pn	14 53 45.7	+1.7
MFF	Saint Martin d	12.49	33	*e*Pn	Pn	14 53 45.7	+1.7
TCF	Toulx Ste Croi	13.38	39	P	Pn	14 53 57.0	+0.8
TCF	Toulx Ste Croi	13.38	39	*e*Pn	Pn	14 53 57.0	+0.8
FLN	La Foliniere	14.11	26	P	Pn	14 54 07.6	+1.5
FLN	La Foliniere	14.11	26	*e*Pn	Pn	14 54 07.6	+1.5
	baz=207						
SMF	Signal de Mont	14.46	41	P	Pn	14 54 12.1	+1.2
SMF	Signal de Mont	14.46	41	*e*Pn	Pn	14 54 12.1	+1.2

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*IDC **28** 15:09:04.8±1.3, 16°.45S×168°.20E, h0^{km}, mb4.0/11, mb1 4.2/11, mb1mx4.0/28, mbtmp3.9/11, MS3.2/5, Ms1 3.2/5, ms1mx2.9/29, Error ellipse: s-maj=43.4km s-min=23.1km az=139.0*

*NOU **28** 15:09:06.7, 16°.38S×168°.28E, h14^{km}, MLv4.5, Vanuatu Islands*

*NEIC **28** 15:09:06.6±2.3, 16°.3S±0°.1×168°.46E±0°.03, h47^{km}±18^{km}, mb4.1/9, Error ellipse: s-maj=14.9km s-min=4.7km az=177.0*

ISC 28 15:09:09.9±0.7**, 16°.44S**±0°.06×**168°.1E**±0°.1**, h35^{km}, n42, σ1ˢ.63**/34**, mb4.1**/15**, MS3.2**/4**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	Devils Point	1.28	177	P	Pn	15 09 30.0	-1.3
SANVU	Saraoutou	1.33	318	Pn	Pn	15 09 30.9	-1.0
SANVU	Saraoutou	1.33	318	P	Pn	15 09 31.1	-0.9
LIFNC	LIFOU	4.39	191	P	Pn	15 10 12.7	-1.4
MARNC	Mare, Loyalty	5.01	181	P	Pn	15 10 22.9	+0.2
KOUNC	Koumac, New Ca	5.47	221	P	Pn	15 10 29.8	+0.8
YATNC	Mamie plateau,	5.71	192	P	Pn	15 10 32.7	+0.5
DZM	Mont Dzumac	5.82	196	Pn	Pn	15 10 33.9	+0.1
DZM	Mont Dzumac	5.82	196	P	Pn	15 10 34.3	+0.4
NOUC	Port Laguerre	5.89	197	P	Pn	15 10 35.1	+0.4
ONTNC	Ouen Toro	6.04	195	P	Pn	15 10 37.7	+0.9
OUENC	Ouen Island, N	6.07	191	P	Pn	15 10 38.2	+1.0
MSVF	Nonsavu	9.58	99	Pn	Pn	15 11 19.0	-6.5
HNR	Honiara	10.58	310	LR	LR	15 14 40.4	
	comp=Z,40nm,20.3s,baz=140,slow=32						
HNR	Honiara	10.58	310	Pn	Pn	15 11 30.8	-8.4
AFI	Afiamalu	19.56	85	P	P	15 13 26.3	-8.7
ARMA	Armidale	20.52	224	P	P	15 13 38.8	-6.6
ARMA				IAmb	IAmb	15 13 53.8	
	comp=Z,10.0nm,1.3s						
NIUE	Niue	21.07	100	P	P	15 13 42.4	-8.8
CTA	Charters Tower	21.08	257	P	P	15 13 54.9	+3.5
	comp=Z,1.4nm,0.6s,baz=83,slow=8.2,SNR=5.7						
CTA				LR	LR	15 21 29.7	
	comp=Z,177nm,19.1s,baz=236,slow=35						
CTAO	Charters Tower	21.08	257	P	P	15 13 50.9	-0.5
PMG	Port Moresby	21.58	286	LR	LR	15 19 55.3	
	comp=Z,39nm,19.5s,baz=74,slow=30						
CAN	Canberra	25.40	219	P	P	15 14 32.2	-2.0
CAN				IAmb	IAmb	15 14 37.8	
	comp=Z,5.8nm,0.9s						
STKA	Stephens Creek	28.56	233	P	P	15 15 03.4	+0.7
	comp=Z,2.0nm,0.8s,baz=103,slow=18,SNR=1.8						
STKA	Stephens Creek	28.56	233	P	P	15 15 01.5	-1.1
WB2	Warramunga Arr	32.24	259	P	P	15 15 33.7	-1.6
WB2				IAmb	IAmb	15 15 43.3	
	comp=Z,3.3nm,1.1s						
WRA	Warramunga Arr	32.25	259	P	P	15 15 35.4	0.0
	comp=Z,0.3nm,0.8s,baz=102,slow=8.2,SNR=1.8						
AS31	Alice Springs	32.88	252	P	P	15 15 40.7	-0.2
AS31				IAmb	IAmb	15 15 42.4	
	comp=Z,2.7nm,0.6s						
ASAR	Alice Springs	32.88	252	P	P	15 15 41.5	+0.6
	comp=Z,5.8nm,0.6s,baz=78,slow=8.6,SNR=148						
ASAR	Alice Springs	32.88	252	P	P	15 15 41.3	+0.4
SIJI	Sorong	39.47	289	LR	LR	15 32 12.5	
	comp=Z,52nm,19.1s,baz=134,slow=35						
FITZ	Fitzroy Crossi	40.54	261	LR	LR	15 33 23.3	
	comp=Z,25nm,19.2s,baz=124,slow=36						
FITZ	Fitzroy Crossi	40.54	261	P	P	15 16 47.1	+1.0
FITZ				IAmb	IAmb	15 16 55.8	
	comp=Z,6.2nm,1.2s						
MJAR	Matsushiro Arr	59.80	332	P	P	15 19 11.6	-0.1
	comp=Z,1.5nm,0.6s,baz=173,slow=8.1,SNR=8.1						
KSRS	Korea Array	65.61	326	P	P	15 19 51.6	+1.2
	comp=Z,1.0nm,0.8s,baz=142,slow=6.3,SNR=4.6						
USRK	Ussuriysk Ar.	68.78	333	P	P	15 20 11.4	+1.0
	comp=Z,2.1nm,0.8s,baz=181,slow=7.1,SNR=4.7						
SONM	Songino Array	84.36	323	P	P	15 21 39.6	+1.0
	comp=Z,0.4nm,0.6s,baz=148,slow=5.9,SNR=4.6						
NVAR	Mina Array Bea	87.76	49	P	P	15 21 57.1	+1.3
	comp=Z,1.0nm,0.7s,baz=226,slow=7.2,SNR=9.8						
ILAR	Eielson Array	87.90	18	P	P	15 21 54.4	-1.1
	comp=Z,0.3nm,0.7s,baz=238,slow=4.9,SNR=7.3						
YKA	Yellowknife Ar	98.68	27	P	P	15 22 45.2	0.0
	comp=Z,0.2nm,0.6s,baz=254,slow=4.5,SNR=4.0						
MKAR	Makanchi Array	99.00	316	P	Pdif	15 22 48.1	+1.0
	comp=Z,0.2nm,0.7s,baz=94,slow=4.6,SNR=2.1						
ARCES	ARCESS Array B	122.11	345	PKP	PKPdf	15 27 59.9	-0.3
	comp=Z,2.8nm,1.0s,baz=54,slow=4.6,SNR=3.9						
TORD	Torodi Ar. Bea	166.47	258	PKP	PKPdf	15 29 12.0	-0.6
	comp=Z,0.3nm,0.7s,baz=108,slow=4.7,SNR=1.8						

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*DJA **28** 15:19:41.2±0.9, 8°S±3°×11°3E±°, h16^{km}±8^{km}, M4.5/12, mb4.5/6, mB5.1/2, MLv4.5/12, Mw(mB)4.4/2*

*NEIC **28** 15:19:42.7±1.4, 7°.48S±0°.08×113°.11E±0°.09, h44^{km}±11^{km}, mb4.1/9, Error ellipse: s-maj=15.1km s-min=8.7km az=46.0*

*IDC **28** 15:19:48.6±3.8, 7°.36S×113°.39E, h87^{km}±38^{km}, mb3.6/7, mb1 3.8/8, mb1mx3.5/25, mbtmp4.0/8, MS3.3/2, Ms1 3.3/2, ms1mx2.7/38, Error ellipse: s-maj=38.0km s-min=13.4km az=48.0*

ISC 28 15:19:41.9±0.6**, 7°.60S**±0°.06×**113°.08E**±0°.05**, h35^{km}, n43, σ1ˢ.96**/48**, mb4.1**/12**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMMI	Kalianget	1.03	58	P	Pn	15 19 59.7	-0.2
KMMI				S	Sn	15 20 14.8	+1.7
ABJI	Asem Bagus	1.16	100	P	Pn	15 20 02.4	+0.8
ABJI				S	Sn	15 20 19.8	+3.6
JAGI	Jajag, Banyuwa	1.37	129	Pn	Pn	15 20 05.3	+0.7
JAGI	Jajag, Banyuwa	1.37	129	P	Pn	15 20 05.2	+0.7
JAGI				S	Sn	15 20 25.0	+3.5
SRBI	Singaraja	2.17	103	P	Pn	15 20 16.8	+1.3
SRBI				S	Sn	15 20 45.2	+4.1
DNP	Denpasar	2.36	117	P	Pn	15 20 20.2	+2.0
UGM	Wanagama	2.56	263	Pn	Pn	15 20 22.2	+1.3
UGM	Wanagama	2.56	263	P	Pn	15 20 22.2	+1.3
SMRI	Semarang	2.68	282	Pn	Pn	15 20 21.8	-0.7
SMRI	Semarang	2.68	282	P	Pn	15 20 22.1	-0.5
BBKI	Banjar Baru	4.46	23	P	Pn	15 20 48.1	+1.0
PLAI	Plampang	4.80	105	P	Pn	15 20 53.0	+1.2
PBKI	Pangkalan Bun	5.06	344	P	Pn	15 20 55.5	+0.2
	93nm,0.6s						
CISI	Cisompet, Garu	5.22	270	P	Pn	15 20 58.2	+0.6
	0.4nm2µm58nm,0.6s						
KBKI	Kotabaru	5.26	36	P	Pn	15 20 57.8	-0.2
	0.3nm1µm30nm,0.5s						
LEM	Lembang	5.48	278	P	Pn	15 21 12.5	+11
	3.4nm,0.3s,baz=354,slow=22,SNR=1.5						
LEM				S	Sn	15 22 16.4	+13
	6.5nm,0.3s,baz=322,slow=18,SNR=1.9						
LEM				LR	LR	15 24 12.7	
	comp=Z,90nm,20.0s,baz=202,slow=46						
LEM	Lembang	5.48	278	P	Pn	15 21 02.9	+1.7

	18nm,0.6s						
MTKI	**Muara Teweh, K**	**6.85**	**15**	P	**Pn**	**15 21 20.4**	**+0.4**
MDSI	**Maura Dua**	**9.38**	**289**	P	**Pn**	**15 21 55.0**	**+0.3**
SBUM	**Sibu**	**10.02**	**355**		**Pn**	**15 22 04.7**	**+1.3**
FITZ	**Fitzroy Crossi**	**16.08**	**132**	P	**Pn**	**15 23 23.3**	**-2.1**
	0.1nm,0.3s,baz=318,slow=12,SNR=1.9						
FITZ				S	**Sn**	**15 26 13.8**	**-8.9**
	0.0nm,0.3s,baz=154,slow=17,SNR=1.5						
FAKI	**Fak Fak**	**19.64**	**77**		**P**	**15 24 07.3**	**-0.4**
WB0	**Warramunga Arr**	**23.94**	**123**	P	**P**	**15 24 52.9**	**-0.2**
WB0				IAmb	IAmb	15 25 03.0	
	comp=Z,6.0nm,1.1s						
WRA	**Warramunga Arr**	**23.98**	**123**	P	**P**	**15 24 53.7**	**+0.3**
	comp=Z,3.5nm,0.7s,baz=301,slow=11,SNR=17						
WRA				PcP	**PcP**	**15 28 35.0**	**-0.2**
	comp=Z,0.2nm,0.4s,baz=315,slow=2.1,SNR=1.5						
WB2	**Warramunga Arr**	**23.99**	**123**	P	**P**	**15 24 54.0**	**+0.5**
WB2				IAmb	IAmb	15 25 01.7	
	comp=Z,3.4nm,0.7s						
WR0	**Warramunga Arr**	**24.15**	**123**	P	**P**	**15 24 55.5**	**+0.5**
ASAR	**Alice Springs**	**25.58**	**131**	P	**P**	**15 25 09.0**	**+1.1**
	comp=Z,0.8nm,0.5s,baz=304,slow=8.3,SNR=32						
ASAR				PcP	**PcP**	**15 28 39.1**	**+0.5**
	comp=Z,0.6nm,0.6s,baz=313,slow=1.8,SNR=8.6						
ASAR	**Alice Springs**	**25.58**	**131**	P	**P**	**15 25 09.2**	**+1.3**
AS31	**Alice Springs**	**25.58**	**131**	P	**P**	**15 25 09.1**	**+1.1**
CMAR	**Chiang Mai Arr**	**29.41**	**332**	P	**P**	**15 25 44.5**	**+2.2**
	comp=Z,2.4nm,0.7s,baz=163,slow=8.8,SNR=22						
COEN	**Coen**	**30.21**	**105**	P	**P**	**15 25 46.6**	**-2.8**
COEN				IAmb	IAmb	15 26 00.2	
	comp=Z,3.3nm,1.0s						
STKA	**Stephens Creek**	**35.89**	**136**	P	**P**	**15 26 40.2**	**+1.4**
	comp=Z,2.7nm,0.8s,baz=318,slow=11,SNR=4.6						
STKA	**Stephens Creek**	**35.89**	**136**	P	**P**	**15 26 40.0**	**+1.2**
SONM	**Songino Array**	**55.51**	**355**	P	**P**	**15 29 13.5**	**-0.1**
	comp=Z,0.3nm,0.4s,baz=174,slow=9.2,SNR=4.7						
MK31	**Makanchi Array**	**60.68**	**336**	P	**P**	**15 29 49.6**	**-0.1**
MK31				IAmb	IAmb	15 29 50.0	
	comp=Z,1.1nm,0.6s						
MKAR	**Makanchi Array**	**60.68**	**336**	P	**P**	**15 29 49.5**	**-0.1**
	comp=Z,1.4nm,0.4s,baz=152,slow=7.0,SNR=50						
MKAR	**Makanchi Array**	**60.68**	**336**	P	**P**	**15 29 49.3**	**-0.3**
ZALV	**Zalesovo Beam**	**65.78**	**342**	P	**P**	**15 30 22.6**	**-0.7**
	comp=Z,1.7nm,0.5s,baz=144,slow=4.9,SNR=10						
ZALV	**Zalesovo Beam**	**65.78**	**342**	P	**P**	**15 30 22.2**	**-1.0**
ABKAR	**Akbulak array**	**73.12**	**327**	P	**P**	**15 31 07.6**	**-1.1**
ABKAR				IAmb	IAmb	15 31 08.8	
	comp=Z,1.8nm,0.8s						
ABKAR	**Akbulak array**	**73.12**	**327**	P	**P**	**15 31 07.6**	**-1.1**
OBN	**Obninsk**	**88.55**	**326**	LR	LR	16 16 29.9	
	comp=Z,38nm,18.1s,baz=172,slow=38						
CPUP	**Villa Florida**	**145.01**	**195**	PKPbc	**PKPab**	**15 39 16.0**	**+0.4**
	comp=Z,3.1nm,1.0s,baz=78,slow=18,SNR=3.4						

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*BJI **28** 15:37:54.2±0.0, 0°.79N×66°.12E, h10km, mB5.1/30, mb4.5/47, Ms4.6/18, Ms7 4.3/20*

*NEIC **28** 15:38:01.7±2.4, 1°.45N±0°.06×66°.7E±0°.1, h10km±1km, mb4.8/31, Error ellipse: s-maj=17.9km s-min=9.2km az=285.0*

*IDC **28** 15:38:01.3±0.6, 1°.50N×66°.82E, h0km, mb4.4/15, mb1 4.6/16, mb1mx4.2/37, mbtmp4.4/16, ML4.0/1, MS4.0/25, Ms1 4.0/25, ms1mx3.9/41, Error ellipse: s-maj=16.8km s-min=15.3km az=156.0*

*GCMT **28** 15:38:03.7±0.2, 1°.56N±0°.03×66°.77E±0°.02, h12km, MW4.9/98, Moment Tensor Solution. s30,c34; s98,c141; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.50±.07; $M_{\theta\theta}$0.93±.07; $M_{\phi\phi}$1.58±.07; $M_{r\theta}$0.57±.34; $M_{\theta\phi}$-1.06±.06; $M_{\phi r}$-0.08±.28; Best double couple: $M_0$2.49500×10^{16} NP1:ϕ_s152.00000°,δ41.00000°,λ-77.00000°. NP2: ϕ_s315.00000°,δ50.00000°,λ-101.00000°. Principal axes: T 2.3960, Plg5.0000°, Azm53.0000°; N 0.2040, Plg8.0000°, Azm322.0000°; P -2.5930, Plg80.0000°, Azm172.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 28 15:38:02.5±0.4, **1°.43N**±0°.07×**66°.81E**±0°.07, **h13**km, **n140**, σ**1s.43**/130, **mb4.8**/68, **MS4.1**/32, **2C-2D, Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DGAR	**Diego Garcia**	**10.43**	**147**	Pn	**Pn**	**15 40 31.9**	**0.0**
PALK	**Pallekele**	**15.01**	**67**	Pn	**Pn**	**15 41 32.4**	**-2.2**
	0.6nm,0.3s,baz=348,slow=13,SNR=6.4						
PALK				LR	LR	15 46 17.6	
	comp=Z,1µm,18.5s,baz=348,slow=33						
PALK	**Pallekele**	**15.01**	**67**	Pn	**Pn**	**15 41 28.4**	**-6.1**
SOCY	**Socotra**	**16.61**	**311**	P	**P**	**15 41 59.3**	**+1.5**
WSAR	**Wadi Sarin**	**23.09**	**340**	LR	LR	15 50 21.9	
	comp=Z,130nm,21.3s,baz=174,slow=32						
BHPL	**Bhopal**	**24.00**	**25**	eP	**P**	**15 43 17.1**	**-0.1**
BHPL				IAmb	IAmb	15 43 19.9	
	comp=Z,28nm,1.2s						
RER	**Riviere de l'E**	**24.93**	**205**	P	**P**	**15 43 23.4**	**-2.2**
ATD	**Arta Tunnel**	**25.81**	**294**	LR	LR	15 51 47.6	
	comp=Z,180nm,21.4s,baz=88,slow=32						
ABPO	**Ambohimpanom**	**27.99**	**223**	P	**P**	**15 43 49.7**	**-3.8**
KMBO	**Kilima Mbogo**	**29.67**	**265**	LR	LR	15 55 40.4	
	comp=Z,471nm,18.1s,baz=92,slow=36						
DHRM	**DHARAMSHALA**	**31.93**	**15**	eP	**P**	**15 44 29.6**	**+1.3**
DHRM				IAmb	IAmb	15 44 30.6	
	comp=Z,5.8nm,0.7s						
NIL	**Nilore**	**32.61**	**10**	P	**P**	**15 44 33.6**	**-0.4**
NIL				IAmb	IAmb	15 44 41.2	
	comp=Z,16nm,1.2s						
KBL	**Kabul**	**33.01**	**3**		**P**	**15 44 36.2**	**-1.5**
KBL				IAmb	IAmb	15 44 46.7	
	comp=Z,19nm,1.4s						
GTK	**Tadong**	**33.15**	**37**	eP	**P**	**15 44 39.4**	**+0.4**
KULM	**Kulim**	**33.99**	**83**	P	**P**	**15 44 46.4**	**+0.1**
KULM				IAmb	IAmb	15 44 48.7	
	comp=Z,9.1nm,1.1s						
SHL	**Shillong**	**34.05**	**43**	eP	**P**	**15 44 46.6**	**-0.3**
BKNI	**Bangkinang**	**34.24**	**92**	P	**P**	**15 44 50.2**	**+1.7**
	comp=Z,71nm,0.6s						
KOHI	**KOHIMA**	**35.70**	**45**	eP	**P**	**15 45 03.4**	**+2.3**
CMAR	**Chiang Mai Arr**	**35.77**	**60**	P	**P**	**15 45 03.8**	**+2.1**
	comp=Z,2.8nm,0.9s,baz=248,slow=10,SNR=26						
CMAR				PcP	**PcP**	**15 47 29.9**	**+0.4**
	comp=Z,1.3nm,0.8s,baz=249,slow=4.5,SNR=8.2						
CMAR				LR	LR	15 58 10.6	
	comp=Z,198nm,21.8s,baz=291,slow=34						
CMAR	**Chiang Mai Arr**	**35.77**	**60**	P	**P**	**15 45 02.6**	**+1.0**
CHTO	**Chiang Mai**	**35.92**	**59**		**P**	**15 45 03.9**	**+1.0**
CHTO				IAmb	IAmb	15 45 06.1	
	comp=Z,22nm,1.3s						
MOKO	**MOKOCHONG**	**36.36**	**45**	eP	**P**	**15 45 07.6**	**+0.9**
LSA	**Lhasa**	**36.42**	**37**	P	**P**	**15 45 08.8**	**+1.3**
LSA				pmax	pmax		
	comp=Z,39nm,1.1s						
LSA	**Lhasa**	**36.42**	**37**	P	**P**	**15 45 08.5**	**+0.9**
LSA				IAmb	IAmb	15 45 13.6	
	comp=Z,18nm,1.2s						
ZIRO	**ZIRO**	**36.66**	**43**	eP	**P**	**15 45 09.4**	**+0.1**
LHSI	**Lahat**	**37.06**	**98**	P	**P**	**15 45 14.5**	**+1.8**
	comp=Z,18nm,0.9s						
GEYT	**Alibeck**	**37.19**	**349**	LR	LR	16 00 17.7	
	comp=Z,124nm,19.0s,baz=225,slow=36						
LWLI	**Liwa**	**37.76**	**100**	P	**P**	**15 45 20.4**	**+1.7**
MDSI	**Maura Dua**	**37.80**	**99**	P	**P**	**15 45 20.9**	**+2.0**
	comp=Z,13nm,1.0s						
KASI	**Kota Agung**	**38.27**	**101**	P	**P**	**15 45 25.4**	**+2.5**
	comp=Z,15nm,0.9s						
KLSI		**38.37**	**99**	P	**P**	**15 45 25.9**	**+2.1**
	comp=Z,4.7nm,1.1s						
KSH	**Kashi**	**38.82**	**11**	P	**P**	**15 45 24.0**	**-3.3**
KSH				PP	**PnPn**	**15 46 56.5**	**-2.1**
KSH				pmax	pmax		
	comp=Z,14nm,1.4s						
KSH				pmax	pmax		
	comp=Z,330nm,7.2s						
KSH				LR	LR		
	comp=Z,460nm,6.5s						
KSH				LR	LR		
	comp=Z,320nm,7.1s						
KSH				LR	LR		
	comp=Z,330nm,14.3s						
PPBI	**Pangkal Pinang**	**39.48**	**95**	P	**P**	**15 45 34.4**	**+1.3**
IUG	**Iuzhnay**	**40.64**	**4**	eP	**P**	**15 45 42.4**	**0.0**
	baz=3.5						
CBJI	**Citeko**	**40.72**	**101**	P	**P**	**15 45 46.2**	**+2.8**
SLVN	**Son La**	**41.20**	**59**	P	**P**	**15 45 47.2**	**-0.2**
LEM	**Lembang**	**41.54**	**102**	P	**P**	**15 45 50.8**	**+0.5**
	comp=Z,24nm,0.8s,baz=208,slow=5.9,SNR=9.1						
LEM	**Lembang**	**41.54**	**102**	P	**P**	**15 45 52.2**	**+1.9**
	comp=Z,17nm,1.2s						
KKAR	**Karatay Array**	**41.62**	**4**	P	**P**	**15 45 49.1**	**-1.3**
CISI	**Cisompet, Garu**	**41.86**	**103**	P	**P**	**15 45 54.4**	**+1.5**
	comp=Z,26nm,1.2s						
KMI	**Kunming**	**41.90**	**53**	⇑P	**P**	**15 45 55.5**	**+2.3**
KMI				pP	sP	15 45 57.5	-0.1
KMI				pmax	pmax		
	comp=Z,11nm,1.3s						
KMI				LR	LR		
	comp=Z,190nm,23.1s						
KMI				LR	LR		
	comp=Z,390nm,18.3s						
KMI				LR	LR		
	comp=Z,320nm,22.1s						
TNSS	**Tian-Shan**	**42.40**	**11**	eP	**P**	**15 45 57.8**	**+0.5**
	baz=11						
SGDS	**Sogindy**	**42.42**	**8**	eP	**P**	**15 45 57.2**	**+0.2**
	comp=Z,31nm,2.1s,baz=8.3						
MDOK	**Medeo**	**42.55**	**11**	eP	**P**	**15 45 57.7**	**-0.4**
	baz=11						
SATY	**Saty**	**42.72**	**13**	eP	**P**	**15 45 59.2**	**-0.3**
	comp=Z,13nm,1.9s,baz=12						
UZB	**Uzynbulak**	**42.94**	**13**	eP	**P**	**15 46 00.9**	**-0.4**
	baz=13						
SHLS	**Shalkode**	**43.05**	**14**	eP	**P**	**15 46 02.3**	**+0.1**
	comp=Z,21nm,1.6s,baz=14						
KUU	**Kurty**	**43.12**	**10**	eP	**P**	**15 46 01.9**	**-0.7**
	baz=10.0						
KPKS	**Kokpek**	**43.17**	**13**	eP	**P**	**15 46 02.2**	**-0.9**
	comp=Z,44nm,2.3s,baz=12						
CHKK	**Chushkaly**	**43.20**	**11**	eP	**P**	**15 46 02.5**	**-0.8**
	baz=11						
MATP	**Matopo**	**43.36**	**238**	P	**P**	**15 46 06.1**	**+1.1**
	comp=Z,6.5nm,0.9s,baz=59,slow=11,SNR=12						
BTLS	**Baital**	**43.90**	**7**	eP	**P**	**15 46 08.3**	**-0.5**
	comp=Z,18nm,2.3s,baz=7.3						
SMRI	**Semarang**	**44.34**	**102**	P	**P**	**15 46 14.7**	**+1.8**
	comp=Z,61nm,1.2s						
UGM	**Wanagama**	**44.57**	**103**	P	**P**	**15 46 14.7**	**0.0**
	comp=Z,46nm,1.2s						
TDK	**Taldyqorghan**	**44.58**	**12**	eP	**P**	**15 46 13.6**	**-0.7**
	comp=Z,48nm,1.6s,baz=12						
QIZ	**Qiongzhong**	**45.62**	**65**	P	**P**	**15 46 22.3**	**-0.7**
QIZ				S	**S**	**15 53 06.3**	**+0.6**
QIZ				LR	LR		
	comp=Z,190nm,16.1s						
QIZ				LR	LR		
	comp=Z,290nm,22.6s						
QIZ				LR	LR		
	comp=Z,260nm,23.5s						
GYA	**Guiyang**	**45.65**	**53**	⇓P	**P**	**15 46 23.5**	**+0.2**
GYA				S	**S**	**15 53 05.8**	**-0.4**
GYA				pmax	pmax		
	comp=Z,16nm,1.3s						
GYA				LR	LR		
	comp=Z,290nm,23.4s						
WMQ	**Urumqi**	**46.12**	**21**	eP	**P**	**15 46 26.0**	**-0.6**
WMQ				pP	sP	15 46 31.3	+0.3
WMQ				pmax	pmax		
	comp=Z,13nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,140nm,3.9s						
WMQ				LR	LR		
	comp=Z,310nm,28.9s						
WMQ				LR	LR		
	comp=Z,1µm,29.2s						
WMQ				LR	LR		
	comp=Z,190nm,29.5s						
MAKZ	**Makanchi**	**47.09**	**14**	P	**P**	**15 46 33.0**	**-1.1**
MAKZ				IAmb	IAmb	15 46 40.3	
	comp=Z,16nm,1.4s						
MK31	**Makanchi Array**	**47.16**	**14**	P	**P**	**15 46 34.8**	**+0.1**
MK31				IAmb	IAmb	15 46 39.9	
	comp=Z,9.5nm,1.4s						
MKAR	**Makanchi Array**	**47.16**	**14**	P	**P**	**15 46 34.6**	**0.0**
	comp=Z,2.6nm,1.1s,baz=198,slow=5.9,SNR=10						
MKAR	**Makanchi Array**	**47.16**	**14**	P	**P**	**15 46 33.9**	**-0.7**
KBZ	**Khabaz**	**47.19**	**336**	P	**P**	**15 46 36.4**	**+1.5**
	comp=Z,5.9nm,1.0s,baz=151,slow=9.8,SNR=5.2						
LBTB	**Lobatse**	**47.79**	**234**	P	**P**	**15 46 41.6**	**+1.6**
	comp=Z,10nm,1.0s,baz=82,slow=8.5,SNR=9.7						
LBTB	**Lobatse**	**47.79**	**234**	P	**P**	**15 46 42.4**	**+2.4**
KMMI	**Kalianget**	**47.80**	**101**	P	**P**	**15 46 40.8**	**+0.7**
	comp=Z,11nm,1.0s						
ABKAR	**Akbulak array**	**48.01**	**354**	P	**P**	**15 46 38.6**	**-2.6**
ABKAR	**Akbulak array**	**48.01**	**354**	P	**P**	**15 46 41.7**	**+0.5**
ABKAR				IAmb	IAmb	15 46 42.3	
	comp=Z,6.0nm,1.2s						
MTKI	**Muara Teweh, K**	**48.14**	**93**	P	**P**	**15 46 44.3**	**+1.5**
ABJI	**Asem Bagus**	**48.17**	**102**	P	**P**	**15 46 42.0**	**-1.0**
	comp=Z,47nm,0.9s						
BBKI	**Banjar Baru**	**48.25**	**96**	P	**P**	**15 46 45.2**	**+1.5**
	comp=Z,22nm,1.0s						
GTA	**Gaotai**	**48.30**	**34**	⇓P	**P**	**15 46 45.3**	**+1.5**
GTA				pP	pwP	15 46 49.0	-2.2
GTA				sP	sP	15 46 52.0	+3.8
GTA				pmax	pmax		
	comp=Z,4.0nm,1.4s						
GTA				pmax	pmax		
	comp=Z,190nm,4.4s						
GTA				LR	LR		
	comp=Z,250nm,16.7s						
GTA				LR	LR		
	comp=Z,230nm,17.1s						
GTA				LR	LR		
	comp=Z,330nm,18.2s						
ZSN	**Zaisan**	**48.45**	**16**	eP	**P**	**15 46 43.4**	**-1.2**
	comp=Z,15nm,1.7s,baz=16						
BRTR	**Keskin Array B**	**48.61**	**326**	P	**P**	**15 46 45.1**	**-1.1**
	comp=Z,1.2nm,0.9s,baz=155,slow=11,SNR=5.2						
BRTR				LR	LR	16 07 36.1	
	comp=Z,152nm,18.4s,baz=160,slow=36						
BRTR	**Keskin Array B**	**48.61**	**326**	P	**P**	**15 46 46.4**	**+0.2**
LZH	**Lanzhou**	**48.62**	**41**	eP	P	15 46 52.5	+6.1
LZH				sP	pwP	15 47 00.5	+6.7
LZH				pmax	pmax		
	comp=Z,15nm,1.0s						
BRZS	**Berezniki**	**48.63**	**5**	eP	**P**	**15 46 45.9**	**-0.1**
	baz=4.9						
SRBI	**Singaraja**	**49.17**	**102**	P	**P**	**15 46 51.6**	**+0.9**
	comp=Z,22nm,1.0s						
DNP	**Denpasar**	**49.27**	**103**	P	**P**	**15 46 53.4**	**+2.0**
	comp=Z,116nm,0.5s						
KBKI	**Kotabaru**	**49.56**	**96**	P	**P**	**15 46 53.9**	**+0.2**
	comp=Z,12nm,0.9s						
BOSA	**Boshof**	**49.77**	**230**	P	**P**	**15 46 56.8**	**+1.6**
	comp=Z,12nm,0.9s,baz=59,slow=8.6,SNR=12						
BOSA				LR	LR	16 05 27.6	
	comp=Z,460nm,20.1s,baz=62,slow=33						
BOSA	**Boshof**	**49.77**	**230**	P	**P**	**15 46 54.6**	**-0.6**
BOSA				IAmb	IAmb	15 47 03.6	
	comp=Z,22nm,1.1s						
KURK	**Kurchatov**	**50.12**	**10**	P	**P**	**15 46 56.4**	**-0.9**
KURK				IAmb	IAmb	15 47 02.9	
	comp=Z,8.3nm,1.2s						
SEM	**Semipalatinsk**	**50.12**	**11**	eP	**P**	**15 46 56.9**	**-0.7**
	baz=11						
SGKI	**Sangatta, Kali**	**50.82**	**92**	P	**P**	**15 47 03.2**	**-0.1**
	comp=Z,232nm,1.3s						
XAN	**Xi'an**	**50.97**	**46**	P	**P**	**15 47 03.5**	**-0.7**
XAN				pP	pwP	15 47 14.0	+2.4
XAN				sP	sP	15 47 18.8	+10
XAN				pmax	pmax		
	comp=Z,21nm,1.4s						
XAN	**Xi'an**	**50.97**	**46**	P	**P**	**15 47 03.4**	**-0.7**
BRVK	**Borovoye**	**51.53**	**3**	P	**P**	**15 47 08.4**	**+0.4**
PLAI	**Plampang**	**51.80**	**102**	P	**P**	**15 47 10.7**	**+0.1**
	comp=Z,17nm,1.2s						
TSUM	**Tsumeb**	**52.49**	**244**	P	**P**	**15 47 16.5**	**+0.7**
TSUM				IAmb	IAmb	15 47 20.3	
	comp=Z,10nm,1.1s						
WHN	**Wuhan**	**53.50**	**52**	⇑P	**P**	**15 47 24.0**	**+1.1**
WHN				pmax	pmax		
	comp=Z,25nm,0.8s						
BNSI	**Bone**	**53.57**	**96**	P	**P**	**15 47 24.1**	**+0.4**
	comp=Z,19nm,1.2s						
ALN	**Alexandroupoli**	**53.83**	**322**	P	**P**	**15 47 25.3**	**+0.1**
ALN				IAmb	IAmb	15 47 33.1	
	comp=Z,22nm,1.3s						
ZAA0	**Zalesovo Array**	**54.41**	**13**	P	**P**	**15 47 28.0**	**-1.2**
ZAA0				IAmb	IAmb	15 47 35.0	
	comp=Z,9.8nm,0.9s						
ZALV	**Zalesovo Beam**	**54.41**	**13**	P	**P**	**15 47 28.4**	**-0.8**
	comp=Z,3.6nm,0.6s,baz=212,slow=7.9,SNR=18						
ZALV				LR	LR	16 10 00.7	
	comp=Z,199nm,19.7s,baz=218,slow=35						
ZALV	**Zalesovo Beam**	**54.41**	**13**	P	**P**	**15 47 26.8**	**-2.4**
ARU	**Arti**	**55.23**	**354**	LR	LR	16 10 56.8	
	comp=Z,71nm,19.1s,baz=169,slow=36						
HHC	**Hu-ho-hao-te**	**56.31**	**40**	eP	**P**	**15 47 43.8**	**+0.5**
HHC				pmax	pmax		
	comp=Z,11nm,1.0s						
HHC				pmax	pmax		
	comp=Z,77nm,5.7s						
HHC				LR	LR		
	comp=Z,240nm,13.1s						
HHC				LR	LR		
	comp=Z,220nm,13.1s						
HHC				LR	LR		
	comp=Z,250nm,13.5s						
H01W3	**Cape Leeuwin H**	**57.11**	**134**	T	T	16 49 29.1	
	baz=299,slow=75,SNR=96						
H01W2	**Cape Leeuwin H**	**57.12**	**134**	T	T	16 49 29.6	
	baz=299,slow=75,SNR=105						
H01W1	**Cape Leeuwin H**	**57.13**	**134**	T	T	16 49 30.0	
	baz=299,slow=75,SNR=76						
KMSI	**Cibinong**	**57.16**	**90**	P	**P**	**15 47 50.1**	**+0.4**
	comp=Z,41nm,1.0s						
SONM	**Songino Array**	**57.49**	**31**	P	**P**	**15 47 52.1**	**+0.5**
	comp=Z,7.7nm,1.2s,baz=227,slow=6.3,SNR=23						
SONM				LR	LR	16 12 47.0	
	comp=Z,362nm,20.1s,baz=215,slow=36						
NJ2	**Nanjing**	**57.64**	**52**	eP	**P**	**15 47 51.5**	**-1.2**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
BATI	**Baumata**	**57.74**	**103**	P	**P**	**15 47 53.3**	**-0.5**
	comp=Z,7.1nm,1.0s						
ULN	**Ulaanbaatar**	**57.85**	**31**	P	**P**	**15 47 55.2**	**+1.2**
ULN				IAmb	IAmb	15 48 00.6	
	comp=Z,9.0nm,1.3s						
AKASG	**Malin Array Be**	**58.47**	**333**	P	**P**	**15 48 00.5**	**+2.3**
	comp=Z,0.1nm,0.3s,baz=131,slow=5.4,SNR=5.3						
KIRV	**Kirov**	**58.61**	**349**	LR	LR	16 14 47.7	
	comp=Z,90nm,18.1s,baz=176,slow=38						
TLY	**Talaya**	**58.83**	**26**	LR	LR	16 13 21.8	
	comp=Z,206nm,19.1s,baz=200,slow=36						
DAV	**Davao City (W)**	**58.83**	**83**	LR	LR	16 13 32.2	
	comp=Z,112nm,21.5s,baz=338,slow=36						
MNK	**Minsk**	**61.72**	**335**	iP	**P**	**15 48 19.7**	**-0.7**
	comp=E,3.0nm,1.0s						
MNK				iP	**P**	**15 48 19.7**	**-0.7**
	comp=N,18nm,0.8s						
MNK				iP	**P**	**15 48 19.7**	**-0.7**
	comp=Z,6.0nm,0.8s						
MNK				iPcP	**PcP**	**15 49 00.2**	**-1.4**
MNK				iPP	**PP**	**15 50 33.4**	**-3.0**
MNK				iPPP	PPP	15 52 01.6	
MNK				iScP	**ScP**	**15 53 04.4**	**+1.1**
MNK				iPcS	PcS	15 53 19.8	+15
MNK				iS	**S**	**15 56 44.3**	**+1.5**
MNK				iScS	**ScS**	**15 58 11.5**	**-0.3**
MNK				iSS	**SS**	**16 00 47.7**	**+3.1**
MNK				iSSS	SSS	16 03 38.2	
MNK				iLR	LR	16 15 00.1	
MNK				iLRM	MLR	16 17 37.1	
	comp=N,157nm,17.2s						
MNK				iLRM	MLR	16 17 42.5	
	comp=Z,55nm,14.9s						
MNK				iLRM	MLR	16 17 50.7	
	comp=E,5.0nm,7.2s						
KLMR	**Klimovskoe**	**62.84**	**345**	eP	**P**	**15 48 26.5**	**-1.2**
KLMR				AMP		15 48 40.0	
	comp=Z,22nm,1.5s						
VRAC	**Vranov**	**64.06**	**326**	LR	LR	16 17 39.8	
	comp=Z,81nm,18.1s,baz=355,slow=37						
TORD	**Torodi Ar. Bea**	**65.46**	**284**	LR	LR	16 17 02.3	
	comp=Z,223nm,18.9s,baz=95,slow=36						
KSRS	**Korea Array**	**66.46**	**49**	LR	LR	16 21 02.8	
	comp=Z,105nm,18.9s,baz=244,slow=39						
CLL	**Collm**	**67.06**	**327**	eP	**P**	**15 48 54.0**	**-1.4**
MAW	**Mawson**	**68.94**	**182**	LR	LR	16 13 26.7	
	comp=Z,194nm,19.0s,baz=270,slow=31						
NRIK	**Noril'sk**	**69.21**	**8**	P	**P**	**15 49 08.7**	**+0.1**
	comp=Z,0.6nm,0.3s,baz=178,slow=3.4,SNR=5.1						
NRIK				LR	LR	16 19 57.5	
	comp=Z,99nm,20.3s,baz=231,slow=36						
NRIK	**Noril'sk**	**69.21**	**8**	P	**P**	**15 49 10.5**	**+1.9**
NRIK				IAmb	IAmb	15 49 24.4	
	comp=Z,11nm,1.4s						
WRA	**Warramunga Arr**	**69.45**	**112**	P	**P**	**15 49 11.9**	**+0.9**
	comp=Z,7.8nm,1.0s,baz=287,slow=5.9,SNR=33						
WRAB	**Tennant Creek**	**69.45**	**112**	P	**P**	**15 49 12.7**	**+1.6**
WB2	**Warramunga Arr**	**69.46**	**112**	P	**P**	**15 49 11.7**	**+0.6**
WB0	**Warramunga Arr**	**69.47**	**112**	P	**P**	**15 49 11.4**	**+0.2**
WR0	**Warramunga Arr**	**69.64**	**112**	P	**P**	**15 49 12.4**	**+0.2**
ASAR	**Alice Springs**	**69.70**	**116**	P	**P**	**15 49 13.6**	**+0.9**
	comp=Z,4.4nm,0.9s,baz=283,slow=6.2,SNR=31						
ASAR	**Alice Springs**	**69.70**	**116**	P	**P**	**15 49 13.2**	**+0.5**
AS31	**Alice Springs**	**69.70**	**116**	P	**P**	**15 49 13.2**	**+0.5**
USRK	**Ussuriysk Ar.**	**71.39**	**44**	LR	LR	16 23 21.3	
	comp=Z,79nm,18.7s,baz=217,slow=38						
DBIC	**Dimbokro**	**71.63**	**277**	LR	LR	16 19 24.4	
	comp=Z,71nm,20.8s,baz=70,slow=35						
ARCES	**ARCESS Array B**	**73.30**	**346**	P	**P**	**15 49 35.5**	**+2.1**
	comp=Z,3.7nm,0.9s,baz=128,slow=3.4,SNR=5.8						
MJAR	**Matsushiro Arr**	**74.24**	**52**	LR	LR	16 24 54.9	
	comp=Z,85nm,19.3s,baz=300,slow=38						
ESDC	**Sonseca Array**	**74.35**	**311**	P	**P**	**15 49 39.3**	**-0.9**
	comp=Z,1.8nm,1.1s,baz=109,slow=3.5,SNR=5.5						
ESDC	**Sonseca Array**	**74.35**	**311**	P	**P**	**15 49 38.9**	**-1.3**
ESDC				IAmb	IAmb	15 49 50.6	
	comp=Z,11nm,1.4s						
STKA	**Stephens Creek**	**77.87**	**123**	LR	LR	16 23 34.2	
	comp=Z,77nm,18.3s,baz=214,slow=35						
TIXI	**Tiksi**	**80.10**	**17**	P	**P**	**15 50 11.1**	**-0.7**
TIXI				IAmb	IAmb	15 50 18.6	
	comp=Z,21nm,1.4s						
PETK	**Petropavlovsk-**	**89.40**	**37**	LR	LR	16 32 43.9	
	comp=Z,113nm,19.1s,baz=274,slow=37						
VNDA	**Vanda**	**92.48**	**167**	LR	LR	16 28 17.4	
	comp=Z,68nm,18.8s,baz=245,slow=33						
PDAR	**Pinedale Array**	**135.88**	**356**	PKP	**PKPdf**	**15 57 23.9**	**+0.1**
	comp=Z,0.4nm,0.8s,baz=15,slow=3.7,SNR=2.4						
NVAR	**Mina Array Bea**	**140.06**	**6**	PKP	**PKPdf**	**15 57 31.8**	**+0.1**
	comp=Z,0.2nm,0.6s,baz=328,slow=3.2,SNR=1.8						
TXAR	**Lajitas Array**	**148.08**	**344**	PKPbc	**PKPbc**	**15 57 48.6**	**-0.2**
	comp=Z,11nm,1.1s,baz=66,slow=1.5,SNR=20						

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*IDC **28** 15:53:20.2±0.8, 52°.82N×170°.96W, h90km±6km, mb3.5/18, mb1 3.7/19, mb1mx3.6/41, mbtmp3.8/19, MS3.4/2, Ms1 3.4/2, ms1mx2.7/38, Error ellipse: s-maj=18.5km s-min=12.3km az=170.0*

*AEIC **28** 15:53:20±2.7, 52°.7N±0°.1×170°.77W±0°.06, h79km±6km, ML4.0/42, mb3.8/24(NEIC), Error ellipse: s-maj=16.1km s-min=3.1km az=165.0*

*NEIC **28** 15:53:21.2±2.1, 52°.66N±0°.08×170°.70W±0°.08, h93km±7km, Error ellipse: s-maj=13.5km s-min=3.4km az=149.0*

ISC 28 15:53:20.2±0.7, **52°.68N**±0°.09×**170°.76W**±0°.04, **h92**km±5km, **n98**, σ**1s.31**/100, **mb3.8**/18, **Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIKH	**Nikolski High**	**1.19**	**75**	Pn	**Pn**	**15 53 42.2**	**-0.1**
NIKH				Sn	**Sn**	**15 53 58.9**	**0.0**
OKSP	**Okmok Steeple**	**1.60**	**68**		**Pn**	**15 53 47.9**	**+0.6**
OKSO	**Okmok South**	**1.71**	**66**		**Pn**	**15 53 48.5**	**-0.3**
OKSO					**Sn**	**15 54 11.3**	**+0.9**
OKFG	**Magazine Ridge**	**1.87**	**66**		**Pn**	**15 53 50.5**	**-0.3**
OKFG					**Sn**	**15 54 14.8**	**+0.8**
KOFP	**Korovin Flat P**	**2.08**	**260**		**Pn**	**15 53 54.9**	**+1.4**
KOWE	**Korovin West**	**2.15**	**263**		**Pn**	**15 53 56.0**	**+1.5**
ATKA	**Atka Island**	**2.15**	**259**	Pn	**Pn**	**15 53 55.4**	**+0.9**
ATKA	**Atka Island**	**2.15**	**259**		**Sn**	**15 54 22.3**	**+1.7**
MAPS	**Pakushin South**	**2.56**	**62**		**Pn**	**15 54 00.6**	**+0.8**
MAPS					**Sn**	**15 54 32.9**	**+2.6**
MGOD	**Makushin Gods**	**2.59**	**63**		**Pn**	**15 54 01.1**	**+0.7**
MREP	**Makushin Rep't**	**2.67**	**63**		**Pn**	**15 54 02.4**	**+1.0**
MSW	**Makushin Switc**	**2.69**	**61**		**Pn**	**15 54 02.3**	**+0.7**
MNAT	**Makushin Natee**	**2.73**	**62**		**Pn**	**15 54 02.9**	**+0.8**
MNAT					**Sn**	**15 54 36.4**	**+2.1**
AKRB	**Akutan Reef Bi**	**3.16**	**61**		**Pn**	**15 54 09.5**	**+1.6**
AKMO	**Akutan Morgan**	**3.18**	**62**		**Pn**	**15 54 09.6**	**+1.5**
AKBBA	**Akutan Broad B**	**3.22**	**62**		**Pn**	**15 54 10.4**	**+1.7**
AKGG	**Akutan Green G**	**3.23**	**60**		**Pn**	**15 54 09.4**	**+0.5**
AKLV	**Akutan Long Va**	**3.24**	**61**		**Pn**	**15 54 10.1**	**+1.1**
GSTR	**Great Sitkin T**	**3.30**	**262**	Pn	**Pn**	**15 54 11.8**	**+2.0**
GSMY	**Great Sitkin M**	**3.31**	**261**		**Pn**	**15 54 11.1**	**+1.2**
AKUT	**Akutan**	**3.32**	**62**	Pn	**Pn**	**15 54 11.8**	**+1.8**

GSTD	Great Sitkin T	3.36	261		Pn	15 54 12.1	+1.5
AKSA	Akutan Strait	3.36	62		Pn	15 54 12.1	+1.4
AKSA	Akutan Strait	3.36	62		Pn	15 54 11.9	+1.3
ADK	Adak	3.72	260	Pn	Pn	15 54 16.8	+1.3
ADK	Adak	3.72	260		Sn	15 54 59.5	+1.3
WESP	Westdahl Peak	4.03	61		Pn	15 54 21.6	+1.9
KIMD	Kanaga Island	4.08	260		Pn	15 54 21.9	+1.5
WTUG	Tugumak	4.36	58		Pn	15 54 25.6	+1.5
SSBA	Shishaldin	4.46	59		Pn	15 54 27.1	+1.5
SPIA	Saint Paul Isl	4.51	4	Pn	Pn	15 54 27.9	+1.8
DT1	Dutton Round H	5.57	61		Pn	15 54 41.8	+1.2
AMKA	Amchitka	6.27	262		Pn	15 54 50.7	+0.7
SDPT	Sand Point	6.62	62		Pn	15 54 54.8	0.0
CNBA	Chernabura Isl	6.96	68		Pn	15 54 59.1	-0.4
KDAK	Kodiak Island	11.55	57	P	Pn	15 55 57.8	-4.0
	0.6nm,0.3s,baz=221,slow=6.9,SNR=15						
KDAK				LR	LR	16 00 13.4	
	comp=Z,33nm,20.7s,baz=254,slow=36						
RSO	Redoubt South	12.59	45		Pn	15 56 19.4	+3.6
SEW	Seward	13.90	49	Pn	Pn	15 56 31.1	-1.7
O22K	Cooper Landing	13.93	48		Pn	15 56 32.5	-0.7
BPAW	Bear Paw Mtn.	15.35	34		P	15 56 53.0	-1.2
BPAW				IAmb	IAmb	15 56 57.2	
	comp=Z,4.3nm,0.6s						
SCM	Sheep Creek Mo	15.56	45		Pn	15 56 54.7	+0.6
SCM				IAmb	IAmb	15 57 12.9	
	comp=Z,7.8nm,0.7s						
M24K	Tolsona, Glenn	16.17	45		Pn	15 57 01.4	-0.3
N25K	Chitina, Valde	16.66	47	P	Pn	15 57 08.0	+0.1
N25K				IAmb	IAmb	15 57 14.2	
	comp=Z,3.7nm,0.8s						
CCB	Clear Creek Bu	16.79	36		Pn	15 57 07.3	-1.9
GLB	Gilahina Butte	16.96	48		Pn	15 57 09.8	-1.7
HDA	Harding Lake	16.96	37	P	Pn	15 57 11.7	+0.2
HDA				IAmb	IAmb	15 57 22.0	
	comp=Z,6.3nm,1.4s						
VRDI	Verde Repeater	17.06	49	Pn	Pn	15 57 11.7	-1.1
IL31		17.18	36		Pn	15 57 12.8	-1.4
ILAR	Eielson Array	17.18	36	P	Pn	15 57 12.8	-1.4
	comp=Z,0.4nm,0.3s,baz=222,slow=9.9,SNR=25						
ILAR				ScP	ScP	16 05 17.3	-1.3
	comp=Z,0.1nm,0.3s,baz=271,slow=3.5,SNR=8.7						
MCARA	McCarthy VSAT	17.30	49		P	15 57 16.0	+0.3
MCARA				IAmb	IAmb	15 57 28.2	
	comp=Z,7.1nm,1.2s						
BARN	Barnard Glacie	17.85	51	P	Pn	15 57 23.2	+0.8
BARN				IAmb	IAmb	15 57 41.4	
	comp=Z,5.7nm,1.2s						
CTGM	Chitina Glacie	17.98	51	P	Pn	15 57 23.8	-0.1
PCA	Pinnacle	18.31	54	P	Pn	15 57 28.6	+0.7
PCA				IAmb	IAmb	15 57 30.1	
	comp=Z,4.3nm,0.6s						
TOLK	Toolik Lake Re	18.89	24	Pn	Pn	15 57 35.2	+0.5
TOLK				IAmb	IAmb	15 57 39.4	
	comp=Z,15nm,1.4s						
PETK	Petropavlovsk-	18.96	284	P	Pn	15 57 35.4	-0.2
	comp=Z,0.5nm,0.3s,baz=82,slow=13,SNR=13						
EGAK	Eagle	19.33	40		Pn	15 57 39.4	-0.4
EGAK				IAmb	IAmb	15 57 39.7	
	comp=Z,3.2nm,0.5s						
BMAR	Burnt Mountain	19.49	31		Pn	15 57 41.5	-0.2
HYT	Haines Junctio	19.78	53	Pn	Pn	15 57 45.7	+0.5
HYT				IAmb	IAmb	15 58 04.6	
	comp=Z,4.7nm,0.9s						
SEY	Seymchan	21.83	312	P	P	15 58 04.5	-0.1
	comp=Z,3.5nm,0.7s,baz=254,slow=23,SNR=25						
SEY				ScP	ScP	16 05 28.9	-0.4
	comp=Z,0.9nm,0.7s,baz=83,slow=19,SNR=5.3						
MA2	Magadan	22.26	303	P	P	15 58 09.3	0.0
	comp=Z,1.8nm,0.6s,baz=171,slow=10.0,SNR=3.9						
DLBC	Dease Lake	23.46	60	P	P	15 58 23.6	+2.3
	comp=Z,3.8nm,0.8s,baz=274,slow=8.4,SNR=11						
INK	Inuvik	23.56	34	P	P	15 58 20.2	-1.7
	comp=Z,0.9nm,0.4s,baz=248,slow=7.0,SNR=8.2						
INK				pP	pP	15 58 40.0	-0.8
	comp=Z,1.8nm,0.7s,baz=230,slow=8.5,SNR=3.9						
INK				ScP	ScP	16 05 33.9	+0.3
	comp=Z,0.5nm,0.5s,baz=326,slow=3.2,SNR=4.0						
INK	Inuvik	23.56	34	P	P	15 58 21.6	-0.3
INK				IAmb	IAmb	15 58 39.4	
	comp=Z,3.6nm,1.3s						
YKA	Yellowknife Ar	30.68	49	P	P	15 59 25.9	+0.2
	comp=Z,0.2nm,0.4s,baz=271,slow=7.0,SNR=6.7						
YKA				ScP	ScP	16 05 56.0	+0.8
	comp=Z,0.1nm,0.5s,baz=273,slow=3.4,SNR=2.7						
B08A	Colville Reser	32.41	77	P	P	15 59 42.8	+1.7
NEW	Newport	33.76	76	P	P	15 59 54.0	+1.2
H11N2	WAKE ISLAND Hy	37.18	216	T	T	16 41 11.7	
	baz=24,slow=75,SNR=6.3						
H11N3	WAKE ISLAND Hy	37.19	216	T	T	16 41 12.8	
	baz=24,slow=75,SNR=7.8						
H11N1	WAKE ISLAND Hy	37.20	216	T	T	16 41 10.0	
	baz=24,slow=75,SNR=5.7						
PNTR	Pine Nut	37.32	90	P	P	16 00 24.9	+1.3
MCMT	McKenzie Canyo	38.05	78	P	P	16 00 30.9	+1.2
BOZ	Bozeman (W)	38.35	76	P	P	16 00 32.7	+0.5
H11S1	WAKE ISLAND Hy	38.38	216	T	T	16 41 46.4	
	baz=19,slow=74,SNR=16						
H11S2	WAKE ISLAND Hy	38.39	216	T	T	16 41 53.8	
	baz=19,slow=74,SNR=35						
H11S3	WAKE ISLAND Hy	38.40	216	T	T	16 42 01.0	
	baz=19						
NVAR	Mina Array Bea	38.52	90	P	P	16 00 35.9	+2.2
	comp=Z,1.2nm,0.7s,baz=305,slow=7.7,SNR=11						
NVAR				ScP	ScP	16 06 24.5	+0.5
	comp=Z,0.2nm,0.6s,baz=316,slow=3.8,SNR=2.4						
PDAR	Pinedale Array	41.18	79	P	P	16 00 56.6	+1.0
	comp=Z,1.5nm,0.7s,baz=306,slow=4.6,SNR=16						
PDAR	Pinedale Array	41.18	79	P	P	16 00 56.0	+0.4
ULM	Lac du Bonnet	44.75	62	P	P	16 01 23.9	-0.2
	comp=Z,1.3nm,0.4s,baz=302,slow=8.3,SNR=4.3						
ULM	Lac du Bonnet	44.75	62	IAmb	IAmb	16 01 35.8	
	comp=Z,0.2nm,0.2s						
ULN	Ulaanbaatar	50.04	300	P	P	16 02 07.8	+2.5
SONM	Songino Array	50.41	300	ScP	ScP	16 07 11.0	-1.4
	comp=Z,0.7nm,0.6s,baz=30,slow=3.9,SNR=5.9						
TXAR	Lajitas Array	53.59	88	P	P	16 02 32.7	+0.8
	comp=Z,1.2nm,0.4s,baz=313,slow=5.7,SNR=8.4						
JMIC	Jan Mayen	55.98	7	LR	LR	16 29 28.2	
	comp=Z,151nm,18.1s,baz=62,slow=39						
MKAR	Makanchi Array	62.97	312	P	P	16 03 35.0	-1.8
	comp=Z,0.1nm,0.3s,baz=46,slow=6.2,SNR=1.6						
MKAR				pP	pP	16 03 58.4	-1.3
	comp=Z,0.6nm,0.8s,baz=42,slow=5.6,SNR=4.8						
FINES	FINESS Array B	65.44	351	P	P	16 03 51.4	-1.2
	comp=Z,2.8nm,0.9s,baz=355,slow=9.6,SNR=3.7						
NOA	NORSAR Array B	66.62	359	P	P	16 03 59.6	-0.6
	comp=Z,0.5nm,0.6s,baz=2.5,slow=6.7,SNR=1.5						
AKASG	Malin Array Be	75.62	347	P	P	16 04 52.3	-2.4
	comp=Z,0.1nm,0.3s,baz=17,slow=5.7,SNR=1.9						
AKASG				pP	pP	16 05 17.2	-0.6
	comp=Z,0.2nm,0.4s,baz=12,slow=4.7,SNR=1.5						
AKASG	Malin Array Be	75.62	347	IAmb	IAmb	16 04 53.7	
	comp=Z,0.6nm,0.9s						
CMAR	Chiang Mai Arr	75.72	282	P	P	16 04 55.6	-0.1
	comp=Z,0.3nm,0.5s,baz=27,slow=7.1,SNR=2.5						
GERES	GERESS Array B	78.78	357	P	P	16 05 11.9	-0.6
	comp=Z,0.1nm,0.3s,baz=19,slow=6.2,SNR=1.8						
CTA	Charters Tower	81.50	220	P	P	16 05 27.2	-0.1
	comp=Z,1.3nm,0.4s,baz=358,slow=4.6						
WRA	Warramunga Arr	86.54	230	P	P	16 05 52.2	-0.7
	comp=Z,0.5nm,0.6s,baz=33,slow=5.5,SNR=6.3						
ASAR	Alice Springs	89.95	229	P	P	16 06 09.4	+0.4
	comp=Z,2.2nm,0.6s,baz=23,slow=4.9,SNR=43						
ASAR				pP	pP	16 06 32.8	-0.6
	comp=Z,0.4nm,0.5s,baz=24,slow=5.5,SNR=1.7						
H03N2	Juan Fernandez	116.83	111	T	T	18 19 15.9	
	baz=314						
H03N1	Juan Fernandez	116.84	111	T	T	18 19 10.4	
	baz=314						
H03N3	Juan Fernandez	116.85	111	T	T	18 19 06.1	
	baz=314						
BOSA	Boshof	153.18	327	PKPbc	PKPbc	16 13 07.2	+0.1
	comp=Z,2.8nm,1.0s,baz=18,slow=0.9,SNR=6.6						

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*IDC **28** 16:10:34.1±0.8, 60°.16N×59°.89E, h0^{km}, mb3.5/5, mb1 3.7/15, mb1mx3.5/43, mbtmp3.6/15, ML3.4/10, MS3.7/1, Ms1 3.8/1, ms1mx2.6/38, Error ellipse: s-maj=12.6km s-min=9.1km az=43.0*

ISC 28 16:10:36.5±0.8, **60°.16N**±0°.08×**60°.10E**±0°.07, **h35**^{km}**, n17,** σ2^{s}**56**/21, **mb3.2**/5, **Ural Mountains region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARU	Arti	3.83	193	Pn	Pn	16 11 34.9	+2.1
	0.0nm,0.3s,baz=1.1,slow=3.1,SNR=4.8						
ARU				Sn	Sn	16 12 20.4	+3.9
	0.0nm,0.3s,baz=327,slow=23,SNR=3.8						
ARU				Lg	Lg	16 12 32.0	
	0.0nm,0.3s,baz=93,slow=22,SNR=7.0						
KIRV	Kirov	5.68	259	Pn	Pn	16 11 59.2	+1.0
	0.6nm,0.3s,baz=342,slow=20,SNR=1.7						
KIRV				Sn	Sn	16 13 02.5	+0.3
	0.8nm,0.3s,baz=203,slow=20,SNR=0.9						
KIRV				Lg	Lg	16 13 27.3	
	1.4nm,0.3s,baz=2.0,slow=20,SNR=2.0						
BVAR	Borovoye Array	9.12	137	Pn	Pn	16 12 47.1	+1.7
	1.1nm,0.3s,baz=267,slow=7.4,SNR=40						
BVAR				Sn	Sn	16 14 23.9	-2.8
	0.7nm,0.3s,baz=343,slow=28,SNR=4.2						
AKTO	Aktyubinsk	9.82	188	Pn	Pn	16 12 56.2	+1.3
	0.2nm,0.3s,baz=330,slow=5.8,SNR=3.4						
AKTO				Sn	Sn	16 14 39.4	-4.5
	0.1nm,0.3s,baz=25,slow=14,SNR=1.3						
BELG	Belogornoye	10.41	227	Pn	Pn	16 13 02.7	-0.2
	1.2nm,0.3s,baz=328,slow=3.2,SNR=12						
BELG				Sn	Sn	16 14 54.5	-3.6
	0.4nm,0.3s,baz=86,slow=7.4,SNR=2.5						
KURBB	Kurchatov Arra	14.12	124	Pn	Pn	16 13 52.4	-1.4
	0.2nm,0.3s,baz=330,slow=13,SNR=6.9						
FINES	FINESS Array B	16.54	289	Pn	Pn	16 14 21.2	-4.2
	0.1nm,0.3s,baz=91,slow=13,SNR=5.2						
FINES				Sn	Sn	16 17 11.5	-16
	0.1nm,0.3s,baz=82,slow=21,SNR=1.6						
ARCES	ARCESS Array B	17.17	317	Pn	Pn	16 14 29.1	-4.2
	baz=95,slow=8.9,SNR=7.2						
MKAR	Makanchi Array	18.67	126	Pn	P	16 14 51.7	+0.4
	0.1nm,0.3s,baz=328,slow=9.7,SNR=6.5						
MKAR				Sn	Sn	16 18 09.8	-10
	0.0nm,0.3s,baz=333,slow=21,SNR=1.7						
KBZ	Khabaz	19.47	220	P	P	16 15 00.1	+0.2
	0.1nm,0.3s,baz=347,slow=9.0,SNR=1.8						
AKASG	Malin Array Be	19.73	255	P	P	16 15 02.8	0.0
	0.4nm,0.3s,baz=46,slow=10,SNR=2.4						
HFS	Hagfors	22.73	290	P	P	16 15 36.2	+1.2
	2.4nm,0.7s,baz=70,slow=13,SNR=5.7						
NOA	NORSAR Array B	23.57	294	P	P	16 15 43.6	+0.1
	0.9nm,1.0s,baz=92,slow=9.0,SNR=3.4						
BRTR	Keskin Array B	26.29	231	P	P	16 16 10.8	+2.2
	0.6nm,0.9s,baz=34,slow=10,SNR=2.1						
GERES	GERESS Array B	28.60	268	P	P	16 16 31.5	+2.3
	0.3nm,0.6s,baz=50,slow=7.1,SNR=3.6						
ILAR	Eielson Array	53.74	14	LR	LR	16 47 18.7	
	comp=Z,65nm,18.4s,baz=324,slow=41						
YKA	Yellowknife Ar	57.61	357	P	P	16 20 23.9	+1.7
	0.3nm,0.7s,baz=6.2,slow=7.0,SNR=7.8						

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*DJA **28** 16:31:19.3±0.3, 2°N±2°×12°7E±°, h39^{km}±11^{km}, M4.2/15, mb4.3/6, mB4.9/4, MLv4.2/15, Mw(mB)4.2/4*

*NEIC **28** 16:31:19.1±1.2, 1°.7N±0°.1×127°.1E±0°.2, h76^{km}±10^{km}, mb4.4/13, Error ellipse: s-maj=24.5km s-min=11.9km az=61.0*

*IDC **28** 16:31:19.4±1.7, 1°.76N×127°.14E, h81^{km}±16^{km}, mb3.9/10, mb1 4.0/13, mb1mx3.7/33, mbtmp4.2/13, MS3.4/4, Ms1 3.4/4, ms1mx2.8/38, Error ellipse: s-maj=18.5km s-min=11.2km az=76.0*

ISC 28 16:31:17.8±0.5, **1°.95N**±0°.04×**127°.24E**±0°.06, **h63**^{km}**, n55,** σ1^{s}**87**/59, **mb4.3**/19, **1D, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.17	174	Pn	Pn	16 31 38.3	0.0
TNTI	Ternate	1.17	174	P	Pn	16 31 38.5	+0.2
TNTI				S	Sn	16 31 53.7	+0.2
SGSI	Sangihe	2.43	315	P	Pn	16 31 55.0	-0.2
SGSI				S	Sn	16 32 23.9	0.0
KMSI	Cibinong	3.53	247	P	Pn	16 32 12.0	+1.7
KMSI				S	Sn	16 32 51.7	+0.9
SANI	Sanana	4.16	197	P	Pn	16 32 19.7	+0.8
DDMP	Don Marcelino,	4.40	340	*e*P	Pn	16 32 22.1	-0.2
DDMP				*e*S	Sn	16 33 09.6	-2.7
GTOI	Gorontalo	4.42	253	P	Pn	16 32 24.4	+1.9
GTOI				S	Sn	16 33 14.4	+1.7
SIJI	Sorong	4.90	125	P	Pn	16 32 31.5	+2.4
	2.3nm,0.3s,baz=226,slow=22,SNR=15						
SIJI				S	Sn	16 33 26.8	+2.3
	0.5nm,0.3s,baz=170,slow=23,SNR=2.5						
NLAI	Namlea	5.15	182	P	Pn	16 32 33.9	+1.4
	0.2nm2µm22nm,1.1s						
SKMP	Bagumbayan, Su	5.28	329	*e*P	Pn	16 32 33.4	-0.9
SKMP				*e*S	Sn	16 33 30.1	-3.7
LUWI	Luwuk	5.36	236	P	Pn	16 32 36.5	+1.1
	0.4nm1µm52nm,0.9s						
KCP	Kidapawan	5.47	337	⇓*e*P	Pn	16 32 47.6	+11
MRSI	Marisa	5.49	255	P	Pn	16 32 38.7	+1.5
	0.1nm20nm,0.5s						
APSI	Ampana	6.27	243	P	Pn	16 32 48.9	+1.1
	0.1nm21nm,0.9s						
FAKI	Fak Fak	6.96	134	Pn	Pn	16 33 01.3	+4.0
FAKI	Fak Fak	6.96	134	P	Pn	16 32 59.3	+2.0
	0.1nm20nm,1.4s						
MYLDM	Lahad Datu	9.29	290	Pn	Pn	16 33 30.8	+1.6
KAPI	Kappang	10.19	227	P	Pn	16 33 41.2	-0.2
	1.3nm,0.3s,baz=309,slow=22,SNR=1.5						
KAPI				S	Sn	16 35 31.0	-3.1
	0.4nm,0.3s,baz=80,slow=11,SNR=1.5						
SAUI	Saumlaki	10.66	158	Pn	Pn	16 33 45.3	-2.6
SOEI	Soe	12.00	194	Pn	Pn	16 34 03.0	-3.2
BATI	Baumata	12.59	196	P	Pn	16 34 09.0	-5.2
STKI	Sintang	15.87	263	P	P	16 35 01.8	+1.7
FITZ	Fitzroy Crossi	19.98	184	P	P	16 35 42.9	-2.4
	0.4nm,0.3s,baz=17,slow=9.6,SNR=13						
FITZ				LR	LR	16 45 02.8	
	comp=Z,40nm,19.7s,baz=168,slow=42						
FITZ	Fitzroy Crossi	19.98	184	P	P	16 35 42.2	-3.0
LEM	Lembang	21.44	246	LR	LR	16 46 05.8	
	comp=Z,38nm,20.1s,baz=191,slow=42						
TWG	Pinlang	21.60	344	P	P	16 36 02.1	-0.5
TWG				IAmb	IAmb	16 36 16.2	
	comp=Z,12nm,0.9s						
TPUB	Ta-pu	22.17	344	P	P	16 36 08.2	-0.6
TPUB				IAmb	IAmb	16 36 09.4	
	comp=Z,29nm,1.3s						
WB0	Warramunga Arr	22.69	162	P	P	16 36 12.6	-1.8
WB0				IAmb	IAmb	16 36 14.9	
	comp=Z,16nm,1.1s						
WRA	Warramunga Arr	22.84	163	P	P	16 36 13.9	-2.1
	comp=Z,5.7nm,0.6s,baz=342,slow=10,SNR=38						
WRA				ScP	ScP	16 43 35.5	-2.3
	comp=Z,0.2nm,0.5s,baz=340,slow=2.9,SNR=1.7						
WB2	Warramunga Arr	22.85	163	P	P	16 36 14.0	-2.0
WB2				IAmb	IAmb	16 36 16.3	
	comp=Z,11nm,0.8s						
WR0	Warramunga Arr	22.92	162	P	P	16 36 14.6	-2.2
AS31	Alice Springs	26.27	166	P	P	16 36 46.3	-1.2
AS31				IAmb	IAmb	16 36 51.4	
	comp=Z,2.3nm,0.3s						
ASAR	Alice Springs	26.27	166	P	P	16 36 45.9	-1.7
	comp=Z,1.9nm,0.6s,baz=347,slow=12,SNR=42						
ASAR				ScP	ScP	16 43 44.0	-3.3
	comp=Z,0.3nm,0.8s,baz=330,slow=2.6,SNR=5.4						
ASAR	Alice Springs	26.27	166	P	P	16 36 45.7	-1.9
KSRS	Korea Array	35.34	1	P	P	16 38 08.0	+0.8
	comp=Z,1.2nm,0.7s,baz=178,slow=10,SNR=9.0						
BBOO	Buckleboo	35.56	167	P	P	16 38 08.3	-0.9
MJAR	Matsushiro Arr	35.89	15	P	P	16 38 11.6	-0.3
	comp=Z,1.6nm,0.7s,baz=187,slow=9.3,SNR=9.0						
STKA	Stephens Creek	36.29	159	P	P	16 38 13.6	-1.9
	comp=Z,6.4nm,0.8s,baz=326,slow=7.7,SNR=7.7						
STKA	Stephens Creek	36.29	159	P	P	16 38 15.3	-0.1
HHC	Hu-ho-hao-te	41.24	342	*e*P	P	16 38 59.5	+2.6
HHC				pmax	pmax		
	comp=Z,4.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,170nm,5.6s						
USRK	Ussuriysk Ar.	42.28	5	P	P	16 39 06.6	+1.4
	comp=Z,1.8nm,0.7s,baz=187,slow=6.5,SNR=8.1						
CAN	Canberra	42.30	153	P	P	16 39 04.4	-1.1
ULN	Ulaanbaatar	48.96	342	P	P	16 39 59.6	+1.6
ULN				IAmb	IAmb	16 40 00.2	
	comp=Z,3.0nm,0.7s						
SONM	Songino Array	49.14	342	P	P	16 40 00.7	+1.3
	comp=Z,1.4nm,0.6s,baz=157,slow=8.4,SNR=16						
WMQ	Urumqi	54.47	326	*e*P	P	16 40 41.8	+2.7
PETK	Petropavlovsk-	56.89	21	P	P	16 40 58.4	+2.3
	comp=Z,4.0nm,0.7s,baz=221,slow=8.3,SNR=2.0						
MK31	Makanchi Array	59.30	326	P	P	16 41 13.7	+0.5
MK31				IAmb	IAmb	16 41 14.6	
	comp=Z,2.8nm,0.7s						
MKAR	Makanchi Array	59.30	326	P	P	16 41 13.7	+0.5
	comp=Z,3.1nm,0.5s,baz=120,slow=8.2,SNR=103						
MAKZ	Makanchi	59.49	326	P	P	16 41 15.0	+0.5
KSH	Kashi	59.66	316	P	P	16 41 17.8	+1.8
KSH				pmax	pmax		
	comp=Z,4.0nm,1.2s						
KSH				pmax	pmax		
	comp=Z,200nm,7.7s						
KKAR	Karatay Array	64.88	317	P	P	16 41 50.9	+0.2
NRIK	Noril'sk	72.27	346	P	P	16 42 36.0	-0.1
	comp=Z,1.4nm,0.6s,baz=114,slow=6.6,SNR=4.3						
KIRV	Kirov	82.00	329	LR	LR	17 23 09.8	
	comp=Z,64nm,18.8s,baz=306,slow=38						
PPT2	Papeete2	84.09	108	*e*LR	LR	16 43 50.0	
	comp=Z,122nm,30.5s						
KBZ	Khabaz	84.57	314	LR	LR	17 27 14.7	
	comp=Z,51nm,18.0s,baz=339,slow=40						

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*UCR **28** 16:36:08.1±1.8, 7°.88N×82°.80W, h11^{km}±8^{km}, MW4.0*

*UPA **28** 16:36:09.4±1.7, 7°.98N×82°.82W, h9^{km}±4^{km}, MW4.5*

ISC 28 16:36:08.7±1.3, **7°.96N**±0°.04×**82°.81W**±0°.03, **h12**^{km}±9^{km}, **n41,** σ**0**^{s}**84**/69, **5C-2D, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LESP3	La Esperanza,	0.45	3	*e*P	Pb	16 36 18.2	-0.4
LESP3				*e*S	Sb	16 36 24.3	-0.9
CCOL	Caracol de Cor	0.47	341	*e*P	Pb	16 36 19.1	0.0
PEDE3	Pedregal, Chir	0.57	43	*e*P	Pb	16 36 20.7	0.0
PEDE3				*e*S	Sb	16 36 29.6	+0.7
DVD	David	0.60	37	*e*P	Pb	16 36 21.0	-0.1
DVD				*e*S	Sb	16 36 29.3	-0.2
LOCO3	Loma Colorada,	0.60	41	⇓*e*P	Pb	16 36 20.6	-0.5
LOCO3				*e*S	Sb	16 36 29.2	-0.3
CDITO	Canoas	0.61	355	*e*P	Pb	16 36 21.5	+0.1
CDITO				*e*S	Sb	16 36 30.0	-0.1
CDITO	Canoas	0.61	355	*e*P	Pg	16 36 21.0	+0.3
LOMA3	Las Lomas, Chi	0.63	42	*e*P	Pb	16 36 21.9	+0.2
LOMA3				*e*S	Sn	16 36 32.2	-1.3
CHIR3	Chiriqui UPA,	0.65	48	⇓*i*P	Pg	16 36 21.3	0.0
CHIR3				*e*S	Sn	16 36 32.1	-1.9
PIRO	Carate, Puerto	0.68	311	*e*P	Pg	16 36 21.8	-0.1
PIRO				*e*S	Sb	16 36 32.2	+0.3
PIRO	Carate, Puerto	0.68	311	*e*P	Pg	16 36 21.8	-0.1
PIRO				*e*S	Sb	16 36 32.3	+0.3
GUAL3	Gualaca, Chiri	0.77	42	*e*P	Pg	16 36 23.5	-0.1
GUAL3				*e*S	Sn	16 36 35.4	-1.6
PTAR3	Potrerillos Ar	0.80	23	⇑*e*P	Pb	16 36 24.2	-0.4
PTAR3				*e*S	Sn	16 36 36.3	-1.5
BCO2	Palmira	0.81	21	⇑*e*P	Pg	16 36 24.2	-0.2
BCO2				*e*S	Sn	16 36 37.0	-1.1
MLIR3	Monte Lirio, C	0.83	359	*e*P	Pb	16 36 25.6	+0.4
MLIR3				*e*S	Sn	16 36 38.4	-0.2
BRU2	Volcan	0.84	8	⇑*e*P	Pb	16 36 25.1	-0.3
BRU2				*e*S	Sn	16 36 38.4	-0.5
BRU2	Volcan	0.84	8	*e*P	Pg	16 36 24.9	-0.1
EDSV	San Vito	0.87	350	*e*P	Pg	16 36 24.1	-1.4
EDSV				*e*S	Sn	16 36 40.4	+0.7
PSOM3	Paja de Sombre	0.87	34	⇑*e*P	Pg	16 36 25.2	-0.4
PSOM3				*e*S	Sb	16 36 37.5	0.0
LNBQ3	Los Naranjos,	0.91	24	*e*P	Pg	16 36 26.0	-0.3
LNBQ3				*e*S	Sn	16 36 40.5	-0.1
RIOS	Rincon, Osa	1.01	317	*e*P	Pb	16 36 27.2	-1.1
RIOS				*e*S	Sg	16 36 41.8	+0.4
NANC3	Nancito, Chiri	1.11	75	*e*P	Pb	16 36 29.1	-0.8
NANC3				*e*S	Sn	16 36 46.8	+1.5
CHGR2	Aguacate	1.18	34	*e*P	Pb	16 36 30.3	-0.8
CHGR2				*e*S	Sb	16 36 45.6	-0.7
EDPN	Palmar Norte	1.18	328	*e*P	Pn	16 36 30.5	-0.6
EDPN				*e*S	Sg	16 36 47.6	+0.7
EDBA	Buenos Aires	1.28	339	*e*P	Pn	16 36 32.4	-0.1
EDBA				*e*S	Sg	16 36 51.2	+1.2
DRK0	Durika	1.36	342	⇑*e*P	Pn	16 36 33.9	0.0
DRK0				*e*S	Sn	16 36 51.7	-0.3
DRK0	Durika	1.36	342	*e*P	Pn	16 36 33.8	0.0
GMAL	Guarumal, Vera	1.58	97	*e*P	Pb	16 36 37.5	-0.4
GMAL				*e*S	Sg	16 36 59.0	-0.6
PEZE	Perez Zeledon,	1.65	329	*e*P	Pn	16 36 38.4	+0.7
CDM	Cerro de Muert	1.84	329	*e*P	Pn	16 36 40.8	+0.2
MRVA	Moravia de Chi	1.96	342	*e*P	Pn	16 36 43.0	+1.1
CACAO	El Cacao, Vera	2.03	107	*e*P	Pb	16 36 44.5	-1.0
CACAO				*e*S	Sb	16 37 11.4	+0.6
RIMA	Rio Macho	2.07	330	*e*P	Pn	16 36 44.0	+0.3
LCR2	La Lucha 2	2.13	327	*e*P	Pn	16 36 44.7	+0.4
CVTR	Volcan Turrial	2.25	336	*e*P	Pn	16 36 47.5	+1.3
JACO	JACO, Garabito	2.49	313	*e*P	Pn	16 36 48.1	-1.0
AZU	Azuero	2.52	94	*e*P	Pn	16 36 50.9	+1.3
AZU				*e*S	Sb	16 37 23.6	-1.4
JTS	Las Juntas de	3.13	318	*e*P	Pn	16 36 59.4	+1.3
JTS				*e*S	Sn	16 37 36.4	+0.9
JTS	Las Juntas de	3.13	318	*e*P	Pn	16 36 59.3	+1.3
BCIP	Isla Barro Col	3.18	68	*e*P	Pn	16 37 00.4	+1.7
BCIP				*e*S	Sn	16 37 38.5	+2.0
INDI	Punta indio, G	3.26	306	*e*P	Pn	16 36 59.5	-0.3

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*TIF **28** 16:57:17.0, 42°.43N×41°.03E, h23^{km}±1^{km}*

*MOS **28** 16:57:17.9±0.0, 42°.47N×41°.05E, h9^{km}, ML2.3/5, MPVA3.2*

*NORS **28** 16:57:18.1±0.0, 42°.48N×41°.22E, h12^{km}, MPVA2.9*

ISC 28 16:57:17.4±1.2, **42°.44N**±0°.04×**41°.03E**±0°.04, **h9**^{km}±11^{km}, **n16,** σ**0**^{s}**62**/32, **Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHVG	Ch'k'valeri	0.82	70	P	Pg	16 57 33.2	0.0
CHVG				S	Sb	16 57 45.1	+0.1
BATM	Batumi	0.97	149	P	Pg	16 57 35.6	-0.3
BATM				S	Sg	16 57 49.1	+0.6
ARXR	Arkhyz	1.14	9	*e*Pg	Pb	16 57 39.0	-0.3
	24nm,0.2s						
ARXR				*i* Sg	Sn	16 57 54.6	-0.8
	135nm,0.3s						
VSLR	Vesyoloye	1.26	325	*i* Pg	Pn	16 57 41.2	+0.1
VSLR				*i* Sg	Sg	16 57 59.6	+1.6
RPOR	Krasnaya Polya	1.38	336	*i* Pg	Pb	16 57 43.3	-0.1
	7.6nm,0.2s						
RPOR				*i* Sg	Sg	16 58 02.3	+0.4
	15nm,0.3s						
NEY	Neytrino	1.48	56	*e*Pg	Pb	16 57 44.9	-0.3
	17nm,0.3s						
NEY				*e*Sg	Sg	16 58 04.4	-0.7
ABS	Abastumani	1.49	117	P	Pn	16 57 44.0	-0.4
ABS				S	Sn	16 58 04.3	+0.3
SOC	Sochi	1.50	320	*e*Pg	Pn	16 57 44.7	+0.3
SOC				*e*Sg	Sg	16 58 05.8	+0.2
GUZR	Guzeripl'	1.70	337	*i* Pg	Pb	16 57 48.4	-0.3
GUZR				*e*Sg	Sg	16 58 11.2	-0.7
SHA1	Shidzhatmaz	1.76	42	*i* Pg	Pb	16 57 49.9	-0.1
	1.5nm,0.4s						
SHA1				*i* Sg	Sb	16 58 12.4	+0.2
	15nm,1.5s						
ONI	Oni	1.79	84	P	Pn	16 57 49.4	+0.9
ONI				S	Sb	16 58 12.9	-0.1
ONI	Oni	1.79	84	*i* Pg	Pn	16 57 49.4	+0.9
ONI				*i* Sg	Sb	16 58 13.6	+0.6
KBZ	Khabaz	1.88	46	*i* Pg	Pb	16 57 51.1	-0.7
KBZ				*e*Sg	Sb	16 58 15.8	+0.5
LZRR	Lazarevskoye	1.93	322	*e*Pg	Pb	16 57 51.7	-0.9
	12nm,1.0s						
LZRR				*i* Sg	Sb	16 58 16.9	+0.2
	25nm,2.2s						
DIGR	Digorskoe uzhe	1.93	75	*e*Pg	Pb	16 57 53.0	+0.1
DIGR				*e*Sg	Sb	16 58 17.8	+0.6
ZEI	Tsey	2.15	80	*e*Pg	Pb	16 57 55.4	-1.1
ZEI				*e*Sg	Sb	16 58 23.4	+0.1

PRU 28 17:05:43.2±0.0, **51°.59N**×**16°.02E, h0**^{km}**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHVC	Chvalec	1.00	179	*e*PG	Pg	17 06 02.0	-0.4
OSTC	Ostas	1.04	173	*e*PG	Pg	17 06 02.9	-0.2
OSTC				*e*SG	Sg	17 06 16.4	-0.2
DPC	Dobruska-Polom	1.26	171	*e*PG	Pg	17 06 05.6	-1.6
DPC				*e*SG	Sb	17 06 24.2	-0.3
KRLC	Kraliky	1.59	162	*e*PG	Pb	17 06 13.4	-0.1
KRLC				*e*SG	Sn	17 06 33.6	-0.3

*IDC **28** 17:07:23.8±2.1, 41°.19N×20°.13E, h0^{km}, mb3.3/6, mb1 3.4/10, mb1mx3.3/43, mbtmp3.3/10, ML3.0/4, Error ellipse: s-maj=32.1km s-min=18.9km az=178.0*
*TIR **28** 17:07:26.9, 41°.32N×20°.31E, h4^{km}±1^{km}, Md3.3, Ml3.2*
*ATH **28** 17:07:26.8, 41°.46N×20°.36E, h8^{km}±3^{km}, ML3.0/7, Error ellipse: s-maj=3.9km s-min=1.1km az=354.0*
*SKO **28** 17:07:26.7, 41°.34N×20°.30E, h20^{km}*
*PDG **28** 17:07:27.4±0.4, 41°.31N×20°.25E, h16^{km}, ML3.0/13, Error ellipse: s-maj=0.6km s-min=0.7km az=0.0*
*THE **28** 17:07:27.8, 41°.33N×20°.34E, h0^{km}±3^{km}, ML3.1/4, Error ellipse: s-maj=4.0km s-min=0.8km az=25.0*
*BEO **28** 17:07:28.0±0.4, 41°.35N×20°.31E, h2^{km}±5^{km}, ML3.1/11*
*SOF **28** 17:07:35.5, 41°.64N×21°.21E, h2^{km}, MD2.5*
ISC 28 17:07:27.9±0.8**, 41°.32N**±0°.02×**20°.28E**±0°.02**, h15**^{km}±6^{km}**, n137, σ1.s30**/210**, mb3.3**/4**, 14C-17D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	Tirane	0.31	275	P	Pg	17 07 34.2	-0.3
TIR				S	Sg	17 07 39.7	+0.7
TIR				AML	AML	17 07 40.1	
	comp=N,33914µm,0.2s						
TIR				AML	AML	17 07 40.2	
	comp=E,16957µm,0.2s						
TIR	Tirane	0.31	275	P	Pg	17 07 34.2	-0.3
TIR				S	Sb	17 07 39.9	-0.2
	comp=E,5µm,0.2s						
TIR	Tirane	0.31	275	*e*Pg	Pg	17 07 34.2	-0.3
TIR				*e*Sg	Sg	17 07 39.6	+0.7
TIR	Tirane	0.31	275	⇑P	Pg	17 07 34.2	-0.3
TIR				⇑S	Sg	17 07 39.8	+0.9
TIR	Tirane	0.31	275	P	Pg	17 07 34.1	-0.3
	baz=276						
TIR				S	Sg	17 07 39.2	+0.2
	baz=276						
TIR				AMP			
	comp=N,22nm,0.1s,baz=276						
TIR	Tirane	0.31	275	⇓*i*Pg	Pg	17 07 34.1	-0.3
PHP	Peshkopia	0.38	19	P	Pg	17 07 35.3	-0.4
PHP	Peshkopia	0.38	19	P	Pg	17 07 35.1	-0.6
	baz=15						
PHP				S	Sg	17 07 41.3	+0.2
	baz=15						
PHP				AMP			
	comp=N,11nm,0.4s,baz=15						
OHR	Ohrid	0.45	118	⇑*i*Pg	Pg	17 07 36.2	-0.6
OHR				*i* Sg	Sb	17 07 44.1	+0.2
OHR				*e*Lg	Lg	17 07 44.2	
	comp=N,3µm,0.4s						
PUK	Puka	0.78	338	P	Pg	17 07 42.5	-0.5
	baz=337						
PUK				S	Sb	17 07 54.5	+1.0
	baz=337						
PUK				AMP			
	comp=N,4.0nm,0.2s,baz=337						
KBN	Korca	0.80	151	P	Pg	17 07 42.7	-0.8
	baz=152						
KBN				S	Sb	17 07 54.5	+0.4
	baz=152						
KBN				AMP			
	comp=N,3.4nm,0.4s,baz=152						
SDA	Shkodra	0.93	322	P	Pb	17 07 45.8	0.0
	baz=321						
SDA				S	Sn	17 08 00.2	+0.7
	baz=321						
PRZK	Prizren	0.96	22	*i* Pg	Pb	17 07 45.3	-0.9
PRZK				*i* Sg	Sn	17 07 59.8	-0.4
FNA	Florina	0.99	123	P	Pb	17 07 45.8	-0.9
FNA				S	Sg	17 07 59.9	-0.1
FNA				AML	AML	17 08 02.0	
	comp=N,4749µm,0.5s						
FNA				AML	AML	17 08 02.7	
	comp=E,5966µm,0.4s						
FNA	Florina	0.99	123	P	Pb	17 07 45.7	-1.1
FNA				S	Sb	17 07 59.7	+0.1
	comp=E,3µm,0.5s						
FNA	Florina	0.99	123	⇑*i*Pg	Pb	17 07 45.6	-1.1
FNA				*i* Sg	Sb	17 07 59.8	+0.2
ULC	Ulcinj	1.01	310	*i* Pg	Pb	17 07 45.6	-1.4
ULC	Ulcinj	1.01	310	*e*Pg	Pb	17 07 45.6	-1.4
ULC				*i* Sg	Sn	17 08 01.7	+0.3
VLO	Vlora	1.04	215	P	Pg	17 07 48.5	+0.5
VLO				S	Sn	17 08 05.0	+2.9
	comp=E,1µm,0.6s						
VLO	Vlora	1.04	215	P	Pn	17 07 48.1	+0.2
	baz=217						
VLO				S	Sn	17 08 03.4	+1.3
	baz=217						
BCI	Bajram Curri	1.06	351	P	Pn	17 07 48.2	0.0
	baz=351						
BCI				S	Sn	17 08 04.3	+1.7
	baz=351						
NEST	Nestorio	1.08	147	P	Pb	17 07 48.4	0.0
NEST				S	Sn	17 08 03.7	+0.5
NEST				AML	AML	17 08 06.5	
	comp=N,1094µm,0.4s						
NEST				AML	AML	17 08 06.7	
	comp=E,1095µm,0.5s						
NEST	Nestorio	1.08	147	P	Pb	17 07 47.8	-0.5
NEST				S	Sg	17 08 03.2	+0.3
	comp=E,438nm,0.5s						
SKO	Skopje	1.09	53	*i* Pg	Pb	17 07 48.0	-0.4
SKO				*i* Sg	Sg	17 08 02.9	-0.2
SKO				*e*Lg	Lg	17 08 04.6	
	comp=E,47nm,0.5s						
ZATK	Zatriq	1.15	13	*i* Pg	Pb	17 07 48.8	-0.8
ZATK				*i* Sg	Sg	17 08 06.4	+1.1
DRME	Dracevica, Mon	1.19	317	*e*Pn	Pn	17 07 49.1	-0.9
DRME	Dracevica, Mon	1.19	317	⇓*i*Pg	Pn	17 07 49.2	-0.8
DRME				*i* Sg	Sg	17 08 08.1	+1.7
LSK	Leskovik	1.20	168	P	Pn	17 07 50.1	0.0
LSK	Leskovik	1.20	168	P	Pn	17 07 50.3	+0.2
	baz=169						
LSK				S	Sg	17 08 08.0	+1.4
	baz=169						
PVY	Plav	1.29	349	⇑*i*Pg	Pn	17 07 51.6	+0.1
PVY				*i* Sg	Sg	17 08 11.6	+1.8
PENT	Pentalofos	1.30	150	P	Pg	17 07 52.8	-0.2
PENT				AML	AML	17 08 16.2	
	comp=E,501µm,0.6s						
PENT				AML	AML	17 08 17.8	
	comp=N,636µm,0.6s						
PENT	Pentalofos	1.30	150	P	Pb	17 07 52.2	+0.1
PEJK	Peje	1.32	0	*i* Pg	Pn	17 07 51.7	-0.2
PDG	Podgorica	1.34	326	*e*Pn	Pn	17 07 52.3	+0.2
PDG				*e*Sn	Sg	17 08 12.6	+1.3
PDG	Podgorica	1.34	326	⇓P	Pn	17 07 52.0	-0.1
PDG				⇓S	Sg	17 08 13.0	+1.7
PDG	Podgorica	1.34	326	*e*Pn	Pn	17 07 52.0	-0.1
PDG	Podgorica	1.34	326	*i* Pg	Pn	17 07 52.0	-0.1
PDG				*i* Sg	Sg	17 08 13.9	+2.6
TTG	Podgorica	1.34	326	⇓*i*Pg	Pn	17 07 52.1	-0.1
TTG				*i* Sg	Sg	17 08 12.6	+1.3
BUM	Brajici-Budva	1.42	314	⇓*i*Pg	Pn	17 07 53.6	+0.3
BUM				*i* Sg	Sg	17 08 14.4	+0.5
GJIK	Gjilan	1.43	37	*i* Pg	Pn	17 07 53.5	+0.1
GJIK				*i* Sg	Sg	17 08 15.4	+1.4
SRN	Sarande	1.46	188	P	Pb	17 07 55.5	+0.9
	baz=190						
SRN				S	Sg	17 08 16.8	+2.0
	baz=190						
STIP	Stip	1.48	75	*i* Pn	Pg	17 07 56.3	-0.1
STIP				*i* Sn	Sg	17 08 20.1	+4.5
STIP				*e*Lg	Lg	17 08 23.5	
	comp=N,55nm,0.4s						
KZN	Kozani	1.52	131	P	Pn	17 07 55.3	+0.7
IVA	Berane	1.57	350	⇓*i*Pn	Pn	17 07 56.0	+0.6
IVA				*i* Sn	Sg	17 08 18.4	-0.3
CEME	Cevo	1.59	321	*e*Pn	Pn	17 07 56.1	+0.5
CEME				*i* Sn	Sg	17 08 18.5	-0.7
KPRO	Kipourio	1.60	148	P	Pn	17 07 55.6	0.0
SMRK	Smrekonice	1.63	17	*i* Pg	Pn	17 07 56.4	+0.4
SMRK				*i* Sg	Sg	17 08 19.9	-0.4
KOME	Kolasin	1.63	340	⇓*i*Pn	Pn	17 07 56.7	+0.6
KOME				*i* Sn	Sg	17 08 19.5	-0.9
GRG	Griva	1.65	102	P	Pn	17 07 56.2	-0.1
GRG				S	Sn	17 08 17.6	+0.4
GRG				AML	AML	17 08 25.7	
	comp=E,472µm,0.7s						
GRG				AML	AML	17 08 27.6	
	comp=N,621µm,0.9s						
GRG	Griva	1.65	102	P	Pn	17 07 56.1	-0.1
GRG	Griva	1.65	102	*i* Pn	Pn	17 07 56.1	-0.2
KEK	Kerkira	1.65	193	P	Pg	17 07 59.9	+0.4
KEK				AML	AML	17 08 28.9	
	comp=N,365µm,0.4s						
KEK				AML	AML	17 08 30.0	
	comp=E,366µm,0.4s						
JAN	Janina	1.72	165	P	Pb	17 07 59.8	+0.6
JAN				AML	AML	17 08 34.6	
	comp=N,320µm,0.5s						
JAN				AML	AML	17 08 36.2	
	comp=E,432µm,0.7s						
VAY	Valandovo	1.73	89	*e*Pn	Pb	17 07 58.4	-0.9
VAY				*e*Sn	Sb	17 08 21.4	+0.6
VAY	Valandovo	1.73	89	*i* Pn	Pn	17 07 57.6	+0.3
VAY				*e*Sn	Sg	17 08 22.1	-1.4
VAY				*e*Lg	Lg	17 08 23.4	
	comp=E,163nm,0.8s						
HCY	Herceg Novi	1.74	311	*e*Pn	Pn	17 07 58.6	+1.0
HCY	Herceg Novi	1.74	311	⇑*i*Pn	Pn	17 07 58.2	+0.6
HCY				*i* Sn	Sb	17 08 22.3	+1.0
NKME	Niksic	1.75	326	*e*Pn	Pn	17 07 58.8	+1.1
NKME				*i* Sn	Sb	17 08 22.1	+0.6
NKY	Niksic	1.77	328	*e*Pn	Pn	17 07 58.9	+0.8
NKY				*i* Sn	Sb	17 08 22.8	+0.6
IGT	Igoumenitsa	1.79	179	*i* Pn	Pb	17 07 59.7	-0.6
PRVS	Prvonek	1.79	48	*e*Pn	Pn	17 07 58.1	-0.2
PRVS				*e*Sn	Sb	17 08 23.5	+0.8
SCTE	Santa Cesarea	1.86	228	P	Pb	17 08 01.9	+0.3
TREB	Trebinje	2.00	315	*e*Pn	Pn	17 08 02.1	+0.9
BOSS	Bosilegrad	2.02	54	*e*Pn	Pn	17 08 01.0	-0.4
BOSS				*e*Sn	Sb	17 08 29.0	-0.2
BRY	Bratogost	2.04	321	*e*Pn	Pn	17 08 03.4	+1.6
BRY	Bratogost	2.04	321	*e*Pn	Pn	17 08 02.5	+0.7
BRY				*i* Sn	Sb	17 08 29.4	-0.6
DBRK	Dubrovnik	2.08	311	*e*Pn	Pn	17 08 01.8	-0.5
DBRK				Sn	Sb	17 08 30.5	-0.5
PLE	Pljevlja	2.11	342	*e*Pn	Pn	17 08 03.5	+0.7
PLE				*i* Sn	Sb	17 08 31.0	-1.0
KKB	Krupnik	2.17	75	P	Pn	17 08 03.8	+0.3
IVAS	Ivanjica	2.25	358	*e*Pn	Pn	17 08 05.1	+0.4
IVAS				*e*Sn	Sb	17 08 34.2	-1.9
RUDO	Rudo	2.39	344	*e*Pn	Pn	17 08 07.8	+1.3
STON	Ston	2.47	310	*e*Pn	Pn	17 08 06.2	-1.3
STON				Sn	Sn	17 08 37.4	+0.1
BOVS	Bovan	2.54	24	⇓P	Pn	17 08 09.8	+1.3
BOVS				⇓S	Sn	17 08 40.4	+1.2
VTS	Vitosha	2.56	59	⇓P	Pn	17 08 08.9	0.0
VTS	Vitosha	2.56	59	P	Pn	17 08 08.9	0.0
VTS	Vitosha	2.56	59	*i* Pn	Pn	17 08 09.0	+0.1
GRUS	Gruza	2.58	7	*e*Pn	Pn	17 08 10.6	+1.4
GRUS				*e*Sn	Sn	17 08 42.0	+1.7
ZAPS	Zavoj	2.62	41	*e*Pn	Pn	17 08 11.0	+1.3
ZAPS				*e*Sn	Sn	17 08 43.3	+2.1
BBLS	Lazići	2.62	346	*e*Pn	Pn	17 08 11.9	+2.1
BBLS				*e*Sn	Sn	17 08 43.7	+2.4
BBLS	Lazići	2.62	346	*e*Pn	Pn	17 08 11.7	+1.9
DIVS	Divibare	2.78	356	*e*Pn	Pn	17 08 13.8	+1.8
DIVS				*e*Sn	Sn	17 08 47.7	+2.4
DIVS	Divibare	2.78	356	*e*Pn	Pn	17 08 12.7	+0.7
MATE	Matera	2.79	257	⇓P	Pn	17 08 11.2	-0.7
MATE				⇓S	Sn	17 08 43.4	-1.8
ZAGS	Zajecar	2.88	29	*e*Pn	Pn	17 08 15.9	+2.7
ZAGS				*e*Sn	Sn	17 08 49.3	+1.8
TRUS	Trudelj	2.90	2	*e*Pn	Pn	17 08 16.0	+2.5
TRUS				*e*Sn	Sn	17 08 49.4	+1.3
BLKB	Belogradchik	2.90	37	⇑S	Sn	17 08 48.6	+0.4
LSTV	Lastovo	2.91	301	*e*Pn	Pn	17 08 13.0	-0.6
LSTV				Sn	Sn	17 08 48.6	+0.4
HAPS	Han Pijesak,BI	2.93	341	*e*Pn	Pn	17 08 14.6	+0.6
SVIS	Svilajnac	3.02	13	*e*Pn	Pn	17 08 17.3	+2.1
SVIS				*e*Sn	Sn	17 08 51.6	+0.6
MAKA	Makarska	3.11	310	*e*Pn	Pn	17 08 16.6	+0.2
RICI	Ricice	3.18	314	*e*Pn	Pn	17 08 18.1	+0.7
KUBS	Kucevo	3.25	18	*e*Pn	Pn	17 08 17.9	-0.5
KUBS				*e*Sn	Sn	17 08 57.5	+0.7
TEKS	Tekeris	3.27	351	*e*Pn	Pn	17 08 20.2	+1.6
TEKS	Tekeris	3.27	351	*e*Pn	Pn	17 08 20.1	+1.5
RZN	Rozhen	3.35	82	P	Pn	17 08 20.9	+1.0
HVAR	Hvar	3.39	304	*e*Pn	Pn	17 08 20.5	+0.2
TIP	Timpagrande	3.44	233	⇑P	Pn	17 08 20.0	-1.0
MDVR	Moldovita	3.61	16	⇓P	Pn	17 08 24.7	+1.3
MDVR				⇑S	Sn	17 09 06.7	+0.9
FRGS	Fruska Gora	3.85	355	*e*Pn	Pn	17 08 27.7	+1.1
FRGS	Fruska Gora	3.85	355	⇑P	Pn	17 08 27.0	+0.4
FRGS	Fruska Gora	3.85	355	*e*Pn	Pn	17 08 27.7	+1.1
MGRS	Mrkonjic Grad	3.88	324	*e*Pn	Pn	17 08 28.7	+1.7
HERR	Herculane	3.89	23	⇓P	Pn	17 08 27.4	+0.4
HERR				⇑S	Sn	17 09 14.6	+2.2
KIJV	Kijevo	3.92	314	*e*Pn	Pn	17 08 27.9	+0.4
BLY	Banja Luka	4.11	328	*e*Pn	Pn	17 08 30.9	+0.8
ZIRJ	Zirje	4.14	306	*i* Pn	Pn	17 08 30.8	+0.2
MORI	Morici	4.22	309	*e*Pn	Pn	17 08 32.6	+0.9
MORI				Sn	Sn	17 09 22.5	+1.8
BZS	Buzias	4.40	12	*e*Pn	Pn	17 08 33.4	-0.7
BZS	Buzias	4.40	12	⇑P	Pn	17 08 34.5	+0.4
BZS				⇓S	Sn	17 09 26.6	+1.5
GZR	Gura Zlata	4.46	23	⇑P	Pn	17 08 35.3	+0.3
GZR				⇑S	Sn	17 09 27.7	+1.1
UDBI	Udbina	4.61	316	*i* Pn	Pn	17 08 38.7	+1.6
DUGI	Dugi Otok	4.68	306	*i* Pn	Pn	17 08 38.3	+0.3
MORH	Mrgy, Hungar	5.03	347	⇓P	Pn	17 08 43.9	+1.1
MORH	Mrgy, Hungar	5.03	347	*e*Pn	Pn	17 08 43.6	+0.8
NVLJ	Novalja	5.12	311	*i* Pn	Pn	17 08 44.2	+0.2
CRES	Cresnjev	5.70	324	*e*Pn	Pn	17 08 51.8	-0.2
MLR	Muntele Rosu	5.86	43	Pn	Pn	17 08 56.1	+1.8
	comp=E,0.2nm,0.3s,baz=130,slow=18,SNR=1.9						
MLR				Sn	Sn	17 10 05.4	+4.1
	comp=E,0.3nm,0.3s,baz=226,slow=19,SNR=1.3						
CEY	Cerknica	6.13	318	*e*Pn	Pn	17 08 57.7	-0.2
LJU	Ljubljana	6.30	320	*e*Pn	Pn	17 08 59.0	-1.2
SOKA	Soboth	6.55	327	*i* Pn	Pn	17 09 04.9	+1.2
	comp=E,2.0nm,0.4s						
OBKA	Obir	6.63	323	*e*Pn	Pn	17 09 06.0	+1.1
	comp=E,1.5nm,0.3s						
OBKA				*e*Sn	Sn	17 10 23.4	+3.2
	comp=E,7.5nm,0.7s						
ARSA	Arzberg	6.84	332	*e*Pn	Pn	17 09 10.1	+2.5
	comp=E,0.9nm,0.3s						
ARSA				*e*Sn	Sn	17 10 30.5	+5.3
	comp=E,3.1nm,0.7s						
IDI	Anoyia	7.03	147	Sn	Sn	17 10 27.0	-3.0
	comp=E,0.2nm,0.3s,baz=218,slow=6.6,SNR=1.3						
KOLS	Kolonicke sedl	7.74	10	*e*PN	Pn	17 09 23.3	+3.3
ABTA	Abfaltersbach	7.79	317	*e*Pn	Pn	17 09 21.8	+1.1
	comp=E,1.1nm,0.3s						
ABTA				*e*Sn	Sn	17 10 49.3	+0.6
	comp=E,1.9nm,0.5s						
WTTA	Wattenberg	8.58	317	*i* Pn	Pn	17 09 32.7	+1.0
	comp=E,1.4nm,0.2s						
WTTA				*e*Sn	Sn	17 11 09.4	+1.2
	comp=E,3.6nm,0.5s						
WATA	Walderalm	8.66	317	*i* Pn	Pn	17 09 33.5	+0.8
	comp=E,1.8nm,0.3s						
GERES	GERESS Array B	8.84	331	Pn	Pn	17 09 34.2	-0.9
	comp=E,0.1nm,0.3s,baz=148,slow=15,SNR=2.5						
FETA	Feichten	8.91	313	*e*Pn	Pn	17 09 37.5	+1.3
	comp=E,0.4nm,0.3s						
FETA				*e*Sn	Sn	17 11 19.2	+2.8
	comp=E,1.0nm,0.6s						
DAVOX	Davos/Dischmat	9.26	310	Pn	Pn	17 09 38.7	-2.2
	comp=E,0.2nm,0.3s,baz=119,slow=19,SNR=1.8						
DAVOX				Sn	Sn	17 11 19.8	-5.1
	comp=E,0.1nm,0.3s,baz=54,slow=14,SNR=1.5						
HFS	Hagfors	19.27	350	P	P	17 11 51.5	-0.2
	comp=E,0.1nm,0.3s,baz=182,slow=12,SNR=1.5						
FINES	FINESS Array B	20.46	8	P	P	17 12 03.3	-1.2
	comp=E,2.3nm,0.9s,baz=181,slow=14,SNR=2.4						
NOA	NORSAR Array B	20.51	347	P	P	17 12 04.7	-0.5
	comp=E,0.3nm,0.6s,baz=157,slow=10,SNR=1.3						
ZALV	Zalesovo Beam	43.78	50	P	P	17 15 32.9	+0.3
	comp=E,0.3nm,0.3s,baz=289,slow=9.0,SNR=2.5						
MKAR	Makanchi Array	43.88	61	P	P	17 15 32.6	-1.0
	comp=E,0.1nm,0.4s,baz=289,slow=7.3,SNR=6.5						
SONM	Songino Array	58.64	52	P	P	17 17 23.0	-1.4
	comp=E,0.2nm,0.6s,baz=275,slow=8.5,SNR=2.1						
YKA	Yellowknife Ar	70.38	340	P	P	17 18 40.8	+0.1
	comp=E,0.1nm,0.6s,baz=54,slow=4.5,SNR=2.1						

IDC 28 17:48:16.2±2.4**, 5°.06S**×**125°.93E, h0**^{km}**, mb2.9**/2**, mb1 3.3**/3**, mb1mx3.1**/24**, mbtmp3.1**/3**, ML2.9**/1**, Error ellipse: s-maj=353.6km s-min=31.0km az=63.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.91	152	Pn	Pn	17 52 14.7	+0.3
	0.0nm,0.3s,baz=328,slow=12,SNR=2.5						
ASAR	Alice Springs	20.03	158	P	P	17 52 50.9	-0.1
	0.4nm,0.5s,baz=341,slow=11,SNR=6.9						
MKAR	Makanchi Array	64.43	328	P	P	17 58 54.4	0.0
	0.1nm,0.8s,baz=126,slow=7.3,SNR=1.0						

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*KNET **28** 18:09:07.6±0.7, 42°.04N×75°.22E, h0^{km}, ml3.3, Error ellipse: s-maj=4.9km s-min=2.6km az=2.0*
*SOME **28** 18:09:08.7, 42°.03N×75°.22E, h15^{km}*
*KRNET **28** 18:09:08.1±0.1, 42°.00N×75°.21E, h14^{km}, mb4.1*
*NNC **28** 18:09:09.3±0.5, 42°.09N×75°.22E, h0^{km}, mb4.3, mpv4.2, Error ellipse: s-maj=3.5km s-min=1.7km az=179.0*
ISC 28 18:09:08.5±1.0**, 42°.03N**±0°.03×**75°.21E**±0°.01**, h9**^{km}±9^{km}**, n99, σ0.s95**/177**, 37C-32D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UCH	Uchtor	0.56	291	⇑*i*P	Pg	18 09 19.4	0.0
	baz=94						
UCH				⇑*i*S	Sg	18 09 27.5	+0.7
	baz=94						
UCH	Uchtor	0.56	291	P	Pg	18 09 19.5	+0.1
	312nm,0.3s,SNR=728						
UCH				⇑S	Sg	18 09 27.6	+0.9
	3µm,0.4s						
KBK	Karagaybulak	0.65	343	⇓*i*P	Pg	18 09 21.2	0.0
	baz=43						
KBK				⇓*i*S	Sg	18 09 30.4	+0.6
	baz=43						
KBK	Karagaybulak	0.65	343	P	Pg	18 09 21.6	+0.4
	2µm,0.3s,SNR=3222						
KBK				⇑S	Sb	18 09 30.9	-0.6
	3µm,0.1s						
ARLS	Aral	0.69	256	⇑*i*P	Pg	18 09 21.3	-0.5
	baz=58						
ARLS				⇑*i*S	Sg	18 09 30.6	-0.1
	baz=58						
BOOM	Boomskoye usch	0.71	50	⇓*i*P	Pg	18 09 21.8	-0.4
	baz=48						
BOOM				⇓*i*S	Sg	18 09 31.6	+0.1
	baz=48						
ULHL	Ulahol	0.80	74	⇑*i*P	Pg	18 09 22.8	-1.1
	baz=72						
ULHL				⇑*i*S	Sg	18 09 33.6	-0.7
	baz=72						
ULHL	Ulahol	0.80	74	⇑P	Pg	18 09 23.1	-0.8
	112nm,0.1s,SNR=1110						
ULHL				⇓S	Sg	18 09 33.8	-0.5
	235nm,0.1s						
AAK	Ala-Archa	0.81	319	⇑*i*P	Pg	18 09 24.0	0.0
	baz=20						
AAK				⇑*i*S	Sg	18 09 35.1	+0.5
	baz=20						
AAK	Ala-Archa	0.81	319	P	Pg	18 09 24.1	0.0
	533nm,0.2s,SNR=708						
AAK				⇓S	Sg	18 09 35.1	+0.5
	358nm,0.2s						
AAK	Ala-Archa	0.81	319	⇑P	Pg	18 09 24.1	0.0
	271nm,0.3s						
AAK				⇓S	Sg	18 09 34.8	+0.2
	202nm,0.2s						
FRU1	Bishkek	0.89	331	⇑*i*P	Pg	18 09 25.5	-0.1
	baz=32						
FRU1				⇑*i*S	Sb	18 09 37.8	-0.4
	baz=32						
TKM2	Tokmak 2	0.93	18	⇑*i*P	Pg	18 09 26.0	-0.5
	baz=17						
TKM2				⇑*i*S	Sb	18 09 38.8	-0.8
	baz=17						
TKM2	Tokmak 2	0.93	18	P	Pg	18 09 26.1	-0.4
	121nm,0.1s,SNR=697						
TKM2				⇓S	Sb	18 09 39.0	-0.6
	800nm,0.1s						
TKM2	Tokmak 2	0.93	18	⇓P	Pg	18 09 26.1	-0.4
	61nm,0.3s						
TKM2				⇓S	Sg	18 09 38.6	-0.1
	204nm,0.2s						
CHMS	Chumysh	1.02	341	⇓*i*P	Pb	18 09 27.5	-1.0
	baz=41						
CHMS				⇓*i*S	Sg	18 09 41.7	+0.2
	baz=41						
CHMS	Chumysh	1.02	341	⇓P	Pb	18 09 27.8	-0.6
	89nm,0.1s,SNR=164						
CHMS				⇑S	Sg	18 09 41.8	+0.2
	281nm,0.1s						
AML	Almayashu	1.13	275	⇓*i*P	Pb	18 09 29.6	-0.9
	baz=77						
AML				⇓*i*S	Sb	18 09 45.0	-0.5
	baz=77						
AML	Almayashu	1.13	275	⇑P	Pb	18 09 29.9	-0.6
	227nm,0.3s,SNR=432						
AML				⇓S	Sb	18 09 45.2	-0.4
	490nm,0.2s						
KST	Kastek	1.15	29	*e*P	Pb	18 09 30.0	-0.7
	baz=28						
KST				*e*S	Sg	18 09 45.6	-0.1
	baz=28						
KST	Kastek	1.15	29	*e*P	Pb	18 09 30.0	-0.7
	92nm,0.3s						
KST				*e*S	Sg	18 09 45.6	-0.1
	757nm,0.4s						
KST	Kastek	1.15	29	P	Pb	18 09 30.0	-0.7
	92nm,0.3s						
KST				S	Sb	18 09 45.3	-0.6
	757nm,0.4s						
EKS2	Erkin-Say	1.23	301	⇓*i*P	Pn	18 09 31.5	-0.6
	baz=2.0						
EKS2				⇓*i*S	Sn	18 09 48.2	-0.8
	baz=2.0						
EKS2	Erkin-Say	1.23	301	⇑P	Pb	18 09 31.8	-0.3
	49nm,0.2s,SNR=254						
EKS2				⇓S	Sg	18 09 49.0	+0.7
	380nm,0.2s						
DGS	Degeres	1.28	19	*e*P	Pb	18 09 32.6	-0.3
	baz=18						
DGS				*e*S	Sg	18 09 50.1	+0.4
	baz=18						
DGS	Degeres	1.28	19	*e*P	Pb	18 09 32.6	-0.3
	316nm,0.3s						
DGS				*e*S	Sg	18 09 50.1	+0.4
	865nm,0.3s						
DGS	Degeres	1.28	19	P	Pb	18 09 32.6	-0.3
	230nm,0.1s						
DGS				S	Sg	18 09 50.1	+0.4
	538nm,0.2s						
USP	Ospenovka	1.34	337	⇓*i*P	Pn	18 09 33.1	-0.4
	baz=38						
USP				⇓*i*S	Sg	18 09 51.4	-0.2
	baz=38						
USP	Ospenovka	1.34	337	P	Pb	18 09 33.5	-0.4
	90nm,0.1s,SNR=449						
USP				⇓S	Sg	18 09 51.5	-0.2
	206nm,0.1s						
MTBS	Maitube	1.42	39	*e*P	Pb	18 09 34.7	-0.5
	baz=38						
MTBS				*e*S	Sg	18 09 53.8	-0.4
	baz=38						
MTBS	Maitube	1.42	39	*e*P	Pb	18 09 34.7	-0.5
	41nm,0.2s						
MTBS				*e*S	Sg	18 09 53.8	-0.4
	704nm,0.2s						
MTBS	Maitube	1.42	39	P	Pb	18 09 35.1	-0.1
	41nm,0.2s						
MTBS				S	Sg	18 09 54.0	-0.2
	704nm,0.2s						
IZV	Izvestkoviy	1.44	45	*e*P	Pb	18 09 35.7	0.0
	baz=45						
IZV				*e*S	Sg	18 09 54.9	0.0
	baz=45						
IZV	Izvestkoviy	1.44	45	*e*P	Pb	18 09 35.7	0.0
	68nm,0.1s						
IZV				*e*S	Sg	18 09 54.9	0.0
	1µm,0.4s						
KDJ	Kajisay	1.47	86	⇓*i*P	Pn	18 09 35.0	-0.4
	baz=84						
KDJ				⇓*i*S	Sb	18 09 54.6	-0.4
	baz=84						
SGDS	Sogindy	1.48	343	P	Pb	18 09 36.4	+0.1
	189nm,0.2s						
SGDS				S	Sg	18 09 56.2	0.0
	421nm,0.2s						
TNSS	Tian-Shan	1.63	51	*e*P	Pb	18 09 39.0	0.0

	baz=50						
TNSS	baz=50			*e*S	**Sg**	**18 10 00.6**	**-0.3**
TNSS	**Tian-Shan** 66nm,0.2s	**1.63**	**51**	*e*P	**Pb**	**18 09 39.0**	**0.0**
TNSS	293nm,0.5s			*e*S	**Sg**	**18 10 00.6**	**-0.3**
TNSS	**Tian-Shan** 66nm,0.2s	**1.63**	**51**	P	**Pb**	**18 09 39.0**	**0.0**
TNSS	293nm,0.5s			S	**Sg**	**18 10 00.6**	**-0.3**
MRKS	**Merke** baz=97	**1.63**	**296**	*e*P	**Pb**	**18 09 38.9**	**0.0**
MRKS	baz=97			*e*S	**Sg**	**18 10 01.0**	**0.0**
MRKS	**Merke** 82nm,0.3s	**1.63**	**296**	*e*P	**Pb**	**18 09 38.9**	**0.0**
MRKS	272nm,0.3s			*e*S	**Sg**	**18 10 01.0**	**0.0**
MRKS	**Merke** 82nm,0.3s	**1.63**	**296**	P	**Pb**	**18 09 38.9**	**0.0**
MRKS	272nm,0.3s			S	**Sg**	**18 10 01.0**	**0.0**
KRBS	**Karabastau** baz=11	**1.70**	**11**	*e*P	**Pb**	**18 09 39.9**	**0.0**
KRBS	baz=11			*e*S	**Sg**	**18 10 02.2**	**-0.9**
KRBS	**Karabastau** 84nm,0.2s	**1.70**	**11**	*e*P	**Pb**	**18 09 39.9**	**0.0**
KRBS	524nm,0.2s			*e*S	**Sg**	**18 10 02.3**	**-0.9**
KRBS	**Karabastau** 84nm,0.2s	**1.70**	**11**	P	**Pb**	**18 09 39.9**	**0.0**
KRBS	524nm,0.2s			S	**Sg**	**18 10 02.3**	**-0.9**
AAA	**Alma-Ata** baz=46	**1.72**	**46**	*e*P	**Pg**	**18 09 40.9**	**-0.7**
AAA	baz=46			*e*S	**Sg**	**18 10 04.3**	**+0.4**
AAA	**Alma-Ata** 108nm,0.2s	**1.72**	**46**	*e*P	**Pg**	**18 09 40.9**	**-0.7**
AAA	669nm,0.4s			*e*S	**Sg**	**18 10 04.3**	**+0.4**
AAA	**Alma-Ata** 108nm,0.2s	**1.72**	**46**	P	**Pg**	**18 09 40.9**	**-0.7**
AAA	669nm,0.4s			S	**Sg**	**18 10 04.3**	**+0.4**
KNDC	**Almaty** 56nm,0.3s	**1.75**	**47**	⇑Pn	**Pb**	**18 09 41.3**	**+0.3**
KNDC	1µm,0.9s			⇓Sn	**Sg**	**18 10 04.9**	**0.0**
MDOK	**Medeo** baz=49	**1.77**	**50**	*e*P	**Pb**	**18 09 41.1**	**-0.1**
MDOK	baz=49			*e*S	**Sg**	**18 10 04.2**	**-1.0**
MDOK	**Medeo** 64nm,0.2s	**1.77**	**50**	*e*P	**Pb**	**18 09 41.1**	**-0.1**
MDOK	343nm,0.4s			*e*S	**Sg**	**18 10 04.3**	**-1.0**
MDOK	**Medeo** 40nm,0.4s	**1.77**	**50**	⇑Pn	**Pb**	**18 09 41.0**	**-0.2**
MDOK	254nm,0.5s			⇑Sn	**Sg**	**18 10 04.3**	**-1.0**
MDOK	**Medeo** 64nm,0.2s	**1.77**	**50**	Pg	**Pb**	**18 09 41.1**	**-0.1**
MDOK	343nm,0.4s			Lg	Lg	18 10 04.3	
ARSB	**Arslanbob** baz=49	**1.81**	**248**	⇑*i*P	**Pb**	**18 09 41.6**	**-0.4**
ARSB	baz=49			⇑*i*S	**Sb**	**18 10 05.4**	**+0.5**
KOTS	**Kotyrbulak** baz=48	**1.85**	**49**	*e*P	**Pg**	**18 09 43.2**	**-0.7**
KOTS	baz=48			*e*S	**Sg**	**18 10 07.8**	**-0.1**
KOTS	**Kotyrbulak** 314nm,0.2s	**1.85**	**49**	*e*P	**Pg**	**18 09 43.2**	**-0.7**
KOTS	2µm,0.5s			*e*S	**Sg**	**18 10 07.8**	**-0.1**
ANVS	**Anan'yevo** baz=66	**1.97**	**67**	⇑*i*P	**Pb**	**18 09 43.1**	**-1.5**
ANVS	baz=66			⇑*i*S	**Sb**	**18 10 08.5**	**-0.8**
KTBS	**Karatobe** baz=32	**2.00**	**32**	*e*P	**Pb**	**18 09 45.5**	**+0.5**
KTBS	baz=32			*e*S	**Sg**	**18 10 11.9**	**-0.8**
KTBS	**Karatobe** 356nm,0.2s	**2.00**	**32**	*e*P	**Pb**	**18 09 45.5**	**+0.5**
KTBS	2µm,0.4s			*e*S	**Sg**	**18 10 11.9**	**-0.8**
KTBS	**Karatobe** 356nm,0.2s	**2.00**	**32**	Pg	**Pb**	**18 09 45.5**	**+0.5**
KTBS	2µm,0.4s			Lg	Lg	18 10 11.9	
KUU	**Kurty** baz=23	**2.04**	**24**	*e*P	**Pb**	**18 09 46.0**	**+0.3**
KUU	baz=23			*e*S	**Sg**	**18 10 12.6**	**-1.3**
KUU	**Kurty** 78nm,0.3s	**2.04**	**24**	*e*P	**Pb**	**18 09 46.0**	**+0.3**
KUU	620nm,0.3s			*e*S	**Sg**	**18 10 12.6**	**-1.3**
KUU	**Kurty** 78nm,0.3s	**2.04**	**24**	Pg	**Pb**	**18 09 46.0**	**+0.3**
KUU	620nm,0.3s			Lg	Lg	18 10 12.6	
MNAS	**Manas** baz=85	**2.06**	**284**	⇑*i*P	**Pb**	**18 09 44.6**	**-1.6**
MNAS	baz=85			⇑*i*S	**Sb**	**18 10 11.3**	**-0.7**
CHKK	**Chushkaly** 48nm,0.4s	**2.24**	**35**	*e*P	**Pb**	**18 09 49.0**	**-0.2**
CHKK	851nm,0.3s			*e*S	**Sg**	**18 10 18.4**	**-2.0**
CHKK	**Chushkaly** 48nm,0.4s	**2.24**	**35**	Pg	**Pb**	**18 09 49.0**	**-0.2**
CHKK	851nm,0.3s			Lg	Lg	18 10 18.5	
OHH	**Osh** baz=32	**2.37**	**231**	⇓*i*P	**Pn**	**18 09 48.6**	**+0.9**
OHH	baz=32			⇓*i*S	**Sn**	**18 10 17.9**	**+1.0**
SFK	**Sufi-Kurgan** baz=14	**2.40**	**213**	⇑*i*P	**Pn**	**18 09 49.0**	**+0.8**
SFK	baz=14			⇑*i*S	**Sn**	**18 10 19.0**	**+1.2**
PRZ	**Przheval'sk** baz=77	**2.41**	**78**	⇑*i*P	**Pn**	**18 09 49.3**	**+1.0**
PRZ	baz=77			⇑*i*S	**Sb**	**18 10 20.3**	**-1.7**
SATY	**Saty** 22nm,0.2s	**2.57**	**65**	*e*P	**Pb**	**18 09 55.4**	**+0.5**
SATY	264nm,0.3s			*e*S	**Sg**	**18 10 28.8**	**-2.4**
SATY	**Saty** 22nm,0.2s	**2.57**	**65**	Pg	**Pb**	**18 09 55.4**	**+0.5**
SATY	264nm,0.3s			Lg	Lg	18 10 28.7	
KURS	**Kuram** 54nm,0.5s	**2.62**	**55**	*e*P	**Pb**	**18 09 55.4**	**-0.2**
KURS	183nm,0.4s			*e*S	**Sb**	**18 10 29.0**	**+1.0**
KURS	**Kuram** 54nm,0.5s	**2.62**	**55**	Pg	**Pb**	**18 09 55.4**	**-0.2**
KURS	183nm,0.4s			Lg	Lg	18 10 29.0	
ARXS	**Arharly** 53nm,0.3s	**2.90**	**40**	*e*P	**Pb**	**18 10 01.2**	**+0.7**
ARXS	400nm,0.6s			*e*S	**Sg**	**18 10 38.6**	**-3.1**
ARXS	**Arharly** 53nm,0.3s	**2.90**	**40**	Pg	**Pb**	**18 10 01.2**	**+0.7**
ARXS	400nm,0.6s			Lg	Lg	18 10 38.6	
KPKS	**Kokpek** 90nm,0.3s	**2.93**	**60**	*e*P	**Pb**	**18 09 59.5**	**-1.6**
KPKS	302nm,0.5s			*e*S	**Sb**	**18 10 36.5**	**-0.4**
DZA	**Taraz** 32nm,0.2s	**3.00**	**288**	*e*P	**Pb**	**18 10 03.8**	**+1.7**
DZA	271nm,0.3s			*e*S	**Sg**	**18 10 42.9**	**-1.8**
UZB	**Uzynbulak** 14nm,0.2s	**3.03**	**67**	*e*P	**Pb**	**18 10 02.2**	**-0.4**
UZB	250nm,0.4s			*e*S	**Sb**	**18 10 40.5**	**+0.7**
UZB	**Uzynbulak** 14nm,0.2s	**3.03**	**67**	Pg	**Pb**	**18 10 02.7**	**+0.1**
UZB	250nm,0.4s			Lg	Lg	18 10 41.2	
MNBS	**Baschi** 17nm,0.2s	**3.11**	**48**	*e*P	**Pb**	**18 10 05.1**	**+1.1**
MNBS	552nm,0.3s			*e*S	**Sg**	**18 10 45.6**	**-2.7**
MNBS	**Baschi** 17nm,0.2s	**3.11**	**48**	Pg	**Pb**	**18 10 05.5**	**+1.5**
MNBS	552nm,0.3s			Lg	Lg	18 10 46.0	
BTLS	**Baital** 22nm,0.3s	**3.12**	**345**	*e*P	**Pb**	**18 10 06.0**	**+1.7**
BTLS	161nm,0.9s			*e*S	**Sg**	**18 10 46.9**	**-2.0**
BTLS	**Baital** 21nm,0.3s	**3.12**	**345**	Pg	**Pb**	**18 10 04.9**	**+0.7**
BTLS	161nm,0.9s			Lg	Lg	18 10 45.7	
SHLS	**Shalkode** 27nm,0.2s	**3.33**	**69**	*e*P	**Pg**	**18 10 11.9**	**-0.5**
SHLS	272nm,0.4s			*e*S	**Sg**	**18 10 57.6**	**+2.1**
SHLS	**Shalkode** 28nm,0.3s	**3.33**	**69**	Pg	**Pg**	**18 10 14.8**	**+2.4**
SHLS	272nm,0.4s			Lg	Lg	18 11 01.9	
PDGK	**Podgornoye** 11nm,0.3s	**3.41**	**66**	Pg	**Pb**	**18 10 09.9**	**+0.7**
PDGK	101nm,0.7s			Lg	Lg	18 10 53.5	
PDGK	**Podgornoye** 18nm,0.5s	**3.41**	**66**	⇓Pn	**Pn**	**18 10 03.9**	**+1.9**
PDGK	178nm,0.6s			⇑Lg	Lg	18 10 53.1	
KK31	**Karatay Array** 0.2nm,0.3s,baz=101,slow=14,SNR=184	**3.63**	**289**	⇑Pn	**Pn**	**18 10 06.5**	**+1.6**
KK31	13nm,0.7s,baz=108,slow=14,SNR=50			⇑Pg	**Pg**	**18 10 15.8**	**-2.3**
KK31	11nm,0.3s,baz=112,slow=26,SNR=17			Lg	Lg	18 11 01.1	
DRK	**Karamyk** baz=27	**3.63**	**227**	⇓*i*P	**Pn**	**18 10 06.3**	**+1.0**
DRK	baz=27			⇓*i*S	**Sn**	**18 10 48.5**	**+0.1**
IUG	**Iuzhnay** 11nm,0.2s	**3.86**	**273**	*e*P	**Pb**	**18 10 19.1**	**+2.3**
IUG	127nm,0.6s			*e*S	**Sg**	**18 11 09.7**	**-2.7**
IUG	**Iuzhnay** 22nm,0.2s	**3.86**	**273**	Pg	**Pg**	**18 10 21.0**	**-1.4**
IUG	127nm,0.6s			Lg	Lg	18 11 13.0	
BTK	**Batken** baz=41	**3.86**	**241**	⇓*i*P	**Pn**	**18 10 09.5**	**+1.3**
BTK	baz=41			⇓*i*S	**Sn**	**18 10 54.0**	**+0.2**
DJR	**Jarkent** 17nm,0.4s	**4.06**	**54**	*e*P	**Pb**	**18 10 23.0**	**+2.8**
DJR	111nm,0.4s			*e*S	**Sg**	**18 11 16.6**	**-2.3**
DJR	**Jarkent** 7.8nm,0.5s	**4.06**	**54**	Pg	**Pb**	**18 10 21.0**	**+0.7**
DJR	111nm,0.5s			Lg	Lg	18 11 13.0	
BRLS	**Borolday** 17nm,0.1s	**4.10**	**286**	*e*P	**Pg**	**18 10 25.3**	**-1.6**
BRLS	70nm,0.4s			*e*S	**Sg**	**18 11 20.0**	**0.0**
BRLS	**Borolday** 17nm,0.1s	**4.10**	**286**	Pg	**Pg**	**18 10 25.3**	**-1.6**
BRLS	70nm,0.4s			Lg	Lg	18 11 20.0	
MK31	**Makanchi Array** 2.1nm,0.4s,baz=220,slow=15,SNR=102	**6.95**	**44**	Pn	**Pn**	**18 10 52.5**	**+1.9**
MK31	8.9nm,0.6s,baz=224,slow=26,SNR=7.7			⇑Lg	Lg	18 12 46.9	
KURBB	**Kurchatov Arra**	**8.89**	**14**	Lg	Lg	18 13 47.0	
KURK	**Kurchatov** 58nm,0.8s	**9.00**	**14**	⇑Lg	Lg	18 13 49.5	

TAP 28 18:16:10.1,24°.46N×121°.87E,h11km,ML1.6,D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EWUT	**Wuta** baz=259	**0.08**	**260**	P	Pg	18 16 13.0	+0.4
EWUT	baz=259			S	Sg	18 16 15.0	+0.7
ENA	**Nanau** baz=252	**0.12**	**255**	*i* P	Pg	18 16 13.7	+0.7
ENA	baz=252			*i* S	Sg	18 16 16.4	+1.2
TWC	**Suao** baz=356	**0.15**	**353**	*i* P	Pg	18 16 14.0	+0.5
NDS	**Dongshan** baz=321	**0.22**	**321**	P	Pb	18 16 15.9	-0.3
TWE	**Neicheng** baz=326	**0.32**	**325**	*e*P	Pb	18 16 17.6	-0.2
ENTT	**Nioudou** baz=303	**0.33**	**303**	*i* P	Pb	18 16 17.9	-0.2
NACB	**Ninganchiao** baz=221	**0.38**	**221**	P	Pg	18 16 17.6	0.0
ETLH	**Xiulin Townshi** baz=234	**0.43**	**235**	*e*P	Pb	18 16 19.3	-0.5
NNSB	**Datong** baz=265	**0.44**	**266**	P	Pb	18 16 19.9	-0.1
NNSH	**Datong** baz=265	**0.44**	**266**	*i* P	Pb	18 16 20.0	-0.1
NNS	**Nan Shan** baz=267	**0.45**	**268**	P	Pb	18 16 20.1	0.0
TWD	**Chiawan** baz=212	**0.45**	**213**	*e*P	Pg	18 16 19.0	0.0
YHNB	**Yeheng** baz=294	**0.49**	**295**	*e*P	Pb	18 16 21.1	+0.2
FUSS	**Fushou** baz=249	**0.61**	**250**	P	Pb	18 16 22.9	0.0
CHGB	**Renai** baz=237	**0.75**	**238**	*e*P	Pg	18 16 24.8	+0.2
WHP	**Taichung City** baz=257	**0.86**	**258**	*e*P	Pb	18 16 27.6	+0.5

TAP 28 18:16:10.5,24°.75N×122°.17E,h11km,ML2.1,C,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao** baz=328	**0.30**	**328**	P	Pg	18 16 17.1	+0.5
TWB1	baz=328			S	Sg	18 16 21.1	+0.3
TWC	**Suao** baz=252	**0.32**	**244**	P	Pg	18 16 16.7	-0.2
TWC	baz=252			S	Sg	18 16 21.4	+0.1
TWC	**Suao** baz=356	**0.32**	**244**	S	Pg	18 16 16.5	-0.4
TIPB	**Shuangxi** baz=305	**0.38**	**306**	*i* P	Pb	18 16 18.8	-0.5
NDS	**Dongshan** baz=248	**0.42**	**254**	P	Pg	18 16 19.5	+0.6
NDS	baz=248			S	Sg	18 16 25.2	+0.7
TWE	**Neicheng** baz=260	**0.45**	**266**	P	Pg	18 16 19.8	+0.4
TWE	baz=260			S	Sg	18 16 26.1	+0.7
EWUT	**Wuta** baz=230	**0.47**	**229**	*e*P	Pg	18 16 19.7	+0.1
EWUT	baz=230			S	Sg	18 16 25.6	-0.2
ENA	**Nanau** baz=230	**0.50**	**230**	*e*P	Pg	18 16 20.9	+0.5
ENA	baz=230			S	Sg	18 16 26.8	-0.2
ENTT	**Nioudou** baz=259	**0.56**	**259**	*e*P	Pb	18 16 22.4	+0.1
ENTT	baz=259			*e*S	Sb	18 16 29.6	-0.7
ENTT	**Nioudou** baz=303	**0.56**	**259**	*e*S	Pb	18 16 22.4	+0.1
TWA	**Mucha** baz=284	**0.57**	**294**	P	Pb	18 16 22.7	0.0
TWA	baz=284			S	Sb	18 16 30.9	+0.1
NWLT	**Wulai** baz=273	**0.60**	**273**	*e*P	Pb	18 16 22.9	-0.2
NWLT	baz=273			S	Sg	18 16 30.5	+0.3
NDT	**Datong Townshi** baz=264	**0.61**	**256**	*e*P	Pb	18 16 23.4	+0.2
NDT	baz=264			S	Sb	18 16 31.5	-0.4
TATO	**Taipei** baz=283	**0.65**	**290**	*e*P	Pb	18 16 24.2	+0.2
TATO	baz=283			S	Sb	18 16 33.5	+0.4
YM05	**YM05** baz=300	**0.68**	**307**	P	Pb	18 16 24.9	+0.3
YM04	**YM04** baz=304	**0.70**	**305**	*e*P	Pn	18 16 25.6	-0.8
YM04	baz=304			*e*S	Sb	18 16 35.2	+0.8
YHNB	**Yeheng** baz=258	**0.72**	**264**	*e*P	Pb	18 16 25.0	-0.2
YHNB	baz=258			*e*S	Sg	18 16 34.2	+0.2
NSK	**Sanguang** baz=258	**0.74**	**264**	*e*P	Pb	18 16 25.4	-0.1
NSK	baz=258			*e*S	Sg	18 16 34.6	+0.1
TWS1	**Kuangyinshan** baz=297	**0.76**	**297**	*e*P	Pn	18 16 27.0	-0.3
NACB	**Ninganchiao** baz=223	**0.78**	**222**	*e*P	Pg	18 16 25.0	-0.5
NACB	baz=223			S	Sg	18 16 35.7	0.0
NNSB	**Datong** baz=237	**0.78**	**246**	*e*P	Pg	18 16 25.9	+0.3
NNSB	baz=237			S	Sb	18 16 36.7	-0.2
NNSB	**Datong** baz=265	**0.78**	**246**	S	Pg	18 16 26.1	+0.5
NNSH	**Datong** baz=237	**0.78**	**246**	*e*P	Pb	18 16 26.2	-0.1
NNSH	baz=237			*e*S	Sb	18 16 36.5	-0.4
NNSH	**Datong** baz=265	**0.78**	**246**	S	Pb	18 16 26.3	0.0
NNS	**Nan Shan** baz=238	**0.79**	**247**	*e*P	Pb	18 16 26.2	-0.1
NNS	baz=238			S	Sg	18 16 36.4	+0.4
NNS	**Nan Shan** baz=267	**0.79**	**247**	*e*S	Pb	18 16 26.6	+0.3
YOJ	**Yonaguni jima** baz=111	**0.82**	**110**	*e*P	Pg	18 16 26.2	-0.2
ETLH	**Xiulin Townshi** baz=230	**0.82**	**229**	*e*P	Pg	18 16 26.7	+0.2
ETLH	baz=230			S	Sg	18 16 37.2	-0.1
TWD	**Chiawan** baz=228	**0.85**	**218**	*e*P	Pg	18 16 26.6	-0.3
TWD	baz=228			*e*S	Sg	18 16 37.9	+0.1
FUSS	**Fushou** baz=240	**0.98**	**239**	*e*P	Pb	18 16 29.7	0.0
FUSS	baz=240			S	Sb	18 16 42.7	0.0
WHF	**Hehuan Shan** baz=234	**1.02**	**234**	*e*P	Pb	18 16 30.3	-0.1
WHF	baz=234			*e*S	Sb	18 16 44.3	+0.2
TWT	**Tachien** baz=235	**1.03**	**241**	*e*P	Pn	18 16 31.1	-0.1
TWT	baz=235			*e*S	Sn	18 16 45.2	-0.4
TDCB	**Techi** baz=235	**1.04**	**242**	*e*P	Pg	18 16 30.5	-0.1
TDCB	baz=235			*e*S	Sb	18 16 45.1	+0.6
LIOB	**Emei** baz=253	**1.05**	**265**	*e*P	Pn	18 16 32.7	+1.4
LIOB	baz=253			S	Sn	18 16 46.4	+0.5
NSTT	**Nanjuang** baz=252	**1.07**	**264**	*e*P	Pn	18 16 31.3	-0.2
NSTT	baz=252			S	Sn	18 16 46.9	+0.6
CHGB	**Renai** baz=224	**1.14**	**233**	*e*P	Pb	18 16 32.2	-0.1
CHGB	baz=224			S	Sb	18 16 47.5	+0.3
ESL	**Shilin** baz=225	**1.15**	**216**	*e*P	Pb	18 16 32.2	-0.2
ESL	baz=225			*e*S	Sg	18 16 47.6	+0.1
WHP	**Taichung City** baz=248	**1.21**	**247**	*e*P	Pg	18 16 35.5	+1.8
WHP	baz=248			S	Sn	18 16 49.8	-0.1
DPDB	**Guoxing** baz=236	**1.34**	**238**	*e*P	Pg	18 16 36.3	+0.1
VWDT	**VWDT** baz=225	**1.36**	**223**	*e*P	Pg	18 16 36.6	-0.1
VWDT	baz=225			S	Sn	18 16 54.0	+0.4
HGSD	**Ruisui** baz=190	**1.42**	**209**	*e*P	Pb	18 16 37.4	+0.3
EHY	**Hungye** baz=210	**1.46**	**212**	*e*P	Pn	18 16 37.2	+0.3
TYC	**Yuchr** baz=233	**1.46**	**235**	*e*P	Pg	18 16 39.0	+0.4
SSLB	**Suanglung** baz=230	**1.46**	**229**	*e*P	Pb	18 16 37.8	-0.1
SSLB	baz=230			*e*S	Sn	18 16 56.2	+0.1
YULB	**Yu-li** baz=209	**1.57**	**211**	*e*P	Pn	18 16 38.2	-0.2
YULB	baz=209			*e*S	Sb	18 16 59.6	+0.1
CHN5	**Tsauling** baz=229	**1.78**	**230**	*e*P	Pg	18 16 44.0	-0.6
CHN5	baz=229			S	Sg	18 17 08.2	+0.4

IDC ***28*** *18:45:14.8±2.0, 1°.25S×133°.56E, h0km, mb3.2/2, mb1 3.6/4, mb1mx3.3/39, mbtmp3.4/4, ML3.5/2, Error ellipse: s-maj=36.9km s-min=18.6km az=32.0*

DJA ***28*** *18:45:16.7±0.7, 1°S±5°×13°4E±°, h13km±7km, M3.8/5, MLv3.8/5*

ISC 28 18:45:19.6±1.1,1°.30S±0°.09×133°.60E±0°.06,h35km,n8, σ1s.06/10,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**2.10**	**220**	P	**Pn**	**18 45 51.9**	**-0.4**
FAKI				S	**Sn**	**18 46 17.4**	**+0.1**
SIJI	**Sorong** 6.3nm,0.3s,baz=291,slow=24,SNR=60	**2.37**	**280**	Pn	**Pn**	**18 45 54.1**	**-1.9**
SIJI	62nm,0.3s,baz=273,slow=23,SNR=16			Lg	Lg	18 46 29.1	
SWI	**Sorong**	**2.38**	**280**	P	**Pn**	**18 45 55.8**	**-0.3**
SWI				S	**Sn**	**18 46 25.7**	**+1.6**
BAKI	**Biak**	**2.51**	**88**	P	**Pn**	**18 45 57.8**	**-0.1**
SRPI	**Serui, Papua**	**2.70**	**102**	P	**Pn**	**18 45 59.6**	**-1.0**
WRA	**Warramunga Arr** 0.2nm,0.3s,baz=356,slow=12,SNR=15	**18.55**	**178**	P	**Pn**	**18 49 33.8**	**0.0**
ASAR	**Alice Springs** 1.1nm,0.7s,baz=4.4,slow=13,SNR=9.9	**22.24**	**179**	P	**P**	**18 50 14.0**	**+0.5**
MKAR	**Makanchi Array** 0.2nm,0.6s,baz=121,slow=7.9,SNR=1.7	**65.60**	**324**	P	**P**	**18 56 00.2**	**+0.1**

IDC 28 19:06:50.9±3.3,36°.66S×179°.53E,h0km,mb3.5/2, mb1 3.7/3,mb1mx3.6/26,mbtmp3.5/3,ML3.4/1,Error ellipse: s-maj=81.2km s-min=43.2km az=134.0,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera** 7.9nm,0.3s,baz=74,slow=2.7,SNR=25	**2.50**	**230**	Pn	Pn	19 07 32.5	-0.3
URZ	12nm,0.3s,baz=223,slow=20,SNR=15			Sn	Sn	19 08 01.4	-2.6
ASAR	**Alice Springs** 0.5nm,0.6s,baz=121,slow=7.5,SNR=15	**41.16**	**275**	P	P	19 14 37.1	-0.1
WRA	**Warramunga Arr** 0.3nm,0.5s,baz=122,slow=7.7,SNR=6.9	**42.72**	**280**	P	P	19 14 49.9	0.0
FINES	**FINESS Array B** 0.7nm,0.7s,baz=46,slow=4.0,SNR=5.0	**150.12**	**334**	PKPbc	PKPbc	19 26 42.3	-0.4

ROM 28 19:20:11.2±0.1,44°.190N±0°.004×10°.893E±0°.004,

h9^{km},ML1.9/6,2C,Error ellipse: s-maj=0.4km s-min=0.3km az=175.0,Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FNVD	**Fontana Vidola**	**0.17**	**98**	P	Pg	19 20 14.9	+0.1
FNVD				S	Sg	19 20 18.0	+0.7
ZCCA	**Zocca**	**0.17**	**20**	P	Pg	19 20 15.6	+0.7
ZCCA				S	Sg	19 20 19.0	+1.5
ZCCA				AML	AML		
	comp=E,467µm,0.4s						
ZCCA				AML	AML		
	comp=N,854µm,0.5s						
ZCCA				AML	AML		
	comp=N,747µm,0.5s						
ZCCA				AML	AML		
	comp=E,409µm,0.4s						
ZCCA				AML	AML		
	comp=N,748µm,0.5s						
POPM	**Popiglio**	**0.17**	**214**	P	Pg	19 20 15.8	+0.9
POPM				S	Sg	19 20 19.6	+2.1
POPM	**Popiglio**	**0.17**	**214**	⇑P	Pg	19 20 15.8	+0.9
POPM				S	Sg	19 20 19.0	+1.6
POPM				AML	AML		
	comp=N,2395µm,0.1s						
POPM				AML	AML		
	comp=E,2505µm,0.2s						
BDI	**Bagni Di Lucca**	**0.25**	**239**	⇑P	Pg	19 20 16.9	+0.6
BDI				S	Sg	19 20 21.3	+1.6
BDI				AML	AML		
	comp=E,456µm,1.1s						
BDI				AML	AML		
	comp=N,420µm,0.4s						
BDI				AML	AML		
	comp=E,456µm,1.1s						
PTF	**Prato**	**0.26**	**151**	P	Pb	19 20 17.4	-0.7
PTF				S	Sb	19 20 21.6	-1.2
CARD	**Cardoso**	**0.34**	**241**	P	Pg	19 20 18.2	+0.3
CARD				S	Sb	19 20 23.9	-1.0
CARD	**Cardoso**	**0.34**	**241**	P	Pg	19 20 18.2	+0.3
CARD				S	Sb	19 20 23.8	-1.1
SARO	**Sassorosso**	**0.35**	**269**	P	Pg	19 20 18.6	+0.3
SARO				S	Sb	19 20 24.3	-1.2
SARO	**Sassorosso**	**0.35**	**269**	P	Pg	19 20 18.6	+0.3
SARO				S	Sb	19 20 24.3	-1.2
SARO				AML	AML		
	comp=E,126µm,0.7s						
SARO				AML	AML		
	comp=N,286µm,0.5s						
SEI	**Scarperia**	**0.36**	**112**	P	Pg	19 20 18.5	+0.2
SEI				S	Sb	19 20 24.7	-0.9
SEI				AML	AML		
	comp=E,611µm,0.4s						
SEI				AML	AML		
	comp=N,625µm,0.3s						
SEI				AML	AML		
	comp=E,610µm,0.4s						
VLC	**Villacollemand**	**0.37**	**265**	P	Pg	19 20 18.9	+0.5
VLC				S	Sb	19 20 24.9	-0.8
VLC				AML	AML		
	comp=E,291µm,0.2s						
VLC				AML	AML		
	comp=N,368µm,0.4s						
VLC				AML	AML		
	comp=E,294µm,0.2s						
VLC				AML	AML		
	comp=E,290µm,0.2s						
VLC				AML	AML		
	comp=N,369µm,0.4s						
VLC				AML	AML		
	comp=N,344µm,0.4s						
CRMI	**Carmignano**	**0.40**	**172**	P	Pb	19 20 19.9	-0.6
CRMI				S	Sb	19 20 26.4	-0.4
CRMI				AML	AML		
	comp=E,35µm,0.5s						
CRMI				AML	AML		
	comp=N,39µm,0.7s						
CRMI				AML	AML		
	comp=E,35µm,0.5s						
CRMI				AML	AML		
	comp=N,39µm,0.7s						
ERBM	**Eremo**	**0.41**	**304**	P	Pg	19 20 19.7	+0.4
ERBM				AML	AML		
	comp=E,148µm,1.6s						
ERBM				AML	AML		
	comp=N,339µm,1.6s						
ERBM				AML	AML		
	comp=E,149µm,1.6s						
ERBM				AML	AML		
	comp=N,338µm,1.6s						
MTRZ	**Monterenzio**	**0.45**	**65**	P	Pg	19 20 20.2	+0.2
MTRZ				S	Sg	19 20 25.5	-0.5
PII	**Pisa**	**0.54**	**210**	P	Pg	19 20 21.9	+0.3
PII				S	Sb	19 20 30.3	-0.3
PII				AML	AML		
	comp=N,154µm,0.3s						
PII				AML	AML		
	comp=E,204µm,0.3s						
RUFI	**Rufina**	**0.57**	**128**	P	Pg	19 20 22.6	+0.4
RUFI				S	Sb	19 20 31.0	-0.4
GRAM	**Graiana**	**0.67**	**297**	P	Pg	19 20 24.1	0.0
GRAM				S	Sb	19 20 34.4	0.0
GRAM	**Graiana**	**0.67**	**297**	P	Pg	19 20 24.5	+0.4
GRAM				S	Sb	19 20 34.1	-0.3
GRAM				AML	AML		
	comp=E,122µm,0.3s						
GRAM				AML	AML		
	comp=N,126µm,1.2s						
GRAM				AML	AML		
	comp=N,126µm,1.2s						
SFI	**Santa Sofia**	**0.74**	**112**	P	Pb	19 20 26.0	-0.3
SFI				AML	AML		
	comp=E,45µm,0.3s						
SFI				AML	AML		
	comp=N,30µm,1.0s						
MSSA	**Maissana**	**1.00**	**278**	P	Pg	19 20 30.4	0.0
VOBA	**Vobarno**	**1.48**	**349**	S	Sn	19 20 57.0	-0.5
MILN	**Milano**	**1.75**	**318**	S	Sg	19 21 10.0	+2.5
SSM1	**San Severino M**	**1.91**	**119**	S	Sg	19 21 14.0	+1.3
GBOS	**Grotte di Boss**	**2.20**	**272**	S	Sb	19 21 17.0	-1.4
LNSS	**Leonessa**	**2.23**	**135**	S	Sg	19 21 24.0	+1.2
TOLF	**Tolfa**	**2.27**	**159**	S	Sg	19 21 25.0	+0.7
SMA1	**SAN MARTINO**	**2.37**	**130**	S	Sb	19 21 23.0	-0.4
VIVA	**Pratoni del Vi**	**2.80**	**150**	P	Pb	19 21 01.4	0.0
VIVA				AML	AML		
	comp=E,1345µm,0.4s						
VIVA				AML	AML		
	comp=N,2035µm,0.4s						

ROM 28 19:21:04.1±0.1**,41°.749N**±0°.003×**13°.227E**±0°.004**, h10^{km},ML2.1**/4**,8C-11D,Error ellipse: s-maj=0.3km s-min=0.2km az=212.0,Southern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUAR	**Guarcino**	**0.08**	**55**	⇑P	Pg	19 21 06.8	+0.3
GUAR				AML	AML		
	comp=E,6775µm,0.4s						
GUAR				AML	AML		
	comp=N,9155µm,1.6s						
GUAR				AML	AML		
	comp=N,9155µm,1.6s						
GUAR				AML	AML		
	comp=E,6775µm,0.4s						
GUAR				AML	AML		
	comp=N,9155µm,1.6s						
GUAR				AML	AML		
	comp=E,6775µm,0.4s						
GUAR	**Guarcino**	**0.08**	**55**	⇑P	Pg	19 21 06.8	+0.3
GUAR				S	Sg	19 21 08.2	0.0
GIUL	**Giuliano Di Ro**	**0.19**	**174**	⇓P	Pg	19 21 09.0	+0.9
GIUL				AML	AML		
	comp=E,1265µm,0.6s						
GIUL				AML	AML		
	comp=N,1400µm,0.3s						
GIUL				AML	AML		
	comp=E,1265µm,0.6s						
GIUL				AML	AML		
	comp=N,1400µm,0.3s						
GIUL				AML	AML		
	comp=E,1265µm,0.6s						
GIUL				AML	AML		
	comp=N,1400µm,0.3s						
GIUL	**Giuliano Di Ro**	**0.19**	**174**	⇓P	Pg	19 21 09.0	+0.8
GIUL				S	Sg	19 21 12.4	+1.4
RCAV	**Rocca di Cave**	**0.23**	**295**	P	Pg	19 21 09.8	+0.9
RCAV				S	Sg	19 21 13.8	+1.6
RCAV				AML	AML		
	comp=N,1140µm,1.3s						
RCAV				AML	AML		
	comp=E,1130µm,0.9s						
CERT	**Cerreto**	**0.27**	**318**	⇑P	Pg	19 21 10.3	+0.7
CERT				S	Sg	19 21 14.5	+1.2
CERT				AML	AML		
	comp=N,425µm,1.2s						
CERT				AML	AML		
	comp=E,1095µm,1.3s						
PTQR	**Pietraquaria**	**0.30**	**25**	P	Pb	19 21 11.0	-0.7
PTQR				S	Sb	19 21 16.1	-0.6
PTQR				AML	AML		
	comp=E,785µm,0.3s						
PTQR				AML	AML		
	comp=N,1022µm,0.3s						
VVLD	**Villa Vallelon**	**0.32**	**68**	⇓P	Pg	19 21 11.1	+0.5
VVLD				AML	AML		
	comp=E,314µm,0.3s						
VVLD				AML	AML		
	comp=N,192µm,0.5s						
VVLD				AML	AML		
	comp=N,192µm,0.5s						
VVLD				AML	AML		
	comp=E,314µm,0.3s						
VVLD				AML	AML		
	comp=N,192µm,0.5s						
VVLD				AML	AML		
	comp=E,314µm,0.3s						
VVLD	**Villa Vallelon**	**0.32**	**68**	⇓P	Pg	19 21 11.1	+0.5
VVLD				S	Sb	19 21 16.2	-1.1
LATB	**Latina**	**0.32**	**218**	⇑P	Pb	19 21 11.3	-0.7
LATB				AML	AML		
	comp=E,122µm,1.2s						
LATB				AML	AML		
	comp=N,91µm,0.6s						
LATB				AML	AML		
	comp=E,122µm,1.2s						
LATB				AML	AML		
	comp=N,91µm,0.6s						
LATB				AML	AML		
	comp=E,122µm,1.2s						
LATB				AML	AML		
	comp=N,91µm,0.6s						
LATB	**Latina**	**0.32**	**218**	⇓P	Pg	19 21 11.1	+0.6
LATB				S	Sb	19 21 16.5	-0.8
VIVA	**Pratoni del Vi**	**0.34**	**270**	AML	AML		
	comp=N,2035µm,0.4s						
VIVA				AML	AML		
	comp=E,1345µm,0.4s						
POFI	**Posta Fibreno**	**0.36**	**95**	⇓P	Pg	19 21 11.8	+0.4
POFI				AML	AML		
	comp=E,349µm,0.5s						
POFI				AML	AML		
	comp=N,358µm,0.3s						
POFI				AML	AML		
	comp=N,358µm,0.3s						
POFI				AML	AML		
	comp=E,349µm,0.5s						
POFI				AML	AML		
	comp=N,358µm,0.3s						
POFI				AML	AML		
	comp=E,349µm,0.5s						
POFI	**Posta Fibreno**	**0.36**	**95**	P	Pg	19 21 11.7	+0.3
POFI				S	Sb	19 21 17.5	-1.0
POFI				AML	AML		
	comp=E,349µm,0.5s						
POFI				AML	AML		
	comp=N,358µm,0.3s						
RMP	**Rome, Mte Porz**	**0.40**	**279**	AML	AML		
	comp=N,988µm,0.4s						
RMP				AML	AML		
	comp=E,628µm,1.0s						
MTCE	**Montecelio**	**0.45**	**307**	⇑P	Pg	19 21 13.4	+0.4
MTCE				S	Sb	19 21 20.1	-1.0
MTCE				AML	AML		
	comp=N,191µm,0.8s						
MTCE				AML	AML		
	comp=N,192µm,0.8s						
MTCE				AML	AML		
	comp=E,212µm,0.4s						
FIAM	**Fiamignano**	**0.53**	**351**	⇑P	Pg	19 21 14.6	+0.2
FIAM				S	Sb	19 21 22.5	-0.7
FIAM				AML	AML		
	comp=E,384µm,0.7s						
FIAM				AML	AML		
	comp=N,277µm,0.8s						
INTR	**Introdacqua**	**0.57**	**62**	⇓P	Pg	19 21 15.4	+0.1
INTR				S	Sb	19 21 24.1	-0.4
INTR				AML	AML		
	comp=E,356µm,0.7s						
INTR				AML	AML		
	comp=N,602µm,0.7s						
CERA	**Filignano**	**0.61**	**104**	⇓P	Pg	19 21 16.2	+0.2
CERA				AML	AML		
	comp=E,248µm,0.5s						
CERA				AML	AML		
	comp=N,286µm,0.6s						
CERA				AML	AML		
	comp=N,286µm,0.6s						
CERA				AML	AML		
	comp=E,248µm,0.5s						
CERA				AML	AML		
	comp=N,286µm,0.6s						
CERA				AML	AML		
	comp=E,248µm,0.5s						
CERA	**Filignano**	**0.61**	**104**	⇓P	Pg	19 21 16.1	+0.1
CERA				S	Sb	19 21 25.0	-0.7
T0110	**Collepietro**	**0.63**	**41**	P	Pg	19 21 16.8	+0.4
T0110				S	Sb	19 21 25.8	-0.4
T0110				AML	AML		
	comp=N,410µm,0.4s						
T0110				AML	AML		
	comp=E,299µm,0.3s						
RNI2	**Rionero Sannit**	**0.69**	**94**	⇓P	Pb	19 21 18.0	-0.4
LPEL	**Lama dei Pelig**	**0.77**	**67**	P	Pg	19 21 18.6	-0.4
MIDA	**Miranda**	**0.78**	**98**	⇑P	Pg	19 21 18.9	-0.2
MIDA				AML	AML		
	comp=E,124µm,1.0s						
MIDA				AML	AML		
	comp=N,494µm,1.6s						
MIDA				AML	AML		
	comp=E,117µm,1.0s						
MIDA				AML	AML		
	comp=N,101µm,0.5s						
MIDA				AML	AML		
	comp=N,494µm,1.6s						
MIDA				AML	AML		
	comp=E,124µm,1.0s						
MIDA				AML	AML		
	comp=E,117µm,1.0s						
MIDA				AML	AML		
	comp=N,101µm,0.5s						
MIDA				AML	AML		
	comp=N,494µm,1.6s						
MIDA				AML	AML		
	comp=E,124µm,1.0s						
MIDA				AML	AML		
	comp=E,117µm,1.0s						
MIDA				AML	AML		
	comp=N,101µm,0.5s						
MIDA	**Miranda**	**0.78**	**98**	⇓P	Pg	19 21 18.7	-0.4
MODR	**Mondragone**	**0.78**	**141**	P	Pg	19 21 18.7	-0.4
MODR				S	Sb	19 21 30.0	-0.3
VAGA	**Valle Agricola**	**0.83**	**113**	⇑P	Pn	19 21 22.2	+0.3
VAGA				AML	AML		
	comp=E,77µm,0.6s						
VAGA				AML	AML		
	comp=N,134µm,0.4s						
VAGA				AML	AML		
	comp=E,77µm,0.6s						
VAGA				AML	AML		
	comp=N,134µm,0.4s						
VAGA				AML	AML		
	comp=E,77µm,0.6s						
VAGA				AML	AML		
	comp=N,134µm,0.4s						
CESX	**Cesi**	**0.98**	**331**	AML	AML		
	comp=E,62µm,1.6s						
CESX				AML	AML		
	comp=N,86µm,0.4s						

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*MOS **28** 19:27:29.1±0.9, 56°.32S×27°.10W, h100^{km}, mb5.2/20, Error ellipse: s-maj=16.9km s-min=9.8km az=105.2*

*NEIC **28** 19:27:30.8±1.4, 56°.35S±0°.09×27°.1W±0°.2, h109^{km}±4^{km}, mb5.4/84, Error ellipse: s-maj=14.2km s-min=11.3km az=219.0*

*IDC **28** 19:27:31.4±1.1, 56°.35S×27°.06W, h110^{km}±9^{km}, mb5.0/26, mb1 5.0/28, mb1mx5.0/32, mbtmp5.4/28, MS4.1/16, Ms1 4.0/16, ms1mx3.9/26, Error ellipse: s-maj=11.4km s-min=9.1km az=50.0*

*GCMT **28** 19:27:31.8±0.1, 56°.45S±0°.01×26°.64W±0°.02, h101^{km}±1^{km}, MW5.2/128, Moment Tensor Solution. s102,c153; s128,c203; Duration: 1^{s}0 Moment tensor: Scale 10^{16} Nm; M$_{rr}$0.98±.18; M$_{\theta\theta}$1.93±.24; M$_{\phi\phi}$-2.91±.23; M$_{r\theta}$-7.70±.12; M$_{\theta\phi}$1.47±.20; M$_{\phi r}$4.22±.12; Best double couple: M$_0$9.25800×10^{16} NP1:ϕ_s202.00000°, δ18.00000°, λ171.00000°. NP2:ϕ_s301.00000°, δ87.00000°, λ72.00000°. Principal axes: T 9.4630, Plg45.0000°, Azm193.0000°; N -0.4090, Plg18.0000°, Azm302.0000°; P -9.0530, Plg40.0000°, Azm47.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 28 19:27:29.6±0.2**,56°.40S**±0°.05×**26°.99W**±0°.05**,h101**^{km}**, n519,**σ**1^{s}20**/549**,mb5.4**/69**,27C-23D,Fault plane solution: NP1:**ϕ_s309.21533°**,**δ76.79451°**,**λ46.20443°. **NP2:**ϕ_s205.81412°**,**δ45.35381°**,**λ161.27101°. **Principal axes:** T Plg41.1808°**,** Azm178.6570°**;** N Plg42.3600°**,** Azm321.5701°**;** P Plg19.5950°**,** Azm70.5116°**; South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**5.82**	**287**	P	**Pn**	**19 28 53.5**	**+0.2**
HOPE	**Hope Point**	**5.82**	**287**		**Pn**	**19 28 53.5**	**+0.2**
VNA1	**Neumayer--Stat**	**16.43**	**158**	P	**P**	**19 31 15.5**	**+0.9**
VNA3	**Neumayer Olymp**	**16.62**	**160**	P	**Pn**	**19 31 16.0**	**-0.1**
VNA2	**Neumayer--Watz**	**16.82**	**158**	P	**Pn**	**19 31 18.4**	**-0.1**
	baz=314,slow=14						
SNAA	**Sanae**	**18.37**	**156**	P	**Pn**	**19 31 36.8**	**-0.5**
SNAA	**Sanae**	**18.37**	**156**	P	**Pn**	**19 31 37.1**	**-0.2**
	14nm,0.3s,baz=309,slow=9.4,SNR=405						
SNAA				S	**S**	**19 34 52.5**	**-7.9**
	0.7nm,0.3s,baz=316,slow=18,SNR=1.7						
SNAA				PcP	**PcP**	**19 36 03.6**	**+1.2**
	0.9nm,0.3s,baz=333,slow=4.5,SNR=1.9						
SNAA				LR	LR	19 38 01.4	
	comp=Z,196nm,18.2s,baz=320,slow=34						
SNAA				ScP	**ScP**	**19 39 28.2**	**-0.1**
	1.0nm,0.3s,baz=324,slow=3.4,SNR=14						
SNAA	**Sanae**	**18.37**	**156**		**P**	**19 31 36.6**	**+0.5**
SNAA				IAmb	IAmb	19 31 44.7	
	comp=Z,189nm,0.8s						
SNAA					**ScP**	**19 39 28.0**	**-0.3**
EFI	**East Falkland**	**18.75**	**271**	P	**P**	**19 31 40.8**	**+0.5**
EFI				pmax	pmax		
	comp=Z,80nm,0.9s						
EFI	**East Falkland**	**18.75**	**271**	P	**P**	**19 31 40.8**	**+0.5**
PMSA	**Palmer Station**	**19.75**	**230**	P	**Pn**	**19 31 53.5**	**0.0**
	comp=Z,11nm,0.3s,baz=81,slow=9.4,SNR=28						
PMSA				LR	LR	19 38 36.6	
	comp=Z,762nm,18.1s,baz=84,slow=34						
PMSA				ScP	**ScP**	**19 39 31.2**	**-0.1**
	comp=Z,3.0nm,0.3s,baz=3.0,slow=1.2,SNR=8.4						
PMSA	**Palmer Station**	**19.75**	**230**	P	**Pn**	**19 31 53.2**	**-0.2**
BELA	**Belgrano 2**	**21.73**	**184**	P	**P**	**19 32 12.3**	**+0.1**
NVL	**N'lazarevskaya**	**21.91**	**146**	⇑*i*P	**P**	**19 32 12.3**	**-1.7**
NVL				*e*S	**S**	**19 36 05.3**	**-4.2**
NVL				pmax	pmax		
	comp=Z,89nm,1.0s						
USHA	**Ushuaia**	**23.21**	**256**	P	**P**	**19 32 29.7**	**+2.3**
	comp=Z,20nm,0.5s,baz=132,slow=4.7,SNR=1.7						
GO09	**Cerro Castillo**	**26.85**	**262**	P	**P**	**19 32 59.4**	**-0.9**
PLTB	**Pedras Altas**	**30.82**	**312**	*e*P	**P**	**19 33 36.0**	**+0.3**
SYO	**Syowa Base**	**31.24**	**140**	⇓*e*X	**P**	**19 33 40.4**	**+1.5**
CPSB	**Cacapava Do Su**	**31.94**	**313**	*e*P	**P**	**19 33 46.1**	**+0.6**
PLCA	**Paso Flores**	**32.17**	**280**	P	**P**	**19 33 46.4**	**-1.2**
	comp=Z,3.9nm,0.7s,baz=139,slow=8.7,SNR=17						
PLCA				PcP	**PcP**	**19 36 34.1**	**+0.2**
	comp=Z,6.0nm,0.8s,baz=147,slow=5.2,SNR=5.3						
PLCA				ScP	**ScP**	**19 40 06.2**	**-1.8**
	comp=Z,9.7nm,0.8s,baz=109,slow=3.5,SNR=16						
PLCA				LR	LR	19 47 10.8	
	comp=Z,154nm,19.4s,baz=133,slow=37						
PLCA	**Paso Flores**	**32.17**	**280**	P	**P**	**19 33 45.5**	**-2.1**
PLCA	**Paso Flores**	**32.17**	**280**	*e*P	**P**	**19 33 46.2**	**-1.4**
QSPA	**South Pole Qui**	**33.85**	**180**	P	**P**	**19 34 03.1**	**+1.1**
ITQB	**Itaqui**	**33.91**	**310**	*e*P	**P**	**19 34 02.7**	**0.0**
ITAB	**Concordia**	**34.26**	**318**	*e*P	**P**	**19 34 06.5**	**+0.8**
BI02	**San Fabin de**	**35.49**	**285**	P	**P**	**19 34 15.2**	**-1.1**
PARB	**Paraibuna**	**35.74**	**330**	*e*P	**P**	**19 34 20.1**	**+1.5**
MAN01	**Angra dos Reis**	**35.75**	**333**	*e*P	**P**	**19 34 20.2**	**+1.6**
SPB	**Sao Paulo**	**36.03**	**327**	*e*P	**P**	**19 34 22.6**	**+1.7**
DUB01	**Friburgo-RJ**	**36.12**	**335**	*e*P	**P**	**19 34 23.5**	**+1.8**
VAS01	**Vassouras-RJ**	**36.18**	**334**	*e*P	**P**	**19 34 24.0**	**+1.7**
CAM01	**Campos-RJ**	**36.20**	**337**	*e*P	**P**	**19 34 24.3**	**+1.9**
PTGB	**Pitanga**	**36.53**	**320**	*e*P	**P**	**19 34 25.6**	**+0.4**
BO02	**Sierra Bellavi**	**36.64**	**287**	P	**P**	**19 34 24.8**	**-1.3**
CPUP	**Villa Florida**	**37.13**	**311**	P	**P**	**19 34 29.8**	**-0.4**
	comp=Z,12nm,0.7s,baz=147,slow=7.5,SNR=27						
CPUP				PcP	**PcP**	**19 36 48.5**	**+0.1**
	comp=Z,2.8nm,0.5s,baz=165,slow=2.7,SNR=1.6						
CPUP				ScP	**ScP**	**19 40 24.1**	**-1.8**
	comp=Z,11nm,0.9s,baz=134,slow=4.6,SNR=10						
CPUP				LR	LR	19 50 59.8	
	comp=Z,112nm,18.4s,baz=153,slow=38						
CPUP	**Villa Florida**	**37.13**	**311**	P	**P**	**19 34 29.3**	**-0.9**
CPUP				IAmb	IAmb	19 34 56.0	
	comp=Z,47nm,1.2s						
CPUP				ScP	**ScP**	**19 40 23.9**	**-1.9**
CPUP	**Villa Florida**	**37.13**	**311**	*e*P	**P**	**19 34 30.2**	**0.0**
ALF01	**Guarapari-ES**	**37.17**	**338**	*e*P	**P**	**19 34 32.4**	**+1.7**
BSCB	**Bom Sucesso**	**37.74**	**332**	*e*P	**P**	**19 34 37.0**	**+1.4**
PEL	**Peldehue**	**37.86**	**289**	P	**P**	**19 34 35.7**	**-0.7**
PEL				pmax	pmax		
	comp=Z,36nm,0.8s						
PEL	**Peldehue**	**37.86**	**289**	P	**P**	**19 34 35.7**	**-0.7**
PEL				IAmb	IAmb	19 34 38.2	
	comp=Z,36nm,0.8s						
MT02	**Curacav**	**38.01**	**289**	P	**P**	**19 34 36.2**	**-1.4**
MT02				IAmb	IAmb	19 34 39.2	
	comp=Z,32nm,0.6s						
VA03	**San Esteban**	**38.08**	**290**	P	**P**	**19 34 37.7**	**-0.7**
VA03				IAmb	IAmb	19 35 23.5	
	comp=Z,40nm,0.8s						
RIB01	**Linhares ES**	**38.37**	**339**	*e*P	**P**	**19 34 42.4**	**+1.6**
TRCB	**Terra Rica**	**38.49**	**320**	*e*P	**P**	**19 34 42.1**	**+0.3**
BB19B	**Bebedouro**	**38.74**	**327**	*e*P	**P**	**19 34 45.3**	**+1.4**
BSFB	**Barra de Sao F**	**38.93**	**339**	*e*P	**P**	**19 34 46.8**	**+1.3**
PCMB	**Pacaembu**	**39.11**	**323**	*e*P	**P**	**19 34 47.5**	**+0.5**
SJMB	**Sao Joao De Ma**	**39.12**	**338**	*e*P	**P**	**19 34 48.2**	**+1.2**
CO02	**Combarbal**	**39.55**	**291**	P	**P**	**19 34 49.1**	**-1.5**
CO02				IAmb	IAmb	19 35 17.1	
	comp=Z,26nm,0.6s						
CO03	**El Pedregal**	**39.67**	**291**	P	**P**	**19 34 50.6**	**-1.0**
NAN01	**Guarapari, ES**	**39.75**	**340**	*e*P	**P**	**19 34 53.4**	**+1.1**
MAW	**Mawson**	**39.80**	**143**	P	**P**	**19 34 53.4**	**+1.3**
	comp=Z,56nm,0.6s,baz=228,slow=6.6,SNR=10						
MAW				LR	LR	19 49 05.9	
	comp=Z,211nm,21.1s,baz=243,slow=32						
MAW	**Mawson**	**39.80**	**143**	P	**P**	**19 34 53.2**	**+1.1**
MAW				IAmb	IAmb	19 35 42.9	
	comp=Z,129nm,2.0s						
CO01	**Juntas del Tor**	**40.06**	**293**	P	**P**	**19 34 54.9**	**-0.1**
DIAM	**Diamantina, MG**	**40.07**	**335**	*e*P	**P**	**19 34 56.1**	**+1.1**
GO04	**Tololo Observa**	**40.26**	**292**	P	**P**	**19 34 55.7**	**-1.0**
GO04				IAmb	IAmb	19 35 23.7	
	comp=Z,28nm,0.7s						
ITRB	**Iturama**	**40.59**	**325**	*e*P	**P**	**19 34 59.4**	**+0.2**
SUR	**Sutherland**	**40.62**	**74**	LR	LR	19 48 42.2	
	comp=Z,419nm,18.4s,baz=198,slow=31						
SUR	**Sutherland**	**40.62**	**74**	P	**P**	**19 35 00.8**	**+1.2**
SUR				IAmb	IAmb	19 35 01.8	
	comp=Z,66nm,1.0s						
AC05	**El Transito**	**41.07**	**294**	P	**P**	**19 35 02.4**	**-0.8**
AC05				IAmb	IAmb	19 35 18.5	
	comp=Z,37nm,0.8s						
IPMB	**Ipameri, GO**	**41.56**	**329**	*e*P	**P**	**19 35 08.3**	**+1.1**
AQDB	**Aquidauana**	**41.74**	**317**	*e*P	**P**	**19 35 08.1**	**-0.5**
AC04	**Llanos de Chal**	**41.99**	**293**	P	**P**	**19 35 10.1**	**-0.5**
AC04				IAmb	IAmb	19 35 25.6	
	comp=Z,72nm,1.0s						
GO03	**Copiap**	**42.06**	**295**	P	**P**	**19 35 10.0**	**-1.2**
AC02	**Maricunga**	**42.14**	**297**	P	**P**	**19 35 12.1**	**-0.3**

AC02				IAmb	IAmb	19 35 36.7	
	comp=Z,59nm,0.9s						
JANB	Januaria	43.34	335	*e*P	P	19 35 22.5	+0.9
AC01	Pan de Azucar	43.44	296	P	P	19 35 21.0	-1.3
SHEL	Horse Pasture	43.48	30	P	P	19 35 23.5	+0.8
SHEL				pmax	pmax		
	comp=Z,318nm,0.9s						
SHEL	Horse Pasture	43.48	30	P	P	19 35 23.5	+0.8
GDU01	Guandu, BA	43.68	342	*e*P	P	19 35 25.0	+0.7
BDFB	Brasilia	43.73	330	P	P	19 35 25.9	+1.1
	comp=Z,21nm,0.9s,baz=158,slow=3.7,SNR=18						
BDFB				LR	LR	19 52 21.7	
	comp=Z,213nm,19.5s,baz=129,slow=34						
BDFB	Brasilia	43.73	330	P	P	19 35 25.2	+0.4
GO02	Mina Guanaco	43.76	298	P	P	19 35 24.5	-0.7
PP1B	Ponte de Pedra	44.07	320	*e*P	P	19 35 27.7	+0.3
PB14	IPOC Station P	44.61	297	P	P	19 35 30.7	-1.3
ARAG	Araguaiana, MT	44.80	325	*e*P	P	19 35 34.1	+0.9
PB15	IPOC Station P	45.34	299	P	P	19 35 37.3	-0.4
PB15				IAmb	IAmb	19 35 42.6	
	comp=Z,38nm,0.6s						
LVC	Limon Verde	45.58	300	ScP	ScP	19 40 59.0	-0.8
	comp=Z,8.4nm,0.6s,baz=228,slow=0.5,SNR=7.5						
LVC	Limon Verde	45.58	300	P	P	19 35 39.9	+0.1
LVC				pmax	pmax		
	comp=Z,56nm,0.8s						
LVC	Limon Verde	45.58	300	P	P	19 35 39.9	+0.1
LVC				IAmb	IAmb	19 35 42.6	
	comp=Z,56nm,0.8s						
LVC				ScP	ScP	19 40 58.2	-1.6
LVC	Limon Verde	45.58	300	*e*P	P	19 35 40.2	+0.5
SBA	Scott Base	45.73	184	P	P	19 35 42.6	+2.7
SBA				pmax	pmax		
	comp=Z,443nm,1.9s						
SBA	Scott Base	45.73	184	P	P	19 35 42.6	+2.7
PB06	IPOC Station P	45.81	299	P	P	19 35 40.5	-0.8
PB06				IAmb	IAmb	19 36 08.7	
	comp=Z,32nm,0.7s						
BOSA	Boshof	45.95	75	P	P	19 35 42.8	+0.5
	comp=Z,41nm,0.9s,baz=211,slow=7.7,SNR=48						
BOSA				ScP	ScP	19 41 01.2	+0.2
	comp=Z,12nm,1.2s,baz=298,slow=2.4,SNR=5.3						
BOSA				LR	LR	19 52 07.6	
	comp=Z,461nm,19.0s,baz=224,slow=32						
BOSA	Boshof	45.95	75	P	P	19 35 42.3	-0.1
BOSA				pmax	pmax		
	comp=Z,67nm,1.0s						
BOSA	Boshof	45.95	75	P	P	19 35 42.3	-0.1
BOSA				IAmb	IAmb	19 35 43.7	
	comp=Z,67nm,1.0s						
SDBA	SAO DESIDERIO	46.03	335	*e*P	P	19 35 43.7	+0.7
VNDA	Vanda	46.23	183	P	P	19 35 45.5	+1.8
	comp=Z,105nm,0.7s,baz=183,slow=5.9,SNR=129						
VNDA				ScP	ScP	19 41 01.9	+0.7
	comp=Z,7.1nm,0.6s,baz=242,slow=1.7,SNR=7.5						
VNDA				LR	LR	19 53 40.2	
	comp=Z,155nm,21.6s,baz=174,slow=34						
VNDA	Vanda	46.23	183	P	P	19 35 45.6	+1.8
VNDA				pmax	pmax		
	comp=Z,106nm,0.7s						
VNDA	Vanda	46.23	183	P	P	19 35 45.6	+1.8
PB04	IPOC Station P	46.41	299	P	P	19 35 45.6	-0.4
PB04				IAmb	IAmb	19 36 10.3	
	comp=Z,104nm,1.3s						
PB09	IPOC Station P	46.43	300	P	P	19 35 46.0	-0.2
PEXB	Peixe	47.18	331	*e*P	P	19 35 52.8	+0.9
PTLB	Pontes e Lacer	47.63	316	*e*P	P	19 35 55.4	+0.1
PB08	IPOC Station P	47.80	302	P	P	19 35 57.2	+0.1
PB08				IAmb	IAmb	19 36 24.6	
	comp=Z,41nm,0.8s						
SIV	San Ignacio	47.90	313	ScP	ScP	19 41 08.5	-0.7
	comp=Z,15nm,0.9s,baz=146,slow=4.1,SNR=15						
NBRF	Rio Formoso -	48.03	349	*e*P	P	19 35 59.2	+0.7
SNDB	Serra Nova Dou	48.16	327	*e*P	P	19 36 00.5	+1.1
H10S2	ASCENSION HYDR	48.31	16	T	T	20 28 56.1	
	baz=31,slow=74,SNR=67						
H10S3	ASCENSION HYDR	48.31	16	T	T	20 28 49.1	
	baz=189,slow=74,SNR=18						
MNMC	Minye Minye	48.88	302	P	P	19 36 05.5	+0.3
LBTB	Lobatse	49.00	73	P	P	19 36 06.4	+0.4
	baz=214,slow=10						
LBTB				ScP	ScP	19 41 14.1	+0.2
	comp=Z,4.2nm,1.0s,baz=227,slow=3.9,SNR=3.8						
LBTB	Lobatse	49.00	73	P	P	19 36 06.2	+0.2
LBTB				pmax	pmax		
	comp=Z,86nm,0.8s						
LBTB	Lobatse	49.00	73	P	P	19 36 06.2	+0.2
PB16	IPOC Station P	49.53	302	P	P	19 36 10.6	0.0
NBLI	Livramento-PB	49.54	347	*e*P	P	19 36 10.6	+0.6
TSUM	Tsumeb	49.76	60	P	P	19 36 12.2	+0.3
SMTB	Santa Maria do	50.10	333	*e*P	P	19 36 15.3	+1.1
VILB	Vilhena	50.32	316	*e*P	P	19 36 15.9	0.0
CLDB	Colider	50.63	322	*e*P	P	19 36 18.1	-0.2
LPAZ	La Paz	50.67	305	P	P	19 36 20.0	+0.7
	comp=Z,31nm,0.5s,baz=144,slow=5.2,SNR=152						
LPAZ				ScP	ScP	19 41 20.2	-1.6
	comp=Z,5.8nm,0.6s,baz=65,slow=6.5,SNR=11						
LPAZ	La Paz	50.67	305	P	P	19 36 19.8	+0.5
LPAZ				IAmb	IAmb	19 36 20.9	
	comp=Z,62nm,1.0s						
LPAZ				ScP	ScP	19 41 20.2	-1.6
LPAZ	La Paz	50.67	305	*e*P	P	19 36 20.2	+0.9
RCBR	Riachuelo	50.93	349	LR	LR	19 53 49.8	
	comp=Z,96nm,20.2s,baz=252,slow=31						
RCBR	Riachuelo	50.93	349	P	P	19 36 19.7	-0.8
RCBR				pmax	pmax		
	comp=Z,22nm,0.8s						
RCBR	Riachuelo	50.93	349	P	P	19 36 19.7	-0.8
RCBR				IAmb	IAmb	19 36 21.7	
	comp=Z,22nm,0.8s						
RCBR	Riachuelo	50.93	349	*e*P	P	19 36 20.7	+0.1
NBPA	Parau_RN	51.15	347	*e*P	P	19 36 23.1	+1.0
NBPS	Pedro II - PI	53.13	342	*e*P	P	19 36 37.9	+1.0
PRPB	Parauapebas	53.26	331	*e*P	P	19 36 38.8	+1.1
CASY	Casey	53.54	160	P	P	19 36 40.5	+1.3
CASY				IAmb	IAmb	19 36 41.6	
	comp=Z,60nm,0.9s						
NBMO	Morrinhos-CE	53.96	344	*e*P	P	19 36 43.8	+0.9
NPGB	Novo Progresso	54.07	324	*e*P	P	19 36 43.8	+0.1
ROSB	Rosrio	55.09	339	*e*P	P	19 36 52.0	+1.0
SAML	Samuel	55.13	315	P	P	19 36 50.7	-0.6
SAML				pmax	pmax		
	comp=Z,33nm,0.8s						
SAML	Samuel	55.13	315	P	P	19 36 50.7	-0.6
SAML				IAmb	IAmb	19 37 14.3	
	comp=Z,33nm,0.8s						
SAML	Samuel	55.13	315	*e*P	P	19 36 51.4	0.0
ETMB	Extrema	55.58	311	*e*P	P	19 36 54.5	0.0
TMAB	Tom-Au,PA,Br	56.47	334	*e*P	P	19 37 02.6	+1.7
ITTB	Itaituba	56.71	325	*e*P	P	19 37 02.8	+0.2
LSZ	Lusaka	58.40	68	P	P	19 37 14.8	+0.2
LSZ				pmax	pmax		
	comp=Z,114nm,1.0s						
LSZ	Lusaka	58.40	68	P	P	19 37 14.8	+0.2
NNA	Nana	58.52	299⇓	*e*P	P	19 37 15.7	+0.4
NNA				pmax	pmax		
	comp=Z,124nm,2.5s						
MALB	Monte Alegre	58.63	328	*e*P	P	19 37 17.1	+1.1
MCPB	Macapa, AP	59.42	331	*e*P	P	19 37 22.8	+1.4
MACA	Manacapuru-AM	59.51	320	*e*P	P	19 37 21.4	-0.7
CZSB	Cruzeiro do Su	60.28	305	*e*P	P	19 37 26.4	-1.0
PTGA	Pitinga	61.52	322	P	P	19 37 35.4	-0.3
	comp=Z,11nm,0.7s,baz=165,slow=6.9,SNR=20						
PTGA	Pitinga	61.52	322	P	P	19 37 35.1	-0.6
PTGA	Pitinga	61.52	322	*e*P	P	19 37 35.4	-0.3
ATAH	Atahualpa	63.47	300	P	P	19 37 50.8	+1.6
	comp=Z,35nm,1.1s,baz=135,slow=6.3,SNR=4.8						
BOAV	Boa Vista	64.63	322	*e*P	P	19 37 55.9	-0.4
MDP	Montagnes des	64.80	332	P	P	19 37 57.6	+0.2
	comp=Z,11nm,0.6s,baz=177,slow=6.0,SNR=11						
LIC	Lamto	64.97	24	*e*P	P	19 37 58.1	-0.4
	comp=Z,207nm,0.7s						
KIC	Kosan Boka	65.17	24	*e*P	P	19 37 59.0	-0.8
	comp=Z,112nm,0.8s						
TIC	Toumodi	65.38	24	*e*P	P	19 38 00.6	-0.5
DBIC	Dimbokro	65.44	24	P	P	19 38 02.1	+0.6
	comp=Z,42nm,0.7s,baz=170,slow=7.8,SNR=86						
DBIC				LR	LR	20 00 44.6	
	comp=Z,236nm,19.1s,baz=172,slow=30						
DBIC	Dimbokro	65.44	24	P	P	19 38 01.7	+0.2
DBIC				pmax	pmax		
	comp=Z,48nm,0.8s						
DBIC	Dimbokro	65.44	24	P	P	19 38 01.7	+0.2
DBIC				IAmb	IAmb	19 38 02.9	
	comp=Z,48nm,0.8s						
ABPO	Ambohimpanom	65.65	88	P	P	19 38 04.7	+1.6
ABPO				pmax	pmax		
	comp=Z,27nm,1.1s						
ABPO	Ambohimpanom	65.65	88	P	P	19 38 04.7	+1.6
FLOC	Florencia	69.87	307	*e*P	P	19 38 23.1	-6.3
OTAV	Otavalo	69.94	304	P	P	19 38 31.4	+1.0
OTAV				pmax	pmax		
	comp=Z,169nm,1.6s						
OTAV	Otavalo	69.94	304	P	P	19 38 31.4	+1.0
OTAV	Otavalo	69.94	304	*e*P	P	19 38 30.8	+0.4
OTAV	Otavalo	69.94	304	*e*P	P	19 38 31.4	+1.0
GARC	Garzon, Huila	70.33	307	*e*P	P	19 38 26.0	-6.5
BETC	Betania	70.75	308	*e*P	P	19 38 24.6	-10
SOTA	Rioblanco	70.78	306	*e*P	P	19 38 37.6	+2.1
PCON	Cinco Dias	70.86	307	*e*P	P	19 38 37.4	+1.3
BBAC	Balboa, Cauca	70.97	306	*e*P	P	19 38 28.3	-8.1
MARP	Paez Belalcaza	71.12	307	*e*P	P	19 38 34.7	-2.6
PRAC	Prado	71.43	309	*e*P	P	19 38 38.4	-0.5
ORTC	Ortega, Tolima	71.76	308	*e*P	P	19 38 39.0	-1.8
ROSC	El Rosal	72.19	310	P	P	19 38 44.5	+0.6
	comp=Z,19nm,0.8s,baz=132,slow=2.2,SNR=5.7						
ROSC	El Rosal	72.19	310	P	P	19 38 43.7	-0.2
ROSC				pmax	pmax		
	comp=Z,20nm,0.8s						
ROSC	El Rosal	72.19	310	P	P	19 38 43.7	-0.2
MBAR	Mbarara	72.21	63	P	P	19 38 44.6	+0.8
MBAR				pmax	pmax		
	comp=Z,47nm,1.4s						
MBAR	Mbarara	72.21	63	P	P	19 38 44.6	+0.8
YOTC	Yotoco, Valle	72.31	307	*e*P	P	19 38 41.4	-2.9
ANIL	Santa Ana	72.35	309	*e*P	P	19 38 31.1	-14
TOLC	Tolima	72.40	309	*e*P	P	19 38 41.9	-3.1
RREF	El Recreo	72.69	309	*e*P	P	19 38 46.1	-1.0
GUY2C	Guyana, Caldas	72.99	309	*e*P	P	19 38 40.5	-8.2
NORC	Norcasia	73.08	309	*e*P	P	19 38 43.4	-5.3
PLMC	San Jos del P	73.10	308	*e*P	P	19 38 48.0	-0.9
KOWA	Kowa	73.20	23	P	P	19 38 50.1	+0.8
	comp=Z,24nm,0.8s,baz=199,slow=5.3,SNR=65						
KOWA	Kowa	73.20	23	P	P	19 38 50.0	+0.7
KOWA				IAmb	IAmb	19 38 51.4	
	comp=Z,42nm,1.1s						
PCRV	Puerto La Cruz	73.30	321	P	P	19 38 50.4	+0.4
	comp=Z,70nm,0.7s,baz=162,slow=2.6,SNR=23						
TOA0	Torodi Ar. Sit	73.31	29	P	P	19 38 50.6	+0.7
TORD	Torodi Ar. Bea	73.31	29	P	P	19 38 50.7	+0.8
	comp=Z,97nm,0.7s,baz=199,slow=6.3,SNR=366						
TORD				pP	pwP	19 39 16.9	-1.1
	comp=Z,66nm,0.7s,baz=201,slow=6.5,SNR=10.0						
TORD				LR	LR	20 06 09.8	
	comp=Z,152nm,18.8s,baz=295,slow=32						
TORD	Torodi Ar. Bea	73.31	29	P	P	19 38 50.5	+0.6
GRGR	Grenville	74.12	325	P	P	19 38 55.2	+0.5
SDV	Santo Domingo	74.34	315	P	P	19 38 56.6	+0.4
	comp=Z,36nm,0.8s,baz=160,slow=5.5,SNR=44						
SDV	Santo Domingo	74.34	315	P	P	19 38 56.2	0.0
SDV				IAmb	IAmb	19 38 57.8	
	comp=Z,38nm,0.8s						
SDV	Santo Domingo	74.34	315	*e*P	P	19 38 53.2	-3.0
SDV	Santo Domingo	74.34	315	*e*P	P	19 38 56.6	+0.4
KMBO	Kilima Mbogo	75.06	69	P	P	19 39 03.4	+2.9
	comp=Z,6.8nm,1.0s,baz=248,slow=5.1,SNR=8.1						
KMBO				LR	LR	20 10 45.5	
	comp=Z,108nm,18.1s,baz=100,slow=35						
WHZ	Wether Hill Ro	77.31	191	P	P	19 39 13.1	+0.6
WHZ				IAmb	IAmb	19 39 14.9	
	comp=Z,66nm,0.9s						
MLZ	Mavora Lakes	77.81	191	P	P	19 39 16.3	+0.9
MLZ				IAmb	IAmb	19 39 19.9	
	comp=Z,34nm,0.8s						
LBZ	Lake Benmore	78.54	192	P	P	19 39 20.4	+1.0
LBZ				IAmb	IAmb	19 39 23.1	
	comp=Z,43nm,0.9s						
MQZ	McQueen's Vall	78.89	194	P	P	19 39 22.0	+0.7
MQZ				IAmb	IAmb	19 39 23.4	
	comp=Z,40nm,0.8s						
RPZ	Rata Peaks	79.10	193	P	P	19 39 23.6	+1.1
	comp=Z,54nm,0.8s,baz=193,slow=3.1,SNR=33						
OXZ	Oxford	79.35	194	P	P	19 39 24.6	+0.7
LTZ	Lake Taylor	79.85	194	P	P	19 39 27.6	+1.0
LTZ				IAmb	IAmb	19 39 29.4	
	comp=Z,89nm,0.9s						
THZ	Tophouse	80.77	195	P	P	19 39 32.1	+0.6
THZ				IAmb	IAmb	19 39 34.1	
	comp=Z,80nm,0.9s						
SNZO	South Karori	80.94	196	P	P	19 39 32.9	+0.5
SNZO				IAmb	IAmb	19 39 35.0	
	comp=Z,78nm,0.8s						
TAU	Tasmania Unive	80.94	176	P	P	19 39 33.0	+0.6
TAU				pmax	pmax		
	comp=Z,136nm,0.9s						
TAU	Tasmania Unive	80.94	176	P	P	19 39 33.0	+0.6
MTP	Monte Pirata	80.98	323	P	P	19 39 32.0	-0.7
CUPR	Culebra, Puert	81.08	323	P	P	19 39 33.7	+0.5
CUPR				IAmb	IAmb	19 39 34.7	
	comp=Z,63nm,0.9s						
HUMP	Col San Antoni	81.12	323	P	P	19 39 34.1	+0.6
JTS	Las Juntas de	81.80	303	P	P	19 39 37.8	+0.6
	comp=Z,34nm,1.0s,baz=24,slow=1.8,SNR=10						
JTS	Las Juntas de	81.80	303*c*	*i*P	P	19 39 38.0	+0.8
JTS				pmax	pmax		
	comp=Z,77nm,1.4s						
ACON	Acoyapa	83.37	303	P	P	19 39 44.5	-0.8
URZ	Urewera	83.51	199	P	P	19 39 46.5	+0.7
	comp=Z,38nm,0.9s,baz=180,slow=3.0,SNR=7.2						
URZ	Urewera	83.51	199	P	P	19 39 46.2	+0.4
URZ				IAmb	IAmb	19 39 48.3	
	comp=Z,47nm,0.9s						
MATN	Matagalpa	84.56	303	P	P	19 39 51.2	-0.2
MATN				IAmb	IAmb	19 39 53.0	
	comp=Z,73nm,1.0s						
NWAO	Narrogin (SRO)	85.96	150	P	P	19 39 58.5	+0.3
	comp=Z,6.2nm,0.5s,baz=139,slow=2.9,SNR=7.0						
NWAO	Narrogin (SRO)	85.96	150	P	P	19 39 58.4	+0.1
NWAO				pmax	pmax		
	comp=Z,141nm,2.0s						
NWAO	Narrogin (SRO)	85.96	150	P	P	19 39 58.4	+0.1
TOO	Toolangi	86.17	174	P	P	19 39 59.7	+0.4
TOO				pmax	pmax		
	comp=Z,24nm,0.8s						
TOO	Toolangi	86.17	174	P	P	19 39 59.7	+0.4
TOO				IAmb	IAmb	19 40 02.7	
	comp=Z,24nm,0.8s						
TBI	Tubuai	86.95	231	*e*LR	LR	20 07 52.6	
	comp=Z,539nm,31.8s,baz=159						
OUZ	Omahuta	87.07	197	P	P	19 40 03.6	0.0
CAN	Canberra	88.57	177	P	P	19 40 11.9	+1.0
CAN				pmax	pmax		
	comp=Z,43nm,1.0s						
CAN	Canberra	88.57	177	P	P	19 40 11.9	+1.0
CAN				IAmb	IAmb	19 40 14.2	
	comp=Z,43nm,1.0s						
MORW	Morawa	89.26	148	P	P	19 40 14.3	+0.2
MORW				IAmb	IAmb	19 43 43.0	
	comp=Z,39nm,1.4s						
BBOO	Buckleboo	89.97	166	P	P	19 40 17.6	+0.2
BBOO				IAmb	IAmb	19 40 20.3	
	comp=Z,37nm,1.1s						
FORT	Forrest	90.60	159	P	P	19 40 20.2	-0.1
MDT	Midelt	90.89	19	P	P	19 40 24.7	+3.3
	comp=Z,44nm,0.7s,baz=185,slow=3.0,SNR=77						
STKA	Stephens Creek	91.53	170	P	P	19 40 25.5	+0.8
	comp=Z,9.6nm,0.5s,baz=164,slow=3.7,SNR=27						
STKA				PP	PP	19 44 03.0	0.0
	comp=Z,6.4nm,0.8s,baz=180,slow=6.7,SNR=6.1						
STKA				LR	LR	20 21 18.1	
	comp=Z,74nm,18.4s,baz=202,slow=35						
STKA	Stephens Creek	91.53	170	P	P	19 40 25.2	+0.5
STKA				pmax	pmax		
	comp=Z,12nm,1.7s						
STKA	Stephens Creek	91.53	170	P	P	19 40 25.1	+0.5
TEIG	Tepich	92.00	304	P	P	19 40 27.2	+0.5
	comp=Z,52nm,0.7s,baz=104,slow=2.2,SNR=25						
TEIG	Tepich	92.00	304	P	P	19 40 27.2	+0.5
PPT2	Papeete2	92.06	234	*e*S	S	19 51 23.0	+2.0
	comp=Z,120nm,30.8s						
PPT2	Papeete2	92.06	234	*e*LR	LR	20 10 11.2	
	comp=Z,903nm,31.0s,baz=157						
PPT	Papeete	92.08	234	LR	LR	20 15 34.3	
	comp=Z,84nm,18.3s,baz=180,slow=31						
PCVE	Castro Verde	95.05	15	*e*P	P	19 40 42.9	+2.6
PBEJ	Beja	95.46	15	*e*P	P	19 40 45.6	+3.4
PBAR	Barrancos	95.73	16	*e*P	P	19 40 46.7	+3.3
EVO	Evora	95.93	15	*e*P	P	19 40 47.4	+3.1
KEST	Kesra	96.83	29	LR	LR	20 21 57.3	
	comp=Z,120nm,18.2s,baz=200,slow=34						
PMRV	Marv??o	96.90	15	*e*P	P	19 40 50.9	+2.2
ESDC	Sonseca Array	97.68	18	P	Pdif	19 40 54.1	+1.8
	comp=Z,4.5nm,0.9s,baz=189,slow=4.6,SNR=24						
ESDC	Sonseca Array	97.68	18	P	Pdif	19 40 54.1	+1.8
EIDS	Eidsvold	98.54	178	P	P	19 40 56.6	-0.1
EIDS				IAmb	IAmb	19 40 59.1	
	comp=Z,11nm,0.9s						
ASAR	Alice Springs	98.62	162	P	P	19 40 57.0	-0.1
	comp=Z,9.7nm,0.6s,baz=184,slow=3.7,SNR=60						
ASAR				PP	PP	19 44 54.9	-3.1
	comp=Z,4.6nm,0.8s,baz=190,slow=6.6,SNR=13						
ASAR	Alice Springs	98.62	162	P	Pdif	19 40 57.2	+0.1
ASAR	Alice Springs	98.62	162	P	Pdif	19 40 57.2	0.0
AS31	Alice Springs	98.62	162		Pdif	19 40 57.5	+0.3
AS31				IAmb	IAmb	19 41 00.5	
	comp=Z,4.1nm,0.6s						
DZM	Mont Dzumac	101.01	193	*e*LR	LR	20 14 21.8	
	comp=Z,281nm,31.9s						
WRA	Warramunga Arr	102.33	162	P	Pdif	19 41 14.3	+0.6
	comp=Z,1.0nm,0.5s,baz=196,slow=4.3,SNR=18						
WRA				PP	PP	19 45 23.8	-2.4
	comp=Z,3.5nm,0.7s,baz=190,slow=6.2,SNR=6.1						
BRTR	Keskin Array B	108.59	45	PP	PP	19 46 11.5	-2.1
	comp=Z,1.5nm,1.0s,baz=186,slow=7.4,SNR=3.8						
GERES	GERESS Array B	110.22	27	PKiKP	PKiKP	19 45 48.0	-0.5
	comp=Z,0.5nm,0.6s,baz=199,slow=3.7,SNR=3.9						
GERES				PP	PP	19 46 15.2	-10
	comp=Z,1.4nm,1.0s,baz=200,slow=4.9,SNR=2.5						
GERES	GERESS Array B	110.22	27	*i* PKIKP	PKiKP	19 45 48.0	-0.5
SOC	Sochi	114.28	47	*i* PKIKP	PKPdf	19 45 55.4	-0.9
SOC				*e*		19 46 53.9	
SOC				*e*PPP	PPP	19 49 19.2	
SOC				*e*		19 52 37.2	
SOC				*e*PS	PKKPab	19 56 38.8	-1.5
SOC				*e*SS	SS	20 02 46.1	+8.2
SOC				*e*SSS	SSS	20 07 00.5	
SOC				MLR	MLR		
	comp=Z,174nm,16.0s						
KIV	Kislovodsk	115.82	49	*e*PKIKP	PKPdf	19 45 58.6	-0.8
KIV				pmax	pmax		
	comp=Z,3.0nm,0.9s						
AKASG	Malin Array Be	116.42	36	PKP	PKPdf	19 45 59.7	-0.5
	comp=Z,1.3nm,0.5s,baz=236,slow=1.6,SNR=7.3						
AKASG				PP	PP	19 47 03.8	-5.1
	comp=Z,0.2nm,0.3s,baz=210,slow=7.0,SNR=1.9						
AKASG	Malin Array Be	116.42	36	PKIKP	PKPdf	19 45 59.2	-0.9
AKASG	Malin Array Be	116.42	36	PKPdf	PKPdf	19 45 59.2	-0.9
MAK	Makhachkala	117.09	53	*e*P	Pdif	19 42 18.9	+0.5
MAK				*i*		19 46 02.2	
MAK				*e*		19 46 24.7	
MAK				*e*		19 47 15.0	
MAK				*e*		19 52 44.5	
MAK				*e*SSS	SSS	20 07 32.3	
MAK				pmax	pmax		
	comp=Z,855nm,1.6s						
SHPR	Sheep Range	118.56	294		PKiKP	19 46 05.7	+0.7
MVU	Marysvale	118.62	297	PKPdf	PKiKP	19 46 05.7	+0.5
EDW2	Edwards Air Fo	118.77	290	P	PKiKP	19 46 05.8	+0.4
	baz=141						
RSSD	Black Hills	119.14	307	P	PKPdf	19 46 05.7	-0.3
	baz=142						
RSSD	Black Hills	119.14	307	PKIKP	PKPdf	19 46 05.5	-0.4
RSSD	Black Hills	119.14	307	PKPdf	PKPdf	19 46 05.5	-0.4
MNK	Minsk	119.25	33	*i* PKP	PKPdf	19 46 04.0	-1.5
	comp=E,2.0nm,0.8s						
MNK				*i* PKP	PKPdf	19 46 04.0	-1.5
	comp=N,22nm,0.9s						
MNK				*i* PKP	PKPdf	19 46 04.0	-1.5
	comp=Z,11nm,0.8s						
MNK				*i* PPP	PPP	19 50 00.5	
MNK				*i* SKS	SKSdf	19 53 15.2	+7.6
MNK				*i* SS	SS	20 03 42.6	+0.4
MNK				*i* SSS	SSS	20 08 08.2	
MNK				*i* LR	LR	20 33 38.5	
MNK				*i* LRM	MLR	20 36 51.9	
	comp=Z,97nm,15.1s						
MNK				*i* LRM	MLR	20 37 02.5	
	comp=N,112nm,14.4s						
MNK				*i* LRM	MLR	20 37 07.7	
	comp=E,12nm,15.8s						
NACGM	Naroch	119.26	32	*i* PKP	PKPdf	19 46 05.1	-0.4
NACGM				*i* PKP	PKPdf	19 46 05.1	-0.4
NACGM				*i* PKP	PKPdf	19 46 05.1	-0.4
NACGM				*i* pP	pPKPdf	19 46 28.5	-3.9
NACGM				*i* sP	sPKPdf	19 46 53.7	+11
NACGM				*i* PP	PP	19 47 43.5	+15
NACGM				*i* PPP	PPP	19 49 32.8	
NACGM				*i* SKS	SKSdf	19 52 23.0	-45
NACGM				*i* SKKS	SKKSac	19 53 44.1	-33
NACGM				*i* S	Sdif	19 55 02.1	-5.8
NACGM				*i* PS	PKKPdf	19 57 09.9	+21
NACGM				*i* SS	SS	20 03 25.1	-17
NACGM				*i* SSS	SSS	20 07 57.0	
MPMC	Manual Prospec	119.41	292	P	PKiKP	19 46 07.2	+0.4
	baz=140						
TPNV	Topopah Spring	119.46	293	P	PKiKP	19 46 07.4	+0.6
	baz=140						
ISA	Isabella, Lake	119.62	291	P	PKiKP	19 46 07.4	+0.4
	baz=140						
CWC	Cottonwood Cre	120.01	291	P	PKiKP	19 46 08.4	+0.6
	baz=140						
R11A	Troy Canyon, C	120.19	295	P	PKiKP	19 46 08.7	+0.5
	baz=140						
DUG	Dugway, Tooele	120.22	298	P	PKiKP	19 46 08.5	+0.3
	baz=140						
DUG	Dugway, Tooele	120.22	298	PKIKP	PKiKP	19 46 08.2	+0.1
DUG	Dugway, Tooele	120.22	298	PKPdf	PKiKP	19 46 08.2	+0.1
SIJI	Sorong	120.25	155	PKP	PKiKP	19 46 09.6	+0.7
	comp=E,9.3nm,0.7s,baz=256,slow=8.3						
HFS	Hagfors	120.57	22	PKKPbc	PKKPbc	19 56 12.9	-0.4
	comp=E,4.9nm,0.9s,baz=346,slow=0.6,SNR=7.7						
ULM	Lac du Bonnet	120.58	316	PKP	PKPdf	19 46 07.2	-1.0
	comp=E,4.5nm,0.5s,baz=128,slow=2.8,SNR=20						
PD31	Pinedale Array	120.63	302		PKPdf	19 46 07.7	-1.2
PDAR	Pinedale Array	120.63	302	PKP	PKPdf	19 46 08.0	-0.9
	comp=E,0.8nm,0.4s,baz=105,slow=4.8,SNR=26						
PDAR				PKKPbc	PKKPab	19 56 14.2	+0.7
	comp=E,0.3nm,0.6s,baz=90,slow=0.6,SNR=3.6						
NB2	NORSAR Subarra	120.90	21	PKPdf	PKPdf	19 46 08.3	-0.2
	comp=Z,6.7nm,1.0s,baz=202,slow=1.9						
NOA	NORSAR Array B	120.90	21	PKP	PKPdf	19 46 08.4	-0.1
	comp=Z,2.6nm,0.8s,baz=203,slow=1.8,SNR=7.5						
NOA				PKKPbc	PKKPbc	19 56 12.4	+0.2
	comp=Z,0.9nm,0.7s,baz=24,slow=4.4,SNR=4.6						
NVAR	Mina Array Bea	121.64	293	PKP	PKiKP	19 46 11.8	+0.8
	comp=Z,1.2nm,0.7s,baz=120,slow=2.6,SNR=11						
NVAR				PKKPbc	PKKPab	19 56 10.5	+0.9
	comp=Z,0.5nm,0.8s,baz=297,slow=2.2,SNR=4.3						
LOHW	Long Hollow	121.77	302		PKiKP	19 46 11.1	-0.1
RLMT	Red Lodge	122.29	304	P	PKiKP	19 46 12.1	0.0
	baz=139						
RLMT	Red Lodge	122.29	304	PKPdf	PKiKP	19 46 12.4	+0.2
OBN	Obninsk	122.56	38*c*	*i*PKIKP	PKPdf	19 46 11.3	-0.5
OBN				pmax	pmax		
	comp=Z,4.0nm,0.7s						
DGMT	Dagmar	122.58	310	P	PKiKP	19 46 12.8	+0.5
	baz=140						
HLID	Hailey	123.55	299	P	PKiKP	19 46 14.9	+0.2
	baz=138						
BOZ	Bozeman (W)	123.74	303	P	PKiKP	19 46 15.2	+0.3
	baz=138						
BEKR	Beckworth	123.77	292		PKiKP	19 46 15.7	+0.5
ORV	Oroville	124.13	291	PKIKP	PKiKP	19 46 16.4	+0.7
ORV	Oroville	124.13	291	PKPdf	PKiKP	19 46 16.4	+0.7
SFJD	Kangerlussuaq	124.34	349	PKP	PKiKP	19 46 15.3	+0.1
	comp=Z,4.6nm,0.5s,baz=179,slow=7.8,SNR=4.8						
SFJD	Kangerlussuaq	124.34	349	*i* P	PKPdf	19 46 14.3	-0.6
	comp=Z,0.4nm,0.6s						
SFJD	Kangerlussuaq	124.34	349	*i* PKIKP	PKPdf	19 46 14.3	-0.6
SFJD	Kangerlussuaq	124.34	349		PKPdf	19 46 14.8	0.0
SFJD	Kangerlussuaq	124.34	349	*i* P	PKPdf	19 46 14.3	-0.6
SFJD				IAmb	IAmb	19 46 15.4	
	comp=Z,0.4nm,0.6s						
BELG	Belogornoye	124.50	46*d*	*i*PKIKP	PKPdf	19 46 15.3	-0.3
FINES	FINESS Array B	124.64	28	PKP	PKPdf	19 46 15.6	0.0
	comp=Z,12nm,0.5s,baz=158,slow=1.7,SNR=139						
FINES				SKKPbc	SKKPbc	19 59 37.7	-2.6
	comp=Z,3.0nm,1.0s,baz=353,slow=4.5,SNR=4.3						
FINES	FINESS Array B	124.64	28	PKPdf	PKPdf	19 46 15.3	-0.3
EGMT	Eagleton	124.69	306	P	PKPdf	19 46 16.2	-0.1
	baz=138						
EGMT	Eagleton	124.69	306	PKPdf	PKPdf	19 46 16.3	0.0
WVOR	Wild Horse Val	124.80	296	PKIKP	PKPdf	19 46 16.7	0.0
WVOR	Wild Horse Val	124.80	296		PKPdf	19 46 16.7	0.0

O03E	Paynes Creek	124.83	292	P	PKiKP	19 46 17.2	+0.1
	baz=138						
CMAR	Chiang Mai Arr	124.84	111	PKP	PKiKP	19 46 17.6	-0.1
	comp=Z,2.4nm,0.7s,baz=227,slow=3.7,SNR=24						
CMAR	Chiang Mai Arr	124.84	111	PKPdf	PKPdf	19 46 17.1	-0.3
ICESG	Greenland Ices	125.53	354	*i* P	PKPdf	19 46 17.2	-0.3
ICESG				IAmb	IAmb	19 46 17.9	
	comp=Z,9.8nm,0.8s						
MSO	Missoula	125.73	302	P	PKiKP	19 46 18.7	-0.1
	baz=137						
N02D	Trinity Center	125.80	292	P	PKiKP	19 46 19.4	+0.4
	baz=137						
BMO	Blue Mountains	125.91	299	PKIKP	PKiKP	19 46 19.1	-0.1
BMO	Blue Mountains	125.91	299	PKPdf	PKiKP	19 46 19.1	-0.1
M04C	Macdoel	125.94	293	P	PKiKP	19 46 19.4	+0.1
	baz=137						
M02C	Callahan	126.18	292	P	PKiKP	19 46 20.6	+0.8
	baz=137						
FFC	Flin Flon	126.41	316	PKIKP	PKPdf	19 46 18.7	-0.6
FFC	Flin Flon	126.41	316		PKPdf	19 46 18.6	-0.6
I07A	Izee	126.43	297		PKiKP	19 46 20.9	+0.6
L04D	Klamath Falls	126.50	293	P	PKiKP	19 46 20.7	+0.3
	baz=137						
ILULI	Ilulissat	126.54	350	PKIKP	PKPdf	19 46 18.6	-0.4
ILULI	Ilulissat	126.54	350		PKPdf	19 46 18.6	-0.4
FCC	Fort Churchill	126.63	323	PKIKP	PKPdf	19 46 18.5	-1.0
FCC	Fort Churchill	126.63	323	PKPdf	PKPdf	19 46 18.5	-1.0
J05D	Fort Rock, OR	126.72	295	P	PKiKP	19 46 21.4	+0.5
	baz=136						
HUMO	Hull Mountain	127.11	293	PKPdf	PKiKP	19 46 22.1	+0.6
IUG	Iuzhnay	127.32	68	*e*PKP	PKPdf	19 46 21.4	-0.2
	baz=68						
IUG	Iuzhnay	127.32	68	*e*PKIKP	PKPdf	19 46 21.3	-0.2
ABKAR	Akbulak array	127.48	56	PKPdf	PKPdf	19 46 21.4	0.0
ABKAR	Akbulak array	127.48	56	PKPdf	PKPdf	19 46 21.3	-0.1
I05D	Terrebonne, OR	127.53	296	P	PKiKP	19 46 22.9	+0.6
	baz=136						
KLMR	Klimovskoe	128.05	35	*e*PKIKP	PKPdf	19 46 21.4	-0.7
KLMR				*e*		19 46 45.9	
KLMR				*e*		19 48 25.8	
KLMR				pmax	pmax		
	comp=Z,21nm,1.5s						
KLMR	Klimovskoe	128.05	35	*e*PKPdf	PKPdf	19 46 21.5	-0.7
KLMR				AMP		19 46 23.5	
	comp=Z,21nm,1.5s						
KLMR				*e*pPKPdf	pPKPdf	19 46 45.9	-3.2
KLMR				*e*PP	PP	19 48 25.8	-1.8
KK31	Karatay Array	128.25	68	PKIKP	PKPdf	19 46 23.3	+0.1
KK31	Karatay Array	128.25	68		PKPdf	19 46 23.3	+0.1
KKAR	Karatay Array	128.25	68	PKIKP	PKPdf	19 46 23.2	0.0
KKAR	Karatay Array	128.25	68	PKPdf	PKPdf	19 46 23.1	0.0
KKAR	Karatay Array	128.25	68	PKPdf	PKPdf	19 46 22.9	-0.2
DZA	Taraz	128.52	68	*e*PKP	PKPdf	19 46 23.8	0.0
	baz=69						
DZA	Taraz	128.52	68	*e*PKIKP	PKPdf	19 46 23.7	0.0
KSH	Kashi	128.55	75	PKP	PKiKP	19 46 24.5	-0.2
KSH				sPKP		19 47 07.3	
KSH				PP	PP	19 48 37.0	+5.6
KSH				PKS	PKSdf	19 50 00.0	-0.6
KSH				SKS	SKSdf	19 53 27.5	+1.3
KSH				SKKS	SKKSac	19 55 13.3	-4.7
KSH				AMB	AMB		
	comp=Z,250nm,5.2s						
KSH				LR	LR		
	comp=Z,300nm,9.8s						
KSH				LR	LR		
	comp=Z,210nm,6.5s						
KSH				LR	LR		
	comp=Z,360nm,7.5s						
SUMG	Summit	128.94	356	*i* P	PKiKP	19 46 24.9	+0.1
	comp=Z,16nm,0.7s						
SUMG	Summit	128.94	356	PKIKP	PKiKP	19 46 24.6	-0.2
SUMG	Summit	128.94	356		PKiKP	19 46 24.6	-0.2
SUMG	Summit	128.94	356	*i* P	PKiKP	19 46 24.9	+0.1
SUMG				IAmb	IAmb	19 46 25.5	
	comp=Z,16nm,0.7s						
AML	Almayashu	129.21	71	P	SKPbc	19 49 37.3	-0.3
	SNR=11						
EKS2	Erkin-Say	129.63	70	P	SKPbc	19 49 38.5	-0.2
	SNR=11						
LSA	Lhasa	129.63	95	PKIKP	PKiKP	19 46 27.6	0.0
LSA	Lhasa	129.63	95		PKiKP	19 46 27.6	0.0
UCH	Uchtor	129.71	71	P	SKPbc	19 49 39.5	+0.1
	SNR=12						
KIRV	Kirov	129.76	41	⇓*i*PKIKP	PKiKP	19 46 26.0	-0.2
AAK	Ala-Archa	129.99	71	P	SKPbc	19 49 39.7	-0.3
	SNR=6.7						
AAK	Ala-Archa	129.99	71	PKIKP	PKiKP	19 46 27.2	-0.3
AAK	Ala-Archa	129.99	71	PKPdf	PKiKP	19 46 27.2	-0.3
TMCR	Tamitsa	130.12	31	*e*PKIKP	PKPdf	19 46 26.3	+0.4
TMCR				pmax	pmax		
	comp=Z,25nm,1.1s						
KBK	Karagaybulak	130.24	71	P	SKPbc	19 49 38.7	-2.2
	SNR=8.5						
CHMS	Chumysh	130.38	71	P	SKPbc	19 49 40.8	-0.4
	SNR=11						
USP	Ospenovka	130.43	70	P	SKPbc	19 49 40.8	-0.6
	SNR=9.7						
UPNV	Upernavik	130.46	349	*i* P	PKiKP	19 46 27.0	-0.3
UPNV				IAmb	IAmb	19 46 27.6	
	comp=Z,11nm,0.7s						
DBG	Daneborg	130.51	2	*i* P	PKiKP	19 46 28.0	+0.7
DBG				IAmb	IAmb	19 46 29.0	
	comp=Z,2.7nm,0.7s						
TKM2	Tokmak 2	130.77	71	P	SKPbc	19 49 42.4	-0.5
	SNR=5.1						
ARCES	ARCESS Array B	131.23	22	PKP	PKPdf	19 46 27.9	-0.1
	comp=Z,6.3nm,0.5s,baz=196,slow=1.5,SNR=39						
ARCES				PP	PP	19 48 45.7	-2.4
	comp=Z,4.8nm,0.7s,baz=211,slow=6.8,SNR=4.4						
ARCES				SKPbc	SKPbc	19 49 42.3	-1.0
	comp=Z,4.4nm,0.7s,baz=202,slow=1.7,SNR=5.5						
ARCES	ARCESS Array B	131.23	22		PKPdf	19 46 27.7	-0.3
TNSS	Tian-Shan	131.56	72	*e*PKP	PKPdf	19 46 29.8	-0.2
	baz=72						
TNSS	Tian-Shan	131.56	72	*e*PKIKP	PKPdf	19 46 29.7	-0.2
MDOK	Medeo	131.70	72	*e*PKP	PKPdf	19 46 29.2	-0.7
	baz=72						
MDOK	Medeo	131.70	72	*e*PKIKP	PKPdf	19 46 29.2	-0.7
KUU	Kurty	131.83	71	*e*PKP	PKPdf	19 46 29.0	-0.9
	baz=71						
KUU	Kurty	131.83	71	*e*PKIKP	PKPdf	19 46 29.0	-0.9
ARU	Arti	131.85	48	*i* PKIKP	PKPdf	19 46 29.2	-0.3
ARU						19 48 51.2	
ARU	Arti	131.85	48	PKPdf	PKiKP	19 46 30.1	-0.4
CHKK	Chushkaly	132.15	71	*e*PKP	PKPdf	19 46 30.7	+0.2
	baz=72						
CHKK	Chushkaly	132.15	71	*e*PKIKP	PKPdf	19 46 30.6	+0.1
KMI	Kunming	132.30	109	⇑PKP	PKPdf	19 46 32.0	+0.3
KMI				LR	LR		
	comp=Z,140nm,5.2s						
KMI				LR	LR		
	comp=Z,57nm,4.0s						
KMI				LR	LR		
	comp=Z,100nm,17.3s						
SATY	Saty	132.35	73	*e*PKP	PKPdf	19 46 30.6	-0.5
	baz=73						
SATY	Saty	132.35	73	*e*PKIKP	PKPdf	19 46 30.6	-0.5
SVE	Sverdlovsk	132.98	49	*e*PKIKP	PKiKP	19 46 32.9	+0.1
SHLS	Shalkode	132.98	74	*e*PKP	PKiKP	19 46 33.4	-0.1
	baz=74						
SHLS	Shalkode	132.98	74	*e*PKIKP	PKiKP	19 46 33.3	-0.1
DAG	Danmarks Havn	133.02	3	*i* P	PKPdf	19 46 30.0	-1.2
	comp=Z,4.4nm,0.6s						
DAG	Danmarks Havn	133.02	3	*i* P	SKPbc	19 49 49.7	+0.3
	comp=Z,3.9nm,0.7s						
DAG	Danmarks Havn	133.02	3	*i* PKIKP	PKPdf	19 46 30.0	-1.2
DAG				pmax	pmax		
	comp=Z,4.0nm,0.6s						
DAG	Danmarks Havn	133.02	3	*i* P	PKPdf	19 46 30.0	-1.2
DAG				IAmb	IAmb	19 46 32.6	
	comp=Z,4.4nm,0.6s						
DAG	Danmarks Havn	133.02	3	IAmb	IAmb	19 49 51.4	
	comp=Z,3.9nm,0.7s						
DAG				*i* P	SKPbc	19 49 49.7	+0.3
BRZS	Berezniki	134.03	62	*e*PKP	PKiKP	19 46 34.9	-0.4
	baz=62						
BRZS	Berezniki	134.03	62	*e*PKIKP	PKiKP	19 46 34.8	-0.4
BRVK	Borovoye	134.85	58	⇓*e*PKIKP	PKiKP	19 46 36.8	+0.1
TULEG	Thule	135.32	347		PKPdf	19 46 35.4	-0.1
TULEG	Thule	135.32	347	*i* P	PKPdf	19 46 35.7	+0.2
TULEG				IAmb	IAmb	19 46 38.3	
	comp=Z,8.5nm,0.8s						
YKA	Yellowknife Ar	136.51	318	PKP	PKPdf	19 46 38.3	+0.2
	comp=Z,6.9nm,0.6s,baz=120,slow=3.1,SNR=60						
YKA				PP	PP	19 49 17.4	-4.4
	comp=Z,2.1nm,0.8s,baz=120,slow=7.0,SNR=7.1						
YKA				SKPbc	SKPbc	19 49 59.5	-1.4
	comp=Z,6.3nm,0.6s,baz=126,slow=4.4,SNR=23						
MAKZ	Makanchi	136.74	71	PKIKP	PKPdf	19 46 38.4	-0.7
MAKZ	Makanchi	136.74	71	PKPdf	PKPdf	19 46 38.4	-0.7
MKAR	Makanchi Array	136.89	72	PKhKP	PKPpre	19 46 26.7	
	comp=Z,0.7nm,0.6s,baz=245,slow=2.9,SNR=10						
MKAR				SKPbc	SKPbc	19 50 01.2	-1.5
	comp=Z,3.5nm,0.7s,baz=242,slow=2.6,SNR=9.6						
MKAR				SKKPbc	SKKPbc	19 58 52.3	-2.3
	comp=Z,0.8nm,1.0s,baz=58,slow=5.0,SNR=5.6						
KURBB	Kurchatov Arra	137.35	65	PKhKP	PKPpre	19 46 29.1	
	comp=Z,0.6nm,0.7s,baz=231,slow=3.4,SNR=1.6						
KURBB				SKPbc	SKPbc	19 50 02.9	-0.9
	comp=Z,5.9nm,0.9s,baz=233,slow=3.2,SNR=12						
KURBB				SKKPbc	SKKPbc	19 58 50.4	-2.7
	comp=Z,2.5nm,0.8s,baz=54,slow=3.6,SNR=13						
KURK	Kurchatov	137.45	65	⇑*i*PKIKP	PKPdf	19 46 39.4	-0.8
CD2	Chengdu	137.46	106	PKP	PKPdf	19 46 41.0	+0.1
WMQ	Urumqi	137.87	79	*e*PKP	PKiKP	19 46 42.3	-1.0
WMQ				LR	LR		
	comp=Z,600nm,28.9s						
WMQ				LR	LR		
	comp=Z,800nm,29.1s						
WMQ				LR	LR		
	comp=Z,130nm,29.1s						
RES	Resolute Bay	138.23	338	PKhKP	PKPpre	19 46 31.3	
	baz=236,slow=3.6						
RES				SKPbc	SKPbc	19 50 04.7	-0.9
	comp=Z,9.0nm,0.9s,baz=132,slow=4.5,SNR=12						
ZSN	Zaisan	138.67	73	*e*PKP	PKPdf	19 46 43.2	+0.6
	baz=73						
ZSN	Zaisan	138.67	73	*e*PKIKP	PKPdf	19 46 43.2	+0.6
ENH	Enshi	139.96	112		PKPdf	19 46 46.1	+0.6
DLBC	Dease Lake	140.62	306	PKhKP	PKPpre	19 46 38.8	
	comp=Z,3.2nm,0.8s,baz=213,slow=3.1,SNR=4.2						
DLBC				SKPbc	SKPbc	19 50 12.2	-0.6
	comp=Z,15nm,0.8s,baz=136,slow=0.5,SNR=19						
LZH	Lanzhou	141.43	101	*e*PKP	PKiKP	19 46 53.8	+2.8
LZH				sPKP		19 47 35.5	
GTA	Gaotai	141.59	93	PKP	PKiKP	19 46 51.5	+0.3
GTA				LR	LR		
	comp=Z,94nm,17.5s						
GTA				LR	LR		
	comp=Z,110nm,15.3s						
GTA				LR	LR		
	comp=Z,97nm,17.8s						
ZAA0	Zalesovo Array	142.42	64		PKiKP	19 46 51.0	-1.1
ZALV	Zalesovo Beam	142.42	64	PKhKP	PKPpre	19 46 44.4	
	comp=Z,3.2nm,0.7s,baz=238,slow=4.1,SNR=12						
ZALV				PKP	PKiKP	19 46 51.3	-0.8
	comp=Z,6.8nm,0.5s,baz=241,slow=3.8,SNR=23						
ZALV				PP	PP	19 49 56.3	-2.0
	comp=Z,0.9nm,0.7s,baz=251,slow=9.0,SNR=3.8						
ZALV				SKPbc	SKPbc	19 50 15.9	-1.4
	comp=Z,3.0nm,0.7s,baz=268,slow=4.2,SNR=5.0						
ZALV				SKKPbc	SKKPbc	19 58 30.5	-2.7
	comp=Z,2.3nm,1.0s,baz=28,slow=6.7,SNR=5.3						
ZALV	Zalesovo Beam	142.42	64	PKPdf	PKiKP	19 46 51.0	-1.2
XAN	Xi'an	142.63	108	PKP	PKPdf	19 46 46.8	-3.4
XAN				pPKP	pPKPdf	19 47 17.5	+0.4
C36M	Paulatuk	143.27	324	P	PKPbc	19 46 47.9	+0.4
	baz=113						
SKAG	Skagway	143.51	305	P	PKPbc	19 46 48.9	+0.4
	baz=118						
HYT	Haines Junctio	145.09	307		PKPdf	19 46 54.0	+0.3
BCPM	Bancas Point	145.69	305		PKPab	19 46 55.7	-0.1
PINM	Pinnacle	146.03	305	P	PKPab	19 46 57.1	-0.1
	baz=114						
PCA	Pinnacle	146.04	305		PKPbc	19 46 56.2	-0.2
NJ2	Nanjing	146.06	121	*e*PKPbc	PKPbc	19 46 57.5	+0.3
INK	Inuvik	146.15	320	PKPbc	PKPbc	19 46 56.5	+0.2
	comp=Z,46nm,0.7s,baz=98,slow=3.4,SNR=9.2						
INK				SKPbc	SKPbc	19 50 24.8	-0.8
	comp=Z,18nm,0.8s,baz=102,slow=2.9,SNR=6.8						
INK	Inuvik	146.15	320		PKPbc	19 46 56.3	0.0
CTGM	Chitina Glacie	146.87	306		PKPbc	19 46 58.6	-0.3
CTG	Chitna Glacier	146.87	306	P	PKPbc	19 46 59.2	+0.4
	baz=112						
BGLC	Bering Glacier	147.44	303	P	PKPab	19 47 03.2	+0.7
	baz=112						
CRQE	Cirque	147.59	305	P	PKPdf	19 46 57.9	0.0
	baz=111						
SUCK	Suckling Hills	147.65	303	PKPdf	PKPdf	19 46 58.9	+1.0
MCARA	McCarthy VSAT	147.78	306	P	PKPdf	19 46 58.9	+0.8
	baz=110,SNR=14						
MCARA	McCarthy VSAT	147.78	306	PKPdf	PKPdf	19 46 58.9	+0.8
BCAR	Beaver Creek A	147.80	309		PKPdf	19 46 57.3	-0.9
BCAR				PKPbc	PKPbc	19 47 01.6	+0.4
KAIM	Kayak Island	147.90	303	P	PKPdf	19 46 57.6	-0.7
	baz=112						
KAIM	Kayak Island	147.90	303	PKPdf	PKPdf	19 46 57.9	-0.4
KAIM				PKPbc	PKiKP	19 47 02.6	-0.6
VRDI	Verde Repeater	147.92	305	PKPdf	PKPdf	19 46 58.0	-0.6
VRDI				PKPbc	PKPbc	19 47 01.6	-0.1
HMT	Hamilton	147.97	304		PKPdf	19 46 58.3	-0.2
HMT				PKPbc	PKPbc	19 47 02.2	+0.5
BTO	Baotou	148.05	101	*e*PKPbc	PKPbc	19 47 02.5	-0.1
EGAK	Eagle	148.06	312	P	PKPbc	19 47 01.1	-0.7
	baz=106						
EGAK	Eagle	148.06	312		PKPbc	19 47 01.6	-0.2
BMRM	Bremner River	148.36	305	P	PKPdf	19 46 58.0	-1.1
	baz=110,SNR=14						
TIA	Tai'an	148.56	115	PKPbc	PKPbc	19 47 04.5	+0.5
N25K	Chitina, Valde	148.57	306	P	PKPdf	19 46 58.4	-1.1
	baz=109,SNR=18						
EYAK	Cordova Ski Ar	148.74	303	P	PKPbc	19 47 04.2	+0.6
	baz=110,SNR=14						
SCRK	Sand Creek	149.02	310	P	PKPbc	19 47 04.9	+0.5
	baz=106,SNR=32						
HIN	Hinchinbrook I	149.04	303		PKPbc	19 47 04.8	+0.4
HHC	Hu-ho-hao-te	149.06	102	*e*PKPbc	PKPdf	19 47 00.5	-0.5
KLU	Klutina	149.13	305	P	PKPdf	19 46 58.3	-2.1
	baz=108						
KLU	Klutina	149.13	305		PKiKP	19 47 05.5	-0.4
NRIK	Noril'sk	149.21	39	PKPbc	PKiKP	19 47 05.2	-0.5
	comp=Z,21nm,0.9s,baz=26,slow=0.5,SNR=21						
NRIK	Noril'sk	149.21	39	⇓*i*PKP2	PKPbc	19 47 04.4	-0.2
NRIK	Noril'sk	149.21	39		PKPbc	19 47 04.9	+0.3
PAX	Paxson	149.38	308	P	PKPdf	19 47 00.6	-0.2
	baz=106						
PAX	Paxson	149.38	308	PKP2	PKPbc	19 47 05.0	-0.3
PAX	Paxson	149.38	308		PKPbc	19 47 05.0	-0.3
M24K	Tolsona, Glenn	149.44	306	P	PKPdf	19 46 59.5	-1.3
	baz=107						
M24K	Tolsona, Glenn	149.44	306		PKPdf	19 47 00.6	-0.2
GLI	Glacier Island	149.48	304	P	PKPbc	19 47 05.8	+0.3
	baz=109						
GLI	Glacier Island	149.48	304		PKPbc	19 47 05.6	+0.1
MOY	Mondy	149.70	77	*e*PKP2	PKPbc	19 47 06.5	0.0
MOY				pmax	pmax		
	comp=Z,25nm,1.9s						
SCM	Sheep Creek Mo	149.88	305	PKP2	PKiKP	19 47 07.1	-0.3
SCM	Sheep Creek Mo	149.88	305		PKiKP	19 47 07.0	-0.3
BMAR	Burnt Mountain	150.02	317		PKPdf	19 47 00.9	-0.7
BMAR				PKPbc	PKiKP	19 47 07.4	-0.1
PRP	Porcupine Dome	150.03	313	P	PKiKP	19 47 07.4	-0.3
	baz=102						
PRP	Porcupine Dome	150.03	313		PKPbc	19 47 07.2	+0.4
ZAK	Zakamensk	150.30	80	*e*PKIKP	PKPbc	19 47 07.7	-0.2
ZAK				pmax	pmax		
	comp=Z,18nm,0.9s						
SML	Sawmill	150.32	305	P	PKiKP	19 47 08.0	-0.3
	baz=106						
SEW	Seward	150.33	301	P	PKiKP	19 47 07.9	-0.3
	baz=109						
SEW	Seward	150.33	301		PKPbc	19 47 07.5	0.0
HDA	Harding Lake	150.38	310	P	PKiKP	19 47 07.9	-0.3
	baz=103						
HDA	Harding Lake	150.38	310		PKPdf	19 47 02.0	-0.2
IL31		150.43	311		PKPbc	19 47 07.7	+0.1
ILAR	Eielson Array	150.43	311	PKPbc	PKPbc	19 47 07.8	+0.1
	comp=Z,30nm,0.7s,baz=146,slow=3.0,SNR=74						
O22K	Cooper Landing	150.58	302	P	PKiKP	19 47 08.6	-0.1
	baz=108						
O22K	Cooper Landing	150.58	302		PKPbc	19 47 08.3	+0.2
SONM	Songino Array	150.63	87	PKPbc	PKPbc	19 47 09.0	+0.1
	comp=Z,27nm,0.5s,baz=220,slow=3.5,SNR=201						
SONM	Songino Array	150.63	87	PKIKP	PKPbc	19 47 08.7	-0.2
SONM	Songino Array	150.63	87		PKPbc	19 47 08.7	-0.2
POKR	Poker Plat Res	150.73	312	P	PKPbc	19 47 08.4	0.0
	baz=101						
RC01	Rabbit Creek A	150.77	303	P	PKiKP	19 47 09.2	+0.1
	baz=107,SNR=14						
BRSE	Bradley Lake S	150.83	300	P	PKiKP	19 47 09.4	0.0
	baz=108						
COLA	College	150.86	311	P	PKPbc	19 47 08.7	+0.1
	baz=102						
COLA	College	150.86	311	*c i*PKIKP	PKPbc	19 47 08.1	-0.5
COLA	College	150.86	311		PKPbc	19 47 08.2	-0.4
COLA				PKPab	PKPab	19 47 16.9	+0.5
TCOL	CIGO, UAF Yank	150.86	311	P	PKPbc	19 47 08.6	0.0
	baz=102,SNR=7.7						
WRH	Wood River Hil	150.88	310		PKPbc	19 47 08.8	+0.1
BJT	Baijiatuau	150.93	109	PKIKP	PKPbc	19 47 09.6	0.0
BJT	Baijiatuau	150.93	109		PKPbc	19 47 09.6	0.0
RND	Reindeer	150.97	308	PKIKP	PKiKP	19 47 09.6	0.0
RND	Reindeer	150.97	308		PKiKP	19 47 09.6	0.0
CNPM	China Poot	151.00	300		PKiKP	19 47 09.7	0.0
ULN	Ulaanbaatar	151.02	87	*c i*PKIKP	PKPbc	19 47 09.3	-0.5
ULN	Ulaanbaatar	151.02	87		PKPbc	19 47 09.6	-0.2
KDAK	Kodiak Island	151.07	296	P	PKiKP	19 47 09.9	0.0
	baz=111						
KDAK	Kodiak Island	151.07	296	*c i*PKIKP	PKPbc	19 47 09.5	+0.2
KDAK	Kodiak Island	151.07	296		PKPbc	19 47 09.6	+0.2
MCK	McKinley	151.08	309	P	PKiKP	19 47 10.0	+0.2
	baz=103						
TLY	Talaya	151.15	78	α *i*PKIKP	PKiKP	19 47 10.1	-0.2
TLY				pmax	pmax		
	comp=Z,12nm,1.0s						
TLY	Talaya	151.15	78		PKPbc	19 47 09.7	-0.1
OHAK	Old Harbor	151.23	294	P	PKiKP	19 47 10.2	0.0
	baz=111						
OHAK	Old Harbor	151.23	294		PKiKP	19 47 09.9	-0.2
NEA2	Nenana	151.32	310	P	PKPbc	19 47 09.6	-0.2
	baz=101,SNR=23						
SUA	Susitna One	151.34	304	P	PKiKP	19 47 10.8	+0.3
	baz=106,SNR=14						
SUA	Susitna One	151.34	304		PKiKP	19 47 10.6	+0.1
CUT	Chulitna	151.36	306	P	PKiKP	19 47 10.5	+0.2
	baz=104						
SII	Sitkinak Islan	151.44	293	P	PKiKP	19 47 10.8	+0.1
	baz=112						
I23K	Minto, Yukon-K	151.54	311	P	PKPbc	19 47 09.9	-0.2
	baz=100,SNR=18						
TRF	Thorofare Moun	151.61	308	P	PKPbc	19 47 10.8	+0.2
	baz=102,SNR=19						
SKT	Skwentna	151.83	305	P	PKPbc	19 47 11.1	+0.1
	baz=104,SNR=29						
TOLK	Toolik Lake Re	152.02	319	P	PKiKP	19 47 11.8	+0.2
	baz=93						
BPAW	Bear Paw Mtn.	152.04	309	P	PKPbc	19 47 11.4	0.0
	baz=100						
MLY	Manley	152.10	311	P	PKPbc	19 47 11.1	-0.4
	baz=99,SNR=7.6						
COLD	Coldfoot	152.15	316	P	PKiKP	19 47 12.5	+0.7
	baz=95						
PPLA	Purkeypile	152.34	306	P	PKPbc	19 47 12.4	+0.1
	baz=102,SNR=10.0						
CHUM	Lake Minchumin	152.58	308	P	PKPbc	19 47 12.7	+0.1
	baz=100,SNR=19						
IMAR	Indian Mountai	153.46	313		PKiKP	19 47 15.2	+0.6
TTA	Tatalina	154.06	306	P	PKiKP	19 47 16.6	+0.6
	baz=99						
KSRS	Korea Array	154.69	128	PKP	PKPdf	19 47 09.2	-0.2
	comp=Z,0.9nm,0.8s,baz=270,slow=1.0,SNR=3.6						
KSRS				PKPbc	PKiKP	19 47 20.2	+2.3
	comp=Z,1.1nm,0.7s,baz=184,slow=2.3,SNR=5.4						
RDOG	Red Dog Mine	156.98	318	P	PKPab	19 47 43.4	+1.0
	baz=82						
MAT	Matsushiro	157.76	147	*e*PKP	PKPdf	19 47 14.6	+1.1
MJAR	Matsushiro Arr	157.76	147	PKP	PKPdf	19 47 15.0	+1.6
	comp=Z,1.0nm,0.8s,baz=126,slow=6.4,SNR=4.0						
MJAR				PKPab	PKPab	19 47 47.0	+0.5
	comp=Z,4.2nm,0.9s,baz=179,slow=4.3,SNR=6.9						
CN2	Changchun	158.46	114	*e*PKP	PKPdf	19 47 15.5	+1.5
BOD	Bodaibo	158.97	70	*e*PKP2	PKPab	19 47 51.6	+0.4
BOD				pmax	pmax		
	comp=Z,13nm,0.9s						
MDJ	Mudanjiang	161.11	119	PKP	PKPdf	19 47 18.8	+1.8
TIXI	Tiksi	161.64	24	PKPab	PKPab	19 48 03.1	+0.6
USRK	Ussuriysk Ar.	161.94	124	PKPab	PKPab	19 48 04.0	-0.5
	comp=Z,2.3nm,0.7s,baz=245,slow=4.0,SNR=6.8						
USRK	Ussuriysk Ar.	161.94	124	PKP2	PKPab	19 48 03.9	-0.7
USRK	Ussuriysk Ar.	161.94	124		PKPab	19 48 03.9	-0.7
KLR	Kul'dur	165.32	110	⇓*e*PKIKP	PKPdf	19 47 23.2	+2.3
YAK	Yakutsk	166.84	55	*e*PKP2	PKPab	19 48 26.1	+0.5
YAK				pmax	pmax		
	comp=Z,16nm,0.9s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.0s						
YAK	Yakutsk	166.84	55	PKPab	PKPab	19 48 26.2	+0.6
PETK	Petropavlovsk-	175.73	221	PKP	PKPdf	19 47 26.5	+0.1
	comp=E,4.6nm,0.8s,baz=98,slow=3.0,SNR=3.8						
PETK				PKPab	PKPab	19 49 06.2	+0.9
	comp=E,9.5nm,0.9s,baz=186,slow=3.0,SNR=4.0						

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*IDC **28** 19:33:04.8±11.0, 56°.46S×26°.63W, h129^{km}±102^{km}, mb4.0/2, mb1 3.9/3, mb1mx3.4/41, mbtmp4.4/3, ML4.3/1*
Error ellipse: s-maj=74.1km s-min=36.5km az=100.0

ISC 28 19:33:00.6±1.3**, 56°.6S**±0°.2×**26°.7W**±0°.4**, h100^{km}, n10, σ1^s.55/8, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNAA	Sanae	18.12	156	P	Pn	19 37 07.8	+2.4
	1.0nm,0.3s,baz=303,slow=13,SNR=2.7						
SNAA				S	S	19 40 24.2	-2.4
	baz=278,slow=8.7,SNR=1.6						
H10N1	ASCENSION HYDR	49.59	16	T	T	20 35 40.7	
	baz=188,slow=75,SNR=4.8						
H10N3	ASCENSION HYDR	49.59	16	T	T	20 35 42.1	
	baz=188,slow=75,SNR=6.2						
H10N2	ASCENSION HYDR	49.60	16	T	T	20 35 42.2	
	baz=188,slow=75,SNR=6.9						
DBIC	Dimbokro	65.58	24	P	P	19 43 33.5	0.0
	2.6nm,0.8s,baz=194,slow=5.7,SNR=2.1						
TORD	Torodi Ar. Bea	73.42	29	P	P	19 44 21.9	+0.1
	1.9nm,0.4s,baz=201,slow=6.2,SNR=10						
FINES	FINESS Array B	124.77	28	PKP	PKPdf	19 51 46.8	-0.2
	3.8nm,1.1s,baz=191,slow=1.4,SNR=4.5						
INK	Inuvik	146.40	320	PKPbc	PKPbc	19 52 27.9	-0.2
	1.0nm,0.6s,baz=76,slow=3.2,SNR=1.8						
SONM	Songino Array	150.51	87	PKPbc	PKiKP	19 52 40.0	-0.4
	0.9nm,0.5s,baz=221,slow=3.4,SNR=10						
ILAR	Eielson Array	150.68	311	PKPbc	PKiKP	19 52 39.7	-0.3
	1.3nm,0.8s,baz=121,slow=3.1,SNR=4.5						

MDD 28 19:42:43.3±1.9**, 31°.78N×13°.10W, h0^{km}, mb4.3**/2**, Error ellipse: s-maj=43.9km s-min=12.4km az=120.0, PRXIMO, Madeira Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EFAM	Famara	2.67	188	S	Sn	19 43 58.4	-2.2
	16nm,0.2s,SNR=7.9						
CFUE	Fuerteventura	3.20	193	P	Pn	19 43 34.8	-0.1
	6.3nm,0.1s,SNR=7.9						
CFUE				S	Sn	19 44 09.4	-4.4
	14nm,0.2s,SNR=7.9						
CGIN	Giniginamar, F	3.66	194	P	Pn	19 43 40.9	-0.3
	4.3nm,0.1s,SNR=7.9						
CGIN				S	Sn	19 44 20.1	-4.9
	2.1nm,0.1s,SNR=7.9						
CGUI	Guimar, Teneri	4.50	221	S	Sn	19 44 41.2	-4.8
	12nm,0.3s,SNR=7.9						
MACI	Morro de la Ar	4.59	221	S	Sn	19 44 43.9	-4.5
	SNR=7.9						
EMIN	Mina Concepcio	7.98	40	P	Pn	19 44 38.6	-1.9
	0.1nm,0.1s,SNR=7.9						
EMIN				S	Sn	19 46 00.2	-11
	0.2nm,0.1s,SNR=7.9						
EQES	Quesada	10.20	51	P	Pn	19 45 09.2	-1.9
	0.1nm,0.1s,SNR=7.9						
EQES				S	Sn	19 46 53.1	-13
	0.4nm,0.1s,SNR=7.9						

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*NEIC **28** 19:50:26.6±1.7, 3°.51S±0°.09×137°.26E±0°.09, h84^{km}±7^{km}, mb4.5/44, Error ellipse: s-maj=15.0km s-min=11.1km az=221.0*

*IDC **28** 19:50:26.1±1.4, 3°.43S×137°.29E, h78^{km}±14^{km}, mb4.0/16, mb1 4.1/22, mb1mx3.9/44, mbtmp4.4/22, MS3.0/6, Ms1 3.0/6, ms1mx2.8/40, Error ellipse: s-maj=13.4km s-min=10.7km az=5.0*

*DJA **28** 19:50:27.4±0.2, 4°S±3°×13°7E±°, h44^{km}±7^{km}, M4.9/25, mB5.4/6, mb4.7/25, MLv5.2/8, Mw(mB)4.8/6*

ISC 28 19:50:23.7±0.4**, 3°.47S**±0°.05×**137°.35E**±0°.05**, h50^{km}, n110, σ1^{s}.75**/111**, mb4.4**/32**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SRPI	Serui, Papua	1.94	325	P	Pn	19 50 56.9	+2.7
SRPI				S	Sn	19 51 20.8	+3.5
BAKI	Biak	2.58	331	P	Pn	19 51 06.5	+3.5
GENI	Genyem	2.95	73	P	Pn	19 51 13.9	+5.8
GENI				S	Sn	19 51 48.3	+6.0
JAY	Jayapura	3.49	74	P	Pn	19 51 19.8	+4.3
	17nm,0.3s,baz=223,slow=11,SNR=57						
JAY				S	Sn	19 51 58.9	+3.3
	27nm,0.3s,baz=152,slow=10.0,SNR=4.5						
FAKI	Fak Fak	5.12	276	Pn	Pn	19 51 40.3	+2.5
FAKI	Fak Fak	5.12	276	P	Pn	19 51 40.7	+2.9
	1.0nm2µm208nm,0.7s						
MMPI	Merauke	5.81	149	P	Pn	19 51 53.2	+5.9
	10nm33µm3µm,0.6s						
SIJI	Sorong	6.60	293	P	Pn	19 52 00.9	+2.7
	14nm,0.3s,baz=105,slow=11,SNR=67						
SIJI				S	Sn	19 53 12.5	+0.3
	2.9nm,0.3s,baz=283,slow=22,SNR=7.8						
SIJI				LR	LR	19 54 46.8	
	comp=Z,130nm,21.9s,baz=134,slow=40						
SWI	Sorong	6.61	293	P	Pn	19 52 01.3	+3.0
	0.6nm2µm166nm,0.6s						
BNDI	Bandanaira	7.50	262	P	Pn	19 52 13.0	+2.6
	1.4nm252nm,1.2s						
SAUI	Saumlaki	7.50	233	Pn	Pn	19 52 12.7	+2.2
SAUI	Saumlaki	7.50	233	P	Pn	19 52 13.2	+2.7
	1.2nm257nm,0.9s						
MSAI	Masohi	8.40	271	P	Pn	19 52 26.1	+3.2
	77µm2µm,1.0s						
NLAI	Namlea	10.23	271	P	Pn	19 52 50.1	+2.2
	26nm,0.8s						
TNTI	Ternate	10.83	293	P	Pn	19 52 59.6	+3.5
	24nm,0.8s						
PMG	Port Moresby	11.39	122	P	Pn	19 53 07.6	+3.8
	2.2nm,0.3s,baz=310,slow=9.1,SNR=11						
PMG				S	Sn	19 55 10.0	+0.2
	1.6nm,0.3s,baz=15,slow=20,SNR=2.1						
PMG				LR	LR	19 58 19.8	
	comp=Z,113nm,19.8s,baz=116,slow=41						
PMG	Port Moresby	11.39	122	Pn	Pn	19 53 07.5	+3.6
PMG	Port Moresby	11.39	122	P	Pn	19 53 08.9	+5.1
SANI	Sanana	11.43	277	P	Pn	19 53 05.3	+0.9
	26nm,0.5s						
COEN	Coen	11.90	151	Pn	Pn	19 53 12.9	+2.1
KMSI	Cibinong	13.95	287	P	Pn	19 53 41.3	+2.5
	52nm,0.8s						
SOEI	Soe	14.41	244	Pn	Pn	19 53 46.5	+1.6
SOEI	Soe	14.41	244	P	Pn	19 53 47.9	+2.9
	48nm,1.3s						
KNRA	Kununurra	14.78	214	Pn	Pn	19 53 49.4	-0.4
BATI	Baumata	15.14	243	P	Pn	19 53 56.0	+1.6
	2.5nm,0.3s,baz=123,slow=6.2,SNR=5.8						
BATI				S	Sn	19 56 41.0	-0.1
	1.8nm,0.3s,baz=106,slow=20,SNR=3.1						
BATI				LR	LR	20 01 17.8	
	comp=Z,30nm,19.8s,baz=85,slow=43						
BATI	Baumata	15.14	243	P	Pn	19 53 57.1	+2.7
	20nm,0.7s						
MMRI	Maumere	15.87	250	P	Pn	19 54 06.6	+2.7
	26nm,1.4s						
APSI	Ampana	15.89	279	P	Pn	19 54 06.3	+2.2
	892nm21nm,0.9s						
WB0	Warramunga Arr	16.45	190	Pn	Pn	19 54 10.1	-1.1
WB0				IAmb	IAmb	19 54 29.2	
	comp=Z,12nm,0.7s						
WB2	Warramunga Arr	16.63	190	Pn	Pn	19 54 12.3	-1.2
WB2				IAmb	IAmb	19 54 19.1	
	comp=Z,22nm,0.7s						
WRA	Warramunga Arr	16.63	190	P	Pn	19 54 12.9	-0.6
	comp=Z,0.5nm,0.3s,baz=8.6,slow=13,SNR=27						
WRA				S	Sn	19 57 05.3	-12
	comp=Z,0.7nm,0.3s,baz=8.1,slow=22,SNR=5.1						
WRA				LR	LR	20 00 37.5	
	comp=Z,48nm,19.2s,baz=290,slow=37						
TOLI2	Tolitoli	17.17	285	P	Pn	19 54 21.2	+1.0
BNSI	Bone	17.22	266	P	P	19 54 23.7	+1.9
	comp=Z,9.6nm,1.4s						
FITZ	Fitzroy Crossi	18.51	217	P	Pn	19 54 39.2	+2.6
	comp=Z,0.6nm,0.3s,baz=37,slow=10,SNR=18						
FITZ				S	Sn	19 57 50.4	-12
	comp=Z,2.2nm,0.3s,baz=164,slow=12,SNR=12						
FITZ				LR	LR	20 02 39.4	
	comp=Z,66nm,19.8s,baz=360,slow=40						
FITZ	Fitzroy Crossi	18.51	217	P	P	19 54 36.7	+0.7
CTA	Charters Tower	18.66	153	P	Pn	19 54 39.4	+1.0
	comp=Z,0.8nm,0.3s,baz=326,slow=14,SNR=20						
CTA				S	Sn	19 58 02.2	-4.2
	comp=Z,0.2nm,0.3s,baz=248,slow=19,SNR=2.3						
CTAO	Charters Tower	18.66	153		Pn	19 54 39.1	+0.7
CTAO				IAmb	IAmb	19 54 42.6	
	comp=Z,39nm,1.3s						
PLAI	Plampang	20.16	254	P	Pn	19 54 57.9	+1.6
	comp=Z,17nm,1.0s						
AS31	Alice Springs	20.35	189	P	P	19 54 57.2	+1.1
ASAR	Alice Springs	20.35	189	P	P	19 54 58.1	+2.1
	comp=Z,13nm,0.8s,baz=14,slow=10,SNR=110						
ASAR				S	S	19 58 38.1	-3.4
	comp=Z,9.0nm,0.9s,baz=8.3,slow=29,SNR=6.2						
ASAR	Alice Springs	20.35	189	P	P	19 54 57.8	+1.7
MYLDM	Lahad Datu	20.69	294	P	P	19 55 00.9	+1.1
MYLDM				IAmb	IAmb	19 55 14.1	
	comp=Z,20nm,1.1s						
PSA00	Pilbara Seismi	24.75	222	P	P	19 55 42.2	+1.4
PSA00				IAmb	IAmb	19 56 01.6	
	comp=Z,20nm,1.2s						
STKA	Stephens Creek	28.54	172	P	P	19 56 13.9	-0.8
	comp=Z,2.3nm,0.9s,baz=339,slow=10.0,SNR=3.6						
STKA	Stephens Creek	28.54	172	P	P	19 56 13.9	-0.8
ARMA	Armidale	30.01	155	P	P	19 56 28.4	+0.5
ARMA				IAmb	IAmb	19 56 35.2	
	comp=Z,13nm,1.4s						
SANVU	Saraoutou	31.71	114	P	P	19 56 43.8	+0.9
JNU	Nakatsue	36.91	351	P	P	19 57 26.9	-0.8
JNU				IAmb	IAmb	19 57 41.9	
	comp=Z,8.0nm,1.1s						
JMN	Monobe	37.15	355	P	P	19 57 30.0	+0.2
JWT	Wachi	38.59	357	P	P	19 57 41.8	-0.1
KSRS	Korea Array	41.65	349	LR	LR	20 13 06.9	
	comp=Z,14nm,21.6s,baz=170,slow=33						
ENH	Enshi	42.84	324	P	P	19 58 16.3	-0.8
ENH				IAmb	IAmb	19 58 21.6	
	comp=Z,7.1nm,1.2s						
CM31	Chiang Mai Arr	43.65	301	P	P	19 58 22.7	-1.1
CM31				IAmb	IAmb	19 58 24.9	
	comp=Z,7.5nm,1.3s						
CMAR	Chiang Mai Arr	43.65	301	P	P	19 58 23.2	-0.5
	comp=Z,1.4nm,0.9s,baz=131,slow=6.5,SNR=11						
CMAR	Chiang Mai Arr	43.65	301	P	P	19 58 22.9	-0.9
BJT	Baijiatuau	47.45	338	P	P	19 58 52.3	-1.1
BJT				IAmb	IAmb	19 58 53.0	
	comp=Z,4.2nm,0.8s						
USRK	Ussuriysk Ar.	47.70	355	P	P	19 58 55.2	-0.1
	comp=Z,1.9nm,0.5s,baz=187,slow=10.0,SNR=5.8						
BKZ	Black Stump Fm	50.23	140	P	P	19 59 15.1	+0.2
BKZ				IAmb	IAmb	19 59 19.5	
	comp=Z,9.4nm,1.2s						
LSA	Lhasa	55.14	310	P	P	19 59 51.0	-0.9
LSA				IAmb	IAmb	19 59 52.5	
	comp=Z,2.2nm,0.7s						
SONM	Songino Array	57.84	336	P	P	20 00 09.9	-0.4
	comp=Z,0.3nm,0.5s,baz=154,slow=7.2,SNR=2.5						
SONM	Songino Array	57.84	336	P	P	20 00 09.9	-0.4
PEA0B	Petropavlovsk-	58.92	14	P	P	20 00 17.2	-0.4
PETK	Petropavlovsk-	58.92	14	P	P	20 00 17.7	+0.1
	comp=Z,4.8nm,0.6s,baz=130,slow=4.6,SNR=7.4						
PETK	Petropavlovsk-	58.92	14	P	P	20 00 18.1	+0.5
MA2	Magadan	63.75	8	P	P	20 00 49.5	-0.5
	comp=Z,4.7nm,0.8s,baz=178,slow=6.6,SNR=6.5						
MA2	Magadan	63.75	8	P	P	20 00 49.8	-0.2
MA2				IAmb	IAmb	20 00 51.0	
	comp=Z,5.2nm,0.8s						
YAK	Yakutsk	65.58	356		P	20 01 00.9	-1.1
SEY	Seymchan	67.20	7	P	P	20 01 12.1	-0.2
	comp=Z,3.1nm,0.6s,baz=186,slow=4.6,SNR=25						
MK31	Makanchi Array	69.57	323	P	P	20 01 26.3	-1.2
MKAR	Makanchi Array	69.57	323	P	P	20 01 26.4	-1.1
	comp=Z,1.4nm,0.5s,baz=105,slow=8.3,SNR=32						
MKAR	Makanchi Array	69.57	323	P	P	20 01 26.2	-1.3
MAKZ	Makanchi	69.76	323	P	P	20 01 27.5	-1.1
MAKZ				IAmb	IAmb	20 01 28.5	
	comp=Z,6.9nm,1.2s						
ZAA0	Zalesovo Array	71.91	330	P	P	20 01 40.0	-1.6
ZALV	Zalesovo Beam	71.91	330	P	P	20 01 40.0	-1.5
	comp=Z,1.0nm,0.6s,baz=95,slow=11,SNR=5.2						
ZALV	Zalesovo Beam	71.91	330	P	P	20 01 39.9	-1.6
KURBB	Kurchatov Arra	73.57	325	P	P	20 01 49.7	-1.8
	comp=Z,1.8nm,1.0s,baz=114,slow=5.9,SNR=11						
TIXI	Tiksi	75.19	357		P	20 01 59.5	-0.9
KK31	Karatay Array	75.72	316	P	P	20 02 02.4	-1.8
KKAR	Karatay Array	75.72	316	P	P	20 02 02.3	-1.8
KKAR	Karatay Array	75.72	316	P	P	20 02 02.7	-1.4
BVAR	Borovoye Array	79.16	326	P	P	20 02 21.3	-1.8
	comp=Z,2.2nm,0.8s,baz=115,slow=7.0,SNR=9.1						
BRVK	Borovoye	79.23	326	P	P	20 02 22.1	-1.4
BRVK				IAmb	IAmb	20 02 23.1	
	comp=Z,5.1nm,0.8s						
NRIK	Noril'sk	80.07	344	P	P	20 02 26.6	-1.1
	comp=Z,3.1nm,0.7s,baz=120,slow=5.1,SNR=4.1						
NRIK	Noril'sk	80.07	344	P	P	20 02 26.5	-1.2
NRIK				IAmb	IAmb	20 02 27.8	
	comp=Z,6.0nm,1.1s						
OHAK	Old Harbor	81.90	31	P	P	20 02 37.1	-0.6
KDAK	Kodiak Island	82.45	31	P	P	20 02 40.5	0.0
TTA	Tatalina	82.67	25	P	P	20 02 41.8	0.0
GEYT	Alibeck	83.64	309	P	P	20 02 46.3	-1.0
	comp=Z,2.0nm,0.8s,baz=51,slow=12,SNR=4.2						
GEYT	Alibeck	83.64	309	P	P	20 02 46.1	-1.2
PPLA	Purkeypile	84.30	26	P	P	20 02 49.5	-0.7
PPLA				IAmb	IAmb	20 03 00.8	
	comp=Z,13nm,1.5s						
ABKAR	Akbulak array	84.42	320	P	P	20 02 49.0	-1.9
ABKAR	Akbulak array	84.42	320	P	P	20 02 49.3	-1.6
ABKAR				IAmb	IAmb	20 02 50.1	
	comp=Z,3.1nm,0.8s						
IMAR	Indian Mountai	84.71	23	P	P	20 02 51.9	-0.1
KTH	Kantishna Hill	85.05	25	P	P	20 02 53.2	-0.6
KTH				IAmb	IAmb	20 02 54.5	
	comp=Z,6.0nm,0.9s						
SML	Sawmill	85.69	27	P	P	20 02 56.2	-0.9
RND	Reindeer	85.89	26	P	P	20 02 57.1	-1.0
SCM	Sheep Creek Mo	86.16	27	P	P	20 02 59.0	-0.4
SCM				IAmb	IAmb	20 02 59.4	
	comp=Z,5.8nm,0.8s						
COLD	Coldfoot	86.46	22	P	P	20 03 00.9	+0.2
COLD				IAmb	IAmb	20 03 02.1	
	comp=Z,6.7nm,1.0s						
WRH	Wood River Hil	86.51	25	P	P	20 02 59.8	-1.1
ARU	Arti	86.68	327	P	P	20 02 59.5	-2.4
	comp=Z,0.5nm,0.4s,baz=180,slow=11,SNR=3.8						
IL31		87.09	25	P	P	20 03 02.0	-1.7
IL31				IAmb	IAmb	20 03 03.3	
	comp=Z,6.0nm,0.8s						
ILAR	Eielson Array	87.09	25	P	P	20 03 02.2	-1.5
	comp=Z,5.2nm,0.8s,baz=264,slow=4.6,SNR=41						
ILAR	Eielson Array	87.09	25	P	P	20 03 01.8	-1.9
BMAR	Burnt Mountain	88.62	22	P	P	20 03 11.1	0.0
BCAR	Beaver Creek A	88.94	27	P	P	20 03 12.6	-0.1
INK	Inuvik	92.88	22	P	P	20 03 29.5	-1.3
	comp=Z,1.5nm,0.9s,baz=267,slow=5.1,SNR=3.7						
ARCES	ARCESS Array B	100.77	341	P	Pdif	20 04 04.7	-1.8
	comp=Z,4.2nm,1.1s,baz=88,slow=5.6,SNR=6.2						
YKA	Yellowknife Ar	101.36	27	P	Pdif	20 04 07.5	-1.7
	comp=Z,0.2nm,0.7s,baz=284,slow=4.2,SNR=3.1						
TORD	Torodi Ar. Bea	135.15	285	PKP	PKPdf	20 09 37.0	-1.7
	comp=Z,0.6nm,0.7s,baz=82,slow=2.2,SNR=2.7						
LPAZ	La Paz	148.06	129	PKPbc	PKPbc	20 10 05.7	+0.1
	comp=Z,0.4nm,0.4s,baz=238,slow=4.6,SNR=4.4						

IDC ***28*** *19:58:49.4±0.8, 4°.03N×126°.45E, h0^{km}, mb3.9/11, mb1 4.0/12, mb1mx3.7/40, mbtmp3.9/12, ML3.9/1, MS3.3/3, Ms1 3.3/3, ms1mx2.7/46, Error ellipse: s-maj=46.2km s-min=14.8km az=67.0*

NEIC ***28*** *19:58:54.2±1.3, 4°.22N±0°.09×126°.75E±0°.06, h43^{km}±11^{km}, mb4.4/15, Error ellipse: s-maj=16.3km s-min=1.7km az=214.0*

DJA ***28*** *19:58:55.8±0.5, 4°N±10°×12°7E±°, h16^{km}±8^{km}, M4.2/10, mb4.5/4, mB4.9/2, MLv4.1/10, Mw(mB)4.2/2*

ISC 28 19:58:54.2±0.5**, 4°.14N**±0°.06×**126°.69E**±0°.06**, h35^{km}, n47, σ1^{s}.23**/47**, mb4.1**/18**, 1C, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	Sangihe	1.24	249	P	Pn	19 59 14.9	-0.2
SGSI				S	Sn	19 59 30.2	-0.4
KCP	Kidapawan	3.26	331⇑	eP	Pn	19 59 46.1	+3.1
KCP				*i* S	Sn	20 00 36.5	+16
TNTI	Ternate	3.41	169	Pn	Pn	19 59 45.5	+0.5
TNTI	Ternate	3.41	169	P	Pn	19 59 45.8	+0.8
KMSI	Cibinong	4.46	217	P	Pn	20 00 00.0	+0.7
GTOI	Gorontalo	5.06	227	P	Pn	20 00 10.0	+2.3
MRSI	Marisa	5.98	233	P	Pn	20 00 22.2	+1.9
	0.2nm626nm48nm,0.5s						
SANI	Sanana	6.19	186	P	Pn	20 00 24.1	+0.9
	0.1nm7.5nm,0.6s						
LUWI	Luwuk	6.46	217	Pn	Pn	20 00 30.5	+3.5
LUWI	Luwuk	6.46	217	P	Pn	20 00 28.2	+1.2
TOLI2	Tolitoli	6.62	243	Pn	Pn	20 00 29.5	+0.4
SIJI	Sorong	6.76	137	Pn	Pn	20 00 31.5	+0.4
	2.2nm,0.3s,baz=336,slow=17,SNR=10						
SIJI				Sn	Sn	20 01 46.3	-0.6
	0.4nm,0.3s,baz=0.0,slow=20,SNR=0.9						
SIJI				LR	LR	20 03 27.2	
	comp=Z,97nm,19.9s,baz=360,slow=41						
MYLDM	Lahad Datu	8.23	278	Pn	Pn	20 00 53.3	+2.1
FAKI	Fak Fak	8.95	142	Pn	Pn	20 01 01.5	+0.4
KKM	Kota Kinabalu	10.60	281	Pn	Pn	20 01 24.2	+0.3
KAPI	Kappang	11.43	217	LR	LR	20 06 28.6	
	comp=Z,81nm,19.7s,baz=63,slow=41						
SBUM	Sibu	14.54	264	P	P	20 02 23.7	0.0
YULB	Yu-li	19.84	345	P	P	20 03 20.8	-1.4
YULB				IAmb	IAmb	20 03 31.7	
	comp=Z,32nm,1.4s						
TPUB	Ta-pu	19.93	343	P	P	20 03 22.4	-0.8
FITZ	Fitzroy Crossi	22.12	183	P	P	20 03 46.0	-0.9
	comp=Z,5.5nm,0.9s,baz=350,slow=6.9,SNR=2.2						
FITZ	Fitzroy Crossi	22.12	183	P	P	20 03 46.7	-0.2
PMG	Port Moresby	24.44	123	P	P	20 04 09.2	-0.8
PMG				IAmb	IAmb	20 04 19.0	
	comp=Z,12nm,1.0s						
WB0	Warramunga Arr	24.94	163	P	P	20 04 13.5	-0.9
WB0				IAmb	IAmb	20 04 23.6	
	comp=Z,8.0nm,0.7s						
WRA	Warramunga Arr	25.09	163	P	P	20 04 15.3	-0.5
	comp=Z,1.9nm,0.6s,baz=342,slow=11,SNR=11						
WB2	Warramunga Arr	25.09	163	P	P	20 04 15.0	-0.8
WB2				IAmb	IAmb	20 04 22.5	
	comp=Z,6.8nm,0.8s						
PSA00	Pilbara Seismi	26.42	194	P	P	20 04 27.2	-0.6
PSA00				IAmb	IAmb	20 04 28.1	
	comp=Z,16nm,1.3s						
ASAR	Alice Springs	28.52	166	P	P	20 04 46.1	-0.5
	comp=Z,0.5nm,0.7s,baz=342,slow=7.0,SNR=1.8						
CMAR	Chiang Mai Arr	30.63	300	P	P	20 05 05.0	-0.5
	comp=Z,0.5nm,0.7s,baz=119,slow=7.1,SNR=5.7						
CMAR	Chiang Mai Arr	30.63	300	P	P	20 05 04.6	-0.8
XAN	Xi'an	34.03	333	P	P	20 05 33.8	-1.4
BBOO	Buckleboo	37.81	167	P	P	20 06 06.6	-0.8
STKA	Stephens Creek	38.52	159	P	P	20 06 13.3	-0.2
	comp=Z,2.0nm,0.7s,baz=331,slow=10,SNR=4.3						
STKA	Stephens Creek	38.52	159	P	P	20 06 13.6	+0.1
ARMA	Armidale	41.83	147	P	P	20 06 41.2	+0.2
ARMA				IAmb	IAmb	20 06 55.5	
	comp=Z,8.9nm,1.3s						
SONM	Songino Array	46.90	341	P	P	20 07 21.9	+0.6
	comp=Z,0.3nm,0.5s,baz=170,slow=9.1,SNR=6.6						
SONM	Songino Array	46.90	341	P	P	20 07 21.0	-0.4
MK31	Makanchi Array	57.20	325	P	P	20 08 37.5	-0.4
MK31				IAmb	IAmb	20 08 39.2	
	comp=Z,3.8nm,1.5s						
MKAR	Makanchi Array	57.20	325	P	P	20 08 37.5	-0.4
	comp=Z,0.7nm,0.4s,baz=124,slow=7.5,SNR=24						
MKAR	Makanchi Array	57.20	325	P	P	20 08 37.0	-1.0
MAKZ	Makanchi	57.38	325	P	P	20 08 38.6	-0.6
AAK	Ala-Archa	60.03	318	LR	LR	20 37 48.1	
	comp=Z,102nm,19.6s,baz=242,slow=39						
ZALV	Zalesovo Beam	60.21	333	P	P	20 08 57.8	-0.8
	comp=Z,0.5nm,0.4s,baz=136,slow=6.7,SNR=3.1						
ZALV	Zalesovo Beam	60.21	333	P	P	20 08 57.5	-1.1
KURK	Kurchatov	61.38	327	P	P	20 09 05.8	-0.8
KURK				IAmb	IAmb	20 09 24.6	
	comp=Z,3.2nm,1.0s						
NRIK	Noril'sk	70.02	346	P	P	20 10 04.9	+2.8
	comp=Z,1.0nm,0.4s,baz=135,slow=2.9,SNR=2.1						
ILAR	Eielson Array	84.75	25	P	P	20 11 26.3	+1.7
	comp=Z,0.7nm,1.0s,baz=251,slow=5.6,SNR=2.9						
FINES	FINESS Array B	91.45	332	P	P	20 11 56.1	-0.6
	comp=Z,1.7nm,0.9s,baz=20,slow=4.4,SNR=1.7						

TUL ***28*** *20:01:04±1.6, 36°.13N±0°.01×97°.28W±0°.02, h5^{km}±6^{km}, ML3.1, mb_Lg3.1/84(NEIC), Error ellipse: s-maj=2.4km s-min=1.8km az=70.0*

NEIC ***28*** *20:01:04.0±1.4, 36°.140N±0°.007×97°.29W±0°.02, h5^{km}±6^{km}, Error ellipse: s-maj=2.6km s-min=0.7km az=69.0*

ANF ***28*** *20:01:04.3±0.7, 36°.12N×97°.24W, h5^{km}, ML3.6/8, Error ellipse: s-maj=11.8km s-min=4.2km az=172.0*

ISC 28 20:01:03.9±1.1**, 36°.14N**±0°.02×**97°.28W**±0°.02**, h5^{km}**±10^{km}**, n92, σ0^{s}.74**/95**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK031	S. Brethren Rd	0.40	118		Pg	20 01 12.1	+0.4
OK031				Sg	Sg	20 01 17.6	+0.7
QUOK	Quay	0.46	86		Pg	20 01 13.2	+0.4
QUOK				Sg	Sg	20 01 19.6	+0.8
BCOK	Bluff Creek, N	0.55	209		Pg	20 01 14.5	0.0
BCOK				Sg	Sg	20 01 22.1	+0.3
OK025	Westminster Rd	0.56	185		Pg	20 01 14.8	0.0
OK025				Sg	Sg	20 01 22.7	+0.7
CROK	Carrier	0.68	303		Pg	20 01 17.1	+0.2
CROK				Sg	Sg	20 01 26.3	+0.6
OKCFA	Oklahoma City	0.74	191		Pg	20 01 17.9	-0.2
OKCFA				Sg	Sg	20 01 27.7	+0.1
OKCSW	OKLAHOMA CITY	0.75	190		Pg	20 01 17.9	-0.3
OKCSW				Sg	Sg	20 01 27.8	-0.1
KAN13	South Haven SW	0.89	350		Pg	20 01 21.0	+0.1
KAN13				Sg	Sg	20 01 31.7	-0.7
FNO	Franklin	0.89	187		Pg	20 01 20.8	-0.1
FNO				Sg	Sg	20 01 32.8	+0.4
KAN14	Manchester OK	0.98	326		Pg	20 01 22.7	-0.1
KAN14					Sg	20 01 36.1	+0.5
T35A	Sooner Cattle	0.99	38	Pg	Pg	20 01 22.9	0.0
T35A				Sg	Sg	20 01 35.9	+0.2
KAN05	Bluff City Nor	1.08	334		Pg	20 01 24.4	-0.2
KAN05				Sg	Sg	20 01 39.1	+0.5
KAN01	Argonia South	1.08	339		Pg	20 01 24.5	-0.1
KAN01				Sg	Sg	20 01 39.3	+0.5
KAN10	Anthony SW Sta	1.18	326		Pg	20 01 26.2	-0.4
KAN10				Sg	Sg	20 01 41.8	-0.1
KAN08	Anthony NE Sta	1.22	333		Pg	20 01 26.8	-0.5
TUL1	Leonard	1.23	100	P	Pg	20 01 26.7	-0.7
	baz=281						
TUL1				S	Sg	20 01 43.4	+0.1
	baz=281						
TUL1	Leonard	1.23	100		Pg	20 01 26.3	-1.2
TUL1				Sn	Sg	20 01 42.6	-0.7
U32A	Winter Ranch,	1.41	280		Pn	20 01 29.8	-0.6
WMOK	Wichita Mounta	1.86	222	P	Pn	20 01 37.0	+0.5
	baz=41						
WMOK				S	Sb	20 02 01.3	-0.8
	baz=41						
WMOK	Wichita Mounta	1.86	222	Pn	Pn	20 01 36.4	-0.2
WMOK				IAmb_Lg		20 02 06.2	
	comp=Z,104nm,0.7s						
X37A	Clayton	2.20	134		Pn	20 01 41.1	-0.1
U38A	Gravette	2.35	82		Pn	20 01 42.4	-0.9
R32A	Long Quarter,	2.55	334		Pn	20 01 46.6	+0.6
R32A				IAmb_Lg		20 02 29.0	
	comp=Z,60nm,0.7s						
HHAR	Hobbs	2.70	86		Pn	20 01 48.0	-0.1
Z35A	Perchaven, San	2.80	180	Pn	Pn	20 01 49.1	-0.4
W39A	Magazine	3.00	107	P	Pn	20 01 53.0	+0.9
	baz=289						
W39A				S	Sn	20 02 29.2	+0.8
	baz=289						
W39A	Magazine	3.00	107		Pn	20 01 52.9	+0.8
W39A				IAmb_Lg		20 02 42.3	
	comp=Z,59nm,0.7s						
KSU1	Kansas State U	3.00	10	P	Pn	20 01 53.4	+1.2
	baz=190						
KSU1	Kansas State U	3.00	10		Pn	20 01 53.0	+0.8
KSU1				IAmb_Lg		20 02 46.4	
	comp=Z,51nm,0.9s						
CBKS	Cedar Bluff	3.31	324	P	Pn	20 01 57.0	+0.5
	baz=143						
CBKS	Cedar Bluff	3.31	324		Pn	20 01 57.1	+0.7
CBKS				IAmb_Lg		20 02 53.0	
	comp=Z,62nm,1.0s						
MIAR	Mount Ida	3.42	117	P	Pn	20 01 58.5	+0.6
	baz=299						
MIAR				S	Sn	20 02 40.5	+1.7
	baz=299						
MIAR	Mount Ida	3.42	117		Pn	20 01 58.7	+0.8
MIAR				IAmb_Lg		20 03 00.8	
	comp=Z,38nm,0.7s						
Z38A	Mt. Pleasant	3.44	146		Pn	20 01 58.4	+0.2
Z38A				IAmb_Lg		20 02 59.7	
	comp=Z,48nm,0.9s						
S39A	Bolivar	3.53	63		Pn	20 02 00.4	+1.0
U40A	Yellville	3.58	85	P	Pn	20 02 01.1	+0.9
	baz=268						
U40A				S	Sn	20 02 43.2	+0.3
	baz=268						
U40A	Yellville	3.58	85		Pn	20 02 01.0	+0.9
U40A				IAmb_Lg		20 03 02.6	
	comp=Z,46nm,0.7s						
AMTX	Amarillo	3.81	252	P	Pn	20 02 04.0	+0.7
	baz=70						
AMTX				S	Sn	20 02 49.7	+1.2
	baz=70						
AMTX	Amarillo	3.81	252	Pn	Pn	20 02 03.8	+0.5
X40A	Basin Creek Fa	3.99	113		Pn	20 02 06.9	+1.1
X40A				IAmb_Lg		20 03 12.7	
	comp=Z,29nm,0.8s						
ABTX	Abilene, Hawle	4.02	210		Pn	20 02 07.0	+0.8
WHTX	Lake Whitney,	4.14	182	Pn	Pn	20 02 07.8	-0.1
WHAR	Wooly Hollow	4.15	100		Pn	20 02 08.7	+0.8
MGMO	Mountain Grove	4.15	74		Pn	20 02 10.3	+2.2
MGMO				IAmb_Lg		20 03 14.7	
	comp=Z,28nm,0.8s						
FCAR	Ozark Folk Cen	4.18	92		Pn	20 02 08.7	+0.2
FCAR				IAmb_Lg		20 03 17.8	
	comp=Z,34nm,1.0s						
WLAR	White Oak Lake	4.21	124	Pn	Pn	20 02 09.6	+0.8
WLAR				IAmb_Lg		20 03 17.1	
	comp=Z,26nm,0.7s						
237A	Washetta, Mont	4.30	163	Pn	Pn	20 02 09.8	-0.3
P38A	Dawn	4.57	39		Pn	20 02 15.0	+1.3
P38A				IAmb_Lg		20 03 36.7	
	comp=Z,24nm,0.7s						
N33A	J Bar K, Exete	4.59	358	IAmb_Lg		20 03 40.3	
	comp=Z,32nm,0.8s						
N35A	Tabor	4.88	15	Pn	Pn	20 02 18.6	+0.5
LCAR	Lake Charles	4.96	89	Pn	Pn	20 02 18.6	-0.4
LCAR				IAmb_Lg		20 03 40.3	
	comp=Z,26nm,1.0s						
MSTX	Muleshoe	5.00	246	Pn	Pn	20 02 18.9	-0.9
T42A	Van Buren	5.05	78	Pn	Pn	20 02 20.7	+0.3
T42A				IAmb_Lg		20 03 42.8	
	comp=Z,30nm,0.9s						
KSCO	Kaye Shedlock'	5.12	306		Pn	20 02 21.1	-0.5
CCM	Cathedral Cave	5.19	67	Pn	Pn	20 02 21.1	-1.1
CCM				IAmb_Lg		20 03 52.7	
	comp=Z,23nm,0.8s						
BGNE	Belgrade	5.30	353	Pn	Pn	20 02 23.9	0.0
BGNE				IAmb_Lg		20 04 06.6	
	comp=Z,49nm,0.8s						
P40A	Paris	5.34	49		Pn	20 02 25.4	+1.1
P40A				IAmb_Lg		20 03 60.0	
	comp=Z,36nm,1.0s						
HBAR	Harrisburg	5.41	94	Pn	Pn	20 02 24.6	-0.6
PBMO	Poplar Bluff	5.55	81	IAmb_Lg		20 04 08.1	
	comp=Z,30nm,0.8s						
N38A	Joes South For	5.62	33	Pn	Pn	20 02 28.8	+0.6
N38A				IAmb_Lg		20 04 03.7	
	comp=Z,36nm,0.7s						
FVM	French Village	5.78	69	IAmb_Lg		20 04 14.0	
	comp=Z,18nm,0.7s						
JCT	Junction City	6.03	201	IAmb_Lg		20 04 23.4	
	comp=Z,19nm,0.8s						
MET	Memphis--Engin	6.07	98	Pn	Pn	20 02 33.5	-0.8
OGNE	Ogallala	6.07	324		Pn	20 02 33.5	-1.0
OGNE				IAmb_Lg		20 04 23.5	
	comp=Z,23nm,0.8s						
SLM	Saint Louis	6.13	64	IAmb_Lg		20 04 21.0	
	comp=Z,25nm,0.9s						
SCIA	State Center	6.57	28		Pn	20 02 42.3	+1.1
SCIA				IAmb_Lg		20 04 37.2	

	comp=Z,24nm,0.8s						
S44A	Carbondale	6.61	74	Pn	Pn	20 02 41.3	-0.4
OXF	Oxford	6.63	102	Pn	Pn	20 02 41.7	-0.4
SIUC	Southern Illin	6.64	74	Pn	Pn	20 02 42.9	+0.7
W45A	Hickory Valley	6.66	96	IAmb_Lg		20 04 36.3	
	comp=Z,27nm,0.9s						
Y45A	Yeager Farm, C	6.74	107	Pn	Pn	20 02 44.1	+0.6
SDCO	Great Sand Dun	6.78	286		Pn	20 02 44.9	+0.5
Q44A	Meyer Farm, Va	7.12	65	Pn	Pn	20 02 49.0	+0.2
Q44A				IAmb_Lg		20 04 55.4	
	comp=Z,30nm,0.8s						
ISCO	Idaho Springs	7.53	302		Pn	20 02 53.7	-0.9
L40A	Anamosa	7.56	37	Pn	Pn	20 02 55.6	+0.9
ECSD	EROS Data Cent	7.60	4		Pn	20 02 53.7	-1.7
WVT	Waverly	7.64	87	Pn	Pn	20 02 54.3	-1.7
WVT				IAmb_Lg		20 05 27.7	
	comp=Z,20nm,0.9s						
HDIL	Hopedale	7.67	53	Pn	Pn	20 02 56.5	+0.3
USIN	University of	7.90	74	IAmb_Lg		20 05 27.1	
	comp=Z,24nm,0.9s						
O44A	Mansfield	8.01	57	IAmb_Lg		20 05 23.1	
	comp=Z,23nm,0.8s						
MNTX	Cornudas Mount	8.06	239	Pn	Pn	20 03 01.1	-0.7
Y22D	IRIS PASSCAL I	8.17	258	Pn	Pn	20 03 02.5	-0.8
Y22D				IAmb_Lg		20 05 31.8	
	comp=Z,22nm,0.8s						
T47A	Sharon Grove	8.23	81	IAmb_Lg		20 05 35.3	
	comp=Z,17nm,0.8s						
L42A	Oliver, Polo	8.32	43	IAmb_Lg		20 05 32.9	
	comp=Z,16nm,0.8s						
SUSD	Miller	8.39	352	IAmb_Lg		20 05 42.3	
	comp=Z,16nm,1.0s						
JFWS	Jewell Farm	8.67	37	IAmb_Lg		20 05 37.1	
	comp=Z,12nm,0.7s						
P46A	Rosedale	8.69	63	IAmb_Lg		20 05 49.3	
	comp=Z,24nm,0.7s						
M44A	Midewin, Midew	8.91	51	IAmb_Lg		20 05 50.2	
	comp=Z,14nm,0.9s						
SFIN	Lafayette	9.05	59	IAmb_Lg		20 05 51.2	
	comp=Z,20nm,0.7s						
HQIL	Hanson Quary C	9.26	50	IAmb_Lg		20 05 54.6	
	comp=Z,23nm,0.9s						
K22A	Casper	9.66	315	IAmb_Lg		20 06 20.3	
	comp=Z,16nm,1.1s						
P48A	Milroy	9.95	67	IAmb_Lg		20 06 21.4	
	comp=Z,15nm,0.8s						

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*ARE **28** 20:10:24±2.2, 15°.70S±0°.07×72°.0W±0°.1, h12^{km}±3^{km}, ML4.5, mb4.8/37(NEIC), Error ellipse: s-maj=14.9km s-min=9.9km az=93.0*

*NEIC **28** 20:10:24.6±2.2, 15°.69S±0°.05×71°.93W±0°.09, h10^{km}±1^{km}, Error ellipse: s-maj=16.0km s-min=2.9km az=300.0*

*VAO **28** 20:10:26.0±0.5, 15°.59S×71°.99W, h10^{km}, mb4.5*

*IDC **28** 20:10:30.8±1.8, 15°.52S×71°.60W, h46^{km}±17^{km}, mb4.0/11, mb1 4.2/16, mb1mx4.0/38, mbtmp4.2/16, ML4.0/5, MS4.0/18, Ms1 4.0/18, ms1mx3.9/35, Error ellipse: s-maj=22.9km s-min=11.8km az=55.0*

*GCMT **28** 20:10:30.0±0.3, 15°.69S±0°.02×72°.01W±0°.03, h22^{km}, MW4.9/79, Moment Tensor Solution. s41,c42; s79,c96; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.44±.17; $M_{\theta\theta}$2.11±.10; $M_{\phi\phi}$0.32±.12; $M_{r\theta}$-0.88±.15; $M_{\theta\phi}$-1.32±.07; $M_{\phi r}$0.67±.23; Best double couple: $M_0$2.84800×10^{16} NP1:ϕ_s293.00000°,δ34.00000°,λ-97.00000°. NP2: ϕ_s122.00000°,δ56.00000°,λ-85.00000°. Principal axes: T 3.0270, Plg11.0000°, Azm209.0000°; N -0.3620, Plg4.0000°, Azm299.0000°; P -2.6690, Plg78.0000°, Azm49.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 28 20:10:25.1±0.4**, 15°.66S**±0°.04×**71°.92W**±0°.06**, h10^{km}, n150, σ1^{s}49**/135**, mb4.8**/28**, MS4.1**/15**, 4C-1D, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AP01	Chacalluta	3.09	151	⇓iP	Pb	20 11 17.9	-2.2
AP01				IAML		20 12 08.3	
	comp=N,6μm,0.5s						
AP01	Chacalluta	3.09	151		Pb	20 11 18.1	-2.0
PB16	IPOC Station P	3.52	139	⇑iP	Pb	20 11 25.7	-2.2
PB16				iS	Sb	20 12 12.4	+1.4
PB16	IPOC Station P	3.52	139		Pb	20 11 25.7	-2.2
LPAZ	La Paz	3.70	100	P	Pb	20 11 29.3	-1.7
	comp=N,2.2nm,0.3s,baz=274,slow=5.6,SNR=24						
LPAZ	La Paz	3.70	100	eP	Pb	20 11 29.1	-1.9
MNMC	Minye Minye	4.10	148	⇑iP	Pn	20 11 32.0	+3.8
MNMC				iS	Sb	20 12 27.1	-0.4
PSGC	Pisagua	4.27	157	eP	Pn	20 11 32.7	+2.4
TA02	Huaiquique	4.89	160	⇑eP	Pn	20 11 41.0	+2.2
HMBC	Humberstone	4.98	157	⇑eP	Pn	20 11 42.3	+2.2
TA01	Diego Aracena	5.15	161		Pn	20 11 43.5	+1.2
PB01	IPOC Station P	5.83	157		Pn	20 11 53.1	+1.3
NNA	Nana	6.02	307	P	Pn	20 11 58.8	+4.5
	comp=N,2.7nm,0.3s,baz=119,slow=14,SNR=3.7						
NNA				S	Sn	20 13 10.6	+7.3
	comp=N,3.2nm,0.3s,baz=229,slow=11,SNR=1.7						
NNA				LR	LR	20 14 50.0	
	comp=N,640nm,18.5s,baz=136,slow=42						
PB07	IPOC Station P	6.33	163		Pn	20 11 59.7	+0.9
PB04	IPOC Station P	6.84	166		Pn	20 12 06.2	+0.4
LVC	Limon Verde	7.47	158	P	Pn	20 12 17.4	+2.9
	comp=N,12nm,0.3s,baz=323,slow=8.0,SNR=57						
LVC				S	Sn	20 13 42.7	+3.1
	comp=N,3.9nm,0.3s,baz=167,slow=18,SNR=2.8						
LVC				LR	LR	20 15 42.9	
	comp=N,2μm,19.6s,baz=331,slow=42						
LVC	Limon Verde	7.47	158	eP	Pn	20 12 16.8	+2.2
PB15	IPOC Station P	7.85	163		Pn	20 12 19.6	0.0
PB10	IPOC Station P	7.91	171	Pn	Pn	20 12 19.9	-0.5
CZSB	Cruzeiro do Su	7.92	354	eP	Pn	20 12 19.9	-0.6
ETMB	Extrema	8.05	44	eP	Pn	20 12 23.6	+1.4
PB14	IPOC Station P	9.03	171	Pn	Pn	20 12 35.2	-0.7
GO02	Mina Guanaco	9.70	167	Pn	Pn	20 12 45.5	+0.4
SIV	San Ignacio	10.45	93	P	Pn	20 12 56.9	+1.8
	comp=N,1.3nm,0.3s,baz=286,slow=11,SNR=17						
SIV				LR	LR	20 16 53.9	
	comp=N,299nm,19.9s,baz=282,slow=38						
AC01	Pan de Azucar	10.50	173	Pn	Pn	20 12 55.0	-0.9
ATAH	Atahualpa	10.59	322	P	Pn	20 13 02.1	+4.8
	comp=N,0.2nm,0.3s,baz=131,slow=20,SNR=2.5						
ATAH				LR	LR	20 16 49.7	
	comp=N,508nm,20.1s,baz=193,slow=36						
SAML	Samuel	10.84	53	Pn	Pn	20 13 01.2	+0.8
SAML	Samuel	10.84	53	eP	Pn	20 13 01.2	+0.8
AC02	Maricunga	11.42	167		Pn	20 13 07.5	-1.3
VILB	Vilhena	11.68	78	eP	Pn	20 13 13.3	+1.3
GO03	Copiap	11.97	173		Pn	20 13 14.4	-1.6
PTLB	Pontes e Lacer	12.32	91	eP	Pn	20 13 23.7	+2.9
AC05	El Transito	13.20	174	Pn	Pn	20 13 31.2	-1.6
LCO	Las Campanas	13.33	175	Pn	Pn	20 13 33.4	-1.4
CO01	Juntas del Tor	14.35	174	Pn	Pn	20 13 49.4	+0.7
GO04	Tololo Observa	14.48	176	Pn	Pn	20 13 49.6	-0.8
MACA	Manacapuru-AM	16.64	43	eP	P	20 14 20.9	-0.1
OTAV	Otavalo	17.07	337	eP	Pn	20 14 14.7	-10
VA03	San Esteban	17.07	176	P	Pn	20 14 22.8	-1.3
CPUP	Villa Florida	17.25	130	P	Pn	20 14 26.7	+0.4
	comp=N,0.1nm,0.3s,baz=297,slow=11,SNR=2.1						
CPUP				LR	LR	20 22 01.6	
	comp=N,226nm,21.1s,baz=312,slow=40						
CPUP	Villa Florida	17.25	130	P	Pn	20 14 25.2	-1.1
PEL	Peldehue	17.44	177	P	Pn	20 14 28.0	-0.6
FLOC	Florencia	17.53	348	eP	P	20 14 32.4	+1.5
MT02	Curacav	17.53	178	P	P	20 14 30.8	-0.1
BBAC	Balboa, Cauca	18.34	343	eP	P	20 14 42.1	+1.9
NPGB	Novo Progresso	18.35	64	eP	P	20 14 41.0	+1.0
PCON	Cinco Dias	18.42	346	eP	P	20 14 43.5	+2.2
POPC	Popayan, Colom	18.69	345	eP	P	20 14 43.1	-0.8
H03N1	Juan Fernandez	18.80	198	T	T	20 33 11.8	
	baz=19,slow=74,SNR=1036						
H03N2	Juan Fernandez	18.80	198	T	T	20 33 11.5	
	baz=19,slow=74,SNR=834						
H03N3	Juan Fernandez	18.81	198	T	T	20 33 09.8	
	baz=19,slow=74,SNR=945						
PTGA	Pitinga	18.96	40	P	P	20 14 45.6	-1.0
	comp=N,0.7nm,0.3s,baz=219,slow=14,SNR=11						
PTGA				LR	LR	20 22 13.1	
	comp=N,742nm,19.8s,baz=222,slow=38						
PTGA	Pitinga	18.96	40	P	P	20 14 46.4	-0.3
PTGA	Pitinga	18.96	40	eP	P	20 14 46.6	-0.1
ITTB	Itaituba	19.48	56	eP	Pn	20 14 54.1	+0.5
PRAC	Prado	19.48	351	eP	P	20 14 52.6	+0.2
TRCB	Terra Rica	19.53	114	eP	Pn	20 14 54.9	+0.6
ORTC	Ortega, Tolima	19.72	350	eP	P	20 14 55.5	+0.4
ITQB	Itaqui	19.81	137	eP	Pn	20 14 57.7	+0.2
YOTC	Yotoco, Valle	20.01	347	eP	P	20 14 56.0	-2.3
SNDB	Serra Nova Dou	20.36	82	eP	P	20 15 03.5	+1.4
TOLC	Tolima	20.40	350	eP	Pn	20 15 04.5	-0.3
PCMB	Pacaembu	20.44	110	eP	P	20 15 04.8	+1.9
ROSC	El Rosal	20.51	353	LR	LR	20 23 22.7	
	comp=N,811nm,21.7s,baz=203,slow=38						
PTGB	Pitanga	20.68	119	eP	P	20 15 06.5	+0.9
RREF	El Recreo	20.71	350	eP	Pn	20 15 10.3	+1.5
PLMC	San Jos del P	20.89	348	eP	P	20 15 09.1	+1.3
BI02	San Fabin de	20.92	179		P	20 15 06.6	-1.4
BI02				IAmb	IAmb	20 15 18.9	
	comp=Z,44nm,0.8s						
ITRB	Iturama	20.93	104	eP	P	20 15 09.1	+0.9
BOAV	Boa Vista	21.19	33	eP	P	20 15 11.8	+0.7
NORC	Norcasia	21.29	352	eP	P	20 15 11.3	-0.9
CBOC	Ciudad Bolivar	21.77	349	eP	P	20 15 17.7	+0.3
FRTB	Fartura	22.40	113	eP	P	20 15 25.9	+1.9
CPSB	Cacapava Do Su	22.41	134	eP	P	20 15 26.2	+2.2
DBBC	Dabeiba	22.93	349	eP	P	20 15 31.3	+1.6
BDFB	Brasilia	23.02	93	LR	LR	20 24 34.5	
	comp=Z,193nm,21.5s,baz=289,slow=37						
PEXB	Peixe	23.20	84	eP	P	20 15 32.9	+0.4
PRPB	Parauapebas	23.64	69	eP	P	20 15 36.8	-0.1
SDV	Santo Domingo	24.43	3	P	P	20 15 44.5	+0.1
	comp=Z,12nm,0.7s,baz=200,slow=7.3,SNR=12						
SDV				LR	LR	20 27 20.6	
	comp=Z,142nm,19.1s,baz=199,slow=42						
SDV	Santo Domingo	24.43	3	P	P	20 15 44.0	-0.4
SDV				IAmb	IAmb	20 15 47.6	
	comp=Z,16nm,0.9s						
SDV	Santo Domingo	24.43	3	eP	P	20 15 44.9	+0.5
SDV	Santo Domingo	24.43	3	eP	P	20 15 44.4	0.0
MCPB	Macapa, AP	24.82	54	eP	P	20 15 48.3	+0.6
PLCA	Paso Flores	25.01	178	P	P	20 15 51.6	+2.3
	comp=Z,34nm,1.1s,baz=1.2,slow=12,SNR=14						
PLCA				LR	LR	20 26 02.0	
	comp=Z,206nm,19.5s,baz=336,slow=37						
PLCA	Paso Flores	25.01	178	P	P	20 15 50.0	+0.8
PLCA				IAmb	IAmb	20 15 57.0	
	comp=Z,29nm,0.9s						
PLCA	Paso Flores	25.01	178	eP	P	20 15 51.4	+2.1
MDP	Montagnes des	28.11	44	LR	LR	20 28 10.7	
	comp=Z,1μm,19.7s,baz=220,slow=38						
JTS	Las Juntas de	28.84	333	LR	LR	20 29 18.7	
	comp=Z,228nm,18.4s,baz=157,slow=39						
RIB01	Linhares ES	30.27	102	eP	P	20 16 38.2	+1.6
CUPR	Culebra, Puert	34.38	11	P	P	20 17 10.2	-2.4
S57A	Dark Hollow, R	53.55	353	P	P	20 19 46.2	0.0
TXAR	Lajitas Array	54.23	326	P	P	20 19 51.9	+0.5
	comp=Z,1.1nm,0.8s,baz=140,slow=9.9,SNR=5.6						
TXAR	Lajitas Array	54.23	326	P	P	20 19 51.3	-0.1
W39A	Magazine	54.67	338	P	P	20 19 54.0	-0.4
W39A				IAmb	IAmb	20 19 55.8	
	comp=Z,7.1nm,0.8s						
ABTX	Abilene, Hawle	54.85	331	P	P	20 19 55.4	-0.5
ABTX				IAmb	IAmb	20 19 57.6	
	comp=Z,7.7nm,0.8s						
U40A	Yellville	55.39	339	P	P	20 19 58.0	-1.6
U40A				IAmb	IAmb	20 20 00.9	
	comp=Z,11nm,1.1s						
T42A	Van Buren	55.44	341	P	P	20 19 57.6	-2.3
T42A				IAmb	IAmb	20 19 59.9	
	comp=Z,7.5nm,1.1s						
S44A	Carbondale	55.52	343	P	P	20 19 58.7	-1.7
SIUC	Southern Illin	55.53	343	P	P	20 19 58.4	-2.1
MGMO	Mountain Grove	55.92	340	P	P	20 20 02.5	-1.0
MGMO				IAmb	IAmb	20 20 03.4	
	comp=Z,5.6nm,0.7s						
S39A	Bolivar	56.76	340	P	P	20 20 08.6	-0.7
S39A				IAmb	IAmb	20 20 09.6	
	comp=Z,6.2nm,0.7s						
R40A	Maddies Statio	56.96	341	P	P	20 20 08.6	-2.1
R40A				IAmb	IAmb	20 20 10.7	
	comp=Z,5.5nm,0.6s						
M55A	Ridgway	57.19	354	P	P	20 20 12.4	0.0
M55A				IAmb	IAmb	20 20 14.0	
	comp=Z,11nm,0.8s						
M53A	WI Miller and	57.39	352	P	P	20 20 13.2	-0.5
M53A				IAmb	IAmb	20 20 29.5	
	comp=Z,18nm,1.4s						
WVNY	West Valley, N	58.11	354	P	P	20 20 18.6	-0.2
ANMO	Albuquerque	60.07	327	P	P	20 20 33.8	+1.0
	comp=Z,2.5nm,0.9s,baz=178,slow=8.7,SNR=7.0						
ANMO	Albuquerque	60.07	327	P	P	20 20 32.4	-0.5
SDCO	Great Sand Dun	61.79	330	P	P	20 20 44.3	-0.3
SDCO				IAmb	IAmb	20 20 46.3	
	comp=Z,5.4nm,0.8s						
BELA	Belgrano 2	64.90	172	P	P	20 21 03.9	-0.3
BELA				IAmb	IAmb	20 21 18.9	
	comp=Z,3.6nm,0.9s						
DRLN	Deer Lake	65.88	10	P	P	20 21 09.7	-1.2
AGMN	Agassiz Nation	67.16	343	P	P	20 21 18.6	-0.5
AGMN				IAmb	IAmb	20 21 20.0	
	comp=Z,9.4nm,0.9s						
PDAR	Pinedale Array	67.65	331	P	P	20 21 23.3	+0.7
	comp=Z,0.5nm,0.6s,baz=104,slow=6.3,SNR=4.3						
PDAR	Pinedale Array	67.65	331	P	P	20 21 22.4	-0.3
MDND	Maddock	67.90	340	P	P	20 21 24.0	+0.2
SNAA	Sanae	68.69	162	P	P	20 21 29.6	+1.0
SNAA				IAmb	IAmb	20 21 55.6	
	comp=Z,7.9nm,1.1s						
LOHW	Long Hollow	68.79	331	P	P	20 21 29.0	-0.7
ULM	Lac du Bonnet	68.93	344	P	P	20 21 29.8	-0.4
	comp=Z,5.3nm,0.9s,baz=177,slow=5.6,SNR=5.6						
ELK	Elko	69.02	326	LR	LR	20 53 03.0	
	comp=Z,766nm,19.1s,baz=171,slow=37						
NVAR	Mina Array Bea	69.15	323	P	P	20 21 33.4	+1.2
	comp=Z,1.0nm,0.8s,baz=141,slow=7.6,SNR=8.5						
NVAR	Mina Array Bea	69.15	323	P	P	20 21 32.3	+0.2
DBIC	Dimbokro	70.01	77	P	P	20 21 35.9	-1.8
	comp=Z,1.6nm,0.7s,baz=208,slow=4.4,SNR=3.9						
DBIC				LR	LR	20 50 57.7	
	comp=Z,164nm,18.2s,baz=221,slow=35						
DBIC	Dimbokro	70.01	77	P	P	20 21 34.9	-2.8
DBIC				IAmb	IAmb	20 21 53.2	
	comp=Z,21nm,1.8s						
DGMT	Dagmar	70.02	338	P	P	20 21 37.0	0.0
DGMT				IAmb	IAmb	20 21 38.9	
	comp=Z,8.5nm,0.8s						
TBI	Tubuai	72.73	250	eLR	LR	20 44 05.9	
	comp=Z,159nm,33.0s						
PPT2	Papeete2	73.92	256	eLR	LR	20 44 44.4	
	comp=Z,166nm,25.0s						
QSPA	South Pole Qui	74.49	180	P	P	20 22 01.1	-2.7
QSPA				IAmb	IAmb	20 22 17.2	
	comp=Z,11nm,1.4s						
TOA0	Torodi Ar. Sit	78.23	73	P	P	20 22 24.4	-1.3
TORD	Torodi Ar. Bea	78.23	73	P	P	20 22 24.3	-1.3
	comp=Z,1.6nm,0.8s,baz=251,slow=4.7,SNR=6.6						
TORD				LR	LR	20 56 43.9	
	comp=Z,83nm,18.0s,baz=255,slow=36						
TORD	Torodi Ar. Bea	78.23	73	P	P	20 22 24.4	-1.3
VNDA	Vanda	82.06	190	LR	LR	20 55 02.5	
	comp=Z,76nm,18.8s,baz=139,slow=32						
ESDC	Sonseca Array	83.78	46	P	P	20 22 53.7	-1.2
	comp=Z,1.1nm,1.1s,baz=268,slow=6.4,SNR=4.9						
YKA	Yellowknife Ar	84.77	342	P	P	20 22 59.3	+0.1
	comp=Z,3.1nm,0.9s,baz=133,slow=5.6,SNR=37						
ICESG	Greenland Ices	87.59	11	iP	P	20 23 13.6	+0.1
ICESG				IAmb	IAmb	20 23 14.3	
	comp=Z,7.8nm,0.8s						
BOSA	Boshof	88.74	119	LR	LR	21 02 09.1	
	comp=Z,70nm,18.1s,baz=229,slow=35						
MAW	Mawson	90.70	164	LR	LR	21 05 32.3	
	comp=Z,77nm,18.5s,baz=237,slow=36						
SUMG	Summit	90.79	10	iP	P	20 23 29.2	+0.7
	comp=Z,18nm,0.6s						
SUMG	Summit	90.79	10	P	P	20 23 28.9	+0.4
SUMG	Summit	90.79	10	iP	P	20 23 29.3	+0.7
SUMG				IAmb	IAmb	20 23 30.2	
	comp=Z,18nm,0.6s						
CASY	Casey	98.28	181	P	P	20 24 01.1	-1.5
DZM	Mont Dzumac	111.62	238	eLR	LR	21 02 03.5	
	comp=Z,146nm,29.4s						
ASAR	Alice Springs	133.47	213	PKP	PKPdf	20 29 42.6	-0.1
	comp=Z,0.4nm,0.7s,baz=138,slow=2.1,SNR=2.0						
ASAR	Alice Springs	133.47	213		PKPdf	20 29 43.1	+0.5
WRA	Warramunga Arr	136.20	217	PKP	PKPdf	20 29 48.3	+0.5
	comp=Z,0.7nm,0.9s,baz=139,slow=1.9,SNR=3.9						
ZALV	Zalesovo Beam	137.69	20	PKP	PKPdf	20 29 48.3	-1.2
	comp=Z,2.7nm,0.7s,baz=294,slow=1.4,SNR=12						
USRK	Ussuriysk Ar.	145.07	329	PKPbc	PKPbc	20 30 02.4	0.0
	comp=Z,1.9nm,0.8s,baz=25,slow=3.2,SNR=5.1						
USRK	Ussuriysk Ar.	145.07	329		PKPab	20 30 02.6	+0.2
MAT	Matsushiro	146.10	314	PKP	PKPdf	20 30 05.2	+0.2
MJAR	Matsushiro Arr	146.10	314	PKPbc	PKPbc	20 30 05.7	-0.2
	comp=Z,7.2nm,0.9s,baz=79,slow=1.5,SNR=19						
SONM	Songino Array	147.89	2	PKPbc	PKPbc	20 30 11.6	+0.9
	comp=Z,7.1nm,0.8s,baz=334,slow=2.6,SNR=53						
KSRS	Korea Array	152.08	325	PKPbc	PKiKP	20 30 22.3	+0.8
	comp=Z,4.1nm,0.8s,baz=25,slow=1.6,SNR=16						

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*KRNET **28** 20:11:17.9±0.1, 40°.59N×77°.42E, mb3.4*

*SOME **28** 20:11:18.0, 40°.63N×77°.13E, h10^{km}*

*NNC **28** 20:11:20.3±1.1, 40°.66N×77°.27E, h0^{km}, mb3.8, mpv3.5, Error ellipse: s-maj=7.1km s-min=4.9km az=174.0*

ISC 28 20:11:22.1±1.3**, 40°.74N**±0°.06×**77°.22E**±0°.03**, h10^{km}, n69, σ1^{s}18**/100**, 24C-16D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDJ	Kajisay	1.39	359	⇓iP	Pn	20 11 46.8	-1.0
	baz=54						
KDJ				⇓iS	Sg	20 12 07.5	+0.6
	baz=54						
ULHL	Ulahol	1.68	334	⇑eP	Pn	20 11 52.3	+0.6
	baz=32						
ULHL				⇑iS	Sg	20 12 17.7	+1.6
	baz=32						
ULHL	Ulahol	1.68	334	P	Pn	20 11 52.3	+0.6
	SNR=48						
PRZ	Przheval'sk	1.96	26	⇓iP	Pn	20 11 55.0	-0.5
	baz=21						
PRZ				⇓iS	Sb	20 12 21.9	-0.6
	baz=21						
BOOM	Boomskoye usch	2.00	332	⇑iP	Pn	20 11 57.4	+1.3
	baz=30						
BOOM				⇑iS	Sg	20 12 25.8	-0.5
	baz=30						
ANVS	Anan'yevo	2.07	9	⇓iP	Pn	20 11 57.5	+0.4
	baz=5.0						
ANVS				⇓iS	Sb	20 12 26.1	+0.3
	baz=5.0						
TNSS	Tian-Shan	2.31	355	eP	Pb	20 12 03.9	-0.1
	48nm,0.4s						
TNSS				eS	Sg	20 12 36.6	+0.3
	44nm,0.6s						
TNSS	Tian-Shan	2.31	355	Pg	Pb	20 12 03.9	-0.1
	48nm,0.4s						
TNSS				Lg	Lg	20 12 36.6	
	44nm,0.6s						
MDOK	Medeo	2.43	357	eP	Pb	20 12 06.1	+0.2
	25nm,0.4s						
MDOK				eS	Sg	20 12 41.0	+0.9
	71nm,0.5s						
MDOK	Medeo	2.43	357	Pg	Pb	20 12 05.8	-0.2
	16nm,0.5s						
MDOK				⇑Lg	Lg	20 12 41.6	
	46nm,0.6s						
MDOK	Medeo	2.43	357	Pg	Pb	20 12 06.1	+0.2
	25nm,0.4s						
MDOK				Lg	Lg	20 12 40.2	
	71nm,0.5s						
ARLS	Aral	2.46	298	⇓iP	Pn	20 12 02.9	+0.6
	baz=99						
ARLS				⇓iS	Sb	20 12 36.4	-0.4
	baz=99						
MTBS	Maitube	2.46	346	eP	Pb	20 12 06.7	+0.1
	12nm,0.5s						
MTBS				eS	Sg	20 12 41.4	+0.2
	49nm,0.3s						
MTBS	Maitube	2.46	346	Pg	Pb	20 12 06.7	+0.1
	12nm,0.5s						
MTBS				Lg	Lg	20 12 41.4	
	49nm,0.3s						
SATY	Saty	2.48	20	eP	Pb	20 12 06.0	-0.8
	9.9nm,0.4s						
SATY				eS	Sg	20 12 40.2	-1.7
	32nm,0.4s						
SATY	Saty	2.48	20	Pg	Pb	20 12 06.0	-0.8
	9.9nm,0.4s						
SATY				Lg	Lg	20 12 40.2	
	32nm,0.4s						
KNDC	Almaty	2.49	356	⇑Pg	Pb	20 12 06.8	-0.1
	29nm,0.6s						
KNDC				⇑Lg	Lg	20 12 44.1	
	137nm,0.7s						
KST	Kastek	2.49	338	eP	Pb	20 12 07.7	+0.8
	9.0nm,0.2s						
KST				eS	Sg	20 12 43.2	+1.1
	56nm,0.5s						
KST	Kastek	2.49	338	Pg	Pb	20 12 07.7	+0.8
	9.0nm,0.2s						
KST				Lg	Lg	20 12 43.2	
	56nm,0.5s						
KOTS	Kotyrbulak	2.50	358	eP	Pb	20 12 07.4	+0.3
	90nm,0.4s						
KOTS				eS	Sg	20 12 42.8	+0.4
	309nm,0.7s						
TKM2	Tokmak 2	2.50	331	⇑eP	Pn	20 12 04.4	+1.4
	baz=30						
TKM2				⇑iS	Sb	20 12 38.1	+0.1
	baz=30						
TKM2	Tokmak 2	2.50	331	P	Pb	20 12 07.5	+0.4
	SNR=9.0						
TKM2	Tokmak 2	2.50	331	⇓Pg	Pb	20 12 06.3	-0.9
	2.8nm,0.3s						
TKM2				⇓Lg	Lg	20 12 44.3	
	26nm,0.5s						
UCH	Uchtor	2.52	307	⇓iP	Pn	20 12 05.1	+1.6
	baz=8.0						
UCH				⇓iS	Sb	20 12 39.4	+0.4
	baz=8.0						
UCH	Uchtor	2.52	307	P	Pb	20 12 06.5	-1.2
	SNR=15						
KBK	Karagaybulak	2.56	319	⇓iP	Pn	20 12 05.4	+1.5
	baz=19						
KBK				⇓iS	Sb	20 12 39.9	0.0
	baz=19						
KBK	Karagaybulak	2.56	319	P	Pb	20 12 08.1	-0.2
	SNR=22						
DGS	Degeres	2.73	337	eP	Pb	20 12 11.5	+0.5
	6.5nm,0.6s						
DGS				eS	Sg	20 12 49.6	-0.1
	33nm,0.6s						
DGS	Degeres	2.73	337	Pg	Pb	20 12 11.5	+0.5
	6.5nm,0.6s						
DGS				Lg	Lg	20 12 49.6	
	33nm,0.6s						
UZB	Uzynbulak	2.76	29	eP	Pb	20 12 11.4	-0.2
	2.3nm,0.2s						
UZB				eS	Sg	20 12 49.3	-1.4
	31nm,0.7s						
UZB	Uzynbulak	2.76	29	Pg	Pb	20 12 11.4	-0.2
	2.3nm,0.2s						
UZB				Lg	Lg	20 12 49.3	
	31nm,0.7s						
AAK	Ala-Archa	2.79	314	⇑iP	Pn	20 12 08.4	+1.5
	baz=14						
AAK				⇑iS	Sb	20 12 45.1	-1.3
	baz=14						
AAK	Ala-Archa	2.79	314	P	Pb	20 12 11.1	-1.0
	SNR=13						
AAK	Ala-Archa	2.79	314	⇑Pg	Pg	20 12 14.4	-1.1
	17nm,0.6s						
AAK				⇑Lg	Lg	20 12 51.8	
	18nm,0.6s						
KURS	Kuram	2.84	14	eP	Pb	20 12 13.0	+0.1
	4.4nm,0.5s						
KURS				eS	Sg	20 12 52.3	-1.0
	26nm,0.8s						
KURS	Kuram	2.84	14	Pg	Pb	20 12 13.0	+0.1
	4.4nm,0.5s						
KURS				Lg	Lg	20 12 52.3	
	26nm,0.8s						
CHMS	Chumysh	2.92	322	⇑iP	Pn	20 12 10.0	+1.4
	baz=21						
CHMS				⇑iS	Sb	20 12 47.9	-2.0
	baz=21						
CHMS	Chumysh	2.92	322	P	Sg	20 12 56.6	+0.8
	SNR=8.9						
SFK	Sufi-Kurgan	2.93	257	⇑iP	Pn	20 12 09.1	+0.2
	baz=60						
SFK				⇑iS	Sn	20 12 46.2	+1.9
	baz=60						
KPKS	Kokpek	2.94	21	eP	Pb	20 12 15.1	+0.5
	14nm,0.4s						
KPKS				eS	Sg	20 12 55.5	-0.9
	51nm,0.4s						

SHLS	Shalkode	2.94	34	eP	Pg	20 12 17.4	-1.0
	12nm,0.2s						
SHLS				eS	Sg	20 12 59.9	+3.3
	28nm,0.7s						
SHLS	Shalkode	2.94	34	Pg	Pg	20 12 17.4	-1.0
	12nm,0.2s						
SHLS				Lg	Lg	20 12 59.9	
	28nm,0.7s						
AML	Almayashu	3.00	299	⇑iP	Pn	20 12 11.4	+1.4
	baz=0.0						
AML				⇑iS	Sb	20 12 50.1	-2.4
	baz=0.0						
AML	Almayashu	3.00	299	P	Pb	20 12 15.4	-0.3
	SNR=12						
KTBS	Karatobe	3.00	353	eP	Pb	20 12 16.0	+0.4
	9.8nm,0.3s						
KTBS				eS	Sg	20 12 57.1	-1.4
	26nm,0.8s						
KTBS	Karatobe	3.00	353	Pg	Pb	20 12 16.0	+0.4
	9.8nm,0.3s						
KTBS				Lg	Lg	20 12 57.1	
	26nm,0.8s						
PDGK	Podgornoye	3.09	32	Pg	Pb	20 12 16.1	-1.2
	1.7nm,0.5s						
PDGK				Lg	Lg	20 12 57.5	
	21nm,0.5s						
PDGK	Podgornoye	3.09	32	⇓Pn	Pn	20 12 14.4	+3.3
	3.7nm,0.4s						
PDGK				⇓Lg	Lg	20 12 59.6	
	54nm,0.7s						
CHKK	Chushkaly	3.12	357	eP	Pb	20 12 18.3	+0.6
	19nm,0.4s						
CHKK				eS	Sg	20 13 01.6	-0.7
	43nm,0.3s						
CHKK	Chushkaly	3.12	357	Pg	Pb	20 12 18.3	+0.6
	19nm,0.4s						
CHKK				Lg	Lg	20 13 01.6	
	43nm,0.3s						
KRBS	Karabastau	3.17	339	eP	Pb	20 12 20.3	+1.7
	8.7nm,0.4s						
KRBS				eS	Sg	20 13 04.7	+0.8
	30nm,0.5s						
KRBS	Karabastau	3.17	339	Pg	Pb	20 12 20.3	+1.7
	8.7nm,0.4s						
KRBS				Lg	Lg	20 13 04.7	
	30nm,0.5s						
EKS2	Erkin-Say	3.22	308	⇑eP	Pn	20 12 14.2	+1.4
	baz=8.0						
EKS2				⇑iS	Sb	20 12 55.6	-3.1
	baz=8.0						
EKS2	Erkin-Say	3.22	308	P	Pn	20 12 14.5	+1.7
	SNR=6.2						
KUU	Kurty	3.22	349	eP	Pb	20 12 19.5	+0.1
	3.8nm,0.5s						
KUU				eS	Sg	20 13 03.7	-1.8
	47nm,0.9s						
KUU	Kurty	3.22	349	Pg	Pb	20 12 19.5	+0.1
	3.8nm,0.5s						
KUU				Lg	Lg	20 13 03.6	
	47nm,0.9s						
USP	Ospenovka	3.24	322	P	Pb	20 12 19.9	+0.2
	SNR=11						
SGDS	Sogindy	3.33	325	Pg	Pb	20 12 21.9	+0.6
	4.8nm,0.4s						
SGDS				Lg	Lg	20 13 07.4	
	14nm,0.4s						
MNBS	Baschi	3.45	14	eP	Pb	20 12 24.3	+0.9
	3.1nm,0.2s						
MNBS				eS	Sg	20 13 11.7	-1.3
	26nm,0.3s						
MNBS	Baschi	3.45	14	Pg	Pb	20 12 24.3	+0.9
	3.1nm,0.2s						
MNBS				Lg	Lg	20 13 11.7	
	26nm,0.3s						
ARXS	Arharly	3.50	7	eP	Pb	20 12 25.6	+1.3
	11nm,0.6s						
ARXS				eS	Sg	20 13 14.2	-0.4
	24nm,0.6s						
ARXS	Arharly	3.50	7	Pg	Pb	20 12 25.6	+1.3
	11nm,0.6s						
ARXS				Lg	Lg	20 13 14.2	
	24nm,0.6s						
MRKS	Merke	3.60	305	eP	Pb	20 12 26.3	+0.4
	4.3nm,0.4s						
MRKS				eS	Sg	20 13 14.9	-2.8
	6.4nm,0.6s						
MRKS	Merke	3.60	305	Pg	Pb	20 12 26.3	+0.4
	4.3nm,0.4s						
MRKS				Lg	Lg	20 13 14.9	
	6.4nm,0.6s						
DJR	Jarkent	4.06	27	eP	Pb	20 12 34.9	+1.2
	0.9nm,0.2s						
DJR				eS	Sg	20 13 29.7	-2.8
	10nm,0.5s						
DJR	Jarkent	4.06	27	Pg	Pb	20 12 34.9	+1.2
	0.9nm,0.2s						
DJR				Lg	Lg	20 13 29.7	
	10nm,0.5s						
KK31	Karatay Array	5.54	297	Pg	Pb	20 13 00.1	+1.3
	0.4nm,0.5s,baz=121,slow=15,SNR=5.1						
KK31				⇑Lg	Lg	20 14 15.8	
	2.2nm,0.6s,baz=113,slow=26,SNR=5.1						
MAKZ	Makanchi	6.98	28	⇑Lg	Lg	20 15 02.5	
	1.4nm,1.0s						
MK31	Makanchi Array	7.08	30	⇑Lg	Lg	20 15 07.9	
	2.6nm,0.9s						

IDC 28 20:14:27.3±5.3**, 6°.29S×133°.35E, h0^{km}, mb3.4**/1**, mb1 3.3**/3**, mb1mx3.1**/31**, mbtmp3.2**/3**, ML2.8**/2**, Error ellipse: s-maj=314.3km s-min=33.8km az=77.0, Aru Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	13.61	176	Pn	Pn	20 17 41.5	-0.3
	0.1nm,0.3s,baz=355,slow=14,SNR=3.2						
WRA				Sn	Sn	20 19 57.9	-16
	0.2nm,0.3s,baz=332,slow=23,SNR=7.6						
ASAR	Alice Springs	17.29	178	P	Pn	20 18 30.5	+0.2
	0.0nm,0.3s,baz=0.5,slow=11,SNR=1.2						
MKAR	Makanchi Array	69.50	325	P	P	20 25 37.8	0.0
	0.1nm,0.4s,baz=117,slow=7.6,SNR=5.7						

IDC 28 20:24:27.0±4.1**, 22°.52N×93°.94E, h122^{km}**±35^{km}**, mb3.3**/4**, mb1 3.3**/5**, mb1mx3.0**/41**, mbtmp3.5**/5**, Error ellipse: s-maj=94.2km s-min=15.9km az=55.0, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	6.19	130	P	Pn	20 25 54.5	-1.5
	0.2nm,0.3s,baz=304,slow=13,SNR=6.2						
CMAR				S	Sn	20 27 07.7	+2.2
	baz=334,slow=16,SNR=1.2						
AAK	Ala-Archa	25.79	326	P	P	20 29 47.8	+1.1
	0.3nm,0.5s,baz=186,slow=9.2,SNR=1.3						
MKAR	Makanchi Array	25.99	342	P	P	20 29 47.9	-0.4
	1.0nm,0.7s,baz=148,slow=10,SNR=23						
WRA	Warramunga Arr	57.77	134	P	P	20 34 05.2	-0.4
	0.8nm,0.6s,baz=324,slow=7.4,SNR=7.6						
ASAR	Alice Springs	60.14	137	P	P	20 34 22.1	+0.1
	0.5nm,0.6s,baz=320,slow=6.7,SNR=8.1						

IDC ***28*** *20:36:56.6±2.9, 13°.42N×148°.91E, h0^{km}, mb3.7/6, mb1 3.9/6, mb1mx3.5/55, mbtmp3.7/6, Error ellipse: s-maj=95.5km s-min=23.3km az=85.0*

NEIC ***28*** *20:36:59.4±1.6, 13°.3N±0°.1×148°.29E±0°.06, h10^{km}±2^{km}, mb4.1/6, Error ellipse: s-maj=23.7km s-min=3.5km az=21.0*

ISC 28 20:37:02.8±0.8**, 13°.3N**±0°.1**×148°.5E**±0°.1**, h35^{km}, n21, σ0^{s}.95**/17**, mb3.9**/10**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	3.58	276	Pn	Pn	20 37 50.7	-5.2
PATS	Pohnpei	11.55	123	Pn	Pn	20 39 45.4	0.0
H11S3	WAKE ISLAND Hy	18.22	71	T	T	21 00 17.0	
	baz=252						
H11S1	WAKE ISLAND Hy	18.23	71	T	T	21 00 16.9	
	baz=252						
H11S2	WAKE ISLAND Hy	18.23	71	T	T	21 00 14.6	
	baz=252						
WR0	Warramunga Arr	35.77	203	P	P	20 43 58.7	0.0
WR0				IAmb	IAmb	20 44 00.5	
	comp=Z,2.1nm,0.8s						
WRA	Warramunga Arr	35.83	203	P	P	20 44 00.5	+1.1
	comp=Z,2.9nm,0.6s,baz=25,slow=9.6,SNR=27						
FITZ	Fitzroy Crossi	38.49	216	P	P	20 44 20.3	-1.5
FITZ				IAmb	IAmb	20 44 34.7	
	comp=Z,5.4nm,1.1s						
AS31	Alice Springs	39.39	201	P	P	20 44 28.1	-1.3
ASAR	Alice Springs	39.39	201	P	P	20 44 30.6	+1.2
	comp=Z,0.6nm,0.6s,baz=23,slow=7.6,SNR=10						
ASAR	Alice Springs	39.39	201	P	P	20 44 29.3	-0.1
CMAR	Chiang Mai Arr	47.87	283	P	P	20 45 39.1	+1.3
	comp=Z,0.2nm,0.5s,baz=81,slow=5.6,SNR=1.6						
SONM	Songino Array	49.09	323	P	P	20 45 46.7	-0.2
	comp=Z,0.2nm,0.6s,baz=113,slow=9.6,SNR=2.3						
MK31	Makanchi Array	64.20	316	P	P	20 47 33.5	-0.7
MK31				IAmb	IAmb	20 47 38.8	
	comp=Z,1.0nm,1.2s						
MKAR	Makanchi Array	64.20	316	P	P	20 47 34.2	0.0
	comp=Z,0.4nm,0.5s,baz=92,slow=8.2,SNR=13						
MKAR	Makanchi Array	64.20	316	P	P	20 47 33.9	-0.4
MAKZ	Makanchi	64.42	316	P	P	20 47 35.3	-0.3
MAKZ				IAmb	IAmb	20 47 41.6	
	comp=Z,2.2nm,1.4s						
IMAR	Indian Mountai	65.11	22	P	P	20 47 40.8	+1.0
KURK	Kurchatov	67.13	320	P	P	20 47 52.4	-0.6
FINES	FINESS Array B	92.93	336	P	P	20 50 11.3	-0.8
	comp=Z,0.8nm,0.6s,baz=17,slow=5.1,SNR=3.8						
FINES	FINESS Array B	92.93	336	P	P	20 50 11.0	-1.2

MEX ***28*** *20:41:23.8±0.8, 23°.73N×108°.71W, h11^{km}±13^{km}, MD4.7*

NEIC ***28*** *20:41:24.6±1.6, 23°.81N±0°.08×108°.61W±0°.08, h10^{km}±1^{km}, Error ellipse: s-maj=15.8km s-min=10.1km az=223.0*

BJI ***28*** *20:41:24.0±0.0, 23°.60N×108°.70W, h10^{km}, mb5.2/1*

GCMT ***28*** *20:41:26.1±0.3, 23°.85N±0°.02×108°.77W±0°.01, h20^{km}±1^{km}, MW5.0/113, Moment Tensor Solution. s32,c40; s113,c158; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.05±.14; $M_{\theta\theta}$-3.89±.13; $M_{\phi\phi}$3.94±.13; $M_{r\theta}$-0.75±.23; $M_{\theta\phi}$-1.23±.10; $M_{\phi r}$1.29±.23; Best double couple: $M_0$4.35400×10^{16} NP1:ϕ_s37.00000°, δ72.00000°, λ6.00000°. NP2:ϕ_s305.00000°, δ84.00000°, λ162.00000°. Principal axes: T 4.5520, Plg17.0000°, Azm260.0000°; N -0.3920, Plg71.0000°, Azm107.0000°; P -4.1570, Plg8.0000°, Azm353.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

IDC ***28*** *20:41:28.1±0.6, 24°.32N×108°.36W, h0^{km}, mb4.3/16, mb1 4.5/19, mb1mx4.3/42, mbtmp4.3/19, ML4.6/2, MS4.2/27, Ms1 4.2/27, ms1mx4.1/40 Error ellipse: s-maj=20.1km s-min=12.4km az=69.0*

ISC 28 20:41:26.2±0.4**, 23°.89N**±0°.05**×108°.49W**±0°.05**, h10^{km}, n400, σ1^{s}.56**/378**, mb4.7**/55**, MS4.3**/26**, 1D, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLBS	Sierra La Lagu	1.35	261		Pn	20 41 42.5	-8.7
SSIG	Sanalona	1.54	53	eP	Pn	20 41 51.1	-2.6
SSIG				i S	Sn	20 42 12.5	-1.3
LPIG	La Paz	1.68	277	eP	Pn	20 41 47.5	-8.2
LPIG				eS	Sn	20 42 05.4	-12
LPIG	La Paz	1.68	277		Pn	20 41 47.5	-8.2
TSIG	Topolobambo	1.77	344	i P	Pn	20 41 52.2	-4.7
TSIG				eS	Sn	20 42 15.9	-3.6
MAIG	Mazatlaan	2.02	110	eP	Pn	20 41 56.3	-4.1
MAIG				eS	Sn	20 42 22.4	-3.2
MAIG	Mazatlaan	2.02	110		Pn	20 41 59.2	-1.1
MAIG					Sb	20 42 28.4	+0.2
CSIG	Choix	2.93	2	eP	Pn	20 42 09.9	-3.0
CSIG				i S	Sn	20 42 46.0	-2.1
PDIG	Papasquiaro	3.04	67	eP	Pn	20 42 13.6	-1.0
PDIG				eS	Sn	20 42 51.5	+0.3
HPIG		3.96	40	i P	Pn	20 42 26.8	-0.4
HPIG				eS	Sn	20 43 14.4	+0.5
HPIG		3.96	40	Pn	Pn	20 42 26.1	-1.2
GUYB	Guaymas	4.53	332	eP	Pn	20 42 29.0	-5.9
GUYB				eS	Sn	20 43 21.2	-6.4
BCIG	La Boquilla	4.57	37	eP	Pn	20 42 35.4	-0.2
BCIG				eS	Sn	20 43 28.3	-0.6
ANIG	Ahuacatlan	4.63	127	eP	Pn	20 42 31.8	-4.6
ANIG				i S	Sn	20 43 23.9	-6.5
SRIG	Santa Rosalia	4.81	316	eP	Pn	20 42 40.0	+1.2
SRIG	Santa Rosalia	4.81	316	Pn	Pn	20 42 35.7	-3.0
ZAIG	Zacatecas	5.56	100	Pn	Pn	20 42 48.2	-1.1
HSIG		5.56	337		Pn	20 42 47.6	-1.4
TX31	Lajitas Ar. Si	6.92	37		Pn	20 43 07.4	-0.5
TX32	Lajitas Array	6.92	37		Pn	20 43 07.1	-0.8
TXAR	Lajitas Array	6.92	37	Pn	Pn	20 43 07.5	-0.5
	1.1nm,0.3s,baz=211,slow=14,SNR=14						
TXAR				Lg	Lg	20 44 52.9	
	1.6nm,0.3s,baz=201,slow=17,SNR=3.4						
TXAR	Lajitas Array	6.92	37	Pn	Pn	20 43 07.1	-0.8
319A	Douglas	7.49	355		Pn	20 43 14.7	-1.0
MNIG	Monterrey	7.65	75	i P	Pn	20 43 15.8	-2.0
MNIG				i S	Sn	20 44 45.7	+1.1
MOIG	Morelia	7.97	120	Pn	Pn	20 43 21.6	-0.9
MNTX	Cornudas Mount	8.25	19	P	Pn	20 43 25.5	-0.5
	baz=202,SNR=43						
MNTX	Cornudas Mount	8.25	19	Pn	Pn	20 43 25.4	-0.5
TUC	Tucson	8.63	347	P	Pn	20 43 32.4	+1.1
	baz=168						
TUC	Tucson	8.63	347	i P	Pn	20 43 33.1	+1.9
TUC	Tucson	8.63	347	Pn	Pn	20 43 31.5	+0.2
121A	Cookes Peak, D	8.63	4	P	Pn	20 43 31.0	-0.3
	baz=186						
121A	Cookes Peak, D	8.63	4	Pn	Pn	20 43 32.4	+1.0
214A	Organ Pipe Nat	8.89	336		Pn	20 43 33.7	-1.2
GDL2	Guadalupe Moun	9.04	23	Pn	Pn	20 43 37.2	+0.2
SFX	San Felipe	9.08	323	Pn	Pn	20 43 33.8	-3.6
CLNB	Carlsbad	9.28	25	Pn	Pn	20 43 40.0	-0.3
SPX	San Pedro Mart	9.43	320	Pn	Pn	20 43 40.9	-1.6
CPRX	Cap Rock	9.97	23	Pn	Pn	20 43 50.7	+1.0
JCT	Junction City	10.14	48	Pn	Pn	20 43 51.2	-0.7
LENM	Lemitar	10.32	7	Pn	Pn	20 43 54.1	-0.5
BNM	Barren Site	10.35	9	Pn	Pn	20 43 56.5	+1.5
GLA	Glamis	10.69	330	Pn	Pn	20 43 56.4	-3.1
IKP	In-Ko-Pah, Jac	11.01	324	P	Pn	20 44 06.2	+2.4
	baz=142						
ANMO	Albuquerque	11.15	9	Pn	Pn	20 44 08.6	+2.6
	0.1nm,0.3s,baz=187,slow=14,SNR=12						
ANMO				Lg	Lg	20 47 10.5	
	0.1nm,0.3s,baz=113,slow=7.7,SNR=1.7						
ANMO				LR	LR	20 48 38.8	
	comp=Z,2μm,19.7s,baz=190,slow=40						
ANMO	Albuquerque	11.15	9	P	Pn	20 44 08.6	+2.6
	baz=191						
ANMO	Albuquerque	11.15	9	Pn	Pn	20 44 07.9	+1.9
MSTX	Muleshoe	11.21	25	P	Pn	20 44 07.0	+0.3
	baz=209						
MSTX	Muleshoe	11.21	25		Pn	20 44 06.4	-0.4
TLIG	Tlapa	11.21	122		Pn	20 44 05.5	-1.3
W18A	Petrified Fore	11.24	355	P	Pn	20 44 09.4	+2.3
	baz=176,SNR=6.6						
BC3	Big Chuckawall	11.48	329	P	Pn	20 44 13.3	+2.9
	baz=148						
PDMCI	Parker Dam,Lak	11.49	336	P	Pn	20 44 13.0	+2.6
	baz=155,SNR=6.7						
ABTX	Abilene, Hawle	11.67	40	P	Pn	20 44 14.7	+1.7
	baz=224						
ABTX	Abilene, Hawle	11.67	40		Pn	20 44 13.0	0.0
IRM	Iron Mountain	11.77	332	P	Pn	20 44 17.3	+3.1
	baz=150,SNR=12						
WUAZ	Wupatki	11.85	348	P	Pn	20 44 19.1	+3.6
	baz=168						
435B	Jarrell	11.87	52	P	Pn	20 44 18.4	+2.8
	baz=238						
435B	Jarrell	11.87	52	Pn	Pn	20 44 15.6	0.0
PFO	Pinyon Flats O	11.94	326	Pn	Pn	20 44 21.1	+4.5
	0.8nm,0.3s,baz=147,slow=9.9,SNR=8.3						
PFO				LR	LR	20 48 10.7	
	comp=Z,1μm,21.4s,baz=135,slow=35						
BELC	Belle Mtn. Jos	12.02	329	P	Pn	20 44 20.9	+3.1
	baz=146						
AMTX	Amarillo	12.45	27	P	Pn	20 44 26.7	+3.0
	baz=211						
AMTX	Amarillo	12.45	27		Pn	20 44 24.0	+0.4
GMRC	Granite Mounta	12.52	332	P	Pn	20 44 26.6	+2.0
	baz=150,SNR=18						
WHTX	Lake Whitney,	12.65	48	Pn	Pn	20 44 25.0	-1.2
HKT	Hockley	12.80	59	Pn	Pn	20 44 26.6	-1.6
MVCO	Mesa Verde	13.27	360	P	Pn	20 44 37.7	+2.7
	baz=181,SNR=6.9						
MVCO	Mesa Verde	13.27	360	Pn	Pn	20 44 34.2	-0.8
GSC	Goldstone, Bar	13.47	329	P	Pn	20 44 40.2	+2.7
	baz=147,SNR=5.8						
GSC	Goldstone, Bar	13.47	329	Pn	Pn	20 44 35.3	-2.2
Z35A	Perchaven, San	13.62	44	Pn	Pn	20 44 38.2	-1.3
T25A	Trinidad	13.66	14	P	Pn	20 44 43.9	+3.6
	baz=197,SNR=8.6						
WMOK	Wichita Mounta	13.72	36	P	Pn	20 44 42.5	+1.6
	baz=221						
WMOK	Wichita Mounta	13.72	36		Pn	20 44 42.3	+1.4
EDW2	Edwards Air Fo	13.72	325	P	Pn	20 44 43.8	+2.8
	baz=142						
SHOC	Shoshone, Teco	13.73	332	P	Pn	20 44 43.9	+2.9
	baz=150						
237A	Washetta, Mont	13.80	51	Pn	Pn	20 44 42.5	+0.4
S22A	4UR Ranch, Cre	13.88	5	P	P	20 44 49.1	-2.7
	baz=187,SNR=12						
OSI	Osito Audit: C	13.91	322	Pn	Pn	20 44 41.5	-2.1
SDCO	Great Sand Dun	14.04	10	P	P	20 44 53.4	-0.1
	baz=192,SNR=23						
SDCO	Great Sand Dun	14.04	10		Pn	20 44 45.8	+0.3
PV05	Paradox Valley	14.15	358		Pn	20 44 48.5	+1.6
PV01	Paradox Valley	14.20	360		Pn	20 44 48.4	+0.7
PV13	Radium Mtn., P	14.22	359		Pn	20 44 49.1	+1.1
PV02	Paradox Valley	14.27	359		Pn	20 44 49.3	+0.7
PV18	Skein Mesa, Pa	14.31	359		Pn	20 44 48.2	-1.0
PV03	Paradox Valley	14.32	359		Pn	20 44 48.6	-0.6
PV17	East Wray Mesa	14.35	359		Pn	20 44 50.5	+0.9
MPMC	Manual Prospec	14.40	329	P	Pn	20 44 52.6	+2.2
	baz=146,SNR=35						
CMIG	Matias Romero	14.43	115	Pn	Pn	20 44 52.6	+2.0
	0.2nm,0.3s,baz=287,slow=15,SNR=3.9						
CMIG				LR	LR	20 50 23.7	
	comp=Z,2μm,19.8s,baz=278,slow=37						
FURC	Furnace Creek,	14.46	332	P	Pn	20 44 53.6	+2.6
	baz=149						
NATX	Nacogdoches	14.52	54	Pn	Pn	20 44 49.9	-1.9
ISA	Isabella, Lake	14.57	326	P	Pn	20 44 54.3	+1.7
	baz=142						
ISA	Isabella, Lake	14.57	326		Pn	20 44 51.1	-1.5
PRN	Pahroc Range	14.60	339	P	Pn	20 44 54.6	+1.6
TPNV	Topopah Spring	14.62	335	P	Pn	20 44 56.3	+2.9
	baz=152,SNR=18						
TPNV	Topopah Spring	14.62	335		Pn	20 44 55.0	+1.6
MVU	Marysvale	14.91	349	P	Pn	20 44 58.1	+0.8
CWC	Cottonwood Cre	14.99	329	P	Pn	20 45 01.5	+3.1
	baz=145						
VES	Vestal, Richgr	15.03	325	P	P	20 45 05.9	+1.8
	baz=141,SNR=6.9						
Z38A	Mt. Pleasant	15.08	49	Pn	Pn	20 44 59.2	-0.2
Z38A				IAmb	IAmb	20 45 13.8	
	comp=Z,17nm,0.9s						
Q24A	Divide	15.29	10	P	P	20 45 06.7	-0.7
	baz=192,SNR=11						
SMCO	Snowmass	15.29	4		Pn	20 45 03.3	+0.8
SMCO				IAmb	IAmb	20 45 13.4	
	comp=Z,53nm,1.1s						
X37A	Clayton	15.62	44		Pn	20 45 06.8	+0.2
R11A	Troy Canyon, C	15.63	339	P	Pn	20 45 08.4	+1.6
	baz=156,SNR=20						
R11A	Troy Canyon, C	15.63	339	Pn	Pn	20 45 05.6	-1.2
KSCO	Kaye Shedlock’	15.87	17	P	P	20 45 12.7	-1.0
	baz=201						
KSCO	Kaye Shedlock’	15.87	17	Pn	Pn	20 45 09.9	0.0
TPH	Tonopah	15.98	334		Pn	20 45 10.6	-0.9
ISCO	Idaho Springs	16.04	8	P	P	20 45 15.8	0.0
	baz=190,SNR=26						
ISCO	Idaho Springs	16.04	8	P	Pn	20 45 13.5	+1.2
O20A	White River Ci	16.20	1	P	P	20 45 16.5	-0.8
	baz=182,SNR=11						
O20A	White River Ci	16.20	1	Pn	Pn	20 45 15.0	+0.9
O20A				IAmb	IAmb	20 45 17.8	
	comp=Z,81nm,1.4s						
TUL1	Leonard	16.25	40	P	P	20 45 18.4	+0.8
	baz=226						
MDPB	Devils Postpil	16.43	329		Pn	20 45 13.7	-3.5
CBKS	Cedar Bluff	16.63	25	P	P	20 45 22.9	+1.0
	baz=210						
CBKS	Cedar Bluff	16.63	25		Pn	20 45 18.6	-0.9
DUG	Dugway, Tooele	16.66	348	P	P	20 45 22.3	-0.1
	baz=167,SNR=21						
DUG	Dugway, Tooele	16.66	348	P	Pn	20 45 21.3	+1.4
DUG				IAmb	IAmb	20 45 25.5	
	comp=Z,56nm,1.4s						
LHV	Little Huntoon	16.67	331	P	Pn	20 45 20.7	+0.8
LHV				IAmb	IAmb	20 45 34.7	
	comp=Z,68nm,1.6s						
R32A	Long Quarter,	16.71	28	Pn	Pn	20 45 20.1	-0.5
NVAR	Mina Array Bea	16.73	332	Pn	P	20 45 22.5	-0.8
	comp=Z,0.1nm,0.3s,baz=154,slow=11,SNR=31						
NVAR	Mina Array Bea	16.73	332	P	Pn	20 45 22.1	+1.1
MIAR	Mount Ida	16.77	47	P	P	20 45 22.9	-0.6
	baz=235						
RYN	Ryan	16.99	332	P	Pn	20 45 22.9	-1.3
W39A	Magazine	17.02	45	P	P	20 45 26.7	+0.4
	baz=233						
N23A	Red Feather La	17.09	7	P	P	20 45 28.1	+0.9
	baz=189,SNR=9.9						
KVN	Kaiserville	17.17	334	P	Pn	20 45 27.0	+0.4
X40A	Basin Creek Fa	17.25	49	P	Pn	20 45 26.9	-0.4
	baz=237						
X40A	Basin Creek Fa	17.25	49		Pn	20 45 25.5	-1.8
CMB	Columbia Colle	17.38	327	P	Pn	20 45 26.4	-2.6
344A	Westbrook Farm	17.43	61		Pn	20 45 27.6	-1.9
344A				IAmb	IAmb	20 45 33.8	
	comp=Z,78nm,1.4s						
U38A	Gravette	17.44	41	P	Pn	20 45 28.8	-0.8
PHWY	Pilot Hill	17.54	8	P	Pn	20 45 31.8	+0.5
YERR	Yerington	17.60	331		Pn	20 45 30.0	-1.9
ELK	Elko	17.73	343	P	P	20 45 34.6	+0.2
	comp=Z,0.1nm,0.3s,baz=160,slow=8.3,SNR=14						
ELK	Elko	17.73	343	P	Pn	20 45 33.7	+0.2
RWWY	Rawlins	17.78	3		Pn	20 45 34.3	+0.2
RWWY				IAmb	IAmb	20 45 39.9	
	comp=Z,61nm,1.4s						
PNTR	Pine Nut	17.84	331		Pn	20 45 32.5	-2.4
OGNE	Ogallala	17.84	16	P	P	20 45 35.8	+0.3
	baz=200						
OGNE	Ogallala	17.84	16	P	Pn	20 45 33.0	-1.7
OGNE				IAmb	IAmb	20 45 40.3	
	comp=Z,81nm,1.8s						
VBMS	Vicksburg	17.88	58	Pn	Pn	20 45 34.5	-0.6
W41B	Gary Mavity, V	18.03	48	P	P	20 45 38.4	+1.0
	baz=236						
VCNR	Virginia City	18.04	331	P	Pn	20 45 35.7	-1.5
KSU1	Kansas State U	18.21	31	P	P	20 45 40.3	+1.0
	baz=218						
KSU1	Kansas State U	18.21	31	P	Pn	20 45 39.0	-0.1
KSU1				IAmb	IAmb	20 45 41.4	
	comp=Z,43nm,1.4s						
U40A	Yellville	18.33	44	P	P	20 45 41.6	+0.8
	baz=232						
U40A	Yellville	18.33	44	P	P	20 45 40.7	0.0
FCAR	Ozark Folk Cen	18.52	46	P	Pn	20 45 43.1	+0.1
PETF	Flores	18.77	108	P	P	20 45 44.1	-1.6
PETF				IAmb	IAmb	20 45 48.2	
	comp=Z,41nm,0.9s						
K22A	Casper	18.78	5	P	Pn	20 45 47.5	+1.3
	baz=186,SNR=26						
PD31	Pinedale Array	18.84	358	P	P	20 45 45.8	-0.8
PDAR	Pinedale Array	18.84	358	P	P	20 45 46.9	+0.4
	comp=Z,0.5nm,0.3s,baz=169,slow=11,SNR=52						
PDAR				LR	LR	20 53 19.6	
	comp=Z,606nm,21.1s,baz=184,slow=39						
PDAR	Pinedale Array	18.84	358	P	P	20 45 46.2	-0.4
BW06	Boulder Array	18.84	358	P	Pn	20 45 47.3	+0.2
	baz=178,SNR=22						
AHID	Auburn Hatcher	18.95	354	P	P	20 45 46.4	-1.2
AHID				IAmb	IAmb	20 45 50.8	
	comp=Z,57nm,1.4s						
TEIG	Tepich	19.08	97	LR	LR	20 53 31.3	
	comp=Z,465nm,20.8s,baz=270,slow=38						
MGMO	Mountain Grove	19.20	43	P	Pn	20 45 51.5	+0.3
ECR	Eagle Creek	19.26	354	P	P	20 45 50.4	-0.8
LCAR	Lake Charles	19.27	47	P	Pn	20 45 52.4	+0.4
LCAR				IAmb	IAmb	20 45 53.8	
	comp=Z,40nm,1.6s						
BGNE	Belgrade	19.49	24		Pn	20 45 54.5	-0.1
BGNE				IAmb	IAmb	20 45 56.5	
	comp=Z,58nm,0.9s						
REDW	Red Top Meadow	19.52	355	P	P	20 45 54.1	+0.2
REDW				IAmb	IAmb	20 46 11.2	
	comp=Z,39nm,1.1s						
O03E	Paynes Creek	19.83	329	P	Pn	20 45 58.9	+0.2

	baz=142						
R40A	Maddies Statio	19.93	40	P	P	20 45 57.6	-0.6
N35A	Tabor	20.06	29	P	P	20 45 59.4	-0.3
N35A				IAmb	IAmb	20 46 02.7	
	comp=Z,55nm,0.9s						
W45A	Hickory Valley	20.16	52		P	20 46 00.7	-0.1
W45A				IAmb	IAmb	20 46 16.1	
	comp=Z,53nm,0.9s						
Z47A	Carrollton	20.16	58	P	P	20 46 01.4	+0.6
Z47A				IAmb	IAmb	20 46 19.1	
	comp=Z,30nm,0.9s						
HLID	Hailey	20.22	347	P	Pn	20 46 03.0	-0.5
	baz=165,SNR=12						
HLID	Hailey	20.22	347	P	P	20 46 00.1	-1.5
O02D	Mt. Diablo Mer	20.22	327	P	Pn	20 46 06.3	+2.9
	baz=140						
FLWY	Flagg Ranch	20.22	355	P	P	20 46 00.4	-1.2
MTO3	Montecristo	20.37	114	P	P	20 46 02.8	-0.6
MOD	Modoc Plateau	20.48	334	P	P	20 46 01.9	-2.4
MOD				IAmb	IAmb	20 46 15.5	
	comp=Z,35nm,1.2s						
RSSD	Black Hills	20.50	9	P	P	20 46 05.8	+1.1
	baz=192						
RSSD	Black Hills	20.50	9	P	P	20 46 05.0	+0.3
H17A	Grant Village	20.52	356	P	Pn	20 46 06.3	-0.8
	baz=175,SNR=23						
H17A	Grant Village	20.52	356	P	P	20 46 04.8	-0.1
H17A				IAmb	IAmb	20 46 10.2	
	comp=Z,40nm,1.3s						
L34A	Svendsen Farm,	20.65	26	P	P	20 46 06.0	-0.1
L34A				IAmb	IAmb	20 46 18.9	
	comp=Z,16nm,0.6s						
P40A	Paris	20.89	38	P	P	20 46 09.6	+0.9
P40A				IAmb	IAmb	20 46 19.2	
	comp=Z,25nm,1.0s						
PLAL	Pickwick Lake	20.89	53	P	P	20 46 07.8	-0.9
LRAL	Lakeview Retre	20.94	59	P	P	20 46 08.7	-0.6
	baz=250						
QLMT	Earthquake Lak	21.02	354	P	P	20 46 10.1	-0.2
M04C	Macdoel	21.03	331	P	P	20 46 13.4	+3.1
	baz=145						
N38A	Joes South For	21.16	34	P	P	20 46 11.3	-0.2
RLMT	Red Lodge	21.19	358	P	P	20 46 13.0	+1.0
	baz=179						
RLMT	Red Lodge	21.19	358	P	P	20 46 11.8	-0.2
RLMT				IAmb	IAmb	20 46 19.6	
	comp=Z,25nm,1.1s						
250A	Grady	21.19	63	P	P	20 46 11.8	-0.2
YBH	Yreka Blue Hor	21.38	330	P	P	20 46 14.0	0.0
	comp=Z,0.8nm,0.5s,baz=234,slow=14,SNR=1.6						
S44A	Carbondale	21.44	46	P	P	20 46 14.4	-0.2
S44A				IAmb	IAmb	20 46 25.5	
	comp=Z,20nm,0.8s						
L04D	Klamath Falls	21.58	331	P	P	20 46 18.4	+2.2
	baz=144						
WVT	Waverly	21.60	51	P	P	20 46 16.3	0.0
	baz=241						
WVT	Waverly	21.60	51	P	P	20 46 16.1	-0.2
BOZ	Bozeman (W)	21.80	354	P	P	20 46 20.2	+1.6
	baz=173,SNR=13						
BOZ	Bozeman (W)	21.80	354	P	P	20 46 18.9	+0.3
GCMT	Greycliff	21.87	358	P	P	20 46 19.5	+0.2
SUSD	Miller	21.93	19	P	P	20 46 20.5	+0.7
SUSD				IAmb	IAmb	20 46 22.7	
	comp=Z,40nm,1.0s						
J05D	Fort Rock, OR	22.02	335	P	P	20 46 22.5	+1.6
	baz=148						
ECSD	EROS Data Cent	22.07	23	P	P	20 46 22.4	+1.1
	baz=210,SNR=15						
ECSD	EROS Data Cent	22.07	23	P	P	20 46 21.4	+0.1
ECSD				IAmb	IAmb	20 46 27.7	
	comp=Z,21nm,1.1s						
BMO	Blue Mountains	22.11	343	P	P	20 46 21.4	-0.5
Q44A	Meyer Farm, Va	22.30	43	P	P	20 46 24.8	+1.1
N41A	Harden Midland	22.36	37	P	P	20 46 24.4	0.0
N41A				IAmb	IAmb	20 46 41.2	
	comp=Z,32nm,1.2s						
Z51A	Franklin	22.48	60	P	P	20 46 26.0	+0.2
FPAL	Fort Paine	22.56	57	P	P	20 46 26.2	-0.5
FPAL				IAmb	IAmb	20 46 29.5	
	comp=Z,34nm,1.2s						
USIN	University of	22.64	47	P	P	20 46 27.5	0.0
152A	Waverly Hall	22.65	62	P	P	20 46 27.3	-0.3
152A				IAmb	IAmb	20 46 37.5	
	comp=Z,43nm,1.2s						
OLIL	Olney	22.78	45	P	P	20 46 29.4	+0.4
OLIL				IAmb	IAmb	20 46 44.0	
	comp=Z,15nm,0.8s						
K38A	Parkersburg	22.79	31	P	P	20 46 28.8	-0.2
K38A				IAmb	IAmb	20 46 45.2	
	comp=Z,36nm,1.2s						
LAO	LASA Array	22.82	4	P	P	20 46 29.6	+0.3
	baz=186						
LAO	LASA Array	22.82	4	P	P	20 46 29.1	-0.3
HRY	Holter Researc	22.93	354	P	P	20 46 29.4	-1.2
W50A	Signal Mountai	23.04	55	P	P	20 46 30.7	-1.1
W50A				IAmb	IAmb	20 46 34.2	
	comp=Z,40nm,1.1s						
F10A	Beach Ranch, E	23.14	344	P	P	20 46 30.7	-1.9
MSO	Missoula	23.30	351	P	P	20 46 35.0	+0.6
	baz=168,SNR=5.3						
MSO	Missoula	23.30	351	P	P	20 46 33.8	-0.5
MSO				IAmb	IAmb	20 46 42.0	
	comp=Z,46nm,1.3s						
E28A	Huff	23.48	14	P	P	20 46 35.7	-0.4
Y52A	Lilburn	23.53	60	P	P	20 46 35.0	-1.6
Y52A				IAmb	IAmb	20 46 41.5	
	comp=Z,37nm,1.1s						
I37A	Lemond, Waseca	23.58	28	P	P	20 46 37.4	+0.4
CPCT	Cooper Cave	23.73	55	P	P	20 46 38.3	-0.3
CPCT				IAmb	IAmb	20 46 46.5	
	comp=Z,22nm,0.8s						
GOGA	Godfrey	23.87	61	P	P	20 46 40.2	+0.3
	baz=253						
V51A	Loudon	24.00	55	P	P	20 46 40.8	-0.4
F33A	5 Mile Ranch,	24.02	21	P	P	20 46 41.6	+0.4
F33A				IAmb	IAmb	20 46 53.0	
	comp=Z,27nm,1.6s						
EGMT	Eagleton	24.10	358	P	P	20 46 42.5	+0.4
	baz=178,SNR=11						
EGMT	Eagleton	24.10	358	P	P	20 46 42.3	+0.2
T50A	Nancy	24.14	52	P	P	20 46 43.2	+0.7
T50A				IAmb	IAmb	20 46 50.4	
	comp=Z,24nm,0.9s						
HAWA	Hanford	24.15	341	P	P	20 46 41.9	-0.5
HAWA				IAmb	IAmb	20 46 48.8	
	comp=Z,14nm,1.2s						
JFWS	Jewell Farm	24.23	34	P	P	20 46 44.9	+1.6
	baz=224						
JFWS	Jewell Farm	24.23	34	P	P	20 46 43.4	+0.2
JFWS				IAmb	IAmb	20 46 52.1	
	comp=Z,35nm,1.6s						
SFIN	Lafayette	24.36	42	P	P	20 46 45.9	+1.4
	baz=234						
TKL	Tuckaleechee C	24.38	56	P	P	20 46 45.4	+0.7
	comp=Z,13nm,1.1s,baz=207,slow=9.1,SNR=7.1						
TKL				LR	LR	20 57 23.9	
	comp=Z,1µm,19.1s,baz=253,slow=40						
TKL	Tuckaleechee C	24.38	56	P	P	20 46 44.6	-0.1
TKL				IAmb	IAmb	20 46 49.2	
	comp=Z,34nm,1.4s						
R49A	Shelbyville	24.50	49	P	P	20 46 45.9	+0.1
DGMT	Dagmar	24.76	7	P	P	20 46 49.9	+1.8
	baz=190						
BG3	Lake Jocassee	24.78	58	P	P	20 46 48.3	-0.1
SPMN	Marine on St.	24.81	27	P	P	20 46 50.6	+2.2
	baz=216						
SPMN	Marine on St.	24.81	27	P	P	20 46 48.9	+0.5
SPMN				IAmb	IAmb	20 46 58.2	
	comp=Z,28nm,1.2s						
MDND	Maddock	24.93	14	P	P	20 46 49.9	+0.4
	baz=200						
MDND	Maddock	24.93	14	P	P	20 46 49.2	-0.4
F36A	Milaca	25.04	25	P	P	20 46 50.6	+0.1
F36A				IAmb	IAmb	20 46 53.6	
	comp=Z,20nm,1.2s						
HODGE	Hodges	25.07	60	P	P	20 46 51.5	+0.5
R50A	Paris	25.08	49	P	P	20 46 49.9	-1.1
R50A				IAmb	IAmb	20 46 55.5	
	comp=Z,40nm,1.6s						
V53A	Saluda	25.11	56	P	P	20 46 51.9	+0.5
NEW	Newport	25.27	346	P	P	20 46 52.7	+0.1
	comp=Z,4.3nm,1.0s,baz=170,slow=13,SNR=4.2						
NEW	Newport	25.27	346	P	P	20 46 52.2	-0.4
	baz=162						
NEW	Newport	25.27	346	P	P	20 46 52.0	-0.6
NEW				IAmb	IAmb	20 46 59.7	
	comp=Z,9.4nm,1.1s						
E04D	Cinebar	25.29	337	P	P	20 46 52.6	-0.2
	baz=149						
S51A	Beattyville	25.31	51	P	P	20 46 53.3	+0.3
S51A				IAmb	IAmb	20 47 02.6	
	comp=Z,19nm,0.8s						
WALA	Waterton Lakes	25.48	352	P	P	20 46 52.3	-2.4
WALA				IAmb	IAmb	20 47 03.3	
	comp=Z,29nm,1.1s						
G40A	Rib Lake	25.99	30	P	P	20 46 59.7	+0.5
G40A				IAmb	IAmb	20 47 17.6	
	comp=Z,14nm,1.2s						
KMSC	Kings Mountain	26.07	58	P	P	20 47 00.3	+0.3
	baz=252						
Q51A	Peebles	26.11	49	P	P	20 47 00.6	+0.2
JTS	Las Juntas de	26.19	117	LR	LR	20 57 33.4	
	comp=Z,478nm,21.3s,baz=3.5,slow=37						
AGMN	Agassiz Nation	26.33	19	P	P	20 47 02.9	+0.6
	baz=207						
AGMN	Agassiz Nation	26.33	19	P	P	20 47 02.2	0.0
AGMN				IAmb	IAmb	20 47 17.3	
	comp=Z,23nm,1.4s						
P51A	Williamsport	26.52	48	P	P	20 47 03.8	-0.2
P51A				IAmb	IAmb	20 47 21.5	
	comp=Z,26nm,1.1s						
W56A	Indian Trail	26.66	59	P	P	20 47 08.3	+3.0
	baz=253						
Q52A	Bidwell	26.82	50	P	P	20 47 07.2	+0.4
B35A	Bob, Littlefor	27.08	22	P	P	20 47 08.9	0.0
B35A				IAmb	IAmb	20 47 22.5	
	comp=Z,31nm,1.8s						
COWI	Conover	27.11	30	P	P	20 47 08.3	-1.0
COWI				IAmb	IAmb	20 47 27.3	
	comp=Z,18nm,1.2s						
EYMN	Ely	27.54	25	P	P	20 47 12.8	-0.3
	baz=216						
EYMN	Ely	27.54	25	P	P	20 47 12.6	-0.6
D41A	Chassel	28.09	30	P	P	20 47 18.2	+0.3
ULM	Lac du Bonnet	28.09	17	P	P	20 47 17.8	-0.2
	comp=Z,2.7nm,0.7s,baz=220,slow=8.7,SNR=7.0						
ULM				LR	LR	20 58 23.9	
	comp=Z,595nm,20.2s,baz=205,slow=37						
ULM	Lac du Bonnet	28.09	17	P	P	20 47 17.0	-1.0
ULM				IAmb	IAmb	20 47 33.1	
	comp=Z,25nm,1.4s						
O53A	New Philadelph	28.13	48	P	P	20 47 19.4	+0.9
	baz=243						
M53A	WI Miller and	29.05	46	P	P	20 47 27.0	+0.4
	baz=242						
N54A	Moraine State	29.28	48	P	P	20 47 29.1	+0.4
	baz=243						
R58A	Rapidan	29.63	54	P	P	20 47 33.6	+1.8
	baz=250						
FFC	Flin Flon	31.17	7	P	P	20 47 43.9	-1.3
FFC				IAmb	IAmb	20 47 51.4	
	comp=Z,6.0nm,1.0s						
L56A	Greenwood	31.44	47	P	P	20 47 48.2	+0.4
	baz=244						
SADO	Sadowa	31.68	42	LR	LR	21 01 17.6	
	comp=Z,1µm,18.1s,baz=249,slow=38						
BBB	Bella Bella	31.99	337	LR	LR	21 00 16.0	
	comp=Z,377nm,18.6s,baz=168,slow=36						
BINY	Binghamton	32.53	48	P	P	20 47 57.7	+0.4
	baz=246						
BINY	Binghamton	32.53	48	P	P	20 47 57.2	-0.2
L58A	Harry Jones Me	32.56	48	P	P	20 47 57.3	-0.4
	baz=247						
K58A	Earlville	32.99	47	P	P	20 48 04.4	+3.0
	baz=246						
L59A	Walton	33.17	48	P	P	20 48 03.7	+0.7
	baz=247						
L59A	Walton	33.17	48	P	P	20 48 03.0	0.0
L59A				IAmb	IAmb	20 48 10.4	
	comp=Z,14nm,1.0s						
I58A	Old Forge	33.82	46	P	P	20 48 09.0	+0.4
	baz=245						
H59A	Cadyville	35.06	45	P	P	20 48 22.3	+3.0
	baz=246						
MATQ	Matagami	35.29	35	P	P	20 48 22.3	+1.0
	baz=234						
CBOC	Ciudad Bolivar	36.00	115	eP	P	20 48 29.2	+1.3
SMLC	San Martn de	36.15	109	eP	P	20 48 28.3	-0.6
PLMC	San Jos del P	36.30	116	eP	P	20 48 30.2	-0.2
FCC	Fort Churchill	36.32	13	P	P	20 48 28.8	-1.0
FCC				IAmb	IAmb	20 48 35.9	
	comp=Z,15nm,1.2s						
GUY2C	Guyana, Caldas	36.88	115	eP	P	20 48 35.5	-0.3
PTBC	PUERTO BERRIO,	36.94	112	eP	P	20 48 33.6	-2.2
RREF	El Recreo	37.08	115	eP	P	20 48 39.2	+1.6
NORC	Norcasia	37.11	114	eP	P	20 48 36.8	-0.5
BBAC	Balboa, Cauca	37.23	121	eP	P	20 48 39.3	+0.8
TOLC	Tolima	37.27	116	eP	P	20 48 38.6	-0.4
POPC	Popayan, Colom	37.37	120	eP	P	20 48 36.1	-3.6
OTAV	Otavalo	37.44	125	P	P	20 48 40.8	+0.3
OTAV				IAmb	IAmb	20 48 49.0	
	comp=Z,16nm,1.0s						
OTAV	Otavalo	37.44	125	eP	P	20 48 40.8	+0.3
OTAV	Otavalo	37.44	125	eP	P	20 48 42.3	+1.8
GCUF	Volcan Galeras	37.65	122	eP	P	20 48 41.0	-1.3
PCON	Cinco Dias	37.72	120	eP	P	20 48 39.6	-3.4
MARP	Paez Belalcaza	37.76	119	eP	P	20 48 44.3	+1.3
DLBC	Dease Lake	37.78	342	P	P	20 48 43.2	+0.8
	comp=Z,3.6nm,0.8s,baz=165,slow=7.5,SNR=10.0						
ROSC	El Rosal	37.96	115	LR	LR	21 05 54.3	
	comp=Z,408nm,19.3s,baz=360,slow=38						
ROSC	El Rosal	37.96	115	P	P	20 48 43.9	-1.0
ROSC				IAmb	IAmb	20 49 00.3	
	comp=Z,10nm,1.0s						
PAMC	Pamplona, Colo	38.04	110	eP	P	20 48 45.8	+0.2
CHIC	Chingaza	38.57	114	eP	P	20 48 50.6	+0.6
YKA	Yellowknife Ar	38.81	355	P	P	20 48 50.1	-0.8
	comp=Z,2.6nm,0.8s,baz=165,slow=8.2,SNR=36						
YKA				LR	LR	21 05 31.3	
	comp=Z,574nm,18.6s,baz=0.0,slow=38						
SDV	Santo Domingo	39.11	106	P	P	20 48 53.3	-1.0
SDV				IAmb	IAmb	20 48 55.7	
	comp=Z,19nm,0.8s						
SDV	Santo Domingo	39.11	106	eP	P	20 48 53.4	-1.0
MACC	Macarena, Meta	39.87	118	eP	P	20 48 57.4	-3.1
ATAH	Atahualpa	42.59	133	P	P	20 49 28.7	+5.4
	comp=Z,6.5nm,0.9s,baz=347,slow=9.6,SNR=4.7						
CRQE	Cirque	43.88	336	P	P	20 49 33.4	+0.6
	baz=132						
MCARA	McCarthy VSAT	44.27	337	P	P	20 49 37.0	+1.2
	baz=132						
BMRM	Bremner River	44.58	336	P	P	20 49 38.9	+0.5
	baz=130						
TAOE	Nuku Hiva Isla	44.90	227	eLR	LR	21 02 00.9	
	comp=Z,528nm,26.1s						
N25K	Chitina, Valde	44.99	337	P	P	20 49 42.4	+0.7
	baz=131						
GLI	Glacier Island	45.48	335	P	P	20 49 45.7	+0.3
	baz=127						
M24K	Tolsona, Glenn	45.89	336	P	P	20 49 49.6	+0.9
	baz=129						
EGAK	Eagle	46.05	341	P	P	20 49 50.0	+0.1
	baz=137						
SCRK	Sand Creek	46.36	339	P	P	20 49 52.7	+0.2
	baz=133						
C36M	Paulatuk	46.42	352	P	P	20 49 51.6	-1.1
	baz=160						
SML	Sawmill	46.51	335	P	P	20 49 53.6	-0.1
	baz=126						
INK	Inuvik	46.98	348	P	P	20 49 57.0	-0.1
	comp=Z,3.3nm,0.9s,baz=136,slow=7.7,SNR=11						
INK	Inuvik	46.98	348	P	P	20 49 55.9	-1.2
INK				IAmb	IAmb	20 50 05.3	
	comp=Z,7.4nm,0.9s						
CZSB	Cruzeiro do Su	47.00	128	eP	P	20 50 00.5	+2.5
SUA	Susitna One	47.27	334	P	P	20 49 59.7	+0.1
	baz=124						
CUT	Chulitna	47.60	335	P	P	20 50 02.2	+0.2
	baz=125						
FRB	Frobisher Bay	47.71	23	LR	LR	21 08 54.0	
	comp=Z,208nm,20.0s,baz=221,slow=35						
IL31		47.83	339	P	P	20 50 02.5	-1.2
IL31				IAmb	IAmb	20 50 11.5	
	comp=Z,4.7nm,0.9s						
ILAR	Eielson Array	47.83	339	P	P	20 50 02.9	-0.9
	comp=Z,1.6nm,0.6s,baz=150,slow=6.9,SNR=21						
ILAR	Eielson Array	47.83	339	P	P	20 50 02.7	-1.1
SKT	Skwentna	47.86	334	P	P	20 50 03.8	-0.3
	baz=123,SNR=9.2						
MCK	McKinley	47.88	337	P	P	20 50 04.2	0.0
	baz=127						
TRF	Thorofare Moun	48.21	336	P	P	20 50 06.2	-0.7
	baz=126,SNR=6.8						
NEA2	Nenana	48.45	338	P	P	20 50 07.9	-0.7
	baz=128						
PPLA	Purkeypile	48.61	335	P	P	20 50 09.4	-0.6
	baz=123						
BMAR	Burnt Mountain	48.92	342	P	P	20 50 11.4	-0.9
TTA	Tatalina	50.14	334	P	P	20 50 20.6	-1.0
	baz=119						
IMAR	Indian Mountai	50.86	338	P	P	20 50 25.4	-1.6
BOAV	Boa Vista	51.02	107	eP	P	20 50 28.5	-0.4
TOLK	Toolik Lake Re	51.13	342	P	P	20 50 28.8	-0.2
	baz=130						
RES	Resolute Bay	51.34	5	P	P	20 50 29.1	-1.3
	comp=Z,0.7nm,0.7s,baz=184,slow=7.7,SNR=4.7						
RES				LR	LR	21 12 29.1	
	comp=Z,352nm,22.0s,baz=188,slow=37						
PTGA	Pitinga	53.05	110	LR	LR	21 15 34.0	
	comp=Z,178nm,18.7s,baz=306,slow=38						
PTGA	Pitinga	53.05	110	P	P	20 50 43.1	-0.9
PTGA	Pitinga	53.05	110	eP	P	20 50 44.2	+0.2
SAML	Samuel	54.98	121	P	P	20 50 55.8	-2.3
SAML				IAmb	IAmb	20 51 02.7	
	comp=Z,11nm,1.1s						
SAML	Samuel	54.98	121	eP	P	20 50 59.2	+1.2
SFJD	Kangerlussuaq	55.83	24	LR	LR	21 13 49.5	
	comp=Z,339nm,19.8s,baz=245,slow=35						
LPAZ	La Paz	56.11	131	P	P	20 51 10.4	+3.5
	comp=Z,1.9nm,0.8s,baz=352,slow=7.3,SNR=7.0						
LPAZ	La Paz	56.11	131	P	P	20 51 03.6	-3.2
LPAZ				IAmb	IAmb	20 51 13.3	
	comp=Z,5.6nm,1.1s						
LPAZ	La Paz	56.11	131	eP	P	20 51 08.9	+2.1
PB16	IPOC Station P	56.64	134	P	P	20 51 08.2	-2.4
PB16				IAmb	IAmb	20 51 17.6	
	comp=Z,21nm,1.6s						
PPT	Papeete	57.50	228	LR	LR	21 10 50.2	
	comp=Z,74nm,21.0s,baz=5.0,slow=30						
PPT2	Papeete2	57.52	228	eLR	LR	21 07 51.3	
	comp=Z,572nm,27.8s						
PB08	IPOC Station P	58.18	135	P	P	20 51 19.6	-1.5
PB08				IAmb	IAmb	20 51 28.1	
	comp=Z,12nm,1.1s						
ITTB	Itaituba	58.54	111	eP	P	20 51 22.6	-0.7
MALB	Monte Alegre	58.54	108	eP	P	20 51 22.7	-0.7
VILB	Vilhena	59.73	123	eP	P	20 51 33.2	+1.6
MCPB	Macapa, AP	59.76	105	eP	P	20 51 30.6	-1.3
LVC	Limon Verde	60.14	137	LR	LR	21 13 23.1	
	comp=Z,70nm,20.3s,baz=256,slow=32						
LVC	Limon Verde	60.14	137	P	P	20 51 33.5	-1.1
LVC	Limon Verde	60.14	137	eP	P	20 51 37.1	+2.5
NPGB	Novo Progresso	60.26	114	eP	P	20 51 34.2	-1.1
TBI	Tubuai	61.55	223	eLR	LR	21 09 34.5	
	comp=Z,268nm,30.8s						
GO02	Mina Guanaco	61.63	140	P	P	20 51 43.8	-0.9
LCO	Las Campanas	63.94	143	P	P	20 51 57.9	-2.2
AC05	El Transito	64.04	143	P	P	20 51 59.7	-0.8
PRPB	Parauapebas	64.52	110	eP	P	20 52 03.4	-0.5
GO04	Tololo Observa	64.80	144	P	P	20 52 04.6	-1.0
CO03	El Pedregal	65.38	145	P	P	20 52 08.0	-1.1
PP1B	Ponte de Pedra	66.61	123	eP	P	20 52 18.7	+1.4
VA03	San Esteban	66.97	146	P	P	20 52 17.4	-1.9
MT02	Curacav	67.06	146	P	P	20 52 18.7	-1.1
BORG	Borgarnes	67.46	28	LR	LR	21 20 02.1	
	comp=Z,174nm,20.4s,baz=276,slow=34						
AQDB	Aquidauana	67.73	126	eP	P	20 52 26.4	+2.1
ARAG	Araguaiana, MT	67.92	120	eP	P	20 52 26.6	+1.0
ROSB	Rosrio	67.96	104	eP	P	20 52 25.1	-0.8
PEXB	Peixe	68.83	114	eP	P	20 52 31.3	0.0
BI02	San Fabin de	69.72	149	P	P	20 52 34.8	-1.7
CPUP	Villa Florida	70.28	132	P	P	20 52 44.6	+4.7
	comp=Z,10nm,1.1s,baz=322,slow=8.1,SNR=4.2						
CPUP	Villa Florida	70.28	132	P	P	20 52 38.4	-1.6
CPUP	Villa Florida	70.28	132	eP	P	20 52 40.3	+0.3
BDFB	Brasilia	70.93	118	P	P	20 52 49.1	+4.7
	comp=Z,5.9nm,0.8s,baz=289,slow=6.8,SNR=6.9						
BDFB				LR	LR	21 24 39.7	
	comp=Z,110nm,21.1s,baz=308,slow=36						
NBPS	Pedro II - PI	71.02	104	eP	P	20 52 44.0	-0.9
SDBA	SAO DESIDERIO	71.83	113	eP	P	20 52 50.4	+0.6
PLCA	Paso Flores	73.33	151	P	P	20 53 03.5	+5.3
	comp=Z,10.0nm,1.0s,baz=326,slow=5.6,SNR=12						
PLCA	Paso Flores	73.33	151	P	P	20 52 56.8	-1.3
PLCA	Paso Flores	73.33	151	eP	P	20 53 03.2	+5.0
TIXI	Tiksi	76.96	344	P	P	20 53 17.4	-1.2
TIXI				IAmb	IAmb	20 53 24.4	
	comp=Z,5.4nm,1.1s						
ESDC	Sonseca Array	85.47	49	P	P	20 54 06.5	+1.9
	comp=Z,0.8nm,0.9s,baz=329,slow=4.8,SNR=2.4						
ESDC				LR	LR	21 30 58.2	
	comp=Z,256nm,19.3s,baz=315,slow=35						
MEM	Membach	86.06	36	dP	P	20 54 05.6	-1.6
NRIK	Noril'sk	86.31	354	LR	LR	21 34 12.2	
	comp=Z,149nm,20.4s,baz=20,slow=37						
GERES	GERESS Array B	91.13	34	LR	LR	21 33 39.6	
	comp=Z,173nm,20.0s,baz=319,slow=34						
USRK	Ussuriysk Ar.	92.56	321	P	P	20 54 41.3	+3.3
	comp=Z,1.4nm,0.8s,baz=100,slow=4.4,SNR=5.4						
MJAR	Matsushiro Arr	93.03	312	P	P	20 54 44.7	+4.3
	comp=Z,1.4nm,0.6s,baz=60,slow=3.8,SNR=5.7						
MJAR				LR	LR	21 31 29.6	
	comp=Z,56nm,19.9s,baz=50,slow=32						
DZM	Mont Dzumac	94.44	248	eLR	LR	21 25 20.2	
	comp=Z,312nm,24.2s						
PMSA	Palmer Station	94.81	162	eP	P	20 54 51.8	+4.2
KEST	Kesra	96.52	46	LR	LR	21 39 42.3	
	comp=Z,96nm,18.0s,baz=290,slow=36						
AKASG	Malin Array Be	96.88	26	LR	LR	21 40 52.0	
	comp=Z,130nm,19.1s,baz=340,slow=37						
DBIC	Dimbokro	99.66	78	LR	LR	21 39 04.3	
	comp=Z,70nm,19.1s,baz=288,slow=35						
WMQ	Urumqi	111.00	348	ePKP	PKiKP	20 59 59.5	-0.6
WRA	Warramunga Arr	121.99	261	PKP	PKiKP	21 00 25.6	+3.7
	comp=Z,0.4nm,0.6s,baz=70,slow=2.0,SNR=6.2						
ASAR	Alice Springs	123.34	257	PKP	PKiKP	21 00 28.0	+3.6
	comp=Z,0.3nm,0.6s,baz=58,slow=1.8,SNR=4.7						
CMAR	Chiang Mai Arr	130.12	325	PKP	PKiKP	21 00 40.0	+1.9
	comp=Z,0.4nm,0.7s,baz=331,slow=2.1,SNR=4.3						

IDC 28 20:53:17.7±8.4**,5°.33S**×**145°.61E,h0^{km},mb3.7**/3**,**
mb1 4.0/5**,mb1mx3.6**/36**,mbtmp3.8**/5**,ML4.1**/1**,MS3.3**/1**,**
Ms1 3.2/1**,ms1mx2.5**/31**,Error ellipse: s-maj=124.1km**
s-min=45.5km az=23.0,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
PMG	Port Moresby	4.33	159	Pn	Pn	20 54 25.0	+0.1
	3.5nm,0.3s,baz=24,slow=10.0,SNR=17						
PMG				Sn	Sn	20 55 10.2	-5.9
	4.3nm,0.3s,baz=213,slow=18,SNR=8.9						
WRA	Warramunga Arr	18.20	216	P	P	20 57 32.5	+0.2
	0.7nm,0.3s,baz=38,slow=12,SNR=14						
ASAR	Alice Springs	21.44	211	P	P	20 58 06.3	-1.4
	1.7nm,0.6s,baz=48,slow=8.7,SNR=21						
FITZ	Fitzroy Crossi	23.27	235	P	P	20 58 27.3	+0.1
	1.0nm,0.5s,baz=57,slow=11,SNR=7.2						
STKA	Stephens Creek	26.68	188	P	P	20 58 59.3	+0.7
	0.8nm,0.4s,baz=0.0,slow=8.1,SNR=3.2						
STKA				LR	LR	21 11 41.6	
	comp=Z,59nm,19.9s,baz=200,slow=41						

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*IDC **28** 21:13:45.1±2.5, 30°.97N×141°.19E, h0^{km}, mb3.6/4,*
mb1 3.6/8, mb1mx3.5/33, mbtmp3.5/8, ML3.1/4, MS2.7/1,
Ms1 2.7/1, ms1mx2.4/34, Error ellipse: s-maj=102.8km
s-min=15.2km az=72.0
*JMA **28** 21:13:45.1±0.4, 31°.58N×142°.06E, h0^{km}, M3.9*
ISC 28 21:13:43.0±1.1**,31°.31N**±0°.06×**142°.2E**±0°.1**,h10^{km},n19,**
σ**1^{s}.48**/26**,mb3.6**/4**,Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
JHJ2	Mitsune	2.72	312	P	Pn	21 14 27.1	+0.3
JHJ	Hachijo jima 2	2.75	312	Pn	Pn	21 14 26.5	-0.6
	7.0nm,0.3s,baz=276,slow=17,SNR=1.6						
JHJ				Sn	Sn	21 14 58.2	-2.2
	14nm,0.3s,baz=72,slow=19,SNR=1.7						
BSO1	Boso 1	3.50	343	P	Pn	21 14 38.1	+1.2
BSO1				eS	Sn	21 15 17.6	-0.5
BSO4	Boso 4	4.00	337	eS	Sn	21 15 30.9	-0.2
JCJ	Chichijima	4.20	180	Pn	Pn	21 14 47.6	+0.5
	2.9nm,0.3s,baz=6.7,slow=17,SNR=1.1						
JCJ				Sn	Sn	21 15 35.4	-0.8

	6.6nm,0.3s,baz=90,slow=22,SNR=1.8						
JOD2	Odawara 2	4.74	327	P	Pn	21 14 55.9	+1.4
JHU	Hanno	5.16	332	P	Pn	21 15 01.5	+1.3
JHU				eS	Sn	21 15 59.0	-0.8
JYT	Yasato	5.19	342	P	Pn	21 15 01.7	+1.0
JYT				eS	Sn	21 15 59.6	-1.0
JRY	Ryogami san	5.45	330	P	Pn	21 15 06.2	+1.8
JRY				eS	Sn	21 16 06.9	-0.3
JHO	Hitachi	5.47	346	P	Pn	21 15 04.7	+0.2
JHO				eS	Sn	21 16 05.1	-2.3
JAG	Ashikaga	5.60	336	P	Pn	21 15 07.4	+1.0
JAG				eS	Sn	21 16 09.5	-1.3
JFK	Kawauchi	6.15	350	eS	Sn	21 16 20.0	-4.3
MJAR	Matsushiro Arr	6.20	329	Pn	Pn	21 15 16.6	+2.0
	0.2nm,0.3s,baz=159,slow=12,SNR=11						
ASAJ	Asahikawa	12.79	1	LR	LR	21 22 55.7	
	comp=Z,36nm,20.6s,baz=42,slow=42						
KLR	Kul'dur	19.57	339	P	Pn	21 18 13.7	+1.4
	0.1nm,0.3s,baz=169,slow=7.2,SNR=4.3						
SONM	Songino Array	31.82	312	P	P	21 20 08.1	+0.1
	0.6nm,0.9s,baz=108,slow=7.8,SNR=4.1						
MKAR	Makanchi Array	47.91	307	P	P	21 22 21.1	-0.3
	0.2nm,0.5s,baz=85,slow=10,SNR=8.3						
WRA	Warramunga Arr	51.52	189	P	P	21 22 48.9	-0.1
	0.7nm,0.6s,baz=5.9,slow=7.6,SNR=12						
ASAR	Alice Springs	55.24	189	P	P	21 23 16.6	+0.2
	0.4nm,0.4s,baz=358,slow=5.2,SNR=20						

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*GCG **28** 22:05:28.5±3.4, 11°.16N×95°.63W, h0^{km}±999^{km}, MD5.0*

*INET **28** 22:06:30.1, 13°.32N×92°.17W, h15^{km}, ML4.0, MW3.9*

*MEX **28** 22:06:30.8±0.9, 13°.69N×92°.01W, h40^{km}, MD5.1*

*SNET **28** 22:06:32.8±1.0, 13°.87N×91°.93W, h56^{km}±24^{km}, ML4.4*

*NEIC **28** 22:06:33.0±2.5, 13°.89N±0°.05×91°.91W±0°.05, h35^{km}±1^{km}, mb4.8/132, Md5.1/23(MEX), Error ellipse: s-maj=9.5km s-min=7.1km az=223.0*

*UCR **28** 22:06:33.9±1.3, 14°.00N×91°.85W, h68^{km}±15^{km}, ML4.2, mb4.8(NEIC)*

*GCMT **28** 22:06:33.0±0.2, 13°.92N±0°.01×92°.21W±0°.02, h27^{km}, MW5.1/98, Moment Tensor Solution. s81,c102; s98,c129; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}5.02±.17; $M_{\theta\theta}$-3.80±.12; $M_{\phi\phi}$-1.21±.13; $M_{r\theta}$1.95±.18; $M_{\theta\phi}$1.94±.08; $M_{\phi r}$-2.00±.23; Best double couple: $M_0$5.66200×10^{16} NP1:ϕ_s291.00000°, δ31.00000°, λ76.00000°. NP2:ϕ_s126.00000°, δ60.00000°, λ98.00000°. Principal axes: T 5.8050, Plg74.0000°, Azm58.0000°; N -0.2760, Plg7.0000°, Azm302.0000°; P -5.5190, Plg14.0000°, Azm210.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*IDC **28** 22:06:38.6±2.5, 14°.09N×91°.48W, h85^{km}±21^{km}, mb4.1/21, mb1 4.3/23, mb1mx4.2/34, mbtmp4.4/23, MS4.2/28, Ms1 4.2/28, ms1mx4.2/40 Error ellipse: s-maj=23.7km s-min=10.2km az=57.0*

ISC 28 22:06:33.7±0.8**, 13°.88N**±0°.04×**91°.98W**±0°.04**, h51**^{km}±7^{km}**, n554,** σ**1^s.51**/556**, mb4.7**/70**, MS4.3**/27**, 1C-4D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTAL	Retalhuleu	0.70	23	⇓iP	Pn	22 06 46.2	-1.4
RTAL				eS	Sn	22 06 57.8	+0.2
RTAL	Retalhuleu	0.70	23		Pn	22 06 46.2	-1.4
RTAL				Sn	Sn	22 06 55.3	-2.3
THIG		1.06	345	eP	Pn	22 06 50.0	-2.3
THIG				eS	Sn	22 07 04.8	-1.2
THIG		1.06	345		Pn	22 06 50.0	-2.3
THIG					Sn	22 07 04.8	-1.2
FUG	Fuego 3	1.24	63	⇓iP	Pn	22 06 53.9	-1.0
PCG	Pacaya	1.42	69	eP	Pn	22 06 56.7	-0.8
HUEH	Huehuetenango	1.50	18	eP	Pn	22 06 58.1	-0.5
HUEH	Huehuetenango	1.50	18		Pn	22 06 58.0	-0.5
HUEH				Sn	Sn	22 07 17.7	+0.5
IXG	Ixpaco	1.52	79	eP	Pn	22 06 57.1	-1.6
NBG	Las Nubes	1.73	66	eP	Pn	22 07 02.4	+0.7
PCIG		2.18	327	eP	Pn	22 07 04.7	-2.8
PCIG				i S	Sn	22 07 31.5	-1.8
PCIG		2.18	327		Pn	22 07 04.7	-2.8
PCIG					Sn	22 07 30.7	-2.6
CEVE	Cerro Verde	2.29	91	eP	Pn	22 07 08.4	-0.8
CEVE				eS	Sn	22 07 36.0	-0.4
CEVE				IAML		22 07 48.5	
	comp=Z,3µm,0.3s						
CEVE	Cerro Verde	2.29	91	eP	Pn	22 07 08.4	-0.8
CEVE				eS	Sn	22 07 36.0	-0.4
CEVE				IAML		22 07 48.5	
	comp=Z,3µm,0.3s						
SBLS	San Blas	2.29	91	eP	Pn	22 07 09.0	-0.3
SBLS	San Blas	2.29	91	eP	Pn	22 07 09.0	-0.3
SNJE	San Jose	2.30	90	eP	Pn	22 07 08.0	-1.4
SNJE	San Jose	2.30	90	eP	Pn	22 07 08.0	-1.4
CCIG	Comitan	2.40	356	eP	Pn	22 07 11.4	+0.7
CCIG				eS	Sn	22 07 42.8	+3.8
CCIG	Comitan	2.40	356		Pn	22 07 11.1	+0.4
JAYA	Jayaque - finc	2.47	95	eP	Pn	22 07 10.3	-1.3
JAYA				eS	Sn	22 07 39.1	-1.6
JAYA				IAML		22 07 42.9	
	comp=Z,2µm,0.2s						
JAYA	Jayaque - finc	2.47	95	eP	Pn	22 07 10.3	-1.3
JAYA				eS	Sn	22 07 39.1	-1.6
JAYA				IAML		22 07 42.9	
	comp=Z,2µm,0.2s						
CEDA	San Andres	2.51	91	eS	Sn	22 07 41.4	-0.2
CEDA				IAML		22 07 55.2	
	comp=Z,2µm,0.5s						
CEDA	San Andres	2.51	91	eS	Sn	22 07 41.4	-0.2
CEDA				IAML		22 07 55.2	
	comp=Z,2µm,0.5s						
MRL	Marmol	2.52	61	⇑eP	Pn	22 07 13.2	+0.7
TACO	Tacachico	2.55	88	⇓iP	Pn	22 07 11.4	-1.2
TACO	Tacachico	2.55	88	⇓iP	Pn	22 07 11.4	-1.2
MTO3	Montecristo	2.59	78	i P	Pn	22 07 12.4	-1.0
MTO3	Montecristo	2.59	78	i P	Pn	22 07 12.4	-1.0
MTO3	Montecristo	2.59	78		Pn	22 07 12.2	-1.2
LALI	Alcalda de L	2.61	98	eP	Pn	22 07 11.9	-1.6
LALI	Alcalda de L	2.61	98	eP	Pn	22 07 11.9	-1.6
BOQS	Boqueron	2.62	93	eP	Pn	22 07 13.3	-0.6
BOQS	Boqueron	2.62	93	eP	Pn	22 07 13.3	-0.6
ESQI	Esquipulas	2.65	75	eP	Pn	22 07 13.3	-0.8
ESQI	Esquipulas	2.65	75		Pn	22 07 13.2	-0.8
UEES	Universidad Ev	2.67	93	IAML		22 07 52.0	
	comp=Z,1µm,0.4s						
UEES	Universidad Ev	2.67	93	IAML		22 07 52.0	
	comp=Z,1µm,0.4s						
SNET	Serv Nac Est T	2.67	94	IAML		22 07 50.2	
	comp=Z,1µm,0.6s						
SNET	Serv Nac Est T	2.67	94	IAML		22 07 50.2	
	comp=Z,1µm,0.6s						
SNET	Serv Nac Est T	2.67	94		Pn	22 07 13.6	-0.8
OPAM	Oficina de Pla	2.71	93	IAML		22 07 53.6	
	comp=Z,1µm,0.3s						
OPAM	Oficina de Pla	2.71	93	IAML		22 07 53.6	
	comp=Z,1µm,0.3s						
LFRS	El Faro	2.84	95	eP	Pn	22 07 15.4	-1.4
LFRS	El Faro	2.84	95	eP	Pn	22 07 15.4	-1.4
LBRS	Las Brisas	2.85	92	eP	Pn	22 07 16.0	-0.9
LBRS	Las Brisas	2.85	92	eP	Pn	22 07 16.0	-0.9
COEG	Centro de Oper	3.02	94	eP	Pn	22 07 18.4	-0.8
COEG	Centro de Oper	3.02	94	eP	Pn	22 07 18.4	-0.8
TGBT	Tuxtla Gutierr	3.08	340	i P	Pn	22 07 17.8	-2.1
TGIG		3.09	339	eP	Pn	22 07 18.9	-1.2
TGIG				i S	Sn	22 07 54.9	-0.9
TGIG		3.09	339		Pn	22 07 19.9	-0.2
TGIG					Sn	22 07 56.7	+0.9
PETF	Flores	3.64	34		Pn	22 07 27.7	0.0
CMIG	Matias Romero	4.25	319	P	Pn	22 07 34.2	-1.7
	comp=Z,16nm,0.3s,baz=150,slow=12,SNR=104						
CMIG				S	Sn	22 08 21.9	-2.4
	comp=Z,144nm,0.3s,baz=112,slow=12,SNR=6.3						
CMIG				LR	LR	22 09 42.0	
	comp=Z,3µm,18.2s,baz=116,slow=41						
CMIG	Matias Romero	4.25	319	eP	Pn	22 07 34.6	-1.3
CMIG				eS	Sn	22 08 20.5	-3.8
CMIG	Matias Romero	4.25	319		Pn	22 07 34.6	-1.3
CMIG					Sn	22 08 20.5	-3.8
CSGN	Cosiguina Volc	4.39	101		Pn	22 07 37.8	-0.2
HUIG	Huatulco	4.42	296	eP	Pn	22 07 35.6	-2.7
HUIG				i S	Sn	22 08 24.3	-4.1
HUIG	Huatulco	4.42	296		Pn	22 07 36.5	-1.7
TGUH	Tegucigalpa,Un	4.57	87	Pn	Pn	22 07 39.8	-0.7
TUIG	Tuzandepetl	4.76	331	eP	Pn	22 07 40.8	-2.1
TUIG				eS	Sn	22 08 39.0	+2.2
TUIG	Tuzandepetl	4.76	331		Pn	22 07 40.8	-2.1
TUIG					Sn	22 08 39.0	+2.2
CRIN	San Cristobal	4.94	103		Pn	22 07 44.9	-0.5
MATN	Matagalpa	5.96	98		Pn	22 07 58.3	-1.3
BOAB	BOACO BROADBAN	6.31	102		Pn	22 08 03.2	-1.0
ACON	Acoyapa	6.90	105		Pn	22 08 11.6	-0.7
GBS3	Finca Las Img	7.08	115	eP	Pn	22 08 16.2	+1.4
LAPC	Finca la Perla	7.10	115	eP	Pn	22 08 15.6	+0.4
BUAI	Buenos Aires	7.14	114	eP	Pn	22 08 17.3	+1.6
SAJU	San Juanillo,	7.21	121	eP	Pn	22 08 17.1	+0.6
TEIG	Tepich	7.24	29	P	Pn	22 08 17.9	+1.0
	comp=Z,54nm,0.3s,baz=243,slow=2.0,SNR=104						
TEIG				S	Sn	22 09 36.4	-1.4
	baz=337,slow=21,SNR=0.8						
TEIG				LR	LR	22 11 38.5	
	comp=Z,3µm,18.5s,baz=218,slow=44						
TEIG	Tepich	7.24	29		Pn	22 08 16.8	-0.2
GUAI	GUAI	7.27	119	eP	Pn	22 08 17.9	+0.5
GUAB	Guayabo de Bag	7.31	115	eP	Pn	22 08 18.2	+0.2
TLIG	Tlapa	7.33	301	Pn	Pn	22 08 19.8	+1.5
GRZA	Playa Garza	7.35	122	eP	Pn	22 08 19.8	+1.3
PLVR	Palo Verde	7.37	118	eP	Pn	22 08 18.5	-0.4
CUI	Cuipilapa	7.39	115	eP	Pn	22 08 19.6	+0.5
INDI	Punta indio, G	7.49	121	eP	Pn	22 08 21.6	+1.2
ESPN	Las Esperanzas	7.67	102		Pn	22 08 22.4	-0.4
JTS	Las Juntas de	7.74	117	P	Pn	22 08 25.6	+1.7
	comp=Z,1.6nm,0.3s,baz=338,slow=6.9,SNR=9.3						
JTS				S	Sn	22 09 56.9	+6.7
	baz=328,slow=13,SNR=1.1						
JTS				LR	LR	22 11 19.3	
	comp=Z,1µm,19.3s,baz=14,slow=38						
JTS	Las Juntas de	7.74	117	eP	Pn	22 08 25.0	+1.1
JTS	Las Juntas de	7.74	117	Pn	Pn	22 08 24.6	+0.7
ARE1	Arenal 1	7.87	115	eP	Pn	22 08 27.0	+1.4
CEDE	Laguna Cedeo	7.87	115	eP	Pn	22 08 27.4	+1.7
LAFE	Finca La Fe, P	8.01	120	eP	Pn	22 08 28.3	+0.7
JACO	JACO, Garabito	8.30	120	eP	Pn	22 08 30.4	-1.1
HDC	Heredia	8.60	116	Pn	Pn	22 08 36.4	+0.6
LCR2	La Lucha 2	8.82	117	eP	Pn	22 08 40.5	+1.6
CVTR	Volcan Turrial	8.91	115	eP	Pn	22 08 40.4	+0.1
RIMA	Rio Macho	8.93	116	eP	Pn	22 08 41.2	+0.8
CDM	Cerro de Muert	9.12	117	eP	Pn	22 08 45.3	+2.1
MRVA	Moravia de Chi	9.27	115	eP	Pn	22 08 46.1	+1.1
PIRO	Carate, Puerto	10.07	122	eP	Pn	22 08 58.1	+2.3
BRU2	Volcan	10.41	118	eP	Pn	22 09 00.7	+0.1
MOIG	Morelia	10.54	304		Pn	22 09 04.2	+1.8
ZAIG	Zacatecas	13.38	313		Pn	22 09 40.8	-0.5
PAYG	Puerto Ayora	14.55	173	Pn	Pn	22 09 56.5	-0.3
061Z	Ochoppi	15.82	39	Pn	Pn	22 10 13.9	+0.7
HKT	Hockley	16.39	348	Pn	Pn	22 10 20.8	+0.6
342A	Flagon Creek P	17.42	359	P	P	22 10 34.2	+0.4
342A				IAmb	IAmb	22 10 36.3	
	comp=Z,44nm,0.8s						
344A	Westbrook Farm	17.53	4	P	P	22 10 36.2	+1.1
344A				IAmb	IAmb	22 10 51.2	
	comp=Z,68nm,1.1s						
435B	Jarrell	17.60	344	P	P	22 10 38.4	+2.6
	baz=162						
435B	Jarrell	17.60	344	P	P	22 10 37.3	+1.4
CBOC	Ciudad Bolivar	17.62	115	eP	Pn	22 10 34.0	-1.9
BRAL	Brewton	17.80	14	P	P	22 10 39.8	+1.9
	baz=196						
PLMC	San Jos del P	17.85	118	eP	Pn	22 10 37.0	-1.7
NATX	Nacogdoches	17.97	353	P	Pn	22 10 40.8	+0.9
	baz=171						
NATX	Nacogdoches	17.97	353	P	Pn	22 10 40.3	+0.4
HPIG		18.24	318		Pn	22 10 44.7	+1.3
SMLC	San Martn de	18.26	104	eP	P	22 10 43.5	+0.2
YOTC	Yotoco, Valle	18.29	121	eP	P	22 10 43.6	-0.1
VBMS	Vicksburg	18.31	4	P	Pn	22 10 44.6	+0.6
	baz=184						
VBMS	Vicksburg	18.31	4	P	Pn	22 10 44.0	+0.1
VBMS				IAmb	IAmb	22 10 51.2	
	comp=Z,36nm,0.8s						
237A	Washetta, Mont	18.38	350		Pn	22 10 46.0	+1.2
GUY2C	Guyana, Caldas	18.49	116	eP	Pn	22 10 47.0	+0.2
RREF	El Recreo	18.66	117	eP	Pn	22 10 49.2	+0.2
352A	Blakely	18.68	19	P	Pn	22 10 48.9	+0.4
352A				IAmb	IAmb	22 10 58.5	
	comp=Z,33nm,0.8s						
PTBC	PUERTO BERRIO,	18.71	111	eP	P	22 10 47.0	-1.2
WHTX	Lake Whitney,	18.72	345	P	Pn	22 10 49.4	+0.5
	baz=163						
WHTX	Lake Whitney,	18.72	345	P	Pn	22 10 49.4	+0.5
BBAC	Balboa, Cauca	18.73	128	eP	Pn	22 10 49.5	0.0
143A	Socs Landing,	18.75	2	P	P	22 10 48.5	+0.1
143A				IAmb	IAmb	22 10 52.0	
	comp=Z,63nm,0.7s						
250A	Grady	18.76	15	P	Pn	22 10 49.1	-0.3
250A				IAmb	IAmb	22 11 02.0	
	comp=Z,80nm,1.4s						
NORC	Norcasia	18.76	114	eP	P	22 10 49.0	+0.2
TXAR	Lajitas Array	18.81	327	P	Pn	22 10 52.0	+1.7
	comp=Z,0.8nm,0.3s,baz=155,slow=13,SNR=84						
TXAR				LR	LR	22 19 28.3	
	comp=Z,342nm,18.3s,baz=0.0,slow=41						
TXAR	Lajitas Array	18.81	327	P	Pn	22 10 51.2	+1.0
TX31	Lajitas Ar. Si	18.81	327	P	Pn	22 10 51.1	+0.8
TX31				IAmb	IAmb	22 10 53.1	
	comp=Z,51nm,0.8s						
ANIL	Santa Ana	18.82	118	eP	P	22 10 49.5	-0.2
TOLC	Tolima	18.84	118	eP	Pn	22 10 51.4	+0.5
POPC	Popayan, Colom	18.85	125	eP	P	22 10 50.2	+0.2
146A	Union	18.86	8	P	P	22 10 49.2	-0.5
146A				IAmb	IAmb	22 10 57.5	
	comp=Z,39nm,0.9s						
OTAV	Otavalo	19.05	134	P	P	22 10 52.7	+0.3
OTAV	Otavalo	19.05	134	eP	P	22 10 47.4	-5.0
TIGA	Tifton	19.10	22	P	Pn	22 10 53.3	-0.3
	baz=205						
OCAC	Ocana	19.14	105	eP	P	22 10 52.8	-0.3
PCON	Cinco Dias	19.20	125	eP	P	22 10 54.6	+0.4
ORTC	Ortega, Tolima	19.25	119	eP	P	22 10 52.4	-1.8
MARP	Paez Belalcaza	19.25	123	eP	P	22 10 54.3	-0.1
Z41A	Richland Creek	19.31	358	P	P	22 10 55.0	+0.4
	baz=177						
SPBC	San Pablo de B	19.43	113	eP	P	22 10 55.4	-0.8
Z38A	Mt. Pleasant	19.49	352	P	Pn	22 10 57.6	-0.5
Z38A				IAmb	IAmb	22 11 03.0	
	comp=Z,43nm,1.0s						
Z47A	Carrollton	19.56	10	P	Pn	22 10 58.6	-0.4
ROSC	El Rosal	19.58	116	P	Pn	22 10 59.5	-0.3
	comp=Z,0.9nm,0.3s,baz=179,slow=1.1,SNR=15						
ROSC				LR	LR	22 19 17.4	
	comp=Z,423nm,19.7s,baz=328,slow=39						
ROSC	El Rosal	19.58	116		P	22 10 58.7	+0.6
ROSC				IAmb	IAmb	22 11 02.2	
	comp=Z,47nm,0.9s						
ROSC	El Rosal	19.58	116	eP	Pn	22 10 59.7	-0.1
SLBS	Sierra La Lagu	19.59	302	P	Pn	22 11 00.5	+1.0
LRAL	Lakeview Retre	19.61	13	P	Pn	22 10 60.0	+0.5
	baz=194,SNR=8.7						
LRAL	Lakeview Retre	19.61	13		Pn	22 10 58.6	-0.9
LRAL				IAmb	IAmb	22 11 13.0	
	comp=Z,34nm,1.0s						
PRAC	Prado	19.66	119	eP	P	22 10 57.8	-0.8
WLAR	White Oak Lake	19.75	357		P	22 10 59.8	+0.4
WLAR				IAmb	IAmb	22 11 13.8	
	comp=Z,58nm,0.9s						
BARC	Barichara	19.85	110	eP	P	22 10 59.9	-1.1
ABTX	Abilene, Hawle	19.93	341	P	Pn	22 11 02.7	-0.8
	baz=158,SNR=11						
ABTX	Abilene, Hawle	19.93	341	P	P	22 11 02.1	+0.7
CCAR	Cane Creek	19.95	1	P	P	22 11 02.2	+0.7
Z35A	Perchaven, San	19.95	347	P	P	22 11 02.2	+0.6
Z35A				IAmb	IAmb	22 11 03.8	
	comp=Z,50nm,0.8s						
PAMC	Pamplona, Colo	20.02	107	eP	P	22 11 00.7	-2.4
Y45A	Yeager Farm, C	20.02	6	P	P	22 11 03.1	+0.8
Y45A				IAmb	IAmb	22 11 15.0	
	comp=Z,39nm,0.8s						
CHIC	Chingaza	20.20	115	eP	Pn	22 11 06.7	-0.4
RUSC	La Rusia	20.22	111	eP	P	22 11 05.5	+0.3
FLOC	Florencia	20.25	126	eP	Pn	22 11 06.7	-0.6
Z51A	Franklin	20.32	17	P	Pn	22 11 07.0	-1.0
Z51A				IAmb	IAmb	22 11 11.0	
	comp=Z,32nm,0.9s						
154A	Montrose	20.34	22	P	P	22 11 05.8	0.0
Y49A	Blount Mountai	20.52	13	P	P	22 11 09.0	+1.2
Y49A				IAmb	IAmb	22 11 22.8	
	comp=Z,35nm,0.8s						
X40A	Basin Creek Fa	20.54	358	P	P	22 11 08.0	+0.1
	baz=178						
X43A	Marvell	20.57	3	P	Pn	22 11 09.7	-1.2
	baz=183						
MIAR	Mount Ida	20.63	356	P	P	22 11 09.6	+0.7
	baz=175,SNR=14						
MIAR	Mount Ida	20.63	356	P	P	22 11 09.3	+0.4
MIAR				IAmb	IAmb	22 11 14.6	
	comp=Z,30nm,0.8s						
OXF	Oxford	20.68	6	P	Pn	22 11 10.9	-1.2
	baz=187						
OXF	Oxford	20.68	6	P	P	22 11 09.4	0.0
OXF				IAmb	IAmb	22 11 23.1	
	comp=Z,85nm,1.2s						
GOGA	Godfrey	20.93	20	P	P	22 11 12.4	+0.2
	baz=204,SNR=8.3						
GOGA	Godfrey	20.93	20	P	P	22 11 12.3	+0.2
GOGA				IAmb	IAmb	22 11 13.5	
	comp=Z,23nm,0.8s						
X48A	Hartselle	20.97	11	P	P	22 11 12.5	0.0
X48A				IAmb	IAmb	22 11 19.5	
	comp=Z,40nm,0.8s						
SC01	Santiago de lo	21.09	72	P	P	22 11 13.5	-0.5
Y52A	Lilburn	21.16	19	P	P	22 11 14.5	-0.1
Y52A				IAmb	IAmb	22 11 19.4	
	comp=Z,25nm,0.8s						
TAMC	Tame, Arauca	21.19	108	eP	P	22 11 07.7	-7.5
W41B	Gary Mavity, V	21.21	359	P	P	22 11 15.3	+0.2
	baz=179						
W39A	Magazine	21.29	356	P	P	22 11 19.5	+3.5
	baz=175						
FPAL	Fort Paine	21.36	15	P	P	22 11 17.5	+0.6
FPAL				IAmb	IAmb	22 11 19.6	
	comp=Z,38nm,0.7s						
MACC	Macarena, Meta	21.38	121	eP	P	22 11 20.6	+3.4
SDV	Santo Domingo	21.50	101	P	P	22 11 16.0	-2.6
	comp=Z,5.6nm,0.6s,baz=299,slow=7.5,SNR=5.7						
SDV				LR	LR	22 20 30.6	
	comp=Z,577nm,20.7s,baz=288,slow=40						
SDV	Santo Domingo	21.50	101	P	P	22 11 16.9	-1.8
SDV	Santo Domingo	21.50	101	eP	P	22 11 16.0	-2.6
SDV	Santo Domingo	21.50	101	eP	P	22 11 16.5	-2.1
MNTX	Cornudas Mount	21.58	328	P	P	22 11 20.8	+1.6
	baz=142,SNR=14						
WMOK	Wichita Mounta	21.66	345	P	P	22 11 19.2	-0.8
	baz=162,SNR=12						
WMOK	Wichita Mounta	21.66	345	P	P	22 11 19.9	-0.2
FCAR	Ozark Folk Cen	21.92	360	P	P	22 11 22.0	-0.8
SWET	Sewanee	21.94	13	P	P	22 11 22.1	-0.9
SWET				IAmb	IAmb	22 11 24.9	
	comp=Z,28nm,0.7s						
NHSC	New Hope	21.95	27	P	P	22 11 23.1	0.0
	baz=212						
HODGE	Hodges	22.10	22	P	P	22 11 23.9	-0.7
HODGE				IAmb	IAmb	22 11 26.8	
	comp=Z,21nm,0.8s						
LCAR	Lake Charles	22.11	2	P	P	22 11 24.2	-0.6
LCAR				IAmb	IAmb	22 11 43.3	
	comp=Z,24nm,0.6s						
TUL1	Leonard	22.21	352	P	P	22 11 24.3	-1.5
	baz=170						
TUL1	Leonard	22.21	352	P	P	22 11 25.2	-0.6
V48A	Smith Brothers	22.26	11	P	P	22 11 25.3	-1.1
V48A				IAmb	IAmb	22 11 27.7	
	comp=Z,28nm,0.7s						
MSTX	Muleshoe	22.27	336	P	P	22 11 26.4	-0.3
	baz=151,SNR=17						
MSTX	Muleshoe	22.27	336	P	P	22 11 26.5	-0.2
MSTX				IAmb	IAmb	22 11 28.9	
	comp=Z,32nm,0.7s						
U40A	Yellville	22.40	358	P	P	22 11 26.9	-1.0
	baz=178						
WVT	Waverly	22.47	9	P	P	22 11 28.1	-0.6
	baz=190						
WVT	Waverly	22.47	9	P	P	22 11 27.6	-1.0
WVT				IAmb	IAmb	22 11 29.7	
	comp=Z,27nm,0.8s						
CPCT	Cooper Cave	22.51	16	P	P	22 11 28.6	-0.4
CPCT				IAmb	IAmb	22 11 48.0	
	comp=Z,23nm,0.7s						
BG3	Lake Jocassee	22.56	20	P	P	22 11 29.5	-0.1
U38A	Gravette	22.57	355	P	P	22 11 30.1	+0.3
AMTX	Amarillo	22.68	339	P	P	22 11 30.8	-0.2
	baz=155						
AMTX	Amarillo	22.68	339	P	P	22 11 30.7	-0.3
PARMO	Parma	22.78	5	P	P	22 11 30.7	-1.2
V51A	Loudon	22.89	16	P	P	22 11 32.9	-0.2
V51A				IAmb	IAmb	22 11 41.5	
	comp=Z,37nm,1.1s						
TKL	Tuckaleechee C	22.91	17	P	P	22 11 32.3	-1.1
	comp=Z,5.7nm,0.6s,baz=185,slow=10.0,SNR=9.5						
TKL				LR	LR	22 21 55.4	
	comp=Z,925nm,18.5s,baz=194,slow=41						
TKL	Tuckaleechee C	22.91	17	P	P	22 11 32.7	-0.6
SRIG	Santa Rosalia	23.16	308	P	P	22 11 36.8	+0.9
U49A	Red Boiling Sp	23.22	13	P	P	22 11 35.8	-0.5
U49A				IAmb	IAmb	22 11 46.0	
	comp=Z,38nm,0.9s						
KMSC	Kings Mountain	23.25	23	P	P	22 11 36.2	-0.5
	baz=207,SNR=5.4						
KMSC	Kings Mountain	23.25	23	P	P	22 11 36.0	-0.7
KMSC				IAmb	IAmb	22 11 37.7	
	comp=Z,24nm,0.8s						
121A	Cookes Peak, D	23.52	325	P	P	22 11 42.0	+2.5
	baz=138,SNR=32						
121A	Cookes Peak, D	23.52	325	P	P	22 11 40.1	+0.6
S39A	Bolivar	23.75	357	P	P	22 11 40.0	-1.3
SIUC	Southern Illin	23.87	5	P	P	22 11 41.6	-0.8
CCM	Cathedral Cave	24.09	1	P	P	22 11 43.0	-1.6
	baz=182						
CCM	Cathedral Cave	24.09	1	P	P	22 11 42.9	-1.6
V56A	Mocksville	24.16	23	P	P	22 11 44.7	-0.4
	baz=208						
Y22D	IRIS PASSCAL I	24.25	329	P	P	22 11 49.9	+3.8
	baz=142						
Y22D	IRIS PASSCAL I	24.25	329	P	P	22 11 48.3	+2.1
U54A	Nelsons Funny	24.32	20	P	P	22 11 46.0	-0.6
	baz=204						
U54A	Nelsons Funny	24.32	20	P	P	22 11 45.6	-1.1
U54A				IAmb	IAmb	22 11 50.3	
	comp=Z,41nm,1.1s						
R40A	Maddies Statio	24.32	359	P	P	22 11 45.6	-0.9
V57A	Coltrane Farms	24.51	24	P	P	22 11 48.2	-0.1
	baz=209						
U56A	King	24.67	23	P	P	22 11 49.2	-0.6
	baz=208						
SLM	Saint Louis	24.71	3	P	P	22 11 49.1	-1.0
ANMO	Albuquerque	24.72	331	P	P	22 11 52.6	+2.1
	comp=Z,20nm,0.7s,baz=144,slow=11,SNR=35						
ANMO				LR	LR	22 23 06.2	
	comp=Z,220nm,18.2s,baz=132,slow=40						
ANMO	Albuquerque	24.72	331	P	P	22 11 52.8	+2.3
	baz=144						
ANMO	Albuquerque	24.72	331	P	P	22 11 52.1	+1.7
ANMO				IAmb	IAmb	22 11 54.7	
	comp=Z,22nm,0.8s						
WCI	Wyandotte Cave	24.77	11	P	P	22 11 49.5	-1.2
	baz=193						
ATAH	Atahualpa	24.85	146	P	P	22 11 53.3	+1.2
	comp=Z,5.0nm,0.8s,baz=298,slow=8.6,SNR=3.7						
ATAH				LR	LR	22 20 22.2	
	comp=Z,770nm,18.6s,baz=311,slow=33						
OLIL	Olney	25.00	7	P	P	22 11 52.6	-0.1
V59A	Middlesex	25.05	27	P	P	22 11 52.1	-1.1
	baz=213						
Q44A	Meyer Farm, Va	25.07	5	P	P	22 11 52.5	-0.8
Q44A				IAmb	IAmb	22 11 54.2	
	comp=Z,30nm,0.8s						
TUC	Tucson	25.14	320	P	P	22 11 56.4	+2.2
	baz=132						
TUC	Tucson	25.14	320	P	P	22 11 55.7	+1.4
W61A	Ground Anchor	25.15	30	P	P	22 11 53.5	-0.7
	baz=216						
U57A	Blanch	25.16	25	P	P	22 11 53.4	-0.7
	baz=210						
SJG	San Juan	25.17	77	LR	LR	22 21 52.2	
	comp=Z,698nm,21.5s,baz=248,slow=37						
KSU1	Kansas State U	25.46	352	P	P	22 11 57.2	+0.3
	baz=169						
KSU1	Kansas State U	25.46	352	P	P	22 11 56.5	-0.3
KSU1				IAmb	IAmb	22 11 58.0	
	comp=Z,26nm,0.7s						
S54A	Dingess, Beckl	25.65	20	P	P	22 11 57.9	-0.8
	baz=204						
T57A	Hurt	25.68	24	P	P	22 11 58.3	-0.6

	baz=209						
T25A	Trinidad	25.69	337	P	P	22 12 02.2	+2.9
	baz=151,SNR=16						
P46A	Rosedale	25.98	8	P	P	22 12 00.5	-1.2
P46A				IAmb	IAmb	22 12 01.3	
	comp=Z,36nm,0.8s						
U60A	Pendleton	26.12	28	P	P	22 12 02.2	-0.7
	baz=214						
Q51A	Peebles	26.19	15	P	P	22 12 02.5	-1.0
Q51A				IAmb	IAmb	22 12 05.5	
	comp=Z,13nm,0.7s						
214A	Organ Pipe Nat	26.22	317	P	P	22 12 06.6	+2.7
	baz=129						
214A	Organ Pipe Nat	26.22	317	P	P	22 12 05.8	+1.8
T59A	Double "B" Far	26.36	27	P	P	22 12 03.9	-1.2
T59A				IAmb	IAmb	22 12 06.1	
	comp=Z,17nm,0.7s						
W18A	Petrified Fore	26.53	326	P	P	22 12 09.8	+2.9
	baz=138						
W18A	Petrified Fore	26.53	326	P	P	22 12 08.3	+1.4
W18A				IAmb	IAmb	22 12 11.9	
	comp=Z,39nm,1.5s						
Q53A	Leroy	26.55	18	P	P	22 12 09.8	+3.1
	baz=203						
SDCO	Great Sand Dun	26.64	336	P	P	22 12 10.2	+2.2
	baz=150,SNR=6.3						
HDIL	Hopedale	26.68	5	P	P	22 12 06.6	-1.3
	baz=186						
S58A	Poland Farm, P	26.69	25	P	P	22 12 07.9	-0.2
	baz=211						
KSCO	Kaye Shedlock’	26.75	341	P	P	22 12 09.1	+0.4
	baz=156						
KSCO	Kaye Shedlock’	26.75	341	P	P	22 12 08.4	-0.3
KSCO				IAmb	IAmb	22 12 10.2	
	comp=Z,16nm,0.8s						
SFIN	Lafayette	26.75	8	P	P	22 12 07.3	-1.3
	baz=190						
R58B	Mineral	27.07	25	P	P	22 12 11.3	-0.1
	baz=211						
S22A	4UR Ranch, Cre	27.20	334	P	P	22 12 15.2	+2.2
	baz=147,SNR=7.4						
R58A	Rapidan	27.30	24	P	P	22 12 13.4	-0.2
	baz=210						
ACSO	Alum Creek Sta	27.42	15	P	P	22 12 13.1	-1.5
	baz=199						
ACSO	Alum Creek Sta	27.42	15	P	P	22 12 12.8	-1.8
Q56A	Snyder Ridge,	27.49	22	P	P	22 12 15.0	-0.3
	baz=208						
MVCO	Mesa Verde	27.52	331	P	P	22 12 18.2	+2.4
	baz=143,SNR=20						
R59A	King George, V	27.58	26	P	P	22 12 16.4	+0.3
	baz=212						
WUAZ	Wupatki	27.73	324	P	P	22 12 20.5	+2.8
	baz=136						
Q58A	Fox Den Farm,	27.98	24	P	P	22 12 19.8	+0.2
	baz=210						
P56A	Dayton Farm, R	28.03	22	P	P	22 12 19.6	-0.4
	baz=208						
PV01	Paradox Valley	28.30	332	P	P	22 12 24.0	+1.2
PV01				IAmb	IAmb	22 12 27.5	
	comp=Z,22nm,1.5s						
P57A	Homestead Farm	28.32	23	P	P	22 12 22.0	-0.6
	baz=209						
P57A	Homestead Farm	28.32	23	P	P	22 12 22.2	-0.5
PDMCI	Parker Dam,Lak	28.57	319	P	P	22 12 27.5	+2.6
	baz=130,SNR=5.8						
O56A	Blue Knob Stat	28.80	22	P	P	22 12 26.2	-0.7
	baz=208						
N54A	Moraine State	28.94	19	P	P	22 12 27.4	-0.8
	baz=204						
BC3	Big Chuckawall	29.02	317	P	P	22 12 32.0	+3.0
	baz=127						
P59A	Jarrettsville	29.06	25	P	P	22 12 28.5	-0.7
	baz=212						
O57A	Amberson	29.09	23	P	P	22 12 28.2	-1.3
	baz=209						
IRM	Iron Mountain	29.12	318	P	P	22 12 32.4	+2.5
	baz=128						
N56A	West Decatur	29.47	21	P	P	22 12 32.3	-0.6
	baz=208						
BELC	Belle Mtn. Jos	29.59	317	P	P	22 12 36.7	+2.6
	baz=127						
PFO	Pinyon Flats O	29.67	316	LR	LR	22 24 47.9	
	comp=Z,399nm,18.6s,baz=124,slow=36						
NNA	Nana	29.76	149	LR	LR	22 22 28.1	
	comp=Z,338nm,19.4s,baz=319,slow=32						
GMRC	Granite Mounta	29.84	318	P	P	22 12 39.2	+2.8
	baz=128						
M56A	Emporium	30.01	21	P	P	22 12 37.3	-0.4
	baz=207						
ECSD	EROS Data Cent	30.02	353	P	P	22 12 38.3	+0.7
	baz=171						
M57A	Sunshine Farm,	30.26	23	P	P	22 12 38.9	-1.0
	baz=209						
M57A	Sunshine Farm,	30.26	23	P	P	22 12 38.6	-1.3
M57A				IAmb	IAmb	22 12 39.6	
	comp=Z,12nm,0.8s						
HEC	Hector,Ludlow	30.31	318	P	P	22 12 43.2	+2.8
	baz=128						
M58A	Price’s Panora	30.55	23	P	P	22 12 41.4	-1.0
	baz=211						
SHPR	Sheep Range	30.63	322	P	P	22 12 44.1	+0.7
L56A	Greenwood	30.81	21	P	P	22 12 43.0	-1.7
	baz=208						
L57A	Andrews Acres	30.94	22	P	P	22 12 44.3	-1.5
	baz=209						
M59A	Waymart	31.09	24	P	P	22 12 47.1	-0.1
	baz=212						
I51A	Listowel	31.27	15	P	P	22 12 46.7	-2.0
	baz=201						
PAL	Palisades	31.29	27	P	P	22 12 47.7	-1.2
	baz=215						
L58A	Harry Jones Me	31.36	23	P	P	22 12 48.3	-1.2
	baz=211						
K56A	Middlesex	31.38	21	P	P	22 12 48.4	-1.3
	baz=208,SNR=8.2						
BINY	Binghamton	31.44	23	P	P	22 12 49.0	-1.2
	baz=211						
GLMI	Grayling	31.48	10	P	P	22 12 49.7	-0.8
	baz=194						
TPNV	Topopah Spring	31.58	321	P	P	22 12 54.9	+3.1
	baz=130						
TPNV	Topopah Spring	31.58	321	P	P	22 12 52.8	+1.0
M61A	Granite Spring	31.60	27	P	P	22 12 50.5	-1.2
	baz=215						
FURC	Furnace Creek,	31.66	320	P	P	22 12 55.4	+3.2
	baz=129						
K57A	Scipio Center	31.70	22	P	P	22 12 50.5	-2.0
	baz=209						
L59A	Walton	31.80	24	P	P	22 12 52.1	-1.3
	baz=212						
MPMC	Manual Prospec	31.80	319	P	P	22 12 56.2	+2.4
	baz=128,SNR=9.4						
RSSD	Black Hills	31.86	343	P	P	22 12 54.7	+0.5
	baz=157						
DUG	Dugway, Tooele	31.95	329	P	P	22 12 57.8	+2.8
	baz=139,SNR=7.4						
DUG	Dugway, Tooele	31.95	329	P	P	22 12 56.3	+1.3
DUG				IAmb	IAmb	22 12 58.8	
	comp=Z,9.1nm,1.1s						
L60A	Shokan	31.96	25	P	P	22 12 53.5	-1.4
	baz=214						
K58A	Earlville	32.05	23	P	P	22 12 54.2	-1.4
	baz=211,SNR=5.1						
J56A	Wolcott	32.05	21	P	P	22 12 54.3	-1.2
	baz=208,SNR=13						
KSCT	Kent School, K	32.06	27	P	P	22 12 54.7	-1.0
KSCT				IAmb	IAmb	22 12 56.4	
	comp=Z,8.7nm,0.8s						
R11A	Troy Canyon, C	32.12	324	P	P	22 12 59.4	+2.9
	baz=133,SNR=11						
CWC	Cottonwood Cre	32.41	319	P	P	22 13 01.7	+2.6
	baz=127						
M63A	Gales Ferry	32.45	29	P	P	22 12 58.1	-1.0
	baz=218						
BW06	Boulder Array	32.54	336	P	P	22 13 03.3	+3.2
	baz=147						
PDAR	Pinedale Array	32.54	336	P	P	22 13 01.4	+1.3
	comp=Z,3.1nm,0.9s,baz=134,slow=11,SNR=8.2						
PDAR				PcP	PcP	22 15 48.0	+2.0
	comp=Z,1.6nm,0.6s,baz=139,slow=5.0,SNR=7.3						
PDAR				LR	LR	22 28 24.2	
	comp=Z,380nm,19.7s,baz=152,slow=40						
H53A	Bobcaygeon	32.66	18	P	P	22 12 59.9	-1.0
	baz=204						
UCCT	U. Connecticut	32.68	28	P	P	22 13 00.3	-0.7
VES	Vestal, Richgr	32.72	317	P	P	22 13 04.9	+3.4
	baz=125						
K61A	Williamstown	32.93	26	P	P	22 13 03.5	+0.3
	baz=215						
J59A	Piesco	33.09	24	P	P	22 13 03.0	-1.6
	baz=212						
I58A	Old Forge	33.10	23	P	P	22 13 03.3	-1.5
	baz=211,SNR=6.2						
BOAV	Boa Vista	33.11	107	*e*P	P	22 13 04.8	-0.4
J60A	Lant Hill Farm	33.33	25	P	P	22 13 05.7	-1.1
	baz=214						
ECR	Eagle Creek	33.53	334	P	P	22 13 09.4	+0.6
G54A	Lake Saint Pet	33.55	18	P	P	22 13 06.8	-1.8
	baz=205						
ELK	Elko	33.61	327	P	P	22 13 11.6	+2.1
ELK				IAmb	IAmb	22 13 14.4	
	comp=Z,10.0nm,0.7s						
H57A	Richville	33.61	22	P	P	22 13 07.9	-1.3
	baz=210						
NV11	Mina Array Sit	33.69	321	P	P	22 13 12.7	+2.5
MDPB	Devils Postpil	33.77	319	P	P	22 13 13.2	+2.2
MDPB				IAmb	IAmb	22 13 15.0	
	comp=Z,10nm,0.9s						
NVAR	Mina Array Bea	33.78	321	P	P	22 13 14.3	+3.3
	comp=Z,13nm,0.6s,baz=134,slow=8.3,SNR=114						
NVAR				PcP	PcP	22 15 51.5	+2.0
	comp=Z,3.0nm,0.7s,baz=132,slow=3.4,SNR=5.9						
NVAR				LR	LR	22 28 54.3	
	comp=Z,782nm,18.1s,baz=129,slow=40						
NVAR	Mina Array Bea	33.78	321	P	P	22 13 13.5	+2.4
J61A	Chester	33.78	26	P	P	22 13 09.4	-1.3
	baz=215						
I60A	Shoreham	33.88	25	P	P	22 13 10.3	-1.3
	baz=214						
H58A	Gabriels	34.02	23	P	P	22 13 10.9	-1.9
	baz=212						
RYN	Ryan	34.04	321	P	P	22 13 15.4	+2.2
RYN				IAmb	IAmb	22 13 17.4	
	comp=Z,12nm,1.1s						
ALGO	Algonquin Park	34.07	17	P	P	22 13 11.4	-1.8
	baz=204						
G57A	Newington	34.31	22	P	P	22 13 13.6	-1.6
	baz=210						
H17A	Grant Village	34.31	336	P	P	22 13 18.0	+2.5
	baz=147						
RLMT	Red Lodge	34.43	338	P	P	22 13 18.2	+1.6
	baz=149,SNR=5.6						
ETMB	Extrema	34.75	131	*e*P	P	22 13 19.1	-0.3
CMB	Columbia Colle	34.84	319	P	P	22 13 21.5	+1.5
PTGA	Pitinga	34.87	112	P	P	22 13 20.6	+0.1
PTGA				IAmb	IAmb	22 13 21.8	
	comp=Z,15nm,0.9s						
PTGA	Pitinga	34.87	112	*e*P	P	22 13 19.5	-1.0
I63A	Otisfield	35.20	27	P	P	22 13 22.2	-0.7
	baz=218						
HLID	Hailey	35.29	331	P	P	22 13 26.0	+2.0
	baz=140,SNR=20						
HLID	Hailey	35.29	331	P	P	22 13 25.0	+1.0
HLID				IAmb	IAmb	22 13 27.2	
	comp=Z,11nm,0.9s						
MACA	Manacapuru-AM	35.35	116	*e*P	P	22 13 23.4	-1.2
BCYI	Bear Canyon	35.42	333	P	P	22 13 27.0	+1.8
E56A	St. Veronique	35.54	20	P	P	22 13 23.2	-2.6
	baz=209						
BOZ	Bozeman (W)	35.72	336	P	P	22 13 29.2	+1.6
	baz=146,SNR=8.4						
BOZ	Bozeman (W)	35.72	336	P	P	22 13 28.8	+1.2
D55A	Sainte-Anne-du	35.81	19	P	P	22 13 27.0	-1.2
	baz=208						
DGMT	Dagmar	35.95	346	P	P	22 13 29.7	+0.4
	baz=159						
G62A	West of Eustis	36.15	26	P	P	22 13 30.1	-1.0
	baz=217						
F60A	Warwick	36.18	24	P	P	22 13 29.6	-1.7
	baz=214						
ULM	Lac du Bonnet	36.41	356	P	P	22 13 32.3	-0.9
	comp=Z,2.4nm,0.8s,baz=163,slow=13,SNR=5.0						
ULM				PcP	PcP	22 15 57.0	+0.4
	comp=Z,7.2nm,0.8s,baz=178,slow=1.9,SNR=9.7						
ULM				LR	LR	22 31 51.7	
	comp=Z,265nm,18.7s,baz=182,slow=42						
ORV	Oroville	36.44	320	P	P	22 13 36.1	+2.4
G63A	Kingsbury	36.46	27	P	P	22 13 32.6	-1.2
	baz=218						
SAML	Samuel	36.48	127	P	P	22 13 33.0	-1.3
SAML	Samuel	36.48	127	*e*P	P	22 13 33.5	-0.8
WVOR	Wild Horse Val	36.61	326	P	P	22 13 37.4	+2.2
WVOR				IAmb	IAmb	22 13 39.5	
	comp=Z,10nm,0.8s						
E60A	Ste Agathe de	36.71	24	P	P	22 13 34.3	-1.5
	baz=215						
PKME	Peaks-Kenny Pk	36.72	27	P	P	22 13 34.6	-1.3
	baz=219						
D58A	Chemin du LacG	36.77	22	P	P	22 13 34.7	-1.6
	baz=212						
G64A	Maxfield	36.95	28	P	P	22 13 35.8	-2.1
	baz=219						
LATQ	La Tuque	37.05	22	P	P	22 13 37.5	-1.2
	baz=212						
O03E	Paynes Creek	37.06	321	P	P	22 13 40.9	+1.9
	baz=127						
EGMT	Eagleton	37.11	340	P	P	22 13 39.8	+0.5
	baz=150						
F63A	Nahmakanta, Br	37.15	27	P	P	22 13 38.8	-0.7
	baz=218						
J08A	Circle Bar Ran	37.16	327	P	P	22 13 42.1	+2.3
LSQQ	Lebel-sur-Quev	37.20	16	P	P	22 13 38.3	-1.6
	baz=204						
D60A	Saint Jean D’O	37.36	24	P	P	22 13 39.9	-1.4
	baz=215						
G65A	Princeton	37.46	29	P	P	22 13 41.1	-1.1
	baz=221,SNR=7.4						
F64A	Sherman	37.61	27	P	P	22 13 42.2	-1.3
	baz=220						
BMO	Blue Mountains	37.64	330	P	P	22 13 44.7	+0.8
BMO				IAmb	IAmb	22 13 46.0	
	comp=Z,14nm,1.2s						
MSO	Missoula	37.66	335	P	P	22 13 45.4	+1.4
	baz=144,SNR=5.5						
MATQ	Matagami	37.66	15	P	P	22 13 41.8	-2.1
	baz=203,SNR=5.9						
D61A	St Aubert, Com	37.89	24	P	P	22 13 44.3	-1.4
	baz=216						
M04C	Macdoel	37.99	323	P	P	22 13 50.0	+3.0
	baz=128						
E63A	Oxbow	38.01	27	P	P	22 13 45.1	-1.7
	baz=219						
LPAZ	La Paz	38.13	141	P	P	22 13 49.2	+0.3
	comp=Z,2.1nm,0.6s,baz=326,slow=8.4,SNR=11						
LPAZ				LR	LR	22 29 09.7	
	comp=Z,278nm,20.2s,baz=324,slow=36						
LPAZ	La Paz	38.13	141	P	P	22 13 48.2	-0.6
LPAZ	La Paz	38.13	141	*e*P	P	22 13 47.8	-1.1
D62A	Allapoint, All	38.26	25	P	P	22 13 47.5	-1.4
	baz=218						
E64A	Bridgewater	38.26	27	P	P	22 13 47.5	-1.4
	baz=220,SNR=5.3						
L04D	Klamath Falls	38.53	323	P	P	22 13 52.8	+1.3
	baz=128						
J05D	Fort Rock, OR	38.60	325	P	P	22 13 55.9	+3.9
	baz=130						
D63A	Stockholm	38.62	26	P	P	22 13 50.7	-1.3
	baz=219,SNR=6.3						
J04D	Umpqua Nationa	39.06	324	P	P	22 13 58.5	+2.6
	baz=129						
E09A	Wood Farm, Sta	39.26	331	P	P	22 13 57.4	+0.1
I05D	Terrebonne, OR	39.34	326	P	P	22 14 01.2	+3.0
	baz=131						
I04A	Tendick Farm,	39.58	325	P	P	22 14 01.7	+1.6
	baz=130						
BATG	Bathurst New B	39.71	28	P	P	22 13 59.7	-1.4
BATG				IAmb	IAmb	22 14 01.0	
	comp=Z,10nm,0.9s						
G05D	Wamic, OR	39.93	327	P	P	22 14 06.0	+3.0
	baz=132,SNR=7.3						
H04A	Detroit Lake	40.03	326	P	P	22 14 04.9	+1.1
I03D	Drain, OR	40.05	324	P	P	22 14 06.3	+2.4
	baz=128						
J01E	Myrtle Point	40.06	323	P	P	22 14 06.3	+2.3
	baz=127						
H04D	Lebanon	40.23	325	P	P	22 14 06.8	+1.4
	baz=130,SNR=6.6						
ITTB	Itaituba	40.27	114	*e*P	P	22 14 05.2	-1.0
F05D	White Salmon	40.44	328	P	P	22 14 10.4	+3.2
	baz=132,SNR=5.5						
MALB	Monte Alegre	40.51	110	*e*P	P	22 14 07.2	-1.0
I02D	Swisshome	40.58	324	P	P	22 14 10.3	+2.0
	baz=128						
G03D	McMinnville, O	40.95	326	P	P	22 14 13.4	+2.0
	baz=130						
F04D	Rainier, OR	41.38	327	P	P	22 14 17.1	+2.2
	baz=131						
E04D	Cinebar	41.46	328	P	P	22 14 17.5	+2.0
	baz=132						
NPGB	Novo Progresso	41.87	117	*e*P	P	22 14 17.3	-2.0
D03D	Eldon	42.38	329	P	P	22 14 24.6	+1.6
	baz=132						
NLWA	Neilton Lookou	42.68	328	P	P	22 14 27.4	+1.9
NLWA				IAmb	IAmb	22 14 29.7	
	comp=Z,20nm,0.8s						
PRPB	Parauapebas	46.34	113	*e*P	P	22 14 54.7	-0.4
SNDB	Serra Nova Dou	47.81	121	*e*P	P	22 15 06.2	-0.4
H03N2	Juan Fernandez	48.67	165	T	T	23 07 46.1	
	baz=347,slow=76,SNR=4.5						
H03N1	Juan Fernandez	48.68	165	T	T	23 07 45.9	
	baz=347,slow=76,SNR=6.1						
H03N3	Juan Fernandez	48.69	165	T	T	23 07 34.0	
	baz=347,slow=76,SNR=8.3						
SMTB	Santa Maria do	49.51	115	*e*P	P	22 15 19.1	-0.6
ROSB	Rosrio	50.29	106	*e*P	P	22 15 24.8	-0.7
YKA	Yellowknife Ar	51.15	347	P	P	22 15 31.0	-0.3
	comp=Z,7.4nm,0.6s,baz=145,slow=8.0,SNR=97						
YKA				PcP	PcP	22 16 47.2	+1.0
	comp=Z,6.4nm,0.8s,baz=141,slow=4.3,SNR=22						
CRAG	Craig	52.24	332	P	P	22 15 42.8	+3.3
	baz=126						
CPUP	Villa Florida	52.27	140	P	P	22 15 39.2	-1.0
	comp=Z,0.7nm,0.3s,baz=309,slow=8.2,SNR=7.9						
CPUP				LR	LR	22 39 22.3	
	comp=Z,282nm,18.6s,baz=328,slow=38						
CPUP	Villa Florida	52.27	140	P	P	22 15 38.7	-1.5
BDFB	Brasilia	52.44	122	P	P	22 15 40.7	-1.0
	comp=Z,2.5nm,0.8s,baz=246,slow=6.1,SNR=3.9						
TAOE	Nuku Hiva Isla	52.87	247	*e*T	T	23 12 25.5	
	comp=Z,34nm,0.2s						
BI02	San Fabin de	53.93	159	P	P	22 15 52.9	+0.6
BI02				IAmb	IAmb	22 15 56.3	
	comp=Z,12nm,1.4s						
HYT	Haines Junctio	57.24	335	P	P	22 16 17.6	+1.8
HYT				IAmb	IAmb	22 16 18.7	
	comp=Z,7.2nm,1.1s						
PLCA	Paso Flores	57.85	161	P	P	22 16 21.2	+0.9
	comp=Z,1.6nm,0.8s,baz=211,slow=7.7,SNR=2.2						
PLCA				LR	LR	22 36 34.9	
	comp=Z,360nm,18.4s,baz=356,slow=31						
PLCA	Paso Flores	57.85	161	P	P	22 16 21.4	+1.1
PLCA				IAmb	IAmb	22 16 39.8	
	comp=Z,9.0nm,1.4s						
PINM	Pinnacle	57.99	334	P	P	22 16 23.2	+2.1
	baz=121,SNR=5.6						
NBLI	Livramento-PB	58.55	108	*e*P	P	22 16 26.1	+0.4
YAH	Yahtse	58.76	334	P	P	22 16 28.4	+1.8
YAH				IAmb	IAmb	22 16 30.5	
	comp=Z,12nm,0.9s						
CTG	Chitna Glacier	58.90	334	P	P	22 16 30.2	+2.7
	baz=121						
RCBR	Riachuelo	58.99	106	P	P	22 16 28.6	-0.1
BALM	Baldy	59.35	334	P	P	22 16 31.7	+1.2
BALM				IAmb	IAmb	22 16 33.9	
	comp=Z,12nm,1.0s						
CRQE	Cirque	59.54	334	P	P	22 16 34.0	+2.2
	baz=119						
NBPV	Pedro Velho	59.76	106	*e*P	P	22 16 34.2	+0.2
MCARA	McCarthy VSAT	59.81	334	P	P	22 16 35.6	+2.0
	baz=119,SNR=10						
MCARA	McCarthy VSAT	59.81	334	P	P	22 16 35.2	+1.6
RAGM	Ragged Mountai	60.06	333	P	P	22 16 36.9	+1.6
BCAR	Beaver Creek A	60.16	336	P	P	22 16 36.8	+0.8
BMRM	Bremner River	60.29	333	P	P	22 16 39.0	+2.1
	baz=117,SNR=8.5						
N25K	Chitina, Valde	60.58	334	P	P	22 16 41.4	+2.4
	baz=118,SNR=15						
EYAK	Cordova Ski Ar	60.60	333	P	P	22 16 41.2	+2.3
	baz=116,SNR=9.1						
EYAK	Cordova Ski Ar	60.60	333	P	P	22 16 40.9	+1.9
NBRF	Rio Formoso -	60.70	108	*e*P	P	22 16 40.2	-0.2
EGAK	Eagle	60.83	338	P	P	22 16 41.2	+0.8
	baz=123,SNR=9.6						
EGAK	Eagle	60.83	338	P	P	22 16 40.9	+0.4
KLU	Klutina	61.10	334	P	P	22 16 44.5	+2.1
	baz=116						
KLU	Klutina	61.10	334	P	P	22 16 44.2	+1.8
SCRK	Sand Creek	61.47	337	P	P	22 16 46.3	+1.3
	baz=119,SNR=7.4						
M24K	Tolsona, Glenn	61.48	334	P	P	22 16 47.5	+2.5
	baz=116						
PAX	Paxson	61.58	335	P	P	22 16 46.9	+1.2
	baz=117,SNR=13						
PAX	Paxson	61.58	335	P	P	22 16 46.5	+0.9
PAX				IAmb	IAmb	22 16 48.0	
	comp=Z,11nm,0.8s						
SEW	Seward	62.11	331	P	P	22 16 50.4	+1.3
	baz=112						
SML	Sawmill	62.27	333	P	P	22 16 52.5	+2.2
	baz=114,SNR=6.1						
BRSE	Bradley Lake S	62.58	331	P	P	22 16 54.1	+1.7
	baz=111						
RC01	Rabbit Creek A	62.61	332	P	P	22 16 54.1	+1.6
	baz=112,SNR=5.4						
PRP	Porcupine Dome	62.80	338	P	P	22 16 55.1	+1.2
	baz=118						
PRP	Porcupine Dome	62.80	338	P	P	22 16 54.8	+0.9
HDA	Harding Lake	62.82	336	P	P	22 16 54.9	+1.1
	baz=117						
KDAK	Kodiak Island	62.83	328	P	P	22 16 55.7	+1.7
	baz=108						
IL31		62.96	337	P	P	22 16 55.3	+0.6
ILAR	Eielson Array	62.96	337	P	P	22 16 55.5	+0.7
	comp=Z,11nm,0.8s,baz=117,slow=5.3,SNR=104						
ILAR				PcP	PcP	22 17 33.2	+0.8
	comp=Z,1.7nm,0.7s,baz=148,slow=1.6,SNR=6.8						
ILAR				LR	LR	22 46 23.1	
	comp=Z,274nm,20.9s,baz=133,slow=38						
ILAR	Eielson Array	62.96	337	P	P	22 16 55.1	+0.3
OHAK	Old Harbor	63.03	328	P	P	22 16 56.8	+1.5
	baz=107						
RND	Reindeer	63.15	335	P	P	22 16 58.0	+1.9
SUA	Susitna One	63.20	333	P	P	22 16 57.9	+1.3
	baz=112,SNR=9.6						
MCK	McKinley	63.32	335	P	P	22 16 58.4	+1.2
	baz=114,SNR=8.7						
POKR	Poker Plat Res	63.33	337	P	P	22 16 58.4	+1.2
	baz=116,SNR=12						
POKR	Poker Plat Res	63.33	337	P	P	22 16 57.9	+0.7
CUT	Chulitna	63.35	334	P	P	22 16 58.9	+1.5
	baz=112,SNR=6.0						
COLA	College	63.38	337	P	P	22 16 58.8	+1.3
	baz=116						
COLA	College	63.38	337	P	P	22 16 58.1	+0.6
TCOL	CIGO, UAF Yank	63.38	337	P	P	22 16 58.7	+1.2
	baz=116						
BMAR	Burnt Mountain	63.41	340	P	P	22 16 59.1	+1.4
NEA2	Nenana	63.73	336	P	P	22 17 01.0	+1.1
	baz=114,SNR=11						
SKT	Skwentna	63.74	333	P	P	22 17 01.3	+1.3
	baz=111,SNR=9.1						
TRF	Thorofare Moun	63.76	335	P	P	22 17 01.6	+1.3
	baz=113,SNR=12						
TRF	Thorofare Moun	63.76	335	P	P	22 17 01.3	+1.0
RSO	Redoubt South	63.77	331	P	P	22 17 01.5	+1.0
I23K	Minto, Yukon-K	64.07	337	P	P	22 17 03.4	+1.4
	baz=114,SNR=33						
ICESG	Greenland Ices	64.18	18	*i* P	P	22 17 00.7	-2.5
ICESG				IAmb	IAmb	22 17 02.0	
	comp=Z,21nm,0.7s						
BPAW	Bear Paw Mtn.	64.30	335	P	P	22 17 04.5	+0.9
	baz=112						
PPLA	Purkeypile	64.35	334	P	P	22 17 05.1	+0.9
	baz=111						
MLY	Manley	64.56	336	P	P	22 17 06.7	+1.4
	baz=113,SNR=39						
CHUM	Lake Minchumin	64.76	335	P	P	22 17 07.9	+1.3
	baz=111						
PPT	Papeete	64.85	243	LR	LR	22 39 01.7	
	comp=Z,245nm,20.7s,baz=27,slow=30						
PPT2	Papeete2	64.86	243	*e*LR	LR	22 36 28.9	
	comp=Z,360nm,24.5s						
COLD	Coldfoot	65.25	339	P	P	22 17 11.8	+2.1
	baz=115,SNR=23						
COLD	Coldfoot	65.25	339	P	P	22 17 11.1	+1.4
COLD				IAmb	IAmb	22 17 12.3	
	comp=Z,13nm,0.8s						
CHGN	Chignik	65.53	326	P	P	22 17 13.2	+1.6
	baz=102						
TOLK	Toolik Lake Re	65.64	340	P	P	22 17 13.8	+1.5
	baz=116,SNR=31						

TTA	Tatalina	66.02	333	P	P	22 17 15.2	+0.3
	baz=107,SNR=8.6						
EUNU	Eureka	66.25	1	P	P	22 17 15.4	-0.7
SUMG	Summit	66.35	15	*i* P	P	22 17 15.8	-1.4
	comp=Z,7.3nm,0.8s						
SUMG	Summit	66.35	15	P	P	22 17 15.7	-1.4
SUMG				IAmb	IAmb	22 17 22.3	
	comp=Z,6.1nm,1.1s						
SUMG	Summit	66.35	15	*i* P	P	22 17 15.8	-1.4
SUMG				IAmb	IAmb	22 17 16.4	
	comp=Z,7.3nm,0.8s						
TBI	Tubuai	67.30	237	*e*LR	LR	22 37 53.1	
	comp=Z,369nm,26.2s						
A21K	Barrow	68.92	342	P	P	22 17 34.0	+1.1
	baz=110						
RDOG	Red Dog Mine	70.12	338	P	P	22 17 41.7	+1.3
	baz=102						
ANM	Nome	70.44	334	P	P	22 17 44.1	+1.7
	baz=99						
DAG	Danmarks Havn	72.78	13	*i* P	P	22 17 54.6	-1.6
	comp=Z,10nm,0.7s						
DAG	Danmarks Havn	72.78	13	*i* P	P	22 17 54.7	-1.6
DAG				IAmb	IAmb	22 17 55.3	
	comp=Z,10nm,0.7s						
ESK	Eskdalemuir	78.03	36	P	P	22 18 24.6	-2.1
ESK				IAmb	IAmb	22 18 26.4	
	comp=Z,16nm,1.0s						
ESDC	Sonseca Array	79.78	52	P	P	22 18 34.2	-2.6
	comp=Z,1.9nm,0.9s,baz=273,slow=5.4,SNR=11						
ESDC				LR	LR	22 51 12.7	
	comp=Z,119nm,18.5s,baz=335,slow=34						
ESDC	Sonseca Array	79.78	52	P	P	22 18 34.9	-1.9
SPA0	Spitsbergen Ar	80.20	11	P	P	22 18 37.5	-0.8
NB2	NORSAR Subarra	84.24	28	P	P	22 18 59.5	-0.2
	comp=Z,1.3nm,0.7s,baz=289,slow=5.6						
NOA	NORSAR Array B	84.24	28	P	P	22 18 59.3	-0.4
	comp=Z,2.5nm,0.9s,baz=289,slow=5.3,SNR=6.1						
NOA				LR	LR	22 57 34.1	
	comp=Z,132nm,18.3s,baz=270,slow=36						
KOWA	Kowa	84.68	76	P	P	22 19 01.4	-1.4
KOWA				IAmb	IAmb	22 19 05.9	
	comp=Z,12nm,1.4s						
DBIC	Dimbokro	85.64	84	P	P	22 19 06.8	-0.8
	comp=Z,1.0nm,0.5s,baz=214,slow=5.3,SNR=4.3						
DBIC	Dimbokro	85.64	84	P	P	22 19 06.5	-1.1
DBIC				IAmb	IAmb	22 19 07.3	
	comp=Z,8.3nm,1.4s						
ARCES	ARCESS Array B	86.25	18	P	P	22 19 08.4	-1.2
	comp=Z,5.2nm,1.1s,baz=316,slow=8.5,SNR=5.5						
ARCES				LR	LR	22 56 53.9	
	comp=Z,216nm,22.0s,baz=300,slow=35						
ARCES	ARCESS Array B	86.25	18	P	P	22 19 08.3	-1.3
TUE	Stuetta	87.68	43	P	P	22 19 16.3	-1.0
TUE				IAmb	IAmb	22 19 19.7	
	comp=Z,7.2nm,0.8s						
DAVA	Damuels	87.78	42	*i* P	P	22 19 16.9	-0.8
	comp=Z,4.9nm,0.8s						
FETA	Feichten	88.42	42	*e*P	P	22 19 19.9	-0.7
	comp=Z,3.8nm,0.9s						
MOTA	Moosalm	88.55	41	*i* P	P	22 19 20.4	-0.9
	comp=Z,3.0nm,0.8s						
GERES	GERESS Array B	89.68	39	P	P	22 19 24.4	-2.1
	comp=Z,0.7nm,0.7s,baz=325,slow=2.1,SNR=5.7						
GERES				LR	LR	22 59 06.7	
	comp=Z,134nm,18.4s,baz=311,slow=35						
GERES	GERESS Array B	89.68	39	P	P	22 19 25.4	-1.1
KBA	Koelnbreinsper	90.08	41	*i* P	P	22 19 26.5	-2.0
	comp=Z,4.1nm,1.2s						
TIXI	Tiksi	90.38	348	P	P	22 19 28.9	-0.2
TORD	Torodi Ar. Bea	90.39	76	P	P	22 19 29.0	-1.3
	comp=Z,1.0nm,1.0s,baz=293,slow=6.5,SNR=1.6						
TORD				LR	LR	22 57 19.4	
	comp=Z,98nm,21.1s,baz=230,slow=34						
FINES	FINESS Array B	90.60	25	P	P	22 19 29.4	-0.9
	comp=Z,2.0nm,0.9s,baz=342,slow=4.2,SNR=4.0						
FINES				LR	LR	23 02 12.1	
	comp=Z,145nm,18.4s,baz=282,slow=37						
PETK	Petropavlovsk-	90.76	326	P	P	22 19 33.2	+1.9
	comp=Z,3.5nm,0.9s,baz=70,slow=4.7,SNR=1.6						
MA2	Magadan	91.22	333	LR	LR	23 05 00.5	
	comp=Z,48nm,20.1s,baz=50,slow=38						
MA2	Magadan	91.22	333	P	P	22 19 34.1	+0.9
NRIK	Noril'sk	97.00	0	LR	LR	23 08 10.9	
	comp=Z,327nm,18.2s,baz=356,slow=38						
DZM	Mont Dzumac	105.66	251	*e*LR	LR	22 55 32.3	
	comp=Z,150nm,27.3s						
SONM	Songino Array	116.42	346	PKP	PKPdf	22 25 12.9	+0.8
	comp=Z,1.0nm,0.7s,baz=42,slow=0.7,SNR=11						
SONM	Songino Array	116.42	346		PKPdf	22 25 12.5	+0.4
KSRS	Korea Array	116.65	325	PKP	PKiKP	22 25 14.2	+1.5
	comp=Z,2.0nm,1.0s,baz=43,slow=1.6,SNR=4.9						
MKAR	Makanchi Array	119.39	5	PKP	PKPdf	22 25 17.5	-0.2
	comp=Z,0.6nm,0.8s,baz=5.2,slow=2.0,SNR=8.8						
MKAR	Makanchi Array	119.39	5		PKPdf	22 25 17.2	-0.6
BOSA	Boshof	120.28	115	PKP	PKiKP	22 25 20.4	+0.3
	comp=Z,2.7nm,0.8s,baz=275,slow=3.6,SNR=5.7						
BOSA	Boshof	120.28	115		PKiKP	22 25 21.5	+1.4
GEYT	Alibeck	121.32	27	PKP	PKiKP	22 25 22.4	+0.5
	comp=Z,1.7nm,0.6s,baz=262,slow=4.3,SNR=3.9						
HHC	Hu-ho-hao-te	121.34	339	*e*PKP	PKiKP	22 25 23.0	+1.1
WMQ	Urumqi	122.58	0	*e*PKP	PKiKP	22 25 25.0	+0.8
NJ2	Nanjing	125.61	328	*e*PKP	PKiKP	22 25 30.8	+0.4
KSH	Kashi	125.71	11	PKP	PKiKP	22 25 32.0	+1.4
KSH				sPKP		22 25 48.0	
KSH				AMB	AMB		
	comp=Z,100nm,4.5s						
GTA	Gaotai	125.86	349	PKP	PKiKP	22 25 31.8	+0.9
GTA				sPKP		22 25 47.0	
GTA				LR	LR		
	comp=Z,110nm,16.7s						
GTA				LR	LR		
	comp=Z,96nm,17.4s						
STKA	Stephens Creek	128.02	240	PKP	PKiKP	22 25 35.5	+0.4
	comp=Z,2.9nm,0.7s,baz=72,slow=4.9,SNR=5.5						
STKA	Stephens Creek	128.02	240		PKiKP	22 25 35.7	+0.6
XAN	Xi'an	128.36	338	PKP	PKiKP	22 25 38.0	+2.1
WRA	Warramunga Arr	135.38	256	PKP	PKiKP	22 25 49.8	-0.6
	comp=Z,0.8nm,0.8s,baz=88,slow=2.1,SNR=8.4						
ASAR	Alice Springs	135.65	250	PKP	PKPdf	22 25 48.6	-0.6
	comp=Z,0.6nm,0.7s,baz=77,slow=1.8,SNR=6.8						
CMAR	Chiang Mai Arr	146.12	341	PKPbc	PKPab	22 26 09.8	0.0
	comp=Z,28nm,0.7s,baz=334,slow=3.5,SNR=103						
CMAR	Chiang Mai Arr	146.12	341	PKPdf	PKPab	22 26 09.5	-0.2
HYB	Hyderabad	147.53	17	*i* PKP	PKPbc	22 26 13.0	-0.2

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*TUL **28** 22:06:53.5±1.4, 36.°84N±0.°02×97.°88W±0.°03, h3^{km}±7^{km}, ML2.8, mb_Lg2.9/69(NEIC), Error ellipse: s-maj=3.6km s-min=2.3km az=73.0*

NEIC 28 22:06:53.7±1.3**, 36.°79N**±0.°02×**97.°87W**±0.°03**, h2**^{km}±7^{km}**, Error ellipse: s-maj=3.4km s-min=2.5km az=75.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAN14	Manchester OK	0.18	337	Pg	Pg	22 06 56.9	-0.4
KAN14				Sg	Sg	22 06 59.1	-0.5
CROK	Carrier	0.30	197		Pg	22 07 00.6	+1.1
KAN05	Bluff City Nor	0.32	0		Pg	22 06 59.3	-0.5
KAN01	Argonia South	0.37	14		Pg	22 07 00.4	-0.5
KAN10	Anthony SW Sta	0.38	332		Pg	22 07 00.6	-0.4
KAN10				Sg	Sg	22 07 05.4	-0.4
KAN13	South Haven SW	0.39	55		Pg	22 07 01.0	-0.2
KAN13				Sg	Sg	22 07 06.1	-0.1
KAN08	Anthony NE Sta	0.44	350		Pg	22 07 01.7	-0.5
KAN08				Sg	Sg	22 07 07.4	-0.5
KAN12	Harper NE Stat	0.51	349		Pg	22 07 03.0	-0.6
U32A	Winter Ranch,	1.00	246		Pg	22 07 12.9	+0.1
T35A	Sooner Cattle	1.10	83		Pg	22 07 14.2	-0.6
QUOK	Quay	1.12	123	Pg	Pg	22 07 15.3	0.0
BCOK	Bluff Creek, N	1.15	169		Pg	22 07 15.8	0.0
OK031	S. Brethren Rd	1.18	135		Pg	22 07 16.4	+0.1
OK025	Westminster Rd	1.28	160		Pb	22 07 18.4	-0.1
OKCFA	Oklahoma City	1.42	166		Pb	22 07 20.7	-0.1
OKCSW	OKLAHOMA CITY	1.43	166		Pn	22 07 20.8	+0.2
FNO	Franklin	1.58	166	Pn	Pb	22 07 23.6	0.0
R32A	Long Quarter,	1.76	338		Pn	22 07 24.9	-0.4
TUL1	Leonard	1.90	117		Pn	22 07 27.9	+0.8
TUL1				IAmb_Lg		22 07 54.5	
	comp=Z,47nm,0.7s						
WMOK	Wichita Mounta	2.18	200	Pn	Pn	22 07 31.9	+0.9
CBKS	Cedar Bluff	2.50	324	Pn	Pn	22 07 36.0	+0.6
KSU1	Kansas State U	2.51	23		Pn	22 07 35.1	-0.5
KSU1				IAmb_Lg		22 08 12.4	
	comp=Z,38nm,0.9s						
U38A	Gravette	2.83	96		Pn	22 07 41.5	+1.6
X37A	Clayton	3.00	136		Pn	22 07 43.7	+1.5
X37A				IAmb_Lg		22 08 34.5	
	comp=Z,25nm,0.7s						
HHAR	Hobbs	3.21	98		Pn	22 07 45.6	+0.4
W39A	Magazine	3.68	114	IAmb_Lg		22 08 57.3	
	comp=Z,24nm,0.9s						
S39A	Bolivar	3.74	75	Pn	Pn	22 07 52.8	+0.3
MIAR	Mount Ida	4.16	121		Pn	22 08 00.1	+2.0
MIAR				IAmb_Lg		22 09 08.8	
	comp=Z,17nm,1.0s						
Z38A	Mt. Pleasant	4.25	145	IAmb_Lg		22 09 13.7	
	comp=Z,27nm,0.8s						
KSCO	Kaye Shedlock'	4.36	302	IAmb_Lg		22 09 15.5	
	comp=Z,26nm,0.7s						
P38A	Dawn	4.44	49	IAmb_Lg		22 09 15.6	
	comp=Z,30nm,0.7s						
MGMO	Mountain Grove	4.50	84	Pn	Pn	22 08 03.9	+1.0
MGMO				IAmb_Lg		22 09 15.8	
	comp=Z,19nm,0.8s						
BGNE	Belgrade	4.62	357	IAmb_Lg		22 09 31.2	
	comp=Z,19nm,0.7s						
R40A	Maddies Statio	4.70	70	IAmb_Lg		22 09 22.0	
	comp=Z,17nm,0.8s						
X40A	Basin Creek Fa	4.70	118		Pn	22 08 06.3	+0.6
WHAR	Wooly Hollow	4.77	107	Pn	Pn	22 08 08.2	+1.6
WHTX	Lake Whitney,	4.80	176	Pn	Pn	22 08 07.1	+0.1
L34A	Svendsen Farm,	5.30	12	IAmb_Lg		22 09 52.5	
	comp=Z,26nm,1.0s						
P40A	Paris	5.34	57	IAmb_Lg		22 09 44.1	
	comp=Z,16nm,0.8s						
N38A	Joes South For	5.39	41	IAmb_Lg		22 09 44.0	
	comp=Z,19nm,0.8s						
LCAR	Lake Charles	5.47	96	IAmb_Lg		22 09 45.0	
	comp=Z,17nm,1.3s						
K31A	O'Neill	5.86	354	IAmb_Lg		22 10 12.2	
	comp=Z,20nm,0.7s						
PBMO	Poplar Bluff	5.97	88	IAmb_Lg		22 10 13.2	
	comp=Z,14nm,1.0s						
FVM	French Village	6.05	76	IAmb_Lg		22 10 03.3	
	comp=Z,12nm,0.8s						
SCIA	State Center	6.25	34	IAmb_Lg		22 10 21.1	
	comp=Z,16nm,0.8s						
SLM	Saint Louis	6.33	71	IAmb_Lg		22 10 18.8	
	comp=Z,12nm,0.8s						
JCT	Junction City	6.50	195	IAmb_Lg		22 10 38.0	
	comp=Z,16nm,1.2s						
PARMO	Parma	6.53	89	IAmb_Lg		22 10 24.3	
	comp=Z,23nm,0.8s						
N41A	Harden Midland	6.74	52	IAmb_Lg		22 10 38.8	
	comp=Z,20nm,0.7s						
S44A	Carbondale	6.93	80	IAmb_Lg		22 10 44.3	
	comp=Z,20nm,1.0s						
SIUC	Southern Illin	6.97	80	IAmb_Lg		22 10 33.5	
	comp=Z,20nm,1.0s						
P43A	Skaggs, Pawnee	7.16	64	IAmb_Lg		22 10 43.6	
	comp=Z,15nm,0.7s						
Y45A	Yeager Farm, C	7.41	111	IAmb_Lg		22 11 05.6	
	comp=Z,42nm,0.9s						
HDIL	Hopedale	7.69	58	IAmb_Lg		22 10 60.0	
	comp=Z,20nm,0.8s						
PLAL	Pickwick Lake	8.15	100	IAmb_Lg		22 11 31.7	
	comp=Z,12nm,0.7s						
PV19	Morning Glory	8.95	283	IAmb_Lg		22 11 39.9	
	comp=Z,13nm,0.9s						
V48A	Smith Brothers	8.99	93	IAmb_Lg		22 11 35.8	
	comp=Z,12nm,0.8s						
X48A	Hartselle	9.12	102	IAmb_Lg		22 11 35.5	
	comp=Z,13nm,0.8s						
121A	Cookes Peak, D	9.20	245	IAmb_Lg		22 11 44.7	
	comp=Z,34nm,0.8s						
L44A	Lake County Fo	9.39	52	IAmb_Lg		22 11 53.0	
	comp=Z,14nm,0.8s						
LRAL	Lakeview Retre	9.69	110	IAmb_Lg		22 12 05.8	
	comp=Z,11nm,1.2s						

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*NEIC **28** 22:39:31.9±1.6, 4.°94S±0.°08×151.°57E±0.°09, h134^{km}±7^{km}, mb4.7/54, Error ellipse: s-maj=12.6km s-min=10.8km az=108.0*

*IDC **28** 22:39:31.8±0.7, 4.°94S×151.°56E, h132^{km}±6^{km}, mb4.1/24, mb1 4.2/27, mb1mx4.1/50, mbtmp4.5/27, MS3.2/2, Ms1 3.2/2, ms1mx2.7/31, Error ellipse: s-maj=13.2km s-min=9.6km az=101.0*

*BJI **28** 22:39:31.4±0.0, 4.°84S×151.°49E, h129^{km}, mB4.9/18, mb4.6/35*

*DJA **28** 22:39:32.8±0.3, 5 ° S±3 ° ×15 ° 2E± ° , h139^{km}±4^{km}, M4.7/28, mb4.8/28, mB5.0/7, MLv5.1/3, Mw(mB)4.3/7, MwMwp6.8/1, Mwp6.7/1*

ISC 28 22:39:31.6±0.4**, 4.°96S**±0.°05×**151.°56E**±0.°06**, h129**^{km}**, n140, σ1^{s}08**/152**, mb4.6**/54**, 1C, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	0.97	38		Pn	22 39 54.9	+0.7
RABL				Sn	Sn	22 40 11.8	+0.5
RABL	Rabaul	0.97	38	P	Pn	22 39 55.1	+0.9
MANU	Manus Island	5.09	305		Pn	22 40 47.3	+1.4
PMG	Port Moresby	6.21	224	P	Pn	22 41 02.5	+1.5
	27nm,0.3s,baz=63,slow=6.0,SNR=40						
PMG				S	Sn	22 42 10.2	-0.6
	72nm,0.3s,baz=183,slow=18,SNR=14						
PMG				LR	LR	22 43 42.7	
	comp=Z,65nm,20.3s,baz=272,slow=40						
PMG	Port Moresby	6.21	224	Pn	Pn	22 41 02.3	+1.4
PMG	Port Moresby	6.21	224	P	Pn	22 41 04.0	+3.0
JAY	Jayapura	11.10	282	P	Pn	22 42 07.2	+0.4
	1.1nm,0.3s,baz=95,slow=6.2,SNR=5.8						
JAY	Jayapura	11.10	282	P	Pn	22 42 07.2	+0.4
	24nm,1.4s						
GENI	Genyem	11.61	281	P	Pn	22 42 15.3	+1.8
	5µm81nm,1.0s						
COEN	Coen	12.17	222	Pn	Pn	22 42 22.2	+1.3
SRPI	Serui, Papua	15.60	281	P	Pn	22 43 05.1	+0.5
	160nm,0.8s						
BAKI	Biak	15.88	283	P	P	22 43 09.2	+0.1
	98nm,1.4s						
CTA	Charters Tower	15.90	199	P	P	22 43 10.4	+1.1
	0.9nm,0.3s,baz=21,slow=13,SNR=22						
CTAO	Charters Tower	15.90	199	P	P	22 43 10.5	+1.2
SANVU	Saraoutou	18.57	125	P	Pn	22 43 40.3	-0.2
SANVU				IAmb	IAmb	22 43 45.0	
	comp=Z,86nm,1.5s						
FAKI	Fak Fak	19.37	275	P	P	22 43 48.1	+0.6
FAKI	Fak Fak	19.37	275	P	P	22 43 46.9	-0.6
	comp=Z,1µmcomp=Z,119nm,1.0s						
EIDS	Eidsvold	20.30	181	P	P	22 43 58.6	+1.2
EIDS				IAmb	IAmb	22 44 04.1	
	comp=Z,27nm,0.8s						
SIJI	Sorong	20.67	281	P	P	22 44 01.6	+0.1
	comp=Z,29nm,0.7s,baz=102,slow=12,SNR=9.9						
SWI	Sorong	20.68	281	P	P	22 43 59.9	-1.6
	comp=Z,62nm,0.6s						
WB0	Warramunga Arr	22.27	227	P	P	22 44 17.7	-0.6
DZM	Mont Dzumac	22.29	141	P	P	22 44 19.6	+1.0
	comp=Z,19nm,0.7s,baz=286,slow=22,SNR=7.2						
DZM	Mont Dzumac	22.29	141	P	P	22 44 20.6	+2.0
WB2	Warramunga Arr	22.41	227	P	P	22 44 19.5	-0.2
WRA	Warramunga Arr	22.42	227	P	P	22 44 19.5	-0.4
	comp=Z,43nm,0.5s,baz=50,slow=10.0,SNR=256						
WRA				PcP	PcP	22 48 10.4	+0.4
	comp=Z,4.2nm,0.7s,baz=42,slow=2.1,SNR=7.7						
WRA				S	S	22 48 14.7	-2.3
	comp=Z,3.0nm,0.7s,baz=54,slow=20,SNR=7.5						
TNTI	Ternate	24.83	283	P	P	22 44 41.9	-0.2
TNTI				IAmb	IAmb	22 44 46.8	
	comp=Z,35nm,1.0s						
AS31	Alice Springs	25.21	221	P	P	22 44 45.7	+0.2
ASAR	Alice Springs	25.21	221	P	P	22 44 45.6	+0.1
	comp=Z,31nm,0.7s,baz=54,slow=7.7,SNR=135						
ASAR				S	S	22 48 58.1	-3.5
	comp=Z,1.2nm,1.0s,baz=43,slow=14,SNR=2.9						
ASAR				ScP	ScP	22 51 42.9	-0.5
	comp=Z,2.1nm,0.7s,baz=46,slow=2.9,SNR=13						
ASAR	Alice Springs	25.21	221	P	P	22 44 45.0	-0.5
ARMA	Armidale	25.32	180	P	P	22 44 46.6	+0.1
ARMA				IAmb	IAmb	22 44 50.7	
	comp=Z,19nm,1.1s						
SANI	Sanana	25.68	276	P	P	22 44 49.5	-0.4
	comp=Z,19nm,1.1s						
STKA	Stephens Creek	28.36	198	P	P	22 45 13.1	-0.6
	comp=Z,2.1nm,0.6s,baz=352,slow=15,SNR=1.6						
STKA	Stephens Creek	28.36	198	P	P	22 45 13.3	-0.3
FITZ	Fitzroy Crossi	28.50	241	P	P	22 45 14.3	-0.7
	comp=Z,13nm,0.7s,baz=52,slow=6.8,SNR=40						
FITZ	Fitzroy Crossi	28.50	241	P	P	22 45 14.1	-0.9
FITZ				IAmb	IAmb	22 45 16.6	
	comp=Z,37nm,1.4s						
LUWI	Luwuk	29.01	277	P	P	22 45 19.0	-0.5
GTOI	Gorontalo	29.05	280	P	P	22 45 21.2	+1.2
	comp=Z,25nm,0.8s						
CAN	Canberra	30.30	184	P	P	22 45 31.3	+0.5
CAN				IAmb	IAmb	22 45 33.3	
	comp=Z,37nm,1.4s						
BBOO	Buckleboo	31.26	206	P	P	22 45 38.8	-0.5
TOLI2	Tolitoli	31.33	280	P	P	22 45 39.7	-0.4
TOLI2				IAmb	IAmb	22 45 40.9	
	comp=Z,7.9nm,0.8s						
FORT	Forrest	33.89	218	P	P	22 46 01.4	-0.8
MYLDM	Lahad Datu	34.52	287	P	P	22 46 07.6	-0.2
PSA00	Pilbara Seismi	34.89	239	P	P	22 46 09.9	-1.0
KKM	Kota Kinabalu	36.95	287	P	P	22 46 27.9	-0.7
KKM				IAmb	IAmb	22 46 35.3	
	comp=Z,21nm,1.1s						
JAGI	Jajag, Banyuwa	37.30	263	P	P	22 46 32.5	+0.9
URZ	Urewera	40.48	148	P	P	22 46 57.3	-0.4
	comp=Z,6.2nm,0.7s,baz=169,slow=19,SNR=7.6						
URZ	Urewera	40.48	148	P	P	22 46 58.6	+0.8
URZ				IAmb	IAmb	22 46 59.7	
	comp=Z,8.6nm,0.8s						
YULB	Yu-li	40.83	315	P	P	22 47 00.5	-0.3
YULB				IAmb	IAmb	22 47 03.1	
	comp=Z,20nm,0.8s						
MORW	Morawa	41.29	230	P	P	22 47 04.0	-0.5
MORW				IAmb	IAmb	22 47 04.7	
	comp=Z,20nm,0.9s						
SSLB	Suanglung	41.32	315	P	P	22 47 05.1	+0.3
SSLB				IAmb	IAmb	22 47 09.2	
	comp=Z,11nm,0.8s						
TUWZ	Tuamarina	41.46	154	P	P	22 47 06.5	+0.8
YHNB	Yeheng	41.59	316	P	P	22 47 08.1	+1.0
BFZ	Birch Farm	41.91	152	P	P	22 47 09.4	0.0
BFZ				IAmb	IAmb	22 47 18.8	
	comp=Z,26nm,1.2s						
RPZ	Rata Peaks	42.25	159	P	P	22 47 12.4	+0.2
	comp=Z,17nm,0.8s,baz=303,slow=1.6,SNR=9.3						
RPZ	Rata Peaks	42.25	159	P	P	22 47 12.6	+0.5
RPZ				IAmb	IAmb	22 47 14.6	
	comp=Z,26nm,1.1s						
NWAO	Narrogin (SRO)	42.40	225	P	P	22 47 12.2	-1.3
JWT	Wachi	42.82	340	P	P	22 47 15.9	-0.8
JWT				IAmb	IAmb	22 47 30.5	
	comp=Z,19nm,1.4s						
MJAR	Matsushiro Arr	43.13	344	P	P	22 47 18.0	-1.3
	comp=Z,1.7nm,0.9s,baz=165,slow=9.8,SNR=2.8						
JHS	Saijyo	43.38	338	P	P	22 47 20.9	-0.4
JHS				IAmb	IAmb	22 47 22.2	
	comp=Z,22nm,1.2s						
CISI	Cisompet, Garu	43.55	264	P	P	22 47 21.4	-1.7
CISI				IAmb	IAmb	22 47 22.7	
	comp=Z,13nm,0.7s						
JTM	Tenmabayashi	46.53	349	P	P	22 47 45.9	-0.2
KSRS	Korea Array	47.60	334	P	P	22 47 53.0	-1.4
	comp=Z,1.4nm,0.8s,baz=145,slow=8.9,SNR=5.9						
NJ2	Nanjing	48.20	322	*e*P	P	22 48 00.0	+0.8
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
KULM	Kulim	51.85	281	P	P	22 48 26.1	-1.1
KULM				IAmb	IAmb	22 48 33.5	
	comp=Z,9.1nm,1.1s						
USRK	Ussuriysk Ar.	52.01	342	P	P	22 48 28.1	+0.4
	comp=Z,1.3nm,0.8s,baz=138,slow=9.2,SNR=4.1						
USRK	Ussuriysk Ar.	52.01	342	P	P	22 48 28.5	+0.8
ENH	Enshi	53.37	314	P	P	22 48 37.8	-0.2
GYA	Guiyang	53.52	308	*e*P	P	22 48 40.0	+0.7
GYA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
XAN	Xi'an	55.89	317	P	P	22 48 56.8	+0.6
XAN				pmax	pmax		
	comp=Z,8.0nm,1.2s						
XAN	Xi'an	55.89	317	P	P	22 48 56.2	0.0
XAN				IAmb	IAmb	22 48 57.4	
	comp=Z,7.2nm,1.0s						
KMI	Kunming	56.06	305	⇑P	P	22 48 59.8	+2.0
KMI				pmax	pmax		
	comp=Z,11nm,1.1s						
CD2	Chengdu	57.91	311	P	P	22 49 11.5	+1.0
CD2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PETK	Petropavlovsk-	58.08	4	P	P	22 49 10.8	-0.4
	comp=Z,5.7nm,1.0s,baz=170,slow=5.0,SNR=1.9						
HHC	Hu-ho-hao-te	58.46	325	*e*P	P	22 49 16.3	+2.1
HHC				pmax	pmax		
	comp=Z,9.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,68nm,5.4s						
LZH	Lanzhou	60.49	316	*e*P	P	22 49 29.5	+1.2
LZH				pP	pwP	22 50 02.3	+1.5
LZH				sP	sP	22 50 14.0	+1.3
LZH				pmax	pmax		
	comp=Z,16nm,1.1s						
LZH				pmax	pmax		
	comp=Z,68nm,4.3s						
GTA	Gaotai	64.94	318	P	P	22 49 59.0	+1.3
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,72nm,6.5s						
GTA				LR	LR		
	comp=Z,110nm,16.4s						
GTA				LR	LR		
	comp=Z,80nm,16.0s						
GTA				LR	LR		
	comp=Z,110nm,17.4s						
ULN	Ulaanbaatar	65.49	329	P	P	22 50 01.5	+0.4
ULN				IAmb	IAmb	22 50 03.2	
	comp=Z,7.1nm,1.1s						
SONM	Songino Array	65.81	328	P	P	22 50 04.3	+1.1
	comp=Z,3.7nm,0.7s,baz=146,slow=4.8,SNR=30						
SONM				LR	LR	23 19 41.5	
	comp=Z,61nm,19.2s,baz=18,slow=37						
SONM	Songino Array	65.81	328	P	P	22 50 04.0	+0.9
YAK	Yakutsk	68.89	349	P	P	22 50 22.1	0.0
YAK				IAmb	IAmb	22 50 23.2	
	comp=Z,9.6nm,1.0s						
PALK	Pallekele	71.74	279	P	P	22 50 40.4	-0.1
	comp=Z,2.1nm,0.6s,baz=194,slow=8.3,SNR=1.7						
WMQ	Urumqi	75.03	318	*e*P	P	22 51 01.0	+1.8
WMQ	Urumqi	75.03	318	P	P	22 51 00.0	+0.8
ZSN	Zaisan	78.20	320	*e*P	P	22 51 16.4	-0.5
	baz=320						
ZSN				*i* S	S	23 00 58.4	-2.7
	baz=320						
TTA	Tatalina	78.37	22	P	P	22 51 16.8	-0.8
CNPM	China Poot	78.40	26	P	P	22 51 17.5	-0.2
BRLK	Bradley Lake	78.67	26	P	P	22 51 18.9	-0.3
BRLK				IAmb	IAmb	22 51 20.2	
	comp=Z,15nm,1.2s						
MK31	Makanchi Array	79.64	319	P	P	22 51 24.5	-0.3
MKAR	Makanchi Array	79.64	319	P	P	22 51 24.9	+0.2
	comp=Z,2.5nm,0.9s,baz=106,slow=6.2,SNR=20						
MKAR	Makanchi Array	79.64	319	P	P	22 51 24.7	-0.1
MAKZ	Makanchi	79.85	319	P	P	22 51 25.8	-0.1
SHLS	Shalkode	80.47	315	*e*P	P	22 51 27.5	-2.0
	baz=315						
ZAA0	Zalesovo Array	80.60	327	P	P	22 51 28.7	-1.1
ZALV	Zalesovo Beam	80.60	327	P	P	22 51 28.8	-1.0
	comp=Z,3.3nm,0.7s,baz=108,slow=5.4,SNR=18						
ZALV	Zalesovo Beam	80.60	327	P	P	22 51 28.4	-1.3
KTH	Kantishna Hill	80.63	23	P	P	22 51 28.7	-1.1
KPKS	Kokpek	81.10	315	*e*P	P	22 51 32.4	-0.4
	baz=315						
SATY	Saty	81.19	315	*e*P	P	22 51 33.2	-0.1
	baz=315						
TDK	Taldyqorghan	81.70	317	*e*P	P	22 51 35.7	-0.1
	baz=317						
KSH	Kashi	82.10	311	P	P	22 51 40.0	+1.8
KSH				sP	sP	22 52 29.0	+5.0
KSH				PP	PP	22 54 53.3	+5.2
KSH				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KSH				pmax	pmax		
	comp=Z,170nm,6.8s						
MDOK	Medeo	82.18	315	*e*P	P	22 51 38.5	0.0
	baz=315						
TNSS	Tian-Shan	82.22	314	*e*P	P	22 51 39.3	+0.2
	baz=314						
AAA	Alma-Ata	82.28	315	*e*P	P	22 51 39.2	+0.3
	baz=315						
CCB	Clear Creek Bu	82.37	22	P	P	22 51 37.3	-1.5

ILAR	Eielson Array	82.77	22	P	P	22 51 39.1	-1.8
	comp=Z,1.4nm,0.8s,baz=251,slow=5.3,SNR=12						
ILAR				pP	pP	22 52 13.8	+0.1
	comp=Z,1.0nm,0.8s,baz=248,slow=5.4,SNR=3.1						
KUU	Kurty	82.86	315	*e*P	P	22 51 41.3	-0.5
	comp=Z,9.2nm,0.9s,baz=315						
NIL	Nilore	83.05	305	P	P	22 51 42.7	-0.4
NIL				IAmb	IAmb	22 51 43.6	
	comp=Z,11nm,0.7s						
KURK	Kurchatov	83.14	322	P	P	22 51 42.6	-0.5
KURK				IAmb	IAmb	22 51 43.6	
	comp=Z,8.5nm,1.0s						
TKM2	Tokmak 2	83.15	314	P	P	22 51 44.3	+0.6
	SNR=5.3						
KURBB	Kurchatov Arra	83.17	322	P	P	22 51 43.0	-0.2
	comp=Z,3.2nm,0.9s,baz=107,slow=4.2,SNR=25						
KURBB				pP	pP	22 52 17.7	+2.2
	comp=Z,0.9nm,0.9s,baz=110,slow=4.5,SNR=2.4						
KBK	Karagaybulak	83.56	314	P	P	22 51 46.1	+0.4
	SNR=5.3						
CHMS	Chumysh	83.78	314	P	P	22 51 46.8	+0.1
	SNR=7.4						
UCH	Uchtor	83.78	313	P	P	22 51 48.5	+1.3
	SNR=10						
AAK	Ala-Archa	83.88	314	P	P	22 51 47.9	+0.6
	comp=Z,4.9nm,0.8s,baz=134,slow=4.6,SNR=20						
AAK	Ala-Archa	83.88	314	P	P	22 51 47.7	+0.4
	SNR=5.2						
AAK	Ala-Archa	83.88	314	P	P	22 51 47.5	+0.2
AAK				IAmb	IAmb	22 51 48.7	
	comp=Z,6.0nm,0.8s						
USP	Ospenovka	84.01	314	P	P	22 51 48.5	+0.7
	SNR=14						
AML	Almayashu	84.36	313	P	P	22 51 51.0	+1.0
	SNR=22						
EKS2	Erkin-Say	84.40	314	P	P	22 51 50.5	+0.6
	SNR=13						
QSPA	South Pole Qui	85.00	180	P	P	22 51 52.6	+0.2
NRIK	Noril'sk	85.72	341	P	P	22 51 56.2	+0.5
	comp=Z,3.1nm,0.8s,baz=98,slow=5.7,SNR=5.3						
NRIK	Noril'sk	85.72	341	P	P	22 51 55.7	0.0
KK31	Karatay Array	86.84	314	P	P	22 52 01.6	-0.2
KK31				IAmb	IAmb	22 52 03.5	
	comp=Z,5.9nm,1.1s						
KKAR	Karatay Array	86.84	314	P	P	22 52 01.4	-0.4
KKAR	Karatay Array	86.84	314	P	P	22 52 01.6	-0.3
KKAR				IAmb	IAmb	22 52 03.5	
	comp=Z,5.9nm,1.1s						
BVAR	Borovoye Array	88.63	323	P	P	22 52 08.4	-1.7
	comp=Z,1.7nm,0.7s,baz=108,slow=9.5,SNR=14						
HRA	Herat	92.20	304	P	P	22 52 26.1	-1.3
NVAR	Mina Array Bea	93.15	52	P	P	22 52 30.9	-0.8
	comp=Z,1.0nm,0.7s,baz=254,slow=4.9,SNR=5.8						
NVAR				pP	pP	22 53 04.7	-0.4
	comp=Z,0.5nm,0.7s,baz=310,slow=4.6,SNR=2.3						
NVAR	Mina Array Bea	93.15	52	P	P	22 52 32.3	+0.6
YKA	Yellowknife Ar	96.14	28	P	P	22 52 44.0	-0.5
	comp=Z,0.1nm,0.6s,baz=272,slow=4.5,SNR=4.2						
YKA				pP	pP	22 53 18.2	+0.4
	comp=Z,0.4nm,0.7s,baz=273,slow=3.5,SNR=4.6						
PDAR	Pinedale Array	99.87	48	P	Pdif	22 53 01.5	-0.5
	comp=Z,0.4nm,0.8s,baz=222,slow=2.0,SNR=3.4						
BOSA	Boshof	118.54	234	PKP	PKPdf	22 58 05.0	0.0
	comp=Z,1.8nm,0.7s,baz=75,slow=1.6,SNR=7.1						
KOLS	Kolonicke sedl	118.72	324	*e*PKP	PKPdf	22 58 02.9	-1.7
KRLC	Kraliky	121.19	328	*e*PKPDF	PKPdf	22 58 09.2	-0.2
CLL	Collm	122.39	331	*e*PKPdf	PKPdf	22 58 10.0	-1.6
PRU	Pruhonice	122.42	329	*e*PKPDF	PKPdf	22 58 11.2	-0.5
CKRC	Cesky Krumlov	123.23	328	*e*PKPDF	PKPdf	22 58 13.3	0.0
KHC	Kasperske Hory	123.43	328	*e*PKPDF	PKPdf	22 58 13.5	-0.2
GERES	GERESS Array B	123.54	328	PKP	PKPdf	22 58 13.7	-0.3
	comp=Z,1.4nm,0.5s,baz=68,slow=2.0,SNR=17						
TORD	Torodi Ar. Bea	149.18	287	PKPbc	PKPbc	22 59 05.3	-0.7
	comp=Z,11nm,0.8s,baz=70,slow=2.6,SNR=52						

NOU 28 22:41:44.3, 18°.02S×170°.55E, h330^{km}, MLv4.0, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	Devils Point	2.27	277	P	Pn	22 42 36.0	+0.2
SANVU	Saraoutou	4.10	308	P	Pn	22 42 53.2	-0.1
MARNC	Mare, Loyalty	4.18	214	P	Pn	22 42 53.7	-0.3
YATNC	Mamie plateau,	5.29	220	P	Pn	22 43 06.0	-0.3
DZM	Mont Dzumac	5.58	223	P	Pn	22 43 09.2	-0.5
OUENC	Ouen Island, N	5.59	218	P	Pn	22 43 10.6	+0.9

*DJA **28** 22:46:25.0±0.5, 4°N±4°×12°6E±°, h141^{km}±4^{km}, M4.2/14, mB5.3/3, mb4.0/8, MLv4.2/14, Mw(mB)4.8/3*

*IDC **28** 22:46:25.8±3.7, 4°.01N×125°.76E, h138^{km}±37^{km}, mb3.6/15, mb1 3.7/16, mb1mx3.5/49, mbtmp4.0/16, Error ellipse: s-maj=36.2km s-min=12.4km az=79.0*

*NEIC **28** 22:46:26.2±1.0, 4°.03N±0°.10×125°.8E±0°.1, h143^{km}±9^{km}, mb4.0/10, Error ellipse: s-maj=18.4km s-min=10.0km az=47.0*

ISC 28 22:46:26.7±0.5**, 3°.94N**±0°.05×**125°.73E**±0°.07**, h150^{km}, n53, σ1^{s}.40**/61**, mb3.9**/20**, 1C, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	0.32	218	P	Pn	22 46 46.4	-1.0
SGSI				S	Sn	22 47 01.6	-1.5
DDMP	Don Marcelino,	2.15	360	*e*P	Pn	22 47 01.0	-2.6
DDMP				*e*S	Sn	22 47 27.5	-4.6
SKMP	Bagumbayan, Su	2.82	335	*e*P	Pn	22 47 10.5	-1.4
SKMP				*e*S	Sn	22 47 44.2	-2.6
KCP	Kidapawan	3.11	348	⇑*i*P	Pn	22 47 15.7	0.0
KCP				*i* S	Sn	22 47 55.9	+2.4
TNTI	Ternate	3.55	152	Pn	Pn	22 47 21.0	-0.2
TNTI	Ternate	3.55	152	P	Pn	22 47 20.3	-0.9
TNTI				S	Sn	22 48 00.5	-2.9
KMSI	Cibinong	3.77	208	P	Pn	22 47 22.4	-1.7
GTOI	Gorontalo	4.26	220	P	Pn	22 47 29.5	-0.9
PAGZ	Pagadian	4.53	329	*e*P	Pn	22 47 32.4	-1.5
MRSI	Marisa	5.12	228	P	Pn	22 47 38.7	-3.0
	0.1nm13nm,1.0s						
TOLI2	Tolitoli	5.69	240	Pn	Pn	22 47 50.3	+1.0
LUWI	Luwuk	5.76	211	P	Pn	22 47 47.9	-2.5
	0.2nm1μm26nm,0.9s						
SANI	Sanana	5.96	177	P	Pn	22 47 51.1	-1.8
	1.0nm7μm118nm,0.7s						
APSI	Ampana	6.31	220	P	Pn	22 47 56.6	-1.1
	0.1nm29nm,0.9s						
NLAI	Namlea	7.26	169	P	Pn	22 48 09.2	-1.2
	0.6nm6μm49nm,1.0s						
SWI	Sorong	7.30	131	P	Pn	22 48 09.9	-1.0
	0.1nm19nm,0.9s						
SIJI	Sorong	7.31	131	P	Pn	22 48 11.0	0.0
	1.8nm,0.3s,baz=139,slow=23,SNR=4.8						
SIJI				S	Sn	22 49 31.1	-1.8
	0.9nm,0.3s,baz=126,slow=23,SNR=1.6						
FAKI	Fak Fak	9.43	136	Pn	Pn	22 48 38.9	-0.4
SBUM	Sibu	13.57	264		P	22 49 39.1	+2.0
FITZ	Fitzroy Crossi	21.90	180	P	P	22 51 09.0	+0.9
	2.1nm,0.3s,baz=8.1,slow=11,SNR=18						
FITZ	Fitzroy Crossi	21.90	180	P	P	22 51 08.8	+0.8
PANO	Nakornpanom	24.52	304	P	P	22 51 32.9	+0.4
WB0	Warramunga Arr	25.05	160	P	P	22 51 39.3	+2.0
WRAB	Tennant Creek	25.20	161	P	P	22 51 40.0	+1.4
WRAB				IAmb	IAmb	22 51 41.9	
	comp=Z,12nm,1.1s						
WRA	Warramunga Arr	25.20	161	P	P	22 51 39.0	+0.3
	comp=Z,4.7nm,0.4s,baz=342,slow=10,SNR=21						
AS31	Alice Springs	28.57	164	P	P	22 52 09.3	+0.5
ASAR	Alice Springs	28.58	164	P	P	22 52 09.8	+1.0
	comp=Z,0.7nm,0.5s,baz=342,slow=7.2,SNR=14						
ASAR	Alice Springs	28.58	164	P	P	22 52 09.4	+0.5
KSRS	Korea Array	33.41	3	P	P	22 52 50.4	-0.7
	comp=Z,1.2nm,0.7s,baz=178,slow=9.8,SNR=4.5						
BBOO	Buckleboo	37.84	166	P	P	22 53 29.9	+1.0
STKA	Stephens Creek	38.69	158	P	P	22 53 37.6	+1.6
	comp=Z,2.2nm,0.5s,baz=115,slow=13,SNR=3.7						
STKA	Stephens Creek	38.69	158	P	P	22 53 37.1	+1.0
STKA				IAmb	IAmb	22 53 43.9	
	comp=Z,2.2nm,1.4s						
USRK	Ussuriysk Ar.	40.47	7	P	P	22 53 51.4	+0.7
	comp=Z,1.6nm,0.6s,baz=192,slow=7.0,SNR=6.4						
USRK	Ussuriysk Ar.	40.47	7	P	P	22 53 51.0	+0.4
KLR	Kul'dur	45.41	6	P	P	22 54 30.4	+0.1
	comp=Z,0.5nm,0.4s,baz=198,slow=9.6,SNR=2.6						
SONM	Songino Array	46.78	342	P	P	22 54 40.9	-0.4
	comp=Z,0.4nm,0.6s,baz=153,slow=9.4,SNR=1.9						
SONM				PcP	PcP	22 56 12.3	+0.2
	comp=Z,0.1nm,0.4s,baz=172,slow=5.7,SNR=4.2						
MK31	Makanchi Array	56.81	326	P	P	22 55 55.3	-0.2
MK31				IAmb	IAmb	22 55 55.7	
	comp=Z,0.7nm,0.4s						
MKAR	Makanchi Array	56.81	326	P	P	22 55 55.2	-0.3
	comp=Z,0.5nm,0.3s,baz=121,slow=6.6,SNR=20						
MKAR				PcP	PcP	22 56 49.9	+0.4
	comp=Z,1.7nm,0.7s,baz=120,slow=3.8,SNR=9.9						
MKAR	Makanchi Array	56.81	326	P	P	22 55 55.1	-0.4
MAKZ	Makanchi	57.00	326	P	P	22 55 56.6	-0.1
MAKZ				IAmb	IAmb	22 55 58.5	
	comp=Z,2.8nm,1.4s						
ZALV	Zalesovo Beam	59.95	333	P	P	22 56 17.1	+0.1
	comp=Z,0.5nm,0.4s,baz=127,slow=9.3,SNR=1.8						
KURBB	Kurchatov Arra	61.02	328	P	P	22 56 24.0	-0.3
	comp=Z,0.9nm,0.6s,baz=128,slow=6.6,SNR=10						
KURK	Kurchatov	61.03	328	P	P	22 56 23.7	-0.7
KURK				IAmb	IAmb	22 56 26.2	
	comp=Z,2.2nm,0.8s						
KKAR	Karatay Array	62.40	317	P	P	22 56 33.6	-0.2
BVAR	Borovoye Array	66.60	327	P	P	22 57 02.0	+1.2
	comp=Z,0.4nm,0.6s,baz=144,slow=16,SNR=3.6						
TIXI	Tiksi	67.65	1	P	P	22 57 07.0	-0.1
TIXI				IAmb	IAmb	22 57 07.5	
	comp=Z,2.0nm,0.9s						
ABKAR	Akbulak array	71.35	321	P	P	22 57 29.6	-0.7
ABKAR	Akbulak array	71.35	321	P	P	22 57 29.2	-1.0
ABKAR				IAmb	IAmb	22 57 35.0	
	comp=Z,1.4nm,1.1s						
IMAR	Indian Mountai	82.56	24	P	P	22 58 34.0	+1.4
ILAR	Eielson Array	85.34	25	P	P	22 58 46.0	-0.8
	comp=Z,0.2nm,0.7s,baz=267,slow=4.3,SNR=1.8						
ARCES	ARCESS Array B	89.90	340	P	P	22 59 07.9	-0.6
	comp=Z,4.9nm,0.9s,baz=86,slow=6.1,SNR=5.1						
FINES	FINESS Array B	91.17	332	P	P	22 59 13.7	-0.8
	comp=Z,2.4nm,0.9s,baz=99,slow=4.5,SNR=4.3						
TORD	Torodi Ar. Bea	121.90	288	PKP	PKiKP	23 05 05.0	+0.6
	comp=Z,0.6nm,0.9s,baz=48,slow=2.1,SNR=2.6						

*IDC **28** 22:47:43.3±1.0, 22°.75N×95°.95E, h0^{km}, mb3.7/10, mb1 3.9/11, mb1mx3.6/54, mbtmp3.8/11, ML4.1/1, MS3.1/2, Ms1 3.2/2, ms1mx2.8/41, Error ellipse: s-maj=37.1km s-min=13.4km az=62.0*

*BJI **28** 22:47:46.9±0.0, 23°.02N×95°.83E, h19^{km}, mb4.2/3, ML4.0/3, Ms3.7/2, Ms7 3.5/3*

ISC 28 22:47:44.1±0.8**, 22°.47N**±0°.06×**95°.70E**±0°.09**, h10^{km}, n20, σ1^{s}.77**/24**, mb3.7**/9**, 1C, Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMMT	Chiang Mai	4.74	140	P	Pn	22 48 56.2	+0.6
CMMT				S	Sg	22 50 15.8	-0.5
MHMT	Maesarieng	4.75	153	P	Pg	22 49 14.9	-0.3
MHMT				S	Sg	22 50 24.1	+7.4
CMAR	Chiang Mai Arr	5.01	142	Pn	Pn	22 49 01.4	+2.0
	2.0nm,0.3s,baz=322,slow=13,SNR=32						
CMAR				Pg	Pg	22 49 18.2	-2.0
	8.5nm,0.3s,baz=324,slow=17,SNR=36						
CMAR				Lg	Lg	22 50 22.3	
	1.3nm,0.3s,baz=313,slow=32,SNR=2.1						
CMAR				LR	LR	22 51 25.9	
	comp=Z,146nm,19.6s,baz=34,slow=44						
CM05	Chiang Mai Arr	5.06	142	P	Pn	22 49 02.1	+2.0
CM05				S	Sg	22 50 25.6	-1.1
LAMP	Lampang	5.38	136	P	Pn	22 49 05.7	+1.2
LAMP				S	Sg	22 50 34.6	-2.3
UTTA	Uttaradit	6.55	135	S	Sg	22 51 12.8	-1.5
KMI	Kunming	6.97	66	⇑Pn	Pn	22 49 28.0	+1.6
KMI				Sn	Sn	22 50 49.3	+3.4
KMI				smax	smax		
	comp=N,120nm,1.1s						
KMI				smax	smax		
	comp=E,58nm,1.1s						
KMI				LR	LR		
	comp=E,340nm,5.2s						
KMI				LR	LR		
	comp=Z,330nm,7.9s						
LSA	Lhasa	8.28	331	P	Pn	22 49 45.5	+0.8
LSA				pmax	pmax		
	comp=Z,18nm,0.7s						
LZH	Lanzhou	15.31	26	*e*P	P	22 51 25.5	+0.2
LZH				pP	sP	22 51 34.3	+4.9
LZH				sP	pP	22 51 40.5	+12
LZH				pmax	pmax		
	comp=Z,23nm,1.2s						
PSI	Prapat	19.80	170	P	Pn	22 52 19.6	+3.2
	comp=Z,1.9nm,0.5s,baz=360,slow=15,SNR=5.1						
MKAR	Makanchi Array	26.58	339	P	P	22 53 21.0	-1.4
	comp=Z,0.8nm,0.5s,baz=150,slow=10,SNR=20						
AAK	Ala-Archa	26.77	324	P	P	22 53 24.9	+0.6
	comp=Z,1.3nm,0.6s,baz=147,slow=6.6,SNR=5.9						
KURBB	Kurchatov Arra	31.15	339	P	P	22 54 01.0	-1.9
	comp=Z,0.5nm,0.5s,baz=145,slow=9.8,SNR=3.8						
BVAR	Borovoye Array	36.11	334	P	P	22 54 46.2	+0.1
	comp=Z,0.4nm,0.6s,baz=157,slow=19,SNR=3.6						
MJAR	Matsushiro Arr	39.25	59	P	P	22 55 11.4	-1.5
	comp=Z,1.3nm,0.7s,baz=272,slow=10,SNR=5.0						
SIJI	Sorong	41.70	119	LR	LR	23 12 27.5	
	comp=Z,37nm,18.6s,baz=60,slow=36						
MA2	Magadan	53.37	31	P	P	22 57 02.2	-1.4
	comp=Z,1.6nm,0.3s,baz=262,slow=0.9,SNR=5.0						
WRA	Warramunga Arr	56.57	135	P	P	22 57 28.0	+0.8
	comp=Z,1.3nm,1.0s,baz=318,slow=7.0,SNR=4.7						
ASAR	Alice Springs	59.02	139	P	P	22 57 46.3	+1.9
	comp=Z,0.3nm,0.9s,baz=322,slow=7.2,SNR=2.2						
ILAR	Eielson Array	80.75	23	P	P	22 59 55.5	-1.9
	comp=Z,0.3nm,0.6s,baz=299,slow=4.0,SNR=2.8						

*IDC **28** 23:03:30.4±1.4, 9°.47S×155°.75E, h0^{km}, mb3.8/8, mb1 4.1/9, mb1mx3.9/28, mbtmp3.8/9, ML4.1/1, MS3.3/4, Ms1 3.3/4, ms1mx3.0/27, Error ellipse: s-maj=47.8km s-min=22.0km az=122.0*

*NEIC **28** 23:03:31.3±1.1, 9°.56S±0°.08×155°.91E±0°.08, h10^{km}±2^{km}, mb4.0/8, Error ellipse: s-maj=15.4km s-min=11.8km az=42.0*

ISC 28 23:03:34.9±0.6**, 9°.58S**±0°.09×**155°.90E**±0°.08**, h35^{km}, n28, σ0^{s}.84**/24**, mb4.0**/11**, D'Entrecasteaux Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	3.99	88	LR	LR	23 05 43.9	
	comp=Z,313nm,18.8s,baz=239,slow=32						
HNR	Honiara	3.99	88	Pn	Pn	23 04 33.4	-0.2
RABL	Rabaul	6.51	325	Pn	Pn	23 05 06.8	-1.5
PMG	Port Moresby	8.62	270	LR	LR	23 08 50.7	
	comp=Z,237nm,19.7s,baz=92,slow=38						
PMG	Port Moresby	8.62	270	Pn	Pn	23 05 37.0	-0.2
SANVU	Saraoutou	12.48	119	Pn	Pn	23 06 28.9	-1.2
CTA	Charters Tower	14.00	221	Pn	Pn	23 06 50.6	-0.2
	0.6nm,0.3s,baz=45,slow=14,SNR=2.9						
CTAO	Charters Tower	14.00	221	Pn	Pn	23 06 50.4	-0.4
DZM	Mont Dzumac	16.03	142	LR	LR	23 12 14.6	
	comp=Z,139nm,20.1s,baz=74,slow=32						
EIDS	Eidsvold	16.36	196		P	23 07 24.7	+0.2
EIDS				IAmb	IAmb	23 07 38.7	
	comp=Z,17nm,1.5s						
WR0	Warramunga Arr	23.06	241	P	P	23 08 37.8	+0.4
WR0				IAmb	IAmb	23 08 43.2	
	comp=Z,4.5nm,0.8s						
WB2	Warramunga Arr	23.22	241	P	P	23 08 38.9	-0.2
WB2				IAmb	IAmb	23 08 40.9	
	comp=Z,4.0nm,0.7s						
WRA	Warramunga Arr	23.23	241	P	P	23 08 39.5	+0.3
	comp=Z,3.3nm,0.7s,baz=69,slow=9.8,SNR=34						
AS31	Alice Springs	25.25	234	P	P	23 08 58.5	+0.5
ASAR	Alice Springs	25.26	234	P	P	23 08 57.5	-0.5
	comp=Z,1.7nm,0.7s,baz=67,slow=9.7,SNR=25						
ASAR	Alice Springs	25.26	234	P	P	23 08 58.0	0.0
STKA	Stephens Creek	25.85	209	P	P	23 09 03.6	+0.3
	comp=Z,2.8nm,0.6s,baz=27,slow=6.8,SNR=7.2						
STKA	Stephens Creek	25.85	209	P	P	23 09 03.1	-0.1
STKA				IAmb	IAmb	23 09 17.2	
	comp=Z,1.9nm,1.3s						
FITZ	Fitzroy Crossi	30.54	251	P	P	23 09 45.1	-0.1
FITZ				IAmb	IAmb	23 10 00.2	
	comp=Z,7.5nm,1.4s						
THZ	Tophouse	35.39	158	P	P	23 10 27.2	-0.2
KSRS	Korea Array	53.63	332	LR	LR	23 35 55.2	
	comp=Z,15nm,18.3s,baz=0.0,slow=36						
CMAR	Chiang Mai Arr	62.72	296	P	P	23 13 57.2	+0.4
	comp=Z,0.5nm,0.3s,baz=124,slow=4.7,SNR=1.4						
SONM	Songino Array	71.98	327	P	P	23 14 55.5	+0.4
	comp=Z,0.4nm,0.6s,baz=123,slow=5.3,SNR=2.7						
SONM	Songino Array	71.98	327	P	P	23 14 55.3	+0.2
ILAR	Eielson Array	85.44	21	P	P	23 16 08.3	-0.2
	comp=Z,0.2nm,1.0s,baz=251,slow=5.6,SNR=1.5						
MK31	Makanchi Array	85.92	319	P	P	23 16 11.2	-0.2
MKAR	Makanchi Array	85.92	319	P	P	23 16 10.7	-0.7
	comp=Z,0.2nm,0.6s,baz=103,slow=5.9,SNR=5.2						
NVAR	Mina Array Bea	92.61	52	P	P	23 16 46.4	+3.0
	comp=Z,0.7nm,0.9s,baz=297,slow=4.0,SNR=2.7						

*TEH **28** 23:05:49.1, 39°.17N×51°.92E, h10^{km}, ML3.0*

*AZER **28** 23:05:52.8±0.4, 39°.36N×51°.78E, h45^{km}±25^{km}, ml3.3/28, Error ellipse: s-maj=26.3km s-min=5.1km az=289.0*

ISC 28 23:05:49.1±1.5**, 39°.31N**±0°.05×**51°.88E**±0°.07**, h10^{km}, n35, σ1^{s}.69**/62**, Caspian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NDR	Nardaran	1.93	312	S	Sn	23 06 46.2	-0.2
LKRN	Lenkeran, Azer	2.49	257	Pn	Pn	23 06 29.2	-0.5
LKRN				Sn	Sn	23 07 00.6	+0.4
ASTR	Astara	2.53	254	Pn	Pn	23 06 31.0	+0.8
ASTR				Sn	Sn	23 07 01.9	+0.8
GBS	Qobustan	2.57	299	Pn	Pn	23 06 33.0	+2.1
GBS				Sn	Sn	23 07 01.9	-0.4
GLBA	Clilabad	2.71	270	Pn	Pn	23 06 34.2	+1.4
GLBA				Sn	Sn	23 07 06.0	+0.4
ATGJ	Altiaghaj	2.74	305	Pn	Pn	23 06 35.6	+2.3
ATGJ				Sn	Sn	23 07 05.9	-0.6
LRK	Lerik	2.84	258	Pn	Pn	23 06 35.4	+0.7
LRK				Sn	Sn	23 07 07.8	-1.3
YRD	Yardimli	2.86	263	Pn	Pn	23 06 35.9	+0.8
YRD				Sn	Sn	23 07 08.9	-0.7
SIZA	Siyzn	2.89	309	Pn	Pn	23 06 38.3	+3.0
SIZA				Sn	Sn	23 07 11.3	+1.2
PQL	Pirkuli	2.93	301	Pn	Pn	23 06 37.0	+1.1
PQL				Sn	Sn	23 07 12.7	+1.6
QALM	Alamut, Qazvin	3.04	199	*e*Pn	Pn	23 06 37.4	-0.1
KDMR	Kurdemir	3.04	292	Pn	Pn	23 06 38.0	+0.8
KDMR				Sn	Sn	23 07 14.8	+1.1
IPRN	Peran	3.09	173	*e*Pn	Pn	23 06 38.4	+0.3
IGLO	Ghaloghah	3.20	151	*e*Pn	Pn	23 06 39.6	-0.1
IGLO				*e*		23 07 19.3	
	comp=Z,99nm,0.3s						
IML	Ismayilli	3.20	299	Pn	Pn	23 06 39.8	+0.2
IML				Sn	Sn	23 07 18.3	+0.4
QUBA	Quba, Azerbaij	3.30	309	Pn	Pn	23 06 42.8	+1.9
QUBA				Sn	Sn	23 07 16.5	-3.7
BLQ	Beylaqan	3.37	278	Pn	Pn	23 06 41.6	-0.2
BLQ				Sn	Sn	23 07 19.9	-2.0
ZRD	Zardab	3.38	288	Pn	Pn	23 06 42.8	+0.9
ZRD				Sn	Sn	23 07 21.4	-0.7
XNQ	Khinaliq	3.42	304	Pn	Pn	23 06 43.3	+0.6
XNQ				Sn	Sn	23 07 22.0	-1.3
QBL	Gabala	3.51	299	Pn	Pn	23 06 43.5	-0.2
QBL				Sn	Sn	23 07 24.2	-1.1
QSAR	Qusar	3.53	310	Pn	Pn	23 06 44.6	+0.5
QSAR				Sn	Sn	23 07 24.2	-1.8
QRD	Qoradiz	3.54	274	Pn	Pn	23 06 45.8	+1.6
QRD				Sn	Sn	23 07 26.0	-0.1
ISRB	Sarab	3.62	247	*e*Pn	Pn	23 06 47.6	+2.1
ISRB				*e*		23 07 33.4	
	comp=Z,99nm,0.3s						
BRDA	Brd	3.75	286	Pn	Pn	23 06 48.4	+1.4
BRDA				Sn	Sn	23 07 29.6	-1.5
AGDM	Agdam	3.77	284	Pn	Pn	23 06 49.8	+2.5
AGDM				Sn	Sn	23 07 29.9	-1.9
IHRS	Heris	3.91	257	*e*Pn	Pn	23 06 51.2	+1.7
IHRS				*e*		23 06 56.9	
	comp=Z,99nm,0.2s						
QABG	Abgarm-Qazvin	4.04	208	*e*Pn	Pn	23 06 51.5	+0.3
SEKA	Sheki	4.05	299	Pn	Pn	23 06 47.8	-3.5
SEKA				Sn	Sn	23 07 36.5	-2.4
IANJ	Anjilo	4.16	157	*e*Pn	Pn	23 06 54.9	+1.9
GANJ	Ganja	4.48	289	Pn	Pn	23 06 56.1	-0.9
GANJ				Sn	Sn	23 07 46.2	-3.0
ORD	Ordubad	4.60	267	Pn	Pn	23 07 01.4	+2.6
ORD				Sn	Sn	23 07 51.3	-1.0
ZKTA	Zakatala	4.64	302	Pn	Pn	23 07 00.2	+0.9
ZKTA				Sn	Sn	23 07 51.5	-1.6
SBZ	Shahbuz	4.91	273	Pn	Pn	23 07 05.8	+2.7
SBZ				Sn	Sn	23 07 56.7	-3.3
GDB	GEDABAY	4.91	289	Pn	Pn	23 07 03.7	+0.5
GDB				Sn	Sn	23 07 56.8	-3.3
QZX	Qazax, Azerbai	5.28	291	Pn	Pn	23 07 10.0	+1.8
QZX				Sn	Sn	23 08 07.2	-1.9

*IDC **28** 23:06:10.9±0.9, 13°.46N×44°.77W, h0^{km}, mb3.8/9, mb1 4.0/10, mb1mx3.7/40, mbtmp3.9/10, ML3.6/1, MS3.5/17, Ms1 3.5/17, ms1mx3.3/39, Error ellipse: s-maj=24.8km s-min=20.3km az=111.0*

ISC 28 23:06:13.2±0.8**, 13°.4N**±0°.1×**44°.8W**±0°.1**, h15^{km}, n25, σ1^{s}.26**/10**, mb4.0**/8**, MS3.4**/16**, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MDP	Montagnes des	11.31	224	Pn	Pn	23 08 52.8	-1.6
	0.4nm,0.3s,baz=39,slow=13,SNR=7.2						
MDP				Sn	Sn	23 10 47.8	-13
	0.1nm,0.3s,baz=134,slow=8.6,SNR=1.4						
MDP				LR	LR	23 12 33.5	
	comp=Z,138nm,20.1s,baz=36,slow=34						
H05S1	Guadeloupe/Mar	15.60	276	T	T	23 25 39.4	
PTGA	Pitinga	20.57	228	P	P	23 10 52.0	+0.2
	1.6nm,0.3s,baz=49,slow=14,SNR=5.9						
PTGA				LR	LR	23 19 19.8	
	comp=Z,69nm,18.2s,baz=30,slow=38						
RCBR	Riachuelo	21.05	155	LR	LR	23 17 15.1	
	comp=Z,80nm,18.5s,baz=318,slow=32						
BDFB	Brasilia	29.04	186	P	P	23 12 13.6	+0.5
	2.3nm,0.8s,baz=23,slow=9.3,SNR=3.6						
SIV	San Ignacio	33.34	209	LR	LR	23 25 38.4	
	comp=Z,56nm,19.1s,baz=325,slow=35						
H10N3	ASCENSION HYDR	36.76	123	T	T	23 52 18.1	
	baz=305,slow=75,SNR=11						
H10N2	ASCENSION HYDR	36.76	123	T	T	23 52 16.7	
	baz=305,slow=75,SNR=12						
H10N1	ASCENSION HYDR	36.78	123	T	T	23 52 19.8	
	baz=305,slow=75,SNR=15						
LPAZ	La Paz	37.45	219	P	P	23 13 28.9	+1.9
	2.2nm,0.9s,baz=42,slow=9.5,SNR=5.1						
LPAZ				LR	LR	23 28 54.7	
	comp=Z,62nm,19.6s,baz=23,slow=36						
ATAH	Atahualpa	39.11	241	LR	LR	23 29 50.5	
	comp=Z,109nm,20.3s,baz=68,slow=36						
JTS	Las Juntas de	39.39	270	LR	LR	23 30 34.9	
	comp=Z,35nm,19.3s,baz=172,slow=37						
DBIC	Dimbokro	39.86	96	P	P	23 13 46.3	-0.4
	1.0nm,0.7s,baz=297,slow=16,SNR=2.0						
DBIC				LR	LR	23 26 07.5	
	comp=Z,73nm,21.8s,baz=348,slow=30						
NNA	Nana	40.57	233	LR	LR	23 30 50.7	
	comp=Z,28nm,18.2s,baz=36,slow=36						
CPUP	Villa Florida	41.33	197	LR	LR	23 33 10.2	
	comp=Z,28nm,18.2s,baz=46,slow=39						
TKL	Tuckaleechee C	41.43	309	LR	LR	23 27 54.6	
	comp=Z,71nm,20.3s,baz=117,slow=32						
TEIG	Tepich	42.07	285	LR	LR	23 29 54.6	
	comp=Z,52nm,21.8s,baz=114,slow=34						
TORD	Torodi Ar. Bea	45.20	85	P	P	23 14 30.3	+0.1
	0.6nm,0.8s,baz=266,slow=3.9,SNR=2.5						
TORD				LR	LR	23 33 02.2	
	comp=Z,84nm,18.0s,baz=280,slow=36						
TXAR	Lajitas Array	56.52	296	LR	LR	23 41 00.8	
	comp=Z,34nm,18.9s,baz=0.0,slow=37						
PLCA	Paso Flores	58.91	203	P	P	23 16 11.2	-0.6
	1.5nm,0.7s,baz=100,slow=3.9,SNR=2.8						
ANMO	Albuquerque	59.28	303	LR	LR	23 38 52.0	
	comp=Z,90nm,21.2s,baz=79,slow=33						
PDAR	Pinedale Array	62.52	311	P	P	23 16 38.1	+1.3
	2.3nm,1.1s,baz=97,slow=5.8,SNR=7.0						
PDAR				LR	LR	23 41 11.7	
	comp=Z,32nm,20.6s,baz=36,slow=34						
YKA	Yellowknife Ar	68.90	332	P	P	23 17 15.7	-1.5
	0.6nm,0.9s,baz=102,slow=8.0,SNR=7.6						
BOSA	Boshof	79.51	123	LR	LR	23 46 28.6	
	comp=Z,64nm,18.5s,baz=346,slow=30						
ILAR	Eielson Array	83.06	335	P	P	23 18 38.1	+0.1
	1.6nm,0.9s,baz=73,slow=4.7,SNR=14						

*IASPEI **28** 23:08:44.2±0.8, 36°.53N±0°.02×89°.64W±0°.02, h17km±4km, Error ellipse: s-maj=3.2km s-min=2.9km az=120.2, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*SLM **28** 23:08:44.5±0.8, 36°.54N±0°.01×89°.64W±0°.01, h13km±4km, Md3.1/50, mb_Lg3.2/141(NEIC), Error ellipse: s-maj=1.8km s-min=1.6km az=113.0*

*NEIC **28** 23:08:44.6±0.7, 36°.53N±0°.01×89°.64W±0°.01, h14km±3km, Error ellipse: s-maj=1.7km s-min=1.5km az=91.0*

*ANF **28** 23:08:44.1±0.5, 36°.52N×89°.61W, h10km, ML3.9/8, Error ellipse: s-maj=7.0km s-min=5.6km az=42.0*

ISC 28 23:08:44.5±0.8, **36°.53N**±0°.02×**89°.64W**±0°.02, **h15**km±4km, **n160, σ0s.53**/135, **New Madrid region, Missouri**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARMO	Marston	0.03	274		Pg	23 08 47.1	0.0
MARMO					Sg	23 08 49.3	+0.3
NMEM	New Madrid Sch	0.06	42		Pg	23 08 47.3	-0.1
NMEM					Sg	23 08 49.6	+0.3
WALK	Watson Lake	0.08	82		Pg	23 08 47.5	-0.1
WALK					Sg	23 08 50.0	+0.4
PENMO	Penman	0.08	175		Pg	23 08 47.5	-0.1
PENMO				Sg	Sg	23 08 49.3	-0.2
CATM	Catron	0.09	354		Pg	23 08 47.6	-0.1
CATM					Sg	23 08 50.1	+0.4
NMMO	New Madrid	0.09	49		Pg	23 08 47.6	-0.1
NMMO					Sg	23 08 50.2	+0.4
PGVM	Portageville	0.10	228		Pg	23 08 47.8	0.0
PGVM					Sb	23 08 50.4	-0.1
POBM	Portage Bay	0.12	190		Pg	23 08 48.0	0.0
POBM					Sb	23 08 50.9	-0.2
PVMO	Portageville	0.12	204		Pg	23 08 47.9	-0.2
PVMO				Sg	Sg	23 08 50.1	-0.3
PPLM	Point Pleasant	0.13	161		Pg	23 08 48.2	+0.1
PPLM					Sb	23 08 51.4	-0.1
PARMO	Parma	0.16	326		Pg	23 08 48.5	-0.1
PARMO				Sg	Sg	23 08 51.1	-0.2
SJMO	Saint John's B	0.16	52		Pg	23 08 48.6	0.0
SJMO					Sb	23 08 51.9	-0.5
KEWM	Kewanee	0.17	12		Pg	23 08 48.7	-0.1
KEWM					Sg	23 08 52.0	+0.4
COKM	Charter Oak	0.20	338		Pg	23 08 49.1	0.0
COKM					Sg	23 08 52.5	+0.4
TOPM	Tallapoosa	0.20	269		Pg	23 08 49.2	0.0
WADM	Wardell	0.21	218		Pg	23 08 49.3	+0.1
WADM					Sb	23 08 53.1	-0.4
WYBT	Wynnburg	0.21	148		Pg	23 08 49.5	+0.2
WYBT					Sb	23 08 53.6	-0.1
HENM	Henderson Moun	0.23	35		Pg	23 08 49.5	-0.1
MATM	Matthews	0.25	6		Pg	23 08 49.8	-0.1
MATM					Sg	23 08 53.9	+0.3
MLDM	Malden	0.25	293		Pg	23 08 49.9	0.0
MLDM					Sg	23 08 53.9	+0.3
FLPT	Flippin	0.28	115		Pg	23 08 50.6	+0.1
FLPT					Sb	23 08 55.2	-0.5
DWDM	Dogwood	0.29	23		Pg	23 08 50.5	-0.1
DWDM					Sg	23 08 55.2	+0.3
EPRM	East Prairie	0.29	50		Pg	23 08 50.5	-0.1
HICK	Hickman	0.33	88		Pg	23 08 51.2	-0.1
HICK	Hickman	0.33	88		Sg	23 08 56.5	+0.5
BETM	Bethany	0.35	284		Pg	23 08 51.7	0.0
BRNM	Bernie	0.35	304		Pg	23 08 51.7	0.0
BRGM	Braggadocio	0.37	209		Pg	23 08 52.1	+0.1
MIST	Miston	0.37	163		Pg	23 08 52.2	+0.1
GLAT	Glass	0.38	132		Pg	23 08 52.4	+0.2
GLST	Glass	0.38	132		Pg	23 08 52.4	+0.2
CHRM	Charleston	0.39	34		Pg	23 08 52.1	-0.3
GUAMO	Guam	0.40	336		Pg	23 08 52.3	-0.2
LNXT	Lenox	0.44	165		Pg	23 08 53.5	+0.2
LNXT	Lenox	0.44	165	P		23 08 53.5	
	baz=345						
PEBM	Pemiscott Bayo	0.45	204		Pg	23 08 53.5	0.0
CWPT	Cottonwood Poi	0.52	179		Pg	23 08 54.9	+0.2
CHNM	Channel	0.54	206		Pg	23 08 55.1	0.0
CHNM					Sb	23 09 03.1	0.0
GNAR	Gosnell	0.64	209		Pg	23 08 57.0	0.0
UTMT	University of	0.65	106		Pg	23 08 56.9	-0.3
HALT	Halls	0.66	159		Pg	23 08 57.3	-0.1
PBMO	Poplar Bluff	0.69	292		Pg	23 08 57.2	-0.6
PBMO	Poplar Bluff	0.69	292	P		23 08 57.2	
	baz=111						
PBMO				S		23 09 06.4	
	baz=111						
T45B	Paducah	0.93	58	P		23 09 01.3	
	baz=239,SNR=33						
T45B				S		23 09 14.0	
	baz=239						
T45A	Paducah	0.94	58		Pb	23 09 01.3	-1.1
LPAR	Lepanto	1.07	210		Pb	23 09 04.0	-0.7
S44A	Carbondale	1.20	15		Pn	23 09 06.1	-0.6
S44A	Carbondale	1.20	15	P		23 09 05.9	
	baz=195,SNR=68						
S44A				S		23 09 21.7	
	baz=195						
SFTN	Shelby Forest	1.21	195		Pn	23 09 06.5	-0.2
SIUC	Southern Illin	1.23	16		Pn	23 09 06.4	-0.7
T42A	Van Buren	1.27	294		Pn	23 09 07.0	-0.7
T42A	Van Buren	1.27	294	P		23 09 06.9	
	baz=113						
T42A				S		23 09 24.0	
	baz=113						
HBAR	Harrisburg	1.27	221	Pn	Pn	23 09 07.3	-0.4
HBAR				IAmb_Lg		23 09 25.7	
	comp=Z,153nm,0.8s						
HBAR	Harrisburg	1.27	221	P		23 09 07.3	
	baz=40						
HBAR				S		23 09 25.2	
	baz=40						
LCAR	Lake Charles	1.31	250		Pn	23 09 07.6	-0.5
EBZ	Ebenezer Churc	1.40	170		Pn	23 09 09.6	+0.1
W45A	Hickory Valley	1.42	165		Pn	23 09 09.5	-0.2
W45A	Hickory Valley	1.42	165	P		23 09 09.4	
	baz=345,SNR=150						
W45A				S		23 09 29.0	
	baz=345						
MET	Memphis--Engin	1.42	190	Pn	Pn	23 09 09.7	0.0
WVT	Waverly	1.51	105	P	Pn	23 09 10.9	0.0
	baz=286						
WVT				S	Sn	23 09 30.8	+0.4
	baz=286						
WVT	Waverly	1.51	105		Pn	23 09 10.7	-0.3
WVT	Waverly	1.51	105	P		23 09 10.6	
	baz=286,SNR=165						
WVT				S		23 09 31.5	
	baz=286						
FVM	French Village	1.58	337		Pn	23 09 12.2	+0.2
FVM	French Village	1.58	337	P		23 09 11.8	
	baz=156						
FVM				S		23 09 33.0	
	baz=156						
CCM	Cathedral Cave	1.99	320	P	Pn	23 09 18.6	+1.0
	baz=140						
CCM				S	Sn	23 09 42.7	+0.4
	baz=140						
CCM	Cathedral Cave	1.99	320		Pn	23 09 18.5	+0.9
CCM	Cathedral Cave	1.99	320	P		23 09 18.5	
	baz=140,SNR=93						
CCM				S		23 09 45.4	
	baz=140						
PLAL	Pickwick Lake	2.00	140		Pn	23 09 17.4	-0.2
PWLA	Pickwick Lake	2.01	140		Pn	23 09 17.5	-0.3
OXF	Oxford	2.02	175	P	Pn	23 09 18.1	+0.1
	baz=355						
OXF				S	Sn	23 09 43.7	+0.8
	baz=355						
OXF	Oxford	2.02	175	Pn	Pn	23 09 17.9	-0.1
OXF	Oxford	2.02	175	P		23 09 17.9	
	baz=355,SNR=22						
T47A	Sharon Grove	2.08	77		Pn	23 09 19.3	+0.4
T47A	Sharon Grove	2.08	77	P		23 09 19.4	
	baz=258,SNR=108						
FCAR	Ozark Folk Cen	2.11	253		Pn	23 09 20.2	+1.0
FCAR				IAmb_Lg		23 09 53.0	
	comp=Z,119nm,0.9s						
USIN	University of	2.13	47		Pn	23 09 19.9	+0.5
SLM	Saint Louis	2.16	347		Pn	23 09 20.9	+1.0
MGMO	Mountain Grove	2.20	287		Pb	23 09 22.4	-1.6
MGMO				IAmb_Lg		23 09 54.1	
	comp=Z,89nm,1.0s						
X43A	Marvell	2.25	207	P	Pn	23 09 21.7	+0.6
	baz=26						
X43A	Marvell	2.25	207	P		23 09 21.6	
	baz=26						
V48A	Smith Brothers	2.41	108		Pn	23 09 23.8	+0.4
V48A	Smith Brothers	2.41	108	P		23 09 23.9	
	baz=290,SNR=19						
Q44A	Meyer Farm, Va	2.42	12		Pn	23 09 24.8	+1.3
Q44A				IAmb_Lg		23 10 02.9	
	comp=Z,78nm,0.8s						
Q44A	Meyer Farm, Va	2.42	12	P		23 09 25.2	
	baz=192,SNR=39						
WHAR	Wooly Hollow	2.48	241		Pn	23 09 24.9	+0.6
WHAR				IAmb_Lg		23 10 07.2	
	comp=Z,101nm,1.0s						
W41B	Gary Mavity, V	2.52	238	P	Pn	23 09 25.2	+0.4
	baz=56						
W41B				S	Sn	23 09 55.6	+0.5
	baz=56						
W41B	Gary Mavity, V	2.52	238	P		23 09 25.3	
	baz=56,SNR=77						
OLIL	Olney	2.52	29		Pn	23 09 25.0	+0.2
OLIL				IAmb_Lg		23 10 09.3	
	comp=Z,81nm,0.9s						
U40A	Yellville	2.60	267	P	Pn	23 09 26.9	+1.0
	baz=85						
U40A	Yellville	2.60	267		Pn	23 09 27.1	+1.2
U40A	Yellville	2.60	267	P		23 09 28.6	
	baz=85,SNR=58						
U40A				P		23 09 28.6	
	baz=85,SNR=58						
Y45A	Yeager Farm, C	2.66	178		Pn	23 09 27.1	+0.4
CLTN	Cedars of Leba	2.71	98		Pn	23 09 27.4	0.0
R40A	Maddies Statio	2.74	311	P		23 09 28.9	
	baz=129,SNR=32						
X48A	Hartselle	2.96	134		Pn	23 09 31.2	+0.3
X48A				IAmb_Lg		23 10 17.1	
	comp=Z,78nm,0.7s						
X48A	Hartselle	2.96	134	P		23 09 30.9	
	baz=315,SNR=24						
U49A	Red Boiling Sp	3.11	89		Pn	23 09 33.5	+0.6
U49A				IAmb_Lg		23 10 23.2	
	comp=Z,53nm,0.8s						
U49A	Red Boiling Sp	3.11	89	P		23 09 33.5	
	baz=272,SNR=22						
P43A	Skaggs, Pawnee	3.11	2		Pn	23 09 34.1	+1.1
CCAR	Cane Creek	3.14	214	Pn	Pn	23 09 33.5	+0.1
WCI	Wyandotte Cave	3.16	56	P	Pn	23 09 33.6	0.0
	baz=238						
WCI	Wyandotte Cave	3.16	56		Pn	23 09 33.8	+0.2
WCI				IAmb_Lg		23 10 25.0	
	comp=Z,61nm,0.8s						
WCI	Wyandotte Cave	3.16	56	P		23 09 33.7	
	baz=238,SNR=12						
S39A	Bolivar	3.17	293		Pn	23 09 34.8	+1.1
S39A	Bolivar	3.17	293	P		23 09 34.9	
	baz=110,SNR=27						
SWET	Sewanee	3.28	112		Pn	23 09 36.2	+0.9
X40A	Basin Creek Fa	3.31	233	P	Pn	23 09 36.4	+0.7
	baz=51						
X40A	Basin Creek Fa	3.31	233		Pn	23 09 36.2	+0.5
X40A				IAmb_Lg		23 10 33.9	
	comp=Z,54nm,0.8s						
X40A	Basin Creek Fa	3.31	233	P		23 09 36.7	
	baz=51,SNR=18						
X40A				P		23 09 36.7	
	baz=51,SNR=18						
P40A	Paris	3.55	328	IAmb_Lg		23 10 40.5	
	comp=Z,52nm,0.8s						
Z47A	Carrollton	3.56	158	IAmb_Lg		23 10 40.4	
	comp=Z,75nm,0.9s						
W39A	Magazine	3.62	250	Pn	Pn	23 09 41.2	+1.2
W39A				IAmb_Lg		23 10 45.9	
	comp=Z,59nm,0.8s						
P46A	Rosedale	3.63	31	Pn	Pn	23 09 41.0	+0.9
Y49A	Blount Mountai	3.75	134		Pn	23 09 42.0	+0.2
Y49A				IAmb_Lg		23 10 47.4	
	comp=Z,78nm,0.7s						
Y49A	Blount Mountai	3.75	134	P		23 09 41.8	
	baz=316,SNR=22						
W50A	Signal Mountai	3.75	109		Pn	23 09 42.7	+0.8
W50A				IAmb_Lg		23 10 44.2	
	comp=Z,75nm,0.9s						
MIAR	Mount Ida	3.77	240		Pn	23 09 42.7	+0.6
MIAR				IAmb_Lg		23 10 44.5	
	comp=Z,60nm,0.8s						
MIAR	Mount Ida	3.77	240	P		23 09 42.8	
	baz=57,SNR=9.6						
U38A	Gravette	3.83	270	Pn	Pn	23 09 44.0	+1.1
FPAL	Fort Paine	3.83	120		Pn	23 09 43.1	+0.1
T50A	Nancy	3.88	81		Pn	23 09 44.9	+1.3
146A	Union	3.91	173	IAmb_Lg		23 10 58.1	
	comp=Z,42nm,0.9s						
R49A	Shelbyville	3.97	62		Pn	23 09 45.2	+0.5
WLAR	White Oak Lake	4.02	226	Pn	Pn	23 09 45.6	+0.1
143A	Socs Landing,	4.08	201	IAmb_Lg		23 11 04.0	
	comp=Z,38nm,0.7s						
LRAL	Lakeview Retre	4.11	147		Pn	23 09 46.4	-0.3
LRAL				IAmb_Lg		23 11 01.3	
	comp=Z,38nm,0.8s						
LRAL	Lakeview Retre	4.11	147	P		23 09 46.4	
	baz=329,SNR=8.1						
CMGA	Chestnut Mount	4.20	115		Pn	23 09 49.0	+1.0
N41A	Harden Midland	4.28	347	IAmb_Lg		23 10 60.0	
	comp=Z,55nm,0.8s						
CPCT	Cooper Cave	4.29	103		Pn	23 09 50.0	+0.9
V51A	Loudon	4.34	98		Pn	23 09 50.4	+0.6
V51A				IAmb_Lg		23 11 05.3	
	comp=Z,36nm,0.7s						
V51A	Loudon	4.34	98	P		23 09 50.2	
	baz=281,SNR=7.8						
P38A	Dawn	4.36	316	Pn	Pn	23 09 50.4	+0.3
P38A				IAmb_Lg		23 11 02.2	
	comp=Z,41nm,0.7s						
P38A	Dawn	4.36	316	P		23 09 50.4	
	baz=134,SNR=14						
P48A	Milroy	4.43	47	IAmb_Lg		23 11 02.7	
	comp=Z,46nm,0.7s						
GRBT	Greenback	4.49	99		Pn	23 09 53.0	+1.2
R50A	Paris	4.58	66		Pn	23 09 53.6	+0.5
CPRT	Copper Ridge	4.66	93		Pn	23 09 55.2	+0.7
TKL	Tuckaleechee C	4.83	99		Pn	23 09 57.1	+0.6
TKL				IAmb_Lg		23 11 23.9	
	comp=Z,32nm,0.7s						
P49A	Miami Univ. Ec	4.91	51	IAmb_Lg		23 11 20.1	
	comp=Z,59nm,0.7s						
V52A	Sevierville	4.93	96		Pn	23 09 58.5	+0.5
S51A	Beattyville	4.96	75		Pn	23 09 58.9	+0.6
TUL1	Leonard	5.01	265	Pn	Pn	23 09 59.4	+0.3
TUL1				IAmb_Lg		23 11 24.2	
	comp=Z,34nm,0.8s						
X37A	Clayton	5.06	249	IAmb_Lg		23 11 23.8	
	comp=Z,52nm,0.8s						
Y52A	Lilburn	5.28	119	IAmb_Lg		23 11 30.9	
	comp=Z,35nm,0.8s						
L42A	Oliver, Polo	5.47	360	IAmb_Lg		23 11 34.9	
	comp=Z,28nm,0.9s						
T35A	Sooner Cattle	5.54	276	IAmb_Lg		23 11 43.5	
	comp=Z,31nm,0.8s						
O49A	Covington	5.54	47	IAmb_Lg		23 11 45.2	
	comp=Z,37nm,0.7s						
Q51A	Peebles	5.57	62	IAmb_Lg		23 11 55.2	
	comp=Z,36nm,0.7s						
152A	Waverly Hall	5.59	132	IAmb_Lg		23 11 43.9	
	comp=Z,37nm,0.8s						
V53A	Saluda	5.59	97		Pn	23 10 07.3	+0.2
L40A	Anamosa	5.66	348	IAmb_Lg		23 11 44.8	
	comp=Z,38nm,1.0s						
BG3	Lake Jocassee	5.66	104		Pn	23 10 08.3	+0.2
QUOK	Quay	5.72	269	IAmb_Lg		23 12 01.1	
	comp=Z,26nm,1.0s						
OK031	S. Brethren Rd	5.85	266	IAmb_Lg		23 11 53.9	
	comp=Z,27nm,0.9s						
P51A	Williamsport	5.97	58	IAmb_Lg		23 12 05.4	
	comp=Z,35nm,0.8s						
SCIA	State Center	6.05	334	IAmb_Lg		23 12 00.0	
	comp=Z,32nm,0.8s						
N49A	Columbus Grove	6.12	43	IAmb_Lg		23 11 56.7	
	comp=Z,39nm,0.9s						
K43A	Burlington	6.25	9	IAmb_Lg		23 12 10.2	
	comp=Z,42nm,1.1s						
Q52A	Bidwell	6.33	65	IAmb_Lg		23 12 12.0	
	comp=Z,33nm,0.8s						
JFWS	Jewell Farm	6.40	356	IAmb_Lg		23 12 12.7	
	comp=Z,23nm,0.7s						
HODGE	Hodges	6.45	109	IAmb_Lg		23 12 12.0	
	comp=Z,23nm,1.0s						
BCOK	Bluff Creek, N	6.51	265	IAmb_Lg		23 12 24.0	
	comp=Z,27nm,0.8s						
KAN01	Argonia South	6.54	278	IAmb_Lg		23 12 18.9	
	comp=Z,39nm,0.8s						
K38A	Parkersburg	6.57	339	IAmb_Lg		23 12 22.2	
	comp=Z,22nm,0.7s						
P52A	Corning	6.68	60	IAmb_Lg		23 12 20.6	
	comp=Z,38nm,0.8s						
KAN08	Anthony NE Sta	6.72	278	IAmb_Lg		23 12 22.8	
	comp=Z,28nm,0.7s						
KAN12	Harper NE Stat	6.74	279	IAmb_Lg		23 12 22.6	
	comp=Z,30nm,0.7s						
S54A	Dingess, Beckl	6.77	77	IAmb_Lg		23 12 18.0	
	comp=Z,22nm,0.8s						
M50A	Fremont	7.08	45	IAmb_Lg		23 12 26.8	
	comp=Z,22nm,0.8s						
P53A	Whipple	7.15	63	IAmb_Lg		23 12 38.4	
	comp=Z,26nm,1.0s						
N51A	Ashland	7.17	50	IAmb_Lg		23 12 28.3	
	comp=Z,33nm,0.8s						
AAM	Ann Arbor	7.39	37	IAmb_Lg		23 12 39.5	
	comp=Z,22nm,0.7s						
Q54A	Coxs Mills	7.39	68	IAmb_Lg		23 12 38.7	
	comp=Z,20nm,0.7s						
I40A	Norwalk	7.39	354	IAmb_Lg		23 12 40.4	
	comp=Z,19nm,0.8s						
BLA	Blacksburg	7.42	82	IAmb_Lg		23 12 47.0	
	comp=Z,33nm,0.8s						
R32A	Long Quarter,	7.46	287	IAmb_Lg		23 12 54.1	
	comp=Z,34nm,1.1s						
O53A	New Philadelph	7.59	58	IAmb_Lg		23 12 48.4	
	comp=Z,30nm,0.9s						
W57A	Gilead	7.95	97	IAmb_Lg		23 12 52.5	
	comp=Z,19nm,0.9s						
Y57A	Sumter	7.96	106	IAmb_Lg		23 13 09.4	
	comp=Z,22nm,0.7s						
H43A	Windswept, Lux	8.06	10	IAmb_Lg		23 12 59.2	
	comp=Z,20nm,0.7s						
N53A	Lisbon	8.10	56	IAmb_Lg		23 12 55.2	
	comp=Z,29nm,1.1s						
O54A	Avella	8.14	61	IAmb_Lg		23 13 00.5	
	comp=Z,20nm,0.8s						
M53A	WI Miller and	8.53	52	IAmb_Lg		23 13 21.4	
	comp=Z,25nm,0.9s						
N54A	Moraine State	8.74	57	IAmb_Lg		23 13 19.8	
	comp=Z,20nm,1.0s						
ECSD	EROS Data Cent	8.96	326	IAmb_Lg		23 13 28.5	
	comp=Z,17nm,1.1s						
M54A	Oil Creek Stat	9.21	54	IAmb_Lg		23 13 39.8	
	comp=Z,21nm,1.0s						
ERPA	Erie	9.33	50	IAmb_Lg		23 13 42.9	
	comp=Z,19nm,0.8s						

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*VAO **28** 23:17:54.0±0.5, 24°.28S×67°.47W, h252km±6km, mb3.8*

*IDC **28** 23:17:55.2±1.9, 24°.00S×66°.81W, h185km±22km, mb3.5/1, mb1 3.5/6, mb1mx3.2/39, mbtmp4.0/6, Error ellipse: s-maj=30.9km s-min=19.2km az=138.0*

*GUC **28** 23:17:56.5±0.5, 24°.09S×67°.26W, h220km±10km, ML4.2*

ISC 28 23:17:54.7±0.7, **24°.08S**±0°.04×**67°.18W**±0°.08, **h222**km±11km, **n48, σ1s.62**/65, **5C, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	2.17	312	P	Pn	23 18 37.8	+0.8
	7.1nm,0.3s,baz=136,slow=8.1,SNR=143						
LVC				S	S	23 19 09.7	0.0
	32nm,0.3s,baz=296,slow=20,SNR=73						
LVC	Limon Verde	2.17	312	eP	Pn	23 18 37.8	+0.8
LVC				eS	S	23 19 09.3	-0.5
LVC	Limon Verde	2.17	312	eP	Pn	23 18 37.9	+1.0
PB15	IPOC Station P	2.28	292	⇑iP	Pn	23 18 39.0	+1.2
PB15				i S	S	23 19 11.3	-0.1
PB15				IAML		23 19 16.4	
	comp=E,2µm,0.4s						
GO02	Mina Guanaco	2.44	243	⇑iP	Pn	23 18 40.5	+0.8
GO02				eS	S	23 19 15.1	+0.4
GO02				IAML		23 19 17.2	
	comp=N,308nm,0.4s						
PB06	IPOC Station P	2.59	301	⇑iP	Pn	23 18 42.4	+1.2
PB06				eS	S	23 19 17.0	-0.4
PB06				IAML		23 19 19.5	
	comp=E,693nm,0.4s						
PB09	IPOC Station P	2.97	320	eP	Pn	23 18 47.3	+1.9
PB09				eS	S	23 19 25.1	+0.2
PB09				IAML		23 19 28.9	
	comp=E,143nm,0.2s						
PB10	IPOC Station P	3.15	280	eP	Pn	23 18 48.7	+1.6
PB10				eS	S	23 19 28.8	+0.7
PB04	IPOC Station P	3.24	302	eP	Pn	23 18 49.6	+1.1
PB04				eS	S	23 19 29.8	-0.8
AC02	Maricunga	3.26	212	⇑iP	Pn	23 18 49.4	+0.4
PB07	IPOC Station P	3.43	313	eP	Pn	23 18 51.5	+0.9
PB01	IPOC Station P	3.70	324	eP	Pn	23 18 54.5	+0.6
PB01				eS	S	23 19 38.5	-1.8
AC01	Pan de Azucar	3.72	236	⇑iP	Pn	23 18 53.8	-0.1
AC01				eS	S	23 19 38.7	-1.7
PB02	IPOC Station P	3.72	317	eP	Pn	23 18 55.0	+0.9
PB02				eS	S	23 19 38.1	-2.6
PATCX	Punta Patache	4.26	319	eP	Pn	23 19 02.0	+1.4
PATCX				eS	S	23 19 50.4	-2.0
PB08	IPOC Station P	4.33	335	eP	Pn	23 19 02.9	+1.2
PB08				eS	S	23 19 54.5	+0.1
GO03	Copiap	4.45	218	eP	Pn	23 19 02.4	-0.5
GO03				eS	S	23 19 54.1	-2.5
HMBC	Humberstone	4.54	326	eP	Pn	23 19 04.0	-0.1
HMBC				eS	S	23 19 56.0	-2.9
PSGC	Pisagua	5.24	328	eP	Pn	23 19 12.2	-0.5
AC04	Llanos de Chal	5.39	220	eP	Pn	23 19 13.8	-0.7
AC05	El Transito	5.49	210	eP	Pn	23 19 15.8	0.0
LPAZ	La Paz	7.81	353	P	Pn	23 19 46.8	+0.6
	comp=E,1.1nm,0.3s,baz=164,slow=6.5,SNR=17						
LPAZ				S	S	23 21 13.7	-1.4
	comp=E,0.3nm,0.3s,baz=353,slow=16,SNR=2.5						
LPAZ	La Paz	7.81	353	eP	Pn	23 19 47.1	+1.0
SIV	San Ignacio	9.88	37	P	Pn	23 20 09.3	-3.0
	comp=E,1.0nm,0.3s,baz=224,slow=15,SNR=5.2						
SIV				S	S	23 21 57.7	-5.5
	comp=E,0.1nm,0.3s,baz=106,slow=21,SNR=1.5						
PTLB	Pontes e Lacer	11.44	43	eP	Pn	23 20 35.0	+3.0
TRCB	Terra Rica	13.41	87	eP	Pn	23 20 58.9	+2.3
CPSB	Cacapava Do Su	13.74	120	eP	Pn	23 21 00.5	-0.1
PTGB	Pitanga	13.79	96	eP	Pn	23 21 03.5	+2.2
PCMB	Pacaembu	14.88	84	eP	Pn	23 21 14.5	-0.1
SAML	Samuel	15.53	15	eP	P	23 21 22.6	+0.5
FRTB	Fartura	16.15	91	eP	P	23 21 29.4	+0.4
ITRB	Iturama	16.20	78	eP	P	23 21 29.7	+0.1
ARAG	Araguaiana, MT	16.67	63	eP	P	23 21 36.3	+1.6
PLCA	Paso Flores	16.84	189	P	Pn	23 21 40.6	+2.6
	comp=E,0.2nm,0.3s,baz=27,slow=12,SNR=3.2						
PLCA	Paso Flores	16.84	189	eP	P	23 21 31.1	-5.3
CLDB	Colider	17.03	41	eP	P	23 21 39.0	+0.4
IPMB	Ipameri, GO	18.71	75	eP	P	23 21 56.9	+0.1
BDFB	Brasilia	19.87	69	P	P	23 22 09.5	+0.1
	comp=E,1.0nm,0.3s,baz=240,slow=12,SNR=18						
JANB	Januaria	23.31	72	eP	P	23 22 43.0	-0.2
SMTB	Santa Maria do	24.07	54	eP	P	23 22 50.3	+0.2
SDBA	SAO DESIDERIO	24.09	65	eP	P	23 22 50.1	-0.1
PRPB	Parauapebas	24.40	46	eP	P	23 22 53.5	+0.5
ALF01	Guarapari-ES	24.69	87	eP	P	23 22 54.9	-0.7
NAN01	Guarapari, ES	25.99	81	eP	P	23 23 06.7	-0.6
GDU01	Guandu, BA	28.02	73	eP	P	23 23 25.1	-0.4
TMAB	Tom-Au,PA,Br	28.39	43	eP	P	23 23 28.0	-0.7
TORD	Torodi Ar. Bea	76.75	69	P	P	23 29 23.9	+1.9
	comp=E,0.6nm,0.4s,baz=259,slow=5.5,SNR=9.5						
MKAR	Makanchi Array	146.69	39	PKPbc	PKiKP	23 37 14.4	+1.7
	comp=E,0.4nm,0.6s,baz=296,slow=2.9,SNR=7.1						

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*IDC **28** 23:24:39.2±3.3, 13°.24N×91°.54W, h0km, mb3.3/3, mb1 3.8/6, mb1mx3.6/37, mbtmp3.6/6, ML4.3/3, Error ellipse: s-maj=63.1km s-min=54.9km az=15.0*

*GCG **28** 23:24:46.6±0.6, 13°.64N×91°.38W, h0km±14km, MD4.0*

*SNET **28** 23:24:49.4±1.2, 13°.99N×91°.35W, h27km±19km, ML3.4*

ISC 28 23:24:46.5±1.1, **13°.74N**±0°.08×**91°.57W**±0°.05, **h28**km, **n19, σ1s.38**/24, **mb3.5**/3, **Near coast of Guatemala**

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

RTAL	**Retalhuleu**	**0.79**	**351**	*e*P	**Pb**	**23 25 02.0**	**+0.2**
RTAL				*e*S	**Sb**	**23 25 10.4**	**-1.7**
FUG	**Fuego 3**	**0.99**	**45**	*e*P	**Pb**	**23 25 05.6**	**+0.3**
PCG	**Pacaya**	**1.13**	**55**	*e*P	**Pb**	**23 25 08.0**	**+0.3**
IXG	**Ixpaco**	**1.17**	**68**	*e*P	**Pn**	**23 25 07.3**	**0.0**
NBG	**Las Nubes**	**1.45**	**54**	*e*P	**Pb**	**23 25 13.4**	**+0.3**
NBG				*e*S	**Sb**	**23 25 33.7**	**+2.4**
HUEH	**Huehuetenango**	**1.57**	**2**	*e*P	**Pn**	**23 25 12.9**	**+0.1**
CEVE	**Cerro Verde**	**1.89**	**87**	IAML		23 25 55.5	
	comp=Z,1μm,0.3s						
JAYA	**Jayaque - finc**	**2.06**	**92**	*e*P	**Pn**	**23 25 18.8**	**-0.7**
JAYA				*e*S	**Sn**	**23 25 43.6**	**-0.7**
JAYA				IAML		23 25 49.0	
	comp=Z,453nm,0.2s						
MTO3	**Montecristo**	**2.24**	**73**	*e*P	**Pn**	**23 25 22.3**	**+0.3**
MRL	**Marmol**	**2.26**	**54**	*e*P	**Pb**	**23 25 24.9**	**-1.9**
LFRS	**El Faro**	**2.44**	**92**	*e*P	**Pn**	**23 25 24.9**	**+0.2**
PQSS	**Presa 15 de Se**	**2.92**	**92**	*e*P	**Pn**	**23 25 31.9**	**+0.7**
PQSS				*e*S	**Sn**	**23 26 04.0**	**-1.5**
CMIG	**Matias Romero**	**4.62**	**317**	Pn	**Pn**	**23 25 55.5**	**+0.9**
	comp=Z,2.6nm,0.3s,baz=129,slow=12,SNR=15						
CMIG				Sn	**Sn**	**23 26 45.0**	**-2.3**
	comp=Z,3.9nm,0.3s,baz=120,slow=12,SNR=4.1						
TEIG	**Tepich**	**7.18**	**26**	Pn	**Pn**	**23 26 32.2**	**+2.5**
	comp=Z,4.0nm,0.3s,baz=350,slow=0.7,SNR=16						
TEIG				Sn	**Sn**	**23 27 47.5**	**-2.8**
	baz=327,slow=20,SNR=0.7						
TXAR	**Lajitas Array**	**19.14**	**326**	P	**Pn**	**23 29 09.9**	**+1.1**
	comp=Z,0.5nm,0.3s,baz=136,slow=12,SNR=2.1						
PDAR	**Pinedale Array**	**32.83**	**335**	P	**P**	**23 31 19.2**	**+1.2**
	comp=Z,0.1nm,0.4s,baz=153,slow=8.1,SNR=2.3						
YKA	**Yellowknife Ar**	**51.37**	**347**	P	**P**	**23 33 48.0**	**-0.5**
	comp=Z,0.4nm,0.6s,baz=144,slow=8.3,SNR=8.6						
ILAR	**Eielson Array**	**63.24**	**337**	P	**P**	**23 35 12.1**	**-0.1**
	comp=Z,0.2nm,0.5s,baz=163,slow=5.8,SNR=7.7						
CMAR	**Chiang Mai Arr**	**146.37**	**342**	PKPbc	**PKPdf**	**23 44 24.1**	**-0.4**
	comp=Z,0.9nm,0.3s,baz=336,slow=4.0,SNR=4.1						

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*SOME **28** 23:30:39.1, 39.°95N×74.°82E, h15^{km}*
*KRNET **28** 23:30:40.4±0.1, 39.°97N×74.°77E, h14^{km}, mb3.1*
*NNC **28** 23:30:41.4±1.1, 40.°04N×74.°79E, h0^{km}, mb3.7, mpv3.5, Error ellipse: s-maj=8.4km s-min=4.9km az=166.0*
ISC 28 23:30:38.5±1.4**, 39.°96N**±0.°05×**74.°80E**±0.°03**, h8**^{km}±14^{km}**, n61, σ1.^{s}62**/94**, 30C-10D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	**Sufi-Kurgan**	**1.00**	**273**	⇑*i*P	**Pn**	**23 30 59.0**	**-0.1**
	baz=73						
SFK				⇑*i*S	**Sg**	**23 31 12.3**	**+1.5**
	baz=73						
OHH	**Osh**	**1.64**	**291**	⇑*i*P	**Pg**	**23 31 10.6**	**+0.6**
	baz=91						
OHH				⇑*i*S	**Sg**	**23 31 32.8**	**+1.4**
	baz=91						
ARLS	**Aral**	**1.93**	**349**	⇑*i*P	**Pg**	**23 31 15.5**	**-0.1**
	baz=50						
ARLS				⇑*i*S	**Sg**	**23 31 41.9**	**+1.3**
	baz=50						
ARSB	**Arslanbob**	**1.94**	**315**	⇑*i*P	**Pg**	**23 31 15.8**	**0.0**
	baz=15						
ARSB				⇑*i*S	**Sg**	**23 31 41.6**	**+0.7**
	baz=15						
UCH	**Uchtor**	**2.27**	**355**	⇑*e*P	**Pb**	**23 31 21.1**	**+1.0**
	baz=55						
UCH				⇑*i*S	**Sg**	**23 31 50.7**	**-0.9**
	baz=55						
UCH	**Uchtor**	**2.27**	**355**	P	**Pg**	**23 31 22.0**	**-0.1**
	SNR=43						
AML	**Almayashu**	**2.32**	**339**	⇓*i*P	**Pb**	**23 31 21.7**	**+0.8**
	baz=40						
AML				⇓*i*S	**Sb**	**23 31 52.0**	**+2.1**
	baz=40						
AML	**Almayashu**	**2.32**	**339**	P	**Pg**	**23 31 23.0**	**-0.1**
	SNR=25						
DRK	**Karamyk**	**2.37**	**259**	⇓*i*P	**Pb**	**23 31 22.0**	**+0.4**
	baz=59						
DRK				⇓*i*S	**Sb**	**23 31 52.5**	**+1.5**
	baz=59						
ULHL	**Ulahol**	**2.53**	**25**	⇑*i*P	**Pb**	**23 31 24.6**	**+0.3**
	baz=26						
ULHL				⇑*i*S	**Sb**	**23 31 56.9**	**+1.3**
	baz=26						
ULHL	**Ulahol**	**2.53**	**25**	P	**Pg**	**23 31 26.9**	**-0.1**
	SNR=28						
BOOM	**Boomskoye usch**	**2.67**	**18**	⇑*e*P	**Pb**	**23 31 26.4**	**-0.2**
	baz=19						
BOOM				⇑*i*S	**Sb**	**23 32 00.1**	**+0.5**
	baz=19						
AAK	**Ala-Archa**	**2.68**	**355**	⇑*i*P	**Pb**	**23 31 26.5**	**-0.4**
	baz=56						
AAK				⇑*i*S	**Sb**	**23 32 00.3**	**+0.3**
	baz=56						
AAK	**Ala-Archa**	**2.68**	**355**	P	**Pb**	**23 31 28.1**	**+1.3**
	SNR=22						
AAK	**Ala-Archa**	**2.68**	**355**	⇑Pg	**Pb**	**23 31 28.9**	**+2.0**
	12nm,0.5s						
AAK				⇑Lg	Lg	23 32 03.9	
	13nm,0.5s						
KBK	**Karagaybulak**	**2.69**	**2**	⇑*i*P	**Pb**	**23 31 26.7**	**-0.4**
	baz=3.0						
KBK				⇑*i*S	**Sb**	**23 32 00.5**	**+0.2**
	baz=3.0						
KBK	**Karagaybulak**	**2.69**	**2**	P	**Pb**	**23 31 28.2**	**+1.1**
	SNR=18						
EKS2	**Erkin-Say**	**2.81**	**344**	⇓*i*P	**Pb**	**23 31 28.2**	**-0.7**
	baz=45						
EKS2				⇓*i*S	**Sb**	**23 32 03.1**	**-0.4**
	baz=45						
EKS2	**Erkin-Say**	**2.81**	**344**	P	**Pb**	**23 31 29.4**	**+0.5**
	SNR=5.9						
KDJ	**Kajisay**	**2.81**	**39**	⇑*i*P	**Pb**	**23 31 28.5**	**-0.6**
	baz=40						
KDJ				⇑*e*S	**Sb**	**23 32 04.0**	**+0.2**
	baz=40						
FRU1	**Bishkek**	**2.85**	**357**	⇓*e*P	**Pb**	**23 31 28.8**	**-0.8**
	baz=58						
FRU1				⇓*i*S	**Sb**	**23 32 03.6**	**-1.1**
	baz=58						
TKM2	**Tokmak 2**	**3.02**	**11**	⇑*i*P	**Pb**	**23 31 31.2**	**-1.4**
	baz=12						
TKM2				⇑*i*S	**Sb**	**23 32 08.4**	**-1.2**
	baz=12						
TKM2	**Tokmak 2**	**3.02**	**11**	P	**Pb**	**23 31 32.5**	**-0.1**
	SNR=13						
TKM2	**Tokmak 2**	**3.02**	**11**	⇑Pg	**Pb**	**23 31 34.0**	**+1.4**
	4.4nm,0.2s						
TKM2				⇓Lg	Lg	23 32 14.1	
	5.8nm,0.4s						
MRKS	**Merke**	**3.02**	**337**	*e*P	**Pb**	**23 31 33.0**	**+0.3**
	3.6nm,0.5s						
MRKS				*e*S	**Sb**	**23 32 12.5**	**+2.8**
	11nm,0.8s						
MRKS	**Merke**	**3.02**	**337**	Pg	**Pb**	**23 31 34.5**	**+1.8**
	6.9nm,0.3s						
MRKS				Lg	Lg	23 32 14.6	
	11nm,0.8s						
CHMS	**Chumysh**	**3.03**	**359**	⇑*e*P	**Pb**	**23 31 31.2**	**-1.6**
	baz=60						
CHMS				⇑*i*S	**Sb**	**23 32 08.4**	**-1.6**
	baz=60						
BTK	**Batken**	**3.06**	**273**	⇑*i*P	**Pb**	**23 31 31.8**	**-1.5**
	baz=73						
BTK				⇑*i*S	**Sb**	**23 32 08.6**	**-2.3**
	baz=73						
KST	**Kastek**	**3.20**	**15**	*e*P	**Pg**	**23 31 39.3**	**-0.5**
	13nm,0.3s						
KST				*e*S	**Sg**	**23 32 22.9**	**+1.6**
	8.9nm,0.4s						
KST	**Kastek**	**3.20**	**15**	Pg	**Pg**	**23 31 39.3**	**-0.5**
	13nm,0.3s						
KST				Lg	Lg	23 32 22.9	
	8.9nm,0.4s						
USP	**Ospenovka**	**3.31**	**356**	P	**Pb**	**23 31 36.3**	**-1.2**
	SNR=8.2						
DGS	**Degeres**	**3.36**	**12**	*e*P	**Pg**	**23 31 41.5**	**-1.4**
	23nm,0.5s						
DGS				*e*S	**Sg**	**23 32 27.1**	**+0.8**
	12nm,0.6s						
DGS	**Degeres**	**3.36**	**12**	Pg	**Pg**	**23 31 41.5**	**-1.4**
	23nm,0.5s						
DGS				Lg	Lg	23 32 27.1	
	12nm,0.6s						
TNSS	**Tian-Shan**	**3.47**	**27**	*e*P	**Pg**	**23 31 44.1**	**-0.9**
	6.4nm,0.3s						
TNSS				*e*S	**Sg**	**23 32 31.1**	**+1.2**
	4.9nm,0.5s						
TNSS	**Tian-Shan**	**3.47**	**27**	Pg	**Pg**	**23 31 44.1**	**-0.9**
	6.4nm,0.3s						
TNSS				Lg	Lg	23 32 31.1	
	4.9nm,0.5s						
SGDS	**Sogindy**	**3.49**	**358**	Pg	**Pb**	**23 31 43.3**	**+2.7**
	3.8nm,0.3s						
SGDS				Lg	Lg	23 32 29.9	
	3.6nm,0.5s						
MDOK	**Medeo**	**3.61**	**27**	*e*P	**Pg**	**23 31 46.2**	**-1.5**
	9.0nm,0.9s						
MDOK				*e*S	**Sg**	**23 32 34.6**	**0.0**
	6.4nm,0.7s						
MDOK	**Medeo**	**3.61**	**27**	Pg	**Pg**	**23 31 46.3**	**-1.5**
	3.7nm,0.5s						
MDOK				Lg	Lg	23 32 34.3	
	6.5nm,0.6s						
MDOK	**Medeo**	**3.61**	**27**	Pg	**Pg**	**23 31 46.2**	**-1.5**
	9.0nm,0.9s						
MDOK				Lg	Lg	23 32 34.6	
	6.4nm,0.7s						
KRBS	**Karabastau**	**3.79**	**10**	*e*P	**Pg**	**23 31 49.7**	**-1.3**
	4.8nm,0.3s						
KRBS				*e*S	**Sg**	**23 32 40.7**	**+0.6**
	5.5nm,0.4s						
KRBS	**Karabastau**	**3.79**	**10**	Pg	**Pg**	**23 31 49.7**	**-1.3**
	4.8nm,0.3s						
KRBS				Lg	Lg	23 32 40.7	
	5.5nm,0.4s						
DZA	**Taraz**	**3.92**	**319**	*e*P	**Pg**	**23 31 52.6**	**-1.1**
	131nm,0.1s						
DZA				*e*S	**Sg**	**23 32 46.0**	**+1.6**
	25nm,0.2s						
DZA	**Taraz**	**3.92**	**319**	Pg	**Pg**	**23 31 52.6**	**-1.1**
	131nm,0.1s						
DZA				Lg	Lg	23 32 46.0	
	25nm,0.2s						
KTBS	**Karatobe**	**4.00**	**20**	*e*P	**Pg**	**23 31 53.7**	**-1.5**
	3.5nm,0.2s						
KTBS				*e*S	**Sg**	**23 32 47.5**	**+0.5**
	8.7nm,0.4s						
KTBS	**Karatobe**	**4.00**	**20**	Pg	**Pg**	**23 31 53.7**	**-1.5**
	3.5nm,0.2s						
KTBS				Lg	Lg	23 32 47.5	
	8.7nm,0.4s						
KUU	**Kurty**	**4.09**	**16**	*e*P	**Pg**	**23 31 54.5**	**-2.4**
	5.1nm,0.3s						
KUU				*e*S	**Sg**	**23 32 48.9**	**-0.9**
	11nm,0.5s						
KUU	**Kurty**	**4.09**	**16**	Pg	**Pg**	**23 31 54.5**	**-2.4**
	5.1nm,0.3s						
KUU				Lg	Lg	23 32 48.9	
	11nm,0.5s						
SATY	**Saty**	**4.11**	**40**	*e*P	**Pb**	**23 31 53.7**	**+2.5**
	2.2nm,0.5s						
SATY				*e*S	**Sg**	**23 32 47.4**	**-3.1**
	5.5nm,0.6s						
SATY	**Saty**	**4.11**	**40**	Pg	**Pb**	**23 31 53.7**	**+2.5**
	2.2nm,0.5s						
SATY				Lg	Lg	23 32 47.4	
	5.5nm,0.6s						
CHKK	**Chushkaly**	**4.22**	**22**	*e*P	**Pg**	**23 31 57.6**	**-1.7**
	1.9nm,0.2s						
CHKK				*e*S	**Sg**	**23 32 54.9**	**+1.0**
	5.3nm,0.4s						
CHKK	**Chushkaly**	**4.22**	**22**	Pg	**Pg**	**23 31 57.6**	**-1.7**
	1.9nm,0.2s						
CHKK				Lg	Lg	23 32 54.9	
	5.3nm,0.4s						
IUG	**Iuzhnay**	**4.22**	**303**	*e*P	**Pg**	**23 31 57.3**	**-2.0**
	0.6nm,0.1s						
IUG				*e*S	**Sg**	**23 32 54.1**	**+0.2**
	14nm,0.6s						
IUG	**Iuzhnay**	**4.22**	**303**	Pg	**Pg**	**23 31 57.3**	**-2.0**
	0.6nm,0.1s						
IUG				Lg	Lg	23 32 54.1	
	14nm,0.6s						
KURS	**Kuram**	**4.33**	**34**	*e*P	**Pg**	**23 31 59.5**	**-2.0**
	2.3nm,0.5s						
KURS				*e*S	**Sg**	**23 32 57.5**	**-0.1**
	3.7nm,0.6s						
KURS	**Kuram**	**4.33**	**34**	Pg	**Pg**	**23 31 59.5**	**-2.0**
	2.3nm,0.5s						
KURS				Lg	Lg	23 32 57.5	
	3.7nm,0.6s						
UZB	**Uzynbulak**	**4.49**	**43**	*e*P	**Pg**	**23 32 01.8**	**-2.6**
	4.1nm,0.2s						
UZB				*e*S	**Sg**	**23 33 01.3**	**-1.3**
	5.6nm,0.6s						
UZB	**Uzynbulak**	**4.49**	**43**	Pg	**Pg**	**23 32 01.8**	**-2.6**
	4.1nm,0.2s						
UZB				Lg	Lg	23 33 01.3	
	5.6nm,0.6s						
KK31	**Karatay Array**	**4.50**	**316**	⇑Pn	Pn	23 31 52.5	+5.5
	0.2nm,0.4s,baz=128,slow=12,SNR=11						
KK31				Pg	**Pg**	**23 32 02.1**	**-2.5**
	0.4nm,0.3s,baz=141,slow=16,SNR=11						
KK31				⇓Lg	Lg	23 33 01.2	
	1.5nm,0.4s,baz=128,slow=28,SNR=5.6						
KPKS	**Kokpek**	**4.55**	**38**	*e*P	**Pg**	**23 32 02.5**	**-3.1**
	1.9nm,0.2s						
KPKS				*e*S	**Sg**	**23 33 02.7**	**-1.8**
	19nm,0.5s						
SHLS	**Shalkode**	**4.73**	**46**	*e*P	**Pg**	**23 32 11.0**	**+1.8**
	1.8nm,0.4s						
SHLS				*e*S	**Sg**	**23 33 16.9**	**+6.5**
	13nm,0.8s						
SHLS	**Shalkode**	**4.73**	**46**	Pg	**Pg**	**23 32 11.0**	**+1.8**
	1.8nm,0.4s						
SHLS				Lg	Lg	23 33 16.9	
	13nm,0.8s						

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*SKHL **28** 23:40:55.3±0.5, 45.°50N×142.°60E, h311^{km}±1^{km}, mb4.5/6, msha5.3/7*
*IDC **28** 23:40:55.6±0.5, 45.°55N×142.°46E, h297^{km}±10^{km}, mb3.2/10, mb1 3.4/17, mb1mx3.3/36, mbtmp4.0/17, Error ellipse: s-maj=22.0km s-min=11.8km az=171.0*
*JMA **28** 23:40:55.0±0.2, 45.°45N×142.°49E, h304^{km}±2^{km}, M3.3*
ISC 28 23:40:55.2±0.6**, 45.°43N**±0.°06×**142.°50E**±0.°06**, h300**^{km}±6^{km}**, n40, σ1.^{s}18**/55**, mb3.5**/10**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JWK2	**Keihoku**	**0.44**	**255**	P	**Pn**	**23 41 34.1**	**+0.5**
JWK2				*e*S	**S**	**23 42 04.0**	**-0.2**
JRR	**Rishiri**	**0.89**	**251**	P	**Pn**	**23 41 35.4**	**+0.4**
JRBN	**Rebuntou**	**1.01**	**270**	P	**Pn**	**23 41 35.3**	**-0.2**
JRBN				*e*S	**S**	**23 42 06.1**	**-1.6**
JSS	**Shosan**	**1.13**	**204**	P	**Pn**	**23 41 36.8**	**+0.6**
JYG	**Yagishiri**	**1.26**	**218**	P	**Pn**	**23 41 37.4**	**+0.5**
ASAJ	**Asahikawa**	**1.31**	**177**	P	**Pn**	**23 41 38.0**	**+0.7**
	10.0nm,0.3s,baz=330,slow=5.3,SNR=92						
ASAJ				S	**S**	**23 42 12.1**	**+1.3**
	2.3nm,0.3s,baz=276,slow=6.4,SNR=10						
ASAJ	**Asahikawa**	**1.31**	**177**	P	**Pn**	**23 41 37.9**	**+0.6**
ASAJ				*e*S	**S**	**23 42 11.8**	**+1.0**
YSS	**Yuzh-Sakhalins**	**1.54**	**7**	*e*P	**Pn**	**23 41 38.3**	**-0.1**
YSS				AMB	AMB	23 41 38.7	
	80nm,0.4s						
YSS				*e*S	**S**	**23 42 11.4**	**-1.5**
YSS				A	A	23 42 12.1	
	100nm,0.4s						
YSS				A	A	23 42 12.1	
	100nm,0.4s						
JMP	**Maruseppu**	**1.55**	**156**	P	**Pn**	**23 41 39.2**	**+0.4**
JMP				*e*S	**S**	**23 42 13.4**	**-0.1**
JKK2	**Kamakawa 2**	**1.57**	**173**	P	**Pn**	**23 41 39.5**	**+0.6**
JKK2				*e*S	**S**	**23 42 14.6**	**+0.9**
JTKR	**Abashiri--Toko**	**1.77**	**145**	P	**Pn**	**23 41 40.9**	**+0.7**
JTKR				*e*S	**S**	**23 42 15.7**	**-0.4**
JHR	**Hokuryu**	**1.77**	**198**	P	**Pn**	**23 41 40.9**	**+0.6**
JAB	**Ashibetsu**	**1.94**	**186**	P	**Pn**	**23 41 42.2**	**+0.7**
JFR	**Furan**	**2.27**	**178**	P	**Pn**	**23 41 44.6**	**+0.4**
JFR				*e*S	**S**	**23 42 23.8**	**+0.4**
JAR	**Ashorobuto**	**2.32**	**156**	P	**Pn**	**23 41 45.4**	**+0.7**
JAR				*e*S	**S**	**23 42 24.8**	**+0.7**
JRA	**Rausu**	**2.39**	**128**	P	**Pn**	**23 41 46.2**	**+1.0**
JEW	**Eniwo**	**2.70**	**197**	P	**Pn**	**23 41 49.2**	**+1.1**
JCH	**Churui**	**2.88**	**167**	P	**Pn**	**23 41 48.8**	**-1.0**
JCH				*e*S	**S**	**23 42 29.3**	**-4.2**
JAK	**Akkeshi**	**2.90**	**146**	P	**Pn**	**23 41 49.5**	**-0.5**
JAK				*e*S	**S**	**23 42 30.4**	**-3.3**
NEM2	**Nemuro 2**	**3.11**	**130**	P	**Pn**	**23 41 50.5**	**-1.5**
JNBK	**Urakawa-nobuka**	**3.15**	**177**	P	**Pn**	**23 41 51.9**	**-0.6**
JNBK				*e*S	**S**	**23 42 36.9**	**-1.4**
JKB	**Kayabe**	**3.70**	**197**	P	**Pn**	**23 41 57.5**	**-0.6**
JKB				*e*S	**S**	**23 42 46.4**	**-2.2**
USRK	**Ussuriysk Ar.**	**7.58**	**264**	P	**Pn**	**23 42 44.2**	**+0.7**
	baz=68,slow=13,SNR=61						
KLR	**Kul'dur**	**8.23**	**301**	P	**Pn**	**23 42 51.7**	**+0.2**
	0.5nm,0.3s,baz=114,slow=11,SNR=18						
KLR	**Kul'dur**	**8.23**	**301**	*e*P	**Pn**	**23 42 50.9**	**-0.5**
KLR				*e*S	**S**	**23 44 23.4**	**-2.4**
MJAR	**Matsushiro Arr**	**9.45**	**202**	P	**Pn**	**23 43 06.8**	**+0.1**
	0.2nm,0.3s,baz=13,slow=14,SNR=13						
PETK	**Petropavlovsk-**	**12.53**	**47**	P	**Pn**	**23 43 44.0**	**0.0**
	0.3nm,0.3s,baz=211,slow=11,SNR=4.9						
KSRS	**Korea Array**	**13.52**	**239**	P	**Pn**	**23 43 57.3**	**+1.4**
	0.2nm,0.3s,baz=68,slow=33,SNR=4.8						
MA2	**Magadan**	**15.02**	**16**	P	**P**	**23 44 11.0**	**-1.1**
	0.5nm,0.3s,baz=184,slow=9.2,SNR=4.8						
SEY	**Seymchan**	**18.43**	**14**	P	**P**	**23 44 48.5**	**-0.4**
	1.4nm,0.3s,baz=192,slow=6.7,SNR=34						
SONM	**Songino Array**	**24.77**	**289**	P	**P**	**23 45 50.8**	**+0.6**
	3.8nm,0.3s,baz=85,slow=8.5,SNR=52						
ZALV	**Zalesovo Beam**	**37.32**	**305**	P	**P**	**23 47 38.1**	**-0.8**
	0.4nm,0.3s,baz=94,slow=13,SNR=2.8						
MKAR	**Makanchi Array**	**40.86**	**294**	P	**P**	**23 48 08.2**	**-0.1**
	0.5nm,0.6s,baz=79,slow=7.6,SNR=12						
ILAR	**Eielson Array**	**42.12**	**37**	P	**P**	**23 48 17.4**	**-0.8**
	0.7nm,0.5s,baz=263,slow=6.2,SNR=22						
YKA	**Yellowknife Ar**	**56.23**	**33**	P	**P**	**23 50 04.1**	**0.0**
	1.8nm,0.5s,baz=309,slow=6.6,SNR=37						
FINES	**FINESS Array B**	**61.83**	**331**	P	**P**	**23 50 42.0**	**-0.3**
	0.7nm,0.4s,baz=44,slow=5.4,SNR=6.4						
NVAR	**Mina Array Bea**	**69.44**	**56**	P	**P**	**23 51 33.1**	**+1.6**
	0.5nm,0.6s,baz=293,slow=5.7,SNR=6.3						
PDAR	**Pinedale Array**	**71.30**	**48**	P	**P**	**23 51 43.2**	**+0.6**
	0.4nm,0.4s,baz=286,slow=1.9,SNR=2.5						
ULM	**Lac du Bonnet**	**72.10**	**35**	P	**P**	**23 51 47.3**	**+0.5**
	1.0nm,0.6s,baz=333,slow=6.8,SNR=2.1						
TXAR	**Lajitas Array**	**84.40**	**53**	P	**P**	**23 52 55.4**	**+1.1**
	0.3nm,0.5s,baz=321,slow=3.8,SNR=2.2						

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*SKHL **28** 23:41:57.5±0.7, 44.°70N×145.°20E, h111^{km}±8^{km}, mb4.3/5, msha4.8/2*
*IDC **28** 23:41:57.3±13.0, 44.°36N×145.°83E, h116^{km}±127^{km}, mb3.2/11, mb1 3.5/11, mb1mx3.3/30, mbtmp3.6/11, Error ellipse: s-maj=28.5km s-min=20.0km az=95.0*
*JMA **28** 23:42:00.1±0.3, 44.°17N×146.°07E, h127^{km}±3^{km}, M2.9*
ISC 28 23:41:59.0±0.8**, 44.°23N**±0.°10×**145.°99E**±0.°08**, h136**^{km}±6^{km}**, n22, σ0.^{s}91**/24**, mb3.3**/11**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YUK	**Yuzh-Kuril'sk**	**0.22**	**205**	*e*P	**Pn**	**23 42 17.3**	**-0.3**
YUK				AMB	AMB	23 42 19.8	
	250nm,0.4s						
YUK				*e*S	**Sn**	**23 42 31.6**	**-0.1**
YUK				A	A	23 42 32.7	
	620nm,0.6s						
YUK				A	A	23 42 32.7	
	680nm,0.6s						
JRA	**Rausu**	**0.69**	**245**	P	**Pn**	**23 42 20.1**	**+0.2**
JRA				*e*S	**Sn**	**23 42 35.7**	**0.0**
JNSB	**Nemuroshibetsu**	**0.84**	**238**	P	**Pn**	**23 42 21.6**	**+0.5**
NEM2	**Nemuro 2**	**0.88**	**192**	P	**Pn**	**23 42 21.2**	**-0.2**
JKHN	**Kushirohamanak**	**1.30**	**208**	P	**Pn**	**23 42 25.7**	**+0.4**
JAK	**Akkeshi**	**1.55**	**218**	*e*S	**Sn**	**23 42 49.3**	**-0.9**
KUR	**Kuril'sk**	**1.67**	**53**	*e*P	**Pn**	**23 42 29.5**	**+0.1**
KUR				AMB	AMB	23 42 30.0	
	160nm,0.5s						
KUR				*e*S	**Sn**	**23 42 54.0**	**+1.4**
KUR				A	A	23 42 55.0	
	110nm,0.5s						
KUR				A	A	23 42 55.0	
	85nm,0.5s						
JOB	**Onbets**	**2.05**	**230**	*e*S	**Sn**	**23 43 01.5**	**+0.9**
ASAJ	**Asahikawa**	**2.44**	**268**	P	**Pn**	**23 42 40.0**	**+1.3**
JCH	**Churui**	**2.50**	**231**	*e*S	**Sn**	**23 43 10.8**	**+0.2**
YSS	**Yuzh-Sakhalins**	**3.54**	**321**	*e*P	Pn	23 42 42.1	-11
YSS				AMB	AMB	23 42 42.6	
	10.0nm,0.5s						
SONM	**Songino Array**	**27.51**	**292**	P	**P**	**23 47 32.3**	**-0.3**
	0.2nm,0.5s,baz=82,slow=8.7,SNR=2.2						
ILAR	**Eielson Array**	**41.60**	**36**	P	**P**	**23 49 32.9**	**-0.1**
	0.2nm,0.6s,baz=252,slow=7.1,SNR=1.9						
MKAR	**Makanchi Array**	**43.62**	**297**	P	**P**	**23 49 48.2**	**-1.4**
	0.3nm,0.8s,baz=80,slow=11,SNR=1.9						
YKA	**Yellowknife Ar**	**55.87**	**34**	P	**P**	**23 51 22.4**	**+0.6**
	0.3nm,0.7s,baz=303,slow=6.6,SNR=2.5						
ARCES	**ARCESS Array B**	**58.50**	**339**	P	**P**	**23 51 39.6**	**-0.7**
	4.4nm,1.0s,baz=40,slow=7.1,SNR=1.7						
FINES	**FINESS Array B**	**64.06**	**332**	P	**P**	**23 52 16.0**	**-1.7**
	1.7nm,0.8s,baz=46,slow=8.2,SNR=4.5						
WRA	**Warramunga Arr**	**64.75**	**192**	P	**P**	**23 52 23.1**	**+0.4**
	0.6nm,0.7s,baz=7.8,slow=6.8,SNR=5.2						
ASAR	**Alice Springs**	**68.47**	**192**	P	**P**	**23 52 47.9**	**+1.7**
	0.2nm,0.6s,baz=6.8,slow=6.5,SNR=5.5						
NOA	**NORSAR Array B**	**68.85**	**338**	P	**P**	**23 52 46.9**	**-1.3**
	0.6nm,0.7s,baz=31,slow=6.5,SNR=3.9						
BRTR	**Keskin Array B**	**76.60**	**313**	P	**P**	**23 53 34.9**	**+0.4**
	0.7nm,0.9s,baz=349,slow=6.6,SNR=2.4						
GERES	**GERESS Array B**	**78.33**	**330**	P	**P**	**23 53 44.3**	**+0.4**
	0.2nm,0.7s,baz=11,slow=6.0,SNR=1.3						

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*IDC **28** 23:55:54.0±0.9, 8.°90S×133.°45E, h0^{km}, mb3.8/5, mb1 4.0/11, mb1mx3.8/39, mbtmp4.0/11, ML3.9/6, MS2.8/2, Ms1 2.8/2, ms1mx2.5/27, Error ellipse: s-maj=33.9km s-min=15.3km az=77.0*
ISC 28 23:55:54.9±0.8**, 9.°07S**±0.°06×**133.°42E**±0.°09**, h10**^{km}**, n12, σ2.^{s}80**/15**, mb3.9**/5**, Arafura Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**8.43**	**345**	Pn	**Pn**	**23 57 55.2**	**-2.0**
	1.3nm,0.3s,baz=287,slow=19,SNR=2.0						
SIJI				Sn	Sn	23 59 19.8	-13
	5.1nm,0.3s,baz=204,slow=22,SNR=8.7						
JAY	**Jayapura**	**9.75**	**48**	Pn	**Pn**	**23 58 15.2**	**-0.1**
	1.4nm,0.3s,baz=211,slow=14,SNR=5.5						
JAY				Sn	Sn	23 59 54.5	-11
	0.3nm,0.3s,baz=134,slow=19,SNR=1.5						
WRA	**Warramunga Arr**	**10.84**	**175**	Pn	**Pn**	**23 58 34.3**	**+4.0**
	1.1nm,0.3s,baz=354,slow=13,SNR=40						
WRA				Sn	**Sn**	**00 00 27.1**	**-4.7**
	1.2nm,0.3s,baz=355,slow=23,SNR=2.7						
WRA				Lg	Lg	00 01 44.2	
	2.5nm,0.3s,baz=342,slow=27,SNR=6.6						
WRA				LR	LR	00 02 26.8	
	comp=Z,33nm,21.1s,baz=30,slow=36						
FITZ	**Fitzroy Crossi**	**11.73**	**219**	Pn	**Pn**	**23 58 46.6**	**+4.2**
	0.5nm,0.3s,baz=42,slow=13,SNR=42						
FITZ				Sn	**Sn**	**00 00 49.5**	**-4.0**
	2.5nm,0.3s,baz=213,slow=17,SNR=4.7						
FITZ				Lg	Lg	00 02 18.6	
	1.5nm,0.3s,baz=75,slow=7.2,SNR=3.6						
PMG	**Port Moresby**	**13.57**	**92**	Sn	Sn	00 01 30.3	-8.3
	0.7nm,0.3s,baz=148,slow=21,SNR=1.3						
ASAR	**Alice Springs**	**14.52**	**178**	Pn	**Pn**	**23 59 22.8**	**+2.1**
	1.2nm,0.3s,baz=12,slow=13,SNR=55						
ASAR				Sn	**Sn**	**00 01 58.4**	**-3.4**
	0.3nm,0.3s,baz=2.3,slow=28,SNR=1.4						
ASAR				Lg	Lg	00 03 40.1	
	0.4nm,0.3s,baz=353,slow=31,SNR=4.7						
ASAR				LR	LR	00 05 22.5	
	comp=Z,68nm,21.2s,baz=358,slow=39						
CTA	**Charters Tower**	**16.55**	**133**	Pn	**Pn**	**23 59 47.5**	**+0.2**
	0.2nm,0.3s,baz=296,slow=17,SNR=2.1						
CTA				Sn	**Sn**	**00 02 50.6**	**-0.5**
	0.1nm,0.3s,baz=216,slow=23,SNR=1.5						
CTA				Lg	Lg	00 04 46.4	
	0.2nm,0.3s,baz=60,slow=20,SNR=1.5						
STKA	**Stephens Creek**	**23.93**	**163**	P	**P**	**00 01 10.1**	**+0.8**
	0.8nm,0.3s,baz=344,slow=15,SNR=1.6						
SONM	**Songino Array**	**61.51**	**340**	P	**P**	**00 06 12.4**	**+0.2**
	0.2nm,0.6s,baz=152,slow=7.2,SNR=2.5						
MKAR	**Makanchi Array**	**71.82**	**326**	P	**P**	**00 07 18.3**	**+0.4**
	1.6nm,0.4s,baz=122,slow=7.5,SNR=54						
ZALV	**Zalesovo Beam**	**74.95**	**333**	P	**P**	**00 07 35.2**	**-1.0**
	0.7nm,0.6s,baz=134,slow=6.2,SNR=2.2						
KURBB	**Kurchatov Arra**	**76.05**	**328**	P	**P**	**00 07 42.4**	**-0.2**
	0.8nm,0.7s,baz=129,slow=4.3,SNR=8.0						

ISC Computed Locations for February 2015

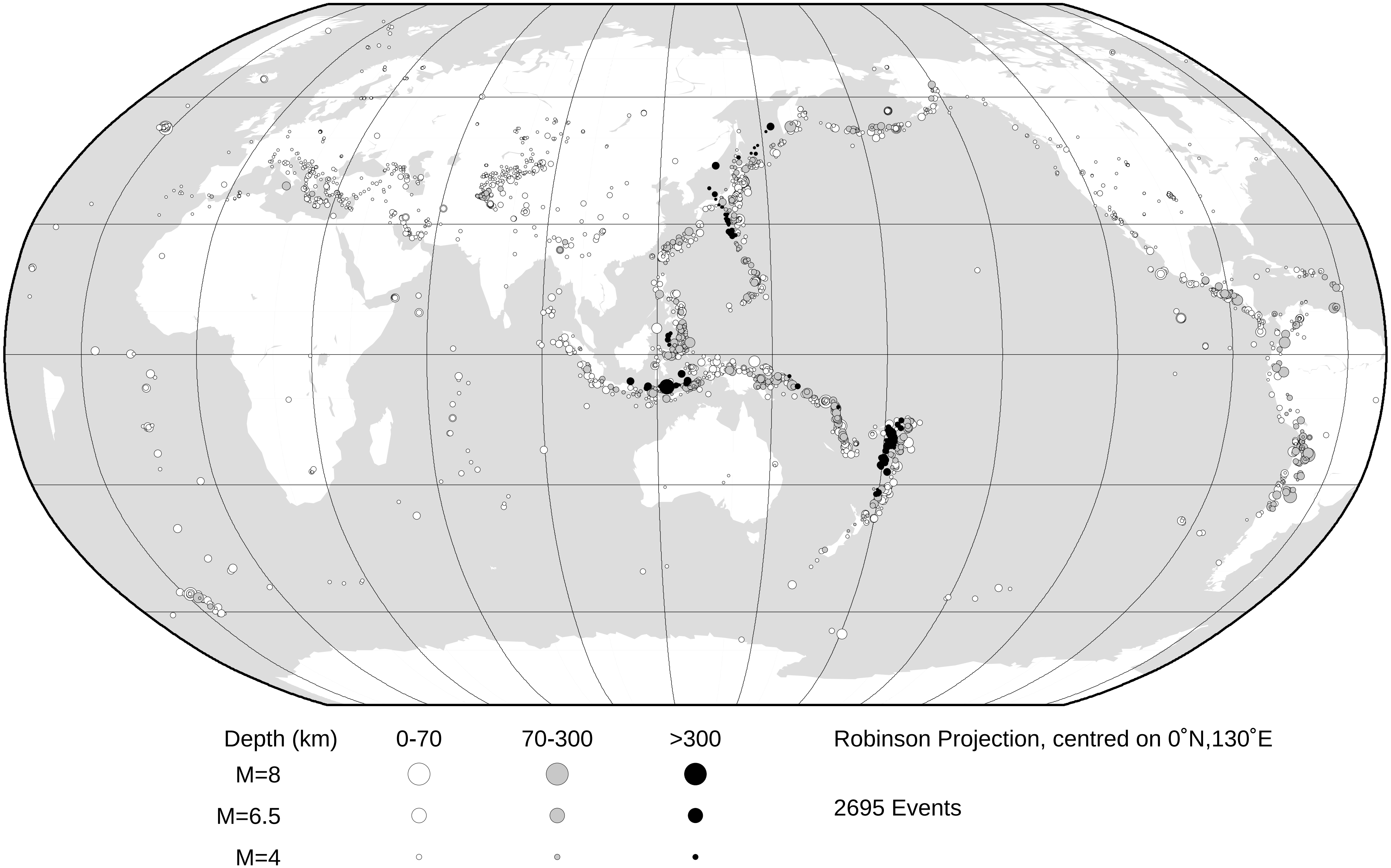

Robinson Projection, centred on 0˚N,130˚E

2695 Events